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

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Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

*NEIC **01** 18:45:41.7±1.7,21°.70S×179°.55W,h600km,mb4.6/6,*
Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
*IDC **01** 18:45:46.3±2.6,21°.76S×179°.70W,h627km±37km,mb3.5/4,*
mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
s-min=20.6km az=159.0
ISC 01 18:45:43.1±2.7,22°.3S±0°.2×179°.6W±0°.3,h613km±42km,
n22,σ1s15/21,mb4.4/9,1C,South of Fiji Islands

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

*NEIC **01** 00:13:27.3±2.4,22.92N×121.42E,h10km,Error ellipse: s-maj=25.7km s-min=10.8km az=133.0*
*ISCJB **01** 00:13:28.9±0.5,22.93N±0.02×121.32E±0.03,h10km±3km, Error ellipse: s-maj=4.4km s-min=2.8km az=21.8*
*TAP **01** 00:13:29.4,22.96N×121.25E,h14km,ML3.5,B*
ISC 01 00:13:29.0±0.5,22.93N±0.02×121.32E±0.03,h10km±3km, n52,σ0.98/76,8D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTN	**Taitung**	**0.24**	**223**	*e*P	**Pg**	**00 13 35.2**	**+1.3**
	baz=194						
TTN				*e*S	**Sg**	**00 13 39.8**	**+2.7**
	baz=194						
TWG	**Pinlang**	**0.25**	**245**	*e*P	**Pg**	**00 13 34.3**	**+0.1**
TWG				*e*S	**Sg**	**00 13 38.6**	**+0.9**
TWG	**Pinlang**	**0.25**	**245**	P	**Pg**	**00 13 34.7**	**+0.6**
	baz=239						
TWG				S	**Sg**	**00 13 38.7**	**+1.1**
	baz=239						
ELDTW	**Lidau**	**0.38**	**313**	⇓*i*P	**Pg**	**00 13 36.1**	**-0.4**
	baz=318						
ELDTW				S	**Sg**	**00 13 40.7**	**-0.9**
	baz=318						
TWF1	**Yuli**	**0.42**	**357**	⇓*i*P	**Pg**	**00 13 37.6**	**+0.3**
	baz=351						
TWF1				*e*S	**Sg**	**00 13 43.5**	**+0.6**
	baz=351						
YULB	**Yu-li**	**0.46**	**357**	*e*P	**Pg**	**00 13 37.8**	**-0.2**
YULB				*e*S	**Sg**	**00 13 44.2**	**0.0**
ECL	**Taimali**	**0.47**	**226**	⇓P	**Pg**	**00 13 38.0**	**-0.2**
	baz=218						
ECL				*e*S	**Sg**	**00 13 44.5**	**0.0**
	baz=218						
STYT	**Tauyuan**	**0.57**	**294**	⇓*i*P	**Pg**	**00 13 39.5**	**-0.6**
	baz=304						
STYT				S	**Sg**	**00 13 46.5**	**-1.0**
	baz=304						
EHY	**Hungye**	**0.57**	**0**	*e*P	**Pg**	**00 13 39.8**	**-0.4**
	baz=354						
EHY				*e*S	**Sg**	**00 13 48.1**	**+0.4**
	baz=354						
SSD	**Sandimen**	**0.66**	**254**	⇓*i*P	**Pg**	**00 13 40.9**	**-0.9**
	baz=250						
SSD				*e*S	**Sg**	**00 13 48.7**	**-1.8**
	baz=250						
TAW	**Tawu**	**0.69**	**215**	*e*P	**Pg**	**00 13 41.8**	**-0.6**
	baz=221						
EAST	**Anshuo**	**0.70**	**219**	⇓*i*P	**Pg**	**00 13 42.1**	**-0.4**
	baz=214						
SGST	**Jiashian**	**0.70**	**283**	*e*P	**Pg**	**00 13 42.4**	**-0.1**
	baz=279						
SGST				S	**Sg**	**00 13 51.7**	**+0.1**
	baz=279						
WTP	**Ta-pu**	**0.72**	**296**	*e*P	**Pg**	**00 13 42.7**	**-0.2**
	baz=297						
WTP				*e*S	**Sg**	**00 13 52.5**	**+0.1**
	baz=297						
TPUB	**Ta-pu**	**0.74**	**300**	*e*P	**Pg**	**00 13 42.5**	**-0.8**
TPUB				*e*S	**Sg**	**00 13 53.0**	**+0.2**
CHN4	**Tsaushan**	**0.79**	**302**	⇓*i*P	**Pg**	**00 13 44.1**	**-0.2**
	baz=312						
CHN4				S	**Sg**	**00 13 55.4**	**+0.8**
	baz=312						
TWM1	**Shoushan**	**0.84**	**263**	*e*P	**Pg**	**00 13 44.2**	**-0.9**
	baz=262						
TWK	**Hsinying**	**0.84**	**294**	*e*P	**Pg**	**00 13 44.9**	**-0.3**
	baz=295						
TWK				*e*S	**Sg**	**00 13 56.4**	**+0.3**
	baz=295						
SCZT	**Fangliau**	**0.85**	**230**	P	**Pg**	**00 13 44.9**	**-0.6**
	baz=226						
ESL	**Shilin**	**0.89**	**7**	*e*P	**Pg**	**00 13 46.1**	**0.0**
	baz=8.0						
CHN5	**Tsauling**	**0.89**	**318**	⇓*i*P	**Pg**	**00 13 46.1**	**-0.1**
	baz=321						
CHN5				*e*S	**Sg**	**00 13 57.9**	**+0.1**
	baz=321						
CHN3	**Shinhua**	**0.89**	**280**	*e*P	**Pg**	**00 13 47.7**	**+1.5**
	baz=280						
LAY	**Lan-yu**	**0.91**	**166**	*e*P	**Pg**	**00 13 45.8**	**-0.7**
	baz=153						
SSLB	**Suanglung**	**0.92**	**338**	*e*P	**Pg**	**00 13 45.8**	**-0.9**
SSLB				*e*S	**Sg**	**00 13 56.9**	**-1.8**
CHY	**Chiayi**	**1.00**	**305**	*e*P	**Pg**	**00 13 48.1**	**-0.2**
	baz=307						
CHY				*e*S	**Sg**	**00 14 02.4**	**+1.1**
	baz=307						
TAI1	**Yung-k'ang**	**1.01**	**276**	*e*P	**Pb**	**00 13 48.9**	**+0.3**
	baz=277						
SMLT	**Sun Moon Lake**	**1.03**	**338**	*e*P	**Pb**	**00 13 48.0**	**-0.9**
	baz=348						
SMLT				*e*S	**Sg**	**00 14 03.5**	**+1.4**
	baz=348						
TWP	**Hsiaoliuchiu**	**1.06**	**237**	*e*P	**Pb**	**00 13 51.9**	**+2.5**
	baz=230						
TYC	**Yuchr**	**1.06**	**336**	*e*P	**Pb**	**00 13 49.2**	**-0.2**
	baz=346						
TYC				*e*S	**Sb**	**00 14 04.5**	**+1.2**
	baz=346						
HEN	**Hengchun**	**1.07**	**211**	*e*P	**Pb**	**00 13 50.2**	**+0.7**
	baz=208						
TWK1	**Hengchun**	**1.09**	**206**	*e*P	**Pn**	**00 13 48.4**	**-1.6**
	baz=191						
TSEB	**Hengchuen, Pin**	**1.10**	**201**	*e*P	**Pb**	**00 13 51.8**	**+1.8**
	baz=189						
CHN8	**Yiju**	**1.10**	**292**	*e*P	**Pb**	**00 13 49.9**	**-0.2**
	baz=293						
WNT	**Mingjian**	**1.11**	**328**	*e*P	**Pb**	**00 13 50.4**	**+0.1**
	baz=330						
WNT				*e*S	**Sb**	**00 14 06.2**	**+1.4**
	baz=330						
TWD	**Chiawan**	**1.17**	**12**	*e*P	**Pb**	**00 13 50.6**	**-0.7**
	baz=11						
WHF	**Hehuan Shan**	**1.21**	**358**	*e*P	**Pn**	**00 13 50.8**	**-1.2**
	baz=8.0						
NACB	**Ninganchiao**	**1.26**	**11**	*e*Pn	**Pn**	**00 13 50.0**	**-2.7**
NACB				*e*Sn	**Sn**	**00 14 10.5**	**+0.8**
TWT	**Tachien**	**1.32**	**354**	*e*P	**Pn**	**00 13 53.8**	**+0.3**
	baz=4.0						
TCU	**Taichung**	**1.35**	**334**	*e*P	**Pn**	**00 13 54.1**	**+0.3**
	baz=334						
TWQ1	**Liyutan**	**1.50**	**340**	*e*P	**Pn**	**00 13 56.6**	**+0.7**
	baz=340						
NNS	**Nan Shan**	**1.50**	**2**	*e*P	**Pn**	**00 13 57.7**	**+1.7**
	baz=13						
ENA	**Nanau**	**1.54**	**14**	*e*P	**Pn**	**00 13 54.0**	**-2.5**
	baz=10.0						
NSY	**Sanyi**	**1.57**	**341**	*e*P	**Pn**	**00 13 58.2**	**+1.4**
	baz=339						
ENTT	**Nioudou**	**1.72**	**7**	*e*P	**Pn**	**00 13 58.1**	**-0.8**
	baz=17						
NSTT	**Nanjuang**	**1.72**	**350**	*e*P	**Pn**	**00 14 00.2**	**+1.3**
	baz=358						
YHNB	**Yeheng**	**1.73**	**2**	*e*Pn	**Pn**	**00 13 58.4**	**-0.8**
YHNB				*e*S	**Sn**	**00 14 26.1**	**+4.8**
NSK	**Sanguang**	**1.74**	**1**	*e*P	**Pn**	**00 13 58.3**	**-0.9**
	baz=11						
TWC	**Suao**	**1.74**	**16**	*e*P	**Pn**	**00 14 00.6**	**+1.3**
	baz=11						
PNG	**Penghu**	**1.75**	**292**	*e*P	**Pn**	**00 13 58.1**	**-1.2**
	baz=275						
PNG				*e*S	**Sn**	**00 14 19.8**	**-1.7**
	baz=275						
TWE	**Neicheng**	**1.81**	**10**	*e*P	**Pn**	**00 14 00.5**	**+0.3**
	baz=6.0						
NWF	**Wu-fen Shan**	**2.17**	**11**	*e*P	**Pn**	**00 14 06.2**	**+1.0**
	baz=4.0						
KNM	**Kinmen**	**3.03**	**300**	*e*P	**Pn**	**00 14 17.7**	**+0.7**
	baz=298						

*NEIC **01** 00:14:29.5, 13.05N×60.74W, h89km, MD3.5(TRN), After TRN.*
TRN 01 00:14:29.3,13.05N×60.74W,h90km,MD3.5,4C-4D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHS	**Barnard House**	**0.45**	**304**	*e*P	Pn	00 14 45.8	+2.1
BHS				*e*S	Sn	00 14 56.4	+2.1
BHS	**Barnard House**	**0.45**	**304**	*e*P	Pn	00 14 45.8	+2.1
BHS				*e*S	Sn	00 14 56.4	+2.1
SSV	**Crater Summit**	**0.52**	**302**	⇓*e*P	Pn	00 14 45.8	+1.7
SSV				*e*S	Sn	00 14 56.8	+1.6
SSV	**Crater Summit**	**0.52**	**302**	⇓*e*P	Pn	00 14 45.8	+1.7
SSV				*e*S	Sn	00 14 56.8	+1.6
SVB	**Belmont**	**0.54**	**294**	*e*P	Pn	00 14 45.2	+0.9
SVB				*e*S	Sn	00 14 57.6	+2.1
SVB	**Belmont**	**0.54**	**294**	*e*P	Pn	00 14 45.2	+0.9
SVB				*e*S	Sn	00 14 57.6	+2.1
MCLT	**Moule a Chique**	**0.69**	**344**	*e*P	Pn	00 14 46.0	+0.3
MCLT				*e*S	Sn	00 14 57.6	-0.2
MCLT	**Moule a Chique**	**0.69**	**344**	*e*P	Pn	00 14 46.0	+0.3
MCLT				*e*S	Sn	00 14 57.6	-0.2
SLDE	**Delcer**	**0.81**	**338**	*e*P	Pn	00 14 48.4	+1.5
SLDE				*e*S	Sn	00 15 01.3	+1.2
SLDE	**Delcer**	**0.81**	**338**	*e*P	Pn	00 14 48.4	+1.5
SLDE				*e*S	Sn	00 15 01.3	+1.2
SLB	**Belfond**	**0.83**	**340**	⇑*e*P	Pn	00 14 48.6	+1.5
SLB				*e*S	Sn	00 15 01.8	+1.3
SLB	**Belfond**	**0.83**	**340**	⇑*e*P	Pn	00 14 48.6	+1.5
SLB				*e*S	Sn	00 15 02.6	+2.2
SLPE	**Piton Saint Es**	**0.83**	**343**	*e*P	Pn	00 14 48.6	+1.5
SLPE				*e*S	Sn	00 15 01.6	+1.2
SLPE	**Piton Saint Es**	**0.83**	**343**	*e*P	Pn	00 14 48.6	+1.5
SLPE				*e*S	Sn	00 15 01.6	+1.2
SLW	**Petit Monier**	**0.99**	**349**	*e*P	Pn	00 14 50.2	+1.3
SLW				*e*S	Sn	00 15 04.9	+1.4
SLW	**Petit Monier**	**0.99**	**349**	*e*P	Pn	00 14 49.1	+0.3
SLW	**Petit Monier**	**0.99**	**349**	*e*P	Pn	00 14 50.2	+1.3
SLW				*e*S	Sn	00 15 04.2	+0.7
SLW				*e*S	Sn	00 15 04.9	+1.4
GRIC	**Isle de Caille**	**1.12**	**227**	*e*P	Pn	00 14 51.7	+1.3
GRIC				*e*S	Sn	00 15 07.5	+1.3
GRSS	**Sisters**	**1.13**	**229**	*e*P	Pn	00 14 51.5	+1.0
GRSS				*e*S	Sn	00 15 07.2	+0.8
GRSS	**Sisters**	**1.13**	**229**	*e*P	Pn	00 14 51.5	+1.0
GRSS				*e*S	Sn	00 15 07.2	+0.8
GRHS	**Sauteurs**	**1.20**	**227**	*e*P	Pn	00 14 53.4	+2.0
GRHS				*e*S	Sn	00 15 09.8	+1.9
GRHS	**Sauteurs**	**1.20**	**227**	*e*P	Pn	00 14 53.4	+2.0
GRHS				*e*S	Sn	00 15 09.8	+1.9
GRW	**Mount Saint Ca**	**1.26**	**226**	⇑*e*P	Pn	00 14 53.2	+1.2
GRW				*e*S	Sn	00 15 10.5	+1.4
GRW	**Mount Saint Ca**	**1.26**	**226**	⇑*e*P	Pn	00 14 53.2	+1.2
GRW				*e*S	Sn	00 15 10.5	+1.4
BIM	**Bigot**	**1.50**	**348**	*e*P	Pn	00 14 56.0	+0.9
BIM				*e*S	Sn	00 15 15.8	+1.3
MVM	**Montagne Vaucl**	**1.51**	**354**	⇓*e*P	Pn	00 14 55.9	+0.8
MVM				⇓*e*S	Sn	00 15 14.9	+0.2
FDF	**Fort de France**	**1.72**	**347**	*e*P	Pn	00 14 59.0	+1.0
FDF				*e*S	Sn	00 15 20.8	+1.2
TOSP	**Speyside**	**1.75**	**173**	*e*P	Pn	00 14 59.4	+1.1
TOSP				*e*S	Sn	00 15 21.0	+0.7
TPR	**Prospect**	**1.85**	**181**	*e*S	Sn	00 15 24.7	+2.1
TRN	**Trinidad (W)**	**2.47**	**195**	*e*S	Sn	00 15 38.4	+1.2
TCE	**Chacachacare**	**2.54**	**203**	*e*S	Sn	00 15 39.6	+0.8
TBH	**Brigand Hill**	**2.57**	**187**	*e*S	Sn	00 15 40.0	+0.4

WEL 01 00:50:28.3±0.5,38.08S×176.22E,h154km±3km,ML3.6/7, Error ellipse: s-maj=3.9km s-min=3.3km az=90.0,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.72**	**104**	PN	Pn	00 50 51.3	-0.1
URZ				SN	Sn	00 51 09.4	+0.4
MWZ	**Matawai**	**1.06**	**104**	PN	Pn	00 50 53.9	-0.1
MWZ				SN	Sn	00 51 13.9	+0.3
BKZ	**Black Stump Fm**	**1.10**	**169**	PN	Pn	00 50 54.5	+0.2
BKZ				SN	Sn	00 51 14.8	+0.5
MCHZ	**McNeill Hill**	**1.41**	**165**	PN	Pn	00 50 57.8	+0.6
KNZ	**Kokohu**	**1.48**	**130**	PN	Pn	00 50 57.8	-0.1
PUZ	**Puketiti**	**1.61**	**90**	SN	Sn	00 51 21.6	-1.4
CNGZ	**Carnagh Statio**	**1.62**	**105**	PN	Pn	00 50 59.7	+0.4
MHGZ	**Mahia Peninsul**	**1.70**	**129**	PN	Pn	00 51 00.3	0.0
CKHZ	**Cape Kidnapper**	**1.71**	**157**	PN	Pn	00 51 00.5	+0.1
KAHZ	**Kahuranaki**	**1.79**	**163**	PN	Pn	00 51 01.2	+0.1
PNHZ	**Pukenui**	**1.83**	**180**	PN	Pn	00 51 01.0	-0.6
PNHZ				SN	Sn	00 51 24.7	-2.7
TSZ	**Takapari Road**	**1.98**	**186**	PN	Pn	00 51 02.6	-0.8
TSZ				SN	Sn	00 51 28.8	-1.7
WPHZ	**Waipukurau**	**1.99**	**175**	PN	Pn	00 51 02.8	-0.6
PXZ	**Pawanui**	**2.01**	**166**	PN	Pn	00 51 03.1	-0.6
PRHZ	**Porangahau**	**2.21**	**172**	PN	Pn	00 51 05.1	-0.9
BFZ	**Birch Farm**	**2.59**	**180**	PN	Pn	00 51 08.9	-1.8
MRZ	**Mangatainoka R**	**2.62**	**191**	PN	Pn	00 51 09.1	-1.9
OGWZ	**Otaki Gorge**	**2.85**	**196**	PN	Pn	00 51 11.8	-2.0
HOWZ	**Holdsworth Sta**	**2.86**	**191**	PN	Pn	00 51 11.7	-2.3
KIW	**Kapiti Island**	**2.95**	**200**	PN	Pn	00 51 12.8	-2.4
MTW	**Mount Morrison**	**3.12**	**190**	PN	Pn	00 51 14.5	-2.8
CAW	**Cannon Point**	**3.15**	**196**	PN	Pn	00 51 15.0	-2.6
TRWZ	**Traveller**	**3.34**	**187**	PN	Pn	00 51 17.3	-2.7
MSWZ	**Moikau Station**	**3.41**	**192**	PN	Pn	00 51 17.8	-3.1
PLWZ	**Palliser**	**3.56**	**192**	PN	Pn	00 51 19.5	-3.3
TUWZ	**Tuamarina**	**3.77**	**207**	PN	Pn	00 51 22.4	-3.3
THZ	**Tophouse**	**4.47**	**214**	PN	Pn	00 51 31.7	-3.0

*ISCJB **01** 01:10:06.4±0.8,33.04N±0.05×91.6E±0.2,h10km,mb3.5/2, Error ellipse: s-maj=22.9km s-min=7.1km az=179.7*
*IDC **01** 01:10:07.1±1.8,33.00N×91.73E,h0km,mb3.4/3, mb1 3.6/6,mb1mx3.4/26,mbtmp3.5/6,ML3.7/3,MS2.9/1, Ms1 2.9/1,ms1mx2.3/20, Error ellipse: s-maj=69.5km s-min=23.6km az=68.0*
ISC 01 01:10:08.7±0.8,33.08N±0.05×91.7E±0.2,h10km,n8, σ0.57/8,mb3.5/2,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.40**	**188**	Pn	**Pn**	**01 11 08.4**	**+6.6**
LSA				Sn	**Sg**	**01 11 58.5**	**+0.5**
LSA				smax			
	comp=N,50nm,0.8s						
LSA				smax			
	comp=E,100nm,1.0s						
MKAR	**Makanchi Array**	**15.47**	**335**	Pn	**Pn**	**01 13 46.4**	**-0.4**
	comp=E,0.1nm,0.3s,baz=137,slow=13,SNR=3.5						
CMAR	**Chiang Mai Arr**	**15.94**	**154**	Pn	**Pn**	**01 13 52.3**	**-0.8**
	comp=E,0.4nm,0.3s,baz=334,slow=12,SNR=3.6						
AAK	**Ala-Archa**	**16.59**	**310**	LR	LR	01 21 02.2	
	comp=E,39nm,18.6s,baz=21,slow=39						
SONM	**Songino Array**	**18.45**	**33**	P	**Pn**	**01 14 25.3**	**+1.0**
	comp=E,0.1nm,0.3s,baz=210,slow=13,SNR=6.5						
KURK	**Kurchatov**	**20.09**	**335**	P	**P**	**01 14 42.4**	**+0.2**
	comp=E,0.6nm,0.6s,baz=144,slow=12,SNR=4.1						
ZALV	**Zalesovo Beam**	**21.43**	**349**	P	**P**	**01 14 56.6**	**-0.1**
	comp=E,0.6nm,0.4s,mb3.2,baz=172,slow=11,SNR=4.4						
ASAR	**Alice Springs**	**69.29**	**139**	P	**P**	**01 21 15.9**	**-0.3**
	comp=E,0.7nm,0.7s,mb3.7,baz=323,slow=5.9,SNR=5.2						

*NIED **01** 01:14:00,44.20N×141.70E,h250km,Mw3.8 Best double couple: M0 6.05000×10^14 NP1:ϕs298.00000°, δ68.00000°,λ-111.00000°. NP2:ϕs165.00000°, δ30.00000°,λ-48.00000°.*
*ISCJB **01** 01:14:45.9±0.3,44.11N±0.03×141.74E±0.06, h234km±2km,mb3.6/13,Error ellipse: s-maj=7.1km s-min=4.9km az=20.2*
*MOS **01** 01:14:45.8±0.9,44.16N×141.70E,h233km,mb4.0/11, Error ellipse: s-maj=16.5km s-min=10.4km az=85.7*
*NEIC **01** 01:14:46.8±0.5,44.16N×141.69E,h224km±7km, mb3.9/5, Error ellipse: s-maj=11.0km s-min=7.1km az=119.0*
*IDC **01** 01:14:46.7±0.5,44.21N×141.69E,h221km±5km,mb3.4/10, mb1 3.5/13,mb1mx3.3/25,mbtmp3.4/13, Error ellipse: s-maj=18.7km s-min=13.7km az=150.0*
*JMA **01** 01:14:46.5±0.2,44.16N×141.71E,h233km±2km,M4.0*
ISC 01 01:14:46.9±0.3,44.10N±0.03×141.73E±0.06,h229km±2km, n64,σ0.84/88,mb3.6/13,3C-13D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSS	**Shosan**	**0.31**	**16**	⇓P	**Pn**	**01 15 17.3**	**+0.5**
JSS				*e*S	**S**	**01 15 40.9**	**+0.6**
JHR	**Hokuryu**	**0.36**	**181**	⇓P	**Pn**	**01 15 17.7**	**+0.7**
JHR				*e*S	**S**	**01 15 41.4**	**+0.9**
JYG	**Yagishiri**	**0.39**	**326**	⇓P	**Pn**	**01 15 17.0**	**0.0**
JYG				*e*S	**S**	**01 15 40.2**	**-0.4**
ASAJ	**Asahikawa**	**0.62**	**89**	P	**Pn**	**01 15 17.9**	**+0.1**
	114nm,0.3s,baz=262,slow=7.0,SNR=231						
ASAJ				S	**S**	**01 15 40.9**	**-1.0**
	5.5nm,0.3s,baz=356,slow=29,SNR=7.2						
ASAJ	**Asahikawa**	**0.62**	**89**	PN	**Pn**	**01 15 17.9**	**+0.1**
ASAJ				S	**S**	**01 15 40.9**	**-1.0**
ASAJ				pmax	pmax		
	comp=Z,114nm,0.3s						
ASAJ				smax			
	comp=N,6.0nm,0.3s						
ASAJ	**Asahikawa**	**0.62**	**89**	⇓P	**Pn**	**01 15 17.8**	**0.0**
ASAJ				*e*S	**S**	**01 15 41.5**	**-0.4**
JAB	**Ashibetsu**	**0.70**	**149**	⇓P	**Pn**	**01 15 18.7**	**+0.6**
JAB				*e*S	**S**	**01 15 43.3**	**+0.8**
JKK2	**Kamakawa 2**	**0.77**	**107**	⇓P	**Pn**	**01 15 18.8**	**+0.4**
JKK2				*e*S	**S**	**01 15 43.1**	**+0.1**
JSE	**Soyaes**	**1.05**	**35**	⇓P	**Pn**	**01 15 19.5**	**-0.4**
JSE				*e*S	**S**	**01 15 45.4**	**-0.5**
JFR	**Furan**	**1.13**	**146**	P	**Pn**	**01 15 21.0**	**+0.5**
JFR				*e*S	**S**	**01 15 48.0**	**+1.2**
JSK	**Shakotan**	**1.18**	**231**	⇑P	**Pn**	**01 15 21.0**	**+0.1**
JSK				*e*S	**S**	**01 15 47.0**	**-0.3**
JWK2	**Keihoku**	**1.22**	**6**	⇓P	**Pn**	**01 15 20.7**	**-0.3**
JWK2				*e*S	**S**	**01 15 47.0**	**-0.9**
JEW	**Eniwo**	**1.28**	**189**	P	**Pn**	**01 15 22.3**	**+0.7**
JEW				*e*S	**S**	**01 15 49.6**	**+0.9**
JTKR	**Abashiri--Toko**	**1.57**	**94**	⇓P	**Pn**	**01 15 24.6**	**+0.8**
JTKR				*e*S	**S**	**01 15 53.4**	**+0.7**
JAR	**Ashorobuto**	**1.68**	**118**	⇓P	**Pn**	**01 15 25.6**	**+0.8**
JAR				*e*S	**S**	**01 15 55.5**	**+1.1**
JCH	**Churui**	**1.91**	**141**	⇓P	**Pn**	**01 15 26.0**	**-0.8**
JCH				*e*S	**S**	**01 15 55.9**	**-2.1**
JNBK	**Urakawa-nobuka**	**1.97**	**157**	⇓P	**Pn**	**01 15 28.2**	**+0.8**
JNBK				*e*S	**S**	**01 15 59.4**	**+0.3**
JKB	**Kayabe**	**2.27**	**193**	⇑P	**Pn**	**01 15 30.4**	**0.0**
JKB				*e*S	**S**	**01 16 03.8**	**-0.7**
ERM	**Erimo**	**2.33**	**153**	*e*Pn	**Pn**	**01 15 32.1**	**+1.1**
ERM				*e*Sn	**S**	**01 16 03.0**	**-2.5**
JAK	**Akkeshi**	**2.42**	**116**	*e*S	**S**	**01 16 05.5**	**-1.6**
JRA	**Rausu**	**2.45**	**93**	P	**Pn**	**01 15 32.9**	**+0.8**
JOSM	**Okushiri--Mats**	**2.61**	**220**	⇑P	**Pn**	**01 15 33.8**	**-0.1**
JOSM				*e*S	**S**	**01 16 10.8**	**+0.1**
JOT	**Ohata**	**2.77**	**191**	P	**Pn**	**01 15 35.2**	**-0.4**
JOT				*e*S	**S**	**01 16 12.4**	**-1.4**
YSS	**Yuzh-Sakhalins**	**2.94**	**14**	*e*Pn	**Pn**	**01 15 36.3**	**-1.1**
YSS				*e*S	**S**	**01 16 14.4**	**-2.7**
YSS	**Yuzh-Sakhalins**	**2.94**	**14**	⇓*i*PN	**Pn**	**01 15 36.5**	**-0.8**
YSS				*e*S	**S**	**01 16 13.0**	**-4.2**
YSS				pmax	pmax		
	comp=Z,90nm,0.6s						
YSS				smax			
	comp=E,300nm,0.9s						
NEM2	**Nemuro 2**	**3.00**	**103**	*e*S	**S**	**01 16 14.8**	**-3.6**
MAJO	**Matsushiro**	**8.02**	**201**	*e*Pn	**Pn**	**01 16 40.0**	**-0.4**
	comp=E,13nm,0.7s						
MAJO	**Matsushiro**	**8.02**	**201**	*e*PN	**Pn**	**01 16 40.0**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,13nm,0.7s						
MAT	**Matsushiro**	**8.02**	**201**	P	**Pn**	**01 16 40.2**	**-0.2**
MAT				*e*S	**S**	**01 18 08.0**	**-3.4**
MJAR	**Matsushiro Arr**	**8.02**	**201**	P	**Pn**	**01 16 40.0**	**-0.4**
	comp=Z,1.1nm,0.3s,baz=14,slow=15,SNR=14						
MJAR	**Matsushiro Arr**	**8.02**	**201**	PN	**Pn**	**01 16 40.0**	**-0.4**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**12.39**	**242**	P	**Pn**	**01 17 35.2**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=45,slow=13,SNR=5.3						
KSRS	**Korea Array**	**12.39**	**242**	PN	**Pn**	**01 17 35.3**	**-0.5**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**13.86**	**44**	P	**Pn**	**01 17 53.9**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=228,slow=9.8,SNR=9.8						
PETK	**Petropavlovsk-**	**13.86**	**44**	P	**Pn**	**01 17 53.9**	**+0.1**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**24.71**	**291**	P	**P**	**01 19 47.6**	**+0.6**
	comp=Z,2.2nm,0.5s,mb4.0,baz=89,slow=8.7,SNR=15						
SONM	**Songino Array**	**24.71**	**291**	P	**P**	**01 19 47.6**	**+0.6**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**37.64**	**306**	P	**P**	**01 21 39.2**	**-0.4**
	comp=Z,0.5nm,0.3s,mb3.6,baz=85,slow=9.0,SNR=3.1						
ZALV	**Zalesovo Beam**	**37.64**	**306**	P	**P**	**01 21 39.2**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
MK31	**Makanchi Array**	**40.92**	**295**	*e*P	**P**	**01 22 06.6**	**-0.2**
MKAR	**Makanchi Array**	**40.92**	**295**	P	**P**	**01 22 06.8**	**0.0**
MKAR	**Makanchi Array**	**40.92**	**295**	P	**P**	**01 22 06.8**	**0.0**
	comp=Z,0.9nm,0.5s,mb3.4,baz=83,slow=9.5,SNR=7.4						
MKAR	**Makanchi Array**	**40.92**	**295**	P	**P**	**01 22 06.8**	**0.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**42.06**	**302**	*e*P	**P**	**01 22 15.5**	**-0.4**
	comp=Z,1.8nm,0.3s,mb4.0						
KURK	**Kurchatov**	**42.06**	**302**	P	**P**	**01 22 16.7**	**+0.8**
	comp=Z,1.2nm,0.3s,mb3.8,baz=78,slow=8.7,SNR=3.6						
KURK	**Kurchatov**	**42.06**	**302**	P	**P**	**01 22 16.7**	**+0.8**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.7						
ILAR	**Eielson Array**	**43.52**	**36**	P	**P**	**01 22 27.1**	**-0.3**
	comp=Z,1.7nm,0.7s,mb3.5,baz=282,slow=8.3,SNR=24						
ILAR	**Eielson Array**	**43.52**	**36**	P	**P**	**01 22 27.1**	**-0.3**
ILA

CN II G.
SZGRF ***01*** *01:29:30.7, 41°.69N×71°.72E, h33km, mb4.7, MS4.0, Kyrgyzstan*
NEIC ***01*** *01:29:30.6±1.4, 41°.56N×71°.42E, h25km±10km, mb4.8/114, Error ellipse: s-maj=5.6km s-min=3.5km az=195.0*
MOS ***01*** *01:29:30.1±1.2, 41°.60N×71°.43E, h33km, mb4.9/93, Error ellipse: s-maj=5.6km s-min=3.5km az=129.9*
ISC 01 01:29:28.9±0.7, **41°.53N**±0'.02×**71°.39E**±0'.02, **h12**km±4km, **h19**km±2.2km:**pP-P, n514,** σ1**§20**/560, **mb4.7**/176, **MS4.0**/51, **26C-19D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**1.70**	**338**	⇑P	**Pn**	**01 29 58.5**	**+0.2**
	352nm,0.3s,baz=153,slow=14						
KK31				⇓S	**Sn**	**01 30 23.4**	**+3.4**
	1μm,0.3s,baz=150,slow=26						
KK31	**Karatay Array**	**1.70**	**338**	*i* PN	**Pn**	**01 29 58.8**	**+0.5**
KK31				pmax	pmax		
	comp=Z,1μm,0.2s						
AML	**Almayashu**	**1.82**	**70**	P	**Pn**	**01 30 00.5**	**+0.5**
	SNR=598						
AML	**Almayashu**	**1.82**	**70**	*e*Pn	**Pn**	**01 30 00.0**	**0.0**
AML				*e*Sn	**Sn**	**01 30 26.3**	**+3.3**
EKS2	**Erkin-Say**	**2.10**	**57**	P	**Pn**	**01 30 05.6**	**+1.8**
	SNR=894						
EKS2	**Erkin-Say**	**2.10**	**57**	*e*Pn	**Pn**	**01 30 05.9**	**+2.1**
EKS2				*e*Sn	**Sn**	**01 30 34.1**	**+4.2**
UCH	**Uchtor**	**2.43**	**72**	P	**Pn**	**01 30 10.3**	**+2.0**
	SNR=104						
UCH	**Uchtor**	**2.43**	**72**	*e*Pn	**Pn**	**01 30 10.0**	**+1.7**
UCH				*e*Sn	**Sn**	**01 30 44.4**	**+6.4**
AAK	**Ala-Archa**	**2.56**	**63**	P	**Pn**	**01 30 12.5**	**+2.4**
	SNR=232						
AAK	**Ala-Archa**	**2.56**	**63**	Pn	**Pn**	**01 30 11.3**	**+1.2**
	comp=Z,1.7nm,0.3s,baz=232,slow=3.1,SNR=77						
AAK				Lg		01 30 48.7	
	comp=Z,4.9nm,0.3s,baz=35,slow=17,SNR=13						
AAK				LR	LR	01 31 31.5	
	comp=Z,729nm,21.7s,baz=60,slow=50						
AAK	**Ala-Archa**	**2.56**	**63**	PN	**Pn**	**01 30 11.3**	**+1.2**
AAK						01 30 48.7	
AAK				pmax	pmax		
	comp=Z,83nm,0.3s						
AAK				MLR	MLR		
	comp=Z,729nm,21.7s						
FRU	**Bishkek**	**2.73**	**60**	*e*PN	**Pn**	**01 30 14.0**	**+1.6**
FRU				*i*		01 30 22.0	
FRU				*i* S	**Sn**	**01 30 52.2**	**+6.9**
FRU				*i*		01 30 59.0	
FRU				pmax	pmax		
	comp=Z,850nm,0.6s						
FRU				smax			
	comp=N,6μm,0.7s						
KBK	**Karagaybulak**	**2.88**	**66**	P	**Pn**	**01 30 17.1**	**+2.7**
	SNR=221						
CHMS	**Chumysh**	**2.89**	**58**	P	**Pn**	**01 30 16.6**	**+1.9**
	SNR=19						
KZA	**Kyzart**	**2.93**	**78**	P	**Pn**	**01 30 17.4**	**+2.2**
	SNR=190						
TKM2	**Tokmak 2**	**3.42**	**65**	⇓Pn	**Pn**	**01 30 24.2**	**+2.3**
	comp=N,160nm,0.5s						
TKM2				⇑Lg		01 31 14.1	
	comp=N,2μm,0.9s						
TKM2	**Tokmak 2**	**3.42**	**65**	P	**Pn**	**01 30 24.1**	**+2.2**
	SNR=58						
TKM2	**Tokmak 2**	**3.42**	**65**	*e*Pn	**Pn**	**01 30 22.7**	**+0.8**
TKM2				*e*Sn	**Sn**	**01 31 13.2**	**+11**
ULHL	**Ulahol**	**3.69**	**77**	P	**Pn**	**01 30 27.5**	**+1.9**
	SNR=34						
KSH	**Kashi**	**4.03**	**118**	Pn	**Pn**	**01 30 31.8**	**+1.5**
KSH				Sn	**Sn**	**01 31 19.9**	**+2.5**
KSH				smax			
	comp=N,2μm,0.9s						
KSH				smax			
	comp=E,1μm,0.9s						
KNDC	**Almaty**	**4.46**	**66**	⇓Pg	**Pg**	**01 30 50.4**	**-3.8**
	comp=E,598nm,0.8s						
KNDC				⇓Lg		01 31 47.0	
	comp=E,2μm,1.1s						
AAA	**Alma-Ata**	**4.46**	**65**	*i* PN	**Pg**	**01 30 52.5**	**-1.9**
AAA				pmax	pmax		
	comp=Z,393nm,0.3s						
KBL	**Kabul**	**7.22**	**196**	*e*Pn	**Pn**	**01 31 16.1**	**+1.9**
KBL				*e*Sn	**Sn**	**01 32 38.5**	**+2.4**
CEP	**Cherat**	**7.70**	**177**	P	**Pn**	**01 31 23.1**	**+2.3**
CEP				S	**Sn**	**01 32 53.0**	**+5.0**
CHCP	**Chirah Chowk**	**8.00**	**169**	P	**Pn**	**01 31 27.3**	**+2.5**
THW	**Thamme Wali**	**8.72**	**178**	P	**Pn**	**01 31 35.3**	**+0.5**
MK31	**Makanchi Array**	**9.43**	**52**	⇓Pn	**Pn**	**01 31 45.8**	**+1.3**
	comp=Z,10nm,0.5s,baz=238,slow=14,SNR=217						
MK31				⇑Lg		01 34 24.0	
	comp=Z,134nm,0.9s,baz=239,slow=28,SNR=3.6						
MK31	**Makanchi Array**	**9.43**	**52**	*e*Pn	**Pn**	**01 31 45.0**	**+0.5**
MK31	**Makanchi Array**	**9.43**	**52**	*i* P	**Pn**	**01 31 45.7**	**+1.3**
MK31				pmax	pmax		
	comp=Z,11nm,0.3s						
MKAR	**Makanchi Array**	**9.43**	**52**	Pn	**Pn**	**01 31 45.1**	**+0.7**
MKAR				Lg		01 34 23.2	
MKAR				LR	LR	01 35 40.3	
MKAR	**Makanchi Array**	**9.43**	**52**	Pn	**Pn**	**01 31 45.1**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=236,slow=13,SNR=35						
MKAR				Lg		01 34 23.2	
	comp=Z,3.0nm,0.3s,baz=260,slow=22,SNR=4.3						
MKAR				LR	LR	01 35 40.3	
	comp=Z,563nm,19.0s,baz=199,slow=40						
THN	**Thein Dam**	**9.71**	**158**	*e*PKP	**Pn**	**01 31 48.2**	**-0.2**
THN				*ex*	x	01 33 30.1	
KURBB	**Kurchatov Arra**	**10.35**	**26**	⇓Pn	**Pn**	**01 31 55.4**	**-1.7**
	comp=Z,0.9nm,0.5s						
KURBB				⇓Lg		01 34 52.9	
	comp=Z,198nm,1.5s						
KURK	**Kurchatov**	**10.46**	**26**	⇓Pn	**Pn**	**01 31 57.8**	**-0.7**
	comp=Z,19nm,1.0s						
KURK				⇓Sn	**Sn**	**01 34 02.6**	**+7.1**
	comp=Z,58nm,0.9s						
KURK				⇓Lg		01 34 54.6	
	comp=Z,603nm,1.2s						
KURK	**Kurchatov**	**10.46**	**26**	*e*Pn	**Pn**	**01 31 56.9**	**-1.6**
KURK				*e*Sn	**Sn**	**01 33 51.1**	**-4.4**
KURK	**Kurchatov**	**10.46**	**26**	Pn	**Pn**	**01 31 55.2**	**-3.3**
	comp=Z,0.2nm,0.3s,baz=220,slow=12,SNR=14						
KURK				Lg		01 34 52.8	
	comp=Z,1.7nm,0.3s,baz=215,slow=29,SNR=8.8						
KURK				LR	LR	01 36 20.3	
	comp=Z,298nm,20.9s,baz=210,slow=40						
KURK	**Kurchatov**	**10.46**	**26**	*c i*P	**Pn**	**01 31 57.1**	**-1.4**
KURK				pmax	pmax		
	comp=Z,13nm,1.7s						
KURK				MLR	MLR		
	comp=Z,500nm,15.0s						
VAN	**Vannovskaya**	**10.84**	**255**	*e*P	**Pn**	**01 32 01.2**	**-2.5**
BHK	**Bhakra**	**10.87**	**157**	*ex*	x	01 33 44.0	
SDNR	**Sundarnagar**	**10.97**	**154**	*e*PKP	**Pn**	**01 32 03.5**	**-2.0**
SDNR				*ex*	x	01 34 01.5	
AB31	**Akbulak array**	**11.15**	**318**	Pn	**Pn**	**01 32 06.8**	**-1.1**
	comp=Z,19nm,0.7s,baz=129,slow=14,SNR=210						
AB31				⇑Sn	**Sn**	**01 34 10.8**	**-1.6**
	comp=Z,9.4nm,0.3s						
AB31	**Akbulak array**	**11.15**	**318**	*i* P	**Pn**	**01 32 06.8**	**-1.1**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.2s						
ABKAR	**Akbulak array**	**11.15**	**318**	*e*Pn	**Pn**	**01 32 06.4**	**-1.5**
	comp=Z,0.3nm,0.3s						
ABKAR				*e*Sn	**Sn**	**01 34 09.9**	**-2.5**
VOSK	**Vostochnaya**	**11.20**	**359**	P	**Pn**	**01 32 07.5**	**-1.1**
VOSK						01 34 08.0	
VOSK				pmax	pmax		
	comp=Z,16nm,0.9s						
VOSK				smax			
	comp=N,107nm,0.9s						
SMLA	**Simla**	**11.37**	**154**	*i* P	**Pn**	**01 32 08.2**	**-2.8**
SMLA				*i* S	**Sn**	**01 34 05.1**	**-13**
SMLA				*i* S	**Sn**	**01 34 05.1**	**-13**
KLP	**Kalpa**	**11.39**	**149**	*e*PKP	**Pn**	**01 32 08.2**	**-3.2**
KLP				*e*S	**Sn**	**01 34 05.6**	**-13**
BVA0	**Borovoye Array**	**11.52**	**357**	⇑Pn	**Pn**	**01 32 12.4**	**-0.6**
	comp=N,2.6nm,0.7s,baz=160,slow=13,SNR=121						
BVA0				⇓Sn	**Sn**	**01 34 16.6**	**-4.9**
	comp=N,13nm,0.8s,baz=169,slow=25,SNR=18						
BVA0	**Borovoye Array**	**11.52**	**357**	*e*P	**Pn**	**01 32 11.8**	**-1.2**
BVA0						01 34 16.5	
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BVA0				smax			
	comp=N,9.0nm,0.5s						
BVAR	**Borovoye Array**	**11.52**	**357**	Pn	**Pn**	**01 32 11.8**	**-1.2**
	comp=N,3.4nm,0.3s,baz=155,slow=11,SNR=40						
BVAR				Sn	**Sn**	**01 34 17.0**	**-4.5**
	comp=N,18nm,0.3s,baz=165,slow=25,SNR=18						
BVAR				Lg		01 35 32.0	
	baz=162,slow=24,SNR=2.6						
BVAR	**Borovoye Array**	**11.52**	**357**	P	**Pn**	**01 32 11.8**	**-1.2**
BVAR						01 34 17.0	
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BVAR				smax			
	comp=N,18nm,0.3s						
ZRNK	**Zerenda**	**11.54**	**353**	*i* P	**Pn**	**01 32 12.2**	**-1.1**
ZRNK				pmax	pmax		
	comp=Z,20nm,0.7s						
BRVK	**Borovoye**	**11.56**	**357**	*e*Pn	**Pn**	**01 32 12.0**	**-1.5**
BRVK				*e*Sn	**Sn**	**01 34 19.6**	**-2.8**
BRVK	**Borovoye**	**11.56**	**357**	*d i*P	**Pn**	**01 32 12.7**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,22nm,0.6s						
BRVK				MLR	MLR		
	comp=Z,900nm,18.0s						
BRVK	**Borovoye**	**11.56**	**357**	Pn	**Pn**	**01 32 13.5**	**0.0**
	SNR=19						
WMQ	**Urumqi**	**12.22**	**74**	P	**Pn**	**01 32 25.2**	**+2.6**
WMQ				pP		01 32 30.7	
WMQ				sP		01 32 34.7	
WMQ				*e*S	**Sn**	**01 34 41.6**	**+3.0**
WMQ				sS		01 34 50.2	
WMQ				SS		01 34 56.1	
WMQ				PcP	PcP	01 38 07.3	+2.0
WMQ				pmax	pmax		
	comp=Z,19nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.0s						
WMQ				LR	LR		
	comp=N,1μm,10.0s						
WMQ				LR	LR		
	comp=E,1μm,9.6s						
WMQ				LR	LR		
	comp=Z,1μm,7.0s						
JOSI	**Joshimath**	**12.78**	**146**	*e*PKP	**Pn**	**01 32 32.7**	**+2.4**
JOSI				*e*S	**Sn**	**01 34 45.7**	**-6.8**
AKTK	**Aktyubinsk**	**12.86**	**318**	Pn	**Pn**	**01 32 30.0**	**-1.3**
AKTK				Sn	**Sn**	**01 34 52.0**	**-2.2**
AKTK				LR	LR	01 37 44.2	
AKTO	**Aktyubinsk**	**12.86**	**318**	Pn	**Pn**	**01 32 30.0**	**-1.3**
	comp=Z,2.8nm,0.3s,baz=129,slow=14,SNR=28						
AKTO				Sn	**Sn**	**01 34 52.0**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=198,slow=20,SNR=4.3						
AKTO				LR	LR	01 37 44.2	
	comp=Z,715nm,19.6s,baz=138,slow=38						
AKTO	**Aktyubinsk**	**12.86**	**318**	P	**Pn**	**01 32 30.0**	**-1.3**
AKTO						01 34 52.0	
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKTO				smax			
	comp=N,1.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,715nm,19.6s						
RTK	**Rohtak**	**13.12**	**160**	*e*PKP	**Pn**	**01 32 32.6**	**-2.4**
NDI	**New Delhi**	**13.67**	**158**	*e*PKP	**Pn**	**01 32 40.2**	**-2.3**
NDI				AMb	AMB	01 32 46.1	
	comp=Z,21nm,0.6s						
NDI				*ex*	x	01 35 06.0	
AYAN	**Aya Nagar**	**13.83**	**158**	*e*PKP	**Pn**	**01 32 42.6**	**-2.2**
KHET	**Khetri**	**13.90**	**164**	*e*PKP	**Pn**	**01 32 44.5**	**-1.2**
KHET				AMb	AMB	01 32 58.6	
	comp=Z,38nm,0.8s						
KHET				*ex*	x	01 35 05.2	
KHET				*ex*	x	01 35 12.7	
KUDL	**Kundal**	**13.99**	**161**	*e*PKP	**Pn**	**01 32 43.8**	**-3.1**
KUDL				*ex*	x	01 35 10.7	
SONA	**Sohna**	**14.04**	**159**	*e*PKP	**Pn**	**01 32 44.7**	**-2.9**
SONA				AMb	AMB	01 32 51.7	
	comp=Z,21nm,0.6s						
SONA				*ex*	x	01 35 10.7	
SONA				*ex*	x	01 35 12.9	
AJM	**Ajmer**	**15.25**	**169**	*e*PKP	**Pn**	**01 33 01.6**	**-2.3**
AJM				AMb	AMB	01 33 03.1	
	comp=Z,26nm,1.8s						
ZALV	**Zalesovo Beam**	**15.32**	**31**	Pn	**Pn**	**01 33 02.2**	**-2.6**
ZALV				Sn	**Sn**	**01 35 48.8**	**-5.5**
ZALV				LR	LR	01 39 40.5	
ZALV	**Zalesovo Beam**	**15.32**	**31**	Pn	**Pn**	**01 33 02.2**	**-2.6**
	comp=Z,0.8nm,0.3s,baz=227,slow=12,SNR=7.0						
ZALV				Sn	**Sn**	**01 35 48.8**	**-5.5**
	comp=Z,1.1nm,0.3s,baz=225,slow=16,SNR=3.4						
ZALV				LR	LR	01 39 40.5	
	comp=Z,86nm,20.2s,baz=230,slow=40						
ZALV	**Zalesovo Beam**	**15.32**	**31**	P	**Pn**	**01 33 02.2**	**-2.5**
ZALV						01 35 48.8	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				smax			
	comp=N,1.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,86nm,20.2s						
NVS	**Novosibirsk**	**15.45**	**26**	*e*P	**Pn**	**01 33 09.8**	**+3.4**
NVS				*e*S	**Sn**	**01 35 45.7**	**-12**
SVE	**Sverdlovsk**	**16.81**	**339**	*e*P	**Pn**	**01 33 23.7**	**-0.2**
SVE				*e*S	**Sn**	**01 36 34.8**	**+4.4**
SVE				pmax	pmax		
	comp=Z,40nm,1.2s						
SVE				MLR	MLR		
	comp=Z,2μm,8.0s						
KOLN	**Koldanda**	**16.98**	**140**	*e*P	**Pn**	**01 33 22.1**	**-4.1**
ARU	**Arti**	**17.08**	**335**	*e*Pn	**Pn**	**01 33 25.0**	**-2.2**
	comp=Z,22nm,0.9s						
ARU	**Arti**	**17.08**	**335**	*c i*P	**Pn**	**01 33 26.2**	**-1.0**
ARU				S	**Sn**	**01 36 35.9**	**-0.9**
ARU				pmax	pmax		
	comp=Z,17nm,1.0s						
GKN	**Gorkha**	**17.30**	**137**	*e*P	**Pn**	**01 33 26.9**	**-3.3**
	comp=Z,108nm,0.6s						
MAK	**Makhachkala**	**17.74**	**283**	*e*P	**Pn**	**01 33 34.2**	**-1.3**
MAK				*e*		01 36 52.6	
MAK				MLR	MLR		
	comp=Z,319nm,8.0s						
KKN	**Kakani**	**17.81**	**136**	*e*P	**Pn**	**01 33 33.3**	**-3.2**
	comp=Z,197nm,1.1s						
DMN	**Daman**	**17.87**	**137**	*e*P	**Pn**	**01 33 33.6**	**-3.6**
GUN	**Gumba**	**18.03**	**134**	*e*P	**Pn**	**01 33 36.4**	**-2.8**
	comp=Z,212nm,1.1s						
PKIN	**Phulchoki**	**18.04**	**136**	*e*P	**Pn**	**01 33 36.5**	**-2.9**
	comp=Z,334nm,1.3s						
PKI	**Pulchoki**	**18.05**	**136**	*e*P	**Pn**	**01 33 35.9**	**-3.6**
	comp=Z,323nm,1.2s						
JIRN	**Jiri**	**18.40**	**134**	*e*P	**Pn**	**01 33 40.8**	**-2.9**
BHPL	**Bhopal**	**18.93**	**163**	*e*PKP	**Pn**	**01 33 47.6**	**-2.5**
BHPL				AMb	AMB	01 33 53.7	
	comp=Z,48nm,0.8s						
RAMN	**Ramite**	**19.18**	**135**	*e*P	**Pn**	**01 33 52.2**	**-1.0**
	comp=Z,199nm,0.9s						
TAPN	**Taplejung**	**19.48**	**131**	*e*P	**Pn**	**01 33 56.1**	**-0.7**
	comp=Z,160nm,1.0s						
ODAN	**Odare**	**19.68**	**133**	*e*P	**Pn**	**01 33 59.0**	**-0.2**
	comp=Z,232nm,1.2s						
LSA	**Lhasa**	**19.88**	**120**	P	**Pn**	**01 34 05.0**	**+3.4**
LSA				pP	pP	01 34 15.8	+12
LSA				S	**Sn**	**01 37 45.5**	**+0.6**
LSA				pmax	pmax		
	comp=Z,30nm,1.0s						
LSA				pmax	pmax		
	comp=Z,250nm,5.0s						
LSA				LR	LR		
	comp=N,380nm,9.0s						
LSA				LR	LR		
	comp=E,150nm,8.0s						
LSA				LR	LR		
	comp=Z,340nm,10.0s						
LSA	**Lhasa**	**19.88**	**120**	*e*P	**Pn**	**01 34 01.9**	**+0.3**
	comp=Z,55nm,1.2s						
LSA	**Lhasa**	**19.88**	**120**	*e*P	**Pn**	**01 34 01.9**	**+0.3**
LSA				pmax	pmax		
	comp=Z,55nm,1.2s						
GNI	**Garni**	**20.19**	**275**	*e*P	**P**	**01 34 04.9**	**+1.6**
	comp=Z,77nm,0.9s						
GNI	**Garni**	**20.19**	**275**	P	**P**	**01 34 04.5**	**+1.3**
	comp=Z,65nm,1.0s,baz=90,slow=3.2,SNR=19						
GNI	**Garni**	**20.19**	**275**	*c i*P	**P**	**01 34 04.8**	**+1.6**
GNI				pmax	pmax		
	comp=Z,93nm,1.3s						
GNI				MLR	MLR		
	comp=Z,100nm,15.0s						
GNI	**Garni**	**20.19**	**275**	P	**P**	**01 34 05.7**	**+2.5**
	SNR=13						
SOKR	**Solikamsk**	**20.22**	**338**	*c i*P	**P**	**01 34 09.7**	**+6.3**
SOKR				pmax	pmax		
	comp=Z,20nm,1.3s						
SOKR				MLR	MLR		
	comp=Z,560nm,16.0s,MS4.0						
ZEI	**Tsey**	**20.39**	**283**	*e*P	**P**	**01 34 06.5**	**+1.1**
ZEI				pmax	pmax		
	comp=Z,45nm,1.4s						
NAZ	**Nazwa, Dubai**	**21.04**	**223**	P	**P**	**01 34 13.7**	**+1.1**
	SNR=15						
ASHO	**Ashiyiah**	**21.09**	**222**	P	**P**	**01 34 14.4**	**+1.3**
	SNR=10						
AKL	**Akola**	**21.30**	**165**	*e*PKP	**P**	**01 34 12.4**	**-3.0**
ASUD	**Al Ashush, Dub**	**21.51**	**223**	P	**P**	**01 34 19.3**	**+1.7**
	SNR=6.6						
SMDO	**Samad**	**21.55**	**215**	P	**P**	**01 34 18.7**	**+0.7**
	SNR=11						
WBK	**Wadi Bani Khal**	**21.56**	**213**	P	**P**	**01 34 19.6**	**+1.4**
	SNR=16						
GTA	**Gaotai**	**21.69**	**86**	P	**P**	**01 34 20.6**	**+1.2**
GTA				pP		01 34 27.2	
GTA				sP	sP	01 34 31.1	+6.6
GTA				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.6						
GTA				pmax	pmax		
	comp=Z,100nm,5.7s						
GTA				LR	LR		
	comp=N,650nm,18.4s,MS4.3						
GTA				LR	LR		
	comp=E,690nm,14.6s,MS4.3						
GTA				LR	LR		
	comp=Z,690nm,17.2s,MS4.1						
ARQ	**Araqi**	**22.00**	**219**	P	**P**	**01 34 25.6**	**+2.7**
	SNR=8.7						
JMDO	**Jabal Madar**	**22.13**	**214**	P	**P**	**01 34 25.5**	**+1.2**
	SNR=9.9						
BSY	**Bisya**	**22.20**	**217**	P	**P**	**01 34 28.7**	**+3.7**
	SNR=10						
VRHR	**Novokhopersk**	**22.54**	**305**	*e*P	**P**	**01 34 28.1**	**-0.3**
VRHR				*e*S	**S**	**01 38 33.4**	**-2.1**
VRHR				pmax	pmax		
	comp=N,6.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,7.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
VRHR				smax			
	comp=N,50nm,1.3s						
VRHR				smax			
	comp=Z,10.0nm,1.3s						
VRHR				smax			
	comp=E,20nm,0.7s						
MOY	**Mondy**	**22.58**	**53**	*e*P	**P**	**01 34 29.5**	**+0.7**
MOY				pmax	pmax		
	comp=Z,62nm,1.8s,mb4.7						
UMR	**Umm Al-Rimmam**	**22.59**	**246**	*e*P	**P**	**01 34 28.6**	**-0.6**
UMR				AMb	AMB	01 34 32.6	
	comp=Z,239nm,1.3s,mb5.5						
MIB	**Mutribah**	**22.70**	**247**	*e*P	**P**	**01 34 29.7**	**-0.6**
MIB				AMb	AMB	01 34 32.9	
	comp=Z,202nm,1.3s,mb5.4						
KBD	**Kabd**	**22.84**	**245**	*e*P	**P**	**01 34 31.9**	**+0.1**
KBD				AMb	AMB	01 34 36.8	
	comp=Z,99nm,1.2s,mb5.1						
RDF	**Al-Radifah**	**23.10**	**245**	*e*P	**P**	**01 34 34.5**	**0.0**
RDF				AMb	AMB	01 34 39.7	
	comp=Z,128nm,1.3s,mb5.2						
SOC	**Sochi**	**23.35**	**286**	*e*P	**P**	**01 34 32.3**	**-4.8**
SOC				*e*		01 35 16.2	
SOC				*e*S	**S**	**01 38 41.7**	**-7.6**
SOC				MLR	MLR		
	comp=Z,379nm,18.0s,MS3.9						
ZAK	**Zakamensk**	**23.72**	**57**	*e*P	**P**	**01 34 39.6**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.0						
VORD	**Divnogorie**	**23.95**	**304**	*e*P	**P**	**01 34 42.6**	**-0.1**
VORD				*e*S	**S**	**01 38 55.2**	**-3.7**
VORD				pmax	pmax		
	comp=N,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,8.0nm,0.6s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
VORD				smax			
	comp=E,210nm,9.6s						
VORD				smax			
	comp=Z,40nm,9.6s						
VORD				smax			
	comp=N,10.0nm,4.8s						
VORD				MLR	MLR		
	comp=N,730nm,8.0s						
VORD				MLR	MLR		
	comp=E,160nm,8.0s						
VORD				MLR	MLR		
	comp=Z,820nm,8.0s						
VSR	**Storozhevoye**	**24.08**	**305**	*e*P	**P**	**01 34 42.5**	**-1.4**
VSR				*e**SP	sP	01 34 48.9	-0.2
VSR				*e*PPP		01 35 18.9	
VSR				*e*S	**S**	**01 38 58.9**	**-2.0**
VSR				pmax	pmax		
	comp=E,5.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.3						
VSR				smax			
	comp=N,70nm,2.3s						
VSR				smax			
	comp=E,30nm,1.2s						
VSR				smax			
	comp=Z,10.0nm,1.2s						
VSR				MLR	MLR		
	comp=N,390nm,18.0s,MS4.0						
VSR				MLR	MLR		
	comp=E,330nm,18.0s,MS4.0						
VSR				MLR	MLR		
	comp=Z,410nm,18.0s,MS4.0						
VOR	**Voronezh**	**24.16**	**306**	P	**P**	**01 34 43.0**	**-1.6**
VOR				pmax	pmax		
	comp=Z,140nm,1.0s,mb5.3						
TLY	**Talaya**	**24.19**	**54**	*e*P	**P**	**01 34 46.8**	**+1.9**
TLY				*e*SS		01 40 07.8	
TLY				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						
TLY				MLR	MLR		
	comp=Z,349nm,11.0s,MS4.1						
HYB	**Hyderabad**	**24.81**	**164**	*e*P	**P**	**01 34 50.0**	**-0.7**
HYB	**Hyderabad**	**24.81**	**164**	*i* P	**P**	**01 34 50.0**	**-0.7**
ANN	**Anapa**	**24.88**	**289**	*e*P	**P**	**01 34 49.1**	**-2.1**
ANN				*e*S	**S**	**01 39 14.9**	**+1.0**
ANN				pmax	pmax		
	comp=Z,95nm,1.6s,mb5.1						
ANN				MLR	MLR		
	comp=N,266nm,12.0s,MS4.1						
ANN				MLR	MLR		
	comp=E,283nm,12.0s,MS4.1						
ANN				MLR	MLR		
	comp=Z,207nm,12.0s,MS3.9						
SONM	**Songino Array**	**25.52**	**64**	P	**P**	**01 34 57.8**	**+0.8**
	comp=Z,3.4nm,0.9s,mb3.9,baz=268,slow=10.0,SNR=19						
SONM				LR	LR	01 45 03.6	
	comp=Z,237nm,18.6s,MS3.7,baz=139,slow=37						
SONM	**Songino Array**	**25.52**	**64**	P	**P**	**01 34 57.8**	**+0.8**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM				MLR	MLR		
	comp=Z,237nm,18.6s						
LZH	**Lanzhou**	**25.77**	**91**	*e*P	**P**	**01 35 02.3**	**+

ULN pmax pmax
comp=Z,28nm,1.4s,mb4.6
ULN Ulaanbaatar 25.96 64 P **P** **01 35 02.4 +1.4**
SNR=24
MOS Moscow 26.14 314 *e*P **P** **01 35 04.8 +2.2**
MOS *e* 01 35 46.9
MOS *e*SS 01 40 58.3
MOS pmax pmax
comp=Z,46nm,1.2s,mb4.9
MOS MLR MLR
comp=Z,400nm,10.0s,MS4.2
OBN Obninsk 26.53 313 *e*P **P** **01 35 07.6 +1.5**
comp=Z,46nm,1.2s,mb4.9
OBN Obninsk 26.53 313⇑ *i*P **P** **01 35 05.9 -0.2**
OBN *i* 01 35 45.2
OBN *e* 01 38 29.9
OBN pmax pmax
comp=Z,29nm,1.2s,mb4.7
OBN MLR MLR
comp=Z,300nm,20.0s,MS3.8
SIM Simferopol' 27.21 290 *de*P **P** **01 35 13.1 +0.7**
SIM *e*S **S** **01 39 50.0 -0.9**
SIM pmax pmax
comp=Z,16nm,1.1s,mb4.5
KLMR Klimovskoe 27.37 326 *e*P **P** **01 35 12.7 -0.9**
KLMR *e* 01 35 55.5
KLMR *e*S **S** **01 39 54.8 +1.8**
KLMR pmax pmax
comp=Z,32nm,1.3s,mb4.7
CD2 Chengdu 28.03 102 P **P** **01 35 21.1 +1.3**
CD2 pP pP 01 35 28.2 +4.7
CD2 sP sP 01 35 31.7 +6.7
CD2 PP 01 36 11.1
CD2 S **S** **01 40 02.3 -1.7**
CD2 sS sS 01 40 14.3 +4.2
CD2 SS 01 41 24.5
CD2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
CD2 LR LR
comp=N,430nm,16.6s,MS4.3
CD2 LR LR
comp=E,400nm,13.7s,MS4.3
CD2 LR LR
comp=Z,980nm,14.7s,MS4.5
BR131 Keskin Array S 28.57 279 *e*P **P** **01 35 25.3 +0.9**
comp=Z,2.8nm,0.7s,mb4.1
BRTR Keskin Array B 28.57 279 P **P** **01 35 25.9 +1.4**
comp=Z,2.9nm,0.7s,mb4.1,baz=90,slow=7.9,SNR=13
BRTR Keskin Array B 28.57 279 P **P** **01 35 25.9 +1.4**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
ASF Jabal al Asfar 28.98 262 P **P** **01 35 29.3 +1.0**
comp=Z,1.2nm,0.8s,mb3.7,baz=341,slow=7.6,SNR=3.4
ASF LR LR 01 48 06.0
comp=Z,83nm,20.0s,MS3.4,baz=52,slow=38
ASF Jabal al Asfar 28.98 262 P **P** **01 35 29.3 +1.0**
ASF pmax pmax
comp=Z,1.0nm,0.8s
ASF MLR MLR
comp=Z,83nm,20.0s
MMAI Mount Meron Ar 29.70 265 P **P** **01 35 36.2 +1.5**
comp=Z,8.5nm,1.0s,mb4.4,baz=71,slow=10,SNR=7.0
HHC Hu-ho-hao-te 30.05 78 *e*P **P** **01 35 38.7 +1.0**
HHC pP pP 01 35 46.0 +4.6
HHC sP sP 01 35 49.8 +6.9
HHC PP PP 01 36 37.0 -8.4
HHC S **S** **01 40 34.4 -1.2**
HHC sS sS 01 40 45.8 +4.1
HHC SS SS 01 42 10.4 -33
HHC PcS PcS 01 42 22.7 +0.1
HHC ScS ScS 01 46 13.1 -3.5
HHC pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
HHC pmax pmax
comp=Z,110nm,5.5s
HHC LR LR
comp=N,430nm,12.9s
HHC LR LR
comp=E,250nm,8.0s
HHC LR LR
comp=Z,240nm,13.1s,MS4.0
AKASG Malin Array Be 30.27 302 P **P** **01 35 39.3 -0.2**
comp=Z,2.3nm,0.6s,mb4.1,baz=80,slow=7.7,SNR=8.5
AKASG LR LR 01 49 58.2
comp=Z,270nm,21.1s,MS3.9,baz=95,slow=41
AKASG Malin Array Be 30.27 302 P **P** **01 35 39.3 -0.2**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG MLR MLR
comp=Z,270nm,21.1s
AKBB Malin Array Si 30.27 302 *e*P **P** **01 35 39.3 -0.2**
KIEV Kiev 30.28 302 *e*P **P** **01 35 39.6 0.0**
comp=Z,8.7nm,1.0s,mb4.4
KIEV Kiev 30.28 302 *e*P **P** **01 35 39.6 0.0**
KIEV pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
XAN Xi'an 30.41 92 P **P** **01 35 40.9 0.0**
XAN pP pP 01 35 48.2 +3.6
XAN sP sP 01 35 51.7 +5.6
XAN pmax pmax
comp=Z,2.0nm,1.1s,mb3.8
XAN pmax pmax
comp=Z,18nm,6.5s
XAN LR LR
comp=N,320nm,16.1s,MS4.1
XAN LR LR
comp=E,93nm,15.0s,MS4.1
XAN LR LR
comp=Z,94nm,17.9s,MS3.5
KMI Kunming 30.67 112 P **P** **01 35 46.2 +3.0**
KMI pP pP 01 35 52.6 +5.7
KMI sP sP 01 35 55.5 +7.1
KMI PP PP 01 36 46.5 -5.9
KMI S **S** **01 40 45.2 -0.3**
KMI sS sS 01 40 56.7 +5.1
KMI SS SS 01 42 27.1 -29
KMI pmax pmax
comp=Z,15nm,0.9s,mb4.8
KMI pmax pmax
comp=Z,89nm,3.6s
KMI LR LR
comp=N,200nm,16.6s,MS4.0
KMI LR LR
comp=E,230nm,15.5s,MS4.0
KMI LR LR
comp=Z,160nm,15.5s,MS3.8
MICGM Minsk 31.34 309⇑ *e*P **P** **01 35 47.0 -1.9**
MNK Minsk 31.37 309⇑ *e*P **P** **01 35 47.0 -2.1**
NACGM Naroch 32.02 310 *e* **P** **01 35 52.0 -2.8**
VRI Vrincioaia 32.26 293⇓ *i*P **P** **01 35 58.5 +1.4**
CHTO Chiang Mai 32.62 126 *e*P **P** **01 36 00.8 +0.4**
comp=Z,2.3nm,0.5s,mb4.4
CHTO Chiang Mai 32.62 126 *e*P **P** **01 36 00.8 +0.4**
CHTO pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
GYA Guiyang 32.62 106 P **P** **01 36 01.9 +1.4**
GYA PP PP 01 37 11.0 -3.1
GYA PcP PcP 01 38 47.6 +1.1
GYA S **S** **01 41 15.0 -1.1**
GYA ScP ScP 01 42 29.4 -0.7
GYA ScS ScS 01 46 27.3 -2.5
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.1
GYA pmax pmax
comp=Z,110nm,4.8s
MLR Muntele Rosu 32.86 293⇓ *i*P **P** **01 36 03.9 +1.6**
CMAR Chiang Mai Arr 32.89 126 P **P** **01 36 00.9 -1.9**
comp=Z,1.0nm,0.3s,mb4.2,baz=312,slow=9.3,SNR=10
CMAR LR LR 01 51 02.5
comp=Z,179nm,21.2s,MS3.7,baz=316,slow=40
CMAR Chiang Mai Arr 32.89 126 P **P** **01 36 00.9 -1.9**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR MLR MLR
comp=Z,179nm,21.3s
BURAR Bucovina Array 33.06 297⇑ *i*P **P** **01 36 03.9 -0.1**
VOIR 33.49 293⇑ *i*P **P** **01 36 08.0 +0.2**
FINES FINESS Array B 33.60 322 P **P** **01 36 08.8 +0.3**
comp=Z,2.8nm,0.5s,mb4.5,baz=111,slow=9.0,SNR=42
FINES LR LR 01 50 36.5
comp=Z,370nm,19.0s,MS4.1,baz=112,slow=38
FINES FINESS Array B 33.60 322 P **P** **01 36 08.9 +0.3**
FINES pmax pmax
comp=Z,3.0nm,0.5s
FINES MLR MLR
comp=Z,370nm,19.0s
LVV L'vov 33.63 301 *e*P **P** **01 36 09.1 +0.1**
LVV *e*S **S** **01 41 30.9 -0.3**
LVV MLR MLR
comp=Z,300nm,17.0s,MS4.1
LVV MLR MLR
comp=N,200nm,16.0s,MS4.2
LVV MLR MLR
comp=E,300nm,19.0s,MS4.2
BJI Beijing 33.66 77 P **P** **01 36 08.9 -0.4**
BJI S **S** **01 41 30.5 -1.4**
BJI pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
BJI LR LR
comp=N,350nm,17.7s,MS4.2
BJI LR LR
comp=E,170nm,17.2s,MS4.2
BJI LR LR
comp=Z,100nm,20.7s,MS3.5
SUW Suwalki 34.06 308 *e*P **P** **01 36 12.8 +0.2**
SUW *ep*P pP 01 36 16.9 +0.5
SUW *e*S **S** **01 41 41.1 +3.4**
SUW LMZ 01 50 12.0
comp=Z,200nm,31.5s
SUW Suwalki 34.06 308 *e*P **P** **01 36 12.4 -0.3**
comp=Z,40nm,1.0s,mb5.3
KWP Kalwaria Pacla 34.50 300 *e*P **P** **01 36 17.9 +1.4**
KWP *ep*P pP 01 36 22.9 +2.6
KWP LMZ 01 52 24.4
comp=Z,400nm,21.0s
KWP Kalwaria Pacla 34.50 300 *e*P **P** **01 36 17.8 +1.3**
comp=Z,22nm,1.2s,mb5.0
KWP Kalwaria Pacla 34.50 300⇑ *i*P **P** **01 36 17.9 +1.4**
TRPA Tarpa 34.78 298⇓ *i*P **P** **01 36 20.2 +1.2**
DRGR 34.87 295⇑ *i*P **P** **01 36 21.3 +1.6**
UZH Uzhgorod 34.88 299 *e*P **P** **01 36 23.3 +3.5**
UZH *e* 01 37 40.3
UZH *e*S **S** **01 41 55.7 +5.1**
UZH *e*SS SS 01 44 22.3 +0.6
UZH MLR MLR
comp=N,470nm,18.0s,MS4.4
UZH MLR MLR
comp=E,360nm,18.0s,MS4.4
UZH MLR MLR
comp=Z,120nm,18.0s,MS3.7
GZR Gura Zlata 35.07 293⇑ *i*P **P** **01 36 23.4 +1.9**
WAR Warsaw 35.38 305 *e*P **P** **01 36 22.2 -1.9**
WAR LMZ 01 51 45.3
comp=Z,300nm,22.0s
VTS Vitosha 35.41 288⇓ *i*P **P** **01 36 25.6 +1.1**
STHS Stebnicka Huta 35.47 300 *e*P **P** **01 36 23.0 -1.9**
comp=Z,1.5nm,0.7s,mb4.0
STHS Stebnicka Huta 35.47 300 *e*P **P** **01 36 23.0 -1.9**
STHS pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
STHS Stebnicka Huta 35.47 300 *e*P **P** **01 36 23.0 -1.9**
NIE Niedzica 36.08 300 *e*P **P** **01 36 31.6 +1.5**
KECS Kecovo 36.09 299 *e*P **P** **01 36 28.6 -1.6**
comp=Z,1.4nm,1.0s,mb3.9
KECS Kecovo 36.09 299 *e*P **P** **01 36 28.6 -1.6**
KECS pmax pmax
comp=Z,1.0nm,1.0s,mb3.7
KECS Kecovo 36.09 299 *e*P **P** **01 36 28.6 -1.6**
WHN Wuhan 36.09 94 P **P** **01 36 30.0 -0.5**
WHN S **S** **01 42 05.6 -4.0**
WHN pmax pmax
comp=Z,53nm,1.3s,mb5.3
WHN LR LR
comp=N,620nm,10.3s,MS4.7
WHN LR LR
comp=E,350nm,10.6s,MS4.7
WHN LR LR
comp=Z,610nm,18.0s
OJC Ojcow 36.31 302 *e*P **P** **01 36 32.8 +0.7**
OJC *ep*P pP 01 36 35.3 -0.5
PSZ Piszkesteto 36.57 298 *e*P **P** **01 36 34.6 +0.2**
comp=Z,3.7nm,0.8s,mb4.3
PSZ Piszkesteto 36.57 298 *e*P **P** **01 36 34.6 +0.3**
PSZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
ARCES ARCESS Array B 36.67 335 P **P** **01 36 35.5 +0.6**
ARCES LR LR 01 52 48.8
ARCES ARCESS Array B 36.67 335 P **P** **01 36 35.5 +0.6**
comp=Z,2.5nm,0.4s,mb4.3,baz=116,slow=9.6,SNR=38
ARCES LR LR 01 52 48.7
comp=Z,243nm,19.8s,MS4.0,baz=151,slow=38
ARCES ARCESS Array B 36.67 335 P **P** **01 36 35.5 +0.6**
ARCES pmax pmax
comp=Z,3.0nm,0.4s
ARCES MLR MLR
comp=Z,243nm,19.8s
ARE0 ARCESS Array S 36.67 335 *e*P **P** **01 36 35.3 +0.4**
VYHS Vyhne 37.17 299 *e*P **P** **01 36 40.0 +0.5**
comp=Z,3.7nm,1.3s,mb4.0
VYHS Vyhne 37.17 299 *e*P **P** **01 36 40.0 +0.5**
VYHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.1
VYHS Vyhne 37.17 299 *e*P **P** **01 36 40.0 +0.5**
GVD Gavdhos 37.40 276 *e*P **P** **01 36 41.8 +0.2**
comp=Z,73nm,0.6s,mb5.7
KOLL Kolacno 37.44 299 *e*P **P** **01 36 43.4 +1.6**
KOLL Kolacno 37.44 299 *e*P **P** **01 36 43.4 +1.6**
GKP Gorka Klasztor 37.61 307 *e*P **P** **01 36 44.2 +1.0**
GKP *ep*P pP 01 36 46.4 -0.5
GKP *e*S **S** **01 42 29.8 -2.5**
GKP *e*sS sS 01 42 41.4 +3.0
GKP LMZ 01 53 10.1
comp=Z,300nm,21.7s
PKSM Moragy 37.73 295⇑ *i*P **P** **01 36 44.7 +0.4**
MORC Moravsky Berou 37.81 301 *e*P **P** **01 36 45.5 +0.6**
comp=Z,6.2nm,1.0s,mb4.3
MORC *e*PP PP 01 38 14.8 +3.7
MORC Moravsky Berou 37.81 301 *e*P **P** **01 36 45.5 +0.6**
MORC *e* 01 38 14.8
MORC pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
MORC Moravsky Berou 37.81 301⇓ *i*P **P** **01 36 46.2 +1.3**
ZST Bratislava 38.36 299 *e*P **P** **01 36 50.1 +0.6**
comp=Z,3.4nm,0.4s,mb4.4
ZST Bratislava 38.36 299 *e*P **P** **01 36 50.1 +0.6**
ZST pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
ZST Bratislava 38.36 299 *e*P **P** **01 36 50.1 +0.6**
KSP Ksiaz 38.45 303 *e*P **P** **01 36 50.7 +0.4**
KSP *ep*P pP 01 36 55.1 +1.1
KSP LMZ 01 55 19.1
comp=Z,500nm,19.5s
DPC Dobruska-Polom 38.50 302 *e*P **P** **01 36 51.1 +0.4**
DPC MLR MLR
comp=Z,200nm,13.2s,MS4.1
DPC Dobruska-Polom 38.50 302 *e*P **P** **01 36 51.1 +0.4**
DPC *ex* x 01 36 54.3
DPC AMS AMS 01 55 00.0
comp=Z,200nm,13.2s
UPC Upice 38.68 303 *e*P **P** **01 36 53.0 +0.9**
UPC Upice 38.68 303 *e*P **P** **01 36 53.0 +0.9**
NJ2 Nanjing 38.75 88 *e*P **P** **01 36 53.6 +0.6**
NJ2 PP PP 01 38 26.0 +4.4
NJ2 S **S** **01 42 48.5 -1.4**
NJ2 pmax pmax
comp=Z,20nm,1.0s,mb4.8
NJ2 pmax pmax
comp=Z,70nm,4.2s
NJ2 LR LR
comp=N,220nm,12.2s,MS4.4
NJ2 LR LR
comp=E,230nm,11.1s,MS4.4
NJ2 LR LR
comp=Z,340nm,12.9s,MS4.4
BSD Bornholm Skovb 38.85 310 *i* P **P** **01 36 55.2 +1.7**
BSD pmax pmax
comp=Z,12nm,0.9s,mb4.6
BSD MLR MLR
comp=Z,210nm,20.0s,MS4.0
BSD Bornholm Skovb 38.85 310 *i* P **P** **01 36 55.2 +1.7**
comp=Z,12nm,0.9s,mb4.6
BSD
comp=Z,210nm,20.0s
TREC Trest 39.21 301 *e*P **P** **01 36 57.9 +1.3**
TREC Trest 39.21 301 *e*P **P** **01 36 57.9 +1.3**
CN2 Changchun 39.22 68 *e*P **P** **01 36 57.1 +0.3**
CONA Conrad Observa 39.23 299⇑ *i*P **P** **01 36 57.3 +0.5**
comp=Z,12nm,1.1s,mb4.5,SNR=8.3
PVCC Panska Ves 39.58 303 *e*P **P** **01 37 00.2 +0.5**
PVCC MLR MLR
comp=Z,200nm,14.8s,MS4.1
PVCC Panska Ves 39.58 303 *e*P **P** **01 37 00.2 +0.5**
PVCC AMS AMS 01 55 30.0
comp=Z,200nm,14.8s
QIZ Qiongzhong 39.62 113 P **P** **01 37 00.4 +0.1**
QIZ S **S** **01 43 00.3 -2.8**
QIZ pmax pmax
comp=Z,13nm,1.7s,mb4.4
QIZ LR LR
comp=N,130nm,18.3s,MS4.0
QIZ LR LR
comp=E,140nm,14.1s,MS4.0
QIZ LR LR
comp=Z,180nm,14.0s,MS4.1
PRU Pruhonice 39.69 302 *e*P **P** **01 37 02.1 +1.5**
PRU MLR MLR
comp=Z,200nm,21.0s,MS3.9
PRU Pruhonice 39.69 302 *e*P **P** **01 37 02.1 +1.5**
PRU *ex* x 01 37 04.5
PRU *e*XS sS 01 43 16.6 +6.7
PRU AMS AMS 01 54 00.0
comp=Z,200nm,21.0s
BRG Berggiesshubel 39.92 304 *e*P **P** **01 37 03.1 +0.6**
comp=Z,11nm,1.2s,mb4.5
BRG Berggiesshubel 39.92 304 *e*P **P** **01 37 03.0 +0.5**
comp=Z,6.3nm,0.8s,mb4.4
BRG
comp=N,224nm,19.6s
BRG
comp=E,284nm,17.8s
BRG
comp=Z,349nm,18.2s
BRG Berggiesshubel 39.92 304 *e*P **P** **01 37 03.0 +0.5**
BRG pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
BRG MLR MLR
comp=N,134nm,19.6s,MS4.0
BRG MLR MLR
comp=E,170nm,17.8s,MS4.0
BRG MLR MLR
comp=Z,209nm,18.2s,MS4.0
SOKA Soboth 40.06 297⇑ *i*P **P** **01 37 05.0 +1.3**
comp=Z,6.3nm,1.0s,mb4.3
COP Copenhagen 40.22 311 *i* P **P** **01 37 05.6 +0.7**
COP pmax pmax
comp=Z,16nm,0.8s,mb4.8
COP MLR MLR
comp=Z,84nm,19.0s,MS3.6
COP Copenhagen 40.22 311 *i* P **P** **01 37 05.6 +0.7**
comp=Z,16nm,0.8s,mb4.8
COP
comp=Z,80nm,19.0s
MOA Molln 40.30 299⇑ *i*P **P** **01 37 06.5 +0.9**
comp=Z,6.5nm,0.9s,mb4.4
CLL Collm 40.43 304 *e*P **P** **01 37 06.8 +0.1**
comp=Z,11nm,0.9s,mb4.6
CLL Collm 40.43 304 *i* P **P** **01 37 03.9 -2.8**
comp=Z,8.0nm,0.7s,mb4.6
CLL *e*S **S** **01 43 17.0 +2.3**
CLL Collm 40.43 304 *i* P **P** **01 37 03.9 -2.8**
CLL *e*S **S** **01 43 17.0 +2.3**
CLL pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
CLL Collm 40.43 304⇓ *i*P **P** **01 37 07.4 +0.7**
comp=Z,8.0nm,0.7s,mb4.6
CLL *i* pP 01 37 09.3 -1.2
CLL *e*PPlp 01 38 38.0
CLL *e*PP PP 01 38 40.0 +0.4
comp=Z,18nm,1.7s
CLL *e*S **S** **01 43 17.0 +2.3**
CLL *e*SS SS 01 46 18.0 +4.4
CLL LmV 01 55 00.0
comp=Z,200nm,21.7s
GEC2 GERESS Array S 40.45 301 *e*P **P** **01 37 07.6 +0.7**
comp=Z,189nm,3.0s
GEC2 GERESS Array S 40.45 301 *e*P **P** **01 37 07.6 +0.7**
GEC2 pmax pmax
comp=Z,189nm,3.0s
KHC Kasperske Hory 40.47 301 *e*P **P** **01 37 07.9 +0.8**
comp=Z,9.5nm,1.0s,mb4.5
KHC Kasperske Hory 40.47 301 *e*P **P** **01 37 07.9 +0.8**
KHC pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
KHC Kasperske Hory 40.47 301 *e*P **P** **01 37 07.8 +0.7**
KHC *ex* x 01 37 10.4
KHC AMS AMS 01 54 30.0
comp=Z,200nm,19.3s
NOA NORSAR Array B 40.65 320 P **P** **01 37 08.0 -0.4**
NOA LR LR 01 54 53.7
NOA NORSAR Array B 40.65 320 P **P** **01 37 08.0 -0.4**
comp=Z,5.6nm,0.8s,mb4.2,baz=91,slow=8.3,SNR=18
NOA LR LR 01 54 53.7
comp=Z,271nm,20.6s,MS4.1,baz=90,slow=38
NOA NORSAR Array B 40.65 320 P **P** **01 37 08.0 -0.4**
NOA pmax pmax
comp=Z,6.0nm,0.8s
NOA MLR MLR
comp=Z,271nm,20.6s
NAO01 NORSAR Array S 40.81 319 *e*P **P** **01 37 09.8 +0.1**
comp=Z,14nm,1.0s,mb4.5
WET Wettzell 40.92 301 *e*P **P** **01 37 11.2 +0.4**
comp=Z,13nm,1.1s,mb4.5
WET Wettzell 40.92 301 *e*P **P** **01 37 11.2 +0.4**
WET pmax pmax
comp=Z,13nm,1.1s,mb4.5
TANN Tannenbergstha 40.93 303 *e*P **P** **01 37 11.3 +0.4**
comp=Z,9.0nm,1.1s,mb4.3
NKC Novy Kostel 40.97 303 *e*P **P** **01 37 12.1 +0.9**
NKC Novy Kostel 40.97 303 *e*P **P** **01 37 12.1 +0.9**
WERD Werda 41.02 303 *e*P **P** **01 37 11.8 +0.2**
comp=Z,13nm,1.2s,mb4.4
GUNZ Gunzen 41.02 303 *e*P **P** **01 37 12.2 +0.6**
comp=Z,9.0nm,1.1s,mb4.3
TIP Timpagrande 41.12 285 *e*P **P** **01 37 13.1 +0.5**
comp=Z,22nm,1.6s,mb4.5
MOX Moxa 41.41 304 *e*P **P** **01 37 15.2 +0.4**
comp=Z,10.0nm,1.1s,mb4.4
MOX
comp=Z,200nm,19.0s
MOX Moxa 41.41 304 *e*P **P** **01 37 15.1 +0.3**
comp=Z,10.0nm,1.1s,mb4.4
MOX Moxa 41.41 304 *e*P **P** **01 37 15.2 +0.4**
MOX pmax pmax
comp=Z,10.0nm,1.1s,mb4.4
MOX MLR MLR
comp=Z,200nm,19.0s,MS4.0
KONO Kongsberg 41.48 317 *e*P **P** **01 37 15.4 +0.1**
comp=Z,17nm,1.2s,mb4.5
KONO Kongsberg 41.48 317 *e*P **P** **01 37 15.4 +0.1**
KONO pmax pmax
comp=Z,17nm,1.2s,mb4.5
CUC Castrocucco 41.51 287 *e*P **P** **01 37 16.5 +0.7**
comp=Z,12nm,1.1s,mb4.4
BSEG Bad Segeberg 41.64 309 *e*P **P** **01 37 17.4 +0.8**
comp=Z,22nm,0.9s,mb4.8
BSEG Bad Segeberg 41.64 309 *e*P **P** **01 37 17.4 +0.8**
BSEG pmax pmax
comp=Z,22nm,0.9s,mb4.8
MDJ Mudanjiang 41.85 65 P **P** **01 37 18.2 -0.3**
MDJ pP pP 01 37 24.4 +2.1
MDJ sP sP 01 37 27.0 +3.2
MDJ PP PP 01 38 56.1 +1.0
MDJ PcP PcP 01 39 11.3 -2.9
MDJ ScP ScP 01 43 01.0 -3.2
MDJ PcS PcS 01 43 03.5 -2.1
MDJ S **S** **01 43 37.4 +1.4**
MDJ ScS ScS 01 47 19.1 -2.0
MDJ pmax pmax
comp=Z,5.0nm,1.1s,mb4.1
MDJ pmax pmax
comp=Z,38nm,4.0s
MDJ LR LR
comp=N,170nm,18.5s,MS3.9
MDJ LR LR
comp=E,71nm,23.1s,MS3.9
MDJ LR LR
comp=Z,75nm,21.5s,MS3.5
GRA1 Grafenberg Arr 41.86 302 *e*P **P** **01 37 19.6 +1.1**
comp=Z,28nm,1.0s,mb4.8
GRA1 LR LR
comp=Z,200nm,21.2s,MS4.0
GRF Grafenberg Arr 41.86 302 *e*P **P** **01 37 19.6 +1.1**
comp=Z,28nm,1.0s,mb4.8
GRF *e*L 01 55 37.6
comp=Z,225nm,21.2s
GRF Grafenberg Arr 41.86 302 *e*P **P** **01 37 19.6 +1.1**

GRF pmax pmax
comp=Z,28nm,1.0s,mb4.8
GRF MLR MLR
comp=Z,200nm,21.2s,MS4.0
CLZ Clausthal 41.95 306 *e*P **P 01 37 19.9 +0.7**
comp=Z,22nm,1.6s,mb4.5
CLZ Clausthal 41.95 306 *e*P **P 01 37 19.9 +0.7**
CLZ pmax pmax
comp=Z,22nm,1.6s,mb4.5
MUD Monsted U'grnd 41.96 313 *i* P **P 01 37 19.9 +0.7**
MUD pmax pmax
comp=Z,7.0nm,1.1s,mb4.2
MUD MLR MLR
comp=Z,160nm,21.0s,MS3.9
MUD Monsted U'grnd 41.96 313 *i* P **P 01 37 19.9 +0.7**
comp=Z,7.1nm,1.1s,mb4.2
MUD
comp=Z,160nm,21.0s
NRDL Niedersach Rie 41.99 307 *e*P **P 01 37 19.0 -0.6**
comp=Z,17nm,1.0s,mb4.6
KLR Kul'dur 42.08 58 *e*P **P 01 37 17.0 -3.3**
CEL Celeste 42.09 285 *e*P **P 01 37 20.6 +0.1**
comp=Z,37nm,1.3s,mb4.8
WTTA Wattenberg 42.17 299⇑ *i*P **P 01 37 21.7 +0.6**
comp=Z,17nm,1.1s,mb4.6
FUR Furstenfeldbru 42.18 300 *e*P **P 01 37 22.0 +0.9**
comp=Z,17nm,0.9s,mb4.7
FUR Furstenfeldbru 42.18 300 *e*P **P 01 37 22.0 +0.9**
FUR pmax pmax
comp=Z,17nm,0.9s,mb4.7
AQU L'Aquila 42.41 291 *e*P **P 01 37 24.9 +1.8**
comp=Z,12nm,0.9s,mb4.5
AQU L'Aquila 42.41 291 *e*P **P 01 37 24.9 +1.8**
AQU pmax pmax
comp=Z,12nm,0.9s,mb4.5
RETA Reutte 42.68 299⇑ *i*P **P 01 37 25.7 +0.4**
comp=Z,7.1nm,1.1s,mb4.3
SPITS Spitsbergen Ar 42.69 346 P **P 01 37 24.9 0.0**
comp=Z,4.8nm,0.6s,mb4.4,baz=144,slow=14,SNR=4.1
SPITS Spitsbergen Ar 42.69 346 P **P 01 37 24.9 0.0**
SPITS pmax pmax
comp=Z,5.0nm,0.6s
FETA Feichten 42.83 299⇑ *i*P **P 01 37 26.8 +0.4**
comp=Z,11nm,1.1s,mb4.5
KSRS Korea Array 43.16 76 P **P 01 37 28.5 -0.7**
comp=Z,2.3nm,0.9s,mb3.9,baz=285,slow=6.3,SNR=7.8
KSRS LR LR 01 56 33.7
comp=Z,76nm,18.0s,MS3.6,baz=298,slow=38
KSRS Korea Array 43.16 76 P **P 01 37 28.5 -0.7**
KSRS pmax pmax
comp=Z,2.0nm,0.9s,mb3.9
KSRS MLR MLR
comp=Z,76nm,18.0s,MS3.6
DAVA Damuels 43.31 299⇑ *i*P **P 01 37 30.8 +0.4**
comp=Z,20nm,0.9s,mb4.9,SNR=9.6
STU Stuttgart 43.37 302 *e*P **P 01 37 31.2 +0.4**
comp=Z,12nm,1.0s,mb4.6
STU Stuttgart 43.37 302 *e*P **P 01 37 31.8 +1.0**
IBBN Ibbenburen 43.44 307 *e*P **P 01 37 31.8 +0.5**
comp=Z,24nm,1.1s,mb4.8
KBS Kingsbay 43.80 346 *e*P **P 01 37 34.3 +0.5**
comp=Z,17nm,1.0s,mb4.7
KBS Kingsbay 43.80 346*c i*P **P 01 37 34.4 +0.5**
KBS pmax pmax
comp=Z,26nm,1.4s,mb4.8
KBS MLR MLR
comp=Z,266nm,16.0s,MS4.2
SPAK Spaichingen-Ko 43.80 301 *e*P **P 01 37 33.8 -0.5**
BUG Bochum–Univer 43.93 306 *e*P **P 01 37 35.9 +0.7**
comp=Z,30nm,1.4s,mb4.8
BFO Black Forest 44.04 301 *e*P **P 01 37 36.2 0.0**
comp=Z,39nm,1.9s,mb4.8
BFO Black Forest 44.04 301 *e*P **P 01 37 36.2 0.0**
BFO pmax pmax
comp=Z,39nm,1.9s,mb4.8
LANF Langenberg 44.20 302 *e*P **P 01 37 37.9 +0.4**
FELD Feldberg im Sc 44.37 301 *e*P **P 01 37 38.6 -0.3**
HABR Khabarovsk 44.38 59 P **P 01 37 37.3 -1.6**
HABR *e**SP sP 01 37 43.5 -0.7
HABR *e* 01 39 20.5
HABR *e*PPP 01 39 56.7
HABR *e*SS SS 01 47 32.4 +1.0
HABR pmax pmax
comp=N,22nm,2.8s
HABR pmax pmax
comp=E,92nm,3.5s
HABR pmax pmax
comp=Z,85nm,3.0s
HABR MLR MLR
comp=Z,131nm,16.0s,MS4.0
RUP Ruppelstein 44.48 303 *e*P **P 01 37 40.3 +0.6**
KULM Kulim 44.54 136 *e*P **P 01 37 39.1 -1.4**
comp=Z,9.6nm,0.9s,mb4.6
CDF Champ du Feu 44.69 302 *e*P **P 01 37 41.4 0.0**
comp=Z,20nm,0.9s,mb4.6
CDF Champ du Feu 44.69 302 *e*P **P 01 37 41.4 0.0**
comp=Z,10.0nm,0.9s,mb4.7
CDF Champ du Feu 44.69 302 *e*P **P 01 37 41.4 0.0**
CDF pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
ECH Echery 44.82 301 *e*P **P 01 37 41.7 -0.7**
MEM Membach 44.90 305 P **P 01 37 44.6 +1.6**
comp=Z,8.7nm,1.2s,mb4.5
WLF Walferdange 45.06 304 P **P 01 37 45.3 +1.0**
comp=Z,12nm,1.2s,mb4.6
WLF Walferdange 45.06 304 *e*P **P 01 37 45.0 +0.7**
comp=Z,24nm,1.1s,mb4.9
WLF Walferdange 45.06 304 *e*P **P 01 37 45.0 +0.7**
WLF pmax pmax
comp=Z,24nm,1.1s,mb4.9
HINF Hinteralfeld 45.13 301 *e*P **P 01 37 44.6 -0.3**
comp=Z,25nm,1.2s,mb4.6
HINF Hinteralfeld 45.13 301 *e*P **P 01 37 44.6 -0.3**
comp=Z,13nm,1.2s,mb4.6
HINF Hinteralfeld 45.13 301 *e*P **P 01 37 44.6 -0.3**
HINF pmax pmax
comp=Z,13nm,1.2s,mb4.6
HAU Haudompre 45.40 301 *e*P **P 01 37 46.9 -0.2**
comp=Z,27nm,1.1s,mb4.7
HAU *e*MLR MLR
comp=Z,200nm,21.8s,MS3.7
HAU Haudompre 45.40 301 *e*P **P 01 37 46.9 -0.2**
comp=Z,14nm,1.1s,mb4.7
HAU LR LR
comp=Z,200nm,21.8s,MS4.0
HAU Haudompre 45.40 301 *e*P **P 01 37 46.9 -0.2**
HAU pmax pmax
comp=Z,14nm,1.1s,mb4.7
HAU MLR MLR
comp=Z,200nm,21.8s,MS4.0
PGF Pioggiola 45.40 293 *e*P **P 01 37 47.2 0.0**
comp=Z,24nm,1.0s,mb4.7
PGF Pioggiola 45.40 293 *e*P **P 01 37 47.2 0.0**
comp=Z,12nm,1.0s,mb4.7
PGF Pioggiola 45.40 293 *e*P **P 01 37 47.2 0.0**
PGF pmax pmax
comp=Z,12nm,1.0s,mb4.7
THEF They Montfort 45.57 302 *e*P **P 01 37 46.9 -1.5**
GIVF Givet 45.77 304 *e*P **P 01 37 50.3 +0.4**
comp=Z,29nm,1.0s,mb4.9
GIVF Givet 45.77 304 *e*P **P 01 37 50.3 +0.4**
comp=Z,14nm,1.0s,mb4.9
GIVF Givet 45.77 304 *e*P **P 01 37 50.3 +0.4**
GIVF pmax pmax
comp=Z,14nm,1.0s,mb4.8
SAOF Saorge 45.89 296 *e*P **P 01 37 51.2 +0.2**
LPG La Plagne 45.92 298 *e*P **P 01 37 52.1 +0.9**
comp=Z,16nm,1.0s,mb4.6
LPG La Plagne 45.92 298 *e*P **P 01 37 52.1 +0.9**
comp=Z,8.2nm,1.0s,mb4.6
LPG La Plagne 45.92 298 *e*P **P 01 37 52.1 +0.9**
LPG pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
LPL La Plagne 45.92 298 *e*P **P 01 37 51.7 +0.5**
comp=Z,12nm,0.7s,mb4.6
LPL La Plagne 45.92 298 *e*P **P 01 37 51.7 +0.5**
comp=Z,6.0nm,0.7s,mb4.6
LPL La Plagne 45.92 298 *e*P **P 01 37 51.7 +0.5**
LPL pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
AUTN L'Aution 45.97 296 *e*P **P 01 37 52.0 +0.4**
CABF La Chapelle 46.00 299 *e*P **P 01 37 51.4 -0.4**
comp=Z,21nm,1.2s,mb4.6
CABF La Chapelle 46.00 299 *e*P **P 01 37 51.4 -0.4**
comp=Z,10nm,1.2s,mb4.6
CABF La Chapelle 46.00 299 *e*P **P 01 37 51.4 -0.4**
CABF pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
SBF Sospel 46.01 295 *e*P **P 01 37 52.1 +0.2**
comp=Z,44nm,1.0s,mb5.0
SBF Sospel 46.01 295 *e*P **P 01 37 52.1 +0.2**
comp=Z,22nm,1.0s,mb5.0
SBF Sospel 46.01 295 *e*P **P 01 37 52.1 +0.2**
SBF pmax pmax
comp=Z,22nm,1.0s,mb5.0
LUCF Luceram 46.06 295 *e*P **P 01 37 52.7 +0.4**
MEZF Maizieres J'vi 46.08 302 *e*P **P 01 37 52.8 +0.4**
comp=Z,48nm,1.2s,mb5.0
MEZF Maizieres J'vi 46.08 302 *e*P **P 01 37 52.8 +0.4**
comp=Z,48nm,1.2s,mb5.3
TOUF Mont Tournerai 46.09 296 *e*P **P 01 37 53.0 +0.5**
BAIF Baives 46.16 305 *e*P **P 01 37 53.5 +0.5**
comp=Z,25nm,1.0s,mb4.8
BAIF Baives 46.16 305 *e*P **P 01 37 53.5 +0.5**
comp=Z,13nm,1.0s,mb4.8
BAIF Baives 46.16 305 *e*P **P 01 37 53.5 +0.5**
BAIF pmax pmax
comp=Z,13nm,1.0s,mb4.8
MBDF Montbardon 46.16 297 *e*P **P 01 37 53.8 +0.7**
comp=Z,30nm,0.9s,mb4.9
MBDF Montbardon 46.16 297 *e*P **P 01 37 53.8 +0.7**
comp=Z,15nm,0.9s,mb4.9
MBDF Montbardon 46.16 297 *e*P **P 01 37 53.8 +0.7**
MBDF pmax pmax
comp=Z,15nm,0.9s,mb4.9
MVIF Mont Vial 46.19 296 *e*P **P 01 37 53.6 +0.2**
FRF La Foret Royal 46.65 295 *e*P **P 01 37 56.8 -0.2**
comp=Z,26nm,1.0s,mb4.8
FRF La Foret Royal 46.65 295 *e*P **P 01 37 56.8 -0.2**
comp=Z,13nm,1.0s,mb4.8
FRF La Foret Royal 46.65 295 *e*P **P 01 37 56.8 -0.2**
FRF pmax pmax
comp=Z,13nm,1.0s,mb4.8
ORIF Oris-en-Rattie 46.69 297 *e*P **P 01 37 58.4 +1.1**
comp=Z,10nm,0.9s,mb4.5
ORIF *e*MLR MLR
comp=Z,213nm,20.5s,MS3.8
ORIF Oris-en-Rattie 46.69 297 *e*P **P 01 37 58.4 +1.1**
comp=Z,5.3nm,0.9s,mb4.5
ORIF Oris-en-Rattie 46.69 297 *e*P **P 01 37 58.4 +1.1**
ORIF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
LMR La Mourre 46.83 295 *e*P **P 01 37 58.2 -0.2**
comp=Z,21nm,1.2s,mb4.7
LMR La Mourre 46.83 295 *e*P **P 01 37 58.2 -0.2**
comp=Z,11nm,1.2s,mb4.7
LMR La Mourre 46.83 295 *e*P **P 01 37 58.2 -0.2**
LMR pmax pmax
comp=Z,11nm,1.2s,mb4.7
SMRF Simiane la Rot 47.23 296 *e*P **P 01 38 01.4 -0.1**
comp=Z,34nm,1.2s,mb4.9
SMRF Simiane la Rot 47.23 296 *e*P **P 01 38 01.4 -0.1**
comp=Z,34nm,1.2s,mb5.2
LOR Lormes 47.23 301 *e*P **P 01 38 01.5 +0.1**
comp=Z,11nm,0.9s,mb4.5
LOR *e*MLR MLR
comp=Z,228nm,22.8s,MS3.8
LOR Lormes 47.23 301 *e*P **P 01 38 01.5 +0.1**
comp=Z,5.4nm,0.9s,mb4.5
LOR LR LR
comp=Z,230nm,22.8s,MS4.1
LOR Lormes 47.23 301 *e*P **P 01 38 01.5 +0.1**
LOR pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
LOR MLR MLR
comp=Z,230nm,22.8s,MS4.1
SMF Signal de Mont 47.45 300 *e*P **P 01 38 02.8 -0.3**
comp=Z,24nm,1.3s,mb4.7
SMF Signal de Mont 47.45 300 *e*P **P 01 38 02.8 -0.3**
comp=Z,12nm,1.3s,mb4.7
SMF Signal de Mont 47.45 300 *e*P **P 01 38 02.8 -0.3**
SMF pmax pmax
comp=Z,12nm,1.3s,mb4.7
VIVF Saint-Julien-l 47.52 298 *e*P **P 01 38 03.8 +0.1**
comp=Z,45nm,1.2s,mb5.1
VIVF Saint-Julien-l 47.52 298 *e*P **P 01 38 03.8 +0.1**
comp=Z,22nm,1.2s,mb5.1
VIVF Saint-Julien-l 47.52 298 *e*P **P 01 38 03.8 +0.1**
VIVF pmax pmax
comp=Z,22nm,1.2s,mb5.1
SSF Saint Saulge 47.53 301 *e*P **P 01 38 03.2 -0.5**
comp=Z,25nm,1.3s,mb4.8
SSF Saint Saulge 47.53 301 *e*P **P 01 38 03.2 -0.5**
comp=Z,12nm,1.3s,mb4.8
SSF Saint Saulge 47.53 301 *e*P **P 01 38 03.2 -0.5**
SSF pmax pmax
comp=Z,12nm,1.3s,mb4.8
AVF Avril sur Loir 47.72 301 *e*P **P 01 38 04.8 -0.4**
comp=Z,32nm,0.9s,mb5.0
AVF Avril sur Loir 47.72 301 *e*P **P 01 38 04.8 -0.4**
comp=Z,16nm,0.9s,mb5.0
AVF Avril sur Loir 47.72 301 *e*P **P 01 38 04.8 -0.4**
AVF pmax pmax
comp=Z,16nm,0.9s,mb5.0
AGO Saint Agoulin 48.11 300 *e*P **P 01 38 08.3 0.0**
BGF Bois d'Agland 48.12 300 *e*P **P 01 38 08.0 -0.4**
comp=Z,18nm,0.9s,mb4.8
BGF Bois d'Agland 48.12 300 *e*P **P 01 38 08.0 -0.4**
comp=Z,9.1nm,0.9s,mb4.8
BGF Bois d'Agland 48.12 300 *e*P **P 01 38 08.0 -0.4**
BGF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
PYM Petit Puy Mans 48.30 299 *e*P **P 01 38 08.3 -1.5**
LBL Lubilhac 48.33 299 *e*P **P 01 38 10.7 +0.7**
LASF Ste Croix 48.35 297 *e*P **P 01 38 10.4 +0.3**
comp=Z,35nm,1.1s,mb5.0
TCF Toulx Ste Croi 48.63 300 *e*P **P 01 38 12.3 0.0**
comp=Z,20nm,1.0s,mb4.8
TCF Toulx Ste Croi 48.63 300 *e*P **P 01 38 12.3 0.0**
comp=Z,10nm,1.0s,mb4.8
TCF Toulx Ste Croi 48.63 300 *e*P **P 01 38 12.3 0.0**
TCF pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
ESK Eskdalemuir 49.01 313 *e*P **P 01 38 17.2 +2.1**
comp=Z,26nm,1.3s,mb5.1
ESK Eskdalemuir 49.01 313 *e*P **P 01 38 17.2 +2.1**
ESK pmax pmax
comp=Z,26nm,1.3s,mb5.1
CAF Calviac 49.22 299 *e*P **P 01 38 17.1 +0.3**
comp=Z,31nm,1.3s,mb4.9
CAF Calviac 49.22 299 *e*P **P 01 38 17.1 +0.3**
comp=Z,16nm,1.3s,mb4.9
CAF Calviac 49.22 299 *e*P **P 01 38 17.1 +0.3**
CAF pmax pmax
comp=Z,16nm,1.3s,mb4.9
LDF La Druitiere 49.31 304 *e*P **P 01 38 17.0 -0.5**
comp=Z,28nm,1.0s,mb5.0
LDF La Druitiere 49.31 304 *e*P **P 01 38 17.0 -0.5**
comp=Z,14nm,1.0s,mb5.0
LDF La Druitiere 49.31 304 *e*P **P 01 38 17.0 -0.5**
LDF pmax pmax
comp=Z,14nm,1.0s,mb5.0
RJF Les Rejaudoux 49.44 299 *e*P **P 01 38 18.9 +0.4**
comp=Z,36nm,1.1s,mb5.0
RJF *e*MLR MLR
comp=Z,71nm,18.2s,MS3.4
RJF Les Rejaudoux 49.44 299 *e*P **P 01 38 18.9 +0.4**
comp=Z,18nm,1.1s,mb5.0
RJF LR LR
comp=Z,70nm,18.3s,MS3.7
RJF Les Rejaudoux 49.44 299 *e*P **P 01 38 18.9 +0.4**
RJF pmax pmax
comp=Z,18nm,1.1s,mb5.0
RJF MLR MLR
comp=Z,70nm,18.3s,MS3.7
FLN La Foliniere 49.48 304 *e*P **P 01 38 18.8 +0.1**
comp=Z,62nm,1.2s,mb5.2
FLN *e*MLR MLR
comp=Z,219nm,22.2s,MS3.8
FLN La Foliniere 49.48 304 *e*P **P 01 38 18.8 +0.1**
comp=Z,31nm,1.2s,mb5.2
FLN LR LR
comp=Z,220nm,22.3s,MS4.1
FLN La Foliniere 49.48 304 *e*P **P 01 38 18.8 +0.1**
FLN pmax pmax
comp=Z,31nm,1.2s,mb5.2
FLN MLR MLR
comp=Z,220nm,22.3s,MS4.1
EJON La Jonquera 49.62 295 P **P 01 38 19.7 -0.3**
comp=Z,33nm,1.6s,mb5.1
MTLF Montolieu 49.73 297 *e*P **P 01 38 20.8 +0.1**
comp=Z,38nm,1.3s,mb5.0
MTLF Montolieu 49.73 297 *e*P **P 01 38 20.8 +0.1**
comp=Z,19nm,1.3s,mb5.0
MTLF Montolieu 49.73 297 *e*P **P 01 38 20.8 +0.1**
MTLF pmax pmax
comp=Z,19nm,1.3s,mb5.0
YSS Yuzh-Sakhalins 49.79 58 *e*P **P 01 38 21.7 +0.5**
YSS MLR MLR
comp=Z,300nm,14.0s,MS4.5
GRR Gorron 49.84 304 *e*P **P 01 38 20.8 -0.7**
comp=Z,69nm,1.2s,mb5.3
GRR Gorron 49.84 304 *e*P **P 01 38 20.8 -0.7**
comp=Z,35nm,1.2s,mb5.3
GRR Gorron 49.84 304 *e*P **P 01 38 20.8 -0.7**
GRR pmax pmax
comp=Z,35nm,1.2s,mb5.3
MFF Saint Martin d 50.03 301 *e*P **P 01 38 22.4 -0.6**
comp=Z,32nm,1.1s,mb5.0
MFF Saint Martin d 50.03 301 *e*P **P 01 38 22.4 -0.6**
comp=Z,16nm,1.1s,mb5.0
MFF Saint Martin d 50.03 301 *e*P **P 01 38 22.4 -0.6**
MFF pmax pmax
comp=Z,16nm,1.1s,mb5.0
LFF La Frestale 50.09 299 *e*P **P 01 38 23.7 +0.3**
comp=Z,39nm,1.1s,mb5.1
LFF La Frestale 50.09 299 *e*P **P 01 38 23.7 +0.3**
comp=Z,19nm,1.1s,mb5.0
LFF La Frestale 50.09 299 *e*P **P 01 38 23.7 +0.3**
LFF pmax pmax
comp=Z,19nm,1.1s,mb5.0
SEY Seymchan 50.12 36 *e*P **P 01 38 23.0 -0.5**
CFON Fontmartina 50.21 295 P **P 01 38 24.4 -0.1**
comp=Z,23nm,1.2s,mb5.1
ASAJ Asahikawa 50.77 62 LR LR 02 01 48.2
comp=Z,111nm,18.7s,MS3.9,baz=314,slow=38
SGMF Saint Gilles 50.95 304 *e*P **P 01 38 29.5 -0.4**
MAJO Matsushiro 50.98 72 *e*P **P 01 38 29.0 -1.3**
comp=Z,24nm,1.3s,mb5.0
MAJO Matsushiro 50.98 72 *e*P **P 01 38 29.0 -1.3**
MAJO pmax pmax
comp=Z,24nm,1.3s,mb5.0
MAT Matsushiro 50.98 72 P **P 01 38 28.5 -1.8**
MAT *e*S **S 01 45 47.0 0.0**
MJAR Matsushiro Arr 50.98 72 P **P 01 38 29.1 -1.3**
comp=Z,4.4nm,0.7s,mb4.5,baz=291,slow=8.9,SNR=22
MJAR Matsushiro Arr 50.98 72 P **P 01 38 29.1 -1.2**
MJAR pmax pmax
comp=Z,4.0nm,0.7s
EPF Esparros 51.11 297 *e*P **P 01 38 31.4 +0.2**
comp=Z,13nm,1.1s,mb4.5
EPF Esparros 51.11 297 *e*P **P 01 38 31.4 +0.2**
comp=Z,6.7nm,1.1s,mb4.5
EPF Esparros 51.11 297 *e*P **P 01 38 31.4 +0.2**
EPF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
ROSF Rostrenen 51.36 305 *e*P **P 01 38 32.5 -0.5**
EBIE Bielsa 51.38 297 P **P 01 38 34.1 +0.8**
comp=Z,10nm,0.9s,mb4.8
ETSF Etsaut 51.76 297 *e*P **P 01 38 36.1 0.0**
comp=Z,35nm,1.2s,mb4.9
ETSF Etsaut 51.76 297 *e*P **P 01 38 36.1 0.0**
comp=Z,18nm,1.2s,mb4.9
ETSF Etsaut 51.76 297 *e*P **P 01 38 36.1 0.0**
ETSF pmax pmax
comp=Z,17nm,1.2s,mb4.8
ERTA Horta de San J 51.98 295 P **P 01 38 38.1 +0.3**
comp=Z,10nm,1.0s,mb4.7
ERM Erimo 52.01 64 *e*P **P 01 38 37.8 -0.1**
ERM MLR MLR
comp=Z,100nm,19.0s,MS3.9
SJPF Ste Jean 52.12 298 *e*P **P 01 38 38.9 +0.2**
comp=Z,18nm,1.0s,mb4.7
SJPF Ste Jean 52.12 298 *e*P **P 01 38 38.9 +0.2**
comp=Z,9.0nm,1.0s,mb4.7
SJPF Ste Jean 52.12 298 *e*P **P 01 38 38.9 +0.2**
SJPF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
EIBI Ibiza 52.14 292 P **P 01 38 39.6 +0.6**
comp=Z,29nm,1.5s,mb5.0
ESAC San Caprasio 52.20 296 P **P 01 38 40.3 +1.0**
comp=Z,23nm,0.9s,mb5.1
KMBO Kilima Mbogo 52.53 225 *e*P **P 01 38 42.0 -0.1**
comp=Z,5.6nm,1.1s,mb4.4
KMBO Kilima Mbogo 52.53 225 P **P 01 38 42.1 0.0**
comp=Z,3.4nm,1.0s,mb4.2,baz=180,slow=24,SNR=6.0
KMBO Kilima Mbogo 52.53 225 P **P 01 38 42.1 +0.1**
KMBO pmax pmax
comp=Z,3.0nm,1.0s
ECRI Cripan 53.19 298 P **P 01 38 47.5 +0.8**
comp=Z,17nm,1.9s,mb4.7
ECRI Cripan 53.19 298 P **P 01 38 47.5 +0.8**
ECRI pmax pmax
comp=Z,17nm,1.9s,mb4.7
KKM Kota Kinabalu 53.22 119 *e*P **P 01 38 47.0 -0.2**
ELAN Lanestosa 53.53 299 P **P 01 38 47.0 -2.1**
comp=Z,33nm,0.9s,mb5.3
CART Cartagena 54.44 291 *e*P **P 01 38 56.4 +0.5**
comp=Z,81nm,1.3s,mb5.5
EVIA Vianos 54.98 293 P **P 01 39 01.1 +1.3**
comp=Z,16nm,1.0s,mb5.0
EVIA Vianos 54.98 293 P **P 01 39 01.1 +1.3**
EVIA pmax pmax
comp=Z,16nm,1.0s,mb5.0
EHUE Huescar 55.44 292 P **P 01 39 02.4 -0.7**
comp=Z,52nm,1.8s,mb5.3
EHUE Huescar 55.44 292 P **P 01 39 02.4 -0.7**
EHUE pmax pmax
comp=Z,52nm,1.8s,mb5.3
ESDC Sonseca Array 55.49 295 P **P 01 39 03.8 +0.3**
comp=Z,1.7nm,0.5s,mb4.3
ESDC Sonseca Array 55.49 295 P **P 01 39 03.5 0.0**
comp=Z,2.5nm,0.6s,mb4.4,baz=55,slow=7.0,SNR=19
ESDC LR LR 02 07 39.4
comp=Z,49nm,18.3s,MS3.6,baz=60,slow=41
ESLA Sonseca Array 55.49 295 *e*P **P 01 39 04.1 +0.6**
comp=Z,2.7nm,1.0s,mb4.2
ENIJ Nijar 55.58 291 P **P 01 39 02.8 -1.3**
MBAR Mbarara 55.76 232 *e*P **P 01 39 04.3 -1.3**
EQES Quesada 55.77 293 P **P 01 39 05.9 +0.3**
comp=Z,17nm,1.0s,mb5.0
EBER Berja 56.09 292 P **P 01 39 07.4 -0.4**
comp=Z,36nm,2.0s,mb5.1
EBAN Banos Encina 56.09 293 P **P 01 39 08.1 +0.3**
comp=Z,5.9nm,0.6s,mb4.8
EBAN Banos Encina 56.09 293 P **P 01 39 08.1 +0.3**
EBAN pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
PETK Petropavlovsk- 56.21 46 P **P 01 39 07.3 -1.1**
comp=Z,7.8nm,1.2s,mb4.6,baz=294,slow=7.2,SNR=4.0
PETK Petropavlovsk- 56.21 46 P **P 01 39 07.3 -1.1**
PETK pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
ECAL Calabor 56.29 299 P **P 01 39 06.9 -2.2**
comp=Z,5.9nm,1.4s,mb4.4
SUMG Summit 56.43 340 *e*P **P 01 39 10.4 +0.7**
comp=Z,15nm,0.7s,mb5.1
SUMG Summit 56.43 340 *i* P **P 01 39 10.2 +0.5**
comp=Z,16nm,0.9s,mb5.0
EGUA Guajares 56.59 292 P **P 01 39 08.5 -2.9**
comp=Z,3µm,3.1s
EADA Adamuz 56.64 294 P **P 01 39 10.9 -0.8**
comp=Z,7.3nm,0.8s,mb4.8
ELUQ Luque 56.72 293 P **P 01 39 11.4 -0.9**
comp=Z,19nm,1.6s,mb4.9
ELUQ Luque 56.72 293 P **P 01 39 11.4 -0.9**
ELUQ pmax pmax
comp=Z,19nm,1.6s,mb4.9
EPLA Plasencia 56.74 296 P **P 01 39 10.0 -2.4**
comp=Z,15nm,1.1s,mb4.9
EPLA Plasencia 56.74 296 P **P 01 39 10.0 -2.4**
EPLA pmax pmax
comp=Z,15nm,1.1s,mb4.9
ELOB Lobios 57.19 299 P **P 01 39 13.5 -2.0**
comp=Z,21nm,1.1s,mb5.1
TAM Tamanrasset 57.48 273 *e*P **P 01 39 18.0 +0.1**
comp=Z,1.0nm,0.4s,mb4.2
TAM Tamanrasset 57.48 273 *e*P **P 01 39 18.0 +0.2**
TAM pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
PMRV Marv??o 57.93 296 *e*P **P 01 39 21.9 +1.1**
comp=Z,28nm,1.2s,mb5.2
EBAD Badajoz 58.01 295 P **P 01 39 19.9 -1.4**
comp=Z,10nm,0.9s,mb4.8
EJIF Jimena Fronter 58.11 292 P **P 01 39 20.9 -1.2**
comp=Z,21nm,3.4s
EJIF Jimena Fronter 58.11 292 P **P 01 39 20.9 -1.2**
EJIF pmax pmax
comp=Z,21nm,3.4s
EMIN Mina Concepcio 58.27 294 P **P 01 39 21.3 -1.9**
comp=Z,7.7nm,0.8s,mb4.8

PBAR	**Barrancos**	**58.32**	**295**	*e*P		**P**		**01 39 24.0**	**+0.4**
	comp=Z,32nm,1.3s,mb5.2								
PBEJ	**Beja**	**58.96**	**295**	*e*P		**P**		**01 39 27.9**	**-0.1**
	comp=Z,21nm,1.7s,mb4.9								
LSZ	**Lusaka**	**69.19**	**225**	*e*P		**P**		**01 40 34.4**	**-1.0**
	comp=Z,173nm,3.0s								
LSZ	**Lusaka**	**69.19**	**225**	*e*P		**P**		**01 40 34.4**	**-1.0**
LSZ					pmax	pmax			
	comp=Z,173nm,3.0s								
ILAR	**Eielson Array**	**69.87**	**16**	P		**P**		**01 40 38.7**	**-0.3**
	comp=Z,1.5nm,0.9s,mb3.9,baz=329,slow=4.8,SNR=11								
ILAR					LR	LR		02 12 22.2	
	comp=Z,78nm,21.6s,MS3.9,baz=30,slow=37								
ILAR	**Eielson Array**	**69.87**	**16**	P		**P**		**01 40 38.7**	**-0.3**
ILAR					pmax	pmax			
	comp=Z,2.0nm,0.9s								
ILAR					MLR	MLR			
	comp=Z,78nm,21.6s								
DBIC	**Dimbokro**	**75.32**	**266**	*e*P		**P**		**01 41 11.7**	**-0.5**
	comp=Z,22nm,1.3s,mb4.9								
DBIC	**Dimbokro**	**75.32**	**266**	P		**P**		**01 41 10.6**	**-1.6**
	comp=Z,5.2nm,0.9s,mb4.5,baz=39,slow=9.6,SNR=5.5								
DBIC	**Dimbokro**	**75.32**	**266**	*e*P		**P**		**01 41 11.7**	**-0.5**
DBIC					pmax	pmax			
	comp=Z,22nm,1.3s								
KIC	**Kosan Boka**	**75.43**	**266**	*e*P		**P**		**01 41 11.0**	**-1.9**
	comp=Z,38nm,1.2s,mb5.2								
TIC	**Toumodi**	**75.46**	**266**	*e*P		**P**		**01 41 11.8**	**-1.2**
	comp=Z,44nm,1.1s,mb5.3								
TIC	**Toumodi**	**75.46**	**266**	*e*P		**P**		**01 41 11.8**	**-1.2**
TIC					pmax	pmax			
	comp=Z,44nm,1.1s,mb5.3								
LIC	**Lamto**	**75.74**	**266**	*e*P		**P**		**01 41 13.8**	**-0.8**
	comp=Z,52nm,1.3s,mb5.3								
LIC	**Lamto**	**75.74**	**266**	*e*P		**P**		**01 41 14.5**	**-0.1**
	comp=Z,21nm,1.0s,mb4.7								
LIC	**Lamto**	**75.74**	**266**	*e*P		**P**		**01 41 14.5**	**-0.1**
	comp=Z,11nm,1.0s,mb4.7								
YKA	**Yellowknife Ar**	**76.21**	**3**	P		**P**		**01 41 15.9**	**-0.6**
YKA	**Yellowknife Ar**	**76.21**	**3**	P		**P**		**01 41 15.9**	**-0.6**
	comp=Z,4.3nm,0.7s,mb4.5,baz=351,slow=6.0,SNR=38								
YKA	**Yellowknife Ar**	**76.21**	**3**	P		**P**		**01 41 15.9**	**-0.6**
YKA					pmax	pmax			
	comp=Z,4.0nm,0.7s								
SCHQ	**Schefferville**	**77.60**	**337**	LR		LR		02 15 09.4	
	comp=Z,165nm,19.2s,MS4.4,baz=88,slow=35								
TSUM	**Tsumeb**	**78.28**	**231**	*e*P		**P**		**01 41 28.6**	**-0.1**
	comp=Z,15nm,1.2s,mb4.8								
LBTB	**Lobatse**	**78.63**	**222**	*e*P		**P**		**01 41 30.6**	**+0.1**
	comp=Z,209nm,2.8s,mb5.6								
BOSA	**Boshof**	**81.79**	**220**	*e*P		**P**		**01 41 47.2**	**-0.3**
	comp=Z,9.8nm,1.0s,mb4.7								
BOSA	**Boshof**	**81.79**	**220**	P		**P**		**01 41 47.0**	**-0.5**
	comp=Z,6.4nm,0.9s,mb4.5,baz=48,slow=5.9,SNR=6.9								
BOSA	**Boshof**	**81.79**	**220**	*e*P		**P**		**01 41 47.2**	**-0.3**
BOSA					pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.7								
FFC	**Flin Flon**	**83.95**	**356**	*e*P		**P**		**01 41 58.0**	**-0.5**
	comp=Z,18nm,1.4s,mb5.0								
FFC	**Flin Flon**	**83.95**	**356**	*e*P		**P**		**01 41 58.0**	**-0.5**
FFC					pmax	pmax			
	comp=Z,18nm,1.4s,mb5.0								
WRAB	**Tennant Creek**	**84.42**	**123**	*e*P		**P**		**01 42 00.7**	**-0.5**
	comp=Z,6.4nm,0.5s,mb5.0								
WRAB	**Tennant Creek**	**84.42**	**123**	*e*P		**P**		**01 42 00.7**	**-0.5**
WRAB					pmax	pmax			
	comp=Z,6.0nm,0.5s,mb5.0								
ASAR	**Alice Springs**	**86.90**	**125**	P		**P**		**01 42 12.4**	**-1.1**
	comp=Z,6.1nm,1.0s,mb4.8,baz=320,slow=4.8,SNR=25								
ASAR	**Alice Springs**	**86.90**	**125**	P		**P**		**01 42 12.4**	**-1.1**
ASAR					pmax	pmax			
	comp=Z,6.0nm,1.0s								
ULM	**Lac du Bonnet**	**87.92**	**352**	LR		LR		02 23 49.4	
	comp=Z,105nm,18.9s,MS4.3,baz=35,slow=37								
EYMN	**Ely**	**89.63**	**349**	*e*P		**P**		**01 42 26.3**	**+0.1**
	comp=Z,6.2nm,0.9s,mb4.9								
AGMN	**Agassiz Nation**	**89.85**	**352**	*e*P		**P**		**01 42 26.9**	**-0.4**
	comp=Z,6.4nm,1.1s,mb4.9								
JCW	**Jim Creek**	**89.89**	**9**	*e*P		**P**		**01 42 27.7**	**+0.2**
NEW	**Newport**	**90.27**	**6**	*e*P		**P**		**01 42 29.3**	**0.0**
	comp=Z,2.6nm,0.7s,mb4.7								
NEW	**Newport**	**90.27**	**6**	*e*P		**P**		**01 42 29.3**	**0.0**
NEW					pmax	pmax			
	comp=Z,3.0nm,0.7s								
SLMT	**Seeley Lake**	**91.51**	**3**	*e*P		**P**		**01 42 35.6**	**+0.6**
CHMT	**Chamberlain Mo**	**91.84**	**3**	*e*P		**P**		**01 42 37.0**	**+0.4**
	comp=Z,0.8nm,0.8s,mb4.1								
CTAO	**Charters Tower**	**92.36**	**115**	*e*P		**P**		**01 42 39.7**	**+0.5**
	comp=Z,57nm,0.8s,mb6.0								
ECSD	**EROS Data Cent**	**94.44**	**351**	*e*P		**P**		**01 42 48.7**	**+0.1**
	comp=Z,12nm,1.6s,mb5.1								
RSSD	**Black Hills**	**94.64**	**357**	*e*P		**P**		**01 42 49.8**	**+0.3**
	comp=Z,1.3nm,0.5s,mb4.6								
RSSD	**Black Hills**	**94.64**	**357**	*e*P		**P**		**01 42 49.8**	**+0.3**
RSSD					pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.5								
HWUT	**Hardware Ranch**	**97.20**	**2**	*e*P		**P**		**01 43 01.4**	**+0.1**
	comp=Z,6.6nm,0.9s,mb4.7								
QSPA	**South Pole Qui**	**131.32**	**180**	*e*PKPdf		PKPdf		01 48 39.6	+0.2
TRQA	**Tornquist**	**144.34**	**260**	*e*PKPdf		PKPdf		01 49 02.2	-2.3
LCO	**Las Campanas**	**146.89**	**280**	*e*PKPbc		PKPbc		01 49 10.5	-0.5
PLCA	**Paso Flores**	**151.47**	**259**	*e*PKPbc		PKPbc		01 49 21.6	-0.7

*ISCJB **01** 01:49:57.4±1.3,25.2°19N±0.0°×141.3°E±0.1,h85km±10km, mb4.2/26, Error ellipse: s-maj=15.6km s-min=11.5km az=165.7*

*JMA **01** 01:49:59.9±0.3,25.5°57N×141.20E,h0km,M5.1*

*IDC **01** 01:50:00.4±0.8,25.3°30N×141.39E,h98km±7km, mb3.9/15, mb1 4.1/16,mb1mx4.0/23,mbtmp3.9/16, Error ellipse: s-maj=20.5km s-min=10.6km az=102.0*

*NEIC **01** 01:50:00.3±0.3,25.2°20N×141.27E, mb4.1/10, Error ellipse: s-maj=11.0km s-min=6.4km az=82.0*

ISC 01 01:49:59.2±1.1,25.22N±0.07°×141.35E±0.1°,h87km±8km, h100km±1.2km;pP-P,n47,σ0§90/48,mb4.2/26,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op	ISC		h m s	ISC
JHHJ	**Haha-jima-NKT**	**1.59**	**28**	P		**Pn**	**01 50 25.9**	**0.0**
JHHJ				*e*S		**Sn**	**01 50 44.6**	**-1.6**
CBIJ	**Chichi jima**	**2.01**	**22**	P		**Pn**	**01 50 31.9**	**+0.5**
	160nm,0.3s,baz=216,slow=9.5,SNR=57							
CBIJ				S		**Sn**	**01 50 55.5**	**-0.5**
	633nm,0.3s,baz=288,slow=19,SNR=23							
CBIJ	**Chichi jima**	**2.01**	**22**	P		**Pn**	**01 50 31.9**	**+0.5**
CBIJ				*e*S		**Sn**	**01 50 54.9**	**-1.1**
BSO1	**Boso 1**	**9.41**	**358**	P		**Pn**	**01 52 11.7**	**-0.1**
BSO3	**Boso 3**	**9.57**	**356**	P		**Pn**	**01 52 13.8**	**-0.3**
JOD2	**Odawara 2**	**10.20**	**349**	P		**Pn**	**01 52 25.5**	**+2.9**
JRY	**Ryogami san**	**10.96**	**350**	P		**Pn**	**01 52 34.5**	**+1.5**
JAG	**Ashikaga**	**11.29**	**352**	P		**Pn**	**01 52 36.3**	**-1.1**
MJAR	**Matsushiro Arr**	**11.60**	**347**	P		**Pn**	**01 52 42.0**	**+0.3**
	1.5nm,0.3s,baz=159,slow=11,SNR=5.7							
MAJO	**Matsushiro**	**11.60**	**347**	*e*Pn		**Pn**	**01 52 43.1**	**+1.4**
MAT	**Matsushiro**	**11.60**	**347**	P		**Pn**	**01 52 40.4**	**-1.3**
MAT				*e*S		Sn	01 54 19.8	-29
ERM	**Erimo**	**16.82**	**5**	*e*Pn		**Pn**	**01 53 51.1**	**+2.0**
ASAJ	**Asahikawa**	**18.88**	**3**	P		**Pn**	**01 54 15.2**	**+1.2**
	0.8nm,0.3s,baz=209,slow=13,SNR=2.1							
COEN	**Coen**	**38.98**	**177**	*e*P		**P**	**01 57 17.1**	**0.0**
	30nm,0.8s							
WRAB	**Tennant Creek**	**45.40**	**189**	*e*P		**P**	**01 58 09.2**	**0.0**
	27nm,0.5s							
ASAR	**Alice Springs**	**49.13**	**189**	P		**P**	**01 58 38.2**	**+0.1**
	2.0nm,0.6s,mb4.3,baz=17,slow=12,SNR=24							
ZALV	**Zalesovo Beam**	**50.42**	**320**	P		**P**	**01 58 47.4**	**-0.3**
	0.4nm,0.4s,mb3.8,baz=101,slow=6.0,SNR=2.1							
ZALV				PcP		PcP	02 00 02.4	-2.4
	0.5nm,0.3s,baz=108,slow=4.7,SNR=4.3							
MKAR	**Makanchi Array**	**51.11**	**311**	P		**P**	**01 58 53.9**	**+1.0**
	0.4nm,0.2s,mb4.0,baz=80,slow=10,SNR=4.5							
KURK	**Kurchatov**	**53.77**	**316**	*e*P		**P**	**01 59 12.3**	**-0.3**
	1.0nm,0.5s,mb4.1							
STKA	**Stephens Creek**	**56.78**	**180**	P		**P**	**01 59 34.2**	**-0.1**
STKA	**Stephens Creek**	**56.78**	**180**	P		**P**	**01 59 34.2**	**-0.1**
	8.5nm,0.6s,mb4.9,baz=350,slow=8.0,SNR=14							
BVAR	**Borovoye Array**	**58.92**	**318**	P		**P**	**01 59 49.4**	**+0.3**
	1.0nm,0.4s,mb4.2,baz=96,slow=8.6,SNR=7.2							
ILAR	**Eielson Array**	**59.71**	**28**	P		**P**	**01 59 53.9**	**-0.4**
	0.8nm,0.7s,mb3.9,baz=260,slow=5.8,SNR=11							
ILAR				pP		pP	02 00 18.5	+2.3
	1.5nm,0.8s,baz=263,slow=5.7,SNR=9.1							
ABKAR	**Akbulak array**	**65.87**	**315**	*e*P		**P**	**02 00 35.2**	**-0.3**
	0.7nm,0.5s,mb3.8							
YKA	**Yellowknife Ar**	**74.14**	**28**	P		**P**	**02 01 26.0**	**+0.1**
	1.5nm,0.5s,mb4.0,baz=295,slow=6.1,SNR=22							
YKA				pP		pP	02 01 50.8	+2.4
	0.8nm,0.6s,baz=294,slow=5.5,SNR=4.2							
KEV	**Kevo**	**74.50**	**341**	*e*p		pP	02 01 54.4	+4.0
ARCES	**ARCESS Array B**	**75.06**	**341**	P		**P**	**02 01 32.0**	**+0.9**
	3.1nm,0.8s,mb4.1,baz=74,slow=8.9,SNR=11							
JOF	**Joensuu**	**76.42**	**334**	*e*p		**P**	**02 01 38.2**	**-0.7**
	3.0nm,0.5s,mb4.3							
YBH	**Yreka Blue Hor**	**77.83**	**50**	P		**P**	**02 01 48.2**	**+0.9**
	0.8nm,0.4s,mb3.8,baz=5.8,slow=4.0,SNR=4.6							
KAF	**Kangasniemi**	**78.83**	**334**	*e*p		**P**	**02 01 51.1**	**-1.2**
	4.2nm,0.5s,mb4.5,baz=58,slow=5.0							
FINES	**FINESS Array B**	**79.29**	**334**	P		**P**	**02 01 54.4**	**-0.4**
FINES	**FINESS Array B**	**79.29**	**334**	P		**P**	**02 01 54.4**	**-0.4**
	3.6nm,0.4s,mb4.5,baz=68,slow=4.9,SNR=68							
NVAR	**Mina Array Bea**	**82.27**	**51**	P		**P**	**02 02 11.9**	**+0.7**
	0.6nm,0.6s,mb3.6,baz=295,slow=6.0,SNR=6.2							
NVAR				pP		pP	02 02 37.1	+3.0
	0.8nm,0.7s,baz=293,slow=5.9,SNR=4.6							
SUMG	**Summit**	**82.46**	**360**	*e*P		**P**	**02 02 12.7**	**+1.2**
	2.4nm,0.5s,mb4.3							
HLID	**Hailey**	**82.58**	**45**	*e*P		**P**	**02 02 13.5**	**+0.8**
	0.7nm,0.7s,mb3.6							
AKASG	**Malin Array Be**	**83.68**	**324**	P		**P**	**02 02 17.8**	**-0.5**
	4.0nm,0.6s,mb4.5,baz=52,slow=5.0,SNR=17							
KIEV	**Kiev**	**83.69**	**324**	*e*P		**P**	**02 02 17.5**	**-0.8**
	2.3nm,0.7s,mb4.1							
IMW	**Indian Meadow**	**84.63**	**44**	*e*P		**P**	**02 02 23.9**	**+0.7**
	2.6nm,0.9s,mb4.2							
IMW				*e*pP		pP	02 02 50.5	+4.3
NOA	**NORSAR Array B**	**85.06**	**338**	P		**P**	**02 02 24.1**	**-0.9**
	2.1nm,0.6s,mb4.3,baz=45,slow=4.8,SNR=20							
DUG	**Dugway**	**85.23**	**48**	*e*P		**P**	**02 02 26.7**	**+0.4**
	1.8nm,0.6s,mb4.2							
NAO01	**NORSAR Array S**	**85.32**	**338**	*e*P		**P**	**02 02 25.3**	**-1.0**
	1.2nm,0.5s,mb4.1							
BR131	**Keskin Array S**	**86.72**	**313**	*e*P		**P**	**02 02 32.7**	**-1.0**
	0.6nm,0.6s,mb3.7							
BRTR	**Keskin Array B**	**86.72**	**313**	P		**P**	**02 02 33.0**	**-0.7**
	0.7nm,0.7s,mb3.7,baz=46,slow=4.2,SNR=3.6							
BUR08	**Bucovina Ar. S**	**87.58**	**323**	*e*P		**P**	**02 02 37.9**	**+0.3**
KWP	**Kalwaria Pacla**	**87.73**	**325**	*e*P		**P**	**02 02 37.5**	**-0.8**
	2.8nm,0.6s,mb4.5							
SCHQ	**Schefferville**	**96.68**	**16**	P		**P**	**02 03 18.0**	**-1.6**
	2.4nm,0.7s,mb4.7,baz=34,slow=7.3,SNR=2.8							
LPAZ	**La Paz**	**151.09**	**78**	*e*PKPbc		PKPbc	02 09 43.5	+0.6

*IDC **01** 02:21:32.0±0.5, 13.57°N×118.65°E,h0km,mb4.7/30, mb1 4.7/31,mb1mx4.7/36,mbtmp4.7/31, ML4.8/2, MS4.5/26, Ms1 4.5/26,ms1mx4.4/32, Error ellipse: s-maj=14.1km s-min=12.8km az=12.0*

*MAN **01** 02:21:33, 13.49N×118.58E, h37km, mb5.6, ML4.7, MS5.0*

*ISCJB **01** 02:21:35.5±0.7, 13.60N±0.02°×118.70E±0.02, h33km±5km, mb5.0/148, MS4.6/58, Error ellipse: s-maj=3.7km s-min=3.2km az=1.4*

*GCMT **01** 02:21:36.7±0.1, 13.62N×118.66E, h18km, MW5.4, Moment Tensor Solution. s72,c131; s99,c196; Moment tensor: Scale 10^17Nm; Mrr-0.50±.02; Mθθ-0.53±.02; Mφφ 1.03±.02; Mrθ-0.46±.05; Mθφ-1.02±.02; Mφr-0.38±.05; Best double couple: M0 1.50000×10^17 NP1:φs 113.00000°, δ64.00000°, λ-158.00000°. NP2:φs 14.00000°, δ71.00000°, λ-27.00000°. Principal axes: T 1.5500, Plg4.0000°, Azm65.0000°; N -0.1400, Plg57.0000°, Azm161.0000°; P -1.4100, Plg33.0000°, Azm332.0000°; Data Used: II IU IC G CN. Surface waves from 105 sta.*

*MOS **01** 02:21:36.1±1.0, 13.66N×118.63E, h33km, mb5.3/58, MS4.8/21 Error ellipse: s-maj=9.0km s-min=4.8km az=123.0*

*DJA **01** 02:21:36, 13.85N×118.87E, h30km, mb5.1/17*

*NEIC **01** 02:21:40.8±0.7, 13.66N×118.63E, h62km±6km, mb5.0/61, Error ellipse: s-maj=5.4km s-min=4.4km az=70.0*

*BJI **01** 02:21:42.6, 14.05N×118.67E, h70km, mB5.1/41, mb4.8/54, Ms4.9/63, Ms7 4.7/55*

ISC 01 02:21:37.5±0.3,13.59N±0.02°×118.71E±0.02,h36km±3km, h68km±5.2km;pP-P,n420,σ1§15/419,mb5.0/148,MS4.6/58, 32C-20D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op	ISC		h m s	ISC
BUSP	**Coron**	**2.14**	**137**	*e*P		**Pn**	**02 22 08.7**	**-2.1**
PGP	**Puerto Galera**	**2.18**	**92**	⇓*i*P		**Pn**	**02 22 10.1**	**-1.2**
TGY	**Tagaytay City**	**2.22**	**76**	Pn		**Pn**	**02 22 11.8**	**0.0**
	2µm,0.3s,baz=250,slow=4.2,SNR=151							
TGY				Sn		**Sn**	**02 22 42.0**	**+3.9**
	3µm,0.3s,baz=325,slow=22,SNR=5.8							
TGY	**Tagaytay City**	**2.22**	**76**	⇑*i*P		**Pn**	**02 22 12.1**	**+0.2**
SCZP	**Santa Cruz**	**2.46**	**28**	*e*P		**Pn**	**02 22 13.2**	**-2.0**
ENPP	**El Nido**	**2.47**	**164**	*e*P		**Pn**	**02 22 11.9**	**-3.4**
BOLP	**Bolinao**	**3.01**	**23**	*e*P		**Pn**	**02 22 21.2**	**-1.5**
BOAC	**Boac**	**3.05**	**92**	*e*P		**Pn**	**02 22 22.8**	**-0.5**
BCPH	**Baguio City Da**	**3.31**	**33**	⇑*i*P		**Pn**	**02 22 24.3**	**-2.6**
POLP	**Polilio Island**	**3.33**	**70**	*e*P		**Pn**	**02 22 27.5**	**+0.4**
OTRP	**Odiongan**	**3.45**	**110**	*e*P		**Pn**	**02 22 27.7**	**-1.1**
BALP	**Baler**	**3.50**	**52**	*e*P		**Pn**	**02 22 29.4**	**-0.1**
CUYO	**Cuyo Island**	**3.53**	**140**	*e*P		**Pn**	**02 22 27.0**	**-3.0**
GQP	**Guinayangan**	**3.64**	**85**	⇑*e*P		**Pn**	**02 22 31.4**	**-0.1**
AUQP	**San Andres**	**3.86**	**93**	*e*P		**Pn**	**02 22 36.4**	**+1.9**
RCP	**Roxas**	**4.42**	**117**	⇑*e*P		**Pn**	**02 22 41.1**	**-1.1**
RCP				*e*S		**Sn**	**02 22 24.3**	**-8.2**
ABRA	**Dolores**	**4.47**	**25**	*e*P		**Pn**	**02 22 42.9**	**0.0**
CAUP	**Cauayan**	**4.49**	**42**	*e*P		**Pn**	**02 22 44.9**	**+1.8**
SIPP	**Brgy. Tapao**	**4.62**	**21**	⇓*e*P		**Pn**	**02 22 52.5**	**+7.5**
GUIM	**Jordan**	**4.80**	**127**	*e*P		**Pn**	**02 22 46.9**	**-0.4**
BATP	**Bataraza**	**4.84**	**191**	*e*P		**Pn**	**02 22 44.0**	**-4.0**
APYP	**Conner**	**4.90**	**30**	*e*P		**Pn**	**02 22 49.2**	**+0.5**
PALP	**Palanan**	**4.98**	**46**	*e*P		**Pn**	**02 22 54.2**	**+4.4**
CVP	**Callao Caves**	**5.07**	**36**	*e*P		**Pn**	**02 22 51.4**	**+0.3**
PVCP	**Virac**	**5.29**	**89**	*e*P		**Pn**	**02 22 56.6**	**+2.5**
SNPH	**Sibulan**	**6.12**	**133**	*e*P		**Pn**	**02 23 05.5**	**0.0**
SNPH				*e*S		**Sn**	**02 24 13.3**	**-1.1**
TBP	**Tagbilaran**	**6.36**	**127**	*e*P		**Pn**	**02 23 06.8**	**-2.0**
KDM	**Kudat**	**6.88**	**196**	P		**Pn**	**02 23 14.2**	**-1.8**
IPIL	**Ipil**	**6.90**	**146**	⇑*i*P		**Pn**	**02 23 13.1**	**-3.1**
PAGZ	**Pagadian**	**7.32**	**141**	*e*P		**Pn**	**02 23 21.4**	**-0.6**
KKM	**Kota Kinabalu**	**7.89**	**198**	P		**Pn**	**02 23 27.4**	**-2.4**
SDKM	**Sandakan**	**8.04**	**191**	P		**Pn**	**02 23 30.7**	**-1.1**
MYLDM	**Lahad Datu**	**8.36**	**181**	P		**Pn**	**02 23 36.6**	**+0.3**
MYLDM	**Lahad Datu**	**8.36**	**181**	P		**Pn**	**02 23 35.4**	**-0.9**
TSM	**Tawau**	**9.27**	**185**	P		**Pn**	**02 23 48.4**	**-0.4**
DAV	**Davao City (W)**	**9.36**	**133**	LR		LR	02 28 20.8	
	comp=Z,6µm,18.6s,baz=134,slow=44							
TWG	**Pinlang**	**9.45**	**13**	*e*Pn		**Pn**	**02 23 52.3**	**+1.1**
HKC	**Hong Kong Obse**	**9.68**	**334**	Pn		**Pn**	**02 23 54.0**	**-0.3**
YULB	**Yu-li**	**10.05**	**14**	*e*Pn		**Pn**	**02 24 01.9**	**+2.4**
QIZ	**Qiongzhong**	**10.09**	**304**	P		**Pn**	**02 23 57.5**	**-2.4**
QIZ				sP			02 24 20.0	
QIZ				S		**Sn**	**02 25 53.0**	**+1.1**
QIZ				pmax	pmax			
	comp=Z,270nm,0.5s							
QIZ				pmax	pmax			
	comp=Z,290nm,8.6s							
QIZ				LR	LR			
	comp=N,5µm,17.8s							
QIZ				LR	LR			
	comp=E,1µm,20.8s							
QIZ				LR	LR			
	comp=Z,6µm,15.4s							
QIZ	**Qiongzhong**	**10.09**	**304**	*e*Pn		**Pn**	**02 23 57.1**	**-2.8**
	comp=Z,228nm,0.6s							
QIZ				*e*Sn		**Sn**	**02 25 43.6**	**-8.2**
GZH	**Guangzhou**	**10.73**	**332**	P		**Pn**	**02 24 11.4**	**+2.7**
GZH				S		**Sn**	**02 26 07.6**	**-0.1**
GZH				LR	LR			
	comp=N,4µm,16.4s							
GZH				LR	LR			
	comp=E,4µm,13.9s							
NACB	**Ninganchiao**	**10.88**	**14**	*e*Pn		**Pn**	**02 24 13.5**	**+2.8**
	comp=E,159nm,1.0s							
QZH	**Quanzhou**	**11.29**	**359**	⇑*i*P		**Pn**	**02 24 14.7**	**-1.8**
QZH				S		**Sn**	**02 26 11.3**	**-10**
QZH				LR	LR			
	comp=N,4µm,14.8s							
QZH				LR	LR			
	comp=E,5µm,13.8s							
QZH				LR	LR			
	comp=Z,6µm,15.2s							
TATO	**Taipei**	**11.62**	**13**	*e*Pn		**Pn**	**02 24 23.1**	**+2.1**
	comp=Z,57nm,0.8s							
BTM	**Bintulu**	**11.72**	**209**	P		**Pn**	**02 24 24.5**	**+2.1**
SBUM	**Sibu**	**12.79**	**211**	P		**Pn**	**02 24 36.4**	**-0.6**
KSM	**Kuching**	**14.63**	**215**	P		**Pn**	**02 25 01.2**	**-0.9**
LUWI	**Luwuk**	**15.08**	**164**	P		**Pn**	**02 25 09.9**	**+1.8**
	comp=Z,2µmcomp=Z,135nm,1.0s							
TTSI	**Tana Toraja**	**16.56**	**176**	P		**Pn**	**02 25 27.0**	**-0.2**
	comp=Z,2µmcomp=Z,73nm,0.9s							
LBMI	**Labuha**	**16.60**	**148**	P		**Pn**	**02 25 17.7**	**-10**
GYA	**Guiyang**	**17.07**	**320**	⇑*i*P		**Pn**	**02 25 32.7**	**-0.8**
GYA				pP		pP	02 25 46.5	+2.3
GYA				S		**S**	**02 28 40.4**	**-11**
GYA				sS		sS	02 29 00.6	-5.1
GYA				pmax	pmax			
	comp=Z,60nm,1.0s							
GYA				pmax	pmax			
	comp=Z,310nm,4.0s							
GYA				LR	LR			
	comp=Z,4µm,15.0s							
WHN	**Wuhan**	**17.35**	**347**	⇓P		**Pn**	**02 25 39.5**	**+2.6**
WHN				pP		pP	02 25 46.0	-1.2
WHN				LR	LR			
	comp=N,4µm,12.1s							
WHN				LR	LR			
	comp=E,5µm,12.7s							
WHN				LR	LR			
	comp=Z,8µm,15.5s							
KTGM	**Kuala Trenggan**	**17.41**	**243**	P		**Pn**	**02 25 39.3**	**+1.5**
SPSI	**Sidrap Palu**	**17.47**	**176**	P		**Pn**	**02 25 40.1**	**+1.6**
	comp=Z,988nmcomp=Z,53nm,1.3s							
SSE	**Sheshan**	**17.57**	**7**	P		**Pn**	**02 25 37.2**	**-2.4**
SSE				S		**S**	**02 28 51.3**	**-10**
SSE				pmax	pmax			
	comp=Z,19nm,0.7s							
SSE				pmax	pmax			
	comp=Z,80nm,4.7s							
SSE				LR	LR			
	comp=N,900nm,12.7s							
SSE				LR	LR			
	comp=E,990nm,13.0s							
SSE				LR	LR			
	comp=Z,1µm,15.6s							
KDI	**Kendari**	**17.86**	**167**	P		**Pn**	**02 25 40.6**	**-2.7**
	comp=Z,1µmcomp=Z,34nm,2.4s							
NJ2	**Nanjing**	**18.38**	**0**	*e*P		**Pn**	**02 25 50.0**	**+0.5**
NJ2				PP			02 26 04.9	
NJ2				pmax	pmax			
	comp=Z,40nm,1.1s							
NJ2				pmax	pmax			
	comp=Z,100nm,5.5s							
NJ2				LR	LR			
	comp=N,2µm,13.2s							
NJ2				LR	LR			
	comp=E,1µm,13.5s							
NJ2				LR	LR			
	comp=Z,2µm,15.0s							
ENH	**Enshi**	**18.66**	**334**	*e*P		**Pn**	**02 25 52.7**	**-0.3**
	comp=Z,57nm,0.8s							
NLAI	**Namlea**	**18.68**	**153**	P		Px	02 26 06.2	
MYKOM	**Kota Tinggi**	**18.80**	**233**	P		**Pn**	**02 25 55.9**	**+1.0**
BKSI	**Bulukumba**	**18.84**	**176**	P		**Pn**	**02 26 01.1**	**+5.9**
	comp=Z,598nmcomp=Z,23nm,1.0s							
SNG	**Songkhla**	**18.90**	**252**	P		**Pn**	**02 25 57.0**	**+1.0**
	comp=Z,140nm,0.8s							
KMI	**Kunming**	**18.92**	**310**	P		**Pn**	**02 25 57.7**	**+1.6**
KMI				pP		pP	02 26 08.8	+4.2
KMI				PP			02 26 17.1	
KMI				sP		sP	02 26 20.8	+12
KMI				S		**S**	**02 29 23.6**	**-4.6**
KM

TIY LR LR
comp=Z,1μm,16.1s,MS4.5
KSRS Korea Array 25.15 17 LR LR 02 37 59.7
comp=Z,574nm,18.9s,MS4.1,baz=202,slow=39
GUMO Guam 25.42 87 LR LR 02 35 08.5
comp=Z,1μm,20.3s,MS4.3,baz=106,slow=32
CBIJ Chichi jima 25.73 55 P P **02 27 04.2 -0.5**
comp=Z,38nm,0.7s,mb5.1,baz=270,slow=19,SNR=3.6
CBIJ LR LR 02 35 07.8
comp=Z,951nm,20.9s,MS4.3,baz=128,slow=32
LZH Lanzhou 26.08 332 *e*P P **02 27 08.2 +0.4**
LZH pP pP 02 27 19.2 +1.2
LZH sP sP 02 27 32.0 +10
LZH *e*S **S** **02 31 32.0 -4.7**
LZH sS sS 02 32 00.5 +6.9
LZH pmax pmax
comp=Z,28nm,1.0s,mb4.8
LZH pmax pmax
comp=Z,180nm,4.2s
LZH LR LR
comp=E,2μm,16.2s
LZH LR LR
comp=Z,3μm,17.4s,MS4.9
BJT Baijiatuau 26.42 356 *e*P P **02 27 11.9 +1.1**
comp=Z,17nm,0.6s,mb4.7
BJT Baijiatuau 26.42 356 *e*P P **02 27 11.9 +1.1**
BJT pmax pmax
comp=Z,17nm,0.6s
BJI Beijing 26.44 356 P P **02 27 11.1 +0.1**
BJI pP pP 02 27 28.8 +7.6
BJI sP sP 02 27 37.4 +12
BJI S **S** **02 31 41.8 -0.5**
BJI pmax pmax
comp=Z,24nm,1.5s,mb4.5
BJI pmax pmax
comp=Z,170nm,4.0s
BJI LR LR
comp=N,420nm,26.6s,MS4.5
BJI LR LR
comp=E,2μm,24.5s,MS4.5
BJI LR LR
comp=Z,1μm,27.1s,MS4.3
JHJ Hachijo jima 2 27.32 41 LR LR 02 36 41.3
comp=Z,420nm,20.8s,MS4.0,baz=242,slow=33
HHC Hu-ho-hao-te 27.87 348 *e*P P **02 27 24.3 +0.5**
HHC pP pP 02 27 41.5 +7.5
HHC sP sP 02 27 51.0 +13
HHC PP 02 28 15.6
HHC PcP PcP 02 30 38.7 -0.4
HHC S **S** **02 31 59.5 -5.3**
HHC sS sS 02 32 29.9 +8.2
HHC PcS PcS 02 34 19.6 -1.4
HHC pmax pmax
comp=Z,20nm,0.9s,mb4.8
HHC pmax pmax
comp=Z,150nm,6.4s
HHC LR LR
comp=N,1μm,12.3s,MS4.7
HHC LR LR
comp=E,690nm,12.8s,MS4.7
HHC LR LR
comp=Z,1μm,15.0s,MS4.6
SHL Shillong 27.88 299 *e*PKP P **02 27 22.0 -2.1**
SHL *e*S **S** **02 32 12.0 +6.6**
MAJO Matsushiro 28.77 34 *e*P P **02 27 33.0 +1.1**
comp=Z,67nm,1.7s,mb5.1
MAJO Matsushiro 28.77 34 *e*P P **02 27 33.0 +1.1**
MAJO pmax pmax
comp=Z,67nm,1.7s,mb5.1
MAT Matsushiro 28.77 34 P P **02 27 32.4 +0.5**
MAT S **S** **02 32 17.0 -2.0**
MJAR Matsushiro Arr 28.77 34 P P **02 27 32.1 +0.3**
comp=Z,8.1nm,0.8s,mb4.5,baz=212,slow=8.9,SNR=9.7
KAKA Kakadu 29.46 152 *e*P P **02 27 39.3 +1.1**
comp=Z,12nm,0.6s,mb4.8
KAKA Kakadu 29.46 152 *e*P P **02 27 39.5 +1.3**
comp=Z,34nm,0.6s,mb5.2
LSA Lhasa 30.11 307 P P **02 27 44.5 +0.6**
LSA pmax pmax
comp=Z,30nm,1.0s,mb5.0
LSA pmax pmax
comp=Z,150nm,12.0s
LSA LR LR
comp=N,370nm,20.0s,MS4.4
LSA LR LR
comp=E,770nm,18.0s,MS4.4
LSA LR LR
comp=Z,1μm,20.0s,MS4.5
LSA Lhasa 30.11 307 *e*P P **02 27 44.6 +0.7**
comp=Z,7.6nm,0.6s,mb4.6
LSA Lhasa 30.11 307 *e*P P **02 27 44.6 +0.7**
LSA pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
GTA Gaotai 30.65 331 *e*P P **02 27 48.1 -0.4**
GTA pP pP 02 28 06.0 +7.2
GTA sP sP 02 28 14.5 +11
GTA PcP PcP 02 30 46.4 +0.2
GTA S **S** **02 32 45.8 -2.7**
GTA pmax pmax
comp=Z,17nm,1.4s,mb4.7
GTA pmax pmax
comp=Z,210nm,5.1s
GTA LR LR
comp=N,2μm,15.5s,MS5.0
GTA LR LR
comp=E,2μm,16.7s,MS5.0
GTA LR LR
comp=Z,4μm,16.6s,MS5.1
CN2 Changchun 30.66 10 *e*P P **02 27 45.8 -2.7**
CN2 *ep*P pP 02 28 03.7 +4.9
CN2 *e*S **S** **02 32 45.8 -2.7**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CN2 pmax pmax
comp=Z,200nm,7.0s
CN2 LR LR
comp=N,600nm,18.0s,MS4.6
CN2 LR LR
comp=E,1μm,18.0s,MS4.6
CN2 LR LR
comp=Z,800nm,19.0s,MS4.4
KNA Kununurra 30.80 161 P P **02 27 49.5 -0.5**
comp=Z,1μmcomp=Z,136nm,0.9s,mb5.8
ODAN Odare 32.12 299 *e*P P **02 28 01.2 -0.4**
comp=Z,47nm,0.9s,mb5.3
FITZ Fitzroy Crossi 32.22 168 *e*P P **02 28 05.0 +2.5**
comp=Z,10nm,0.8s,mb4.7
FITZ Fitzroy Crossi 32.22 168 *e*P P **02 28 04.6 +2.1**
comp=Z,14nm,1.2s,mb4.7
FITZ Fitzroy Crossi 32.22 168 P P **02 28 01.7 -0.8**
comp=Z,3.3nm,1.0s,mb4.1,baz=340,slow=15,SNR=2.9
FITZ Fitzroy Crossi 32.22 168 P P **02 28 06.0 +3.5**
comp=Z,22nm,2.7s,mb4.5
MDJ Mudanjiang 32.29 15 P P **02 28 03.7 +0.9**
MDJ pP pP 02 28 20.6 +7.5
MDJ sP sP 02 28 28.6 +11
MDJ PcP PcP 02 30 50.6 +0.1
MDJ S **S** **02 33 13.2 -0.8**
MDJ ScP ScP 02 34 26.6 -5.0
MDJ PcS PcS 02 34 36.0 +0.8
MDJ ScS ScS 02 38 26.8 -3.6
MDJ pmax pmax
comp=Z,20nm,1.1s,mb4.9
MDJ pmax pmax
comp=Z,190nm,4.5s
MDJ LR LR
comp=N,430nm,15.5s
MDJ LR LR
comp=E,1μm,32.3s
MDJ LR LR
comp=Z,540nm,18.2s,MS4.3
MDJ Mudanjiang 32.29 15 *e*P P **02 28 03.5 +0.7**
comp=Z,30nm,0.9s,mb5.1
GUN Gumba 33.72 300 *e*P P **02 28 15.6 0.0**
comp=Z,92nm,0.7s,mb5.8
PKI Pulchoki 34.01 299 *e*P P **02 28 17.5 -0.7**
comp=Z,46nm,0.7s,mb5.5
PKIN Phulchoki 34.02 299 *e*P P **02 28 17.3 -1.0**
comp=Z,34nm,0.8s,mb5.3
KKN Kakani 34.19 300 *e*P P **02 28 18.7 -1.0**
comp=Z,41nm,0.7s,mb5.5
DMN Daman 34.28 299 *e*P P **02 28 20.1 -0.4**
comp=Z,52nm,0.9s,mb5.5
MBWA Marble Bar 34.55 178 *e*P P **02 28 24.9 +2.1**
comp=Z,10.0nm,0.7s,mb4.8
GKN Gorkha 34.79 300 *e*P P **02 28 23.8 -1.1**
comp=Z,32nm,0.8s,mb5.3
ERM Erimo 35.38 32 *e*P P **02 28 37.9 +8.1**
comp=Z,36nm,1.0s,mb5.3
ERM Erimo 35.38 32 *e*P P **02 28 37.9 +8.1**
ERM pmax pmax
comp=Z,36nm,1.0s,mb5.3
ULN Ulaanbaatar 35.53 346 *e*P P **02 28 30.8 -0.1**
comp=Z,16nm,1.2s,mb4.8
ULN Ulaanbaatar 35.53 346 *e*P P **02 28 30.8 -0.1**
ULN pmax pmax
comp=Z,16nm,1.2s,mb4.8
KOLN Koldanda 35.61 299 *e*P P **02 28 31.1 -0.8**
comp=Z,39nm,0.7s,mb5.4
SONM Songino Array 35.65 346 P P **02 28 32.3 +0.3**
comp=Z,8.0nm,0.8s,mb4.7,baz=159,slow=9.0,SNR=41
SONM LR LR 02 43 53.1
comp=Z,2μm,18.2s,MS4.8,baz=156,slow=38
PMG Port Moresby 36.32 127 *i*P P **02 28 45.3 +7.2**
PMG pmax pmax
comp=Z,26nm,1.1s
COEN Coen 36.55 138 *e*P P **02 28 41.8 +1.7**
COEN Coen 36.55 138 *e*P P **02 28 41.6 +1.6**
comp=Z,126nm,0.7s,mb5.8
COEN Coen 36.55 138 P P **02 28 38.8 -1.3**
ASAJ Asahikawa 36.65 29 P P **02 28 41.9 +1.3**
comp=Z,16nm,0.5s,mb5.1,baz=228,slow=11,SNR=12
WRAB Tennant Creek 36.69 155 P P **02 28 43.5 +2.3**
comp=Z,206nm,1.1s,mb5.9,SNR=5.4
WRAB Tennant Creek 36.69 155 *e*P P **02 28 41.8 +0.6**
comp=Z,41nm,1.1s,mb5.2
WRAB Tennant Creek 36.69 155 *e*P P **02 28 41.8 +0.6**
WRAB pmax pmax
comp=Z,41nm,1.1s,mb5.2
KLR Kul'dur 37.13 14 *e*P P **02 28 40.5 -4.1**
KLR *e*S **S** **02 34 25.0 -3.4**
KLR pmax pmax
comp=E,40nm,1.0s
KLR pmax pmax
comp=Z,64nm,1.0s,mb5.4
KLR MLR MLR
comp=N,500nm,13.5s,MS4.7
KLR MLR MLR
comp=E,600nm,13.5s,MS4.7
KLR MLR MLR
comp=Z,2μm,13.5s,MS5.1
HABR Khabarovsk 37.33 18 *e*P P **02 28 55.0 +8.7**
HABR *e* 02 31 04.9
HABR S **S** **02 34 30.2 -1.3**
HABR *e*SS sS 02 34 46.2 -2.4
HABR *e*SS SS 02 37 07.5 -8.4
HABR *e* 02 38 56.9
HABR pmax pmax
comp=N,11nm,1.0s
HABR pmax pmax
comp=E,20nm,1.0s
HABR pmax pmax
comp=Z,72nm,2.0s,mb5.2
HABR MLR MLR
comp=Z,425nm,17.0s,MS4.3
ZAK Zakamensk 38.79 344 *e*P P **02 28 57.9 -0.7**
ZAK *e* 02 30 24.9
ZAK pmax pmax
comp=Z,5.0nm,1.4s,mb4.0
HYB Hyderabad 38.84 281 *e*P P **02 29 00.0 +0.6**
HYB Hyderabad 38.84 281 *i*P P **02 29 00.0 +0.6**
YSS Yuzh-Sakhalins 38.89 26 *e*P P **02 29 01.9 +2.4**
comp=Z,32nm,1.0s,mb5.0
YSS Yuzh-Sakhalins 38.89 26 *e*P P **02 29 02.0 +2.6**
YSS *e* 02 29 20.5
YSS *e*S **S** **02 34 57.0 +1.9**
YSS *e* 02 38 14.0
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.1
YSS MLR MLR
comp=N,500nm,16.0s
YSS MLR MLR
comp=Z,400nm,16.0s,MS4.3
TLY Talaya 39.89 345 P P **02 29 08.8 +1.1**
comp=Z,79nm,0.7s,mb5.5,SNR=6.0
TLY Talaya 39.89 345 *e*P P **02 29 08.3 +0.6**
comp=Z,51nm,1.7s,mb5.0
TLY Talaya 39.89 345 *e*P P **02 29 07.6 -0.1**
TLY *e* 02 30 48.9
TLY *e*S **S** **02 35 07.4 -2.7**
TLY pmax pmax
comp=Z,30nm,1.7s,mb4.8
TLY MLR MLR
comp=Z,786nm,17.0s,MS4.6
ASAR Alice Springs 39.90 158 P P **02 29 07.2 -1.0**
comp=Z,4.7nm,0.6s,mb4.4,baz=339,slow=7.2,SNR=32
ASAR PcP PcP 02 31 13.5 +0.1
comp=Z,2.0nm,0.7s,baz=340,slow=3.9,SNR=3.1
WMQ Urumqi 40.16 325 P P **02 29 11.4 +1.3**
WMQ pP pP 02 29 26.7 +6.1
WMQ sP sP 02 29 33.9 +9.0
WMQ PP PP 02 30 48.4 +5.5
WMQ PcP PcP 02 31 16.2 +2.2
WMQ *e*S **S** **02 35 12.4 -1.9**
WMQ sS sS 02 35 38.5 +6.9
WMQ SS SS 02 38 05.6 -7.4
WMQ ScS ScS 02 39 10.5 -3.4
WMQ pmax pmax
comp=Z,14nm,1.2s,mb4.6
WMQ pmax pmax
comp=Z,240nm,4.4s
WMQ LR LR
comp=N,2μm,21.0s,MS5.0
WMQ LR LR
comp=E,1μm,26.0s,MS5.0
WMQ LR LR
comp=Z,2μm,25.0s,MS4.8
IRK Irkutsk 40.26 346 *e*P P **02 29 10.8 0.0**
IRK pmax pmax
comp=Z,41nm,1.6s,mb4.9
MOY Mondy 40.58 343 *e*P P **02 29 14.1 +0.7**
MOY pmax pmax
comp=Z,44nm,2.1s,mb4.7
CTA Charters Tower 43.06 140 *e*P P **02 29 37.5 +3.4**
comp=Z,22nm,0.8s,mb4.9
CTAO Charters Tower 43.06 140 *e*P P **02 29 34.6 +0.5**
comp=Z,35nm,0.9s,mb5.1
CTAO Charters Tower 43.06 140 *e*P P **02 29 34.6 +0.5**
CTAO pmax pmax
comp=Z,35nm,0.9s,mb5.1
CLNS Chul'man 43.42 5 *e*P P **02 29 36.8 +0.3**
CLNS *e**PP pP 02 29 42.6 -4.5
CLNS *e* 02 31 18.4
CLNS *e* 02 31 25.8
CLNS *e*S **S** **02 36 02.3 +0.1**
CLNS pmax pmax
comp=E,16nm,1.1s
CLNS pmax pmax
comp=Z,27nm,0.9s,mb5.0
CLNS pmax pmax
comp=N,22nm,1.2s
CLNS pmax pmax
comp=N,5.0nm,0.8s
CLNS pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
CLNS pmax pmax
comp=E,4.0nm,0.7s
CLNS smax
comp=E,59nm,14.2s
CLNS smax
comp=N,49nm,14.6s
CLNS MLR MLR
comp=N,229nm,15.0s,MS4.5
CLNS MLR MLR
comp=Z,240nm,15.0s,MS4.2
CLNS MLR MLR
comp=E,355nm,13.0s,MS4.5
KLBR Kellerberrin 44.93 181 *e*P P **02 29 54.4 +5.5**
comp=E,17nm,0.7s,mb5.0
MK31 Makanchi Array 44.99 325 *e*P P **02 29 49.7 +0.4**
MK31 Makanchi Array 44.99 325 *ce*P P **02 29 48.9 -0.4**
MK31 pmax pmax
comp=Z,31nm,0.8s,mb5.2
MKAR Makanchi Array 44.99 325 P P **02 29 49.6 +0.3**
comp=Z,16nm,0.7s,mb5.0,baz=128,slow=8.8,SNR=105
MKAR PcP PcP 02 31 30.4 +0.4
comp=Z,1.9nm,0.7s,baz=131,slow=4.0,SNR=2.3
MKAR LR LR 02 49 42.3
comp=Z,2μm,19.1s,MS5.1,baz=131,slow=38
MKAR Makanchi Array 44.99 325 P P **02 29 49.6 +0.3**
MKAR 02 31 30.4
FORT Forrest 45.02 169 *e*P P **02 29 53.3 +3.6**
comp=Z,65nm,0.7s,mb5.6
FORT Forrest 45.02 169 *e*P P **02 29 52.8 +3.1**
comp=Z,402nm,0.6s
KSH Kashi 45.54 313 P P **02 29 56.0 +2.2**
KSH *ep*P pP 02 30 15.1 +11
KSH *es*P sP 02 30 23.6 +15
KSH *e*S **S** **02 36 31.0 -2.6**
KSH pmax pmax
comp=Z,16nm,1.2s,mb4.8
KSH pmax pmax
comp=Z,82nm,5.3s
KSH LR LR
comp=N,900nm,17.7s
KSH LR LR
comp=E,380nm,11.3s
KSH LR LR
comp=Z,520nm,14.0s,MS4.6
ULHL Ulahol 46.45 316 P P **02 30 02.0 +1.1**
SNR=51
KZA Kyzart 47.05 316 P P **02 30 07.2 +1.6**
SNR=21
TKM2 Tokmak 2 47.17 317 P P **02 30 07.2 +0.7**
SNR=29
KBK Karagaybulak 47.49 316 P P **02 30 11.8 +2.7**
SNR=8.0
UCH Uchtor 47.62 315 P P **02 30 11.6 +1.6**
SNR=10
FRU Bishkek 47.79 316 *e*P P **02 30 11.0 -0.4**
FRU pmax pmax
comp=Z,85nm,2.2s,mb5.4
AAK Ala-Archa 47.79 316 P P **02 30 12.1 +0.7**
comp=Z,151nm,1.0s,mb6.0,SNR=11
AAK Ala-Archa 47.79 316 P P **02 30 10.0 -1.4**
SNR=7.4
AAK Ala-Archa 47.79 316 P P **02 30 11.9 +0.6**
comp=Z,9.2nm,0.8s,mb4.9,baz=139,slow=7.1,SNR=30
AAK LR LR 02 51 53.5
comp=Z,1μm,21.5s,MS4.8,baz=228,slow=38
USP Ospenovka 48.05 317 P P **02 30 13.8 +0.4**
SNR=26
AML Almayashu 48.14 315 P P **02 30 15.2 +1.1**
SNR=31
ZALV Zalesovo Beam 48.29 334 P P **02 30 14.4 -0.6**
comp=Z,6.2nm,0.7s,mb4.8,baz=133,slow=5.8,SNR=24
ZALV LR LR 02 51 23.2
comp=Z,739nm,18.4s,MS4.7,baz=340,slow=37
EKS2 Erkin-Say 48.29 316 P P **02 30 16.2 +1.0**
SNR=24
YAK Yakutsk 49.01 7 *e*P P **02 30 20.7 +0.3**
YAK Yakutsk 49.01 7 *e*P P **02 30 21.0 +0.6**
YAK pmax pmax
comp=Z,20nm,0.8s,mb5.2
YAK pmax pmax
comp=N,12nm,1.2s
KURK Kurchatov 49.22 327 P P **02 30 22.5 +0.2**
comp=N,871nm,0.9s,SNR=96
KURK Kurchatov 49.22 327 *e*P P **02 30 22.5 +0.3**
comp=N,126nm,0.8s,mb6.0
KURK Kurchatov 49.22 327 *d*P P **02 30 22.6 +0.3**
KURK pmax pmax
comp=Z,196nm,1.2s,mb6.0
KBL Kabul 49.36 304 *e*P P **02 30 24.1 +0.4**
comp=Z,17nm,0.7s,mb5.2
KBL Kabul 49.36 304 *e*P P **02 30 24.1 +0.5**
KBL pmax pmax
comp=Z,17nm,0.7s,mb5.2
NVS Novosibirsk 49.57 334 *i*P P **02 30 24.6 -0.3**
NVS pmax pmax
comp=Z,62nm,1.8s,mb5.3
NVS pmax pmax
comp=N,47nm,1.7s
NVS pmax pmax
comp=E,49nm,1.7s
EIDS Eidsvold 49.95 141 *e*P P **02 30 29.8 +1.7**
comp=E,42nm,1.0s,mb5.4
PEA0B Petropavlovsk- 50.06 30 *e*P P **02 30 30.4 +1.8**
PETK Petropavlovsk- 50.06 30 P P **02 30 29.5 +0.9**
comp=E,10.0nm,0.7s,mb4.9,baz=216,slow=4.6,SNR=11
PETK LR LR 02 49 26.4
comp=E,286nm,21.3s,MS4.2,baz=328,slow=33
STKA Stephens Creek 50.25 155 *e*P P **02 30 32.6 +2.3**
comp=E,10nm,0.8s,mb4.9
STKA Stephens Creek 50.25 155 *e*P P **02 30 32.1 +1.8**
comp=E,3.8nm,0.9s,mb4.4
STKA Stephens Creek 50.25 155 P P **02 30 31.6 +1.3**
comp=E,13nm,0.8s,mb5.0,baz=338,slow=11,SNR=6.3
PET Petropavlovsk 50.48 30 *e*P P **02 30 36.9 +5.2**
PET *e* 02 32 35.7
PET *e*S **S** **02 37 45.6 +2.6**
PET *e*SS SS 02 41 19.8 +2.6
PET pmax pmax
comp=Z,100nm,12.6s
PET pmax pmax
comp=Z,100nm,13.3s
KK31 Karatay Array 50.68 315 *ce*P P **02 30 32.8 -0.7**
KK31 pmax pmax
comp=Z,41nm,0.9s,mb5.4
ARMA Armidale 54.02 145 *e*P P **02 31 02.1 +3.8**
ARMA Armidale 54.02 145 *e*P P **02 31 01.2 +2.8**
comp=Z,50nm,1.3s,mb5.3
SEY Seymchan 54.70 18 *i*P P **02 31 04.3 +1.4**
BVA0 Borovoye Array 54.79 326 P P **02 31 04.2 +0.6**
BVA0 pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
BVAR Borovoye Array 54.79 326 P P **02 31 03.8 +0.2**
comp=Z,10nm,0.7s,mb5.0,baz=119,slow=9.3,SNR=58
BRVK Borovoye 54.86 326 P P **02 31 04.0 -0.2**
comp=Z,246nm,1.2s,mb6.1,SNR=18
BRVK Borovoye 54.86 326 *e*P P **02 31 04.2 0.0**
comp=Z,70nm,1.2s,mb5.6
BRVK Borovoye 54.86 326 *d*P P **02 31 04.4 +0.2**
BRVK pmax pmax
comp=Z,71nm,1.2s,mb5.6
YNG Young 55.36 150 *e*P P **02 31 16.3 +8.3**
comp=Z,10nm,0.9s,mb4.9
CNB Canberra Magne 56.65 150 *e*P P **02 31 25.0 +7.8**
TIXI Tiksi 58.36 4 *e*P P **02 31 24.5 -4.2**
comp=Z,24nm,1.0s,mb5.2
TIXI Tiksi 58.36 4 *e*P P **02 31 28.4 -0.3**
TIXI *e*S **S** **02 39 28.3 -0.3**
TIXI *e* 02 45 36.3
TIXI pmax pmax
comp=Z,24nm,1.1s,mb5.1
TIXI MLR MLR
comp=Z,400nm,18.0s,MS4.6
ABKT Ailbek 58.64 306 P P **02 31 32.3 +1.0**
comp=Z,243nm,1.1s,mb6.1,SNR=12
AB31 Akbulak array 59.56 319 *ce*P P **02 31 37.2 -0.2**
AB31 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
AKTO Aktyubinsk 61.06 320 LR LR 02 59 36.9
comp=Z,751nm,20.4s,MS4.8,baz=115,slow=37
SVE Sverdlovsk 61.47 328 *i*P P **02 31 50.3 0.0**
SVE pmax pmax
comp=Z,35nm,0.9s,mb5.5
ARU Arti 62.42 327 P P **02 31 56.5 -0.2**
comp=Z,107nm,0.7s,mb6.1,SNR=5.5
ARU Arti 62.42 327 *e*P P **02 31 55.8 -0.9**
comp=Z,19nm,0.9s,mb5.2
ARU Arti 62.42 327 *d*P P **02 31 55.7 -1.0**
ARU *e* 02 34 09.3
ARU S **S** **02 40 19.4 -1.6**
ARU pmax pmax
comp=Z,55nm,2.5s,mb5.2
KBD Kabd 67.06 296 *e*P P **02 32 27.7 +0.2**
KBD AMb AMB 02 32 29.1
comp=Z,29nm,1.3s,mb5.2
MAK Makhachkala 67.14 311 *e*P P **02 32 32.1 +4.3**
MAK *e* 02 34 56.5
MAK *e*PPP 02 36 34.7
MAK *e* 02 42 26.4
MAK *e*SS SS 02 45 35.6 -3.5
MAK pmax pmax
comp=Z,143nm,1.0s,mb6.0
RDF Al-Radifah 67.20 296 *e*P P **02 32 28.2 -0.1**
RDF AMb AMB 02 32 30.4
comp=Z,66nm,1.1s,mb5.6
MIB Mutribah 67.33 297 *e*P P **02 32 28.2 -1.0**
MIB AMb AMB 02 32 30.5
comp=Z,57nm,0.8s,mb5.7
DGRG David-gareji 68.68 309 P P **02 32 37.2 -0.3**
MTA Mtatsminda 69.12 310 P P **02 32 41.0 +0.8**
GNI Garni 69.16 308 *e*P P **02 32 42.0 +1.5**
comp=Z,102nm,1.5s,mb5.5
GNI Garni 69.16 308 P P **02 32 41.5 +1.0**
comp=Z,3.8nm,0.5s,mb4.6,baz=148,slow=14,SNR=9.1

GNI Garni 69.16 308 *d iP* **P** **02 32 41.6 +1.1**
GNI pmax pmax
comp=Z,57nm,1.7s
TBLG Delisi 69.16 310 P **P** **02 32 41.5 +1.0**
TBLG Delisi 69.16 310 P **P** **02 32 41.5 +1.1**
GOR Gori 69.63 310 P **P** **02 32 44.1 +0.8**
ZEI Tsey 69.79 311 *eP* **P** **02 32 43.5 -0.8**
ZEI pmax pmax
comp=Z,58nm,1.4s,mb5.3
ONI Oni 70.12 311 P **P** **02 32 48.2 +1.9**
VRHR Novokhopersk 71.44 320 *eP* **P** **02 32 53.1 -1.1**
VRHR pmax pmax
comp=N,10.0nm,1.0s
VRHR pmax pmax
comp=E,10.0nm,1.0s
VRHR pmax pmax
comp=Z,40nm,1.0s,mb5.3
SOC Sochi 72.83 312 *eP* **P** **02 33 00.4 -2.3**
SOC *e*PP pP 02 33 11.4 -2.4
SOC *e* 02 35 41.3
SOC *eS* S 02 42 24.4 -1.9
SOC *e* 02 43 04.5
SOC pmax pmax
comp=Z,106nm,1.9s,mb5.5
SOC MLR MLR
comp=Z,363nm,23.0s,MS4.6
KLMR Klimovskoe 72.97 330 *eP* **P** **02 33 00.3 -2.9**
KLMR pmax pmax
comp=Z,57nm,1.8s,mb5.2
VSR Storozhevoye 72.99 320 *eP* **P** **02 33 02.0 -1.5**
VSR pmax pmax
comp=E,10.0nm,1.1s
VSR pmax pmax
comp=Z,30nm,1.1s,mb5.1
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,1.1s
ATD Arta Tunnel 73.79 278 P **P** **02 33 07.8 -1.1**
ATD Arta Tunnel 73.79 278 P **P** **02 33 07.8 -1.1**
comp=E,7.2nm,0.7s,mb4.7,baz=75,slow=20,SNR=3.6
MOS Moscow 73.88 324 *eP* **P** **02 33 06.9 -1.7**
MOS pmax pmax
comp=Z,67nm,1.5s,mb5.3
ANN Anapa 74.40 313 *eP* **P** **02 33 10.6 -1.3**
ANN MLR MLR
comp=Z,328nm,18.0s,MS4.7
OBN Obninsk 74.49 324 ⇑*iP* **P** **02 33 09.9 -2.3**
OBN *e* pP 02 33 20.9 -2.4
OBN *i* 02 33 29.2
OBN pmax pmax
comp=Z,44nm,1.6s,mb5.1
OBN MLR MLR
comp=Z,800nm,19.0s,MS5.0
TTA Tatalina 75.86 28 *eP* **P** **02 33 20.5 +0.5**
comp=Z,13nm,1.0s,mb4.8
TTA Tatalina 75.86 28 *eP* **P** **02 33 20.5 +0.6**
TTA pmax pmax
comp=Z,13nm,1.0s,mb4.8
ASF Jabal al Asfar 76.05 300 P **P** **02 33 22.3 +0.7**
comp=Z,8.1nm,1.1s,mb4.6,baz=355,slow=3.2,SNR=10.0
SIM Simferopol' 76.74 313 *ceP* **P** **02 33 25.6 +0.3**
SIM *eS* S 02 43 06.0 -3.9
SIM pmax pmax
comp=Z,17nm,0.8s,mb5.0
SIM MLR MLR
comp=Z,300nm,20.0s,MS4.6
JOF Joensuu 76.83 332 *eP* **P** **02 33 24.6 -0.8**
JOF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
JOF Joensuu 76.83 332 *ep* **P** **02 33 24.6 -0.8**
comp=Z,6.7nm,0.8s,mb4.6
MMAI Mount Meron Ar 77.19 301 P **P** **02 33 28.5 +0.4**
comp=Z,3.5nm,0.7s,mb4.4,baz=79,slow=9.4,SNR=6.0
MMAI LR LR 03 15 14.9
comp=Z,178nm,18.3s,MS4.4,baz=100,slow=42
BR131 Keskin Array S 77.70 308 *eP* **P** **02 33 30.3 -0.5**
comp=Z,5.7nm,0.8s,mb4.5
BRTR Keskin Array B 77.70 308 P **P** **02 33 31.1 +0.3**
comp=Z,6.7nm,0.8s,mb4.6,baz=119,slow=6.2,SNR=33
BRTR LR LR 03 15 37.3
comp=Z,170nm,18.2s,MS4.4,baz=290,slow=42
KDAK Kodiak Island 77.94 33 P **P** **02 33 32.8 +1.0**
comp=Z,6.2nm,0.7s,mb4.6,baz=207,slow=5.5,SNR=7.1
KDAK Kodiak Island 77.94 33 *ceP* **P** **02 33 36.4 +4.7**
BPAW Bear Paw Mtn. 78.03 27 *eP* **P** **02 33 32.8 +0.7**
comp=Z,3µm,0.8s
EIL Elat 78.06 298 P **P** **02 33 33.0 0.0**
EIL Elat 78.06 298 P **P** **02 33 33.0 0.0**
comp=Z,12nm,0.9s,mb4.8,baz=26,slow=3.9,SNR=12
ARCES ARCESS Array B 78.50 339 P **P** **02 33 34.2 -0.4**
ARCES LR LR 03 11 42.3
ARCES ARCESS Array B 78.50 339 P **P** **02 33 34.2 -0.4**
comp=Z,5.6nm,0.7s,mb4.6,baz=86,slow=8.2,SNR=14
ARCES LR LR 03 11 42.3
comp=Z,661nm,19.7s,MS5.0,baz=132,slow=38
CSS Prodhromos 78.61 303 *eP* **P** **02 33 34.7 -1.3**
comp=Z,54nm,0.6s,mb5.7
PMR Palmer 79.19 29 *eP* **P** **02 33 38.2 -0.4**
comp=Z,22nm,0.9s,mb5.1
PMR Palmer 79.19 29 *eP* **P** **02 33 38.2 -0.3**
PMR pmax pmax
comp=Z,22nm,0.9s,mb5.1
KAF Kangasniemi 79.23 331 *eP* **P** **02 33 38.0 -0.8**
comp=Z,8.0nm,0.7s,mb4.8
KAF Kangasniemi 79.23 331 *eP* **P** **02 33 38.0 -0.8**
KAF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
KAF Kangasniemi 79.23 331 *ep* **P** **02 33 38.0 -0.8**
comp=Z,8.0nm,0.7s,mb4.8
COLA College 79.27 26 *eP* **P** **02 33 38.5 -0.4**
comp=Z,3.7nm,0.7s,mb4.4
COLA College 79.27 26 *eP* **P** **02 33 38.5 -0.4**
COLA pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
AKASG Malin Array Be 79.30 320 P **P** **02 33 38.3 -1.1**
comp=Z,4.6nm,0.7s,mb4.5,baz=72,slow=4.9,SNR=25
AKASG LR LR 03 11 37.8
comp=Z,265nm,19.0s,MS4.6,baz=95,slow=38
KIEV Kiev 79.31 320 *eP* **P** **02 33 38.1 -1.3**
comp=Z,13nm,0.9s,mb4.8
KIEV Kiev 79.31 320 *eP* **P** **02 33 38.1 -1.3**
KIEV pmax pmax
comp=Z,13nm,0.9s,mb4.9
FINES FINESS Array B 79.44 331 P **P** **02 33 38.8 -1.1**
FINES LR LR 03 10 19.7
FINES FINESS Array B 79.44 331 P **P** **02 33 38.8 -1.1**
comp=Z,2.9nm,0.7s,mb4.3,baz=43,slow=5.3,SNR=10
FINES LR LR 03 10 19.7
comp=Z,283nm,19.4s,MS4.6,baz=340,slow=37
MICGM Minsk 79.55 324 ⇓*eP* **P** **02 33 38.0 -2.6**
VSU Vasula 79.57 328 ⇑*iP* **P** **02 33 40.6 -0.1**
VSU pmax pmax
comp=Z,31nm,1.6s,mb5.0
MNK Minsk 79.58 324 ⇓*eP* **P** **02 33 38.0 -2.8**
ILAR Eielson Array 79.69 26 P **P** **02 33 40.1 -1.1**
comp=Z,0.9nm,0.8s,mb3.8,baz=288,slow=5.9,SNR=9.5
ILAR LR LR 03 13 54.6
comp=Z,103nm,18.4s,MS4.2,baz=112,slow=39
CASY Casey 79.87 183 *eP* **P** **02 33 44.9 +2.9**
comp=Z,5.3nm,0.9s,mb4.5
NACGM Naroch 80.12 324 *e* **P** **02 33 39.0 -4.7**
KIS Kishinev 80.13 316 *eP* **P** **02 33 44.0 +0.1**
KIS MLR MLR
comp=Z,400nm,17.0s,MS4.8
KIS MLR MLR
comp=Z,500nm,16.0s
MENT Mentasta 81.43 27 *eP* **P** **02 33 50.4 -0.2**
VRI Vrincioaia 81.75 315 P **P** **02 33 54.6 +2.0**
VRI Vrincioaia 81.75 315 ⇑*iP* **P** **02 33 53.3 +0.7**
KMBO Kilima Mbogo 81.96 267 *eP* **P** **02 33 55.7 +1.3**
comp=Z,17nm,1.3s,mb4.8
KMBO Kilima Mbogo 81.96 267 P **P** **02 33 54.3 0.0**
comp=Z,5.6nm,0.9s,mb4.5,baz=1.7,slow=24,SNR=9.7
KMBO LR LR 03 05 50.2
comp=Z,314nm,21.3s,MS4.6,baz=0.0,slow=32
KMBO Kilima Mbogo 81.96 267 *eP* **P** **02 33 55.7 +1.3**
KMBO pmax pmax
comp=Z,17nm,1.3s
EGAK Eagle 82.09 25 *eP* **P** **02 33 54.2 +0.2**
comp=Z,5.7nm,0.7s,mb4.6
SUW Suwalki 82.35 324 *eP* **P** **02 33 55.9 +0.3**
SUW LMZ 03 11 50.6
comp=Z,900nm,21.0s
SUW Suwalki 82.35 324 *eP* **P** **02 33 55.2 -0.4**
comp=Z,34nm,0.9s,mb5.3

MLR Muntele Rosu 82.36 315 ⇑P **P** **02 33 56.1 +0.3**
MLR Muntele Rosu 82.36 315 P **P** **02 33 56.8 +1.0**
MLR Muntele Rosu 82.36 315 ⇑*iP* **P** **02 33 56.1 +0.3**
BURAR Bucovina Array 82.43 317 ⇑P **P** **02 33 55.9 -0.2**
BURAR Bucovina Array 82.43 317 ⇑*iP* **P** **02 33 55.9 -0.2**
BUR08 Bucovina Ar. S 82.43 317 *eP* **P** **02 33 55.9 -0.3**
LVV L'vov 82.73 319 *eP* **P** **02 33 57.9 +0.2**
LVV *e* 02 34 13.7
LVV MLR MLR
comp=Z,400nm,20.0s,MS4.8
LVV MLR MLR
comp=N,100nm,21.0s,MS4.7
LVV MLR MLR
comp=E,300nm,21.0s,MS4.7
VOIR 82.99 315 ⇑P **P** **02 34 00.9 +1.8**
VOIR 82.99 315 ⇑*iP* **P** **02 34 00.9 +1.8**
DAWY Dawson 83.02 26 *eP* **P** **02 33 59.6 +0.7**
KWP Kalwaria Pacla 83.61 319 *eP* **P** **02 34 02.4 +0.2**
KWP LMZ 03 13 11.8
comp=E,400nm,21.4s
KWP Kalwaria Pacla 83.61 319 *eP* **P** **02 34 01.9 -0.3**
comp=E,15nm,0.8s,mb5.2
KWP Kalwaria Pacla 83.61 319 ⇓*iP* **P** **02 34 02.7 +0.5**
KWP Kalwaria Pacla 83.61 319 ⇓*iP* **P** **02 34 02.7 +0.5**
INK Inuvik 83.89 21 *eP* **P** **02 34 03.2 -0.1**
comp=E,4.9nm,0.9s,mb4.6
INK Inuvik 83.89 21 *eP* **P** **02 34 03.2 -0.1**
INK pmax pmax
comp=Z,5.0nm,0.9s
UZH Uzhgorod 84.11 318 ⇓*iP* **P** **02 34 05.5 +0.7**
DRGR 84.27 317 ⇓P **P** **02 34 06.0 +0.3**
DRGR 84.27 317 ⇓*iP* **P** **02 34 06.0 +0.3**
GZR Gura Zlata 84.56 315 P **P** **02 34 08.5 +1.4**
STHS Stebnicka Huta 84.59 319 *eP* **P** **02 34 08.2 +1.0**
comp=Z,4.0nm,1.0s,mb4.5
STHS Stebnicka Huta 84.59 319 *eP* **P** **02 34 08.2 +1.0**
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
STHS Stebnicka Huta 84.59 319 *eP* **P** **02 34 08.2 +1.0**
VTS Vitosha 84.92 312 ⇓P **P** **02 34 00.2 -8.8**
VTS Vitosha 84.92 312 ⇓*iP* **P** **02 34 00.2 -8.8**
NIE Niedzica 85.18 320 *eP* **P** **02 34 10.7 +0.5**
OJC Ojcow 85.29 320 *eP* **P** **02 34 10.9 +0.2**
OJC *eS* S 02 44 35.1 -3.5
OJC L 03 14 19.7
comp=Z,0.4nm,20.1s
KECS Kecovo 85.31 319 *eP* **P** **02 34 10.8 -0.1**
comp=Z,4.8nm,1.0s,mb4.6
KECS Kecovo 85.31 319 *eP* **P** **02 34 10.8 -0.1**
KECS pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
KECS Kecovo 85.31 319 *eP* **P** **02 34 10.8 -0.1**
HFS Hagfors 85.64 331 P **P** **02 34 10.8 -1.4**
comp=Z,4.9nm,0.6s,mb4.9,baz=102,slow=6.1,SNR=3.3
PSZ Piszkesteto 85.84 318 *eP* **P** **02 34 13.2 -0.3**
comp=Z,15nm,1.4s,mb5.0
PSZ Piszkesteto 85.84 318 *eP* **P** **02 34 13.2 -0.3**
PSZ pmax pmax
comp=Z,15nm,1.4s,mb5.0
PSZ Piszkesteto 85.84 318 ⇑*eP* **P** **02 34 13.8 +0.3**
GKP Gorka Klasztor 85.96 324 *eP* **P** **02 34 13.2 -0.8**
GKP LMZ 03 14 20.1
comp=Z,1µm,21.0s
GVD Gavdhos 86.08 305 *eP* **P** **02 34 14.7 -0.3**
comp=Z,88nm,1.0s,mb6.0
VYHS Vyhne 86.37 319 *eP* **P** **02 34 16.7 +0.6**
comp=Z,10nm,1.8s,mb4.8
VYHS Vyhne 86.37 319 *eP* **P** **02 34 16.7 +0.6**
VYHS pmax pmax
comp=Z,11nm,1.8s,mb4.8
VYHS Vyhne 86.37 319 *eP* **P** **02 34 16.7 +0.6**
OKC Ostrava-Krasne 86.42 320 *eS* S 02 44 44.9 -4.8
OKC AMS AMS 03 14 50.0
comp=Z,300nm,22.5s
NOA NORSAR Array B 86.47 332 P **P** **02 34 14.8 -1.5**
NOA PP PP 02 37 38.3 +0.7
NOA LR LR 03 15 24.9
NOA NORSAR Array B 86.47 332 P **P** **02 34 14.8 -1.5**
comp=Z,3.0nm,0.8s,mb4.6,baz=64,slow=5.7,SNR=20
NOA PP PP 02 37 38.3 +0.7
comp=Z,0.7nm,0.8s,baz=77,slow=7.8,SNR=4.0
NOA LR LR 03 15 24.9
comp=Z,531nm,18.4s,MS5.0,baz=60,slow=37
NOA NORSAR Array B 86.47 332 P **P** **02 34 14.8 -1.5**
NOA 02 37 38.3
NAO01 NORSAR Array S 86.69 332 *eP* **P** **02 34 16.0 -1.4**
comp=Z,3.3nm,0.8s,mb4.6
MORC Moravsky Berou 86.81 320 *eP* **P** **02 34 18.0 -0.2**
comp=Z,24nm,1.5s,mb5.2
MORC Moravsky Berou 86.81 320 *eP* **P** **02 34 18.0 -0.2**
MORC pmax pmax
comp=Z,24nm,1.5s,mb5.2
MORC Moravsky Berou 86.81 320 ⇑*iP* **P** **02 34 17.7 -0.5**
KSP Ksiaz 87.25 322 *eP* **P** **02 34 20.3 -0.1**
KSP LMZ 03 15 22.7
comp=Z,1µm,20.8s
DPC Dobruska-Polom 87.39 321 *eP* **P** **02 34 21.2 +0.2**
DPC *e* 02 44 45.0
DPC MLR MLR
comp=Z,500nm,18.2s,MS5.0
DPC Dobruska-Polom 87.39 321 *eP* **P** **02 34 21.2 +0.2**
DPC *eSKS* 02 44 45.0
DPC AMS AMS 03 15 10.0
comp=Z,500nm,18.2s
UPC Upice 87.53 321 *eP* **P** **02 34 21.6 -0.1**
UPC Upice 87.53 321 *eP* **P** **02 34 21.6 -0.1**
VRAC Vranov 87.54 320 P **P** **02 34 22.6 +0.8**
comp=Z,1.8nm,0.4s,mb4.6,baz=78,slow=4.8,SNR=9.8
VRAC Vranov 87.54 320 ⇑P **P** **02 34 22.3 +0.5**
VRAC Vranov 87.54 320 ⇑*iP* **P** **02 34 22.3 +0.5**
ZST Bratislava 87.56 319 *eP* **P** **02 34 23.6 +1.7**
ZST Bratislava 87.56 319 *eP* **P** **02 34 23.6 +1.7**
RUE Ruedersdorf 88.20 324 *eP* **P** **02 34 24.3 -0.5**
comp=Z,102nm,2.3s,mb5.7
TREC Trest 88.23 320 *eP* **P** **02 34 23.8 -1.3**
TREC *e* 02 45 10.2
TREC MLR MLR
comp=Z,300nm,14.7s,MS4.8
TREC Trest 88.23 320 *eP* **P** **02 34 23.8 -1.3**
TREC *eS* S 02 45 10.2 +3.0
TREC AMS AMS 03 20 30.0
comp=Z,300nm,14.7s
PVCC Panska Ves 88.39 322 *eP* **P** **02 34 26.4 +0.6**
PVCC MLR MLR
comp=Z,600nm,21.1s,MS5.0
PVCC Panska Ves 88.39 322 *eP* **P** **02 34 26.4 +0.6**
PVCC AMS AMS 03 15 50.0
comp=Z,600nm,21.1s
PRU Pruhonice 88.59 321 *eP* **P** **02 34 25.7 -1.0**
PRU *e* 02 44 59.0
PRU *e* 02 46 10.1
PRU MLR MLR
comp=Z,600nm,20.0s,MS5.0
PRU Pruhonice 88.59 321 *eP* **P** **02 34 25.7 -1.0**
PRU *eSKS* 02 44 59.0
PRU *ePS* 02 46 10.1
PRU AMS AMS 03 16 00.0
comp=Z,600nm,20.0s
BRG Berggiesshubel 88.65 322 *eP* **P** **02 34 26.6 -0.4**
comp=Z,22nm,1.6s,mb5.2
BRG Berggiesshubel 88.65 322 *eP* **P** **02 34 26.8 -0.2**
comp=Z,21nm,1.6s,mb5.2
BRG
comp=N,316nm,17.9s
BRG
comp=E,523nm,19.2s
BRG
comp=Z,670nm,22.7s
BRG Berggiesshubel 88.65 322 *eP* **P** **02 34 26.8 -0.2**
BRG pmax pmax
comp=Z,12nm,1.6s,mb5.0
BRG MLR MLR
comp=N,189nm,17.9s,MS4.8
BRG MLR MLR
comp=E,313nm,19.2s,MS4.8
BRG MLR MLR
comp=Z,401nm,22.7s,MS4.8
CLL Collm 89.06 323 *eP* **P** **02 34 28.3 -0.6**
comp=Z,15nm,1.5s,mb5.1
CLL *ePP* PP 02 38 01.3 +2.6
CLL Collm 89.06 323 ⇑*iP* **P** **02 34 29.3 +0.4**
comp=Z,15nm,1.5s,mb5.1
CLL *eS* S 02 45 11.0 -3.9
CLL pmax pmax
comp=Z,15nm,1.5s,mb5.1
CLL MLR MLR
comp=Z,500nm,20.0s,MS4.9
CLL Collm 89.06 323 ⇑*iP* **P** **02 34 29.3 +0.4**
comp=Z,15nm,1.5s,mb5.1
CLL *ePlp* 02 34 34.0
CLL *eSKSac* SKSac 02 44 53.0 -3.0
CLL *eS* S 02 45 11.0 -3.9
CLL *ePS* PS 02 46 22.0 -1.4
CLL *eSS* SS 02 51 10.0 +2.1
CLL LmH 03 13 00.0
comp=N,400nm,21.5s
CLL LmH 03 13 00.0
comp=E,200nm,18.5s
CLL LmV 03 16 00.0
comp=Z,500nm,20.0s
DLBC Dease Lake 89.25 29 LR LR 03 19 03.5
comp=Z,144nm,19.5s,MS4.4,baz=296,slow=39
RES Resolute Bay 89.44 8 LR LR 03 19 24.9
comp=Z,136nm,18.1s,MS4.4,baz=289,slow=39
KHC Kasperske Hory 89.47 321 *eP* **P** **02 34 31.1 +0.2**
KHC *e* 02 44 58.5
KHC *e* 02 46 22.9
KHC MLR MLR
comp=Z,300nm,17.0s,MS4.8
KHC Kasperske Hory 89.47 321 *eP* **P** **02 34 31.1 +0.2**
KHC *eSKS* 02 44 58.5
KHC *ePS* PS 02 46 22.9 -5.2
KHC AMS AMS 03 20 40.0
comp=Z,300nm,17.0s
MOA Molln 89.47 319 ⇓*iPcP* PcP 02 34 31.9 -0.4
comp=Z,9.3nm,1.3s
GEC2 GERESS Array S 89.49 320 *eP* **P** **02 34 30.4 -0.6**
comp=Z,7.0nm,1.3s,mb4.8
GEC2 *ePP* PP 02 38 02.8 +0.6
GEC2 GERESS Array S 89.49 320 *eP* **P** **02 34 30.4 -0.6**
GEC2 *e* 02 38 02.8
GEC2 pmax pmax
comp=Z,7.0nm,1.3s,mb4.8
TANN Tannenbergstha 89.69 322 *eP* **P** **02 34 31.5 -0.4**
comp=Z,12nm,1.6s,mb5.0
TANN *ePP* PP 02 38 06.5 +2.7
NKC Novy Kostel 89.77 322 *ePS* PS 02 46 24.7 -6.7
NKC AMS AMS 03 16 30.0
comp=Z,600nm,17.6s
WERD Werda 89.78 322 *eP* **P** **02 34 32.1 -0.2**
comp=Z,42nm,2.3s,mb5.4
WERD *ePP* PP 02 38 07.1 +2.7
GUNZ Gunzen 89.79 322 *eP* **P** **02 34 31.9 -0.5**
comp=Z,10.0nm,1.2s,mb5.0
WET Wettzell 89.89 321 *eP* **P** **02 34 32.9 0.0**
comp=Z,16nm,1.9s,mb5.0
WET Wettzell 89.89 321 *eP* **P** **02 34 32.9 0.0**
WET pmax pmax
comp=Z,16nm,1.9s,mb5.0
MOX Moxa 90.11 323 *eP* **P** **02 34 34.5 +0.6**
comp=Z,29nm,2.0s,mb5.3
MOX
comp=Z,400nm,20.0s
MOX Moxa 90.11 323 *eP* **P** **02 34 33.3 -0.6**
comp=Z,14nm,1.6s,mb5.0
MOX Moxa 90.11 323 *eP* **P** **02 34 34.5 +0.6**
MOX pmax pmax
comp=Z,29nm,2.0s,mb5.3
MOX MLR MLR
comp=Z,400nm,20.0s,MS4.8
MAW Mawson 90.37 198 LR LR 03 10 27.3
comp=Z,177nm,20.9s,MS4.5,baz=50,slow=32
CLZ Clausthal 90.39 324 *eP* **P** **02 34 35.0 -0.1**
comp=Z,55nm,2.0s,mb5.5
CLZ Clausthal 90.39 324 *eP* **P** **02 34 35.0 -0.1**
CLZ pmax pmax
comp=Z,55nm,2.0s,mb5.5
TIP Timpagrande 90.55 310 *eP* **P** **02 34 35.9 -0.3**
comp=Z,4.0nm,0.7s,mb4.9
GRA1 Grafenberg Arr 90.70 322 *eP* **P** **02 34 36.7 +0.1**
comp=Z,17nm,1.3s,mb5.2
GRA1 LR LR
comp=Z,600nm,20.7s,MS5.0
GRF Grafenberg Arr 90.70 322 *eP* **P** **02 34 36.7 +0.1**
comp=Z,17nm,1.3s,mb5.2
GRF *eL* 03 17 24.2
comp=Z,632nm,20.7s
GRF Grafenberg Arr 90.70 322 *eP* **P** **02 34 36.7 +0.1**
GRF pmax pmax
comp=Z,17nm,1.3s,mb5.2
GRF MLR MLR
comp=Z,600nm,20.7s,MS5.0
WTTA Wattenberg 91.35 319 ⇓*iPcP* PcP 02 34 40.4 -0.2
comp=Z,9.6nm,1.1s
CEL Celeste 91.48 310 *eP* **P** **02 34 41.3 +0.8**
comp=Z,60nm,1.6s,mb5.7
FETA Feichten 92.01 319 ⇑*iPcP* PcP 02 34 43.9 +0.4
comp=Z,8.2nm,1.2s
STU Stuttgart 92.28 321 *eP* **P** **02 34 43.6 -0.4**
comp=Z,44nm,2.1s,mb5.4
DAVOX Davos/Dischmat 92.64 319 P **P** **02 34 45.5 -0.2**
comp=Z,3.6nm,0.9s,mb4.8,baz=63,slow=3.9,SNR=7.1
SUMG Summit 92.72 353 *eP* **P** **02 34 46.0 +0.5**
comp=Z,3.4nm,0.8s,mb4.8
BFO Black Forest 92.99 321 *eP* **P** **02 34 46.5 -0.7**
comp=Z,39nm,2.3s,mb5.4
BFO Black Forest 92.99 321 *eP* **P** **02 34 46.5 -0.7**
BFO pmax pmax
comp=Z,39nm,2.3s,mb5.4
YKA Yellowknife Ar 93.61 22 P **P** **02 34 49.9 +0.1**
comp=Z,3.0nm,0.8s,mb4.8,baz=313,slow=4.4,SNR=18
LSZ Lusaka 94.00 255 *eP* **P** **02 34 51.9 -0.6**
comp=Z,3.6nm,0.8s,mb4.8
LSZ Lusaka 94.00 255 *eP* **P** **02 34 51.9 -0.6**
LSZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
PGF Pioggiola 94.88 316 *eP* **P** **02 34 55.3 -0.8**
comp=Z,12nm,1.0s,mb5.0
PGF Pioggiola 94.88 316 *eP* **P** **02 34 55.3 -0.8**
comp=Z,6.0nm,1.0s,mb5.0
PGF Pioggiola 94.88 316 *eP* **P** **02 34 55.3 -0.8**
PGF pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
LPG La Plagne 95.15 319 *eP* **P** **02 34 56.2 -1.1**
comp=Z,7.3nm,1.0s,mb4.8
LPG La Plagne 95.15 319 *eP* **P** **02 34 56.2 -1.1**
comp=Z,3.7nm,1.0s,mb4.8
LPG La Plagne 95.15 319 *eP* **P** **02 34 56.2 -1.1**
LPG pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
LPL La Plagne 95.16 319 *eP* **P** **02 34 56.3 -1.0**
MBDF Montbardon 95.47 318 *eP* **P** **02 34 57.5 -1.2**
PPT Papeete 95.61 107 LR LR 03 12 04.1
comp=Z,162nm,19.9s,MS4.5,baz=118,slow=32
LMR La Mourre 96.23 317 *eP* **P** **02 35 01.8 -0.4**
comp=Z,12nm,1.1s,mb4.9
LMR La Mourre 96.23 317 *eP* **P** **02 35 01.8 -0.4**
comp=Z,6.1nm,1.1s,mb4.9
LMR La Mourre 96.23 317 *eP* **P** **02 35 01.8 -0.4**
LMR pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
SMRF Simiane la Rot 96.56 318 *eP* **P** **02 35 02.7 -1.0**
TCF Toulx Ste Croi 97.62 321 *eP* **P** **02 35 07.2 -1.3**
comp=Z,19nm,1.2s,mb5.2
TCF Toulx Ste Croi 97.62 321 *eP* **P** **02 35 07.2 -1.3**
comp=Z,9.5nm,1.2s,mb5.2
TCF Toulx Ste Croi 97.62 321 *eP* **P** **02 35 07.2 -1.3**
TCF pmax pmax
comp=Z,10.0nm,1.2s,mb5.2
BOSA Boshof 99.37 243 LR LR 03 17 35.8
comp=Z,209nm,20.3s,MS4.6,baz=86,slow=34
ESDC Sonseca Array 104.88 318 PP PP 02 40 01.3 +0.6
comp=Z,0.8nm,0.8s,baz=37,slow=9.6,SNR=6.2
NVAR Mina Array Bea 105.74 43 Pdif Pdif 02 35 45.5 +1.1
NVAR PP PP 02 40 08.1 +1.0
NVAR Mina Array Bea 105.74 43 Pdiff Pdif 02 35 45.5 +1.1
comp=Z,0.3nm,0.4s,baz=243,slow=4.0,SNR=4.5
NVAR PP PP 02 40 08.1 +1.0
comp=Z,0.5nm,0.8s,baz=268,slow=3.9,SNR=3.7
ANMO Albuquerque 115.47 40 *ePKPdf* PKPdf 02 40 16.8 +0.7
WMOK Wichita Mounta 120.20 35 *ePKPdf* PKPdf 02 40 25.5 +0.3
TXAR Lajitas Array 120.89 43 PKP PKPdf 02 40 27.1 +0.4
comp=Z,1.1nm,0.8s,baz=252,slow=1.0,SNR=17
JCT Junction City 122.62 40 *ePKPdf* PKPdf 02 40 30.6 +0.7
WCI Wyandotte Cave 123.38 23 *ePKPdf* PKPdf 02 40 31.0 -0.2
WVT Waverly 124.55 26 *ePKPdf* PKPdf 02 40 33.4 -0.1
HKT Hockley 125.39 37 *ePKPdf* PKPdf 02 40 36.0 +0.7

JTS	**JuntasAbangare**	**146.62**	**46**	*e*PKPbc	PKPbc	PKPbc	02 41 15.5	-0.8
PLCA	**Paso Flores**	**151.77**	**165**	*e*PKPbc	PKPbc	PKPbc	02 41 28.9	+0.3
PLCA				*e*PKPab	PKPab	PKPab	02 41 37.7	+0.3
LPAZ	**La Paz**	**172.86**	**113**	PKP	PKPdf	PKPdf	02 41 44.5	+0.7
	comp=Z,1.2nm,0.9s,baz=19,slow=6.3,SNR=4.7							
LPAZ	**La Paz**	**172.86**	**113**	*e*PKIKP	PKPdf		02 41 44.4	+0.6

*IDC **01** 02:30:06.7±3.1, 40°.63N×125°.46W, h0km, mb3.3/2, mb1 3.7/4, mb1mx3.4/25, mbtmp3.4/4, ML3.3/1, Error ellipse: s-maj=31.1km s-min=20.4km az=87.0*
*NEIC **01** 02:30:08.3, 40°.44N×125°.33W, h2km, mb3.6/1, ML3.5(NCEDC), After NCEDC.*

ISC 01 02:30:10.7±2.9, 40°.45N±0°.07×125°.3W±0°.2, h18km±29km, n29, σ1°43/32, mb3.7/2, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRMB	**Red Mountain**	**1.50**	**44**	P		**Pn**	**02 30 34.3**	**-2.3**
KSXB	**Camp Six Broad**	**1.74**	**37**	P		**Pn**	**02 30 37.8**	**-2.2**
KBO	**Bosley Butte**	**1.93**	**24**	P		**Pn**	**02 30 40.8**	**-1.8**
KTRM	**Thompson Ridge**	**2.05**	**44**	P		**Pn**	**02 30 42.5**	**-1.7**
WDC	**Whiskeytown Da**	**2.10**	**86**	*e*Pn		**Pn**	**02 30 43.4**	**-1.5**
WDC				*e*Sn		**Sn**	**02 31 09.6**	**-0.9**
HOPS	**Hopland**	**2.25**	**130**	*e*Pn		**Pn**	**02 30 45.0**	**-1.9**
LAMM	**Antelope Mount**	**2.33**	**59**	P		**Pn**	**02 30 46.7**	**-1.2**
YBH	**Yreka Blue Hor**	**2.33**	**56**	Pn		**Pn**	**02 30 46.9**	**-1.2**
	11nm,0.3s,baz=250,slow=13,SNR=150							
YBH				Sn		**Sn**	**02 31 16.1**	**-0.1**
	15nm,0.3s,baz=132,slow=12,SNR=12							
KEBM	**Edson Butte**	**2.52**	**16**	P		**Pn**	**02 30 49.2**	**-1.5**
LTIM	**Timbered Crate**	**2.98**	**75**	P		**Pn**	**02 30 56.0**	**-0.9**
LBCM	**Butte Creek Ri**	**3.02**	**81**	P		**Pn**	**02 30 56.7**	**-0.9**
DBO	**Dodson Butte**	**3.07**	**29**	P		**Pn**	**02 30 57.8**	**-0.4**
MOD	**Modoc**	**4.03**	**67**	*e*Pn		**Pn**	**02 31 11.2**	**-0.2**
CMB	**Columbia Colle**	**4.51**	**121**	*e*Pn		**Pn**	**02 31 18.0**	**0.0**
WVOR	**Wild Horse Val**	**5.38**	**66**	*e*Pn		**Pn**	**02 31 29.2**	**-0.7**
	5.6nm,0.6s							
NVAR	**Mina Array Bea**	**5.78**	**108**	Pn		**Pn**	**02 31 36.1**	**+0.7**
	0.7nm,0.3s,baz=284,slow=15,SNR=15							
NVAR				Sn		**Sn**	**02 32 45.8**	**+4.7**
	0.2nm,0.3s,baz=301,slow=24,SNR=2.6							
HAWA	**Hanford**	**7.27**	**33**	*e*Pn		**Pn**	**02 31 57.0**	**+1.2**
	6.4nm,0.4s							
BMO	**Blue Mountains**	**7.35**	**51**	*e*Pn		**Pn**	**02 31 58.9**	**+1.9**
	11nm,0.6s							
LNOR	**Lincton Mounta**	**7.45**	**41**	*e*Pn		**Pn**	**02 32 00.2**	**+1.9**
	7.6nm,0.5s							
M13A	**Montello**	**8.48**	**80**	*e*Pn		**Pn**	**02 32 12.9**	**+0.5**
	3.0nm,1.2s							
HLID	**Hailey**	**8.67**	**65**	*e*Pn		**Pn**	**02 32 17.1**	**+2.0**
	4.0nm,0.9s							
MCMT	**McKenzie Canyo**	**10.15**	**60**	*e*Pn		**Pn**	**02 32 37.8**	**+2.3**
	1.6nm,0.9s							
MSO	**Missoula**	**10.40**	**48**	*e*Pn		**Pn**	**02 32 41.3**	**+2.5**
	5.0nm,0.9s							
DLMT	**Dillon**	**10.52**	**58**	*e*Pn		**Pn**	**02 32 42.2**	**+1.7**
	5.8nm,1.1s							
BSMT	**Bassoo Peak**	**10.56**	**42**	*e*Pn		**Pn**	**02 32 42.7**	**+1.7**
	7.1nm,1.3s							
CHMT	**Chamberlain Mo**	**10.84**	**49**	*e*Pn		**Pn**	**02 32 46.7**	**+1.9**
	1.6nm,0.6s							
TXAR	**Lajitas Array**	**20.87**	**115**	P		**P**	**02 34 53.3**	**+1.7**
	0.4nm,0.8s,baz=304,slow=8.6,SNR=6.1							
FFC	**Flin Flon**	**21.10**	**40**	*e*P		**P**	**02 34 54.5**	**+0.6**
	3.0nm,1.0s,mb3.6							
ULM	**Lac du Bonnet**	**22.74**	**55**	P		**P**	**02 35 11.2**	**-0.2**
	3.6nm,0.8s,mb3.9,baz=277,slow=6.9,SNR=3.1							

*ISCJB **01** 02:41:43.6±0.4, 31°.31N±0°.03×103°.49E±0°.05, h10km, mb3.8/8, Error ellipse: s-maj=5.7km s-min=4.2km az=0.4*
*IDC **01** 02:41:44.5±1.2, 31°.16N×103°.48E, h0km, mb3.8/6, mb1 3.9/8, mb1mx3.6/26, mbtmp3.8/8, ML3.5/1, MS3.9/1, Ms1 3.9/1, ms1mx2.8/28, Error ellipse: s-maj=32.7km s-min=21.5km az=53.0*
*NEIC **01** 02:41:46.4±0.7, 31°.12N×103°.34E, h10km, mb4.0/2, Error ellipse: s-maj=15.9km s-min=10.8km az=74.0*
*BJI **01** 02:41:46.2, 31°.27N×103°.59E, h17km, mb4.1/2, ML3.8/17, Ms3.5/1*

ISC 01 02:41:45.7±0.4, 31°.29N±0°.03×103°.46E±0°.04, h10km, n27, σ1°29/36, mb3.8/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CD2	**Chengdu**	**0.46**	**146**	Pg		**Pg**	**02 41 54.3**	**-0.3**
CD2				Sg		**Sg**	**02 42 01.7**	**+1.1**
CD2				smax				
	comp=N,20μm,0.6s							
CD2				smax				
	comp=E,8μm,0.8s							
LZH	**Lanzhou**	**4.80**	**4**	Pn		**Pn**	**02 42 59.2**	**+1.2**
LZH				Pg		**Pg**	**02 43 11.8**	**-5.8**
LZH				Sn		**Sn**	**02 43 51.4**	**-2.3**
LZH				Sg		**Sg**	**02 44 13.1**	**-6.7**
LZH				smax				
	comp=N,59nm,0.8s							
LZH				smax				
	comp=E,86nm,0.8s							
LZH				LR		LR		
	comp=E,380nm,6.1s							
ENH	**Enshi**	**5.28**	**99**	*e*Pn		**Pn**	**02 43 08.2**	**+3.4**
	comp=E,34nm,0.6s							
XAN	**Xi'an**	**5.36**	**58**	Pn		**Pn**	**02 43 05.2**	**-0.6**
XAN				Pg		**Pg**	**02 43 23.9**	**-4.5**
XAN				Sn		**Sn**	**02 44 06.3**	**-1.3**
XAN				Sg		**Sg**	**02 44 28.4**	**-9.5**
XAN				smax				
	comp=N,120nm,0.7s							
XAN				smax				
	comp=E,59nm,0.9s							
GYA	**Guiyang**	**5.57**	**149**	Pn		**Pn**	**02 43 08.7**	**0.0**
GYA				Sn		**Sn**	**02 44 12.9**	**+0.1**
GYA				Sg		**Sg**	**02 44 39.2**	**-5.4**
GYA				smax				
	comp=N,160nm,0.8s							
GYA				smax				
	comp=E,180nm,1.0s							
KMI	**Kunming**	**6.17**	**186**	Pn		**Pn**	**02 43 18.0**	**+1.0**
KMI				Sn		**Sn**	**02 44 27.5**	**-0.1**
KMI				smax				
	comp=N,48nm,0.9s							
KMI				smax				
	comp=E,34nm,1.2s							
GTA	**Gaotai**	**8.63**	**341**	*e*P		Px	02 44 28.5	
GTA				pP			02 44 32.5	
GTA				sP			02 44 35.5	
GTA				pmax		pmax		
	comp=Z,12nm,1.2s							
HHC	**Hu-ho-hao-te**	**11.57**	**32**	*e*P		**Pn**	**02 44 30.0**	**-0.9**
HHC				S		**Sn**	**02 46 39.4**	**-0.7**
HHC				pmax		pmax		
	comp=Z,10.0nm,0.9s							
CHTO	**Chiang Mai**	**13.07**	**199**	*e*Pn		**Pn**	**02 44 49.3**	**-2.3**
CMAR	**Chiang Mai Arr**	**13.41**	**199**	Pn		**Pn**	**02 44 53.4**	**-2.8**
	baz=12,slow=15,SNR=4.7							
PKI	**Pulchoki**	**16.16**	**261**	*e*P		**Pn**	**02 45 32.2**	**-0.7**
	comp=Z,23nm,0.7s							
PKIN	**Phulchoki**	**16.16**	**261**	*e*P		**Pn**	**02 45 32.6**	**-0.4**
	comp=Z,9.5nm,0.4s							
KKN	**Kakani**	**16.20**	**262**	*e*P		**Pn**	**02 45 31.9**	**-1.6**
	comp=Z,46nm,0.9s							
DMN	**Daman**	**16.40**	**262**	*e*P		**Pn**	**02 45 35.1**	**-1.0**
SONM	**Songino Array**	**16.68**	**7**	Pn		**Pn**	**02 45 40.1**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=188,slow=12,SNR=6.4							
GKN	**Gorkha**	**16.69**	**263**	*e*P		**Pn**	**02 45 38.2**	**-1.5**
	comp=Z,78nm,0.9s							
KSRS	**Korea Array**	**21.08**	**66**	P		**P**	**02 46 31.1**	**+0.9**
	comp=Z,2.9nm,0.7s,mb3.7,baz=259,slow=10,SNR=9.6							
MK31	**Makanchi Array**	**22.48**	**320**	*e*P		**P**	**02 46 48.4**	**+3.3**
MKAR	**Makanchi Array**	**22.48**	**320**	P		**P**	**02 46 47.2**	**+2.2**
MKAR	**Makanchi Array**	**22.48**	**320**	P		**P**	**02 46 47.2**	**+2.2**
	comp=Z,1.8nm,0.8s,mb3.6,baz=124,slow=9.6,SNR=13							
UCH	**Uchtor**	**25.52**	**303**	*e*P		**P**	**02 47 16.0**	**+1.7**
	comp=Z,3.3nm,0.8s,mb3.9							
AAK	**Ala-Archa**	**25.64**	**304**	P		**P**	**02 47 17.9**	**+2.4**
	comp=Z,2.5nm,0.5s,mb4.0,baz=176,slow=6.6,SNR=4.9							
ZALV	**Zalesovo Beam**	**26.32**	**335**	P		**P**	**02 47 22.1**	**+0.7**
	comp=Z,0.9nm,0.4s,mb3.7,baz=137,slow=11,SNR=5.7							
KURK	**Kurchatov**	**26.77**	**324**	*e*P		**P**	**02 47 26.8**	**+1.2**
	comp=Z,3.0nm,1.0s,mb3.8							
ASF	**Jabal al Asfar**	**55.76**	**290**	LR		LR	03 17 37.7	
	comp=Z,95nm,19.6s,baz=181,slow=39							
ASAR	**Alice Springs**	**61.94**	**148**	P		**P**	**02 52 05.5**	**-0.2**
	comp=Z,0.8nm,1.0s,mb3.8,baz=335,slow=6.2,SNR=5.2							
HFS	**Hagfors**	**63.31**	**326**	P		**P**	**02 52 15.2**	**+0.7**
	comp=Z,0.9nm,0.6s,mb4.0,baz=116,slow=3.4,SNR=5.1							

*ISCJB **01** 02:45:06.0±0.4, 24°.40N±0°.02×121°.86E±0°.03, h23km±3km, Error ellipse: s-maj=4.2km s-min=2.9km az=19.6*
*TAP **01** 02:45:05.1, 24°.39N×121°.81E, h29km, ML4.0, B*

ISC 01 02:45:06.1±0.4, 24°.41N±0°.02×121°.85E±0°.03, h22km±3km, n48, σ1°07/82, 4C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ENA	**Nanau**	**0.10**	**281**	⇑*i*P		**Pb**	**02 45 10.4**	**0.0**
	baz=300							
ENA				*e*S		**Sb**	**02 45 14.0**	**+0.6**
	baz=300							
EHP	**Heping Village**	**0.14**	**227**	P		**Pb**	**02 45 10.4**	**-0.4**
	baz=212							
EHP				S		**Sb**	**02 45 15.4**	**+1.5**
	baz=212							
TWC	**Suao**	**0.20**	**359**	⇑*i*P		**Pb**	**02 45 11.8**	**+0.3**
	baz=12							
TWC				S		**Sb**	**02 45 16.1**	**+1.0**
	baz=12							
ENTT	**Nioudou**	**0.35**	**311**	*i* P		**Pb**	**02 45 13.2**	**-0.5**
	baz=314							
ENTT				*e*S		**Sb**	**02 45 18.9**	**0.0**
	baz=314							
TWE	**Neicheng**	**0.36**	**331**	⇑*i*P		**Pb**	**02 45 13.6**	**-0.3**
	baz=344							
TWE				S		**Sb**	**02 45 19.5**	**+0.4**
	baz=344							
ILA	**Ilan**	**0.37**	**345**	P		**Pb**	**02 45 13.7**	**-0.3**
	baz=349							
ILA				*i* S		**Sb**	**02 45 20.6**	**+1.2**
	baz=349							
TWD	**Chiawan**	**0.40**	**216**	*i* P		**Pb**	**02 45 13.6**	**-1.0**
	baz=215							
TWD				*e*S		**Sb**	**02 45 20.0**	**-0.3**
	baz=215							
NNS	**Nan Shan**	**0.44**	**274**	*i* P		**Pb**	**02 45 14.2**	**-1.0**
	baz=276							
NNS				*i* S		**Sb**	**02 45 20.5**	**-0.9**
	baz=276							
HWA	**Hwalien**	**0.48**	**208**	*e*P		**Pb**	**02 45 15.6**	**-0.4**
	baz=211							
HWA				*e*S		**Sb**	**02 45 24.2**	**+1.6**
	baz=211							
NSK	**Sanguang**	**0.53**	**301**	*i* P		**Pb**	**02 45 15.8**	**-0.8**
	baz=299							
NSK				*e*S		**Sb**	**02 45 21.9**	**-1.9**
	baz=299							
WHF	**Hehuan Shan**	**0.60**	**244**	⇓*i*P		**Pb**	**02 45 17.1**	**-0.8**
	baz=250							
WHF				S		**Sb**	**02 45 25.6**	**-0.3**
	baz=250							
TWB1	**Santiao Chiao**	**0.61**	**12**	P		**Pb**	**02 45 18.1**	**0.0**
	baz=16							
TWB1				*e*S		**Sb**	**02 45 26.8**	**+0.5**
	baz=16							
TWA	**Mucha**	**0.62**	**337**	*i* P		**Pb**	**02 45 18.2**	**0.0**
	baz=336							
TWA				*i* S		**Sb**	**02 45 26.9**	**+0.3**
	baz=336							
TWT	**Tachien**	**0.64**	**256**	P		**Pb**	**02 45 17.9**	**-0.6**
	baz=256							
TWT				S		**Sb**	**02 45 26.8**	**-0.3**
	baz=256							
NWF	**Wu-fen Shan**	**0.66**	**354**	⇑*i*P		**Pb**	**02 45 19.4**	**+0.4**
	baz=351							
NWF				*i* S		**Sb**	**02 45 28.9**	**+1.0**
	baz=351							
TAP1	**Taipei**	**0.70**	**334**	*i* P		**Pb**	**02 45 19.2**	**-0.3**
	baz=324							
TAP1				S		**Sb**	**02 45 28.7**	**0.0**
	baz=324							
ESL	**Shilin**	**0.70**	**213**	*e*P		**Pb**	**02 45 17.8**	**-1.9**
	baz=221							
TWS1	**Kuangyinshan**	**0.80**	**330**	*e*P		**Pb**	**02 45 20.9**	**-0.3**
	baz=333							
TWS1				*e*S		**Sb**	**02 45 33.2**	**+1.6**
	baz=333							
NSTT	**Nanjuang**	**0.81**	**286**	⇓*i*P		**Pb**	**02 45 20.9**	**-0.5**
	baz=287							
NSTT				S		**Sb**	**02 45 30.5**	**-1.4**
	baz=287							
NCU	**National Centr**	**0.83**	**313**	P		**Pb**	**02 45 21.3**	**-0.4**
	baz=315							
NCU				*e*S		**Sb**	**02 45 33.5**	**+1.1**
	baz=315							
TWY	**Chenhua**	**0.90**	**345**	P		**Pb**	**02 45 22.7**	**-0.2**
	baz=348							
TWY				S		**Sb**	**02 45 35.4**	**+0.9**
	baz=348							
HSN	**Hsinchu**	**0.90**	**296**	*e*P		**Pb**	**02 45 22.1**	**-0.9**
	baz=300							
HSN				*e*S		**Sb**	**02 45 35.1**	**+0.6**
	baz=300							
TWQ1	**Liyutan**	**0.99**	**267**	⇓*i*P		**Pb**	**02 45 24.4**	**-0.1**
	baz=267							
TWQ1				*e*S		**Sb**	**02 45 37.1**	**0.0**
	baz=267							
NSY	**Sanyi**	**1.00**	**271**	*e*P		**Pb**	**02 45 24.5**	**-0.1**
	baz=271							
NSY				*e*S		**Sb**	**02 45 38.0**	**+0.7**
	baz=271							
SMLT	**Sun Moon Lake**	**1.02**	**239**	*e*P		**Pn**	**02 45 23.6**	**-1.3**
	baz=225							
SMLT				*e*S		**Sb**	**02 45 37.2**	**-0.7**
	baz=225							
EHY	**Hungye**	**1.02**	**209**	*e*P		**Pn**	**02 45 22.3**	**-2.7**
	baz=214							
TYC	**Yuchr**	**1.04**	**241**	*i* P		**Pn**	**02 45 24.1**	**-1.2**
	baz=234							
YOJ	**Yonaguni jima**	**1.06**	**87**	P		**Pn**	**02 45 25.2**	**-0.3**
	baz=79							
YOJ				*e*S		**Sb**	**02 45 39.5**	**+0.5**
	baz=79							
TCU	**Taichung**	**1.11**	**257**	*e*P		**Pn**	**02 45 26.1**	**-0.1**
	baz=256							
TCU				*e*S		**Sb**	**02 45 42.7**	**+2.2**
	baz=256							
TWF1	**Yuli**	**1.17**	**206**	*e*P		**Pn**	**02 45 24.0**	**-3.0**
	baz=212							
WNT	**Mingjian**	**1.19**	**244**	*e*P		**Pn**	**02 45 27.1**	**-0.3**
	baz=243							
CHN5	**Tsauling**	**1.34**	**233**	P		**Pn**	**02 45 29.5**	**0.0**
	baz=232							
CHN5				*e*S		**Sn**	**02 45 47.9**	**+1.3**
	baz=232							
ELDTW	**Lidau**	**1.44**	**212**	*e*P		**Pn**	**02 45 29.3**	**-1.4**
	baz=198							
WTCT	**Ta-ch'eng**	**1.54**	**250**	*e*P		**Pn**	**02 45 31.3**	**-0.8**
	baz=248							
CHN4	**Tsaushan**	**1.56**	**228**	*e*P		**Pn**	**02 45 33.2**	**+0.7**
	baz=215							
CHN4				*e*S		**Sn**	**02 45 54.0**	**+1.9**
	baz=215							
CHY	**Chiayi**	**1.59**	**236**	*e*P		**Pn**	**02 45 33.1**	**+0.2**
	baz=234							
CHY				*e*S		**Sn**	**02 45 54.2**	**+1.5**
	baz=234							
STYT	**Tauyuan**	**1.59**	**219**	*e*P		**Pn**	**02 45 33.1**	**+0.1**
	baz=216							
STYT				*e*S		**Sn**	**02 45 54.1**	**+1.3**
	baz=216							
WTP	**Ta-pu**	**1.62**	**225**	*e*P		**Pn**	**02 45 33.5**	**+0.2**
	baz=223							
WTP				*e*S		**Sn**	**02 45 55.6**	**+2.1**
	baz=223							
TWK	**Hsinying**	**1.69**	**228**	*e*P		**Pn**	**02 45 34.2**	**0.0**
	baz=225							
SGST	**Jiashian**	**1.76**	**222**	P		**Pn**	**02 45 36.1**	**+0.9**
	baz=207							
SGST				*e*S		**Sn**	**02 45 59.3**	**+2.4**
	baz=207							
SSD	**Sandimen**	**2.00**	**214**	*e*P		**Pn**	**02 45 39.3**	**+0.8**
	baz=226							
SSD				*e*S		**Sn**	**02 46 05.3**	**+2.5**
	baz=226							
TWM1	**Shoushan**	**2.05**	**220**	*e*P		**Pn**	**02 45 41.1**	**+1.9**
	baz=217							
EAST	**Anshuo**	**2.22**	**205**	*e*P		**Pn**	**02 45 41.3**	**-0.2**
	baz=193							
PNG	**Penghu**	**2.26**	**249**	*e*P		**Pn**	**02 45 40.2**	**-1.9**
	baz=247							
SCZT	**Fangliau**	**2.32**	**209**	*e*P		**Pn**	**02 45 43.6**	**+0.7**
	baz=193							
LAY	**Lan-yu**	**2.37**	**187**	*e*P		**Pn**	**02 45 40.9**	**-2.8**
	baz=183							
QZH	**Quanzhou**	**3.02**	**281**	Pn		**Pn**	**02 45 50.0**	**-2.5**
QZH				Sn		**Sn**	**02 46 24.1**	**-3.8**
QZH				smax				
	comp=N,290nm,0.5s							
QZH				smax				
	comp=E,170nm,0.9s							
KNM	**Kinmen**	**3.12**	**271**	*e*P		**Pn**	**02 45 52.7**	**-1.2**
	baz=270							

*ISCJB **01** 02:50:45.8±0.5, 59°.69N±0°.04×153°.38W±0°.09, h136km±5km, mb3.6/2, Error ellipse: s-maj=7.7km s-min=6.3km az=23.4*
*IDC **01** 02:50:45.8±1.6, 59°.79N×153°.47W, h109km±26km, mb3.4/2, mb1 3.4/5, mb1mx3.1/24, mbtmp3.3/5, Error ellipse: s-maj=35.1km s-min=12.8km az=107.0*
*NEIC **01** 02:50:48.6, 59°.70N×153°.31W, h130km, MG3.1(AEIC), After AEIC.*

ISC 01 02:50:47.1±0.5, 59°.69N±0°.04×153°.38W±0°.09, h131km±5km, n39, σ0°73/45, mb3.6/2, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AUL	**Augustine Lava**	**0.31**	**186**	P		**Pn**	**02 51 05.5**	**+0.2**
AUL				S		**Sn**	**02 51 19.4**	**+0.3**
RSO	**Redoubt South**	**0.83**	**22**	*e*Pn		**Pn**	**02 51 08.8**	**+0.3**
RSO				*e*Sn		**Sn**	**02 51 25.1**	**+0.4**
CNPM	**China Poot**	**1.10**	**98**	P		**Pn**	**02 51 11.6**	**+0.7**
BRLK	**Bradley Lake**	**1.26**	**86**	P		**Pn**	**02 51 12.9**	**+0.4**
BRLK				S		**Sn**	**02 51 31.8**	**-0.2**
SLKM	**Skilak Lake**	**1.78**	**61**	P		**Pn**	**02 51 18.9**	**+0.6**
SVW2	**Sparrevohn**	**1.79**	**323**	*e*P		**Pn**	**02 51 18.0**	**-0.4**
KDAK	**Kodiak Island**	**1.96**	**167**	P		**Pn**	**02 51 20.4**	**-0.2**
KDAK	**Kodiak Island**	**1.96**	**167**	P		**Pn**	**02 51 20.3**	**-0.2**
	4.5nm,0.3s,baz=20,slow=4.7,SNR=54							
KDAK				S		**Sn**	**02 51 45.6**	**-0.5**
	27nm,0.3s,baz=294,slow=20,SNR=41							
SEW	**Seward**	**2.02**	**77**	P		**Pn**	**02 51 21.5**	**+0.3**
FIB	**Fire Island**	**2.17**	**46**	P		**Pn**	**02 51 24.7**	**+1.2**
RC01	**Rabbit Creek A**	**2.29**	**51**	P		**Pn**	**02 51 24.7**	**+0.2**
RC01				S		**Sn**	**02 51 52.1**	**-1.2**
OHAK	**Old Harbor**	**2.48**	**179**	*e*P		**Pn**	**02 51 26.2**	**-0.7**
PMR	**Palmer**	**2.83**	**46**	*e*P		**Pn**	**02 51 30.6**	**-0.8**
SML	**Sawmill**	**3.26**	**47**	P		**Pn**	**02 51 36.3**	**-0.7**
PPLA	**Purkeypile**	**3.27**	**10**	P		**Pn**	**02 51 38.3**	**+1.3**
TT01	**Tatalina**	**3.47**	**340**	P		**Pn**	**02 51 39.5**	**-0.2**
TTA	**Tatalina**	**3.49**	**340**	*e*P		**Pn**	**02 51 39.6**	**-0.3**
MID	**Middleton Isla**	**3.59**	**91**	*e*P		**Pn**	**02 51 41.7**	**+0.4**
EYAK	**Cordova Ski Ar**	**3.91**	**74**	P		**Pn**	**02 51 45.6**	**+0.1**
DIV	**Divide**	**4.04**	**66**	P		**Pn**	**02 51 46.7**	**-0.5**
CHUM	**Lake Minchumin**	**4.24**	**6**	P		**Pn**	**02 51 50.2**	**+0.4**
RND	**Reindeer**	**4.31**	**28**	P		**Pn**	**02 51 50.5**	**-0.3**
DHY	**Denali Highway**	**4.46**	**38**	P		**Pn**	**02 51 52.3**	**-0.4**
BMRM	**Bremner River**	**4.54**	**70**	P		**Pn**	**02 51 54.3**	**+0.4**
BPAW	**Bear Paw Mtn.**	**4.57**	**13**	P		**Pn**	**02 51 53.9**	**-0.3**
MENT	**Mentasta**	**5.68**	**51**	*e*Pn		**Pn**	**02 52 09.3**	**+0.3**
SDPT	**Sand Point**	**5.79**	**224**	*e*P		**Pn**	**02 52 10.6**	**-0.1**
COLA	**College**	**5.80**	**24**	P		**Pn**	**02 52 09.8**	**-0.9**
ILAR	**Eielson Array**	**5.93**	**28**	P		**Pn**	**02 52 11.2**	**-1.3**
	2.7nm,0.3s,baz=216,slow=14,SNR=196							
ILAR				S		**Sn**	**02 53 15.1**	**-4.0**
	1.0nm,0.3s,baz=203,slow=18,SNR=6.7							
IM3	**Indian Mountai**	**6.32**	**359**	P		**Pn**	**02 52 18.4**	**+0.7**
BCA3	**Beaver Creek A**	**6.51**	**54**	P		**Pn**	**02 52 21.2**	**+0.9**
YKU2	**Yakutat**	**6.96**	**86**	*e*P		**Pn**	**02 52 24.4**	**-1.9**
PNL	**Peninsula**	**7.08**	**84**	P		**Pn**	**02 52 28.1**	**+0.1**
EGAK	**Eagle**	**7.64**	**43**	*e*Pn		**Pn**	**02 52 34.6**	**-0.9**
	1.7nm,0.5s							
DAWY	**Dawson**	**7.92**	**50**	*e*Pn		**Pn**	**02 52 39.7**	**+0.4**
DLBC	**Dease Lake**	**12.06**	**86**	P		**Pn**	**02 53 37.6**	**+3.2**
	0.4nm,0.3s,baz=232,slow=9.1,SNR=5.7							
YKA	**Yellowknife Ar**	**18.75**	**65**	P		**P**	**02 54 56.6**	**+1.1**
	0.1nm,0.3s,baz=277,slow=10.0,SNR=10							
SONM	**Songino Array**	**54.82**	**306**	P		**P**	**03 00 03.0**	**0.0**
	0.5nm,0.5s,mb3.5,baz=56,slow=9.1,SNR=4.0							
ZALV	**Zalesovo Beam**	**57.51**	**323**	P		**P**	**03 00 22.1**	**+0.1**
	0.5nm,0.3s,mb3.8,baz=22,slow=8.3,SNR=3.1							

*ATH **01** 02:51:00.9, 40°.06N×21°.39E, h19km±2km, MD3.2/8*
*SKO **01** 02:51:00.4, 40°.00N×21°.39E, h0km*
*NEIC **01** 02:51:00.9, 40°.06N×21°.39E, h19km, MD3.2(ATH), After ATH.*
*ISCJB **01** 02:51:00.5±0.7, 40°.05N±0°.03×21°.34E±0°.04, h11km±5km, Error ellipse: s-maj=5.1km s-min=4.1km az=159.1*
*THE **01** 02:51:00.8, 40°.05N×21°.34E, h2km, 21km, ML2.7/4, Error ellipse: s-maj=21.2km s-min=0.4km az=0.0*
*CSEM **01** 02:51:00.9±0.2, 40°.07N×21°.38E, h2km, MD3.2, Error ellipse: s-maj=5.3km s-min=4.1km az=78.0*

ISC 01 02:51:01.3±0.5, 40°.06N±0°.02×21°.37E±0°.04, h10km±5km, n50, σ1°06/70, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KZN	**Kozani**	**0.39**	**51**	*e*Pb		**Pg**	**02 51 08.7**	**-0.3**
KZN				*e*Sb		**Sg**	**02 51 15.1**	**+0.9**
KZN	**Kozani**	**0.39**	**51**	*e*PB		**Pg**	**02 51 08.7**	**-0.3**
KZN				*e*SB		**Sg**	**02 51

TIR	Tirane	1.72 319	P	Pn	02 51 35.2	+3.9
TIR	Tirane	1.72 319	P	Pn	02 51 35.2	+3.9
LKR	Lokris	1.89 138	*e*Pb	Pb	02 51 33.7	-2.2
LKR	Lokris	1.89 138	*e*PB	Pb	02 51 33.7	-2.2
VLS	Valsamata	1.98 198	*e*Pn	Pn	02 51 36.5	+1.7
VLS	Valsamata	1.98 198	*e*PN	Pn	02 51 36.5	+1.7
VLS	Valsamata	1.98 198	*e*Pn	Pn	02 51 36.5	+1.7

ISCJB ***01*** *02:56:40.0±0.5,21°.99S±0°.04×67°.14W±0°.05,h173km±3km, mb4.5/107, Error ellipse: s-maj=7.9km s-min=5.0km az=142.7*

NEIC ***01*** *02:56:40.7±0.5,22°.02S×67°.19W,h170km±5km,mb4.6/101, Error ellipse: s-maj=6.1km s-min=4.3km az=64.0*

IDC ***01*** *02:56:41.8±1.2,22°.01S×67°.17W,h180km±10km,mb4.3/13, mb1 4.4/17,mb1mx4.3/20,mbtmp4.3/17,MS2.8/1, Ms1 2.9/1,ms1mx2.6/19,Error ellipse: s-maj=16.7km s-min=10.9km az=69.0*

GUC ***01*** *02:56:43.8±0.9,21°.94S×67°.72W,h217km±31km,ML5.2*

ISC 01 02:56:40.7±0.5, 21°.99S±0°.04×67°.09W±0°.05, h164km±3km, n518, σ0≥71/506, mb4.5/107, 177C-205D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.24**	**263**	⇑	*i*P		**Pn**	**02 57 27.6**	**+8.2**
PB04					*i* S		**Sn**	**02 58 01.6**	**+12**
PB04					AML		AML	02 58 06.3	
	comp=E,4μm,0.6s								
PB01	**Plate Boundary**	**2.42**	**292**	⇑	*i*P		**Pn**	**02 57 23.3**	**+1.8**
PB01					*i* S		**Sn**	**02 57 53.9**	**+0.7**
HMBC	**Humberston**	**3.12**	**303**	⇑	*i*P		**Pn**	**02 57 30.7**	**+0.6**
HMBC					*i* S		**Sn**	**02 58 07.2**	**-1.1**
HMBC					AML		AML	02 58 11.7	
	comp=E,7μm,0.6s								
CEN1	**Los Morros**	**3.19**	**244**	⇓	*i*P		**Pn**	**02 57 35.5**	**+4.6**
CEN1					*i* S		**Sn**	**02 58 14.1**	**+4.1**
CEN1					AML		AML	02 58 17.7	
	comp=N,2μm,0.5s								
MECH	**Mejillones**	**3.30**	**250**	⇑	*i*P		**Pn**	**02 57 33.0**	**+0.8**
MECH					*i* S		**Sn**	**02 58 11.3**	**-1.1**
MECH					AML		AML	02 58 16.9	
	comp=E,6μm,0.4s								
ANCH	**Antofagasta**	**3.49**	**241**	⇑	*i*P		**Pn**	**02 57 33.1**	**-1.7**
ANCH					*i* S		**Sn**	**02 58 12.5**	**-4.4**
ANCH	**Antofagasta**	**3.49**	**241**	⇑	*i*P		**Pn**	**02 57 33.1**	**-1.7**
ANCH					*i* S		**Sn**	**02 58 12.5**	**-4.4**
MNMC	**Miæe Miæ**	**3.69**	**320**	⇑	*i*P		**Pn**	**02 57 39.0**	**+1.7**
MNMC					*e*S		**Sn**	**02 58 21.9**	**+0.5**
PSGC	**Pisagua**	**3.70**	**309**	⇑	*e*P		**Pn**	**02 57 37.2**	**-0.3**
PSGC					*e*S		**Sn**	**02 58 19.3**	**-2.4**
PSGC					AML		AML	02 58 23.6	
	comp=N,2μm,0.6s								
LPAZ	**La Paz**	**5.76**	**350**	⇓	*i*Pn		**Pn**	**02 58 07.8**	**+3.4**
	comp=N,86nm,0.5s								
LPAZ	**La Paz**	**5.76**	**350**		P		**Pn**	**02 58 07.9**	**+3.6**
	comp=N,21nm,0.3s,baz=158,slow=7.2,SNR=464								
LPAZ					LR		LR	03 00 42.3	
	comp=N,90nm,21.8s,baz=151,slow=42								
LCO	**Las Campanas**	**7.71**	**204**		*e*Pn		**Pn**	**02 58 27.9**	**-2.3**
	comp=N,58nm,0.6s								
LCO					*e*Sn		**Sn**	**02 59 50.5**	**-6.0**
SIV	**San Ignacio**	**8.25**	**45**		P		**Pn**	**02 58 38.0**	**+0.7**
	comp=N,25nm,0.3s,baz=242,slow=11,SNR=711								
CFAA	**Coronel Fontan**	**9.63**	**186**		P		**Pn**	**02 58 55.0**	**-0.5**
	comp=N,0.3nm,0.3s,baz=5.1,slow=13,SNR=48								
CPUP	**Villa Florida**	**9.90**	**118**		*e*Pn		**Pn**	**02 59 00.4**	**+1.2**
CPUP	**Villa Florida**	**9.90**	**118**		P		**Pn**	**02 59 00.9**	**+1.7**
	comp=N,7.9nm,0.3s,baz=278,slow=10,SNR=78								
NNA	**Nana**	**13.63**	**315**		P		**Pn**	**02 59 50.8**	**+3.4**
	comp=N,4.6nm,0.3s,baz=157,slow=10,SNR=36								
TRQA	**Tornquist**	**16.61**	**166**		*e*P		**Pn**	**03 00 23.5**	**-0.4**
	comp=N,5.2nm,0.4s								
ATAH	**Atahualpa**	**18.36**	**322**		P		**P**	**03 00 44.5**	**+1.5**
	comp=N,1.3nm,0.3s,baz=165,slow=6.2,SNR=8.2								
PLCA	**Paso Flores**	**18.91**	**188**		*e*P		**P**	**03 00 48.7**	**-0.1**
	comp=N,13nm,0.9s								
PLCA	**Paso Flores**	**18.91**	**188**		P		**P**	**03 00 49.0**	**+0.3**
	baz=4.3,slow=12								
CAM4	**Nova Friburgo**	**22.71**	**96**	⇑	*i*P		**P**	**03 01 27.9**	**-0.7**
CAM4					*i*			03 01 28.8	
CAM4					*i*			03 01 29.4	
CAM4					*i*			03 01 32.1	
CAM4					*i*			03 01 36.3	
OTAV	**Otavalo**	**24.71**	**332**		*e*P		**P**	**03 01 48.1**	**+1.2**
	comp=N,11nm,0.8s,mb4.4								
SDV	**Santo Domingo**	**30.88**	**353**		*e*P		**P**	**03 02 40.6**	**-1.2**
	comp=N,11nm,1.0s,mb4.5								
USHA	**Ushuaia**	**32.81**	**181**		P		**P**	**03 02 57.4**	**-0.8**
	comp=N,9.4nm,1.0s,mb4.5,baz=335,slow=11,SNR=3.1								
BCIP	**Isla Barro Col**	**33.39**	**337**		*e*P		**P**	**03 03 03.3**	**-0.4**
	comp=N,17nm,0.6s,mb5.0								
RCBR	**Riachuelo**	**34.16**	**67**		*e*P		**P**	**03 03 10.6**	**+0.2**
	comp=N,21nm,0.7s,mb5.0								
GRGR	**Grenville**	**34.33**	**9**		*e*P		**P**	**03 03 11.7**	**-0.1**
	comp=N,89nm,0.8s,mb5.5								
JTS	**JuntasAbangare**	**36.55**	**330**		*e*P		**P**	**03 03 31.7**	**+0.9**
	comp=N,14nm,0.8s,mb4.6								
ANWB	**Willy Bob**	**39.75**	**8**		*e*P		**P**	**03 03 58.3**	**+0.9**
	comp=N,108nm,0.6s,mb5.7								
CELP	**Cerrillos**	**39.82**	**1**		*e*P		**P**	**03 04 00.0**	**+2.0**
SJG	**San Juan**	**39.87**	**1**		*e*P		**P**	**03 03 58.4**	**0.0**
	comp=N,14nm,0.7s,mb4.7								
TGUH	**Tegucigalpa,Un**	**40.93**	**329**		*e*P		**P**	**03 04 07.0**	**-0.2**
	comp=N,24nm,1.0s,mb4.8								
TEIG	**Tepich**	**46.78**	**332**		*e*P		**P**	**03 04 52.8**	**-1.0**
	comp=N,41nm,0.6s,mb5.2								
GOGA	**Godfrey**	**57.26**	**344**		*e*P		**P**	**03 06 09.6**	**-1.4**
JSC	**Jenkinsville**	**57.56**	**346**		*e*P		**P**	**03 06 12.3**	**-0.8**
LRAL	**Lakeview Retre**	**57.92**	**340**		*e*P		**P**	**03 06 13.6**	**-2.0**
	comp=N,12nm,1.0s,mb4.7								
HKT	**Hockley**	**58.58**	**331**		*e*P		**P**	**03 06 19.4**	**-0.9**
	comp=N,94nm,1.3s,mb4.5								
VNA1	**Neumayer--Stat**	**59.26**	**161**		*e*P		**P**	**03 06 25.7**	**+1.3**
CPCT	**Cooper Cave**	**59.47**	**344**	⇓	*i*P		**P**	**03 06 25.1**	**-1.1**
TKL	**Tuckaleechee C**	**59.47**	**344**	⇓	*i*P		**P**	**03 06 24.8**	**-1.5**
SWET	**Sewanee**	**59.63**	**342**	⇓	*i*P		**P**	**03 06 25.9**	**-1.5**
ELN	**Prospectdale**	**60.29**	**347**		*e*P		**P**	**03 06 31.4**	**-0.5**
JCT	**Junction City**	**60.90**	**328**		*e*P		**P**	**03 06 34.7**	**-1.4**
	comp=N,15nm,0.7s,mb4.9								
WVT	**Waverly**	**61.04**	**341**	⇓	*i*P		**P**	**03 06 34.7**	**-2.2**
	comp=N,30nm,0.7s,mb5.2								
MIAR	**Mount Ida**	**61.60**	**335**		*e*P		**P**	**03 06 38.5**	**-2.2**
	comp=N,8.6nm,0.6s,mb4.8								
628A	**Black Gap, Mar**	**61.70**	**325**	⇑	P		**P**	**03 06 41.0**	**-0.5**
	baz=62,SNR=20								
627A	**Terlingua Ranc**	**61.95**	**324**	⇑	P		**P**	**03 06 42.1**	**-1.1**
	baz=62,SNR=11								
TXAR	**Lajitas Array**	**62.01**	**324**		P		**P**	**03 06 42.4**	**-1.2**
	comp=N,2.5nm,0.7s,mb4.2,baz=151,slow=8.7,SNR=32								
528A	**Cox Ranch, San**	**62.18**	**325**	⇑	P		**P**	**03 06 43.5**	**-1.2**
	baz=62,SNR=7.2								
626A	**Big Bend Ranch**	**62.43**	**324**	⇑	P		**P**	**03 06 45.9**	**-0.5**
	baz=63,SNR=23								
WCI	**Wyandotte Cave**	**62.56**	**343**		*e*P		**P**	**03 06 44.8**	**-2.2**
	comp=N,5.4nm,0.5s,mb4.6								
428A	**Kincaid Ranch,**	**62.57**	**326**	⇓	P		**P**	**03 06 46.4**	**-0.9**
	baz=63,SNR=7.0								
527A	**Woodward Ranch**	**62.61**	**325**	⇑	P		**P**	**03 06 46.4**	**-1.1**
	baz=63,SNR=9.8								
526A	**Mary Lane Ranc**	**62.80**	**324**	⇑	P		**P**	**03 06 48.2**	**-0.6**
	baz=63,SNR=18								
SIUC	**Southern Illin**	**62.93**	**340**		*e*P		**P**	**03 06 48.0**	**-1.5**
427A	**Hayter Ranch,**	**63.05**	**325**	⇓	P		**P**	**03 06 49.4**	**-1.1**
	baz=63,SNR=5.5								
328A	**Wristen Ranch,**	**63.16**	**326**	⇑	P		**P**	**03 06 50.0**	**-1.1**
	baz=63,SNR=12								
426A	**McDonald Obser**	**63.24**	**325**	⇓	P		**P**	**03 06 51.0**	**-0.7**
	baz=63,SNR=11								
FVM	**French Village**	**63.56**	**340**	⇓	*i*P		**P**	**03 06 51.8**	**-1.9**
	comp=N,12nm,0.5s,mb5.0								
ACSO	**Alum Creek Sta**	**63.65**	**346**		*e*P		**P**	**03 06 52.4**	**-1.7**
	comp=N,18nm,0.9s,mb4.9								
326A	**Caldwell Ranch**	**63.72**	**325**	⇑	P		**P**	**03 06 53.9**	**-0.9**
	baz=64,SNR=9.5								
425A	**Indio Mountain**	**63.85**	**324**	⇓	P		**P**	**03 06 54.8**	**-0.9**
	baz=64,SNR=21								
CCM	**Cathedral Cave**	**63.90**	**339**	⇓	*i*P		**P**	**03 06 54.1**	**-1.7**
	comp=N,24nm,0.6s,mb5.2								
227A	**Bennet, Jal**	**63.91**	**326**	⇓	P		**P**	**03 06 55.2**	**-0.9**
	baz=64								
WMOK	**Wichita Mounta**	**63.95**	**331**		*e*P		**P**	**03 06 54.3**	**-2.0**
	comp=N,2.4nm,0.8s,mb4.1								
WMOK					*e*PcP		PcP	03 07 29.7	-0.6
325A	**Bean Ranch, Si**	**64.29**	**324**	⇓	P		**P**	**03 06 57.7**	**-0.8**
	baz=64,SNR=35								
226A	**Malaga, Loving**	**64.37**	**325**	⇓	P		**P**	**03 06 58.7**	**-0.3**
	baz=65,SNR=7.1								
127A	**Arkansas Junct**	**64.46**	**326**	⇓	P		**P**	**03 06 58.6**	**-1.1**
	baz=65								
GDL2	**Guadalupe Moun**	**64.61**	**325**		*e*P		**P**	**03 07 00.4**	**-0.2**
324A	**Moseley Ranch,**	**64.63**	**324**	⇓	P		**P**	**03 06 59.0**	**-1.7**
	baz=65,SNR=19								
MNTX	**Cornudas Mount**	**64.77**	**324**	⇓	*i*P		**P**	**03 06 59.1**	**-2.5**
	comp=N,8.1nm,1.0s,mb4.5								
126A	**Clayton Basin,**	**64.78**	**326**	⇑	P		**P**	**03 07 00.7**	**-1.0**
	baz=65,SNR=7.1								
225A	**Deer Hill, Car**	**64.79**	**325**	⇑	P		**P**	**03 07 00.9**	**-0.9**
	baz=65,SNR=9.9								
Z27A	**Tatum**	**64.90**	**327**	⇓	P		**P**	**03 07 00.9**	**-1.5**
	baz=65,SNR=12								
125A	**Gardner Draw,**	**65.12**	**325**	⇑	P		**P**	**03 07 02.5**	**-1.5**
	baz=65,SNR=11								
224A	**Cornudas Mount**	**65.14**	**324**	⇓	P		**P**	**03 07 02.7**	**-1.3**
	baz=65,SNR=22								
MSTX	**Muleshoe**	**65.20**	**328**	⇑	P		**P**	**03 07 03.1**	**-1.3**
	baz=65,SNR=17								
Y27A	**Causey**	**65.32**	**327**	⇓	P		**P**	**03 07 03.8**	**-1.4**
	baz=66								
AMTX	**Amarillo**	**65.41**	**329**		*e*P		**P**	**03 07 03.9**	**-1.8**
	comp=N,4.0nm,0.4s,mb4.6								
124A	**Stringfield Ra**	**65.58**	**325**	⇓	P		**P**	**03 07 06.0**	**-0.8**
	baz=66,SNR=11								
Z25A	**Roswell**	**65.64**	**326**	⇓	P		**P**	**03 07 05.9**	**-1.3**
	baz=66,SNR=8.2								
Z24A	**Sheeppen Canyo**	**66.02**	**325**	⇑	P		**P**	**03 07 08.9**	**-0.7**
	baz=66,SNR=17								
222A	**Williams Famil**	**66.02**	**323**	⇑	P		**P**	**03 07 09.5**	**-0.2**
	baz=66,SNR=8.1								
Y25A	**Mesa, Roswell**	**66.13**	**326**	⇓	P		**P**	**03 07 09.0**	**-1.4**
	baz=66,SNR=5.8								
X26A	**CR and CF Fran**	**66.18**	**327**	⇓	P		**P**	**03 07 09.6**	**-1.0**
	baz=66								
W27A	**Bowe Ranch, En**	**66.22**	**328**	⇓	P		**P**	**03 07 09.7**	**-1.2**
	baz=66,SNR=5.3								
320A	**Kipp Ranch, An**	**66.25**	**322**	⇑	P		**P**	**03 07 11.2**	**0.0**
	baz=66								
122A	**Conniff Cattle**	**66.42**	**324**	⇑	P		**P**	**03 07 12.3**	**+0.2**
	baz=67								
Z23A	**Rita Site, Whi**	**66.43**	**325**	⇑	P		**P**	**03 07 11.7**	**-0.5**
	baz=67								
Y24A	**Capitan**	**66.52**	**326**	⇑	P		**P**	**03 07 13.3**	**+0.5**
	baz=67								
W26A	**Owens Ranch, T**	**66.58**	**328**	⇓	P		**P**	**03 07 12.5**	**-0.7**
	baz=67,SNR=5.7								
220A	**Playas Peak, P**	**66.67**	**322**	⇓	P		**P**	**03 07 13.8**	**0.0**
	baz=67,SNR=18								
319A	**Douglas**	**66.72**	**321**	⇓	P		**P**	**03 07 14.1**	**-0.1**
	baz=67,SNR=20								
121A	**Cookes Peak, D**	**66.72**	**323**	⇑	P		**P**	**03 07 14.5**	**+0.4**
	baz=67,SNR=10.0								
Z22A	**Elephant Butte**	**66.82**	**324**	⇑	P		**P**	**03 07 14.9**	**+0.2**
	baz=67,SNR=39								
Y23A	**Lovelace Mesa,**	**66.85**	**325**	⇓	P		**P**	**03 07 14.8**	**-0.1**
	baz=67								
LIC	**Lamto**	**66.91**	**73**		*e*P		**P**	**03 07 14.7**	**-1.1**
	comp=N,31nm,0.7s,mb5.2								
W25A	**X Br L Ranch,**	**67.03**	**327**	⇓	P		**P**	**03 07 15.2**	**-0.9**
	baz=67,SNR=11								
TIC	**Toumodi**	**67.11**	**72**		*e*P		**P**	**03 07 16.1**	**-0.9**
	comp=N,29nm,0.9s,mb5.1								
219A	**White Tail Can**	**67.16**	**322**	⇑	P		**P**	**03 07 16.9**	**0.0**
	baz=67								
318A	**Bisbee**	**67.17**	**321**	⇓	P		**P**	**03 07 17.1**	**+0.1**
	baz=67,SNR=16								
KIC	**Kosan Boka**	**67.22**	**73**		*e*P		**P**	**03 07 17.0**	**-0.7**
	comp=N,46nm,0.8s,mb5.4								
Z21A	**St. Cloud Mine**	**67.24**	**324**	⇑	P		**P**	**03 07 17.9**	**+0.4**
	baz=67,SNR=22								
DBIC	**Dimbokro**	**67.26**	**72**	⇑	*i*P		**P**	**03 07 17.0**	**-1.0**
	comp=N,24nm,0.8s,mb5.1								
DBIC	**Dimbokro**	**67.26**	**72**		P		**P**	**03 07 17.4**	**-0.6**
	comp=N,20nm,0.7s,mb5.1,baz=216,slow=6.8,SNR=34								
BNM	**Barren Site**	**67.32**	**325**		*e*P		**P**	**03 07 18.0**	**+0.1**
	comp=N,3.6nm,0.7s,mb4.3								
Y22A	**Socorro**	**67.34**	**325**	⇓	P		**P**	**03 07 17.6**	**-0.4**
	baz=68								
X23A	**Hourglass Bar**	**67.42**	**326**	⇓	P		**P**	**03 07 18.3**	**-0.2**
	baz=68,SNR=6.9								
W24A	**Lazy 6 Ranch,**	**67.50**	**327**	⇑	P		**P**	**03 07 18.3**	**-0.7**
	baz=68,SNR=7.4								
218A	**Dragoon**	**67.60**	**321**	⇓	P		**P**	**03 07 20.0**	**+0.3**
	baz=68								
V25A	**Rancho No Teng**	**67.60**	**328**	⇑	P		**P**	**03 07 19.0**	**-0.6**
	baz=68,SNR=8.5								
Z20A	**Nine Sixteen R**	**67.61**	**323**	⇑	P		**P**	**03 07 20.2**	**+0.5**
	baz=68,SNR=18								
U26A	**Atchley Ranch,**	**67.61**	**329**	⇓	P		**P**	**03 07 19.1**	**-0.6**
	baz=68,SNR=14								
119A	**Ashpeak Ranch,**	**67.75**	**322**	⇓	P		**P**	**03 07 20.2**	**-0.4**
	baz=68								
Y21A	**Point of Rocks**	**67.77**	**324**	⇓	P		**P**	**03 07 21.3**	**+0.6**
	baz=68,SNR=6.9								
CBKS	**Cedar Bluff**	**67.78**	**333**	⇓	*i*P		**P**	**03 07 19.8**	**-0.8**
	comp=N,26nm,0.5s,mb5.2								
LAZ	**Ladron**	**67.78**	**325**		*e*P		**P**	**03 07 21.0**	**+0.2**
	comp=N,3.0nm,1.1s,mb3.9								
X22A	**Bernardo**	**67.80**	**325**	⇑	P		**P**	**03 07 21.6**	**+0.8**
	baz=68								
V24A	**Rampart Ranch,**	**67.84**	**327**	⇓	P		**P**	**03 07 20.7**	**-0.4**
	baz=68,SNR=7.4								
ANMO	**Albuquerque**	**67.85**	**326**	⇓	*i*P		**P**	**03 07 21.1**	**-0.1**
	comp=N,8.2nm,1.0s,mb4.4								
W23A	**Werner Place,**	**67.85**	**326**	⇓	P		**P**	**03 07 21.0**	**-0.2**
	baz=68,SNR=6.3								
217A	**Green Valley**	**67.90**	**321**	⇓	P		**P**	**03 07 21.5**	**-0.1**
	baz=68,SNR=15								
U25A	**Circle Dot Ran**	**67.94**	**328**	⇓	P		**P**	**03 07 21.2**	**-0.5**
	baz=68								
JFWS	**Jewell Farm**	**68.02**	**342**		*e*P		**P**	**03 07 20.0**	**-2.0**
	comp=N,11nm,0.6s,mb4.8								
118A	**Homack Ranch,**	**68.04**	**322**	⇓	P		**P**	**03 07 22.5**	**+0.1**
	baz=68,SNR=4.1								
Y20A	**Horse Springs,**	**68.08**	**324**	⇑	P		**P**	**03 07 23.1**	**+0.4**
	baz=68,SNR=11								
Z19A	**T-Link Ranch,**	**68.12**	**323**	⇑	P		**P**	**03 07 23.3**	**+0.4**
	baz=68								
W22A	**Albuquerque**	**68.15**	**326**	⇓	P		**P**	**03 07 23.5**	**+0.4**
	baz=68,SNR=5.0								
X21A	**Alamocita Cree**	**68.16**	**325**	⇓	P		**P**	**03 07 23.7**	**+0.5**
	baz=68,SNR=18								
QSPA	**South Pole Qui**	**68.20**	**180**		*e*P		**P**	**03 07 23.4**	**+0.6**
	comp=N,9.5nm,0.9s,mb4.5								
TUC	**Tucson**	**68.27**	**321**	⇓	*i*P		**P**	**03 07 23.7**	**-0.2**
	comp=N,13nm,1.3s,mb4.5								
V23A	**Ortiz Mt. (NFS**	**68.32**	**326**	⇑	P		**P**	**03 07 24.3**	**+0.2**
	baz=68,SNR=10								
Z18A	**Geronimo**	**68.40**	**322**	⇓	P		**P**	**03 07 24.7**	**0.0**
	baz=69								
117A	**Oracle**	**68.43**	**321**	⇓	P		**P**	**03 07 24.9**	**+0.1**
	baz=69,SNR=14								
216A	**Three Points,**	**68.44**	**320**	⇓	P		**P**	**03 07 25.1**	**+0.1**
	baz=69,SNR=12								
T25A	**Trinidad**	**68.53**	**329**	⇑	P		**P**	**03 07 25.3**	**-0.1**
	baz=69,SNR=5.5								
W21A	**San Fidel**	**68.60**	**325**	⇓	P		**P**	**03 07 26.3**	**+0.4**
	baz=69,SNR=11								
Y19A	**Nutrioso**	**68.60**	**323**	⇓	P		**P**	**03 07 26.7**	**+0.8**
	baz=69,SNR=28								
X20A	**Quemado**	**68.62**	**324**	⇓	P		**P**	**03 07 26.4**	**+0.4**
	baz=69,SNR=5.5								
U23A	**El Rito**	**68.77**	**327**	⇑	P		**P**	**03 07 27.1**	**+0.2**
	baz=69								
Z17A	**San Carlos Hig**	**68.81**	**322**	⇑	P		**P**	**03 07 27.3**	**+0.2**
	baz=69								
V22A	**San Miguel Ran**	**68.82**	**326**	⇓	P		**P**	**03 07 27.6**	**+0.4**
	baz=69,SNR=10								
Y18A	**Canyon Day Jun**	**68.91**	**323**	⇑	P		**P**	**03 07 27.9**	**+0.2**
	baz=69,SNR=5.4								
S25A	**Robets Cordova**	**68.95**	**329**	⇓	P		**P**	**03 07 27.8**	**-0.1**
	baz=69,SNR=15								
X19A	**St. Johns**	**68.97**	**323**	⇑	P		**P**	**03 07 28.5**	**+0.3**
	baz=69								
116A	**Eloy**	**68.99**	**321**	⇓	P		**P**	**03 07 28.6**	**+0.3**
	baz=69								
W20A	**Ramah**	**69.06**	**325**	⇑	P		**P**	**03 07 28.8**	**+0.1**
	baz=69,SNR=18								
214A	**Organ Pipe Nat**	**69.22**	**319**	⇓	P		**P**	**03 07 30.0**	**+0.3**
	baz=69,SNR=12								
T23A	**Casias Ranch,**	**69.25**	**327**	⇓	P		**P**	**03 07 30.1**	**+0.3**
	baz=70								
Y17A	**Roosevelt**	**69.31**	**322**	⇓	P		**P**	**03 07 30.6**	**+0.3**
	baz=70,SNR=15								
S24A	**Houchin Ranch,**	**69.31**	**328**	⇓	P		**P**	**03 07 30.7**	**+0.5**
	baz=70,SNR=10								
Z16A	**Peralta Trail,**	**69.39**	**321**	⇑	P		**P**	**03 07 30.9**	**+0.2**
	baz=70								
X18A	**Snowflake**	**69.41**	**323**	⇑	P		**P**	**03 07 31.2**	**+0.4**
	baz=70								
W19A	**Sanders**	**69.53**	**324**	⇓	P		**P**	**03 07 31.8**	**+0.2**
	baz=70,SNR=6.1								
SDCO	**Great Sand Dun**	**69.54**	**328**	⇓	*i*P		**P**	**03 07 31.6**	**0.0**
	comp=N,13nm,0.9s,mb4.7								
V20A	**Brimhall**	**69.55**	**325**	⇓	P		**P**	**03 07 31.7**	**0.0**
	baz=70,SNR=7.0								
U21A	**Nageezi**	**69.60**	**326**	⇓	P		**P**	**03 07 32.1**	**+0.1**
	baz=70,SNR=12								
T22A	**Edith**	**69.67**	**327**	⇑	P		**P**	**03 07 32.7**	**+0.4**
	baz=70,SNR=10.0								
W18A	**Petrified Fore**	**69.73**	**324**	⇑	P		**P**	**03 07 33.1**	**+0.3**
	baz=70								
R24A	**Sanders Place,**	**69.73**	**329**	⇑	P		**P**	**03 07 33.0**	**+0.2**
	baz=70,SNR=17								
X17A	**Forest Lakes**	**69.75**	**322**	⇑	P		**P**	**03 07 33.7**	**+0.7**
	baz=70,SNR=12								
S23A	**Nye Farm, Mont**	**69.75**	**328**	⇑	P		**P**	**03 07 33.2**	**+0.3**
	baz=70								
Z15A	**Gila River Ind**	**69.78**	**321**	⇓	P		**P**	**03 07 33.5**	**+0.3**
	baz=70								
V19A	**Window Rock**	**69.80**	**325**	⇓	P		**P**	**03 07 33.6**	**+0.4**
	baz=70,SNR=6.0								
Y16A	**Circle Bar Ran**	**69.80**	**322**	⇓	P		**P**	**03 07 33.8**	**+0.5**
	baz=70,SNR=8.5								
114A	**Black Gap (USA**	**69.83**	**320**	⇓	P		**P**	**03 07 33.5**	**0.0**
	baz=70,SNR=12								
Q25A	**Bedland, Calha**	**69.87**	**330**	⇓	P		**P**	**03 07 33.1**	**-0.5**
	baz=70								
T21A	**Navajo Lake**	**69.97**	**326**	⇑	P		**P**	**03 07 34.4**	**+0.1**
	baz=70								
U20A	**Newcomb**	**70.02**	**325**	⇓	P		**P**	**03 07 34.5**	**-0.1**
	baz=70,SNR=6.7								
X16A	**Lo Mia Camp, P**	**70.17**	**322**	⇓	P		**P**	**03 07 36.0**	**+0.4**
	baz=70,SNR=15								
S22A	**4UR Ranch, Cre**	**70.19**	**327**	⇑	P		**P**	**03 07 35.6**	**0.0**
	baz=70,SNR=6.4								
W17A	**Winslow**	**70.24**	**323**	⇑	P		**P**	**03 07 36.0**	**+0.1**
	baz=70								
V18A	**Ganado**	**70.28**	**324**	⇓	P		**P**	**03 07 36.1**	**0.0**
	baz=70,SNR=5.3								
Z14A	**Wintersburg**	**70.29**	**320**	⇑	P		**P**	**03 07 36.3**	**0.0**
	baz=70								
P25A	**Willow Gulch B**	**70.31**	**330**	⇓	P		**P**	**03 07 36.6**	**+0.3**
	baz=71								
U19A	**Dine' College,

BELC **Belle Mtn. Jos** 72.57 319 ⇑P P 03 07 50.3 +0.4
baz=73
T15A **Red Dirt Ranch** 72.58 323 ⇑P P 03 07 50.7 +0.8
baz=73,SNR=19
PFO **Pinyon Flat Ob** 72.58 318 ⇓P P 03 07 50.4 +0.4
baz=73
U14A **Mt Trumbull** 72.59 322 ⇓P P 03 07 50.9 +0.9
baz=73,SNR=19
V13A **Grand Canyon W** 72.65 322 ⇓P P 03 07 50.8 +0.4
baz=73,SNR=12
S16A **Weppner Ranch,** 72.66 324 ⇓P P 03 07 50.6 +0.3
baz=73
R17A **Hanksville Air** 72.70 325 ⇑P P 03 07 50.9 +0.3
baz=73
P19A **Cripple Cowboy** 72.72 327 ⇓P P 03 07 51.2 +0.5
baz=73,SNR=39
O20A **White River Ci** 72.74 328 ⇓P P 03 07 51.0 +0.2
baz=73,SNR=23
W12A **Cal Nev Ari** 72.78 321 ⇓P P 03 07 51.6 +0.5
baz=73
N21A **Black Mountain** 72.87 329 ⇑P P 03 07 52.5 +1.0
baz=73,SNR=9.8
GMRC **Granite Mounta** 72.89 320 ⇓P P 03 07 52.2 +0.4
baz=73,SNR=12
Q18A **Rafter H Ranch** 72.91 326 ⇑P P 03 07 52.3 +0.5
baz=73,SNR=6.2
EYMN **Ely** 72.98 343 *e*P P 03 07 50.3 -1.7
comp=N,3.2nm,0.8s,mb4.1
T14A **Hurricane** 73.00 323 ⇓P P 03 07 53.1 +0.7
baz=73,SNR=13
R16A **Teasdale** 73.01 325 ⇓P P 03 07 52.6 +0.2
baz=73
MURC **Murrieta** 73.04 318 ⇑P P 03 07 52.4 -0.3
baz=73
V12A **Nelson** 73.07 321 ⇓P P 03 07 53.0 +0.2
baz=73,SNR=6.4
SRU **San Rafael** 73.11 326 ⇓P P 03 07 53.4 +0.4
baz=73,SNR=17
SRU **San Rafael** 73.11 326 ⇓*i*P P 03 07 52.8 -0.2
comp=N,26nm,0.7s,mb5.1
N20A **Spence Gulch,** 73.28 329 ⇓P P 03 07 54.3 +0.4
baz=74,SNR=14
O19A **Miners Draw (B** 73.30 328 ⇑P P 03 07 54.3 +0.3
baz=74,SNR=21
Q16A **Castle Valley** 73.31 325 ⇑P P 03 07 54.5 +0.3
baz=74,SNR=8.7
HEC **Hector,Ludlow** 73.33 319 ⇑P P 03 07 54.8 +0.5
baz=74,SNR=5.2
L22A **Ellis Ranch, M** 73.36 330 ⇓P P 03 07 54.7 +0.4
baz=74
P18A **Preston Nutter** 73.36 327 ⇓P P 03 07 54.4 -0.1
baz=74,SNR=42
U12A **Valley of Fire** 73.38 322 ⇓P P 03 07 54.8 +0.2
baz=74,SNR=6.9
R15A **Junction** 73.38 324 ⇓P P 03 07 55.2 +0.6
baz=74
T13A **Saint George** 73.43 322 ⇑P P 03 07 55.4 +0.5
baz=74,SNR=10
RWWY **Rawlins** 73.45 330 *e*P P 03 07 55.1 +0.2
comp=N,14nm,0.8s,mb4.8
M21A **Separation Pea** 73.45 330 ⇓P P 03 07 55.2 +0.3
baz=74,SNR=12
V11A **Goodsprings** 73.48 321 ⇑P P 03 07 55.3 +0.1
baz=74
P17A **Butcher Ranch,** 73.50 326 ⇓P P 03 07 55.7 +0.4
baz=74,SNR=8.7
TUQ **Turquoise Moun** 73.50 320 ⇓P P 03 07 55.4 +0.1
baz=74
CCUT **Cedar City** 73.50 323 ⇓*i*P P 03 07 56.4 +1.1
comp=N,17nm,0.8s,mb4.8
S14A **Cedar City** 73.54 323 ⇓P P 03 07 56.4 +0.8
baz=74,SNR=5.6
MSU **Marysvale** 73.55 325 *e*P P 03 07 56.2 +0.6
comp=N,14nm,0.8s,mb4.8
TMUT **Trail Mountain** 73.61 326 *e*P P 03 07 56.3 +0.4
comp=N,6.5nm,0.9s,mb4.4
O18A **Roosevelt** 73.71 327 ⇓P P 03 07 57.1 +0.6
baz=74,SNR=5.2
ARUT **Antelope Range** 73.72 323 *e*P P 03 07 57.2 +0.7
comp=N,15nm,0.9s,mb4.7
L21A **Rawlins** 73.73 330 ⇓P P 03 07 56.8 +0.3
baz=74,SNR=22
BFSC **Mount Baldy Ra** 73.75 318 ⇑P P 03 07 57.4 +0.6
baz=74
M20A **Sweetwater, Wa** 73.75 329 ⇓P P 03 07 57.1 +0.4
baz=74
N19A **John Jarvie Ra** 73.78 328 ⇑P P 03 07 56.9 +0.1
baz=74,SNR=11
S13A **Holt Ranch, En** 73.80 323 ⇑P P 03 07 57.9 +0.8
baz=74,SNR=13
GSC **Goldstone** 73.94 320 ⇑P P 03 07 58.0 +0.1
baz=74,SNR=5.5
GSC **Goldstone** 73.94 320 *e*P P 03 07 57.9 0.0
comp=N,11nm,1.4s,mb4.4
RSSD **Black Hills** 73.98 333 *e*P P 03 07 57.3 -0.6
comp=N,9.5nm,0.8s,mb4.6
Q15A **Fillmore** 74.01 325 ⇑P P 03 07 58.9 +0.6
baz=74
O17A **Robinson Place** 74.03 327 ⇑P P 03 07 59.3 +1.0
baz=74,SNR=26
N18A **Larsen Ranch,** 74.08 328 ⇑P P 03 07 59.4 +0.8
baz=74
L20A **Wamsutter** 74.22 329 ⇓P P 03 07 59.8 +0.4
baz=74,SNR=16
R13A **O'Grain Ranch,** 74.29 323 ⇓P P 03 08 00.6 +0.7
baz=74,SNR=5.1
EDW2 **Edwards Air Fo** 74.38 319 ⇑P P 03 08 00.2 -0.3
baz=75,SNR=5.3
S12A **Delamar Landin** 74.38 322 ⇑P P 03 08 00.9 +0.5
baz=75
U10A **Ash Meadows, A** 74.41 321 ⇑P P 03 08 01.3 +0.7
baz=75
O16A **Springville** 74.43 326 ⇑P P 03 08 01.4 +0.7
baz=75
DAU **Daniels Canyon** 74.46 326 *e*P P 03 08 01.4 +0.6
comp=N,10nm,0.8s,mb4.6
Q14A **Sevier Lake (B** 74.48 324 ⇓P P 03 08 01.7 +0.7
baz=75,SNR=26
AGMN **Agassiz Nation** 74.57 341 *e*P P 03 07 59.8 -1.5
comp=N,9.3nm,1.1s,mb4.3
AGMN *e*PcP PcP 03 08 14.9 +0.1
M18A **Lyman** 74.62 328 ⇑P P 03 08 01.6 -0.1
baz=75,SNR=6.9
N17A **Moffit Pass** 74.64 327 ⇓P P 03 08 02.6 +0.8
baz=75,SNR=37
JLU **Jordanelle** 74.70 327 ⇓*i*P P 03 08 02.5 +0.3
comp=N,9.4nm,0.7s,mb4.5
K20A **Yellowstone Ra** 74.73 330 ⇑P P 03 08 02.2 -0.1
baz=75,SNR=22
R12A **Pony Springs,** 74.75 323 ⇓P P 03 08 03.7 +1.2
baz=75,SNR=13
FURC **Furnace Creek,** 74.76 320 ⇓P P 03 08 03.2 +0.6
baz=75,SNR=9.8
L19A **Farson** 74.78 329 ⇑P P 03 08 02.9 +0.3
baz=75,SNR=11
P14A **Drum Mountains** 74.81 325 ⇓P P 03 08 04.0 +1.2
baz=75,SNR=21
MPMC **Manual Prospec** 74.86 320 ⇓P P 03 08 03.1 -0.1
baz=75,SNR=7.3
Q13A **Wheeler Ranch,** 74.86 324 ⇑P P 03 08 03.8 +0.7
baz=75,SNR=11
N16A **Rees Ranch, Co** 74.90 327 ⇑P P 03 08 03.8 +0.5
baz=75,SNR=5.6
S11A **Rachel** 74.91 322 ⇓P P 03 08 04.3 +0.8
baz=75
M17A **Scullys Gap (B** 74.95 328 ⇑P P 03 08 03.5 -0.1
baz=75,SNR=6.3
L18A **Fontenelle, Gr** 74.98 328 ⇑P P 03 08 04.0 +0.3
baz=75,SNR=23
K19A **Absolon Red Bu** 75.09 330 ⇓P P 03 08 03.9 -0.4
baz=75,SNR=16
DUG **Dugway** 75.11 325 ⇓P P 03 08 04.9 +0.4
baz=75,SNR=14
DUG **Dugway** 75.11 325 ⇓*i*P P 03 08 04.5 0.0
comp=N,17nm,1.3s,mb4.5
ISA **Isabella** 75.19 319 ⇑P P 03 08 05.4 +0.2
baz=75,SNR=8.3
ISA **Isabella** 75.19 319 ⇓*i*P P 03 08 05.2 +0.1
comp=N,9.9nm,0.9s,mb4.4
P13A **Bates Ranch, G** 75.22 324 ⇓P P 03 08 06.0 +0.9
baz=75,SNR=14
R11A **Troy Canyon, C** 75.31 323 ⇓P P 03 08 06.4 +0.7
baz=76,SNR=11
Q12A **Willow Creek R** 75.37 323 ⇑P P 03 08 06.5 +0.4
baz=76
BW06 **Boulder Array** 75.39 329 ⇓P P 03 08 05.9 -0.2
baz=76,SNR=9.8
BW06 **Boulder Array** 75.39 329 *e*P P 03 08 05.2 -0.8
comp=N,3.6nm,0.6s,mb4.2
GRAC **Grapevine Rang** 75.42 320 ⇑P P 03 08 06.5 +0.1
baz=76
SYO **Syowa Base** 75.45 159 ⇑*e*P P 03 08 05.0 -1.1
N15A **Stansbury Isla** 75.46 326 ⇑P P 03 08 06.7 +0.2
baz=76,SNR=12
CWC **Cottonwood Cre** 75.47 320 ⇓P P 03 08 06.8 +0.1
baz=76
HWUT **Hardware Ranch** 75.50 327 ⇓*i*P P 03 08 06.3 -0.5
comp=N,12nm,0.7s,mb4.6
K18A **Toltan Ranch,** 75.52 329 ⇑P P 03 08 07.4 +0.6
baz=76,SNR=14
L17A **Cokeville** 75.52 328 ⇑P P 03 08 06.8 0.0
baz=76,SNR=15
S10A **Tonopah Range,** 75.59 322 ⇓P P 03 08 07.7 +0.4
baz=76,SNR=14
R10A **Warm Springs** 75.68 322 ⇓P P 03 08 08.8 +1.0
baz=76,SNR=12
VES **Vestal, Richgr** 75.68 319 ⇓P P 03 08 07.9 0.0
baz=76,SNR=5.2
Q11A **Duckwater** 75.69 323 ⇑P P 03 08 08.4 +0.4
baz=76,SNR=15
P12A **McGill** 75.72 324 ⇑P P 03 08 08.8 +0.7
baz=76,SNR=5.5
SPUT **South Promonto** 75.73 326 ⇓*i*P P 03 08 08.0 -0.1
comp=N,25nm,1.1s,mb4.8
L16A **Fish Haven** 75.73 327 ⇑P P 03 08 08.1 +0.1
baz=76,SNR=12
BGU **Big Grassy Mou** 75.75 326 *e*P P 03 08 07.8 -0.4
comp=N,13nm,1.2s,mb4.4
N14A **Grayback Hills** 75.78 326 ⇑P P 03 08 08.4 +0.1
baz=76,SNR=6.8
M15A **Larsen Ranch,** 75.84 327 ⇓P P 03 08 08.7 0.0
baz=76,SNR=20
SMMC **Simmler** 75.90 318 ⇑P P 03 08 09.5 +0.4
baz=76
J18A **Kendall Valley** 75.94 329 ⇓P P 03 08 09.4 +0.1
baz=76,SNR=9.0
K17A **Gardner Place,** 76.03 328 ⇑P P 03 08 09.8 +0.1
baz=76,SNR=11
O12A **Currie** 76.19 324 ⇑P P 03 08 10.9 +0.2
baz=76,SNR=15
L15A **Malad City** 76.21 327 ⇑P P 03 08 10.9 +0.1
baz=76,SNR=22
I18A **Diamond G Ranc** 76.22 330 ⇑P P 03 08 11.4 +0.6
baz=76,SNR=11
HVU **Hansel Valley** 76.24 327 *e*P P 03 08 10.4 -0.5
comp=N,8.3nm,0.9s,mb4.4
ULM **Lac du Bonnet** 76.30 341 *e*P P 03 08 09.5 -1.6
comp=N,12nm,0.6s,mb4.7
ULM **Lac du Bonnet** 76.30 341 P P 03 08 09.6 -1.4
comp=N,14nm,0.6s,mb4.8,baz=154,slow=6.4,SNR=11
N13A **Wendover, West** 76.32 325 ⇓P P 03 08 11.6 +0.2
baz=76
M14A **Sheep Mountain** 76.33 326 ⇑P P 03 08 11.5 0.0
baz=76,SNR=21
J17A **Brown Place, J** 76.39 329 ⇑P P 03 08 12.0 +0.3
baz=77,SNR=11
K16A **Soda Springs** 76.42 328 ⇑P P 03 08 12.9 +0.9
baz=77,SNR=28
REDW **Red Top Meadow** 76.46 329 ⇓*i*P P 03 08 12.0 -0.1
comp=N,9.0nm,0.8s,mb4.5
SNOW **Snow King Moun** 76.48 329 *e*P P 03 08 12.3 0.0
comp=N,13nm,0.8s,mb4.4
SCHQ **Schefferville** 76.51 0 P P 03 08 11.2 -0.9
comp=N,3.8nm,0.8s,mb4.1,baz=229,slow=13,SNR=3.4
LOHW **Long Hollow** 76.53 329 ⇓*i*P P 03 08 12.5 0.0
comp=N,9.8nm,0.7s,mb4.5
O11A **Cowboy Ranch,** 76.59 324 ⇓P P 03 08 13.2 +0.2
baz=77,SNR=5.6
TPAW **Teton Pass** 76.60 329 *e*P P 03 08 12.6 -0.3
comp=N,12nm,0.8s,mb4.6
M13A **Morello** 76.66 325 ⇓P P 03 08 13.3 0.0
baz=77
M13A **Montello** 76.66 325 *e*P P 03 08 12.8 -0.5
comp=N,3.2nm,0.8s,mb4.0
L14A **Malta** 76.66 326 ⇑P P 03 08 13.1 -0.2
baz=77,SNR=14
RRI2 **Red Ridge** 76.67 328 ⇓*i*P P 03 08 13.3 0.0
comp=N,11nm,0.9s,mb4.5
P10A **Eureka** 76.68 323 ⇑P P 03 08 14.4 +0.9
baz=77,SNR=7.0
MOOW **Moose Ponds** 76.69 329 ⇓*i*P P 03 08 13.4 0.0
comp=N,3.2nm,0.6s,mb4.1
I17A **Pilgrim Ck.** 76.74 329 ⇑P P 03 08 14.5 +0.8
baz=77,SNR=5.3
J16A **Bone** 76.76 328 ⇑P P 03 08 14.2 +0.4
baz=77
N12A **Clover Valley,** 76.76 325 ⇑P P 03 08 13.9 0.0
baz=77
N12A **Clover Valley,** 76.76 325 *e*P P 03 08 13.6 -0.3
comp=N,2.8nm,0.7s,mb4.0
K15A **Arbon** 76.78 327 ⇓P P 03 08 14.3 +0.4
baz=77,SNR=18
M12A **Wells** 77.09 325 ⇑P P 03 08 15.7 -0.1
baz=77,SNR=7.4
H17A **Grant Village** 77.10 330 ⇓P P 03 08 16.3 +0.6
baz=77
N11A **Elko Archery C** 77.11 324 ⇓P P 03 08 16.0 +0.2
baz=77
I16A **Newdale** 77.15 329 ⇓P P 03 08 16.7 +0.7
baz=77,SNR=5.9
O10A **Cortez Mining,** 77.17 323 ⇓P P 03 08 16.6 +0.5
baz=77
J15A **Blackfoot** 77.25 328 ⇓P P 03 08 17.2 +0.6
baz=78,SNR=13
G18A **Lazy EL Ranch,** 77.34 331 ⇓P P 03 08 17.3 +0.3
baz=78,SNR=12
YMR **Madison River** 77.49 330 *e*P P 03 08 19.1 +1.2
comp=N,7.0nm,0.4s,mb4.6
K13A **Stover Farm, H** 77.54 326 ⇓P P 03 08 18.7 +0.5
baz=78,SNR=6.6
M11A **Holland Ranch,** 77.57 325 ⇑P P 03 08 18.7 +0.3
baz=78,SNR=8.0
H16A **Russell Place,** 77.65 329 ⇑P P 03 08 19.2 +0.5
baz=78,SNR=10
L12A **House Creek Ra** 77.66 326 ⇓P P 03 08 19.4 +0.6
baz=78,SNR=8.2
I15A **Monteview** 77.72 328 ⇓P P 03 08 19.9 +0.8
baz=78,SNR=5.5
J14A **Carey** 77.74 327 ⇑P P 03 08 19.8 +0.6
baz=78,SNR=13
GCMT **Greycliff** 77.75 331 *e*P P 03 08 19.1 -0.1
comp=N,11nm,0.9s,mb4.5
F18A **Big Timber** 77.86 331 ⇓P P 03 08 20.0 +0.1
baz=78,SNR=16
CMB **Columbia Colle** 77.90 320 *e*P P 03 08 19.4 -0.9
comp=N,1.6nm,0.6s,mb3.8
M10A **I.L. Ranch, Tu** 78.04 324 ⇑P P 03 08 21.3 +0.3
baz=78
L11A **Cat Creek Ranc** 78.07 325 ⇓P P 03 08 21.6 +0.5
baz=78,SNR=14
J13A **Cove Ranch, Pi** 78.12 327 ⇓P P 03 08 21.7 +0.4
baz=78
I14A **Mackay** 78.15 328 ⇓P P 03 08 22.2 +0.7
baz=78
TSUM **Tsumeb** 78.28 106 *e*P P 03 08 23.2 +0.3
comp=N,23nm,0.8s,mb4.9
F17A **Fitzpatrick Pl** 78.28 331 ⇑P P 03 08 22.7 +0.5
baz=78,SNR=12
G16A **Moss Hill, Enn** 78.31 329 ⇑P P 03 08 22.7 +0.4
baz=78
HLID **Hailey** 78.36 327 ⇑P P 03 08 23.8 +1.0
baz=79,SNR=38
HLID **Hailey** 78.36 327 ⇓*i*P P 03 08 23.3 +0.6
comp=N,17nm,0.8s,mb4.7
L10A **Juniper Basin** 78.39 325 ⇓P P 03 08 23.4 +0.5
baz=79,SNR=7.3
E18A **Harlowton** 78.45 331 ⇓P P 03 08 22.8 -0.3
baz=79
I13A **Wildhorse Cree** 78.47 327 ⇑P P 03 08 24.0 +0.7
baz=79,SNR=20
MCMT **McKenzie Canyo** 78.51 329 *e*P P 03 08 23.8 +0.4
comp=N,6.9nm,0.9s,mb4.3
G15A **Dillon** 78.58 329 ⇑P P 03 08 24.5 +0.6
baz=79,SNR=8.0
H14A **Leadore** 78.61 328 ⇑P P 03 08 24.8 +0.8
baz=79
F16A **Kennard Place,** 78.64 330 ⇑P P 03 08 24.1 0.0
baz=79
DLMT **Dillon** 78.78 329 *e*P P 03 08 24.0 -0.9
comp=N,9.9nm,1.2s,mb4.3
E17A **Martinsdale** 78.80 331 ⇑P P 03 08 25.3 +0.3
baz=79,SNR=13
D18A **Linhart Farms,** 78.89 332 ⇑P P 03 08 25.3 -0.1
baz=79
I12A **Atlanta** 78.89 327 ⇓P P 03 08 26.2 +0.6
baz=79,SNR=15
MFID **Camas Ranch** 78.98 326 ⇓P P 03 08 26.3 +0.2
baz=79,SNR=6.0
H13A **Challis** 79.00 328 ⇓P P 03 08 26.9 +0.7
baz=79
LRM **Limekiln Ridge** 79.05 330 *e*P P 03 08 26.2 -0.2
comp=N,25nm,1.0s,mb4.8
D17A **Six Diamond Ra** 79.24 331 ⇓P P 03 08 27.4 0.0
baz=80,SNR=10
H12A **Diamond D Ranc** 79.29 327 ⇑P P 03 08 28.1 +0.4
baz=80,SNR=17
G13A **Cobalt** 79.37 328 ⇓P P 03 08 28.7 +0.6
baz=80,SNR=71
HRY **Holter Researc** 79.42 330 *e*P P 03 08 28.5 +0.1
comp=N,7.2nm,0.9s,mb4.3
F14A **Wisdom** 79.48 329 ⇑P P 03 08 29.2 +0.4
baz=80
EGMT **Eagleton** 79.50 332 ⇑P P 03 08 28.5 -0.3
baz=80,SNR=6.4
EGMT **Eagleton** 79.50 332 *e*P P 03 08 28.0 -0.8
comp=N,17nm,1.1s,mb4.6
D16A **Dana Ranch, Ca** 79.54 331 ⇑P P 03 08 29.4 +0.4
baz=80,SNR=21
E15A **Deer Lodge** 79.59 330 ⇓P P 03 08 29.3 0.0
baz=80,SNR=5.7
C17A **Wharram Farm,** 79.64 332 ⇓P P 03 08 29.1 -0.4
baz=80,SNR=5.6
B18A **Beardsley Farm** 79.80 333 ⇑P P 03 08 30.1 -0.3
baz=80,SNR=12
WVOR **Wild Horse Val** 79.80 324 *e*P P 03 08 30.2 -0.3
comp=N,2.1nm,0.9s,mb3.8
F13A **Darby** 79.92 329 ⇑P P 03 08 31.5 +0.4
baz=80,SNR=31
G12A **Big Creek, Yel** 79.94 328 ⇓P P 03 08 31.2 0.0
baz=80,SNR=7.5
E14A **Clinton** 79.98 329 ⇑P P 03 08 31.9 +0.5
baz=80
B17A **L&Q Farms, Che** 80.16 332 ⇑P P 03 08 31.6 -0.8
baz=80
C16A **Fuhringer Ranc** 80.20 331 ⇑P P 03 08 32.2 -0.4
baz=80,SNR=11
A18A **Metzger Ranch,** 80.23 333 ⇓P P 03 08 32.0 -0.6
baz=80
E13A **Victor** 80.33 329 ⇓P P 03 08 33.4 +0.2
baz=81,SNR=14
J08A **Circle Bar Ran** 80.34 325 ⇓P P 03 08 33.4 0.0
baz=80,SNR=9.4
F12A **Elk City** 80.35 328 ⇓P P 03 08 33.2 -0.2
baz=81,SNR=6.4
D14A **Greenough** 80.47 330 ⇓P P 03 08 33.9 -0.2
baz=81
MSO **Missoula** 80.49 329 *e*P P 03 08 34.4 +0.2
comp=N,4.3nm,1.0s,mb4.0
C15A **Salmond Ranch,** 80.57 331 ⇑P P 03 08 34.8 +0.2
baz=81,SNR=36
A17A **Triple J Farms** 80.61 333 ⇑P P 03 08 34.3 -0.4
baz=81,SNR=13
B16A **M & M Farms, S** 80.64 332 ⇓P P 03 08 34.1 -0.8
baz=81
BMO **Blue Mountains** 80.75 326 *e*P P 03 08 35.3 -0.2
comp=N,11nm,1.1s,mb4.4
WDC **Whiskeytown Da** 80.81 321 *e*P P 03 08 34.0 -2.0
comp=N,8.7nm,0.6s,mb4.6
D13A **Huson** 80.93 329 ⇓P P 03 08 36.3 -0.1
baz=81,SNR=15
B15A **Bradely Ranch,** 80.95 331 ⇓P P 03 08 35.7 -0.8
baz=81,SNR=16
E12A **Beaver Dam Sad** 80.97 328 ⇑P P 03 08 36.4 -0.3
baz=81,SNR=8.5
SWMT **Swartz Lake** 81.01 330 *e*P P 03 08 37.0 +0.1
comp=N,6.7nm,0.9s,mb4.3
C14A **Swan Lake** 81.09 330 ⇓P P 03 08 37.2 -0.1
baz=81,SNR=13
K05A **Summer Lake** 81.24 323 ⇓P P 03 08 38.8 +0.6
baz=81
YBMT **Yellow Bay** 81.28 330 *e*P P 03 08 38.1 -0.2
comp=N,5.1nm,0.8s,mb4.2
D12A **Red Ives Fores** 81.32 329 ⇓P P 03 08 38.4 -0.1
baz=82
I07A **Izee** 81.38 325 ⇓P P 03 08 39.0 +0.1
baz=82,SNR=10
C13A **Hot Springs** 81.41 330 ⇓P P 03 08 38.9 0.0
baz=82,SNR=11
F10A **Beach Ranch, E** 81.48 327 ⇑P P 03 08 39.5 0.0
baz=82,SNR=13
A15A **Johnson Ranch,** 81.52 332 ⇓P P 03 08 38.5 -1.1
baz=82,SNR=6.9
BSMT **Bassoo Peak** 81.63 330 *e*P P 03 08 39.9 -0.2
comp=N,7.9nm,0.8s,mb4.4
YBH **Yreka Blue Hor** 81.64 321 *e*P P 03 08 39.0 -1.4
comp=N,3.7nm,0.8s,mb4.1
YBH **Yreka Blue Hor** 81.64 321 P P 03 08 38.8 -1.6
comp=N,3.6nm,0.7s,mb4.1,baz=97,slow=4.8,SNR=15
BOSA **Boshof** 81.72 117 *e*P P 03 08 41.0 -0.3
comp=N,12nm,0.8s,mb4.6
BOSA **Boshof** 81.72 117 P P 03 08 41.3 +0.1
comp=N,11nm,0.6s,mb4.7,baz=253,slow=3.8,SNR=25
A14A **Double T Ranch** 81.82 331 ⇓P P 03 08 40.4 -0.7
baz=82
C12B **Naegeli Ranch,** 81.85 329 ⇓P P 03 08 41.3 0.0
baz=82
B13A **Whitefish** 81.86 330 ⇑P P 03 08 41.1 -0.2
baz=82,SNR=12
G08A **Pilot Rock** 81.90 326 ⇓P P 03 08 41.5 -0.1
baz=82,SNR=10
FFC **Flin Flon** 82.05 340 *e*P P 03 08 41.1 -1.1
comp=N,6.4nm,1.1s,mb4.2
WALA **Waterton Lakes** 82.10 331 *e*P P 03 08 41.4 -1.2
comp=N,0.3nm,0.9s
A13A **Flathead Natio** 82.24 331 ⇑P P 03 08 43.4 +0.1
baz=82,SNR=22
VIPM **Ingram Point** 82.26 325 P P 03 08 43.9 +0.4
C11A **Tepee Creek (N** 82.31 329 ⇓P P 03 08 43.4 -0.3
baz=82,SNR=19
E09A **Wood Farm, Sta** 82.32 327 ⇓P P 03 08 43.4 -0.3
baz=82
HUMO **Hull Mountain** 82.33 322 *e*P P 03 08 42.2 -1.7
comp=N,2.6nm,0.6s,mb4.0
B12A **Libby** 82.45 330 ⇓P P 03 08 44.5 +0.1
baz=83
A12A **Yaak River Ran** 82.81 330 ⇓P P 03 08 46.0 -0.2
baz=83
F07A **Phinny Hill Vi** 82.81 326 ⇑P P 03 08 46.5 +0.1
baz=83
HAWA **Hanford** 82.94 326 *e*P P 03 08 46.6 -0.4
comp=N,5.7nm,0.6s,mb4.5
NEW **Newport** 83.03 329 *e*P P 03 08 46.3 -1.1
comp=N,2.3nm,0.8s,mb4.0
D08A **Wollman Farm,** 83.08 327 ⇓P P 03 08 47.4 -0.2
baz=83
OD2 **Odessa Site #2** 83.20 328 P P 03 08 47.9 -0.4
C09A **Chrisman Ranch** 83.27 328 ⇑P P 03 08 48.4 -0.2
baz=84,SNR=10
LBTB **Lobatse** 83.28 114 *e*P P 03 08 49.4 +0.1
comp=N,18nm,0.7s,mb4.9
MAW **Mawson** 83.37 163 P P 03 08 49.3 +0.4
comp=N,4.4nm,0.6s,mb4.3,baz=220,slow=7.5,SNR=8.2
FCC **Fort Churchill** 83.50 346 *e*P P 03 08 48.8 -0.7
comp=N,0.3nm,0.7s
TAM **Tamanrasset** 83.54 62 *e*P P 03 08 50.5 -0.1
comp=N,4.3nm,0.6s,mb4.4
ETW **Entiat** 84.16 327 P P 03 08 52.9 -0.3
B08A **Colville Reser** 84.17 328 ⇓P P 03 08 52.6 -0.6
baz=84
D05A **Enumclaw** 84.73 326 ⇑P P 03 08 55.8 -0.3
baz=85
ESDC **Sonseca Array** 85.01 44 P P 03 08 58.1 +0.5
comp=N,1.2nm,0.6s,mb3.8,baz=235,slow=5.3,SNR=9.1
ESLA **Sonseca Array** 85.01 44 *e*P P 03 08 58.3 +0.7
comp=N,1.9nm,1.1s,mb3.7
B06A **Marblemount** 85.34 327 ⇑P P 03 08 58.1 -0.9
baz=86
JCW **Jim Creek** 85.36 327 P P 03 08 58.0 -1.2

A05A	**Maple Falls**	**85.96**	**327**	⇓P		**P**	**03 09 01.3**	**-0.8**
	baz=86								
LSZ	**Lusaka**	**89.14**	**106**	*e*P		**P**	**03 09 20.3**	**+2.2**
	comp=N,4.0nm,0.7s,mb4.5								
BBB	**Bella Bella**	**90.95**	**327**	P		**P**	**03 09 25.1**	**-0.5**
	comp=N,4.7nm,0.9s,mb4.5,baz=110,slow=19,SNR=3.7								
YKA	**Yellowknife Ar**	**92.22**	**340**	P		**P**	**03 09 30.3**	**-0.9**
YKA	**Yellowknife Ar**	**92.22**	**340**	P		**P**	**03 09 30.3**	**-0.9**
	comp=N,8.3nm,0.8s,mb4.8,baz=132,slow=4.7,SNR=87								
DLBC	**Dease Lake**	**95.42**	**332**	P		**P**	**03 09 45.7**	**-0.4**
DLBC	**Dease Lake**	**95.42**	**332**	P		**P**	**03 09 45.7**	**-0.4**
	comp=N,1.8nm,0.6s,mb4.5,baz=109,slow=3.2,SNR=7.1								
ASAR	**Alice Springs**	**130.23**	**205**	PKP	PKPdf		03 15 30.9	-1.1	
	comp=N,3.0nm,0.8s,baz=152,slow=2.4,SNR=23								
ASAR				SKPbc	SKPbc		03 18 35.9	-3.9	
	comp=N,2.5nm,0.8s,baz=146,slow=4.8,SNR=15								
ABKAR	**Akbulak array**	**130.35**	**43**	*e*PKPdf	PKPdf		03 15 31.5	+0.2	
WRAB	**Tennant Creek**	**133.36**	**208**	*e*PKPdf	PKPdf		03 15 37.1	-0.8	
PETK	**Petropavlovsk-**	**133.96**	**324**	PKP	PKPdf		03 15 35.7	-2.3	
PETK				SKPbc	SKPbc		03 18 48.8	-3.1	
PETK	**Petropavlovsk-**	**133.96**	**324**	PKP	PKPdf		03 15 35.7	-2.3	
	comp=N,1.2nm,0.6s,baz=62,slow=5.8,SNR=4.3								
PETK				SKPbc	SKPbc		03 18 48.8	-3.1	
	comp=N,3.0nm,0.9s,baz=91,slow=10,SNR=5.1								
BVAR	**Borovoye Array**	**135.23**	**35**	PKP	PKPdf		03 15 39.1	-1.2	
	comp=N,0.4nm,0.4s,baz=274,slow=5.8,SNR=4.6								
EKS2	**Erkin-Say**	**141.48**	**48**	*e*PKPdf	PKPdf		03 15 52.0	-0.1	
ZALV	**Zalesovo Beam**	**141.65**	**27**	PKP	PKPdf		03 15 51.2	-0.9	
	comp=N,1.9nm,0.7s,baz=322,slow=2.9,SNR=5.6								
ZALV				SKPbc	SKPbc		03 19 11.0	-3.1	
	comp=N,0.9nm,0.4s,baz=298,slow=3.2,SNR=3.7								
TKM2	**Tokmak 2**	**142.64**	**47**	*e*PKPdf	PKPdf		03 15 54.4	+0.1	
MK31	**Makanchi Array**	**145.01**	**38**	*e*PKPbc	PKPbc		03 15 57.7	-0.2	
MKAR	**Makanchi Array**	**145.01**	**38**	PKPbc	PKPbc		03 15 58.0	0.0	
MKAR	**Makanchi Array**	**145.01**	**38**	PKPbc	PKPbc		03 15 58.0	0.0	
	comp=N,4.4nm,0.7s,baz=317,slow=3.0,SNR=25								
YSS	**Yuzh-Sakhalins**	**145.35**	**323**	*e*PKPbc	PKPbc		03 15 58.6	-0.5	
WMQ	**Urumqi**	**149.84**	**38**	*e*PKPbc	PKPdf		03 16 06.9	+0.5	
SONM	**Songino Array**	**153.69**	**10**	PKP	PKPdf		03 16 11.8	-0.1	
	comp=N,0.5nm,0.6s,baz=343,slow=1.5,SNR=4.7								
SONM				PKPbc	PKPbc		03 16 19.0	-0.9	
	comp=N,1.1nm,0.8s,baz=327,slow=0.7,SNR=5.2								
SONM				PKPab	PKPab		03 16 32.7	-0.5	
	comp=N,1.4nm,0.5s,baz=321,slow=2.4,SNR=7.4								
MJAR	**Matsushiro Arr**	**153.70**	**309**	PKP	PKPdf		03 16 12.3	-0.1	
	comp=N,0.5nm,0.5s,baz=7.1,slow=2.0,SNR=2.5								
MJAR				PKPbc	PKPbc		03 16 19.1	-1.2	
	comp=N,1.4nm,0.6s,baz=137,slow=1.3,SNR=4.7								
HHC	**Hu-ho-hao-te**	**161.16**	**3**	*e*PKP	PKPdf		03 16 20.8	-0.7	
HHC				pPKP	pPKPdf		03 17 03.4	-1.6	
HHC				PKPab	PKPab		03 17 06.7	+1.0	
HHC				sPKP			03 17 19.8		
HHC				PKS			03 19 59.2		
HHC				PP	PP		03 20 51.3	+3.1	
HHC				SKS	SKSdf		03 23 07.3	-3.9	
HHC				SKKS	SKKSac		03 27 21.1	-0.4	
HHC				SS	SS		03 40 47.9	-0.9	
HHC				AMB	AMB				
	comp=Z,53nm,5.7s								
BJI	**Beijing**	**161.79**	**352**	PKP	PKPdf		03 16 15.2	-7.0	
LZH	**Lanzhou**	**163.88**	**27**	*e*PKP	PKPdf		03 16 25.0	+0.6	
LZH				pPKP	pPKPdf		03 17 08.5	+0.6	
LZH				PKPab	PKPab		03 17 19.5	+1.7	
LZH				sPKP			03 17 23.5		
CD2	**Chengdu**	**167.92**	**41**	PKP	PKPdf		03 16 27.0	-0.8	
KMI	**Kunming**	**170.16**	**70**	PKP	PKPdf		03 16 26.2	-3.1	
GYA	**Guiyang**	**172.77**	**51**	*e*PKP	PKPdf		03 16 28.0	-2.6	
GYA				sPKP			03 17 32.8		
GYA				PKPab	PKPab		03 17 58.6	+1.1	
GYA				PKS			03 19 58.9		
GYA				PP	PP		03 21 50.0	+1.0	
GYA				AMB	AMB				
	comp=Z,80nm,8.0s								

*ISCJB **01** 03:21:36.8±0.5,6.85N±0.05×73.04W±0.05,h160km±5km, mb3.6/7, Error ellipse: s-maj=9.5km s-min=5.9km az=139.8*
*IDC **01** 03:21:38.0±1.6,6.66N×73.10W,h164km±43km,mb3.5/3, mb1 3.7/6,mb1mx3.4/20,mbtmp3.6/6,Error ellipse: s-maj=64.6km s-min=22.6km az=160.0*
*FUNV **01** 03:21:37.5,6.77N×73.14W,h165km,MW3.7*
*NEIC **01** 03:21:38.2±0.7,6.84N×73.09W,h154km±9km,mb3.6/5, Error ellipse: s-maj=13.2km s-min=8.3km az=131.0*
ISC 01 03:21:37.7±0.4,6.83N±0.05×73.03W±0.05,h154km±5km, n34,σ0.99/40,mb3.6/7,11D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
CAPV	**Capacho**	**1.25**	**35**	⇓*i*P	**Pn**		**03 22 06.4**	**+1.3**
CAPV				*e*S	**Sn**		**03 22 27.6**	**+1.5**
ROSC	**El Rosal**	**2.35**	**213**	P	**Pn**		**03 22 18.3**	**+1.1**
	19nm,0.3s,baz=98,slow=20,SNR=76							
ROSC				S	**Sn**		**03 22 46.0**	**-1.7**
	64nm,0.3s,baz=82,slow=21,SNR=26							
VIGV	**El Vigia**	**2.59**	**40**	⇓*i*P	**Pn**		**03 22 20.9**	**+0.7**
VIGV				*e*S	**Sn**		**03 22 53.0**	**0.0**
SOCV	**Socops**	**2.60**	**56**	⇓*i*P	**Pn**		**03 22 21.1**	**+0.9**
SOCV				*e*S	**Sn**		**03 22 53.2**	**+0.1**
SDV	**Santo Domingo**	**3.13**	**49**	*e*Sn	**Sn**		**03 23 05.6**	**+0.5**
ELOV	**Elorza**	**3.53**	**87**	*e*P	**Pn**		**03 22 32.8**	**+0.9**
VIRV	**Villa del Rosa**	**3.70**	**10**	⇓*i*P	**Pn**		**03 22 33.5**	**-0.7**
VIRV				*e*S	**Sn**		**03 23 15.9**	**-2.2**
QARV	**Quebrada Arrib**	**4.17**	**36**	⇓*i*P	**Pn**		**03 22 41.0**	**+0.7**
SANV	**Sanarito**	**4.36**	**52**	⇓*e*P	**Pn**		**03 22 42.7**	**-0.1**
CURV	**Curarigua**	**4.38**	**44**	⇓*i*P	**Pn**		**03 22 43.3**	**+0.2**
DABV	**Dabajuro**	**4.70**	**30**	*e*P	**Pn**		**03 22 47.7**	**+0.4**
TEPV	**Terepaima**	**4.91**	**50**	⇓*i*P	**Pn**		**03 22 50.2**	**+0.2**
SIQV	**Siquisique**	**4.96**	**40**	⇓*i*P	**Pn**		**03 22 50.5**	**-0.2**
BAUV	**El Baul**	**5.37**	**67**	⇓*i*P	**Pn**		**03 22 54.9**	**-1.3**
MAPV	**Macapo**	**5.42**	**56**	⇓*i*P	**Pn**		**03 22 56.6**	**-0.2**
IMOV	**Isla Los Monje**	**5.88**	**21**	*e*P	**Pn**		**03 23 02.1**	**-0.8**
JACV	**Jacura**	**5.93**	**44**	*e*P	**Pn**		**03 23 02.8**	**-0.7**
TURV	**Turiamo**	**6.27**	**55**	*e*P	**Pn**		**03 23 07.2**	**-0.9**
CAOV	**Caicara del Or**	**6.68**	**85**	*e*P	**Pn**		**03 23 12.1**	**-1.4**
MERV	**Las Mercedes**	**7.09**	**70**	*e*P	**Pn**		**03 23 18.7**	**-0.3**
BIRV	**Birongo**	**7.60**	**61**	*e*P	**Pn**		**03 23 24.4**	**-1.4**
CUPV	**Cœpira**	**7.85**	**65**	*e*P	**Pn**		**03 23 27.9**	**-1.3**
OTAV	**Otavalo**	**8.49**	**220**	*e*Pn	**Pn**		**03 23 37.4**	**-0.3**
	2.9nm,0.6s							
PCRV	**Puerto La Cruz**	**8.94**	**68**	P	**Pn**		**03 23 45.9**	**+2.2**
	1.0nm,0.3s,baz=38,slow=5.3,SNR=8.2							
PCRV				S	**Sn**		**03 25 23.4**	**+0.3**
	1.1nm,0.3s,baz=180,slow=20,SNR=3.8							
PCRV	**Puerto La Cruz**	**8.94**	**68**	*e*P	**Pn**		**03 23 43.3**	**-0.4**
MTDJ	**Mount Denham**	**12.15**	**339**	*e*Pn	**Pn**		**03 24 28.1**	**+2.4**
JTS	**JuntasAbangare**	**12.28**	**287**	P	**Pn**		**03 24 26.6**	**-1.0**
	0.4nm,0.3s,baz=62,slow=15,SNR=4.7							
LPAZ	**La Paz**	**23.48**	**168**	*e*P	**P**		**03 26 35.5**	**+1.9**
	1.8nm,1.0s,mb3.5							
TXAR	**Lajitas Array**	**36.52**	**312**	P	**P**		**03 28 29.1**	**+0.7**
	0.4nm,0.4s,mb3.4,baz=128,slow=8.9,SNR=10							
WMOK	**Wichita Mounta**	**36.52**	**323**	*e*P	**P**		**03 28 27.6**	**-0.8**
	1.4nm,0.8s,mb3.6							
MNTX	**Cornudas Mount**	**39.03**	**314**	*e*P	**P**		**03 28 49.7**	**+0.2**
	1.0nm,0.7s,mb3.5							
SDCO	**Great Sand Dun**	**42.59**	**321**	*e*P	**P**		**03 29 19.7**	**+1.1**
	0.7nm,0.7s,mb3.4							
ULM	**Lac du Bonnet**	**47.31**	**340**	P	**P**		**03 29 55.2**	**-0.3**
	1.6nm,0.4s,mb4.0,baz=172,slow=10,SNR=2.7							
YKA	**Yellowknife Ar**	**63.28**	**340**	P	**P**		**03 31 49.6**	**0.0**
	1.0nm,0.6s,mb3.8,baz=132,slow=6.5,SNR=17							

*ISCJB **01** 04:29:32.8±1.1,17.6S±0.3×178.7W±0.2,h569km±12km, mb4.0/8,Error ellipse: s-maj=57.7km s-min=15.7km az=152.9*
*IDC **01** 04:29:32.2±2.2,17.13S×178.95W,h531km±29km,mb3.5/7, mb1 3.7/8,mb1mx3.5/16,mbtmp3.5/8,Error ellipse: s-maj=47.2km s-min=14.1km az=149.0*
*NEIC **01** 04:29:33.5±1.1,17.53S×178.67W,h564km±12km,mb4.2/2, Error ellipse: s-maj=54.6km s-min=14.5km az=153.0*
ISC 01 04:29:33.7±1.1,17.5S±0.3×178.7W±0.2,h564km±12km, n14,σ1.9/22/14,mb4.0/8,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
MSVF	**Nonsavu**	**3.12**	**266**	*e*Pn	**P**		**04 30 52.1**	**+1.5**
AFI	**Afiamalu**	**7.56**	**63**	P	**P**		**04 31 25.6**	**-2.1**
AFI	**Afiamalu**	**7.56**	**63**	P	**P**		**04 31 25.6**	**-2.1**
	6.6nm,0.3s,baz=275,slow=19,SNR=5.7							
CTA	**Charters Tower**	**33.25**	**260**	P	**P**		**04 35 25.1**	**-0.1**
	3.3nm,0.6s,mb4.0,baz=76,slow=11,SNR=6.5							
CTAO	**Charters Tower**	**33.25**	**260**	*e*P	**P**		**04 35 24.6**	**-0.5**
	1.9nm,0.5s,mb3.9							
COEN	**Coen**	**36.84**	**270**	*e*P	**P**		**04 35 55.8**	**+0.7**
STKA	**Stephens Creek**	**38.58**	**241**	P	**P**		**04 36 08.9**	**-0.2**
	6.9nm,0.5s,mb4.5,baz=89,slow=9.2,SNR=15							
ASAR	**Alice Springs**	**44.64**	**254**	P	**P**		**04 36 56.6**	**-0.3**
	26nm,0.5s,mb5.0,baz=86,slow=8.2,SNR=384							
FORT	**Forrest**	**49.93**	**244**	*e*P	**P**		**04 37 35.1**	**-1.4**
	4.7nm,0.3s,mb4.4							
PETK	**Petropavlovsk-**	**73.25**	**345**	P	**P**		**04 40 06.1**	**-1.6**
	0.6nm,0.3s,mb3.5,baz=129,slow=3.9,SNR=2.9							
NVAR	**Mina Array Bea**	**79.33**	**44**	P	**P**		**04 40 43.0**	**+1.6**
	1.1nm,0.7s,mb3.3,baz=224,slow=9.2,SNR=8.6							
ILAR	**Eielson Array**	**85.58**	**13**	P	**P**		**04 41 12.4**	**+0.2**
	0.5nm,0.4s,mb3.5,baz=223,slow=5.2,SNR=17							
TXAR	**Lajitas Array**	**86.02**	**58**	P	**P**		**04 41 16.9**	**+1.7**
TXAR	**Lajitas Array**	**86.02**	**58**	P	**P**		**04 41 16.9**	**+1.7**
	1.1nm,0.7s,mb3.6,baz=219,slow=6.2,SNR=17							

*NNC **01** 05:00:35.2±1.7,49.79N×81.05E,h0km,mb3.0,mpv2.7, Error ellipse: s-maj=35.8km s-min=5.2km az=45.0*
*ISCJB **01** 05:00:37.4±0.9,49.80N±0.09×81.0E±0.1,h10km,Error ellipse: s-maj=15.9km s-min=7.5km az=43.4*
*IDC **01** 05:00:39.1±1.3,49.68N×81.54E,h0km,mb1 3.0/3, mb1mx2.9/25,mbtmp3.0/3,ML2.9/3,Error ellipse: s-maj=24.0km s-min=11.9km az=71.0*
ISC 01 05:00:38.5±0.9,49.77N±0.09×80.9E±0.1,h10km,n6, σ0.85/9,3C-3D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
KURK	**Kurchatov**	**1.73**	**304**	⇑P	**Pn**		**05 01 07.8**	**-0.8**
	8.6nm,0.4s							
KURK				⇓S	**Sn**		**05 01 31.8**	**+1.1**
	40nm,0.6s							
KURBB	**Kurchatov Arra**	**1.74**	**300**	⇑P	**Pn**		**05 01 08.0**	**-0.6**
	1.1nm,0.3s,baz=117,slow=19							
KURBB				⇓S	**Sn**		**05 01 32.0**	**+1.2**
	8.3nm,0.5s							
MK31	**Makanchi Array**	**3.12**	**162**	⇑Pn	**Pn**		**05 01 27.9**	**+0.2**
	0.8nm,0.3s,baz=353,slow=13,SNR=60							
MK31				⇓Lg			05 02 14.6	
	2.4nm,0.3s,baz=351,slow=28,SNR=11							
MKAR	**Makanchi Array**	**3.12**	**162**	Pn	**Pn**		**05 01 27.8**	**+0.1**
	0.7nm,0.3s,baz=346,slow=13,SNR=42							
MKAR				Lg			05 02 13.8	
	3.4nm,0.3s,baz=347,slow=26,SNR=13							
ZALV	**Zalesovo Beam**	**4.84**	**29**	Pn	**Pn**		**05 01 51.5**	**+0.1**
	0.6nm,0.3s,baz=214,slow=14,SNR=5.7							
ZALV				Lg			05 03 09.4	
	0.6nm,0.3s,baz=205,slow=24,SNR=3.8							
BVAR	**Borovoye Array**	**7.33**	**300**	Pn	**Pn**		**05 02 32.4**	**+7.0**
	0.3nm,0.3s,baz=115,slow=16,SNR=2.5							
BVAR				Sn	**Sn**		**05 03 47.1**	**-1.4**
	0.9nm,0.3s,baz=116,slow=22,SNR=6.4							

IDC 01 05:01:20.8±8.0,7.16S×126.76E,h454km±119km,mb3.0/4, mb1 2.9/6,mb1mx2.8/18,mbtmp2.9/6,Error ellipse: s-maj=108.8km s-min=56.1km az=55.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
FITZ	**Fitzroy Crossi**	**10.93**	**186**	P	P		05 03 47.8	-0.2
	0.1nm,0.3s,baz=359,slow=9.6,SNR=8.9							
ASAR	**Alice Springs**	**17.79**	**158**	P	P		05 05 01.3	+0.1
	0.3nm,0.3s,baz=332,slow=7.5,SNR=8.7							
SONM	**Songino Array**	**57.63**	**344**	P	P		05 10 26.2	0.0
	0.4nm,0.5s,baz=165,slow=7.1,SNR=4.3							
MKAR	**Makanchi Array**	**66.63**	**328**	P	P		05 11 25.1	+0.2
	0.6nm,0.8s,baz=126,slow=6.2,SNR=5.2							
ZALV	**Zalesovo Beam**	**70.34**	**335**	P	P		05 11 46.7	-0.6
	1.2nm,0.6s,baz=138,slow=5.4,SNR=4.3							
BVAR	**Borovoye Array**	**76.51**	**329**	P	P		05 12 23.5	+0.7
	0.4nm,0.4s,baz=117,slow=5.0,SNR=3.0							

*NEIC **01** 05:05:01.6,15.21N×60.42W,h72km,MD3.6(TRN),After TRN.*
TRN 01 05:05:00.7,15.21N×60.32W,h27km,MD3.6,2C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
MVM	**Montagne Vaucl**	**0.85**	**221**	*e*P	Pb		05 05 17.6	+0.7
MVM				*e*S	Sb		05 05 30.2	+2.2
DLPL	**La Plaine**	**0.90**	**278**	*e*P	Pn		05 05 19.5	+1.9
DLPL				*e*S	Sb		05 05 32.3	+2.9
FDF	**Fort de France**	**0.93**	**240**	⇓*e*P	Pn		05 05 18.9	+0.9
FDF				⇓*e*S	Sb		05 05 32.2	+2.1
BIM	**Bigot**	**1.00**	**227**	*e*P	Pn		05 05 19.9	+0.9
BIM				*e*S	Sb		05 05 34.1	+2.0
MGG	**Marie-Galante**	**1.19**	**307**	*e*P	Pn		05 05 22.1	+0.5
DEG	**La Desirade**	**1.31**	**327**	*e*P	Pn		05 05 22.8	-0.4
DEG				*e*S	Sn		05 05 39.1	-0.7
SLW	**Petit Monier**	**1.32**	**207**	*e*P	Pn		05 05 24.8	+1.4
SLW				*e*S	Sn		05 05 41.8	+1.6
SLW	**Petit Monier**	**1.32**	**207**	⇑*e*P	Pn		05 05 23.8	+0.4
SLW	**Petit Monier**	**1.32**	**207**	*e*P	Pn		05 05 24.8	+1.4
SLW				⇑*e*S	Sn		05 05 41.0	+0.8
SLW				*e*S	Sn		05 05 41.8	+1.6
TBG	**Guadaloupe-3**	**1.43**	**297**	*e*P	Pn		05 05 25.7	+0.9
SLPE	**Piton Saint Es**	**1.50**	**206**	*e*P	Pn		05 05 27.5	+1.6
SLPE				*e*S	Sn		05 05 46.9	+2.2
SLPE	**Piton Saint Es**	**1.50**	**206**	*e*P	Pn		05 05 27.1	+1.2
SLPE				*e*S	Sn		05 05 46.9	+2.2
PHG	**Guadaloupe-2**	**1.50**	**302**	*e*P	Pn		05 05 27.3	+1.4
BCG	**Bois Riant Cap**	**1.52**	**305**	*e*P	Pn		05 05 27.3	+1.1
SLB	**Belfond**	**1.54**	**207**	*e*P	Pn		05 05 28.0	+1.6
SLB				*i*S	Sn		05 05 47.5	+2.0
SLB	**Belfond**	**1.54**	**207**	*e*P	Pn		05 05 28.0	+1.6
SLB				*e*S	Sn		05 05 48.4	+2.9
SCG	**Saint Claude**	**1.54**	**302**	*e*P	Pn		05 05 28.0	+1.6
SLDE	**Delcer**	**1.57**	**207**	*e*P	Pn		05 05 28.5	+1.8
SLDE				*e*S	Sn		05 05 47.7	+1.5
SLDE	**Delcer**	**1.57**	**207**	*e*S	Sn		05 05 47.7	+1.5
MCLT	**Moule a Chique**	**1.60**	**202**	*e*P	Pn		05 05 29.4	+2.1
MCLT				*e*S	Sn		05 05 49.1	+2.0
MCLT	**Moule a Chique**	**1.60**	**202**	*e*P	Pn		05 05 29.4	+2.1
MCLT				*e*S	Sn		05 05 49.1	+2.0
SEG	**Port Louis**	**1.65**	**316**	*e*P	Pn		05 05 28.8	+0.9
SSV	**Crater Summit**	**2.05**	**204**	*e*P	Pn		05 05 34.0	+0.6
SSV				*e*S	Sn		05 05 58.8	+0.6
SSV	**Crater Summit**	**2.05**	**204**	*e*P	Pn		05 05 34.0	+0.6
SSV				*e*S	Sn		05 05 58.8	+0.6
SVB	**Belmont**	**2.12**	**205**	*e*P	Pn		05 05 35.6	+1.1
SVB				*e*S	Sn		05 06 01.6	+1.7
SVB	**Belmont**	**2.12**	**205**	*e*P	Pn		05 05 35.6	+1.1
SVB				*e*S	Sn		05 06 01.6	+1.7

*SGS **01** 05:38:03.6,30.56N×50.24E,h14km*
*ISCJB **01** 05:38:04.0±1.7,30.48N±0.05×50.24E±0.05,h3km±13km, Error ellipse: s-maj=9.3km s-min=5.8km az=136.5*
*KISR **01** 05:38:06.0±1.0,30.55N×49.93E,h34km±72km,ML3.0*
*TEH **01** 05:38:07.7,30.43N×50.26E,h22km*
ISC 01 05:38:05.7±1.8,30.45N±0.05×50.2E±0.05,h6km±14km, n22,σ0.66/31,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
UMR	**Umm Al-Rimmam**	**2.36**	**248**	*e*P	**Pn**		**05 38 45.0**	**0.0**
IGAR	**Gharneh**	**2.48**	**38**	*e*Pn	**Pn**		**05 38 47.3**	**+0.6**
IGAR				*e*			05 38 48.3	
	comp=Z,2μm,0.1s							
IGAR				*e*Sg	**Sg**		**05 39 25.5**	**0.0**
IPAR	**Pars**	**2.51**	**103**	*e*Pn	**Pn**		**05 38 47.3**	**+0.2**
IPAR				*e*Sg	**Sg**		**05 39 25.6**	**-0.9**
IPAR				*e*			05 39 30.7	
	comp=Z,4μm,0.4s							
KBD	**Kabd**	**2.55**	**241**	*e*P	**Pn**		**05 38 47.8**	**+0.2**
KBD				*e*S	**Sn**		**05 39 20.1**	**+1.2**
KBD				AML	AML		05 39 23.0	
	comp=Z,58nm,0.3s							
MIB	**Mutribah**	**2.59**	**256**	*e*P	**Pn**		**05 38 48.1**	**0.0**
MIB				*e*S	**Sn**		**05 39 18.9**	**-1.1**
MIB				AML	AML		05 39 23.5	
	comp=Z,54nm,0.6s							
RDF	**Al-Radifah**	**2.79**	**238**	*e*P	**Pn**		**05 38 51.2**	**+0.3**
RDF				*e*S	**Sn**		**05 39 24.8**	**-0.1**
RDF				AML	AML		05 39 29.4	
	comp=Z,93nm,0.5s							
NAY	**Al-Naaiem**	**2.86**	**246**	*e*P	**Pn**		**05 38 52.0**	**+0.1**
NAY				*e*S	**Sn**		**05 39 26.3**	**-0.4**
NAY				AML	AML		05 39 29.1	
	comp=Z,28nm,0.3s							
IZEF	**Zefreh**	**3.02**	**36**	*e*Pn	**Pn**		**05 38 54.5**	**+0.4**
IZEF				*e*			05 38 55.6	
	comp=Z,2μm,0.1s							
IKLH	**Kolahrood**	**3.08**	**21**	*e*Pn	**Pn**		**05 38 55.1**	**+0.2**
IKLH				*e*			05 38 56.5	
	comp=Z,2μm,0.1s							
ISAD	**Sadrabad**	**3.30**	**63**	*e*Pn	**Pn**		**05 38 58.4**	**+0.5**
ISAD				*e*			05 39 53.1	
	comp=Z,3μm,0.3s							
IMEH	**Mehriz**	**3.88**	**75**	*e*	**Pn**		**05 39 07.5**	**+1.6**
	comp=Z,1μm,0.1s							
IMEH				*e*Pn	**Pn**		**05 39 05.6**	**-0.3**
ICHK	**Chekchek**	**3.99**	**62**	*e*	**Pb**		**05 39 18.9**	**+2.4**
	comp=Z,520nm,0.1s							
ICHK				*e*Pn	**Pn**		**05 39 07.0**	**-0.4**
IVRN	**Varamin**	**4.70**	**15**	*e*Pn	**Pn**		**05 39 17.0**	**-0.2**
IVRN				*e*Pn	**Pn**		**05 39 17.3**	**+0.1**
IVRN				*e*			05 39 18.9	
	comp=Z,380nm,0.0s							
IBAF	**Bafgh**	**4.72**	**75**	*e*Pn	**Pn**		**05 39 16.5**	**-0.9**
IBAF				*e*			05 39 17.2	
	comp=Z,379nm,0.1s							
IRAZ	**Razeghan**	**4.94**	**357**	*e*Pn	**Pn**		**05 39 20.8**	**+0.3**
IRAZ				*e*			05 40 35.1	
	comp=Z,220nm,0.3s							
ILIN	**Lien**	**5.24**	**329**	*e*Pn	**Pn**		**05 39 24.5**	**-0.1**
ILIN				*e*			05 40 29.3	
	comp=Z,346nm,0.2s							
IDMV	**Damavand**	**5.33**	**16**	*e*Pn	**Pn**		**05 39 25.7**	**-0.1**
IDMV				*e*			05 39 27.4	
	comp=Z,315nm,0.1s							
ILAS	**Lasjerd**	**5.42**	**24**	*e*Pn	**Pn**		**05 39 26.8**	**-0.3**
ILAS				*e*			05 39 29.9	
	comp=Z,170nm,0.1s							
IFIR	**Firoozkooh**	**5.59**	**22**	*e*Pn	**Pn**		**05 39 29.2**	**-0.2**
IFIR				*e*			05 39 30.5	
	comp=Z,416nm,0.1s							
IANJ	**Anjilo**	**5.88**	**31**	*e*Pn	**Pn**		**05 39 32.6**	**-0.8**
IANJ				*e*			05 39 34.9	
	comp=Z,582nm,0.1s							
ISHM	**Shahmirzad**	**5.92**	**25**	*e*Pn	**Pn**		**05 39 33.3**	**-0.7**
ISHM				*e*			05 39 34.9	
	comp=Z,311nm,0.1s							
IGLO	**Ghaloghah**	**6.74**	**26**	*e*Pn	**Pn**		**05 39 44.8**	**-0.4**

*GUC **01** 06:18:31.9±1.1,22.38S×66.99W,h210km,ML6.2, mb4.9(NEIC)*
*LDG **01** 06:18:36.9,22.05S×66.04W,h180km*
*MOS **01** 06:18:36.8±1.0,22.31S×66.72W,h204km,mb5.1/52, Error ellipse: s-maj=9.5km s-min=6.0km az=100.3*
*ISCJB **01** 06:18:37.8±0.2,22.32S±0.04×66.65W±0.03,h212km, mb4.9/202,Error ellipse: s-maj=5.7km s-min=3.4km az=21.9*
*NEIC **01** 06:18:38.9±0.2,22.36S×66.63W,mb5.0/175,Error ellipse: s-maj=5.7km s-min=3.7km az=33.0*
*IDC **01** 06:18:38.4±0.4,22.38S×66.70W,h208km±3km,mb4.4/13, mb1 4.5/18,mb1mx4.5/19,mbtmp4.4/18,Error ellipse: s-maj=14.6km s-min=8.3km az=62.0*
*BJI **01** 06:18:39.9,22.40S×66.60W,h212km,mB5.1/14*
*GCMT **01** 06:18:42.3±0.2,22.49S×66.92W,h217km±1km,MW5.3, Moment Tensor Solution. s66,c93; s85,c134; Moment tensor: Scale 10^17^Nm;

comp=Z,42nm,1.0s,mb5.0
USHA Ushuaia 32.41 182 P **P 06 24 48.2 -0.6**
comp=Z,4.7nm,0.5s,mb4.3,baz=346,slow=11,SNR=8.2
USHA S **S 06 29 49.4 +2.6**
comp=Z,12nm,1.1s,baz=55,slow=11,SNR=2.2
TPP Pointe-a-Pierr 32.91 9 *eP* **P 06 24 56.5 +3.0**
TPP Pointe-a-Pierr 32.91 9 *eP* **P 06 24 56.5 +3.0**
TBH Brigand Hill 33.13 10 *eP* **P 06 24 56.9 +1.4**
TBH Brigand Hill 33.13 10 *eP* **P 06 24 56.9 +1.4**
TCE Chacachacare 33.24 9 *eP* **P 06 24 57.4 +1.0**
TCE Chacachacare 33.24 9 *eP* **P 06 24 57.4 +1.0**
TRN Trinidad (W) 33.24 9 *eP* **P 06 24 57.0 +0.6**
TRN Trinidad (W) 33.24 9 *eP* **P 06 24 57.0 +0.6**
BOT Bacolet 33.86 10 *eP* **P 06 25 02.7 +0.9**
BOT Bacolet 33.86 10 *eP* **P 06 25 02.7 +0.9**
TPR Prospect 33.87 10 *eP* **P 06 25 02.6 +0.8**
TPR Prospect 33.87 10 *eP* **P 06 25 02.6 +0.8**
RCBR Riachuelo 33.92 66 *eP* **P 06 25 02.1 -0.2**
comp=Z,214nm,1.4s,mb5.5
RCBR *epP* pP 06 25 46.4 +0.2
BCIP Isla Barro Col 33.95 336 *eP* **P 06 25 02.4 -0.1**
comp=Z,27nm,0.7s,mb4.9
TOSP Speyside 34.02 11 *eP* **P 06 25 02.6 -0.5**
GRGR Grenville 34.66 9 *eP* **P 06 25 07.9 -0.8**
comp=Z,894nm,1.0s,mb6.2
GRW Mount Saint Ca 34.69 9 *eP* **P 06 25 09.3 +0.4**
GRW Mount Saint Ca 34.69 9 *eP* **P 06 25 09.3 +0.4**
SVB Belmont 35.84 9 *eP* **P 06 25 18.2 -0.4**
SVB Belmont 35.84 9 *eP* **P 06 25 18.2 -0.4**
BIM Bigot 37.09 9 *eP* **P 06 25 28.5 -0.8**
JTS JuntasAbangare 37.14 329 *eP* **P 06 25 30.6 +0.9**
comp=Z,31nm,0.7s,mb5.0
MVM Montagne Vaucl 37.15 9 *eP* **P 06 25 29.0 -0.7**
FDF Fort de France 37.29 9 *eP* **P 06 25 29.4 -1.6**
ICM Isla Caja Muer 40.05 0 *eP* **P 06 25 55.4 +1.6**
CRPR Cabo Rojo, PR 40.16 359 *eP* **P 06 25 53.1 -1.6**
comp=Z,21nm,0.7s,mb4.7
OBIP Obispado Ponce 40.20 0 *eP* **P 06 25 52.4 -2.6**
comp=Z,95nm,1.1s,mb5.1
MTP Monte Pirata 40.27 2 *eP* **P 06 25 52.2 -3.4**
comp=Z,9.9nm,0.5s,mb4.5
SJG San Juan 40.27 1 *eP* **P 06 25 52.9 -2.6**
comp=Z,230nm,1.7s,mb5.3
SJG San Juan 40.27 1 *eP* **P 06 25 52.9 -2.7**
SJG pmax pmax
comp=Z,230nm,1.7s
MPR Mayaguez 40.37 359 *eP* **P 06 25 53.8 -2.6**
CBYP Canovanas 40.43 1 *eP* **P 06 25 54.7 -2.2**
comp=Z,36nm,0.9s,mb4.8
LRS Lares 40.45 360 *eP* **P 06 25 54.5 -2.5**
TGUH Tegucigalpa,Un 41.51 329 *eP* **P 06 26 05.6 -0.2**
comp=Z,71nm,1.0s,mb5.0
PMSA Palmer Station 42.39 178 P **P 06 26 11.8 -0.4**
comp=Z,15nm,0.7s,mb4.5,baz=306,slow=15,SNR=2.8
TEIG Tepich 47.36 332 *eP* **P 06 26 50.2 -1.7**
comp=Z,49nm,0.9s,mb4.8
TEIG *epP* pP 06 27 38.7 +0.3
BRAL Brewton 56.62 339 *eP* **P 06 28 00.5 +0.5**
comp=Z,65nm,0.8s,mb5.3
BRAL *epP* pP 06 28 49.4 +1.3
NHSC New Hope 56.70 346 *eP* **P 06 28 00.9 +0.4**
comp=Z,92nm,1.1s,mb5.3
GOGA Godfrey 57.78 343 *eP* **P 06 28 07.2 -0.9**
comp=Z,18nm,0.9s,mb4.7
GOGA Godfrey 57.78 343 *eP* **P 06 28 07.2 -0.9**
GOGA pmax pmax
comp=Z,18nm,0.9s,mb4.7
JSC Jenkinsville 58.07 346 *eP* **P 06 28 09.3 -0.8**
LRAL Lakeview Retre 58.46 340 *eP* **P 06 28 11.2 -1.6**
comp=Z,17nm,1.0s,mb4.6
LRAL *epP* pP 06 29 00.6 -0.7
VNA1 Neumayer--Stat 58.72 161 *eP* **P 06 28 11.3 -2.8**
HKT Hockley 59.16 330 *eP* **P 06 28 16.4 -1.2**
comp=Z,12nm,0.9s,mb4.5
HKT Hockley 59.16 330 *eP* **P 06 28 16.5 -1.1**
HKT pmax pmax
comp=Z,12nm,0.9s,mb4.5
CPCT Cooper Cave 59.99 343 *eP* **P 06 28 22.6 -0.6**
TKL Tuckaleechee C 59.99 344 *eP* **P 06 28 21.9 -1.3**
TKL *epP* pP 06 29 09.0 -2.9
SWET Sewanee 60.16 342 *eP* **P 06 28 23.1 -1.2**
SWET *epP* pP 06 29 11.6 -1.6
NATX Nacogdoches 60.19 333 *eP* **P 06 28 24.9 +0.3**
comp=Z,132nm,1.3s,mb5.4
BLA Blacksburg 60.71 347 *eP* **P 06 28 27.7 -0.3**
comp=Z,30nm,1.0s,mb4.9
BLA Blacksburg 60.71 347 *eP* **P 06 28 27.7 -0.3**
BLA pmax pmax
comp=Z,30nm,1.0s,mb4.9
JSRW J. Sargeant Re 60.71 350 *eP* **P 06 28 29.1 +1.1**
ELN Prospectdale 60.79 347 *eP* **P 06 28 28.4 -0.2**
JCT Junction City 61.49 327 *eP* **P 06 28 32.2 -1.2**
comp=Z,36nm,0.8s,mb5.1
JCT Junction City 61.49 327 *eP* **P 06 28 32.2 -1.2**
JCT pmax pmax
comp=Z,36nm,0.8s,mb5.0
WVT Waverly 61.58 341 *eP* **P 06 28 31.4 -2.5**
comp=Z,73nm,1.2s,mb5.2
WVT *epP* pP 06 29 19.7 -3.2
WVT Waverly 61.58 341 *eP* **P 06 28 31.4 -2.5**
WVT *e*PP* pP 06 29 19.7 -3.2
WVT pmax pmax
comp=Z,73nm,1.2s,mb5.2
UALR University of 61.90 336 *eP* **P 06 28 35.0 -1.0**
comp=Z,18nm,0.9s,mb4.7
UALR *epP* pP 06 29 23.1 -1.9
UTMT University of 62.10 340 *eP* **P 06 28 36.3 -1.0**
comp=Z,134nm,1.1s,mb5.5
UTMT *epP* pP 06 29 23.4 -3.0
GNAR Gosnell 62.14 339 *eP* **P 06 28 37.4 -0.2**
comp=Z,576nm,0.6s
GNAR *epP* pP 06 29 26.1 -0.6
MIAR Mount Ida 62.16 335 *eP* **P 06 28 36.6 -1.2**
comp=Z,21nm,0.6s,mb5.0
MIAR *epP* pP 06 29 26.6 -0.3
MIAR Mount Ida 62.16 335 *eP* **P 06 28 36.6 -1.2**
MIAR *e*PP* pP 06 29 26.6 -0.3
MIAR pmax pmax
comp=Z,21nm,0.6s,mb4.9
GLAT Glass 62.17 339 *eP* **P 06 28 37.2 -0.6**
GLAT *epP* pP 06 29 25.2 -1.6
628A Black Gap, Mar 62.30 324 ⇓P **P 06 28 38.4 -0.4**
baz=62,SNR=42
628A ⇑S **S 06 36 49.6 +1.8**
baz=62
627A Terlingua Ranc 62.54 324 ⇑P **P 06 28 39.6 -0.9**
baz=63,SNR=24
627A ⇑S **S 06 36 51.8 +0.9**
baz=63
TXAR Lajitas Array 62.60 324 P **P 06 28 39.7 -1.1**
comp=Z,3.0nm,0.6s,mb4.1,baz=147,slow=8.5,SNR=50
TXAR pP pP 06 29 27.8 -2.2
comp=Z,2.5nm,0.8s,baz=148,slow=9.8,SNR=3.2
PARMO Parma 62.68 339 *eP* **P 06 28 40.5 -0.8**
PARMO *epP* pP 06 29 29.6 -0.7
MVL Millersville 62.74 352 *eP* **P 06 28 41.3 -0.2**
comp=Z,15nm,1.0s,mb4.6
MVL *epP* pP 06 29 30.2 -0.5
528A Cox Ranch, San 62.77 325 ⇓P **P 06 28 40.8 -1.2**
baz=63,SNR=18
528A ⇓S **S 06 36 54.8 +1.0**
baz=63
MCWV Mont Chateau 62.97 349 *eP* **P 06 28 43.2 +0.2**
comp=Z,25nm,0.8s,mb4.9
MCWV *epP* pP 06 29 30.5 -1.7
626A Big Bend Ranch 63.03 323 ⇑P **P 06 28 43.3 -0.4**
baz=63,SNR=57
626A ⇑S **S 06 36 58.3 +1.4**
baz=63
WCI Wyandotte Cave 63.08 343 *eP* **P 06 28 42.0 -1.8**
comp=Z,19nm,0.6s,mb4.9
WCI *epP* pP 06 29 30.5 -2.5
WCI Wyandotte Cave 63.08 343 *eP* **P 06 28 42.0 -1.8**
WCI *e*PP* pP 06 29 30.5 -2.5
WCI pmax pmax
comp=Z,19nm,0.6s,mb4.9
428A Kincaid Ranch, 63.16 325 ⇑P **P 06 28 43.7 -0.8**
baz=63,SNR=12
527A Woodward Ranch 63.20 324 ⇓P **P 06 28 43.8 -1.0**
baz=63,SNR=30
526A Mary Lane Ranc 63.40 324 ⇓P **P 06 28 45.5 -0.6**
baz=64,SNR=40
SIUC Southern Illin 63.47 340 *eP* **P 06 28 44.4 -2.0**
comp=Z,14nm,0.7s,mb4.7
SIUC *epP* pP 06 29 33.4 -2.3

427A Hayter Ranch, 63.64 325 ⇓P **P 06 28 46.6 -1.0**
baz=64,SNR=17
328A Wristen Ranch, 63.75 326 ⇓P **P 06 28 47.3 -1.0**
baz=64,SNR=38
426A McDonald Obser 63.84 324 ⇑P **P 06 28 48.3 -0.7**
baz=64,SNR=34
BLO Bloomington 64.03 343 *eP* **P 06 28 48.2 -1.8**
comp=Z,30nm,0.6s,mb5.1
BLO *epP* pP 06 29 37.6 -1.7
BLO Bloomington 64.03 343 *eP* **P 06 28 48.2 -1.8**
BLO *e*PP* pP 06 29 37.6 -1.7
BLO pmax pmax
comp=Z,30nm,0.6s,mb5.1
OLIL Olney 64.07 341 *eP* **P 06 28 47.8 -2.5**
comp=Z,44nm,1.4s,mb4.9
OLIL *epP* pP 06 29 36.5 -3.1
FVM French Village 64.10 339 *eP* **P 06 28 48.8 -1.7**
comp=Z,71nm,1.1s,mb5.2
FVM *epP* pP 06 29 38.4 -1.5
FVM French Village 64.10 339 *eP* **P 06 28 48.8 -1.7**
FVM *e*PP* pP 06 29 38.4 -1.5
FVM pmax pmax
comp=Z,71nm,1.1s,mb5.2
ACSO Alum Creek Sta 64.15 346 *eP* **P 06 28 49.8 -1.0**
comp=Z,37nm,0.8s,mb5.1
ACSO *epP* pP 06 29 38.1 -2.0
326A Caldwell Ranch 64.31 325 ⇓P **P 06 28 51.3 -0.8**
baz=64,SNR=25
CCM Cathedral Cave 64.44 339 *eP* **P 06 28 51.0 -1.6**
comp=Z,41nm,0.7s,mb5.2
CCM *epP* pP 06 29 40.5 -1.5
CCM Cathedral Cave 64.44 339 *eP* **P 06 28 51.0 -1.7**
CCM *e*PP* pP 06 29 40.6 -1.5
CCM pmax pmax
comp=Z,41nm,0.7s,mb5.2
425A Indio Mountain 64.45 324 ⇓P **P 06 28 52.0 -0.8**
baz=65,SNR=42
227A Bennet, Jal 64.50 326 ⇓P **P 06 28 52.5 -0.7**
baz=65,SNR=16
WMOK Wichita Mounta 64.52 331 *eP* **P 06 28 51.5 -1.8**
comp=Z,8.5nm,1.0s,mb4.3
WMOK Wichita Mounta 64.52 331 *eP* **P 06 28 51.5 -1.8**
WMOK pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
BINY Binghamton 64.86 352 *eP* **P 06 28 55.2 -0.1**
comp=Z,34nm,1.0s,mb4.9
BINY *epP* pP 06 29 43.7 -1.1
325A Bean Ranch, Si 64.89 324 ⇓P **P 06 28 54.8 -0.9**
baz=65,SNR=108
ALLY Alegheny Colle 64.95 349 *eP* **P 06 28 55.7 -0.2**
comp=Z,38nm,0.8s,mb5.1
ALLY *epP* pP 06 29 44.9 -0.5
226A Malaga, Loving 64.96 325 ⇑P **P 06 28 55.8 -0.4**
baz=65,SNR=26
CLNB Carlsbad 65.00 326 *eP* **P 06 28 56.1 -0.3**
comp=Z,2.9nm,0.5s,mb4.2
127A Arkansas Junct 65.06 326 ⇓P **P 06 28 55.4 -1.3**
baz=65,SNR=9.2
TRY Troy 65.13 354 *eP* **P 06 28 57.6 +0.5**
TRY *epP* pP 06 29 46.1 -0.5
MAIT Maitri 65.20 159 *eP* pP 06 29 44.3 -2.3
GDL2 Guadalupe Moun 65.21 325 *eP* **P 06 28 57.3 -0.5**
324A Moseley Ranch, 65.22 324 ⇓P **P 06 28 56.2 -1.7**
baz=65,SNR=31
NVL N'lazarevskaya 65.23 159 ⇓/P **P 06 28 56.8 -0.6**
NVL pmax pmax
comp=Z,40nm,1.1s,mb5.0
MNTX Cornudas Mount 65.36 324 *eP* **P 06 28 57.0 -1.8**
comp=Z,22nm,1.0s,mb4.7
126A Clayton Basin, 65.37 326 ⇑P **P 06 28 57.9 -0.9**
baz=66,SNR=18
ERPA Erie 65.38 349 *eP* **P 06 28 58.4 -0.2**
comp=Z,60nm,0.6s,mb5.4
ERPA *epP* pP 06 29 46.2 -2.0
225A Deer Hill, Car 65.38 325 ⇑P **P 06 28 58.0 -0.9**
baz=66,SNR=31
Z27A Tatum 65.49 327 ⇓P **P 06 28 58.2 -1.3**
baz=66,SNR=41
125A Gardner Draw, 65.72 325 ⇑P **P 06 28 59.6 -1.4**
baz=66,SNR=25
224A Cornudas Mount 65.73 324 ⇑P **P 06 28 59.8 -1.3**
baz=66,SNR=45
ACCN Adirondack Com 65.78 354 *eP* **P 06 29 01.4 +0.3**
comp=Z,28nm,1.6s,mb4.7
MSTX Muleshoe 65.79 327 ⇑P **P 06 29 00.3 -1.1**
baz=66,SNR=49
Z26A Caprock 65.84 326 ⇓P **P 06 29 00.8 -1.0**
baz=66
Y27A Causey 65.91 327 ⇓P **P 06 29 00.9 -1.3**
baz=66,SNR=16
HNH Hanover 65.99 355 *eP* **P 06 29 02.4 -0.1**
AMTX Amino 65.99 329 *eP* **P 06 29 01.4 -1.3**
comp=Z,35nm,1.1s,mb4.9
HDIL Hopedale 66.10 341 *eP* **P 06 29 01.0 -2.3**
comp=Z,23nm,0.8s,mb4.8
HDIL *epP* pP 06 29 51.5 -1.4
223A Chaparral, Ant 66.17 324 ⇑P **P 06 29 03.2 -0.8**
baz=66
124A Stringfield Ra 66.17 325 ⇓P **P 06 29 03.2 -0.8**
baz=66,SNR=39
Z25A Roswell 66.23 326 ⇑P **P 06 29 03.0 -1.3**
baz=66,SNR=40
Y26A Elida 66.28 327 ⇑P **P 06 29 03.5 -1.0**
baz=66,SNR=7.2
MDV Middlebury 66.35 355 *eP* **P 06 29 04.9 +0.2**
X27A F and S Farms, 66.49 328 ⇓P **P 06 29 04.7 -1.2**
baz=67,SNR=6.2
LBNH Lisbon 66.50 356 *eP* **P 06 29 05.8 +0.1**
LBNH *epP* pP 06 29 53.7 -1.7
LIC Lamto 66.61 72 *eP* **P 06 29 05.6 -1.5**
comp=Z,30nm,0.8s,mb5.0
LIC Lamto 66.61 72 *eP* **P 06 29 05.8 -1.3**
comp=Z,19nm,0.8s,mb4.5
LIC *eMLR* MLR
comp=Z,203nm,22.2s
LIC Lamto 66.61 72 *eP* **P 06 29 05.8 -1.3**
comp=Z,9.6nm,0.8s,mb4.5
LIC LR LR
comp=Z,100nm,22.3s
Z24A Sheeppen Canyo 66.61 325 ⇓P **P 06 29 06.0 -0.7**
baz=67,SNR=45
222A Williams Famil 66.62 323 ⇑P **P 06 29 06.6 -0.1**
baz=67
Y25A Mesa, Roswell 66.72 326 ⇓P **P 06 29 06.1 -1.2**
baz=67,SNR=33
X26A CR and CF Fran 66.77 327 ⇑P **P 06 29 06.9 -0.7**
baz=67,SNR=16
W27A Bowe Ranch, En 66.80 328 ⇓P **P 06 29 06.8 -1.0**
baz=67,SNR=16
TIC Toumodi 66.81 72 *eP* **P 06 29 07.1 -1.3**
comp=Z,56nm,1.2s,mb5.1
TIC Toumodi 66.81 72 *eP* **P 06 29 07.1 -1.3**
TIC pmax pmax
comp=Z,56nm,1.2s,mb5.1
320A Kipp Ranch, An 66.85 322 ⇑P **P 06 29 08.4 +0.1**
baz=67,SNR=13
KIC Kosan Boka 66.92 72 *eP* **P 06 29 08.5 -0.6**
comp=Z,53nm,0.8s,mb5.2
221A Mesquite Ranch 66.92 323 ⇓P **P 06 29 09.0 +0.3**
baz=67,SNR=6.1
DBIC Dimbokro 66.96 72 *eP* **P 06 29 08.8 -0.6**
comp=Z,119nm,1.4s,mb5.3
DBIC *epP* pP 06 29 57.9 -1.2
DBIC Dimbokro 66.96 72 P **P 06 29 09.2 -0.2**
comp=Z,17nm,0.8s,mb4.7,baz=221,slow=6.0,SNR=13
DBIC pP pP 06 29 57.9 -1.2
comp=Z,73nm,1.2s,baz=219,slow=5.9,SNR=9.5
DBIC Dimbokro 66.96 72 *eP* **P 06 29 08.8 -0.5**
DBIC *e*PP* pP 06 29 57.9 -1.2
DBIC pmax pmax
comp=Z,119nm,1.4s
122A Conniff Cattle 67.01 324 ⇑P **P 06 29 09.6 +0.4**
baz=67,SNR=12
Z23A Rita Site, Whi 67.02 325 ⇓P **P 06 29 09.0 -0.3**
baz=67,SNR=22
LONY Lake Ozonia 67.09 354 *eP* **P 06 29 09.4 -0.1**
comp=Z,33nm,0.8s,mb5.0
LONY *epP* pP 06 29 58.6 -0.7
Y24A Capitan 67.11 326 ⇓P **P 06 29 08.7 -1.2**
baz=67
W26A Owens Ranch, T 67.17 327 ⇓P **P 06 29 09.5 -0.7**
baz=67,SNR=21
X25A Clemmons Ranch 67.18 326 ⇑P **P 06 29 09.1 -1.1**
baz=67
FRNY Flat Rock 67.21 355 *eP* **P 06 29 10.1 -0.1**
comp=Z,17nm,0.8s,mb4.7
220A Playas Peak, P 67.27 322 ⇑P **P 06 29 10.8 0.0**
baz=68,SNR=18
319A Douglas 67.32 321 ⇑P **P 06 29 11.1 -0.1**
baz=68,SNR=12
121A Cookes Peak, D 67.32 323 ⇑P **P 06 29 11.6 +0.4**
baz=68,SNR=26
KSU1 Kansas State U 67.32 335 *eP* **P 06 29 10.0 -1.0**
comp=Z,29nm,0.8s,mb5.0
PKME Peaks-Kenny Pk 67.39 358 *eP* **P 06 29 10.9 -0.4**
comp=Z,30nm,0.7s,mb5.0
PKME *epP* pP 06 30 00.2 -0.9
Z22A Elephant Butte 67.41 324 ⇓P **P 06 29 12.0 +0.3**
baz=68,SNR=99
Y23A Lovelace Mesa, 67.44 325 ⇓P **P 06 29 11.5 -0.4**
baz=68
X24A Lazy VL Ranch, 67.61 326 ⇓P **P 06 29 12.3 -0.6**
baz=68
W25A X Bar L Ranch, 67.62 327 ⇓P **P 06 29 12.2 -0.8**
baz=68,SNR=22
318A Bisbee 67.78 321 ⇓P **P 06 29 14.1 +0.1**
baz=68,SNR=37
QSPA South Pole Qui 67.79 180 *eP* **P 06 29 13.1 -0.4**
comp=Z,26nm,0.6s,mb5.0
120A U Bar Ranch, L 67.81 322 ⇑P **P 06 29 14.4 +0.2**
baz=68,SNR=13
Z21A St. Cloud Mine 67.84 324 ⇑P **P 06 29 14.8 +0.4**
baz=68,SNR=33
BNM Barren Site 67.91 325 *eP* **P 06 29 15.1 +0.3**
comp=Z,24nm,1.2s,mb4.7
Y22A Socorro 67.93 324 ⇑P **P 06 29 15.0 0.0**
baz=68
X23A Hourglass Bar 68.01 325 ⇑P **P 06 29 15.5 0.0**
baz=68,SNR=22
LPM Los Pinos Moun 68.04 325 *eP* **P 06 29 15.7 +0.1**
LPM *epP* pP 06 30 09.8 +4.2
W24A Lazy 6 Ranch, 68.09 326 ⇓P **P 06 29 15.3 -0.6**
baz=68,SNR=18
V25A Rancho No Teng 68.19 327 ⇓P **P 06 29 16.1 -0.4**
baz=68,SNR=42
218A Dragoon 68.20 321 ⇓P **P 06 29 16.9 +0.2**
baz=68,SNR=26
U26A Atchley Ranch, 68.20 328 ⇓P **P 06 29 16.2 -0.3**
baz=68,SNR=59
Z20A Nine Sixteen R 68.20 323 ⇓P **P 06 29 17.0 +0.4**
baz=68,SNR=29
119A Ashpeak Ranch, 68.35 322 ⇓P **P 06 29 17.8 +0.2**
baz=68,SNR=9.2
CBKS Cedar Bluff 68.35 333 *eP* **P 06 29 17.0 -0.4**
comp=Z,72nm,0.9s,mb5.3
CBKS Cedar Bluff 68.35 333 *eP* **P 06 29 17.0 -0.5**
CBKS pmax pmax
comp=Z,72nm,0.9s,mb5.3
Y21A Point of Rocks 68.37 324 ⇑P **P 06 29 18.3 +0.6**
baz=69,SNR=59
LAZ Ladron 68.38 325 *eP* **P 06 29 17.9 +0.1**
comp=Z,17nm,1.5s,mb4.5
LAZ *epP* pP 06 30 09.5 +1.8
X22A Bernardo 68.39 325 ⇓P **P 06 29 18.3 +0.5**
baz=69
V24A Rampart Ranch, 68.43 327 ⇓P **P 06 29 17.6 -0.4**
baz=69,SNR=35
ANMO Albuquerque 68.44 326 *eP* **P 06 29 17.4 -0.7**
comp=Z,24nm,0.8s,mb4.9
ANMO *epP* pP 06 30 11.4 +3.4
ANMO Albuquerque 68.44 326 *eP* **P 06 29 17.4 -0.7**
ANMO pmax pmax
comp=Z,24nm,0.8s
W23A Werner Place, 68.44 326 ⇑P **P 06 29 18.1 0.0**
baz=69,SNR=21
217A Green Valley 68.51 320 ⇑P **P 06 29 18.7 +0.1**
baz=69,SNR=31
U25A Circle Dot Ran 68.53 328 ⇑P **P 06 29 18.4 -0.2**
baz=69,SNR=42
JFWS Jewell Farm 68.55 342 *eP* **P 06 29 17.2 -1.3**
comp=Z,40nm,0.9s,mb5.0
JFWS *epP* pP 06 30 06.6 -2.0
JFWS Jewell Farm 68.55 342 *eP* **P 06 29 17.2 -1.4**
JFWS *e*PP* pP 06 30 06.6 -2.0
JFWS pmax pmax
comp=Z,40nm,0.9s,mb5.0
SCIA State Center 68.56 339 *eP* **P 06 29 17.7 -1.0**
comp=Z,36nm,0.8s,mb5.1
SCIA *epP* pP 06 30 07.4 -1.3
Y20A Horse Springs, 68.68 324 ⇓P **P 06 29 20.0 +0.4**
baz=69,SNR=26
Z19A T-Link Ranch, 68.72 322 ⇑P **P 06 29 20.2 +0.4**
baz=69
W22A Albuquerque 68.75 325 ⇑P **P 06 29 20.4 +0.5**
baz=69,SNR=14
X21A Alamocita Cree 68.76 324 ⇑P **P 06 29 20.6 +0.6**
baz=69,SNR=44
TUC Tucson 68.87 321 *eP* **P 06 29 20.8 0.0**
comp=Z,29nm,1.2s,mb4.8
TUC *epP* pP 06 30 13.0 +2.1
TUC Tucson 68.87 321 *eP* **P 06 29 20.8 0.0**
TUC *e*PP* pP 06 30 13.0 +2.1
TUC pmax pmax
comp=Z,29nm,1.2s,mb4.8
V23A Ortiz Mt. (NFS 68.91 326 ⇑P **P 06 29 21.3 +0.4**
baz=69,SNR=26
U24A Moreno Valley 68.97 327 ⇓P **P 06 29 21.8 +0.5**
baz=69,SNR=5.1
Z18A Geronimo 69.00 322 ⇑P **P 06 29 21.6 0.0**
baz=69
117A Oracle 69.03 321 ⇑P **P 06 29 21.9 +0.1**
baz=69,SNR=26
216A Three Points, 69.05 320 ⇑P **P 06 29 22.1 +0.2**
baz=69,SNR=14
T25A Trinidad 69.11 328 ⇓P **P 06 29 22.4 +0.2**
baz=69,SNR=17
W21A San Fidel 69.19 325 ⇓P **P 06 29 23.1 +0.4**
baz=69
Y19A Nutrioso 69.20 323 ⇑P **P 06 29 23.6 +0.8**
baz=69,SNR=40
X20A Quemado 69.22 324 ⇑P **P 06 29 23.4 +0.5**
baz=69,SNR=20
U23A El Rito 69.36 327 ⇓P **P 06 29 24.1 +0.3**
baz=70,SNR=22
Z17A San Carlos Hig 69.41 322 ⇑P **P 06 29 24.1 +0.1**
baz=70
V22A San Miguel Ran 69.41 326 ⇑P **P 06 29 24.7 +0.6**
baz=70,SNR=23
Y18A Canyon Day Jun 69.51 322 ⇓P **P 06 29 24.8 +0.1**
baz=70,SNR=9.9
S25A Robets Cordova 69.54 329 ⇓P **P 06 29 24.9 +0.1**
baz=70,SNR=49
X19A St. Johns 69.57 323 ⇓P **P 06 29 25.2 +0.2**
baz=70,SNR=5.8
116A Eloy 69.59 320 ⇓P **P 06 29 25.1 -0.1**
baz=70,SNR=5.6
W20A Ramah 69.66 324 ⇑P **P 06 29 25.9 +0.3**
baz=70,SNR=42
V21A Milan 69.71 325 ⇓P **P 06 29 26.4 +0.5**
baz=70,SNR=6.7
U22A Llaves 69.74 326 ⇑P **P 06 29 26.7 +0.6**
baz=70,SNR=19
214A Organ Pipe Nat 69.83 319 ⇑P **P 06 29 26.8 +0.1**
baz=70,SNR=22
T23A Casias Ranch, 69.83 327 ⇑P **P 06 29 26.9 +0.3**
baz=70,SNR=20
S24A Houchin Ranch, 69.90 328 ⇑P **P 06 29 27.5 +0.6**
baz=70,SNR=28
Y17A Roosevelt 69.91 322 ⇓P **P 06 29 27.4 +0.3**
baz=70,SNR=29
Z16A Peralta Trail, 69.99 321 ⇓P **P 06 29 27.7 +0.1**
baz=70,SNR=8.0
X18A Snowflake 70.01 323 ⇑P **P 06 29 28.0 +0.3**
baz=70,SNR=13
SDCO Great Sand Dun 70.12 328 *eP* **P 06 29 28.5 +0.2**
comp=Z,32nm,0.9s,mb5.0
SDCO *epP* pP 06 30 19.6 +1.1
W19A Sanders 70.13 324 ⇓P **P 06 29 28.6 +0.1**
baz=70
V20A Brimhall 70.14 325 ⇑P **P 06 29 28.6 +0.1**
baz=70,SNR=14
U21A Nageezi 70.19 326 ⇑P **P 06 29 29.1 +0.3**
baz=70,SNR=25
T22A Edith 70.25 327 ⇑P **P 06 29 29.7 +0.6**
baz=70,SNR=30
W18A Petrified Fore 70.33 323 ⇓P **P 06 29 29.9 +0.3**
baz=70,SNR=5.4
S23A Nye Farm, Mont 70.34 328 ⇑P **P 06 29 30.1 +0.4**
baz=70
X17A Forest Lakes 70.35 322 ⇓P **P 06 29 30.5 +0.7**
baz=70,SNR=16
Z15A Gila River Ind 70.38 321 ⇓P **P 06 29 30.3 +0.3**
baz=71
V19A Window Rock 70.39 324 ⇑P **P 06 29 30.4 +0.3**
baz=71,SNR=24

114A	Black Gap (USA	70.43	320	⇓P		P	06 29 30.2 -0.1
	baz=71,SNR=12						
Q25A	Bedland, Calha	70.45	330	⇑P		P	06 29 30.0 -0.2
	baz=71,SNR=7.7						
T21A	Navajo Lake	70.56	326	⇓P		P	06 29 31.2 +0.2
	baz=71,SNR=15						
U20A	Newcomb	70.61	325	⇓P		P	06 29 31.4 +0.1
	baz=71,SNR=16						
X16A	Lo Mia Camp, P	70.77	322	⇑P		P	06 29 32.8 +0.4
	baz=71,SNR=23						
S22A	4UR Ranch, Cre	70.78	327	⇓P		P	06 29 32.4 +0.1
	baz=71,SNR=20						
W17A	Winslow	70.84	323	⇓P		P	06 29 33.1 +0.3
	baz=71						
V18A	Ganado	70.87	324	⇑P		P	06 29 32.9 0.0
	baz=71,SNR=12						
P25A	Willow Gulch B	70.89	330	⇑P		P	06 29 33.2 +0.3
	baz=71,SNR=23						
Z14A	Wintersburg	70.89	320	⇓P		P	06 29 33.1 0.0
	baz=71						
U19A	Dine' College,	70.91	325	⇑P		P	06 29 32.7 -0.4
	baz=71,SNR=10						
Q24A	Divide	70.92	329	⇓P		P	06 29 33.4 +0.3
	baz=71,SNR=21						
Y15A	Casa Rosa Ranc	70.95	321	⇓P		P	06 29 33.7 +0.2
	baz=71,SNR=29						
113A	Mohawk Valley,	70.97	319	⇑P		P	06 29 33.3 -0.3
	baz=71,SNR=7.3						
R22A	Saguache, Gunn	71.12	328	⇓P		P	06 29 34.7 +0.4
	baz=71,SNR=23						
COWI	Conover	71.18	344	eP		P	06 29 33.5 -1.0
	comp=Z,14nm,1.1s,mb4.5						
Q23A	Hartsel	71.19	329	⇑P		P	06 29 35.2 +0.4
	baz=71						
Z13A	Yuma Proving G	71.20	320	⇓P		P	06 29 34.9 -0.1
	baz=71,SNR=11						
T19A	Beclabito	71.22	325	⇑P		P	06 29 34.9 -0.1
	baz=71,SNR=53						
MVCO	Mesa Verde	71.23	326	⇓P		P	06 29 35.3 +0.3
	baz=71,SNR=34						
MVCO	Mesa Verde	71.23	326	eP		P	06 29 35.2 +0.2
	comp=Z,46nm,1.0s,mb5.1						
P24A	Kohler Place,	71.24	330	⇑P		P	06 29 35.4 +0.4
	baz=71,SNR=14						
X15A	Humboldt	71.28	321	⇑P		P	06 29 35.8 +0.5
	baz=72,SNR=29						
V17A	Tonalea, Kykot	71.28	323	⇑P		P	06 29 36.0 +0.6
	baz=72						
112A	Yuma	71.31	319	⇑P		P	06 29 35.3 -0.3
	baz=72						
W16A	Flagstaff	71.31	322	⇓P		P	06 29 36.3 +0.8
	baz=72,SNR=18						
Y14A	Wickenburg	71.34	321	⇓P		P	06 29 35.7 -0.1
	baz=72,SNR=6.9						
ECSD	EROS Data Cent	71.34	338	eP		P	06 29 34.2 -1.4
	comp=Z,27nm,1.3s,mb4.7						
ECSD				epP		pP	06 30 23.0 -2.9
O25A	Wiggins	71.35	330	⇓P		P	06 29 36.2 +0.5
	baz=72						
U18A	Rough Rock, Ch	71.36	324	⇑P		P	06 29 36.3 +0.4
	baz=72,SNR=40						
WUAZ	Wupatki	71.53	323	⇑P		P	06 29 37.3 +0.5
	baz=72,SNR=20						
WUAZ	Wupatki	71.53	323	eP		P	06 29 37.4 +0.6
	comp=Z,38nm,1.0s,mb5.0						
P23A	Jefferson	71.57	329	⇑P		P	06 29 37.5 +0.5
	baz=72,SNR=11						
R21A	Cimarron	71.62	327	⇑P		P	06 29 37.9 +0.5
	baz=72,SNR=32						
X14A	Yava	71.64	321	⇓P		P	06 29 37.9 +0.3
	baz=72,SNR=13						
Q22A	Crested Butte,	71.69	328	⇑P		P	06 29 38.2 +0.5
	baz=72,SNR=15						
Y13A	Salome	71.74	320	⇓P		P	06 29 38.2 +0.1
	baz=72,SNR=9.7						
W15A	Williams	71.79	322	⇑P		P	06 29 39.1 +0.7
	baz=72,SNR=12						
ISCO	Idaho Springs	71.80	329	eP		P	06 29 38.7 +0.3
	comp=Z,18nm,0.9s,mb4.7						
ISCO				epP		pP	06 30 29.4 +0.6
ISCO	Idaho Springs	71.80	329	eP		P	06 29 38.7 +0.4
ISCO				e*PP		pP	06 30 29.4 +0.6
ISCO				pmax		pmax	
	comp=Z,18nm,0.9s,mb4.7						
O24A	Longmont	71.80	330	⇑P		P	06 29 38.5 +0.2
	baz=72						
GLA	Glamis	71.81	319	⇑P		P	06 29 38.6 0.0
	baz=72,SNR=5.2						
GLA	Glamis	71.81	319	eP		P	06 29 38.7 +0.1
	comp=Z,17nm,1.1s,mb4.6						
GLA	Glamis	71.81	319	eP		P	06 29 38.7 +0.1
GLA				pmax		pmax	
	comp=Z,17nm,1.1s,mb4.6						
U16A	Tuba City	71.85	323	⇑P		P	06 29 39.1 +0.4
	baz=72,SNR=20						
T18A	Mexican Hat	71.90	325	⇑P		P	06 29 39.0 0.0
	baz=72,SNR=63						
N25A	Grover	71.90	331	⇓P		P	06 29 39.2 +0.2
	baz=72						
R20A	Redvale	71.91	326	⇓P		P	06 29 39.9 +0.8
	baz=72,SNR=58						
S19A	Harvey Farm, M	71.96	326	⇓P		P	06 29 39.5 +0.1
	baz=72,SNR=46						
SMCO	Snowmass	71.96	328	eP		P	06 29 40.1 +0.7
	comp=Z,29nm,1.0s,mb4.9						
SMCO				epP		pP	06 30 31.0 +1.1
PV01	Paradox Valley	71.96	326	eP		P	06 29 39.7 +0.4
	comp=Z,5µm,1.3s						
Q21A	Lamborn Mesa,	71.99	327	⇑P		P	06 29 39.8 +0.3
	baz=72,SNR=18						
P22A	Eagle	72.18	328	⇑P		P	06 29 41.0 +0.3
	baz=72,SNR=24						
V15A	Kaibab Nationa	72.19	322	⇓P		P	06 29 41.5 +0.7
	baz=72,SNR=36						
PDMCI	Parker Dam,Lak	72.26	320	⇑P		P	06 29 41.5 +0.2
	baz=72						
O23A	Lake Granby, G	72.26	329	⇓P		P	06 29 41.6 +0.5
	baz=72,SNR=13						
N24A	Carr	72.27	330	⇓P		P	06 29 41.7 +0.5
	baz=72,SNR=6.6						
X13A	Yucca	72.28	321	⇑P		P	06 29 41.5 +0.2
	baz=72,SNR=18						
W14A	Seligman	72.28	321	⇓P		P	06 29 42.0 +0.7
	baz=72,SNR=12						
T17A	Navajo Res., N	72.29	324	⇑P		P	06 29 42.2 +0.8
	baz=72,SNR=57						
DVTC	Desert V Tower	72.33	318	⇓P		P	06 29 42.1 +0.4
	baz=72						
SWSC	Sam W. Stewart	72.33	318	⇓P		P	06 29 41.5 -0.1
	baz=72						
PV04	Paradox Valley	72.33	326	eP		P	06 29 41.3 -0.2
S18A	Hurst Farm, Bl	72.37	325	⇑P		P	06 29 42.3 +0.5
	baz=73,SNR=82						
PV10	Paradox Valley	72.39	326	eP		P	06 29 41.6 -0.2
	comp=Z,359nm,1.0s,mb6.0						
R19A	Curley Farm, L	72.44	326	⇓P		P	06 29 42.2 0.0
	baz=73,SNR=31						
Q20A	Ridgley Place,	72.45	327	⇑P		P	06 29 42.1 -0.1
	baz=73,SNR=9.6						
P21A	Newcastle	72.46	328	⇓P		P	06 29 43.0 +0.7
	baz=73,SNR=15						
O22A	Kremmling	72.52	329	⇑P		P	06 29 42.8 +0.1
	baz=73,SNR=31						
V14A	Boquillas Ranc	72.59	322	⇑P		P	06 29 44.0 +0.8
	baz=73,SNR=32						
BC3	Big Chuckawall	72.61	319	⇑P		P	06 29 43.5 +0.2
	baz=73,SNR=14						
T16A	Glen Canyon Da	72.67	324	⇓P		P	06 29 44.2 +0.6
	baz=73,SNR=5.5						
W13A	Hualapai Mount	72.67	321	⇓P		P	06 29 44.1 +0.5
	baz=73,SNR=12						
MONP	Monument Peak	72.68	318	⇑P		P	06 29 43.9 +0.2
	baz=73,SNR=5.3						
U15A	North Rim	72.70	323	⇑P		P	06 29 44.8 +1.0
	baz=73						
BAR	Barrett	72.70	317	eP		P	06 29 43.5 -0.3
	comp=Z,19nm,1.0s,mb4.7						
S17A	Black Ridge (B	72.76	325	⇓P		P	06 29 44.6 +0.4
	baz=73,SNR=15						
IRM	Iron Mountain	72.77	319	⇑P		P	06 29 44.2 0.0
	baz=73,SNR=14						
N23A	Red Feather La	72.81	330	⇓P		P	06 29 44.6 +0.3
	baz=73,SNR=19						
R18A	Canyonlands Na	72.84	326	⇑P		P	06 29 44.4 -0.1
	baz=73,SNR=21						
NEE2	Needles Airpor	72.87	320	⇓P		P	06 29 44.7 -0.2
	baz=73						
P20A	De Beque	72.91	327	⇑P		P	06 29 45.3 +0.4
	baz=73,SNR=14						
Q19A	Hogan Spring (	72.94	326	⇓P		P	06 29 45.3 +0.2
	baz=73,SNR=37						
N22A	Wattenberg Ran	72.98	329	⇓P		P	06 29 45.9 +0.6
	baz=73,SNR=23						
O21A	Pagoda	73.01	328	⇓P		P	06 29 46.1 +0.6
	baz=73,SNR=10.0						
109C	Camp Elliot, M	73.11	317	⇓P		P	06 29 46.1 -0.2
	baz=73						
BELC	Belle Mtn. Jos	73.17	319	⇓P		P	06 29 46.9 +0.2
	baz=73,SNR=7.1						
T15A	Red Dirt Ranch	73.17	323	⇑P		P	06 29 47.3 +0.8
	baz=73,SNR=42						
PFO	Pinyon Flat Ob	73.19	318	⇑P		P	06 29 47.0 +0.3
	baz=73,SNR=6.9						
PFO	Pinyon Flat Ob	73.19	318	eP		P	06 29 46.2 -0.5
	comp=Z,8.8nm,0.9s,mb4.4						
PFO	Pinyon Flat Ob	73.19	318	eP		P	06 29 46.2 -0.5
PFO				pmax		pmax	
	comp=Z,9.0nm,0.9s,mb4.4						
U14A	Mt Trumbull	73.19	322	⇑P		P	06 29 47.6 +0.9
	baz=73,SNR=19						
V13A	Grand Canyon W	73.25	321	⇑P		P	06 29 47.5 +0.5
	baz=73,SNR=22						
S16A	Weppner Ranch,	73.25	324	⇑P		P	06 29 47.2 +0.2
	baz=74						
R17A	Hanksville Air	73.29	325	⇓P		P	06 29 47.5 +0.3
	baz=74,SNR=70						
P19A	Cripple Cowboy	73.31	327	⇑P		P	06 29 47.8 +0.5
	baz=74,SNR=87						
O20A	White River Ci	73.32	328	⇑P		P	06 29 47.7 +0.4
	baz=74,SNR=37						
W12A	Cal Nev Ari	73.39	320	⇓P		P	06 29 47.8 0.0
	baz=74						
N21A	Black Mountain	73.45	329	⇓P		P	06 29 48.8 +0.7
	baz=74,SNR=9.0						
GMRC	Granite Mounta	73.50	320	⇑P		P	06 29 48.9 +0.4
	baz=74,SNR=17						
Q18A	Rafter H Ranch	73.50	326	⇓P		P	06 29 48.6 +0.2
	baz=74,SNR=17						
EYMN	Ely	73.51	343	eP		P	06 29 46.7 -1.5
	comp=Z,16nm,1.1s,mb4.6						
T14A	Hurricane	73.60	323	⇑P		P	06 29 49.6 +0.6
	baz=74,SNR=33						
R16A	Teasdale	73.60	325	⇑P		P	06 29 49.5 +0.4
	baz=74,SNR=11						
MURC	Murrieta	73.64	318	⇑P		P	06 29 49.3 -0.1
	baz=74						
V12A	Nelson	73.67	321	⇓P		P	06 29 49.5 +0.1
	baz=74,SNR=17						
SRU	San Rafael	73.71	326	⇓P		P	06 29 49.7 +0.1
	baz=74,SNR=44						
SRU	San Rafael	73.71	326	eP		P	06 29 49.8 +0.2
	comp=Z,70nm,1.3s,mb5.1						
SRU				epP		pP	06 30 39.7 -0.6
SRU	San Rafael	73.71	326	eP		P	06 29 49.8 +0.2
SRU				e*PP		pP	06 30 39.7 -0.6
SRU				pmax		pmax	
	comp=Z,70nm,1.3s,mb5.1						
N20A	Spence Gulch,	73.87	328	⇓P		P	06 29 50.7 +0.2
	baz=74,SNR=19						
O19A	Miners Draw (B	73.88	327	⇓P		P	06 29 50.8 +0.2
	baz=74,SNR=36						
Q16A	Castle Valley	73.90	325	⇓P		P	06 29 51.1 +0.3
	baz=74,SNR=22						
BBRC	Big Bear Solar	73.91	318	⇑P		P	06 29 51.5 +0.6
	baz=74						
HEC	Hector,Ludlow	73.94	319	⇑P		P	06 29 51.4 +0.3
	baz=74,SNR=6.9						
P18A	Preston Nutter	73.95	326	⇑P		P	06 29 51.6 +0.6
	baz=74,SNR=27						
R15A	Junction	73.98	324	⇓P		P	06 29 51.7 +0.5
	baz=74,SNR=15						
U12A	Valley of Fire	73.98	321	⇑P		P	06 29 51.6 +0.4
	baz=74,SNR=20						
RWWY	Rawlins	74.03	330	eP		P	06 29 52.0 +0.6
	comp=Z,26nm,0.9s,mb4.9						
T13A	Saint George	74.03	322	⇓P		P	06 29 52.2 +0.6
	baz=74,SNR=23						
M21A	Separation Pea	74.04	329	⇑P		P	06 29 51.7 +0.2
	baz=74						
V11A	Goodsprings	74.09	321	⇑P		P	06 29 52.1 +0.2
	baz=74,SNR=6.0						
CCUT	Cedar City	74.10	323	eP		P	06 29 53.0 +1.1
	comp=Z,45nm,1.1s,mb5.0						
CCUT				epP		pP	06 30 41.3 -1.4
TUQ	Turquoise Moun	74.10	320	⇓P		P	06 29 52.4 +0.4
	baz=74						
MSU	Marysvale	74.14	324	eP		P	06 29 52.5 +0.3
MSU				epP		pP	06 30 45.9 +2.9
S14A	Cedar City	74.14	323	⇓P		P	06 29 52.8 +0.7
	baz=74						
TMUT	Trail Mountain	74.20	326	eP		P	06 29 52.1 -0.3
	comp=Z,8.2nm,0.5s,mb4.6						
CIS	Catalina Islan	74.27	317	⇑P		P	06 29 53.0 0.0
	baz=74						
T12A	Moapa	74.28	322	⇑P		P	06 29 53.0 0.0
	baz=74						
O18A	Roosevelt	74.30	327	⇓P		P	06 29 53.3 +0.3
	baz=74,SNR=12						
ARUT	Antelope Range	74.31	323	eP		P	06 29 54.0 +0.8
	comp=Z,34nm,1.0s,mb4.9						
ARUT	Antelope Range	74.31	323	eP		P	06 29 54.0 +0.9
ARUT				pmax		pmax	
	comp=Z,35nm,1.0s,mb4.9						
L21A	Rawlins	74.32	330	⇑P		P	06 29 53.1 +0.1
	baz=74,SNR=19						
M20A	Sweetwater, Wa	74.34	329	⇓P		P	06 29 53.3 +0.1
	baz=74,SNR=14						
BFSC	Mount Baldy Ra	74.35	318	⇑P		P	06 29 53.4 -0.1
	baz=74,SNR=7.2						
N19A	John Jarvie Ra	74.36	328	⇓P		P	06 29 53.3 0.0
	baz=75,SNR=15						
S13A	Holt Ranch, En	74.40	323	⇑P		P	06 29 54.6 +0.9
	baz=75,SNR=26						
FMP	Fort Macarthur	74.40	317	⇑P		P	06 29 53.7 0.0
	baz=75						
R14A	James Farms, M	74.45	324	⇑P		P	06 29 54.5 +0.6
	baz=75						
U11A	Corn Creek	74.46	321	⇓P		P	06 29 54.7 +0.6
	baz=75						
GSC	Goldstone	74.54	319	⇑P		P	06 29 54.7 +0.2
	baz=75,SNR=12						
GSC	Goldstone	74.54	319	eP		P	06 29 54.9 +0.4
	comp=Z,40nm,1.4s,mb4.9						
GSC				epP		pP	06 30 47.0 +1.6
GSC	Goldstone	74.54	319	eP		P	06 29 54.9 +0.4
GSC				e*PP		pP	06 30 47.0 +1.7
GSC				pmax		pmax	
	comp=Z,40nm,1.4s,mb4.9						
RSSD	Black Hills	74.55	333	eP		P	06 29 54.3 -0.1
	comp=Z,15nm,1.0s,mb4.6						
RSSD				epP		pP	06 30 45.6 +0.4
RSSD	Black Hills	74.55	333	eP		P	06 29 54.3 -0.1
RSSD				e*PP		pP	06 30 45.6 +0.4
RSSD				pmax		pmax	
	comp=Z,15nm,1.0s,mb4.6						
MWC	Mount Wilson	74.59	318	eP		P	06 29 55.0 +0.2
	comp=Z,41nm,1.3s,mb4.9						
MWC	Mount Wilson	74.59	318	eP		P	06 29 55.0 +0.2
MWC				pmax		pmax	
	comp=Z,41nm,1.3s,mb4.9						
Q15A	Fillmore	74.60	325	⇓P		P	06 29 55.2 +0.4
	baz=75,SNR=6.0						
O17A	Robinson Place	74.62	326	⇓P		P	06 29 55.6 +0.7
	baz=75,SNR=59						
SHOC	Shoshone	74.63	320	⇑P		P	06 29 55.3 +0.3
	baz=75						
PASC	Pasadena Art C	74.64	318	eP		P	06 29 55.2 +0.1
	comp=Z,202nm,1.4s,mb5.6						
P16A	Fountain Green	74.67	325	⇓P		P	06 29 55.6 +0.4
	baz=75						
N18A	Larsen Ranch,	74.67	328	⇑P		P	06 29 55.1 -0.1
	baz=75,SNR=13						
DECC	Green Verdugo	74.78	318	⇓P		P	06 29 56.0 +0.1
	baz=75						
L20A	Wamsutter	74.81	329	⇑P		P	06 29 56.0 +0.1
	baz=75,SNR=18						
M19A	Rock Springs	74.82	328	⇓P		P	06 29 56.0 0.0
	baz=75,SNR=6.1						
R13A	O'Grain Ranch,	74.89	323	⇓P		P	06 29 57.3 +0.9
	baz=75,SNR=17						
SYO	Syowa Base	74.90	159	⇑eP		P	06 29 54.2 -1.9
MPU	Maple Canyon	74.95	326	eP		P	06 29 57.1 +0.3
	comp=Z,29nm,1.0s,mb4.9						
MPU				epP		pP	06 30 50.0 +2.4
P15A	Leamington	74.97	325	⇓P		P	06 29 57.2 +0.3
	baz=75,SNR=5.2						
S12A	Delamar Landin	74.98	322	⇓P		P	06 29 57.7 +0.8
	baz=75,SNR=5.1						
EDW2	Edwards Air Fo	74.98	318	⇑P		P	06 29 56.8 -0.3
	baz=75,SNR=7.3						
U10A	Ash Meadows, A	75.01	320	⇓P		P	06 29 57.7 +0.5
	baz=75,SNR=8.9						
O16A	Springville	75.02	326	⇓P		P	06 29 57.5 +0.3
	baz=75,SNR=14						
DAU	Daniels Canyon	75.05	326	eP		P	06 29 58.0 +0.7
DAU				epP		pP	06 30 49.2 +1.0
Q14A	Sevier Lake (B	75.08	324	⇓P		P	06 29 58.3 +0.8
	baz=75,SNR=32						
AGMN	Agassiz Nation	75.10	340	eP		P	06 29 56.4 -1.1
	comp=Z,11nm,0.8s,mb4.5						
AGMN				epP		pP	06 30 45.5 -2.9
NLU	North Lily Min	75.14	325	eP		P	06 29 58.8 +1.0
	comp=Z,20nm,1.2s,mb4.6						
NLU				epP		pP	06 30 50.5 +1.8
BLG	Laguna Peak	75.14	317	⇑P		P	06 29 59.2 +1.2
	baz=75						
LRMC	Laurel Mountai	75.19	319	⇓P		P	06 29 58.6 +0.3
	baz=75						
M18A	Lyman	75.20	328	⇓P		P	06 29 57.9 -0.3
	baz=75,SNR=16						
N17A	Moffit Pass	75.23	327	⇑P		P	06 29 59.0 +0.7
	baz=75,SNR=48						
JLU	Jordanelle	75.29	326	eP		P	06 29 59.3 +0.6
	comp=Z,22nm,0.8s,mb4.8						
JLU				epP		pP	06 30 49.4 -0.2
K20A	Yellowstone Ra	75.31	329	⇑P		P	06 29 58.5 -0.2
	baz=76,SNR=21						
SBA	Scott Base	75.32	190	eP		P	06 29 58.2 -0.2
	comp=Z,50nm,1.6s,mb4.9						
SBA	Scott Base	75.32	190	eP		P	06 29 58.2 -0.2
SBA				pmax		pmax	
	comp=Z,50nm,1.6s,mb4.9						
R12A	Pony Springs,	75.34	323	⇑P		P	06 29 59.9 +0.9
	baz=76,SNR=27						
FURC	Furnace Creek,	75.36	320	⇑P		P	06 29 59.4 +0.2
	baz=76,SNR=10						
L19A	Farson	75.37	329	⇓P		P	06 29 59.4 +0.3
	baz=76,SNR=20						
P14A	Drum Mountains	75.40	325	⇓P		P	06 30 00.2 +0.8
	baz=76,SNR=34						
MPMC	Manual Prospec	75.46	320	⇓P		P	06 29 59.7 0.0
	baz=76,SNR=9.7						
Q13A	Wheeler Ranch,	75.46	324	⇑P		P	06 30 00.1 +0.5
	baz=76,SNR=14						
N16A	Rees Ranch, Co	75.49	326	⇓P		P	06 30 00.2 +0.4
	baz=76,SNR=12						
S11A	Rachel	75.52	322	⇓P		P	06 30 01.1 +1.1
	baz=76						
M17A	Scullys Gap (B	75.54	327	⇓P		P	06 29 59.8 -0.3
	baz=76,SNR=12						
L18A	Fontenelle, Gr	75.56	328	⇓P		P	06 30 00.4 +0.2
	baz=76,SNR=36						
O15A	The Old Anders	75.58	325	⇓P		P	06 30 00.9 +0.5
	baz=76,SNR=5.2						
ARVC	Arvin	75.66	318	⇓P		P	06 30 01.2 +0.3
	baz=76						
K19A	Absolon Red Bu	75.68	329	⇓P		P	06 30 00.5 -0.3
	baz=76,SNR=22						
DUG	Dugway	75.70	325	⇑P		P	06 30 01.4 +0.4
	baz=76,SNR=22						
DUG	Dugway	75.70	325	eP		P	06 30 01.5 +0.5
	comp=Z,20nm,1.0s,mb4.7						
DUG				epP		pP	06 30 53.7 +1.7
DUG	Dugway	75.70	325	eP		P	06 30 01.5 +0.5
DUG				e*PP		pP	06 30 53.7 +1.7
DUG				pmax		pmax	
	comp=Z,20nm,1.0s,mb4.7						
ISA	Isabella	75.80	319	⇓P		P	06 30 02.0 +0.3
	baz=76,SNR=15						
ISA	Isabella	75.80	319	eP		P	06 30 02.1 +0.4
	comp=Z,17nm,0.8s,mb4.7						
ISA				epP		pP	06 30 53.8 +1.1
ISA	Isabella	75.80	319	eP		P	06 30 02.1 +0.4
ISA				e*PP		pP	06 30 53.8 +1.1
ISA				pmax		pmax	
	comp=Z,17nm,0.8s,mb4.7						
P13A	Bates Ranch, G	75.81	324	⇑P		P	06 30 02.4 +0.7
	baz=76,SNR=23						
R11A	Troy Canyon, C	75.91	322	⇑P		P	06 30 03.0 +0.8
	baz=76,SNR=24						
Q12A	Willow Creek R	75.97	323	⇓P		P	06 30 03.0 +0.4
	baz=76,SNR=12						
BW06	Boulder Array	75.97	329	⇑P		P	06 30 02.2 -0.3
	baz=76,SNR=13						
GRAC	Grapevine Rang	76.02	320	⇑P		P	06 30 03.2 +0.3
	baz=76,SNR=5.2						
N15A	Stansbury Isla	76.05	326	⇓P		P	06 30 03.0 0.0
	baz=76,SNR=17						
CWC	Cottonwood Cre	76.07	319	⇓P		P	06 30 03.6 +0.4
	baz=76						
HWUT	Hardware Ranch	76.09	327	eP		P	06 30 02.9 -0.2
	comp=Z,19nm,0.9s,mb4.7						
HWUT				epP		pP	06 30 52.9 -1.3
K18A	Toltan Ranch,	76.10	328	⇓P		P	06 30 03.7 +0.5
	baz=76,SNR=30						
L17A	Cokeville	76.11	328	⇑P		P	06 30 03.0 -0.3
	baz=76,SNR=32						
S10A	Tonopah Range,	76.19	321	⇑P		P	06 30 04.4 +0.6
	baz=76,SNR=24						
R10A	Warm Springs	76.28	322	⇑P		P	06 30 05.4 +1.1
	baz=76,SNR=29						
O13A	Hicks Ranch, I	76.28	325	⇑P		P	06 30 04.6 +0.3
	baz=76						
VES	Vestal, Richgr	76.29	318	⇓P		P	06 30 04.3 -0.1
	baz=76,SNR=11						
Q11A	Duckwater	76.29	323	⇑P		P	06 30 04.9 +0.5
	baz=76,SNR=20						
P12A	McGill	76.32	324	⇑P		P	06 30 05.0 +0.5
	baz=76,SNR=11						
SPUT	South Promonto	76.32	326	eP		P	06 30 04.7 +0.2
	comp=Z,23nm,0.7s,mb4.9						
SPUT				epP		pP	06 30 55.4 -0.2
L16A	Fish Haven	76.32	327	⇑P		P	06 30 04.3 -0.2
	baz=76,SNR=26						
BGU	Big Grassy Mou	76.34	326	eP		P	06 30 04.2 -0.5
	comp=Z,27nm,1.2s,mb4.8						
BGU				epP		pP	06 30 56.3 +0.6
N14A	Grayback Hills	76.37	325	⇑P		P	06 30 04.8 +0.1
	baz=77,SNR=24						
M15A	Larsen Ranch,	76.43	326	⇑P		P	06 30 05.0 -0.1
	baz=77,SNR=37						
SMMC	Simmler	76.51	318	⇑P		P	06 30 06.1 +0.4
	baz=77,SNR=6.0						
J18A	Kendall Valley	76.53	329

comp=Z,18nm,0.8s,mb4.7
SCHQ ePcP PcP 06 30 16.2 -1.4
SCHQ epP pP 06 30 59.4 +0.7
SCHQ Schefferville 76.92 360 P **P 06 30 07.3 -0.2**
comp=Z,14nm,0.8s,mb4.7,baz=166,slow=3.5,SNR=13
SCHQ ppP pP 06 30 57.5 -1.1
comp=Z,7.2nm,0.8s,baz=171,slow=8.9,SNR=3.7
M14A Sheep Mountain 76.93 326 ⇑P **P 06 30 07.9 0.0**
baz=77,SNR=27
J17A Brown Place, J 76.97 329 ⇑P **P 06 30 08.5 +0.4**
baz=77,SNR=19
K16A Soda Springs 77.01 328 ⇑P **P 06 30 08.9 +0.6**
baz=77,SNR=26
REDW Red Top Meadow 77.04 329 eP **P 06 30 08.8 +0.3**
comp=Z,22nm,1.0s,mb4.8
REDW epP pP 06 31 01.0 +1.3
SNOW Snow King Moun 77.07 329 eP **P 06 30 09.0 +0.4**
comp=Z,18nm,0.9s,mb4.7
SNOW epP pP 06 30 59.0 -0.8
LOHW Long Hollow 77.11 329 eP **P 06 30 09.1 +0.3**
comp=Z,14nm,0.9s,mb4.6
LOHW epP pP 06 31 01.0 +1.0
TPAW Teton Pass 77.19 329 eP **P 06 30 09.7 +0.5**
comp=Z,29nm,1.2s,mb4.8
TPAW epP pP 06 30 59.0 -1.4
PPT Papeete 77.19 256 eS S 06 39 30.2 -12
PPT eLR LR 06 52 50.0
comp=Z,198nm,24.5s
O11A Cowboy Ranch, 77.19 324 ⇓P **P 06 30 09.7 +0.3**
baz=77,SNR=9.7
M13A Montello 77.25 325 ⇑P **P 06 30 09.4 -0.2**
baz=77,SNR=17
M13A Montello 77.25 325 eP **P 06 30 09.6 -0.1**
comp=Z,8.4nm,0.8s,mb4.4
M13A epP pP 06 31 02.3 +1.4
L14A Malta 77.25 326 ⇓P **P 06 30 09.4 -0.3**
baz=78,SNR=22
RRI2 Red Ridge 77.26 328 eP **P 06 30 10.3 +0.6**
comp=Z,28nm,0.9s,mb4.9
RRI2 epP pP 06 31 03.2 +2.4
MOOW Moose Ponds 77.28 329 eP **P 06 30 09.8 0.0**
comp=Z,27nm,1.5s,mb4.7
MOOW epP pP 06 31 00.1 -0.8
I17A Pilgrim Ck. 77.33 329 ⇑P **P 06 30 10.8 +0.8**
baz=78,SNR=15
J16A Bone 77.34 328 ⇑P **P 06 30 10.3 +0.2**
baz=78
N12A Clover Valley, 77.36 324 ⇑P **P 06 30 10.3 0.0**
baz=78,SNR=6.0
N12A Clover Valley, 77.36 324 eP **P 06 30 10.0 -0.3**
comp=Z,5.7nm,0.8s,mb4.2
K15A Arbon 77.37 327 ⇓P **P 06 30 10.4 +0.1**
baz=78,SNR=36
DCID1 Drake Creek 77.38 328 eP **P 06 30 11.3 +1.0**
comp=Z,23nm,1.0s,mb4.8
ELK Elko 77.39 324 eP **P 06 30 10.5 +0.1**
comp=Z,6.0nm,0.6s,mb4.4
ELK Elko 77.39 324 eP **P 06 30 10.5 0.0**
ELK pmax pmax
comp=Z,6.0nm,0.6s
IMW Indian Meadow 77.48 329 eP **P 06 30 10.8 -0.1**
comp=Z,31nm,1.0s,mb4.9
IMW epP pP 06 31 01.9 -0.2
FLWY Flagg Ranch 77.51 329 eP **P 06 30 11.7 +0.7**
comp=Z,33nm,0.9s,mb5.0
FLWY epP pP 06 31 04.0 +1.8
NVAR Mina Array Bea 77.53 321 P **P 06 30 11.4 +0.2**
comp=Z,2.5nm,0.5s,mb4.1,baz=154,slow=6.1,SNR=7.1
NVAR pP pP 06 31 01.4 -1.2
comp=Z,5.4nm,0.9s,baz=142,slow=6.6,SNR=2.3
LAO LASA Array 77.53 333 eP **P 06 30 10.3 -0.8**
comp=Z,26nm,1.0s,mb4.8
LAO epP pP 06 31 02.1 -0.2
K14A Jones Ranch, D 77.59 327 ⇑P **P 06 30 11.4 -0.1**
baz=78,SNR=13
RLMT Red Lodge 77.63 331 ⇑P **P 06 30 11.9 +0.2**
baz=78,SNR=19
RLMT Red Lodge 77.63 331 eP **P 06 30 12.0 +0.3**
comp=Z,17nm,0.8s,mb4.7
RLMT epP pP 06 31 04.2 +1.3
L13A Double Diamond 77.66 326 ⇑P **P 06 30 12.3 +0.4**
baz=78,SNR=45
H17A Grant Village 77.69 329 ⇓P **P 06 30 13.3 +1.3**
baz=78
M12A Wells 77.69 325 ⇑P **P 06 30 12.2 +0.1**
baz=78,SNR=17
N11A Elko Archery C 77.71 324 ⇑P **P 06 30 12.3 +0.1**
baz=78
I16A Newdale 77.73 329 ⇓P **P 06 30 12.7 +0.4**
baz=78,SNR=11
LKWY Lake 77.73 330 eP **P 06 30 13.6 +1.3**
comp=Z,13nm,0.9s,mb4.6
LKWY epP pP 06 31 04.4 +0.9
LKWY Lake 77.73 330 eP **P 06 30 13.6 +1.3**
LKWY e*PP pP 06 31 04.4 +0.9
LKWY pmax pmax
comp=Z,13nm,0.9s,mb4.6
TSUM Tsumeb 77.74 106 eP **P 06 30 12.7 -0.3**
comp=Z,35nm,1.1s,mb4.9
TSUM epP pP 06 31 03.1 -1.0
O10A Cortez Mining, 77.76 323 ⇓P **P 06 30 12.8 +0.3**
baz=78
J15A Blackfoot 77.84 328 ⇑P **P 06 30 13.4 +0.5**
baz=78,SNR=20
YFT Old Faithful 77.85 329 eP **P 06 30 14.3 +1.4**
comp=Z,16nm,0.9s,mb4.6
G18A Lazy EL Ranch, 77.92 331 ⇑P **P 06 30 13.3 0.0**
baz=78,SNR=29
N10A Dunphy 78.06 324 ⇑P **P 06 30 14.0 -0.2**
baz=78
YMR Madison River 78.07 329 eP **P 06 30 15.1 +1.0**
comp=Z,22nm,0.8s,mb4.8
YMR epP pP 06 31 06.3 +0.8
K13A Stover Farm, H 78.13 326 ⇓P **P 06 30 14.7 +0.2**
baz=78,SNR=5.0
M11A Holland Ranch, 78.17 324 ⇓P **P 06 30 15.2 +0.4**
baz=78,SNR=27
H16A Russell Place, 78.23 329 ⇓P **P 06 30 15.6 +0.6**
baz=78,SNR=20
WAKR Walker 78.24 320 eP **P 06 30 15.9 +0.6**
L12A House Creek Ra 78.26 325 ⇓P **P 06 30 15.7 +0.5**
baz=78,SNR=32
I15A Monteview 78.31 328 ⇑P **P 06 30 16.1 +0.7**
baz=78
J14A Carey 78.33 327 ⇓P **P 06 30 16.1 +0.5**
baz=78,SNR=29
F18A Big Timber 78.43 331 ⇓P **P 06 30 16.0 0.0**
baz=79,SNR=32
G17A Pierce Place, 78.46 330 ⇓P **P 06 30 16.8 +0.5**
baz=79
CMB Columbia Colle 78.50 319 eP **P 06 30 16.7 0.0**
comp=Z,6.3nm,0.9s,mb4.2
CMB Columbia Colle 78.50 319 eP **P 06 30 16.7 0.0**
CMB pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
M10A I.L. Ranch, Tu 78.64 324 ⇑P **P 06 30 17.6 +0.3**
baz=79
L11A Cat Creek Ranc 78.66 325 ⇑P **P 06 30 17.8 +0.4**
baz=79,SNR=21
J13A Cove Ranch, Pi 78.71 327 ⇑P **P 06 30 18.2 +0.5**
baz=79
I14A Mackay 78.73 327 ⇑P **P 06 30 18.7 +1.0**
baz=79
F17A Fitzpatrick Pl 78.86 330 ⇑P **P 06 30 18.7 +0.3**
baz=79,SNR=38
G16A Moss Hill, Enn 78.89 329 ⇓P **P 06 30 18.7 +0.1**
baz=79,SNR=7.9
HLID Hailey 78.95 327 ⇓P **P 06 30 19.8 +0.8**
baz=79,SNR=85
HLID Hailey 78.95 327 eP **P 06 30 19.7 +0.7**
comp=Z,54nm,1.2s,mb5.0
HLID epP pP 06 31 12.4 +2.0
WCN Washoe City 78.95 321 ⇑P **P 06 30 19.6 +0.5**
baz=79
L10A Juniper Basin 78.98 325 ⇓P **P 06 30 19.6 +0.4**
baz=79,SNR=35
PAHR Pah Rah Range 79.00 321 eP **P 06 30 20.1 +0.8**
comp=Z,66nm,1.1s,mb5.2
PAHR epP pP 06 31 13.2 +2.5
E18A Harlowton 79.03 331 ⇓P **P 06 30 19.3 0.0**
baz=79
I13A Wildhorse Cree 79.06 327 ⇑P **P 06 30 20.4 +0.8**
baz=79,SNR=28
MCMT McKenzie Canyo 79.09 328 P **P 06 30 20.5 +0.8**
G15A Dillon 79.17 329 ⇓P **P 06 30 20.4 +0.3**
baz=79,SNR=19
H14A Leadore 79.19 328 ⇓P **P 06 30 20.7 +0.5**
baz=79,SNR=24
F16A Kennard Place, 79.22 330 ⇓P **P 06 30 20.0 -0.3**
baz=79
DLMT Dillon 79.36 329 eP **P 06 30 21.6 +0.4**
comp=Z,15nm,0.9s,mb4.6
DLMT epP pP 06 31 14.1 +1.5
E17A Martinsdale 79.37 331 ⇑P **P 06 30 21.1 0.0**
baz=80,SNR=22
D18A Linhart Farms, 79.46 332 ⇑P **P 06 30 21.4 -0.2**
baz=80,SNR=17
I12A Atlanta 79.48 327 ⇑P **P 06 30 22.3 +0.5**
baz=80,SNR=33
MFID Camas Ranch 79.58 326 ⇓P **P 06 30 22.6 +0.3**
baz=80,SNR=15
H13A Challis 79.59 328 ⇓P **P 06 30 23.0 +0.6**
baz=80,SNR=53
LRM Limekiln Ridge 79.63 329 eP **P 06 30 22.9 +0.3**
LRM epP pP 06 31 15.2 +1.1
G14A Jackson 79.69 328 ⇓P **P 06 30 23.1 +0.2**
baz=80,SNR=6.5
E16A East Helena 79.80 330 ⇑P **P 06 30 23.5 +0.1**
baz=80,SNR=16
D17A Six Diamond Ra 79.82 331 ⇓P **P 06 30 23.4 -0.2**
baz=80,SNR=39
H12A Diamond D Ranc 79.88 327 ⇓P **P 06 30 24.5 +0.5**
baz=80,SNR=28
G13A Cobalt 79.96 328 ⇓P **P 06 30 25.0 +0.6**
baz=80,SNR=100
OHCM Honcut 80.00 320 eP **P 06 30 25.0 +0.3**
HRY Holter Researc 80.00 330 eP **P 06 30 24.9 +0.3**
HRY epP pP 06 31 16.2 +0.1
F14A Wisdom 80.06 329 ⇑P **P 06 30 25.7 +0.8**
baz=80
EGMT Eagleton 80.07 332 ⇓P **P 06 30 24.3 -0.6**
baz=80,SNR=18
EGMT Eagleton 80.07 332 eP **P 06 30 24.4 -0.5**
comp=Z,28nm,0.9s,mb4.9
EGMT epP pP 06 31 15.9 -0.5
D16A Dana Ranch, Ca 80.11 331 ⇓P **P 06 30 25.5 +0.4**
baz=80,SNR=7.4
E15A Deer Lodge 80.17 330 ⇑P **P 06 30 25.6 +0.1**
baz=80,SNR=23
B18A Beardsley Farm 80.37 332 ⇑P **P 06 30 26.1 -0.4**
baz=81,SNR=31
F13A Darby 80.51 328 ⇓P **P 06 30 27.6 +0.3**
baz=81,SNR=65
MORF Marmelete 80.63 43 eP **P 06 30 29.9 +1.8**
comp=Z,109nm,1.4s,mb5.3
B17A L&G Farms, Che 80.73 332 ⇑P **P 06 30 27.6 -0.8**
baz=81,SNR=23
PTEO Sao Teotonio 80.73 43 eP **P 06 30 31.3 +2.6**
comp=Z,190nm,1.6s,mb5.5
C16A Fuhringer Ranc 80.78 331 ⇑P **P 06 30 28.2 -0.4**
baz=81,SNR=28
A18A Metzger Ranch, 80.80 333 ⇑P **P 06 30 28.0 -0.8**
baz=81,SNR=28
CHMT Chamberlain Mo 80.81 330 eP **P 06 30 29.3 +0.5**
E13A Victor 80.91 329 ⇓P **P 06 30 29.7 +0.3**
baz=81,SNR=60
J08A Circle Bar Ran 80.93 324 ⇑P **P 06 30 29.8 +0.2**
baz=81,SNR=32
F12A Elk City 80.94 328 ⇓P **P 06 30 29.5 0.0**
baz=81,SNR=19
MOD Modoc 80.97 322 eP **P 06 30 30.2 +0.4**
comp=Z,15nm,0.8s,mb4.7
PBDV Barranco-do-Ve 81.05 44 eP **P 06 30 31.3 +0.9**
comp=Z,88nm,1.4s,mb5.2
D14A Greenough 81.05 330 ⇑P **P 06 30 30.1 0.0**
baz=81,SNR=14
MSO Missoula 81.08 329 eP **P 06 30 30.4 +0.2**
comp=Z,4.9nm,0.8s,mb4.2
MSO epP pP 06 31 22.0 +0.1
BOSA Boshof 81.14 117 P **P 06 30 31.7 +0.5**
comp=Z,7.2nm,0.6s,mb4.5,baz=234,slow=3.2,SNR=13
BOSA pP pP 06 31 21.9 -0.9
comp=Z,4.7nm,1.0s,baz=263,slow=4.8,SNR=3.3
C15A Salmond Ranch, 81.15 331 ⇓P **P 06 30 30.8 +0.2**
baz=81,SNR=79
SLMT Seeley Lake 81.17 330 eP **P 06 30 30.7 0.0**
SLMT epP pP 06 31 22.7 +0.3
A17A Triple J Farms 81.18 332 ⇓P **P 06 30 30.2 -0.5**
baz=81,SNR=45
PCVE Castro Verde 81.22 43 eP **P 06 30 31.9 +0.7**
comp=Z,54nm,0.9s,mb5.2
B16A M & M Farms, S 81.22 331 ⇓P **P 06 30 30.1 -0.9**
baz=81
PVAQ Vaqueiros 81.28 44 eP **P 06 30 32.1 +0.5**
comp=Z,79nm,1.7s,mb5.1
BMO Blue Mountains 81.34 326 eP **P 06 30 31.3 -0.4**
comp=Z,25nm,1.1s,mb4.8
BMO epP pP 06 31 24.8 +1.4
WDC Whiskeytown Da 81.41 320 eP **P 06 30 30.4 -1.8**
comp=Z,19nm,1.4s,mb4.5
WDC Whiskeytown Da 81.41 320 eP **P 06 30 30.4 -1.8**
WDC pmax pmax
comp=Z,19nm,1.4s,mb4.5
D13A Huson 81.51 329 ⇑P **P 06 30 32.4 -0.1**
baz=82,SNR=28
EGRO El Granado 81.51 44 P **P 06 30 33.2 +0.4**
comp=Z,71nm,0.8s,mb5.3
B15A Bradely Ranch, 81.53 331 ⇑P **P 06 30 31.7 -0.9**
baz=82,SNR=17
PBEJ Beja 81.56 43 eP **P 06 30 34.4 +1.4**
comp=Z,43nm,1.1s,mb5.0
SWMT Swartz Lake 81.59 330 eP **P 06 30 33.0 0.0**
SWMT epP pP 06 31 26.0 +1.3
C14A Swan Lake 81.67 330 ⇓P **P 06 30 33.4 +0.1**
baz=82
EVO Evora 81.77 43 eP **P 06 30 33.2 -0.9**
comp=Z,86nm,1.1s,mb5.0
EVO eMLR MLR
comp=Z,95nm,19.8s
EVO Evora 81.77 43 eP **P 06 30 34.6 +0.5**
comp=Z,40nm,1.8s,mb4.7
K05A Summer Lake 81.84 323 ⇓P **P 06 30 34.7 +0.3**
baz=82,SNR=31
YBMT Yellow Bay 81.86 330 eP **P 06 30 34.4 +0.1**
YBMT epP pP 06 31 27.2 +1.1
JTMT Jette 81.90 330 eP **P 06 30 34.6 +0.1**
JTMT epP pP 06 31 25.2 -1.1
I07A Izee 81.97 325 ⇑P **P 06 30 35.2 +0.2**
baz=82,SNR=18
C13A Hot Springs 81.99 330 ⇓P **P 06 30 35.0 0.0**
baz=82,SNR=32
F10A Beach Ranch, E 82.07 327 ⇓P **P 06 30 35.3 -0.2**
baz=82,SNR=35
A15A Johnson Ranch, 82.09 331 ⇓P **P 06 30 34.5 -1.1**
baz=82
EMIN Mina Concepcio 82.17 44 P **P 06 30 36.7 +0.5**
comp=Z,92nm,0.9s,mb5.4
ESPR Espera 82.17 45 P **P 06 30 36.9 +0.7**
comp=Z,87nm,0.9s,mb5.4
PBAR Barrancos 82.17 43 eP **P 06 30 36.5 +0.3**
comp=Z,49nm,1.7s,mb4.9
PTOM Tomar 82.18 42 eP **P 06 30 37.2 +1.0**
comp=Z,130nm,1.2s,mb5.4
EJIF Jimena Fronter 82.19 45 P **P 06 30 38.1 +1.8**
comp=Z,42nm,0.9s,mb5.1
EJIF Jimena Fronter 82.19 45 P **P 06 30 38.1 +1.8**
EJIF pmax pmax
comp=Z,42nm,0.9s,mb5.1
BSMT Bassoo Peak 82.21 330 eP **P 06 30 36.2 +0.1**
BSMT epP pP 06 31 28.9 +0.9
PESTR Estremoz 82.24 42 eP **P 06 30 38.2 +1.7**
comp=Z,49nm,1.3s,mb5.0
YBH Yreka Blue Hor 82.24 321 eP **P 06 30 35.0 -1.5**
comp=Z,8.8nm,1.3s,mb4.2
YBH Yreka Blue Hor 82.24 321 eP **P 06 30 35.0 -1.5**
YBH pmax pmax
comp=Z,9.0nm,1.3s
KHMM Horse Mountain 82.30 320 eP **P 06 30 37.4 +0.5**
comp=Z,24nm,1.3s,mb4.7
A14A Double T Ranch 82.40 331 ⇑P **P 06 30 36.2 -0.9**
baz=83,SNR=9.9
C12B Naegeli Ranch, 82.43 329 ⇓P **P 06 30 37.0 -0.4**
baz=83,SNR=16
B13A Whitefish 82.44 330 ⇑P **P 06 30 36.9 -0.4**
baz=83,SNR=9.8
G08A Pilot Rock 82.50 326 ⇑P **P 06 30 37.5 -0.2**
baz=83,SNR=17
EBAD Badajoz 82.53 43 P **P 06 30 38.5 +0.4**
comp=Z,57nm,0.8s,mb5.3
LNOR Lincton Mounta 82.54 326 eP **P 06 30 36.8 -1.1**
FFC Flin Flon 82.58 340 eP **P 06 30 37.1 -0.8**
comp=Z,7.4nm,1.1s,mb4.3
FFC epP pP 06 31 26.8 -3.0
FFC Flin Flon 82.58 340 i P **P 06 30 38.0 +0.1**
WALA Waterton Lakes 82.68 331 eP **P 06 30 38.1 -0.5**
comp=Z,0.5nm,0.9s
PMRV Marv??o 82.70 42 eP **P 06 30 38.9 0.0**
comp=Z,38nm,1.5s,mb4.9
LBTB Lobatse 82.70 114 eP **P 06 30 39.1 -0.2**
comp=Z,114nm,2.0s,mb5.2
LBTB epP pP 06 31 28.9 -2.3
LBTB Lobatse 82.70 114 eP **P 06 30 39.1 -0.3**
LBTB e*PP pP 06 31 28.9 -2.3
LBTB pmax pmax
comp=Z,114nm,2.0s,mb5.3
A13A Flathead Natio 82.82 330 ⇓P **P 06 30 39.3 +0.1**
baz=83
MAW Mawson 82.84 163 eP **P 06 30 38.9 -0.4**
comp=Z,3.9nm,0.9s,mb4.1
MAW epP pP 06 31 30.8 -0.3
MAW Mawson 82.84 163 P **P 06 30 38.7 -0.6**
comp=Z,11nm,0.7s,mb4.7,baz=190,slow=5.7,SNR=21
MAW pP pP 06 31 30.1 -1.0
comp=Z,7.3nm,0.8s,baz=238,slow=9.8,SNR=4.6
MAW Mawson 82.84 163 eP **P 06 30 38.9 -0.4**
MAW e*PP pP 06 31 30.8 -0.3
MAW pmax pmax
comp=Z,4.0nm,0.9s
VIPM Ingram Point 82.86 324 P **P 06 30 40.2 +0.7**
PCBR Castelo Branco 82.89 42 eP **P 06 30 40.8 +0.9**
comp=Z,30nm,1.5s,mb4.8
C11A Tepee Creek (N 82.90 329 ⇓P **P 06 30 39.3 -0.5**
baz=83
E09A Wood Farm, Sta 82.91 327 ⇓P **P 06 30 39.7 -0.1**
baz=83
HUMO Hull Mountain 82.93 322 eP **P 06 30 39.1 -0.9**
comp=Z,53nm,2.3s,mb4.9
B12A Libby 83.03 330 ⇑P **P 06 30 40.1 -0.2**
baz=83
ECAB El Cabril 83.15 44 P **P 06 30 38.9 -2.4**
comp=Z,51nm,1.6s,mb5.0
PVIS Viseu 83.16 41 eP **P 06 30 42.1 +0.9**
comp=Z,54nm,1.7s,mb5.0
MTE Manteigas 83.19 41 eP **P 06 30 42.1 +0.7**
comp=Z,64nm,1.9s,mb5.0
MTE Manteigas 83.19 41 eP **P 06 30 41.8 +0.4**
comp=Z,32nm,0.9s,mb5.0
TAM Tamanrasset 83.33 62 eP **P 06 30 43.0 +0.4**
comp=Z,53nm,1.1s,mb5.2
TAM epP pP 06 31 32.8 -1.7
TAM Tamanrasset 83.33 62 eP **P 06 30 43.0 +0.5**
TAM e*PP pP 06 31 32.8 -1.7
TAM pmax pmax
comp=Z,53nm,1.1s,mb5.2
E08A Dider Farm, El 83.36 327 ⇓P **P 06 30 41.5 -0.6**
baz=84
A12A Yaak River Ran 83.39 330 ⇑P **P 06 30 41.7 -0.5**
baz=84,SNR=7.6
F07A Phinny Hill Vi 83.41 326 ⇑P **P 06 30 42.7 +0.3**
baz=84
ELOJ Sierra Loja 83.45 45 P **P 06 30 43.4 +0.6**
comp=Z,44nm,1.2s,mb5.1
ELOJ Sierra Loja 83.45 45 P **P 06 30 43.4 +0.6**
ELOJ pmax pmax
comp=Z,44nm,1.2s,mb5.1
HAWA Hanford 83.53 326 eP **P 06 30 43.3 +0.3**
comp=Z,18nm,0.8s,mb4.9
HAWA epP pP 06 31 36.4 +1.5
RSW Rattlesnake Hi 83.56 326 eP **P 06 30 43.3 +0.2**
RSW epP pP 06 31 36.1 +1.0
ELUQ Luque 83.61 45 P **P 06 30 44.5 +0.9**
comp=Z,177nm,1.3s,mb5.6
ERON Agron 83.61 46 P **P 06 30 43.5 -0.1**
comp=Z,9.3nm,0.7s,mb4.6
PVRL Vila Real 83.61 40 eP **P 06 30 44.8 +1.3**
comp=Z,66nm,1.7s,mb5.1
NEW Newport 83.61 329 eP **P 06 30 42.1 -1.2**
comp=Z,4.5nm,0.8s,mb4.2
NEW Newport 83.61 329 eP **P 06 30 42.1 -1.2**
NEW pmax pmax
comp=Z,5.0nm,0.8s
D08A Wollman Farm, 83.67 327 ⇑P **P 06 30 43.4 -0.3**
baz=84,SNR=11
PCAB Cabril 83.69 40 eP **P 06 30 44.5 +0.6**
comp=Z,67nm,1.8s,mb5.1
EADA Adamuz 83.75 44 P **P 06 30 44.4 +0.1**
comp=Z,20nm,0.8s,mb4.9
ELOB Lobios 83.76 40 P **P 06 30 44.2 0.0**
comp=Z,57nm,1.2s,mb5.2
OD2 Odessa Site #2 83.79 327 eP **P 06 30 43.9 -0.3**
OD2 epP pP 06 31 35.0 -1.3
E07A Sunnyside 83.81 326 ⇑P **P 06 30 44.2 -0.1**
baz=84
H04A Detroit Lake 83.82 324 ⇑P **P 06 30 43.7 -0.8**
baz=84
C09A Chrisman Ranch 83.85 328 ⇑P **P 06 30 44.3 -0.3**
baz=84,SNR=25
EPLA Plasencia 83.89 42 P **P 06 30 44.5 -0.5**
comp=Z,135nm,1.2s,mb5.5
EPLA Plasencia 83.89 42 P **P 06 30 44.5 -0.5**
EPLA pmax pmax
comp=Z,135nm,1.2s,mb5.5
KEBM Edson Butte 83.89 321 eP **P 06 30 46.0 +1.0**
comp=Z,39nm,1.0s,mb5.1
ECOG Cogollos-Vega 83.91 46 P **P 06 30 45.9 +0.7**
comp=Z,7.4nm,0.6s,mb4.6
ECOG Cogollos-Vega 83.91 46 P **P 06 30 45.9 +0.8**
ECOG pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
MVO Moncorvo 83.96 41 eP **P 06 30 46.2 +0.9**
comp=Z,69nm,1.4s,mb5.2
MVO Moncorvo 83.96 41 P **P 06 30 45.5 +0.3**
FCC Fort Churchill 84.00 346 eP **P 06 30 45.2 +0.1**
comp=Z,0.7nm,0.7s,mb3.5
EBER Berja 84.15 46 P **P 06 30 46.3 0.0**
comp=Z,14nm,0.9s,mb4.7
EBAN Banos Encina 84.26 45 P **P 06 30 47.3 +0.4**
comp=Z,85nm,1.0s,mb5.4
EBAN Banos Encina 84.26 45 P **P 06 30 47.3 +0.4**
EBAN pmax pmax
comp=Z,85nm,1.0s,mb5.4
PBRG Braganca 84.51 41 eP **P 06 30 49.0 +1.0**
comp=Z,51nm,1.4s,mb5.1
EQES Quesada 84.53 45 P **P 06 30 47.8 -0.4**
comp=Z,89nm,1.3s,mb5.3
ECAL Calabor 84.59 40 P **P 06 30 48.5 +0.1**
comp=Z,56nm,1.3s,mb5.1
TBM Table Mountain 84.60 326 P **P 06 30 48.6 +0.3**
WTV Waterville 84.62 327 P **P 06 30 48.2 -0.2**
ERUA La Rua 84.62 40 P **P 06 30 48.4 -0.2**
comp=Z,33nm,1.2s,mb4.9
ERUA La Rua 84.62 40 P **P 06 30 48.4 -0.2**
ERUA pmax pmax
comp=Z,33nm,1.2s,mb4.9
ENIJ Nijar 84.65 47 P **P 06 30 49.3 +0.5**
comp=Z,9.4nm,0.6s,mb4.7
ENIJ Nijar 84.65 47 P **P 06 30 49.3 +0.5**
ENIJ pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
PAB San Pablo 84.68 43 eP **P 06 30 49.2 +0.3**
comp=Z,71nm,1.1s,mb5.3
PAB epP pP 06 31 39.4 -1.7
PAB San Pablo 84.68 43 eP **P 06 30 49.3 +0.4**
PAB e*PP pP 06 31 39.4 -1.6
PAB pmax pmax
comp=Z,71nm,1.1s,mb5.3
ETW Entiat 84.75 327 P **P 06 30 48.9 -0.2**
F04A Amboy 84.75 325 ⇑P **P 06 30 48.6 -0.6**
baz=85
B08A Colville Reser 84.75 328 ⇓P **P 06 30 48.0 -1.0**
baz=85,SNR=5.4
EHUE Huescar 84.85 46 P **P 06 30 49.4 -0.4**
comp=Z,18nm,0.8s,mb4.8
EHUE Huescar 84.85 46 P **P 06 30 49.4 -0.4**
EHUE pmax pmax
comp=Z,18nm,0.8s,mb4.8
LON Longmire 84.95 325 eP **P 06 30 49.0 -1.1**
comp=Z,71nm,2.4s,mb5.0
LON Longmire 84.95 325 eP **P 06 30 49.0 -1.1**
LON pmax pmax
comp=Z,71nm,2.4s,mb5.0
ESDC Sonseca Array 85.00 43 P **P 06 30 51.0 +0.5**
comp=Z,54nm,1.1s,mb5.2
ESDC Sonseca Array 85.00 43 P **P 06 30 51.5 +1.0**
comp=Z,17nm,0.9s,mb4.8,baz=238,slow=4.7,SNR=49
ESDC pP pP 06 31 41.4 -1.2
comp=Z,5.6nm,0.9s,baz=234,slow=4.6,SNR=3.0
ESLA Sonseca Array 85.00 43 eP **P 06 30 51.7 +1.1**
comp=Z,16nm,1.1s,mb4.7
ESLA epP pP 06 31 41.0 -1.6
D05A Enumclaw 85.33 326 ⇓P **P 06 30 51.2 -0.7**

baz=86,SNR=5.1
EVIA Vianos 85.36 45 P **P** 06 30 52.5 +0.2
comp=Z,23nm,0.8s,mb5.0
EVIA Vianos 85.36 45 P **P** 06 30 52.5 +0.1
EVIA pmax pmax
comp=Z,23nm,0.8s,mb5.0
GUD Guadarrama 85.42 43 P **P** 06 30 53.3 +0.7
comp=Z,43nm,1.2s,mb5.0
GUD Guadarrama 85.42 43 P **P** 06 30 53.3 +0.7
GUD pmax pmax
comp=Z,43nm,1.2s,mb5.0
EDM Edmonton 85.50 334 *eP* **P** 06 30 51.3 -1.3
EDM *epP* pP 06 31 42.3 -2.5
RPW Rockport 85.90 327 *eP* **P** 06 30 53.6 -1.2
RPW *epP* pP 06 31 47.3 +0.3
B06A Marblemount 85.93 327 ⇑P **P** 06 30 53.6 -1.3
baz=86,SNR=6.2
JCW Jim Creek 85.95 327 *eP* **P** 06 30 53.7 -1.3
JCW *epP* pP 06 31 46.6 -0.6
ETOB Tobarra 85.99 45 P **P** 06 30 55.2 -0.3
comp=Z,74nm,1.2s,mb5.3
A05A Maple Falls 86.55 327 ⇓P **P** 06 30 56.8 -1.1
baz=87,SNR=8.3
ETOR Torete 86.85 43 P **P** 06 30 59.0 -0.5
comp=Z,20nm,1.0s,mb4.8
ETOR pP pP 06 31 45.4 -6.5
ETOR Torete 86.85 43 P **P** 06 30 59.1 -0.5
ETOR *PP pP 06 31 45.4 -6.5
ETOR pmax pmax
comp=Z,20nm,1.0s,mb4.8
ECHE Chera 86.88 45 P **P** 06 31 00.5 +0.7
comp=Z,16nm,0.8s,mb4.8
ECHE pP pP 06 31 47.5 -4.6
ECHE Chera 86.88 45 P **P** 06 31 00.5 +0.7
ECHE *PP pP 06 31 47.5 -4.6
ECHE pmax pmax
comp=Z,16nm,0.8s,mb4.8
PGC Sidney 87.02 326 *eP* **P** 06 30 59.3 -0.9
comp=Z,3.6nm,1.3s,mb3.9
LSZ Lusaka 88.59 106 *eP* **P** 06 31 09.4 +0.9
comp=Z,36nm,1.3s,mb5.0
LSZ *epP* pP 06 31 59.9 -1.1
LSZ Lusaka 88.59 106 *eP* **P** 06 31 09.4 +0.9
LSZ *e*PP pP 06 31 59.9 -1.1
LSZ pmax pmax
comp=Z,36nm,1.3s,mb5.0
SJPF Ste Jean 88.61 42 *eP* **P** 06 31 08.3 +0.5
comp=Z,45nm,1.3s,mb4.8
SJPF Ste Jean 88.61 42 *eP* **P** 06 31 08.3 +0.5
comp=Z,23nm,1.3s,mb4.8
SJPF Ste Jean 88.61 42 *eP* **P** 06 31 08.3 +0.5
SJPF pmax pmax
comp=Z,23nm,1.3s,mb4.8
ETSF Etsaut 88.91 42 *eP* **P** 06 31 09.8 +0.6
comp=Z,18nm,0.9s,mb4.6
ETSF Etsaut 88.91 42 *eP* **P** 06 31 09.8 +0.6
comp=Z,8.9nm,0.9s,mb4.6
ETSF Etsaut 88.91 42 *eP* **P** 06 31 09.8 +0.6
ETSF pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
EPF Esparros 89.54 42 *eP* **P** 06 31 12.6 +0.4
QUIF Quistinic 90.12 37 *eP* **P** 06 31 14.5 -0.3
ROSF Rostrenen 90.30 37 *eP* **P** 06 31 16.3 +0.7
comp=Z,125nm,1.5s,mb5.2
ROSF Rostrenen 90.30 37 *eP* **P** 06 31 16.3 +0.7
comp=Z,62nm,1.5s,mb5.2
ROSF Rostrenen 90.30 37 *eP* **P** 06 31 16.3 +0.7
ROSF pmax pmax
comp=Z,62nm,1.5s,mb5.2
LFF La Frestale 90.78 41 *eP* **P** 06 31 17.4 -0.5
MTLF Montolieu 90.88 43 *eP* **P** 06 31 18.7 +0.3
MFF Saint Martin d 91.13 39 *eP* **P** 06 31 19.8 +0.3
comp=Z,33nm,1.0s,mb4.9
MFF Saint Martin d 91.13 39 *eP* **P** 06 31 19.8 +0.3
comp=Z,17nm,1.0s,mb4.9
MFF Saint Martin d 91.13 39 *eP* **P** 06 31 19.8 +0.3
MFF pmax pmax
comp=Z,17nm,1.0s,mb4.9
RJF Les Rejaudoux 91.44 41 *eP* **P** 06 31 20.7 -0.3
RJF *e*MLR MLR
comp=Z,107nm,19.2s
RJF Les Rejaudoux 91.44 41 *eP* **P** 06 31 20.7 -0.3
RJF MLR MLR
comp=Z,110nm,19.3s
CAF Calviac 91.58 41 *eP* **P** 06 31 21.8 +0.2
GRR Gorron 91.67 37 *eP* **P** 06 31 21.8 -0.1
comp=Z,33nm,1.0s,mb4.9
GRR Gorron 91.67 37 *eP* **P** 06 31 21.8 -0.1
comp=Z,17nm,1.0s,mb4.9
GRR Gorron 91.67 37 *eP* **P** 06 31 21.8 -0.1
GRR pmax pmax
comp=Z,17nm,1.0s,mb4.9
KEST Kesra 92.16 52 P **P** 06 31 25.3 +0.8
KEST Kesra 92.16 52 P **P** 06 31 25.3 +0.8
comp=Z,2.1nm,0.8s,mb4.1,baz=195,slow=1.8,SNR=6.4
LASF Ste Croix 92.27 43 *eP* **P** 06 31 24.4 -0.4
comp=Z,29nm,1.4s,mb4.7
TCF Toulx Ste Croi 92.36 40 *eP* **P** 06 31 25.2 0.0
YKA Yellowknife Ar 92.76 340 P **P** 06 31 25.9 -0.7
comp=Z,4.6nm,0.6s,mb4.7,baz=132,slow=4.4,SNR=49
YKA pP pP 06 32 17.5 -1.8
comp=Z,9.5nm,0.8s,baz=128,slow=4.4,SNR=7.1
YKA Yellowknife Ar 92.76 340 P **P** 06 31 25.9 -0.7
YKA *PP pP 06 32 17.5 -1.8
VIVF Saint-Julien-l 93.16 42 *eP* **P** 06 31 28.8 -0.1
AVF Avril sur Loir 93.29 40 *eP* **P** 06 31 28.8 -0.7
SMRF Simiane la Rot 93.31 44 *eP* **P** 06 31 29.2 -0.4
SMF Signal de Mont 93.52 41 *eP* **P** 06 31 30.0 -0.5
SSF Saint Saulge 93.52 40 *eP* **P** 06 31 30.0 -0.5
LMR La Mourre 93.61 44 *eP* **P** 06 31 31.1 +0.1
comp=Z,33nm,1.2s,mb4.9
LMR La Mourre 93.61 44 *eP* **P** 06 31 31.1 +0.1
comp=Z,16nm,1.2s,mb4.9
LMR La Mourre 93.61 44 *eP* **P** 06 31 31.1 +0.1
LMR pmax pmax
comp=Z,16nm,1.2s,mb4.9
FRF La Foret Royal 93.81 44 *eP* **P** 06 31 32.2 +0.3
LOR Lormes 93.83 40 *eP* **P** 06 31 31.6 -0.3
LOR *e*MLR MLR
comp=Z,69nm,22.8s
LOR Lormes 93.83 40 *eP* **P** 06 31 31.6 -0.3
LOR MLR MLR
comp=Z,70nm,22.8s
ORIF Oris-en-Rattie 93.95 43 *eP* **P** 06 31 32.3 -0.2
ORIF *e*MLR MLR
comp=Z,114nm,19.5s
MBDF Montbardon 94.42 43 *eP* **P** 06 31 34.2 -0.5
comp=Z,4.6nm,0.7s,mb4.3
MBDF Montbardon 94.42 43 *eP* **P** 06 31 34.2 -0.5
comp=Z,2.3nm,0.7s,mb4.3
MBDF Montbardon 94.42 43 *eP* **P** 06 31 34.2 -0.5
MBDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
SBF Sospel 94.45 44 *eP* **P** 06 31 35.1 +0.2
LPL La Plagne 94.76 43 *eP* **P** 06 31 37.0 +0.8
comp=Z,9.4nm,0.7s,mb4.7
LPL La Plagne 94.76 43 *eP* **P** 06 31 37.0 +0.8
comp=Z,4.7nm,0.7s,mb4.7
LPL La Plagne 94.76 43 *eP* **P** 06 31 37.0 +0.8
LPL pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
LPG La Plagne 94.76 43 *eP* **P** 06 31 37.2 +1.0
PGF Pioggiola 94.90 46 *eP* **P** 06 31 37.5 +0.6
GIVF Givet 95.75 38 *eP* **P** 06 31 40.0 -0.6
DLBC Dease Lake 96.00 332 *eP* **P** 06 31 41.1 -0.4
FETA Feichten 97.91 42 ⇑ *i*Pdiff **P** 06 31 51.7 +1.3
comp=Z,6.3nm,1.1s,mb4.9
WTTA Wattenberg 98.57 42 ⇑ *i*Pdiff **P** 06 31 55.1 +1.7
comp=Z,15nm,1.7s,mb5.0
CLL Collm 100.97 39 *ep*Pdif 06 32 56.0
CLL *eP* PP 06 36 16.0 +0.6
CLL *e*SKSac SKSac 06 42 26.0 +4.0
CLL *e*SP SP 06 44 51.0 -4.3
CLL *e*PPS 06 46 14.0
CLL *es*SS SS 06 50 28.0 +0.6
CLL *es*SS 06 51 48.0
CLL *e*PPPrev 06 56 19.0
ILAR Eielson Array 105.99 334 PP PP 06 36 54.2 +2.0
comp=Z,1.4nm,0.9s,baz=119,slow=5.1,SNR=8.8
AKASG Malin Array Be 110.63 43 PP PP 06 37 21.0 -5.3
comp=Z,0.3nm,0.4s,baz=254,slow=8.8,SNR=6.4
FINES FINESS Array B 110.68 31 PP PP 06 37 21.2 -5.1
comp=Z,5.6nm,1.0s,baz=248,slow=10,SNR=6.0
BRTR Keskin Array B 111.61 55 PP PP 06 37 30.2 -3.4
comp=Z,0.2nm,0.4s,baz=316,slow=5.2,SNR=3.9

OBN Obninsk 115.56 38 *i* PKIKP PKPdf 06 36 55.0 -0.3
OBN *e* 06 37 46.8
OBN *i* 06 37 58.9
OBN *i* PS PS 06 47 20.4 -24
OBN *e*SS SS 06 53 54.2 +11
OBN pmax pmax
comp=Z,9.0nm,1.2s
OBN MLR MLR
comp=Z,100nm,19.0s
MOS Moscow 116.18 38 *e*PKIKP PKPdf 06 37 02.8 +6.3
KIV Kislovodsk 118.88 51 *d* /PKIKP PKPdf 06 37 02.4 +0.3
KIV *e* 06 38 26.8
KIV *i* PS PS 06 47 53.3 -21
KIV pmax pmax
comp=Z,10.0nm,1.1s
ARU Arti 127.68 35 *e*PKPdf PKPdf 06 37 19.3 +0.8
ARU Arti 127.68 35 *i* PKIKP PKPdf 06 37 19.0 +0.4
ARU 06 39 19.9
ASAR Alice Springs 130.05 205 PKP PKPdf 06 37 23.1 -1.1
comp=Z,3.8nm,0.8s,baz=153,slow=2.0,SNR=19
ASAR pPKP pPKPdf 06 38 17.8 -1.7
comp=Z,4.0nm,0.9s,baz=158,slow=2.5,SNR=5.6
ASAR SKPbc SKPbc 06 40 27.3 +0.6
comp=Z,1.4nm,0.8s,baz=151,slow=5.6,SNR=5.3
ASAR Alice Springs 130.05 205 PKIKP PKPdf 06 37 23.1 -1.1
ASAR 06 38 17.8
ABKAR Akbulak array 130.34 44 *e*PKPdf PKPdf 06 37 24.9 +1.0
BRVK Borovoye 135.23 36 ⇓ *i*PKIKP PKPdf 06 37 33.1 +0.2
BVAR Borovoye Array 135.30 36 PKP PKPdf 06 37 33.3 +0.2
comp=Z,2.6nm,0.6s,baz=292,slow=4.0,SNR=12
FITZ Fitzroy Crossi 138.00 198 *e*PKPdf PKPdf 06 37 39.9 +0.7
KURK Kurchatov 140.88 35 *e*PKPdf PKPdf 06 37 43.9 +0.6
KURK Kurchatov 140.88 35 ⇓ *i*PKIKP PKPdf 06 37 43.7 +0.3
EKS2 Erkin-Say 141.42 49 *e*PKPdf PKPdf 06 37 46.0 +1.4
AML Almayashu 141.53 50 *e*PKPdf PKPdf 06 37 46.8 +2.0
ZAA0 Zalesovo Array 141.82 27 *e*PKPdf PKPdf 06 37 42.1 -2.8
ZALV Zalesovo Beam 141.82 27 PKIKP PKPpre 06 37 40.0
comp=Z,4.6nm,0.6s,baz=322,slow=4.7,SNR=14
ZALV PKP PKPdf 06 37 45.1 +0.2
comp=Z,7.0nm,0.5s,baz=295,slow=2.8,SNR=20
ZALV pPKP pPKPdf 06 38 38.0 -2.3
comp=Z,1.8nm,0.3s,baz=339,slow=3.8,SNR=3.1
AAK Ala-Archa 141.93 49 *e*PKPdf PKPdf 06 37 45.0 -0.5
TKM2 Tokmak 2 142.59 48 *e*PKPdf PKPdf 06 37 44.3 -2.4
KSH Kashi 143.97 53 *e*PKP PKPdf 06 37 47.0 -2.2
KSH *es*PKP 06 39 07.0
KSH *e*PKS 06 41 22.3
KSH *e*SKS SKSdf 06 44 34.9 -3.4
KSH AMB AMB
comp=Z,96nm,4.0s
KSH LR LR
comp=N,36nm,5.6s
KSH LR LR
comp=E,49nm,4.5s
KSH LR LR
comp=Z,47nm,4.6s
AJM Ajmer 144.58 75 *e*PKP PKPdf 06 37 49.5 -1.2
CLNS Chul'man 144.59 349 *e*PKIKP PKPdf 06 37 48.4 -1.3
CLNS pmax pmax
comp=N,4.0nm,1.0s
CLNS pmax pmax
comp=Z,17nm,1.1s
CLNS pmax pmax
comp=E,3.0nm,0.8s
MK31 Makanchi Array 145.06 38 *e*PKPdf PKPdf 06 37 51.5 +0.7
MKAR Makanchi Array 145.06 38 PKPbc PKPbc 06 37 51.5 +0.7
comp=E,28nm,0.8s,baz=314,slow=3.2,SNR=214
MKAR pPKPbc 06 38 43.9
comp=E,16nm,1.0s,baz=291,slow=3.4,SNR=5.1
PALK Pallekele 145.12 110 *i* PKP2 PKPab 06 37 53.7 +1.5
LATR Latur 145.31 90 *e*PKP PKPdf 06 37 51.1 -1.1
KHET Khetri 145.63 73 *e*PKP PKPdf 06 37 52.1 -0.4
AKL Akola 146.18 86 *e*PKP PKPdf 06 37 52.8 -0.7
AKL AMS AMS 07 14 35.0
comp=Z,229nm,18.3s
KUDL Kundal 146.23 73 *e*PKP PKPdf 06 37 52.3 -1.2
KKR Kurukshetra 146.44 69 *e*PKP PKPdf 06 37 53.1 -0.7
SMLA Simla 146.63 67 *e*PKP PKPdf 06 37 53.3 -0.8
SONA Sohna 146.75 72 *e*PKP PKPdf 06 37 53.6 -0.8
AYAN Aya Nagar 146.79 72 *e*PKP PKPdf 06 37 53.7 -0.7
AYAN *ex* x 06 38 45.0
AYAN AMS AMS 06 48 15.1
comp=Z,708nm,21.6s
NDI New Delhi 146.86 72 *e*PKP PKPdf 06 37 53.4 -1.1
NDI AMS AMS 07 14 51.4
comp=Z,201nm,23.6s
BHPL Bhopal 146.89 81 *e*PKP PKPdf 06 37 53.7 -1.1
BHPL AMb AMB 06 37 59.9
comp=Z,24nm,0.5s
HYB Hyderabad 146.92 92 *eP* PKPbc 06 37 58.5 +1.3
HYB *e* 06 38 51.0
HYB Hyderabad 146.92 92 *i* PKP PKPbc 06 37 58.5 +1.3
HYB *ep*PKP PKPdf 06 38 51.0 +0.7
DDI Dehra Dun 147.47 68 *e*PKP PKPdf 06 37 54.4 -1.1
KLP Kalpa 147.50 66 *e*PKP PKPdf 06 37 55.1 -0.4
KLP AMS AMS 06 49 18.9
comp=Z,274nm,20.2s
AGRA Agra 147.54 74 *e*PKP PKPdf 06 37 55.5 -0.2
AGRA AMS AMS 06 46 35.5
comp=Z,108nm,22.4s
ASAJ Asahikawa 147.64 319 PKPbc PKPbc 06 37 56.5 -1.8
comp=Z,26nm,1.0s,baz=341,slow=8.0,SNR=8.3
JOSI Joshimath 148.74 68 *e*PKP PKPdf 06 37 56.8 -0.8
JOSI AMS AMS 06 49 08.3
comp=Z,339nm,17.0s
MOY Mondy 149.25 15 *e*PKP2 PKPbc 06 38 03.3 +1.1
MOY pmax pmax
comp=Z,34nm,1.2s
KLR Kul'dur 149.54 336 *e*PKHKP PKPdf 06 37 57.8 -0.4
WMQ Urumqi 149.89 39 PKPbc PKPbc 06 38 04.9 +0.9
WMQ PKS 06 41 38.3
WMQ SKS SKSdf 06 44 48.8 +2.4
WMQ SS SS 07 00 42.5 +4.7
WMQ AMB AMB
comp=Z,120nm,6.2s
ZAK Zakamensk 150.97 13 *e*PKIKP PKPdf 06 38 00.7 +0.3
ZAK *e* 06 38 58.5
ZAK pmax pmax
comp=Z,5.0nm,1.0s
SONM Songino Array 154.01 11 PKP PKPdf 06 38 05.6 +0.6
comp=Z,2.2nm,0.8s,baz=240,slow=0.3,SNR=11
SONM PKPbc PKPbc 06 38 13.4 +0.2
comp=Z,4.5nm,0.8s,baz=309,slow=0.9,SNR=16
SONM PKPab PKPab 06 38 28.6 +1.2
comp=Z,6.0nm,0.9s,baz=324,slow=4.5,SNR=11
SONM pPKP pPKPdf 06 38 58.5 -1.9
comp=Z,1.3nm,0.8s,baz=318,slow=3.1,SNR=1.3
ULN Ulaanbaatar 154.09 10 *e*PKPdf PKPdf 06 38 05.4 +0.3
ULN *e*PKPab PKPab 06 38 28.5 +0.7
MJAR Matsushiro Arr 154.30 309 PKP PKPdf 06 38 04.7 -1.1
MJAR PKPbc PKPbc 06 38 12.6 -1.6
MJAR PKPab PKPab 06 38 28.8 -0.3
MJAR pPKPab pPKPab 06 39 21.4 -0.9
MJAR Matsushiro Arr 154.30 309 PKP PKPdf 06 38 04.7 -1.1
comp=Z,1.1nm,0.4s,baz=33,slow=2.9,SNR=4.2
MJAR PKPbc PKPbc 06 38 12.6 -1.6
comp=Z,3.1nm,0.8s,baz=187,slow=0.5,SNR=7.6
MJAR PKPab PKPab 06 38 28.8 -0.3
comp=Z,2.3nm,0.6s,baz=61,slow=2.0,SNR=7.8
MJAR pPKPab pPKPab 06 39 21.4 -0.9
comp=Z,2.5nm,0.8s,baz=64,slow=2.0,SNR=2.8
MAT Matsushiro 154.30 309 PKP PKPbc 06 38 13.7 -0.5
CN2 Changchun 156.44 338 *e*PKP PKPdf 06 38 06.3 -2.1
GTA Gaotai 159.47 31 *e*PKP PKPdf 06 38 12.8 +0.6
GTA pPKP pPKPdf 06 39 11.6 +3.8
GTA PKS 06 41 46.1
GTA PP PP 06 42 37.2 +4.4
GTA SKS SKSdf 06 44 53.9 -3.4
GTA SS SS 07 02 20.0 -0.8
GTA AMB AMB
comp=Z,50nm,7.7s
GTA LR LR
comp=N,68nm,13.4s
GTA LR LR
comp=E,91nm,15.5s
GTA LR LR
comp=Z,66nm,14.6s
SHL Shillong 160.10 77 *ex* PKPab 06 38 54.0 -0.6
KSRS Korea Array 160.45 323 PKP PKPdf 06 38 14.0 +0.6
comp=Z,1.0nm,0.7s,baz=269,slow=36,SNR=5.1
KSRS PKPab PKPab 06 38 55.4 -0.2
comp=Z,2.9nm,0.7s,baz=58,slow=4.6,SNR=6.8
KSRS pPKP pPKPdf 06 39 07.2 -1.8
comp=Z,1.9nm,1.0s,baz=71,slow=4.1,SNR=1.8

HHC Hu-ho-hao-te 161.55 4 *e*PKP PKPdf 06 38 11.5 -3.0
HHC PKPab PKPab 06 38 57.7 -2.5
HHC pPKP pPKPdf 06 39 09.8 -0.3
HHC sPKP 06 39 32.6
HHC PKS 06 41 43.5
HHC PP PP 06 42 42.6 -0.7
HHC SKS SKSdf 06 44 52.7 -6.3
HHC AMB AMB
comp=Z,64nm,5.7s
BJI Beijing 162.26 353 PKP PKPdf 06 38 06.6 -8.6
LZH Lanzhou 164.04 29 *e*PKP PKPdf 06 38 14.0 -3.0
LZH PKPab PKPab 06 39 09.5 -1.8
LZH pPKP pPKPdf 06 39 11.5 -1.2
LZH sPKP 06 39 36.5
CMAR Chiang Mai Arr 165.90 104 PKP PKPdf 06 38 19.2 +0.1
comp=Z,0.8nm,0.3s,baz=245,slow=2.7,SNR=5.1
CMAR PKPab PKPab 06 39 19.9 -0.3
comp=Z,4.7nm,0.8s,baz=258,slow=5.1,SNR=15
CD2 Chengdu 167.93 43 PKP PKPdf 06 38 18.1 -2.2
NJ2 Nanjing 169.24 334 *e*PKP PKPdf 06 38 17.2 -3.9
KMI Kunming 169.88 72 PKP PKPdf 06 38 19.2 -2.5
GYA Guiyang 172.66 55 *e*PKP PKPdf 06 38 21.3 -1.7
GYA pPKP pPKPdf 06 39 18.0 -0.8
GYA sPKP 06 39 38.7
GYA PKPab PKPab 06 39 51.2 +1.3
GYA PKS 06 41 51.0
GYA PP PP 06 43 42.6 +1.0
GYA AMB AMB
comp=Z,120nm,8.0s

DDA ***01*** *06:18:46.5,36.°97N×29.°25E,h7km±5km,Md3.0*
ISCJB ***01*** *06:18:47.2±0.7,36.°97N±0.°03×29.°21E±0.°04,h1km±7km, Error ellipse: s-maj=5.8km s-min=4.8km az=25.4*
ISK ***01*** *06:18:47.5,36.°99N×29.°20E,h10km,MD2.9*
CSEM ***01*** *06:18:47.2±0.2,36.°97N×29.°24E,h5km,MD3.0, Error ellipse: s-maj=5.4km s-min=4.7km az=29.0*
ISC 01 06:18:47.9±0.6, 36.°97N±0.°03×29.°22E±0.°04, h8km±5km, n25, σ 0°95/41, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.38**	**45**	*i* P		**Pg 06 18 53.2**	**-2.2**
GOLH				*i* S		**Sg 06 19 00.4**	**-0.1**
GOLH	**Golhisar**	**0.38**	**45**	*i* P		**Pg 06 18 53.2**	**-2.2**
GOLH				*i* S		**Sg 06 19 00.4**	**0.0**
TURN	**Turunc**	**0.50**	**259**	*i* P		**Pg 06 19 01.8**	**+4.2**
TURN				*i* S		**Sg 06 19 14.4**	**+10**
ELL	**Elmali**	**0.59**	**111**	*e*PG		**Pg 06 18 59.5**	**+0.1**
ELL				*e*SG		**Sg 06 19 09.3**	**+2.2**
ELL	**Elmali**	**0.59**	**111**	*e*Pg		**Pg 06 18 59.5**	**+0.1**
ELL				*e*Sg		**Sg 06 19 09.3**	**+2.2**
DNZL	**Cakiroluk**	**0.73**	**349**	*i* P		**Pg 06 19 00.7**	**-1.3**
DNZL				*i* S		**Sg 06 19 12.7**	**+1.2**
DNZL	**Cakiroluk**	**0.73**	**349**	*i* P		**Pg 06 19 00.7**	**-1.3**
DNZL				*i* S		**Sg 06 19 12.7**	**+1.1**
YER	**Yerkesik**	**0.77**	**283**	*e*PG		**Pg 06 19 02.4**	**-0.3**
YER				*e*SG		**Sg 06 19 13.4**	**+0.7**
YER	**Yerkesik**	**0.77**	**283**	*e*Pg		**Pg 06 19 02.4**	**-0.2**
YER				*e*Sg		**Sg 06 19 13.4**	**+0.8**
AKAS	**Kas**	**0.80**	**157**	*i* P		**Pg 06 19 02.4**	**-0.8**
AKAS				*i* S		**Sg 06 19 18.2**	**+4.6**
AKAS	**Kas**	**0.80**	**157**	*i* P		**Pg 06 19 02.4**	**-0.8**
DENT	**Denizli**	**0.80**	**349**	*e*PG		**Pg 06 19 02.8**	**-0.5**
DENT				*e*SG		**Sg 06 19 14.2**	**+0.5**
DENT	**Denizli**	**0.80**	**349**	*e*Pg		**Pg 06 19 02.8**	**-0.5**
DENT				*e*Sg		**Sg 06 19 14.2**	**+0.6**
AYDN	**Tasoluk**	**1.27**	**303**	*i* P		**Pn 06 19 12.2**	**+0.2**
AYDN				*i* S		**Sb 06 19 29.4**	**+0.8**
AYDN	**Tasoluk**	**1.27**	**303**	*i* P		**Pn 06 19 12.2**	**+0.3**
AYDN				*i* S		**Sb 06 19 29.4**	**+0.8**
DAT	**Datca**	**1.34**	**260**	*e*PN		**Pn 06 19 12.7**	**-0.1**
DAT	**Datca**	**1.34**	**260**	*e*Pn		**Pn 06 19 12.7**	**-0.1**
KHL	**Karahalli**	**1.37**	**10**	*e*PN		**Pn 06 19 13.1**	**-0.3**
KHL	**Karahalli**	**1.37**	**10**	*e*Pn		**Pn 06 19 13.1**	**-0.2**
KHAL	**Karahalli**	**1.42**	**9**	*i* P		**Pn 06 19 12.7**	**-1.2**
KHAL				*i* S		**Sn 06 19 33.4**	**+0.6**
KHAL	**Karahalli**	**1.42**	**9**	*i* P		**Pn 06 19 12.7**	**-1.2**
KHAL				*i* S		**Sn 06 19 33.4**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.51**	**70**	*e*PN		**Pn 06 19 15.9**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.51**	**70**	*e*Pn		**Pn 06 19 15.9**	**+0.7**
BODT	**Bodrum**	**1.53**	**274**	*e*PN		**Pn 06 19 14.7**	**-0.8**
BODT	**Bodrum**	**1.53**	**274**	*e*Pn		**Pn 06 19 14.7**	**-0.8**

BJI ***01*** *06:22:59.1,50.°02N×119.°27E,h31km,ML3.6/6*
BYKL 01 06:22:57.2±0.6, 49.°82N×118.°99E,
Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HIA	**Hailar**	**0.74**	**138**	*e*Pg	Pg	06 23 10.5	-0.8
HIA				*e*Sg	Sg	06 23 20.2	-0.7
CIT	**Chita**	**4.09**	**305**	*e*Sg	Sg	06 25 03.7	-4.7
CIT				Smax			
	289nm,0.3s						
KPC	**Khapcheranga**	**4.29**	**271**	*e*Pn	Pn	06 24 02.6	-1.0
KPC				*e*Pg	Pg	06 24 15.0	-4.3
KPC				*e*Sg	Sg	06 25 09.8	-5.1
KPC				Pmax			
	13nm,0.4s						
KPC				Smax			
	65nm,0.4s						
TUP	**Tupik**	**4.65**	**7**	*e*Sg	Sg	06 25 20.0	-6.5
TUP				Smax			
	88nm,0.5s						
TNDR	**Tynda**	**6.38**	**31**	*e*Sg	Sg	06 26 15.4	-6.5
YLYR	**Ulyunkhan**	**6.97**	**320**	*e*Pg	Pg	06 25 02.3	-8.4
YLYR				*e*Sg	Sg	06 26 32.6	-8.3
YLYR				Pmax			
	1.0nm,0.4s						
YLYR				Smax			
	130nm,1.1s						
CRS	**Chara**	**7.11**	**357**	*e*Sg	Sg	06 26 39.2	-6.0
CRS				Smax			
	40nm,1.0s						
KMO	**Kumora**	**7.69**	**325**	*e*Sg	Sg	06 26 55.2	-8.7
KMO				Smax			
	34nm,0.9s						
OGRR	**Ongureny**	**8.04**	**303**	*e*Sg	Sg	06 27 06.5	-8.7
OGRR				Smax			
	34nm,1.0s						

ISK ***01*** *06:24:01.8,38.°85N×26.°00E,h6km,MD3.3*
ISCJB ***01*** *06:24:02.7±0.6,38.°86N±0.°02×26.°04E±0.°04,h5km±4km, Error ellipse: s-maj=5.8km s-min=3.4km az=162.5*
DDA ***01*** *06:24:02.0,38.°87N×26.°05E,h7km±4km,Md2.9*
CSEM ***01*** *06:24:03.1±0.2,38.°86N×26.°03E,h8km,MD3.0/4, Error ellipse: s-maj=4.9km s-min=2.9km az=72.0*
THE ***01*** *06:24:03.5,38.°87N×26.°08E,h6km±1km,ML3.0/4, Error ellipse: s-maj=1.5km s-min=0.4km az=260.0*
ISC 01 06:24:03.3±0.6, 38.°86N±0.°02×26.°03E±0.°05, h8km±4km, n53, σ 0°74/73, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIGR	**SIGRI**	**0.37**	**339**	P		**Pg 06 24 11.1**	**+0.5**
SIGR				S		**Sg 06 24 16.4**	**+0.9**
SIGR	**SIGRI**	**0.37**	**339**	P		**Pg 06 24 11.1**	**+0.5**
SIGR				S		**Sg 06 24 16.4**	**+0.9**
PRK	**Paraskevi**	**0.42**	**26**	P		**Pg 06 24 11.4**	**-0.2**
PRK				S		**Sg 06 24 17.3**	**+0.1**
PRK	**Paraskevi**	**0.42**	**26**	P		**Pg 06 24 11.4**	**-0.2**
PRK				S		**Sg 06 24 17.3**	**+0.1**
CHOS	**Chios island**	**0.48**	**178**	P		**Pg 06 24 12.9**	**+0.4**
CHOS				S		**Sg 06 24 20.1**	**+1.3**
CHOS	**Chios island**	**0.48**	**178**	P		**Pg 06 24 12.9**	**+0.4**
CHOS				S		**Sg 06 24 20.1**	**+1.3**
URLA	**Izmir**	**0.67**	**138**	*i* P		**Pg 06 24 14.9**	**-1.3**
URLA				*i* S		**Sg 06 24 25.2**	**+0.3**
URLA	**Izmir**	**0.67**	**138**	*i* P		**Pg 06 24 14.9**	**-1.3**
URLA				*i* S		**Sg 06 24 25.2**	**+0.3**
AYVA	**Ayvalik**	**0.68**	**49**	*i* P		**Pg 06 24 15.3**	**-1.1**
AYVA				*i* S		**Sg 06 24 24.8**	**-0.4**
AYVA	**Ayvalik**	**0.68**	**49**	*i* P		**Pg 06 24 15.3**	**-1.1**
AYVA				*i* S		**Sg 06 24 24.8**	**-0.4**
BLCB	**Balcova**	**0.93**	**121**	*e*PG		**Pg 06 24 20.8**	**-0.2**
BLCB				*e*SG		**Sg 06 24 32.9**	**-0.2**
BLCB	**Balcova**	**0.93**	**121**	P		**Pg 06 24 20.6**	**-0.5**
BLCB				S		**Sg 06 24 33.5**	**+0.4**

BLCB	**Balcova**	**0.93**	**121**	*e*Pg		**Pg**	**06 24 20.8**	**-0.3**
BLCB				*e*Sg		**Sg**	**06 24 32.9**	**-0.2**
BLCB				S		**Sg**	**06 24 33.5**	**+0.4**
EZN	**Ezine**	**0.99**	**13**	*e*PG		**Pg**	**06 24 21.6**	**-0.6**
EZN				*e*SG		**Sg**	**06 24 35.4**	**+0.3**
EZN	**Ezine**	**0.99**	**13**	*e*Pg		**Pg**	**06 24 21.6**	**-0.7**
EZN				*e*Sg		**Sg**	**06 24 35.4**	**+0.3**
LIA	**Limnos Island**	**1.22**	**328**	P		**Pb**	**06 24 26.4**	**-0.3**
LIA	**Limnos Island**	**1.22**	**328**	P		**Pb**	**06 24 26.4**	**-0.3**
GADA	**Gvkgeada**	**1.33**	**356**	*e*PN		**Pn**	**06 24 26.9**	**-1.2**
GADA	**Gvkgeada**	**1.33**	**356**	*e*Pn		**Pn**	**06 24 26.9**	**-1.3**
AKS	**Akhisar**	**1.39**	**89**	*e*PN		**Pn**	**06 24 29.4**	**+0.4**
AKS	**Akhisar**	**1.39**	**89**	*e*Pn		**Pn**	**06 24 29.5**	**+0.5**
AKHS	**Akhisar**	**1.39**	**89**	*i* P		**Pn**	**06 24 28.2**	**-0.8**
AKHS				*i* S		**Sb**	**06 24 48.1**	**+0.7**
AKHS	**Akhisar**	**1.39**	**89**	*i* P		**Pn**	**06 24 28.2**	**-0.8**
AKHS				*i* S		**Sb**	**06 24 48.1**	**+0.6**
BALY	**Balya**	**1.51**	**54**	*i* P		**Pn**	**06 24 29.5**	**-1.2**
BALY				*i* S		**Sn**	**06 24 51.4**	**+0.8**
BALY	**Balya**	**1.51**	**54**	*i* P		**Pn**	**06 24 29.5**	**-1.2**
BALY				*i* S		**Sn**	**06 24 51.4**	**+0.8**
GELI	**Tayfur-Gelibol**	**1.57**	**12**	*e*PN		**Pn**	**06 24 31.6**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.57**	**12**	*e*Pn		**Pn**	**06 24 31.7**	**+0.2**
LPK	**Lapseki**	**1.61**	**20**	*e*PN		**Pn**	**06 24 32.1**	**+0.1**
LPK	**Lapseki**	**1.61**	**20**	*e*Pn		**Pn**	**06 24 32.2**	**+0.2**
BALB	**Balikesir**	**1.63**	**61**	*e*PN		**Pn**	**06 24 31.4**	**-0.9**
BALB	**Balikesir**	**1.63**	**61**	*e*Pn		**Pn**	**06 24 31.4**	**-0.9**
GONE	**Gonen-Balikesi**	**1.74**	**47**	*e*PN		**Pn**	**06 24 34.0**	**+0.2**
GONE	**Gonen-Balikesi**	**1.74**	**47**	*e*Pn		**Pn**	**06 24 34.0**	**+0.1**
APE	**Apeiranthos**	**1.83**	**193**	*e*PN		**Pn**	**06 24 33.9**	**-1.2**
APE	**Apeiranthos**	**1.83**	**193**	*e*Pn		**Pn**	**06 24 33.9**	**-1.2**
ERIK	**Erikli-Kesan**	**1.84**	**11**	*e*PN		**Pn**	**06 24 34.8**	**-0.4**
ERIK	**Erikli-Kesan**	**1.84**	**11**	*e*Pn		**Pn**	**06 24 34.8**	**-0.4**
ENEZ	**Enez**	**1.87**	**3**	*e*PN		**Pn**	**06 24 36.0**	**+0.4**
ENEZ	**Enez**	**1.87**	**3**	*e*Pn		**Pn**	**06 24 36.0**	**+0.4**
RKY	**Sarkoy-Tekirda**	**2.02**	**26**	*e*PN		**Pn**	**06 24 38.2**	**+0.4**
RKY	**Sarkoy-Tekirda**	**2.02**	**26**	*e*Pn		**Pn**	**06 24 38.2**	**+0.5**
ALN	**Alexandroupoli**	**2.03**	**0**	P		**Pn**	**06 24 36.9**	**-0.9**
ALN	**Alexandroupoli**	**2.03**	**0**	P		**Pn**	**06 24 36.9**	**-0.9**
KULA	**Kula-Manisa**	**2.09**	**99**	*e*PN		**Pn**	**06 24 38.8**	**+0.2**
KULA	**Kula-Manisa**	**2.09**	**99**	*e*Pn		**Pn**	**06 24 38.8**	**+0.2**
MFT	**Murefte**	**2.15**	**26**	*e*PN		**Pn**	**06 24 40.3**	**+0.9**
MFT	**Murefte**	**2.15**	**26**	*e*Pn		**Pn**	**06 24 40.3**	**+0.9**
KCTX	**Karacabey (Bur**	**2.28**	**51**	*e*PN		**Pn**	**06 24 41.7**	**+0.5**
KCTX	**Karacabey (Bur**	**2.28**	**51**	*e*Pn		**Pn**	**06 24 41.7**	**+0.5**
EDRB	**Edirne**	**3.03**	**10**	*e*PN		**Pn**	**06 24 52.2**	**+0.7**
EDRB	**Edirne**	**3.03**	**10**	*e*Pn		**Pn**	**06 24 52.2**	**+0.7**
YLV	**Yalova**	**3.09**	**56**	*e*PN		**Pn**	**06 24 53.8**	**+1.5**
YLV	**Yalova**	**3.09**	**56**	*e*Pn		**Pn**	**06 24 53.8**	**+1.5**

*IDC **01** 06:55:23.8±2.7, 15°.09N×123°.06E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/24, mbtmp4.0/5, MS2.9/1, Ms1 2.9/1, ms1mx2.3/34, Error ellipse: s-maj=54.3km s-min=23.7km az=22.0*

*ISCJB **01** 06:55:30.0±1.8, 15°.10N±0°.05×122°.73E±0°.10, h21km±17km, mb3.9/4, Error ellipse: s-maj=15.9km s-min=7.4km az=166.6*

*MAN **01** 06:55:30, 15°.08N×122°.71E, h30km, mb4.9, ML3.8, MS3.9*

ISC 01 06:55:27.5±1.5, 15°.09N±0°.04×122°.87E±0°.08, h2km±10km, n20, σ1°26/21, mb3.9/4, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POLP	**Polilio Island**	**0.97**	**248**	*e*P	**Pg**	**06 55 45.8**	**-0.3**
GQP	**Guinayangan**	**1.25**	**199**	⇑*i*P	**Pg**	**06 55 51.9**	**+0.4**
GQP				*i* S	**Sg**	**06 56 07.3**	**-0.4**
BALP	**Baler**	**1.40**	**297**	*e*P	**Pn**	**06 55 51.9**	**-2.2**
AUQP	**San Andres**	**1.77**	**186**	*e*P	**Pn**	**06 56 02.6**	**+3.5**
BOAC	**Boac**	**1.91**	**212**	*e*P	**Pn**	**06 56 03.4**	**+2.4**
PVCP	**Virac**	**1.94**	**140**	*e*P	**Pn**	**06 56 02.9**	**+1.4**
PALP	**Palanan**	**2.00**	**348**	*e*P	**Pn**	**06 56 03.0**	**+0.6**
CAUP	**Cauayan**	**2.10**	**331**	*e*P	**Pn**	**06 56 04.3**	**+0.7**
TGY	**Tagaytay City**	**2.12**	**242**	Pn	**Pn**	**06 56 03.0**	**-0.9**
	445nm,0.3s,baz=71,slow=2.1,SNR=18						
TGY				Sn	**Sn**	**06 56 32.5**	**+1.7**
	233nm,0.3s,baz=141,slow=23,SNR=15						
BCPH	**Baguio City Da**	**2.55**	**300**	⇑*i*P	**Pn**	**06 56 09.3**	**-0.6**
CVP	**Callao Caves**	**2.78**	**339**	*e*P	**Pn**	**06 56 13.5**	**+0.4**
OTRP	**Odiongan**	**2.84**	**197**	*e*P	**Pn**	**06 56 14.1**	**+0.3**
BOLP	**Bolinao**	**3.12**	**295**	*e*P	**Pn**	**06 56 17.7**	**0.0**
APYP	**Conner**	**3.16**	**331**	*e*P	**Pn**	**06 56 18.6**	**+0.3**
ABRA	**Dolores**	**3.28**	**321**	*e*P	**Pn**	**06 56 21.1**	**+1.3**
DAV	**Davao City (W)**	**8.41**	**161**	LR	LR	07 01 43.9	
	comp=Z,71nm,18.4s,baz=228,slow=46						
CMAR	**Chiang Mai Arr**	**23.14**	**282**	P	**P**	**07 00 33.5**	**-1.8**
	3.7nm,0.9s,mb3.8,baz=96,slow=7.2,SNR=11						
FITZ	**Fitzroy Crossi**	**33.10**	**175**	P	**P**	**07 02 00.7**	**-4.2**
	0.7nm,0.4s,mb3.9,baz=0.1,slow=10,SNR=7.8						
ASAR	**Alice Springs**	**40.01**	**164**	P	**P**	**07 03 00.3**	**-3.5**
	0.5nm,0.4s,mb3.6,baz=344,slow=7.7,SNR=8.0						
STKA	**Stephens Creek**	**50.04**	**159**	P	**P**	**07 04 20.2**	**-3.4**
	1.3nm,0.4s,mb4.3,baz=326,slow=3.6,SNR=3.5						

*ISCJB **01** 07:01:02.6±0.9, 22°.40S±0°.07×179°.74W±0°.10, h569km±13km, mb4.0/17, Error ellipse: s-maj=14.3km s-min=10.3km az=27.1*

*NEIC **01** 07:01:03.2±0.8, 22°.41S×179°.63W, h568km±10km, mb4.5/13, Error ellipse: s-maj=14.6km s-min=9.8km az=136.0*

*IDC **01** 07:01:06.1±2.6, 22°.38S×179°.76W, h593km±29km, mb3.4/11, mb1 3.6/11, mb1mx3.5/17, mbtmp3.4/11, Error ellipse: s-maj=18.6km s-min=14.8km az=1.0*

ISC 01 07:01:03.2±0.9, 22°.49S±0°.08×179°.65W±0°.10, h565km±12km, n36, σ1°10/33, mb4.0/17, 1C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.21**	**335**	*e*Pn	**P**	**07 02 36.6**	**+0.8**
	129nm,0.4s						
AFI	**Afiamalu**	**11.35**	**43**	*e*Pn	**P**	**07 03 33.2**	**-2.0**
	50nm,1.0s						
AFI				*e*S	**S**	**07 05 30.9**	**-9.3**
AFI	**Afiamalu**	**11.35**	**43**	P	**P**	**07 03 33.1**	**-2.2**
	4.1nm,0.3s,baz=337,slow=14,SNR=7.1						
AFI				S	**S**	**07 05 31.4**	**-8.7**
	3.2nm,0.3s,baz=254,slow=17,SNR=3.9						
URZ	**Urewera**	**15.96**	**189**	*e*P	**P**	**07 04 20.7**	**-0.8**
	23nm,0.7s						
URZ				S	**S**	**07 07 01.7**	**-1.6**
URZ	**Urewera**	**15.96**	**189**	P	**P**	**07 04 20.7**	**-0.8**
	5.1nm,0.3s,baz=343,slow=5.5,SNR=18						
URZ				S	**S**	**07 07 01.7**	**-1.6**
	2.0nm,0.3s,baz=60,slow=20,SNR=11						
KHZ	**Kahutara**	**20.67**	**194**	*e*P	**P**	**07 05 04.2**	**-0.2**
	95nm,1.4s						
RPZ	**Rata Peaks**	**22.52**	**198**	P	**P**	**07 05 22.4**	**+1.4**
	4.9nm,0.4s,mb4.5,baz=356,slow=15,SNR=8.0						
CTA	**Charters Tower**	**31.82**	**268**	P	**P**	**07 06 42.9**	**+0.3**
	5.6nm,0.7s,mb4.2,baz=101,slow=12,SNR=11						
CTAO	**Charters Tower**	**31.82**	**268**	*e*P	**P**	**07 06 42.8**	**+0.3**
	5.2nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**35.56**	**246**	*e*P	**P**	**07 07 15.5**	**+1.7**
	2.3nm,1.2s,mb3.6						
STKA	**Stephens Creek**	**35.56**	**246**	P	**P**	**07 07 15.0**	**+1.2**
	2.9nm,0.5s,mb4.0,baz=93,slow=14,SNR=5.5						
ASAR	**Alice Springs**	**42.60**	**259**	P	**P**	**07 08 10.8**	**+0.2**
	2.6nm,0.6s,mb3.9,baz=90,slow=8.1,SNR=28						
ASAR				PcP	PcP	07 09 49.8	+0.1
	0.9nm,0.5s,baz=93,slow=3.6,SNR=5.0						
ASAR				S	**S**	**07 13 51.5**	**-1.7**
	0.5nm,0.6s,baz=97,slow=14,SNR=7.0						
WRAB	**Tennant Creek**	**42.84**	**265**	*e*P	**P**	**07 08 11.6**	**-0.8**
	2.1nm,0.6s,mb3.8						
KAKA	**Kakadu**	**46.52**	**274**	*e*P	**P**	**07 08 39.7**	**-1.1**
FORT	**Forrest**	**47.12**	**248**	*e*P	**P**	**07 08 45.0**	**0.0**
	19nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**51.27**	**264**	P	**P**	**07 09 16.0**	**+0.2**
	1.9nm,0.4s,mb3.8,baz=70,slow=5.5,SNR=28						
SBA	**Scott Base**	**55.79**	**183**	*e*P	**P**	**07 09 50.6**	**+3.8**
	16nm,1.2s,mb4.1						
MBWA	**Marble Bar**	**55.95**	**259**	*e*P	**P**	**07 09 48.1**	**-0.7**
	11nm,0.4s,mb4.5						
QSPA	**South Pole Qui**	**67.58**	**180**	*e*P	**P**	**07 11 05.4**	**+2.0**
	14nm,0.7s,mb4.6						
QSPA	**South Pole Qui**	**67.58**	**180**	P	**P**	**07 11 05.8**	**+2.4**
	18nm,0.8s,mb4.7,baz=18,slow=1.2,SNR=114						
MAW	**Mawson**	**79.17**	**200**	P	**P**	**07 12 10.8**	**+1.2**
	2.7nm,0.5s,mb3.9,baz=133,slow=8.7,SNR=8.3						
ISA	**Isabella**	**81.82**	**46**	*e*P	**P**	**07 12 23.7**	**-0.1**
	9.2nm,1.6s,mb4.0						
CMB	**Columbia Colle**	**81.96**	**43**	*e*P	**P**	**07 12 24.5**	**+0.1**
	1.9nm,0.6s,mb3.7						
NVAR	**Mina Array Bea**	**83.52**	**44**	P	**P**	**07 12 33.2**	**+1.0**
	0.7nm,0.5s,mb3.5,baz=226,slow=8.5,SNR=5.3						
SYO	**Syowa Base**	**84.45**	**193**	⇑*e*P	**P**	**07 12 35.0**	**-1.4**
CMAR	**Chiang Mai Arr**	**89.34**	**290**	P	**P**	**07 13 01.5**	**+1.1**
	1.0nm,0.3s,mb4.2,baz=131,slow=3.1,SNR=8.8						
TXAR	**Lajitas Array**	**89.41**	**58**	P	**P**	**07 13 01.2**	**+0.7**
	1.0nm,0.9s,mb3.6,baz=210,slow=6.5,SNR=8.8						
TXAR				pP	pP	07 15 08.1	+4.3
	0.3nm,0.8s,baz=208,slow=5.1,SNR=3.7						
ILAR	**Eielson Array**	**90.59**	**13**	P	**P**	**07 13 03.9**	**-1.2**
	0.2nm,0.6s,mb3.2,baz=222,slow=4.0,SNR=4.7						
BVAR	**Borovoye Array**	**119.60**	**319**	PKP	PKPdf	07 18 47.8	-1.2
	1.1nm,0.4s,baz=55,slow=0.9,SNR=6.0						
PKME	**Peaks-Kenny Pk**	**119.77**	**50**	*e*PKPdf	PKPdf	07 18 45.3	-4.2
AKASG	**Malin Array Be**	**143.96**	**329**	PKP	PKPdf	07 19 32.4	-2.1
AKASG	**Malin Array Be**	**143.96**	**329**	PKP	PKPdf	07 19 32.4	-2.1
	1.6nm,0.4s,baz=42,slow=4.0,SNR=8.1						
BRTR	**Keskin Array B**	**146.97**	**309**	PKPbc	PKPbc	07 19 42.4	-0.6
	1.5nm,0.6s,baz=115,slow=4.4,SNR=6.4						
MMAI	**Mount Meron Ar**	**147.39**	**296**	PKPbc	PKPbc	07 19 44.7	+0.4
	2.1nm,0.4s,baz=94,slow=5.9,SNR=4.9						
TORD	**Torodi Ar. Bea**	**170.62**	**188**	PKP	PKPdf	07 20 06.2	-1.4
TORD				PKPab	PKPab	07 21 28.7	-0.3
TORD	**Torodi Ar. Bea**	**170.62**	**188**	PKP	PKPdf	07 20 06.2	-1.4
	165nm,0.3s,baz=186,slow=3.3,SNR=3.5						
TORD				PKPab	PKPab	07 21 28.7	-0.3
	1.3nm,0.7s,baz=184,slow=2.4,SNR=8.9						

*IDC **01** 07:01:31.0±2.5, 54°.29N×86°.63E, h0km, mb1 3.6/2, mb1mx3.2/25, mbtmp3.6/2, ML3.6/2, Error ellipse: s-maj=20.8km s-min=8.1km az=67.0*

*NNC **01** 07:01:33.1±5.8, 53°.94N×86°.56E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=45.0km s-min=32.7km az=55.0*

ISC 01 07:01:34.3±2.0, 54°.21N±0°.08×86°.5E±0°.2, h10km, n8, σ0°.88/13, 2C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**1.01**	**256**	P*g*	**Pg**	**07 01 51.2**	**-2.6**
	8.3nm,0.3s,baz=68,slow=16,SNR=49						
ZALV				Lg		07 02 09.4	
	12nm,0.3s,baz=73,slow=29,SNR=25						
KURK	**Kurchatov**	**5.94**	**237**	⇑Pn	**Pn**	**07 03 02.4**	**+0.2**
	7.7nm,0.7s						
KURK				⇓Sn	**Sn**	**07 04 11.0**	**+0.7**
	4.2nm,0.5s						
KURK				⇓Lg		07 04 44.7	
	26nm,0.9s						
KURBB	**Kurchatov Arra**	**6.04**	**237**	⇑Pn	**Pn**	**07 03 04.0**	**+0.3**
	2.2nm,0.6s						
KURBB				⇓Sn	**Sn**	**07 04 13.6**	**+0.8**
	3.0nm,0.6s						
KURBB				⇓Lg		07 04 49.8	
	7.8nm,0.8s						
MK31	**Makanchi Array**	**7.89**	**201**	Pn	**Pn**	**07 03 28.9**	**-0.1**
	1.3nm,0.5s,baz=29,slow=12,SNR=21						
MK31				Sn	**Sn**	**07 04 58.8**	**+0.6**
	1.7nm,0.5s,baz=23,slow=20,SNR=12						
MK31				Lg		07 05 38.3	
	21nm,1.2s,baz=27,slow=32,SNR=6.7						
MKAR	**Makanchi Array**	**7.89**	**201**	Pn	**Pn**	**07 03 29.0**	**+0.1**
	0.7nm,0.3s,baz=25,slow=13,SNR=23						
MKAR				Sn	**Sn**	**07 04 56.9**	**-1.3**
	1.4nm,0.3s,baz=21,slow=26,SNR=18						
MKAR				Lg		07 05 42.7	
	baz=152,slow=29,SNR=2.3						
BVA0	**Borovoye Array**	**9.64**	**269**	Pn	**Pn**	**07 03 53.7**	**+0.8**
	0.2nm,0.6s,baz=76,slow=16,SNR=8.1						
BVA0				Sn	**Sn**	**07 05 35.7**	**-5.4**
	0.9nm,0.8s,baz=76,slow=18,SNR=6.6						
BVAR	**Borovoye Array**	**9.64**	**269**	Pn	**Pn**	**07 03 52.9**	**0.0**
	0.6nm,0.3s,baz=72,slow=16,SNR=10						
BVAR				Sn	**Sn**	**07 05 36.4**	**-4.8**
	0.8nm,0.3s,baz=74,slow=24,SNR=9.6						
SONM	**Songino Array**	**14.04**	**109**	Lg		07 08 54.7	
	0.1nm,0.3s,baz=304,slow=24,SNR=5.2						

IDC 01 07:07:45.6±1.7, 56°.33S×147°.34E, h0km, mb4.0/6, mb1 4.2/6, mb1mx4.1/11, mbtmp4.0/6, MS3.8/7, Ms1 3.8/7, ms1mx3.6/13, Error ellipse: s-maj=103.2km s-min=23.7km az=82.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**19.66**	**60**	LR	LR	07 18 44.1	
	comp=Z,273nm,18.8s,baz=28,slow=34						
STKA	**Stephens Creek**	**24.77**	**348**	P	P	07 13 09.7	+0.8
	5.3nm,0.9s,baz=170,slow=14,SNR=3.4						
URZ	**Urewera**	**26.78**	**60**	LR	LR	07 23 01.7	
	comp=Z,176nm,19.1s,baz=218,slow=34						
NWAO	**Narrogin (SRO)**	**31.29**	**306**	LR	LR	07 23 57.1	
	comp=Z,172nm,21.5s,baz=311,slow=31						
QSPA	**South Pole Qui**	**33.78**	**180**	P	P	07 14 28.8	+0.3
	0.4nm,0.6s,baz=323,slow=3.9,SNR=3.4						
ASAR	**Alice Springs**	**34.08**	**338**	P	P	07 14 31.4	-0.2
	2.3nm,0.9s,baz=166,slow=9.7,SNR=12						
CTA	**Charters Tower**	**36.20**	**358**	P	P	07 14 49.4	-0.4
	3.5nm,0.9s,baz=158,slow=8.8,SNR=4.1						
MAW	**Mawson**	**38.03**	**218**	LR	LR	07 28 12.5	
	comp=Z,158nm,21.6s,baz=101,slow=32						
FITZ	**Fitzroy Crossi**	**41.52**	**328**	P	P	07 15 34.2	-0.3
	3.1nm,1.0s,baz=156,slow=13,SNR=3.6						
HNR	**Honiara**	**47.82**	**17**	LR	LR	07 33 16.3	
	comp=Z,52nm,19.3s,baz=159,slow=32						
BOSA	**Boshof**	**82.21**	**229**	LR	LR	07 51 13.4	
	comp=Z,55nm,19.5s,baz=349,slow=32						
CMAR	**Chiang Mai Arr**	**84.85**	**315**	P	P	07 20 22.3	+0.4
	0.6nm,0.5s,baz=176,slow=5.8,SNR=4.1						
CMAR				LR	LR	07 58 11.6	
	comp=Z,55nm,18.8s,baz=207,slow=36						

*ISCJB **01** 07:17:19.8±1.0, 21°.94S±0°.10×179°.7W±0°.1, h610km±12km, mb4.1/18, Error ellipse: s-maj=16.9km s-min=14.5km az=31.8*

*NEIC **01** 07:17:19.8±1.0, 21°.93S×179°.53W, h603km±10km, mb4.4/13, Error ellipse: s-maj=14.8km s-min=11.5km az=111.0*

*IDC **01** 07:17:23.0±2.7, 22°.00S×179°.62W, h635km±30km, mb3.4/10, mb1 3.6/10, mb1mx3.5/15, mbtmp3.4/10, Error ellipse: s-maj=25.3km s-min=15.8km az=151.0*

ISC 01 07:17:20.5±1.1, 21°.9S±0°.1×179°.6W±0°.1, h601km±13km, n49, σ0°.83/37, mb4.1/18, 1C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.71**	**332**	*e*Pn	**P**	**07 18 51.0**	**-0.3**
OUZ	**Omahuta**	**14.51**	**203**	*e*P	**P**	**07 20 23.8**	**0.0**
	17nm,0.6s						
URZ	**Urewera**	**16.51**	**189**	*e*P	**P**	**07 20 39.4**	**-2.9**
	13nm,0.5s						
URZ				S	**S**	**07 23 18.8**	**-7.7**
URZ	**Urewera**	**16.51**	**189**	P	**P**	**07 20 38.7**	**-3.5**
	2.7nm,0.3s,baz=349,slow=5.2,SNR=11						
URZ				S	**S**	**07 23 18.8**	**-7.7**
	1.5nm,0.3s,baz=79,slow=20,SNR=8.2						
EIDS	**Eidsvold**	**27.02**	**257**	*e*P	**P**	**07 22 16.9**	**+0.5**
	3.0nm,0.4s,mb4.3						
ARMA	**Armidale**	**27.09**	**246**	*e*P	**P**	**07 22 18.7**	**+1.8**
CTA	**Charters Tower**	**31.87**	**267**	⇓*i*P	**P**	**07 22 58.8**	**+0.7**
	6.6nm,0.4s,mb4.6						
CTA	**Charters Tower**	**31.87**	**267**	P	**P**	**07 22 58.9**	**+0.7**
	8.5nm,0.4s,mb4.7,baz=97,slow=10,SNR=20						
CTAO	**Charters Tower**	**31.87**	**267**	*e*P	**P**	**07 22 58.7**	**+0.6**
	8.4nm,0.5s,mb4.6						
STKA	**Stephens Creek**	**35.81**	**246**	⇓*i*P	**P**	**07 23 31.6**	**+0.7**
	4.0nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**35.81**	**246**	*e*P	**P**	**07 23 31.6**	**+0.7**
	1.1nm,0.5s,mb3.6						
STKA	**Stephens Creek**	**35.81**	**246**	P	**P**	**07 23 31.7**	**+0.8**
	6.7nm,0.5s,mb4.4,baz=87,slow=10,SNR=17						
ASAR	**Alice Springs**	**42.73**	**258**	P	**P**	**07 24 26.6**	**+0.2**
	11nm,0.8s,mb4.5,baz=98,slow=7.9,SNR=109						
ASAR				PcP	PcP	07 26 04.0	0.0
	1.8nm,0.6s,baz=107,slow=3.7,SNR=7.6						
ASAR				S	**S**	**07 30 06.4**	**-1.5**
	0.9nm,0.9s,baz=97,slow=19,SNR=6.2						
WRAB	**Tennant Creek**	**42.91**	**264**	*e*P	**P**	**07 24 27.3**	**-0.6**
	8.3nm,0.8s,mb4.3						
KAKA	**Kakadu**	**46.51**	**273**	*e*P	**P**	**07 24 54.8**	**-0.7**
	9.7nm,0.4s,mb4.7						
KAKA	**Kakadu**	**46.51**	**273**	*e*P	**P**	**07 24 54.9**	**-0.6**
	26nm,0.6s,mb4.9						
FORT	**Forrest**	**47.34**	**248**	*e*P	**P**	**07 25 01.0**	**-0.5**
	18nm,0.6s,mb4.8						
FORT	**Forrest**	**47.34**	**248**	*e*P	**P**	**07 25 01.0**	**-0.5**
	19nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**51.35**	**264**	*e*P	**P**	**07 25 31.1**	**+0.1**
	7.3nm,0.4s,mb4.5						
FITZ	**Fitzroy Crossi**	**51.35**	**264**	*e*P	**P**	**07 25 31.2**	**+0.2**
	4.2nm,0.4s,mb4.2						
FITZ	**Fitzroy Crossi**	**51.35**	**264**	P	**P**	**07 25 31.3**	**+0.3**
	3.6nm,0.3s,mb4.2,baz=62,slow=4.6,SNR=48						
MBWA	**Marble Bar**	**56.07**	**259**	*e*P	**P**	**07 26 03.8**	**-0.4**
	12nm,0.4s,mb4.5						
KLBR	**Kellerberrin**	**56.08**	**246**	*e*P	**P**	**07 26 03.7**	**-0.4**
	53nm,1.7s,mb4.5						
SBA	**Scott Base**	**56.35**	**183**	*e*P	**P**	**07 26 06.8**	**+1.6**
	3.4nm,0.8s,mb3.6						
CASY	**Casey**	**62.02**	**205**	*e*P	**P**	**07 26 42.6**	**-0.5**
	2.4nm,0.5s,mb3.7						
QSPA	**South Pole Qui**	**68.14**	**180**	*e*P	**P**	**07 27 21.3**	**+0.2**
	7.4nm,1.1s,mb4.0						
MJAR	**Matsushiro Arr**	**70.48**	**325**	P	**P**	**07 27 35.4**	**-0.3**
	0.6nm,0.3s,mb3.5,baz=163,slow=7.0,SNR=4.2						
PETK	**Petropavlovsk-**	**77.28**	**346**	P	**P**	**07 28 13.0**	**-0.6**
PETK	**Petropavlovsk-**	**77.28**	**346**	P	**P**	**07 28 13.0**	**-0.6**
	0.9nm,0.5s,mb3.5,baz=139,slow=7.3,SNR=5.2						
MAW	**Mawson**	**79.70**	**200**	P	**P**	**07 28 25.5**	**-0.9**
	2.6nm,0.7s,mb3.7,baz=158,slow=5.8,SNR=6.7						
NVAR	**Mina Array Bea**	**83.11**	**44**	P	**P**	**07 28 44.2**	**0.0**
NVAR	**Mina Array Bea**	**83.11**	**44**	P	**P**	**07 28 44.2**	**0.0**
	0.2nm,0.6s,baz=223,slow=10,SNR=4.8						
TXAR	**Lajitas Array**	**89.10**	**58**	P	**P**	**07 29 13.4**	**+0.4**
	0.6nm,0.8s,mb3.5,baz=232,slow=5.0,SNR=7.9						
CMAR	**Chiang Mai Arr**	**89.17**	**290**	P	**P**	**07 29 14.8**	**+1.3**
	3.3nm,0.8s,mb4.2,baz=138,slow=3.2,SNR=14						
MKAR	**Makanchi Array**	**111.07**	**313**	PKiKP	PKiKP	07 34 44.6	-1.8
	0.2nm,0.5s,baz=149,slow=1.7,SNR=5.0						
BVAR	**Borovoye Array**	**119.19**	**319**	PKP	PKPdf	07 35 00.6	-1.2
	1.3nm,0.3s,baz=108,slow=2.3,SNR=7.5						
ARCES	**ARCESS Array B**	**130.04**	**349**	PKP	PKPdf	07 35 20.6	-1.5
	2.3nm,0.7s,baz=59,slow=0.5,SNR=7.3						
NOA	**NORSAR Array B**	**140.20**	**352**	PKP	PKPdf	07 35 41.8	+0.6
	0.6nm,0.8s,baz=96,slow=6.5,SNR=3.3						
HFS	**Hagfors**	**140.69**	**350**	PKhKP	PKPpre	07 35 35.2	
	1.1nm,0.4s,baz=84,slow=4.6,SNR=13						
AKASG	**Malin Array Be**	**143.49**	**329**	PKP	PKPdf	07 35 45.0	-2.4
AKASG	**Malin Array Be**	**143.49**	**329**	PKP	PKPdf	07 35 45.0	-2.4
	2.4nm,0.3s,baz=41,slow=4.2,SNR=20						
KIEV	**Kiev**	**143.50**	**329**	*e*PKPdf	PKPdf	07 35 44.8	-2.6
EKA	**Eskdalemuir Ar**	**146.54**	**4**	PKPbc	PKPbc	07 35 54.0	-1.1
	0.9nm,0.8s,baz=280,slow=1.

ECAB Lg 07 22 17.9
110nm,0.1s,SNR=10
ECAB El Cabril 1.13 7 Pg **Pg 07 22 00.7 -0.1**
68nm,0.2s,SNR=194
ECAB Sn **Sn 07 22 16.6 +0.8**
62nm,0.2s,SNR=5.1
ECAB Lg 07 22 17.9
110nm,0.1s,SNR=10
ECAB El Cabril 1.13 7 Pg **Pg 07 22 00.7 -0.1**
68nm,0.2s,SNR=194
ECAB Sn **Sn 07 22 16.6 +0.8**
62nm,0.2s,SNR=5.1
ECAB Lg 07 22 17.3
ELOJ Sierra Loja 1.16 80 Pg **Pg 07 22 01.9 +0.6**
ELOJ Lg 07 22 18.2
ELOJ Sierra Loja 1.16 80 Pg **Pg 07 22 01.6 +0.3**
73nm,0.2s,SNR=38
ELOJ Lg 07 22 18.2
129nm,0.3s,SNR=17
ELOJ Sierra Loja 1.16 80 Pg **Pg 07 22 01.6 +0.3**
73nm,0.2s,SNR=38
ELOJ Lg 07 22 18.2
129nm,0.3s,SNR=17
ELOJ Sierra Loja 1.16 80 Pg **Pg 07 22 01.6 +0.3**
73nm,0.2s,SNR=38
ELOJ Lg 07 22 18.2
129nm,0.3s,SNR=17
EMIN Mina Concepcio 1.19 314 Pg **Pg 07 22 01.3 -0.6**
EMIN Lg 07 22 18.5
EMIN Mina Concepcio 1.19 314 ⇓Pg **Pg 07 22 01.3 -0.6**
36nm,0.2s,SNR=18
EMIN Lg 07 22 18.5
95nm,0.2s,SNR=18
EMIN Mina Concepcio 1.19 314 ⇓Pg **Pg 07 22 01.3 -0.6**
36nm,0.2s,SNR=18
EMIN Lg 07 22 18.5
95nm,0.2s,SNR=18
EMIN Mina Concepcio 1.19 314 Pg **Pg 07 22 01.3 -0.6**
36nm,0.2s,SNR=18
EMIN Lg 07 22 18.5
95nm,0.2s,SNR=18
ELUQ Luque 1.22 59 Pg **Pg 07 22 02.2 -0.1**
ELUQ Lg 07 22 20.9
ELUQ Luque 1.22 59 ⇑Pg **Pg 07 22 02.2 -0.1**
127nm,0.2s,SNR=18
ELUQ Lg 07 22 20.9
330nm,0.3s,SNR=7.9
ELUQ Luque 1.22 59 ⇑Pg **Pg 07 22 02.2 -0.1**
127nm,0.2s,SNR=18
ELUQ Lg 07 22 20.9
330nm,0.3s,SNR=7.9
ELUQ Luque 1.22 59 Pg **Pg 07 22 02.2 -0.1**
127nm,0.2s,SNR=18
ELUQ Lg 07 22 20.9
330nm,0.3s,SNR=7.9
ERON Agron 1.42 87 Pg **Pg 07 22 05.6 -0.7**
ERON Lg 07 22 25.0
ERON Agron 1.42 87 Pg **Pg 07 22 05.6 -0.7**
29nm,0.2s,SNR=7.9
ERON Lg 07 22 25.0
102nm,0.4s,SNR=7.9
ERON Agron 1.42 87 Pg **Pg 07 22 05.6 -0.7**
29nm,0.2s,SNR=7.9
ERON Lg 07 22 25.0
102nm,0.4s,SNR=7.9
ERON Agron 1.42 87 Pg **Pg 07 22 05.6 -0.7**
29nm,0.2s,SNR=7.9
ERON Lg 07 22 25.0
102nm,0.4s,SNR=7.9
EADA Adamuz 1.46 33 Pn **Pn 07 22 05.4 +0.6**
EADA Pg **Pg 07 22 07.1 +0.2**
EADA Lg 07 22 27.2
EADA Adamuz 1.46 33 ⇑Pn **Pn 07 22 05.3 +0.5**
2.1nm,0.1s,SNR=18
EADA Pg **Pg 07 22 06.8 -0.1**
29nm,0.2s,SNR=15
EADA Sn **Sn 07 22 24.8 +1.0**
21nm,0.1s,SNR=4.0
EADA Lg 07 22 27.2
120nm,0.2s,SNR=14
EADA Adamuz 1.46 33 ⇑Pn **Pn 07 22 05.3 +0.5**
2.1nm,0.1s,SNR=18
EADA Pg **Pg 07 22 06.8 -0.1**
29nm,0.2s,SNR=15
EADA Sn **Sn 07 22 24.8 +1.0**
21nm,0.1s,SNR=4.0
EADA Lg 07 22 27.2
120nm,0.2s,SNR=14
EADA Adamuz 1.46 33 Pn **Pn 07 22 05.3 +0.4**
2.1nm,0.1s,SNR=18
EADA Adamuz 1.46 33 Pg **Pg 07 22 07.1 +0.2**
EADA Sn **Sn 07 22 24.8 +1.0**
21nm,0.1s,SNR=4.0
EADA Lg 07 22 27.2
120nm,0.2s,SNR=14
DKH Dar Kharkhour 1.47 173 *i* P **Pn 07 22 05.0 0.0**
EGUA Guajares 1.62 93 Pn **Pn 07 22 08.4 +1.3**
EGUA Guajares 1.62 93 Pn **Pn 07 22 07.9 +0.7**
19nm,0.3s,SNR=7.9
EGUA Pg **Pg 07 22 10.3 +0.2**
121nm,0.3s,SNR=7.9
EGUA Sn **Sn 07 22 28.5 +0.7**
120nm,0.3s,SNR=7.9
EGUA Lg 07 22 32.5
504nm,0.5s,SNR=7.9
EGUA Guajares 1.62 93 Pn **Pn 07 22 07.9 +0.7**
19nm,0.3s,SNR=7.9
EGUA Pg **Pg 07 22 10.3 +0.2**
121nm,0.3s,SNR=7.9
EGUA Sn **Sn 07 22 28.5 +0.7**
120nm,0.3s,SNR=7.9
EGUA Lg 07 22 32.5
504nm,0.5s,SNR=7.9
EGUA Guajares 1.62 93 Pn **Pn 07 22 07.9 +0.8**
19nm,0.3s,SNR=7.9
EGRO El Granado 1.63 292 Pn **Pn 07 22 07.1 -0.1**
EGRO Pg **Pg 07 22 09.3 -0.8**
EGRO Lg 07 22 30.4
EGRO El Granado 1.63 292 ⇓Pn **Pn 07 22 07.1 -0.1**
4.8nm,0.2s,SNR=18
EGRO Pg **Pg 07 22 09.1 -1.1**
45nm,0.3s,SNR=12
EGRO Lg 07 22 30.4
185nm,0.3s,SNR=5.0
EGRO El Granado 1.63 292 ⇓Pn **Pn 07 22 07.1 -0.1**
4.8nm,0.2s,SNR=18
EGRO Pg **Pg 07 22 09.1 -1.1**
45nm,0.3s,SNR=12
EGRO Lg 07 22 30.4
185nm,0.3s,SNR=5.0
EGRO El Granado 1.63 292 Pn **Pn 07 22 07.1 -0.1**
4.8nm,0.2s,SNR=18
ECOG Cogollos-Vega 1.65 78 Pn **Pn 07 22 08.5 +1.1**
ECOG Sn **Sn 07 22 31.7 +3.3**
ECOG Lg 07 22 34.5
ECOG Cogollos-Vega 1.65 78 ⇑Pn **Pn 07 22 08.6 +1.2**
45nm,0.3s,SNR=18
ECOG Pg **Pg 07 22 10.6 +0.1**
55nm,0.2s,SNR=7.9
ECOG Sn **Sn 07 22 28.2 -0.2**
38nm,0.3s,SNR=11
ECOG Lg 07 22 34.5
151nm,0.3s,SNR=6.3
ECOG Cogollos-Vega 1.65 78 ⇑Pn **Pn 07 22 08.6 +1.2**
45nm,0.3s,SNR=18
ECOG Pg **Pg 07 22 10.6 +0.1**
55nm,0.2s,SNR=7.9
ECOG Sn **Sn 07 22 28.2 -0.2**
38nm,0.3s,SNR=11
ECOG Lg 07 22 34.5
151nm,0.3s,SNR=6.3
ECOG Cogollos-Vega 1.65 78 Pn **Pn 07 22 08.5 +1.0**
PBAR Barrancos 1.69 317 *e*Pn **Pn 07 22 08.1 +0.1**
PBAR *e*Sn **Sn 07 22 30.4 +1.0**
PBAR *e*Sg **Sg 07 22 34.7 +1.5**
PBAR A 07 22 38.1
118nm,0.5s
PBAR Barrancos 1.69 317 Pn **Pn 07 22 08.1 +0.1**
PBAR Sn **Sn 07 22 30.4 +1.0**
PBAR Lg 07 22 34.7
118nm,0.5s
PBAR Barrancos 1.69 317 Pn **Pn 07 22 08.1 +0.1**
PBAR Sn **Sn 07 22 30.4 +1.0**
PBAR Lg 07 22 34.7
118nm,0.5s
PBAR Barrancos 1.69 317 *e*Pn **Pn 07 22 08.1 +0.1**
PBAR *e*Sn **Sn 07 22 30.4 +1.0**

PBAR *e*Sg **Sg 07 22 34.7 +1.5**
118nm,0.5s
EQUE Quentar 1.73 81 ⇑Pn **Pn 07 22 09.5 +0.8**
7.6nm,0.1s,SNR=18
EQUE Pg **Pg 07 22 11.5 -0.6**
32nm,0.3s,SNR=13
EQUE Lg 07 22 33.8
128nm,0.5s,SNR=5.0
EQUE Quentar 1.73 81 ⇑Pn **Pn 07 22 09.5 +0.8**
7.6nm,0.1s,SNR=18
EQUE Pg **Pg 07 22 11.5 -0.6**
32nm,0.3s,SNR=13
EQUE Lg 07 22 33.8
128nm,0.5s,SNR=5.0
EQUE Quentar 1.73 81 Pn **Pn 07 22 09.5 +0.8**
7.6nm,0.1s,SNR=18
PVAQ Vaqueiros 1.77 286 *e*Pn **Pn 07 22 08.9 -0.2**
PVAQ *e*Sn **Sn 07 22 31.0 -0.4**
PVAQ *e*Sg **Sg 07 22 36.0 +0.3**
PVAQ A 07 22 38.3
153nm,0.4s
PVAQ Vaqueiros 1.77 286 ⇑Pn **Pn 07 22 08.9 -0.2**
PVAQ Sn **Sn 07 22 31.0 -0.4**
PVAQ Lg 07 22 36.0
153nm,0.4s
PVAQ Vaqueiros 1.77 286 ⇑Pn **Pn 07 22 08.9 -0.2**
PVAQ Sn **Sn 07 22 31.0 -0.4**
PVAQ Lg 07 22 36.0
153nm,0.4s
EBAN Banos Encina 1.87 49 Pn **Pn 07 22 11.0 +0.4**
EBAN Banos Encina 1.87 49 Pn **Pn 07 22 10.9 +0.3**
8.5nm,0.3s,SNR=9.1
EBAN Pg **Pg 07 22 14.0 -0.9**
18nm,0.2s,SNR=9.2
EBAN Sn **Sn 07 22 34.4 +0.3**
22nm,0.2s,SNR=6.5
EBAN Lg 07 22 38.5
48nm,0.2s,SNR=9.6
EBAN Banos Encina 1.87 49 Pn **Pn 07 22 10.9 +0.3**
8.5nm,0.3s,SNR=9.1
EBAN Pg **Pg 07 22 14.0 -0.9**
18nm,0.2s,SNR=9.2
EBAN Sn **Sn 07 22 34.4 +0.3**
22nm,0.2s,SNR=6.5
EBAN Lg 07 22 38.5
48nm,0.2s,SNR=9.6
EBAN Banos Encina 1.87 49 Pn **Pn 07 22 11.0 +0.4**
PBDV Barranco-do-Ve 1.90 280 *e*Pn **Pn 07 22 10.8 -0.2**
PBDV *e*Sn **Sn 07 22 33.5 -1.3**
PBDV *e*Sg **Sg 07 22 39.9 -0.2**
PBDV A 07 22 48.5
119nm,0.5s
PBDV Barranco-do-Ve 1.90 280 ⇓Pn **Pn 07 22 10.8 -0.2**
PBDV Sn **Sn 07 22 33.5 -1.3**
PBDV Lg 07 22 39.9
119nm,0.5s
PBDV Barranco-do-Ve 1.90 280 ⇓Pn **Pn 07 22 10.8 -0.2**
PBDV Sn **Sn 07 22 33.5 -1.3**
PBDV Lg 07 22 39.9
119nm,0.5s
PCVE Castro Verde 2.08 290 *e*Pn **Pn 07 22 13.2 -0.2**
PCVE Castro Verde 2.08 290 *e*Pg **Pg 07 22 17.8 -0.9**
PCVE *e*Sg **Sg 07 22 47.0 +1.4**
PCVE A 07 22 49.4
67nm,0.4s
PCVE Castro Verde 2.08 290 Pn **Pn 07 22 13.2 -0.2**
PCVE Pg **Pg 07 22 17.8 -0.9**
PCVE Lg 07 22 47.0
67nm,0.4s
PCVE Castro Verde 2.08 290 Pn **Pn 07 22 13.2 -0.2**
PCVE Pg **Pg 07 22 17.8 -0.9**
PCVE Lg 07 22 47.0
67nm,0.4s
PCVE Castro Verde 2.08 290 *e*Pn **Pn 07 22 13.2 -0.2**
PCVE Castro Verde 2.08 290 *e*Pg **Pg 07 22 17.8 -0.9**
PCVE *e*Sg **Sg 07 22 47.0 +1.4**
67nm,0.4s
RSA Sarsar 2.08 186 *i* P **Pn 07 22 13.0 -0.4**
PBEJ Beja 2.11 301 *e*Pn **Pn 07 22 14.0 +0.1**
PBEJ *e*Sg **Sg 07 22 47.2 +0.4**
PBEJ A 07 22 51.9
54nm,0.3s
PBEJ Beja 2.11 301 Pn **Pn 07 22 14.0 +0.1**
PBEJ Lg 07 22 47.2
27nm,0.3s
PBEJ Beja 2.11 301 Pn **Pn 07 22 14.0 +0.1**
PBEJ Lg 07 22 47.2
27nm,0.3s
PBEJ Beja 2.11 301 *e*Pn **Pn 07 22 14.0 +0.1**
PBEJ *e*Sg **Sg 07 22 47.2 +0.4**
54nm,0.3s
EBAD Badajoz 2.13 328 Pn **Pn 07 22 14.4 +0.3**
EBAD Pg **Pg 07 22 18.2 -1.6**
EBAD Sn **Sn 07 22 40.8 +0.4**
EBAD Lg 07 22 47.0
EBAD Badajoz 2.13 328 ⇓Pn **Pn 07 22 14.3 +0.2**
5.3nm,0.1s,SNR=18
EBAD Pg **Pg 07 22 18.2 -1.6**
14nm,0.2s,SNR=13
EBAD Sn **Sn 07 22 41.0 +0.5**
52nm,0.2s,SNR=6.1
EBAD Lg 07 22 47.3
94nm,0.2s,SNR=5.0
EBAD Badajoz 2.13 328 ⇓Pn **Pn 07 22 14.3 +0.2**
5.3nm,0.1s,SNR=18
EBAD Pg **Pg 07 22 18.2 -1.6**
14nm,0.2s,SNR=13
EBAD Sn **Sn 07 22 41.0 +0.5**
52nm,0.2s,SNR=6.1
EBAD Lg 07 22 47.3
94nm,0.2s,SNR=5.0
EBAD Badajoz 2.13 328 Pn **Pn 07 22 14.4 +0.3**
EBAD Badajoz 2.13 328 Pg **Pg 07 22 18.2 -1.6**
14nm,0.2s,SNR=13
EBAD Sn **Sn 07 22 41.0 +0.6**
52nm,0.2s,SNR=6.1
EBAD Lg 07 22 47.3
94nm,0.2s,SNR=5.0
EBER Berja 2.16 91 Pn **Pn 07 22 16.3 +1.8**
EBER Berja 2.16 91 Pn **Pn 07 22 15.3 +0.8**
3.8nm,0.3s,SNR=14
EBER Pg **Pg 07 22 18.8 -1.5**
19nm,0.4s,SNR=12
EBER Lg 07 22 49.6
27nm,0.3s,SNR=5.0
EBER Berja 2.16 91 Pn **Pn 07 22 15.3 +0.8**
3.8nm,0.3s,SNR=14
EBER Pg **Pg 07 22 18.8 -1.5**
19nm,0.4s,SNR=12
EBER Lg 07 22 49.6
27nm,0.3s,SNR=5.0
EBER Berja 2.16 91 Pn **Pn 07 22 15.3 +0.8**
3.8nm,0.3s,SNR=14
EQES Quesada 2.17 66 Pn **Pn 07 22 15.5 +0.8**
EQES Pg **Pg 07 22 19.9 -0.7**
EQES Sn **Sn 07 22 44.2 +2.6**
EQES Lg 07 22 49.0
EQES Quesada 2.17 66 Pn **Pn 07 22 15.5 +0.8**
3.4nm,0.1s,SNR=7.9
EQES Pg **Pg 07 22 19.6 -1.1**
16nm,0.2s,SNR=12
EQES Sn **Sn 07 22 43.0 +1.5**
19nm,0.2s,SNR=6.2
EQES Lg 07 22 49.0
142nm,0.3s,SNR=16
EQES Quesada 2.17 66 Pn **Pn 07 22 15.5 +0.8**
3.4nm,0.1s,SNR=7.9
EQES Pg **Pg 07 22 19.6 -1.1**
16nm,0.2s,SNR=12
EQES Sn **Sn 07 22 43.0 +1.5**
19nm,0.2s,SNR=6.2
EQES Lg 07 22 49.0
142nm,0.3s,SNR=16
EQES Quesada 2.17 66 Pn **Pn 07 22 15.5 +0.8**
3.4nm,0.1s,SNR=7.9
MESJ Messejana 2.28 294 *e*P **Pn 07 22 15.7 -0.5**
MESJ *e*S **Sn 07 22 41.3 -2.8**
MESJ Messejana 2.28 294 Pn **Pn 07 22 15.7 -0.5**
MESJ Sn **Sn 07 22 41.3 -2.9**
MESJ Messejana 2.28 294 Pn **Pn 07 22 15.7 -0.5**
MESJ Sn **Sn 07 22 41.3 -2.9**
MESJ Messejana 2.28 294 *e*P **Pn 07 22 15.7 -0.5**
MESJ *e*S **Sn 07 22 41.3 -2.9**
EALB Alboran 2.29 115 Pn **Pn 07 22 17.2 +0.9**
8.6nm,0.1s,SNR=4.0
EALB Sn **Sn 07 22 43.1 -1.1**

24nm,0.4s,SNR=5.0
EALB Alboran 2.29 115 Pn **Pn 07 22 17.2 +0.9**
8.6nm,0.1s,SNR=4.0
EALB Sn **Sn 07 22 43.1 -1.1**
24nm,0.4s,SNR=5.0
EALB Alboran 2.29 115 Pn **Pn 07 22 17.2 +0.9**
8.6nm,0.1s,SNR=4.0
EALB Sn **Sn 07 22 43.2 -1.1**
24nm,0.4s,SNR=5.0
MORF Marmelete 2.48 279 *e*Pg **Pg 07 22 24.9 -1.5**
MORF *e*Sn **Sn 07 22 48.7 -0.3**
MORF *e*Sg **Sg 07 22 58.5 -0.1**
MORF A 07 23 00.9
68nm,0.2s
MORF Marmelete 2.48 279 Pg **Pg 07 22 24.9 -1.5**
MORF Sn **Sn 07 22 48.7 -0.3**
MORF Lg 07 22 58.5
68nm,0.2s
MORF Marmelete 2.48 279 Pg **Pg 07 22 24.9 -1.5**
MORF Sn **Sn 07 22 48.7 -0.3**
MORF Lg 07 22 58.5
68nm,0.2s
MORF Marmelete 2.48 279 *e*Pg **Pg 07 22 24.9 -1.5**
MORF *e*Sn **Sn 07 22 48.7 -0.3**
MORF *e*Sg **Sg 07 22 58.5 -0.1**
68nm,0.2s
PESTR Estremoz 2.49 321 *e*Pn **Pn 07 22 19.6 +0.5**
PESTR *e*Sg **Sg 07 23 00.4 +1.5**
PESTR A 07 23 05.5
52nm,0.4s
PESTR Estremoz 2.49 321 Pn **Pn 07 22 19.6 +0.5**
PESTR Lg 07 23 00.4
52nm,0.4s
PESTR Estremoz 2.49 321 Pn **Pn 07 22 19.6 +0.5**
PESTR Lg 07 23 00.4
52nm,0.4s
PESTR Estremoz 2.49 321 *e*Pn **Pn 07 22 19.6 +0.5**
PESTR *e*Sg **Sg 07 23 00.4 +1.5**
52nm,0.4s
EVO Evora 2.49 310 *e*Pn **Pn 07 22 20.4 +1.3**
EVO Evora 2.49 310 *e*Pg **Pg 07 22 27.1 +0.4**
EVO *e*Sg **Sg 07 22 59.1 +0.1**
100nm,0.3s
EVO Evora 2.49 310 *e*Pn **Pn 07 22 19.6 +0.5**
EVO *e*Sn **Sn 07 22 50.8 +1.4**
EVO A 07 23 03.7
72nm,0.5s
EVO Evora 2.49 310 Pn **Pn 07 22 19.6 +0.5**
EVO Sn **Sn 07 22 50.8 +1.4**
72nm,0.5s
EVO Evora 2.49 310 Pn **Pn 07 22 19.6 +0.5**
EVO Sn **Sn 07 22 50.8 +1.4**
72nm,0.5s
EVO Evora 2.49 310 *e*Pn **Pn 07 22 19.6 +0.5**
EVO *e*Sn **Sn 07 22 50.8 +1.4**
72nm,0.5s
EHUE Huescar 2.53 69 ⇑Pn **Pn 07 22 19.9 +0.2**
8.9nm,0.2s,SNR=18
EHUE Pg **Pg 07 22 25.8 -1.7**
11nm,0.2s,SNR=7.9
EHUE Sn **Sn 07 22 51.4 +1.0**
9.1nm,0.2s,SNR=7.9
EHUE Lg 07 22 59.8
66nm,0.2s,SNR=7.9
EHUE Huescar 2.53 69 ⇑Pn **Pn 07 22 19.9 +0.2**
8.9nm,0.2s,SNR=18
EHUE Pg **Pg 07 22 25.8 -1.7**
11nm,0.2s,SNR=7.9
EHUE Sn **Sn 07 22 51.4 +1.0**
9.1nm,0.2s,SNR=7.9
EHUE Lg 07 22 59.8
66nm,0.2s,SNR=7.9
EHUE Huescar 2.53 69 Pn **Pn 07 22 19.9 +0.2**
8.9nm,0.2s,SNR=18
EVOP Sao Brissos 2.56 309 *e*Pn **Pn 07 22 20.4 +0.4**
EVOP Sao Brissos 2.56 309 *e*Pg **Pg 07 22 27.1 -0.9**
EVOP *e*Sg **Sg 07 22 59.1 -2.0**
50nm,0.3s
PTEO Sao Teotonio 2.58 284 *e*Pn **Pn 07 22 20.2 -0.1**
PTEO *e*Sg **Sg 07 23 01.3 -0.4**
PTEO A 07 23 03.6
80nm,0.3s
PTEO Sao Teotonio 2.58 284 Pn **Pn 07 22 20.2 -0.1**
PTEO Lg 07 23 01.3
40nm,0.3s
PTEO Sao Teotonio 2.58 284 Pn **Pn 07 22 20.2 -0.1**
PTEO Lg 07 23 01.3
40nm,0.3s
PTEO Sao Teotonio 2.58 284 *e*Pn **Pn 07 22 20.2 -0.1**
PTEO *e*Sg **Sg 07 23 01.3 -0.4**
80nm,0.3s
MOE Montemor 2.70 306 *e*Pn **Pn 07 22 22.5 +0.5**
MOE Montemor 2.70 306 *e*Pn **Pn 07 22 22.5 +0.5**
PAB San Pablo 2.77 20 *e*Pn **Pn 07 22 24.8 +1.8**
PAB *e*Sg **Sg 07 23 08.9 +1.0**
PAB San Pablo 2.77 20 *e*Pn **Pn 07 22 24.8 +1.9**
PAB *e*Sg **Sg 07 23 08.9 +1.0**
PMRV Marv??o 2.86 331 *e*Pn **Pn 07 22 24.4 +0.3**
PMRV *e*Sg **Sg 07 23 08.9 -1.8**
PMRV A 07 23 15.3
52nm,0.6s
PMRV Marv??o 2.86 331 Pn **Pn 07 22 24.4 +0.3**
PMRV Lg 07 23 08.9
52nm,0.6s
PMRV Marv??o 2.86 331 Pn **Pn 07 22 24.4 +0.3**
PMRV Lg 07 23 08.9
52nm,0.6s
PMRV Marv??o 2.86 331 *e*Pn **Pn 07 22 24.4 +0.3**
PMRV *e*Sg **Sg 07 23 08.9 -1.8**
52nm,0.6s
EVIA Vianos 2.97 54 Pn **Pn 07 22 25.7 0.0**
7.8nm,0.1s,SNR=6.1
EVIA Pg **Pg 07 22 34.4 -1.4**
8.4nm,0.2s,SNR=6.1
EVIA Sn **Sn 07 23 01.4 +0.3**
8.8nm,0.2s,SNR=4.0
EVIA Lg 07 23 14.4
72nm,0.5s,SNR=5.9
EVIA Vianos 2.97 54 Pn **Pn 07 22 25.7 0.0**
7.8nm,0.1s,SNR=6.1
EVIA Pg **Pg 07 22 34.4 -1.4**
8.4nm,0.2s,SNR=6.1
EVIA Sn **Sn 07 23 01.4 +0.3**
8.8nm,0.2s,SNR=4.0
EVIA Lg 07 23 14.4
72nm,0.5s,SNR=5.9
EVIA Vianos 2.97 54 Pn **Pn 07 22 25.7 +0.1**
7.8nm,0.1s,SNR=6.1
ESDC Sonseca Array 3.00 25 Pn **Pn 07 22 27.2 +1.0**
ESDC Pg **Pg 07 22 32.1 -4.4**
ESDC Sn **Sn 07 23 03.4 +1.4**
ESDC Lg 07 23 14.6
ESDC Sonseca Array 3.00 25 Pn **Pn 07 22 27.2 +1.0**
5.3nm,0.3s,baz=204,slow=12,SNR=19
ESDC Pg **Pg 07 22 32.1 -4.4**
2.8nm,0.3s,baz=201,slow=12,SNR=5.2
ESDC Sn **Sn 07 23 03.4 +1.4**
10nm,0.3s,baz=203,slow=21,SNR=17
ESDC Lg 07 23 14.6
18nm,0.3s,baz=209,slow=30,SNR=13
ESDC Sonseca Array 3.00 25 Pn **Pn 07 22 27.2 +1.0**
7.2nm,0.1s,baz=205,slow=14,SNR=16
ESDC Pg **Pg 07 22 35.0 -1.6**
11nm,0.4s,baz=205,slow=18,SNR=8.1
ESDC Sn **Sn 07 23 01.8 -0.2**
16nm,0.3s,baz=206,slow=24,SNR=11
ESDC Lg 07 23 15.1
23nm,0.2s,baz=205,slow=31,SNR=15
ESDC Sonseca Array 3.00 25 Pn **Pn 07 22 27.2 +1.0**
7.2nm,0.1s,baz=205,slow=14,SNR=16
ESDC Pg **Pg 07 22 35.0 -1.6**
11nm,0.4s,baz=205,slow=18,SNR=8.1
ESDC Sn **Sn 07 23 01.8 -0.2**
16nm,0.3s,baz=206,slow=24,SNR=11
ESDC Lg 07 23 15.1
23nm,0.2s,baz=205,slow=31,SNR=15
ESDC Sonseca Array 3.00 25 Pn **Pn 07 22 27.2 +1.0**
7.2nm,0.1s,slow=12,SNR=16
ESDC Sonseca Array 3.00 25 Pg **Pg 07 22 35.0 -1.5**
11nm,0.4s,SNR=8.1
ESDC Sn **Sn 07 23 01.8 -0.2**
16nm,0.3s,baz=208,slow=23,SNR=11
ESDC Lg 07 23 15.1
23nm,0.2s,SNR=15
ESLA Sonseca Array 3.00 25 *e*Pn **Pn 07 22 27.4 +1.2**
ESLA *e*Sn **Sn 07 23 02.7 +0.7**

ESLA					*e*Sg	**Sg**	**07 23 18.2 +2.7**		
ESLA	**Sonseca Array**	**3.00**	**25**		*e*Pn	**Pn**	**07 22 27.4 +1.2**		
ESLA					*e*Sn	**Sn**	**07 23 02.7 +0.7**		
ZAI	**Zaio**	**3.03**	**130**		*i* P	**Pn**	**07 22 26.0 -0.5**		
TZK	**Tazeka**	**3.07**	**158**		*i* P	**Pn**	**07 22 28.0 +0.9**		
EPLA	**Plasencia**	**3.14**	**353**		Pn	**Pn**	**07 22 28.6 +0.6**		
	4.9nm,0.1s,SNR=6.5								
EPLA					Pg	**Pg**	**07 22 36.9 -2.1**		
	6.0nm,0.2s,SNR=4.0								
EPLA					Sn	**Sn**	**07 23 03.4 -1.9**		
	7.7nm,0.1s,SNR=5.7								
EPLA					Lg		07 23 17.9		
	32nm,0.3s,SNR=5.0								
EPLA	**Plasencia**	**3.14**	**353**		Pn	**Pn**	**07 22 28.6 +0.6**		
	4.9nm,0.1s,SNR=6.5								
EPLA					Pg	**Pg**	**07 22 36.9 -2.1**		
	6.0nm,0.2s,SNR=4.0								
EPLA					Sn	**Sn**	**07 23 03.4 -1.9**		
	7.7nm,0.1s,SNR=5.7								
EPLA					Lg		07 23 17.9		
	32nm,0.3s,SNR=5.0								
EPLA	**Plasencia**	**3.14**	**353**		Pn	**Pn**	**07 22 28.6 +0.6**		
	4.9nm,0.1s,SNR=6.5								
PCBR	**Castelo Branco**	**3.25**	**333**		*e*Pn	**Pn**	**07 22 31.0 +1.5**		
PCBR					*e*Sn	**Sn**	**07 23 08.4 +0.4**		
PCBR					A		07 23 41.4		
	24nm,0.5s								
PCBR	**Castelo Branco**	**3.25**	**333**		Pn	**Pn**	**07 22 31.0 +1.5**		
PCBR					Sn	**Sn**	**07 23 08.4 +0.4**		
	12nm,0.5s								
PCBR	**Castelo Branco**	**3.25**	**333**		Pn	**Pn**	**07 22 31.0 +1.5**		
PCBR					Sn	**Sn**	**07 23 08.4 +0.4**		
	12nm,0.5s								
PCBR	**Castelo Branco**	**3.25**	**333**		*e*Pn	**Pn**	**07 22 31.0 +1.5**		
PCBR					*e*Sn	**Sn**	**07 23 08.4 +0.4**		
	24nm,0.5s								
PTOM	**Tomar**	**3.47**	**321**		*e*Pn	**Pn**	**07 22 33.5 +0.9**		
PTOM					*e*Sg	**Sg**	**07 23 31.1 +0.7**		
PTOM					A		07 23 37.3		
	48nm,0.3s								
PTOM	**Tomar**	**3.47**	**321**		Pn	**Pn**	**07 22 33.5 +0.9**		
PTOM					Lg		07 23 31.1		
	24nm,0.3s								
PTOM	**Tomar**	**3.47**	**321**		Pn	**Pn**	**07 22 33.5 +0.9**		
PTOM					Lg		07 23 31.1		
	24nm,0.3s								
PTOM	**Tomar**	**3.47**	**321**		*e*Pn	**Pn**	**07 22 33.5 +0.9**		
PTOM					*e*Sg	**Sg**	**07 23 31.1 +0.7**		
	48nm,0.3s								
PMAFR	**Mafra**	**3.55**	**306**		*e*Pn	**Pn**	**07 22 34.0 +0.4**		
PMAFR					*e*Sn	**Sn**	**07 23 15.9 +0.6**		
PMAFR					*e*Sg	**Sg**	**07 23 35.5 +2.7**		
PMAFR					A		07 23 41.3		
	46nm,0.4s								
PMAFR	**Mafra**	**3.55**	**306**		Pn	**Pn**	**07 22 34.2 +0.6**		
	5.1nm,0.1s,SNR=7.9								
PMAFR					Sn	**Sn**	**07 23 15.9 +0.5**		
	24nm,0.2s,SNR=7.6								
PMAFR					Lg		07 23 32.1		
	161nm,0.5s,SNR=7.9								
PMAFR	**Mafra**	**3.55**	**306**		Pn	**Pn**	**07 22 34.2 +0.6**		
	5.1nm,0.1s,SNR=7.9								
PMAFR					Sn	**Sn**	**07 23 15.9 +0.5**		
	24nm,0.2s,SNR=7.6								
PMAFR					Lg		07 23 32.1		
	161nm,0.5s,SNR=7.9								
PMAFR	**Mafra**	**3.55**	**306**		*e*Pn	**Pn**	**07 22 34.0 +0.4**		
PMAFR					Sn	**Sn**	**07 23 15.9 +0.6**		
	24nm,0.2s,SNR=7.6								
PMAFR					Lg		07 23 32.1		
	161nm,0.5s,SNR=7.9								
PMAFR					*e*Sg	**Sg**	**07 23 35.5 +2.7**		
	46nm,0.4s								
EMUR	**La Murta**	**3.57**	**74**		Sn	**Sn**	**07 23 16.0 +0.1**		
	16nm,0.4s,SNR=7.9								
EMUR					Lg		07 23 31.2		
	19nm,0.4s,SNR=4.0								
EMUR	**La Murta**	**3.57**	**74**		Sn	**Sn**	**07 23 16.0 +0.1**		
	16nm,0.4s,SNR=7.9								
EMUR					Lg		07 23 31.2		
	19nm,0.4s,SNR=4.0								
EMUR	**La Murta**	**3.57**	**74**		Sn	**Sn**	**07 23 16.0 0.0**		
	16nm,0.4s,SNR=7.9								
EMUR					Lg		07 23 31.2		
	19nm,0.4s,SNR=4.0								
ETOB	**Tobarra**	**3.62**	**61**		Pn	**Pn**	**07 22 34.7 +0.1**		
	4.7nm,0.2s,SNR=22								
ETOB					Sn	**Sn**	**07 23 17.4 +0.3**		
	6.2nm,0.3s,SNR=7.9								
ETOB					Lg		07 23 33.9		
	31nm,0.3s,SNR=36

*ISK **01** 07:57:46.9,38.85N×25.96E,h5km,ML3.8*
*ISCJB **01** 07:57:47.5±0.4,38.86N±0.01×26.01E±0.02,h5km±3km,*
Error ellipse: s-maj=2.6km s-min=2.3km az=170.5
*ATH **01** 07:57:47.3,38.85N×26.18E,h30km,MD3.7/21,ML3.5*
*DDA **01** 07:57:47.2,38.85N×26.07E,h7km±7km,Md3.6*
*THE **01** 07:57:48.7,38.87N×26.08E,h6km,ML3.7/6,Error ellipse:*
s-maj=0.9km s-min=0.4km az=93.0
*CSEM **01** 07:57:49.3±0.1,38.85N×26.03E,h15km,ML3.7/6,Error*
ellipse: s-maj=2.9km s-min=2.7km az=111.0

ISC 01 07:57:48.3±0.4,**38.85N**±0.01×**26.02E**±0.02,**h4**km±3km,
n237,σ1ᵍ**03**/275,**11C-21D**,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	**SIGRI**	**0.38**	**341**	P	**Pg**	**07 57 56.4**	**+0.7**
SIGR				S	**Sg**	**07 58 01.8**	**+1.1**
SIGR	**SIGRI**	**0.38**	**341**	P	**Pg**	**07 57 56.4**	**+0.7**
SIGR				S	**Sg**	**07 58 01.8**	**+1.1**
PRK	**Paraskevi**	**0.44**	**26**	⇑*i*Pb	**Pg**	**07 57 56.8**	**0.0**
PRK				*e*Sb	**Sg**	**07 58 02.7**	**+0.1**
PRK	**Paraskevi**	**0.44**	**26**	⇑*i*PB	**Pg**	**07 57 56.8**	**0.0**
PRK				*e*SB	**Sg**	**07 58 02.7**	**+0.1**
PRK	**Paraskevi**	**0.44**	**26**	P	**Pg**	**07 57 56.7**	**-0.1**
PRK				S	**Sg**	**07 58 02.6**	**0.0**
PRK	**Paraskevi**	**0.44**	**26**	P	**Pg**	**07 57 56.7**	**-0.1**
PRK				*e*Sb	**Sg**	**07 58 02.7**	**+0.1**
CHOS	**Chios island**	**0.46**	**176**	*e*PB	**Pg**	**07 57 58.4**	**+1.3**
CHOS				*e*SB	**Sg**	**07 58 05.1**	**+2.0**
CHOS	**Chios island**	**0.46**	**176**	P	**Pg**	**07 57 58.2**	**+1.1**
CHOS				S	**Sg**	**07 58 05.2**	**+2.1**
CHOS	**Chios island**	**0.46**	**176**	P	**Pg**	**07 57 58.2**	**+1.1**
CHOS				*e*Sb	**Sg**	**07 58 05.1**	**+2.0**
URLA	**Izmir**	**0.67**	**137**	*i* P	**Pg**	**07 57 59.0**	**-2.0**
URLA				*i* S	**Sg**	**07 58 09.1**	**-0.5**
URLA	**Izmir**	**0.67**	**137**	*i* P	**Pg**	**07 57 59.0**	**-2.0**
URLA				*i* S	**Sg**	**07 58 09.1**	**-0.5**
AYVA	**Ayvalik**	**0.70**	**48**	*i* P	**Pg**	**07 58 00.6**	**-1.0**
AYVA				*i* S	**Sg**	**07 58 09.8**	**-0.8**
AYVA	**Ayvalik**	**0.70**	**48**	*i* P	**Pg**	**07 58 00.6**	**-1.0**
AYVA				*i* S	**Sg**	**07 58 09.8**	**-0.9**
BLCB	**Balcova**	**0.93**	**120**	*e*PG	**Pg**	**07 58 06.0**	**0.0**
BLCB	**Balcova**	**0.93**	**120**	Pn	**Pn**	**07 58 08.2**	**+0.2**
BLCB	**Balcova**	**0.93**	**120**	P	**Pg**	**07 58 05.6**	**-0.4**
BLCB				S	**Sg**	**07 58 18.6**	**+0.6**
BLCB	**Balcova**	**0.93**	**120**	P	**Pg**	**07 58 05.6**	**-0.4**
BLCB	**Balcova**	**0.93**	**120**	*e*Pg	**Pg**	**07 58 06.0**	**0.0**
BLCB	**Balcova**	**0.93**	**120**	Pn	**Pn**	**07 58 08.2**	**+0.2**
BLCB				S	**Sg**	**07 58 18.6**	**+0.6**
BLCB				*e*Sg	**Sg**	**07 58 19.5**	**+1.5**
EZN	**Ezine**	**1.00**	**14**	*e*PG	**Pg**	**07 58 07.2**	**-0.3**
EZN				*e*SG	**Sg**	**07 58 20.9**	**+0.4**
EZN	**Ezine**	**1.00**	**14**	Pn	**Pn**	**07 58 07.8**	**-1.3**
EZN	**Ezine**	**1.00**	**14**	*e*Pg	**Pg**	**07 58 07.5**	**-0.2**
EZN	**Ezine**	**1.00**	**14**	Pn	**Pn**	**07 58 07.8**	**-1.3**
EZN				*e*Sg	**Sg**	**07 58 21.0**	**+0.4**
IZM	**Izmir**	**1.07**	**114**	*e*PN	**Pn**	**07 58 08.6**	**-1.4**
IZM				*e*SN	**Sn**	**07 58 24.1**	**-1.2**
IZM	**Izmir**	**1.07**	**114**	Pn	**Pn**	**07 58 11.4**	**+1.4**
IZM	**Izmir**	**1.07**	**114**	Pn	**Pn**	**07 58 11.4**	**+1.4**
IZM				*e*Sn	**Sn**	**07 58 24.1**	**-1.2**
KDAG	**Bornova**	**1.07**	**114**	*i* P	**Pg**	**07 58 06.7**	**-2.1**
KDAG				*i* S	**Sg**	**07 58 23.7**	**+0.9**
KDAG	**Bornova**	**1.07**	**114**	*i* P	**Pg**	**07 58 06.7**	**-2.1**
KDAG				*i* S	**Sg**	**07 58 23.7**	**+0.9**
LIA	**Limnos Island**	**1.23**	**329**	⇓*i*Pn	**Pn**	**07 58 11.6**	**-0.6**
LIA				*e*Sn	**Sn**	**07 58 28.6**	**-0.7**
LIA	**Limnos Island**	**1.23**	**329**	⇓*i*PN	**Pn**	**07 58 11.6**	**-0.6**
LIA				*e*SN	**Sn**	**07 58 28.6**	**-0.7**
LIA	**Limnos Island**	**1.23**	**329**	P	**Pg**	**07 58 11.3**	**-0.6**
LIA				S	**Sg**	**07 58 29.0**	**+1.1**
LIA	**Limnos Island**	**1.23**	**329**	P	**Pg**	**07 58 11.3**	**-0.6**
LIA	**Limnos Island**	**1.23**	**329**	⇓*i*Pn	**Pn**	**07 58 11.6**	**-0.6**
LIA				*e*Sn	**Sn**	**07 58 28.6**	**-0.7**
LIA				S	**Sg**	**07 58 29.0**	**+1.1**
GADA	**Gvkgeada**	**1.34**	**356**	*e*PN	**Pn**	**07 58 12.2**	**-1.5**
GADA	**Gvkgeada**	**1.34**	**356**	Pn	**Pn**	**07 58 12.5**	**-1.3**
GADA				Sg	**Sg**	**07 58 30.5**	**-1.0**
GADA	**Gvkgeada**	**1.34**	**356**	Pn	**Pn**	**07 58 12.5**	**-1.3**
GADA				Sg	**Sg**	**07 58 30.5**	**-1.0**
AKS	**Akhisar**	**1.40**	**88**	*e*PN	**Pn**	**07 58 14.2**	**-0.3**
AKS	**Akhisar**	**1.40**	**88**	Pn	**Pn**	**07 58 15.3**	**+0.8**
AKS	**Akhisar**	**1.40**	**88**	Pn	**Pn**	**07 58 15.3**	**+0.8**
AKHS	**Akhisar**	**1.40**	**88**	*i* P	**Pn**	**07 58 12.5**	**-2.1**
AKHS				*i* S	**Sb**	**07 58 33.5**	**+0.3**
AKHS	**Akhisar**	**1.40**	**88**	*i* P	**Pn**	**07 58 12.5**	**-2.0**
AKHS				*i* S	**Sb**	**07 58 33.5**	**+0.3**
BALY	**Balya**	**1.53**	**54**	*i* P	**Pn**	**07 58 13.6**	**-2.7**
BALY				*i* S	**Sn**	**07 58 36.8**	**+0.2**
BALY	**Balya**	**1.53**	**54**	*i* P	**Pn**	**07 58 13.6**	**-2.7**
BALY				*i* S	**Sn**	**07 58 36.8**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.59**	**13**	*e*PN	**Pn**	**07 58 16.9**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.59**	**13**	*e*Pn	**Pn**	**07 58 16.9**	**-0.2**
LPK	**Lapseki**	**1.63**	**20**	*e*PN	**Pn**	**07 58 17.5**	**-0.2**
LPK	**Lapseki**	**1.63**	**20**	Pn	**Pn**	**07 58 17.5**	**-0.2**
LPK	**Lapseki**	**1.63**	**20**	*e*Pn	**Pn**	**07 58 17.5**	**-0.1**
BALB	**Balikesir**	**1.65**	**61**	*e*PN	**Pn**	**07 58 18.0**	**+0.1**
BALB	**Balikesir**	**1.65**	**61**	Pn	**Pn**	**07 58 20.3**	**+2.4**
BALB	**Balikesir**	**1.65**	**61**	*e*Pn	**Pn**	**07 58 18.0**	**+0.1**
AOS	**Alonnisos**	**1.70**	**282**	P	**Pn**	**07 58 21.8**	**+3.2**
AOS	**Alonnisos**	**1.70**	**282**	P	**Pn**	**07 58 18.7**	**+0.1**
AOS				S	**Sn**	**07 58 41.9**	**+1.2**
AOS	**Alonnisos**	**1.70**	**282**	P	**Pn**	**07 58 18.7**	**+0.1**
AOS				S	**Sn**	**07 58 41.9**	**+1.2**
GONE	**Gonen-Balikesi**	**1.76**	**47**	*e*PN	**Pn**	**07 58 18.7**	**-0.8**
GONE	**Gonen-Balikesi**	**1.76**	**47**	*e*Pn	**Pn**	**07 58 18.7**	**-0.8**
APE	**Apeiranthos**	**1.82**	**192**	*e*PN	**Pb**	**07 58 18.8**	**-1.4**
APE	**Apeiranthos**	**1.82**	**192**	*e*Pb	**Pb**	**07 58 19.0**	**-3.0**
APE	**Apeiranthos**	**1.82**	**192**	*e*PB	**Pb**	**07 58 19.0**	**-3.0**
APE	**Apeiranthos**	**1.82**	**192**	P	**Pn**	**07 58 19.1**	**-1.2**
APE	**Apeiranthos**	**1.82**	**192**	⇓*i*P	**Pn**	**07 58 24.9**	**+4.6**
APE	**Apeiranthos**	**1.82**	**192**	*e*Pn	**Pn**	**07 58 18.8**	**-1.5**
APE	**Apeiranthos**	**1.82**	**192**	*e*Pb	**Pb**	**07 58 19.0**	**-3.0**
KRBG	**Karabiga-Canak**	**1.83**	**32**	*e*PN	**Pn**	**07 58 20.2**	**-0.2**
KRBG	**Karabiga-Canak**	**1.83**	**32**	*e*Pn	**Pn**	**07 58 20.2**	**-0.3**
ERIK	**Erikli-Kesan**	**1.86**	**12**	*e*PN	**Pn**	**07 58 20.3**	**-0.6**
ERIK	**Erikli-Kesan**	**1.86**	**12**	*e*Pn	**Pn**	**07 58 20.3**	**-0.6**
PTL	**Penteli**	**1.87**	**245**	*e*Pn	**Pn**	**07 58 20.2**	**-0.8**
PTL	**Penteli**	**1.87**	**245**	*e*PN	**Pn**	**07 58 20.2**	**-0.8**
PTL	**Penteli**	**1.87**	**245**	*e*Pn	**Pn**	**07 58 20.2**	**-0.8**
ENEZ	**Enez**	**1.89**	**3**	*e*PN	**Pn**	**07 58 20.3**	**-0.9**
ENEZ	**Enez**	**1.89**	**3**	*e*Pn	**Pn**	**07 58 20.3**	**-0.9**
ATH	**Athens Observa**	**2.01**	**245**	*e*Pb	**Pb**	**07 58 23.7**	**-1.6**
ATH	**Athens Observa**	**2.01**	**245**	*e*PB	**Pb**	**07 58 23.7**	**-1.6**
ATH	**Athens Observa**	**2.01**	**245**	*e*Pb	**Pb**	**07 58 23.7**	**-1.6**
VLY	**Voula,Athens**	**2.01**	**241**	*e*Pn	**Pn**	**07 58 22.3**	**-0.6**
VLY	**Voula,Athens**	**2.01**	**241**	*e*PN	**Pn**	**07 58 22.3**	**-0.6**
VLY	**Voula,Athens**	**2.01**	**241**	*e*Pn	**Pn**	**07 58 22.3**	**-0.6**
RKY	**Sarkoy-Tekirda**	**2.04**	**26**	*e*PN	**Pn**	**07 58 23.4**	**+0.1**
RKY	**Sarkoy-Tekirda**	**2.04**	**26**	Pn	**Pn**	**07 58 24.2**	**+0.8**
RKY	**Sarkoy-Tekirda**	**2.04**	**26**	*e*Pn	**Pn**	**07 58 23.5**	**+0.1**
ALN	**Alexandroupoli**	**2.05**	**1**	*e*Pb	**Pb**	**07 58 22.2**	**-3.8**
ALN	**Alexandroupoli**	**2.05**	**1**	*e*PB	**Pb**	**07 58 22.2**	**-3.8**
ALN	**Alexandroupoli**	**2.05**	**1**	P	**Pn**	**07 58 22.1**	**-1.3**
ALN				S	**Sn**	**07 58 48.4**	**-1.0**
ALN	**Alexandroupoli**	**2.05**	**1**	P	**Pn**	**07 58 22.1**	**-1.3**
ALN				S	**Sn**	**07 58 48.4**	**-1.0**
BODT	**Bodrum**	**2.06**	**150**	*e*PN	**Pn**	**07 58 23.8**	**+0.3**
BODT	**Bodrum**	**2.06**	**150**	*e*Pn	**Pn**	**07 58 23.8**	**+0.3**
EDC	**Edincik**	**2.07**	**43**	*e*PN	**Pn**	**07 58 23.5**	**-0.2**
EDC	**Edincik**	**2.07**	**43**	Pn	**Pn**	**07 58 25.4**	**+1.7**
EDC	**Edincik**	**2.07**	**43**	*e*Pn	**Pn**	**07 58 23.5**	**-0.2**
MLSB	**Milas**	**2.08**	**138**	*e*PN	**Pn**	**07 58 24.1**	**+0.2**
MLSB	**Milas**	**2.08**	**138**	Pn	**Pn**	**07 58 25.8**	**+1.9**
MLSB	**Milas**	**2.08**	**138**	*e*Pn	**Pn**	**07 58 24.1**	**+0.2**
KULA	**Kula-Manisa**	**2.10**	**98**	*e*PN	**Pn**	**07 58 24.6**	**+0.6**
KULA	**Kula-Manisa**	**2.10**	**98**	*e*Pn	**Pn**	**07 58 24.6**	**+0.5**
BNT	**Bandirma**	**2.10**	**44**	*e*PN	**Pn**	**07 58 23.7**	**-0.5**
BNT	**Bandirma**	**2.10**	**44**	Pn	**Pn**	**07 58 25.3**	**+1.1**
PAIG	**Paliouri**	**2.11**	**301**	P	**Pn**	**07 58 25.6**	**+1.3**
PAIG	**Paliouri**	**2.11**	**301**	P	**Pn**	**07 58 23.6**	**-0.7**
PAIG	**Paliouri**	**2.11**	**301**	P	**Pn**	**07 58 23.6**	**-0.7**
OUR	**Ouranopolis**	**2.16**	**314**	P	**Pn**	**07 58 24.3**	**-0.7**
OUR	**Ouranopolis**	**2.16**	**314**	P	**Pn**	**07 58 24.3**	**-0.7**
MFT	**Murefte**	**2.17**	**26**	*e*PN	**Pn**	**07 58 25.6**	**+0.5**
MFT	**Murefte**	**2.17**	**26**	*e*Pn	**Pn**	**07 58 25.6**	**+0.5**
NEO	**Neokhori**	**2.22**	**283**	*e*Pn	**Pn**	**07 58 25.4**	**-0.4**
NEO	**Neokhori**	**2.22**	**283**	*e*PN	**Pn**	**07 58 25.4**	**-0.4**
NEO	**Neokhori**	**2.22**	**283**	*e*Pn	**Pn**	**07 58 25.4**	**-0.4**
NAIG	**Nisos Aigina**	**2.27**	**242**	*e*Pn	**Pn**	**07 58 27.1**	**+0.6**
NAIG	**Nisos Aigina**	**2.27**	**242**	*e*PN	**Pn**	**07 58 27.1**	**+0.6**
NAIG	**Nisos Aigina**	**2.27**	**242**	*e*Pn	**Pn**	**07 58 27.1**	**+0.6**
KCTX	**Karacabey (Bur**	**2.30**	**51**	*e*PN	**Pn**	**07 58 26.3**	**-0.5**
KCTX	**Karacabey (Bur**	**2.30**	**51**	*e*Pn	**Pn**	**07 58 26.3**	**-0.5**
LKR	**Lokris**	**2.37**	**266**	*e*PN	**Pn**	**07 58 27.9**	**+0.1**
LKR	**Lokris**	**2.37**	**266**	*e*PN	**Pn**	**07 58 27.9**	**+0.1**
LKR	**Lokris**	**2.37**	**266**	*e*Pn	**Pn**	**07 58 27.9**	**+0.1**
KAVA	**Kavala**	**2.44**	**332**	P	**Pn**	**07 58 27.9**	**-0.9**
KAVA	**Kavala**	**2.44**	**332**	P	**Pn**	**07 58 27.9**	**-0.9**
DAT	**Datca**	**2.45**	**149**	*e*PN	**Pn**	**07 58 28.9**	**0.0**
DAT	**Datca**	**2.45**	**149**	*e*Pn	**Pn**	**07 58 28.9**	**-0.1**
YER	**Yerkesik**	**2.48**	**133**	*e*PN	**Pn**	**07 58 29.6**	**+0.3**
YER	**Yerkesik**	**2.48**	**133**	Pn	**Pn**	**07 58 30.9**	**+1.6**
YER	**Yerkesik**	**2.48**	**133**	*e*Pn	**Pn**	**07 58 29.6**	**+0.3**
LTK	**Loutraki**	**2.53**	**252**	*e*PN	**Pn**	**07 58 30.7**	**+0.6**
DID	**Didima**	**2.57**	**239**	*e*PN	**Pn**	**07 58 29.9**	**-0.7**
DID	**Didima**	**2.57**	**239**	*e*Pn	**Pn**	**07 58 29.9**	**-0.7**
ARMT	**Armutlu**	**2.78**	**51**	*e*PN	**Pn**	**07 58 34.8**	**+1.2**
ARMT	**Armutlu**	**2.78**	**51**	Pn	**Pn**	**07 58 35.7**	**+2.1**
ARMT	**Armutlu**	**2.78**	**51**	*e*Pn	**Pn**	**07 58 34.8**	**+1.2**
SOH	**Sokhos**	**2.84**	**315**	*e*Pn	**Pn**	**07 58 34.3**	**-0.1**
SOH	**Sokhos**	**2.84**	**315**	*e*PN	**Pn**	**07 58 34.3**	**-0.1**
HORT	**Hortiatis**	**2.85**	**309**	P	**Pn**	**07 58 34.2**	**-0.3**
AGG	**Agios Georgios**	**2.88**	**275**	*e*Pn	**Pn**	**07 58 35.6**	**+0.7**
AGG	**Agios Georgios**	**2.88**	**275**	*e*PN	**Pn**	**07 58 35.6**	**+0.7**
AGG	**Agios Georgios**	**2.88**	**275**	*e*Pn	**Pn**	**07 58 35.6**	**+0.7**
SLVT	**Silivri**	**2.91**	**35**	*e*PN	**Pn**	**07 58 36.7**	**+1.4**
SLVT	**Silivri**	**2.91**	**35**	*e*Pn	**Pn**	**07 58 35.5**	**+0.2**
GEMT	**Gemlik**	**2.92**	**56**	*e*PN	**Pn**	**07 58 37.1**	**+1.7**
GEMT	**Gemlik**	**2.92**	**56**	*e*Pn	**Pn**	**07 58 35.5**	**+0.1**
SRS	**Serrai**	**2.93**	**321**	P	**Pn**	**07 58 35.7**	**+0.1**
NVR	**Nevrokopi**	**3.00**	**327**	*e*PN	**Pn**	**07 58 36.0**	**-0.5**
NVR	**Nevrokopi**	**3.00**	**327**	*e*PN	**Pn**	**07 58 36.0**	**-0.5**
GUR	**Goura**	**3.03**	**254**	*e*PN	**Pn**	**07 58 37.2**	**+0.3**
GUR	**Goura**	**3.03**	**254**	*e*Pn	**Pn**	**07 58 37.2**	**+0.3**
EDRB	**Edirne**	**3.05**	**10**	*e*PN	**Pn**	**07 58 37.6**	**+0.5**
EDRB	**Edirne**	**3.05**	**10**	Pn	**Pn**	**07 58 37.8**	**+0.7**
EDRB	**Edirne**	**3.05**	**10**	*e*Pn	**Pn**	**07 58 37.6**	**+0.4**
YLV	**Yalova**	**3.10**	**55**	*e*PN	**Pn**	**07 58 39.7**	**+1.7**
YLV	**Yalova**	**3.10**	**55**	*e*Pn	**Pn**	**07 58 38.4**	**+0.4**
ARG	**Arkhangelos**	**3.12**	**147**	*e*Pn	**Pn**	**07 58 35.7**	**-2.4**
ARG	**Arkhangelos**	**3.12**	**147**	*e*PN	**Pn**	**07 58 35.7**	**-2.4**
ARG	**Arkhangelos**	**3.12**	**147**	*e*Pn	**Pn**	**07 58 35.7**	**-2.4**
BGKT	**Bogazkoy**	**3.15**	**41**	*e*PN	**Pn**	**07 58 39.7**	**+1.2**
BGKT	**Bogazkoy**	**3.15**	**41**	Pn	**Pn**	**07 58 40.6**	**+2.0**
BGKT	**Bogazkoy**	**3.15**	**41**	*e*Pn	**Pn**	**07 58 39.0**	**+0.5**
CTYL	**Yal??k??y-??at**	**3.15**	**33**	*e*Pn	**Pn**	**07 58 39.5**	**+1.0**
CTYL	**Yal??k??y-??at**	**3.15**	**33**	*e*Pn	**Pn**	**07 58 39.6**	**+1.0**
THL	**Klokotos Trika**	**3.19**	**284**	*e*PN	**Pn**	**07 58 39.4**	**+0.2**
THL	**Klokotos Trika**	**3.19**	**284**	*e*Pn	**Pn**	**07 58 39.4**	**+0.2**
VLX	**Vlachokerasia**	**3.23**	**244**	*e*PN	**Pn**	**07 58 39.5**	**-0.1**
VLX	**Vlachokerasia**	**3.23**	**244**	*e*Pn	**Pn**	**07 58 39.5**	**-0.1**
VLI	**Veliai**	**3.24**	**230**	*e*Pn	**Pn**	**07 58 39.2**	**-0.6**
VLI	**Veliai**	**3.24**	**230**	*e*PN	**Pn**	**07 58 39.2**	**-0.6**
VLI	**Veliai**	**3.24**	**230**	*e*Pn	**Pn**	**07 58 39.2**	**-0.6**
EFP	**Efpalio**	**3.25**	**264**	*e*PN	**Pn**	**07 58 40.8**	**+0.9**
EFP	**Efpalio**	**3.25**	**264**	*e*Pn	**Pn**	**07 58 40.8**	**+0.9**
ADVT	**Abdulvahap**	**3.28**	**60**	*e*PN	**Pn**	**07 58 41.8**	**+1.4**
ADVT	**Abdulvahap**	**3.28**	**60**	Pn	**Pn**	**07 58 42.9**	**+2.5**
ADVT	**Abdulvahap**	**3.28**	**60**	*e*Pn	**Pn**	**07 58 40.6**	**+0.2**
KLYT	**Kilyos**	**3.34**	**43**	*e*PN	**Pn**	**07 58 42.9**	**+1.7**
KLYT	**Kilyos**	**3.34**	**43**	Pn	**Pn**	**07 58 43.3**	**+2.1**
KLYT	**Kilyos**	**3.34**	**43**	*e*Pn	**Pn**	**07 58 41.4**	**+0.2**
KARP	**Karpathos**	**3.42**	**164**	*e*Pn	**Pn**	**07 58 40.9**	**-1.4**
KARP	**Karpathos**	**3.42**	**164**	*e*PN	**Pn**	**07 58 40.9**	**-1.4**
KARP	**Karpathos**	**3.42**	**164**	*e*Pn	**Pn**	**07 58 40.9**	**-1.4**
HRT	**Hereke**	**3.43**	**54**	*e*PN	**Pn**	**07 58 43.9**	**+0.9**
HRT	**Hereke**	**3.43**	**54**	*e*Pn	**Pn**	**07 58 43.4**	**+0.9**
GRG	**Griva**	**3.49**	**308**	P	**Pn**	**07 58 43.9**	**+0.7**
GRG	**Griva**	**3.49**	**308**	P	**Pn**	**07 58 44.0**	**+0.8**
GRG	**Griva**	**3.49**	**308**	*e*Pn	**Pn**	**07 58 43.9**	**+0.7**
KYTH	**Kithira**	**3.49**	**224**	*e*Pn	**Pn**	**07 58 42.9**	**-0.4**
KYTH	**Kithira**	**3.49**	**224**	*e*PN	**Pn**	**07 58 42.9**	**-0.4**
KYTH	**Kithira**	**3.49**	**224**	*e*Pn	**Pn**	**07 58 42.9**	**-0.4**
VAY	**Valandovo**	**3.62**	**314**	*e*Pn	**Pn**	**07 58 44.6**	**-0.4**
VAY				*e*Sg	**Sg**	**07 59 41.0**	**-3.5**
ITM	**Ithomi**	**3.63**	**244**	*e*Pn	**Pn**	**07 58 46.1**	**+0.8**
ITM	**Ithomi**	**3.63**	**244**	*e*PN	**Pn**	**07 58 46.1**	**+0.8**
ITM	**Ithomi**	**3.63**	**244**	*e*Pn	**Pn**	**07 58 46.1**	**+0.8**
RLS	**Riolos of Patr**	**3.66**	**259**	*e*Pn	**Pn**	**07 58 46.9**	**+1.3**
RLS	**Riolos of Patr**	**3.66**	**259**	*e*PN	**Pn**	**07 58 46.9**	**+1.3**
RLS	**Riolos of Patr**	**3.66**	**259**	*e*Pn	**Pn**	**07 58 46.9**	**+1.3**
IDI	**Anoyia**	**3.67**	**195**	*e*Pn	**Pn**	**07 58 44.4**	**-1.3**
IDI	**Anoyia**	**3.67**	**195**	*e*PN	**Pn**	**07 58 44.4**	**-1.3**
IDI	**Anoyia**	**3.67**	**195**	*e*Pn	**Pn**	**07 58 44.4**	**-1.3**
LAST	**Lasithi**	**3.71**	**187**	*e*PN	**Pn**	**07 58 45.8**	**-0.4**
LAST	**Lasithi**	**3.71**	**187**	*e*PN	**Pn**	**07 58 45.8**	**-0.4**
LAST	**Lasithi**	**3.71**	**187**	*e*Pn	**Pn**	**07 58 45.8**	**-0.4**
ZKR	**Zakros**	**3.73**	**177**	*e*Pn	**Pn**	**07 58 46.1**	**-0.5**
ZKR	**Zakros**	**3.73**	**177**	*e*PN	**Pn**	**07 58 46.1**	**-0.5**
ZKR	**Zakros**	**3.73**	**177**	*e*Pn	**Pn**	**07 58 46.1**	**-0.5**
KARN	**Karanos**	**3.83**	**207**	*e*PN	**Pn**	**07 58 48.5**	**+0.6**
KARN	**Karanos**	**3.83**	**207**	*e*Pn	**Pn**	**07 58 48.5**	**+0.6**
PYL	**PYLOS**	**3.91**	**241**	*e*PN	**Pn**	**07 58 50.2**	**+1.2**
PYL	**PYLOS**	**3.91**	**241**	*e*Pn	**Pn**	**07 58 50.2**	**+1.2**
GVD	**Gavdhos**	**4.29**	**202**	*e*Pn	**Pn**	**07 58 55.6**	**+1.3**
GVD	**Gavdhos**	**4.29**	**202**	*e*PN	**Pn**	**07 58 55.6**	**+1.3**
GVD	**Gavdhos**	**4.29**	**202**	*e*Pn	**Pn**	**07 58 55.6**	**+1.3**
SVRH	**Sivrihisar-ESK**	**4.32**	**80**	*e*PN	**Pn**	**07 58 57.2**	**+2.5**
SVRH	**Sivrihisar-ESK**	**4.32**	**80**	Pn	**Pn**	**07 58 57.7**	**+3.0**
SVRH	**Sivrihisar-ESK**	**4.32**	**80**	*e*Pn	**Pn**	**07 58 56.2**	**+1.5**
TIRR	**Tirgusor**	**5.88**	**17**	*e*Pn	**Pn**	**07 59 14.6**	**-1.6**
TIRR	**Tirgusor**	**5.88**	**17**	*e*Pn	**Pn**	**07 59 14.6**	**-1.5**
BR131	**Keskin Array S** 1.3nm,0.6s	**5.98**	**79**	*e*Pn	**Pn**	**07 59 22.6**	**+5.2**
VOIR			**6.62**	**354**	⇓P	**Pn**	**07 59 25.8**	**-0.5**
VOIR			**6.62**	**354**	⇓*i*P	**Pn**	**07 59 25.8**	**-0.5**
VOIR			**6.62**	**354**	⇓P	**Pn**	**07 59 25.8**	**-0.5**
MLR	**Muntele Rosu**		**6.64**	**360**	⇑P	**Pn**	**07 59 27.0**	**+0.5**
MLR	**Muntele Rosu**		**6.64**	**360**	⇑*i*P	**Pn**	**07 59 27.0**	**+0.5**
MLR	**Muntele Rosu**		**6.64**	**360**	⇑P	**Pn**	**07 59 27.0**	**+0.5**
GZR	**Gura Zlata**		**6.97**	**341**	⇓P	**Pn**	**07 59 30.0**	**-1.1**
GZR	**Gura Zlata**		**6.97**	**341**	⇓*i*P	**Pn**	**07 59 30.0**	**-1.0**
GZR	**Gura Zlata**		**6.97**	**341**	⇓P	**Pn**	**07 59 30.0**	**-1.0**
PLOR	**Plostina**		**7.01**	**4**	⇓*i*P	**Pn**	**07 59 32.8**	**+1.2**
PLOR	**Plostina**		**7.01**	**4**	⇓*i*P	**Pn**	**07 59 32.8**	**+1.2**
VRI	**Vrincioaia**		**7.03**	**4**	⇓P	**Pn**	**07 59 33.9**	**+2.0**
VRI	**Vrincioaia**		**7.03**	**4**	⇓*i*P	**Pn**	**07 59 33.9**	**+2.0**
VRI	**Vrincioaia**		**7.03**	**4**	⇓P	**Pn**	**07 59 33.9**	**+2.0**
BZS	**Buzias**		**7.51**	**336**	⇓P	**Pn**	**07 59 37.7**	**-0.7**
BZS	**Buzias**		**7.51**	**336**	⇓*i*P	**Pn**	**07 59 37.7**	**-0.7**
BZS	**Buzias**		**7.51**	**336**	⇓P	**Pn**	**07 59 37.7**	**-0.7**
TESR			**7.67**	**3**	⇓P	**Pn**	**07 59 40.9**	**+0.2**
TESR			**7.67**	**3**	⇓*i*P	**Pn**	**07 59 40.8**	**+0.1**
TESR			**7.67**	**3**	⇓P	**Pn**	**07 59 40.8**	**+0.1**
DRGR			**8.30**	**344**	⇑P	**Pn**	**07 59 49.9**	**+0.6**
DRGR			**8.30**	**344**	⇑*i*P	**Pn**	**07 59 49.9**	**+0.6**
DRGR			**8.30**	**344**	⇑P	**Pn**	**07 59 49.9**	**+0.6**
BURAR	**Bucovina Array**		**8.78**	**356**	⇑P	**Pn**	**07 59 57.7**	**+1.8**
BURAR	**Bucovina Array**		**8.78**	**356**	⇑*i*P	**Pn**	**07 59 57.7**	**+1.8**
BURAR	**Bucovina Array**		**8.78**	**356**	⇑P	**Pn**	**07 59 57.7**	**+1.8**

*TIR **01** 08:09:37.8±1.0,40.18N×20.34E,h0km±5km,ML3.6*
*CSEM **01** 08:09:38.6±0.2,39.96N×20.54E,h10km,ML3.6,Error*
ellipse: s-maj=4.1km s-min=3.4km az=132.0
*THE **01** 08:09:38.7,39.94N×20.56E,h6km±1km,ML2.6/5,Error*
ellipse: s-maj=1.1km s-min=0.4km az=255.0
*NEIC **01** 08:09:38.0,39.98N×20.51E,h25km,MD3.0(ATH),After*
ATH.
*ATH **01** 08:09:38.0,39.98N×20.51E,h25km±1km,MD3.0/3*
*SKO **01** 08:09:38.6,39.94N×20.62E,h42km*
*ISCJB **01** 08:09:38.4±0.5,39.98N±0.02×20.51E±0.03,h8km±4km,*
Error ellipse: s-maj=5.0km s-min=3.2km az=40.8
*BEO **01** 08:09:44.9±1.3,40.61N×20.30E,h0km,ML2.1/1*

ISC 01 08:09:38.8±0.4,**39.96N**±0.02×**20.54E**±0.03,**h8**km±4km,
n57,σ0ᵍ**86**/81,**3C**,**Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSK	**Leskovik**	**0.20**	**13**	*e*PG	**Pg**	**08 09 42.9**	**0.0**
LSK				*i* SG	**Sg**	**08 09 46.4**	**+0.7**
LSK	**Leskovik** SNR=92	**0.20**	**13**	*e*Pg	**Pg**	**08 09 42.9**	**0.0**
LSK	SNR=92			*i* Sg	**Sg**	**08 09 46.4**	**+0.7**
JAN	**Janina**	**0.38**	**141**	*e*P

mb5.9/435,MS5.8/263,Error ellipse: s-maj=2.4km s-min=2.0km az=22.8

BJI ***01*** *08:32:41.6, 32.02N× 104.85E, h14km, mB6.1/27, mb5.6/39, ML5.9/23, Ms6.2/52, Ms7 6.0/46*

IDC ***01*** *08:32:41.2± 0.4, 32.06N× 104.79E, h0km, mb5.5/25, mb1 5.6/28, mb1mx5.5/29, mbtmp5.5/28, ML4.9/3, MS5.5/33, Ms1 5.5/33, ms1mx5.4/44, Error ellipse: s-maj=13.0km s-min=9.7km az=48.0*

SZGRF ***01*** *08:32:43.7, 31.90N× 104.52E, h33km, mb6.2, MS6.6, Sichuan, China*

NEIC ***01*** *08:32:43.6± 0.1, 32.03N× 104.72E, h11km, mb5.9/255, ME6.1, MS5.6/179, MW5.7, Error ellipse: s-maj=2.5km s-min=1.8km az=204.0 Broadband fault plane solution: P waves. NP1:φs225.00000°, δ75.00000°, λ90.00000°. NP2:φs45.00000°, δ15.00000°, λ90.00000°. Principal axes: T Plg60.0000°, Azm135.0000°; N Plg0.0000°, Azm0.0000°; P Plg30.0000°, Azm315.0000°; Moment Tensor Solution. s70 Moment tensor: Scale 10^17 Nm; Mrr3.15; Mθθ0.05; Mφφ-3.20; Mrθ-3.13; Mθφ-0.64; Mφr-1.98; Best double couple: Mo4.90000×10^17 NP1:φs352.00000°, δ29.00000°, λ44.00000°. NP2:φs221.00000°, δ70.00000°, λ112.00000°. Principal axes: T 5.3100, Plg58.0000°, Azm161.0000°; N -0.9200, Plg20.0000°, Azm33.0000°; P -4.4000, Plg22.0000°, Azm294.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC At least 231 people injured, 540 houses destroyed and 2,450 houses damaged in Beichuan and Pingwu. Several landslides and rockfalls blocked roads in Pingwu. Cellular phone service interrupted in Beichuan. Felt [V] at Mianyang; [III] at Chengdu and Chongqing; [II] at Xi'an. Also felt at Ankang, Baoji, Daxian, Deyang, Fuling, Guangyuan, Hanzhong, Jiangyou, Lanzhou, Leshan, Luzhou, Nanchong, Nanlong, Tianshui, Ya'an, Yanliang and Yibin.

IGIL ***01*** *08:32:43.9, 32.04N× 104.74E, h10km, MS6.0*

MOS ***01*** *08:32:43.6± 0.9, 31.93N× 104.85E, h33km, mb6.1/143, MS6.0/77, Error ellipse: s-maj=7.5km s-min=5.4km az=96.1*

DJA ***01*** *08:32:46, 31.99N× 104.61E, h25km, Mw6.6/77*

GCMT ***01*** *08:32:47.8± 0.1, 32.04N× 104.72E, h21km, MW5.7, Moment Tensor Solution. s86,c161; s37,c39; Moment tensor: Scale 10^17Nm; Mrr2.71±.05; Mθθ0.44±.04; Mφφ-3.15±.04; Mrθ-1.76±.08; Mθφ-1.03±.03; Mφr-2.04±.09; Best double couple: Mo4.10000×10^17 NP1:φs354.00000°, δ29.00000°, λ54.00000°. NP2:φs213.00000°, δ67.00000°, λ108.00000°. Principal axes: T 3.9400, Plg64.0000°, Azm153.0000°; N 0.3600, Plg16.0000°, Azm26.0000°; P -4.3000, Plg20.0000°, Azm290.0000°; Data Used: II IU G CN IC. Surface waves: sta= 94, comp=189, per= 50.*

BGS ***01*** *08:32:55.3± 1.4, 32.78N× 101.69E, h10km, mb5.5, MS6.1*

ISC 01 08:32:43.8±0.5,**32.08N**±0.01×**104.73E**±0.01,**h10**km±3km, **h13**km±1.7km:**pP-P, n1629,** ∝**0**≈**93**/1518, **mb5.8**/435, **MS5.8**/263, **175C-175D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.43**	**216**	Pn		**Pn**	**08 33 09.2**	**-0.5**
CD2				Pg		**Pg**	**08 33 10.6**	**-0.6**
CD2				Sn		**Sn**	**08 33 29.4**	**+0.9**
CD2				Sg		**Sg**	**08 33 30.5**	**+0.7**
CD2				smax				
	comp=N,903μm,0.8s							
CD2				smax				
	comp=E,841μm,0.8s							
XAN	**Xi'an**	**4.03**	**60**	Pn		**Pn**	**08 33 45.5**	**0.0**
XAN				Pg		**Pg**	**08 33 56.5**	**-4.5**
XAN				Sn		**Sn**	**08 34 31.8**	**-0.9**
XAN				Sg		**Sg**	**08 34 46.7**	**-6.5**
XAN				smax				
	comp=N,34μm,0.9s							
XAN				smax				
	comp=E,30μm,0.9s							
XAN				LR	LR			
	comp=N,305μm,9.3s							
XAN				LR	LR			
	comp=E,65μm,9.3s							
XAN				LR	LR			
	comp=Z,57μm,9.8s							
LZH	**Lanzhou**	**4.06**	**350**	Pn		**Pn**	**08 33 48.2**	**+2.3**
LZH				Sn		**Sn**	**08 34 35.9**	**+2.4**
LZH				Sg		**Sg**	**08 34 50.7**	**-3.5**
LZH				smax				
	comp=N,64μm,0.8s							
LZH				smax				
	comp=E,82μm,1.0s							
LZH				LR	LR			
	comp=N,610μm,5.9s							
LZH				LR	LR			
	comp=Z,620μm,7.0s							
ENH	**Enshi**	**4.46**	**113**	*e*Pn		**Pn**	**08 33 51.9**	**+0.5**
ENH				*e*Sg		**Sg**	**08 35 06.8**	**-0.2**
GYA	**Guiyang**	**5.85**	**163**	⇑*i*Pn		**Pn**	**08 34 09.9**	**-0.6**
GYA				Sn		**Sn**	**08 35 14.4**	**-3.3**
GYA				Sg		**Sg**	**08 35 40.4**	**-11**
GYA				smax				
	comp=N,17μm,0.8s							
GYA				smax				
	comp=E,15μm,0.7s							
GYA				LR	LR			
	comp=N,171μm,9.3s							
GYA				LR	LR			
	comp=E,137μm,8.6s							
GYA				LR	LR			
	comp=Z,253μm,11.2s							
KMI	**Kunming**	**7.15**	**195**	Pn		**Pn**	**08 34 27.7**	**-0.6**
KMI				Sn		**Sn**	**08 35 50.0**	**+0.4**
KMI				smax				
	comp=N,3μm,1.7s							
KMI				smax				
	comp=E,3μm,1.4s							
KMI				LR	LR			
	comp=N,120μm,9.2s							
KMI				LR	LR			
	comp=E,77μm,8.5s							
KMI				LR	LR			
	comp=Z,113μm,11.8s							
GTA	**Gaotai**	**8.33**	**333**	P		**Pn**	**08 34 44.6**	**+0.1**
GTA				pP			08 34 48.9	
GTA				sP			08 34 52.3	
GTA				S		**Sn**	**08 36 16.1**	**-2.5**
GTA				pmax	pmax			
	comp=Z,140nm,1.0s							
GTA				pmax	pmax			
	comp=Z,2μm,7.1s							
GTA				LR	LR			
	comp=N,205μm,10.1s							
GTA				LR	LR			
	comp=E,53μm,10.4s							
GTA				LR	LR			
	comp=Z,183μm,10.4s							
WHN	**Wuhan**	**8.38**	**98**	⇑P		**Pn**	**08 34 43.8**	**-1.4**
WHN				S		**Sn**	**08 36 14.0**	**-5.8**
WHN				LR	LR			
	comp=Z,419μm,13.0s							
TIY	**Taiyuan**	**8.46**	**46**	*e*P		**Pn**	**08 34 45.1**	**-1.3**
TIY				S		**Sn**	**08 36 20.8**	**-1.1**
TIY				LR	LR			
	comp=N,59μm,4.3s							
TIY				LR	LR			
	comp=E,48μm,7.1s							
TIY				LR	LR			
	comp=Z,35μm,6.2s							
BTO	**Baotou**	**9.52**	**25**	*e*P		**Pn**	**08 35 00.2**	**-0.6**
BTO				S		**Sn**	**08 36 45.4**	**-2.4**
BTO				LR	LR			
	comp=N,44μm,9.2s							
BTO				LR	LR			
	comp=E,19μm,10.3s							
HHC	**Hu-ho-hao-te**	**10.34**	**30**	*e*P		**Pn**	**08 35 10.8**	**-1.2**
HHC				pP			08 35 16.0	
HHC				sP			08 35 19.5	
HHC				S		**Sn**	**08 37 04.6**	**-3.2**
HHC				sS			08 37 13.8	
HHC				SS			08 37 18.8	
HHC				pmax	pmax			
	comp=Z,89nm,0.6s							
HHC				pmax	pmax			
	comp=Z,880nm,4.0s							
HHC				LR	LR			
	comp=N,58μm,6.1s							
HHC				LR	LR			
	comp=E,91μm,6.4s							
HHC				LR	LR			
	comp=Z,56μm,6.0s							
TIA	**Tai'an**	**11.07**	**65**	P		**Pn**	**08 35 21.6**	**-0.4**
TIA				S		**Sn**	**08 37 32.5**	**+6.7**
TIA				LR	LR			
	comp=N,54μm,8.0s							
TIA				LR	LR			
	comp=E,52μm,6.9s							
GZH	**Guangzhou**	**11.77**	**137**	P		**Pn**	**08 35 26.6**	**-5.1**
LSA	**Lhasa**	**11.90**	**262**	P		**Pn**	**08 35 34.2**	**+0.7**
LSA				pP			08 35 43.2	
LSA				S		**Sn**	**08 37 41.8**	**-4.5**
LSA				pmax	pmax			
	comp=Z,120nm,1.1s							
LSA				pmax	pmax			
	comp=Z,460nm,5.0s							
LSA				LR	LR			
	comp=N,63μm,14.0s							
LSA				LR	LR			
	comp=E,47μm,9.0s							
LSA				LR	LR			
	comp=E,66μm,11.0s							
LSA	**Lhasa**	**11.90**	**262**	*e*Pn		**Pn**	**08 35 34.0**	**+0.6**
	comp=Z,176nm,0.8s							
LSA	**Lhasa**	**11.90**	**262**	*e*P		**Pn**	**08 35 34.0**	**+0.5**
LSA				pmax	pmax			
	comp=Z,176nm,0.8s							
NJ2	**Nanjing**	**11.99**	**86**	*e*P		**Pn**	**08 35 33.5**	**-1.1**
NJ2				pP			08 35 41.2	
NJ2				sP			08 35 44.3	
NJ2				S		**Sn**	**08 37 46.0**	**-2.4**
NJ2				sS			08 38 01.5	
NJ2				pmax	pmax			
	comp=Z,130nm,1.0s							
NJ2				pmax	pmax			
	comp=Z,2μm,4.0s							
NJ2				LR	LR			
	comp=N,97μm,17.5s							
NJ2				LR	LR			
	comp=E,120μm,15.0s							
NJ2				LR	LR			
	comp=Z,121μm,16.2s							
BJT	**Baijiatuan**	**12.18**	**46**	*e*Pn		**Pn**	**08 35 38.5**	**+1.3**
	comp=Z,173nm,0.8s							
BJT	**Baijiatuan**	**12.18**	**46**	*e*P		**Pn**	**08 35 38.5**	**+1.3**
BJT				pmax	pmax			
	comp=Z,173nm,0.8s							
BJI	**Beijing**	**12.20**	**46**	P		**Pn**	**08 35 40.1**	**+2.7**
BJI				S		**Sn**	**08 37 57.3**	**+3.9**
BJI				pmax	pmax			
	comp=Z,64nm,0.7s							
BJI				pmax	pmax			
	comp=Z,3μm,10.6s							
BJI				LR	LR			
	comp=N,71μm,13.2s							
BJI				LR	LR			
	comp=E,74μm,13.7s							
BJI				LR	LR			
	comp=Z,12μm,14.5s							
HKC	**Hong Kong Obse**	**12.86**	**137**	⇑*i*P		**Pn**	**08 35 44.0**	**-2.6**
HKC				S		**Sn**	**08 38 10.0**	**+0.2**
SHL	**Shillong**	**12.99**	**243**	⇑*i*P		**Pn**	**08 35 46.0**	**-2.4**
SHL				*ex*		x	08 39 36.0	
QIZ	**Qiongzhong**	**13.79**	**159**	P		**Pn**	**08 35 57.3**	**-2.0**
QIZ				sP			08 36 04.1	
QIZ				S		**Sn**	**08 38 37.8**	**+5.3**
QIZ				pmax	pmax			
	comp=Z,96nm,0.9s							
QIZ				pmax	pmax			
	comp=Z,4μm,9.0s							
QIZ	**Qiongzhong**	**13.79**	**159**	*e*Pn		**Pn**	**08 35 56.4**	**-2.9**
	comp=Z,304nm,1.1s							
SSE	**Sheshan**	**14.07**	**90**	P		**Pn**	**08 36 00.3**	**-2.8**
SSE				sP			08 36 09.9	
SSE				S		**Sn**	**08 38 38.7**	**-0.6**
SSE				pmax	pmax			
	comp=Z,35nm,0.8s							
SSE				pmax	pmax			
	comp=Z,3μm,8.6s							
SSE				LR	LR			
	comp=N,90μm,13.4s							
SSE				LR	LR			
	comp=E,36μm,13.5s							
SSE				LR	LR			
	comp=Z,109μm,14.0s							
QZH	**Quanzhou**	**14.11**	**117**	⇑*i*P		**Pn**	**08 36 00.2**	**-3.4**
QZH				S		**Sn**	**08 38 34.2**	**-6.0**
CHG	**Chiang Mai**	**14.20**	**203**	⇓P		**Pn**	**08 36 05.3**	**+0.4**
	comp=Z,188nm,1.2s							
CHTO	**Chiang Mai**	**14.20**	**203**	*e*Pn		**Pn**	**08 36 04.0**	**-0.9**
CHTO	**Chiang Mai**	**14.20**	**203**	P		**Pn**	**08 36 04.4**	**-0.5**
	comp=Z,4μmcomp=Z,230nm,1.2s							
CHTO	**Chiang Mai**	**14.20**	**203**	P		**Pn**	**08 36 04.5**	**-0.4**
	SNR=50							
CM31	**Chiang Mai Arr**	**14.53**	**202**	*e*Pn		**Pn**	**08 36 10.1**	**+0.6**
CMAR	**Chiang Mai Arr**	**14.53**	**202**	Pn		**Pn**	**08 36 07.3**	**-2.1**
	comp=Z,2.1nm,0.3s,baz=16,slow=12,SNR=25							
CMAR				Lg			08 40 27.7	
	baz=14,slow=31,SNR=2.5							
CMAR				PcP	PcP		08 41 23.0	-1.0
	comp=Z,0.8nm,0.3s,baz=299,slow=1.6,SNR=6.1							
CMAR				LR	LR		08 42 23.7	
	comp=Z,20μm,19.9s,baz=30,slow=40							
CMAR				ScP	ScP		08 44 56.6	-1.2
	comp=Z,0.5nm,0.3s,baz=313,slow=1.8,SNR=6.5							
DL2	**Dalian**	**15.35**	**59**	⇑*i*P		**Pn**	**08 36 21.4**	**+1.1**
DL2				S		**Sn**	**08 39 14.1**	**+3.7**
DL2				pmax	pmax			
	comp=Z,280nm,1.6s							
DL2				pmax	pmax			
	comp=Z,3μm,5.5s							
DL2				LR	LR			
	comp=N,19μm,17.6s							
DL2				LR	LR			
	comp=E,12μm,17.6s							
DL2				LR	LR			
	comp=Z,27μm,12.1s							
TAPN	**Taplejung**	**15.51**	**257**	*e*P		**Pn**	**08 36 20.5**	**-2.1**
	comp=Z,872nm,0.9s							
BDT	**Bhumibol Dam**	**15.65**	**201**	P		**Pn**	**08 36 23.0**	**-1.4**
	comp=Z,118nm,0.9s							
SONM	**Songino Array**	**15.79**	**4**	Pn		**Pn**	**08 36 25.7**	**-0.3**
SONM				Lg			08 41 03.5	
SONM				LR	LR		08 42 57.9	
SONM	**Songino Array**	**15.79**	**4**	Pn		**Pn**	**08 36 25.7**	**-0.3**
	comp=Z,1.6nm,0.3s,baz=184,slow=11,SNR=86							
SONM				Lg			08 41 03.5	
	comp=Z,1.3nm,0.3s,baz=174,slow=29,SNR=4.5							
SONM				LR	LR		08 42 57.9	
	comp=Z,39μm,20.8s,baz=182,slow=39							
SONM				P3KPbc			09 11 52.2	
	comp=Z,0.1nm,0.3s,baz=350,slow=3.4,SNR=12							
ULN	**Ulaanbaatar**	**15.87**	**6**	*e*P		**Pn**	**08 36 27.0**	**0.0**
	comp=Z,180nm,0.9s							
ULN	**Ulaanbaatar**	**15.87**	**6**	*e*P		**Pn**	**08 36 27.0**	**0.0**
ULN				pmax	pmax			
	comp=Z,180nm,0.9s							
ULN	**Ulaanbaatar**	**15.87**	**6**	P		**Pn**	**08 36 27.3**	**+0.3**
	comp=Z,3μmcomp=Z,275nm,1.4s							
ULN	**Ulaanbaatar**	**15.87**	**6**	P		**Pn**	**08 36 27.5**	**+0.5**
	SNR=133							
ODAN	**Odare**	**15.96**	**255**	*e*P		**Pn**	**08 36 25.6**	**-2.8**
	comp=Z,1μm,1.0s							
TATO	**Taipei**	**16.33**	**111**	*e*P		**Pn**	**08 36 33.9**	**+0.7**
	comp=Z,8μm,2.9s							
TATO	**Taipei**	**16.33**	**111**	P		**Pn**	**08 36 33.8**	**+0.6**
	SNR=31							
YHNB	**Yeheng**	**16.40**	**113**	*e*P		**Pn**	**08 36 34.0**	**0.0**
	comp=Z,262nm,0.8s							
SSLB	**Suanglung**	**16.54**	**116**	*e*P		**Pn**	**08 36 36.3**	**+0.5**
	comp=Z,2μm,1.4s							
TPUB	**Ta-pu**	**16.57**	**118**	*e*P		**Pn**	**08 36 34.8**	**-1.4**
	comp=Z,936nm,1.5s							
RAMN	**Ramite**	**16.58**	**257**	*e*P		**Pn**	**08 36 33.6**	**-2.7**
	comp=Z,464nm,0.7s							
JIRN	**Jiri**	**16.67**	**259**	*e*P		**Pn**	**08 36 35.7**	**-1.7**
	comp=Z,603nm,1.0s							
NACB	**Ninganchiao**	**16.82**	**114**	*e*P		**Pn**	**08 36 39.2**	**-0.2**
	comp=Z,2μm,1.6s							
GUN	**Gumba**	**16.84**	**261**	*e*P		**Pn**	**08 36 37.2**	**-2.5**
	comp=Z,1μm,1.0s							
NST	**Nakhon Sawan**	**16.86**	**195**	⇓P		**Pn**	**08 36 38.5**	**-1.4**
	comp=Z,351nm,0.8s							
YULB	**Yu-li**	**17.02**	**116**	*e*P		**Pn**	**08 36 41.8**	**0.0**
	comp=Z,1μm,1.8s							
TWG	**Pinlang**	**17.18**	**118**	*e*P		**Pn**	**08 36 45.6**	**+1.7**
	comp=Z,2μm,1.8s							
PKI	**Pulchoki**	**17.35**	**260**	*e*P		**Pn**	**08 36 43.4**	**-2.6**
	comp=Z,1μm,0.8s							
PKIN	**Phulchoki**	**17.36**	**260**	*e*P		**Pn**	**08 36 43.3**	**-2.8**
	comp=Z,849nm,0.8s							
CAL	**Calcutta**	**17.38**	**241**	*e*PKP		**Pn**	**08 36 44.5**	**-1.8**
CAL				*ex*		x	08 39 53.7	
KKN	**Kakani**	**17.39**	**261**	*e*P		**Pn**	**08 36 44.0**	**-2.4**
	comp=Z,763nm,0.8s							
DMN	**Daman**	**17.59**	**260**	*e*P		**Pn**	**08 36 47.1**	**-1.9**
	comp=Z,1μm,1.0s							
WMQ	**Urumqi**	**17.79**	**316**	P		**Pn**	**08 36 50.9**	**-0.4**
WMQ				pP		pP	08 36 54.5	-0.5
WMQ				sP		sP	08 36 57.9	+1.5
WMQ				PP			08 37 05.7	
WMQ				S		**Sn**	**08 40 06.9**	**-2.6**
WMQ				SS			08 40 29.4	
WMQ				PcP	PcP		08 41 28.7	+0.2
WMQ				ScP	ScP		08 45 02.1	-1.6
WMQ				pmax	pmax			
	comp=Z,540nm,1.1s							
WMQ				pmax	pmax			
	comp=Z,7μm,4.2s							
GKN	**Gorkha**	**17.86**	**262**	*e*P		**Pn**	**08 36 49.4**	**-2.9**
	comp=Z,2μm,0.9s							
SNY	**Shenyang**	**17.90**	**52**	⇑P		**Pn**	**08 36 52.5**	**-0.3**
SNY				S		**Sn**	**08 40 14.5**	**+2.2**
SNY				pmax	pmax			
	comp=Z,160nm,1.1s							
SNY				pmax	pmax			
	comp=Z,8μm,8.2s							
SNY				LR	LR			
	comp=E,30μm,14.1s							
SNY				LR	LR			
	comp=Z,26μm,14.4s							
ZAK	**Zakamensk**	**18.32**	**357**	⇓*i*P		**Pn**	**08 36 58.7**	**+0.9**
ZAK				pmax	pmax			
	comp=Z,140nm,1.4s							
INCN	**Inchon**	**18.77**	**67**	*e*P		**Pn**	**08 37 02.3**	**-1.1**
	comp=Z,496nm,1.2s							
INCN	**Inchon**	**18.77**	**67**	P		**Pn**	**08 37 04.1**	**+0.7**
	SNR=18							
KOLN	**Koldanda**	**18.80**	**262**	*e*P		**Pn**	**08 37 01.5**	**-2.4**
	comp=Z,1μm,0.8s							
TLY	**Talaya**	**19.60**	**358**	Pn		**Pn**	**08 37 14.7**	**+1.4**
	comp=Z,694nm,0.8s							
TLY	**Talaya**	**19.60**	**358**	*e*P		**Pn**	**08 37 13.4**	**+0.1**
	comp=Z,265nm,1.2s							
TLY	**Talaya**	**19.60**	**358**	*e*P		**Pn**	**08 37 14.4**	**+1.1**
TLY				*e*S		**Sn**	**08 40 51.9**	**-1.3**
TLY				pmax	pmax			
	comp=Z,166nm,1.2s							
TLY				MLR	MLR			
	comp=Z,38μm,11.0s							
TLY	**Talaya**	**19.60**	**358**	P		**Pn**	**08 37 15.1**	**+1.8**
	SNR=78							
MOY	**Mondy**	**19.76**	**353**	*e*P		**Pn**	**08 37 15.9**	**+0.7**
MOY				*e*			08 40 59.3	
MOY				pmax	pmax			
	comp=Z,2μm,2.8s							
KSRS	**Korea Array**	**19.78**	**68**	P		**Pn**	**08 37 12.8**	**-2.7**
	comp=Z,5.7nm,0.3s,baz=256,slow=9.8,SNR=278							
KSRS				S		**Sn**	**08 40 57.6**	**-0.1**
	baz=259,slow=18,SNR=2.8							
KSRS				Lg			08 43 08.5	
	comp=Z,0.2nm,0.3s,baz=258,slow=30,SNR=3.0							
KSRS				LR	LR		08 46 21.4	
	comp=Z,7μm,19.3s,baz=262,slow=42							
CN2	**Changchun**	**20.04**	**48**	*e*P		**P**	**08 37 17.2**	**+0.4**
CN2				*e*PP			08 37 36.4	
CN2				*e*S		**S**	**08 40 56.4**	**-5.5**
CN2				LR	LR			
	comp=N,24μm,16.0s,MS5.7							
CN2				LR	LR			
	comp=E,15μm,16.0s,MS5.7							
CN2				LR	LR			
	comp=Z,18μm,16.0s,MS5.5							
IRK	**Irkutsk**	**20.15**	**359**	⇑*i*P		**P**	**08 37 20.6**	**+2.7**
IRK				*e*S		**S**	**08 41 07.1**	**+3.1**
IRK				pmax	pmax			
	comp=Z,2μm,1.1s							
HIA	**Hailar**	**20.54**	**29**	*e*P		**P**	**08 37 22.7**	**+0.6**
	comp=Z,226nm,0.9s							
HIA	**Hailar**	**20.54**	**29**	*e*P		**P**	**08 37 22.7**	**+0.6**
HIA				pmax	pmax			
	comp=Z,225nm,0.9s							
APYP	**Conner**	**20.57**	**130**	*e*P		**P**	**08 37 25.4**	**+2.7**
BOLP	**Bolinao**	**20.84**	**135**	*e*P		**P**	**08 37 28.0**	**+2.3**
CIT	**Chita**	**20.95**	**15**	*e*P		**P**	**08 37 28.8**	**+2.3**
CIT				*e*			08 37 47.2	
CIT				*e*			08 38 01.2	
CIT				*e*			08 41 31.0	
CIT				pmax	pmax			
	comp=Z,1μm,2.7s							
CVP	**Callao Caves**	**21.06**	**129**	*e*P		**P**	**08 37 29.0**	**+1.0**
JOW	**Kunigami**	**21.15**	**98**	P		**P**	**08 37 28.0**	**-0.9**
BCPH	**Baguio City Da**	**21.25**	**134**	⇑*i*P		**P**	**08 37 31.4**	**+1.3**
SCZP	**Santa Cruz**	**21.32**	**136**	*e*P		**P**	**08 37 33.4**	**+2.6**
CAUP	**Cauayan**	**21.61**	**130**	*e*P		**P**	**08 37 36.4**	**+2.5**
JNU	**Nakatsue**	**22.04**	**80**	P		**P**	**08 37 38.4**	**-0.1**
BALP	**Baler**	**22.35**	**133**	*e*P		**P**	**08 37 44.3**	**+2.4**
MK31	**Makanchi Array**	**22.61**	**317**	*e*P		**P**	**08 37 44.6**	**+0.2**
MK31	**Makanchi Array**	**22.61**	**317**	*i*P		**P**	**08 37 44.0**	**-0.4**
MK31				pmax	pmax			
	comp=Z,983nm,1.2s,mb6.1							
MKAR	**Makanchi Array**	**22.61**	**317**	P		**P**	**08 37 44.2**	**-0.2**
MKAR				S		**S**	**08 41 53.9**	**+1.5**
MKAR				ScP	ScP		08 45 12.6	-2.3
MKAR				LR	LR		08 47 24.1	
MKAR	**Makanchi Array**	**22.61**	**317**	P		**P**	**08 37 44.2**	**-0.2**
	comp=Z,457nm,1.1s,mb5.8,baz=113,slow=9.3,SNR=693							
MKAR				S		**S**	**08 41 53.9**	**+1.5**
	comp=Z,29nm,1.0s,baz=123,slow=12,SNR=3.6							
MKAR				ScP	ScP		08 45 12.6	-2.3
	comp=Z,18nm,1.0s,baz=108,slow=4.7,SNR=6.9							
MKAR				LR	LR		08 47 24.1	
	comp=Z,72μm,18.6s,MS6.1,baz=123,slow=39							
MKAR				P3KPbc			09 11 23.9	
	comp=Z,0.5nm,0.4s,baz=316,slow=5.1,SNR=8.3							
MKAR				P3KP			09 12 10.2	
	comp=Z,0.2nm,0.2s,baz=347,slow=5.0,SNR=3.6							
MKAR	**Makanchi Array**	**22.61**	**317**	P		**P**	**08 37 44.2**	**-0.2**
MKAR				S		**S**	**08 41 53.9**	**+1.5**
MKAR				pmax	pmax			
	comp=Z,457nm,1.1s							
MKAR				smax				
	comp=N,29nm,1.0s							
MKAR				MLR	MLR			
	comp=Z,72μm,18.6s							
MDJ	**Mudanjiang**	**23.07**	**50**	P		**P**	**08 37 49.1**	**-0.2**
MDJ				pP			08 37 52.0	
MDJ				sP		sP	08 37 53.8	+0.1
MDJ				PcP	PcP		08 41 38.7	+0.4
MDJ				S		**S**	**08 42 00.0**	**-0.1**
MDJ				ScP	ScP		08 45 16.4	+0.2
MDJ				ScS	ScS		08 49 02.5	+0.5
MDJ				pmax	pmax			
	comp=Z,450nm,2.5s,mb5.5							
MDJ				pmax	pmax			
	comp=Z,4μm,6.1s							
MDJ				LR	LR			
	comp=N,6μm,13.9s,MS5.5							
MDJ				LR	LR			
	comp=E,12μm,13.9s,MS5.5							
MDJ				LR	LR			
	comp=Z,15μm,12.9s,MS5.6							
MDJ	**Mudanjiang**	**23.07**	**50**	*e*P		**P**	**08 37 49.8**	**+0.4**
	comp=Z,1μm,1.6s,mb6.1							
MDJ				LR	LR			
	comp=Z,6μm,19.0s,MS5.0							
TGY	**Tagaytay City**	**23.24**	**137**	P		**P**	**08 37 51.2**	**-0.1**
	comp=Z,114nm,0.3s,mb5.7,baz=334,slow=4.2,SNR=12							
TGY				LR	LR		08 47 32.6	
	comp=Z,70nm,18.5s,baz=292,slow=38							
POLP	**Polillo Island**	**23.35**	**134**	*e*P		**P**	**08 37 54.7**	**+2.2**
SMLA	**Simla**	**23.47**	**275**	*i*P		**P**	**08 37 51.8**	**-1.9**
NDI	**New Delhi**	**23.95**	**269**	*e*PKP		**P**	**08 37 58.2**	**0.0**
NDI				AMb	AMB		08 38 06.7	
	comp=Z,1μm,1.1s,mb6.2							
NDI				*ex*		x	08 42 11.0	

VIS Vishakhapatnam 24.04 239 *i* P P 08 37 58.1 -1.0
VIS *e*PKP 08 37 58.2
VIS *i* S **S** **08 42 17.3 +1.1**
KSH Kashi 24.40 296↓ *i* P P **08 38 05.3 +3.1**
KSH *e*pP 08 38 09.3
KSH *e*sP sP 08 38 12.0 +5.3
KSH *e*PP 08 38 41.3
KSH *e*PcP PcP 08 41 43.1 +1.9
KSH S **S** **08 42 22.8 +1.0**
KSH *e*SS 08 43 18.5
KSH *e*ScP ScP 08 45 20.3 +0.4
KSH *e*PcS PcS 08 45 22.3 +1.3
KSH *e*ScS ScS 08 49 07.4 0.0
KSH pmax pmax
comp=Z,1µm,2.3s,mb5.9
KSH LR LR
comp=N,18µm,9.3s
KSH LR LR
comp=E,6µm,4.2s
KSH LR LR
comp=Z,9µm,5.2s
BUSP Coron 24.54 141 *e*P P **08 38 04.6 +1.0**
AAA Alma-Ata 24.55 305 *i* P P **08 38 04.9 +1.4**
AAA pmax pmax
comp=Z,3µm,1.7s,mb6.6
AAA MLR MLR
comp=Z,44µm,7.0s
ULHL Ulahol 24.76 302 P P **08 38 06.4 +0.9**
SNR=159
ENPP El Nido 24.81 144 *e*P P **08 38 07.0 +0.9**
TKM2 Tokmak 2 25.40 304 P P **08 38 12.7 +1.5**
SNR=146
TKM2 Tokmak 2 25.40 304 *e*P P **08 38 12.2 +1.0**
comp=Z,18nm,1.2s,mb4.5
TKM2 LR LR
comp=Z,38µm,19.0s,MS5.9
TKM2 Tokmak 2 25.40 304 *e*P P **08 38 12.2 +1.0**
TKM2 MLR MLR
comp=Z,38µm,19.0s,MS5.9
KZA Kyzart 25.43 301 P P **08 38 14.3 +2.8**
SNR=6.6
PVCP Virac 25.59 132 *e*P P **08 38 13.8 +0.6**
BHPL Bhopal 25.68 257 *e*PKP P **08 38 13.0 -1.0**
BHPL *e*PKP 08 38 13.4
BHPL AMb AMB 08 38 17.6
comp=Z,392nm,1.6s,mb5.7
BHPL AMb AMB 08 38 18.2
comp=Z,459nm,1.5s,mb5.8
KBK Karagaybulak 25.79 303 P P **08 38 16.5 +1.7**
SNR=131
CUYO Cuyo Island 25.94 141 *e*P P **08 38 16.9 +0.6**
UCH Uchtor 26.00 302 P P **08 38 18.9 +2.2**
SNR=112
UCH Uchtor 26.00 302 *e*P P **08 38 18.7 +2.0**
comp=Z,298nm,1.2s,mb5.7
FRU Bishkek 26.07 303↓ *i* P P **08 38 17.5 +0.2**
FRU *e*S **S** **08 42 54.0 +5.6**
FRU pmax pmax
comp=Z,712nm,2.2s,mb5.8
FRU smax
comp=N,15µm,11.0s
ZAA0 Zalesovo Array 26.09 333 *e*P P **08 38 17.8 +0.4**
ZALV Zalesovo Beam 26.09 333 P P **08 38 17.5 +0.2**
ZALV PcP PcP 08 41 43.6 -1.1
ZALV S **S** **08 42 59.8 +11**
ZALV ScP ScP 08 45 21.8 -2.6
ZALV LR LR 08 48 02.2
ZALV *e* 09 11 07.7
ZALV Zalesovo Beam 26.09 333 P P **08 38 17.5 +0.2**
comp=N,266nm,0.8s,mb5.8,baz=131,slow=9.4,SNR=650
ZALV PcP PcP 08 41 43.6 -1.1
comp=N,11nm,0.6s,baz=143,slow=3.0,SNR=4.6
ZALV S **S** **08 42 59.8 +11**
comp=N,12nm,1.1s,baz=134,slow=10,SNR=3.0
ZALV ScP ScP 08 45 21.8 -2.6
comp=N,15nm,0.9s,baz=149,slow=3.4,SNR=4.5
ZALV LR LR 08 48 02.2
comp=N,3µm,18.4s,MS4.9,baz=302,slow=35
ZALV P3KPbc 09 11 07.7
comp=N,2.2nm,0.6s,baz=326,slow=5.4,SNR=9.0
ZALV Zalesovo Beam 26.09 333 P P **08 38 17.5 +0.2**
ZALV 08 41 43.6
ZALV pmax pmax
comp=Z,266nm,0.8s,mb5.8
AAK Ala-Archa 26.11 302 P P **08 38 18.3 +0.6**
comp=Z,562nm,0.9s,mb6.1,SNR=44
AAK Ala-Archa 26.11 302 P P **08 38 19.4 +1.7**
SNR=28
AAK Ala-Archa 26.11 302 P P **08 38 17.7 0.0**
AAK LR LR 08 50 37.3
AAK *e* 09 11 09.1
AAK Ala-Archa 26.11 302 P P **08 38 17.7 0.0**
comp=Z,43nm,0.8s,mb5.0,baz=106,slow=4.9,SNR=35
AAK LR LR 08 50 37.3
comp=Z,42µm,19.7s,MS6.0,baz=113,slow=41
AAK P3KPbc 09 11 09.1
comp=Z,1.7nm,0.3s,baz=244,slow=3.6,SNR=7.4
BATP Bataraza 26.16 150 *e*P P **08 38 18.6 +0.3**
USP Ospenovka 26.26 304 P P **08 38 20.0 +1.0**
SNR=109
KLR Kul'dur 26.51 42 *e*P P **08 38 16.7 -4.5**
KLR *e*S **S** **08 42 54.5 -0.6**
KLR pmax pmax
comp=Z,680nm,1.8s,mb5.9
KLR pmax pmax
comp=E,2µm,10.0s
KLR pmax pmax
comp=Z,4µm,10.0s
KLR smax
comp=N,4µm,12.0s
KLR smax
comp=E,7µm,12.0s
AML Almayashu 26.58 301 P P **08 38 23.1 +1.2**
SNR=145
AML Almayashu 26.58 301 *e*P P **08 38 23.3 +1.4**
comp=E,20nm,1.5s,mb4.4
AML LR LR
comp=Z,53µm,21.0s,MS6.1
EKS2 Erkin-Say 26.63 302 P P **08 38 23.0 +0.6**
SNR=40
EKS2 Erkin-Say 26.63 302 *e*P P **08 38 23.2 +0.8**
comp=Z,205nm,1.3s,mb5.5
EKS2 LR LR
comp=Z,44µm,19.0s,MS6.0
KTGM Kuala Trenggan 26.66 184 P P **08 38 23.1 +0.3**
AJM Ajmer 26.78 266 *e*PKP P **08 38 23.1 -0.8**
AJM *e*PKP 08 38 23.5
AJM AMb AMB 08 38 28.2
comp=Z,348nm,1.2s,mb5.8
AJM AMb AMB 08 38 35.0
comp=Z,632nm,1.5s,mb5.9
KURK Kurchatov 26.80 322 *e*P P **08 38 23.5 -0.3**
comp=Z,270nm,1.2s,mb5.7
KURK LR LR
comp=Z,9µm,19.0s,MS5.3
KURK Kurchatov 26.80 322*d i* P P **08 38 23.5 -0.3**
KURK pmax pmax
comp=Z,485nm,2.5s,mb5.6
KURK MLR MLR
comp=Z,29µm,14.0s,MS6.0
KURK Kurchatov 26.80 322 P P **08 38 23.9 +0.1**
SNR=141
KULM Kulim 26.92 189 *e*P P **08 38 23.9 -1.3**
comp=Z,91nm,1.0s,mb5.3
KULM *e*PcP PcP 08 41 48.1 +0.8
KULM LR LR
comp=Z,35µm,21.0s,MS5.9
KULM Kulim 26.92 189 P P **08 38 24.7 -0.5**
KULM Kulim 26.92 189 P P **08 38 24.4 -0.8**
comp=Z,3µmcomp=Z,126nm,1.5s,mb5.2
AKL Akola 27.21 252 *i* P P **08 38 26.0 -1.7**
AKL AMb AMB 08 38 36.6
comp=Z,130nm,1.7s,mb5.2
AKL *i* S **S** **08 43 06.1 -0.6**
NVS Novosibirsk 27.37 333 *e*P P **08 38 29.3 +0.4**
NVS pmax pmax
comp=N,309nm,1.4s
NVS pmax pmax
comp=E,244nm,1.4s
NVS pmax pmax
comp=Z,319nm,1.4s,mb5.7
KDM Kudat 27.47 153 P P **08 38 30.1 0.0**
IPM Ipoh 27.68 188 P P **08 38 30.1 -1.9**
IPM Ipoh 27.68 188 P P **08 38 30.5 -1.5**
IPM Ipoh 27.68 188 P P **08 38 30.2 -1.8**
comp=Z,3µmcomp=Z,115nm,1.2s,mb5.4

HYB Hyderabad 27.80 245 *e*P P **08 38 29.0 -4.1**
HYB *e*S **S** **08 43 18.0 +2.0**
HYB Hyderabad 27.80 245 *i* P P **08 38 29.0 -4.1**
HYB *e*S **S** **08 43 12.0 -4.0**
HYB LR LR 08 50 00.0
comp=Z,8.5nm,20.0s
MAJO Matsushiro 27.93 72 *e*P P **08 38 32.6 -1.5**
comp=Z,352nm,1.8s,mb5.7
MAJO *e*PcP PcP 08 41 49.3 -0.2
MAJO *e*ScP ScP 08 45 28.8 -1.5
MAJO LR LR
comp=Z,6µm,22.0s,MS5.1
MAJO Matsushiro 27.93 72 *e*P P **08 38 32.6 -1.5**
MAJO *e* 08 41 49.3
MAJO pmax pmax
comp=Z,352nm,1.8s,mb5.7
MAJO MLR MLR
comp=Z,6µm,22.0s,MS5.1
MAT Matsushiro 27.93 72 P P **08 38 31.5 -2.6**
MAT S **S** **08 43 18.0 +0.2**
MJAR Matsushiro Arr 27.93 72 P P **08 38 32.0 -2.1**
MJAR PcP PcP 08 41 47.7 -1.8
MJAR ScP ScP 08 45 28.3 -2.0
MJAR LR LR 08 50 10.8
MJAR Matsushiro Arr 27.93 72 P P **08 38 32.0 -2.1**
comp=Z,28nm,0.7s,mb5.0,baz=273,slow=8.9,SNR=132
MJAR PcP PcP 08 41 47.7 -1.8
comp=Z,5.3nm,0.6s,baz=263,slow=2.2,SNR=7.9
MJAR ScP ScP 08 45 28.3 -2.0
comp=Z,13nm,1.0s,baz=264,slow=3.3,SNR=14
MJAR LR LR 08 50 10.8
comp=Z,4µm,18.1s,MS5.0,baz=255,slow=38
KKM Kota Kinabalu 28.04 155 *e*P P **08 38 34.8 -0.5**
comp=Z,236nm,1.0s,mb5.8
KKM *e*PcP PcP 08 41 51.1 +1.1
KKM *e*ScP ScP 08 45 30.3 -0.6
KKM LR LR
comp=Z,9µm,19.0s,MS5.4
KKM Kota Kinabalu 28.04 155 P P **08 38 35.2 0.0**
KKM Kota Kinabalu 28.04 155 P P **08 38 34.8 -0.4**
comp=Z,5µmcomp=Z,308nm,1.8s,mb5.6
HABR Khabarovsk 28.10 46*c i* P P **08 38 34.5 -1.0**
HABR *e**PP pP 08 38 42.2 +3.6
HABR *e**SP sP 08 38 46.7 +6.7
HABR *e*PPP 08 39 29.8
HABR *e* 08 41 45.3
HABR *e*S **S** **08 43 18.1 -2.1**
HABR *e**SS sS 08 43 32.6 +7.1
HABR *e*SS 08 44 34.9
HABR *e* 08 49 17.0
HABR pmax pmax
comp=Z,595nm,2.3s,mb5.8
HABR pmax pmax
comp=E,445nm,2.2s
HABR pmax pmax
comp=N,144nm,2.4s
HABR MLR MLR
comp=N,2µm,13.0s,MS5.9
HABR MLR MLR
comp=E,21µm,13.0s,MS5.9
HABR MLR MLR
comp=Z,23µm,13.0s,MS6.0
CLNS Chul'man 28.42 23 *e*P P **08 38 39.1 +0.9**
CLNS *e* 08 39 31.1
CLNS *e*PPP 08 39 41.3
CLNS *e* 08 41 46.0
CLNS *e*S **S** **08 43 27.6 +2.6**
CLNS *e*SSS 08 45 04.1
CLNS pmax pmax
comp=Z,21nm,0.9s,mb4.8
CLNS pmax pmax
comp=N,17nm,0.7s
CLNS pmax pmax
comp=E,19nm,0.9s
CLNS pmax pmax
comp=Z,26nm,1.1s,mb4.8
CLNS pmax pmax
comp=N,34nm,1.1s
CLNS smax
comp=N,769nm,11.2s
CLNS smax
comp=E,899nm,10.4s
CLNS MLR MLR
comp=E,10µm,11.0s,MS5.8
CLNS MLR MLR
comp=N,7µm,11.0s,MS5.8
CLNS MLR MLR
comp=Z,13µm,11.0s,MS5.8
SDKM Sandakan 28.77 153 P P **08 38 41.1 -0.7**
LATR Latur 28.78 249 *e*PKP P **08 38 42.2 +0.4**
LATR AMb AMB 08 38 45.9
comp=Z,111nm,0.9s,mb5.6
FRIM Kepong 28.84 186 P P **08 38 42.2 -0.2**
TSI Tuntungan 29.01 193 P P **08 38 43.9 0.0**
TSI Tuntungan 29.01 193 P P **08 38 44.1 +0.2**
comp=Z,910nm,0.9s,mb6.5
KK31 Karatay Array 29.07 302 *i* P P **08 38 44.3 +0.1**
KK31 pmax pmax
comp=Z,62nm,1.1s,mb5.2
MDRS Chennai 29.36 235 *ex* x 08 38 53.2
MDRS *ex* x 08 42 55.2
JHJ Hachijo jima 2 29.47 78 P P **08 38 47.6 -0.3**
comp=Z,231nm,1.0s,mb5.8,baz=238,slow=4.9,SNR=9.1
JHJ LR LR 08 50 03.9
comp=Z,2µm,20.0s,MS4.8,baz=68,slow=35
JHJ2 Mitsune 29.50 78 P P **08 38 47.7 -0.4**
TPTI 29.53 195 P P **08 38 45.5 -3.0**
comp=Z,1µmcomp=Z,69nm,0.9s,mb5.4
PSI Prapat 29.63 192 P P **08 38 49.1 -0.3**
PSI PcP PcP 08 41 52.7 -1.3
PSI ScP ScP 08 45 34.6 -1.3
PSI LR LR 08 51 55.1
PSI Prapat 29.63 192 P P **08 38 49.1 -0.3**
comp=Z,97nm,0.8s,mb5.6,baz=346,slow=7.7,SNR=53
PSI PcP PcP 08 41 52.7 -1.3
comp=Z,21nm,0.7s,baz=353,slow=3.6,SNR=3.6
PSI ScP ScP 08 45 34.6 -1.3
comp=Z,19nm,1.0s,baz=321,slow=11,SNR=4.9
PSI LR LR 08 51 55.1
comp=Z,13µm,19.0s,MS5.6,baz=348,slow=39
PSI Prapat 29.63 192 P P **08 38 49.1 -0.3**
PSI 08 41 52.7
PSI 08 45 34.6
PSI pmax pmax
comp=Z,97nm,0.8s,mb5.6
PSI MLR MLR
comp=Z,13µm,19.0s,MS5.6
MYLDM Lahad Datu 29.71 151 P P **08 38 51.5 +1.4**
comp=Z,663nm,1.8s,mb6.1
BTM Bintulu 29.78 163 P P **08 38 51.4 +0.7**
KBL Kabul 29.83 285 *e*P P **08 38 52.1 +1.1**
comp=Z,270nm,0.9s,mb6.0
KBL *e*PcP PcP 08 41 55.1 +0.9
KBL *e*ScP ScP 08 45 34.5 -1.8
KBL Kabul 29.83 285 *e*P P **08 38 52.1 +1.1**
KBL *e* 08 41 55.1
KBL pmax pmax
comp=Z,270nm,0.9s,mb6.0
KGM Kluang 29.93 183 P P **08 38 52.3 +0.2**
MYKOM Kota Tinggi 30.14 182 P P **08 38 54.1 +0.2**
MYKOM Kota Tinggi 30.14 182 P P **08 38 53.6 -0.3**
comp=Z,3µmcomp=Z,166nm,1.7s,mb5.5
TSM Tawau 30.27 153 P P **08 38 54.9 -0.1**
SBUM Sibu 30.31 165 P P **08 38 56.1 +0.8**
SBUM Sibu 30.31 165 P P **08 38 55.6 +0.3**
comp=Z,5µmcomp=Z,252nm,1.8s,mb5.6
KSM Kuching 30.90 169 *e*P P **08 39 00.5 0.0**
comp=Z,1µm,2.4s,mb6.2
KSM *e*ScP ScP 08 45 39.6 -0.4
KSM LR LR
comp=Z,11µm,22.0s,MS5.5
KSM Kuching 30.90 169 P P **08 39 00.8 +0.2**
KSM Kuching 30.90 169 P P **08 38 59.7 -0.8**
comp=Z,3µmcomp=Z,128nm,1.9s,mb5.4
MNSI Mandailing Nat 31.49 190 P P **08 39 03.8 -2.0**
comp=Z,5µmcomp=Z,72nm,0.7s,mb5.6
DAV Davao City (W) 31.57 138 PFAKE 08 39 20.0 +13
DAV LR LR
comp=Z,15µm,19.0s,MS5.7
DAV Davao City (W) 31.57 138↑ *e*P P **08 39 01.8 -4.7**
DAV Davao City (W) 31.57 138 P P **08 39 09.1 +2.6**
SNR=11
BKNI Bangkinang 31.77 187 P P **08 39 08.5 +0.2**
comp=Z,8µmcomp=Z,421nm,1.6s,mb6.0
ASAJ Asahikawa 31.86 57 P P **08 39 08.6 -0.3**

ASAJ Asahikawa 31.86 57 LR LR 08 51 32.3
comp=Z,7µm,19.6s,MS5.3,baz=267,slow=36
ERM Erimo 32.01 61 *e*P P **08 39 11.0 +0.8**
comp=Z,59nm,1.0s,mb5.4
ERM LR LR
comp=Z,6µm,20.0s,MS5.3
ERM Erimo 32.01 61*d i* P P **08 39 08.4 -1.7**
ERM pmax pmax
comp=Z,69nm,1.7s,mb5.2
ERM MLR MLR
comp=Z,6µm,21.0s,MS5.3
BVA0 Borovoye Array 32.37 320 *i* P P **08 39 13.0 -0.2**
BVA0 pmax pmax
comp=Z,45nm,2.3s,mb4.9
BVAR Borovoye Array 32.37 320 P P **08 39 13.7 +0.5**
comp=Z,31nm,0.8s,mb5.2,baz=116,slow=10,SNR=91
BVAR PcP PcP 08 42 00.1 -0.5
comp=Z,24nm,0.7s,baz=118,slow=2.8,SNR=7.2
BVAR ScP ScP 08 45 42.2 -2.2
comp=Z,7.4nm,0.8s,baz=132,slow=2.2,SNR=3.8
BRVK Borovoye 32.44 320 *e*P P **08 39 13.6 -0.2**
comp=Z,68nm,0.9s,mb5.5
BRVK LR LR
comp=Z,4µm,19.0s,MS5.2
BRVK Borovoye 32.44 320*d i* P P **08 39 14.1 +0.3**
BRVK pmax pmax
comp=Z,211nm,2.5s,mb5.5
BRVK MLR MLR
comp=Z,28µm,15.0s,MS6.1
BRVK Borovoye 32.44 320 P P **08 39 14.0 +0.2**
SNR=63
STKI Sintang 32.48 167 P P **08 39 14.7 +0.2**
comp=Z,274nm,1.7s,mb5.8
YSS Yuzh-Sakhalins 32.53 52 *e*P P **08 39 14.7 0.0**
comp=Z,53nm,0.7s,mb5.6
YSS *e*ScP ScP 08 45 43.7 -1.4
YSS LR LR
comp=Z,4µm,19.0s,MS5.1
YSS Yuzh-Sakhalins 32.53 52*ce* P P **08 39 14.2 -0.5**
YSS *e* 08 40 18.0
YSS *i* S **S** **08 44 27.0 -2.7**
YSS pmax pmax
comp=Z,440nm,1.7s,mb6.1
YSS pmax pmax
comp=E,520nm,2.0s
YSS pmax pmax
comp=E,1µm,9.0s
YSS pmax pmax
comp=Z,2µm,9.0s
YSS smax
comp=N,3µm,12.0s
YSS MLR MLR
comp=N,16µm,16.0s
YSS MLR MLR
comp=Z,12µm,16.0s,MS5.7
PPI Padang Panjang 32.62 188 P P **08 39 14.1 -1.6**
PPI Padang Panjang 32.62 188 P P **08 39 12.9 -2.8**
comp=Z,µmcomp=Z,57nm,1.5s,mb5.3
CBIJ Chichi jima 32.84 89 P P **08 39 14.0 -3.6**
CBIJ Chichi jima 32.84 89 LR LR 08 52 40.5
comp=Z,6µm,19.8s,MS5.3,baz=281,slow=37
SDSI Sungai Dareh 32.98 186 P P **08 39 17.9 -1.0**
comp=Z,4µmcomp=Z,224nm,1.5s,mb5.9
PDSI Padang 33.06 188 P P **08 39 16.0 -3.6**
comp=Z,92nm,0.6s,mb5.9
PALK Pallekele 33.31 227 *e*P P **08 39 21.8 0.0**
comp=Z,210nm,1.4s,mb5.9
PALK Pallekele 33.31 227 *i* P P **08 39 20.1 -1.7**
PALK Pallekele 33.31 227 P P **08 39 22.0 +0.2**
comp=Z,878nmcomp=Z,54nm,1.9s,mb5.2
PALK Pallekele 33.31 227 P P **08 39 22.2 +0.4**
SNR=5.6
SISI Saibi 33.65 190 P P **08 39 24.6 -0.1**
comp=Z,4µmcomp=Z,163nm,1.3s,mb5.8
YAK Yakutsk 34.01 21 *e*P P **08 39 27.7 +0.3**
comp=Z,193nm,0.8s,mb6.1
YAK LR LR
comp=Z,12µm,20.0s,MS5.6
YAK Yakutsk 34.01 21 *e*P P **08 39 27.5 +0.1**
YAK *e* 08 40 39.8
YAK *e*PPP 08 40 53.2
YAK *e* 08 42 05.2
YAK *e*S **S** **08 44 51.3 -1.0**
YAK *e*SS SS 08 47 00.6 -19
YAK *e* 08 49 45.3
YAK pmax pmax
comp=Z,188nm,0.9s,mb6.0
YAK pmax pmax
comp=N,46nm,1.2s
YAK pmax pmax
comp=E,81nm,1.3s
YAK smax
comp=N,804nm,2.4s
YAK smax
comp=E,722nm,2.2s
YAK MLR MLR
comp=Z,10µm,9.0s
YAK MLR MLR
comp=N,6µm,7.0s
YAK MLR MLR
comp=E,7µm,7.0s
PPBI Pangkal Pinang 34.08 177 P P **08 39 28.9 +0.4**
comp=E,297nm,1.6s,mb6.0
YUK Yuzh-Kuril'sk 34.18 58↑ *i* P P **08 39 26.0 -3.1**
YUK *i* PPP 08 40 54.0
YUK *i* S **S** **08 44 55.0 -0.4**
YUK pmax pmax
comp=N,130nm,7.0s
YUK pmax pmax
comp=E,370nm,7.0s
YUK pmax pmax
comp=Z,500nm,7.0s
YUK smax
comp=N,900nm,7.5s
YUK smax
comp=E,410nm,7.5s
YUK MLR MLR
comp=N,2µm,19.0s,MS5.4
YUK MLR MLR
comp=E,6µm,19.0s,MS5.4
YUK MLR MLR
comp=Z,6µm,19.0s,MS5.3
SMKI Samarinda 34.44 158 P P **08 39 33.2 +1.6**
comp=Z,10µmcomp=Z,514nm,1.2s,mb6.3
TPI Tanjungpandan 34.76 175 P P **08 39 34.8 +0.5**
comp=Z,4µmcomp=Z,212nm,1.6s,mb5.8
MRSI Marisa 35.39 149 P P **08 39 40.4 +0.6**
comp=Z,8µmcomp=Z,521nm,1.3s,mb6.3
KSI Kapahiang 35.59 184 P P **08 39 40.9 -0.6**
comp=Z,296nm,1.1s,mb6.1
PCI Palu 35.79 154 P P **08 39 44.2 +1.0**
comp=Z,7µmcomp=Z,398nm,1.7s,mb6.1
MNI Manado 35.89 144 P P **08 39 45.0 +0.9**
comp=Z,502nm,1.9s,mb6.1
KMSI Cibinong 36.23 146 P P **08 39 47.6 +0.6**
comp=Z,1µm,1.4s,mb6.7
MDSI Maura Dua 36.37 181 P P **08 39 47.1 -1.0**
comp=Z,5µmcomp=Z,290nm,0.8s,mb6.3
KLI Kotabumi 36.74 180 P P **08 39 51.4 +0.1**
comp=Z,8µmcomp=Z,365nm,0.9s,mb6.2
KBKI Kotabaru 36.83 161 P P **08 39 52.1 0.0**
comp=Z,5µmcomp=Z,300nm,1.0s,mb6.1
LWLI Liwa 36.90 181 P P **08 39 50.9 -1.8**
comp=Z,201nm,1.1s,mb5.9
LUWI Luwuk 37.11 149 P P **08 39 54.5 0.0**
comp=Z,9µmcomp=Z,604nm,1.5s,mb6.2
KASI Kota Agung 37.39 180 P P **08 39 54.3 -2.6**
comp=Z,147nm,1.0s,mb5.8
AB31 Akbulak array 37.43 311 *i* P P **08 39 57.3 +0.4**
AB31 Akbulak array 37.43 311 *i* P P **08 39 57.2 +0.3**
AB31 pmax pmax
comp=Z,263nm,1.1s,mb6.0
ABKAR Akbulak array 37.43 311 *e*P P **08 39 57.3 +0.4**
comp=Z,150nm,0.8s,mb5.9
RBSI Rajabasa 37.73 178 P P **08 39 58.3 -1.4**
comp=Z,8µmcomp=Z,425nm,2.0s,mb5.8
TTSI Tana Toraja 37.76 155 P P **08 40 00.1 +0.1**
comp=Z,7µmcomp=Z,423nm,1.7s,mb5.9
TNTI Ternate 37.77 141 P P **08 39 59.9 -0.2**
comp=Z,610nm,1.7s,mb6.1
TNG Tangerang 38.08 177 P P **08 40 03.8 +1.1**
comp=Z,2µm,1.5s,mb6.5
TNG Tangerang 38.08 177 P P **08 40 04.1 +1.4**
comp=Z,2µm,1.5s,mb6.7
ABKT Ailbek 38.31 292 P P **08 40 05.0 +0.5**
comp=Z,2µm,0.9s,mb6.9,SNR=96
VAN Vannovskaya 38.31 292*ce* P P **08 40 01.5 -3.0**

CGJI **Cibinong** 38.49 178 P P 08 40 03.3 -2.8
comp=Z,3µmcomp=Z,103nm,1.5s,mb5.3
SPSI **Sidrap Palu** 38.59 155 P P 08 40 07.2 +0.2
comp=Z,8µmcomp=Z,522nm,1.9s,mb5.9
LEM **Lembang** 38.79 175 P P 08 40 09.5 +0.9
comp=Z,9µmcomp=Z,435nm,0.9s,mb6.2
AKTO **Aktyubinsk** 38.87 312 LR LR 08 55 50.4
comp=Z,5µm,21.1s,MS5.3,baz=100,slow=36
LBMI **Labuha** 39.03 142 P P 08 40 10.5 -0.2
comp=Z,797nm,1.5s,mb6.2
SVE **Sverdlovsk** 39.04 323⇑ eP P 08 40 11.3 +0.9
SVE eS S 08 46 08.5 -0.7
SVE eSS SS 08 48 53.6 -7.5
SVE pmax pmax
comp=Z,447nm,1.7s,mb5.9
SVE MLR MLR
comp=Z,26µm,18.0s,MS6.1
BJII **Banjamegara** 39.48 172 P P 08 40 15.8 +1.4
comp=Z,650nm,1.7s,mb6.1
CISI **Cisompet, Garu** 39.52 175 P P 08 40 11.3 -3.5
comp=Z,3µmcomp=Z,157nm,0.7s,mb5.8
KDI **Kendari** 39.67 151 P P 08 40 15.7 -0.4
comp=Z,3µmcomp=Z,89nm,2.2s,mb5.1
NGJI **Ngawi** 39.75 170 P P 08 40 18.9 +2.2
comp=Z,456nm,1.9s,mb5.9
KMMI **Kalianget** 39.90 166 P P 08 40 19.5 +1.6
comp=Z,10µmcomp=Z,447nm,1.9s,mb5.9
BKSI **Bulukumba** 39.98 156 P P 08 40 18.0 -0.6
comp=Z,5µmcomp=Z,233nm,1.2s,mb5.8
ARU **Arti** 39.99 321 P P 08 40 18.2 -0.1
comp=Z,2µm,0.9s,mb6.8,SNR=64
ARU **Arti** 39.99 321 eP P 08 40 17.9 -0.5
comp=Z,301nm,0.9s,mb6.0
ARU eS S 08 46 24.4 +0.8
ARU LR LR
comp=Z,9µm,22.0s,MS5.6
ARU **Arti** 39.99 321 *d* iP P 08 40 18.8 +0.5
ARU *e* 08 41 54.2
ARU 08 42 21.9
ARU S S 08 46 24.4 +0.8
ARU SS SS 08 49 17.7 -2.6
ARU 08 50 20.1
ARU pmax pmax
comp=Z,410nm,1.2s,mb6.0
ARU MLR MLR
comp=Z,19µm,16.0s,MS6.0
UGM **Wanagama** 40.15 171 P P 08 40 20.7 +0.7
comp=Z,639nm,1.5s,mb6.1
SJI **Sawahan** 40.16 169 P P 08 40 21.1 +1.0
comp=Z,848nm,0.9s,mb6.5
PWJI **Pagerwojo** 40.45 169 P P 08 40 22.4 0.0
comp=Z,7µmcomp=Z,427nm,0.9s,mb6.2
PCJI **Pacitan** 40.52 170 P P 08 40 24.9 +1.8
comp=Z,204nm,2.2s,mb5.4
KRKI **Karangkates** 40.69 168 P P 08 40 24.9 +0.5
comp=Z,1µm,0.9s,mb6.5
GMJI **Gumukmas** 40.98 167 P P 08 40 26.7 -0.2
comp=Z,7µmcomp=Z,257nm,2.8s,mb5.4
GUMO **Guam** 41.03 107 eP P 08 40 28.0 +0.6
comp=Z,651nm,1.6s,mb6.0
GUMO LR LR
comp=Z,8µm,19.0s,MS5.6
GUMO **Guam** 41.03 107 LR LR 08 57 46.8
comp=Z,8µm,18.8s,MS5.6,baz=118,slow=37
GUMO **Guam** 41.03 107 eP P 08 40 28.0 +0.6
GUMO pmax pmax
comp=Z,651nm,1.6s,mb6.0
GUMO MLR MLR
comp=Z,8µm,19.0s,MS5.6
GUMO **Guam** 41.03 107 P P 08 40 28.4 +1.0
comp=Z,7µmcomp=Z,306nm,1.6s,mb5.7
NLAI **Namlea** 41.05 145 P P 08 40 28.5 +1.0
comp=Z,6µmcomp=Z,324nm,1.6s,mb5.7
SRBI **Singaraja** 41.17 164 P P 08 40 29.1 +0.6
comp=Z,8µmcomp=Z,343nm,2.3s,mb5.6
JAGI **Jajag, Banyuwa** 41.31 166 P P 08 40 29.2 -0.4
comp=Z,9µmcomp=Z,560nm,1.5s,mb6.0
NBBI **Negara** 41.32 165 P P 08 40 32.1 +2.5
comp=Z,855nm,1.7s,mb6.1
WBK **Wadi Bani Khal** 41.47 269 P P 08 40 32.2 +1.3
SNR=12
KHKI **Kahang-Kahang** 41.54 164 P P 08 40 31.6 +0.1
comp=Z,743nm,1.7s,mb6.0
TIXI **Tiksi** 41.70 11 eP P 08 40 31.0 -1.2
comp=Z,66nm,0.6s,mb5.4
TIXI LR LR
comp=Z,15µm,21.0s,MS5.8
TIXI **Tiksi** 41.70 11 *c* iP P 08 40 30.8 -1.3
TIXI *e* 08 42 08.6
TIXI eS S 08 46 45.2 -3.3
TIXI eSS SS 08 49 48.2 -5.5
TIXI *e* 08 50 30.0
TIXI pmax pmax
comp=Z,235nm,1.9s,mb5.5
TIXI MLR MLR
comp=N,10µm,15.0s,MS5.9
TIXI MLR MLR
comp=E,6µm,13.0s,MS5.9
TIXI MLR MLR
comp=Z,29µm,18.0s,MS6.2
SKR **Severo-Kuril's** 41.86 48 eP P 08 40 30.0 -3.8
SKR *e* 08 42 18.0
SKR eS S 08 46 50.0 -1.5
SKR *e* 08 50 23.0
SKR pmax pmax
comp=Z,2µm,6.0s
SKR pmax pmax
comp=N,1µm,8.0s
SKR pmax pmax
comp=E,1µm,8.0s
SKR pmax pmax
comp=Z,400nm,1.5s,mb5.8
SKR smax
comp=N,1µm,16.0s
SKR smax
comp=E,2µm,16.0s
SKR MLR MLR
comp=Z,11µm,16.0s,MS5.8
SKR MLR MLR
comp=N,7µm,14.0s,MS5.8
SKR MLR MLR
comp=E,5µm,14.0s,MS5.8
SOKR **Solikamsk** 41.89 326 *d* iP P 08 40 34.5 +0.6
SOKR S S 08 46 51.0 -0.7
SOKR SS SS 08 49 57.4 -0.4
SOKR pmax pmax
comp=Z,280nm,0.9s,mb5.9
SOKR MLR MLR
comp=Z,7µm,18.0s,MS5.6
AAI **Ambon** 41.98 144 P P 08 40 35.4 +0.2
comp=Z,9µmcomp=Z,330nm,2.6s,mb5.5
SMDO **Samad** 42.07 270 P P 08 40 36.9 +1.0
SNR=19
JMDO **Jabal Madar** 42.30 269 P P 08 40 38.6 +0.9
SNR=8.4
HOQ **Hoqain** 42.50 271 P P 08 40 40.1 +0.8
SNR=13
BSY **Bisya** 42.91 270 P P 08 40 43.7 +1.0
SNR=24
SEY **Seymchan** 42.98 30⇑ iP P 08 40 42.6 -0.1
SEY **Seymchan** 42.98 30 *c* iP P 08 40 42.5 -0.2
HATD **Hatta, Dubai** 43.04 273 P P 08 40 46.1 +2.3
SNR=14
PEA0B **Petropavlovsk-** 43.12 45 eP P 08 40 43.9 -0.1
PETK **Petropavlovsk-** 43.12 45 P P 08 40 43.2 -0.8
PETK PcP PcP 08 42 32.7 -0.9
PETK LR LR 09 00 34.9
PETK **Petropavlovsk-** 43.12 45 P P 08 40 43.2 -0.8
comp=Z,38nm,0.8s,mb5.2,baz=218,slow=3.9,SNR=63
PETK PcP PcP 08 42 32.7 -0.9
comp=Z,7.4nm,0.8s,baz=282,slow=4.1,SNR=2.8
PETK LR LR 09 00 34.9
comp=Z,6µm,18.8s,MS5.5,baz=62,slow=39
PETK **Petropavlovsk-** 43.12 45 P P 08 40 43.2 -0.8
PETK 08 42 32.7
PETK pmax pmax
comp=Z,38nm,0.8s,mb5.2
PETK MLR MLR
comp=Z,6µm,18.8s,MS5.5
ASHO **Ashiyiah** 43.15 273 P P 08 40 46.6 +1.9
SNR=32
ARQ **Araqi** 43.26 271 P P 08 40 46.8 +1.3
SNR=16
NAZ **Nazwa, Dubai** 43.38 274 P P 08 40 48.1 +1.7
SNR=14
BNDI **Bandanaira** 43.57 142 P P 08 40 51.0 +2.9
comp=Z,789nm,1.6s,mb6.2

PET **Petropavlovsk** 43.69 45 eP P 08 40 48.7 +0.1
comp=Z,161nm,1.3s,mb5.6
PET LR LR
comp=Z,7µm,19.0s,MS5.6
PET **Petropavlovsk** 43.69 45 *c* iP P 08 40 47.2 -1.4
PET *e* 08 42 29.9
PET eS S 08 47 12.4 -5.9
PET eSS SS 08 50 19.0 -14
PET *e* 08 50 41.6
PET pmax pmax
comp=Z,145nm,1.2s,mb5.6
PET pmax pmax
comp=Z,2µm,7.8s
PET pmax pmax
comp=Z,900nm,9.0s
PET pmax pmax
comp=Z,2µm,8.9s
PET pmax pmax
comp=Z,1µm,7.2s
PET smax
comp=N,1µm,16.0s
PET smax
comp=N,1µm,18.7s
PET MLR MLR
comp=Z,10µm,15.0s,MS5.9
ASUD **Al Ashush, Dub** 43.79 273 P P 08 40 51.8 +2.0
SNR=15
MMRI **Maumere** 43.81 155 P P 08 40 48.7 -1.2
comp=Z,1µm,1.4s,mb6.5
WSI **Waingapu** 44.10 158 P P 08 40 50.3 -2.0
comp=Z,1µm,0.9s,mb6.6
BAKI **Biak** 44.47 132 P P 08 40 56.5 +1.2
comp=Z,556nm,1.6s,mb6.0
COCO **West Island** 44.66 191 PFAKE 08 41 10.0 +13
COCO LR LR
comp=Z,7µm,20.0s,MS5.6
MAK **Makhachkala** 45.87 301 eP P 08 41 04.0 -2.1
MAK *e* 08 42 40.1
MAK *e* 08 42 57.4
MAK eS S 08 47 46.6 -3.6
MAK *e* 08 50 56.1
MAK pmax pmax
comp=Z,2µm,2.7s,mb6.5
MAK pmax pmax
comp=Z,468nm,2.1s,mb6.0
MAK pmax pmax
comp=E,246nm,1.0s
MAK pmax pmax
comp=N,282nm,1.2s
MAK smax
comp=N,6µm,8.1s
MAK smax
comp=E,5µm,7.1s
DGRG **David-gareji** 47.63 299 P P 08 41 19.9 -0.1
MTA **Mtatsminda** 48.03 299 P P 08 41 30.3 +7.3
MTA S S 08 48 35.6 +15
TBLG **Delisi** 48.06 299 P P 08 41 24.0 +0.7
TBLG **Delisi** 48.06 299 P P 08 41 24.0 +0.7
GNI **Garni** 48.32 297 eP P 08 41 26.8 +1.5
comp=E,114nm,0.9s,mb5.9
GNI LR LR
comp=Z,6µm,20.0s,MS5.5
GNI **Garni** 48.32 297 LR LR 09 04 57.9
comp=Z,11µm,18.1s,MS5.9,baz=89,slow=40
GNI **Garni** 48.32 297 *c* eP P 08 41 25.9 +0.6
GNI pmax pmax
comp=Z,150nm,1.2s
GNI **Garni** 48.32 297 P P 08 41 27.0 +1.6
SNR=39
GOR **Gori** 48.49 300 P P 08 41 27.6 +1.1
ZEI **Tsey** 48.52 301 eP P 08 41 26.8 0.0
ZEI eS S 08 48 28.3 +0.2
ZEI *e* 08 51 19.6
ZEI pmax pmax
comp=Z,95nm,1.3s,mb5.7
ZEI MLR MLR
comp=Z,10µm,13.0s,MS6.0
ZEI MLR MLR
comp=E,8µm,14.0s,MS6.0
ZEI MLR MLR
comp=N,7µm,14.0s,MS6.0
UMR **Umm Al-Rimmam** 48.54 283 eP P 08 41 26.6 -0.6
UMR AMb AMB 08 41 35.4
comp=Z,256nm,1.7s,mb6.0
KEH **Kehvi** 48.57 300 P P 08 41 26.7 -0.5
KBD **Kabd** 48.68 282 eP P 08 41 27.7 -0.5
KBD AMb AMB 08 41 36.5
comp=Z,146nm,1.6s,mb5.8
MIB **Mutribah** 48.77 283 eP P 08 41 28.1 -0.8
MIB AMb AMB 08 41 30.4
comp=Z,362nm,1.0s,mb6.3
RDF **Al-Radifah** 48.87 282 eP P 08 41 29.5 -0.3
RDF AMb AMB 08 41 31.1
comp=Z,344nm,1.0s,mb6.3
ONI **Oni** 48.88 301 P P 08 41 31.0 +1.5
ONI S S 08 48 35.6 +2.6
NAY **Al-Naaiem** 49.03 283 eP P 08 41 30.1 -0.8
NAY AMb AMB 08 41 32.1
comp=Z,308nm,1.0s,mb6.3
CLDR **Caldiran** 49.14 296 eP P 08 41 31.8 +0.2
KIV **Kislovodsk** 49.23 303 P P 08 41 33.6 +1.4
comp=Z,1µm,0.9s,mb7.0,SNR=36
KIV **Kislovodsk** 49.23 303 eP P 08 41 33.0 +0.8
comp=Z,187nm,0.9s,mb6.1
KIV LR LR
comp=Z,10µm,21.0s,MS5.8
KIV **Kislovodsk** 49.23 303 *d* iP P 08 41 32.5 +0.3
KIV *i* 08 41 42.5
KIV *i* 08 42 53.7
KIV *i* 08 43 22.8
KIV *i* S S 08 48 39.3 +1.3
KIV pmax pmax
comp=Z,330nm,1.2s,mb6.2
KIV MLR MLR
comp=Z,19µm,16.0s,MS6.2
KIV **Kislovodsk** 49.23 303 P P 08 41 33.5 +1.3
SNR=54
VRHR **Novokhopersk** 49.28 312 eP P 08 41 31.9 -0.6
VRHR eS S 08 48 36.5 -1.9
VRHR pmax pmax
comp=N,30nm,0.9s
VRHR pmax pmax
comp=E,90nm,0.9s
VRHR pmax pmax
comp=Z,360nm,0.9s,mb6.4
VRHR smax
comp=N,660nm,1.4s
VRHR smax
comp=E,240nm,1.4s
VRHR smax
comp=Z,30nm,1.4s
VRHR MLR MLR
comp=N,2µm,14.0s,MS5.5
VRHR MLR MLR
comp=E,3µm,14.0s,MS5.5
VRHR MLR MLR
comp=Z,4µm,14.0s,MS5.5
KARS **Kars** 49.48 298 eP P 08 41 35.3 +1.1
HAKT **HAKKARI** 49.63 294 ‖ iP P 08 41 35.9 +0.5
VANB **Van** 49.65 296 eP P 08 41 36.3 +0.8
AGRB **Hanur-Agry** 49.75 297 eP P 08 41 38.1 +1.8
CUKT **Cukurca** 49.78 294 eP P 08 41 35.3 -1.2
DGAR **Diego Garcia** 49.90 224 PFAKE 08 41 50.0 +12
DGAR LR LR
comp=Z,3µm,21.0s,MS5.2
BHD **Baghdad** 50.17 289 *ex* x 08 41 35.4
BHD *ex* x 08 43 34.5
BHD *ex* x 08 44 30.5
BHD *i* x x 08 48 48.5
BHD *i* x x 08 51 26.5
ARTV **Artvin** 50.24 299 ‖ iP P 08 41 40.0 0.0
DAGI **Agillar** 50.27 299 ‖ iP P 08 41 41.2 +1.0
BCA **Borcka** 50.41 300 eP P 08 41 40.4 -0.9
HOMI **Horasan** 50.48 298 ‖ iP P 08 41 43.3 +1.5
KLMR **Klimovskoe** 50.57 325 *d* iP P 08 41 41.9 -0.2
KLMR *e* 08 43 38.2
KLMR *i* S S 08 48 54.1 -2.1
KLMR *i* 08 51 26.0
KLMR eSS SS 08 52 23.4 -6.5
KLMR pmax pmax
comp=Z,410nm,9.2s
KLMR pmax pmax
comp=Z,555nm,1.3s,mb6.3
KLMR MLR MLR
comp=Z,21µm,17.0s,MS6.2

VOR **Voronezh** 50.76 313 eP P 08 41 43.0 -0.7
VOR eS S 08 48 54.0 -5.1
VOR pmax pmax
comp=Z,700nm,1.4s,mb6.4
VSR **Storozhevoye** 50.81 312 eP P 08 41 43.6 -0.6
VSR *e**PP pP 08 41 52.7 +5.3
VSR *e**SP sP 08 41 56.5 +7.8
VSR *e* 08 43 40.8
VSR eS S 08 48 55.6 -4.3
VSR eSS SS 08 52 31.2 -2.9
VSR pmax pmax
comp=E,210nm,0.9s
VSR pmax pmax
comp=Z,210nm,0.9s,mb6.1
VSR pmax pmax
comp=N,10.0nm,0.4s
VSR pmax pmax
comp=E,440nm,2.8s
VSR pmax pmax
comp=Z,360nm,2.8s,mb5.8
VSR smax
comp=E,290nm,1.2s
VSR smax
comp=N,1µm,2.5s
VSR smax
comp=Z,280nm,2.5s
VSR MLR MLR
comp=N,3µm,16.0s,MS5.9
VSR MLR MLR
comp=E,10µm,16.0s,MS5.9
VSR MLR MLR
comp=Z,15µm,16.0s,MS6.1
EZM **Erzurum** 50.91 298 eP P 08 41 47.1 +2.0
BNGL **BINGOL** 51.28 296 ‖ iP P 08 41 48.2 +0.4
SOC **Sochi** 51.41 303 *d* iP P 08 41 48.3 -0.5
SOC *e**PP pP 08 41 55.5 +3.4
SOC *e**SP sP 08 42 00.6 +7.3
SOC *e* 08 43 45.4
SOC eS S 08 49 08.5 +0.1
SOC *e* 08 49 27.6
SOC *e* 08 51 34.0
SOC eSSS 08 54 20.2
SOC pmax pmax
comp=Z,1µm,2.7s,mb6.3
SOC pmax pmax
comp=Z,267nm,1.2s,mb6.0
SOC MLR MLR
comp=Z,17µm,12.0s,MS6.3
MOS **Moscow** 51.49 318 eP P 08 41 45.3 -3.8
MOS *e* 08 43 00.9
MOS *e* 08 43 42.5
MOS eS S 08 49 00.9 -8.1
MOS *e* 08 51 34.3
MOS eSS SS 08 52 42.5 -2.1
MOS pmax pmax
comp=Z,400nm,1.0s,mb6.3
MOS pmax pmax
comp=Z,327nm,0.9s,mb6.3
MOS MLR MLR
comp=Z,19µm,18.0s,MS6.2
MOS MLR MLR
comp=E,13µm,17.0s
KOPT **Kop Dagi** 51.54 298 ‖ iP P 08 41 51.5 +1.7
KAKA **Kakadu** 51.85 145 ⇑ iP P 08 41 51.0 -1.2
comp=E,202nm,1.5s,mb5.8
KAKA **Kakadu** 51.85 145 eP P 08 41 51.4 -0.8
comp=E,860nm,1.5s,mb6.5
KAKA **Kakadu** 51.85 145 P P 08 41 51.2 -1.0
comp=E,1µmcomp=E,138nm,0.8s,mb5.9
MARD **Mardin** 51.95 295 ‖ iP P 08 41 52.0 -0.9
OBN **Obninsk** 52.12 317 P P 08 41 53.8 0.0
comp=E,1µm,1.2s,mb6.7,SNR=24
OBN **Obninsk** 52.12 317 eP P 08 41 53.8 0.0
comp=E,648nm,1.5s,mb6.3
OBN LR LR
comp=Z,23µm,20.0s,MS6.2
OBN **Obninsk** 52.12 317 *d* iP P 08 41 53.2 -0.6
OBN *i* 08 42 04.2
OBN *i* 08 43 02.2
OBN *i* S S 08 49 15.9 -1.8
OBN pmax pmax
comp=Z,335nm,1.2s,mb6.2
OBN MLR MLR
comp=Z,24µm,21.0s,MS6.2
DIYA **Diyarbakir** 52.31 295 ‖ iP P 08 41 56.3 +0.8
KELT **Kelkit** 52.44 298 ‖ iP P 08 41 55.1 -1.4
EZC **Erzincan** 52.46 298 eP P 08 41 57.8 +1.2
PTK **Pertek** 52.63 297 eP P 08 41 58.2 +0.3
ANN **Anapa** 52.81 304 *d* iP P 08 41 58.4 -0.7
ANN *e*PPP 08 45 03.6
ANN *i* S S 08 49 26.0 -1.5
ANN pmax pmax
comp=Z,289nm,1.3s,mb6.0
ANN pmax pmax
comp=Z,437nm,9.0s
ANN MLR MLR
comp=N,3µm,13.0s,MS5.9
ANN MLR MLR
comp=E,7µm,13.0s,MS5.9
ANN MLR MLR
comp=Z,8µm,13.0s,MS6.0
SVRC **Sivrice-ELAZID** 52.82 296 eP P 08 42 00.3 +0.9
KNA **Kununurra** 52.85 151 P P 08 41 58.5 -1.1
comp=Z,2µm,0.7s,mb7.1
SMY **Shemya** 53.03 45 eP P 08 41 58.6 -2.0
comp=Z,686nm,1.6s,mb6.3
SMY **Shemya** 53.03 45 eP P 08 41 58.6 -2.0
SMY pmax pmax
comp=Z,686nm,1.6s,mb6.3
ELZG **Elazig** 53.03 296 ‖ iP P 08 42 02.0 +1.1
SUSE **Susehri** 53.21 299 ‖ iP P 08 42 01.3 -0.9
KEMA **Kemaliye** 53.22 297 ‖ iP P 08 42 02.4 +0.1
LVZ **Lovozero** 53.22 334 P P 08 42 02.8 +1.0
comp=Z,565nm,0.9s,mb6.5,SNR=5.5
LVZ **Lovozero** 53.22 334 *i* P P 08 42 02.0 +0.2
LVZ LR LR
comp=Z,6µm,19.0s,MS5.7
LVZ **Lovozero** 53.22 334 *d* iP P 08 42 02.0 +0.2
LVZ pmax pmax
comp=Z,88nm,0.8s,mb5.7
LVZ MLR MLR
comp=Z,13µm,15.0s,MS6.1
URFA **Urfa** 53.43 295 eP P 08 42 04.5 +0.7
MYA **Malataya** 53.50 296 eP P 08 42 05.7 +1.3
APA **Apatity** 53.67 333 ‖ iP P 08 42 03.7 -1.4
APA *i* 08 44 09.0
APA *i* S S 08 49 36.0 -2.6
APA *i* PS 08 49 50.0
APA *i* 08 51 48.0
APA *i* SS SS 08 53 12.0 -6.7
APA pmax pmax
comp=Z,1µm,6.3s
APA pmax pmax
comp=Z,270nm,1.7s,mb5.9
APA MLR MLR
comp=Z,25µm,15.0s,MS6.4
FITZ **Fitzroy Crossi** 53.77 155 ⇑ iP P 08 42 05.2 -1.2
comp=Z,452nm,1.6s,mb6.2
FITZ eS S 08 49 34.9 -6.0
FITZ **Fitzroy Crossi** 53.77 155 eP P 08 42 05.2 -1.2
comp=Z,97nm,0.7s,mb5.8
FITZ **Fitzroy Crossi** 53.77 155 P P 08 42 05.5 -0.9
comp=Z,8µmcomp=Z,396nm,1.6s,mb6.1
DARE **Darende-Malaty** 53.81 297 eP P 08 42 09.3 +2.6
ATAB **Bozova** 53.83 295 ‖ iP P 08 42 06.4 -0.3
AKCD **Akcadag** 53.89 296 ‖ iP P 08 42 08.1 +0.9
SCER **sogukcermik** 54.09 299 ‖ iP P 08 42 09.3 +0.6
ERBA **Erbaa** 54.17 300 ‖ iP P 08 42 09.2 0.0
SVSK **Karacayir** 54.18 299 eP P 08 42 10.3 +1.1
JOF **Joensuu** 54.49 327 eP P 08 42 10.3 -0.9
JOF pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
JOF **Joensuu** 54.49 327 *ep* P 08 42 10.3 -0.9
comp=Z,10.0nm,0.4s,mb5.1
KVT **Kavak** 54.60 300 eP P 08 42 11.6 -0.7
SARI **SarD1z-Kayseri** 54.72 297 eP P 08 42 15.2 +2.0
MBWA **Marble Bar** 54.85 163 eP P 08 42 13.3 -0.9
comp=Z,432nm,1.5s,mb6.3
MBWA LR LR
comp=Z,2µm,21.0s,MS5.3
MBWA **Marble Bar** 54.85 163 P P 08 42 13.8 -0.4
comp=Z,5µmcomp=Z,232nm,2.3s,mb5.8
MBWA **Marble Bar** 54.85 163 P P 08 42 14.5 +0.3
SNR=12
KMRS **Kahramanmaras** 54.88 296 eP P 08 42 14.8 +0.3

PINB	**Pinarbasi**	**54.94**	**297**	⇓	*i*	P	**P**	**08 42 15.0**	**+0.1**
KUZU	**Kuzuini**	**54.95**	**295**	⇓	*i*	P	**P**	**08 42 15.1**	**+0.2**
SIM	**Simferopol'**	**55.09**	**305**		*e*	P	**P**	**08 42 15.5**	**-0.3**
SIM					*e*	S	**S**	**08 49 57.0**	**-1.4**
SIM						pmax	pmax		
	comp=Z,186nm,0.8s,mb6.2								
SIM						pmax	pmax		
	comp=Z,200nm,11.0s								
SIM						MLR	MLR		
	comp=Z,9μm,20.0s,MS5.9								
PUL	**Pulkovo**	**55.16**	**324**	⇑	*e*	P	**P**	**08 42 15.9**	**-0.1**
PUL	**Pulkovo**	**55.16**	**324**	⇑	*e*	P	**P**	**08 42 15.8**	**-0.2**
PUL						pmax	pmax		
	comp=Z,343nm,0.8s,mb6.4								
PUL						MLR	MLR		
	comp=Z,13μm,16.0s,MS6.1								
ANDN	**Andirin**	**55.29**	**296**	⇓	*i*	P	**P**	**08 42 17.6**	**+0.3**
KOZT	**Kozan**	**55.71**	**296**		*e*	P	**P**	**08 42 18.6**	**-1.8**
CORM	**Corum**	**55.87**	**300**		*e*	P	**P**	**08 42 21.7**	**+0.2**
CEYT	**Ceyhan**	**55.91**	**296**		*e*	P	**P**	**08 42 22.6**	**+0.7**
YAYL	**Yayladag**	**55.92**	**294**	⇓	*i*	P	**P**	**08 42 21.7**	**-0.2**
KEV	**Kevo**	**56.06**	**336**		*e*	P	**P**	**08 42 21.4**	**-1.0**
	comp=Z,16nm,0.4s,mb5.4								
KEV						pmax	pmax		
	comp=Z,16nm,0.4s,mb5.4								
KEV	**Kevo**	**56.06**	**336**		*ep*	P	**P**	**08 42 21.4**	**-1.0**
	comp=Z,16nm,0.4s,mb5.4								
AVNT	**Avonos**	**56.08**	**298**	⇓	*i*	P	**P**	**08 42 23.0**	**0.0**
TOS	**Tosya**	**56.09**	**301**		*e*	P	**P**	**08 42 23.3**	**+0.3**
CDAG	**Cicekdag**	**56.21**	**299**	⇓	*i*	P	**P**	**08 42 23.7**	**-0.3**
FKH	**Fakeheh**	**56.24**	**292**		*e*	P	**P**	**08 42 24.6**	**+0.4**
ILGA	**Ilgaz**	**56.31**	**301**	⇓	*i*	P	**P**	**08 42 24.9**	**+0.2**
KARA	**Karaisali**	**56.36**	**296**		*e*	P	**P**	**08 42 25.6**	**+0.5**
AMKA	**Amchitka**	**56.40**	**46**		*e*	P	**P**	**08 42 24.0**	**-1.1**
	comp=Z,103nm,1.1s,mb5.8								
CANT	**Cankiri**	**56.50**	**300**		*e*	P	**P**	**08 42 26.6**	**+0.7**
GULE	**Gulek**	**56.57**	**296**	⇓	*i*	P	**P**	**08 42 27.4**	**+0.8**
HWQ	**Hawqa**	**56.58**	**292**		*e*	P	**P**	**08 42 27.0**	**+0.3**
ARCES	**ARCESS Array B**	**56.59**	**336**		P	P	**P**	**08 42 25.5**	**-0.7**
	comp=Z,72nm,0.8s,mb5.8,baz=85,slow=7.5,SNR=126								
ARCES						LR	LR	09 08 34.3	
	comp=Z,5μm,21.9s,MS5.6,baz=279,slow=38								
ARCES	**ARCESS Array B**	**56.59**	**336**		P	P	**P**	**08 42 25.5**	**-0.7**
ARCES						pmax	pmax		
	comp=Z,72nm,0.8s								
ARCES						MLR	MLR		
	comp=Z,5μm,21.9s								
ARE0	**ARCESS Array S**	**56.59**	**336**		*e*	P	**P**	**08 42 26.4**	**+0.2**
BR131	**Keskin Array S**	**56.73**	**299**		*e*	P	**P**	**08 42 27.3**	**-0.3**
	comp=Z,44nm,0.9s,mb5.5								
BR131						LR	LR		
	comp=Z,4μm,20.0s,MS5.5								
BRTR	**Keskin Array B**	**56.73**	**299**		P	P	**P**	**08 42 27.4**	**-0.2**
	comp=Z,36nm,1.0s,mb5.4,baz=103,slow=6.0,SNR=85								
BRTR						LR	LR	09 10 58.7	
	comp=Z,5μm,18.1s,MS5.6,baz=245,slow=40								
BRTR	**Keskin Array B**	**56.73**	**299**		P	P	**P**	**08 42 27.4**	**-0.2**
BRTR						pmax	pmax		
	comp=Z,37nm,1.0s								
BRTR						MLR	MLR		
	comp=Z,5μm,18.2s								
KAF	**Kangasniemi**	**56.87**	**327**		*e*	P	**P**	**08 42 27.6**	**-0.6**
KAF						pmax	pmax		
	comp=Z,6.0nm,0.4s,mb5.0								
KAF	**Kangasniemi**	**56.87**	**327**		*ep*	P	**P**	**08 42 27.6**	**-0.6**
	comp=Z,6.4nm,0.4s,mb5.0,baz=82,slow=6.9								
BHL	**Bhannes**	**56.93**	**292**		*e*	P	**P**	**08 42 29.4**	**+0.2**
RCY	**Rachaya**	**56.94**	**292**		*e*	P	**P**	**08 42 29.6**	**+0.4**
FINES	**FINESS Array B**	**57.06**	**326**		P	P	**P**	**08 42 29.4**	**-0.2**
	comp=Z,91nm,0.7s,mb5.9,baz=89,slow=8.2,SNR=164								
FINES						S	**S**	**08 50 21.3**	**-2.7**
	comp=Z,17nm,1.1s,baz=61,slow=12,SNR=8.4								
FINES	**FINESS Array B**	**57.06**	**326**		P	P	**P**	**08 42 29.4**	**-0.2**
FINES						S	**S**	**08 50 21.3**	**-2.7**
FINES						pmax	pmax		
	comp=Z,91nm,0.7s								
FINES						smax			
	comp=N,17nm,1.1s								
AKASG	**Malin Array Be**	**57.11**	**313**		P	P	**P**	**08 42 29.6**	**-0.5**
	comp=N,58nm,0.6s,mb5.8,baz=69,slow=6.5,SNR=187								
AKASG						S	**S**	**08 50 24.1**	**-1.0**
	comp=N,1.9nm,0.9s,baz=99,slow=22,SNR=7.3								
AKASG						LR	LR	09 08 26.9	
	comp=N,24μm,19.6s,MS6.3,baz=75,slow=38								
AKASG	**Malin Array Be**	**57.11**	**313**		P	P	**P**	**08 42 29.6**	**-0.5**
AKASG						S	**S**	**08 50 24.1**	**-0.9**
AKASG						pmax	pmax		
	comp=Z,59nm,0.6s								
AKASG						smax			
	comp=N,2.0nm,0.9s								
AKASG						MLR	MLR		
	comp=Z,24μm,19.6s								
KIEV	**Kiev**	**57.12**	**313**		*e*	P	**P**	**08 42 29.2**	**-1.0**
	comp=Z,137nm,1.0s,mb5.9								
KIEV						S	**S**	**08 50 23.1**	**-2.1**
KIEV						LR	LR		
	comp=Z,23μm,20.0s,MS6.3								
KIEV	**Kiev**	**57.12**	**313**		*e*	P	**P**	**08 42 29.2**	**-1.0**
KIEV						S	**S**	**08 50 23.1**	**-2.0**
KIEV						pmax	pmax		
	comp=Z,137nm,1.0s,mb5.9								
KIEV						MLR	MLR		
	comp=Z,23μm,20.0s,MS6.3								
VSU	**Vasula**	**57.15**	**322**	*d*	*i*	P	**P**	**08 42 30.0**	**-0.3**
VSU						pmax	pmax		
	comp=Z,192nm,0.8s,mb6.2								
VSU						MLR	MLR		
	comp=Z,12μm,18.0s,MS6.0								
BBAL	**Bala**	**57.16**	**299**	⇓	*i*	P	**P**	**08 42 30.4**	**-0.3**
MICGM	**Minsk**	**57.18**	**317**	⇑	*i*	P	**P**	**08 42 29.0**	**-1.6**
MNK	**Minsk**	**57.21**	**317**	⇑	*e*	P	**P**	**08 42 29.0**	**-1.8**
MNK					*e*			08 43 30.0	
MNK					*e*			08 44 40.0	
MNK					*e*	S	**S**	**08 50 24.0**	**-2.2**
MNK					*e*	SS	SS	08 54 20.0	+5.3
MNK						pmax	pmax		
	comp=Z,310nm,1.0s,mb6.3								
MNK						MLR	MLR		
	comp=E,38μm,20.0s								
MNK						MLR	MLR		
	comp=Z,50μm,18.0s,MS6.7								
SULT	**Sultanhani-AKS**	**57.25**	**298**		*e*	P	**P**	**08 42 30.7**	**-0.7**
MMAI	**Mount Meron Ar**	**57.42**	**291**		P	P	**P**	**08 42 32.9**	**+0.3**
	comp=Z,63nm,0.9s,mb5.6,baz=66,slow=8.3,SNR=38								
MMAI						ScP	ScP	08 47 25.0	-1.4
	comp=Z,7.9nm,0.9s,baz=90,slow=1.4,SNR=4.4								
MMAI						LR	LR	09 11 58.2	
	comp=Z,5μm,19.6s,MS5.6,baz=80,slow=41								
KTK1	**Kautokeino**	**57.43**	**335**		*eP*	P	**P**	**08 42 33.7**	**+1.5**
KTK1						AMB	AMB	08 42 37.3	
	comp=Z,176nm,1.8s,mb5.8								
KTK1						*e*S	**S**	**08 50 30.0**	**+1.2**
KTK1						AMS	AMS	09 09 25.4	
	comp=Z,12μm,13.3s,MS6.2								
IKL	**Isikli**	**57.72**	**295**		*e*	P	**P**	**08 42 34.3**	**-0.4**
NACGM	**Naroch**	**57.73**	**318**		*e*	P	**P**	**08 42 31.0**	**-3.5**
PMG	**Port Moresby**	**57.83**	**128**		*e*	P	**P**	**08 42 35.0**	**-0.7**
	comp=Z,113nm,1.0s,mb5.8								
PMG						LR	LR		
	comp=Z,3μm,19.0s,MS5.4								
PMG	**Port Moresby**	**57.83**	**128**	*c*	*i*	P	**P**	**08 42 34.7**	**-1.0**
PMG						pmax	pmax		
	comp=Z,178nm,1.2s								
PMG	**Port Moresby**	**57.83**	**128**		P	P	**P**	**08 42 35.5**	**-0.2**
	comp=Z,3μmcomp=Z,132nm,1.3s,mb5.8								
KDZE	**Karadeniz Ereo**	**57.89**	**302**		*e*	P	**P**	**08 42 38.0**	**+2.2**
LADK	**Ladik-KONYA**	**58.12**	**298**		*e*	P	**P**	**08 42 36.2**	**-1.3**
LFK	**Lefkose**	**58.14**	**294**		*e*	P	**P**	**08 42 35.4**	**-2.3**
KONT	**Konya--Tatoy**	**58.20**	**298**		*e*	P	**P**	**08 42 37.5**	**-0.5**
BJO	**Bjornoya**	**58.21**	**342**		*e*	P	**P**	**08 42 36.0**	**-1.5**
BJO					*e*	S	**S**	**08 50 40.2**	**+1.4**
BJO						AMS	AMS	09 11 58.2	
	comp=Z,12μm,15.0s,MS6.1								
KIS	**Kishinev**	**58.21**	**309**		*e*	PcP	pP	08 42 45.0	+3.7
KIS	**Kishinev**	**58.21**	**309**		*e*	PP	PP	08 44 48.0	+1.4
KIS	**Kishinev**	**58.21**	**309**		*e*	P	**P**	**08 42 36.0**	**-2.0**
KIS					*e*			08 42 45.0	
KIS					*e*			08 44 48.0	
KIS					*e*	S	**S**	**08 50 37.0**	**-2.6**
KIS					*e*	SS	SS	08 54 28.0	-2.8
KIS					*e*	SSS		08 56 50.0	
KIS						MLR	MLR		
	comp=E,9μm,16.0s,MS6.0								
KIS						MLR	MLR		
	comp=Z,12μm,16.0s,MS6.1								
KIS						MLR	MLR		
	comp=N,5μm,18.0s,MS6.0								
KIZT	**Kizilcal**	**58.27**	**299**		*e*	P	**P**	**08 42 38.5**	**-0.1**
MDU	**Mudurnu**	**58.30**	**301**		*e*	P	**P**	**08 42 36.7**	**-2.0**
SVRH	**Sivrihisar-ESK**	**58.37**	**299**		*e*	P	**P**	**08 42 39.0**	**-0.2**
CSS	**Prodhromos**	**58.40**	**294**		P	P	**P**	**08 42 38.8**	**-0.7**
	comp=N,3.3nm,1.2s								
HDMB	**Hadim**	**58.41**	**296**		*e*	P	**P**	**08 42 39.2**	**-0.3**
MAMC	**Mammari**	**58.42**	**294**		P	P	**P**	**08 42 39.3**	**-0.3**
TLCR		**58.68**	**307**	⇑	P	P	**P**	**08 42 40.8**	**-0.5**
TLCR		**58.68**	**307**	⇑	*i*	P	**P**	**08 42 40.8**	**-0.5**
LEF	**Lefka**	**58.69**	**294**		*e*	P	**P**	**08 42 40.1**	**-1.5**
COEN	**Coen**	**58.75**	**135**		*e*	P	**P**	**08 42 41.5**	**-0.5**
	comp=N,2μm,1.1s,mb7.0								
COEN					*e*	PcP	PcP	08 43 32.6	+0.8
COEN	**Coen**	**58.75**	**135**		P	P	**P**	**08 42 41.8**	**-0.2**
	comp=N,706nm,1.5s,mb6.5								
GAZI	**Gazipasa**	**58.77**	**296**	⇓	*i*	P	**P**	**08 42 40.6**	**-1.4**
GULT	**Gulveren**	**58.82**	**301**		*e*	P	**P**	**08 42 43.1**	**+0.8**
ESKT	**Eskisehir**	**58.84**	**300**		*e*	P	**P**	**08 42 42.1**	**-0.4**
TRO	**Tromso**	**58.88**	**336**		*e*	S	**S**	**08 50 47.1**	**-0.5**
TRO					*e*	SS	SS	08 54 43.6	+3.2
TRO						AMS	AMS	09 10 15.4	
	comp=Z,12μm,16.2s,MS6.1								
ALFC	**Alevga**	**58.91**	**294**		P	P	**P**	**08 42 42.0**	**-1.0**
GAMB	**Gambell**	**58.95**	**31**		*e*	P	**P**	**08 42 42.8**	**-0.1**
	comp=Z,157nm,1.4s,mb5.8								
WRAB	**Tennant Creek**	**58.99**	**147**		P	P	**P**	**08 42 42.0**	**-1.6**
	comp=Z,2μm,0.7s,mb7.3								
WRAB	**Tennant Creek**	**58.99**	**147**		*e*	P	**P**	**08 42 42.5**	**-1.1**
	comp=Z,142nm,0.8s,mb6.0								
WRAB						LR	LR		
	comp=Z,5μm,20.0s,MS5.7								
WRAB	**Tennant Creek**	**58.99**	**147**		*e*	P	**P**	**08 42 42.5**	**-1.1**
WRAB						pmax	pmax		
	comp=Z,231nm,0.8s,mb6.3								
WRAB						MLR	MLR		
	comp=Z,2μm,20.0s,MS5.3								
WRAB	**Tennant Creek**	**58.99**	**147**		P	P	**P**	**08 42 43.8**	**+0.2**
	comp=Z,7μmcomp=Z,466nm,0.8s,mb6.5								
BOLV	**Bolvadin**	**59.02**	**299**	⇓	*i*	P	**P**	**08 42 43.5**	**-0.2**
BORA	**Eskisehir**	**59.03**	**300**	⇓	*i*	P	**P**	**08 42 43.3**	**-0.5**
CFR	**Carcaliu**	**59.14**	**307**	⇓	P	P	**P**	**08 42 44.2**	**-0.3**
CFR	**Carcaliu**	**59.14**	**307**	⇓	*i*	P	**P**	**08 42 44.2**	**-0.3**
TIRR	**Tirgusor**	**59.15**	**306**		*e*	P	**P**	**08 42 44.2**	**-0.4**
	comp=Z,79nm,0.8s,mb5.8								
TIRR	**Tirgusor**	**59.15**	**306**		*e*	P	**P**	**08 42 44.2**	**-0.4**
TIRR						pmax	pmax		
	comp=Z,79nm,0.8s,mb5.8								
TIRR	**Tirgusor**	**59.15**	**306**	⇓	*i*	P	**P**	**08 42 44.3**	**-0.3**
PPCY	**Paphos**	**59.19**	**294**		P	P	**P**	**08 42 44.3**	**-0.7**
KBS	**Kingsbay**	**59.30**	**347**		*eP*	P	**P**	**08 42 43.0**	**-2.0**
KBS						AMB	AMB	08 42 50.0	
	comp=Z,58nm,1.9s,mb5.3								
KBS					*e*	S	**S**	**08 50 54.5**	**+1.7**
KBS						AMS	AMS	09 11 50.3	
	comp=Z,7μm,16.0s,MS5.9								
KBS	**Kingsbay**	**59.30**	**347**		*eP*	P	**P**	**08 42 45.3**	**+0.2**
	comp=Z,38nm,1.0s,mb5.4								
KBS						LR	LR		
	comp=Z,8μm,22.0s,MS5.8								
KBS	**Kingsbay**	**59.30**	**347**	*d*	*i*	P	**P**	**08 42 45.2**	**+0.1**
KBS						pmax	pmax		
	comp=Z,121nm,2.5s,mb5.5								
HRT	**Hereke**	**59.32**	**302**		*eP*	P	**P**	**08 42 46.1**	**+0.3**
MSEY	**Mahe Island**	**59.36**	**241**		PFAKE			08 43 00.0	+14
MSEY						LR	LR		
	comp=Z,2μm,20.0s,MS5.2								
SHUT	**Suhut-Afyon**	**59.37**	**299**		*e*	P	**P**	**08 42 45.4**	**-0.7**
CAVI	**Cavuskoy**	**59.38**	**301**		*e*	P	**P**	**08 42 44.1**	**-2.1**
ADVT	**Abdulvahap**	**59.38**	**301**		*e*	P	**P**	**08 42 47.5**	**+1.2**
PSN	**Preselentsi**	**59.53**	**305**		P	P	**P**	**08 42 47.6**	**+0.4**
ALT	**Altintas**	**59.53**	**299**		*e*	P	**P**	**08 42 46.7**	**-0.6**
ISP	**Isparta**	**59.62**	**298**		*e*	P	**P**	**08 42 46.8**	**-1.2**
ISP	**Isparta**	**59.62**	**298**		*eP*	P	**P**	**08 42 47.3**	**-0.6**
	comp=Z,171nm,0.9s,mb6.1								
ISP						LR	LR		
	comp=Z,5μm,20.0s,MS5.6								
ISP	**Isparta**	**59.62**	**298**		P	P	**P**	**08 42 47.8**	**-0.1**
ISP	**Isparta**	**59.62**	**298**		P	P	**P**	**08 42 48.7**	**+0.8**
ISP	**Isparta**	**59.62**	**298**	⇓	*i*	P	**P**	**08 42 47.0**	**-0.9**
TESR		**59.78**	**309**	⇓	P	P	**P**	**08 42 48.7**	**-0.1**
TESR		**59.78**	**309**	⇓	*i*	P	**P**	**08 42 48.7**	**-0.1**
GEMT	**Gemlik**	**59.78**	**301**		*eP*	P	**P**	**08 42 48.3**	**-0.6**
AMRR	**Amara**	**59.85**	**306**	⇑	P	P	**P**	**08 42 49.8**	**+0.4**
AMRR	**Amara**	**59.85**	**306**	⇑	*i*	P	**P**	**08 42 49.8**	**+0.4**
GRER		**59.88**	**307**	⇑	*i*	P	**P**	**08 42 50.9**	**+1.4**
VRI	**Vrincioaia**	**59.90**	**308**	⇓	P	P	**P**	**08 42 50.4**	**+0.7**
VRI	**Vrincioaia**	**59.90**	**308**	⇓	*i*	P	**P**	**08 42 50.4**	**+0.7**
PLOR	**Plostina**	**59.96**	**308**	⇓	P	P	**P**	**08 42 50.8**	**+0.7**
PLOR	**Plostina**	**59.96**	**308**	⇓	*i*	P	**P**	**08 42 50.8**	**+0.7**
ARMT	**Armutlu**	**59.98**	**301**		*eP*	P	**P**	**08 42 50.1**	**-0.2**
SUW	**Suwalki**	**59.98**	**318**		*eP*	P	**P**	**08 42 49.3**	**-0.8**
SUW					*ep*	P	pP	08 42 53.7	+0.2
SUW					*es*	P	sP	08 42 52.5	+4.8
SUW					*e*	S	**S**	**08 51 01.3**	**-1.0**
SUW					*es*	S	sS	08 51 11.2	+3.4
SUW						LMZ		09 09 48.0	
	comp=Z,22μm,19.7s								
SUW	**Suwalki**	**59.98**	**318**		*eP*	P	**P**	**08 42 49.5**	**-0.6**
	comp=Z,202nm,0.8s,mb6.2								
GDZ	**Gediz**	**59.99**	**300**	⇓	*i*	P	**P**	**08 42 48.6**	**-1.8**
TNA	**Tin City**	**60.20**	**29**		*eP*	P	**P**	**08 42 51.5**	**+0.1**
	comp=Z,158nm,1.4s,mb5.8								
KHAL	**Karahalli**	**60.21**	**299**	⇓	*i*	P	**P**	**08 42 51.2**	**-0.8**
PRD	**Provadia**	**60.22**	**305**		P	P	**P**	**08 42 51.5**	**-0.4**
BURAR	**Bucovina Array**	**60.41**	**310**	⇓	P	P	**P**	**08 42 53.3**	**+0.1**
BURAR	**Bucovina Array**	**60.41**	**310**	⇓	*i*	P	**P**	**08 42 53.3**	**+0.1**
BUR01	**Bucovina Ar. S**	**60.41**	**310**		P	P	**P**	**08 42 53.9**	**+0.7**
BUR08	**Bucovina Ar. S**	**60.41**	**310**		*eP*	P	**P**	**08 42 53.2**	**0.0**
ELL	**Elmali**	**60.43**	**297**		*eP*	P	**P**	**08 42 52.0**	**-1.6**
KCTX	**Karacabey (Bur**	**60.44**	**301**		*eP*	P	**P**	**08 42 54.2**	**+0.7**
MLR	**Muntele Rosu**	**60.54**	**308**	⇓	P	P	**P**	**08 42 54.2**	**+0.1**
MLR	**Muntele Rosu**	**60.54**	**308**	⇓	*i*	P	**P**	**08 42 54.2**	**+0.1**
LVV	**L'vov**	**60.55**	**313**		*i*	P	**P**	**08 42 54.6**	**+0.5**
LVV					*e*	S	**S**	**08 51 09.0**	**-0.8**
LVV						MLR	MLR		
	comp=Z,11μm,19.0s,MS6.0								
SULR		**60.57**	**307**	⇓	P	P	**P**	**08 42 55.4**	**+1.1**
SULR		**60.57**	**307**	⇓	*i*	P	**P**	**08 42 55.4**	**+1.1**
DNZL	**Cakiroluk**	**60.77**	**298**	⇓	*i*	P	**P**	**08 42 55.2**	**-0.6**
DOPR	**Dopca**	**60.77**	**308**	⇓	*i*	P	**P**	**08 42 56.6**	**+0.9**
KULA	**Kula-Manisa**	**60.78**	**299**		*eP*	P	**P**	**08 42 53.5**	**-2.4**
AKAS	**Kas**	**60.84**	**297**	⇑	*i*	P	**P**	**08 42 55.7**	**-0.6**
BALB	**Balikesir**	**60.99**	**301**		*eP*	P	**P**	**08 42 57.2**	**0.0**
GONE	**Gonen-Balikesi**	**60.99**	**301**		*eP*	P	**P**	**08 42 56.4**	**-0.9**
JMB	**Yambol**	**61.01**	**304**		P	P	**P**	**08 42 59.2**	**+1.8**
LOF	**Lofoten**	**61.09**	**335**		*eP*	P	**P**	**08 42 56.9**	**-0.6**
LOF					*ep*	P	pP	08 42 59.2	-1.6
LOF						AMB	AMB	08 43 01.9	
	comp=Z,136nm,1.0s,mb6.0								
EDRB	**Edirne**	**61.09**	**303**		*eP*	P	**P**	**08 42 58.2**	**+0.3**
BALY	**Balya**	**61.14**	**301**	⇓	*i*	P	**P**	**08 42 57.6**	**-0.7**
VOIR		**61.16**	**308**	⇓	P	P	**P**	**08 42 58.1**	**-0.2**
VOIR		**61.16**	**308**	⇓	*i*	P	**P**	**08 42 58.1**	**-0.2**
KRBG	**Karabiga-Canak**	**61.16**	**302**		*eP*	P	**P**	**08 42 58.9**	**+0.4**
SZH	**Strazhica**	**61.22**	**305**		P	P	**P**	**08 42 58.7**	**0.0**
MORB	**Moi Rana**	**61.23**	**332**		*eP*	P	**P**	**08 42 57.1**	**-1.3**
KWP	**Kalwaria Pacla**	**61.43**	**313**		*eP*	P	**P**	**08 43 00.6**	**+0.5**
KWP					*ep*	P	pP	08 43 04.8	+1.3
KWP					*e*	S	**S**	**08 51 20.8**	**-0.2**
KWP						LMZ		09 10 45.6	
	comp=Z,16μm,19.8s								
KWP	**Kalwaria Pacla**	**61.43**	**313**		PFAKE			08 43 10.0	+10
KWP						LR	LR		
	comp=Z,16μm,20.0s,MS6.2								
ZIMR		**61.49**	**306**	⇑	P	P	**P**	**08 43 01.0**	**+0.5**
ZIMR		**61.49**	**306**	⇑	*i*	P	**P**	**08 43 01.0**	**+0.4**
BMR	**Baia Mare**	**61.51**	**311**	⇑	P	P	**P**	**08 43 01.3**	**+0.7**
BMR	**Baia Mare**	**61.51**	**311**	⇑	*i*	P	**P**	**08 43 01.3**	**+0.7**
LPK	**Lapseki**	**61.56**	**302**		*eP*	P	**P**	**08 42 57.5**	**-3.6**
ERIK	**Erikli-Kesan**	**61.64**	**302**		*eP*	P	**P**	**08 43 01.9**	**+0.2**
WAR	**Warsaw**	**61.70**	**316**		*eP*	P	**P**	**08 43 04.6**	**+2.7**
WAR					*e*	S	**S**	**08 51 25.9**	**+1.6**
WAR						LMZ		09 10 49.1	
	comp=Z,18μm,21.4s								
GELI	**Tayfur-Gelibol**	**61.76**	**302**		*eP*	P	**P**	**08 43 03.5**	**+1.1**
MLSB	**Milas**	**61.85**	**298**		*eP*	P	**P**	**08 43 01.5**	**-1.6**
ENEZ	**Enez**	**61.88**	**302**		*eP*	P	**P**	**08 43 04.2**	**+1.0**
ALN	**Alexandroupoli**	**61.90**	**303**		P	P	**P**	**08 43 08.0**	**+4.6**
ARG	**Arkhangelos**	**61.97**	**297**		*eP*	P	**P**	**08 43 06.5**	**+2.6**
TRPA	**Tarpa**	**61.98**	**311**	⇑	*i*	P	**P**	**08 43 04.3**	**+0.5**
UZH	**Uzhgorod**	**61.99**	**312**	⇓	*i*	P	**P**	**08 43 03.9**	**0.0**
UZH					*e*			08 43 43.5	
UZH					*e*			08 45 19.5	
UZH					*e*	PPP		08 46 49.7	
UZH					*e*	S	**S**	**08 51 26.1**	**-2.0**
UZH					*e*	PS		08 51 36.7	
UZH					*e*			08 52 48.5	
UZH					*e*	SSS		08 58 06.3	
UZH						MLR	MLR		
	comp=N,3μm,18.0s,MS6.1								
UZH						MLR	MLR		
	comp=E,11μm,18.0s,MS6.1								
UZH						MLR	MLR		
	comp=Z,6μm,18.0s,MS5.8								
ASAR	**Alice Springs**	**62.05**	**150**		P	P	**P**	**08 43 03.8**	**-0.7**
ASAR					S	S	**S**	**08 51 27.9**	**-1.4**
ASAR					P'P'			09 12 05.3	
ASAR				⇑	*e*			09 12 17.6	
ASAR	**Alice Springs**	**62.05**	**150**		P	P	**P**	**08 43 03.8**	**-0.7**
	comp=Z,52nm,0.8s,mb5.7,baz=334,slow=6.4,SNR=348								
ASAR					S	S	**S**	**08 51 27.9**	**-1.4**
	comp=Z,3.4nm,1.0s,baz=339,slow=14,SNR=7.9								
ASAR					PKPPKP			09 12 05.3	
	comp=Z,0.7nm,0.8s,baz=128,slow=3.2,SNR=7.8								
ASAR					PKP2bc			09 12 17.6	
	comp=Z,3.8nm,1.0s,baz=143,slow=2.6,SNR=7.0								
ASAR					P4KPbc			09 20 04.8	
	comp=Z,0.5nm,0.8s,baz=333,slow=4.6,SNR=7.1								
ASAR	**Alice Springs**	**62.05**	**150**		P	P	**P**	**08 43 03.8**	**-0.7**
ASAR					S	S	**S**	**08 51 27.9**	**-1.4**
ASAR					pmax	pmax			
	comp=Z,52nm,0.8s								
ASAR					smax				
	comp=N,3.0nm,1.0s								
KDZ	**Kurdzhali**	**62.10**	**304**		P	P	**P**	**08 43 04.9**	**+0.2**
DAT	**Datca**	**62.20**	**298**		*eP*	P	**P**	**08 43 04.7**	**-0.8**
DRGR		**62.29**	**310**	⇓	P	P	**P**	**08 43 06.4**	**+0.5**
DRGR		**62.29**	**310**		P	P	**P**	**08 43 06.3**	**+0.4**
DRGR		**62.29**	**310**	⇓	*i*	P	**P**	**08 43 06.4**	**+0.5**
CRAR	**CRAIOVA**	**62.35**	**307**		P	P	**P**	**08 43 07.0**	**+0.7**
STHS	**Stebnicka Huta**	**62.41**	**313**		*eP*	P	**P**	**08 43 07.1**	**+0.5**
	comp=N,65nm,1.0s,mb5.7								
STHS					*e*PP	pP		08 43 18.2	+8.2
STHS	**Stebnicka Huta**	**62.41**	**313**		*eP*	P	**P**	**08 43 07.1**	**+0.5**
STHS						pmax	pmax		
	comp=Z,65nm,1.0s,mb5.7								
STHS	**Stebnicka Huta**	**62.41**	**313**		*eP*	P	**P**	**08 43 07.1**	**+0.5**
STHS					*ep*	P	pP	08 43 18.2	+8.2
**DE

GRG Griva 64.47 304 P **P** **08 43 20.5 +0.1**
NEO Neokhori 64.48 302 *e*P **P** **08 43 19.5 -1.1**
KLBR Kellerberrin 64.52 168 *e*P **P** **08 43 19.9 -0.7**
comp=Z,101nm,0.7s,mb6.0
MORC Moravsky Berou 64.57 314 *e*P **P** **08 43 21.3 +0.4**
comp=Z,86nm,0.9s,mb5.8
MORC Moravsky Berou 64.57 314 P **P** **08 43 21.5 +0.6**
MORC Moravsky Berou 64.57 314 ⇓*i*P **P** **08 43 21.2 +0.3**
GRUS Gruza 64.58 307 P **P** **08 43 20.7 -0.4**
VLY Voula,Athens 64.60 300 *e*P **P** **08 43 18.5 -2.9**
ATH Athens Observa 64.62 300 *e*P **P** **08 43 21.5 0.0**
LIT Litokhoron 64.72 303 P **P** **08 43 22.6 +0.5**
OSL Oslo 64.73 326 *e*P **P** **08 43 21.3 -0.5**
OSL AMb AMB 08 43 26.9
comp=Z,205nm,1.8s,mb5.9
SKO Skopje 64.78 305 *e*P **P** **08 43 23.1 +0.6**
ATAL Atalanti 64.86 301 P **P** **08 43 23.2 +0.2**
LKR Lokris 64.89 301 P **P** **08 43 26.1 +2.9**
SIVA Sivas 64.92 297 *e*P **P** **08 43 22.5 -1.0**
SIVA Sivas 64.92 297 P **P** **08 43 24.4 +0.9**
KSP Ksiaz 64.95 316 *e*P **P** **08 43 23.7 +0.3**
KSP *e*pP pP 08 43 27.6 +0.8
KSP *e*S **S** **08 52 03.1 -1.8**
KSP LMZ 09 13 05.0
comp=Z,43µm,19.7s
KSP Ksiaz 64.95 316 *e*P **P** **08 43 23.8 +0.4**
KSP *e* 08 45 43.2
KSP *e*S **S** **08 52 01.3 -3.6**
KSP *e* 08 53 15.9
KSP MLR MLR
comp=Z,50µm,19.7s,MS6.7
DIVS Divibare 65.00 308 P **P** **08 43 24.3 +0.5**
FURI Furi 65.05 265 *i* P **P** **08 43 27.4 +2.8**
DPC Dobruska-Polom 65.10 315 *e*P **P** **08 43 24.9 +0.5**
DPC *e* 08 45 47.1
DPC *e*S S 08 52 06.3 -0.5
DPC *e* 08 53 19.3
DPC MLR MLR
comp=Z,26µm,17.9s,MS6.5
DPC Dobruska-Polom 65.10 315 *e*P **P** **08 43 24.9 +0.5**
DPC *e*pP pP 08 43 28.4 +0.6
DPC *e*PP PP 08 45 47.1 -0.2
DPC *e*S S 08 52 06.3 -0.5
DPC *e*SKS 08 53 19.3
DPC AMS AMS 09 13 00.0
comp=Z,26µm,17.9s
KRUS Krusevo 65.13 304 *e*P **P** **08 43 23.5 -1.3**
PKSM Moragy 65.13 310 ⇓*i*P **P** **08 43 24.6 -0.1**
DID Didima 65.14 300 *e*P **P** **08 43 23.5 -1.4**
KZN Kozani 65.15 303 *e*P **P** **08 43 24.0 -0.9**
KZN Kozani 65.15 303 P **P** **08 43 29.9 +5.0**
MOL Molde 65.21 330 *e*S S 08 52 09.3 +1.6
MOL *e*SKS 08 53 20.5
VAM Vamos 65.23 297 *e*P **P** **08 43 24.5 -1.0**
AGG Agios Georgios 65.23 302 P **P** **08 43 24.7 -0.8**
UPC Upice 65.23 315 *e*P **P** **08 43 25.9 +0.7**
UPC Upice 65.23 315 *e*P **P** **08 43 25.9 +0.7**
UPC *e*pP pP 08 43 29.1 +0.5
FNA Florina 65.26 304 P **P** **08 43 25.3 -0.3**
THL Klokotos Trika 65.26 302 P **P** **08 43 24.8 -0.8**
VRAC Vranov 65.31 314 ⇓P **P** **08 43 26.5 +0.7**
VRAC Vranov 65.31 314 ⇓*i*P **P** **08 43 26.5 +0.7**
CTA Charters Tower 65.36 137 *e*P **P** **08 43 25.5 -0.9**
comp=Z,28nm,0.6s,mb5.5
CTA *e*S S 08 52 08.7 -1.9
CTAO Charters Tower 65.36 137 *e*P **P** **08 43 25.8 -0.6**
comp=Z,245nm,1.4s,mb6.0
CTAO LR LR
comp=Z,3µm,20.0s,MS5.5
CTAO Charters Tower 65.36 137 *e*P **P** **08 43 25.8 -0.6**
CTAO pmax pmax
comp=Z,245nm,1.4s,mb6.0
CTAO MLR MLR
comp=Z,3µm,20.0s,MS5.5
CTAO Charters Tower 65.36 137 P **P** **08 43 25.8 -0.6**
comp=Z,3µmcomp=Z,111nm,1.8s,mb5.6
KONO Kongsberg 65.37 326 *e*P **P** **08 43 25.2 -0.8**
KONO AMB AMB 08 43 30.3
comp=Z,116nm,1.1s,mb5.8
KONO *e*S S 08 52 11.9 +2.2
KONO *e*SS SS 08 56 25.4 +3.2
KONO AMS AMS 09 13 24.7
comp=Z,10µm,11.0s,MS6.3
KONO Kongsberg 65.37 326 *e*P **P** **08 43 25.4 -0.6**
comp=Z,133nm,1.3s,mb5.8
KONO LR LR
comp=Z,9µm,19.0s,MS6.0
KONO Kongsberg 65.37 326 *e*P **P** **08 43 25.4 -0.6**
KONO pmax pmax
comp=Z,133nm,1.3s,mb5.8
KONO MLR MLR
comp=Z,9µm,19.0s,MS6.0
COP Copenhagen 65.39 322 *i* P **P** **08 43 26.0 -0.2**
COP pmax pmax
comp=Z,59nm,0.9s,mb5.6
COP MLR MLR
comp=Z,3µm,16.0s,MS5.6
COP Copenhagen 65.39 322 *i* P **P** **08 43 26.0 -0.2**
comp=Z,59nm,0.9s,mb5.6
COP
comp=Z,3µm,16.0s
ZST Bratislava 65.39 313 *e*P **P** **08 43 27.4 +1.1**
comp=Z,31nm,0.8s,mb5.4
ZST *e*PP pP 08 43 37.5 +7.8
ZST *e*S S 08 52 09.7 -0.8
ZST *e*ScS ScS 08 53 22.7 +1.0
ZST LR LR
comp=Z,8µm,16.9s,MS6.0
ZST Bratislava 65.39 313 *e*P **P** **08 43 27.4 +1.1**
ZST *e*pP pP 08 43 37.5 +7.8
ZST *e*S S 08 52 09.7 -0.8
ZST *e*SCS ScS 08 53 22.7 +1.0
KARN Karanos 65.44 298 *e*P **P** **08 43 26.5 -0.4**
KARN Karanos 65.44 298 P **P** **08 43 27.3 +0.4**
BBLS Lazići 65.48 308 P **P** **08 43 27.1 +0.2**
IVA Berane 65.51 306 ⇑*i*P **P** **08 43 27.5 +0.3**
IVA Berane 65.51 306 P **P** **08 43 28.0 +0.8**
GVD Gavdhos 65.53 297 *e*P **P** **08 43 26.4 -1.0**
comp=Z,987nm,1.5s,mb6.6
GVD Gavdhos 65.53 297 *e*P **P** **08 43 26.5 -1.0**
OHR Ohrid 65.54 304 *e*P **P** **08 43 26.9 -0.5**
PVY Plav 65.56 306 ⇑*i*P **P** **08 43 27.8 +0.3**
PVY Plav 65.56 306 P **P** **08 43 28.0 +0.5**
KALE Kalithea 65.61 301 P **P** **08 43 28.1 +0.2**
NEST Nestorio 65.62 304 P **P** **08 43 32.5 +4.5**
GUR Goura 65.64 301 *e*P **P** **08 43 26.0 -2.1**
PLE Pljevlja 65.68 307 ⇑*i*P **P** **08 43 29.1 +0.8**
PLE Pljevlja 65.68 307 P **P** **08 43 29.0 +0.7**
NWAO Narrogin (SRO) 65.73 168 *e*P **P** **08 43 27.9 -0.5**
comp=Z,112nm,0.8s,mb6.0
NWAO LR LR
comp=Z,2µm,22.0s,MS5.4
NWAO Narrogin (SRO) 65.73 168 *e*P **P** **08 43 27.9 -0.6**
NWAO pmax pmax
comp=Z,112nm,0.8s
NWAO MLR MLR
comp=Z,2µm,22.0s
NWAO Narrogin (SRO) 65.73 168 P **P** **08 43 29.5 +1.1**
SNR=10.0
EFP Efpalio 65.77 301 *e*P **P** **08 43 29.5 +0.6**
LAKA Lakka 65.78 301 P **P** **08 43 29.0 0.0**
RUE Ruedersdorf 65.82 318 *e*P **P** **08 43 29.0 0.0**
comp=Z,606nm,1.9s,mb6.3
RUE *e*S S 08 52 14.0 -1.5
RUE Ruedersdorf 65.82 318 *e*P **P** **08 43 29.8 +0.8**
comp=Z,121nm,1.0s,mb5.9
VLX Vlachokerasia 65.83 300 *e*P **P** **08 43 27.5 -1.8**
TTA Tatalina 65.95 30 *e*P **P** **08 43 29.0 -0.7**
TREC Trest 65.99 314 *e*P **P** **08 43 30.8 +0.6**
TREC *e*S S 08 52 17.7 0.0
TREC *e* 08 53 24.5
TREC MLR MLR
comp=Z,24µm,16.7s,MS6.5
TREC Trest 65.99 314 *e*P **P** **08 43 30.8 +0.6**
TREC *e*S S 08 52 17.7 0.0
TREC *e*SKS 08 53 24.5
TREC AMS AMS 09 13 20.0
comp=Z,24µm,16.7s
DAG Danmarks Havn 66.00 348 ⇑*i*P **P** **08 43 29.3 -0.5**
DAG pmax pmax
comp=Z,58nm,1.4s,mb5.4
DAG Danmarks Havn 66.00 348 ⇑*i*P **P** **08 43 29.3 -0.5**
comp=Z,58nm,1.4s,mb5.4

JAN Janina 66.05 303 *e*P **P** **08 43 29.5 -1.2**
UPM Unac-Piva 66.06 307 ⇑*i*P **P** **08 43 30.2 -0.5**
UPM Unac-Piva 66.06 307 P **P** **08 43 31.0 +0.3**
MIDW Midway 66.07 71 PFAKE 08 43 40.0 +8.9
MIDW LR LR
comp=Z,1µm,20.0s,MS5.2
PVCC Panska Ves 66.08 316 *e*P **P** **08 43 31.5 +0.8**
PVCC *e*S S 08 52 18.4 -0.4
PVCC MLR MLR
comp=Z,22µm,20.3s,MS6.3
PVCC Panska Ves 66.08 316 *e*P **P** **08 43 31.5 +0.8**
PVCC *e*pP pP 08 43 33.9 -0.2
PVCC *e*S S 08 52 18.4 -0.4
PVCC AMS AMS 09 13 30.0
comp=Z,22µm,20.3s
TIR Tirane 66.10 305 *e*P **P** **08 43 30.0 -1.0**
comp=Z,96nm,0.8s,mb5.9
TIR LR LR
comp=Z,4µm,19.0s,MS5.7
TIR Tirane 66.10 305 *e*P **P** **08 43 30.0 -1.0**
TIR pmax pmax
comp=Z,96nm,0.8s,mb5.9
TIR MLR MLR
comp=Z,4µm,19.0s,MS5.7
TTG Podgorica 66.11 306 ⇑*i*P **P** **08 43 29.5 -1.6**
TTG Podgorica 66.11 306 P **P** **08 43 31.0 -0.1**
NKY Niksic 66.14 307 ⇑*i*P **P** **08 43 30.8 -0.5**
RLS Riolos of Patr 66.23 301 *e*P **P** **08 43 30.5 -1.4**
ITM Ithomi 66.23 300 *e*P **P** **08 43 29.5 -2.4**
ITM Ithomi 66.23 300 P **P** **08 43 34.7 +2.8**
CONA Conrad Observa 66.27 313 *i* P **P** **08 43 32.5 +0.6**
comp=Z,112nm,1.0s,mb5.8,SNR=36
ULC Ulcinj 66.29 306 ⇑*i*P **P** **08 43 31.7 -0.6**
ULC Ulcinj 66.29 306 P **P** **08 43 32.0 -0.3**
PRU Pruhonice 66.30 315 *e*P **P** **08 43 33.3 +1.2**
PRU *e* 08 45 59.0
PRU *e*S S 08 52 19.8 -1.7
PRU *e* 08 53 24.1
PRU MLR MLR
comp=Z,26µm,17.4s,MS6.5
PRU Pruhonice 66.30 315 *e*P **P** **08 43 33.3 +1.2**
PRU *e*PP PP 08 45 59.0 +1.3
PRU *e*S S 08 52 19.8 -1.7
PRU *e*SKS 08 53 24.1
PRU AMS AMS 09 13 40.0
comp=Z,26µm,17.4s
FORT Forrest 66.31 158 *e*P **P** **08 43 32.4 +0.1**
comp=Z,96nm,0.8s,mb5.9
FORT Forrest 66.31 158 *e*P **P** **08 43 31.9 -0.4**
comp=Z,1µm,1.0s,mb6.8
BRG Berggiesshubel 66.32 316 *e*P **P** **08 43 32.2 -0.1**
comp=Z,129nm,1.2s,mb5.8
BRG *e*S S 08 52 20.7 -1.0
BRG Berggiesshubel 66.32 316 ⇑*i*P **P** **08 43 32.7 +0.5**
comp=Z,71nm,0.9s,mb5.7
BRG *i* 08 43 42.3
comp=Z,84nm,1.2s
BRG *i* PCP PcP 08 44 02.5 +0.4
comp=Z,48nm,1.1s
BRG *i* PP PP 08 45 48.4 -9.5
comp=Z,20nm,1.1s
BRG S S 08 52 19.0 -2.7
BRG SP 08 53 25.0
BRG SS SS 08 56 34.0 -3.4
BRG *e*PKPPKP 09 12 06.3
comp=Z,7.8nm,1.3s
BRG
comp=N,7µm,18.7s
BRG
comp=E,15µm,17.2s
BRG
comp=Z,20nm,15.0s
BRG Berggiesshubel 66.32 316 ⇑*i*P **P** **08 43 32.7 +0.4**
BRG *i* 08 43 42.3
BRG *i* 08 44 02.5
BRG S S 08 52 19.0 -2.7
BRG SP 08 53 25.0
BRG SS SS 08 56 34.0 -3.4
BRG pmax pmax
comp=Z,42nm,0.9s,mb5.5
BRG MLR MLR
comp=N,4µm,18.7s,MS6.1
BRG MLR MLR
comp=E,9µm,17.2s,MS6.1
BRG MLR MLR
comp=Z,12µm,15.0s,MS6.2
PRA Prague 66.33 315 P **P** **08 43 32.0 -0.4**
PRA AMS AMS 09 14 00.0
COLD Coldfoot 66.37 24 *e*P **P** **08 43 31.7 -0.6**
comp=Z,92nm,1.1s,mb5.7
BUM Brajici-Budva 66.41 306 ⇑*i*P **P** **08 43 33.0 0.0**
BRY Bratogost 66.42 307 ⇑*i*P **P** **08 43 32.1 -0.9**
BRY Bratogost 66.42 307 P **P** **08 43 33.0 0.0**
PYL PYLOS 66.48 300 P **P** **08 43 32.1 -1.4**
LKD2 Lefkada island 66.53 302 P **P** **08 43 33.0 -0.8**
KOGS Kog 66.58 311 P **P** **08 43 34.0 0.0**
BLY Banja Luka 66.62 309 P **P** **08 43 34.0 -0.3**
HCY Herceg Novi 66.62 306 ⇑*i*P **P** **08 43 34.0 -0.4**
FOO Floro 66.67 329 *e*P **P** **08 43 32.2 -2.1**
FOO AMB AMB 08 43 36.5
comp=Z,68nm,1.4s,mb5.5
FOO *e*S S 08 52 24.1 -1.6
FOO *e*SKS 08 53 29.4
FOO *e*SS SS 08 56 44.5 +2.1
CLL Collm 66.71 317 *e*P **P** **08 43 34.3 -0.4**
comp=Z,251nm,1.6s,mb6.0
CLL *e*S S 08 52 24.8 -1.6
CLL Collm 66.71 317 ⇑*i*P **P** **08 43 34.8 +0.1**
comp=Z,69nm,1.0s,mb5.6
CLL *e*S S 08 52 23.0 -3.4
CLL *i* P'P'
CLL LR LR
comp=Z,10µm,19.9s,MS6.0
CLL Collm 66.71 317 ⇑*i*P **P** **08 43 34.8 +0.1**
CLL *e*S S 08 52 23.0 -3.4
CLL pmax pmax
comp=Z,69nm,1.0s,mb5.6
CLL MLR MLR
comp=Z,10µm,19.9s,MS6.0
CLL Collm 66.71 317 ⇑*i*P **P** **08 43 34.8 +0.1**
comp=Z,69nm,1.0s,mb5.6
CLL *e*Plp pP 08 43 36.0 -2.1
CLL *e*PP PP 08 46 01.0 -0.2
CLL *e*S S 08 52 23.0 -3.4
CLL *e*S S 08 52 23.0 -3.4
CLL *e*SS SS 08 56 46.0 +2.7
CLL *e*SSS 08 59 59.0
CLL *i* PKPPKPdf 09 12 06.7
CLL Lm 09 14 18.0
comp=Z,10µm,19.9s
ARSA Arzberg 66.74 312 P **P** **08 43 35.1 +0.1**
ARSA Arzberg 66.74 312 ⇓*i*P **P** **08 43 34.9 -0.1**
comp=Z,93nm,1.3s,mb5.7,SNR=12
KEK Kerkira 66.78 303 *e*P **P** **08 43 33.0 -2.4**
MUD Monsted U'grnd 66.80 323 ⇑*i*P **P** **08 43 35.6 +0.4**
MUD *i* S S 08 52 24.3 -3.0
MUD pmax pmax
comp=Z,76nm,1.1s,mb5.6
MUD MLR MLR
comp=Z,8µm,18.0s,MS6.0
MUD Monsted U'grnd 66.80 323 ⇑*i*P **P** **08 43 35.6 +0.4**
comp=Z,76nm,1.1s,mb5.6
MUD *i* S S 08 52 24.3 -3.0
MUD
comp=Z,8µm,18.0s
VLS Valsamata 66.82 301 *e*P **P** **08 43 32.5 -3.2**
SVW2 Sparrevohn 66.89 31 *e*P **P** **08 43 35.5 -0.2**
comp=Z,288nm,1.7s,mb6.0
HNR Honiara 66.94 118 PFAKE 08 43 50.0 +13
HNR LR LR
comp=Z,2µm,21.0s,MS5.3
STON Ston 67.00 307 P **P** **08 43 34.9 -1.9**
BER Bergen 67.05 328 *e*P **P** **08 43 34.5 -2.2**
BER AMB AMB 08 43 41.8
comp=Z,130nm,1.6s,mb5.7
BER *e*S S 08 52 30.9 +0.8
BER *e*SKS 08 53 33.6
BER AMS AMS 09 14 10.0
comp=Z,8µm,15.3s,MS6.1
JMIC Jan Mayen 67.07 341 *e*P **P** **08 43 37.5 +0.8**
JMIC AMB AMB 08 43 42.9
comp=Z,185nm,1.8s,mb5.8
JMIC *e*S S 08 52 32.3 +2.1
JMIC AMS AMS 09 15 28.5
comp=Z,4µm,21.5s,MS5.6
JMIC Jan Mayen 67.07 341 LR LR 09 15 46.6
comp=Z,5µm,20.9s,MS5.7,baz=56,slow=38
GOLS Golise 67.15 311 *i* P **P** **08 43 37.7 +0.1**
BSEG Bad Segeberg 67.19 320 *e*P **P** **08 43 38.2 +0.5**
comp=Z,240nm,1.2s,mb6.1
BSEG *e*S S 08 52 32.4 +0.3
BSEG Bad Segeberg 67.19 320 *e*P **P** **08 43 38.2 +0.5**
BSEG *e*S S 08 52 32.4 +0.3
BSEG pmax pmax
comp=Z,240nm,1.2s,mb6.1
GCIS Gornji Cirnik 67.20 311 *i* P **P** **08 43 38.0 +0.1**
KHC Kasperske Hory 67.21 315 *e*P **P** **08 43 37.9 -0.1**
comp=Z,190nm,1.7s,mb5.8
KHC Kasperske Hory 67.21 315 *e*P **P** **08 43 38.2 +0.2**
KHC *e* 08 46 09.5
KHC *e*S S 08 52 32.6 +0.1
KHC *e* 08 53 36.7
KHC MLR MLR
comp=Z,27µm,18.3s,MS6.5
KHC Kasperske Hory 67.21 315 *e*P **P** **08 43 38.2 +0.2**
KHC *e*pP pP 08 43 42.3 +1.0
KHC *e*PP PP 08 46 09.5 +3.8
KHC *e*S S 08 52 32.6 +0.1
KHC *e*SKS 08 53 36.7
KHC AMS AMS 09 14 10.0
comp=Z,27µm,18.3s
PERS Pernice 67.23 312 *i* P **P** **08 43 38.0 -0.2**
PERS *e*S S 08 52 31.4 -1.4
PERS *e* 08 53 35.9
GEC2 GERESS Array S 67.25 314 *e*P **P** **08 43 38.2 0.0**
comp=Z,254nm,1.8s,mb6.0
GEC2 *e*S S 08 52 33.7 +0.8
GEC2 GERESS Array S 67.25 314 *e*P **P** **08 43 38.2 0.0**
GEC2 *e*S S 08 52 33.7 +0.8
GEC2 pmax pmax
comp=Z,254nm,1.8s,mb6.0
SOKA Soboth 67.27 312 ⇓*i*P **P** **08 43 38.3 -0.1**
comp=Z,124nm,1.1s,mb5.9
MOA Molln 67.29 313 P **P** **08 43 38.8 +0.3**
MOA Molln 67.29 313 *i* P **P** **08 43 38.8 +0.3**
comp=Z,186nm,1.4s,mb5.9,SNR=29
TANN Tannenbergstha 67.37 316 *e*P **P** **08 43 38.9 -0.1**
comp=Z,124nm,1.3s,mb5.8
TANN *e*S S 08 52 33.8 -0.6
WERD Werda 67.45 316 *e*P **P** **08 43 39.4 -0.1**
comp=Z,123nm,1.3s,mb5.8
WERD *e*S S 08 52 31.8 -3.5
NKC Novy Kostel 67.45 316 *e*P **P** **08 43 39.8 +0.3**
NKC *e*S S 08 52 34.9 -0.5
NKC *e* 08 53 38.3
NKC MLR MLR
comp=Z,23µm,17.6s,MS6.5
NKC Novy Kostel 67.45 316 *e*P **P** **08 43 39.8 +0.3**
NKC *e*S S 08 52 34.9 -0.5
NKC *e*SKS 08 53 38.3
NKC AMS AMS 09 14 20.0
comp=Z,23µm,17.6s
NEUB Neuenburg 67.46 317 *e*S S 08 52 33.7 -1.7
GUNZ Gunzen 67.47 316 *e*P **P** **08 43 39.6 0.0**
comp=Z,203nm,1.4s,mb6.0
GUNZ *e*S S 08 52 34.0 -1.6
BPAW Bear Paw Mtn. 67.49 27 *e*P **P** **08 43 39.0 -0.5**
comp=Z,108nm,0.8s,mb5.9
CHGN Chignik 67.53 37 *e*P **P** **08 43 38.8 -1.0**
PDKS Podkum 67.53 311 *i* P **P** **08 43 40.0 0.0**
PPLA Purkeypile 67.56 29 *e*P **P** **08 43 39.4 -0.5**
comp=Z,513nm,1.3s,mb6.4
BOJS Bojanci 67.59 310 *i* P **P** **08 43 40.7 +0.2**
BOJS *e*S S 08 52 36.2 -1.0
BOJS *e* 08 53 37.6
BOJS Bojanci 67.59 310 *i* P **P** **08 43 40.7 +0.3**
BOJS *e*S S 08 52 36.2 -1.0
BOJS *e* 08 53 37.6
WET Wettzell 67.63 315 *e*P **P** **08 43 40.8 +0.2**
comp=Z,262nm,1.7s,mb6.0
WET *e*S S 08 52 38.2 +0.7
WET Wettzell 67.63 315 *e*P **P** **08 43 40.8 +0.2**
WET *e*S S 08 52 38.2 +0.7
WET pmax pmax
comp=Z,262nm,1.7s,mb6.0
OBKA Obir 67.64 312 P **P** **08 43 40.7 0.0**
OBKA Obir 67.64 312 ⇓*i*P **P** **08 43 40.7 -0.1**
comp=Z,110nm,1.5s,mb5.7,SNR=33
VISS Visnje 67.74 311 *i* P **P** **08 43 41.3 -0.1**
MOX Moxa 67.78 317 *e*P **P** **08 43 41.2 -0.3**
comp=Z,291nm,1.8s,mb6.0
MOX *e*S S 08 52 25.0 -14
MOX
comp=Z,9µm,21.0s
MOX Moxa 67.78 317 *e*P **P** **08 43 41.5 0.0**
comp=Z,180nm,1.5s,mb5.9
MOX *e*S S 08 52 38.6 -0.6
MOX Moxa 67.78 317 *e*P **P** **08 43 41.2 -0.3**
MOX pmax pmax
comp=Z,291nm,1.8s,mb6.0
MOX MLR MLR
comp=Z,9µm,21.0s,MS6.0
LJU Ljubljana 67.84 311 *i* P **P** **08 43 42.0 0.0**
LJU *e*S S 08 52 37.6 -2.6
LJU *e* 08 53 39.4
NRDL Niedersach Rie 67.89 319 *e*P **P** **08 43 41.6 -0.6**
comp=Z,963nm,2.2s,mb6.4
NRDL *e*S S 08 52 39.3 -1.2
CRNS Crni Vrh 68.00 311 *i* P **P** **08 43 42.5 -0.5**
CLZ Clausthal 68.00 318 *e*P **P** **08 43 43.1 +0.2**
comp=Z,928nm,2.1s,mb6.5
CLZ *e*S S 08 52 40.8 -1.1
CLZ Clausthal 68.00 318 *e*P **P** **08 43 43.1 +0.2**
CLZ *e*S S 08 52 40.8 -1.1
CLZ pmax pmax
comp=Z,928nm,2.1s,mb6.5
KNDS Knezji Dol 68.14 311 *i* P **P** **08 43 43.8 -0.1**
MYKA Terra Mystica 68.17 312 ⇓*i*P **P** **08 43 43.6 -0.5**
comp=Z,24nm,0.9s,mb5.2
KBA Koelnbreinsper 68.17 313 ⇓*i*P **P** **08 43 43.9 -0.1**
comp=Z,84nm,0.8s,mb5.8,SNR=67
JAVS Javornik 68.20 311 *i* P **P** **08 43 43.6 -0.7**
JAVS *e*S S 08 52 44.0 -0.4
JAVS *e* 08 53 42.2
NVLJ Novalja 68.21 310 P **P** **08 43 43.5 -0.9**
VOY Vojsko 68.25 311 ⇑*e*P **P** **08 43 44.2 -0.4**
VOY *e* 08 43 53.7
VOY *e* 08 44 03.4
VOY *e* 08 44 19.0
VOJS Vojsko 68.25 311 *i* P **P** **08 43 43.8 -0.8**
COLA College 68.32 26 *e*P **P** **08 43 43.6 -1.0**
comp=Z,196nm,1.2s,mb6.0
COLA LR LR
comp=Z,4µm,20.0s,MS5.7
COLA College 68.32 26 *e*P **P** **08 43 43.6 -1.1**
COLA pmax pmax
comp=Z,197nm,1.2s,mb6.0
COLA MLR MLR
comp=Z,4µm,20.0s,MS5.7
SKDS Skadanscina 68.37 311 *i* P **P** **08 43 44.8 -0.5**
GRA1 Grafenberg Arr 68.39 316 *e*P **P** **08 43 45.8 +0.4**
comp=Z,452nm,1.5s,mb6.3
GRA1 *e*S S 08 52 47.3 +0.6
GRA1 LR LR
comp=Z,31µm,19.0s,MS6.5
GRF Grafenberg Arr 68.39 316 *e*P **P** **08 43 45.8 +0.4**
comp=Z,452nm,1.5s,mb6.3
GRF *e*S S 08 52 47.3 +0.6
GRF *e*L 09 15 18.1
comp=Z,31µm,19.0s
GRF Grafenberg Arr 68.39 316 *e*P **P** **08 43 45.8 +0.4**
GRF *e*S S 08 52 47.3 +0.6
GRF pmax pmax
comp=Z,452nm,1.5s,mb6.3
GRF MLR MLR
comp=Z,31µm,19.0s,MS6.5
RSO Redoubt South 68.41 31 *e*P **P** **08 43 45.6 +0.2**
comp=Z,154nm,0.7s,mb6.1
PTCC Patocco-Chiusa 68.44 312 P **P** **08 43 44.9 -0.9**
TRI Trieste 68.46 311 *e*P **P** **08 43 45.2 -0.7**
comp=Z,109nm,0.9s,mb5.9
TRI LR LR
comp=Z,11µm,20.0s,MS6.1
TRI Trieste 68.46 311 *e*P **P** **08 43 45.2 -0.7**
TRI pmax pmax
comp=Z,109nm,0.9s,mb5.9
TRI MLR MLR
comp=Z,11µm,20.0s,MS6.1

UBBA Unterbreizbach 68.64 317 *e*S S 08 52 48.2 -1.3
MSAG Monte S. Angel 68.69 307 P **P** **08 43 47.0 -0.4**
ILAR Eielson Array 68.73 26 P **P** **08 43 45.4 -1.9**
ILAR ⇑*e* 09 11 55.2
ILAR Eielson Array 68.73 26 P **P** **08 43 45.4 -1.9**
comp=Z,8.1nm,0.4s,mb5.0,baz=291,slow=4.3,SNR=270
ILAR PKP2bc 09 11 55.2
comp=Z,3.1nm,1.1s,baz=114,slow=1.0,SNR=9.7
SGRT San Giovanni R 68.78 307 P **P** **08 43 47.5 -0.5**
ABTA Abfaltersbach 68.83 313‖*i*P **P** **08 43 47.3 -0.9**
comp=Z,44nm,0.9s,mb5.4,SNR=20
RGNG Rignano Grg 68.92 307 P **P** **08 43 48.4 -0.5**
FUR Furstenfeldbru 69.00 314 *e*P **P** **08 43 49.7 +0.5**
comp=Z,458nm,1.2s,mb6.3
FUR *e*S S 08 52 55.0 +1.1
FUR Furstenfeldbru 69.00 314 *e*P **P** **08 43 49.7 +0.5**
FUR *e*S S 08 52 55.0 +1.1
FUR pmax pmax
comp=Z,458nm,1.2s,mb6.3
ACER Acerenza 69.05 306 P **P** **08 43 49.9 +0.3**
PTRP Pietrapertosa 69.07 305 P **P** **08 43 50.3 +0.5**
TIP Timpagrande 69.15 304 *e*P **P** **08 43 50.0 -0.4**
comp=Z,801nm,2.0s,mb6.3
TIP LR LR
comp=Z,4µm,20.0s,MS5.7
WTTA Wattenberg 69.16 313‖*i*P **P** **08 43 50.0 -0.2**
comp=Z,220nm,1.4s,mb5.9,SNR=59
FG2 Serracapriola 69.16 307 P **P** **08 43 50.7 +0.4**
WATA Walderalm 69.16 313‖*i*P **P** **08 43 50.0 -0.2**
comp=Z,55nm,0.8s,mb5.6,SNR=12
IBBN Ibbenburen 69.27 319 *e*P **P** **08 43 50.9 +0.1**
comp=Z,365nm,1.7s,mb6.0
IBBN *e*S S 08 52 56.0 -1.0
FG5 Orsara di Pugl 69.30 306 P **P** **08 43 52.0 +0.8**
MRLC Muro Lucano 69.37 306 P **P** **08 43 51.7 0.0**
CIGN Sant'Elia a Pi 69.39 307 P **P** **08 43 52.3 +0.5**
RC01 Rabbit Creek A 69.42 30 *e*P **P** **08 43 50.4 -1.3**
comp=Z,353nm,1.7s,mb6.0
PMR Palmer 69.43 29 *e*P **P** **08 43 49.9 -1.8**
comp=Z,122nm,1.0s,mb5.8
PMR Palmer 69.43 29 *e*P **P** **08 43 49.9 -1.8**
PMR pmax pmax
comp=Z,122nm,1.0s,mb5.8
MOTA Moosalm 69.45 314‖*i*P **P** **08 43 51.7 -0.3**
comp=Z,78nm,0.9s,mb5.7,SNR=29
HDH Heidenheim-Cha 69.46 315 P **P** **08 43 52.7 +0.6**
AOI Ancona 69.47 309 P **P** **08 43 52.5 +0.3**
CUC Castrocucco 69.47 305 *e*P **P** **08 43 51.2 -1.0**
comp=Z,56nm,0.8s,mb5.5
CUC LR LR
comp=Z,5µm,20.0s,MS5.8
SIND Sindeldorf 69.49 316 P **P** **08 43 52.8 +0.5**
MRB1 Monte Rocchett 69.57 306 P **P** **08 43 53.2 +0.3**
MGR Morigerati 69.59 305 P **P** **08 43 53.5 +0.5**
RETA Reutte 69.60 314↑*i*P **P** **08 43 52.8 -0.1**
comp=Z,48nm,0.8s,mb5.5,SNR=27
PSB1 Pescosannita 69.64 306 P **P** **08 43 53.2 -0.1**
OHAK Old Harbor 69.66 35 *e*P **P** **08 43 52.8 -0.3**
comp=Z,224nm,1.0s,mb6.0
OFFI Offida 69.67 308 P **P** **08 43 53.9 +0.4**
KDAK Kodiak Island 69.73 34 *e*P **P** **08 43 52.9 -0.6**
comp=Z,354nm,1.4s,mb6.1
KDAK LR LR
comp=Z,2µm,20.0s,MS5.4
KDAK Kodiak Island 69.73 34 *i*P **P** **08 43 52.5 -1.1**
APPI Appiano 69.74 313 P **P** **08 43 53.5 -0.3**
PESA Pesaro 69.80 310 P **P** **08 43 55.0 +0.8**
CING Cingoli 69.81 309 P **P** **08 43 54.5 +0.2**
FETA Feichten 69.82 313‖*i*P **P** **08 43 54.1 -0.2**
comp=Z,120nm,0.8s,mb5.9,SNR=68
MIDA Miranda 69.84 307 P **P** **08 43 55.0 +0.5**
TOD Tromm 69.85 316 *e*P **P** **08 43 54.9 +0.4**
TERO Teramo 69.86 308 P **P** **08 43 54.6 0.0**
SGG Gregorio Mates 69.86 307 P **P** **08 43 54.6 -0.1**
UBR Ueberruh 69.91 314 P **P** **08 43 55.1 +0.2**
INTR Introdacqua 69.92 307 P **P** **08 43 54.9 -0.1**
BUG Bochum--Univer 69.92 319 *e*P **P** **08 43 54.9 0.0**
comp=Z,161nm,1.1s,mb5.9
BUG *e*S S 08 53 04.9 +0.2
STU Stuttgart 69.99 316 *e*P **P** **08 43 55.1 -0.2**
comp=Z,160nm,1.3s,mb5.8
STU Stuttgart 69.99 316 *e*P **P** **08 43 55.2 -0.1**
comp=Z,98nm,0.9s,mb5.7
STU Stuttgart 69.99 316 *e*P **P** **08 43 55.2 -0.1**
STU pmax pmax
comp=Z,98nm,0.9s,mb5.7
SEW Seward 70.03 31 *e*P **P** **08 43 54.0 -1.4**
comp=Z,111nm,1.0s,mb5.8
BUCH Bad Urach 70.03 315 P **P** **08 43 56.2 +0.6**
LRW Lerwick 70.05 329 *e*P **P** **08 43 55.0 -0.5**
LRW AMb AMB 08 43 58.2
comp=Z,124nm,3.0s
LRW *e* 08 53 08.9
LRW AMS AMS 09 16 13.8
comp=Z,9µm,16.0s,MS6.1
AQU L'Aquila 70.11 308 *e*P **P** **08 43 56.9 +0.7**
comp=Z,308nm,1.2s,mb6.1
AQU LR LR
comp=Z,11µm,19.0s,MS6.1
AQU L'Aquila 70.11 308 P **P** **08 43 57.0 +0.8**
AQU L'Aquila 70.11 308‖*i*P **P** **08 43 56.8 +0.6**
CEL Celeste 70.15 303 *e*P **P** **08 43 56.1 -0.5**
comp=Z,173nm,0.9s,mb6.0
CEL LR LR
comp=Z,2µm,22.0s,MS5.3
RFI Roccamonfina 70.17 307 P **P** **08 43 56.6 0.0**
VVLD Villa Vallelon 70.17 307 P **P** **08 43 57.7 +1.1**
PIEI Pieia 70.17 309 P **P** **08 43 56.8 +0.2**
WAL1 Walls 70.18 329 *e*P **P** **08 43 56.0 -0.3**
PAX Paxson 70.20 27 *e*P **P** **08 43 55.6 -0.7**
comp=Z,43nm,0.8s,mb5.4
PAX Paxson 70.20 27 *e*P **P** **08 43 55.7 -0.7**
PAX pmax pmax
comp=Z,44nm,0.8s,mb5.4
DAVA Damuels 70.22 314 P **P** **08 43 56.8 0.0**
DAVA Damuels 70.22 314‖*i*P **P** **08 43 56.6 -0.2**
comp=Z,55nm,0.9s,mb5.5,SNR=12
LBG Lerchenberg 70.27 316 P **P** **08 43 57.9 +0.8**
BRMO Bormio 70.28 313 P **P** **08 43 57.1 0.0**
SCLL Scilla 70.28 303 P **P** **08 43 56.9 -0.4**
MURB Monte Urbino 70.30 309 P **P** **08 43 58.1 +0.8**
FIAM Fiamignano 70.34 308 P **P** **08 43 57.7 +0.1**
GUT Gutenstein 70.34 315 P **P** **08 43 58.2 +0.7**
FIU Minerbio Fiu 70.37 311 P **P** **08 43 59.4 +1.7**
MABI Malga Bissina 70.37 312 P **P** **08 43 57.8 +0.1**
MTTG Motta San Giov 70.40 307 P **P** **08 43 58.0 -0.1**
GUAR Guarcino 70.41 307 P **P** **08 43 57.7 -0.3**
ABH Alteburg 70.46 317 *e*P **P** **08 43 58.9 +0.7**
SPAK Spaichingen-Ko 70.53 315 *e*P **P** **08 43 59.2 +0.6**
CERT Cerreto 70.56 308 P **P** **08 43 58.4 -0.6**
VMG Vicchio 70.63 310 P **P** **08 44 00.9 +1.5**
MTCE Montecelio 70.69 308 P **P** **08 43 59.0 -0.8**
BFO Black Forest 70.70 315 *e*P **P** **08 43 59.3 -0.4**
comp=Z,276nm,1.6s,mb5.9
BFO *e*S S 08 53 13.6 -0.3
BFO Black Forest 70.70 315 *e*P **P** **08 43 59.3 -0.4**
BFO *e*S S 08 53 13.6 -0.3
BFO pmax pmax
comp=Z,276nm,1.6s,mb5.9
LANF Langenberg 70.72 316 *e*P **P** **08 44 00.1 +0.3**
MGAB Montegabbione 70.72 309 P **P** **08 43 59.9 0.0**
EGAK Eagle 70.80 24 *e*P **P** **08 43 58.9 -1.1**
comp=Z,36nm,0.9s,mb5.3
EGAK LR LR
comp=Z,4µm,20.0s,MS5.7
FNVD Fontana Vidola 70.82 310 P **P** **08 44 01.7 +1.2**
RUP Ruppelstein 70.83 317 *e*P **P** **08 44 01.1 +0.7**
SCO Scoresbysund 70.89 343 *i*P **P** **08 43 59.9 -0.6**
SCO *i*S S 08 53 15.5 +0.1
SCO pmax pmax
comp=Z,12nm,0.9s,mb4.8
SCO MLR MLR
comp=Z,4µm,18.0s,MS5.7
SCO Scoresbysund 70.89 343 *i*P **P** **08 43 59.9 -0.6**
comp=Z,12nm,0.9s,mb4.8
SCO *i*S S 08 53 15.5 +0.1
SCO
comp=Z,4µm,18.0s
MENT Mentasta 70.89 27 *e*P **P** **08 43 59.7 -0.9**
TUE Stuetta 70.91 313 P **P** **08 44 01.0 0.0**
TUE LR LR
comp=Z,18µm,19.0s,MS6.3
ROM9 Roma 70.93 308 P **P** **08 44 01.7 +0.5**
MEM Membach 71.01 318 P **P** **08 44 01.8 +0.2**
comp=Z,54nm,1.7s,mb5.2
MEM AP pP 08 44 05.5 +0.6
CSNT Castellina Chi 71.02 310 P **P** **08 44 00.5 -1.2**
LATE Laterza 71.06 309 P **P** **08 44 01.6 -0.4**
DIV Divide 71.06 29 *e*P **P** **08 44 01.4 -0.2**
comp=Z,156nm,1.3s,mb5.8
INK Inuvik 71.06 20 *e*P **P** **08 44 00.7 -0.8**
comp=Z,237nm,1.3s,mb6.0
INK Inuvik 71.06 20 LR LR 09 20 15.8
comp=Z,3µm,20.7s,MS5.6,baz=146,slow=40
INK Inuvik 71.06 20 *e*P **P** **08 44 00.7 -0.8**
INK pmax pmax
comp=Z,237nm,1.3s
AGST Augusta-Monte 71.06 302 P **P** **08 44 02.2 +0.1**
FELD Feldberg im Sc 71.10 315 *e*P **P** **08 44 02.3 +0.2**
KIZ Kirchzarten 71.11 315 P **P** **08 44 02.1 -0.1**
ERBM Eremo 71.16 311 P **P** **08 44 04.0 +1.4**
TOLF Tolfa 71.17 308 P **P** **08 44 02.5 -0.2**
LIBD Limburg 71.21 315 *e*P **P** **08 44 03.0 +0.2**
CDF Champ du Feu 71.29 316 *e*P **P** **08 44 02.9 -0.3**
comp=Z,326nm,1.2s,mb5.8
CDF Champ du Feu 71.29 316 *e*P **P** **08 44 02.9 -0.3**
comp=Z,163nm,1.2s,mb5.8
CDF Champ du Feu 71.29 316 *e*P **P** **08 44 02.9 -0.3**
CDF pmax pmax
comp=Z,163nm,1.2s,mb5.8
VLC Villacollemand 71.29 311 *e*P **P** **08 44 04.3 +0.9**
comp=Z,302nm,1.4s,mb6.0
VLC LR LR
comp=Z,13µm,20.0s,MS6.2
WLF Walferdange 71.37 317 P **P** **08 44 04.8 +1.1**
comp=Z,252nm,1.8s,mb5.8
WLF Walferdange 71.37 317 *e*P **P** **08 44 04.7 +1.0**
comp=Z,258nm,1.0s,mb6.1
WLF LR LR
comp=Z,8µm,19.0s,MS6.0
WLF Walferdange 71.37 317 *e*P **P** **08 44 04.7 +1.0**
WLF pmax pmax
comp=Z,258nm,1.0s,mb6.1
WLF MLR MLR
comp=Z,8µm,19.0s,MS6.0
SOFL Sornfelli, Far 71.43 333 AMS AMS 09 17 35.0
comp=Z,6µm,16.3s,MS5.9
ECH Echery 71.45 316 *e*P **P** **08 44 04.3 +0.1**
ECH Echery 71.45 316 *e*P **P** **08 44 03.8 -0.4**
comp=Z,56nm,1.0s,mb5.5
ECH LR LR
comp=Z,18µm,19.0s,MS6.3
ECH Echery 71.45 316 *e*P **P** **08 44 03.8 -0.4**
ECH pmax pmax
comp=Z,56nm,1.0s,mb5.5
ECH MLR MLR
comp=Z,18µm,19.0s,MS6.3
HVZN Vizzini 71.46 303 P **P** **08 44 04.8 +0.3**
BCLA Clavier 71.50 318 P **P** **08 44 04.8 +0.3**
comp=Z,96nm,2.0s,mb5.4
BCLA AP pP 08 44 06.6 -1.2
HMDC Modica 71.51 302 P **P** **08 44 04.9 +0.1**
BBS Basel-Blauen 71.58 315 *e*P **P** **08 44 05.2 +0.1**
MAON Monte Argentar 71.59 309 P **P** **08 44 05.0 -0.2**
BMRM Bremner River 71.63 29 *e*P **P** **08 44 04.9 -0.2**
comp=Z,166nm,1.0s,mb5.9
MOF Memmin 71.63 315 *e*P **P** **08 44 05.5 +0.2**
KMBO Kilima Mbogo 71.65 257 *e*P **P** **08 44 05.5 -0.5**
comp=Z,179nm,1.4s,mb5.8
KMBO LR LR
comp=Z,2µm,20.0s,MS5.4
KMBO Kilima Mbogo 71.65 257 P **P** **08 44 06.2 +0.2**
comp=Z,71nm,1.1s,mb5.5,baz=41,slow=7.0,SNR=51
KMBO Kilima Mbogo 71.65 257 *e*P **P** **08 44 05.5 -0.5**
KMBO pmax pmax
comp=Z,179nm,1.4s
KMBO MLR MLR
comp=Z,2µm,20.0s
KMBO Kilima Mbogo 71.65 257 P **P** **08 44 07.0 +1.0**
SNR=38
RAFF Raffo Rosso 71.70 303 P **P** **08 44 06.5 +0.6**
HINF Hinteralfeld 71.81 315 *e*P **P** **08 44 05.8 -0.6**
comp=Z,184nm,1.1s,mb5.6
HINF Hinteralfeld 71.81 315 *e*P **P** **08 44 05.8 -0.6**
comp=Z,92nm,1.1s,mb5.6
HINF Hinteralfeld 71.81 315 *e*P **P** **08 44 05.8 -0.6**
HINF pmax pmax
comp=Z,92nm,1.1s,mb5.6
DAWY Dawson 71.84 25 *e*P **P** **08 44 05.2 -1.1**
USI Ustica 71.87 305 P **P** **08 44 06.3 -0.6**
GIVF Givet 71.92 318 *e*P **P** **08 44 06.8 -0.2**
comp=Z,180nm,0.9s,mb5.7
GIVF Givet 71.92 318 *e*P **P** **08 44 06.8 -0.2**
comp=Z,90nm,0.9s,mb5.7
GIVF Givet 71.92 318 *e*P **P** **08 44 06.8 -0.2**
GIVF pmax pmax
comp=Z,90nm,0.9s,mb5.7
HAU Haudompre 72.03 316 *e*P **P** **08 44 07.1 -0.6**
comp=Z,157nm,1.1s,mb5.6
HAU *e*MLR MLR
comp=Z,22µm,20.0s,MS6.1
HAU Haudompre 72.03 316 *e*P **P** **08 44 07.1 -0.6**
comp=Z,79nm,1.1s,mb5.5
HAU LR LR
comp=Z,22µm,20.0s,MS6.4
HAU Haudompre 72.03 316 *e*P **P** **08 44 07.1 -0.6**
HAU pmax pmax
comp=Z,79nm,1.1s,mb5.6
HAU MLR MLR
comp=Z,22µm,20.0s,MS6.4
SNF Seneffe 72.03 319 P **P** **08 44 08.1 +0.4**
comp=Z,76nm,1.9s,mb5.3
LOMF Lomont 72.05 315 *e*P **P** **08 44 07.9 +0.1**
DOU Dourbes 72.05 318 P **P** **08 44 08.1 +0.3**
comp=Z,64nm,2.0s,mb5.2
DOU AP pP 08 44 10.6 -0.6
THEF They Montfort 72.14 316 *e*P **P** **08 44 08.5 +0.1**
FAVR Favara 72.17 303 P **P** **08 44 10.0 +1.2**
WDD Wield Dalam 72.19 301 *e*P **P** **08 44 08.4 -0.5**
comp=Z,204nm,0.9s,mb6.1
WDD LR LR
comp=Z,1µm,21.0s,MS5.1
EIDS Eidsvold 72.25 137 *e*P **P** **08 44 08.8 -0.5**
comp=Z,109nm,0.8s,mb5.8
BAIF Baives 72.29 318 *e*P **P** **08 44 09.2 0.0**
comp=Z,207nm,1.1s,mb5.7
BAIF Baives 72.29 318 *e*P **P** **08 44 09.2 0.0**
comp=Z,103nm,1.0s,mb5.7
BAIF Baives 72.29 318 *e*P **P** **08 44 09.2 0.0**
BAIF pmax pmax
comp=Z,103nm,1.0s,mb5.7
MCD Coleburn Disti 72.29 327⇑*e*P **P** **08 44 08.9 -0.2**
MME1 Meikle Cairn 72.30 327⇑*e*P **P** **08 44 08.8 -0.4**
MVH1 Achvaich 72.53 328 *e*P **P** **08 44 10.4 -0.1**
STKA Stephens Creek 72.54 148 *e*P **P** **08 44 09.7 -1.1**
comp=Z,31nm,0.6s,mb5.4
STKA Stephens Creek 72.54 148 *e*P **P** **08 44 09.9 -0.9**
comp=Z,23nm,1.1s,mb5.0
STKA *e*PP PP 08 46 42.7 -10
STKA Stephens Creek 72.54 148 P **P** **08 44 10.1 -0.7**
comp=Z,44nm,0.7s,mb5.5,baz=325,slow=6.4,SNR=87
MEZF Maizieres J'vi 72.55 317 *e*P **P** **08 44 10.6 -0.2**
comp=Z,295nm,1.2s,mb5.8
MEZF Maizieres J'vi 72.55 317 *e*P **P** **08 44 10.6 -0.2**
comp=Z,295nm,1.2s,mb6.1
SUMG Summit 72.59 349 *e*P **P** **08 44 10.9 +0.3**
comp=Z,83nm,1.1s,mb5.6
SUMG Summit 72.59 349⇑*i*P **P** **08 44 10.6 0.0**
comp=Z,39nm,0.9s,mb5.3
SUMG
comp=Z,5µm,20.0s
OG01 Vacheresse 72.62 314 *e*P **P** **08 44 11.6 +0.3**
RES Resolute Bay 72.72 5 LR LR 09 19 14.1
comp=Z,3µm,18.6s,MS5.6,baz=188,slow=38
CABF La Chapelle 72.84 314 *e*P **P** **08 44 12.2 -0.4**
comp=Z,201nm,1.1s,mb5.7
CABF La Chapelle 72.84 314 *e*P **P** **08 44 12.2 -0.4**
comp=Z,100nm,1.1s,mb5.7
CABF La Chapelle 72.84 314 *e*P **P** **08 44 12.2 -0.4**
CABF pmax pmax
comp=Z,100nm,1.1s,mb5.7
MDO Dochfour 72.87 328⇑*e*P **P** **08 44 12.2 -0.3**
ESY Stoneypath 72.88 326⇑*e*P **P** **08 44 11.9 -0.7**
PGF Pioggiola 72.93 310 *e*P **P** **08 44 13.3 +0.1**
comp=Z,650nm,1.1s,mb6.2
PGF Pioggiola 72.93 310 *e*P **P** **08 44 13.3 +0.1**
comp=Z,325nm,1.1s,mb6.2
PGF Pioggiola 72.93 310 *e*P **P** **08 44 13.3 +0.1**
PGF pmax pmax
comp=Z,325nm,1.1s,mb6.2
RSL Roselend 72.96 313 *e*P **P** **08 44 13.5 +0.2**
LPG La Plagne 72.97 313 *e*P **P** **08 44 13.9 +0.5**
comp=Z,577nm,0.8s,mb6.3
LPG La Plagne 72.97 313 *e*P **P** **08 44 13.9 +0.5**
comp=Z,289nm,0.8s,mb6.3
LPG La Plagne 72.97 313 *e*P **P** **08 44 13.9 +0.5**
LPG pmax pmax
comp=Z,289nm,0.8s,mb6.3
LPL La Plagne 72.97 313 *e*P **P** **08 44 13.8 +0.4**
comp=Z,496nm,0.8s,mb6.2
LPL La Plagne 72.97 313 *e*P **P** **08 44 13.8 +0.4**
comp=Z,242nm,0.8s,mb6.2
LPL La Plagne 72.97 313 *e*P **P** **08 44 13.8 +0.4**
LPL pmax pmax
comp=Z,243nm,0.8s,mb6.2
IMI Imperia 73.00 311 P **P** **08 44 13.7 +0.1**
EBH Black Hill 73.13 326⇑*e*P **P** **08 44 13.6 -0.5**
EDI Edinburgh 73.15 326 *e*P **P** **08 44 13.5 -0.8**
EDI AMb AMB 08 44 18.4
comp=Z,154nm,2.1s,mb5.6
EDI AMS AMS 09 18 36.0
comp=Z,5µm,16.7s,MS5.9
EBL Broad Law 73.16 326⇑*e*P **P** **08 44 14.1 -0.2**
OG22 Abries 73.17 313 *e*P **P** **08 44 14.7 +0.1**
SAOF Saorge 73.18 312 *e*P **P** **08 44 15.1 +0.4**
MENF Mencas 73.19 319 *e*P **P** **08 44 15.1 +0.5**
AUTN L'Aution 73.26 312 *e*P **P** **08 44 16.3 +1.2**
KAC Achnashellach 73.26 328⇑*e*P **P** **08 44 14.4 -0.4**
RRR Rubha Reidh 73.29 328 *e*P **P** **08 44 15.1 0.0**
EAU Auchinoon 73.31 326⇑*e*P **P** **08 44 15.1 -0.1**
SBF Sospel 73.32 311 *e*P **P** **08 44 15.1 -0.4**
comp=Z,361nm,0.8s,mb6.0
SBF Sospel 73.32 311 *e*P **P** **08 44 15.1 -0.4**
comp=Z,181nm,0.8s,mb6.0
SBF Sospel 73.32 311 *e*P **P** **08 44 15.1 -0.4**
SBF pmax pmax
comp=Z,181nm,0.8s,mb6.0
MBDF Montbardon 73.33 313 *e*P **P** **08 44 14.7 -0.8**
comp=Z,205nm,1.0s,mb5.7
MBDF Montbardon 73.33 313 *e*P **P** **08 44 14.7 -0.8**
comp=Z,103nm,1.0s,mb5.7
MBDF Montbardon 73.33 313 *e*P **P** **08 44 14.7 -0.8**
MBDF pmax pmax
comp=Z,103nm,1.0s,mb5.7
LUCF Luceram 73.36 312 *e*P **P** **08 44 16.0 +0.3**
TOUF Mont Tournerai 73.37 312 *e*P **P** **08 44 16.4 +0.7**
SURF Saint Ours 73.42 312 *e*P **P** **08 44 16.4 +0.4**
HPK Haverah Park 73.43 324 P **P** **08 44 14.9 -1.0**
HPK AMb AMB 08 44 20.1
comp=Z,143nm,2.1s,mb5.5
HPK AMS AMS 09 18 59.9
comp=Z,7µm,18.4s
HPK Haverah Park 73.43 324 *e*P **P** **08 44 14.9 -1.0**
HPK AMb AMB 08 44 20.1
comp=Z,143nm,2.1s,mb5.5
HPK AMS AMS 09 18 59.9
comp=Z,7µm,18.4s,MS6.0
ELSH Elham, Standar 73.45 320 *e*P **P** **08 44 15.1 -1.0**
ELSH AMb AMB 08 44 17.4
comp=Z,302nm,0.9s,mb6.2
KSB Sheil Bridge 73.48 328 *e*P **P** **08 44 15.8 -0.3**
MVIF Mont Vial 73.48 312 *e*P **P** **08 44 16.7 +0.3**
ESK Eskdalemuir 73.48 325 *e*P **P** **08 44 15.4 -0.8**
ESK AMS AMS 09 18 48.8
comp=Z,5µm,16.2s,MS5.9
ESK AMb AMB 09 20 27.9
comp=Z,40nm,2.1s,mb5.0
ESK Eskdalemuir 73.48 325 *e*P **P** **08 44 15.9 -0.3**
comp=Z,110nm,1.4s,mb5.6
ESK LR LR
comp=Z,5µm,20.0s,MS5.8
ESK Eskdalemuir 73.48 325 *e*P **P** **08 44 15.9 -0.3**
ESK pmax pmax
comp=Z,110nm,1.4s,mb5.6
ESK MLR MLR
comp=Z,5µm,20.0s,MS5.8
GDM Grand'Maison 73.50 313 *e*P **P** **08 44 17.1 +0.6**
KPL Plockton 73.51 328 *e*P **P** **08 44 15.8 -0.6**
KPL AMb AMB 08 44 20.8
comp=Z,142nm,2.0s,mb5.5
KPL AMS AMS 09 18 15.6
comp=Z,8µm,16.9s,MS6.1
ECK Cauldkaine Hil 73.52 325⇑*e*P **P** **08 44 16.0 -0.4**
EAB Aberfoyle 73.55 327 *e*P **P** **08 44 16.4 -0.1**
RRH Rhenigidale 73.65 329 *e*P **P** **08 44 17.2 0.0**
CALN Calern 73.72 312 *e*P **P** **08 44 18.1 +0.3**
ORIF Oris-en-Rattie 73.79 313 *e*P **P** **08 44 18.0 -0.2**
comp=Z,226nm,0.8s,mb5.8
ORIF *e*MLR MLR
comp=Z,23µm,18.2s,MS6.2
ORIF Oris-en-Rattie 73.79 313 *e*P **P** **08 44 18.0 -0.2**
comp=Z,113nm,0.8s,mb5.8
ORIF Oris-en-Rattie 73.79 313 *e*P **P** **08 44 18.0 -0.2**
ORIF pmax pmax
comp=Z,113nm,0.8s,mb5.8
PGBU Glenifferbraes 73.82 326 *e*P **P** **08 44 18.2 0.0**
PGBU AMb AMB 08 44 22.9
comp=Z,148nm,1.9s,mb5.6
PGBU AMS AMS 09 18 47.5
comp=Z,7µm,17.0s,MS6.0
KAR1 Arisaig 73.83 328⇑*e*P **P** **08 44 18.5 +0.3**
LOR Lormes 73.86 316 *e*P **P** **08 44 17.6 -1.0**
comp=Z,149nm,1.2s,mb5.5
LOR *e*MLR MLR
comp=Z,17µm,20.8s,MS6.0
LOR Lormes 73.86 316 *e*P **P** **08 44 17.6 -1.0**
comp=Z,74nm,1.2s,mb5.5
LOR LR LR
comp=Z,17µm,20.8s,MS6.3
LOR Lormes 73.86 316 *e*P **P** **08 44 17.6 -1.0**
LOR pmax pmax
comp=Z,74nm,1.2s,mb5.5
LOR MLR MLR
comp=Z,17µm,20.8s,MS6.3
CWF Charnwood Fore 73.92 323 P **P** **08 44 17.0 -1.8**
CWF AMb AMB 08 44 21.6
comp=Z,85nm,2.3s,mb5.3
CWF 08 53 43.9
CWF AMS AMS 09 19 16.9
comp=Z,9µm,17.7s
CWF Charnwood Fore 73.92 323 *e*P **P** **08 44 17.0 -1.8**
CWF AMb AMB 08 44 21.6
comp=Z,85nm,2.3s,mb5.3
CWF *e* 08 53 43.9
CWF AMS AMS 09 19 16.9
comp=Z,9µm,17.7s,MS6.1
FRF La Foret Royal 73.97 312 *e*P **P** **08 44 18.7 -0.6**
comp=Z,67nm,1.7s,mb6.0
FRF La Foret Royal 73.97 312 *e*P **P** **08 44 18.7 -0.6**
comp=Z,338nm,1.7s,mb6.0
FRF La Foret Royal 73.97 312 *e*P **P** **08 44 18.7 -0.6**
FRF pmax pmax
comp=Z,338nm,1.7s,mb6.0
GCD Castle Douglas 74.09 325⇑*e*P **P** **08 44 19.8 +0.1**
VSL Villasalto 74.12 307 *e*P **P** **08 44 19.9 -0.4**
comp=Z,401nm,1.8s,mb6.0
VSL *e*PP PP 08 47 04.2 -1.2
VSL LR LR
comp=Z,3µm,20.0s,MS5.6
LMR La Mourre 74.16 311 *e*P **P** **08 44 19.9 -0.5**
SSF Saint Saulge 74.17 316 *e*P **P** **08 44 19.6 -0.8**
comp=Z,168nm,1.2s,mb5.6
SSF Saint Saulge 74.17 316 *e*P **P** **08 44 19.6 -0.8**
comp=Z,84nm,1.2s,mb5.5
SSF Saint Saulge 74.17 316 *e*P **P** **08 44 19.6 -0.8**
SSF pmax pmax
comp=Z,84nm,1.2s,mb5.5
SMF Signal de Mont 74.18 315 *e*P **P** **08 44 19.9 -0.6**
comp=Z,330nm,1.0s,mb5.9
SMF Signal de Mont 74.18 315 *e*P **P** **08 44 19.9 -0.6**
comp=Z,165nm,1.0s,mb5.9
SMF Signal de Mont 74.18 315 *e*P **P** **08 44 19.9 -0.6**
SMF pmax pmax
comp=Z,165nm,1.0s,mb5.9
AVF Avril sur Loir 74.40 316 *e*P **P** **08 44 21.2 -0.5**
comp=Z,239nm,0.9s,mb5.8
AVF Avril sur Loir 74.40 316 *e*P **P** **08 44 21.2 -0.5**
comp=Z,120nm,0.9s,mb5.8
AVF Avril sur Loir 74.40 316 *e*P **P** **08 44 21.2 -0.5**
AVF pmax pmax
comp=Z,120nm,0.9s,mb5.8
SSB Saint Sauveur 74.44 314 *e*P **P** **08 44 22.0 0.0**
SSB Saint Sauveur 74.44 314 *e*P **P** **08 44 21.6 -0.3**
comp=Z,184nm,1.6s,mb5.8
SSB LR LR
comp=Z,10µm,19.0s,MS6.1

SSB Saint Sauveur 74.44 314 *e*P **P 08 44 21.6 -0.4**
SSB pmax pmax
comp=Z,184nm,1.6s,mb5.8
SSB MLR MLR
comp=Z,10µm,19.0s,MS6.1
SMRF Simiane la Rot 74.44 312 *e*P **P 08 44 21.9 -0.1**
comp=Z,429nm,1.7s,mb5.8
SMRF Simiane la Rot 74.44 312 *e*P **P 08 44 21.9 -0.1**
comp=Z,429nm,1.7s,mb6.1
GAL1 Galloway 74.46 326 *e*P **P 08 44 21.5 -0.5**
GAL1 AMb AMB 08 44 26.3
comp=Z,129nm,2.0s,mb5.5
GAL1 AMS AMS 09 20 02.5
comp=Z,5µm,15.9s,MS5.9
PNL Peninsula 74.49 28 *e*P **P 08 44 22.2 +0.2**
comp=Z,116nm,0.9s,mb5.8
VIVF Saint-Julien-l 74.56 313 *e*P **P 08 44 22.3 -0.5**
comp=Z,167nm,0.9s,mb5.7
VIVF Saint-Julien-l 74.56 313 *e*P **P 08 44 22.3 -0.5**
comp=Z,83nm,0.9s,mb5.7
VIVF Saint-Julien-l 74.56 313 *e*P **P 08 44 22.3 -0.5**
VIVF pmax pmax
comp=Z,83nm,0.9s,mb5.7
HYF Humbligny 74.58 316 *e*P **P 08 44 22.6 -0.2**
PLDF La Plantade 74.65 315 *e*P **P 08 44 23.5 +0.3**
GIM North Isle of 74.66 325 *e*P **P 08 44 23.0 -0.1**
BORG Borgarnes 74.74 339 LR LR 09 19 06.9
comp=Z,3µm,18.3s,MS5.7,baz=243,slow=37
BGF Bois d'Agland 74.81 316 *e*P **P 08 44 23.5 -0.7**
comp=Z,240nm,1.4s,mb5.6
BGF Bois d'Agland 74.81 316 *e*P **P 08 44 23.5 -0.7**
comp=Z,120nm,1.4s,mb5.6
BGF Bois d'Agland 74.81 316 *e*P **P 08 44 23.5 -0.7**
BGF pmax pmax
comp=Z,120nm,1.4s,mb5.6
HLM1 Long Mynd 74.84 323 *e*P **P 08 44 22.5 -1.7**
AGO Saint Agoulin 74.90 315 *e*P **P 08 44 25.1 +0.4**
ABPO Ambohimpanom 74.91 236 PFAKE 08 44 30.0 +5.0
ABPO LR LR
comp=Z,1µm,20.0s,MS5.2
WME Myndd Eilan 75.08 324 *e*P **P 08 44 24.1 -1.5**
PYM Petit Puy Mans 75.13 315 *e*P **P 08 44 26.5 +0.5**
YLL Llanberis 75.15 324 *e*P **P 08 44 26.0 +0.1**
WLF1 Llynfaes 75.18 324 P **P 08 44 26.0 -0.1**
WLF1 AMS AMS 09 20 36.9
comp=Z,17µm,15.2s
WLF1 Llynfaes 75.18 324 *e*P **P 08 44 26.0 -0.1**
WLF1 AMS AMS 09 20 36.9
comp=Z,17µm,15.2s,MS6.5
MCH1 Michaelchurch 75.19 322⇑ *e*P **P 08 44 25.7 -0.6**
MCH1 AMb AMB 08 44 30.3
comp=Z,179nm,2.0s,mb5.7
MCH1 *e* 08 54 04.7
MCH1 AMS AMS 09 19 58.4
comp=Z,8µm,18.2s,MS6.1
LBL Lubilhac 75.25 314 *e*P **P 08 44 26.9 +0.2**
HTR Trewern Hill 75.28 323⇑ *e*P **P 08 44 26.4 -0.3**
HGH Gray Hill 75.29 322 *e*P **P 08 44 26.5 -0.3**
YRC Rhoscolyn 75.29 324 *e*P **P 08 44 26.3 -0.5**
TCF Toulx Ste Croi 75.33 316 *e*P **P 08 44 26.9 -0.2**
comp=Z,256nm,1.1s,mb5.8
TCF Toulx Ste Croi 75.33 316 *e*P **P 08 44 26.9 -0.2**
comp=Z,128nm,1.1s,mb5.8
TCF Toulx Ste Croi 75.33 316 *e*P **P 08 44 26.9 -0.2**
TCF pmax pmax
comp=Z,128nm,1.1s,mb5.8
GMM Mts of Mourne 75.41 325⇑ *e*P **P 08 44 27.2 -0.2**
VERF Verneugheol 75.44 315 *e*P **P 08 44 28.2 +0.4**
LASF Ste Croix 75.46 313 *e*P **P 08 44 27.9 0.0**
comp=Z,193nm,0.9s,mb5.7
LDF La Druitiere 75.47 318 *e*P **P 08 44 27.3 -0.6**
comp=Z,79nm,0.8s,mb5.4
LDF La Druitiere 75.47 318 *e*P **P 08 44 27.3 -0.6**
comp=Z,40nm,0.8s,mb5.4
LDF La Druitiere 75.47 318 *e*P **P 08 44 27.3 -0.6**
LDF pmax pmax
comp=Z,40nm,0.8s,mb5.4
FLN La Foliniere 75.58 319 *e*P **P 08 44 28.0 -0.6**
comp=Z,235nm,1.1s,mb5.7
FLN *e*MLR MLR
comp=Z,10µm,21.5s,MS5.8
FLN La Foliniere 75.58 319 *e*P **P 08 44 28.0 -0.6**
comp=Z,117nm,1.1s,mb5.7
FLN LR LR
comp=Z,10µm,21.5s,MS6.1
FLN La Foliniere 75.58 319 *e*P **P 08 44 28.0 -0.6**
FLN pmax pmax
comp=Z,117nm,1.1s,mb5.7
FLN MLR MLR
comp=Z,10µm,21.5s,MS6.1
GRR Gorron 76.00 319 *e*P **P 08 44 30.5 -0.4**
comp=Z,294nm,0.9s,mb5.9
GRR Gorron 76.00 319 *e*P **P 08 44 30.5 -0.4**
comp=Z,147nm,0.9s,mb5.9
GRR Gorron 76.00 319 *e*P **P 08 44 30.5 -0.4**
GRR pmax pmax
comp=Z,147nm,0.9s,mb5.9
CAF Calviac 76.12 314 *e*P **P 08 44 31.9 +0.2**
comp=Z,155nm,0.9s,mb5.6
CAF Calviac 76.12 314 *e*P **P 08 44 31.9 +0.2**
comp=Z,77nm,0.9s,mb5.6
CAF Calviac 76.12 314 *e*P **P 08 44 31.9 +0.2**
CAF pmax pmax
comp=Z,77nm,0.9s,mb5.6
SKAG Skagway 76.23 27 *e*P **P 08 44 32.0 0.0**
comp=Z,354nm,1.7s,mb6.0
DLF Lyons Farm 76.23 325⇑ *i*P **P 08 44 32.0 -0.2**
RJF Les Rejaudoux 76.26 315 *e*P **P 08 44 32.6 +0.1**
comp=Z,250nm,1.1s,mb5.7
RJF *e*MLR MLR
comp=Z,13µm,19.0s,MS6.0
RJF Les Rejaudoux 76.26 315 *e*P **P 08 44 32.6 +0.1**
comp=Z,125nm,1.1s,mb5.8
RJF LR LR
comp=Z,13µm,19.0s,MS6.3
RJF Les Rejaudoux 76.26 315 *e*P **P 08 44 32.6 +0.1**
RJF pmax pmax
comp=Z,125nm,1.1s,mb5.8
RJF MLR MLR
comp=Z,13µm,19.0s,MS6.3
JSA Saint Aubin 76.29 320 P **P 08 44 31.1 -1.4**
JSA AMb AMB 08 44 35.9
comp=Z,155nm,2.0s,mb5.6
JSA AMS AMS 09 20 42.5
comp=Z,12µm,18.0s
JSA Saint Aubin 76.29 320 *e*P **P 08 44 31.1 -1.4**
JSA AMb AMB 08 44 35.9
comp=Z,155nm,2.0s,mb5.6
JSA AMS AMS 09 20 42.5
comp=Z,12µm,18.0s,MS6.3
ARMA Armidale 76.42 140 *e*P **P 08 44 34.3 +0.9**
ARMA Armidale 76.42 140 *e*P **P 08 44 34.6 +1.2**
comp=Z,339nm,1.7s,mb6.0
HTL Hartland 76.52 322 *e*P **P 08 44 32.8 -1.0**
HTL AMb AMB 08 44 36.8
comp=Z,86nm,2.6s,mb5.2
HTL AMS AMS 09 20 59.3
comp=Z,9µm,17.0s,MS6.2
DYA Yadsworthy 76.55 321 AMS AMS 09 21 37.0
comp=Z,11µm,14.3s,MS6.3
MFF Saint Martin d 76.55 317 *e*P **P 08 44 34.0 -0.1**
comp=Z,240nm,1.1s,mb5.8
MFF Saint Martin d 76.55 317 *e*P **P 08 44 34.0 -0.1**
comp=Z,120nm,1.0s,mb5.8
MFF Saint Martin d 76.55 317 *e*P **P 08 44 34.0 -0.1**
MFF pmax pmax
comp=Z,120nm,1.0s,mb5.8
MBAR Mbarara 76.78 261 PFAKE 08 44 50.0 +14
MBAR LR LR
comp=Z,675nm,20.0s,MS5.0
MTLF Montolieu 76.86 313 *e*P **P 08 44 35.8 -0.1**
comp=Z,494nm,1.9s,mb5.8
MTLF Montolieu 76.86 313 *e*P **P 08 44 35.8 -0.1**
comp=Z,247nm,1.9s,mb5.8
MTLF Montolieu 76.86 313 *e*P **P 08 44 35.8 -0.1**
MTLF pmax pmax
comp=Z,247nm,1.9s,mb5.8
LRDF Laroque-de-Fa 76.87 313 *e*P **P 08 44 36.5 +0.5**
CMAH Djebel Manchou 76.87 305 P **P 08 44 36.5 +0.4**
EJON La Jonquera 76.91 312 P **P 08 44 35.7 -0.5**
comp=Z,324nm,1.9s,mb5.9
LFF La Frestale 76.92 315 *e*P **P 08 44 36.4 +0.2**
comp=Z,245nm,1.1s,mb5.7
LFF La Frestale 76.92 315 *e*P **P 08 44 36.4 +0.2**
comp=Z,122nm,1.1s,mb5.8
LFF La Frestale 76.92 315 *e*P **P 08 44 36.4 +0.2**
LFF pmax pmax
comp=Z,123nm,1.1s,mb5.8
ABSA Djebel Ababsia 77.01 305 P **P 08 44 37.1 +0.2**
SGMF Saint Gilles 77.02 319 *e*P **P 08 44 36.8 +0.1**
comp=Z,404nm,1.1s,mb6.0
SGMF Saint Gilles 77.02 319 *e*P **P 08 44 36.8 +0.1**
comp=Z,202nm,1.1s,mb6.0
SGMF Saint Gilles 77.02 319 *e*P **P 08 44 36.8 +0.1**
SGMF pmax pmax
comp=Z,202nm,1.1s,mb6.0
FILF Fillols 77.06 312 *e*P **P 08 44 37.6 +0.6**
CAEH 'Ain El Ouahch 77.19 305 P **P 08 44 37.8 -0.1**
CARF Carcanieres 77.26 312 *e*P **P 08 44 38.2 0.0**
CCA1 Carnmenellis 77.37 322 AMS AMS 09 21 31.4
comp=Z,8µm,14.5s,MS6.2
ROSF Rostrenen 77.37 319 *e*P **P 08 44 38.6 -0.1**
comp=Z,212nm,1.1s,mb5.7
ROSF Rostrenen 77.37 319 *e*P **P 08 44 38.6 -0.1**
comp=Z,106nm,1.1s,mb5.7
ROSF Rostrenen 77.37 319 *e*P **P 08 44 38.6 -0.1**
ROSF pmax pmax
comp=Z,106nm,1.1s,mb5.7
CLLI Llivia 77.47 312 P **P 08 44 39.9 +0.6**
CKFL Kef-Lekhel 77.47 305 P **P 08 44 40.2 +0.7**
VALF Valcebollere 77.48 312 *e*P **P 08 44 40.3 +0.9**
QUIF Quistinic 77.55 319 *e*P **P 08 44 39.5 -0.2**
comp=Z,428nm,1.4s,mb5.9
QUIF Quistinic 77.55 319 *e*P **P 08 44 39.5 -0.2**
comp=Z,214nm,1.4s,mb5.9
QUIF Quistinic 77.55 319 *e*P **P 08 44 39.5 -0.2**
QUIF pmax pmax
comp=Z,214nm,1.4s,mb5.9
CFON Fontmartina 77.55 312 P **P 08 44 40.2 +0.4**
comp=Z,514nm,1.9s,mb6.1
CASM Ain Smara 77.70 305 P **P 08 44 40.8 0.0**
MLS Moulis 77.76 313 *e*P **P 08 44 41.0 0.0**
JOHN Johnston Islan 77.78 78 PFAKE 08 44 50.0 +8.5
JOHN LR LR
comp=Z,2µm,20.0s,MS5.5
SALF Salau 77.81 313 *e*P **P 08 44 40.6 -0.6**
SIT Sitka 77.81 29 *e*P **P 08 44 41.8 +0.8**
comp=Z,251nm,2.1s,mb5.8
SIT Sitka 77.81 29 *e*P **P 08 44 41.8 +0.8**
SIT pmax pmax
comp=Z,251nm,2.1s,mb5.8
CTEI Djebel Teioual 77.86 305 P **P 08 44 42.3 +0.6**
CSOR Sort 78.05 313 P **P 08 44 43.0 +0.4**
comp=Z,272nm,2.0s,mb5.8
EMIR Miracle 78.05 312 P **P 08 44 43.1 +0.5**
comp=Z,436nm,1.6s,mb6.1
EPF Esparros 78.19 313 *e*P **P 08 44 42.6 -0.7**
comp=Z,237nm,1.5s,mb5.6
EPF Esparros 78.19 313 *e*P **P 08 44 42.6 -0.7**
comp=Z,118nm,1.5s,mb5.6
EPF Esparros 78.19 313 *e*P **P 08 44 42.6 -0.7**
EPF pmax pmax
comp=Z,118nm,1.5s,mb5.6
RESF Ens 78.31 313 *e*P **P 08 44 45.1 +1.1**
LABF Labassere 78.34 314 *e*P **P 08 44 44.2 0.0**
ETOS Mallorca 78.36 310 P **P 08 44 45.2 +0.8**
comp=Z,528nm,2.0s,mb6.1
SET Setif 78.49 305 P **P 08 44 46.0 +0.8**
EBIE Bielsa 78.50 313 P **P 08 44 46.0 +0.9**
comp=Z,396nm,1.8s,mb6.0
CKHR Kef el Ahmar 78.51 305 P **P 08 44 46.1 +0.8**
EPOB Poblet 78.63 312 P **P 08 44 45.9 0.0**
comp=Z,378nm,1.8s,mb6.0
RIV Riverview 78.81 142 *e*P **P 08 44 47.6 +0.9**
ETSF Etsaut 78.81 314 *e*P **P 08 44 47.1 +0.3**
comp=Z,126nm,0.9s,mb5.5
ETSF Etsaut 78.81 314 *e*P **P 08 44 47.1 +0.3**
comp=Z,63nm,0.9s,mb5.5
ETSF Etsaut 78.81 314 *e*P **P 08 44 47.1 +0.3**
ETSF pmax pmax
comp=Z,63nm,0.9s,mb5.5
AKF Akfadou 78.84 306 P **P 08 44 47.7 +0.6**
CAN Canberra 78.88 144 *e*P **P 08 44 47.5 +0.4**
comp=Z,355nm,1.6s,mb6.0
CAN LR LR
comp=Z,2µm,19.0s,MS5.6
CAN Canberra 78.88 144 *e*P **P 08 44 47.5 +0.5**
CAN pmax pmax
comp=Z,355nm,1.6s,mb6.0
CAN MLR MLR
comp=Z,2µm,19.0s,MS5.6
DLBC Dease Lake 78.94 26 *e*P **P 08 44 47.3 +0.1**
DLBC Dease Lake 78.94 26 P **P 08 44 47.2 0.0**
comp=Z,13nm,0.8s,mb4.9,baz=312,slow=5.6,SNR=30
DLBC LR LR 09 23 18.0
comp=Z,3µm,18.8s,MS5.7,baz=303,slow=38
LARF Larrau 79.00 314 *e*P **P 08 44 48.8 +1.0**
TOO Toolangi 79.05 148 *e*P **P 08 44 47.6 -0.3**
CNB Canberra Magne 79.06 144⇑ *i*P **P 08 44 48.1 +0.1**
SJPF Ste Jean 79.10 314 *e*P **P 08 44 49.0 +0.6**
comp=Z,106nm,0.9s,mb5.5
SJPF Ste Jean 79.10 314 *e*P **P 08 44 49.0 +0.6**
comp=Z,53nm,0.9s,mb5.5
SJPF Ste Jean 79.10 314 *e*P **P 08 44 49.0 +0.6**
SJPF pmax pmax
comp=Z,53nm,0.9s,mb5.5
EALK Alkurruntz 79.21 314 P **P 08 44 49.8 +0.8**
comp=Z,476nm,2.5s,mb6.0
ELIZ Elizondo 79.26 314 P **P 08 44 50.2 +1.0**
comp=Z,186nm,1.3s,mb5.9
ELIZ Elizondo 79.26 314 P **P 08 44 50.2 +1.0**
ELIZ pmax pmax
comp=Z,186nm,1.3s,mb5.9
ERTA Horta de San J 79.32 312 P **P 08 44 49.7 +0.1**
comp=Z,356nm,1.5s,mb6.1
ESAC San Caprasio 79.41 313 P **P 08 44 50.5 +0.5**
comp=Z,356nm,1.6s,mb6.0
ATAF Djebel Tarf 79.44 306 P **P 08 44 53.1 +2.7**
AKET Djebel Ketaf 79.62 306 P **P 08 44 53.0 +1.7**
EIBI Ibiza 79.72 310 P **P 08 44 52.6 +0.8**
comp=Z,346nm,2.0s,mb5.9
CRAG Craig 79.79 29 *e*P **P 08 44 51.9 0.0**
comp=Z,199nm,2.1s,mb5.7
ADJB Djebel Djouab 79.86 306 P **P 08 44 54.1 +1.4**
DZM Mont Dzumac 79.88 124 *e*S S 08 55 09.5 +13
comp=Z,1µm,34.0s
DZM *e*LR LR 09 11 03.2
comp=Z,7µm,23.8s
DZM Mont Dzumac 79.88 124 *e*P **P 08 44 49.0 -3.8**
EMOS Mosqueruela 80.16 312 P **P 08 44 54.9 +0.7**
comp=Z,411nm,1.9s,mb6.0
EMHD Djebel Mahouad 80.17 307 P **P 08 44 56.0 +1.7**
ELAN Lanestosa 80.37 315 P **P 08 44 56.0 +0.8**
comp=Z,398nm,1.4s,mb6.2
YKA Yellowknife Ar 80.61 17 P **P 08 44 55.2 -0.9**
YKA PKKPbc PKKPbc 09 03 33.2 -3.5
YKA Yellowknife Ar 80.61 17 P **P 08 44 55.2 -0.9**
comp=Z,50nm,0.7s,mb5.5,baz=329,slow=5.2,SNR=161
YKA PKKPbc PKKPbc 09 03 33.2 -3.5
comp=Z,4.4nm,0.5s,baz=156,slow=2.0,SNR=85
YKA Yellowknife Ar 80.61 17 P **P 08 44 55.2 -0.9**
YKA 09 03 33.2
YKA pmax pmax
comp=Z,50nm,0.7s
ETOR Torete 80.90 313 P **P 08 44 57.3 -0.9**
comp=Z,41nm,0.9s,mb5.4
ETOR Torete 80.90 313 P **P 08 44 57.3 -0.9**
ETOR pmax pmax
comp=Z,41nm,0.9s,mb5.4
ECHE Chera 80.91 311 P **P 08 44 58.9 +0.7**
comp=Z,52nm,1.2s,mb5.3
ECHE Chera 80.91 311 P **P 08 44 58.9 +0.7**
ECHE pmax pmax
comp=Z,52nm,1.2s,mb5.3
EBEN Beniarda 80.92 310 P **P 08 44 58.9 +0.6**
comp=Z,216nm,1.9s,mb5.8
EBNR Beni Rached 81.09 307 P **P 08 45 00.5 +1.2**
ECHA Ech Chlef 81.28 307 P PcP 08 45 15.0 +8.6
EARI Arriondas 81.38 316 P **P 08 44 59.8 -0.9**
comp=Z,423nm,1.8s,mb6.1
EANR 'Ain N'Sour 81.57 307 P **P 08 45 02.0 +0.2**
ETRT Tiaret 81.74 307 P **P 08 45 03.7 +1.0**
ETOB Tobarra 81.81 311 P **P 08 45 03.9 +0.8**
comp=Z,412nm,2.2s,mb6.0
EMUR La Murta 82.07 310 P **P 08 45 04.5 +0.1**
comp=Z,254nm,2.0s,mb5.8
GUD Guadarrama 82.31 313 P **P 08 45 06.1 +0.5**
comp=Z,469nm,1.5s,mb6.2
EVIA Vianos 82.43 311 P **P 08 45 06.8 +0.5**
comp=Z,322nm,1.7s,mb6.0
EVIA Vianos 82.43 311 P **P 08 45 06.8 +0.5**
EVIA pmax pmax
comp=Z,322nm,1.7s,mb6.0
EPON Pontenova 82.50 317 P **P 08 45 06.4 -0.1**
comp=Z,214nm,1.3s,mb5.9
ESDC Sonseca Array 82.75 313 P **P 08 45 08.0 0.0**
comp=Z,36nm,0.9s,mb5.4
ESDC Sonseca Array 82.75 313 P **P 08 45 08.3 +0.3**
comp=Z,19nm,0.8s,mb5.2,baz=45,slow=5.4,SNR=61
ESDC PP PP 08 48 05.3 -12
comp=Z,0.4nm,0.3s,baz=48,slow=7.3,SNR=4.4
ESDC PKKPbc PKKPbc 09 03 30.6 -0.7
comp=Z,0.2nm,0.3s,baz=248,slow=1.7,SNR=6.7
ESDC LR LR 09 24 39.1
comp=Z,6µm,20.1s,MS6.0,baz=55,slow=38
ESLA Sonseca Array 82.75 313 *e*P **P 08 45 08.1 +0.2**
comp=Z,89nm,1.7s,mb5.5
ESLA LR LR
comp=Z,44µm,20.0s,MS6.8
EHUE Huescar 82.96 310 P **P 08 45 08.9 -0.1**
comp=Z,386nm,2.5s,mb6.0
EHUE Huescar 82.96 310 P **P 08 45 08.9 -0.2**
EHUE pmax pmax
comp=Z,387nm,2.5s,mb6.0
ERUA La Rua 83.06 316 P **P 08 45 09.9 +0.4**
comp=Z,190nm,1.8s,mb5.8
ERUA La Rua 83.06 316 P **P 08 45 09.9 +0.4**
ERUA pmax pmax
comp=Z,191nm,1.8s,mb5.8
PAB San Pablo 83.07 313 *e*P **P 08 45 09.8 +0.2**
comp=Z,84nm,1.4s,mb5.6
PAB *e*PP PP 08 48 23.1 +3.1
PAB LR LR
comp=Z,9µm,19.0s,MS6.2
PAB San Pablo 83.07 313 *e*P **P 08 45 09.8 +0.2**
PAB *e* 08 48 23.1
PAB pmax pmax
comp=Z,84nm,1.4s,mb5.6
PAB MLR MLR
comp=Z,9µm,19.0s,MS6.2
ECAL Calabor 83.10 316 P **P 08 45 10.2 +0.5**
comp=Z,204nm,1.3s,mb6.0
PBRG Braganca 83.18 316 *e*P **P 08 45 10.4 +0.3**
comp=Z,122nm,1.7s,mb5.7
ENIJ Nijar 83.19 310 P **P 08 45 11.4 +1.1**
comp=Z,167nm,1.5s,mb5.8
ENIJ Nijar 83.19 310 P **P 08 45 11.4 +1.1**
ENIJ pmax pmax
comp=Z,167nm,1.5s,mb5.8
EQES Quesada 83.28 311 P **P 08 45 10.8 +0.1**
comp=Z,336nm,1.5s,mb6.2
EBAN Banos Encina 83.52 311 P **P 08 45 12.2 +0.2**
comp=Z,36nm,0.8s,mb5.6
EBAN Banos Encina 83.52 311 P **P 08 45 12.2 +0.2**
EBAN pmax pmax
comp=Z,37nm,0.8s,mb5.6
STS Santiago 83.58 317 P **P 08 45 13.0 +0.9**
comp=Z,37nm,1.0s,mb5.5
STS Santiago 83.58 317 P **P 08 45 13.0 +0.8**
STS pmax pmax
comp=Z,37nm,1.0s,mb5.5
EBER Berja 83.68 310 P **P 08 45 13.0 +0.2**
comp=Z,332nm,2.5s,mb6.0
MVO Moncorvo 83.74 315 *e*P **P 08 45 13.6 +0.6**
comp=Z,168nm,1.9s,mb5.8
MVO *e*S S 08 55 32.1 -3.8
MVO *e*LQ 09 15 39.9
MVO *e*LR LR 09 19 24.4
comp=Z,5µm,20.0s
MVO Moncorvo 83.74 315 P **P 08 45 13.8 +0.8**
EMAZ Mazaricos 83.78 317 P **P 08 45 13.4 +0.2**
comp=Z,422nm,1.7s,mb6.3
EPLA Plasencia 83.83 314 P **P 08 45 13.3 -0.2**
comp=Z,415nm,1.8s,mb6.3
EPLA Plasencia 83.83 314 P **P 08 45 13.3 -0.2**
EPLA pmax pmax
comp=Z,415nm,1.8s,mb6.3
ELOB Lobios 83.92 316 P **P 08 45 15.0 +1.1**
comp=Z,334nm,1.5s,mb6.2
PCAB Cabril 84.00 316 *e*P **P 08 45 15.0 +0.7**
comp=Z,296nm,1.7s,mb6.1
EADA Adamuz 84.03 312 P **P 08 45 14.7 +0.2**
comp=Z,267nm,1.9s,mb6.0
PVRL Vila Real 84.08 316 *e*P **P 08 45 15.4 +0.6**
comp=Z,115nm,1.8s,mb5.7
EZAM Zamans 84.12 317 P **P 08 45 15.5 +0.6**
comp=Z,52nm,0.7s,mb5.8
EZAM Zamans 84.12 317 P **P 08 45 15.5 +0.6**
EZAM pmax pmax
comp=Z,52nm,0.7s,mb5.8
EGUA Guajares 84.16 310 P **P 08 45 14.6 -0.6**
comp=Z,306nm,1.0s,mb6.4
EGUA Guajares 84.16 310 P **P 08 45 14.6 -0.6**
EGUA pmax pmax
comp=Z,306nm,1.0s,mb6.4
ELUQ Luque 84.19 311 P **P 08 45 15.3 -0.1**
comp=Z,133nm,0.9s,mb6.1
ELUQ Luque 84.19 311 P **P 08 45 15.3 -0.1**
ELUQ pmax pmax
comp=Z,133nm,0.9s,mb6.1
ERON Agron 84.21 310 P **P 08 45 14.9 -0.6**
comp=Z,21nm,0.7s,mb5.4
ELOJ Sierra Loja 84.36 311 P **P 08 45 15.1 -1.1**
comp=Z,30nm,1.1s,mb5.3
ELOJ Sierra Loja 84.36 311 P **P 08 45 15.1 -1.1**
ELOJ pmax pmax
comp=Z,30nm,1.1s,mb5.3
MTE Manteigas 84.52 315 *e*P **P 08 45 18.1 +1.1**
comp=Z,254nm,1.7s,mb6.1
MTE *e*S S 08 55 40.2 -3.5
MTE *e*LQ 09 17 13.3
MTE *e*LR LR 09 19 51.4
comp=Z,6µm,18.0s
MTE Manteigas 84.52 315 *e*P **P 08 45 17.6 +0.7**
comp=Z,352nm,1.8s,mb6.2
MTE LR LR
comp=Z,7µm,19.0s,MS6.1
PVIS Viseu 84.53 315 *e*P **P 08 45 18.1 +1.0**
comp=Z,187nm,1.9s,mb5.9
ECAB El Cabril 84.61 312 P **P 08 45 18.1 +0.6**
comp=Z,457nm,2.3s,mb6.2
PTO Porto 84.69 316 *e*P **P 08 45 18.6 +0.7**
comp=Z,205nm,1.7s,mb6.0
KIP Kipapa 84.72 68 PFAKE 08 45 30.0 +12
KIP LR LR
comp=Z,2µm,21.0s,MS5.4
PCBR Castelo Branco 84.82 314 *e*P **P 08 45 19.5 +1.0**
comp=Z,122nm,1.7s,mb5.8
PMRV Marv??o 85.02 314 *e*P **P 08 45 20.2 +0.7**
comp=Z,181nm,1.9s,mb5.9
PMRV *e*S S 08 55 41.2 -7.6
PMRV *e*LQ 09 15 04.7
PMRV *e*LR LR 09 20 04.9
comp=Z,6µm,18.0s
EMIJ Mijas 85.10 310 P **P 08 45 18.4 -1.6**
comp=Z,51nm,1.0s,mb5.6
EBAD Badajoz 85.20 313 P **P 08 45 20.8 +0.3**
comp=Z,221nm,1.5s,mb6.1
PESTR Estremoz 85.49 314 *e*P **P 08 45 22.2 +0.3**
comp=Z,132nm,1.9s,mb5.7
PESTR *e*S S 08 55 44.8 -8.6
PESTR *e*LQ 09 14 17.1
PESTR *e*LR LR 09 20 36.5
comp=Z,6µm,18.0s
TAM Tamanrasset 85.51 294 *e*P **P 08 45 22.8 +0.6**
comp=Z,41nm,1.2s,mb5.5
TAM LR LR
comp=Z,2µm,20.0s,MS5.4
TAM Tamanrasset 85.51 294 *e*P **P 08 45 22.8 +0.5**
TAM pmax pmax
comp=Z,41nm,1.2s,mb5.5
TAM MLR MLR
comp=Z,2µm,20.0s,MS5.4
PTOM Tomar 85.52 315 *e*P **P 08 45 23.0 +0.9**
comp=Z,207nm,2.0s,mb6.0
PBAR Barrancos 85.57 313 *e*P **P 08 45 22.7 +0.4**
comp=Z,211nm,1.7s,mb6.1
PBAR *e*S S 08 55 46.9 -7.3
PBAR *e*LQ 09 14 54.8
PBAR *e*LR LR 09 20 31.9
comp=Z,8µm,20.0s
EMIN Mina Concepcio 85.59 312 P **P 08 45 22.9 +0.5**
comp=Z,292nm,1.8s,mb6.2
EJIF Jimena Fronter 85.62 311 P **P 08 45 21.6 -1.0**
comp=Z,20nm,0.7s,mb5.5
EJIF Jimena Fronter 85.62 311 P **P 08 45 21.6 -1.0**
EJIF pmax pmax
comp=Z,20nm,0.7s,mb5.5
MSVF Nonsavu 85.86 114 *e*P **P 08 45 26.3 +2.4**

comp=Z,238nm,1.4s,mb6.2
MSVF Nonsavu 85.86 114 P **P** **08 45 26.3 +2.4**
comp=Z,537nm,1.4s,mb6.6,SNR=13
EVO Evora 85.95 314 ⇑*i*P **P** **08 45 25.2 +1.0**
comp=Z,383nm,1.6s,mb6.1
EVO *e*MLR MLR
comp=Z,7μm,18.0s,MS5.8
EVO Evora 85.95 314 *e*P **P** **08 45 24.8 +0.6**
comp=Z,192nm,1.7s,mb6.0
EVOP Sao Brissos 86.03 314 *e*P **P** **08 45 25.4 +0.8**
EVOP *e*PP PP 08 48 45.4 +1.4
EVOP *e*S S 08 55 50.2 -8.4
EVOP *e*S S 08 55 50.4 -8.3
EVOP AMS AMS 09 27 31.7
comp=Z,5μm,13.3s,MS6.1
EVOP Sao Brissos 86.03 314 *e*P **P** **08 45 25.3 +0.7**
EVOP *e* 08 48 45.4
EVOP *e*S S 08 55 50.2 -8.5
PBEJ Beja 86.18 313 *e*P **P** **08 45 26.3 +1.0**
comp=Z,155nm,1.7s,mb6.0
EGRO El Granado 86.24 312 P **P** **08 45 26.1 +0.5**
comp=Z,360nm,2.2s,mb6.2
PMAFR Mafra 86.47 314 *e*P **P** **08 45 27.4 +0.7**
comp=Z,275nm,1.6s,mb6.2
PMAFR *e*S S 08 55 52.8 -10
PMAFR *e*LQ 09 17 47.2
PMAFR *e*LR LR 09 20 50.6
comp=Z,4μm,20.0s
PVAQ Vaqueiros 86.47 312 *e*P **P** **08 45 27.3 +0.5**
comp=Z,151nm,1.8s,mb5.9
PVAQ *e*S S 08 55 52.2 -11
PVAQ *e*LQ 09 14 35.7
PVAQ *e*LR LR 09 21 26.9
comp=Z,8μm,20.0s
MESJ Messejana 86.51 313 *e*P **P** **08 45 27.7 +0.8**
MESJ *e*S S 08 55 52.4 -11
MESJ *e*S S 08 55 52.8 -11
MESJ AMS AMS 09 27 15.6
comp=Z,6μm,25.0s,MS5.9
MESJ Messejana 86.51 313 *e*P **P** **08 45 27.7 +0.7**
MESJ *e*S S 08 55 52.4 -11
MESJ A 09 27 15.6
comp=Z,6μm,25.0s
MESJ Messejana 86.51 313 *e*P **P** **08 45 27.7 +0.7**
MESJ *e*S S 08 55 52.4 -11
PCVE Castro Verde 86.53 313 *e*P **P** **08 45 27.3 +0.2**
comp=Z,176nm,1.6s,mb6.0
PCVE *e*S S 08 55 53.4 -10
PCVE *e*LQ 09 14 54.2
PCVE *e*LR LR 09 20 57.9
comp=Z,8μm,20.0s
LIS Lisbon 86.53 314 *e*P **P** **08 45 27.5 +0.4**
LIS *e*S S 08 55 52.8 -11
LIS *e*S S 08 55 52.8 -11
LIS AMS AMS 09 26 35.5
comp=N,5μm,16.9s
LIS Lisbon 86.53 314 *e*P **P** **08 45 27.5 +0.4**
LIS *e*S S 08 55 52.8 -11
LIS Lisbon 86.53 314 *e*P **P** **08 45 27.4 +0.3**
LIS *e*S S 08 55 52.7 -11
PBDV Barranco-do-Ve 86.70 312 *e*P **P** **08 45 28.3 +0.4**
comp=N,222nm,1.9s,mb6.1
PBDV *e*S S 08 55 54.0 -11
PBDV *e*LQ 09 16 04.9
PBDV *e*LR LR 09 21 42.9
comp=N,7μm,20.0s
LSZ Lusaka 87.00 250 *e*P **P** **08 45 29.3 -0.3**
comp=N,78nm,1.4s,mb5.8
LSZ LR LR
comp=Z,1μm,19.0s,MS5.3
LSZ Lusaka 87.00 250 *e*P **P** **08 45 29.3 -0.3**
LSZ pmax pmax
comp=Z,311nm,1.4s,mb6.3
LSZ MLR MLR
comp=Z,1μm,19.0s,MS5.3
LSZ Lusaka 87.00 250 P **P** **08 45 29.8 +0.2**
SNR=33
PTEO Sao Teotonio 87.01 313 *e*P **P** **08 45 30.1 +0.7**
comp=Z,244nm,2.0s,mb6.1
MORF Marmelete 87.11 313 *e*P **P** **08 45 30.4 +0.5**
comp=Z,179nm,1.6s,mb6.0
MORF *e*S S 08 55 57.5 -12
MORF *e*LQ 09 17 56.9
MORF *e*LR LR 09 21 49.3
comp=Z,7μm,20.0s
MORF Marmelete 87.11 313 *e*P **P** **08 45 30.4 +0.5**
MORF *e* 08 48 54.0
MORF *e*S S 08 55 55.5 -14
PFVI Vila Bisbo 87.33 313 *e*P **P** **08 45 31.6 +0.6**
comp=Z,212nm,1.7s,mb6.1
PFVI *e*S S 08 55 53.9 -18
PFVI *e*LQ 09 14 52.7
PFVI *e*LR LR 09 22 09.7
comp=Z,7μm,20.0s
POHA Pohakuloa 87.58 68 PFAKE 08 45 40.0 +7.5
POHA LR LR
comp=Z,1μm,21.0s,MS5.4
FCC Fort Churchill 88.15 10 *e*P **P** **08 45 35.1 +0.7**
comp=Z,6.2nm,1.4s,mb4.7
EDM Edmonton 88.83 22 *e*P **P** **08 45 38.0 +0.3**
PGC Sidney 88.84 30 *e*P **P** **08 45 38.8 +0.8**
comp=Z,1.6nm,0.8s,mb4.4
A05A Maple Falls 89.14 29 ⇓P **P** **08 45 38.9 -0.5**
baz=89
A05A ⇓S S 08 56 23.6 -4.5
baz=89
NLWA Neilton Lookou 89.64 31 ⇓P **P** **08 45 42.2 +0.5**
baz=89
NLWA ⇓S S 08 56 29.1 -3.7
baz=89
NLWA Neilton Lookou 89.64 31 *e*P **P** **08 45 43.9 +2.2**
comp=Z,206nm,1.6s,mb6.2
NLWA LR LR
comp=Z,2μm,20.0s,MS5.5
B06A Marblemount 89.76 29 ⇓P **P** **08 45 42.0 -0.2**
baz=90
B06A ⇑S S 08 56 30.9 -3.0
baz=90
JCW Jim Creek 89.83 29 *e*P **P** **08 45 43.1 +0.6**
comp=Z,278nm,1.5s,mb6.4
E03A Lebam 90.42 31 ⇑S S 08 56 39.1 -1.1
baz=90
FFC Flin Flon 90.54 15 *e*P **P** **08 45 45.2 -0.5**
comp=Z,174nm,1.4s,mb6.2
FFC LR LR
comp=Z,3μm,22.0s,MS5.7
FFC Flin Flon 90.54 15 *i* P **P** **08 45 45.5 -0.2**
D05A Enumclaw 90.60 30 ⇑P **P** **08 45 46.9 +0.8**
baz=90
D05A ⇓S S 08 56 39.6 -2.2
baz=90
B08A Colville Reser 90.75 28 ⇑P **P** **08 45 47.0 +0.1**
baz=90,SNR=35
B08A ⇓S S 08 56 39.6 -3.5
baz=90
F03A Seaside 90.90 31 ⇓P **P** **08 45 48.5 +0.9**
baz=91
ETW Entiat 90.96 29 P **P** **08 45 48.4 +0.6**
WTV Waterville 91.03 28 P **P** **08 45 48.9 +0.7**
TWW Teanaway 91.11 29 P **P** **08 45 49.7 +1.2**
F04A Amboy 91.40 31 ⇓P **P** **08 45 50.2 +0.2**
baz=91,SNR=7.1
MTMW Mount Mitchell 91.42 31 P **P** **08 45 51.2 +1.1**
ASR Mount Adams--S 91.58 30 P **P** **08 45 51.8 +1.1**
C09A Chrisman Ranch 91.62 27 ⇑P **P** **08 45 51.0 +0.1**
baz=91,SNR=29
A12A Yaak River Ran 91.67 25 ⇑P **P** **08 45 51.2 +0.1**
baz=91,SNR=7.2
NEW Newport 91.68 26 *e*P **P** **08 45 51.4 +0.3**
comp=Z,70nm,1.3s,mb5.8
NEW *e*PP PP 08 49 28.2 -0.6
NEW LR LR
comp=Z,3μm,21.0s,MS5.7
NEW Newport 91.68 26 *e*P **P** **08 45 51.4 +0.2**
NEW *e* 08 49 28.2
NEW pmax pmax
comp=Z,70nm,1.3s
NEW MLR MLR
comp=Z,3μm,21.0s
OD2 Odessa Site #2 91.78 28 P **P** **08 45 52.2 +0.5**
AFI Afiamalu 91.89 105 PFAKE 08 46 00.0 +7.4
AFI LR LR
comp=Z,2μm,20.0s,MS5.5
AFI Afiamalu 91.89 105 LR LR 09 21 02.8
comp=Z,902nm,21.3s,MS5.2,baz=292,slow=32
G04A Mulino 91.94 31 ⇓P **P** **08 45 52.2 -0.3**
baz=92
D08A Wollman Farm, 91.97 28 ⇑P **P** **08 45 51.9 -0.7**
baz=92,SNR=20
E07A Sunnyside 91.99 29 ⇑P **P** **08 45 52.9 +0.2**
baz=92,SNR=12
COR Corvallis 92.06 32 *e*P **P** **08 45 55.2 +2.2**
comp=Z,149nm,1.4s,mb6.1
COR LR LR
comp=Z,2μm,19.0s,MS5.5
COR Corvallis 92.06 32 *e*P **P** **08 45 55.2 +2.2**
COR pmax pmax
comp=Z,149nm,1.4s,mb6.1
COR MLR MLR
comp=Z,2μm,19.0s,MS5.5
B12A Libby 92.08 26 ⇓P **P** **08 45 52.7 -0.3**
baz=92,SNR=9.6
A13A Flathead Natio 92.11 25 ⇓P **P** **08 45 53.1 0.0**
baz=92
WALA Waterton Lakes 92.18 24 *e*P **P** **08 45 54.4 +0.9**
comp=Z,4.2nm,1.6s,mb4.5
RSW Rattlesnake Hi 92.23 29 *e*P **P** **08 45 55.0 +1.3**
comp=Z,94nm,1.3s,mb6.0
HAWA Hanford 92.25 29 *e*P **P** **08 45 54.3 +0.4**
comp=Z,127nm,1.5s,mb6.0
HAWA LR LR
comp=Z,1μm,19.0s,MS5.4
E08A Dider Farm, El 92.37 29 ⇑P **P** **08 45 55.0 +0.6**
baz=92,SNR=11
A14A Double T Ranch 92.43 24 ⇓P **P** **08 45 54.2 -0.4**
baz=92,SNR=19
H04A Detroit Lake 92.48 31 ⇑P **P** **08 45 54.8 -0.2**
baz=92,SNR=15
F07A Phinny Hill Vi 92.49 29 ⇑P **P** **08 45 54.7 -0.3**
baz=92
B13A Whitefish 92.57 25 ⇓P **P** **08 45 55.6 +0.3**
baz=92,SNR=22
A15A Johnson Ranch, 92.66 24 ⇓P **P** **08 45 55.4 -0.3**
baz=92,SNR=18
E09A Wood Farm, Sta 92.72 28 ⇑P **P** **08 45 56.1 +0.1**
baz=92,SNR=12
C12B Naegeli Ranch, 92.76 26 ⇑P **P** **08 45 56.4 +0.2**
baz=92,SNR=16
BSMT Bassoo Peak 92.89 25 *e*P **P** **08 45 57.9 +1.2**
comp=Z,20nm,0.9s,mb5.5
C13A Hot Springs 93.11 25 ⇑P **P** **08 45 57.9 +0.1**
baz=93,SNR=28
SCHQ Schefferville 93.14 355 *e*P **P** **08 45 56.6 -1.1**
comp=Z,159nm,1.7s,mb6.2
SCHQ LR LR
comp=Z,3μm,19.0s,MS5.8
SCHQ Schefferville 93.14 355 P **P** **08 45 57.2 -0.5**
comp=Z,21nm,0.8s,mb5.6,baz=29,slow=4.7,SNR=16
SCHQ PKKPbc PKKPbc 09 03 03.7 -3.0
comp=Z,3.6nm,0.7s,baz=232,slow=7.2,SNR=4.8
SCHQ LR LR 09 32 36.1
comp=Z,3μm,18.0s,MS5.8,baz=191,slow=39
YBMT Yellow Bay 93.16 25 *e*P **P** **08 45 59.3 +1.3**
comp=Z,32nm,1.2s,mb5.6
YBMT *e*PP PP 08 49 42.5 +2.1
JTMT Jette 93.16 25 *e*P **P** **08 45 58.6 +0.6**
comp=Z,35nm,1.4s,mb5.6
JTMT *e*PP PP 08 49 41.6 +1.2
LNOR Lincton Mounta 93.19 29 *e*P **P** **08 45 59.1 +0.9**
comp=Z,44nm,1.6s,mb5.6
LNOR Lincton Mounta 93.19 29 *e*P **P** **08 45 59.1 +0.9**
LNOR pmax pmax
comp=Z,44nm,1.6s,mb5.6
B15A Bradely Ranch, 93.29 24 ⇑P **P** **08 45 58.1 -0.4**
baz=93,SNR=30
VIPM Ingram Point 93.31 31 P **P** **08 45 59.7 +1.0**
C14A Swan Lake 93.34 25 ⇓P **P** **08 45 58.8 -0.1**
baz=93
D12A Red Ives Fores 93.35 26 ⇓P **P** **08 45 58.9 -0.1**
baz=93,SNR=16
A17A Triple J Farms 93.36 23 ⇑P **P** **08 45 58.1 -0.8**
baz=93,SNR=38
G08A Pilot Rock 93.38 29 ⇑P **P** **08 45 59.3 +0.2**
baz=93,SNR=11
SWMT Swartz Lake 93.47 25 *e*P **P** **08 46 00.2 +0.7**
comp=Z,63nm,1.6s,mb5.8
B16A M & M Farms, S 93.49 23 ⇓P **P** **08 45 58.7 -0.8**
baz=93,SNR=26
F10A Beach Ranch, E 93.53 28 ⇑P **P** **08 45 59.2 -0.6**
baz=93,SNR=28
D13A Huson 93.65 26 ⇑P **P** **08 45 60.0 -0.3**
baz=93,SNR=13
A18A Metzger Ranch, 93.66 22 ⇓P **P** **08 45 59.6 -0.7**
baz=93,SNR=9.0
C15A Salmond Ranch, 93.73 24 ⇓P **P** **08 46 00.6 -0.1**
baz=94,SNR=34
HUMO Hull Mountain 93.75 33 *e*P **P** **08 46 02.6 +1.7**
comp=Z,93nm,1.7s,mb5.9
HUMO LR LR
comp=Z,1μm,20.0s,MS5.3
TORD Torodi Ar. Bea 93.84 288 P **P** **08 46 01.0 -0.7**
comp=Z,12nm,1.0s,mb5.3,baz=56,slow=3.5,SNR=41
TORD PP PP 08 49 42.9 -4.2
comp=Z,8.8nm,0.9s,baz=58,slow=7.1,SNR=6.3
TORD PKKPbc PKKPbc 09 03 00.7 -3.4
comp=Z,0.6nm,0.8s,baz=230,slow=5.4,SNR=3.0
TORD LR LR 09 33 12.0
comp=Z,1μm,19.7s,MS5.3,baz=30,slow=39
SLMT Seeley Lake 93.88 25 *e*P **P** **08 46 01.4 +0.1**
comp=Z,36nm,1.0s,mb5.8
B17A L&G Farms, Che 93.90 23 ⇑P **P** **08 46 01.1 -0.3**
baz=94,SNR=42
C16A Fuhringer Ranc 94.01 24 ⇑P **P** **08 46 00.9 -1.0**
baz=94,SNR=22
D14A Greenough 94.01 25 ⇑P **P** **08 46 01.1 -0.8**
baz=94,SNR=24
MSO Missoula 94.06 25 *e*P **P** **08 46 02.6 +0.4**
comp=Z,23nm,1.2s,mb5.5
MSO *e*PP PP 08 49 48.2 +0.7
MSO LR LR
comp=Z,2μm,19.0s,MS5.5
I07A Izee 94.13 30 ⇓P **P** **08 46 02.7 +0.1**
baz=94,SNR=13
B18A Beardsley Farm 94.14 22 ⇑P **P** **08 46 01.7 -0.9**
baz=94,SNR=34
CHMT Chamberlain Mo 94.24 25 *e*P **P** **08 46 02.7 -0.3**
comp=Z,20nm,1.5s,mb5.3
E13A Victor 94.30 26 ⇑P **P** **08 46 02.6 -0.7**
baz=94,SNR=25
LBTB Lobatse 94.42 243 *e*P **P** **08 46 02.9 -1.2**
comp=Z,27nm,1.0s,mb5.6
LBTB LR LR
comp=Z,2μm,19.0s,MS5.5
LBTB Lobatse 94.42 243 *e*P **P** **08 46 02.9 -1.2**
LBTB pmax pmax
comp=Z,27nm,1.0s,mb5.6
LBTB MLR MLR
comp=Z,2μm,19.0s,MS5.5
BMO Blue Mountains 94.42 29 *e*P **P** **08 46 04.2 +0.4**
comp=Z,21nm,1.3s,mb5.4
BMO *e*PP PP 08 49 49.2 -1.1
BMO LR LR
comp=Z,1μm,19.0s,MS5.4
EGMT Eagleton 94.47 22 ⇑P **P** **08 46 03.7 -0.4**
baz=94,SNR=21
EGMT Eagleton 94.47 22 *e*P **P** **08 46 04.2 +0.1**
comp=Z,121nm,1.5s,mb6.1
EGMT LR LR
comp=Z,3μm,19.0s,MS5.8
F12A Elk City 94.48 27 ⇓P **P** **08 46 03.4 -0.7**
baz=94,SNR=15
YBH Yreka Blue Hor 94.55 34 *e*P **P** **08 46 05.6 +1.1**
comp=Z,28nm,1.6s,mb5.4
YBH LR LR
comp=Z,1μm,20.0s,MS5.3
YBH Yreka Blue Hor 94.55 34 LR LR 09 26 31.5
comp=Z,1μm,21.6s,MS5.3,baz=325,slow=34
YBH Yreka Blue Hor 94.55 34 *e*P **P** **08 46 05.6 +1.1**
YBH pmax pmax
comp=Z,28nm,1.6s
YBH MLR MLR
comp=Z,1μm,20.0s
K05A Summer Lake 94.60 32 ⇓P **P** **08 46 05.1 +0.4**
baz=94
D16A Dana Ranch, Ca 94.74 24 ⇓P **P** **08 46 05.3 0.0**
baz=94,SNR=20
F13A Darby 94.80 26 ⇑P **P** **08 46 04.2 -1.4**
baz=94,SNR=9.3
E15A Deer Lodge 94.88 25 ⇑P **P** **08 46 05.2 -0.8**
baz=95,SNR=18
HRY Holter Researc 94.92 24 *e*P **P** **08 46 06.5 +0.4**
comp=Z,19nm,0.9s,mb5.5
D17A Six Diamond Ra 94.93 23 ⇓P **P** **08 46 05.5 -0.6**
baz=95,SNR=13
E16A East Helena 95.12 24 ⇓P **P** **08 46 06.6 -0.5**
baz=95,SNR=15
F14A Wisdom 95.14 26 ⇓P **P** **08 46 06.5 -0.6**
baz=95,SNR=9.2
J08A Circle Bar Ran 95.15 30 ⇑P **P** **08 46 07.4 +0.1**
baz=95
D18A Linhart Farms, 95.19 23 ⇑P **P** **08 46 06.8 -0.5**
baz=95
G13A Cobalt 95.42 27 ⇓P **P** **08 46 07.1 -1.4**
baz=95,SNR=16
LRM Limekiln Ridge 95.46 25 *e*P **P** **08 46 09.3 +0.7**
comp=Z,64nm,1.1s,mb6.0
LRM *e*PP PP 08 49 58.5 +0.2
E17A Martinsdale 95.47 24 ⇓P **P** **08 46 08.1 -0.5**
baz=95,SNR=21
MOD Modoc 95.52 32 *e*P **P** **08 46 10.1 +1.1**
comp=Z,36nm,1.6s,mb5.6
MOD *e*PP PP 08 50 01.4 +2.4
MOD LR LR
comp=Z,913nm,19.0s,MS5.3
WDC Whiskeytown Da 95.53 34 *e*P **P** **08 46 09.2 +0.2**
comp=Z,28nm,1.5s,mb5.5
WDC LR LR
comp=Z,1μm,20.0s,MS5.4
WDC Whiskeytown Da 95.53 34 *e*P **P** **08 46 09.2 +0.2**
WDC pmax pmax
comp=Z,29nm,1.5s,mb5.5
WDC MLR MLR
comp=Z,1μm,20.0s,MS5.4
XMAS Kiritimati 95.56 84 PFAKE 08 46 20.0 +10
XMAS LR LR
comp=Z,2μm,20.0s,MS5.6
G14A Jackson 95.59 26 ⇓P **P** **08 46 08.4 -0.8**
baz=95,SNR=15
H12A Diamond D Ranc 95.64 27 ⇓P **P** **08 46 08.6 -0.9**
baz=95,SNR=8.9
E18A Harlowton 95.70 23 ⇑P **P** **08 46 09.3 -0.4**
baz=95
F16A Kennard Place, 95.79 25 ⇑P **P** **08 46 09.6 -0.5**
baz=96,SNR=15
DLMT Dillon 95.80 25 *e*P **P** **08 46 10.2 0.0**
comp=Z,34nm,1.4s,mb5.6
WVOR Wild Horse Val 95.83 31 *e*P **P** **08 46 11.4 +1.1**
comp=Z,8.9nm,0.9s,mb5.2
WVOR *e*PP PP 08 50 02.9 +1.5
WVOR LR LR
comp=Z,1μm,19.0s,MS5.4
WVOR Wild Horse Val 95.83 31 *e*P **P** **08 46 11.4 +1.0**
WVOR *e* 08 50 02.9
WVOR pmax pmax
comp=Z,9.0nm,0.9s,mb5.2
WVOR MLR MLR
comp=Z,1μm,19.0s,MS5.4
H13A Challis 95.86 27 ⇑P **P** **08 46 09.8 -0.7**
baz=96,SNR=12
G15A Dillon 96.01 25 ⇑P **P** **08 46 10.7 -0.4**
baz=96,SNR=34
ULM Lac du Bonnet 96.02 13 *e*P **P** **08 46 10.7 -0.3**
comp=Z,38nm,1.6s,mb5.6
ULM LR LR
comp=Z,3μm,21.0s,MS5.7
ULM Lac du Bonnet 96.02 13 P **P** **08 46 09.1 -2.0**
comp=Z,7.3nm,0.7s,mb5.2,baz=332,slow=6.1,SNR=7.6
ULM PKKPbc PKKPbc 09 02 55.5 -3.5
comp=Z,3.1nm,0.4s,baz=96,slow=3.8,SNR=3.9
ULM LR LR 09 32 09.8
comp=Z,2μm,18.9s,MS5.6,baz=346,slow=37
F17A Fitzpatrick Pl 96.02 24 ⇓P **P** **08 46 10.6 -0.6**
baz=96,SNR=32
H14A Leadore 96.15 26 ⇓P **P** **08 46 11.1 -0.7**
baz=96,SNR=9.0
I12A Atlanta 96.17 28 ⇑P **P** **08 46 11.6 -0.3**
baz=96,SNR=34
MCMT McKenzie Canyo 96.17 26 *e*P **P** **08 46 12.8 +0.9**
comp=Z,19nm,1.4s,mb5.3
MCMT *e*PP PP 08 50 05.4 +1.5
MFID Camas Ranch 96.20 28 ⇑P **P** **08 46 11.6 -0.4**
baz=96,SNR=7.4
G16A Moss Hill, Enn 96.20 25 ⇓P **P** **08 46 11.5 -0.6**
baz=96,SNR=9.0
F18A Big Timber 96.34 23 ⇑P **P** **08 46 12.6 -0.1**
baz=96,SNR=24
GCMT Greycliff 96.46 23 *e*P **P** **08 46 13.9 +0.7**
comp=Z,20nm,1.3s,mb5.4
GCMT *e*PP PP 08 50 06.4 +0.3
I13A Wildhorse Cree 96.46 27 ⇑P **P** **08 46 12.9 -0.3**
baz=96,SNR=8.8
HOPS Hopland 96.50 36 PFAKE 08 46 20.0 +6.5
HOPS LR LR
comp=Z,1μm,19.0s,MS5.4
G17A Pierce Place, 96.50 24 ⇓P **P** **08 46 13.5 +0.2**
baz=96,SNR=5.5
BOSA Boshof 96.63 240 P **P** **08 46 12.7 -1.4**
comp=Z,9.0nm,0.8s,mb5.3,baz=31,slow=3.2,SNR=11
BOSA Boshof 96.63 240 P **P** **08 46 12.7 -1.4**
BOSA pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
HLID Hailey 96.64 28 ⇓P **P** **08 46 14.1 0.0**
baz=96,SNR=41
HLID Hailey 96.64 28 *e*P **P** **08 46 15.2 +1.1**
comp=Z,49nm,1.5s,mb5.7
HLID *e*PP PP 08 50 07.2 -0.4
HLID LR LR
comp=Z,2μm,19.0s,MS5.7
I14A Mackay 96.71 27 ⇓P **P** **08 46 14.4 0.0**
baz=96
RPZ Rata Peaks 96.71 138 LR LR 09 34 04.4
comp=Z,2μm,19.7s,MS5.6,baz=206,slow=38
LAO LASA Array 96.77 21 *e*P **P** **08 46 15.6 +1.0**
comp=Z,55nm,1.4s,mb5.8
LAO LR LR
comp=Z,3μm,19.0s,MS5.7
H16A Russell Place, 96.86 25 ⇑P **P** **08 46 15.4 +0.4**
baz=97,SNR=12
J13A Cove Ranch, Pi 96.88 27 ⇓P **P** **08 46 15.4 +0.3**
baz=97
I15A Monteview 97.01 26 ⇑P **P** **08 46 16.2 +0.5**
baz=97
L10A Juniper Basin 97.05 30 ⇓P **P** **08 46 16.1 +0.2**
baz=97
URZ Urewera 97.11 131 LR LR 09 29 57.0
comp=Z,2μm,20.1s,MS5.5,baz=312,slow=35
RLMT Red Lodge 97.18 24 ⇓P **P** **08 46 16.7 +0.3**
baz=97,SNR=13
RLMT Red Lodge 97.18 24 *e*P **P** **08 46 17.2 +0.7**
comp=Z,47nm,1.6s,mb5.7
RLMT LR LR
comp=Z,3μm,20.0s,MS5.8
J14A Carey 97.19 27 ⇑P **P** **08 46 16.9 +0.4**
baz=97
MCCM Marconi Confer 97.25 36 PFAKE 08 46 30.0 +13
MCCM LR LR
comp=Z,905nm,20.0s,MS5.3
L11A Cat Creek Ranc 97.27 29 ⇑P **P** **08 46 16.9 0.0**
baz=97,SNR=14
LKWY Lake 97.28 24 PFAKE 08 46 30.0 +13
LKWY LR LR
comp=Z,3μm,20.0s,MS5.7
H17A Grant Village 97.36 25 ⇑P **P** **08 46 19.3 +2.0**
baz=97
SNZO South Karori 97.39 134 PFAKE 08 46 30.0 +13
SNZO LR LR
comp=Z,2μm,19.0s,MS5.5
M10A I.L. Ranch, Tu 97.48 30 ⇑P **P** **08 46 18.6 +0.8**
baz=97
I16A Newdale 97.49 26 ⇓P **P** **08 46 19.0 +1.1**
baz=97
J15A Blackfoot 97.54 26 ⇑P **P** **08 46 18.6 +0.5**
baz=97,SNR=7.0
K13A Stover Farm, H 97.54 28 ⇓P **P** **08 46 18.5 +0.4**
baz=97
L12A House Creek Ra 97.59 29 ⇓P **P** **08 46 18.5 +0.1**
baz=97,SNR=6.3
FLWY Flagg Ranch 97.59 25 *e*P **P** **08 46 19.8 +1.5**
comp=Z,47nm,1.5s,mb5.8
FLWY *e*PP PP 08 50 17.0 +2.2
TSUM Tsumeb 97.63 252 PFAKE 08 46 30.0 +11
TSUM LR LR
comp=Z,1μm,19.0s,MS5.5
IMW Indian Meadow 97.67 25 *e*P **P** **08 46 20.1 +1.4**
comp=Z,14nm,1.1s,mb5.4
IMW *e*PP PP 08 50 17.5 +2.1
I17A Pilgrim Ck. 97.78 25 ⇑P **P** **08 46 20.1 +1.0**
baz=98
WCN Washoe City 97.85 33 ⇑P **P** **08 46 20.3 +0.7**
baz=98
MOOW Moose Ponds 97.86 25 *e*P **P** **08 46 20.8 +1.2**

comp=Z,18nm,1.6s,mb5.3
MOOW ePP PP 08 50 17.1 +0.1
M11A Holland Ranch, 97.87 30 ⇓P P 08 46 19.9 +0.2
baz=98,SNR=9.6
AGMN Agassiz Nation 97.89 14 *eP* **P 08 46 19.0 -0.6**
comp=Z,22nm,1.4s,mb5.5
AGMN LR LR
comp=Z,3μm,20.0s,MS5.7
J16A Bone 97.96 26 ⇓P P 08 46 20.1 +0.1
baz=98
K14A Jones Ranch, D 97.99 27 ⇑P P 08 46 20.0 -0.1
baz=98,SNR=6.5
TPAW Teton Pass 98.02 25 *eP* **P 08 46 22.2 +2.0**
comp=Z,20nm,1.6s,mb5.4
TPAW ePP PP 08 50 20.0 +1.9
LOHW Long Hollow 98.03 25 *eP* **P 08 46 20.9 +0.5**
comp=Z,9.8nm,1.5s,mb5.1
LOHW ePP PP 08 50 17.7 -0.5
L13A Double Diamond 98.07 28 ⇓P P 08 46 20.7 +0.2
baz=98,SNR=7.1
BMN Battle Mountai 98.08 31 PFAKE 08 46 30.0 +9.4
BMN LR LR
comp=Z,1μm,19.0s,MS5.5
SNOW Snow King Moun 98.11 25 *eP* **P 08 46 21.5 +0.8**
comp=Z,2.0nm,0.8s,mb4.7
K15A Arbon 98.12 27 ⇑P P 08 46 21.3 +0.6
baz=98
CASY Casey 98.14 178 *eP* **P 08 46 18.7 -1.3**
CASY Casey 98.14 178 *eP* **P 08 46 19.0 -1.0**
comp=Z,42nm,1.4s,mb5.8
CASY LR LR
comp=Z,3μm,21.0s,MS5.8
REDW Red Top Meadow 98.16 25 *eP* **P 08 46 22.2 +1.3**
comp=Z,4.8nm,1.0s,mb5.0
REDW ePP PP 08 50 20.2 +1.0
J17A Brown Place, J 98.21 25 ⇑P P 08 46 21.6 +0.5
baz=98
I18A Diamond G Ranc 98.24 25 ⇑P P 08 46 21.8 +0.6
baz=98
M12A Wells 98.24 29 ⇓P P 08 46 21.8 +0.5
baz=98
K16A Soda Springs 98.35 26 ⇑P P 08 46 21.6 -0.2
baz=98
L14A Malta 98.40 28 ⇓P P 08 46 21.8 -0.2
baz=98,SNR=5.2
N11A Elko Archery C 98.40 30 ⇑P P 08 46 22.6 +0.6
baz=98
O10A Cortez Mining, 98.51 31 ⇑P P 08 46 23.1 +0.6
baz=98
CMB Columbia Colle 98.56 34 *eP* **P 08 46 23.8 +1.0**
comp=Z,8.6nm,1.2s,mb5.2
CMB ePP PP 08 50 24.1 +1.7
CMB LR LR
comp=Z,1μm,21.0s,MS5.4
CMB Columbia Colle 98.56 34 *eP* **P 08 46 23.8 +1.0**
CMB *e* 08 50 24.1
CMB pmax pmax
comp=Z,9.0nm,1.2s,mb5.2
CMB MLR MLR
comp=Z,1μm,21.0s,MS5.4
AHID Auburn Hatcher 98.59 26 PFAKE 08 46 30.0 +7.2
AHID LR LR
comp=Z,2μm,21.0s,MS5.6
J18A Kendall Valley 98.59 25 ⇑P P 08 46 22.6 -0.2
baz=98
M13A Montello 98.60 29 ⇑P P 08 46 23.1 +0.2
baz=98
M13A Montello 98.60 29 *eP* **P 08 46 24.1 +1.2**
comp=Z,15nm,1.3s,mb5.4
N12A Clover Valley, 98.66 29 ⇑Pdiff P 08 46 23.9 +0.7
baz=98
N12A Clover Valley, 98.66 29 *eP* **P 08 46 24.7 +1.5**
comp=Z,18nm,1.3s,mb5.4
K17A Gardner Place, 98.67 26 ⇓Pdiff P 08 46 23.2 +0.1
baz=98
L15A Malad City 98.75 27 ⇓Pdiff P 08 46 23.9 +0.3
baz=98
M14A Sheep Mountain 98.80 28 ⇓Pdiff P 08 46 24.1 +0.3
baz=98
O11A Cowboy Ranch, 99.00 30 ⇑Pdiff P 08 46 25.4 +0.7
baz=99
N13A Wendover, West 99.00 29 ⇑Pdiff P 08 46 24.7 -0.1
baz=99
EYMN Ely 99.02 11 *eP* **P 08 46 24.2 -0.5**
comp=Z,30nm,1.4s,mb5.6
EYMN LR LR
comp=Z,2μm,19.0s,MS5.7
SAO San Andreas Ge 99.04 36 PFAKE 08 46 30.0 +5.0
SAO LR LR
comp=Z,1μm,20.0s,MS5.4
K18A Toltan Ranch, 99.08 25 ⇑Pdiff P 08 46 24.8 -0.2
baz=99
L16A Fish Haven 99.11 26 ⇑Pdiff P 08 46 25.6 +0.4
baz=99
BW06 Boulder Array 99.15 25 ⇑Pdiff P 08 46 24.7 -0.6
baz=99
BW06 Boulder Array 99.15 25 PFAKE 08 46 40.0 +15
BW06 LR LR
comp=Z,2μm,21.0s,MS5.6
M15A Larsen Ranch, 99.19 27 ⇓Pdiff P 08 46 25.1 -0.5
baz=99
NVAR Mina Array Bea 99.22 33 P **P 08 46 26.7 +1.0**
comp=Z,0.4nm,0.6s,baz=267,slow=3.0,SNR=3.6
NVAR PP PP 08 50 22.2 -5.2
comp=Z,1.3nm,0.9s,baz=297,slow=6.0,SNR=3.6
NVAR PKKPbc PKKPbc 09 02 48.1 -1.9
comp=Z,1.5nm,0.9s,baz=145,slow=3.7,SNR=7.8
L17A Cokeville 99.25 26 ⇑Pdiff P 08 46 25.3 -0.5
baz=99
O12A Currie 99.27 30 ⇑Pdiff P 08 46 26.4 +0.4
baz=99
K19A Absolon Red Bu 99.35 24 ⇑Pdiff P 08 46 25.6 -0.6
baz=99
HWUT Hardware Ranch 99.41 27 *eP* **P 08 46 28.1 +1.5**
comp=Z,6.6nm,1.0s,mb5.1
HWUT LR LR
comp=Z,2μm,22.0s,MS5.5
BGU Big Grassy Mou 99.42 28 *eP* **P 08 46 27.8 +1.2**
comp=Z,23nm,1.7s,mb5.4
N14A Grayback Hills 99.42 28 ⇑Pdiff P 08 46 26.4 -0.2
baz=99
P11A Circle Ranch, 99.44 31 ⇓Pdiff P 08 46 27.2 +0.5
baz=99
N15A Stansbury Isla 99.65 28 ⇓Pdiff Pdif 08 46 27.5 0.0
baz=99
K20A Yellowstone Ra 99.67 24 ⇓Pdiff Pdif 08 46 27.2 -0.4
baz=99
O13A Hicks Ranch, I 99.71 29 ⇑Pdiff Pdif 08 46 27.9 +0.1
baz=99
L18A Fontenelle, Gr 99.71 26 ⇓Pdiff Pdif 08 46 27.5 -0.3
baz=99
RSSD Black Hills 99.75 21 *eP* **Pdif 08 46 28.8 +0.9**
comp=Z,34nm,1.3s
RSSD LR LR
comp=Z,2μm,20.0s,MS5.7
RSSD Black Hills 99.75 21 *eP* **Pdif 08 46 28.8 +0.9**
RSSD pmax pmax
comp=Z,34nm,1.3s,mb5.6
RSSD MLR MLR
comp=Z,2μm,20.0s,MS5.7
L19A Farson 99.80 25 ⇓Pdiff Pdif 08 46 28.0 -0.2
baz=100
M17A Scullys Gap (B 99.87 26 ⇓Pdiff Pdif 08 46 28.6 +0.1
baz=100
P12A McGill 99.87 30 ⇑Pdiff Pdif 08 46 28.6 +0.1
baz=100
TPH Tonopah 100.00 32 PFAKE 08 46 40.0 +11
TPH LR LR
comp=Z,901nm,20.0s,MS5.3
Q11A Duckwater 100.07 31 ⇑Pdiff Pdif 08 46 29.5 +0.2
baz=100
DUG Dugway 100.13 28 ⇓Pdiff Pdif 08 46 30.3 +0.6
baz=100
DUG Dugway 100.13 28 *ePdif* **Pdif 08 46 30.9 +1.2**
comp=Z,8.7nm,1.2s
DUG ePP PP 08 50 34.5 +0.2
DUG LR LR
comp=Z,1μm,19.0s,MS5.5
DUG Dugway 100.13 28 *eP* **Pdif 08 46 30.9 +1.3**
DUG *e* 08 50 34.5
DUG pmax pmax
comp=Z,9.0nm,1.2s
DUG MLR MLR
comp=Z,1μm,19.0s,MS5.5
M18A Lyman 100.13 26 ⇑Pdiff Pdif 08 46 29.7 +0.1
baz=100
R10A Warm Springs 100.24 32 ⇑Pdiff Pdif 08 46 30.6 +0.4
baz=100
P13A Bates Ranch, G 100.26 29 ⇓Pdiff Pdif 08 46 30.7 +0.5
baz=100
N17A Moffit Pass 100.26 27 ⇓Pdiff Pdif 08 46 30.7 +0.5
baz=100
Q12A Willow Creek R 100.26 30 ⇓Pdiff Pdif 08 46 30.5 +0.3
baz=100
M19A Rock Springs 100.39 25 ⇓Pdiff Pdif 08 46 30.8 -0.1
baz=100
S10A Tonopah Range, 100.41 32 ⇓Pdiff Pdif 08 46 30.8 -0.1
baz=100
R11A Troy Canyon, C 100.51 31 ⇑Pdiff Pdif 08 46 31.7 +0.4
baz=100
P14A Drum Mountains 100.54 29 ⇓Pdiff Pdif 08 46 31.5 0.0
baz=100
DAU Daniels Canyon 100.56 27 *ePdif* **Pdif 08 46 33.5 +2.0**
comp=Z,11nm,1.3s
DAU Daniels Canyon 100.56 27 *eP* **Pdif 08 46 33.5 +2.0**
DAU pmax pmax
comp=Z,11nm,1.3s
L21A Rawlins 100.62 24 ⇓Pdiff Pdif 08 46 31.2 -0.6
baz=100
NLU North Lily Min 100.63 28 *ePdif* **Pdif 08 46 32.7 +0.9**
comp=Z,33nm,1.9s
N18A Larsen Ranch, 100.67 26 ⇑Pdiff Pdif 08 46 32.2 +0.2
baz=100
Q13A Wheeler Ranch, 100.68 30 ⇑Pdiff Pdif 08 46 32.6 +0.5
baz=100
M20A Sweetwater, Wa 100.75 25 ⇑Pdiff Pdif 08 46 32.9 +0.4
baz=100
P15A Leamington 100.88 28 ⇑Pdiff Pdif 08 46 32.7 -0.3
baz=101
N19A John Jarvie Ra 100.92 26 ⇓Pdiff Pdif 08 46 33.0 -0.2
baz=101
M21A Separation Pea 100.94 24 ⇑Pdiff Pdif 08 46 32.8 -0.4
baz=101
Q14A Sevier Lake (B 100.96 29 ⇑Pdiff Pdif 08 46 33.6 +0.2
baz=101
P16A Fountain Green 101.09 28 ⇓Pdiff Pdif 08 46 34.0 +0.1
baz=101
DAC Darwin (Calif) 101.30 34 PFAKE 08 46 50.0 +15
DAC LR LR
comp=Z,1μm,19.0s,MS5.4
N20A Spence Gulch, 101.31 25 ⇑Pdiff Pdif 08 46 34.8 -0.1
baz=101
Q15A Fillmore 101.32 29 ⇓Pdiff Pdif 08 46 34.9 0.0
baz=101
S12A Delamar Landin 101.45 31 ⇑Pdiff Pdif 08 46 35.5 0.0
baz=101
O19A Miners Draw (B 101.46 26 ⇓Pdiff Pdif 08 46 35.4 -0.2
baz=101
MPMC Manual Prospec 101.52 34 ⇓Pdiff Pdif 08 46 36.2 +0.3
baz=101
P18A Preston Nutter 101.62 27 ⇑Pdiff Pdif 08 46 36.4 +0.1
baz=101
N21A Black Mountain 101.63 24 ⇓Pdiff Pdif 08 46 36.8 +0.4
baz=101
MSU Marysvale 101.82 29 *ePdif* **Pdif 08 46 39.2 +2.0**
comp=Z,17nm,1.5s
MSU ePP PP 08 50 47.3 +0.2
MSU Marysvale 101.82 29 *eP* **Pdif 08 46 39.2 +2.0**
MSU *e* 08 50 47.3
MSU pmax pmax
comp=Z,17nm,1.5s
SUR Sutherland 101.86 239 PFAKE 08 46 50.0 +13
SUR LR LR
comp=Z,2μm,20.0s,MS5.6
Q16A Castle Valley 101.88 28 ⇑Pdiff Pdif 08 46 37.3 -0.1
baz=102
SRU San Rafael 101.96 27 ⇓Pdiff Pdif 08 46 37.8 0.0
baz=102
N22A Wattenberg Ran 101.97 24 ⇓Pdiff Pdif 08 46 38.3 +0.5
baz=102
R15A Junction 102.03 29 ⇑Pdiff Pdif 08 46 38.1 0.0
baz=102
S14A Cedar City 102.05 30 ⇑Pdiff Pdif 08 46 38.4 +0.3
baz=102
DRV Dumont d'Urvil 102.05 166 Pdif Pdif 08 46 36.0 -2.2
DRV Dumont d'Urvil 102.05 166 PP PP 08 50 54.0 +4.5
DRV SKKS SKSac 08 57 11.0 -5.2
DRV SP SP 08 59 45.0 -7.5
DRV SS SS 09 05 32.0 +7.2
N23A Red Feather La 102.06 23 ⇓Pdiff Pdif 08 46 38.2 0.0
baz=102
ECSD EROS Data Cent 102.07 16 *ePdif* **Pdif 08 46 38.5 +0.2**
comp=Z,17nm,1.4s
ECSD ePP PP 08 50 47.4 -1.3
ECSD LR LR
comp=Z,3μm,20.0s,MS5.8
OSI Osito Adit 102.09 35 ⇑Pdiff Pdif 08 46 38.5 +0.1
baz=102
P19A Cripple Cowboy 102.10 26 ⇑Pdiff Pdif 08 46 38.1 -0.3
baz=102
P20A De Beque 102.43 26 ⇑Pdiff Pdif 08 46 39.2 -0.7
baz=102
R17A Hanksville Air 102.49 28 ⇑Pdiff Pdif 08 46 39.7 -0.4
baz=102
O22A Kremmling 102.50 24 ⇓Pdiff Pdif 08 46 40.0 -0.2
baz=102
Q19A Hogan Spring (102.58 27 ⇑Pdiff Pdif 08 46 40.4 -0.2
baz=102
S16A Weppner Ranch, 102.73 29 ⇓Pdiff Pdif 08 46 41.1 -0.1
baz=102
DBIC Dimbokro 102.80 286 Pdif Pdif 08 46 42.8 +1.2
DBIC PP PP 08 50 54.7 -1.2
DBIC LR LR
comp=Z,2μm,20.0s,MS5.7
DBIC Dimbokro 102.80 286 Pdiff Pdif 08 46 42.8 +1.2
comp=Z,7.5nm,1.1s,baz=149,slow=11,SNR=3.1
DBIC PP PP 08 50 54.7 -1.2
comp=Z,5.6nm,0.8s,baz=49,slow=9.9,SNR=4.4
DBIC Dimbokro 102.80 286 P Pdif 08 46 42.8 +1.3
DBIC 08 50 54.7
DBIC pmax pmax
comp=Z,8.0nm,1.1s
DBIC pmax pmax
comp=Z,6.0nm,0.9s
PKME Peaks-Kenny Pk 102.83 356 PFAKE 08 46 50.0 +8.3
PKME LR LR
comp=Z,3μm,19.0s,MS5.9
P22A Eagle 102.94 24 ⇓Pdiff Pdif 08 46 41.9 -0.2
baz=103
Q20A Ridgley Place, 102.95 26 ⇓Pdiff Pdif 08 46 42.1 -0.1
baz=103
V12A Nelson 103.01 32 ⇑Pdiff Pdif 08 46 43.0 +0.5
baz=103
ISCO Idaho Springs 103.15 24 *ePdif* **Pdif 08 46 44.5 +1.4**
comp=Z,4.4nm,1.0s
ISCO LR LR
comp=Z,4μm,19.0s,MS6.0
ISCO Idaho Springs 103.15 24 *eP* **Pdif 08 46 44.5 +1.4**
ISCO pmax pmax
comp=Z,4.0nm,1.0s
ISCO MLR MLR
comp=Z,4μm,19.0s,MS6.0
SMCO Snowmass 103.23 25 *ePdif* **Pdif 08 46 44.8 +1.3**
comp=Z,14nm,1.3s
SMCO ePP PP 08 50 53.6 -4.0
OGNE Ogallala 103.25 21 PFAKE 08 46 50.0 +6.5
OGNE LR LR
comp=Z,2μm,20.0s,MS5.6
SADO Sadowa 103.44 3 PP PP 08 50 58.5 -0.4
comp=Z,5.2nm,0.9s,baz=316,slow=13,SNR=3.7
SADO PKKPab PKKPab 09 02 55.4 -6.2
comp=Z,4.0nm,0.6s,baz=167,slow=2.5,SNR=5.4
PV01 Paradox Valley 103.56 26 *ePdif* **Pdif 08 46 46.3 +1.4**
comp=Z,385nm,1.0s
PV01 ePP PP 08 51 02.6 +2.5
LONY Lake Ozonia 103.66 359 PFAKE 08 47 00.0 +15
LONY LR LR
comp=Z,2μm,19.0s,MS5.6
LBNH Lisbon 103.98 358 PFAKE 08 47 00.0 +13
LBNH LR LR
comp=Z,2μm,20.0s,MS5.7
PFO Pinyon Flat Ob 104.01 34 PFAKE 08 47 00.0 +13
PFO LR LR
comp=Z,1μm,19.0s,MS5.4
JFWS Jewell Farm 104.12 11 PFAKE 08 47 00.0 +13
JFWS LR LR
comp=Z,3μm,20.0s,MS5.8
MAW Mawson 104.23 195 PKiKP PKiKP 08 51 03.0 -0.7
comp=Z,2.5nm,0.6s,baz=72,slow=5.9,SNR=12
MAW PKKPbc PKKPbc 09 02 33.7 -3.0
comp=Z,5.0nm,0.7s,baz=204,slow=5.1,SNR=9.6
MVCO Mesa Verde 104.40 27 PFAKE 08 47 00.0 +11
MVCO LR LR
comp=Z,1μm,19.0s,MS5.5
SCIA State Center 104.55 14 PFAKE 08 47 00.0 +11
SCIA LR LR
comp=Z,2μm,21.0s,MS5.6
WUAZ Wupatki 104.71 30 PFAKE 08 47 00.0 +10
WUAZ LR LR
comp=Z,1μm,20.0s,MS5.5
SDCO Great Sand Dun 105.03 24 PFAKE 08 51 20.0 +14
SDCO LR LR
comp=Z,2μm,19.0s,MS5.6
AAM Ann Arbor 105.58 6 PFAKE 08 51 20.0 +13
AAM LR LR
comp=Z,3μm,19.0s,MS5.8
CBKS Cedar Bluff 105.89 20 PFAKE 08 51 20.0 +12
CBKS LR LR
comp=Z,2μm,20.0s,MS5.7
ERPA Erie 106.04 4 PFAKE 08 51 20.0 +12
ERPA LR LR
comp=Z,2μm,19.0s,MS5.7
BINY Binghamton 106.08 1 PFAKE 08 51 20.0 +12
BINY LR LR
comp=Z,3μm,19.0s,MS5.8
KSU1 Kansas State U 106.46 17 PFAKE 08 51 20.0 +11
KSU1 LR LR
comp=Z,3μm,19.0s,MS5.8
HDIL Hopedale 106.57 11 PFAKE 08 51 20.0 +11
HDIL LR LR
comp=Z,3μm,20.0s,MS5.8
ANMO Albuquerque 107.17 26 PFAKE 08 51 20.0 +10
ANMO LR LR
comp=Z,2μm,20.0s,MS5.8
LAZ Ladron 107.39 27 *ePdif* PKiKP 08 51 12.5 +1.7
ACSO Alum Creek Sta 107.70 6 PFAKE 08 51 20.0 +8.8
ACSO LR LR
comp=Z,2μm,20.0s,MS5.7
TUC Tucson 107.70 31 PFAKE 08 51 20.0 +8.6
TUC LR LR
comp=Z,2μm,19.0s,MS5.6
BNM Barren Site 107.81 27 *ePdif* PKiKP 08 51 11.6 +0.1
MCWV Mont Chateau 108.50 4 PFAKE 08 51 20.0 +7.3
MCWV LR LR
comp=Z,3μm,19.0s,MS5.9
CCM Cathedral Cave 108.65 13 PFAKE 08 51 20.0 +7.0
CCM LR LR
comp=Z,2μm,19.0s,MS5.7
AMTX Amarillo 108.92 23 PFAKE 08 51 20.0 +6.4
AMTX LR LR
comp=Z,2μm,20.0s,MS5.6
WCI Wyandotte Cave 109.30 9 PFAKE 08 51 20.0 +5.8
WCI LR LR
comp=Z,2μm,19.0s,MS5.7
WMOK Wichita Mounta 109.96 20 *ePdif* PKiKP 08 51 12.9 -2.7
WMOK LR LR
comp=Z,2μm,20.0s,MS5.7
CBN Corbin 110.05 2 PFAKE 08 51 30.0 +14
CBN LR LR
comp=Z,2μm,20.0s,MS5.7
GDL2 Guadalupe Moun 110.40 26 *ePKPdf* PKiKP 08 51 16.2 -0.2
MNTX Cornudas Mount 110.46 27 *ePKPdf* PKiKP 08 51 16.9 +0.3
MNTX LR LR
comp=Z,1μm,21.0s,MS5.5
BLA Blacksburg 110.90 4 PFAKE 08 51 30.0 +13
BLA LR LR
comp=Z,2μm,19.0s,MS5.7
WVT Waverly 111.13 11 PFAKE 08 51 30.0 +12
WVT LR LR
comp=Z,2μm,19.0s,MS5.7
SYO Syowa Base 111.37 201⇑ *eP* PKiKP 08 51 14.4 -2.6
SYO Syowa Base 111.37 201⇑ *eP* PKiKP 08 51 18.6 +1.6
MIAR Mount Ida 111.53 16 *ePKPdf* PKiKP 08 51 18.4 -0.1
MIAR LR LR
comp=Z,3μm,21.0s,MS5.8
TKL Tuckaleechee C 112.15 7 PKPdf PKiKP 08 51 18.8 -0.9
TKL Tuckaleechee C 112.15 7 PKiKP PKiKP 08 51 18.8 -0.9
baz=339,slow=12
TKL Tuckaleechee C 112.15 7 *i* PKIKP PKiKP 08 51 18.8 -0.9
TXAR Lajitas Array 113.23 27 Pdif Pdif 08 47 32.1 +4.2
TXAR PKPdf PKiKP 08 51 20.9 -1.0
TXAR PKKPbc PKKPbc 09 02 06.7 -0.2
TXAR Lajitas Array 113.23 27 Pdiff Pdif 08 47 32.1 +4.2
comp=Z,0.1nm,0.8s,baz=347,slow=3.1,SNR=2.4
TXAR PKiKP PKiKP 08 51 20.9 -1.0
comp=Z,2.0nm,0.7s,baz=166,slow=0.6,SNR=16
TXAR PKKPbc PKKPbc 09 02 06.7 -0.2
comp=Z,2.9nm,1.0s,baz=142,slow=6.3,SNR=17
TXAR Lajitas Array 113.23 27 P Pdif 08 47 32.1 +4.2
TXAR *i* 08 51 20.9
TXAR pmax pmax
comp=Z,2.0nm,0.7s
JCT Junction City 113.58 23 *ePKPdf* PKiKP 08 51 21.7 -0.9
JCT LR LR
comp=Z,2μm,20.0s,MS5.8
NATX Nacogdoches 113.91 18 PFAKE 08 51 30.0 +6.9
NATX LR LR
comp=Z,2μm,20.0s,MS5.8
LRAL Lakeview Retre 114.30 11 PFAKE 08 51 30.0 +6.1
LRAL LR LR
comp=Z,2μm,19.0s,MS5.7
GOGA Godfrey 114.40 8 PFAKE 08 51 30.0 +5.9
GOGA LR LR
comp=Z,3μm,19.0s,MS5.9
VBMS Vicksburg 114.44 14 PFAKE 08 51 30.0 +5.8
VBMS LR LR
comp=Z,2μm,19.0s,MS5.8
NHSC New Hope 115.00 5 PFAKE 08 51 40.0 +15
NHSC LR LR
comp=Z,2μm,21.0s,MS5.7
HKT Hockley 115.30 20 PFAKE 08 51 40.0 +14
HKT LR LR
comp=Z,2μm,21.0s,MS5.7
SHEL Horse Pasture 115.47 267 PFAKE 08 51 40.0 +14
SHEL LR LR
comp=Z,1μm,19.0s,MS5.6
SBA Scott Base 115.61 168 *ePKPdf* PKPdf 08 51 24.6 -0.3
SBA LR LR
comp=Z,893nm,19.0s,MS5.4
TAOE Nuku Hiva Isla 115.92 84 *eS* PKKPbc 09 01 58.4 +1.1
comp=Z,726nm,25.8s
TAOE *e*LR LR 09 26 42.0
comp=Z,2μm,24.5s
BRAL Brewton 116.27 11 PFAKE 08 51 40.0 +12
BRAL LR LR
comp=Z,2μm,20.0s,MS5.7
KVTX Kingsville 116.91 23 PFAKE 08 51 40.0 +11
KVTX LR LR
comp=Z,2μm,20.0s,MS5.7
DWPF Disney 119.86 6 PFAKE 08 51 40.0 +5.3
DWPF LR LR
comp=Z,2μm,19.0s,MS5.7
NVL N'lazarevskaya 120.86 203 *ePKIKP* PKPdf 08 51 33.2 -1.9
NVL *e* 08 58 42.6
NVL MLR MLR
comp=Z,916nm,17.0s,MS5.5
MAIT Maitri 120.89 203 *ePKPab* PKPdf 08 51 34.5 -0.7
TEIG Tepich 126.52 15 PFAKE 08 52 00.0 +12
TEIG LR LR
comp=Z,1μm,20.0s,MS5.7
GRTK Grand Turk 126.57 355 PFAKE 08 52 00.0 +12
GRTK LR LR
comp=Z,2μm,19.0s,MS5.8
GTBY Guantanamo Bay 128.29 360 PFAKE 08 52 00.0 +9.0
GTBY LR LR
comp=Z,1μm,21.0s,MS5.7
ANWB Willy Bob 128.87 343 PFAKE 08 52 00.0 +7.8
ANWB LR LR
comp=Z,1μm,20.0s,MS5.7
SDDR Presa de Saban 129.09 355 PFAKE 08 52 00.0 +7.4
SDDR LR LR
comp=Z,2μm,20.0s,MS5.8
MTP Monte Pirata 129.25 348 *ePKPdf* PKPdf 08 51 52.2 -0.7
SJG San Juan 129.33 349 PFAKE 08 52 00.0 +7.0
SJG LR LR
comp=Z,1μm,20.0s,MS5.6
ICM Isla Caja Muer 129.61 349 *ePKPdf* PKPdf 08 51 53.2 -0.4
MTDJ Mount Denham 129.94 3 PFAKE 08 52 00.0 +5.8
MTDJ LR LR
comp=Z,2μm,19.0s,MS5.9
BBGH Gun Hill 132.58 339 PFAKE 08 52 10.0 +11
BBGH LR LR
comp=Z,2μm,21.0s,MS5.9
TGUH Tegucigalpa,Un 132.71 16 *ePKPdf* PKPdf 08 52 00.9 +1.5
TGUH LR LR
comp=Z,1μm,20.0s,MS5.5
GRGR Grenville 134.15 341 PFAKE 08 52 10.0 +7.8
GRGR LR LR
comp=Z,2μm,22.0s,MS5.7
RCBR Riachuelo 134.93 297 PFAKE 08 52 10.0 +6.3

RCBR				LR	LR			
	comp=Z,1μm,21.0s,MS5.6							
PCRV	**Puerto La Cruz**	**136.77**	**345**	SKPbc	SKPbc	08 55 36.6	-3.3	
	comp=Z,24nm,0.9s,baz=297,slow=8.5,SNR=6.5							
JTS	**JuntasAbangare**	**136.86**	**14**	PFAKE		08 52 20.0	+13	
JTS				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
BCIP	**Isla Barro Col**	**138.76**	**7**	PFAKE		08 52 20.0	+9.2	
BCIP				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
SDV	**Santo Domingo**	**139.03**	**353**	*e*PKPdf	PKPdf	08 52 11.8	+0.5	
SDV				LR	LR			
	comp=Z,297nm,20.0s,MS5.0							
ROSC	**El Rosal**	**143.26**	**358**	*e*PKPdf	PKPdf	08 52 17.1	-1.8	
ROSC	**El Rosal**	**143.26**	**358**	PKP	PKPdf	08 52 16.6	-2.3	
	comp=Z,34nm,0.7s,baz=83,slow=1.4,SNR=22							
PAYG	**Puerto Ayora**	**145.70**	**27**	*e*PKPdf	PKPdf	08 52 24.2	+1.1	
PAYG				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
PMSA	**Palmer Station**	**146.55**	**189**	*e*PKPbc	PKPbc	08 52 24.7	+0.3	
PMSA				LR	LR			
	comp=Z,2μm,21.0s,MS5.8							
PMSA	**Palmer Station**	**146.55**	**189**	PKPbc	PKPbc	08 52 23.3	-1.2	
	baz=209,slow=3.4							
OTAV	**Otavalo**	**147.72**	**6**	*e*PKPdf	PKPdf	08 52 27.4	+0.8	
OTAV				LR	LR			
	comp=Z,876nm,20.0s,MS5.5							
CAM4	**Nova Friburgo**	**149.44**	**280**	⇑*i*P	PKPdf	08 52 31.7	+2.7	
CAM4				*i*		08 52 32.9		
CAM4				*i*		08 52 36.9		
CAM4				*i*		08 52 41.5		
CAM4				*i*		08 52 47.7		
CAM4				*i*		08 53 03.6		
SPB	**Sao Paulo**	**154.02**	**282**	*e*PKPdf	PKPdf	08 52 36.6	+0.6	
SPB				*e*PKPbc	PKPbc	08 52 43.9	-0.1	
SPB				*e*PKPab	PKPab	08 52 57.6	+0.2	
SPB				LR	LR			
	comp=Z,1μm,20.0s,MS5.7							
ATAH	**Atahualpa**	**155.01**	**7**	PKPbc	PKPdf	08 52 38.8	+1.1	
	comp=Z,7.7nm,0.8s,baz=125,slow=5.2,SNR=10							
USHA	**Ushuaia**	**156.74**	**190**	PKPab	PKPab	08 53 07.2	-0.8	
	comp=Z,20nm,0.6s,baz=164,slow=6.0,SNR=14							
SIV	**San Ignacio**	**159.43**	**318**	PKP	PKPdf	08 52 42.3	-0.8	
	comp=Z,6.1nm,0.8s,baz=89,slow=2.0,SNR=29							
SIV				PKPab	PKPab	08 53 19.1	-1.6	
	comp=Z,28nm,0.9s,baz=72,slow=6.1,SNR=24							
SIV				PP	PP	08 57 01.2	-0.1	
	comp=Z,2.5nm,0.9s,baz=51,slow=13,SNR=2.4							
NNA	**Nana**	**159.95**	**4**	PFAKE		08 52 50.0	+6.3	
NNA				LR	LR			
	comp=Z,1μm,20.0s,MS5.7							
LPAZ	**La Paz**	**162.99**	**336**	*e*PKPdf	PKPdf	08 52 47.2	+0.3	
LPAZ				LR	LR			
	comp=Z,2μm,22.0s							
LPAZ	**La Paz**	**162.99**	**336**	PKP	PKPdf	08 52 46.7	-0.1	
	comp=Z,21nm,1.1s,baz=11,slow=3.0,SNR=44							
LPAZ	**La Paz**	**162.99**	**336**	PKIKP	PKPdf	08 52 46.7	-0.1	
LPAZ				pmax	pmax			
	comp=Z,21nm,1.1s							
CPUP	**Villa Florida**	**163.32**	**286**	PKP	PKPdf	08 52 44.8	-2.1	
	comp=Z,4.3nm,0.8s,baz=84,slow=17,SNR=15							
CPUP	**Villa Florida**	**163.32**	**286**	PKIKP	PKPdf	08 52 44.8	-2.1	
CPUP				pmax	pmax			
	comp=Z,4.0nm,0.8s							
TRQA	**Tornquist**	**167.59**	**238**	*e*PKPdf	PKPdf	08 52 49.2	-0.9	
TRQA				*e*PKPab	PKPab	08 53 54.5	-1.6	
TRQA				*e*PP	PP	08 57 49.2	+4.4	
TRQA				LR	LR			
	comp=Z,2μm,20.0s							
PLCA	**Paso Flores**	**170.56**	**202**	PFAKE		08 53 00.0	+8.1	
PLCA				LR	LR			
	comp=Z,1μm,20.0s							
CFAA	**Coronel Fontan**	**173.99**	**273**	PKP	PKPdf	08 52 52.9	-0.8	
CFAA				PKPab	PKPab	08 54 23.1	-1.7	
CFAA				PP	PP	08 58 13.7	-3.7	
CFAA	**Coronel Fontan**	**173.99**	**273**	PKP	PKPdf	08 52 52.9	-0.8	
	comp=Z,3.1nm,1.1s,baz=282,slow=0.7,SNR=20							
CFAA				PKPab	PKPab	08 54 23.1	-1.7	
	comp=Z,1.1nm,1.0s,baz=81,slow=2.9,SNR=3.8							
CFAA				PP	PP	08 58 13.7	-3.7	
	comp=Z,0.2nm,0.5s,baz=51,slow=16,SNR=2.6							
LCO	**Las Campanas**	**175.01**	**307**	PFAKE		08 53 00.0	+5.9	
LCO				LR	LR			
	comp=Z,2μm,19.0s							

*ISCJB **01** 08:39:16.5±0.6,32°.1N±0°.1×104°.97E±0°.07,h10km, mb4.4/15, Error ellipse: s-maj=15.7km s-min=7.6km az=164.0*

*IDC **01** 08:39:16.7±1.0,32°.08N×104°.83E,h0km,mb4.3/9, mb1 4.4/10,mb1mx4.2/24,mbtmp4.3/10,ML3.9/1, Error ellipse: s-maj=37.3km s-min=19.6km az=52.0*

ISC 01 08:39:18.4±0.6,32°.1N±0°.1×104°.89E±0°.07,h10km,n26, σ0§42/27,mb4.4/15,3C,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XAN	**Xi'an**	**3.90**	**59**	Pg	**Pg**	**08 40 45.6**	**+13**
XAN				Sg	**Sg**	**08 41 23.6**	**0.0**
XAN				smax			
	comp=N,1μm,0.6s						
XAN				smax			
	comp=E,580nm,0.8s						
KSRS	**Korea Array**	**19.64**	**68**	P	**Pn**	**08 43 48.8**	**+0.2**
	comp=E,0.3nm,0.3s,baz=250,slow=10,SNR=3.6						
MKAR	**Makanchi Array**	**22.69**	**317**	P	**P**	**08 44 20.5**	**+0.5**
	comp=E,5.4nm,0.8s,mb4.0,baz=107,slow=9.7,SNR=2.6						
ZALV	**Zalesovo Beam**	**26.13**	**333**	P	**P**	**08 44 52.9**	**+0.4**
	comp=E,9.8nm,0.6s,mb4.5,baz=132,slow=9.4,SNR=4.1						
ARCES	**ARCESS Array B**	**56.63**	**336**	P	**P**	**08 49 01.5**	**+0.3**
	comp=E,1.8nm,0.5s,mb4.4,baz=84,slow=8.1,SNR=9.1						
FINES	**FINESS Array B**	**57.12**	**326**	P	**P**	**08 49 04.7**	**-0.1**
	comp=E,3.3nm,0.5s,mb4.6,baz=87,slow=7.8,SNR=4.7						
ASAR	**Alice Springs**	**62.00**	**150**	P	**P**	**08 49 39.0**	**+0.1**
	comp=E,1.3nm,0.8s,mb4.1,baz=350,slow=4.7,SNR=6.1						
NOA	**NORSAR Array B**	**64.18**	**327**	P	**P**	**08 49 51.9**	**-1.0**
	comp=E,2.0nm,0.6s,mb4.3,baz=74,slow=6.5,SNR=3.6						
ILAR	**Eielson Array**	**68.65**	**26**	P	**P**	**08 50 21.2**	**-0.2**
	comp=E,0.4nm,0.4s,mb3.7,baz=289,slow=4.4,SNR=6.9						
HINF	**Hinteralfeld**	**71.90**	**315**	*e*P	**P**	**08 50 41.2**	**-0.5**
GIVF	**Givet**	**72.00**	**318**	*e*P	**P**	**08 50 42.4**	**+0.2**
BAIF	**Baives**	**72.37**	**318**	*e*P	**P**	**08 50 44.6**	**+0.2**
STKA	**Stephens Creek**	**72.48**	**148**	P	**P**	**08 50 45.3**	**+0.1**
	comp=E,3.9nm,1.0s,mb4.3,baz=320,slow=7.9,SNR=2.9						
CABF	**La Chapelle**	**72.93**	**315**	*e*P	**P**	**08 50 47.5**	**-0.3**
	comp=E,33nm,1.3s,mb4.8						
PGF	**Pioggiola**	**73.03**	**310**	⇑*i*P	**P**	**08 50 48.8**	**+0.3**
	comp=E,8.7nm,0.7s,mb4.5						
LPG	**La Plagne**	**73.06**	**313**	⇑*i*P	**P**	**08 50 49.3**	**+0.7**
	comp=E,21nm,0.7s,mb4.9						
LPL	**La Plagne**	**73.06**	**313**	⇑*i*P	**P**	**08 50 49.3**	**+0.7**
	comp=E,19nm,0.7s,mb4.8						
SBF	**Sospel**	**73.41**	**312**	*e*P	**P**	**08 50 50.5**	**-0.2**
	comp=E,17nm,0.7s,mb4.8						
ORIF	**Oris-en-Rattie**	**73.88**	**313**	*e*P	**P**	**08 50 53.5**	**0.0**
LOR	**Lormes**	**73.94**	**316**	*e*P	**P**	**08 50 52.8**	**-1.0**
SMF	**Signal de Mont**	**74.26**	**315**	*e*P	**P**	**08 50 55.3**	**-0.4**
AVF	**Avril sur Loir**	**74.48**	**316**	*e*P	**P**	**08 50 56.7**	**-0.2**
	comp=E,13nm,0.9s,mb4.6						
TCF	**Toulx Ste Croi**	**75.42**	**316**	*e*P	**P**	**08 51 02.4**	**+0.1**
CAF	**Calviac**	**76.21**	**315**	*e*P	**P**	**08 51 07.3**	**+0.4**
SGMF	**Saint Gilles**	**77.10**	**319**	*e*P	**P**	**08 51 12.0**	**+0.1**
YKA	**Yellowknife Ar**	**80.54**	**17**	P	**P**	**08 51 30.0**	**-0.5**
	comp=E,2.8nm,0.6s,mb4.3,baz=327,slow=5.2,SNR=11						

*IDC **01** 08:50:02.5±2.6,28°.25N×87°.95E,h0km,mb3.8/3, mb1 3.9/5,mb1mx3.5/26,mbtmp3.8/5,ML4.1/2,MS2.3/1, Ms1 2.3/1,ms1mx2.3/31,Error ellipse: s-maj=85.1km s-min=25.3km az=71.0*

*ISCJB **01** 08:50:10.7±0.7,28°.33N±0°.09×87°.73E±0°.04,h88km±13km, mb3.6/3,Error ellipse: s-maj=15.9km s-min=5.8km az=11.7*

*DMN **01** 08:50:10.4±0.0,28°.39N×87°.81E,h60km,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 01 08:50:11.5±0.7,28°.36N±0°.09×87°.74E±0°.05,h78km±14km, n18,σ0§75/28,mb3.6/3,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAPN	**Taplejung**	**1.00**	**181**	*e*Pg	**Pn**	**08 50 30.4**	**-0.1**
TAPN				*e*Sg	**Sn**	**08 50 44.8**	**+0.2**
	3μm,0.3s						
GTK	**Gangtok**	**1.28**	**142**	*e*PKP	**Pn**	**08 50 33.0**	**-0.9**
GTK				*e*S	**Sn**	**08 50 51.0**	**+0.2**
ODAN	**Odare**	**1.52**	**192**	*e*Pg	**Pn**	**08 50 37.0**	**0.0**
ODAN				*e*Sg	**Sn**	**08 50 56.1**	**-0.2**
	1μm,0.3s						
JIRN	**Jiri**	**1.53**	**243**	*e*Pg	**Pn**	**08 50 37.8**	**+0.7**
JIRN				*e*Sg	**Sn**	**08 50 57.8**	**+1.3**
	579nm,0.3s						
GUN	**Gumba**	**1.70**	**255**	*e*Pg	**Pn**	**08 50 40.2**	**+0.9**
GUN				*e*Sg	**Sn**	**08 51 00.5**	**+0.1**
	706nm,0.4s						
RAMN	**Ramite**	**1.73**	**216**	*e*Pg	**Pn**	**08 50 39.3**	**-0.4**
RAMN				*e*Sg	**Sn**	**08 51 00.7**	**-0.4**
	788nm,0.4s						
PKI	**Pulchoki**	**2.20**	**250**	*e*Pn	**Pn**	**08 50 46.5**	**+0.5**
PKI				*e*Sn	**Sn**	**08 51 12.5**	**+0.1**
	1μm,0.7s						
PKIN	**Phulchoki**	**2.21**	**250**	*e*Sn	**Sn**	**08 51 12.5**	**-0.1**
	572nm,0.4s						
KKN	**Kakani**	**2.24**	**256**	*e*Pn	**Pn**	**08 50 47.0**	**+0.5**
KKN				*e*Sn	**Sn**	**08 51 13.8**	**+0.4**
	280nm,0.2s						
DMN	**Daman**	**2.44**	**253**	*e*Pn	**Pn**	**08 50 49.8**	**+0.6**
DMN				*e*Sn	**Sn**	**08 51 18.5**	**+0.3**
	474nm,0.4s						
GKN	**Gorkha**	**2.76**	**263**	*e*Pn	**Pn**	**08 50 52.7**	**-0.8**
GKN				*e*Sn	**Sn**	**08 51 25.5**	**-0.3**
	556nm,0.3s						
KOLN	**Koldanda**	**3.70**	**262**	*e*Pn	**Pn**	**08 51 04.7**	**-1.6**
KOLN				*e*Sn	**Sn**	**08 51 46.8**	**-1.9**
	408nm,0.4s						
CMAR	**Chiang Mai Arr**	**14.24**	**131**	Pn	**Pn**	**08 53 22.8**	**-6.5**
	0.7nm,0.3s,baz=301,slow=11,SNR=6.4						
MKAR	**Makanchi Array**	**18.89**	**348**	P	**Pn**	**08 54 25.8**	**-1.1**
	0.2nm,0.3s,baz=163,slow=9.7,SNR=3.6						
SONM	**Songino Array**	**24.25**	**32**	P	**P**	**08 55 21.3**	**+0.3**
	1.5nm,0.4s,mb3.7,baz=219,slow=10,SNR=11						
ZALV	**Zalesovo Beam**	**25.66**	**356**	P	**P**	**08 55 35.2**	**+1.5**
	1.1nm,0.4s,mb3.6,baz=162,slow=7.9,SNR=1.6						
TGY	**Tagaytay City**	**33.91**	**108**	LR	LR	09 12 00.7	
	comp=Z,5.5nm,21.2s,baz=176,slow=39						
ASAR	**Alice Springs**	**68.22**	**135**	P	**P**	**09 01 03.8**	**-0.1**
	0.4nm,0.7s,mb3.4,baz=315,slow=6.4,SNR=6.5						

BJI 01 09:00:13.5,32°.08N×104°.53E,h15km,ML3.6/10,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.34**	**210**	Pg	Pg	09 00 37.6	-1.7
CD2				Sg	Sg	09 00 56.7	0.0
CD2				smax			
	comp=N,1μm,0.6s						
CD2				smax			
	comp=E,3μm,0.7s						
LZH	**Lanzhou**	**4.04**	**352**	Pg	Pg	09 01 27.0	-3.8
LZH				Sn	Sn	09 02 04.0	+2.3
LZH				Sg	Sg	09 02 17.8	-5.3
LZH				smax			
	comp=N,110nm,0.6s						
LZH				smax			
	comp=E,160nm,0.7s						
XAN	**Xi'an**	**4.17**	**61**	Pg	Pg	09 01 25.8	-7.6
XAN				Sn	Sn	09 02 14.2	+9.1
XAN				smax			
	comp=N,160nm,0.7s						
XAN				smax			
	comp=E,63nm,0.6s						

*DDA **01** 09:01:17.5,36°.99N×29°.22E,h7km±6km,Md2.9*

*ISCJB **01** 09:01:18.4±0.6,37°.01N±0°.04×29°.20E±0°.04,h10km±6km, Error ellipse: s-maj=6.6km s-min=5.0km az=26.8*

*ISK **01** 09:01:18.5,37°.01N×29°.19E,h17km,MD2.7*

*CSEM **01** 09:01:18.1±0.3,36°.99N×29°.24E,h10km,MD2.9,Error ellipse: s-maj=6.8km s-min=5.5km az=23.0*

ISC 01 09:01:19.0±0.6,37°.02N±0°.04×29°.21E±0°.04,h15km±6km, n20,σ1§19/31,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.35**	**52**	*e*P	**Pg**	**09 01 23.9**	**-2.3**
GOLH				*e*S	**Sg**	**09 01 30.4**	**-0.8**
GOLH	**Golhisar**	**0.35**	**52**	*e*P	**Pg**	**09 01 23.9**	**-2.3**
GOLH				*e*S	**Sg**	**09 01 30.4**	**-0.7**
ELL	**Elmali**	**0.62**	**116**	*e*PG	**Pg**	**09 01 30.7**	**-0.4**
ELL				*e*SG	**Sg**	**09 01 41.2**	**+1.8**
ELL	**Elmali**	**0.62**	**116**	*e*Pg	**Pg**	**09 01 30.7**	**-0.4**
ELL				*e*Sg	**Sg**	**09 01 41.2**	**+1.8**
DNZL	**Cakiroluk**	**0.68**	**349**	*e*P	**Pg**	**09 01 26.3**	**-6.0**
DNZL				*e*S	**Sg**	**09 01 42.3**	**+0.9**
DENT	**Denizli**	**0.75**	**349**	*e*PG	**Pg**	**09 01 33.8**	**+0.2**
DENT				*e*SG	**Sg**	**09 01 44.6**	**+1.2**
DENT	**Denizli**	**0.75**	**349**	*e*Pg	**Pg**	**09 01 33.8**	**+0.2**
DENT				*e*Sg	**Sg**	**09 01 44.6**	**+1.2**
YER	**Yerkesik**	**0.75**	**279**	*e*PG	**Pg**	**09 01 33.8**	**+0.1**
YER				*e*SG	**Sg**	**09 01 43.3**	**-0.2**
YER	**Yerkesik**	**0.75**	**279**	*e*Pg	**Pg**	**09 01 33.8**	**+0.2**
YER				*e*Sg	**Sg**	**09 01 43.3**	**-0.2**
AKAS	**Kas**	**0.84**	**158**	*e*P	**Pb**	**09 01 33.0**	**-2.4**
AKAS				*e*S	**Sb**	**09 01 49.4**	**+2.9**
AKAS	**Kas**	**0.84**	**158**	*e*P	**Pb**	**09 01 33.0**	**-2.4**
KORT	**Korkueli**	**0.91**	**91**	*e*P	**Pb**	**09 01 36.3**	**-0.2**
KORT				*e*S	**Sb**	**09 01 51.8**	**+3.4**
KORT	**Korkueli**	**0.91**	**91**	*e*P	**Pb**	**09 01 36.3**	**-0.2**
KHL	**Karahalli**	**1.32**	**11**	*e*PN	**Pn**	**09 01 42.6**	**-0.4**
KHL	**Karahalli**	**1.32**	**11**	*e*Pn	**Pn**	**09 01 42.6**	**-0.4**
DAT	**Datca**	**1.34**	**258**	*e*PN	**Pn**	**09 01 43.6**	**+0.4**
DAT	**Datca**	**1.34**	**258**	*e*Pn	**Pn**	**09 01 43.6**	**+0.4**
BODT	**Bodrum**	**1.52**	**272**	*e*PN	**Pn**	**09 01 45.4**	**-0.3**
BODT	**Bodrum**	**1.52**	**272**	*e*Pn	**Pn**	**09 01 45.4**	**-0.2**
KULA	**Kula-Manisa**	**1.56**	**344**	*e*PN	**Pn**	**09 01 45.6**	**-0.5**

IDC 01 09:13:17.9±2.5,17°.35S×179°.01W,h501km±35km, mb3.2/6,mb1 3.4/7,mb1mx3.2/15,mbtmp3.3/7,Error ellipse: s-maj=60.3km s-min=17.8km az=145.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.76**	**65**	P	P	09 15 11.9	0.0
	2.8nm,0.3s,baz=190,slow=12,SNR=4.8						
STKA	**Stephens Creek**	**38.40**	**240**	P	P	09 19 55.5	-0.3
	2.4nm,0.9s,baz=84,slow=7.5,SNR=4.8						
ASAR	**Alice Springs**	**44.39**	**254**	P	P	09 20 43.6	+0.1
	4.1nm,0.5s,baz=88,slow=7.8,SNR=100						
PETK	**Petropavlovsk-**	**73.00**	**346**	P	P	09 23 56.8	+0.9
	1.9nm,0.8s,baz=114,slow=10.0,SNR=4.2						
ILAR	**Eielson Array**	**85.48**	**13**	P	P	09 25 01.0	-0.8
	0.3nm,0.4s,baz=224,slow=5.2,SNR=11						
TXAR	**Lajitas Array**	**86.19**	**58**	P	P	09 25 06.7	+0.7
	0.2nm,0.5s,baz=214,slow=6.0,SNR=6.0						
SONM	**Songino Array**	**92.76**	**319**	P	P	09 25 35.7	-0.4
	0.2nm,0.4s,baz=101,slow=4.6,SNR=2.3						

*IDC **01** 09:34:31.1±11.0,35°.42N×143°.62E,h0km,mb3.8/2, mb1 3.5/3,mb1mx3.2/24,mbtmp3.5/3,ML2.5/1,Error ellipse: s-maj=235.0km s-min=106.6km az=166.0*

*JMA **01** 09:34:54.8±0.2,43°.27N×146°.80E,h64km±2km,M3.3*

ISC 01 09:34:55.1±1.7,43°.3N±0°.1×146°.8E±0°.1,h66km±12km,n12, σ0§49/19,mb3.5/2,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.79**	**276**	P	**Pn**	**09 35 10.4**	**-0.4**
NEM2				*e*S	**Sn**	**09 35 21.7**	**-0.7**
JRA	**Rausu**	**1.40**	**298**	P	**Pn**	**09 35 18.5**	**0.0**
JRA				*e*S	**Sn**	**09 35 36.0**	**-0.1**
JNK	**Nakash**	**1.56**	**282**	P	**Pn**	**09 35 20.4**	**-0.3**
JNK				*e*S	**Sn**	**09 35 39.7**	**-0.4**
JAK	**Akkeshi**	**1.58**	**260**	P	**Pn**	**09 35 20.8**	**-0.2**
JAK				*e*S	**Sn**	**09 35 40.4**	**-0.2**
JOB	**Onbets**	**2.22**	**261**	P	**Pn**	**09 35 30.4**	**+0.8**
JOB				*e*S	**Sn**	**09 35 56.1**	**+0.1**
JTKR	**Abashiri--Toko**	**2.22**	**289**	P	**Pn**	**09 35 30.3**	**+0.7**
JAR	**Ashorobuto**	**2.23**	**271**	P	**Pn**	**09 35 30.1**	**+0.4**
JAR				*e*S	**Sn**	**09 35 56.6**	**+0.4**
JMP	**Maruseppu**	**2.61**	**287**	P	**Pn**	**09 35 35.9**	**+1.0**
JCH	**Churui**	**2.63**	**256**	P	**Pn**	**09 35 35.3**	**+0.1**
JCH				*e*S	**Sn**	**09 36 05.3**	**-0.6**
JFR	**Furan**	**3.09**	**269**	*e*S	**Sn**	**09 36 18.0**	**+0.7**
SONM	**Songino Array**	**28.43**	**293**	P	**P**	**09 40 42.8**	**-0.5**
	0.6nm,0.6s,mb3.3,baz=102,slow=9.3,SNR=4.1						
MKAR	**Makanchi Array**	**44.59**	**298**	P	**P**	**09 42 59.9**	**-0.5**
	0.4nm,0.3s,mb3.7,baz=76,slow=8.5,SNR=4.6						

*IDC **01** 09:45:19.4±6.6,36°.31N×71°.44E,h85km±58km,mb3.5/3, mb1 3.6/8,mb1mx3.3/28,mbtmp3.6/8,ML3.6/4,Error ellipse: s-maj=58.3km s-min=42.3km az=135.0*

*ISCJB **01** 09:45:20.1±0.5,36°.37N±0°.03×71°.59E±0°.06,h115km±9km, mb3.6/4,Error ellipse: s-maj=7.6km s-min=5.3km az=0.1*

*NEIC **01** 09:45:22.3±1.0,36°.50N×71°.27E,h103km±10km,mb4.4/6, Error ellipse: s-maj=22.2km s-min=9.2km az=130.0*

*NNC **01** 09:45:31.2±18.0,37°.27N×71°.33E,h216km±244km,mb3.0, mpv4.0,Error ellipse: s-maj=175.7km s-min=95.2km az=12.0*

ISC 01 09:45:21.6±0.5,36°.37N±0°.03×71°.56E±0°.06,h111km±8km, n36,σ1§15/45,mb3.6/4,4C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.75**	**229**	*e*Pn	**Pn**	**09 46 04.2**	**-0.1**
KBL				Sn	**Sn**	**09 46 37.7**	**+0.6**
KSH	**Kashi**	**4.69**	**47**	Pn	**Pn**	**09 46 27.9**	**-2.3**
KSH				Sn	**Sn**	**09 47 14.9**	**-8.7**
KSH				smax			
	comp=N,220nm,0.4s						
KSH				smax			
	comp=E,240nm,0.3s						
AML	**Almayashu**	**5.99**	**15**	P	**Pn**	**09 46 48.5**	**+0.8**
	SNR=89						
AML	**Almayashu**	**5.99**	**15**	*e*Pn	**Pn**	**09 46 48.2**	**+0.5**
	comp=E,25nm,0.4s						
AML				*e*Sn	**Sn**	**09 47 53.3**	**-1.5**
UCH	**Uchtor**	**6.28**	**20**	P	**Pn**	**09 46 54.5**	**+2.8**
	SNR=6.2						
UCH	**Uchtor**	**6.28**	**20**	*e*Pn	**Pn**	**09 46 52.2**	**+0.6**
	comp=E,5.1nm,0.5s						
UCH				*e*Sn	**Sn**	**09 48 01.1**	**-0.9**
KZA	**Kyzart**	**6.38**	**26**	P	**Pn**	**09 46 54.8**	**+1.8**
	SNR=8.0						
EKS2	**Erkin-Say**	**6.51**	**15**	P	**Pn**	**09 46 55.7**	**+0.8**
	SNR=31						
EKS2	**Erkin-Say**	**6.51**	**15**	*e*Pn	**Pn**	**09 46 55.3**	**+0.5**
	comp=E,10nm,0.6s						
AAK	**Ala-Archa**	**6.65**	**19**	P	**Pn**	**09 46 58.1**	**+1.4**
	SNR=11						
AAK	**Ala-Archa**	**6.65**	**19**	P	**Pn**	**09 46 57.1**	**+0.4**
	comp=E,0.1nm,0.3s,baz=165,slow=6.2,SNR=15						
AAK				S	**Sn**	**09 48 10.6**	**-0.4**
	comp=E,1.1nm,0.3s,baz=151,slow=10,SNR=9.9						
KK31	**Karatay Array**	**6.77**	**353**	⇑P	**Pn**	**09 46 56.9**	**-1.4**
	comp=E,14nm,0.4s,baz=181,slow=14						
KK31				⇑S	**Sn**	**09 48 07.8**	**-6.1**
	comp=E,2.2nm,0.3s,baz=180,slow=23						
ULHL	**Ulahol**	**6.90**	**30**	P	**Pn**	**09 47 01.7**	**+1.7**
	SNR=6.8						
SMLA	**Simla**	**7.01**	**137**	*i* P	**Pn**	**09 47 02.6**	**+1.0**
SMLA				*i* S	**Sn**	**09 48 19.3**	**-0.4**
SMLA				⇓		09 48 22.2	
	comp=E,1μm,0.3s						
SMLA				⇓		09 48 22.8	
	comp=N,895nm,0.2s						
TKM2	**Tokmak 2**	**7.25**	**24**	⇑P	**Pn**	**09 47 06.2**	**+1.4**
	comp=N,4.0nm,0.6s						
TKM2				⇑S	**Sn**	**09 48 17.6**	**-7.8**
	comp=N,3.8nm,0.1s						
TKM2	**Tokmak 2**	**7.25**	**24**	P	**Pn**	**09 47 06.2**	**+1.4**
	SNR=6.1						
TKM2	**Tokmak 2**	**7.25**	**24**	*e*Pn	**Pn**	**09 47 05.8**	**+1.1**
	comp=N,3.8nm,0.4s						
KLP	**Kalpa**	**7.36**	**129**	*e*PKP	**Pn**	**09 47 05.2**	**-1.1**
KLP				*e*S	**Sn**	**09 48 27.8**	**-0.5**
KUDL	**Kundal**	**9.20**	**152**	*e*S	**Sn**	**09 49 08.2**	**-4.8**
SONA	**Sohna**	**9.34**	**148**	*e*S	**Sn**	**09 49 12.7**	**-3.9**
AGRA	**Agra**	**10.60**	**147**	*e*S	**Sn**	**09 49 43.1**	**-4.0**
AGRA				AML	AML	09 50 13.5	
	comp=E,70nm,0.5s						
AGRA				AML	AML	09 50 13.6	
	comp=N,66nm,0.2s						
MKAR	**Makanchi Array**	**13.14**	**34**	P	**Pn**	**09 48 24.3**	**+0.5**
MKAR	**Makanchi Array**	**13.14**	**34**	P	**Pn**	**09 48 24.3**	**+0.5**
	comp=N,0.1nm,0.3s,baz=217,slow=13,SNR=6.0						
AB31	**Akbulak array**	**15.42**	**330**	P	**Pn**	**09 48 49.1**	**-3.8**
	comp=N,1.1nm,0.3s,baz=139,slow=19,SNR=52						
AB31				⇓S	S	09 51 26.8	-25
	comp=N,0.9nm,0.6s,baz=161,slow=22,SNR=4.9						
ABKAR	**Akbulak array**	**15.42**	**330**	*e*Pn	**Pn**	**09 48 48.8**	**-4.1**
	comp=N,3.0nm,0.3s						
ABKAR				*e*Sn	Sn	09 51 20.9	-22
BVAR	**Borovoye Array**	**16.68**

LADK	**Ladik-KONYA**	**1.22**	**254**	*e*PN	**Pn**	**09 54 03.6**	**-1.4**
LADK	**Ladik-KONYA**	**1.22**	**254**	*e*Pn	**Pn**	**09 54 03.4**	**-1.6**
LADK				*e*Sn	**Sn**	**09 54 19.7**	**-1.5**
KONT	**Konya--Tatoy**	**1.32**	**243**	*e*PN	**Pn**	**09 54 07.1**	**+0.8**
KONT	**Konya--Tatoy**	**1.32**	**243**	*e*Pn	**Pn**	**09 54 06.3**	**0.0**
KONT				*e*Sn	**Sn**	**09 54 24.7**	**+1.1**

IDC ***01*** *09:57:26.9±1.1,31°.66N×104°.79E,h0km,mb3.6/6, mb1 3.7/8,mb1mx3.6/24,mbtmp3.5/8,ML3.7/2,Error ellipse: s-maj=42.3km s-min=22.0km az=69.0*

BJI ***01*** *09:57:33.9,32°.17N×104°.65E,h15km,ML3.5/11*

ISC 01 09:57:30.8±0.6,32°.05N±0°.05×104°.83E±0°.06,h10km,n12, σ1§06/18,mb3.5/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.46**	**219**	Pg	**Pg**	**09 57 58.3**	**-0.5**
CD2				Sg	**Sg**	**09 58 16.9**	**-0.8**
CD2				smax			
	comp=N,2μm,0.6s						
CD2				smax			
	comp=E,3μm,0.7s						
XAN	**Xi'an**	**3.97**	**59**	Pn	**Pn**	**09 58 34.5**	**+2.8**
XAN				Pg	**Pg**	**09 58 46.2**	**-0.6**
XAN				Sn	**Sn**	**09 59 22.5**	**+4.2**
XAN				Sg	**Sg**	**09 59 36.9**	**-1.4**
XAN				smax			
	comp=N,100nm,0.6s						
XAN				smax			
	comp=E,58nm,0.8s						
LZH	**Lanzhou**	**4.11**	**349**	Pn	**Pn**	**09 58 38.2**	**+4.5**
LZH				Pg	**Pg**	**09 58 48.8**	**-0.8**
LZH				Sn	**Sn**	**09 59 26.3**	**+4.5**
LZH				Sg	**Sg**	**09 59 41.8**	**-1.0**
LZH				smax			
	comp=N,180nm,0.7s						
LZH				smax			
	comp=E,190nm,0.6s						
GTA	**Gaotai**	**8.40**	**332**	*e*P	Px	10 00 11.2	
GTA				pP		10 00 16.0	
GTA				sP		10 00 19.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.54**	**203**	Pn	**Pn**	**10 00 49.1**	**-7.5**
	comp=Z,0.3nm,0.3s,baz=360,slow=10,SNR=3.4						
SONM	**Songino Array**	**15.81**	**4**	Pn	**Pn**	**10 01 15.1**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=187,slow=11,SNR=3.2						
MKAR	**Makanchi Array**	**22.69**	**317**	P	**P**	**10 02 32.9**	**+0.5**
	comp=Z,0.5nm,0.7s,mb3.1,baz=114,slow=12,SNR=5.6						
ZALV	**Zalesovo Beam**	**26.16**	**333**	P	**P**	**10 03 05.5**	**+0.5**
	comp=Z,1.2nm,0.6s,mb3.6,baz=116,slow=13,SNR=5.7						
ARCES	**ARCESS Array B**	**56.66**	**336**	P	**P**	**10 07 13.9**	**+0.1**
	comp=Z,2.2nm,0.8s,mb4.2,baz=96,slow=9.2,SNR=4.2						
ASAR	**Alice Springs**	**61.98**	**150**	P	**P**	**10 07 46.6**	**-4.5**
	comp=Z,0.2nm,0.5s,mb3.5,baz=333,slow=6.2,SNR=3.4						
ILAR	**Eielson Array**	**68.72**	**26**	P	**P**	**10 08 34.0**	**-0.2**
	comp=Z,0.1nm,0.4s,mb3.1,baz=292,slow=4.4,SNR=3.7						
YKA	**Yellowknife Ar**	**80.61**	**17**	P	**P**	**10 09 44.1**	**+0.9**
	comp=Z,0.4nm,0.5s,mb3.6,baz=327,slow=5.1,SNR=4.8						

BJI 01 10:18:47.6,32°.00N×104°.81E,h9km,ML3.5/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.41**	**220**	Pg	Pg	10 19 12.5	-2.2
CD2				Sg	Sg	10 19 31.1	-1.9
CD2				smax			
	comp=N,2μm,0.6s						
CD2				smax			
	comp=E,3μm,0.4s						
XAN	**Xi'an**	**4.01**	**58**	Pg	Pg	10 19 58.8	-5.6
XAN				Sg	Sg	10 20 49.6	-6.7
XAN				smax			
	comp=N,98nm,0.7s						
XAN				smax			
	comp=E,26nm,0.7s						
LZH	**Lanzhou**	**4.15**	**349**	Pg	Pg	10 20 02.5	-4.7
LZH				Sn	Sn	10 20 39.8	-0.1
LZH				Sg	Sg	10 20 53.1	-7.9
LZH				smax			
	comp=N,67nm,0.7s						
LZH				smax			
	comp=E,130nm,0.6s						

ISCJB ***01*** *10:23:15.4±2.2, 18°.8N±0°.1×145°.4E±0°.2,h214km±23km, mb3.5/11,Error ellipse: s-maj=30.8km s-min=21.7km az=179.9*

IDC ***01*** *10:23:15.2±2.8, 18°.88N×145°.46E,h196km±31km, mb3.3/10,mb1 3.5/11,mb1mx3.4/23,mbtmp3.4/11,Error ellipse: s-maj=24.6km s-min=22.6km az=67.0*

NEIC ***01*** *10:23:16.8±1.6, 18°.85N×145°.45E,h213km±17km,mb4.0/1, Error ellipse: s-maj=19.8km s-min=14.1km az=91.0*

ISC 01 10:23:16.0±2.0,18°.8N±0°.1×145°.5E±0°.2,h205km±22km, n14,σ0§72/15,mb3.5/11,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.24**	**186**	P	**Pn**	**10 24 34.9**	**+1.2**
	5.8nm,0.3s,baz=18,slow=20,SNR=5.0						
GUMO				S	**Sn**	**10 25 34.0**	**-1.0**
	6.0nm,0.3s,baz=37,slow=20,SNR=3.5						
WRAB	**Tennant Creek**	**40.03**	**196**	*e*P	**P**	**10 30 31.1**	**-0.1**
	3.8nm,0.7s,mb3.9						
SONM	**Songino Array**	**42.89**	**321**	P	**P**	**10 30 54.8**	**+0.6**
	0.2nm,0.3s,mb3.0,baz=123,slow=7.7,SNR=2.5						
ASAR	**Alice Springs**	**43.71**	**195**	P	**P**	**10 31 01.6**	**+0.6**
	0.5nm,0.7s,mb3.0,baz=24,slow=7.2,SNR=6.0						
ZALV	**Zalesovo Beam**	**57.77**	**322**	P	**P**	**10 32 45.2**	**-0.3**
ZALV	**Zalesovo Beam**	**57.77**	**322**	P	**P**	**10 32 45.2**	**-0.3**
	0.5nm,0.4s,mb3.5,baz=133,slow=6.3,SNR=2.9						
MKAR	**Makanchi Array**	**58.20**	**314**	P	**P**	**10 32 49.0**	**+0.3**
MKAR	**Makanchi Array**	**58.20**	**314**	P	**P**	**10 32 49.0**	**+0.3**
	0.4nm,0.2s,mb3.6,baz=92,slow=9.2,SNR=5.6						
ILAR	**Eielson Array**	**63.63**	**26**	P	**P**	**10 33 24.0**	**-0.9**
	0.7nm,0.7s,mb3.4,baz=258,slow=5.1,SNR=5.9						
BVAR	**Borovoye Array**	**66.22**	**320**	P	**P**	**10 33 41.8**	**0.0**
	0.9nm,0.5s,mb3.6,baz=88,slow=11,SNR=3.1						
INK	**Inuvik**	**69.35**	**23**	P	**P**	**10 34 01.1**	**+0.1**
	0.8nm,0.5s,mb3.6,baz=236,slow=3.6,SNR=4.3						
YKA	**Yellowknife Ar**	**77.98**	**28**	P	**P**	**10 34 51.1**	**-0.2**
	0.7nm,0.5s,mb3.5,baz=286,slow=5.4,SNR=6.2						
NVAR	**Mina Array Bea**	**83.25**	**52**	P	**P**	**10 35 20.7**	**+1.0**
	1.8nm,0.7s,mb3.9,baz=264,slow=5.9,SNR=15						
FINES	**FINESS Array B**	**86.67**	**335**	P	**P**	**10 35 35.0**	**-1.3**
	0.4nm,0.3s,mb3.6,baz=28,slow=4.5,SNR=3.6						

SZGRF ***01*** *10:35:19.6, 13°.58N×122°.24E,h132km, mb5.6,Luzon, Philippine Islands*

BJI ***01*** *10:35:20.9, 13°.36N×121°.03E,h140km, mB5.2/37, mb5.1/65*

MOS ***01*** *10:35:23.0±1.0, 13°.63N×120°.77E,h134km,mb5.3/75, MS4.5/16,Error ellipse: s-maj=8.0km s-min=4.4km az=119.6*

ISCJB ***01*** *10:35:23.4±0.1, 13°.66N±0°.01×120°.75E±0°.02,h133km, mb5.3/237,Error ellipse: s-maj=2.7km s-min=1.9km az=167.3*

IDC ***01*** *10:35:23.6±0.3, 13°.55N×120°.86E,h133km±2km, mb4.9/32, mb1 4.9/32,mb1mx4.8/34,mbtmp4.9/32,MS4.4/10, Ms1 4.4/10,ms1mx4.1/27,Error ellipse: s-maj=9.7km s-min=7.8km az=72.0*

GCMT ***01*** *10:35:24.8±0.1, 13°.56N×120°.77E,h136km,MW5.6, Moment Tensor Solution. s98,c166; s27,c29; Moment tensor: Scale 10^17Nm; Mrr2.52±.03; Mθθ-1.23±.04; Mϕϕ-1.29±.05; Mrθ-0.46±.03; Mθϕ1.45±.03; Mϕr-0.60±.03; Best double couple: M0 2.70000×10^17 NP1:ϕs300.00000°, δ46.00000°,λ67.00000°. NP2:ϕs151.00000°,δ48.00000°, λ112.00000°. Principal axes: T 2.7400, Plg74.0000°, Azm132.0000°; N -0.0300, Plg16.0000°, Azm316.0000°; P -2.7100, Plg1.0000°, Azm226.0000°; Data Used: II IU IC G CN. Surface waves: sta=109, comp=209, per= 50.*

NEIC ***01*** *10:35:24.3±0.1, 13°.52N×120°.76E, mb5.3/108, MW5.6, MW5.5 Error ellipse: s-maj=4.3km s-min=3.5km az=71.0, Moment Tensor Solution. s22 Moment tensor: Scale 10^17Nm; Mrr3.04; Mθθ-0.29; Mϕϕ-2.75; Mrθ-0.39; Mθϕ1.36; Mϕr-0.07; Best double couple: M0 3.20000×10^17 NP1: ϕs328.00000°, δ46.00000°, λ79.00000°. NP2: ϕs164.00000°, δ45.00000°, λ101.00000°. Principal axes: T 3.1000, Plg82.0000°, Azm162.0000°; N 0.2600, Plg7.0000°, Azm335.0000°; P -3.3600, Plg0.0000°, Azm65.0000°;*

NEIC Felt [V] at Bacolod, Negros and [IV] at Iloilo, Panay. Felt [III PIVS] at Manila and San Fernando, Luzon. Also felt at Angeles and Batangas. Felt [II PIVS] at Puerto Galera, Mindoro.

MAN ***01*** *10:35:24, 13°.60N×120°.65E,h117km, mb5.7,ML4.7, MS5.3*

MAN INTENSITY III - MANILA CITY; SAN FERNANDO PAMPANGA; INTENSITY II - PUERTO GALERA.

DJA ***01*** *10:35:29, 13°.60N×120°.85E,h182km,Mw5.6/59*

ISC 01 10:35:24.8±0.1,13°.65N±0°.01×120°.76E±0°.02,h135km, h135km±.7km:pP-P,n852,σ1§12/671,mb5.3/236,151C-92D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.24**	**128**	*e*P	**Pn**	**10 35 42.0**	**-1.3**
TGY	**Tagaytay City**	**0.48**	**21**	P	**Pn**	**10 35 44.1**	**-0.2**
	14μm,0.3s,baz=188,slow=2.6,SNR=1158						
TGY				S	**Sn**	**10 35 59.9**	**+0.7**
	14μm,0.3s,baz=6.4,slow=20,SNR=18						
TGY	**Tagaytay City**	**0.48**	**21**	*i*P	**Pn**	**10 35 44.2**	**-0.1**
BOAC	**Boac**	**1.07**	**100**	*e*P	**Pn**	**10 35 49.2**	**+0.4**
POLP	**Polilio Island**	**1.57**	**47**	*e*P	**Pn**	**10 35 55.2**	**+1.2**
GQP	**Guinayangan**	**1.66**	**81**	*i*P	**Pn**	**10 35 55.8**	**+0.8**
BUSP	**Coron**	**1.72**	**199**	*e*P	**Pn**	**10 35 54.1**	**-1.7**
OTRP	**Odiongan**	**1.77**	**136**	*e*P	**Pn**	**10 35 55.4**	**-1.0**
AUQP	**San Andres**	**1.89**	**100**	*e*P	**Pn**	**10 36 00.3**	**+2.5**
BALP	**Baler**	**2.23**	**21**	*e*P	**Pn**	**10 36 03.2**	**+1.4**
SCZP	**Santa Cruz**	**2.27**	**339**	*e*P	**Pn**	**10 36 02.8**	**+0.4**
BCPH	**Baguio City Da**	**2.72**	**356**	*i*P	**Pn**	**10 36 09.0**	**+0.9**
ENPP	**El Nido**	**2.75**	**208**	*e*P	**Pn**	**10 36 07.6**	**-0.9**
CUYO	**Cuyo Island**	**2.79**	**175**	*e*P	**Pn**	**10 36 07.7**	**-1.3**
BOLP	**Bolinao**	**2.84**	**343**	*e*P	**Pn**	**10 36 10.0**	**+0.5**
RCP	**Roxas**	**2.84**	**137**	*e*P	**Pn**	**10 36 09.3**	**-0.3**
RCP				*e*S	**Sn**	**10 36 39.6**	**-4.4**
MMPH	**Masbate**	**3.07**	**114**	*i*P	**Pn**	**10 36 13.2**	**+0.6**
MMPH				*i*S	**Sn**	**10 36 49.4**	**0.0**
PVCP	**Virac**	**3.30**	**90**	*e*P	**Pn**	**10 36 16.9**	**+1.4**
CAUP	**Cauayan**	**3.43**	**17**	*e*P	**Pn**	**10 36 18.7**	**+1.4**
GUIM	**Jordan**	**3.50**	**149**	*e*P	**Pn**	**10 36 18.8**	**+0.7**
PALP	**Palanan**	**3.76**	**25**	*e*P	**Pn**	**10 36 22.8**	**+1.3**
CNP	**Catarman**	**3.97**	**106**	*e*P	**Pn**	**10 36 26.1**	**+1.8**
ABRA	**Dolores**	**3.98**	**359**	*e*P	**Pn**	**10 36 24.9**	**+0.5**
APYP	**Conner**	**4.22**	**6**	*e*P	**Pn**	**10 36 29.5**	**+1.9**
SIPP	**Brgy, Tapao**	**4.26**	**356**	*i*P	**Pn**	**10 36 30.0**	**+1.8**
LLP	**Lapu-Lapu**	**4.56**	**136**	*e*P	**Pn**	**10 36 32.9**	**+0.7**
LLP				*e*S	**Sn**	**10 37 22.3**	**-2.2**
OCLP	**Ormoc**	**4.56**	**124**	*e*P	**Pn**	**10 36 34.2**	**+2.0**
SNPH	**Sibulan**	**4.92**	**150**	P	**Pn**	**10 36 38.0**	**+1.1**
SNPH				*i*S	**Sn**	**10 37 38.4**	**+5.3**
TBP	**Tagbilaran**	**4.97**	**142**	*e*P	**Pn**	**10 36 38.4**	**+0.7**
BATP	**Bataraza**	**5.63**	**211**	*e*P	**Pn**	**10 36 46.0**	**-0.5**
SCPH	**Surigao**	**6.02**	**129**	*e*P	**Pn**	**10 36 53.2**	**+1.5**
SCPH				*e*S	**Sn**	**10 37 59.1**	**-0.4**
IPIL	**Ipil**	**6.09**	**163**	*i*P	**Pn**	**10 36 54.0**	**+1.3**
PAGZ	**Pagadian**	**6.31**	**156**	*e*P	**Pn**	**10 36 58.0**	**+2.3**
CGP	**Cagayan de Oro**	**6.45**	**143**	*e*P	**Pn**	**10 36 59.4**	**+2.0**
BUTP	**Butuan**	**6.66**	**134**	*e*P	**Pn**	**10 37 02.5**	**+2.2**
BUKP	**Musuan**	**7.12**	**143**	*e*P	**Pn**	**10 37 08.9**	**+2.3**
KDM	**Kudat**	**7.72**	**210**	P	**Pn**	**10 37 15.2**	**+0.5**
DAV	**Davao City (W)**	**8.07**	**144**	*e*Pn	**Pn**	**10 37 22.3**	**+3.0**
DAV	**Davao City (W)**	**8.07**	**144**	P	**Pn**	**10 37 22.0**	**+2.7**
	43nm,0.3s,baz=266,slow=5.4,SNR=10						
DAV				LR	LR	10 41 09.0	
	comp=Z,1μm,20.1s,baz=258,slow=44						
DAV	**Davao City (W)**	**8.07**	**144**	*e*P	**Pn**	**10 37 12.1**	**-7.3**
DAV	**Davao City (W)**	**8.07**	**144**	P	**Pn**	**10 37 24.2**	**+4.8**
DAV	**Davao City (W)**	**8.07**	**144**	P	**Pn**	**10 37 23.1**	**+3.8**
	SNR=5.9						
SDKM	**Sandakan**	**8.70**	**204**	P	**Pn**	**10 37 27.2**	**-0.5**
MYLDM	**Lahad Datu**	**8.70**	**195**	P	**Pn**	**10 37 29.3**	**+1.5**
MYLDM	**Lahad Datu**	**8.70**	**195**	P	**Pn**	**10 37 30.4**	**+2.6**
	808nm,1.2s						
KKM	**Kota Kinabalu**	**8.78**	**211**	*e*Pn	**Pn**	**10 37 26.5**	**-2.4**
	525nm,1.1s						
KKM				*e*Sn	**Sn**	**10 39 07.0**	**+0.7**
KKM	**Kota Kinabalu**	**8.78**	**211**	P	**Pn**	**10 37 29.0**	**+0.2**
KKM	**Kota Kinabalu**	**8.78**	**211**	P	**Pn**	**10 37 29.4**	**+0.5**
TWG	**Pinlang**	**9.13**	**2**	*e*Pn	**Pn**	**10 37 33.9**	**+0.4**
	120nm,0.9s						
TPUB	**Ta-pu**	**9.60**	**359**	*e*Pn	**Pn**	**10 37 39.3**	**-0.5**
	162nm,1.0s						
TSM	**Tawau**	**9.72**	**197**	P	**Pn**	**10 37 43.5**	**+2.0**
SSLB	**Suanglung**	**10.09**	**1**	*e*Pn	**Pn**	**10 37 46.3**	**+0.1**
	51nm,0.7s						
NACB	**Ninganchiao**	**10.50**	**4**	*e*Pn	**Pn**	**10 37 52.8**	**+1.1**
	55nm,0.8s						
SGSI	**Sangihe**	**10.96**	**154**	P	**Pn**	**10 37 59.2**	**+1.3**
	6μm579nm,0.9s						
YHNB	**Yeheng**	**10.98**	**3**	*e*Pn	**Pn**	**10 37 59.7**	**+1.7**
	110nm,0.9s						
QZH	**Quanzhou**	**11.42**	**350**	*i*P	**Pn**	**10 38 03.0**	**-0.9**
QZH				sP		10 38 38.0	
QZH				S	**Sn**	**10 40 14.0**	**+4.1**
QZH				LR	LR		
	comp=N,2μm,11.4s						
QZH				LR	LR		
	comp=E,4μm,19.8s						
QZH				LR	LR		
	comp=Z,4μm,18.2s						
GZH	**Guangzhou**	**11.73**	**324**	P	**Pn**	**10 38 12.3**	**+4.3**
GZH				S	**Sn**	**10 40 29.6**	**+12**
GZH				LR	LR		
	comp=N,3μm,14.0s						
GZH				LR	LR		
	comp=E,1μm,12.3s						
GZH				LR	LR		
	comp=Z,3μm,16.7s						
QIZ	**Qiongzhong**	**11.76**	**298**	P	**Pn**	**10 38 10.5**	**+2.0**
QIZ				sP		10 38 47.5	
QIZ				S	**Sn**	**10 40 17.7**	**-0.6**
QIZ				pmax	pmax		
	comp=Z,39nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,370nm,7.8s						
QIZ	**Qiongzhong**	**11.76**	**298**	*e*Pn	**Pn**	**10 38 09.7**	**+1.2**
	comp=Z,69nm,0.9s						
QIZ				*e*Sn	**Sn**	**10 40 17.1**	**-1.1**
TOLI	**Toli-Toli**	**12.45**	**180**	P	**Pn**	**10 38 18.1**	**+0.7**
	comp=Z,296nm,1.1s						
MNI	**Manado**	**12.78**	**161**	P	**Pn**	**10 38 23.1**	**+1.3**
	comp=Z,3μm,1.3s						
BTM	**Bintulu**	**12.86**	**217**	P	**Pn**	**10 38 22.5**	**-0.3**
MRSI	**Marisa**	**13.14**	**175**	P	**Pn**	**10 38 27.7**	**+1.3**
	comp=Z,4μmcomp=Z,498nm,0.9s						
KMSI	**Cibinong**	**13.38**	**166**	P	**Pn**	**10 38 31.3**	**+1.8**
	comp=Z,2μm,0.9s						
SBUM	**Sibu**	**13.97**	**218**	P	**Pn**	**10 38 37.5**	**+0.5**
SBUM	**Sibu**	**13.97**	**218**	P	**Pn**	**10 38 37.5**	**+0.5**
	comp=Z,5μmcomp=Z,543nm,1.0s						
TNTI	**Ternate**	**14.37**	**152**	P	**Pn**	**10 38 39.3**	**-2.8**
SMKI	**Samarinda**	**14.44**	**194**	P	**Pn**	**10 38 46.0**	**+3.0**
	comp=Z,343nm,1.2s						
PCI	**Palu**	**14.49**	**184**	P	**Pn**	**10 38 46.2**	**+2.6**
	comp=Z,3μmcomp=Z,172nm,1.0s						
LUWI	**Luwuk**	**14.73**	**172**	P	**Pn**	**10 38 47.3**	**+0.6**
	comp=Z,1μm,1.1s						
LBMI	**Labuha**	**15.69**	**154**	P	**Pn**	**10 38 56.0**	**-2.6**
KSM	**Kuching**	**15.91**	**221**	*e*P	**Pn**	**10 39 01.8**	**+0.4**
	comp=Z,836nm,0.9s						
KSM				*e*S	**S**	**10 42 03.0**	**+4.0**
KSM	**Kuching**	**15.91**	**221**	P	**Pn**	**10 39 02.9**	**+1.5**
KSM	**Kuching**	**15.91**	**221**	P	**Pn**	**10 39 02.5**	**+1.1**
	comp=Z,9μmcomp=Z,1μm,0.9s						
STKI	**Sintang**	**16.33**	**215**	P	**Pn**	**10 39 08.5**	**+2.0**
	comp=Z,148nm,1.2s						
SSE	**Sheshan**	**17.37**	**1**	P	**Pn**	**10 39 20.0**	**+1.1**
SSE				S	**S**	**10 42 31.0**	**-0.9**
SSE				pmax	pmax		
	comp=Z,24nm,0.7s						
SSE				pmax	pmax		
	comp=Z,220nm,8.3s						
SSE				LR	LR		
	comp=N,420nm,16.5s						
SSE				LR	LR		
	comp=E,870nm,16.5s						
SSE				LR	LR		
	comp=Z,930nm,16.6s						
KBKI	**Kotabaru**	**17.44**	**195**	P	**Pn**	**10 39 21.9**	**+2.0**
	comp=Z,2μmcomp=Z,202nm,0.9s						
KDI	**Kendari**	**17.59**	**174**	P	**Pn**	**10 39 20.5**	**-1.2**
	comp=Z,6μmcomp=Z,376nm,1.1s						
WHN	**Wuhan**	**17.82**	**342**	P	**Pn**	**10 39 25.5**	**+1.1**
WHN				sP	sP	10 40 04.3	+0.2
WHN				S	**S**	**10 42 42.0**	**+0.9**
WHN				pmax	pmax		
	comp=Z,110nm,1.0s						
WHN				pmax	pmax		
	comp=Z,640nm,4.8s						
WHN				LR	LR		
	comp=N,2μm,13.6s						
WHN				LR	LR		
	comp=E,3μm,15.0s						
WHN				LR	LR		
	comp=Z,3μm,13.3s						
NLAI	**Namlea**	**17.92**	**159**	P	**Pn**	**10 39 23.0**	**-2.6**
	comp=Z,5μmcomp=Z,472nm,1.0s						
GYA	**Guiyang**	**18.36**	**316**	*i*P	**P**	**10 39 32.2**	**+3.1**
GYA				PP		10 39 53.8	
GYA				sP	sP	10 40 14.5	+4.5
GYA				S	**S**	**10 42 50.0**	**-1.9**
GYA				PcP	PcP	10 43 55.8	+1.1
GYA				pmax	pmax		
	comp=Z,50nm,1.0s						
GYA				pmax	pmax		
	comp=Z,180nm,4.2s						
NJ2	**Nanjing**	**18.40**	**355**	*e*P	**P**	**10 39 32.5**	**+3.0**
NJ2				PP		10 39 48.5	
NJ2				S	**S**	**10 42 57.0**	**+4.3**
NJ2				pmax	pmax		
	comp=Z,60nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,300nm,6.5s						
NJ2				LR	LR		
	comp=N,1μm,13.4s						
NJ2				LR	LR		
	comp=E,900nm,12.5s						
NJ2				LR	LR		
	comp=Z,960nm,13.0s						
MSAI	**Masohi**	**18.73**	**154**	P	**P**	**10 39 33.7**	**+0.5**
	comp=Z,7μmcomp=Z,364nm,1.1s						
AAI	**Ambon**	**18.74**	**156**	P	**P**	**10 39 33.2**	**-0.1**
	comp=Z,7μmcomp=Z,718nm,0.8s						
BKSI	**Bulukumba**	**18.86**	**182**	P	**P**	**10 39 34.2**	**-0.4**
	comp=Z,2μmcomp=Z,260nm,0.9s						
KTGM	**Kuala Trenggan**	**19.24**	**246**	P	**P**	**10 39 39.7**	**+0.9**
ENH	**Enshi**	**19.55**	**330**	*e*P	**P**	**10 39 43.5**	**+1.5**
	comp=Z,113nm,1.1s						
NST	**Nakhon Sawan**	**20.06**	**278**	P	**P**	**10 39 48.0**	**+0.4**
BNDI	**Bandanaira**	**20.21**	**153**	P	**P**	**10 39 49.1**	**-0.1**
	comp=Z,1μm,1.2s						
KMI	**Kunming**	**20.45**	**307**	P	**P**	**10 39 54.1**	**+2.4**
KMI				pP		10 40 19.0	
KMI				PP		10 40 22.7	
KMI				sP	sP	10 40 35.3	+2.3
KMI				S	**S**	**10 43 35.4**	**+2.1**
KMI				SS		10 44 18.8	
KMI				pmax	pmax		
	comp=Z,84nm,1.0s						
KMI				pmax	pmax		
	comp=Z,690nm,4.2s						
KMI				LR	LR		
	comp=N,2μm,12.9s						
KMI				LR	LR		
	comp=E,550nm,15.7s						
KMI				LR	LR		
	comp=Z,820nm,13.4s						
MYKOM	**Kota Tinggi**	**20.46**	**236**	P	**P**	**10 39 52.4**	**+0.4**
MYKOM	**Kota Tinggi**	**20.46**	**236**	P	**P**	**10 39 52.9**	**+0.9**
	comp=Z,2μmcomp=Z,88nm,1.9s						
KGM	**Kluang**	**20.76**	**238**	P	**P**	**10 39 55.7**	**+0.5**
SNG	**Songkhla**	**20.82**	**254**	P	**P**	**10 39 56.0**	**+0.2**
	comp=Z,160nm,0.8s						
TPI	**Tanjungpandan**	**20.85**	**220**	P	**P**	**10 39 55.3**	**-0.8**
	comp=Z,2μmcomp=Z,189nm,1.4s						
CHRT	**Chiangrai**	**21.01**	**290**	P	**P**	**10 39 58.5**	**+0.7**
	comp=Z,290nm,1.0s,mb5.6						
BAKI	**Biak**	**21.18**	**133**	P	**P**	**10 40 01.1**	**+1.4**
	comp=Z,7μmcomp=Z,733nm,1.0s,mb6.0						
PPBI	**Pangkal Pinang**	**21.38**	**224**	P	**P**	**10 40 01.7**	**-0.1**
	comp=Z,3μmcomp=Z,721nm,1.1s,mb4.9						
KULM	**Kulim**	**21.49**	**249**	*e*P	**P**	**10 40 03.6**	**+0.6**
	comp=Z,48nm,0.6s,mb5.0						
KULM				*e*S	**S**	**10 43 54.2**	**+0.5**
KULM	**Kulim**	**21.49**	**249**	P	**P**	**10 40 02.5**	**-0.4**
KULM	**Kulim**	**21.49**	**249**	P	**P**	**10 40 04.2**	**+1.3**
	comp=Z,2μmcomp=Z,77nm,2.2s,mb4.6						
IPM	**Ipoh**	**21.49**	**247**	P	**P**	**10 40 02.7**	**-0.3**
IPM	**Ipoh**	**21.49**	**247**	P	**P**	**10 40 02.9**	**-0.1**
	comp=Z,1μmcomp=Z,69nm,0.8s,mb5.0						
CM31	**Chiang Mai Arr**	**21.50**	**286**	*e*P	**P**	**10 40 04.9**	**+1.9**
	comp=Z,88nm,0.8s,mb5.1						
CM31				*e*PcP	PcP	10 44 01.1	+0.5
CMAR	**Chiang Mai Arr**	**21.50**	**286**	P	**P**	**10 40 04.3**	**+1.3**
	comp=Z,67nm,0.7s,mb5.1,baz=95,slow=7.8,SNR=230						
CMAR				PcP	PcP	10 44 00.3	-0.3
	comp=Z,16nm,0.7s,baz=92,slow=0.7,SNR=25						
CMAR				ScP	ScP	10 47 24.2	-1.0
	comp=Z,1.2nm,0.6s,baz=81,slow=1.0,SNR=5.3						
CMAR	**Chiang Mai Arr**	**21.50**	**286**	P	**P**	**10 40 04.3**	**+1.3**
CMAR						10 44 00.3	
FRIM	**Kepong**	**21.55**	**243**	P	**P**	**10 40 03.2**	**-0.4**
CHTO	**Chiang Mai**	**21.56**	**287**	*e*P	**P**	**10 40 04.2**	**+0.5**
	comp=Z,43nm,0.8s,mb4.9						
CHTO				*e*S	**S**	**10 43 54.5**	**-0.3**
CHTO	**Chiang Mai**	**21.56**	**287**	*e*P	**P**	**10 40 04.2**	**+0.5**
CHTO				*e*S	**S**	**10 43 54.5**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,43nm,0.8s,mb4.9						
CHTO	**Chiang Mai**	**21.56**	**287**	P	**P**	**10 40 04.2**	**

CD2 pmax pmax
comp=Z,220nm,0.7s,mb5.7
CD2 pmax pmax
comp=Z,660nm,6.5s
CD2 LR LR
comp=N,1μm,13.7s
CD2 LR LR
comp=E,1μm,15.2s
CD2 LR LR
comp=Z,1μm,14.7s
PWJI Pagerwojo 23.29 203 P **P** **10 40 20.6 -0.1**
comp=Z,4μmcomp=Z,403nm,1.1s,mb5.8
GUMO Guam 23.43 87 *eP* **P** **10 40 21.7 -0.4**
comp=Z,914nm,1.2s,mb6.1
GUMO Guam 23.43 87 P **P** **10 40 21.6 -0.4**
comp=Z,569nm,1.0s,mb5.9,baz=218,slow=2.0,SNR=21
GUMO Guam 23.43 87 *eP* **P** **10 40 21.7 -0.3**
GUMO pmax pmax
comp=Z,914nm,1.2s,mb6.1
GUMO Guam 23.43 87 P **P** **10 40 23.3 +1.3**
comp=Z,916nm,1.2s,mb6.1
BJII Banjamegara 23.55 208 P **P** **10 40 24.7 +1.6**
comp=Z,7μmcomp=Z,265nm,1.7s,mb5.5
BKNI Bangkinang 23.59 237 P **P** **10 40 23.5 0.0**
comp=Z,3μmcomp=Z,306nm,1.0s,mb5.8
PCJI Pacitan 23.69 204 P **P** **10 40 26.1 +1.7**
comp=Z,5μmcomp=Z,374nm,1.1s,mb5.8
UGM Wanagama 23.71 206 P **P** **10 40 25.9 +1.4**
comp=Z,6μmcomp=Z,316nm,1.8s,mb5.5
SDSI Sungai Dareh 24.02 234 P **P** **10 40 27.0 -0.4**
comp=Z,4μmcomp=Z,84nm,1.0s,mb5.2
CBIJ Chichi jima 24.08 53 P **P** **10 40 27.1 -0.8**
comp=Z,82nm,0.5s,mb5.5,baz=233,slow=3.7,SNR=14
CBIJ LR LR 10 49 54.9
comp=Z,709nm,18.1s,baz=56,slow=36
PSI Prapat 24.12 245 P **P** **10 40 28.2 -0.1**
comp=Z,111nm,0.9s,mb5.4,baz=52,slow=5.7,SNR=35
PSI PcP PcP 10 44 05.5 -0.6
comp=Z,18nm,0.6s,baz=328,slow=2.1,SNR=7.4
PSI S **S** **10 44 38.5 +2.0**
comp=Z,9.1nm,0.8s,baz=137,slow=15,SNR=7.6
TSI Tuntungan 24.12 247 P **P** **10 40 30.7 +2.3**
comp=Z,321nm,1.2s,mb5.7
LEM Lembang 24.17 213 P **P** **10 40 30.9 +2.2**
comp=Z,3μmcomp=Z,130nm,0.9s,mb5.4
KLSI 24.19 222 P **P** **10 40 29.1 +0.2**
comp=Z,6μmcomp=Z,573nm,1.1s,mb6.0
KLI Kotabumi 24.24 222 P **P** **10 40 31.7 +2.3**
CBJI Citeko 24.25 216 P **P** **10 40 35.0 +5.5**
BLSI Bandar Lampung 24.38 220 P **P** **10 40 32.1 +1.5**
comp=Z,6μmcomp=Z,268nm,0.8s,mb5.8
MDSI Maura Dua 24.40 224 P **P** **10 40 30.7 -0.2**
comp=Z,2μmcomp=Z,94nm,1.2s,mb5.2
MNSI Mandailing Nat 24.55 240 P **P** **10 40 32.0 -0.2**
comp=Z,418nm,0.8s,mb6.0
KSRS Korea Array 24.55 14 P **P** **10 40 32.5 +0.5**
comp=Z,18nm,0.9s,mb4.6,baz=191,slow=9.2,SNR=38
KSRS PcP PcP 10 44 05.7 -1.0
comp=Z,4.5nm,0.7s,baz=201,slow=2.1,SNR=8.5
PPI Padang Panjang 24.57 237 P **P** **10 40 32.3 -0.1**
comp=Z,3μmcomp=Z,152nm,1.0s,mb5.5
CISI Cisompet, Garu 24.68 212 P **P** **10 40 34.0 +0.7**
comp=Z,3μmcomp=Z,230nm,0.9s,mb5.7
PDSI Padang 24.78 236 P **P** **10 40 33.7 -0.6**
comp=Z,187nm,0.8s,mb5.7
LWLI Liwa 24.88 223 P **P** **10 40 35.8 +0.6**
comp=Z,540nm,1.0s,mb6.0
KSI Kapahiang 24.91 228 P **P** **10 40 37.6 +2.1**
comp=Z,378nm,1.0s,mb5.9
KASI Kota Agung 24.97 221 P **P** **10 40 36.0 0.0**
comp=Z,176nm,1.2s,mb5.5
TIY Taiyuan 25.09 344 *eP* **P** **10 40 37.7 +0.9**
TIY pP pP 10 41 05.1 -0.3
TIY PP 10 41 22.4
TIY S **S** **10 44 49.3 -2.1**
TIY pmax pmax
comp=Z,280nm,4.0s
TIY LR LR
comp=N,660nm,12.3s
TIY LR LR
comp=E,580nm,9.5s
TIY LR LR
comp=Z,650nm,15.2s
MNAI Manna 25.15 226 P **P** **10 40 39.6 +2.0**
comp=Z,6μmcomp=Z,462nm,1.3s,mb5.8
DL2 Dalian 25.17 2 P **P** **10 40 37.5 -0.1**
DL2 pP pP 10 41 03.7 -2.4
DL2 PP 10 41 19.2
DL2 S **S** **10 44 51.1 -1.5**
DL2 pmax pmax
comp=Z,30nm,1.0s,mb4.8
TPTI 25.47 248 P PcP 10 44 08.6 -0.5
JHJ Hachijo jima 2 26.00 39 P **P** **10 40 44.5 -0.7**
comp=Z,55nm,0.9s,mb5.2,baz=230,slow=16,SNR=2.6
JHJ LR LR 10 49 19.9
comp=Z,1μm,22.0s,baz=256,slow=32
SISI Saibi 26.13 237 P **P** **10 40 46.2 -0.3**
comp=Z,4μmcomp=Z,330nm,1.0s,mb5.9
BJT Baijiatuan 26.58 352 *eP* **P** **10 40 51.2 +1.0**
comp=Z,23nm,0.8s,mb4.9
BJT Baijiatuan 26.58 352 *eP* **P** **10 40 51.2 +1.0**
BJT pmax pmax
comp=Z,23nm,0.8s
BJI Beijing 26.60 352 P **P** **10 40 50.0 -0.4**
BJI pP pP 10 41 21.8 +2.7
BJI sP sP 10 41 38.1 +3.3
BJI S **S** **10 45 11.2 -4.0**
BJI sS sS 10 46 11.6 +5.8
BJI pmax pmax
comp=Z,35nm,1.6s,mb4.7
LZH Lanzhou 27.02 329 *eP* **P** **10 40 55.6 +1.3**
LZH pP pP 10 41 23.0 0.0
LZH sP sP 10 41 47.0 +8.3
LZH PcP PcP 10 44 13.4 +1.1
LZH S **S** **10 45 22.5 +0.6**
LZH sS sS 10 46 14.6 +2.0
LZH SS SS 10 46 50.5 -31
LZH pmax pmax
comp=Z,350nm,1.0s,mb5.9
LZH pmax pmax
comp=Z,1μm,4.0s
LZH LR LR
comp=N,1μm,14.8s
LZH LR LR
comp=Z,2μm,18.2s
MAJO Matsushiro 27.64 31 *eP* **P** **10 40 59.4 -0.5**
comp=Z,54nm,1.3s,mb5.1
MAJO *e*PcP PcP 10 44 14.2 +0.4
MAJO Matsushiro 27.64 31 *eP* **P** **10 40 59.4 -0.4**
MAJO *e* 10 44 14.2
MAJO pmax pmax
comp=Z,54nm,1.3s,mb5.1
MAT Matsushiro 27.64 31 P **P** **10 40 58.3 -1.5**
MAT S **S** **10 45 30.0 -1.7**
MJAR Matsushiro Arr 27.64 31 P **P** **10 40 58.8 -1.0**
comp=Z,15nm,1.0s,mb4.7,baz=209,slow=8.8,SNR=49
MJAR PcP PcP 10 44 13.3 -0.5
comp=Z,4.5nm,0.7s,baz=200,slow=2.0,SNR=8.3
HHC Hu-ho-hao-te 28.27 345 *eP* **P** **10 41 06.2 +0.9**
HHC pP pP 10 41 32.8 -1.4
HHC sP sP 10 41 47.9 -1.9
HHC PP PP 10 42 00.7 -11
HHC PcP PcP 10 44 18.9 +3.7
HHC S **S** **10 45 38.9 -2.5**
HHC PcS PcS 10 48 00.3 +2.8
HHC pmax pmax
comp=Z,26nm,1.1s,mb4.9
HHC pmax pmax
comp=Z,140nm,4.0s
HHC LR LR
comp=N,910nm,15.7s
HHC LR LR
comp=E,570nm,11.2s
HHC LR LR
comp=Z,790nm,14.3s
KAKA Kakadu 28.63 156 *eP* **P** **10 41 05.3 -3.5**
comp=Z,52nm,0.5s,mb5.5
KAKA Kakadu 28.63 156 *eP* **P** **10 41 05.6 -3.2**
comp=Z,165nm,0.6s,mb5.9
KAKA Kakadu 28.63 156 P **P** **10 41 05.8 -3.0**
SHL Shillong 29.60 298⇑ *iP* **P** **10 41 16.5 -0.8**
SHL *ex* x 10 46 00.5
KNA Kununurra 30.26 165 P **P** **10 41 20.9 -2.3**
CN2 Changchun 30.32 7 *eP* **P** **10 41 23.0 -0.4**
CN2 *es*P sP 10 42 09.5 +1.5
CN2 *e*PP PP 10 42 28.8 -5.7
CN2 *eS* **S** **10 46 13.4 -0.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,700nm,16.0s
CN2 LR LR
comp=E,700nm,16.0s
CN2 LR LR
comp=Z,600nm,18.0s
GTA Gaotai 31.61 328⇑ P **P** **10 41 36.3 +1.4**
GTA pP pP 10 42 08.7 +4.7
GTA sP sP 10 42 27.7 +8.1
GTA PcP PcP 10 44 24.6 +0.6
GTA S **S** **10 46 35.8 +1.9**
GTA ScP ScP 10 47 54.6 -0.2
GTA pmax pmax
comp=Z,150nm,1.6s,mb5.5
GTA pmax pmax
comp=Z,710nm,7.7s
GTA LR LR
comp=N,680nm,16.1s
GTA LR LR
comp=E,590nm,17.8s
GTA LR LR
comp=Z,900nm,14.3s
LSA Lhasa 31.69 305 P **P** **10 41 37.4 +1.7**
LSA S **S** **10 46 29.8 -5.5**
LSA pmax pmax
comp=Z,20nm,0.8s,mb4.9
LSA pmax pmax
comp=Z,440nm,8.0s
LSA LR LR
comp=N,470nm,17.0s
LSA LR LR
comp=E,480nm,20.0s
LSA LR LR
comp=Z,420nm,20.0s
LSA Lhasa 31.69 305 *eP* **P** **10 41 37.6 +2.0**
comp=Z,81nm,0.5s,mb5.7
LSA Lhasa 31.69 305 *eP* **P** **10 41 37.7 +2.0**
LSA pmax pmax
comp=Z,81nm,0.5s,mb5.7
MDJ Mudanjiang 31.77 12 P **P** **10 41 36.8 +0.6**
MDJ pP pP 10 42 06.0 +0.7
MDJ sP sP 10 42 23.0 +2.1
MDJ PcP PcP 10 44 23.3 -1.0
MDJ S **S** **10 46 38.5 +2.3**
MDJ ScP ScP 10 47 53.1 -2.1
MDJ PcS PcS 10 48 10.1 +1.3
MDJ ScS ScS 10 51 50.7 -2.8
MDJ pmax pmax
comp=Z,19nm,1.1s,mb4.7
MDJ pmax pmax
comp=Z,83nm,4.2s
MDJ Mudanjiang 31.77 12 *eP* **P** **10 41 36.8 +0.6**
comp=Z,14nm,0.7s,mb4.8
FITZ Fitzroy Crossi 31.91 171 *eP* **P** **10 41 34.9 -2.8**
comp=Z,68nm,1.1s,mb5.3
FITZ *ep*P pP 10 42 06.2 -0.6
FITZ Fitzroy Crossi 31.91 171 *eP* **P** **10 41 34.8 -2.8**
comp=Z,59nm,1.1s,mb5.2
FITZ Fitzroy Crossi 31.91 171 P **P** **10 41 35.2 -2.5**
TAPN Taplejung 33.70 299 *eP* **P** **10 41 54.2 +0.9**
ODAN Odare 33.84 298 *eP* **P** **10 41 55.2 +0.8**
comp=Z,552nm,0.8s,mb6.3
ERM Erimo 34.30 30 *eP* **P** **10 41 58.6 +0.4**
RAMN Ramite 34.54 298 *eP* **P** **10 42 01.5 +1.0**
comp=Z,325nm,0.8s,mb6.0
MBWA Marble Bar 34.60 182 *eP* **P** **10 41 58.8 -2.2**
comp=Z,262nm,0.8s,mb5.9
MBWA Marble Bar 34.60 182 P **P** **10 41 58.8 -2.2**
comp=Z,3μmcomp=Z,302nm,0.8s,mb6.0
MBWA Marble Bar 34.60 182 P **P** **10 41 59.4 -1.6**
SNR=9.3
PMG Port Moresby 34.80 130 *eP* **P** **10 42 00.9 -1.9**
comp=Z,75nm,0.9s,mb5.3
PMG Port Moresby 34.80 130 *ce*P **P** **10 42 00.7 -2.1**
PMG pmax pmax
comp=Z,83nm,0.9s
PMG Port Moresby 34.80 130 P **P** **10 42 01.4 -1.4**
comp=Z,947nmcomp=Z,97nm,0.9s,mb5.4
JIRN Jiri 35.09 299 *eP* **P** **10 42 06.2 +1.0**
comp=Z,307nm,0.4s,mb6.2
COEN Coen 35.28 140 *eP* **P** **10 42 03.5 -3.4**
comp=Z,157nm,0.8s,mb5.7
COEN Coen 35.28 140 P **P** **10 42 04.5 -2.4**
comp=Z,110nm,0.8s,mb5.6
GUN Gumba 35.42 299 *eP* **P** **10 42 09.0 +1.0**
ASAJ Asahikawa 35.65 27 P **P** **10 42 08.2 -1.5**
comp=Z,45nm,1.1s,mb5.0,baz=231,slow=15,SNR=18
PKI Putkoki 35.73 298 *eP* **P** **10 42 10.9 +0.2**
PKIN Phulchoki 35.74 298 *eP* **P** **10 42 10.9 +0.1**
comp=Z,155nm,0.4s,mb6.0
KKN Kakani 35.90 299 *eP* **P** **10 42 12.4 +0.3**
WRAB Tennant Creek 35.95 158 P **P** **10 42 09.0 -3.5**
comp=Z,719nm,0.6s,mb6.5
WRAB Tennant Creek 35.95 158 *eP* **P** **10 42 09.5 -3.1**
comp=Z,70nm,0.7s,mb5.4
WRAB Tennant Creek 35.95 158 *eP* **P** **10 42 09.5 -3.0**
WRAB pmax pmax
comp=Z,70nm,0.7s,mb5.4
WRAB Tennant Creek 35.95 158 P **P** **10 42 10.8 -1.7**
comp=Z,131nm,0.9s,mb5.6
ULN Ulaanbaatar 35.97 344 *eP* **P** **10 42 13.0 +0.6**
comp=Z,12nm,0.5s,mb4.8
ULN Ulaanbaatar 35.97 344 *eP* **P** **10 42 13.0 +0.6**
ULN pmax pmax
comp=Z,12nm,0.5s,mb4.8
ULN Ulaanbaatar 35.97 344 P **P** **10 42 13.3 +0.9**
comp=Z,762nmcomp=Z,38nm,1.6s,mb4.8
ULN Ulaanbaatar 35.97 344 P **P** **10 42 13.4 +1.0**
SNR=28
DMN Daman 36.00 298 *eP* **P** **10 42 13.3 +0.3**
comp=Z,140nm,0.5s,mb5.8
SONM Songino Array 36.12 344 P **P** **10 42 14.0 +0.3**
comp=Z,18nm,0.7s,mb4.8,baz=164,slow=10,SNR=95
SONM PcP PcP 10 44 36.2 -0.4
comp=Z,6.3nm,0.7s,baz=175,slow=4.3,SNR=6.8
SONM S **S** **10 47 41.3 -1.9**
comp=Z,0.7nm,0.8s,baz=171,slow=10,SNR=2.4
VIS Vishakhapatnam 36.23 281 *ex* pP 10 42 50.2 +5.6
GKN Gorkha 36.50 299 *eP* **P** **10 42 17.0 -0.2**
comp=Z,169nm,0.6s,mb5.8
KLR Kul'dur 36.62 12⇓ *iP* **P** **10 42 14.2 -3.7**
KLR *e* pP 10 42 39.3 -8.2
KLR *eS* **S** **10 47 42.5 -8.2**
KLR *e* 10 48 33.5
KLR pmax pmax
comp=E,70nm,1.8s
KLR pmax pmax
comp=Z,150nm,1.8s,mb5.3
KLR MLR MLR
comp=E,500nm,13.0s
KLR MLR MLR
comp=Z,2μm,13.0s
HABR Khabarovsk 36.69 16*de*P **P** **10 42 17.1 -1.4**
HABR 10 43 47.0
HABR *e* 10 44 35.8
HABR *eS* **S** **10 47 49.0 -2.7**
HABR 10 52 13.1
HABR pmax pmax
comp=Z,70nm,2.8s,mb4.8
HABR pmax pmax
comp=N,34nm,2.8s
HABR pmax pmax
comp=E,42nm,2.8s
HABR MLR MLR
comp=Z,235nm,16.0s
KOLN Koldanda 37.33 298 *eP* **P** **10 42 24.6 +0.4**
comp=Z,162nm,0.8s,mb5.7
YSS Yuzh-Sakhalins 37.98 25 *eP* **P** **10 42 30.7 +1.3**
comp=Z,43nm,0.9s,mb5.1
YSS Yuzh-Sakhalins 37.98 25⇑ *eP* **P** **10 42 30.0 +0.6**
YSS *e**PP pP 10 43 02.0 +2.9
YSS *eS* **S** **10 48 10.0 -1.3**
YSS pmax pmax
comp=Z,180nm,1.7s,mb5.4
YSS MLR MLR
comp=N,500nm,15.0s
YSS MLR MLR
comp=Z,500nm,15.0s
ASAR Alice Springs 39.25 161 P **P** **10 42 38.0 -2.3**
comp=Z,24nm,0.5s,mb5.1,baz=332,slow=7.1,SNR=475
ASAR pP pP 10 43 08.7 -1.5
comp=Z,42nm,0.9s,baz=335,slow=6.3,SNR=6.9
ASAR PcP PcP 10 44 45.5 -1.2
comp=Z,12nm,0.7s,baz=357,slow=4.1,SNR=5.6
ASAR S **S** **10 48 27.2 -3.6**
comp=Z,5.0nm,0.9s,baz=353,slow=19,SNR=7.7
ZAK Zakamensk 39.31 342 *eP* **P** **10 42 40.9 +0.5**
ZAK *e* pP 10 43 10.8 +0.4
ZAK pmax pmax
comp=Z,7.0nm,1.2s,mb4.2
MDRS Chennai 39.39 274 *ex* x 10 43 24.2
TLY Talaya 40.37 344 P **P** **10 42 50.8 +1.6**
comp=Z,126nm,0.6s,mb5.7,SNR=6.3
TLY Talaya 40.37 344 *eP* **P** **10 42 50.5 +1.3**
comp=Z,12nm,0.6s,mb4.7
TLY *ep*P pP 10 43 19.9 +0.7
TLY Talaya 40.37 344⇑ *iP* **P** **10 42 50.2 +1.0**
TLY *e* pP 10 43 19.7 +0.5
TLY *e* 10 43 32.9
TLY pmax pmax
comp=Z,21nm,0.8s,mb4.8
TLY MLR MLR
comp=Z,315nm,16.0s
TLY Talaya 40.37 344 P **P** **10 42 50.6 +1.4**
SNR=12
IRK Irkutsk 40.71 344 *eP* **P** **10 42 51.9 0.0**
IRK *e* pP 10 43 21.5 -0.5
IRK *eS* **S** **10 48 57.6 +5.6**
IRK pmax pmax
comp=Z,72nm,1.6s,mb5.0
HYB Hyderabad 40.78 281 *eP* **P** **10 42 53.0 -0.1**
HYB Hyderabad 40.78 281 *i P* **P** **10 42 53.0 -0.1**
HYB *ep*P pP 10 43 27.0 +3.8
HYB *e* 10 43 34.0
HYB *e*PcP PcP 10 44 52.0 +0.2
MOY Mondy 41.13 341 *eP* **P** **10 42 56.7 +1.3**
MOY pmax pmax
comp=Z,76nm,2.3s,mb4.9
WMQ Urumqi 41.28 323 P **P** **10 42 58.9 +2.1**
WMQ pP pP 10 43 30.2 +3.2
WMQ sP sP 10 43 46.5 +4.2
WMQ PP PP 10 44 39.8 +4.9
WMQ PcP PcP 10 44 54.9 +2.0
WMQ S **S** **10 49 02.8 +2.0**
WMQ SS SS 10 52 06.7 -2.9
WMQ ScS ScS 10 52 45.4 -1.2
WMQ pmax pmax
comp=Z,77nm,0.9s,mb5.3
WMQ pmax pmax
comp=Z,720nm,4.0s
WMQ LR LR
comp=N,660nm,17.0s
WMQ LR LR
comp=E,490nm,20.0s
WMQ LR LR
comp=Z,470nm,15.0s
CTA Charters Tower 41.87 143 *eP* **P** **10 43 00.1 -1.7**
comp=Z,59nm,1.2s,mb5.1
CTAO Charters Tower 41.87 143 *eP* **P** **10 43 00.3 -1.5**
comp=Z,134nm,1.1s,mb5.5
CTAO *ep*P pP 10 43 32.6 +0.6
CTAO *es*P sP 10 43 46.4 -0.9
CTAO Charters Tower 41.87 143 *eP* **P** **10 43 00.3 -1.5**
CTAO *e**PP pP 10 43 32.6 +0.5
CTAO *e**SP sP 10 43 46.4 -0.9
CTAO pmax pmax
comp=Z,134nm,1.1s,mb5.5
CTAO Charters Tower 41.87 143 P **P** **10 43 00.7 -1.1**
comp=Z,μmcomp=Z,106nm,1.4s,mb5.3
BHPL Bhopal 42.07 290 *e*PKP **P** **10 43 03.1 -0.5**
BHPL AMb AMB 10 43 06.0
comp=Z,53nm,0.5s,mb5.4
AKL Akola 42.28 286 *e*PKP **P** **10 43 03.9 -1.4**
AKL AMb AMB 10 43 08.9
comp=Z,139nm,1.3s,mb5.4
LATR Latur 42.67 282 *e*PKP **P** **10 43 08.3 -0.2**
LATR AMb AMB 10 43 12.1
comp=Z,136nm,2.3s,mb5.2
NDI New Delhi 43.02 297 *e*PKP **P** **10 43 09.4 -1.7**
CLNS Chul'man 43.22 3 *eP* **P** **10 43 06.8 -5.5**
CLNS *e**PP pP 10 43 38.3 -4.3
CLNS *e* 10 44 52.0
CLNS *e*PPP 10 45 29.8
CLNS *eS* **S** **10 49 24.9 -3.9**
CLNS pmax pmax
comp=N,11nm,0.9s
CLNS pmax pmax
comp=Z,23nm,1.2s,mb4.7
CLNS pmax pmax
comp=E,12nm,0.8s
CLNS smax
comp=E,108nm,14.8s
CLNS smax
comp=N,215nm,11.7s
SDNR Sundarnagar 43.83 301 *e*PKP **P** **10 43 17.5 -0.1**
BHK Bhakra 44.27 301 *ex* x 10 43 47.8
FORT Forrest 44.72 171 *eP* **P** **10 43 22.4 -2.2**
comp=N,71nm,0.7s,mb5.4
FORT *ep*P pP 10 43 54.3 -0.9
FORT *e*PCP PcP 10 45 03.6 -1.1
FORT Forrest 44.72 171 *eP* **P** **10 43 22.5 -2.1**
comp=N,14μm,1.8s
FORT *ep*P pP 10 43 55.0 -0.2
FORT *es*P sP 10 44 09.6 -0.7
FORT *e*PcP PcP 10 45 03.6 -1.0
AJM Ajmer 44.93 294 *e*PKP **P** **10 43 26.1 -0.3**
AJM AMb AMB 10 43 28.7
comp=Z,122nm,0.5s,mb5.8
KAD Karad 44.95 281 *e*PKP **P** **10 43 25.9 -0.9**
KAD AMb AMB 10 43 30.3
comp=Z,93nm,0.8s,mb5.4
KLBR Kellerberrin 45.07 184 *eP* **P** **10 43 25.1 -2.2**
comp=Z,336nm,0.8s,mb6.0
KLBR *ep*P pP 10 43 57.4 -0.5
THN Thein Dam 45.09 302 *e*PKP **P** **10 43 25.4 -2.2**
POO Poona 45.24 283 *e*PKP **P** **10 43 28.3 -0.7**
POO AMb AMB 10 43 32.5
comp=Z,123nm,1.4s,mb5.3
MK31 Makanchi Array 46.11 324 *eP* **P** **10 43 36.0 +0.6**
MK31 Makanchi Array 46.11 324 *i P* **P** **10 43 36.2 +0.8**
MK31 pmax pmax
comp=Z,22nm,0.4s,mb5.1
MKAR Makanchi Array 46.11 324 P **P** **10 43 36.0 +0.6**
MKAR PcP PcP 10 45 09.3 0.0
MKAR PP PP 10 45 36.6 +11
MKAR Makanchi Array 46.11 324 P **P** **10 43 36.0 +0.6**
comp=Z,66nm,0.8s,mb5.3,baz=130,slow=8.6,SNR=414
MKAR PcP PcP 10 45 09.3 0.0
comp=Z,8.1nm,0.7s,baz=117,slow=4.7,SNR=3.6
MKAR PP PP 10 45 36.6 +11
comp=Z,4.1nm,0.8s,baz=134,slow=6.2,SNR=1.7
MKAR Makanchi Array 46.11 324 *i* P **P** **10 43 36.0 +0.6**
MKAR pmax pmax
comp=Z,66nm,0.8s
NWAO Narrogin (SRO) 46.43 184 *eP* **P** **10 43 36.2 -1.8**
comp=Z,230nm,0.9s,mb5.8
NWAO Narrogin (SRO) 46.43 184 *eP* **P** **10 43 36.2 -1.8**
NWAO pmax pmax
comp=Z,229nm,0.9s
NWAO Narrogin (SRO) 46.43 184 P **P** **10 43 37.1 -0.9**
SNR=6.0
SKR Severo-Kuril's 46.74 30 *eP* **P** **10 43 38.7 -1.5**
SKR *PP pP 10 44 05.0 -6.0
SKR *e* 10 45 09.0
SKR *eS* **S** **10 50 22.0 +2.2**
SKR pmax pmax
comp=E,800nm,2.0s
SKR pmax pmax
comp=Z,1μm,2.0s,mb6.1
SKR pmax pmax
comp=N,90nm,1.0s
SKR pmax pmax
comp=E,110nm,1.0s
SKR pmax pmax
comp=Z,110nm,1.0s,mb5.4
SKR smax
comp=N,1μm,10.0s
SKR MLR MLR
comp=Z,900nm,16.0s
KSH Kashi 46.98 312⇑ *iP* **P** **10 43 44.6 +2.3**
KSH pP pP 10 44 14.3 +1.2
KSH sP sP 10 44 32.4 +4.2
KSH PcP PcP 10 45 14.5 +2.0
KSH *e*PP PP 10 45 36.1 +2.0
KSH *e*ScP ScP 10 48 54.2 +0.3
KSH *e*PcS PcS 10 49 08.2 +0.5

KSH S **S** **10 50 24.1 +0.6**
KSH sS sS 10 51 19.7 +2.9
KSH *e*ScS ScS 10 53 21.2 -1.7
KSH *e*SS SS 10 53 47.5 -4.6
KSH pmax pmax
comp=Z,19nm,0.6s,mb4.9
KSH pmax pmax
comp=Z,300nm,8.7s
KSH LR LR
comp=N,410nm,13.7s
KSH LR LR
comp=E,470nm,13.1s
KSH LR LR
comp=Z,460nm,13.4s
ULHL Ulahol 47.80 315 P **P** **10 43 50.2 +1.6**
SNR=31
KZA Kyzart 48.42 315 P **P** **10 43 55.6 +2.2**
SNR=7.2
TKM2 Tokmak 2 48.50 316 P **P** **10 43 55.0 +1.1**
SNR=86
TKM2 Tokmak 2 48.50 316 *e*P **P** **10 43 54.9 +0.9**
comp=Z,45nm,0.5s,mb5.3
TKM2 Tokmak 2 48.50 316 *e*P **P** **10 43 54.9 +0.9**
TKM2 pmax pmax
comp=Z,45nm,0.5s,mb5.3
YAK Yakutsk 48.73 6 *e*P **P** **10 43 54.4 -1.0**
comp=Z,101nm,0.8s,mb5.5
YAK *e*pP pP 10 44 25.6 -0.8
YAK *e*sP sP 10 44 41.3 -0.2
YAK Yakutsk 48.73 6 *e*P **P** **10 43 54.4 -1.0**
YAK *e**PP pP 10 44 25.6 -0.8
YAK *e**SP sP 10 44 41.3 -0.2
YAK pmax pmax
comp=Z,101nm,0.8s,mb5.5
EIDS Eidsvold 48.76 143 *e*P **P** **10 43 53.8 -2.3**
comp=Z,58nm,0.8s,mb5.3
EIDS *e*pP pP 10 44 25.9 -1.2
KBK Karagaybulak 48.84 315 P **P** **10 43 58.1 +1.5**
SNR=48
UCH Uchtor 48.98 315 P **P** **10 43 59.6 +2.0**
SNR=36
UCH Uchtor 48.98 315 *e*P **P** **10 43 59.4 +1.8**
comp=Z,60nm,0.8s,mb5.3
UCH *e*pP pP 10 44 33.8 +5.1
PETK Petropavlovsk- 49.04 29 P **P** **10 43 58.4 +0.5**
comp=Z,14nm,0.8s,mb4.7,baz=207,slow=3.0,SNR=25
PETK LR LR 11 05 33.3
comp=Z,153nm,18.9s,baz=228,slow=37
ZAA0 Zalesovo Array 49.13 333 *e*P **P** **10 43 58.1 -0.5**
ZAA0 *e*pP pP 10 44 29.9 +0.3
ZALV Zalesovo Beam 49.13 333 P **P** **10 43 58.2 -0.4**
ZALV pP pP 10 44 29.0 -0.6
ZALV LR LR 11 06 15.3
ZALV Zalesovo Beam 49.13 333 P **P** **10 43 58.2 -0.4**
comp=Z,28nm,0.5s,mb5.2,baz=126,slow=6.5,SNR=108
ZALV pP pP 10 44 29.0 -0.6
comp=Z,24nm,1.0s,baz=112,slow=6.6,SNR=3.7
ZALV LR LR 11 06 15.3
comp=Z,367nm,18.6s,baz=92,slow=38
ZALV Zalesovo Beam 49.13 333 P **P** **10 43 58.2 -0.4**
ZALV *e*PP pP 10 44 29.0 -0.6
FRU Bishkek 49.13 315 *e*P **P** **10 44 01.0 +2.2**
FRU pmax pmax
comp=Z,45nm,1.8s,mb4.8
AAK Ala-Archa 49.14 315 P **P** **10 44 00.3 +1.4**
comp=Z,245nm,0.7s,mb5.9,SNR=9.7
AAK Ala-Archa 49.14 315 P **P** **10 44 01.1 +2.2**
SNR=17
AAK Ala-Archa 49.14 315 *e*P **P** **10 44 00.9 +2.1**
comp=Z,25nm,0.6s,mb5.0
AAK Ala-Archa 49.14 315 P **P** **10 43 59.9 +1.0**
comp=Z,18nm,0.5s,mb5.0,baz=119,slow=7.2,SNR=35
AAK Ala-Archa 49.14 315 *e*P **P** **10 44 01.0 +2.1**
AAK pmax pmax
comp=Z,25nm,0.6s,mb5.0
USP Ospenovka 49.38 316 P **P** **10 44 01.2 +0.6**
SNR=54
PET Petropavlovsk 49.44 29 *e*P **P** **10 44 02.4 +1.4**
comp=Z,18nm,0.8s,mb4.8
PET Petropavlovsk 49.44 29*c i*P **P** **10 44 01.8 +0.9**
PET *e**PP pP 10 44 33.5 +1.5
PET *e* 10 45 56.2
PET *i* S **S** **10 50 58.3 +0.6**
PET *e**SS sS 10 51 57.1 +5.7
PET *e*SS SS 10 54 29.0 -2.2
PET pmax pmax
comp=Z,52nm,1.9s,mb4.8
PET pmax pmax
comp=Z,300nm,11.3s
PET pmax pmax
comp=Z,100nm,11.7s
PET MLR MLR
comp=Z,200nm,15.0s
STKA Stephens Creek 49.48 157 *e*P **P** **10 43 59.0 -2.5**
comp=Z,21nm,0.8s,mb4.8
STKA *e*pP pP 10 44 30.3 -2.3
STKA Stephens Creek 49.48 157 *e*P **P** **10 43 59.0 -2.4**
comp=Z,32nm,1.4s,mb4.8
STKA *e*pP pP 10 44 30.4 -2.2
STKA Stephens Creek 49.48 157 P **P** **10 43 59.0 -2.4**
comp=Z,11nm,0.3s,mb4.9,baz=334,slow=7.9,SNR=27
STKA pP pP 10 44 30.0 -2.6
comp=Z,28nm,0.7s,baz=328,slow=6.3,SNR=5.8
AML Almayashu 49.51 314 P **P** **10 44 04.5 +2.8**
SNR=9.2
AML Almayashu 49.51 314 *e*P **P** **10 44 03.1 +1.4**
comp=Z,68nm,0.8s,mb5.3
EKS2 Erkin-Say 49.65 315 P **P** **10 44 04.3 +1.6**
SNR=5.5
EKS2 Erkin-Say 49.65 315 *e*P **P** **10 44 03.9 +1.2**
comp=Z,53nm,0.8s,mb5.2
KURK Kurchatov 50.27 326 P **P** **10 44 07.0 -0.2**
comp=Z,2µm,0.6s
KURK Kurchatov 50.27 326 *e*P **P** **10 44 07.6 +0.4**
comp=Z,233nm,0.7s,mb5.9
KURK *e*pP pP 10 44 39.4 +1.0
KURK Kurchatov 50.27 326*ce*P **P** **10 44 07.5 +0.3**
KURK pmax pmax
comp=Z,453nm,1.3s,mb5.9
KURK Kurchatov 50.27 326 P **P** **10 44 07.9 +0.7**
SNR=120
NVS Novosibirsk 50.41 333 *e*P **P** **10 44 07.5 -0.8**
NVS *e* pP 10 44 38.9 -0.6
NVS pmax pmax
comp=N,71nm,1.5s
NVS pmax pmax
comp=E,77nm,1.5s
NVS pmax pmax
comp=Z,90nm,1.5s,mb5.2
KBL Kabul 50.99 303 *e*P **P** **10 44 13.3 +0.4**
comp=Z,130nm,0.8s,mb5.6
KBL Kabul 50.99 303 *e*P **P** **10 44 13.3 +0.4**
KBL pmax pmax
comp=Z,130nm,0.8s,mb5.6
KK31 Karatay Array 52.05 314 *i* P **P** **10 44 20.6 -0.1**
KK31 pmax pmax
comp=Z,28nm,0.5s,mb5.2
ARMA Armidale 52.94 146 *e*P **P** **10 44 26.9 -0.4**
ARMA *e*pP pP 10 44 58.9 +0.1
ARMA Armidale 52.94 146 *e*P **P** **10 44 27.0 -0.3**
comp=Z,68nm,1.4s,mb5.2
SEY Seymchan 54.04 17⇑*e*P **P** **10 44 36.2 +1.3**
SEY Seymchan 54.04 17*ce*P **P** **10 44 36.1 +1.2**
CNB Canberra Magne 55.73 152 *e*P **P** **10 44 46.0 -1.4**
CNB *e*pP pP 10 45 18.8 -0.4
BVA0 Borovoye Array 55.85 326 *i* P **P** **10 44 48.1 0.0**
BVAR Borovoye Array 55.85 326 P **P** **10 44 48.0 0.0**
comp=Z,16nm,0.5s,mb5.1,baz=117,slow=8.6,SNR=70
BVAR pP pP 10 45 19.3 -0.6
comp=Z,11nm,0.6s,baz=113,slow=11,SNR=3.2
BRVK Borovoye 55.92 326 P **P** **10 44 48.1 -0.5**
comp=Z,426nm,1.4s,mb6.1,SNR=19
BRVK Borovoye 55.92 326 *e*P **P** **10 44 48.5 -0.1**
comp=Z,119nm,1.2s,mb5.6
BRVK *e*pP pP 10 45 20.4 +0.1
BRVK Borovoye 55.92 326*c i*P **P** **10 44 48.4 -0.2**
BRVK pmax pmax
comp=Z,128nm,1.2s,mb5.6
BRVK Borovoye 55.92 326 P **P** **10 44 48.9 +0.3**
SNR=43
TOO Toolangi 56.00 156 *e*P **P** **10 44 47.7 -1.6**
TOO *e*pP pP 10 45 20.8 -0.3
ZRNK Zerenda 56.58 325 *i* P **P** **10 44 52.5 -0.8**
ZRNK pmax pmax
comp=Z,222nm,1.5s,mb5.8
DZM Mont Dzumac 57.15 128 *e*P **P** **10 44 55.5 -2.3**
comp=Z,220nm,19.0s
VSR Storozhevoye 74.24 320*c i*P **P** **10 46 46.1 -0.8**
VSR *e**PP pP 10 47 18.0 -2.3
VSR pmax pmax
comp=Z,50nm,0.6s,mb5.4
VSR pmax pmax
comp=N,4.0nm,0.3s
VSR pmax pmax
comp=E,20nm,0.7s
TTA Tatalina 74.88 28 *e*P **P** **10 46 51.5 +1.1**
comp=E,11nm,0.6s,mb4.7
TTA *e*pP pP 10 47 24.2 +0.3
TTA Tatalina 74.88 28 *e*P **P** **10 46 51.5 +1.1**
TTA *e**PP pP 10 47 24.2 +0.4
TTA pmax pmax
comp=Z,11nm,0.6s,mb4.7
MOS Moscow 74.98 324 *e*P **P** **10 46 49.1 -2.0**
MOS *e* pP 10 47 22.3 -2.3
MOS pmax pmax
comp=Z,65nm,0.7s,mb5.4
OBN Obninsk 75.62 324⇑*i*P **P** **10 46 53.9 -0.9**
OBN Obninsk 75.62 324*c i*P **P** **10 46 53.8 -1.0**
OBN *e* 10 47 04.3
OBN *i* *PP pP 10 47 27.1 -1.2
OBN *i* 10 49 47.4
OBN pmax pmax
comp=Z,112nm,1.7s,mb5.2
OBN MLR MLR
comp=Z,200nm,18.0s
ATD Arta Tunnel 75.75 279 P **P** **10 46 56.5 +0.2**
comp=Z,37nm,0.8s,mb5.1,baz=82,slow=4.1,SNR=13
ANN Anapa 75.81 313 *e*P **P** **10 46 54.4 -1.7**
ANN *e*S S 10 56 23.7 -3.6
ANN pmax pmax
comp=Z,106nm,1.4s,mb5.3
OHAK Old Harbor 76.46 34 *e*P **P** **10 46 59.6 +0.1**
comp=Z,36nm,1.1s,mb4.9
APA Apatity 76.48 337⇓*i*P **P** **10 46 58.8 -0.6**
APA *e*S S 10 56 25.0 -8.8
APA *i* PS 10 57 25.0
APA pmax pmax
comp=Z,20nm,0.8s,mb4.8
APA MLR MLR
comp=Z,500nm,19.0s
PPLA Purkeypile 76.63 28 *e*P **P** **10 47 01.3 +1.0**
comp=E,85nm,1.4s,mb5.2
KDAK Kodiak Island 76.80 33 *e*P **P** **10 47 02.0 +0.6**
comp=Z,59nm,1.6s,mb5.0
KDAK Kodiak Island 76.80 33 *i* P **P** **10 47 02.4 +1.0**
BPAW Bear Paw Mtn. 77.08 27 *e*P **P** **10 47 03.1 +0.3**
comp=Z,64nm,0.9s,mb5.2
BPAW *e*pP pP 10 47 37.8 +1.3
COLD Coldfoot 77.16 24 *e*P **P** **10 47 04.7 +1.4**
comp=Z,15nm,0.8s,mb4.7
COLD *e*pP pP 10 47 39.2 +2.4
COLD *e*sP sP 10 47 51.5 +0.2
JOF Joensuu 77.72 332 *e*P **P** **10 47 05.4 -1.0**
JOF pmax pmax
comp=Z,28nm,0.6s,mb5.1
JOF Joensuu 77.72 332 *e*p **P** **10 47 05.4 -1.0**
comp=Z,28nm,0.6s,mb5.1
ASF Jabal al Asfar 77.74 300 P **P** **10 47 07.9 +0.7**
comp=Z,28nm,0.7s,mb5.0,baz=121,slow=5.9,SNR=50
SIM Simferopol' 78.14 314 *e*P **P** **10 47 08.6 -0.5**
SIM *e*S S 10 56 50.0 -2.5
SIM pmax pmax
comp=Z,39nm,0.7s,mb5.2
PMR Palmer 78.17 29 *e*P **P** **10 47 08.9 0.0**
comp=Z,18nm,0.8s,mb4.8
PMR *e*pP pP 10 47 42.2 -0.4
PMR *e*sP sP 10 47 55.9 -1.2
PMR Palmer 78.17 29 *e*P **P** **10 47 08.9 0.0**
PMR *e**PP pP 10 47 42.2 -0.5
PMR *e**SP sP 10 47 55.9 -1.2
PMR pmax pmax
comp=Z,18nm,0.8s,mb4.8
SEW Seward 78.19 31 *e*P **P** **10 47 09.2 +0.1**
comp=Z,29nm,1.0s,mb4.9
SEW *e*pP pP 10 47 43.2 +0.4
SEW *e*sP sP 10 47 57.6 +0.4
COLA College 78.35 26 *e*P **P** **10 47 09.7 -0.2**
comp=Z,23nm,0.8s,mb4.9
COLA *e*pP pP 10 47 44.3 +0.7
COLA College 78.35 26 *e*P **P** **10 47 09.7 -0.2**
COLA *e**PP pP 10 47 44.3 +0.7
COLA pmax pmax
comp=Z,23nm,0.8s,mb4.9
KEV Kevo 78.60 339 *e*P **P** **10 47 10.9 -0.3**
comp=Z,14nm,0.6s,mb4.8
KEV Kevo 78.60 339 *e*P **P** **10 47 10.9 -0.3**
KEV pmax pmax
comp=Z,14nm,0.6s,mb4.8
KEV Kevo 78.60 339 *e*p **P** **10 47 10.9 -0.3**
comp=Z,14nm,0.6s,mb4.8
ILAR Eielson Array 78.77 26 P **P** **10 47 11.0 -1.2**
ILAR PP PP 10 50 08.6 -3.4
ILAR PKKPbc PKKPbc 11 06 04.5 -3.3
ILAR ⇑*e* 11 14 06.0
ILAR Eielson Array 78.77 26 P **P** **10 47 11.0 -1.2**
comp=Z,5.4nm,0.7s,mb4.3,baz=279,slow=3.5,SNR=53
ILAR PP PP 10 50 08.6 -3.4
comp=Z,1.5nm,1.1s,baz=263,slow=6.3,SNR=3.8
ILAR PKKPbc PKKPbc 11 06 04.5 -3.3
comp=Z,1.0nm,0.7s,baz=131,slow=2.2,SNR=12
ILAR PKP2bc 11 14 06.0
comp=Z,0.3nm,0.9s,baz=90,slow=1.8,SNR=3.4
ILAR Eielson Array 78.77 26 P **P** **10 47 11.0 -1.2**
ILAR 10 50 08.6
MMAI Mount Meron Ar 78.86 301 P **P** **10 47 14.6 +1.2**
comp=Z,5.8nm,0.4s,mb4.5,baz=79,slow=8.6,SNR=15
ARCES ARCESS Array B 79.15 339 P **P** **10 47 12.6 -1.6**
comp=Z,19nm,0.7s,mb4.8,baz=87,slow=6.6,SNR=36
ARCES pP pP 10 47 47.6 -0.4
comp=Z,21nm,0.9s,baz=81,slow=7.5,SNR=5.3
ARCES LR LR 11 27 51.4
comp=Z,246nm,18.7s,baz=93,slow=40
ARCES ARCESS Array B 79.15 339 P **P** **10 47 12.6 -1.6**
ARCES *PP pP 10 47 47.6 -0.4
ARE0 ARCESS Array S 79.15 339 *e*P **P** **10 47 14.3 +0.2**
ARE0 *e*pP pP 10 47 48.0 0.0
BR131 Keskin Array S 79.23 308 *e*P **P** **10 47 15.4 +0.2**
comp=Z,5.0nm,0.6s,mb4.3
BRTR Keskin Array B 79.23 308 P **P** **10 47 14.4 -0.8**
comp=Z,5.9nm,0.8s,mb4.3,baz=120,slow=4.3,SNR=32
BRTR Keskin Array B 79.23 308 *i* P **P** **10 47 15.1 -0.1**
ABPO Ambohimpanom 79.35 247 *e*P **P** **10 47 15.2 -1.0**
comp=Z,34nm,0.9s,mb5.0
ABPO *e*pP pP 10 47 50.5 +0.5
ABPO Ambohimpanom 79.35 247 *e*P **P** **10 47 15.2 -1.0**
ABPO *e**PP pP 10 47 50.5 +0.5
ABPO pmax pmax
comp=Z,34nm,0.9s,mb5.0
POHA Pohakuloa 79.68 72 *e*P **P** **10 47 20.3 +2.3**
comp=Z,98nm,1.0s,mb5.4
EIL Elat 79.79 298 P **P** **10 47 19.0 +0.6**
comp=Z,106nm,1.1s,mb5.4,baz=25,slow=2.0,SNR=44
DIV Divide 79.84 29 *e*P **P** **10 47 19.0 +1.0**
comp=Z,11nm,0.7s,mb4.6
DIV *e*pP pP 10 47 52.8 +0.9
CASY Casey 80.06 184 *e*P **P** **10 47 16.5 -2.5**
CASY Casey 80.06 184 *e*P **P** **10 47 16.4 -2.6**
comp=Z,46nm,0.7s,mb5.2
CASY *e*pP pP 10 47 50.5 -2.4
CASY *e*sP sP 10 48 06.7 -0.5
KAF Kangasniemi 80.13 332 *e*P **P** **10 47 19.6 0.0**
comp=Z,18nm,0.8s,mb4.7
KAF Kangasniemi 80.13 332 *e*P **P** **10 47 19.6 0.0**
KAF pmax pmax
comp=Z,18nm,0.8s,mb4.8
KAF Kangasniemi 80.13 332 *e*p **P** **10 47 19.6 0.0**
comp=Z,18nm,0.8s,mb4.7,baz=77,slow=4.9
CSS Prodhromos 80.24 304 *e*P **P** **10 47 19.9 -0.9**
comp=Z,20nm,0.6s,mb4.9
KBS Kingsbay 80.25 349⇑*e*P **P** **10 47 19.6 -0.4**
FINES FINESS Array B 80.36 331 P **P** **10 47 19.4 -1.4**
FINES pP pP 10 47 53.2 -1.5
FINES LR LR 11 26 07.0
FINES FINESS Array B 80.36 331 P **P** **10 47 19.4 -1.4**
comp=Z,10nm,0.8s,mb4.5,baz=56,slow=5.6,SNR=38
FINES pP pP 10 47 53.2 -1.5
comp=Z,14nm,0.9s,baz=72,slow=6.2,SNR=4.8
FINES LR LR 11 26 07.0
comp=Z,249nm,18.5s,baz=220,slow=38
FINES FINESS Array B 80.36 331 P **P** **10 47 19.4 -1.4**
FINES *PP pP 10 47 53.2 -1.5

BMRM Bremner River 80.42 30 *e*P P **10 47 22.1 +0.9**
comp=Z,136nm,2.0s,mb5.2
BMRM *ep*P pP 10 47 56.9 +1.8
MENT Mentasta 80.46 27 *e*P P **10 47 22.5 +1.1**
MENT *ep*P pP 10 47 56.2 +1.0
MENT *es*P sP 10 48 11.2 +1.6
AKASG Malin Array Be 80.54 320 P P **10 47 20.4 -1.6**
AKASG pP pP 10 47 54.5 -1.4
AKASG PP PP 10 50 29.5 +2.5
AKASG LR LR 11 25 52.1
AKASG Malin Array Be 80.54 320 P P **10 47 20.4 -1.6**
comp=Z,8.9nm,0.8s,mb4.5,baz=66,slow=5.3,SNR=35
AKASG pP pP 10 47 54.5 -1.4
comp=Z,6.0nm,0.8s,baz=67,slow=5.2,SNR=3.1
AKASG PP PP 10 50 29.5 +2.5
comp=Z,1.2nm,0.6s,baz=68,slow=7.7,SNR=5.1
AKASG LR LR 11 25 52.1
comp=Z,213nm,18.6s,baz=50,slow=38
AKASG Malin Array Be 80.54 320 P P **10 47 20.4 -1.6**
AKASG *PP pP 10 47 54.5 -1.4
AKASG 10 50 29.5
KIEV Kiev 80.55 320 *e*P P **10 47 21.2 -0.9**
comp=Z,12nm,0.9s,mb4.5
KIEV *ep*P pP 10 47 54.6 -1.3
KIEV *es*P sP 10 48 09.4 -0.9
KIEV Kiev 80.55 320 *e*P P **10 47 21.2 -0.9**
KIEV *e**PP pP 10 47 54.6 -1.4
KIEV *e**SP sP 10 48 09.4 -1.0
KIEV pmax pmax
comp=Z,13nm,0.9s,mb4.6
VSU Vasula 80.58 328*c i*P P **10 47 20.9 -1.2**
VSU pmax pmax
comp=Z,80nm,1.0s,mb5.3
MICGM Minsk 80.68 324 *e* P **10 47 20.0 -2.7**
MNK Minsk 80.71 324 *e*P P **10 47 20.0 -2.8**
EGAK Eagle 81.18 25 *e*P P **10 47 24.8 -0.4**
comp=Z,16nm,0.6s,mb4.8
EGAK *ep*P pP 10 48 00.5 +1.4
EGAK *e*PP PP 10 50 33.7 +1.8
NACGM Naroch 81.23 324 *e* P **10 47 22.0 -3.6**
ISP Isparta 81.95 307 *e*P P **10 47 29.0 -0.8**
comp=Z,30nm,0.8s,mb5.0
ISP *ep*P pP 10 48 02.2 -1.6
ISP Isparta 81.95 307 *e*P P **10 47 29.0 -0.8**
ISP *e**PP pP 10 48 02.2 -1.6
ISP pmax pmax
comp=Z,30nm,0.8s,mb5.0
ISP Isparta 81.95 307⇑*i*P P **10 47 28.6 -1.2**
DAWY Dawson 82.10 26 *e*P P **10 47 30.8 +0.8**
TIRR Tirgusor 82.23 314⇑P P **10 47 31.0 -0.1**
TIRR Tirgusor 82.23 314⇑*i*P P **10 47 31.0 -0.1**
TESR 83.03 316⇑P P **10 47 35.1 -0.1**
TESR 83.03 316⇑*i*P P **10 47 35.1 -0.1**
VRI Vrincioaia 83.11 315⇑P P **10 47 35.7 +0.1**
VRI Vrincioaia 83.11 315 P P **10 47 36.6 +1.0**
VRI Vrincioaia 83.11 315⇑*i*P P **10 47 35.7 +0.1**
INK Inuvik 83.12 21 *e*P P **10 47 35.4 +0.2**
comp=Z,34nm,0.9s,mb5.1
INK *ep*P pP 10 48 10.2 +0.9
INK Inuvik 83.12 21 P P **10 47 33.8 -1.4**
comp=Z,25nm,0.8s,mb5.0,baz=302,slow=5.1,SNR=46
INK PKKP PKKPdf 11 05 42.9 -4.9
comp=Z,1.8nm,0.5s,baz=41,slow=12,SNR=6.3
INK PKKPbc PKKPbc 11 05 54.1 -4.0
comp=Z,1.6nm,1.0s,baz=354,slow=3.4,SNR=3.3
INK Inuvik 83.12 21 *e*P P **10 47 35.4 +0.2**
INK *e**PP pP 10 48 10.2 +0.9
INK pmax pmax
comp=Z,34nm,0.9s
PLOR Plostina 83.17 315 P P **10 47 36.8 +0.9**
PLOR Plostina 83.17 315⇑*i*P P **10 47 36.4 +0.5**
PRD Provadia 83.21 313 P P **10 47 34.8 -1.4**
PNL Peninsula 83.24 30 *e*P P **10 47 37.9 +2.0**
comp=Z,12nm,0.7s,mb4.7
PNL *ep*P pP 10 48 12.3 +2.2
SUW Suwalki 83.48 324 *e*P P **10 47 37.0 -0.3**
SUW *ep*P pP 10 48 11.1 -0.3
SUW Suwalki 83.48 324 *e*P P **10 47 36.8 -0.5**
SUW *ep*P pP 10 48 11.0 -0.4
MLR Muntele Rosu 83.73 315⇑P P **10 47 38.6 -0.1**
MLR Muntele Rosu 83.73 315 P P **10 47 39.3 +0.5**
MLR Muntele Rosu 83.73 315⇑*i*P P **10 47 38.7 -0.1**
BUR01 Bucovina Ar. S 83.74 317 P P **10 47 38.8 +0.1**
BURAR Bucovina Array 83.74 317⇓P P **10 47 39.3 +0.6**
BURAR Bucovina Array 83.74 317⇓*i*P P **10 47 39.3 +0.5**
BUR08 Bucovina Ar. S 83.74 317 *e*P P **10 47 38.9 +0.1**
KMBO Kilima Mbogo 83.95 267 *e*P P **10 47 41.1 +0.5**
comp=Z,197nm,1.8s,mb5.5
KMBO *ep*P pP 10 48 15.3 +0.6
KMBO Kilima Mbogo 83.95 267 P P **10 47 41.2 +0.7**
comp=Z,15nm,0.7s,mb4.8,baz=4.6,slow=22,SNR=33
KMBO Kilima Mbogo 83.95 267 *e*P P **10 47 41.1 +0.6**
KMBO *e**PP pP 10 48 15.3 +0.6
KMBO pmax pmax
comp=Z,197nm,1.8s
KMBO Kilima Mbogo 83.95 267 P P **10 47 42.1 +1.6**
SNR=17
LVV L'vov 83.98 320 *e*P P **10 47 39.1 -0.9**
DOPR Dopca 84.00 316⇑*i*P P **10 47 40.1 0.0**
SZH Strazhica 84.24 313 P P **10 47 43.7 +2.3**
VOIR 84.35 315⇑P P **10 47 41.8 -0.2**
VOIR 84.35 315 P P **10 47 42.2 +0.3**
VOIR 84.35 315⇑*i*P P **10 47 41.8 -0.1**
PVL Pavlikeni 84.68 313 P P **10 47 43.0 -0.6**
BMR Baia Mare 84.85 318⇑*i*P P **10 47 45.0 +0.6**
KWP Kalwaria Pacla 84.86 320 *e*P P **10 47 45.0 +0.6**
KWP *ep*P pP 10 48 18.4 -0.2
KWP Kalwaria Pacla 84.86 320 *e*P P **10 47 44.9 +0.5**
comp=Z,68nm,0.6s,mb5.5
KWP Kalwaria Pacla 84.86 320⇑*i*P P **10 47 44.3 -0.1**
SKAG Skagway 85.28 30 *e*P P **10 47 48.0 +1.8**
comp=Z,154nm,1.7s,mb5.5
SKAG *ep*P pP 10 48 21.5 +1.0
TRPA Tarpa 85.36 318⇑*i*P P **10 47 46.6 -0.3**
UZH Uzhgorod 85.38 319⇓*i*P P **10 47 46.5 -0.5**
UZH *i* pP 10 48 21.1 -0.2
RZN Rozhen 85.49 312 P P **10 47 46.7 -1.0**
DRGR 85.59 317⇑P P **10 47 47.7 -0.4**
DRGR 85.59 317 P P **10 47 48.8 +0.7**
DRGR 85.59 317⇑*i*P P **10 47 47.7 -0.4**
DRGR 85.59 317⇑*i*P P **10 47 47.7 -0.4**
PGB Panagyurishte 85.67 313 P P **10 47 48.0 -0.6**
STHS Stebnicka Huta 85.84 320 *e*P P **10 47 49.7 +0.5**
comp=Z,16nm,0.9s,mb4.7
STHS Stebnicka Huta 85.84 320 *e*P P **10 47 49.7 +0.5**
STHS pmax pmax
comp=Z,16nm,0.9s,mb4.8
STHS Stebnicka Huta 85.84 320 *e*P P **10 47 49.7 +0.5**
GZR Gura Zlata 85.92 316⇓P P **10 47 48.9 -0.8**
GZR Gura Zlata 85.92 316 P P **10 47 50.2 +0.5**
GZR Gura Zlata 85.92 316⇓*i*P P **10 47 48.9 -0.8**
SIT Sitka 86.06 32 *e*P P **10 47 50.5 +0.3**
comp=Z,66nm,1.3s,mb5.2
SIT Sitka 86.06 32 *e*P P **10 47 50.5 +0.3**
SIT pmax pmax
comp=Z,66nm,1.3s,mb5.2
VTS Vitosha 86.34 313⇓P P **10 47 50.8 -1.1**
VTS Vitosha 86.34 313⇓*i*P P **10 47 50.8 -1.1**
VTS Vitosha 86.34 313 P P **10 47 51.2 -0.7**
NIE Niedzica 86.42 320 *e*P P **10 47 53.2 +1.1**
NIE Niedzica 86.42 320 *e*P P **10 47 53.2 +1.1**
OJC Ojcow 86.51 321 *e*P P **10 47 51.8 -0.7**
OJC *ep*P pP 10 48 25.5 -1.3
BZS Buzias 86.64 316⇑P P **10 47 52.1 -1.2**
BZS Buzias 86.64 316 P P **10 47 53.3 0.0**
BZS Buzias 86.64 316⇑*i*P P **10 47 52.1 -1.2**
PSZ Piszkesteto 87.12 319 *e*P P **10 47 55.6 0.0**
comp=Z,151nm,2.3s,mb5.4
PSZ *ep*P pP 10 48 29.9 0.0
PSZ *es*P sP 10 48 44.2 0.0
PSZ Piszkesteto 87.12 319 *e*P P **10 47 55.6 +0.1**
PSZ *e**PP pP 10 48 29.9 0.0
PSZ *e**SP sP 10 48 44.2 0.0
PSZ pmax pmax
comp=Z,151nm,2.3s,mb5.4
PSZ Piszkesteto 87.12 319⇑*i*P P **10 47 54.7 -0.8**
PSZ Piszkesteto 87.12 319⇑*e*PcP PcP 10 47 54.9 -2.6
NOA NORSAR Array B 87.33 333 P P **10 47 54.4 -1.9**
comp=Z,17nm,0.7s,mb5.0,baz=67,slow=4.6,SNR=65
NOA pP pP 10 48 28.9 -1.7
comp=Z,32nm,0.8s,baz=67,slow=4.7,SNR=16
VYHS Vyhne 87.62 319 *e*P P **10 47 58.0 +0.1**
comp=Z,83nm,2.6s,mb5.1
VYHS *e*PP pP 10 48 31.5 -0.9
VYHS *e*SP 10 48 46.1
VYHS Vyhne 87.62 319 *e*P P **10 47 58.0 +0.1**
VYHS pmax pmax
comp=Z,83nm,2.6s,mb5.1
VYHS Vyhne 87.62 319 *e*P P **10 47 58.0 +0.1**
VYHS *ep*P pP 10 48 31.5 -0.9
VYHS *es*P sP 10 48 46.1 -0.5
OKC Ostrava-Krasne 87.64 321 *e*P P **10 47 57.6 -0.4**
OKC *e**PP pP 10 48 31.5 -0.9
OKC MLR MLR
comp=Z,200nm,18.5s
OKC Ostrava-Krasne 87.64 321 *e*P P **10 47 57.6 -0.4**
OKC *ep*P pP 10 48 31.5 -0.9
OKC *ex* x 10 48 39.0
OKC AMS AMS 11 29 50.0
comp=Z,200nm,18.5s
BUD Budapest 87.81 318⇑*e*P P **10 47 56.9 -2.0**
MORC Moravsky Berou 88.03 321 *e*P P **10 47 59.4 -0.4**
comp=Z,99nm,2.0s,mb5.3
MORC Moravsky Berou 88.03 321⇑P P **10 47 59.7 -0.1**
MORC Moravsky Berou 88.03 321⇑*i*P P **10 47 59.7 -0.1**
DLBC Dease Lake 88.22 30 *e*P P **10 48 02.0 +1.5**
DLBC *ep*P pP 10 48 36.3 +1.4
DLBC *es*P sP 10 48 52.1 +2.8
DLBC Dease Lake 88.22 30 PKKPbc PKKPbc 11 05 42.2 -3.6
comp=Z,1.7nm,0.5s,baz=60,slow=1.4,SNR=6.9
KSP Ksiaz 88.43 322 *e*P P **10 48 01.8 +0.1**
KSP *ep*P pP 10 48 35.1 -1.0
KSP Ksiaz 88.43 322 *e*P P **10 48 01.5 -0.2**
KSP *e**PP pP 10 48 35.3 -0.9
KSP *e* 10 58 18.7
PKSM Moragy 88.45 317⇑P P **10 48 01.0 -0.9**
PKSM Moragy 88.45 317⇑*i*P P **10 48 01.0 -0.9**
DPC Dobruska-Polom 88.58 322 *e*P P **10 48 03.0 +0.6**
DPC *e**PP pP 10 48 36.7 -0.2
DPC Dobruska-Polom 88.58 322 *e*P P **10 48 03.0 +0.6**
DPC *ep*P pP 10 48 36.7 -0.2
UPC Upice 88.72 322 *e*P P **10 48 03.0 0.0**
UPC *e**PP pP 10 48 37.0 -0.5
UPC Upice 88.72 322 *e*P P **10 48 03.0 0.0**
UPC *ep*P pP 10 48 37.0 -0.5
VRAC Vranov 88.77 321⇑*i*P P **10 48 03.5 +0.2**
RES Resolute Bay 89.08 9 *e*P P **10 48 05.0 +0.7**
comp=Z,26nm,0.8s,mb5.2
RES Resolute Bay 89.08 9 *e*P P **10 48 05.0 +0.7**
RES pmax pmax
comp=Z,26nm,0.8s,mb5.2
RUE Ruedersdorf 89.32 324 *e*P P **10 48 05.5 -0.3**
comp=Z,31nm,0.8s,mb5.3
TREC Trest 89.45 321 *e*P P **10 48 06.8 +0.3**
TREC *e**PP pP 10 48 40.4 -0.6
TREC Trest 89.45 321 *e*P P **10 48 06.8 +0.3**
TREC *ep*P pP 10 48 40.4 -0.6
TREC *ex* x 10 48 47.7
PVCC Panska Ves 89.57 322 *e*P P **10 48 07.2 +0.2**
PVCC *e**PP pP 10 48 41.1 -0.5
PVCC MLR MLR
comp=Z,300nm,17.6s
PVCC Panska Ves 89.57 322 *e*P P **10 48 07.2 +0.2**
PVCC *ep*P pP 10 48 41.1 -0.5
PVCC *ex* x 10 48 48.2
PVCC AMS AMS 11 30 50.0
comp=Z,300nm,17.6s
PRU Pruhonice 89.78 322 *e*P P **10 48 08.3 +0.3**
PRU *e**PP pP 10 48 42.5 -0.1
PRU *e* 10 58 27.1
PRU *e* 10 59 48.4
PRU MLR MLR
comp=N,200nm,14.1s
PRU Pruhonice 89.78 322 *e*P P **10 48 08.3 +0.3**
PRU *ep*P pP 10 48 42.5 -0.1
PRU *ex* x 10 48 49.4
PRU *e*SKS 10 58 27.1
PRU *e*XS sS 10 59 48.4 +0.1
PRU AMS AMS 11 28 30.0
BRG Berggiesshubel 89.82 323 *e*P P **10 48 07.5 -0.7**
comp=Z,19nm,1.0s,mb5.0
BRG *e*PP PP 10 51 43.4 +1.4
BRG Berggiesshubel 89.82 323 *e*P P **10 48 08.2 0.0**
comp=Z,19nm,1.1s,mb5.0
BRG *i* pP pP 10 48 41.7 -1.0
comp=Z,24nm,1.2s
BRG *i* 10 48 49.0
comp=Z,22nm,1.0s
BRG *e*PP PP 10 51 40.3 -1.7
comp=Z,3.5nm,0.8s
BRG
comp=N,264nm,13.3s
BRG
comp=E,122nm,15.1s
BRG
comp=Z,264nm,15.5s
BRG Berggiesshubel 89.82 323 *e*P P **10 48 08.2 0.0**
BRG *i* *PP pP 10 48 41.7 -1.0
BRG *e* 10 51 40.3
BRG pmax pmax
comp=Z,12nm,1.1s,mb4.7
BRG MLR MLR
comp=N,82nm,13.3s
BRG MLR MLR
comp=E,158nm,15.1s
BRG MLR MLR
comp=Z,73nm,15.5s
PRA Prague 89.82 322 P P **10 48 09.0 +0.8**
PRA pP pP 10 48 43.0 +0.3
ARSA Arzberg 90.14 319⇓*i*P P **10 48 08.8 -0.9**
comp=Z,7.0nm,0.8s,mb4.6
MBAR Mbarara 90.16 269*c i*P P **10 48 09.8 -0.8**
CLL Collm 90.21 323 *e*P P **10 48 09.1 -0.9**
comp=Z,19nm,1.2s,mb4.9
CLL Collm 90.21 323⇓*i*P P **10 48 09.9 -0.1**
CLL *i* *PP pP 10 48 43.2 -1.3
CLL Collm 90.21 323⇓*i*P P **10 48 09.9 -0.1**
CLL *i* pP pP 10 48 43.2 -1.3
comp=Z,16nm,1.1s
CLL *e* 10 48 51.0
CLL *e*PP PP 10 51 41.0 -4.1
CLL LmV 11 31 00.0
comp=Z,200nm,19.8s
PERS Pernice 90.61 318 *e*P P **10 48 10.9 -1.1**
SOKA Soboth 90.65 318⇑*i*P P **10 48 11.3 -0.9**
comp=Z,11nm,0.9s,mb4.9
BSEG Bad Segeberg 90.67 326 *e*P P **10 48 11.3 -0.8**
comp=Z,23nm,1.0s,mb5.2
BSEG Bad Segeberg 90.67 326 *e*P P **10 48 11.3 -0.8**
BSEG pmax pmax
comp=Z,23nm,1.0s,mb5.2
KHC Kasperske Hory 90.68 321 *e*P P **10 48 12.2 0.0**
comp=Z,3.3nm,0.9s,mb4.4
KHC Kasperske Hory 90.68 321 *e*P P **10 48 12.0 -0.2**
KHC *e**PP pP 10 48 46.0 -0.8
KHC *e* 10 58 32.4
KHC MLR MLR
comp=Z,200nm,13.3s
KHC Kasperske Hory 90.68 321 *e*P P **10 48 12.0 -0.2**
KHC *ep*P pP 10 48 46.0 -0.8
KHC *ex* x 10 48 52.8
KHC *e*SKS 10 58 32.4
KHC AMS AMS 11 34 50.0
comp=Z,200nm,13.3s
GEC2 GERESS Array S 90.71 321 *e*P P **10 48 11.9 -0.5**
comp=Z,14nm,1.0s,mb5.0
GEC2 GERESS Array S 90.71 321 *e*P P **10 48 11.9 -0.5**
GEC2 pmax pmax
comp=Z,14nm,1.0s,mb5.0
MOA Molln 90.72 320⇑*i*P P **10 48 11.8 -0.7**
comp=Z,32nm,0.9s,mb5.4,SNR=11
TANN Tannenbergstha 90.86 323 *e*P P **10 48 12.3 -0.8**
comp=Z,11nm,1.2s,mb4.8
BOJS Bojanci 90.92 317 *i* P P **10 48 12.4 -1.0**
BOJS *ep*P pP 10 48 45.5 -2.5
NKC Novy Kostel 90.94 322 *e*P P **10 48 13.6 +0.2**
NKC *e**PP pP 10 48 47.4 -0.6
NKC Novy Kostel 90.94 322 *e*P P **10 48 13.6 +0.2**
NKC *ep*P pP 10 48 47.4 -0.6
NKC *ex* x 10 48 54.6
WERD Werda 90.94 323 *e*P P **10 48 12.9 -0.5**
comp=Z,14nm,1.2s,mb4.9
GUNZ Gunzen 90.96 323 *e*P P **10 48 13.1 -0.4**
comp=Z,17nm,1.0s,mb5.0
MAW Mawson 91.06 199 *e*P P **10 48 12.2 -1.2**
comp=Z,12nm,1.2s,mb4.8
MAW *ep*P pP 10 48 46.5 -1.5
MAW Mawson 91.06 199 *e*P P **10 48 12.6 -0.9**
comp=Z,5.0nm,1.1s,mb4.5
MAW *ep*P pP 10 48 47.0 -1.0
MAW Mawson 91.06 199 P P **10 48 11.9 -1.5**
comp=Z,11nm,0.9s,mb4.9,baz=52,slow=5.5,SNR=13
MAW Mawson 91.06 199 *e*P P **10 48 12.6 -0.8**
MAW *e**PP pP 10 48 47.0 -1.0
MAW pmax pmax
comp=Z,5.0nm,1.1s
WET Wettzell 91.10 321 *e*P P **10 48 13.8 -0.4**
comp=Z,22nm,1.5s,mb5.0
WET Wettzell 91.10 321 *e*P P **10 48 13.8 -0.4**
WET pmax pmax
comp=Z,22nm,1.5s,mb5.0
LJU Ljubljana 91.21 318 *e*P P **10 48 13.9 -0.9**
LJU *ep*P pP 10 48 47.5 -1.8
MOX Moxa 91.27 323 *e*P P **10 48 14.8 -0.1**
MOX *e* pP 10 48 48.9 -0.6
comp=Z,22nm,1.4s
MOX Moxa 91.27 323 *e*P P **10 48 14.2 -0.7**
comp=Z,55nm,2.0s,mb5.2
MOX Moxa 91.27 323 *e*P P **10 48 14.8 -0.1**
comp=Z,22nm,1.4s,mb5.0
MOX *e* pP 10 48 48.9 -0.6
MOX Moxa 91.27 323 *e*P P **10 48 14.8 -0.1**
MOX *e* pP 10 48 48.9 -0.6
MOX pmax pmax
comp=Z,22nm,1.4s,mb5.0
NRDL Niedersach Rie 91.38 325 *e*P P **10 48 14.0 -1.4**
comp=Z,126nm,2.4s,mb5.5
CLZ Clausthal 91.50 324 *e*P P **10 48 15.7 -0.3**
comp=Z,98nm,2.1s,mb5.5
CLZ *ep*P pP 10 48 49.5 -1.1
CLZ *e*PP PP 10 51 59.2 +3.9
CLZ Clausthal 91.50 324 *e*P P **10 48 15.7 -0.3**
CLZ *e**PP pP 10 48 49.5 -1.1
CLZ *e* 10 51 59.2
CLZ pmax pmax
comp=Z,98nm,2.1s,mb5.5
JAVS Javornik 91.56 318 *e*P P **10 48 14.9 -1.5**
JAVS *ep*P pP 10 48 46.6 -4.4
VOY Vojsko 91.62 318 *e*P P **10 48 15.6 -1.1**
VOY *ep*P pP 10 48 50.5 -0.7
GRA1 Grafenberg Arr 91.88 322 *e*P P **10 48 17.5 -0.3**
comp=Z,124nm,2.5s,mb5.5
GRA1 *e* 10 48 58.6
GRF Grafenberg Arr 91.88 322 *e*P P **10 48 17.5 -0.3**
comp=Z,124nm,2.5s,mb5.5
GRF *e* 10 48 58.6
GRF Grafenberg Arr 91.88 322 *e*P P **10 48 17.5 -0.3**
GRF pmax pmax
comp=Z,124nm,2.5s,mb5.5
TIP Timpagrande 92.02 311 *e*P P **10 48 18.7 0.0**
comp=Z,11nm,0.8s,mb4.9
TIP *ep*P pP 10 48 52.7 -0.5
ABTA Abfaltersbach 92.24 319⇑*i*P P **10 48 17.6 -1.9**
comp=Z,18nm,1.0s,mb5.1
WTTA Wattenberg 92.59 320⇑*i*P P **10 48 20.0 -1.2**
comp=Z,40nm,0.9s,mb5.5,SNR=14
YKA Yellowknife Ar 92.80 22 P P **10 48 21.4 -0.3**
comp=Z,13nm,0.7s,mb5.2,baz=307,slow=4.3,SNR=72
YKA PKiKP PKiKP 10 53 08.0 -0.9
comp=Z,0.6nm,0.6s,baz=324,slow=1.6,SNR=7.0
YKA PKKPbc PKKPbc 11 05 29.3 -5.2
comp=Z,1.4nm,0.5s,baz=132,slow=2.8,SNR=18
YKA Yellowknife Ar 92.80 22 P P **10 48 21.4 -0.4**
SUMG Summit 92.88 354 *e*P P **10 48 22.4 +0.4**
comp=Z,18nm,0.9s,mb5.2
MOTA Moosalm 92.89 320⇓*i*PcP PcP 10 48 22.1 -1.0
comp=Z,26nm,0.9s
CEL Celeste 92.97 310 *e*P P **10 48 23.1 0.0**
comp=Z,33nm,1.1s,mb5.4
FETA Feichten 93.26 320⇑*i*P P **10 48 22.7 -1.5**
comp=Z,24nm,0.9s,mb5.3,SNR=16
AQU L'Aquila 93.30 315 *e*P P **10 48 24.5 -0.1**
comp=Z,13nm,0.7s,mb5.2
AQU *ep*P pP 10 48 58.7 -0.4
AQU L'Aquila 93.30 315 *e*P P **10 48 24.5 0.0**
AQU *e**PP pP 10 48 58.7 -0.4
AQU pmax pmax
comp=Z,13nm,0.7s,mb5.2
BUG Bochum--Univer 93.42 325 *e*P P **10 48 23.1 -1.8**
comp=Z,13nm,0.9s,mb5.1
PPT Papeete 93.72 107 LR LR 11 23 12.7
comp=Z,247nm,21.7s,baz=270,slow=31
BFO Black Forest 94.18 322 *e*P P **10 48 27.4 -1.0**
comp=Z,11nm,1.2s,mb4.9
BFO Black Forest 94.18 322 *e*P P **10 48 27.4 -1.0**
BFO pmax pmax
comp=Z,11nm,1.2s,mb4.9
MEM Membach 94.51 325 P P **10 48 29.8 -0.1**
MEM AP pP 10 49 04.8 +0.4
CDF Champ du Feu 94.78 322⇑*i*P P **10 48 30.6 -0.5**
comp=Z,24nm,1.0s,mb5.1
CDF *ep*P pP 10 49 02.9 -2.8
CDF Champ du Feu 94.78 322⇑*i*P P **10 48 30.6 -0.5**
comp=Z,12nm,1.0s,mb5.1
CDF *ep*P pP 10 49 02.9 -2.8
CDF Champ du Feu 94.78 322⇑*i*P P **10 48 30.6 -0.5**
CDF *e**PP pP 10 49 02.9 -2.8
CDF pmax pmax
comp=Z,12nm,1.0s,mb5.1
WLF Walferdange 94.87 324 P P **10 48 32.1 +0.6**
WLF AP pP 10 49 06.1 0.0
SBA Scott Base 94.94 171 *e*P P **10 48 30.4 -0.8**
comp=Z,23nm,1.7s,mb5.1
SBA Scott Base 94.94 171 *e*P P **10 48 30.4 -0.8**
SBA pmax pmax
comp=Z,23nm,1.7s,mb5.1
BCLA Clavier 95.00 325 P P **10 48 31.8 -0.3**
comp=Z,14nm,1.8s,mb4.9
HINF Hinteralfeld 95.30 322 *e*P P **10 48 32.6 -0.9**
comp=Z,22nm,1.1s,mb5.0
HINF *ep*P pP 10 49 04.9 -3.2
HINF Hinteralfeld 95.30 322 *e*P P **10 48 32.6 -0.9**
comp=Z,11nm,1.1s,mb5.0
HINF *ep*P pP 10 49 04.9 -3.2
HINF Hinteralfeld 95.30 322 *e*P P **10 48 32.6 -0.9**
HINF *e**PP pP 10 49 04.9 -3.2
HINF pmax pmax
comp=Z,11nm,1.1s,mb5.0
GIVF Givet 95.42 324 *e*P P **10 48 33.6 -0.4**
DOU Dourbes 95.55 324 P P **10 48 34.6 0.0**
DOU AP pP 10 49 08.9 -0.3
BAIF Baives 95.79 325⇑*i*P P **10 48 35.2 -0.5**
comp=Z,11nm,0.8s,mb5.0
BAIF *ep*P pP 10 49 07.7 -2.6
BAIF Baives 95.79 325⇑*i*P P **10 48 35.2 -0.5**
comp=Z,5.5nm,0.8s,mb4.9
BAIF *ep*P pP 10 49 07.7 -2.6
BAIF Baives 95.79 325⇑*i*P P **10 48 35.2 -0.5**
BAIF *e**PP pP 10 49 07.7 -2.6
BAIF pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
LSZ Lusaka 95.94 256 *e*P P **10 48 36.8 -0.3**
comp=Z,15nm,0.6s,mb5.5
LSZ Lusaka 95.94 256 *e*P P **10 48 36.8 -0.3**
LSZ pmax pmax
comp=Z,15nm,0.6s,mb5.5
MEZF Maizieres J'vi 96.05 323 *e*P P **10 48 36.5 -0.4**
PGF Pioggiola 96.22 316⇑*i*P P **10 48 37.2 -0.7**
comp=Z,40nm,0.9s,mb5.5
PGF *ep*P pP 10 49 09.4 -3.1
CABF La Chapelle 96.31 321 *e*P P **10 48 37.5 -0.7**
LPG La Plagne 96.40 320⇑P P **10 48 38.6 0.0**
comp=Z,24nm,0.9s,mb5.2
LPG La Plagne 96.40 320⇑*i*P P **10 48 38.6 0.0**
comp=Z,12nm,0.9s,mb5.2
LPG La Plagne 96.40 320⇑*i*P P **10 48 38.6 0.0**
LPG pmax pmax
comp=Z,12nm,0.9s,mb5.2
LPL La Plagne 96.41 320⇑*i*P P **10 48 38.5 -0.1**
comp=Z,21nm,0.9s,mb5.2
LPL *ep*P pP 10 49 10.7 -2.6
LPL La Plagne 96.41 320⇑*i*P P **10 48 38.5 -0.1**
comp=Z,10nm,0.9s,mb5.2
LPL *ep*P pP 10 49 10.7 -2.6
LPL La Plagne 96.41 320⇑*i*P P **10 48 38.5 -0.1**
LPL *e**PP pP 10 49 10.7 -2.6
LPL pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
SBF Sospel 96.69 318⇑*i*P P **10 48 38.9 -1.1**
comp=Z,28nm,0.8s,mb5.3
MBDF Montbardon 96.74 319 *e*P P **10 48 39.8 -0.3**
ORIF Oris-en-Rattie 97.22 319⇑*i*P P **10 48 41.7 -0.6**

comp=Z,11nm,0.9s,mb4.9
ORIF eMLR MLR

comp=Z,420nm,19.8s
ORIF Oris-en-Rattie 97.22 319⇑ *i*P **P 10 48 41.7 -0.6**
comp=Z,5.5nm,0.9s,mb4.9
ORIF Oris-en-Rattie 97.22 319⇑ *i*P **P 10 48 41.7 -0.6**
ORIF pmax pmax

comp=Z,6.0nm,0.9s,mb4.9
FRF La Foret Royal 97.34 318 *e*P **P 10 48 41.9 -1.0**
comp=Z,14nm,0.9s,mb5.0
LOR Lormes 97.35 322 *e*P **P 10 48 41.9 -0.9**
comp=Z,9.5nm,0.9s,mb4.8
LOR eMLR MLR

comp=Z,236nm,22.2s
LOR Lormes 97.35 322 *e*P **P 10 48 41.9 -0.9**
comp=Z,4.8nm,0.9s,mb4.8
LOR LR LR

comp=Z,240nm,22.3s
LOR Lormes 97.35 322 *e*P **P 10 48 41.9 -0.9**
LOR pmax pmax

comp=Z,5.0nm,0.9s,mb4.8
LOR MLR MLR

comp=Z,240nm,22.3s
LMR La Mourre 97.53 318 *e*P **P 10 48 43.4 -0.3**
SSF Saint Saulge 97.66 322 *e*P **P 10 48 43.4 -0.8**
SSF epP pP 10 49 15.6 -3.3
SMF Signal de Mont 97.66 322 *e*P **P 10 48 43.7 -0.6**
AVF Avril sur Loir 97.88 322 *e*P **P 10 48 44.3 -0.9**
comp=Z,6.4nm,0.7s,mb4.8
AVF epP pP 10 49 16.6 -3.3
VIVF Saint-Julien-l 98.00 320⇑ *i*P **P 10 48 45.2 -0.6**
comp=Z,11nm,0.9s,mb5.0
TCF Toulx Ste Croi 98.82 322 *e*P **P 10 48 48.9 -0.5**
comp=Z,7.5nm,0.8s,mb4.9
LDF La Druitiere 98.97 325 *e*P **P 10 48 49.8 -0.3**
FLN La Foliniere 99.08 325 *e*P **P 10 48 49.7 -0.9**
FLN eMLR MLR

comp=Z,344nm,21.5s
FLN La Foliniere 99.08 325 *e*P **P 10 48 49.7 -0.9**
FLN MLR MLR

comp=Z,340nm,21.5s
GRR Gorron 99.49 325 *e*P Pdif 10 48 51.9 -0.4
RJF Les Rejaudoux 99.73 321 *e*P Pdif 10 48 53.5 +0.2
comp=Z,8.2nm,0.8s
RJF epP pP 10 49 25.8 -2.5
RJF eMLR MLR

comp=Z,200nm,19.2s
NEW Newport 99.84 35 *e*P Pdif 10 48 54.8 +1.0
comp=Z,2.9nm,1.0s
NEW Newport 99.84 35 *e*P Pdif 10 48 54.8 +1.0
NEW pmax pmax

comp=Z,3.0nm,1.0s
MFF Saint Martin d 100.05 323 *e*P Pdif 10 48 55.5 +0.8
MTLF Montolieu 100.28 319 *e*P Pdif 10 48 55.5 -0.3
BOSA Boshof 101.17 243 P Pdif 10 48 59.2 -0.5
comp=Z,4.0nm,0.8s,baz=96,slow=9.7,SNR=6.2
ETSF Etsaut 102.26 320 *e*P Pdif 10 49 05.7 +1.1
comp=Z,22nm,1.3s
ETSF Etsaut 102.26 320 *e*P Pdif 10 49 05.7 +1.1
comp=Z,11nm,1.3s
ETSF Etsaut 102.26 320 *e*P Pdif 10 49 05.7 +1.1
ETSF pmax pmax

comp=Z,11nm,1.3s
FCC Fort Churchill 102.46 18 *e*Pdif Pdif 10 49 03.2 -2.3
SJPF Ste Jean 102.56 320 *e*P Pdif 10 49 05.7 -0.2
comp=Z,15nm,1.0s
SJPF Ste Jean 102.56 320 *e*P Pdif 10 49 05.7 -0.2
comp=Z,7.6nm,1.0s
SJPF Ste Jean 102.56 320 *e*P Pdif 10 49 05.7 -0.2
SJPF pmax pmax

comp=Z,8.0nm,1.0s
MFID Camas Ranch 103.27 39 ⇓PKiKP PKiKP 10 53 26.0 -2.0
baz=103
I12A Atlanta 103.48 38 ⇑PKiKP PKiKP 10 53 27.1 -1.2
baz=103
QSPA South Pole Qui 103.49 180 *e*Pdif Pdif 10 49 10.2 +0.2
comp=Z,3.4nm,0.8s
H13A Challis 103.56 37 ⇓PKiKP PKiKP 10 53 27.5 -1.0
baz=104
L10A Juniper Basin 103.60 40 ⇑PKiKP PKiKP 10 53 27.7 -0.9
baz=104
D16A Dana Ranch, Ca 103.62 34 ⇓PKiKP PKiKP 10 53 27.6 -1.0
baz=104
B18A Beardsley Farm 103.71 32 ⇑PKiKP PKiKP 10 53 26.8 -1.8
baz=104
L11A Cat Creek Ranc 104.00 40 ⇓PKiKP PKiKP 10 53 28.6 -0.8
baz=104
D17A Six Diamond Ra 104.01 33 ⇓PKiKP PKiKP 10 53 28.2 -1.1
baz=104
I13A Wildhorse Cree 104.01 38 ⇓PKiKP PKiKP 10 53 29.5 +0.2
baz=104
HLID Hailey 104.04 38 ⇓PKiKP PKiKP 10 53 29.2 -0.2
baz=104
HLID Hailey 104.04 38 *e*Pdif Pdif 10 49 14.2 +1.7
NVAR Mina Array Bea 104.32 44 Pdiff Pdif 10 49 15.2 +1.5
comp=Z,0.7nm,0.7s,baz=269,slow=4.5,SNR=8.3
NVAR PKiKP PKiKP 10 53 29.6 -0.5
comp=Z,1.3nm,0.7s,baz=267,slow=2.2,SNR=6.5
NVAR PKKPbc PKKPbc 11 04 59.8 -1.9
comp=Z,1.8nm,0.7s,baz=134,slow=4.2,SNR=19
NVAR PKKPab PKKPab 11 05 19.2 -2.6
comp=Z,1.0nm,0.7s,baz=130,slow=4.7,SNR=6.6
M11A Holland Ranch, 104.38 40 ⇑PKiKP PKiKP 10 53 29.4 -0.7
baz=104
I14A Mackay 104.40 37 ⇑PKiKP PKiKP 10 53 29.9 -0.2
baz=104
D18A Linhart Farms, 104.46 33 ⇑PKiKP PKiKP 10 53 29.9 -0.1
baz=104
G16A Moss Hill, Enn 104.58 35 ⇑PKiKP PKiKP 10 53 29.3 -1.0
baz=104
J14A Carey 104.71 38 ⇑PKiKP PKiKP 10 53 29.9 -0.7
baz=105
L13A Double Diamond 105.16 39 ⇓PKiKP PKiKP 10 53 31.2 -0.3
baz=105
N12A Clover Valley, 105.17 41 ⇓PKiKP PKiKP 10 53 31.3 -0.3
baz=105
K14A Jones Ranch, D 105.36 38 ⇓PKiKP PKiKP 10 53 31.6 -0.3
baz=105
M13A Montello 105.44 40 *e*PKPdif PKiKP 10 53 33.6 +1.5
RLMT Red Lodge 106.06 34 *e*PP PP 10 53 46.8 +0.7
L15A Malad City 106.16 38 ⇓PKiKP PKiKP 10 53 33.1 -0.3
baz=106
ESDC Sonseca Array 106.16 319 PP PP 10 53 45.9 -1.2
comp=Z,0.5nm,0.5s,baz=60,slow=8.3,SNR=4.2
R11A Troy Canyon, C 106.19 43 ⇑PKiKP PKiKP 10 53 33.1 -0.4
baz=106
FURC Furnace Creek, 106.31 45 ⇓PKiKP PKiKP 10 53 34.0 +0.2
baz=106
HWUT Hardware Ranch 106.89 38 *e*PKPdif PKiKP 10 53 35.2 +0.5
HWUT *e*PP PP 10 53 52.9 +0.6
DUG Dugway 106.94 40 *e*PKPdf PKiKP 10 53 35.9 +1.1
DUG *e*PP PP 10 53 53.5 +0.7
BW06 Boulder Array 107.37 36 *e*PKPdf PKiKP 10 53 35.8 +0.2
JLU Jordanelle 107.55 39 *e*PKPdf PKiKP 10 53 36.8 +0.8
JLU *e*PP PP 10 53 56.3 -0.9
GMRC Granite Mounta 108.03 46 ⇓PKiKP PKiKP 10 53 37.7 +0.6
baz=108
BELC Belle Mtn. Jos 108.19 47 ⇓PKiKP PKiKP 10 53 37.8 +0.4
baz=108
O17A Robinson Place 108.23 39 ⇓PKiKP PKiKP 10 53 38.1 +0.8
baz=108
MSU Marysvale 108.32 41 *e*PKPdf PKiKP 10 53 39.5 +2.0
MSU *e*PP PP 10 54 03.1 +0.3
V13A Grand Canyon W 108.61 44 ⇑PKiKP PKiKP 10 53 39.1 +1.0
baz=108
O18A Roosevelt 108.63 39 ⇓PKiKP PKiKP 10 53 38.3 +0.3
baz=108
Q16A Castle Valley 108.72 40 ⇓PKiKP PKiKP 10 53 38.8 +0.6
baz=109
N19A John Jarvie Ra 108.75 38 ⇓PKiKP PKiKP 10 53 38.4 +0.2
baz=109
U14A Mt Trumbull 108.84 44 ⇓PKiKP PKiKP 10 53 39.6 +1.1
baz=109
P18A Preston Nutter 108.87 39 ⇑PKiKP PKiKP 10 53 39.7 +1.2
baz=109
SRU San Rafael 109.01 40 ⇑PKiKP PKiKP 10 53 39.5 +0.7
baz=109
O19A Miners Draw (B 109.15 38 ⇓PKiKP PKiKP 10 53 39.2 +0.2
baz=109
R17A Hanksville Air 109.30 41 ⇑PKiKP PKiKP 10 53 39.8 +0.4
baz=109
V14A Boquillas Ranc 109.33 44 ⇓PKiKP PKiKP 10 53 40.9 +1.4
baz=109
N20A Spence Gulch, 109.33 37 ⇑PKiKP PKiKP 10 53 40.2 +0.9
baz=109
X13A Yucca 109.40 45 ⇓PKiKP PKiKP 10 53 40.4 +0.7
baz=109
U15A North Rim 109.43 43 ⇓PKiKP PKiKP 10 53 40.4 +0.8
baz=109
RSSD Black Hills 109.52 33 *e*PKPdf PKiKP 10 53 39.7 +0.1
W14A Seligman 109.58 45 ⇑PKiKP PKiKP 10 53 40.7 +0.8
baz=110
P19A Cripple Cowboy 109.64 39 ⇑PKiKP PKiKP 10 53 40.5 +0.6
baz=110
S17A Black Ridge (B 109.71 41 ⇑PKiKP PKiKP 10 53 40.4 +0.3
baz=110
O20A White River Ci 109.78 38 ⇑PKiKP PKiKP 10 53 40.7 +0.5
baz=110
N21A Black Mountain 109.81 37 ⇑PKiKP PKiKP 10 53 40.5 +0.2
baz=110
R18A Canyonlands Na 109.84 40 ⇓PKiKP PKiKP 10 53 41.0 +0.6
baz=110
V15A Kaibab Nationa 109.85 44 ⇑PKiKP PKiKP 10 53 41.0 +0.6
baz=110
Q19A Hogan Spring (109.89 39 ⇑PKiKP PKiKP 10 53 41.2 +0.7
baz=110
T17A Navajo Res., N 110.08 42 ⇑PKiKP PKiKP 10 53 41.5 +0.6
baz=110
P20A De Beque 110.09 39 ⇑PKiKP PKiKP 10 53 41.5 +0.7
baz=110
S18A Hurst Farm, Bl 110.19 41 ⇓PKiKP PKiKP 10 53 41.8 +0.8
baz=110
Z13A Yuma Proving G 110.27 47 ⇓PKiKP PKiKP 10 53 42.1 +0.8
baz=110
R19A Curley Farm, L 110.29 40 ⇓PKiKP PKiKP 10 53 42.2 +1.0
baz=110
U16A Tuba City 110.36 43 ⇓PKiKP PKiKP 10 53 42.8 +1.4
baz=110
PV10 Paradox Valley 110.38 40 *e*PKPdf PKiKP 10 53 43.1 +1.8
X15A Humboldt 110.56 45 ⇓PKiKP PKiKP 10 53 42.7 +0.9
baz=110
T18A Mexican Hat 110.60 41 ⇑PKiKP PKiKP 10 53 42.6 +0.7
baz=110
P21A Newcastle 110.64 38 ⇓PKiKP PKiKP 10 53 42.6 +0.8
baz=110
Y15A Casa Rosa Ranc 110.79 45 ⇓PKiKP PKiKP 10 53 43.4 +1.1
baz=111
PV01 Paradox Valley 110.82 40 *e*PKPdf PKiKP 10 53 43.5 +1.3
Q21A Lamborn Mesa, 111.00 39 ⇓PKiKP PKiKP 10 53 43.7 +1.2
baz=111
X16A Lo Mia Camp, P 111.14 44 ⇓PKiKP PKiKP 10 53 44.2 +1.3
baz=111
R21A Cimarron 111.30 39 ⇑PKiKP PKiKP 10 53 44.1 +1.0
baz=111
T19A Beclabito 111.33 41 ⇓PKiKP PKiKP 10 53 44.1 +0.9
baz=111
Q22A Crested Butte, 111.38 38 ⇓PKiKP PKiKP 10 53 44.3 +1.1
baz=111
V18A Ganado 111.40 43 ⇓PKiKP PKiKP 10 53 44.7 +1.3
baz=111
MVCO Mesa Verde 111.43 41 ⇑PKiKP PKiKP 10 53 44.7 +1.3
baz=111
SCHQ Schefferville 111.49 5 *e*PKPdf PKiKP 10 53 42.4 -0.6
SCHQ Schefferville 111.49 5 PKiKP PKiKP 10 53 42.2 -0.8
comp=Z,2.8nm,0.7s,baz=41,slow=5.5,SNR=5.8
X17A Forest Lakes 111.62 44 ⇑PKiKP PKiKP 10 53 45.2 +1.4
baz=112
R22A Saguache, Gunn 111.88 39 ⇓PKiKP PKiKP 10 53 45.3 +1.1
baz=112
W18A Petrified Fore 111.88 43 ⇑PKiKP PKiKP 10 53 45.4 +1.1
baz=112
U20A Newcomb 111.92 41 ⇑PKiKP PKiKP 10 53 45.4 +1.1
baz=112
Y17A Roosevelt 111.96 45 ⇓PKiKP PKiKP 10 53 45.6 +1.1
baz=112
V19A Window Rock 111.98 42 ⇑PKiKP PKiKP 10 53 45.9 +1.4
baz=112
116A Eloy 112.00 46 ⇑PKiKP PKiKP 10 53 45.9 +1.3
baz=112
V20A Brimhall 112.31 42 ⇓PKiKP PKiKP 10 53 45.8 +0.7
baz=112
U21A Nageezi 112.44 41 ⇑PKiKP PKiKP 10 53 46.2 +0.9
baz=112
P25A Willow Gulch B 112.57 36 ⇓PKiKP PKiKP 10 53 46.1 +0.6
baz=112
X19A St. Johns 112.58 43 ⇓PKiKP PKiKP 10 53 46.8 +1.1
baz=112
117A Oracle 112.67 46 ⇑PKiKP PKiKP 10 53 46.9 +1.0
baz=113
W20A Ramah 112.69 42 ⇑PKiKP PKiKP 10 53 46.8 +1.0
baz=113
Y19A Nutrioso 112.89 44 ⇓PKiKP PKiKP 10 53 47.3 +1.0
baz=113
SDCO Great Sand Dun 112.95 38 *e*PKPdf PKiKP 10 53 46.8 +0.5
U22A Llaves 112.98 40 ⇓PKiKP PKiKP 10 53 47.9 +1.5
baz=113
X20A Quemado 113.04 43 ⇑PKiKP PKiKP 10 53 47.8 +1.3
baz=113
217A Green Valley 113.06 46 ⇑PKiKP PKiKP 10 53 48.0 +1.3
baz=113
T23A Casias Ranch, 113.07 39 ⇑PKiKP PKiKP 10 53 47.7 +1.2
baz=113
S24A Houchin Ranch, 113.19 38 ⇑PKiKP PKiKP 10 53 47.9 +1.2
baz=113
V22A San Miguel Ran 113.23 41 ⇑PKiKP PKiKP 10 53 48.2 +1.4
baz=113
Z19A T-Link Ranch, 113.27 44 ⇓PKiKP PKiKP 10 53 48.4 +1.4
baz=113
U23A El Rito 113.43 40 ⇑PKiKP PKiKP 10 53 48.6 +1.3
baz=113
ECSD EROS Data Cent 113.48 29 *e*PKPdf PKiKP 10 53 46.1 -1.0
Y20A Horse Springs, 113.50 43 ⇑PKiKP PKiKP 10 53 48.8 +1.3
baz=113
119A Ashpeak Ranch, 113.55 45 ⇑PKiKP PKiKP 10 53 48.9 +1.4
baz=114
X21A Alamocita Cree 113.57 43 ⇓PKiKP PKiKP 10 53 49.0 +1.4
baz=114
V23A Ortiz Mt. (NFS 113.80 41 ⇓PKiKP PKiKP 10 53 49.6 +1.7
baz=114
Z20A Nine Sixteen R 113.83 44 ⇑PKiKP PKiKP 10 53 49.5 +1.4
baz=114
318A Bisbee 113.83 46 ⇓PKiKP PKiKP 10 53 49.5 +1.3
baz=114
Y21A Point of Rocks 113.91 43 ⇓PKiKP PKiKP 10 53 49.8 +1.6
baz=114
T25A Trinidad 114.00 38 ⇑PKiKP PKiKP 10 53 49.3 +1.0
baz=114
LAZ Ladron 114.02 42 *e*PKPdf PKiKP 10 53 49.8 +1.4
TORD Torodi Ar. Bea 114.02 291 PKP PKiKP 10 53 47.0 -1.9
comp=Z,7.3nm,0.8s,baz=45,slow=1.7,SNR=40
TORD PKKPbc PKKPbc 11 04 27.1 -3.1
comp=Z,2.0nm,0.9s,baz=262,slow=2.7,SNR=6.8
ANMO Albuquerque 114.12 41 *e*PKPdf PKiKP 10 53 49.7 +1.1
120A U Bar Ranch, L 114.13 45 ⇓PKiKP PKiKP 10 53 50.0 +1.3
baz=114
W23A Werner Place, 114.19 41 ⇓PKiKP PKiKP 10 53 49.7 +1.0
baz=114
Y22D IRIS PASSCAL I 114.36 42 ⇓PKiKP PKiKP 10 53 50.5 +1.4
baz=114
319A Douglas 114.36 46 ⇑PKiKP PKiKP 10 53 50.2 +1.1
baz=114
V24A Rampart Ranch, 114.39 40 ⇓PKiKP PKiKP 10 53 50.1 +1.0
baz=114
Y22A Socorro 114.42 43 ⇑PKiKP PKiKP 10 53 50.1 +0.9
baz=114
U25A Circle Dot Ran 114.48 39 ⇓PKiKP PKiKP 10 53 50.0 +0.8
baz=114
BNM Barren Site 114.51 42 *e*PKPdf PKiKP 10 53 50.2 +0.9
X23A Hourglass Bar 114.53 42 ⇑PKiKP PKiKP 10 53 50.3 +0.9
baz=114
220A Playas Peak, P 114.58 45 ⇓PKiKP PKiKP 10 53 50.5 +0.9
baz=114
W24A Lazy 6 Ranch, 114.63 41 ⇑PKiKP PKiKP 10 53 50.5 +0.9
baz=114
121A Cookes Peak, D 114.72 44 ⇑PKiKP PKiKP 10 53 50.7 +0.9
baz=115
V25A Rancho No Teng 114.72 40 ⇑PKiKP PKiKP 10 53 50.7 +0.9
baz=115
Z22A Elephant Butte 114.83 43 ⇑PKiKP PKiKP 10 53 50.8 +0.8
baz=115
U26A Atchley Ranch, 114.89 39 ⇑PKiKP PKiKP 10 53 50.9 +0.8
baz=115
320A Kipp Ranch, An 114.91 46 ⇑PKiKP PKiKP 10 53 51.4 +1.1
baz=115
Y23A Lovelace Mesa, 115.02 42 ⇑PKiKP PKiKP 10 53 51.0 +0.6
baz=115
221A Mesquite Ranch 115.03 45 ⇑PKiKP PKiKP 10 53 51.5 +1.1
baz=115
W25A X Bar L Ranch, 115.22 40 ⇑PKiKP PKiKP 10 53 51.4 +0.7
baz=115
Y24A Capitan 115.42 42 ⇓PKiKP PKiKP 10 53 51.8 +0.6
baz=115
W26A Owens Ranch, T 115.73 40 ⇓PKiKP PKiKP 10 53 52.6 +0.9
baz=116
Z24A Sheeppen Canyo 115.84 42 ⇑PKiKP PKiKP 10 53 52.8 +0.9
baz=116
Y25A Mesa, Roswell 115.90 41 ⇓PKiKP PKiKP 10 53 52.6 +0.5
baz=116
X26A CR and CF Fran 116.06 40 ⇓PKiKP PKiKP 10 53 53.0 +0.6
baz=116
124A Stringfield Ra 116.17 43 ⇑PKiKP PKiKP 10 53 53.2 +0.6
baz=116
Z25A Roswell 116.29 42 ⇓PKiKP PKiKP 10 53 53.5 +0.7
baz=116
X27A F and S Farms, 116.44 40 ⇑PKiKP PKiKP 10 53 53.5 +0.4
baz=116
224A Cornudas Mount 116.52 43 ⇓PKiKP PKiKP 10 53 54.0 +0.7
baz=116
125A Gardner Draw, 116.72 42 ⇓PKiKP PKiKP 10 53 54.1 +0.4
baz=117
Z26A Caprock 116.77 41 ⇑PKiKP PKiKP 10 53 54.0 +0.2
baz=117
MNTX Cornudas Mount 116.84 44 *e*PKPdf PKPdf 10 53 54.4 +0.4
MNTX *e*PP PP 10 55 04.5 +0.8
Y27A Causey 116.90 40 ⇑PKiKP PKiKP 10 53 54.2 +0.2
baz=117
324A Moseley Ranch, 116.93 44 ⇑PKiKP PKiKP 10 53 54.4 +0.2
baz=117
JFWS Jewell Farm 116.94 25 *e*PKPdf PKPdf 10 53 52.4 -1.4
225A Deer Hill, Car 116.96 43 ⇓PKiKP PKiKP 10 53 54.4 +0.3
baz=117
MSTX Muleshoe 117.09 40 ⇑PKiKP PKiKP 10 53 54.7 +0.4
baz=117
126A Clayton Basin, 117.15 42 ⇓PKiKP PKiKP 10 53 54.6 +0.1
baz=117
GDL2 Guadalupe Moun 117.20 42 *e*PKPdf PKPdf 10 53 55.3 +0.7
Z27A Tatum 117.23 41 ⇓PKiKP PKiKP 10 53 54.9 +0.2
baz=117
325A Bean Ranch, Si 117.32 44 ⇓PKiKP PKiKP 10 53 55.0 +0.1
baz=117
CLNB Carlsbad 117.48 42 *e*PKPdf PKPdf 10 53 55.5 +0.3
425A Indio Mountain 117.67 44 ⇓PKiKP PKiKP 10 53 56.0 +0.4
baz=118
326A Caldwell Ranch 118.02 43 ⇓PKiKP PKiKP 10 53 56.3 +0.1
baz=118
426A McDonald Obser 118.39 44 ⇑PKiKP PKiKP 10 53 57.1 +0.1
baz=118
427A Hayter Ranch, 118.69 43 ⇓PKiKP PKiKP 10 53 57.6 0.0
baz=119
526A Mary Lane Ranc 118.73 44 ⇓PKiKP PKiKP 10 53 57.7 0.0
baz=119
328A Wristen Ranch, 118.75 42 ⇓PKiKP PKiKP 10 53 57.6 0.0
baz=119
WMOK Wichita Mounta 118.97 37 *e*PKPdf PKPdf 10 53 57.2 -0.8
527A Woodward Ranch 119.00 44 ⇓PKiKP PKiKP 10 53 58.3 +0.1
baz=119
626A Big Bend Ranch 119.01 45 ⇑PKiKP PKiKP 10 53 58.2 0.0
baz=119
TXAR Lajitas Array 119.47 45 PKP PKPdf 10 53 59.2 +0.1
TXAR PP PP 10 55 14.7 -7.2
TXAR PKKPbc PKKPbc 11 04 09.5 -2.0
TXAR PKKP PKKPdf 11 04 40.9 -1.0
TXAR Lajitas Array 119.47 45 PKP PKPdf 10 53 59.2 +0.1
comp=Z,8.8nm,0.7s,baz=212,slow=0.6,SNR=111
TXAR PP PP 10 55 14.7 -7.2
comp=Z,1.8nm,1.2s,baz=273,slow=6.2,SNR=2.4
TXAR PKKPbc PKKPbc 11 04 09.5 -2.0
comp=Z,1.4nm,0.9s,baz=137,slow=7.0,SNR=10
TXAR PKKP PKKPdf 11 04 40.9 -1.0
comp=Z,0.6nm,0.7s,baz=136,slow=3.7,SNR=4.5
528A Cox Ranch, San 119.54 43 ⇑PKiKP PKiKP 10 53 59.3 +0.1
baz=119
627A Terlingua Ranc 119.58 44 ⇑PKiKP PKiKP 10 53 59.4 0.0
baz=120
628A Black Gap, Mar 119.90 44 ⇓PKiKP PKiKP 10 53 59.9 0.0
baz=120
CCM Cathedral Cave 120.45 29 *e*PKPdf PKPdf 10 53 59.6 -1.1
PKME Peaks-Kenny Pk 120.67 8 *e*PKPdf PKPdf 10 54 00.2 -0.6
JCT Junction City 121.28 41 *e*PKPdf PKPdf 10 54 02.1 -0.4
OLIL Olney 121.32 26 *e*PKPdf PKPdf 10 54 02.1 -0.3
MIAR Mount Ida 122.03 33 *e*PKPdf PKPdf 10 54 04.2 +0.4
BINY Binghamton 122.33 15 *e*PKPdf PKPdf 10 54 03.6 -0.6
DBIC Dimbokro 122.36 287 PKP PKPdf 10 54 03.9 -1.1
comp=Z,16nm,0.7s,baz=32,slow=2.2,SNR=25
KIC Kosan Boka 122.36 287 *e*PKP1 PKPdf 10 54 03.8 -1.2
comp=Z,48nm,0.7s
WCI Wyandotte Cave 122.50 25 *e*PKPdf PKPdf 10 54 04.3 -0.4
TIC Toumodi 122.53 287 *e*PKP1 PKPdf 10 54 03.2 -2.1
comp=Z,17nm,0.2s
LIC Lamto 122.68 287 *e*PKP1 PKPdf 10 54 04.3 -1.3
comp=Z,77nm,0.8s
LIC Lamto 122.68 287⇑ *i*PKIKP PKPdf 10 54 04.4 -1.2
comp=Z,49nm,0.8s
WVT Waverly 123.60 28 *e*PKPdf PKPdf 10 54 06.2 -0.6
WVT *ep*PKPdf pPKPdf 10 54 42.1 -0.9
HKT Hockley 124.12 39 *e*PKPdf PKPdf 10 54 09.0 +1.0
ELN Prospectdale 125.50 21 *e*PKPdf PKPdf 10 54 09.8 -0.6
TKL Tuckaleechee C 125.74 25 *e*PKPdf PKPdf 10 54 10.9 -0.1
LRAL Lakeview Retre 126.54 29 *e*PKPdf PKPdf 10 54 12.5 -0.1
BRAL Brewton 128.17 31 *e*PKPdf PKPdf 10 54 16.7 +1.0
TGUH Tegucigalpa,Un 140.91 46 *e*PKPdf PKPdf 10 54 39.2 -0.6
JTS JuntasÁbangare 145.12 48 *e*PKPbc PKPbc 10 54 46.3 -0.7
SDDR Presa de Saban 145.47 20 *e*PKPbc PKPbc 10 54 48.0 0.0
CRPR Cabo Rojo, PR 147.60 14 *e*PKPbc PKPbc 10 54 54.2 +0.1
CBYP Canovanas 147.62 12 *e*PKPdf PKPdf 10 54 51.9 +0.5
CBYP *e*PKPbc PKPbc 10 54 54.0 -0.2
CBYP *e*PKPab PKPab 10 54 57.2 +0.6
SJG San Juan 147.72 12 *e*PKPdf PKPdf 10 54 51.4 -0.2
SJG *e*PKPbc PKPbc 10 54 53.8 -0.7
ICM Isla Caja Muer 147.85 13 *e*PKPdf PKPdf 10 54 51.7 0.0
ICM *e*PKPbc PKPbc 10 54 54.4 -0.5
ICM *e*PKPab PKPab 10 54 57.8 +0.3
MTP Monte Pirata 147.85 11 *e*PKPbc PKPbc 10 54 54.6 -0.2
BCIP Isla Barro Col 149.47 43 *e*PKPdf PKPdf 10 54 54.3 -0.2
BCIP *e*PKPbc PKPbc 10 54 59.0 -0.2
BCIP *e*PKPab PKPab 10 55 04.3 0.0
PLCA Paso Flores 151.26 162 PKPbc PKPbc 10 55 01.4 -1.2
baz=242,slow=4.9
PLCA Paso Flores 151.26 162 *e*PKIKP PKPbc 10 55 02.5 -0.1
FDF Fort de France 151.74 4 *e*P PKPbc 10 55 03.8 -0.6
MVM Montagne Vaucl 151.93 3 *e*P PKPbc 10 55 04.3 -0.6
BIM Bigot 151.96 4 *e*P PKPbc 10 55 04.8 -0.1
SDV Santo Domingo 154.92 27 *e*PKPdf PKPdf 10 55 03.0 +0.3
SDV *e*PKPbc PKPbc 10 55 11.7 +0.3
OTAV Otavalo 156.49 56 *e*PKPdf PKPdf 10 55 06.3 +1.5
CPUP Villa Florida 167.26 188 PKP PKPdf 10 55 13.8 -1.5
comp=Z,1.7nm,0.6s,baz=102,slow=1.8,SNR=9.9
CPUP PKPab PKPab 10 56 18.9 -1.6
comp=Z,10nm,0.7s,baz=144,slow=4.8,SNR=30
LPAZ La Paz 171.02 108 PKP PKPdf 10 55 17.1 -0.8
comp=Z,4.4nm,0.9s,baz=350,slow=2.7,SNR=16
LPAZ PKPab PKPab 10 56 38.3 +0.6
comp=Z,6.3nm,0.8s,baz=293,slow=2.9,SNR=12
LPAZ La Paz 171.02 108 *e*PKIKP PKPdf 10 55 18.4 +0.5

NEIC ***01*** *10:41:24.4, 19˚.22N×68˚.70W, h125km, MD3.7(RSPR), After RSPR.*

RSPR 01 10:41:24.4, 19˚.22N×68˚.70W, h125km±3km, MD3.7/3, 3C-1D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
SMN1	**Samana, DR**	**0.55**	**267**⇑	*e*P	Pn	10 41 43.4	+0.3
SMN1				*e*S	Sn	10 41 56.8	-0.4
AGPR	**Aguadilla, PR**	**1.68**	**116**	*e*S	Sn	10 42 17.1	+0.2
LSP	**Las Mesas**	**1.85**	**124**⇓	*e*P	Pn	10 41 55.5	-0.7
CRPR	**Cabo Rojo, PR**	**1.93**	**128**⇓	*e*P	Pn	10 41 56.9	-0.3
CRPR				*e*S	Sn	10 42 22.7	+0.4
MTP	**Monte Pirata**	**3.18**	**110**⇑	*e*P	Pn	10 42 16.2	+2.9
MTP				*e*S	Sn	10 42 50.6	-0.3

IDC ***01*** *10:45:22.5±8.0, 36˚.18N×69˚.84E, h193km±55km, mb3.2/4, mb1 3.3/6, mb1mx3.0/25, mbtmp3.2/6, Error ellipse: s-maj=81.9km s-min=40.3km az=72.0*
ISCJB ***01*** *10:45:26.1±1.1, 36˚.46N±0˚.04×70˚.3E±0˚.1, h209km±9km, mb3.2/3, Error ellipse: s-maj=18.7km s-min=6.0km az=173.3*

ISC 01 10:45:26.7±1.1, 36˚.47N±0˚.04×70˚.3E±0˚.1, h184km±10km, n28, σ1°27/35, mb3.3/3, 4C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
CEP	**Cherat**	**2.94**	**154**	⇑P	**Pn**	**10 46 18.1**	**+3.3**
CEP				S	**Sn**	**10 46 57.0**	**+4.8**
CHCP	**Chirah Chowk**	**3.69**	**139**	P	**Pn**	**10 46 27.3**	**+3.2**
THW	**Thamme Wali**	**3.84**	**162**	⇑P	**Pn**	**10 46 26.4**	**+0.4**
KK31	**Karatay Array**	**6.63**	**1**	Pn	**Pn**	**10 47 02.3**	**+0.4**

1.8nm,0.3s,baz=179,slow=12,SNR=53
KK31 ⇓Sn **Sn** **10 48 13.5 -3.5**
10.0nm,0.6s,baz=183,slow=24
AAK **Ala-Archa** **6.94 26** P **Pn** **10 47 08.6 +2.6**
1.3nm,0.3s,baz=189,slow=13,SNR=3.2
AAK S **Sn** **10 48 24.0 -0.5**
2.1nm,0.3s,baz=199,slow=6.2,SNR=7.6
TKM2 **Tokmak 2** **7.61 31** ⇑Pn **Pn** **10 47 15.8 +1.1**
3.5nm,0.6s
TKM2 ⇑Sn **Sn** **10 48 39.2 -1.1**
8.2nm,0.9s
SMLA **Simla** **7.79 131** *i* P **Pn** **10 47 16.9 -0.3**
SMLA *i* S **Sn** **10 48 42.4 -2.3**
SMLA 10 48 46.0
comp=N,454nm,0.2s
SMLA 10 48 46.2
comp=E,363nm,0.2s
KLP **Kalpa** **8.21 125** *e*PKP **Pn** **10 47 22.5 -0.2**
KLP *e*S **Sn** **10 48 38.1 -17**
KLP AML AML 10 49 38.1
comp=E,63nm,1.1s
KLP AML AML 10 49 38.5
comp=N,52nm,0.8s
KHET **Khetri** **9.56 150** *e*PKP **Pn** **10 47 38.6 -1.8**
KHET *e*S **Sn** **10 49 21.6 -5.5**
KHET AML AML 10 49 26.0
comp=N,17nm,0.4s
KHET AML AML 10 49 26.3
comp=E,16nm,0.4s
NDI **New Delhi** **9.69 141** *e*PKP **Pn** **10 47 41.0 -1.1**
KUDL **Kundal** **9.79 146** *ex* **Pn** **10 47 42.2 -1.3**
KUDL *e*S **Sn** **10 49 24.9 -7.7**
KUDL AML AML 10 49 35.7
comp=E,12nm,0.5s
KUDL AML AML 10 49 41.8
comp=N,11nm,0.5s
SONA **Sohna** **9.98 143** *e*PKP **Pn** **10 47 42.4 -3.5**
SONA *e*S Sn 10 49 14.7 -22
SONA AML AML 10 49 25.0
comp=N,10nm,0.1s
SONA AML AML 10 49 26.2
comp=E,18nm,0.4s
MKAR **Makanchi Array** **13.63 37** P **Pn** **10 48 32.5 +0.1**
comp=E,0.6nm,0.3s,baz=226,slow=12,SNR=6.8
GKN **Gorkha** **14.74 121** *e*P **Pn** **10 48 46.4 0.0**
comp=E,17nm,0.3s
DMN **Daman** **15.31 121** *e*P **Pn** **10 48 54.1 +0.7**
comp=E,20nm,0.4s
KKN **Kakani** **15.32 120** *e*P **Pn** **10 48 53.3 -0.2**
PKIN **Phulchoki** **15.53 121** *e*P **Pn** **10 48 57.0 +0.9**
comp=E,28nm,0.6s
PKI **Pulchoki** **15.54 121** *e*P **Pn** **10 48 57.2 +0.9**
comp=E,51nm,0.7s
GUN **Gumba** **15.67 119** *e*P **Pn** **10 48 58.2 +0.4**
JIRN **Jiri** **16.04 119** *e*P **Pn** **10 49 02.7 +0.5**
comp=E,42nm,0.3s
RAMN **Ramite** **16.76 120** *e*P **Pn** **10 49 10.9 0.0**
comp=E,24nm,0.5s
TAPN **Taplejung** **17.30 117** *e*P **Pn** **10 49 19.1 +1.7**
comp=E,13nm,0.3s
ODAN **Odare** **17.37 119** *e*P **Pn** **10 49 20.4 +2.2**
comp=E,28nm,0.6s
ZALV **Zalesovo Beam** **20.17 25** P **P** **10 49 46.1 -0.6**
comp=E,2.5nm,0.4s,baz=219,slow=10,SNR=11
SONM **Songino Array** **28.79 55** P **P** **10 51 07.3 +0.1**
comp=E,0.9nm,0.6s,mb3.7,baz=265,slow=9.3,SNR=4.2
ILAR **Eielson Array** **74.95 16** P **P** **10 56 44.3 -2.8**
comp=E,0.3nm,0.9s,mb2.9,baz=303,slow=5.3,SNR=3.9
YKA **Yellowknife Ar** **81.30 2** pP pP 10 58 10.8 +3.9
comp=E,1.1nm,0.9s,baz=352,slow=5.9,SNR=5.2
ASAR **Alice Springs** **84.67 124** P **P** **10 57 35.4 -4.4**
comp=E,0.4nm,0.8s,mb3.2,baz=309,slow=5.9,SNR=4.8

*ISCJB **01** 10:45:59.9±0.9,43.00N±0.05×13.25E±0.05,h64km±7km, Error ellipse: s-maj=8.4km s-min=6.1km az=156.1*
*CSEM **01** 10:45:59.2±0.4,42.98N×13.19E,h69km±5km, ML2.3/7, Error ellipse: s-maj=6.1km s-min=5.2km az=162.0*
*ROM **01** 10:46:00.8±0.2,42.98N×13.21E,h55km±2km, Md2.3/14, Ml2.0/10, Error ellipse: s-maj=2.2km s-min=1.8km az=166.0*

ISC 01 10:45:59.9±0.8, 42.99N±0.05×13.27E±0.05, h64km±7km, n31, σ0s72/52, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.14**	**291**		Pg	**Pn**	**10 46 09.1**	**-0.5**
FDMO					Sg	**Sn**	**10 46 15.7**	**-0.9**
	202nm,0.2s							
FDMO	**Fiordimonte**	**0.14**	**291**		Pg	**Pn**	**10 46 09.1**	**-0.5**
CESI	**CESI - Serrava**	**0.27**	**274**		Pg	**Pn**	**10 46 09.9**	**-0.3**
CESI					Sg	**Sn**	**10 46 17.1**	**-0.6**
	142nm,0.6s							
CESI	**CESI - Serrava**	**0.27**	**274**		Pg	**Pn**	**10 46 09.9**	**-0.3**
CESI					Sg	**Sn**	**10 46 17.1**	**-0.6**
	142nm,0.6s							
SNTG	**Esanatoglia**	**0.36**	**318**		Pg	**Pn**	**10 46 10.8**	**-0.1**
SNTG					Sg	**Sn**	**10 46 18.6**	**-0.4**
	35nm,0.1s							
SNTG	**Esanatoglia**	**0.36**	**318**		Pg	**Pn**	**10 46 10.8**	**-0.1**
SNTG					Sg	**Sn**	**10 46 18.6**	**-0.4**
	35nm,0.1s							
CING	**Cingoli**	**0.39**	**352**		Pg	**Pn**	**10 46 11.4**	**+0.2**
CING					Sg	**Sn**	**10 46 19.5**	**+0.1**
	48nm,0.3s							
CING	**Cingoli**	**0.39**	**352**		Pg	**Pn**	**10 46 11.4**	**+0.2**
CING					Sg	**Sn**	**10 46 19.5**	**+0.1**
	48nm,0.3s							
TERO	**Teramo**	**0.44**	**146**		Pg	**Pn**	**10 46 11.9**	**+0.3**
TERO					Sg	**Sn**	**10 46 20.7**	**+0.6**
	103nm,0.4s							
TERO	**Teramo**	**0.44**	**146**		Pg	**Pn**	**10 46 11.9**	**+0.3**
TERO					Sg	**Sn**	**10 46 20.7**	**+0.6**
	103nm,0.4s							
ASS	**Assisi**	**0.46**	**280**		Pg	**Pn**	**10 46 11.8**	**0.0**
ASS					Sg	**Sn**	**10 46 20.7**	**+0.2**
	39nm,0.3s							
ASS	**Assisi**	**0.46**	**280**		Pg	**Pn**	**10 46 11.8**	**0.0**
ASS					Sg	**Sn**	**10 46 20.7**	**+0.2**
	39nm,0.3s							
ARVD	**Arcevia**	**0.57**	**335**		Pg	**Pn**	**10 46 13.5**	**+0.6**
	33nm,0.7s							
ARVD	**Arcevia**	**0.57**	**335**		Pg	**Pn**	**10 46 13.5**	**+0.6**
	33nm,0.7s							
MURB	**Monte Urbino**	**0.61**	**297**		Pg	**Pn**	**10 46 14.5**	**+1.1**
	93nm,0.2s							
MURB	**Monte Urbino**	**0.61**	**297**		Pg	**Pn**	**10 46 14.5**	**+1.1**
	93nm,0.2s							
AOI	**Ancona**	**0.61**	**23**		Pg	**Pn**	**10 46 14.0**	**+0.6**
AOI					Sg	**Sn**	**10 46 24.9**	**+1.6**
AOI	**Ancona**	**0.61**	**23**		Pg	**Pn**	**10 46 14.0**	**+0.6**
AOI					Sg	**Sn**	**10 46 24.9**	**+1.6**
FIAM	**Fiamignano**	**0.73**	**189**		Pg	**Pn**	**10 46 16.0**	**+1.3**
	25nm,0.5s							
FIAM	**Fiamignano**	**0.73**	**189**		Pg	**Pn**	**10 46 16.0**	**+1.3**
	25nm,0.5s							
PIEI	**Pieia**	**0.77**	**316**		Pg	**Pn**	**10 46 15.9**	**+0.7**
	20nm,0.3s							
PIEI	**Pieia**	**0.77**	**316**		Pg	**Pn**	**10 46 15.9**	**+0.7**
	20nm,0.3s							
MGAB	**Montegabbione**	**0.85**	**265**		Pg	**Pn**	**10 46 16.5**	**+0.2**
MGAB					Sg	**Sn**	**10 46 27.8**	**-0.5**
MGAB	**Montegabbione**	**0.85**	**265**		Pg	**Pn**	**10 46 16.5**	**+0.2**
MGAB					Sg	**Sn**	**10 46 27.8**	**-0.5**
SACS	**San Casciano d**	**1.01**	**263**		Pg	**Pn**	**10 46 18.3**	**+0.1**
SACS					Sg	**Sn**	**10 46 31.5**	**-0.3**
	23nm,0.2s							
SACS	**San Casciano d**	**1.01**	**263**		Pg	**Pn**	**10 46 18.3**	**+0.1**
SACS					Sg	**Sn**	**10 46 31.5**	**-0.3**
	23nm,0.2s							
CAFI	**Castiglion Fio**	**1.01**	**290**		Pg	**Pn**	**10 46 18.5**	**+0.2**
CAFI					Sg	**Sn**	**10 46 31.1**	**-0.8**
	11nm,0.3s							
CAFI	**Castiglion Fio**	**1.01**	**290**		Pg	**Pn**	**10 46 18.5**	**+0.2**
CAFI					Sg	**Sn**	**10 46 31.1**	**-0.8**
	11nm,0.3s							
NVLJ	**Novalja**	**1.96**	**36**	*e*Pn	Pn	**Pn**	**10 46 29.5**	**-1.4**
NVLJ					Sn	**Sn**	**10 46 54.3**	**-0.1**
NVLJ	**Novalja**	**1.96**	**36**	*e*Pn	Pn	**Pn**	**10 46 29.4**	**-1.4**
NVLJ					Sn	**Sn**	**10 46 54.3**	**-0.1**
STON	**Ston**	**3.25**	**91**		Sn	**Sn**	**10 47 24.4**	**-1.6**

*ISK **01** 10:52:35.8,35.98N×31.70E,h20km, MD3.5, ML3.3*

*ISCJB **01** 10:52:36.5±0.8,35.91N±0.03×31.66E±0.04,h31km±8km, Error ellipse: s-maj=5.1km s-min=3.8km az=148.4*
*DDA **01** 10:52:37.3,36.54N×31.70E,h8km×3km, Md3.3, Ml3.4*
*CSEM **01** 10:52:37.6±0.1,35.97N×31.70E,h30km, Mw3.2, Error ellipse: s-maj=4.2km s-min=3.3km az=57.0*
*NIC **01** 10:52:38.8±0.3,36.07N×31.94E,h35km, ML3.3, MW3.2*
*HLW **01** 10:52:41.3,35.70N×31.38E,h35km±51km, Ml3.3*

ISC 01 10:52:37.5±0.9, 35.96N±0.03×31.70E±0.03, h27km±9km, n78, σ0s79/96, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**0.57**	**61**	*i* P		**Pb**		**10 52 48.5**	**-0.4**
GAZI				*i* S		**Sb**		**10 52 57.5**	**+0.8**
GAZI	**Gazipasa**	**0.57**	**61**	*i* P		**Pb**		**10 52 48.5**	**-0.4**
GAZI				*i* S		**Sb**		**10 52 57.5**	**+0.8**
ALFC	**Alevga**	**1.08**	**137**	P		**Pn**		**10 52 56.8**	**-0.1**
	37nm,0.1s								
ALFC				S		**Sn**		**10 53 11.1**	**+0.1**
ALFC	**Alevga**	**1.08**	**137**	P		**Pn**		**10 52 56.8**	**-0.1**
	37nm,0.1s								
ALFC				S		**Sn**		**10 53 11.1**	**+0.1**
HDMB	**Hadim**	**1.19**	**32**	*e*PN		**Pn**		**10 52 57.5**	**-0.8**
HDMB				*e*SN		**Sn**		**10 53 13.6**	**+0.1**
HDMB	**Hadim**	**1.19**	**32**	*e*Pn		**Pn**		**10 52 57.5**	**-0.8**
HDMB				*e*Sn		**Sn**		**10 53 13.6**	**+0.1**
PPCY	**Paphos**	**1.19**	**154**	P		**Pn**		**10 52 59.8**	**+1.4**
PPCY	**Paphos**	**1.19**	**154**	P		**Pn**		**10 52 59.8**	**+1.4**
ANTB	**Antalya**	**1.26**	**318**	*e*PN		**Pn**		**10 52 58.3**	**-1.0**
ANTB				*e*SN		**Sn**		**10 53 15.1**	**-0.4**
ANTB	**Antalya**	**1.26**	**318**	*e*Pn		**Pn**		**10 52 58.3**	**-1.0**
ANTB				*e*Sn		**Sn**		**10 53 15.1**	**-0.3**
LEF	**Lefka**	**1.28**	**130**	*e*PN		**Pn**		**10 52 58.6**	**-1.0**
LEF	**Lefka**	**1.28**	**130**	*e*Pn		**Pn**		**10 52 58.6**	**-1.0**
MAMC	**Mammari**	**1.47**	**122**	P		**Pn**		**10 53 01.8**	**-0.3**
MAMC	**Mammari**	**1.47**	**122**	P		**Pn**		**10 53 01.8**	**-0.3**
KORT	**Korkueli**	**1.51**	**314**	*i* P		**Pn**		**10 53 00.3**	**-2.3**
KORT				*i* S		**Sn**		**10 53 27.7**	**+6.3**
KORT	**Korkueli**	**1.51**	**314**	*i* P		**Pn**		**10 53 00.3**	**-2.4**
SUTC	**Sutluce-Ispart**	**1.62**	**340**	*e*PN		**Pn**		**10 53 03.8**	**-0.4**
SUTC	**Sutluce-Ispart**	**1.62**	**340**	*e*Pn		**Pn**		**10 53 03.8**	**-0.4**
IKL	**Isikli**	**1.63**	**80**	*e*PN		**Pn**		**10 53 04.5**	**+0.2**
IKL	**Isikli**	**1.63**	**80**	*e*Pn		**Pn**		**10 53 04.6**	**+0.2**
LFK	**Lefkose**	**1.64**	**114**	*e*PN		**Pn**		**10 53 04.4**	**-0.1**
LFK	**Lefkose**	**1.64**	**114**	*e*Pn		**Pn**		**10 53 04.4**	**-0.1**
ELL	**Elmali**	**1.65**	**299**	*e*PN		**Pn**		**10 53 04.4**	**-0.2**
ELL	**Elmali**	**1.65**	**299**	*e*Pn		**Pn**		**10 53 04.4**	**-0.2**
CSS	**Prodhromos**	**1.66**	**126**	P		**Pn**		**10 53 04.4**	**-0.4**
	3.4nm,0.3s								
CSS				S		**Sn**		**10 53 24.9**	**-0.3**
CSS	**Prodhromos**	**1.66**	**126**	P		**Pn**		**10 53 04.4**	**-0.4**
	3.4nm,0.3s								
CSS				S		**Sn**		**10 53 24.9**	**-0.3**
BCK	**Bucak**	**1.75**	**330**	*e*PN		**Pn**		**10 53 05.5**	**-0.4**
BCK	**Bucak**	**1.75**	**330**	*e*Pn		**Pn**		**10 53 05.5**	**-0.5**
KONT	**Konya--Tatoy**	**2.05**	**15**	*e*PN		**Pn**		**10 53 10.3**	**+0.1**
KONT	**Konya--Tatoy**	**2.05**	**15**	*e*Pn		**Pn**		**10 53 10.3**	**+0.1**
EREN	**Erenkoy**	**2.05**	**101**	*e*PN		**Pn**		**10 53 10.6**	**+0.4**
EREN	**Erenkoy**	**2.05**	**101**	*e*Pn		**Pn**		**10 53 10.6**	**+0.4**
GOLH	**Golhisar**	**2.14**	**307**	*i* P		**Pn**		**10 53 11.0**	**-0.4**
GOLH				*i* S		**Sn**		**10 53 37.7**	**+0.6**
GOLH	**Golhisar**	**2.14**	**307**	*i* P		**Pn**		**10 53 11.0**	**-0.4**
GOLH				*i* S		**Sn**		**10 53 37.7**	**+0.6**
LADK	**Ladik-KONYA**	**2.30**	**13**	*e*PN		**Pn**		**10 53 12.7**	**-0.9**
LADK	**Ladik-KONYA**	**2.30**	**13**	*e*Pn		**Pn**		**10 53 12.7**	**-0.9**
MERS	**Mersin**	**2.45**	**67**	*e*PN		**Pn**		**10 53 15.7**	**+0.1**
MERS	**Mersin**	**2.45**	**67**	*e*Pn		**Pn**		**10 53 15.7**	**+0.1**
TURN	**Turunc**	**2.66**	**291**	*i* P		**Pn**		**10 53 20.1**	**+1.6**
TURN				*i* S		**Sn**		**10 53 51.2**	**+1.4**
TURN	**Turunc**	**2.66**	**291**	*i* P		**Pn**		**10 53 20.1**	**+1.6**
TURN				*i* S		**Sn**		**10 53 51.2**	**+1.3**
SULT	**Sultanhani-AKS**	**2.67**	**32**	*e*PN		**Pn**		**10 53 18.0**	**-0.6**
SULT	**Sultanhani-AKS**	**2.67**	**32**	*e*Pn		**Pn**		**10 53 18.0**	**-0.6**
DNZL	**Cakiroluk**	**2.74**	**310**	*i* P		**Pn**		**10 53 20.7**	**+1.0**
DNZL				*i* S		**Sn**		**10 53 58.8**	**+6.9**
DNZL	**Cakiroluk**	**2.74**	**310**	*i* P		**Pn**		**10 53 20.7**	**+1.0**
SHUT	**Suhut-Afyon**	**2.75**	**341**	*e*PN		**Pn**		**10 53 20.5**	**+0.8**
SHUT	**Suhut-Afyon**	**2.75**	**341**	*e*Pn		**Pn**		**10 53 20.5**	**+0.8**
KIZT	**Kizilcal**	**2.92**	**3**	*e*PN		**Pn**		**10 53 21.6**	**-0.5**
KIZT	**Kizilcal**	**2.92**	**3**	*e*Pn		**Pn**		**10 53 21.6**	**-0.5**
KHL	**Karahalli**	**2.93**	**324**	*e*PN		**Pn**		**10 53 21.8**	**-0.5**
KHL	**Karahalli**	**2.93**	**324**	*e*Pn		**Pn**		**10 53 21.8**	**-0.5**
YER	**Yerkesik**	**2.99**	**294**	*e*PN		**Pn**		**10 53 24.3**	**+1.2**
YER	**Yerkesik**	**2.99**	**294**	*e*Pn		**Pn**		**10 53 24.3**	**+1.2**
KARA	**Karaisali**	**2.99**	**63**	*e*PN		**Pn**		**10 53 23.8**	**+0.6**
KARA	**Karaisali**	**2.99**	**63**	*e*Pn		**Pn**		**10 53 23.8**	**+0.7**
SVRH	**Sivrihisar-ESK**	**3.48**	**358**	*e*PN		**Pn**		**10 53 29.5**	**-0.4**
SVRH	**Sivrihisar-ESK**	**3.48**	**358**	*e*Pn		**Pn**		**10 53 29.5**	**-0.4**
KULA	**Kula-Manisa**	**3.52**	**317**	*e*PN		**Pn**		**10 53 31.5**	**+1.2**
KULA	**Kula-Manisa**	**3.52**	**317**	*e*Pn		**Pn**		**10 53 31.5**	**+1.1**
KOZT	**Kozan**	**3.65**	**64**	*e*PN		**Pn**		**10 53 33.1**	**+1.1**
AMAG	**Maghara**	**5.45**	**166**	P		**Pn**		**10 53 57.4**	**+0.5**
	baz=162								
AMAG	**Maghara**	**5.45**	**166**	P		**Pn**		**10 53 57.4**	**+0.5**
HBRG	**Burj al 'Arab**	**5.59**	**197**	P		**Pn**		**10 53 59.4**	**+0.5**
	baz=195								
HBRG	**Burj al 'Arab**	**5.59**	**197**	P		**Pn**		**10 53 59.4**	**+0.5**
KOT	**Kottamia**	**6.02**	**179**	P		**Pn**		**10 54 05.3**	**+0.6**
	baz=176								
KOT				S		**Sn**		**10 55 04.2**	**-8.4**
	baz=176								
KOT	**Kottamia**	**6.02**	**179**	P		**Pn**		**10 54 05.3**	**+0.6**
HMAT	**Matruh**	**6.19**	**220**	P		**Pn**		**10 54 06.3**	**-0.8**
	baz=220								
HMAT				AMP				10 55 00.0	
	comp=E,20μm,0.2s,logA/T=4.9,baz=220								
HSAF	**As Saff**	**6.32**	**181**	P		**Pn**		**10 54 09.4**	**+0.5**
	baz=178								
HSAF	**As Saff**	**6.32**	**181**	P		**Pn**		**10 54 09.4**	**+0.5**
GLL	**Jalalah**	**6.36**	**180**	P		**Pn**		**10 54 10.3**	**+0.8**
	baz=177								
GLL	**Jalalah**	**6.36**	**180**	P		**Pn**		**10 54 10.3**	**+0.8**
SLUM		**7.00**	**232**	P		**Pn**		**10 54 17.2**	**-1.0**
	baz=233								
SLUM				S		**Sn**		**10 55 25.4**	**-12**
	baz=233								
SLUM		**7.00**	**232**	P		**Pn**		**10 54 17.2**	**-1.1**
AWBH		**7.98**	**198**	P		**Pn**		**10 54 31.0**	**-0.6**
	baz=197								
AWBH		**7.98**	**198**	P		**Pn**		**10 54 31.0**	**-0.6**
SWA2		**8.52**	**220**	P		**Pn**		**10 54 37.6**	**-1.5**
	baz=220								
SWA2		**8.52**	**220**	P		**Pn**		**10 54 37.6**	**-1.4**
HDK1	**Dakhla**	**10.57**	**191**	P		**Pn**		**10 55 06.5**	**-0.6**
	baz=191								
HDK1	**Dakhla**	**10.57**	**191**	P		**Pn**		**10 55 06.5**	**-0.6**

*IDC **01** 11:08:27.9±1.1,51.70N×75.46E,h0km,mb1 3.1/3, mb1mx2.9/27,mbtmp3.1/3,ML2.9/3, Error ellipse:*
s-maj=30.3km s-min=8.6km az=33.0
*ISCJB **01** 11:08:29.5±0.6,51.60N±0.07×75.69E±0.08,h10km, Error ellipse: s-maj=10.6km s-min=5.3km az=28.7*
*NNC **01** 11:08:29.9±1.6,51.19N×75.48E,h0km, mb3.1, mpv2.7, Error ellipse: s-maj=64.6km s-min=12.0km az=29.0*

ISC 01 11:08:31.2±0.6, 51.61N±0.07×75.63E±0.08, h10km, n9, σ0s77/16, 7C-6D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**2.08**	**117**	⇓Pn		**Pn**	**Pn**	**11 09 05.5**	**-0.5**
	1.1nm,0.5s								
KURBB				⇑Lg				11 09 35.8	
	9.1nm,0.6s								
KURK	**Kurchatov**	**2.08**	**114**	⇑Pn		**Pn**	**Pn**	**11 09 05.4**	**-0.7**
	4.2nm,0.5s								
KURK				⇓Lg				11 09 33.6	
	20nm,0.6s								
VOSK	**Vostochnaya**	**3.07**	**293**	⇑Pn		**Pn**	**Pn**	**11 09 19.6**	**-0.1**
	5.7nm,0.6s								
VOSK				⇓Sn		**Sn**	**Sn**	**11 09 56.0**	**-0.5**
	36nm,0.7s								
BVA0	**Borovoye Array**	**3.52**	**296**	⇑Pn		**Pn**	**Pn**	**11 09 27.4**	**+1.6**
	0.5nm,0.6s,baz=117,slow=20,SNR=16								
BVA0				⇑Sn		**Sn**	**Sn**	**11 10 12.4**	**+5.1**
	3.1nm,0.7s,baz=117,slow=26,SNR=10								
BVAR	**Borovoye Array**	**3.52**	**296**	Pn		**Pn**	**Pn**	**11 09 21.7**	**-4.0**
	0.6nm,0.3s,baz=106,slow=15,SNR=5.8								
BVAR				Pg		**Pg**	**Pg**	**11 09 27.8**	**-11**
	1.0nm,0.3s,baz=112,slow=16,SNR=14								
BVAR				Lg				11 10 12.8	
	5.8nm,0.3s,baz=110,slow=25,SNR=17								
ZRNK	**Zerenda**	**4.29**	**291**	⇑Pn		**Pn**	**Pn**	**11 09 41.3**	**+4.9**
	2.1nm,0.6s								
ZRNK				⇓Sn		**Sn**	**Sn**	**11 10 35.7**	**+9.4**
	26nm,0.9s								
ZALV	**Zalesovo Beam**	**6.05**	**64**	Pn		**Pn**	**Pn**	**11 09 59.9**	**-0.7**
	1.0nm,0.3s,baz=250,slow=15,SNR=8.8								
ZALV				Sn		**Sn**	**Sn**	**11 11 10.5**	**+0.7**
	0.3nm,0.3s,baz=257,slow=24,SNR=3.0								
MK31	**Makanchi Array**	**6.50**	**135**	⇓Pn		**Pn**	**Pn**	**11 10 06.3**	**-0.4**
	0.1nm,0.3s,baz=318,slow=11,SNR=3.6								
MK31				⇑Sn		**Sn**	**Sn**	**11 11 21.8**	**+0.9**
	0.4nm,0.3s,baz=320,slow=27,SNR=6.6								
MK31				⇓Lg				11 11 55.8	
	3.3nm,0.6s,baz=327,slow=24,SNR=5.0								
MKAR	**Makanchi Array**	**6.50**	**135**	Pn		**Pn**	**Pn**	**11 10 06.3**	**-0.4**
	0.2nm,0.3s,baz=321,slow=12,SNR=5.3								
MKAR				Sn		**Sn**	**Sn**	**11 11 21.3**	**+0.4**
	0.3nm,0.3s,baz=325,slow=27,SNR=4.5								
MKAR				Lg				11 11 54.9	
	0.6nm,0.3s,baz=323,slow=28,SNR=9.1								

*ATH **01** 11:29:38.6,36.83N×29.03E,h54km±21km,MD3.2/3*
*ISCJB **01** 11:29:43.9±0.6,36.98N±0.05×28.10E±0.04,h10km±7km, Error ellipse: s-maj=8.3km s-min=5.0km az=150.8*
*ISK **01** 11:29:43.7,36.99N×28.11E,h6km,MD2.9*
*NEIC **01** 11:29:43.0,37.04N×28.07E,h5km,MD3.2(ATH), MD2.7(ISK), After ISK.*
*CSEM **01** 11:29:44.2±0.3,37.00N×28.11E,h10km,MD2.9, Error ellipse: s-maj=7.5km s-min=5.0km az=142.0*

ISC 01 11:29:44.3±0.5, 36.98N±0.03×28.11E±0.04, h9km±6km, n30, σ0s97/38, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.20**	**43**	Pg		**Pg**		**11 29 48.1**	**-0.5**
YER	**Yerkesik**	**0.20**	**43**	*i* Pg		**Pg**		**11 29 48.0**	**-0.6**
YER					*e*Sg	**Sg**		**11 29 52.2**	**+0.8**
MLSB	**Milas**	**0.41**	**320**	*e*PG		**Pg**		**11 29 51.1**	**-1.2**
MLSB	**Milas**	**0.41**	**320**	*e*Pg		**Pg**		**11 29 51.7**	**-0.6**
MLSB					*e*Sg	**Sg**		**11 29 58.4**	**+0.6**
TURN	**Turunc**	**0.41**	**105**	*i* P		**Pg**		**11 29 47.7**	**-4.7**
TURN	**Turunc**	**0.41**	**105**	*i* P		**Pg**		**11 29 47.7**	**-4.6**
DAT	**Datca**	**0.50**	**239**	*e*PG		**Pg**		**11 29 54.0**	**+0.1**
DAT					*e*SG	**Sg**		**11 30 01.4**	**+1.0**
DAT	**Datca**	**0.50**	**239**	*e*Pg		**Pg**		**11 29 54.0**	**+0.1**
DAT					*e*Sg	**Sg**		**11 30 01.4**	**+0.9**
BDRM	**Kayabasi**	**0.54**	**279**	*i* P		**Pg**		**11 29 55.6**	**+0.9**
BDRM	**Kayabasi**	**0.54**	**279**	*i* P		**Pg**		**11 29 55.6**	**+0.8**
BODT	**Bodrum**	**0.64**	**277**	PG		**Pg**		**11 29 56.0**	**-0.8**
BODT					SG	**Sg**		**11 30 04.8**	**-0.4**
BODT	**Bodrum**	**0.64**	**277**	*e*Pg		**Pg**		**11 29 56.0**	**-0.8**
ARG	**Arkhangelos**	**0.77**	**179**	*e*P		**Pg**		**11 29 56.7**	**-2.4**
ARG					*e*S	**Sg**		**11 30 10.1**	**+1.1**
ARG	**Arkhangelos**	**0.77**	**179**	*e*P		**Pg**		**11 29 56.7**	**-2.4**
ARG					*e*S	**Sg**		**11 30 10.1**	**+1.1**
ARG	**Arkhangelos**	**0.77**	**179**	*e*P		**Pg**		**11 29 56.7**	**-2.4**
ARG					*e*S	**Sg**		**11 30 10.1**	**+1.1**
DENT	**Denizli**	**1.06**	**43**	*e*PG		**Pg**		**11 30 04.2**	**-0.6**
DENT	**Denizli**	**1.06**	**43**	*e*Pg		**Pg**		**11 30 04.2**	**-0.6**
ELL	**Elmali**	**1.46**	**99**	*e*PN		**Pn**		**11 30 12.0**	**+1.1**
ELL	**Elmali**	**1.46**	**99**	*e*Pn		**Pn**		**11 30 12.0**	**+1.1**
KULA	**Kula-Manisa**	**1.59**	**16**	*e*PN		**Pn**		**11 30 12.8**	**+0.2**
KULA	**Kula-Manisa**	**1.59**	**16**	*e*Pn		**Pn**		**11 30 12.8**	**+0.2**
KARP	**Karpathos**	**1.62**	**208**	*e*P		**Pn**		**11 30 11.2**	**-1.9**
KARP	**Karpathos**	**1.62**	**208**	*e*P		**Pn**		**11 30 11.2**	**-1.9**
KARP	**Karpathos**	**1.62**	**208**	*e*P		**Pn**		**11 30 11.2**	**-1.9**
NPS	**Neapolis**	**2.65**	**230**	*e*P		**Pn**		**11 30 27.4**	**+0.2**
NPS	**Neapolis**	**2.65**	**230**	*e*P		**Pn**		**11 30 27.4**	**+0.2**
NPS	**Neapolis**	**2.65**	**230**	*e*P		**Pn**		**11 30 27.4**	**+0.2**
LAST	**Lasithi**	**2.80**	**230**	*e*P		**Pn**		**11 30 30.2**	**+0.9**
LAST	**Lasithi**	**2.80**	**230**	*e*P		**Pn**		**11 30 30.2**	**+0.9**
LAST	**Lasithi**	**2.80**	**230**	*e*P		**Pn**		**11 30 30.2**	**+0.9**

*NIED **01** 12:02:00,36.10N×139.80E,h53km,Mw3.5 Best double couple: M0 1.91000×10^14 NP1:φs66.00000°,δ84

mb4.3/42,MS3.9/16,Error ellipse: s-maj=6.0km s-min=3.4km az=28.2
*JMA **01** 12:04:24.1±0.4,21°.19N×121°.06E,h107km,M4.3*
*BJI **01** 12:04:26.7,21°.52N×120°.83E,h15km,mB4.6/9,mb4.4/15, ML4.3/3,Ms4.3/13,Ms7 4.1/12*
*MAN **01** 12:04:50,19°.35N×120°.53E,h13km,mb4.7,ML3.5,MS3.5*

ISC 01 12:04:25.7±1.2,21°.21N±0°.03×121°.17E±0°.04,h23km,σ9km, h25km±5.8km:pP-P,n102,σ1§05/106,mb4.4/42,MS3.9/16, 1C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**1.60**	**357**	*e*Pn	**Pn**	**12 04 49.0**	**-3.6**
TPUB	**Ta-pu**	**2.14**	**347**	*e*Pn	**Pn**	**12 04 58.8**	**-1.1**
YULB	**Yu-li**	**2.17**	**3**	*e*Pn	**Pn**	**12 04 58.5**	**-1.9**
SSLB	**Suanglung**	**2.57**	**356**	*e*Pn	**Pn**	**12 05 04.9**	**-1.0**
NACB	**Ninganchiao**	**2.98**	**8**	*e*Pn	**Pn**	**12 05 10.8**	**-0.7**
NACB				*e*Sn	**Sn**	**12 05 45.9**	**-0.5**
APYP	**Conner**	**3.33**	**179**	*e*P	**Pn**	**12 05 16.0**	**-0.4**
YHNB	**Yeheng**	**3.45**	**3**	*e*Pn	**Pn**	**12 05 17.1**	**-0.9**
CVP	**Callao Caves**	**3.54**	**170**	*e*P	**Pn**	**12 05 19.2**	**-0.1**
ABRA	**Dolores**	**3.57**	**187**	*e*P	**Pn**	**12 05 19.8**	**+0.2**
YOJ	**Yonaguni jima**	**3.65**	**27**	P	**Pn**	**12 05 20.6**	**-0.2**
YOJ				S	**Sn**	**12 06 03.7**	**+0.5**
HATJ	**Hateruma jima**	**3.73**	**40**	P	**Pn**	**12 05 22.2**	**+0.3**
HATJ				S	**Sn**	**12 06 05.8**	**+0.6**
TATO	**Taipei**	**3.76**	**4**	*e*Pn	**Pn**	**12 05 25.1**	**+2.9**
IRIF	**Iriomote-Funau**	**3.91**	**37**	P	**Pn**	**12 05 24.0**	**-0.3**
IRIF				S	**Sn**	**12 06 11.4**	**+2.0**
JKRS	**Kuro-shima**	**3.99**	**41**	P	**Pn**	**12 05 25.1**	**-0.4**
JKRS				S	**Sn**	**12 06 13.1**	**+1.5**
JIJ	**Ishigaki jima**	**4.17**	**41**	P	**Pn**	**12 05 27.4**	**-0.5**
JIJ				S	**Sn**	**12 06 15.4**	**-0.5**
CAUP	**Cauayan**	**4.29**	**172**	*e*P	**Pn**	**12 05 34.4**	**+4.8**
PALP	**Palanan**	**4.29**	**164**	*e*P	**Pn**	**12 05 31.4**	**+1.8**
JTJ	**Tarama**	**4.72**	**43**	P	**Pn**	**12 05 35.3**	**-0.1**
JTJ				S	**Sn**	**12 06 29.3**	**-0.1**
BCPH	**Baguio City Da**	**4.84**	**187**	‖*i*P	**Pn**	**12 05 34.5**	**-2.6**
BOLP	**Bolinao**	**4.95**	**194**	*e*P	**Pn**	**12 05 38.7**	**0.0**
JMJ	**Miyako jima 2**	**5.22**	**46**	S	**Sn**	**12 06 42.8**	**+0.9**
JOGS	**Gusukube**	**5.26**	**47**	P	**Pn**	**12 05 43.7**	**+0.8**
JOGS				S	**Sn**	**12 06 43.9**	**+1.0**
BALP	**Baler**	**5.46**	**176**	*e*P	**Pn**	**12 05 48.5**	**+3.0**
SCZP	**Santa Cruz**	**5.54**	**193**	*e*P	**Pn**	**12 05 46.6**	**-0.1**
TGY	**Tagaytay City**	**7.07**	**182**	Pn	**Pn**	**12 06 08.2**	**+0.4**
	8.9nm,0.3s,baz=11,slow=5.2,SNR=2.3						
GZH	**Guangzhou**	**7.49**	**286**	Pn	**Pn**	**12 06 09.3**	**-4.2**
GZH				Sn	**Sn**	**12 07 26.0**	**-12**
GZH				smax			
	comp=N,140nm,0.7s						
GZH				smax			
	comp=E,96nm,0.9s						
JOW	**Kunigami**	**8.57**	**48**	P	**Pn**	**12 06 28.1**	**-0.3**
JOW				S	**Sn**	**12 07 59.7**	**-4.6**
JTK	**Tokunoshima**	**9.64**	**46**	P	**Pn**	**12 06 42.4**	**-0.7**
QIZ	**Qiongzhong**	**10.86**	**260**	P	**Pn**	**12 07 03.1**	**+3.3**
QIZ				LR	LR		
	comp=N,990nm,13.4s						
QIZ				LR	LR		
	comp=E,230nm,19.5s						
QIZ				LR	LR		
	comp=Z,1μm,21.7s						
DAV	**Davao City (W)**	**14.69**	**162**	LR	LR	12 14 58.0	
	comp=Z,478nm,19.4s,baz=13,slow=43						
KKM	**Kota Kinabalu**	**15.82**	**198**	*e*Pn	**Pn**	**12 08 08.6**	**+1.5**
	comp=Z,28nm,1.2s						
XAN	**Xi'an**	**16.75**	**322**	P	**Pn**	**12 08 17.7**	**-1.0**
XAN				LR	LR		
	comp=N,510nm,10.6s						
XAN				LR	LR		
	comp=E,290nm,11.5s						
XAN				LR	LR		
	comp=Z,190nm,13.5s						
KSRS	**Korea Array**	**17.21**	**18**	P	**Pn**	**12 08 24.0**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=199,slow=11,SNR=9.6						
BJT	**Baijiatuan**	**19.23**	**348**	*e*P	**Pn**	**12 08 49.3**	**+0.1**
	comp=Z,21nm,0.8s						
BJI	**Beijing**	**19.25**	**348**	P	**Pn**	**12 08 48.9**	**-0.5**
BJI				pmax	pmax		
	comp=Z,17nm,0.7s						
BJI				pmax	pmax		
	comp=Z,130nm,5.5s						
BJI				LR	LR		
	comp=N,280nm,19.6s						
BJI				LR	LR		
	comp=E,770nm,22.6s						
BJI				LR	LR		
	comp=Z,140nm,20.3s						
JHJ	**Hachijo jima 2**	**20.33**	**50**	LR	LR	12 16 04.7	
	comp=Z,303nm,20.4s,MS3.6,baz=257,slow=35						
CHTO	**Chiang Mai**	**21.02**	**267**	*e*P	**P**	**12 09 08.8**	**+1.0**
	comp=Z,7.3nm,0.9s,mb4.0						
CMAR	**Chiang Mai Arr**	**21.08**	**266**	P	**P**	**12 09 09.3**	**+0.8**
	comp=Z,3.3nm,0.6s,mb3.8,baz=74,slow=9.3,SNR=16						
CMAR				LR	LR	12 18 20.9	
	comp=Z,568nm,18.2s,MS4.0,baz=88,slow=40						
LZH	**Lanzhou**	**21.18**	**318**	⇑P	**P**	**12 09 11.8**	**+2.4**
LZH				pP		12 09 15.5	
LZH				sP	sP	12 09 18.0	-1.0
LZH				S	**S**	**12 12 57.1**	**-6.8**
LZH				sS	sS	12 13 04.8	-10
LZH				SS		12 13 29.5	
LZH				pmax	pmax		
	comp=Z,97nm,1.5s,mb4.9						
LZH				pmax	pmax		
	comp=Z,220nm,4.0s						
LZH				LR	LR		
	comp=N,670nm,12.9s						
LZH				LR	LR		
	comp=Z,880nm,14.0s,MS4.3						
MAJO	**Matsushiro**	**21.30**	**41**	*e*P	**P**	**12 09 13.0**	**+2.2**
	comp=Z,28nm,1.4s,mb4.4						
MAT	**Matsushiro**	**21.30**	**41**	P	**P**	**12 09 12.0**	**+1.3**
MAT				S	**S**	**12 13 05.0**	**-1.2**
MJAR	**Matsushiro Arr**	**21.30**	**41**	P	**P**	**12 09 10.2**	**-0.6**
	comp=Z,3.0nm,0.7s,mb3.8,baz=232,slow=7.6,SNR=13						
BTO	**Baotou**	**21.53**	**336**	*e*P	**P**	**12 09 12.2**	**-1.0**
KSM	**Kuching**	**22.29**	**210**	*e*P	**P**	**12 09 22.0**	**+0.5**
	comp=Z,12nm,0.8s,mb4.4						
GUMO	**Guam**	**23.83**	**105**	LR	LR	12 18 36.3	
	comp=Z,217nm,19.7s,MS3.6,baz=89,slow=36						
MDJ	**Mudanjiang**	**24.36**	**15**	*e*P	**P**	**12 09 45.2**	**+3.4**
	comp=Z,11nm,0.8s,mb4.3						
GTA	**Gaotai**	**25.75**	**320**	*e*P	**P**	**12 09 55.0**	**+0.4**
GTA				pP	pP	12 09 59.2	-2.3
GTA				sP	sP	12 10 02.8	-1.6
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.0						
SHL	**Shillong**	**27.20**	**285**	*e*PKP	**P**	**12 10 07.0**	**-0.8**
PSI	**Prapat**	**28.35**	**233**	LR	LR	12 21 17.0	
	comp=Z,257nm,18.3s,MS3.9,baz=20,slow=36						
ULN	**Ulaanbaatar**	**28.93**	**340**	*e*P	**P**	**12 10 23.1**	**+0.2**
	comp=Z,12nm,1.1s,mb4.5						
SONM	**Songino Array**	**29.11**	**339**	P	**P**	**12 10 24.5**	**-0.1**
	comp=Z,4.9nm,0.9s,mb4.2,baz=158,slow=9.4,SNR=23						
SONM				PcP	PcP	12 13 31.8	-0.2
	comp=Z,0.8nm,0.8s,baz=145,slow=5.3,SNR=2.9						
SONM				LR	LR	12 23 36.9	
	comp=Z,171nm,21.2s,MS3.6,baz=151,slow=40						
YSS	**Yuzh-Sakhalins**	**31.09**	**29**	*e*P	**P**	**12 10 38.4**	**-3.7**
	comp=Z,6.3nm,0.5s,mb4.7						
KAKA	**Kakadu**	**35.48**	**161**	*e*P	**P**	**12 11 19.7**	**-0.9**
	comp=Z,14nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**39.31**	**173**	*e*P	**P**	**12 11 51.0**	**-2.1**
	comp=Z,7.4nm,0.9s,mb4.4						
MK31	**Makanchi Array**	**40.50**	**318**	*e*P	**P**	**12 12 03.4**	**+0.7**
MKAR	**Makanchi Array**	**40.50**	**318**	P	**P**	**12 12 02.9**	**+0.2**
MKAR				LR	LR	12 30 51.2	
MKAR	**Makanchi Array**	**40.50**	**318**	P	**P**	**12 12 02.9**	**+0.2**
	comp=Z,5.0nm,0.7s,mb4.4,baz=112,slow=9.6,SNR=44						
MKAR				LR	LR	12 30 51.2	
	comp=Z,140nm,18.6s,MS3.9,baz=278,slow=39						
PETK	**Petropavlovsk-**	**42.35**	**32**	P	**P**	**12 12 17.1**	**-0.7**
	comp=Z,2.0nm,0.8s,mb3.8,baz=226,slow=3.8,SNR=4.2						
PETK				LR	LR	12 29 42.2	
	comp=Z,95nm,21.1s,MS3.7,baz=80,slow=36						
ZAA0	**Zalesovo Array**	**42.75**	**329**	*e*P	**P**	**12 12 20.1**	**-0.9**
ZALV	**Zalesovo Beam**	**42.75**	**329**	P	**P**	**12 12 20.6**	**-0.4**
	comp=Z,14nm,1.0s,mb4.7,baz=111,slow=8.1,SNR=38						
ZALV				LR	LR	12 31 16.3	
	comp=Z,116nm,20.2s,MS3.8,baz=101,slow=38						
WRAB	**Tennant Creek**	**42.88**	**162**	*e*P	**P**	**12 12 21.9**	**-0.4**
	comp=Z,9.1nm,0.8s,mb4.6						
TKM2	**Tokmak 2**	**43.63**	**311**	*e*P	**P**	**12 12 29.3**	**+1.0**
	comp=Z,12nm,1.2s,mb4.5						
UCH	**Uchtor**	**44.23**	**309**	*e*P	**P**	**12 12 35.5**	**+2.4**
	comp=Z,15nm,1.3s,mb4.6						
AAK	**Ala-Archa**	**44.34**	**310**	LR	LR	12 33 59.2	
	comp=Z,309nm,18.3s,MS4.3,baz=90,slow=40						
KURK	**Kurchatov**	**44.38**	**322**	*e*P	**P**	**12 12 34.4**	**+0.1**
	comp=Z,11nm,0.9s,mb4.6						
KURK	**Kurchatov**	**44.38**	**322**	LR	LR	12 32 21.9	
	comp=Z,72nm,18.7s,MS3.6,baz=100,slow=38						
AML	**Almayashu**	**44.80**	**309**	*e*P	**P**	**12 12 39.5**	**+1.8**
	comp=Z,16nm,1.0s,mb4.8						
AML				*e*pP	pP	12 12 50.3	+5.4
EKS2	**Erkin-Say**	**44.86**	**310**	*e*P	**P**	**12 12 39.4**	**+1.2**
	comp=Z,5.7nm,1.1s,mb4.3						
ASAR	**Alice Springs**	**46.30**	**164**	P	**P**	**12 12 48.6**	**-1.0**
	comp=Z,1.2nm,0.7s,mb4.0,baz=346,slow=6.8,SNR=19						
KBL	**Kabul**	**47.48**	**298**	*e*P	**P**	**12 13 00.5**	**+1.6**
	comp=Z,49nm,1.7s,mb5.2						
CTA	**Charters Tower**	**47.82**	**147**	*e*P	**P**	**12 13 03.7**	**+2.1**
	comp=Z,8.0nm,0.6s,mb4.9						
CTA	**Charters Tower**	**47.82**	**147**	P	**P**	**12 13 01.2**	**-0.4**
CTA	**Charters Tower**	**47.82**	**147**	P	**P**	**12 13 01.2**	**-0.4**
	comp=Z,12nm,0.8s,mb5.0,baz=329,slow=11,SNR=18						
CTAO	**Charters Tower**	**47.82**	**147**	*e*P	**P**	**12 13 00.8**	**-0.8**
	comp=Z,13nm,0.8s,mb5.0						
BVAR	**Borovoye Array**	**49.98**	**322**	P	**P**	**12 13 18.1**	**+0.3**
BVAR				PcP	PcP	12 14 37.2	-0.4
BVAR	**Borovoye Array**	**49.98**	**322**	P	**P**	**12 13 18.1**	**+0.3**
	comp=Z,1.5nm,0.5s,mb4.3,baz=101,slow=9.7,SNR=7.3						
BVAR				PcP	PcP	12 14 37.2	-0.4
	comp=Z,0.7nm,0.6s,baz=99,slow=4.5,SNR=2.0						
BRVK	**Borovoye**	**50.05**	**322**	*e*P	**P**	**12 13 19.0**	**+0.6**
	comp=Z,5.0nm,0.7s,mb4.7						
ABKAR	**Akbulak array**	**55.53**	**316**	*e*P	**P**	**12 13 58.7**	**-0.2**
	comp=Z,2.2nm,0.7s,mb4.3						
STKA	**Stephens Creek**	**56.30**	**159**	*e*P	**P**	**12 14 03.0**	**-1.5**
	comp=Z,8.1nm,0.7s,mb4.9						
STKA	**Stephens Creek**	**56.30**	**159**	P	**P**	**12 14 04.8**	**+0.3**
	comp=Z,9.5nm,0.7s,mb4.9,baz=345,slow=6.3,SNR=18						
KDAK	**Kodiak Island**	**70.34**	**35**	P	**P**	**12 15 36.4**	**-0.9**
	comp=Z,4.7nm,0.6s,mb4.6,baz=272,slow=6.7,SNR=8.2						
COLA	**College**	**71.43**	**27**	*e*P	**P**	**12 15 44.2**	**+0.4**
	comp=Z,2.1nm,0.8s,mb4.1						
COLA				*e*pP	pP	12 15 51.4	+0.1
PMR	**Palmer**	**71.44**	**30**	*e*P	**P**	**12 15 42.7**	**-1.3**
	comp=Z,6.4nm,0.6s,mb4.7						
ILAR	**Eielson Array**	**71.86**	**27**	P	**P**	**12 15 44.6**	**-1.8**
ILAR	**Eielson Array**	**71.86**	**27**	P	**P**	**12 15 44.6**	**-1.8**
	comp=Z,1.2nm,0.7s,mb3.9,baz=290,slow=6.1,SNR=20						
ARCES	**ARCESS Array B**	**72.28**	**338**	P	**P**	**12 15 48.1**	**-0.8**
	comp=Z,3.5nm,0.8s,mb4.4,baz=74,slow=10,SNR=5.0						
ARCES				LR	LR	12 48 33.0	
	comp=Z,116nm,20.5s,MS4.1,baz=243,slow=37						
MENT	**Mentasta**	**73.63**	**28**	*e*P	**P**	**12 15 56.6**	**-0.3**
FINES	**FINESS Array B**	**74.00**	**330**	P	**P**	**12 15 58.6**	**-0.5**
	comp=Z,2.3nm,0.8s,mb4.1,baz=41,slow=7.2,SNR=9.3						
FINES				LR	LR	12 51 41.6	
	comp=Z,132nm,20.5s,MS4.2,baz=262,slow=38						
EGAK	**Eagle**	**74.24**	**26**	*e*P	**P**	**12 16 00.1**	**-0.4**
	comp=Z,6.3nm,0.8s,mb4.6						
BRTR	**Keskin Array B**	**74.93**	**307**	P	**P**	**12 16 03.5**	**-1.4**
	comp=Z,0.7nm,0.8s,mb3.6,baz=71,slow=11,SNR=3.6						
BRTR				LR	LR	12 53 35.1	
	comp=Z,43nm,21.4s,MS3.7,baz=281,slow=39						
AKASG	**Malin Array Be**	**75.08**	**319**	P	**P**	**12 16 04.8**	**-0.8**
AKASG	**Malin Array Be**	**75.08**	**319**	P	**P**	**12 16 04.8**	**-0.8**
	comp=Z,0.5nm,0.4s,mb3.8,baz=66,slow=6.0,SNR=4.9						
DAWY	**Dawson**	**75.18**	**27**	*e*P	**P**	**12 16 05.6**	**-0.3**
HYT	**Haines Junctio**	**77.07**	**30**	*e*P	**P**	**12 16 17.1**	**+0.3**
NOA	**NORSAR Array B**	**80.84**	**332**	P	**P**	**12 16 38.4**	**+1.0**
	comp=Z,0.6nm,0.6s,mb3.7,baz=59,slow=5.7,SNR=3.5						
NOA				LR	LR	12 55 46.0	
	comp=Z,88nm,18.5s,MS4.1,baz=90,slow=38						
KMBO	**Kilima Mbogo**	**84.73**	**267**	P	**P**	**12 16 58.4**	**-0.2**
	comp=Z,1.2nm,0.8s,mb4.1,baz=180,slow=24,SNR=3.8						
YKA	**Yellowknife Ar**	**85.70**	**23**	P	**P**	**12 17 01.2**	**-1.3**
	comp=Z,1.8nm,0.6s,mb4.5,baz=308,slow=4.8,SNR=25						
EDM	**Edmonton**	**92.19**	**29**	*e*P	**P**	**12 17 33.6**	**+0.1**
PPT	**Papeete**	**95.53**	**107**	LR	LR	12 54 00.5	
	comp=Z,109nm,21.2s,MS4.3,baz=271,slow=31						
NVAR	**Mina Array Bea**	**98.60**	**43**	P	**P**	**12 18 03.2**	**+0.2**
NVAR	**Mina Array Bea**	**98.60**	**43**	P	**P**	**12 18 03.2**	**+0.2**
	comp=Z,0.3nm,0.7s,mb3.9,baz=262,slow=6.9,SNR=2.6						
LPAZ	**La Paz**	**169.92**	**62**	PKP	PKPdf	12 24 32.7	+0.4
	comp=Z,1.0nm,0.8s,baz=192,slow=3.2,SNR=4.3						

*ISK **01** 12:09:33.9,39°.52N×33°.14E,h10km,MD3.1*
*ISCJB **01** 12:09:34.9±0.5,39°.45N±0°.03×33°.10E±0°.03,h7km±5km, Error ellipse: s-maj=4.7km s-min=4.3km az=8.5*
*CSEM **01** 12:09:34.6±0.2,39°.45N×33°.05E,h2km,MD3.1,Error ellipse: s-maj=4.9km s-min=4.8km az=139.0*
*DDA **01** 12:09:35.1,39°.48N×33°.11E,h12km±1km,Md3.1*

ISC 01 12:09:35.4±0.5,39°.46N±0°.03×33°.10E±0°.04,h9km±4km, n34,σ1§05/49,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBAL	**Bala**	**0.09**	**14**	*i* P	**Pg**	**12 09 37.4**	**-0.4**
BBAL				*i* S	**Sg**	**12 09 39.5**	**+0.1**
BBAL	**Bala**	**0.09**	**14**	*i* P	**Pg**	**12 09 37.4**	**-0.3**
BBAL				*i* S	**Sg**	**12 09 39.5**	**+0.2**
LOD	**Lodumlu**	**0.50**	**329**	*e*PG	**Pg**	**12 09 43.4**	**-1.7**
LOD				*e*SG	**Sg**	**12 09 50.9**	**-0.9**
LOD	**Lodumlu**	**0.50**	**329**	*e*Pg	**Pg**	**12 09 43.4**	**-1.8**
LOD				*e*Sg	**Sg**	**12 09 50.9**	**-0.9**
CDAG	**Cicekdag**	**1.00**	**80**	*i* P	**Pg**	**12 09 54.1**	**-0.6**
CDAG				*i* S	**Sg**	**12 10 08.4**	**+0.8**
CDAG	**Cicekdag**	**1.00**	**80**	*i* P	**Pg**	**12 09 54.1**	**-0.6**
CDAG				*i* S	**Sg**	**12 10 08.4**	**+0.7**
ELDT	**Eldivan**	**1.06**	**14**	*i* P	**Pg**	**12 09 55.5**	**-0.3**
ELDT				*i* S	**Sg**	**12 10 12.8**	**+3.1**
ELDT	**Eldivan**	**1.06**	**14**	*i* P	**Pg**	**12 09 55.5**	**-0.4**
KIZT	**Kizilcal**	**1.11**	**239**	*e*PN	**Pg**	**12 09 55.9**	**-0.7**
KIZT				*e*SN	**Sg**	**12 10 14.2**	**+3.1**
KIZT	**Kizilcal**	**1.11**	**239**	*e*Pn	**Pg**	**12 09 55.9**	**-0.8**
KIZT				*e*Sn	**Sg**	**12 10 14.2**	**+3.2**
SVRH	**Sivrihisar-ESK**	**1.22**	**270**	*e*PN	**Pn**	**12 09 57.5**	**-1.1**
SVRH	**Sivrihisar-ESK**	**1.22**	**270**	*e*Pn	**Pn**	**12 09 57.5**	**-1.2**
SULT	**Sultanhani-AKS**	**1.30**	**165**	*e*PN	**Pn**	**12 09 59.8**	**0.0**
SULT	**Sultanhani-AKS**	**1.30**	**165**	*e*Pn	**Pn**	**12 09 59.8**	**0.0**
SGKT	**Sivrigoynuk**	**1.37**	**325**	*i* P	**Pn**	**12 10 00.0**	**-0.8**
SGKT				*i* S	**Sb**	**12 10 21.1**	**+2.2**
SGKT	**Sivrigoynuk**	**1.37**	**325**	*i* P	**Pn**	**12 10 00.0**	**-0.8**
LADK	**Ladik-KONYA**	**1.38**	**205**	*e*PN	**Pn**	**12 09 59.9**	**-1.0**
LADK	**Ladik-KONYA**	**1.38**	**205**	*e*Pn	**Pn**	**12 09 59.9**	**-1.0**
CORM	**Corum**	**1.39**	**58**	*e*PN	**Pn**	**12 09 60.0**	**-1.0**
CORM	**Corum**	**1.39**	**58**	*e*Pn	**Pn**	**12 10 00.0**	**-1.0**
AVNT	**Avonos**	**1.53**	**116**	*i* P	**Pb**	**12 10 04.0**	**+0.1**
AVNT				*i* S	**Sg**	**12 10 25.7**	**+1.1**
AVNT	**Avonos**	**1.53**	**116**	*i* P	**Pb**	**12 10 04.0**	**+0.1**
AVNT				*i* S	**Sg**	**12 10 25.7**	**+1.2**
KONT	**Konya--Tatoy**	**1.61**	**201**	*e*PN	**Pn**	**12 10 04.1**	**0.0**
KONT	**Konya--Tatoy**	**1.61**	**201**	*e*Pn	**Pn**	**12 10 04.1**	**0.0**
ESKT	**Eskisehir**	**1.74**	**273**	*i* P	**Pn**	**12 10 06.4**	**+0.6**
ESKT				*i* S	**Sg**	**12 10 33.2**	**+1.9**
SEYT	**Eskypehyr**	**1.74**	**273**	*i* P	**Pn**	**12 10 06.4**	**+0.6**
MDU	**Mudurnu**	**1.76**	**305**	*e*PN	**Pn**	**12 10 05.6**	**-0.5**
MDU	**Mudurnu**	**1.76**	**305**	*e*Pn	**Pn**	**12 10 05.6**	**-0.5**
BALT	**Daday**	**2.09**	**6**	*i* P	**Pb**	**12 10 12.9**	**-0.6**
BALT				*i* S	**Sn**	**12 10 37.9**	**+1.2**
BALT	**Daday**	**2.09**	**6**	*i* P	**Pb**	**12 10 12.9**	**-0.6**
BALT				*i* S	**Sn**	**12 10 37.9**	**+1.2**
GULT	**Gulveren**	**2.21**	**297**	*e*PN	**Pn**	**12 10 12.2**	**-0.2**
GULT	**Gulveren**	**2.21**	**297**	*e*Pn	**Pn**	**12 10 12.2**	**-0.1**
SUTC	**Sutluce-Ispart**	**2.57**	**220**	*e*PN	**Pn**	**12 10 17.6**	**+0.3**
SUTC	**Sutluce-Ispart**	**2.57**	**220**	*e*Pn	**Pn**	**12 10 17.6**	**+0.3**

*DHMR **01** 12:55:26.2±1.1,12°.51N×40°.38E,h6km±531km,ML3.8*

ISC 01 12:55:24.7±3.6,14°.8N±0°.3×39°.9E±0°.1,h10km,n6, σ0§72/12,Ethiopia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DESE	**Dese**	**3.65**	**183**	*e*P	**Pn**	**12 56 21.5**	**+0.2**
DESE				*e*S	**Sn**	**12 57 09.6**	**+5.1**
UDYN	**Al 'Udayn**	**4.07**	**101**	*i* P	**Pn**	**12 56 27.7**	**+0.6**
UDYN				*i* S	**Sn**	**12 57 15.8**	**+1.0**
UDYN				AML	AML	12 57 25.6	
	comp=Z,287nm,0.4s						
DHBB	**Dhamar BB**	**4.40**	**92**	*i* P	**Pn**	**12 56 36.9**	**+5.4**
DHBB				*i* S	**Sn**	**12 57 30.5**	**+7.7**
TRBA	**At Turbah**	**4.42**	**110**	*i* P	**Pn**	**12 56 26.2**	**-5.6**
TRBA				*i* S	**Sn**	**12 57 14.2**	**-9.1**
TRBA				AML	AML	12 57 36.0	
	comp=N,354nm,0.7s						
BDHA	**Al Bayda'**	**5.60**	**98**	*i* P	**Pn**	**12 56 47.6**	**-0.4**
BDHA				*i* S	**Sn**	**12 57 51.3**	**-1.2**
FURI	**Furi**	**5.97**	**191**	*e*PN	**Pb**	**12 57 08.6**	**-0.3**
FURI				*e*S	**Sb**	**12 58 12.4**	**-8.0**

*ISCJB **01** 12:55:26.6±0.6,32°.08N±0°.04×104°.67E±0°.07,h10km, mb3.6/4,Error ellipse: s-maj=9.0km s-min=5.5km az=24.8*
*IDC **01** 12:55:26.4±1.2,31°.64N×103°.95E,h0km,mb3.5/5, mb1 3.6/7,mb1mx3.5/26,mbtmp3.5/7,MS2.9/1,Ms1 2.9/1, ms1mx2.2/26,Error ellipse: s-maj=38.0km s-min=21.3km az=61.0*
*BJI **01** 12:55:30.2,32°.03N×104°.86E,h16km,ML3.7/13,Ms3.4/2, Ms7 3.0/2*

ISC 01 12:55:28.5±0.6,32°.10N±0°.03×104°.63E±0°.07,h10km,n11, σ1§28/20,mb3.6/4,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.40**	**212**	Pg	**Pg**	**12 55 54.0**	**-1.5**
CD2				Sg	**Sg**	**12 56 14.9**	**+1.2**
CD2				smax			
	comp=N,5μm,0.5s						
CD2				smax			
	comp=E,4μm,0.7s						
LZH	**Lanzhou**	**4.03**	**351**	Pn	**Pn**	**12 56 34.0**	**+3.8**
LZH				Pg	**Pg**	**12 56 46.4**	**+0.7**
LZH				Sn	**Sn**	**12 57 23.7**	**+6.2**
LZH				Sg	**Sg**	**12 57 36.5**	**-1.4**
LZH				smax			
	comp=N,300nm,0.7s						
LZH				smax			
	comp=E,340nm,0.7s						
XAN	**Xi'an**	**4.09**	**61**	Pn	**Pn**	**12 56 31.9**	**+0.8**
XAN				Pg	**Pg**	**12 56 43.1**	**-3.8**
XAN				Sn	**Sn**	**12 57 19.4**	**+0.4**
XAN				Sg	**Sg**	**12 57 33.7**	**-6.1**
XAN				smax			
	comp=N,120nm,0.6s						
XAN				smax			
	comp=E,63nm,0.7s						
XAN				LR	LR		
	comp=N,250nm,9.7s						
XAN				LR	LR		
	comp=E,35nm,7.9s						
XAN				LR	LR		
	comp=Z,29nm,4.9s						
GYA	**Guiyang**	**5.90**	**162**	Pn	**Pn**	**12 56 58.0**	**+2.0**
GYA				Sn	**Sn**	**12 58 02.3**	**-1.3**
GYA				Sg	**Sg**	**12 58 26.4**	**-12**
GYA				smax			
	comp=N,90nm,0.8s						
GYA				smax			
	comp=E,80nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.52**	**202**	Pn	**Pn**	**12 58 44.9**	**-9.2**
	comp=E,0.1nm,0.3s,baz=8.1,slow=8.1,SNR=2.3						
SONM	**Songino Array**	**15.77**	**4**	Pn	**Pn**	**12 59 18.2**	**+7.6**
	baz=188,slow=8.7,SNR=6.1						
SONM				LR	LR	13 05 41.8	
	comp=E,46nm,19.6s,baz=131,slow=38						
KSRS	**Korea Array**	**19.85**	**68**	P	**Pn**	**13 00 06.1**	**+5.0**
	comp=E,0.9nm,0.5s,baz=256,slow=10,SNR=3.7						
MKAR	**Makanchi Array**	**22.54**	**317**	P	**P**	**13 00 28.8**	**+0.3**
	comp=E,0.5nm,0.5s,mb3.2,baz=124,slow=11,SNR=6.2						
ZALV	**Zalesovo Beam**	**26.03**	**333**	P	**P**	**13 01 02.8**	**+1.1**
	comp=E,1.6nm,0.6s,mb3.8,baz=134,slow=10,SNR=9.0						
ASAR	**Alice Springs**	**62.12**	**150**	P	**P**	**

LAJ	**Bijagual**	**2.94**	**112**	*e*P	Pn	13 09 13.9	-2.9
URSC	**Urasca**	**3.27**	**111**	*e*P	Pn	13 09 24.4	+3.1
LFRS	**El Faro**	**3.36**	**321**	*e*P	Pn	13 09 23.2	+0.7
LFRS				*e*S	Sn	13 10 01.9	+0.6
BUS	**Buena Vista**	**3.40**	**115**	*e*P	Pn	13 09 25.7	+2.7
BAR1		**3.93**	**116**	*e*P	Pn	13 09 31.0	+0.6

*ISCJB **01** 13:13:35.5±0.7, 37.80N±0.03×26.88E±0.05, h3km±7km, Error ellipse: s-maj=7.1km s-min=4.0km az=164.5*
*CSEM **01** 13:13:35.8±0.2, 37.80N×26.89E, h8km, MD3.0, Error ellipse: s-maj=4.6km s-min=2.6km az=80.0*
*ISK **01** 13:13:35.6, 37.80N×26.93E, h10km, MD2.8*
*DDA **01** 13:13:36.4, 37.85N×26.94E, h7km±5km, Md3.0*

ISC 01 13:13:36.1±0.7, 37.80N±0.03×26.88E±0.05, h9km±6km, n30, σ0§79/45, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.30**	**110**	*i* P	**Pg**	**13 13 42.3**	**+0.3**
GCAM				*i* S	**Sg**	**13 13 46.7**	**+0.7**
GCAM	**G?zelcaml?**	**0.30**	**110**	*i* P	**Pg**	**13 13 42.3**	**+0.3**
GCAM				*i* S	**Sg**	**13 13 46.7**	**+0.8**
BLCB	**Balcova**	**0.60**	**12**	*e*PG	**Pg**	**13 13 47.6**	**0.0**
BLCB				*e*SG	**Sg**	**13 13 56.1**	**+0.7**
BLCB	**Balcova**	**0.60**	**12**	*e*Pg	**Pg**	**13 13 47.6**	**-0.1**
BLCB				*e*Sg	**Sg**	**13 13 56.2**	**+0.7**
URLA	**Izmir**	**0.60**	**338**	*i* P	**Pg**	**13 13 46.9**	**-0.8**
URLA				*i* S	**Sg**	**13 13 56.5**	**+0.8**
URLA	**Izmir**	**0.60**	**338**	*i* P	**Pg**	**13 13 46.9**	**-0.9**
URLA				*i* S	**Sg**	**13 13 56.5**	**+0.8**
IZM	**Izmir**	**0.67**	**27**	*e*PG	**Pg**	**13 13 48.6**	**-0.3**
IZM				*e*SG	**Sg**	**13 13 58.3**	**+0.6**
IZM	**Izmir**	**0.67**	**27**	*e*Pg	**Pg**	**13 13 48.6**	**-0.4**
IZM				*e*Sg	**Sg**	**13 13 58.3**	**+0.6**
KDAG	**Bornova**	**0.67**	**27**	*i* P	**Pg**	**13 13 47.6**	**-1.5**
KDAG				*i* S	**Sg**	**13 13 57.4**	**-0.5**
KDAG	**Bornova**	**0.67**	**27**	*i* P	**Pg**	**13 13 47.6**	**-1.5**
KDAG				*i* S	**Sg**	**13 13 57.4**	**-0.5**
AYDN	**Tasoluk**	**0.80**	**100**	*i* P	**Pg**	**13 13 51.4**	**-0.2**
AYDN				*i* S	**Sg**	**13 14 01.3**	**-0.7**
AYDN	**Tasoluk**	**0.80**	**100**	*i* P	**Pg**	**13 13 51.4**	**-0.1**
AYDN				*i* S	**Sg**	**13 14 01.3**	**-0.7**
BODT	**Bodrum**	**0.81**	**155**	*e*PG	**Pg**	**13 13 51.0**	**-0.7**
BODT	**Bodrum**	**0.81**	**155**	*e*Pg	**Pg**	**13 13 51.0**	**-0.7**
BDRM	**Kayabasi**	**0.86**	**148**	*i* P	**Pg**	**13 13 52.7**	**+0.1**
BDRM				*i* S	**Sg**	**13 14 06.7**	**+2.9**
BDRM	**Kayabasi**	**0.86**	**148**	*i* P	**Pg**	**13 13 52.7**	**+0.1**
MLSB	**Milas**	**0.87**	**125**	*e*PG	**Pg**	**13 13 52.5**	**-0.4**
MLSB	**Milas**	**0.87**	**125**	*e*Pg	**Pg**	**13 13 52.5**	**-0.4**
DAT	**Datca**	**1.21**	**152**	*e*PN	**Pn**	**13 13 58.8**	**-0.3**
DAT	**Datca**	**1.21**	**152**	*e*Pn	**Pn**	**13 13 58.8**	**-0.3**
YER	**Yerkesik**	**1.30**	**120**	*e*PN	**Pn**	**13 13 60.0**	**-0.4**
YER	**Yerkesik**	**1.30**	**120**	*e*Pn	**Pn**	**13 14 00.0**	**-0.4**
APE	**Apeiranthos**	**1.30**	**236**	*e*PN	**Pn**	**13 14 01.1**	**+0.7**
APE	**Apeiranthos**	**1.30**	**236**	*e*Pn	**Pn**	**13 14 01.1**	**+0.7**
AKHS	**Akhisar**	**1.30**	**34**	*i* P	**Pn**	**13 14 00.3**	**-0.1**
AKHS				*i* S	**Sb**	**13 14 19.1**	**+1.5**
AKHS	**Akhisar**	**1.30**	**34**	*i* P	**Pn**	**13 14 00.3**	**-0.1**
AKHS				*i* S	**Sb**	**13 14 19.1**	**+1.6**
AKS	**Akhisar**	**1.30**	**34**	*e*PN	**Pn**	**13 14 00.1**	**-0.4**
AKS	**Akhisar**	**1.30**	**34**	*e*Pn	**Pn**	**13 14 00.0**	**-0.4**
KULA	**Kula-Manisa**	**1.57**	**63**	*e*PN	**Pn**	**13 14 03.7**	**-0.5**
KULA	**Kula-Manisa**	**1.57**	**63**	*e*Pn	**Pn**	**13 14 03.7**	**-0.5**

*NEIC **01** 13:15:05.6, 52.36N×166.57W, h26km, mb3.8/1, ML3.3(PMR), ML3.3(AEIC), After AEIC.*
*IDC **01** 13:15:06.0±1.4, 52.83N×167.14W, h0km, mb3.8/13, mb1 3.9/14, mb1mx3.8/28, mbtmp3.8/14, ML3.2/1, Error ellipse: s-maj=35.9km s-min=17.8km az=2.0*

ISC 01 13:15:11.5±1.1, 52.8N±0.1×166.94W±0.09, h39km±8km, n32, σ1§07/36, mb3.9/15, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UNV	**Unalaska Valle**	**1.04**	**14**	*e*Pn	**Pn**	**13 15 30.3**	**+0.6**
UNV				S	**Sn**	**13 15 48.7**	**+5.7**
AKLV	**Akutan Long Va**	**1.45**	**23**	P	**Pn**	**13 15 34.9**	**-0.3**
AKUT	**Akutan**	**1.48**	**28**	*e*P	**Pn**	**13 15 36.0**	**+0.4**
AKGG	**Akutan Green G**	**1.48**	**22**	P	**Pn**	**13 15 35.8**	**+0.2**
ATKA	**Atka Island**	**4.48**	**265**	P	**Pn**	**13 16 16.6**	**-0.2**
ATKA				S	**Sn**	**13 17 08.9**	**+1.3**
SDPT	**Sand Point**	**4.56**	**54**	Pn	**Pn**	**13 16 17.5**	**-0.4**
SDPT				*e*Sn	**Sn**	**13 17 09.7**	**+0.2**
SPIA	**Saint Paul Isl**	**4.75**	**338**	P	**Pn**	**13 16 23.3**	**+2.8**
AMKA	**Amchitka**	**8.60**	**266**	*e*P	**Pn**	**13 17 12.6**	**-0.9**
OHAK	**Old Harbor**	**8.98**	**55**	Pn	**Pn**	**13 17 17.5**	**-1.0**
KDAK	**Kodiak Island**	**9.56**	**53**	Pn	**Pn**	**13 17 25.1**	**-1.3**
	0.3nm,0.3s,baz=246,slow=12,SNR=3.4						
KDAK				Sn	**Sn**	**13 19 08.6**	**-3.8**
	0.1nm,0.3s,baz=288,slow=23,SNR=2.6						
ILAR	**Eielson Array**	**15.74**	**33**	Pn	**Pn**	**13 18 47.4**	**-2.7**
	0.0nm,0.3s,baz=219,slow=11,SNR=3.9						
DAWY	**Dawson**	**18.10**	**41**	*e*P	**Pn**	**13 19 20.4**	**+0.8**
PETK	**Petropavlovsk-**	**21.17**	**285**	P	**P**	**13 19 52.0**	**-1.1**
	2.7nm,0.4s,mb3.9,baz=89,slow=15,SNR=8.0						
DLBC	**Dease Lake**	**21.37**	**60**	P	**P**	**13 19 57.2**	**+2.0**
	0.7nm,0.7s,mb3.1,baz=260,slow=6.1,SNR=2.5						
INK	**Inuvik**	**22.14**	**33**	*e*P	**P**	**13 20 01.7**	**-1.7**
	2.2nm,0.6s,mb3.8						
INK	**Inuvik**	**22.14**	**33**	P	**P**	**13 20 02.9**	**-0.5**
	1.9nm,0.5s,mb3.8,baz=171,slow=1.4,SNR=8.1						
YKA	**Yellowknife Ar**	**28.81**	**50**	P	**P**	**13 21 08.1**	**+2.6**
	0.3nm,0.7s,mb3.2,baz=281,slow=8.0,SNR=2.9						
NVAR	**Mina Array Bea**	**36.20**	**94**	P	**P**	**13 22 11.7**	**+1.4**
	0.3nm,0.5s,mb3.4,baz=304,slow=9.6,SNR=2.9						
TXAR	**Lajitas Array**	**51.27**	**91**	P	**P**	**13 24 11.3**	**0.0**
	0.3nm,0.5s,mb3.4,baz=297,slow=6.0,SNR=5.2						
SONM	**Songino Array**	**52.33**	**302**	P	**P**	**13 24 17.5**	**-1.4**
	0.6nm,0.8s,mb3.6,baz=67,slow=3.9,SNR=4.2						
ARCES	**ARCESS Array B**	**57.60**	**355**	P	**P**	**13 24 57.0**	**+0.2**
	3.8nm,0.9s,mb4.4,baz=22,slow=6.9,SNR=4.0						
JOF	**Joensuu**	**63.70**	**351**	*e*P	**P**	**13 25 38.0**	**-0.3**
JOF	**Joensuu**	**63.70**	**351**	*e*p	**P**	**13 25 38.0**	**-0.3**
	2.3nm,0.4s,mb4.6						
BVAR	**Borovoye Array**	**64.17**	**326**	P	**P**	**13 25 42.1**	**+0.5**
	0.9nm,0.7s,mb3.9,baz=45,slow=2.9,SNR=4.7						
MK31	**Makanchi Array**	**64.55**	**315**	*e*P	**P**	**13 25 43.0**	**-1.1**
MKAR	**Makanchi Array**	**64.55**	**315**	P	**P**	**13 25 43.8**	**-0.3**
	0.9nm,0.7s,mb3.9,baz=41,slow=4.4,SNR=12						
KAF	**Kangasniemi**	**64.92**	**353**	*e*P	**P**	**13 25 46.0**	**-0.3**
	5.3nm,0.6s,mb4.8						
KAF	**Kangasniemi**	**64.92**	**353**	*e*p	**P**	**13 25 46.0**	**-0.3**
	5.3nm,0.6s,mb4.8						
FINES	**FINESS Array B**	**65.60**	**353**	P	**P**	**13 25 50.9**	**+0.1**
	2.8nm,0.5s,mb4.5,baz=14,slow=8.0,SNR=18						
NOA	**NORSAR Array B**	**66.46**	**1**	P	**P**	**13 25 56.9**	**+0.6**
	0.9nm,0.7s,mb3.9,baz=358,slow=6.0,SNR=2.9						
AKASG	**Malin Array Be**	**75.94**	**349**	P	**P**	**13 26 54.0**	**+0.2**
AKASG	**Malin Array Be**	**75.94**	**349**	P	**P**	**13 26 54.0**	**+0.2**
	1.9nm,0.4s,mb4.3,baz=15,slow=6.5,SNR=4.9						

SKHL 01 13:18:02.8±0.6, 52.56N×132.52E, h11km±1km, mb3.6/3, 1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EKMR	**Ekimchan**	**0.57**	**27**	*i* Pg	Pg	13 18 13.1	-0.9
EKMR				AMB	AMB	13 18 13.5	
	64nm,0.4s						
EKMR				pPg		13 18 16.0	
EKMR				*e*Sg	Sg	13 18 20.4	-1.1
EKMR				A		13 18 21.2	
	310nm,0.3s						
EKMR				A		13 18 21.2	
	190nm,0.3s						
EKMR				A		13 18 21.2	
	260nm,0.3s						
GRNR	**Gornyy**	**3.02**	**125**	*e*rx	rx	13 19 00.5	
GRNR				*e*Sg	Sg	13 19 37.0	-2.7
GRNR				A		13 19 39.0	
	46nm,0.2s						
BMKR	**Bomnak**	**3.07**	**316**	*e*Pn	Pn	13 18 51.4	+0.2
BMKR				sPn		13 18 55.5	
BMKR				*e*Pg	Pg	13 18 58.5	-3.1
BMKR				AMB	AMB	13 18 59.8	
	8.0nm,0.4s						
BMKR				AMB	AMB	13 18 59.8	
	15nm,0.4s						
BMKR				*e*Sg	Sg	13 19 38.9	-2.5
BMKR				A		13 19 42.8	
	40nm,0.4s						
BMKR				A		13 19 42.8	
	44nm,0.4s						
KLR	**Kul'dur**	**3.37**	**189**	*e*Sg	Sg	13 19 47.4	-3.5
ZEA	**Zeya**	**3.39**	**292**	*e*Sg	Sg	13 19 48.4	-3.0
ZEA				A		13 19 51.3	
	50nm,0.6s						
KROS	**Kirovskiy**	**3.81**	**302**	*e*Pg	Pg	13 19 10.5	-5.2
KROS				AMB	AMB	13 19 13.1	
	3.0nm,0.5s						
KROS				*e*Sg	Sg	13 20 00.5	-4.5
KROS				A		13 20 05.1	
	18nm,0.6s						
KROS				A		13 20 05.1	
	10.0nm,0.6s						

*ATH **01** 13:21:47.9, 34.53N×29.39E, h45km, MD3.5/9*
*CSEM **01** 13:21:49.3±1.6, 34.61N×29.21E, h10km, MD3.5, Error ellipse: s-maj=39.1km s-min=11.1km az=124.0*
*ISCJB **01** 13:21:59.0±1.1, 35.0N±0.1×28.57E±0.07, h33km, Error ellipse: s-maj=16.6km s-min=6.4km az=159.0*

ISC 01 13:22:00.5±1.0, 35.1N±0.1×28.54E±0.07, h35km, n30, σ0§88/32, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**1.20**	**344**	*e*P	**Pn**	**13 22 20.1**	**-0.7**
ARG				*e*S	**Sn**	**13 22 43.9**	**+8.0**
ARG	**Arkhangelos**	**1.20**	**344**	*e*P	**Pn**	**13 22 20.1**	**-0.7**
ARG				*e*S	**Sn**	**13 22 43.9**	**+8.0**
KARP	**Karpathos**	**1.23**	**294**	*e*P	**Pn**	**13 22 22.0**	**+0.8**
KARP	**Karpathos**	**1.23**	**294**	*e*P	**Pn**	**13 22 22.0**	**+0.8**
AKAS	**Kas**	**1.46**	**36**	*i* P	**Pn**	**13 22 23.8**	**-0.6**
TURN	**Turunc**	**1.81**	**2**	*i* P	**Pn**	**13 22 27.6**	**-1.6**
TURN	**Turunc**	**1.81**	**2**	*i* P	**Pn**	**13 22 27.6**	**-1.6**
ZKR	**Zakros**	**1.91**	**272**	*e*P	**Pn**	**13 22 29.9**	**-0.6**
ZKR	**Zakros**	**1.91**	**272**	*e*P	**Pn**	**13 22 29.9**	**-0.6**
BDRM	**Kayabasi**	**2.19**	**336**	*i* P	**Pn**	**13 22 34.7**	**+0.3**
BDRM	**Kayabasi**	**2.19**	**336**	*i* P	**Pn**	**13 22 34.7**	**+0.3**
GOLH	**Golhisar**	**2.32**	**21**	*i* P	**Pn**	**13 22 36.5**	**+0.2**
NPS	**Neapolis**	**2.41**	**276**	*e*P	**Pn**	**13 22 36.4**	**-1.0**
NPS	**Neapolis**	**2.41**	**276**	*e*P	**Pn**	**13 22 36.4**	**-1.0**
LAST	**Lasithi**	**2.51**	**273**	*e*P	**Pn**	**13 22 38.4**	**-0.4**
LAST	**Lasithi**	**2.51**	**273**	*e*P	**Pn**	**13 22 38.4**	**-0.4**
DNZL	**Cakiroluk**	**2.66**	**9**	*i* P	**Pn**	**13 22 41.1**	**+0.4**
DNZL	**Cakiroluk**	**2.66**	**9**	*i* P	**Pn**	**13 22 41.2**	**+0.4**
IDI	**Anoyia**	**3.00**	**275**	*e*P	**Pn**	**13 22 45.1**	**-0.4**
IDI	**Anoyia**	**3.00**	**275**	*e*P	**Pn**	**13 22 45.1**	**-0.4**
SIVA	**Sivas**	**3.06**	**270**	*e*P	**Pn**	**13 22 46.4**	**0.0**
SIVA	**Sivas**	**3.06**	**270**	*e*P	**Pn**	**13 22 46.4**	**0.0**
APE	**Apeiranthos**	**3.15**	**310**	*e*P	**Pn**	**13 22 50.2**	**+2.5**
APE	**Apeiranthos**	**3.15**	**310**	*e*P	**Pn**	**13 22 50.2**	**+2.5**
GAZI	**Gazipasa**	**3.29**	**68**	*i* P	**Pn**	**13 22 49.2**	**-0.4**
VAM	**Vamos**	**3.57**	**277**	*e*P	**Pn**	**13 22 54.4**	**+1.0**
VAM	**Vamos**	**3.57**	**277**	*e*P	**Pn**	**13 22 54.4**	**+1.0**
KARN	**Karanos**	**3.80**	**276**	*e*P	**Pn**	**13 22 56.3**	**-0.2**
KARN	**Karanos**	**3.80**	**276**	*e*P	**Pn**	**13 22 56.3**	**-0.2**
ERMK	**Ermenek**	**3.89**	**65**	*i* P	**Pn**	**13 22 59.0**	**+1.2**

*IDC **01** 14:06:59.9±2.9, 5.11S×151.35E, h130km±23km, mb3.7/10, mb1 3.8/11, mb1mx3.7/17, mbtmp3.7/11, Error ellipse: s-maj=37.0km s-min=13.0km az=120.0*
*NEIC **01** 14:07:02.1±2.6, 5.28S×151.33E, h157km±25km, mb4.0/4, Error ellipse: s-maj=26.7km s-min=17.9km az=122.0*

ISC 01 14:07:02.7±2.5, 5.1S±0.2×151.2E±0.2, h155km±23km, n20, σ0§83/22, mb3.9/12, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.84**	**223**	*e*Pn	**Pn**	**14 08 27.5**	**+0.2**
PMG				*e*Sn	**Sn**	**14 09 34.1**	**+0.5**
CTA	**Charters Tower**	**15.63**	**197**	P	**Pn**	**14 10 33.3**	**-1.4**
	0.2nm,0.3s,baz=14,slow=8.3,SNR=2.8						
CTAO	**Charters Tower**	**15.63**	**197**	*e*P	**Pn**	**14 10 30.1**	**-4.6**
	2.4nm,0.8s						
KAKA	**Kakadu**	**19.99**	**247**	*e*P	**P**	**14 11 22.1**	**-1.2**
	23nm,0.5s						
WRAB	**Tennant Creek**	**22.03**	**227**	*e*P	**P**	**14 11 44.7**	**-0.3**
	3.8nm,0.8s,mb3.9						
WB2	**Warramunga Arr**	**22.04**	**227**	*e*P	**P**	**14 11 44.6**	**-0.4**
ASAR	**Alice Springs**	**24.85**	**220**	P	**P**	**14 12 11.7**	**+0.8**
ASAR				pP		14 12 40.2	
ASAR				S	**S**	**14 16 27.2**	**+4.8**
ASAR				ScP	ScP	14 19 09.1	+1.5
ASAR	**Alice Springs**	**24.85**	**220**	P	**P**	**14 12 11.7**	**+0.8**
	1.3nm,0.6s,mb3.6,baz=51,slow=8.9,SNR=20						
ASAR				pP		14 12 40.2	
	1.0nm,0.8s,baz=60,slow=10,SNR=3.4						
ASAR				S	**S**	**14 16 27.2**	**+4.8**
	0.3nm,0.9s,baz=32,slow=18,SNR=3.3						
ASAR				ScP	ScP	14 19 09.1	+1.5
	0.7nm,0.7s,baz=34,slow=3.5,SNR=7.7						
FITZ	**Fitzroy Crossi**	**28.10**	**241**	P	**P**	**14 12 40.3**	**+0.1**
	3.7nm,1.0s,mb4.1,baz=72,slow=9.0,SNR=11						
PETK	**Petropavlovsk-**	**58.28**	**5**	P	**P**	**14 16 40.8**	**-0.1**
	2.4nm,0.8s,mb4.1,baz=143,slow=6.7,SNR=5.8						
SONM	**Songino Array**	**65.76**	**329**	P	**P**	**14 17 32.6**	**+1.7**
	1.5nm,0.6s,mb4.0,baz=152,slow=4.4,SNR=9.2						
CASY	**Casey**	**67.24**	**197**	*e*P	**P**	**14 17 44.0**	**+4.0**
	3.6nm,1.0s,mb4.2						
MKAR	**Makanchi Array**	**79.52**	**319**	P	**P**	**14 18 52.7**	**+0.4**
MKAR	**Makanchi Array**	**79.52**	**319**	P	**P**	**14 18 52.7**	**+0.4**
	0.4nm,0.3s,mb3.5,baz=105,slow=7.0,SNR=8.1						
ZALV	**Zalesovo Beam**	**80.54**	**327**	P	**P**	**14 18 57.2**	**-0.4**
	0.7nm,0.3s,mb3.7,baz=135,slow=6.0,SNR=4.8						
ILAR	**Eielson Array**	**83.06**	**22**	P	**P**	**14 19 09.2**	**-1.3**
	1.0nm,0.5s,mb3.8,baz=252,slow=5.0,SNR=23						
BVAR	**Borovoye Array**	**88.55**	**323**	P	**P**	**14 19 36.9**	**-0.9**
	0.4nm,0.4s,mb3.7,baz=87,slow=3.2,SNR=3.2						
NVAR	**Mina Array Bea**	**93.54**	**52**	P	**P**	**14 20 02.1**	**+0.8**
	0.8nm,0.8s,mb3.9,baz=257,slow=6.0,SNR=6.2						
YKA	**Yellowknife Ar**	**96.46**	**28**	P	**P**	**14 20 14.3**	**+0.3**
	0.4nm,0.6s,mb3.9,baz=263,slow=4.8,SNR=3.4						
TORD	**Torodi Ar. Bea**	**148.88**	**287**	PKPbc	PKPbc	14 26 33.0	-0.2
	2.7nm,0.6s,baz=71,slow=2.8,SNR=16						

CASC 01 14:38:51.2±1.5, 12.46N×87.54W, h31km±9km, MD3.5, ML3.6, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGN	**Cerro Negro**	**0.82**	**87**	*e*P	Pn	14 39 06.9	+0.2
CNGN				*e*S	Sn	14 39 19.9	+2.1
CNCH	**Conchagua**	**0.86**	**341**	*e*P	Pn	14 39 07.2	0.0
CNCH				*e*S	Sn	14 39 20.4	+1.6
COPN	**Copaltepe**	**0.97**	**106**	*e*P	Pn	14 39 09.0	+0.4
COPN				*e*S	Sn	14 39 22.1	+0.8
MOMN	**Momotombo**	**0.98**	**93**	*e*P	Pn	14 39 09.1	+0.3
MOMN				*e*S	Sn	14 39 22.8	+1.1
CSAN		**1.13**	**104**	*e*P	Pn	14 39 11.3	+0.4
BLLM	**Bellamira**	**1.19**	**325**	*e*P	Pn	14 39 11.8	+0.1
BLLM				*e*S	Sn	14 39 28.0	+1.1
XAVN	**Gruta Xavier**	**1.23**	**104**	*e*P	Pn	14 39 12.1	-0.1
XAVN				*e*S	Sn	14 39 28.5	+0.7
XAVN				AML	AML	14 39 30.7	
	comp=Z,728nm,0.2s						
TISN	**Laguna Tiscapa**	**1.28**	**104**	*e*P	Pn	14 39 13.1	+0.1
MGAN	**Managua**	**1.30**	**104**	*e*P	Pn	14 39 13.2	0.0
MGAN				*e*S	Sn	14 39 29.9	+0.3
HUEN		**1.34**	**95**	*e*P	Pn	14 39 13.3	-0.5
HUEN				*e*S	Sn	14 39 32.0	+1.4
TGUH	**Tegucigalpa,Un**	**1.61**	**9**	*e*P	Pn	14 39 17.3	-0.2
TGUH				*e*S	Sn	14 39 38.1	+0.8
TGUH				AML	AML	14 39 38.2	
	comp=E,1μm,0.4s						
LFRS	**El Faro**	**1.88**	**308**	*e*P	Pn	14 39 21.4	+0.2
LFRS				*e*S	Sn	14 39 44.4	+0.5
SSN	**San Juan del S**	**2.01**	**125**	*e*P	Pn	14 39 22.4	-0.6
SSN				*e*S	Sn	14 39 47.9	+0.7
BOQS	**Boqueron**	**2.12**	**307**	*e*P	Pn	14 39 25.1	+0.6

*IDC **01** 14:40:24.9±1.4, 6.19S×79.96W, h0km, mb3.9/4, mb1 4.2/6, mb1mx4.0/13, mbtmp3.9/6, ML3.9/2, MS3.0/3, Ms1 3.0/3, ms1mx2.8/23, Error ellipse: s-maj=61.1km s-min=12.6km az=40.0*
*ISCJB **01** 14:40:31.5±1.8, 6.7S±0.1×80.0W±0.2, h7km±16km, mb3.9/12, Error ellipse: s-maj=34.4km s-min=13.3km az=152.8*

*NEIC **01** 14:40:34.1±1.2, 6.65S×79.98W, h88km±11km, mb4.2/6, Error ellipse: s-maj=22.1km s-min=8.0km az=61.0*

ISC 01 14:40:33.5±1.6, 6.7S±0.1×80.0W±0.2, h82km±14km, n22, σ0§98/19, mb3.9/12, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**1.62**	**107**	Pn	**Pn**	**14 40 58.6**	**-1.8**
	31nm,0.3s,baz=284,slow=7.0,SNR=72						
ATAH				Lg		14 41 23.6	
	150nm,0.3s,baz=133,slow=16,SNR=20						
NNA	**Nana**	**6.12**	**150**	Pn	**Pn**	**14 42 02.3**	**+1.0**
	3.3nm,0.3s,baz=319,slow=14,SNR=4.5						
NNA				Sn	**Sn**	**14 43 06.0**	**-3.8**
	7.6nm,0.3s,baz=198,slow=18,SNR=4.3						
OTAV	**Otavalo**	**7.02**	**12**	*e*Pn	**Pn**	**14 42 14.6**	**+1.0**
LPAZ	**La Paz**	**15.02**	**131**	Pn	**Pn**	**14 44 03.6**	**+2.3**
	0.1nm,0.3s,baz=301,slow=7.7,SNR=3.0						
LPAZ				LR	LR	14 50 40.2	
	comp=Z,61nm,21.8s,baz=275,slow=40						
JTS	**JuntasAbangare**	**17.56**	**343**	LR	LR	14 49 19.4	
	comp=Z,41nm,21.1s,baz=158,slow=31						
SIV	**San Ignacio**	**20.69**	**118**	P	**P**	**14 45 05.6**	**-1.4**
	1.1nm,0.5s,baz=306,slow=12,SNR=6.9						
CMIG	**Matias Romero**	**27.84**	**328**	LR	LR	14 55 06.9	
	comp=Z,37nm,19.5s,baz=23,slow=32						
TXAR	**Lajitas Array**	**42.44**	**329**	P	**P**	**14 48 20.0**	**-0.3**
	0.3nm,0.7s,mb3.1,baz=147,slow=7.4,SNR=3.7						
MIAR	**Mount Ida**	**42.96**	**343**	*e*P	**P**	**14 48 24.8**	**+0.3**
	2.3nm,0.7s,mb4.0						
WMOK	**Wichita Mounta**	**44.85**	**338**	*e*P	**P**	**14 48 38.6**	**-1.0**
	1.0nm,0.7s,mb3.6						
CCM	**Cathedral Cave**	**45.72**	**348**	P	**P**	**14 48 46.2**	**-0.2**
	2.4nm,0.7s,mb4.0						
AGMN	**Agassiz Nation**	**56.49**	**347**	*e*P	**P**	**14 50 07.0**	**+0.1**
	7.5nm,0.8s,mb4.8						
NVAR	**Mina Array Bea**	**57.28**	**325**	P	**P**	**14 50 13.4**	**+0.6**
	1.1nm,0.9s,mb3.9,baz=143,slow=6.7,SNR=5.8						
MOD	**Modoc**	**60.76**	**326**	*e*P	**P**	**14 50 36.6**	**-0.1**
	2.0nm,0.8s,mb4.2						
YKA	**Yellowknife Ar**	**73.90**	**344**	P	**P**	**14 51 58.8**	**-0.4**
	1.1nm,0.7s,mb3.7,baz=141,slow=5.6,SNR=7.7						
TORD	**Torodi Ar. Bea**	**83.42**	**76**	P	**P**	**14 52 53.0**	**+0.4**
	0.9nm,0.9s,mb3.6,baz=274,slow=5.7,SNR=4.5						
ESDC	**Sonseca Array**	**83.55**	**49**	P	**P**	**14 52 53.9**	**+1.2**
ESDC	**Sonseca Array**	**83.55**	**49**	P	**P**	**14 52 53.9**	**+1.2**
	0.5nm,0.3s,mb3.8,baz=286,slow=5.5,SNR=7.9						
EGAK	**Eagle**	**84.21**	**338**	*e*P	**P**	**14 52 55.0**	**-0.5**
	3.4nm,0.9s,mb4.2						
ILAR	**Eielson Array**	**86.41**	**337**	P	**P**	**14 53 06.0**	**-0.4**
	0.6nm,0.9s,mb3.5,baz=155,slow=4.5,SNR=7.7						
ZALV	**Zalesovo Beam**	**131.26**	**12**	PKP	PKPdf	14 59 36.1	+0.1
	0.7nm,0.5s,baz=90,slow=1.4,SNR=5.1						
MKAR	**Makanchi Array**	**137.20**	**18**	PKP	PKPdf	14 59 47.4	0.0
	0.2nm,0.2s,baz=352,slow=2.9,SNR=2.7						

*IDC **01** 14:45:29.1±2.7, 21.76N×91.86E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.2/25, mbtmp3.3/4, Error ellipse: s-maj=106.5km s-min=29.3km az=57.0*

ISC 01 14:45:35.0±2.4, 21.9N±0.4×92.1E±0.5, h35km, n5, σ1§54/6, mb3.4/3, Myanmar-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**3.67**	**356**	*e*PN	**Pn**	**14 46 36.0**	**+6.7**
SHL				*e*SN	**Sn**	**14 47 00.5**	**-11**
CMAR	**Chiang Mai Arr**	**7.24**	**117**	Pn	**Pn

ELDTW	**Lidau**	**2.45**	**212**	*e*P		**Pn**	**15 03 46.1**	**+0.4**
	baz=205							
CHN4	**Tsaushan**	**2.55**	**221**	*e*S		**S**	**15 04 23.0**	**+0.1**
	baz=226							
STYT	**Tauyuan**	**2.60**	**216**	*e*P		**Pn**	**15 03 46.4**	**-0.9**
	baz=219							
WTP	**Ta-pu**	**2.62**	**220**	*e*P		**Pn**	**15 03 47.8**	**+0.3**
	baz=217							
WTP				*e*S		**S**	**15 04 23.1**	**-1.1**
	baz=217							
JMJ	**Miyako jima 2**	**2.64**	**100**	S		**S**	**15 04 24.5**	**0.0**
JOGS	**Gusukube**	**2.75**	**100**	P		**Pn**	**15 03 50.4**	**+1.6**
JOGS				S		**S**	**15 04 26.8**	**+0.1**
SGST	**Jiashian**	**2.76**	**218**	*e*P		**Pn**	**15 03 48.5**	**-0.6**
	baz=215							
SSD	**Sandimen**	**3.01**	**213**	*e*P		**Pn**	**15 03 52.1**	**+0.3**
	baz=210							
JKE	**Kume jima 2**	**4.06**	**74**	P		**Pn**	**15 04 04.1**	**0.0**
JKE				S		**S**	**15 04 54.2**	**-0.1**
JAGN	**Aguni-jima**	**4.52**	**72**	P		**Pn**	**15 04 09.0**	**-0.7**
JJT2	**Tamagusuku 2**	**4.87**	**79**	P		**Pn**	**15 04 13.9**	**-0.2**
JIH	**Iheya**	**5.27**	**69**	P		**Pn**	**15 04 18.0**	**-1.1**
JOW	**Kunigami**	**5.48**	**72**	P		**Pn**	**15 04 19.9**	**-1.8**
JOW				S		**S**	**15 05 19.9**	**-6.1**
JTK	**Tokunoshima**	**6.35**	**65**	P		**Pn**	**15 04 29.7**	**-3.0**

*DDA **01** 15:16:18.4, 37.°37N×44.°15E, h5km±4km, Md3.8*
*NEIC **01** 15:16:22.6, 37.°62N×43.°97E, h5km, ML4.0(ISK), MN4.0(TEH), After ISK.*
*ISK **01** 15:16:22.6, 37.°62N×43.°97E, h5km, MD3.9, ML4.0*
*TEH **01** 15:16:23.4, 37.°75N×43.°96E, h3km*
*CSEM **01** 15:16:23.5±0.2, 37.°64N×44.°02E, h2km, ML4.0, Error ellipse: s-maj=4.2km s-min=3.8km az=19.0*
*ISCJB **01** 15:16:23.0±0.3, 37.°65N±0.°02×44.°00E±0.°02, h10km, mb3.3/4, Error ellipse: s-maj=2.7km s-min=2.5km az=173.9*
*IDC **01** 15:16:24.2±1.1, 37.°60N×44.°08E, h0km, mb3.5/4, mb1 3.5/10, mb1mx3.4/27, mbtmp3.5/10, ML3.4/5, MS2.8/2, Ms1 2.8/2, ms1mx2.4/32, Error ellipse: s-maj=22.6km s-min=14.1km az=140.0*

ISC 01 15:16:24.2±0.3, 37.°64N±0.°02×44.°01E±0.°02, h10km, n89, σ1§28/120, mb3.3/4, 1D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HAKT	**HAKKARI**	**0.25**	**252**	*i* P		**Pg**	**15 16 28.1**	**-1.2**
HAKT				*i* S		**Sg**	**15 16 32.4**	**-0.4**
HAKT	**HAKKARI**	**0.25**	**252**	*i* P		**Pg**	**15 16 28.1**	**-1.2**
HAKT				*i* S		**Sg**	**15 16 32.4**	**-0.4**
CUKT	**Cukurca**	**0.50**	**219**	*e*PG		**Pg**	**15 16 32.1**	**-1.9**
CUKT				*e*SG		**Sg**	**15 16 39.3**	**-1.3**
CUKT	**Cukurca**	**0.50**	**219**	*e*Pg		**Pg**	**15 16 32.1**	**-1.9**
CUKT				*e*Sg		**Sg**	**15 16 39.3**	**-1.3**
VANT	**Van**	**0.98**	**323**	*e*PG		**Pg**	**15 16 42.1**	**-0.9**
VANB	**Van**	**1.07**	**333**	*e*PG		**Pg**	**15 16 42.7**	**-2.1**
VANB				*e*SG		**Sg**	**15 16 58.8**	**0.0**
VANB	**Van**	**1.07**	**333**	Pg		**Pg**	**15 16 42.7**	**-2.1**
VANB				Sg		**Sg**	**15 16 58.7**	**-0.1**
VANB	**Van**	**1.07**	**333**	*e*Pg		**Pg**	**15 16 42.7**	**-2.2**
VANB				Sg		**Sg**	**15 16 58.7**	**-0.1**
ISHB	**Shabestar**	**1.43**	**63**	Pg		**Pn**	**15 16 48.7**	**-1.5**
ISHB	**Shabestar**	**1.43**	**63**	⇓*e*Pg		**Pn**	**15 16 48.8**	**-1.4**
ISHB				*e*			15 17 18.4	
	comp=Z,12μm,0.3s							
CLDR	**Caldiran**	**1.51**	**357**	*e*PN		**Pn**	**15 16 51.0**	**-0.3**
CLDR				*e*SN		**Sn**	**15 17 11.7**	**+0.8**
CLDR	**Caldiran**	**1.51**	**357**	Pn		**Pn**	**15 16 51.0**	**-0.3**
CLDR				Sg		**Sg**	**15 17 12.0**	**-0.7**
CLDR	**Caldiran**	**1.51**	**357**	*e*Pn		**Pn**	**15 16 51.0**	**-0.3**
CLDR				*e*Sn		**Sn**	**15 17 11.7**	**+0.8**
CLDR				Sg		**Sg**	**15 17 12.0**	**-0.7**
IAZR	**Azarshahr**	**1.57**	**88**	*e*Pn		**Pn**	**15 16 51.1**	**-1.0**
IAZR				*e*Sg		**Sg**	**15 17 14.1**	**-0.5**
IAZR				*e*			15 17 25.7	
	comp=Z,29μm,0.3s							
IAZR	**Azarshahr**	**1.57**	**88**	*e*Pn		**Pn**	**15 16 51.1**	**-1.0**
IAZR				*e*Sg		**Sg**	**15 17 14.1**	**-0.5**
TATV	**Tatvan**	**1.63**	**303**	*i* P		**Pg**	**15 16 53.8**	**-1.6**
TATV				*i* S		**Sg**	**15 17 18.8**	**+2.2**
TATV	**Tatvan**	**1.63**	**303**	*i* P		**Pg**	**15 16 53.8**	**-1.6**
TATV				*i* S		**Sg**	**15 17 18.8**	**+2.3**
IMRD	**Marand**	**1.71**	**51**	Pn		**Pn**	**15 16 54.4**	**+0.3**
IMRD	**Marand**	**1.71**	**51**	*e*Pn		**Pn**	**15 16 53.6**	**-0.5**
IMRD				*e*			15 17 23.9	
	comp=Z,13μm,0.3s							
IMRD	**Marand**	**1.71**	**51**	*e*Pn		**Pn**	**15 16 53.6**	**-0.5**
ITBZ	**Tabriz**	**1.79**	**70**	Pn		**Pn**	**15 16 54.8**	**-0.4**
ITBZ	**Tabriz**	**1.79**	**70**	*e*Pn		**Pn**	**15 16 55.2**	**0.0**
ITBZ				*e*Sg		**Sg**	**15 17 18.0**	**-3.9**
ITBZ				*e*			15 17 30.3	
	comp=Z,5μm,0.4s							
DYDN	**Diyadin**	**1.92**	**353**	*i* P		**Pg**	**15 16 59.5**	**-1.6**
DYDN				*i* S		**Sg**	**15 17 26.4**	**+0.5**
DYDN	**Diyadin**	**1.92**	**353**	*i* P		**Pg**	**15 16 59.5**	**-1.5**
DYDN				*i* S		**Sg**	**15 17 26.5**	**+0.5**
IFTB	**Fath-abad**	**1.93**	**78**	*e*Pn		**Pn**	**15 16 57.4**	**+0.4**
IFTB				*e*			15 17 41.9	
	comp=Z,41μm,0.3s							
AGRB	**Hanur-Agry**	**2.09**	**338**	*e*PN		**Pn**	**15 16 59.7**	**+0.4**
AGRB	**Hanur-Agry**	**2.09**	**338**	*e*Pn		**Pn**	**15 16 59.7**	**+0.4**
BEST	**Besiri**	**2.18**	**278**	*i* P		**Pg**	**15 17 03.2**	**-2.9**
BEST				*i* S		**Sg**	**15 17 34.6**	**+0.2**
IHRS	**Heris**	**2.49**	**73**	Pn		**Pn**	**15 17 08.0**	**+3.2**
IHRS	**Heris**	**2.49**	**73**	*e*		**Pg**	**15 17 18.7**	**+6.7**
	comp=Z,3μm,0.3s							
IHRS				*e*Pn		**Pn**	**15 17 05.9**	**+1.1**
GNI	**Garni**	**2.57**	**13**	*e*PN		**Pn**	**15 17 06.2**	**+0.3**
GNI	**Garni**	**2.57**	**13**	Pn		**Pn**	**15 17 09.6**	**+3.7**
	comp=Z,7.1nm,0.3s,baz=290,slow=2.4,SNR=16							
GNI				Lg			15 17 49.7	
	comp=Z,8.8nm,0.3s,baz=211,slow=22,SNR=6.4							
GNI	**Garni**	**2.57**	**13**	Pn		**Pn**	**15 17 06.2**	**+0.3**
MARD	**Mardin**	**2.59**	**264**	*i* P		**Pn**	**15 17 05.4**	**-0.7**
MARD				*i* S		**Sn**	**15 17 40.2**	**+2.5**
BNGL	**BINGOL**	**2.60**	**301**	*i* P		**Pg**	**15 17 08.2**	**-5.9**
BNGL				*i* S		**Sg**	**15 17 48.8**	**+0.9**
ISRB	**Sarab**	**2.91**	**85**	Pn		**Pn**	**15 17 11.4**	**+0.9**
ISRB	**Sarab**	**2.91**	**85**	*e*Pn		**Pn**	**15 17 11.2**	**+0.7**
ISRB				*e*			15 17 25.4	
	comp=Z,3μm,0.3s							
ISRB	**Sarab**	**2.91**	**85**	*e*Pn		**Pn**	**15 17 11.2**	**+0.7**
BINT	**Bingol**	**3.03**	**295**	*e*PN		**Pn**	**15 17 12.3**	**0.0**
BINT	**Bingol**	**3.03**	**295**	*e*Pn		**Pn**	**15 17 12.3**	**0.0**
EZIM	**Erzurum**	**3.07**	**318**	*e*PN		**Pn**	**15 17 15.5**	**+0.7**
DIYA	**Diyarbakir**	**3.09**	**276**	*i* P		**Pg**	**15 17 15.6**	**-3.7**
DIYA				*i* S		**Sg**	**15 18 02.2**	**-1.3**
DIYA	**Diyarbakir**	**3.09**	**276**	*i* P		**Pn**	**15 17 15.6**	**+2.5**
ILIN	**Lien**	**3.61**	**138**	Pn		**Pn**	**15 17 21.8**	**+1.6**
ILIN	**Lien**	**3.61**	**138**	*e*Pn		**Pn**	**15 17 21.0**	**+0.8**
ILIN				*e*			15 18 30.3	
	comp=Z,2μm,0.3s							
ILIN	**Lien**	**3.61**	**138**	*e*Pn		**Pn**	**15 17 21.0**	**+0.8**
SVRC	**Sivrice-ELAZID**	**3.79**	**283**	*e*PN		**Pn**	**15 17 22.9**	**+0.3**
SVRC	**Sivrice-ELAZID**	**3.79**	**283**	*e*Pn		**Pn**	**15 17 22.9**	**+0.3**
PTK	**Pertek**	**3.84**	**290**	*e*PN		**Pn**	**15 17 23.8**	**+0.4**
PTK	**Pertek**	**3.84**	**290**	*e*Pn		**Pn**	**15 17 23.8**	**+0.4**
IVIS	**Veis**	**3.86**	**143**	Pn		**Pn**	**15 17 24.7**	**+1.0**
IVIS	**Veis**	**3.86**	**143**	*e*Pn		**Pn**	**15 17 25.0**	**+1.3**
IVIS				*e*			15 18 42.1	
	comp=Z,3μm,0.6s							
IVIS	**Veis**	**3.86**	**143**	*e*Pn		**Pn**	**15 17 25.0**	**+1.3**
IGHG	**Ghaleghazi**	**3.90**	**147**	Pn		**Pn**	**15 17 25.4**	**+1.2**
IGHG				Sn		**Sn**	**15 18 11.7**	**+1.7**
IGHG	**Ghaleghazi**	**3.90**	**147**	*e*Pn		**Pn**	**15 17 24.6**	**+0.4**
IGHG				*e*			15 18 42.1	
	comp=Z,4μm,0.3s							
IGHG	**Ghaleghazi**	**3.90**	**147**	*e*Pn		**Pn**	**15 17 24.6**	**+0.4**
IGHG				Sn		**Sn**	**15 18 11.7**	**+1.7**
DGRG	**David-gareji**	**3.95**	**15**	P		**Pg**	**15 17 35.5**	**-4.4**
DGRG				S		**Sg**	**15 18 29.1**	**-2.1**
MTA	**Mtatsminda**	**4.10**	**8**	P		**Pb**	**15 17 32.8**	**-3.6**
MTA				S		**Sg**	**15 18 39.9**	**+4.2**
TBLG	**Delisi**	**4.13**	**8**	P		**Pg**	**15 17 40.2**	**-3.1**
TBLG				S		**Sg**	**15 18 37.0**	**+0.3**
BCA	**Borcka**	**4.23**	**335**	*e*PN		**Pn**	**15 17 30.3**	**+1.7**
BCA	**Borcka**	**4.23**	**335**	*e*Pn		**Pn**	**15 17 30.3**	**+1.7**
GOR	**Gori**	**4.34**	**1**	P		**Pg**	**15 17 43.2**	**-4.2**
GOR				S		**Sg**	**15 18 44.4**	**+0.7**
BHD	**Baghdad**	**4.37**	**176**	*ex*		**Pn**	**15 17 29.9**	**-0.7**
BHD				*ex*		**Sn**	**15 18 21.9**	**+0.4**
BHD	**Baghdad**	**4.37**	**176**	*e*Pn		**Pn**	**15 17 29.9**	**-0.7**
BHD				*e*Sn		**Sn**	**15 18 21.9**	**+0.4**
MYA	**Malataya**	**4.46**	**281**	*e*PN		**Pn**	**15 17 32.4**	**+0.5**
MYA	**Malataya**	**4.46**	**281**	*e*Pn		**Pn**	**15 17 32.4**	**+0.5**
KEH	**Kehvi**	**4.67**	**359**	P		**Pb**	**15 17 42.2**	**-3.9**
KEH				S		**Sb**	**15 18 42.3**	**0.0**
ONI	**Oni**	**4.97**	**355**	P		**Pb**	**15 17 43.8**	**-7.5**
ONI				S		**Sb**	**15 18 46.9**	**-4.0**
ASF	**Jabal al Asfar**	**7.99**	**229**	Pn		**Pn**	**15 18 21.4**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=36,slow=19,SNR=5.1							
ASF				Lg			15 20 39.3	
	comp=Z,0.6nm,0.3s,baz=217,slow=20,SNR=4.6							
MIB	**Mutribah**	**8.29**	**159**	*e*P		**Pn**	**15 18 22.4**	**-2.0**
MIB				AML		AML	15 19 58.5	
	comp=Z,13nm,0.6s							
BRTR	**Keskin Array B**	**8.37**	**288**	Pn		**Pn**	**15 18 28.8**	**+3.2**
	comp=Z,0.1nm,0.3s,baz=105,slow=17,SNR=2.9							
MMAI	**Mount Meron Ar**	**8.41**	**239**	Pn		**Pn**	**15 18 28.7**	**+2.6**
	comp=Z,0.8nm,0.3s,baz=68,slow=16,SNR=3.1							
MMAI				Lg			15 20 50.7	
	comp=Z,0.9nm,0.3s,baz=69,slow=25,SNR=2.7							
NAY	**Al-Naaiem**	**8.79**	**161**	*e*P		**Pn**	**15 18 29.0**	**-2.4**
NAY				AML		AML	15 20 07.9	
	comp=Z,4.8nm,0.6s							
RDF	**Al-Radifah**	**9.18**	**160**	*e*P		**Pn**	**15 18 35.2**	**-1.4**
RDF				AML		AML	15 20 15.7	
	comp=Z,5.2nm,0.8s							
EIL	**Elat**	**10.95**	**226**	Lg			15 22 18.1	
	comp=Z,0.2nm,0.3s,baz=323,slow=20,SNR=3.7							
EIL				LR		LR	15 23 25.7	
	comp=Z,46nm,19.7s,baz=120,slow=38							
AKTK	**Aktyubinsk**	**16.25**	**34**	Pn		**Pn**	**15 20 12.4**	**0.0**
AKTK	**Aktyubinsk**	**16.25**	**34**	Pn		**Pn**	**15 20 12.4**	**0.0**
AKTO	**Aktyubinsk**	**16.25**	**34**	Pn		**Pn**	**15 20 12.4**	**0.0**
	comp=Z,0.2nm,0.3s,baz=216,slow=12,SNR=4.7							
AKASG	**Malin Array Be**	**16.78**	**326**	Pn		**Pn**	**15 20 19.8**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=135,slow=12,SNR=2.8							
AKASG	**Malin Array Be**	**16.78**	**326**	Pn		**Pn**	**15 20 19.8**	**+0.6**
VRAC	**Vranov**	**22.93**	**309**	LR		LR	15 32 29.5	
	comp=Z,26nm,21.3s,baz=274,slow=42							
BVAR	**Borovoye Array**	**23.91**	**41**	P		**P**	**15 21 39.4**	**+1.4**
	comp=Z,0.3nm,0.4s,mb3.1,baz=229,slow=13,SNR=2.7							
BVAR	**Borovoye Array**	**23.91**	**41**	P		**P**	**15 21 39.4**	**+1.4**
KURK	**Kurchatov**	**27.78**	**51**	P		**P**	**15 22 14.4**	**+1.3**
	comp=Z,0.5nm,0.7s,mb3.2,baz=264,slow=9.3,SNR=2.1							
KURK	**Kurchatov**	**27.78**	**51**	P		**P**	**15 22 14.4**	**+1.3**
MKAR	**Makanchi Array**	**29.54**	**60**	P		**P**	**15 22 29.2**	**+0.4**
	comp=Z,0.2nm,0.2s,mb3.4,baz=271,slow=7.9,SNR=2.0							
MKAR	**Makanchi Array**	**29.54**	**60**	P		**P**	**15 22 29.2**	**+0.4**
CMAR	**Chiang Mai Arr**	**51.37**	**96**	P		**P**	**15 25 30.3**	**+1.1**
	comp=Z,0.4nm,0.6s,mb3.5,baz=296,slow=7.8,SNR=5.0							
CMAR	**Chiang Mai Arr**	**51.37**	**96**	P		**P**	**15 25 30.3**	**+1.1**

*IDC **01** 15:20:44.5±3.4, 18.°10S×178.°21W, h599km±41km, mb2.9/6, mb1 3.1/6, mb1mx3.0/16, mbtmp2.9/6, Error ellipse: s-maj=52.1km s-min=18.3km az=154.0*

NEIC 01 15:20:46.9±1.5, 18.°04S×178.°29W, h628km±12km, mb3.9/2, Error ellipse: s-maj=48.2km s-min=18.3km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**3.50**	**274**	*i* Pn		P	15 22 11.5	+0.3
HNR	**Honiara**	**22.79**	**289**	P		P	15 25 03.2	-1.2
	80nm,0.9s,baz=112,slow=5.4,SNR=3.7							
CTA	**Charters Tower**	**33.54**	**261**	P		P	15 26 38.1	+0.9
	0.8nm,0.3s,baz=90,slow=13,SNR=3.5							
CTAO	**Charters Tower**	**33.54**	**261**	*e*P		P	15 26 38.0	+0.8
	1.5nm,0.6s							
STKA	**Stephens Creek**	**38.67**	**241**	*e*P		P	15 27 17.3	-1.7
STKA	**Stephens Creek**	**38.67**	**241**	P		P	15 27 17.4	-1.6
	2.2nm,0.9s,baz=90,slow=11,SNR=6.4							
WB2	**Warramunga Arr**	**44.71**	**260**	*i* P		P	15 28 06.8	+0.3
WRAB	**Tennant Creek**	**44.71**	**260**	*e*P		P	15 28 06.6	+0.1
	1.6nm,0.4s							
ASAR	**Alice Springs**	**44.87**	**254**	P		P	15 28 07.7	+0.1
	2.2nm,0.6s,baz=91,slow=7.5,SNR=46							
ASAR				S		S	15 34 03.3	+1.8
	0.3nm,0.8s,baz=90,slow=15,SNR=3.6							
FITZ	**Fitzroy Crossi**	**53.12**	**261**	P		P	15 29 09.0	+0.8
	0.5nm,0.3s,baz=116,slow=6.2,SNR=8.1							
TXAR	**Lajitas Array**	**85.97**	**58**	P		P	15 32 22.6	+0.2
	0.6nm,0.7s,baz=230,slow=8.1,SNR=9.1							
ILAR	**Eielson Array**	**85.99**	**13**	P		P	15 32 21.9	+0.1
	0.1nm,0.3s,baz=225,slow=5.4,SNR=3.7							

*IDC **01** 15:21:55.2±2.4, 7.°23S×150.°91E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/17, mbtmp3.6/4, Error ellipse: s-maj=110.5km s-min=29.2km az=127.0*
*ISCJB **01** 15:21:58.5±1.3, 7.°25S±0.°2×150.°7E±0.°2, h33km, mb3.5/4, Error ellipse: s-maj=44.4km s-min=12.5km az=44.5*
*NEIC **01** 15:22:01.4±1.3, 7.°12S×150.°55E, h35km, mb3.6/1, Error ellipse: s-maj=43.7km s-min=13.0km az=125.0*

ISC 01 15:22:00.2±1.3, 7.°2S±0.°2×150.°8E±0.°2, h35km, n9, σ1§00/9, mb3.5/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**4.23**	**239**	*e*Pn		**Pn**	**15 22 60.0**	**-2.2**
PMG				*e*Sn		**Sn**	**15 23 51.7**	**+1.3**
WRAB	**Tennant Creek**	**20.38**	**230**	*e*P		**P**	**15 26 33.7**	**-0.3**
	2.4nm,0.8s							
WB2	**Warramunga Arr**	**20.38**	**230**	*e*P		**P**	**15 26 34.0**	**0.0**
ASAR	**Alice Springs**	**23.06**	**223**	P		**P**	**15 27 03.1**	**+0.4**
	0.6nm,0.7s,mb3.1,baz=56,slow=10,SNR=14							
FITZ	**Fitzroy Crossi**	**26.81**	**244**	P		**P**	**15 27 37.3**	**0.0**
	0.7nm,0.5s,mb3.5,baz=60,slow=8.1,SNR=5.4							
CM31	**Chiang Mai Arr**	**57.16**	**297**	P		**P**	**15 31 42.8**	**-1.1**
KURK	**Kurchatov**	**84.45**	**323**	P		**P**	**15 34 30.4**	**+1.2**
	0.2nm,0.3s,mb3.8,baz=104,slow=4.9,SNR=2.8							
ILAR	**Eielson Array**	**85.11**	**22**	P		**P**	**15 34 32.8**	**+0.5**
	0.3nm,0.6s,mb3.6,baz=252,slow=5.4,SNR=5.0							
TORD	**Torodi Ar. Bea**	**149.06**	**284**	PKPbc	PKPbc		15 41 46.6	+0.9
	0.4nm,0.6s,baz=54,slow=4.5,SNR=4.2							

*ISCJB **01** 15:26:30.0±0.8, 36.°52N±0.°08×70.°7E±0.°1, h191km±12km, Error ellipse: s-maj=18.4km s-min=7.9km az=35.8*
*NEIC **01** 15:26:30.9±1.1, 36.°45N×70.°75E, h197km±17km, mb3.4/1, Error ellipse: s-maj=26.7km s-min=13.1km az=139.0*
*IDC **01** 15:26:34.5±9.2, 36.°72N×70.°77E, h207km±60km, mb1 2.9/6, mb1mx2.7/29, mbtmp2.9/6, Error ellipse: s-maj=86.7km s-min=52.4km az=173.0*

ISC 01 15:26:31.1±0.8, 36.54N±0.°07×70.7E±0.°1, h183km±11km, n15, σ1§00/21, 2C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KBL	**Kabul**	**2.40**	**214**	⇓*i* Pn		**Pn**	**15 27 13.2**	**+0.5**
KBL				*e*Sn		**Sn**	**15 27 44.6**	**-0.5**
KSH	**Kashi**	**5.13**	**53**	Pn		**Pn**	**15 27 44.8**	**-1.9**
KSH				Sn		**Sn**	**15 28 39.7**	**-6.4**
KSH				smax				
	comp=N,51nm,0.9s							
KSH				smax				
	comp=E,31nm,0.3s							
AML	**Almayashu**	**6.06**	**22**	*e*Pn		**Pn**	**15 27 59.8**	**+1.1**
AML				*e*Sn		**Sn**	**15 29 07.8**	**0.0**
KK31	**Karatay Array**	**6.56**	**359**	⇓Pn		**Pn**	**15 28 05.3**	**0.0**
	comp=E,0.6nm,0.2s,baz=170,slow=11,SNR=24							
KK31				⇑Sn		**Sn**	**15 29 16.6**	**-3.1**
	comp=E,0.8nm,0.3s,baz=184,slow=24,SNR=4.6							
EKS2	**Erkin-Say**	**6.57**	**20**	*e*Pn		**Pn**	**15 28 06.6**	**+1.2**
EKS2				*e*Sn		**Sn**	**15 29 19.4**	**-0.5**
AAK	**Ala-Archa**	**6.76**	**25**	P		**Pn**	**15 28 09.5**	**+1.5**
	comp=E,1.7nm,0.3s,baz=202,slow=4.0,SNR=5.1							
AAK				S		**Sn**	**15 29 25.2**	**+0.6**
	comp=E,1.5nm,0.3s,baz=304,slow=22,SNR=20							
MK31	**Makanchi Array**	**13.41**	**37**	*e*Pn		**Pn**	**15 29 33.9**	**-0.2**
MKAR	**Makanchi Array**	**13.41**	**37**	P		**Pn**	**15 29 34.7**	**+0.6**
	comp=E,0.1nm,0.3s,baz=226,slow=12,SNR=6.6							
AB31	**Akbulak array**	**14.93**	**332**	⇑Pn		**Pn**	**15 29 53.7**	**+0.8**
	comp=E,0.6nm,0.6s,baz=171,slow=10,SNR=7.9							
ABKAR	**Akbulak array**	**14.93**	**332**	*e*P		**Pn**	**15 29 53.2**	**+0.3**
	comp=E,0.7nm,0.5s							
KURK	**Kurchatov**	**15.28**	**19**	P		**Pn**	**15 29 54.8**	**-2.3**
	comp=E,0.1nm,0.3s,baz=208,slow=11,SNR=4.1							
BVAR	**Borovoye Array**	**16.49**	**359**	P		**Pn**	**15 30 12.3**	**+0.5**
	comp=E,0.2nm,0.3s,baz=162,slow=11,SNR=4.6							
AKTK	**Aktyubinsk**	**16.62**	**331**	P		**Pn**	**15 30 12.8**	**-0.6**
AKTO	**Aktyubinsk**	**16.62**	**331**	P		**Pn**	**15 30 12.8**	**-0.6**
	comp=E,0.2nm,0.3s,baz=128,slow=12,SNR=4.5							
ZALV	**Zalesovo Beam**	**19.99**	**25**	P		**P**	**15 30 48.9**	**-0.3**
	comp=E,0.3nm,0.3s,baz=230,slow=11,SNR=4.8							

GUC 01 15:29:22.9±0.6, 21.°92S×67.°76W, h213km±23km, ML3.6, 3C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB04	**Plate Boundary**	**1.64**	**258**	*e*P		Pn	15 30 06.8	+7.8
PB04				*i* S		S	15 30 40.0	+13
PB04				AML		AML	15 30 42.1	
	comp=N,118nm,0.1s							
PB01	**Plate Boundary**	**1.83**	**298**	⇑*i* P		Pn	15 30 02.0	+1.2
PB01				*i* S		S	15 30 31.6	+1.3
PB01				AML		AML	15 30 33.1	
	comp=N,309nm,0.4s							
MACH	**Maria Elena**	**1.87**	**261**	*i* P		Pn	15 30 03.1	+1.9
MACH				*i* S		S	15 30 33.4	+2.4
HMBC	**Humberston**	**2.57**	**309**	⇑*i* P		Pn	15 30 09.5	+1.0
HMBC				*i* S		S	15 30 45.6	+1.5
HMBC				AML		AML	15 30 47.2	
	comp=N,222nm,0.5s							
CEN1	**Los Morros**	**2.69**	**237**	*e*P		Pn	15 30 13.6	+4.0
CEN1				*i* S		S	15 30 52.2	+5.9
CEN1				AML		AML	15 30 54.2	
	comp=E,77nm,0.4s							
MNMC	**Miæe Miæ**	**3.27**	**328**	⇑*i* P		Pn	15 30 17.8	+1.5
MNMC				*i* S		S	15 31 00.4	+2.0

*ISK **01** 15:38:16.5, 38.°84N×25.°84E, h10km, MD3.3*
*NEIC **01** 15:38:16.4, 38.°84N×25.°84E, h10km, MD3.3(ISK), MD3.2(ATH), After ISK.*
*ISCJB **01** 15:38:19.5±0.5, 38.°89N±0.°02×26.°04E±0.°04, h12km±4km, Error ellipse: s-maj=4.8km s-min=2.9km az=167.2*
*CSEM **01** 15:38:19.8±0.2, 38.°87N×26.°04E, h15km, MD3.2, Error ellipse: s-maj=4.7km s-min=3.0km az=72.0*
*ATH **01** 15:38:19.0, 38.°85N×26.°17E, h30km±2km, MD3.2/6*
*THE **01** 15:38:20.5, 38.°88N×26.°07E, h10km±1km, ML3.0/4, Error ellipse: s-maj=1.3km s-min=0.5km az=86.0*
*DDA **01** 15:38:21.9, 39.°26N×27.°09E, h8km±72km, Md3.1*

ISC 01 15:38:19.8±0.5, 38.°88N±0.°02×26.°04E±0.°04, h12km±3km, n84, σ0§96/120, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SIGR	**SIGRI**	**0.36**	**337**	P		**Pg**	**15 38 28.0**	**+0.9**
SIGR				S		**Sg**	**15 38 33.2**	**+1.2**
SIGR	**SIGRI**	**0.36**	**337**	P		**Pg**	**15 38 28.0**	**+0.9**
SIGR				S		**Sg**	**15 38 33.2**	**+1.2**
PRK	**Paraskevi**	**0.41**	**26**	*e*Pb		**Pg**	**15 38 28.4**	**+0.4**
PRK				*e*Sb		**Sg**	**15 38 33.9**	**+0.4**
PRK	**Paraskevi**	**0.41**	**26**	*e*PB		**Pg**	**15 38 28.4**	**+0.4**
PRK				*e*SB		**Sg**	**15 38 33.9**	**+0.4**
PRK	**Paraskevi**	**0.41**	**26**	P		**Pg**	**15 38 28.3**	**+0.3**
PRK				S		**Sg**	**15 38 34.3**	**+0.8**
PRK	**Paraskevi**	**0.41**	**26**	P		**Pg**	**15 38 28.3**	**+0.4**
PRK				*e*Sb		**Sg**	**15 38 33.9**

GEMT	**Gemlik**	**2.88**	**56**	*e*Pn	**Pn**	**15 39 06.3**	**+0.8**
EDRB	**Edirne**	**3.01**	**10**	*e*PN	**Pn**	**15 39 06.6**	**-0.6**
EDRB	**Edirne**	**3.01**	**10**	Pn	**Pn**	**15 39 06.7**	**-0.6**
EDRB	**Edirne**	**3.01**	**10**	*e*Pn	**Pn**	**15 39 06.6**	**-0.7**
CTKS	**Kestanelik-??a**	**3.02**	**38**	*e*PN	**Pn**	**15 39 07.8**	**+0.4**
CTKS	**Kestanelik-??a**	**3.02**	**38**	*e*Pn	**Pn**	**15 39 07.8**	**+0.4**
YLV	**Yalova**	**3.07**	**56**	*e*PN	**Pn**	**15 39 09.2**	**+1.0**
YLV	**Yalova**	**3.07**	**56**	*e*Pn	**Pn**	**15 39 09.2**	**+1.1**

NEIC ***01*** *15:40:16.2, 44°.80S×167°.33E, h5km, ML3.9(WEL), After WEL.*

WEL 01 15:40:16.2±0.3, 44°.81S×167°.33E, h5km, ML3.9/11, Error ellipse: s-maj=2.8km s-min=2.0km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.45**	**73**	PG	Pg	15 40 24.9	+0.1
MSZ				SG	Sg	15 40 29.8	-0.8
MSZ	**Milford Sound**	**0.45**	**73**	P	Pg	15 40 24.9	+0.1
MSZ				S	Sg	15 40 29.8	-0.8
DCZ	**Deep Cove**	**0.68**	**190**	P*	Pb	15 40 29.4	-1.1
DCZ				SG	Sg	15 40 39.0	+0.9
DCZ	**Deep Cove**	**0.68**	**190**	P	Pg	15 40 29.4	+0.1
DCZ				S	Sg	15 40 39.0	+0.9
MLZ	**Mavora Lakes**	**0.80**	**132**	P*	Pb	15 40 31.5	-1.1
MLZ				S*	Sb	15 40 42.7	-1.1
MLZ	**Mavora Lakes**	**0.80**	**132**	P	Pg	15 40 31.5	-0.1
MLZ				S	Sg	15 40 42.7	+0.6
WHZ	**Wether Hill Ro**	**1.17**	**158**	P*	Pb	15 40 38.1	-0.8
WHZ				S*	Sb	15 40 53.5	-0.8
WHZ	**Wether Hill Ro**	**1.17**	**158**	P	Pg	15 40 38.1	-0.5
WKZ	**Wanaka**	**1.20**	**92**	P*	Pb	15 40 38.8	-0.6
WKZ				S*	Sb	15 40 54.5	-0.7
WKZ	**Wanaka**	**1.20**	**92**	P	Pg	15 40 38.8	-0.4
WKZ				S	Sg	15 40 54.5	-0.3
JCZ	**Jackson Bay**	**1.26**	**55**	P*	Pb	15 40 40.3	-0.1
JCZ	**Jackson Bay**	**1.26**	**55**	P	Pg	15 40 40.3	0.0
PYZ	**Puysegur Point**	**1.43**	**198**	PN	Pn	15 40 40.9	-1.9
EAZ	**Earnscleugh**	**1.47**	**107**	PN	Pn	15 40 43.1	-0.1
EAZ	**Earnscleugh**	**1.47**	**107**	P	Pn	15 40 43.1	-0.2
TUZ	**Tuapeka**	**1.99**	**126**	PN	Pn	15 40 51.4	+0.9
TUZ	**Tuapeka**	**1.99**	**126**	P	Pn	15 40 51.4	+1.0
APZ	**The Paps**	**2.08**	**167**	PN	Pn	15 40 52.8	+1.2
APZ	**The Paps**	**2.08**	**167**	P	Pn	15 40 52.8	+1.1
LBZ	**Lake Benmore**	**2.08**	**79**	PN	Pn	15 40 53.1	+1.3
LBZ	**Lake Benmore**	**2.08**	**79**	P	Pn	15 40 53.1	+1.4
FOZ	**Fox Glacier**	**2.10**	**55**	PN	Pn	15 40 53.1	+1.1
FOZ	**Fox Glacier**	**2.10**	**55**	P	Pn	15 40 53.1	+1.1
SYZ	**Scrubby Hill**	**2.15**	**144**	PN	Pn	15 40 53.5	+1.0
SYZ	**Scrubby Hill**	**2.15**	**144**	P	Pn	15 40 53.5	+0.9
ODZ	**Otahua Downs**	**2.37**	**97**	PN	Pn	15 40 56.9	+1.2
ODZ	**Otahua Downs**	**2.37**	**97**	P	Pn	15 40 57.0	+1.4
RPZ	**Rata Peaks**	**2.89**	**69**	PN	Pn	15 41 04.0	+1.2
RPZ	**Rata Peaks**	**2.89**	**69**	P	Pn	15 41 04.0	+1.2
WVZ	**Waitaha Valley**	**3.01**	**56**	PN	Pn	15 41 04.3	-0.1
WVZ	**Waitaha Valley**	**3.01**	**56**	P	Pn	15 41 04.3	-0.2
QRZ	**Quartz Range**	**5.52**	**46**	PN	Pn	15 41 38.7	-0.3
QRZ	**Quartz Range**	**5.52**	**46**	P	Pn	15 41 38.7	-0.2

DDA ***01*** *15:47:11.4, 37°.43N×44°.14E, h5km, Md3.1*
ISK ***01*** *15:47:12.8, 37°.63N×43°.93E, h2km, MD3.4*
CSEM ***01*** *15:47:13.3±0.8, 37°.61N×44°.05E, h2km, MD3.4, Error ellipse: s-maj=19.3km s-min=8.2km az=115.0*
ISCJB ***01*** *15:47:14.0±0.6, 37°.65N±0°.03×43°.99E±0°.03, h5km±6km, Error ellipse: s-maj=5.2km s-min=4.2km az=166.5*
TEH ***01*** *15:47:15.4, 37°.79N×43°.82E, h23km*

ISC 01 15:47:14.8±0.6, 37°.65N±0°.03×43°.98E±0°.04, h6km±6km, n30, σ1ᵍ08/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAKT	**HAKKARI**	**0.23**	**247**	*i* P	**Pg**	**15 47 18.9**	**-0.5**
HAKT				*i* S	**Sg**	**15 47 23.4**	**+1.0**
HAKT	**HAKKARI**	**0.23**	**247**	*i* P	**Pg**	**15 47 18.9**	**-0.4**
HAKT				*i* S	**Sg**	**15 47 23.4**	**+1.0**
CUKT	**Cukurca**	**0.50**	**216**	*e*PG	**Pg**	**15 47 22.7**	**-1.6**
CUKT				*e*SG	**Sg**	**15 47 30.2**	**-0.6**
CUKT	**Cukurca**	**0.50**	**216**	*e*Pg	**Pg**	**15 47 22.7**	**-1.6**
CUKT				*e*Sg	**Sg**	**15 47 30.2**	**-0.6**
VANT	**Van**	**0.95**	**324**	*e*PG	**Pg**	**15 47 31.7**	**-1.3**
VANB	**Van**	**1.05**	**334**	*e*PG	**Pg**	**15 47 33.4**	**-1.5**
VANB				*e*SG	**Sg**	**15 47 49.5**	**+0.5**
VANB	**Van**	**1.05**	**334**	*e*Pg	**Pg**	**15 47 33.4**	**-1.5**
ISHB	**Shabestar**	**1.44**	**63**	*e*Pn	**Pn**	**15 47 39.5**	**-1.9**
ISHB	comp=Z,2μm,0.2s			*e*		15 47 55.0	
ISHB				*e*Sg	**Sg**	**15 48 02.8**	**+1.6**
CLDR	**Caldiran**	**1.49**	**358**	*e*PN	**Pn**	**15 47 41.6**	**-0.5**
CLDR	**Caldiran**	**1.49**	**358**	*e*Pn	**Pn**	**15 47 41.6**	**-0.5**
IAZR	**Azarshahr**	**1.59**	**88**	*e*Pn	**Pn**	**15 47 41.8**	**-1.6**
IAZR	comp=Z,8μm,0.2s			*e*		15 48 16.0	
TATV	**Tatvan**	**1.60**	**303**	*i* P	**Pg**	**15 47 45.5**	**+0.1**
TATV				*i* S	**Sg**	**15 48 08.6**	**+2.5**
TATV	**Tatvan**	**1.60**	**303**	*i* P	**Pg**	**15 47 45.5**	**+0.1**
TATV				*i* S	**Sg**	**15 48 08.6**	**+2.5**
IMRD	**Marand**	**1.73**	**51**	*e*Pn	**Pn**	**15 47 44.6**	**-0.7**
IMRD	comp=Z,3μm,0.4s			*e*		15 47 52.1	
ITBZ	**Tabriz**	**1.81**	**71**	*e*Pn	**Pn**	**15 47 46.1**	**-0.4**
ITBZ	comp=Z,812nm,0.2s			*e*		15 47 53.7	
AGRB	**Hanur-Agry**	**2.07**	**338**	*e*PN	**Pn**	**15 47 49.7**	**-0.3**
AGRB	**Hanur-Agry**	**2.07**	**338**	*e*Pn	**Pn**	**15 47 49.7**	**-0.3**
BEST	**Besiri**	**2.16**	**277**	*i* P	**Pb**	**15 47 53.0**	**-1.1**
BEST				*i* S	**Sg**	**15 48 27.3**	**+3.3**
IHRS	**Heris**	**2.51**	**74**	*e*Pn	**Pn**	**15 47 56.4**	**+0.3**
IHRS	comp=Z,896nm,0.2s			*e*		15 48 04.3	
MARD	**Mardin**	**2.56**	**263**	*i* P	**Pn**	**15 47 57.1**	**+0.3**
MARD				*i* S	**Sb**	**15 48 32.9**	**0.0**
GNI	**Garni**	**2.57**	**13**	*e*PN	**Pn**	**15 47 57.6**	**+0.8**
GNI	**Garni**	**2.57**	**13**	*e*Pn	**Pn**	**15 47 57.7**	**+0.9**
ISRB	**Sarab**	**2.93**	**85**	*e*	**Pg**	**15 48 15.8**	**+4.9**
ISRB	comp=Z,602nm,0.2s			*e*Pn	**Pn**	**15 48 02.4**	**+0.6**
ILIN	**Lien**	**3.64**	**138**	*e*Pn	**Pn**	**15 48 12.8**	**+1.2**
ILIN	comp=Z,355nm,0.2s			*e*		15 48 13.3	
SVRC	**Sivrice-ELAZID**	**3.76**	**283**	*e*PN	**Pn**	**15 48 13.4**	**+0.2**
SVRC	**Sivrice-ELAZID**	**3.76**	**283**	*e*Pn	**Pn**	**15 48 13.4**	**+0.2**
PTK	**Pertek**	**3.81**	**290**	*e*PN	**Pn**	**15 48 14.2**	**+0.2**
PTK	**Pertek**	**3.81**	**290**	*e*Pn	**Pn**	**15 48 14.2**	**+0.2**
IVIS	**Veis**	**3.89**	**142**	*e*Pn	**Pn**	**15 48 16.0**	**+1.0**
IVIS	comp=Z,295nm,0.3s			*e*		15 49 29.9	
IGHG	**Ghaleghazi**	**3.92**	**147**	*e*Pn	**Pn**	**15 48 16.8**	**+1.3**
IGHG	comp=Z,615nm,0.3s			*e*		15 49 07.8	

IDC ***01*** *15:51:20.8±10.0, 16°.98N×146°.88E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.6/22, mbtmp3.9/6, Error ellipse: s-maj=288.1km s-min=52.7km az=174.0*
ISCJB ***01*** *15:51:34.2±3.7, 18°.3N±0°.1×146°.8E±0°.3, h63km±33km, mb3.9/7, Error ellipse: s-maj=51.2km s-min=22.1km az=7.4*
NEIC ***01*** *15:51:36.5±2.6, 18°.19N×146°.74E, h70km±24km, mb4.0/1, Error ellipse: s-maj=38.3km s-min=17.5km az=91.0*

ISC 01 15:51:36.5±3.3, 18°.2N±0°.1×146°.8E±0°.3, h69km±30km, n10, σ0ᵍ67/11, mb3.8/7, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.96**	**202**	*e*Pn	**Pn**	**15 52 47.8**	**-0.7**
GUMO				S	**Sn**	**15 53 45.3**	**+0.6**
WRAB	**Tennant Creek**	**39.83**	**198**	P	**P**	**15 59 03.4**	**+0.2**
	1.4nm,0.8s,mb3.8						
WB2	**Warramunga Arr**	**39.84**	**198**	*e*P	**P**	**15 59 02.8**	**-0.5**
ZALV	**Zalesovo Beam**	**59.03**	**323**	P	**P**	**16 01 29.0**	**0.0**
	0.4nm,0.3s,mb4.0,baz=101,slow=7.8,SNR=2.8						
MKAR	**Makanchi Array**	**59.55**	**314**	P	**P**	**16 01 33.4**	**+0.6**
	0.2nm,0.5s,mb3.4,baz=89,slow=9.4,SNR=3.2						
ILAR	**Eielson Array**	**63.61**	**26**	P	**P**	**16 02 00.8**	**+1.1**
	0.1nm,0.6s,mb2.9,baz=274,slow=4.1,SNR=4.4						
BVAR	**Borovoye Array**	**67.51**	**321**	P	**P**	**16 02 25.5**	**+0.3**
	0.7nm,0.5s,mb3.8,baz=98,slow=7.5,SNR=6.1						

ARCES	**ARCESS Array B**	**83.27**	**342**	P	**P**	**16 03 53.9**	**-1.2**
ARCES	**ARCESS Array B**	**83.27**	**342**	P	**P**	**16 03 53.9**	**-1.2**
	4.0nm,0.9s,mb4.2,baz=58,slow=2.2,SNR=5.1						
FINES	**FINESS Array B**	**87.76**	**336**	P	**P**	**16 04 17.1**	**-0.5**
	2.6nm,0.9s,mb4.2,baz=71,slow=4.4,SNR=9.8						

ISCJB ***01*** *16:21:54.4±1.4, 14°.45N±0°.07×93°.26W±0°.05, h21km±12km, mb3.7/3, Error ellipse: s-maj=12.7km s-min=8.2km az=164.9*
MEX ***01*** *16:21:56.8±0.5, 14°.35N×93°.20W, h36km±51km, MD4.0*
IDC ***01*** *16:21:57.0±1.7, 15°.12N×92°.56W, h0km, mb3.7/3, mb1 3.8/5, mb1mx3.5/19, mbtmp3.4/5, ML3.3/2, Error ellipse: s-maj=97.6km s-min=23.1km az=49.0*
NEIC ***01*** *16:22:01.8±1.1, 14°.91N×92°.93W, h35km, mb3.7/1, Error ellipse: s-maj=22.1km s-min=14.1km az=220.0*

ISC 01 16:21:54.5±1.7, 14°.47N±0°.09×93°.21W±0°.07, h14km±16km, n14, σ1ᵍ08/23, mb3.7/3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.01**	**65**	*i* P	**Pb**	**16 22 13.2**	**-0.6**
THIG				*i* S	**Sg**	**16 22 26.4**	**-0.8**
PCIG		**1.23**	**360**	*i* P	**Pn**	**16 22 17.9**	**+0.7**
PCIG				*i* S	**Sb**	**16 22 33.0**	**-0.1**
TGIG		**2.29**	**2**	*i* P	**Pn**	**16 22 32.7**	**+0.8**
TGIG				*i* S	**Sn**	**16 22 59.7**	**-0.2**
SCX	**San Cristobal**	**2.32**	**14**	*i* P	**Pn**	**16 22 37.0**	**+4.8**
SCX				*i* S	**Sn**	**16 23 01.0**	**+0.4**
CMIG	**Matias Romero**	**3.06**	**328**	Pn	**Pn**	**16 22 44.6**	**+2.1**
	2.3nm,0.3s,baz=145,slow=11,SNR=23						
CMIG				Sn	**Sn**	**16 23 24.3**	**+5.3**
	8.2nm,0.3s,baz=100,slow=18,SNR=7.1						
HUIG	**Huatulco**	**3.08**	**295**	*e*P	**Pn**	**16 22 41.9**	**-0.9**
HUIG				*i* S	**Sn**	**16 23 18.1**	**-1.4**
VHO	**Vista Hermosa**	**4.26**	**308**	*i* P	**Pn**	**16 22 59.4**	**+0.4**
VHO				*i* S	**Sn**	**16 23 47.7**	**-0.9**
PNIG	**Pinotepa**	**5.11**	**293**	*e*P	**Pn**	**16 23 11.5**	**+0.8**
PNIG				*e*S	**Sn**	**16 24 08.6**	**-1.0**
TEIG	**Tepich**	**7.41**	**39**	*e*Pn	**Pn**	**16 23 40.7**	**-1.6**
TEIG				Sn	**Sn**	**16 25 00.9**	**-5.2**
TXAR	**Lajitas Array**	**17.67**	**329**	P	**Pn**	**16 26 03.1**	**+2.8**
	0.0nm,0.3s,baz=153,slow=16,SNR=2.4						
NVAR	**Mina Array Bea**	**32.57**	**322**	P	**P**	**16 28 29.6**	**+4.2**
	0.2nm,0.4s,mb3.4,baz=122,slow=8.6,SNR=2.5						
LPAZ	**La Paz**	**39.34**	**140**	*e*P	**P**	**16 29 30.0**	**+6.4**
	0.7nm,0.4s,mb3.7						
LPAZ	**La Paz**	**39.34**	**140**	P	**P**	**16 29 29.9**	**+6.2**
	0.7nm,0.4s,mb3.7,baz=304,slow=3.6,SNR=3.3						
YKA	**Yellowknife Ar**	**50.30**	**347**	P	**P**	**16 30 51.1**	**+0.7**
	0.9nm,0.7s,mb3.9,baz=152,slow=7.2,SNR=5.3						

ISK ***01*** *17:10:21.6, 37°.15N×36°.04E, h19km, MD3.2*
ISCJB ***01*** *17:10:22.3±0.4, 37°.19N±0°.03×36°.00E±0°.03, h13km±4km, Error ellipse: s-maj=5.4km s-min=4.0km az=142.3*
CSEM ***01*** *17:10:22.4±0.1, 37°.19N×36°.02E, h15km, MD3.2, Error ellipse: s-maj=3.9km s-min=3.0km az=165.0*
DDA ***01*** *17:10:23.1, 37°.20N×36°.08E, h7km±9km, Md3.2*
NSSC ***01*** *17:10:23, 36°.91N×37°.53E, h10km±6km*

ISC 01 17:10:22.7±0.4, 37°.18N±0°.03×36°.02E±0°.03, h13km±4km, n48, σ0ᵍ93/64, 2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.28**	**233**	*e*PG	**Pg**	**17 10 28.2**	**-0.3**
CEYT				*e*SG	**Sg**	**17 10 32.9**	**+0.6**
CEYT	**Ceyhan**	**0.28**	**233**	*e*Pg	**Pg**	**17 10 28.2**	**-0.3**
CEYT				*e*Sg	**Sg**	**17 10 32.9**	**+0.6**
KOZT	**Kozan**	**0.34**	**333**	*e*PG	**Pg**	**17 10 29.8**	**+0.1**
KOZT				*e*SG	**Sg**	**17 10 35.8**	**+1.4**
YURE	**YUREGIR**	**0.47**	**222**	*i* P	**Pg**	**17 10 32.3**	**+0.3**
YURE				*i* S	**Sg**	**17 10 45.0**	**+6.8**
YURE	**YUREGIR**	**0.47**	**222**	*i* P	**Pg**	**17 10 32.3**	**+0.3**
YURE				*i* S	**Sg**	**17 10 45.0**	**+6.8**
ANDN	**Andirin**	**0.48**	**32**	*i* P	**Pg**	**17 10 31.5**	**-0.7**
ANDN				*i* S	**Sg**	**17 10 40.4**	**+1.8**
ANDN	**Andirin**	**0.48**	**32**	*i* P	**Pg**	**17 10 31.5**	**-0.7**
ANDN				*i* S	**Sg**	**17 10 40.4**	**+1.8**
DRWC	**Darouich**	**0.76**	**137**	⇑*i* P	**Pg**	**17 10 37.0**	**-0.4**
DRWC	**Darouich**	**0.76**	**137**	⇑*i* P	**Pg**	**17 10 37.4**	**0.0**
KMRS	**Kahramanmaras**	**0.77**	**64**	*e*PG	**Pg**	**17 10 37.1**	**-0.6**
KMRS	**Kahramanmaras**	**0.77**	**64**	*e*Pg	**Pg**	**17 10 37.1**	**-0.6**
KARA	**Karaisali**	**0.78**	**277**	*e*PG	**Pg**	**17 10 37.4**	**-0.4**
KARA	**Karaisali**	**0.78**	**277**	*e*Pg	**Pg**	**17 10 37.4**	**-0.4**
KRTS	**Karatas**	**0.79**	**221**	*e*PG	**Pg**	**17 10 37.2**	**-0.9**
KRTS	**Karatas**	**0.79**	**221**	*e*Pg	**Pg**	**17 10 37.2**	**-0.9**
KUZU	**Kuzuini**	**0.93**	**115**	*i* P	**Pb**	**17 10 41.0**	**+0.3**
KUZU				*i* S	**Sg**	**17 10 53.6**	**+0.6**
KUZU	**Kuzuini**	**0.93**	**115**	*i* P	**Pb**	**17 10 41.0**	**+0.3**
KUZU				*i* S	**Sg**	**17 10 53.6**	**+0.7**
GAZ	**Gaziantep**	**0.95**	**90**	*e*PG	**Pg**	**17 10 40.3**	**-0.7**
GAZ	**Gaziantep**	**0.95**	**90**	*e*Pg	**Pg**	**17 10 40.3**	**-0.7**
GULE	**Gulek**	**1.00**	**277**	*i* P	**Pb**	**17 10 41.9**	**0.0**
GULE				*i* S	**Sb**	**17 10 57.9**	**+2.9**
GULE	**Gulek**	**1.00**	**277**	*i* P	**Pb**	**17 10 41.9**	**0.0**
GULE				*i* S	**Sb**	**17 10 57.9**	**+3.0**
HTY	**Hatay**	**1.06**	**175**	*e*PG	**Pg**	**17 10 41.2**	**-1.9**
HTY	**Hatay**	**1.06**	**175**	*e*Pg	**Pg**	**17 10 41.2**	**-1.9**
YAYL	**Yayladag**	**1.14**	**177**	*i* P	**Pb**	**17 10 44.3**	**0.0**
YAYL				*i* S	**Sb**	**17 11 00.6**	**+1.7**
YAYL	**Yayladag**	**1.14**	**177**	*i* P	**Pb**	**17 10 44.3**	**+0.1**
YAYL				*i* S	**Sb**	**17 11 00.6**	**+1.7**
BTCH	**Batrach**	**1.19**	**163**	⇓P	**Pn**	**17 10 46.0**	**+1.0**
BTCH	**Batrach**	**1.19**	**163**	⇓*i*P	**Pn**	**17 10 46.2**	**+1.2**
MERS	**Mersin**	**1.24**	**256**	*e*PN	**Pn**	**17 10 44.4**	**-1.3**
MERS	**Mersin**	**1.24**	**256**	*e*Pn	**Pn**	**17 10 44.4**	**-1.3**
GZT	**Gaziantep**	**1.24**	**81**	*i* P	**Pn**	**17 10 44.8**	**-1.0**
GZT				*i* S	**Sb**	**17 11 02.5**	**+0.7**
SARI	**SarD1z-Kayseri**	**1.59**	**19**	*e*PN	**Pn**	**17 10 45.2**	**-5.3**
SARI	**SarD1z-Kayseri**	**1.59**	**19**	*e*Pn	**Pn**	**17 10 45.2**	**-5.4**
WRDH	**Warideh**	**1.69**	**169**	⇑P	**Pn**	**17 10 52.0**	**+0.1**
WRDH				⇑S	**Sn**	**17 11 15.0**	**+1.6**
WRDH	**Warideh**	**1.69**	**169**	⇑*i*P	**Pn**	**17 10 52.4**	**+0.5**
IKL	**Isikli**	**2.10**	**244**	*e*PN	**Pn**	**17 10 56.9**	**-0.6**
IKL	**Isikli**	**2.10**	**244**	*e*Pn	**Pn**	**17 10 56.9**	**-0.6**
BIDA	**Albida**	**2.17**	**174**	⇑P	**Pn**	**17 10 58.0**	**-0.5**
BIDA				⇑S	**Sn**	**17 11 25.0**	**-0.2**
BIDA	**Albida**	**2.17**	**174**	⇑*i*P	**Pn**	**17 10 58.1**	**-0.4**
MYA	**Malataya**	**2.22**	**58**	*e*PN	**Pn**	**17 10 58.6**	**-0.7**
MYA	**Malataya**	**2.22**	**58**	*e*Pn	**Pn**	**17 10 58.6**	**-0.6**
SULT	**Sultanhani-AKS**	**2.24**	**298**	*e*PN	**Pn**	**17 10 58.9**	**-0.5**
SULT	**Sultanhani-AKS**	**2.24**	**298**	*e*Pn	**Pn**	**17 10 58.9**	**-0.5**
URFA	**Urfa**	**2.25**	**82**	*e*PN	**Pn**	**17 10 58.7**	**-0.9**
URFA	**Urfa**	**2.25**	**82**	*e*Pn	**Pn**	**17 10 58.7**	**-0.8**
DARE	**Darende-Malaty**	**2.26**	**38**	*e*PN	**Pn**	**17 10 52.8**	**-7.0**
DARE	**Darende-Malaty**	**2.26**	**38**	*e*Pn	**Pn**	**17 10 52.8**	**-7.0**
HDMB	**Hadim**	**2.84**	**267**	*e*PN	**Pn**	**17 11 07.2**	**-0.4**
HDMB	**Hadim**	**2.84**	**267**	*e*Pn	**Pn**	**17 11 07.3**	**-0.4**

NIED ***01*** *17:21:00, 29°.90N×139°.30E, h440km, Mw4.0 Best double couple: M0 1.28000×10¹⁵ NP1:ϕ=268.00000°, δ=60.00000°, λ=-58.00000°. NP2:ϕ=37.00000°, δ=43.00000°, λ=-133.00000°.*
ISCJB ***01*** *17:21:50.6±0.3, 29°.90N±0°.04×139°.14E±0°.08, h443km±4km, mb3.8/24, Error ellipse: s-maj=11.2km s-min=5.4km az=158.5*
NEIC ***01*** *17:21:51.1±0.8, 29°.89N×138°.96E, h426km±9km, mb4.1/9, Error ellipse: s-maj=9.3km s-min=7.3km az=91.0*
IDC ***01*** *17:21:51.6±0.8, 29°.91N×138°.99E, h430km±9km, mb3.2/15, mb1 3.4/18, mb1mx3.3/26, mbtmp3.3/18, Error ellipse: s-maj=19.4km s-min=10.6km az=81.0*
JMA ***01*** *17:21:51.1±0.2, 29°.95N×139°.31E, h446km±4km, M3.8*

ISC 01 17:21:51.4±0.3, 29°.91N±0°.04×139°.15E±0°.08, h435km±4km, n47, σ0ᵍ99/61, mb3.8/24, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.24**	**10**	P	**P**	**17 23 00.5**	**+1.5**
JHJ2				*e*S	**S**	**17 23 53.8**	**-0.2**
JHJ	**Hachijo jima 2**	**3.24**	**9**	P	**P**	**17 23 00.8**	**+1.8**
	21nm,0.3s,baz=38,slow=22,SNR=28						
JHJ				S	**S**	**17 23 53.5**	**-0.6**
	29nm,0.3s,baz=72,slow=23,SNR=12						
CBIJ	**Chichi jima**	**3.87**	**136**	P	**P**	**17 23 04.4**	**-0.1**
CBIJ				*e*S	**S**	**17 24 03.5**	**-0.4**
JHHJ	**Haha-jima-NKT**	**4.22**	**140**	P	**P**	**17 23 07.4**	**-0.3**
JHHJ				*e*S	**S**	**17 24 08.5**	**-1.1**

JWZ	**Kozaga**	**4.65**	**322**	P	**P**	**17 23 12.4**	**+0.9**
JWZ				S	**S**	**17 24 17.3**	**+0.6**
JIE	**Ise**	**4.92**	**336**	P	**P**	**17 23 15.7**	**+1.6**
JIE				S	**S**	**17 24 22.6**	**+1.0**
JKN2	**Miekihoku**	**4.96**	**331**	P	**P**	**17 23 15.9**	**+1.4**
JKN2				S	**S**	**17 24 22.3**	**+0.1**
BSO1	**Boso 1**	**4.97**	**18**	P	**P**	**17 23 15.6**	**+1.0**
BSO1				*e*S	**S**	**17 24 20.6**	**-2.0**
BSO3	**Boso 3**	**5.01**	**13**	P	**P**	**17 23 15.3**	**+0.3**
BSO3				*e*S	**S**	**17 24 21.5**	**-1.7**
HMMJ	**Hamamatsu 2**	**5.08**	**347**	P	**P**	**17 23 16.4**	**+0.8**
BSO4	**Boso 4**	**5.16**	**11**	P	**P**	**17 23 16.2**	**-0.3**
BSO4				*e*S	**S**	**17 24 25.3**	**-0.6**
JAO	**Obara**	**5.57**	**344**	P	**P**	**17 23 22.3**	**+1.7**
JAO				S	**S**	**17 24 32.7**	**-0.8**
MJAR	**Matsushiro Arr**	**6.66**	**353**	P	**P**	**17 23 31.2**	**-0.7**
	4.5nm,0.3s,baz=305,slow=15,SNR=27						
MJAR				S	**S**	**17 24 55.0**	**+0.8**
	0.5nm,0.3s,baz=256,slow=21,SNR=3.1						
MAJO	**Matsushiro**	**6.66**	**353**	*e*P	**P**	**17 23 31.6**	**-0.3**
	42nm,0.6s						
MAJO				*e*S	**S**	**17 24 51.5**	**-2.8**
MAT	**Matsushiro**	**6.66**	**353**	P	**P**	**17 23 31.6**	**-0.3**
MAT				S	**S**	**17 24 51.2**	**-3.1**
KSRS	**Korea Array**	**11.99**	**312**	P	**P**	**17 24 30.5**	**+0.3**
	0.7nm,0.3s,baz=126,slow=10,SNR=23						
YSS	**Yuzh-Sakhalins**	**17.25**	**8**	P	**P**	**17 25 27.1**	**+0.7**
ENH	**Enshi**	**25.64**	**278**	*e*P	**P**	**17 26 42.9**	**-1.5**
	7.8nm,0.6s,mb4.3						
SONM	**Songino Array**	**30.84**	**315**	P	**P**	**17 27 30.8**	**+1.0**
	0.2nm,0.5s,baz=111,slow=8.2,SNR=2.9						
CHTO	**Chiang Mai**	**38.08**	**262**	*e*P	**P**	**17 28 30.5**	**-0.8**
	9.7nm,0.7s,mb4.2						
CM31	**Chiang Mai Arr**	**38.23**	**262**	*e*P	**P**	**17 28 32.1**	**-0.4**
CMAR	**Chiang Mai Arr**	**38.23**	**262**	P	**P**	**17 28 32.0**	**-0.5**
	2.3nm,0.4s,mb3.8,baz=72,slow=4.8,SNR=19						
ZALV	**Zalesovo Beam**	**45.62**	**318**	P	**P**	**17 29 30.2**	**-0.5**
	0.2nm,0.3s,mb3.0,baz=149,slow=6.4,SNR=3.0						
ZALV				PcP	PcP	17 31 00.1	-0.3
	0.4nm,0.4s,baz=68,slow=4.0,SNR=3.6						
MKAR	**Makanchi Array**	**46.64**	**308**	P	**P**	**17 29 38.4**	**-0.3**
MKAR				PcP	PcP	17 31 04.1	-0.1
MKAR				ScP	ScP	17 34 13.6	-2.0
MKAR	**Makanchi Array**	**46.64**	**308**	P	**P**	**17 29 38.4**	**-0.3**
	0.3nm,0.4s,mb3.0,baz=86,slow=9.6,SNR=6.4						
MKAR				PcP	PcP	17 31 04.1	-0.1
	0.7nm,0.8s,baz=74,slow=6.8,SNR=6.6						
MKAR				ScP	ScP	17 34 13.6	-2.0
	0.3nm,0.7s,baz=64,slow=2.8,SNR=4.0						
PSI	**Prapat**	**46.67**	**242**	P	**P**	**17 29 39.0**	**-0.4**
	2.9nm,0.3s,mb4.1,baz=99,slow=13,SNR=4.2						
FITZ	**Fitzroy Crossi**	**49.48**	**197**	P	**P**	**17 30 00.4**	**0.0**
	1.8nm,0.6s,mb3.6,baz=107,slow=12,SNR=12						
WRAB	**Tennant Creek**	**49.77**	**186**	*e*P	**P**	**17 30 02.5**	**0.0**
	2.1nm,0.7s,mb3.6						
AML	**Almayashu**	**53.14**	**302**	*e*P	**P**	**17 30 27.6**	**+0.7**
	2.4nm,0.6s,mb3.

ACX	**Acapulco**	**0.37**	**146**	*i* P	Pn	17 48 25.6	-1.8
ACX				*i* S	Sn	17 48 31.1	-2.4
MEIG	**Mezcala**	**0.86**	**30**	*i* P	Pn	17 48 32.6	-1.5
MEIG				*i* S	Sn	17 48 43.1	-2.3
ZIIG	**Zihuatanejo**	**1.39**	**288**	*e*P	Pn	17 48 39.5	-2.0
ZIIG				*i* S	Sn	17 48 56.8	-1.8
PNIG	**Pinotepa**	**2.02**	**112**	*e*P	Pn	17 48 49.9	-0.2
PNIG				*i* S	Sn	17 49 11.1	-3.1

*IDC **01** 17:54:25.8±1.0,24˚.09N×143˚.02E,h0km,mb4.2/14, mb1 4.3/15,mb1mx4.1/24,mbtmp4.1/15,ML3.4/1,MS4.7/1, Ms1 4.7/1,ms1mx2.9/21,Error ellipse: s-maj=28.5km s-min=23.6km az=14.0*

*ISCJB **01** 17:54:27.6±5.5,24˚.07N±0˚.09×143˚.0E±0˚.2,h25km±37km, mb4.2/22,Error ellipse: s-maj=23.6km s-min=14.5km az=171.7*

*NEIC **01** 17:54:31.8±1.9,24˚.07N×143˚.00E,h44km±16km,mb4.4/7, Error ellipse: s-maj=15.5km s-min=9.8km az=85.0*

ISC 01 17:54:31.8±2.4,24˚.08N±0˚.09×143˚.0E±0˚.1,h43km±20km, n27,σ0=69/27,mb4.2/22,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAJO	**Matsushiro**	**13.09**	**343**	P	**Pn**	**17 57 35.6**	**+0.4**
KSRS	**Korea Array**	**18.55**	**319**	P	**Pn**	**17 58 45.4**	**-0.2**
	0.1nm,0.3s,baz=126,slow=13,SNR=5.1						
KSRS				LR	LR	18 04 42.8	
	comp=Z,21nm,19.8s,baz=215,slow=33						
YAK	**Yakutsk**	**39.01**	**350**	P	**P**	**18 01 52.5**	**-1.3**
	7.9nm,0.8s,mb4.5						
CTAO	**Charters Tower**	**44.01**	**176**	P	**P**	**18 02 34.0**	**-1.3**
	6.1nm,1.2s,mb4.2						
WRAB	**Tennant Creek**	**44.55**	**192**	*e*P	**P**	**18 02 40.2**	**+0.7**
	5.0nm,0.9s,mb4.3						
ASAR	**Alice Springs**	**48.27**	**191**	P	**P**	**18 03 08.8**	**+0.1**
	0.2nm,0.6s,mb3.3,baz=9.6,slow=8.7,SNR=4.8						
ZALV	**Zalesovo Beam**	**52.26**	**321**	P	**P**	**18 03 38.1**	**-0.5**
	1.3nm,0.6s,mb4.1,baz=104,slow=6.7,SNR=7.0						
ZALV				PcP	PcP	18 04 49.9	+0.4
	0.6nm,0.4s,baz=103,slow=2.5,SNR=4.4						
MKAR	**Makanchi Array**	**52.98**	**311**	P	**P**	**18 03 44.4**	**+0.3**
	1.3nm,0.5s,mb4.1,baz=86,slow=8.7,SNR=26						
MKAR				PcP	PcP	18 04 52.9	+0.5
	0.3nm,0.7s,baz=90,slow=5.8,SNR=2.7						
KURK	**Kurchatov**	**55.64**	**316**	*e*P	**P**	**18 04 02.8**	**-0.5**
	2.3nm,0.6s,mb4.4						
KURK	**Kurchatov**	**55.64**	**316**	P	**P**	**18 04 03.7**	**+0.4**
	2.9nm,0.6s,mb4.5,baz=93,slow=8.0,SNR=22						
COLA	**College**	**59.62**	**28**	*e*P	**P**	**18 04 30.0**	**-1.1**
	2.8nm,0.7s,mb4.4						
ILAR	**Eielson Array**	**60.02**	**28**	P	**P**	**18 04 32.9**	**-0.9**
	1.2nm,0.8s,mb4.0,baz=263,slow=5.7,SNR=15						
BVAR	**Borovoye Array**	**60.77**	**319**	P	**P**	**18 04 39.5**	**+0.4**
	2.7nm,0.6s,mb4.5,baz=90,slow=8.0,SNR=19						
BRVK	**Borovoye**	**60.83**	**319**	*e*P	**P**	**18 04 39.7**	**+0.2**
	1.3nm,0.8s,mb4.1						
ARU	**Arti**	**67.26**	**323**	*e*P	**P**	**18 05 21.8**	**+0.1**
	3.4nm,0.6s,mb4.5						
YKA	**Yellowknife Ar**	**74.45**	**28**	P	**P**	**18 06 05.2**	**0.0**
YKA	**Yellowknife Ar**	**74.45**	**28**	P	**P**	**18 06 05.2**	**0.0**
	1.3nm,0.6s,mb4.0,baz=293,slow=6.3,SNR=7.4						
ARCES	**ARCESS Array B**	**76.62**	**341**	P	**P**	**18 06 18.7**	**+1.1**
	3.1nm,0.8s,mb4.3,baz=65,slow=8.7,SNR=5.9						
YBH	**Yreka Blue Hor**	**77.42**	**50**	P	**P**	**18 06 24.1**	**+1.5**
	0.8nm,0.3s,mb4.1,baz=315,slow=8.6,SNR=3.6						
JOF	**Joensuu**	**78.11**	**334**	*e*p	**P**	**18 06 25.6**	**-0.4**
	8.3nm,0.6s,mb4.8						
KAF	**Kangasniemi**	**80.50**	**335**	*e*p	**P**	**18 06 39.0**	**-0.1**
	4.5nm,0.6s,mb4.6						
FINES	**FINESS Array B**	**80.97**	**334**	P	**P**	**18 06 42.1**	**+0.5**
	3.6nm,0.4s,mb4.6,baz=70,slow=5.4,SNR=54						
NVAR	**Mina Array Bea**	**81.81**	**52**	P	**P**	**18 06 47.4**	**+0.9**
	0.6nm,0.6s,mb3.7,baz=283,slow=6.1,SNR=5.8						
AKASG	**Malin Array Be**	**85.48**	**324**	P	**P**	**18 07 05.0**	**0.0**
	0.8nm,0.6s,mb4.1,baz=54,slow=4.7,SNR=4.6						
AKASG				LR	LR	18 46 29.6	
	comp=Z,375nm,18.6s,baz=60,slow=36						
NOA	**NORSAR Array B**	**86.68**	**339**	P	**P**	**18 07 10.8**	**0.0**
NOA	**NORSAR Array B**	**86.68**	**339**	P	**P**	**18 07 10.8**	**0.0**
	3.2nm,0.7s,mb4.7,baz=46,slow=4.7,SNR=8.5						
BRTR	**Keskin Array B**	**88.59**	**313**	P	**P**	**18 07 19.9**	**-0.4**
	0.7nm,0.7s,mb4.1,baz=59,slow=4.8,SNR=4.9						

*ISCJB **01** 18:00:10.4±0.6,38˚.79N±0˚.03×26˚.83E±0˚.04,h8km±6km, Error ellipse: s-maj=5.8km s-min=3.8km az=37.3*

*CSEM **01** 18:00:10.5±0.1,38˚.78N×26˚.83E,h10km,ML2.6/5,Error ellipse: s-maj=3.1km s-min=2.4km az=52.0*

*THE **01** 18:00:10.6,38˚.80N×26˚.82E,h2km±1km,ML2.6/5,Error ellipse: s-maj=1.9km s-min=0.6km az=216.0*

*DDA **01** 18:00:11.2,38˚.77N×26˚.84E,h14km,Md3.1*

ISC 01 18:00:10.8±0.5,38˚.79N±0˚.03×26˚.84E±0˚.03,h11km±5km, n22,σ0=61/44,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.43**	**158**	P	**Pg**	**18 00 19.4**	**+0.2**
BLCB				S	**Sg**	**18 00 25.8**	**+0.9**
BLCB	**Balcova**	**0.43**	**158**	P	**Pg**	**18 00 19.4**	**+0.2**
BLCB				S	**Sg**	**18 00 25.8**	**+0.9**
URLA	**Izmir**	**0.47**	**204**	*i* P	**Pg**	**18 00 18.6**	**-1.3**
URLA				*i* S	**Sg**	**18 00 26.4**	**+0.3**
URLA	**Izmir**	**0.47**	**204**	*i* P	**Pg**	**18 00 18.6**	**-1.3**
URLA				*i* S	**Sg**	**18 00 26.4**	**+0.4**
KDAG	**Bornova**	**0.51**	**139**	*i* P	**Pg**	**18 00 20.0**	**-0.7**
KDAG				*i* S	**Sg**	**18 00 27.8**	**+0.4**
KDAG	**Bornova**	**0.51**	**139**	*i* P	**Pg**	**18 00 20.0**	**-0.7**
KDAG				*i* S	**Sg**	**18 00 27.8**	**+0.4**
PRK	**Paraskevi**	**0.64**	**316**	P	**Pg**	**18 00 22.7**	**-0.5**
PRK				S	**Sg**	**18 00 31.7**	**+0.2**
PRK	**Paraskevi**	**0.64**	**316**	P	**Pg**	**18 00 22.7**	**-0.5**
PRK				S	**Sg**	**18 00 31.7**	**+0.2**
CHOS	**Chios island**	**0.73**	**237**	P	**Pg**	**18 00 24.5**	**-0.4**
CHOS				S	**Sg**	**18 00 35.5**	**+1.0**
CHOS	**Chios island**	**0.73**	**237**	P	**Pg**	**18 00 24.5**	**-0.4**
CHOS				S	**Sg**	**18 00 35.5**	**+1.0**
AKHS	**Akhisar**	**0.77**	**83**	*i* P	**Pg**	**18 00 26.0**	**+0.4**
AKHS				*i* S	**Sg**	**18 00 35.8**	**+0.2**
AKHS	**Akhisar**	**0.77**	**83**	*i* P	**Pg**	**18 00 26.0**	**+0.4**
AKHS				*i* S	**Sg**	**18 00 35.8**	**+0.2**
SIGR	**SIGRI**	**0.88**	**299**	P	**Pg**	**18 00 27.1**	**-0.6**
SIGR				S	**Sg**	**18 00 39.2**	**+0.1**
SIGR	**SIGRI**	**0.88**	**299**	P	**Pg**	**18 00 27.1**	**-0.6**
SIGR				S	**Sg**	**18 00 39.2**	**+0.1**
BALY	**Balya**	**1.13**	**32**	*i* P	**Pb**	**18 00 32.2**	**-0.2**
BALY				*i* S	**Sb**	**18 00 47.5**	**+0.5**
BALY	**Balya**	**1.13**	**32**	*i* P	**Pb**	**18 00 32.2**	**-0.2**
BALY				*i* S	**Sb**	**18 00 47.5**	**+0.4**
AYDN	**Tasoluk**	**1.39**	**144**	*i* P	**Pn**	**18 00 35.1**	**-1.1**
AYDN				*i* S	**Sn**	**18 00 54.5**	**0.0**
AYDN	**Tasoluk**	**1.39**	**144**	*i* P	**Pn**	**18 00 35.1**	**-1.0**
AYDN				*i* S	**Sn**	**18 00 54.5**	**0.0**
LIA	**Limnos Island**	**1.70**	**311**	P	**Pn**	**18 00 39.9**	**-0.5**
LIA				S	**Sn**	**18 01 03.3**	**+1.2**
LIA	**Limnos Island**	**1.70**	**311**	P	**Pn**	**18 00 39.9**	**-0.5**
LIA				S	**Sn**	**18 01 03.3**	**+1.2**
ALN	**Alexandroupoli**	**2.19**	**344**	P	**Pn**	**18 00 46.8**	**-0.4**
ALN				S	**Sn**	**18 01 14.6**	**+0.2**
ALN	**Alexandroupoli**	**2.19**	**344**	P	**Pn**	**18 00 46.8**	**-0.4**
ALN				S	**Sn**	**18 01 14.6**	**+0.2**

*ISCJB **01** 18:06:15.9±0.4,43˚.83N±0˚.03×105˚.25W±0˚.05,h0km,Error ellipse: s-maj=5.0km s-min=4.5km az=23.7*

*NEIC **01** 18:06:17.8±0.4,43˚.84N×105˚.27W,h0km,ML3.4,Error ellipse: s-maj=5.3km s-min=4.6km az=132.0,Suspected Mining explosion.*

NEIC 50 km [30 miles] SSE of Gillette.

*IDC **01** 18:06:18.9±1.1,44˚.10N×105˚.66W,h0km,mb4.2/1, mb1 3.9/6,mb1mx3.6/27,mbtmp3.6/6,ML3.3/5,Error ellipse: s-maj=24.4km s-min=12.1km az=138.0*

ISC 01 18:06:17.9±0.4,43˚.84N±0˚.03×105˚.28W±0˚.04,h0km,n64, σ0=96/72,Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.94**	**72**	*e*Pg	**Pg**	**18 06 36.6**	**+0.7**
RWWY	**Rawlins**	**2.58**	**214**	*e*Pn	**Pn**	**18 07 01.4**	**+0.5**
RWWY				*e*Sn	**Sn**	**18 07 31.9**	**-1.1**
LAO	**LASA Array**	**2.93**	**347**	*e*Pn	**Pn**	**18 07 06.6**	**+0.9**
LAO				*e*Pg	**Pg**	**18 07 14.9**	**+0.9**
LAO				*e*Sg	**Sg**	**18 07 48.4**	**-3.5**
RLMT	**Red Lodge**	**3.13**	**296**	*e*P	**Pn**	**18 07 08.0**	**-0.5**
BW06	**Boulder Array**	**3.31**	**253**	*e*Pn	**Pn**	**18 07 11.1**	**+0.2**
BW06				*e*Sn	**Sn**	**18 07 55.1**	**+4.2**
GCMT	**Greycliff**	**3.68**	**303**	*e*Pn	**Pn**	**18 07 17.2**	**+1.1**
LKWY	**Lake**	**3.76**	**283**	*e*Pn	**Pn**	**18 07 13.2**	**-3.9**
OGNE	**Ogallala**	**3.76**	**139**	*e*Pn	**Pn**	**18 07 17.4**	**+0.3**
LOHW	**Long Hollow**	**3.87**	**268**	*e*Pn	**Pn**	**18 07 19.4**	**+0.8**
FLWY	**Flagg Ranch**	**3.92**	**275**	*e*Pn	**Pn**	**18 07 19.9**	**+0.5**
MOOW	**Moose Ponds**	**3.96**	**271**	*e*Pn	**Pn**	**18 07 21.2**	**+1.3**
SNOW	**Snow King Moun**	**4.00**	**266**	*e*Pn	**Pn**	**18 07 17.8**	**-2.6**
ISCO	**Idaho Springs**	**4.05**	**184**	*e*Pn	**Pn**	**18 07 20.6**	**-0.4**
YFT	**Old Faithful**	**4.05**	**281**	*e*Pn	**Pn**	**18 07 21.6**	**+0.6**
YFT				*e*Sg	**Sg**	**18 08 26.9**	**-1.1**
REDW	**Red Top Meadow**	**4.08**	**265**	*e*Pn	**Pn**	**18 07 22.1**	**+0.6**
IMW	**Indian Meadow**	**4.10**	**273**	*e*Pn	**Pn**	**18 07 22.3**	**+0.6**
YMR	**Madison River**	**4.17**	**283**	*e*Pn	**Pn**	**18 07 20.9**	**-1.8**
DCID1	**Drake Creek**	**4.29**	**269**	*e*Pn	**Pn**	**18 07 19.7**	**-4.7**
AHID	**Auburn Hatcher**	**4.39**	**258**	*e*Pn	**Pn**	**18 07 19.5**	**-6.2**
RRI2	**Red Ridge**	**4.42**	**266**	*e*Pn	**Pn**	**18 07 26.6**	**+0.4**
SMCO	**Snowmass**	**4.83**	**196**	*e*Pn	**Pn**	**18 07 41.2**	**+9.3**
HWUT	**Hardware Ranch**	**5.14**	**246**	*e*Pn	**Pn**	**18 07 35.6**	**-0.5**
	18nm,0.6s						
EGMT	**Eagleton**	**5.22**	**325**	*e*Pn	**Pn**	**18 07 37.5**	**+0.3**
	47nm,0.5s						
HRY	**Holter Researc**	**5.44**	**304**	*e*Pn	**Pn**	**18 07 41.1**	**+0.8**
	25nm,0.6s						
DLMT	**Dillon**	**5.45**	**289**	*e*Pn	**Pn**	**18 07 40.1**	**-0.2**
	8.4nm,0.6s						
LRM	**Limekiln Ridge**	**5.47**	**294**	*e*Pn	**Pn**	**18 07 40.7**	**0.0**
	41nm,0.6s						
MCMT	**McKenzie Canyo**	**5.52**	**283**	*e*Pn	**Pn**	**18 07 46.4**	**+5.0**
	3.9nm,0.5s						
JLU	**Jordanelle**	**5.61**	**237**	*e*Pn	**Pn**	**18 07 42.3**	**-0.3**
	12nm,0.5s						
DAU	**Daniels Canyon**	**5.61**	**234**	*e*Pn	**Pn**	**18 07 42.8**	**+0.2**
	20nm,0.6s						
CTU	**Camp Tracy**	**5.74**	**239**	*e*Pn	**Pn**	**18 07 43.8**	**-0.6**
SPUT	**South Promonto**	**5.87**	**247**	*e*Pn	**Pn**	**18 07 46.7**	**+0.6**
	11nm,0.6s						
HVU	**Hansel Valley**	**5.89**	**252**	*e*Pn	**Pn**	**18 07 46.7**	**+0.3**
	11nm,0.6s						
MPU	**Maple Canyon**	**6.09**	**233**	*e*Pg	**Pg**	**18 08 09.9**	**-4.7**
	14nm,0.7s						
SDCO	**Great Sand Dun**	**6.09**	**182**	*e*Pn	**Pn**	**18 07 49.0**	**-0.1**
	3.6nm,0.6s						
PV01	**Paradox Valley**	**6.22**	**205**	*e*Pn	**Pn**	**18 07 51.3**	**+0.4**
	851nm,0.5s						
ECSD	**EROS Data Cent**	**6.27**	**88**	*e*Pn	**Pn**	**18 07 51.7**	**+0.1**
	9.8nm,0.5s						
TMUT	**Trail Mountain**	**6.36**	**226**	*e*Pn	**Pn**	**18 07 53.1**	**+0.3**
	15nm,0.4s						
NLU	**North Lily Min**	**6.39**	**235**	*e*Pn	**Pn**	**18 07 52.8**	**-0.5**
CHMT	**Chamberlain Mo**	**6.40**	**301**	*e*Pn	**Pn**	**18 07 54.0**	**+0.6**
	4.1nm,0.6s						
BGU	**Big Grassy Mou**	**6.44**	**246**	*e*Pn	**Pn**	**18 07 54.1**	**+0.2**
	3.4nm,0.7s						
CBKS	**Cedar Bluff**	**6.53**	**138**	*e*Pn	**Pn**	**18 07 55.7**	**+0.6**
	28nm,0.6s						
HLID	**Hailey**	**6.63**	**271**	*e*Pn	**Pn**	**18 07 58.9**	**+2.3**
	2.1nm,0.7s						
DUG	**Dugway**	**6.69**	**240**	*e*Pn	**Pn**	**18 07 56.3**	**-1.1**
	4.7nm,0.5s						
MSO	**Missoula**	**6.80**	**299**	*e*Pn	**Pn**	**18 07 57.2**	**-1.6**
	2.6nm,0.5s						
M13A	**Montello**	**7.01**	**252**	*e*Pn	**Pn**	**18 08 02.1**	**+0.3**
	4.2nm,0.6s						
MVCO	**Mesa Verde**	**7.06**	**201**	*e*Pn	**Pn**	**18 08 00.5**	**-2.0**
	398nm,0.2s						
MSU	**Marysvale**	**7.44**	**227**	*e*Pn	**Pn**	**18 08 07.1**	**-0.7**
	8.9nm,0.7s						
AGMN	**Agassiz Nation**	**7.92**	**52**	*e*Pn	**Pn**	**18 08 09.4**	**-4.8**
	18nm,0.5s						
CCUT	**Cedar City**	**8.78**	**227**	*e*Pn	**Pn**	**18 08 26.4**	**+0.3**
	4.1nm,0.6s						
ULM	**Lac du Bonnet**	**9.07**	**42**	*e*Pn	**Pn**	**18 08 29.2**	**-0.7**
ULM				Pn	**Pn**	**18 08 29.5**	**-0.4**
ULM				Pg	**Pg**	**18 09 01.8**	**-10**
ULM				Lg		18 10 55.3	
ULM	**Lac du Bonnet**	**9.07**	**42**	*e*Pn	**Pn**	**18 08 29.5**	**-0.4**
	1.4nm,0.3s,baz=233,slow=12,SNR=4.8						
ULM				Pg	**Pg**	**18 09 01.8**	**-10**
	1.8nm,0.3s,baz=229,slow=16,SNR=6.0						
ULM				Lg		18 10 55.3	
	0.6nm,0.3s,baz=165,slow=19,SNR=1.8						
AMTX	**Amarillo**	**9.37**	**162**	*e*Pn	**Pn**	**18 08 28.5**	**-5.6**
	14nm,0.6s						
WUAZ	**Wupatki**	**9.55**	**212**	*e*Pn	**Pn**	**18 08 36.5**	**-0.1**
	4.2nm,0.5s						
WMOK	**Wichita Mounta**	**10.39**	**149**	*e*Pn	**Pn**	**18 08 42.0**	**-6.1**
	1.8nm,0.6s						
FFC	**Flin Flon**	**11.10**	**10**	*e*Pn	**Pn**	**18 08 56.7**	**-1.1**
	5.8nm,0.6s						
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn	**Pn**	**18 09 00.6**	**+1.2**
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn	**Pn**	**18 09 00.6**	**+1.2**
	0.2nm,0.3s,baz=53,slow=11,SNR=7.4						
YBH	**Yreka Blue Hor**	**12.98**	**267**	Pn	**Pn**	**18 09 25.4**	**+1.8**
	0.1nm,0.3s,baz=60,slow=6.4,SNR=4.8						
TXAR	**Lajitas Array**	**14.54**	**174**	Pn	**Pn**	**18 09 51.0**	**+6.2**
TXAR	**Lajitas Array**	**14.54**	**174**	Pn	**Pn**	**18 09 51.0**	**+6.2**
	0.0nm,0.3s,baz=2.5,slow=8.8,SNR=5.1						
YKA	**Yellowknife Ar**	**19.47**	**347**	P	**Pn**	**18 10 44.4**	**-2.6**
YKA	**Yellowknife Ar**	**19.47**	**347**	P	**Pn**	**18 10 44.4**	**-2.6**
	0.2nm,0.3s,baz=159,slow=12,SNR=4.8						
ARCES	**ARCESS Array B**	**61.32**	**18**	P	**P**	**18 16 34.0**	**-0.7**
ARCES	**ARCESS Array B**	**61.32**	**18**	P	**P**	**18 16 34.0**	**-0.7**
	2.5nm,0.9s,baz=328,slow=7.8,SNR=4.7						

*IDC **01** 18:12:15.8±0.6,32˚.44N×105˚.27E,h0km,mb4.5/24, mb1 4.5/27,mb1mx4.5/32,mbtmp4.5/27,ML4.1/3,MS4.0/12, Ms1 4.0/12,ms1mx3.7/32,Error ellipse: s-maj=19.0km s-min=11.8km az=58.0*

*ISCJB **01** 18:12:16.0±0.9,32˚.41N±0˚.02×105˚.22E±0˚.02,h12km±5km, mb4.8/124,MS4.3/31,Error ellipse: s-maj=3.5km s-min=3.3km az=146.6*

*BJI **01** 18:12:16.5,32˚.42N×105˚.27E,h14km,mB4.7/20,mb4.8/37, ML5.1/22,Ms5.0/50,Ms7 4.5/46*

*GCMT **01** 18:12:19.0±0.3,32˚.44N×105˚.12E,h27km±1km,MW4.9, Moment Tensor Solution. s19,c23; s72,c110; Moment tensor: Scale 10^16^Nm; Mrr=0.33±.16; Mθφ1.76±.12; Mφφ-1.43±.12; Mrθ-0.76±.20; Mθθ-2.26±.10; Mθr-0.46±.22; Best double couple: M0≥2.90000×10^16^ NP1:φs342.00000°, δ72.00000°,λ-6.00000°. NP2:φs73.00000°,δ84.00000°, λ-162.00000°. Principal axes: T 3.0000, Plg8.0000°, Azm206.0000°; N -0.1600, Plg71.0000°, Azm92.0000°; P -2.8300, Plg17.0000°, Azm299.0000°; Data Used: II IU G IC CN.*

*MOS **01** 18:12:19.2±0.7,32˚.45N×105˚.24E,h33km,mb5.0/78, MS4.3/21 Error ellipse: s-maj=7.7km s-min=4.3km az=118.8*

*NEIC **01** 18:12:19.6±1.1,32˚.44N×105˚.22E,h22km±8km,mb4.9/78, MS4.4/3,Error ellipse: s-maj=4.0km s-min=3.4km az=55.0*

*SZGRF **01** 18:12:22.3,32˚.84N×105˚.12E,h14km,mb5.1,MS4.2, Sichuan, China*

ISC 01 18:12:16.8±0.8,32˚.44N±0˚.02×105˚.21E±0˚.02,h3km±5km, h17km±1.1km:pP-P,n386,σ0=92/406,mb4.8/124,MS4.3/31, 26C-21D,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.96**	**219**	Pn	**Pn**	**18 12 52.2**	**+1.3**
CD2				Pg	**Pg**	**18 12 54.8**	**+0.3**
CD2				Sg	**Sg**	**18 13 21.6**	**+1.7**
CD2				smax			
	comp=N,44μm,0.8s						
CD2				smax			
	comp=E,77μm,0.6s						
XAN	**Xi'an**	**3.50**	**62**	Pn	**Pn**	**18 13 12.6**	**+0.5**
XAN				Pg	**Pg**	**18 13 20.0**	**-3.9**
XAN				Sn	**Sn**	**18 13 54.3**	**+0.4**
XAN				Sg	**Sg**	**18 14 04.3**	**-4.9**
XAN				smax			
	comp=N,9μm,0.8s						
XAN				smax			
	comp=E,4μm,0.8s						
XAN				LR	LR		
	comp=N,26μm,7.9s						
XAN				LR	LR		
	comp=E,4μm,9.2s						
XAN				LR	LR		
	comp=Z,3μm,7.9s						
LZH	**Lanzhou**	**3.81**	**343**	Pn	**Pn**	**18 13 18.7**	**+2.4**
LZH				Pg	**Pg**	**18 13 27.1**	**-2.7**
LZH				Sn	**Sn**	**18 14 02.8**	**+1.2**
LZH				Sg	**Sg**	**18 14 15.8**	**-3.4**
LZH				smax			
	comp=N,12μm,0.6s						
LZH				smax			
	comp=E,35μm,0.7s						
LZH				LR	LR		
	comp=E,42μm,6.1s						
LZH				LR	LR		
	comp=Z,43μm,7.8s						
ENH	**Enshi**	**4.25**	**119**	*e*Pn	**Pn**	**18 13 23.5**	**+1.1**
ENH				*e*Sn	**Sg**	**18 14 31.8**	**-1.7**
GYA	**Guiyang**	**6.09**	**168**	⇑*i*Pn	**Pn**	**18 13 48.6**	**+0.8**
GYA				Sn	**Sn**	**18 14 57.3**	**-0.7**
GYA				Sg	**Sg**	**18 15 27.4**	**-5.2**
GYA				smax			
	comp=N,2μm,0.8s						
GYA				smax			
	comp=E,3μm,0.9s						
GYA				LR	LR		
	comp=N,5μm,4.0s						
GYA				LR	LR		
	comp=E,11μm,6.5s						
GYA				LR	LR		
	comp=Z,6μm,5.0s						
KMI	**Kunming**	**7.60**	**197**	Pn	**Pn**	**18 14 08.9**	**+0.4**
KMI				Sn	**Sn**	**18 15 34.4**	**-0.8**
KMI				smax			
	comp=N,400nm,1.6s						
KMI				smax			
	comp=E,320nm,1.3s						
KMI				LR	LR		
	comp=N,4μm,7.9s						
KMI				LR	LR		
	comp=E,4μm,7.4s						
KMI				LR	LR		
	comp=Z,2μm,8.5s						
WHN	**Wuhan**	**8.04**	**101**	⇑P	**Pn**	**18 14 13.7**	**-0.7**
WHN				pP		18 14 16.8	
WHN				S	**Sn**	**18 15 38.7**	**-7.0**
WHN				LR	LR		
	comp=N,42μm,14.4s						
WHN				LR	LR		
	comp=E,21μm,7.7s						
WHN				LR	LR		
	comp=Z,11μm,9.5s						
BTO	**Baotou**	**9.02**	**24**	*e*P	**Pn**	**18 14 27.2**	**-0.7**
HHC	**Hu-ho-hao-te**	**9.82**	**30**	*e*P	**Pn**	**18 14 38.3**	**-0.6**
HHC				pP		18 14 43.3	
HHC				sP		18 14 47.5	
HHC				S	**Sn**	**18 16 30.0**	**+0.4**
HHC				sS		18 16 36.6	
HHC				pmax	pmax		
	comp=Z,26nm,0.5s						
HHC				pmax	pmax		
	comp=Z,110nm,4.7s						
HHC				LR	LR		
	comp=N,2μm,3.1s						
HHC				LR	LR		
	comp=E,2μm,3.7s						
HHC				LR	LR		
	comp=Z,2μm,7.0s						
TIA	**Tai'an**	**10.55**	**66**	S	**Sn**	**18 16 45.4**	**-2.0**
TIA				LR	LR		
	comp=N,1μm,7.4s						
TIA				LR	LR		
	comp=E,2μm,7.8s						
NJ2	**Nanjing**	**11.56**	**88**	*e*P	**Pn**	**18 15 02.5**	**-0.3**
NJ2				pP		18 15 05.8	
NJ2				sP		18 15 08.8	
NJ2				PP		18 15 11.6	
NJ2				S	**Sn**	**18 17 12.5**	**+0.1**
NJ2				sS		18 17 20.0	
NJ2				pmax	pmax		
	comp=Z,30nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,40nm,4.4s						
NJ2				LR	LR		
	comp=N,7μm,12.4s						
NJ2				LR	LR		
	comp=E,3μm,14.2s						
NJ2				LR	LR		
	comp=Z,2μm,12.4s						
BJT	**Baijiatuau**	**11.63**	**46**	*e*Pn	**Pn**	**18 15 03.5**	**-0.2**
	comp=Z,41nm,0.7s						
BJT				*e*Lg		18 18 15.4	
BJT	**Baijiatuau**	**11.63**	**46**	*e*P	**Pn**	**18 15 03.5**	**-0.2**
BJT				pmax	pmax		
	comp=Z,41nm,0.7s						
BJI	**Beijing**	**11.65**	**46**	P	**Pn**	**18 15 03.5**	**-0.4**
BJI				pmax	pmax		
	comp=Z,17nm,0.7s						
BJI				LR	LR		
	comp=N,4μm,11.0s						
BJI				LR	LR		
	comp=E,4μm,12.8s						
GZH	**Guangzhou**	**11.77**	**140**	P	**Pn**	**18 14 58.7**	**-7.0**
GZH				S	**Sn**	**18 17 00.2**	**-17**
GZH				LR	LR		
	comp=N,4μm,8.8s						
GZH				LR	LR		
	comp=E,5μm,9.0s						
LSA	**Lhasa**	**12.36**	**261**	P	**Pn**	**18 15 14.6**	**+1.0**
LSA				pP		18 15 23.6	
LSA				S	**Sn**	**18 17 41.8**	**+10**
LSA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LSA				pmax	pmax		
	comp=Z,340nm,3.0s						
LSA				LR	LR		
	comp=N,410nm,7.0s						
LSA				LR	LR	

DL2 LR LR
comp=E,1µm,17.2s
DL2 LR LR
comp=Z,650nm,12.2s
CM31 Chiang Mai Arr 15.02 204 *e*Pn **Pn 18 15 49.7 -0.3**
comp=Z,19nm,0.7s
CMAR Chiang Mai Arr 15.02 204 Pn **Pn 18 15 49.9 -0.1**
comp=Z,0.4nm,0.3s,baz=14,slow=12,SNR=64
CMAR LR LR 18 22 26.0
comp=Z,186nm,21.9s,baz=24,slow=41
SONM Songino Array 15.40 3 Pn **Pn 18 15 54.8 -0.1**
comp=Z,0.4nm,0.3s,baz=185,slow=13,SNR=62
SONM LR LR 18 22 39.5
comp=Z,440nm,19.2s,baz=182,slow=40
ULN Ulaanbaatar 15.47 5 *e*Pn **Pn 18 15 55.1 -0.7**
comp=Z,49nm,1.0s
ULN Ulaanbaatar 15.47 5 *e*P **Pn 18 15 55.1 -0.7**
ULN pmax pmax
comp=Z,49nm,1.0s
TAPN Taplejung 15.99 256 *e*P **Pn 18 16 03.0 +0.2**
TATO Taipei 16.09 113 *e*Pn **Pn 18 16 07.1 +3.0**
comp=Z,72nm,1.1s
BDT Bhumibol Dam 16.14 202 P **Pn 18 16 05.0 +0.4**
comp=Z,20nm,0.8s
YHNB Yeheng 16.17 115 Pn **Pn 18 16 04.4 -0.6**
comp=Z,73nm,1.3s
SSLB Suanglung 16.34 118 *e*Pn **Pn 18 16 08.3 +1.2**
comp=Z,48nm,0.9s
TPUB Ta-pu 16.38 120 *e*Pn **Pn 18 16 08.2 +0.4**
comp=Z,40nm,1.0s
ODAN Odare 16.45 255 *e*P **Pn 18 16 09.2 +0.6**
comp=Z,95nm,0.7s
NACB Ninganchiao 16.60 116 *e*Pn **Pn 18 16 14.6 +4.0**
comp=Z,40nm,0.9s
RAMN Ramite 17.06 256 *e*P **Pn 18 16 14.8 -1.6**
comp=Z,76nm,0.8s
JIRN Jiri 17.13 259 *e*P **Pn 18 16 16.7 -0.6**
comp=Z,54nm,0.7s
GUN Gumba 17.31 260 *e*P **Pn 18 16 18.6 -0.8**
comp=Z,156nm,1.0s
NST Nakhon Sawan 17.32 197 P **Pn 18 16 20.7 +1.1**
SNY Shenyang 17.36 52 ⇓P **Pn 18 16 24.7 +4.7**
SNY S **Sn 18 19 36.9 +3.3**
SNY pmax pmax
comp=Z,14nm,1.1s
SNY pmax pmax
comp=Z,140nm,3.9s
SNY LR LR
comp=E,760nm,11.6s
SNY LR LR
comp=Z,770nm,12.6s
PKI Pulchoki 17.81 259 *e*P **Pn 18 16 24.5 -1.2**
comp=Z,95nm,0.9s
WMQ Urumqi 17.82 315 P **Pn 18 16 27.0 +1.3**
WMQ pP pP 18 16 31.8 +4.4
WMQ sP sP 18 16 35.5 +7.6
WMQ PP 18 16 41.8
WMQ S **Sn 18 19 42.7 -1.9**
WMQ sS sS 18 19 50.4 -2.9
WMQ SS 18 20 05.2
WMQ PcP PcP 18 21 04.6 +1.8
WMQ pmax pmax
comp=Z,28nm,0.7s
WMQ pmax pmax
comp=Z,160nm,4.2s
WMQ LR LR
comp=N,4µm,17.2s
WMQ LR LR
comp=E,2µm,13.0s
WMQ LR LR
comp=Z,1µm,16.0s
PKIN Phulchoki 17.82 259 *e*P **Pn 18 16 24.3 -1.5**
comp=Z,70nm,0.8s
KKN Kakani 17.85 260 *e*P **Pn 18 16 24.9 -1.2**
comp=Z,131nm,1.0s
ZAK Zakamensk 17.98 356 *e*P **Pn 18 16 28.4 +0.8**
ZAK pmax pmax
comp=Z,40nm,1.2s
DMN Daman 18.05 260 *e*P **Pn 18 16 27.4 -1.3**
comp=Z,154nm,0.9s
GKN Gorkha 18.31 261 *e*P **Pn 18 16 30.4 -1.5**
KOLN Koldanda 19.25 262 *e*P **Pn 18 16 41.8 -1.5**
TLY Talaya 19.26 357 *e*P **Pn 18 16 43.8 +0.6**
comp=Z,21nm,1.3s
TLY Talaya 19.26 357 *e*P **Pn 18 16 46.5 +3.3**
TLY pmax pmax
comp=Z,10.0nm,1.0s
TLY MLR MLR
comp=Z,317nm,10.0s
KSRS Korea Array 19.27 69 P **Pn 18 16 42.7 -0.7**
comp=Z,0.9nm,0.3s,baz=251,slow=9.6,SNR=22
KSRS LR LR 18 23 47.5
comp=Z,468nm,20.7s,baz=262,slow=36
KSRS Korea Array 19.27 69 P **Pn 18 16 42.7 -0.7**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,468nm,20.7s
MOY Mondy 19.46 352 *e*P **Pn 18 16 50.7 +5.1**
MOY pmax pmax
comp=Z,72nm,2.7s
CN2 Changchun 19.50 49 *e*P **Pn 18 16 45.7 -0.4**
CN2 *es*P sP 18 16 54.2 +7.8
CN2 *e*S **Sn 18 20 20.1 -5.1**
CN2 *e*SS 18 20 47.3
CN2 pmax pmax
comp=Z,40nm,0.9s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,2µm,14.0s
CN2 LR LR
comp=E,800nm,14.0s
CN2 LR LR
comp=Z,600nm,15.0s
IRK Irkutsk 19.80 358 *e*P **Pn 18 16 49.7 0.0**
IRK pmax pmax
comp=Z,136nm,1.8s
HIA Hailar 20.03 29 *e*P **P 18 16 51.2 +0.6**
comp=Z,40nm,0.8s
HIA Hailar 20.03 29 *e*P **P 18 16 51.2 +0.6**
HIA pmax pmax
comp=Z,41nm,0.8s
CIT Chita 20.49 15 *e*P **P 18 16 57.2 +1.5**
CIT *e* 18 17 15.1
CIT *e* 18 17 25.2
CIT pmax pmax
comp=Z,136nm,1.8s
MDJ Mudanjiang 22.53 50 P **P 18 17 17.7 +0.1**
MDJ pP 18 17 23.1
MDJ sP sP 18 17 26.4 +7.3
MDJ PcP PcP 18 21 10.9 -0.5
MDJ S **S 18 21 24.0 -1.5**
MDJ ScP ScP 18 24 46.4 -3.5
MDJ PcS PcS 18 24 50.1 0.0
MDJ ScS ScS 18 28 34.2 -0.8
MDJ pmax pmax
comp=Z,10.0nm,1.8s,mb3.9
MDJ pmax pmax
comp=Z,62nm,4.0s
MDJ LR LR
comp=N,1µm,14.0s,MS4.5
MDJ LR LR
comp=E,700nm,16.5s,MS4.5
MDJ LR LR
comp=Z,590nm,12.1s,MS4.2
MDJ Mudanjiang 22.53 50 *e*P **P 18 17 19.7 +2.1**
comp=Z,20nm,0.9s,mb4.5
MK31 Makanchi Array 22.63 316 ⇓*i*P **P 18 17 18.6 -0.1**
MK31 Makanchi Array 22.63 316 *i* P **P 18 17 18.3 -0.4**
MK31 pmax pmax
comp=Z,15nm,0.6s,mb4.6
MKAR Makanchi Array 22.63 316 P **P 18 17 18.9 +0.2**
MKAR Makanchi Array 22.63 316 P **P 18 17 18.9 +0.2**
comp=Z,19nm,0.7s,mb4.7,baz=117,slow=12,SNR=123
MKAR Makanchi Array 22.63 316 P **P 18 17 18.9 +0.2**
MKAR pmax pmax
comp=Z,19nm,0.7s
SDNR Sundarnagar 23.95 275 *e*PKP **P 18 17 32.5 +0.3**
NDI New Delhi 24.36 269 *e*PKP **P 18 17 35.0 -1.0**
NDI *e*PKP 18 17 36.1
NDI AMb AMB 18 17 41.9
comp=Z,42nm,1.3s,mb4.7
KSH Kashi 24.62 295 ⇓*i*P **P 18 17 42.1 +3.8**
KSH pP 18 17 49.0
KSH *es*P sP 18 17 52.6 +13
KSH PP 18 18 18.9
KSH *e*PcP PcP 18 21 19.0 +3.1
KSH S **S 18 22 00.3 +0.2**
KSH SS 18 22 58.2
KSH *e*ScP ScP 18 24 55.3 -0.3
KSH *e*PcS PcS 18 24 58.1 +2.2
KSH *e*ScS ScS 18 28 42.0 -1.3
KSH pmax pmax
comp=Z,22nm,0.6s,mb4.9
KSH LR LR
comp=N,490nm,11.9s,MS4.5
KSH LR LR
comp=E,760nm,11.2s,MS4.5
KSH LR LR
comp=Z,520nm,8.4s
ULHL Ulahol 24.92 301 P **P 18 17 42.6 +1.6**
SNR=26
KZA Kyzart 25.60 301 P **P 18 17 49.4 +2.3**
SNR=23
NGP Nagpur 25.84 251 *e*PKP **P 18 17 50.8 +1.3**
NGP AMb AMB 18 18 04.0
comp=Z,51nm,1.3s,mb4.9
KBK Karagaybulak 25.94 302 P **P 18 17 52.0 +1.7**
SNR=28
ZALV Zalesovo Beam 25.96 332 P **P 18 17 50.1 -0.1**
comp=Z,7.2nm,0.7s,mb4.3,baz=132,slow=9.7,SNR=37
ZALV Zalesovo Beam 25.96 332 P **P 18 17 50.1 -0.2**
ZALV pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
KLR Kul'dur 25.97 42 *e*P **P 18 17 47.0 -3.4**
BHPL Bhopal 26.16 257 *e*PKP **P 18 17 52.3 -0.1**
BHPL AMb AMB 18 18 00.3
comp=Z,46nm,1.5s,mb4.8
UCH Uchtor 26.17 301 P **P 18 17 54.7 +2.4**
SNR=10
UCH Uchtor 26.17 301 *e*P **P 18 17 54.3 +2.0**
comp=Z,38nm,1.1s,mb4.8
AAK Ala-Archa 26.27 302 P **P 18 17 53.8 +0.6**
comp=Z,2.2nm,0.3s,mb4.1,baz=132,slow=5.3,SNR=9.2
AAK Ala-Archa 26.27 302 P **P 18 17 53.8 +0.6**
AAK pmax pmax
comp=Z,2.0nm,0.3s,mb4.1
USP Ospenovka 26.41 303 P **P 18 17 55.8 +1.4**
SNR=20
AML Almayashu 26.74 300 P **P 18 17 59.6 +2.1**
SNR=34
AML Almayashu 26.74 300 ⇓*i*P **P 18 17 59.2 +1.7**
comp=Z,25nm,0.6s,mb4.9
KURK Kurchatov 26.77 321 ⇓*i*P **P 18 17 57.7 0.0**
comp=Z,19nm,0.9s,mb4.6
KURK Kurchatov 26.77 321 P **P 18 17 56.8 -0.9**
comp=Z,9.1nm,0.8s,mb4.4,baz=132,slow=9.3,SNR=38
KURK Kurchatov 26.77 321 ⇑*i*P **P 18 17 57.9 +0.2**
KURK pmax pmax
comp=Z,9.0nm,0.5s,mb4.6
EKS2 Erkin-Say 26.79 301 P **P 18 17 59.2 +1.3**
SNR=16
EKS2 Erkin-Say 26.79 301 *e*P **P 18 17 58.8 +0.9**
comp=Z,8.9nm,0.6s,mb4.5
AJM Ajmer 27.21 265 *e*PKP **P 18 18 01.4 -0.4**
AJM AMb AMB 18 18 06.4
comp=Z,19nm,0.5s,mb4.9
NVS Novosibirsk 27.24 332 *e*P **P 18 18 10.4 +8.5**
NVS pmax pmax
comp=N,10.0nm,1.2s
NVS pmax pmax
comp=Z,13nm,1.2s,mb4.3
NVS pmax pmax
comp=E,15nm,1.4s
KULM Kulim 27.34 190 *e*P **P 18 18 01.3 -1.8**
comp=E,13nm,1.0s,mb4.4
MAJO Matsushiro 27.43 72 P **P 18 18 01.4 -2.3**
comp=E,9.8nm,0.9s,mb4.3
MAJO Matsushiro 27.43 72 P **P 18 18 01.4 -2.4**
MAJO pmax pmax
comp=Z,10.0nm,0.9s,mb4.3
MAT Matsushiro 27.43 72 P **P 18 18 03.0 -0.8**
MAT S **S 18 22 38.0 -6.8**
MJAR Matsushiro Arr 27.43 72 P **P 18 18 06.8 +3.1**
comp=Z,0.9nm,0.5s,mb3.5,baz=271,slow=9.8,SNR=2.8
MJAR LR LR 18 27 56.0
comp=Z,269nm,21.2s,MS3.8,baz=280,slow=34
MJAR Matsushiro Arr 27.43 72 P **P 18 18 06.8 +3.0**
MJAR pmax pmax
comp=Z,1.0nm,0.5s
MJAR MLR MLR
comp=Z,269nm,21.2s
HABR Khabarovsk 27.56 46 P **P 18 18 05.5 +0.7**
HABR *e*PP pP 18 18 14.3 +8.5
HABR *e*SP sP 18 18 19.0 +13
HABR *e* 18 18 50.6
HABR S **S 18 22 46.5 0.0**
HABR *e*SS sS 18 23 02.2 +14
HABR SS 18 24 01.0
HABR *e* 18 28 50.7
HABR MLR MLR
comp=Z,463nm,13.0s,MS4.2
AKL Akola 27.70 252 *e*PKP **P 18 18 05.0 -1.4**
KK31 Karatay Array 29.23 301 *i* P **P 18 18 19.9 +0.2**
KK31 pmax pmax
comp=Z,6.0nm,0.4s,mb4.7
LATR Latur 29.29 248 *e*PKP **P 18 18 20.2 -0.3**
LATR AMb AMB 18 18 35.9
comp=Z,38nm,2.3s,mb4.7
PSI Prapat 30.07 193 P **P 18 18 27.8 +0.4**
comp=Z,12nm,0.8s,mb4.7,baz=345,slow=6.8,SNR=7.9
PSI Prapat 30.07 193 P **P 18 18 27.8 +0.4**
PSI pmax pmax
comp=Z,12nm,0.8s,mb4.7
KBL Kabul 30.13 284 *e*P **P 18 18 28.5 +0.6**
comp=Z,11nm,0.8s,mb4.7
KBL Kabul 30.13 284 *e*P **P 18 18 28.5 +0.7**
KBL pmax pmax
comp=Z,11nm,0.8s,mb4.6
DAV Davao City (W) 31.57 139 *e*P **P 18 18 35.2 -5.5**
KAD Karad 31.78 249 *e*PKP **P 18 18 41.7 -0.8**
KAD AMb AMB 18 18 54.8
comp=Z,37nm,2.0s,mb4.8
YSS Yuzh-Sakhalins 31.99 52 *e*P **P 18 18 46.0 +2.0**
YSS MLR MLR
comp=N,500nm,15.0s
YSS MLR MLR
comp=Z,500nm,15.0s,MS4.3
BVA0 Borovoye Array 32.35 320 P **P 18 18 46.8 -0.4**
BVA0 pmax pmax
comp=Z,1.0nm,0.7s,mb3.8
BVAR Borovoye Array 32.35 320 P **P 18 18 47.5 +0.4**
comp=Z,3.9nm,0.6s,mb4.4,baz=112,slow=9.3,SNR=30
BVAR Borovoye Array 32.35 320 P **P 18 18 47.5 +0.3**
BVAR pmax pmax
comp=Z,4.0nm,0.6s
BRVK Borovoye 32.42 320 *e*P **P 18 18 47.2 -0.5**
comp=Z,8.8nm,0.8s,mb4.6
BRVK Borovoye 32.42 320 *d i*P **P 18 18 48.1 +0.3**
BRVK pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
YAK Yakutsk 33.53 21 *e*P **P 18 18 57.5 +0.1**
comp=Z,20nm,0.8s,mb5.1
YAK Yakutsk 33.53 21 *e*P **P 18 18 57.3 0.0**
YAK pmax pmax
comp=Z,19nm,0.9s,mb5.0
YAK MLR MLR
comp=Z,513nm,14.0s,MS4.4
YAK MLR MLR
comp=N,379nm,15.0s,MS4.4
YAK MLR MLR
comp=E,319nm,13.0s,MS4.4
PALK Pallekele 33.85 228 P **P 18 19 02.5 +1.9**
comp=E,33nm,1.2s,mb5.1
PALK Pallekele 33.85 228 P **P 18 19 02.5 +1.8**
PALK pmax pmax
comp=Z,33nm,1.2s,mb5.1
AB31 Akbulak array 37.51 310 *i* P **P 18 19 32.1 +0.4**
AB31 pmax pmax
comp=Z,6.0nm,0.4s,mb4.7
ABKAR Akbulak array 37.51 310 ⇓*e*P **P 18 19 32.0 +0.2**
comp=Z,8.7nm,0.6s,mb4.7
AKTK Aktyubinsk 38.93 312 P **P 18 19 44.2 +0.5**
AKTO Aktyubinsk 38.93 312 P **P 18 19 44.2 +0.5**
comp=Z,4.6nm,0.6s,mb4.4,baz=98,slow=7.4,SNR=19
AKTO Aktyubinsk 38.93 312 P **P 18 19 44.2 +0.5**
AKTO pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
SVE Sverdlovsk 39.00 322 ⇓*e*P **P 18 19 43.3 -0.9**
SVE *e*SS SS 18 28 20.6 -14
SVE pmax pmax
comp=Z,20nm,1.0s,mb4.8
SVE MLR MLR
comp=Z,362nm,18.0s,MS4.2
ARU Arti 39.97 321 ⇓*i*P **P 18 19 52.1 -0.2**
comp=Z,20nm,0.9s,mb4.9
ARU Arti 39.97 321 *d i*P **P 18 19 52.4 +0.1**
ARU *e* 18 21 24.4
ARU *e*PPP 18 21 49.1
ARU S **S 18 25 56.8 -1.2**
ARU SS SS 18 28 44.8 -10
ARU pmax pmax
comp=Z,23nm,1.0s,mb4.9
GUMO Guam 40.75 108 P **P 18 19 58.5 -0.7**
comp=Z,134nm,1.3s,mb5.4
GUMO Guam 40.75 108 LR LR 18 36 08.4
comp=Z,125nm,18.5s,MS3.8,baz=81,slow=35
GUMO Guam 40.75 108 P **P 18 19 58.5 -0.7**
GUMO pmax pmax
comp=Z,134nm,1.3s,mb5.4
TIXI Tiksi 41.26 11 *e*P **P 18 20 03.5 +0.8**
comp=Z,9.2nm,0.7s,mb4.5
TIXI Tiksi 41.26 11 *e*P **P 18 20 05.5 +2.7**
TIXI pmax pmax
comp=Z,20nm,1.5s,mb4.5
TIXI MLR MLR
comp=Z,424nm,18.0s,MS4.3
SOKR Solikamsk 41.82 325 ⇑*i*P **P 18 20 08.1 +0.6**
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
SOKR MLR MLR
comp=Z,290nm,17.0s,MS4.2
SEY Seymchan 42.47 30 *ce*P **P 18 20 18.3 +5.6**
GNI Garni 48.52 297 *e*P **P 18 21 01.9 +0.9**
comp=Z,58nm,1.4s,mb5.4
GNI Garni 48.52 297 P **P 18 21 02.0 +1.0**
comp=Z,5.7nm,0.5s,mb4.8,baz=324,slow=0.6,SNR=4.5
GNI Garni 48.52 297 *e*P **P 18 21 01.9 +0.9**
GNI pmax pmax
comp=Z,58nm,1.4s
ZEI Tsey 48.69 301 *e*P **P 18 21 00.9 -1.4**
ZEI pmax pmax
comp=Z,13nm,0.4s,mb5.3
MIB Mutribah 49.09 283 *e*P **P 18 21 05.3 -0.3**
MIB AMb AMB 18 21 06.2
comp=Z,29nm,0.7s,mb5.4
RDF Al-Radifah 49.20 282 *e*P **P 18 21 06.4 0.0**
RDF AMb AMB 18 21 07.5
comp=Z,26nm,0.7s,mb5.4
VRHR Novokhopersk 49.34 312 *e*P **P 18 21 06.3 -0.8**
VRHR pmax pmax
comp=N,7.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
NAY Al-Naaiem 49.35 282 *e*P **P 18 21 07.3 -0.2**
NAY AMb AMB 18 21 08.4
comp=Z,27nm,0.7s,mb5.4
KIV Kislovodsk 49.38 302 *e*P **P 18 21 08.1 +0.6**
comp=Z,26nm,1.1s,mb5.2
KIV Kislovodsk 49.38 302 *c i*P **P 18 21 08.6 +1.1**
KIV *i* 18 22 34.1
KIV *i* 18 22 57.9
KIV pmax pmax
comp=Z,37nm,1.6s,mb5.2
KIV MLR MLR
comp=Z,400nm,17.0s,MS4.5
VORD Divnogorie 50.82 312 *e*P **P 18 21 18.3 0.0**
VORD pmax pmax
comp=N,9.0nm,0.4s
VORD pmax pmax
comp=E,9.0nm,0.4s
VORD pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
VSR Storozhevoye 50.88 312 *e*P **P 18 21 18.3 -0.5**
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
MOS Moscow 51.49 318 *e*P **P 18 21 32.0 +8.7**
OBN Obninsk 52.13 317 P **P 18 21 27.8 -0.3**
comp=Z,11nm,0.6s,mb5.0
OBN Obninsk 52.13 317 *c i*P **P 18 21 27.8 -0.3**
OBN *i* 18 22 38.8
OBN pmax pmax
comp=Z,18nm,1.2s,mb4.9
OBN MLR MLR
comp=Z,300nm,22.0s,MS4.3
APA Apatity 53.54 333 ⇑*i*P **P 18 21 42.0 +3.7**
APA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
APA MLR MLR
comp=Z,800nm,13.0s,MS5.0
FITZ Fitzroy Crossi 53.93 156 *e*P **P 18 21 42.8 +1.1**
comp=Z,20nm,1.2s,mb4.9
FITZ Fitzroy Crossi 53.93 156 P **P 18 21 40.8 -0.9**
comp=Z,12nm,1.1s,mb4.8,baz=316,slow=7.2,SNR=6.4
JOF Joensuu 54.41 327 *e*P **P 18 21 44.3 -0.4**
JOF pmax pmax
comp=Z,12nm,0.8s,mb4.9
JOF Joensuu 54.41 327 *ep* **P 18 21 44.3 -0.4**
comp=Z,12nm,0.8s,mb4.9
MBWA Marble Bar 55.08 163 *e*P **P 18 21 48.6 -1.4**
PUL Pulkovo 55.11 323 ⇑*e*P **P 18 21 50.1 +0.2**
SIM Simferopol' 55.22 305 *e*P **P 18 21 51.2 +0.3**
SIM pmax pmax
comp=Z,21nm,0.8s,mb5.2
SIM MLR MLR
comp=Z,300nm,24.0s,MS4.3
KEV Kevo 55.90 336 *e*P **P 18 21 55.1 -0.3**
comp=Z,16nm,0.8s,mb5.1
KEV Kevo 55.90 336 *e*P **P 18 21 55.1 -0.3**
KEV pmax pmax
comp=Z,16nm,0.8s,mb5.1
KEV Kevo 55.90 336 *ep* **P 18 21 55.1 -0.3**
comp=Z,16nm,0.8s,mb5.1
ARCES ARCESS Array B 56.43 335 P **P 18 21 59.1 -0.1**
comp=Z,8.9nm,0.8s,mb4.9,baz=86,slow=7.5,SNR=14
ARCES LR LR 18 47 41.8
comp=Z,162nm,18.6s,MS4.2,baz=256,slow=38
ARCES ARCESS Array B 56.43 335 P **P 18 21 59.1 -0.1**
ARCES pmax pmax
comp=Z,9.0nm,0.8s
ARCES MLR MLR
comp=Z,162nm,18.6s
KAF Kangasniemi 56.79 327 *e*P **P 18 22 01.7 -0.2**
comp=Z,8.3nm,1.0s,mb4.7
KAF Kangasniemi 56.79 327 *e*P **P 18 22 01.7 -0.2**
KAF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
KAF Kangasniemi 56.79 327 *ep* **P 18 22 01.7 -0.2**
comp=Z,8.3nm,1.0s,mb4.7
BR131 Keskin Array S 56.91 299 *e*P **P 18 22 02.5 -0.6**
comp=Z,4.8nm,0.8s,mb4.6
BRTR Keskin Array B 56.91 299 P **P 18 22 03.1 0.0**
comp=Z,5.0nm,0.7s,mb4.6,baz=96,slow=7.1,SNR=25
BRTR Keskin Array B 56.91 299 P **P 18 22 03.1 0.0**
BRTR pmax pmax
comp=Z,5.0nm,0.7s
FINES FINESS Array B 56.99 326 P **P 18 22 02.7 -0.6**
comp=Z,2.1nm,0.4s,mb4.5,baz=106,slow=8.2,SNR=24
FINES FINESS Array B 56.99 326 P **P 18 22 02.7 -0.6**
FINES pmax pmax
comp=Z,2.0nm,0.4s
VSU Vasula 57.11 322 ⇑*e*P **P 18 22 03.9 -0.3**
VSU pmax pmax
comp=Z,16nm,0.6s,mb5.2
AKASG Malin Array Be 57.16 313 P **P 18 22 04.0 -0.7**
comp=Z,7.8nm,0.7s,mb4.9,baz=69,slow=6.7,SNR=15
AKASG Malin Array Be 57.16 313 P **P 18 22 04.1 -0.6**
AKASG pmax pmax
comp=Z,8.0nm,0.7s
AKBB Malin Array Si 57.16 313 *e*P **P 18 22 03.7 -1.0**
KIEV Kiev 57.17 313 *e*P **P 18 22 04.0 -0.8**
comp=Z,7.3nm,0.8s,mb4.8
KIEV Kiev 57.17 313 *e*P **P 18 22 04.0 -0.8**
KIEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
MMAI Mount Meron Ar 57.67 291 P **P 18 22 08.9 +0.3**
comp=Z,7.0nm,1.0s,mb4.7,baz=332,slow=8.5,SNR=5.6
WRAB Tennant Creek 59.08 148 *e*P **P 18 22 18.5 +0.1**
comp=Z,29nm,0.8s,mb5.4
WRAB Tennant Creek 59.08 148 *e*P **P 18 22 18.5 +0.1**
WRAB pmax pmax

comp=Z,29nm,0.8s,mb5.4
TESR 59.87 308 ⇑P P 18 22 23.5 -0.2
TESR 59.87 308 ⇑*i*P P 18 22 23.5 -0.2
VRI **Vrincioaia** 60.01 308 ⇑P P 18 22 24.5 -0.1
VRI **Vrincioaia** 60.01 308 ⇑*i*P P 18 22 24.5 -0.1
PLOR **Plostina** 60.06 308 ⇓P P 18 22 25.5 +0.5
PLOR **Plostina** 60.06 308 ⇓*i*P P 18 22 25.5 +0.5
BURAR **Bucovina Array** 60.49 310 ⇑P P 18 22 28.3 +0.4
BURAR **Bucovina Array** 60.49 310 ⇑*i*P P 18 22 28.3 +0.4
BUR08 **Bucovina Ar. S** 60.49 310 *e*P P 18 22 27.8 -0.1
MLR **Muntele Rosu** 60.64 308 ⇓P P 18 22 28.9 -0.1
MLR **Muntele Rosu** 60.64 308 ⇓*i*P P 18 22 28.9 -0.1
VOIR 61.26 308 ⇑P P 18 22 33.4 +0.2
VOIR 61.26 308 ⇑*i*P P 18 22 33.4 +0.2
UZH **Uzhgorod** 62.05 312 *e*P P 18 22 44.1 +5.6
UZH *e* 18 23 19.3
TRPA **Tarpa** 62.05 311 ⇑*i*P P 18 22 38.8 +0.3
ASAR **Alice Springs** 62.16 150 P P 18 22 39.1 -0.3
comp=Z,5.6nm,0.7s,mb4.8,baz=328,slow=6.7,SNR=10
ASAR **Alice Springs** 62.16 150 P P 18 22 39.1 -0.3
ASAR pmax pmax
comp=Z,6.0nm,0.7s
DRGR 62.37 310 ⇓P P 18 22 40.9 +0.3
DRGR 62.37 310 ⇓*i*P P 18 22 40.9 +0.3
STHS **Stebnicka Huta** 62.46 313 *e*P P 18 22 42.2 +1.0
comp=Z,5.7nm,0.9s,mb4.7
STHS *e*PP pP 18 22 47.1 +4.8
STHS **Stebnicka Huta** 62.46 313 *e*P P 18 22 42.2 +1.0
STHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
STHS **Stebnicka Huta** 62.46 313 *e*P P 18 22 42.2 +1.0
STHS *e*pP pP 18 22 47.1 +4.8
GZR **Gura Zlata** 62.79 308 ⇓P P 18 22 43.5 +0.1
GZR **Gura Zlata** 62.79 308 ⇓*i*P P 18 22 43.5 +0.1
NIE **Niedzica** 63.03 313 *e*P P 18 22 45.9 +0.9
OJC **Ojcow** 63.09 314 *e*P P 18 22 45.3 -0.1
VTS **Vitosha** 63.45 305 ⇓P P 18 22 48.4 +0.5
VTS **Vitosha** 63.45 305 ⇓*i*P P 18 22 48.4 +0.5
PSZ **Piszkesteto** 63.80 312 *e*P P 18 22 55.5 +5.4
NOA **NORSAR Array B** 64.04 327 P P 18 22 50.5 -1.0
comp=Z,1.8nm,0.4s,mb4.4,baz=72,slow=6.5,SNR=12
NOA **NORSAR Array B** 64.04 327 P P 18 22 50.5 -1.0
NOA pmax pmax
comp=Z,2.0nm,0.4s
OKC **Ostrava-Krasne** 64.22 314 *e*P P 18 22 52.7 -0.1
OKC MLR MLR
comp=Z,200nm,16.7s,MS4.4
OKC **Ostrava-Krasne** 64.22 314 *e*P P 18 22 52.7 -0.1
OKC *e*pP pP 18 22 56.8 +2.8
OKC AMS AMS 18 51 50.0
comp=Z,200nm,16.7s
VYHS **Vyhne** 64.26 313 *e*P P 18 22 53.9 +0.7
comp=Z,5.8nm,1.1s,mb4.5
VYHS *e*PP pP 18 22 58.7 +4.4
VYHS **Vyhne** 64.26 313 *e*P P 18 22 53.9 +0.7
VYHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
VYHS **Vyhne** 64.26 313 *e*P P 18 22 53.9 +0.7
VYHS *e*pP pP 18 22 58.7 +4.4
BUD **Budapest** 64.50 311 ⇑*e*P P 18 23 00.1 +5.4
KOLL **Kolacno** 64.50 313 *e*P P 18 22 55.6 +0.9
KOLL *e*PP pP 18 23 01.0 +5.2
KOLL **Kolacno** 64.50 313 *e*P P 18 22 55.6 +0.9
KOLL *e*pP pP 18 23 01.0 +5.2
MORC **Moravsky Berou** 64.61 314 *e*P P 18 22 55.2 -0.2
comp=Z,12nm,1.0s,mb4.9
MORC *e* 18 23 00.2
MORC **Moravsky Berou** 64.61 314 ⇑P P 18 22 55.7 +0.3
MORC **Moravsky Berou** 64.61 314 ⇑*i*P P 18 22 55.7 +0.3
KSP **Ksiaz** 64.97 316 *e*P P 18 23 02.5 +4.7
DPC **Dobruska-Polom** 65.14 315 *e*P P 18 22 59.2 +0.4
DPC MLR MLR
comp=Z,300nm,17.9s,MS4.5
DPC **Dobruska-Polom** 65.14 315 *e*P P 18 22 59.2 +0.4
DPC *e*pP pP 18 23 03.7 +3.8
DPC AMS AMS 18 51 30.0
comp=Z,300nm,17.9s
PKSM **Moragy** 65.21 310 ⇑P P 18 22 59.5 +0.2
PKSM **Moragy** 65.21 310 ⇑*i*P P 18 22 59.5 +0.1
UPC **Upice** 65.26 315 *e*P P 18 23 00.2 +0.6
UPC **Upice** 65.26 315 *e*P P 18 23 00.2 +0.6
UPC *e*pP pP 18 23 04.7 +3.9
CTA **Charters Tower** 65.35 137 LR LR 18 49 34.6
comp=Z,109nm,21.7s,MS4.0,baz=151,slow=34
CTAO **Charters Tower** 65.35 137 P P 18 23 01.9 +1.4
COLD **Coldfoot** 65.87 24 *e*P P 18 23 05.6 +2.3
comp=Z,8.4nm,1.1s,mb4.7
NWAO **Narrogin (SRO)** 66.00 169 P P 18 23 04.3 -0.1
comp=Z,11nm,0.7s,mb5.0,baz=23,slow=7.7,SNR=4.2
NWAO **Narrogin (SRO)** 66.00 169 P P 18 23 04.4 0.0
NWAO pmax pmax
comp=Z,11nm,0.7s
TREC **Trest** 66.03 314 AMS AMS 18 52 00.0
comp=Z,200nm,17.4s
PVCC **Panska Ves** 66.11 316 *e*P P 18 23 05.5 +0.4
PVCC MLR MLR
comp=Z,300nm,12.6s,MS4.7
PVCC **Panska Ves** 66.11 316 *e*P P 18 23 05.5 +0.4
PVCC AMS AMS 18 51 50.0
comp=Z,300nm,12.6s
PRU **Pruhonice** 66.33 315 *e*P P 18 23 07.4 +0.9
PRU MLR MLR
comp=Z,300nm,14.7s,MS4.6
PRU **Pruhonice** 66.33 315 *e*P P 18 23 07.4 +0.9
PRU *e*pP pP 18 23 12.3 +4.6
PRU AMS AMS 18 51 30.0
comp=Z,300nm,14.7s
BRG **Berggiesshubel** 66.35 316 *e*P P 18 23 06.8 +0.2
comp=Z,7.0nm,0.8s,mb4.7
BRG **Berggiesshubel** 66.35 316 *e*P P 18 23 06.6 0.0
comp=Z,4.7nm,0.7s,mb4.6
BRG *e* 18 23 11.3
comp=Z,7.3nm,1.0s
BRG
comp=N,182nm,17.2s
BRG
comp=E,271nm,13.1s
BRG
comp=Z,289nm,14.4s
CLL **Collm** 66.72 317 *e*P P 18 23 08.9 -0.1
comp=Z,9.0nm,1.0s,mb4.8
CLL **Collm** 66.72 317 *i* P P 18 23 08.6 -0.4
comp=Z,9.0nm,1.0s,mb4.8
CLL **Collm** 66.72 317 *i* P P 18 23 08.6 -0.4
CLL pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
CLL **Collm** 66.72 317 *i* P P 18 23 08.6 -0.4
comp=Z,9.0nm,1.0s,mb4.8
CLL *e*pP pP 18 23 14.0 +3.9
CLL LmH 18 49 00.0
comp=N,400nm,20.8s
CLL LmH 18 49 00.0
comp=E,200nm,21.5s
CLL LmV 18 52 00.0
comp=Z,200nm,22.0s
BPAW **Bear Paw Mtn.** 66.99 28 *e*P P 18 23 12.8 +2.3
comp=Z,22nm,1.3s,mb5.0
PPLA **Purkeypile** 67.05 29 *e*P P 18 23 10.5 -0.3
comp=Z,14nm,0.9s,mb5.0
BSEG **Bad Segeberg** 67.17 320 *e*P P 18 23 11.7 -0.1
comp=Z,21nm,1.1s,mb5.1
BSEG **Bad Segeberg** 67.17 320 *e*P P 18 23 11.7 -0.1
BSEG pmax pmax
comp=Z,21nm,1.1s,mb5.1
KHC **Kasperske Hory** 67.25 315 *e*P P 18 23 12.3 -0.1
KHC MLR MLR
comp=Z,300nm,18.6s,MS4.5
KHC **Kasperske Hory** 67.25 315 *e*P P 18 23 12.3 -0.1
KHC *e*pP pP 18 23 17.0 +3.5
KHC AMS AMS 18 52 50.0
comp=Z,300nm,18.6s
GEC2 **GERESS Array S** 67.29 314 *e*P P 18 23 13.0 +0.4
comp=Z,9.0nm,1.0s,mb4.8
GEC2 **GERESS Array S** 67.29 314 *e*P P 18 23 13.0 +0.4
GEC2 pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
PERS **Pernice** 67.30 312 *i* P P 18 23 13.0 +0.3
TANN **Tannenbergstha** 67.39 316 *e*P P 18 23 13.6 +0.3
comp=Z,10.0nm,1.1s,mb4.8
WERD **Werda** 67.47 316 *e*P P 18 23 14.0 +0.2
comp=Z,8.0nm,1.1s,mb4.7
GUNZ **Gunzen** 67.49 316 *e*P P 18 23 14.2 +0.3
comp=Z,12nm,1.1s,mb4.8
WET **Wettzell** 67.66 315 *e*P P 18 23 15.5 +0.5
comp=Z,10.0nm,1.3s,mb4.7
WET **Wettzell** 67.66 315 *e*P P 18 23 15.5 +0.5
WET pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
BOJS **Bojanci** 67.67 311 *i* P P 18 23 15.2 +0.1
BOJS *i* 18 23 20.5
MOX **Moxa** 67.79 317 *e*P P 18 23 20.5 +4.7
comp=Z,9.0nm,1.3s,mb4.6
MOX **Moxa** 67.79 317 *e*P P 18 23 16.0 +0.2
comp=Z,5.0nm,1.0s,mb4.5
MOX **Moxa** 67.79 317 *e*P P 18 23 20.5 +4.7
MOX pmax pmax
comp=Z,9.0nm,1.3s,mb4.6
VISS **Visnje** 67.81 311 *i* P P 18 23 16.1 +0.1
COLA **College** 67.82 26 *e*P P 18 23 15.9 +0.2
comp=Z,20nm,1.1s,mb5.1
COLA **College** 67.82 26 *e*P P 18 23 15.9 +0.2
COLA pmax pmax
comp=Z,20nm,1.1s,mb5.1
NRDL **Niedersach Rie** 67.88 319 *e*P P 18 23 16.0 -0.3
comp=Z,17nm,1.0s,mb5.0
CLZ **Clausthal** 68.01 318 *e*P P 18 23 17.8 +0.7
comp=Z,20nm,1.1s,mb5.1
CLZ **Clausthal** 68.01 318 *e*P P 18 23 17.8 +0.7
CLZ pmax pmax
comp=Z,20nm,1.1s,mb5.1
ILAR **Eielson Array** 68.23 26 P P 18 23 17.4 -0.9
comp=Z,1.1nm,0.8s,mb4.0,baz=290,slow=4.4,SNR=7.4
ILAR **Eielson Array** 68.23 26 P P 18 23 17.4 -0.9
ILAR pmax pmax
comp=Z,1.0nm,0.8s
JAVS **Javornik** 68.27 311 *e*P P 18 23 23.5 +4.6
GRA1 **Grafenberg Arr** 68.42 316 *e*P P 18 23 20.4 +0.6
comp=Z,30nm,1.4s,mb5.1
GRA1 *e*pP pP 18 23 24.5 +3.6
GRA1 LR LR
comp=Z,200nm,21.9s,MS4.3
GRF **Grafenberg Arr** 68.42 316 *e*P P 18 23 20.4 +0.6
comp=Z,30nm,1.4s,mb5.1
GRF *e*pP pP 18 23 24.5 +3.6
GRF eL 18 52 16.3
comp=Z,161nm,21.9s
FUR **Furstenfeldbru** 69.04 314 *e*P P 18 23 24.5 +0.9
comp=Z,32nm,0.9s,mb5.2
FUR **Furstenfeldbru** 69.04 314 *e*P P 18 23 24.5 +0.9
FUR pmax pmax
comp=Z,32nm,0.9s,mb5.2
KDAK **Kodiak Island** 69.21 34 *e*P P 18 23 23.4 -1.2
comp=Z,69nm,2.1s,mb5.2
KDAK **Kodiak Island** 69.21 34 P P 18 23 23.6 -0.9
comp=Z,2.5nm,0.8s,mb4.2,baz=0.0,slow=1.0,SNR=2.3
KDAK LR LR 18 54 14.4
comp=Z,159nm,20.1s,MS4.2,baz=276,slow=36
KDAK **Kodiak Island** 69.21 34 P P 18 23 23.6 -0.9
KDAK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KDAK MLR MLR
comp=Z,159nm,20.1s,MS4.2
IBBN **Ibbenburen** 69.27 319 *e*P P 18 23 25.4 +0.4
comp=Z,13nm,1.1s,mb4.8
TIP **Timpagrande** 69.29 304 *e*P P 18 23 24.2 -1.2
comp=Z,16nm,1.3s,mb4.8
CUC **Castrocucco** 69.59 305 *e*P P 18 23 27.8 +0.6
comp=Z,5.1nm,0.9s,mb4.5
BUG **Bochum--Univer** 69.92 319 *e*P P 18 23 29.4 +0.3
comp=Z,17nm,1.1s,mb4.9
STU **Stuttgart** 70.02 316 *e*P P 18 23 29.7 0.0
comp=Z,16nm,0.8s,mb5.0
CEL **Celeste** 70.29 303 *e*P P 18 23 30.8 -0.8
comp=Z,15nm,1.1s,mb4.8
BFO **Black Forest** 70.73 315 *e*P P 18 23 34.0 -0.1
comp=Z,15nm,1.3s,mb4.8
BFO **Black Forest** 70.73 315 *e*P P 18 23 34.0 -0.1
BFO pmax pmax
comp=Z,15nm,1.3s,mb4.8
TUE **Stuetta** 70.96 313 *e*P P 18 23 34.2 -1.3
comp=Z,6.6nm,0.8s,mb4.6
BMRM **Bremner River** 71.12 29 *e*P P 18 23 34.6 -1.6
comp=Z,19nm,1.0s,mb5.0
CDF **Champ du Feu** 71.31 316 *e*P P 18 23 37.1 -0.5
comp=Z,23nm,1.1s,mb4.7
CDF **Champ du Feu** 71.31 316 *e*P P 18 23 37.1 -0.5
comp=Z,12nm,1.1s,mb4.7
CDF **Champ du Feu** 71.31 316 *e*P P 18 23 37.1 -0.5
CDF pmax pmax
comp=Z,12nm,1.1s,mb4.7
DAWY **Dawson** 71.34 25 *e*P P 18 23 39.6 +2.2
WLF **Walferdange** 71.38 317 P P 18 23 38.7 +0.8
comp=Z,21nm,1.2s,mb5.0
WLF AP pP 18 23 43.6 +4.5
WLF **Walferdange** 71.38 317 *e*P P 18 23 38.5 +0.5
comp=Z,31nm,1.0s,mb5.2
WLF **Walferdange** 71.38 317 *e*P P 18 23 38.5 +0.5
WLF pmax pmax
comp=Z,31nm,1.0s,mb5.2
BCLA **Clavier** 71.50 318 P P 18 23 38.8 +0.1
HINF **Hinteralfeld** 71.84 315 *e*P P 18 23 40.0 -0.8
comp=Z,18nm,1.1s,mb4.6
HINF **Hinteralfeld** 71.84 315 *e*P P 18 23 40.0 -0.8
comp=Z,8.8nm,1.1s,mb4.6
HINF **Hinteralfeld** 71.84 315 *e*P P 18 23 40.0 -0.8
HINF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
GIVF **Givet** 71.92 318 *e*P P 18 23 40.8 -0.4
HAU **Haudompre** 72.05 316 *e*P P 18 23 41.3 -0.8
HAU *e*MLR MLR
comp=Z,212nm,17.5s,MS4.2
HAU **Haudompre** 72.05 316 *e*P P 18 23 41.3 -0.8
HAU MLR MLR
comp=Z,210nm,17.5s,MS4.5
DOU **Dourbes** 72.06 318 P P 18 23 42.4 +0.4
KMBO **Kilima Mbogo** 72.13 257 *e*P P 18 23 42.5 -0.5
KMBO **Kilima Mbogo** 72.13 257 P P 18 23 43.1 +0.1
comp=Z,1.6nm,0.7s,mb4.0,baz=180,slow=24,SNR=3.7
KMBO **Kilima Mbogo** 72.13 257 P P 18 23 43.1 +0.1
KMBO pmax pmax
comp=Z,2.0nm,0.7s
BAIF **Baives** 72.29 318 *e*P P 18 23 43.1 -0.3
comp=Z,23nm,1.2s,mb4.7
BAIF **Baives** 72.29 318 *e*P P 18 23 43.1 -0.3
comp=Z,11nm,1.2s,mb4.7
BAIF **Baives** 72.29 318 *e*P P 18 23 43.1 -0.3
BAIF pmax pmax
comp=Z,11nm,1.2s,mb4.7
STKA **Stephens Creek** 72.63 148 *e*P P 18 23 46.4 +0.9
STKA **Stephens Creek** 72.63 148 P P 18 23 44.0 -1.5
comp=Z,3.2nm,0.5s,mb4.5,baz=351,slow=6.2,SNR=2.7
CABF **La Chapelle** 72.88 315 *e*P P 18 23 47.3 +0.3
comp=Z,46nm,1.3s,mb4.9
CABF **La Chapelle** 72.88 315 *e*P P 18 23 47.3 +0.3
comp=Z,23nm,1.3s,mb5.0
CABF **La Chapelle** 72.88 315 *e*P P 18 23 47.3 +0.3
CABF pmax pmax
comp=Z,23nm,1.3s,mb5.0
PGF **Pioggiola** 73.02 310 *e*P P 18 23 47.9 0.0
comp=Z,33nm,1.1s,mb4.9
PGF **Pioggiola** 73.02 310 *e*P P 18 23 47.9 0.0
comp=Z,17nm,1.1s,mb4.9
PGF **Pioggiola** 73.02 310 *e*P P 18 23 47.9 0.0
PGF pmax pmax
comp=Z,17nm,1.1s,mb4.9
LPG **La Plagne** 73.02 313 *e*P P 18 23 48.2 +0.3
comp=Z,45nm,1.0s,mb5.1
LPG **La Plagne** 73.02 313 *e*P P 18 23 48.2 +0.3
comp=Z,22nm,1.0s,mb5.0
LPG **La Plagne** 73.02 313 *e*P P 18 23 48.2 +0.3
LPG pmax pmax
comp=Z,23nm,1.0s,mb5.1
LPL **La Plagne** 73.02 313 *e*P P 18 23 48.1 +0.2
comp=Z,61nm,1.1s,mb5.1
LPL **La Plagne** 73.02 313 *e*P P 18 23 48.1 +0.2
comp=Z,30nm,1.1s,mb5.1
LPL **La Plagne** 73.02 313 *e*P P 18 23 48.1 +0.2
LPL pmax pmax
comp=Z,31nm,1.1s,mb5.2
MBDF **Montbardon** 73.38 313 *e*P P 18 23 48.8 -1.2
comp=Z,14nm,0.9s,mb4.6
MBDF **Montbardon** 73.38 313 *e*P P 18 23 48.8 -1.2
comp=Z,7.2nm,0.9s,mb4.6
MBDF **Montbardon** 73.38 313 *e*P P 18 23 48.8 -1.2
MBDF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
SBF **Sospel** 73.39 312 *e*P P 18 23 49.5 -0.6
comp=Z,39nm,1.0s,mb5.0
SBF **Sospel** 73.39 312 *e*P P 18 23 49.5 -0.6
comp=Z,19nm,1.0s,mb5.0
SBF **Sospel** 73.39 312 *e*P P 18 23 49.5 -0.6
SBF pmax pmax
comp=Z,19nm,1.0s,mb5.0
ORIF **Oris-en-Rattie** 73.84 313 *e*P P 18 23 52.5 -0.2
comp=Z,16nm,0.8s,mb4.7
ORIF *e*MLR MLR
comp=Z,406nm,21.2s,MS4.4
ORIF **Oris-en-Rattie** 73.84 313 *e*P P 18 23 52.5 -0.2
comp=Z,7.9nm,0.8s,mb4.7
ORIF **Oris-en-Rattie** 73.84 313 *e*P P 18 23 52.5 -0.2
ORIF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LOR **Lormes** 73.88 316 *e*P P 18 23 51.7 -1.2
LOR *e*MLR MLR
comp=Z,212nm,20.5s,MS4.1
LOR **Lormes** 73.88 316 *e*P P 18 23 51.7 -1.2
LOR MLR MLR
comp=Z,210nm,20.5s,MS4.4
FRF **La Foret Royal** 74.03 312 *e*P P 18 23 52.9 -1.0
SSF **Saint Saulge** 74.19 316 *e*P P 18 23 53.8 -1.0
comp=Z,12nm,0.9s,mb4.5
SSF **Saint Saulge** 74.19 316 *e*P P 18 23 53.8 -1.0
comp=Z,5.9nm,0.9s,mb4.5
SSF **Saint Saulge** 74.19 316 *e*P P 18 23 53.8 -1.0
SSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
SMF **Signal de Mont** 74.21 315 *e*P P 18 23 54.1 -0.7
comp=Z,34nm,1.1s,mb4.9
SMF **Signal de Mont** 74.21 315 *e*P P 18 23 54.1 -0.7
comp=Z,17nm,1.1s,mb4.9
SMF **Signal de Mont** 74.21 315 *e*P P 18 23 54.1 -0.7
SMF pmax pmax
comp=Z,17nm,1.1s,mb4.9
LMR **La Mourre** 74.23 311 *e*P P 18 23 54.3 -0.7
comp=Z,38nm,1.3s,mb4.8
LMR **La Mourre** 74.23 311 *e*P P 18 23 54.3 -0.7
comp=Z,19nm,1.3s,mb4.9
LMR **La Mourre** 74.23 311 *e*P P 18 23 54.3 -0.7
LMR pmax pmax
comp=Z,19nm,1.3s,mb4.9
AVF **Avril sur Loir** 74.42 316 *e*P P 18 23 55.4 -0.7
comp=Z,21nm,1.0s,mb4.7
AVF **Avril sur Loir** 74.42 316 *e*P P 18 23 55.4 -0.7
comp=Z,11nm,1.0s,mb4.7
AVF **Avril sur Loir** 74.42 316 *e*P P 18 23 55.4 -0.7
AVF pmax pmax
comp=Z,11nm,1.0s,mb4.7
SMRF **Simiane la Rot** 74.50 312 *e*P P 18 23 56.3 -0.3
VIVF **Saint-Julien-l** 74.61 314 *e*P P 18 23 56.5 -0.7
comp=Z,18nm,0.9s,mb4.7
VIVF **Saint-Julien-l** 74.61 314 *e*P P 18 23 56.5 -0.7
comp=Z,9.1nm,0.9s,mb4.7
VIVF **Saint-Julien-l** 74.61 314 *e*P P 18 23 56.5 -0.7
VIVF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
TCF **Toulx Ste Croi** 75.36 316 *e*P P 18 24 01.2 -0.3
LDF **La Druitiere** 75.47 319 *e*P P 18 24 01.3 -0.8
LASF **Ste Croix** 75.52 313 *e*P P 18 24 02.2 -0.3
comp=Z,16nm,0.9s,mb4.6
SKAG **Skagway** 75.73 27 *e*P P 18 24 04.4 +1.0
comp=Z,17nm,1.0s,mb4.9
GRR **Gorron** 76.00 319 *e*P P 18 24 04.6 -0.5
comp=Z,34nm,1.0s,mb4.9
GRR **Gorron** 76.00 319 *e*P P 18 24 04.6 -0.5
comp=Z,17nm,1.0s,mb4.9
GRR **Gorron** 76.00 319 *e*P P 18 24 04.6 -0.5
GRR pmax pmax
comp=Z,17nm,1.0s,mb4.9
KEST **Kesra** 76.11 304 P P 18 24 05.7 -0.3
comp=Z,1.1nm,0.9s,mb3.8,baz=108,slow=13,SNR=2.1
CAF **Calviac** 76.16 315 *e*P P 18 24 06.1 0.0
comp=Z,13nm,1.1s,mb4.5
CAF **Calviac** 76.16 315 *e*P P 18 24 06.1 0.0
comp=Z,6.6nm,1.1s,mb4.5
CAF **Calviac** 76.16 315 *e*P P 18 24 06.1 0.0
CAF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
RJF **Les Rejaudoux** 76.29 315 *e*P P 18 24 06.9 0.0
comp=Z,24nm,1.1s,mb4.7
RJF *e*MLR MLR
comp=Z,211nm,19.0s,MS4.2
RJF **Les Rejaudoux** 76.29 315 *e*P P 18 24 06.9 0.0
comp=Z,12nm,1.1s,mb4.7
RJF LR LR
comp=Z,210nm,19.0s,MS4.5
RJF **Les Rejaudoux** 76.29 315 *e*P P 18 24 06.9 0.0
RJF pmax pmax
comp=Z,12nm,1.1s,mb4.7
RJF MLR MLR
comp=Z,210nm,19.0s,MS4.5
ARMA **Armidale** 76.43 140 P P 18 24 13.2 +5.5
MTLF **Montolieu** 76.91 313 *e*P P 18 24 10.0 -0.4
comp=Z,18nm,1.3s,mb4.5
MTLF **Montolieu** 76.91 313 *e*P P 18 24 10.0 -0.4
comp=Z,9.2nm,1.3s,mb4.5
MTLF **Montolieu** 76.91 313 *e*P P 18 24 10.0 -0.4
MTLF pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
DLBC **Dease Lake** 78.44 26 LR LR 18 59 46.0
comp=Z,84nm,21.0s,MS4.0,baz=321,slow=36
ETSF **Etsaut** 78.86 314 *e*P P 18 24 21.6 +0.3
YKA **Yellowknife Ar** 80.14 18 P P 18 24 27.5 -0.4
comp=Z,1.7nm,0.6s,mb4.2,baz=328,slow=5.1,SNR=11
YKA **Yellowknife Ar** 80.14 18 P P 18 24 27.5 -0.4
YKA pmax pmax
comp=Z,2.0nm,0.6s
ESDC **Sonseca Array** 82.81 313 P P 18 24 42.5 0.0
comp=Z,0.3nm,0.4s,mb3.7,baz=44,slow=5.9,SNR=7.0
ESLA **Sonseca Array** 82.81 313 P P 18 24 40.5 -2.0
LSZ **Lusaka** 87.50 250 *e*P P 18 25 06.3 0.0
comp=Z,6.7nm,1.2s,mb4.8
LSZ **Lusaka** 87.50 250 *e*P P 18 25 06.3 +0.1
LSZ pmax pmax
comp=Z,7.0nm,1.2s,mb4.8
FFC **Flin Flon** 90.09 15 *e*P P 18 25 17.8 0.0
comp=Z,7.5nm,1.0s,mb5.0
FFC **Flin Flon** 90.09 15 *e*P P 18 25 17.8 -0.1
FFC pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
ETW **Entiat** 90.45 29 P P 18 25 18.9 -0.8
comp=Z,14nm,1.0s,mb5.2
SCHQ **Schefferville** 92.81 355 LR LR 19 12 13.1
comp=Z,123nm,21.9s,MS4.3,baz=140,slow=39
ULM **Lac du Bonnet** 95.58 13 LR LR 19 10 56.8
comp=Z,140nm,20.2s,MS4.4,baz=9.8,slow=37
BOSA **Boshof** 97.16 241 LR LR 19 08 13.4
comp=Z,95nm,18.4s,MS4.3,baz=223,slow=34
OTAV **Otavalo** 147.31 7 *e*PKPbc PKPbc 18 32 03.0 +0.6

IDC ***01*** *18:14:09.4±0.8, 10°.74N×122°.90E, h0km, mb4.1/13, mb1 4.2/15, mb1mx4.0/27, mbtmp4.2/15, ML4.4/1, MS3.8/4, Ms1 3.8/4, ms1mx3.2/34, Error ellipse: s-maj=34.8km s-min=14.7km az=66.0*

MAN ***01*** *18:14:10, 10°.87N×123°.09E, h7km, mb5.4, ML4.4, MS4.6*

MAN INTENSITY VI - SILAY CITY CADIZ CITY SAGAY CITY (NEGROS OCCIDENTAL); INTENSITY IV - BACOLOD CITY ILOILO CITY GUIMARAS ISLAND; INTENSITY III - MAMBUCAL NEGROS OCCIDENTAL; ROXAS CITY.

ISCJB ***01*** *18:14:11.2±0.7, 10°.91N±0°.03×123°.12E±0°.04, h26km±6km, mb4.3/21, MS3.8/3, Error ellipse: s-maj=7.5km s-min=4.0km az=155.3*

NEIC ***01*** *18:14:11.2±5.2, 10°.82N×122°.98E, h14km±33km, mb4.6/8, Error ellipse: s-maj=24.5km s-min=8.0km az=58.0*

NEIC Felt [VI PIVS] at Cadiz, Sagay City and Silay; [IV PIVS] at Bacolod; [III PIVS] at Mambucal, Negros. Felt [IV PIVS] at Iloilo and [III PIVS] at Roxas City, Panay. Also felt [IV PIVS] on Guimaras Island.

DJA ***01*** *18:14:39, 9.50N×122°.13E, h39km, mb4.7/6*

ISC 01 18:14:11.0±0.8, 10°.91N±0°.03×123°.18E±0°.04, h12km±5km, n59, σ1°22/65, mb4.3/21, MS3.8/3, 7C-2D, Cebu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RCP	**Roxas**	**0.77**	**326**	⇓*i*P			**Pg**	**18 14 24.9**	**-1.1**
RCP				*i*	S		**Sg**	**18 14 35.9**	**-0.3**
LLP	**Lapu-Lapu**	**0.97**	**128**	⇓*i*P			**Pg**	**18 14 29.4**	**-0.4**
LLP				*i*	S		**Sg**	**18 14 43.4**	**+0.9**
TBP	**Tagbilaran**	**1.39**	**151**	*e*P			**Pn**	**18 14 35.6**	**-0.6**
TBP				*e*	S		**Sn**	**18 14 54.2**	**-0.3**
MMPH	**Masbate**	**1.50**	**17**	⇑*e*P			**Pn**	**18 14 37.4**	**-0.4**
MMPH				*i*	S		**Sn**	**18 15 02.8**	**+5.5**
SNPH	**Sibulan**	**1.56**	**178**	⇑*i*P			**Pn**	**18 14 38.2**	**-0.4**
SNPH				*i*	S		**Sn**	**18 14 58.5**	**-0.4**

SCPH	**Surigao**	**2.53**	**116**	*e*P		**Pn**	**18 14 51.0**	**-1.0**
SCPH				*e*S		**Sn**	**18 15 11.3**	**-12**
PVCP	**Virac**	**2.83**	**19**⇑	*i*P		**Pn**	**18 14 57.0**	**+0.9**
GQP	**Guinayangan**	**3.06**	**346**⇑	*e*P		**Pn**	**18 15 01.0**	**+1.7**
IPIL	**Ipil**	**3.16**	**191**⇑	*i*P		**Pn**	**18 14 59.4**	**-1.3**
CTBH	**Cotabato--PC H**	**3.82**	**164**⇑	*e*P		**Pn**	**18 15 09.0**	**-0.7**
CTBH				*i* S		**Sn**	**18 15 54.0**	**-0.5**
TGY	**Tagaytay City**	**3.85**	**326**	P	Pn	**Pn**	**18 15 10.5**	**+0.3**
	20nm,0.3s,baz=104,slow=5.2,SNR=7.8							
DMPH	**Davao City--Mi**	**4.45**	**149**⇑	*e*P		**Pn**	**18 15 25.9**	**+7.6**
DAV	**Davao City (W)**	**4.49**	**148**	Pn	Pn	**Pn**	**18 15 20.4**	**+1.4**
	17nm,0.3s,baz=274,slow=13,SNR=1.8							
DAV				LR	LR		18 17 41.1	
	comp=Z,910nm,19.4s,baz=305,slow=47							
MYLDM	**Lahad Datu**	**7.34**	**220**	P		**Pn**	**18 15 59.0**	**+0.8**
MYLDM	**Lahad Datu**	**7.34**	**220**	P		**Pn**	**18 15 59.0**	**+0.8**
KDM	**Kudat**	**7.42**	**238**	P		**Pb**	**18 16 16.3**	**-3.6**
SDKM	**Sandakan**	**7.91**	**229**	P		**Pn**	**18 16 11.7**	**+5.7**
TSM	**Tawau**	**8.42**	**219**	P		**Pn**	**18 16 12.3**	**-0.7**
LUWI	**Luwuk**	**11.88**	**182**	P		**Pn**	**18 17 05.5**	**+5.0**
	938nm95nm,1.1s							
BTM	**Bintulu**	**12.61**	**233**	P		**Pn**	**18 17 11.9**	**+1.5**
SBUM	**Sibu**	**13.75**	**233**	P		**Pn**	**18 17 28.0**	**+2.0**
SBUM	**Sibu**	**13.75**	**233**	P		**Pn**	**18 17 27.4**	**+1.4**
	396nm36nm,0.9s							
TTSI	**Tana Toraja**	**14.27**	**194**	P		**Pn**	**18 17 36.7**	**+3.7**
	30nm,0.8s							
SPSI	**Sidrap Palu**	**15.17**	**193**	P		**Pn**	**18 17 49.3**	**+4.1**
	28nm,1.1s							
QIZ	**Qiongzhong**	**15.20**	**304**	*e*Pn		**Pn**	**18 17 42.7**	**-3.0**
KSM	**Kuching**	**15.86**	**235**	*e*P		**Pn**	**18 17 57.6**	**+3.3**
	72nm,1.5s							
KSM	**Kuching**	**15.86**	**235**	P		**Pn**	**18 17 57.3**	**+3.0**
KSM	**Kuching**	**15.86**	**235**	P		**Pn**	**18 17 58.5**	**+4.2**
STKI	**Sintang**	**15.86**	**228**	P		**Pn**	**18 17 56.3**	**+2.0**
	1um34nm,1.3s							
CMAR	**Chiang Mai Arr**	**24.60**	**291**	P		**P**	**18 19 30.1**	**-1.2**
	6.5nm,1.0s,mb4.1,baz=105,slow=8.2,SNR=7.6							
KAKA	**Kakadu**	**25.21**	**158**	*e*P		**P**	**18 19 33.4**	**-3.4**
	43nm,0.7s,mb5.1							
PSI	**Prapat**	**25.38**	**253**	P		**P**	**18 19 37.1**	**-1.3**
	4.4nm,0.3s,mb4.4,baz=90,slow=5.1,SNR=2.5							
KSRS	**Korea Array**	**26.77**	**8**	P		**P**	**18 19 53.9**	**+3.1**
	0.8nm,0.8s,mb3.3,baz=184,slow=9.8,SNR=2.9							
FITZ	**Fitzroy Crossi**	**28.93**	**175**	P		**P**	**18 20 10.3**	**0.0**
	0.5nm,0.5s,mb3.5,baz=311,slow=9.3,SNR=4.4							
WRAB	**Tennant Creek**	**32.56**	**160**	*e*P		**P**	**18 20 43.8**	**+1.5**
	5.4nm,0.7s,mb4.6							
ASAR	**Alice Springs**	**35.93**	**163**	P		**P**	**18 21 09.7**	**-1.8**
	0.8nm,0.5s,mb3.9,baz=341,slow=6.6,SNR=16							
CTAO	**Charters Tower**	**38.27**	**144**	P		**P**	**18 21 31.9**	**+0.4**
	14nm,1.1s,mb4.6							
SONM	**Songino Array**	**39.42**	**342**	LR	LR		18 40 54.0	
	comp=Z,133nm,18.7s,MS3.8,baz=153,slow=41							
HYB	**Hyderabad**	**43.67**	**284**	*i* P		**P**	**18 22 16.5**	**+0.3**
HYB				*e*		pP	18 22 21.5	+1.6
STKA	**Stephens Creek**	**46.06**	**158**	P		**P**	**18 22 34.1**	**-0.7**
	5.2nm,0.9s,mb4.4,baz=339,slow=8.6,SNR=2.6							
MKAR	**Makanchi Array**	**49.70**	**324**	P		**P**	**18 23 02.1**	**-0.8**
	1.6nm,0.8s,mb4.1,baz=91,slow=7.4,SNR=3.1							
MKAR				LR	LR		18 45 31.2	
	comp=Z,138nm,18.7s,MS4.0,baz=268,slow=38							
YAK	**Yakutsk**	**51.25**	**4**	P		**P**	**18 23 14.5**	**+0.1**
ZALV	**Zalesovo Beam**	**52.63**	**333**	P		**P**	**18 23 24.6**	**-0.2**
	1.9nm,0.8s,mb4.1,baz=104,slow=6.1,SNR=4.1							
ZALV				LR	LR		18 47 00.1	
	comp=Z,65nm,20.0s,MS3.7,baz=95,slow=37							
AML	**Almayashu**	**53.11**	**315**	*e*P		**P**	**18 23 28.5**	**0.0**
	4.5nm,0.8s,mb4.5							
KURK	**Kurchatov**	**53.84**	**326**	*e*P		**P**	**18 23 33.3**	**-0.5**
KURK	**Kurchatov**	**53.84**	**326**	P		**P**	**18 23 34.3**	**+0.5**
	2.8nm,0.9s,mb4.2,baz=117,slow=10,SNR=4.3							
KBL	**Kabul**	**54.47**	**305**	*e*P		**P**	**18 23 40.1**	**+1.4**
	4.3nm,0.8s,mb4.5							
BVAR	**Borovoye Array**	**59.43**	**326**	P		**P**	**18 24 12.8**	**-0.7**
	1.0nm,0.6s,mb4.0,baz=123,slow=10,SNR=4.3							
BRVK	**Borovoye**	**59.50**	**326**	*e*P		**P**	**18 24 11.9**	**-2.1**
	5.3nm,0.8s,mb4.6							
ABKAR	**Akbulak array**	**64.42**	**320**	*e*P		**P**	**18 24 46.1**	**-1.1**
AKTK	**Aktyubinsk**	**65.90**	**321**	P		**P**	**18 24 55.5**	**-1.3**
AKTO	**Aktyubinsk**	**65.90**	**321**	P		**P**	**18 24 55.5**	**-1.3**
	0.5nm,0.3s,mb4.0,baz=107,slow=16,SNR=2.1							
ARU	**Arti**	**67.03**	**327**	*e*P		**P**	**18 25 03.4**	**-0.5**
JOF	**Joensuu**	**81.22**	**332**	*e*P		**P**	**18 26 28.5**	**+1.8**
JOF	**Joensuu**	**81.22**	**332**	*e*p		**P**	**18 26 28.5**	**+1.8**
	5.2nm,1.0s,mb4.4							
ARCES	**ARCESS Array B**	**82.53**	**339**	P		**P**	**18 26 35.6**	**+2.2**
	2.4nm,0.7s,mb4.3,baz=61,slow=5.6,SNR=3.3							
KAF	**Kangasniemi**	**83.64**	**332**	*e*P		**P**	**18 26 42.7**	**+3.4**
	6.9nm,0.9s,mb4.8							
KAF	**Kangasniemi**	**83.64**	**332**	*e*p		**P**	**18 26 42.7**	**+3.4**
	6.9nm,0.9s,mb4.8							
FINES	**FINESS Array B**	**83.88**	**331**	P		**P**	**18 26 41.6**	**+1.1**
	1.8nm,0.7s,mb4.3,baz=138,slow=15,SNR=3.1							

IDC 01 18:36:10.3±3.3, 11°34S×163°11E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.6/17, mbtmp3.9/5, ML4.0/1, Error ellipse: s-maj=72.4km s-min=39.9km az=115.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.64**	**301**	Pn	Pn	18 37 07.5	-0.4
	13nm,0.3s,baz=68,slow=2.4,SNR=7.5						
ASAR	**Alice Springs**	**30.36**	**242**	P	P	18 42 23.5	-0.5
	0.6nm,0.4s,baz=64,slow=10.0,SNR=26						
FITZ	**Fitzroy Crossi**	**36.80**	**255**	P	P	18 43 20.9	+0.7
	1.0nm,0.5s,baz=86,slow=8.7,SNR=10						
SONM	**Songino Array**	**77.39**	**325**	P	P	18 48 08.3	+1.2
	0.5nm,0.8s,baz=130,slow=4.3,SNR=2.7						
MKAR	**Makanchi Array**	**91.97**	**317**	P	P	18 49 19.8	-1.1
	0.4nm,0.7s,baz=105,slow=6.5,SNR=3.4						

*ISCJB **01** 18:37:17.2±0.6, 52°.6N±0°.1×174°.06W±0°.10, h206km±5km, mb4.0/11, Error ellipse: s-maj=19.2km s-min=7.9km az=162.6*
*NEIC **01** 18:37:18.1±0.6, 52°.57N×174°.14W, h206km±6km, mb4.6/15, Error ellipse: s-maj=15.9km s-min=7.9km az=161.0*
*IDC **01** 18:37:20.8±7.2, 53°.16N×174°.17W, h211km±37km, mb3.3/3, mb1 3.8/5, mb1mx3.2/27, mbtmp3.6/5, Error ellipse: s-maj=77.2km s-min=43.0km az=82.0*
*BJI **01** 18:37:25.0, 52°.59N×173°.72W, h225km, mB4.5/8, mb4.3/9*
ISC 01 18:37:18.6±0.6, 52°.6N±0°.1×174°.00W±0°.10, h199km±5km, h223km±3.0km:pP-P, n41, σ1§12/47, mb4.0/11, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.45**	**196**	P	**Pn**	**18 37 45.6**	**+0.2**
ATKA				S	**Sn**	**18 38 06.1**	**+0.1**
NIKO	**Nikolski**	**3.14**	**82**	P	**Pn**	**18 38 10.7**	**+1.0**
NIKO				S	**Sn**	**18 38 48.9**	**-0.9**
AMKA	**Amchitka**	**4.33**	**256**	*e*P	**Pn**	**18 38 22.2**	**-2.1**
UNV	**Unalaska Valle**	**4.67**	**72**	P	**Pn**	**18 38 29.7**	**+1.1**
SPIA	**Saint Paul Isl**	**5.04**	**24**	P	**Pn**	**18 38 34.5**	**+1.1**
AKUT	**Akutan**	**5.15**	**70**	*e*P	**Pn**	**18 38 36.5**	**+1.8**
FX1	**Attu Island--F**	**7.80**	**277**	P	**Pn**	**18 39 08.2**	**-0.8**
SDPT	**Sand Point**	**8.42**	**66**	*e*P	**Pn**	**18 39 16.1**	**-1.0**
OHAK	**Old Harbor**	**12.75**	**61**	*e*Pn	**Pn**	**18 40 09.8**	**-2.9**
	40nm,0.6s						
OHAK				*e*S	**Sn**	**18 42 24.5**	**-10**
SVW2	**Sparrevohn**	**13.13**	**43**	*e*P	**Pn**	**18 40 18.8**	**+1.5**
	30nm,1.1s						
KDAK	**Kodiak Island**	**13.25**	**59**	*e*Pn	**Pn**	**18 40 15.9**	**-3.0**
	63nm,0.4s						
KDAK				*e*P		18 40 21.6	
KDAK				*e*S	**Sn**	**18 42 45.5**	**-0.9**
KDAK	**Kodiak Island**	**13.25**	**59**	P	**Pn**	**18 40 16.5**	**-2.3**
	5.5nm,0.3s,baz=238,slow=7.0,SNR=41						
KDAK				S	**Sn**	**18 42 44.5**	**-1.9**
	0.5nm,0.3s,baz=233,slow=23,SNR=8.2						
RSO	**Redoubt South**	**14.05**	**48**	*e*Pn	**Pn**	**18 40 29.8**	**+1.1**
PPLA	**Purkeypile**	**15.44**	**40**	*e*Pn	**Pn**	**18 40 47.3**	**+1.6**
	17nm,0.7s						
SEW	**Seward**	**15.45**	**51**	*e*Pn	**Pn**	**18 40 44.8**	**-1.1**
	29nm,0.3s						
RC01	**Rabbit Creek A**	**15.66**	**48**	*e*Pn	**Pn**	**18 40 48.8**	**+0.4**
BPAW	**Bear Paw Mtn.**	**16.54**	**37**	*e*P	**Pn**	**18 40 59.0**	**0.0**
	19nm,0.7s						
MID	**Middleton Isla**	**16.80**	**55**	*e*P	**Pn**	**18 41 02.3**	**+0.2**
	62nm,0.6s						
DIV	**Divide**	**17.49**	**50**	*e*P	**Pn**	**18 41 09.2**	**-1.0**
	9.1nm,0.5s						
BMRM	**Bremner River**	**17.99**	**51**	*e*P	**Pn**	**18 41 16.1**	**0.0**
	15nm,0.7s						
COLA	**College**	**18.11**	**37**	*e*P	**P**	**18 41 15.2**	**+0.1**
	7.5nm,0.6s						
ILAR	**Eielson Array**	**18.42**	**38**	P	**P**	**18 41 16.8**	**-1.8**
	1.8nm,0.3s,baz=240,slow=9.8,SNR=42						
COLD	**Coldfoot**	**18.68**	**29**	*e*P	**P**	**18 41 21.6**	**+0.3**
	4.3nm,0.6s						
MENT	**Mentasta**	**18.96**	**45**	*e*P	**P**	**18 41 25.4**	**+1.0**
PNL	**Peninsula**	**20.33**	**56**	*e*P	**P**	**18 41 39.2**	**+0.1**
	17nm,0.5s						
EGAK	**Eagle**	**20.65**	**41**	*e*P	**P**	**18 41 42.5**	**0.0**
	7.7nm,0.6s						
DAWY	**Dawson**	**21.16**	**44**	*e*P	**P**	**18 41 47.7**	**-0.1**
YKA	**Yellowknife Ar**	**32.20**	**49**	P	**P**	**18 43 25.8**	**-1.5**
	0.7nm,0.6s,mb3.4,baz=276,slow=9.2,SNR=5.7						
YBH	**Yreka Blue Hor**	**35.80**	**87**	P	**P**	**18 44 02.0**	**+3.4**
	1.7nm,0.7s,mb3.7,baz=344,slow=5.9,SNR=5.6						
MCMT	**McKenzie Canyo**	**39.98**	**76**	*e*P	**P**	**18 44 33.9**	**+0.5**
	2.4nm,0.6s,mb3.8						
MCMT				*e*pP	pP	18 45 05.0	-10
CN2	**Changchun**	**40.20**	**282**	*e*P	**P**	**18 44 44.4**	**+9.1**
BJI	**Beijing**	**47.98**	**284**	P	**P**	**18 45 42.5**	**+5.5**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.7						
BJI				pmax	pmax		
	comp=Z,59nm,7.7s						
HHC	**Hu-ho-hao-te**	**50.17**	**288**	*e*P	**P**	**18 46 02.0**	**+8.4**
HHC				pP	pP	18 46 51.4	+14
HHC				sP	sP	18 47 15.4	+16
HHC				PP	PP	18 48 01.1	+11
HHC				S	**S**	**18 52 57.3**	**+7.7**
HHC				sS	sS	18 54 24.3	+18
HHC				SS	SS	18 56 32.4	+7.4
HHC				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.2						
HHC				pmax	pmax		
	comp=Z,82nm,5.6s						
TXAR	**Lajitas Array**	**55.56**	**86**	P	**P**	**18 46 34.0**	**+0.8**
TXAR				ScP	ScP	18 51 09.4	-0.4
TXAR	**Lajitas Array**	**55.56**	**86**	P	**P**	**18 46 34.0**	**+0.8**
	comp=Z,1.0nm,0.6s,mb3.5,baz=297,slow=4.7,SNR=15						
TXAR				ScP	ScP	18 51 09.4	-0.4
	comp=Z,0.1nm,0.3s,baz=282,slow=4.2,SNR=4.0						
LZH	**Lanzhou**	**57.84**	**289**	*e*P	**P**	**18 46 50.0**	**+0.9**
LZH				pP	pP	18 47 41.0	+6.8
LZH				sP	sP	18 48 04.5	+8.5
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.5						
MIAR	**Mount Ida**	**57.91**	**74**	*e*P	**P**	**18 46 48.7**	**-1.0**
	comp=Z,4.7nm,0.9s,mb4.1						
WMQ	**Urumqi**	**61.10**	**305**	*e*P	**P**	**18 47 19.1**	**+7.9**
WMQ				pP	pP	18 48 10.3	+13
WMQ				sP	sP	18 48 34.4	+16
WMQ				PP	PP	18 49 39.4	+12
WMQ				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.5						
WMQ				pmax	pmax		
	comp=Z,100nm,4.2s						
CD2	**Chengdu**	**61.58**	**284**	P	**P**	**18 47 22.5**	**+7.9**
GYA	**Guiyang**	**63.10**	**279**	*e*P	**P**	**18 47 32.8**	**+8.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
KMI	**Kunming**	**66.45**	**281**	P	**P**	**18 47 54.1**	**+7.7**
KMI				pP	pP	18 48 43.7	+11
KMI				sP	sP	18 49 08.0	+14
KMI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
KMI				pmax	pmax		
	comp=Z,59nm,6.1s						

*NIED **01** 18:55:00, 24°.00N×121°.50E, h29km, Mw4.5 Best double couple: M0=6.29000×10^15 NP1:φs=165.00000°, δ79.00000°, λ33.00000°. NP2:φs=68.00000°, δ57.00000°, λ167.00000°.*
*IDC **01** 18:55:44.9±0.5, 24°.08N×121°.77E, h0km, mb4.5/23, mb1 4.6/24, mb1mx4.5/29, mbtmp4.5/24, ML3.8/1, MS4.0/19, Ms1 4.0/19, ms1mx3.8/36, Error ellipse: s-maj=17.9km s-min=13.4km az=54.0*
*MOS **01** 18:55:47.9±1.0, 24°.03N×121°.73E, h33km, mb5.0/43, MS4.3/8, Error ellipse: s-maj=9.3km s-min=5.4km az=116.1*
*BJI **01** 18:55:47.6, 24°.20N×121°.54E, h11km, mB4.8/30, mb4.6/44, ML4.7/10, Ms4.6/50, Ms7 4.6/48*
*NEIC **01** 18:55:47.2±0.7, 23°.99N×121°.70E, h18km±3km, mb4.9/54, ML5.4(TAP), Error ellipse: s-maj=5.4km s-min=4.2km az=106.0*
NEIC Felt at Pan-ch'iao. Recorded [5 TAP] in Hua-lien; [4 TAP] in I-lan and Nan-t'ou; [2 TAP] in Chang-hua, Hsin-chu and Yun-lin; [1 TAP] in T'ai-pei, T'ai-tung and T'ao-yuan.
*ISCJB **01** 18:55:48.9±0.2, 24°.04N±0°.01×121°.61E±0°.01, h32km±1km, mb4.8/96, MS4.2/30, Error ellipse: s-maj=2.5km s-min=1.8km az=41.0*
*JMA **01** 18:55:48.8±0.2, 23°.99N×121°.48E, h63km, MA4.7*
*TAP **01** 18:55:49.3, 24°.05N×121°.53E, h21km, ML5.1, B*
*DJA **01** 18:56:23, 22°.69N×121°.56E, h147km, mb4.5/5*
ISC 01 18:55:49.4±0.2, 24°.04N±0°.01×121°.59E±0°.01, h25km±1km, h26km±2.4km:pP-P, n332, σ1§24/387, mb4.8/96, MS4.2/30, 34C-28D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.04**	**3**⇓	*i*P	**Pb**	**18 55 53.5**	**-0.2**
	baz=66						
TWD				*i* S	**Sb**	**18 55 56.0**	**-0.5**
	baz=66						
HWA	**Hwalien**	**0.06**	**171**⇑	*i*P	**Pb**	**18 55 54.0**	**+0.2**
	baz=132						
NACB	**Ninganchiao**	**0.13**	**0**	*e*Pg	**Pb**	**18 55 52.6**	**-1.7**
NACB				*e*Sg	**Sb**	**18 55 56.3**	**-1.3**
ESF	**Shoufeng Towns**	**0.19**	**205**⇓	*i*P	**Pb**	**18 55 54.2**	**-0.6**
	baz=192						
ESF				*i* S	**Sb**	**18 55 57.7**	**-0.8**
	baz=192						
ESL	**Shilin**	**0.27**	**213**⇑	*i*P	**Pb**	**18 55 55.1**	**-0.9**
	baz=192						
EHP	**Heping Village**	**0.30**	**27**	P	**Pb**	**18 55 56.5**	**+0.1**
	baz=38						
EHP				S	**Sb**	**18 56 01.6**	**+0.4**
	baz=38						
WHF	**Hehuan Shan**	**0.32**	**289**⇓	*i*P	**Pb**	**18 55 55.8**	**-0.9**
	baz=287						
TEGC	**Jichi Village**	**0.33**	**188**	P	**Pb**	**18 55 57.1**	**+0.3**
	baz=187						
TEGC				S	**Sb**	**18 56 03.2**	**+1.2**
	baz=187						
ENA	**Nanau**	**0.41**	**19**⇓	*i*P	**Pb**	**18 55 58.1**	**+0.1**
	baz=28						
TWT	**Tachien**	**0.44**	**299**⇑	*i*P	**Pb**	**18 55 58.2**	**-0.4**
	baz=305						
NNS	**Nan Shan**	**0.45**	**333**⇑	*i*P	**Pb**	**18 55 58.4**	**-0.3**
	baz=341						
NNS				*e*S	**Sb**	**18 56 04.3**	**-0.7**
	baz=341						
EHY	**Hungye**	**0.59**	**205**⇑	*i*P	**Pb**	**18 55 59.4**	**-1.6**
	baz=188						
ENTT	**Nioudou**	**0.60**	**358**⇓	*i*P	**Pb**	**18 56 01.1**	**-0.1**
	baz=4.0						
TWC	**Suao**	**0.61**	**22**⇓	*i*P	**Pb**	**18 56 01.5**	**0.0**
	baz=29						
SSLB	**Suanglung**	**0.64**	**247**	*e*Pg	**Pb**	**18 56 00.7**	**-1.2**
SSLB				*e*Sg	**Sb**	**18 56 08.0**	**-2.4**
SMLT	**Sun Moon Lake**	**0.65**	**256**⇓	*i*P	**Pb**	**18 56 01.4**	**-0.7**
	baz=248						
SMLT				*e*S	**Sb**	**18 56 09.1**	**-1.8**
	baz=248						
YHNB	**Yeheng**	**0.66**	**342**	*e*Pg	**Pb**	**18 56 01.5**	**-0.7**
YHNB				*e*Sg	**Sb**	**18 56 10.7**	**-0.3**
NSK	**Sanguang**	**0.67**	**341**⇑	*i*P	**Pb**	**18 56 02.0**	**-0.4**
	baz=347						
TWE	**Neicheng**	**0.68**	**6**⇓	*i*P	**Pb**	**18 56 02.5**	**-0.1**
	baz=19						
TWE				*i* S	**Sb**	**18 56 11.8**	**+0.2**
	baz=19						
TYC	**Yuchr**	**0.69**	**259**⇑	*i*P	**Pb**	**18 56 01.8**	**-0.9**
	baz=256						
YULB	**Yu-li**	**0.70**	**203**	*e*Pg	**Pb**	**18 56 00.7**	**-2.3**
YULB				*e*Pn	**Pn**	**18 56 02.5**	**-1.2**
YULB				*e*Sg	**Sb**	**18 56 11.3**	**-0.8**
ILA	**Ilan**	**0.73**	**11**	*e*P	**Pb**	**18 56 03.5**	**-0.1**
	baz=16						
ILA				S	**Sb**	**18 56 14.5**	**+1.3**
	baz=16						
TWF1	**Yuli**	**0.74**	**202**⇑	*i*P	**Pb**	**18 56 01.5**	**-2.0**
	baz=196						
TWF1				*e*S	**Sb**	**18 56 12.4**	**-0.8**
	baz=196						
NSTT	**Nanjuang**	**0.80**	**318**⇑	*i*P	**Pb**	**18 56 04.5**	**-0.1**
	baz=321						
TWQ1	**Liyutan**	**0.81**	**292**⇑	*i*P	**Pb**	**18 56 04.9**	**+0.1**
	baz=294						
TCU	**Taichung**	**0.84**	**277**⇑	*i*P	**Pb**	**18 56 05.8**	**+0.4**
	baz=277						
TCU				*e*S	**Sb**	**18 56 17.3**	**+1.0**
	baz=277						
NSY	**Sanyi**	**0.85**	**296**⇑	*i*P	**Pb**	**18 56 05.9**	**+0.5**
	baz=305						
NSY				*e*S	**Sb**	**18 56 16.8**	**+0.4**
	baz=305						
WNT	**Mingjian**	**0.85**	**259**⇑	*i*P	**Pb**	**18 56 05.7**	**+0.3**
	baz=257						
WNT				*i* S	**Sb**	**18 56 17.1**	**+0.7**
	baz=257						
ALS	**Alishan**	**0.90**	**234**⇓	*e*P	**Pb**	**18 56 06.3**	**0.0**
	baz=223						
ALS				*e*S	**Sb**	**18 56 18.2**	**+0.4**
	baz=223						
TATO	**Taipei**	**0.94**	**354**	*e*Pg	**Pb**	**18 56 06.8**	**-0.1**
TATO				*e*Sg	**Sb**	**18 56 18.7**	**-0.2**
TWA	**Mucha**	**0.94**	**359**⇓	*i*P	**Pb**	**18 56 07.0**	**0.0**
	baz=357						
TWA				*e*S	**Sb**	**18 56 19.8**	**+0.9**
	baz=357						
CHN5	**Tsauling**	**0.95**	**242**⇓	*i*P	**Pn**	**18 56 07.3**	**+0.2**
	baz=252						
HSN	**Hsinchu**	**0.95**	**323**	*e*P	**Pn**	**18 56 07.8**	**+0.7**
	baz=335						
HSN				*e*S	**Sb**	**18 56 21.5**	**+2.2**
	baz=335						
TAP1	**Taipei**	**1.00**	**356**	P	**Pn**	**18 56 08.0**	**+0.2**
	baz=360						
TAP1				*i* S	**Sb**	**18 56 21.6**	**+0.9**
	baz=360						
NCU	**National Centr**	**1.00**	**338**	P	**Pn**	**18 56 08.6**	**+0.8**
	baz=342						
NCU				*i* S	**Sb**	**18 56 23.0**	**+2.4**
	baz=342						
ELDTW	**Lidau**	**1.00**	**212**⇑	*e*P	**Pn**	**18 56 05.8**	**-2.0**
	baz=208						
ELDTW				*e*S	**Sb**	**18 56 20.1**	**-0.7**
	baz=208						
WGK	**Gukeng**	**1.01**	**250**⇑	*i*P	**Pn**	**18 56 08.4**	**+0.5**
	baz=247						
WGK				*e*S	**Sb**	**18 56 22.1**	**+1.1**
	baz=247						
TWB1	**Santiao Chiao**	**1.03**	**20**	P	**Pn**	**18 56 08.3**	**+0.1**
	baz=25						
TWB1				*e*S	**Sb**	**18 56 22.3**	**+0.7**
	baz=25						
NWF	**Wu-fen Shan**	**1.04**	**9**⇓	*i*P	**Pn**	**18 56 08.8**	**+0.4**
	baz=13						
NWF				S	**Sb**	**18 56 22.8**	**+0.8**
	baz=13						
TWS1	**Kuangyinshan**	**1.07**	**351**	⇓P	**Pn**	**18 56 09.3**	**+0.6**
	baz=8.0						
TWS1				*e*S	**Sb**	**18 56 25.5**	**+2.8**
	baz=8.0						
CHN4	**Tsaushan**	**1.15**	**233**	*e*P	**Pn**	**18 56 10.5**	**+0.7**
	baz=230						
CHN4				*e*S	**Sn**	**18 56 26.8**	**+2.1**
	baz=230						
TPUB	**Ta-pu**	**1.15**	**230**	*e*Pn	**Pn**	**18 56 10.3**	**+0.4**
STYT	**Tauyuan**	**1.16**	**221**	⇑P	**Pn**	**18 56 09.9**	**-0.1**
	baz=210						
STYT				*e*S	**Sn**	**18 56 25.5**	**+0.4**
	baz=210						
WTP	**Ta-pu**	**1.20**	**229**⇑	*i*P	**Pn**	**18 56 11.2**	**+0.7**
	baz=210						
CHY	**Chiayi**	**1.20**	**243**	P	**Pn**	**18 56 11.2**	**+0.7**
	baz=251						
CHY				*e*S	**Sn**	**18 56 27.1**	**+1.0**
	baz=251						
WTCT	**Ta-ch'eng**	**1.21**	**262**	P	**Pn**	**18 56 11.3**	**+0.6**
	baz=260						
WTCT				*e*S	**Sn**	**18 56 27.9**	**+1.5**
	baz=260						
TWY	**Chenhua**	**1.23**	**0**	*e*P	**Pn**	**18 56 11.3**	**+0.3**
	baz=4.0						
TWK	**Hsinying**	**1.27**	**233**	*e*P	**Pn**	**18 56 12.6**	**+1.0**
	baz=229						
TWG	**Pinlang**	**1.31**	**202**	*e*Pn	**Pn**	**18 56 09.2**	**-2.8**
TWG	**Pinlang**	**1.31**	**202**	*e*P	**Pn**	**18 56 10.1**	**-2.0**
	baz=183						
SGST	**Jiashian**	**1.33**	**224**⇑	*i*P	**Pn**	**18 56 13.5**	**+1.1**
	baz=209						
SGST				*e*S	**Sn**	**18 56 31.9**	**+2.6**
	baz=209						
TTN	**Taitung**	**1.34**	**198**	*e*P	**Pn**	**18 56 11.1**	**-1.5**
	baz=179						
YOJ	**Yonaguni jima**	**1.36**	**72**	P	**Pn**	**18 56 13.6**	**+0.8**
YOJ				*e*S	**Sn**	**18 56 31.8**	**+1.8**
YOJ	**Yonaguni jima**	**1

baz=76
JOGS Gusukube 3.55 78 P Pn 18 56 44.5 +1.6
JOGS eS Sn 18 57 26.6 +2.6
JKE Kume jima 2 5.22 63 P Pn 18 57 07.1 +1.2
JKE eS Sn 18 58 07.2 +1.8
JAGN Aguni-jima 5.71 62 P Pn 18 57 13.7 +1.2
JAGN eS Sn 18 58 19.5 +2.2
NAH1 Naha 5.93 67 P Pn 18 57 17.4 +1.8
JJT2 Tamagusuku 2 5.96 68 P Pn 18 57 17.4 +1.4
JIH Iheya 6.48 61 P Pn 18 57 23.7 +0.5
JIH eS Sn 18 58 34.6 -1.8
JOW Kunigami 6.65 64 P Pn 18 57 25.2 -0.3
JOW eS Sn 18 58 38.1 -2.4
JOW Kunigami 6.65 64⇑ eP Pn 18 57 25.2 -0.3
baz=68
PALP Palanan 6.99 173⇓ iP Pn 18 57 34.3 +4.2
SSE Sheshan 7.04 357 P Pn 18 57 30.8 0.0
SSE S Sn 18 58 48.2 -1.8
SSE smax
comp=N,290nm,1.1s
SSE smax
comp=E,320nm,1.0s
SSE LR LR
comp=N,2μm,10.7s
SSE LR LR
comp=E,440nm,10.8s
SSE LR LR
comp=Z,2μm,11.6s
JTK Tokunoshima 7.60 59 P Pn 18 57 37.6 -1.0
JTK eS Sn 18 59 02.4 -1.5
GZH Guangzhou 7.63 265 P Pn 18 57 33.9 -5.0
GZH S Sn 18 58 52.8 -12
GZH smax
comp=N,530nm,1.9s
GZH smax
comp=E,450nm,0.9s
NJ2 Nanjing 8.34 344 eP Pn 18 57 48.2 -0.5
NJ2 pP 18 57 55.8
NJ2 sP 18 58 00.1
NJ2 S Sn 18 59 20.5 -1.5
NJ2 pmax pmax
comp=Z,140nm,4.5s
NJ2 smax
comp=N,400nm,1.1s
NJ2 smax
comp=E,270nm,1.0s
NJ2 LR LR
comp=Z,610nm,12.6s
JAM Amami Oshima 8.41 57 P Pn 18 57 48.6 -1.0
JAM eS Sn 18 59 21.2 -2.5
JZK Kikaishima 8.64 59 P Pn 18 57 52.1 -0.8
JMZ Minamidaito 2 8.92 77 P Pn 18 57 53.4 -3.2
WHN Wuhan 9.13 317 ⇑P Pn 18 57 58.8 -0.8
WHN pP 18 58 05.4
WHN S Sn 18 59 37.0 -4.6
WHN LR LR
comp=N,5μm,13.7s
WHN LR LR
comp=E,4μm,8.9s
WHN LR LR
comp=Z,8μm,12.5s
QIZ Qiongzhong 12.02 248 P Pn 18 58 47.6 +8.5
QIZ S Sn 19 00 55.2 +2.8
QIZ sS 19 01 06.4
QIZ SS 19 01 09.4
QIZ pmax pmax
comp=Z,5.0nm,0.9s
QIZ pmax pmax
comp=Z,50nm,5.0s
QIZ LR LR
comp=N,710nm,16.4s
QIZ LR LR
comp=E,170nm,13.2s
QIZ LR LR
comp=Z,710nm,18.3s
QIZ Qiongzhong 12.02 248 ePn Pn 18 58 37.8 -1.3
ENH Enshi 12.43 303 ePn Pn 18 58 44.7 -0.1
comp=Z,14nm,0.8s
TIA Tai'an 12.73 343 P Pn 18 58 49.4 +0.6
TIA LR LR
comp=N,2μm,12.8s
TIA LR LR
comp=E,2μm,10.8s
GYA Guiyang 13.72 283 P Pn 18 59 04.0 +1.6
GYA PP 18 59 15.9
GYA S Sn 19 01 39.4 +5.3
GYA SS 19 01 55.8
GYA PcP PcP 19 04 27.4 +1.3
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,4.7s
GYA LR LR
comp=N,3μm,6.5s
GYA LR LR
comp=E,1μm,5.3s
GYA LR LR
comp=Z,3μm,5.9s
KSRS Korea Array 14.43 21 Pn Pn 18 59 14.8 +2.8
comp=Z,2.9nm,0.3s,baz=201,slow=11,SNR=107
KSRS LR LR 19 05 34.5
comp=Z,309nm,18.1s,baz=195,slow=41
XAN Xi'an 14.89 315 P Pn 18 59 18.6 +0.3
XAN pP pP 18 59 25.6 -4.9
XAN S Sn 19 02 00.6 -1.8
XAN pmax pmax
comp=Z,3.0nm,1.0s
XAN pmax pmax
comp=Z,18nm,4.8s
XAN LR LR
comp=N,570nm,9.8s
XAN LR LR
comp=E,620nm,11.3s
XAN LR LR
comp=Z,670nm,12.2s
BJT Baijiatuau 16.57 345 ePn Pn 18 59 41.0 +0.9
comp=Z,12nm,0.7s
BJT Baijiatuau 16.57 345 eP Pn 18 59 41.0 +1.0
BJT pmax pmax
comp=Z,12nm,0.7s
BJI Beijing 16.59 345 P Pn 18 59 42.0 +1.7
BJI pmax pmax
comp=Z,16nm,1.7s
BJI LR LR
comp=N,1μm,14.5s
BJI LR LR
comp=E,410nm,20.8s
BJI LR LR
comp=Z,500nm,16.2s
KMI Kunming 17.18 277 P Pn 18 59 52.3 +4.5
KMI PP 19 00 06.8
KMI S Sn 19 03 02.9 +4.6
KMI pmax pmax
comp=Z,10.0nm,1.4s
KMI pmax pmax
comp=Z,25nm,3.1s
KMI LR LR
comp=N,310nm,9.1s
KMI LR LR
comp=E,2μm,10.0s
KMI LR LR
comp=Z,2μm,12.2s
CD2 Chengdu 17.23 297 P Pn 18 59 48.5 +0.1
CD2 pP pP 18 59 52.0 -4.5
CD2 sP sP 18 59 55.5 -4.3
CD2 PP 19 00 03.0
CD2 S Sn 19 02 58.4 -1.0
CD2 sS sS 19 03 04.0 -15
CD2 SS 19 03 19.5
CD2 pmax pmax
comp=Z,10.0nm,0.7s
CD2 pmax pmax
comp=Z,80nm,4.3s
CD2 LR LR
comp=N,1μm,4.1s
CD2 LR LR
comp=E,1μm,4.1s
CD2 LR LR
comp=Z,1μm,6.1s
JHJ Hachijo jima 2 18.34 56 P Pn 19 00 04.8 +2.8
comp=Z,7.2nm,0.3s,baz=222,slow=5.6,SNR=6.0
JHJ LR LR 19 06 31.0
comp=Z,235nm,21.0s,baz=286,slow=36
HHC Hu-ho-hao-te 18.75 336 eP Pn 19 00 09.3 +2.3
HHC pP pP 19 00 13.0 -0.2
HHC sP sP 19 00 16.4 -0.1
HHC PP 19 00 25.5
HHC S Sn 19 03 36.0 0.0
HHC sS sS 19 03 41.6 -7.9
HHC PcP PcP 19 04 36.3 +2.9
HHC pmax pmax
comp=Z,38nm,1.2s
HHC pmax pmax
comp=Z,280nm,4.1s
HHC LR LR
comp=N,1μm,12.5s
HHC LR LR
comp=E,580nm,11.0s
HHC LR LR
comp=Z,1μm,13.7s
MAJO Matsushiro 18.97 45 P Pn 19 00 06.3 -3.3
MAT Matsushiro 18.97 45 P Pn 19 00 06.7 -2.9
MAT S Sn 19 03 41.0 -0.3
MJAR Matsushiro Arr 18.97 45 P Pn 19 00 06.8 -2.8
MJAR LR LR 19 08 02.0
MJAR Matsushiro Arr 18.97 45 P Pn 19 00 06.8 -2.8
comp=Z,0.3nm,0.3s,baz=237,slow=9.4,SNR=7.2
MJAR LR LR 19 08 02.0
comp=Z,158nm,18.8s,baz=225,slow=39
MYLDM Lahad Datu 18.99 190 P Pn 19 00 19.3 +9.3
comp=Z,27nm,1.9s
BTO Baotou 19.16 332 eP Pn 19 00 13.4 +1.5
LZH Lanzhou 19.46 312 eP Pn 19 00 17.0 +1.5
LZH pP pP 19 00 22.7 +1.7
LZH sP sP 19 00 25.3 +1.0
LZH S Sn 19 03 51.1 -2.1
LZH sS sS 19 03 57.0 -6.9
LZH pmax pmax
comp=Z,51nm,1.1s
LZH pmax pmax
comp=Z,230nm,4.7s
LZH LR LR
comp=E,1μm,12.7s
LZH LR LR
comp=Z,2μm,13.3s
CN2 Changchun 19.96 8 eP Pn 19 00 21.3 -0.1
CN2 ePP 19 00 39.4
CN2 eSS 19 04 27.5
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,800nm,6.0s
CN2 LR LR
comp=N,500nm,16.0s
CN2 LR LR
comp=E,1μm,16.0s
CN2 LR LR
comp=Z,700nm,16.0s
CHRT Chiangrai 20.65 263 ⇓P P 19 00 29.0 +1.7
comp=Z,105nm,1.0s
MDJ Mudanjiang 21.54 16 P P 19 00 37.2 +0.5
MDJ pP 19 00 40.0
MDJ sP sP 19 00 41.3 -5.5
MDJ S S 19 04 36.6 +2.5
MDJ PcP PcP 19 04 38.5 0.0
MDJ ScP ScP 19 08 14.0 0.0
MDJ PcS PcS 19 08 16.8 +0.2
MDJ ScS ScS 19 12 00.0 +2.0
MDJ pmax pmax
comp=Z,12nm,1.2s,mb4.2
MDJ pmax pmax
comp=Z,75nm,6.0s
MDJ LR LR
comp=N,520nm,17.4s,MS4.3
MDJ LR LR
comp=E,940nm,19.4s,MS4.3
MDJ LR LR
comp=Z,770nm,13.6s
MDJ Mudanjiang 21.54 16 eP P 19 00 36.3 -0.4
CHG Chiang Mai 21.71 260 ⇓P P 19 00 40.9 +2.2
comp=Z,36nm,1.0s,mb4.8
CHTO Chiang Mai 21.71 260 eP P 19 00 40.1 +1.4
comp=Z,50nm,1.3s,mb4.8
CHTO Chiang Mai 21.71 260 eP P 19 00 40.2 +1.5
CHTO pmax pmax
comp=Z,50nm,1.3s,mb4.8
CM31 Chiang Mai Arr 21.82 260 eP P 19 00 42.1 +2.2
comp=Z,9.0nm,0.8s,mb4.2
CMAR Chiang Mai Arr 21.82 260 P P 19 00 42.1 +2.2
CMAR PcP PcP 19 04 40.5 +1.0
CMAR LR LR 19 09 52.5
CMAR Chiang Mai Arr 21.82 260 P P 19 00 42.1 +2.2
comp=Z,14nm,0.9s,mb4.4,baz=60,slow=7.7,SNR=32
CMAR PcP PcP 19 04 40.5 +1.0
comp=Z,0.8nm,0.7s,baz=33,slow=3.2,SNR=4.8
CMAR LR LR 19 09 52.5
comp=Z,249nm,20.1s,MS3.6,baz=250,slow=39
CMAR Chiang Mai Arr 21.82 260 P P 19 00 42.1 +2.2
CMAR 19 04 40.5
BDT Bhumibol Dam 22.18 257 P P 19 00 46.0 +2.2
SBUM Sibu 23.30 204 P P 19 00 54.8 -0.8
GTA Gaotai 23.95 315 P P 19 01 02.8 +1.2
GTA pP 19 01 07.1
GTA sP sP 19 01 09.9 -2.2
GTA pmax pmax
comp=Z,31nm,1.4s,mb4.5
GTA pmax pmax
comp=Z,210nm,5.9s
GTA LR LR
comp=N,670nm,14.6s,MS4.5
GTA LR LR
comp=E,1μm,16.7s,MS4.5
GTA LR LR
comp=Z,1μm,14.9s,MS4.6
GUMO Guam 24.32 111 eP P 19 01 03.9 -1.3
GUMO Guam 24.32 111 LR LR 19 08 30.2
comp=Z,123nm,20.5s,MS3.4,baz=73,slow=32
KSM Kuching 24.95 208 eP P 19 01 09.8 -1.2
comp=Z,16nm,0.8s,mb4.6
KSM Kuching 24.95 208 P P 19 01 12.1 +1.2
LUWI Luwuk 24.96 177 P P 19 01 18.7 +7.7
comp=Z,63nm,1.1s,mb5.1
HIA Hailar 25.22 357 eP P 19 01 12.4 -0.6
comp=Z,21nm,1.1s,mb4.6
HIA Hailar 25.22 357 eP P 19 01 12.4 -0.6
HIA pmax pmax
comp=Z,21nm,1.1s
STKI Sintang 25.77 204 P pP 19 01 31.3 +5.5
KLR Kul'dur 26.38 15 eP P 19 01 19.7 -3.8
KLR MLR MLR
comp=N,1μm,13.0s,MS4.6
KLR MLR MLR
comp=E,600nm,13.0s,MS4.6
KLR MLR MLR
comp=Z,3μm,13.0s,MS5.1
ULN Ulaanbaatar 26.44 338 eP P 19 01 23.9 -0.2
comp=Z,18nm,0.9s,mb4.6
ULN Ulaanbaatar 26.44 338 eP P 19 01 23.9 -0.2
ULN pmax pmax
comp=Z,18nm,0.9s,mb4.6
HABR Khabarovsk 26.61 20 eP pP 19 01 37.0 +4.0
HABR eS S 19 05 57.3 -1.6
HABR e*SS sS 19 06 12.8 +1.7
HABR SS 19 07 01.5
HABR e 19 12 14.7
HABR pmax pmax
comp=Z,38nm,2.1s,mb4.6
HABR pmax pmax
comp=N,20nm,2.1s
HABR pmax pmax
comp=E,20nm,1.9s
HABR MLR MLR
comp=Z,207nm,18.0s,MS3.7
SONM Songino Array 26.64 337 P P 19 01 26.0 0.0
comp=Z,11nm,0.8s,mb4.5,baz=161,slow=8.9,SNR=51
SONM LR LR 19 13 22.2
comp=Z,794nm,18.4s,MS4.3,baz=146,slow=40
SHL Shillong 26.99 279 ePKP P 19 01 31.0 +1.7
NLAI Namlea 27.64 168 P P 19 01 43.6 +8.4
comp=Z,34nm,0.8s,mb5.0
LSA Lhasa 27.69 288 eP P 19 01 27.4 -8.2
LSA Lhasa 27.69 288 eP P 19 01 37.5 +1.9
comp=Z,22nm,0.6s,mb5.0
LSA Lhasa 27.69 288 eP P 19 01 37.5 +1.9
LSA pmax pmax
comp=Z,21nm,0.6s,mb4.9
IPM Ipoh 27.77 229 P pP 19 01 49.9 +6.1
comp=Z,14nm,1.4s
YSS Yuzh-Sakhalins 28.45 31 eP P 19 01 42.5 +0.3
comp=Z,18nm,0.9s,mb4.7
YSS Yuzh-Sakhalins 28.45 31 eP P 19 01 43.6 +1.4
ZAK Zakamensk 29.90 336 eP P 19 01 54.2 -0.8
ZAK pmax pmax
comp=Z,8.0nm,2.6s,mb4.0
TLY Talaya 30.85 338 eP P 19 02 02.7 -0.6
comp=Z,6.0nm,0.6s,mb4.6
TLY Talaya 30.85 338 eP P 19 02 03.4 +0.1
TLY pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
TLY MLR MLR
comp=Z,644nm,16.0s,MS4.4
IRK Irkutsk 31.11 339 eP P 19 02 04.2 -1.5
IRK pmax pmax
comp=Z,29nm,0.9s,mb5.1
MNSI Mandailing Nat 31.45 226 P P 19 02 11.3 +2.3
WMQ Urumqi 34.02 314 eP P 19 02 33.1 +1.8
WMQ pP pP 19 02 37.6 -1.1
WMQ sP sP 19 02 40.1 -1.7
WMQ PP PP 19 03 47.3 -1.2
WMQ pmax pmax
comp=Z,22nm,1.2s,mb5.0
WMQ pmax pmax
comp=Z,140nm,5.0s
WMQ LR LR
comp=N,230nm,16.0s,MS4.2
WMQ LR LR
comp=E,310nm,15.2s,MS4.2
WMQ LR LR
comp=Z,330nm,16.0s,MS4.2
YAK Yakutsk 38.37 6 eP P 19 03 04.3 -3.9
comp=Z,9.8nm,0.6s,mb4.7
YAK Yakutsk 38.37 6 eP P 19 03 05.9 -2.3
YAK pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
YAK MLR MLR
comp=Z,615nm,16.0s,MS4.5
YAK MLR MLR
comp=N,379nm,14.0s,MS4.3
YAK MLR MLR
comp=E,124nm,16.0s,MS4.3
MK31 Makanchi Array 38.70 316 eP P 19 03 11.4 +0.2
MK31 Makanchi Array 38.70 316 ceP P 19 03 11.5 +0.3
MK31 pmax pmax
comp=Z,27nm,0.8s,mb5.0
MKAR Makanchi Array 38.70 316 P P 19 03 11.6 +0.4
MKAR PcP PcP 19 05 22.0 -0.7
MKAR LR LR 19 20 25.8
MKAR Makanchi Array 38.70 316 P P 19 03 11.6 +0.4
comp=Z,15nm,0.7s,mb4.8,baz=106,slow=9.1,SNR=72
MKAR PcP PcP 19 05 22.0 -0.7
comp=Z,1.9nm,1.0s,baz=116,slow=3.4,SNR=2.9
MKAR LR LR 19 20 25.8
comp=Z,527nm,18.0s,MS4.4,baz=106,slow=38
MKAR Makanchi Array 38.70 316 P P 19 03 11.6 +0.4
MKAR 19 05 22.0
ZALV Zalesovo Beam 40.57 327 P P 19 03 25.8 -0.8
comp=Z,16nm,0.7s,mb4.7,baz=113,slow=8.1,SNR=44
ZALV LR LR 19 21 45.9
comp=Z,287nm,18.4s,MS4.2,baz=93,slow=38
KSH Kashi 41.29 303⇑ iP P 19 03 36.7 +3.9
KSH epP pP 19 03 40.9 +0.6
KSH esP sP 19 03 43.9 +0.5
KSH ePP PP 19 05 16.1 +7.8
KSH ePcP PcP 19 05 34.2 +3.0
KSH eScP ScP 19 09 23.1 +3.5
KSH ePcS PcS 19 09 24.7 +2.4
KSH eS S 19 09 52.2 +6.7
KSH esS sS 19 10 00.0 +2.0
KSH eSS SS 19 12 53.0 +3.7
KSH eScS ScS 19 13 36.9 +1.5
KSH pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
KSH pmax pmax
comp=Z,72nm,3.9s
KSH LR LR
comp=N,430nm,10.0s
KSH LR LR
comp=E,650nm,15.9s
KSH LR LR
comp=Z,580nm,14.9s,MS4.6
PMG Port Moresby 41.58 140 P P 19 03 33.4 -1.9
KURK Kurchatov 42.44 320 eP P 19 03 41.2 -0.8
comp=Z,20nm,1.0s,mb4.7
KURK Kurchatov 42.44 320 eP P 19 03 41.2 -0.8
KURK pmax pmax
comp=Z,20nm,1.0s,mb4.7
UCH Uchtor 42.80 307 eP P 19 03 46.0 +0.9
comp=Z,38nm,1.5s,mb4.9
UCH Uchtor 42.80 307 eP P 19 03 46.0 +0.9
UCH pmax pmax
comp=Z,38nm,1.5s,mb4.9
AAK Ala-Archa 42.89 307 P P 19 03 46.7 +0.9
comp=Z,1.8nm,0.3s,mb4.3,baz=148,slow=7.2,SNR=3.6
AML Almayashu 43.39 307 eP P 19 03 50.7 +0.9
comp=Z,20nm,1.3s,mb4.7
AML Almayashu 43.39 307 eP P 19 03 50.7 +0.9
AML pmax pmax
comp=Z,20nm,1.3s,mb4.7
EKS2 Erkin-Say 43.42 307 eP P 19 03 50.3 +0.2
comp=Z,4.2nm,0.8s,mb4.2
EKS2 Erkin-Say 43.42 307 eP P 19 03 50.3 +0.3
EKS2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
SEY Seymchan 43.98 20⇓ eP P 19 03 53.7 -0.6
MBWA Marble Bar 44.96 182 eP P 19 03 59.8 -2.8
comp=Z,68nm,1.6s,mb5.2
WRAB Tennant Creek 45.44 163 P P 19 04 04.9 -1.5
comp=Z,66nm,0.5s,mb5.7,SNR=7.7
WRAB Tennant Creek 45.44 163 eP P 19 04 04.6 -1.8
comp=Z,12nm,1.1s,mb4.6
WRAB Tennant Creek 45.44 163 eP P 19 04 04.6 -1.8
WRAB pmax pmax
comp=Z,12nm,1.1s,mb4.6
KK31 Karatay Array 45.85 307 ceP P 19 04 09.9 +0.4
KK31 pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
KBL Kabul 46.56 296 eP P 19 04 16.0 +0.8
comp=Z,33nm,1.3s,mb5.1
KBL Kabul 46.56 296 eP P 19 04 16.0 +0.8
KBL pmax pmax
comp=Z,33nm,1.3s,mb5.1
TIXI Tiksi 47.82 3 eP P 19 04 22.1 -2.3
comp=Z,14nm,1.1s,mb4.9
TIXI Tiksi 47.82 3 eP P 19 04 23.0 -1.4
TIXI pmax pmax
comp=Z,15nm,1.3s,mb4.9
TIXI MLR MLR
comp=Z,586nm,16.0s,MS4.7
BVA0 Borovoye Array 48.02 321 P P 19 04 26.7 +0.4
BVA0 pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
BVAR Borovoye Array 48.02 321 P P 19 04 26.2 0.0
comp=Z,6.9nm,0.6s,mb4.9,baz=103,slow=8.7,SNR=41
BRVK Borovoye 48.09 321 eP P 19 04 26.6 -0.2
comp=Z,21nm,0.9s,mb5.2
BRVK Borovoye 48.09 321 ceP P 19 04 26.7 -0.1
BRVK pmax pmax
comp=Z,23nm,1.7s,mb4.9
ASAR Alice Springs 48.90 165 P P 19 04 32.4 -0.9
comp=Z,2.0nm,0.6s,mb4.3,baz=338,slow=6.7,SNR=103
ASAR PcP PcP 19 05 56.7 -0.8
comp=Z,1.2nm,0.7s,baz=348,slow=4.1,SNR=3.1
CTA Charters Tower 50.01 149 P P 19 04 40.3 -1.5
comp=Z,2.7nm,0.8s,mb4.3,baz=318,slow=8.7,SNR=5.1
CTA LR LR 19 24 43.1
comp=Z,107nm,18.9s,MS3.9,baz=318,slow=35
CTAO Charters Tower 50.01 149 eP P 19 04 41.4 -0.5
comp=Z,9.9nm,1.1s,mb4.8
CTAO Charters Tower 50.01 149 eP P 19 04 41.4 -0.4
CTAO pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
CTAO Charters Tower 50.01 149 P pP 19 04 54.8 +5.3
AB31 Akbulak array 53.81 314 ceP P 19 05 10.1 +0.2
AB31 pmax pmax
comp=Z,14nm,0.7s,mb5.0
ABKAR Akbulak array 53.81 314 ePn P 19 05 09.9 0.0
comp=Z,11nm,0.7s,mb4.9
SVE Sverdlovsk 54.38 324⇑ eP P 19 05 14.0 +0.1
SVE pmax pmax
comp=Z,20nm,1.3s,mb4.9
SVE MLR MLR
comp=Z,448nm,16.0s,MS4.6
AKTK Aktyubinsk 55.14 316 P P 19 05 19.2 -0.3
AKTK LR LR 19 30 40.2
AKTO Aktyubinsk 55.14 316 P P 19 05 19.2 -0.3
comp=Z,5.1nm,1.0s,mb4.5,baz=83,slow=6.5,SNR=12

AKTO LR LR 19 30 40.2
comp=Z,295nm,18.2s,MS4.4,baz=288,slow=38
ARU Arti 55.45 323 P **P** **19 05 21.4 -0.2**
comp=Z,79nm,0.8s,mb5.8,SNR=7.2
ARU Arti 55.45 323 *eP* **P** **19 05 20.6 -1.0**
comp=Z,22nm,1.1s,mb5.1
ARU Arti 55.45 323 *d iP* **P** **19 05 20.5 -1.1**
ARU *e* 19 07 24.0
ARU *e*PPP 19 08 35.8
ARU S **S** **19 13 04.5 -0.3**
ARU SS SS 19 16 45.7 -3.7
ARU pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
NWAO Narrogin (SRO) 56.80 184 P **P** **19 05 29.5 -2.0**
STKA Stephens Creek 58.80 160 *eP* **P** **19 05 43.6 -1.9**
comp=Z,1.0nm,0.6s,mb4.0
STKA Stephens Creek 58.80 160 P **P** **19 05 44.5 -1.1**
comp=Z,4.5nm,0.6s,mb4.7,baz=330,slow=5.1,SNR=20
STKA Stephens Creek 58.80 160 *eP* **P** **19 05 43.6 -2.0**
STKA pmax pmax
comp=Z,1.0nm,0.6s
GNI Garni 65.19 305 LR LR 19 38 57.8
comp=Z,120nm,20.9s,MS4.1,baz=227,slow=40
ZEI Tsey 65.32 308 *eP* **P** **19 06 28.3 -1.1**
ZEI pmax pmax
comp=Z,13nm,0.5s,mb5.2
MIB Mutribah 65.42 293 *eP* **P** **19 06 29.8 -0.5**
MIB AMb AMB 19 06 42.8
comp=Z,31nm,0.9s,mb5.4
TTA Tatalina 65.44 30 P **P** **19 06 29.1 -0.7**
comp=Z,12nm,0.3s,mb5.4
TTA Tatalina 65.44 30 P **P** **19 06 29.1 -0.7**
TTA pmax pmax
comp=Z,12nm,0.3s,mb5.4
RDF Al-Radifah 65.47 292 *eP* **P** **19 06 30.4 -0.2**
RDF AMb AMB 19 06 43.5
comp=Z,50nm,0.8s,mb5.6
KLMR Klimovskoe 65.48 328 P **P** **19 06 29.2 -0.9**
KLMR pmax pmax
comp=Z,25nm,1.6s,mb5.0
VRHR Novokhopersk 65.49 317 *eP* **P** **19 06 29.2 -1.1**
VRHR *e* pP 19 06 37.7 -0.5
VRHR pmax pmax
comp=N,9.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
NAY Al-Naaiem 65.64 293 *eP* **P** **19 06 30.7 -1.0**
NAY AMb AMB 19 06 33.7
comp=Z,10nm,0.8s,mb4.9
KIV Kislovodsk 65.97 309 *eP* **P** **19 06 33.4 -0.2**
comp=Z,49nm,1.3s,mb5.4
KIV Kislovodsk 65.97 309 ⇑ *iP* **P** **19 06 33.8 +0.2**
KIV *i* pP 19 06 42.6 +1.1
KIV *e* 19 07 05.8
KIV pmax pmax
comp=Z,14nm,1.2s,mb4.9
KIV MLR MLR
comp=Z,100nm,17.0s,MS4.1
VORD Divnogorie 66.97 317 *eP* **P** **19 06 38.4 -1.4**
VORD *e* pP 19 06 47.2 -0.5
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,20nm,0.8s
VORD pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
VSR Storozhevoye 67.00 317 *eP* **P** **19 06 39.0 -1.0**
VSR *e* pP 19 06 47.5 -0.4
VSR pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
VSR pmax pmax
comp=N,7.0nm,0.8s
VSR pmax pmax
comp=E,5.0nm,0.8s
PPLA Purkeypile 67.19 30 *eP* **P** **19 06 40.9 0.0**
comp=E,12nm,0.6s,mb5.1
BPAW Bear Paw Mtn. 67.54 28 *eP* **P** **19 06 43.0 -0.3**
comp=E,12nm,0.6s,mb5.1
KDAK Kodiak Island 67.81 35 P **P** **19 06 45.6 +0.6**
comp=E,138nm,0.7s,SNR=5.3
KDAK Kodiak Island 67.81 35 *eP* **P** **19 06 43.8 -1.2**
comp=E,12nm,0.6s,mb5.1
KDAK Kodiak Island 67.81 35 P **P** **19 06 44.2 -0.7**
comp=E,14nm,0.7s,mb5.1,baz=313,slow=8.0,SNR=20
KDAK Kodiak Island 67.81 35 *i* P **P** **19 06 44.4 -0.6**
OBN Obninsk 67.84 322 *eP* **P** **19 06 51.3 +6.0**
OBN pmax pmax
comp=Z,11nm,1.2s,mb4.8
OBN MLR MLR
comp=Z,100nm,19.0s,MS4.1
COLA College 68.74 27 *eP* **P** **19 06 50.6 -0.2**
comp=Z,4.2nm,0.6s,mb4.5
COLA College 68.74 27 *eP* **P** **19 06 50.6 -0.1**
COLA pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
PMR Palmer 68.82 31 *eP* **P** **19 06 50.0 -1.3**
comp=Z,15nm,0.6s,mb5.1
PMR Palmer 68.82 31 *eP* **P** **19 06 50.0 -1.3**
PMR pmax pmax
comp=Z,15nm,0.6s,mb5.1
JOF Joensuu 69.02 331 *eP* **P** **19 06 51.5 -1.0**
JOF Joensuu 69.02 331 *ep* **P** **19 06 51.5 -1.0**
comp=Z,6.7nm,0.9s,mb4.6
ILAR Eielson Array 69.17 27 P **P** **19 06 51.9 -1.5**
comp=Z,1.9nm,0.5s,mb4.3,baz=269,slow=4.3,SNR=46
ANN Anapa 69.47 311 *eP* **P** **19 07 01.9 +6.3**
ANN pmax pmax
comp=Z,52nm,1.1s,mb5.4
SPITS Spitsbergen Ar 69.70 348 LR LR 19 42 21.3
comp=Z,116nm,18.5s,MS4.2,baz=30,slow=40
ARCES ARCESS Array B 69.81 339 P **P** **19 06 57.4 +0.1**
comp=Z,4.1nm,0.8s,mb4.4,baz=62,slow=6.2,SNR=3.4
DIV Divide 70.50 31 *eP* **P** **19 07 01.2 -0.5**
comp=Z,10nm,0.7s,mb4.9
MENT Mentasta 70.97 29 *eP* **P** **19 07 04.1 -0.4**
BMRM Bremner River 71.09 31 *eP* **P** **19 07 04.5 -0.8**
comp=Z,9.1nm,0.8s,mb4.8
KAF Kangasniemi 71.46 330 *eP* **P** **19 07 10.5 +3.0**
comp=Z,7.5nm,1.2s,mb4.5
KAF Kangasniemi 71.46 330 *eP* **P** **19 07 10.5 +3.0**
KAF pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
KAF Kangasniemi 71.46 330 *ep* **P** **19 07 10.5 +3.0**
comp=Z,7.5nm,1.2s,mb4.5
EGAK Eagle 71.54 27 *eP* **P** **19 07 07.0 -0.9**
comp=Z,13nm,0.6s,mb5.0
SIM Simferopol' 71.71 312 P **P** **19 07 16.7 +7.4**
SIM pmax pmax
comp=Z,14nm,0.8s,mb4.9
SIM MLR MLR
comp=Z,80nm,17.0s,MS4.0
FINES FINESS Array B 71.76 330 P **P** **19 07 08.4 -0.8**
comp=Z,2.8nm,0.7s,mb4.3,baz=59,slow=6.2,SNR=12
FINES LR LR 19 41 26.1
comp=Z,277nm,18.8s,MS4.5,baz=302,slow=38
DAWY Dawson 72.49 27 *eP* **P** **19 07 12.7 -0.9**
INK Inuvik 73.22 22 *eP* **P** **19 07 16.7 -1.2**
comp=Z,12nm,1.0s,mb4.8
INK Inuvik 73.22 22 P **P** **19 07 17.1 -0.7**
comp=Z,6.2nm,0.7s,mb4.6,baz=331,slow=6.6,SNR=5.0
INK Inuvik 73.22 22 *eP* **P** **19 07 16.7 -1.1**
INK pmax pmax
comp=Z,13nm,1.0s
AKASG Malin Array Be 73.23 318 P **P** **19 07 16.9 -1.3**
comp=Z,1.8nm,0.6s,mb4.2,baz=58,slow=6.4,SNR=6.9
ASF Jabal al Asfar 73.36 298 P **P** **19 07 20.2 +0.8**
comp=Z,3.9nm,0.9s,mb4.4,baz=152,slow=2.5,SNR=2.6
ASF LR LR 19 44 36.0
comp=Z,81nm,19.8s,MS4.0,baz=216,slow=40
BR131 Keskin Array S 73.56 307 *eP* **P** **19 07 20.4 0.0**
comp=Z,13nm,1.0s,mb4.8
BRTR Keskin Array B 73.56 307 P **P** **19 07 20.7 +0.3**
comp=Z,4.3nm,0.8s,mb4.4,baz=107,slow=5.9,SNR=14
MMAI Mount Meron Ar 74.29 299 P **P** **19 07 25.3 +0.5**
comp=Z,1.1nm,0.7s,mb3.9,baz=46,slow=8.7,SNR=2.8
AFI Afiamalu 75.20 113 LR LR 19 33 17.7
comp=Z,24nm,20.8s,MS3.5,baz=84,slow=30
EIL Elat 75.75 296 LR LR 19 47 48.4
comp=Z,81nm,18.6s,MS4.1,baz=96,slow=41
SKAG Skagway 75.96 31 *eP* **P** **19 07 34.3 +0.5**
comp=Z,16nm,0.9s,mb4.9
TESR 76.20 315 ⇓P **P** **19 07 34.6 -0.9**
TESR 76.20 315 ⇓ *iP* **P** **19 07 34.6 -0.9**
VRI Vrincioaia 76.37 314 ⇓P **P** **19 07 38.1 +1.6**
VRI Vrincioaia 76.37 314 ⇓ *iP* **P** **19 07 38.1 +1.6**
BUR08 Bucovina Ar. S 76.73 316 P **P** **19 07 38.5 0.0**
BURAR Bucovina Array 76.73 316 ⇑P **P** **19 07 44.6 +6.1**
BURAR Bucovina Array 76.73 316 ⇑ *iP* **P** **19 07 44.6 +6.1**
SIT Sitka 76.92 33 *eP* **P** **19 07 39.9 +0.5**
comp=Z,15nm,0.9s,mb4.9
SIT Sitka 76.92 33 *eP* **P** **19 07 39.9 +0.5**
SIT pmax pmax
comp=Z,15nm,0.9s,mb4.9
MLR Muntele Rosu 77.02 314 ⇓P **P** **19 07 40.2 0.0**
MLR Muntele Rosu 77.02 314 ⇓ *iP* **P** **19 07 40.2 0.0**
STHS Stebnicka Huta 78.49 319 *eP* **P** **19 07 51.4 +3.1**
comp=Z,4.0nm,1.0s,mb4.3
STHS Stebnicka Huta 78.49 319 *eP* **P** **19 07 51.4 +3.1**
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
STHS Stebnicka Huta 78.49 319 *eP* **P** **19 07 51.4 +3.1**
NOA NORSAR Array B 78.53 332 P **P** **19 07 46.5 -1.8**
comp=Z,1.9nm,0.7s,mb4.1,baz=63,slow=5.4,SNR=5.9
DRGR 78.62 316 ⇓P **P** **19 07 47.3 -1.7**
DRGR 78.62 316 ⇓ *iP* **P** **19 07 47.3 -1.8**
DLBC Dease Lake 78.88 31 *eP* **P** **19 07 48.6 -1.6**
OJC Ojcow 79.02 320 *eP* **P** **19 07 47.4 -3.8**
PSZ Piszkesteto 79.92 318 ⇑P **P** **19 08 04.9 +8.8**
PSZ Piszkesteto 79.92 318 ⇑ *iP* **P** **19 08 04.9 +8.8**
VTS Vitosha 79.94 312 ⇓P **P** **19 07 55.4 -1.0**
VTS Vitosha 79.94 312 ⇓ *iP* **P** **19 07 55.4 -1.0**
VYHS Vyhne 80.32 319 *eP* **P** **19 07 57.6 -0.7**
comp=Z,5.7nm,1.2s,mb4.4
VYHS *e* pP 19 08 05.9 -0.4
VYHS Vyhne 80.32 319 *eP* **P** **19 07 57.6 -0.7**
VYHS *e* pP 19 08 05.9 -0.4
VYHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
VYHS Vyhne 80.32 319 *eP* **P** **19 07 57.6 -0.7**
VYHS epP pP 19 08 05.9 -0.4
VRAC Vranov 81.29 320 LR LR 19 47 15.9
comp=Z,126nm,19.1s,MS4.3,baz=75,slow=38
PKSM Moragy 81.42 317 ⇑P **P** **19 08 05.0 +0.8**
PKSM Moragy 81.42 317 ⇑ *iP* **P** **19 08 05.0 +0.8**
CLL Collm 82.39 323 *eP* **P** **19 08 08.0 -1.2**
CLL LR LR
comp=Z,300nm,17.7s,MS4.7
CLL Collm 82.39 323 *eP* **P** **19 08 08.0 -1.2**
YKA Yellowknife Ar 82.96 23 P **P** **19 08 10.8 -1.1**
comp=Z,9.2nm,0.7s,mb5.0,baz=314,slow=4.7,SNR=29
KHC Kasperske Hory 83.12 321 *eP* **P** **19 08 13.5 +0.4**
KHC Kasperske Hory 83.12 321 *eP* **P** **19 08 13.5 +0.4**
DAVOX Davos/Dischmat 86.46 320 LR LR 19 52 53.7
comp=Z,152nm,18.1s,MS4.4,baz=82,slow=40
BORG Borgarnes 86.96 345 LR LR 19 50 24.3
comp=Z,150nm,18.8s,MS4.4,baz=29,slow=38
CDF Champ du Feu 87.06 323 *eP* **P** **19 08 31.5 -1.3**
NLWA Neilton Lookou 87.75 38 *eP* **P** **19 08 37.6 +1.4**
comp=Z,52nm,1.7s,mb5.5
BAIF Baives 87.78 325 *eP* **P** **19 08 34.6 -1.7**
HAU Haudompre 87.81 323 *eP* **P** **19 08 35.1 -1.3**
JCW Jim Creek 88.38 37 *eP* **P** **19 08 37.9 -1.2**
comp=Z,11nm,0.7s,mb5.2
RPW Rockport 88.46 36 *eP* **P** **19 08 37.5 -2.0**
comp=Z,21nm,0.9s,mb5.4
LPG La Plagne 88.98 320 *eP* **P** **19 08 40.4 -1.6**
comp=Z,8.9nm,0.8s,mb4.8
LPG La Plagne 88.98 320 *eP* **P** **19 08 40.4 -1.6**
comp=Z,4.4nm,0.8s,mb4.8
LPG La Plagne 88.98 320 *eP* **P** **19 08 40.4 -1.6**
LPG pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
LPL La Plagne 88.98 320 *eP* **P** **19 08 40.3 -1.7**
PGF Pioggiola 89.23 317 *eP* **P** **19 08 42.2 -1.1**
LON Longmire 89.27 38 *eP* **P** **19 08 43.8 +0.4**
comp=Z,9.9nm,1.2s,mb5.0
LON Longmire 89.27 38 *eP* **P** **19 08 43.8 +0.4**
LON pmax pmax
comp=Z,10.0nm,1.2s,mb5.0
MBDF Montbardon 89.40 320 *eP* **P** **19 08 42.8 -1.2**
SMF Signal de Mont 89.98 322 *eP* **P** **19 08 45.2 -1.5**
comp=Z,14nm,0.9s,mb5.0
SMF Signal de Mont 89.98 322 *eP* **P** **19 08 45.2 -1.5**
comp=Z,6.8nm,0.9s,mb5.0
SMF Signal de Mont 89.98 322 *eP* **P** **19 08 45.2 -1.5**
SMF pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
RSW Rattlesnake Hi 90.72 37 *eP* **P** **19 08 46.5 -3.6**
comp=Z,70nm,1.0s,mb6.0
HUMO Hull Mountain 90.96 42 *eP* **P** **19 08 52.8 +1.4**
comp=Z,4.4nm,0.7s,mb4.9
YBH Yreka Blue Hor 91.61 42 *eP* **P** **19 08 54.6 +0.3**
comp=Z,4.4nm,0.9s,mb4.8
YBH Yreka Blue Hor 91.61 42 P **P** **19 08 54.4 +0.1**
comp=Z,3.8nm,0.9s,mb4.7,baz=159,slow=2.5,SNR=7.6
YBH Yreka Blue Hor 91.61 42 *eP* **P** **19 08 54.6 +0.2**
YBH pmax pmax
comp=Z,4.0nm,0.9s
RJF Les Rejaudoux 92.08 322 *eP* **P** **19 08 54.9 -1.6**
comp=Z,30nm,1.2s,mb5.2
RJF Les Rejaudoux 92.08 322 *eP* **P** **19 08 54.9 -1.6**
comp=Z,15nm,1.2s,mb5.2
RJF Les Rejaudoux 92.08 322 *eP* **P** **19 08 54.9 -1.6**
RJF pmax pmax
comp=Z,15nm,1.2s,mb5.2
FCC Fort Churchill 92.37 18 *eP* **P** **19 08 55.3 -2.2**
MOD Modoc 92.98 41 *eP* **P** **19 09 00.8 +0.1**
comp=Z,7.4nm,0.7s,mb5.2
FFC Flin Flon 93.11 24 *eP* **P** **19 09 00.2 -0.8**
comp=Z,5.4nm,0.8s,mb5.0
FFC Flin Flon 93.11 24 *eP* **P** **19 09 00.2 -0.8**
FFC pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
CMB Columbia Colle 95.20 44 *eP* **P** **19 09 10.2 -0.8**
comp=Z,8.8nm,1.3s,mb5.0
CMB Columbia Colle 95.20 44 *eP* **P** **19 09 10.2 -0.8**
CMB pmax pmax
comp=Z,9.0nm,1.3s,mb5.0
HLID Hailey 95.36 37 *eP* **P** **19 09 12.2 +0.7**
comp=Z,2.6nm,0.9s,mb4.7
NVAR Mina Array Bea 96.28 43 P **P** **19 09 16.3 +0.4**
NVAR Mina Array Bea 96.28 43 P **P** **19 09 16.3 +0.4**
comp=Z,1.1nm,0.7s,mb4.4,baz=283,slow=6.3,SNR=7.2
SDV Santo Domingo 145.16 21 *e*PKPdf PKPdf 19 15 23.9 -1.7
OTAV Otavalo 149.01 42 *e*PKPbc PKPbc 19 15 36.7 +0.6

*TIR **01** 18:55:55.5, 38°.41N×21°.63E, h0km*
*NEIC **01** 18:55:57.7, 38°.08N×20°.20E, h3km, MD3.4(ATH), After ATH.*
*ATH **01** 18:55:57.7, 38°.08N×20°.20E, h3km, MD3.4/9*
*ISCJB **01** 18:55:58.0±0.8, 38°.11N±0°.03×20°.20E±0°.04, h2km±5km, Error ellipse: s-maj=5.5km s-min=4.4km az=42.3*
*CSEM **01** 18:55:58.2±0.3, 38°.07N×20°.23E, h2km, ML3.2/1, Error ellipse: s-maj=6.4km s-min=4.1km az=28.0*
*THE **01** 18:55:59.6, 38°.13N×20°.27E, h1km±2km, ML3.2/1, Error ellipse: s-maj=2.9km s-min=1.0km az=207.0*

ISC 01 18:55:58.5±0.9, 38°.08N±0°.03×20°.21E±0°.04, h1km±5km, n76, σ0°.88/104, Greece

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.31**	**72**	*e*Pg		**Pg**	**18 56 04.6**	**+0.1**
VLS				*e*Sg		**Sg**	**18 56 08.8**	**+0.2**
VLS	**Valsamata**	**0.31**	**72**	*e*PG		**Pg**	**18 56 04.6**	**+0.1**
VLS				*e*SG		**Sg**	**18 56 08.8**	**+0.2**
VLS	**Valsamata**	**0.31**	**72**	P		**Pg**	**18 56 04.3**	**-0.2**
VLS				S		**Sg**	**18 56 08.5**	**-0.1**
VLS	**Valsamata**	**0.31**	**72**	P		**Pg**	**18 56 04.3**	**-0.2**
VLS	**Valsamata**	**0.31**	**72**	*e*Pg		**Pg**	**18 56 04.6**	**+0.1**
VLS				S		**Sg**	**18 56 08.5**	**-0.1**
VLS				*e*Sg		**Sg**	**18 56 08.8**	**+0.2**
KFL	**Anninata**	**0.46**	**86**	P		**Pg**	**18 56 07.4**	**+0.2**
KFL	**Anninata**	**0.46**	**86**	P		**Pg**	**18 56 07.4**	**+0.2**
LKD2	**Lefkada island**	**0.79**	**26**	P		**Pg**	**18 56 13.0**	**-0.6**
LKD2				S		**Sg**	**18 56 23.7**	**-0.2**
LKD2	**Lefkada island**	**0.79**	**26**	P		**Pg**	**18 56 13.0**	**-0.6**
LKD2				S		**Sg**	**18 56 23.7**	**-0.2**
RLS	**Riolos of Patr**	**0.99**	**91**	*e*Pg		**Pg**	**18 56 16.8**	**-0.7**
RLS				*e*Sg		**Sg**	**18 56 30.4**	**+0.1**
RLS	**Riolos of Patr**	**0.99**	**91**	*e*PG		**Pg**	**18 56 16.8**	**-0.7**
RLS				*e*SG		**Sg**	**18 56 30.4**	**+0.1**
RLS	**Riolos of Patr**	**0.99**	**91**	*e*Pg		**Pg**	**18 56 16.8**	**-0.7**
RLS				*e*Sg		**Sg**	**18 56 30.4**	**+0.1**
UPR	**University Cam**	**1.26**	**80**	*e*PB		**Pn**	**18 56 22.0**	**-1.1**
UPR				*e*SB		**Sn**	**18 56 38.3**	**-2.4**
UPR	**University Cam**	**1.26**	**80**	*e*Pb		**Pn**	**18 56 22.0**	**-1.1**
UPR				*e*Sb		**Sn**	**18 56 38.3**	**-2.4**
EFP	**Efpalio**	**1.38**	**75**	*e*PN		**Pn**	**18 56 24.4**	**-0.4**
EFP	**Efpalio**	**1.38**	**75**	*e*Pn		**Pn**	**18 56 24.4**	**-0.4**
EVR	**Evrytania**	**1.51**	**56**	P		**Pb**	**18 56 30.1**	**+2.9**
EVR	**Evrytania**	**1.51**	**56**	P		**Pb**	**18 56 30.1**	**+2.9**
ITM	**Ithomi**	**1.63**	**123**	*e*Pb		**Pb**	**18 56 28.9**	**-0.4**
ITM				*e*Sb		**Sb**	**18 56 50.6**	**+0.2**
ITM	**Ithomi**	**1.63**	**123**	*e*PB		**Pb**	**18 56 28.9**	**-0.4**
ITM				*e*SB		**Sb**	**18 56 50.6**	**+0.2**
ITM	**Ithomi**	**1.63**	**123**	P		**Pn**	**18 56 28.1**	**-0.2**
ITM	**Ithomi**	**1.63**	**123**	P		**Pn**	**18 56 28.1**	**-0.2**
ITM	**Ithomi**	**1.63**	**123**	*e*Pb		**Pb**	**18 56 28.9**	**-0.4**
ITM				*e*Sb		**Sb**	**18 56 50.6**	**+0.2**
KEK	**Kerkira**	**1.66**	**349**	*e*Pg		**Pn**	**18 56 28.7**	**0.0**
KEK	**Kerkira**	**1.66**	**349**	*e*PG		**Pn**	**18 56 28.7**	**0.0**
KEK	**Kerkira**	**1.66**	**349**	P		**Pn**	**18 56 28.5**	**-0.2**
KEK	**Kerkira**	**1.66**	**349**	P		**Pn**	**18 56 28.5**	**-0.2**
KEK	**Kerkira**	**1.66**	**349**	*e*Pg		**Pn**	**18 56 28.7**	**0.0**
GUR	**Goura**	**1.69**	**94**	*e*PB		**Pb**	**18 56 29.6**	**-0.7**
GUR	**Goura**	**1.69**	**94**	*e*Pb		**Pb**	**18 56 29.6**	**-0.7**
PYL	**PYLOS**	**1.70**	**134**	*e*PG		**Pn**	**18 56 29.0**	**-0.2**
PYL	**PYLOS**	**1.70**	**134**	*e*Pg		**Pn**	**18 56 29.0**	**-0.2**
SRN	**Sarande**	**1.81**	**355**	*e*PN		**Pn**	**18 56 30.6**	**-0.1**
SRN				*i* SN		**Sn**	**18 56 54.3**	**+0.1**
SRN	**Sarande**	**1.81**	**355**	*e*Pn		**Pn**	**18 56 30.6**	**-0.1**
SRN	SNR=40			*i* Sn		**Sn**	**18 56 54.3**	**+0.1**
	SNR=40							
VLX	**Vlachokerasia**	**1.86**	**112**	*e*PB		**Pb**	**18 56 33.2**	**0.0**
VLX	**Vlachokerasia**	**1.86**	**112**	*e*Pb		**Pb**	**18 56 33.2**	**0.0**
AGG	**Agios Georgios**	**1.91**	**60**	P		**Pn**	**18 56 33.0**	**+0.9**
AGG	**Agios Georgios**	**1.91**	**60**	P		**Pn**	**18 56 33.0**	**+0.9**
THL	**Klokotos Trika**	**2.04**	**43**	*e*PG		**Pn**	**18 56 35.5**	**+1.5**
THL	**Klokotos Trika**	**2.04**	**43**	P		**Pn**	**18 56 35.2**	**+1.2**
THL				S		**Sn**	**18 57 00.2**	**+0.1**
THL	**Klokotos Trika**	**2.04**	**43**	P		**Pn**	**18 56 35.2**	**+1.2**
THL	**Klokotos Trika**	**2.04**	**43**	*e*Pg		**Pn**	**18 56 35.5**	**+1.5**
THL				S		**Sn**	**18 57 00.2**	**+0.1**
LTK	**Loutraki**	**2.18**	**91**	*e*PB		**Pn**	**18 56 36.3**	**+0.5**
LTK	**Loutraki**	**2.18**	**91**	*e*Pb		**Pn**	**18 56 36.3**	**+0.5**
LKR	**Lokris**	**2.26**	**75**	*e*Pb		**Pn**	**18 56 37.7**	**+0.7**
LKR	**Lokris**	**2.26**	**75**	*e*PB		**Pn**	**18 56 37.7**	**+0.7**
LKR	**Lokris**	**2.26**	**75**	P		**Pn**	**18 56 37.5**	**+0.5**
LKR	**Lokris**	**2.26**	**75**	P		**Pn**	**18 56 37.5**	**+0.5**
LKR	**Lokris**	**2.26**	**75**	*e*Pb		**Pn**	**18 56 37.7**	**+0.7**
NEST	**Nestorio**	**2.42**	**15**	P		**Pn**	**18 56 40.8**	**+1.7**
NEST	**Nestorio**	**2.42**	**15**	P		**Pn**	**18 56 40.8**	**+1.7**
DID	**Didima**	**2.46**	**103**	*e*PB		**Pn**	**18 56 40.6**	**+0.9**
DID	**Didima**	**2.46**	**103**	*e*Pb		**Pn**	**18 56 40.6**	**+0.9**
KBN	**Korca**	**2.58**	**10**	*e*PN		**Pn**	**18 56 36.1**	**-5.2**
KBN	**Korca**	**2.58**	**10**	*e*Pn		**Pn**	**18 56 36.1**	**-5.2**
	SNR=40							
NEO	**Neokhori**	**2.66**	**62**	P		**Pn**	**18 56 45.8**	**+3.4**
NEO	**Neokhori**	**2.66**	**62**	P		**Pn**	**18 56 45.8**	**+3.4**
XOR	**Xorichti**	**2.66**	**60**	P		**Pn**	**18 56 42.7**	**+0.2**
XOR	**Xorichti**	**2.66**	**60**	P		**Pn**	**18 56 42.7**	**+0.2**
FNA	**Florina**	**2.85**	**18**	P		**Pn**	**18 56 45.4**	**+0.4**
FNA				S		**Sn**	**18 57 20.0**	**+0.1**
FNA	**Florina**	**2.85**	**18**	P		**Pn**	**18 56 45.4**	**+0.4**
FNA				S		**Sn**	**18 57 20.0**	**+0.1**
TIP	**Timpagrande**	**2.92**	**293**	P		**Pn**	**18 56 46.1**	**+0.1**
TIP	**Timpagrande**	**2.92**	**293**	P		**Pn**	**18 56 46.1**	**+0.1**
OHR	**Ohrid**	**3.06**	**8**	*e*Pn		**Pn**	**18 56 48.6**	**+0.7**
OHR				*e*Sg		**Sn**	**18 57 25.8**	**+0.6**
KRUS	**Krusevo**	**3.38**	**13**	*e*Pn		**Pn**	**18 56 52.0**	**-0.3**
KRUS				*e*Sg		**Sn**	**18 57 32.1**	**-0.9**
CEL	**Celeste**	**3.41**	**274**	*e*Pn		**Pn**	**18 56 52.0**	**-0.7**
CEL				*e*Sn		**Sn**	**18 57 33.8**	**0.0**
CEL	**Celeste**	**3.41**	**274**	*e*Pn		**Pn**	**18 56 52.0**	**-0.7**
CEL				*e*Sn		**Sn**	**18 57 33.8**	**+0.1**
CUC	**Castrocucco**	**3.92**	**301**	P		**Pn**	**18 57 01.6**	**+1.8**
CUC	**Castrocucco**	**3.92**	**301**	P		**Pn**	**18 57 01.6**	**+1.8**
PUK	**Puka**	**3.97**	**357**	*e*PN		**Pn**	**18 56 59.9**	**-0.5**
PUK				*i* SN		**Sn**	**18 57 47.4**	**-0.1**
PUK	**Puka**	**3.97**	**357**	*e*Pn		**Pn**	**18 56 59.9**	**-0.5**
	SNR=40							
BARS	**Barje**	**4.89**	**14**	*e*Pn		**Pn**	**18 57 12.3**	**-0.7**
STON	**Ston**	**5.16**	**339**	*e*Pn		**Pn**	**18 57 13.8**	**-2.9**
STON				Sn		**Sn**	**18 58 10.8**	**-6.0**
STON	**Ston**	**5.16**	**339**	*e*Pn		**Pn**	**18 57 13.8**	**-2.9**
NVLJ	**Novalja**	**7.62**	**330**	*e*Pn		**Pn**	**18 57 49.5**	**-1.1**
NVLJ				Sn		**Sn**	**18 59 13.3**	**-4.2**
NVLJ	**Novalja**	**7.62**	**330**	*e*Pn		**Pn**	**18 57 49.4**	**-1.2**

TAP 01 18:58:25.2, 23°.11N×120°.62E, h10km, ML3.6, 9C-2D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SGST	**Jiashian**	**0.04**	**232**	⇓ *iP*		Pg	18 58 27.8	+0.6
SGST	baz=221			*e*S		Sg	18 58 29.3	+0.7
	baz=221							
WTP	**Ta-pu**	**0.14**	**359**	⇓ *iP*		Pg	18 58 29.4	+1.0
TWK	baz=2.0			*e*S		Sg	18 58 34.6	+2.3
	baz=327							
CHN3	**Shinhua**	**0.23**	**262**	*i* P		Pg	18 58 31.9	+1.8
CHN3	baz=268			S		Sg	18 58 37.3	+3.9
	baz=268							
CHN4	**Tsaushan**	**0.24**	**355**	*i* P		Pg	18 58 31.4	+1.1
CHN4	baz=355			*i* S		Sg	18 58 35.9	+2.2
	baz=355							
TWM1	**Shoushan**	**0.33**	**212**	⇑ *iP*		Pg	18 58 34.1	+2.2
TAI1	baz=203			*e*S		Sg	18 58 41.7	+4.3
	baz=274							
ELDTW	**Lidau**	**0.38**	**77**	⇑ *iP*		Pg	18 58 33.9	+1.2
ELDTW	baz=78			S		Sg	18 58 39.9	+2.2
	baz=78							
SCLT	**Jiali**	**0.40**	**280**	*eP*		Pg	18 58 34.6	+1.6
CHY	**Chiayi**	**0.43**	**336**	*eP*		Pg	18 58 34.9	+1.2
CHY	baz=337			*e*S		Sg	18 58 42.2	+2.8
	baz=337							
CHN8	**Yiju**	**0.44**	**303**	⇑ *iP*		Pg	18 58 35.1	+1.1
CHN5	baz=317			S		Sg	18 58 35.9	+1.0
TWG	**Pinlang**	**0.51**	**124**	*eP*		Pg	18 58 36.7	+1.5
TWG	baz=121			*e*S		Sg	18 58 44.6	+2.8
	baz=121							
WGK	**Gukeng**	**0.58**	**355**	*eP*		Pg	18 58 37.8	+1.3
WGK	baz=356			*e*S		Sg	18 58 47.6	+3.5
	baz=356							
ECL	**Taimali**	**0.59**	**148**	⇑ *iP*		Pg	18 58 37.6	+0.8
ECL	baz=143			*e*S		Sg	18 58 47.3	+2.7
	baz=143							
TTN	**Taitung**	**0.60**	**126**	*eP*		Pg	18 58 38.8	+1.8
KAU	**Kaohsiung**	**0.61**	**208**	*eP*		Pg	18 58 39.5	+2.4
TWF1	baz=225			*e*S		Sg	18 58 48.3	+1.3
	baz=69							
SCZT	**Fangliau**	**0.73**	**180**	⇑P		Pg	18 58 40.3	+0.9
SCZT	baz=168			*e*S		Sg	18 58 53.2	+4.2
	baz=168							
EAST	**Anshuo**	**0.75**	**163**	⇑ *iP*		Pg	18 58 40.7	+0.9
EAST	baz=162			*e*S		Sg	18 58 52.8	+3.2
	baz=162							
EHY	**Hungye**	**0.76**	**58**	P		Pg	18 58 40.9	+0.9
EHY	baz=67			S		Sg	18 58 50.8

WNT	**Mingjian**	**0.77**	**5**	P		Pg	18 58 41.2	+1.1
	baz=6.0								
WNT				*e*S		Sg	18 58 52.9	+2.7
	baz=6.0								
TAW	**Tawu**	**0.79**	**161**	*e*P		Pg	18 58 41.0	+0.5
	baz=160								
TAW				*e*S		Sg	18 58 53.5	+2.7
	baz=160								
TWP	**Hsiaoliuchiu**	**0.79**	**197**	*e*P		Pg	18 58 43.1	+2.5
	baz=223								
WTCT	**Ta-ch'eng**	**0.81**	**338**	*e*P		Pg	18 58 40.8	-0.2
	baz=339								
WTCT				*e*S		Sg	18 58 53.6	+2.0
	baz=339								
SMLT	**Sun Moon Lake**	**0.81**	**19**	*e*P		Pg	18 58 42.0	+1.0
	baz=19								
TYC	**Yuchr**	**0.82**	**15**	*e*P		Pg	18 58 42.0	+0.8
	baz=16								
TYC				*e*S		Sg	18 58 54.3	+2.4
	baz=16								
ESL	**Shilin**	**1.03**	**47**	*e*P		Pg	18 58 46.0	+0.9
	baz=47								
ESL				*e*S		Sg	18 59 00.3	+1.8
	baz=47								
TCU	**Taichung**	**1.04**	**3**	*e*P		Pg	18 58 46.1	+0.8
	baz=349								
PNG	**Penghu**	**1.08**	**295**	P		Pb	18 58 44.9	-1.1
	baz=298								
PNG				*e*S		Sg	18 58 59.3	-0.8
	baz=298								
HEN	**Hengchun**	**1.10**	**174**	*e*P		Pb	18 58 46.9	+0.5
	baz=168								
TWK1	**Hengchun**	**1.17**	**171**	*e*P		Pb	18 58 48.6	+1.1
	baz=172								
WHF	**Hehuan Shan**	**1.19**	**30**	*e*P		Pb	18 58 49.2	+1.3
	baz=30								
WHF				*e*S		Sb	18 59 06.0	+2.6
	baz=30								
TSEB	**Hengchuen, Pin**	**1.23**	**168**	*e*P		Pn	18 58 49.8	+1.4
	baz=187								
TWQ1	**Liyutan**	**1.24**	**7**	*e*P		Pn	18 58 48.8	+0.2
	baz=353								
TWT	**Tachien**	**1.25**	**24**	*e*P		Pn	18 58 49.9	+1.1
	baz=22								
NSY	**Sanyi**	**1.31**	**6**	*e*P		Pn	18 58 50.4	+0.8
	baz=354								
NSY				*e*S		Sb	18 59 09.8	+3.0
	baz=354								
TWD	**Chiawan**	**1.32**	**43**	*e*P		Pn	18 58 49.7	0.0
	baz=43								
NNS	**Nan Shan**	**1.50**	**27**	*e*P		Pn	18 58 54.0	+1.9
	baz=16								
NSTT	**Nanjuang**	**1.56**	**13**	*e*P		Pn	18 58 53.1	+0.2
	baz=356								
ENA	**Nanau**	**1.67**	**38**	*e*P		Pn	18 58 57.5	+3.0
	baz=49								
NSK	**Sanguang**	**1.70**	**23**	*e*P		Pn	18 58 58.0	+3.1
	baz=22								
ENTT	**Nioudou**	**1.76**	**29**	*e*P		Pn	18 58 58.4	+2.7
	baz=19								
ENTT				*e*S		Sn	18 59 23.3	+5.2
	baz=19								
TWE	**Neicheng**	**1.87**	**31**	*e*P		Pn	18 59 00.3	+3.0
	baz=15								
TWC	**Suao**	**1.87**	**37**	*e*P		Pn	18 58 59.8	+2.5
	baz=47								
TWA	**Mucha**	**2.06**	**25**	*e*P		Pn	18 59 03.5	+3.6
	baz=24								

SZGRF ***01*** *19:06:21.5,35˙.70N×71˙.50E,h33km, mb4.7, MS4.0, Pakistan*

NNC ***01*** *19:06:42.4±9.1,37˙.11N×71˙.42E, h0km, mb4.6, mpv4.9, Error ellipse: s-maj=97.3km s-min=51.2km az=48.0*

ISCJB ***01*** *19:06:44.6±0.2,36˙.58N±0˙.02×71˙.29E±0˙.02, h205km±3km, mb4.4/173, Error ellipse: s-maj=3.4km s-min=2.8km az=36.1*

NEIC ***01*** *19:06:46.0±0.5, 36˙.58N×71˙.35E, h207km±5km, mb4.5/106, Error ellipse: s-maj=4.8km s-min=3.9km az=191.0*

MOS ***01*** *19:06:45.9±0.9, 36˙.62N×71˙.35E, h220km, mb4.4/84, Error ellipse: s-maj=6.7km s-min=3.7km az=128.8*

BJI ***01*** *19:06:45.4, 36˙.78N×71˙.21E, h212km, mB4.6/15, mb4.5/31*

IDC ***01*** *19:06:47.6±0.6, 36˙.66N×71˙.37E, h220km±4km, mb4.1/20, mb1 4.2/26, mb1mx4.1/31, mbtmp4.1/26, Error ellipse: s-maj=9.8km s-min=7.9km az=158.0*

TEH ***01*** *19:07:28.3, 36˙.01N×66˙.93E, h18km*

ISC 01 19:06:45.5±0.2**, 36˚.60N**±0˙.02×**71˚.30E**±0˙.02**, h196**km±3km**, h215**km±2.0km**; pP-P, n519, σ0˚93/555, mb4.4**/173**, 49C-29D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.76**	**223**	*e*Pn		**Pn**	**19 07 33.5**	**+1.5**
KBL				*e*Sn		**Sn**	**19 08 07.6**	**-0.8**
CEP	**Cherat**	**2.81**	**170**	⇓P		**Pn**	**19 07 34.7**	**+2.0**
CEP				S		**Sn**	**19 08 11.0**	**+1.4**
CHCP	**Chirah Chowk**	**3.34**	**151**	⇑P		**Pn**	**19 07 41.7**	**+2.7**
THW	**Thamme Wali**	**3.81**	**174**	⇑P		**Pn**	**19 07 46.3**	**+1.5**
KSH	**Kashi**	**4.70**	**50**	⇑*i*P		**Pn**	**19 07 52.0**	**-3.8**
KSH				S		**Sn**	**19 08 41.3**	**-10**
KSH				smax				
	comp=N,4μm,0.4s							
KSH				smax				
	comp=E,1μm,0.3s							
JMU	**Jammu**	**4.88**	**142**	*e*PKP		**Pn**	**19 08 00.0**	**+1.8**
JMU				*e*S		**Sn**	**19 08 51.5**	**-3.9**
THN	**Thein Dam**	**5.53**	**137**	*e*PKP		**Pn**	**19 08 05.9**	**-0.6**
THN				*ex*		x	19 09 09.7	
AML	**Almayashu**	**5.83**	**18**	P		**Pn**	**19 08 11.1**	**+0.8**
	SNR=631							
AML	**Almayashu**	**5.83**	**18**	⇑*i*Pn		**Pn**	**19 08 10.9**	**+0.7**
	comp=E,259nm,0.5s							
AML				*e*Sn		**Sn**	**19 09 11.5**	**-5.9**
UCH	**Uchtor**	**6.15**	**23**	P		**Pn**	**19 08 15.3**	**+0.9**
	SNR=35							
UCH	**Uchtor**	**6.15**	**23**	⇑*i*Pn		**Pn**	**19 08 15.2**	**+0.7**
	comp=E,3.2nm,0.7s							
UCH				*e*Sn		**Sn**	**19 09 21.6**	**-3.2**
KZA	**Kyzart**	**6.27**	**28**	P		**Pn**	**19 08 16.4**	**+0.4**
	SNR=20							
EKS2	**Erkin-Say**	**6.35**	**17**	P		**Pn**	**19 08 17.9**	**+0.9**
	SNR=69							
EKS2	**Erkin-Say**	**6.35**	**17**	⇑*e*Pn		**Pn**	**19 08 17.6**	**+0.5**
	comp=E,40nm,0.4s							
EKS2				*e*Sn		**Sn**	**19 09 24.2**	**-5.4**
AAK	**Ala-Archa**	**6.51**	**21**	P		**Pn**	**19 08 20.2**	**+1.0**
	SNR=68							
AAK	**Ala-Archa**	**6.51**	**21**	P		**Pn**	**19 08 20.1**	**+1.0**
	comp=E,34nm,0.3s,baz=172,slow=5.4,SNR=84							
AAK				S		**Sn**	**19 09 30.7**	**-2.7**
	comp=E,19nm,0.3s,baz=328,slow=21,SNR=27							
KK31	**Karatay Array**	**6.53**	**355**	⇓P		**Pn**	**19 08 19.3**	**0.0**
	comp=E,35nm,0.3s,baz=174,slow=12							
KK31				⇑Sn		**Sn**	**19 09 28.9**	**-4.9**
	comp=E,610nm,0.6s,baz=184,slow=23							
KBK	**Karagaybulak**	**6.67**	**24**	P		**Pn**	**19 08 22.5**	**+1.3**
	SNR=73							
BHK	**Bhakra**	**6.69**	**139**	*ex*		**Pn**	**19 08 19.0**	**-2.6**
BHK				*e*S		**Sn**	**19 09 33.0**	**-4.7**
FRU	**Bishkek**	**6.73**	**21**	⇑*i*PN		**Pn**	**19 08 22.0**	**0.0**
FRU				pmax	pmax			
	comp=Z,90nm,0.8s							
ULHL	**Ulahol**	**6.81**	**33**	P		**Pn**	**19 08 23.4**	**+0.4**
	SNR=32							
SDNR	**Sundarnagar**	**6.92**	**136**	*e*PKP		**Pn**	**19 08 24.9**	**+0.2**
SDNR				*e*S		**Sn**	**19 09 38.5**	**-4.8**
USP	**Ospenovka**	**7.10**	**19**	P		**Pn**	**19 08 27.9**	**+1.1**
	SNR=13							
SMLA	**Simla**	**7.32**	**137**	*i* P		**Pn**	**19 08 29.4**	**-0.4**
SMLA				*i* P			19 08 29.5	
SMLA				*i* S		**Sn**	**19 09 46.8**	**-5.7**
SMLA				⇓			19 09 50.9	
	comp=N,16μm,0.4s							
SMLA				⇓			19 09 51.1	
	comp=E,16μm,0.3s							
KLP	**Kalpa**	**7.66**	**129**	*e*PKP		**Pn**	**19 08 34.5**	**+0.2**
KLP				*e*S		**Sn**	**19 09 54.1**	**-6.7**
IMYA	**Miami**	**9.03**	**272**	*e*Pn		**Pn**	**19 08 49.7**	**-2.3**
IMYA				*e*			19 09 06.0	
	comp=Z,2μm,0.2s							
JOSI	**Joshimath**	**9.15**	**129**	*e*PKP		**Pn**	**19 08 53.8**	**+0.2**
JOSI				*e*S		**Sn**	**19 10 27.5**	**-8.6**
KHET	**Khetri**	**9.31**	**155**	*e*PKP		**Pn**	**19 08 54.0**	**-1.8**
KHET				*e*S		**Sn**	**19 10 31.7**	**-8.4**
KHET				*e*S		**Sn**	**19 10 32.5**	**-7.5**
KHET				AML	AML		19 10 34.6	
	comp=E,137nm,0.3s							
KHET				AML	AML		19 10 34.9	
	comp=N,151nm,0.4s							
NDI	**New Delhi**	**9.33**	**146**	*e*PKP		**Pn**	**19 08 55.5**	**-0.6**
NDI				*e*S		**Sn**	**19 10 32.9**	**-7.7**
NDI				AML	AML		19 10 36.9	
	comp=N,194nm,0.7s							
NDI				AML	AML		19 10 38.2	
	comp=E,288nm,0.6s							
AYAN	**Aya Nagar**	**9.46**	**147**	*e*PKP		**Pn**	**19 08 57.0**	**-0.8**
AYAN				*e*S		**Sn**	**19 10 36.2**	**-7.5**
KUDL	**Kundal**	**9.50**	**151**	*e*PKP		**Pn**	**19 08 56.6**	**-1.6**
KUDL				*e*S		**Sn**	**19 10 35.6**	**-8.9**
KUDL				*e*S		**Sn**	**19 10 36.1**	**-8.4**
SONA	**Sohna**	**9.65**	**148**	*e*PKP		**Pn**	**19 08 59.5**	**-0.7**
SONA				*e*S		**Sn**	**19 10 39.4**	**-8.6**
SONA				AML	AML		19 10 46.0	
	comp=E,255nm,0.4s							
SONA				AML	AML		19 10 46.7	
	comp=N,120nm,0.4s							
IMOG	**Moghan**	**9.66**	**271**	*e*Pn		**Pn**	**19 08 58.3**	**-2.0**
IMOG				*e*			19 09 04.5	
	comp=Z,569nm,0.1s							
IPAY	**Payeh**	**9.91**	**273**	*e*Pn		**Pn**	**19 09 01.9**	**-1.6**
IPAY				*e*			19 09 30.0	
	comp=Z,1μm,0.3s							
IPAY				*e*Sg		**Sn**	**19 10 48.5**	**-5.6**
IAKL	**Akhelmad**	**10.09**	**274**	*e*Pn		**Pn**	**19 09 03.7**	**-2.1**
IAKL				*e*			19 09 43.8	
	comp=E,865nm,0.1s							
PTH	**Pithoragarh**	**10.26**	**131**	*ex*		**Pn**	**19 09 05.8**	**-2.3**
PTH				*e*S		**Sn**	**19 10 54.5**	**-8.1**
AJM	**Ajmer**	**10.48**	**163**	*e*PKP		**Pn**	**19 09 10.1**	**-0.9**
AJM				*e*S		**Sn**	**19 10 56.9**	**-11**
ISFR	**Sfrayin**	**10.68**	**276**	*e*Pn		**Pn**	**19 09 12.6**	**-0.8**
ISFR				*e*			19 09 53.1	
	comp=Z,1μm,0.3s							
ISHV	**Shirvan**	**10.91**	**279**	*e*Pn		**Pn**	**19 09 16.5**	**+0.1**
ISHV				*e*			19 09 19.5	
	comp=Z,1μm,0.1s							
MK31	**Makanchi Array**	**13.07**	**35**	Pn		**Pn**	**19 09 43.4**	**-0.4**
	comp=Z,9.1nm,0.5s,baz=214,slow=11,SNR=254							
MK31	**Makanchi Array**	**13.07**	**35**	*e*P		**Pn**	**19 09 42.9**	**-0.8**
MKAR	**Makanchi Array**	**13.07**	**35**	P		**Pn**	**19 09 43.5**	**-0.2**
MKAR				ScP	ScP		19 18 09.8	-4.1
MKAR	**Makanchi Array**	**13.07**	**35**	P		**Pn**	**19 09 43.5**	**-0.2**
	comp=Z,2.1nm,0.3s,baz=206,slow=9.6,SNR=99							
MKAR				ScP	ScP		19 18 09.8	-4.1
	baz=222,slow=1.6,SNR=3.9							
MKAR	**Makanchi Array**	**13.07**	**35**	*ce*P		**Pn**	**19 09 43.5**	**-0.2**
MKAR				pmax	pmax			
	comp=Z,16nm,0.6s							
GKN	**Gorkha**	**14.15**	**123**	*e*P		**Pn**	**19 09 56.7**	**-0.7**
BHPL	**Bhopal**	**14.32**	**157**	*e*PKP		**Pn**	**19 09 58.9**	**-0.6**
BHPL				*ex*		x	19 12 31.6	
WMQ	**Urumqi**	**14.44**	**55**	P		**Pn**	**19 10 02.0**	**+1.2**
WMQ				sP			19 10 54.6	
WMQ				S		**Sn**	**19 12 37.7**	**-4.4**
WMQ				PcP	PcP		19 15 03.0	+1.7
WMQ				ScP	ScP		19 18 15.8	-0.5
WMQ				pmax	pmax			
	comp=Z,38nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,91nm,3.6s							
WMQ				LR	LR			
	comp=N,230nm,14.0s							
WMQ				LR	LR			
	comp=E,310nm,16.0s							
WMQ				LR	LR			
	comp=Z,330nm,14.0s							
ISHM	**Shahmirzad**	**14.57**	**272**	*e*Pn		**Pn**	**19 10 03.6**	**+1.2**
DMN	**Daman**	**14.72**	**124**	*e*P		**Pn**	**19 10 04.4**	**0.0**
	comp=Z,134nm,0.3s							
KKN	**Kakani**	**14.72**	**123**	*e*P		**Pn**	**19 10 04.2**	**-0.2**
	comp=Z,356nm,0.7s							
IMEH	**Mehriz**	**14.78**	**254**	*e*		**Pn**	**19 10 11.1**	**+5.9**
	comp=Z,204nm,0.2s							
IMEH				*e*Pn		**Pn**	**19 10 06.6**	**+1.5**
PKIN	**Phulchoki**	**14.94**	**123**	*e*P		**Pn**	**19 10 07.0**	**-0.1**
PKI	**Pulchoki**	**14.95**	**123**	*e*P		**Pn**	**19 10 07.1**	**-0.1**
	comp=Z,262nm,0.6s							
KURBB	**Kurchatov Arra**	**14.95**	**18**	⇓Pn		**Pn**	**19 10 05.9**	**-1.1**
	comp=Z,0.8nm,0.4s							
GUN	**Gumba**	**15.06**	**121**	*e*P		**Pn**	**19 10 08.5**	**0.0**
	comp=Z,120nm,0.3s							
KURK	**Kurchatov**	**15.06**	**18**	⇑Pn		**Pn**	**19 10 07.9**	**-0.4**
	comp=Z,7.5nm,1.0s							
KURK	**Kurchatov**	**15.06**	**18**	*e*Pn		**Pn**	**19 10 07.3**	**-1.0**
	comp=Z,6.8nm,0.7s							
KURK	**Kurchatov**	**15.06**	**18**	P		**Pn**	**19 10 06.5**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=205,slow=10,SNR=30							
KURK	**Kurchatov**	**15.06**	**18**	*c i*P		**Pn**	**19 10 08.2**	**-0.1**
KURK				pmax	pmax			
	comp=Z,4.0nm,0.7s							
AB31	**Akbulak array**	**15.12**	**330**	Pn		**Pn**	**19 10 07.7**	**-1.3**
	comp=Z,19nm,0.5s,baz=180,slow=13,SNR=591							
AB31				⇓Sn		**Sn**	**19 12 48.4**	**-10**
	comp=Z,6.8nm,0.3s,baz=170,slow=20,SNR=11							
ABKAR	**Akbulak array**	**15.12**	**330**	*e*Pn		**Pn**	**19 10 07.2**	**-1.8**
ABKAR				*e*S		**S**	**19 12 44.0**	**-13**
JIRN	**Jiri**	**15.43**	**121**	*e*P		**Pn**	**19 10 13.2**	**+0.2**
	comp=Z,344nm,0.3s							
VOSK	**Vostochnaya**	**16.12**	**359**	⇑Pn		**Pn**	**19 10 21.4**	**+0.2**
	comp=Z,4.0nm,0.3s							
RAMN	**Ramite**	**16.16**	**122**	*e*P		**Pn**	**19 10 21.7**	**-0.2**
	comp=Z,243nm,0.6s							
ZRNK	**Zerenda**	**16.43**	**355**	⇑Pn		**Pn**	**19 10 24.7**	**-0.2**
	comp=Z,7.8nm,0.5s							
BVA0	**Borovoye Array**	**16.44**	**358**	Pn		**Pn**	**19 10 24.7**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=158,slow=12,SNR=55							
BVA0				⇑Sn		**S**	**19 13 22.3**	**-3.6**
	comp=Z,1.7nm,1.0s,baz=168,slow=23,SNR=6.5							
BVAR	**Borovoye Array**	**16.44**	**358**	P		**Pn**	**19 10 24.6**	**-0.3**
	comp=Z,2.6nm,0.3s,baz=155,slow=13,SNR=35							
BVAR				S		**S**	**19 13 20.8**	**-5.1**
	comp=Z,0.5nm,0.3s,baz=159,slow=17,SNR=4.5							
BVAR	**Borovoye Array**	**16.44**	**358**	P		**Pn**	**19 10 24.6**	**-0.3**
BVAR				S		**S**	**19 13 20.8**	**-5.1**
BVAR				pmax	pmax			
	comp=Z,3.0nm,0.3s							
BVAR				smax				
	comp=N,1.0nm,0.3s							
BRVK	**Borovoye**	**16.47**	**358**	⇑*e*P		**Pn**	**19 10 24.8**	**-0.5**
	comp=N,13nm,0.8s							
BRVK	**Borovoye**	**16.47**	**358**	*c i*P		**Pn**	**19 10 25.1**	**-0.2**
BRVK				pmax	pmax			
	comp=Z,14nm,1.2s							
TAPN	**Taplejung**	**16.68**	**119**	*e*P		**Pn**	**19 10 28.6**	**+0.5**
	comp=Z,162nm,0.5s							
ODAN	**Odare**	**16.76**	**121**	*e*P		**Pn**	**19 10 29.3**	**+0.3**
	comp=Z,172nm,0.6s							
AKTK	**Aktyubinsk**	**16.82**	**329**	P		**Pn**	**19 10 29.1**	**-0.4**
AKTO	**Aktyubinsk**	**16.82**	**329**	P		**Pn**	**19 10 29.1**	**-0.4**
	comp=Z,8.6nm,0.3s,baz=136,slow=10,SNR=120							
AKTO	**Aktyubinsk**	**16.82**	**329**	P		**Pn**	**19 10 29.1**	**-0.4**
AKTO				pmax	pmax			
	comp=Z,9.0nm,0.3s							
LSA	**Lhasa**	**17.97**	**107**	P		**Pn**	**19 10 45.1**	**+1.8**
LSA	**Lhasa**	**17.97**	**107**	⇓*e*P		**Pn**	**19 10 44.5**	**+1.2**
	comp=Z,68nm,0.8s							
LSA				*e*S		**S**	**19 13 59.6**	**+2.5**
LSA	**Lhasa**	**17.97**	**107**	⇓*e*P		**Pn**	**19 10 44.5**	**+1.2**
LSA				*e*S		**S**	**19 13 59.6**	**+2.5**
LSA				pmax	pmax			
	comp=Z,68nm,0.8s							
LATR	**Latur**	**18.70**	**164**	*ex*		x	19 13 58.1	
ZALV	**Zalesovo Beam**	**19.73**	**24**	P		**P**	**19 10 59.7**	**-0.1**
	comp=Z,3.4nm,0.3s,baz=210,slow=9.9,SNR=45							
ZALV				pP			19 11 40.3	
	comp=Z,1.8nm,0.3s,baz=218,slow=11,SNR=2.1							
ZALV				S		**S**	**19 14 27.0**	**-4.2**
	comp=Z,0.6nm,0.3s,baz=214,slow=20,SNR=4.2							
ZALV	**Zalesovo Beam**	**19.73**	**24**	P		**P**	**19 10 59.7**	**-0.1**
ZALV				S		**S**	**19 14 27.0**	**-4.2**
ZALV				pmax	pmax			
	comp=Z,3.0nm,0.3s							
ZALV				smax				
	comp=N,1.0nm,0.3s							
NVS	**Novosibirsk**	**20.00**	**20**	*e*P		**P**	**19 11 02.7**	**-0.1**
NVS				*e*S		**S**	**19 14 32.9**	**-3.7**
NVS				pmax	pmax			
	comp=N,5.0nm,0.5s							
NVS				pmax	pmax			
	comp=E,2.0nm,0.5s							
NVS				pmax	pmax			
	comp=Z,4.0nm,0.5s							
NVS				smax				
	comp=N,27nm,1.6s							
NVS				smax				
	comp=E,27nm,1.6s							
HYB	**Hyderabad**	**20.15**	**160**	*e*P		**P**	**19 11 08.0**	**+3.2**
HYB	**Hyderabad**	**20.15**	**160**	*i* P		**P**	**19 11 07.0**	**+2.2**
SHL	**Shillong**	**20.73**	**116**	⇓*i*P		**P**	**19 11 11.0**	**+0.1**
SHL				*e*S		**S**	**19 14 50.0**	**-1.2**
GNI	**Garni**	**21.10**	**288**	*e*P		**P**	**19 11 15.7**	**+1.1**
	comp=E,33nm,1.0s,mb4.8							
GNI	**Garni**	**21.10**	**288**	P		**P**	**19 11 16.5**	**+1.9**
	comp=E,7.6nm,0.5s,mb4.5,baz=360,slow=8.9,SNR=7.1							
GNI	**Garni**	**21.10**	**288**	⇓*e*P		**P**	**19 11 16.8**	**+2.2**
GNI				pmax	pmax			
	comp=Z,29nm,1.0s							
MIB	**Mutribah**	**21.14**	**258**	*e*P		**P**	**19 11 14.6**	**-0.5**
MIB				AMb	AMB		19 11 17.4	
	comp=Z,185nm,0.9s,mb5.6							
RDF	**Al-Radifah**	**21.36**	**256**	*e*P		**P**	**19 11 17.1**	**-0.4**
RDF				AMb	AMB		19 11 20.4	
	comp=Z,80nm,0.7s,mb5.4							
NAY	**Al-Naaiem**	**21.45**	**257**	*e*P		**P**	**19 11 17.9**	**-0.6**
NAY				AMb	AMB		19 11 20.0	
	comp=Z,90nm,0.6s,mb5.5							
SVE	**Sverdlovsk**	**21.47**	**344**	*e*P		**P**	**19 11 17.2**	**-1.1**
SVE				pmax	pmax			
	comp=Z,27nm,1.2s,mb4.7							
ARU	**Arti**	**21.62**	**341**	⇑*i*P		**P**	**19 11 19.6**	**-0.3**
	comp=Z,31nm,1.0s,mb4.8							
ARU				*e*			19 12 22.0	
ARU	**Arti**	**21.62**	**341**	*c i*P		**P**	**19 11 19.8**	**-0.1**
ARU				*e*PPP			19 12 01.2	
ARU				S		**S**	**19 15 04.8**	**-0.8**
ARU				pmax	pmax			
	comp=Z,30nm,1.2s,mb4.7							
ZEI	**Tsey**	**21.92**	**295**	*e*P		**P**	**19 11 25.3**	**+2.3**
ZEI				pmax	pmax			
	comp=Z,22nm,0.6s,mb4.9							
GTA	**Gaotai**	**22.60**	**74**	*e*P		**P**	**19 11 31.1**	**+1.8**
GTA				pmax	pmax			
	comp=Z,14nm,1.1s,mb4.4							
KIV	**Kislovodsk**	**22.96**	**298**	*e*P		**P**	**19 11 32.6**	**+0.1**
	comp=Z,19nm,0.6s,mb4.8							
KIV	**Kislovodsk**	**22.96**	**298**	*c i*P		**P**	**19 11 32.9**	**+0.4**
KIV				*i* *PP			19 12 07.0	
KIV				pmax	pmax			
	comp=Z,11nm,1.0s,mb4.3							
VRHR	**Novokhopersk**	**25.63**	**314**	*e*P		**P**	**19 11 56.0**	**-0.6**
VRHR				*e*			19 12 42.3	
VRHR				pmax	pmax			
	comp=N,10.0nm,0.8s							
VRHR				pmax	pmax			
	comp=E,10.0nm,0.8s							
VRHR				pmax	pmax			
	comp=Z,20nm,0.8s,mb4.8							
LZH	**Lanzhou**	**26.15**	**81**	*e*P		**P**	**19 12 06.0**	**+4.5**
LZH				pP	pP		19 12 43.0	+1.9
LZH				sP	sP		19 13 11.0	+7.1
LZH				pmax	pmax			
	comp=Z,13nm,1.0s,mb4.5							
ZAK	**Zakamensk**	**26.74**	**49**	*e*P		**P**	**19 12 07.7**	**+1.1**
ZAK				pmax	pmax			
	comp=Z,1.0nm,0.8s,mb3.5							
VORD	**Divnogorie**	**26.95**	**312**	*e*P		**P**	**19 12 08.5**	**0.0**
VORD				*e*	pP		19 12 50.6	+2.4
VORD				pmax	pmax			
	comp=E,7.0nm,0.4s							
VORD				pmax	pmax			
	comp=Z,6.0nm,0.4s,mb4.6							
VORD				pmax	pmax			
	comp=N,10.0nm,0.8s							
CD2	**Chengdu**	**27.49**	**92**	P		**P**	**19 12 15.2**	**+1.7**
CD2				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.5							
CD2				pmax	pmax			
	comp=Z,30nm,4.2s							
SONM	**Songino Array**	**28.08**	**55**	P		**P**	**19 12 19.2**	**+0.7**
	comp=Z,2.7nm,0.8s,mb3.9,baz=265,slow=9.7,SNR=17							
SONM				pP	pP		19 13 03.2	+4.9
	comp=Z,3.2nm,0.8s,baz=255,slow=9.7,SNR=7.7							
SONM	**Songino Array**	**28.08**	**55**	P		**P**	**19 12 19.2**	**+0.7**
SONM				*PP	pP		19 13 03.2	+4.8
SONM				pmax	pmax			
	comp=Z,3.0nm,0.8s							
SONM				pmax	pmax			
	comp=Z,3.0nm,0.8s							
ULN	**Ulaanbaatar**	**28.52**	**55**	*e*P		**P**	**19 12 22.1**	**-0.3**
	comp=Z,3.1nm,0.9s,mb3.9							
ULN	**Ulaanbaatar**	**28.52**	**55**	*e*P		**P**	**19 12 22.1**	**-0.3**
ULN				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb3.9							
KMI	**Kunming**	**29.18**	**104**	P		**P**	**19 12 29.9**	**+1.3**
KMI				pP	pP		19 13 13.1	+4.5
KMI				sP	sP		19 13 34.9	+3.7
KMI				S	**S**		**19 17 04.5**	**-1.8**
KMI				sS	sS		19 18 20.5	+2.9
KMI				SS	SS		19 18 55.7	-23
KMI				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.2							
KMI				pmax	pmax			
	comp=Z,82nm,4.2s							
KMI				LR	LR			
	comp=N,94nm,19.5s							
KMI				LR	LR			
	comp=E,88nm,19.5s							
KMI				LR	LR			
	comp=Z,80nm,13.2s							
MMAI	**Mount Meron

KLMR pmax pmax
comp=Z,27nm,1.2s,mb4.7
GYA Guiyang 31.64 98 *e*P **P** **19 12 50.6 +0.5**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
ENH Enshi 32.33 90 *e*P **P** **19 12 56.5 +0.4**
comp=Z,11nm,0.7s,mb4.5
AKASG Malin Array Be 33.08 309 P **P** **19 13 02.2 -0.1**
AKASG Malin Array Be 33.08 309 P **P** **19 13 02.2 -0.1**
comp=Z,9.9nm,0.3s,mb4.8,baz=82,slow=7.6,SNR=73
AKASG Malin Array Be 33.08 309 P **P** **19 13 02.2 -0.1**
AKASG pmax pmax
comp=Z,10.0nm,0.3s
KIEV Kiev 33.08 309 *e*P **P** **19 13 02.0 -0.4**
comp=Z,19nm,0.6s,mb4.8
KIEV *e*PP PP 19 14 14.9 -6.3
KIEV Kiev 33.08 309 *e*P **P** **19 13 02.0 -0.4**
KIEV *e* 19 14 14.9
KIEV pmax pmax
comp=Z,19nm,0.6s,mb4.8
VRI Vrincioaia 34.39 300 ⇓P **P** **19 13 15.5 +1.8**
VRI Vrincioaia 34.39 300 ⇓*i*P **P** **19 13 15.5 +1.8**
PLOR Plostina 34.45 300 ⇑P **P** **19 13 16.5 +2.3**
PLOR Plostina 34.45 300 ⇑*i*P **P** **19 13 16.5 +2.3**
TESR 34.45 301 ⇑P **P** **19 13 15.2 +1.0**
TESR 34.45 301 ⇑*i*P **P** **19 13 15.2 +1.0**
MLR Muntele Rosu 34.95 299 ⇑P **P** **19 13 20.9 +2.4**
MLR Muntele Rosu 34.95 299 ⇑*i*P **P** **19 13 20.9 +2.4**
BJI Beijing 35.09 70 P **P** **19 13 19.2 -0.6**
BJI pmax pmax
comp=Z,5.0nm,0.4s,mb4.4
NACGM Naroch 35.32 316 *e* **P** **19 13 19.0 -2.5**
BURAR Bucovina Array 35.44 303 ⇓P **P** **19 13 23.8 +1.1**
BURAR Bucovina Array 35.44 303 ⇓*i*P **P** **19 13 23.8 +1.1**
BUR08 Bucovina Ar. S 35.45 303 *e*P **P** **19 13 23.6 +0.8**
VOIR 35.58 299 ⇓P **P** **19 13 25.3 +1.4**
VOIR 35.58 299 ⇓*i*P **P** **19 13 25.3 +1.4**
JOF Joensuu 35.91 330 *e*P **P** **19 13 25.9 -0.5**
JOF pmax pmax
comp=Z,30nm,0.3s,mb5.3
JOF Joensuu 35.91 330 *e*p **P** **19 13 25.9 -0.5**
comp=Z,30nm,0.3s,mb5.3
VSU Vasula 36.26 321 *c*e**P** **P** **19 13 29.4 -0.1**
VSU pmax pmax
comp=Z,38nm,0.7s,mb5.0
LVV L'vov 36.30 307 *e*P **P** **19 13 29.6 -0.3**
VTS Vitosha 37.14 294 ⇑P **P** **19 13 39.0 +1.9**
VTS Vitosha 37.14 294 ⇑*i*P **P** **19 13 39.0 +1.9**
DRGR 37.15 301 ⇓P **P** **19 13 38.7 +1.5**
DRGR 37.15 301 ⇓*i*P **P** **19 13 38.7 +1.5**
GZR Gura Zlata 37.18 299 ⇑P **P** **19 13 38.7 +1.3**
GZR Gura Zlata 37.18 299 ⇑*i*P **P** **19 13 38.7 +1.3**
TRPA Tarpa 37.24 304 ⇓*i*P **P** **19 13 39.8 +1.9**
UZH Uzhgorod 37.41 304 *e*P **P** **19 13 39.1 -0.2**
FINES FINESS Array B 37.54 326 P **P** **19 13 40.5 +0.3**
comp=Z,21nm,0.5s,mb4.9,baz=121,slow=9.2,SNR=142
FINES FINESS Array B 37.54 326 P **P** **19 13 40.5 +0.3**
FINES pmax pmax
comp=Z,21nm,0.5s
APA Apatity 37.64 337⇑ *e*P **P** **19 13 40.4 -0.6**
APA pmax pmax
comp=Z,45nm,1.5s,mb4.8
APA MLR MLR
comp=Z,400nm,17.0s
KAF Kangasniemi 37.68 327 *e*P **P** **19 13 41.3 -0.1**
comp=Z,8.8nm,0.4s,mb4.6
KAF Kangasniemi 37.68 327 *e*P **P** **19 13 41.3 -0.1**
KAF pmax pmax
comp=Z,9.0nm,0.4s,mb4.7
KAF Kangasniemi 37.68 327 *e*p **P** **19 13 41.3 -0.1**
comp=Z,8.8nm,0.4s,mb4.6,baz=112,slow=8.2
BZS Buzias 37.98 300 ⇓P **P** **19 13 45.5 +1.3**
BZS Buzias 37.98 300 ⇓*i*P **P** **19 13 45.5 +1.4**
GVD Gavdhos 38.08 282 *e*P **P** **19 13 44.5 -0.6**
comp=Z,126nm,0.9s,mb5.5
STHS Stebnicka Huta 38.10 306 *e*P **P** **19 13 45.9 +0.8**
comp=Z,4.8nm,0.7s,mb4.1
STHS Stebnicka Huta 38.10 306 *e*P **P** **19 13 45.9 +0.8**
STHS pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
STHS Stebnicka Huta 38.10 306 *e*P **P** **19 13 45.9 +0.8**
NIE Niedzica 38.71 306 *e*P **P** **19 13 51.9 +1.8**
PSZ Piszkesteto 39.02 303 *e*P **P** **19 13 52.9 +0.2**
comp=Z,4.3nm,0.8s,mb4.0
PSZ Piszkesteto 39.02 303 ⇑P **P** **19 13 53.6 +0.8**
PSZ Piszkesteto 39.02 303 ⇑*i*P **P** **19 13 53.6 +0.8**
OJC Ojcow 39.04 307 *e*P **P** **19 13 52.8 -0.1**
NJ2 Nanjing 39.22 82 *e*P **P** **19 13 55.6 +1.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
VYHS Vyhne 39.70 304 *e*P **P** **19 13 59.3 +0.9**
comp=Z,6.2nm,1.4s,mb3.9
VYHS Vyhne 39.70 304 *e*P **P** **19 13 59.3 +0.9**
VYHS pmax pmax
comp=Z,6.0nm,1.4s,mb3.8
VYHS Vyhne 39.70 304 *e*P **P** **19 13 59.2 +0.8**
KOLL Kolacno 39.99 304 *e*P **P** **19 14 03.2 +2.5**
KOLL Kolacno 39.99 304 *e*P **P** **19 14 03.2 +2.5**
PKSM Moragy 40.00 301 ⇓P **P** **19 14 01.9 +1.0**
PKSM Moragy 40.00 301 ⇓*i*P **P** **19 14 01.9 +1.1**
OKC Ostrava-Krasne 40.11 306 *e*P **P** **19 14 02.6 +0.9**
OKC Ostrava-Krasne 40.11 306 *e*P **P** **19 14 02.6 +0.9**
GOTU Gotland 40.32 319 P **P** **19 14 03.3 0.0**
GOTU Gotland 40.32 319 P **P** **19 14 03.2 -0.1**
MORC Moravsky Berou 40.50 306 *e*P **P** **19 14 05.5 +0.6**
comp=Z,4.5nm,0.6s,mb4.1
MORC Moravsky Berou 40.50 306 *e*P **P** **19 14 05.6 +0.7**
MORC pmax pmax
comp=Z,5.0nm,0.6s,mb4.1
MORC Moravsky Berou 40.50 306⇑ *i*P **P** **19 14 05.9 +1.0**
NRTU Norrtaelje 40.61 322 P **P** **19 14 05.8 +0.1**
NRTU Norrtaelje 40.61 322 P **P** **19 14 05.8 +0.1**
BURU Burvik 40.62 330 P **P** **19 14 06.0 +0.3**
GRAU Graesoe 40.78 323 P **P** **19 14 07.0 -0.1**
KEV Kevo 40.80 338 *e*P **P** **19 14 07.0 -0.1**
comp=Z,16nm,0.8s,mb4.5
KEV Kevo 40.80 338 *e*P **P** **19 14 07.0 -0.1**
KEV pmax pmax
comp=Z,17nm,0.8s,mb4.5
KEV Kevo 40.80 338 *e*p **P** **19 14 06.4 -0.7**
comp=Z,12nm,0.6s,mb4.5
NYNU Nynaeshamn 40.81 321 P **P** **19 14 07.2 -0.1**
NYNU Nynaeshamn 40.81 321 P **P** **19 14 07.2 -0.1**
FLYU Flymyra 41.06 322 P **P** **19 14 09.3 -0.1**
FLYU Flymyra 41.06 322 P **P** **19 14 09.3 -0.1**
BYXU Byxelkrok 41.11 318 P **P** **19 14 09.6 -0.1**
BYXU Byxelkrok 41.11 318 P **P** **19 14 09.6 -0.1**
VRAC Vranov 41.14 306 ⇓P **P** **19 14 11.3 +1.1**
VRAC Vranov 41.14 306 ⇓*i*P **P** **19 14 11.3 +1.1**
ARCES ARCESS Array B 41.15 337 P **P** **19 14 10.5 +0.6**
ARCES sP sP 19 15 19.5 +5.5
ARCES ARCESS Array B 41.15 337 P **P** **19 14 10.5 +0.6**
comp=Z,17nm,0.5s,mb4.7,baz=114,slow=8.8,SNR=138
ARCES sP sP 19 15 19.5 +5.5
comp=Z,12nm,0.9s,baz=126,slow=7.6,SNR=4.4
ARCES ARCESS Array B 41.15 337 P **P** **19 14 10.5 +0.6**
ARCES *SP sP 19 15 19.5 +5.4
ARCES pmax pmax
comp=Z,17nm,0.5s
ARE0 ARCESS Array S 41.15 337 *e*P **P** **19 14 10.2 +0.3**
DPC Dobruska-Polom 41.27 307 *e*P **P** **19 14 12.3 +1.1**
DPC MLR MLR
comp=Z,200nm,17.0s
DPC Dobruska-Polom 41.27 307 *e*P **P** **19 14 12.3 +1.1**
DPC AMS AMS 19 46 40.0
comp=Z,200nm,17.0s
SVAU Svanoeiden 41.33 329 P **P** **19 14 11.8 +0.3**
ASPU Aespoe 41.34 318 P **P** **19 14 11.5 -0.2**
CN2 Changchun 41.35 63 *e*P **P** **19 14 12.0 +0.1**
VSTU Vaestervik 41.40 318 P **P** **19 14 12.1 0.0**
VSTU Vaestervik 41.40 318 P **P** **19 14 12.1 0.0**
BACU Backbrunna 41.40 322 P **P** **19 14 11.8 -0.3**
BACU Backbrunna 41.40 322 P **P** **19 14 11.8 -0.3**
VIKU Vikbolandet 41.41 320 P **P** **19 14 12.2 0.0**
VIKU Vikbolandet 41.41 320 P **P** **19 14 12.2 0.0**
LILU Lilltraesk 41.46 330 P **P** **19 14 12.7 +0.2**
UPC Upice 41.46 308 *e*P **P** **19 14 13.7 +1.0**
UPC Upice 41.46 308 *e*P **P** **19 14 13.7 +1.0**
IGGU Iggoen 41.48 323 P **P** **19 14 12.6 -0.1**
HEMU Hemsoen 41.52 326 P **P** **19 14 13.0 0.0**
BREU Bredtraesk 41.58 328 P **P** **19 14 13.8 +0.3**
OSKU Oskarshamn 41.59 318 P **P** **19 14 13.4 -0.3**
OSKU Oskarshamn 41.59 318 P **P** **19 14 13.4 -0.3**

ARNU Arnoeviken 41.61 325 P **P** **19 14 13.8 0.0**
KTK1 Kautokeino 41.62 336 *e*P **P** **19 14 14.0 +0.1**
ESKU Eskilstuna 41.67 321 P **P** **19 14 14.4 +0.1**
ESKU Eskilstuna 41.67 321 P **P** **19 14 14.4 +0.1**
CONA Conrad Observa 41.73 304⇑ *i*P **P** **19 14 15.8 +0.8**
comp=Z,15nm,1.0s,mb4.4
TREC Trest 41.86 306 *e*P **P** **19 14 17.1 +1.1**
TREC MLR MLR
comp=Z,200nm,14.9s
TREC Trest 41.86 306 *e*P **P** **19 14 17.1 +1.1**
TREC AMS AMS 19 47 10.0
comp=Z,200nm,14.9s
HASU Hassela 42.05 325 P **P** **19 14 17.3 -0.1**
BSD Bornholm Skovb 42.12 314 *e*P **P** **19 14 16.9 -1.1**
BSD pmax pmax
comp=Z,19nm,0.8s,mb4.6
BSD MLR MLR
comp=Z,240nm,18.0s
BSD Bornholm Skovb 42.12 314 *i* P **P** **19 14 16.9 -1.1**
comp=Z,19nm,0.8s,mb4.6
BSD
comp=Z,240nm,18.0s
FALU Falun 42.13 323 P **P** **19 14 17.9 -0.1**
FALU Falun 42.13 323 P **P** **19 14 17.8 -0.2**
VXJU Vaexsjoe 42.20 317 S **P** **19 14 06.3 -12**
VXJU S 19 14 06.3
VXJU Vaexsjoe 42.20 317 P **P** **19 14 17.8 -0.8**
PVCC Panska Ves 42.38 308 AMS AMS 19 48 40.0
comp=Z,200nm,17.1s
SOKA Soboth 42.42 302⇑ *i*P **P** **19 14 21.3 +0.7**
comp=Z,12nm,0.5s,mb4.5
PRU Pruhonice 42.43 307 *e*P **P** **19 14 22.2 +1.6**
PRU MLR MLR
comp=Z,200nm,13.3s
PRU Pruhonice 42.43 307 *e*P **P** **19 14 22.2 +1.6**
PRU AMS AMS 19 49 00.0
comp=Z,200nm,13.3s
TIP Timpagrande 42.58 291 *e*P **P** **19 14 21.6 -0.3**
comp=Z,4.6nm,0.9s,mb3.9
BRG Berggiesshubel 42.76 308 *e*P **P** **19 14 23.6 +0.4**
comp=Z,9.0nm,0.7s,mb4.3
BRG Berggiesshubel 42.76 308 *e*P **P** **19 14 23.7 +0.6**
comp=Z,9.2nm,0.7s,mb4.3
BRG *e* pP 19 15 09.8 +4.5
comp=Z,4.7nm,0.8s
MOA Molln 42.80 304⇑ *i*P **P** **19 14 24.1 +0.4**
comp=Z,9.3nm,0.9s,mb4.2
GEC2 GERESS Array S 43.07 305 *e*P **P** **19 14 26.3 +0.5**
comp=Z,6.0nm,1.1s,mb3.9
GEC2 GERESS Array S 43.07 305 *e*P **P** **19 14 26.3 +0.5**
GEC2 pmax pmax
comp=Z,6.0nm,1.1s,mb3.9
CUC Castrocucco 43.09 292 *e*P **P** **19 14 26.6 +0.5**
comp=Z,17nm,0.8s,mb4.5
KHC Kasperske Hory 43.13 306 *e*P **P** **19 14 27.1 +0.9**
KHC MLR MLR
comp=Z,200nm,15.4s
KHC Kasperske Hory 43.13 306 *e*P **P** **19 14 27.1 +0.9**
KHC AMS AMS 19 49 50.0
comp=Z,200nm,15.4s
TRO Tromso 43.28 336 *e*P **P** **19 14 27.2 +0.1**
TRO AMB AMB 19 14 31.3
comp=Z,30nm,2.4s,mb4.3
CLL Collm 43.32 309 *e*P **P** **19 14 27.8 +0.1**
comp=Z,5.0nm,0.9s,mb3.9
CLL Collm 43.32 309⇑ *i*P **P** **19 14 27.9 +0.2**
comp=Z,5.0nm,0.9s,mb3.9
CLL Collm 43.32 309⇑ *i*P **P** **19 14 27.9 +0.2**
CLL pmax pmax
comp=Z,5.0nm,0.9s,mb3.9
CLL Collm 43.32 309⇑ *i*P **P** **19 14 27.9 +0.2**
comp=Z,5.0nm,0.9s,mb3.9
CLL *e*pP pP 19 15 13.0 +3.1
CLL *e*PP PP 19 16 11.0 -1.4
KBA Koelnbreinsper 43.52 303⇑ *i*P **P** **19 14 29.8 +0.4**
comp=Z,3.7nm,0.5s,mb4.0
WET Wettzell 43.58 306 *e*P **P** **19 14 30.5 +0.7**
comp=Z,3.0nm,1.1s,mb3.5
TANN Tannenbergstha 43.73 308 *e*P **P** **19 14 31.5 +0.5**
comp=Z,9.0nm,1.6s,mb3.9
NKC Novy Kostel 43.75 307 *e*P **P** **19 14 31.7 +0.5**
NKC Novy Kostel 43.75 307 *e*P **P** **19 14 31.7 +0.5**
GUNZ Gunzen 43.82 308 *e*P **P** **19 14 32.6 +0.9**
comp=Z,23nm,1.8s,mb4.2
WERD Werda 43.83 308 *e*P **P** **19 14 32.4 +0.7**
comp=Z,5.0nm,0.9s,mb3.8
MOR8 Moi Rana 43.85 331 *e*P **P** **19 14 31.2 -0.5**
MOR8 AMB AMB 19 14 32.0
comp=Z,54nm,0.6s,mb5.0
MOX Moxa 44.25 308 *e*P **P** **19 14 35.5 +0.4**
comp=Z,5.0nm,0.8s,mb3.9
YHNB Yeheng 44.25 91 P **P** **19 14 37.3 +1.8**
comp=Z,15nm,1.1s,mb4.2
STRU Stroemstad 44.33 320 P **P** **19 14 35.1 -0.5**
STRU Stroemstad 44.33 320 P **P** **19 14 35.1 -0.5**
NB2 NORSAR Subarra 44.45 323 P **P** **19 14 35.9 -0.6**
comp=Z,40nm,0.5s,mb5.0,baz=96,slow=7.9
NOA NORSAR Array B 44.45 323 P **P** **19 14 35.8 -0.8**
comp=Z,28nm,0.4s,mb4.9,baz=95,slow=7.9,SNR=178
NOA NORSAR Array B 44.45 323 P **P** **19 14 35.8 -0.7**
NOA pmax pmax
comp=Z,28nm,0.4s
NAO01 NORSAR Array S 44.59 323 *e*P **P** **19 14 36.9 -0.8**
comp=Z,7.9nm,0.4s,mb4.4
GRA1 Grafenberg Arr 44.60 307 *e*P **P** **19 14 39.5 +1.6**
comp=Z,16nm,1.0s,mb4.3
GRA1 LR LR
comp=Z,200nm,19.4s
GRF Grafenberg Arr 44.60 307 *e*P **P** **19 14 39.5 +1.6**
comp=Z,16nm,1.0s,mb4.3
GRF *e*L 19 50 08.9
comp=Z,167nm,19.4s
GRF Grafenberg Arr 44.60 307 *e*P **P** **19 14 39.5 +1.6**
GRF pmax pmax
comp=Z,16nm,1.0s,mb4.3
GRF MLR MLR
comp=Z,200nm,19.4s
KSRS Korea Array 44.62 71 P **P** **19 14 38.2 0.0**
comp=Z,2.0nm,0.5s,mb3.7,baz=272,slow=7.2,SNR=9.4
KSRS Korea Array 44.62 71 P **P** **19 14 38.3 +0.1**
KSRS pmax pmax
comp=Z,2.0nm,0.5s,mb3.7
WTTA Wattenberg 44.65 303⇑ *i*P **P** **19 14 37.8 -0.5**
comp=Z,3.1nm,0.8s,mb4.3
FUR Furstenfeldbru 44.76 305 *e*P **P** **19 14 40.1 +0.9**
comp=Z,27nm,1.2s,mb4.5
FUR Furstenfeldbru 44.76 305 *e*P **P** **19 14 40.1 +0.9**
FUR pmax pmax
comp=Z,27nm,1.2s,mb4.5
BSEG Bad Segeberg 44.80 313 *e*P **P** **19 14 40.3 +0.9**
comp=Z,15nm,0.8s,mb4.4
BSEG Bad Segeberg 44.80 313 *e*P **P** **19 14 40.3 +0.9**
BSEG pmax pmax
comp=Z,15nm,0.8s,mb4.4
CLZ Clausthal 44.92 310 *e*P **P** **19 14 41.1 +0.7**
comp=Z,9.0nm,0.9s,mb4.1
CLZ Clausthal 44.92 310 *e*P **P** **19 14 41.1 +0.7**
CLZ pmax pmax
comp=Z,9.0nm,0.9s,mb4.1
MOTA Moosalm 44.99 303⇑ *i*P **P** **19 14 40.4 -0.6**
comp=Z,7.6nm,0.8s,mb4.1
NRDL Niedersach Rie 45.02 311 *e*P **P** **19 14 40.7 -0.5**
comp=Z,9.0nm,0.9s,mb4.1
KONO Kongsberg 45.16 321 *e*P **P** **19 14 41.7 -0.5**
comp=Z,12nm,0.3s,mb4.7
KONO Kongsberg 45.16 321 *e*P **P** **19 14 41.7 -0.5**
KONO pmax pmax
comp=Z,12nm,0.3s,mb4.7
FETA Feichten 45.30 303⇑ *i*P **P** **19 14 43.1 -0.3**
comp=Z,4.6nm,0.5s,mb4.1
TIXI Tiksi 45.59 22 *e*P **P** **19 14 44.5 -0.9**
comp=Z,3.5nm,0.3s,mb4.2
TIXI Tiksi 45.59 22 *e*P **P** **19 14 44.5 -0.9**
TIXI pmax pmax
comp=Z,3.0nm,0.3s,mb4.1
DAVA Damuels 45.82 304⇑ *i*P **P** **19 14 47.3 -0.2**
comp=Z,23nm,0.5s,mb4.8
IBBN Ibbenburen 46.48 311 *e*P **P** **19 14 53.2 +0.6**
comp=Z,18nm,1.2s,mb4.3
BFO Black Forest 46.68 305 *e*P **P** **19 14 53.9 -0.3**
comp=Z,7.0nm,1.0s,mb4.0
BFO Black Forest 46.68 305 *e*P **P** **19 14 53.9 -0.3**
BFO pmax pmax
comp=Z,7.0nm,1.0s,mb4.0
BUG Bochum--Univer 46.88 310 *e*P **P** **19 14 57.1 +1.4**
comp=Z,33nm,1.6s,mb4.4

LANF Langenberg 46.91 306 *e*P **P** **19 14 56.9 +0.9**
FELD Feldberg im Sc 46.97 305 *e*P **P** **19 14 56.6 +0.1**
HABR Khabarovsk 47.16 54*c e*P **P** **19 14 56.3 -1.6**
HABR *e**PP pP 19 15 43.9 +3.1
HABR *e**SP sP 19 16 09.3 +6.5
HABR *e* 19 16 49.9
HABR *e*PPP 19 17 43.6
HABR *e*S **S** **19 21 31.3 -3.8**
HABR *e**SS sS 19 22 56.0 +5.7
HABR *e* 19 24 28.5
HABR *e*SS SS 19 25 03.6 -1.0
HABR pmax pmax
comp=N,31nm,2.4s
HABR pmax pmax
comp=Z,46nm,2.5s,mb4.4
HABR pmax pmax
comp=E,108nm,3.1s
RUP Ruppelstein 47.27 307 *e*P **P** **19 14 58.8 0.0**
CDF Champ du Feu 47.35 305 *e*P **P** **19 14 59.4 0.0**
comp=E,8.4nm,0.9s,mb3.8
CDF Champ du Feu 47.35 305 *e*P **P** **19 14 59.4 0.0**
comp=E,4.2nm,0.9s,mb3.8
PGF Pioggiola 47.44 297 *e*P **P** **19 14 59.5 -0.7**
comp=E,15nm,0.6s,mb4.4
PGF Pioggiola 47.44 297 *e*P **P** **19 14 59.5 -0.7**
comp=E,12nm,0.6s,mb4.4
PGF Pioggiola 47.44 297 *e*P **P** **19 14 59.5 -0.7**
PGF pmax pmax
comp=Z,12nm,0.6s,mb4.4
MOF Molkenrain 47.55 305 *e*P **P** **19 15 01.2 +0.3**
HINF Hinteralfeld 47.74 305 *e*P **P** **19 15 02.0 -0.4**
comp=Z,21nm,1.1s,mb4.1
HINF Hinteralfeld 47.74 305 *e*P **P** **19 15 02.0 -0.4**
comp=Z,11nm,1.1s,mb4.1
HINF Hinteralfeld 47.74 305 *e*P **P** **19 15 02.0 -0.4**
HINF pmax pmax
comp=Z,11nm,1.1s,mb4.1
WLF Walferdange 47.86 307 P **P** **19 15 03.9 +0.7**
comp=Z,17nm,1.5s,mb4.2
VSL Villasalto 48.00 293 *e*P **P** **19 15 03.7 -0.8**
HAU Haudompre 48.04 305 *e*P **P** **19 15 04.3 -0.4**
comp=Z,30nm,1.0s,mb4.3
HAU Haudompre 48.04 305 *e*P **P** **19 15 04.3 -0.4**
comp=Z,15nm,1.0s,mb4.3
HAU Haudompre 48.04 305 *e*P **P** **19 15 04.3 -0.4**
HAU pmax pmax
comp=Z,15nm,1.0s,mb4.3
SAOF Saorge 48.11 300 *e*P **P** **19 15 05.5 +0.2**
AUTN L'Aution 48.19 300 *e*P **P** **19 15 06.6 +0.7**
SBF Sospel 48.22 299 *e*P **P** **19 15 06.1 0.0**
comp=Z,47nm,0.7s,mb4.6
SBF Sospel 48.22 299 *e*P **P** **19 15 06.1 0.0**
comp=Z,24nm,0.7s,mb4.6
SBF Sospel 48.22 299 *e*P **P** **19 15 06.1 0.0**
SBF pmax pmax
comp=Z,24nm,0.7s,mb4.6
THEF They Montfort 48.23 305 *e*P **P** **19 15 06.3 +0.1**
LUCF Luceram 48.27 300 *e*P **P** **19 15 07.2 +0.7**
LPG La Plagne 48.30 302 *e*P **P** **19 15 06.9 +0.2**
comp=Z,10nm,0.3s,mb4.3
LPG La Plagne 48.30 302 *e*P **P** **19 15 06.9 +0.2**
comp=Z,5.2nm,0.3s,mb4.3
LPG La Plagne 48.30 302 *e*P **P** **19 15 06.9 +0.2**
LPG pmax pmax
comp=Z,5.0nm,0.3s,mb4.3
LPL La Plagne 48.31 302 *e*P **P** **19 15 07.0 +0.2**
comp=Z,18nm,0.6s,mb4.3
LPL La Plagne 48.31 302 *e*P **P** **19 15 07.0 +0.2**
comp=Z,8.8nm,0.6s,mb4.3
LPL La Plagne 48.31 302 *e*P **P** **19 15 07.0 +0.2**
LPL pmax pmax
comp=Z,9.0nm,0.6s,mb4.3
TOUF Mont Tournerai 48.31 300 *e*P **P** **19 15 07.4 +0.6**
RSL Roselend 48.35 302 *e*P **P** **19 15 07.5 +0.4**
MVIF Mont Vial 48.41 300 *e*P **P** **19 15 08.2 +0.6**
MBDF Montbardon 48.47 301 *e*P **P** **19 15 07.4 -0.6**
comp=Z,25nm,0.6s,mb4.4
MBDF Montbardon 48.47 301 *e*P **P** **19 15 07.4 -0.6**
comp=Z,13nm,0.6s,mb4.4
MBDF Montbardon 48.47 301 *e*P **P** **19 15 07.4 -0.6**
MBDF pmax pmax
comp=Z,13nm,0.6s,mb4.4
CABF La Chapelle 48.50 303 *e*P **P** **19 15 08.2 0.0**
KBS Kingsbay 48.57 347 *e*P **P** **19 15 08.9 +0.6**
comp=Z,13nm,0.6s,mb4.4
KBS *e*PP PP 19 16 59.3 -3.5
KBS Kingsbay 48.57 347*c i*P **P** **19 15 08.8 +0.5**
KBS pmax pmax
comp=Z,29nm,1.2s,mb4.5
GIVF Givet 48.63 308 *e*P **P** **19 15 09.5 +0.4**
comp=Z,38nm,1.1s,mb4.3
GIVF Givet 48.63 308 *e*P **P** **19 15 09.5 +0.4**
comp=Z,19nm,1.1s,mb4.3
GIVF Givet 48.63 308 *e*P **P** **19 15 09.5 +0.4**
GIVF pmax pmax
comp=Z,19nm,1.1s,mb4.3
DOU Dourbes 48.77 308 P **P** **19 15 11.5 +1.2**
comp=Z,12nm,2.6s,mb3.8
MEZF Maizieres J'vi 48.79 306 *e*P **P** **19 15 10.5 +0.1**
comp=Z,41nm,1.0s,mb4.4
MEZF Maizieres J'vi 48.79 306 *e*P **P** **19 15 10.5 +0.1**
comp=Z,41nm,1.0s,mb4.7
FRF La Foret Royal 48.85 299 *e*P **P** **19 15 10.4 -0.5**
comp=Z,18nm,0.6s,mb4.3
FRF La Foret Royal 48.85 299 *e*P **P** **19 15 10.4 -0.5**
comp=Z,9.2nm,0.6s,mb4.3
FRF La Foret Royal 48.85 299 *e*P **P** **19 15 10.4 -0.5**
FRF pmax pmax
comp=Z,9.0nm,0.6s,mb4.3
SNF Seneffe 48.89 309 P **P** **19 15 12.1 +1.0**
LMR La Mourre 49.01 299 *e*P **P** **19 15 11.3 -0.8**
comp=Z,24nm,1.1s,mb4.2
LMR La Mourre 49.01 299 *e*P **P** **19 15 11.3 -0.8**
comp=Z,12nm,1.1s,mb4.1
LMR La Mourre 49.01 299 *e*P **P** **19 15 11.3 -0.8**
LMR pmax pmax
comp=Z,12nm,1.1s,mb4.1
BAIF Baives 49.02 308 *e*P **P** **19 15 12.5 +0.3**
comp=Z,27nm,1.0s,mb4.2
BAIF Baives 49.02 308 *e*P **P** **19 15 12.5 +0.3**
comp=Z,14nm,1.0s,mb4.2
BAIF Baives 49.02 308 *e*P **P** **19 15 12.5 +0.3**
BAIF pmax pmax
comp=Z,14nm,1.0s,mb4.2
ORIF Oris-en-Rattie 49.04 301 *e*P **P** **19 15 11.4 -1.0**
comp=Z,6.4nm,0.7s,mb3.8
ORIF Oris-en-Rattie 49.04 301 *e*P **P** **19 15 11.4 -1.0**
comp=Z,3.2nm,0.7s,mb3.8
KMBO Kilima Mbogo 49.08 228 *e*P **P** **19 15 13.5 +0.5**
comp=Z,4.6nm,0.8s,mb3.9
KMBO Kilima Mbogo 49.08 228 P **P** **19 15 14.2 +1.3**
comp=Z,4.7nm,0.8s,mb3.9,baz=359,slow=24,SNR=18
KMBO Kilima Mbogo 49.08 228 P **P** **19 15 14.3 +1.3**
KEST Kesra 49.24 289 P **P** **19 15 14.8 +0.8**
KEST Kesra 49.24 289 P **P** **19 15 14.8 +0.8**
comp=Z,6.5nm,0.6s,mb4.1,baz=13,slow=1.0,SNR=39
SMRF Simiane la Rot 49.49 300 *e*P **P** **19 15 15.5 -0.3**
comp=Z,19nm,1.1s,mb4.0
SMRF Simiane la Rot 49.49 300 *e*P **P** **19 15 15.5 -0.3**
comp=Z,19nm,1.1s,mb4.3
LOR Lormes 49.84 305 *e*P **P** **19 15 17.6 -0.8**
comp=Z,19nm,1.2s,mb4.0
LOR Lormes 49.84 305 *e*P **P** **19 15 17.6 -0.8**
comp=Z,9.6nm,1.2s,mb4.0
LOR Lormes 49.84 305 *e*P **P** **19 15 17.6 -0.8**
LOR pmax pmax
comp=Z,10.0nm,1.2s,mb4.0
SSB Saint Sauveur 49.87 302 *e*P **P** **19 15 18.9 +0.3**
SSB Saint Sauveur 49.87 302 *e*P **P** **19 15 18.6 0.0**
comp=Z,4.1nm,0.4s,mb4.1
SSB Saint Sauveur 49.87 302 *e*P **P** **19 15 18.6 0.0**
SSB pmax pmax
comp=Z,4.0nm,0.4s,mb4.1
VIVF Saint-Julien-l 49.89 301 *e*P **P** **19 15 18.5 -0.2**
comp=Z,27nm,0.7s,mb4.4
VIVF Saint-Julien-l 49.89 301 *e*P **P** **19 15 18.5 -0.2**
comp=Z,13nm,0.7s,mb4.4
VIVF Saint-Julien-l 49.89 301 *e*P **P** **19 15 18.5 -0.2**
VIVF pmax pmax
comp=Z,13nm,0.7s,mb4.4
SMF Signal de Mont 50.00 304 *e*P **P** **19 15 19.1 -0.5**
comp=Z,33nm,0.8s,mb4.4
SMF Signal de Mont 50.00 304 *e*P **P** **19 15 19.1 -0.5**
comp=Z,16nm,0.8s,mb4.4
SMF Signal de Mont 50.00 304 *e*P **P** **19 15 19.1 -0.5**
SMF pmax pmax

comp=Z,16nm,0.8s,mb4.4
SSF Saint Saulge 50.12 304 *e*P **P 19 15 19.8 -0.7**
comp=Z,15nm,1.0s,mb4.0
SSF Saint Saulge 50.12 304 *e*P **P 19 15 19.8 -0.7**
comp=Z,7.5nm,1.0s,mb4.0
SSF Saint Saulge 50.12 304 *e*P **P 19 15 19.8 -0.7**
SSF pmax pmax
comp=Z,8.0nm,1.0s,mb4.0
AVF Avril sur Loir 50.29 304 *e*P **P 19 15 21.3 -0.5**
comp=Z,32nm,0.8s,mb4.4
AVF Avril sur Loir 50.29 304 *e*P **P 19 15 21.3 -0.5**
comp=Z,16nm,0.8s,mb4.4
AVF Avril sur Loir 50.29 304 *e*P **P 19 15 21.3 -0.5**
AVF pmax pmax
comp=Z,16nm,0.8s,mb4.4
PLDF La Plantade 50.32 303 *e*P **P 19 15 22.2 +0.2**
AGO Saint Agoulin 50.63 303 *e*P **P 19 15 24.7 +0.4**
HYF Humbligny 50.65 305 *e*P **P 19 15 24.4 0.0**
LASF Ste Croix 50.66 301 *e*P **P 19 15 24.6 +0.1**
comp=Z,44nm,0.9s,mb4.5
BGF Bois d'Agland 50.69 304 *e*P **P 19 15 24.1 -0.6**
comp=Z,21nm,0.8s,mb4.3
BGF Bois d'Agland 50.69 304 *e*P **P 19 15 24.1 -0.6**
comp=Z,10nm,0.8s,mb4.3
BGF Bois d'Agland 50.69 304 *e*P **P 19 15 24.1 -0.6**
BGF pmax pmax
comp=Z,11nm,0.8s,mb4.3
TCF Toulx Ste Croi 51.18 304 *e*P **P 19 15 28.3 -0.1**
comp=Z,44nm,1.0s,mb4.5
TCF Toulx Ste Croi 51.18 304 *e*P **P 19 15 28.3 -0.1**
comp=Z,22nm,1.0s,mb4.5
TCF Toulx Ste Croi 51.18 304 *e*P **P 19 15 28.3 -0.1**
TCF pmax pmax
comp=Z,22nm,1.0s,mb4.5
CAF Calviac 51.65 302 *e*P **P 19 15 32.0 +0.1**
comp=Z,27nm,0.9s,mb4.4
CAF Calviac 51.65 302 *e*P **P 19 15 32.0 +0.1**
comp=Z,14nm,0.9s,mb4.4
CAF Calviac 51.65 302 *e*P **P 19 15 32.0 +0.1**
CAF pmax pmax
comp=Z,14nm,0.9s,mb4.4
RJF Les Rejaudoux 51.92 303 *e*P **P 19 15 34.0 +0.1**
comp=Z,28nm,1.1s,mb4.3
RJF Les Rejaudoux 51.92 303 *e*P **P 19 15 34.0 +0.1**
comp=Z,14nm,1.1s,mb4.3
RJF Les Rejaudoux 51.92 303 *e*P **P 19 15 34.0 +0.1**
RJF pmax pmax
comp=Z,14nm,1.1s,mb4.3
MTLF Montolieu 52.01 300 *e*P **P 19 15 34.4 -0.2**
comp=Z,18nm,0.7s,mb4.3
MTLF Montolieu 52.01 300 *e*P **P 19 15 34.4 -0.2**
comp=Z,8.8nm,0.7s,mb4.3
MTLF Montolieu 52.01 300 *e*P **P 19 15 34.4 -0.2**
MTLF pmax pmax
comp=Z,9.0nm,0.7s,mb4.3
FLN La Foliniere 52.30 307 *e*P **P 19 15 35.7 -0.9**
comp=Z,100nm,1.5s,mb4.7
FLN La Foliniere 52.30 307 *e*P **P 19 15 35.7 -0.9**
comp=Z,50nm,1.5s,mb4.7
FLN La Foliniere 52.30 307 *e*P **P 19 15 35.7 -0.9**
FLN pmax pmax
comp=Z,50nm,1.5s,mb4.7
LFF La Frestale 52.55 302 *e*P **P 19 15 38.5 0.0**
comp=Z,30nm,0.8s,mb4.5
LFF La Frestale 52.55 302 *e*P **P 19 15 38.5 0.0**
comp=Z,15nm,0.8s,mb4.5
LFF La Frestale 52.55 302 *e*P **P 19 15 38.5 0.0**
LFF pmax pmax
comp=Z,15nm,0.8s,mb4.5
YSS Yuzh-Sakhalins 52.57 55 P **P 19 15 34.0 -4.6**
GRR Gorron 52.64 307 *e*P **P 19 15 38.3 -0.8**
comp=Z,6.8nm,0.4s,mb4.1
GRR Gorron 52.64 307 *e*P **P 19 15 38.3 -0.8**
comp=Z,3.4nm,0.4s,mb4.1
GRR Gorron 52.64 307 *e*P **P 19 15 38.3 -0.8**
GRR pmax pmax
comp=Z,3.0nm,0.4s,mb4.1
MFF Saint Martin d 52.66 305 *e*P **P 19 15 38.4 -0.9**
comp=Z,45nm,1.1s,mb4.5
MFF Saint Martin d 52.66 305 *e*P **P 19 15 38.4 -0.9**
comp=Z,23nm,1.1s,mb4.5
MFF Saint Martin d 52.66 305 *e*P **P 19 15 38.4 -0.9**
MFF pmax pmax
comp=Z,23nm,1.1s,mb4.5
ETOS Mallorca 52.73 296 P **P 19 15 39.9 0.0**
comp=Z,46nm,1.5s,mb4.7
MBAR Mbarara 52.76 235 P **P 19 15 37.6 -2.9**
CSOR Sort 53.06 299 P **P 19 15 43.0 +0.6**
comp=Z,22nm,1.1s,mb4.5
EPF Esparros 53.41 300 *e*P **P 19 15 43.5 -1.3**
comp=Z,12nm,0.7s,mb4.1
EPF Esparros 53.41 300 *e*P **P 19 15 43.5 -1.3**
comp=Z,6.1nm,0.7s,mb4.1
EPF Esparros 53.41 300 *e*P **P 19 15 43.5 -1.3**
EPF pmax pmax
comp=Z,6.0nm,0.7s,mb4.1
EBIE Bielsa 53.66 300 P **P 19 15 47.1 +0.5**
comp=Z,3.3nm,0.4s,mb4.2
SGMF Saint Gilles 53.77 307 *e*P **P 19 15 46.9 -0.4**
comp=Z,69nm,1.2s,mb4.8
SGMF Saint Gilles 53.77 307 *e*P **P 19 15 46.9 -0.4**
comp=Z,34nm,1.2s,mb4.8
SGMF Saint Gilles 53.77 307 *e*P **P 19 15 46.9 -0.4**
SGMF pmax pmax
comp=Z,34nm,1.2s,mb4.8
ETSF Etsaut 54.08 300 *e*P **P 19 15 49.6 -0.1**
comp=Z,40nm,0.6s,mb4.8
ETSF Etsaut 54.08 300 *e*P **P 19 15 49.6 -0.1**
comp=Z,20nm,0.6s,mb4.8
ETSF Etsaut 54.08 300 *e*P **P 19 15 49.6 -0.1**
ETSF pmax pmax
comp=Z,20nm,0.6s,mb4.8
ROSF Rostrenen 54.20 308 *e*P **P 19 15 49.8 -0.7**
comp=Z,56nm,1.1s,mb4.7
ROSF Rostrenen 54.20 308 *e*P **P 19 15 49.8 -0.7**
comp=Z,28nm,1.1s,mb4.7
ROSF Rostrenen 54.20 308 *e*P **P 19 15 49.8 -0.7**
ROSF pmax pmax
comp=Z,28nm,1.1s,mb4.7
QUIF Quistinic 54.26 307 *e*P **P 19 15 50.1 -0.8**
comp=Z,14nm,0.7s,mb4.3
QUIF Quistinic 54.26 307 *e*P **P 19 15 50.1 -0.8**
comp=Z,6.8nm,0.7s,mb4.3
QUIF Quistinic 54.26 307 *e*P **P 19 15 50.1 -0.8**
QUIF pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
SJPF Ste Jean 54.47 301 *e*P **P 19 15 52.3 -0.2**
comp=Z,14nm,0.8s,mb4.2
SJPF Ste Jean 54.47 301 *e*P **P 19 15 52.3 -0.2**
comp=Z,7.2nm,0.8s,mb4.2
SJPF Ste Jean 54.47 301 *e*P **P 19 15 52.3 -0.2**
SJPF pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
DAG Danmarks Havn 54.70 344⇓ *i*P **P 19 15 54.2 +0.5**
DAG pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
DAG Danmarks Havn 54.70 344⇓ *i*P **P 19 15 54.2 +0.5**
comp=Z,10nm,0.7s,mb4.5
ECHE Chera 55.52 297 P **P 19 16 00.0 -0.1**
comp=Z,9.9nm,0.9s,mb4.3
ECHE Chera 55.52 297 P **P 19 16 00.0 -0.1**
ECHE pmax pmax
comp=Z,10.0nm,0.9s,mb4.3
ELAN Lanestosa 55.95 302 P **P 19 16 02.5 -0.6**
EVIA Vianos 56.98 296 P **P 19 16 08.7 -1.7**
EHUE Huescar 57.37 295 P **P 19 16 11.7 -1.4**
comp=Z,4.1nm,0.5s,mb4.3
EHUE Huescar 57.37 295 P **P 19 16 11.7 -1.5**
EHUE pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
GUD Guadarrama 57.39 299 P **P 19 16 13.4 +0.1**
comp=Z,28nm,0.8s,mb4.9
GUD Guadarrama 57.39 299 P **P 19 16 13.4 +0.1**
GUD pmax pmax
comp=Z,28nm,0.8s,mb4.9
ENIJ Nijar 57.42 294 P **P 19 16 13.3 -0.3**
comp=Z,15nm,0.6s,mb4.8
ENIJ Nijar 57.42 294 P **P 19 16 13.3 -0.3**
ENIJ pmax pmax
comp=Z,15nm,0.6s,mb4.8
ESDC Sonseca Array 57.63 298 P **P 19 16 14.2 -0.7**
comp=Z,11nm,0.6s,mb4.7
ESDC Sonseca Array 57.63 298 P **P 19 16 14.8 -0.1**
comp=Z,6.9nm,0.6s,mb4.4,baz=61,slow=7.2,SNR=63
ESDC pP pP 19 17 02.8 +3.2
comp=Z,2.1nm,0.9s,baz=64,slow=7.6,SNR=1.9
ESLA Sonseca Array 57.63 298 *e*P **P 19 16 14.4 -0.5**
comp=Z,2.7nm,0.8s,mb3.9
EQES Quesada 57.72 296 P **P 19 16 14.6 -1.1**
comp=Z,8.2nm,0.4s,mb4.7
TAM Tamanrasset 57.77 276 *e*P **P 19 16 15.3 -0.8**
comp=Z,8.3nm,0.9s,mb4.4
TAM Tamanrasset 57.77 276 *e*P **P 19 16 15.3 -0.9**
TAM pmax pmax
comp=Z,8.0nm,0.9s,mb4.3
EBER Berja 57.95 294 P **P 19 16 16.5 -0.7**
comp=Z,7.7nm,0.7s,mb4.4
EBAN Banos Encina 58.10 296 P **P 19 16 17.3 -0.9**
comp=Z,9.2nm,0.7s,mb4.5
EBAN Banos Encina 58.10 296 P **P 19 16 17.3 -0.9**
EBAN pmax pmax
comp=Z,9.0nm,0.7s,mb4.5
ECOG Cogollos-Vega 58.30 295 P **P 19 16 19.2 -0.4**
comp=Z,4.9nm,0.3s,mb4.6
ECOG Cogollos-Vega 58.30 295 P **P 19 16 19.2 -0.4**
ECOG pmax pmax
comp=Z,5.0nm,0.3s,mb4.6
EGUA Guajares 58.48 295 P **P 19 16 19.9 -0.9**
comp=Z,83nm,0.8s,mb5.4
ERON Agron 58.58 295 P **P 19 16 20.0 -1.5**
comp=Z,13nm,0.7s,mb4.7
EADA Adamuz 58.66 296 P **P 19 16 21.9 -0.2**
comp=Z,6.1nm,1.1s,mb4.1
ERUA La Rua 58.79 302 P **P 19 16 22.6 -0.4**
EPLA Plasencia 58.97 299 P **P 19 16 22.6 -1.6**
comp=Z,37nm,0.9s,mb5.0
EPLA Plasencia 58.97 299 P **P 19 16 22.6 -1.6**
EPLA pmax pmax
comp=Z,37nm,0.9s,mb5.0
MVO Moncorvo 59.20 301 *e*P **P 19 16 25.8 +0.1**
comp=Z,21nm,2.0s,mb4.4
MVO Moncorvo 59.20 301 P **P 19 16 27.3 +1.6**
ELOB Lobios 59.63 302 P **P 19 16 26.4 -2.3**
comp=Z,19nm,1.1s,mb4.6
MTE Manteigas 59.86 300 *e*P **P 19 16 31.0 +0.7**
comp=Z,31nm,1.8s,mb4.6
PVIS Viseu 59.98 300 *e*P **P 19 16 31.8 +0.7**
comp=Z,30nm,1.8s,mb4.6
PCBR Castelo Branco 60.04 299 *e*P **P 19 16 32.4 +0.8**
comp=Z,24nm,1.8s,mb4.5
ESPR Espera 60.13 296 P **P 19 16 30.6 -1.6**
comp=Z,6.7nm,0.5s,mb4.5
PMRV Marv??o 60.15 299 *e*P **P 19 16 33.0 +0.7**
comp=Z,21nm,1.8s,mb4.5
EBAD Badajoz 60.17 298 P **P 19 16 31.1 -1.3**
comp=Z,34nm,0.9s,mb5.0
PBAR Barrancos 60.43 297 *e*P **P 19 16 34.6 +0.4**
comp=Z,30nm,1.4s,mb4.7
PESTR Estremoz 60.53 298 *e*P **P 19 16 35.5 +0.6**
comp=Z,17nm,1.7s,mb4.4
PTOM Tomar 60.79 299 *e*P **P 19 16 36.8 +0.2**
comp=Z,36nm,1.6s,mb4.8
EVO Evora 60.97 298⇓ *i*P **P 19 16 38.2 +0.4**
comp=Z,65nm,1.5s,mb4.8
EVO Evora 60.97 298 *e*P **P 19 16 38.4 +0.6**
comp=Z,22nm,1.5s,mb4.6
SUMG Summit 61.05 341 *e*P **P 19 16 38.9 +1.1**
comp=Z,37nm,1.1s,mb4.9
SUMG Summit 61.05 341 *i* P **P 19 16 38.1 +0.3**
comp=Z,19nm,0.8s,mb4.8
SUMG
comp=Z,50nm,17.0s
PBEJ Beja 61.08 298 *e*P **P 19 16 38.8 +0.2**
comp=Z,26nm,1.6s,mb4.6
PVAQ Vaqueiros 61.24 297 *e*P **P 19 16 39.6 -0.1**
LSZ Lusaka 65.70 226 *e*P **P 19 17 08.5 -0.6**
comp=Z,4.7nm,0.6s,mb4.3
LSZ Lusaka 65.70 226 *e*P **P 19 17 08.5 -0.5**
LSZ pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
COLD Coldfoot 71.81 16 *e*P **P 19 17 45.3 -0.8**
INK Inuvik 73.77 9 P **P 19 17 56.6 -0.9**
comp=Z,10.0nm,0.6s,mb4.7,baz=359,slow=7.3,SNR=19
INK Inuvik 73.77 9 P **P 19 17 56.6 -1.0**
INK pmax pmax
comp=Z,10.0nm,0.6s
COLA College 74.32 16 P **P 19 17 59.9 -0.9**
comp=Z,8.5nm,0.9s,mb4.4
COLA College 74.32 16 P **P 19 17 59.9 -0.9**
COLA pmax pmax
comp=Z,8.0nm,0.9s,mb4.3
ILAR Eielson Array 74.62 16 P **P 19 18 01.4 -1.1**
comp=Z,2.3nm,0.9s,mb3.8,baz=312,slow=5.1,SNR=15
ILAR pP pP 19 18 52.8 +3.4
comp=Z,1.7nm,1.0s,baz=304,slow=3.8,SNR=4.1
FITZ Fitzroy Crossi 74.75 127 P **P 19 18 03.4 -0.5**
comp=Z,0.7nm,0.3s,mb3.8,baz=276,slow=11,SNR=4.2
LBTB Lobatse 74.91 222 *e*P **P 19 18 04.2 -0.6**
comp=Z,4.2nm,0.5s,mb4.3
LBTB Lobatse 74.91 222 *e*P **P 19 18 04.2 -0.5**
LBTB pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
DBIC Dimbokro 74.95 267 *e*P **P 19 18 03.0 -2.2**
comp=Z,7.3nm,0.6s,mb4.5
DBIC Dimbokro 74.95 267 P **P 19 18 03.6 -1.6**
comp=Z,4.6nm,0.5s,mb4.4,baz=46,slow=9.6,SNR=9.7
DBIC Dimbokro 74.95 267 P **P 19 18 03.6 -1.7**
DBIC pmax pmax
comp=Z,5.0nm,0.5s
KIC Kosan Boka 75.03 267 *e*P **P 19 18 03.8 -2.0**
comp=Z,41nm,0.9s,mb5.0
TIC Toumodi 75.09 267 *e*P **P 19 18 04.1 -2.0**
comp=Z,8.0nm,0.3s,mb4.9
TIC Toumodi 75.09 267 *e*P **P 19 18 04.1 -2.0**
TIC pmax pmax
comp=Z,8.0nm,0.3s,mb4.8
TSUM Tsumeb 75.17 232 *e*P **P 19 18 05.4 -0.9**
comp=Z,6.7nm,1.0s,mb4.2
LIC Lamto 75.34 267 *e*P **P 19 18 05.5 -2.0**
comp=Z,40nm,0.8s,mb5.1
DAWY Dawson 76.77 13 *e*P **P 19 18 14.4 -0.4**
BOSA Boshof 77.98 220 *e*P **P 19 18 20.8 -1.0**
comp=Z,7.0nm,0.9s,mb4.3
BOSA Boshof 77.98 220 P **P 19 18 20.7 -1.1**
comp=Z,5.5nm,0.8s,mb4.2,baz=126,slow=13,SNR=9.5
BOSA Boshof 77.98 220 *e*P **P 19 18 20.8 -1.0**
BOSA pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
YKA Yellowknife Ar 81.14 3 P **P 19 18 38.3 -0.1**
comp=Z,8.0nm,0.4s,mb4.7,baz=352,slow=5.4,SNR=93
YKA pP pP 19 19 30.2 +4.1
comp=Z,1.2nm,0.7s,baz=346,slow=5.4,SNR=2.6
YKA sP sP 19 19 52.8 +5.9
comp=Z,1.7nm,0.5s,baz=349,slow=5.4,SNR=3.9
WRAB Tennant Creek 81.84 122 *e*P **P 19 18 41.6 -1.1**
comp=Z,2.7nm,0.8s,mb3.9
WRAB Tennant Creek 81.84 122 *e*P **P 19 18 41.6 -1.1**
WRAB pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
ASAR Alice Springs 84.11 125 P **P 19 18 53.5 -0.9**
comp=Z,1.5nm,0.9s,mb3.7,baz=313,slow=4.9,SNR=9.3
ASAR Alice Springs 84.11 125 P **P 19 18 53.5 -0.8**
ASAR pmax pmax
comp=Z,2.0nm,0.9s
FFC Flin Flon 88.86 356 P **P 19 19 15.7 -1.3**
comp=Z,3.4nm,0.7s,mb4.3
FFC Flin Flon 88.86 356 P **P 19 19 15.7 -1.3**
FFC pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
CTAO Charters Tower 90.36 115 P **P 19 19 23.8 -0.6**
comp=Z,1.9nm,0.8s,mb4.0
CTAO Charters Tower 90.36 115 P **P 19 19 23.8 -0.6**
CTAO pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
QSPA South Pole Qui 126.39 180 PKP PKPdf 19 25 21.2 -2.2
comp=Z,1.5nm,0.8s,baz=204,slow=1.9,SNR=4.4
CPUP Villa Florida 135.46 268 PKP PKPdf 19 25 40.7 -1.4
comp=Z,1.0nm,0.7s,baz=298,slow=19,SNR=4.6
CPUP Villa Florida 135.46 268 PKIKP PKPdf 19 25 40.7 -1.4
CPUP pmax pmax
comp=Z,1.0nm,0.7s

*ISCJB **01** 19:08:32.5±1.3, 19°.01N±0°.07×145°.4E±0°.2, h239km±13km, mb3.8/18, Error ellipse: s-maj=25.4km s-min=11.4km az=175.4*
*NEIC **01** 19:08:32.7±1.4, 19°.00N×145°.47E, h228km±13km, mb4.3/1, Error ellipse: s-maj=19.8km s-min=9.4km az=84.0*
*IDC **01** 19:08:34.8±2.5, 19°.00N×145°.39E, h246km±25km, mb3.6/16, mb1 3.7/18, mb1mx3.6/27, mbtmp3.6/18, Error ellipse: s-maj=19.4km s-min=11.7km az=83.0*
ISC 01 19:08:33.4±1.2, **18°.98N**±0°.07×**145°.4E**±0°.2, **h234**km±13km,
n28, σ**0**°**98**/30, **mb3.8**/18, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GUMO	**Guam**	**5.38**	**186**	*e*Pn		**Pn**	**19 09 52.5**	**-1.1**
GUMO				S		**S**	**19 10 56.0**	**-1.3**
GUMO				*e*Sn		**S**	**19 10 57.9**	**+0.6**
GUMO	**Guam**	**5.38**	**186**	P		**Pn**	**19 09 54.9**	**+1.3**
	7.0nm,0.3s,baz=64,slow=9.5,SNR=7.4							
GUMO				S		**S**	**19 10 56.0**	**-1.3**
	21nm,0.3s,baz=179,slow=22,SNR=5.8							
MJAR	**Matsushiro Arr**	**18.61**	**342**	P		**P**	**19 12 33.9**	**+0.4**
	0.6nm,0.3s,baz=166,slow=10,SNR=5.1							
MAJO	**Matsushiro**	**18.61**	**342**	*e*P		**P**	**19 12 33.4**	**-0.1**
MAT	**Matsushiro**	**18.61**	**342**	P		**P**	**19 12 34.0**	**+0.5**
WRAB	**Tennant Creek**	**40.16**	**196**	*e*P		**P**	**19 15 47.5**	**+0.5**
	5.8nm,0.6s,mb4.2							
FITZ	**Fitzroy Crossi**	**41.66**	**209**	P		**P**	**19 15 60.0**	**+0.7**
	4.5nm,0.3s,mb4.4,baz=33,slow=9.8,SNR=62							
SONM	**Songino Array**	**42.76**	**321**	P		**P**	**19 16 08.4**	**+0.6**
	0.4nm,0.3s,mb3.3,baz=133,slow=7.0,SNR=5.9							
ASAR	**Alice Springs**	**43.85**	**195**	P		**P**	**19 16 17.3**	**+0.6**
	1.6nm,0.5s,mb3.6,baz=14,slow=5.5,SNR=45							
CMAR	**Chiang Mai Arr**	**43.91**	**277**	P		**P**	**19 16 19.4**	**+2.0**
	1.3nm,0.7s,mb3.4,baz=70,slow=7.3,SNR=6.3							
STKA	**Stephens Creek**	**50.70**	**184**	P		**P**	**19 17 08.6**	**-0.7**
	1.0nm,0.3s,mb3.7,baz=6.2,slow=9.2,SNR=9.1							
MKAR	**Makanchi Array**	**58.07**	**314**	P		**P**	**19 18 02.2**	**-0.1**
MKAR	**Makanchi Array**	**58.07**	**314**	P		**P**	**19 18 02.2**	**-0.1**
	0.9nm,0.6s,mb3.6,baz=86,slow=9.0,SNR=5.0							
KURK	**Kurchatov**	**60.88**	**318**	P		**P**	**19 18 21.4**	**0.0**
	1.1nm,0.4s,mb3.9,baz=92,slow=7.5,SNR=5.3							
ILAR	**Eielson Array**	**63.51**	**26**	P		**P**	**19 18 38.0**	**-0.5**
	0.3nm,0.4s,mb3.3,baz=264,slow=5.6,SNR=2.5							
BVAR	**Borovoye Array**	**66.09**	**320**	P		**P**	**19 18 55.1**	**-0.2**
	2.1nm,0.5s,mb4.0,baz=100,slow=8.4,SNR=9.5							
AKTK	**Aktyubinsk**	**73.98**	**318**	P		**P**	**19 19 43.2**	**0.0**
AKTO	**Aktyubinsk**	**73.98**	**318**	P		**P**	**19 19 43.2**	**0.0**
	1.6nm,0.6s,mb3.8,baz=86,slow=9.6,SNR=4.6							
YBH	**Yreka Blue Hor**	**78.98**	**50**	P		**P**	**19 20 13.1**	**+1.6**
	1.2nm,0.7s,mb3.6,baz=257,slow=2.6,SNR=5.4							
ARCES	**ARCESS Array B**	**82.14**	**342**	P		**P**	**19 20 27.3**	**-0.3**
	5.1nm,0.9s,mb4.1,baz=51,slow=9.6,SNR=3.8							
NVAR	**Mina Array Bea**	**83.18**	**52**	P		**P**	**19 20 34.9**	**+1.2**
NVAR	**Mina Array Bea**	**83.18**	**52**	P		**P**	**19 20 34.9**	**+1.2**
	2.5nm,0.7s,mb4.0,baz=268,slow=5.8,SNR=21							
JOF	**Joensuu**	**83.65**	**335**	*e*p		**P**	**19 20 33.2**	**-2.3**
	2.1nm,0.4s,mb4.2							
KAF	**Kangasniemi**	**86.05**	**336**	*e*p		**P**	**19 20 43.5**	**-3.9**
FINES	**FINESS Array B**	**86.52**	**335**	P		**P**	**19 20 47.7**	**-2.0**
	2.7nm,0.3s,mb4.4,baz=66,slow=4.4,SNR=30							
NOA	**NORSAR Array B**	**92.22**	**340**	P		**P**	**19 21 15.8**	**-0.7**
	0.6nm,0.8s,mb3.6,baz=42,slow=4.5,SNR=2.6							
BRTR	**Keskin Array B**	**93.72**	**314**	P		**P**	**19 21 22.9**	**-0.9**
	0.9nm,1.1s,mb3.7,baz=42,slow=6.7,SNR=3.9							
LPAZ	**La Paz**	**147.95**	**91**	PKPbc		PKPbc	19 27 53.1	+1.2
	1.1nm,0.6s,baz=356,slow=2.2,SNR=3.7							

WEL 01 19:11:07.0±0.2, **38°.93S**×**177°.77E**, **h37**km±3km, **ML3.6/6, 3C-1D, Error ellipse: s-maj=2.6km s-min=1.4km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PRGZ	**Paritu Road**	**0.09**	**84**	⇑P	N	Pn	19 11 12.8	-0.4
PRGZ					SN	Sn	19 11 18.5	+1.0
KNZ	**Kokohu**	**0.12**	**220**	⇓P	N	Pn	19 11 12.2	-1.2
KNZ					SN	Sn	19 11 16.9	-0.8
MHGZ	**Mahia Peninsul**	**0.25**	**154**	⇑P	N	Pn	19 11 14.9	+0.5
MHGZ					SN	Sn	19 11 20.5	+1.0
RAHZ	**Arahi**	**0.53**	**271**	⇑P	N	Pn	19 11 17.4	-0.7
RAHZ					SN	Sn	19 11 26.0	+0.2
CNGZ	**Carnagh Statio**	**0.56**	**38**	P	N	Pn	19 11 19.0	+0.5
MWZ	**Matawai**	**0.63**	**342**	P	N	Pn	19 11 19.9	-0.5
MWZ					SN	Sn	19 11 28.4	+0.2
URZ	**Urewera**	**0.85**	**322**	P	N	Pn	19 11 21.7	-0.7
PUZ	**Puketiti**	**0.94**	**24**	P	N	Pn	19 11 23.3	-0.4
BKZ	**Black Stump Fm**	**1.02**	**256**	P	N	Pn	19 11 24.7	-0.1
RRRZ	**Republican Roa**	**1.15**	**301**	P	N	Pn	19 11 26.4	-0.1
PRRZ	**Plateau Road**	**1.16**	**292**	P	N	Pn	19 11 26.5	-0.2
ALRZ	**Allen Road**	**1.17**	**288**	P	N	Pn	19 11 26.6	-0.3
TARZ	**Mount Tarawera**	**1.21**	**305**	P	N	Pn	19 11 27.4	0.0
PXZ	**Pawanui**	**1.30**	**212**	P	N	Pn	19 11 27.7	-1.0
OPRZ	**Ohinepanea**	**1.45**	**318**	P	N	Pn	19 11 29.8	-0.8
RITZ	**Rihia Road**	**1.49**	**268**	P	N	Pn	19 11 31.4	+0.2
PNHZ	**Pukenui**	**1.56**	**231**	P	N	Pn	19 11 32.0	-0.3
OTVZ	**Oturere**	**1.65**	**261**	P	N	Pn	19 11 34.4	+0.9
KRVZ	**Karewarewa**	**1.67**	**264**	P	N	Pn	19 11 33.7	0.0
NGZ	**Ngauruhoe**	**1.71**	**261**	P	N	Pn	19 11 34.4	+0.2
WTVZ	**West Tongariro**	**1.71**	**263**	P	N	Pn	19 11 34.3	+0.1
TSZ	**Takapari Road**	**1.79**	**231**	P	N	Pn	19 11 34.5	-1.0
POWZ	**Post Office Ro**	**2.12**	**226**	P	N	Pn	19 11 39.7	+0.2
WAZ	**Wangaehu**	**2.31**	**248**	P	N	Pn	19 11 44.1	+1.6
VRZ	**Vera Road**	**2.35**	**264**	P	N	Pn	19 11 43.3	+0.2
MRZ	**Mangatainoka R**	**2.41**	**224**	P	N	Pn	19 11 42.5	-1.4
HOWZ	**Holdsworth Sta**	**2.62**	**221**	P	N	Pn	19 11 45.7	-1.1
OGWZ	**Otaki Gorge**	**2.75**	**226**	P	N	Pn	19 11 46.8	-1.7
KIW	**Kapiti Island**	**2.92**	**228**	P	N	Pn	19 11 49.3	-1.6
CAW	**Cannon Point**	**3.00**	**223**	P	N	Pn	19 11 49.9	-2.2
PLWZ	**Palliser**	**3.26**	**215**	P	N	Pn	19 11 52.9	-2.7

IDC 01 19:25:17.5±27.0, **47°.14N**×**152°.86E**, **h0**km, **mb3.7/4, mb1 3.8/4, mb1mx3.3/24, mbtmp3.7/4, Error ellipse: s-maj=621.5km s-min=88.2km az=155.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**46.60**	**297**	P		P	19 33 46.9	-0.1
	0.5nm,0.7s,baz=72,slow=7.9,SNR=4.4							
KURK	**Kurchatov**	**47.00**	**303**	P		P	19 33 50.8	+0.7
	0.8nm,0.8s,baz=66,slow=8.8,SNR=4.6							
FINES	**FINESS Array B**	**63.61**	**335**	P		P	19 35 49.5	-0.1
	0.9nm,0.6s,baz=33,slow=7.3,SNR=3.8							
AKASG	**Malin Array Be**	**71.12**	**326**	P		P	19 36 37.6	+0.2
	0.1nm,0.3s,baz=32,slow=5.1,SNR=4.2							

IDC 01 19:40:49.1±5.3, **11°.69N**×**86°.78W**, **h0**km, **mb3.3**/2, **mb1 3.8**/2, **mb1mx3.4**/17, **mbtmp3.3**/2, **1C, Error ellipse: s-maj=148.7km s-min=92.7km az=49.0, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CGA2	**Cerro Gallo 2**	**2.81**	**126**	⇑*e*P		Pn	19 41 50.9	+16
PRS1	**Puriscal**	**2.96**	**125**	*e*P		Pn	19 41 51.7	+14
LAJ	**Bijagual**	**3.18**	**125**	*e*S		Pn	19 42 00.7	+20
TXAR	**Lajitas Array**	**23.58**	**321**	P		P	19 46 01.4	-0.4
	0.6nm,0.5s,baz=138,slow=9.9,SNR=9.6							
YKA	**Yellowknife Ar**	**54.52**	**345**	P		P	19 50 18.6	+0.2
	0.2nm,0.5s,baz=136,slow=8.0,SNR=3.6							
ASAR	**Alice Springs**	**139.59**	**247**	PKP		PKPdf	20 00 19.4	-0.2
	0.4nm,1.0s,baz=104,slow=2.3,SNR=3.1							

CASC 01 19:41:25.6±3.3, **11°.87N**×**88°.44W**, **h0**km±9km, **MD3.9, ML3.3, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CNCH	**Conchagua**	**1.51**	**23**	*e*P		Pn	19 41 52.4	-1.5
VSM	**San Miguel**	**1.55**	**6**	*e*P		Pn	19 41 54.0	-0.6
BLLM	**Bellamira**	**1.57**	**7**	*e*P		Pn	19 41 53.9	-0.9
CRIN	**San Cristobal**	**1.58**	**59**	*e*P		Pn	19 41 54.2	-0.7
SNVI	**San Vicente**	**1.77**	**347**	*e*P		Pn	19 41 57.8	+0.2
CNGN	**Cerro Negro**	**1.81**	**70**	*e*S		Sn	19 42 23.8	+2.1
CNGN					AML	AML	19 42 40.7	
	comp=N,324nm,0.5s							
COPN	**Copaltepe**	**1.83**	**80**	*e*		Pn	19 41 58.3	0.0
COPN				*e*P			19 41 58.3	
MOMN	**Momotombo**	**1.93**	**74**	*e*P		Pn	19 41 57.5	-2.2
BOQS	**Boqueron**	**2.03**	**336**	*e*P		Pn	19 42 01.8	+0.8
**SBL

*LDG **01** 19:44:08.0±0.2, 41°.13N×71°.44E, h10km, Mb4.5/6, Error ellipse: s-maj=7.9km s-min=4.2km az=176.0*
*NNC **01** 19:44:10.0±3.9, 41°.43N×71°.46E, h0km, mb4.3, mpv4.8, Error ellipse: s-maj=33.1km s-min=12.4km az=23.0*
*IDC **01** 19:44:10.8±0.8, 41°.48N×71°.47E, h0km, mb4.0/14, mb1 4.2/20, mb1mx4.0/30, mbtmp4.0/20, ML3.6/6, MS3.1/4, Ms1 3.1/4, ms1mx2.7/27, Error ellipse: s-maj=13.3km s-min=9.3km az=173.0*
*ISCJB **01** 19:44:12.8±1.3, 41°.52N±0°.02×71°.27E±0°.03, h24km±10km, mb4.2/33, MS3.2/5, Error ellipse: s-maj=4.5km s-min=3.9km az=140.0*
*BJI **01** 19:44:13.4, 41°.87N×71°.57E, h13km, mB4.7/3, mb4.2/9, ML4.2/6, Ms4.1/2*
*MOS **01** 19:44:14.4±1.1, 41°.63N×71°.31E, h33km, mb4.4/20, Error ellipse: s-maj=7.6km s-min=5.6km az=110.0*
*NEIC **01** 19:44:15.9±1.4, 41°.61N×71°.36E, h34km±10km, mb4.4/13, Error ellipse: s-maj=5.9km s-min=3.7km az=194.0*

ISC 01 19:44:13.4±1.4, 41°.54N±0°.03×71°.32E±0°.03, h16km±9km, n144, σ1°12/166, mb4.2/33, MS3.2/5, 16C-10D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**1.67**	**339**	⇓P	**Pn**	**19 44 42.5**	**+0.5**
	439nm,0.6s,baz=156,slow=16						
KK31				⇑S	**Sn**	**19 45 08.1**	**+5.0**
	772nm,0.4s,baz=166,slow=25,SNR=3.5						
KK31	**Karatay Array**	**1.67**	**339**	*ce*PN	**Pn**	**19 44 42.5**	**+0.5**
KK31				pmax	pmax		
	comp=Z,217nm,0.2s						
AML	**Almayashu**	**1.87**	**71**	P	**Pn**	**19 44 45.2**	**+0.4**
	SNR=643						
AML	**Almayashu**	**1.87**	**71**	*e*Pn	**Pn**	**19 44 44.6**	**-0.1**
AML				*e*Sg	**Sg**	**19 45 12.1**	**-1.3**
EKS2	**Erkin-Say**	**2.14**	**58**	P	**Pn**	**19 44 50.4**	**+1.9**
	SNR=212						
EKS2	**Erkin-Say**	**2.14**	**58**	*e*Pn	**Pn**	**19 44 50.1**	**+1.6**
EKS2				*e*Sn	**Sn**	**19 45 14.5**	**-0.3**
UCH	**Uchtor**	**2.48**	**73**	P	**Pn**	**19 44 54.8**	**+1.7**
	SNR=63						
UCH	**Uchtor**	**2.48**	**73**	*e*Pn	**Pn**	**19 44 54.3**	**+1.1**
UCH				*e*Sg	**Sg**	**19 45 26.7**	**-6.4**
AAK	**Ala-Archa**	**2.60**	**64**	P	**Pn**	**19 44 57.0**	**+2.2**
	SNR=108						
AAK	**Ala-Archa**	**2.60**	**64**	*e*Pn	**Pn**	**19 44 56.5**	**+1.7**
AAK				Pn	**Pn**	**19 44 56.8**	**+2.0**
AAK				Lg		19 45 31.9	
AAK				LR	LR	19 46 05.4	
AAK	**Ala-Archa**	**2.60**	**64**	Pn	**Pn**	**19 44 56.8**	**+2.0**
	comp=Z,178nm,0.3s,baz=213,slow=5.8,SNR=90						
AAK				Lg		19 45 31.8	
	comp=Z,38nm,0.3s,baz=360,slow=17,SNR=13						
AAK				LR	LR	19 46 05.4	
	comp=Z,234nm,18.0s,baz=237,slow=45						
AAK	**Ala-Archa**	**2.60**	**64**	PN	**Pn**	**19 44 56.8**	**+2.0**
AAK						19 45 31.8	
AAK				pmax	pmax		
	comp=Z,19nm,0.3s						
AAK				MLR	MLR		
	comp=Z,234nm,18.0s						
FRU	**Bishkek**	**2.77**	**61**	⇓*i*PN	**Pn**	**19 44 59.0**	**+1.9**
FRU				*e*S	**Sn**	**19 45 35.0**	**+4.8**
FRU				pmax	pmax		
	comp=Z,1μm,1.8s						
FRU				smax			
	comp=N,3μm,1.6s						
USP	**Ospenovka**	**2.92**	**53**	P	**Pn**	**19 45 00.1**	**+1.0**
	SNR=34						
KBK	**Karagaybulak**	**2.92**	**66**	P	**Pn**	**19 45 01.6**	**+2.4**
	SNR=52						
KZA	**Kyzart**	**2.98**	**78**	P	**Pn**	**19 45 02.0**	**+1.9**
	SNR=34						
ULHL	**Ulahol**	**3.74**	**78**	P	**Pn**	**19 45 12.5**	**+2.0**
	SNR=6.8						
KSH	**Kashi**	**4.08**	**118**	Pn	**Pn**	**19 45 16.5**	**+1.3**
KSH				Sn	**Sn**	**19 46 03.2**	**+0.6**
KSH				smax			
	comp=N,580nm,1.0s						
KSH				smax			
	comp=E,380nm,0.7s						
KNDC	**Almaty**	**4.50**	**66**	⇑Pg	**Pg**	**19 45 34.9**	**-4.7**
KNDC				⇑Lg		19 46 32.0	
KBL	**Kabul**	**7.22**	**195**	*e*Pn	**Pn**	**19 46 00.9**	**+2.6**
	comp=E,31nm,0.6s						
KBL				*e*Sn	**Sn**	**19 47 18.8**	**-1.2**
KBL	**Kabul**	**7.22**	**195**	*e*P	**Pn**	**19 46 00.9**	**+2.6**
KBL				*e*		19 47 18.8	
KBL				pmax	pmax		
	comp=Z,31nm,0.6s						
CEP	**Cherat**	**7.72**	**176**	P	**Pn**	**19 46 09.3**	**+4.1**
CEP				S	**Sn**	**19 47 34.0**	**+1.7**
CHCP	**Chirah Chowk**	**8.02**	**168**	P	**Pn**	**19 46 12.5**	**+3.2**
THW	**Thamme Wali**	**8.74**	**178**	P	**Pn**	**19 46 20.9**	**+1.7**
THW				S	**Sn**	**19 47 48.0**	**-9.4**
MK31	**Makanchi Array**	**9.46**	**53**	⇓Pn	**Pn**	**19 46 29.7**	**+0.6**
	comp=Z,3.8nm,0.6s,baz=238,slow=14,SNR=101						
MK31				⇑Sn	**Sn**	**19 48 20.7**	**+5.7**
	comp=Z,7.7nm,0.7s						
MK31				⇑Lg		19 49 10.9	
	comp=Z,60nm,0.9s						
MK31	**Makanchi Array**	**9.46**	**53**	*e*P	**Pn**	**19 46 28.8**	**-0.2**
MKAR	**Makanchi Array**	**9.46**	**53**	Pn	**Pn**	**19 46 28.8**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=236,slow=13,SNR=16						
MKAR				Lg		19 48 57.8	
	comp=Z,0.9nm,0.3s,baz=242,slow=21,SNR=5.5						
KURBB	**Kurchatov Arra**	**10.36**	**26**	Pn	**Pn**	**19 46 40.2**	**-1.1**
	comp=Z,1.0nm,0.6s						
KURBB				⇓Lg		19 49 36.1	
	comp=Z,42nm,1.1s						
KURK	**Kurchatov**	**10.47**	**26**	⇑Pn	**Pn**	**19 46 45.7**	**+2.9**
	comp=Z,5.2nm,0.9s						
KURK				⇓Lg		19 49 41.1	
	comp=Z,286nm,1.5s						
KURK	**Kurchatov**	**10.47**	**26**	Pn	**Pn**	**19 46 38.0**	**-4.8**
KURK				*e*Sn	**Sn**	**19 48 43.5**	**+3.7**
KURK				Lg		19 49 28.7	
KURK	**Kurchatov**	**10.47**	**26**	Pn	**Pn**	**19 46 39.8**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=220,slow=13,SNR=8.3						
KURK				Lg		19 49 28.7	
	comp=Z,0.6nm,0.3s,baz=210,slow=28,SNR=4.3						
KURK	**Kurchatov**	**10.47**	**26**	*ce*P	**Pn**	**19 46 43.8**	**+1.0**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
AB31	**Akbulak array**	**11.10**	**318**	⇑Pn	**Pn**	**19 46 50.6**	**-0.8**
	comp=Z,4.5nm,0.5s,baz=130,slow=14,SNR=95						
AB31				⇑Sn	**Sn**	**19 48 51.2**	**-4.0**
	comp=Z,15nm,0.7s						
AB31	**Akbulak array**	**11.10**	**318**	*i* P	**Pn**	**19 46 50.3**	**-1.1**
AB31				pmax	pmax		
	comp=Z,8.0nm,0.4s						
ABKAR	**Akbulak array**	**11.10**	**318**	*e*Pn	**Pn**	**19 46 50.4**	**-1.1**
	comp=Z,7.1nm,0.4s						
VOSK	**Vostochnaya**	**11.19**	**359**	⇓Pn	**Pn**	**19 46 51.4**	**-1.2**
	comp=Z,8.0nm,1.1s						
VOSK				⇑Sn	**Sn**	**19 48 52.5**	**-4.7**
	comp=Z,15nm,0.7s						
VOSK				⇓Lg		19 50 03.0	
	comp=Z,139nm,1.1s						
BVA0	**Borovoye Array**	**11.50**	**357**	⇑Pn	**Pn**	**19 46 56.4**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=163,slow=12,SNR=69						
BVA0				⇑Sn	**Sn**	**19 49 01.3**	**-3.7**
	comp=Z,8.5nm,1.1s,baz=168,slow=23,SNR=20						
BVAR	**Borovoye Array**	**11.50**	**357**	Pn	**Pn**	**19 46 56.3**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=163,slow=12,SNR=45						
BVAR				Sn	**Sn**	**19 49 01.5**	**-3.4**
	comp=Z,6.8nm,0.3s,baz=167,slow=24,SNR=19						
BVAR				Lg		19 50 12.2	
	baz=145,slow=23,SNR=2.9						
BVAR	**Borovoye Array**	**11.50**	**357**	P	**Pn**	**19 46 56.3**	**-0.6**
BVAR						19 49 01.5	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				smax			
	comp=N,7.0nm,0.3s						
ZRNK	**Zerenda**	**11.52**	**353**	⇑Pn	**Pn**	**19 46 56.0**	**-1.1**
	comp=N,5.2nm,0.6s						
ZRNK				⇓Sn	**Sn**	**19 49 00.5**	**-4.9**
	comp=N,26nm,1.1s						
ZRNK				⇓Lg		19 50 13.4	
	comp=N,93nm,1.0s						
ZRNK	**Zerenda**	**11.52**	**353**	*i* P	**Pn**	**19 46 55.9**	**-1.2**
ZRNK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BRVK	**Borovoye**	**11.54**	**357**	*e*Pn	**Pn**	**19 46 55.2**	**-2.2**
	comp=Z,8.1nm,0.6s						
BRVK				*e*Sn	**Sn**	**19 49 00.1**	**-5.8**
BRVK	**Borovoye**	**11.54**	**357**	*ce*P	**Pn**	**19 46 56.1**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
AKTK	**Aktyubinsk**	**12.81**	**318**	Pn	**Pn**	**19 47 15.8**	**+0.9**
AKTK				Sn	**Sn**	**19 49 30.4**	**-6.6**
AKTK				LR	LR	19 52 39.6	
AKTO	**Aktyubinsk**	**12.81**	**318**	Pn	**Pn**	**19 47 15.8**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=126,slow=14,SNR=16						
AKTO				Sn	**Sn**	**19 49 30.4**	**-6.6**
	comp=Z,0.5nm,0.3s,baz=30,slow=19,SNR=4.0						
AKTO				LR	LR	19 52 39.6	
	comp=Z,115nm,21.2s,baz=179,slow=39						
AKTO	**Aktyubinsk**	**12.81**	**318**	P	**Pn**	**19 47 15.8**	**+1.0**
AKTO						19 49 30.4	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				smax			
	comp=N,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**15.34**	**31**	Pn	**Pn**	**19 47 48.8**	**-0.3**
	comp=N,0.4nm,0.3s,baz=226,slow=10,SNR=16						
ZALV				Sn	**Sn**	**19 50 29.8**	**-8.7**
	comp=N,0.2nm,0.3s,baz=239,slow=15,SNR=4.2						
ZALV				Lg		19 52 16.2	
	comp=N,0.1nm,0.3s,baz=202,slow=26,SNR=3.6						
ZALV	**Zalesovo Beam**	**15.34**	**31**	P	**Pn**	**19 47 48.8**	**-0.3**
ZALV						19 50 29.8	
NVS	**Novosibirsk**	**15.46**	**27**	*e*P	**Pn**	**19 47 54.6**	**+3.9**
NVS				*e*S	**Sn**	**19 50 34.4**	**-7.1**
NVS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
NVS				pmax	pmax		
	comp=N,7.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.6s						
NVS				smax			
	comp=N,15nm,1.0s						
NVS				smax			
	comp=E,13nm,1.1s						
SVE	**Sverdlovsk**	**16.78**	**339**	*e*P	Px	19 48 17.7	
KOLN	**Koldanda**	**17.03**	**140**	*e*P	**Pn**	**19 48 07.5**	**-3.4**
	comp=E,17nm,0.5s						
ARU	**Arti**	**17.04**	**335**	*e*Pn	**Pn**	**19 48 09.5**	**-1.4**
	comp=E,6.4nm,0.6s						
ARU	**Arti**	**17.04**	**335**	*d i*P	**Pn**	**19 48 10.0**	**-0.9**
ARU				S	**Sn**	**19 51 16.8**	**-3.1**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GKN	**Gorkha**	**17.35**	**137**	*e*P	**Pn**	**19 48 12.3**	**-2.6**
	comp=Z,26nm,0.4s						
KKN	**Kakani**	**17.86**	**136**	*e*P	**Pn**	**19 48 19.9**	**-1.3**
	comp=Z,19nm,0.5s						
DMN	**Daman**	**17.91**	**137**	*e*P	**Pn**	**19 48 20.2**	**-1.7**
	comp=Z,36nm,0.9s						
PKIN	**Phulchoki**	**18.09**	**136**	*e*P	**Pn**	**19 48 22.6**	**-1.4**
PKI	**Pulchoki**	**18.10**	**136**	*e*P	**Pn**	**19 48 22.1**	**-2.1**
JIRN	**Jiri**	**18.44**	**134**	*e*P	**Pn**	**19 48 26.9**	**-1.5**
	comp=Z,28nm,0.5s						
RAMN	**Ramite**	**19.23**	**134**	*e*P	**Pn**	**19 48 35.3**	**-2.6**
	comp=Z,37nm,0.8s						
TAPN	**Taplejung**	**19.53**	**131**	*e*P	**Pn**	**19 48 40.5**	**-0.9**
ODAN	**Odare**	**19.73**	**133**	*e*P	**Pn**	**19 48 42.2**	**-1.7**
LSA	**Lhasa**	**19.93**	**120**	*e*Pn	**Pn**	**19 48 46.6**	**+0.3**
	comp=Z,43nm,1.8s						
LSA	**Lhasa**	**19.93**	**120**	*e*P	**Pn**	**19 48 46.6**	**+0.3**
LSA				pmax	pmax		
	comp=Z,43nm,1.8s						
GNI	**Garni**	**20.13**	**275**	*e*Pn	**P**	**19 48 50.0**	**+3.3**
GNI	**Garni**	**20.13**	**275**	P	**P**	**19 48 50.7**	**+4.0**
	comp=Z,7.4nm,0.6s,baz=350,slow=13,SNR=6.3						
GNI	**Garni**	**20.13**	**275**	P	**P**		
GNI				pmax	pmax	**19 48 50.7**	**+4.0**
	comp=Z,7.0nm,0.6s						
KIV	**Kislovodsk**	**21.12**	**286**	*e*P	**P**	**19 48 56.9**	**-0.5**
KIV	**Kislovodsk**	**21.12**	**286**	*e*P	**P**	**19 48 57.3**	**-0.1**
KIV				pmax	pmax		
	comp=Z,11nm,1.6s,mb3.9						
KIV				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.2						
GTA	**Gaotai**	**21.74**	**86**	*e*P	**P**	**19 49 04.3**	**+0.3**
GTA				pP		19 49 11.3	
GTA				sP	sP	19 49 15.2	+4.7
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.0						
VRHR	**Novokhopersk**	**22.49**	**305**	*e*P	**P**	**19 49 12.5**	**+0.6**
VRHR				pmax	pmax		
	comp=N,7.0nm,0.7s						
VRHR				pmax	pmax		
	comp=E,8.0nm,0.7s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
ZAK	**Zakamensk**	**23.75**	**57**	*e*P	**P**	**19 49 25.2**	**+0.3**
VORD	**Divnogorie**	**23.90**	**304**	*e*P	**P**	**19 49 27.5**	**+1.2**
VORD				pmax	pmax		
	comp=E,4.0nm,0.6s						
VORD				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.2						
VORD				pmax	pmax		
	comp=N,2.0nm,0.3s						
VSR	**Storozhevoye**	**24.03**	**305**	*e*P	**P**	**19 49 27.6**	**+0.2**
VSR				pmax	pmax		
	comp=N,1.0nm,0.3s						
VSR				pmax	pmax		
	comp=E,2.0nm,0.3s						
VSR				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.2						
TLY	**Talaya**	**24.22**	**54**	*e*P	**P**	**19 49 30.3**	**+1.1**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.8						
TLY				MLR	MLR		
	comp=Z,59nm,11.0s,MS3.3						
SONM	**Songino Array**	**25.56**	**64**	P	**P**	**19 49 42.1**	**+0.7**
	comp=Z,1.0nm,0.7s,mb3.5,baz=264,slow=10.0,SNR=9.8						
SONM	**Songino Array**	**25.56**	**64**	P	**P**	**19 49 42.1**	**+0.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ULN	**Ulaanbaatar**	**26.00**	**64**	*e*P	**P**	**19 49 45.7**	**+0.3**
	comp=Z,7.1nm,1.4s,mb4.0						
ULN	**Ulaanbaatar**	**26.00**	**64**	*e*P	**P**	**19 49 45.7**	**+0.3**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.0						
OBN	**Obninsk**	**26.48**	**313**	*e*P	**P**	**19 49 51.0**	**+1.4**
OBN				*e*		19 50 27.0	
OBN				pmax	pmax		
	comp=Z,36nm,2.5s,mb4.5						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.4						
BR131	**Keskin Array S**	**28.51**	**279**	*e*P	**P**	**19 50 08.5**	**+0.5**
BRTR	**Keskin Array B**	**28.51**	**279**	P	**P**	**19 50 09.8**	**+1.8**
	comp=Z,1.4nm,0.8s,mb3.8,baz=98,slow=7.9,SNR=6.4						
BRTR	**Keskin Array B**	**28.51**	**279**	*ce*P	**P**	**19 50 09.8**	**+1.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	**30.22**	**302**	P	**P**	**19 50 23.9**	**+0.8**
	comp=Z,0.2nm,0.3s,mb3.4,baz=80,slow=7.5,SNR=3.4						
ENH	**Enshi**	**32.65**	**98**	*e*P	**P**	**19 50 43.8**	**-0.9**
	comp=Z,7.9nm,1.0s,mb4.6						
CMAR	**Chiang Mai Arr**	**32.94**	**126**	P	**P**	**19 50 46.6**	**-0.7**
	comp=Z,0.7nm,0.8s,mb3.6,baz=329,slow=11,SNR=5.2						
CMAR	**Chiang Mai Arr**	**32.94**	**126**	P	**P**	**19 50 46.6**	**-0.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**33.55**	**322**	P	**P**	**19 50 53.1**	**+1.0**
	comp=Z,3.1nm,0.8s,mb4.3,baz=112,slow=9.5,SNR=14						
FINES				LR	LR	20 07 15.5	
	comp=Z,18nm,21.5s,MS2.8,baz=286,slow=41						
ARCES	**ARCESS Array B**	**36.63**	**335**	P	**P**	**19 51 19.6**	**+1.0**
	comp=Z,1.1nm,0.5s,mb3.9,baz=115,slow=8.7,SNR=11						
ARCES	**ARCESS Array B**	**36.63**	**335**	P	**P**	**19 51 19.6**	**+1.0**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NJ2	**Nanjing**	**38.80**	**88**	*e*P	**P**	**19 51 38.4**	**+1.0**
YAK	**Yakutsk**	**39.80**	**39**	*e*P	**P**	**19 51 44.8**	**-0.5**
	comp=Z,8.1nm,0.6s,mb4.6						
YAK	**Yakutsk**	**39.80**	**39**	*e*P	**P**	**19 51 44.8**	**-0.6**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
CLL	**Collm**	**40.38**	**304**	*e*P	**P**	**19 51 51.0**	**+0.7**
NOA	**NORSAR Array B**	**40.60**	**320**	P	**P**	**19 51 52.1**	**0.0**
	comp=Z,2.5nm,0.9s,mb3.9,baz=92,slow=8.3,SNR=5.3						
NOA				LR	LR	20 09 27.6	
	comp=Z,38nm,20.0s,MS3.2,baz=45,slow=37						
DAVOX	**Davos/Dischmat**	**43.40**	**299**	P	**P**	**19 52 15.8**	**+0.7**
	comp=Z,2.2nm,0.5s,mb4.1,baz=90,slow=11,SNR=5.8						
CDF	**Champ du Feu**	**44.64**	**302**	*e*P	**P**	**19 52 24.9**	**-0.1**
HINF	**Hinteralfeld**	**45.08**	**301**	*e*P	**P**	**19 52 28.3**	**-0.2**
HAU	**Haudompre**	**45.35**	**301**	*e*P	**P**	**19 52 30.6**	**0.0**
LPG	**La Plagne**	**45.86**	**298**	*e*P	**P**	**19 52 35.5**	**+0.7**
	comp=Z,3.4nm,0.6s,mb4.2						
LPG	**La Plagne**	**45.86**	**298**	*e*P	**P**	**19 52 35.5**	**+0.7**
	comp=Z,1.7nm,0.6s,mb4.2						
LPG	**La Plagne**	**45.86**	**298**	*e*P	**P**	**19 52 35.5**	**+0.7**
LPG				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
SBF	**Sospel**	**45.96**	**295**	*e*P	**P**	**19 52 35.8**	**+0.3**
	comp=Z,15nm,0.8s,mb4.7						
SBF	**Sospel**	**45.96**	**295**	*e*P	**P**	**19 52 35.8**	**+0.3**
	comp=Z,7.4nm,0.8s,mb4.7						
SBF	**Sospel**	**45.96**	**295**	*e*P	**P**	**19 52 35.8**	**+0.3**
SBF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
MEZF	**Maizieres J'vi**	**46.03**	**302**	*e*P	**P**	**19 52 36.5**	**+0.5**
BAIF	**Baives**	**46.11**	**305**	*e*P	**P**	**19 52 36.5**	**-0.1**
MBDF	**Montbardon**	**46.11**	**297**	*e*P	**P**	**19 52 37.6**	**+0.9**
	comp=Z,7.4nm,0.8s,mb4.4						
MBDF	**Montbardon**	**46.11**	**297**	*e*P	**P**	**19 52 37.6**	**+0.9**
	comp=Z,3.7nm,0.8s,mb4.4						
MBDF	**Montbardon**	**46.11**	**297**	*e*P	**P**	**19 52 37.6**	**+0.9**
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
FRF	**La Foret Royal**	**46.60**	**295**	*e*P	**P**	**19 52 40.4**	**-0.2**
SMRF	**Simiane la Rot**	**47.17**	**296**	*e*P	**P**	**19 52 45.1**	**0.0**
LOR	**Lormes**	**47.18**	**301**	*e*P	**P**	**19 52 44.2**	**-0.8**
SMF	**Signal de Mont**	**47.40**	**300**	*e*P	**P**	**19 52 46.2**	**-0.5**
VIVF	**Saint-Julien-l**	**47.47**	**298**	*e*P	**P**	**19 52 47.3**	**0.0**
SSF	**Saint Saulge**	**47.47**	**301**	*e*P	**P**	**19 52 46.7**	**-0.6**
AVF	**Avril sur Loir**	**47.66**	**300**	*e*P	**P**	**19 52 48.5**	**-0.3**
	comp=Z,6.2nm,0.8s,mb4.4						
AVF	**Avril sur Loir**	**47.66**	**300**	*e*P	**P**	**19 52 48.5**	**-0.3**
	comp=Z,3.1nm,0.8s,mb4.4						
AVF	**Avril sur Loir**	**47.66**	**300**	*e*P	**P**	**19 52 48.5**	**-0.3**
AVF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
LASF	**Ste Croix**	**48.29**	**297**	*e*P	**P**	**19 52 54.0**	**+0.3**
	comp=Z,13nm,1.0s,mb4.6						
TCF	**Toulx Ste Croi**	**48.58**	**300**	*e*P	**P**	**19 52 55.8**	**-0.1**
LDF	**La Druitiere**	**49.26**	**304**	*e*P	**P**	**19 53 00.7**	**-0.4**
GRR	**Garron**	**49.79**	**304**	*e*P	**P**	**19 53 05.1**	**0.0**
MFF	**Saint Martin d**	**49.98**	**301**	*e*P	**P**	**19 53 06.0**	**-0.6**
MJAR	**Matsushiro Arr**	**51.02**	**72**	P	**P**	**19 53 13.9**	**-0.8**
	comp=Z,2.1nm,0.8s,mb4.1,baz=287,slow=9.2,SNR=4.9						
MJAR	**Matsushiro Arr**	**51.02**	**72**	P	**P**	**19 53 13.9**	**-0.8**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
EPF	**Esparros**	**51.05**	**297**	*e*P	**P**	**19 53 13.9**	**-0.9**
ESDC	**Sonseca Array**	**55.44**	**295**	P	**P**	**19 53 47.7**	**+0.6**
ESDC	**Sonseca Array**	**55.44**	**295**	P	**P**	**19 53 47.7**	**+0.6**
	comp=Z,0.7nm,0.6s,mb3.9,baz=57,slow=7.5,SNR=8.7						
LSZ	**Lusaka**	**69.16**	**225**	*e*P	**P**	**19 55 19.1**	**-0.1**
	comp=Z,3.9nm,0.9s,mb4.3						
LSZ	**Lusaka**	**69.16**	**225**	*e*P	**P**	**19 55 19.1**	**-0.1**
LSZ				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
ILAR	**Eielson Array**	**69.87**	**16**	P	**P**	**19 55 22.9**	**-0.1**
	comp=Z,0.5nm,0.8s,mb3.5,baz=310,slow=4.6,SNR=8.3						
ILAR	**Eielson Array**	**69.87**	**16**	P	**P**	**19 55 22.9**	**-0.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
DBIC	**Dimbokro**	**75.26**	**266**	P	**P**	**19 55 55.6**	**-0.2**
	comp=Z,9.7nm,1.2s,mb4.6,baz=344,slow=7.4,SNR=3.3						
DBIC	**Dimbokro**	**75.26**	**266**	P	**P**	**19 55 55.7**	**-0.2**
DBIC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YKA	**Yellowknife Ar**	**76.20**	**3**	P	**P**	**19 56 00.0**	**-0.4**
	comp=Z,1.8nm,0.7s,mb4.1,baz=352,slow=6.1,SNR=11						
TSUM	**Tsumeb**	**78.25**	**231**	*e*P	**P**	**19 56 12.8**	**+0.3**
	comp=Z,5.7nm,1.2s,mb4.4						
LBTB	**Lobatse**	**78.60**	**222**	*e*P	**P**	**19 56 14.3**	**0.0**
	comp=Z,2.6nm,0.6s,mb4.3						
LBTB	**Lobatse**	**78.60**	**222**	*e*P	**P**	**19 56 14.3**	**0.0**
LBTB				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
WRAB	**Tennant Creek**	**84.47**	**123**	*e*P	**P**	**19 56 44.8**	**-0.6**
	comp=Z,2.5nm,0.6s,mb4.5						
WRAB	**Tennant Creek**	**84.47**	**123**	*e*P	**P**	**19 56 44.8**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
WB2	**Warramunga Arr**	**84.47**	**123**	*e*P	**P**	**19 56 44.2**	**-1.2**
ASAR	**Alice Springs**	**86.95**	**125**	P	**P**	**19 56 57.0**	**-0.8**
	comp=Z,2.5nm,0.8s,mb4.5,baz=316,slow=5.2,SNR=20						
ASAR	**Alice Springs**	**86.95**	**125**	P	**P**	**19 56 57.0**	**-0.7**
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						

*NIED **01** 19:47:00, 35°.10N×140°.10E, h20km, Mw3.6 Best double couple: M0 3.26000×10^14 NP1:φs122.00000°, δ82.00000°, λ8.00000°. NP2:φs31.00000°, δ82.00000°, λ172.00000°.*
*ISCJB **01** 19:47:19.8±0.7, 35°.11N±0°.04×140°.11E±0°.04, h44km±7km, Error ellipse: s

Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.57**	**20**	*e*P	Pg	20 50 15.5	+1.5
ACR				*e*S	Sg	20 50 24.3	+2.9
BRU2	**Volcan**	**0.95**	**45**	*e*P	Pg	20 50 22.0	+0.8
BRU2				*e*S	Sg	20 50 37.2	+3.7
TBS2		**0.97**	**46**	*e*P	Pg	20 50 16.1	-5.6
TBS2				*e*S	Sg	20 50 30.8	-3.6
BRU	**Baru**	**1.05**	**49**	*e*P	Pg	20 50 13.3	-10
BRU				*e*S	Sg	20 50 22.4	-14
BAR1		**1.12**	**3**	*e*P	Pg	20 50 24.6	0.0
BAR1				*e*S	Sg	20 50 40.6	+1.4
BUS	**Buena Vista**	**1.48**	**345**	*e*P	Pn	20 50 30.7	-0.2
QCR	**Quepos**	**1.52**	**329**	*e*P	Pn	20 50 30.5	-0.9
URSC	**Ursasca**	**1.76**	**347**	*e*P	Pn	20 50 34.5	-0.1
LAJ	**Bijagual**	**1.89**	**337**	*e*P	Pn	20 50 36.2	-0.3
PRS1	**Puriscal**	**2.08**	**333**	*e*P	Pn	20 50 39.2	+0.1
CGA2	**Cerro Gallo 2**	**2.18**	**330**	*e*P	Pn	20 50 41.9	+1.4
JCR	**Jicaral**	**2.44**	**315**	*e*P	Pn	20 50 43.7	-0.4

IDC ***01*** *21:03:29.5±1.8,31˚.99N×104˚.78E,h0km,mb3.8/8, mb1 3.8/11,mb1mx3.6/25,mbtmp3.7/11,ML3.3/3,MS2.9/1, Ms1 2.9/1,ms1mx2.2/31,Error ellipse: s-maj=39.9km s-min=27.2km az=12.0*

ISCJB ***01*** *21:03:30.2±0.4,32˚.01N±0˚.03×104˚.76E±0˚.04,h10km, mb3.8/11,Error ellipse: s-maj=4.8km s-min=4.1km az=8.3*

NEIC ***01*** *21:03:31.8±0.6,32˚.02N×104˚.69E,h10km,mb4.0/4,Error ellipse: s-maj=12.8km s-min=10.5km az=67.0*

BJI ***01*** *21:03:32.1,32˚.10N×104˚.86E,h14km,mb3.8/2,ML3.8/21, Ms3.5/7,Ms7 3.4/6*

ISC 01 21:03:32.0±0.3,32˚.07N±0˚.03×104˚.70E±0˚.04,h10km,n26, σ1§**16**/40**,mb3.8**/11**,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.41**	**215**	Pg	**Pg**	**21 03 57.8**	**-1.2**
CD2				Sg	**Sg**	**21 04 17.1**	**-0.2**
CD2				smax			
	comp=N,7μm,0.6s						
CD2				smax			
	comp=E,7μm,0.6s						
XAN	**Xi'an**	**4.05**	**60**	Pn	**Pn**	**21 04 33.7**	**-0.3**
XAN				Pg	**Pg**	**21 04 44.2**	**-5.4**
XAN				Sn	**Sn**	**21 05 22.2**	**+0.7**
XAN				Sg	**Sg**	**21 05 35.5**	**-6.6**
XAN				smax			
	comp=N,300nm,0.8s						
XAN				smax			
	comp=E,150nm,0.6s						
XAN				LR	LR		
	comp=N,330nm,8.8s						
XAN				LR	LR		
	comp=E,61nm,8.8s						
LZH	**Lanzhou**	**4.07**	**350**	Pn	**Pn**	**21 04 36.5**	**+2.2**
LZH				Pg	**Pg**	**21 04 48.4**	**-1.5**
LZH				Sn	**Sn**	**21 05 26.2**	**+4.3**
LZH				Sg	**Sg**	**21 05 40.5**	**-2.1**
LZH				smax			
	comp=N,520nm,0.8s						
LZH				smax			
	comp=E,460nm,0.6s						
LZH				LR	LR		
	comp=N,1μm,6.5s						
ENH	**Enshi**	**4.48**	**112**	*e*Pn	**Pn**	**21 04 41.2**	**+1.3**
ENH				*e*Pg	**Pg**	**21 04 54.2**	**-3.6**
ENH				*e*Sn	**Sn**	**21 05 33.0**	**+0.9**
ENH				*e*Sg	**Sg**	**21 05 55.2**	**-0.6**
GYA	**Guiyang**	**5.85**	**162**	Pn	**Pn**	**21 04 58.5**	**-0.3**
GYA				Sn	**Sn**	**21 06 06.6**	**+0.7**
GYA				Sg	**Sg**	**21 06 34.8**	**-5.0**
GYA				smax			
	comp=N,80nm,0.7s						
GYA				smax			
	comp=E,80nm,0.7s						
KMI	**Kunming**	**7.13**	**194**	Pn	**Pn**	**21 05 18.5**	**+2.1**
KMI				Sn	**Sn**	**21 06 36.9**	**-0.6**
KMI				smax			
	comp=N,13nm,1.8s						
KMI				smax			
	comp=E,12nm,2.0s						
KMI				LR	LR		
	comp=N,100nm,7.9s						
KMI				LR	LR		
	comp=E,110nm,7.3s						
KMI				LR	LR		
	comp=Z,120nm,7.3s						
GTA	**Gaotai**	**8.33**	**333**	*e*P	**Pb**	**21 05 46.9**	**-9.4**
GTA				pP		21 05 50.9	
GTA				sP		21 05 54.4	
GTA				S	**Sn**	**21 07 21.2**	**+14**
GTA				sS		21 07 25.1	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,66nm,4.8s						
GTA				LR	LR		
	comp=N,190nm,9.2s						
GTA				LR	LR		
	comp=E,76nm,10.1s						
GTA				LR	LR		
	comp=Z,180nm,9.8s						
CMAR	**Chiang Mai Arr**	**14.52**	**202**	Pn	**Pn**	**21 06 55.7**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=217,slow=30,SNR=3.1						
SONM	**Songino Array**	**15.80**	**4**	Pn	**Pn**	**21 07 15.4**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=184,slow=16,SNR=4.4						
SONM				LR	LR	21 14 12.3	
	comp=Z,37nm,18.4s,baz=270,slow=40						
ULN	**Ulaanbaatar**	**15.88**	**6**	*e*Pn	**Pn**	**21 07 16.0**	**+0.6**
KSRS	**Korea Array**	**19.80**	**68**	P	**Pn**	**21 08 02.1**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=262,slow=8.7,SNR=4.1						
MK31	**Makanchi Array**	**22.60**	**317**	*e*P	**P**	**21 08 33.7**	**+1.1**
MKAR	**Makanchi Array**	**22.60**	**317**	P	**P**	**21 08 32.9**	**+0.3**
	comp=Z,0.8nm,0.7s,mb3.3,baz=104,slow=13,SNR=8.7						
UCH	**Uchtor**	**25.99**	**302**	*e*P	**P**	**21 09 06.0**	**+1.2**
	comp=Z,1.8nm,0.6s,mb3.8						
ZALV	**Zalesovo Beam**	**26.08**	**333**	P	**P**	**21 09 05.2**	**-0.4**
ZALV	**Zalesovo Beam**	**26.08**	**333**	P	**P**	**21 09 05.2**	**-0.3**
	comp=Z,3.5nm,0.6s,mb4.1,baz=127,slow=11,SNR=20						
KURK	**Kurchatov**	**26.79**	**322**	*e*P	**P**	**21 09 13.5**	**+1.5**
	comp=Z,2.0nm,1.1s,mb3.6						
KURK	**Kurchatov**	**26.79**	**322**	P	**P**	**21 09 12.1**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.2,baz=135,slow=8.1,SNR=5.5						
KBL	**Kabul**	**29.81**	**285**	*e*P	**P**	**21 09 40.3**	**+1.2**
	comp=Z,1.1nm,0.4s,mb3.9						
ARU	**Arti**	**39.99**	**321**	*e*P	**P**	**21 11 05.9**	**-0.6**
	comp=Z,1.6nm,0.4s,mb4.1						
ARCES	**ARCESS Array B**	**56.59**	**336**	P	**P**	**21 13 15.0**	**+0.6**
ARCES	**ARCESS Array B**	**56.59**	**336**	P	**P**	**21 13 15.0**	**+0.6**
	comp=Z,2.5nm,0.9s,mb4.2,baz=77,slow=7.6,SNR=4.8						
FINES	**FINESS Array B**	**57.05**	**326**	P	**P**	**21 13 17.1**	**-0.7**
	comp=Z,1.2nm,0.6s,mb4.1,baz=75,slow=5.9,SNR=6.4						
NOA	**NORSAR Array B**	**64.12**	**327**	P	**P**	**21 14 06.8**	**+0.7**
	comp=Z,1.0nm,0.8s,mb3.9,baz=69,slow=2.4,SNR=3.5						
ILAR	**Eielson Array**	**68.75**	**26**	P	**P**	**21 14 33.8**	**-1.9**
	comp=Z,0.2nm,0.6s,mb3.2,baz=291,slow=4.3,SNR=4.8						
YKA	**Yellowknife Ar**	**80.62**	**17**	P	**P**	**21 15 43.9**	**-0.6**
	comp=Z,0.6nm,0.5s,mb3.8,baz=327,slow=5.0,SNR=4.6						

IDC ***01*** *21:07:35.2±4.5,6˚.83S×129˚.66E,h101km±41km,mb3.7/9, mb1 3.9/11,mb1mx3.7/20,mbtmp3.8/11,MS3.6/1, Ms1 3.5/1,ms1mx2.4/23,Error ellipse: s-maj=34.9km s-min=15.6km az=71.0*

NEIC ***01*** *21:07:38.4±1.4,6˚.90S×129˚.46E,h128km±15km,mb4.1/4, Error ellipse: s-maj=13.5km s-min=9.6km az=67.0*

ISCJB ***01*** *21:07:39.8±1.2,7˚.06S±0˚.06×129˚.6E±0˚.1,h167km±13km, mb3.8/11,Error ellipse: s-maj=18.7km s-min=8.4km az=157.4*

DJA ***01*** *21:07:41,7˚.10S×129˚.65E,h155km,mb4.9/6*

ISC 01 21:07:40.0±1.2,7˚.05S±0˚.07×129˚.7E±0˚.1,h151km±14km, n35,σ1§**33**/37**,mb3.8**/11**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**3.36**	**66**	P	Px	21 08 34.5	
NLAI	**Namlea**	**4.56**	**326**	P	Px	21 08 53.6	
KAKA	**Kakadu**	**6.26**	**154**	*e*P	**Pn**	**21 09 11.0**	**+0.9**
	172nm,0.3s						
KAKA				*e*S	x	21 10 04.9	
KAKA	**Kakadu**	**6.26**	**154**	*e*Pn	**Pn**	**21 09 11.4**	**+1.3**
	449nm,0.5s						
KAKA				*e*Sn	**Sn**	**21 10 17.9**	**-2.9**
KAKA	**Kakadu**	**6.26**	**154**	P	**Pn**	**21 09 11.8**	**+1.7**
	3.4nm9μm308nm,0.6s						
KNA	**Kununurra**	**8.70**	**186**	P	**Pn**	**21 09 42.6**	**-0.1**
	3.6nm712nm,0.8s						
MNI	**Manado**	**9.71**	**330**	P	**Pn**	**21 09 57.7**	**+1.5**
	105nm,1.2s						
FITZ	**Fitzroy Crossi**	**11.67**	**199**	*e*P	**Pn**	**21 10 20.1**	**-1.8**
	26nm,0.3s						
FITZ				*e*S	x	21 12 22.0	
FITZ	**Fitzroy Crossi**	**11.67**	**199**	*e*Pn	**Pn**	**21 10 20.5**	**-1.4**
FITZ				S	**Sn**	**21 12 24.3**	**-6.7**
FITZ	**Fitzroy Crossi**	**11.67**	**199**	P	**Pn**	**21 10 20.4**	**-1.5**
	7.0nm,0.3s,baz=34,slow=10,SNR=73						
FITZ				S	**Sn**	**21 12 24.3**	**-6.7**
	9.7nm,0.3s,baz=75,slow=22,SNR=10						
FITZ	**Fitzroy Crossi**	**11.67**	**199**	P	**Pn**	**21 10 21.7**	**-0.2**
	52nm,0.6s						
WRAB	**Tennant Creek**	**13.59**	**161**	*e*Pn	**Pn**	**21 10 45.2**	**-1.5**
	14nm,0.4s						
WRAB				*e*Sn	**Sn**	**21 13 08.2**	**-9.1**
WRAB	**Tennant Creek**	**13.59**	**161**	P	**Pn**	**21 10 46.6**	**-0.1**
	30nm,1.2s						
WB2	**Warramunga Arr**	**13.60**	**161**	*e*Pn	**Pn**	**21 10 45.2**	**-1.6**
WB2				*e*Sn	**Sn**	**21 13 09.2**	**-8.3**
COEN	**Coen**	**14.95**	**118**	*e*P	**Pn**	**21 11 07.4**	**+3.6**
	40nm,0.5s						
MBWA	**Marble Bar**	**17.01**	**213**	*e*P	**Pn**	**21 11 28.3**	**-0.6**
	11nm,0.7s						
ASAR	**Alice Springs**	**17.02**	**167**	P	**Pn**	**21 11 30.4**	**+1.4**
	3.8nm,0.3s,baz=341,slow=10,SNR=254						
ASAR				S	**S**	**21 14 32.1**	**-6.1**
	0.5nm,0.3s,baz=349,slow=28,SNR=3.9						
SBUM	**Sibu**	**19.80**	**298**	P	**P**	**21 12 00.6**	**+1.7**
FORT	**Forrest**	**23.66**	**183**	*e*P	**P**	**21 12 40.5**	**+2.9**
	13nm,0.8s,mb4.5						
FORT	**Forrest**	**23.66**	**183**	*e*P	**P**	**21 12 40.1**	**+2.5**
	18nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**27.10**	**157**	*e*P	**P**	**21 13 10.7**	**+2.0**
	3.4nm,1.1s,mb3.9						
STKA	**Stephens Creek**	**27.10**	**157**	P	**P**	**21 13 10.6**	**+2.0**
	1.6nm,0.4s,mb4.0,baz=340,slow=7.8,SNR=3.3						
STKA				LR	LR	21 24 42.4	
	comp=Z,124nm,18.4s,baz=203,slow=38						
PSI	**Prapat**	**32.20**	**287**	P	**P**	**21 13 54.1**	**+0.1**
	4.8nm,0.6s,mb4.4,baz=86,slow=7.7,SNR=4.5						
CMAR	**Chiang Mai Arr**	**39.51**	**310**	P	**P**	**21 14 55.2**	**-0.9**
	0.9nm,0.5s,mb3.6,baz=138,slow=6.8,SNR=10						
CHTO	**Chiang Mai**	**39.72**	**311**	*e*P	**P**	**21 14 56.5**	**-1.3**
	1.6nm,0.7s,mb3.8						
MJAR	**Matsushiro Arr**	**44.09**	**10**	P	**P**	**21 15 31.3**	**-1.7**
	0.3nm,0.3s,mb3.4,baz=193,slow=10,SNR=4.2						
SONM	**Songino Array**	**58.38**	**342**	P	**P**	**21 17 19.2**	**-0.2**
	0.2nm,0.4s,mb3.3,baz=155,slow=7.5,SNR=3.3						
MK31	**Makanchi Array**	**68.08**	**327**	*e*P	**P**	**21 18 23.3**	**0.0**
MKAR	**Makanchi Array**	**68.08**	**327**	P	**P**	**21 18 23.2**	**0.0**
	0.9nm,0.4s,mb3.9,baz=116,slow=8.0,SNR=24						
MKAR				pP	PcP	21 18 40.4	-7.9
	0.8nm,0.5s,baz=124,slow=7.0,SNR=4.8						
ZALV	**Zalesovo Beam**	**71.48**	**334**	P	**P**	**21 18 42.8**	**-1.1**
	0.7nm,0.5s,mb3.6,baz=138,slow=7.1,SNR=3.9						
KURK	**Kurchatov**	**72.38**	**329**	*e*P	**P**	**21 18 49.2**	**-0.2**
	1.3nm,0.7s,mb3.8						
KURK	**Kurchatov**	**72.38**	**329**	P	**P**	**21 18 48.5**	**-0.9**
	1.0nm,0.5s,mb3.8,baz=138,slow=3.7,SNR=3.8						
MAW	**Mawson**	**74.79**	**201**	P	**P**	**21 19 04.6**	**+1.5**
	1.4nm,0.6s,mb3.8,baz=62,slow=12,SNR=5.0						
CPUP	**Villa Florida**	**146.14**	**169**	PKPbc	PKPbc	21 27 04.4	+1.2
	0.8nm,0.5s,baz=225,slow=5.7,SNR=5.6						
LPAZ	**La Paz**	**150.88**	**143**	PKPbc	PKPbc	21 27 18.8	+3.1
	0.4nm,0.4s,baz=242,slow=1.7,SNR=3.7						

ISCJB ***01*** *21:13:53.1±0.8,38˚.57N±0˚.04×58˚.4E±0˚.1,h10km,Error ellipse: s-maj=12.2km s-min=6.3km az=3.4*

CSEM ***01*** *21:13:54.1±0.4,38˚.47N×58˚.37E,h2km,ML3.7,Error ellipse: s-maj=10.6km s-min=7.0km az=96.0*

TEH ***01*** *21:13:56.4,38˚.41N×58˚.33E,h4km*

ISC 01 21:13:55.3±0.8,38˚.44N±0˚.04×58˚.37E±0˚.07,h10km,n23, σ1§**23**/36**,7C-3D,Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IEMG	**Emamgholi**	**1.05**	**168**	*e*Pg	**Pg**	**21 14 14.8**	**-0.6**
IEMG				*e*Sg	**Sg**	**21 14 28.8**	**-0.2**
IEMG				*e*		21 14 34.0	
	comp=Z,21μm,0.1s						
IEMG	**Emamgholi**	**1.05**	**168**	*e*Pg	**Pg**	**21 14 14.8**	**-0.6**
IEMG				*e*Sg	**Sg**	**21 14 28.8**	**-0.2**
ISHV	**Shirvan**	**1.05**	**211**	*e*Pg	**Pg**	**21 14 14.5**	**-0.9**
ISHV				*e*		21 14 15.4	
	comp=Z,25μm,0.1s						
ISHV				*e*Sg	**Sg**	**21 14 28.0**	**-1.0**
ISHV	**Shirvan**	**1.05**	**211**	*e*Pg	**Pg**	**21 14 14.5**	**-0.9**
ISHV				*e*Sg	**Sg**	**21 14 28.0**	**-1.0**
IQHU	**Qucahn**	**1.37**	**174**	*e*Pg	**Pn**	**21 14 20.1**	**-0.4**
IQHU				*e*		21 14 45.7	
	comp=Z,10μm,0.1s						
IQHU	**Qucahn**	**1.37**	**174**	*e*Pg	**Pn**	**21 14 20.1**	**-0.4**
ISFR	**Sfrayin**	**1.41**	**192**	*e*Pn	**Pn**	**21 14 21.3**	**+0.2**
ISFR				*e*Sg	**Sg**	**21 14 39.8**	**-1.0**
ISFR				*e*		21 14 43.2	
	comp=Z,10μm,0.1s						
IKRD	**Kardeh**	**1.66**	**176**	*e*Pn	**Pg**	**21 14 30.1**	**+2.9**
IKRD				*e*Sg	**Sg**	**21 14 55.2**	**+6.4**
IKRD				*e*		21 14 56.8	
	comp=Z,8μm,0.1s						
IAKL	**Akhelmad**	**1.86**	**170**	*e*Pn	**Pb**	**21 14 28.3**	**-1.1**
IAKL				*e*Sg	**Sb**	**21 14 52.7**	**+0.1**
IAKL				*e*		21 14 56.9	
	comp=Z,5μm,0.1s						
IPAY	**Payeh**	**2.05**	**166**	*e*Pn	**Pn**	**21 14 30.8**	**+1.0**
IPAY				*e*		21 15 03.2	
	comp=Z,6μm,0.1s						
IPAY	**Payeh**	**2.05**	**166**	*e*Pn	**Pn**	**21 14 30.8**	**+1.0**
ISRO	**Mashad**	**2.30**	**157**	*e*Pn	**Pn**	**21 14 34.9**	**+1.6**
ISRO				*e*		21 15 08.2	
	comp=Z,7μm,0.4s						
MHI	**Mashad**	**2.30**	**157**	*e*Pn	**Pn**	**21 14 34.9**	**+1.6**
MHI				*e*		21 15 08.8	
	comp=Z,5μm,0.1s						
IMOG	**Moghan**	**2.45**	**161**	*e*Pn	**Pn**	**21 14 36.3**	**+1.0**
IMOG				*e*		21 15 13.5	
	comp=Z,2μm,0.2s						
IMOG	**Moghan**	**2.45**	**161**	*e*Pn	**Pn**	**21 14 36.3**	**+1.0**
IMYA	**Miami**	**2.51**	**146**	*e*Pn	**Pn**	**21 14 38.0**	**+1.9**
IMYA				*e*Sg	**Sg**	**21 15 14.2**	**-1.6**
IMYA				*e*		21 15 16.6	
	comp=Z,4μm,0.1s						
IMYA	**Miami**	**2.51**	**146**	*e*Pn	**Pn**	**21 14 38.0**	**+1.9**
IMYA				*e*Sg	**Sg**	**21 15 14.2**	**-1.6**
ISHM	**Shahmirzad**	**4.83**	**239**	*e*Pn	**Pn**	**21 15 09.4**	**+1.3**
ISHM	**Shahmirzad**	**4.83**	**239**	*e*Pn	**Pn**	**21 15 09.4**	**+1.3**
KK31	**Karatay Array**	**10.32**	**59**	Pn	**Pn**	**21 16 21.7**	**-1.6**
	comp=Z,0.3nm,0.5s,baz=237,slow=16,SNR=7.4						
KK31				Sn	**Sn**	**21 18 11.3**	**-7.7**
	comp=Z,1.2nm,0.8s,baz=252,slow=22						
KK31	**Karatay Array**	**10.32**	**59**	Pn	**Pn**	**21 16 21.7**	**-1.6**
	comp=Z,0.3nm,0.5s,baz=237,SNR=7.4						
KK31				Sn	**Sn**	**21 18 11.3**	**-7.6**
	comp=Z,1.2nm,0.8s						
AB31	**Akbulak array**	**10.87**	**5**	Pn	**Pn**	**21 16 29.4**	**-1.5**
	comp=Z,0.5nm,0.6s,baz=185,slow=13,SNR=8.6						
AB31				Sn	**Sn**	**21 18 20.0**	**-12**
	comp=Z,0.6nm,0.3s,baz=198,slow=27,SNR=6.9						
AB31	**Akbulak array**	**10.87**	**5**	Pn	**Pn**	**21 16 29.4**	**-1.5**
	comp=Z,0.5nm,0.6s,baz=185,SNR=8.6						
AB31				Sn	**Sn**	**21 18 20.0**	**-12**
	comp=Z,0.6nm,0.3s,SNR=6.9						

IDC ***01*** *22:28:15.6±1.0,10˚.58S×163˚.51E,h0km,mb4.1/9, mb1 4.4/11,mb1mx4.2/17,mbtmp4.2/11,ML4.6/2,MS3.7/10, Ms1 3.7/10,ms1mx3.5/19,Error ellipse: s-maj=32.8km s-min=19.5km az=147.0*

ISCJB ***01*** *22:28:21.4±2.9,10˚.71S±0˚.09×163˚.4E±0˚.1,h51km±23km, mb4.3/19,MS3.7/9,Error ellipse: s-maj=21.2km s-min=14.2km az=22.2*

NEIC ***01*** *22:28:22.3±2.7,10˚.63S×163˚.41E,h43km±21km,mb4.6/11, Error ellipse: s-maj=23.6km s-min=12.1km az=126.0*

ISC 01 22:28:22.4±2.7,10˚.69S±0˚.09×163˚.4E±0˚.1,h46km±21km, n40,σ0§**95**/34**,mb4.3**/19**,MS3.7**/9**,Bougainville -**

Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.64**	**290**	Pn	**Pn**	**22 29 15.3**	**-1.0**
	107nm,0.3s,baz=73,slow=1.0,SNR=21						
HNR				Sn	**Sn**	**22 29 58.5**	**+0.6**
	253nm,0.3s,baz=323,slow=22,SNR=15						
PMG	**Port Moresby**	**16.06**	**273**	*e*Pn	**Pn**	**22 32 05.5**	**+0.3**
CTA	**Charters Tower**	**18.98**	**238**	*e*P	**Pn**	**22 32 41.5**	**+0.2**
	24nm,0.9s						
CTA	**Charters Tower**	**18.98**	**238**	P	**Pn**	**22 32 41.5**	**+0.2**
	0.8nm,0.3s,baz=64,slow=11,SNR=42						
CTA				LR	LR	22 38 46.5	
	comp=Z,186nm,20.7s,baz=243,slow=33						
CTAO	**Charters Tower**	**18.98**	**238**	*e*P	**Pn**	**22 32 41.9**	**+0.6**
	40nm,0.9s						
COEN	**Coen**	**20.04**	**259**	*e*P	**P**	**22 32 52.9**	**+1.2**
	204nm,1.4s						
ARMA	**Armidale**	**22.48**	**207**	*e*P	**P**	**22 33 19.0**	**+1.1**
AFI	**Afiamalu**	**24.44**	**100**	LR	LR	22 41 00.7	
	comp=Z,146nm,20.4s,MS3.5,baz=260,slow=31						
STKA	**Stephens Creek**	**29.17**	**220**	*e*P	**P**	**22 34 19.2**	**-0.3**
	4.4nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**29.17**	**220**	P	**P**	**22 34 20.9**	**+1.4**
STKA				LR	LR	22 45 34.8	
STKA	**Stephens Creek**	**29.17**	**220**	P	**P**	**22 34 20.9**	**+1.4**
	1.3nm,0.5s,mb3.9,baz=112,slow=14,SNR=3.5						
STKA				LR	LR	22 45 34.8	
	comp=Z,295nm,18.5s,MS3.9,baz=28,slow=35						
WRAB	**Tennant Creek**	**29.46**	**248**	*e*P	**P**	**22 34 20.6**	**-1.6**
	7.4nm,0.9s,mb4.4						
WB2	**Warramunga Arr**	**29.46**	**248**	*e*P	**P**	**22 34 20.5**	**-1.7**
URZ	**Urewera**	**30.07**	**158**	LR	LR	22 44 09.7	
	comp=Z,133nm,21.1s,MS3.5,baz=285,slow=32						
GUMO	**Guam**	**30.34**	**322**	LR	LR	22 44 54.5	
	comp=Z,222nm,22.0s,MS3.8,baz=219,slow=33						
ASAR	**Alice Springs**	**30.93**	**242**	P	**P**	**22 34 33.9**	**-1.3**
	6.0nm,0.9s,mb4.4,baz=74,slow=9.9,SNR=45						
FITZ	**Fitzroy Crossi**	**37.27**	**254**	*e*P	**P**	**22 35 28.6**	**-1.6**
	6.5nm,0.5s,mb4.7						
FITZ	**Fitzroy Crossi**	**37.27**	**254**	LR	LR	22 49 58.0	
	comp=Z,158nm,21.2s,MS3.8,baz=14,slow=35						
MBWA	**Marble Bar**	**43.15**	**251**	*e*P	**P**	**22 36 19.9**	**+1.1**
	12nm,1.0s,mb4.6						
PPT	**Papeete**	**46.00**	**104**	LR	LR	22 51 56.5	
	comp=Z,128nm,18.1s,MS3.9,baz=331,slow=31						
KSRS	**Korea Array**	**58.32**	**327**	LR	LR	23 02 01.3	
	comp=Z,35nm,18.4s,MS3.5,baz=346,slow=35						
ENH	**Enshi**	**65.91**	**310**	*e*P	**P**	**22 39 03.4**	**-0.5**
	8.2nm,0.9s,mb4.8						
CMAR	**Chiang Mai Arr**	**69.88**	**294**	P	**P**	**22 39 29.7**	**+0.6**
	2.6nm,0.9s,mb4.2,baz=112,slow=4.2,SNR=13						
CMAR				LR	LR	23 07 52.7	
	comp=Z,23nm,19.3s,MS3.4,baz=180,slow=34						
CHTO	**Chiang Mai**	**69.99**	**295**	*e*P	**P**	**22 39 29.7**	**-0.1**
	4.0nm,1.0s,mb4.3						
ULN	**Ulaanbaatar**	**76.69**	**325**	*e*P	**P**	**22 40 09.1**	**+0.5**
	2.8nm,0.8s,mb4.2						
SONM	**Songino Array**	**77.04**	**325**	P	**P**	**22 40 10.4**	**-0.2**
	0.8nm,0.7s,mb3.8,baz=140,slow=6.1,SNR=5.6						
QSPA	**South Pole Qui**	**79.31**	**180**	*e*P	**P**	**22 40 29.7**	**+7.1**
	6.9nm,1.1s,mb4.5						
LSA	**Lhasa**	**80.23**	**303**	*e*P	**P**	**22 40 30.7**	**+2.1**
	4.6nm,1.0s,mb4.4						
COLA	**College**	**83.68**	**19**	*e*P	**P**	**22 40 46.5**	**+0.6**
	4.6nm,0.7s,mb4.7						
ILAR	**Eielson Array**	**83.92**	**19**	P	**P**	**22 40 45.8**	**-1.3**
	1.4nm,1.1s,mb4.0,baz=245,slow=5.3,SNR=6.6						
YBH	**Yreka Blue Hor**	**85.29**	**46**	P	**P**	**22 40 54.2**	**-0.4**
	0.5nm,0.4s,mb4.0,baz=190,slow=4.2,SNR=2.8						
EGAK	**Eagle**	**85.85**	**21**	*e*P	**P**	**22 40 57.1**	**+0.2**
	12nm,1.1s,mb5.0						
DAWY	**Dawson**	**86.07**	**22**	*e*P	**P**	**22 40 58.7**	**+0.7**
NVAR	**Mina Array Bea**	**87.56**	**50**	P	**P**	**22 41 05.8**	**0.0**
NVAR	**Mina Array Bea**	**87.56**	**50**	P	**P**	**22 41 05.8**	**0.0**
	0.2nm,0.3s,mb3.8,baz=241,slow=4.9,SNR=3.0						
MK31	**Makanchi Array**	**91.71**	**317**	*e*P	**P**	**22 41 25.2**	**+0.2**
MKAR	**Makanchi Array**	**91.71**	**317**	P	**P**	**22 41 25.2**	**+0.2**
	1.7nm,0.8s,mb4.4,baz=96,slow=6.5,SNR=5.5						
ZALV	**Zalesovo Beam**	**91.94**	**325**	P	**P**	**22 41 24.9**	**-1.0**
ZALV				LR	LR	23 20 08.2	
ZALV	**Zalesovo Beam**	**91.94**	**325**	P	**P**	**22 41 24.9**	**-1.0**
	0.3nm,0.3s,mb4.0,baz=288,slow=30,SNR=2.7						
ZALV				LR	LR	23 20 08.1	
	comp=Z,34nm,20.0s,MS3.8,baz=53,slow=34						
BVAR	**Borovoye Array**	**100.27**	**322**	P	Pdif	22 42 03.3	-0.6
	0.6nm,0.9s,baz=55,slow=7.8,SNR=4.1						

ISK ***01*** *22:43:48.0,35˚.15N×25˚.99E,h54km,MD3.9*

ISCJB ***01*** *22:43:54.5±0.3,35˚.53N±0˚.03×26˚.23E±0˚.

APE	**Apeiranthos**	**1.61**	**340**	*e*P		**Pn**	**22 44 21.5**	**-0.1**
APE				*e*S		**Sn**	**22 44 42.5**	**+1.1**
APE	**Apeiranthos**	**1.61**	**340**	*e*P		**Pn**	**22 44 21.5**	**-0.1**
APE				*e*S		**Sn**	**22 44 42.5**	**+1.1**
APE	**Apeiranthos**	**1.61**	**340**	P		**Pn**	**22 44 20.6**	**-1.1**
APE	**Apeiranthos**	**1.61**	**340**	*e*Pn		**Pn**	**22 44 20.7**	**-0.9**
APE	**Apeiranthos**	**1.61**	**340**	*e*P		**Pn**	**22 44 21.5**	**-0.1**
APE				*e*S		**Sn**	**22 44 42.5**	**+1.1**
APE				*e*Sn		**Sn**	**22 44 43.2**	**+1.8**
VAM	**Vamos**	**1.66**	**265**	*e*P		**Pn**	**22 44 21.7**	**-0.6**
VAM				*e*S		**Sn**	**22 44 43.0**	**+0.4**
VAM	**Vamos**	**1.66**	**265**	*e*P		**Pn**	**22 44 21.7**	**-0.6**
VAM				*e*S		**Sn**	**22 44 43.0**	**+0.4**
VAM	**Vamos**	**1.66**	**265**	*e*P		**Pn**	**22 44 21.7**	**-0.6**
VAM				*e*S		**Sn**	**22 44 43.0**	**+0.4**
ARG	**Arkhangelos**	**1.68**	**66**	*e*P		**Pn**	**22 44 23.1**	**+0.5**
ARG				*e*S		**Sn**	**22 44 44.2**	**+1.1**
ARG	**Arkhangelos**	**1.68**	**66**	*e*P		**Pn**	**22 44 23.1**	**+0.5**
ARG				*e*S		**Sn**	**22 44 44.2**	**+1.1**
ARG	**Arkhangelos**	**1.68**	**66**	P		**Pn**	**22 44 23.1**	**+0.5**
ARG				S		**Sn**	**22 44 44.5**	**+1.4**
ARG	**Arkhangelos**	**1.68**	**66**	*e*P		**Pn**	**22 44 23.1**	**+0.5**
ARG				*e*S		**Sn**	**22 44 44.2**	**+1.1**
BODT	**Bodrum**	**1.74**	**30**	*e*PN		**Pn**	**22 44 22.2**	**-1.2**
BODT				*e*SN		**Sn**	**22 44 48.6**	**+4.0**
BODT	**Bodrum**	**1.74**	**30**	*e*Pn		**Pn**	**22 44 22.3**	**-1.2**
BODT				*e*Sn		**Sn**	**22 44 48.7**	**+4.1**
KARN	**Karanos**	**1.89**	**266**	P		**Pn**	**22 44 25.1**	**-0.4**
KARN	**Karanos**	**1.89**	**266**	P		**Pn**	**22 44 25.1**	**-0.4**
GVD	**Gavdhos**	**1.89**	**248**	*e*Pn		**Pn**	**22 44 27.5**	**+2.0**
GVD	**Gavdhos**	**1.89**	**248**	P		**Pn**	**22 44 28.6**	**+3.1**
GVD	**Gavdhos**	**1.89**	**248**	*e*Pn		**Pn**	**22 44 27.5**	**+2.0**
GVD	**Gavdhos**	**1.89**	**248**	P		**Pn**	**22 44 28.6**	**+3.1**
MLSB	**Milas**	**2.14**	**35**	*e*PN		**Pn**	**22 44 28.3**	**-0.7**
MLSB	**Milas**	**2.14**	**35**	*e*Pn		**Pn**	**22 44 28.3**	**-0.7**
YER	**Yerkesik**	**2.29**	**46**	*e*PN		**Pn**	**22 44 31.0**	**0.0**
YER	**Yerkesik**	**2.29**	**46**	*e*Pn		**Pn**	**22 44 31.0**	**0.0**
KYTH	**Kithira**	**2.69**	**287**	*e*P		**Pn**	**22 44 36.4**	**0.0**
KYTH	**Kithira**	**2.69**	**287**	*e*P		**Pn**	**22 44 36.4**	**0.0**
KYTH	**Kithira**	**2.69**	**287**	*e*P		**Pn**	**22 44 36.4**	**0.0**
BLCB	**Balcova**	**2.90**	**13**	*e*PN		**Pn**	**22 44 39.1**	**-0.2**
BLCB	**Balcova**	**2.90**	**13**	P		**Pn**	**22 44 38.8**	**-0.6**
BLCB	**Balcova**	**2.90**	**13**	P		**Pn**	**22 44 38.8**	**-0.6**
BLCB	**Balcova**	**2.90**	**13**	*e*Pn		**Pn**	**22 44 39.1**	**-0.3**
VLI	**Veliai**	**2.90**	**294**	*e*P		**Pn**	**22 44 39.2**	**-0.2**
VLI	**Veliai**	**2.90**	**294**	*e*P		**Pn**	**22 44 39.2**	**-0.2**
VLI	**Veliai**	**2.90**	**294**	*e*P		**Pn**	**22 44 39.2**	**-0.2**
IZM	**Izmir**	**2.96**	**16**	*e*PN		**Pn**	**22 44 40.1**	**0.0**
IZM	**Izmir**	**2.96**	**16**	*e*Pn		**Pn**	**22 44 40.1**	**-0.1**
DENT	**Denizli**	**3.15**	**45**	*e*PN		**Pn**	**22 44 43.0**	**+0.2**
DENT	**Denizli**	**3.15**	**45**	*e*Pn		**Pn**	**22 44 43.0**	**+0.2**
ELL	**Elmali**	**3.21**	**67**	*e*PN		**Pn**	**22 44 43.2**	**-0.4**
ELL	**Elmali**	**3.21**	**67**	*e*Pn		**Pn**	**22 44 43.3**	**-0.4**
KULA	**Kula-Manisa**	**3.54**	**33**	*e*PN		**Pn**	**22 44 49.0**	**+0.8**
KULA	**Kula-Manisa**	**3.54**	**33**	*e*Pn		**Pn**	**22 44 49.0**	**+0.8**
KHL	**Karahalli**	**3.82**	**43**	*e*PN		**Pn**	**22 44 52.6**	**+0.6**
KHL	**Karahalli**	**3.82**	**43**	*e*Pn		**Pn**	**22 44 52.7**	**+0.6**
PYL	**PYLOS**	**3.86**	**292**	*e*P		**Pn**	**22 44 53.8**	**+1.2**
PYL	**PYLOS**	**3.86**	**292**	*e*P		**Pn**	**22 44 53.8**	**+1.2**
GUR	**Goura**	**3.92**	**308**	*e*P		**Pn**	**22 44 54.9**	**+1.5**
GUR	**Goura**	**3.92**	**308**	*e*P		**Pn**	**22 44 54.9**	**+1.5**
LKR	**Lokris**	**4.02**	**321**	P		**Pn**	**22 44 54.9**	**+0.1**
LKR	**Lokris**	**4.02**	**321**	P		**Pn**	**22 44 54.9**	**+0.1**
EZN	**Ezine**	**4.26**	**1**	*e*PN		**Pn**	**22 44 58.5**	**+0.4**
EZN	**Ezine**	**4.26**	**1**	*e*Pn		**Pn**	**22 44 58.5**	**+0.4**
GONE	**Gonen-Balikesi**	**4.63**	**14**	*e*PN		**Pn**	**22 45 04.0**	**+0.9**
GONE	**Gonen-Balikesi**	**4.63**	**14**	*e*Pn		**Pn**	**22 45 04.0**	**+0.8**
THL	**Klokotos Trika**	**5.21**	**321**	*e*P		**Pn**	**22 45 12.6**	**+1.4**
THL	**Klokotos Trika**	**5.21**	**321**	*e*P		**Pn**	**22 45 12.6**	**+1.4**
BR131	**Keskin Array S**	**7.21**	**53**	*e*Pn		**Pn**	**22 45 40.4**	**+1.8**
	3.2nm,0.6s							
BR131	**Keskin Array S**	**7.21**	**53**	*e*Pn		**Pn**	**22 45 40.4**	**+1.9**
	3.2nm,0.6s							
BRTR	**Keskin Array B**	**7.21**	**53**	Pn		**Pn**	**22 45 38.4**	**-0.2**
	0.6nm,0.3s,baz=225,slow=14,SNR=26							
BRTR				Sn		**Sn**	**22 46 57.7**	**-1.6**
	baz=150,slow=23,SNR=1.8							
BRTR	**Keskin Array B**	**7.21**	**53**	Pn		**Pn**	**22 45 38.3**	**-0.2**
BRTR				Sn		**Sn**	**22 46 57.7**	**-1.6**
MMAI	**Mount Meron Ar**	**8.01**	**106**	Pn		**Pn**	**22 45 48.5**	**-1.2**
	0.6nm,0.3s,baz=308,slow=13,SNR=6.2							
MMAI				Sn		**Sn**	**22 47 19.1**	**-0.1**
	2.0nm,0.3s,baz=344,slow=17,SNR=5.9							
TIP	**Timpagrande**	**8.36**	**298**	*e*Pn		**Pn**	**22 45 53.6**	**-0.8**
	3.4nm,0.6s							
TIP	**Timpagrande**	**8.36**	**298**	*e*Pn		**Pn**	**22 45 53.6**	**-0.7**
	3.4nm,0.6s							
CUC	**Castrocucco**	**9.35**	**301**	*e*Pn		**Pn**	**22 46 07.8**	**-0.2**
CUC	**Castrocucco**	**9.35**	**301**	*e*Pn		**Pn**	**22 46 07.8**	**-0.2**
EIL	**Elat**	**9.41**	**126**	Pn		**Pn**	**22 46 10.2**	**+1.4**
	0.3nm,0.3s,baz=332,slow=15,SNR=8.4							
EIL				Sn		**Sn**	**22 47 49.8**	**-3.9**
	0.5nm,0.3s,baz=0.7,slow=23,SNR=5.8							
EIL	**Elat**	**9.41**	**126**	Pn		**Pn**	**22 46 10.2**	**+1.3**
ASF	**Jabal al Asfar**	**9.50**	**108**	Pn		**Pn**	**22 46 15.0**	**+5.0**
	0.2nm,0.3s,baz=210,slow=8.5,SNR=3.3							
KEST	**Kesra**	**13.73**	**276**	Pn		**Pn**	**22 47 18.4**	**+10**
	0.0nm,0.3s,baz=90,slow=18,SNR=3.0							
ONI	**Oni**	**15.10**	**57**	P		**Pn**	**22 47 23.7**	**-2.7**
ONI				S			22 47 25.4	
KIV	**Kislovodsk**	**15.17**	**51**	*e*Pn		**Pn**	**22 47 25.9**	**-1.4**
KIV	**Kislovodsk**	**15.17**	**51**	*e*Pn		**Pn**	**22 47 25.9**	**-1.4**
AKASG	**Malin Array Be**	**15.29**	**7**	Pn		**Pn**	**22 47 30.8**	**+1.9**
	0.8nm,0.3s,baz=197,slow=11,SNR=5.8							
AKASG	**Malin Array Be**	**15.29**	**7**	Pn		**Pn**	**22 47 30.8**	**+2.0**
KEH	**Kehvi**	**15.33**	**59**	P		**Pn**	**22 47 28.5**	**-0.9**
KEH				S			22 47 35.1	
LPG	**La Plagne**	**17.78**	**310**	*e*P		**Pn**	**22 48 03.9**	**+3.5**
ORIF	**Oris-en-Rattie**	**18.09**	**307**	*e*P		**Pn**	**22 48 04.5**	**+0.3**
	7.5nm,1.0s							
ORIF	**Oris-en-Rattie**	**18.09**	**307**	*e*P		**Pn**	**22 48 04.5**	**+0.3**
	3.8nm,1.0s							
ORIF	**Oris-en-Rattie**	**18.09**	**307**	*e*P		**Pn**	**22 48 04.5**	**+0.3**
	3.8nm,1.0s							
CABF	**La Chapelle**	**18.71**	**312**	*e*P		**Pn**	**22 48 21.1**	**+9.3**
	38nm,1.5s							
CDF	**Champ du Feu**	**19.00**	**318**	*e*P		**Pn**	**22 48 22.5**	**+7.3**
AVF	**Avril sur Loir**	**20.47**	**310**	*e*P		**P**	**22 48 38.1**	**+7.7**
SSF	**Saint Saulge**	**20.50**	**311**	*e*P		**P**	**22 48 29.1**	**-1.6**
	8.4nm,0.8s							
SSF	**Saint Saulge**	**20.50**	**311**	*e*P		**P**	**22 48 29.1**	**-1.6**
	4.2nm,0.8s							
SSF	**Saint Saulge**	**20.50**	**311**	*e*P		**P**	**22 48 29.1**	**-1.6**
	4.2nm,0.8s							
BAIF	**Baives**	**21.59**	**319**	*e*P		**P**	**22 48 50.3**	**+7.9**
	12nm,0.9s,mb4.0							
BAIF	**Baives**	**21.59**	**319**	*e*P		**P**	**22 48 50.3**	**+7.9**
	6.2nm,0.9s,mb4.0							
FLN	**La Foliniere**	**23.64**	**312**	*e*P		**P**	**22 49 08.8**	**+4.9**
ESDC	**Sonseca Array**	**24.20**	**289**	P		**P**	**22 49 16.9**	**+7.8**
	0.2nm,0.4s,mb2.9,baz=85,slow=9.7,SNR=4.2							
ABKAR	**Akbulak array**	**28.15**	**50**	*e*Sn		**P**	**22 49 42.0**	**-2.7**
BRVK	**Borovoye**	**35.39**	**46**	*e*P		**P**	**22 50 49.1**	**+1.0**
	0.8nm,0.5s,mb3.9							
BRVK	**Borovoye**	**35.39**	**46**	*e*P		**P**	**22 50 49.1**	**+1.0**
	0.8nm,0.5s,mb3.9							
EKS2	**Erkin-Say**	**37.17**	**64**	*e*S		**P**	**22 51 01.5**	**-2.0**
KURK	**Kurchatov**	**40.26**	**51**	*e*P		**P**	**22 51 30.4**	**+1.1**
	2.7nm,0.8s,mb4.0							
KURK	**Kurchatov**	**40.26**	**51**	P		**P**	**22 51 29.3**	**+0.1**
	2.1nm,0.7s,mb4.0,baz=271,slow=8.6,SNR=7.2							
KURK	**Kurchatov**	**40.26**	**51**	*e*P		**P**	**22 51 30.4**	**+1.1**
	2.7nm,0.8s,mb4.0							
MKAR	**Makanchi Array**	**42.83**	**57**	P		**P**	**22 51 51.1**	**+0.7**
MKAR				pP		pP	22 51 58.4	-0.9
MKAR	**Makanchi Array**	**42.83**	**57**	P		**P**	**22 51 51.1**	**+0.7**
	0.6nm,0.3s,mb3.8,baz=271,slow=8.7,SNR=6.8							
MKAR				pP		pP	22 51 58.4	-0.9
	1.9nm,0.4s,baz=271,slow=8.2,SNR=7.5							
MKAR	**Makanchi Array**	**42.83**	**57**	P		**P**	**22 51 51.2**	**+0.8**
MKAR				pP		pP	22 51 58.4	-0.9
ZALV	**Zalesovo Beam**	**44.10**	**46**	P		**P**	**22 51 59.8**	**-0.7**
ZALV				pP		pP	22 52 07.8	-1.6
ZALV	**Zalesovo Beam**	**44.10**	**46**	P		**P**	**22 51 59.8**	**-0.7**
	1.8nm,0.5s,mb4.1,baz=270,slow=8.3,SNR=3.8							
ZALV				pP		pP	22 52 07.8	-1.6
	2.2nm,0.5s,baz=267,slow=8.6,SNR=3.5							
ZALV	**Zalesovo Beam**	**44.10**	**46**	P		**P**	**22 51 59.8**	**-0.7**
ZALV				pP		pP	22 52 07.8	-1.6
SONM	**Songino Array**	**58.56**	**51**	P		**P**	**22 53 49.7**	**+0.7**
	0.2nm,0.3s,mb3.6,baz=240,slow=37,SNR=2.3							
SONM				pP		pP	22 53 57.3	-0.8
	0.4nm,0.5s,baz=278,slow=7.0,SNR=2.9							
SONM	**Songino Array**	**58.56**	**51**	P		**P**	**22 53 49.7**	**+0.7**
SONM				pP		pP	22 53 57.3	-0.8
SCHQ	**Schefferville**	**63.45**	**320**	P		**P**	**22 54 28.0**	**+6.0**
SCHQ	**Schefferville**	**63.45**	**320**	P		**P**	**22 54 28.0**	**+6.0**
	2.5nm,0.6s,mb4.6,baz=45,slow=1.4,SNR=4.4							

IDC ***01*** *22:44:37.1±1.0,37˚.37N×55˚.68E,h0km,mb4.0/15, mb1 4.1/21,mb1mx4.0/29,mbtmp4.1/21,ML3.0/1,MS3.2/8, Ms1 3.2/8,ms1mx3.0/25,Error ellipse: s-maj=20.2km s-min=11.6km az=1.0*

THR ***01*** *22:44:38.5±0.3,37˚.76N×55˚.65E,h15km,ML4.4*

ISCJB ***01*** *22:44:39.2±0.7,37˚.71N±0˚.03×55˚.66E±0˚.02,h14km±5km, mb4.2/42,MS3.1/4, Error ellipse: s-maj=4.7km s-min=2.9km az=173.2*

TEH ***01*** *22:44:40.3,37˚.53N×55˚.68E,h3km*

CSEM ***01*** *22:44:40.0±0.1,37˚.60N×55˚.68E,h10km,mb4.2/28,Ms3.4, Error ellipse: s-maj=4.7km s-min=3.1km az=173.0*

NEIC ***01*** *22:44:40.2,37˚.53N×55˚.68E,h3km,mb4.2/21, ML4.4(THR),MN4.5(TEH),After TEH.*

BJI ***01*** *22:44:41.3,37˚.80N×55˚.98E,h13km,mB4.6/5,mb4.3/6, Ms4.1/2*

MOS ***01*** *22:44:41.9±1.0,37˚.63N×55˚.71E,h33km,mb4.5/26,Error ellipse: s-maj=8.6km s-min=5.2km az=134.5*

NNC ***01*** *22:44:44.0±5.0,38˚.19N×56˚.33E,h0km,mb4.2, Error ellipse: s-maj=42.6km s-min=39.0km az=100.0*

ISC 01 22:44:39.9±0.8,37˚.65N±0˚.03×55˚.69E±0˚.02,h7km±5km, n328,σ1§05/354,mb4.2/42,MS3.1/4,32C-25D, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
MRVT	**Maraveh tapeh**	**0.32**	**88**	*e*Pg		**Pg**	**22 44 46.0**	**-0.1**
MRVT				*e*Sg		**Sg**	**22 44 51.4**	**+1.2**
MRVT					AML	AML	22 44 53.1	
	comp=N,55μm,0.2s							
MRVT					AML	AML	22 44 53.7	
	comp=E,53μm,0.3s							
BJRD	**Bojnurd**	**1.36**	**87**	*e*Pg		**Pg**	**22 45 04.3**	**-1.7**
BJRD					AML	AML	22 45 28.8	
	comp=N,6μm,0.7s							
BJRD					AML	AML	22 45 29.1	
	comp=E,4μm,0.7s							
ISHV	**Shirvan**	**1.60**	**93**	Pn		**Pn**	**22 45 08.7**	**+0.2**
ISHV	**Shirvan**	**1.60**	**93**	*e*		**Sg**	**22 45 37.4**	**+6.1**
	comp=Z,49μm,0.3s							
ISHV				*e*Pn		**Pn**	**22 45 08.7**	**+0.2**
IGLO	**Ghaloghah**	**1.88**	**233**	Pn		**Pn**	**22 45 11.3**	**-1.0**
IGLO				*e*Sg		**Sg**	**22 45 36.4**	**-3.8**
IGLO	**Ghaloghah**	**1.88**	**233**	⇓*e*Pn		**Pn**	**22 45 10.3**	**-2.0**
IGLO				*e*Sg		**Sg**	**22 45 36.4**	**-3.8**
IGLO				*e*			22 45 43.2	
	comp=Z,7μm,0.3s							
IGLO	**Ghaloghah**	**1.88**	**233**	Pn		**Pn**	**22 45 11.3**	**-1.0**
IGLO				*e*Sg		**Sg**	**22 45 36.4**	**-3.8**
VAN	**Vannovskaya**	**1.94**	**80**	*e*P		**Pn**	**22 45 13.7**	**+0.6**
VAN	**Vannovskaya**	**1.94**	**80**	*e*P		**Pn**	**22 45 13.7**	**+0.6**
IKIA	**Kiasar**	**2.16**	**229**	Pn		**Pn**	**22 45 15.6**	**-0.6**
IKIA	**Kiasar**	**2.16**	**229**	⇓*e*Pn		**Pn**	**22 45 15.6**	**-0.6**
IKIA				*e*			22 45 47.0	
	comp=Z,18μm,0.2s							
IKIA	**Kiasar**	**2.16**	**229**	⇓*e*Pn		**Pn**	**22 45 15.6**	**-0.6**
IQHU	**Qucahn**	**2.34**	**103**	Pn		**Pn**	**22 45 19.3**	**+0.6**
IQHU	**Qucahn**	**2.34**	**103**	⇓*e*Pn		**Pn**	**22 45 19.3**	**+0.6**
IQHU				*e*			22 46 15.8	
	comp=Z,80μm,0.3s							
IQHU	**Qucahn**	**2.34**	**103**	⇓*e*Pn		**Pn**	**22 45 19.3**	**+0.6**
IEMG	**Emamgholi**	**2.37**	**95**	Pn		**Pn**	**22 45 19.2**	**+0.2**
IEMG	**Emamgholi**	**2.37**	**95**	*e*Pn		**Pn**	**22 45 19.3**	**+0.3**
IEMG				*e*			22 46 00.5	
	comp=Z,24μm,0.2s							
IEMG	**Emamgholi**	**2.37**	**95**	*e*Pn		**Pn**	**22 45 19.3**	**+0.3**
IKRD	**Kardeh**	**2.42**	**110**	Pn		**Pg**	**22 45 30.8**	**+4.7**
IKRD	**Kardeh**	**2.42**	**110**	*e*Pn		**Pg**	**22 45 30.7**	**+4.6**
IKRD				*e*			22 46 22.7	
	comp=Z,9μm,0.3s							
IANJ	**Anjilo**	**2.60**	**214**	Pn		**Pn**	**22 45 21.2**	**-1.1**
IANJ	**Anjilo**	**2.60**	**214**	*e*Pn		**Pn**	**22 45 20.8**	**-1.5**
IANJ				*e*			22 45 57.0	
	comp=Z,11μm,0.2s							
IANJ	**Anjilo**	**2.60**	**214**	Pn		**Pn**	**22 45 21.2**	**-1.1**
IAKL	**Akhelmad**	**2.66**	**112**	Pn		**Pn**	**22 45 23.0**	**-0.1**
IAKL	**Akhelmad**	**2.66**	**112**	*e*Pn		**Pn**	**22 45 23.1**	**0.0**
IAKL				*e*			22 46 04.8	
	comp=Z,16μm,0.2s							
ISHM	**Shahmirzad**	**2.66**	**227**	Pn		**Pn**	**22 45 22.5**	**-0.6**
ISHM	**Shahmirzad**	**2.66**	**227**	*e*Pn		**Pn**	**22 45 22.6**	**-0.5**
ISHM				*e*			22 46 00.6	
	comp=Z,20μm,0.2s							
ISHM	**Shahmirzad**	**2.66**	**227**	*e*Pn		**Pn**	**22 45 22.6**	**-0.5**
IALA	**Alasht**	**2.79**	**237**	Pn		**Pn**	**22 45 23.8**	**-1.1**
IALA	**Alasht**	**2.79**	**237**	*e*Pn		**Pn**	**22 45 23.8**	**-1.1**
IALA				*e*			22 46 01.2	
	comp=Z,32μm,0.2s							
IALA	**Alasht**	**2.79**	**237**	*e*Pn		**Pn**	**22 45 23.8**	**-1.1**
IPAY	**Payeh**	**2.90**	**113**	Pn		**Pn**	**22 45 26.7**	**+0.3**
IPAY	**Payeh**	**2.90**	**113**	⇓*e*Pn		**Pn**	**22 45 26.7**	**+0.3**
IPAY				*e*			22 46 23.7	
	comp=Z,16μm,0.3s							
IPAY	**Payeh**	**2.90**	**113**	⇓*e*Pn		**Pn**	**22 45 26.7**	**+0.3**
IPRN	**Peran**	**3.03**	**243**	Pn		**Pn**	**22 45 28.1**	**-0.1**
IPRN	**Peran**	**3.03**	**243**	*e*Pn		**Pn**	**22 45 27.6**	**-0.6**
IPRN				*e*			22 46 07.1	
	comp=Z,26μm,0.3s							
IPRN	**Peran**	**3.03**	**243**	*e*Pn		**Pn**	**22 45 27.6**	**-0.6**
IFIR	**Firoozkooh**	**3.10**	**231**	Pn		**Pn**	**22 45 28.9**	**-0.2**
IFIR	**Firoozkooh**	**3.10**	**231**	⇓*e*Pn		**Pn**	**22 45 28.9**	**-0.2**
IFIR				*e*			22 46 11.0	
	comp=Z,7μm,0.1s							
IFIR	**Firoozkooh**	**3.10**	**231**	⇓*e*Pn		**Pn**	**22 45 28.9**	**-0.2**
ILAS	**Lasjerd**	**3.16**	**225**	Pn		**Pn**	**22 45 29.1**	**-0.8**
ILAS	**Lasjerd**	**3.16**	**225**	*e*Pn		**Pn**	**22 45 29.4**	**-0.5**
ILAS				*e*			22 46 19.8	
	comp=Z,6μm,0.3s							
ILAS	**Lasjerd**	**3.16**	**225**	*e*Pn		**Pn**	**22 45 29.4**	**-0.5**
IMOG	**Moghan**	**3.30**	**117**	Pn		**Pn**	**22 45 32.3**	**+0.4**
IMOG	**Moghan**	**3.30**	**117**	⇑*e*Pn		**Pn**	**22 45 32.0**	**+0.1**
IMOG				*e*			22 45 45.1	
	comp=Z,9μm,0.3s							
IMOG	**Moghan**	**3.30**	**117**	⇑*e*Pn		**Pn**	**22 45 32.0**	**+0.1**
ISRO	**Mashad**	**3.31**	**113**	*e*Pn		**Pn**	**22 45 32.0**	**0.0**
ISRO	**Mashad**	**3.31**	**113**	*e*Pn		**Pn**	**22 45 32.0**	**0.0**
MHI	**Mashad**	**3.31**	**113**	*e*Pn		**Pn**	**22 45 33.1**	**+1.1**
MHI				*e*			22 45 41.0	
	comp=Z,6μm,0.3s							
IDMV	**Damavand**	**3.60**	**236**	Pn		**Pn**	**22 45 35.9**	**-0.1**
IDMV	**Damavand**	**3.60**	**236**	*e*Pn		**Pn**	**22 45 35.9**	**-0.1**
IDMV				*e*			22 45 52.6	
	comp=Z,5μm,0.2s							
IDMV	**Damavand**	**3.60**	**236**	*e*Pn		**Pn**	**22 45 35.9**	**-0.1**
DAMV	**Damavand**	**3.61**	**237**	Pn		**Pn**	**22 45 36.0**	**-0.1**
DAMV	**Damavand**	**3.61**	**237**	*e*Pn		**Pn**	**22 45 36.5**	**+0.4**
DAMV					AML	AML	22 46 34.4	
	comp=E,549nm,1.7s							
DAMV	**Damavand**	**3.61**	**237**	Pn		**Pn**	**22 45 36.0**	**-0.1**
IAFJ	**Afjeh**	**3.66**	**242**	*e*Pn		**Pn**	**22 45 36.9**	**0.0**
IAFJ	**Afjeh**	**3.66**	**242**	*e*Pn		**Pn**	**22 45 36.9**	**0.0**
IMYA	**Miami**	**3.76**	**109**	Pn		**Pn**	**22 45 38.4**	**+0.1**
IMYA	**Miami**	**3.76**	**109**	⇑*e*Pn		**Pn**	**22 45 38.3**	**0.0**
IMYA				*e*			22 47 04.2	
	comp=Z,12μm,0.5s							
IMYA	**Miami**	**3.76**	**109**	Pn		**Pn**	**22 45 38.4**	**+0.1**
THKV	**Tehran--Karaj**	**4.23**	**247**	Pn		**Pn**	**22 45 44.0**	**-0.7**
THKV	**Tehran--Karaj**	**4.23**	**247**	*e*Pn		**Pn**	**22 45 45.0**	**+0.3**
THKV	**Tehran--Karaj**	**4.23**	**247**	Pn		**Pn**	**22 45 44.0**	**-0.7**
ISFB	**Sefidab**	**4.32**	**221**	Pn		**Pn**	**22 45 44.9**	**-1.0**
ISFB	**Sefidab**	**4.32**	**221**	*e*Pn		**Pn**	**22 45 43.4**	**-2.5**
ISFB				*e*			22 47 03.8	
	comp=Z,2μm,0.3s							
ISFB	**Sefidab**	**4.32**	**221**	Pn		**Pn**	**22 45 44.9**	**-1.0**
IR3	**Iran Long-Peri**	**4.34**	**241**	*e*Pn		**Pn**	**22 45 45.9**	**-0.3**
IR3	**Iran Long-Peri**	**4.34**	**241**	*e*Pn		**Pn**	**22 45 45.9**	**-0.3**
GHVR	**GHOM**	**4.76**	**230**	Pn		**Pn**	**22 45 52.0**	**0.0**
GHVR	**GHOM**	**4.76**	**230**	*e*Pn		**Pn**	**22 45 53.1**	**+1.1**
GHVR	**GHOM**	**4.76**	**230**	Pn		**Pn**	**22 45 52.0**	**0.0**
IRAZ	**Razeghan**	**5.15**	**246**	Pn		**Pn**	**22 45 56.9**	**-0.5**
IRAZ	**Razeghan**	**5.15**	**246**	*e*Pn		**Pn**	**22 45 57.0**	**-0.4**
IRAZ				*e*			22 47 41.9	
	comp=Z,2μm,0.4s							
IRAZ	**Razeghan**	**5.15**	**246**	*e*Pn		**Pn**	**22 45 57.0**	**-0.4**

ASAO	**Ashtian**	**5.53**	**238**	Pn		**Pn**	**22 46 02.0**	**-0.6**
ASAO	**Ashtian**	**5.53**	**238**	*e*Pn		**Pn**	**22 46 03.2**	**+0.6**
ASAO	**Ashtian**	**5.53**	**238**	Pn		**Pn**	**22 46 02.0**	**-0.6**
ZNJK	**Zanjan**	**5.68**	**262**	*e*Pn		**Pn**	**22 46 04.3**	**-0.3**
ZNJK					AML	AML	22 47 11.6	
	comp=N,123nm,1.1s							
ISRB	**Sarab**	**6.36**	**274**	Pn		**Pn**	**22 46 13.7**	**-0.3**
ISRB	**Sarab**	**6.36**	**274**	*e*Pn		**Pn**	**22 46 13.2**	**-0.8**
ISRB				*e*			22 46 22.0	
	comp=Z,2μm,0.1s							
ISRB	**Sarab**	**6.36**	**274**	Pn		**Pn**	**22 46 13.7**	**-0.3**
IHRS	**Heris**	**6.87**	**278**	Pn		**Pn**	**22 46 20.7**	**-0.2**
IHRS	**Heris**	**6.87**	**278**	*e*Pn		**Pn**	**22 46 20.8**	**-0.1**
IHRS				*e*			22 46 30.5	
	comp=Z,1μm,0.1s							
SNGE	**Sanandaj**	**7.20**	**252**	*e*Pn		**Pn**	**22 46 25.8**	**+0.3**
ITBZ	**Tabriz**	**7.57**	**277**	Pn		**Pn**	**22 46 30.7**	**+0.2**
ITBZ	**Tabriz**	**7.57**	**277**	*e*Pn		**Pn**	**22 46 30.6**	**+0.1**
ITBZ	**Tabriz**	**7.57**	**277**	*e*Pn		**Pn**	**22 46 30.6**	**+0.1**
IAZR	**Azarshahr**	**7.70**	**273**	*e*Pn		**Pn**	**22 46 32.7**	**+0.3**
IAZR	**Azarshahr**	**7.70**	**273**	*e*Pn		**Pn**	**22 46 32.7**	**+0.3**
IMRD	**Marand**	**7.94**	**281**	Pn		**Pn**	**22 46 36.0**	**+0.4**
IMRD	**Marand**	**7.94**	**281**	*e*Pn		**Pn**	**22 46 35.7**	**+0.1**
IMRD				*e*			22 46 43.9	
	comp=Z,1μm,0.2s							
IMRD	**Marand**	**7.94**	**281**	*e*Pn		**Pn**	**22 46 35.7**	**+0.1**
ISHB	**Shabestar**	**7.98**	**278**	Pn		**Pn**	**22

VORD						pmax		pmax		
	comp=Z,20nm,0.6s									
VORD	**Divnogorie**	**17.69**	**324**	*eP*		**Pn**	**22 48 47.9**	**+1.3**		
ZRNK	**Zerenda**	**17.89**	**27**	⇑Pn		**Pn**	**22 48 49.4**	**+0.4**		
	comp=Z,6.8nm,0.8s									
ZRNK				⇑Sn		**Sn**	**22 51 57.0**	**-12**		
	comp=Z,6.4nm,0.7s									
VSR	**Storozhevoye**	**17.92**	**324**	*eP*		**Pn**	**22 48 47.9**	**-1.5**		
VSR				*eS*		**Sn**	**22 52 03.3**	**-6.0**		
VSR					pmax	pmax				
	comp=Z,6.0nm,0.6s									
VSR					smax					
	comp=N,20nm,0.9s									
VSR					smax					
	comp=E,20nm,0.9s									
VSR					smax					
	comp=Z,7.0nm,0.9s									
VSR	**Storozhevoye**	**17.92**	**324**	*eP*		**Pn**	**22 48 47.9**	**-1.5**		
	comp=Z,6.0nm,0.6s									
VOR	**Voronezh**	**18.26**	**326**	P		**Pn**	**22 48 54.0**	**+0.5**		
VOR					pmax	pmax				
	comp=Z,160nm,1.0s									
VOR	**Voronezh**	**18.26**	**326**	P		**Pn**	**22 48 54.0**	**+0.5**		
	comp=Z,160nm,1.0s									
BRVK	**Borovoye**	**18.45**	**29**	*eP*		**Pn**	**22 48 56.6**	**+0.8**		
	comp=Z,8.7nm,0.7s									
BRVK	**Borovoye**	**18.45**	**29**	*ceP*		**Pn**	**22 48 56.5**	**+0.6**		
BRVK					pmax	pmax				
	comp=Z,23nm,1.7s									
BRVK	**Borovoye**	**18.45**	**29**	*eP*		**Pn**	**22 48 56.6**	**+0.7**		
	comp=Z,8.7nm,0.7s									
BVA0	**Borovoye Array**	**18.47**	**29**	⇑Pn		**Pn**	**22 48 55.9**	**-0.2**		
	comp=Z,1.4nm,0.6s,baz=211,slow=12,SNR=60									
BVA0				⇑Sn		**Sn**	**22 52 12.3**	**-10**		
	comp=Z,1.7nm,1.1s,baz=221,slow=28,SNR=5.5									
BVAR	**Borovoye Array**	**18.47**	**29**	P		**Pn**	**22 48 56.0**	**-0.1**		
	comp=Z,1.6nm,0.3s,baz=211,slow=12,SNR=33									
BVAR				S		**Sn**	**22 52 13.5**	**-8.9**		
	comp=Z,0.8nm,0.3s,baz=231,slow=24,SNR=5.8									
BVAR	**Borovoye Array**	**18.47**	**29**	P		**Pn**	**22 48 56.0**	**0.0**		
BVAR				S		**Sn**	**22 52 13.5**	**-8.9**		
BVAR					pmax	pmax				
	comp=Z,2.0nm,0.3s									
BVAR					smax					
	comp=N,1.0nm,0.3s									
BVAR	**Borovoye Array**	**18.47**	**29**	P		**Pn**	**22 48 56.0**	**0.0**		
	comp=N,2.0nm,0.3s									
VOSK	**Vostochnaya**	**18.47**	**30**	⇑Pn		**Pn**	**22 48 55.9**	**-0.2**		
	comp=N,6.8nm,0.8s									
VOSK				⇑Sn		**Sn**	**22 52 08.5**	**-14**		
	comp=N,2.0nm,0.5s									
VOSK	**Vostochnaya**	**18.47**	**30**	Pn		**Pn**	**22 48 55.9**	**-0.2**		
	comp=N,6.8nm,0.8s									
ARU	**Arti**	**18.89**	**5**	*eP*		**Pn**	**22 49 02.1**	**+1.0**		
	comp=N,16nm,0.8s									
ARU	**Arti**	**18.89**	**5**	*ciP*		**Pn**	**22 49 01.9**	**+0.8**		
ARU				S		**Sn**	**22 52 23.6**	**-9.0**		
ARU					pmax	pmax				
	comp=Z,13nm,0.8s									
ARU	**Arti**	**18.89**	**5**	*i* P		**Pn**	**22 49 01.9**	**+0.8**		
	comp=Z,13nm,0.8s									
EIL	**Elat**	**18.99**	**251**	LR		LR	22 57 48.4			
	comp=Z,94nm,19.2s,baz=76,slow=42									
SVE	**Sverdlovsk**	**19.47**	**8**	⇑*eP*		**Pn**	**22 49 10.2**	**+2.1**		
SVE					pmax	pmax				
	comp=Z,12nm,1.1s									
SVE	**Sverdlovsk**	**19.47**	**8**	*eP*		**Pn**	**22 49 10.2**	**+2.1**		
	comp=Z,12nm,1.1s									
KURK	**Kurchatov**	**20.89**	**44**	*eP*		**P**	**22 49 23.4**	**+0.9**		
	comp=Z,6.9nm,0.9s									
KURK				LR		LR	22 58 23.2			
KURK	**Kurchatov**	**20.89**	**44**	P		**P**	**22 49 21.9**	**-0.6**		
	comp=Z,3.7nm,0.9s,baz=242,slow=10,SNR=13									
KURK				LR		LR	22 58 23.2			
	comp=Z,115nm,21.0s,MS3.2,baz=235,slow=39									
KURK	**Kurchatov**	**20.89**	**44**	⇓*eP*		**P**	**22 49 23.6**	**+1.1**		
KURK					pmax	pmax				
	comp=Z,4.0nm,0.8s									
KURK	**Kurchatov**	**20.89**	**44**	*eP*		**P**	**22 49 23.4**	**+0.9**		
	comp=Z,6.8nm,0.9s									
TLCR		**21.45**	**299**	⇑P		**P**	**22 49 29.1**	**+0.5**		
TLCR		**21.45**	**299**	⇑*iP*		**P**	**22 49 29.1**	**+0.5**		
TLCR		**21.45**	**299**	⇑*iP*		**P**	**22 49 29.1**	**+0.5**		
TIRR	**Tirgusor**	**21.61**	**297**	*eP*		**P**	**22 49 31.4**	**+1.1**		
	comp=Z,11nm,1.0s,mb4.2									
TIRR	**Tirgusor**	**21.61**	**297**	⇑*iP*		**P**	**22 49 31.4**	**+1.2**		
TIRR	**Tirgusor**	**21.61**	**297**	⇑*iP*		**P**	**22 49 31.4**	**+1.2**		
MK31	**Makanchi Array**	**21.63**	**57**	⇑Pn		**P**	**22 49 30.6**	**+0.2**		
	comp=Z,6.9nm,0.7s,mb4.2									
MK31	**Makanchi Array**	**21.63**	**57**	*eP*		**P**	**22 49 30.8**	**+0.3**		
MK31	**Makanchi Array**	**21.63**	**57**	*eP*		**P**	**22 49 30.8**	**+0.3**		
MKAR	**Makanchi Array**	**21.63**	**57**	P		**P**	**22 49 30.9**	**+0.5**		
	comp=Z,6.8nm,0.7s,mb4.2,baz=244,slow=9.2,SNR=33									
MKAR	**Makanchi Array**	**21.63**	**57**	*i* P		**P**	**22 49 31.0**	**+0.5**		
MKAR					pmax	pmax				
	comp=Z,7.0nm,0.7s									
MKAR	**Makanchi Array**	**21.63**	**57**	*i* P		**P**	**22 49 31.0**	**+0.5**		
	comp=Z,7.0nm,0.7s,mb4.2									
OBN	**Obninsk**	**21.77**	**329**	*eP*		**P**	**22 49 32.6**	**+0.8**		
OBN				*i*			22 49 52.4			
OBN				*eS*		**S**	**22 53 39.3**	**+6.7**		
OBN					pmax	pmax				
	comp=Z,31nm,1.2s,mb4.6									
OBN					MLR	MLR				
	comp=Z,100nm,16.0s,MS3.3									
OBN	**Obninsk**	**21.77**	**329**	*eP*		**P**	**22 49 32.6**	**+0.8**		
	comp=Z,31nm,1.2s,mb4.6									
AKASG	**Malin Array Be**	**22.89**	**313**	P		**P**	**22 49 44.4**	**+0.6**		
AKASG	**Malin Array Be**	**22.89**	**313**	P		**P**	**22 49 44.4**	**+0.6**		
	comp=Z,4.9nm,0.4s,mb4.3,baz=98,slow=8.4,SNR=20									
AKASG	**Malin Array Be**	**22.89**	**313**	P		**P**	**22 49 44.4**	**+0.6**		
AKASG					pmax	pmax				
	comp=Z,5.0nm,0.4s									
AKASG	**Malin Array Be**	**22.89**	**313**	P		**P**	**22 49 44.4**	**+0.6**		
	comp=Z,5.0nm,0.4s,mb4.3									
KIEV	**Kiev**	**22.89**	**313**	*eP*		**P**	**22 49 44.0**	**+0.1**		
	comp=Z,11nm,0.5s,mb4.5									
KIEV	**Kiev**	**22.89**	**313**	*eP*		**P**	**22 49 44.0**	**+0.1**		
KIEV					pmax	pmax				
	comp=Z,11nm,0.5s,mb4.5									
KIEV	**Kiev**	**22.89**	**313**	*eP*		**P**	**22 49 44.0**	**+0.1**		
	comp=Z,11nm,0.5s,mb4.5									
VRI	**Vrincioaia**	**23.02**	**300**	⇑P		**P**	**22 49 47.1**	**+1.8**		
VRI	**Vrincioaia**	**23.02**	**300**	⇑*iP*		**P**	**22 49 47.1**	**+1.8**		
VRI	**Vrincioaia**	**23.02**	**300**	⇑*iP*		**P**	**22 49 47.1**	**+1.8**		
PLOR	**Plostina**	**23.07**	**300**	⇓P		**P**	**22 49 47.1**	**+1.3**		
PLOR	**Plostina**	**23.07**	**300**	⇓*iP*		**P**	**22 49 47.1**	**+1.3**		
PLOR	**Plostina**	**23.07**	**300**	⇓*iP*		**P**	**22 49 47.1**	**+1.3**		
TESR		**23.20**	**302**	⇑P		**P**	**22 49 46.2**	**-1.0**		
TESR		**23.20**	**302**	⇑*iP*		**P**	**22 49 46.2**	**-1.0**		
TESR		**23.20**	**302**	⇑*iP*		**P**	**22 49 46.2**	**-1.0**		
MLR	**Muntele Rosu**	**23.50**	**299**	⇓P		**P**	**22 49 50.3**	**0.0**		
MLR	**Muntele Rosu**	**23.50**	**299**	⇓*iP*		**P**	**22 49 50.3**	**0.0**		
MLR	**Muntele Rosu**	**23.50**	**299**	⇓*iP*		**P**	**22 49 50.3**	**0.0**		
VOIR		**24.11**	**299**	⇑P		**P**	**22 49 57.8**	**+1.8**		
VOIR		**24.11**	**299**	⇑*iP*		**P**	**22 49 57.8**	**+1.8**		
VOIR		**24.11**	**299**	⇑*iP*		**P**	**22 49 57.8**	**+1.8**		
BURAR	**Bucovina Array**	**24.39**	**304**	⇑P		**P**	**22 50 00.3**	**+1.7**		
BURAR	**Bucovina Array**	**24.39**	**304**	⇑*iP*		**P**	**22 50 00.3**	**+1.8**		
BURAR	**Bucovina Array**	**24.39**	**304**	⇑*iP*		**P**	**22 50 00.3**	**+1.8**		
BUR08	**Bucovina Ar. S**	**24.41**	**304**	*eP*		**P**	**22 49 59.5**	**+0.8**		
BUR08	**Bucovina Ar. S**	**24.41**	**304**	*eP*		**P**	**22 49 59.5**	**+0.8**		
WMQ	**Urumqi**	**24.92**	**66**	*eP*		**P**	**22 50 04.0**	**+0.6**		
WMQ				pP			22 50 14.0			
WMQ				sP		sP	22 50 18.0	+12		
WMQ					pmax	pmax				
	comp=Z,9.0nm,1.2s,mb4.2									
WMQ					pmax	pmax				
	comp=Z,100nm,4.5s									
VTS	**Vitosha**	**25.23**	**292**	⇓P		**P**	**22 50 08.1**	**+1.9**		
VTS	**Vitosha**	**25.23**	**292**	⇓*iP*		**P**	**22 50 08.1**	**+1.9**		
VTS	**Vitosha**	**25.23**	**292**	⇓*iP*		**P**	**22 50 08.1**	**+1.9**		
KLMR	**Klimovskoe**	**25.37**	**341**	P		**P**	**22 50 17.1**	**+10**		
KLMR					pmax	pmax				
	comp=Z,18nm,1.0s,mb4.6									
ZALV	**Zalesovo Beam**	**25.78**	**41**	P		**P**	**22 50 10.7**	**-0.4**		
	comp=Z,1.6nm,0.6s,mb3.7,baz=253,slow=10,SNR=7.3									
ZALV				LR		LR	23 01 52.1			
	comp=Z,25nm,20.5s,MS2.7,baz=268,slow=40									
DRGR		**25.92**	**301**	⇓P		**P**	**22 50 12.3**	**-0.1**		
DRGR		**25.92**	**301**	⇓*iP*		**P**	**22 50 12.4**	**0.0**		
DRGR		**25.92**	**301**	⇓*iP*		**P**	**22 50 12.4**	**0.0**		
GKN	**Gorkha**	**26.07**	**103**	*eP*		**P**	**22 50 13.0**	**-1.0**		
	comp=Z,19nm,0.9s,mb4.6									
UZH	**Uzhgorod**	**26.52**	**305**	*eP*		**P**	**22 50 20.7**	**+2.8**		
UZH				*e*			22 50 32.7			
UZH	**Uzhgorod**	**26.52**	**305**	*eP*		**P**	**22 50 20.7**	**+2.8**		
DMN	**Daman**	**26.62**	**103**	*eP*		**P**	**22 50 18.4**	**-0.6**		
	comp=Z,20nm,0.9s,mb4.6									
KKN	**Kakani**	**26.67**	**103**	*eP*		**P**	**22 50 19.3**	**-0.1**		
	comp=Z,16nm,0.7s,mb4.7									
PKIN	**Phulchoki**	**26.86**	**103**	*eP*		**P**	**22 50 20.8**	**-0.3**		
	comp=Z,22nm,0.8s,mb4.7									
PKI	**Phulchoki**	**26.88**	**103**	*eP*		**P**	**22 50 21.5**	**+0.3**		
	comp=Z,20nm,0.7s,mb4.8									
GUN	**Gumba**	**27.07**	**102**	*eP*		**P**	**22 50 22.8**	**-0.2**		
PSZ	**Piszkesteto**	**27.98**	**303**	*eP*		**P**	**22 50 31.9**	**+1.0**		
	comp=Z,2.8nm,0.9s,mb3.9									
PSZ	**Piszkesteto**	**27.98**	**303**	*eP*		**P**	**22 50 31.9**	**+1.0**		
PSZ					pmax	pmax				
	comp=Z,3.0nm,0.9s,mb3.9									
PSZ	**Piszkesteto**	**27.98**	**303**	*eP*		**P**	**22 50 31.9**	**+1.0**		
	comp=Z,2.8nm,0.9s,mb3.9									
ATD	**Ata Tunnel**	**28.45**	**207**	LR		LR	23 02 45.2			
	comp=Z,80nm,19.2s,MS3.3,baz=37,slow=39									
OJC	**Ojcow**	**28.45**	**308**	*eP*		**P**	**22 50 37.0**	**+1.9**		
OJC	**Ojcow**	**28.45**	**308**	*eP*		**P**	**22 50 37.0**	**+1.9**		
ODAN	**Odare**	**28.76**	**103**	*eP*		**P**	**22 50 38.1**	**0.0**		
MORC	**Moravsky Berou**	**29.80**	**306**	*eP*		**P**	**22 50 47.9**	**+0.8**		
	comp=Z,1.2nm,0.6s,mb3.8									
MORC	**Moravsky Berou**	**29.80**	**306**	*eP*		**P**	**22 50 47.9**	**+0.8**		
MORC					pmax	pmax				
	comp=Z,1.0nm,0.6s,mb3.7									
MORC	**Moravsky Berou**	**29.80**	**306**	*eP*		**P**	**22 50 47.9**	**+0.8**		
	comp=Z,1.0nm,0.6s,mb3.7									
FINES	**FINESS Array B**	**30.12**	**332**	P		**P**	**22 50 49.5**	**-0.3**		
	comp=Z,1.2nm,0.4s,mb3.9,baz=128,slow=9.1,SNR=11									
FINES	**FINESS Array B**	**30.12**	**332**	P		**P**	**22 50 49.5**	**-0.3**		
FINES					pmax	pmax				
	comp=Z,1.0nm,0.4s									
FINES	**FINESS Array B**	**30.12**	**332**	P		**P**	**22 50 49.5**	**-0.3**		
	comp=Z,1.0nm,0.4s,mb3.9									
AQU	**L'Aquila**	**32.49**	**292**	*eP*		**P**	**22 51 08.5**	**-2.4**		
	comp=Z,5.6nm,0.6s,mb4.6									
AQU	**L'Aquila**	**32.49**	**292**	*eP*		**P**	**22 51 08.5**	**-2.4**		
AQU					pmax	pmax				
	comp=Z,6.0nm,0.6s,mb4.6									
AQU	**L'Aquila**	**32.49**	**292**	*eP*		**P**	**22 51 08.5**	**-2.4**		
	comp=Z,6.0nm,0.6s,mb4.6									
CLL	**Collm**	**32.89**	**308**	*eP*		**P**	**22 51 15.8**	**+1.5**		
DAVOX	**Davos/Dischmat**	**34.71**	**300**	P		**P**	**22 51 29.9**	**-0.3**		
	comp=Z,3.6nm,0.9s,mb4.3,baz=167,slow=21,SNR=4.6									
DAVOX	**Davos/Dischmat**	**34.71**	**300**	P		**P**	**22 51 29.9**	**-0.3**		
HFS	**Hagfors**	**34.73**	**324**	P		**P**	**22 51 30.6**	**+0.4**		
	comp=Z,2.2nm,0.7s,mb4.2,baz=111,slow=8.3,SNR=7.8									
HFS	**Hagfors**	**34.73**	**324**	P		**P**	**22 51 30.6**	**+0.4**		
HFS					pmax	pmax				
	comp=Z,2.0nm,0.7s									
HFS	**Hagfors**	**34.73**	**324**	P		**P**	**22 51 30.6**	**+0.4**		
	comp=Z,2.0nm,0.7s,mb4.2									
PGF	**Pioggiola**	**35.70**	**293**	*eP*		**P**	**22 51 37.8**	**-0.9**		
	comp=Z,4.9nm,0.6s,mb4.3									
PGF	**Pioggiola**	**35.70**	**293**	*eP*		**P**	**22 51 37.8**	**-0.9**		
	comp=Z,2.5nm,0.6s,mb4.3									
PGF	**Pioggiola**	**35.70**	**293**	*eP*		**P**	**22 51 37.8**	**-0.9**		
PGF					pmax	pmax				
	comp=Z,2.0nm,0.6s,mb4.2									
PGF	**Pioggiola**	**35.70**	**293**	*eP*		**P**	**22 51 37.8**	**-0.9**		
	comp=Z,2.5nm,0.6s,mb4.3									
ARCES	**ARCESS Array B**	**35.84**	**342**	P		**P**	**22 51 40.3**	**+0.7**		
	comp=Z,6.2nm,1.0s,mb4.5,baz=134,slow=8.7,SNR=9.0									
ARCES	**ARCESS Array B**	**35.84**	**342**	P		**P**	**22 51 40.3**	**+0.7**		
ARCES					pmax	pmax				
	comp=Z,6.0nm,1.0s									
ARCES	**ARCESS Array B**	**35.84**	**342**	P		**P**	**22 51 40.3**	**+0.7**		
	comp=Z,6.0nm,1.0s,mb4.5									
ZAK	**Zakamensk**	**35.91**	**54**	*eP*		**P**	**22 51 41.8**	**+1.4**		
ZAK	**Zakamensk**	**35.91**	**54**	*eP*		**P**	**22 51 41.8**	**+1.4**		
NOA	**NORSAR Array B**	**36.20**	**325**	P		**P**	**22 51 43.0**	**+0.2**		
	comp=Z,2.3nm,0.9s,mb4.1,baz=114,slow=8.4,SNR=4.5									
NOA	**NORSAR Array B**	**36.20**	**325**	P		**P**	**22 51 43.0**	**+0.2**		
NOA					pmax	pmax				
	comp=Z,2.0nm,0.9s									
NOA	**NORSAR Array B**	**36.20**	**325**	P		**P**	**22 51 43.0**	**+0.2**		
	comp=Z,2.0nm,0.9s,mb4.0									
CDF	**Champ du Feu**	**36.43**	**303**	*eP*		**P**	**22 51 45.7**	**+0.8**		
	comp=Z,8.9nm,1.0s,mb4.4									
CDF	**Champ du Feu**	**36.43**	**303**	*eP*		**P**	**22 51 45.7**	**+0.8**		
	comp=Z,4.4nm,1.0s,mb4.3									
CDF	**Champ du Feu**	**36.43**	**303**	*eP*		**P**	**22 51 45.7**	**+0.8**		
CDF					pmax	pmax				
	comp=Z,4.0nm,1.0s,mb4.3									
CDF	**Champ du Feu**	**36.43**	**303**	*eP*		**P**	**22 51 45.7**	**+0.8**		
	comp=Z,4.4nm,1.0s,mb4.3									
HINF	**Hinteralfeld**	**36.73**	**302**	*eP*		**P**	**22 51 47.2**	**-0.3**		
HINF	**Hinteralfeld**	**36.73**	**302**	*eP*		**P**	**22 51 47.2**	**-0.3**		
LPL	**La Plagne**	**36.97**	**298**	*eP*		**P**	**22 51 48.6**	**-1.0**		
	comp=Z,1.1nm,1.1s,mb4.3									
LPL	**La Plagne**	**36.97**	**298**	*eP*		**P**	**22 51 48.6**	**-1.0**		
	comp=Z,5.5nm,1.1s,mb4.3									
LPL	**La Plagne**	**36.97**	**298**	*eP*		**P**	**22 51 48.6**	**-1.0**		
LPL					pmax	pmax				
	comp=Z,6.0nm,1.1s,mb4.3									
LPL	**La Plagne**	**36.97**	**298**	*eP*		**P**	**22 51 48.6**	**-1.0**		
	comp=Z,5.5nm,1.1s,mb4.3									
MBDF	**Montbardon**	**37.02**	**297**	*eP*		**P**	**22 51 49.3**	**-0.8**		
	comp=Z,10nm,1.0s,mb4.3									
MBDF	**Montbardon**	**37.02**	**297**	*eP*		**P**	**22 51 49.3**	**-0.8**		
	comp=Z,5.1nm,1.0s,mb4.3									
MBDF	**Montbardon**	**37.02**	**297**	*eP*		**P**	**22 51 49.3**	**-0.8**		
MBDF					pmax	pmax				
	comp=Z,5.0nm,1.0s,mb4.3									
MBDF	**Montbardon**	**37.02**	**297**	*eP*		**P**	**22 51 49.3**	**-0.8**		
	comp=Z,5.1nm,1.0s,mb4.3									
HAU	**Haudompre**	**37.06**	**302**	*eP*		**P**	**22 51 50.3**	**0.0**		
HAU	**Haudompre**	**37.06**	**302**	*eP*		**P**	**22 51 50.3**	**0.0**		
FRF	**La Foret Royal**	**37.26**	**295**	*eP*		**P**	**22 51 51.8**	**-0.3**		
	comp=Z,9.8nm,0.8s,mb4.4									
FRF	**La Foret Royal**	**37.26**	**295**	*eP*		**P**	**22 51 51.8**	**-0.3**		
	comp=Z,4.9nm,0.8s,mb4.4									
FRF	**La Foret Royal**	**37.26**	**295**	*eP*		**P**	**22 51 51.8**	**-0.3**		
FRF					pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.4									
FRF	**La Foret Royal**	**37.26**	**295**	*eP*		**P**	**22 51 51.8**	**-0.3**		
	comp=Z,4.9nm,0.8s,mb4.4									
CABF	**La Chapelle**	**37.32**	**300**	*eP*		**P**	**22 51 52.9**	**+0.3**		
CABF	**La Chapelle**	**37.32**	**300**	*eP*		**P**	**22 51 52.9**	**+0.3**		
SONM	**Songino Array**	**37.99**	**58**	P		**P**	**22 51 58.4**	**+0.3**		
	comp=Z,0.3nm,0.5s,mb3.3,baz=273,slow=10,SNR=3.8									
SONM	**Songino Array**	**37.99**	**58**	P		**P**	**22 51 58.4**	**+0.3**		
ULN	**Ulaanbaatar**	**38.43**	**58**	*eP*		**P**	**22 52 03.0**	**+1.1**		
	comp=Z,2.9nm,0.8s,mb4.1									
ULN	**Ulaanbaatar**	**38.43**	**58**	*eP*		**P**	**22 52 03.0**	**+1.1**		
ULN					pmax	pmax				
	comp=Z,3.0nm,0.8s,mb4.1									
ULN	**Ulaanbaatar**	**38.43**	**58**	*eP*		**P**	**22 52 03.0**	**+1.1**		
	comp=Z,3.0nm,0.8s,mb4.1									
SMF	**Signal de Mont**	**38.86**	**300**	*eP*		**P**	**22 52 05.7**	**+0.2**		
SMF	**Signal de Mont**	**38.86**	**300**	*eP*		**P**	**22 52 05.7**	**+0.2**		
SSF	**Saint Saulge**	**39.05**	**301**	*eP*		**P**	**22 52 07.1**	**0.0**		
	comp=Z,6.9nm,0.9s,mb4.1									
SSF	**Saint Saulge**	**39.05**	**301**	*eP*		**P**	**22 52 07.1**	**0.0**		
	comp=Z,3.5nm,0.9s,mb4.1									
SSF	**Saint Saulge**	**39.05**	**301**	*eP*		**P**	**22 52 07.1**	**0.0**		
SSF					pmax	pmax				
	comp=Z,3.0nm,0.9s,mb4.0									
SSF	**Saint Saulge**	**39.05**	**301**	*eP*		**P**	**22 52 07.1**	**0.0**		
	comp=Z,3.5nm,0.9s,mb4.1									
AVF	**Avril sur Loir**	**39.18**	**301**	*eP*		**P**	**22 52 07.7**	**-0.5**		
	comp=Z,18nm,1.0s,mb4.5									
AVF	**Avril sur Loir**	**39.18**	**301**	*eP*		**P**	**22 52 07.7**	**-0.5**		
	comp=Z,9.2nm,1.0s,mb4.5									
AVF	**Avril sur Loir**	**39.18**	**301**	*eP*		**P**	**22 52 07.7**	**-0.5**		
AVF					pmax	pmax				
	comp=Z,9.0nm,1.0s,mb4.5									
AVF	**Avril sur Loir**	**39.18**	**301**	*eP*		**P**	**22 52 07.7**	**-0.5**		
	comp=Z,9.2nm,1.0s,mb4.5									
BGF	**Bois d'Agland**	**39.55**	**300**	*eP*		**P**	**22 52 12.0**	**+0.7**		
	comp=Z,23nm,1.1s,mb4.5									
BGF	**Bois d'Agland**	**39.55**	**300**	*eP*		**P**	**22 52 12.0**	**+0.7**		
	comp=Z,12nm,1.1s,mb4.5									
BGF	**Bois d'Agland**	**39.55**	**300**	*eP*		**P**	**22 52 12.0**	**+0.7**		
BGF					pmax	pmax				
	comp=Z,12nm,1.1s,mb4.5									
BGF	**Bois d'Agland**	**39.55**	**300**	*eP*		**P**	**22 52 12.0**	**+0.7**		
	comp=Z,12nm,1.1s,mb4.5									
TCF	**Toulx Ste Croi**	**40.02**	**300**	*eP*		**P**	**22 52 16.0**	**+0.8**		
	comp=Z,7.2nm,1.2s,mb4.4									
TCF	**Toulx Ste Croi**	**40.02**	**300**	*eP*		**P**	**22 52 16.0**	**+0.8**		
	comp=Z,8.7nm,1.2s,mb4.4									
TCF	**Toulx Ste Croi**	**40.02**	**300**	*eP*		**P**	**22 52 16.0**	**+0.8**		
TCF					pmax	pmax				
	comp=Z,9.0nm,1.2s,mb4.4									
TCF	**Toulx Ste Croi**	**40.02**	**300**	*eP*		**P**	**22 52 16.0**	**+0.8**		
	comp=Z,8.7nm,1.2s,mb4.4									
MTLF	**Montolieu**	**40.48**	**295**	*eP*		**P**	**22 52 18.8**	**-0.3**		
MTLF	**Montolieu**	**40.48**	**295**	*eP*		**P**	**22 52 18.8**	**-0.3**		
EPF	**Esparros**	**41.89**	**295**	*eP*		**P**	**22 52 29.9**	**-0.7**		
EPF	**Esparros**	**41.89**	**295**	*eP*		**P**	**22 52 29.9**	**-0.7**		
CMAR	**Chiang Mai Arr**	**42.25**	**105**	P		**P**	**22 52 32.6**	**-1.2**		
	comp=Z,1.1nm,0.3s,mb3.9,baz=302,slow=8.2,SNR=6.6									
CMAR	**Chiang Mai Arr**	**42.25**	**105**	P		**P**	**22 52 32.7**	**-1.2**		
CMAR					pmax	pmax				
	comp=Z,1.0nm,0.3s									
CMAR	**Chiang Mai Arr**	**42.25**	**105**	P		**P**	**22 52 32.7**	**-1.2**		
	comp=Z,1.0nm,0.3s,mb3.9									
ETSF	**Etsaut**	**42.56**	**295**	*eP*		**P**	**22 52 36.6**	**+0.5**		
	comp=Z,17nm,1.1s,mb4.4									
ETSF	**Etsaut**	**42.56**	**295**	*eP*		**P**	**22 52 36.6**	**+0.5**		
	comp=Z,8.6nm,1.1s,mb4.4									
ETSF	**Etsaut**	**42.56**	**295**	*eP*		**P**	**22 52 36.6**	**+0.5**		
ETSF					pmax	pmax				
	comp=Z,9.0nm,1.1s,mb4.4									
ETSF	**Etsaut**	**42.56**	**295**	*eP*		**P**	**22 52 36.6**	**+0.5**		
	comp=Z,8.6nm,1.1s,mb4.4									
XAN	**Xi'an**	**42.82**	**78**	P		**P**	**22 52 38.3**	**-0.1**		
XAN					pmax	pmax				
	comp=Z,2.0nm,1.2s,mb3.7									
XAN					pmax	pmax				
	comp=Z,12nm,7.3s									
ESDC	**Sonseca Array**	**45.87**	**292**	P		**P**	**22 53 01.4**	**-1.3**		
	com

HUMP	**Col San Antoni**	**3.87**	**281**⇓	*e*P		**Pn**	**23**	**25**	**44.8 +1.5**
HUMP				*e*S		**Sn**	**23**	**26**	**28.2 +0.5**
HUMP	**Col San Antoni**	**3.87**	**281**⇓	*e*P		**Pn**	**23**	**25**	**44.8 +1.5**
HUMP				*e*S		**Sn**	**23**	**26**	**28.2 +0.5**

NIED ***02*** *00:17:00.46˝80N×153˝20E,h11km,Mw4.1 Best double couple: M₀1.37000×10¹⁵ NP1:φ₀324.00000°,δ73.00000°, λ55.00000°. NP2:φ₀212.00000°,δ39.00000°,λ153.00000°.*
JMA ***02*** *00:17:04.4±0.7,46˝77N×153˝20E,h30km,M4.8*
ISCJB ***02*** *00:17:05.4±0.8,46˝77N±0˝06×152˝96E±0˝07,h47km±6km, mb4.4/56,MS3.5/3,Error ellipse: s-maj=11.5km s-min=5.0km az=145.6*
SKHL ***02*** *00:17:06.1±1.4,46˝55N×153˝27E,h92km±18km,mb5.0/5, msh5.7/1*
MOS ***02*** *00:17:08.0±1.0,46˝77N×152˝87E,h73km,mb4.5/24,Error ellipse: s-maj=10.8km s-min=8.3km az=80.9*
IDC ***02*** *00:17:10.8±6.2,47˝01N×152˝82E,h76km±55km,mb3.8/18, mb1 3.9/18,mb1mx3.9/23,mbtmp3.8/18,MS3.5/3, Ms1 3.5/3,ms1mx3.1/22,Error ellipse: s-maj=22.9km s-min=15.1km az=165.0*
NEIC ***02*** *00:17:11.9±1.2,47˝03N×152˝86E,h84km±11km,mb4.2/26, Error ellipse: s-maj=10.5km s-min=6.0km az=169.0*
ISC 02 00:17:07.9±0.7,46˝81N±0˝06×152˝95E±0˝07,h51km±5km, n142,σ1$09/157,mb4.4/56,MS3.5/3,11C-11D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.88**	**248**⇑	*i*PN		**Pn**	**00 18 04.0**	**-0.9**
KUR				*e*S		**Sn**	**00 18 48.0**	**-1.1**
KUR	comp=N,150nm,0.5s			pmax	pmax			
KUR	comp=E,80nm,0.5s			pmax	pmax			
KUR	comp=Z,150nm,0.5s			pmax	pmax			
KUR	comp=N,660nm,0.7s			smax				
KUR	comp=E,260nm,0.7s			smax				
KUR	**Kuril'sk**	**3.88**	**248**⇑	*i*P		**Pn**	**00 18 04.0**	**-0.9**
KUR	comp=E,140nm,0.4s			AMB	AMB		00 18 06.0	
KUR	comp=E,80nm,0.4s			AMB	AMB		00 18 06.0	
KUR	comp=E,180nm,0.4s			AMB	AMB		00 18 06.0	
KUR				*e*S		**Sn**	**00 18 48.0**	**-1.1**
KUR	comp=E,660nm,0.7s			A			00 19 10.0	
KUR	comp=E,260nm,0.7s			A			00 19 10.0	
SKR	**Severo-Kuril's**	**4.40**	**27**	*e*PN		**Pn**	**00 18 13.0**	**+0.9**
SKR				*e*S		**Sn**	**00 19 02.1**	**+0.1**
SKR	comp=Z,30nm,0.5s			pmax	pmax			
SKR	comp=N,120nm,0.5s			smax				
SKR	comp=E,170nm,0.5s			smax				
SKR	**Severo-Kuril's**	**4.40**	**27**	*e*P		**Pn**	**00 18 13.0**	**+0.9**
SKR	comp=E,30nm,0.5s			AMB	AMB		00 18 13.6	
SKR				*e*S		**Sn**	**00 19 02.1**	**+0.1**
SKR	comp=E,40nm,0.4s			A			00 19 09.0	
SKR	comp=E,120nm,0.5s			A			00 19 09.0	
SKR	comp=E,170nm,0.5s			A			00 19 09.0	
YUK	**Yuzh-Kuril'sk**	**5.71**	**243**⇑	*i*PN		**Pn**	**00 18 30.9**	**+0.9**
YUK				*i* S		**Sn**	**00 19 35.7**	**+1.5**
YUK	comp=N,90nm,0.8s			pmax	pmax			
YUK	comp=Z,230nm,0.8s			pmax	pmax			
YUK	comp=E,70nm,0.4s			pmax	pmax			
YUK	comp=N,720nm,1.0s			smax				
YUK	comp=E,1μm,1.0s			smax				
YUK	comp=N,270nm,0.7s			smax				
YUK	comp=E,560nm,0.7s			smax				
YUK	**Yuzh-Kuril'sk**	**5.71**	**243**⇑	*i*P		**Pn**	**00 18 30.9**	**+0.9**
YUK	comp=E,320nm,0.4s			AMB	AMB		00 18 32.0	
YUK	comp=E,90nm,0.8s			AMB	AMB		00 18 33.0	
YUK	comp=E,230nm,0.8s			AMB	AMB		00 18 33.0	
YUK	comp=E,70nm,0.4s			AMB	AMB		00 18 33.0	
YUK				*i* S		**Sn**	**00 19 35.7**	**+1.5**
YUK	comp=E,720nm,0.9s			A			00 19 54.0	
YUK	comp=E,1μm,0.9s			A			00 19 54.0	
YUK	comp=E,270nm,0.7s			A			00 20 00.5	
YUK	comp=E,560nm,0.7s			A			00 20 00.5	
NEM2	**Nemuro 2**	**6.16**	**239**	P		**Pn**	**00 18 34.0**	**-2.1**
NEM2				*e*S		**Sn**	**00 19 40.7**	**-4.4**
JRA	**Rausu**	**6.22**	**245**	P		**Pn**	**00 18 38.4**	**+1.4**
JNK	**Nakash**	**6.65**	**244**	P		**Pn**	**00 18 43.0**	**+0.1**
JNK				*e*S		**Sn**	**00 19 56.5**	**-0.7**
YSS	**Yuzh-Sakhalins**	**6.99**	**275**	*e*Pn		**Pn**	**00 18 50.4**	**+2.8**
YSS	**Yuzh-Sakhalins**	**6.99**	**275**	*e*PN		**Pn**	**00 18 50.3**	**+2.8**
YSS				*e*S		**Sn**	**00 20 07.9**	**+2.4**
YSS	comp=Z,30nm,1.0s			pmax	pmax			
YSS	**Yuzh-Sakhalins**	**6.99**	**275**	*e*P		**Pn**	**00 18 50.3**	**+2.8**
YSS	comp=E,40nm,1.0s			AMB	AMB		00 18 51.8	
YSS	comp=Z,30nm,1.0s			AMB	AMB		00 18 51.8	
YSS				*e*S		**Sn**	**00 20 07.9**	**+2.4**
PET	**Petropavlovsk**	**7.22**	**29**⇓	*e*PN		**Pn**	**00 18 56.6**	**+5.9**
JAR	**Ashorobuto**	**7.39**	**245**	P		**Pn**	**00 18 53.3**	**+0.3**
JAR				*e*S		**Sn**	**00 20 15.7**	**+0.3**
ASAJ	**Asahikawa**	**7.76**	**253**	P		**Pn**	**00 19 01.1**	**+3.0**
JKK2	**Kamakawa 2**	**7.76**	**251**	P		**Pn**	**00 19 00.0**	**+1.9**
TYV	**Tymovskoe**	**7.91**	**305**	*e*P		**Pn**	**00 18 58.0**	**-2.0**
TYV	comp=Z,22nm,1.0s			AMB	AMB		00 19 03.5	
JCH	**Churui**	**8.01**	**242**	P		**Pn**	**00 19 00.2**	**-1.4**
JCH				*e*S		**Sn**	**00 20 25.9**	**-4.8**
JNBK	**Urakawa-nobuka**	**8.57**	**242**	P		**Pn**	**00 19 07.6**	**-1.6**
JNBK				*e*S		**Sn**	**00 20 38.6**	**-5.9**
JNB	**Noboribetsu**	**9.54**	**247**	P		**Pn**	**00 19 22.5**	**+0.1**
JKB	**Kayabe**	**9.85**	**244**	P		**Pn**	**00 19 24.7**	**-2.0**
JKB				*e*S		**Sn**	**00 21 08.3**	**-7.5**
JTM	**Tenmabayashi**	**10.48**	**239**	P		**Pn**	**00 19 31.3**	**-4.1**
JTM				*e*S		**Sn**	**00 21 20.2**	**-11**
JANG	**Nango**	**10.49**	**236**	P		**Pn**	**00 19 30.7**	**-4.8**
JANG				*e*S		**Sn**	**00 21 19.4**	**-12**
JOSM	**Okushiri--Mats**	**10.73**	**249**	P		**Pn**	**00 19 37.8**	**-0.9**
JRG	**Rokugo**	**11.65**	**235**	P		**Pn**	**00 19 47.8**	**-3.5**
JIO	**Ouri**	**11.94**	**230**	P		**Pn**	**00 19 51.0**	**-4.2**
JIO				*e*S		**Sn**	**00 21 53.4**	**-13**
HABR	**Khabarovsk**	**12.19**	**284**	*e*PN		**Pn**	**00 20 00.0**	**+1.4**
HABR	comp=E,35nm,1.1s			pmax	pmax			
HABR	comp=N,46nm,1.8s			pmax	pmax			
HABR	comp=Z,42nm,2.0s			pmax	pmax			
MAJO	**Matsushiro**	**15.03**	**232**	*e*Pn		**Pn**	**00 20 41.3**	**+4.4**
MAJO	**Matsushiro**	**15.03**	**232**	*e*P		**Pn**	**00 20 41.3**	**+4.4**
MAJO	comp=Z,6.0nm,0.6s			pmax	pmax			
SEY	**Seymchan**	**16.16**	**359**⇓	*e*P		**Pn**	**00 20 53.3**	**+2.1**
KSRS	**Korea Array**	**20.71**	**252**	P		**P**	**00 21 44.6**	**+0.9**
KSRS	**Korea Array**	**20.71**	**252**	P		**P**	**00 21 44.6**	**+0.9**
KSRS	comp=Z,3.0nm,0.7s			pmax	pmax			
SONM	**Songino Array**	**31.21**	**289**	P		**P**	**00 23 22.3**	**+0.4**
SONM	comp=Z,0.5nm,0.7s,mb3.5,baz=86,slow=6.4,SNR=4.5			LR	LR		00 37 06.2	
SONM	comp=Z,58nm,18.1s,MS3.3,baz=349,slow=38 **Songino Array**	**31.21**	**289**	P		**P**	**00 23 22.3**	**+0.3**
SONM	comp=Z,1.0nm,0.7s			pmax	pmax			
SONM	comp=Z,58nm,18.1s			MLR	MLR			
ILAR	**Eielson Array**	**36.57**	**39**	P		**P**	**00 24 07.4**	**-0.9**
EGAK	comp=Z,0.7nm,0.8s,mb3.6,baz=263,slow=8.2,SNR=8.3 **Eagle**	**39.02**	**38**	*e*P		**P**	**00 24 29.0**	**+0.1**
ZALV	comp=Z,2.7nm,0.9s,mb4.0 **Zalesovo Beam**	**42.48**	**306**	P		**P**	**00 24 56.1**	**-1.5**
ZALV	comp=Z,0.5nm,0.3s,mb3.5,baz=53,slow=8.4,SNR=3.0			PcP	PcP		00 26 48.4	-1.1
ZALV	comp=Z,0.4nm,0.3s,baz=93,slow=3.0,SNR=4.7			LR	LR		00 43 56.4	
ZALV	comp=Z,63nm,18.1s,MS3.5,baz=63,slow=38 **Zalesovo Beam**	**42.48**	**306**	P		**P**	**00 24 56.1**	**-1.5**
ZALV							00 26 48.4	
ZALV	comp=Z,1.0nm,0.4s,mb3.8			pmax	pmax			
ZALV	comp=Z,63nm,18.1s,MS3.5			MLR	MLR			
MK31	**Makanchi Array**	**46.81**	**297**	*e*P		**P**	**00 25 31.5**	**-0.7**
MKAR	**Makanchi Array**	**46.81**	**297**	P		**P**	**00 25 30.7**	**-1.4**
MKAR	comp=Z,0.7nm,0.5s,mb3.9,baz=70,slow=8.3,SNR=6.0			LR	LR		00 46 21.0	
MKAR	comp=Z,68nm,19.5s,MS3.6,baz=357,slow=38			LR	LR			
MKAR	**Makanchi Array**	**46.81**	**297**	*e*P		**P**	**00 25 32.4**	**+0.3**
MKAR	comp=Z,1.0nm,0.5s			pmax	pmax			
KURK	**Kurchatov**	**47.24**	**304**	*e*P		**P**	**00 25 33.8**	**-1.6**
KURK	comp=Z,2.1nm,0.6s,mb4.2			PcP	PcP		00 27 03.2	-2.6
KURK	**Kurchatov**	**47.24**	**304**	P		**P**	**00 25 34.8**	**-0.6**
KURK	comp=Z,0.8nm,0.5s,mb3.9,baz=70,slow=8.5,SNR=7.9			PcP	PcP		00 27 03.2	-2.6
KURK	comp=Z,0.2nm,0.4s,baz=72,slow=6.8,SNR=3.7 **Kurchatov**	**47.24**	**304**	P		**P**	**00 25 34.8**	**-0.6**
KURK							00 27 03.3	
KURK	comp=Z,1.0nm,0.5s,mb4.0			pmax	pmax			
LSA	**Lhasa**	**50.16**	**273**	*e*P		**P**	**00 25 59.4**	**+1.3**
LSA	comp=Z,6.0nm,0.7s,mb4.7 **Lhasa**	**50.16**	**273**	*e*P		**P**	**00 25 59.4**	**+1.3**
LSA	comp=Z,6.0nm,0.7s,mb4.7			pmax	pmax			
BVAR	**Borovoye Array**	**50.73**	**309**	P		**P**	**00 26 00.1**	**-2.0**
BVAR	comp=Z,0.3nm,0.3s,mb3.7,baz=58,slow=9.2,SNR=4.4			PcP	PcP		00 27 15.9	-2.7
BVAR	comp=Z,0.6nm,0.5s,baz=170,slow=4.2,SNR=4.7 **Borovoye Array**	**50.73**	**309**	*e*P		**P**	**00 26 01.0**	**-1.1**
YKA	**Yellowknife Ar**	**50.94**	**37**	P		**P**	**00 26 04.0**	**+0.5**
CHTO	comp=Z,2.0nm,0.8s,mb4.1,baz=301,slow=7.1,SNR=7.1 **Chiang Mai**	**52.02**	**256**	*e*P		**P**	**00 26 12.5**	**+0.3**
CHTO	comp=Z,3.0nm,0.8s,mb4.3			pmax	pmax			
CHTO	comp=Z,3.0nm,0.8s,mb4.3 **Chiang Mai**	**52.02**	**256**	*e*P		**P**	**00 26 12.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**52.28**	**256**	P		**P**	**00 26 14.8**	**+0.7**
CMAR	comp=Z,1.3nm,0.6s,mb4.1,baz=33,slow=7.7,SNR=8.7 **Chiang Mai Arr**	**52.28**	**256**	P		**P**	**00 26 14.8**	**+0.7**
CMAR	comp=Z,1.0nm,0.6s			pmax	pmax			
EKS2	**Erkin-Say**	**54.13**	**297**	*e*P		**P**	**00 26 27.9**	**+0.5**
ODAN	comp=Z,1.6nm,0.7s,mb4.1 **Odare**	**54.52**	**273**	*e*P		**P**	**00 26 33.3**	**+2.9**
JIRN	**Jiri**	**54.83**	**274**	*e*P		**P**	**00 26 35.3**	**+2.6**
GUN	comp=Z,9.8nm,0.2s,mb5.4 **Gumba**	**54.88**	**275**	*e*P		**P**	**00 26 36.1**	**+3.0**
ARU	comp=Z,12nm,0.4s,mb5.3 **Arti**	**54.89**	**317***c*	*i*P		**P**	**00 26 32.8**	**+0.1**
ARU							00 28 35.9	
ARU				S		**S**	**00 34 06.5**	**-3.5**
ARU				SS		SS	00 37 45.8	-7.4
ARU	comp=Z,3.0nm,1.2s,mb4.2			pmax	pmax			
RAMN	**Ramite**	**55.00**	**273**	*e*P		**P**	**00 26 34.3**	**+0.4**
KKN	comp=Z,16nm,0.4s,mb5.4 **Kakani**	**55.37**	**275**	*e*P		**P**	**00 26 37.7**	**+1.1**
PKI	comp=Z,12nm,0.6s,mb5.1 **Pulchoki**	**55.42**	**275**	*e*P		**P**	**00 26 37.5**	**+0.6**
PKIN	comp=Z,6.7nm,0.5s,mb5.0 **Phulchoki**	**55.42**	**275**	*e*P		**P**	**00 26 37.3**	**+0.3**
DMN	comp=Z,5.2nm,0.4s,mb4.9 **Daman**	**55.60**	**275**	*e*P		**P**	**00 26 39.2**	**+0.9**
GKN	comp=Z,11nm,0.5s,mb5.1 **Gorkha**	**55.67**	**276**	*e*P		**P**	**00 26 38.8**	**0.0**
KOLN	comp=Z,6.0nm,0.4s,mb5.0 **Koldanda**	**56.53**	**276**	*e*P		**P**	**00 26 43.4**	**-1.5**
NEW	comp=Z,3.6nm,0.4s,mb4.8 **Newport**	**57.23**	**53**	*e*P		**P**	**00 26 49.2**	**-0.3**
NEW	comp=Z,2.6nm,0.9s,mb4.3 **Newport**	**57.23**	**53**	*e*P		**P**	**00 26 49.2**	**-0.3**
NEW	comp=Z,3.0nm,0.9s			pmax	pmax			
ARCES	**ARCESS Array B**	**57.76**	**341**	P		**P**	**00 26 51.8**	**-1.1**
ARCES	comp=Z,4.4nm,1.0s,mb4.5,baz=36,slow=6.6,SNR=3.5 **ARCESS Array B**	**57.76**	**341**	P		**P**	**00 26 51.8**	**-1.1**
ARCES	comp=Z,4.0nm,1.0s			pmax	pmax			
ABKAR	**Akbulak array**	**58.30**	**310**	*e*P		**P**	**00 26 55.7**	**-1.3**
SUMG	comp=Z,0.7nm,0.5s,mb4.0 **Summit**	**60.65**	**4**	*e*P		**P**	**00 27 13.0**	**+0.1**
FFC	comp=Z,10.0nm,0.8s,mb5.0 **Flin Flon**	**60.76**	**40**	*e*P		**P**	**00 27 14.3**	**+0.4**
FFC	comp=Z,3.8nm,0.8s,mb4.6 **Flin Flon**	**60.76**	**40**	*e*P		**P**	**00 27 14.3**	**+0.4**
FFC	comp=Z,4.0nm,0.8s,mb4.6			pmax	pmax			
JOF	**Joensuu**	**61.23**	**334**	*e*P		**P**	**00 27 15.6**	**-1.3**
JOF	comp=Z,1.0nm,0.3s,mb4.4			pmax	pmax			
JOF	**Joensuu**	**61.23**	**334**	*e*p		**P**	**00 27 15.6**	**-1.3**
HLID	comp=Z,1.0nm,0.3s,mb4.4 **Hailey**	**61.57**	**56**	*e*P		**P**	**00 27 19.8**	**+0.3**
NVAR	comp=Z,1.4nm,0.9s,mb4.1 **Mina Array Bea**	**62.51**	**62**	P		**P**	**00 27 26.8**	**+0.9**
SCO	comp=Z,0.5nm,0.6s,mb3.8,baz=286,slow=7.7,SNR=4.2 **Scoresbysund**	**62.96**	**358**	*e*P		**P**	**00 27 33.4**	**+5.0**
SCO	comp=Z,10.0nm,0.9s,mb5.0			pmax	pmax			
SCO	**Scoresbysund**	**62.96**	**358**	*i* P		**P**	**00 27 33.4**	**+5.0**
KAF	comp=Z,10.0nm,0.9s,mb5.0 **Kangasniemi**	**63.34**	**335**	*e*P		**P**	**00 27 29.7**	**-1.3**
KAF	comp=Z,4.0nm,0.6s,mb4.7			pmax	pmax			
KAF	**Kangasniemi**	**63.34**	**335**	*e*p		**P**	**00 27 29.7**	**-1.3**
TPAW	comp=Z,3.6nm,0.6s,mb4.7,baz=37,slow=6.2 **Teton Pass**	**63.56**	**54**	*e*P		**P**	**00 27 34.0**	**+1.3**
LOHW	comp=Z,1.9nm,0.8s,mb4.2 **Long Hollow**	**63.67**	**54**	*e*P		**P**	**00 27 33.9**	**+0.4**
FINES	comp=Z,1.1nm,0.6s,mb4.1 **FINESS Array B**	**63.94**	**335**	P		**P**	**00 27 34.2**	**-0.8**
FINES	**FINESS Array B**	**63.94**	**335**	P		**P**	**00 27 34.2**	**-0.8**
FINES	comp=Z,3.4nm,0.4s,mb4.7,baz=36,slow=7.1,SNR=42 **FINESS Array B**	**63.94**	**335**	P		**P**	**00 27 34.2**	**-0.8**
FINES	comp=Z,3.0nm,0.4s			pmax	pmax			
DUG	**Dugway**	**64.64**	**58**	*e*P		**P**	**00 27 40.1**	**+0.1**
DUG	comp=Z,0.8nm,0.7s,mb3.9 **Dugway**	**64.64**	**58**	*e*P		**P**	**00 27 40.1**	**+0.2**
DUG	comp=Z,1.0nm,0.7s,mb4.0			pmax	pmax			
BW06	**Boulder Array**	**64.80**	**54**	*e*P		**P**	**00 27 41.4**	**+0.4**
ULM	comp=Z,1.1nm,0.9s,mb3.9 **Lac du Bonnet**	**66.55**	**41**	*e*P		**P**	**00 27 50.4**	**-1.6**
NOA	comp=Z,2.0nm,0.5s,mb4.4 **NORSAR Array B**	**68.13**	**341**	P		**P**	**00 28 01.6**	**-0.3**
NOA	comp=Z,5.7nm,0.8s,mb4.6,baz=28,slow=6.3,SNR=14 **NORSAR Array B**	**68.13**	**341**	P		**P**	**00 28 01.6**	**-0.3**
NOA	comp=Z,6.0nm,0.8s			pmax	pmax			
AKASG	**Malin Array Be**	**71.43**	**326**	P		**P**	**00 28 21.4**	**-0.9**
AKASG	comp=Z,4.2nm,0.4s,mb4.7,baz=33,slow=6.2,SNR=11 **Malin Array Be**	**71.43**	**326**	P		**P**	**00 28 21.4**	**-0.9**
AKASG	comp=Z,4.0nm,0.4s			pmax	pmax			
KIEV	**Kiev**	**71.44**	**326**	*e*P		**P**	**00 28 21.2**	**-1.2**
KIEV	comp=Z,4.4nm,0.6s,mb4.6 **Kiev**	**71.44**	**326**	*e*P		**P**	**00 28 21.2**	**-1.2**
KIEV	comp=Z,4.0nm,0.6s,mb4.5			pmax	pmax			
STHS	**Stebnicka Huta**	**75.41**	**330**	*e*P		**P**	**00 28 46.5**	**+0.8**
STHS	comp=Z,2.5nm,0.8s,mb4.2 **Stebnicka Huta**	**75.41**	**330**	*e*P		**P**	**00 28 46.5**	**+0.8**
STHS	comp=Z,3.0nm,0.8s,mb4.3			pmax	pmax			
STHS	**Stebnicka Huta**	**75.41**	**330**	*e*P		**P**	**00 28 46.5**	**+0.8**
BUR08	**Bucovina Ar. S**	**75.46**	**326**	*e*P		**P**	**00 28 45.9**	**-0.2**
BURAR	**Bucovina Array**	**75.47**	**326**⇑	*i*P		**P**	**00 28 45.8**	**-0.4**
TESR		**75.83**	**325**⇓	*i*P		**P**	**00 28 48.0**	**-0.2**
TRPA	**Tarpa**	**76.03**	**328**⇓	*i*P		**P**	**00 28 49.7**	**+0.3**
TLCR		**76.04**	**323**⇑	*i*P		**P**	**00 28 48.9**	**-0.5**
MORC	**Moravsky Berou**	**76.33**	**332**	*e*P		**P**	**00 28 50.4**	**-0.6**
MORC	comp=Z,1.6nm,0.9s,mb4.0 **Moravsky Berou**	**76.33**	**332**	*e*P		**P**	**00 28 50.4**	**-0.6**
MORC	comp=Z,2.0nm,0.9s,mb4.0			pmax	pmax			
CLL	**Collm**	**76.36**	**335**⇑	*i*P		**P**	**00 28 50.3**	**-0.8**
CLL	comp=Z,7.0nm,1.1s,mb4.5 **Collm**	**76.36**	**335**⇑	*i*P		**P**	**00 28 50.3**	**-0.8**
CLL	comp=Z,7.0nm,1.1s,mb4.5			pmax	pmax			
CLL	**Collm**	**76.36**	**335**⇑	*i*P		**P**	**00 28 50.3**	**-0.8**
GRER	comp=Z,7.0nm,1.1s,mb4.5	**76.63**	**324**⇑	*i*P		**P**	**00 28 55.5**	**+2.7**
MLR	**Muntele Rosu**	**76.95**	**325**⇓	*i*P		**P**	**00 28 55.5**	**+0.9**
VYHS	**Vyhne**	**77.02**	**331**	*e*P		**P**	**00 28 55.3**	**+0.4**
VYHS	comp=Z,1.4nm,0.9s,mb3.9 **Vyhne**	**77.02**	**331**	*e*P		**P**	**00 28 55.3**	**+0.4**
VYHS	comp=Z,1.0nm,0.9s,mb3.8			pmax	pmax			
VYHS	**Vyhne**	**77.02**	**331**	*e*P		**P**	**00 28 55.3**	**+0.4**
VRAC	**Vranov**	**77.04**	**332**⇓	*i*P		**P**	**00 28 55.6**	**+0.6**
DRGR		**77.10**	**327**⇓	*i*P		**P**	**00 28 55.3**	**-0.1**
VOIR		**77.35**	**325**⇓	*i*P		**P**	**00 28 57.3**	**+0.5**
TXAR	**Lajitas Array**	**77.56**	**60**	P		**P**	**00 28 58.2**	**-0.1**
TXAR	**Lajitas Array**	**77.56**	**60**	P		**P**	**00 28 58.2**	**-0.1**
TXAR	comp=Z,0.8nm,0.5s,mb3.9,baz=305,slow=5.3,SNR=14 **Lajitas Array**	**77.56**	**60**	P		**P**	**00 28 58.2**	**-0.1**
TXAR	comp=Z,1.0nm,0.5s			pmax	pmax			
KHC	**Kasperske Hory**	**78.13**	**334**	*e*P		**P**	**00 29 01.2**	**+0.1**
KHC	comp=Z,1.7nm,0.9s,mb4.0 **Kasperske Hory**	**78.13**	**334**	*e*P		**P**	**00 29 01.2**	**+0.1**
KHC	comp=Z,2.0nm,0.9s,mb4.0			pmax	pmax			
KHC	**Kasperske Hory**	**78.13**	**334**	*e*P		**P**	**00 29 01.5**	**+0.4**
BRTR	**Keskin Array B**	**78.27**	**317**	P		**P**	**00 29 02.4**	**+0.3**
BRTR	comp=Z,1.7nm,0.9s,mb4.0,baz=57,slow=4.6,SNR=6.0 **Keskin Array B**	**78.27**	**317**	*e*P		**P**	**00 29 02.3**	**+0.3**
BRTR	comp=Z,2.0nm,0.9s			pmax	pmax			
BZS	**Buzias**	**78.50**	**327**⇓	*i*P		**P**	**00 29 02.6**	**-0.6**
MIB	**Mutribah**	**78.53**	**301**	*e*P		**P**	**00 29 03.7**	**0.0**
MIB	comp=Z,23nm,0.8s,mb5.2			AMb	AMB		00 29 04.6	
STKA	**Stephens Creek**	**78.99**	**190**	P		**P**	**00 29 07.8**	**+2.0**
RDF	comp=Z,2.8nm,0.8s,mb4.2,baz=160,slow=12,SNR=3.6 **Al-Radifah**	**79.06**	**301**	*e*P		**P**	**00 29 07.3**	**+0.8**
RDF	comp=Z,28nm,1.2s,mb5.1			AMb	AMB		00 29 08.0	
PKSM	**Moragy**	**79.06**	**330**⇓	*i*P		**P**	**00 29 05.4**	**-0.8**
VTS	**Vitosha**	**80.45**	**325**⇓	*i*P		**P**	**00 29 14.2**	**+0.3**
WVT	**Waverly**	**81.07**	**46**	*e*P		**P**	**00 29 17.1**	**-0.2**
WVT	comp=Z,4.4nm,1.0s,mb4.3 **Waverly**	**81.07**	**46**	*e*P		**P**	**00 29 17.1**	**-0.2**
WVT	comp=Z,4.0nm,1.0s,mb4.3			pmax	pmax			
HKT	**Hockley**	**81.65**	**55**	*e*P		**P**	**00 29 20.1**	**-0.4**
CSS	**Prodhromos**	**82.19**	**314**	*e*P		**P**	**00 29 22.2**	**-1.1**
MMAI	comp=Z,5.1nm,0.7s,mb4.6 **Mount Meron Ar**	**82.69**	**311**	P		**P**	**00 29 25.9**	**+0.1**
AQU	comp=Z,0.5nm,0.3s,mb4.0,baz=41,slow=6.6,SNR=4.4 **L'Aquila**	**84.23**	**331**	*e*P		**P**	**00 29 33.4**	**-0.2**
AQU	comp=Z,2.9nm,0.7s,mb4.5 **L'Aquila**	**84.23**	**331**	*e*P		**P**	**00 29 33.4**	**-0.2**
AQU	comp=Z,3.0nm,0.7s,mb4.5			pmax	pmax			
TIP	**Timpagrande**	**85.87**	**327**	*e*P		**P**	**00 29 40.7**	**-1.2**
CFAA	comp=Z,5.8nm,1.3s,mb4.7 **Coronel Fontan**	**145.09**	**79**	PKPbc	PKPbc		00 36 37.6	-1.1
CPUP	comp=Z,0.2nm,0.6s,baz=242,slow=2.9,SNR=4.7 **Villa Florida**	**148.53**	**60**	PKPbc	PKPbc		00 36 48.3	-0.5
CPUP	comp=Z,0.7nm,0.4s,baz=82,slow=20,SNR=5.9 **Villa Florida**	**148.53**	**60**	PKP2	PKPbc		00 36 48.3	-0.5
CPUP	comp=Z,1.0nm,0.4s			pmax	pmax			

IDC ***02*** *00:21:59.9±1.5,7˝06S×150˝60E,h0km,mb4.0/7, mb1 4.2/7,mb1mx3.8/16,mbtmp4.0/7,MS3.0/2,Ms1 3.0/2, ms1mx2.7/13,Error ellipse: s-maj=52.4km s-min=21.5km az=110.0*
ISCJB ***02*** *00:22:07.5±3.9,7˝2S±0˝2×150˝6E±0˝2,h73km±30km, mb3.8/8,Error ellipse: s-maj=39.0km s-min=22.8km az=20.3*
NEIC ***02*** *00:22:08.8±3.2,7˝21S×150˝53E,h66km±25km,mb4.3/2, Error ellipse: s-maj=33.1km s-min=17.3km az=104.0*
ISC 02 00:22:08.1±3.9,7˝2S±0˝2×150˝7E±0˝2,h64km±31km,n15, σ0$97/14,mb3.9/8,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.09**	**238**	*e*Pn		**Pn**	**00 23 07.8**	**-0.4**
PMG				*e*Sn		**Sn**	**00 23 56.4**	**+1.6**
CTA	**Charters Tower**	**13.49**	**198**	LR		LR	00 30 12.8	
KAKA	comp=Z,68nm,18.2s,baz=223,slow=36 **Kakadu**	**18.75**	**252**	*e*P		**Pn**	**00 26 21.1**	**-2.0**
WRAB	36nm,0.5s **Tennant Creek**	**20.25**	**230**	*e*P		**P**	**00 26 37.8**	**-0.5**
WB2	13nm,0.9s **Warramunga Arr**	**20.25**	**230**	*e*P		**P**	**00 26 38.1**	**-0.2**
ASAR	**Alice Springs**	**22.94**	**223**	P		**P**	**00 27 06.8**	**-0.3**
STKA	2.5nm,0.3s,mb4.1,baz=54,slow=9.6,SNR=41 **Stephens Creek**	**25.95**	**198**	P		**P**	**00 27 35.0**	**+0.5**
FITZ	1.9nm,0.6s,mb3.8,baz=39,slow=12,SNR=5.4 **Fitzroy Crossi**	**26.66**	**244**	P		**P**	**00 27 41.0**	**-0.2**
KSRS	6.1nm,0.5s,mb4.3,baz=76,slow=8.6,SNR=48 **Korea Array**	**49.26**	**336**	LR		LR	00 47 18.7	
SONM	comp=Z,13nm,19.7s,baz=220,slow=31 **Songino Array**	**67.27**	**329**	P		**P**	**00 32 55.9**	**+0.1**
SONM	**Songino Array**	**67.27**	**329**	P		**P**	**00 32 55.9**	**+0.1**
MKAR	0.3nm,0.4s,mb3.7,baz=93,slow=7.2,SNR=3.4 **Makanchi Array**	**80.76**	**320**	P		**P**	**00 34 13.9**	**-0.7**
KURK	0.1nm,0.4s,mb3.1,baz=118,slow=8.3,SNR=2.4 **Kurchatov**	**84.37**	**323**	P		**P**	**00 34 33.2**	**-0.1**
ILAR

IDC 02 00:53:47.0±1.8, 1°.77N×126°.44E, h0km, mb3.7/2, mb1 3.8/3, mb1mx3.4/19, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=117.2km s-min=22.8km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.77**	**182**	P	Pn	00 58 18.8	-1.4
	0.2nm,0.3s,baz=4.8,slow=11,SNR=5.0						
WRA	**Warramunga Arr**	**22.93**	**161**	P	P	00 58 53.3	+0.4
	1.8nm,0.4s,baz=340,slow=11,SNR=7.2						
ASAR	**Alice Springs**	**26.31**	**164**	P	P	00 59 24.3	-0.3
	0.7nm,0.5s,baz=350,slow=15,SNR=10						
MKAR	**Makanchi Array**	**58.99**	**326**	P	P	01 03 48.6	+0.1
	0.4nm,0.4s,baz=128,slow=7.1,SNR=11						

MEX 02 01:12:26.2±0.4, 15°.21N×93°.25W, h67km±4km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.50**	**3**	*i* P	Pn	01 12 37.3	-1.4
PCIG				*i* S	Sn	01 12 46.1	-1.7
THIG		**1.00**	**107**	*i* P	Pn	01 12 43.2	-1.3
THIG				*i* S	Sn	01 12 56.1	-1.9
TGIG		**1.57**	**4**	*i* P	Pn	01 12 50.6	-1.4
TGIG				*i* S	Sn	01 13 09.7	-1.7
SCX	**San Cristobal**	**1.63**	**21**	*e*P	Pn	01 12 51.6	-1.2
SCX				*i* S	Sn	01 13 11.9	-1.1
HUIG	**Huatulco**	**2.81**	**282**	*e*P	Pn	01 13 07.9	-1.0
HUIG				*i* S	Sn	01 13 40.3	-1.3
VHO	**Vista Hermosa**	**3.83**	**299**	*e*P	Pn	01 13 22.7	0.0
VHO				*i* S	Sn	01 14 03.7	-2.8
PNIG	**Pinotepa**	**4.84**	**285**	*e*P	Pn	01 13 36.4	-0.2
PNIG				*i* S	Sn	01 14 29.5	-1.9

*NEIC **02** 02:19:14.3, 18°.62N×68°.29W, h121km, MD3.5(RSPR), After RSPR.*

RSPR 02 02:19:14.3, 18°.61N×68°.29W, h121km±10km, 2C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMN1	**Samana, DR**	**1.10**	**302**	*e*P	Pn	02 19 36.9	-0.5
CRPR	**Cabo Rojo, PR**	**1.27**	**118**	*e*P	Pn	02 19 38.6	-0.6
CRPR				*e*S	Sn	02 19 58.0	0.0
AOPR	**Arecibo Observ**	**1.48**	**100**	*e*P	Pn	02 19 41.9	+0.5
AOPR				*e*S	Sn	02 20 03.1	+1.0
CBYP	**Canovanas**	**2.33**	**98**	*e*P	Pn	02 19 51.2	-0.7
CBYP				*e*S	Sn	02 20 20.6	-0.1

*IDC **02** 02:28:13.9±1.6, 7°.04S×150°.55E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.8/15, mbtmp3.9/5, Error ellipse: s-maj=57.5km s-min=23.8km az=114.0*

*ISCJB **02** 02:28:22.6±4.3, 7°.1S±0°.2×150°.3E±0°.3, h79km±32km, mb3.6/5, Error ellipse: s-maj=59.4km s-min=27.2km az=20.1*

*NEIC **02** 02:28:22.9±3.2, 7°.15S×150°.42E, h69km±25km, mb3.8/1, Error ellipse: s-maj=39.5km s-min=18.4km az=109.0*

ISC 02 02:28:22.9±4.3, 7°.2S±0°.2×150°.4E±0°.3, h69km±33km, n8, σ0s65/8, mb3.6/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.93**	**235**	*e*Pn	**Pn**	**02 29 21.0**	**+0.2**
WRAB	**Tennant Creek**	**20.11**	**229**	*e*P	**P**	**02 32 50.9**	**-0.4**
	3.9nm,0.8s						
WB2	**Warramunga Arr**	**20.11**	**229**	*e*P	**P**	**02 32 50.8**	**-0.6**
ASAR	**Alice Springs**	**22.83**	**222**	P	**P**	**02 33 19.9**	**-0.3**
	1.1nm,0.4s,mb3.6,baz=53,slow=9.6,SNR=20						
STKA	**Stephens Creek**	**25.93**	**197**	P	**P**	**02 33 49.4**	**+0.5**
	1.9nm,0.8s,mb3.6,baz=36,slow=11,SNR=3.6						
FITZ	**Fitzroy Crossi**	**26.48**	**243**	P	**P**	**02 33 54.8**	**+0.8**
	3.4nm,0.7s,mb3.9,baz=89,slow=8.5,SNR=14						
SONM	**Songino Array**	**67.10**	**329**	P	**P**	**02 39 09.2**	**+0.1**
	0.4nm,0.7s,mb3.4,baz=113,slow=3.3,SNR=2.7						
ILAR	**Eielson Array**	**85.22**	**22**	P	**P**	**02 40 51.4**	**-0.2**
	0.4nm,0.7s,mb3.4,baz=251,slow=5.2,SNR=6.7						

MAN 02 02:41:34, 6°.98N×126°.06E, h67km, mb4.5, ML3.4, MS3.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.20**	**101**	*e*P	Pn	02 41 45.9	+1.6
MATI				*e*S	Sn	02 41 54.7	+3.0
DMPH	**Davao City--Mi**	**0.56**	**280**	*e*P	Pn	02 41 49.4	+2.2
DMPH				*e*S	Sn	02 42 00.7	+3.8
BUKP	**Musuan**	**1.33**	**312**	*e*P	Pn	02 41 58.9	+2.2
BUKP				*e*S	Sn	02 42 12.0	-1.8

*IDC **02** 03:10:01.8±0.7, 32°.95S×178°.52W, h0km, mb4.4/7, mb1 4.5/8, mb1mx4.3/14, mbtmp4.5/8, ML4.6/1, MS4.4/10, Ms1 4.4/10, ms1mx4.1/18, Error ellipse: s-maj=23.5km s-min=21.9km az=106.0*

*ISCJB **02** 03:10:04.3±0.8, 33°.30S±0°.04×178°.5W±0°.1, h33km, mb4.8/17, MS4.4/9, Error ellipse: s-maj=16.6km s-min=5.4km az=11.5*

*NEIC **02** 03:10:04.9±6.2, 33°.32S×178°.37W, h25km±40km, mb5.1/8, Error ellipse: s-maj=27.6km s-min=13.9km az=57.0*

*GCMT **02** 03:10:08.5±0.3, 33°.08S×178°.27W, h21km±1km, MW5.0, Moment Tensor Solution. s35,c45; s59,c84; Moment tensor: Scale 10^{16}Nm; M_{rr}2.83±.19; $M_{\theta\theta}$0.69±.15; $M_{\phi\phi}$-3.52±.14; $M_{r\theta}$0.21±.29; $M_{\theta\phi}$-1.23±.11; $M_{r\phi}$2.67±.25; Best double couple: $M_0$4.30000×10^{16} NP1:ϕ_s208.00000°, δ27.00000°, λ109.00000°. NP2:ϕ_s6.00000°, δ65.00000°, λ81.00000°. Principal axes: T 3.8200, Plg69.0000°, Azm258.0000°; N 0.9500, Plg9.0000°, Azm10.0000°; P -4.7700, Plg19.0000°, Azm103.0000°; Data Used: II IU IC G*

ISC 02 03:10:07.3±0.9, 33°.34S±0°.05×178°.6W±0°.1, h35km, n101, σ1s18/68, mb4.8/17, MS4.4/9, 1C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**5.37**	**207**	PN	**Pn**	**03 11 25.0**	**+0.1**
PUZ				SN	**Sn**	**03 12 30.2**	**+4.8**
CNGZ	**Carnagh Statio**	**5.75**	**206**	PN	**Pn**	**03 11 30.4**	**+0.3**
MWZ	**Matawai**	**5.89**	**211**	P	**Pn**	**03 11 32.2**	**+0.2**
MWZ				S	**Sn**	**03 12 42.5**	**+4.2**
MWZ	**Matawai**	**5.89**	**211**	PN	**Pn**	**03 11 32.2**	**+0.2**
MWZ				SN	**Sn**	**03 12 42.5**	**+4.2**
URZ	**Urewera**	**6.02**	**214**	Pn	**Pn**	**03 11 35.6**	**+1.8**
	13nm,0.3s,baz=214,slow=1.6,SNR=58						
URZ				Sn	**Sn**	**03 12 47.4**	**+6.0**
	57nm,0.3s,baz=145,slow=23,SNR=9.7						
URZ	**Urewera**	**6.02**	**214**	PN	**Pn**	**03 11 34.2**	**+0.5**
URZ				SN	**Sn**	**03 12 43.2**	**+1.8**
PRGZ	**Paritu Road**	**6.25**	**206**	PN	**Pn**	**03 11 36.4**	**-0.6**
KNZ	**Kokohu**	**6.42**	**207**	P	**Pn**	**03 11 40.8**	**+1.5**
KNZ				S	**Sn**	**03 12 56.8**	**+5.6**
KNZ	**Kokohu**	**6.42**	**207**	PN	**Pn**	**03 11 40.8**	**+1.5**
RAHZ	**Arahi**	**6.57**	**211**	PN	**Pn**	**03 11 42.6**	**+1.3**
RAHZ				SN	**Sn**	**03 12 58.9**	**+4.0**
OUZ	**Omahuta**	**6.72**	**252**	*e*Pn	**Pn**	**03 11 48.8**	**+5.4**
	86nm,0.8s						
PNHZ	**Pukenui**	**7.78**	**211**	PN	**Pn**	**03 11 57.1**	**-0.8**
TSZ	**Takapari Road**	**8.00**	**211**	PN	**Pn**	**03 12 01.3**	**+0.3**
BFZ	**Birch Farm**	**8.40**	**208**	P	**Pn**	**03 12 04.7**	**-1.8**
BFZ	**Birch Farm**	**8.40**	**208**	PN	**Pn**	**03 12 04.7**	**-1.8**
MRZ	**Mangatainoka R**	**8.66**	**211**	P	**Pn**	**03 12 08.4**	**-1.6**
MRZ	**Mangatainoka R**	**8.66**	**211**	PN	**Pn**	**03 12 08.4**	**-1.6**
HOWZ	**Holdsworth Sta**	**8.88**	**210**	PN	**Pn**	**03 12 10.9**	**-2.2**
MTW	**Mount Morrison**	**9.11**	**209**	P	**Pn**	**03 12 14.0**	**-2.1**
MTW	**Mount Morrison**	**9.11**	**209**	PN	**Pn**	**03 12 14.0**	**-2.1**
TUWZ	**Tuamarina**	**10.01**	**214**	PN	**Pn**	**03 12 24.7**	**-3.8**
THZ	**Tophouse**	**10.77**	**216**	PN	**Pn**	**03 12 35.3**	**-3.6**
RPZ	**Rata Peaks**	**13.13**	**215**	*e*Pn	**Pn**	**03 13 10.3**	**-0.9**
RPZ				Sn	**Sn**	**03 15 27.3**	**-8.7**
RPZ	**Rata Peaks**	**13.13**	**215**	P	**Pn**	**03 13 09.9**	**-1.3**
	1.4nm,0.3s,baz=52,slow=16,SNR=12						
RPZ				Sn	**Sn**	**03 15 27.3**	**-8.7**
	2.8nm,0.3s,baz=64,slow=21,SNR=12						
RPZ				LR	LR	03 18 50.3	
	comp=Z,2μm,18.8s,baz=41,slow=39						
DZM	**Mont Dzumac**	**17.33**	**307**	*e*P	**Pn**	**03 14 15.4**	**+8.9**
	106nm,1.6s						
DZM				*e*LR	LR	03 18 05.3	
	4μm,23.1s						
DZM	**Mont Dzumac**	**17.33**	**307**	*e*P	**Pn**	**03 14 07.5**	**+1.0**
	82nm,1.6s						
RAR	**Rarotonga**	**20.61**	**59**	LR	LR	03 21 08.7	
	comp=Z,453nm,18.5s,MS3.9,baz=260,slow=33						
EIDS	**Eidsvold**	**27.52**	**279**	*e*P	**P**	**03 15 52.0**	**+1.4**
EIDS	**Eidsvold**	**27.52**	**279**	*e*P	**P**	**03 15 52.1**	**+1.5**
	25nm,1.1s,mb4.8						
PPT	**Papeete**	**30.42**	**66**	*e*LR	LR	03 23 40.9	
	847nm,24.5s,baz=232						
PPT	**Papeete**	**30.42**	**66**	LR	LR	03 25 02.2	
	comp=Z,446nm,19.5s,MS4.1,baz=251,slow=30						
STKA	**Stephens Creek**	**33.42**	**261**	P	**P**	**03 16 43.0**	**+0.3**
STKA				PcP	PcP	03 19 22.5	-1.1
STKA				LR	LR	03 29 42.4	
STKA	**Stephens Creek**	**33.42**	**261**	P	**P**	**03 16 43.0**	**+0.3**
	2.3nm,0.7s,mb4.2,baz=36,slow=6.9,SNR=4.8						
STKA				PcP	PcP	03 19 22.5	-1.1
	5.1nm,1.1s,baz=63,slow=6.8,SNR=2.8						
STKA				LR	LR	03 29 42.4	
	comp=Z,2μm,18.6s,MS4.8,baz=66,slow=35						
CTA	**Charters Tower**	**33.88**	**284**	*e*P	**P**	**03 16 48.0**	**+1.2**
	8.3nm,0.6s,mb4.8						
CTA	**Charters Tower**	**33.88**	**284**	P	**P**	**03 16 48.0**	**+1.2**
	9.4nm,0.8s,mb4.8,baz=114,slow=9.7,SNR=22						
CTAO	**Charters Tower**	**33.88**	**284**	*e*P	**P**	**03 16 48.0**	**+1.2**
	14nm,0.8s,mb5.0						
CTAO	**Charters Tower**	**33.88**	**284**	P	**P**	**03 16 47.4**	**+0.6**
	24nm,0.9s,mb5.1						
PMG	**Port Moresby**	**39.49**	**299**	P	**P**	**03 17 40.9**	**+6.3**
	23nm,1.6s,mb4.7						
RKT	**Rikitea**	**39.52**	**87**	*e*LR	LR	03 28 00.4	
	1μm,29.8s						
COEN	**Coen**	**39.68**	**290**	*e*P	**P**	**03 17 36.7**	**+0.5**
COEN	**Coen**	**39.68**	**290**	*e*P	**P**	**03 17 37.2**	**+1.1**
	76nm,0.7s,mb5.5						
COEN	**Coen**	**39.68**	**290**	P	**P**	**03 17 36.1**	**-0.1**
	83nm,1.9s,mb5.1						
ASAR	**Alice Springs**	**42.52**	**270**	P	**P**	**03 17 59.6**	**+0.1**
	15nm,0.7s,mb4.9,baz=108,slow=7.3,SNR=149						
TAOE	**Nuku Hiva Isla**	**42.99**	**64**	*e*LR	LR	03 29 32.0	
	489nm,27.5s						
WB2	**Warramunga Arr**	**43.77**	**276**	*e*P	**P**	**03 18 09.2**	**-0.5**
WRAB	**Tennant Creek**	**43.77**	**276**	*e*P	**P**	**03 18 09.2**	**-0.4**
	52nm,1.3s,mb5.1						
WRAB	**Tennant Creek**	**43.77**	**276**	P	**P**	**03 18 09.0**	**-0.7**
	89nm,0.7s,mb5.6,SNR=12						
WRAB	**Tennant Creek**	**43.77**	**276**	P	**P**	**03 18 10.9**	**+1.2**
	31nm,1.4s,mb4.8						
WRA	**Warramunga Arr**	**43.78**	**276**	P	**P**	**03 18 09.4**	**-0.3**
	9.4nm,0.8s,mb4.6,baz=115,slow=7.7,SNR=38						
FORT	**Forrest**	**44.87**	**258**	*e*P	**P**	**03 18 17.2**	**-1.1**
	18nm,0.7s,mb5.0						
KAKA	**Kakadu**	**49.00**	**283**	*e*P	**P**	**03 18 51.7**	**+0.9**
	8.4nm,0.6s,mb5.0						
KAKA	**Kakadu**	**49.00**	**283**	*e*P	**P**	**03 18 51.1**	**+0.3**
	24nm,0.6s,mb5.4						
KAKA	**Kakadu**	**49.00**	**283**	P	**P**	**03 18 48.9**	**-1.9**
	22nm,0.7s,mb5.3						
KNA	**Kununurra**	**50.44**	**277**	P	**P**	**03 19 00.0**	**-1.7**
	563nm65nm,1.0s,mb5.6						
FITZ	**Fitzroy Crossi**	**51.90**	**272**	*e*P	**P**	**03 19 12.2**	**-0.5**
	13nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**51.90**	**272**	*e*P	**P**	**03 19 12.1**	**-0.5**
	6.6nm,0.7s,mb4.7						
FITZ				*e*pP	pP	03 19 25.3	+2.1
FITZ	**Fitzroy Crossi**	**51.90**	**272**	P	**P**	**03 19 12.5**	**-0.2**
CASY	**Casey**	**52.32**	**209**	*e*P	**P**	**03 19 16.4**	**+1.3**
	8.7nm,0.7s,mb4.8						
MEEK	**Meekatharra**	**54.08**	**259**	*e*P	**P**	**03 19 27.9**	**-0.7**
QSPA	**South Pole Qui**	**56.78**	**180**	P	**P**	**03 19 51.0**	**+3.7**
	5.0nm,0.8s,mb4.6,baz=28,slow=5.5,SNR=17						
QSPA				LR	LR	03 39 51.8	
	comp=Z,216nm,22.0s,MS4.2,baz=38,slow=31						
GUMO	**Guam**	**58.23**	**317**	LR	LR	03 42 34.6	
	comp=Z,166nm,19.6s,MS4.2,baz=237,slow=34						
MAW	**Mawson**	**69.39**	**201**	P	**P**	**03 21 13.5**	**+2.4**
	1.9nm,0.6s,mb4.2,baz=163,slow=5.8,SNR=4.6						
MAW				LR	LR	03 51 01.3	
	comp=Z,392nm,20.7s,MS4.6,baz=114,slow=35						
SYO	**Syowa Base**	**74.14**	**193**	*e*P	**P**	**03 21 40.0**	**+0.4**
KSRS	**Kore Array**	**86.25**	**320**	P	**P**	**03 22 44.9**	**-0.2**
	1.9nm,0.8s,mb4.4,baz=144,slow=5.4,SNR=6.5						
NVAR	**Mina Array Bea**	**90.74**	**43**	P	**P**	**03 23 06.5**	**+0.1**
	0.9nm,0.8s,mb4.1,baz=216,slow=4.8,SNR=5.6						
TXAR	**Lajitas Array**	**94.40**	**58**	LR	LR	04 01 10.4	
	comp=Z,104nm,18.1s,MS4.3,baz=10.0,slow=33						
LPAZ	**La Paz**	**97.40**	**115**	LR	LR	03 57 43.8	
	comp=Z,103nm,20.1s,MS4.3,baz=310,slow=29						
CPUP	**Villa Florida**	**98.55**	**129**	LR	LR	04 02 34.5	
	comp=Z,361nm,19.5s,MS4.9,baz=203,slow=32						
MK31	**Makanchi Array**	**119.24**	**309**	*e*PKPdf	PKPdf	03 28 51.8	-0.5
MKAR	**Makanchi Array**	**119.24**	**309**	PKP	PKPdf	03 28 51.2	-1.0
	0.3nm,0.3s,baz=64,slow=2.8,SNR=3.6						
TKM2	**Tokmak 2**	**122.58**	**303**	*e*PKPdf	PKPdf	03 28 58.2	-0.6
KURK	**Kurchatov**	**122.68**	**313**	*e*PKPdf	PKPdf	03 28 57.9	-0.9
BVAR	**Borovoye Array**	**128.11**	**314**	PKP	PKPdf	03 29 09.7	+0.6
	1.4nm,0.6s,baz=112,slow=1.6,SNR=10						
ARCES	**ARCESS Array B**	**141.33**	**347**	PKP	PKPdf	03 29 30.4	-2.8
	1.5nm,0.6s,baz=30,slow=1.4,SNR=6.2						
JOF	**Joensuu**	**144.93**	**337**	*e*p	PKPdf	03 29 35.2	-4.6
KAF	**Kangasniemi**	**147.11**	**339**	*e*p	PKPdf	03 29 43.4	-0.1
	7.4nm,0.6s						
FINES	**FINESS Array B**	**147.69**	**338**	PKPbc	PKPbc	03 29 46.1	-1.2
	10nm,0.7s,baz=58,slow=3.6,SNR=29						
NOA	**NORSAR Array B**	**151.56**	**350**	PKPbc	PKPbc	03 29 54.5	-2.4
NOA				PKPab	PKPab	03 30 03.9	-1.6
NOA	**NORSAR Array B**	**151.56**	**350**	PKPbc	PKPbc	03 29 54.5	-2.4
	3.0nm,0.8s,baz=14,slow=4.1,SNR=9.5						
NOA				PKPab	PKPab	03 30 03.9	-1.6
	5.3nm,0.7s,baz=24,slow=2.8,SNR=13						
MMAI	**Mount Meron Ar**	**151.60**	**279**	PKPbc	PKPbc	03 29 58.9	+1.0
	14nm,0.7s,baz=81,slow=5.2,SNR=28						
MMAI				PKPab	PKPab	03 30 08.4	+1.8
	5.3nm,0.6s,baz=60,slow=4.0,SNR=4.9						
NAO01	**NORSAR Array S**	**151.79**	**350**	*e*PKPab	PKPab	03 30 05.3	-1.2
MICGM	**Minsk**	**151.81**	**327**	*e*	PKPbc	03 29 56.0	-1.6
LIC	**Lamto**	**152.37**	**166**	*e*PKIKP	PKPdf	03 29 55.1	+1.7
	128nm,1.7s						
DBIC	**Dimbokro**	**152.84**	**166**	PKPbc	PKPbc	03 30 02.1	+0.9
	1.6nm,0.7s,baz=348,slow=14,SNR=2.9						
AKASG	**Malin Array Be**	**153.24**	**319**	PKPbc	PKPbc	03 30 00.8	-0.2
AKASG				PKPab	PKPab	03 30 10.0	-2.9
AKASG	**Malin Array Be**	**153.24**	**319**	PKPbc	PKPbc	03 30 00.8	-0.2
	2.0nm,0.7s,baz=59,slow=2.3,SNR=9.1						
AKASG				PKPab	PKPab	03 30 10.0	-2.9
	1.7nm,0.6s,baz=56,slow=2.6,SNR=4.7						
KIEV	**Kiev**	**153.25**	**319**	*e*PKPbc	PKPbc	03 30 00.3	-0.7
BR131	**Keskin Array S**	**153.41**	**293**	*e*PKPbc	PKPbc	03 30 01.3	-0.5
BRTR	**Keskin Array B**	**153.41**	**293**	PKPbc	PKPbc	03 30 01.0	-0.7
	3.1nm,0.6s,baz=137,slow=3.2,SNR=18						
BRTR				PKPab	PKPab	03 30 11.6	-2.4
	1.4nm,0.5s,baz=147,slow=4.0,SNR=6.1						
CSS	**Prodhromos**	**153.57**	**282**	*e*PKPbc	PKPbc	03 30 00.6	-1.6
MORC	**Moravsky Berou**	**159.68**	**329**	*e*PKPdf	PKPdf	03 30 01.4	-0.5
CLL	**Collm**	**160.14**	**338**	*e*PKPab	PKPab	03 30 41.0	-1.5
	comp=Z,3.0nm,0.8s						
CLL				*es*PKPab		03 30 53.0	
QUIF	**Quistinic**	**165.04**	**12**	*e*PKP2	PKPab	03 31 00.1	-3.9
	comp=Z,110nm,1.2s						
SSF	**Saint Saulge**	**166.20**	**354**	*e*PKP2	PKPab	03 31 07.7	-1.4
	comp=Z,6.0nm,0.8s						
AVF	**Avril sur Loir**	**166.48**	**354**	*e*PKP2	PKPab	03 31 08.5	-1.9
	comp=Z,14nm,1.2s						
SMF	**Signal de Mont**	**166.58**	**353**	*e*PKP2	PKPab	03 31 09.3	-1.5
	comp=Z,34nm,1.2s						
MFF	**Saint Martin d**	**166.70**	**5**	*e*PKP2	PKPab	03 31 07.2	-4.2
	comp=Z,32nm,1.1s						
LPL	**La Plagne**	**167.16**	**343**	*e*PKP2	PKPab	03 31 12.9	-0.6
	comp=Z,9.8nm,1.0s						
LPG	**La Plagne**	**167.18**	**343**	*e*PKP2	PKPab	03 31 13.2	-0.3
	comp=Z,8.0nm,0.9s						
ORIF	**Oris-en-Rattie**	**167.93**	**345**	*e*PKP2	PKPab	03 31 16.1	-0.7
	comp=Z,7.8nm,0.9s						
SMRF	**Simiane la Rot**	**168.89**	**344**	*e*PKP2	PKPab	03 31 18.8	-2.3
	comp=Z,20nm,1.1s						

PRE 02 03:11:59.2±1.0, 20°.99S×33°.33E, h5km, ML3.8, Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSNA	**Messina**	**3.36**	**246**	*e*P	Pn	03 12 54.3	+1.9
MSNA				*e*S	Sn	03 13 33.7	+1.0
MSNA				AML	AML	03 13 48.8	
	comp=Z,267nm,0.2s						
POGA	**Pongola**	**6.54**	**194**	*e*P	Pn	03 13 36.8	+0.7
POGA				*e*S	Sn	03 14 47.7	-3.4
POGA				AML	AML	03 15 27.6	
	comp=Z,52nm,0.6s						
SLR	**Silverton**	**6.62**	**224**	*e*P	Pn	03 13 38.2	+1.0
SLR				*e*S	Sn	03 14 50.7	-2.4
SLR				AML	AML	03 15 33.3	
	comp=Z,132nm,0.5s						
KSR	**Koster**	**7.64**	**229**	*e*P	Pn	03 13 52.9	+1.7
KSR				*e*S	Sn	03 15 15.0	-3.1
KSR				AML	AML	03 16 11.5	
	comp=Z,79nm,0.6s						
PRYS	**Parys**	**8.05**	**222**	*e*P	Pn	03 13 57.5	+0.7
PRYS				*e*S	Sn	03 15 24.5	-3.7
PRYS				AML	AML	03 16 24.3	
	comp=Z,58nm,0.6s						
LBTB	**Lobatse**	**8.18**	**239**	*e*P	Pn	03 13 59.6	+1.1
LBTB				*e*S	Sn	03 15 26.8	-4.6
LBTB				AML	AML	03 16 34.5	
	comp=Z,35nm,0.7s						
SWZ	**Schweizer**	**9.56**	**228**	*e*P	Pn	03 14 18.5	+0.9
SWZ				*e*S	Sn	03 16 01.4	-4.0
SWZ				AML	AML	03 17 06.9	
	comp=Z,26nm,0.7s						
KSD	**Kokstad**	**10.14**	**200**	*e*P	Pn	03 14 26.3	+0.7
KSD				*e*S	Sn	03 16 14.2	-5.6
KSD				AML	AML	03 17 29.0	
	comp=Z,21nm,0.7s						
BOSA	**Boshof**	**10.55**	**222**	*e*P	Pn	03 14 32.3	+1.1
BOSA				*e*S	Sn	03 16 24.2	-5.6
BOSA				AML	AML	03 17 40.6	
	comp=Z,16nm,0.7s						
PKA	**Prieska**	**12.88**	**226**	*e*P	Pn	03 15 04.8	+1.8
PKA				*e*S	Sn	03 17 20.2	-6.7
PKA				AML	AML	03 19 09.6	
	comp=Z,17nm,0.6s						
SUR	**Sutherland**	**15.92**	**222**	*e*P	Pn	03 15 46.3	+2.3
SUR				*e*S	Sn	03 18 32.9	-7.9

*TAP **02** 03:16:59.4, 23°.82N×122°.55E, h4km±1km, ML3.0, D*

*JMA **02** 03:16:59.2±0.3, 23°.89N×122°.72E, h32km, M2.5*

ISC 02 03:16:57.5±0.5, 23°.80N±0°.03×122°.72E±0°.02, h5km±3km, n32, σ0s91/61, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.71**	**22**	P	**Pg**	**03 17 11.6**	**+0.5**
YOJ				S	**Sg**	**03 17 19.8**	**-0.5**
HATJ	**Hateruma jima**	**1.02**	**75**	P	**Pg**	**03 17 17.1**	**0.0**
HATJ				*e*S	**Sg**	**03 17 30.9**	**+0.6**
HWA	**Hwalien**	**1.04**	**280**	*e*P	**Pg**	**03 17 17.1**	**-0.3**
	baz=280						
HWA				*e*S	**Sg**	**03 17 30.4**	**-0.4**
	baz=280						
IRIF	**Iriomote-Funau**	**1.06**	**60**	P	**Pg**	**03 17 17.6**	**-0.2**
IRIF				*e*S	**Sg**	**03 17 31.8**	**+0.2**
TWD	**Chiawan**	**1.07**	**285**	*e*P	**Pg**	**03 17 17.6**	**-0.3**
	baz=286						
TWD				*e*S	**Sg**	**03 17 31.5**	**-0.3**
	baz=286						
ENA	**Nanau**	**1.09**	**305**	P	**Pg**	**03 17 18.8**	**+0.4**
	baz=309						
ENA				S	**Sg**	**03 17 33.1**	**+0.5**
	baz=309						
TWC	**Suao**	**1.13**	**315**	P	**Pg**	**03 17 19.3**	**+0.1**
	baz=321						
TWC				S	**Sg**	**03 17 33.5**	**-0.4**
	baz=321						
ESL	**Shilin**	**1.18**	**271**	P	**Pg**	**03 17 19.6**	**-0.5**
	baz=269						
ESL				S	**Sg**	**03 17 34.8**	**-0.6**
	baz=269						
JKRS	**Kuro-shima**	**1.25**	**69**	P	**Pg**	**03 17 20.9**	**-0.6**
JKRS				*e*S	**Sg**	**03 17 37.3**	**-0.5**
EHY	**Hungye**	**1.32**	**257**	P	**Pn**	**03 17 22.7**	**+0.2**
	baz=254						
EHY				S	**Sg**	**03 17 39.3**	**-0.5**
	baz=254						
TWE	**Neicheng**	**1.33**	**314**	*e*P	**Pn**	**03 17 22.8**	**+0.1**
	baz=318						
TWE				*e*S	**Sb**	**03 17 41.0**	**+0.7**
	baz=318						
ENTT	**Nioudou**	**1.35**	**309**	*e*P	**Pn**	**03 17 23.6**	**+0.7**
	baz=312						
ENTT				*e*S	**Sb**	**03 17 40.6**	**-0.1**
	baz=312						
TWB1	**Santiao Chiao**	**1.38**	**331**	*e*P	**Pn**	**03 17 24.8**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.56**	**194**	*i* P	Pn	03 29 34.7	-1.4
CMIG				*i* S	Sn	03 29 47.3	-1.7
TGIG		**1.77**	**119**	*i* P	Pn	03 29 48.0	-0.8
TGIG				*i* S	Sn	03 30 10.4	-1.4
VHO	**Vista Hermosa**	**1.98**	**254**	*i* P	Pn	03 29 51.0	-0.5
VHO				*i* S	Sn	03 30 15.7	-0.7
SCX	**San Cristobal**	**2.21**	**114**	*i* P	Pn	03 29 57.0	+2.6
HUIG	**Huatulco**	**2.27**	**215**	*i* P	Pn	03 29 54.0	-1.2
HUIG				*i* S	Sn	03 30 21.9	-1.2
PCIG		**2.42**	**143**	*eP*	Pn	03 29 55.0	-2.0
PCIG				*i* S	Sn	03 30 23.6	-3.0
TPIG	**Tehuac#an**	**2.61**	**288**	*eP*	Pn	03 29 56.5	-3.1
TPIG				*i* S	Sn	03 30 26.4	-4.5
PNIG	**Pinotepa**	**3.46**	**250**	*i* P	Pn	03 30 09.2	-1.7
PNIG				*i* S	Sn	03 30 50.2	-1.0

JMA 02 03:29:49.8±0.4, 43.92N×148.09E, h0km, M3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.79**	**253**	P	Pn	03 30 22.5	+0.6
NEM2				*eS*	Sn	03 30 46.0	+0.6
JRA	**Rausu**	**2.14**	**272**	P	Pn	03 30 27.5	+0.7
JNK	**Nakash**	**2.46**	**263**	P	Pn	03 30 32.1	+0.9
JNK				*eS*	Sn	03 31 03.1	+1.1
JAK	**Akkeshi**	**2.64**	**251**	P	Pn	03 30 34.6	+1.0
JAR	**Ashorobuto**	**3.20**	**260**	P	Pn	03 30 43.3	+2.0
JAR				*eS*	Sn	03 31 23.1	+3.0
JCH	**Churui**	**3.69**	**251**	P	Pn	03 30 49.6	+1.5
JNBK	**Urakawa-nobuka**	**4.24**	**249**	P	Pn	03 30 57.9	+2.3

*ISCJB **02** 03:37:59.3±4.1, 5.3S±0.1×154.0E±0.2, h123km±34km, mb3.7/10, Error ellipse: s-maj=32.3km s-min=24.3km az=12.5*
*NEIC **02** 03:37:59.3±2.6, 5.23S×154.07E, h113km±21km, mb3.8/2, Error ellipse: s-maj=27.6km s-min=14.1km az=94.0*
*IDC **02** 03:38:06.0±13.0, 5.40S×154.08E, h178km±128km, mb3.5/8, mb1 3.5/9, mb1mx3.4/16, mbtmp3.5/9, Error ellipse: s-maj=45.0km s-min=40.9km az=80.0*
ISC 02 03:37:59.5±3.6, 5.2S±0.1×154.0E±0.2, h112km±29km, n16, σ0§60/16, mb3.7/10, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.97**	**238**	*ePn*	**Pn**	**03 39 52.4**	**-0.3**
	18nm,0.7s						
PMG				*eSn*	**Sn**	**03 41 21.1**	**-0.1**
CTA	**Charters Tower**	**16.58**	**206**	P	**Pn**	**03 41 46.5**	**+1.0**
CTA	**Charters Tower**	**16.58**	**206**	P	**Pn**	**03 41 46.5**	**+1.0**
	0.1nm,0.3s,baz=20,slow=13,SNR=6.5						
CTAO	**Charters Tower**	**16.58**	**206**	*eP*	**Pn**	**03 41 46.1**	**+0.6**
	4.2nm,0.8s						
WRA	**Warramunga Arr**	**24.09**	**231**	P	**P**	**03 43 05.4**	**+0.5**
	1.6nm,0.7s,mb3.5,baz=55,slow=10.0,SNR=10.0						
ASAR	**Alice Springs**	**26.67**	**225**	P	**P**	**03 43 27.3**	**-0.9**
	0.7nm,1.0s,mb3.1,baz=57,slow=4.6,SNR=4.5						
STKA	**Stephens Creek**	**28.95**	**202**	P	**P**	**03 43 48.0**	**-0.4**
	2.3nm,0.9s,mb3.8,baz=335,slow=7.4,SNR=2.8						
FITZ	**Fitzroy Crossi**	**30.54**	**243**	P	**P**	**03 44 02.7**	**+0.1**
	1.0nm,0.6s,mb3.8,baz=60,slow=9.6						
SONM	**Songino Array**	**67.35**	**327**	P	**P**	**03 48 43.5**	**+1.0**
	0.7nm,0.3s,mb4.0,baz=134,slow=6.4,SNR=3.6						
MK31	**Makanchi Array**	**81.46**	**319**	*eP*	**P**	**03 50 04.7**	**+0.4**
MKAR	**Makanchi Array**	**81.46**	**319**	P	**P**	**03 50 04.6**	**+0.3**
	0.7nm,0.4s,mb3.8,baz=95,slow=5.8,SNR=7.2						
ILAR	**Eielson Array**	**82.11**	**22**	P	**P**	**03 50 07.0**	**-0.3**
	0.3nm,0.7s,mb3.2,baz=254,slow=5.0,SNR=5.5						
ZALV	**Zalesovo Beam**	**82.20**	**326**	P	**P**	**03 50 07.4**	**-0.6**
	1.1nm,0.6s,mb3.9,baz=117,slow=7.6,SNR=5.2						
TKM2	**Tokmak 2**	**85.11**	**314**	*eP*	**P**	**03 50 23.4**	**+0.3**
	0.9nm,0.6s,mb3.9						
BVAR	**Borovoye Array**	**90.32**	**323**	P	**P**	**03 50 46.8**	**-1.0**
	0.4nm,0.4s,mb3.9,baz=106,slow=7.9,SNR=4.2						
SCHQ	**Schefferville**	**120.65**	**26**	PKP	PKPdf	03 56 36.8	-1.3
	6.6nm,1.0s,baz=222,slow=1.8,SNR=3.8						

*NEIC **02** 03:46:48.7±1.4, 8.31S×118.93E, h153km±14km, mb4.2/6, Error ellipse: s-maj=17.3km s-min=7.3km az=57.0*
*ISCJB **02** 03:46:49.3±0.3, 8.40S±0.04×119.00E±0.03, h178km±4km, mb4.2/10, Error ellipse: s-maj=6.6km s-min=4.7km az=42.8*
*IDC **02** 03:46:50.9±2.8, 8.25S×119.21E, h170km±27km, mb3.8/6, mb1 3.9/7, mb1mx3.6/20, mbtmp3.8/7, Error ellipse: s-maj=55.9km s-min=8.6km az=53.0*
*DJA **02** 03:46:51, 8.46S×119.04E, h132km, mb4.8/14*
ISC 02 03:46:50.2±0.3, 8.43S±0.04×119.02E±0.03, h170km±4km, n53, σ1§17/67, mb4.2/10, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.76**	**134**	P	**Pn**	**03 47 23.9**	**-0.1**
WSI				S	**Sn**	**03 47 48.6**	**-1.6**
MMRI	**Maumere**	**3.19**	**94**	P	**Pn**	**03 47 41.1**	**+0.4**
MMRI				S	**Sn**	**03 48 18.8**	**-1.2**
BKSI	**Bulukumba**	**3.27**	**20**	P	**Pn**	**03 47 42.5**	**+0.7**
BKSI				S	**Sn**	**03 48 22.4**	**+0.4**
KHKI	**Kahang-Kahang**	**3.38**	**271**	P	**Pn**	**03 47 42.3**	**-0.8**
SRBI	**Singaraja**	**3.79**	**275**	P	**Pn**	**03 47 49.6**	**+1.3**
IGBI	**Denpasar**	**3.85**	**264**	P	**Pn**	**03 47 48.6**	**-0.5**
JAGI	**Jajag, Banyuwa**	**4.82**	**269**	P	**Pn**	**03 48 00.4**	**-1.2**
TTSI	**Tana Toraja**	**5.41**	**8**	P	**Pn**	**03 48 10.3**	**+1.0**
	0.2nm24nm,0.7s						
GMJI	**Gumukmas**	**5.52**	**271**	P	**Pn**	**03 48 09.0**	**-1.8**
	54nm,0.7s						
KBKI	**Kotabaru**	**5.83**	**331**	P	**Pn**	**03 48 16.3**	**+1.4**
	5µm38nm,1.1s						
PWJI	**Pagerwojo**	**7.16**	**273**	P	**Pn**	**03 48 33.0**	**+0.6**
	0.6nm47nm,1.9s						
SJI	**Sawahan**	**7.22**	**275**	P	**Pn**	**03 48 33.8**	**+0.6**
	0.9nm54nm,0.8s						
PCI	**Palu**	**7.52**	**6**	P	**Pn**	**03 48 37.3**	**+0.1**
	0.1nm36nm,0.6s						
PCJI	**Pacitan**	**7.77**	**271**	P	**Pn**	**03 48 41.1**	**+0.6**
	94nm,1.6s						
SMKI	**Samarinda**	**8.13**	**347**	P	**Pn**	**03 48 46.4**	**+1.1**
	70nm,0.9s						
FITZ	**Fitzroy Crossi**	**11.57**	**147**	*eP*	**Pn**	**03 49 30.8**	**+0.4**
	47nm,0.6s						
FITZ				*eS*	**Sn**	**03 51 33.0**	**-5.7**
FITZ	**Fitzroy Crossi**	**11.57**	**147**	P	**Pn**	**03 49 31.2**	**+0.9**
	4.0nm,0.3s,baz=338,slow=7.6,SNR=189						
FITZ				S	**Sn**	**03 51 36.8**	**-1.9**
	3.8nm,0.3s,baz=182,slow=18,SNR=4.8						
FITZ	**Fitzroy Crossi**	**11.57**	**147**	P	**Pn**	**03 49 30.8**	**+0.4**
	80nm,0.7s						
KNA	**Kununurra**	**11.99**	**128**	*eP*	**Pn**	**03 49 35.0**	**-0.8**
	22nm,0.2s						
KNA				*eS*	**Sn**	**03 51 40.5**	**-8.2**
KNA	**Kununurra**	**11.99**	**128**	P	**Pn**	**03 49 34.8**	**-1.0**
	3µm222nm,0.8s						
CBJI	**Citeko**	**12.23**	**279**	P	**Pn**	**03 49 38.4**	**-0.6**
	233nm,0.7s						
MBWA	**Marble Bar**	**12.68**	**177**	*eP*	**Pn**	**03 49 45.5**	**+0.9**
MBWA				*eS*	**Sn**	**03 51 52.2**	**-13**
MBWA	**Marble Bar**	**12.68**	**177**	*ePn*	**Pn**	**03 49 45.4**	**+0.8**
MBWA				*eSn*	**Sn**	**03 51 57.6**	**-7.6**
CGJI	**Cibinong**	**13.34**	**277**	P	**Pn**	**03 49 56.5**	**+3.5**
	5µm89nm,0.4s						
KAKA	**Kakadu**	**13.86**	**109**	*eP*	**Pn**	**03 49 59.2**	**-0.4**
	34nm,0.6s						
KAKA				*eS*	**Sn**	**03 52 22.0**	**-12**
KAKA	**Kakadu**	**13.86**	**109**	*ePn*	**Pn**	**03 49 59.7**	**+0.1**
	71nm,0.4s						
KAKA				*eSn*	**Sn**	**03 52 23.3**	**-10**
KAKA	**Kakadu**	**13.86**	**109**	P	**Pn**	**03 49 59.4**	**-0.2**
	927nm72nm,0.6s						
KKM	**Kota Kinabalu**	**14.64**	**349**	*ePn*	**Pn**	**03 50 08.1**	**-1.4**
LWLI	**Liwa**	**15.24**	**282**	P	**Pn**	**03 50 21.8**	**+5.0**
MEEK	**Meekatharra**	**18.12**	**181**	*eP*	**P**	**03 50 52.5**	**+3.2**
MEEK				*eS*	**S**	**03 54 02.7**	**-5.3**
WRA	**Warramunga Arr**	**18.73**	**129**	P	**P**	**03 50 57.1**	**+1.1**
WRA				S	**S**	**03 54 21.4**	**+1.1**
WRA	**Warramunga Arr**	**18.73**	**129**	P	**P**	**03 50 57.1**	**+1.0**
	1.5nm,0.3s,baz=302,slow=12,SNR=74						
WRA				S	**S**	**03 54 21.4**	**+1.1**
	1.3nm,0.3s,baz=308,slow=23,SNR=7.5						
WRAB	**Tennant Creek**	**18.73**	**129**	*eP*	**P**	**03 50 57.0**	**+1.0**
	9.4nm,0.6s						
WRAB				*eSn*	**S**	**03 54 19.2**	**-1.3**
WB2	**Warramunga Arr**	**18.74**	**129**	*eP*	**P**	**03 50 57.0**	**+0.9**
WB2				*eSn*	**S**	**03 54 18.3**	**-2.2**
MORW	**Morawa**	**20.72**	**187**	*eS*	**S**	**03 55 02.9**	**+3.6**
ASAR	**Alice Springs**	**20.80**	**138**	P	**P**	**03 51 20.1**	**+1.8**
	2.4nm,0.4s,baz=315,slow=10,SNR=61						
ASAR				S	**S**	**03 55 01.7**	**+0.8**
	3.3nm,0.9s,baz=324,slow=23,SNR=12						
COEN	**Coen**	**24.31**	**105**	*eP*	**P**	**03 51 53.9**	**+1.7**
COEN	**Coen**	**24.31**	**105**	*eP*	**P**	**03 51 53.7**	**+1.5**
	45nm,0.5s,mb5.2						
STKA	**Stephens Creek**	**31.38**	**141**	P	**P**	**03 52 57.2**	**+2.2**
STKA	**Stephens Creek**	**31.38**	**141**	P	**P**	**03 52 57.2**	**+2.2**
	1.8nm,0.6s,mb4.0,baz=328,slow=9.7,SNR=4.2						
WHN	**Wuhan**	**39.01**	**354**	*eP*	**P**	**03 53 58.0**	**-2.1**
SONM	**Songino Array**	**57.12**	**350**	P	**P**	**03 56 19.8**	**+1.1**
	0.9nm,0.4s,mb3.9,baz=167,slow=9.0,SNR=9.6						
MK31	**Makanchi Array**	**63.96**	**333**	*eP*	**P**	**03 57 05.4**	**+0.3**
MKAR	**Makanchi Array**	**63.96**	**333**	P	**P**	**03 57 05.3**	**+0.2**
	4.2nm,0.6s,mb4.5,baz=146,slow=7.7,SNR=35						
TKM2	**Tokmak 2**	**64.59**	**326**	*eP*	**P**	**03 57 07.6**	**-1.7**
	1.1nm,0.5s,mb3.9						
AML	**Almayashu**	**65.16**	**324**	*eP*	**P**	**03 57 13.0**	**0.0**
	1.9nm,0.6s,mb4.1						
EKS2	**Erkin-Say**	**65.45**	**325**	*eP*	**P**	**03 57 13.6**	**-1.2**
	2.1nm,0.7s,mb4.1						
KURK	**Kurchatov**	**68.50**	**334**	*eP*	**P**	**03 57 33.3**	**-0.5**
	1.8nm,0.5s,mb4.1						
ZAA0	**Zalesovo Array**	**68.52**	**339**	*eP*	**P**	**03 57 32.8**	**-1.2**
ZALV	**Zalesovo Beam**	**68.52**	**339**	P	**P**	**03 57 33.2**	**-0.7**
	3.2nm,0.3s,mb4.5,baz=148,slow=5.0,SNR=19						
BVAR	**Borovoye Array**	**73.80**	**332**	P	**P**	**03 58 04.2**	**-1.5**
	0.7nm,0.6s,mb3.5,baz=137,slow=7.6,SNR=5.3						
TXAR	**Lajitas Array**	**134.91**	**57**	PKP	PKPdf	04 05 50.7	+1.2
	0.1nm,0.6s,baz=176,slow=18,SNR=3.6						
CPUP	**Villa Florida**	**145.27**	**186**	PKPbc	PKPbc	04 06 10.9	+2.5
	0.6nm,0.5s,baz=93,slow=19,SNR=5.0						

*NIED **02** 04:03:00, 29.30N×130.40E, h35km, Mw5.2 Best double couple: M0 7.37000×10^16 NP1:φs31.00000°, δ87.00000°, λ77.00000°. NP2:φs290.00000°, δ13.00000°, λ169.00000°.*
*SZGRF **02** 04:03:18.4, 29.40N×132.81E, h32km, mb5.4, MS5.2, Southeast of Shikoku, Japan*
*BGS **02** 04:03:19.2±1.7, 28.28N×130.44E, h33km, mb5.1, MS5.0*
*IDC **02** 04:03:21.3±2.7, 29.38N×130.30E, h9km±16km, mb5.0/31, mb1 5.0/31, mb1mx4.9/35, mbtmp5.0/31, MS4.6/24, Ms1 4.6/24, ms1mx4.4/32, Error ellipse: s-maj=16.2km s-min=12.4km az=67.0*
*BJI **02** 04:03:22.6, 29.07N×130.70E, h50km, mB5.1/43, mb5.0/62, Ms4.9/66, Ms7 4.8/58*
*ISCJB **02** 04:03:23.6±0.1, 29.27N±0.02×130.37E±0.02, h35km, mb5.2/259, MS4.9/74, Error ellipse: s-maj=2.8km s-min=2.1km az=146.2*
*MOS **02** 04:03:24.6±0.8, 29.55N×130.21E, h33km, mb5.3/103, MS5.2/33, Error ellipse: s-maj=7.7km s-min=4.3km az=115.5*
*JMA **02** 04:03:25.2, 29.30N×130.36E, h63km±2km, M5.1*
JMA Felt II J1.
*NEIC **02** 04:03:27.7±0.6, 29.36N×130.28E, h55km±5km, mb5.1/149, MW5.2(NIED), Error ellipse: s-maj=4.0km s-min=3.2km az=160.0*
NEIC Recorded [2 JMA] in the Tokara-retto and [1 JMA] on Amami-oshima and Yaku-shima.
*GCMT **02** 04:03:27.9±0.2, 29.18N×130.67E, h41km, MW5.1, Moment Tensor Solution. s50,c80; s70,c106; Moment tensor: Scale 10^16Nm; Mrr4.43±.19; Mθθ-1.97±.13; Mφφ-2.46±.15; Mrθ2.11±.10; Mθφ-2.19±.08; Mφr1.44±.10; Best double couple: M0 5.10000×10^16 NP1:φs215.00000°, δ31.00000°, λ78.00000°. NP2:φs49.00000°, δ60.00000°, λ97.00000°. Principal axes: T 5.1500, Plg74.0000°, Azm336.0000°; N -0.0800, Plg6.0000°, Azm225.0000°; P -5.0700, Plg15.0000°, Azm134.0000°; Data Used: II IC IU CN G.*
*DJA **02** 04:03:28, 29.59N×130.46E, h65km, mb5.1/10*
ISC 02 04:03:25.4±0.1, 29.29N±0.02×130.38E±0.02, h37km, h37km±2.1km:pP-P, n804, σ0§91/775, mb5.2/259, MS4.9/74, 115C-108D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.70**	**321**	P	**Pn**	**04 03 39.4**	**+0.5**
JNN				S	**Sn**	**04 03 50.3**	**+1.8**
JZK	**Kikaishima**	**1.03**	**200**	P	**Pn**	**04 03 43.9**	**+0.5**
JAM	**Amami Oshima**	**1.11**	**218**	P	**Pn**	**04 03 45.0**	**+0.6**
JAM				*eS*	**Sn**	**04 04 00.2**	**+1.7**
JKC	**Kuchinoerabu**	**1.18**	**352**	P	**Pn**	**04 03 46.1**	**+0.7**
JKC				S	**Sn**	**04 04 01.6**	**+1.3**
JTN	**Tanegashima 3**	**1.46**	**21**	P	**Pn**	**04 03 49.5**	**+0.3**
JTN				*eS*	**Sn**	**04 04 08.7**	**+1.6**
JTSR	**Tashiro 2**	**1.93**	**14**	P	**Pn**	**04 03 56.0**	**+0.3**
JTSR				*eS*	**Sn**	**04 04 19.4**	**+0.7**
JTK	**Tokunoshima**	**1.96**	**220**	P	**Pn**	**04 03 56.8**	**+0.7**
JSU	**Suzuyama**	**2.21**	**2**	P	**Pn**	**04 04 00.2**	**+0.6**
JSU				S	**Sn**	**04 04 27.3**	**+1.6**
JNAR	**Kushima--Naru**	**2.36**	**19**	P	**Pn**	**04 04 02.4**	**+0.8**
JSJ	**Shimokoshiki**	**2.45**	**347**	P	**Pn**	**04 04 03.8**	**+0.9**
JSJ				*eS*	**Sn**	**04 04 32.3**	**+0.7**
JTZ	**Takazaki**	**2.67**	**13**	P	**Pn**	**04 04 06.4**	**+0.4**
JZO	**Okuchi**	**2.85**	**4**	P	**Pn**	**04 04 09.3**	**+0.9**
JOW	**Kunigami**	**3.08**	**218**	P	**Pn**	**04 04 11.4**	**-0.1**
JIH	**Iheya**	**3.10**	**224**	P	**Pn**	**04 04 12.2**	**+0.4**
JTSN	**Tsuno**	**3.10**	**18**	P	**Pn**	**04 04 11.8**	**0.0**
JKIT	**Kitakata**	**3.45**	**15**	P	**Pn**	**04 04 17.2**	**+0.6**
JMZ	**Minamidaito 2**	**3.54**	**168**	P	**Pn**	**04 04 15.4**	**-2.4**
JAGN	**Aguni-jima**	**3.87**	**227**	P	**Pn**	**04 04 22.8**	**+0.4**
JTO	**Tosashimizu**	**4.12**	**30**	P	**Pn**	**04 04 23.8**	**-2.0**
JKE	**Kume jima 2**	**4.34**	**228**	P	**Pn**	**04 04 29.2**	**+0.3**
UWA2	**Uwa jima 2**	**4.36**	**26**	P	**Pn**	**04 04 27.7**	**-1.4**
JFA	**Akaike**	**4.42**	**4**	P	**Pn**	**04 04 31.6**	**+1.6**
JKU	**Kubokawa**	**4.62**	**29**	P	**Pn**	**04 04 31.6**	**-1.1**
JHIK	**Hikimi**	**5.39**	**14**	P	**Pn**	**04 04 43.1**	**-0.2**
JWZ	**Kozaga**	**6.22**	**46**	P	**Pn**	**04 04 54.0**	**-0.6**
JKN2	**Miekihoku**	**7.04**	**44**	P	**Pn**	**04 05 05.6**	**-0.3**
JFM	**Mihama**	**7.82**	**36**	P	**Pn**	**04 05 17.0**	**+0.4**
SSE	**Sheshan**	**8.16**	**285**	P	**Pn**	**04 05 24.4**	**+3.1**
SSE				S	**Sn**	**04 07 02.4**	**+10**
SSE				pmax	pmax		
	comp=Z,36nm,0.6s						
SSE				pmax	pmax		
	comp=Z,240nm,5.4s						
SSE				LR	LR		
	comp=N,2µm,13.6s						
SSE				LR	LR		
	comp=E,4µm,13.6s						
SSE				LR	LR		
	comp=Z,5µm,14.7s						
JGM	**Miyama**	**8.34**	**38**	P	**Pn**	**04 05 24.5**	**+0.8**
KSRS	**Korea Array**	**8.40**	**346**	Pn	**Pn**	**04 05 27.9**	**+3.3**
	comp=Z,2.1nm,0.3s,baz=158,slow=15,SNR=54						
KSRS				LR	LR	04 08 56.5	
	comp=Z,4µm,19.5s,baz=160,slow=40						
KSRS	**Korea Array**	**8.40**	**346**	P	**Pn**	**04 05 27.9**	**+3.3**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSRS				MLR	MLR		
	comp=Z,4µm,19.5s						
INCN	**Inchon**	**8.75**	**340**	*ePn*	**Pn**	**04 05 34.5**	**+5.2**
JHJ	**Hachijo jima 2**	**8.91**	**62**	LR	LR	04 08 39.9	
	comp=Z,2µm,19.8s,baz=221,slow=36						
TATO	**Taipei**	**9.01**	**244**	*ePn*	**Pn**	**04 05 40.2**	**+7.2**
JGN	**Niukaw**	**9.05**	**38**	P	**Pn**	**04 05 33.9**	**+0.4**
YHNB	**Yeheng**	**9.26**	**242**	*ePn*	**Pn**	**04 05 37.5**	**+1.1**
	comp=Z,83nm,0.8s						
JOD2	**Odawara 2**	**9.47**	**49**	P	**Pn**	**04 05 40.3**	**+1.0**
MAJO	**Matsushiro**	**9.77**	**40**	*eP*	**Pn**	**04 05 44.3**	**+0.9**
MAT	**Matsushiro**	**9.77**	**40**	P	**Pn**	**04 05 43.1**	**-0.3**
MAT				S	**Sn**	**04 07 34.0**	**+2.1**
SSLB	**Suanglung**	**10.06**	**239**	*ePn*	**Pn**	**04 05 49.4**	**+2.0**
	comp=Z,161nm,1.0s						
NJ2	**Nanjing**	**10.30**	**288**	*eP*	**Pn**	**04 05 53.7**	**+3.0**
NJ2				PP		04 06 02.7	
NJ2				sP		04 06 08.3	
NJ2				S	**Sn**	**04 07 47.0**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,80nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,410nm,3.6s						
NJ2				LR	LR		
	comp=N,2µm,9.8s						
NJ2				LR	LR		
	comp=E,4µm,12.6s						
NJ2				LR	LR		
	comp=Z,6µm,14.2s						
TWG	**Pinlang**	**10.56**	**235**	*ePn*	**Pn**	**04 05 56.9**	**+2.7**
	comp=Z,28nm,0.6s						
QZH	**Quanzhou**	**11.36**	**250**	P	**Pn**	**04 06 06.1**	**+1.0**
QZH				LR	LR		
	comp=N,3µm,7.6s						
QZH				LR	LR		
	comp=E,1µm,7.3s						
QZH				LR	LR		
	comp=Z,4µm,19.2s						
DL2	**Dalian**	**12.02**	**325**	P	**Pn**	**04 06 17.0**	**+2.9**
DL2				sP		04 06 29.7	
DL2				S	**Sn**	**04 08 31.2**	**+4.3**
DL2				pmax	pmax		
	comp=Z,40nm,0.7s						
DL2				LR	LR		
	comp=N,3µm,14.6s						
DL2				LR	LR		
	comp=E,2µm,13.9s						
DL2				LR	LR		
	comp=Z,4µm,14.1s						
TIA	**Tai'an**	**13.11**	**305**	*eP*	**Pn**	**04 06 31.5**	**+2.4**
TIA				LR	LR		
	comp=N,2µm,12.0s						
TIA				LR	LR		
	comp=E,2µm,12.0s						
SNY	**Shenyang**	**13.67**	**338**	⇓P	**Pn**	**04 06 39.8**	**+3.1**
SNY				S	**Sn**	**04 09 21.2**	**+14**
SNY				pmax	pmax		
	comp=Z,30nm,2.5s						
SNY				pmax	pmax		
	comp=Z,380nm,4.3s						
SNY				LR	LR		
	comp=N,5µm,13.2s						
SNY				LR	LR		
	comp=E,3µm,12.6s						
SNY				LR	LR		
	comp=Z,7µm,14.4s						
WHN	**Wuhan**	**13.96**	**279**	P	**Pn**	**04 06 43.3**	**+2.6**
WHN				S	**Sn**	**04 09 25.5**	**+11**
WHN				LR	LR		
	comp=N,2µm,11.6s						
WHN				LR	LR		
	comp=E,9µm,19.2s						
WHN				LR	LR		
	comp=Z,6µm,15.4s						
WHN	**Wuhan**	**13.96**	**279**	P	**Pn**	**04 06 45.0**	**+4.3**
WHN				pP		04 06 53.0	
WHN				S	**Sn**	**04 09 26.9**	**+12**
WHN				LR	LR		
	comp=N,2µm,11.6s						
WHN				LR	LR		
	comp=E,9µm,19.4s						
WHN				LR	LR		
	comp=Z,6µm,15.3s						
CN2	**Changchun**	**15.01**	**346**	*eP*	**Pn**	**04 06 56.8**	**+2.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,5µm,14.0s						
CN2				LR	LR		
	comp=E,700nm,14.0s						
CN2				LR	LR		
	comp=Z,5µm,15.0s						
MDJ	**Mudanjiang**	**15.31**	**358**	P	**Pn**	**04 06 59.6**	**+0.9**
MDJ				S	**Sn**	**04 09 49.6**	**-13**
MDJ				PcP	PcP	04 11 59.8	-2.4
MDJ				ScS	ScS	04 19 10.7	-0.8
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,370nm,5.9s						
MDJ				LR	LR		
	comp=N,1µm,20.6s						
MDJ				LR	LR		
	comp=E,1µm,15.2s						
MDJ				LR	LR		
	comp=Z,2µm,20.6s						
BJT	**Baijiatuao**	**15.83**	**316**	*ePn*	**Pn**	**04 07 08.0**	**+2.5**
	comp=Z,90nm,0.6s						
BJT	**Baijiatuao**	**15.83**	**316**	*eP*	**Pn**	**04 07 08.0**	**+2.5**
BJT				pmax	pmax		
	comp=Z,90nm,0.6s						
BJI	**Beijing**	**15.84**	**316**	P	**Pn**	**04 07 08.1**	**+2.5**
BJI				S	**S**	**04 10 01.8**	**-12**
BJI				pmax	pmax		
	comp=Z,82nm,0.7s						
BJI				pmax	pmax		
	comp=Z,500nm,4.0s						
BJI				LR	LR		
	comp=N,6µm,15.3s						
BJI				LR	LR		
	comp=E,3µm,15.7s						
BJI				LR	LR		
	comp=Z,2µm,22.1s						
ERM	**Erimo**	**16.38**	**36**	*deP*	**Pn**	**04 07 11.8**	**-0.6**
ERM				pmax	pmax		
	comp=Z,48nm,1.2s						
GZH	**Guangzhou**	**16.48**	**252**	P	**Pn**	**04 07 11.4**	**-2.5**
GZH				S	**S**	**04 10 13.1**	**-14**
GZH				LR	LR		
	comp=N,2µm,15.0s						
GZH				LR	LR		
	comp=E,2µm,16.3s						
ENH	**Enshi**	**18.16**	**278**	*eP*	**Pn**	**04 07 35.9**	**+1.1**
	comp=E,120nm,0.6s						
XAN	**Xi'an**	**18.86**	**290**	P	**Pn**	**04 07 43.1**	**-0.1**
XAN				pP	pP	04 07 52.5	+0.7
XAN				sP	sP	04 07 58.7	+2.2
XAN				PP		04 08 00.1	
XAN				S	**S**	**04 11 07.8**	**-6.7**
XAN				pmax	pmax		
	comp=Z,40nm,0.6s						
XAN				pmax	pmax		
	comp=Z,220nm,11.2s						
XAN				LR	LR		
	comp=N,1µm,16.0s						
XAN				LR	LR		
	comp=E,390nm,17.0s						
XAN				LR	LR		
	comp=Z,600nm,12.5s						
HHC	**Hu-ho-hao-te**	**19.20**	**312**	*eP*	**Pn**	**04 07 46.9**	**-0.3**
HHC				pP	pP	04 07 56.9	+1.4
HHC				sP	sP

HABR pmax pmax
comp=E,24nm,0.9s
HABR MLR MLR
comp=Z,2μm,16.0s
KLR Kul'dur 19.94 3 *e*P **Pn 04 07 48.5 -7.4**
KLR MLR MLR
comp=N,1μm,13.0s
KLR MLR MLR
comp=Z,4μm,13.0s
BTO Baotou 20.10 310 *e*P **P 04 07 54.5 -1.4**
YSS Yuzh-Sakhalins 20.10 25 *e*Pn **P 04 07 57.2 +1.4**
comp=Z,105nm,1.1s
YSS Yuzh-Sakhalins 20.10 25 *αe*P **P 04 07 56.4 +0.6**
YSS pmax pmax
comp=N,80nm,1.1s
YSS pmax pmax
comp=Z,90nm,1.1s
YSS pmax pmax
comp=E,30nm,1.0s
YSS MLR MLR
comp=N,600nm,15.0s
YSS MLR MLR
comp=Z,1μm,15.0s,MS4.3
GUMO Guam 20.60 136 *e*P **P 04 08 01.6 +0.2**
comp=Z,328nm,1.2s
GUMO Guam 20.60 136 P **P 04 08 01.8 +0.4**
comp=Z,269nm,1.1s,baz=235,slow=3.2,SNR=8.3
GUMO LR LR 04 14 42.1
comp=Z,779nm,18.2s,MS4.1,baz=312,slow=33
GUMO Guam 20.60 136 P **P 04 08 01.8 +0.3**
GUMO pmax pmax
comp=Z,269nm,1.1s
GUMO MLR MLR
comp=Z,779nm,18.2s,MS4.1
GUMO Guam 20.60 136 P **P 04 08 03.1 +1.6**
comp=Z,301nm,1.3s
GYA Guiyang 21.15 268 ⇑ *i*P **P 04 08 08.7 +1.4**
GYA pP 04 08 21.0
GYA sP sP 04 08 28.4 +6.9
GYA S **S 04 11 55.2 -5.4**
GYA sS sS 04 12 16.0 +0.2
GYA SS 04 12 31.9
GYA ScP ScP 04 15 44.8 -1.5
GYA pmax pmax
comp=Z,40nm,0.6s,mb4.9
GYA pmax pmax
comp=Z,130nm,4.5s
GYA LR LR
comp=N,1μm,12.5s,MS4.6
GYA LR LR
comp=E,890nm,14.3s,MS4.6
GYA LR LR
comp=Z,1μm,12.9s,MS4.5
QIZ Qiongzhong 21.31 246 P **P 04 08 10.2 +1.1**
QIZ pP 04 08 23.0
QIZ sP sP 04 08 29.3 +6.9
QIZ S **S 04 12 05.9 +2.0**
QIZ sS sS 04 12 24.1 +5.0
QIZ pmax pmax
comp=Z,59nm,0.9s,mb4.9
QIZ pmax pmax
comp=Z,190nm,9.4s
QIZ LR LR
comp=N,1μm,18.0s,MS4.4
QIZ LR LR
comp=E,770nm,18.9s,MS4.4
QIZ LR LR
comp=Z,1μm,25.5s
QIZ Qiongzhong 21.31 246 *e*P **P 04 08 10.5 +1.4**
comp=Z,43nm,0.8s,mb4.8
HIA Hailar 21.54 341 *e*P **P 04 08 11.3 0.0**
comp=Z,22nm,0.6s,mb4.8
HIA Hailar 21.54 341 *e*P **P 04 08 11.3 0.0**
HIA pmax pmax
comp=Z,22nm,0.6s
DAV Davao City (W) 22.56 193 LR LR 04 16 15.1
comp=Z,683nm,19.9s,MS4.1,baz=6.8,slow=34
CD2 Chengdu 23.07 281 ⇓ P **P 04 08 28.2 +0.4**
CD2 pP 04 08 39.6
CD2 sP sP 04 08 45.2 +3.1
CD2 PP 04 08 59.2
CD2 S **S 04 12 31.4 -4.8**
CD2 sS sS 04 12 50.6 -2.6
CD2 SS 04 13 17.8
CD2 pmax pmax
comp=Z,230nm,0.6s,mb5.8
CD2 pmax pmax
comp=Z,330nm,6.8s
CD2 LR LR
comp=N,3μm,18.6s
CD2 LR LR
comp=E,3μm,13.2s
CD2 LR LR
comp=Z,3μm,13.2s
LZH Lanzhou 23.30 294 ⇑ P **P 04 08 29.5 -0.6**
LZH pP 04 08 41.0
LZH sP sP 04 08 46.5 +2.1
LZH PP 04 09 01.6
LZH S **S 04 12 35.0 -4.8**
LZH pmax pmax
comp=Z,59nm,1.0s,mb5.0
LZH pmax pmax
comp=Z,380nm,4.1s
LZH LR LR
comp=E,3μm,14.5s
LZH LR LR
comp=Z,4μm,15.2s,MS5.0
KMI Kunming 24.91 267 P **P 04 08 45.3 +0.3**
KMI pP 04 08 56.2
KMI sP sP 04 09 01.9 +2.2
KMI PP 04 09 25.3
KMI S **S 04 13 06.9 +1.0**
KMI sS sS 04 13 26.5 +3.5
KMI pmax pmax
comp=Z,150nm,0.7s,mb5.6
KMI pmax pmax
comp=Z,130nm,3.3s
KMI LR LR
comp=N,880nm,15.2s,MS4.9
KMI LR LR
comp=E,2μm,13.0s,MS4.9
KMI LR LR
comp=Z,3μm,13.3s,MS5.0
ULN Ulaanbaatar 25.85 322 *e*P **P 04 08 52.3 -1.0**
comp=Z,33nm,0.7s,mb5.0
ULN Ulaanbaatar 25.85 322 *e*P **P 04 08 52.3 -1.0**
ULN pmax pmax
comp=Z,33nm,0.7s,mb5.0
ULN Ulaanbaatar 25.85 322 P **P 04 08 51.9 -1.4**
comp=Z,463nmcomp=Z,48nm,0.8s,mb5.1
ULN Ulaanbaatar 25.85 322 P **P 04 08 53.3 0.0**
SNR=15
SONM Songino Array 26.18 322 P **P 04 08 55.4 -0.9**
comp=Z,23nm,0.7s,mb4.8,baz=140,slow=9.4,SNR=60
SONM PcP PcP 04 12 23.9 +1.3
comp=Z,1.2nm,0.5s,baz=162,slow=5.2,SNR=5.1
SONM ScP ScP 04 16 04.4 +4.9
comp=Z,0.7nm,0.9s,baz=129,slow=3.9,SNR=3.0
SONM LR LR 04 20 40.7
comp=Z,4μm,18.1s,MS5.0,baz=140,slow=40
MYLDM Lahad Datu 26.48 207 P **P 04 09 01.8 +2.5**
comp=Z,46nm,1.1s,mb4.9
KKM Kota Kinabalu 26.71 213 *e*P **P 04 09 04.3 +2.8**
comp=Z,54nm,1.6s,mb4.8
KKM Kota Kinabalu 26.71 213 P **P 04 09 04.5 +3.1**
comp=Z,497nmcomp=Z,17nm,1.2s,mb4.4
GTA Gaotai 27.07 300 *e*P **P 04 09 04.6 +0.2**
GTA pP pP 04 09 18.7 +4.0
GTA sP sP 04 09 26.9 +7.7
GTA pmax pmax
comp=Z,25nm,0.9s,mb4.7
GTA pmax pmax
comp=Z,240nm,8.9s
GTA LR LR
comp=N,2μm,16.7s,MS4.9
GTA LR LR
comp=E,3μm,17.0s,MS4.9
GTA LR LR
comp=Z,3μm,17.2s,MS5.0
TNTI Ternate 28.50 186 P **P 04 09 22.0 +4.6**
comp=Z,65nm,0.8s,mb5.4
ZAK Zakamensk 29.34 323 *e*P **P 04 09 22.6 -1.9**
ZAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
TLY Talaya 29.93 326 P **P 04 09 30.9 +1.1**
comp=Z,72nm,0.7s,mb5.5,SNR=5.7
TLY Talaya 29.93 326 *e*P **P 04 09 29.8 0.0**
comp=Z,19nm,1.1s,mb4.7
TLY Talaya 29.93 326 *e*P **P 04 09 29.8 0.0**
TLY pmax pmax
comp=Z,19nm,1.1s,mb4.7
TLY Talaya 29.93 326 P **P 04 09 30.9 +1.1**
SNR=12
CHTO Chiang Mai 30.45 257 *e*P **P 04 09 35.0 +0.3**
comp=Z,11nm,0.8s,mb4.6
CHTO *e*PcP PcP 04 12 34.4 +0.8
CHTO Chiang Mai 30.45 257 *e*P **P 04 09 35.0 +0.2**
CHTO *e* 04 12 34.4
CHTO pmax pmax
comp=Z,11nm,0.8s,mb4.6
CM31 Chiang Mai Arr 30.61 256 *e*P **P 04 09 36.9 +0.7**
CMAR Chiang Mai Arr 30.61 256 P **P 04 09 35.2 -0.9**
comp=Z,3.5nm,0.5s,mb4.5,baz=56,slow=6.8,SNR=15
CMAR PcP PcP 04 12 35.9 +1.8
comp=Z,3.1nm,0.6s,baz=50,slow=1.3,SNR=10
CMAR LR LR 04 22 41.9
comp=Z,955nm,21.1s,MS4.4,baz=70,slow=38
CMAR Chiang Mai Arr 30.61 256 P **P 04 09 35.3 -0.8**
CMAR 04 12 35.9
CMAR pmax pmax
comp=Z,4.0nm,0.5s
CMAR MLR MLR
comp=Z,955nm,21.1s
PET Petropavlovsk 31.50 33 *e*P **P 04 09 53.2 +10**
PET *e* 04 14 49.8
PET MLR MLR
comp=Z,900nm,19.0s,MS4.5
SBUM Sibu 31.79 216 P **P 04 09 50.3 +3.8**
comp=Z,9.2nm,0.9s,mb4.6
YAK Yakutsk 32.75 359 *e*P **P 04 09 54.8 +0.4**
YAK *e**PP pP 04 10 04.7 -0.1
YAK *e* 04 11 02.1
YAK *e* 04 12 41.7
YAK *e*S **S 04 15 07.3 -1.1**
YAK *e* 04 20 24.2
YAK pmax pmax
comp=Z,23nm,0.8s,mb5.2
YAK pmax pmax
comp=N,13nm,1.0s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,14nm,0.6s,mb5.1
YAK smax
comp=N,70nm,2.8s
YAK smax
comp=E,51nm,2.3s
YAK MLR MLR
comp=Z,835nm,15.0s,MS4.6
YAK MLR MLR
comp=N,779nm,17.0s,MS4.5
YAK MLR MLR
comp=E,385nm,18.0s,MS4.5
KSM Kuching 33.63 218 *e*P **P 04 10 04.4 +1.8**
comp=E,21nm,1.0s,mb5.0
KSM Kuching 33.63 218 P **P 04 10 04.4 +1.8**
comp=E,22nm,0.9s,mb5.1
LSA Lhasa 34.04 281 P **P 04 10 07.5 +1.4**
LSA sP sP 04 10 22.4 +1.4
LSA pmax pmax
comp=Z,30nm,1.0s,mb5.2
LSA LR LR
comp=N,800nm,21.0s,MS4.6
LSA LR LR
comp=E,1μm,22.0s,MS4.6
LSA LR LR
comp=Z,1μm,23.0s,MS4.6
LSA Lhasa 34.04 281 *e*P **P 04 10 07.5 +1.4**
comp=Z,37nm,1.0s,mb5.3
LSA Lhasa 34.04 281 *e*P **P 04 10 07.5 +1.4**
LSA pmax pmax
comp=Z,37nm,1.0s,mb5.3
SHL Shillong 34.27 273 *e*PKP **P 04 10 07.5 -0.6**
SEY Seymchan 36.55 17 ⇑ *e*P **P 04 10 27.7 +0.4**
WMQ Urumqi 36.81 305 P **P 04 10 31.4 +1.7**
WMQ pP pP 04 10 43.6 +3.4
WMQ sP sP 04 10 48.9 +4.2
WMQ PP PP 04 11 57.2 +3.3
WMQ PcP PcP 04 12 53.8 +2.6
WMQ S **S 04 16 11.1 -0.3**
WMQ sS sS 04 16 31.4 +2.6
WMQ SS SS 04 18 40.0 -13
WMQ ScS ScS 04 20 40.8 -1.3
WMQ pmax pmax
comp=Z,24nm,1.4s,mb4.8
WMQ pmax pmax
comp=Z,160nm,5.2s
WMQ LR LR
comp=N,980nm,20.0s,MS4.7
WMQ LR LR
comp=E,680nm,22.0s,MS4.7
WMQ LR LR
comp=Z,980nm,21.4s,MS4.6
KULM Kulim 36.87 235 *e*P **P 04 10 31.3 +0.8**
comp=Z,23nm,0.9s,mb5.0
IPM Ipoh 37.17 234 P **P 04 10 33.1 0.0**
comp=Z,34nm,0.7s,mb5.3
MYKOM Kota Tinggi 37.22 228 P **P 04 10 35.0 +1.5**
TAPN Taplejung 37.47 278 *e*P **P 04 10 36.1 +0.6**
comp=Z,39nm,0.6s,mb5.4
ODAN Odare 37.86 277 *e*P **P 04 10 39.1 +0.3**
comp=Z,139nm,0.7s,mb5.8
RAMN Ramite 38.52 277 *e*P **P 04 10 44.3 -0.1**
comp=Z,38nm,0.5s,mb5.4
JIRN Jiri 38.71 279 *e*P **P 04 10 46.8 +0.8**
GUN Gumba 38.92 279 *e*P **P 04 10 48.6 +0.9**
comp=Z,173nm,0.5s,mb6.0
PKI Pulchoki 39.40 279 *e*P **P 04 10 52.1 +0.3**
comp=Z,180nm,0.8s,mb5.9
PKIN Phulchoki 39.41 279 *e*P **P 04 10 52.0 +0.1**
comp=Z,125nm,0.8s,mb5.7
KKN Kakani 39.47 279 *e*P **P 04 10 52.6 +0.3**
comp=Z,144nm,0.6s,mb5.9
DMN Daman 39.66 279 *e*P **P 04 10 54.0 +0.1**
comp=Z,84nm,0.7s,mb5.6
PSI Prapat 39.83 234 P **P 04 10 56.3 +0.9**
comp=Z,13nm,0.7s,mb4.8,baz=346,slow=4.3,SNR=6.3
PSI LR LR 04 29 14.4
comp=Z,226nm,19.9s,MS4.0,baz=29,slow=39
PSI Prapat 39.83 234 P **P 04 10 56.3 +0.8**
PSI pmax pmax
comp=Z,13nm,0.7s,mb4.8
PSI MLR MLR
comp=Z,226nm,19.9s,MS4.0
GKN Gorkha 39.97 280 *e*P **P 04 10 56.8 +0.3**
comp=Z,128nm,0.8s,mb5.7
KOLN Koldanda 40.92 280 *e*P **P 04 11 04.7 +0.4**
comp=Z,106nm,0.8s,mb5.5
MK31 Makanchi Array 41.01 309 *e*P **P 04 11 04.9 0.0**
MK31 Makanchi Array 41.01 309 *e*P **P 04 11 05.1 +0.2**
MK31 pmax pmax
comp=Z,13nm,0.5s,mb4.8
MKAR Makanchi Array 41.01 309 P **P 04 11 03.1 -1.8**
comp=Z,19nm,0.5s,mb5.0,baz=92,slow=11,SNR=178
MKAR PcP PcP 04 13 04.3 -0.1
comp=Z,5.5nm,0.7s,baz=79,slow=6.3,SNR=5.0
MKAR ScP ScP 04 16 52.8 +1.5
comp=Z,2.4nm,0.9s,baz=123,slow=4.5,SNR=6.1
MKAR LR LR 04 29 59.0
comp=Z,849nm,18.6s,MS4.6,baz=87,slow=39
MKAR Makanchi Array 41.01 309 *i*P **P 04 11 02.4 -2.5**
MKAR pmax pmax
comp=Z,19nm,0.5s
ZAA0 Zalesovo Array 41.05 320 *e*P **P 04 11 04.3 -0.8**
ZALV Zalesovo Beam 41.05 320 P **P 04 11 03.2 -1.9**
comp=Z,30nm,0.6s,mb5.1,baz=106,slow=9.0,SNR=105
ZALV PcP PcP 04 13 04.1 -0.2
comp=Z,5.3nm,0.6s,baz=126,slow=2.0,SNR=5.4
ZALV ScP ScP 04 16 52.5 +1.2
comp=Z,0.7nm,0.5s,baz=133,slow=6.1,SNR=3.5
ZALV LR LR 04 30 10.8
comp=Z,1μm,18.2s,MS4.9,baz=283,slow=39
NVS Novosibirsk 42.21 321 *e*P **P 04 11 12.9 -1.6**
NVS pmax pmax
comp=N,10.0nm,0.9s
NVS pmax pmax
comp=E,21nm,0.9s
NVS pmax pmax
comp=Z,20nm,0.9s,mb4.8
JOSI Joshimath 43.76 285 *e*PKP **P 04 11 27.6 +0.1**
KURK Kurchatov 43.99 314 P **P 04 11 29.6 +0.6**
comp=Z,2μm,0.5s,SNR=44
KURK Kurchatov 43.99 314 *e*P **P 04 11 27.1 -1.9**
comp=Z,144nm,0.5s,mb6.0
KURK Kurchatov 43.99 314 *c i*P **P 04 11 27.3 -1.7**
KURK pmax pmax
comp=Z,193nm,0.8s,mb5.9
KURK Kurchatov 43.99 314 P **P 04 11 28.9 -0.1**
SNR=42
VIS Vishakhapatnam 44.39 266 *e*PKP **P 04 11 32.5 -0.2**
KLP Kalpa 44.67 286 *e*PKP **P 04 11 35.1 +0.4**
KLP AMb AMB 04 11 35.8
comp=Z,45nm,0.6s,mb5.5
COEN Coen 44.73 162 *e*P **P 04 11 35.7 +0.5**
ULHL Ulahol 45.09 302 P **P 04 11 38.3 +0.4**
SNR=20
KSH Kashi 45.43 298 P **P 04 11 44.2 +3.5**
KSH *e*pP pP 04 11 56.2 +4.8
KSH *e*sP sP 04 12 01.7 +6.0
KSH *e*PcP PcP 04 13 22.2 +2.8
KSH *e*PP PP 04 13 31.6 +4.3
KSH *e*ScP ScP 04 17 09.9 +0.6
KSH *e*PcS PcS 04 17 15.1 +1.8
KSH *e*S **S 04 18 22.0 +2.4**
KSH *e*ScS ScS 04 21 33.3 -1.0
KSH *e*SS SS 04 21 38.4 -5.1
KSH pmax pmax
comp=Z,11nm,0.7s,mb4.8
KSH pmax pmax
comp=Z,82nm,6.6s
KSH LR LR
comp=N,880nm,17.8s,MS5.0
KSH LR LR
comp=E,1μm,17.9s,MS5.0
KSH LR LR
comp=Z,1μm,14.8s,MS4.9
TKM2 Tokmak 2 45.55 303 P **P 04 11 41.9 +0.4**
SNR=54
TKM2 Tokmak 2 45.55 303 *e*P **P 04 11 41.9 +0.3**
comp=Z,23nm,0.6s,mb5.3
TKM2 Tokmak 2 45.55 303 *e*P **P 04 11 41.9 +0.4**
TKM2 pmax pmax
comp=Z,23nm,0.6s,mb5.3
SDNR Sundarnagar 45.74 287 *e*PKP **P 04 11 42.5 -0.8**
KZA Kyzart 45.83 302 P **P 04 11 45.3 +1.5**
SNR=24
AGRA Agra 45.91 281 *e*PKP **P 04 11 43.5 -1.1**
AGRA AMb AMB 04 11 45.6
comp=Z,52nm,0.5s,mb5.7
NDI New Delhi 46.17 283 *e*PKP **P 04 11 46.2 -0.4**
NDI AMb AMB 04 11 46.8
comp=Z,103nm,1.8s,mb5.5
FRU Bishkek 46.27 303 ⇓ *i*P **P 04 11 47.0 -0.2**
FRU pmax pmax
comp=Z,30nm,1.2s,mb5.1
AYAN Aya Nagar 46.29 283 *e*PKP **P 04 11 47.3 -0.3**
AYAN AMb AMB 04 11 48.0
comp=Z,64nm,0.8s,mb5.6
USP Ospenovka 46.34 303 P **P 04 11 48.2 +0.4**
SNR=16
AAK Ala-Archa 46.37 302 P **P 04 11 49.0 +0.9**
SNR=5.1
AAK Ala-Archa 46.37 302 *e*P **P 04 11 48.6 +0.6**
comp=Z,10nm,0.6s,mb4.9
AAK Ala-Archa 46.37 302 LR LR 04 33 50.0
comp=Z,1μm,18.7s,MS4.9,baz=79,slow=40
AAK Ala-Archa 46.37 302 *e*P **P 04 11 48.6 +0.6**
AAK pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
UCH Uchtor 46.37 302 P **P 04 11 49.8 +1.7**
SNR=10
UCH Uchtor 46.37 302 *e*P **P 04 11 49.6 +1.6**
comp=Z,15nm,0.9s,mb4.9
SONA Sohna 46.39 282 *e*PKP **P 04 11 48.2 -0.2**
SONA AMb AMB 04 11 49.0
comp=Z,76nm,0.8s,mb5.7
THN Thein Dam 46.60 288 *ex* **P 04 11 47.1 -2.9**
NGP Nagpur 46.84 272 *e*PKP **P 04 11 50.5 -1.4**
NGP AMb AMB 04 11 52.8
comp=Z,48nm,1.0s,mb5.4
EKS2 Erkin-Say 46.90 302 P **P 04 11 52.7 +0.5**
SNR=12
EKS2 Erkin-Say 46.90 302 *e*P **P 04 11 52.3 +0.2**
comp=Z,19nm,1.2s,mb4.9
KUDL Kundal 46.92 282 *e*PKP **P 04 11 51.5 -1.0**
KUDL AMb AMB 04 11 52.3
comp=Z,83nm,1.1s,mb5.6
AML Almayashu 46.99 302 P **P 04 11 54.3 +1.4**
SNR=14
AML Almayashu 46.99 302 *e*P **P 04 11 53.8 +0.9**
comp=Z,6.5nm,0.6s,mb4.7
FITZ Fitzroy Crossi 47.34 186 *e*P **P 04 11 56.8 +1.1**
comp=Z,22nm,0.8s,mb5.2
FITZ Fitzroy Crossi 47.34 186 *e*P **P 04 11 56.0 +0.3**
comp=Z,19nm,1.0s,mb5.0
KHET Khetri 47.52 283 *e*PKP **P 04 11 57.0 -0.3**
KHET AMb AMB 04 11 58.5
comp=Z,77nm,0.9s,mb5.7
BHPL Bhopal 47.54 276 *e*PKP **P 04 11 56.8 -0.6**
HYB Hyderabad 48.68 268 *i*P **P 04 12 07.0 +0.7**
AKL Akola 48.77 273 *e*PKP **P 04 12 07.3 +0.4**
AKL AMb AMB 04 12 09.2
comp=Z,76nm,1.2s,mb5.6
VOSK Vostochnaya 48.94 316 P **P 04 12 07.0 -0.8**
VOSK pmax pmax
comp=Z,50nm,0.7s,mb5.7
AJM Ajmer 48.96 281 *e*PKP **P 04 12 07.8 -0.5**
WRAB Tennant Creek 49.08 175 P **P 04 12 09.3 +0.1**
comp=Z,272nm,0.8s,mb6.3,SNR=5.5
WRAB Tennant Creek 49.08 175 *e*P **P 04 12 09.1 -0.1**
comp=Z,43nm,0.9s,mb5.5
WRAB Tennant Creek 49.08 175 *e*P **P 04 12 09.1 -0.1**
WRAB pmax pmax
comp=Z,43nm,0.9s,mb5.5
WB2 Warramunga Arr 49.09 175 *e*P **P 04 12 09.1 -0.1**
KK31 Karatay Array 49.27 303 P **P 04 12 10.7 +0.3**
KK31 pmax pmax
comp=Z,17nm,0.6s,mb5.2
BVA0 Borovoye Array 49.32 316 *i*P **P 04 12 10.4 -0.3**
BVA0 pmax pmax
comp=Z,17nm,0.6s,mb5.2
BVAR Borovoye Array 49.32 316 P **P 04 12 09.4 -1.3**
comp=Z,80nm,0.6s,mb6.0,baz=99,slow=9.5,SNR=261
BVAR PcP PcP 04 13 32.9 0.0
comp=Z,14nm,0.6s,baz=102,slow=3.0,SNR=5.6
BVAR Borovoye Array 49.32 316 P **P 04 12 09.4 -1.3**
BVAR 04 13 32.9
BVAR pmax pmax
comp=Z,80nm,0.6s
BRVK Borovoye 49.39 316 P **P 04 12 11.0 -0.2**
comp=Z,1μm,0.6s,SNR=26
BRVK Borovoye 49.39 316 *e*P **P 04 12 10.1 -1.1**
comp=Z,135nm,0.6s,mb6.2
BRVK Borovoye 49.39 316 *c i*P **P 04 12 10.3 -0.9**
BRVK pmax pmax
comp=Z,201nm,1.0s,mb6.1
BRVK Borovoye 49.39 316 P **P 04 12 10.5 -0.7**
SNR=55
LATR Latur 50.03 270 *e*PKP **P 04 12 16.5 -0.1**
LATR AMb AMB 04 12 46.7
comp=Z,32nm,2.8s,mb4.9
ZRNK Zerenda 50.16 316 P **P 04 12 16.7 -0.3**
ZRNK pmax pmax
comp=Z,82nm,0.7s,mb5.9
CTA Charters Tower 51.42 161 *e*P **P 04 12 26.4 -0.5**
comp=Z,6.4nm,0.9s,mb4.5
CTA Charters Tower 51.42 161 P **P 04 12 26.5 -0.4**
comp=Z,4.9nm,0.9s,mb4.4,baz=333,slow=8.3,SNR=4.7
CTAO Charters Tower 51.42 161 *e*P **P 04 12 27.2 +0.4**
comp=Z,9.6nm,0.9s,mb4.7
CTAO Charters Tower 51.42 161 *e*P **P 04 12 27.2 +0.3**
CTAO pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
PALK Pallekele 51.54 255 *e*P **P 04 12 28.3 +0.3**
comp=Z,26nm,1.0s,mb5.1
PALK Pallekele 51.54 255 *e*P **P 04 12 28.3 +0.3**
PALK pmax pmax
comp=Z,26nm,1.0s,mb5.1
KBL Kabul 51.64 293 *e*P **P 04 12 29.4 +0.9**
comp=Z,35nm,0.7s,mb5.4
KBL *e*PcP PcP 04 13 42.3 +0.4
KBL Kabul 51.64 293 *e*P **P 04 12 29.4 +0.9**
KBL *e* 04 13 42.3
KBL pmax pmax
comp=Z,35nm,0.7s,mb5.4
POO Poona 52.35 272 *e*PKP **P 04 12 33.1 -0.9**
KAD Karad 52.54 270 *e*PKP **P 04 12 34.8 -0.7**
ASAR Alice Springs 52.76 176 P **P 04 12 37.2 +0.5**

comp=Z,4.5nm,0.9s,mb4.4,baz=2.3,slow=7.3,SNR=23
SVE Sverdlovsk 55.05 321 *e*P **P** **04 12 53.6 +0.4**
SVE *e* 04 14 01.8
SVE *e*PPP 04 16 14.8
SVE pmax pmax
comp=Z,85nm,0.9s,mb5.8
SVE MLR MLR
comp=Z,4μm,16.0s,MS5.6
CHGN Chignik 55.88 40 *e*P **P** **04 12 58.1 -1.0**
AB31 Akbulak array 55.99 312 *e*P **P** **04 12 59.7 -0.4**
AB31 pmax pmax
comp=Z,140nm,0.6s,mb6.2
ABKAR Akbulak array 55.99 312 *e*P **P** **04 12 59.8 -0.3**
comp=Z,137nm,0.6s,mb6.2
ARU Arti 56.21 321 P **P** **04 13 01.7 +0.2**
comp=Z,542nm,0.6s,SNR=16
ARU Arti 56.21 321 *e*P **P** **04 13 00.9 -0.6**
comp=Z,78nm,0.9s,mb5.7
ARU Arti 56.21 321 *c i*P **P** **04 13 00.9 -0.6**
ARU *e* 04 13 57.8
ARU *e* 04 15 03.3
ARU PPP 04 16 19.8
ARU S **S** **04 20 48.9 +0.5**
ARU SS SS 04 24 27.5 -7.3
ARU pmax pmax
comp=Z,91nm,1.0s,mb5.8
ARU MLR MLR
comp=Z,2μm,16.0s,MS5.3
SOKR Solikamsk 57.01 324 *d i*P **P** **04 13 07.2 +0.1**
SOKR pmax pmax
comp=Z,90nm,0.9s,mb5.8
SOKR MLR MLR
comp=Z,1μm,15.0s,MS5.0
AKTK Aktyubinsk 57.08 313 P **P** **04 13 07.8 0.0**
AKTO Aktyubinsk 57.08 313 P **P** **04 13 07.8 0.0**
comp=Z,51nm,0.8s,mb5.6,baz=91,slow=7.2,SNR=66
AKTO Aktyubinsk 57.08 313 P **P** **04 13 07.8 0.0**
AKTO pmax pmax
comp=Z,51nm,0.8s,mb5.6
IMYA Miami 58.32 297 *e*P **P** **04 13 16.2 -0.6**
RSO Redoubt South 58.59 34 *e*P **P** **04 13 19.0 +0.7**
OHAK Old Harbor 58.62 38 *e*P **P** **04 13 17.9 -0.6**
comp=Z,11nm,0.6s,mb5.1
PPLA Purkeypile 58.69 32 *e*P **P** **04 13 19.8 +0.9**
comp=Z,15nm,0.8s,mb5.1
KDAK Kodiak Island 58.94 38 P **P** **04 13 20.9 +0.2**
comp=Z,174nm,0.7s,mb6.2,SNR=8.3
KDAK Kodiak Island 58.94 38 P **P** **04 13 20.7 0.0**
comp=Z,17nm,0.6s,mb5.2,baz=279,slow=3.5,SNR=27
KDAK Kodiak Island 58.94 38 P **P** **04 13 20.7 0.0**
KDAK pmax pmax
comp=Z,17nm,0.6s,mb5.2
BPAW Bear Paw Mtn. 59.15 30 *e*P **P** **04 13 22.6 +0.5**
comp=Z,9.4nm,0.9s,mb4.8
COLD Coldfoot 59.28 26 *e*P **P** **04 13 23.6 +0.7**
comp=Z,14nm,1.1s,mb4.9
TRF Thorofare Moun 59.51 31 *e*P **P** **04 13 25.2 +0.7**
comp=Z,10.0nm,1.0s,mb4.8
FORT Forrest 59.77 182 *e*P **P** **04 13 28.0 +1.3**
comp=Z,19nm,0.6s,mb5.3
FORT Forrest 59.77 182 *e*P **P** **04 13 27.8 +1.1**
comp=Z,26nm,0.8s,mb5.3
MCK McKinley 60.08 30 *e*P **P** **04 13 28.4 -0.1**
comp=Z,49nm,1.2s,mb5.4
MCK McKinley 60.08 30 *e*P **P** **04 13 28.4 -0.1**
MCK pmax pmax
comp=Z,49nm,1.2s,mb5.4
PMR Palmer 60.23 33 *e*P **P** **04 13 29.4 -0.1**
comp=Z,18nm,0.9s,mb5.1
PMR Palmer 60.23 33 *e*P **P** **04 13 29.4 -0.1**
PMR pmax pmax
comp=Z,18nm,0.9s,mb5.1
SEW Seward 60.27 35 *e*P **P** **04 13 29.4 -0.4**
comp=Z,38nm,1.0s,mb5.4
COLA College 60.43 29 *e*P **P** **04 13 31.6 +0.7**
comp=Z,7.7nm,0.7s,mb4.8
COLA College 60.43 29 *e*P **P** **04 13 31.6 +0.8**
COLA pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
ILAR Eielson Array 60.85 29 P **P** **04 13 33.1 -0.5**
comp=Z,4.8nm,0.8s,mb4.7,baz=270,slow=5.5,SNR=55
ILAR LR LR 04 40 30.9
comp=Z,261nm,21.1s,MS4.3,baz=296,slow=37
ILAR Eielson Array 60.85 29 P **P** **04 13 33.2 -0.5**
ILAR pmax pmax
comp=Z,5.0nm,0.8s
ILAR MLR MLR
comp=Z,261nm,21.1s
PAX Paxson 61.73 31 *e*P **P** **04 13 40.0 +0.3**
comp=Z,9.7nm,1.0s,mb4.9
PAX Paxson 61.73 31 *e*P **P** **04 13 40.0 +0.3**
PAX pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
STKA Stephens Creek 61.76 169 *e*P **P** **04 13 40.4 +0.3**
comp=Z,2.8nm,0.6s,mb4.6
STKA Stephens Creek 61.76 169 *e*P **P** **04 13 40.2 +0.1**
comp=Z,0.6nm,0.7s,mb3.8
STKA Stephens Creek 61.76 169 P **P** **04 13 40.5 +0.3**
comp=Z,3.2nm,0.8s,mb4.5,baz=20,slow=9.9,SNR=11
STKA LR LR 04 36 32.7
comp=Z,267nm,22.0s,MS4.4,baz=17,slow=32
DIV Divide 61.90 33 *e*P **P** **04 13 41.3 +0.5**
comp=Z,27nm,0.8s,mb5.4
BMRM Bremner River 62.49 33 *e*P **P** **04 13 45.3 +0.5**
comp=Z,34nm,0.9s,mb5.5
MENT Mentasta 62.52 31 *e*P **P** **04 13 45.8 +0.8**
EGAK Eagle 63.27 29 *e*P **P** **04 13 50.1 +0.1**
comp=Z,22nm,1.3s,mb5.1
DAWY Dawson 64.18 29 *e*P **P** **04 13 56.3 +0.4**
KLMR Klimovskoe 65.29 327 *e*P **P** **04 14 01.3 -1.9**
KLMR pmax pmax
comp=Z,63nm,1.4s,mb5.5
KLMR MLR MLR
comp=Z,2μm,18.0s,MS5.3
PNL Peninsula 65.31 34 *e*P **P** **04 14 04.1 +0.7**
comp=Z,28nm,0.9s,mb5.3
MAK Makhachkala 65.79 307 *e*P **P** **04 14 04.4 -2.4**
MAK MLR MLR
comp=Z,859nm,18.0s,MS5.0
APA Apatity 65.88 335 ⇑ *i*P **P** **04 14 06.2 -0.7**
APA pmax pmax
comp=Z,20nm,0.8s,mb5.2
SPITS Spitsbergen Ar 66.24 348 P **P** **04 14 08.3 -0.8**
comp=Z,4.8nm,0.6s,mb4.7,baz=70,slow=2.3,SNR=28
SPITS Spitsbergen Ar 66.24 348 P **P** **04 14 08.3 -0.8**
SPITS pmax pmax
comp=Z,5.0nm,0.6s
KBS Kingsbay 66.60 349 *e*P **P** **04 14 11.1 -0.3**
KBS AMS AMS 04 44 07.5
comp=Z,363nm,23.2s,MS4.5
VRHR Novokhopersk 67.06 317 *e*P **P** **04 14 13.1 -1.7**
VRHR MLR MLR
comp=N,180nm,19.0s,MS4.5
VRHR MLR MLR
comp=E,170nm,19.0s,MS4.5
VRHR MLR MLR
comp=Z,270nm,19.0s,MS4.5
KEV Kevo 67.30 338 *e*P **P** **04 14 14.0 -1.9**
KEV pmax pmax
comp=Z,30nm,0.8s,mb5.4
KEV Kevo 67.30 338 *ep* **P** **04 14 14.0 -1.9**
comp=Z,30nm,0.8s,mb5.4
SKAG Skagway 67.35 33 *e*P **P** **04 14 17.8 +1.3**
comp=Z,33nm,1.1s,mb5.3
ARCES ARCESS Array B 67.87 338 P **P** **04 14 18.7 -0.8**
comp=Z,8.3nm,0.7s,mb4.8,baz=62,slow=8.4,SNR=18
ARCES ARCESS Array B 67.87 338 P **P** **04 14 18.7 -0.8**
ARCES pmax pmax
comp=Z,8.0nm,0.7s
SIT Sitka 68.17 36 *e*P **P** **04 14 22.8 +1.2**
comp=Z,46nm,1.2s,mb5.4
SIT Sitka 68.17 36 *e*P **P** **04 14 22.8 +1.2**
SIT pmax pmax
comp=Z,46nm,1.2s,mb5.4
JOF Joensuu 68.30 331 *e*P **P** **04 14 20.9 -1.5**
JOF pmax pmax
comp=Z,55nm,0.8s,mb5.6
JOF Joensuu 68.30 331 *ep* **P** **04 14 20.9 -1.5**
comp=Z,55nm,0.8s,mb5.6
ZEI Tsey 68.36 308 *e*P **P** **04 14 21.9 -1.2**
ZEI pmax pmax
comp=Z,43nm,0.6s,mb5.7
VSR Storozhevoye 68.48 317 *e*P **P** **04 14 22.5 -1.2**
VSR pmax pmax
comp=E,20nm,0.8s
VSR pmax pmax
comp=Z,30nm,0.8s,mb5.4
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR MLR MLR
comp=N,590nm,17.0s,MS5.2
VSR MLR MLR
comp=E,960nm,17.0s,MS5.2
VSR MLR MLR
comp=Z,2μm,17.0s,MS5.4
VORD Divnogorie 68.50 317 *e*P **P** **04 14 22.8 -1.0**
VORD pmax pmax
comp=N,7.0nm,0.5s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD pmax pmax
comp=Z,20nm,0.5s,mb5.4
VORD MLR MLR
comp=N,350nm,16.0s,MS5.1
VORD MLR MLR
comp=E,920nm,16.0s,MS5.1
VORD MLR MLR
comp=Z,1μm,16.0s,MS5.3
OBN Obninsk 68.59 322 *e*P **P** **04 14 23.8 -0.6**
comp=Z,20nm,0.6s,mb5.2
OBN Obninsk 68.59 322 *k e*P **P** **04 14 23.6 -0.7**
OBN *PP pP 04 14 35.1 -0.4
OBN 04 16 56.0
OBN S S 04 23 39.0 +15
OBN *e* 04 24 13.0
OBN pmax pmax
comp=Z,22nm,0.6s,mb5.3
OBN MLR MLR
comp=Z,1μm,18.0s,MS5.2
GNI Garni 68.69 305 *e*P **P** **04 14 26.4 +1.2**
comp=Z,31nm,0.8s,mb5.3
GNI Garni 68.69 305 P **P** **04 14 26.6 +1.4**
comp=Z,19nm,0.7s,mb5.2,baz=67,slow=1.9,SNR=12
GNI Garni 68.69 305 *c i*P **P** **04 14 26.2 +1.0**
GNI pmax pmax
comp=Z,24nm,0.7s
GNI Garni 68.69 305 P **P** **04 14 27.3 +2.1**
SNR=6.6
ISHB Shabestar 68.71 303 *e*P **P** **04 14 25.6 +0.2**
KIV Kislovodsk 68.78 309 P **P** **04 14 26.1 +0.4**
comp=Z,491nm,0.7s,mb6.5,SNR=9.5
KIV Kislovodsk 68.78 309 *e*P **P** **04 14 26.3 +0.7**
comp=Z,123nm,1.1s,mb5.8
KIV Kislovodsk 68.78 309 *α e*P **P** **04 14 26.2 +0.5**
KIV *e*PP pP 04 14 36.8 -0.1
KIV 04 14 51.0
KIV S S 04 23 26.0 -0.6
KIV PS 04 23 52.0
KIV *e* 04 24 21.2
KIV pmax pmax
comp=Z,123nm,1.2s,mb5.7
KIV Kislovodsk 68.78 309 P **P** **04 14 26.6 +0.9**
SNR=13
KTK1 Kautokeino 68.82 338 *e*P **P** **04 14 25.1 -0.5**
TRO Tromso 69.88 340 *e*P **P** **04 14 31.2 -0.8**
TRO AMS AMS 04 48 25.4
comp=Z,853nm,19.5s,MS5.0
DLBC Dease Lake 70.28 33 *e*P **P** **04 14 35.5 +0.8**
MIB Mutribah 70.57 294 *e*P **P** **04 14 36.5 -0.5**
MIB AMb AMB 04 14 37.8
comp=Z,120nm,0.8s,mb5.9
RDF Al-Radifah 70.75 293 *e*P **P** **04 14 37.9 -0.1**
RDF AMb AMB 04 14 39.2
comp=Z,119nm,0.8s,mb5.9
KAF Kangasniemi 70.75 331 *e*P **P** **04 14 34.7 -2.8**
KAF pmax pmax
comp=Z,24nm,1.0s,mb5.1
KAF Kangasniemi 70.75 331 *ep* **P** **04 14 34.7 -2.8**
comp=Z,24nm,1.0s,mb5.1,baz=61,slow=5.7
NAY Al-Naaiem 70.86 293 *e*P **P** **04 14 37.9 -0.9**
NAY AMb AMB 04 14 39.5
comp=Z,74nm,0.9s,mb5.6
SOC Sochi 70.91 310 *e*P **P** **04 14 37.3 -1.5**
SOC *e* 04 15 06.5
SOC *e* 04 17 24.1
SOC *e*PPP 04 18 57.4
SOC *e*S S 04 23 46.9 -4.8
SOC *e* 04 24 39.8
SOC *e*SS SS 04 28 19.2 -5.1
SOC pmax pmax
comp=Z,122nm,0.6s,mb6.0
FINES FINESS Array B 71.15 331 P **P** **04 14 38.8 -1.2**
comp=Z,15nm,0.5s,mb5.2,baz=68,slow=5.3,SNR=128
FINES LR LR 04 49 14.1
comp=Z,898nm,18.6s,MS5.1,baz=62,slow=39
FINES FINESS Array B 71.15 331 P **P** **04 14 38.8 -1.1**
FINES pmax pmax
comp=Z,15nm,0.5s
FINES MLR MLR
comp=Z,898nm,18.6s
ANN Anapa 71.95 312 *e*P **P** **04 14 44.0 -1.1**
ANN *e*PP pP 04 14 56.9 +0.6
ANN *e* 04 17 24.4
ANN *e*S S 04 24 04.5 +0.8
ANN pmax pmax
comp=Z,79nm,0.7s,mb5.8
ANN MLR MLR
comp=E,456nm,17.0s
ANN MLR MLR
comp=Z,731nm,17.0s,MS5.0
RES Resolute Bay 72.19 11 *e*P **P** **04 14 46.5 +0.5**
comp=Z,80nm,1.3s,mb5.5
RES Resolute Bay 72.19 11 *e*P **P** **04 14 46.5 +0.5**
RES pmax pmax
comp=Z,80nm,1.3s,mb5.5
VSU Vasula 72.20 328 *d i*P **P** **04 14 46.0 -0.3**
VSU pmax pmax
comp=Z,55nm,1.0s,mb5.4
DAG Danmarks Havn 72.48 353 ⇓ *e*P **P** **04 14 47.0 -0.7**
DAG pmax pmax
comp=Z,12nm,1.0s,mb4.8
DAG Danmarks Havn 72.48 353 ⇓ *i*P **P** **04 14 47.0 -0.7**
comp=Z,12nm,1.0s,mb4.8
NACGM Naroch 73.82 324 *e* **P** **04 14 53.0 -2.9**
SIM Simferopol' 74.04 313 *e*P **P** **04 14 56.5 -0.9**
SIM pmax pmax
comp=Z,30nm,0.8s,mb5.3
AKASG Malin Array Be 74.45 320 P **P** **04 14 58.7 -1.0**
comp=Z,42nm,0.5s,mb5.6,baz=59,slow=6.2,SNR=78
AKASG LR LR 04 50 25.4
comp=Z,1μm,18.2s,MS5.2,baz=50,slow=38
AKASG Malin Array Be 74.45 320 P **P** **04 14 58.7 -1.0**
AKASG pmax pmax
comp=Z,42nm,0.5s
AKASG MLR MLR
comp=Z,1μm,18.2s
KIEV Kiev 74.46 320 *e*P **P** **04 14 58.4 -1.4**
comp=Z,41nm,0.5s,mb5.6
KIEV Kiev 74.46 320 *e*P **P** **04 14 58.4 -1.4**
KIEV pmax pmax
comp=Z,41nm,0.5s,mb5.6
YKA Yellowknife Ar 74.96 26 P **P** **04 15 02.8 +0.4**
comp=Z,6.1nm,0.8s,mb4.6,baz=297,slow=5.4,SNR=17
NSS Namsos 74.98 337 *e*P **P** **04 15 00.0 -2.5**
JMIC Jan Mayen 75.87 347 AMS AMS 04 51 28.1
comp=Z,233nm,16.6s,MS4.6
JMIC Jan Mayen 75.87 347 P **P** **04 15 08.5 +1.0**
comp=Z,17nm,0.6s,mb5.2,baz=3.1,slow=3.4,SNR=3.3
JMIC LR LR 04 51 55.7
comp=Z,274nm,20.9s,MS4.5,baz=50,slow=38
SUW Suwalki 76.09 324 *e*P **P** **04 15 08.7 -0.3**
SUW LMZ 04 52 18.5
comp=Z,1μm,17.6s
BR131 Keskin Array S 76.66 308 *e*P **P** **04 15 12.4 -0.1**
comp=Z,30nm,0.6s,mb5.4
BRTR Keskin Array B 76.66 308 P **P** **04 15 12.1 -0.5**
comp=Z,35nm,0.6s,mb5.4,baz=100,slow=4.6,SNR=151
BRTR LR LR 04 56 17.0
comp=Z,252nm,18.1s,MS4.6,baz=231,slow=42
BRTR Keskin Array B 76.66 308 *c e*P **P** **04 15 12.6 0.0**
BRTR pmax pmax
comp=Z,35nm,0.6s
HFS Hagfors 77.00 333 P **P** **04 15 12.7 -1.4**
comp=Z,8.2nm,0.6s,mb4.8,baz=101,slow=6.2,SNR=60
HFS Hagfors 77.00 333 P **P** **04 15 12.7 -1.4**
HFS pmax pmax
comp=Z,8.0nm,0.6s
TLCR 77.28 315 ⇑ P **P** **04 15 16.9 +0.9**
TLCR 77.28 315 ⇑ *i*P **P** **04 15 16.9 +1.0**
NB2 NORSAR Subarra 77.41 334 P **P** **04 15 15.0 -1.4**
comp=Z,16nm,0.6s,mb5.1,baz=48,slow=5.6
NOA NORSAR Array B 77.41 334 P **P** **04 15 15.0 -1.4**
NOA PP PP 04 18 08.8 -1.7
NOA LR LR 04 54 03.4
NOA NORSAR Array B 77.41 334 P **P** **04 15 15.0 -1.4**
comp=Z,10nm,0.6s,mb4.9,baz=50,slow=5.7,SNR=56
NOA PP PP 04 18 08.8 -1.7
comp=Z,2.6nm,0.7s,baz=49,slow=8.2,SNR=5.3
NOA LR LR 04 54 03.4
comp=Z,383nm,18.0s,MS4.8,baz=35,slow=39
NOA NORSAR Array B 77.41 334 P **P** **04 15 15.0 -1.4**
NOA 04 18 08.8
NOA pmax pmax
comp=Z,10.0nm,0.6s
NOA pmax pmax
comp=Z,3.0nm,0.7s
NOA MLR MLR
comp=Z,383nm,18.0s
NAO01 NORSAR Array S 77.66 334 *e*P **P** **04 15 15.5 -2.2**
comp=Z,3.3nm,0.6s,mb4.4
CFR Carcaliu 77.70 315 ⇑ P **P** **04 15 18.6 +0.3**
CFR Carcaliu 77.70 315 ⇑ *i*P **P** **04 15 18.6 +0.3**
LVV L'vov 77.79 321 *e*P **P** **04 15 19.0 +0.3**
LVV MLR MLR
comp=N,200nm,16.0s,MS5.2
LVV MLR MLR
comp=Z,800nm,16.0s,MS5.1
LVV MLR MLR
comp=E,900nm,17.0s,MS5.2
TIRR Tirgusor 77.88 314 ⇑ *i*P **P** **04 15 19.8 +0.5**
TIRR Tirgusor 77.88 314 ⇑ *i*P **P** **04 15 19.8 +0.5**
TESR 77.95 317 ⇑ P **P** **04 15 19.5 -0.2**
TESR 77.95 317 ⇑ *i*P **P** **04 15 19.5 -0.2**
SUMG Summit 78.12 357 *e*P **P** **04 15 20.4 +0.3**
comp=E,25nm,0.6s,mb5.3
SUMG Summit 78.12 357 ⇑ *i*P **P** **04 15 20.9 +0.8**
SUMG
comp=Z,210nm,20.0s
VRI Vrincioaia 78.22 316 ⇓ P **P** **04 15 21.9 +0.7**
VRI Vrincioaia 78.22 316 ⇓ *i*P **P** **04 15 21.9 +0.7**
BUR08 Bucovina Ar. S 78.24 318 *e*P **P** **04 15 21.2 0.0**
BURAR Bucovina Array 78.24 318 ⇑ P **P** **04 15 21.2 0.0**
BURAR Bucovina Array 78.24 318 ⇑ *i*P **P** **04 15 21.2 -0.1**
PLOR Plostina 78.28 316 ⇓ P **P** **04 15 22.9 +1.4**
PLOR Plostina 78.28 316 ⇓ *i*P **P** **04 15 22.9 +1.4**
MMAI Mount Meron Ar 78.45 301 P **P** **04 15 23.5 +0.8**
comp=Z,7.7nm,0.6s,mb4.8,baz=55,slow=7.2,SNR=18
MMAI LR LR 04 55 40.3
comp=Z,280nm,19.1s,MS4.6,baz=25,slow=40
SCO Scoresbysund 78.56 351 *i*P **P** **04 15 26.0 +3.4**
SCO MLR MLR
comp=Z,110nm,19.0s,MS4.2
SCO Scoresbysund 78.56 351 *i*P **P** **04 15 26.0 +3.4**
SCO
comp=Z,110nm,19.0s
KWP Kalwaria Pacla 78.62 321 *e*P **P** **04 15 23.5 +0.2**
KWP *e*PcP PcP 04 15 28.9 -3.3
KWP LMZ 04 53 10.4
comp=Z,2μm,18.8s
MLR Muntele Rosu 78.89 316 ⇓ P **P** **04 15 25.1 +0.3**
MLR Muntele Rosu 78.89 316 ⇓ *i*P **P** **04 15 25.1 +0.2**
KONO Kongsberg 78.92 334 *e*P **P** **04 15 24.1 -0.6**
KONO AMS AMS 04 56 48.8
comp=Z,479nm,15.1s,MS5.0
CSS Prodhromos 79.07 304 *e*P **P** **04 15 24.8 -1.3**
comp=Z,31nm,0.6s,mb5.4
FOO Floro 79.29 337 *e*P **P** **04 15 19.2 -7.5**
UZH Uzhgorod 79.38 320 *e*P **P** **04 15 21.9 -5.6**
UZH *e* pP 04 15 30.0 -8.9
UZH *e* 04 15 37.3
UZH MLR MLR
comp=N,400nm,16.0s,MS5.2
UZH MLR MLR
comp=E,800nm,16.0s,MS5.2
UZH MLR MLR
comp=Z,400nm,16.0s,MS4.8
JCW Jim Creek 79.39 40 *e*P **P** **04 15 28.3 +0.8**
comp=Z,17nm,1.0s,mb4.9
BSD Bornholm Skovb 79.48 328 ⇑ *i*P **P** **04 15 26.7 -1.2**
BSD Bornholm Skovb 79.48 328 ⇑ *i*P **P** **04 15 26.7 -1.2**
TRPA Tarpa 79.51 320 ⇓ *i*P **P** **04 15 28.9 +0.7**
STHS Stebnicka Huta 79.54 321 *e*P **P** **04 15 29.1 +0.7**
comp=Z,11nm,1.2s,mb4.7
STHS Stebnicka Huta 79.54 321 *e*P **P** **04 15 29.1 +0.7**
STHS pmax pmax
comp=Z,11nm,1.2s,mb4.7
STHS Stebnicka Huta 79.54 321 *e*P **P** **04 15 29.1 +0.7**
ISP Isparta 79.70 308 ⇓ P **P** **04 15 29.4 -0.1**
ISP Isparta 79.70 308 ⇓ *i*P **P** **04 15 29.4 -0.1**
OJC Ojcow 79.88 322 *i*P **P** **04 15 30.2 0.0**
OJC *e*pP pP 04 15 37.1 -4.5
NIE Niedzica 80.05 321 *e*P **P** **04 15 31.6 +0.5**
DRGR 80.13 318 ⇓ P **P** **04 15 31.9 +0.3**
DRGR 80.13 318 ⇓ *i*P **P** **04 15 31.9 +0.3**
ETW Entiat 80.62 40 *e*P **P** **04 15 35.1 +0.9**
comp=Z,7.6nm,0.6s,mb4.8
B08A Colville Reser 80.76 39 ⇑ P **P** **04 15 35.1 +0.1**
baz=80
GZR Gura Zlata 80.84 317 ⇓ P **P** **04 15 36.5 +1.0**
GZR Gura Zlata 80.84 317 ⇓ *i*P **P** **04 15 36.5 +1.1**
OKC Ostrava-Krasne 80.97 323 *e*P **P** **04 15 35.9 -0.2**
OKC *e*S S 04 25 51.7 +9.4
OKC MLR MLR
comp=Z,900nm,17.1s,MS5.2
OKC Ostrava-Krasne 80.97 323 *e*P **P** **04 15 35.9 -0.2**
OKC *e*SKS 04 25 51.7
OKC AMS AMS 04 54 50.0
comp=Z,900nm,17.1s
EDM Edmonton 81.00 33 *e*P **P** **04 15 36.7 +0.5**
PSZ Piszkesteto 81.11 320 *e*P **P** **04 15 37.0 +0.2**
comp=Z,8.8nm,0.8s,mb4.7
PSZ Piszkesteto 81.11 320 ⇓ P **P** **04 15 37.4 +0.6**
PSZ Piszkesteto 81.11 320 ⇓ *i*P **P** **04 15 37.4 +0.6**
PSZ Piszkesteto 81.11 320 ⇑ *e*P **P** **04 15 36.6 -0.2**
MUD Monsted U'grnd 81.17 331 *i*P **P** **04 15 36.2 -0.8**
MUD MLR MLR
comp=Z,860nm,17.0s,MS5.2
MUD Monsted U'grnd 81.17 331 *i*P **P** **04 15 36.2 -0.8**
MUD
comp=Z,860nm,17.0s
MORC Moravsky Berou 81.33 323 *e*P **P** **04 15 37.4 -0.5**
comp=Z,13nm,0.8s,mb4.9
MORC Moravsky Berou 81.33 323 ⇑ P **P** **04 15 38.1 +0.1**
MORC Moravsky Berou 81.33 323 ⇑ *i*P **P** **04 15 38.1 +0.1**
KSP Ksiaz 81.35 324 *e*P **P** **04 15 38.3 +0.3**
KSP *e*PcP PcP 04 15 44.1 0.0
KSP *e*pP pP 04 15 48.8 -0.6
KSP LMZ 04 55 24.7
comp=Z,3μm,18.8s
KSP Ksiaz 81.35 324 ⇑ *e*P **P** **04 15 38.2 +0.1**
KSP MLR MLR
comp=Z,3μm,18.8s,MS5.7
VYHS Vyhne 81.37 321 *e*P **P** **04 15 38.7 +0.5**
comp=Z,16nm,1.3s,mb4.8
VYHS *e*S S 04 26 13.6 +27
VYHS *e*SS SS 04 31 21.6 +20
VYHS LR LR
comp=Z,1μm,17.1s,MS5.3
VYHS Vyhne 81.37 321 *e*P **P** **04 15 38.7 +0.5**
VYHS *e* 04 26 13.6
VYHS *e* 04 31 21.6
KOLL Kolacno 81.56 321 *e*P **P** **04 15 39.7 +0.5**
KOLL Kolacno 81.56 321 *e*P **P** **04 15 39.7 +0.5**
RUE Ruedersdorf 81.61 326 *e*P **P** **04 15 39.6 +0.2**
comp=Z,39nm,1.0s,mb5.3
DPC Dobruska-Polom 81.63 324 *e*P **P** **04 15 40.0 +0.5**
DPC MLR MLR
comp=Z,2μm,17.0s,MS5.4
DPC Dobruska-Polom 81.63 324 *e*P **P** **04 15 40.0 +0.5**
DPC AMS AMS 04 55 10.0
comp=Z,2μm,17.0s
OD2 Odessa Site #2 81.65 40 *e*P **P** **04 15 40.0 +0.3**
comp=Z,6.7nm,0.5s,mb4.8
UPC Upice 81.70 324 *e*P **P** **04 15 40.1 +0.2**
UPC Upice 81.70 324 *e*P **P** **04 15 40.1 +0.2**
D08A Wollman Farm, 81.72 40 ⇓ P **P** **04 15 40.3 +0.2**
baz=82
HAWA Hanford 81.74 41 *e*P **P** **04 15 41.0 +0.8**
comp=Z,12nm,1.0s,mb4.8
G06A Carlson Farm, 81.74 42 ⇓ P **P** **04 15 40.7 +0.4**
baz=82
BUD Budapest 81.84 320 ⇑ *e*P **P** **04 15 42.0 +1.3**
E08A Dider Farm, El 81.96 41 ⇓ P **P** **04 15 41.3 0.0**
baz=82
NEW Newport 82.02 39 *e*P **P** **04 15 41.8 +0.2**
comp=Z,11nm,1.1s,mb4.7

NEW Newport 82.02 39 eP P 04 15 41.8 +0.1
NEW pmax pmax
comp=Z,11nm,1.1s
VTS Vitosha 82.08 315 ⇓P P 04 15 42.0 0.0
VTS Vitosha 82.08 315 ⇓iP P 04 15 42.0 -0.1
VRAC Vranov 82.11 323 P P 04 15 42.5 +0.5
comp=Z,9.9nm,0.6s,mb4.9,baz=63,slow=4.8,SNR=16
VRAC Vranov 82.11 323 ⇑iP P 04 15 42.5 +0.4
BSEG Bad Segeberg 82.31 329 eP P 04 15 43.0 -0.1
comp=Z,19nm,0.8s,mb5.1
BSEG Bad Segeberg 82.31 329 eP P 04 15 43.0 -0.1
BSEG pmax pmax
comp=Z,19nm,0.8s,mb5.1
YBH Yreka Blue Hor 82.38 46 eP P 04 15 44.5 +0.9
comp=Z,5.5nm,1.0s,mb4.4
YBH Yreka Blue Hor 82.38 46 eP P 04 15 44.5 +0.8
YBH pmax pmax
comp=Z,6.0nm,1.0s
PVCC Panska Ves 82.42 325 eP P 04 15 43.7 0.0
PVCC MLR MLR
comp=Z,2µm,16.4s,MS5.5
PVCC Panska Ves 82.42 325 eP P 04 15 43.7 0.0
PVCC AMS AMS 04 56 50.0
comp=Z,2µm,16.4s
A12A Yaak River Ran 82.42 37 ⇑P P 04 15 44.2 +0.5
baz=82
LRW Lerwick 82.45 338 P P 04 15 43.1 -0.6
LRW AMb AMB 04 15 43.8
comp=Z,84nm,1.8s,mb5.4
LRW Lerwick 82.45 338 eP P 04 15 43.1 -0.6
LRW AMb AMB 04 15 43.8
comp=Z,84nm,1.8s,mb5.4
E09A Wood Farm, Sta 82.47 40 ⇑P P 04 15 43.9 0.0
baz=82
ZST Bratislava 82.49 322 eP P 04 15 44.7 +0.6
comp=Z,12nm,0.6s,mb5.0
ZST eS S 04 26 29.5 +31
ZST LR LR
comp=Z,600nm,15.3s,MS5.1
ZST Bratislava 82.49 322 eP P 04 15 44.7 +0.6
ZST e 04 26 29.5
BRG Berggiesshubel 82.52 325 eP P 04 15 44.3 +0.1
comp=Z,38nm,1.8s,mb5.1
BRG Berggiesshubel 82.52 325 eP P 04 15 44.1 -0.1
comp=Z,8.5nm,0.8s,mb4.8
BRG SS SS 04 31 34.0 +15
BRG
comp=N,887nm,16.3s
BRG
comp=E,693nm,16.7s
BRG
comp=Z,1µm,15.6s
BRG Berggiesshubel 82.52 325 eP P 04 15 44.1 -0.1
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
BRG MLR MLR
comp=N,5µm,16.3s,MS6.0
BRG MLR MLR
comp=E,531nm,16.7s,MS6.0
BRG MLR MLR
comp=Z,415nm,15.6s,MS4.9
G08A Pilot Rock 82.69 42 ⇓P P 04 15 45.4 +0.2
baz=82
TREC Trest 82.69 323 eP P 04 15 45.3 +0.2
TREC MLR MLR
comp=Z,1µm,19.6s,MS5.2
TREC Trest 82.69 323 eP P 04 15 45.3 +0.2
TREC AMS AMS 04 56 00.0
comp=Z,1µm,19.6s
CLL Collm 82.72 326 eP P 04 15 45.0 -0.2
comp=Z,25nm,0.7s,mb5.3
CLL Collm 82.72 326 ⇑iP P 04 15 45.0 -0.2
comp=Z,25nm,0.7s,mb5.3
CLL eS S 04 26 00.0 -0.3
CLL LR LR
comp=Z,2µm,17.6s,MS5.5
CLL Collm 82.72 326 ⇑iP P 04 15 45.0 -0.2
CLL eS S 04 26 00.0 -0.3
CLL pmax pmax
comp=Z,25nm,0.7s,mb5.3
CLL MLR MLR
comp=Z,2µm,17.6s,MS5.5
CLL Collm 82.72 326 ⇑iP P 04 15 45.0 -0.2
comp=Z,25nm,0.7s,mb5.3
CLL ePcP PcP 04 15 50.0 -0.1
CLL ePP PP 04 18 55.0 +0.2
CLL e 04 25 28.0
CLL e(S) S 04 26 13.0 +13
CLL ePPS 04 27 12.0
CLL eSS SS 04 31 24.0 +2.1
C11A Tepee Creek (N 82.74 39 ⇑P P 04 15 45.2 -0.2
baz=82
PRU Pruhonice 82.76 324 eP P 04 15 46.2 +0.7
PRU e*PP pP 04 15 57.3 +0.4
PRU MLR MLR
comp=Z,1µm,16.9s,MS5.4
PRU Pruhonice 82.76 324 eP P 04 15 46.2 +0.7
PRU epP pP 04 15 57.3 +0.4
PRU ex x 04 26 17.1
PRU AMS AMS 04 56 00.0
comp=Z,1µm,16.9s
K05A Summer Lake 82.97 45 ⇓P P 04 15 46.5 -0.2
baz=83
I07A Izee 83.06 43 ⇓P P 04 15 47.2 +0.1
baz=83
A13A Flathead Natio 83.08 37 ⇓P P 04 15 47.6 +0.5
baz=83
WDC Whiskeytown Da 83.11 47 eP P 04 15 46.8 -0.7
comp=Z,5.5nm,0.9s,mb4.6
WDC Whiskeytown Da 83.11 47 eP P 04 15 46.8 -0.7
WDC pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
VAY Valandovo 83.17 314 eP P 04 15 46.1 -1.6
WALA Waterton Lakes 83.26 37 eP P 04 15 49.0 +1.0
comp=Z,0.5nm,1.2s
F10A Beach Ranch, E 83.30 40 ⇓P P 04 15 48.3 -0.1
baz=83
CONA Conrad Observa 83.32 322 iP P 04 15 49.0 +0.6
comp=Z,42nm,0.8s,mb5.5,SNR=59
NRDL Niedersach Rie 83.35 328 eP P 04 15 47.4 -1.0
comp=Z,31nm,1.5s,mb5.1
B13A Whitefish 83.39 37 ⇑P P 04 15 49.1 +0.3
baz=83
SKO Skopje 83.52 315 eP P 04 15 49.9 +0.3
BSMT Bassoo Peak 83.53 38 eP P 04 15 50.7 +1.2
comp=Z,9.0nm,1.0s,mb4.8
TANN Tannenbergstha 83.55 325 eP P 04 15 49.7 +0.2
comp=Z,42nm,1.9s,mb5.2
A14A Double T Ranch 83.57 37 ⇓P P 04 15 49.3 -0.4
baz=83,SNR=8.9
WERD Werda 83.60 325 eP P 04 15 49.8 0.0
comp=Z,14nm,0.8s,mb5.1
GUNZ Gunzen 83.64 325 eP P 04 15 50.3 +0.3
comp=Z,90nm,1.9s,mb5.6
CLZ Clausthal 83.65 327 eP P 04 15 50.4 +0.4
comp=Z,81nm,1.3s,mb5.7
CLZ Clausthal 83.65 327 eP P 04 15 50.4 +0.4
CLZ pmax pmax
comp=Z,81nm,1.3s,mb5.7
NKC Novy Kostel 83.67 325 eP P 04 15 50.7 +0.6
NKC e*PP pP 04 16 01.2 -0.4
NKC MLR MLR
comp=Z,2µm,14.7s,MS5.5
NKC Novy Kostel 83.67 325 eP P 04 15 50.7 +0.6
NKC epP pP 04 16 01.2 -0.4
NKC AMS AMS 04 57 20.0
comp=Z,2µm,14.7s
BORG Borgarnes 83.70 348 LR LR 04 57 02.1
comp=Z,192nm,19.0s,MS4.5,baz=13,slow=38
D12A Red Ives Fores 83.70 39 ⇓P P 04 15 50.6 +0.2
baz=83
KHC Kasperske Hory 83.79 324 eP P 04 15 50.8 +0.1
comp=Z,29nm,1.3s,mb5.2
KHC Kasperske Hory 83.79 324 eP P 04 15 50.8 0.0
KHC e*PP pP 04 16 01.9 -0.3
KHC eS S 04 26 15.7 +4.6
KHC MLR MLR
comp=Z,1µm,19.6s,MS5.3
KHC Kasperske Hory 83.79 324 eP P 04 15 50.8 0.0
KHC epP pP 04 16 01.9 -0.3
KHC ex x 04 26 15.7
KHC AMS AMS 04 56 30.0
comp=Z,1µm,19.6s
MOD Modoc 83.79 45 eP P 04 15 52.0 +1.1
comp=Z,13nm,1.0s,mb5.0
MOX Moxa 83.82 326 eP P 04 15 50.9 0.0
comp=Z,32nm,1.5s,mb5.2
MOX
comp=Z,1µm,18.0s
MOX Moxa 83.82 326 eP P 04 15 51.0 +0.1
comp=Z,19nm,1.0s,mb5.2
MOX Moxa 83.82 326 eP P 04 15 50.9 0.0
MOX pmax pmax
comp=Z,32nm,1.5s,mb5.2
MOX MLR MLR
comp=Z,1µm,18.0s,MS5.3
JTMT Jette 83.87 38 eP P 04 15 51.5 +0.3
GEC2 GERESS Array S 83.90 324 eP P 04 15 51.4 0.0
comp=Z,36nm,1.6s,mb5.2
GEC2 GERESS Array S 83.90 324 eP P 04 15 51.4 0.0
GEC2 pmax pmax
comp=Z,36nm,1.6s,mb5.2
BMO Blue Mountains 83.91 41 eP P 04 15 51.9 +0.4
comp=Z,16nm,1.4s,mb4.9
ARSA Arzberg 83.91 322 ⇑iP P 04 15 51.5 0.0
comp=Z,17nm,0.8s,mb5.2,SNR=16
A15A Johnson Ranch, 83.92 36 ⇓P P 04 15 50.9 -0.6
baz=84,SNR=13
E12A Beaver Dam Sad 83.97 39 ⇓P P 04 15 50.6 -1.2
baz=84
E12A ⇓PcP PcP 04 15 53.2 -2.5
baz=84
KRUS Krusevo 83.98 314 eP P 04 15 49.6 -2.3
J08A Circle Bar Ran 84.08 43 ⇑PcP PcP 04 15 53.8 -2.4
baz=84
WET Wettzell 84.14 324 eP P 04 15 52.8 +0.2
comp=Z,36nm,1.7s,mb5.2
WET epP pP 04 16 02.0 -2.0
WET Wettzell 84.14 324 eP P 04 15 52.8 +0.2
WET e*PP pP 04 16 02.0 -2.0
WET pmax pmax
comp=Z,36nm,1.7s,mb5.2
C14A Swan Lake 84.14 38 ⇓PcP PcP 04 15 54.0 -2.4
baz=84
SWMT Swartz Lake 84.16 38 eP P 04 15 52.9 +0.2
comp=Z,6.7nm,1.1s,mb4.7
MOA Molln 84.22 323 ⇑iPcP PcP 04 15 53.3 -3.4
comp=Z,20nm,0.8s,SNR=16
B15A Bradely Ranch, 84.43 37 ⇑P P 04 15 53.7 -0.4
baz=84,SNR=7.1
PERS Pernice 84.50 321 iP P 04 15 53.6 -0.9
WVOR Wild Horse Val 84.51 44 eP P 04 15 56.0 +1.4
comp=Z,39nm,1.1s,mb5.5
WVOR Wild Horse Val 84.51 44 eP P 04 15 56.0 +1.4
WVOR pmax pmax
comp=Z,39nm,1.1s,mb5.5
SOKA Soboth 84.52 321 ⇑iP P 04 15 54.6 +0.1
comp=Z,50nm,1.1s,mb5.5
A16A West Butte Ran 84.53 36 ⇓P P 04 15 54.7 +0.2
baz=84,SNR=7.5
F12A Elk City 84.54 40 ⇑P P 04 15 55.0 +0.3
baz=84
IBBN Ibbenburen 84.55 329 eP P 04 15 54.3 -0.3
comp=Z,48nm,0.8s,mb5.7
SLMT Seeley Lake 84.60 38 eP P 04 15 55.4 +0.5
comp=Z,11nm,0.8s,mb5.0
MSO Missoula 84.61 38 eP P 04 15 55.2 +0.2
comp=Z,7.4nm,1.3s,mb4.7
GRA1 Grafenberg Arr 84.62 325 eP P 04 15 55.3 +0.3
comp=Z,127nm,1.6s,mb5.8
GRA1 LR LR
comp=Z,1µm,19.4s,MS5.2
GRF Grafenberg Arr 84.62 325 eP P 04 15 55.3 +0.3
comp=Z,127nm,1.6s,mb5.8
GRF eL 04 57 18.4
comp=Z,990nm,19.4s
GRF Grafenberg Arr 84.62 325 eP P 04 15 55.3 +0.3
GRF pmax pmax
comp=Z,127nm,1.6s,mb5.8
GRF MLR MLR
comp=Z,1µm,19.4s,MS5.2
D14A Greenough 84.69 38 ⇑P P 04 15 55.7 +0.3
baz=84
C15A Salmond Ranch, 84.74 37 ⇑P P 04 15 55.6 0.0
baz=84
FCC Fort Churchill 84.81 22 eP P 04 15 56.2 +0.4
comp=Z,0.8nm,1.0s,mb3.8
G12A Big Creek, Yel 84.87 40 ⇑P P 04 15 56.4 +0.1
baz=85
OBKA Obir 84.89 321 ⇑iP P 04 15 56.1 -0.3
comp=Z,13nm,0.9s,mb5.0,SNR=8.8
A17A Triple J Farms 84.98 35 ⇓P P 04 15 56.7 -0.2
baz=85,SNR=7.1
FFC Flin Flon 85.01 27 P P 04 15 57.5 +0.6
comp=Z,135nm,0.8s,mb6.1,SNR=9.3
FFC Flin Flon 85.01 27 eP P 04 15 57.3 +0.4
comp=Z,19nm,0.8s,mb5.3
FFC Flin Flon 85.01 27 iP P 04 15 57.6 +0.7
F13A Darby 85.03 39 ⇓P P 04 15 57.3 +0.2
baz=85
MVH1 Achvaich 85.15 338 ⇓eP P 04 15 56.5 -1.0
VISS Visnje 85.16 321 iP P 04 15 57.5 -0.3
C16A Fuhringer Ranc 85.17 37 ⇓P P 04 15 58.1 +0.3
baz=85,SNR=12
KBA Koelnbreinsper 85.19 322 ⇑iP P 04 15 57.8 -0.1
comp=Z,20nm,0.7s,mb5.4,SNR=11
LJU Ljubljana 85.19 321 iP P 04 15 57.5 -0.4
LJU i pP 04 16 08.1 -1.3
MYKA Terra Mystica 85.31 322 ⇑iP P 04 15 58.3 -0.2
comp=Z,17nm,0.6s,mb5.3
B17A L&G Farms, Che 85.35 36 ⇑P P 04 15 59.1 +0.4
baz=85,SNR=8.4
BUG Bochum–Univer 85.36 328 eP P 04 15 58.2 -0.5
comp=Z,52nm,1.5s,mb5.4
A18A Metzger Ranch, 85.43 35 ⇑P P 04 15 59.0 0.0
baz=85,SNR=7.6
CEY Cerknica 85.43 321 iP P 04 15 58.8 -0.3
CEY i pP 04 16 09.2 -1.4
H12A Diamond D Ranc 85.49 41 ⇑P P 04 15 59.4 -0.1
baz=85
JAVS Javornik 85.53 321 iP P 04 15 58.9 -0.8
VOY Vojsko 85.54 321 eP P 04 15 58.8 -0.9
VOY e 04 16 03.8
FUR Furstenfeldbru 85.58 324 eP P 04 16 00.3 +0.5
comp=Z,53nm,1.5s,mb5.5
FUR Furstenfeldbru 85.58 324 eP P 04 16 00.3 +0.5
FUR pmax pmax
comp=Z,53nm,1.5s,mb5.5
MDO Dochfour 85.59 337 ⇓eP P 04 15 58.2 -1.5
MFID Camas Ranch 85.61 42 ⇓P P 04 15 59.9 -0.2
baz=85
GVD Gavdhos 85.69 308 eP P 04 15 60.0 -0.7
comp=Z,121nm,0.7s,mb6.2
RRR Rubha Reidh 85.74 338 ⇓eP P 04 15 59.5 -0.9
D16A Dana Ranch, Ca 85.77 37 ⇓P P 04 16 00.8 0.0
baz=86,SNR=9.9
I12A Atlanta 85.79 41 ⇓PcP PcP 04 16 02.4 -1.3
baz=86
HRY Holter Researc 85.82 38 eP P 04 16 01.9 +0.8
comp=Z,7.3nm,0.7s,mb5.0
H13A Challis 85.82 40 ⇓P P 04 16 00.8 -0.3
baz=86
H13A ⇓PcP PcP 04 16 02.2 -1.6
baz=86
ABTA Abfaltersbach 85.84 322 ⇑iP P 04 16 00.7 -0.4
comp=Z,17nm,0.5s,mb5.5,SNR=36
KAC Achnashellach 85.86 338 ⇓eP P 04 16 00.1 -0.9
CMB Columbia Colle 85.91 48 eP P 04 16 01.8 +0.2
comp=Z,22nm,1.3s,mb5.2
CMB Columbia Colle 85.91 48 eP P 04 16 01.8 +0.1
CMB pmax pmax
comp=Z,22nm,1.3s,mb5.2
RRH Rhenigidale 85.97 339 ⇓eP P 04 16 00.6 -1.0
WTTA Wattenberg 85.97 323 ⇑iP P 04 16 01.4 -0.3
comp=Z,13nm,0.6s,mb5.3
LRM Limekiln Ridge 86.05 39 eP P 04 16 03.4 +1.2
comp=Z,152nm,1.5s,mb6.0
EGMT Eagleton 86.06 36 ⇑PcP PcP 04 16 03.3 -1.5
baz=86
EGMT Eagleton 86.06 36 eP P 04 16 03.0 +0.8
comp=Z,16nm,1.1s,mb5.2
FRB Frobisher Bay 86.08 8 LR LR 04 57 12.6
comp=Z,435nm,19.1s,MS4.9,baz=161,slow=38
KPL Plockton 86.10 338 P P 04 16 01.3 -0.9
KPL AMb AMB 04 16 10.9
comp=Z,109nm,3.7s
KPL Plockton 86.10 338 eP P 04 16 01.3 -0.9
KPL AMb AMB 04 16 10.9
comp=Z,109nm,3.7s
D17A Six Diamond Ra 86.14 37 ⇓PcP PcP 04 16 03.8 -1.4
baz=86,SNR=10.0
ESY Stoneypath 86.17 336 eP P 04 16 01.5 -1.1
MOTA Moosalm 86.20 324 ⇑iP P 04 16 02.4 -0.5
comp=Z,7.2nm,0.5s,mb5.1,SNR=11
STU Stuttgart 86.23 325 eP P 04 16 03.1 0.0
comp=Z,9.2nm,0.6s,mb5.2
STU Stuttgart 86.23 325 eP P 04 16 03.1 +0.1
STU pmax pmax
comp=Z,9.0nm,0.6s,mb5.2
DLMT Dillon 86.25 39 eP P 04 16 04.0 +0.7
comp=Z,17nm,0.9s,mb5.3
I13A Wildhorse Cree 86.30 41 ⇑PcP PcP 04 16 04.7 -1.2
baz=86
M10A I.L. Ranch, Tu 86.31 44 ⇑PcP PcP 04 16 05.6 -0.5
baz=86
HLID Hailey 86.34 41 ⇓P P 04 16 03.3 -0.4
baz=86
HLID ⇑PcP PcP 04 16 05.2 -1.0
baz=86
HLID Hailey 86.34 41 eP P 04 16 05.2 +1.5
comp=Z,11nm,0.9s,mb5.1
L11A Cat Creek Ranc 86.40 43 ⇑P P 04 16 03.7 -0.3
baz=86
G15A Dillon 86.44 39 ⇓PcP PcP 04 16 05.6 -1.0
baz=86
MCMT McKenzie Canyo 86.45 40 eP P 04 16 05.2 +1.0
comp=Z,0.6nm,0.6s,mb4.0
KAR1 Arisaig 86.49 338 eP P 04 16 03.5 -0.7
E17A Martinsdale 86.50 37 ⇑P P 04 16 03.9 -0.5
baz=86,SNR=10
MEM Memboch 86.51 328 P P 04 16 04.1 -0.3
F16A Kennard Place, 86.52 38 ⇓P P 04 16 03.9 -0.6
baz=86
EAU Auchinoon 86.52 336 eP P 04 16 03.5 -0.8
BMN Battle Mountai 86.54 45 eP P 04 16 06.3 +1.5
comp=Z,27nm,1.4s,mb5.3
BMN Battle Mountai 86.54 45 eP P 04 16 06.3 +1.6
BMN pmax pmax
comp=Z,27nm,1.4s,mb5.3
EAB Aberfoyle 86.57 337 ⇓eP P 04 16 03.6 -0.9
J13A Cove Ranch, Pi 86.58 41 ⇓P P 04 16 04.9 0.0
baz=86
FETA Feichten 86.60 323 ⇑iP P 04 16 04.5 -0.4
comp=Z,4.6nm,0.6s,mb4.9,SNR=10
H15A Lima 86.69 40 ⇑P P 04 16 05.3 -0.1
baz=86
G16A Moss Hill, Enn 86.77 39 ⇑PcP PcP 04 16 06.8 -1.2
baz=86
EKA Eskdalemuir Ar 86.81 335 P P 04 16 04.2 -1.6
comp=Z,6.0nm,0.6s,mb5.0,baz=39,slow=4.6,SNR=47
EKA PP PP 04 19 27.8 0.0
comp=Z,3.8nm,0.8s,baz=41,slow=7.8,SNR=8.6
EKA Eskdalemuir Ar 86.81 335 P P 04 16 04.2 -1.6
EKA 04 19 27.8
EKA pmax pmax
comp=Z,6.0nm,0.6s
EKA pmax pmax
comp=Z,4.0nm,0.8s
M11A Holland Ranch, 86.82 44 ⇓P P 04 16 05.2 -0.9
baz=87
XAL Allendale 86.83 335 eP P 04 16 04.7 -1.1
ESK Eskdalemuir 86.84 336 eP P 04 16 05.3 -0.6
comp=Z,109nm,0.7s,mb6.2,SNR=5.3
ESK Eskdalemuir 86.84 336 eP P 04 16 03.9 -2.0
ESK AMb AMB 04 16 06.3
comp=Z,35nm,3.9s
ESK AMS AMS 05 00 00.1
comp=Z,477nm,17.3s,MS5.0
ESK Eskdalemuir 86.84 336 eP P 04 16 04.5 -1.4
comp=Z,12nm,0.7s,mb5.2
ESK Eskdalemuir 86.84 336 eP P 04 16 04.6 -1.3
ESK pmax pmax
comp=Z,12nm,0.7s,mb5.2
DAVA Damuels 86.87 324 ⇑iPcP PcP 04 16 05.7 -2.7
comp=Z,9.2nm,0.7s,SNR=8.6
ECK Cauldkaine Hil 86.92 335 ⇓eP P 04 16 05.3 -1.0
E18A Harlowton 86.93 37 ⇓P P 04 16 05.9 -0.6
baz=87
E18A ⇑PcP PcP 04 16 08.0 -0.7
baz=87
BFO Black Forest 86.95 325 eP P 04 16 05.8 -0.8
comp=Z,6.0nm,0.9s,mb4.8
BFO Black Forest 86.95 325 eP P 04 16 05.8 -0.8
BFO pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
F17A Fitzpatrick Pl 86.96 38 ⇓PcP PcP 04 16 08.1 -0.8
baz=87
BCLA Clavier 86.97 328 P P 04 16 06.3 -0.3
NVAR Mina Array Bea 87.03 47 P P 04 16 08.0 +0.8
comp=Z,3.0nm,0.7s,mb4.7,baz=291,slow=5.2,SNR=13
WLF Walferdange 87.10 327 P P 04 16 07.3 0.0
comp=Z,21nm,1.3s,mb5.2
WLF Walferdange 87.10 327 eP P 04 16 06.7 -0.5
comp=Z,37nm,1.3s,mb5.5
WLF Walferdange 87.10 327 eP P 04 16 06.7 -0.6
WLF pmax pmax
comp=Z,37nm,1.3s,mb5.5
DAVOX Davos/Dischmat 87.20 324 P P 04 16 07.5 -0.4
comp=Z,15nm,0.5s,mb5.5,baz=46,slow=2.4,SNR=60
DAVOX PP PP 04 19 33.4 +2.2
comp=Z,1.9nm,0.7s,baz=52,slow=4.0,SNR=3.8
G17A Pierce Place, 87.29 38 ⇑P P 04 16 07.8 -0.5
baz=87
HPK Haverah Park 87.30 334 AMS AMS 05 01 32.0
comp=Z,635nm,10.7s,MS5.3
M12A Wells 87.36 43 ⇑P P 04 16 08.0 -0.7
baz=87
SNF Seneffe 87.37 329 P P 04 16 08.2 -0.3
GIVF Givet 87.41 328 eP P 04 16 08.2 -0.6
comp=Z,8.5nm,0.5s,mb4.9
GIVF Givet 87.41 328 eP P 04 16 08.2 -0.6
comp=Z,4.3nm,0.5s,mb4.9
GIVF Givet 87.41 328 eP P 04 16 08.2 -0.6
GIVF pmax pmax
comp=Z,4.0nm,0.5s,mb4.9
CDF Champ du Feu 87.42 326 eP P 04 16 08.4 -0.4
comp=Z,12nm,0.6s,mb5.0
CDF Champ du Feu 87.42 326 eP P 04 16 08.4 -0.4
comp=Z,6.0nm,0.6s,mb5.0
CDF Champ du Feu 87.42 326 eP P 04 16 08.4 -0.4
CDF pmax pmax
comp=Z,6.0nm,0.6s,mb5.0
F18A Big Timber 87.46 37 ⇑PcP PcP 04 16 10.2 -0.9
baz=87,SNR=8.9
P10A Eureka 87.49 45 ⇑PcP PcP 04 16 10.3 -1.0
baz=87
DOU Dourbes 87.52 328 P P 04 16 08.8 -0.5
comp=Z,10nm,1.7s,mb4.8
GCMT Greycliff 87.56 37 eP P 04 16 11.0 +1.4
comp=Z,5.3nm,1.0s,mb4.7
J15A Blackfoot 87.58 40 ⇑PcP PcP 04 16 11.1 -0.6
baz=87
N12A Clover Valley, 87.62 44 ⇑PcP PcP 04 16 11.4 -0.5
baz=87
N12A Clover Valley, 87.62 44 eP P 04 16 11.0 +1.0
comp=Z,16nm,1.2s,mb5.1
TUE Stuetta 87.68 324 eP P 04 16 09.8 -0.3
comp=Z,13nm,0.7s,mb5.3
K14A Jones Ranch, D 87.68 41 ⇓PcP PcP 04 16 11.2 -0.9
baz=87
BAIF Baives 87.72 329 eP P 04 16 09.6 -0.7
comp=Z,9.3nm,0.8s,mb4.8
BAIF Baives 87.72 329 eP P 04 16 09.6 -0.7
comp=Z,4.7nm,0.8s,mb4.8
BAIF Baives 87.72 329 eP P 04 16 09.6 -0.7
BAIF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
GAL1 Galloway 87.74 336 P P 04 16 08.7 -1.6
GAL1 AMb AMB 04 16 13.0
comp=Z,47nm,3.0s,mb5.2
GAL1 AMS AMS 04 59 03.9
comp=Z,434nm,22.8s
GAL1 Galloway 87.74 336 eP P 04 16 08.7 -1.6
GAL1 AMb AMB 04 16 13.0
comp=Z,47nm,3.0s,mb5.2
GAL1 AMS AMS 04 59 03.9
comp=Z,434nm,22.8s,MS4.8
I16A Newdale 87.81 40 ⇓PcP PcP 04 16 12.3 -0.4
baz=88
M13A Montello 87.84 43 ⇓P P 04 16 10.3 -0.7
baz=88
M13A Montello 87.84 43 eP P 04 16 12.4 +1.4
comp=Z,9.5nm,1.3s,mb4.9
L14A Malta 87.97 42 ⇓PcP PcP 04 16 12.9 -0.5
baz=88
H17A Grant Village 87.98 39 ⇓PcP PcP 04 16 12.5 -0.9
baz=88,SNR=6.2
HINF Hinteralfeld 88.03 326 eP P 04 16 10.7 -1.1
comp=Z,13nm,0.7s,mb5.0
HINF Hinteralfeld 88.03 326 eP P 04 16 10.7 -1.1

comp=Z,6.7nm,0.7s,mb5.0
HINF Hinteralfeld 88.03 326 *e*P **P 04 16 10.7 -1.1**
HINF pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
TIP Timpagrande 88.04 315 *e*P **P 04 16 12.0 0.0**
comp=Z,4.3nm,0.6s,mb4.9
IMW Indian Meadow 88.10 39 *e*P **P 04 16 14.0 +1.8**
comp=Z,8.5nm,1.0s,mb4.9
CWF Charnwood Fore 88.10 333 AMS AMS 05 00 56.8
comp=Z,724nm,18.6s,MS5.1
FLWY Flagg Ranch 88.11 39 *e*P **P 04 16 14.6 +2.3**
comp=Z,13nm,1.0s,mb5.1
AQU L'Aquila 88.11 319 *e*P **P 04 16 13.6 +1.4**
comp=Z,21nm,1.3s,mb5.2
AQU L'Aquila 88.11 319 *e*P **P 04 16 13.6 +1.3**
AQU pmax pmax
comp=Z,21nm,1.3s,mb5.2
CUC Castrocucco 88.13 316 *e*P **P 04 16 10.9 -1.5**
comp=Z,5.0nm,0.9s,mb4.7
HAU Haudompre 88.15 326 *e*P **P 04 16 11.5 -0.8**
comp=Z,12nm,0.7s,mb4.9
HAU *e*MLR MLR
comp=Z,2µm,17.2s,MS5.2
HAU Haudompre 88.15 326 *e*P **P 04 16 11.5 -0.8**
comp=Z,5.8nm,0.7s,mb4.9
HAU LR LR
comp=Z,2µm,17.3s,MS5.5
HAU Haudompre 88.15 326 *e*P **P 04 16 11.5 -0.8**
HAU pmax pmax
comp=Z,6.0nm,0.7s,mb4.9
HAU MLR MLR
comp=Z,2µm,17.3s,MS5.5
O12A Currie 88.16 44 ⇑PcP PcP 04 16 13.2 -1.0
baz=88
RLMT Red Lodge 88.21 38 ⇓PcP PcP 04 16 13.5 -1.0
baz=88
RLMT Red Lodge 88.21 38 *e*P **P 04 16 14.1 +1.4**
comp=Z,12nm,1.1s,mb5.0
M14A Sheep Mountain 88.23 42 ⇑PcP PcP 04 16 14.0 -0.6
baz=88
MOOW Moose Ponds 88.30 39 *e*P **P 04 16 14.7 +1.5**
comp=Z,2.2nm,0.8s,mb4.4
TPAW Teton Pass 88.35 40 *e*P **P 04 16 15.4 +2.1**
comp=Z,9.7nm,1.1s,mb5.0
R10A Warm Springs 88.38 46 ⇑P **P 04 16 12.8 -0.8**
baz=88
S10A Tonopah Range, 88.42 47 ⇓PcP PcP 04 16 15.0 -0.5
baz=88
MEZF Maizieres J'vi 88.43 327 *e*P **P 04 16 13.3 -0.3**
comp=Z,28nm,0.8s,mb5.2
MEZF Maizieres J'vi 88.43 327 *e*P **P 04 16 13.3 -0.3**
comp=Z,28nm,0.8s,mb5.5
LOHW Long Hollow 88.47 39 *e*P **P 04 16 15.4 +1.5**
comp=Z,4.2nm,1.1s,mb4.6
L15A Malad City 88.48 42 ⇓PcP PcP 04 16 14.7 -1.0
baz=88
REDW Red Top Meadow 88.49 40 *e*P **P 04 16 14.9 +0.9**
comp=Z,6.1nm,1.2s,mb4.7
P12A McGill 88.54 45 ⇓PcP PcP 04 16 14.9 -1.1
baz=88
GMM Mts of Mourne 88.68 336 *e*P **P 04 16 13.4 -1.3**
N14A Grayback Hills 88.73 43 ⇑P **P 04 16 14.6 -0.6**
baz=88
LAO LASA Array 88.74 35 *e*P **P 04 16 16.0 +0.9**
comp=Z,14nm,1.1s,mb5.2
R11A Troy Canyon, C 88.80 46 ⇓PcP PcP 04 16 16.2 -0.9
baz=89
I18A Diamond G Ranc 88.84 39 ⇑PcP PcP 04 16 16.4 -0.9
baz=89
L16A Fish Haven 89.02 41 ⇓PcP PcP 04 16 17.2 -0.8
baz=89
J18A Kendall Valley 89.05 39 ⇑P **P 04 16 16.2 -0.5**
baz=89
N15A Stansbury Isla 89.10 42 ⇑P **P 04 16 16.3 -0.7**
baz=89
FURC Furnace Creek, 89.11 48 ⇓P **P 04 16 16.7 -0.4**
baz=89
CEL Celeste 89.14 314 *e*P **P 04 16 16.8 -0.4**
comp=Z,23nm,0.6s,mb5.7
HWUT Hardware Ranch 89.21 41 *e*P **P 04 16 18.8 +1.4**
comp=Z,26nm,1.4s,mb5.4
CABF La Chapelle 89.24 325 *e*P **P 04 16 16.7 -0.8**
comp=Z,11nm,0.8s,mb4.9
CABF La Chapelle 89.24 325 *e*P **P 04 16 16.7 -0.8**
comp=Z,5.4nm,0.8s,mb4.9
CABF La Chapelle 89.24 325 *e*P **P 04 16 16.7 -0.8**
CABF pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
MCH1 Michaelchurch 89.34 333 ⇓*e*P **P 04 16 16.8 -1.1**
MCH1 AMb AMB 04 16 17.1
comp=Z,27nm,2.0s,mb5.2
MCH1 AMS AMS 05 01 53.3
comp=Z,612nm,22.5s,MS5.0
DUG Dugway 89.36 43 *e*P **P 04 16 19.4 +1.2**
comp=Z,11nm,1.3s,mb5.0
DUG Dugway 89.36 43 *e*P **P 04 16 19.4 +1.2**
DUG pmax pmax
comp=Z,11nm,1.3s,mb5.0
Q13A Wheeler Ranch, 89.40 45 ⇑P **P 04 16 17.8 -0.7**
baz=89
R12A Pony Springs, 89.42 45 ⇑P **P 04 16 17.8 -0.7**
baz=89
P14A Drum Mountains 89.59 44 ⇓PcP PcP 04 16 19.4 -1.2
baz=89
BW06 Boulder Array 89.60 40 ⇑PcP PcP 04 16 19.6 -1.0
baz=89
BW06 Boulder Array 89.60 40 *e*P **P 04 16 19.8 +0.5**
comp=Z,6.4nm,1.0s,mb4.9
DLF Lyons Farm 89.64 336 *e*P **P 04 16 18.9 -0.3**
LPL La Plagne 89.67 324 *e*P **P 04 16 19.0 -0.5**
comp=Z,9.8nm,0.7s,mb5.0
LPL La Plagne 89.67 324 *e*P **P 04 16 19.0 -0.5**
comp=Z,4.9nm,0.7s,mb5.0
LPL La Plagne 89.67 324 *e*P **P 04 16 19.0 -0.5**
LPL pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
LPG La Plagne 89.67 324 *e*P **P 04 16 19.1 -0.5**
comp=Z,8.9nm,0.6s,mb5.0
LPG La Plagne 89.67 324 *e*P **P 04 16 19.1 -0.5**
comp=Z,4.4nm,0.6s,mb5.0
LPG La Plagne 89.67 324 *e*P **P 04 16 19.1 -0.5**
LPG pmax pmax
comp=Z,4.0nm,0.6s,mb4.9
T11A Corn Creek, Al 89.70 47 ⇑PcP PcP 04 16 20.2 -0.9
baz=90
Q14A Sevier Lake (B 89.84 44 ⇓P **P 04 16 19.4 -1.0**
baz=90
LOR Lormes 89.87 327 *e*P **P 04 16 19.3 -1.1**
comp=Z,21nm,1.1s,mb5.1,baz=45
LOR *e*MLR MLR
comp=Z,1µm,17.8s,MS5.1
LOR Lormes 89.87 327 *e*P **P 04 16 19.3 -1.1**
comp=Z,11nm,1.0s,mb5.1
LOR LR LR
comp=Z,1µm,17.8s,MS5.4
LOR Lormes 89.87 327 *e*P **P 04 16 19.3 -1.1**
LOR pmax pmax
comp=Z,11nm,1.0s,mb5.1
LOR MLR MLR
comp=Z,1µm,17.8s,MS5.4
PPT Papeete 90.11 110 LR LR 04 48 38.1
comp=Z,156nm,19.5s,MS4.5,baz=304,slow=30
L19A Farson 90.14 40 ⇓PcP PcP 04 16 22.6 -0.4
baz=90,SNR=5.7
MPU Maple Canyon 90.18 43 *e*P **P 04 16 22.9 +0.9**
comp=Z,3.5nm,0.9s,mb4.7
SSF Saint Saulge 90.18 327 *e*P **P 04 16 20.9 -1.0**
comp=Z,7.7nm,0.7s,mb4.9
SSF Saint Saulge 90.18 327 *e*P **P 04 16 20.9 -1.0**
comp=Z,3.8nm,0.7s,mb4.8
SSF Saint Saulge 90.18 327 *e*P **P 04 16 20.9 -1.0**
SSF pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
M18A Lyman 90.18 41 ⇑PcP PcP 04 16 22.2 -1.0
baz=90
MBDF Montbardon 90.19 324 *e*P **P 04 16 20.5 -1.5**
comp=Z,7.6nm,0.6s,mb4.9
MBDF Montbardon 90.19 324 *e*P **P 04 16 20.5 -1.5**
comp=Z,3.8nm,0.6s,mb4.9
MBDF Montbardon 90.19 324 *e*P **P 04 16 20.5 -1.5**
MBDF pmax pmax
comp=Z,4.0nm,0.6s,mb4.9
SMF Signal de Mont 90.32 326 *e*P **P 04 16 21.6 -0.9**
comp=Z,16nm,0.8s,mb5.1
SMF Signal de Mont 90.32 326 *e*P **P 04 16 21.6 -0.9**
comp=Z,8.1nm,0.8s,mb5.1
SMF Signal de Mont 90.32 326 *e*P **P 04 16 21.6 -0.9**
SMF pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
TUQ Turquoise Moun 90.33 48 ⇓P **P 04 16 22.1 -0.8**
baz=90
K20A Yellowstone Ra 90.34 39 ⇑P **P 04 16 22.2 -0.6**
baz=90
S13A Holt Ranch, En 90.35 46 ⇑P **P 04 16 22.3 -0.5**
baz=90
SBF Sospel 90.43 323 *e*P **P 04 16 22.5 -0.6**
comp=Z,31nm,0.9s,mb5.4
SBF Sospel 90.43 323 *e*P **P 04 16 22.5 -0.6**
comp=Z,16nm,0.9s,mb5.3
SBF Sospel 90.43 323 *e*P **P 04 16 22.5 -0.6**
SBF pmax pmax
comp=Z,16nm,0.9s,mb5.3
HYF Humbligny 90.44 327 *e*P **P 04 16 23.1 0.0**
AVF Avril sur Loir 90.45 327 *e*P **P 04 16 22.2 -1.0**
comp=Z,12nm,0.8s,mb5.0
AVF Avril sur Loir 90.45 327 *e*P **P 04 16 22.2 -1.0**
comp=Z,6.1nm,0.8s,mb5.0
AVF Avril sur Loir 90.45 327 *e*P **P 04 16 22.2 -1.0**
AVF pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
PGF Pioggiola 90.47 321 *e*P **P 04 16 22.6 -0.8**
comp=Z,22nm,1.0s,mb5.2
PGF Pioggiola 90.47 321 *e*P **P 04 16 22.6 -0.8**
comp=Z,11nm,1.0s,mb5.2
PGF Pioggiola 90.47 321 *e*P **P 04 16 22.6 -0.8**
PGF pmax pmax
comp=Z,11nm,1.0s,mb5.1
ORIF Oris-en-Rattie 90.52 324 *e*P **P 04 16 23.1 -0.4**
comp=Z,6.8nm,0.7s,mb4.8
ORIF *e*MLR MLR
comp=Z,770nm,18.8s,MS4.9
ORIF Oris-en-Rattie 90.52 324 *e*P **P 04 16 23.1 -0.4**
comp=Z,3.4nm,0.7s,mb4.8
ORIF Oris-en-Rattie 90.52 324 *e*P **P 04 16 23.1 -0.4**
ORIF pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
O17A Robinson Place 90.59 42 ⇓PcP PcP 04 16 24.4 -0.6
baz=90
T13A Saint George 90.66 46 ⇓PcP PcP 04 16 25.0 -0.5
baz=90
N18A Larsen Ranch, 90.70 41 ⇓PcP PcP 04 16 24.6 -0.9
baz=90
LDF La Druitiere 90.73 330 *e*P **P 04 16 23.4 -1.0**
comp=Z,12nm,0.5s,mb5.1
LDF La Druitiere 90.73 330 *e*P **P 04 16 23.4 -1.0**
comp=Z,5.8nm,0.5s,mb5.2
LDF La Druitiere 90.73 330 *e*P **P 04 16 23.4 -1.0**
LDF pmax pmax
comp=Z,6.0nm,0.5s,mb5.2
FLN La Foliniere 90.76 330 *e*P **P 04 16 23.5 -1.1**
comp=Z,9.0nm,0.6s,mb5.0
FLN *e*MLR MLR
comp=Z,1µm,23.0s,MS4.9
FLN La Foliniere 90.76 330 *e*P **P 04 16 23.5 -1.1**
comp=Z,4.5nm,0.6s,mb5.0
FLN LR LR
comp=Z,1µm,23.0s,MS5.2
FLN La Foliniere 90.76 330 *e*P **P 04 16 23.5 -1.1**
FLN pmax pmax
comp=Z,5.0nm,0.6s,mb5.0
FLN MLR MLR
comp=Z,1µm,23.0s,MS5.2
MSU Marysvale 90.80 44 *e*P **P 04 16 26.6 +1.6**
comp=Z,27nm,1.7s,mb5.3
MSU Marysvale 90.80 44 *e*P **P 04 16 26.6 +1.6**
MSU pmax pmax
comp=Z,27nm,1.7s,mb5.3
ULM Lac du Bonnet 90.84 28 *e*P **P 04 16 24.9 0.0**
comp=Z,11nm,1.0s,mb5.1
ULM Lac du Bonnet 90.84 28 P **P 04 16 25.2 +0.3**
comp=Z,14nm,0.9s,mb5.3,baz=322,slow=5.8,SNR=7.2
ULM LR LR 05 00 26.3
comp=Z,150nm,18.3s,MS4.5,baz=352,slow=38
V12A Nelson 90.85 48 ⇑PcP PcP 04 16 26.0 -0.2
baz=91
BGF Bois d'Agland 90.86 327 *e*P **P 04 16 25.7 +0.6**
R15A Junction 90.93 44 ⇓PcP PcP 04 16 25.7 -0.9
baz=91
FRF La Foret Royal 91.06 323 *e*P **P 04 16 25.3 -0.7**
comp=Z,25nm,1.1s,mb5.1
FRF La Foret Royal 91.06 323 *e*P **P 04 16 25.3 -0.7**
comp=Z,12nm,1.1s,mb5.2
FRF La Foret Royal 91.06 323 *e*P **P 04 16 25.3 -0.7**
FRF pmax pmax
comp=Z,12nm,1.1s,mb5.1
Q16A Castle Valley 91.15 43 ⇓PcP PcP 04 16 26.7 -0.8
baz=91
VIVF Saint-Julien-l 91.18 325 *e*P **P 04 16 25.5 -1.1**
comp=Z,6.3nm,0.7s,mb4.8
VIVF Saint-Julien-l 91.18 325 *e*P **P 04 16 25.5 -1.1**
comp=Z,3.2nm,0.6s,mb4.8
VIVF Saint-Julien-l 91.18 325 *e*P **P 04 16 25.5 -1.1**
VIVF pmax pmax
comp=Z,3.0nm,0.6s,mb4.8
GRR Gorron 91.21 330 *e*P **P 04 16 25.9 -0.7**
comp=Z,17nm,0.7s,mb5.2
GRR Gorron 91.21 330 *e*P **P 04 16 25.9 -0.7**
comp=Z,8.5nm,0.7s,mb5.2
GRR Gorron 91.21 330 *e*P **P 04 16 25.9 -0.7**
GRR pmax pmax
comp=Z,9.0nm,0.7s,mb5.2
P18A Preston Nutter 91.25 42 ⇓P **P 04 16 27.1 +0.1**
baz=91,SNR=9.0
SMRF Simiane la Rot 91.33 324 *e*P **P 04 16 26.6 -0.7**
comp=Z,5.7nm,0.8s,mb4.7
SMRF Simiane la Rot 91.33 324 *e*P **P 04 16 26.6 -0.7**
comp=Z,5.7nm,0.8s,mb5.0
V13A Grand Canyon W 91.33 47 ⇓P **P 04 16 26.8 -0.7**
baz=91
L21A Rawlins 91.34 39 ⇑P **P 04 16 25.9 -1.5**
baz=91
TCF Toulx Ste Croi 91.36 327 *e*P **P 04 16 26.8 -0.6**
comp=Z,7.4nm,0.7s,mb4.8
TCF Toulx Ste Croi 91.36 327 *e*P **P 04 16 26.8 -0.6**
comp=Z,3.7nm,0.7s,mb4.8
TCF Toulx Ste Croi 91.36 327 *e*P **P 04 16 26.8 -0.6**
TCF pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
R16A Teasdale 91.37 44 ⇓P **P 04 16 27.8 +0.2**
baz=91,SNR=7.4
SRU San Rafael 91.42 43 *e*P **P 04 16 28.8 +1.0**
comp=Z,3.3nm,0.8s,mb4.7
SRU San Rafael 91.42 43 *e*P **P 04 16 28.8 +1.0**
SRU pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
N20A Spence Gulch, 91.60 40 P **P 04 16 28.4 -0.2**
baz=91
RWWY Rawlins 91.62 39 *e*P **P 04 16 28.3 -0.3**
T15A Red Dirt Ranch 91.62 45 ⇓P **P 04 16 28.4 -0.3**
baz=91,SNR=5.4
RSSD Black Hills 91.63 36 *e*P **P 04 16 29.2 +0.5**
comp=Z,9.1nm,1.1s,mb5.0
RSSD Black Hills 91.63 36 *e*P **P 04 16 29.2 +0.5**
RSSD pmax pmax
comp=Z,9.0nm,1.1s,mb5.0
S16A Weppner Ranch, 91.66 44 ⇑P **P 04 16 29.3 +0.4**
baz=91
R17A Hanksville Air 91.75 43 ⇓P **P 04 16 28.4 -1.0**
baz=92,SNR=9.6
P19A Cripple Cowboy 91.98 42 ⇑P **P 04 16 30.7 +0.3**
baz=92,SNR=7.9
V14A Bernalillas Ranc 92.03 47 ⇓P **P 04 16 31.0 +0.3**
baz=92,SNR=5.6
SGMF Saint Gilles 92.04 331 *e*P **P 04 16 30.0 -0.5**
U15A North Rim 92.05 46 ⇓P **P 04 16 30.7 -0.1**
baz=92,SNR=6.5
O20A White River Ci 92.08 41 ⇑P **P 04 16 30.3 -0.6**
baz=92
LASF Ste Croix 92.14 325 *e*P **P 04 16 30.9 -0.2**
comp=Z,29nm,1.2s,mb5.2
S17A Black Ridge (B 92.20 44 ⇓P **P 04 16 30.9 -0.5**
baz=92,SNR=5.9
X13A Yucca 92.20 48 ⇓P **P 04 16 30.8 -0.7**
baz=92
MFF Saint Martin d 92.23 328 *e*P **P 04 16 31.0 -0.4**
comp=Z,15nm,0.7s,mb5.2
MFF Saint Martin d 92.23 328 *e*P **P 04 16 31.0 -0.4**
comp=Z,7.7nm,0.7s,mb5.1
MFF Saint Martin d 92.23 328 *e*P **P 04 16 31.0 -0.4**
MFF pmax pmax
comp=Z,8.0nm,0.7s,mb5.2
R18A Canyonlands Na 92.26 43 ⇑P **P 04 16 31.5 -0.2**
baz=92
Q19A Hogan Spring (92.26 42 ⇓P **P 04 16 32.3 +0.6**
baz=92
ROSF Rostrenen 92.28 331 *e*P **P 04 16 31.1 -0.5**
comp=Z,27nm,0.8s,mb5.3
ROSF Rostrenen 92.28 331 *e*P **P 04 16 31.1 -0.5**
comp=Z,13nm,0.8s,mb5.3
ROSF Rostrenen 92.28 331 *e*P **P 04 16 31.1 -0.5**
ROSF pmax pmax
comp=Z,13nm,0.8s,mb5.3
W14A Seligman 92.30 47 ⇓P **P 04 16 31.8 -0.2**
baz=92
AGMN Agassiz Nation 92.36 29 *e*P **P 04 16 31.6 -0.4**
comp=Z,3.5nm,1.0s,mb4.6
RJF Les Rejaudoux 92.41 327 *e*P **P 04 16 31.9 -0.4**
comp=Z,17nm,0.8s,mb5.1
RJF *e*MLR MLR
comp=Z,1µm,18.2s,MS5.1
RJF Les Rejaudoux 92.41 327 *e*P **P 04 16 31.9 -0.4**
comp=Z,8.4nm,0.8s,mb5.1
RJF LR LR
comp=Z,1µm,18.3s,MS5.4
RJF Les Rejaudoux 92.41 327 *e*P **P 04 16 31.9 -0.4**
RJF pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
RJF MLR MLR
comp=Z,1µm,18.3s,MS5.4
CAF Calviac 92.42 326 *e*P **P 04 16 32.0 -0.3**
comp=Z,7.8nm,0.7s,mb4.9
CAF Calviac 92.42 326 *e*P **P 04 16 32.0 -0.3**
comp=Z,3.9nm,0.7s,mb4.8
CAF Calviac 92.42 326 *e*P **P 04 16 32.0 -0.3**
CAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
V15A Kaibab Nationa 92.50 46 ⇓P **P 04 16 32.0 -0.9**
baz=92
S18A Hurst Farm, BI 92.65 44 ⇑P **P 04 16 33.3 -0.2**
baz=92,SNR=8.1
Y13A Salome 92.69 49 ⇑P **P 04 16 33.5 -0.3**
baz=92
R19A Curley Farm, L 92.70 43 ⇑P **P 04 16 33.8 0.0**
baz=92,SNR=9.1
Q20A Ridgley Place, 92.83 42 ⇑P **P 04 16 34.1 -0.2**
baz=93
PV04 Paradox Valley 92.84 43 *e*P **P 04 16 35.6 +1.2**
P21A Newcastle 92.94 41 ⇓P **P 04 16 34.8 0.0**
baz=93
U16A Tuba City 92.95 45 ⇓P **P 04 16 34.1 -0.8**
baz=93
T18A Mexican Hat 93.08 44 ⇑P **P 04 16 34.9 -0.6**
baz=93
S19A Harvey Farm, M 93.13 43 ⇑P **P 04 16 35.6 -0.1**
baz=93
Y14A Wickenburg 93.15 48 ⇑P **P 04 16 35.0 -0.9**
baz=93
Z13A Yuma Proving G 93.18 49 ⇑P **P 04 16 35.2 -0.9**
baz=93,SNR=5.7
WUAZ Wupatki 93.20 46 *e*P **P 04 16 37.8 +1.7**
comp=Z,16nm,1.2s,mb5.3
P22A Eagle 93.28 41 ⇑P **P 04 16 36.5 +0.1**
baz=93
X15A Humboldt 93.30 47 ⇓P **P 04 16 36.5 -0.1**
baz=93,SNR=6.9
O23A Lake Granby, G 93.34 40 ⇑P **P 04 16 37.4 +0.7**
baz=93
SMCO Snowmass 93.44 41 *e*P **P 04 16 38.7 +1.5**
comp=Z,4.0nm,0.8s,mb4.9
V17A Tonalea, Kykot 93.49 46 ⇓P **P 04 16 37.1 -0.4**
baz=93
MTLF Montolieu 93.50 325 *e*P **P 04 16 36.4 -0.9**
comp=Z,7.4nm,0.9s,mb4.8
MTLF Montolieu 93.50 325 *e*P **P 04 16 36.4 -0.9**
comp=Z,3.7nm,0.9s,mb4.8
MTLF Montolieu 93.50 325 *e*P **P 04 16 36.4 -0.9**
MTLF pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
U18A Rough Rock, Ch 93.55 45 ⇓P **P 04 16 37.5 -0.2**
baz=93,SNR=9.7
Y15A Casa Rosa Ranc 93.57 48 ⇑P **P 04 16 37.8 -0.1**
baz=93,SNR=7.5
Q22A Crested Butte, 93.69 41 ⇑P **P 04 16 38.4 +0.1**
baz=93
ISCO Idaho Springs 93.79 40 *e*P **P 04 16 40.2 +1.4**
T19A Beclabito 93.80 44 ⇓P **P 04 16 38.9 0.0**
baz=94
X16A Lo Mia Camp, P 93.85 47 ⇑P **P 04 16 38.7 -0.5**
baz=94
MVCO Mesa Verde 93.86 43 ⇓P **P 04 16 39.1 0.0**
baz=94
U19A Dine' College, 94.04 44 ⇑P **P 04 16 39.4 -0.6**
baz=94
Y16A Circle Bar Ran 94.17 47 ⇑P **P 04 16 40.6 0.0**
baz=94
EYMN Ely 94.42 27 *e*P **P 04 16 41.8 +0.3**
comp=Z,6.2nm,0.7s,mb5.2
115A Sonoran Desert 94.43 49 ⇑P **P 04 16 41.7 -0.2**
baz=94
214A Organ Pipe Nat 94.51 50 ⇓P **P 04 16 41.7 -0.5**
baz=94
Y17A Roosevelt 94.69 47 ⇓P **P 04 16 42.4 -0.6**
baz=94
KEST Kesra 94.79 316 P **P 04 16 43.0 -0.4**
KEST Kesra 94.79 316 P **P 04 16 43.0 -0.4**
comp=Z,0.6nm,0.6s,mb4.2,baz=58,slow=7.7,SNR=3.7
SCHQ Schefferville 94.92 10 LR LR 05 03 09.6
comp=Z,438nm,19.4s,MS4.9,baz=173,slow=38
T22A Edith 94.94 43 ⇑P **P 04 16 43.0 -1.1**
baz=95
ETSF Etsaut 95.19 326 *e*P **P 04 16 44.7 -0.4**
comp=Z,9.0nm,0.9s,mb4.9
ETSF Etsaut 95.19 326 *e*P **P 04 16 44.7 -0.4**
comp=Z,4.5nm,0.9s,mb4.9
ETSF Etsaut 95.19 326 *e*P **P 04 16 44.7 -0.4**
ETSF pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
X19A St. Johns 95.21 46 ⇑P **P 04 16 44.6 -0.7**
baz=95
216A Three Points, 95.37 49 ⇑P **P 04 16 46.2 +0.1**
baz=95
TUC Tucson 95.62 48 *e*P **P 04 16 48.2 +0.9**
comp=Z,8.9nm,1.3s,mb5.0
TUC Tucson 95.62 48 *e*P **P 04 16 48.2 +0.9**
TUC pmax pmax
comp=Z,9.0nm,1.3s,mb5.0
217A Green Valley 95.94 49 ⇑P **P 04 16 47.6 -1.2**
baz=96
ESDC Sonseca Array 99.31 326 P **P 04 17 02.5 -1.2**
comp=Z,1.2nm,0.7s,mb4.5,baz=25,slow=4.2,SNR=9.2
ESDC PP PP 04 21 04.7 -1.5
comp=Z,0.6nm,0.6s,baz=64,slow=12,SNR=5.9
ESDC LR LR 05 09 06.5
comp=Z,508nm,18.3s,MS5.1,baz=50,slow=40
TXAR Lajitas Array 102.16 46 P Pdif 04 17 17.9 +1.6
comp=Z,0.4nm,0.8s,baz=294,slow=2.8,SNR=4.4
BOSA Boshof 115.61 250 PKP PKPdf 04 22 03.8 -0.1
comp=Z,1.8nm,0.6s,baz=44,slow=12,SNR=7.1
BOSA Boshof 115.61 250 PKIKP PKPdf 04 22 03.8 -0.1
BOSA pmax pmax
comp=Z,2.0nm,0.6s
DBIC Dimbokro 124.05 302 PKP PKPdf 04 22 20.4 -0.3
comp=Z,4.7nm,0.6s,baz=260,slow=1.0,SNR=10
DBIC Dimbokro 124.05 302 PKIKP PKPdf 04 22 20.4 -0.2
DBIC pmax pmax
comp=Z,5.0nm,0.6s
KIC Kosan Boka 124.17 302 *e*PKP1 PKPdf 04 22 20.6 -0.3
comp=Z,15nm,0.7s
TIC Toumodi 124.19 303 *e*PKP1 PKPdf 04 22 19.9 -1.0
comp=Z,45nm,1.1s
LIC Lamto 124.47 302 *e*PKP1 PKPdf 04 22 20.9 -0.5
comp=Z,118nm,1.9s
OTAV Otavalo 139.75 48 *e*PKPdf PKPdf 04 22 51.8 +1.6

BER 02 04:13:04.0±2.7, 69°44N×19°18E, h23km±24km, MD1.7, Northern Norway

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TRO	**Tromso**	**0.21**	**336**	*e*P		Pb	04 13 07.2	-2.3
TRO				*e*S		Sb	04 13 14.5	+1.1
KTK1	**Kautokeino**	**1.51**	**105**	*e*P		Pn	04 13 28.2	-1.3
KTK1				*e*Sg		Sn	04 13 49.9	+1.4
MOR8	**Moi Rana**	**3.74**	**211**	*e*Sg		Sn	04 14 50.6	+7.1
MOR8	**Moi Rana**	**3.74**	**211**	*e*Sg		Sn	04 14 50.6	+7.1

IDC 02 04:21:14.3±2.3, 24°65N×93°88E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.4/24, mbtmp3.6/5, ML4.0/1, Error ellipse: s-maj=67.7km s-min=32.3km az=59.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**2.03**	**297**	*e*Pn	Pn	04 21 56.5	+6.8
SHL				*e*Sn	Sn	04 22 24.5	+8.8
CMAR	**Chiang Mai Arr**	**7.76**	**142**	Pn	Pn	04 23 09.3	+0.8
	0.6nm,0.3s,baz=315,slow=15,SNR=4.2						
MKAR	**Makanchi Array**	**23.96**	**340**	P	P	04 26 32.0	+1.9
	0.3nm,0.3s,baz=148,slow=9.8,SNR=4.5						
SONM	**Songino Array**	**25.18**	**20**	P	P	04 26 40.5	-0.7
	0.8nm,0.7s,baz=198,slow=8.9,SNR=4.6						
ZALV	**Zalesovo Beam**	**30.04**	**349**	P	P	04 27 24.9	+0.2
	0.5nm,0.4s,baz=141,slow=5.5,SNR=2.6						
FINES	**FINESS Array B**	**58.07**	**328**	P	P	04 31 08.0	-1.0
	1.6nm,0.8s,baz=72,slow=6.2,SNR=3.5						

ISCJB ***02*** *04:21:52.6±1.5,37.3S±0.1×176.4E±0.2,h346km±10km, Error ellipse: s-maj=27.5km s-min=14.5km az=140.6*
NEIC ***02*** *04:21:54.6,36.97S×176.38E,h313km,MG4.3(WEL), After WEL.*
WEL ***02*** *04:21:54.6±0.3,36.97S×176.39E,h313km±7km,ML4.3/12, Error ellipse: s-maj=15.7km s-min=10.6km az=0.0*

ISC 02 04:21:54.4±1.4,37.4S±0.1×176.4E±0.2,h338km±10km, n81,σ0.82/88,2C,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.03**	**147**	⇑Pn	**Pn**	**04 22 38.4**	**-0.5**
URZ				SN	**S**	**04 23 12.3**	**-2.2**
URZ	**Urewera**	**1.03**	**147**	P	**Pn**	**04 22 38.4**	**-0.5**
PRRZ	**Pataua Road**	**1.10**	**180**	PN	**Pn**	**04 22 39.5**	**+0.4**
PRRZ				SN	**S**	**04 23 14.9**	**-0.2**
ALRZ	**Allen Road**	**1.17**	**182**	PN	**Pn**	**04 22 39.9**	**+0.4**
MWZ	**Matawai**	**1.30**	**137**	PN	**Pn**	**04 22 40.2**	**+0.1**
MWZ				SN	**S**	**04 23 15.1**	**-1.7**
MWZ	**Matawai**	**1.30**	**137**	P	**Pn**	**04 22 40.2**	**+0.1**
MWZ				S	**S**	**04 23 15.1**	**-1.7**
MXZ	**Matakaoa Point**	**1.53**	**97**	PN	**Pn**	**04 22 40.4**	**-1.1**
MXZ				SN	**S**	**04 23 16.1**	**-3.1**
MXZ	**Matakaoa Point**	**1.53**	**97**	P	**Pn**	**04 22 40.4**	**-1.1**
MXZ				S	**S**	**04 23 16.1**	**-3.1**
RAHZ	**Arahi**	**1.61**	**160**	PN	**Pn**	**04 22 43.2**	**+1.3**
PUZ	**Puketiti**	**1.63**	**115**	PN	**Pn**	**04 22 41.1**	**-0.9**
BKZ	**Black Stump Fm**	**1.77**	**177**	⇑PN	**Pn**	**04 22 43.3**	**+0.4**
CNGZ	**Carnagh Statio**	**1.80**	**128**	PN	**Pn**	**04 22 43.3**	**+0.2**
OTVZ	**Oturere**	**1.85**	**198**	PN	**Pn**	**04 22 44.6**	**+1.1**
KNZ	**Kokohu**	**1.91**	**148**	PN	**Pn**	**04 22 43.9**	**+0.1**
KNZ	**Kokohu**	**1.91**	**148**	P	**Pn**	**04 22 43.9**	**+0.1**
WPVZ	**Whakapapa**	**1.92**	**200**	PN	**Pn**	**04 22 45.6**	**+1.7**
PRGZ	**Paritu Road**	**1.93**	**143**	PN	**Pn**	**04 22 44.4**	**+0.5**
TRVZ	**Turoa**	**2.01**	**199**	PN	**Pn**	**04 22 45.7**	**+1.2**
WNVZ	**Wahianoa**	**2.03**	**198**	PN	**Pn**	**04 22 45.7**	**+1.0**
MHGZ	**Mahia Peninsul**	**2.12**	**146**	PN	**Pn**	**04 22 46.0**	**+0.6**
VRZ	**Vera Road**	**2.15**	**216**	PN	**Pn**	**04 22 47.0**	**+1.4**
PNHZ	**Pukenui**	**2.52**	**183**	PN	**Pn**	**04 22 49.0**	**+0.5**
WAZ	**Wanganui**	**2.60**	**205**	PN	**Pn**	**04 22 50.1**	**+0.9**
WAZ	**Wanganui**	**2.60**	**205**	P	**Pn**	**04 22 50.1**	**+0.9**
PXZ	**Pawanui**	**2.66**	**172**	PN	**Pn**	**04 22 50.4**	**+0.7**
TSZ	**Takapari Road**	**2.68**	**187**	PN	**Pn**	**04 22 50.7**	**+0.8**
TSZ	**Takapari Road**	**2.68**	**187**	P	**Pn**	**04 22 50.7**	**+0.8**
OVHZ	**Dannevirke**	**2.91**	**183**	PN	**Pn**	**04 22 52.2**	**+0.4**
POWZ	**Post Office Ro**	**3.03**	**189**	PN	**Pn**	**04 22 53.4**	**+0.4**
BFZ	**Birch Farm**	**3.28**	**182**	PN	**Pn**	**04 22 55.9**	**+0.5**
BFZ	**Birch Farm**	**3.28**	**182**	P	**Pn**	**04 22 55.9**	**+0.6**
MRZ	**Mangatainoka R**	**3.32**	**191**	PN	**Pn**	**04 22 55.8**	**+0.1**
MRZ	**Mangatainoka R**	**3.32**	**191**	P	**Pn**	**04 22 55.8**	**+0.1**
OGWZ	**Otaki Gorge**	**3.55**	**195**	PN	**Pn**	**04 22 58.1**	**+0.2**
HOWZ	**Holdsworth Sta**	**3.56**	**191**	PN	**Pn**	**04 22 58.1**	**0.0**
KIW	**Kapiti Island**	**3.65**	**198**	PN	**Pn**	**04 22 59.0**	**+0.1**
KIW	**Kapiti Island**	**3.65**	**198**	P	**Pn**	**04 22 59.0**	**+0.1**
TMWZ	**Te Maipa**	**3.73**	**186**	PN	**Pn**	**04 23 00.2**	**+0.5**
MTW	**Mount Morrison**	**3.82**	**190**	PN	**Pn**	**04 23 00.6**	**-0.1**
MTW	**Mount Morrison**	**3.82**	**190**	P	**Pn**	**04 23 00.6**	**-0.1**
CAW	**Cannon Point**	**3.85**	**195**	PN	**Pn**	**04 23 00.9**	**0.0**
CAW	**Cannon Point**	**3.85**	**195**	P	**Pn**	**04 23 00.9**	**0.0**
TRWZ	**Traveller**	**4.03**	**188**	PN	**Pn**	**04 23 03.2**	**+0.3**
PAWZ	**Paruwai Farm**	**4.05**	**190**	PN	**Pn**	**04 23 03.0**	**0.0**
PAWZ	**Paruwai Farm**	**4.05**	**190**	P	**Pn**	**04 23 03.0**	**0.0**
WEL	**Wellington**	**4.08**	**197**	PN	**Pn**	**04 23 02.4**	**-0.9**
WEL	**Wellington**	**4.08**	**197**	P	**Pn**	**04 23 02.4**	**-1.0**
MSWZ	**Moikau Station**	**4.11**	**192**	PN	**Pn**	**04 23 03.6**	**-0.1**
SNZO	**South Karori**	**4.12**	**198**	PN	**Pn**	**04 23 03.8**	**0.0**
SNZO	**South Karori**	**4.12**	**198**	P	**Pn**	**04 23 03.8**	**0.0**
BHW	**Baring Head**	**4.18**	**196**	PN	**Pn**	**04 23 04.2**	**-0.1**
BHW	**Baring Head**	**4.18**	**196**	P	**Pn**	**04 23 04.2**	**-0.2**
PLWZ	**Palliser**	**4.26**	**192**	PN	**Pn**	**04 23 05.2**	**0.0**
TUWZ	**Tuamarina**	**4.45**	**204**	PN	**Pn**	**04 23 07.4**	**+0.1**
NNZ	**Nelson**	**4.47**	**211**	PN	**Pn**	**04 23 06.9**	**-0.7**
NNZ	**Nelson**	**4.47**	**211**	P	**Pn**	**04 23 06.9**	**-0.7**
QRZ	**Quartz Range**	**4.55**	**220**	PN	**Pn**	**04 23 07.4**	**-1.0**
QRZ	**Quartz Range**	**4.55**	**220**	P	**Pn**	**04 23 07.4**	**-1.0**
BSWZ	**Blackbirch Sta**	**4.73**	**203**	PN	**Pn**	**04 23 10.9**	**+0.6**
THZ	**Tophouse**	**5.12**	**211**	PN	**Pn**	**04 23 14.4**	**-0.3**
THZ	**Tophouse**	**5.12**	**211**	P	**Pn**	**04 23 14.4**	**-0.3**
KHZ	**Kahutara**	**5.47**	**203**	PN	**Pn**	**04 23 19.0**	**+0.4**
KHZ	**Kahutara**	**5.47**	**203**	P	**Pn**	**04 23 19.0**	**+0.4**
DSZ	**Denniston Nort**	**5.61**	**218**	PN	**Pn**	**04 23 19.2**	**-1.0**
DSZ	**Denniston Nort**	**5.61**	**218**	P	**Pn**	**04 23 19.2**	**-0.9**
LTZ	**Lake Taylor**	**6.24**	**209**	PN	**Pn**	**04 23 26.8**	**-0.6**
LTZ	**Lake Taylor**	**6.24**	**209**	P	**Pn**	**04 23 26.8**	**-0.6**
MQZ	**McQueen's Vall**	**6.92**	**203**	PN	**Pn**	**04 23 34.4**	**-1.0**
MQZ	**McQueen's Vall**	**6.92**	**203**	P	**Pn**	**04 23 34.4**	**-0.9**
WVZ	**Waitaha Valley**	**7.13**	**216**	PN	**Pn**	**04 23 37.3**	**-0.6**
WVZ	**Waitaha Valley**	**7.13**	**216**	P	**Pn**	**04 23 37.3**	**-0.6**
RPZ	**Rata Peaks**	**7.50**	**211**	PN	**Pn**	**04 23 41.3**	**-1.0**
RPZ	**Rata Peaks**	**7.50**	**211**	P	**Pn**	**04 23 41.3**	**-1.0**
FOZ	**Fox Glacier**	**8.00**	**218**	PN	**Pn**	**04 23 46.2**	**-2.0**
FOZ	**Fox Glacier**	**8.00**	**218**	P	**Pn**	**04 23 46.2**	**-2.0**
LBZ	**Lake Benmore**	**8.41**	**212**	PN	**Pn**	**04 23 52.6**	**-0.5**
LBZ	**Lake Benmore**	**8.41**	**212**	P	**Pn**	**04 23 52.6**	**-0.5**
ODZ	**Otahua Downs**	**8.78**	**208**	PN	**Pn**	**04 23 58.4**	**+0.9**
ODZ				SN	**S**	**04 25 38.1**	**+0.1**
ODZ	**Otahua Downs**	**8.78**	**208**	P	**Pn**	**04 23 58.4**	**+0.9**
JCZ	**Jackson Bay**	**8.83**	**219**	PN	**Pn**	**04 23 57.2**	**-1.0**
JCZ	**Jackson Bay**	**8.83**	**219**	P	**Pn**	**04 23 57.2**	**-0.9**

NEIC ***02*** *05:11:55.3,32.07S×71.16W,h78km,MD3.2(GUC),After GUC.*

GUC 02 05:11:55.3±0.8,32.07S×71.16W,h78km±5km,MD3.2, ML3.7,6C-13D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.34**	**302**	⇓*i*P	Pn	05 12 07.6	0.0
CHNG				*i* S	Sn	05 12 17.5	+0.8
CHNG				AML	AML	05 12 19.1	
	comp=N,2μm,0.2s						
JACH	**Jahuel**	**0.78**	**142**	⇓*i*P	Pn	05 12 12.0	+0.3
JACH				*i* S	Sn	05 12 24.7	+0.8
JACH	**Jahuel**	**0.78**	**142**	⇓*i*P	Pn	05 12 12.0	+0.3
JACH				*i* S	Sn	05 12 24.7	+0.8
ROCH	**El Roble**	**0.91**	**172**	⇑*i*P	Pn	05 12 14.0	+0.8
ROCH				*i* S	Sn	05 12 27.7	+1.2
ROCH	**El Roble**	**0.91**	**172**	⇑*i*P	Pn	05 12 14.0	+0.8
ROCH				*i* S	Sn	05 12 27.7	+1.2
PEL	**Peldehue**	**1.15**	**160**	⇓*i*P	Pn	05 12 16.7	+0.7
PEL				*i* S	Sn	05 12 32.4	+0.8
PEL				AML	AML	05 12 33.6	
	comp=E,5μm,0.4s						
CLCH	**Cerro Calan**	**1.43**	**159**	⇓*i*P	Pn	05 12 20.2	+0.6
CLCH				*i* S	Sn	05 12 39.2	+1.3
CLCH				AML	AML	05 12 40.7	
	comp=N,2μm,0.4s						
CLCH				AML	AML	05 12 41.3	
	comp=N,2μm,0.3s						
SAN	**Santiago**	**1.45**	**163**	*e*P	Pn	05 12 20.2	+0.3
SAN				*i* S	Sn	05 12 39.0	+0.7
SAN	**Santiago**	**1.45**	**163**	*e*P	Pn	05 12 20.2	+0.3
SAN				*i* S	Sn	05 12 39.0	+0.7
LCCH	**Las Cruces**	**1.45**	**194**	⇑*i*P	Pn	05 12 20.3	+0.4
LCCH	**Las Cruces**	**1.45**	**194**	⇑*i*P	Pn	05 12 20.3	+0.4
OVCH	**Ovalle**	**1.45**	**359**	⇑*i*P	Pn	05 12 20.6	+0.7
OVCH				*i* S	Sn	05 12 39.5	+1.1
OVCH	**Ovalle**	**1.45**	**359**	⇑*i*P	Pn	05 12 20.6	+0.7
OVCH				*i* S	Sn	05 12 39.5	+1.1
OVCH				AML	AML	05 12 41.2	
	comp=N,861nm,0.3s						
FCH	**Farellones**	**1.46**	**150**	⇓*i*P	Pn	05 12 21.2	+1.2
FCH				*i* S	Sn	05 12 40.9	+2.3
FCH				AML	AML	05 12 44.1	
	comp=N,2μm,0.2s						
ANTU	**Antumapu**	**1.56**	**164**	*e*P	Pn	05 12 21.9	+0.5
ANTU				*i* S	Sn	05 12 41.6	+0.6
ANTU	**Antumapu**	**1.56**	**164**	*e*P	Pn	05 12 21.9	+0.5
ANTU				*i* S	Sn	05 12 41.6	+0.6
ANTU				AML	AML	05 12 43.5	
	comp=E,1μm,0.3s						
TACH	**Talagante**	**1.59**	**173**	*e*P	Pn	05 12 22.1	+0.4
TACH				*i* S	Sn	05 12 42.6	+0.8
TACH	**Talagante**	**1.59**	**173**	*e*P	Pn	05 12 22.1	+0.4
TACH				*i* S	Sn	05 12 42.6	+0.8
PCH	**Pirque**	**1.64**	**161**	⇓*i*P	Pn	05 12 23.0	+0.6
PCH				*i* S	Sn	05 12 44.0	+1.1
PCH	**Pirque**	**1.64**	**161**	⇓*i*P	Pn	05 12 23.0	+0.6
PCH				*i* S	Sn	05 12 44.0	+1.1
SJCH	**San Jose de Ma**	**1.71**	**157**	*e*P	Pn	05 12 24.3	+1.0
SJCH				*i* S	Sn	05 12 46.5	+2.0
SJCH	**San Jose de Ma**	**1.71**	**157**	*e*P	Pn	05 12 24.3	+1.0
SJCH				*i* S	Sn	05 12 46.5	+2.0
SJCH				AML	AML	05 12 47.7	
	comp=E,567nm,0.3s						
LNV	**Longovilo**	**1.90**	**186**	⇓*i*P	Pn	05 12 25.6	-0.2
LNV				*i* S	Sn	05 12 49.2	+0.3
LNV	**Longovilo**	**1.90**	**186**	⇓*i*P	Pn	05 12 25.6	-0.2
LNV				*i* S	Sn	05 12 49.2	+0.3
CHCH	**Chadas Angostu**	**1.91**	**167**	*i* P	Pn	05 12 26.4	+0.5
CHCH				*i* S	Sn	05 12 50.2	+0.9
CHCH	**Chadas Angostu**	**1.91**	**167**	*i* P	Pn	05 12 26.4	+0.5
CHCH				*i* S	Sn	05 12 50.2	+0.9
TLL	**Tololo Astrono**	**1.92**	**9**	*e*P	Pn	05 12 26.6	+0.6
TLL				*i* S	Sn	05 12 50.4	+1.0
TLL	**Tololo Astrono**	**1.92**	**9**	*e*P	Pn	05 12 26.6	+0.6
TLL				*i* S	Sn	05 12 50.4	+1.0
TLL				AML	AML	05 12 52.5	
	comp=E,509nm,0.4s						
LMEL	**Las Melosas**	**1.95**	**156**	⇓*i*P	Pn	05 12 27.7	+1.2
LMEL				*i* S	Sn	05 12 52.4	+2.2
LMEL	**Las Melosas**	**1.95**	**156**	⇓*i*P	Pn	05 12 27.7	+1.2
LMEL				*i* S	Sn	05 12 52.4	+2.2
LMEL				AML	AML	05 12 54.6	
	comp=N,2μm,0.1s						
LCO	**Las Campanas**	**3.07**	**8**	P	Pn	05 12 41.6	0.0
LCO				*i* S	Sn	05 13 18.2	+1.0
LCO	**Las Campanas**	**3.07**	**8**	*e*P	Pn	05 12 41.6	0.0
LCO				*i* S	Sn	05 13 18.2	+1.0
LCO				AML	AML	05 13 19.4	
	comp=N,250nm,0.2s						

AUST 02 05:18:23.1,14.66S×122.17E,h3km,ML4.1,Northwest of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**4.78**	**136**	*e*P	Pn	05 19 33.7	-2.4
FITZ				*e*S	Sn	05 20 26.3	-5.8
	98nm,0.5s						
KNA	**Kununurra**	**6.46**	**101**	*e*P	Pn	05 19 56.6	-2.7
KNA				*e*S	Sn	05 21 04.4	-9.2
	39nm,0.3s						
MBWA	**Marble Bar**	**6.87**	**199**	*e*P	Pn	05 20 02.5	-2.3
MBWA				*e*S	Sn	05 21 16.2	-7.4
KAKA	**Kakadu**	**10.17**	**80**	*e*P	Pn	05 20 46.7	-3.5
KAKA				*e*S	Sn	05 22 25.5	-19
	7.8nm,0.6s						
MEEK	**Meekatharra**	**12.38**	**195**	*e*P	Pn	05 21 16.2	-4.1
MEEK				*e*S	Sn	05 23 24.3	-15
MORW	**Morawa**	**15.42**	**201**	*e*P	Pn	05 21 55.8	-5.9
MORW				*e*S	Sn	05 24 35.3	-18
KMBL	**Kambalda**	**16.64**	**181**	*e*P	Pn	05 22 10.9	-6.5
KLBR	**Kellerberrin**	**17.34**	**193**	*e*P	Pn	05 22 22.2	-4.0
NWAO	**Narrogin (SRO)**	**18.73**	**193**	*e*P	Pn	05 22 38.6	-4.8

ATH ***02*** *05:23:49.1,35.73N×21.98E,h19km±3km,MD3.5/7*
NEIC ***02*** *05:23:49.1,35.73N×21.98E,h19km,MD3.5(ATH),After ATH.*
CSEM ***02*** *05:23:49.7±0.5,35.77N×22.06E,h2km,MD3.5,Error ellipse: s-maj=12.8km s-min=5.9km az=39.0*
THE ***02*** *05:23:52.8,35.95N×22.26E,h11km±4km,Error ellipse: s-maj=4.9km s-min=0.9km az=36.0*

ISC 02 05:23:49.9±1.9,35.73N±0.07×22.02E±0.07,h6km±10km, n69,σ0.97/80,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.99**	**56**	*e*Pn	**Pg**	**05 24 08.9**	**0.0**
KYTH	**Kithira**	**0.99**	**56**	*e*PN	**Pg**	**05 24 08.9**	**0.0**
KYTH	**Kithira**	**0.99**	**56**	*e*Pn	**Pg**	**05 24 08.9**	**0.0**
PYL	**PYLOS**	**1.19**	**349**	*e*PN	**Pg**	**05 24 11.5**	**-1.2**
PYL	**PYLOS**	**1.19**	**349**	*e*Pn	**Pg**	**05 24 11.5**	**-1.2**
VLI	**Veliai**	**1.23**	**37**	*e*Pn	**Pn**	**05 24 12.8**	**-0.9**
VLI				*e*Sn	**Sg**	**05 24 30.2**	**+0.6**
VLI	**Veliai**	**1.23**	**37**	*e*PN	**Pn**	**05 24 12.8**	**-0.9**
VLI				*e*SN	**Sg**	**05 24 30.2**	**+0.6**
VLI	**Veliai**	**1.23**	**37**	*e*Pn	**Pn**	**05 24 12.8**	**-0.9**
VLI				*e*Sn	**Sg**	**05 24 30.2**	**+0.6**
ITM	**Ithomi**	**1.45**	**357**	*e*Pn	**Pn**	**05 24 15.6**	**-1.1**
ITM				*e*Sn	**Sg**	**05 24 37.0**	**+0.4**
ITM	**Ithomi**	**1.45**	**357**	*e*PN	**Pn**	**05 24 15.6**	**-1.1**
ITM				*e*SN	**Sg**	**05 24 37.0**	**+0.4**
ITM	**Ithomi**	**1.45**	**357**	P	**Pn**	**05 24 15.2**	**-1.5**
ITM	**Ithomi**	**1.45**	**357**	P	**Pn**	**05 24 15.2**	**-1.5**
ITM	**Ithomi**	**1.45**	**357**	*e*Pn	**Pn**	**05 24 15.6**	**-1.1**
ITM				*e*Sn	**Sg**	**05 24 37.0**	**+0.4**
KARN	**Karanos**	**1.58**	**101**	*e*PN	**Pn**	**05 24 18.7**	**+0.2**
KARN	**Karanos**	**1.58**	**101**	P	**Pn**	**05 24 18.7**	**+0.2**
KARN				S	**Sn**	**05 24 38.1**	**-1.1**
KARN	**Karanos**	**1.58**	**101**	P	**Pn**	**05 24 18.7**	**+0.2**
KARN				S	**Sn**	**05 24 38.1**	**-1.1**
VLX	**Vlachokerasia**	**1.66**	**10**	*e*PN	**Pn**	**05 24 20.6**	**+1.0**
VLX	**Vlachokerasia**	**1.66**	**10**	*e*Pn	**Pn**	**05 24 20.6**	**+1.0**
VAM	**Vamos**	**1.81**	**100**	*e*Pn	**Pn**	**05 24 21.7**	**+0.2**
VAM	**Vamos**	**1.81**	**100**	*e*PN	**Pn**	**05 24 21.7**	**+0.2**
VAM	**Vamos**	**1.81**	**100**	*e*Pn	**Pn**	**05 24 21.7**	**+0.2**
GVD	**Gavdhos**	**1.91**	**117**	*e*Pn	**Pn**	**05 24 23.8**	**+0.8**
GVD	**Gavdhos**	**1.91**	**117**	*e*PN	**Pn**	**05 24 23.8**	**+0.8**
GVD	**Gavdhos**	**1.91**	**117**	P	**Pn**	**05 24 23.6**	**+0.6**
GVD				S	**Sn**	**05 24 48.1**	**+0.8**
GVD	**Gavdhos**	**1.91**	**117**	P	**Pn**	**05 24 23.6**	**+0.6**
GVD				S	**Sn**	**05 24 48.1**	**+0.8**
DID	**Didima**	**2.03**	**29**	*e*PN	**Pn**	**05 24 25.6**	**+1.0**
DID	**Didima**	**2.03**	**29**	*e*Pn	**Pn**	**05 24 25.6**	**+1.0**
NAIG	**Nisos Aigina**	**2.34**	**30**	*e*Pn	**Pn**	**05 24 28.8**	**-0.2**
NAIG	**Nisos Aigina**	**2.34**	**30**	*e*PN	**Pn**	**05 24 28.8**	**-0.2**
NAIG	**Nisos Aigina**	**2.34**	**30**	*e*Pn	**Pn**	**05 24 28.8**	**-0.2**
RLS	**Riolos of Patr**	**2.37**	**349**	*e*Pn	**Pn**	**05 24 28.3**	**-1.0**
RLS	**Riolos of Patr**	**2.37**	**349**	*e*PN	**Pn**	**05 24 28.3**	**-1.0**
RLS	**Riolos of Patr**	**2.37**	**349**	*e*Pn	**Pn**	**05 24 28.3**	**-1.0**
VLY	**Voula,Athens**	**2.55**	**33**	*e*Pn	**Pn**	**05 24 32.3**	**+0.5**
VLY	**Voula,Athens**	**2.55**	**33**	*e*PN	**Pn**	**05 24 32.3**	**+0.5**
VLY	**Voula,Athens**	**2.55**	**33**	*e*Pn	**Pn**	**05 24 32.3**	**+0.5**
EFP	**Efpalio**	**2.69**	**358**	*e*PB	**Pn**	**05 24 35.2**	**+1.4**
VLS	**Valsamata**	**2.70**	**335**	*e*Pn	**Pn**	**05 24 30.2**	**-3.7**
VLS	**Valsamata**	**2.70**	**335**	*e*PN	**Pn**	**05 24 30.2**	**-3.7**
THR5	**Thira Island,**	**2.78**	**75**	P	**Pn**	**05 24 33.4**	**-1.6**
THR5	**Thira Island,**	**2.78**	**75**	P	**Pn**	**05 24 33.4**	**-1.6**
LKR	**Lokris**	**3.02**	**15**	*e*Pn	**Pn**	**05 24 37.4**	**-0.8**
LKR	**Lokris**	**3.02**	**15**	*e*PN	**Pn**	**05 24 37.4**	**-0.8**
LKR	**Lokris**	**3.02**	**15**	P	**Pn**	**05 24 38.2**	**0.0**
LKR	**Lokris**	**3.02**	**15**	*e*Pn	**Pn**	**05 24 37.4**	**-0.8**
LKR	**Lokris**	**3.02**	**15**	P	**Pn**	**05 24 38.2**	**0.0**
LKD2	**Lefkada island**	**3.24**	**341**	P	**Pn**	**05 24 41.5**	**+0.2**
LKD2	**Lefkada island**	**3.24**	**341**	P	**Pn**	**05 24 41.5**	**+0.2**
AGG	**Agios Georgios**	**3.30**	**4**	P	**Pn**	**05 24 42.6**	**+0.5**
AGG	**Agios Georgios**	**3.30**	**4**	P	**Pn**	**05 24 42.6**	**+0.5**
NEO	**Neokhori**	**3.70**	**15**	P	**Pn**	**05 24 49.3**	**+1.7**
NEO	**Neokhori**	**3.70**	**15**	P	**Pn**	**05 24 49.3**	**+1.7**
KEK	**Kerkira**	**4.35**	**337**	P	**Pn**	**05 24 56.2**	**-0.3**
KEK	**Kerkira**	**4.35**	**337**	P	**Pn**	**05 24 56.2**	**-0.3**
LIT	**Litokhoron**	**4.38**	**5**	P	**Pn**	**05 24 57.4**	**+0.4**
LIT	**Litokhoron**	**4.38**	**5**	P	**Pn**	**05 24 57.4**	**+0.4**
KZN	**Kozani**	**4.58**	**358**	P	**Pn**	**05 25 00.8**	**+1.2**
KZN	**Kozani**	**4.58**	**358**	P	**Pn**	**05 25 00.8**	**+1.2**
HORT	**Hortiatis**	**4.94**	**10**	P	**Pn**	**05 25 03.4**	**-1.2**
HORT	**Hortiatis**	**4.94**	**10**	P	**Pn**	**05 25 03.4**	**-1.2**
FNA	**Florina**	**5.07**	**354**	P	**Pn**	**05 25 05.4**	**-1.1**
FNA	**Florina**	**5.07**	**354**	P	**Pn**	**05 25 05.4**	**-1.1**
GRG	**Griva**	**5.23**	**3**	P	**Pn**	**05 25 07.4**	**-1.2**
GRG	**Griva**	**5.23**	**3**	P	**Pn**	**05 25 07.4**	**-1.2**
TIP	**Timpagrande**	**5.42**	**311**	P	**Pn**	**05 25 10.8**	**-0.5**
TIP	**Timpagrande**	**5.42**	**311**	P	**Pn**	**05 25 10.8**	**-0.5**
CUC	**Castrocucco**	**6.50**	**313**	P	**Pn**	**05 25 27.9**	**+1.9**
CUC	**Castrocucco**	**6.50**	**313**	P	**Pn**	**05 25 27.9**	**+1.9**
STON	**Ston**	**7.88**	**336**	*i* Pn	**Pn**	**05 25 40.0**	**-5.0**
STON				Sn	**Sn**	**05 26 59.5**	**-15**

IDC ***02*** *05:31:48.3±1.0,31.11S×177.94W,h0km,mb4.6/5, mb1 4.7/5,mb1mx4.2/16,mbtmp4.6/5,Error ellipse: s-maj=34.2km s-min=28.1km az=8.0*
NEIC ***02*** *05:31:53.5±4.5,31.80S×177.70W,h49km±36km,mb4.9/7, Error ellipse: s-maj=44.5km s-min=23.0km az=214.0*

ISC 02 05:31:53.2±1.7,31.72S±0.06×177.9W±0.3,h35km,n38, σ1.921/37,mb4.8/8,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**7.07**	**205**	P	**Pn**	**05 33 33.8**	**-0.3**
PUZ				S	**Sn**	**05 34 55.5**	**+2.3**
PUZ	**Puketiti**	**7.07**	**205**	PN	**Pn**	**05 33 33.8**	**-0.3**
PUZ				SN	**Sn**	**05 34 55.5**	**+2.3**
CNGZ	**Carnagh Statio**	**7.45**	**204**	PN	**Pn**	**05 33 39.9**	**+0.6**
CNGZ				SN	**Sn**	**05 35 06.5**	**+3.9**
URZ	**Urewera**	**7.69**	**210**	P	**Pn**	**05 33 43.0**	**+0.4**
URZ	**Urewera**	**7.69**	**210**	Pn	**Pn**	**05 33 43.0**	**+0.5**
	1.4nm,0.3s,baz=178,slow=14,SNR=14						
URZ				Sn	**Sn**	**05 35 09.0**	**+0.6**
	8.6nm,0.3s,baz=61,slow=23,SNR=13						
URZ	**Urewera**	**7.69**	**210**	PN	**Pn**	**05 33 43.0**	**+0.4**
URZ				SN	**Sn**	**05 35 09.4**	**+1.0**
OUZ	**Omahuta**	**7.89**	**241**	*e*Pn	**Pn**	**05 33 51.0**	**+5.7**
KNZ	**Kokohu**	**8.12**	**205**	P	**Pn**	**05 33 47.8**	**-0.7**
KNZ				S	**Sn**	**05 35 18.8**	**-0.2**
KNZ	**Kokohu**	**8.12**	**205**	PN	**Pn**	**05 33 47.8**	**-0.7**
KNZ				SN	**Sn**	**05 35 18.8**	**-0.3**
PNHZ	**Pukenui**	**9.46**	**209**	SN	**Sn**	**05 35 50.0**	**-1.9**
BFZ	**Birch Farm**	**10.10**	**206**	P	**Pn**	**05 34 14.0**	**-1.7**
BFZ	**Birch Farm**	**10.10**	**206**	PN	**Pn**	**05 34 14.0**	**-1.6**
MRZ	**Mangatainoka R**	**10.35**	**209**	P	**Pn**	**05 34 15.4**	**-3.6**
MRZ	**Mangatainoka R**	**10.35**	**209**	PN	**Pn**	**05 34 15.4**	**-3.6**
MRZ				SN	**Sn**	**05 36 07.7**	**-6.0**
KHZ	**Kahutara**	**12.65**	**210**	*e*Pn	**Pn**	**05 34 52.7**	**+2.1**
RPZ	**Rata Peaks**	**14.79**	**213**	Pn	**Pn**	**05 35 17.7**	**-2.0**
	0.6nm,0.3s,baz=45,slow=1.4,SNR=3.2						
RPZ

comp=Z,56nm,20.4s,MS3.8,baz=274,slow=34
PMSA Palmer Station 66.54 177 LR LR 06 14 54.1
comp=Z,261nm,21.0s,MS4.4,baz=92,slow=34
CMAR Chiang Mai Arr 70.04 337 P **P** **05 48 49.5 -0.3**
2.2nm,0.8s,mb4.1,baz=184,slow=5.2,SNR=11
CMAR LR LR 06 18 07.5
comp=Z,48nm,19.4s,MS3.8,baz=181,slow=35
BOSA Boshof 72.83 246 LR LR 06 15 19.9
comp=Z,120nm,18.3s,MS4.2,baz=152,slow=31
WHN Wuhan 79.39 354 *eP* **P** **05 49 45.0 +1.3**
KSRS Korea Array 86.21 5 LR LR 06 30 22.5
comp=Z,30nm,21.0s,MS3.7,baz=185,slow=37
GTA Gaotai 90.05 343 *eP* **P** **05 50 37.3 +0.1**
GTA pP pP 05 50 41.6 +1.1
GTA sP sP 05 50 44.7 +3.0
GTA pmax pmax
comp=Z,3.0nm,1.2s,mb4.5
ILAR Eielson Array 133.42 36 PKP PKPdf 05 56 51.6 -1.2
comp=Z,0.3nm,0.6s,baz=292,slow=3.7,SNR=4.5
TXAR Lajitas Array 140.57 103 PKhKP PKPpre 05 57 00.5
comp=Z,0.2nm,0.7s,baz=199,slow=5.7,SNR=4.2
TPAW Teton Pass 143.91 78 *e*PKPdf PKPdf 05 57 11.4 -1.3
REDW Red Top Meadow 143.92 79 *e*PKPdf PKPdf 05 57 10.9 -1.8
CHMT Chamberlain Mo 143.93 72 *e*PKPdf PKPdf 05 57 10.5 -2.1
IMW Indian Meadow 144.11 78 *e*PKPdf PKPdf 05 57 12.1 -1.0
MOOW Moose Ponds 144.16 78 *e*PKPdf PKPdf 05 57 11.7 -1.5
LOHW Long Hollow 144.19 78 *e*PKPdf PKPdf 05 57 11.7 -1.5
HRY Holter Researc 144.74 73 *e*PKPdf PKPdf 05 57 14.0 0.0
RWWY Rawlins 145.50 83 *e*PKPdf PKPdf 05 57 16.2 +0.7
ISCO Idaho Springs 145.60 87 *e*PKPbc PKPbc 05 57 16.7 +0.7
RLMT Red Lodge 145.72 77 *e*PKPdf PKPdf 05 57 16.6 +0.8
HKT Hockley 145.94 110 *e*PKPbc PKPbc 05 57 17.8 +0.5
EDM Edmonton 146.00 62 *e*PKPdf PKPdf 05 57 17.0 +1.0
EKA Eskdalemuir Ar 146.23 302 PKPbc PKPbc 05 57 16.2 -1.2
comp=Z,3.8nm,1.1s,baz=106,slow=2.7,SNR=5.2
YKA Yellowknife Ar 146.79 45 PKPbc PKPbc 05 57 18.5 -0.3
comp=Z,2.7nm,0.7s,baz=267,slow=3.2,SNR=8.0
WMOK Wichita Mounta 147.22 100 *e*PKPbc PKPbc 05 57 20.5 -0.4
LAO LASA Array 148.29 76 *e*PKPbc PKPbc 05 57 24.6 +1.1
RSSD Black Hills 148.68 81 *e*PKPbc PKPbc 05 57 24.9 +0.3
KSU1 Kansas State U 151.16 96 *e*PKPbc PKPbc 05 57 31.1 +0.3

ISCJB ***02*** *05:58:26.6±0.5, 22.04S±0.04×67.25W±0.05, h178km±4km, mb4.0/21, Error ellipse: s-maj=8.5km s-min=6.5km az=154.6*
NEIC ***02*** *05:58:27.3, 22.17S×67.59W, h200km, mb4.2/17, After GUC.*
IDC ***02*** *05:58:27.5±1.6, 21.97S×67.19W, h172km±14km, mb3.9/8, mb1 3.9/13, mb1mx3.8/18, mbtmp3.7/13, MS4.1/1, Ms1 4.1/1, ms1mx2.9/17, Error ellipse: s-maj=20.1km s-min=11.9km az=67.0*
GUC ***02*** *05:58:27.3±0.7, 22.17S×67.59W, h200km, ML5.0*
BJI ***02*** *05:58:29.6, 22.20S×67.33W, h198km, mB4.7/1*
ISC 02 05:58:27.5±0.5, 22.05S±0.04×67.22W±0.05, h169km±4km, n213, σ0.672/217, mb4.0/21, 75C-94D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.11**	**264**	⇑*i*P		**Pn**	**05 59 12.8**	**+7.7**
PB04				*i* S		**Sn**	**05 59 46.3**	**+12**
PB04				AML		AML	05 59 48.0	
	comp=N,2μm,0.2s							
PB01	**Plate Boundary**	**2.33**	**295**	⇑*i*P		**Pn**	**05 59 08.3**	**+0.6**
PB01				*i* S		**Sn**	**05 59 38.4**	**-0.3**
PB01				AML		AML	05 59 39.5	
	comp=N,4μm,0.5s							
CEN1	**Los Morros**	**3.06**	**243**	⇑*i*P		**Pn**	**05 59 17.3**	**+0.9**
CEN1				*i* S		**Sn**	**05 59 55.2**	**+0.9**
CEN1				AML		AML	05 59 57.3	
	comp=N,3μm,0.8s							
MECH	**Mejillones**	**3.16**	**250**	⇑*i*P		**Pn**	**05 59 18.5**	**+0.8**
MECH				*i* S		**Sn**	**05 59 56.1**	**-0.6**
MECH				AML		AML	05 59 59.8	
	comp=N,3μm,0.5s							
ANCH	**Antofagasta**	**3.36**	**240**	⇑*i*P		**Pn**	**05 59 18.8**	**-1.4**
ANCH				*i* S		**Sn**	**05 59 57.6**	**-3.5**
ANCH	**Antofagasta**	**3.36**	**240**	⇑*i*P		**Pn**	**05 59 18.8**	**-1.4**
ANCH				*i* S		**Sn**	**05 59 57.6**	**-3.5**
ANCH				AML		AML	05 59 59.6	
	comp=E,3μm,0.2s							
LPAZ	**La Paz**	**5.79**	**351**	*e*Pn		**Pn**	**05 59 52.9**	**+1.2**
	comp=E,54nm,0.5s							
LPAZ				*e*Sn		**Sn**	**06 01 00.2**	**+2.5**
LPAZ	**La Paz**	**5.79**	**351**	P		**Pn**	**05 59 53.1**	**+1.4**
	comp=E,18nm,0.3s,baz=151,slow=6.7,SNR=240							
LPAZ				S		**Sn**	**06 00 58.2**	**+0.4**
	comp=E,2.3nm,0.3s,baz=71,slow=25,SNR=4.3							
LCO	**Las Campanas**	**7.62**	**204**	*e*Pn		**Pn**	**06 00 14.0**	**-1.6**
	comp=E,20nm,0.5s							
SIV	**San Ignacio**	**8.37**	**45**	P		**Pn**	**06 00 23.6**	**-2.1**
	comp=E,101nm,0.3s,baz=234,slow=11,SNR=1029							
SIV				S		**Sn**	**06 01 51.5**	**-7.8**
	comp=E,6.6nm,0.3s,baz=140,slow=21,SNR=6.1							
CFAA	**Coronel Fontan**	**9.56**	**185**	P		**Pn**	**06 00 41.5**	**+0.1**
	comp=E,0.4nm,0.3s,baz=3.6,slow=12,SNR=36							
CFAA				S		**Sn**	**06 02 22.6**	**-5.2**
	comp=E,0.6nm,0.3s,baz=252,slow=22,SNR=11							
CPUP	**Villa Florida**	**9.99**	**117**	*e*Pn		**Pn**	**06 00 47.5**	**+0.5**
CPUP	**Villa Florida**	**9.99**	**117**	P		**Pn**	**06 00 47.2**	**+0.2**
	comp=E,1.2nm,0.3s,baz=282,slow=12,SNR=17							
TRQA	**Tornquist**	**16.59**	**165**	*e*P		**Pn**	**06 02 10.0**	**-0.2**
	comp=E,11nm,0.4s							
SPB	**Sao Paulo**	**18.31**	**99**	*e*P		**P**	**06 02 29.6**	**+0.8**
	comp=E,8.8nm,0.5s							
ATAH	**Atahualpa**	**18.33**	**322**	P		**P**	**06 02 28.2**	**-0.9**
	comp=E,0.3nm,0.3s,baz=129,slow=18,SNR=2.2							
PLCA	**Paso Flores**	**18.84**	**188**	P		**P**	**06 02 35.4**	**+0.9**
	comp=E,0.3nm,0.3s,baz=16,slow=13,SNR=6.8							
PLCA				LR		LR	06 10 00.1	
	comp=E,665nm,21.7s,baz=74,slow=37							
SWET	**Sewanee**	**59.65**	**342**	*e*P		**P**	**06 08 12.3**	**-1.5**
ELN	**Prospectdale**	**60.32**	**348**	*e*P		**P**	**06 08 17.9**	**-0.4**
WVT	**Waverly**	**61.05**	**341**	*e*P		**P**	**06 08 21.4**	**-1.9**
	comp=E,9.5nm,0.7s,mb4.7							
628A	**Big Gap, Mar**	**61.68**	**325**	⇓P		**P**	**06 08 27.3**	**-0.3**
	baz=62							
627A	**Terlingua Ranc**	**61.92**	**324**	⇑P		**P**	**06 08 28.6**	**-0.7**
	baz=62							
TXAR	**Lajitas Array**	**61.98**	**324**	P		**P**	**06 08 28.8**	**-0.9**
	comp=E,0.5nm,0.6s,mb3.5,baz=150,slow=8.6,SNR=8.1							
626A	**Big Bend Ranch**	**62.41**	**324**	⇓P		**P**	**06 08 32.3**	**-0.2**
	baz=63,SNR=5.1							
527A	**Woodward Ranch**	**62.58**	**325**	⇑P		**P**	**06 08 33.0**	**-0.7**
	baz=63							
526A	**Mary Lane Ranc**	**62.77**	**324**	⇓P		**P**	**06 08 34.5**	**-0.4**
	baz=63							
328A	**Wristen Ranch,**	**63.13**	**326**	⇓P		**P**	**06 08 35.0**	**-2.3**
	baz=63							
425A	**Indio Mountain**	**63.82**	**324**	⇓P		**P**	**06 08 41.0**	**-0.8**
	baz=64,SNR=6.1							
325A	**Bean Ranch, Si**	**64.27**	**324**	⇑P		**P**	**06 08 43.4**	**-1.3**
	baz=64,SNR=6.6							
226A	**Malaga, Loving**	**64.34**	**326**	⇓P		**P**	**06 08 43.9**	**-1.2**
	baz=65							
324A	**Moseley Ranch,**	**64.60**	**324**	⇓P		**P**	**06 08 45.4**	**-1.5**
	baz=65							
126A	**Clayton Basin,**	**64.76**	**326**	⇓P		**P**	**06 08 47.1**	**-0.7**
	baz=65							
225A	**Deer Hill, Car**	**64.76**	**325**	⇓P		**P**	**06 08 46.9**	**-1.0**
	baz=65							
Z27A	**Tatum**	**64.88**	**327**	⇓P		**P**	**06 08 47.0**	**-1.6**
	baz=65							
125A	**Gardner Draw,**	**65.10**	**326**	⇑P		**P**	**06 08 48.5**	**-1.6**
	baz=65							
224A	**Cornudas Mount**	**65.11**	**325**	P		**P**	**06 08 49.1**	**-1.0**
	baz=65,SNR=5.3							
MSTX	**Muleshoe**	**65.18**	**328**	⇑P		**P**	**06 08 49.5**	**-1.0**
	baz=65							
Z25A	**Roswell**	**65.62**	**326**	⇑P		**P**	**06 08 51.4**	**-2.0**
	baz=66							
Z24A	**Sheeppen Canyo**	**66.00**	**326**	⇑P		**P**	**06 08 55.2**	**-0.6**
	baz=66							
Y25A	**Mesa, Roswell**	**66.11**	**326**	⇓P		**P**	**06 08 54.7**	**-1.8**
	baz=66							
X26A	**CR and CF Fran**	**66.16**	**327**	⇓P		**P**	**06 08 55.8**	**-1.0**
	baz=66							
220A	**Playas Peak, P**	**66.64**	**322**	⇑P		**P**	**06 08 59.6**	**-0.3**
	baz=67							
121A	**Cookes Peak, D**	**66.69**	**323**	⇓P		**P**	**06 09 00.0**	**-0.2**
	baz=67							
Z22A	**Elephant Butte**	**66.79**	**324**	⇑P		**P**	**06 09 00.6**	**-0.2**
	baz=67							
W25A	**X Bar L Ranch,**	**67.01**	**327**	⇑P		**P**	**06 09 01.5**	**-0.6**
	baz=67							
V26A	**Tequesquite Ra**	**67.14**	**328**	⇓P		**P**	**06 09 02.3**	**-0.7**
	baz=67							
318A	**Bisbee**	**67.14**	**321**	⇑P		**P**	**06 09 02.1**	**-1.0**
	baz=67							
DBIC	**Dimbokro**	**67.39**	**72**	P		**P**	**06 09 03.9**	**-1.2**
	comp=E,3.8nm,1.0s,mb4.2,baz=300,slow=8.1,SNR=5.7							
X23A	**Hourglass Bar**	**67.40**	**326**	⇑P		**P**	**06 09 05.3**	**+0.7**
	baz=68							
Z20A	**Nine Sixteen R**	**67.58**	**323**	⇓P		**P**	**06 09 05.8**	**0.0**
	baz=68							
V25A	**Rancho No Teng**	**67.58**	**328**	⇓P		**P**	**06 09 03.5**	**-2.2**
	baz=68							
U26A	**Atchley Ranch,**	**67.60**	**329**	⇑P		**P**	**06 09 04.8**	**-1.0**
	baz=68							
Y21A	**Point of Rocks**	**67.75**	**324**	⇑P		**P**	**06 09 06.6**	**-0.3**
	baz=68							
V24A	**Rampart Ranch,**	**67.82**	**327**	⇓P		**P**	**06 09 07.3**	**+0.1**
	baz=68							
ANMO	**Albuquerque**	**67.82**	**326**	*e*P		**P**	**06 09 07.3**	**0.0**
	comp=E,1.3nm,0.8s,mb3.7							
W23A	**Werner Place,**	**67.83**	**326**	⇑P		**P**	**06 09 07.0**	**-0.3**
	baz=68							
217A	**Green Valley**	**67.87**	**321**	⇓P		**P**	**06 09 07.3**	**-0.4**
	baz=68							
U25A	**Circle Dot Ran**	**67.92**	**328**	⇓P		**P**	**06 09 07.4**	**-0.5**
	baz=68							
Y20A	**Horse Springs,**	**68.05**	**324**	⇓P		**P**	**06 09 09.5**	**+0.7**
	baz=68							
W22A	**Albuquerque**	**68.13**	**326**	⇑P		**P**	**06 09 09.7**	**+0.5**
	baz=68							
X21A	**Alamocita Cree**	**68.14**	**325**	⇓P		**P**	**06 09 09.8**	**+0.5**
	baz=68							
117A	**Oracle**	**68.40**	**321**	⇓P		**P**	**06 09 10.2**	**-0.7**
	baz=69							
Y19A	**Nutrioso**	**68.57**	**323**	⇓P		**P**	**06 09 12.0**	**+0.1**
	baz=69,SNR=6.2							
V22A	**San Miguel Ran**	**68.80**	**326**	⇑P		**P**	**06 09 14.0**	**+0.7**
	baz=69							
S25A	**Robets Cordova**	**68.94**	**329**	⇓P		**P**	**06 09 13.8**	**-0.4**
	baz=69							
W20A	**Ramah**	**69.04**	**325**	⇑P		**P**	**06 09 14.4**	**-0.4**
	baz=69							
Y17A	**Roosevelt**	**69.28**	**322**	⇓P		**P**	**06 09 16.1**	**-0.2**
	baz=70							
S24A	**Houchin Ranch,**	**69.30**	**329**	⇑P		**P**	**06 09 16.7**	**+0.3**
	baz=70							
SDCO	**Great Sand Dun**	**69.52**	**328**	*e*P		**P**	**06 09 18.0**	**+0.2**
	comp=E,1.9nm,0.7s,mb3.9							
R24A	**Sanders Place,**	**69.72**	**329**	⇓P		**P**	**06 09 19.3**	**+0.3**
	baz=70							
X17A	**Forest Lakes**	**69.72**	**323**	⇓P		**P**	**06 09 19.7**	**+0.6**
	baz=70							
V19A	**Window Rock**	**69.77**	**325**	⇓P		**P**	**06 09 19.9**	**+0.6**
	baz=70							
S22A	**4UR Ranch, Cre**	**70.17**	**328**	⇑P		**P**	**06 09 22.3**	**+0.6**
	baz=70							
U19A	**Dine' College,**	**70.29**	**325**	⇓P		**P**	**06 09 22.4**	**0.0**
	baz=70							
P25A	**Willow Gulch B**	**70.30**	**330**	⇓P		**P**	**06 09 22.6**	**+0.1**
	baz=71							
Q24A	**Divide**	**70.32**	**329**	⇑P		**P**	**06 09 23.2**	**+0.7**
	baz=71							
Y15A	**Casa Rosa Ranc**	**70.32**	**321**	⇓P		**P**	**06 09 22.8**	**+0.1**
	baz=70							
T19A	**Beclabito**	**70.60**	**325**	⇑P		**P**	**06 09 24.5**	**+0.2**
	baz=71							
X15A	**Humboldt**	**70.64**	**322**	⇑P		**P**	**06 09 24.9**	**+0.3**
	baz=71							
V17A	**Tonalea, Kykot**	**70.65**	**323**	⇑P		**P**	**06 09 25.3**	**+0.6**
	baz=71							
U18A	**Rough Rock, Ch**	**70.74**	**325**	⇑P		**P**	**06 09 25.6**	**+0.4**
	baz=71							
X14A	**Yava**	**71.01**	**321**	⇓P		**P**	**06 09 26.9**	**+0.1**
	baz=71							
R21A	**Cimarron**	**71.02**	**327**	⇑P		**P**	**06 09 27.3**	**+0.5**
	baz=71							
Q22A	**Crested Butte,**	**71.08**	**328**	⇑P		**P**	**06 09 28.1**	**+0.9**
	baz=71							
Y13A	**Salome**	**71.10**	**320**	⇓P		**P**	**06 09 28.2**	**+0.7**
	baz=71							
T18A	**Mexican Hat**	**71.28**	**325**	P		**P**	**06 09 28.6**	**+0.2**
	baz=72,SNR=5.7							
R20A	**Redvale**	**71.30**	**327**	⇑P		**P**	**06 09 29.0**	**+0.5**
	baz=72							
U17A	**Shonto**	**71.30**	**324**	⇑P		**P**	**06 09 29.0**	**+0.5**
	baz=72							
S19A	**Harvey Farm, M**	**71.35**	**326**	⇓P		**P**	**06 09 28.8**	**0.0**
	baz=72							
PV01	**Paradox Valley**	**71.35**	**327**	*e*P		**P**	**06 09 29.4**	**+0.6**
	comp=E,190nm,1.0s							
V15A	**Kaibab Nationa**	**71.57**	**323**	⇓P		**P**	**06 09 30.9**	**+0.8**
	baz=72							
P22A	**Eagle**	**71.58**	**329**	⇑P		**P**	**06 09 30.3**	**+0.1**
	baz=72							
X13A	**Yucca**	**71.64**	**321**	⇓P		**P**	**06 09 30.6**	**-0.1**
	baz=72							
O23A	**Lake Granby, G**	**71.67**	**330**	⇓P		**P**	**06 09 31.5**	**+0.9**
	baz=72							
T17A	**Navajo Res., N**	**71.67**	**324**	⇓P		**P**	**06 09 31.7**	**+1.0**
	baz=72							
S18A	**Hurst Farm, Bl**	**71.75**	**325**	⇓P		**P**	**06 09 32.0**	**+0.7**
	baz=72,SNR=6.8							
R19A	**Curley Farm, L**	**71.83**	**326**	⇑P		**P**	**06 09 31.5**	**-0.2**
	baz=72							
P21A	**Newcastle**	**71.86**	**328**	⇓P		**P**	**06 09 32.3**	**+0.5**
	baz=72							
O22A	**Kremmling**	**71.92**	**329**	⇑P		**P**	**06 09 32.1**	**-0.1**
	baz=72							
V14A	**Boquillas Ranc**	**71.96**	**322**	⇓P		**P**	**06 09 33.1**	**+0.5**
	baz=72							
BC3	**Big Chuckawall**	**71.96**	**319**	⇑P		**P**	**06 09 32.6**	**0.0**
	baz=72							
U15A	**North Rim**	**72.07**	**323**	⇓P		**P**	**06 09 33.2**	**+0.1**
	baz=72							
N23A	**Red Feather La**	**72.22**	**330**	⇓P		**P**	**06 09 34.3**	**+0.3**
	baz=72							
R18A	**Canyonlands Na**	**72.22**	**326**	⇑P		**P**	**06 09 34.3**	**+0.3**
	baz=72							
P20A	**De Beque**	**72.31**	**328**	⇑P		**P**	**06 09 35.2**	**+0.8**
	baz=72							
Q19A	**Hogan Spring (**	**72.33**	**327**	⇓P		**P**	**06 09 35.5**	**+0.9**
	baz=73							
N22A	**Wattenberg Ran**	**72.38**	**330**	⇑P		**P**	**06 09 35.7**	**+0.7**
	baz=73							
109C	**Camp Elliot, M**	**72.46**	**318**	⇑P		**P**	**06 09 36.1**	**+0.5**
	baz=73							
T15A	**Red Dirt Ranch**	**72.55**	**323**	⇓P		**P**	**06 09 36.1**	**+0.1**
	baz=73							
V13A	**Grand Canyon W**	**72.62**	**322**	⇑P		**P**	**06 09 36.4**	**-0.1**
	baz=73							
S16A	**Weppner Ranch,**	**72.63**	**324**	⇓P		**P**	**06 09 35.9**	**-0.6**
	baz=73							
R17A	**Hanksville Air**	**72.67**	**326**	⇓P		**P**	**06 09 36.3**	**-0.4**
	baz=73,SNR=6.6							
P19A	**Cripple Cowboy**	**72.70**	**327**	⇓P		**P**	**06 09 37.5**	**+0.6**
	baz=73,SNR=12							
O20A	**White River Ci**	**72.72**	**328**	⇑P		**P**	**06 09 37.1**	**+0.2**
	baz=73							
GMRC	**Granite Mounta**	**72.86**	**320**	⇑P		**P**	**06 09 37.8**	**0.0**
	baz=73							
SRU	**San Rafael**	**73.09**	**326**	⇑P		**P**	**06 09 39.8**	**+0.6**
	baz=73							
SRU	**San Rafael**	**73.09**	**326**	*e*P		**P**	**06 09 39.5**	**+0.4**
	comp=E,5.4nm,0.8s,mb4.3							
N20A	**Spence Gulch,**	**73.27**	**329**	⇓P		**P**	**06 09 40.8**	**+0.7**
	baz=74							
O19A	**Miners Draw (B**	**73.28**	**328**	⇓P		**P**	**06 09 40.4**	**+0.2**
	baz=74							
Q16A	**Castle Valley**	**73.28**	**326**	⇓P		**P**	**06 09 41.1**	**+0.8**
	baz=74							
P18A	**Preston Nutter**	**73.33**	**327**	⇓P		**P**	**06 09 41.5**	**+1.0**
	baz=74,SNR=5.5							
CCUT	**Cedar City**	**73.47**	**323**	*e*P		**P**	**06 09 42.5**	**+1.1**
	comp=E,3.5nm,0.9s,mb4.1							
CCUT				*e*			06 10 31.1	
MSU	**Marysvale**	**73.52**	**325**	*e*P		**P**	**06 09 42.7**	**+1.0**
	comp=E,2.9nm,0.9s,mb4.0							
L21A	**Rawlins**	**73.72**	**330**	⇓P		**P**	**06 09 42.7**	**-0.1**
	baz=74							
M20A	**Sweetwater, Wa**	**73.74**	**329**	⇑P		**P**	**06 09 43.6**	**+0.7**
	baz=74							
S13A	**Holt Ranch, En**	**73.77**	**323**	⇓P		**P**	**06 09 43.1**	**0.0**
	baz=74							
O17A	**Robinson Place**	**74.01**	**327**	⇓P		**P**	**06 09 45.1**	**+0.6**
	baz=74							
L20A	**Wamsutter**	**74.21**	**329**	⇑P		**P**	**06 09 45.8**	**+0.2**
	baz=74							
T11A	**Corn Creek, Al**	**74.30**	**322**	⇓P		**P**	**06 09 46.7**	**+0.4**
	baz=74							
Q14A	**Sevier Lake (B**	**74.46**	**324**	⇓P		**P**	**06 09 47.6**	**+0.5**
	baz=75							
N17A	**Moffit Pass**	**74.62**	**327**	⇓P		**P**	**06 09 48.9**	**+1.0**
	baz=75,SNR=9.5							
K20A	**Yellowstone Ra**	**74.71**	**330**	⇑P		**P**	**06 09 48.3**	**-0.2**
	baz=75							
R12A	**Pony Springs,**	**74.72**	**323**	⇑P		**P**	**06 09 49.6**	**+1.0**
	baz=75							
FURC	**Furnace Creek,**	**74.72**	**320**	⇑P		**P**	**06 09 49.2**	**+0.5**
	baz=75							
L19A	**Farson**	**74.77**	**329**	⇓P		**P**	**06 09 49.2**	**+0.5**
	baz=75							
P14A	**Drum Mountains**	**74.78**	**325**	⇑P		**P**	**06 09 48.8**	**-0.1**
	baz=75							
L18A	**Fontenelle, Gr**	**74.96**	**328**	⇓P		**P**	**06 09 49.6**	**-0.3**
	baz=75,SNR=5.3							
K19A	**Absolon Red Bu**	**75.08**	**330**	⇑P		**P**	**06 09 50.3**	**-0.3**
	baz=75							
ISA	**Isabella**	**75.15**	**319**	⇑P		**P**	**06 09 51.1**	**-0.1**
	baz=75							
ISA	**Isabella**	**75.15**	**319**	*e*P		**P**	**06 09 52.1**	**+0.9**
	comp=E,2.9nm,0.7s,mb4.0							
P13A	**Bates Ranch, G**	**75.19**	**324**	⇑P		**P**	**06 09 51.0**	**-0.3**
	baz=75							
R11A	**Troy Canyon, C**	**75.28**	**323**	⇓P		**P**	**06 09 51.4**	**-0.4**
	baz=76							
BW06	**Boulder Array**	**75.37**	**329**	⇓P		**P**	**06 09 51.6**	**-0.7**
	baz=76							
HWUT	**Hardware Ranch**	**75.48**	**327**	*e*P		**P**	**06 09 53.0**	**+0.2**
	comp=E,2.3nm,0.7s,mb3.9							
K18A	**Toltan Ranch,**	**75.50**	**329**	⇑P		**P**	**06 09 53.7**	**+0.7**
	baz=76,SNR=5.1							
S10A	**Tonopah Range,**	**75.56**	**322**	⇑P		**P**	**06 09 53.4**	**0.0**
	baz=76							
R10A	**Warm Springs**	**75.64**	**322**	⇑P		**P**	**06 09 53.6**	**-0.3**
	baz=76							
Q11A	**Duckwater**	**75.66**	**323**	⇓P		**P**	**06 09 53.6**	**-0.4**
	baz=76							
P12A	**McGill**	**75.69**	**324**	⇑P		**P**	**06 09 55.2**	**+1.1**
	baz=76							
N14A	**Grayback Hills**	**75.76**	**326**	⇓P		**P**	**06 09 54.8**	**+0.4**
	baz=76							
M15A	**Larsen Ranch,**	**75.82**	**327**	⇑P		**P**	**06 09 55.0**	**+0.2**
	baz=76							
J18A	**Kendall Valley**	**75.93**	**329**	⇑P		**P**	**06 09 55.4**	**0.0**
	baz=76,SNR=10							
K17A	**Gardner Place,**	**76.01**	**328**	⇓P		**P**	**06 09 56.0**	**+0.1**
	baz=76							
O12A	**Currie**	**76.17**	**324**	⇓P		**P**	**06 09 56.6**	**-0.2**
	baz=76							
L15A	**Malad City**	**76.19**	**327**	⇓P		**P**	**06 09 56.9**	**+0.1**
	baz=76							
I18A	**Diamond G Ranc**	**76.21**	**330**	⇑P		**P**	**06 09 57.3**	**+0.3**
	baz=76,SNR=5.1							
M14A	**Sheep Mountain**	**76.31**	**326**	⇓P		**P**	**06 09 58.1**	**+0.5**
	baz=76							
ULM	**Lac du Bonnet**	**76.32**	**342**	P		**P**	**06 09 55.3**	**-2.1**
	comp=E,4.2nm,0.5s,mb4.3,baz=168,slow=6.5,SNR=3.2							
K16A	**Soda Springs**	**76.40**	**328**	⇑P		**P**	**06 09 57.8**	**-0.2**
	baz=77,SNR=6.6							
LOHW	**Long Hollow**	**76.51**	**329**	*e*P		**P**	**06 09 59.1**	**+0.4**
	comp=E,1.6nm,0.6s,mb3.8							
L14A	**Malta**	**76.64**	**327**	⇓P		**P**	**06 09 59.1**	**-0.4**
	baz=77							
K15A	**Arbon**	**76.76**	**327**	⇓P		**P**	**06 10 00.6**	**+0.5**
	baz=77							
IMW	**Indian Meadow**	**76.88**	**329**	*e*P		**P**	**06 10 01.3**	**+0.6**
	comp=E,3.5nm,0.9s,mb4.0							
NVAR	**Mina Array Bea**	**76.89**	**321**	P		**P**	**06 10 01.6**	**+0.7**
	comp=E,0.8nm,0.7s,mb3.5,baz=157,slow=5.8,SNR=3.9							
RLMT	**Red Lodge**	**77.04**	**331**	⇑P		**P**	**06 10 02.4**	**+0.8**
	baz=77							
L13A	**Double Diamond**	**77.04**	**326**	⇓P		**P**	**06 10 02.1**	**+0.4**
	baz=77,SNR=5.4							
J15A	**Blackfoot**	**77.24**	**328**	⇑P		**P**	**06 10 02.4**	**-0.3**
	baz=78							
G18A	**Lazy EL Ranch,**	**77.33**	**331**	⇑P		**P**	**06 10 02.1**	**-1.1**
	baz=78							
F18A	**Big Timber**	**77.84**	**331**	⇓P		**P**	**06 10 06.4**	**+0.4**
	baz=78							
L11A	**Cat Creek Ranc**	**78.04**	**325**	⇓P		**P**	**06 10 07.8**	**+0.6**
	baz=78							
F17A	**Fitzpatrick Pl**	**78.27**	**331**	⇓P		**P**	**06 10 08.7**	**+0.3**
	baz=78							
G16A	**Moss Hill, Enn**	**78.29**	**330**	⇓P		**P**	**06 10 08.8**	**+0.3**
	baz=78							
HLID	**Hailey**	**78.34**	**327**	⇑P		**P**	**06 10 09.8**	**+0.9**
	baz=79,SNR=9.0							
HLID	**Hailey**	**78.34**	**327**	*e*P		**P**	**06 10 09.9**	**+1.0**
	comp=E,4.0nm,0.9s,

HHC				PP	PP	06 22 37.4	+2.6	
HHC				SKS	SKSdf	06 24 53.5	-3.4	
HHC				SS	SS	06 42 35.2	-0.1	
HHC				AMB	AMB			
	comp=Z,34nm,5.3s							
CD2	**Chengdu**	**168.04**	**41**	PKP	PKPdf	06 18 13.7	-0.4	
NJ2	**Nanjing**	**168.66**	**333**	*e*PKP	PKPdf	06 18 14.1	-0.3	

ATH ***02*** *05:58:45.3, 35.40N × 21.30E, h6km, MD3.2/5*
NEIC ***02*** *05:58:45.3, 35.40N × 21.30E, h6km, MD3.2(ATH), After ATH.*
CSEM ***02*** *05:58:50.2±0.7, 35.60N × 21.56E, h2km, MD3.2, Error ellipse: s-maj=16.8km s-min=9.6km az=28.0*

ISC 02 05:58:47.6±2.1, 35.3N±0.1 × 21.5E±0.1, h10km, n40, σ0≈92/41, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**1.54**	**52**	*e*Pb	**Pb**	**05 59 16.5**	**+0.3**
KYTH	**Kithira**	**1.54**	**52**	*e*PB	**Pb**	**05 59 16.5**	**+0.3**
KYTH	**Kithira**	**1.54**	**52**	*e*Pb	**Pb**	**05 59 16.5**	**+0.3**
PYL	**PYLOS**	**1.57**	**6**	*e*PB	**Pn**	**05 59 14.0**	**-1.5**
PYL	**PYLOS**	**1.57**	**6**	*e*Pb	**Pn**	**05 59 14.0**	**-1.5**
VLI	**Veliai**	**1.79**	**39**	*e*Pn	**Pn**	**05 59 19.6**	**+1.1**
VLI	**Veliai**	**1.79**	**39**	*e*PN	**Pn**	**05 59 19.6**	**+1.1**
VLI	**Veliai**	**1.79**	**39**	*e*Pn	**Pn**	**05 59 19.6**	**+1.1**
ITM	**Ithomi**	**1.87**	**9**	*e*Pn	**Pn**	**05 59 19.3**	**-0.3**
ITM	**Ithomi**	**1.87**	**9**	*e*PN	**Pn**	**05 59 19.3**	**-0.3**
ITM	**Ithomi**	**1.87**	**9**	*e*Pn	**Pn**	**05 59 19.3**	**-0.3**
KARN	**Karanos**	**1.94**	**87**	*e*PN	**Pb**	**05 59 23.6**	**+0.5**
KARN	**Karanos**	**1.94**	**87**	*e*Pn	**Pb**	**05 59 23.6**	**+0.5**
VLX	**Vlachokerasia**	**2.15**	**18**	*e*PG	**Pb**	**05 59 25.7**	**-0.8**
VLX	**Vlachokerasia**	**2.15**	**18**	*e*Pg	**Pb**	**05 59 25.7**	**-0.8**
NPS	**Neapolis**	**3.33**	**90**	P	**Pg**	**05 59 49.9**	**-1.5**
LKR	**Lokris**	**3.51**	**19**	P	**Pn**	**05 59 43.1**	**+0.9**
LKR	**Lokris**	**3.51**	**19**	P	**Pn**	**05 59 43.1**	**+0.9**
AGG	**Agios Georgios**	**3.74**	**9**	P	**Pn**	**05 59 46.5**	**+1.2**
AGG	**Agios Georgios**	**3.74**	**9**	P	**Pn**	**05 59 46.5**	**+1.2**
NEO	**Neokhori**	**4.19**	**18**	P	**Pn**	**05 59 51.7**	**+0.2**
NEO	**Neokhori**	**4.19**	**18**	P	**Pn**	**05 59 51.7**	**+0.2**
LIT	**Litokhoron**	**4.82**	**9**	P	**Pn**	**06 00 00.3**	**+0.1**
LIT	**Litokhoron**	**4.82**	**9**	P	**Pn**	**06 00 00.3**	**+0.1**
PAIG	**Palioiri**	**4.89**	**20**	P	**Pn**	**06 00 00.4**	**-0.8**
PAIG	**Palioiri**	**4.89**	**20**	P	**Pn**	**06 00 00.4**	**-0.8**
KZN	**Kozani**	**4.97**	**2**	P	**Pn**	**06 00 03.3**	**+1.1**
KZN	**Kozani**	**4.97**	**2**	P	**Pn**	**06 00 03.3**	**+1.1**
HORT	**Hortiatis**	**5.40**	**13**	P	**Pn**	**06 00 07.6**	**-0.5**
HORT	**Hortiatis**	**5.40**	**13**	P	**Pn**	**06 00 07.6**	**-0.5**
TIP	**Timpagrande**	**5.41**	**317**	P	**Pn**	**06 00 09.0**	**+0.7**
TIP	**Timpagrande**	**5.41**	**317**	P	**Pn**	**06 00 09.0**	**+0.7**
FNA	**Florina**	**5.45**	**359**	P	**Pn**	**06 00 08.4**	**-0.4**
FNA	**Florina**	**5.45**	**359**	P	**Pn**	**06 00 08.4**	**-0.4**
GRG	**Griva**	**5.66**	**7**	P	**Pn**	**06 00 11.6**	**-0.1**
GRG	**Griva**	**5.66**	**7**	P	**Pn**	**06 00 11.6**	**-0.1**
SOH	**Sokhos**	**5.67**	**14**	P	**Pn**	**06 00 12.6**	**+0.8**
SOH	**Sokhos**	**5.67**	**14**	P	**Pn**	**06 00 12.6**	**+0.8**
STON	**Ston**	**8.10**	**340**	*e*Pn	**Pn**	**06 00 42.0**	**-3.2**
STON					**Sn**	**06 02 03.0**	**-14**
NVLJ	**Novalja**	**10.54**	**333**	Sn	**Sn**	**06 03 04.2**	**-13**

ISCJB ***02*** *06:25:11.8±1.0, 33.62N±0.03 × 48.93E±0.03, h12km±8km, mb3.7/6, Error ellipse: s-maj=5.4km s-min=4.5km az=157.5*
THR ***02*** *06:25:11.6±0.8, 33.67N × 48.98E, h14km±9km, ML3.7*
KISR ***02*** *06:25:11.7±1.1, 33.31N × 49.58E, h23km±999km, ML3.5*
TEH ***02*** *06:25:13.0, 33.69N × 48.98E, h2km*
CSEM ***02*** *06:25:13.0, 33.69N × 48.98E, h2km, ML3.8, After TEH*
IDC ***02*** *06:25:14.1±3.7, 34.22N × 49.02E, h0km, mb3.7/6, mb1 3.9/8, mb1mx3.6/23, mbtmp3.7/8, ML3.5/2, MS2.7/1, Ms1 2.7/1, ms1mx2.2/24, Error ellipse: s-maj=76.0km s-min=32.1km az=173.0*

ISC 02 06:25:12.4±1.0, 33.63N±0.03 × 48.96E±0.03, h7km±7km, n52, σ1≈24/65, mb3.7/6, 2C-2D, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAO	**Ashtian**	**1.27**	**44**	*e*Pg	**Pn**	**06 25 34.4**	**-2.1**
ASAO				*e*Sg	**Sn**	**06 25 51.5**	**-2.4**
ASAO				AML	AML	06 25 57.5	
	comp=N,1μm,0.5s						
ASAO				AML	AML	06 25 59.2	
	comp=E,2μm,0.7s						
IKOM	**Komasi**	**1.33**	**295**	*e*Pg	**Pn**	**06 25 34.5**	**-2.8**
IKOM				*e*Sg	**Sg**	**06 25 54.1**	**-1.0**
IKOM				*e*		06 26 04.9	
	comp=Z,16μm,0.3s						
IKOM	**Komasi**	**1.33**	**295**	*e*Pg	**Pn**	**06 25 34.5**	**-2.8**
IKOM				*e*Sg	**Sg**	**06 25 54.1**	**-1.0**
SHGR	**Shooshtar-Gavs**	**1.52**	**185**	*e*Pg	**Pn**	**06 25 40.0**	**0.0**
IRAZ	**Razeghan**	**1.94**	**24**	*e*Pn	**Pn**	**06 25 46.0**	**+0.2**
IRAZ				*e*		06 26 26.6	
	comp=Z,12μm,0.3s						
IRAZ	**Razeghan**	**1.94**	**24**	*e*Pn	**Pn**	**06 25 46.0**	**+0.2**
IVIS	**Veis**	**1.97**	**298**	*e*Pn	**Pn**	**06 25 46.5**	**+0.4**
IVIS	**Veis**	**1.97**	**298**	*e*Pn	**Pn**	**06 25 46.5**	**+0.4**
SNGE	**Sanandaj**	**1.98**	**318**	*e*Pg	**Pn**	**06 25 47.5**	**+1.3**
SNGE				AML	AML	06 26 21.4	
	comp=E,593nm,0.5s						
SNGE				AML	AML	06 26 24.2	
	comp=N,868nm,0.6s						
ILIN	**Lien**	**2.10**	**308**	*e*Pn	**Pn**	**06 25 48.8**	**+0.9**
ILIN				*e*		06 25 52.4	
	comp=Z,10μm,0.4s						
ILIN	**Lien**	**2.10**	**308**	*e*Pn	**Pn**	**06 25 48.8**	**+0.9**
IGHG	**Ghaleghazi**	**2.11**	**290**	*e*Pn	**Pn**	**06 25 48.4**	**+0.3**
IGHG				*e*		06 25 54.7	
	comp=Z,12μm,0.3s						
IGHG	**Ghaleghazi**	**2.11**	**290**	*e*Pn	**Pn**	**06 25 48.4**	**+0.3**
GHVR	**GHOM**	**2.12**	**66**	*e*Pg	**Pn**	**06 25 48.9**	**+0.8**
GHVR				AML	AML	06 26 25.7	
	comp=N,417nm,0.7s						
GHVR				AML	AML	06 26 26.6	
	comp=E,555nm,0.5s						
IKLH	**Kolahrood**	**2.21**	**97**	*e*Pn	**Pn**	**06 25 50.3**	**+0.9**
IKLH				*e*Sg	**Sg**	**06 26 22.2**	**-1.1**
IKLH				*e*		06 26 24.1	
	comp=Z,6μm,0.2s						
IKLH	**Kolahrood**	**2.21**	**97**	*e*Pn	**Pn**	**06 25 50.3**	**+0.9**
IKLH				*e*Sg	**Sg**	**06 26 22.2**	**-1.1**
IMHD	**Mahdasht**	**2.49**	**34**	*e*Pn	**Pn**	**06 25 55.9**	**+2.6**
IMHD				*e*Sg	**Sg**	**06 26 28.7**	**-3.6**
IMHD				*e*		06 26 29.6	
	comp=Z,4μm,0.3s						
IMHD	**Mahdasht**	**2.49**	**34**	*e*Pn	**Pn**	**06 25 55.9**	**+2.6**
IMHD				*e*Sg	**Sg**	**06 26 28.7**	**-3.6**
IR3	**Iran Long-Peri**	**2.51**	**42**	*e*Pn	**Pn**	**06 25 54.8**	**+1.2**
IVRN	**Varamin**	**2.66**	**58**	*e*Pn	**Pn**	**06 25 56.0**	**+0.3**
IVRN				*e*Sg	**Sg**	**06 26 34.2**	**-3.8**
IVRN				*e*Sg	**Sg**	**06 26 34.4**	**-3.6**
IVRN	**Varamin**	**2.66**	**58**	*e*Pn	**Pn**	**06 25 56.0**	**+0.3**
IVRN				*e*Sg	**Sg**	**06 26 34.2**	**-3.8**
ISFB	**Sefidab**	**2.82**	**74**	*e*Pn	**Pn**	**06 25 59.7**	**+1.9**
ISFB				*e*		06 26 41.4	
	comp=Z,3μm,0.4s						
ISFB	**Sefidab**	**2.82**	**74**	*e*Pn	**Pn**	**06 25 59.7**	**+1.9**
IGAR	**Gharneh**	**2.86**	**114**	*e*Pn	**Pn**	**06 25 59.6**	**+1.2**
IGAR				*e*		06 26 44.4	
	comp=Z,2μm,0.3s						
IZEF	**Zefreh**	**2.91**	**104**	*e*Pn	**Pn**	**06 26 00.3**	**+1.2**
IZEF				*e*		06 26 54.7	
	comp=Z,2μm,0.4s						
IZEF	**Zefreh**	**2.91**	**104**	*e*Pn	**Pn**	**06 26 00.3**	**+1.2**
IDMV	**Damavand**	**3.19**	**52**	*e*Pn	**Pn**	**06 26 03.4**	**+0.4**
IDMV				*e*		06 27 06.4	
	comp=Z,2μm,0.3s						
IDMV	**Damavand**	**3.19**	**52**	*e*Pn	**Pn**	**06 26 03.4**	**+0.4**
NASN	**Na'in**	**3.33**	**103**	*e*Pn	**Pn**	**06 26 05.9**	**+1.1**
NASN				*e*Sg	**Sg**	**06 26 55.5**	**-3.8**
ILAS	**Lasjerd**	**3.73**	**61**	*e*Pn	**Pn**	**06 26 10.7**	**+0.3**
ILAS				*e*		06 27 24.2	
	comp=Z,1μm,0.3s						
ILAS	**Lasjerd**	**3.73**	**61**	*e*Pn	**Pn**	**06 26 10.7**	**+0.3**
MIB	**Mutribah**	**4.06**	**200**	*e*P	**Pn**	**06 26 14.8**	**0.0**
MIB				*e*S	**Sn**	**06 27 02.4**	**-0.2**
MIB				AML	AML	06 27 15.3	
	comp=Z,61nm,0.6s						
IMAH	**Mahabad**	**4.11**	**321**	*e*Pn	**Pg**	**06 26 33.0**	**+1.9**
ISHM	**Shahmirzad**	**4.18**	**57**	*e*Pn	**Pn**	**06 26 17.9**	**+1.4**
ISHM	**Shahmirzad**	**4.18**	**57**	*e*Pn	**Pn**	**06 26 17.9**	**+1.4**
ISRB	**Sarab**	**4.32**	**346**	*e*Pn	**Pn**	**06 26 18.4**	**0.0**
IANJ	**Anjilo**	**4.48**	**64**	*e*Pn	**Pn**	**06 26 20.0**	**-0.6**
IANJ	**Anjilo**	**4.48**	**64**	*e*Pn	**Pn**	**06 26 20.0**	**-0.6**
NAY	**Al-Naaiem**	**4.61**	**199**	*e*P	**Pn**	**06 26 22.2**	**-0.1**
NAY				*e*S	**Sn**	**06 27 16.2**	**+0.1**
NAY				AML	AML	06 27 20.5	
	comp=Z,19nm,0.5s						
RDF	**Al-Radifah**	**4.84**	**195**	*e*P	**Pn**	**06 26 25.7**	**+0.1**
RDF				*e*S	**Sn**	**06 27 20.0**	**-1.9**
RDF				AML	AML	06 27 25.1	
	comp=Z,86nm,0.5s						
IGLO	**Ghaloghah**	**4.92**	**53**	*e*Pn	**Pn**	**06 26 26.9**	**+0.3**
IGLO	**Ghaloghah**	**4.92**	**53**	*e*Pn	**Pn**	**06 26 26.9**	**+0.3**
IHRS	**Heris**	**4.93**	**342**	*e*Pn	**Pn**	**06 26 27.1**	**+0.2**
ASF	**Jabal al Asfar**	**10.25**	**265**	LR	LR	06 32 37.4	
	comp=Z,46nm,19.9s,baz=18,slow=43						
MMAI	**Mount Meron Ar**	**11.36**	**271**	Pn	**Pn**	**06 27 59.8**	**+4.7**
	comp=Z,0.8nm,0.3s,baz=70,slow=17,SNR=3.6						
BRTR	**Keskin Array B**	**13.72**	**301**	Pn	**Pn**	**06 28 28.2**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=123,slow=14,SNR=8.5						
AKASG	**Malin Array Be**	**22.36**	**326**	P	**P**	**06 30 08.3**	**-2.5**
	comp=Z,1.5nm,0.7s,mb3.6,baz=135,slow=9.7,SNR=5.5						
BVAR	**Borovoye Array**	**24.71**	**32**	P	**P**	**06 30 33.7**	**-0.2**
	comp=Z,1.0nm,0.6s,mb3.6,baz=220,slow=8.8,SNR=6.2						
FINES	**FINESS Array B**	**31.49**	**339**	P	**P**	**06 31 32.5**	**-2.0**
	comp=Z,3.7nm,1.1s,mb4.1,baz=152,slow=8.4,SNR=5.1						
NOA	**NORSAR Array B**	**36.62**	**330**	P	**P**	**06 32 17.1**	**-1.8**
	comp=Z,1.3nm,0.9s,mb3.8,baz=129,slow=8.5,SNR=3.3						
ILAR	**Eielson Array**	**81.14**	**7**	P	**P**	**06 37 26.5**	**-1.6**
	comp=Z,0.2nm,0.7s,mb3.2,baz=324,slow=4.5,SNR=3.0						
YKA	**Yellowknife Ar**	**83.30**	**352**	P	**P**	**06 37 40.2**	**+0.7**
	comp=Z,1.2nm,0.9s,mb3.9,baz=26,slow=3.3,SNR=3.8						

IDC ***02*** *06:59:52.4±0.8, 60.38S × 26.72W, h0km, mb4.2/7, mb1 4.2/7, mb1mx4.1/12, mbtmp4.2/7, MS3.7/6, Ms1 3.6/6, ms1mx3.5/14, Error ellipse: s-maj=28.5km s-min=20.3km az=48.0*
NEIC ***02*** *06:59:57.9±0.5, 60.35S × 26.50W, h35km, mb4.5/6, Error ellipse: s-maj=14.8km s-min=12.8km az=54.0*
ISCJB ***02*** *06:59:58.5±5.9, 60.4S±0.1 × 26.5W±0.3, h58km±55km, mb4.2/10, MS3.7/5, Error ellipse: s-maj=26.5km s-min=17.2km az=143.1*

ISC 02 07:00:00.9±5.6, 60.4S±0.1 × 26.6W±0.3, h64km±53km, n21, σ0≈74/15, mb4.2/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**17.62**	**240**	P	**Pn**	**07 04 01.6**	**+0.1**
	1.2nm,0.3s,baz=70,slow=15,SNR=9.1						
PMSA				LR	LR	07 09 51.5	
	comp=Z,100nm,18.5s,baz=120,slow=34						
USHA	**Ushuaia**	**22.80**	**265**	LR	LR	07 11 50.6	
	comp=Z,253nm,21.9s,baz=79,slow=32						
QSPA	**South Pole Qui**	**29.85**	**180**	*e*P	**P**	**07 06 01.6**	**+0.2**
	12nm,0.6s,mb4.8						
QSPA	**South Pole Qui**	**29.85**	**180**	P	**P**	**07 06 01.6**	**+0.2**
	12nm,0.6s,mb4.8,baz=215,slow=3.7,SNR=48						
QSPA				LR	LR	07 17 38.4	
	comp=Z,141nm,18.0s,baz=219,slow=36						
PLCA	**Paso Flores**	**33.31**	**266**	LR	LR	07 19 57.8	
	comp=Z,88nm,19.3s,baz=107,slow=36						
MAW	**Mawson**	**36.52**	**140**	*e*P	**P**	**07 06 59.0**	**-0.5**
	0.6nm,0.7s,mb3.5						
MAW	**Mawson**	**36.52**	**140**	P	**P**	**07 06 59.5**	**0.0**
	3.3nm,1.0s,mb4.1,baz=223,slow=11,SNR=5.0						
CFAA	**Coronel Fontan**	**39.73**	**297**	P	**P**	**07 07 25.3**	**-1.5**
CFAA	**Coronel Fontan**	**39.73**	**297**	P	**P**	**07 07 25.3**	**-1.5**
	0.3nm,0.4s,mb3.4,baz=148,slow=6.4,SNR=15						
SBA	**Scott Base**	**41.77**	**184**	*e*P	**P**	**07 07 44.1**	**+1.0**
	19nm,1.6s,mb4.5						
BOSA	**Boshof**	**46.88**	**71**	P	**P**	**07 08 24.5**	**0.0**
	1.8nm,0.8s,mb4.1,baz=217,slow=5.1,SNR=2.8						
BOSA				LR	LR	07 23 42.6	
	comp=Z,68nm,18.3s,baz=179,slow=30						
CASY	**Casey**	**49.72**	**159**	*e*P	**P**	**07 08 45.4**	**-0.4**
	4.2nm,0.8s,mb4.5						
LPAZ	**La Paz**	**53.22**	**307**	*e*P	**P**	**07 09 12.6**	**+0.1**
	5.6nm,0.9s,mb4.5						
LPAZ	**La Paz**	**53.22**	**307**	P	**P**	**07 09 12.8**	**+0.3**
	2.2nm,0.5s,mb4.3,baz=103,slow=4.5,SNR=11						
LSZ	**Lusaka**	**59.74**	**66**	LR	LR	07 31 56.3	
	comp=Z,105nm,18.7s,baz=243,slow=32						
DBIC	**Dimbokro**	**69.01**	**23**	P	**P**	**07 10 59.8**	**+0.5**
	6.2nm,0.9s,mb4.5,baz=150,slow=7.4,SNR=5.3						
OTAV	**Otavalo**	**72.37**	**304**	*e*P	**P**	**07 11 20.9**	**+1.1**
	2.9nm,1.0s,mb4.2						
ASAR	**Alice Springs**	**94.74**	**162**	P	**P**	**07 13 14.2**	**-0.9**
	0.3nm,0.7s,mb3.9,baz=189,slow=4.1,SNR=4.4						
YKA	**Yellowknife Ar**	**139.54**	**314**	PKP	PKPdf	07 19 21.5	+2.2
	1.1nm,0.7s,baz=150,slow=1.6,SNR=3.5						
SONM	**Songino Array**	**150.39**	**94**	PKPbc	PKPbc	07 19 45.1	+1.4
	1.5nm,0.7s,baz=221,slow=3.7,SNR=6.5						
ILAR	**Eielson Array**	**153.09**	**305**	PKPbc	PKPbc	07 19 49.6	+0.3
	0.5nm,0.7s,baz=310,slow=1.0,SNR=8.3						

IDC ***02*** *07:12:40.9±0.8, 34.42N × 26.01E, h0km, mb4.2/14, mb1 4.2/19, mb1mx4.1/29, mbtmp4.1/19, ML4.2/5, MS3.0/2, Ms1 3.0/2, ms1mx2.5/26, Error ellipse: s-maj=17.7km s-min=15.5km az=61.0*
ISCJB ***02*** *07:12:40.5±0.6, 34.32N±0.02 × 26.08E±0.03, h12km±4km, mb4.2/32, MS3.2/6, Error ellipse: s-maj=4.3km s-min=2.7km az=42.7*
CSEM ***02*** *07:12:42.5±0.1, 34.36N × 25.97E, h10km, mb4.2/9, Ms2.6, Error ellipse: s-maj=4.8km s-min=3.2km az=48.0*
ATH ***02*** *07:12:43.3, 34.40N × 26.00E, h13km±3km, MD3.8/18*
MOS ***02*** *07:12:43.6±1.6, 34.29N × 25.79E, h33km, mb4.4/22, Error ellipse: s-maj=7.4km s-min=4.5km az=103.2*
NEIC ***02*** *07:12:43.3, 34.40N × 26.00E, h13km, mb4.0/12, MD3.8(ATH), After ATH.*
GII ***02*** *07:12:46.2±0.0, 34.35N × 26.59E, h1km, Md3.7/1*
HLW ***02*** *07:12:48.0, 34.21N × 26.24E, h36km±42km, Ml3.9*

ISC 02 07:12:42.4±0.6, 34.36N±0.02 × 26.04E±0.02, h11km±4km, n272, σ1≈28/298, mb4.2/32, MS3.2/6, 4C-2D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XRY	**Khrisi**	**0.59**	**331**	*e*Pg	**Pg**	**07 12 53.6**	**-0.3**
XRY	**Khrisi**	**0.59**	**331**	*e*PG	**Pg**	**07 12 53.6**	**-0.3**
XRY	**Khrisi**	**0.59**	**331**	*e*Pg	**Pg**	**07 12 53.6**	**-0.3**
ZKR	**Zakros**	**0.77**	**11**	*e*Pg	**Pg**	**07 12 57.0**	**-0.3**
ZKR				*e*Sb	**Sb**	**07 13 07.8**	**-0.5**
ZKR	**Zakros**	**0.77**	**11**	*e*PG	**Pg**	**07 12 57.0**	**-0.3**
ZKR				*e*SB	**Sb**	**07 13 07.8**	**-0.5**
ZKR	**Zakros**	**0.77**	**11**	*e*Pg	**Pg**	**07 12 57.0**	**-0.3**
ZKR				*e*Sb	**Sb**	**07 13 07.8**	**-0.5**
LAST	**Lasithi**	**0.93**	**330**	*e*Pg	**Pg**	**07 12 59.3**	**-0.9**
LAST				*e*Sb	**Sb**	**07 13 12.7**	**-0.1**
LAST	**Lasithi**	**0.93**	**330**	*e*PG	**Pg**	**07 12 59.3**	**-0.9**
LAST				*e*SB	**Sb**	**07 13 12.7**	**-0.1**
LAST	**Lasithi**	**0.93**	**330**	*e*Pg	**Pg**	**07 12 59.3**	**-0.9**
LAST				*e*Sb	**Sb**	**07 13 12.7**	**-0.1**
NPS	**Neapolis**	**0.97**	**339**	*e*Pb	**Pb**	**07 13 00.1**	**-1.1**
NPS				*e*Sb	**Sb**	**07 13 13.4**	**-0.6**
NPS	**Neapolis**	**0.97**	**339**	*e*PB	**Pb**	**07 13 00.1**	**-1.1**
NPS				*e*SB	**Sb**	**07 13 13.4**	**-0.6**
NPS	**Neapolis**	**0.97**	**339**	*e*Pb	**Pb**	**07 13 00.1**	**-1.1**
NPS				*e*Sb	**Sb**	**07 13 13.4**	**-0.6**
SIVA	**Sivas**	**1.21**	**303**	*e*Pg	**Pg**	**07 13 04.7**	**-0.9**
SIVA				*e*Sb	**Sb**	**07 13 21.4**	**+0.5**
SIVA	**Sivas**	**1.21**	**303**	*e*PG	**Pg**	**07 13 04.7**	**-0.9**
SIVA				*e*SB	**Sb**	**07 13 21.4**	**+0.5**
SIVA	**Sivas**	**1.21**	**303**	*e*Pg	**Pg**	**07 13 04.7**	**-0.9**
SIVA				*e*Sb	**Sb**	**07 13 21.4**	**+0.5**
IDI	**Anoyia**	**1.33**	**315**	*e*Pb	**Pb**	**07 13 07.8**	**+0.5**
IDI	**Anoyia**	**1.33**	**315**	*e*PB	**Pb**	**07 13 07.8**	**+0.5**
IDI	**Anoyia**	**1.33**	**315**	*e*Pb	**Pb**	**07 13 07.8**	**+0.5**
KARP	**Karpathos**	**1.50**	**37**	*e*Pb	**Pb**	**07 13 12.1**	**+1.8**
KARP	**Karpathos**	**1.50**	**37**	*e*PB	**Pb**	**07 13 12.1**	**+1.8**
KARP	**Karpathos**	**1.50**	**37**	*e*Pb	**Pb**	**07 13 12.1**	**+1.8**
GVD	**Gavdhos**	**1.68**	**287**	*e*Pg	**Pg**	**07 13 13.7**	**-0.9**
GVD				*e*Sb	**Sb**	**07 13 37.3**	**+2.8**
GVD	**Gavdhos**	**1.68**	**287**	*e*PG	**Pg**	**07 13 13.7**	**-0.9**
GVD				*e*SB	**Sb**	**07 13 37.3**	**+2.8**
GVD	**Gavdhos**	**1.68**	**287**	*e*Pg	**Pg**	**07 13 13.7**	**-0.9**
GVD				*e*Sb	**Sb**	**07 13 37.3**	**+2.8**
VAM	**Vamos**	**1.84**	**305**	*e*Pg	**Pg**	**07 13 17.2**	**-0.5**
VAM	**Vamos**	**1.84**	**305**	*e*PG	**Pg**	**07 13 17.2**	**-0.5**
VAM	**Vamos**	**1.84**	**305**	*e*Pg	**Pg**	**07 13 17.2**	**-0.5**
KARN	**Karanos**	**2.03**	**302**	*e*PG	**Pg**	**07 13 20.1**	**-1.3**
KARN	**Karanos**	**2.03**	**302**	*e*Pg	**Pg**	**07 13 20.1**	**-1.3**
ARG	**Arkhangelos**	**2.52**	**42**	*e*Pn	**Pn**	**07 13 26.8**	**+3.5**
ARG	**Arkhangelos**	**2.52**	**42**	*e*PN	**Pn**	**07 13 26.8**	**+3.5**
APE	**Apeiranthos**	**2.74**	**351**	*e*Pn	**Pn**	**07 13 29.6**	**+3.4**
APE	**Apeiranthos**	**2.74**	**351**	*e*PN	**Pn**	**07 13 29.6**	**+3.4**
LTBQ	**Tobruq**	**2.90**	**218**	*i* P	**Pn**	**07 13 29.6**	**+1.2**
	SNR=134						
BDRM	**Kayabasi**	**2.94**	**23**	*i* P	**Pn**	**07 13 30.0**	**+1.0**
BDRM	**Kayabasi**	**2.94**	**23**	*i* P	**Pn**	**07 13 30.0**	**+1.1**
SLUM		**2.94**	**194**	P	**Pn**	**07 13 30.3**	**+1.3**
	baz=198						
SLUM				S	**Sn**	**07 14 03.4**	**-0.8**
	baz=198						
SLUM		**2.94**	**194**	P	**Pn**	**07 13 30.3**	**+1.3**
SLUM				S	**Sn**	**07 14 03.4**	**-0.8**
KYTH	**Kithira**	**3.12**	**309**	*e*Pn	**Pn**	**07 13 34.2**	**+2.8**
KYTH	**Kithira**	**3.12**	**309**	*e*PN	**Pn**	**07 13 34.2**	**+2.8**
HMAT	**Matruh**	**3.37**	**164**	P	**Pn**	**07 13 35.5**	**+0.6**
	baz=166						
HMAT	**Matruh**	**3.37**	**164**	P	**Pn**	**07 13 35.5**	**+0.6**
VLI	**Veliai**	**3.46**	**314**	*e*Pn	**Pn**	**07 13 38.8**	**+2.7**
VLI	**Veliai**	**3.46**	**314**	*e*PN	**Pn**	**07 13 38.8**	**+2.7**
AKAS	**Kas**	**3.47**	**56**	*i* P	**Pn**	**07 13 36.9**	**+0.7**
AKAS	**Kas**	**3.47**	**56**	*i* P	**Pn**	**07 13 36.9**	**+0.7**
AYDN	**Tasoluk**	**3.62**	**24**	*i* P	**Pn**	**07 13 41.2**	**+2.8**
AYDN	**Tasoluk**	**3.62**	**24**	*i* P	**Pn**	**07 13 41.2**	**+2.9**
DID	**Didima**	**3.88**	**325**	*e*PN	**Pn**	**07 13 42.3**	**+0.4**
DID	**Didima**	**3.88**	**325**	*e*Pn	**Pn**	**07 13 42.3**	**+0.4**
CHOS	**Chios island**	**4.02**	**0**	*e*PN	**Pn**	**07 13 44.7**	**+0.8**
CHOS	**Chios island**	**4.02**	**0**	*e*Pn	**Pn**	**07 13 44.7**	**+0.8**
GOLH	**Golhisar**	**4.06**	**44**	*i* P	**Pn**	**07 13 44.7**	**+0.3**
GOLH	**Golhisar**	**4.06**	**44**	*i* P	**Pn**	**07 13 44.7**	**+0.3**
DNZL	**Cakiroluk**	**4.12**	**35**	*i* P	**Pn**	**07 13 49.6**	**+4.3**
DNZL	**Cakiroluk**	**4.12**	**35**	*i* P	**Pn**	**07 13 49.6**	**+4.3**
KDAG	**Bornova**	**4.16**	**13**	*i* P	**Pn**	**07 13 46.7**	**+1.0**
KDAG	**Bornova**	**4.16**	**13**	*i* P	**Pn**	**07 13 46.7**	**+0.9**
VLX	**Vlachokerasia**	**4.23**	**316**	*e*PN	**Pn**	**07 13 49.9**	**+3.2**
PYL	**PYLOS**	**4.32**	**307**	*e*PN	**Pn**	**07 13 48.2**	**+0.2**
PYL	**PYLOS**	**4.32**	**307**	*e*Pn	**Pn**	**07 13 48.2**	**+0.2**
ITM	**Ithomi**	**4.37**	**311**	*e*Pn	**Pn**	**07 13 49.0**	**+0.3**
ITM	**Ithomi**	**4.37**	**311**	*e*PN	**Pn**	**07 13 49.0**	**+0.3**
ITM	**Ithomi**	**4.37**	**311**	*e*Pn	**Pn**	**07 13 49.0**	**+0.3**
KORT	**Korkueli**	**4.39**	**52**	*i* P	**Pn**	**07 13 52.1**	**+3.1**
KORT	**Korkueli**	**4.39**	**52**	*i* P	**Pn**	**07 13 52.1**	**+3.2**
LTK	**Loutraki**	**4.42**	**327**	*e*PN	**Pn**	**07 13 49.6**	**+0.2**
LTK	**Loutraki**	**4.42**	**327**	*e*Pn	**Pn**	**07 13 49.6**	**+0.2**
GUR	**Goura**	**4.66**	**321**	*e*PN	**P

ZEI	**Tsey**	**16.28**	**54**	*e*P		**Pn**	**07 16 35.2**	**+4.3**
	comp=Z,33nm,1.0s							
TBLG	**Delisi**	**16.45**	**58**	*e*P		**Pn**	**07 16 37.9**	**+4.8**
TBLG	**Delisi**	**16.45**	**58**	P		**Pn**	**07 16 38.0**	**+4.9**
TBLG	**Delisi**	**16.45**	**58**	*e*P		**Pn**	**07 16 37.9**	**+4.8**
VRAC	**Vranov**	**16.50**	**338**	Pn		**Pn**	**07 16 35.6**	**+2.0**
	comp=Z,0.8nm,0.3s,baz=167,slow=9.4,SNR=4.7							
VRAC	**Vranov**	**16.50**	**338**	P		**Pn**	**07 16 35.6**	**+2.0**
VRAC				pmax	pmax			
	comp=Z,1.0nm,0.3s							
VRAC	**Vranov**	**16.50**	**338**	⇑*i*P		**Pn**	**07 16 35.8**	**+2.2**
VRAC	**Vranov**	**16.50**	**338**	P		**Pn**	**07 16 35.6**	**+2.0**
	comp=Z,1.0nm,0.3s							
AKASG	**Malin Array Be**	**16.50**	**7**	Pn		**Pn**	**07 16 33.7**	**0.0**
AKASG	**Malin Array Be**	**16.50**	**7**	Pn		**Pn**	**07 16 33.7**	**0.0**
	comp=Z,1.0nm,0.3s,baz=193,slow=11,SNR=7.7							
AKASG	**Malin Array Be**	**16.50**	**7**	P		**Pn**	**07 16 33.7**	**+0.1**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.3s							
AKASG	**Malin Array Be**	**16.50**	**7**	Pn		**Pn**	**07 16 33.7**	**+0.1**
MORC	**Moravsky Berou**	**16.63**	**340**	*e*P		**Pn**	**07 16 36.6**	**+1.3**
DGRG	**David-gareji**	**16.81**	**59**	P		**Pn**	**07 16 43.7**	**+6.1**
KHC	**Kasperske Hory**	**17.41**	**332**	*e*P		**Pn**	**07 16 42.8**	**-2.3**
KHC	**Kasperske Hory**	**17.41**	**332**	*e*P		**Pn**	**07 16 42.8**	**-2.3**
DAVOX	**Davos/Dischmat**	**17.41**	**320**	P		**Pn**	**07 16 48.1**	**+3.0**
	comp=Z,0.3nm,0.3s,baz=162,slow=17,SNR=6.3							
DAVOX	**Davos/Dischmat**	**17.41**	**320**	P		**Pn**	**07 16 48.2**	**+3.0**
DPC	**Dobruska-Polom**	**17.50**	**339**	*e*P		**Pn**	**07 16 47.3**	**+1.1**
DPC	**Dobruska-Polom**	**17.50**	**339**	*e*P		**Pn**	**07 16 47.3**	**+1.1**
DPC	**Dobruska-Polom**	**17.50**	**339**	*e*P		**Pn**	**07 16 47.3**	**+1.1**
FRF	**La Foret Royal**	**17.63**	**307**	*e*P		**Pn**	**07 16 45.0**	**-2.9**
UPC	**Upice**	**17.73**	**339**	*e*P		**Pn**	**07 16 51.1**	**+2.1**
UPC	**Upice**	**17.73**	**339**	*e*P		**Pn**	**07 16 51.1**	**+2.1**
UPC	**Upice**	**17.73**	**339**	*e*P		**Pn**	**07 16 51.1**	**+2.1**
MBDF	**Montbardon**	**18.07**	**311**	*e*P		**Pn**	**07 16 49.9**	**-3.4**
	comp=Z,15nm,1.0s							
MBDF	**Montbardon**	**18.07**	**311**	*e*P		**Pn**	**07 16 49.9**	**-3.4**
	comp=Z,7.4nm,1.0s							
MBDF	**Montbardon**	**18.07**	**311**	*e*P		**Pn**	**07 16 49.9**	**-3.4**
MBDF				pmax	pmax			
	comp=Z,7.0nm,1.0s							
LPG	**La Plagne**	**18.46**	**313**	*e*P		**Pn**	**07 16 57.2**	**-0.9**
LPG	**La Plagne**	**18.46**	**313**	*e*P		**Pn**	**07 16 57.2**	**-0.9**
LPL	**La Plagne**	**18.48**	**313**	*e*P		**Pn**	**07 16 57.8**	**-0.5**
	comp=Z,12nm,0.8s							
LPL	**La Plagne**	**18.48**	**313**	*e*P		**Pn**	**07 16 57.8**	**-0.5**
	comp=Z,5.9nm,0.8s							
LPL	**La Plagne**	**18.48**	**313**	*e*P		**Pn**	**07 16 57.8**	**-0.5**
LPL				pmax	pmax			
	comp=Z,6.0nm,0.8s							
LPL	**La Plagne**	**18.48**	**313**	*e*P		**Pn**	**07 16 57.8**	**-0.5**
	comp=Z,5.9nm,0.8s							
ORIF	**Oris-en-Rattie**	**18.72**	**310**	*e*P		**Pn**	**07 17 00.2**	**-1.0**
	comp=Z,14nm,1.3s							
ORIF				*e*MLR		MLR		
	comp=Z,46nm,19.5s							
ORIF	**Oris-en-Rattie**	**18.72**	**310**	*e*P		**Pn**	**07 17 00.2**	**-1.0**
	comp=Z,7.2nm,1.3s							
ORIF	**Oris-en-Rattie**	**18.72**	**310**	*e*P		**Pn**	**07 17 00.2**	**-1.0**
ORIF				pmax	pmax			
	comp=Z,7.0nm,1.3s							
ORIF	**Oris-en-Rattie**	**18.72**	**310**	*e*P		**Pn**	**07 17 00.2**	**-1.0**
	comp=Z,7.2nm,1.3s							
NKC	**Novy Kostel**	**18.73**	**332**	*e*P		**Pn**	**07 17 02.3**	**+1.0**
NKC	**Novy Kostel**	**18.73**	**332**	*e*P		**Pn**	**07 17 02.3**	**+1.0**
NKC	**Novy Kostel**	**18.73**	**332**	*e*P		**Pn**	**07 17 02.3**	**+1.0**
VSR	**Storozhevoye**	**19.36**	**26**	*e*P		**Pn**	**07 17 08.0**	**-0.9**
VSR				pmax	pmax			
	comp=N,3.0nm,0.4s							
VSR				pmax	pmax			
	comp=E,7.0nm,0.4s							
VSR				pmax	pmax			
	comp=Z,7.0nm,0.4s							
VSR	**Storozhevoye**	**19.36**	**26**	*e*P		**Pn**	**07 17 08.0**	**-0.9**
CLL	**Collm**	**19.40**	**335**	*e*P		**Pn**	**07 17 11.0**	**+1.6**
CLL	**Collm**	**19.40**	**335**	*e*pP		pP	07 17 11.0	-0.4
CLL	**Collm**	**19.40**	**335**	*e*P		**Pn**	**07 17 11.0**	**+1.6**
VIVF	**Saint-Julien-l**	**19.46**	**309**	*e*P		**Pn**	**07 17 09.0**	**-1.2**
	comp=Z,14nm,1.1s							
VIVF	**Saint-Julien-l**	**19.46**	**309**	*e*P		**Pn**	**07 17 09.0**	**-1.2**
	comp=Z,7.2nm,1.1s							
VIVF	**Saint-Julien-l**	**19.46**	**309**	*e*P		**Pn**	**07 17 09.0**	**-1.2**
VIVF				pmax	pmax			
	comp=Z,7.0nm,1.1s							
VIVF	**Saint-Julien-l**	**19.46**	**309**	*e*P		**Pn**	**07 17 09.0**	**-1.2**
	comp=Z,7.2nm,1.1s							
CDF	**Champ du Feu**	**19.81**	**321**	*e*P		**Pn**	**07 17 12.9**	**-1.4**
	comp=Z,12nm,0.7s							
CDF	**Champ du Feu**	**19.81**	**321**	*e*P		**Pn**	**07 17 12.9**	**-1.4**
	comp=Z,5.9nm,0.7s							
CDF	**Champ du Feu**	**19.81**	**321**	*e*P		**Pn**	**07 17 12.9**	**-1.4**
CDF				pmax	pmax			
	comp=Z,6.0nm,0.7s							
CDF	**Champ du Feu**	**19.81**	**321**	*e*P		**Pn**	**07 17 12.9**	**-1.4**
	comp=Z,5.9nm,0.7s							
HAU	**Haudompre**	**20.06**	**319**	*e*P		**P**	**07 17 15.0**	**-0.5**
	comp=Z,6.0nm,0.6s							
HAU				*e*MLR		MLR		
	comp=Z,48nm,18.2s,MS2.6							
HAU	**Haudompre**	**20.06**	**319**	*e*P		**P**	**07 17 15.0**	**-0.5**
	comp=Z,3.0nm,0.6s							
HAU				LR		LR		
	comp=Z,50nm,18.3s,MS2.9							
HAU	**Haudompre**	**20.06**	**319**	*e*P		**P**	**07 17 15.0**	**-0.5**
	comp=Z,3.0nm,0.6s							
MEZF	**Maizieres J'vi**	**21.06**	**318**	*e*P		**P**	**07 17 25.2**	**-1.1**
	comp=Z,15nm,0.7s,mb4.1							
MEZF	**Maizieres J'vi**	**21.06**	**318**	*e*P		**P**	**07 17 25.2**	**-1.1**
	comp=Z,15nm,0.7s,mb4.4							
MEZF	**Maizieres J'vi**	**21.06**	**318**	*e*P		**P**	**07 17 25.2**	**-1.1**
	comp=Z,7.5nm,0.7s,mb4.1							
LOR	**Lormes**	**21.08**	**314**	*e*P		**P**	**07 17 27.0**	**+0.5**
	comp=Z,9.7nm,0.8s,mb3.9							
LOR				*e*MLR		MLR		
	comp=Z,42nm,20.0s,MS2.5							
LOR	**Lormes**	**21.08**	**314**	*e*P		**P**	**07 17 27.0**	**+0.5**
	comp=Z,4.8nm,0.8s,mb3.9							
LOR				LR		LR		
	comp=Z,40nm,20.0s,MS2.8							
LOR	**Lormes**	**21.08**	**314**	*e*P		**P**	**07 17 27.0**	**+0.5**
	comp=Z,4.8nm,0.8s,mb3.9							
WLF	**Walferdange**	**21.17**	**322**	P		**P**	**07 17 27.6**	**+0.1**
WLF	**Walferdange**	**21.17**	**322**	P		**P**	**07 17 27.5**	**0.0**
TCF	**Toulx Ste Croi**	**21.64**	**311**	*e*P		**P**	**07 17 32.4**	**-0.1**
	comp=Z,33nm,1.4s,mb4.3							
TCF	**Toulx Ste Croi**	**21.64**	**311**	*e*P		**P**	**07 17 32.4**	**-0.1**
	comp=Z,16nm,1.4s,mb4.3							
TCF	**Toulx Ste Croi**	**21.64**	**311**	*e*P		**P**	**07 17 32.4**	**-0.1**
TCF				pmax	pmax			
	comp=Z,17nm,1.4s,mb4.3							
TCF	**Toulx Ste Croi**	**21.64**	**311**	*e*P		**P**	**07 17 32.4**	**-0.1**
	comp=Z,16nm,1.4s,mb4.3							
RJF	**Les Rejaudoux**	**21.69**	**308**	*e*P		**P**	**07 17 32.3**	**-0.8**
RJF				*e*MLR		MLR		
	comp=Z,56nm,22.8s,MS2.6							
RJF	**Les Rejaudoux**	**21.69**	**308**	*e*P		**P**	**07 17 32.3**	**-0.8**
RJF				LR		LR		
	comp=Z,60nm,22.8s,MS2.9							
RJF	**Les Rejaudoux**	**21.69**	**308**	*e*P		**P**	**07 17 32.3**	**-0.8**
MEM	**Membach**	**21.85**	**324**	P		**P**	**07 17 34.3**	**-0.4**
	comp=Z,10nm,1.2s,mb4.1							
MEM	**Membach**	**21.85**	**324**	P		**P**	**07 17 34.3**	**-0.4**
	comp=Z,10nm,1.2s,mb4.1							
OBN	**Obninsk**	**22.02**	**16**	P		**P**	**07 17 40.0**	**+3.5**
OBN				*e*			07 17 52.1	
OBN				S		**S**	**07 21 41.0**	**+1.9**
OBN				pmax	pmax			
	comp=Z,20nm,1.0s,mb4.5							
LFF	**La Frestale**	**22.08**	**306**	*e*P		**P**	**07 17 35.2**	**-2.1**
	comp=Z,31nm,1.0s,mb4.4							
LFF	**La Frestale**	**22.08**	**306**	*e*P		**P**	**07 17 35.2**	**-2.1**
	comp=Z,16nm,1.0s,mb4.4							
LFF	**La Frestale**	**22.08**	**306**	*e*P		**P**	**07 17 35.2**	**-2.1**
LFF				pmax	pmax			
	comp=Z,16nm,1.0s,mb4.4							
LFF	**La Frestale**	**22.08**	**306**	*e*P		**P**	**07 17 35.2**	**-2.1**
	comp=Z,16nm,1.0s,mb4.4							
DOU	**Dourbes**	**22.23**	**322**	P		**P**	**07 17 39.2**	**+0.4**
	comp=Z,10nm,1.8s,mb4.0							
DOU	**Dourbes**	**22.23**	**322**	P		**P**	**07 17 39.2**	**+0.4**
	comp=Z,10nm,1.8s,mb4.0							
BAIF	**Baives**	**22.41**	**321**	*e*P		**P**	**07 17 39.5**	**-1.2**
	comp=Z,38nm,1.0s,mb4.5							
BAIF	**Baives**	**22.41**	**321**	*e*P		**P**	**07 17 39.5**	**-1.2**
	comp=Z,19nm,1.0s,mb4.5							
BAIF	**Baives**	**22.41**	**321**	*e*P		**P**	**07 17 39.5**	**-1.2**
	comp=Z,19nm,1.0s,mb4.5							
BAIF	**Baives**	**22.41**	**321**	*e*P		**P**	**07 17 39.5**	**-1.2**
BAIF				pmax	pmax			
	comp=Z,19nm,1.0s,mb4.5							
MFF	**Saint Martin d**	**23.26**	**310**	*e*P		**P**	**07 17 47.7**	**-2.0**
MFF	**Saint Martin d**	**23.26**	**310**	*e*P		**P**	**07 17 47.7**	**-2.0**
LDF	**La Druitiere**	**24.07**	**314**	*e*P		**P**	**07 17 55.9**	**-1.6**
	comp=Z,4.1nm,0.5s,mb3.8							
LDF	**La Druitiere**	**24.07**	**314**	*e*P		**P**	**07 17 55.9**	**-1.6**
	comp=Z,2.0nm,0.5s,mb3.8							
LDF	**La Druitiere**	**24.07**	**314**	*e*P		**P**	**07 17 55.9**	**-1.6**
LDF				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb3.8							
FLN	**La Foliniere**	**24.36**	**314**	*e*P		**P**	**07 17 58.1**	**-2.0**
FLN				*e*MLR		MLR		
	comp=Z,62nm,20.8s,MS2.8							
FLN	**La Foliniere**	**24.36**	**314**	*e*P		**P**	**07 17 58.1**	**-2.0**
FLN				MLR		MLR		
	comp=Z,60nm,20.8s,MS3.1							
GRR	**Gorron**	**24.42**	**313**	*e*P		**P**	**07 17 58.6**	**-2.1**
ESDC	**Sonseca Array**	**24.47**	**291**	P		**P**	**07 18 01.8**	**+0.4**
	comp=Z,0.5nm,0.5s,mb3.2,baz=80,slow=8.9,SNR=5.9							
SGMF	**Saint Gilles**	**25.40**	**312**	*e*P		**P**	**07 18 08.2**	**-1.5**
ROSF	**Rostrenen**	**25.88**	**312**	*e*P		**P**	**07 18 13.0**	**-1.0**
HFS	**Hagfors**	**27.02**	**346**	P		**P**	**07 18 22.9**	**-1.3**
	comp=Z,1.2nm,0.5s,mb3.7,baz=141,slow=9.6,SNR=7.0							
HFS	**Hagfors**	**27.02**	**346**	P		**P**	**07 18 22.9**	**-1.3**
HFS				pmax	pmax			
	comp=Z,1.0nm,0.5s							
FINES	**FINESS Array B**	**27.11**	**0**	P		**P**	**07 18 23.1**	**-1.8**
	comp=Z,6.1nm,1.0s,mb4.1,baz=165,slow=15,SNR=6.3							
FINES	**FINESS Array B**	**27.11**	**0**	P		**P**	**07 18 23.1**	**-1.8**
FINES				pmax	pmax			
	comp=Z,6.0nm,1.0s							
EVO	**Evora**	**27.61**	**289**	*e*P		**P**	**07 18 29.5**	**-0.2**
	comp=Z,35nm,1.3s,mb4.5							
KAF	**Kangasniemi**	**27.78**	**0**	*e*P		**P**	**07 18 28.8**	**-2.1**
KAF				pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.3							
KAF	**Kangasniemi**	**27.78**	**0**	*e*p		**P**	**07 18 28.8**	**-2.1**
	comp=Z,6.1nm,0.8s,mb4.3,baz=178,slow=9.2							
KLMR	**Klimovskoe**	**27.91**	**14**	P		**P**	**07 18 29.7**	**-2.4**
KLMR				pmax	pmax			
	comp=Z,17nm,1.1s,mb4.6							
AKTK	**Aktyubinsk**	**28.28**	**46**	P		**P**	**07 18 34.9**	**-0.7**
AKTO	**Aktyubinsk**	**28.28**	**46**	P		**P**	**07 18 34.9**	**-0.7**
	comp=Z,0.9nm,0.5s,mb3.6,baz=244,slow=11,SNR=5.9							
AKTO	**Aktyubinsk**	**28.28**	**46**	P		**P**	**07 18 34.9**	**-0.7**
AKTO				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.7							
JOF	**Joensuu**	**28.78**	**5**	*e*P		**P**	**07 18 40.5**	**+0.7**
JOF				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.0							
JOF	**Joensuu**	**28.78**	**5**	*e*p		**P**	**07 18 40.5**	**+0.7**
	comp=Z,2.3nm,0.7s,mb4.0							
JOF	**Joensuu**	**28.78**	**5**	*e*P		**P**	**07 18 40.5**	**+0.7**
	comp=Z,2.3nm,0.7s,mb4.0							
EKA	**Eskdalemuir Ar**	**29.11**	**325**	P		**P**	**07 18 42.8**	**-0.1**
	comp=Z,1.5nm,0.7s,mb3.8,baz=128,slow=10,SNR=5.2							
EKA	**Eskdalemuir Ar**	**29.11**	**325**	P		**P**	**07 18 42.8**	**-0.1**
EKA				pmax	pmax			
	comp=Z,2.0nm,0.7s							
ARU	**Arti**	**31.29**	**35**	P		**P**	**07 19 07.2**	**+5.1**
ARCES	**ARCESS Array B**	**35.23**	**360**	P		**P**	**07 19 34.5**	**-1.8**
	comp=Z,5.4nm,1.1s,mb4.4,baz=194,slow=7.3,SNR=3.1							
ARCES	**ARCESS Array B**	**35.23**	**360**	P		**P**	**07 19 34.6**	**-1.8**
ARCES				pmax	pmax			
	comp=Z,5.0nm,1.1s							
BRVK	**Borovoye**	**36.33**	**45**	*e*P		**P**	**07 19 47.2**	**+1.2**
BRVK				pmax	pmax			
	comp=Z,5.0nm,1.7s,mb4.2							
BVAR	**Borovoye Array**	**36.39**	**45**	P		**P**	**07 19 47.8**	**+1.3**
	comp=Z,1.4nm,0.7s,mb4.0,baz=254,slow=5.5,SNR=4.8							
BVAR	**Borovoye Array**	**36.39**	**45**	P		**P**	**07 19 47.8**	**+1.3**
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
AAK	**Ala-Archa**	**38.37**	**63**	P		**P**	**07 20 03.5**	**0.0**
	comp=Z,2.8nm,0.4s,mb4.4,baz=250,slow=6.3,SNR=5.7							
AAK	**Ala-Archa**	**38.37**	**63**	P		**P**	**07 20 03.5**	**+0.1**
AAK				pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.4							
KSH	**Kashi**	**39.83**	**68**	*e*P		**P**	**07 20 16.0**	**+0.3**
KSH				*e*pP		pP	07 20 28.7	+10
KSH				*e*sP		sP	07 20 34.0	+14
KSH				*e*PP		PP	07 21 52.1	+5.0
KSH				*e*PcP		PcP	07 22 22.3	+0.7
KSH				*e*ScP		ScP	07 26 06.0	-4.4
KSH				*e*PcS		PcS	07 26 11.1	-0.5
KSH				*e*S		**S**	**07 26 17.4**	**-2.6**
KSH				sS		sS	07 26 37.8	+12
KSH				*e*SS		SS	07 29 08.0	-8.0
KSH				*e*ScS		ScS	07 30 17.9	-5.3
KSH				pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.3							
KSH				pmax	pmax			
	comp=Z,77nm,6.2s							
KSH				LR		LR		
	comp=N,190nm,13.2s,MS4.3							
KSH				LR		LR		
	comp=E,230nm,14.2s,MS4.3							
KSH				LR		LR		
	comp=Z,76nm,4.9s							
KURK	**Kurchatov**	**41.13**	**50**	*c* *i*P		**P**	**07 20 27.2**	**+0.9**
KURK				pmax	pmax			
	comp=Z,7.0nm,1.2s,mb4.2							
MKAR	**Makanchi Array**	**43.62**	**56**	P		**P**	**07 20 47.8**	**+1.2**
	comp=Z,7.1nm,0.7s,mb4.5,baz=282,slow=6.1,SNR=39							
MKAR	**Makanchi Array**	**43.62**	**56**	*c*e*c*P		**P**	**07 20 47.7**	**+1.1**
MKAR				pmax	pmax			
	comp=Z,7.0nm,0.7s							
NVS	**Novosibirsk**	**44.15**	**44**	*e*P		**P**	**07 20 51.1**	**+0.3**
NVS				pmax	pmax			
	comp=Z,11nm,1.6s,mb4.3							
ZALV	**Zalesovo Beam**	**45.04**	**46**	P		**P**	**07 20 58.2**	**+0.3**
	comp=Z,4.2nm,0.5s,mb4.5,baz=266,slow=8.8,SNR=17							
ZALV	**Zalesovo Beam**	**45.04**	**46**	P		**P**	**07 20 58.2**	**+0.3**
ZALV				pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.5							
SUMG	**Summit**	**49.99**	**339**	*i* P		**P**	**07 21 35.7**	**-0.4**
	comp=Z,7.0nm,0.9s,mb4.7							
SUMG	**Summit**	**49.99**	**339**	*i* P		**P**	**07 21 35.7**	**-0.4**
	comp=Z,7.0nm,0.9s,mb4.7							
TSUM	**Tsumeb**	**53.86**	**190**	P		**P**	**07 22 06.2**	**+0.7**
	comp=Z,2.1nm,0.8s,mb4.1,baz=326,slow=11,SNR=5.0							
SONM	**Songino Array**	**59.44**	**50**	P		**P**	**07 22 46.8**	**+1.8**
	comp=Z,0.5nm,0.5s,mb3.9,baz=295,slow=8.7,SNR=7.8							
SONM	**Songino Array**	**59.44**	**50**	P		**P**	**07 22 46.8**	**+1.9**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.5s							
BOSA	**Boshof**	**62.63**	**181**	P		**P**	**07 23 08.4**	**+1.7**
	comp=Z,2.5nm,0.6s,mb4.5,baz=356,slow=11,SNR=4.9							
BOSA				LR		LR	07 49 07.0	
	comp=Z,48nm,20.8s,MS3.6,baz=158,slow=35							
CMAR	**Chiang Mai Arr**	**65.94**	**83**	P		**P**	**07 23 29.2**	**+0.4**
	comp=Z,0.4nm,0.3s,mb3.9,baz=290,slow=5.7,SNR=4.1							
ASAR	**Alice Springs**	**117.19**	**101**	PKP		PKPdf	07 31 27.4	-0.5
	comp=Z,0.2nm,0.7s,baz=316,slow=2.6,SNR=3.4							

WEL 02 07:48:19.9±0.1, 40.06S×174.97E, h12km, ML3.6/36, 3C, Error ellipse: s-maj=1.4km s-min=0.6km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.30**	**2**	⇑P*	Pg	07 48 27.0	+1.0
WAZ				S*	Sg	07 48 32.3	+2.1
POWZ	**Post Office Ro**	**0.70**	**119**	P*	Pb	07 48 33.0	-1.0
POWZ				S*	Sb	07 48 42.2	-1.4
TSZ	**Takapari Road**	**0.76**	**90**	P*	Pb	07 48 34.0	-1.1
TSZ				S*	Sb	07 48 44.1	-1.2
MRZ	**Mangatainoka R**	**0.76**	**142**	⇑P*	Pb	07 48 34.2	-0.9
MRZ				S*	Sb	07 48 44.0	-1.4
OGWZ	**Otaki Gorge**	**0.77**	**169**	⇑P*	Pb	07 48 34.1	-1.2
OGWZ				S*	Sb	07 48 43.5	-2.3
MTVZ	**Mangateitei**	**0.78**	**30**	P*	Pb	07 48 34.0	-1.3
MTVZ				S*	Sb	07 48 45.7	0.0
KIW	**Kapiti Island**	**0.80**	**183**	P*	Pb	07 48 34.1	-1.7
WNVZ	**Wahianoa**	**0.88**	**34**	P*	Pb	07 48 35.6	-1.4
TRVZ	**Turoa**	**0.88**	**31**	P*	Pb	07 48 35.3	-1.8
MOVZ	**Moawhango**	**0.89**	**43**	P*	Pb	07 48 35.5	-1.6
DRZ	**Dome Shelter**	**0.91**	**31**	P*	Pb	07 48 37.1	-0.4
VRZ	**Vera Road**	**0.94**	**350**	P*	Pb	07 48 37.7	-0.4
DVHZ	**Dannevirke**	**0.95**	**105**	P*	Pb	07 48 37.8	-0.5
DVHZ				S*	Sb	07 48 50.1	-0.7
TUVZ	**Tukino**	**0.95**	**34**	P*	Pb	07 48 36.6	-1.6
PNHZ	**Pukenui**	**0.96**	**82**	P*	Pb	07 48 37.3	-1.1
WPVZ	**Whakapapa**	**0.96**	**28**	P*	Pb	07 48 36.9	-1.5
TIWZ	**Tintock**	**1.00**	**136**	P*	Pb	07 48 38.7	-0.5
OTVZ	**Oturere**	**1.04**	**31**	P*	Pb	07 48 38.4	-1.4
CAW	**Cannon Point**	**1.05**	**176**	P*	Pb	07 48 38.8	-1.2
WTVZ	**West Tongariro**	**1.06**	**27**	P*	Pb	07 48 38.6	-1.4
KRVZ	**Karewarewa**	**1.09**	**29**	P*	Pb	07 48 39.2	-1.5
MHEZ	**Mangahewa**	**1.10**	**333**	P*	Pb	07 48 41.1	+0.3
BFZ	**Birch Farm**	**1.16**	**123**	P*	Pb	07 48 41.2	-0.6
MTW	**Mount Morrison**	**1.17**	**160**	P*	Pb	07 48 41.6	-0.5
KATZ	**Kakaramea**	**1.22**	**28**	P*	Pb	07 48 41.5	-1.3
KATZ				S*	Sb	07 48 57.7	-0.8
WEL	**Wellington**	**1.24**	**187**	P*	Pb	07 48 41.8	-1.3
TMWZ	**Te Maipa**	**1.26**	**146**	P*	Pb	07 48 42.9	-0.7
SNZO	**South Karori**	**1.27**	**189**	P*	Pb	07 48 42.1	-1.6
RITZ	**Rihia Road**	**1.28**	**33**	PN	Pn	07 48 43.3	-0.2
BHW	**Baring Head**	**1.35**	**183**	PN	Pn	07 48 43.8	-0.7
PAWZ	**Paruwai Farm**	**1.37**	**165**	PN	Pn	07 48 44.5	-0.3
MSWZ	**Moikau Station**	**1.37**	**171**	PN	Pn	07 48 44.0	-0.8
TRWZ	**Traveller**	**1.45**	**158**	PN	Pn	07 48 45.7	-0.1
PXZ	**Pawanui**	**1.45**	**90**	PN	Pn	07 48 45.1	-0.8
WATZ	**Wairara**	**1.47**	**24**	PN	Pn	07 48 46.3	+0.1
BKZ	**Black Stump Fm**	**1.48**	**53**	PN	Pn	07 48 45.8	-0.4
PLWZ	**Palliser**	**1.53**	**172**	PN	Pn	07 48 47.0	+0.1
HIZ	**Hauiti**	**1.54**	**357**	PN	Pn	07 48 46.8	-0.4
TUWZ	**Tuamarina**	**1.58**	**209**	PN	Pn	07 48 47.0	-0.6
NNZ	**Nelson**	**1.68**	**226**	PN	Pn	07 48 49.0	0.0
ALRZ	**Allen Road**	**1.83**	**36**	PN	Pn	07 48 52.6	+1.4
BSWZ	**Blackbirch Sta**	**1.85**	**206**	PN	Pn	07 48 51.6	+0.2
PRRZ	**Plateau Road**	**1.91**	**36**	PN	Pn	07 48 53.4	+1.2
QRZ	**Quartz Range**	**2.01**	**247**	PN	Pn	07 48 53.3	-0.3
THZ	**Tophouse**	**2.31**	**222**	PN	Pn	07 48 58.6	+0.9
TOZ	**Tahuroa Road**	**2.36**	**10**	PN	Pn	07 49 01.1	+2.6
KHZ	**Kahutara**	**2.59**	**204**	PN	Pn	07 49 00.9	-0.7
DSZ	**Dennistone Nort**	**2.93**	**234**	PN	Pn	07 49 06.3	+0.1
MKAZ	**Moumakai**	**2.95**	**3**	PN	Pn	07 49 07.1	+0.6
LTZ	**Lake Taylor**	**3.40**	**216**	PN	Pn	07 49 11.7	-0.9
MQZ	**McQueen's Vall**	**4.04**	**205**	PN	Pn	07 49 18.1	-3.3
ODZ	**Otahua Downs**	**5.92**	**211**	PN	Pn	07 49 44.5	-2.8

*IDC **02** 07:55:04.1±2.0, 21.07S×169.57E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.9/12, mbtmp3.9/6, MS3.2/4, Ms1 3.1/4, ms1mx3.0/14, Error ellipse: s-maj=86.4km s-min=25.6km az=151.0*

*ISCJB **02** 07:55:10.7±2.0, 21.0S±0.4×169.2E±0.2, h51km±19km, mb4.0/6, MS3.0/3, Error ellipse: s-maj=71.8km s-min=16.1km az=154.9*

*NOU **02** 07:55:10.2±0.9, 19.86S×168.47E, h10km, MD2.9*

ISC 02 07:55:11.3±2.0, 21.05S±0.4×169.2E±0.2, h41km±20km**, n13, σ1°03/15, mb4.0/6, MS3.0/3, Vanuatu Islands**

| Code | Station Name | Δ° | AZ° | Phase ID Op | IS

AGG				*e*Sn	**Sg**	**08 11 44.7**	**-0.8**
THL	**Klokotos Trika**	**2.00**	**44**	*e*PN	**Pg**	**08 11 21.5**	**-2.1**
THL				*e*SN	**Sg**	**08 11 48.0**	**-1.5**
THL	**Klokotos Trika**	**2.00**	**44**	*e*Pn	**Pg**	**08 11 21.5**	**-2.1**
THL				*e*Sn	**Sg**	**08 11 48.0**	**-1.5**
LKR	**Lokris**	**2.24**	**76**	*e*Pn	**Pn**	**08 11 24.2**	**+0.6**
LKR	**Lokris**	**2.24**	**76**	*e*PN	**Pn**	**08 11 24.2**	**+0.6**
LKR	**Lokris**	**2.24**	**76**	*e*Pn	**Pn**	**08 11 24.2**	**+0.6**
DID	**Didima**	**2.47**	**104**	*e*PN	**Pn**	**08 11 28.9**	**+2.1**
LIT	**Litokhoron**	**2.64**	**41**	*e*Pb	**Pn**	**08 11 29.6**	**+0.5**
LIT	**Litokhoron**	**2.64**	**41**	*e*PB	**Pn**	**08 11 29.6**	**+0.5**
TIP	**Timpagrande**	**2.90**	**292**	*e*Pn	**Pn**	**08 11 32.6**	**-0.2**
TIP	**Timpagrande**	**2.90**	**292**	*e*Pn	**Pn**	**08 11 32.6**	**-0.2**
STON	**Ston**	**5.10**	**339**	*e*Pn	**Pn**	**08 12 00.4**	**-2.6**
STON				Sn	**Sn**	**08 12 56.0**	**-6.5**
STON	**Ston**	**5.10**	**339**	*e*Pn	**Pn**	**08 12 00.4**	**-2.6**
NVLJ	**Novalja**	**7.57**	**330**	Sn	**Sn**	**08 13 58.3**	**-5.0**

NNC 02 08:28:15.0±9.5, 38°26N×71°39E, h0km, mb3.6, mpv3.3, 2C-4D, Error ellipse: s-maj=68.8km s-min=43.0km az=177.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.89**	**352**	Pn	Pn	08 29 29.1	-0.6
	1.5nm,0.3s,baz=175,slow=13,SNR=46						
KK31				⇓Sn	Sn	08 30 28.8	+1.8
	8.4nm,0.5s,baz=176,slow=23						
KK31				⇓Lg		08 30 46.4	
	5.3nm,0.5s,baz=165,slow=32,SNR=4.3						
TKM2	**Tokmak 2**	**5.65**	**33**	⇑Pn	Pn	08 29 40.3	+0.1
	1.6nm,0.5s						
TKM2				⇓Sn	Sn	08 30 48.7	+2.9
	3.6nm,0.7s						
TKM2				⇑Lg		08 31 14.9	
	9.0nm,1.1s						
AB31	**Akbulak array**	**13.74**	**327**	⇓Pn	Pn	08 31 29.3	-1.7
	0.5nm,0.7s,baz=172,slow=11,SNR=6.0						

IDC 02 08:30:29.8±1.0, 24°22N×143°07E, h0km, mb4.0/11, mb1 4.2/11, mb1mx4.0/21, mbtmp4.0/11, Error ellipse: s-maj=29.2km s-min=27.2km az=55.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**48.42**	**191**	P	P	08 39 13.7	-0.2
	0.3nm,0.7s,baz=13,slow=9.2,SNR=5.6						
ZALV	**Zalesovo Beam**	**52.19**	**320**	P	P	08 39 41.7	-0.5
	0.4nm,0.3s,baz=76,slow=6.1,SNR=2.6						
ZALV				PcP	PcP	08 40 54.2	+0.4
	0.5nm,0.4s,baz=139,slow=2.9,SNR=3.7						
MKAR	**Makanchi Array**	**52.94**	**311**	P	P	08 39 48.0	+0.2
	0.7nm,0.4s,baz=92,slow=9.9,SNR=8.2						
ILAR	**Eielson Array**	**59.86**	**28**	P	P	08 40 36.5	-0.4
	0.9nm,0.8s,baz=262,slow=5.3,SNR=14						
BVAR	**Borovoye Array**	**60.71**	**319**	P	P	08 40 43.5	+0.6
	1.4nm,0.5s,baz=91,slow=8.1,SNR=7.4						
YKA	**Yellowknife Ar**	**74.29**	**28**	P	P	08 42 09.0	+0.4
	1.3nm,0.7s,baz=293,slow=5.9,SNR=4.4						
ARCES	**ARCESS Array B**	**76.51**	**341**	P	P	08 42 21.7	+0.4
	6.7nm,1.0s,baz=70,slow=7.9,SNR=4.6						
JOF	**Joensuu**	**78.01**	**334**	*ep*	P	08 42 30.1	+0.3
	8.5nm,0.6s						
KAF	**Kangasniemi**	**80.40**	**335**	*ep*	P	08 42 41.7	-1.3
	1.8nm,0.5s,baz=57,slow=5.0						
FINES	**FINESS Array B**	**80.87**	**334**	P	P	08 42 45.8	+0.3
	2.7nm,0.4s,baz=71,slow=4.7,SNR=50						
NVAR	**Mina Array Bea**	**81.67**	**52**	P	P	08 42 50.4	+0.2
	0.8nm,0.8s,baz=278,slow=6.5,SNR=6.2						
NOA	**NORSAR Array B**	**86.57**	**339**	P	P	08 43 14.4	-0.3
	1.7nm,0.7s,baz=46,slow=4.8,SNR=5.9						
BRTR	**Keskin Array B**	**88.54**	**313**	P	P	08 43 23.6	-1.1
	0.9nm,0.8s,baz=100,slow=3.4,SNR=3.6						
LPAZ	**La Paz**	**149.74**	**81**	PKPbc	PKPbc	08 50 23.5	+1.1
	2.8nm,1.4s,baz=224,slow=7.6,SNR=3.9						

IDC 02 08:42:22.9±6.6, 1°.99S×102°.27E, h0km, mb3.9/4, mb1 3.9/4, mb1mx3.6/19, mbtmp3.9/4, Error ellipse: s-maj=404.5km s-min=24.1km az=56.0
ISCJB 02 08:42:37.8±0.6, 2°.4S±0°.1×101°.9E±0°.1, h160km±7km, mb3.7/4, Error ellipse: s-maj=24.5km s-min=6.8km az=138.7
DJA 02 08:42:39, 2°.51S×101°.90E, h132km, MLv4.1/7
ISC 02 08:42:38.9±0.6, 2°.4S±0°.1×102°.0E±0°.1, h152km±8km, n12, σ0.88/15, mb3.7/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDSI	**Sungai Dareh**	**1.57**	**341**	P	**Pn**	**08 43 09.2**	**-0.2**
PDSI	**Padang**	**2.11**	**315**	P	**Pn**	**08 43 17.1**	**+1.6**
PDSI				S	**Sn**	**08 43 43.8**	**+0.2**
MNAI	**Manna**	**2.17**	**152**	P	**Pn**	**08 43 15.9**	**-0.3**
MNAI				S	**Sn**	**08 43 44.5**	**-0.4**
BKNI	**Bangkinang**	**2.88**	**342**	P	**Pn**	**08 43 25.1**	**+0.2**
MDSI	**Maura Dua**	**3.02**	**133**	P	**Pn**	**08 43 26.7**	**0.0**
SISI	**Saibi**	**3.06**	**291**	P	**Pn**	**08 43 28.5**	**+1.4**
SISI				S	**Sn**	**08 44 03.4**	**-1.0**
KASI	**Kota Agung**	**3.99**	**141**	P	**Pn**	**08 43 38.4**	**-0.8**
TPTI		**7.39**	**320**	P	**Pn**	**08 44 23.5**	**-0.7**
ASAR	**Alice Springs**	**37.44**	**127**	P	**P**	**08 49 38.0**	**+0.3**
	0.4nm,0.6s,mb3.2,baz=301,slow=8.4,SNR=8.3						
STKA	**Stephens Creek**	**47.42**	**133**	P	**P**	**08 51 00.1**	**+1.8**
	1.0nm,0.4s,mb3.8,baz=320,slow=7.9,SNR=4.3						
MKAR	**Makanchi Array**	**51.98**	**343**	P	**P**	**08 51 31.4**	**-1.0**
	0.6nm,0.4s,mb3.6,baz=142,slow=7.8,SNR=4.9						
ZALV	**Zalesovo Beam**	**57.96**	**348**	P	**P**	**08 52 14.4**	**-0.8**
	1.0nm,0.3s,mb4.1,baz=165,slow=8.3,SNR=4.4						

ISCJB 02 09:03:57.9±0.3, 44°.55N±0°.02×26°.18E±0°.03, h10km, Error ellipse: s-maj=3.1km s-min=2.5km az=138.3
SOF 02 09:03:57.2, 44°.61N×26°.30E, h10km, MD3.1
THE 02 09:03:57.5, 44°.74N×26°.28E, h21km±5km, ML3.5/1, Error ellipse: s-maj=7.3km s-min=1.2km az=33.0
CSEM 02 09:03:59.9±0.2, 44°.59N×26°.22E, h24km±1km, MD3.5/13, Error ellipse: s-maj=2.9km s-min=2.5km az=127.0
NEIC 02 09:04:00.4, 44°.60N×26°.25E, h28km, ML3.4(BUC), After BUC.
NEIC Felt at Bucharest.
ISC 02 09:03:58.7±0.2, 44°57N±0°.02×26°22E±0°.03, h10km, n125, σ1.14/150, 32C-29D, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SULR		**0.11**	**14**	⇑P	**Pg**	**09 04 04.6**	**+3.1**
SULR				S	**Sg**	**09 04 09.6**	**+6.2**
SULR		**0.11**	**14**	⇑*i*P	**Pg**	**09 04 04.6**	**+3.1**
SULR		**0.11**	**14**	S	**Sg**	**09 04 09.6**	**+6.2**
SULR		**0.11**	**14**	⇑*i*P	**Pg**	**09 04 04.6**	**+3.1**
SULR				*i* S	**Sg**	**09 04 09.6**	**+6.2**
INCR	**INCERC-Sediu C**	**0.14**	**197**	⇑*i*P	**Pg**	**09 04 05.8**	**+3.9**
INCR	**INCERC-Sediu C**	**0.14**	**197**	S	**Sg**	**09 04 11.1**	**+7.1**
BUC1	**Bucharest**	**0.26**	**211**	⇑P	**Pg**	**09 04 07.3**	**+3.3**
BUC1	**Bucharest**	**0.26**	**211**	⇑*i*P	**Pg**	**09 04 07.3**	**+3.3**
BUC1	**Bucharest**	**0.26**	**211**	S	**Sg**	**09 04 13.3**	**+5.7**
BUC1	**Bucharest**	**0.26**	**211**	⇑*i*P	**Pg**	**09 04 07.3**	**+3.3**
BUC1	**Bucharest**	**0.26**	**211**	*i* S	**Sg**	**09 04 13.3**	**+5.7**
BUC1	**Bucharest**	**0.26**	**211**	S	**Sg**	**09 04 13.3**	**+5.7**
ISR	**Istrita**	**0.59**	**23**	⇓P	**Pg**	**09 04 10.3**	**0.0**
PGOR	**Pogoanele**	**0.64**	**58**	⇑P	**Pg**	**09 04 11.5**	**+0.3**
PGOR	**Pogoanele**	**0.64**	**58**	⇑*i*P	**Pg**	**09 04 11.5**	**+0.3**
PGOR				*i* S	**Sg**	**09 04 21.4**	**+1.8**
AMRR	**Amara**	**0.80**	**87**	⇓P	**Pg**	**09 04 14.1**	**-0.1**
AMRR				S	**Sg**	**09 04 25.6**	**+1.1**
AMRR	**Amara**	**0.80**	**87**	⇓*i*P	**Pg**	**09 04 14.1**	**0.0**
AMRR	**Amara**	**0.80**	**87**	S	**Sg**	**09 04 25.6**	**+1.0**
AMRR	**Amara**	**0.80**	**87**	⇓*i*P	**Pg**	**09 04 14.1**	**0.0**
AMRR				*i* S	**Sg**	**09 04 25.6**	**+1.0**
MLR	**Muntele Rosu**	**0.94**	**348**	⇓P	**Pg**	**09 04 17.1**	**+0.3**
MLR				S	**Sg**	**09 04 31.6**	**+2.5**
MLR	**Muntele Rosu**	**0.94**	**348**	⇓*i*P	**Pg**	**09 04 17.1**	**+0.3**
MLR	**Muntele Rosu**	**0.94**	**348**	S	**Sg**	**09 04 31.6**	**+2.6**
MLR	**Muntele Rosu**	**0.94**	**348**	⇓*i*P	**Pg**	**09 04 17.1**	**+0.3**
GRER		**0.97**	**33**	P	**Pg**	**09 04 18.4**	**+1.0**
GRER		**0.97**	**33**	⇑*i*P	**Pg**	**09 04 18.3**	**+0.9**
GRER		**0.97**	**33**	S	**Sg**	**09 04 31.8**	**+1.8**
GRER		**0.97**	**33**	⇑*i*P	**Pg**	**09 04 18.3**	**+0.9**
ZIMR		**1.10**	**214**	⇓P	**Pb**	**09 04 20.6**	**+0.7**
ZIMR				S	**Sg**	**09 04 37.0**	**+2.8**
ZIMR		**1.10**	**214**	⇑*i*P	**Pb**	**09 04 20.6**	**+0.8**
ZIMR		**1.10**	**214**	S	**Sg**	**09 04 37.0**	**+2.8**
VOIR		**1.20**	**317**	⇓P	**Pb**	**09 04 20.9**	**-0.6**
VOIR				S	**Sb**	**09 04 37.5**	**+0.4**
VOIR		**1.20**	**317**	⇓*i*P	**Pb**	**09 04 20.9**	**-0.6**
VOIR		**1.20**	**317**	S	**Sb**	**09 04 37.5**	**+0.5**
VOIR		**1.20**	**317**	⇓*i*P	**Pb**	**09 04 20.9**	**-0.6**
VOIR				*i* S	**Sb**	**09 04 37.5**	**+0.5**
PLOR	**Plostina**	**1.31**	**13**	⇑*i*P	**Pn**	**09 04 22.3**	**-0.8**
PLOR	**Plostina**	**1.31**	**13**	S	**Sb**	**09 04 43.8**	**+3.4**
PLOR	**Plostina**	**1.31**	**13**	⇑*i*P	**Pn**	**09 04 22.3**	**-0.8**
SZH	**Strazhica**	**1.32**	**189**	*i* P	**Pn**	**09 04 23.6**	**+0.4**
SZH	**Strazhica**	**1.32**	**189**	*i* P	**Pn**	**09 04 23.6**	**+0.4**
CVD	**Cernavoda**	**1.32**	**101**	⇓P	**Pn**	**09 04 22.5**	**-0.8**
CVD				S	**Sb**	**09 04 40.0**	**-0.7**
CVD	**Cernavoda**	**1.32**	**101**	⇓*i*P	**Pn**	**09 04 22.5**	**-0.8**
CVD	**Cernavoda**	**1.32**	**101**	S	**Sb**	**09 04 40.0**	**-0.7**
CVD	**Cernavoda**	**1.32**	**101**	⇓*i*P	**Pn**	**09 04 22.5**	**-0.8**
CVD				*i* S	**Sb**	**09 04 40.0**	**-0.7**
ODB	**Odobesti**	**1.34**	**26**	⇑*i*P	**Pn**	**09 04 24.2**	**+0.7**
ODB	**Odobesti**	**1.34**	**26**	S	**Sb**	**09 04 45.6**	**+4.4**
ODB	**Odobesti**	**1.34**	**26**	⇑*i*P	**Pn**	**09 04 24.2**	**+0.7**
VRI	**Vrincioaia**	**1.34**	**15**	P	**Pn**	**09 04 23.1**	**-0.5**
VRI	**Vrincioaia**	**1.34**	**15**	⇑*i*P	**Pn**	**09 04 22.7**	**-0.8**
VRI	**Vrincioaia**	**1.34**	**15**	P	**Pn**	**09 04 23.1**	**-0.4**
VRI				*i* S	**Sb**	**09 04 41.4**	**+0.2**
PETR		**1.36**	**32**	⇓P	**Pn**	**09 04 23.4**	**-0.3**
PETR		**1.36**	**32**	S	**Sb**	**09 04 42.2**	**+0.6**
PETR		**1.36**	**32**	⇓*i*P	**Pn**	**09 04 23.4**	**-0.3**
CFR	**Carcaliu**	**1.49**	**65**	⇑P	**Pn**	**09 04 23.3**	**-2.2**
CFR				S	**Sn**	**09 04 43.9**	**-1.2**
CFR	**Carcaliu**	**1.49**	**65**	⇓P	**Pn**	**09 04 23.3**	**-2.3**
CFR	**Carcaliu**	**1.49**	**65**	S	**Sn**	**09 04 43.9**	**-1.2**
CFR	**Carcaliu**	**1.49**	**65**	⇓*i*P	**Pn**	**09 04 23.3**	**-2.3**
CFR				*i* S	**Sn**	**09 04 43.9**	**-1.2**
PVL	**Pavlikeni**	**1.50**	**206**	*i* P	**Pn**	**09 04 28.9**	**+3.3**
PVL	**Pavlikeni**	**1.50**	**206**	*i* P	**Pn**	**09 04 28.9**	**+3.3**
TIRR	**Tirgusor**	**1.57**	**93**	*e*Pn	**Pn**	**09 04 26.2**	**-0.5**
TIRR				*e*Sn	**Sn**	**09 04 45.8**	**-1.3**
TIRR	**Tirgusor**	**1.57**	**93**	⇓P	**Pn**	**09 04 26.3**	**-0.4**
TIRR	**Tirgusor**	**1.57**	**93**	⇓*i*P	**Pn**	**09 04 26.3**	**-0.4**
TIRR				*e*Sn	**Sn**	**09 04 45.8**	**-1.3**
TIRR				*i* S	**Sn**	**09 04 46.4**	**-0.7**
PRD	**Provadia**	**1.62**	**148**	*i* P	**Pn**	**09 04 27.5**	**+0.2**
PRD	**Provadia**	**1.62**	**148**	*i* P	**Pn**	**09 04 27.5**	**+0.2**
PSN	**Preselentsi**	**1.67**	**121**	*i* P	**Pn**	**09 04 27.1**	**-0.9**
PSN	**Preselentsi**	**1.67**	**121**	*i* P	**Pn**	**09 04 27.1**	**-0.9**
CRAR	**CRAIOVA**	**1.75**	**263**	S	**Sn**	**09 04 55.7**	**+4.3**
TLCR		**1.95**	**71**	⇑P	**Pn**	**09 04 31.0**	**-0.8**
TLCR		**1.95**	**71**	⇓P	**Pn**	**09 04 31.0**	**-0.8**
TLCR		**1.95**	**71**	⇓*i*P	**Pn**	**09 04 31.0**	**-0.8**
TLCR				*i* S	**Sn**	**09 04 54.9**	**-1.4**
TESR		**1.96**	**9**	⇑P	**Pn**	**09 04 30.8**	**-1.3**
TESR		**1.96**	**9**	⇑*i*P	**Pn**	**09 04 30.8**	**-1.3**
TESR		**1.96**	**9**	⇑*i*P	**Pn**	**09 04 30.8**	**-1.3**
MDB	**Medias**	**2.04**	**321**	⇓*i*P	**Pn**	**09 04 32.7**	**-0.3**
JMB	**Yambol**	**2.12**	**173**	P	**Pn**	**09 04 33.8**	**-0.4**
JMB				S	**Sn**	**09 05 01.6**	**+1.0**
JMB	**Yambol**	**2.12**	**173**	*i* P	**Pn**	**09 04 33.8**	**-0.4**
JMB	**Yambol**	**2.12**	**173**	P	**Pn**	**09 04 33.8**	**-0.4**
JMB				S	**Sn**	**09 05 01.6**	**+1.0**
PGB	**Panagyurishte**	**2.51**	**217**	*i* P	**Pn**	**09 04 40.0**	**+0.4**
PGB	**Panagyurishte**	**2.51**	**217**	*i* P	**Pn**	**09 04 40.0**	**+0.4**
DIM	**Dimitrovgrad**	**2.57**	**191**	*i* P	**Pn**	**09 04 44.6**	**+4.2**
DIM	**Dimitrovgrad**	**2.57**	**191**	*i* P	**Pn**	**09 04 44.6**	**+4.2**
GZR	**Gura Zlata**	**2.58**	**290**	⇑P	**Pn**	**09 04 40.5**	**0.0**
GZR	**Gura Zlata**	**2.58**	**290**	⇑*i*P	**Pn**	**09 04 40.5**	**0.0**
GZR				*i* S	**Sn**	**09 05 09.3**	**-2.5**
DJES	**Djerdap**	**2.64**	**273**	*e*Pn	**Pn**	**09 04 45.1**	**+3.7**
PLD	**Plovdiv**	**2.70**	**205**	P	**Pn**	**09 04 42.0**	**-0.2**
PLD	**Plovdiv**	**2.70**	**205**	*i* P	**Pn**	**09 04 47.0**	**+4.8**
PLD	**Plovdiv**	**2.70**	**205**	P	**Pn**	**09 04 42.0**	**-0.2**
VTS	**Vitosha**	**2.95**	**229**	P	**Pn**	**09 04 45.0**	**-0.6**
VTS	**Vitosha**	**2.95**	**229**	⇓*i*P	**Pn**	**09 04 45.1**	**-0.5**
VTS	**Vitosha**	**2.95**	**229**	*i* P	**Pn**	**09 04 44.8**	**-0.8**
VTS	**Vitosha**	**2.95**	**229**	⇓*i*P	**Pn**	**09 04 45.1**	**-0.5**
VTS				*i* S	**Sn**	**09 05 19.8**	**-1.2**
KIS	**Kishinev**	**3.03**	**36**	*e*	**Pg**	**09 05 00.0**	**+3.2**
BURAR	**Bucovina Array**	**3.12**	**347**	⇓P	**Pn**	**09 04 47.9**	**-0.1**
BURAR	**Bucovina Array**	**3.12**	**347**	⇑*i*P	**Pn**	**09 04 47.9**	**-0.1**
BURAR	**Bucovina Array**	**3.12**	**347**	⇑*i*P	**Pn**	**09 04 47.9**	**-0.1**
BUR08	**Bucovina Ar. S**	**3.15**	**347**	*e*Pn	**Pn**	**09 04 48.0**	**-0.4**
BUR08	**Bucovina Ar. S**	**3.15**	**347**	*e*Pn	**Pn**	**09 04 48.0**	**-0.4**
DRGR		**3.31**	**313**	⇑P	**Pn**	**09 04 48.9**	**-1.7**
DRGR		**3.31**	**313**	⇓P	**Pn**	**09 04 48.9**	**-1.7**
DRGR		**3.31**	**313**	⇓*i*P	**Pn**	**09 04 48.9**	**-1.7**
BZS	**Buzias**	**3.42**	**289**	⇑P	**Pn**	**09 04 50.7**	**-1.3**
BZS	**Buzias**	**3.42**	**289**	⇑*i*P	**Pn**	**09 04 50.7**	**-1.4**
BZS	**Buzias**	**3.42**	**289**	⇑*i*P	**Pn**	**09 04 50.7**	**-1.4**
RDO	**Rodhopi**	**3.46**	**189**	P	**Pn**	**09 04 52.5**	**-0.1**
RDO	**Rodhopi**	**3.46**	**189**	P	**Pn**	**09 04 52.5**	**-0.1**
KKB	**Krupnik**	**3.54**	**221**	*i* P	**Pn**	**09 04 54.3**	**+0.5**
KKB	**Krupnik**	**3.54**	**221**	*i* P	**Pn**	**09 04 54.3**	**+0.5**
ALN	**Alexandroupoli**	**3.67**	**182**	P	**Pn**	**09 04 55.5**	**-0.1**
ALN	**Alexandroupoli**	**3.67**	**182**	P	**Pn**	**09 04 55.5**	**-0.1**
KAVA	**Kavala**	**3.79**	**200**	P	**Pn**	**09 04 56.7**	**-0.4**
KAVA	**Kavala**	**3.79**	**200**	P	**Pn**	**09 04 56.7**	**-0.4**
SRS	**Serrai**	**3.96**	**210**	P	**Pn**	**09 04 59.5**	**+0.1**
SRS				S	**Sn**	**09 05 48.7**	**+2.9**
SRS	**Serrai**	**3.96**	**210**	P	**Pn**	**09 04 59.5**	**+0.1**
SRS				S	**Sn**	**09 05 48.7**	**+2.9**
TRUS	**Trudelj**	**4.18**	**267**	⇑Pn	**Pn**	**09 04 58.3**	**-4.2**
KNT	**Kendrikon**	**4.19**	**217**	P	**Pn**	**09 05 03.0**	**+0.3**
KNT	**Kendrikon**	**4.19**	**217**	P	**Pn**	**09 05 03.0**	**+0.3**
VAY	**Valandovo**	**4.21**	**221**	*i* Pn	**Pn**	**09 05 02.7**	**-0.2**
VAY				*e*Sg	**Sg**	**09 06 07.9**	**-5.9**
DIVS	**Divibare**	**4.49**	**266**	P	**Pn**	**09 05 05.4**	**-1.4**
DIVS	**Divibare**	**4.49**	**266**	⇑*i*Pn	**Pn**	**09 05 05.5**	**-1.3**
BBLS	**Lazići**	**4.95**	**264**	⇓*i*Pn	**Pn**	**09 05 11.5**	**-1.6**
STHS	**Stebnicka Huta**	**5.92**	**327**	*e*Pn	**Pn**	**09 05 26.3**	**-0.1**
STHS	**Stebnicka Huta**	**5.92**	**327**	*e*PN	**Pn**	**09 05 26.3**	**-0.1**
STHS	**Stebnicka Huta**	**5.92**	**327**	*e*Pn	**Pn**	**09 05 26.3**	**-0.1**
VYHS	**Vyhne**	**6.43**	**310**	*e*Pn	**Pn**	**09 05 33.7**	**+0.4**
VYHS	**Vyhne**	**6.43**	**310**	*e*PN	**Pn**	**09 05 33.7**	**+0.4**
VYHS	**Vyhne**	**6.43**	**310**	*e*Pn	**Pn**	**09 05 33.7**	**+0.4**

MAN 02 09:34:54, 8.05N×122.05E, h31km, mb4.5, ML3.3, MS3.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPIL	**Ipil**	**0.58**	**116**	*e*P	Pb	09 35 06.2	+0.5
IPIL				*e*S	Sb	09 35 15.4	+1.7
PAGZ	**Pagadian**	**1.33**	**98**	*e*P	Pn	09 35 17.8	+1.3
PAGZ				*e*S	Sn	09 35 33.8	+0.6
SNPH	**Sibulan**	**1.74**	**42**	*e*P	Pn	09 35 22.6	+0.4
SNPH				*e*S	Sn	09 35 44.1	+0.8
GUIM	**Jordan**	**2.62**	**12**	*e*P	Pn	09 35 34.9	+0.7
CUYO	**Cuyo Island**	**2.97**	**340**	*e*P	Pn	09 35 40.6	+1.6
BUKP	**Musuan**	**2.99**	**93**	*e*P	Pn	09 35 44.7	+5.4
ENPP	**El Nido**	**4.07**	**321**	*e*P	Pn	09 35 55.6	+1.5

CASC 02 09:41:16.4±1.6, 14°.33N×91°.93W, h76km±15km, MD3.6, 1C-3D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.29**	**92**	⇓*i*P	Pn	09 41 28.8	+0.6
TP2	**Tecpan 2**	**0.99**	**63**	⇓*e*P	Pn	09 41 36.2	+1.1
TP2				*e*S	Sn	09 41 52.1	+2.9
FG6		**1.04**	**77**	⇓*e*P	Pn	09 41 36.4	+0.7
FG6				*e*S	Sn	09 41 50.9	+0.7
FUG	**Fuego 3**	**1.06**	**83**	⇓*e*P	Pn	09 41 36.1	+0.1
NBG	**Las Nubes**	**1.56**	**80**	*e*P	Pn	09 41 43.4	+1.1
NBG				*e*S	Sn	09 42 09.5	+7.6
MRL	**Marmol**	**2.29**	**71**	*e*P	Pn	09 41 52.7	+0.6
BOQS	**Boqueron**	**2.64**	**103**	*e*P	Pn	09 41 56.9	0.0
BOQS				*e*S	Sn	09 42 30.1	+2.2
LFRS	**El Faro**	**2.88**	**104**	*e*P	Pn	09 42 00.9	+0.9
LFRS				*e*S	Sn	09 42 35.5	+2.0
SNVI	**San Vicente**	**3.09**	**103**	*e*P	Pn	09 42 03.2	+0.3
SNVI				*e*S	Sn	09 42 41.8	+3.0

IDC 02 09:42:16.5±1.4, 27°.93N×137°.76E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.3/22, mbtmp3.6/3, Error ellipse: s-maj=74.1km s-min=32.7km az=98.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**51.43**	**185**	P	P	09 51 23.4	0.0
	0.3nm,0.8s,baz=14,slow=10,SNR=4.0						
ILAR	**Eielson Array**	**58.88**	**29**	P	P	09 52 16.8	0.0
	0.4nm,0.6s,baz=248,slow=6.3,SNR=8.9						
FINES	**FINESS Array B**	**75.43**	**333**	P	P	09 54 01.9	0.0
	0.7nm,0.5s,baz=60,slow=9.1,SNR=5.8						

ISCJB 02 09:45:30.2±1.9, 22°.64S±0°.08×66°.2W±0°.2, h258km±21km, mb3.8/2, Error ellipse: s-maj=37.3km s-min=11.9km az=9.6
IDC 02 09:45:31.9±8.8, 22°.29S×65°.58W, h238km±59km, mb3.9/1, mb1 3.6/2, mb1mx3.1/13, mbtmp3.5/2, Error ellipse: s-maj=115.8km s-min=43.3km az=27.0
NEIC 02 09:45:33.2, 22°.44S×66°.69W, h278km, MG4.2(GUC), After GUC.
GUC 02 09:45:33.2±0.7, 22°.44S×66°.69W, h278km, ML4.2
ISC 02 09:45:32.0±1.9, 22°.54S±0°.09×66°.4W±0°.3, h276km±26km, n11, σ0.94/17, mb3.8/2, 2C-3D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB04	**Plate Boundary**	**2.83**	**275**	⇑*i*P	**Pn**	**09 46 32.2**	**+7.8**
PB04				*i* S	**S**	**09 47 17.4**	**+11**
PB04				AML	AML	09 47 20.4	
	comp=N,140nm,0.2s						
PB01	**Plate Boundary**	**3.20**	**297**	⇑*i*P	**Pn**	**09 46 29.2**	**+1.0**
PB01				*i* S	**S**	**09 47 12.6**	**-0.4**
PB01				AML	AML	09 47 15.2	
	comp=N,252nm,0.4s						
CEN1	**Los Morros**	**3.56**	**256**	⇓*i*P	**Pn**	**09 46 36.4**	**+4.3**
CEN1				*i* S	**S**	**09 47 24.6**	**+4.6**
CEN1				AML	AML	09 47 26.9	
	comp=N,100nm,0.4s						
ANCH	**Antofagasta**	**3.83**	**252**	⇓*i*P	**Pn**	**09 46 34.1**	**-0.9**
ANCH				*i* S	**S**	**09 47 22.5**	**-2.8**
ANCH	**Antofagasta**	**3.83**	**252**	⇓*i*P	**Pn**	**09 46 34.1**	**-0.9**
ANCH				*i* S	**S**	**09 47 22.5**	**-2.8**
LPAZ	**La Paz**	**6.42**	**345**	P	**Pn**	**09 47 06.3**	**+0.3**
	comp=N,0.4nm,0.3s,baz=162,slow=9.5,SNR=12						
LPAZ				S	**S**	**09 48 21.2**	**-0.3**
	comp=N,0.1nm,0.3s,baz=309,slow=8.4,SNR=2.1						
LCO	**Las Campanas**	**7.50**	**210**	*e*Pn	**Pn**	**09 47 19.3**	**+0.2**
LCO				*e*Sn	**S**	**09 48 33.3**	**-12**
TORD	**Torodi Ar. Bea**	**75.57**	**69**	P	**P**	**09 56 46.2**	**-0.7**
	comp=N,0.4nm,0.3s,mb3.5,baz=257,slow=6.3,SNR=10						
ULM	**Lac du Bonnet**	**77.02**	**341**	P	**P**	**09 56 58.8**	**+4.5**
	comp=N,2.2nm

BJI ***02*** *10:40:32.3,38°.97N×71°.14E,h30km,mb3.9/1,ML3.4/4*
NNC ***02*** *10:40:35.9±6.6,38°.59N×70°.84E,h0km,mb4.1,mpv3.8, Error ellipse: s-maj=60.0km s-min=44.4km az=13.0*
ISCJB ***02*** *10:40:36.7±0.7,38°.35N±0°.05×71°.67E±0°.09,h50km±16km, mb3.9/3, Error ellipse: s-maj=12.8km s-min=6.2km az=26.6*
NEIC ***02*** *10:40:37.5±1.1,38°.19N×71°.84E,h44km±21km, Error ellipse: s-maj=28.9km s-min=10.8km az=123.0*
IDC ***02*** *10:40:45.5±7.2,38°.74N×71°.96E,h104km±56km, mb3.6/3, mb1 3.7/7, mb1mx3.3/24, mbtmp3.6/7, MS2.8/1, Ms1 2.8/1, ms1mx2.4/19, Error ellipse: s-maj=66.9km s-min=49.8km az=153.0*

ISC 02 10:40:38.5±0.6, 38°.34N±0°.05×71°.72E±0°.10, h48km±16km, n25, σ1§42/31, mb3.9/3, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**3.52**	**69**	Pg	**Pn**	**10 41 30.5**	**-0.2**
KSH				Sg	**Sn**	**10 42 14.0**	**+2.9**
KSH	comp=N,180nm,0.6s			smax			
KSH	comp=E,120nm,0.8s			smax			
AML	**Almayashu**	**4.08**	**21**	*e*Pn	**Pn**	**10 41 38.5**	**+0.2**
KBL	**Kabul**	**4.36**	**210**	*e*Pn	**Pn**	**10 41 40.3**	**-1.9**
KBL				*e*Sn	**Sn**	**10 42 33.0**	**+1.2**
UCH	**Uchtor**	**4.43**	**28**	*e*Pn	**Pn**	**10 41 43.3**	**+0.1**
CEP	**Cherat**	**4.51**	**178**	P	**Pn**	**10 41 44.5**	**+0.2**
CEP				S	**Sn**	**10 42 51.0**	**+16**
EKS2	**Erkin-Say**	**4.59**	**19**	*e*Pn	**Pn**	**10 41 46.9**	**+1.5**
AAK	**Ala-Archa**	**4.78**	**25**	P	**Pn**	**10 41 50.4**	**+2.4**
AAK				S	**Sn**	**10 42 39.7**	**-2.4**
AAK				LR	LR	10 43 55.1	
AAK	**Ala-Archa**	**4.78**	**25**	P	**Pn**	**10 41 50.4**	**+2.4**
AAK	comp=E,4.3nm,0.3s,baz=195,slow=4.8,SNR=8.9			S	**Sn**	**10 42 39.7**	**-2.4**
AAK	comp=E,0.2nm,0.3s,baz=352,slow=11,SNR=1.9			LR	LR	10 43 55.1	
	comp=E,122nm,19.1s,baz=207,slow=44						
CHCP	**Chirah Chowk**	**4.84**	**165**	P	**Pn**	**10 41 49.3**	**+0.5**
KK31	**Karatay Array**	**4.85**	**349**	↑P	**Pn**	**10 41 47.3**	**-1.5**
KK31	comp=E,6.1nm,0.5s,baz=181,slow=14,SNR=6.0			↓Lg		10 43 02.0	
	comp=E,17nm,0.6s,baz=173,slow=29,SNR=3.9						
TKM2	**Tokmak 2**	**5.45**	**32**	↑P	**Pn**	**10 42 00.2**	**+3.1**
TKM2	comp=E,13nm,0.8s			↑Lg		10 43 32.3	
	comp=E,17nm,0.8s						
TKM2	**Tokmak 2**	**5.45**	**32**	Pn	**Pn**	**10 41 55.3**	**-1.7**
	comp=E,12nm,0.8s						
MK31	**Makanchi Array**	**11.49**	**39**	*e*Pn	**Pn**	**10 43 19.7**	**-0.1**
MKAR	**Makanchi Array**	**11.49**	**39**	P	**Pn**	**10 43 20.0**	**+0.2**
	comp=E,0.2nm,0.3s,baz=224,slow=12,SNR=18						
AJM	**Ajmer**	**12.08**	**167**	*i* P	**Pn**	**10 43 26.0**	**-2.0**
AB31	**Akbulak array**	**13.81**	**326**	↑P	**Pn**	**10 43 44.2**	**-7.3**
	comp=E,1.2nm,0.6s,baz=133,slow=14,SNR=13						
AB31				↓Sn	**Sn**	**10 46 09.4**	**-14**
	comp=E,2.9nm,0.8s,baz=146,slow=24,SNR=2.6						
ABKAR	**Akbulak array**	**13.81**	**326**	*e*Pn	**Pn**	**10 43 42.6**	**-8.9**
AKTK	**Aktyubinsk**	**15.53**	**326**	P	**Pn**	**10 44 15.2**	**+1.1**
AKTO	**Aktyubinsk**	**15.53**	**326**	P	**Pn**	**10 44 15.2**	**+1.1**
	comp=E,0.5nm,0.3s,baz=135,slow=11,SNR=12						
ZALV	**Zalesovo Beam**	**18.01**	**26**	P	**Pn**	**10 44 41.7**	**-3.4**
ZALV	**Zalesovo Beam**	**18.01**	**26**	P	**Pn**	**10 44 41.7**	**-3.4**
	comp=E,0.3nm,0.3s,baz=229,slow=9.5,SNR=7.3						
FINES	**FINESS Array B**	**36.30**	**325**	P	**P**	**10 47 34.8**	**-2.3**
	comp=E,1.5nm,0.6s,mb4.1,baz=104,slow=8.0,SNR=10						
ARCES	**ARCESS Array B**	**39.68**	**337**	P	**P**	**10 48 05.8**	**+0.4**
	comp=E,1.8nm,0.7s,mb3.9,baz=101,slow=6.3,SNR=5.8						
NOA	**NORSAR Array B**	**43.27**	**322**	P	**P**	**10 48 36.2**	**+1.2**
NOA	**NORSAR Array B**	**43.27**	**322**	P	**P**	**10 48 36.2**	**+1.2**
	comp=E,1.3nm,0.8s,mb3.7,baz=92,slow=8.1,SNR=3.7						

IDC 02 10:47:07.7±10.0, 30°.63S×179°.12W, h0km, mb3.7/1, mb1 3.8/1, mb1mx3.5/12, mbtmp3.7/1, Error ellipse: s-maj=528.8km s-min=49.3km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.14**	**268**	P	P	10 55 01.9	0.0
	0.9nm,0.8s,baz=106,slow=7.5,SNR=18						
FINES	**FINESS Array B**	**145.02**	**339**	PKPbc	PKPbc	11 06 43.0	-2.6
	1.5nm,0.8s,baz=42,slow=3.6,SNR=8.0						
NOA	**NORSAR Array B**	**148.82**	**350**	PKPbc	PKPbc	11 06 57.6	+1.1
	0.5nm,0.7s,baz=280,slow=12,SNR=2.3						

HLW ***02*** *11:26:52.9,34°.55N×25°.66E,h34km±25km, Ml3.5*
IDC ***02*** *11:26:53.5±1.1,34°.48N×26°.00E,h0km,mb3.8/9, mb1 3.8/13, mb1mx3.7/24, mbtmp3.7/13, ML3.4/3, Error ellipse: s-maj=22.7km s-min=17.2km az=7.0*
NEIC ***02*** *11:26:54.4,34°.33N×25°.99E,h5km,MD3.4(ATH), After ATH.*
ATH ***02*** *11:26:55.0,34°.35N×25°.98E,h8km±5km,MD3.4/11*
CSEM ***02*** *11:26:55.4±0.2,34°.44N×26°.02E,h15km,MD3.4, Error ellipse: s-maj=8.6km s-min=5.1km az=44.0*

ISC 02 11:26:54.8±1.1, 34°.39N±0°.04×26°.03E±0°.04, h6km±8km, n68, σ1§27/77, mb3.7/11, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XRY	**Khrisi**	**0.55**	**330**	*e*Pg	**Pg**	**11 27 05.5**	**+0.1**
XRY	**Khrisi**	**0.55**	**330**	*e*PB	**Pg**	**11 27 05.5**	**+0.1**
XRY	**Khrisi**	**0.55**	**330**	*e*Pg	**Pg**	**11 27 05.5**	**+0.1**
ZKR	**Zakros**	**0.74**	**12**	*e*Pb	**Pb**	**11 27 08.9**	**-1.1**
ZKR				*e*Sb	**Sb**	**11 27 21.5**	**+1.2**
ZKR	**Zakros**	**0.74**	**12**	*e*PB	**Pb**	**11 27 08.9**	**-1.1**
ZKR				*e*SB	**Sb**	**11 27 21.5**	**+1.2**
ZKR	**Zakros**	**0.74**	**12**	*e*Pb	**Pb**	**11 27 08.9**	**-1.1**
LAST	**Lasithi**	**0.89**	**330**	*e*Pg	**Pg**	**11 27 11.6**	**-0.3**
LAST	**Lasithi**	**0.89**	**330**	*e*PB	**Pg**	**11 27 11.6**	**-0.3**
LAST	**Lasithi**	**0.89**	**330**	*e*Pg	**Pg**	**11 27 11.6**	**-0.3**
NPS	**Neapolis**	**0.93**	**339**	*e*Pb	**Pb**	**11 27 12.1**	**-1.2**
NPS	**Neapolis**	**0.93**	**339**	*e*PB	**Pb**	**11 27 12.1**	**-1.2**
NPS	**Neapolis**	**0.93**	**339**	*e*Pb	**Pb**	**11 27 12.1**	**-1.2**
SIVA	**Sivas**	**1.18**	**302**	*e*Pb	**Pb**	**11 27 17.9**	**+0.4**
SIVA				*e*Sb	**Sb**	**11 27 33.7**	**+0.7**
SIVA	**Sivas**	**1.18**	**302**	*e*PB	**Pb**	**11 27 17.9**	**+0.4**
SIVA				*e*SB	**Sb**	**11 27 33.7**	**+0.7**
SIVA	**Sivas**	**1.18**	**302**	*e*Pb	**Pb**	**11 27 17.9**	**+0.4**
SIVA				*e*Sb	**Sb**	**11 27 33.7**	**+0.7**
KARP	**Karpathos**	**1.48**	**39**	*e*Pb	**Pb**	**11 27 24.8**	**+2.1**
KARP	**Karpathos**	**1.48**	**39**	*e*PB	**Pb**	**11 27 24.8**	**+2.1**
KARP	**Karpathos**	**1.48**	**39**	*e*Pb	**Pb**	**11 27 24.8**	**+2.1**
GVD	**Gavdhos**	**1.66**	**286**	*e*Pb	**Pb**	**11 27 26.3**	**+0.6**
GVD				*e*Sg	**Sg**	**11 27 52.5**	**+4.4**
GVD	**Gavdhos**	**1.66**	**286**	*e*PB	**Pb**	**11 27 26.3**	**+0.6**
GVD	**Gavdhos**	**1.66**	**286**	*e*Pb	**Pb**	**11 27 26.3**	**+0.6**
VAM	**Vamos**	**1.81**	**304**	*e*Pn	**Pn**	**11 27 29.1**	**+2.7**
VAM	**Vamos**	**1.81**	**304**	*e*PN	**Pn**	**11 27 29.1**	**+2.7**
KARN	**Karanos**	**2.00**	**301**	*e*PN	**Pn**	**11 27 31.4**	**+2.3**
ARG	**Arkhangelos**	**2.50**	**43**	*e*Pn	**Pn**	**11 27 39.1**	**+3.1**
ARG	**Arkhangelos**	**2.50**	**43**	*e*PN	**Pn**	**11 27 39.1**	**+3.1**
KYTH	**Kithira**	**3.08**	**308**	*e*Pb	**Pn**	**11 27 46.1**	**+2.1**
KYTH	**Kithira**	**3.08**	**308**	*e*PN	**Pn**	**11 27 46.1**	**+2.1**
HMAT	**Matruh**	**3.41**	**164**	AMP		11 28 00.0	
	comp=N,80µm,0.6s,logA/T=5.1,baz=160						
HNAT	**Natroun**	**6.14**	**139**	P	**Pn**	**11 28 26.1**	**0.0**
	baz=138						
HNAT	**Natroun**	**6.14**	**139**	P	**Pn**	**11 28 26.1**	**+0.1**
AWBH		**6.54**	**157**	P	**Pn**	**11 28 30.4**	**-1.0**
	baz=155						
AWBH		**6.54**	**157**	P	**Pn**	**11 28 30.4**	**-1.0**
HSAF	**As Saff**	**6.69**	**134**	P	**Pn**	**11 28 34.1**	**+0.7**
	baz=132						
HSAF	**As Saff**	**6.69**	**134**	P	**Pn**	**11 28 34.1**	**+0.6**
GLL	**Jalalah**	**6.81**	**133**	P	**Pn**	**11 28 34.9**	**-0.2**
	baz=132						
GLL	**Jalalah**	**6.81**	**133**	P	**Pn**	**11 28 34.9**	**-0.3**
AMAG	**Maghara**	**7.13**	**120**	P	**Pn**	**11 28 39.8**	**+0.3**
	baz=119						
AMAG	**Maghara**	**7.13**	**120**	P	**Pn**	**11 28 39.8**	**+0.3**
MMAI	**Mount Meron Ar**	**7.94**	**97**	Pn	**Pn**	**11 28 49.2**	**-1.4**
	comp=N,3.0nm,0.3s,baz=287,slow=12,SNR=12						
MMAI				Sn	**Sn**	**11 30 22.8**	**+2.1**
	comp=N,2.5nm,0.3s,baz=281,slow=23,SNR=4.1						
BRTR	**Keskin Array B**	**8.08**	**47**	Pn	**Pn**	**11 28 52.3**	**-0.3**
	comp=N,0.1nm,0.3s,baz=184,slow=5.8,SNR=2.4						
BRTR	**Keskin Array B**	**8.08**	**47**	Pn	**Pn**	**11 28 52.3**	**-0.3**
TIP	**Timpagrande**	**8.83**	**305**	*e*Pn	**Pn**	**11 29 01.9**	**-1.1**
	comp=N,4.5nm,0.5s						
TIP				*e*Sn	**Sn**	**11 30 33.7**	**-9.0**
TIP	**Timpagrande**	**8.83**	**305**	*e*Pn	**Pn**	**11 29 01.9**	**-1.0**
	comp=N,4.5nm,0.5s						
EIL	**Elat**	**8.92**	**119**	Pn	**Pn**	**11 29 03.2**	**-0.9**
	comp=N,0.4nm,0.3s,baz=280,slow=6.7,SNR=4.2						
EIL				Sn	**Sn**	**11 30 46.0**	**+1.0**
	comp=N,1.4nm,0.3s,baz=30,slow=12,SNR=4.2						
EIL	**Elat**	**8.92**	**119**	Pn	**Pn**	**11 29 03.2**	**-0.9**
EIL				S	**Sn**	**11 30 46.0**	**+1.1**
AKASG	**Malin Array Be**	**16.46**	**7**	Pn	**Pn**	**11 30 43.8**	**-2.4**
	baz=190,slow=10.0,SNR=2.1						
AKASG	**Malin Array Be**	**16.46**	**7**	Pn	**Pn**	**11 30 43.8**	**-2.4**
ESDC	**Sonseca Array**	**24.45**	**291**	P	**P**	**11 32 14.2**	**0.0**
	comp=N,0.2nm,0.3s,mb3.1,baz=89,slow=9.6,SNR=4.0						
ESDC	**Sonseca Array**	**24.45**	**291**	P	**P**	**11 32 14.2**	**0.0**
HFS	**Hagfors**	**26.98**	**346**	P	**P**	**11 32 35.1**	**-1.8**
	comp=N,1.3nm,0.7s,mb3.6,baz=148,slow=14,SNR=3.2						
HFS	**Hagfors**	**26.98**	**346**	P	**P**	**11 32 35.1**	**-1.9**
FINES	**FINESS Array B**	**27.07**	**0**	P	**P**	**11 32 35.6**	**-2.1**
	comp=N,0.7nm,0.6s,mb3.4,baz=126,slow=29,SNR=7.9						
FINES	**FINESS Array B**	**27.07**	**0**	P	**P**	**11 32 35.6**	**-2.1**
KAF	**Kangasniemi**	**27.74**	**0**	*e*p	**P**	**11 32 36.4**	**-7.3**
JOF	**Joensuu**	**28.74**	**5**	*e*p	**P**	**11 32 57.9**	**+5.3**
	comp=N,0.9nm,0.5s,mb3.8						
EKA	**Eskdalemuir Ar**	**29.07**	**325**	P	**P**	**11 32 55.1**	**-0.6**
	comp=N,1.8nm,1.0s,mb3.7,baz=123,slow=8.8,SNR=3.1						
EKA	**Eskdalemuir Ar**	**29.07**	**325**	P	**P**	**11 32 55.1**	**-0.6**
TORD	**Torodi Ar. Bea**	**30.56**	**232**	P	**P**	**11 33 09.2**	**0.0**
	comp=N,1.2nm,0.7s,mb3.9,baz=28,slow=9.3,SNR=6.5						
ARCES	**ARCESS Array B**	**35.20**	**360**	P	**P**	**11 33 46.6**	**-2.5**
	comp=N,1.0nm,0.6s,mb3.9,baz=179,slow=11,SNR=4.1						
ARCES	**ARCESS Array B**	**35.20**	**360**	P	**P**	**11 33 46.6**	**-2.6**
BVAR	**Borovoye Array**	**36.37**	**45**	P	**P**	**11 33 59.8**	**+0.4**
	comp=N,0.4nm,0.5s,mb3.6,baz=238,slow=8.4,SNR=2.6						
BVAR	**Borovoye Array**	**36.37**	**45**	P	**P**	**11 33 59.8**	**+0.4**
MKAR	**Makanchi Array**	**43.61**	**56**	P	**P**	**11 34 59.6**	**-0.1**
	comp=N,2.2nm,0.7s,mb4.0,baz=278,slow=6.2,SNR=16						
MKAR	**Makanchi Array**	**43.61**	**56**	P	**P**	**11 34 59.6**	**-0.1**
ZALV	**Zalesovo Beam**	**45.02**	**46**	P	**P**	**11 35 10.2**	**-0.7**
	comp=N,1.0nm,0.3s,mb4.1,baz=266,slow=8.1,SNR=7.7						
SONM	**Songino Array**	**59.42**	**50**	P	**P**	**11 36 58.7**	**+0.7**
	comp=N,0.4nm,0.5s,mb3.7,baz=292,slow=7.6,SNR=2.8						
SONM	**Songino Array**	**59.42**	**50**	P	**P**	**11 36 58.7**	**+0.7**

MEX 02 11:29:43.9±0.6, 16°.78N×95°.23W, h102km±6km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.46**	**47**	*i* P	Pn	11 29 58.5	-1.0
CMIG				*i* S	Sn	11 30 09.3	-1.9
HUIG	**Huatulco**	**1.31**	**220**	*i* P	Pn	11 30 07.0	-0.9
HUIG				*i* S	Sn	11 30 24.6	-1.5
OXX	**Oaxaca**	**1.46**	**282**	*e*P	Pn	11 30 08.8	-1.0
OXX				*i* S	Sn	11 30 28.1	-1.2
VHO	**Vista Hermosa**	**1.47**	**282**	*i* P	Pn	11 30 09.0	-0.8
VHO				*i* S	Sn	11 30 27.7	-1.8
TGIG		**2.02**	**90**	*i* P	Pn	11 30 16.1	-0.7
TGIG				*i* S	Sn	11 30 40.0	-2.0
PCIG		**2.21**	**119**	*i* P	Pn	11 30 18.1	-1.2
PCIG				*i* S	Sn	11 30 44.8	-1.5
PNIG	**Pinotepa**	**2.80**	**263**	*i* P	Pn	11 30 25.2	-1.8
PNIG				*i* S	Sn	11 30 58.1	-2.1

DJA 02 11:48:15, 9°.31S×115°.03E, h57km, MLv3.3/7, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**0.50**	**13**	P	Pn	11 48 29.4	+2.6
IGBI				S	Sn	11 48 39.0	+3.7
NBBI	**Negara**	**1.02**	**337**	P	Pn	11 48 34.9	+1.7
NBBI				S	Sn	11 48 50.0	+3.4
KHKI	**Kahang-Kahang**	**1.10**	**31**	P	Pn	11 48 35.3	+1.0
JAGI	**Jajag, Banyuwa**	**1.20**	**314**	P	Pn	11 48 35.9	+0.3
JAGI				S	Sn	11 48 51.3	+0.3
SRBI	**Singaraja**	**1.23**	**8**	P	Pn	11 48 36.6	+0.6
SRBI				S	Sn	11 48 53.1	+1.4
BYJI	**Banyuwangi**	**1.28**	**328**	P	Pn	11 48 38.9	+2.3
GMJI	**Gumukmas**	**1.88**	**303**	P	Pn	11 48 45.9	+1.2
BKSI	**Bulukumba**	**6.42**	**52**	P	Pn	11 49 47.2	+0.2

IDC 02 11:51:37.4±3.4, 11°.10S×164°.53E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.7/14, mbtmp3.7/4, ML3.9/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/13, Error ellipse: s-maj=133.6km s-min=30.2km az=133.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**19.72**	**241**	P	Pn	11 56 10.6	+0.5
	0.2nm,0.3s,baz=70,slow=12,SNR=4.4						
CTA				LR	LR	12 01 46.3	
	comp=Z,44nm,19.0s,baz=212,slow=31						
ASAR	**Alice Springs**	**31.70**	**243**	P	P	11 58 02.2	-0.9
	0.6nm,0.6s,baz=64,slow=10,SNR=14						
SONM	**Songino Array**	**78.00**	**324**	P	P	12 03 38.2	+0.5
	0.4nm,0.6s,baz=134,slow=6.2,SNR=3.8						
ILAR	**Eielson Array**	**83.94**	**19**	P	P	12 04 09.1	+0.1
	0.4nm,0.8s,baz=238,slow=6.2,SNR=6.9						

BJI ***02*** *12:21:36.1,32°.33N×105°.34E,h7km,mb3.6/1,ML3.7/13, Ms3.5/3, Ms7 3.2/1*
IDC ***02*** *12:21:40.6±2.2,32°.87N×105°.89E,h0km,mb3.2/2, mb1 3.6/3, mb1mx3.2/22, mbtmp3.4/3, ML4.2/1, Error ellipse: s-maj=85.3km s-min=32.8km az=56.0*

ISC 02 12:21:37.1±0.7, 32°.38N±0°.04×105°.31E±0°.06, h10km, n8, σ1§73/17, mb3.3/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.98**	**222**	Pn	**Pn**	**12 22 11.5**	**+0.9**
CD2				Pg	**Pg**	**12 22 13.9**	**-1.1**
CD2				Sg	**Sg**	**12 22 40.9**	**+0.2**
CD2	comp=N,2µm,0.6s			smax			
CD2	comp=E,870nm,0.7s			smax			
XAN	**Xi'an**	**3.45**	**60**	Pn	**Pn**	**12 22 34.7**	**+3.8**
XAN				Pg	**Pg**	**12 22 39.5**	**-3.7**
XAN				Sn	**Sn**	**12 23 14.2**	**+2.4**
XAN				Sg	**Sg**	**12 23 25.2**	**-2.7**
XAN	comp=N,160nm,1.0s			smax			
XAN	comp=E,75nm,0.8s			smax			
XAN	comp=N,260nm,8.5s			LR	LR		
XAN	comp=E,49nm,8.2s			LR	LR		
LZH	**Lanzhou**	**3.89**	**342**	Pn	**Pn**	**12 22 38.0**	**+1.1**
LZH				Pg	**Pg**	**12 22 47.7**	**-4.0**
LZH				Sn	**Sn**	**12 23 21.8**	**-0.9**
LZH				Sg	**Sg**	**12 23 35.0**	**-7.1**
LZH	comp=N,290nm,1.0s			smax			
LZH	comp=E,540nm,1.0s			smax			
LZH	comp=E,520nm,5.0s			LR	LR		
GYA	**Guiyang**	**6.02**	**168**	Pn	**Pn**	**12 23 02.9**	**-3.3**
GYA				Sn	**Sn**	**12 24 16.9**	**+1.7**
GYA				Sg	**Sg**	**12 24 48.0**	**-2.4**
GYA	comp=N,50nm,0.6s			smax			
GYA	comp=E,50nm,0.7s			smax			
GTA	**Gaotai**	**8.31**	**329**	*e*P	**Pn**	**12 23 48.4**	**+11**
GTA				pP		12 23 52.7	
GTA				sP		12 23 56.0	
GTA	comp=Z,5.0nm,0.8s			pmax	pmax		
CMAR	**Chiang Mai Arr**	**15.01**	**204**	Pn	Px	12 25 22.5	
	comp=Z,0.3nm,0.3s,baz=5.1,slow=11,SNR=4.1						
MKAR	**Makanchi Array**	**22.73**	**316**	P	**P**	**12 26 44.1**	**+5.0**
	comp=Z,0.4nm,0.6s,mb3.1,baz=116,slow=12,SNR=3.7						
ASAR	**Alice Springs**	**62.07**	**150**	P	**P**	**12 32 04.3**	**+6.4**
	comp=Z,0.5nm,1.0s,mb3.6,baz=331,slow=6.4,SNR=4.1						

CASC 02 12:26:52.5±2.3, 8°.21N×82°.83W, h15km±20km, MD3.6, 1C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**0.56**	**323**	↑*e*P	Pg	12 27 02.9	-0.7
TBS2		**0.61**	**16**	*e*P	Pg	12 27 05.4	+1.0
TBS2				*e*S	Sg	12 27 14.5	+1.9
BAR1		**1.14**	**335**	*e*P	Pb	12 27 11.9	-1.9
BUS	**Buena Vista**	**1.63**	**326**	*e*P	Pn	12 27 20.1	-0.5
BUS				*e*S	Sn	12 27 40.6	-0.7
URSC	**Urasca**	**1.87**	**330**	*e*P	Pn	12 27 23.9	0.0
LAJ	**Bijagual**	**2.08**	**322**	*e*P	Pn	12 27 29.6	+2.7
LAJ				*e*S	Sn	12 27 58.4	+5.8
PRS1	**Puriscal**	**2.29**	**320**	*e*P	Pn	12 27 29.7	-0.1
PRS1				*e*S	Sn	12 27 58.1	+0.3
CGA2	**Cerro Gallo 2**	**2.42**	**318**	*e*P	Pn	12 27 32.7	+1.2

BJI ***02*** *12:53:07.4,34°.88N×81°.45E,h12km,ML3.7/6*
ISCJB ***02*** *12:53:13.3±1.2,35°.6N±0°.1×81°.5E±0°.2,h10km, Error ellipse: s-maj=23.3km s-min=12.5km az=44.6*
IDC ***02*** *12:53:13.3±3.9,35°.48N×81°.34E,h0km,mb3.4/1, mb1 3.6/4, mb1mx3.2/24, mbtmp3.4/4, ML3.4/3, Error ellipse: s-maj=124.9km s-min=26.3km az=65.0*
NEIC ***02*** *12:53:14.9±1.2,35°.54N×81°.42E,h10km,mb3.5/3, Error ellipse: s-maj=27.7km s-min=13.8km az=57.0*

ISC 02 12:53:14.9±1.2, 35°.6N±0°.1×81°.6E±0°.2, h10km, n10, σ1§30/10, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**5.95**	**313**	Pn	**Pn**	**12 54 42.4**	**-0.7**
KSH				Sn	**Sn**	**12 55 53.7**	**+2.4**
KSH	comp=N,33nm,1.0s			smax			
KSH	comp=E,28nm,0.7s			smax			
AAK	**Ala-Archa**	**8.95**	**324**	Pg	Px	12 56 01.2	
	comp=E,0.7nm,0.3s,baz=223,slow=6.7,SNR=4.4						
AAK				Lg		12 57 55.4	
	comp=E,0.3nm,0.3s,baz=28,slow=15,SNR=3.8						
AML	**Almayashu**	**8.99**	**319**	*e*Pn	**Pn**	**12 55 23.3**	**-1.4**
	comp=E,5.8nm,0.7s						
AML				*e*Sg		12 57 56.0	
MKAR	**Makanchi Array**	**11.22**	**2**	Pn	**Pn**	**12 55 56.9**	**+1.6**
	comp=E,0.2nm,0.3s,baz=174,slow=13,SNR=3.8						
KURK	**Kurchatov**	**15.29**	**353**	*e*Pn	**Pn**	**12 56 49.2**	**-1.5**
	comp=E,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**18.51**	**6**	Pn	**Pn**	**12 57 32.2**	**+1.0**
	comp=E,0.1nm,0.3s,baz=189,slow=16,SNR=3.1						
BVAR	**Borovoye Array**	**19.16**	**339**	P	**Pn**	**12 57 38.4**	**-0.7**
	comp=E,0.2nm,0.3s,baz=134,slow=11,SNR=6.0						
BRVK	**Borovoye**	**19.22**	**339**	*e*P	**Pn**	**12 57 38.2**	**-1.7**
	comp=E,2.6nm,0.8s						
ABKAR	**Akbulak array**	**20.94**	**317**	*e*P	**P**	**12 57 58.2**	**+0.6**
	comp=E,1.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**22.95**	**133**	P	**P**	**12 58 20.1**	**+0.7**
	comp=E,0.5nm,0.5s,baz=312,slow=10,SNR=6.6						

MEX 02 13:09:33.2±1.1, 16°.05N×98°.17W, h6km±9km, MD4.2, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.34**	**7**	*i* P	Pg	13 09 39.1	-0.8
PNIG				*i* S	Sg	13 09 45.5	+1.0
VHO	**Vista Hermosa**	**1.71**	**53**	*e*P	Pn	13 10 00.7	-2.9
VHO				*i* S	Sn	13 10 21.1	-4.6
ACX	**Acapulco**	**1.81**	**297**	*e*P	Pn	13 10 01.4	-3.5
ACX				*e*S	Sn	13 10 25.2	-3.0
HUIG	**Huatulco**	**2.00**	**98**	*e*P	Pn	13 10 04.5	-3.0
HUIG				*i* S	Sn	13 10 28.3	-4.7
CAIG	**El Cayaco**	**2.24**	**297**	*e*P	Pn	13 10 08.0	-2.8
CAIG				*e*S	Sn	13 10 34.9	-4.0
MEIG	**Mezcala**	**2.33**	**324**	*e*P	Pn	13 10 09.7	-2.3
MEIG				*i* S	Sn	13 10 32.8	-8.1
PLIG	**Platanillo**	**2.66**	**332**	*e*P	Pn	13 10 13.4	-3.1
PLIG				*i* S	Sn	13 10 43.8	-5.3

ISCJB ***02*** *13:25:46.0±0.3,32°.70N±0°.02×105°.47E±0°.04,h10km, mb3.9/14, Error ellipse: s-maj=4.4km s-min=3.5km az=11.0*
BJI ***02*** *13:25:46.2,32°.68N×105°.67E,h10km,mB4.4/9,mb4.4/13, ML4.3/24, Ms4.0/17, Ms7 3.6/13*
NEIC ***02*** *13:25:49.0±2.7,32°.77N×105°.61E,h21km±23km,mb4.1/10, Error ellipse: s-maj=11.9km s-min=7.1km az=88.0*
IDC ***02*** *13:25:48.0±1.7,32°.77N×105°.21E,h0km,mb3.7/7, mb1 3.8/10, mb1mx3.6/25, mbtmp3.7/10, ML3.6/3, MS2.9/2, Ms1 2.9/2, ms1mx2.4/27, Error ellipse: s-maj=33.8km s-min=27.3km az=3.0*

**ISC 02 13:25:47.7±0.3, 32°.69N±0°.02

	comp=Z,7.0nm,0.9s								
GTA						pmax	pmax		
	comp=Z,54nm,5.6s								
GTA						LR	LR		
	comp=N,690nm,13.4s								
GTA						LR	LR		
	comp=E,660nm,10.4s								
GTA						LR	LR		
	comp=Z,260nm,11.0s								
BTO	**Baotou**	**8.68**	**23**	*eP*		**Pn**		**13 27 51.6**	**-1.7**
BTO				S		**Sn**		**13 29 40.7**	**+10**
BTO				LR	LR				
	comp=N,110nm,10.3s								
BTO				LR	LR				
	comp=E,56nm,8.8s								
HHC	**Hu-ho-hao-te**	**9.47**	**29**	*eP*		**Pn**		**13 28 06.1**	**+2.0**
HHC				pP				13 28 09.2	
HHC				sP				13 28 12.4	
HHC				*eS*		**Sn**		**13 29 51.9**	**+1.4**
HHC				sS				13 29 57.6	
HHC				pmax	pmax				
	comp=Z,20nm,0.5s								
HHC				pmax	pmax				
	comp=Z,58nm,3.8s								
HHC				LR	LR				
	comp=N,150nm,2.9s								
HHC				LR	LR				
	comp=E,170nm,3.2s								
HHC				LR	LR				
	comp=Z,220nm,5.7s								
BJI	**Beijing**	**11.28**	**46**	P		**Pn**		**13 28 27.2**	**-1.7**
BJI				pmax	pmax				
	comp=Z,5.0nm,0.6s								
BJI				pmax	pmax				
	comp=Z,50nm,5.6s								
BJI				LR	LR				
	comp=N,450nm,11.8s								
BJI				LR	LR				
	comp=E,440nm,10.4s								
NJ2	**Nanjing**	**11.28**	**90**	*eP*		**Pn**		**13 28 32.6**	**+3.7**
NJ2				pP				13 28 35.8	
NJ2				PP				13 28 38.8	
NJ2				sP				13 28 41.4	
NJ2				S		**Sn**		**13 30 39.8**	**+4.8**
NJ2				sS				13 30 45.0	
NJ2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
NJ2				pmax	pmax				
	comp=Z,210nm,3.5s								
NJ2				LR	LR				
	comp=N,90nm,9.2s								
NJ2				LR	LR				
	comp=E,30nm,10.7s								
QIZ	**Qiongzhong**	**14.14**	**163**	P		**Pn**		**13 29 06.1**	**-2.0**
QIZ				S		**Sn**		**13 31 44.8**	**-0.4**
QIZ				pmax	pmax				
	comp=Z,9.0nm,1.4s								
QIZ				LR	LR				
	comp=N,130nm,15.9s								
QIZ				LR	LR				
	comp=E,230nm,13.9s								
QIZ				LR	LR				
	comp=Z,140nm,12.1s								
CHTO	**Chiang Mai**	**15.03**	**205**	*eP*		**Pn**		**13 29 22.6**	**+2.3**
	comp=Z,4.4nm,0.7s								
SONM	**Songino Array**	**15.14**	**2**	Pn		**Pn**		**13 29 20.4**	**-1.1**
SONM				Lg				13 33 43.5	
SONM				LR	LR			13 36 11.6	
SONM	**Songino Array**	**15.14**	**2**	Pn		**Pn**		**13 29 20.4**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=175,slow=12,SNR=5.1								
SONM				Lg				13 33 43.5	
	comp=Z,0.2nm,0.3s,baz=221,slow=33,SNR=5.9								
SONM				LR	LR			13 36 11.6	
	comp=Z,14nm,18.3s,baz=355,slow=41								
ULN	**Ulaanbaatar**	**15.20**	**4**	*e*Pn		**Pn**		**13 29 20.9**	**-1.4**
	comp=Z,3.7nm,0.5s								
CM31	**Chiang Mai Arr**	**15.36**	**204**	Pn		**Pn**		**13 29 26.4**	**+1.8**
	comp=Z,9.4nm,1.0s								
CMAR	**Chiang Mai Arr**	**15.36**	**204**	Pn		**Pn**		**13 29 24.9**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=13,slow=11,SNR=8.2								
KSRS	**Korea Array**	**18.92**	**69**	P		**Pn**		**13 30 12.2**	**+3.0**
	comp=Z,3nm,0.3s,baz=258,slow=9.5,SNR=8.4								
MK31	**Makanchi Array**	**22.65**	**315**	*e*P		**P**		**13 30 48.3**	**-0.5**
MKAR	**Makanchi Array**	**22.65**	**315**	P		**P**		**13 30 48.7**	**-0.1**
	comp=Z,2.1nm,0.6s,mb3.8,baz=119,slow=13,SNR=25								
ZALV	**Zalesovo Beam**	**25.87**	**331**	P		**P**		**13 31 20.6**	**+1.2**
	comp=Z,0.6nm,0.5s,mb3.4,baz=128,slow=12,SNR=3.4								
AAK	**Ala-Archa**	**26.38**	**301**	LR		LR		13 42 40.1	
	comp=Z,67nm,19.4s,baz=189,slow=39								
KURK	**Kurchatov**	**26.76**	**320**	*e*P		**P**		**13 31 27.2**	**-0.3**
	comp=Z,2.7nm,0.6s,mb4.0								
AML	**Almayashu**	**26.86**	**300**	*e*P		**P**		**13 31 27.0**	**-1.5**
	comp=Z,3.6nm,1.0s,mb3.9								
BVAR	**Borovoye Array**	**32.34**	**319**	P		**P**		**13 32 17.2**	**+0.2**
	comp=Z,0.3nm,0.4s,mb3.5,baz=90,slow=8.6,SNR=2.4								
ABKAR	**Akbulak array**	**37.56**	**310**	*e*P		**P**		**13 33 02.0**	**0.0**
	comp=Z,0.8nm,0.6s,mb3.6								
AKTK	**Aktyubinsk**	**38.98**	**311**	P		**P**		**13 33 13.5**	**-0.4**
AKTO	**Aktyubinsk**	**38.98**	**311**	P		**P**		**13 33 13.5**	**-0.4**
	comp=Z,0.7nm,0.6s,mb3.6,baz=76,slow=8.3,SNR=3.5								
ARU	**Arti**	**39.95**	**321**	*e*P		**P**		**13 33 21.3**	**-0.7**
	comp=Z,2.9nm,0.7s,mb4.1								
MBWA	**Marble Bar**	**55.24**	**164**	*e*P		**P**		**13 35 20.4**	**-0.6**
	comp=Z,11nm,1.1s,mb4.8								
FINES	**FINESS Array B**	**56.94**	**326**	P		**P**		**13 35 32.4**	**-0.4**
	comp=Z,0.8nm,0.5s,mb4.0,baz=94,slow=7.9,SNR=7.6								
AKASG	**Malin Array Be**	**57.20**	**313**	P		**P**		**13 35 33.6**	**-1.2**
	comp=Z,0.3nm,0.4s,mb3.7,baz=71,slow=7.4,SNR=3.3								
CTAO	**Charters Tower**	**65.34**	**138**	*e*P		**P**		**13 36 33.5**	**+3.3**
	comp=Z,5.0nm,0.7s,mb4.7								
COLA	**College**	**67.47**	**26**	P		**P**		**13 36 42.7**	**-0.6**
	comp=Z,3.4nm,0.8s,mb4.4								
ILAR	**Eielson Array**	**67.88**	**26**	P		**P**		**13 36 48.9**	**+3.0**
	comp=Z,0.5nm,0.9s,mb3.5,baz=292,slow=5.1,SNR=5.8								
PMR	**Palmer**	**68.56**	**30**	P		**P**		**13 36 54.3**	**+4.1**

*ISCJB **02** 13:31:51.7±0.4, 4.°82S±0.°04×129.°37E±0.°05, h217km±4km, mb3.9/13, Error ellipse: s-maj=9.1km s-min=5.6km az=146.7*
*NEIC **02** 13:31:52.0±1.4, 4.°82S×129.°28E, h200km±15km, mb4.2/11, Error ellipse: s-maj=12.3km s-min=6.3km az=219.0*
*DJA **02** 13:31:53, 4.°81S×129.°40E, h201km, mb4.6/10*
*IDC **02** 13:31:58.3±3.9, 4.°93S×129.°21E, h263km±41km, mb3.6/7, mb1 3.7/8, mb1mx3.4/19, mbtmp3.6/8, Error ellipse: s-maj=43.3km s-min=10.1km az=66.0*

ISC 02 13:31:52.8±0.4, **4.°83S**±0.°05×**129.°35E**±0.°05, **h210**km±4km, **n46**, σ0**76**/54, **mb3.9**/13, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BNDI	**Bandanaira**	**0.63**	**61**	P		**Pn**	**13 32 22.1**	**+0.5**
BNDI				S		**S**	**13 32 43.8**	**-0.1**
AAI	**Ambon**	**1.62**	**314**	P		**Pn**	**13 32 29.0**	**+0.5**
NLAI	**Namlea**	**2.75**	**305**	P		**Pn**	**13 32 41.0**	**+0.9**
NLAI				S		**S**	**13 33 16.6**	**-0.5**
TLE	**Tual**	**3.47**	**104**	P		**Pn**	**13 32 48.6**	**+0.1**
TLE				S		**S**	**13 33 27.8**	**-4.4**
LBMI	**Labuha**	**4.55**	**336**	P		**Pn**	**13 33 01.5**	**-0.4**
TNTI	**Ternate**	**5.91**	**340**	P		**Pn**	**13 33 18.7**	**-0.4**
	0.7nm2μm187nm,0.8s							
BAKI	**Biak**	**7.65**	**62**	P		**Pn**	**13 33 41.1**	**-0.5**
	84nm,0.9s							
MNI	**Manado**	**7.69**	**324**	P		**Pn**	**13 33 41.4**	**-0.7**
	184nm,0.9s							
KAKA	**Kakadu**	**8.40**	**159**	*e*P		**Pn**	**13 33 50.1**	**-1.2**
	79nm,0.3s							
KAKA				*e*S		**S**	**13 35 19.2**	**-7.0**
KAKA	**Kakadu**	**8.40**	**159**	*e*Pn		**Pn**	**13 33 49.9**	**-1.5**
	188nm,0.4s							
KAKA				*e*S		**S**	**13 35 17.6**	**-8.6**
KAKA	**Kakadu**	**8.40**	**159**	P		**Pn**	**13 33 50.3**	**-1.0**
	4μm171nm,0.6s							
MRSI	**Marisa**	**9.09**	**305**	P		**Pn**	**13 34 00.9**	**+0.7**
	16nm,0.9s							
BKSI	**Bulukumba**	**9.21**	**267**	P		**Pn**	**13 34 04.1**	**+2.4**
	15nm,0.9s							
SGSI	**Sangihe**	**9.28**	**336**	P		**Pn**	**13 34 01.3**	**-1.4**
	164nm,0.7s							
SPSI	**Sidrap Palu**	**9.59**	**275**	P		**Pn**	**13 34 07.4**	**+0.7**
	16nm,0.6s							
KNA	**Kununurra**	**10.87**	**183**	P		**Pn**	**13 34 22.3**	**-0.8**
	1μm74nm,0.8s							
FITZ	**Fitzroy Crossi**	**13.68**	**195**	*e*P		**Pn**	**13 34 58.2**	**-0.3**
	8.7nm,0.6s							
FITZ				*e*S		**S**	**13 37 25.5**	**-5.3**
FITZ	**Fitzroy Crossi**	**13.68**	**195**	*e*P		**Pn**	**13 34 58.4**	**-0.1**
FITZ	**Fitzroy Crossi**	**13.68**	**195**	P		**Pn**	**13 34 58.3**	**-0.2**
WRAB	**Tennant Creek**	**15.78**	**162**	*e*P		**Pn**	**13 35 23.2**	**-0.9**
	20nm,0.6s							
WRAB				*e*S		**S**	**13 38 08.3**	**-10**
COEN	**Coen**	**16.37**	**125**	*e*P		**P**	**13 35 30.8**	**+0.6**
	50nm,0.3s							
KKM	**Kota Kinabalu**	**16.99**	**309**	*e*P		**P**	**13 35 37.0**	**-0.1**
	23nm,0.7s							
PMG	**Port Moresby**	**18.24**	**105**	*e*P		**P**	**13 35 51.6**	**+0.9**
	14nm,0.8s							
MBWA	**Marble Bar**	**18.73**	**209**	*e*P		**P**	**13 35 54.9**	**-1.0**
	12nm,1.0s							
ASAR	**Alice Springs**	**19.24**	**167**	P		**P**	**13 36 02.5**	**+1.2**
	6.8nm,0.3s,baz=351,slow=12,SNR=538							
ASAR				S		**S**	**13 39 26.6**	**-1.2**
	0.4nm,0.3s,baz=348,slow=20,SNR=15							
KSM	**Kuching**	**20.03**	**288**	P		**P**	**13 36 09.3**	**-0.7**
	7.5nm,0.9s							
CTA	**Charters Tower**	**22.38**	**134**	*e*P		**P**	**13 36 34.0**	**+0.3**
	3.8nm,0.9s,mb3.9							
CTA	**Charters Tower**	**22.38**	**134**	P		**P**	**13 36 35.2**	**+1.6**
CTA	**Charters Tower**	**22.38**	**134**	P		**P**	**13 36 35.2**	**+1.6**
	3.6nm,0.6s,mb4.1,baz=315,slow=12,SNR=8.2							
BBOO	**Buckleboo**	**28.54**	**168**	*e*P		**P**	**13 37 29.4**	**+0.5**
	3.5nm,0.4s,mb4.3							
STKA	**Stephens Creek**	**29.25**	**158**	*e*P		**P**	**13 37 36.6**	**+1.3**
	3.4nm,1.1s,mb3.9							
STKA	**Stephens Creek**	**29.25**	**158**	*e*P		**P**	**13 37 35.9**	**+0.6**
	1.4nm,1.2s,mb3.5							
STKA	**Stephens Creek**	**29.25**	**158**	P		**P**	**13 37 36.5**	**+1.2**
	1.1nm,0.4s,mb3.9,baz=320,slow=12,SNR=3.8							
KULM	**Kulim**	**30.38**	**289**	*e*P		**P**	**13 37 45.2**	**-0.2**
	5.0nm,0.8s,mb4.2							
CMAR	**Chiang Mai Arr**	**37.87**	**308**	P		**P**	**13 38 50.3**	**+0.6**
	1.9nm,0.6s,mb3.8,baz=129,slow=6.8,SNR=9.4							
CHTO	**Chiang Mai**	**38.07**	**309**	*e*P		**P**	**13 38 51.1**	**-0.3**
	1.0nm,0.6s,mb3.5							
MK31	**Makanchi Array**	**66.07**	**327**	*e*P		**P**	**13 42 17.0**	**-0.1**
MKAR	**Makanchi Array**	**66.07**	**327**	P		**P**	**13 42 17.4**	**+0.3**
	3.2nm,0.5s,mb4.2,baz=125,slow=8.0,SNR=11							
ZALV	**Zalesovo Beam**	**69.36**	**334**	P		**P**	**13 42 37.2**	**-0.3**
ZALV	**Zalesovo Beam**	**69.36**	**334**	P		**P**	**13 42 37.2**	**-0.3**
	1.0nm,0.5s,mb3.7,baz=132,slow=8.8,SNR=3.9							
KURK	**Kurchatov**	**70.34**	**328**	*e*P		**P**	**13 42 43.0**	**-0.5**
	4.5nm,1.0s,mb4.0							
BVAR	**Borovoye Array**	**75.89**	**328**	P		**P**	**13 43 15.6**	**-0.4**
	0.8nm,0.5s,mb3.6,baz=122,slow=7.2,SNR=6.6							
BRVK	**Borovoye**	**75.97**	**328**	*e*P		**P**	**13 43 16.9**	**+0.5**
	3.3nm,0.8s,mb4.0							
ABKAR	**Akbulak array**	**80.42**	**322**	*e*P		**P**	**13 43 40.5**	**-0.5**
	1.1nm,0.7s,mb3.6							
AKTK	**Aktyubinsk**	**81.97**	**322**	P		**P**	**13 43 49.4**	**+0.3**
AKTO	**Aktyubinsk**	**81.97**	**322**	P		**P**	**13 43 49.4**	**+0.3**
	0.5nm,0.3s,mb3.6,baz=108,slow=8.7,SNR=3.6							

*ISCJB **02** 13:35:43.2±0.5, 23.°92N±0.°03×122.°04E±0.°02, h22km±5km, Error ellipse: s-maj=5.0km s-min=2.8km az=148.5*
*TAP **02** 13:35:43.7, 23.°95N×121.°98E, h42km, ML3.1, C*
*JMA **02** 13:35:44.6±0.3, 24.°07N×122.°04E, h67km, M2.4*

ISC 02 13:35:43.5±0.5, **23.°94N**±0.°02×**122.°03E**±0.°02, **h21**km±4km, **n33**, σ0**74**/60, **4C**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HWA	**Hwalien**	**0.39**	**276**	*e*P		**Pb**	**13 35 52.7**	**+1.0**
	baz=271							
HWA				*e*S		**Sb**	**13 35 59.9**	**+2.5**
	baz=271							
TWD	**Chiawan**	**0.42**	**290**	P		**Pb**	**13 35 52.7**	**+0.5**
	baz=292							
TWD				S		**Sb**	**13 35 59.2**	**+1.0**
	baz=292							
ENA	**Nanau**	**0.56**	**332**	*i* P		**Pb**	**13 35 55.0**	**+0.4**
	baz=329							
ENA				S		**Sb**	**13 36 03.2**	**+1.1**
	baz=329							
ESL	**Shilin**	**0.56**	**258**	P		**Pb**	**13 35 54.4**	**-0.2**
	baz=249							
ESL				*e*S		**Sb**	**13 36 02.4**	**+0.2**
	baz=249							
TWC	**Suao**	**0.69**	**346**	*e*P		**Pb**	**13 35 57.1**	**+0.3**
	baz=351							
TWC				*e*S		**Sb**	**13 36 07.0**	**+1.1**
	baz=351							
WHF	**Hehuan Shan**	**0.73**	**287**	⇑ *i* P		**Pb**	**13 35 57.1**	**-0.4**
	baz=278							
WHF				S		**Sb**	**13 36 07.1**	**+0.1**
	baz=278							
EHY	**Hungye**	**0.78**	**237**	*i* P		**Pb**	**13 35 57.5**	**-0.8**
	baz=244							
EHY				*e*S		**Sb**	**13 36 07.4**	**-1.0**
	baz=244							
NNS	**Nan Shan**	**0.78**	**310**	*e*P		**Pb**	**13 35 58.2**	**-0.2**
	baz=312							
NNS				S		**Sb**	**13 36 08.8**	**+0.2**
	baz=312							
ENTT	**Nioudou**	**0.82**	**329**	P		**Pb**	**13 35 58.9**	**-0.1**
	baz=332							
ENTT				S		**Sb**	**13 36 09.5**	**-0.1**
	baz=332							
TWT	**Tachien**	**0.84**	**292**	*e*P		**Pb**	**13 35 58.9**	**-0.5**
	baz=285							
TWT				*e*S		**Sb**	**13 36 10.0**	**-0.3**
	baz=285							
TWE	**Neicheng**	**0.85**	**337**	*e*P		**Pb**	**13 35 59.4**	**-0.1**
	baz=341							
TWE				S		**Sb**	**13 36 10.5**	**0.0**
	baz=341							
TWF1	**Yuli**	**0.89**	**229**	⇑ *i* P		**Pb**	**13 35 59.3**	**-0.9**
	baz=239							
TWF1				S		**Sb**	**13 36 10.6**	**-1.0**
	baz=239							
NSK	**Sanguang**	**0.96**	**320**	P		**Pb**	**13 36 00.9**	**-0.5**
	baz=312							
NSK				*e*S		**Sb**	**13 36 12.6**	**-1.1**
	baz=312							
SMLT	**Sun Moon Lake**	**1.04**	**267**	⇑ *i* P		**Pn**	**13 36 01.9**	**-0.9**
	baz=266							
SMLT				S		**Sb**	**13 36 14.8**	**-1.0**
	baz=266							
YOJ	**Yonaguni jima**	**1.04**	**59**	P		**Pn**	**13 36 02.7**	**-0.1**
YOJ				S		**Sb**	**13 36 15.8**	**-0.1**
TYC	**Yuchr**	**1.07**	**269**	*i* P		**Pn**	**13 36 02.3**	**-1.0**
	baz=268							
TYC				S		**Sb**	**13 36 15.5**	**-1.5**
	baz=268							
TWA	**Mucha**	**1.12**	**339**	*e*S		**Sn**	**13 36 17.4**	**-0.8**
	baz=331							
NWF	**Wu-fen Shan**	**1.15**	**349**	*e*S		**Sn**	**13 36 19.2**	**-0.3**
	baz=351							
NSTT	**Nanjuang**	**1.17**	**307**	⇑ *i* P		**Pn**	**13 36 04.5**	**-0.1**
	baz=308							
NSTT				*e*S		**Sn**	**13 36 18.5**	**-1.3**
	baz=308							
ELDTW	**Lidau**	**1.19**	**232**	P		**Pn**	**13 36 03.3**	**-1.5**
	baz=220							
TWQ1	**Liyutan**	**1.22**	**290**	P		**Pn**	**13 36 05.3**	**0.0**
	baz=290							
TWQ1				*e*S		**Sn**	**13 36 21.4**	**+0.2**
	baz=290							
CHN5	**Tsauling**	**1.28**	**255**	P		**Pn**	**13 36 06.1**	**-0.1**
	baz=253							
CHN5				*e*S		**Sn**	**13 36 23.1**	**+0.4**
	baz=253							
WGK	**Gukeng**	**1.37**	**260**	*e*P		**Pn**	**13 36 07.2**	**-0.1**
	baz=258							
CHN4	**Tsaushan**	**1.44**	**246**	*e*P		**Pn**	**13 36 08.8**	**+0.5**
	baz=244							
CHN4				*e*S		**Sn**	**13 36 27.1**	**+0.5**
	baz=244							
WTP	**Ta-pu**	**1.47**	**242**	*e*P		**Pn**	**13 36 08.0**	**-0.8**
	baz=240							
WTP				*e*S		**Sn**	**13 36 28.0**	**+0.7**
	baz=240							
TWK	**Hsinying**	**1.56**	**245**	P		**Pn**	**13 36 10.6**	**+0.6**
	baz=243							
TWK				S		**Sn**	**13 36 30.4**	**+0.8**
	baz=243							
SGST	**Jiashian**	**1.58**	**238**	P		**Pn**	**13 36 11.0**	**+0.8**
	baz=227							
SGST				*e*S		**Sn**	**13 36 31.2**	**+1.3**
	baz=227							
IRIF	**Iriomote-Funau**	**1.60**	**75**	P		**Pn**	**13 36 10.7**	**+0.2**
IRIF				S		**Sn**	**13 36 30.6**	**0.0**
HATJ	**Hateruma jima**	**1.63**	**85**	P		**Pn**	**13 36 11.1**	**+0.2**
SSD	**Sandimen**	**1.75**	**228**	P		**Pn**	**13 36 13.6**	**+1.1**
	baz=221							
SSD				*e*S		**Sn**	**13 36 34.9**	**+0.7**
	baz=221							
JKRS	**Kuro-shima**	**1.83**	**80**	P		**Pn**	**13 36 14.4**	**+0.7**
JKRS				*e*S		**Sn**	**13 36 36.8**	**+0.5**
JIJ	**Ishigaki jima**	**1.98**	**77**	P		**Pn**	**13 36 15.5**	**-0.2**
JIJ				S		**Sn**	**13 36 38.9**	**-0.9**
JTJ	**Tarama**	**2.54**	**73**	P		**Pn**	**13 36 23.4**	**0.0**

*ISCJB **02** 13:35:58.1±0.3, 32.°53N±0.°03×105.°56E±0.°04, h10km, mb3.9/8, Error ellipse: s-maj=5.1km s-min=3.5km az=22.6*
*NEIC **02** 13:35:59.6±4.7, 32.°54N×105.°36E, h3km±32km, mb4.0/4, Error ellipse: s-maj=14.6km s-min=8.5km az=73.0*
*BJI **02** 13:35:59.6, 32.°53N×105.°56E, h9km, mB4.5/4, mb4.4/6, ML4.1/22, Ms3.7/15, Ms7 3.3/11*
*IDC **02** 13:35:59.2±1.0, 32.°48N×105.°41E, h0km, mb3.8/6, mb1 3.9/9, mb1mx3.6/24, mbtmp3.8/9, ML3.4/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/22, Error ellipse: s-maj=34.2km s-min=19.4km az=62.0*

ISC 02 13:36:00.3±0.3, **32.°52N**±0.°03×**105.°55E**±0.°04, **h10**km, **n28**, σ1**9**09/45, **mb3.9**/8, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CD2	**Chengdu**	**2.21**	**224**	Pn		**Pn**	**13 36 37.5**	**+0.5**
CD2				Pg		**Pg**	**13 36 41.0**	**-1.7**
CD2				Sn		**Sn**	**13 37 05.8**	**+1.4**
CD2				Sg		**Sg**	**13 37 10.0**	**-1.4**
CD2				smax				
	comp=N,8μm,0.6s							
CD2				smax				
	comp=E,3μm,0.6s							
XAN	**Xi'an**	**3.21**	**61**	Pn		**Pn**	**13 36 53.8**	**+3.1**
XAN				Pg		**Pg**	**13 37 01.0**	**-0.8**
XAN				Sn		**Sn**	**13 37 28.7**	**-0.3**
XAN				Sg		**Sg**	**13 37 42.3**	**-1.0**
XAN				smax				
	comp=N,760nm,0.7s							
XAN				smax				
	comp=E,440nm,0.8s							
XAN				LR	LR			
	comp=N,1μm,8.9s							
XAN				LR	LR			
	comp=E,200nm,7.9s							
LZH	**Lanzhou**	**3.83**	**339**	Pn		**Pn**	**13 37 01.0**	**+1.7**
LZH				Pg		**Pg**	**13 37 10.6**	**-3.1**
LZH				Sn		**Sn**	**13 37 44.0**	**-0.4**
LZH				Sg		**Sg**	**13 37 57.7**	**-5.7**
LZH				smax				
	comp=N,1μm,1.0s							
LZH				smax				
	comp=E,2μm,1.0s							
LZH				LR	LR			
	comp=E,2μm,5.1s							
LZH				LR	LR			
	comp=Z,2μm,7.0s							
ENH	**Enshi**	**4.04**	**123**	*e*Pn		**Pn**	**13 37 05.2**	**+3.0**
ENH				*e*S		**Sn**	**13 38 07.7**	**+18**
GYA	**Guiyang**	**6.11**	**171**	Pn		**Pn**	**13 37 32.5**	**+1.8**
GYA				Sn		**Sn**	**13 38 39.9**	**-0.8**
GYA				Sg		**Sg**	**13 39 09.7**	**-6.9**
GYA				smax				
	comp=N,390nm,0.9s							
GYA				smax				
	comp=E,240nm,0.8s							
KMI	**Kunming**	**7.76**	**199**	Pn		**Pn**	**13 37 53.5**	**+0.1**
KMI				Sn		**Sn**	**13 39 20.4**	**-1.0**
KMI				smax				
	comp=N,22nm,1.0s							
KMI				smax				
	comp=E,28nm,0.9s							
KMI				LR	LR			
	comp=N,220nm,10.1s							
KMI				LR	LR			
	comp=E,310nm,9.2s							
KMI				LR	LR			
	comp=Z,170nm,10.1s							
WHN	**Wuhan**	**7.76**	**102**	P		**Pb**	**13 38 06.8**	**-8.2**
WHN				S		**Sn**	**13 39 20.2**	**-1.1**
WHN				LR	LR			
	comp=N,1μm,4.0s							
WHN				LR	LR			
	comp=E,1μm,4.5s							
WHN				LR	LR			
	comp=Z,1μm,3.7s							
GTA	**Gaotai**	**8.30**	**328**	*e*P		**Pn**	**13 38 00.1**	**-0.6**
GTA				pP			13 38 04.6	
GTA				sP			13 38 07.5	
GTA				S		**Sn**	**13 39 35.8**	**+1.3**
GTA				sS			13 39 40.8	
GTA				pmax	pmax			
	comp=Z,6.0nm,0.8s							
GTA				pmax	pmax			
	comp=Z,87nm,5.4s							
GTA				LR	LR			
	comp=N,370nm,9.5s							
GTA				LR	LR			
	comp=E,370nm,10.7s							
GTA				LR	LR			
	comp=Z,230nm,12.2s							
BTO	**Baotou**	**8.84**	**23**	*e*P		**Pn**	**13 38 14.4**	**+6.4**
BTO				LR	LR			
	comp=N,88nm,5.5s							
BTO				LR	LR			
	comp=E,68nm,9.2s							
HHC	**Hu-ho-hao-te**	**9.62**	**28**	*e*P		**Pn**	**13 38 19.1**	**+0.4**
HHC				pP			13 38 22.2	
HHC				sP			13 38 25.2	
HHC				*e*S		**Sn**	**13 40 06.4**	**-0.4**
HHC				sS			13 40 13.4	
HHC				pmax	pmax			
	comp=Z,14nm,0.7s							
HHC				pmax	pmax			
	comp=Z,87nm,4.1s							
HHC				LR	LR			
	comp=N,170nm,3.5s							
HHC				LR	LR			
	comp=E,180nm,3.8s							
HHC				LR	LR			
	comp=Z,220nm,9.1s							
NJ2	**Nanjing**	**11.27**	**89**	*e*P		**Pn**	**13 38 48.7**	**+7.3**
NJ2				pP			13 38 51.9	
NJ2				PP			13 38 54.9	
NJ2				LR	LR			
	comp=N,90nm,11.3s							
NJ2				LR	LR			
	comp=E,80nm,11.6s							
QIZ	**Qiongzhong**	**13.97**	**163**	P		**Pn**	**13 39 22.9**	**+4.5**
QIZ				S		**Sn**	**13 41 57.9**	**+4.3**
QIZ				pmax	pmax			
	comp=Z,12nm,1.5s

FINES	FINES Array B	57.09	326	P		P	13 45 46.7	+0.3
FINES	FINES Array B	57.09	326	P		P	13 45 46.7	+0.3
	comp=Z,2.7nm,0.9s,mb4.3,baz=66,slow=6.5,SNR=6.8							
WRAB	Tennant Creek	58.98	148	*eP*		P	13 46 00.4	+0.3
	comp=Z,2.7nm,0.7s,mb4.4							
ASAR	Alice Springs	62.08	150	P		P	13 46 21.9	+0.7
	comp=Z,0.4nm,0.5s,mb3.8,baz=330,slow=7.0,SNR=10							
NOA	NORSAR Array B	64.14	327	P		P	13 46 34.9	+0.4
	comp=Z,0.4nm,0.5s,mb3.7,baz=84,slow=5.6,SNR=2.9							

JMA 02 13:51:45.9±0.2, 40.05N×144.46E, h38km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	2.00	268	P	Pn	13 52 18.3	+1.2
JTH				S	Sn	13 52 42.2	+1.3
MIYJ	Miyakonagasawa	2.09	258	P	Pn	13 52 19.7	+1.3
MIYJ				*eS*	Sn	13 52 44.6	+1.5
JANG	Nango	2.28	279	P	Pn	13 52 22.3	+1.3
JANG				*eS*	Sn	13 52 49.3	+1.5
JOM	Ohasama	2.51	258	P	Pn	13 52 26.0	+1.9
JOM				*eS*	Sn	13 52 55.6	+2.1
JNBK	Urakawa-nobuka	2.57	331	*eS*	Sn	13 52 57.7	+2.6
JCH	Churui	2.69	342	P	Pn	13 52 27.8	+1.1
JMK	Ichinoseki	2.74	247	P	Pn	13 52 28.5	+1.2
JMK				*eS*	Sn	13 53 00.1	+1.0
JOT	Ohata	2.92	298	P	Pn	13 52 31.5	+1.8
JOT				*eS*	Sn	13 53 06.0	+2.5
JKB	Kayabe	3.18	306	P	Pn	13 52 35.8	+2.5
JKB				*eS*	Sn	13 53 12.3	+2.3

*IDC **02** 14:20:49.9±1.0, 19.53S×167.70E, h0km, mb4.3/9, mb1 4.5/9, mb1mx4.4/13, mbtmp4.3/9, MS3.5/5, Ms1 3.5/5, ms1mx3.3/19, Error ellipse: s-maj=28.8km s-min=24.0km az=143.0*

*ISCJB **02** 14:20:53.8±3.2, 19.57S±0.07×167.48E±0.09, h32km±23km, mb4.3/16, MS3.6/3, Error ellipse: s-maj=15.4km s-min=10.1km az=24.1*

*NEIC **02** 14:20:55.8±1.7, 19.60S×167.54E, h38km±17km, mb4.5/12, Error ellipse: s-maj=14.6km s-min=12.1km az=157.0*

ISC 02 14:20:54.7±3.2, 19.59S±0.06×167.52E±0.09, h27km±24km, n33, σ1s20/31, mb4.3/16, MS3.5/4, 1D, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.67	202	*eP*	Pn	14 21 35.0	-0.9
DZM				*eS*	Sn	14 22 07.3	-0.1
DZM	Mont Dzumac	2.67	202	*ePn*	Pn	14 21 35.2	-0.7
DZM				*eSn*	Sn	14 22 07.8	+0.5
NOUC	Port Laguerre	2.74	204	*eP*	Pn	14 21 36.6	-0.4
HNR	Honiara	12.48	323	LR	LR	14 27 13.4	
	comp=Z,45nm,19.0s,baz=133,slow=31						
FUNA	Funafuti	15.78	47	Pn	Pn	14 24 36.4	+1.3
EIDS	Eidsvold	16.24	246	*ePn*	Pn	14 24 42.2	+1.2
	13nm,1.3s						
CTA	Charters Tower	20.02	265	*eP*	P	14 25 27.2	+1.7
	20nm,1.1s						
CTA	Charters Tower	20.02	265	P	P	14 25 26.9	+1.3
	25nm,0.9s,baz=93,slow=12,SNR=27						
CTA				LR	LR	14 31 23.5	
	comp=Z,140nm,21.7s,MS3.3,baz=98,slow=31						
CTAO	Charters Tower	20.02	265	*eP*	P	14 25 26.9	+1.4
	27nm,0.9s						
CTAO				*e*		14 25 35.5	
URZ	Urewera	20.38	158	P	P	14 25 27.7	-1.6
	22nm,1.0s,baz=312,slow=14,SNR=3.1						
AFI	Afiamalu	20.60	77	LR	LR	14 31 58.4	
	comp=Z,224nm,19.1s,MS3.5,baz=126,slow=33						
PMG	Port Moresby	22.14	294	*eP*	P	14 25 47.6	-0.9
	26nm,1.0s,mb4.6						
STKA	Stephens Creek	26.29	237	*eP*	P	14 26 29.0	+0.9
	9.3nm,0.9s,mb4.3						
STKA	Stephens Creek	26.29	237	*eP*	P	14 26 29.0	+0.9
	3.2nm,0.9s,mb3.9						
STKA				LR	LR	14 36 29.6	
STKA	Stephens Creek	26.29	237	P	P	14 26 29.2	+1.1
	11nm,0.8s,mb4.4,baz=87,slow=8.3,SNR=14						
STKA				LR	LR	14 36 29.6	
	comp=Z,128nm,18.8s,MS3.5,baz=26,slow=36						
WRAB	Tennant Creek	31.19	264	*eP*	P	14 27 09.8	-2.1
	6.3nm,1.1s,mb4.4						
ASAR	Alice Springs	31.47	257	P	P	14 27 13.5	-0.8
	5.4nm,1.0s,mb4.3,baz=86,slow=8.3,SNR=36						
FITZ	Fitzroy Crossi	39.60	265	⇓*i* P	P	14 28 23.3	-0.8
	11nm,1.0s,mb4.5						
FITZ	Fitzroy Crossi	39.60	265	*eP*	P	14 28 23.1	-1.0
	9.1nm,1.0s,mb4.5						
MBWA	Marble Bar	44.70	259	*eP*	P	14 29 05.5	-0.3
	19nm,1.2s,mb4.8						
SBA	Scott Base	58.30	180	*eP*	P	14 30 48.4	+1.7
	3.3nm,1.0s,mb4.3						
QSPA	South Pole Qui	70.46	180	*eP*	P	14 32 07.5	+1.3
	5.8nm,1.2s,mb4.4						
ENH	Enshi	74.66	310	*eP*	P	14 32 30.1	-1.8
	8.3nm,0.9s,mb4.7						
KMI	Kunming	77.09	303	P	P	14 32 47.4	+1.4
KMI				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.6						
CMAR	Chiang Mai Arr	77.18	295	P	P	14 32 47.8	+1.2
	comp=Z,2.5nm,0.9s,mb4.2,baz=121,slow=4.5,SNR=12						
CHTO	Chiang Mai	77.33	295	*eP*	P	14 32 48.3	+0.8
	comp=Z,5.9nm,1.0s,mb4.5						
MAW	Mawson	77.50	202	*eP*	P	14 32 46.4	-1.1
	comp=Z,1.5nm,1.1s,mb3.8						
MAW	Mawson	77.50	202	P	P	14 32 48.8	+1.2
	comp=Z,2.5nm,0.8s,mb4.2,baz=126,slow=10,SNR=4.5						
SONM	Songino Array	86.54	324	P	P	14 33 35.4	+0.2
	comp=Z,1.6nm,0.9s,mb4.3,baz=152,slow=4.7,SNR=7.7						
NVAR	Mina Array Bea	90.25	49	P	P	14 33 52.4	-0.7
	comp=Z,0.1nm,0.5s,mb3.5,baz=239,slow=4.6,SNR=2.4						
ILAR	Eielson Array	91.05	18	P	P	14 33 54.2	-1.9
	comp=Z,0.5nm,0.7s,mb3.9,baz=244,slow=6.1,SNR=5.8						
TXAR	Lajitas Array	98.36	62	LR	LR	15 12 32.5	
	comp=Z,29nm,18.7s,MS3.8,baz=190,slow=32						
TORD	Torodi Ar. Bea	164.97	247	PKPab	PKPab	14 41 52.6	-1.1
	comp=Z,1.1nm,1.0s,baz=124,slow=4.4,SNR=2.7						

*IDC **02** 14:27:25.1±10.0, 37.38N×20.74E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/22, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=205.5km s-min=32.5km az=38.0*

*ISCJB **02** 14:27:26.9±0.6, 37.45N±0.03×20.73E±0.03, h3km±3km, mb3.7/5, Error ellipse: s-maj=4.8km s-min=3.4km az=37.4*

*THE **02** 14:27:28.4, 37.47N×20.75E, h3km±1km, ML3.5/3, Error ellipse: s-maj=3.0km s-min=1.0km az=237.0*

*ATH **02** 14:27:28.6, 37.49N×20.81E, h12km±1km, MD3.4/27, ML3.4*

*CSEM **02** 14:27:28.6±0.3, 37.49N×20.84E, h1km, ML3.5/3, Error ellipse: s-maj=7.0km s-min=4.0km az=47.0*

*NEIC **02** 14:27:31.5, 37.60N×20.89E, h5km, ML3.6(ATH), After ATH.*

ISC 02 14:27:27.9±0.6, 37.45N±0.03×20.77E±0.03, h2km±3km, n179, σ1s23/221, mb3.7/5, 14C-3D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	Anninata	0.66	1	P	Pg	14 27 40.8	+0.1
KFL				S	Sg	14 27 49.7	+0.4
KFL	Anninata	0.66	1	P	Pg	14 27 40.8	+0.1
KFL				S	Sg	14 27 49.7	+0.4
VLS	Valsamata	0.74	349	*ePg*	Pg	14 27 42.1	-0.1
VLS				*eSb*	Sg	14 27 52.9	+1.0
VLS	Valsamata	0.74	349	*ePG*	Pg	14 27 42.1	-0.1
VLS				*eSB*	Sg	14 27 52.9	+1.0
VLS	Valsamata	0.74	349	P	Pg	14 27 42.3	+0.1
VLS				S	Sg	14 27 52.6	+0.7
VLS	Valsamata	0.74	349	P	Pg	14 27 42.3	+0.1
VLS				S	Sg	14 27 52.6	+0.7
VLS				*eSb*	Sg	14 27 52.9	+1.0
RLS	Riolos of Patr	0.82	42	*ePb*	Pg	14 27 42.1	-1.6
RLS				*eSb*	Sg	14 27 54.4	0.0
RLS	Riolos of Patr	0.82	42	*ePB*	Pg	14 27 42.1	-1.6
RLS				*eSB*	Sg	14 27 54.4	0.0
RLS	Riolos of Patr	0.82	42	*ePb*	Pg	14 27 42.1	-1.6
RLS				*eSb*	Sg	14 27 54.4	0.0
PYL	PYLOS	0.95	125	*ePN*	Pn	14 27 47.7	-0.5
PYL	PYLOS	0.95	125	*ePn*	Pn	14 27 47.7	-0.5
ITM	Ithomi	0.96	106	*ePb*	Pb	14 27 46.5	-0.7
ITM	Ithomi	0.96	106	*ePB*	Pb	14 27 46.5	-0.7
ITM	Ithomi	0.96	106	P	Pg	14 27 46.4	+0.1
ITM	Ithomi	0.96	106	P	Pg	14 27 46.4	+0.1
UPR	University Cam	1.16	43	*ePG*	Pg	14 27 49.1	-1.1
UPR				*eSB*	Sb	14 28 05.6	-0.5
UPR	University Cam	1.16	43	*ePg*	Pg	14 27 49.1	-1.1
UPR				*eSb*	Sb	14 28 05.6	-0.5
VLX	Vlachokerasia	1.28	93	*ePB*	Pb	14 27 52.4	-0.3
VLX	Vlachokerasia	1.28	93	*ePb*	Pb	14 27 52.4	-0.3
EFP	Efpalio	1.33	42	*ePB*	Pn	14 27 51.2	-2.3
EFP				*eSB*	Sb	14 28 11.1	+0.1
EFP	Efpalio	1.33	42	*ePb*	Pn	14 27 51.2	-2.3
EFP				*eSb*	Sb	14 28 11.1	+0.1
GUR	Goura	1.34	68	*ePB*	Pn	14 27 51.4	-2.2
GUR				*eSB*	Sb	14 28 11.2	-0.1
GUR	Goura	1.34	68	*ePb*	Pn	14 27 51.4	-2.2
GUR				*eSb*	Sb	14 28 11.2	-0.1
LKD2	Lefkada island	1.34	356	P	Pn	14 27 52.1	-1.6
LKD2				S	Sg	14 28 12.0	+0.8
LKD2	Lefkada island	1.34	356	P	Pn	14 27 52.1	-1.6
LKD2				S	Sg	14 28 12.0	+0.8
EVR	Evrytania	1.68	29	*ePb*	Pb	14 27 59.4	-0.2
EVR	Evrytania	1.68	29	*ePB*	Pb	14 27 59.4	-0.2
EVR	Evrytania	1.68	29	*ePb*	Pb	14 27 59.4	-0.2
LTK	Loutraki	1.83	71	*ePN*	Pn	14 28 01.5	+1.1
LTK	Loutraki	1.83	71	*ePn*	Pn	14 28 01.5	+1.1
VLI	Veliai	1.88	112	*ePg*	Pg	14 28 03.4	-0.5
VLI				P		14 28 07.0	
VLI	Veliai	1.88	112	*ePG*	Pg	14 28 03.4	-0.5
VLI	Veliai	1.88	112	*ePg*	Pg	14 28 03.4	-0.5
DID	Didima	1.96	87	*ePN*	Pn	14 28 02.7	+0.5
DID	Didima	1.96	87	*ePn*	Pn	14 28 02.7	+0.5
AGG	Agios Georgios	2.00	37	*ePg*	Pg	14 28 04.3	-1.9
AGG	Agios Georgios	2.00	37	*ePG*	Pg	14 28 04.3	-1.9
AGG	Agios Georgios	2.00	37	P	Pn	14 28 02.0	-0.6
AGG	Agios Georgios	2.00	37	P	Pn	14 28 02.0	-0.6
AGG	Agios Georgios	2.00	37	*ePg*	Pg	14 28 04.3	-1.9
IGT	Igoumenitsa	2.11	351	P	Pn	14 28 06.7	+2.4
IGT	Igoumenitsa	2.11	351	P	Pn	14 28 04.4	+0.1
IGT	Igoumenitsa	2.11	351	P	Pn	14 28 04.4	+0.1
LKR	Lokris	2.13	55	*ePn*	Pn	14 28 05.0	+0.5
LKR				*eSn*	Sn	14 28 32.2	+0.7
LKR	Lokris	2.13	55	*ePN*	Pn	14 28 05.0	+0.5
LKR				*eSN*	Sn	14 28 32.2	+0.7
LKR	Lokris	2.13	55	P	Pn	14 28 05.1	+0.6
LKR				S	Sn	14 28 32.1	+0.6
LKR	Lokris	2.13	55	*ePn*	Pn	14 28 05.0	+0.5
LKR				S	Sn	14 28 32.1	+0.6
KYTH	Kithira	2.15	122	*ePg*	Pg	14 28 07.8	-1.4
KYTH	Kithira	2.15	122	*ePG*	Pg	14 28 07.8	-1.4
KYTH	Kithira	2.15	122	*ePg*	Pg	14 28 07.8	-1.4
NAIG	Nisos Aigina	2.18	81	*ePn*	Pn	14 28 07.1	+1.9
NAIG	Nisos Aigina	2.18	81	*ePN*	Pn	14 28 07.1	+1.9
NAIG	Nisos Aigina	2.18	81	*ePn*	Pn	14 28 07.1	+1.9
JAN	Janina	2.21	2	*ePg*	Pg	14 28 08.3	-2.0
JAN				*eSn*	Sn	14 28 34.3	+0.8
JAN	Janina	2.21	2	*ePG*	Pg	14 28 08.3	-2.0
JAN				*eSN*	Sn	14 28 34.3	+0.8
JAN	Janina	2.21	2	*ePg*	Pg	14 28 08.3	-2.0
JAN				*eSn*	Sn	14 28 34.3	+0.8
THL	Klokotos Trika	2.33	24	*ePN*	Pn	14 28 08.5	+1.3
THL				*eSN*	Sn	14 28 37.8	+1.4
THL	Klokotos Trika	2.33	24	P	Pn	14 28 06.6	-0.6
THL	Klokotos Trika	2.33	24	P	Pn	14 28 06.6	-0.6
THL	Klokotos Trika	2.33	24	*ePn*	Pn	14 28 08.5	+1.3
THL				*eSn*	Sn	14 28 37.8	+1.4
KEK	Kerkira	2.39	342	*ePn*	Pn	14 28 09.8	+1.7
KEK	Kerkira	2.39	342	*ePN*	Pn	14 28 09.8	+1.7
KEK	Kerkira	2.39	342	P	Pn	14 28 08.6	+0.5
KEK	Kerkira	2.39	342	P	Pn	14 28 08.6	+0.5
KEK	Kerkira	2.39	342	*ePn*	Pn	14 28 09.8	+1.7
ATH	Athens Observa	2.39	76	*ePn*	Pn	14 28 09.8	+1.7
ATH				*eSn*	Sn	14 28 38.3	+0.3
ATH	Athens Observa	2.39	76	*ePN*	Pn	14 28 09.8	+1.7
ATH				*eSN*	Sn	14 28 38.3	+0.3
ATH	Athens Observa	2.39	76	*ePn*	Pn	14 28 09.8	+1.7
ATH				*eSn*	Sn	14 28 38.3	+0.3
VLY	Voula,Athens	2.43	79	*ePn*	Pn	14 28 09.6	+1.0
VLY	Voula,Athens	2.43	79	*ePN*	Pn	14 28 09.6	+1.0
VLY	Voula,Athens	2.43	79	*ePn*	Pn	14 28 09.6	+1.0
SRN	Sarande	2.50	346	*eP*	Pn	14 28 16.8	+7.1
PTL	Penteli	2.52	75	*ePb*	Pn	14 28 10.2	+0.3
PTL	Penteli	2.52	75	*ePB*	Pn	14 28 10.2	+0.3
PTL	Penteli	2.52	75	*ePb*	Pn	14 28 10.2	+0.3
NEO	Neokhori	2.66	45	*ePb*	Pn	14 28 12.4	+0.4
NEO	Neokhori	2.68	45	*ePB*	Pn	14 28 12.4	+0.4
NEO	Neokhori	2.68	45	*ePb*	Pn	14 28 12.4	+0.4
XOR	Xorichti	2.70	44	P	Pn	14 28 12.6	+0.3
XOR	Xorichti	2.70	44	P	Pn	14 28 12.4	+0.1
XOR				S	Sn	14 28 45.8	+0.2
XOR	Xorichti	2.70	44	P	Pn	14 28 12.6	+0.3
XOR				S	Sn	14 28 45.8	+0.2
KZN	Kozani	2.96	15	*ePb*	Pn	14 28 17.9	+2.0
KZN	Kozani	2.96	15	*ePB*	Pn	14 28 17.9	+2.0
KZN	Kozani	2.96	15	P	Pn	14 28 17.1	+1.2
KZN	Kozani	2.96	15	P	Pn	14 28 17.1	+1.2
KZN	Kozani	2.96	15	*ePb*	Pn	14 28 17.9	+2.0
LIT	Litokhoron	2.97	26	*ePn*	Pn	14 28 15.4	-0.7
LIT	Litokhoron	2.97	26	*ePN*	Pn	14 28 15.4	-0.7
LIT	Litokhoron	2.97	26	P	Pn	14 28 15.3	-0.8
LIT	Litokhoron	2.97	26	*ePn*	Pn	14 28 15.4	-0.7
NEST	Nestorio	2.97	4	P	Pn	14 28 18.5	+2.4
NEST	Nestorio	2.97	4	P	Pn	14 28 18.5	+2.4
AOS	Alonnisos	2.99	54	P	Pn	14 28 16.7	+0.4
AOS	Alonnisos	2.99	54	P	Pn	14 28 16.4	+0.1
AOS				S	Sn	14 28 52.5	-0.2
AOS	Alonnisos	2.99	54	P	Pn	14 28 16.7	+0.4
AOS				S	Sn	14 28 52.5	-0.2
KBN	Korca	3.17	0	*eP*	Pg	14 28 30.7	+1.9
KARN	Karanos	3.25	128	*ePN*	Pn	14 28 21.6	+1.7
KARN	Karanos	3.25	128	P	Pn	14 28 21.7	+1.8
KARN	Karanos	3.25	128	*ePn*	Pn	14 28 21.6	+1.7
FNA	Florina	3.37	8	P	Pn	14 28 22.0	+0.5
FNA	Florina	3.37	8	P	Pn	14 28 22.0	+0.5
FNA	Florina	3.37	8	P	Pn	14 28 22.0	+0.5
VAM	Vamos	3.43	125	*ePn*	Pn	14 28 23.9	+1.5
VAM				P		14 28 28.7	
VAM	Vamos	3.43	125	*ePN*	Pn	14 28 23.9	+1.5
VAM	Vamos	3.43	125	*ePn*	Pn	14 28 23.9	+1.5
BIA	Bitola	3.59	7	P	Pn	14 28 24.6	+0.5
BIA	Bitola	3.59	7	*ePn*	Pn	14 28 24.6	+0.5
BIA	Bitola	3.59	7	P	Pn	14 28 25.1	+0.5
TIP	Timpagrande	3.60	300	*ePn*	Pn	14 28 25.6	+0.9
TIP				*ePg*	Pg	14 28 40.5	+3.5
TIP				*eSn*	Sn	14 29 07.0	-0.8
TIP	Timpagrande	3.60	300	*ePn*	Pn	14 28 25.6	+0.9
THE	Thessaloniki	3.61	28	P	Pn	14 28 24.8	-0.1
THE	Thessaloniki	3.61	28	P	Pn	14 28 24.8	-0.1
HORT	Hortiatis	3.63	29	P	Pn	14 28 25.1	0.0
HORT	Hortiatis	3.63	29	P	Pn	14 28 25.1	0.0
OHR	Ohrid	3.66	0	*ePn*	Pn	14 28 25.1	-0.4
APE	Apeiranthos	3.81	94	*ePn*	Pn	14 28 29.8	+2.2
APE	Apeiranthos	3.81	94	*ePN*	Pn	14 28 29.8	+2.2
APE	Apeiranthos	3.81	94	*ePn*	Pn	14 28 29.8	+2.2
OUR	Ouranopolis	3.82	40	P	Pn	14 28 27.6	-0.1
OUR	Ouranopolis	3.82	40	P	Pn	14 28 27.6	-0.1
SOH	Sokhos	3.92	30	*ePn*	Pn	14 28 29.6	+0.5
SOH	Sokhos	3.92	30	*ePN*	Pn	14 28 29.6	+0.5
SOH	Sokhos	3.92	30	P	Pn	14 28 29.4	+0.3
SOH	Sokhos	3.92	30	*ePn*	Pn	14 28 29.6	+0.5
KRUS	Krusevo	3.94	5	*ePn*	Pn	14 28 28.8	-0.5
IDI	Anoyia	3.96	122	*ePn*	Pn	14 28 28.0	-1.6
IDI	Anoyia	3.96	122	*ePN*	Pn	14 28 28.0	-1.6
IDI	Anoyia	3.96	122	*ePn*	Pn	14 28 28.0	-1.6
TAR1	Taranto	4.11	320	*ePn*	Pn	14 28 33.8	+2.2
VAY	Valandovo	4.11	19	*ePn*	Pn	14 28 30.8	-0.9
LIA	Limnos Island	4.23	53	P	Pn	14 28 37.8	+4.4
LIA	Limnos Island	4.23	53	P	Pn	14 28 37.8	+4.4
PE1	Pezze di Greco	4.25	323	*ePn*	Pn	14 28 34.4	+0.8
PE1				*eSn*	Sn	14 29 21.6	-2.1
SRS	Serrai	4.27	30	P	Pn	14 28 34.0	+0.1
SRS	Serrai	4.27	30	P	Pn	14 28 34.0	+0.1
LAST	Lasithi	4.43	120	*ePn*	Pn	14 28 38.2	+2.1
LAST	Lasithi	4.43	120	*ePN*	Pn	14 28 38.2	+2.1
LAST	Lasithi	4.43	120	*ePn*	Pn	14 28 38.2	+2.1
NVR	Nevrokopi	4.57	31	*ePn*	Pn	14 28 38.7	+0.6
NVR	Nevrokopi	4.57	31	*ePN*	Pn	14 28 38.7	+0.6
NVR	Nevrokopi	4.57	31	*ePn*	Pn	14 28 38.7	+0.6
CUC	Castrocucco	4.64	305	P	Pn	14 28 45.1	+6.1
SG1	Sgolgore (BA)	4.65	318	*ePn*	Pn	14 28 41.7	+2.6
SG1				*eSn*	Sn	14 29 31.8	-1.8
BCI	Bajram Curri	4.95	354	*eP*	Pn	14 28 44.7	+1.5
BCI	Bajram Curri	4.95	354	*eP*	Pn	14 28 44.7	+1.5
BARS	Barje	5.42	8	⇑*i* Pn	Pn	14 28 49.5	-0.3
VTS	Vitosha	5.47	19	⇓P	Pn	14 28 51.1	+0.7
VTS				S	Sn	14 29 52.6	-1.2
VTS	Vitosha	5.47	19	⇓*i* P	Pn	14 28 51.1	+0.7
VTS	Vitosha	5.47	19	S	Sn	14 29 52.6	-1.2
VTS	Vitosha	5.47	19	⇓P	Pn	14 28 51.1	+0.7
VTS				S	Sn	14 29 52.6	-1.2
STON	Ston	5.91	337	*ePn*	Pn	14 28 53.7	-2.7
STON				*eSn*	Sn	14 29 58.4	-6.3
BBLS	Lazići	6.50	351	⇑*i* Pn	Pn	14 29 05.0	+0.5
DIVS	Divibare	6.67	355	⇑*i* Pn	Pn	14 29 05.6	-1.3
GZR	Gura Zlata	8.08	10	⇑P	Pn	14 29 25.6	-0.7
GZR	Gura Zlata	8.08	10	⇑*i* P	Pn	14 29 25.6	-0.6
GZR	Gura Zlata	8.08	10	⇑P	Pn	14 29 25.6	-0.6
BZS	Buzias	8.19	4	⇑P	Pn	14 29 25.5	-2.2
BZS	Buzias	8.19	4	⇑*i* P	Pn	14 29 25.5	-2.2
NVLJ	Novalja	8.39	330	*ePn*	Pn	14 29 30.7	+0.2
NVLJ				*eSn*	Sn	14 31 00.6	-5.2
NVLJ	Novalja	8.39	330	*ePn*	Pn	14 29 30.7	+0.2
VOIR		8.60	21	⇑P	Pn	14 29 33.9	+0.5
VOIR		8.60	21	⇑*i* P	Pn	14 29 33.9	+0.5
VOIR		8.60	21	⇑P	Pn	14 29 33.9	+0.5
MLR	Muntele Rosu	8.92	24	⇑P	Pn	14 29 39.7	+1.9
MLR	Muntele Rosu	8.92	24	⇑*i* P	Pn	14 29 39.7	+1.9
MLR	Muntele Rosu	8.92	24	⇑P	Pn	14 29 39.7	+1.9
VYHS	Vyhne	11.13	353	*eP*	Pn	14 30 17.8	+10
VYHS	Vyhne	11.13	353	*e*	Pn	14 30 17.8	+10
MMAI	Mount Meron Ar	12.75	106	Pn	Pn	14 30 27.7	-2.5
	0.3nm,0.3s,baz=296,slow=12,SNR=2.1						
FINES	FINESS Array B	24.25	6	P	P	14 32 43.7	-2.3
FINES	FINESS Array B	24.25	6	P	P	14 32 43.7	-2.3
	0.7nm,0.4s,mb3.4,baz=172,slow=11,SNR=7.6						
NB2	NORSAR Subarra	24.37	349	P	P	14 32 47.1	0.0
	2.0nm,0.9s,mb3.5,SNR=3.9						
NOA	NORSAR Array B	24.37	349	P	P	14 32 45.1	-2.0
	0.6nm,0.6s,mb3.2,baz=145,slow=11,SNR=3.0						
ARCES	ARCESS Array B	32.25	3	P	P	14 33 56.1	-1.2
	3.1nm,1.0s,mb4.1,baz=205,slow=7.7,SNR=3.4						
ARCES	ARCESS Array B	32.25	3	P	P	14 33 56.1	-1.3
MKAR	Makanchi Array	45.52	58	P	P	14 35 46.7	-2.0
MKAR	Makanchi Array	45.52	58	P	P	14 35 46.7	-2.0
	0.3nm,0.4s,mb3.5,baz=271,slow=7.9,SNR=3.9						
MKAR	Makanchi Array	45.52	58	P	P	14 35 46.7	-2.0
ZALV	Zalesovo Beam	46.03	48	P	P	14 35 50.6	-2.1
	0.6nm,0.3s,mb4.0,baz=277,slow=9.6,SNR=4.1						

*IDC **02** 14:51:21.9±1.1, 35.04N×23.32E, h0km, mb3.8/8, mb1 3.8/11, mb1mx3.6/25, mbtmp3.7/11, ML3.3/3, Error ellipse: s-maj=22.5km s-min=22.1km az=66.0*

*ISCJB **02** 14:51:27.5±0.4, 34.91N±0.03×23.31E±0.04, h71km±5km, mb3.6/10, Error ellipse: s-maj=6.5km s-min=3.8km az=144.4*

*NEIC **02** 14:51:27.5, 34.92N×23.33E, h67km, MG3.4(ATH), After ATH.*

*ATH **02** 14:51:27.5, 34.92N×23.33E, h67km±4km, ML3.5*

*CSEM **02** 14:51:28.8±0.2, 34.91N×23.33E, h60km, ML3.5, Error ellipse: s-maj=5.2km s-min=3.3km az=50.0*

*THE **02** 14:51:29.0, 35.00N×23.27E, h32km±24km, ML3.0/1, Error ellipse: s-maj=24.4km s-min=0.8km az=159.0*

*HLW **02** 14:51:31.2, 34.79N×23.63E, h33km±54km, Ml3.1*

ISC 02 14:51:28.8±0.4, 34.92N±0.03×23.32E±0.04, h61km±5km, n146, σ0s89/166, mb3.7/10, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	0.64	97	*eP*	Pn	14 51

SLUM			**3.77**	**155**	P		**Pn**	**14 52 24.3**	**-0.1**
VLS	**Valsamata**		**3.93**	**327**	*e*P		**Pn**	**14 52 25.7**	**-0.9**
VLS	**Valsamata**		**3.93**	**327**	*e*P		**Pn**	**14 52 25.7**	**-0.9**
VLS	**Valsamata**		**3.93**	**327**	P		**Pn**	**14 52 25.7**	**-0.9**
VLS					S		**Sn**	**14 53 10.1**	**-1.3**
VLS	**Valsamata**		**3.93**	**327**	*e*P		**Pn**	**14 52 25.7**	**-0.9**
VLS					S		**Sn**	**14 53 10.1**	**-1.3**
ARG	**Arkhangelos**		**4.13**	**70**	*e*P		**Pn**	**14 52 29.8**	**+0.5**
ARG	**Arkhangelos**		**4.13**	**70**	*e*P		**Pn**	**14 52 29.8**	**+0.5**
ARG	**Arkhangelos**		**4.13**	**70**	*e*P		**Pn**	**14 52 29.8**	**+0.5**
EVR	**Evrytania**		**4.17**	**344**	*e*P		**Pn**	**14 52 31.4**	**+1.5**
EVR					P			14 52 34.6	
EVR	**Evrytania**		**4.17**	**344**	*e*P		**Pn**	**14 52 31.4**	**+1.5**
EVR	**Evrytania**		**4.17**	**344**	*e*P		**Pn**	**14 52 31.4**	**+1.5**
AGG	**Agios Georgios**		**4.17**	**349**	*e*P		**Pn**	**14 52 30.2**	**+0.2**
AGG					*e*S		**Sn**	**14 53 17.1**	**-0.3**
AGG	**Agios Georgios**		**4.17**	**349**	*e*P		**Pn**	**14 52 30.2**	**+0.2**
AGG					*e*S		**Sn**	**14 53 17.1**	**-0.3**
AGG	**Agios Georgios**		**4.17**	**349**	P		**Pn**	**14 52 29.4**	**-0.6**
AGG	**Agios Georgios**		**4.17**	**349**	*e*P		**Pn**	**14 52 30.2**	**+0.2**
AGG					*e*S		**Sn**	**14 53 17.1**	**-0.3**
NEO	**Neokhori**		**4.38**	**359**	P		**Pn**	**14 52 33.3**	**+0.5**
NEO	**Neokhori**		**4.38**	**359**	P		**Pn**	**14 52 33.3**	**+0.5**
LKD2	**Lefkada island**		**4.42**	**332**	P		**Pn**	**14 52 33.1**	**-0.1**
LKD2	**Lefkada island**		**4.42**	**332**	P		**Pn**	**14 52 33.1**	**-0.1**
XOR	**Xorichti**		**4.44**	**359**	P		**Pn**	**14 52 34.7**	**+1.1**
XOR	**Xorichti**		**4.44**	**359**	P		**Pn**	**14 52 34.1**	**+0.5**
XOR	**Xorichti**		**4.44**	**359**	P		**Pn**	**14 52 34.1**	**+0.5**
THL	**Klokotos Trika**		**4.76**	**348**	*e*P		**Pn**	**14 52 37.8**	**-0.1**
THL	**Klokotos Trika**		**4.76**	**348**	*e*P		**Pn**	**14 52 37.8**	**-0.1**
LJBD	**Adjabya**		**4.78**	**214**	*i* P		**Pn**	**14 52 38.0**	**-0.2**
	SNR=96								
HMAT	**Matruh**		**4.96**	**139**	P		**Pn**	**14 52 40.3**	**-0.5**
	baz=140								
HMAT					S		**Sn**	**14 53 31.7**	**-5.0**
	baz=140								
JAN	**Janina**		**5.12**	**338**	*e*P		**Pn**	**14 52 43.3**	**+0.3**
JAN	**Janina**		**5.12**	**338**	*e*P		**Pn**	**14 52 43.3**	**+0.3**
JAN	**Janina**		**5.12**	**338**	*e*P		**Pn**	**14 52 43.3**	**+0.3**
OUR	**Ouranopolis**		**5.44**	**5**	P		**Pn**	**14 52 47.0**	**-0.2**
OUR	**Ouranopolis**		**5.44**	**5**	P		**Pn**	**14 52 47.0**	**-0.2**
KEK	**Kerkira**		**5.55**	**331**	*e*P		**Pn**	**14 52 48.2**	**-0.6**
KEK	**Kerkira**		**5.55**	**331**	*e*P		**Pn**	**14 52 48.2**	**-0.6**
KEK	**Kerkira**		**5.55**	**331**	*e*P		**Pn**	**14 52 48.2**	**-0.6**
HORT	**Hortiatis**		**5.68**	**358**	P		**Pn**	**14 52 51.4**	**+0.9**
HORT	**Hortiatis**		**5.68**	**358**	P		**Pn**	**14 52 51.4**	**+0.9**
GRG	**Griva**		**6.08**	**353**	P		**Pn**	**14 52 57.1**	**+1.1**
GRG	**Griva**		**6.08**	**353**	P		**Pn**	**14 52 57.1**	**+1.1**
ISP	**Isparta**		**6.50**	**61**	*e*Pn		**Pn**	**14 52 51.6**	**-10**
ISP					*e*Sn		**Sn**	**14 53 59.0**	**-15**
TIP	**Timpagrande**		**6.75**	**311**	*e*Pn		**Pn**	**14 53 02.5**	**-2.8**
TIP	**Timpagrande**		**6.75**	**311**	*e*Pn		**Pn**	**14 53 02.5**	**-2.7**
SG1	**Sgolgore (BA)**		**7.91**	**320**	*e*Pn		**Pn**	**14 53 19.6**	**-1.4**
HFRF	**Wahat Farafira**		**8.85**	**150**	P		**Pn**	**14 53 33.0**	**-1.0**
	baz=151								
HFRF	**Wahat Farafira**		**8.85**	**150**	P		**Pn**	**14 53 32.9**	**-1.1**
STON	**Ston**		**9.07**	**333**	*e*Pn		**Pn**	**14 53 31.9**	**-5.0**
STON					Sn		**Sn**	**14 55 05.1**	**-12**
BRTR	**Keskin Array B**		**9.52**	**57**	Pn		**Pn**	**14 53 41.1**	**-2.0**
	comp=E,0.0nm,0.3s,baz=237,slow=15,SNR=2.3								
BRTR	**Keskin Array B**		**9.52**	**57**	Pn		**Pn**	**14 53 41.1**	**-2.0**
MMAI	**Mount Meron Ar**		**10.21**	**97**	Pn		**Pn**	**14 53 51.9**	**-0.8**
	comp=E,1.2nm,0.3s,baz=297,slow=11,SNR=5.1								
EIL	**Elat**		**11.14**	**115**	Pn		**Pn**	**14 54 02.4**	**-2.9**
EIL					Sn		**Sn**	**14 55 59.7**	**-8.7**
EIL	**Elat**		**11.14**	**115**	Pn		**Pn**	**14 54 02.4**	**-2.9**
	comp=E,0.3nm,0.3s,baz=2.3,slow=23,SNR=7.1								
EIL					Sn		**Sn**	**14 55 59.7**	**-8.7**
	comp=E,0.7nm,0.3s,baz=16,slow=19,SNR=4.1								
ASF	**Jabal al Asfar**		**11.66**	**100**	Pn		**Pn**	**14 54 12.9**	**+0.6**
	comp=E,0.4nm,0.3s,baz=338,slow=5.4,SNR=2.5								
ASF					Sn		**Sn**	**14 56 21.2**	**+0.4**
	comp=E,0.3nm,0.3s,baz=18,slow=20,SNR=2.5								
VRAC	**Vranov**		**15.21**	**343**	Pn		**Pn**	**14 55 04.2**	**+4.4**
	comp=E,0.6nm,0.3s,baz=141,slow=6.5,SNR=2.9								
AKASG	**Malin Array Be**		**16.35**	**13**	Pn		**Pn**	**14 55 13.8**	**-0.5**
	comp=E,1.0nm,0.3s,baz=206,slow=9.0,SNR=4.5								
AKASG	**Malin Array Be**		**16.35**	**13**	Pn		**Pn**	**14 55 13.8**	**-0.4**
HFS	**Hagfors**		**26.00**	**349**	P		**P**	**14 56 55.6**	**-0.1**
	comp=E,1.0nm,0.4s,mb3.7,baz=154,slow=9.2,SNR=11								
HFS	**Hagfors**		**26.00**	**349**	P		**P**	**14 56 55.6**	**-0.1**
FINES	**FINESS Array B**		**26.61**	**3**	P		**P**	**14 57 00.0**	**-1.1**
	comp=E,2.3nm,1.0s,mb3.7,baz=181,slow=9.7,SNR=3.7								
FINES	**FINESS Array B**		**26.61**	**3**	P		**P**	**14 57 00.0**	**-1.1**
NOA	**NORSAR Array B**		**27.27**	**347**	P		**P**	**14 57 06.6**	**-0.6**
	comp=E,0.6nm,0.6s,mb3.3,baz=152,slow=10,SNR=5.0								
NOA	**NORSAR Array B**		**27.27**	**347**	P		**P**	**14 57 06.6**	**-0.5**
EKA	**Eskdalemuir Ar**		**27.39**	**326**	P		**P**	**14 57 11.3**	**+3.1**
	comp=E,1.1nm,0.7s,mb3.5,baz=116,slow=6.6,SNR=4.0								
TORD	**Torodi Ar. Bea**		**29.19**	**227**	P		**P**	**14 57 26.5**	**+1.9**
	comp=E,0.2nm,0.4s,mb3.2,baz=28,slow=8.7,SNR=2.6								
ARCES	**ARCESS Array B**		**34.70**	**1**	P		**P**	**14 58 11.5**	**-0.8**
	comp=E,1.0nm,0.7s,mb3.9,baz=170,slow=7.4,SNR=5.7								
ARCES	**ARCESS Array B**		**34.70**	**1**	P		**P**	**14 58 11.5**	**-0.8**
SPITS	**Spitsbergen Ar**		**43.47**	**358**	P		**P**	**14 59 25.9**	**+0.4**
	comp=E,0.3nm,0.3s,mb3.5,baz=183,slow=12,SNR=3.3								
SPITS	**Spitsbergen Ar**		**43.47**	**358**	P		**P**	**14 59 25.9**	**+0.5**
MKAR	**Makanchi Array**		**45.17**	**56**	P		**P**	**14 59 39.8**	**+0.4**
	comp=E,0.7nm,0.4s,mb3.8,baz=265,slow=8.9,SNR=9.4								
MKAR	**Makanchi Array**		**45.17**	**56**	P		**P**	**14 59 39.8**	**+0.4**
ZALV	**Zalesovo Beam**		**46.26**	**46**	P		**P**	**14 59 47.8**	**-0.1**
	comp=E,0.8nm,0.4s,mb4.0,baz=261,slow=7.5,SNR=3.5								
ZALV	**Zalesovo Beam**		**46.26**	**46**	P		**P**	**14 59 47.8**	**-0.1**
SONM	**Songino Array**		**60.81**	**50**	P		**P**	**15 01 34.9**	**+0.4**
	comp=E,0.7nm,0.6s,mb4.0,baz=282,slow=6.7,SNR=5.6								
SONM	**Songino Array**		**60.81**	**50**	P		**P**	**15 01 34.9**	**+0.4**
ASAR	**Alice Springs**		**119.50**	**100**	PKP		PKPdf	15 10 12.8	+1.0
	comp=E,0.5nm,1.0s,baz=320,slow=2.0,SNR=5.3								
ASAR	**Alice Springs**		**119.50**	**100**	PKIKP		PKPdf	15 10 12.9	+1.1

KRSC 02 15:06:39.8±0.5, 52°.58N×159°.57E, h29km±19km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.59**	**28**	P		Pb	15 06 52.3	+0.7
SPN				*i* S		Sb	15 07 00.8	+1.2
NLC	**Nalytchevo**	**0.61**	**347**	*i* P		Pb	15 06 52.3	+0.4
NLC				*i* S		Sb	15 07 01.3	+1.1
PET	**Petropavlovsk**	**0.71**	**309**	*i* P		Pb	15 06 53.4	-0.3
PET				*i* S		Sb	15 07 03.3	+0.2
AVH	**Avacha**	**0.85**	**324**	*i* P		Pn	15 06 55.9	+0.1
AVH				*i* S		Sb	15 07 07.2	+0.2
GRL	**Gorelyy**	**0.91**	**269**	*e*P		Pn	15 06 56.9	+0.3
GRL				*e*S		Sn	15 07 09.4	+0.6
KII	**Karymskiy**	**1.46**	**357**	P		Pn	15 07 04.9	+0.7
KII				*i* S		Sn	15 07 23.1	+0.8
GNL	**Ganaly**	**1.49**	**319**	*i* P		Pn	15 07 05.1	+0.6
GNL				*i* S		Sn	15 07 23.3	+0.4
MIPR	**Malaya Ipel'ka**	**1.75**	**261**	P		Pn	15 07 08.6	+0.5
MKZ	**Mys Kozlova**	**2.36**	**32**	*e*P		Pn	15 07 17.0	+0.5
MKZ				*i* S		Sn	15 07 43.3	-1.2
ALID	**Alaid**	**3.03**	**237**	P		Pn	15 07 26.4	+0.7
KBTR	**Krutoberegovo**	**4.10**	**26**	*e*P		Pn	15 07 42.2	+1.8
KBTR				*e*S		Sn	15 08 29.3	+1.9

IDC 02 15:07:21.2±1.3, 0°.82N×120°.41E, h0km, mb3.6/5, mb1 3.6/5, mb1mx3.5/19, mbtmp3.6/5, Error ellipse: s-maj=189.6km s-min=25.2km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ASAR	**Alice Springs**	**27.65**	**153**	P		P	15 13 11.0	+0.1
	0.3nm,0.9s,baz=331,slow=10.0,SNR=2.7							
SONM	**Songino Array**	**48.38**	**347**	P		P	15 16 05.3	+0.5
	0.6nm,0.7s,baz=150,slow=6.0,SNR=4.5							
MKAR	**Makanchi Array**	**56.57**	**329**	P		P	15 17 06.5	+0.9
	0.3nm,0.4s,baz=125,slow=8.2,SNR=5.6							
ZALV	**Zalesovo Beam**	**60.52**	**337**	P		P	15 17 32.0	-1.0
	0.6nm,0.6s,baz=147,slow=8.1,SNR=3.4							
BVAR	**Borovoye Array**	**66.46**	**330**	P		P	15 18 12.0	-0.4
	0.3nm,0.4s,baz=141,slow=7.4,SNR=2.4							

*IDC **02** 15:34:21.2±0.5, 16°.34S×178°.23E, h0km, mb4.6/17, mb1 4.7/19, mb1mx4.6/23, mbtmp4.6/19, MS4.7/17, Ms1 4.7/17, ms1mx4.6/18, Error ellipse: s-maj=19.7km s-min=13.2km az=146.0*
*NEIC **02** 15:34:22.8±0.2, 16°.31S×178°.16E, h10km, mb5.0/57, MS4.8/173, MW5.5, MW5.5, Error ellipse: s-maj=8.2km s-min=5.1km az=141.0, Moment Tensor Solution. s26 Moment tensor: Scale 10¹⁷Nm; Mrr0.10; Mθθ-0.66; Mφφ0.56; Mrθ-0.07; Mrφ2.46; Mθφ0.46; Best double couple: M₀2.60000×10¹⁷ NP1:φs353.00000°, δ90.00000°, λ170.00000°. NP2:φs83.00000°, δ80.00000°, λ0.00000°. Principal axes: T 2.5300, Plg7.0000°, Azm307.0000°; N 0.1000, Plg79.0000°, Azm171.0000°; P -2.6200, Plg7.0000°, Azm38.0000°;*
*SZGRF **02** 15:34:23.5, 16°.94S×177°.93E, h33km, Fiji Islands*
*ISCJB **02** 15:34:24.8±0.2, 16°.39S±0°.05×178°.18E±0°.04, h33km, mb4.9/82, MS4.8/196, Error ellipse: s-maj=7.9km s-min=4.7km az=146.4*
*MOS **02** 15:34:25.7±1.0, 16°.05S×177°.96E, h33km, mb5.1/22, Error ellipse: s-maj=12.7km s-min=9.6km az=154.7*
*BJI **02** 15:34:25.4, 16°.39S×178°.17E, h31km, mB5.2/31, mb4.9/32, Ms5.0/32, Ms7 4.8/33*
*GCMT **02** 15:34:27.8±0.1, 16°.26S×178°.22E, h17km, MW5.5, Moment Tensor Solution. s80,c145; s33,c35; Moment tensor: Scale 10¹⁷Nm; Mrr-0.20±.03; Mθθ-0.91±.03; Mφφ1.11±.03; Mrθ0.00±.06; Mrφ1.58±.02; Mθφ-0.31±.06; Best double couple: M₀1.90000×10¹⁷ NP1:φs254.00000°, δ81.00000°, λ1.00000°. NP2:φs164.00000°, δ89.00000°, λ171.00000°. Principal axes: T 2.0100, Plg7.0000°, Azm118.0000°; N -0.2200, Plg81.0000°, Azm337.0000°; P -1.7900, Plg5.0000°, Azm209.0000°; Data Used: II IU IC G CN. Surface waves: sta=110, comp=218, per= 50.*

ISC 02 15:34:26.7±0.2, 16°.40S±0°.05×178°.24E±0°.04, h35km, (h34km±1.3km:pP-P), n513, s0°75/305, mb4.9/82, MS4.8/196, 66C-74D, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**1.34**	**188**	*i* Pn		**Pn**	**15 34 47.1**	**-1.8**
MSVF	**Nonsavu**	**1.34**	**188**	Pn		**Pn**	**15 34 47.1**	**-1.8**
	39µm,1.2s							
AFI	**Afiamalu**	**9.96**	**77**	*e*Pn		**Pn**	**15 36 45.6**	**-1.7**
	109nm,1.0s							
AFI				LR		LR	15 39 48.5	
AFI	**Afiamalu**	**9.96**	**77**	Pn		**Pn**	**15 36 45.7**	**-1.7**
	0.8nm,0.3s,baz=291,slow=18,SNR=3.3							
AFI				LR		LR	15 39 48.5	
	comp=E,4µm,19.9s,baz=253,slow=33							
AFI	**Afiamalu**	**9.96**	**77**	*e*P		**Pn**	**15 36 45.6**	**-1.7**
AFI				pmax		pmax		
	comp=Z,109nm,1.0s							
DZM	**Mont Dzumac**	**12.48**	**241**	*e*P		**Pn**	**15 37 23.0**	**+1.1**
	comp=Z,166nm,1.4s							
DZM				*e*LQ			15 39 44.0	
	comp=Z,24µm,26.1s							
DZM				*e*LR		LR	15 40 21.5	
	comp=Z,9µm,26.0s							
DZM	**Mont Dzumac**	**12.48**	**241**	*e*Pn		**Pn**	**15 37 22.4**	**+0.6**
	comp=Z,388nm,1.9s							
HNR	**Honiara**	**19.11**	**289**	*e*P		**Pn**	**15 38 42.8**	**-5.0**
	comp=Z,716nm,1.8s							
HNR	**Honiara**	**19.11**	**289**	P		**Pn**	**15 38 44.3**	**-3.5**
	comp=Z,2.6nm,0.3s,baz=155,slow=3.3,SNR=7.1							
HNR				LR		LR	15 45 02.3	
	comp=Z,2µm,18.2s,baz=123,slow=34							
HNR	**Honiara**	**19.11**	**289**	*e*P		**Pn**	**15 38 42.8**	**-5.0**
HNR				pmax		pmax		
	comp=Z,715nm,1.8s							
RAR	**Rarotonga**	**21.36**	**106**	P		**P**	**15 39 12.1**	**+1.0**
	comp=Z,108nm,1.1s,mb5.1,baz=260,slow=6.9,SNR=6.2							
RAR				LR		LR	15 45 55.2	
	comp=Z,1µm,19.6s,MS4.3,baz=276,slow=32							
URZ	**Urewera**	**21.80**	**182**	P		**P**	**15 39 14.7**	**-0.9**
	comp=Z,34nm,1.0s,mb4.7,baz=331,slow=19,SNR=3.0							
URZ				LR		LR	15 46 24.7	
	comp=Z,4µm,18.8s,MS4.8,baz=184,slow=33							
SNZO	**South Karori**	**25.01**	**186**	*e*P		**P**	**15 39 47.4**	**+0.1**
SNZO				LR		LR		
	comp=Z,3µm,22.0s,MS4.8							
RPZ	**Rata Peaks**	**27.91**	**191**	P		**P**	**15 40 12.7**	**-0.6**
	comp=Z,24nm,1.2s,mb4.7,baz=353,slow=3.6,SNR=2.9							
RPZ				LR		LR	15 50 21.6	
	comp=Z,2µm,18.1s,MS4.8,baz=177,slow=34							
XMAS	**Kiritimati**	**30.21**	**55**	PFAKE			15 40 50.0	+16
XMAS				LR		LR		
	comp=Z,1µm,20.0s,MS4.5							
CTA	**Charters Tower**	**30.57**	**258**	*e*P		**P**	**15 40 37.9**	**+0.6**
	comp=Z,6.2nm,1.2s,mb4.3							
CTA				*e*S		**S**	**15 45 47.0**	**+10**
CTA	**Charters Tower**	**30.57**	**258**	P		**P**	**15 40 38.3**	**+1.1**
	comp=Z,3.9nm,0.9s,mb4.2,baz=81,slow=13,SNR=4.6							
CTA				LR		LR	15 50 02.0	
	comp=Z,952nm,18.8s,MS4.5,baz=81,slow=31							
CTAO	**Charters Tower**	**30.57**	**258**	*e*P		**P**	**15 40 37.5**	**+0.3**
	comp=Z,11nm,0.9s,mb4.7							
CTAO				LR		LR		
	comp=Z,1µm,22.0s,MS4.5							
CTAO	**Charters Tower**	**30.57**	**258**	*e*P		**P**	**15 40 37.5**	**+0.2**
CTAO				pmax		pmax		
	comp=Z,11nm,0.9s,mb4.7							
CTAO				MLR		MLR		
	comp=Z,1µm,22.0s,MS4.5							
PPT	**Papeete**	**30.79**	**97**	*e*LQ			15 47 04.9	
PPT				*e*LR		LR	15 48 12.8	
	comp=Z,6µm,29.8s,baz=270							
PPT	**Papeete**	**30.79**	**97**	LR		LR	15 50 26.3	
	comp=Z,496nm,20.7s,MS4.2,baz=268,slow=31							
PMG	**Port Moresby**	**31.05**	**279**	*e*P		**P**	**15 40 38.8**	**-2.8**
	comp=Z,26nm,1.0s,mb5.0							
PMG				LR		LR		
	comp=Z,890nm,21.0s,MS4.4							
PMG	**Port Moresby**	**31.05**	**279**	*e*P		**P**	**15 40 38.8**	**-2.8**
PMG				pmax		pmax		
	comp=Z,26nm,1.0s							
PMG				MLR		MLR		
	comp=Z,890nm,21.0s							
CAN	**Canberra**	**32.18**	**229**	PFAKE			15 41 00.0	+8.7
CAN				LR		LR		
	comp=Z,2µm,21.0s,MS4.8							
JOHN	**Johnston Islan**	**35.06**	**21**	PFAKE			15 41 30.0	+14
JOHN				LR		LR		
	comp=Z,2µm,22.0s,MS4.8							
TOO	**Toolangi**	**35.73**	**227**	*e*P		**P**	**15 41 23.1**	**+1.0**
STKA	**Stephens Creek**	**36.61**	**238**	*e*P		**P**	**15 41 30.7**	**+1.0**
	comp=Z,10nm,0.8s,mb4.7							
STKA				*e*S		**S**	**15 47 23.7**	**+13**
STKA	**Stephens Creek**	**36.61**	**238**	*e*P		**P**	**15 41 30.3**	**+0.6**
	comp=Z,33nm,2.3s,mb4.8							
STKA	**Stephens Creek**	**36.61**	**238**	P		**P**	**15 41 30.8**	**+1.1**
	comp=Z,11nm,0.7s,mb4.8,baz=69,slow=8.9,SNR=23							
STKA				LR		LR	15 54 46.3	
	comp=Z,2µm,19.1s,MS4.9,baz=68,slow=33							
TAOE	**Nuku Hiva Isla**	**41.23**	**85**	*e*LR		LR	15 53 00.3	
	comp=Z,3µm,27.0s							
WRAB	**Tennant Creek**	**41.76**	**258**	*e*P		**P**	**15 42 11.6**	**-1.3**
	comp=Z,78nm,1.9s,mb5.0							
WRAB				LR		LR		
	comp=Z,1µm,22.0s,MS4.8							
WRAB	**Tennant Creek**	**41.76**	**258**	*e*P		**P**	**15 42 11.6**	**-1.3**
WRAB				pmax		pmax		
	comp=Z,78nm,1.9s,mb5.0							
WRAB				MLR		MLR		
	comp=Z,1µm,22.0s,MS4.8							
WRA	**Warramunga Arr**	**41.77**	**258**	P		**P**	**15 42 11.8**	**-1.2**
	comp=Z,4.7nm,0.9s,mb4.1,baz=91,slow=8.2,SNR=25							
ASAR	**Alice Springs**	**42.14**	**253**	P		**P**	**15 42 15.5**	**-0.5**
	comp=Z,10nm,0.8s,mb4.5,baz=84,slow=9.4,SNR=83							
KIP	**Kipapa**	**44.22**	**33**	PFAKE			15 42 40.0	+7.4
KIP				LR		LR		
	comp=Z,1µm,21.0s,MS4.8							
POHA	**Pohakuloa**	**44.22**	**37**	PFAKE			15 42 40.0	+7.3
POHA				LR		LR		
	comp=Z,1µm,20.0s,MS4.8							
RKT	**Rikitea**	**44.40**	**106**	*e*LR		LR	15 54 32.1	
	comp=Z,5µm,30.0s							
KAKA	**Kakadu**	**44.41**	**268**	*e*P		**P**	**15 42 33.8**	**-0.6**
	comp=Z,81nm,1.9s,mb5.1							
GUMO	**Guam**	**44.44**	**310**	PFAKE			15 42 50.0	+15
GUMO				LR		LR		
	comp=Z,909nm,20.0s,MS4.7							
GUMO	**Guam**	**44.44**	**310**	LR		LR	15 56 28.2	
	comp=Z,644nm,21.9s,MS4.5,baz=245,slow=30							
MIDW	**Midway**	**44.55**	**6**	PFAKE			15 42 50.0	+15
MIDW				LR		LR		
	comp=Z,907nm,21.0s,MS4.7							
FORT	**Forrest**	**47.78**	**243**	*e*P		**P**	**15 43 00.1**	**-0.7**
	comp=Z,20nm,0.7s,mb5.3							
FORT	**Forrest**	**47.78**	**243**	*e*P		**P**	**15 43 00.2**	**-0.6**
	comp=Z,200nm,1.8s,mb5.8							
FITZ	**Fitzroy Crossi**	**50.12**	**260**	*e*P		**P**	**15 43 14.4**	**-4.4**
	comp=Z,30nm,1.6s,mb5.1							
FITZ				*e*S		**S**	**15 50 30.6**	**+2.2**
FITZ	**Fitzroy Crossi**	**50.12**	**260**	P		**P**	**15 43 18.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**50.12**	**260**	P		**P**	**15 43 18.9**	**0.0**
	comp=Z,5.3nm,1.0s,mb4.5,baz=95,slow=8.7,SNR=7.8							
MBWA	**Marble Bar**	**55.34**	**255**	*e*P		**P**	**15 43 56.5**	**-0.9**
	comp=Z,31nm,1.3s,mb5.2							
MBWA				LR		LR		
	comp=Z,1µm,21.0s,MS5.0							
DAV	**Davao City (W)**	**57.07**	**290**	PFAKE			15 44 20.0	+10
DAV				LR		LR		
	comp=Z,620nm,21.0s,MS4.7							
NWAO	**Narrogin (SRO)**	**57.10**	**241**	PFAKE			15 44 20.0	+10
NWAO				LR		LR		
	comp=Z,2µm,21.0s,MS5.3							
SBA	**Scott Base**	**61.74**	**183**	*e*P		**P**	**15 44 42.3**	**+1.2**
	comp=Z,271nm,2.5s,mb5.9							
SBA				LR		LR		
	comp=Z,646nm,19.0s,MS4.8							
SBA	**Scott Base**	**61.74**	**183**	*e*P		**P**	**15 44 42.3**	**+1.2**
SBA				pmax		pmax		
	comp=Z,271nm,2.5s,mb5.9							
SBA				MLR		MLR		
	comp=Z,646nm,19.0s,MS4.8							
TGY	**Tagaytay City**	**64.20**	**295**	LR		LR	16 12 32.4	
	comp=Z,2.4nm,18.3s,baz=243,slow=36							
MAJO	**Matsushiro**	**64.81**	**325**	*e*P		**P**	**15 45 01.3**	**-0.7**
	comp=Z,70nm,1.8s,mb5.4							
MAJO				LR		LR		
	comp=Z,453nm,21.0s,MS4.6							
MAJO	**Matsushiro**	**64.81**	**325**	*e*P		**P**	**15 45 01.3**	**-0.7**
MAJO				pmax		pmax		
	comp=Z,70nm,1.8s,mb5.4							
MAJO				MLR		MLR		
	comp=Z,453nm,21.0s,MS4.6							
MAT	**Matsushiro**	**64.81**	**325**	P		**P**	**15 44 59.7**	**-2.3**
MAT				S		**S**	**15 53 44.0**	**+3.4**
KKM	**Kota Kinabalu**	**65.26**	**285**	PFAKE			15 45 20.0	+15
KKM				LR		LR		
	comp=Z,213nm,21.0s,MS4.3							
CASY	**Casey**	**66.18**	**204**	*e*P		**P**	**15 45 09.9**	**-0.5**
CASY	**Casey**	**66.18**	**204**	*e*P		**P**	**15 45 09.8**	**-0.6**
	comp=Z,24nm,1.4s,mb5.0							
CASY				LR		LR		
	comp=Z,574nm,19.0s,MS4.8							
ERM	**Erimo**	**66.53**	**332**	PFAKE			15 45 20.0	+7.1
ERM				LR		LR		
	comp=Z,732nm,19.0s,MS4.9							
YHNB	**Yeheng**	**68.84**	**305**	PFAKE			15 45 40.0	+12
YHNB				LR		LR		
	comp=Z,826nm,21.0s,MS5.0							
TATO	**Taipei**	**68.91**	**306**	PFAKE			15 45 40.0	+12
TATO				LR		LR		
	comp=Z,624nm,19.0s,MS4.9							
KSM	**Kuching**	**69.30**	**278**	PFAKE			15 45 40.0	+8.9
KSM				LR		LR		
	comp=Z,197nm,21.0s,MS4.3							
QZH	**Quanzhou**	**71.17**	**304**	P		**P**	**15 45 43.8**	**+1.6**
QZH				S		S	15 54 54.1	-3.0
QZH				pmax		pmax		
	comp=Z,480nm,6.6s							
QZH				LR		LR		
	comp=N,970nm,18.8s,MS5.2							
QZH				LR		LR		
	comp=E,730nm,17.7s,MS5.2							
QZH				LR		LR		
	comp=Z,930nm,20.7s,MS5.0							
PET	**Petropavlovsk**	**71.17**	**348**	PFAKE			15 45 50.0	+8.4
PET				LR		LR	

comp=Z,10.0nm,0.6s,mb4.9
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,20.0s,MS4.6
CN2 LR LR
comp=E,200nm,20.0s,MS4.6
CN2 LR LR
comp=Z,200nm,19.0s,MS4.5
OHAK Old Harbor 77.08 15 *eP* **P 15 46 15.3 -0.7**
comp=Z,96nm,1.9s,mb5.4
KLR Kul'dur 77.21 331 *eP* **P 15 46 17.0 +0.1**
MCCM Marconi Confer 77.38 44 PFAKE 15 46 30.0 +12
MCCM LR LR
comp=Z,564nm,22.0s,MS4.8
SAO San Andreas Ge 77.61 46 PFAKE 15 46 30.0 +11
SAO LR LR
comp=Z,508nm,20.0s,MS4.8
HOPS Hopland 77.71 43 PFAKE 15 46 30.0 +10
HOPS LR LR
comp=Z,543nm,22.0s,MS4.8
KDAK Kodiak Island 77.76 16 P **P 15 46 19.1 -0.7**
comp=Z,8.7nm,1.0s,mb4.6,baz=246,slow=3.2,SNR=5.8
KDAK Kodiak Island 77.76 16 P **P 15 46 19.1 -0.7**
KDAK MLR MLR
comp=Z,729nm,22.0s,MS5.0
KHMM Horse Mountain 78.32 41 *eP* **P 15 46 19.7 -3.6**
comp=Z,18nm,1.1s,mb4.9
WDC Whiskeytown Da 78.91 42 PFAKE 15 46 40.0 +13
WDC LR LR
comp=Z,496nm,22.0s,MS4.8
CMB Columbia Colle 78.99 45 *eP* **P 15 46 26.9 -0.2**
comp=Z,7.8nm,1.1s,mb4.5
CMB LR LR
comp=Z,375nm,20.0s,MS4.7
CMB Columbia Colle 78.99 45 *eP* **P 15 46 26.9 -0.2**
CMB pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
CMB MLR MLR
comp=Z,375nm,20.0s,MS4.7
EDW2 Edwards Air Fo 79.11 49 ⇑P **P 15 46 27.5 -0.3**
baz=79
ISA Isabella 79.14 48 ⇓P **P 15 46 27.9 0.0**
baz=79
ISA Isabella 79.14 48 *eP* **P 15 46 27.5 -0.4**
comp=Z,23nm,1.5s,mb4.9
ISA Isabella 79.14 48 *eP* **P 15 46 27.5 -0.4**
ISA pmax pmax
comp=Z,23nm,1.5s,mb4.9
MONP Monument Peak 79.32 51 ⇓P **P 15 46 29.4 +0.4**
baz=80
YBH Yreka Blue Hor 79.43 41 P **P 15 46 29.7 +0.3**
comp=Z,4.2nm,0.9s,mb4.4,baz=179,slow=1.7,SNR=12
YBH Yreka Blue Hor 79.43 41 P **P 15 46 29.7 +0.3**
YBH MLR MLR
comp=Z,349nm,20.0s
DVTC Desert V Tower 79.46 51 ⇓P **P 15 46 30.1 +0.4**
baz=80
LRMC Laurel Mountai 79.61 48 ⇑P **P 15 46 31.0 +0.5**
baz=80
PFO Pinyon Flat Ob 79.63 50 PFAKE 15 46 40.0 +9.4
PFO LR LR
comp=Z,441nm,22.0s,MS4.8
KULM Kulim 79.64 279 PFAKE 15 46 40.0 +8.8
KULM LR LR
comp=Z,266nm,21.0s,MS4.6
HUMO Hull Mountain 79.76 40 *eP* **P 15 46 32.0 +0.9**
comp=Z,16nm,1.3s,mb4.8
HUMO LR LR
comp=Z,427nm,22.0s,MS4.7
WAKR Walker 79.88 45 *eP* **P 15 46 32.4 +0.6**
MTUM Tungsten Hills 79.90 46 *eP* **P 15 46 33.1 +1.1**
MPMC Manual Prospec 80.03 48 ⇑P **P 15 46 33.5 +0.8**
baz=80
DAC Darwin (Calif) 80.06 48 PFAKE 15 46 40.0 +7.1
DAC LR LR
comp=Z,443nm,21.0s,MS4.8
WCN Washoe City 80.06 44 ⇑P **P 15 46 33.4 +0.5**
baz=80
RSO Redoubt South 80.08 14 *eP* **P 15 46 32.0 -0.5**
RSO *e* 15 46 38.3
BELC Belle Mtn. Jos 80.15 50 ⇑P **P 15 46 33.9 +0.4**
baz=80
GSC Goldstone 80.16 49 ⇓P **P 15 46 33.9 +0.4**
baz=80
GSC Goldstone 80.16 49 *eP* **P 15 46 34.1 +0.6**
comp=Z,8.5nm,1.1s,mb4.6
GSC Goldstone 80.16 49 *eP* **P 15 46 34.1 +0.6**
GSC pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
HEC Hector,Ludlow 80.28 49 ⇑P **P 15 46 34.3 +0.2**
baz=80
BJT Baijiatuau 80.47 317 *eP* **P 15 46 33.7 -1.3**
BJT LR LR
comp=Z,287nm,20.0s,MS4.6
BJI Beijing 80.47 317 P **P 15 46 35.2 +0.2**
BJI PP PP 15 49 39.7 +0.9
BJI S S 15 56 44.6 +5.5
BJI pmax pmax
comp=Z,120nm,5.3s
BJI LR LR
comp=N,420nm,23.3s,MS4.7
BJI LR LR
comp=E,190nm,25.1s,MS4.7
BJI LR LR
comp=Z,430nm,38.6s
PAHR Pah Rah Range 80.52 44 *eP* **P 15 46 36.5 +1.2**
comp=Z,29nm,1.6s,mb5.0
GRAC Grapevine Rang 80.56 47 ⇑P **P 15 46 35.2 -0.4**
baz=81
NVAR Mina Array Bea 80.61 45 P **P 15 46 36.5 +0.7**
NVAR Mina Array Bea 80.61 45 P **P 15 46 36.5 +0.7**
comp=Z,3.6nm,0.7s,mb4.4,baz=227,slow=8.5,SNR=31
COR Corvallis 80.65 38 PFAKE 15 46 50.0 +14
COR LR LR
comp=Z,546nm,22.0s,MS4.9
GMRC Granite Mounta 80.75 50 ⇓P **P 15 46 36.2 -0.5**
baz=81
ENH Enshi 80.78 305 *eP* **P 15 46 37.0 +0.1**
comp=Z,63nm,1.6s,mb5.3
ENH LR LR
comp=Z,288nm,20.0s,MS4.6
SHOC Shoshone 80.82 48 ⇓P **P 15 46 35.9 -1.0**
baz=81
IRM Iron Mountain 80.84 50 ⇑P **P 15 46 36.3 -0.9**
baz=81
U10A Ash Meadows, A 81.02 48 ⇓P **P 15 46 38.1 0.0**
baz=81
MOD Modoc 81.05 42 *eP* **P 15 46 38.2 +0.2**
comp=Z,27nm,1.7s,mb4.9
MOD LR LR
comp=Z,299nm,19.0s,MS4.7
K05A Summer Lake 81.11 41 ⇓P **P 15 46 38.4 0.0**
baz=81
TPH Tonopah 81.18 46 PFAKE 15 46 50.0 +11
TPH LR LR
comp=Z,347nm,20.0s,MS4.7
H04A Detroit Lake 81.37 38 ⇑P **P 15 46 39.7 0.0**
baz=82
S10A Tonopah Range, 81.54 47 ⇓P **P 15 46 41.0 +0.2**
baz=82
TTA Tatalina 81.60 12 *eP* **P 15 46 40.3 -0.2**
comp=Z,15nm,1.1s,mb4.8
TTA Tatalina 81.60 12 *eP* **P 15 46 40.3 -0.2**
TTA pmax pmax
comp=Z,15nm,1.1s,mb4.8
SEY Seymchan 81.62 348 ⇑ *iP* **P 15 46 40.5 -0.1**
NLWA Neilton Lookou 81.91 36 PFAKE 15 46 50.0 +7.5
NLWA LR LR
comp=Z,612nm,20.0s,MS5.0
R10A Warm Springs 81.92 46 ⇓P **P 15 46 42.2 -0.5**
baz=82
PMR Palmer 81.94 15 *eP* **P 15 46 41.7 -0.6**
comp=Z,15nm,1.2s,mb4.8
PMR Palmer 81.94 15 *eP* **P 15 46 41.7 -0.6**
PMR pmax pmax
comp=Z,15nm,1.2s,mb4.8
X13A Yucca 82.02 51 ⇓P **P 15 46 43.0 -0.4**
baz=82
Q10A Clear Creek Ra 82.11 46 ⇑P **P 15 46 44.3 +0.5**
baz=82
T11A Corn Creek, Al 82.19 48 ⇑P **P 15 46 44.7 +0.5**
baz=82
BMN Battle Mountai 82.32 44 PFAKE 15 47 00.0 +15
BMN LR LR
comp=Z,425nm,20.0s,MS4.8
Y14A Wickenburg 82.35 51 ⇑P **P 15 46 45.5 +0.4**
baz=82
WVOR Wild Horse Val 82.38 42 *eP* **P 15 46 45.3 +0.2**
comp=Z,16nm,1.2s,mb4.8
WVOR Wild Horse Val 82.38 42 *eP* **P 15 46 45.3 +0.2**
WVOR pmax pmax
comp=Z,16nm,1.2s,mb4.8
P10A Eureka 82.44 45 ⇑P **P 15 46 45.8 +0.3**
baz=83
R11A Troy Canyon, C 82.45 47 ⇑P **P 15 46 44.7 -0.8**
baz=83
G06A Carlson Farm, 82.59 39 ⇑P **P 15 46 46.3 +0.2**
baz=83
S12A Delamar Landin 82.62 47 ⇓P **P 15 46 47.0 +0.6**
baz=83
Q11A Duckwater 82.63 46 ⇓P **P 15 46 46.5 0.0**
baz=83
BMRM Bremner River 82.63 17 *eP* **P 15 46 45.4 -0.6**
comp=Z,12nm,1.1s,mb4.8
X14A Yava 82.66 51 ⇑P **P 15 46 46.4 -0.3**
baz=83,SNR=5.5
I07A Izee 82.68 40 ⇓P **P 15 46 46.5 -0.1**
baz=83
LON Longmire 82.72 37 *eP* **P 15 46 47.7 +0.9**
comp=Z,22nm,1.9s,mb4.9
LON Longmire 82.72 37 *eP* **P 15 46 47.7 +1.0**
LON pmax pmax
comp=Z,22nm,1.9s,mb4.9
W14A Seligman 82.84 50 ⇑P **P 15 46 47.4 -0.3**
baz=83,SNR=6.9
Y15A Casa Rosa Ranc 82.86 52 ⇑P **P 15 46 46.9 -0.9**
baz=83
J08A Circle Bar Ran 82.95 41 ⇑P **P 15 46 48.5 +0.4**
baz=83
V14A Boquillas Ranc 83.00 50 ⇑P **P 15 46 49.0 +0.5**
baz=83,SNR=7.9
T13A Saint George 83.03 48 P **P 15 46 49.5 +1.0**
baz=83,SNR=5.6
X15A Humboldt 83.16 51 ⇑P **P 15 46 48.8 -0.5**
baz=83
O11A Cowboy Ranch, 83.23 45 ⇓P **P 15 46 50.7 +1.2**
baz=83
TRF Thorofare Moun 83.27 14 *eP* **P 15 46 47.9 -1.3**
comp=Z,15nm,0.9s,mb5.0
Q12A Willow Creek R 83.29 46 ⇑P **P 15 46 50.2 +0.3**
baz=84
U14A Mt Trumbull 83.29 49 ⇑P **P 15 46 50.7 +0.8**
baz=84,SNR=13
M10A I.L. Ranch, Tu 83.30 43 ⇑P **P 15 46 49.1 -0.8**
baz=84
HIA Hailar 83.30 326 PFAKE 15 47 00.0 +10
HIA LR LR
comp=Z,390nm,20.0s,MS4.8
S13A Holt Ranch, En 83.31 48 ⇓P **P 15 46 49.7 -0.3**
baz=84
TUC Tucson 83.36 54 *eP* **P 15 46 51.2 +0.8**
comp=Z,8.9nm,1.2s,mb4.7
TUC Tucson 83.36 54 *eP* **P 15 46 51.3 +0.9**
TUC pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
P12A McGill 83.43 46 ⇓P **P 15 46 51.3 +0.7**
baz=84
Y16A Circle Bar Ran 83.47 52 ⇑P **P 15 46 51.3 +0.3**
baz=84
R13A O'Grain Ranch, 83.50 47 ⇑P **P 15 46 51.9 +0.9**
baz=84
L10A Juniper Basin 83.61 43 ⇑P **P 15 46 51.4 0.0**
baz=84
318A Bisbee 83.63 55 ⇓P **P 15 46 51.9 0.0**
baz=84
G08A Pilot Rock 83.63 39 P **P 15 46 51.8 +0.3**
baz=84,SNR=10
T14A Hurricane 83.64 49 ⇑P **P 15 46 51.7 -0.1**
baz=84,SNR=5.5
CCUT Cedar City 83.65 48 *eP* **P 15 46 52.6 +0.8**
comp=Z,46nm,2.1s,mb5.2
BPAW Bear Paw Mtn. 83.68 13 *eP* **P 15 46 49.2 -2.1**
comp=Z,9.3nm,1.0s,mb4.9
ARUT Antelope Range 83.70 48 *eP* **P 15 46 52.6 +0.5**
comp=Z,30nm,1.9s,mb5.1
ARUT Antelope Range 83.70 48 *eP* **P 15 46 52.6 +0.6**
ARUT pmax pmax
comp=Z,30nm,1.9s,mb5.1
X16A Lo Mia Camp, P 83.72 52 ⇓P **P 15 46 52.4 +0.1**
baz=84,SNR=7.8
M11A Holland Ranch, 83.75 44 ⇓P **P 15 46 51.9 -0.3**
baz=84
V15A Kaibab Nationa 83.77 50 ⇓P **P 15 46 52.1 -0.3**
baz=84,SNR=10.0
Q13A Wheeler Ranch, 83.81 47 ⇓P **P 15 46 52.6 0.0**
baz=84,SNR=5.2
MCK McKinley 83.82 14 *eP* **P 15 46 51.3 -0.7**
comp=Z,14nm,0.9s,mb5.1
MCK McKinley 83.82 14 *eP* **P 15 46 51.3 -0.7**
MCK pmax pmax
comp=Z,14nm,0.9s,mb5.1
RSW Rattlesnake Hi 83.82 38 *eP* **P 15 46 52.9 +0.4**
HAWA Hanford 83.86 38 *eP* **P 15 46 53.0 +0.4**
comp=Z,10nm,0.9s,mb5.0
HAWA *e* 15 46 58.6
HAWA LR LR
comp=Z,354nm,20.0s,MS4.7
O12A Currie 83.91 45 ⇑P **P 15 46 53.3 +0.3**
baz=84
HHC Hu-ho-hao-te 83.94 316 *eP* **P 15 46 54.1 +0.9**
HHC pP pP 15 47 04.4 +0.2
HHC sP sP 15 47 08.7 +0.4
HHC PP PP 15 50 09.4 +2.0
HHC SKS 15 57 11.5
HHC S S 15 57 15.1 +0.5
HHC sS sS 15 57 31.8 -1.1
HHC SS SS 16 02 45.1 +1.5
HHC pmax pmax
comp=Z,30nm,0.8s,mb5.5
HHC pmax pmax
comp=Z,120nm,4.5s
HHC LR LR
comp=N,140nm,14.7s
HHC LR LR
comp=E,310nm,20.1s
HHC LR LR
comp=Z,470nm,23.8s
U15A North Rim 83.94 49 ⇓P **P 15 46 53.5 +0.2**
baz=84,SNR=17
N12A Clover Valley, 83.98 44 ⇓P **P 15 46 54.2 +0.8**
baz=84
N12A Clover Valley, 83.98 44 *eP* **P 15 46 53.6 +0.2**
comp=Z,20nm,1.4s,mb5.1
ETW Entiat 84.03 37 *eP* **P 15 46 53.4 -0.1**
ETW *e* 15 46 59.1
PAX Paxson 84.04 16 *eP* **P 15 46 51.7 -1.4**
comp=Z,13nm,1.4s,mb4.8
PAX Paxson 84.04 16 *eP* **P 15 46 51.7 -1.4**
PAX pmax pmax
comp=Z,13nm,1.4s,mb4.9
P13A Bates Ranch, G 84.04 46 ⇑P **P 15 46 54.2 +0.5**
baz=84,SNR=9.5
L11A Cat Creek Ranc 84.12 43 ⇑P **P 15 46 54.3 +0.3**
baz=84,SNR=12
118A Homack Ranch, 84.12 54 ⇓P **P 15 46 53.3 -1.0**
baz=84
T15A Red Dirt Ranch 84.13 49 ⇑P **P 15 46 54.5 +0.3**
baz=84,SNR=5.7
319A Douglas 84.16 55 ⇓P **P 15 46 55.1 +0.6**
baz=84
X17A Forest Lakes 84.17 52 ⇑P **P 15 46 54.8 +0.3**
baz=84
MAW Mawson 84.17 200 *eP* **P 15 46 54.4 +0.4**
comp=Z,6.7nm,0.9s,mb4.8
MAW Mawson 84.17 200 *eP* **P 15 46 54.0 0.0**
comp=Z,2.3nm,1.0s,mb4.3
MAW Mawson 84.17 200 P **P 15 46 54.2 +0.3**
comp=Z,2.9nm,0.6s,mb4.6,baz=117,slow=7.1,SNR=14
MAW LR LR 16 20 33.0
comp=Z,346nm,18.1s,MS4.8,baz=108,slow=33
MAW Mawson 84.17 200 *eP* **P 15 46 54.0 0.0**
MAW pmax pmax
comp=Z,2.0nm,1.0s
WUAZ Wupatki 84.23 51 ⇑P **P 15 46 54.6 -0.2**
baz=84
WUAZ Wupatki 84.23 51 *eP* **P 15 46 55.5 +0.7**
comp=Z,13nm,1.1s,mb5.0
KMI Kunming 84.29 298 P **P 15 46 55.7 +0.4**
KMI pP pP 15 47 06.8 +0.4
KMI sP sP 15 47 11.7 +1.3
KMI PP PP 15 50 12.6 +2.0
KMI SKS 15 57 13.4
KMI S S 15 57 19.3 +0.5
KMI sS sS 15 57 35.7 -1.4
KMI SS SS 16 02 49.0 -0.4
KMI pmax pmax
comp=Z,6.0nm,1.9s,mb4.4
KMI pmax pmax
comp=Z,98nm,3.6s
KMI LR LR
comp=N,160nm,22.7s,MS4.8
KMI LR LR
comp=E,380nm,21.4s,MS4.8
KMI LR LR
comp=Z,720nm,34.0s
M12A Wells 84.32 44 ⇑P **P 15 46 55.3 +0.2**
baz=84
Q14A Sevier Lake (B 84.35 47 ⇓P **P 15 46 55.9 +0.6**
baz=84,SNR=19
BMO Blue Mountains 84.42 40 *eP* **P 15 46 55.7 +0.2**
comp=Z,3.9nm,1.0s,mb4.5
BMO LR LR
comp=Z,415nm,22.0s,MS4.8
SKAG Skagway 84.46 22 *eP* **P 15 46 54.7 -0.7**
comp=Z,33nm,1.8s,mb5.2
SKAG *e* 15 47 01.7
MENT Mentasta 84.48 16 *eP* **P 15 46 55.4 0.0**
N13A Wendover, West 84.54 45 *eP* **P 15 46 56.8 +0.5**
comp=Z,25nm,1.1s,mb5.3
D08A Wollman Farm, 84.56 38 ⇓P **P 15 46 56.7 +0.6**
baz=85
L12A House Creek Ra 84.59 43 ⇓P **P 15 46 56.2 -0.2**
baz=85
MFID Camas Ranch 84.66 42 ⇑P **P 15 46 56.6 -0.2**
baz=85,SNR=6.1
U16A Tuba City 84.67 50 ⇑P **P 15 46 57.9 +0.9**
baz=85,SNR=6.5
119A Ashpeak Ranch, 84.69 54 ⇓P **P 15 46 58.1 +0.9**
baz=85
V17A Tonalea, Kykot 84.70 51 ⇓P **P 15 46 57.9 +0.7**
baz=85,SNR=9.6
HYT Haines Junctio 84.71 20 *eP* **P 15 46 56.8 +0.3**
P14A Drum Mountains 84.76 46 ⇑P **P 15 46 57.7 +0.3**
baz=85,SNR=7.9
M13A Montello 84.80 44 ⇓P **P 15 46 57.1 -0.4**
baz=85
M13A Montello 84.80 44 *eP* **P 15 46 57.3 -0.2**
comp=Z,15nm,1.4s,mb4.9
OD2 Odessa Site #2 84.86 37 *eP* **P 15 46 57.7 0.0**
MSU Marysvale 84.91 48 *eP* **P 15 46 59.1 +0.9**
S16A Weppner Ranch, 84.99 48 ⇓P **P 15 46 59.4 +0.9**
baz=85
B08A Colville Reser 85.00 36 ⇑P **P 15 46 58.2 -0.2**
baz=85
F10A Beach Ranch, E 85.03 39 P **P 15 46 58.6 +0.1**
baz=85,SNR=8.1
COLA College 85.04 14 *eP* **P 15 46 56.6 -1.6**
comp=Z,20nm,1.0s,mb5.2
COLA LR LR
comp=Z,712nm,22.0s,MS5.0
COLA College 85.04 14 *eP* **P 15 46 56.6 -1.6**
COLA pmax pmax
comp=Z,20nm,1.0s,mb5.2
COLA MLR MLR
comp=Z,712nm,22.0s,MS5.0
120A U Bar Ranch, L 85.12 54 ⇑P **P 15 46 59.4 0.0**
baz=85
ILAR Eielson Array 85.18 14 P **P 15 46 58.0 -0.9**
comp=Z,12nm,0.8s,mb5.0,baz=234,slow=6.2,SNR=113
ILAR LR LR 16 17 11.1
comp=Z,543nm,21.8s,MS4.9,baz=48,slow=30
Y19A Nutrioso 85.19 53 ⇓P **P 15 46 59.6 -0.1**
baz=85
DUG Dugway 85.20 46 ⇓P **P 15 46 58.4 -1.2**
baz=85
DUG Dugway 85.20 46 *eP* **P 15 46 59.6 0.0**
comp=Z,4.3nm,0.9s,mb4.6
DUG LR LR
comp=Z,429nm,22.0s,MS4.8
DUG Dugway 85.20 46 *eP* **P 15 46 59.6 0.0**
DUG pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
DUG MLR MLR
comp=Z,429nm,22.0s,MS4.8
T17A Navajo Res., N 85.26 49 ⇑P **P 15 46 59.0 -1.0**
baz=85,SNR=5.5
I12A Atlanta 85.28 42 ⇑P **P 15 47 00.4 +0.5**
baz=86,SNR=9.8
R16A Teasdale 85.31 48 ⇓P **P 15 46 59.7 -0.5**
baz=86
X19A St. Johns 85.35 52 ⇓P **P 15 47 00.1 -0.4**
baz=86
CM31 Chiang Mai Arr 85.35 291 *eP* **P 15 46 56.8 -4.1**
CM31 LR LR
comp=Z,295nm,20.0s,MS4.7
CMAR Chiang Mai Arr 85.35 291 P **P 15 47 02.0 +1.2**
comp=Z,3.1nm,1.0s,mb4.4,baz=103,slow=3.3,SNR=14
CMAR LR LR 16 23 41.3
comp=Z,226nm,19.7s,MS4.6,baz=120,slow=35
BGU Big Grassy Mou 85.37 45 *eP* **P 15 46 59.9 -0.5**
comp=Z,18nm,1.8s,mb4.9
Z20A Nine Sixteen R 85.37 54 ⇑P **P 15 47 00.6 0.0**
baz=86
M14A Sheep Mountain 85.41 44 ⇑P **P 15 47 01.1 +0.5**
baz=86,SNR=19
CHTO Chiang Mai 85.47 291 *eP* **P 15 47 01.8 +0.4**
comp=Z,8.4nm,1.3s,mb4.7
CHTO LR LR
comp=Z,316nm,21.0s,MS4.7
CHTO Chiang Mai 85.47 291 *eP* **P 15 47 01.8 +0.4**
CHTO pmax pmax
comp=Z,8.0nm,1.3s,mb4.7
CHTO MLR MLR
comp=Z,316nm,21.0s,MS4.7
CD2 Chengdu 85.56 304 P **P 15 47 02.2 +0.6**
CD2 pP pP 15 47 12.7 0.0
CD2 sP sP 15 47 16.6 -0.1
CD2 PP PP 15 50 22.8 +2.0
CD2 SKS 15 57 21.8
CD2 S S 15 57 29.7 -1.5
CD2 SS SS 16 03 10.0 +2.0
CD2 pmax pmax
comp=Z,10.0nm,1.4s,mb4.8
CD2 pmax pmax
comp=Z,300nm,4.7s
CD2 LR LR
comp=N,340nm,7.3s
CD2 LR LR
comp=E,400nm,8.6s
CD2 LR LR
comp=Z,190nm,6.4s
HLID Hailey 85.64 42 ⇓P **P 15 47 02.3 +0.6**
baz=86,SNR=22
HLID Hailey 85.64 42 *eP* **P 15 47 02.5 +0.8**
comp=Z,6.7nm,0.8s,mb4.9
HLID LR LR
comp=Z,434nm,22.0s,MS4.8
U18A Rough Rock, Ch 85.71 50 ⇑P **P 15 47 02.1 -0.1**
baz=86
L14A Malta 85.72 44 ⇑P **P 15 47 02.4 +0.3**
baz=86
DLBC Dease Lake 85.75 24 *eP* **P 15 47 01.2 -0.7**
DLBC *e* 15 47 07.5
G12A Big Creek, Yel 85.79 41 ⇓P **P 15 47 02.4 0.0**
baz=86
H12A Diamond D Ranc 85.81 41 ⇓P **P 15 47 02.0 -0.5**
baz=86,SNR=8.2
Y20A Horse Springs, 85.85 53 ⇓P **P 15 47 03.3 +0.3**
baz=86
HVU Hansel Valley 85.92 44 *eP* **P 15 47 02.9 -0.2**
comp=Z,14nm,1.2s,mb5.1
HVU Hansel Valley 85.92 44 *eP* **P 15 47 02.9 -0.2**
HVU pmax pmax
comp=Z,14nm,1.2s,mb5.1
TMUT Trail Mountain 85.93 47 *eP* **P 15 47 04.1 +0.9**
comp=Z,114nm,2.4s,mb5.7
K14A Jones Ranch, D 85.99 44 ⇑P **P 15 47 03.2 -0.2**
baz=86
I13A Wildhorse Cree 85.99 42 ⇑P **P 15 47 03.5 0.0**
baz=86,SNR=6.0
T18A Mexican Hat 86.00 50 ⇑P **P 15 47 03.8 +0.2**
baz=86,SNR=10
X20A Quemado 86.00 52 ⇓P **P 15 47 03.3 -0.3**
baz=86
M15A Larsen Ranch, 86.00 45 ⇓P **P 15 47 03.8 +0.3**
baz=86
F12A Elk City 86.13 40 ⇓P **P 15 47 03.5 -0.5**
baz=86,SNR=20
U19A Dine' College, 86.15 51 ⇓P **P 15 47 04.6 +0.2**
baz=86

Z21A St. Cloud Mine 86.16 54 ⇓P **P 15 47 03.9 -0.6**
baz=86
H13A Challis 86.20 41 ⇓P **P 15 47 04.0 -0.4**
baz=86,SNR=10
NEW Newport 86.22 37 PFAKE 15 47 20.0 +16
NEW LR LR
comp=Z,327nm,19.0s,MS4.8
E12A Beaver Dam Sad 86.25 39 ⇓P **P 15 47 03.2 -1.4**
baz=86
L15A Malad City 86.28 44 ⇑P **P 15 47 03.6 -1.3**
baz=86
SRU San Rafael 86.34 48 *e*P **P 15 47 05.5 +0.2**
comp=Z,8.9nm,0.7s,mb5.1
SRU San Rafael 86.34 48 *e*P **P 15 47 05.5 +0.3**
SRU pmax pmax
comp=Z,9.0nm,0.7s,mb5.1
DAU Daniels Canyon 86.37 46 *e*P **P 15 47 06.3 +0.9**
PMSA Palmer Station 86.44 158 *e*P **P 15 47 05.9 +0.6**
G13A Cobalt 86.46 41 ⇑P **P 15 47 05.5 -0.1**
baz=87,SNR=6.1
K15A Arbon 86.48 44 ⇓P **P 15 47 05.2 -0.7**
baz=87
R18A Canyonlands Na 86.49 48 ⇓P **P 15 47 04.6 -1.4**
baz=87
X21A Alamocita Cree 86.50 53 ⇑P **P 15 47 05.6 -0.5**
baz=87
C11A Tepee Creek (N 86.52 38 ⇑P **P 15 47 05.8 -0.1**
baz=87,SNR=12
COLD Coldfoot 86.56 12 *e*P **P 15 47 05.2 -0.4**
comp=Z,5.7nm,1.0s,mb4.8
Q18A Rafter H Ranch 86.61 48 ⇑P **P 15 47 06.7 +0.1**
baz=87
EGAK Eagle 86.63 16 *e*P **P 15 47 05.7 -0.4**
comp=Z,12nm,1.1s,mb5.0
EGAK LR LR
comp=Z,383nm,21.0s,MS4.8
O17A Robinson Place 86.64 47 ⇓P **P 15 47 06.1 -0.6**
baz=87,SNR=8.8
HWUT Hardware Ranch 86.66 45 *e*P **P 15 47 03.7 -3.1**
comp=Z,3.4nm,0.5s,mb4.8
HWUT LR LR
comp=Z,451nm,22.0s,MS4.8
D12A Red Ives Fores 86.68 39 ⇓P **P 15 47 06.2 -0.5**
baz=87
F13A Darby 86.72 40 ⇓P **P 15 47 05.5 -1.4**
baz=87,SNR=9.9
H14A Leadore 86.79 42 ⇓P **P 15 47 07.2 -0.1**
baz=87,SNR=10
J15A Blackfoot 86.86 43 ⇓P **P 15 47 07.4 -0.3**
baz=87,SNR=11
G14A Jackson 87.01 41 ⇓P **P 15 47 08.3 -0.1**
baz=87,SNR=5.5
MVCO Mesa Verde 87.04 50 PFAKE 15 47 20.0 +11
MVCO LR LR
comp=Z,362nm,22.0s,MS4.7
E13A Victor 87.10 40 ⇓P **P 15 47 08.8 0.0**
baz=87
MCMT McKenzie Canyo 87.22 42 *e*P **P 15 47 10.2 +0.8**
comp=Z,3.9nm,1.0s,mb4.6
D13A Huson 87.24 39 ⇓P **P 15 47 09.0 -0.4**
baz=87
H15A Lima 87.25 42 ⇓P **P 15 47 10.5 +1.0**
baz=87,SNR=5.6
BNM Barren Site 87.28 53 *e*P **P 15 47 10.1 +0.1**
PV01 Paradox Valley 87.35 49 *e*P **P 15 47 10.2 +0.1**
comp=Z,170nm,0.8s
U21A Nageezi 87.36 51 ⇓P **P 15 47 08.1 -2.2**
baz=88
MNTX Cornudas Mount 87.37 56 PFAKE 15 47 20.0 +10
MNTX LR LR
comp=Z,220nm,19.0s,MS4.6
BSMT Bassoo Peak 87.39 38 *e*P **P 15 47 10.4 +0.3**
MSO Missoula 87.43 40 *e*P **P 15 47 13.7 +3.4**
comp=Z,11nm,1.7s,mb4.8
MSO LR LR
comp=Z,256nm,21.0s,MS4.6
LZH Lanzhou 87.44 309 *e*P **P 15 47 12.2 +1.5**
LZH pP pP 15 47 22.7 +0.9
LZH sP sP 15 47 26.5 +0.7
LZH SKS 15 57 34.2
LZH *e*S S 15 57 47.1 -2.1
LZH sS sS 15 58 06.5 -1.1
LZH *e*SS SS 16 03 37.3 +2.0
LZH pmax pmax
comp=Z,36nm,1.2s,mb5.5
LZH pmax pmax
comp=Z,190nm,5.8s
LZH LR LR
comp=E,310nm,16.0s
LZH LR LR
comp=Z,560nm,19.8s,MS5.0
AHID Auburn Hatcher 87.47 44 PFAKE 15 47 20.0 +9.4
AHID LR LR
comp=Z,225nm,20.0s,MS4.6
E14A Clinton 87.52 40 ⇓P **P 15 47 10.8 0.0**
baz=88
325A Bean Ranch, Si 87.58 56 ⇑P **P 15 47 10.6 -0.9**
baz=88
G15A Dillon 87.59 41 ⇑P **P 15 47 11.6 +0.4**
baz=88,SNR=7.1
DLMT Dillon 87.61 41 *e*P **P 15 47 12.2 +0.9**
comp=Z,24nm,1.4s,mb5.2
ANMO Albuquerque 87.71 53 *e*P **P 15 47 12.2 +0.3**
comp=Z,6.6nm,1.3s,mb4.7
ANMO LR LR
comp=Z,307nm,21.0s,MS4.7
ANMO Albuquerque 87.71 53 *e*P **P 15 47 12.3 +0.3**
ANMO pmax pmax
comp=Z,7.0nm,1.3s
ANMO MLR MLR
comp=Z,307nm,21.0s
D14A Greenough 87.81 39 ⇓P **P 15 47 11.4 -0.8**
baz=88
CHMT Chamberlain Mo 87.89 40 *e*P **P 15 47 12.5 -0.1**
LRM Limekiln Ridge 87.91 41 *e*P **P 15 47 11.3 -1.4**
TXAR Lajitas Array 87.93 59 P **P 15 47 13.2 0.0**
TXAR LR LR 16 20 55.9
TXAR Lajitas Array 87.93 59 P **P 15 47 13.2 0.0**
comp=Z,0.7nm,0.8s,mb4.0,baz=224,slow=5.7,SNR=7.7
TXAR LR LR 16 20 55.9
comp=Z,323nm,18.7s,MS4.8,baz=115,slow=32
E15A Deer Lodge 88.05 40 ⇑P **P 15 47 13.6 +0.3**
baz=88
426A McDonald Obser 88.09 57 ⇓P **P 15 47 13.9 -0.1**
baz=88
A13A Flathead Natio 88.12 38 ⇓P **P 15 47 14.0 +0.4**
baz=88
K18A Toltan Ranch, 88.12 45 ⇑P **P 15 47 13.6 -0.2**
baz=88
Y24A Capitan 88.12 54 ⇑P **P 15 47 13.3 -0.7**
baz=88
H16A Russell Place, 88.19 42 ⇓P **P 15 47 15.2 +1.2**
baz=88,SNR=6.1
627A Terlingua Ranc 88.20 59 ⇑P **P 15 47 14.3 -0.2**
baz=88
V23A Ortiz Mt. (NFS 88.21 52 ⇑P **P 15 47 14.4 +0.1**
baz=88
FLWY Flagg Ranch 88.28 43 *e*P **P 15 47 15.4 +0.9**
YFT Old Faithful 88.35 43 P **P 15 47 15.0 +0.2**
GDL2 Guadalupe Moun 88.35 56 *e*P **P 15 47 16.0 +0.9**
comp=Z,4.4nm,1.0s,mb4.6
S22A 4UR Ranch, Cre 88.47 50 ⇓P **P 15 47 15.7 +0.1**
baz=89
WALA Waterton Lakes 88.47 38 *e*P **P 15 47 15.0 -0.3**
comp=Z,0.2nm,0.9s
BW06 Boulder Array 88.50 45 PFAKE 15 47 30.0 +14
BW06 LR LR
comp=Z,221nm,19.0s,MS4.6
W24A Lazy 6 Ranch, 88.61 53 ⇓P **P 15 47 16.6 +0.3**
baz=89
427A Hayter Ranch, 88.66 57 ⇓P **P 15 47 16.3 -0.4**
baz=89
C15A Salmond Ranch, 88.67 39 ⇑P **P 15 47 16.6 +0.4**
baz=89
LKWY Lake 88.68 43 PFAKE 15 47 30.0 +14
LKWY LR LR
comp=Z,591nm,20.0s,MS5.0
A14A Double T Ranch 88.72 38 ⇑P **P 15 47 16.8 +0.3**
baz=89
B15A Bradely Ranch, 88.93 39 ⇓P **P 15 47 16.9 -0.5**
baz=89
D16A Dana Ranch, Ca 88.99 40 ⇑P **P 15 47 18.2 +0.5**
baz=89
Z26A Caprock 89.03 55 ⇓P **P 15 47 17.9 -0.4**
baz=89
A15A Johnson Ranch, 89.13 38 ⇓P **P 15 47 18.2 -0.1**
baz=89

W25A X Bar L Ranch, 89.33 53 ⇓P **P 15 47 19.1 -0.5**
baz=90
SDCO Great Sand Dun 89.45 50 PFAKE 15 47 30.0 +10
SDCO LR LR
comp=Z,218nm,20.0s,MS4.6
RLMT Red Lodge 89.64 42 PFAKE 15 47 30.0 +9.1
RLMT LR LR
comp=Z,402nm,21.0s,MS4.8
A16A West Butte Ran 89.79 38 ⇓P **P 15 47 21.1 -0.4**
baz=90
ULN Ulaanbaatar 89.94 320 PFAKE 15 47 30.0 +7.8
ULN LR LR
comp=Z,230nm,20.0s,MS4.6
ISCO Idaho Springs 90.11 48 PFAKE 15 47 30.0 +6.8
ISCO LR LR
comp=Z,183nm,19.0s,MS4.5
A17A Triple J Farms 90.32 39 ⇑P **P 15 47 22.3 -1.6**
baz=90
SONM Songino Array 90.33 320 P **P 15 47 24.1 +0.1**
comp=Z,0.9nm,0.8s,mb4.2,baz=164,slow=5.9,SNR=4.9
SONM LR LR 16 27 00.9
comp=Z,263nm,19.7s,MS4.7,baz=92,slow=35
EGMT Eagleton 90.51 40 PFAKE 15 47 40.0 +15
EGMT LR LR
comp=Z,308nm,21.0s,MS4.7
EDM Edmonton 90.68 34 *e*P **P 15 47 25.6 +0.1**
EDM *e* 15 47 30.8
AMTX Amarillo 91.37 54 PFAKE 15 47 40.0 +11
AMTX LR LR
comp=Z,332nm,22.0s,MS4.7
JCT Junction City 91.47 59 PFAKE 15 47 40.0 +10
JCT LR LR
comp=Z,356nm,22.0s,MS4.8
GTA Gaotai 91.61 311 *e*P **P 15 47 31.9 +1.7**
GTA pP pP 15 47 42.2 +0.9
GTA sP sP 15 47 46.0 +0.7
GTA SKS 15 58 00.2
GTA S S 15 58 31.7 +3.7
GTA SS SS 16 04 38.0 +2.3
GTA pmax pmax
comp=Z,5.0nm,1.9s,mb4.5
GTA pmax pmax
comp=Z,120nm,6.2s
GTA LR LR
comp=N,150nm,18.1s,MS4.7
GTA LR LR
comp=E,260nm,21.4s,MS4.7
GTA LR LR
comp=Z,390nm,19.9s,MS4.8
KVTX Kingsville 92.18 62 PFAKE 15 47 40.0 +6.9
KVTX LR LR
comp=Z,260nm,19.0s,MS4.7
LAO LASA Array 92.21 42 PFAKE 15 47 40.0 +7.2
LAO LR LR
comp=Z,555nm,21.0s,MS5.0
OGNE Ogallala 93.07 48 *e*P **P 15 47 37.1 +0.2**
comp=Z,34nm,0.8s,mb5.8
OGNE LR LR
comp=Z,313nm,21.0s,MS4.7
TLY Talaya 93.48 323 PFAKE 15 47 50.0 +11
TLY LR LR
comp=Z,253nm,20.0s,MS4.7
TIXI Tiksi 93.91 346 PFAKE 15 47 50.0 +10
TIXI LR LR
comp=Z,211nm,21.0s,MS4.6
CBKS Cedar Bluff 94.08 51 PFAKE 15 47 50.0 +8.4
CBKS LR LR
comp=Z,193nm,21.0s,MS4.5
YKA Yellowknife Ar 94.33 25 P **P 15 47 42.3 +0.2**
comp=Z,1.5nm,0.8s,mb4.5,baz=245,slow=3.8,SNR=4.4
HKT Hockley 94.60 60 PFAKE 15 48 00.0 +16
HKT LR LR
comp=Z,303nm,19.0s,MS4.8
PLCA Paso Flores 94.68 135 PFAKE 15 48 00.0 +16
PLCA LR LR
comp=Z,471nm,20.0s,MS5.0
PLCA Paso Flores 94.68 135 LR LR 16 21 03.7
comp=Z,296nm,20.6s,MS4.7,baz=71,slow=30
LSA Lhasa 95.50 299 PFAKE 15 48 00.0 +12
LSA LR LR
comp=Z,260nm,22.0s,MS4.7
NATX Nacogdoches 96.06 59 PFAKE 15 48 00.0 +9.1
NATX LR LR
comp=Z,300nm,19.0s,MS4.8
KSU1 Kansas State U 96.50 51 PFAKE 15 48 00.0 +7.4
KSU1 LR LR
comp=Z,275nm,19.0s,MS4.8
FFC Flin Flon 97.46 35 PFAKE 15 48 10.0 +13
FFC LR LR
comp=Z,421nm,19.0s,MS5.0
MIAR Mount Ida 97.66 56 PFAKE 15 48 10.0 +12
MIAR LR LR
comp=Z,323nm,22.0s,MS4.8
ECSD EROS Data Cent 97.73 47 PFAKE 15 48 10.0 +12
ECSD LR LR
comp=Z,373nm,20.0s,MS4.9
TGUH Tegucigalpa,Un 98.09 78 PFAKE 15 48 10.0 +10
TGUH LR LR
comp=Z,169nm,21.0s,MS4.5
TEIG Tepich 98.70 71 PFAKE 15 48 10.0 +7.0
TEIG LR LR
comp=Z,204nm,21.0s,MS4.6
JTS JuntasAbangare 99.31 82 PFAKE 15 48 20.0 +14
JTS LR LR
comp=Z,296nm,22.0s,MS4.7
AGMN Agassiz Nation 99.38 42 PFAKE 15 48 20.0 +15
AGMN LR LR
comp=Z,651nm,22.0s,MS5.1
VBMS Vicksburg 99.59 59 PFAKE 15 48 20.0 +14
VBMS LR LR
comp=Z,305nm,22.0s,MS4.8
LCO Las Campanas 99.60 124 PFAKE 15 48 20.0 +14
LCO LR LR
comp=Z,609nm,22.0s,MS5.1
SCIA State Center 99.70 49 PFAKE 15 48 20.0 +13
SCIA LR LR
comp=Z,395nm,20.0s,MS4.9
ULM Lac du Bonnet 99.84 41 PFAKE 15 48 20.0 +13
ULM LR LR
comp=Z,469nm,22.0s,MS5.0
ULM Lac du Bonnet 99.84 41 LR LR 16 27 02.6
comp=Z,301nm,21.1s,MS4.8,baz=45,slow=32
CCM Cathedral Cave 100.32 53 PFAKE 15 48 20.0 +10
CCM LR LR
comp=Z,299nm,22.0s,MS4.8
WMQ Urumqi 101.54 312 P Pdif 15 48 15.4 +0.4
WMQ pP 15 48 26.0
WMQ sP 15 48 29.9
WMQ PP PP 15 52 27.8 +2.2
WMQ SKS 15 58 50.7
WMQ S Sdif 15 59 49.2 -3.9
WMQ SS SS 16 06 54.6 -1.3
WMQ pmax pmax
comp=Z,15nm,1.0s
WMQ pmax pmax
comp=Z,160nm,4.4s
WMQ LR LR
comp=N,380nm,30.0s
WMQ LR LR
comp=E,310nm,23.2s
WMQ LR LR
comp=Z,370nm,24.0s
JFWS Jewell Farm 102.06 49 PFAKE 15 48 30.0 +13
JFWS LR LR
comp=Z,243nm,20.0s,MS4.7
EYMN Ely 102.17 43 PFAKE 15 48 30.0 +12
EYMN LR LR
comp=Z,309nm,20.0s,MS4.8
BRAL Brewton 102.21 61 PFAKE 15 48 30.0 +12
BRAL LR LR
comp=Z,187nm,20.0s,MS4.6
HDIL Hopedale 102.31 51 PFAKE 15 48 30.0 +12
HDIL LR LR
comp=Z,221nm,21.0s,MS4.7
LRAL Lakeview Retre 102.66 59 PFAKE 15 48 30.0 +10
LRAL LR LR
comp=Z,186nm,21.0s,MS4.6
OTAV Otavalo 102.84 94 PFAKE 15 48 30.0 +9.2
OTAV LR LR
comp=Z,175nm,20.0s,MS4.6
COWI Conover 103.42 46 PFAKE 15 48 30.0 +6.7
COWI LR LR
comp=Z,228nm,20.0s,MS4.7
BCIP Isla Barro Col 103.90 84 PFAKE 15 48 40.0 +15
BCIP LR LR
comp=Z,181nm,21.0s,MS4.6
WCI Wyandotte Cave 104.18 54 PFAKE 15 48 40.0 +13
WCI LR LR
comp=Z,257nm,19.0s,MS4.8
GOGA Godfrey 105.64 59 PFAKE 15 53 00.0 +13
GOGA LR LR
comp=Z,255nm,20.0s,MS4.8
GLMI Grayling 106.39 47 PFAKE 15 53 00.0 +12
GLMI LR LR
comp=Z,411nm,22.0s,MS4.9
DWPF Disney 106.47 65 PFAKE 15 53 00.0 +12
DWPF LR LR
comp=Z,102nm,20.0s,MS4.4
AAM Ann Arbor 106.77 50 PFAKE 15 53 00.0 +11
AAM LR LR
comp=Z,266nm,21.0s,MS4.8
LPAZ La Paz 106.94 113 PFAKE 15 53 00.0 +10
LPAZ LR LR
comp=Z,742nm,19.0s,MS5.3
ACSO Alum Creek Sta 107.02 52 PFAKE 15 53 00.0 +11
ACSO LR LR
comp=Z,340nm,21.0s,MS4.9
MTDJ Mount Denham 108.15 76 PFAKE 15 53 00.0 +8.2
MTDJ LR LR
comp=Z,123nm,19.0s,MS4.5
NHSC New Hope 108.32 60 PFAKE 15 53 00.0 +8.3
NHSC LR LR
comp=Z,237nm,20.0s,MS4.8
KURK Kurchatov 108.57 319 PFAKE 15 53 00.0 +8.4
KURK LR LR
comp=Z,300nm,19.0s,MS4.9
BLA Blacksburg 108.64 56 PFAKE 15 53 00.0 +7.8
BLA LR LR
comp=Z,284nm,22.0s,MS4.8
MCWV Mont Chateau 109.35 53 PFAKE 15 53 10.0 +17
MCWV LR LR
comp=Z,478nm,20.0s,MS5.1
ERPA Erie 109.46 51 PFAKE 15 53 10.0 +16
ERPA LR LR
comp=Z,254nm,20.0s,MS4.8
CNNC Cliffs of the 110.46 58 PFAKE 15 53 10.0 +14
CNNC LR LR
comp=Z,627nm,20.0s,MS5.2
UCH Uchtor 110.91 309 PFAKE 15 53 10.0 +14
UCH LR LR
comp=Z,144nm,21.0s,MS4.5
AAK Ala-Archa 110.95 310 PFAKE 15 53 10.0 +14
AAK LR LR
comp=Z,266nm,20.0s,MS4.8
CBN Corbin 111.15 55 PFAKE 15 53 10.0 +13
CBN LR LR
comp=Z,316nm,20.0s,MS4.9
NIL Nilore 111.21 300 PFAKE 15 53 10.0 +13
NIL LR LR
comp=Z,102nm,21.0s,MS4.4
EKS2 Erkin-Say 111.48 310 PFAKE 15 53 10.0 +13
EKS2 LR LR
comp=Z,292nm,21.0s,MS4.8
AML Almayashu 111.52 309 PFAKE 15 53 10.0 +13
AML LR LR
comp=Z,257nm,22.0s,MS4.8
BINY Binghamton 112.44 51 PFAKE 15 53 10.0 +11
BINY LR LR
comp=Z,328nm,19.0s,MS4.9
SDV Santo Domingo 112.64 87 PFAKE 15 53 10.0 +10
SDV LR LR
comp=Z,94nm,19.0s,MS4.4
LONY Lake Ozonia 113.51 48 PFAKE 15 53 10.0 +8.8
LONY LR LR
comp=Z,373nm,22.0s,MS4.9
BRVK Borovoye 113.72 321 PFAKE 15 53 10.0 +8.7
BRVK LR LR
comp=Z,247nm,20.0s,MS4.8
SDDR Presa de Saban 114.11 76 PFAKE 15 53 20.0 +17
SDDR LR LR
comp=Z,149nm,20.0s,MS4.6
LBNH Lisbon 115.42 48 PFAKE 15 53 20.0 +15
LBNH LR LR
comp=Z,328nm,20.0s,MS4.9
KBS Kingsbay 117.10 357 PFAKE 15 53 20.0 +13
KBS LR LR
comp=Z,195nm,22.0s,MS4.7
PKME Peaks-Kenny Pk 117.24 47 PFAKE 15 53 20.0 +12
PKME LR LR
comp=Z,319nm,21.0s,MS4.9
SCHQ Schefferville 117.58 36 PFAKE 15 53 20.0 +11
SCHQ LR LR
comp=Z,449nm,21.0s,MS5.1
SJG San Juan 118.77 78 PFAKE 15 53 20.0 +8.0
SJG LR LR
comp=Z,189nm,22.0s,MS4.7
MSEY Mahe Island 119.66 255 PFAKE 15 53 30.0 +16
MSEY LR LR
comp=Z,513nm,21.0s,MS5.1
ARU Arti 119.82 326 PFAKE 15 53 20.0 +7.1
ARU LR LR
comp=Z,248nm,19.0s,MS4.9
SPB Sao Paulo 120.25 131 PFAKE 15 53 30.0 +15
SPB LR LR
comp=Z,519nm,19.0s,MS5.2
ABPO Ambohimpanom 120.33 236 PFAKE 15 53 30.0 +15
ABPO LR LR
comp=Z,725nm,22.0s,MS5.3
BBSR BB Station 121.27 62 PFAKE 15 53 30.0 +14
BBSR LR LR
comp=Z,283nm,20.0s,MS4.9
GRGR Grenville 121.97 86 PFAKE 15 53 30.0 +12
GRGR LR LR
comp=Z,206nm,22.0s,MS4.7
ANWB Willy Bob 122.81 79 PFAKE 15 53 30.0 +10
ANWB LR LR
comp=Z,126nm,20.0s,MS4.6
KEV Kevo 123.77 348 PFAKE 15 53 30.0 +10
KEV LR LR
comp=Z,274nm,19.0s,MS4.9
ARCES ARCESS Array B 124.24 349 PKP PKPdf 15 53 20.8 -0.3
comp=Z,4.4nm,1.0s,baz=35,slow=3.3,SNR=4.1
LBTB Lobatse 130.95 214 PFAKE 15 53 50.0 +15
LBTB LR LR
comp=Z,312nm,19.0s,MS5.0
OBN Obninsk 131.47 332 PFAKE 15 53 50.0 +15
OBN LR LR
comp=Z,264nm,21.0s,MS4.9
GNI Garni 133.36 310 PFAKE 15 53 50.0 +11
GNI LR LR
comp=Z,178nm,20.0s,MS4.8
KIV Kislovodsk 133.54 316 PFAKE 15 53 50.0 +10
KIV LR LR
comp=Z,194nm,19.0s,MS4.8
KONO Kongsberg 136.02 352 PFAKE 15 54 00.0 +16
KONO LR LR
comp=Z,197nm,19.0s,MS4.9
ANN Anapa 136.60 319 *i* PKIKP PKPdf 15 53 49.0 +3.8
ANN pmax pmax
comp=Z,128nm,1.3s
LSZ Lusaka 136.82 225 PFAKE 15 54 00.0 +14
LSZ LR LR
comp=Z,526nm,20.0s,MS5.3
AKASG Malin Array Be 137.71 331 PKP PKPdf 15 53 47.1 0.0
comp=Z,0.3nm,0.4s,baz=15,slow=1.1,SNR=3.5
KIEV Kiev 137.72 331 PFAKE 15 54 00.0 +13
KIEV LR LR
comp=Z,263nm,21.0s,MS5.0
KMBO Kilima Mbogo 137.74 249 PFAKE 15 54 00.0 +12
KMBO LR LR
comp=Z,323nm,22.0s,MS5.0
RCBR Riachuelo 139.65 120 PFAKE 15 54 00.0 +8.2
RCBR LR LR
comp=Z,323nm,20.0s,MS5.1
TSUM Tsumeb 139.83 209 PFAKE 15 54 00.0 +8.1
TSUM LR LR
comp=Z,402nm,21.0s,MS5.1
ESK Eskdalemuir 141.14 1 PFAKE 15 54 00.0 +6.8
ESK LR LR
comp=Z,203nm,22.0s,MS4.8
BR131 Keskin Array S 141.44 314 PFAKE 15 54 10.0 +16
BR131 LR LR
comp=Z,168nm,20.0s,MS4.8
BRTR Keskin Array B 141.44 314 PKP PKPdf 15 53 55.2 +1.0
comp=Z,0.5nm,0.7s,baz=56,slow=3.6,SNR=3.1
OKC Ostrava-Krasne 142.95 339 AMS AMS 16 55 50.0
comp=Z,200nm,22.4s
UPC Upice 143.09 341 *ep*PKP pPKPdf 15 54 04.2 -4.1
DPC Dobruska-Polom 143.12 341 *ep*PKP pPKPdf 15 54 07.6 -0.7
DPC AMS AMS 16 52 20.0

	comp=Z,200nm,23.7s						
CLL	**Collm**	**143.22**	**344**	*e*PKIKP	PKPdf	15 53 55.0	-2.0
CLL	**Collm**	**143.22**	**344**	*e*(PKPdf)	PKPdf	15 53 55.0	-2.0
CLL				*e*PP	PP	15 57 05.0	-2.0
CLL				*e*		15 58 44.0	
CLL				*e*SS	SS	16 15 52.0	+8.3
CLL				*e*SSS		16 21 09.0	
BRG	**Berggiesshubel**	**143.37**	**343**	*e*PKP	PKPdf	15 54 04.3	+7.0
	comp=Z,10nm,1.5s						
BRG				*e*		16 15 55.0	
BRG				*e*		16 21 08.0	
BRG							
	comp=N,212nm,31.5s						
BRG							
	comp=E,125nm,23.4s						
BRG							
	comp=Z,209nm,22.7s						
BRG	**Berggiesshubel**	**143.37**	**343**	*e*PKIKP	PKPdf	15 54 04.3	+7.0
BRG				*e*		16 21 08.0	
BRG				pmax	pmax		
	comp=Z,10.0nm,1.5s						
BRG				MLR	MLR		
	comp=N,6μm,21.5s						
BRG				MLR	MLR		
	comp=E,127nm,23.4s						
BRG				MLR	MLR		
	comp=Z,75nm,22.7s,MS4.4						
CSS	**Prodhromos**	**143.62**	**307**	PFAKE		15 54 10.0	+12
CSS				LR	LR		
	comp=Z,219nm,21.0s,MS4.9						
MBAR	**Mbarara**	**143.76**	**245**	PFAKE		15 54 10.0	+11
MBAR				LR	LR		
	comp=Z,722nm,22.0s,MS5.4						
VYHS	**Vyhne**	**143.82**	**337**	*e*PKP	PKPdf	15 53 58.1	0.0
VYHS				*e*		15 54 30.7	
VYHS	**Vyhne**	**143.82**	**337**	*e*PKP	PKPdf	15 53 58.1	0.0
VYHS				*e*		15 54 30.7	
PSZ	**Piszkesteto**	**143.87**	**335**	PFAKE		15 54 10.0	+12
PSZ				LR	LR		
	comp=Z,235nm,22.0s,MS4.9						
PRU	**Pruhonice**	**143.99**	**342**	*e*PKIKP	PKPdf	15 53 59.9	+1.5
PRU				MLR	MLR		
	comp=Z,200nm,23.9s,MS4.8						
PRU	**Pruhonice**	**143.99**	**342**	*e*PKP	PKPdf	15 53 59.9	+1.5
PRU				AMS	AMS	16 52 30.0	
	comp=Z,200nm,23.9s						
NKC	**Novy Kostel**	**144.35**	**344**	*ep*PKP	pPKPdf	15 54 08.1	-2.4
NKC				AMS	AMS	16 50 50.0	
	comp=Z,300nm,27.3s						
ISP	**Isparta**	**144.48**	**313**	PFAKE		15 54 10.0	+10
ISP				LR	LR		
	comp=Z,242nm,21.0s,MS5.0						
KHC	**Kasperske Hory**	**145.04**	**342**	*e*PKIKP	PKPdf	15 53 59.7	-0.5
KHC				MLR	MLR		
	comp=Z,300nm,29.0s,MS4.9						
KHC	**Kasperske Hory**	**145.04**	**342**	*e*PKP	PKPdf	15 53 59.7	-0.5
KHC				AMS	AMS	16 52 40.0	
	comp=Z,300nm,29.0s						
GRA1	**Grafenberg Arr**	**145.16**	**345**	*e*PKPbc	PKPbc	15 53 58.2	-1.8
GRF	**Grafenberg Arr**	**145.16**	**345**	*e*PKPbc	PKPbc	15 53 58.2	-1.8
WET	**Wettzell**	**145.23**	**343**	*e*PKPbc	PKPbc	15 53 58.5	-1.7
GEC2	**GERESS Array S**	**145.26**	**342**	*e*PKPbc	PKPbc	15 53 58.1	-2.3
MEM	**Membach**	**145.30**	**351**	PKP	PKPdf	15 54 00.8	+0.1
GIVF	**Givet**	**145.96**	**352**	*e*PKP1	PKPbc	15 54 02.2	-0.3
DOU	**Dourbes**	**146.00**	**353**	PKP	PKPdf	15 54 01.3	-0.6
BAIF	**Baives**	**146.08**	**353**	*e*PKP1	PKPbc	15 54 02.8	-0.1
	comp=Z,71nm,1.5s						
WLF	**Walferdange**	**146.20**	**351**	PKP	PKPdf	15 54 03.7	+1.5
WLF	**Walferdange**	**146.20**	**351**	*e*PKIKP	PKPdf	15 54 00.4	-1.8
WLF				MLR	MLR		
	comp=Z,229nm,21.0s,MS4.9						
STU	**Stuttgart**	**146.49**	**347**	*e*PKPbc	PKPbc	15 54 02.2	-1.9
FUR	**Furstenfeldbru**	**146.56**	**344**	*e*PKPbc	PKPbc	15 54 02.5	-1.8
FUR	**Furstenfeldbru**	**146.56**	**344**	*e*PKP2	PKPab	15 54 02.4	-3.0
PERS	**Pernice**	**146.74**	**339**	*i* PKPdf	PKPdf	15 54 04.8	+1.6
PERS				*e*PKPbc	PKPbc	15 54 12.5	+7.6
BFO	**Black Forest**	**147.09**	**348**	*e*PKPbc	PKPbc	15 54 03.8	-2.1
CDF	**Champ du Feu**	**147.22**	**349**	*e*PKP1	PKPbc	15 54 06.3	+0.1
	comp=Z,47nm,1.4s						
CRES	**Cresnjev**	**147.31**	**337**	*i* PKPbc	PKPbc	15 54 12.7	+6.2
CRES				*i*		15 54 21.6	
ECH	**Echery**	**147.43**	**349**	PFAKE		15 54 20.0	+16
ECH				LR	LR		
	comp=Z,193nm,21.0s,MS4.9						
MEZF	**Maizieres J'vi**	**147.50**	**352**	*e*PKP1	PKPbc	15 54 07.1	+0.1
VISS	**Visnje**	**147.56**	**338**	*i* PKPdf	PKPdf	15 54 05.2	+0.6
VISS				*i* PKPbc	PKPbc	15 54 13.0	+5.8
HAU	**Haudompre**	**147.78**	**350**	*e*PKP1	PKPbc	15 54 07.7	-0.1
HAU				*e*MLR	MLR		
	comp=Z,277nm,21.2s,MS4.7						
HAU	**Haudompre**	**147.78**	**350**	*e*PKP2	PKPab	15 54 07.7	-2.5
HAU				MLR	MLR		
	comp=Z,280nm,21.3s,MS5.0						
HINF	**Hinteralfeld**	**147.87**	**349**	*e*PKP1	PKPbc	15 54 07.7	-0.3
	comp=Z,18nm,1.3s						
TRI	**Trieste**	**148.01**	**339**	PFAKE		15 54 20.0	+15
TRI				LR	LR		
	comp=Z,172nm,20.0s,MS4.8						
ROSF	**Rostrenen**	**148.12**	**2**	*e*PKP1	PKPbc	15 54 08.2	-0.5
TUE	**Stuetta**	**148.62**	**345**	*e*PKPbc	PKPbc	15 54 10.5	+0.5
TUE				LR	LR		
	comp=Z,249nm,20.0s,MS5.0						
LOR	**Lormes**	**148.87**	**353**	*e*PKP1	PKPbc	15 54 10.7	0.0
	comp=Z,40nm,1.3s						
LOR				*e*MLR	MLR		
	comp=Z,276nm,20.2s,MS4.7						
LOR	**Lormes**	**148.87**	**353**	*e*PKP2	PKPab	15 54 10.7	-3.8
LOR				MLR	MLR		
	comp=Z,280nm,20.3s,MS5.0						
TIR	**Tirane**	**148.92**	**327**	PFAKE		15 54 20.0	+13
TIR				LR	LR		
	comp=Z,318nm,20.0s,MS5.1						
SSF	**Saint Saulge**	**149.11**	**353**	*e*PKP1	PKPbc	15 54 11.4	+0.1
	comp=Z,60nm,1.3s						
CABF	**La Chapelle**	**149.17**	**349**	*e*PKP1	PKPbc	15 54 12.1	+0.7
	comp=Z,75nm,1.4s						
AVF	**Avril sur Loir**	**149.40**	**353**	*e*PKP1	PKPbc	15 54 11.8	-0.2
	comp=Z,32nm,1.4s						
SMF	**Signal de Mont**	**149.48**	**352**	*e*PKP1	PKPbc	15 54 12.1	-0.1
BGF	**Bois d'Agland**	**149.68**	**354**	*e*PKP1	PKPbc	15 54 12.7	0.0
TCF	**Toulx Ste Croi**	**150.01**	**354**	*e*PKP1	PKPbc	15 54 13.4	-0.1
	comp=Z,46nm,1.4s						
LPL	**La Plagne**	**150.11**	**348**	*e*PKP1	PKPbc	15 54 14.5	+0.7
LPG	**La Plagne**	**150.12**	**348**	*e*PKP1	PKPbc	15 54 14.6	+0.8
	comp=Z,46nm,1.3s						
VLC	**Villacollemand**	**150.47**	**342**	PFAKE		15 54 20.0	+11
VLC				LR	LR		
	comp=Z,170nm,20.0s,MS4.8						
SSB	**Saint Sauveur**	**150.72**	**351**	*e*PKPbc	PKPbc	15 54 15.3	+0.1
SSB				LR	LR		
	comp=Z,222nm,22.0s,MS4.9						
ORIF	**Oris-en-Rattie**	**150.85**	**349**	*e*PKP1	PKPbc	15 54 15.8	+0.2
	comp=Z,14nm,0.9s						
ORIF				*e*MLR	MLR		
	comp=Z,228nm,21.0s,MS4.7						
MBDF	**Montbardon**	**150.85**	**347**	*e*PKP1	PKPbc	15 54 15.9	+0.3
	comp=Z,38nm,1.1s						
AQU	**L'Aquila**	**151.05**	**336**	PFAKE		15 54 20.0	+10
AQU				LR	LR		
	comp=Z,268nm,21.0s,MS5.0						
RJF	**Les Rejaudoux**	**151.05**	**355**	*e*PKP1	PKPbc	15 54 15.9	-0.1
	comp=Z,7.2nm,0.8s						
RJF				*e*MLR	MLR		
	comp=Z,267nm,19.8s,MS4.8						
RJF	**Les Rejaudoux**	**151.05**	**355**	*e*PKIKP	PKPdf	15 54 15.9	+5.7
RJF				MLR	MLR		
	comp=Z,270nm,19.8s,MS5.0						
CAF	**Calviac**	**151.38**	**354**	*e*PKP1	PKPbc	15 54 16.9	+0.1
	comp=Z,3.2nm,0.7s						
SMRF	**Simiane la Rot**	**151.81**	**349**	*e*PKP1	PKPbc	15 54 18.2	+0.4
	comp=Z,54nm,1.4s						
CUC	**Castrocucco**	**151.95**	**330**	PFAKE		15 54 20.0	+8.2
CUC				LR	LR		
	comp=Z,133nm,20.0s,MS4.7						
TIP	**Timpagrande**	**152.12**	**328**	*e*PKPdf	PKPdf	15 54 13.1	+1.0
TIP				LR	LR		
	comp=Z,250nm,22.0s,MS5.0						
CEL	**Celeste**	**153.25**	**328**	PFAKE		15 54 20.0	+6.3
CEL				LR	LR		
	comp=Z,268nm,22.0s,MS5.0						
VSL	**Villasalto**	**155.01**	**339**	PFAKE		15 54 30.0	+14
VSL				LR	LR		
	comp=Z,172nm,21.0s,MS4.8						
MTE	**Manteigas**	**155.56**	**11**	PFAKE		15 54 30.0	+13
MTE				LR	LR		
	comp=Z,410nm,19.0s,MS5.3						
WDD	**Wield Dalam**	**155.78**	**326**	PFAKE		15 54 30.0	+13
WDD				LR	LR		
	comp=Z,208nm,20.0s,MS5.0						
ESDC	**Sonseca Array**	**156.73**	**4**	PKPab	PKPab	15 54 45.8	-2.0
	comp=Z,1.0nm,0.7s,baz=333,slow=3.3,SNR=4.5						
ESLA	**Sonseca Array**	**156.73**	**4**	PFAKE		15 54 30.0	+12
ESLA				LR	LR		
	comp=Z,2μm,19.0s,MS5.9						
PAB	**San Pablo**	**156.83**	**5**	PFAKE		15 54 30.0	+11
PAB				LR	LR		
	comp=Z,340nm,20.0s,MS5.2						
DBIC	**Dimbokro**	**169.87**	**162**	PFAKE		15 54 40.0	+8.4
DBIC				LR	LR		
	comp=Z,367nm,22.0s						
TAM	**Tamanrasset**	**170.64**	**314**	PFAKE		15 54 40.0	+8.2
TAM				LR	LR		
	comp=Z,329nm,21.0s						
TORD	**Torodi Ar. Bea**	**175.35**	**226**	PKP	PKPdf	15 54 33.3	-0.6
	comp=Z,1.1nm,1.1s,baz=221,slow=0.3,SNR=3.6						
TORD				PKPab	PKPab	15 56 09.9	-0.4
	comp=Z,3.2nm,1.3s,baz=125,slow=4.5,SNR=3.0						

MEX 02 15:38:34.5±1.3, 16.07N×98.25W, h20km±180km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.34**	**20**	*i* P		Pb	15 38 39.9	-2.0
PNIG				*i* S		Sb	15 38 46.4	-0.6
ACX	**Acapulco**	**1.74**	**298**	*e*P		Pn	15 39 02.4	-1.2
ACX				*i* S		Sn	15 39 21.8	-3.3
VHO	**Vista Hermosa**	**1.77**	**55**	*i* P		Pn	15 39 02.1	-1.8
VHO				*i* S		Sn	15 39 22.6	-3.3
HUIG	**Huatulco**	**2.08**	**98**	*e*P		Pn	15 39 06.4	-1.9
HUIG				*i* S		Sn	15 39 30.0	-3.6
CAIG	**El Cayaco**	**2.17**	**297**	*i* P		Pn	15 39 07.8	-1.7
CAIG				*i* S		Sn	15 39 30.3	-5.5
MZVM		**3.24**	**343**	*e*P		Pn	15 39 25.0	+0.8
MZVM				*i* S		Sn	15 40 02.7	+0.4
IIO	**Organos**	**3.53**	**353**	*e*P		Pn	15 39 28.6	+0.3
IIO				*i* S		Sn	15 40 11.1	+1.6

*NEIC **02** 15:43:09.9, 31.97S×71.24W, h45km, MD3.8(GUC), After GUC.*

GUC 02 15:43:09.9±0.7, 31.97S×71.24W, h45km±7km, MD3.8, ML3.2, 10C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.89**	**143**	↑*i* P		Pn	15 43 27.0	+0.9
JACH				*i* S		Sn	15 43 40.1	+2.2
JACH	**Jahuel**	**0.89**	**143**	↑*i* P		Pn	15 43 27.0	+0.9
JACH				*i* S		Sn	15 43 40.1	+2.2
ROCH	**El Roble**	**1.02**	**169**	↑*i* P		Pn	15 43 28.8	+1.1
ROCH				*i* S		Sn	15 43 43.3	+2.4
ROCH	**El Roble**	**1.02**	**169**	↑*i* P		Pn	15 43 28.8	+1.1
ROCH				↑*i* P			15 43 28.9	
ROCH				*i* S		Sn	15 43 43.3	+2.4
ROCH				*i* S		Sn	15 43 43.7	+2.8
ROCH				AML		AML	15 43 45.0	
	comp=N,930nm,0.3s							
PEL	**Peldehue**	**1.26**	**158**	↑*i* P		Pn	15 43 32.0	+1.0
PEL				*i* S		Sn	15 43 48.4	+1.6
PEL				AML		AML	15 43 49.5	
	comp=E,952nm,0.5s							
OVCH	**Ovalle**	**1.36**	**1**	↓*i* P		Pn	15 43 33.6	+1.2
OVCH				*i* S		Sn	15 43 50.8	+1.6
OVCH	**Ovalle**	**1.36**	**1**	↓*i* P		Pn	15 43 33.6	+1.2
OVCH				*i* S		Sn	15 43 50.8	+1.6
OVCH				AML		AML	15 43 52.4	
	comp=N,1μm,0.4s							
LCCH	**Las Cruces**	**1.53**	**191**	*e*P		Pn	15 43 35.6	+0.9
LCCH	**Las Cruces**	**1.53**	**191**	*e*P		Pn	15 43 35.6	+0.9
CLCH	**Cerro Calan**	**1.54**	**158**	↓*i* P		Pn	15 43 35.9	+1.0
CLCH				*i* S		Sn	15 43 55.6	+1.9
CLCH				AML		AML	15 43 57.6	
	comp=N,346nm,0.7s							
FCH	**Farellones**	**1.57**	**150**	↑*i* P		Pn	15 43 36.7	+1.4
FCH				*i* S		Sn	15 43 57.0	+2.6
FCH	**Farellones**	**1.57**	**150**	↑*i* P		Pn	15 43 36.7	+1.4
FCH				*i* S		Sn	15 43 57.0	+2.6
FCH				AML		AML	15 43 59.5	
	comp=E,179nm,0.2s							
ANTU	**Antumapu**	**1.67**	**163**	*e*P		Pn	15 43 37.3	+0.6
ANTU				*i* S		Sn	15 43 58.8	+1.9
ANTU	**Antumapu**	**1.67**	**163**	*e*P		Pn	15 43 37.3	+0.6
ANTU				*i* S		Sn	15 43 58.8	+1.9
ANTU				AML		AML	15 44 00.3	
	comp=E,359nm,0.2s							
TACH	**Talagante**	**1.70**	**172**	↑*i* P		Pn	15 43 38.1	+1.1
TACH				*i* S		Sn	15 43 59.0	+1.5
TACH	**Talagante**	**1.70**	**172**	↑*i* P		Pn	15 43 38.1	+1.1
TACH				*i* S		Sn	15 43 59.0	+1.5
PCH	**Pirque**	**1.75**	**160**	*e*P		Pn	15 43 38.4	+0.5
PCH				*i* S		Sn	15 44 00.9	+2.0
PCH	**Pirque**	**1.75**	**160**	*e*P		Pn	15 43 38.4	+0.5
PCH				*i* S		Sn	15 44 00.9	+2.0
TLL	**Tololo Astrono**	**1.84**	**12**	*e*P		Pn	15 43 40.2	+1.3
TLL				*i* S		Sn	15 44 03.1	+2.2
TLL	**Tololo Astrono**	**1.84**	**12**	*e*P		Pn	15 43 40.2	+1.3
TLL				*i* S		Sn	15 44 03.1	+2.2
TLL				AML		AML	15 44 04.1	
	comp=E,297nm,0.4s							
LNV	**Longovilo**	**1.98**	**184**	*e*P		Pn	15 43 41.3	+0.3
LNV				S		Sn	15 44 04.4	-0.3
LNV	**Longovilo**	**1.98**	**184**	*e*P		Pn	15 43 41.3	+0.3
LNV				*i* S		Sn	15 44 04.4	-0.3
CHCH	**Chadas Angostu**	**2.02**	**166**	*e*P		Pn	15 43 42.0	+0.5
CHCH	**Chadas Angostu**	**2.02**	**166**	*e*P		Pn	15 43 42.0	+0.5
LMEL	**Las Melosas**	**2.06**	**155**	↓*i* P		Pn	15 43 43.6	+1.5
LMEL				*i* S		Sn	15 44 09.9	+3.3
LMEL	**Las Melosas**	**2.06**	**155**	↓*i* P		Pn	15 43 43.6	+1.5
LMEL				*i* S		Sn	15 44 09.9	+3.3
LMEL				AML		AML	15 44 11.4	
	comp=N,310nm,0.2s							
LCO	**Las Campanas**	**2.99**	**9**	*e*P		Pn	15 43 54.6	-0.1
LCO				*i* S		Sn	15 44 28.9	-0.4
LCO	**Las Campanas**	**2.99**	**9**	*e*P		Pn	15 43 54.6	-0.1
LCO				*i* S		Sn	15 44 28.9	-0.4
LCO				AML		AML	15 44 31.9	
	comp=N,118nm,0.3s							
LCO				AML		AML	15 44 31.9	
	comp=N,124nm,0.3s							

*NIED **02** 15:50:00, 35.30N×141.20E, h23km, Mw4.2 Best double couple: M0 2.64000×10^15 NP1:φs 212.00000°, δ68.00000°, λ -54.00000°. NP2:φs 329.00000°, δ42.00000°, λ -145.00000°.*
*IDC **02** 15:50:30.6±1.0, 35.30N×141.01E, h0km, mb3.9/13, mb1 4.1/14, mb1mx3.9/25, mbtmp3.9/14, ML3.5/1, MS3.6/1, Ms1 3.6/1, ms1mx2.3/37, Error ellipse: s-maj=27.0km s-min=18.7km az=164.0*
*JMA **02** 15:50:32.7±0.1, 35.33N×141.18E, h37km±2km, M4.4*
JMA Felt I J1.
*BJI **02** 15:50:34.2, 35.31N×140.62E, h19km, mB4.6/3, mb4.3/6*
*ISCJB **02** 15:50:34.2±0.8, 35.31N±0.04×141.05E±0.07, h38km±6km, mb4.1/20, Error ellipse: s-maj=10.4km s-min=6.9km az=18.3*
*NEIC **02** 15:50:37.1±2.4, 35.33N×140.92E, h47km±17km, mb4.6/8, MW4.2(NIED), Error ellipse: s-maj=24.0km s-min=12.0km az=167.0*
NEIC Recorded [1 JMA] in Chiba.
ISC 02 15:50:34.6±0.8, 35.29N±0.04×141.03E±0.06, h28km±4km, n43, σ1 91/47, mb4.1/20, 5C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.43**	**341**	↓P		**Pb**	**15 50 42.7**	**-1.1**
CHOJ				S		**Sb**	**15 50 49.7**	**-0.5**
KTR	**Katsuura**	**0.60**	**256**	↑P		**Pb**	**15 50 46.7**	**+0.1**
KTR				S		**Sb**	**15 50 55.3**	**+0.5**
BSO1	**Boso 1**	**0.64**	**184**	↓P		**Pb**	**15 50 45.9**	**-1.3**
BSO4	**Boso 4**	**0.64**	**242**	↑P		**Pb**	**15 50 47.5**	**+0.2**
BSO3	**Boso 3**	**0.65**	**221**	↓P		**Pb**	**15 50 47.1**	**-0.3**
BSO3				S		**Sb**	**15 50 58.4**	**+2.3**
JCN	**Nagara**	**0.69**	**281**	↑P		**Pb**	**15 50 48.6**	**+0.6**
JYT	**Yasato**	**1.15**	**324**	↑P		**Pn**	**15 50 53.5**	**-1.3**
JIM2	**Oshima 3**	**1.43**	**247**	S		**Sn**	**15 51 15.4**	**-1.1**
JOD2	**Odawara 2**	**1.59**	**270**	↑P		**Pn**	**15 51 00.1**	**-0.7**
JOD2				S		**Sn**	**15 51 19.2**	**-1.1**
JAG	**Ashikaga**	**1.71**	**312**	P		**Pn**	**15 51 03.8**	**+1.4**
JHJ	**Hachijo jima 2**	**2.40**	**206**	Pn		**Pn**	**15 51 10.6**	**-1.3**
	29nm,0.3s,baz=104,slow=19,SNR=24							
JHJ				Sn		**Sn**	**15 51 44.7**	**+4.3**
	46nm,0.3s,baz=251,slow=22,SNR=5.7							
MAJO	**Matsushiro**	**2.61**	**299**	*e*Pn		**Pn**	**15 51 16.2**	**+1.4**
MAT	**Matsushiro**	**2.61**	**299**	P		**Pn**	**15 51 16.6**	**+1.8**
MAT				*e*S		**Sn**	**15 51 49.8**	**+4.3**
KSRS	**Korea Array**	**10.79**	**285**	Pn		**Pn**	**15 53 12.2**	**+5.1**
	0.1nm,0.3s,baz=90,slow=14,SNR=7.3							
KSRS				LR		LR	15 57 30.9	
	comp=Z,273nm,18.5s,baz=298,slow=39							
YSS	**Yuzh-Sakhalins**	**11.72**	**6**	Pn		**Pn**	**15 53 15.1**	**-4.7**
BJT	**Baijiatuan**	**20.22**	**291**	*e*P		**P**	**15 55 04.6**	**-2.5**
	9.8nm,0.6s							
ENH	**Enshi**	**26.92**	**268**	*e*P		**P**	**15 56 11.7**	**-1.6**
	4.9nm,0.6s,mb4.2							
YAK	**Yakutsk**	**27.70**	**348**	*e*P		**P**	**15 56 19.1**	**-0.9**
	20nm,0.6s,mb4.9							
SONM	**Songino Array**	**28.54**	**307**	P		**P**	**15 56 29.4**	**+1.8**
	1.7nm,0.6s,mb3.9,baz=67,slow=11,SNR=2.7							
CMAR	**Chiang Mai Arr**	**40.78**	**257**	P		**P**	**15 58 13.5**	**+0.1**
	0.6nm,0.3s,mb3.6,baz=60,slow=8.6,SNR=6.9							
ZALV	**Zalesovo Beam**	**42.88**	**314**	P		**P**	**15 58 30.1**	**0.0**
	1.7nm,0.5s,mb4.0,baz=95,slow=7.2,SNR=10							
MK31	**Makanchi Array**	**44.80**	**304**	*e*P		**P**	**15 58 45.7**	**0.0**
MKAR	**Makanchi Array**	**44.80**	**304**	P		**P**	**15 58 45.9**	**+0.2**
MKAR	**Makanchi Array**	**44.80**	**304**	P		**P**	**15 58 45.9**	**+0.2**
	1.1nm,0.6s,mb3.9,baz=85,slow=9.6,SNR=10							
KURK	**Kurchatov**	**46.78**	**309**	*e*P		**P**	**15 59 00.6**	**-0.7**
	6.5nm,0.8s,mb4.6							
KDAK	**Kodiak Island**	**48.61**	**41**	P		**P**	**15 59 15.4**	**+0.1**
	2.1nm,0.6s,mb4.3							
AAK	**Ala-Archa**	**51.06**	**300**	P		**P**	**15 59 34.8**	**+0.6**
	3.3nm,0.9s,mb4.3							
ILAR	**Eielson Array**	**51.13**	**32**	P		**P**	**15 59 34.7**	**+0.3**
	0.5nm,0.7s,mb3.6,baz=263,slow=6.2,SNR=7.6							
BVAR	**Borovoye Array**	**51.52**	**313**	P		**P**	**15 59 38.3**	**+0.8**
	0.9nm,0.6s,mb3.9,baz=76,slow=6.3,SNR=6.5							
BRVK	**Borovoye**	**51.58**	**313**	P		**P**	**15 59 37.5**	**-0.5**
AML	**Almayashu**	**51.77**	**299**	*e*P		**P**	**15 59 40.6**	**+1.1**
	5.5nm,0.6s,mb4.7							
ARU	**Arti**	**57.47**	**319**	*e*P		**P**	**16 00 20.0**	**-0.6**
	8.6nm,1.0s,mb4.7							
ABKAR	**Akbulak array**	**58.83**	**311**	*e*P		**P**	**16 00 30.0**	**-0.3**
	2.5nm,0.5s,mb4.5							
FINES	**FINESS Array B**	**70.21**	**332**	P		**P**	**16 01 44.1**	**-0.3**
	1.1nm,0.6s,mb3.9,baz=165,slow=7.9,SNR=7.4							
AKASG	**Malin Array Be**	**75.48**	**322**	P		**P**	**16 02 14.7**	**-1.2**
	1.3nm,0.5s,mb4.1,baz=47,slow=5.1,SNR=4.6							
NOA	**NORSAR Array B**	**75.67**	**337**	P		**P**	**16 02 16.8**	**+0.1**
	1.7nm,0.8s,mb4.0,baz=39,slow=5.8,SNR=5.3							
NVAR	**Mina Array Bea**	**76.29**	**53**	P		**P**	**16 02 22.0**	**+1.3**
NVAR	**Mina Array Bea**	**76.29**	**53**	P		**P**	**16 02 22.0**	**+1.3**
	0.4nm,0.7s,mb3.5,baz=300,slow=7.2,SNR=3.4							
BRTR	**Keskin Array B**	**79.77**	**312**	P		**P**	**16 02 40.8**	**+0.8**
	0.5nm,0.5s,mb3.7,baz=72,slow=4.7,SNR=2.5							
CLL	**Collm**	**82.45**	**330**	*e*P		**P**	**16 02 54.0**	**0.0**
TXAR	**Lajitas Array**	**91.43**	**52**	P		**P**	**16 03 39.4**	**+1.1**
	0.2nm,0.8s,mb3.5,baz=256,slow=3.6,SNR=3.2							
LPAZ	**La Paz**	**147.82**	**61**	PKPbc		PKPbc	16 10 18.5	+1.3
LPAZ	**La Paz**	**147.82**	**61**	PKPbc		PKPbc	16 10 18.5	+1.3
	0.8nm,0.6s,baz=268,slow=3.6,SNR=4.9							

*IDC **02** 15:52:33.4±2.4, 6.99S×127.85E, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.5/16, mbtmp4.0/3, ML4.3/1, MS4.4/3, Ms1 4.4/3, ms1mx3.5/24, Error ellipse: s-maj=139.8km s-min=29.8km az=79.0*
*ISCJB **02** 15:52:45.6±4.9, 7.65S±0.2×127.4E±0.2, h134km±57km, mb3.6/3, Error ellipse: s-maj=42.6km s-min=27.8km az=155.3*
*NEIC **02** 15:52:47.9±4.0, 7.65S×127.41E, h140km±47km, mb3.8/2, Error ellipse: s-maj=33.8km s-min=24.2km az=151.0*
ISC 02 15:52:47.2±4.1, 7.65S±0.2×127.4E±0.2, h131km±48km, n11, σ0 92/9, mb3.6/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.08**	**136**	*e*Pn		**Pn**	**15 54 28.6**	**+0.3**
	228nm,0.6s							
KAKA				*e*Sn		Sx	15 55 39.3	
FITZ	**Fitzroy Crossi**	**10.57**	**189**	Pn		**Pn**	**15 55 15.3**	**+0.3**
	baz=15,slow=12							
WRAB	**Tennant Creek**	**13.97**	**152**	*e*Pn		**Pn**	**15 55 57.9**	**-1.7**
	5.1nm,0.8s							
WRAB				*e*Sn		Sx	15 58 19.7	
MBWA	**Marble Bar**	**15.37**	**208**	Pn		**Pn**	**15 56 16.8**	**-0.3**
**ASA

GUMO	**Guam**	**30.33**	**322**	LR	LR	16 17 55.0	
	comp=Z,168nm,18.1s,baz=270,slow=34						
ASAR	**Alice Springs**	**30.91**	**241**	P	**P**	**16 07 10.0**	**-1.5**
	1.6nm,0.8s,mb3.9,baz=64,slow=10,SNR=18						
CMAR	**Chiang Mai Arr**	**69.87**	**294**	P	**P**	**16 12 06.8**	**+1.0**
	0.6nm,0.4s,mb3.9,baz=140,slow=4.7,SNR=4.7						
ILAR	**Eielson Array**	**83.92**	**19**	P	**P**	**16 13 23.6**	**-0.5**
	0.5nm,0.9s,mb3.6,baz=237,slow=4.6,SNR=4.9						
NVAR	**Mina Array Bea**	**87.56**	**50**	P	**P**	**16 13 43.3**	**+0.5**
	0.8nm,0.8s,mb4.0,baz=242,slow=7.1,SNR=4.8						
MKAR	**Makanchi Array**	**91.70**	**317**	P	**P**	**16 14 01.8**	**-0.2**
	0.9nm,0.8s,mb4.2,baz=90,slow=5.0,SNR=6.6						

*IDC **02** 16:19:35.9±3.4,36°.00N×71°.35E,h0km,mb4.0/5, mb1 4.0/9,mb1mx3.6/27,mbtmp4.0/9,ML3.4/4, Error ellipse: s-maj=64.0km s-min=25.5km az=142.0*

*ISCJB **02** 16:19:47.9±0.6,36°.46N±0°.03×71°.62E±0°.06, h107km±10km,mb3.8/7,Error ellipse: s-maj=8.6km s-min=4.4km az=161.7*

*BJI **02** 16:19:49.7,36°.86N×71°.02E,h116km,mb4.3/4*

*NEIC **02** 16:19:50.1±1.5,36°.50N×71°.29E,h103km±16km,mb3.9/7, Error ellipse: s-maj=30.2km s-min=12.9km az=130.0*

*NNC **02** 16:19:57.0±13.0,37°.10N×70°.75E,h185km±124km,mb2.8, mpv3.6,Error ellipse: s-maj=123.4km s-min=72.5km az=24.0*

ISC 02 16:19:49.4±0.6,36°.44N±0°.03×71°.61E±0°.06,h107km±8km, n48,σ1§24/61,mb3.8/7,6C-5D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.62**	**175**	⇑P	**Pn**	**16 20 32.4**	**+2.1**
CEP				S	**Sn**	**16 21 07.0**	**+5.2**
KBL	**Kabul**	**2.83**	**229**	*e*Pn	**Pn**	**16 20 32.0**	**-0.9**
CHCP	**Chirah Chowk**	**3.09**	**154**	P	**Pn**	**16 20 40.0**	**+3.5**
THW	**Thamme Wali**	**3.64**	**178**	P	**Pn**	**16 20 45.2**	**+1.4**
KSH	**Kashi**	**4.61**	**47⇑**	*i*P	**Pn**	**16 20 55.4**	**-1.4**
KSH				S	**Sn**	**16 21 43.4**	**-5.9**
KSH	comp=N,250nm,0.6s			smax			
KSH	comp=E,220nm,0.7s			smax			
AML	**Almayashu**	**5.91**	**15**	*e*Pn	**Pn**	**16 21 15.6**	**+1.3**
AML	comp=E,19nm,0.4s			*e*Sn	**Sn**	**16 22 16.1**	**-4.5**
UCH	**Uchtor**	**6.20**	**20**	*e*Pn	**Pn**	**16 21 23.1**	**+4.8**
UCH	comp=E,6.3nm,0.8s			*e*Sn	**Sn**	**16 22 26.9**	**-0.8**
EKS2	**Erkin-Say**	**6.43**	**14**	*e*Pn	**Pn**	**16 21 22.7**	**+1.2**
EKS2	comp=E,17nm,0.7s			*e*Sn	**Sn**	**16 22 31.8**	**-1.5**
AAK	**Ala-Archa**	**6.57**	**19**	*e*Pn	**Pn**	**16 21 24.9**	**+1.5**
AAK				*e*Sn	**Sn**	**16 22 37.9**	**+1.2**
AAK				Sn	**Sn**	**16 22 38.1**	**+1.3**
AAK	**Ala-Archa**	**6.57**	**19**	Pn	**Pn**	**16 21 25.3**	**+2.0**
AAK	comp=E,4.4nm,0.3s,baz=177,slow=5.6,SNR=14			Sn	**Sn**	**16 22 38.1**	**+1.3**
	comp=E,1.2nm,0.3s,baz=344,slow=15,SNR=8.7						
SDNR	**Sundarnagar**	**6.64**	**136**	*ex*	**Pn**	**16 21 20.5**	**-3.9**
SDNR				*e*S	**Sn**	**16 22 37.5**	**-1.1**
KK31	**Karatay Array**	**6.71**	**353**	⇓P	**Pn**	**16 21 24.0**	**-1.2**
KK31	comp=E,1.7nm,0.2s,baz=183,slow=13,SNR=66			⇑S	**Sn**	**16 22 33.4**	**-6.6**
	comp=E,7.1nm,0.5s,baz=189,slow=24						
SMLA	**Simla**	**7.03**	**137**	*i*P	**Pn**	**16 21 30.0**	**+0.4**
SMLA				*i*S	**Sn**	**16 22 48.0**	**-0.1**
SMLA	comp=N,387nm,0.2s			⇓		16 22 48.7	
SMLA	comp=E,578nm,0.3s			⇓		16 22 49.1	
KLP	**Kalpa**	**7.37**	**130**	*e*PKP	**Pn**	**16 21 34.8**	**+0.5**
KLP				*e*S	**Sn**	**16 22 55.1**	**-1.2**
KLP	comp=N,333nm,0.3s			AML	AML	16 23 08.3	
KLP	comp=E,781nm,0.3s			AML	AML	16 23 08.5	
JOSI	**Joshimath**	**8.86**	**129**	*ex*	x	16 22 01.4	
JOSI				*e*S	**Sn**	**16 23 30.4**	**-2.1**
JOSI	comp=E,129nm,0.5s			AML	AML	16 23 36.6	
JOSI	comp=N,184nm,0.6s			AML	AML	16 23 38.1	
KHET	**Khetri**	**9.07**	**156**	*e*S	**Sn**	**16 23 31.4**	**-6.2**
KHET				AML	AML	16 23 34.8	
KHET	comp=E,11nm,0.4s			AML	AML	16 23 38.1	
AYAN	**Aya Nagar**	**9.20**	**148**	*e*S	**Sn**	**16 23 37.2**	**-3.7**
KUDL	**Kundal**	**9.24**	**152**	*e*S	**Sn**	**16 23 35.6**	**-6.3**
SONA	**Sohna**	**9.39**	**149**	*e*S	**Sn**	**16 23 39.9**	**-5.5**
SONA				AML	AML	16 23 45.2	
SONA	comp=E,10nm,0.1s			AML	AML	16 23 46.1	
MK31	**Makanchi Array**	**13.05**	**34**	⇓P	**Pn**	**16 22 50.9**	**+0.4**
	comp=N,0.9nm,0.7s,baz=223,slow=16,SNR=9.5						
MK31	**Makanchi Array**	**13.05**	**34**	*e*Pn	**Pn**	**16 22 50.2**	**-0.3**
MKAR	**Makanchi Array**	**13.05**	**34**	Pn	**Pn**	**16 22 51.0**	**+0.5**
	comp=N,0.1nm,0.3s,baz=198,slow=12,SNR=9.0						
KOLN	**Koldanda**	**13.33**	**127**	*e*P	**Pn**	**16 22 53.8**	**-0.5**
GKN	**Gorkha**	**13.86**	**124**	*e*P	**Pn**	**16 23 01.5**	**+0.3**
DMN	**Daman**	**14.43**	**124**	*e*P	**Pn**	**16 23 08.6**	**+0.1**
KKN	**Kakani**	**14.43**	**123**	*e*P	**Pn**	**16 23 08.1**	**-0.4**
PKI	**Pulchoki**	**14.66**	**123**	*e*P	**Pn**	**16 23 12.0**	**+0.6**
GUN	**Gumba**	**14.76**	**121**	*e*P	**Pn**	**16 23 13.7**	**+1.0**
KURBB	**Kurchatov Arra**	**15.03**	**17**	⇑P	**Pn**	**16 23 19.2**	**+3.3**
KURK	**Kurchatov**	**15.13**	**17**	⇑P	**Pn**	**16 23 14.2**	**-3.0**
KURK	**Kurchatov**	**15.13**	**17**	*e*Pn	**Pn**	**16 23 20.5**	**+3.3**
JIRN	**Jiri**	**15.13**	**121**	*e*P	**Pn**	**16 23 19.0**	**+1.6**
AB31	**Akbulak array**	**15.38**	**330**	⇑P	**Pn**	**16 23 15.9**	**-4.4**
AB31	comp=N,0.3nm,0.2s,baz=120,slow=12,SNR=21			⇓S	S	16 25 52.2	-27
ABKAR	**Akbulak array**	**15.38**	**330**	*e*Pn	**Pn**	**16 23 15.9**	**-4.3**
ABKAR	comp=N,4.3nm,0.9s,baz=170,slow=24,SNR=4.9 comp=N,1.5nm,0.3s			*e*Sn	**Sn**	**16 25 49.9**	**-20**
BVAR	**Borovoye Array**	**16.60**	**357**	P	**Pn**	**16 23 34.8**	**-0.6**
BVAR	**Borovoye Array**	**16.60**	**357**	P	**Pn**	**16 23 34.8**	**-0.6**
BRVK	**Borovoye**	**16.64**	**357**	Pn	**Pn**	**16 23 35.1**	**-0.8**
	comp=N,0.2nm,0.3s,baz=155,slow=7.8,SNR=3.9 comp=N,3.2nm,0.9s						
AKTK	**Aktyubinsk**	**17.08**	**329**	P	**Pn**	**16 23 39.1**	**-2.1**
AKTO	**Aktyubinsk**	**17.08**	**329**	P	**Pn**	**16 23 39.1**	**-2.1**
	comp=N,0.4nm,0.3s,baz=140,slow=12,SNR=14						
ZALV	**Zalesovo Beam**	**19.77**	**24**	P	**P**	**16 24 12.1**	**+1.4**
	comp=N,6.5nm,0.6s,baz=222,slow=9.8,SNR=40						
ARU	**Arti**	**21.85**	**340**	*e*P	**P**	**16 24 33.7**	**+0.8**
	comp=N,5.0nm,0.9s,mb3.8						
GTA	**Gaotai**	**22.41**	**74**	*e*P	**P**	**16 24 44.6**	**+5.6**
GTA	comp=Z,8.0nm,0.7s,mb4.2			pmax	pmax		
AKASG	**Malin Array Be**	**33.37**	**309**	P	**P**	**16 26 17.4**	**+0.3**
	comp=Z,0.2nm,0.3s,mb3.5,baz=77,slow=7.6,SNR=4.2						
FINES	**FINESS Array B**	**37.81**	**326**	P	**P**	**16 26 55.7**	**+0.8**
FINES	**FINESS Array B**	**37.81**	**326**	P	**P**	**16 26 55.7**	**+0.8**
	comp=Z,1.4nm,0.6s,mb4.0,baz=116,slow=10,SNR=8.1						
HFS	**Hagfors**	**43.42**	**322**	P	**P**	**16 27 41.6**	**+0.6**
	comp=Z,2.4nm,0.6s,mb4.1,baz=90,slow=12,SNR=7.3						
NOA	**NORSAR Array B**	**44.72**	**323**	P	**P**	**16 27 51.6**	**+0.2**
	comp=Z,1.3nm,0.7s,mb3.8,baz=95,slow=7.9,SNR=5.1						
TORD	**Torodi Ar. Bea**	**66.21**	**269**	P	**P**	**16 30 24.4**	**-1.6**
	comp=Z,0.5nm,0.8s,mb3.4,baz=46,slow=5.6,SNR=3.5						

*NAO **02** 16:25:39.4±2.8,76°.95N×20°.83E,h17km±33km,ML3.8*

*CSEM **02** 16:25:39.0±0.3,76°.87N×20°.31E,h10km,ML3.8,Error ellipse: s-maj=12.7km s-min=5.9km az=69.0*

*NEIC **02** 16:25:39.8±0.5,76°.90N×20°.44E,h10km,mb4.5/5, ML3.8(BER),Error ellipse: s-maj=15.0km s-min=6.2km az=72.0*

*IDC **02** 16:25:39.7±0.6,76°.90N×20°.42E,h0km,mb3.8/7, mb1 4.2/11,mb1mx3.9/24,mbtmp4.0/11,ML4.4/4,Error ellipse: s-maj=20.9km s-min=8.0km az=67.0*

*BER **02** 16:25:42.2±3.0,76°.92N×20°.40E,h19km±13km,MD2.2, ML3.8,ML3.8(NAO)*

ISC 02 16:25:39.1±0.7,76°.85N±0°.03×20°.2E±0°.1,h0km±5km,n96, σ1§32/116,mb4.0/13,2C,Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSP	**Hornsund**	**1.07**	**281**	*e*P	**Pg**	**16 26 01.1**	**+1.5**
HSP				*e*S	**Sg**	**16 26 14.7**	**+1.2**
HOPEN	**Hopen**	**1.16**	**105**	*e*P	**Pg**	**16 26 01.9**	**+0.7**
HOPEN				*e*Sg	**Sg**	**16 26 16.9**	**+0.6**
HOPEN	comp=Z,3μm,0.7s			AML	AML	16 26 22.1	
HOPEN	**Hopen**	**1.16**	**105**	*e*P	**Pg**	**16 26 02.0**	**+0.7**
HOPEN	SNR=55			*e*Sg	**Sg**	**16 26 16.9**	**+0.6**
	comp=Z,3μm,0.7s,SNR=94						
SPA0	**Spitsbergen Ar**	**1.58**	**330**	Pg	**Pg**	**16 26 07.9**	**-1.3**
	baz=147,slow=18						
SPA0	baz=141,slow=28			Lg		16 26 29.4	
SPA0	**Spitsbergen Ar**	**1.58**	**330**	Pg	**Pg**	**16 26 07.9**	**-1.3**
	SNR=574						
SPA0	SNR=2.7			Lg		16 26 29.4	
SPITS	**Spitsbergen Ar**	**1.58**	**330**	Pn	**Pn**	**16 26 07.9**	**-0.2**
	baz=147,slow=18,SNR=746						
SPITS	baz=156,slow=34,SNR=21			Sn	**Sn**	**16 26 29.9**	**+0.7**
BJO	**Bjornoya**	**2.37**	**187**	*e*Pg	**Pg**	**16 26 23.7**	**-0.8**
BJO				*e*Sg	**Sg**	**16 26 55.2**	**+0.1**
BJO	comp=Z,1μm,0.4s			AML	AML	16 27 02.9	
BJO	**Bjornoya**	**2.37**	**187**	*e*Pg	**Pg**	**16 26 23.7**	**-0.8**
	SNR=92						
BJO	comp=Z,1μm,0.4s,SNR=92			*e*Sg	**Sg**	**16 26 55.2**	**0.0**
BJO1	**Bjornoya**	**2.38**	**188**	*i*P	**Pn**	**16 26 23.6**	**+4.4**
BJO1				*e*		16 26 24.5	
BJO1				*e*S	**Sn**	**16 26 55.3**	**+6.2**
BJO1	**Bjornoya**	**2.38**	**188**	*i*P	**Pn**	**16 26 23.6**	**+4.4**
KBS	**Kingsbay**	**2.72**	**324**	Pn	**Pn**	**16 26 22.9**	**-0.9**
KBS				Pg	**Pg**	**16 26 29.9**	**-1.2**
KBS				Lg		16 27 03.5	
KBS	**Kingsbay**	**2.72**	**324**	*e*P	**Pn**	**16 26 22.8**	**-1.0**
KBS				Pn	**Pn**	**16 26 22.9**	**-0.9**
KBS				Pg	**Pg**	**16 26 29.9**	**-1.2**
KBS				*e*Pg	**Pg**	**16 26 30.0**	**-1.1**
KBS				*e*Sg	**Sg**	**16 27 03.4**	**-2.9**
KBS				Lg		16 27 03.5	
KBS	**Kingsbay**	**2.72**	**324**	*e*P	**Pn**	**16 26 22.8**	**-1.0**
KBS				*e*Pg	**Pg**	**16 26 30.0**	**-1.1**
KBS				*e*		16 26 30.6	
KBS				*e*Sg	**Sg**	**16 27 03.4**	**-2.9**
KBS	**Kingsbay**	**2.72**	**324**	*e*P	**Pn**	**16 26 22.8**	**-1.0**
	SNR=55						
TRO	**Tromso**	**7.27**	**184**	*e*Pn	**Pn**	**16 27 25.9**	**-0.3**
TRO				*e*Sn	**Sn**	**16 28 44.1**	**-5.2**
TRO	**Tromso**	**7.27**	**184**	*e*Pn	**Pn**	**16 27 25.9**	**-0.4**
	SNR=55						
KEV	**Kevo**	**7.39**	**161**	*e*Pn	**Pn**	**16 27 26.8**	**-1.1**
	comp=Z,25nm,0.3s						
KEV				*e*Sn	**Sn**	**16 28 44.0**	**-8.2**
KEV	**Kevo**	**7.39**	**161**	*e*p	**Pn**	**16 27 26.7**	**-1.2**
	comp=Z,21nm,0.3s						
KEV	**Kevo**	**7.39**	**161**	*e*P	**Pn**	**16 27 26.7**	**-1.2**
	comp=Z,21nm,0.3s						
ARA0	**ARCESS Array S**	**7.51**	**166**	Pn	**Pn**	**16 27 28.2**	**-1.4**
	baz=356,slow=12						
ARA0	baz=2.5,slow=22			Sn	**Sn**	**16 28 47.0**	**-8.2**
ARA0	**ARCESS Array S**	**7.51**	**166**	Pn	**Pn**	**16 27 28.2**	**-1.3**
	SNR=752						
ARCES	**ARCESS Array B**	**7.51**	**166**	Pn	**Pn**	**16 27 28.6**	**-1.0**
	comp=Z,17nm,0.3s,baz=359,slow=11,SNR=120						
ARCES				Sn	**Sn**	**16 28 46.9**	**-8.3**
	comp=Z,6.9nm,0.3s,baz=355,slow=24,SNR=3.2						
ARCES	**ARCESS Array B**	**7.51**	**166**	Pn	**Pn**	**16 27 28.5**	**-1.0**
ARE0	**ARCESS Array S**	**7.51**	**166**	*e*Pn	**Pn**	**16 27 28.8**	**-0.8**
ARE0				*e*Sn	**Sn**	**16 28 45.7**	**-9.5**
ARE0	**ARCESS Array S**	**7.51**	**166**	*e*Pn	**Pn**	**16 27 28.8**	**-0.7**
KTK1	**Kautokeino**	**7.93**	**172**	*e*Pn	**Pn**	**16 27 36.2**	**+0.9**
KTK1				*e*Sn	**Sn**	**16 29 01.9**	**-3.7**
KTK1	**Kautokeino**	**7.93**	**172**	*e*Pn	**Pn**	**16 27 36.2**	**+0.9**
	SNR=55						
KTK1	SNR=55			*e*Sn	**Sn**	**16 29 01.9**	**-3.7**
DAG	**Danmarks Havn**	**8.77**	**288⇑**	*i*P	**Pn**	**16 27 51.3**	**+4.5**
	comp=Z,6.7nm,0.9s						
DAG	**Danmarks Havn**	**8.77**	**288⇑**	*i*P	**Pn**	**16 27 51.3**	**+4.5**
	comp=Z,0.8nm,0.9s						
JMIC	**Jan Mayen**	**9.78**	**248**	Pn	**Pn**	**16 28 02.8**	**+2.2**
	comp=Z,5.1nm,0.3s,baz=159,slow=4.7,SNR=7.8						
DUNU	**Dundret**	**9.78**	**179**	P	**Pn**	**16 27 56.3**	**-4.4**
PAJU	**Pajala**	**9.92**	**173**	P	**Pn**	**16 28 02.7**	**+0.2**
APA0	**Apatity Array**	**10.04**	**151**	Pn	**Pn**	**16 28 02.5**	**-1.6**
	SNR=7.2						
MOR8	**Moi Rana**	**10.88**	**193**	*e*	**Pn**	**16 28 17.3**	**+1.6**
MOR8	**Moi Rana**	**10.88**	**193**	*e*P	**Pn**	**16 28 17.3**	**+1.6**
KALU	**Kalix**	**11.09**	**173**	P	**Pn**	**16 28 19.2**	**+0.6**
KALU	**Kalix**	**11.09**	**173**	P	**Pn**	**16 28 18.5**	**-0.1**
SJUU	**Sjulsmark**	**11.41**	**177**	P	**Pn**	**16 28 22.7**	**-0.2**
SJUU	**Sjulsmark**	**11.41**	**177**	P	**Pn**	**16 28 22.7**	**-0.2**
LILU	**Lilltraesk**	**11.63**	**181**	P	**Pn**	**16 28 25.4**	**-0.5**
BURU	**Burvik**	**12.34**	**178**	P	**Pn**	**16 28 35.4**	**-0.2**
BURU	**Burvik**	**12.34**	**178**	P	**Pn**	**16 28 34.9**	**-0.7**
SVAU	**Svanoeiden**	**12.42**	**181**	P	**Pn**	**16 28 37.0**	**+0.2**
SVAU	**Svanoeiden**	**12.42**	**181**	P	**Pn**	**16 28 36.0**	**-0.8**
UMAU	**Umeaa**	**13.04**	**179**	P	**Pn**	**16 28 44.3**	**-0.8**
BREU	**Bredtraesk**	**13.04**	**183**	P	**Pn**	**16 28 45.5**	**+0.3**
BREU	**Bredtraesk**	**13.04**	**183**	P	**Pn**	**16 28 44.8**	**-0.4**
JOF	**Joensuu**	**14.46**	**159**	*e*p	**Pn**	**16 28 57.9**	**-6.6**
	comp=Z,2.4nm,0.3s						
KAF	**Kangasniemi**	**14.95**	**169**	*e*p	**Pn**	**16 29 06.8**	**-4.4**
	comp=Z,6.5nm,0.4s						
SUMG	**Summit**	**15.41**	**284**	*e*Pn	**Pn**	**16 29 17.6**	**+0.3**
	comp=Z,34nm,1.0s						
SUMG	**Summit**	**15.41**	**284**	*i*P	**Pn**	**16 29 24.4**	**+7.2**
	comp=Z,21nm,1.0s						
SUMG	**Summit**	**15.41**	**284**	*i*P	**Pn**	**16 29 24.4**	**+7.2**
	comp=Z,21nm,1.0s						
FIA0	**FINESS Array S**	**15.61**	**170**	Pn	**Pn**	**16 29 15.6**	**-4.3**
	baz=5.2,slow=10						
FINES	**FINESS Array B**	**15.61**	**170**	Pn	**Pn**	**16 29 16.1**	**-3.9**
	comp=Z,2.3nm,0.3s,baz=5.6,slow=10,SNR=102						
FINES	comp=Z,0.8nm,0.3s,baz=360,slow=24,SNR=4.5			Sn	**Sn**	**16 32 04.1**	**-9.1**
NB2	**NORSAR Subarra**	**16.18**	**196**	P	**Pn**	**16 29 27.9**	**+0.7**
NB2	**NORSAR Subarra**	**16.18**	**196**	P	**Pn**	**16 29 27.9**	**+0.6**
NOA	**NORSAR Array B**	**16.18**	**196**	Pn	**Pn**	**16 29 27.9**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=4.2,slow=12,SNR=7.4						
NOA	**NORSAR Array B**	**16.18**	**196**	Pn	**Pn**	**16 29 27.9**	**+0.6**
HFS	**Hagfors**	**16.95**	**191**	P	**Pn**	**16 29 39.2**	**+2.1**
	baz=12,slow=10						
HFS	**Hagfors**	**16.95**	**191**	Pn	**Pn**	**16 29 37.8**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=20,slow=11,SNR=30						
HFS	**Hagfors**	**16.95**	**191**	P	**Pn**	**16 29 39.2**	**+2.1**
	SNR=4.2						
MUD	**Mnsted U'grnd**	**20.87**	**197**	*i*P	**P**	**16 30 24.7**	**+2.6**
	comp=Z,7.1nm,0.8s						
ARU	**Arti**	**24.61**	**124**	*e*P	**P**	**16 31 03.7**	**+3.3**
	comp=Z,22nm,1.1s,mb4.8						
AKASG	**Malin Array Be**	**26.48**	**167**	P	**P**	**16 31 17.5**	**+0.1**
	comp=Z,1.2nm,0.3s,mb4.0,baz=354,slow=9.3,SNR=5.8						
AKBB	**Malin Array Si**	**26.48**	**167**	P	**P**	**16 31 20.5**	**+3.1**
AKBB				*e*		16 31 29.4	
MORC	**Moravsky Berou**	**27.20**	**184**	P	**P**	**16 31 19.5**	**-4.4**
PSZ	**Piszkesteto**	**29.04**	**180**	P	**P**	**16 31 37.0**	**-3.3**
PSZ	**Piszkesteto**	**29.04**	**180**	P	**P**	**16 31 37.0**	**-3.3**
ZALV	**Zalesovo Beam**	**32.52**	**97**	P	**P**	**16 32 11.2**	**+0.3**
	comp=Z,1.0nm,0.7s,mb3.8,baz=340,slow=8.2,SNR=5.9						
KURK	**Kurchatov**	**34.14**	**105**	*e*P	**P**	**16 32 27.5**	**+2.4**
	comp=Z,3.7nm,1.1s,mb4.2						
KIV	**Kislovodsk**	**34.30**	**151**	P	**P**	**16 32 24.3**	**-2.2**
	comp=Z,9.8nm,1.1s,mb4.7						
KIV	**Kislovodsk**	**34.30**	**151**	P	**P**	**16 32 24.3**	**-2.2**
	comp=Z,9.8nm,1.1s,mb4.7						
BRTR	**Keskin Array B**	**37.68**	**163**	P	**P**	**16 32 57.9**	**+2.3**
	comp=Z,0.9nm,0.7s,mb3.6,baz=349,slow=5.0,SNR=4.3						
ILAR	**Eielson Array**	**38.38**	**351**	P	**P**	**16 33 02.1**	**+0.9**
	comp=Z,3.2nm,0.9s,mb4.0,baz=0.8,slow=6.7,SNR=24						
ILAR	**Eielson Array**	**38.38**	**351**	P	**P**	**16 33 02.1**	**+0.9**
MK31	**Makanchi Array**	**38.65**	**104**	*e*P	**P**	**16 33 05.1**	**+1.5**
MKAR	**Makanchi Array**	**38.65**	**104**	P	**P**	**16 33 05.3**	**+1.7**
	comp=Z,1.1nm,0.5s,mb3.7,baz=353,slow=6.5,SNR=18						
PAX	**Paxson**	**40.13**	**350**	*e*P	**P**	**16 33 15.9**	**+0.1**
	comp=Z,2.3nm,0.9s,mb3.8						
PAX	**Paxson**	**40.13**	**350**	*e*P	**P**	**16 33 15.9**	**+0.1**
	comp=Z,2.3nm,0.9s,mb3.8						
PMR	**Palmer**	**41.64**	**352**	P	**P**	**16 33 26.6**	**-1.6**
PMR	**Palmer**	**41.64**	**352**	P	**P**	**16 33 26.6**	**-1.6**
ULN	**Ulaanbaatar**	**43.26**	**79**	P	**P**	**16 33 44.0**	**+2.4**
KDAK	**Kodiak Island**	**45.55**	**355**	P	**P**	**16 33 57.2**	**-2.5**
	comp=Z,3.4nm,0.8s,mb4.4,baz=6.3,slow=9.2,SNR=2.6						
KDAK	**Kodiak Island**	**45.55**	**355**	P	**P**	**16 33 57.2**	**-2.5**
PV01	**Paradox Valley**	**60.96**	**315**	*e*P	**P**	**16 35 52.5**	**-0.8**
	comp=Z,231nm,0.9s						
PV01	**Paradox Valley**	**60.96**	**315**	*e*P	**P**	**16 35 52.5**	**-0.8**
	comp=Z,231nm,0.9s						
NVAR	**Mina Array Bea**	**62.11**	**324**	P	**P**	**16 35 60.0**	**-1.1**
NVAR	**Mina Array Bea**	**62.11**	**324**	P	**P**	**16 35 60.0**	**-1.1**
	comp=Z,0.2nm,0.6s,mb3.5,baz=52,slow=35,SNR=2.4						
NVAR	**Mina Array Bea**	**62.11**	**324**	P	**P**	**16 36 00.0**	**-1.1**
WMOK	**Wichita Mounta**	**62.57**	**306**	P	**P**	**16 36 04.0**	**-0.2**
WMOK	**Wichita Mounta**	**62.57**	**306**	P	**P**	**16 36 04.0**	**-0.2**
TORD	**Torodi Ar. Bea**	**64.44**	**200**	P	**P**	**16 36 18.2**	**+1.4**
	comp=Z,0.7nm,0.6s,mb4.1,baz=2.6,slow=7.8,SNR=7.0						
TXAR	**Lajitas Array**	**68.72**	**309**	P	**P**	**16 36 43.8**	**-0.2**
	comp=Z,0.5nm,0.5s,mb4.0,baz=52,slow=4.8,SNR=9.9						
TXAR	**Lajitas Array**	**68.72**	**309**	P	**P**	**16 36 43.8**	**-0.2**
ASAR	**Alice Springs**	**118.22**	**72**	PKP	PKPdf	16 44 26.4	-0.8
	comp=Z,0.9nm,1.3s,baz=18,slow=1.7,SNR=5.5						
ASAR	**Alice Springs**	**118.22**	**72**	PKIKP	PKPdf	16 44 26.4	-0.8

MAN 02 16:30:05,16°.61N×122°.37E,h22km,mb4.8,ML3.7,MS3.7, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.46**	**7**	*e*P	Pb	16 30 14.9	+0.5
PALP				*e*S	Sb	16 30 25.6	+4.8
CAUP	**Cauayan**	**0.62**	**303**	*e*P	Pb	16 30 18.3	+1.1
CAUP				*e*S	Sb	16 30 28.1	+2.6
BALP	**Baler**	**1.15**	**222**	*e*P	Pn	16 30 25.6	-0.2
BALP				*e*S	Sb	16 30 31.9	-8.8
APYP	**Conner**	**1.65**	**319**	*e*P	Pn	16 30 33.8	+1.1

MEX 02 17:12:34.2±0.6,16°.11N×98°.37W,h4km±8km,MD3.6,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.36**	**39**	*i*P	Pg	17 12 40.6	-0.6
PNIG				*i*S	Sg	17 12 46.5	+0.5
ACX	**Acapulco**	**1.62**	**298**	*e*P	Pn	17 13 01.1	-2.4
ACX				*i*S	Sn	17 13 20.4	-4.4
VHO	**Vista Hermosa**	**1.84**	**58**	*e*P	Pn	17 13 03.4	-3.1
VHO				*i*S	Sn	17 13 25.8	-4.4
CAIG	**El Cayaco**	**2.05**	**297**	*i*P	Pn	17 13 06.2	-3.2
CAIG				*i*S	Sn	17 13 30.3	-5.1
MEIG	**Mezcala**	**2.17**	**327**	*e*P	Pn	17 13 08.3	-2.8
MEIG				*i*S	Sn	17 13 32.9	-5.5

*THE **02** 17:31:48.8,37°.50N×20°.84E,h5km,ML2.1/1,Error ellipse: s-maj=2.2km s-min=0.5km az=60.0*

*ISCJB **02** 17:31:49.2±1.1,37°.53N±0°.05×20°.85E±0°.10,h9km±8km, Error ellipse: s-maj=14.2km s-min=5.4km az=156.0*

*ATH **02** 17:31:49.9,37°.59N×20°.85E,h20km±2km,MD3.2/11*

*NEIC **02** 17:31:49.9,37°.59N×20°.85E,h20km,MD3.2(ATH),After ATH.*

*CSEM **02** 17:31:49.0±0.6,37°.52N×20°.90E,h2km,ML2.1/1,Error ellipse: s-maj=14.7km s-min=5.0km az=58.0*

ISC 02 17:31:48.9±1.1,37°.50N±0°.04×20°.88E±0°.08,h1km±8km, n40,σ0§95/56,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KFL	**Anninata**	**0.61**	**353**	P	**Pg**	**17 32 00.3**	**-0.3**
KFL				S	**Sg**	**17 32 09.2**	**+0.6**
KFL	**Anninata**	**0.61**	**353**	P	**Pg**	**17 32 00.3**	**-0.3**
KFL				S	**Sg**	**17 32 09.2**	**+0.6**
VLS	**Valsamata**	**0.71**	**341**	*e*Pn	**Pg**	**17 32 02.1**	**-0.5**
VLS				*e*Sn	**Sg**	**17 32 12.4**	**+0.5**
VLS	**Valsamata**	**0.71**	**341**	*e*PN	**Pg**	**17 32 02.1**	**-0.5**
VLS				*e*SN	**Sg**	**17 32 12.4**	**+0.5**
VLS	**Vals

Ms1 3.9/5,ms1mx3.7/14,Error ellipse: s-maj=30.5km s-min=20.7km az=141.0
*ISCJB **02** 17:39:47.3±0.6,28°33S±0°10×176°6W±0°1,h33km, mb4.4/17,MS4.0/4,Error ellipse: s-maj=16.9km s-min=13.3km az=23.1*
*NEIC **02** 17:39:51.6±0.4,28°32S×176°54W,h60km,mb4.7/10, Error ellipse: s-maj=14.0km s-min=10.6km az=131.0*

ISC 02 17:39:49.4±0.6,28°30S±0°10×176°5W±0°1,h35km,n54, σ1§02/33,mb4.4/17,MS4.0/4,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**11.27**	**207**	Pn	**Pn**	**17 42 23.1**	**-4.8**
	0.6nm,0.3s,baz=16,slow=18,SNR=3.3						
URZ				Sn	**Sn**	**17 44 26.8**	**-5.6**
	1.3nm,0.3s,baz=163,slow=21,SNR=6.4						
AFI	**Afiamalu**	**14.98**	**18**	*e*Pn	**Pn**	**17 43 08.9**	**-10**
AFI				Sn	Sn	17 45 41.5	-22
AFI	**Afiamalu**	**14.98**	**18**	Pn	**Pn**	**17 43 12.9**	**-5.7**
	1.3nm,0.3s,baz=203,slow=14,SNR=3.0						
AFI				Sn	Sn	17 45 41.5	-22
	1.3nm,0.3s,baz=165,slow=19,SNR=3.9						
DZM	**Mont Dzumac**	**16.60**	**288**	*e*LR	LR	17 47 28.8	
	844nm,27.1s,baz=124						
RAR	**Rarotonga**	**16.77**	**69**	LR	LR	17 49 07.3	
	comp=Z,372nm,18.9s,baz=133,slow=34						
RPZ	**Rata Peaks**	**18.34**	**210**	*e*Pn	**Pn**	**17 43 58.5**	**-2.3**
	92nm,1.6s						
RPZ	**Rata Peaks**	**18.34**	**210**	P	**Pn**	**17 43 59.0**	**-1.8**
	1.0nm,0.3s,baz=61,slow=19,SNR=6.4						
PPT	**Papeete**	**26.96**	**72**	*e*LR	LR	17 51 39.3	
	400nm,30.5s						
EIDS	**Eidsvold**	**29.00**	**268**	*e*P	**P**	**17 45 44.9**	**-1.1**
HNR	**Honiara**	**29.01**	**306**	LR	LR	17 56 02.3	
	comp=Z,176nm,18.2s,MS3.7,baz=192,slow=34						
CTA	**Charters Tower**	**34.81**	**275**	P	**P**	**17 46 38.2**	**+1.2**
CTA	**Charters Tower**	**34.81**	**275**	P	**P**	**17 46 38.2**	**+1.2**
	4.2nm,0.8s,mb4.4,baz=119,slow=12,SNR=5.9						
CTAO	**Charters Tower**	**34.81**	**275**	*e*P	**P**	**17 46 36.8**	**-0.2**
STKA	**Stephens Creek**	**36.25**	**254**	*e*P	**P**	**17 46 49.8**	**+0.6**
	2.2nm,1.0s,mb4.0						
STKA				LR	LR	18 01 02.8	
STKA	**Stephens Creek**	**36.25**	**254**	P	**P**	**17 46 50.0**	**+0.8**
	1.3nm,0.5s,mb4.1,baz=94,slow=10,SNR=6.4						
STKA				LR	LR	18 01 02.8	
	comp=Z,367nm,18.5s,MS4.2,baz=25,slow=35						
ASAR	**Alice Springs**	**44.55**	**264**	P	**P**	**17 47 57.3**	**-0.7**
	2.2nm,0.9s,mb4.0,baz=97,slow=6.9,SNR=27						
WRAB	**Tennant Creek**	**45.35**	**269**	*e*P	**P**	**17 48 03.9**	**-0.4**
	7.9nm,0.9s,mb4.5						
SBA	**Scott Base**	**50.23**	**185**	*e*P	**P**	**17 48 42.7**	**+1.4**
	8.4nm,1.0s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.69**	**268**	P	**P**	**17 49 07.8**	**-0.2**
	1.4nm,0.6s,mb4.1,baz=267,slow=11,SNR=7.0						
NWAO	**Narrogin (SRO)**	**56.36**	**248**	P	**P**	**17 49 27.8**	**+0.7**
CASY	**Casey**	**57.59**	**207**	*e*P	**P**	**17 49 35.4**	**+0.1**
CASY	**Casey**	**57.59**	**207**	*e*P	**P**	**17 49 35.4**	**+0.1**
	6.6nm,0.6s,mb4.8						
QSPA	**South Pole Qui**	**61.81**	**180**	*e*P	**P**	**17 50 04.3**	**+0.2**
	8.7nm,1.2s,mb4.8						
MAW	**Mawson**	**74.72**	**200**	*e*P	**P**	**17 51 24.4**	**-0.8**
	1.1nm,0.9s,mb3.8						
MAW				LR	LR	18 24 56.8	
MAW	**Mawson**	**74.72**	**200**	P	**P**	**17 51 25.8**	**+0.7**
	1.5nm,0.7s,mb4.0,baz=138,slow=9.1,SNR=5.0						
MAW				LR	LR	18 24 56.8	
	comp=Z,138nm,19.7s,MS4.2,baz=256,slow=36						
KSM	**Kuching**	**75.92**	**279**	*e*P	**P**	**17 51 32.5**	**-0.4**
	15nm,1.1s,mb4.8						
MAJO	**Matsushiro**	**77.27**	**324**	*e*P	**P**	**17 51 39.0**	**-1.0**
	7.9nm,0.9s,mb4.6						
MAT	**Matsushiro**	**77.27**	**324**	P	**P**	**17 51 39.7**	**-0.3**
KSRS	**Korea Array**	**83.60**	**319**	P	**P**	**17 52 15.0**	**+1.0**
	2.5nm,0.9s,mb4.3,baz=134,slow=5.4,SNR=7.2						
KSRS				LR	LR	18 22 18.0	
	comp=Z,39nm,20.0s,MS3.8,baz=117,slow=30						
CMB	**Columbia Colle**	**84.34**	**41**	P	**P**	**17 52 16.2**	**-1.5**
	4.2nm,1.1s,mb4.5						
NVAR	**Mina Array Bea**	**85.83**	**42**	P	**P**	**17 52 25.5**	**+0.3**
NVAR	**Mina Array Bea**	**85.83**	**42**	P	**P**	**17 52 25.5**	**+0.3**
	0.6nm,0.7s,mb4.0,baz=226,slow=7.6,SNR=7.0						
KULM	**Kulim**	**86.18**	**278**	P	**P**	**17 52 23.0**	**-4.5**
CMAR	**Chiang Mai Arr**	**93.93**	**289**	P	**P**	**17 53 05.4**	**+1.6**
	0.5nm,0.4s,mb4.3,baz=156,slow=3.5,SNR=6.2						
KMI	**Kunming**	**94.03**	**296**	P	**P**	**17 53 07.0**	**+2.8**
KMI				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.8						
ILAR	**Eielson Array**	**95.60**	**12**	P	**P**	**17 53 09.8**	**-0.6**
	comp=Z,0.4nm,0.8s,mb3.9,baz=214,slow=4.4,SNR=3.9						
ZALV	**Zalesovo Beam**	**117.31**	**319**	PKP	PKPdf	17 58 29.3	-1.2
	comp=Z,0.3nm,0.4s,baz=107,slow=4.8,SNR=2.5						
MKAR	**Makanchi Array**	**117.39**	**311**	PKP	PKPdf	17 58 29.6	-1.4
	comp=Z,0.4nm,0.6s,baz=77,slow=1.6,SNR=4.3						
BVAR	**Borovoye Array**	**121.78**	**317**	PKP	PKPdf	17 58 46.3	-0.5
	comp=Z,0.8nm,0.6s,baz=147,slow=3.0,SNR=6.5						
ARCES	**ARCESS Array B**	**136.80**	**349**	PKP	PKPdf	17 59 03.9	-3.3
ARCES	**ARCESS Array B**	**136.80**	**349**	PKhKP	PKPpre	17 59 03.9	
	comp=Z,2.3nm,0.9s,baz=321,slow=2.3,SNR=2.6						
FINES	**FINESS Array B**	**143.58**	**342**	PKhKP	PKPpre	17 59 16.2	
	comp=Z,1.0nm,0.5s,baz=62,slow=2.3,SNR=13						
NOA	**NORSAR Array B**	**146.85**	**353**	PKPbc	PKPbc	17 59 26.6	-0.7
	comp=Z,6.1nm,0.9s,baz=15,slow=4.4,SNR=8.8						
HFS	**Hagfors**	**147.42**	**351**	PKPbc	PKPbc	17 59 27.9	-0.9
	comp=Z,5.6nm,0.6s,baz=90,slow=3.0,SNR=18						
AKASG	**Malin Array Be**	**150.34**	**326**	PKPbc	PKPbc	17 59 35.5	-1.1
AKASG				PKPab	PKPab	17 59 42.3	-0.7
AKASG	**Malin Array Be**	**150.34**	**326**	PKPbc	PKPbc	17 59 35.5	-1.1
	comp=Z,4.9nm,0.7s,baz=40,slow=3.1,SNR=20						
AKASG				PKPab	PKPab	17 59 42.3	-0.7
	comp=Z,1.5nm,0.6s,baz=45,slow=4.3,SNR=4.9						
ASF	**Jabal al Asfar**	**150.93**	**286**	PKPbc	PKPbc	17 59 38.8	+0.2
	comp=Z,1.0nm,0.5s,baz=196,slow=1.0,SNR=4.0						
ASF				PKPab	PKPab	17 59 43.9	-2.2
	comp=Z,1.4nm,0.5s,baz=36,slow=3.9,SNR=3.0						
MMAI	**Mount Meron Ar**	**152.19**	**288**	PKPbc	PKPbc	17 59 42.3	+0.9
	comp=Z,1.6nm,0.6s,baz=92,slow=4.3,SNR=3.6						
EIL	**Elat**	**152.47**	**281**	PKPbc	PKPbc	17 59 41.4	-0.8
	comp=Z,2.4nm,0.8s,baz=90,slow=1.0,SNR=2.8						
EIL				PKPab	PKPab	17 59 53.5	+1.0
	comp=Z,4.9nm,0.8s,baz=39,slow=9.6,SNR=3.9						
EKA	**Eskdalemuir Ar**	**152.56**	**8**	PKPbc	PKPbc	17 59 40.8	-0.7
	comp=Z,0.6nm,0.7s,baz=262,slow=2.0,SNR=3.3						
BRTR	**Keskin Array B**	**152.64**	**302**	PKPbc	PKPbc	17 59 42.1	-0.1
	comp=Z,0.6nm,0.6s,baz=29,slow=2.8,SNR=3.5						
BRTR				PKPab	PKPab	17 59 53.6	+0.7
	comp=Z,1.4nm,0.8s,baz=98,slow=3.7,SNR=5.7						
CLL	**Collm**	**155.92**	**345**	*e*P	PKPab	18 00 06.0	-0.4
BRG	**Berggiesshubel**	**156.10**	**343**	*e*P	PKPab	18 00 06.4	-0.8
	comp=Z,3.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**164.84**	**173**	PKPab	PKPab	18 00 46.1	0.0
	comp=Z,1.8nm,0.8s,baz=195,slow=3.3,SNR=4.5						

*NEIC **02** 17:52:52.8,39°30N×23°24E,h19km,ML2.6(ATH),After ATH.*
*ATH **02** 17:52:52.8,39°30N×23°24E,h19km±1km,MD2.6/9,ML2.6*
*ISCJB **02** 17:52:53.7±0.6,39°25N±0°03×23°17E±0°04,h12km±5km, Error ellipse: s-maj=5.3km s-min=4.8km az=153.9*
*CSEM **02** 17:52:53.6±0.2,39°29N×23°15E,h12km,ML2.6,Error ellipse: s-maj=5.8km s-min=4.3km az=45.0*
*THE **02** 17:52:53.7,39°26N×23°17E,h14km,ML2.1/5,Error ellipse: s-maj=0.9km s-min=0.5km az=106.0*

ISC 02 17:52:53.8±0.4,39°28N±0°03×23°16E±0°04,h13km±3km, n35,σ0§90/55,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEO	**Neokhori**	**0.05**	**63**	*e*Pb	**Pg**	**17 52 56.7**	**+0.3**
NEO				*e*Sb	**Sg**	**17 52 58.2**	**0.0**
NEO	**Neokhori**	**0.05**	**63**	*e*PB	**Pg**	**17 52 56.7**	**+0.3**
NEO				*e*SB	**Sg**	**17 52 58.2**	**0.0**
NEO	**Neokhori**	**0.05**	**63**	*e*Pb	**Pg**	**17 52 56.7**	**+0.3**
NEO				*e*Sb	**Sg**	**17 52 58.2**	**0.0**
XOR	**Xorichti**	**0.09**	**15**	P	**Pg**	**17 52 57.1**	**+0.4**
XOR				S	**Sg**	**17 52 59.1**	**+0.3**
XOR	**Xorichti**	**0.09**	**15**	P	**Pg**	**17 52 57.1**	**+0.4**
XOR				S	**Sg**	**17 52 59.1**	**+0.3**
AOS	**Alonnisos**	**0.57**	**101**	P	**Pg**	**17 53 04.5**	**-0.4**
AOS				S	**Sg**	**17 53 12.1**	**-0.4**
AOS	**Alonnisos**	**0.57**	**101**	P	**Pg**	**17 53 04.5**	**-0.4**
AOS				S	**Sg**	**17 53 12.1**	**-0.4**
LKR	**Lokris**	**0.64**	**191**	*e*Pn	**Pn**	**17 53 05.7**	**-2.9**
LKR				*e*Sn	**Sg**	**17 53 15.7**	**+0.9**
LKR	**Lokris**	**0.64**	**191**	*e*PN	**Pn**	**17 53 05.7**	**-2.9**
LKR				*e*SN	**Sg**	**17 53 15.7**	**+0.9**
LKR	**Lokris**	**0.64**	**191**	P	**Pg**	**17 53 05.6**	**-0.8**
LKR				S	**Sg**	**17 53 14.7**	**-0.1**
LKR	**Lokris**	**0.64**	**191**	P	**Pg**	**17 53 05.6**	**-0.8**
LKR				S	**Sg**	**17 53 14.7**	**-0.1**
AGG	**Agios Georgios**	**0.70**	**248**	*e*Pb	**Pb**	**17 53 06.8**	**-1.0**
AGG	**Agios Georgios**	**0.70**	**248**	*e*PB	**Pb**	**17 53 06.8**	**-1.0**
AGG	**Agios Georgios**	**0.70**	**248**	P	**Pg**	**17 53 06.9**	**-0.5**
AGG				S	**Sg**	**17 53 17.3**	**+0.8**
AGG	**Agios Georgios**	**0.70**	**248**	P	**Pg**	**17 53 06.9**	**-0.5**
AGG				S	**Sg**	**17 53 17.3**	**+0.8**
THL	**Klokotos Trika**	**0.93**	**288**	*e*PN	**Pb**	**17 53 11.4**	**-0.4**
THL				*e*SN	**Sn**	**17 53 26.1**	**+0.4**
THL	**Klokotos Trika**	**0.93**	**288**	P	**Pb**	**17 53 11.4**	**-0.4**
THL	**Klokotos Trika**	**0.93**	**288**	P	**Pb**	**17 53 11.4**	**-0.4**
THL				*e*Sn	**Sn**	**17 53 26.1**	**+0.4**
LIT	**Litokhoron**	**0.97**	**328**	*e*Pn	**Pn**	**17 53 11.2**	**-1.8**
LIT	**Litokhoron**	**0.97**	**328**	*e*PN	**Pn**	**17 53 11.2**	**-1.8**
LIT	**Litokhoron**	**0.97**	**328**	P	**Pb**	**17 53 11.9**	**-0.5**
LIT				S	**Sb**	**17 53 26.7**	**+1.6**
LIT	**Litokhoron**	**0.97**	**328**	*e*Pn	**Pn**	**17 53 11.2**	**-1.8**
LIT	**Litokhoron**	**0.97**	**328**	P	**Pb**	**17 53 11.9**	**-0.5**
LIT				S	**Sb**	**17 53 26.7**	**+1.6**
PTL	**Penteli**	**1.35**	**156**	*e*Pn	**Pn**	**17 53 18.9**	**+0.6**
PTL	**Penteli**	**1.35**	**156**	*e*PN	**Pn**	**17 53 18.9**	**+0.6**
PTL	**Penteli**	**1.35**	**156**	*e*Pn	**Pn**	**17 53 18.9**	**+0.6**
ATH	**Athens Observa**	**1.38**	**161**	*e*Pn	**Pn**	**17 53 18.2**	**-0.5**
ATH	**Athens Observa**	**1.38**	**161**	*e*PN	**Pn**	**17 53 18.2**	**-0.5**
ATH	**Athens Observa**	**1.38**	**161**	*e*Pn	**Pn**	**17 53 18.2**	**-0.5**
VLY	**Voula,Athens**	**1.51**	**161**	*e*Pn	**Pn**	**17 53 21.8**	**+1.3**
VLY				*e*Sn	**Sn**	**17 53 41.3**	**+1.3**
VLY	**Voula,Athens**	**1.51**	**161**	*e*PN	**Pn**	**17 53 21.8**	**+1.3**
VLY				*e*SN	**Sn**	**17 53 41.3**	**+1.3**
VLY	**Voula,Athens**	**1.51**	**161**	*e*Pn	**Pn**	**17 53 21.8**	**+1.3**
VLY				*e*Sn	**Sn**	**17 53 41.3**	**+1.3**
NAIG	**Nisos Aigina**	**1.54**	**170**	*e*Pn	**Pn**	**17 53 21.1**	**+0.2**
NAIG	**Nisos Aigina**	**1.54**	**170**	*e*PN	**Pn**	**17 53 21.1**	**+0.2**
NAIG	**Nisos Aigina**	**1.54**	**170**	*e*Pn	**Pn**	**17 53 21.1**	**+0.2**

*ISCJB **02** 17:58:27.2±0.6,12°7N±0°1×45°0W±0°1,h10km,mb4.2/12, MS3.6/8,Error ellipse: s-maj=19.7km s-min=12.2km az=144.9*
*IDC **02** 17:58:27.4±0.8,12°71N×44°98W,h0km,mb4.0/9, mb1 4.2/9,mb1mx3.9/24,mbtmp4.0/9,MS3.6/8,Ms1 3.6/8, ms1mx3.4/20,Error ellipse: s-maj=37.7km s-min=17.6km az=126.0*
*NEIC **02** 17:58:28.8±0.5,12°67N×44°93W,h10km,mb4.3/5,Error ellipse: s-maj=15.9km s-min=10.5km az=142.0*

ISC 02 17:58:29.1±0.6,12°7N±0°1×44°9W±0°1,h10km,n23, σ0§69/17,mb4.2/12,MS3.6/8,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDF	**Fort de France**	**15.88**	**279**	*e*Pn	**Pn**	**18 02 12.5**	**-0.4**
	205nm,1.3s						
ROSC	**El Rosal**	**30.04**	**258**	LR	LR	18 15 55.7	
	comp=Z,920nm,21.4s,MS3.4,baz=209,slow=35						
SIV	**San Ignacio**	**32.66**	**210**	P	**P**	**18 05 02.3**	**+0.7**
	3.4nm,0.9s,mb4.3,baz=55,slow=11,SNR=16						
LPAZ	**La Paz**	**36.81**	**219**	*e*P	**P**	**18 05 38.0**	**+0.5**
	6.1nm,0.9s,mb4.4						
LPAZ				LR	LR	18 21 02.1	
LPAZ	**La Paz**	**36.81**	**219**	P	**P**	**18 05 38.1**	**+0.6**
	4.4nm,0.9s,mb4.3,baz=27,slow=8.3,SNR=17						
LPAZ				LR	LR	18 21 02.1	
	comp=Z,191nm,18.9s,MS3.9,baz=278,slow=37						
DBIC	**Dimbokro**	**39.93**	**95**	LR	LR	18 20 29.9	
	comp=Z,55nm,18.1s,MS3.4,baz=266,slow=33						
ESDC	**Sonseca Array**	**44.97**	**46**	P	**P**	**18 06 44.4**	**-0.3**
	1.2nm,0.8s,mb3.8,baz=246,slow=8.8,SNR=6.3						
ESDC				LR	LR	18 21 21.4	
	comp=Z,73nm,18.2s,MS3.6,baz=190,slow=30						
TORD	**Torodi Ar. Bea**	**45.41**	**84**	LR	LR	18 23 22.7	
	comp=Z,83nm,19.4s,MS3.7,baz=245,slow=33						
SCHQ	**Schefferville**	**45.42**	**342**	LR	LR	18 23 02.9	
	comp=Z,55nm,20.0s,MS3.5,baz=82,slow=32						
ESK	**Eskdalemuir**	**53.46**	**28**	P	**P**	**18 07 48.7**	**-0.7**
	121nm,2.1s,mb5.5						
TXAR	**Lajitas Array**	**56.72**	**297**	P	**P**	**18 08 12.5**	**-0.8**
	0.8nm,0.9s,mb3.8,baz=121,slow=7.4,SNR=8.8						
GDL2	**Guadalupe Moun**	**57.54**	**300**	*e*P	**P**	**18 08 19.2**	**0.0**
	1.0nm,0.6s,mb4.0						
PLCA	**Paso Flores**	**58.21**	**203**	P	**P**	**18 08 21.8**	**-1.7**
	3.0nm,0.9s,mb4.3						
PLCA	**Paso Flores**	**58.21**	**203**	P	**P**	**18 08 22.4**	**-1.2**
	2.1nm,0.8s,mb4.2,baz=9.5,slow=12,SNR=3.5						
SDCO	**Great Sand Dun**	**59.12**	**306**	P	**P**	**18 08 31.2**	**+1.1**
	1.5nm,1.0s,mb4.0						
CLL	**Collm**	**60.33**	**38**	*e*P	**P**	**18 08 38.0**	**-0.1**
NOA	**NORSAR Array B**	**62.92**	**27**	LR	LR	18 30 23.0	
	comp=Z,32nm,21.3s,MS3.5,baz=270,slow=30						
HFS	**Hagfors**	**63.69**	**28**	P	**P**	**18 09 00.6**	**+0.1**
	3.5nm,0.8s,mb4.5,baz=223,slow=8.1,SNR=5.2						
FINES	**FINESS Array B**	**69.88**	**29**	LR	LR	18 34 20.7	
	comp=Z,41nm,18.5s,MS3.7,baz=215,slow=31						
BRTR	**Keskin Array B**	**73.26**	**52**	P	**P**	**18 10 00.3**	**-0.5**
	0.6nm,0.9s,mb3.5,baz=235,slow=4.4,SNR=3.8						
ILAR	**Eielson Array**	**83.65**	**335**	P	**P**	**18 10 57.9**	**+0.2**
	0.7nm,0.8s,mb3.8,baz=77,slow=4.6,SNR=8.2						
AKTK	**Aktyubinsk**	**88.40**	**39**	P	**P**	**18 11 22.3**	**+0.8**
AKTO	**Aktyubinsk**	**88.40**	**39**	P	**P**	**18 11 22.3**	**+0.8**
	0.6nm,0.5s,mb4.0,baz=252,slow=6.4,SNR=3.6						

DJA 02 18:09:37,0°55S×122°99E,h38km,MLv3.6/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.54**	**204**	P	Pn	18 09 49.3	+1.1
LUWI				S	Sn	18 09 56.1	+0.1
APSI	**Ampana**	**1.39**	**255**	P	Pn	18 09 59.9	0.0
APSI				S	Sn	18 10 18.7	+1.7
MRSI	**Marisa**	**1.46**	**314**	P	Pn	18 10 01.3	+0.4
MRSI				S	Sn	18 10 20.3	+1.4

CASC 02 18:29:47.6±2.5,13°41N×90°77W,h15km±9km,MD3.8, 1C-6D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**0.82**	**22**	*e*P	Pg	18 30 03.8	+0.3
PCG	**Pacaya**	**0.99**	**9**	*e*P	Pb	18 30 06.3	-0.2
FUG	**Fuego 3**	**1.03**	**356**	*e*P	Pb	18 30 06.5	-0.7
FG6		**1.15**	**354**	*e*P	Pn	18 30 08.2	-1.0
FG6				*e*S	Sb	18 30 22.6	-1.3
SBLS	**San Blas**	**1.19**	**69**	*e*P	Pn	18 30 08.7	-1.1
JAT	**Jato**	**1.23**	**317**	*e*P	Pn	18 30 09.5	-0.9
NBG	**Las Nubes**	**1.24**	**19**	*e*P	Pn	18 30 10.8	+0.3
RBDL	**Robledal**	**1.26**	**56**	*e*P	Pn	18 30 10.0	-0.8
TP2	**Tecpan 2**	**1.39**	**350**	*e*P	Pn	18 30 12.3	-0.1
BOQS	**Boqueron**	**1.48**	**77**	*e*P	Pn	18 30 13.4	-0.4
BOQS				*e*S	Sn	18 30 34.1	+1.2
SNET	**Serv Nac Est T**	**1.52**	**79**	*e*S	Sn	18 30 32.1	-1.8
LFRS	**El Faro**	**1.67**	**83**	*e*P	Pn	18 30 16.0	-0.4
LFRS				*e*S	Sn	18 30 38.8	+1.1
MTO2	**Montecristo 2**	**1.68**	**54**	*e*P	Pn	18 30 16.0	-0.6
MTO2				*e*S	Sn	18 30 38.5	+0.6
SNVI	**San Vicente**	**1.89**	**84**	*e*P	Pn	18 30 19.8	+0.4
SNVI				*e*S	Sn	18 30 44.7	+1.7
MRL	**Marmol**	**1.95**	**32**	*e*P	Pn	18 30 21.3	+1.1
MRL				*e*S	Sn	18 30 48.4	+4.0
VSM	**San Miguel**	**2.43**	**89**	*e*P	Pn	18 30 27.7	+0.9
BLLM	**Bellamira**	**2.46**	**89**	*e*P	Pn	18 30 27.6	+0.3
BLLM				*e*S	Sn	18 30 58.6	+1.5
CAHU	**Cacacuatique**	**2.51**	**82**	*e*P	Pn	18 30 27.8	-0.2
CNCH	**Conchagua**	**2.86**	**92**	*e*P	Pn	18 30 33.0	+0.2

*IDC **02** 19:06:58.4±0.9,31°13S×13°35W,h0km,mb4.2/7, mb1 4.2/7,mb1mx3.9/17,mbtmp4.2/7,MS3.8/11, Ms1 3.8/11,ms1mx3.6/21,Error ellipse: s-maj=24.8km s-min=23.5km az=63.0*
*ISCJB **02** 19:06:59.0±0.6,31°35S±0°09×13°2W±0°1,h10km, mb4.3/14,MS3.8/11,Error ellipse: s-maj=13.5km s-min=12.9km az=23.5*
*NEIC **02** 19:06:60.0±0.5,31°21S×13°29W,h10km,mb4.4/8,Error ellipse: s-maj=13.7km s-min=12.1km az=117.0*

ISC 02 19:07:00.9±0.6,31°32S±0°09×13°2W±0°1,h10km,n32, σ1§02/22,mb4.3/14,MS3.8/11,1C,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRIS	**Tristan da Cun**	**5.78**	**173**	*e*Pn	**Pn**	**19 08 25.9**	**-0.8**
SUR	**Sutherland**	**28.85**	**101**	LR	LR	19 21 46.6	
	comp=Z,209nm,20.2s,MS3.7,baz=256,slow=31						
TSUM	**Tsumeb**	**30.24**	**74**	*e*P	**P**	**19 13 12.1**	**+0.1**
	8.3nm,1.1s,mb4.4						
TSUM	**Tsumeb**	**30.24**	**74**	LR	LR	19 23 36.0	
	comp=Z,301nm,18.0s,MS4.0,baz=144,slow=33						
BOSA	**Boshof**	**33.32**	**95**	P	**P**	**19 13 39.1**	**+0.1**
	3.3nm,0.9s,mb4.3,baz=244,slow=11,SNR=3.2						
BOSA				LR	LR	19 24 33.6	
	comp=Z,153nm,18.2s,MS3.8,baz=346,slow=32						
LBTB	**Lobatse**	**34.65**	**89**	*e*P	**P**	**19 13 50.2**	**-0.4**
	24nm,1.4s,mb4.9						
LBTB				LR	LR	19 25 24.9	
LBTB	**Lobatse**	**34.65**	**89**	P	**P**	**19 13 51.3**	**+0.7**
	5.3nm,1.0s,mb4.4,baz=254,slow=5.7,SNR=3.8						
LBTB				LR	LR	19 25 24.9	
	comp=Z,154nm,19.5s,MS3.8,baz=276,slow=32						
LSZ	**Lusaka**	**40.97**	**77**	*e*P	**P**	**19 14 44.9**	**+0.8**
	5.7nm,1.0s,mb4.2						
LSZ				LR	LR	19 29 32.1	
LSZ	**Lusaka**	**40.97**	**77**	P	**P**	**19 14 45.1**	**+1.1**
	2.7nm,0.7s,mb4.0,baz=247,slow=4.5,SNR=7.0						
LSZ				LR	LR	19 29 32.1	
	comp=Z,201nm,20.9s,MS4.0,baz=266,slow=33						
USHA	**Ushuaia**	**45.23**	**222**	LR	LR	19 32 19.0	
	comp=Z,92nm,18.5s,MS3.8,baz=336,slow=34						
SIV	**San Ignacio**	**46.07**	**278**	P	**P**	**19 15 24.2**	**-1.0**
	1.2nm,0.7s,mb3.9,baz=118,slow=14,SNR=6.6						
TORD	**Torodi Ar. Bea**	**46.47**	**20**	P	**P**	**19 15 26.2**	**-2.1**
TORD				LR	LR	19 30 02.0	
TORD	**Torodi Ar. Bea**	**46.47**	**20**	P	**P**	**19 15 26.2**	**-2.1**
	3.2nm,1.1s,mb4.2,baz=192,slow=7.9,SNR=6.0						
TORD				LR	LR	19 30 02.0	
	comp=Z,84nm,21.3s,MS3.7,baz=220,slow=30						
PLCA	**Paso Flores**	**46.60**	**242**	LR	LR	19 30 41.6	
	comp=Z,94nm,18.5s,MS3.8,baz=94,slow=31						
SYO	**Syowa Base**	**48.01**	**157**	*e*P	**P**	**19 15 38.6**	**-1.1**
LPAZ	**La Paz**	**51.94**	**273**	P	**P**	**19 16 10.9**	**+0.6**
	4.8nm,1.3s,mb4.3						
LPAZ	**La Paz**	**51.94**	**273**	LR	LR	19 36 48.4	
	comp=Z,87nm,20.9s,MS3.8,baz=265,slow=35						
MAW	**Mawson**	**56.17**	**153**	*e*P	**P**	**19 16 41.0**	**+0.6**
	0.7nm,1.0s,mb3.6						
MAW	**Mawson**	**56.17**	**153**	P	**P**	**19 16 41.4**	**+1.0**
	3.9nm,1.0s,mb4.4,baz=267,slow=4.4,SNR=5.7						
KMBO	**Kilima Mbogo**	**56.30**	**68**	LR	LR	19 39 35.1	
	comp=Z,89nm,19.8s,MS3.9,baz=91,slow=35						
QSPA	**South Pole Qui**	**58.92**	**180**	*e*P	**P**	**19 17 00.3**	**+0.7**
	7.9nm,0.9s,mb4.7						
ANWB	**Willy Bob**	**67.43**	**309**	P	**P**	**19 17 59.3**	**+2.4**
ROSC	**El Rosal**	**68.39**	**290**	LR	LR	19 48 10.2	
	comp=Z,84nm,18.4s,MS4.0,baz=171,slow=36						
MSEY	**Mahe Island**	**69.39**	**83**	P	**P**	**19 18 09.8**	**+0.4**
	53nm,1.2s,mb5.3						
KEST	**Kesra**	**69.98**	**19**	P	**P**	**19 18 09.0**	**-3.4**
KEST

border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.64**	**220**	*e*Pn	**Pn**	**19 29 16.3**	**-0.1**
KBL				*e*Sn	**Sn**	**19 29 38.3**	**-13**
CEP	**Cherat**	**2.83**	**166**	⇓P	**Pn**	**19 29 20.3**	**+1.7**
CEP				S	**Sn**	**19 29 50.0**	**-5.8**
CHCP	**Chirah Chowk**	**3.42**	**148**	⇓P	**Pn**	**19 29 27.8**	**+2.3**
THW	**Thamme Wali**	**3.82**	**172**	⇓P	**Pn**	**19 29 31.6**	**+1.1**
THW				S	**Sn**	**19 30 15.0**	**-2.1**
KSH	**Kashi**	**4.83**	**51**	Pn	**Pn**	**19 29 40.4**	**-2.7**
KSH				Sn	**Sn**	**19 30 33.2**	**-6.9**
KSH	comp=N,24nm,0.5s			smax			
KSH	comp=E,21nm,0.5s			smax			
AML	**Almayashu**	**5.89**	**19**	*e*Pn	**Pn**	**19 29 57.7**	**+1.0**
AML	comp=E,50nm,0.4s			*e*Sn	**Sn**	**19 31 02.2**	**-2.4**
UCH	**Uchtor**	**6.22**	**24**	*e*Pn	**Pn**	**19 30 02.0**	**+1.0**
EKS2	comp=E,5.2nm,0.6s **Erkin-Say**	**6.41**	**18**	*e*Pn	**Pn**	**19 30 04.1**	**+0.7**
EKS2	comp=E,7.6nm,0.5s			*e*Sn	**Sn**	**19 31 09.4**	**-7.3**
KK31	**Karatay Array**	**6.53**	**356**	⇑Pn	**Pn**	**19 30 04.6**	**-0.3**
KK31	comp=E,0.9nm,0.3s,baz=186,slow=13,SNR=78			⇑Sn	**Sn**	**19 31 14.2**	**-5.2**
AAK	comp=E,6.0nm,0.5s,baz=188,slow=24,SNR=4.2 **Ala-Archa**	**6.59**	**22**	*e*Pn	**Pn**	**19 30 05.9**	**+0.3**
AAK				S	**Sn**	**19 31 20.9**	**+0.1**
AAK				*e*Sn	**Sn**	**19 31 21.2**	**+0.4**
AAK	**Ala-Archa**	**6.59**	**22**	P	**Pn**	**19 30 06.6**	**+0.9**
AAK	comp=E,3.1nm,0.3s,baz=207,slow=6.3,SNR=7.3			S	**Sn**	**19 31 20.9**	**+0.1**
MK31	comp=E,0.5nm,0.3s,baz=142,slow=21,SNR=9.5 **Makanchi Array**	**13.18**	**36**	*e*Pn	**Pn**	**19 31 29.7**	**-0.8**
MKAR	**Makanchi Array**	**13.18**	**36**	P	**Pn**	**19 31 31.9**	**+1.5**
AB31	comp=E,0.1nm,0.3s,baz=217,slow=13,SNR=4.7 **Akbulak array**	**15.05**	**331**	P	**Pn**	**19 31 53.4**	**-0.1**
ABKAR	comp=E,0.3nm,0.3s,baz=136,slow=18,SNR=12 **Akbulak array**	**15.05**	**331**	P	**Pn**	**19 31 52.6**	**-1.0**
BVAR	comp=E,0.7nm,0.4s **Borovoye Array**	**16.45**	**358**	P	**Pn**	**19 32 10.6**	**+0.2**
AKTK	comp=E,0.3nm,0.3s,baz=164,slow=9.8,SNR=5.6 **Aktyubinsk**	**16.75**	**330**	P	**Pn**	**19 32 13.6**	**-0.4**
AKTO	**Aktyubinsk**	**16.75**	**330**	P	**Pn**	**19 32 13.6**	**-0.4**
ZALV	comp=E,0.4nm,0.3s,baz=144,slow=10,SNR=12 **Zalesovo Beam**	**19.81**	**24**	P	**P**	**19 32 47.4**	**+1.4**
ARU	comp=E,0.2nm,0.3s,baz=248,slow=12,SNR=4.0 **Arti**	**21.58**	**341**	*e*P	**P**	**19 33 00.7**	**-4.1**
FINES	comp=E,1.9nm,0.6s,mb3.8 **FINESS Array B**	**37.46**	**326**	P	**P**	**19 35 25.2**	**+0.5**
ARCES	comp=E,0.9nm,0.8s,mb3.3,baz=108,slow=6.2,SNR=5.0 **ARCESS Array B**	**41.10**	**338**	P	**P**	**19 35 55.4**	**+0.6**
WRA	comp=E,1.4nm,0.7s,mb3.5,baz=117,slow=9.7,SNR=5.9 **Warramunga Arr**	**81.97**	**122**	P	**P**	**19 40 27.0**	**-1.6**
ASAR	comp=E,0.3nm,0.6s,mb3.1,baz=325,slow=4.8,SNR=5.0 **Alice Springs**	**84.23**	**125**	P	**P**	**19 40 39.6**	**-0.5**
	comp=E,0.2nm,0.6s,mb3.0,baz=312,slow=5.8,SNR=5.7						

*ISCJB **02** 19:40:01.9±1.6,51°.17N±0°.07×174°.04W±0°.06,h21^{km}±9^{km}, mb4.5/72,MS3.8/3,Error ellipse: s-maj=12.3km s-min=5.7km az=172.5*

*BJI **02** 19:40:05.5,51°.80N×174°.97W,h20^{km}, mB4.8/14, mb4.7/27,Ms4.5/7,Ms7 4.3/7*

*NEIC **02** 19:40:07.4±0.5,51°.39N×174°.07W,mb4.5/42, ML3.6(AEIC),Error ellipse: s-maj=13.6km s-min=5.5km az=163.0*

*IDC **02** 19:40:07.2±1.0,51°.46N×173°.94W,h44^{km}±6^{km},mb3.8/15, mb1 4.0/17,mb1mx3.9/25,mbtmp3.8/17,ML4.3/2,MS3.1/1, Ms1 3.1/1,ms1mx2.4/31,Error ellipse: s-maj=25.2km s-min=16.8km az=166.0*

*SZGRF **02** 19:40:16.6,52°.83N×175°.73W,h46^{km},mb4.7,Andreanof Islands, Aleutian Islands, United States*

ISC 02 19:40:04.7±1.8,51°.26N±0°.07×174°.05W±0°.06, h26^{km}±10^{km},h36^{km}±3.1^{km};pP-P,n139,σ0.97/138, mb4.5/72,MS3.8/3,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.95**	**355**	P	**Pn**	**19 40 21.4**	**-1.0**
ATKA				S	**Sb**	**19 40 35.0**	**+0.4**
GSTR	**Great Sitkin T**	**1.51**	**305**	*e*Pn	**Pn**	**19 40 29.0**	**-1.0**
GSTR				*e*Sn	**Sn**	**19 40 49.6**	**+0.9**
NIKO	**Nikolski**	**3.63**	**60**	P	**Pn**	**19 40 50.0**	**+0.8**
AMKA	**Amchitka**	**4.17**	**274**	P	**Pn**	**19 41 05.8**	**-0.8**
UNV	**Unalaska Valle**	**5.28**	**58**	P	**Pn**	**19 41 22.3**	**+0.4**
AKUT	**Akutan**	**5.80**	**57**	*e*Pn	**Pn**	**19 41 36.5**	**+7.6**
SPIA	**Saint Paul Isl**	**6.34**	**19**	P	**Pn**	**19 41 37.8**	**+1.5**
FX1	**Attu Island--F**	**8.05**	**287**	P	**Pn**	**19 42 00.9**	**+1.2**
SDPT	**Sand Point**	**9.10**	**58**	P	**Pn**	**19 42 16.9**	**+2.8**
OHAK	**Old Harbor** 7.5nm,0.6s	**13.50**	**56**	*e*Pn	**Pn**	**19 43 12.3**	**-2.0**
KDAK	**Kodiak Island** 0.6nm,0.3s,baz=211,slow=8.0,SNR=5.6	**14.04**	**54**	P	**Pn**	**19 43 20.4**	**-1.2**
TNA	**Tin City**	**14.69**	**10**	Pn	**Pn**	**19 43 31.1**	**+0.7**
TTA	**Tatalina** 5.8nm,0.8s	**15.19**	**33**	*e*Pn	**Pn**	**19 43 42.5**	**+5.4**
SEW	**Seward**	**16.37**	**48**	*e*Pn	**Pn**	**19 43 50.7**	**-1.7**
PPLA	**Purkeypile** 12nm,1.0s	**16.54**	**37**	*e*Pn	**Pn**	**19 43 56.8**	**+2.3**
RC01	**Rabbit Creek A**	**16.63**	**44**	Pn	**Pn**	**19 43 56.5**	**+0.8**
BPAW	**Bear Paw Mtn.** 4.4nm,0.7s	**17.68**	**35**	*e*P	**Pn**	**19 44 09.7**	**+1.0**
BMRM	**Bremner River** 7.4nm,0.7s	**18.91**	**48**	P	**Pn**	**19 44 21.1**	**-2.7**
COLA	**College**	**19.24**	**35**	*e*P	**Pn**	**19 44 28.2**	**+0.5**
PAX	**Paxson**	**19.25**	**42**	Pn	**Pn**	**19 44 26.6**	**-1.3**
ILAR	**Eielson Array** 0.8nm,0.3s,baz=226,slow=9.1,SNR=35	**19.53**	**36**	P	**Pn**	**19 44 27.6**	**-3.7**
COLD	**Coldfoot** 5.4nm,0.8s	**19.90**	**28**	*e*P	**Pn**	**19 44 34.6**	**-1.0**
EGAK	**Eagle** 26nm,0.8s,mb4.7	**21.73**	**39**	*e*P	**P**	**19 44 53.3**	**-0.3**
DAWY	**Dawson**	**22.19**	**41**	*e*P	**P**	**19 44 57.3**	**-1.2**
SIT	**Sitka** 12nm,0.8s,mb4.4	**23.16**	**60**	P	**P**	**19 45 08.2**	**-0.6**
INK	**Inuvik** 4.9nm,1.1s,mb4.0	**25.88**	**34**	*e*P	**P**	**19 45 31.8**	**-2.1**
INK	**Inuvik** 1.6nm,0.6s,mb3.7,baz=18,slow=6.4,SNR=2.4	**25.88**	**34**	P	**P**	**19 45 30.5**	**-3.4**
DLBC	**Dease Lake**	**25.94**	**57**	*e*P	**P**	**19 45 36.1**	**+1.6**
DLBC	**Dease Lake** 1.9nm,0.6s,mb3.8,baz=288,slow=0.7,SNR=6.2	**25.94**	**57**	P	**P**	**19 45 37.7**	**+3.2**
CN2	**Changchun**	**40.48**	**284**	*e*P	**P**	**19 47 39.2**	**-1.8**
NVAR	**Mina Array Bea** 0.9nm,0.7s,baz=289,slow=9.6,SNR=5.7	**40.60**	**86**	pP	pP	19 47 57.6	+7.9
KSRS	**Korea Array** 1.8nm,0.9s,mb3.8,baz=53,slow=7.6,SNR=4.5	**42.62**	**274**	P	**P**	**19 47 59.1**	**+0.5**
KSRS				LR	LR	20 06 32.7	
BJI	comp=Z,20nm,18.4s,MS3.0,baz=341,slow=37 **Beijing**	**48.30**	**285**	P	**P**	**19 48 42.9**	**-0.6**
BJI	comp=Z,8.0nm,0.8s,mb4.8			pmax	pmax		
ULN	**Ulaanbaatar** comp=Z,2.2nm,0.8s,mb4.2	**48.96**	**299**	*e*P	**P**	**19 48 46.9**	**-1.5**
SONM	**Songino Array** comp=Z,2.7nm,0.9s,mb4.3,baz=50,slow=7.6,SNR=20	**49.34**	**299**	P	**P**	**19 48 50.8**	**-0.5**
HHC	**Hu-ho-hao-te**	**50.57**	**289**	*e*P	**P**	**19 49 00.8**	**0.0**
HHC				pP	pP	19 49 08.0	-0.7
HHC				sP	sP	19 49 11.3	-0.5
HHC				PcP	PcP	19 50 19.8	+1.5
HHC				PP	PP	19 50 56.9	+0.4
HHC				*e*S	**S**	**19 56 10.8**	**-2.6**
HHC				sS	sS	19 56 22.0	-4.4
HHC				ScS	ScS	19 58 46.1	-3.6
HHC				SS	SS	19 59 40.0	-7.2
HHC	comp=Z,13nm,0.7s,mb5.0			pmax	pmax		
HHC	comp=Z,57nm,3.8s			pmax	pmax		
HHC	comp=N,120nm,11.8s,MS4.2			LR	LR		
HHC	comp=E,73nm,12.7s,MS4.2			LR	LR		
HHC	comp=Z,54nm,14.3s,MS3.7			LR	LR		
SPITS	**Spitsbergen Ar** comp=Z,1.1nm,0.4s,mb4.1,baz=20,slow=6.2,SNR=7.8	**50.67**	**357**	P	**P**	**19 49 00.8**	**-0.3**
NJ2	**Nanjing**	**51.79**	**275**	*e*P	**P**	**19 49 10.9**	**+0.8**
NJ2	comp=Z,10.0nm,0.5s,mb5.0			pmax	pmax		
TXAR	**Lajitas Array** comp=Z,0.4nm,0.8s,mb3.5,baz=321,slow=8.1,SNR=4.9	**55.71**	**85**	P	**P**	**19 49 38.0**	**-0.8**
TXAR				pP	pP	19 49 51.1	+4.3
ZALV	comp=Z,0.5nm,0.7s,baz=309,slow=6.5,SNR=5.8 **Zalesovo Beam** comp=Z,0.8nm,0.6s,baz=43,slow=4.8,SNR=4.5	**56.24**	**316**	PcP	PcP	19 50 40.1	+0.6
ZALV				pPcP		19 50 53.8	
LZH	comp=Z,0.8nm,0.5s,baz=31,slow=4.4,SNR=4.9 **Lanzhou**	**58.26**	**289**	*e*P	**P**	**19 49 55.0**	**-1.8**
LZH				pP	pP	19 50 02.5	-2.3
LZH				sP	sP	19 50 06.1	-1.8
LZH				*e*PP	PP	19 52 05.0	-0.5
LZH	comp=Z,20nm,1.3s,mb5.0			pmax	pmax		
LZH	comp=Z,49nm,6.3s			pmax	pmax		
LZH	comp=E,290nm,15.2s			LR	LR		
LZH	comp=Z,340nm,18.3s,MS4.5			LR	LR		
KEV	**Kevo** comp=Z,5.5nm,0.8s,mb4.6	**58.32**	**352**	*e*P	**P**	**19 49 55.6**	**-1.1**
GTA	**Gaotai**	**58.35**	**295**	*e*P	**P**	**19 49 57.4**	**0.0**
GTA				pP	pP	19 50 05.0	-0.4
GTA				sP	sP	19 50 08.1	-0.4
GTA	comp=Z,5.0nm,1.0s,mb4.5			pmax	pmax		
ARCES	**ARCESS Array B**	**58.67**	**352**	P	**P**	**19 49 57.9**	**-1.2**
ARCES				pP	pP	19 50 11.1	+3.9
ARCES				PcP	PcP	19 50 49.0	+0.1
ARCES	**ARCESS Array B** comp=Z,1.8nm,0.5s,mb4.4,baz=32,slow=7.4,SNR=21	**58.67**	**352**	P	**P**	**19 49 57.9**	**-1.2**
ARCES				pP	pP	19 50 11.1	+3.9
ARCES	comp=Z,3.0nm,0.8s,baz=24,slow=7.2,SNR=1.9			PcP	PcP	19 50 49.0	+0.1
KURK	comp=Z,3.8nm,0.7s,baz=3.8,slow=5.4,SNR=4.6 **Kurchatov** comp=Z,1.3nm,0.5s,mb4.3	**61.22**	**316**	*e*P	**P**	**19 50 15.2**	**-1.7**
WMQ	**Urumqi**	**61.87**	**306**	*e*P	**P**	**19 50 22.7**	**+1.3**
WMQ				pP	pP	19 50 30.3	+0.8
WMQ				sP	sP	19 50 33.6	+1.0
WMQ	comp=Z,6.0nm,1.0s,mb4.7			pmax	pmax		
WMQ	comp=Z,72nm,4.8s			pmax	pmax		
CD2	**Chengdu**	**61.90**	**285**	P	**P**	**19 50 22.7**	**+0.9**
CD2	comp=Z,10.0nm,0.6s,mb5.1			pmax	pmax		
CD2	comp=Z,30nm,4.8s			pmax	pmax		
LONY	**Lake Ozonia** comp=Z,6.1nm,0.8s,mb4.8	**61.92**	**53**	*e*P	**P**	**19 50 20.8**	**-0.9**
MK31	**Makanchi Array**	**62.40**	**311**	*e*P	**P**	**19 50 23.4**	**-1.6**
MKAR	**Makanchi Array** comp=Z,0.7nm,0.4s,mb4.2,baz=46,slow=5.9,SNR=20	**62.40**	**311**	P	**P**	**19 50 23.7**	**-1.2**
BVAR	**Borovoye Array** comp=Z,2.9nm,0.6s,mb4.6,baz=45,slow=7.8,SNR=14	**62.86**	**322**	P	**P**	**19 50 27.3**	**-0.5**
BRVK	**Borovoye**	**62.88**	**322**	P	**P**	**19 50 24.9**	**-3.1**
GYA	**Guiyang**	**63.29**	**280**	*e*P	**P**	**19 50 31.0**	**-0.1**
GYA	comp=Z,10.0nm,1.0s,mb4.9			pmax	pmax		
FINES	**FINESS Array B** comp=Z,2.0nm,0.8s,mb4.2,baz=8.2,slow=7.9,SNR=7.5	**66.50**	**350**	P	**P**	**19 50 50.2**	**-1.3**
FINES				pP	pP	19 51 03.3	+3.7
KMI	comp=Z,1.7nm,0.6s,baz=5.8,slow=5.8,SNR=3.8 **Kunming**	**66.69**	**281**	P	**P**	**19 50 51.8**	**-1.4**
KMI				pP	pP	19 51 00.2	-1.2
KMI				sP	sP	19 51 02.9	-1.5
KMI	comp=Z,3.0nm,1.0s,mb4.3			pmax	pmax		
NOA	**NORSAR Array B** comp=Z,0.6nm,0.4s,mb4.0,baz=3.9,slow=6.7,SNR=6.5	**67.97**	**357**	P	**P**	**19 51 00.4**	**-0.4**
NOA				pP	pP	19 51 12.9	+4.0
EKS2	comp=Z,1.4nm,0.8s,baz=1.8,slow=6.1,SNR=3.1 **Erkin-Say** comp=Z,4.5nm,0.8s,mb4.5	**69.49**	**313**	*e*P	**P**	**19 51 10.7**	**+0.1**
ABKAR	**Akbulak array** comp=Z,1.1nm,0.4s,mb4.1	**69.78**	**326**	*e*P	**P**	**19 51 11.3**	**-0.9**
LSA	**Lhasa** comp=Z,11nm,0.8s,mb4.8	**70.26**	**293**	*e*P	**P**	**19 51 17.3**	**+1.8**
LSA				*e*		19 51 31.0	
CMAR	**Chiang Mai Arr** comp=Z,2.2nm,0.9s,mb4.1,baz=25,slow=7.3,SNR=10	**73.98**	**280**	P	**P**	**19 51 38.0**	**+0.1**
GUN	**Gumba**	**74.64**	**295**	*e*P	**P**	**19 51 42.5**	**+0.9**
JIRN	**Jiri**	**74.65**	**295**	*e*P	**P**	**19 51 43.1**	**+1.4**
RAMN	**Ramite** comp=Z,37nm,0.8s,mb5.3	**74.96**	**294**	*e*P	**P**	**19 51 44.2**	**+0.7**
KKN	**Kakani**	**75.07**	**296**	*e*P	**P**	**19 51 44.5**	**+0.4**
BSEG	**Bad Segeberg** comp=Z,12nm,0.9s,mb4.8	**75.11**	**357**	*e*P	**P**	**19 51 44.4**	**+0.5**
GKN	**Gorkha** comp=Z,29nm,0.9s,mb5.2	**75.27**	**296**	*e*P	**P**	**19 51 45.7**	**+0.4**
DMN	**Daman** comp=Z,15nm,0.8s,mb5.0	**75.30**	**296**	*e*P	**P**	**19 51 46.3**	**+0.8**
KOLN	**Koldanda** comp=Z,12nm,0.8s,mb4.9	**76.03**	**297**	*e*P	**P**	**19 51 50.1**	**+0.5**
AKASG	**Malin Array Be** comp=Z,1.6nm,0.4s,mb4.3,baz=18,slow=6.4,SNR=7.3	**76.51**	**345**	P	**P**	**19 51 50.9**	**-1.1**
AKASG	comp=Z,1.1nm,0.5s,baz=19,slow=5.9,SNR=3.3			pP	pP	19 52 03.9	+3.7
NRDL	**Niedersach Rie** comp=Z,5.0nm,1.0s,mb4.4	**76.56**	**357**	*e*P	**P**	**19 51 51.3**	**-0.9**
IBBN	**Ibbenburen** comp=Z,13nm,0.9s,mb4.9	**76.80**	**359**	*e*P	**P**	**19 51 54.0**	**+0.4**
CLZ	**Clausthal** comp=Z,9.0nm,0.8s,mb4.8	**77.21**	**357**	*e*P	**P**	**19 51 56.5**	**+0.6**
CLL	**Collm** comp=Z,5.0nm,0.7s,mb4.5	**77.64**	**355**	*e*P	**P**	**19 51 58.0**	**-0.3**
CLL				*e*pP	pP	19 52 11.2	+4.7
CLL	**Collm**	**77.64**	**355**	*i*P	**P**	**19 51 58.1**	**-0.2**
CLL	**Collm**	**77.64**	**355**	*i*P	**P**	**19 51 58.1**	**-0.2**
CLL				*e*sP	sP	19 52 11.0	+1.4
BRG	**Berggiesshubel** comp=Z,5.0nm,0.8s,mb4.5	**78.02**	**355**	*e*P	**P**	**19 52 00.2**	**-0.2**
BRG	**Berggiesshubel** comp=Z,6.0nm,1.1s,mb4.5	**78.02**	**355**	*e*P	**P**	**19 52 00.1**	**-0.4**
BRG	comp=Z,3.0nm,0.8s			*e*		19 52 13.3	
KBL	**Kabul** comp=Z,6.0nm,0.8s,mb4.6	**78.21**	**311**	*e*P	**P**	**19 52 00.8**	**-0.9**
UPC	**Upice**	**78.25**	**353**	*e*P	**P**	**19 52 02.2**	**+0.5**
MOX	**Moxa** comp=Z,7.0nm,0.9s,mb4.6	**78.36**	**356**	*e*P	**P**	**19 52 02.5**	**+0.2**
DPC	**Doruska-Polom**	**78.39**	**353**	*e*P	**P**	**19 52 03.0**	**+0.6**
TANN	**Tannenbergstha** comp=Z,5.0nm,1.4s,mb4.2	**78.55**	**356**	*e*P	**P**	**19 52 03.5**	**+0.1**
GUNZ	**Gunzen** comp=Z,29nm,2.4s,mb4.8	**78.61**	**356**	*e*P	**P**	**19 52 04.0**	**+0.3**
NKC	**Novy Kostel**	**78.74**	**356**	*e*P	**P**	**19 52 05.1**	**+0.7**
PRU	**Pruhonice**	**78.87**	**354**	*e*P	**P**	**19 52 05.9**	**+0.8**
BAIF	**Baives**	**79.05**	**1**	*e*P	**P**	**19 52 06.5**	**+0.4**
GRA1	**Grafenberg Arr** comp=Z,10.0nm,0.7s,mb4.8	**79.33**	**357**	*e*P	**P**	**19 52 08.3**	**+0.7**
GRF	**Grenberg Arr** comp=Z,10.0nm,0.7s,mb4.8	**79.33**	**357**	*e*P	**P**	**19 52 08.3**	**+0.7**
KHC	**Kasperske Hory** comp=Z,2.3nm,0.9s,mb4.1	**79.78**	**355**	*e*P	**P**	**19 52 10.4**	**+0.3**
KHC	**Kasperske Hory**	**79.78**	**355**	*e*P	**P**	**19 52 10.9**	**+0.8**
WET	**Wettzell** comp=Z,2.0nm,1.0s,mb4.0	**79.80**	**355**	*e*P	**P**	**19 52 10.3**	**+0.1**
VYHS	**Vyhne** comp=Z,21nm,3.0s	**80.02**	**351**	*e*P	**P**	**19 52 11.9**	**+0.5**
VYHS	**Vyhne**	**80.02**	**351**	*e*P	**P**	**19 52 11.9**	**+0.5**
GEC2	**GERESS Array S** comp=Z,2.0nm,1.0s,mb4.0	**80.06**	**355**	*e*P	**P**	**19 52 11.4**	**-0.2**
BUR08	**Bucovina Ar. S**	**80.10**	**347**	*e*P	**P**	**19 52 11.0**	**-0.9**
LDF	**La Druitiere** comp=Z,5.2nm,0.6s,mb4.3	**80.39**	**4**	*e*P	**P**	**19 52 13.1**	**-0.3**
LDF	**La Druitiere** comp=Z,2.6nm,0.6s,mb4.3	**80.39**	**4**	*e*P	**P**	**19 52 13.1**	**-0.3**
GRR	**Gorron**	**80.56**	**5**	*e*P	**P**	**19 52 14.3**	**0.0**
MEZF	**Maizieres J'vi** comp=Z,8.1nm,0.7s,mb4.5	**80.62**	**1**	*e*P	**P**	**19 52 15.1**	**+0.5**
MEZF	**Maizieres J'vi** comp=Z,8.1nm,0.7s,mb4.8	**80.62**	**1**	*e*P	**P**	**19 52 15.1**	**+0.5**
CDF	**Champ du Feu** comp=Z,9.5nm,0.8s,mb4.5	**80.70**	**359**	*e*P	**P**	**19 52 15.4**	**+0.3**
CDF	**Champ du Feu** comp=Z,4.8nm,0.8s,mb4.5	**80.70**	**359**	*e*P	**P**	**19 52 15.4**	**+0.3**
BFO	**Black Forest** comp=Z,4.0nm,0.9s,mb4.3	**80.77**	**358**	*e*P	**P**	**19 52 15.7**	**+0.2**
ECH	**Echery** comp=Z,8.2nm,0.9s,mb4.7	**80.90**	**359**	*e*P	**P**	**19 52 16.1**	**-0.1**
HAU	**Haudompre** comp=Z,11nm,0.7s,mb4.6	**81.12**	**360**	*e*P	**P**	**19 52 17.6**	**+0.3**
HAU	**Haudompre**	**81.12**	**360**	*e*P	**P**	**19 52 17.6**	**+0.3**
HINF	comp=Z,5.4nm,0.7s,mb4.6 **Hinteralfeld**	**81.30**	**359**	*e*P	**P**	**19 52 18.3**	**0.0**
HINF	comp=Z,8.1nm,0.7s,mb4.5 **Hinteralfeld**	**81.30**	**359**	*e*P	**P**	**19 52 18.3**	**0.0**
LOR	comp=Z,4.1nm,0.7s,mb4.5 **Lormes**	**81.84**	**1**	*e*P	**P**	**19 52 21.4**	**+0.3**
LOR	comp=Z,13nm,0.8s,mb4.6 **Lormes**	**81.84**	**1**	*e*P	**P**	**19 52 21.4**	**+0.3**
SSF	comp=Z,6.7nm,0.8s,mb4.6 **Saint Saulge**	**82.04**	**2**	*e*P	**P**	**19 52 22.5**	**+0.3**
SSF	comp=Z,11nm,0.7s,mb4.6 **Saint Saulge**	**82.04**	**2**	*e*P	**P**	**19 52 22.5**	**+0.3**
AVF	comp=Z,5.3nm,0.7s,mb4.6 **Avril sur Loir**	**82.31**	**2**	*e*P	**P**	**19 52 23.8**	**+0.2**
AVF	comp=Z,7.9nm,0.6s,mb4.5 **Avril sur Loir**	**82.31**	**2**	*e*P	**P**	**19 52 23.8**	**+0.2**
MFF	comp=Z,4.0nm,0.6s,mb4.5 **Saint Martin d**	**82.38**	**4**	*e*P	**P**	**19 52 24.3**	**+0.3**
MFF	comp=Z,16nm,0.9s,mb4.7 **Saint Martin d**	**82.38**	**4**	*e*P	**P**	**19 52 24.3**	**+0.3**
SMF	comp=Z,8.2nm,0.9s,mb4.7 **Signal de Mont**	**82.46**	**1**	*e*P	**P**	**19 52 24.6**	**+0.2**
SMF	comp=Z,12nm,0.7s,mb4.6 **Signal de Mont**	**82.46**	**1**	*e*P	**P**	**19 52 24.6**	**+0.2**
CABF	comp=Z,6.3nm,0.7s,mb4.7 **La Chapelle**	**82.51**	**360**	*e*P	**P**	**19 52 25.5**	**+0.8**
CABF	comp=Z,14nm,0.9s,mb4.7 **La Chapelle**	**82.51**	**360**	*e*P	**P**	**19 52 25.5**	**+0.8**
TCF	comp=Z,7.2nm,0.9s,mb4.7 **Toulx Ste Croi**	**82.78**	**3**	*e*P	**P**	**19 52 26.2**	**+0.1**
TCF	comp=Z,7.7nm,0.8s,mb4.5 **Toulx Ste Croi**	**82.78**	**3**	*e*P	**P**	**19 52 26.2**	**+0.1**
CAF	comp=Z,3.8nm,0.8s,mb4.5 **Calviac**	**84.14**	**3**	*e*P	**P**	**19 52 33.7**	**+0.6**
CAF	comp=Z,27nm,1.2s,mb4.9 **Calviac**	**84.14**	**3**	*e*P	**P**	**19 52 33.7**	**+0.6**
ORIF	comp=Z,13nm,1.3s,mb4.9 **Oris-en-Rattie**	**84.20**	**0**	*e*P	**P**	**19 52 34.7**	**+1.3**
ORIF	comp=Z,16nm,1.1s,mb4.8 **Oris-en-Rattie**	**84.20**	**0**	*e*P	**P**	**19 52 34.7**	**+1.3**
MBDF	comp=Z,7.8nm,1.1s,mb4.8 **Montbardon**	**84.39**	**359**	*e*P	**P**	**19 52 35.7**	**+1.3**
MBDF	comp=Z,9.6nm,1.0s,mb4.6 **Montbardon**	**84.39**	**359**	*e*P	**P**	**19 52 35.7**	**+1.3**
LASF	comp=Z,4.8nm,1.0s,mb4.6 **Ste Croix**	**85.03**	**2**	*e*P	**P**	**19 52 38.4**	**+0.8**
ETSF	comp=Z,19nm,1.2s,mb4.8 **Etsaut**	**86.05**	**5**	*e*P	**P**	**19 52 43.6**	**+0.9**
ETSF	comp=Z,9.3nm,0.9s,mb4.7 **Etsaut**	**86.05**	**5**	*e*P	**P**	**19 52 43.6**	**+0.9**
BR131	comp=Z,4.7nm,0.9s,mb4.7 **Keskin Array S**	**86.21**	**339**	*e*P	**P**	**19 52 43.9**	**+0.3**
BRTR	comp=Z,1.5nm,0.8s,mb4.3 **Keskin Array B**	**86.21**	**339**	P	**P**	**19 52 44.2**	**+0.6**
FITZ	comp=Z,0.9nm,0.6s,mb4.2,baz=12,slow=2.3,SNR=5.9 **Fitzroy Crossi**	**86.80**	**236**	*e*P	**P**	**19 52 46.6**	**0.0**
ASAR	comp=Z,6.8nm,1.2s,mb4.8 **Alice Springs**	**87.49**	**226**	P	**P**	**19 52 50.8**	**+1.0**
ESDC	comp=Z,0.5nm,0.8s,mb3.8,baz=27,slow=6.3,SNR=4.2 **Sonseca Array**	**89.03**	**8**	P	**P**	**19 52 57.3**	**+0.2**
BOSA	comp=Z,0.9nm,0.7s,mb4.2,baz=343,slow=4.6,SNR=6.5 **Boshof**	**153.13**	**320**	PKPbc	PKPbc	20 00 00.2	+0.6
BOSA	**Boshof** comp=Z,1.1nm,0.4s,baz=90,slow=8.1,SNR=3.2	**153.13**	**320**	PKPbc	PKPbc	20 00 00.2	+0.6

*CSEM **02** 19:47:32.4,37°.54N×24°.92W,h11^{km},ML2.5,After PDA*

PDA 02 19:47:32.4±0.7,37°.54N×24°.92W,h11^{km}±6^{km},MD3.7, ML2.5,Error ellipse: s-maj=8.4km s-min=2.3km az=65.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BART	**Pico Bartolome**	**0.31**	**320**	*i*P	Pg	19 47 37.9	-0.8
BART				*e*S	Sg	19 47 42.6	-0.3
BART	620nm,0.2s			A		19 47 45.2	
GRON	**Grota Negra**	**0.54**	**295**	*e*P	Pg	19 47 39.8	-3.2
GRON				*e*S	Sg	19 47 45.4	-4.7
GRON	105nm,0.1s			A		19 47 46.9	
PSMN	**Pico do Norte,**	**0.55**	**193**	*e*P	Pg	19 47 41.7	-1.4
PSMN				*e*S	Sg	19 47 48.0	-2.3
PSMN	**Pico do Norte,**	**0.55**	**193**	*e*P	Pg	19 47 41.7	-1.4
PSMN				*e*S	Sg	19 47 48.0	-2.3
PSMA	**Santa Maria**	**0.57**	**198**	*e*P	Pg	19 47 41.7	-1.7
PSMA				*e*S	Sg	19 47 48.7	-2.2
PSMA	230nm,0.1s			A		19 47 49.9	
PDA	**Ponta Delgada**	**0.63**	**290**	*e*P	Pg	19 47 42.7	-1.9
PDA				*e*S	Sg	19 47 50.4	-2.5
PDA	**Ponta Delgada**	**0.63**	**290**	*e*P	Pg	19 47 42.7	-1.9
PDA				*e*S	Sg	19 47 50.4	-2.5
PSET	**Sete Cidades**	**0.70**	**294**	*e*P	Pg	19 47 43.2	-2.8
PSET				*e*S	Sg	19 47 51.9	-3.2
PSET	15nm,0.1s			A

	RSW	**Rattlesnake Hi**	**6.62**	**66**	*e*Pn		**Pn**	**20 14 38.4**	**+1.0**
	HAWA	**Hanford**	**6.66**	**66**	*e*P		**Pn**	**20 14 37.8**	**-0.1**
		4.4nm,0.6s							
	WVOR	**Wild Horse Val**	**7.25**	**99**	*e*Pn		**Pn**	**20 14 40.6**	**-5.3**
		2.3nm,0.6s							
	CMB	**Columbia Colle**	**8.45**	**132**	*e*Pn		**Pn**	**20 15 01.8**	**-0.6**
		24nm,1.8s							
	NVAR	**Mina Array Bea**	**9.37**	**123**	Pn		**Pn**	**20 15 16.4**	**+1.4**
	NVAR	**Mina Array Bea**	**9.37**	**123**	Pn		**Pn**	**20 15 16.4**	**+1.4**
		0.1nm,0.3s,baz=299,slow=12,SNR=7.9							
	HLID	**Hailey**	**10.07**	**88**	*e*Pn		**Pn**	**20 15 27.3**	**+2.6**
	BSMT	**Bassoo Peak**	**10.19**	**63**	*e*Pn		**Pn**	**20 15 28.4**	**+2.1**
	MSO	**Missoula**	**10.51**	**69**	P		**Pn**	**20 15 26.6**	**-4.0**
		2.1nm,1.0s							
	N13A	**Wendover, West**	**10.90**	**102**	*e*P		**Pn**	**20 15 37.1**	**+1.1**
		16nm,1.1s							
	CHMT	**Chamberlain Mo**	**10.99**	**69**	P		**Pn**	**20 15 34.1**	**-3.1**
	MCMT	**McKenzie Canyo**	**11.11**	**80**	*e*Pn		**Pn**	**20 15 40.7**	**+1.9**
		1.1nm,0.9s							
	GSC	**Goldstone**	**12.40**	**130**	Pn		**Pn**	**20 15 58.2**	**+1.6**
		4.7nm,1.1s							
	MVCO	**Mesa Verde**	**16.49**	**107**	*e*Pn		**Pn**	**20 16 51.0**	**-0.3**
		11nm,1.3s							
	ISCO	**Idaho Springs**	**17.41**	**96**	*e*Pn		**Pn**	**20 17 03.0**	**+0.2**
		23nm,1.9s							
	SDCO	**Great Sand Dun**	**18.33**	**102**	*e*Pn		**Pn**	**20 17 14.8**	**+0.5**
		31nm,1.8s							
	LAZ	**Ladron**	**18.96**	**113**	*e*P		**Pn**	**20 17 22.4**	**+0.5**
		6.7nm,1.7s							
	ANMO	**Albuquerque**	**19.10**	**111**	*e*P		**Pn**	**20 17 24.4**	**+0.8**
		3.7nm,1.1s							
	ANMO	**Albuquerque**	**19.10**	**111**	P		**Pn**	**20 17 23.6**	**0.0**
		0.1nm,0.3s,baz=318,slow=14,SNR=2.8							
	ANMO				LR		LR	20 25 12.0	
		comp=Z,157nm,19.3s,baz=128,slow=38							
	BNM	**Barren Site**	**19.45**	**113**	*e*P		**Pn**	**20 17 27.5**	**-0.4**
		4.5nm,1.2s							
	FFC	**Flin Flon**	**20.12**	**48**	P		**P**	**20 17 32.2**	**-1.7**
	YKA	**Yellowknife Ar**	**20.19**	**19**	P		**P**	**20 17 34.4**	**-0.2**
		0.8nm,0.7s,baz=209,slow=11,SNR=2.6							
	ECSD	**EROS Data Cent**	**22.80**	**80**	*e*P		**P**	**20 18 02.3**	**-0.4**
		8.4nm,1.0s,mb4.1							
	ULM	**Lac du Bonnet**	**22.83**	**63**	P		**P**	**20 18 03.4**	**+0.5**
		2.6nm,0.5s,mb3.9,baz=300,slow=4.1,SNR=3.4							
	ILAR	**Eielson Array**	**23.29**	**340**	P		**P**	**20 18 08.1**	**+0.5**
		0.4nm,0.9s,mb2.8,baz=173,slow=7.7,SNR=4.1							
	ILAR				LR		LR	20 25 29.4	
		comp=Z,54nm,21.9s,MS3.0,baz=120,slow=32							
	TXAR	**Lajitas Array**	**24.48**	**118**	P		**P**	**20 18 18.3**	**-0.8**
		0.3nm,0.7s,mb2.8,baz=263,slow=8.7,SNR=3.9							
	TXAR				LR		LR	20 27 15.5	
		comp=Z,51nm,21.0s,MS3.0,baz=0.0,slow=35							
	WMOK	**Wichita Mounta**	**24.53**	**102**	*e*P		**P**	**20 18 20.0**	**+0.4**
		17nm,0.9s,mb4.6							
	WMOK				*e*			20 18 26.9	
	SJG	**San Juan**	**57.70**	**96**	LR		LR	20 51 17.0	
		comp=Z,25nm,18.0s,MS3.4,baz=244,slow=40							
	SONM	**Songino Array**	**76.67**	**326**	P		**P**	**20 24 49.1**	**-1.8**
		1.0nm,0.9s,mb3.8,baz=22,slow=4.1,SNR=7.2							

*NEIC **02** 20:15:07.3±9.6, 28°.18S×176°.48W, h1km±57km, mb4.7/6, Error ellipse: s-maj=23.2km s-min=15.6km az=49.0*
*IDC **02** 20:15:07.6±1.0, 28°.17S×176°.43W, h0km, mb4.1/7, mb1 4.3/8, mb1mx4.2/13, mbtmp4.1/8, ML4.3/1, MS3.7/6, Ms1 3.7/6, ms1mx3.3/19, Error ellipse: s-maj=37.4km s-min=25.0km az=138.0*
*ISCJB **02** 20:15:11.4±0.8, 28°.33S±0°.10×176°.6W±0°.2, h33km, mb4.3/11, MS3.6/5, Error ellipse: s-maj=22.7km s-min=13.8km az=8.2*

ISC 02 20:15:13.5±0.8, 28°.29S±0°.10×176°.6W±0°.2, h35km, n32, σ0s93/18, mb4.3/11, MS3.6/5, 1D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**11.24**	**206**	*e*Pn	**Pn**	**20 17 50.1**	**-1.4**
URZ				*e*Sn	**Sn**	**20 19 50.8**	**-5.1**
DZM	**Mont Dzumac**	**16.52**	**288**	*e*LR	LR	20 22 55.4	
	358nm,26.5s						
RAR	**Rarotonga**	**16.84**	**69**	LR	LR	20 23 27.8	
	comp=Z,180nm,20.0s,baz=66,slow=30						
RPZ	**Rata Peaks**	**18.31**	**210**	P	**Pn**	**20 19 25.2**	**+0.6**
	0.9nm,0.3s,baz=180,slow=1.0,SNR=5.3						
PPT	**Papeete**	**27.04**	**73**	*e*LR	LR	20 27 02.2	
	170nm,29.0s						
PPT	**Papeete**	**27.04**	**73**	LR	LR	20 30 35.5	
	comp=Z,211nm,18.1s,MS3.7,baz=271,slow=35						
HNR	**Honiara**	**28.94**	**306**	LR	LR	20 31 27.1	
	comp=Z,76nm,18.3s,MS3.8,baz=218,slow=34						
CTA	**Charters Tower**	**34.73**	**275**	P	**P**	**20 22 01.6**	**+1.2**
	2.5nm,0.5s,mb4.4,baz=92,slow=15,SNR=5.7						
CTA				LR	LR	20 32 15.8	
	comp=Z,70nm,20.4s,MS3.4,baz=142,slow=30						
CTAO	**Charters Tower**	**34.73**	**275**	*e*P	**P**	**20 22 00.5**	**+0.1**
	3.6nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**36.17**	**254**	*e*P	**P**	**20 22 13.7**	**+1.0**
	1.9nm,0.9s,mb4.0						
STKA				LR	LR	20 36 27.2	
STKA	**Stephens Creek**	**36.17**	**254**	P	**P**	**20 22 14.0**	**+1.3**
	3.9nm,0.7s,mb4.4,baz=86,slow=7.7,SNR=6.2						
STKA				LR	LR	20 36 27.2	
	comp=Z,149nm,18.0s,MS3.8,baz=26,slow=35						
ASAR	**Alice Springs**	**44.47**	**264**	P	**P**	**20 23 21.1**	**-0.4**
	1.0nm,0.7s,mb3.7,baz=99,slow=6.7,SNR=20						
WRAB	**Tennant Creek**	**45.27**	**269**	*e*P	**P**	**20 23 27.0**	**-0.8**
CASY	**Casey**	**57.56**	**207**	*e*P	**P**	**20 24 58.8**	**-0.4**
	5.5nm,0.8s,mb4.6						
QSPA	**South Pole Qui**	**61.82**	**180**	*e*P	**P**	**20 25 28.4**	**+0.2**
	7.7nm,1.1s,mb4.8						
MAW	**Mawson**	**74.70**	**200**	P	**P**	**20 26 50.2**	**+1.1**
	0.6nm,0.3s,mb4.0,baz=98,slow=11,SNR=3.0						
KSM	**Kuching**	**75.84**	**279**	*e*P	**P**	**20 26 55.6**	**-1.0**
	8.5nm,0.9s,mb4.7						
MAJO	**Matsushiro**	**77.22**	**324**	*e*P	**P**	**20 27 02.6**	**-1.2**
	6.6nm,0.9s,mb4.6						
MAT	**Matsushiro**	**77.22**	**324**	P	**P**	**20 27 03.2**	**-0.6**
KSRS	**Korea Array**	**85.54**	**319**	P	**P**	**20 27 38.4**	**+0.7**
	1.5nm,0.7s,mb4.2,baz=132,slow=6.2,SNR=5.2						
NVAR	**Mina Array Bea**	**85.87**	**42**	P	**P**	**20 27 49.3**	**-0.2**
	0.8nm,0.7s,mb4.0,baz=229,slow=12,SNR=4.9						
TXAR	**Lajitas Array**	**90.23**	**57**	LR	LR	20 57 49.2	
	comp=Z,48nm,21.6s,MS3.9,baz=90,slow=28						
CMAR	**Chiang Mai Arr**	**93.85**	**289**	P	**P**	**20 28 29.4**	**+1.8**
	0.6nm,0.8s,mb4.1,baz=138,slow=2.3,SNR=3.9						
MKAR	**Makanchi Array**	**117.33**	**311**	PKP	PKPdf	20 33 53.8	-1.1
	0.4nm,0.8s,baz=90,slow=1.4,SNR=4.3						
BVAR	**Borovoye Array**	**125.72**	**317**	PKP	PKPdf	20 34 10.3	-0.5
	0.6nm,0.6s,baz=104,slow=1.8,SNR=4.7						
FINES	**FINESS Array B**	**143.55**	**342**	PKhKP	PKPpre	20 34 39.8	
	1.6nm,0.9s,baz=41,slow=3.8,SNR=8.7						
NOA	**NORSAR Array B**	**146.83**	**353**	PKPbc	PKPbc	20 34 50.2	-1.0
NOA	**NORSAR Array B**	**146.83**	**353**	PKPbc	PKPbc	20 34 50.2	-1.0
	2.7nm,0.8s,baz=15,slow=4.5,SNR=7.2						
AKASG	**Malin Array Be**	**150.29**	**326**	PKPbc	PKPbc	20 34 58.8	-1.8
	2.8nm,0.7s,baz=43,slow=2.8,SNR=10						
MMAI	**Mount Meron Ar**	**152.11**	**288**	PKPbc	PKPbc	20 35 05.7	+0.3
	1.9nm,0.6s,baz=80,slow=3.8,SNR=3.8						
BRTR	**Keskin Array B**	**152.57**	**302**	PKPbc	PKPbc	20 35 05.9	-0.3
	0.6nm,0.7s,baz=45,slow=4.3,SNR=3.4						
CLL	**Collm**	**155.89**	**345**	*i*PKPab	PKPab	20 35 29.5	-0.9
	comp=Z,5.0nm,0.9s						

*VIE **02** 20:42:42.5, 17°.95S×178°.41W, h563km, mb3.4 336 km E of Suva*
*IDC **02** 20:42:43.6±1.5, 18°.00S×178°.48W, h576km±17km, mb3.3/11, mb1 3.5/12, mb1mx3.5/15, mbtmp3.3/12, Error ellipse: s-maj=35.6km s-min=11.5km az=151.0*
*ISCJB **02** 20:42:44.2±0.8, 18°.1S±0°.2×178°.3W±0°.1, h603km±7km, mb3.8/11, Error ellipse: s-maj=32.5km s-min=10.8km az=156.0*
*NEIC **02** 20:42:44.6±1.1, 18°.01S×178°.33W, h594km±10km, Error ellipse: s-maj=44.1km s-min=15.9km az=152.0*

ISC 02 20:42:44.5±0.8, 18°.1S±0°.2×178°.2W±0°.1, h592km±6km, n65, σ1s16/18, mb3.8/11, 8C-6D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.57**	**275**	*i*P	**P**	**20 44 07.7**	**+1.3**
MSVF				*e*S	**S**	**20 45 13.5**	**+0.3**
AFI	**Afiamalu**	**7.46**	**57**	P	**P**	**20 44 37.4**	**-1.1**
	2.6nm,0.3s,baz=247,slow=15,SNR=3.3						
AFI				S	**S**	**20 46 11.4**	**-0.4**
	1.2nm,0.3s,baz=118,slow=17,SNR=2.9						
CTA	**Charters Tower**	**33.59**	**261**	P	**P**	**20 48 34.8**	**-2.4**
	1.3nm,0.4s,mb3.9,baz=84,slow=14,SNR=5.8						
STKA	**Stephens Creek**	**38.70**	**241**	P	**P**	**20 49 18.9**	**-0.1**
STKA	**Stephens Creek**	**38.70**	**241**	P	**P**	**20 49 18.9**	**-0.1**
	1.1nm,0.5s,mb3.7,baz=79,slow=12,SNR=5.1						
ASAR	**Alice Springs**	**44.91**	**254**	P	**P**	**20 50 06.8**	**-1.1**
	7.5nm,0.6s,mb4.4,baz=85,slow=8.4,SNR=163						
ASAR				PcP	PcP	20 51 35.8	-0.6
	1.3nm,0.4s,baz=102,slow=3.7,SNR=11						
ASAR				S	**S**	**20 55 59.5**	**-4.3**
	0.8nm,0.9s,baz=84,slow=16,SNR=6.3						
MAT	**Matsushiro**	**68.15**	**323**	P	**P**	**20 52 45.8**	**-0.8**
KSRS	**Korea Array**	**74.95**	**318**	P	**P**	**20 53 26.9**	**+0.8**
	0.7nm,0.6s,mb3.4,baz=134,slow=5.6,SNR=4.1						
NVAR	**Mina Array Bea**	**79.43**	**44**	P	**P**	**20 53 52.1**	**+1.9**
	1.3nm,0.7s,mb3.4,baz=224,slow=8.2,SNR=11						
MAW	**Mawson**	**83.75**	**200**	P	**P**	**20 54 12.2**	**+0.4**
	1.0nm,0.4s,mb3.7,baz=122,slow=6.4,SNR=4.5						
TXAR	**Lajitas Array**	**85.94**	**58**	P	**P**	**20 54 26.1**	**+3.0**
	1.2nm,0.7s,mb3.6,baz=215,slow=6.5,SNR=16						
ILAR	**Eielson Array**	**86.02**	**13**	P	**P**	**20 54 21.9**	**-0.6**
	1.4nm,0.4s,mb3.9,baz=220,slow=4.9,SNR=34						
CMAR	**Chiang Mai Arr**	**89.11**	**290**	P	**P**	**20 54 38.9**	**+0.8**
	1.3nm,0.8s,mb3.8,baz=101,slow=2.5,SNR=6.7						
SONM	**Songino Array**	**93.80**	**319**	P	**P**	**20 54 59.8**	**+0.7**
	0.5nm,0.7s,mb3.7,baz=117,slow=5.0,SNR=3.0						
YKA	**Yellowknife Ar**	**94.42**	**25**	P	**P**	**20 55 00.2**	**-1.3**
	0.5nm,0.6s,mb3.9,baz=240,slow=4.3,SNR=3.9						
MKAR	**Makanchi Array**	**109.38**	**314**	PKiKP	PKiKP	21 00 07.0	-1.2
	0.4nm,0.5s,baz=207,slow=0.9,SNR=12						
BVAR	**Borovoye Array**	**117.09**	**321**	PKP	PKPdf	21 00 21.6	-1.2
	0.9nm,0.5s,baz=162,slow=1.5,SNR=5.0						
ARCES	**ARCESS Array B**	**126.52**	**350**	PKP	PKPdf	21 00 40.0	-0.3
	1.2nm,0.6s,baz=67,slow=1.8,SNR=11						
FINES	**FINESS Array B**	**133.41**	**344**	PKP	PKPdf	21 00 52.6	-1.0
	0.7nm,0.4s,baz=95,slow=1.1,SNR=8.2						
AKASG	**Malin Array Be**	**140.80**	**332**	PKhKP	PKPpre	21 01 00.8	
	1.2nm,0.4s,baz=45,slow=3.9,SNR=7.4						
OJC	**Ojcow**	**144.84**	**340**	*e*PX		21 01 15.1	
BURAR	**Bucovina Array**	**144.85**	**332**	*i*P	PKPdf	21 01 16.2	+1.4
TESR		**145.00**	**330**	*i*P	PKPdf	21 01 15.6	+0.6
STHS	**Stebnicka Huta**	**145.02**	**338**	*e*PKP	PKPdf	21 01 16.7	+1.7
BRTR	**Keskin Array B**	**145.03**	**315**	PKP	PKPdf	21 01 16.0	+0.7
	1.5nm,0.5s,baz=86,slow=2.1,SNR=17						
NIE	**Niedzica**	**145.35**	**339**	*e*PX		21 01 17.4	
ASF	**Jabal al Asfar**	**145.42**	**301**	PKPbc	PKPbc	21 01 16.9	-0.7
	1.7nm,0.5s,baz=248,slow=3.6,SNR=4.3						
VRI	**Vrincioaia**	**145.42**	**329**	*i*P	PKPab	21 01 19.6	+1.0
CLL	**Collm**	**145.67**	**347**	*i*PKPbc	PKPbc	21 01 17.7	0.0
	comp=Z,15nm,0.6s						
OKC	**Ostrava-Krasne**	**145.70**	**341**	*e*P	PKPbc	21 01 18.2	+0.4
OKC				*ex*	x	21 01 21.6	
UPC	**Upice**	**145.71**	**344**	*e*P	PKPbc	21 01 18.2	+0.4
UPC				*ex*	x	21 01 20.6	
DPC	**Dobruska-Polom**	**145.77**	**343**	*e*P	PKPbc	21 01 18.6	+0.6
DPC				*ex*	x	21 01 20.7	
BRG	**Berggiesshubel**	**145.88**	**346**	*e*P	PKPbc	21 01 18.3	0.0
	comp=Z,6.3nm,0.7s						
MORC	**Moravsky Berou**	**145.93**	**342**	*i*P	PKPbc	21 01 18.5	0.0
PVCC	**Panska Ves**	**146.05**	**345**	*e*P	PKPbc	21 01 19.3	+0.5
MLR	**Muntele Rosu**	**146.07**	**329**	*i*P	PKPbc	21 01 18.5	-0.5
MMAI	**Mount Meron Ar**	**146.39**	**303**	PKPbc	PKPbc	21 01 20.4	+0.1
	comp=Z,3.5nm,0.4s,baz=66,slow=6.8,SNR=16						
PRU	**Pruhonice**	**146.56**	**345**	*e*P	PKPbc	21 01 20.8	+0.6
PRU				*ex*	x	21 01 23.8	
DRGR		**146.58**	**334**	*i*P	PKPbc	21 01 20.2	-0.1
VYHS	**Vyhne**	**146.65**	**339**	*e*PKP	PKPbc	21 01 20.8	+0.3
PSZ	**Piszkesteto**	**146.77**	**338**	*i*P	PKPbc	21 01 20.5	-0.3
NKC	**Novy Kostel**	**146.81**	**347**	*e*P	PKPdf	21 01 18.5	+0.5
NKC				*ex*	x	21 01 21.4	
KHC	**Kasperske Hory**	**147.59**	**345**	*e*P	PKPbc	21 01 23.3	+0.4
KHC				*ex*	x	21 01 28.1	
GIVF	**Givet**	**147.97**	**356**	*e*PKP1	PKPbc	21 01 24.0	+0.2
	comp=Z,11nm,0.5s						
BZS	**Bucas**	**147.97**	**333**	*i*P	PKPbc	21 01 23.5	-0.5
BAIF	**Baives**	**148.04**	**357**	*e*PKP1	PKPbc	21 01 24.3	+0.3
	comp=Z,8.1nm,0.5s						
FLN	**La Foliniere**	**149.35**	**3**	*e*PKP1	PKPbc	21 01 27.1	-0.2
	comp=Z,8.3nm,0.6s						
CDF	**Champ du Feu**	**149.42**	**353**	*e*PKP1	PKPbc	21 01 27.6	+0.1
	comp=Z,4.8nm,0.5s						
SOKA	**Soboth**	**149.46**	**342**	*i*PKPbc	PKPbc	21 01 27.0	-0.6
	comp=Z,3.9nm,1.0s						
LDF	**La Druitiere**	**149.53**	**2**	*e*PKP1	PKPbc	21 01 27.4	-0.3
	comp=Z,4.3nm,0.5s						
VTS	**Vitosha**	**149.53**	**328**	*i*P	PKPbc	21 01 27.8	-0.1
GRR	**Gorron**	**149.70**	**3**	*e*PKP1	PKPbc	21 01 28.0	-0.1
	comp=Z,5.2nm,0.5s						
WTTA	**Wattenberg**	**149.79**	**347**	*i*PKPbc	PKPbc	21 01 28.4	0.0
	comp=Z,7.8nm,0.5s						
HAU	**Haudompre**	**149.93**	**354**	*e*PKP1	PKPbc	21 01 28.6	-0.1
	comp=Z,5.0nm,0.6s						
HINF	**Hinteralfeld**	**150.06**	**353**	*e*PKP1	PKPbc	21 01 28.8	-0.2
	comp=Z,4.6nm,0.7s						
ABTA	**Abfaltersbach**	**150.07**	**345**	*i*PKPbc	PKPbc	21 01 28.4	-0.7
	comp=Z,7.6nm,0.6s						
LOR	**Lormes**	**150.85**	**357**	*e*PKP1	PKPbc	21 01 30.9	+0.1
	comp=Z,8.8nm,0.6s						
SSF	**Saint Saulge**	**151.07**	**358**	*e*PKP1	PKPbc	21 01 31.5	+0.2
	comp=Z,5.9nm,0.6s						
CABF	**La Chapelle**	**151.33**	**354**	*e*PKP1	PKPbc	21 01 32.6	+0.7
AVF	**Avril sur Loir**	**151.34**	**358**	*e*PKP1	PKPbc	21 01 31.6	-0.3
MFF	**Saint Martin d**	**151.52**	**3**	*e*PKP1	PKPbc	21 01 32.2	-0.1
	comp=Z,3.9nm,0.5s						
BGF	**Bois d'Agland**	**151.59**	**358**	*e*PKP1	PKPbc	21 01 32.5	0.0
	comp=Z,5.8nm,0.5s						
TCF	**Toulx Ste Croi**	**151.87**	**359**	*e*PKP1	PKPbc	21 01 33.7	+0.6
LPG	**La Plagne**	**152.35**	**352**	*e*PKP1	PKPbc	21 01 35.1	+0.9
MBDF	**Montbardon**	**153.11**	**352**	*e*PKP1	PKPbc	21 01 36.0	+0.1
	comp=Z,6.1nm,0.8s						

*ISCJB **02** 20:44:11.9±1.2, 38°.01N±0°.05×20°.17E±0°.06, h10km, Error ellipse: s-maj=9.3km s-min=4.7km az=41.4*
*NEIC **02** 20:44:11.5, 38°.07N×20°.11E, h5km, MD3.4(ATH), After ATH.*
*ATH **02** 20:44:11.5, 38°.07N×20°.11E, h5km, MD3.4/7*
*CSEM **02** 20:44:12.0±0.7, 38°.04N×20°.15E, h2km, ML1.9/2, Error ellipse: s-maj=12.0km s-min=5.9km az=48.0*
*THE **02** 20:44:14.1, 38°.12N×20°.25E, h0km±1km, ML1.9/2, Error ellipse: s-maj=1.9km s-min=0.6km az=212.0*

ISC 02 20:44:12.3±1.3, 38°.03N±0°.06×20°.14E±0°.07, h10km, n26, σ0s97/44, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.39**	**67**	*e*Pb	**Pg**	**20 44 19.3**	**-0.6**
VLS	**Valsamata**	**0.39**	**67**	*e*PB	**Pg**	**20 44 19.3**	**-0.6**
VLS	**Valsamata**	**0.39**	**67**	P	**Pg**	**20 44 19.3**	**-0.6**
VLS				S	**Sg**	**20 44 23.5**	**-1.5**
VLS	**Valsamata**	**0.39**	**67**	P	**Pg**	**20 44 19.3**	**-0.6**
VLS				S	**Sg**	**20 44 23.5**	**-1.5**
KFL	**Anninata**	**0.52**	**81**	P	**Pg**	**20 44 22.2**	**-0.2**
KFL				S	**Sg**	**20 44 28.9**	**-0.3**
KFL	**Anninata**	**0.52**	**81**	P	**Pg**	**20 44 22.2**	**-0.2**
KFL				S	**Sg**	**20 44 28.9**	**-0.3**
LKD2	**Lefkada island**	**0.86**	**28**	P	**Pg**	**20 44 28.1**	**-0.8**
LKD2				S	**Sg**	**20 44 39.1**	**-1.0**
LKD2	**Lefkada island**	**0.86**	**28**	P	**Pg**	**20 44 28.1**	**-0.8**
LKD2				S	**Sg**	**20 44 39.1**	**-1.0**
RLS	**Riolos of Patr**	**1.05**	**88**	*e*Pb	**Pg**	**20 44 32.1**	**-0.4**
RLS				*e*Sb	**Sg**	**20 44 47.0**	**+0.9**
RLS	**Riolos of Patr**	**1.05**	**88**	*e*PB	**Pg**	**20 44 32.1**	**-0.4**
RLS				*e*SB	**Sg**	**20 44 47.0**	**+0.9**
RLS	**Riolos of Patr**	**1.05**	**88**	*e*Pb	**Pg**	**20 44 32.1**	**-0.4**
RLS				*e*Sb	**Sg**	**20 44 47.0**	**+0.9**
EFP	**Efpalio**	**1.45**	**74**	*e*PG	**Pn**	**20 44 38.5**	**0.0**
EFP				*e*SB	**Sn**	**20 44 59.9**	**+2.3**
EFP	**Efpalio**	**1.45**	**74**	*e*Pg	**Pn**	**20 44 38.5**	**0.0**
EFP				*e*Sb	**Sn**	**20 44 59.9**	**+2.3**
IGT	**Igoumenitsa**	**1.51**	**6**	P	**Pn**	**20 44 40.4**	**+1.0**
IGT				S	**Sn**	**20 45 00.3**	**+1.2**
IGT	**Igoumenitsa**	**1.51**	**6**	P	**Pn**	**20 44 40.4**	**+1.0**
IGT				S	**Sn**	**20 45 00.3**	**+1.2**
EVR	**Evrytania**	**1.58**	**55**	*e*Pb	**Pb**	**20 44 41.3**	**-0.3**
EVR	**Evrytania**	**1.58**	**55**	*e*PB	**Pb**	**20 44 41.3**	**-0.3**
EVR	**Evrytania**	**1.58**	**55**	*e*Pb	**Pb**	**20 44 41.3**	**-0.3**
ITM	**Ithomi**	**1.66**	**120**	*e*Pg	**Pg**	**20 44 43.1**	**-0.9**
ITM	**Ithomi**	**1.66**	**120**	*e*PG	**Pg**	**20 44 43.1**	**-0.9**
ITM	**Ithomi**	**1.66**	**120**	*e*Pg	**Pg**	**20 44 43.1**	**-0.9**
KEK	**Kerkira**	**1.70**	**351**	*e*Pb	**Pb**	**20 44 43.2**	**-0.5**
KEK				*e*Sb	**Sb**	**20 45 05.6**	**+0.5**
KEK	**Kerkira**	**1.70**	**351**	*e*PB	**Pb**	**20 44 43.2**	**-0.5**
KEK				*e*SB	**Sb**	**20 45 05.6**	**+0.5**
KEK	**Kerkira**	**1.70**	**351**	*e*Pb	**Pb**	**20 44 43.2**	**-0.5**
KEK				*e*Sb	**Sb**	**20 45 05.6**	**+0.5**
GUR	**Goura**	**1.75**	**92**	*e*PN	**Pg**	**20 44 45.2**	**-0.5**
GUR				*e*SN	**Sg**	**20 45 10.2**	**+1.8**
GUR	**Goura**	**1.75**	**92**	*e*Pn	**Pg**	**20 44 45.3**	**-0.4**
GUR				*e*Sn	**Sg**	**20 45 10.2**	**+1.8**

*CSEM **02** 20:45:13.8±0.6, 29°.27N×49°.10E, h10km, mb3.8/6, Error ellipse: s-maj=17.3km s-min=6.5km az=13.0*
*KISR **02** 20:45:15.6±0.6, 29°.37N×49°.22E, h19km±10km, ML3.7*
*IDC **02** 20:45:16.2±5.8, 29°.78N×49°.03E, h0km, mb3.8/6, mb1 3.7/8, mb1mx3.5/24, mbtmp3.7/8, ML3.3/2, MS3.1/1, Ms1 3.1/1, ms1mx2.3/22, Error ellipse: s-maj=108.6km s-min=27.0km az=0.0*
*NEIC **02** 20:45:17.0±3.5, 29°.43N×49°.15E, h24km±22km, mb3.8/5, ML3.7(THR), MN3.9(TEH), Error ellipse: s-maj=21.9km s-min=7.2km az=198.0*
*TEH **02** 20:45:18.8, 29°.39N×49°.20E, h33km*
*THR **02** 20:45:37.1±0.9, 31°.39N×49°.75E, h15km, ML3.6*

ISC 02 20:45:17.8±1.7, 29°.52N±0°.05×49°.25E±0°.04, h19km±12km, n84, σ1s15/89, mb3.7/12, Persian Gulf

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QRN	**Al-Qurain**	**1.39**	**237**	*e*P	**Pn**	**20 45 40.9**	**-1.2**
KBD	**Kabd**	**1.40**	**256**	*e*P	**Pn**	**20 45 42.2**	**0.0**
KBD				*e*S	**Sn**	**20 46 01.5**	**+1.4**
KBD				AML	AML	20 46 03.6	
	comp=Z,1μm,0.3s						
RDF	**Al-Radifah**	**1.60**	**249**	*e*P	**Pn**	**20 45 44.7**	**-0.2**
RDF				*e*S	**Sn**	**20 46 06.4**	**+1.4**
RDF				AML	AML	20 46 07.6	
	comp=Z,883nm,0.6s						
MIB	**Mutribah**	**1.69**	**280**	*e*P	**Pn**	**20 45 46.8**	**+0.6**
MIB				*e*S	**Sn**	**20 46 10.5**	**+3.3**
MIB				AML	AML	20 46 11.0	
	comp=Z,777nm,0.5s						
NAY	**Al-Naaiem**	**1.77**	**262**	*e*P	**Pn**	**20 45 47.4**	**+0.1**
SHGR	**Shooshtar-Gavs**	**2.61**	**352**	Pg	**Pg**	**20 45 59.0**	**-8.9**
SHGR	**Shooshtar-Gavs**	**2.61**	**352**	*e*Pn	**Pn**	**20 45 59.9**	**+1.0**
SHGR				AML	AML	20 46 53.2	
	comp=E,1μm,0.2s						
ISRV	**Sarvestan**	**3.38**	**91**	Pn	**Pn**	**20 46 10.0**	**+0.6**
ISRV				Sg	**Sg**	**20 47 05.7**	**-0.5**
ISRV	**Sarvestan**	**3.38**	**91**	*e*Pn	**Pn**	**20 46 10.1**	**+0.7**
ISRV				*e*Sg	**Sg**	**20 47 05.7**	**-0.5**
ISRV				*e*		20 47 23.1	
	comp=Z,5μm,0.4s						
ISRV	**Sarvestan**	**3.38**	**91**

comp=Z,29nm,18.5s,baz=342,slow=40

MKAR	**Makanchi Array**	**30.89**	**47**	P		**P**	**20 51 32.4**	**-0.5**
JOF	**Joensuu** comp=Z,0.4nm,0.3s,mb3.8	**35.38**	**346**	*ep*		**P**	**20 52 10.3**	**-1.5**
JOF	**Joensuu** comp=Z,0.4nm,0.3s,mb3.8	**35.38**	**346**	*eP*		**P**	**20 52 10.3**	**-1.5**
FINES	**FINESS Array B** comp=Z,0.9nm,0.4s,mb4.1,baz=148,slow=10,SNR=16	**35.42**	**341**	P		**P**	**20 52 11.2**	**-1.0**
FINES	**FINESS Array B**	**35.42**	**341**	P		**P**	**20 52 11.2**	**-1.0**
ZALV	**Zalesovo Beam**	**35.47**	**36**	P		**P**	**20 52 14.3**	**+1.6**
ZALV	**Zalesovo Beam** comp=Z,0.5nm,0.3s,mb3.9,baz=258,slow=7.4,SNR=5.6	**35.47**	**36**	P		**P**	**20 52 14.3**	**+1.6**
KAF	**Kangasniemi**	**35.90**	**342**	*ep*		**P**	**20 52 15.6**	**-0.7**
KAF	**Kangasniemi**	**35.90**	**342**	*eP*		**P**	**20 52 15.6**	**-0.7**

IDC ***02*** *20:58:36.2±1.2, 11.°34N×93.°28E, h0km, mb3.9/8, mb1 3.9/8, mb1mx3.6/21, mbtmp3.9/8, Error ellipse: s-maj=68.8km s-min=19.2km az=54.0*
NEIC ***02*** *20:58:37.3±1.0, 11.°18N×92.°97E, h10km, Error ellipse: s-maj=26.3km s-min=16.1km az=62.0*
ISCJB ***02*** *20:58:38.9±0.9, 11.°0N±0.°1×93.°2E±0.°1, h33km, mb3.9/8, Error ellipse: s-maj=23.2km s-min=12.3km az=144.7*

ISC 02 20:58:41.1±0.9, 11.°0N±0.°1×93.°1E±0.°1, h35km, n20, σ1s58/20, mb3.9/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.30**	**36**	Pn		**Pn**	**21 00 52.8**	**-0.1**
	0.1nm,0.3s,baz=226,slow=14,SNR=5.4							
ODAN	**Odare**	**16.69**	**342**	*eP*		**Pn**	**21 02 36.0**	**+3.7**
RAMN	**Ramite**	**17.03**	**340**	*eP*		**Pn**	**21 02 40.5**	**+3.9**
TAPN	**Taplejung** 13nm,0.3s	**17.05**	**343**	*eP*		**Pn**	**21 02 38.0**	**+1.1**
DMN	**Daman**	**18.17**	**337**	*eP*		**Pn**	**21 02 52.7**	**+2.0**
KKN	**Kakani** 8.2nm,0.4s	**18.27**	**337**	*eP*		**Pn**	**21 02 53.7**	**+1.8**
LSA	**Lhasa**	**18.70**	**355**	Pn		**Pn**	**21 02 52.0**	**-5.2**
GKN	**Gorkha** 17nm,0.4s	**18.71**	**336**	*eP*		**Pn**	**21 02 58.7**	**+1.5**
KOLN	**Koldanda** 11nm,0.7s	**18.94**	**333**	*eP*		**Pn**	**21 03 01.8**	**+1.7**
MK31	**Makanchi Array**	**36.85**	**348**	*eP*		**P**	**21 05 43.8**	**-2.1**
MKAR	**Makanchi Array** 1.3nm,0.7s,mb3.9,baz=166,slow=7.9,SNR=16	**36.85**	**348**	P		**P**	**21 05 44.1**	**-1.9**
FITZ	**Fitzroy Crossi** 1.5nm,1.0s,mb3.7,baz=334,slow=11,SNR=5.6	**43.19**	**132**	P		**P**	**21 06 40.3**	**+1.3**
ZALV	**Zalesovo Beam** 2.0nm,0.5s,mb4.1,baz=182,slow=8.3,SNR=14	**43.35**	**353**	P		**P**	**21 06 37.4**	**-2.4**
AKTK	**Aktyubinsk**	**48.76**	**331**	P		**P**	**21 07 21.2**	**-1.2**
AKTO	**Aktyubinsk** 0.6nm,0.5s,mb3.9,baz=111,slow=8.6,SNR=2.3	**48.76**	**331**	P		**P**	**21 07 21.2**	**-1.2**
ASAR	**Alice Springs** 0.2nm,0.4s,mb3.4,baz=307,slow=7.2,SNR=6.0	**52.68**	**131**	P		**P**	**21 07 53.7**	**+1.3**
BRTR	**Keskin Array B** 0.4nm,0.5s,mb3.7,baz=129,slow=7.6,SNR=3.1	**59.67**	**310**	P		**P**	**21 08 42.4**	**+0.3**
FINES	**FINESS Array B**	**69.51**	**332**	P		**P**	**21 09 44.1**	**-1.8**
FINES	**FINESS Array B** 0.4nm,0.4s,mb3.8,baz=108,slow=6.2,SNR=7.8	**69.51**	**332**	P		**P**	**21 09 44.1**	**-1.8**
ARCES	**ARCESS Array B** 6.3nm,1.2s,mb4.4,baz=96,slow=7.4,SNR=5.9	**72.01**	**340**	P		**P**	**21 09 59.5**	**-1.6**

ISCJB ***02*** *21:11:51.9±1.5, 17.°4S±0.°2×175.°5W±0.°2, h220km±17km, mb3.9/10, Error ellipse: s-maj=36.4km s-min=14.8km az=140.6*
NEIC ***02*** *21:11:53.6±1.2, 17.°57S×175.°45W, h225km±13km, mb3.8/3, Error ellipse: s-maj=26.8km s-min=11.2km az=141.0*
IDC ***02*** *21:11:53.7±2.4, 17.°58S×175.°42W, h226km±25km, mb3.7/6, mb1 3.9/7, mb1mx3.7/15, mbtmp3.7/7, Error ellipse: s-maj=37.4km s-min=15.4km az=135.0*

ISC 02 21:11:53.7±1.7, 17.°6S±0.°2×175.°5W±0.°2, h225km±18km, n16, σ0s31/18, mb3.9/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**5.08**	**45**	P		**Pn**	**21 13 09.7**	**0.0**
AFI				S		**S**	**21 14 04.5**	**-5.6**
AFI	**Afiamalu** 12nm,0.3s,baz=262,slow=22,SNR=11	**5.08**	**45**	P		**Pn**	**21 13 09.7**	**0.0**
AFI				S		**S**	**21 14 04.5**	**-5.6**
URZ	**Urewera** 14nm,0.3s,baz=216,slow=20,SNR=6.7	**21.61**	**196**	P		**P**	**21 16 25.7**	**-0.4**
ARMA	**Armidale** 8.7nm,0.4s,mb4.6,baz=288,slow=3.2,SNR=8.0	**32.55**	**241**	*eP*		**P**	**21 18 04.3**	**+0.4**
CTA	**Charters Tower** 2.6nm,0.8s,mb3.8	**36.28**	**260**	*eP*		**P**	**21 18 35.9**	**0.0**
CTAO	**Charters Tower** 2.2nm,0.6s,mb3.9	**36.28**	**260**	*eP*		**P**	**21 18 35.6**	**-0.3**
STKA	**Stephens Creek** 6.2nm,0.8s,mb4.1	**41.26**	**242**	*eP*		**P**	**21 19 17.7**	**+0.6**
STKA	**Stephens Creek** 1.7nm,0.8s,mb3.5	**41.26**	**242**	*eP*		**P**	**21 19 17.6**	**+0.5**
STKA	**Stephens Creek** 6.8nm,0.7s,mb4.2,baz=70,slow=8.1,SNR=16	**41.26**	**242**	P		**P**	**21 19 17.2**	**+0.1**
WRAB	**Tennant Creek** 2.3nm,0.5s,mb3.8	**47.46**	**259**	*eP*		**P**	**21 20 06.0**	**-0.2**
ASAR	**Alice Springs** 18nm,0.6s,mb4.6,baz=88,slow=8.1,SNR=366	**47.59**	**254**	P		**P**	**21 20 07.2**	**0.0**
KAKA	**Kakadu** 6.5nm,0.6s,mb4.1	**50.41**	**268**	*eP*		**P**	**21 20 28.8**	**+0.1**
FITZ	**Fitzroy Crossi** 1.7nm,0.4s,mb3.9	**55.87**	**260**	*eP*		**P**	**21 21 08.3**	**-0.1**
NVAR	**Mina Array Bea** 0.5nm,0.4s,mb3.5,baz=229,slow=8.2,SNR=3.6	**77.25**	**43**	P		**P**	**21 23 23.2**	**+0.1**
TXAR	**Lajitas Array** 0.3nm,0.6s,mb3.2,baz=215,slow=5.9,SNR=3.7	**83.45**	**57**	P		**P**	**21 23 56.7**	**+0.4**
ILAR	**Eielson Array** 0.3nm,0.4s,mb3.4,baz=219,slow=5.0,SNR=5.4	**84.96**	**12**	P		**P**	**21 24 02.5**	**-0.5**

NNC ***02*** *21:23:07.7±4.3, 35.°79N×68.°57E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=51.5km s-min=39.1km az=107.0*
IDC ***02*** *21:23:32.4±1.7, 37.°72N×69.°02E, h0km, mb3.8/8, mb1 4.0/13, mb1mx3.9/25, mbtmp3.9/13, ML3.6/5, MS3.2/5, Ms1 3.2/5, ms1mx2.7/27, Error ellipse: s-maj=33.3km s-min=15.2km az=163.0*
ISCJB ***02*** *21:23:34.2±0.4, 38.°09N±0.°03×68.°95E±0.°05, h10km, mb4.0/13, MS3.2/3, Error ellipse: s-maj=5.9km s-min=5.0km az=5.1*
NEIC ***02*** *21:23:36.0±0.6, 38.°05N×68.°92E, h10km, mb4.3/6, Error ellipse: s-maj=9.3km s-min=7.5km az=156.0*
BJI ***02*** *21:23:36.2, 38.°18N×69.°10E, h14km, mB4.5/2, mb4.0/8, ML3.9/3, Ms3.5/2*
MOS ***02*** *21:23:37.3±1.3, 38.°10N×68.°99E, h33km, mb4.4/5, Error ellipse: s-maj=12.0km s-min=6.8km az=84.2*

ISC 02 21:23:35.9±0.4, 38.°04N±0.°03×68.°90E±0.°05, h10km, n64, σ1s26/69, mb4.0/13, MS3.2/3, 7C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KBL	**Kabul**	**3.50**	**178**	*ePn*		**Pn**	**21 24 30.6**	**+0.3**
KBL				*eS*		**Sn**	**21 25 20.4**	**+8.7**
CEP	**Cherat**	**4.87**	**149**	⇑P		**Pn**	**21 24 49.1**	**0.0**
CEP				S		**Sn**	**21 25 33.0**	**-12**
KK31	**Karatay Array** 2.0nm,0.3s,baz=194,slow=15,SNR=115	**5.20**	**13**	⇑Pn		**Pn**	**21 24 57.0**	**+3.3**
KK31				⇓Sn		**Sg**	**21 26 24.3**	**+1.5**
	23nm,0.5s,baz=191,slow=25,SNR=5.7							
AML	**Almayashu** SNR=20	**5.49**	**40**	P		**Pn**	**21 24 59.0**	**+1.3**
AML	**Almayashu** 32nm,0.5s	**5.49**	**40**	*ePn*		**Pn**	**21 24 58.9**	**+1.3**
AML				*eS*		**Sn**	**21 25 58.9**	**-2.0**
CHCP	**Chirah Chowk**	**5.63**	**140**	P		**Pn**	**21 25 00.2**	**+0.6**
KSH	**Kashi**	**5.72**	**73**	Pn		**Pn**	**21 24 56.1**	**-4.7**
KSH				Sn		**Sn**	**21 25 59.5**	**-7.0**
KSH	comp=N,150nm,1.0s			smax				
KSH	comp=E,130nm,1.0s			smax				
THW	**Thamme Wali**	**5.73**	**155**	P		**Pn**	**21 24 59.9**	**-1.0**
EKS2	**Erkin-Say** SNR=8.9	**5.93**	**37**	P		**Pn**	**21 25 07.8**	**+4.1**
EKS2	**Erkin-Say** comp=E,21nm,0.6s	**5.93**	**37**	*ePn*		**Pn**	**21 25 05.6**	**+1.9**
UCH	**Uchtor** comp=E,13nm,0.8s	**6.00**	**44**	*ePn*		**Pn**	**21 25 05.1**	**+0.5**
AAK	**Ala-Archa** comp=E,42nm,0.9s	**6.27**	**41**	*ePn*		**Pn**	**21 25 09.6**	**+1.3**
AAK	**Ala-Archa** comp=E,1.5nm,0.3s,baz=219,slow=7.3,SNR=11	**6.27**	**41**	Pn		**Pn**	**21 25 09.9**	**+1.6**
AAK	comp=E,1.8nm,0.3s,baz=109,slow=19,SNR=2.9			Lg			21 26 52.6	
AAK	comp=E,230nm,20.6s,baz=176,slow=42			LR		LR	21 28 00.9	
AAK	**Ala-Archa**	**6.27**	**41**	*ePN*		**Pn**	**21 25 09.9**	**+1.6**
KZA	**Kyzart** SNR=16	**6.32**	**48**	P		**Pn**	**21 25 10.7**	**+1.7**
FRU	**Bishkek**	**6.47**	**41**	*ePN*		**Pn**	**21 25 14.0**	**+2.9**
FRU				*i*			21 25 37.0	
FRU	comp=Z,70nm,2.0s			pmax		pmax		
FRU	comp=E,450µm,2.0s			pmax		pmax		
KBK	**Karagaybulak** SNR=14	**6.52**	**43**	P		**Pn**	**21 25 13.9**	**+2.1**
ULHL	**Ulahol** SNR=11	**7.02**	**51**	P		**Pn**	**21 25 19.3**	**+0.7**
SDNR	**Sundarnagar**	**9.30**	**132**	*ePKP*		**Pn**	**21 25 47.5**	**-2.5**
AB31	**Akbulak array** comp=E,1.9nm,0.4s,baz=161,slow=12,SNR=104	**12.94**	**333**	⇑P		**Pn**	**21 26 38.8**	**-0.8**
ABKAR	**Akbulak array**	**12.94**	**333**	*ePn*		**Pn**	**21 26 38.7**	**-1.0**
MK31	**Makanchi Array** comp=E,4.0nm,0.8s,baz=228,slow=7.7,SNR=5.7	**13.19**	**44**	⇑P		**Pn**	**21 26 43.1**	**0.0**
MK31	**Makanchi Array**	**13.19**	**44**	*eP*		**Pn**	**21 26 42.3**	**-0.8**
MKAR	**Makanchi Array** comp=E,0.2nm,0.3s,baz=231,slow=14,SNR=21	**13.19**	**44**	Pn		**Pn**	**21 26 42.8**	**-0.3**
KURBB	**Kurchatov Arra** comp=E,0.3nm,0.6s	**14.32**	**26**	⇓P		**Pn**	**21 26 57.0**	**-1.6**
KURK	**Kurchatov** comp=E,1.2nm,0.6s	**14.43**	**26**	⇑P		**Pn**	**21 27 00.6**	**+0.5**
KURK	**Kurchatov**	**14.43**	**26**	*ePn*		**Pn**	**21 27 00.3**	**+0.3**
KURK	**Kurchatov**	**14.43**	**26**	*eP*		**Pn**	**21 26 59.7**	**-0.3**
AKTK	**Aktyubinsk**	**14.62**	**331**	Pn		**Pn**	**21 27 01.1**	**-1.5**
AKTO	**Aktyubinsk** comp=E,0.7nm,0.3s,baz=155,slow=14,SNR=6.0	**14.62**	**331**	Pn		**Pn**	**21 27 01.1**	**-1.5**
VOSK	**Vostochnaya** comp=E,4.0nm,0.7s	**14.75**	**5**	⇓P		**Pn**	**21 27 10.4**	**+6.0**
ZRNK	**Zerenda** comp=E,4.3nm,0.8s	**14.91**	**0**	⇑P		**Pn**	**21 27 07.1**	**+0.6**
BVA0	**Borovoye Array** comp=E,0.6nm,0.6s,baz=184,slow=13,SNR=5.3	**15.02**	**3**	⇑P		**Pn**	**21 27 12.6**	**+4.6**
BVAR	**Borovoye Array** comp=E,0.2nm,0.3s,baz=172,slow=12,SNR=8.5	**15.02**	**3**	Pn		**Pn**	**21 27 05.9**	**-2.1**
BRVK	**Borovoye** comp=E,5.5nm,0.7s	**15.05**	**3**	*ePn*		**Pn**	**21 27 09.2**	**+0.8**
BRVK				*eS*		**Sn**	**21 30 05.2**	**+10**
BRVK	**Borovoye**	**15.05**	**3**	*eP*		**Pn**	**21 27 09.2**	**+0.8**
BRVK	comp=Z,6.0nm,0.7s			pmax		pmax		
GNI	**Garni** comp=Z,0.5nm,0.3s,baz=222,slow=2.8,SNR=3.5	**18.86**	**284**	P		**Pn**	**21 27 58.9**	**+2.4**
ZALV	**Zalesovo Beam** comp=Z,0.8nm,0.3s,baz=226,slow=11,SNR=18	**19.30**	**29**	P		**Pn**	**21 27 59.6**	**-2.1**
ZALV	comp=Z,25nm,18.0s,baz=222,slow=40			LR		LR	21 36 29.6	
NVS	**Novosibirsk**	**19.42**	**26**	*eP*		**Pn**	**21 28 00.1**	**-3.1**
NVS				*eS*		**Sn**	**21 31 25.6**	**-15**
NVS	comp=N,6.0nm,0.9s			pmax		pmax		
NVS	comp=Z,6.0nm,0.9s			pmax		pmax		
NVS	comp=E,37nm,2.4s			smax				
SVE	**Sverdlovsk**	**19.58**	**346**	*eP*		**Pn**	**21 28 05.0**	**-0.1**
SVE	comp=Z,8.0nm,0.8s			pmax		pmax		
ARU	**Arti** comp=Z,14nm,0.8s	**19.65**	**343**	*eP*		**Pn**	**21 28 05.3**	**-0.6**
ARU	**Arti**	**19.65**	**343**	*d iP*		**Pn**	**21 28 05.8**	**-0.1**
ARU				S		**Sn**	**21 31 44.7**	**-1.6**
ARU	comp=Z,25nm,1.7s			pmax		pmax		
LSA	**Lhasa** comp=Z,4.7nm,0.7s	**20.23**	**108**	*eP*		**P**	**21 28 11.3**	**+0.2**
LSA	**Lhasa**	**20.23**	**108**	*eP*		**P**	**21 28 11.3**	**+0.2**
LSA	comp=Z,5.0nm,0.7s			pmax		pmax		
KIV	**Kislovodsk** comp=Z,5.6nm,0.6s	**20.60**	**295**	*eP*		**P**	**21 28 16.0**	**+1.0**
KIV	**Kislovodsk**	**20.60**	**295**	P		**P**	**21 28 17.0**	**+2.0**
KIV				*e*			21 28 31.2	
KIV	comp=Z,6.0nm,0.6s			pmax		pmax		
VRHR	**Novokhopersk**	**23.25**	**313**	*eP*		**P**	**21 28 48.5**	**+5.3**
VRHR	comp=N,10.0nm,0.6s			pmax		pmax		
VRHR	comp=E,20nm,0.6s			pmax		pmax		
VRHR	comp=Z,10.0nm,0.6s,mb4.4			pmax		pmax		
GTA	**Gaotai**	**24.10**	**77**	*eP*		**P**	**21 28 51.1**	**-0.4**
GTA				pP			21 28 57.1	
GTA				sP		sP	21 28 59.8	+4.0
GTA	comp=Z,5.0nm,1.3s,mb3.8			pmax		pmax		
VSR	**Storozhevoye**	**24.73**	**312**	*eP*		**P**	**21 28 57.4**	**+0.3**
VSR	comp=N,2.0nm,0.6s			pmax		pmax		
VSR	comp=E,3.0nm,0.6s			pmax		pmax		
VSR	comp=Z,6.0nm,0.6s,mb4.3			pmax		pmax		
BRTR	**Keskin Array B** comp=Z,0.6nm,0.7s,mb3.2,baz=109,slow=7.8,SNR=3.5	**27.40**	**285**	P		**P**	**21 29 20.8**	**-0.6**
OBN	**Obninsk**	**27.68**	**319**	P		**P**	**21 29 25.0**	**+1.3**
OBN				*e*			21 29 35.8	
SONM	**Songino Array** comp=Z,0.5nm,0.7s,mb3.4,baz=262,slow=8.6,SNR=2.3	**28.89**	**58**	P		**P**	**21 29 33.7**	**-0.9**
SONM	comp=Z,57nm,18.8s,MS3.2,baz=237,slow=39			LR		LR	21 42 14.9	
EIL	**Elat** comp=Z,50nm,18.4s,MS3.2,baz=89,slow=41	**29.28**	**264**	LR		LR	21 43 27.3	
ENH	**Enshi** comp=Z,12nm,0.7s,mb5.0	**34.26**	**91**	*eP*		**P**	**21 30 13.5**	**-8.5**
FINES	**FINESS Array B** comp=Z,0.9nm,0.5s,mb3.9,baz=125,slow=9.2,SNR=9.6	**35.27**	**326**	P		**P**	**21 30 31.0**	**+0.6**
ARCES	**ARCESS Array B** comp=Z,1.9nm,0.7s,mb3.9,baz=111,slow=6.6,SNR=5.1	**39.08**	**337**	P		**P**	**21 31 04.1**	**+1.5**
NOA	**NORSAR Array B** comp=Z,1.4nm,0.5s,mb3.9,baz=98,slow=8.1,SNR=11	**42.14**	**322**	P		**P**	**21 31 28.1**	**+0.1**
TIXI	**Tiksi** comp=Z,6.2nm,0.8s,mb4.5	**44.99**	**23**	*eP*		**P**	**21 31 50.7**	**-0.1**
TIXI	**Tiksi** comp=Z,6.0nm,0.9s,mb4.4	**44.99**	**23**	*eP*		**P**	**21 31 49.9**	**-0.9**
KSRS	**Korea Array** comp=Z,25nm,19.6s,MS3.2,baz=185,slow=38	**45.97**	**72**	LR		LR	21 52 44.0	
ESDC	**Sonseca Array** comp=Z,0.5nm,0.6s,mb3.7,baz=61,slow=7.7,SNR=6.0	**55.27**	**296**	P		**P**	**21 33 09.6**	**+0.3**
ILAR	**Eielson Array** comp=Z,0.6nm,0.9s,mb3.5,baz=325,slow=5.6,SNR=6.6	**73.74**	**15**	P		**P**	**21 35 08.6**	**-1.1**
YKA	**Yellowknife Ar** comp=Z,1.7nm,0.6s,mb4.2,baz=352,slow=5.6,SNR=7.8	**79.77**	**2**	P		**P**	**21 35 43.9**	**+0.2**
LPAZ	**La Paz** comp=Z,1.3nm,0.8s,baz=31,slow=5.9,SNR=5.4	**136.54**	**288**	PKP		PKPdf	21 42 58.9	+0.4

CSEM ***02*** *22:00:55.2, 66.°54N×17.°72W, h11km, ML3.4, After REY*

REY 02 22:00:55.2, 66.°54N×17.°72W, h11km, ML3.4, ML3.5, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
IGRI	**Grimsey**	**0.12**	**273**	P		Pg	22 00 58.1	0.0
IGRI				S		Sg	22 01 00.2	0.0
IFLA	**Flatey**	**0.38**	**188**	P		Pg	22 01 02.4	-0.3
IFLA				S		Sg	22 01 08.0	+0.2
IBRE	**Brettingsstaoi**	**0.42**	**190**	P		Pg	22 01 03.0	-0.5
IBRE				S		Sg	22 01 09.0	-0.1
IHED	**Heoinshofoi**	**0.49**	**160**	P		Pg	22 01 04.0	-0.7
IHED				S		Sg	22 01 10.4	-0.7
ILEI	**Leirhofn**	**0.51**	**104**	P		Pg	22 01 04.4	-0.7
ILEI				S		Sg	22 01 11.4	-0.5
IGRA	**Granastaoir**	**0.62**	**175**	P		Pg	22 01 06.2	-1.1
IGRA				S		Sg	22 01 14.4	-1.1
ISIG	**Siglufjorour**	**0.63**	**230**	P		Pg	22 01 06.1	-1.3
ISIG				S		Sg	22 01 14.1	-1.6
IHLA	**Hella**	**0.65**	**205**	P		Pg	22 01 06.7	-1.1
IHLA				S		Sg	22 01 15.2	-1.2
IGIL	**Gilhagi**	**0.72**	**129**	P		Pg	22 01 07.6	-1.5
IGIL				S		Sg	22 01 17.3	-1.2
IKVO	**Krokottuvotn**	**0.90**	**157**	S		Sg	22 01 22.0	-2.0
IREN	**Reynihlio**	**0.95**	**159**	S		Sg	22 01 23.6	-2.3
IHRN	**Hraun**	**1.06**	**247**	S		Sb	22 01 25.8	-3.5
IGRS	**Grimsstaoir**	**1.11**	**143**	P		Pb	22 01 13.9	-2.5
IGRS				S		Sb	22 01 28.8	-2.0
ISVA	**Svartarkot**	**1.22**	**171**	P		Pn	22 01 15.8	-2.3
ISVA				S		Sb	22 01 31.7	-2.2

BJI ***02*** *22:04:37.6, 28.°73N×80.°71E, h10km, mb4.4/6*
IDC ***02*** *22:04:48.4±1.0, 29.°49N×81.°71E, h0km, mb4.0/11, mb1 4.1/13, mb1mx3.8/25, mbtmp4.0/13, ML3.7/2, Error ellipse: s-maj=29.1km s-min=19.0km az=47.0*
ISCJB ***02*** *22:04:52.8±0.9, 29.°38N±0.°04×81.°55E±0.°05, h52km±10km, mb4.0/16, Error ellipse: s-maj=8.1km s-min=6.8km az=138.0*
NDI ***02*** *22:04:53.7±2.2, 29.°58N×81.°57E, h23km±11km, ML4.0, mb4.1(NEIC)*
NEIC ***02*** *22:04:53.3±3.3, 29.°54N×81.°62E, h30km±24km, mb4.1/3, Error ellipse: s-maj=17.6km s-min=9.4km az=213.0*

ISC 02 22:04:54.2±0.7, 29.°43N±0.°04×81.°57E±0.°05, h42km±8km, n35, σ0s94/41, mb4.0/16, Nepal

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PTH	**Pithoragarh**	**1.19**	**276**	*ePKP*		**Pn**	**22 05 15.5**	**+1.1**
PTH				*eS*		**Sn**	**22 05 31.2**	**+1.9**
JOSI	**Joshimath**	**2.08**	**303**	*ePKP*		**Pn**	**22 05 27.9**	**+1.3**
JOSI				*eS*		**Sn**	**22 05 49.8**	**-1.4**
JOSI	comp=N,2µm,0.6s			AML		AML	22 06 01.3	
JOSI	comp=E,2µm,0.7s			AML		AML	22 06 03.0	
AGRA	**Agra**	**3.88**	**236**	*eS*		**Sn**	**22 06 35.2**	**-0.4**
NDI	**New Delhi**	**3.89**	**260**	*ePKP*		**Pn**	**22 05 52.0**	**+0.6**
NDI				*eS*		**Sn**	**22 06 35.0**	**-0.8**
SDNR	**Sundarnagar**	**4.48**	**299**	*ex*		x	22 06 04.5	
SDNR				*ex*		x	22 07 10.5	
KUDL	**Kundal**	**4.64**	**255**	*ePKP*		**Pn**	**22 06 02.5**	**+0.6**
KUDL				*eS*		**Sn**	**22 06 53.9**	**-0.6**
KHET	**Khetri**	**5.24**	**256**	*eS*		**Sn**	**22 07 08.2**	**-1.0**
BHPL	**Bhopal**	**7.20**	**212**	*ePKP*		**Pn**	**22 06 38.1**	**+1.2**
BHPL				*eS*		**Sn**	**22 07 56.4**	**-1.0**
LSA	**Lhasa** comp=E,6.8nm,0.3s	**8.34**	**86**	Pn		**Pn**	**22 06 53.2**	**+0.6**
LSA				*eSn*		**Sn**	**22 08 21.4**	**-4.1**
KBL	**Kabul** comp=E,4.1nm,0.5s	**11.79**	**299**	*ePn*		**Pn**	**22 07 38.9**	**-0.9**
KBL				*eSn*		**Sn**	**22 09 45.5**	**-4.4**
AML	**Almayashu** comp=E,4.1nm,0.6s	**14.18**	**335**	*ePn*		**Pn**	**22 08 09.1**	**-3.3**
AAK	**Ala-Archa** comp=E,0.0nm,0.3s,baz=180,slow=11,SNR=2.6	**14.36**	**338**	Pn		**Pn**	**22 08 15.3**	**+0.6**
EKS2	**Erkin-Say** comp=E,5.8nm,0.8s	**14.62**	**337**	Pn		**Pn**	**22 08 17.4**	**-0.9**
EKS2				*e*			22 08 25.1	
MK31	**Makanchi Array**	**17.34**	**2**	*ePn*		**Pn**	**22 08 53.1**	**+0.1**
MKAR	**Makanchi Array** comp=E,0.2nm,0.3s,baz=181,slow=12,SNR=18	**17.34**	**2**	P		**Pn**	**22 08 49.3**	**-3.6**
GTA	**Gaotai**	**18.01**	**52**	*eP*		**Pn**	**22 09 01.9**	**+0.6**
GTA				pP		pP	22 09 06.2	-5.4
GTA				sP		sP	22 09 09.2	-7.8
GTA	comp=Z,4.0nm,0.7s			pmax		pmax		
CMAR	**Chiang Mai Arr** comp=Z,0.1nm,0.3s,baz=316,slow=9.5,SNR=7.1	**19.24**	**121**	P		**Pn**	**22 09 15.5**	**-0.8**
KURK	**Kurchatov** comp=Z,2.8nm,0.7s,mb3.7	**21.38**	**355**	*eP*		**P**	**22 09 36.4**	**-1.5**
ZALV	**Zalesovo Beam** comp=Z,3.4nm,0.6s,mb4.1,baz=192,slow=9.9,SNR=20	**24.61**	**5**	P		**P**	**22 10 09.6**	**-0.7**
BVAR	**Borovoye Array** comp=Z,1.5nm,0.5s,mb3.8,baz=137,slow=11,SNR=7.4	**24.97**	**344**	P		**P**	**22 10 13.4**	**-0.1**
ABKAR	**Akbulak array** comp=Z,5.4nm,0.8s,mb4.1	**25.76**	**326**	*eP*		**P**	**22 10 21.8**	**+1.1**
SONM	**Songino Array** comp=Z,0.8nm,0.5s,mb3.5,baz=230,slow=6.9,SNR=4.0	**25.53**	**39**	P		**P**	**22 10 27.6**	**-0.1**
AKTK	**Aktyubinsk**	**27.47**	**326**	P		**P**	**22 10 36.5**	**+0.4**
AKTO	**Aktyubinsk** comp=Z,1.0nm,0.4s,mb3.7,baz=126,slow=10,SNR=4.7	**27.47**	**326**	P		**P**	**22 10 36.5**	**+0.4**
ARU	**Arti** comp=Z,2.0nm,0.5s,mb4.2	**31.51**	**335**	P		**P**	**22 11 12.4**	**+0.5**
BRTR	**Keskin Array B** comp=Z,0.2nm,0.4s,mb3.2,baz=123,slow=10,SNR=4.1	**40.36**	**298**	P		**P**	**22 12 29.6**	**+1.8**
JOF	**Joensuu** comp=Z,1.8nm,0.3s,mb4.5	**46.38**	**331**	*ep*		**P**	**22 13 15.9**	**0.0**
FINES	**FINESS Array B** comp=Z,3.0nm,0.5s,mb4.5,baz=110,slow=7.8,SNR=36	**48.23**	**328**	P		**P**	**22 13 30.6**	**+0.3**
KAF	**Kangasniemi** comp=Z,0.6nm,0.3s,mb4.1,baz=106,slow=7.5	**48.31**	**329**	*ep*		**P**	**22 13 30.0**	**-1.0**
ARCES	**ARCESS Array B** comp=Z,2.2nm,0.8s,mb4.1,baz=98,slow=6.5,SNR=6.5	**51.03**	**338**	P		**P**	**22 13 51.6**	**0.0**
NOA	**NORSAR Array B** comp=Z,1.8nm,0.7s,mb4.2,baz=94,slow=7.0,SNR=4.4	**55.27**	**326**	P		**P**	**22 14 22.7**	**-0.1**
ASAR	**Alice Springs** comp=Z,0.8nm,0.8s,mb3.7,baz=324,slow=6.1,SNR=6.6	**72.92**	**131**	P		**P**	**22 16 18.5**	**-0.7**
ILAR	**Eielson Array** comp=Z,0.6nm,0.8s,mb3.6,baz=312,slow=5.1,SNR=7.3	**78.83**	**19**	P		**P**	**22 16 52.1**	**-0.1**
DBIC	**Dimbokro**	**83.66**	**274**	P		**P**	**22 17 20.0**	**+1.1**
DBIC	**Dimbokro** comp=Z,3.6nm,0.8s,mb4.6,baz=0.0,slow=5.1,SNR=2.8	**83.66**	**274**	P		**P**	**22 17 20.0**	**+1.1**

**BJI 02 22:25:08.7

EVR					*e*SN	**Sn**	**22 51 17.0**	**-0.9**
EVR	**Evrytania**	**0.78**	**10**		*e*Pn	**Pn**	**22 51 05.9**	**-0.9**
EVR					*e*Sn	**Sn**	**22 51 17.0**	**-0.9**
VLS	**Valsamata**	**0.83**	**273**		*e*Pn	**Pn**	**22 51 05.3**	**-2.1**
VLS					*e*Sn	**Sn**	**22 51 18.9**	**-0.1**
VLS	**Valsamata**	**0.83**	**273**		*e*PN	**Pn**	**22 51 05.3**	**-2.1**
VLS					*e*SN	**Sn**	**22 51 18.9**	**-0.1**
VLS	**Valsamata**	**0.83**	**273**		P	**Pb**	**22 51 05.4**	**-1.1**
VLS					S	**Sb**	**22 51 18.3**	**+1.1**
VLS	**Valsamata**	**0.83**	**273**		P	**Pb**	**22 51 05.4**	**-1.1**
VLS					S	**Sb**	**22 51 18.3**	**+1.1**
VLS					*e*Sn	**Sn**	**22 51 18.9**	**-0.1**
VLX	**Vlachokerasia**	**0.97**	**143**		*e*PN	**Pn**	**22 51 09.1**	**-0.2**
VLX					*e*SN	**Sn**	**22 51 22.1**	**-0.4**
VLX	**Vlachokerasia**	**0.97**	**143**		*e*Pn	**Pn**	**22 51 09.1**	**-0.2**
VLX					*e*Sn	**Sn**	**22 51 22.1**	**-0.4**
ITM	**Ithomi**	**0.99**	**167**		*e*Pb	**Pb**	**22 51 08.5**	**-0.8**
ITM					*e*Sn	**Sn**	**22 51 23.6**	**+0.6**
ITM	**Ithomi**	**0.99**	**167**		*e*PB	**Pb**	**22 51 08.5**	**-0.8**
ITM					*e*SN	**Sn**	**22 51 23.6**	**+0.6**
ITM	**Ithomi**	**0.99**	**167**		*e*Pb	**Pb**	**22 51 08.5**	**-0.8**
ITM					*e*Sn	**Sn**	**22 51 23.6**	**+0.6**
LKD2	**Lefkada island**	**1.00**	**310**		P	**Pb**	**22 51 08.5**	**-1.0**
LKD2					S	**Sb**	**22 51 23.2**	**+0.9**
LKD2	**Lefkada island**	**1.00**	**310**		P	**Pb**	**22 51 08.5**	**-1.0**
LKD2					S	**Sb**	**22 51 23.2**	**+0.9**
AGG	**Agios Georgios**	**1.03**	**32**		*e*Pn	**Pn**	**22 51 10.7**	**+0.5**
AGG					*e*Sn	**Sn**	**22 51 24.5**	**+0.4**
AGG	**Agios Georgios**	**1.03**	**32**		*e*PN	**Pn**	**22 51 10.7**	**+0.5**
AGG					*e*SN	**Sn**	**22 51 24.5**	**+0.4**
AGG	**Agios Georgios**	**1.03**	**32**		*e*Pn	**Pn**	**22 51 10.7**	**+0.5**
AGG					*e*Sn	**Sn**	**22 51 24.5**	**+0.4**
LTK	**Loutraki**	**1.06**	**96**		*e*PN	**Pn**	**22 51 11.2**	**+0.7**
LTK	**Loutraki**	**1.06**	**96**		*e*Pn	**Pn**	**22 51 11.2**	**+0.7**
LKR	**Lokris**	**1.18**	**64**		*e*Pn	**Pn**	**22 51 10.7**	**-1.6**
LKR	**Lokris**	**1.18**	**64**		*e*PN	**Pn**	**22 51 10.7**	**-1.6**
LKR	**Lokris**	**1.18**	**64**		*e*Pn	**Pn**	**22 51 10.7**	**-1.6**
PYL	**PYLOS**	**1.25**	**176**		*e*PN	**Pn**	**22 51 14.1**	**+0.9**
PYL	**PYLOS**	**1.25**	**176**		*e*Pn	**Pn**	**22 51 14.1**	**+0.9**
DID	**Didima**	**1.42**	**116**		*e*PN	**Pn**	**22 51 17.2**	**+1.7**
DID					*e*SN	**Sn**	**22 51 37.1**	**+3.5**
DID	**Didima**	**1.42**	**116**		*e*Pn	**Pn**	**22 51 17.2**	**+1.7**
THL	**Klokotos Trika**	**1.45**	**12**		*e*PN	**Pn**	**22 51 18.9**	**+3.0**
THL					*e*SN	**Sn**	**22 51 38.2**	**+3.8**
THL	**Klokotos Trika**	**1.45**	**12**		*e*Pn	**Pn**	**22 51 18.9**	**+3.0**

IDC ***02*** *23:27:28.8±1.6, 6.05S×149.66E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.7/15, mbtmp3.9/6, MS3.3/5, Ms1 3.3/5, ms1mx2.9/18, Error ellipse: s-maj=55.9km s-min=22.1km az=108.0*

ISCJB ***02*** *23:27:36.0±3.6, 6.1S±0.2×149.5E±0.3, h67km±30km, mb3.6/6, Error ellipse: s-maj=51.1km s-min=23.5km az=22.6*

NEIC ***02*** *23:27:40.3±3.3, 6.15S×149.21E, h72km±25km, mb4.0/3, Error ellipse: s-maj=52.8km s-min=21.1km az=100.0*

ISC 02 23:27:37.2±3.5**, 6.1S**±0.2**×149.6E**±0.3**, h64**km±30km**, n14,** σ0**s71**/11**, mb3.7**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**4.06**	**216**	*e*Pn		**Pn**	**23 28 36.8**	**-0.1**
PMG				*e*S		**Sn**	**23 29 23.5**	**+0.2**
CTA	**Charters Tower**	**14.26**	**193**	LR		LR	23 34 59.2	
	comp=Z,72nm,19.2s,baz=51,slow=31							
GUMO	**Guam**	**20.13**	**347**	LR		LR	23 37 56.3	
	comp=Z,65nm,21.0s,baz=227,slow=31							
WRAB	**Tennant Creek**	**20.20**	**226**	*e*P		**P**	**23 32 06.6**	**-0.3**
	5.5nm,0.6s							
ASAR	**Alice Springs**	**23.07**	**219**	P		**P**	**23 32 37.2**	**-0.3**
	1.7nm,0.7s,mb3.6,baz=52,slow=9.7,SNR=44							
FITZ	**Fitzroy Crossi**	**26.23**	**241**	*e*P		**P**	**23 33 05.5**	**-1.0**
	18nm,1.3s,mb4.4							
FITZ	**Fitzroy Crossi**	**26.23**	**241**	P		**P**	**23 33 05.7**	**-0.7**
	2.1nm,0.6s,mb3.8,baz=55,slow=8.4,SNR=12							
STKA	**Stephens Creek**	**26.70**	**195**	*e*P		**P**	**23 33 11.6**	**+1.1**
	0.4nm,0.7s,mb3.1							
STKA	**Stephens Creek**	**26.70**	**195**	P		**P**	**23 33 11.3**	**+0.8**
	1.8nm,0.7s,mb3.7,baz=350,slow=13,SNR=6.0							
STKA				LR		LR	23 43 53.9	
	comp=Z,72nm,20.0s,baz=24,slow=37							
KSRS	**Korea Array**	**47.83**	**337**	LR		LR	23 55 03.2	
	comp=Z,29nm,18.3s,baz=150,slow=35							
SONM	**Songino Array**	**65.78**	**330**	P		**P**	**23 38 16.7**	**+1.2**
	0.4nm,0.5s,mb3.7,baz=125,slow=6.6,SNR=2.9							
ZALV	**Zalesovo Beam**	**80.50**	**327**	P		**P**	**23 39 42.4**	**+0.3**
	0.5nm,0.5s,mb3.7,baz=123,slow=7.1,SNR=3.5							
ILAR	**Eielson Array**	**84.58**	**23**	P		**P**	**23 40 02.1**	**-1.0**
	0.3nm,0.6s,mb3.6,baz=243,slow=6.0,SNR=4.1							
DLBC	**Dease Lake**	**90.15**	**31**	LR		LR	00 12 52.1	
	comp=Z,43nm,21.8s,baz=234,slow=30							

IDC 02 23:30:27.4±1.1**, 26.41N**×**142.08E, h0**km**, mb3.7**/7**, mb1 3.9**/7**, mb1mx3.6**/21**, mbtmp3.7**/7**, Error ellipse: s-maj=42.4km s-min=29.3km az=74.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ASAR	**Alice Springs**	**50.40**	**190**	P		P	23 39 26.6	0.0
	0.4nm,0.7s,baz=15,slow=14,SNR=6.0							
MKAR	**Makanchi Array**	**50.84**	**310**	P		P	23 39 30.4	+0.6
	0.1nm,0.4s,baz=93,slow=7.2,SNR=1.9							
BVAR	**Borovoye Array**	**58.48**	**318**	P		P	23 40 24.9	-0.3
BVAR	**Borovoye Array**	**58.48**	**318**	P		P	23 40 24.9	-0.3
	0.4nm,0.4s,baz=85,slow=5.4,SNR=4.3							
ARCES	**ARCESS Array B**	**74.16**	**341**	P		P	23 42 05.8	+0.4
	2.1nm,0.8s,baz=71,slow=8.7,SNR=5.2							
JOF	**Joensuu**	**75.66**	**334**	*ep*		P	23 42 14.0	-0.2
	1.0nm,0.3s							
FINES	**FINESS Array B**	**78.52**	**334**	P		P	23 42 30.3	0.0
	1.0nm,0.3s,baz=75,slow=4.9,SNR=27							
NVAR	**Mina Array Bea**	**81.02**	**52**	P		P	23 42 44.9	+0.6
	0.2nm,0.5s,baz=280,slow=6.3,SNR=2.5							
NOA	**NORSAR Array B**	**84.21**	**338**	P		P	23 43 00.0	-0.5
	0.6nm,0.7s,baz=46,slow=4.5,SNR=2.8							

ISCJB ***02*** *23:57:56.5±0.4, 4.86S±0.04×151.77E±0.06, h138km, mb4.7/58, Error ellipse: s-maj=8.5km s-min=4.9km az=6.2*

IDC ***02*** *23:57:56.4±0.6, 4.89S×151.91E, h131km±4km, mb4.2/15, mb1 4.4/17, mb1mx4.3/20, mbtmp4.3/17, MS4.0/2, Ms1 3.9/2, ms1mx3.0/20, Error ellipse: s-maj=18.9km s-min=10.4km az=100.0*

NEIC ***02*** *23:57:56.8±0.4, 4.83S×151.86E, mb4.8/21, Error ellipse: s-maj=11.1km s-min=6.5km az=95.0*

BJI ***02*** *23:57:57.4, 5.28S×151.79E, h163km, mB4.7/14, mb4.7/26*

DJA ***02*** *23:58:01, 4.78S×151.59E, h161km, mb5.1/20*

ISC 02 23:57:58.5±0.4**, 4.86S**±0.04×**151.75E**±0.06**, h140**km**,** σ3.1**km**;**pP-P, n112,** σ1**911**/117**, mb4.7**/58**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**6.42**	**225**	*e*Pn		**Pn**	**23 59 30.6**	**-0.1**
PMG				*e*S		**Sn**	**00 00 43.9**	**+1.1**
PMG	**Port Moresby**	**6.42**	**225**	P		**Pn**	**23 59 32.6**	**+1.9**
	3.4nm10μm244nm,0.8s							
PMG	**Port Moresby**	**6.42**	**225**	P		**Pn**	**23 59 31.8**	**+1.1**
	3.4nm10μm244nm,0.8s							
COEN	**Coen**	**12.38**	**223**	*e*Pn		**Pn**	**00 00 51.8**	**+1.8**
	323nm,0.8s							
COEN				*e*S		**Sn**	**00 03 02.3**	**-4.4**
COEN	**Coen**	**12.38**	**223**	P		**Pn**	**00 00 58.6**	**+8.6**
CTA	**Charters Tower**	**16.05**	**199**	*e*P		**Pn**	**00 01 37.8**	**+1.4**
	15nm,0.6s							
CTA	**Charters Tower**	**16.05**	**199**	P		**Pn**	**00 01 36.2**	**-0.2**
	1.3nm,0.3s,baz=32,slow=13,SNR=24							
CTAO	**Charters Tower**	**16.05**	**199**	*e*P		**Pn**	**00 01 37.7**	**+1.3**
	24nm,0.8s							
CTAO	**Charters Tower**	**16.05**	**199**	P		**Pn**	**00 01 38.0**	**+1.6**
GUMO	**Guam**	**19.57**	**340**	P		**P**	**00 02 16.6**	**+1.0**
	1.9nm,0.3s,baz=190,slow=8.1,SNR=5.2							
EIDS	**Eidsvold**	**20.40**	**182**	*e*P		**P**	**00 02 24.6**	**+0.2**
	17nm,0.8s							
KAKA	**Kakadu**	**20.61**	**247**	*e*P		**P**	**00 02 26.3**	**-0.5**
	117nm,0.8s							
KAKA	**Kakadu**	**20.61**	**247**	*e*P		**P**	**00 02 26.2**	**-0.6**
	367nm,0.7s							
KAKA				*e*S		**S**	**00 06 06.8**	**-2.7**
KAKA	**Kakadu**	**20.61**	**247**	P		**P**	**00 02 26.2**	**-0.6**
	2μm254nm,0.8s							
WRAB	**Tennant Creek**	**22.62**	**227**	*e*P		**P**	**00 02 47.2**	**-0.5**
	120nm,0.7s,mb5.4							
WRAB	**Tennant Creek**	**22.62**	**227**	P		**P**	**00 02 48.0**	**+0.3**
	2μm186nm,0.8s,mb5.6							
KNA	**Kununurra**	**25.04**	**243**	P		**P**	**00 03 09.9**	**+0.1**
	4μm535nm,0.8s							
ASAR	**Alice Springs**	**25.41**	**221**	P		**P**	**00 03 12.7**	**-0.4**
	37nm,0.8s,mb5.0,baz=51,slow=8.3,SNR=106							
ASAR					sP	sP	00 03 54.9	-4.1
	17nm,0.8s,baz=50,slow=9.7,SNR=4.8							
ASAR					PcP	PcP	00 06 42.1	+0.3
	3.5nm,0.8s,baz=52,slow=2.9,SNR=5.7							
ASAR					S	**S**	**00 07 30.9**	**+1.4**
	1.9nm,0.9s,baz=37,slow=15,SNR=4.6							
ASAR					ScP	ScP	00 10 09.2	+0.9
	1.6nm,1.0s,baz=63,slow=4.2,SNR=4.1							
ARMA	**Armidale**	**25.42**	**180**	*e*P		**P**	**00 03 13.4**	**+0.3**
ARMA	**Armidale**	**25.42**	**180**	*e*P		**P**	**00 03 13.2**	**+0.1**
	27nm,0.9s,mb4.8							
STKA	**Stephens Creek**	**28.51**	**198**	*e*P		**P**	**00 03 39.7**	**-1.0**
	7.6nm,0.6s,mb4.6							
STKA	**Stephens Creek**	**28.51**	**198**	*e*P		**P**	**00 03 40.2**	**-0.5**
	2.2nm,0.6s,mb4.1							
STKA	**Stephens Creek**	**28.51**	**198**	P		**P**	**00 03 40.2**	**-0.5**
	11nm,0.7s,mb4.7,baz=10.0,slow=9.7,SNR=21							
STKA					LR	LR	00 16 02.6	
	comp=Z,69nm,19.4s,baz=203,slow=38							
FITZ	**Fitzroy Crossi**	**28.72**	**241**	*e*P		**P**	**00 03 42.0**	**-0.8**
	80nm,0.8s,mb5.5							
FITZ	**Fitzroy Crossi**	**28.72**	**241**	*e*P		**P**	**00 03 42.0**	**-0.7**
	50nm,0.8s,mb5.3							
FITZ	**Fitzroy Crossi**	**28.72**	**241**	P		**P**	**00 03 42.0**	**-0.7**
	47nm,0.8s,mb5.3,baz=73,slow=6.7,SNR=123							
FITZ	**Fitzroy Crossi**	**28.72**	**241**	P		**P**	**00 03 41.9**	**-0.9**
	148nm,0.9s,mb5.7							
CNB	**Canberra Magne**	**30.38**	**184**	*e*P		**P**	**00 03 57.5**	**+0.3**
PCI	**Palu**	**32.11**	**276**	P		**P**	**00 04 18.1**	**+5.3**
	43nm,1.2s,mb5.0							
TOO	**Toolangi**	**33.05**	**189**	*e*P		**P**	**00 04 20.8**	**+0.2**
FORT	**Forrest**	**34.09**	**218**	*e*P		**P**	**00 04 28.8**	**-0.9**
	61nm,0.6s,mb5.5							
FORT	**Forrest**	**34.09**	**218**	*e*P		**P**	**00 04 28.0**	**-1.7**
	70nm,0.6s,mb5.6							
MBWA	**Marble Bar**	**35.04**	**240**	*e*P		**P**	**00 04 37.0**	**-1.0**
	48nm,0.7s,mb5.2							
MBWA	**Marble Bar**	**35.04**	**240**	P		**P**	**00 04 37.0**	**-1.0**
	72nm,1.2s,mb5.2							
KKM	**Kota Kinabalu**	**37.10**	**287**	*e*P		**P**	**00 04 56.3**	**+0.6**
	20nm,1.1s,mb4.7							
MOO	**Moorlands**	**37.64**	**186**	*e*P		**P**	**00 05 01.2**	**+1.5**
KLBR	**Kellerberrin**	**41.51**	**226**	*e*P		**P**	**00 05 30.4**	**-1.6**
	9.8nm,0.5s,mb4.7							
KSM	**Kuching**	**41.88**	**278**	*e*P		**P**	**00 05 35.4**	**0.0**
	22nm,0.8s,mb4.8							
KSM	**Kuching**	**41.88**	**278**	P		**P**	**00 05 36.1**	**+0.8**
	31nm,0.9s,mb4.9							
RPZ	**Rata Peaks**	**42.28**	**159**	P		**P**	**00 05 37.1**	**-0.9**
	20nm,0.7s,mb4.8,baz=339,slow=12,SNR=6.7							
RPZ					LR	LR	00 18 54.0	
	comp=Z,724nm,18.9s,baz=18,slow=30							
MDSI	**Maura Dua**	**47.41**	**268**	P		**P**	**00 06 17.9**	**-1.3**
	22nm,1.2s,mb4.7							
KSRS	**Korea Array**	**47.59**	**334**	P		**P**	**00 06 19.8**	**-0.4**
	2.7nm,1.0s,mb3.8,baz=154,slow=10,SNR=5.5							
KSRS					pP	pP	00 06 51.6	-0.5
	2.6nm,1.0s,baz=145,slow=9.6,SNR=3.7							
QIZ	**Qiongzhong**	**47.61**	**301**	P		**P**	**00 06 22.5**	**+1.9**
QIZ					pP	pP	00 06 57.6	+5.1
QIZ					sP	sP	00 07 16.9	+8.7
QIZ					S	**S**	**00 13 07.4**	**+1.8**
QIZ					pmax	pmax		
	comp=Z,17nm,1.1s,mb4.6							
QIZ					pmax	pmax		
	comp=Z,74nm,6.1s							
NJ2	**Nanjing**	**48.24**	**322**	*e*P		**P**	**00 06 27.1**	**+1.8**
NJ2					pP	pP	00 07 03.1	+5.8
NJ2					sP	sP	00 07 22.3	+9.3
NJ2					S	**S**	**00 13 12.0**	**-2.2**
NJ2					sS	sS	00 14 15.5	+5.8
NJ2					pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6							
NJ2					pmax	pmax		
	comp=Z,70nm,6.2s							
NJ2					LR	LR		
	comp=N,270nm,20.4s							
NJ2					LR	LR		
	comp=E,220nm,18.1s							
NJ2					LR	LR		
	comp=Z,160nm,18.8s							
RGRI	**Rengat**	**49.56**	**274**	P		**P**	**00 06 43.7**	**+8.1**
SDSI	**Sungai Dareh**	**50.40**	**273**	P		**P**	**00 06 40.8**	**-1.2**
	comp=Z,871nmcomp=Z,46nm,0.8s,mb5.2							
PDSI	**Padang**	**51.36**	**273**	P		**P**	**00 06 47.1**	**-2.1**
	comp=Z,59nm,0.7s,mb5.3							
PPI	**Padang Panjang**	**51.47**	**273**	P		**P**	**00 06 48.5**	**-1.5**
	comp=Z,69nm,0.9s,mb5.3							
IPM	**Ipoh**	**51.52**	**280**	P		**P**	**00 06 50.8**	**+0.5**
	comp=Z,20nm,1.1s,mb4.7							
KULM	**Kulim**	**52.02**	**281**	P		**P**	**00 06 54.2**	**+0.1**
	comp=Z,18nm,1.2s,mb4.6							
MNSI	**Mandailing Nat**	**52.42**	**275**	P		**P**	**00 06 55.7**	**-1.3**
	comp=Z,39nm,0.8s,mb5.1							
ENH	**Enshi**	**53.44**	**314**	*e*P		**P**	**00 07 04.7**	**+0.5**
	comp=Z,19nm,1.0s,mb4.8							
ENH					*ep*P	pP	00 07 36.9	+0.1
GYA	**Guiyang**	**53.61**	**308**	P		**P**	**00 07 07.3**	**+1.8**
GYA					pP	pP	00 07 46.2	+8.1
GYA					sP	sP	00 08 05.0	+11
GYA					PP	PP	00 09 12.7	+4.9
GYA					ScP	ScP	00 11 51.8	-3.3
GYA					S	**S**	**00 14 26.5**	**-1.9**
GYA					sS	sS	00 15 33.0	+8.2
GYA					pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5							
GYA					pmax	pmax		
	comp=Z,110nm,5.4s							
CN2	**Changchun**	**53.94**	**337**	*e*P		**P**	**00 07 08.0**	**+0.5**
BJI	**Beijing**	**55.38**	**327**	P		**P**	**00 07 17.4**	**-0.6**
BJI					S	**S**	**00 14 53.2**	**+1.6**
BJI					pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.0							
BJI					pmax	pmax		
	comp=Z,47nm,3.1s							
KMI	**Kunming**	**56.16**	**305**	P		**P**	**00 07 25.8**	**+1.9**
KMI					pP	pP	00 08 04.2	+7.4
KMI					sP	sP	00 08 22.2	+10
KMI					PP	PP	00 09 35.5	+4.9
KMI					S	**S**	**00 15 00.6**	**-1.9**
KMI					sS	sS	00 16 07.5	+8.1
KMI					SS	SS	00 18 50.7	-0.6
KMI					pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.6							
KMI					pmax	pmax		
	comp=Z,39nm,5.4s							
KMI					LR	LR		
	comp=N,150nm,19.9s							
KMI					LR	LR		
	comp=E,75nm,18.4s							
KMI					LR	LR		
	comp=Z,180nm,16.9s							
CM31	**Chiang Mai Arr**	**56.96**	**296**	*e*P		**P**	**00 07 30.7**	**+1.0**
	comp=Z,9.8nm,0.8s,mb4.7							
CMAR	**Chiang Mai Arr**	**56.96**	**296**	P		**P**	**00 07 30.9**	**+1.2**
	comp=Z,8.4nm,0.9s,mb4.6,baz=111,slow=5.2,SNR=41							
CMAR					pP	pP	00 08 03.0	+0.3
	comp=Z,1.6nm,0.8s,baz=114,slow=5.8,SNR=1.9							
CHTO	**Chiang Mai**	**57.08**	**296**	*e*P		**P**	**00 07 31.1**	**+0.6**
	comp=Z,12nm,1.1s,mb4.7							
CHTO	**Chiang Mai**	**57.08**	**296**	P		**P**	**00 07 31.4**	**+0.9**
	comp=Z,12nm,1.2s,mb4.6							
CD2	**Chengdu**	**57.99**	**311**	P		**P**	**00 07 37.2**	**+0.5**
CD2					pP	pP	00 08 14.6	+4.8
CD2					sP	sP	00 08 32.4	+7.2
CD2					PP	PP	00 09 49.3	+2.5
CD2					S	**S**	**00 15 23.1**	**-3.2**
CD2					sS	sS	00 16 28.3	+4.8
CD2					SS	SS	00 19 18.3	-1.7
CD2					pmax	pmax		
	comp=Z,20nm,0.6s,mb5.1							
CD2					pmax	pmax		
	comp=Z,100nm,4.2s							
HHC	**Hu-ho-hao-te**	**58.49**	**325**	*e*P		**P**	**00 07 43.0**	**+3.0**
HHC					pP	pP	00 08 20.5	+7.4
HHC					sP	sP	00 08 38.1	+10
HHC					PP	PP	00 09 56.0	+4.9
HHC					*e*S	**S**	**00 15 32.4**	**-0.1**
HHC					sS	sS	00 16 37.6	+7.8
HHC					SS	SS	00 19 29.4	+1.9
HHC					pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6							
HHC					pmax	pmax		
	comp=Z,48nm,3.8s							
LZH	**Lanzhou**	**60.55**	**316**	*e*P		**P**	**00 07 54.5**	**+0.3**
LZH					pP	pP	00 08 30.7	+3.1
LZH					sP	sP	00 08 49.8	+6.9
LZH					PP	PP	00 10 10.2	+0.8
LZH					*e*S	**S**	**00 15 56.2**	**-2.9**
LZH					sS	sS	00 17 02.0	+5.2
LZH					pmax	pmax		
	comp=Z,21nm,1.3s,mb4.8							
LZH					pmax	pmax		
	comp=Z,92nm,6.0s							
LZH					LR	LR		
	comp=N,280nm,16.0s							
LZH					LR	LR		
	comp=Z,400nm,18.4s							
GTA	**Gaotai**	**65.00**	**318**	*e*P		**P**	**00 08 24.2**	**+0.6**
GTA					pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.4							
ULN	**Ulaanbaatar**	**65.50**	**329**	*e*P		**P**	**00 08 26.5**	**-0.1**
	comp=Z,9.0nm,1.1s,mb4.5							
ULN					*e*	pP	00 09 00.3	-0.2
SONM	**Songino Array**	**65.83**	**328**	P		**P**	**00 08 29.1**	**+0.4**
	comp=Z,4.9nm,0.9s,mb4.3,baz=141,slow=5.7,SNR=22							
SONM					pP	pP	00 09 01.7	-0.9
	comp=Z,8.2nm,1.2s,baz=146,slow=5.4,SNR=6.5							
CASY	**Casey**	**67.65**	**197**	*e*P		**P**	**00 08 39.7**	**-0.2**
	comp=Z,20nm,1.3s,mb4.7							
TAPN	**Taplejung**	**69.55**	**301**	*e*P		**P**	**00 08 51.7**	**-0.8**
ODAN	**Odare**	**69.68**	**301**	*e*P		**P**	**00 08 53.4**	**+0.1**
	comp=Z,38nm,0.9s,mb5.1							
RAMN	**Ramite**	**70.38**	**301**	*e*P		**P**	**00 08 57.0**	**-0.6**
	comp=Z,12nm,0.9s,mb4.6							
GUN	**Gumba**	**71.26**	**301**	*e*P		**P**	**00 09 03.0**	**+0.1**
	comp=Z,45nm,0.9s,mb5.2							
PKI	**Pulchoki**	**71.57**	**301**	*e*P		**P**	**00 09 04.8**	**0.0**
KKN	**Kakani**	**71.74**	**301**	*e*P		**P**	**00 09 05.5**	**-0.3**
	comp=Z,25nm,0.8s,mb5.0							
DMN	**Daman**	**71.84**	**301**	*e*P		**P**	**00 09 06.5**	**+0.1**
	comp=Z,44nm,0.9s,mb5.2							
GKN	**Gorkha**	**72.35**	**301**	*e*P		**P**	**00 09 09.1**	**-0.3**
	comp=Z,43nm,1.0s,mb5.2							
KOLN	**Koldanda**	**73.17**	**301**	*e*P		**P**	**00 09 13.9**	**-0.3**
	comp=Z,23nm,0.8s,mb4.9							
SBA	**Scott Base**	**73.37**	**177**	*e*P		**P**	**00 09 15.9**	**+1.4**
	comp=Z,33nm,2.1s,mb4.7							
WMQ	**Urumqi**	**75.08**	**318**	*e*P		**P**	**00 09 26.9**	**+1.9**
WMQ					pP	pP	00 10 06.2	+6.5
WMQ					sP	sP	00 10 23.5	+8.8
WMQ					PP	PP	00 12 18.9	+3.8
WMQ					pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.3							
WMQ					pmax	pmax		
	comp=Z,78nm,5.0s							
WMQ					LR	LR		
	comp=N,130nm,23.2s							
WMQ					LR	LR		
	comp=E,67nm,24.8s							
WMQ					LR	LR		
	comp=Z,95nm,22.0s							
MK31	**Makanchi Array**	**79.69**	**319**	*e*P		**P**	**00 09 50.3**	**-0.3**
MK31					*ep*P	pP	00 10 23.1	-2.5
MKAR	**Makanchi Array**	**79.69**	**319**	P		**P**	**00 09 50.4**	**-0.2**
MKAR					pP	pP	00 10 23.4	-2.2
MKAR	**Makanchi Array**	**79.69**	**319**	P		**P**	**00 09 50.4**	**-0.2**
	comp=Z,4.3nm,0.9s,mb4.1,baz=103,slow=5.4,SNR=27							
MKAR					pP	pP	00 10 23.4	-2.2
	comp=Z,1.4nm,0.9s,baz=92,slow=8.5,SNR=3.1							
ZALV	**Zalesovo Beam**	**80.63**	**327**	P		**P**	**00 09 54.2**	**-1.2**
ZALV					pP	pP	00 10 27.4	-3.2
ZALV	**Zalesovo Beam**	**80.63**	**327**	P		**P**	**00 09 54.2**	**-1.2**
	comp=Z,1.3nm,0.5s,mb3.8,baz=102,slow=6.2,SNR=11							
ZALV					pP	pP	00 10 27.4	-3.2
	comp=Z,1.8nm,0.6s,baz=107,slow=5.4,SNR=4.5							
KSH	**Kashi**	**82.19**	**311**	P		**P**	**00 10 05.6**	**+1.6**
KSH					*ep*P	pP	00 10 45.2	+6.0
KSH					*es*P	sP	00 11 02.6	+8.5
KSH					*e*PP	PP	00 13 14.3	0.0
KSH					*e*S	S	00 20 00.2	-7.4
KSH					*e*SKS		00 20 04.5	

KSI	**Kapahiang**	**1.76**	**87**	P		**Pn**	**00 13 11.0**	**+1.6**
KSI				S		**Sn**	**00 13 31.6**	**+1.0**
MNAI	**Manna**	**2.20**	**106**	P		**Pn**	**00 13 14.3**	**-1.3**
MNAI				S		**Sn**	**00 13 41.3**	**-0.3**
PDSI	**Padang**	**2.83**	**352**	P		**Pn**	**00 13 24.5**	**+0.3**
SDSI	**Sungai Dareh**	**2.85**	**12**	P		**Pn**	**00 13 23.0**	**-1.4**
PPI	**Padang Panjang**	**3.29**	**352**	P		**Pn**	**00 13 32.1**	**+1.6**
MDSI	**Maura Dua**	**3.42**	**103**	P		**Pn**	**00 13 31.6**	**-0.6**
KLSI		**4.00**	**104**	P		**Pn**	**00 13 40.3**	**+0.1**
SONM	**Songino Array**	**51.59**	**5**	P		**P**	**00 21 43.1**	**+0.5**
	1.4nm,0.8s,mb3.9,baz=185,slow=9.0,SNR=10.0							
MKAR	**Makanchi Array**	**52.92**	**344**	P		**P**	**00 21 52.8**	**+0.3**
	0.3nm,0.5s,mb3.5,baz=133,slow=8.5,SNR=3.6							
ZALV	**Zalesovo Beam**	**59.02**	**349**	P		**P**	**00 22 36.0**	**0.0**
	1.1nm,0.6s,mb4.0,baz=151,slow=3.3,SNR=6.4							
BVAR	**Borovoye Array**	**62.09**	**340**	P		**P**	**00 22 56.4**	**-0.6**
	0.4nm,0.5s,mb3.8,baz=139,slow=13,SNR=4.2							
TXAR	**Lajitas Array**	**145.53**	**40**	PKPbc	PKPbc		00 32 15.7	+0.6
	0.5nm,0.5s,baz=187,slow=1.5,SNR=5.4							

*IDC **03** 00:15:23.3±0.6,4°.82S×133°.58E,h0km,mb4.2/9, mb1 4.4/12,mb1mx4.3/16,mbtmp4.3/12,ML4.6/3,MS4.3/9, Ms1 4.3/9,ms1mx3.9/24,Error ellipse: s-maj=29.1km s-min=14.8km az=65.0*

*ISCJB **03** 00:15:25.8±0.8,4°.93S±0°.04×133°.85E±0°.05,h33km±7km, mb4.5/27,MS4.3/10,Error ellipse: s-maj=8.2km s-min=5.8km az=157.8*

*BJI **03** 00:15:25.3,4°.58S×134°.13E,h25km,mB4.9/11,mb4.7/20, Ms4.3/1*

*NEIC **03** 00:15:27.9±0.5,4°.92S×133°.81E,h35km,mb4.6/10,Error ellipse: s-maj=14.6km s-min=8.5km az=63.0*

*DJA **03** 00:15:29,4°.88S×133°.84E,h30km,mb4.9/21*

ISC 03 00:15:28.3±0.6,**4°.88S**±0°.04×**133°.87E**±0°.05,**h36**km±6km, **h18**km±4.3km**:pP-P,n78,**σ1=**30**/80,**mb4.5**/27,**MS4.3**/10, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLE	**Tual**	**1.36**	**236**	P	**Pn**	**00 15 52.7**	**+1.9**
BNDI	**Bandanaira**	**3.97**	**275**	P	**Pn**	**00 16 26.9**	**+0.2**
BAKI	**Biak**	**4.29**	**31**	P	**Pn**	**00 16 31.2**	**+0.1**
MSAI	**Masohi**	**5.16**	**287**	P	**Pn**	**00 16 43.9**	**+0.8**
	0.5nm74nm,0.8s						
AAI	**Ambon**	**5.78**	**282**	P	**Pn**	**00 16 49.9**	**-1.7**
	1.6nm6µm360nm,0.8s						
NLAI	**Namlea**	**6.95**	**283**	P	**Pn**	**00 17 08.0**	**+0.3**
	0.6nm3µm152nm,0.7s						
JAY	**Jayapura**	**7.21**	**71**	P	**Pn**	**00 17 12.8**	**+1.5**
	1.0nm64nm,0.9s						
LBMI	**Labuha**	**7.63**	**303**	P	**Pn**	**00 17 15.2**	**-1.8**
	0.6nm2µm155nm,1.1s						
KAKA	**Kakadu**	**7.91**	**190**	*e*P	**Pn**	**00 17 20.9**	**0.0**
	52nm,0.4s						
KAKA				*e*S	**Sn**	**00 18 46.3**	**-2.9**
KAKA	**Kakadu**	**7.91**	**190**	*e*Pn	**Pn**	**00 17 21.6**	**+0.7**
	171nm,0.5s						
KAKA				*e*Sn	**Sn**	**00 18 49.3**	**+0.1**
KAKA	**Kakadu**	**7.91**	**190**	P	**Pn**	**00 17 22.4**	**+1.5**
	4µm159nm,0.6s						
KDI	**Kendari**	**11.25**	**274**	P	**Pn**	**00 18 07.9**	**+1.1**
	35nm,1.3s						
LUWI	**Luwuk**	**11.72**	**289**	P	**Pn**	**00 18 18.9**	**+5.8**
KNA	**Kununurra**	**11.91**	**205**	P	**Pn**	**00 18 15.2**	**-0.5**
	6µm910nm,1.0s						
COEN	**Coen**	**12.87**	**135**	*e*Pn	**Pn**	**00 18 26.5**	**-2.3**
COEN	**Coen**	**12.87**	**135**	P	**Pn**	**00 18 26.9**	**-1.9**
	98nm,1.3s						
MRSI	**Marisa**	**13.05**	**294**	P	**Pn**	**00 18 32.7**	**+1.4**
	875nm34nm,1.2s						
PMG	**Port Moresby**	**13.93**	**110**	*e*Pn	**Pn**	**00 18 41.8**	**-1.6**
	107nm,1.1s						
PMG	**Port Moresby**	**13.93**	**110**	P	**Pn**	**00 18 46.2**	**+2.8**
	1µm86nm,1.2s						
SPSI	**Sidrap Palu**	**14.09**	**273**	P	**Pn**	**00 18 52.3**	**+6.8**
PCI	**Palu**	**14.56**	**285**	P	**Pn**	**00 18 51.6**	**-0.3**
	1µm72nm,1.9s						
WRAB	**Tennant Creek**	**14.97**	**178**	*e*Pn	**Pn**	**00 18 53.8**	**-3.6**
	38nm,0.6s						
WRAB				*e*S	**Sn**	**00 21 33.1**	**-9.1**
WRAB	**Tennant Creek**	**14.97**	**178**	P	**Pn**	**00 18 55.5**	**-1.9**
	64nm,0.7s						
FITZ	**Fitzroy Crossi**	**15.41**	**211**	*e*P	**Pn**	**00 18 59.3**	**-3.9**
	20nm,0.6s						
FITZ				*e*S	S	00 21 44.1	-24
FITZ	**Fitzroy Crossi**	**15.41**	**211**	Pn	**Pn**	**00 19 00.2**	**-3.0**
FITZ				Sn	**Sn**	**00 21 46.0**	**-6.9**
FITZ	**Fitzroy Crossi**	**15.41**	**211**	Pn	**Pn**	**00 18 59.8**	**-3.4**
	2.6nm,0.3s,baz=36,slow=11,SNR=51						
FITZ				Sn	**Sn**	**00 21 46.0**	**-6.9**
	7.3nm,0.3s,baz=182,slow=13,SNR=9.0						
FITZ	**Fitzroy Crossi**	**15.41**	**211**	P	**Pn**	**00 19 02.3**	**-0.9**
	54nm,1.5s						
MYLDM	**Lahad Datu**	**18.31**	**303**	P	**Pn**	**00 19 44.0**	**+4.3**
ASAR	**Alice Springs**	**18.68**	**180**	P	**Pn**	**00 19 41.9**	**-2.2**
	1.0nm,0.3s,baz=354,slow=14,SNR=41						
ASAR				S	**S**	**00 23 04.4**	**-10**
	0.9nm,0.3s,baz=7.8,slow=28,SNR=5.4						
CTA	**Charters Tower**	**19.34**	**142**	*e*P	**Pn**	**00 19 53.2**	**+1.2**
	17nm,1.0s						
CTA	**Charters Tower**	**19.34**	**142**	P	**Pn**	**00 19 53.0**	**+1.0**
CTA				S	**S**	**00 23 34.8**	**+7.0**
CTA				LR	LR	00 28 11.2	
CTA	**Charters Tower**	**19.34**	**142**	P	**Pn**	**00 19 53.0**	**+1.0**
	1.3nm,0.3s,baz=318,slow=12,SNR=13						
CTA				S	**S**	**00 23 34.8**	**+7.0**
	0.2nm,0.3s,baz=192,slow=6.9,SNR=3.3						
CTA				LR	LR	00 28 11.2	
	comp=Z,794nm,20.3s,baz=137,slow=39						
CTAO	**Charters Tower**	**19.34**	**142**	*e*P	**Pn**	**00 19 52.5**	**+0.5**
	28nm,0.9s						
CTAO				*e*Sn	**Sn**	**00 23 35.2**	**+7.3**
CTAO	**Charters Tower**	**19.34**	**142**	P	**Pn**	**00 19 52.7**	**+0.7**
	38nm,1.3s						
KKM	**Kota Kinabalu**	**20.70**	**301**	*e*P	**P**	**00 20 03.7**	**-1.9**
	74nm,1.4s						
KKM	**Kota Kinabalu**	**20.70**	**301**	P	**P**	**00 20 05.9**	**+0.3**
	550nm43nm,1.6s						
MBWA	**Marble Bar**	**21.22**	**219**	*e*P	**P**	**00 20 10.7**	**-0.5**
	16nm,0.7s,mb4.5						
MBWA	**Marble Bar**	**21.22**	**219**	P	**P**	**00 20 11.1**	**-0.1**
	30nm,1.1s,mb4.5						
GUMO	**Guam**	**21.35**	**31**	LR	LR	00 28 47.8	
	comp=Z,490nm,18.2s,MS3.9,baz=133,slow=38						
SBUM	**Sibu**	**22.82**	**288**	P	**P**	**00 20 33.4**	**+5.0**
KSM	**Kuching**	**24.37**	**284**	*e*P	**P**	**00 20 42.0**	**-1.3**
	89nm,1.5s,mb5.0						
KSM	**Kuching**	**24.37**	**284**	P	**P**	**00 20 46.2**	**+2.9**
	509nm31nm,1.5s,mb4.5						
HNR	**Honiara**	**26.26**	**101**	P	**P**	**00 21 04.4**	**+3.9**
	19nm,0.3s,mb5.0,baz=247,slow=2.8,SNR=3.8						
FORT	**Forrest**	**26.34**	**191**	*e*P	**P**	**00 21 04.6**	**+3.6**
	22nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**27.82**	**166**	*e*P	**P**	**00 21 17.1**	**+2.8**
	7.1nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**27.82**	**166**	P	**P**	**00 21 16.7**	**+2.4**
	7.0nm,0.8s,mb4.3,baz=337,slow=11,SNR=5.3						
STKA				LR	LR	00 33 05.6	
	comp=Z,692nm,19.7s,MS4.2,baz=341,slow=38						
ARMA	**Armidale**	**30.43**	**149**	*e*P	**P**	**00 21 37.8**	**+0.3**
KLBR	**Kellerberrin**	**30.58**	**208**	*e*P	**P**	**00 21 39.6**	**+0.8**
	77nm,1.8s,mb5.2						
SDSI	**Sungai Dareh**	**32.63**	**276**	P	**P**	**00 22 02.3**	**+5.2**
	14nm,1.1s,mb4.8						
PPI	**Padang Panjang**	**33.71**	**276**	P	**P**	**00 22 09.5**	**+2.9**
PSI	**Prapat**	**35.74**	**282**	LR	LR	00 35 37.4	
	comp=Z,261nm,20.7s,MS4.0,baz=314,slow=34						
JHJ	**Hachijo jima 2**	**38.20**	**8**	LR	LR	00 36 59.0	
	comp=Z,570nm,18.2s,MS4.4,baz=278,slow=34						
CMAR	**Chiang Mai Arr**	**41.51**	**305**	P	**P**	**00 23 10.8**	**-1.6**
	3.1nm,0.8s,mb4.0,baz=133,slow=7.3,SNR=16						
CHTO	**Chiang Mai**	**41.69**	**305**	*e*P	**P**	**00 23 13.3**	**-0.5**
	15nm,1.4s,mb4.4						
KSRS	**Korea Array**	**42.48**	**353**	P	**P**	**00 23 19.0**	**-1.0**
	0.9nm,0.8s,mb3.5,baz=144,slow=32,SNR=3.5						
KSRS				LR	LR	00 40 30.9	
	comp=Z,188nm,21.6s,MS3.9,baz=281,slow=36						
BJI	**Beijing**	**47.57**	**342**	P	pP	00 24 14.9	+3.8
BJI				S	**S**	**00 30 52.9**	**-0.4**
BJI				ScS	ScS	00 33 42.7	-8.8
BJI				SS	SS	00 34 33.3	+11
BJI				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
BJI				pmax	pmax		
	comp=Z,75nm,4.1s						
BJI				LR	LR		
	comp=N,120nm,16.9s,MS4.3						
BJI				LR	LR		
	comp=E,290nm,19.0s,MS4.3						
BJI				LR	LR		
	comp=Z,100nm,25.6s						
MDJ	**Mudanjiang**	**49.42**	**356**	P	**P**	**00 24 12.9**	**-1.7**
MDJ				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
MDJ				pmax	pmax		
	comp=Z,84nm,4.5s						
MDJ	**Mudanjiang**	**49.42**	**356**	*e*Pn	**P**	**00 24 14.0**	**-0.6**
	comp=Z,32nn,1.2s,mb5.2						
LZH	**Lanzhou**	**49.51**	**328**	*e*P	**P**	**00 24 22.0**	**+6.5**
LZH				pP	pP	00 24 26.8	+0.7
LZH				sP	sP	00 24 30.1	-0.3
LZH				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.0						
LZH				pmax	pmax		
	comp=Z,87nm,4.3s						
LZH				LR	LR		
	comp=E,280nm,10.2s						
LZH				LR	LR		
	comp=Z,300nm,15.6s						
GTA	**Gaotai**	**54.12**	**328**	*e*P	**P**	**00 24 50.2**	**+0.4**
GTA				pP	pP	00 24 56.9	-3.6
GTA				sP	sP	00 25 01.2	-3.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
SONM	**Songino Array**	**57.78**	**338**	P	**P**	**00 25 15.9**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.9,baz=165,slow=6.8,SNR=5.1						
WMQ	**Urumqi**	**63.82**	**324**	*e*P	**P**	**00 25 59.0**	**+2.0**
WMQ				pP	pP	00 26 06.6	-1.4
WMQ				sP	sP	00 26 09.9	-2.2
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
WMQ				pmax	pmax		
	comp=Z,12nm,3.6s						
WMQ				LR	LR		
	comp=N,130nm,22.3s,MS4.1						
WMQ				LR	LR		
	comp=E,65nm,24.6s,MS4.1						
MK31	**Makanchi Array**	**68.65**	**325**	*e*P	**P**	**00 26 27.4**	**-0.5**
MKAR	**Makanchi Array**	**68.65**	**325**	P	**P**	**00 26 26.9**	**-1.0**
	comp=E,3.3nm,0.5s,mb4.6,baz=118,slow=8.1,SNR=28						
ZALV	**Zalesovo Beam**	**71.46**	**332**	P	**P**	**00 26 45.4**	**+0.3**
	comp=E,3.2nm,0.9s,mb4.3,baz=115,slow=6.7,SNR=4.1						
AML	**Almayashu**	**71.81**	**317**	*e*P	**P**	**00 26 48.9**	**+1.5**
	comp=E,6.2nm,1.0s,mb4.5						
EKS2	**Erkin-Say**	**71.97**	**318**	P	**P**	**00 26 50.7**	**+2.4**
	comp=E,1.1nm,0.7s,mb3.9						
KURK	**Kurchatov**	**72.79**	**327**	*e*P	**P**	**00 26 52.3**	**-0.8**
	comp=E,10nm,1.0s,mb4.7						
PPT	**Papeete**	**75.74**	**107**	LR	LR	00 59 29.8	
	comp=E,130nm,18.9s,MS4.3,baz=216,slow=35						
MAW	**Mawson**	**78.33**	**202**	P	**P**	**00 27 25.0**	**+0.5**
	comp=E,0.9nm,0.5s,mb4.0,baz=260,slow=19,SNR=3.0						
MAW				LR	LR	00 59 15.0	
	comp=E,230nm,20.0s,MS4.5,baz=233,slow=34						
BVAR	**Borovoye Array**	**78.38**	**327**	P	**P**	**00 27 24.7**	**-0.3**
	comp=E,1.4nm,0.5s,mb4.2,baz=126,slow=8.3,SNR=11						
BRVK	**Borovoye**	**78.45**	**327**	*e*P	**P**	**00 27 24.8**	**-0.6**
	comp=E,6.6nm,0.8s,mb4.6						
ABKAR	**Akbulak array**	**83.28**	**321**	*e*P	**P**	**00 27 50.2**	**-1.1**
	comp=E,2.8nm,0.8s,mb4.3						
QSPA	**South Pole Qui**	**85.08**	**180**	*e*P	**P**	**00 28 01.1**	**+1.1**
	comp=E,8.5nm,1.1s,mb4.8						
ILAR	**Eielson Array**	**89.81**	**25**	P	**P**	**00 28 21.9**	**-0.9**
	comp=E,0.6nm,0.7s,mb4.0,baz=282,slow=4.8,SNR=7.6						
KMBO	**Kilima Mbogo**	**96.50**	**268**	LR	LR	01 09 51.2	
	comp=E,423nm,19.1s,MS4.9,baz=271,slow=34						
LPAZ	**La Paz**	**149.74**	**134**	PKPbc	PKPbc	00 35 17.8	+2.3
LPAZ				PKPab	PKPab	00 35 21.9	+1.2
LPAZ	**La Paz**	**149.74**	**134**	PKPbc	PKPbc	00 35 17.8	+2.3
	comp=E,1.6nm,0.9s,baz=351,slow=4.3,SNR=2.8						
LPAZ				PKPab	PKPab	00 35 21.9	+1.2
	comp=E,3.4nm,1.0s,baz=292,slow=0.6,SNR=5.9						

*BJI **03** 00:39:10.3,39°.55N×23°.16E,h5km,mB5.4/33,mb5.1/55, Ms5.1/45,Ms7 4.8/41*

*ISCJB **03** 00:39:14.9±0.3,39°.619N±0°.009×23°.865E±0°.010, h7km±2km,mb5.0/210,MS4.9/192,Error ellipse: s-maj=1.6km s-min=1.2km az=14.6*

*IDC **03** 00:39:15.5±0.5,39°.63N×23°.80E,h0km,mb4.6/25, mb1 4.7/34,mb1mx4.6/36,mbtmp4.6/34,ML4.1/7,MS4.6/25, Ms1 4.7/25,ms1mx4.6/30,Error ellipse: s-maj=10.1km s-min=9.2km az=42.0*

*ATH **03** 00:39:16.1,39°.59N×23°.90E,h30km±1km,ML5.3*

*PDG **03** 00:39:16.2±0.5,39°.62N×23°.88E,h18km±1km,MD4.6/4, ML4.5/10,Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

*THE **03** 00:39:16.5,39°.58N×23°.87E,h10km±1km,ML4.9/6,Error ellipse: s-maj=1.0km s-min=0.5km az=251.0*

*NEIC **03** 00:39:16.9±0.1,39°.61N×23°.85E,h10km,mb5.0/159, MS4.9/140,MW5.3,ML5.3(ATH),ML5.2(THE),Error ellipse: s-maj=2.2km s-min=2.1km az=154.0*

NEIC 5.2 [THE]. Felt at Thessaloniki and Volos.

*CSEM **03** 00:39:16.0±0.1,39°.60N×23°.86E,h5km,mb5.1/99,Ms4.8, Mw5.3,Error ellipse: s-maj=1.8km s-min=1.4km az=21.0*

*IGIL **03** 00:39:17.9,39°.59N×23°.92E,h5km,mb5.5*

*MOS **03** 00:39:18.2±1.2,39°.67N×23°.82E,h33km,mb5.1/38, MS4.7/52,Error ellipse: s-maj=3.2km s-min=2.1km az=100.6*

*GCMT **03** 00:39:19.6±0.2,39°.54N×23°.76E,h12km,MW5.3,Moment Tensor Solution. s51,c79; s9,c9; Moment tensor: Scale 10^16^Nm; Mrr-5.69±.15; Mθθ6.50±.14; Mφφ-0.81±.15; Mrθ0.56±.36; Mθφ-6.23±.12; Mφr3.84±.43; Best double couple: Mo9.50000×10^16^ NP1:φs267.00000°,δ52.00000°, λ-143.00000°. NP2:φs152.00000°,δ61.00000°, λ-44.00000°. Principal axes: T 10.2000, Plg5.0000°, Azm211.0000°; N -1.4000, Plg39.0000°, Azm306.0000°; P -8.8000, Plg50.0000°, Azm115.0000°; Data Used: II IU IC CN G. Surface waves: sta= 93, comp=179, per= 50.*

*DDA **03** 00:39:20.2,39°.67N×24°.48E,h18km±3km,Ml5.0*

*BGS **03** 00:39:26.3±1.8,40°.80N×23°.45E,h10km,mb4.8,MS5.0*

*DJA **03** 00:40:02,40°.19N×23°.54E,h463km,mb4.7/15*

ISC 03 00:39:16.6±0.3,**39°.585N**±0°.009×**23°.852E**±0°.010, **h9**km±1km,**h15**km±1.4km**:pP-P,n1721,**σ1=**10**/1803, **mb5.0**/210,**MS4.9**/192,**128C-145D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.37**	**339**	P	**Pg**	**00 39 24.2**	**+0.4**
PAIG				S	**Sg**	**00 39 29.8**	**+1.1**
PAIG	**Paliouri**	**0.37**	**339**	P	**Pg**	**00 39 23.7**	**-0.1**
PAIG				S	**Sg**	**00 39 29.8**	**+1.1**
AOS	**Alonnisos**	**0.41**	**177**	P	**Pg**	**00 39 24.2**	**-0.5**
AOS	**Alonnisos**	**0.41**	**177**	P	**Pg**	**00 39 24.7**	**0.0**
AOS				S	**Sg**	**00 39 31.1**	**+0.9**
AOS	**Alonnisos**	**0.41**	**177**	P	**Pg**	**00 39 24.7**	**0.0**
AOS				S	**Sg**	**00 39 31.1**	**+0.9**
XOR	**Xorichti**	**0.56**	**247**	P	**Pg**	**00 39 27.2**	**-0.2**
XOR	**Xorichti**	**0.56**	**247**	P	**Pg**	**00 39 27.2**	**-0.2**
XOR				S	**Sg**	**00 39 35.8**	**+1.2**
XOR	**Xorichti**	**0.56**	**247**	P	**Pg**	**00 39 27.2**	**-0.2**
XOR				S	**Sg**	**00 39 35.8**	**+1.2**
NEO	**Neokhori**	**0.56**	**240**	*e*Pn	**Pg**	**00 39 28.0**	**+0.6**
NEO				*e*Sn	**Sg**	**00 39 37.5**	**+2.7**
NEO	**Neokhori**	**0.56**	**240**	*e*PN	**Pg**	**00 39 28.0**	**+0.6**
NEO				*e*SN	**Sg**	**00 39 37.5**	**+2.7**
NEO	**Neokhori**	**0.56**	**240**	*e*Pn	**Pg**	**00 39 28.0**	**+0.6**
NEO				*e*Sn	**Sg**	**00 39 37.5**	**+2.7**
OUR	**Ouranopolis**	**0.76**	**8**	P	**Pg**	**00 39 30.8**	**-0.4**
OUR				S	**Sg**	**00 39 41.9**	**+0.9**
OUR	**Ouranopolis**	**0.76**	**8**	P	**Pg**	**00 39 30.8**	**-0.4**
OUR				S	**Sg**	**00 39 41.9**	**+0.9**
LIA	**Limnos Island**	**1.07**	**73**	*e*Pn	**Pn**	**00 39 36.8**	**-1.0**
LIA				*e*Sn	**Sn**	**00 39 49.9**	**-2.9**
LIA	**Limnos Island**	**1.07**	**73**	*e*PN	**Pn**	**00 39 36.8**	**-1.0**
LIA				*e*SN	**Sn**	**00 39 49.9**	**-2.9**
LIA	**Limnos Island**	**1.07**	**73**	P	**Pg**	**00 39 36.0**	**-1.2**
LIA				S	**Sg**	**00 39 51.6**	**+0.4**
LIA	**Limnos Island**	**1.07**	**73**	P	**Pg**	**00 39 36.0**	**-1.2**
LIA	**Limnos Island**	**1.07**	**73**	*e*Pn	**Pn**	**00 39 36.8**	**-1.0**
LIA				*e*Sn	**Sn**	**00 39 49.9**	**-2.9**
LIA				S	**Sg**	**00 39 51.6**	**+0.4**
ATAL	**Atalanti**	**1.10**	**216**	P	**Pg**	**00 39 36.7**	**-1.0**
ATAL	**Atalanti**	**1.10**	**216**	P	**Pg**	**00 39 36.7**	**-1.0**

LKR	**Lokris**	**1.14**	**216**	*e*Pb	**Pb**	**00 39 37.5**	**-1.0**
LKR	**Lokris**	**1.14**	**216**	*e*PB	**Pb**	**00 39 37.5**	**-1.0**
LKR	**Lokris**	**1.14**	**216**	P	**Pb**	**00 39 37.2**	**-1.3**
LKR	**Lokris**	**1.14**	**216**	P	**Pb**	**00 39 37.2**	**-1.3**
LKR	**Lokris**	**1.14**	**216**	*e*Pb	**Pb**	**00 39 37.5**	**-1.0**
HORT	**Hortiatis**	**1.17**	**331**	P	**Pb**	**00 39 37.5**	**-1.4**
HORT	**Hortiatis**	**1.17**	**331**	P	**Pb**	**00 39 37.9**	**-1.0**
HORT				S	**Sb**	**00 39 54.9**	**+0.8**
HORT	**Hortiatis**	**1.17**	**331**	P	**Pb**	**00 39 37.9**	**-1.0**
HORT				S	**Sb**	**00 39 54.9**	**+0.8**
LIT	**Litokhoron**	**1.17**	**297**	*e*Pb	**Pb**	**00 39 36.9**	**-2.0**
LIT	**Litokhoron**	**1.17**	**297**	*e*PB	**Pb**	**00 39 36.9**	**-2.0**
LIT	**Litokhoron**	**1.17**	**297**	P	**Pb**	**00 39 36.9**	**-2.0**
LIT	**Litokhoron**	**1.17**	**297**	*e*Pb	**Pb**	**00 39 36.9**	**-2.0**
THE	**Thessaloniki**	**1.25**	**327**	P	**Pn**	**00 39 39.5**	**-0.7**
THE	**Thessaloniki**	**1.25**	**327**	P	**Pn**	**00 39 39.5**	**-0.7**
SOH	**Sokhos**	**1.29**	**343**	*e*Pn	**Pn**	**00 39 40.3**	**-0.5**
SOH				*e*Sn	**Sn**	**00 39 57.5**	**-0.7**
SOH	**Sokhos**	**1.29**	**343**	*e*PN	**Pn**	**00 39 40.3**	**-0.5**
SOH				*e*SN	**Sn**	**00 39 57.5**	**-0.7**
SOH	**Sokhos**	**1.29**	**343**	P	**Pn**	**00 39 40.0**	**-0.8**
SOH				S	**Sb**	**00 39 58.7**	**+0.9**
SOH	**Sokhos**	**1.29**	**343**	P	**Pn**	**00 39 40.0**	**-0.8**
SOH	**Sokhos**	**1.29**	**343**	*e*Pn	**Pn**	**00 39 40.3**	**-0.5**
SOH				*e*Sn	**Sn**	**00 39 57.5**	**-0.7**
SOH				S	**Sb**	**00 39 58.7**	**+0.9**
AGG	**Agios Georgios**	**1.31**	**245**	*e*Pn	**Pn**	**00 39 40.4**	**-0.6**
AGG				*e*Sn	**Sn**	**00 39 59.6**	**+1.0**
AGG	**Agios Georgios**	**1.31**	**245**	*e*PN	**Pn**	**00 39 40.4**	**-0.6**
AGG				*e*SN	**Sn**	**00 39 59.6**	**+1.0**
AGG	**Agios Georgios**	**1.31**	**245**	P	**Pn**	**00 39 39.9**	**-1.1**
AGG	**Agios Georgios**	**1.31**	**245**	P	**Pn**	**00 39 39.9**	**-1.1**
AGG	**Agios Georgios**	**1.31**	**245**	*e*Pn	**Pn**	**00 39 40.4**	**-0.6**
AGG				*e*Sn	**Sn**	**00 39 59.6**	**+1.0**
THL	**Klokotos Trika**	**1.42**	**270**	*e*PB	**Pb**	**00 39 41.8**	**-1.4**
THL	**Klokotos Trika**	**1.42**	**270**	P	**Pn**	**00 39 41.6**	**-1.0**
THL	**Klokotos Trika**	**1.42**	**270**	P	**Pn**	**00 39 41.6**	**-1.0**
KAVA	**Kavala**	**1.50**	**20**	P	**Pn**	**00 39 41.6**	**-2.1**
KAVA	**Kavala**	**1.50**	**20**	P	**Pn**	**00 39 41.9**	**-1.8**
KAVA				S	**Sn**	**00 40 03.2**	**-0.1**
KAVA	**Kavala**	**1.50**	**20**	P	**Pn**	**00 39 41.9**	**-1.8**
KAVA				S	**Sn**	**00 40 03.2**	**-0.1**
PTL	**Penteli**	**1.53**	**180**	*e*Pn	**Pn**	**00 39 43.1**	**-1.0**
PTL				*e*Sn	**Sn**	**00 40 02.8**	**-1.3**
PTL	**Penteli**	**1.53**	**180**	*e*PN	**Pn**	**00 39 43.1**	**-1.0**
PTL				*e*SN	**Sn**	**00 40 02.8**	**-1.3**
PTL	**Penteli**	**1.53**	**180**	*e*Pn	**Pn**	**00 39 43.1**	**-1.0**
PTL				*e*Sn	**Sn**	**00 40 02.8**	**-1.3**
SRS	**Serrai**	**1.54**	**353**	P	**Pn**	**00 39 42.8**	**-1.5**
SRS	**Serrai**	**1.54**	**353**	P	**Pn**	**00 39 42.8**	**-1.1**
SRS	**Serrai**	**1.54**	**353**	P	**Pn**	**00 39 43.2**	**-1.1**
DSF	**Desfina**	**1.56**	**222**	P	**Pn**	**00 39 42.9**	**-1.6**
DSF	**Desfina**	**1.56**	**222**	P	**Pn**	**00 39 42.9**	**-1.6**
ATH	**Athens Observa**	**1.61**	**184**	*e*Pb	**Pb**	**00 39 44.2**	**-2.3**
ATH				*e*Sn	**Sn**	**00 40 06.0**	**-0.1**
ATH	**Athens Observa**	**1.61**	**184**	*e*PB	**Pb**	**00 39 44.2**	**-2.3**
ATH				*e*SN	**Sn**	**00 40 06.0**	**-0.1**
ATH	**Athens Observa**	**1.61**	**184**	*e*Pb	**Pb**	**00 39 44.2**	**-2.3**
ATH				*e*Sn	**Sn**	**00 40 06.0**	**-0.1**
ATHU	**Athens Univers**	**1.62**	**182**	P	**Pn**	**00 39 44.7**	**-0.6**
ATHU	**Athens Univers**	**1.62**	**182**	P	**Pn**	**00 39 44.7**	**-0.6**
GADA	**Gvkgeada**	**1.69**	**68**	*e*PN	**Pn**	**00 39 44.6**	**-1.6**
GADA	**Gvkgeada**	**1.69**	**68**	*e*Pn	**Pn**	**00 39 44.6**	**-1.6**
LTK	**Loutraki**	**1.71**	**204**	*e*PB	**Pb**	**00 39 45.5**	**-2.6**
LTK	**Loutraki**	**1.71**	**204**	P	**Pn**	**00 39 45.2**	**-1.3**
LTK	**Loutraki**	**1.71**	**204**	P	**Pn**	**00 39 45.2**	**-1.3**
LTK	**Loutraki**	**1.71**	**204**	*e*Pb	**Pb**	**00 39 45.5**	**-2.6**
EVR	**Evrytania**	**1.72**	**248**	*e*Pn	**Pn**	**00 39 46.9**	**+0

RLS	Riolos of Patr	2.41	231	ePN	Pn	00 39 56.4	+0.3	KLYT	Kilyos	4.30	66	ePn	Pn	00 40 21.6	-0.5	MLR	Muntele Rosu	6.10	14 ⇑P	Pn	00 40 47.1	+0.2
RLS	Riolos of Patr	2.41	231	ePn	Pn	00 39 56.4	+0.3	YLV	Yalova	4.35	75	ePN	Pn	00 40 23.1	+0.3	CUC	Castrocucco	6.20	276 ePn	Pn	00 40 49.6	+1.3
URLA	Izmir	2.46	119	iP	Pn	00 39 55.8	-1.1	YLV	Yalova	4.35	75	ePn	Pn	00 40 23.1	+0.3		186nm,0.7s					
URLA				iS	Sn	00 40 35.0	+7.9	IDI	Anoyia	4.37	169	ePn	Pn	00 40 22.3	-0.8	CUC	Castrocucco	6.20	276 ePn	Pn	00 40 49.6	+1.3
URLA	Izmir	2.46	119	iP	Pn	00 39 55.8	-1.1	IDI	Anoyia	4.37	169	ePN	Pn	00 40 22.3	-0.8		186nm,0.7s					
VLX	Vlachokerasia	2.50	208	ePN	Pn	00 39 57.2	-0.1	IDI	Anoyia	4.37	169	ePn	Pn	00 40 22.3	-0.8	GRER		6.23	21 P	Pn	00 40 50.4	+1.7
VLX	Vlachokerasia	2.50	208	P	Pn	00 39 57.0	-0.3	GDZ	Gediz	4.39	95	iP	Pn	00 40 23.1	-0.4	GRER		6.23	21 P	Pn	00 40 50.4	+1.7
VLX	Vlachokerasia	2.50	208	ePn	Pn	00 39 57.2	-0.1	GDZ	Gediz	4.39	95	iP	Pn	00 40 23.1	-0.3	BZS	Buzias	6.25	345 ⇓P	Pn	00 40 47.8	-1.1
KBN	Korca	2.57	295	ePN	Pg	00 40 09.2	+3.3	ROIA	ROIAK	4.40	36	Pn	Pn	00 40 22.6	-0.9	BZS	Buzias	6.25	345 P	Pn	00 40 48.1	-0.8
PLD	Plovdiv	2.60	14	P	Pn	00 39 58.8	0.0	BEY	Berane	4.43	319 ⇓iPn		Pn	00 40 24.6	+0.6	BZS	Buzias	6.25	345 ⇓P	Pn	00 40 47.8	-1.1
PLD	Plovdiv	2.60	14	P	Pn	00 39 58.8	0.0	BEY				eSn	Sn	00 41 14.6	-1.1	KIZT	Kizilcal	6.27	94 ePN	Pn	00 40 50.4	+1.1
LKD2	Lefkada island	2.61	253	P	Pn	00 40 00.8	+1.9	IVA	Berane	4.43	319 ⇓iPn		Pn	00 40 24.6	+0.6	DEV	Deva	6.33	354 ⇓P	Pn	00 40 50.5	+0.4
LKD2	Lefkada island	2.61	253	P	Pn	00 40 00.8	+1.9	IVA				eSn	Sn	00 41 14.6	-1.1	DEV	Deva	6.33	354 ⇓P	Pn	00 40 50.5	+0.4
KRUS	Krusevo	2.67	313	ePn	Pn	00 39 59.4	-0.3	DENT	Denizli	4.45	113	ePN	Pn	00 40 24.2	0.0	CEL	Celeste	6.34	260 ePn	Pn	00 40 50.3	+0.1
IGT	Igoumenitsa	2.72	270	P	Pn	00 40 02.0	+1.6	DENT	Denizli	4.45	113	ePn	Pn	00 40 24.2	0.0		470nm,1.0s					
IGT	Igoumenitsa	2.72	270	P	Pn	00 40 02.0	+1.6	BOLS	Boljevac	4.47	342	iPn	Pn	00 40 24.0	-0.5	CEL			eS	Sn	00 42 01.1	-1.7
BLCB	Balcova	2.76	115	ePN	Pn	00 40 00.1	-0.9	DNZL	Cakiroluk	4.49	113	iP	Pn	00 40 26.2	+1.5	CEL	Celeste	6.34	260 ePn	Pn	00 40 50.3	+0.1
BLCB	Balcova	2.76	115	P	Pn	00 40 01.1	+0.1	DNZL	Cakiroluk	4.49	113	iP	Pn	00 40 26.2	+1.5		470nm,1.0s					
BLCB	Balcova	2.76	115	ePn	Pn	00 40 00.1	-0.9	PDG	Podgorica	4.49	311 ⇑iPn		Pn	00 40 25.6	+0.9	CEL			eS	Sn	00 42 01.1	-1.7
BLCB	Balcova	2.76	115	P	Pn	00 40 01.1	+0.1	PDG				eSn	Sn	00 41 17.0	0.0	CFR	Carcaliu	6.43	28 ⇑P	Pn	00 40 50.5	-0.9
RKY	Sarkoy-Tekirda	2.78	66	ePN	Pn	00 40 00.1	-1.1	TTG	Podgorica	4.49	311 ⇑iPn		Pn	00 40 25.6	+0.9	CFR	Carcaliu	6.43	28 ⇑P	Pn	00 40 50.5	-0.8
RKY	Sarkoy-Tekirda	2.78	66	ePn	Pn	00 40 00.1	-1.1	TTG				eSn	Sn	00 41 17.0	0.0	MDB	Medias	6.56	3 ⇑P	Pn	00 40 54.1	+0.9
SART	Tekirdag	2.78	66	iP	Pn	00 39 57.7	-3.6	NPS	Neapolis	4.54	161	ePn	Pn	00 40 24.8	-0.6	MDB	Medias	6.56	3 ⇑P	Pn	00 40 54.1	+0.9
SART	Tekirdag	2.78	66	iP	Pn	00 39 57.7	-3.6	NPS	Neapolis	4.54	161	ePN	Pn	00 40 24.8	-0.6	PLOR	Plostina	6.59	17 ⇑P	Pn	00 40 53.6	0.0
OHR	Ohrid	2.79	304	ePn	Pn	00 40 01.3	-0.1	NPS	Neapolis	4.54	161	ePn	Pn	00 40 24.8	-0.6	PETR		6.62	21 ⇑P	Pn	00 40 54.3	+0.3
KFL	Anninata	2.81	239	P	Pn	00 40 03.4	+1.7	KHAL	Karahalli	4.56	104	iP	Pn	00 40 26.6	+0.9	PETR		6.62	21 ⇑P	Pn	00 40 54.3	+0.3
KFL	Anninata	2.81	239	P	Pn	00 40 03.4	+1.7	KHAL	Karahalli	4.56	104	iP	Pn	00 40 26.6	+0.9	VRI	Vrincioaia	6.62	18 ⇓P	Pn	00 40 54.1	0.0
APE	Apeiranthos	2.84	152	ePN	Pn	00 40 01.1	-1.0	KHL	Karahalli	4.60	104	ePN	Pn	00 40 26.5	+0.2	VRI	Vrincioaia	6.62	18 ⇓P	Pn	00 40 54.1	0.0
APE	Apeiranthos	2.84	152	ePn	Pn	00 40 01.1	-1.0	KHL	Karahalli	4.60	104	ePn	Pn	00 40 26.5	+0.3	TLCR		6.70	32 ⇓P	Pn	00 40 54.4	-0.7
APE				eSn	Sn	00 40 35.0	-1.3	ADVT	Abdulvahap	4.60	78	ePN	Pn	00 40 26.5	+0.2	TLCR		6.70	32 ⇓P	Pn	00 40 54.4	-0.6
APE	Apeiranthos	2.84	152	ePN	Pn	00 40 01.1	-1.0	ADVT	Abdulvahap	4.60	78	ePn	Pn	00 40 26.5	+0.2	LADK	Ladik-KONYA	6.78	99 ePN	Pn	00 40 57.2	+1.0
APE				eSN	Sn	00 40 01.0	-1.1	LAST	Lasithi	4.60	163	ePN	Pn	00 40 26.8	+0.5	KONT	Konya--Tatoy	6.85	101 ePN	Pn	00 40 57.7	+0.6
APE	Apeiranthos	2.84	152	P	Pn	00 40 01.0	-1.1	LAST	Lasithi	4.60	163	ePN	Pn	00 40 26.8	+0.5	LOD	Lodumlu	6.88	85 ePN	Pn	00 40 58.4	+0.9
APE	Apeiranthos	2.84	152	ePn	Pn	00 40 01.1	-1.0	LAST	Lasithi	4.60	163	P	Pn	00 40 26.9	+0.6	SAFT	Safranbolu	6.94	73 ePN	Pn	00 40 59.1	+0.7
APE				eSn	Sn	00 40 35.0	-1.3	LAST	Lasithi	4.60	163	ePn	Pn	00 40 26.8	+0.5	BLY	Banja Luka	7.15	318 P	Pn	00 41 01.9	+0.6
ITM	Ithomi	2.84	213	ePn	Pn	00 40 02.7	+0.6	TURN	Turunc	4.62	124	iP	Pn	00 40 24.2	-2.3	BLY	Banja Luka	7.15	318 P	Pn	00 41 01.9	+0.6
ITM	Ithomi	2.84	213	ePN	Pn	00 40 02.7	+0.6	TURN	Turunc	4.62	124	iP	Pn	00 40 24.2	-2.3	TESR		7.22	16 ⇓P	Pn	00 41 02.4	+0.2
ITM	Ithomi	2.84	213	P	Pn	00 40 02.3	+0.2	HRT	Hereke	4.62	73	ePN	Pn	00 40 26.5	-0.1	TESR		7.22	16 ⇓P	Pn	00 41 02.4	+0.2
ITM	Ithomi	2.84	213	P	Pn	00 40 02.3	+0.2	HRT	Hereke	4.62	73	ePn	Pn	00 40 26.5	-0.1	DRGR		7.25	354 ⇓P	Pn	00 41 02.1	-0.6
ITM	Ithomi	2.84	213	ePn	Pn	00 40 02.7	+0.6	SIVA	Sivas	4.62	170	ePn	Pn	00 40 27.5	+0.9	DRGR		7.25	354 ⇓P	Pn	00 41 02.1	-0.6
MFT	Murefte	2.89	64	ePN	Pn	00 40 02.5	-0.3	SIVA	Sivas	4.62	170	ePN	Pn	00 40 27.5	+0.9	HDMB	Hadim	7.28	108 ePN	Pn	00 41 04.0	+0.9
MFT	Murefte	2.89	64	ePn	Pn	00 40 02.5	-0.3	SIVA	Sivas	4.62	170	P	Pn	00 40 27.6	+1.0	BR131	Keskin Array S	7.55	86 ePn	Pn	00 41 07.3	+0.4
VLS	Valsamata	2.91	242	ePn	Pn	00 40 04.4	+1.4	SIVA	Sivas	4.62	170	ePn	Pn	00 40 27.5	+0.9	BR131	Keskin Array S	7.55	86 ePn	Pn	00 41 07.3	+0.5
VLS	Valsamata	2.91	242	ePN	Pn	00 40 04.4	+1.4	BUM	Brajici-Budva	4.63	307 ⇑iPn		Pn	00 40 27.4	+0.7	BRTR	Keskin Array B	7.55	86 Pn	Pn	00 41 07.2	+0.4
VLS	Valsamata	2.91	242	P	Pn	00 40 04.4	+1.4	BUM				eSn	Sn	00 41 19.7	-0.8		2.2nm,0.3s,baz=260,slow=11,SNR=82					
VLS	Valsamata	2.91	242	ePn	Pn	00 40 04.4	+1.4	BUM	Brajici-Budva	4.63	307 ⇑iPn		Pn	00 40 27.4	+0.7	BRTR			Pg	Pg	00 41 34.5	-6.6
IZM	Izmir	2.91	113	ePN	Pn	00 40 02.4	-0.6	BUM				eSn	Sn	00 41 19.7	-0.8		1.8nm,0.3s,baz=272,slow=14,SNR=6.5					
KDAG	Bornova	2.91	113	iP	Pn	00 40 02.5	-0.6	CAVI	Cavuskoy	4.65	80	ePN	Pn	00 40 27.2	+0.2	BRTR			Lg		00 43 20.0	
KDAG	Bornova	2.91	113	iP	Pn	00 40 02.5	-0.6	CAVI	Cavuskoy	4.65	80	ePn	Pn	00 40 27.2	+0.2		0.5nm,0.3s,baz=273,slow=26,SNR=5.6					
BALY	Balya	2.91	86	iP	Pn	00 40 02.6	-0.4	SILT	Sile	4.69	69	ePN	Pn	00 40 27.2	-0.4	BRTR			LR	LR	00 43 53.7	
BALY	Balya	2.91	86	iP	Pn	00 40 02.6	-0.5	SILT	Sile	4.69	69	ePn	Pn	00 40 27.2	-0.3		comp=Z,3µm,18.9s,baz=267,slow=37					
VLI	Veliai	2.95	194	ePN	Pn	00 40 02.7	-0.9	CRAR	CRAIOVA	4.74	360 ⇑P		Pn	00 40 27.6	-0.5	BRTR	Keskin Array B	7.55	86 iP	Pn	00 41 07.3	+0.5
VLI	Veliai	2.95	194	ePN	Pn	00 40 02.7	-0.9	GVD	Gavdhos	4.74	178	ePn	Pn	00 40 29.4	+1.2	BRTR			pmax	pmax		
VLI	Veliai	2.95	194	ePn	Pn	00 40 02.7	-0.9	GVD	Gavdhos	4.74	178	ePN	Pn	00 40 29.4	+1.2		comp=Z,6.0nm,0.4s					
SRN	Sarande	2.98	277	ePN	Pg	00 40 17.2	+3.4	GVD	Gavdhos	4.74	178	P	Pn	00 40 29.6	+1.4	BRTR	Keskin Array B	7.55	86 Pn	Pn	00 41 07.2	+0.4
GONE	Gonen-Balikesi	2.99	80	ePN	Pn	00 40 03.3	-0.8	GVD	Gavdhos	4.74	178	ePn	Pn	00 40 29.4	+1.2	BRTR	Keskin Array B	7.55	86 Pg	Pg	00 41 34.5	-6.7
GONE	Gonen-Balikesi	2.99	80	ePn	Pn	00 40 03.3	-0.8	ARG	Arkhangelos	4.77	134	ePn	Pn	00 40 29.3	+0.7	CANT	Cankiri	7.56	79 ePN	Pn	00 41 07.5	+0.6
SKO	Skopje	3.01	323	P	Pn	00 40 05.1	+0.7	ARG	Arkhangelos	4.77	134	ePN	Pn	00 40 29.3	+0.7	PKSM	Moragy	7.65	332 ⇑P	Pn	00 41 08.0	-0.1
SKO	Skopje	3.01	323	ePn	Pn	00 40 05.1	+0.7	ARG	Arkhangelos	4.77	134	P	Pn	00 40 29.1	+0.5	PKSM	Moragy	7.65	332 P	Pn	00 41 08.2	+0.1
SKO	Skopje	3.01	323	P	Pn	00 40 05.1	+0.7	ARG	Arkhangelos	4.77	134	P	Pn	00 40 29.1	+0.5	PKSM	Moragy	7.65	332 ⇑P	Pn	00 41 07.9	-0.2
VTS	Vitosha	3.04	351 ⇑P		Pn	00 40 05.1	+0.2	KARP	Karpathos	4.81	146	ePn	Pn	00 40 29.5	+0.3	SULT	Sultanhani-AKS	7.66	97 ePN	Pn	00 41 08.8	+0.5
VTS	Vitosha	3.04	351	P	Pn	00 40 05.2	+0.3	KARP	Karpathos	4.81	146	ePN	Pn	00 40 29.5	+0.3	VAE	Valguarnera	7.69	257 Pn	Pn	00 41 10.9	+2.1
VTS	Vitosha	3.04	351	P	Pn	00 40 05.2	+0.3	KARP	Karpathos	4.81	146	ePn	Pn	00 40 29.5	+0.3	VAE			Sn	Sn	00 42 36.0	+0.1
BALB	Balikesir	3.11	88	ePN	Pn	00 40 05.1	-0.7	ZKR	Zakros	4.84	156	ePn	Pn	00 40 30.1	+0.5	VAE			Lg		00 43 18.6	
BALB	Balikesir	3.11	88	ePn	Pn	00 40 05.1	-0.7	ZKR	Zakros	4.84	156	ePN	Pn	00 40 30.1	+0.5	VAE			LR	LR	00 43 56.3	
KEK	Kerkira	3.13	274	ePn	Pn	00 40 07.6	+1.5	ZKR	Zakros	4.84	156	P	Pn	00 40 30.3	+0.7	VAE	Valguarnera	7.69	257 Pn	Pn	00 41 10.9	+2.1
KEK	Kerkira	3.13	274	ePN	Pn	00 40 07.6	+1.5	ZKR	Zakros	4.84	156	ePn	Pn	00 40 30.1	+0.5		comp=Z,2.9nm,0.3s,baz=50,slow=10,SNR=7.5					
KEK	Kerkira	3.13	274	P	Pn	00 40 07.6	+1.6	NKY	Niksic	4.88	313 ⇓iPn		Pn	00 40 31.4	+1.3	VAE			Sn	Sn	00 42 36.0	+0.1
KEK	Kerkira	3.13	274	ePn	Pn	00 40 07.6	+1.5	NKY				eSn	Sn	00 41 25.8	-0.9		comp=Z,4.7nm,0.3s,baz=172,slow=16,SNR=3.6					
TKR	Tekirdag	3.15	62	ePN	Pn	00 40 05.3	-1.0	NKY	Niksic	4.88	313 ⇓iPn		Pn	00 40 31.4	+1.3	VAE			Lg		00 43 18.6	
TKR	Tekirdag	3.15	62	ePn	Pn	00 40 05.3	-1.0	NKY				eSn	Sn	00 41 25.8	-0.9	VAE			LR	LR	00 43 56.3	
EDRB	Edirne	3.15	43	ePN	Pn	00 40 04.9	-1.5	ALT	Altintas	4.88	94	ePN	Pn	00 40 30.0	-0.2		comp=Z,4µm,18.2s,baz=27,slow=36					
EDRB	Edirne	3.15	43	ePn	Pn	00 40 04.9	-1.5	ALT	Altintas	4.88	94	ePn	Pn	00 40 30.0	-0.2	VAE	Valguarnera	7.69	257 Pn	Pn	00 41 10.9	+2.2
AKS	Akhisar	3.16	102	ePN	Pn	00 40 05.7	-0.8	HCY	Herceg Novi	4.96	307 ⇓iPn		Pn	00 40 31.2	0.0	VAE			Sn	Sn	00 42 36.0	0.0
AKS	Akhisar	3.16	102	ePn	Pn	00 40 05.7	-0.7	HCY				eSn	Sn	00 41 28.0	-0.6	PKS2	Kecel	7.69	335 ⇓eP	Pn	00 41 09.0	+0.3
AKHS	Akhisar	3.16	102	iP	Pn	00 40 06.6	+0.2	HCY	Herceg Novi	4.96	307 ⇓iPn		Pn	00 40 31.2	0.0	PKSN	Nyarlorinc	7.87	340 ⇓eP	Pn	00 41 11.2	+0.1
AKHS	Akhisar	3.16	102	iP	Pn	00 40 06.6	+0.2	HCY				eSn	Sn	00 41 28.0	-0.6	TOS	Tosya	7.91	76 ePN	Pn	00 41 12.3	+0.6
PYL	PYLOS	3.16	212	ePN	Pn	00 40 07.4	+1.0	GPA	Golpazari	5.01	80	ePN	Pn	00 40 31.4	-0.6	BZK	Bozkurt	8.06	70 ePN	Pn	00 41 13.7	-0.1
PYL	PYLOS	3.16	212	P	Pn	00 40 07.2	+0.8	GPA	Golpazari	5.01	80	ePn	Pn	00 40 31.4	-0.6	BUR01	Bucovina Ar. S	8.09	7 P	Pn	00 41 14.7	+0.6
PYL	PYLOS	3.16	212	P	Pn	00 40 07.2	+0.8	PLE	Pljevlja	5.02	320 ⇓iPn		Pn	00 40 32.7	+0.6	BURAR	Bucovina Array	8.09	7 ⇓P	Pn	00 41 14.5	+0.4
EDC	Edincik	3.18	75	ePN	Pn	00 40 05.7	-1.0	PLE				eSn	Sn	00 41 29.5	-0.7	BMR	Baia Mare	8.09	358 ⇑P	Pn	00 41 14.1	-0.1
EDC	Edincik	3.18	75	ePn	Pn	00 40 05.7	-1.0	PLE	Pljevlja	5.02	320 ⇓iPn		Pn	00 40 32.7	+0.6	PKS9	Tamasi	8.10	332 ⇓eP	Pn	00 41 14.6	+0.3
BNT	Bandirma	3.22	75	ePN	Pn	00 40 06.4	-0.9	PLE				eSn	Sn	00 41 29.5	-0.7	BUR08	Bucovina Ar. S	8.12	6 ePn	Pn	00 41 14.6	+0.1
GCAM	G?zlecami?	3.25	124	iP	Pn	00 40 08.5	+0.8	BUC1	Bucharest	5.03	18 ⇓P		Pn	00 40 31.2	-1.0	PKS7	Kunszentmiklos	8.20	337 ⇓eP	Pn	00 41 16.2	+0.5
GCAM	G?zlecami?	3.25	124	iP	Pn	00 40 08.5	+0.8	BUC1	Bucharest	5.03	18 ⇓P		Pn	00 40 31.2	-0.9	KIS	Kishinev	8.25	24 eP	Pn	00 41 15.0	-1.3
CRLT	Corlu	3.34	61	ePN	Pn	00 40 07.8	-1.3	GLHS	Glhisar (BURDU	5.06	117	ePN	Pn	00 40 32.7	+0.2	KIS			iS	Sn	00 42 49.0	-0.5
CRLT	Corlu	3.34	61	ePn	Pn	00 40 07.8	-1.2	GLHS	Glhisar (BURDU	5.06	117	ePn	Pn	00 40 32.7	+0.1	KIS			iLi		00 43 16.0	
KYTH	Kithira	3.36	191	ePN	Pn	00 40 08.5	-0.7	GOLH	Golhisar	5.06	116	iP	Pn	00 40 34.1	+1.5	KIS			iLg1		00 43 28.0	
KYTH	Kithira	3.36	191	ePn	Pn	00 40 08.5	-0.7	GOLH	Golhisar	5.06	116	iP	Pn	00 40 34.1	+1.5	KIS			iLg2		00 43 50.0	
KYTH	Kithira	3.36	191	ePn	Pn	00 40 08.5	-0.7	SPNC	Sapanca-Adapaz	5.07	75	ePN	Pn	00 40 32.7	0.0	KIS			iRg		00 44 06.0	
THR5	Thira Island,	3.38	159	P	Pn	00 40 08.6	-0.9	SPNC	Sapanca-Adapaz	5.07	75	ePn	Pn	00 40 32.7	0.0	KIS			LRM		00 44 46.0	
THR5	Thira Island,	3.38	159	P	Pn	00 40 08.6	-0.9	PE1	Pezze di Greco	5.07	286	eP	Pn	00 40 32.0	-0.8		comp=Z,10µm,12.0s					
THR3	Thira Island,	3.40	158	P	Pn	00 40 09.6	-0.2	SVIS	Svilajnac	5.07	338	P	Pn	00 40 33.1	+0.3	KIS	Kishinev	8.25	24 ⇓P	Pn	00 41 15.6	-0.7
THR3	Thira Island,	3.40	158	P	Pn	00 40 09.6	-0.2	BORA	Eskisehir	5.10	85	iP	Pn	00 40 33.2	+0.1	KIS	Kishinev	8.25	24 eP	Pn	00 41 15.0	-1.3
THR1	Thera Island	3.45	158	P	Pn	00 40 09.5	-1.0	BORA	Eskisehir	5.10	85	iP	Pn	00 40 33.2	+0.1	KIS			iS	Sn	00 42 49.0	-0.5
THR1	Thera Island	3.45	158	P	Pn	00 40 09.5	-1.0	TAR1	Taranto	5.13	283	ePn	Pn	00 40 32.0	-1.5	KIS			MLR	MLR		
TIR	Tirane	3.51	301	ePn	Pn	00 40 13.1	+1.7	DJES	Djerdap	5.17	349	P	Pn	00 40 32.4	-1.7		comp=Z,7µm,9.0s					
TIR	Tirane	3.51	301	P	Pn	00 40 13.2	+1.9	UPM	Unac-Piva	5.18	316 ⇓iPn		Pn	00 40 35.1	+0.8	KIS	Kishinev	8.25	24 eP	Pn	00 41 15.0	-1.3
TIR	Tirane	3.51	301	P	Pn	00 40 13.2	+1.9	UPM				eSn	Sn	00 41 33.4	-0.8	KIS			iS	Sn	00 42 49.0	-0.5
KCTX	Karacabey (Bur	3.53	77	ePN	Pn	00 40 10.8	-0.7	UPM	Unac-Piva	5.18	316 ⇓iPn		Pn	00 40 35.1	+0.8	WDD	Wield Dalam	8.27	246 ePn	Pn	00 41 16.4	-0.3
KCTX	Karacabey (Bur	3.53	77	ePn	Pn	00 40 10.8	-0.8	UPM				eSn	Sn	00 41 33.4	-0.8		comp=Z,3µm,1.0s					
JMB	Yambol	3.54	35	P	Pn	00 40 10.5	-1.3	GULT	Gulveren	5.19	78	ePN	Pn	00 40 34.7	+0.3	WDD			eSn	Sn	00 42 46.8	-3.4
JMB	Yambol	3.54	35	P	Pn	00 40 10.5	-1.3	GULT	Gulveren	5.19	78	ePn	Pn	00 40 34.7	+0.4	CORM	Corum	8.31	82 ePN	Pn	00 41 17.9	+0.7
BARS	Barje	3.58	335	P	Pn	00 40 10.8	-1.4	BRY	Bratogost	5.19	311 ⇓iPn		Pn	00 40 35.2	+0.8	NVLJ	Novalja	8.33	310 iPn	Pn	00 41 16.6	-0.8
BARS	Barje	3.58	335	iPn	Pn	00 40 12.4	+0.2	BRY				eSn	Sn	00 41 32.9	-1.5	NVLJ			Sn	Sn	00 42 50.9	-0.6
AYDN	Tasoluk	3.69	120	iP	Pn	00 40 14.1	+0.3	BRY	Bratogost	5.19	311 ⇓iPn		Pn	00 40 35.2	+0.8	NVLJ	Novalja	8.33	310 iPn	Pn	00 41 16.5	-0.9
AYDN	Tasoluk	3.69	120	iP	Pn	00 40 14.1	+0.3	BRY				eSn	Sn	00 41 32.9	-1.5	NVLJ			Sn	Sn	00 42 50.8	-0.7
BODT	Bodrum	3.71	132	ePN	Pn	00 40 13.6	-0.5	PSN	Preselentsi	5.22	37	Pn	Pn	00 40 32.9	-1.9	AQU	L'Aquila	8.38	293 ePn	Pn	00 41 17.5	-0.6
BODT	Bodrum	3.71	132	ePn	Pn	00 40 13.6	-0.4	TRUS	Trudelj	5.30	332	iPn	Pn	00 40 34.8	-1.1	AQU	L'Aquila	8.38	293 ⇓P	Pn	00 41 17.7	-0.4
SLVT	Silivri	3.71	62	ePN	Pn	00 40 12.6	-1.4	SHUT	Suhut-Afyon	5.32	99	ePN	Pn	00 40 36.9	+0.8	AQU	L'Aquila	8.38	293 P	Pn	00 41 17.7	-0.4
SLVT	Silivri	3.71	62	ePn	Pn	00 40 12.6	-1.5	SHUT	Suhut-Afyon	5.32	99	ePn	Pn	00 40 36.9	+0.8	IKL	Isikli	8.46	110 ePN	Pn	00 41 19.9	+0.7
MPEP	Malo Peshtene	3.77	359	Pn	Pn	00 40 14.2	-0.7	DIVS	Divibare	5.35	329	P	Pn	00 40 36.6	0.0	LEF	Lefka	8.46	119 ePN	Pn	00 41 19.3	-0.1
BDRM	Kayabasi	3.78	131	iP	Pn	00 40 15.6	+0.6	DIVS	Divibare	5.35	329	iPn	Pn	00 40 36.6	0.0	BYBT	Boyabat	8.52	74 ePN	Pn	00 41 19.9	-0.2
BDRM	Kayabasi	3.78	131	iP	Pn	00 40 15.6	+0.6	SULR		5.39	19 ⇑P		Pn	00 40 36.5	-0.7	BUD	Budapest	8.64	338 ⇑e	Pn	00 41 17.3	-4.4
DEMI	Demirci	3.81	97	iP	Pn	00 40 15.9	+0.5	SULR		5.39	19 ⇑P		Pn	00 40 36.5	-0.7	BOJS	Bojanci	8.67	316 ePn	Pn	00 41 22.1	-0.1
DEMI	Demirci	3.81	97	iP	Pn	00 40 15.9	+0.5	ESKT	Eskisehir	5.41	88	ePN	Pn	00 40 37.6	+0.2	BOJS						
ELBA	Catalca	3.83	64	iP	Pn	00 40 18.1	+2.4	ESKT	Eskisehir	5.41	88	iP	Pn	00 40 37.3	-0.1		comp=Z,21µm,8.2s					
ELBA	Catalca	3.83	64	iP	Pn	00 40 18.1	+2.4	BBLS	Lazići	5.42	324	P	Pn	00 40 38.3	+0.8	PKSG		8.75	335 ⇓eP	Pn	00 41 24.1	+0.9
MLSB	Milas	3.84	125	ePN	Pn	00 40 15.6	-0.2	BBLS	Lazići	5.42	324	P	Pn	00 40 38.3	+0.8	PSZ	Piszkesteto	8.81	342 ePn	Pn	00 41 25.1	+1.1
MLSB	Milas	3.84	125	ePn	Pn	00 40 15.6	-0.2	ISP	Isparta	5.51	107	ePN	Pn	00 40 39.0	+1.1	PSZ	Piszkesteto	8.81	342 ⇓e	Pn	00 41 25.4	+1.4
CTYL	Yal??k??y-??at	3.87	59	ePN	Pn	00 40 15.7	-0.6	ISP	Isparta	5.51	107	ePn	Pn	00 40 39.9	+1.1	PSZ	Piszkesteto	8.81	342 eP	Pn	00 41 25.1	+1.1
CTYL	Yal??k??y-??at	3.87	59	ePn	Pn	00 40 15.7	-0.6	ISP				eS	Sg	00 42 07.5	-5.9	LFK	Lefkose	8.82	116 ePN	Pn	00 41 24.8	+0.6
PUK	Puka	3.88	311	ePN	Pn	00 40 24.0	+7.6	ISP	Isparta	5.51	107 ⇑P		Pn	00 40 39.6	+0.9	SEV	Sevastopol'	8.82	53 ePn	Pn	00 41 27.3	+3.1
KULA	Kula-Manisa	3.89	104	ePN	Pn	00 40 16.1	-0.5	ISP	Isparta	5.51	107	P	Pn	00 40 39.6	+0.9	YOZ	Yozgat	8.85	86 ePN	Pn	00 41 24.6	0.0
KULA	Kula-Manisa	3.89	104	ePn	Pn	00 40 16.1	-0.5	TIP	Timpagrande	5.51	268 ePn		Pn	00 40 38.9	+0.1	VISS	Visnje	9.09	316 iPn	Pn	00 41 27.7	-0.2
CTKS	Kestanelik-??a	3.92	64	ePN	Pn	00 40 16.1	-0.

TRI	**Trieste**	**9.62**	**313**	*e*Pn		**Pn**	**00 41 34.3**	**-0.9**
	comp=Z,43nm,0.8s								
TRI				*e*S		**Sn**	**00 43 20.0**	**-3.4**
TRI	**Trieste**	**9.62**	**313**	*e*P		**Pn**	**00 41 34.3**	**-0.9**
TRI				*e*S		**Sn**	**00 43 20.0**	**-3.4**
TRI				pmax	pmax				
	comp=Z,43nm,0.8s								
CEYT	**Ceyhan**	**9.70**	**102**	*e*PN		**Pn**	**00 41 35.9**	**-0.3**
OBKA	**Obir**	**9.70**	**319**	P		**Pn**	**00 41 36.7**	**+0.4**
OBKA	**Obir**	**9.70**	**319**	⇑*i*Pn		**Pn**	**00 41 36.1**	**-0.2**
	SNR=30								
OBKA	**Obir**	**9.70**	**319**	Pn		**Pn**	**00 41 36.1**	**-0.2**
	SNR=30								
VOY	**Vojsko**	**9.74**	**315**	*e*Pn		**Pn**	**00 41 36.8**	**0.0**
VOY				*e*			00 41 40.9		
VOY				*e*			00 42 07.3		
ARSA	**Arzberg**	**9.76**	**324**	P		**Pn**	**00 41 39.6**	**+2.5**
ARSA	**Arzberg**	**9.76**	**324**	⇑*i*Pn		**Pn**	**00 41 37.5**	**+0.4**
	SNR=36								
ARSA	**Arzberg**	**9.76**	**324**	Pn		**Pn**	**00 41 37.5**	**+0.4**
	SNR=36								
KOLL	**Kolacno**	**9.81**	**338**	*e*Pn		**Pn**	**00 41 39.0**	**+1.3**
KOLL				*e*			00 41 55.8		
KOLL				*e*Sg			00 44 45.6		
KOLL	**Kolacno**	**9.81**	**338**	*e*PN		**Pn**	**00 41 39.0**	**+1.3**
KOLL				*e*			00 41 55.8		
KOLL				*e*			00 44 45.6		
KOLL	**Kolacno**	**9.81**	**338**	*e*Pn		**Pn**	**00 41 39.0**	**+1.3**
SUDU	**Sudak**	**9.82**	**54**	*e*P		**Pn**	**00 41 37.5**	**-0.4**
SUDU				*e*S		**Sn**	**00 43 31.0**	**+2.9**
ZST	**Bratislava**	**9.89**	**333**	*e*Pn		**Pn**	**00 41 41.0**	**+2.2**
ZST				*e*Sn		**Sn**	**00 43 22.7**	**-7.1**
ZST	**Bratislava**	**9.89**	**333**	*e*P		**Pn**	**00 41 41.0**	**+2.2**
ZST				*e*			00 43 22.7		
ZST				MLR	MLR				
	comp=Z,29µm,11.5s								
ZST	**Bratislava**	**9.89**	**333**	*e*PN		**Pn**	**00 41 41.0**	**+2.2**
ZST				*e*SN		**Sn**	**00 43 22.7**	**-7.1**
STHS	**Stebnicka Huta**	**10.01**	**350**	*e*Pn		**Pn**	**00 41 44.8**	**+4.4**
STHS				*e*Sg		Sn	00 44 41.6	+69	
STHS	**Stebnicka Huta**	**10.01**	**350**	*e*PN		**Pn**	**00 41 44.8**	**+4.4**
STHS				*e*			00 44 41.6		
SARI	**SarD1z-Kayseri**	**10.02**	**91**	*e*PN		**Pn**	**00 41 38.7**	**-2.0**
KWP	**Kalwaria Pacla**	**10.08**	**356**	*e*P		**Pn**	**00 41 43.3**	**+1.9**
KWP				LMZ			00 46 15.3		
	comp=Z,14µm,14.5s								
NIE	**Niedzica**	**10.15**	**347**	*e*P		**Pn**	**00 41 44.1**	**+1.7**
NIE				*e*PP			00 41 52.5		
NIE	**Niedzica**	**10.15**	**347**	*e*P		**Pn**	**00 41 44.1**	**+1.7**
LVV	**L'vov**	**10.23**	**1**	*e*P		**Pn**	**00 41 46.0**	**+2.5**
LVV				*e*S		**Sn**	**00 43 45.0**	**+6.7**
LVV				MLR	MLR				
	comp=Z,5µm,12.0s								
KBA	**Koelnbreinsper**	**10.70**	**318**	*i* Pn		**Pn**	**00 41 50.1**	**+0.2**
	SNR=32								
KBA	**Koelnbreinsper**	**10.70**	**318**	Pn		**Pn**	**00 41 50.1**	**+0.2**
	SNR=32								
MOA	**Molln**	**10.78**	**323**	P		**Pn**	**00 41 52.3**	**+1.3**
MOA	**Molln**	**10.78**	**323**	⇑*i*Pn		**Pn**	**00 41 51.7**	**+0.7**
	SNR=57								
MOA	**Molln**	**10.78**	**323**	Pn		**Pn**	**00 41 51.7**	**+0.7**
	SNR=57								
ABTA	**Abfaltersbach**	**10.94**	**315**	⇓*i*Pn		**Pn**	**00 41 52.5**	**-0.7**
	SNR=18								
ABTA	**Abfaltersbach**	**10.94**	**315**	Pn		**Pn**	**00 41 52.5**	**-0.7**
	SNR=18								
OJC	**Ojcow**	**11.01**	**346**	*e*P		**Pn**	**00 41 56.6**	**+2.4**
OJC				*e*PP			00 42 05.1		
OJC				*e*S		**Sn**	**00 44 03.3**	**+5.9**
OJC				*e*SS			00 44 21.8		
OJC				L			00 46 26.5		
	comp=Z,4.2nm,17.4s								
OJC	**Ojcow**	**11.01**	**346**	*e*P		**Pn**	**00 41 56.6**	**+2.4**
OJC				*e*S		**Sn**	**00 44 03.3**	**+5.9**
OJC				MLR	MLR				
	comp=Z,4µm,17.4s								
VRAC	**Vranov**	**11.01**	**334**	Pn		**Pn**	**00 41 54.5**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=155,slow=12,SNR=10								
VRAC				Sn		**Sn**	**00 43 54.8**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=166,slow=14,SNR=3.1								
VRAC				Lg			00 45 12.6		
	comp=Z,0.1nm,0.3s,baz=134,slow=17,SNR=1.9								
VRAC				LR	LR		00 46 01.0		
	comp=Z,1µm,19.3s,baz=150,slow=37								
VRAC	**Vranov**	**11.01**	**334**	P		**Pn**	**00 41 54.5**	**+0.3**
VRAC							00 43 54.8		
VRAC				MLR	MLR				
	comp=Z,1µm,19.3s								
OKC	**Ostrava-Krasne**	**11.02**	**340**	*e*P		**Pn**	**00 41 58.9**	**+4.6**
OKC				MLR	MLR				
	comp=Z,9µm,11.1s								
OKC	**Ostrava-Krasne**	**11.02**	**340**	*e*P		**Pn**	**00 41 58.9**	**+4.6**
OKC				AMS	AMS		00 46 40.0		
	comp=Z,9µm,11.1s								
MORC	**Moravsky Berou**	**11.13**	**338**	*e*Pn		**Pn**	**00 41 57.8**	**+2.0**
	comp=Z,135nm,2.1s								
MORC	**Moravsky Berou**	**11.13**	**338**	*e*P		**Pn**	**00 41 57.8**	**+2.0**
MORC				pmax	pmax				
	comp=Z,135nm,2.1s								
VSL	**Villasalto**	**11.18**	**274**	*e*Pn		**Pn**	**00 41 57.2**	**+0.7**
RAC	**Raciborz**	**11.23**	**341**	*e*P		**Pn**	**00 42 00.2**	**+3.0**
RAC				*e*S		**Sn**	**00 44 02.5**	**-0.3**
RAC				MLR	MLR				
	comp=E,10µm,13.0s								
RAC				MLR	MLR				
	comp=Z,5µm,10.0s								
RAC				MLR	MLR				
	comp=N,8µm,11.0s								
ANN	**Anapa**	**11.34**	**58**	*e*P		**Pn**	**00 41 56.0**	**-2.7**
ANN				*e*S		**Sn**	**00 44 01.7**	**-3.7**
ANN				MLR	MLR				
	comp=Z,3µm,13.0s								
MMAI	**Mount Meron Ar**	**11.39**	**122**	Pn		**Pn**	**00 41 59.5**	**+0.1**
	comp=Z,2.8nm,0.3s,baz=310,slow=12,SNR=20								
MMAI				Sn		**Sn**	**00 44 04.0**	**-2.7**
	comp=Z,1.0nm,0.3s,baz=98,slow=40,SNR=2.7								
MMAI				Lg			00 45 06.3		
	comp=Z,0.2nm,0.3s,baz=315,slow=57,SNR=1.9								
MMAI				LR	LR		00 47 08.9		
	comp=Z,2µm,21.5s,baz=330,slow=41								
TREC	**Trest**	**11.39**	**331**	*e*P		**Pn**	**00 42 01.0**	**+1.6**
TREC				MLR	MLR				
	comp=Z,7µm,11.2s								
TREC	**Trest**	**11.39**	**331**	*e*P		**Pn**	**00 42 01.0**	**+1.6**
TREC				AMS	AMS		00 47 10.0		
	comp=Z,7µm,11.2s								
TREC	**Trest**	**11.39**	**331**	P		**Pn**	**00 42 01.0**	**+1.6**
PGF	**Pioggiola**	**11.60**	**290**	*e*P		**Pn**	**00 42 02.4**	**+0.2**
	comp=Z,147nm,1.3s								
PGF	**Pioggiola**	**11.60**	**290**	*e*P		**Pn**	**00 42 02.4**	**+0.2**
	comp=Z,74nm,1.3s								
PGF	**Pioggiola**	**11.60**	**290**	*e*P		**Pn**	**00 42 02.4**	**+0.2**
PGF				pmax	pmax				
	comp=Z,74nm,1.3s								
PGF	**Pioggiola**	**11.60**	**290**	*e*P		**Pn**	**00 42 02.4**	**+0.2**
	comp=Z,74nm,1.3s								
WTTA	**Wattenberg**	**11.73**	**315**	⇓*i*Pn		**Pn**	**00 42 03.6**	**-0.3**
	SNR=14								
WTTA				⇓*i*Sn		**Sn**	**00 44 15.9**	**+0.9**
WTTA	**Wattenberg**	**11.73**	**315**	Pn		**Pn**	**00 42 03.6**	**-0.4**
	SNR=14								
WTTA				Sn		**Sn**	**00 44 15.9**	**+1.0**
KIEV	**Kiev**	**11.73**	**17**	*e*Pn		**Pn**	**00 42 03.6**	**-0.4**
	comp=Z,26nm,0.8s								
KIEV	**Kiev**	**11.73**	**17**	*e*P		**Pn**	**00 42 03.6**	**-0.4**
KIEV				pmax	pmax				
	comp=Z,26nm,0.8s								
KIEV	**Kiev**	**11.73**	**17**	*e*Pn		**Pn**	**00 42 03.6**	**-0.4**
	comp=Z,26nm,0.8s								
AKASG	**Malin Array Be**	**11.74**	**17**	Pn		**Pn**	**00 42 02.6**	**-1.6**
	comp=Z,3.2nm,0.3s,baz=196,slow=13,SNR=17								
AKASG				Sn		**Sn**	**00 44 10.6**	**-4.6**
	comp=Z,1.9nm,0.3s,baz=167,slow=22,SNR=3.2								
AKASG				Lg			00 45 21.3		
	baz=186,slow=28,SNR=2.5								
AKASG				LR	LR		00 46 41.1		
	comp=Z,3µm,21.3s,baz=190,slow=38								
AKASG	**Malin Array Be**	**11.74**	**17**	P		**Pn**	**00 42 02.6**	**-1.5**
AKASG							00 44 10.6		
AKASG				pmax	pmax				
	comp=Z,3.0nm,0.3s								
AKASG				smax					
	comp=N,2.0nm,0.3s								
AKASG				MLR	MLR				
	comp=Z,3µm,21.3s								
AKASG	**Malin Array Be**	**11.74**	**17**	Sn		**Sn**	**00 44 10.6**	**-4.6**
AKBB	**Malin Array Si**	**11.74**	**17**	*e*Pn		**Pn**	**00 42 02.9**	**-1.2**
AKBB	**Malin Array Si**	**11.74**	**17**	*e*Pn		**Pn**	**00 42 02.9**	**-1.2**
GEC2	**GERESS Array S**	**11.77**	**325**	*e*P		**Pn**	**00 42 05.2**	**+0.7**
GEC2	**GERESS Array S**	**11.77**	**325**	*e*P		**Pn**	**00 42 05.2**	**+0.7**
WATA	**Walderalm**	**11.80**	**315**	⇑*i*Pn		**Pn**	**00 42 04.8**	**-0.3**
	SNR=12								
WATA				⇓*i*Sn		**Sn**	**00 44 17.8**	**+1.0**
WATA	**Walderalm**	**11.80**	**315**	Pn		**Pn**	**00 42 04.8**	**-0.2**
	SNR=12								
WATA				Sn		**Sn**	**00 44 17.8**	**+1.0**
DPC	**Dobruska-Polom**	**12.00**	**336**	*e*P		**Pn**	**00 42 12.2**	**+4.5**
DPC				MLR	MLR				
	comp=Z,10µm,9.9s								
DPC	**Dobruska-Polom**	**12.00**	**336**	*e*P		**Pn**	**00 42 12.2**	**+4.5**
DPC				AMS	AMS		00 47 30.0		
	comp=Z,10µm,9.9s								
KHC	**Kasperske Hory**	**12.04**	**326**	*e*Pn		**Pn**	**00 42 08.4**	**+0.3**
	comp=Z,114nm,1.6s								
KHC				*e*S		**Sn**	**00 44 22.2**	**-0.3**
KHC	**Kasperske Hory**	**12.04**	**326**	*e*P		**Pn**	**00 42 08.5**	**+0.3**
KHC				*e*S		**Sn**	**00 44 22.2**	**-0.2**
KHC				pmax	pmax				
	comp=Z,114nm,1.6s								
KHC	**Kasperske Hory**	**12.04**	**326**	*e*P		**Pn**	**00 42 08.3**	**+0.1**
KHC				*e*S		**Sn**	**00 44 32.5**	**+10**
KHC				*ex*		x	00 46 08.0		
KHC				AMS	AMS		00 47 10.0		
	comp=Z,15µm,10.0s								
KHC	**Kasperske Hory**	**12.04**	**326**	*e*Pn		**Pn**	**00 42 08.4**	**+0.2**
	comp=Z,114nm,1.6s								
KHC				*e*S		**Sn**	**00 44 22.2**	**-0.2**
MOTA	**Moosalm**	**12.07**	**314**	⇑*i*Pn		**Pn**	**00 42 07.9**	**-0.8**
	SNR=25								
MOTA				⇑*i*Sn		**Sn**	**00 44 24.7**	**+1.4**
MOTA	**Moosalm**	**12.07**	**314**	Pn		**Pn**	**00 42 07.9**	**-0.8**
	SNR=25								
MOTA				Sn		**Sn**	**00 44 24.7**	**+1.4**
FETA	**Feichten**	**12.10**	**312**	⇓*i*Pn		**Pn**	**00 42 08.8**	**-0.2**
	SNR=10								
FETA	**Feichten**	**12.10**	**312**	Pn		**Pn**	**00 42 08.8**	**-0.2**
	SNR=10								
KEST	**Kesra**	**12.12**	**256**	Pn		**Pn**	**00 42 10.6**	**+1.2**
UPC	**Upice**	**12.24**	**336**	*e*P		**Pn**	**00 42 18.8**	**+7.9**
UPC	**Upice**	**12.24**	**336**	*e*P		**Pn**	**00 42 18.8**	**+7.9**
PRU	**Pruhonice**	**12.31**	**331**	*e*P		**Pn**	**00 42 16.5**	**+4.5**
PRU				MLR	MLR				
	comp=Z,9µm,10.4s								
PRU	**Pruhonice**	**12.31**	**331**	*e*P		**Pn**	**00 42 16.5**	**+4.5**
PRU				AMS	AMS		00 47 00.0		
	comp=Z,9µm,10.4s								
RETA	**Reutte**	**12.34**	**314**	⇑*i*Pn		**Pn**	**00 42 11.5**	**-0.8**
	SNR=15								
RETA	**Reutte**	**12.34**	**314**	Pn		**Pn**	**00 42 11.5**	**-0.9**
	SNR=15								
WET	**Wetzell**	**12.36**	**324**	*e*P		**Pn**	**00 42 12.3**	**-0.2**
WET	**Wettzell**	**12.36**	**324**	*e*P		**Pn**	**00 42 12.3**	**-0.2**
KSP	**Ksiaz**	**12.45**	**337**	*e*P		**Pn**	**00 42 20.8**	**+7.0**
KSP				LMZ			00 46 50.9		
	comp=Z,6µm,18.1s								
KSP	**Ksiaz**	**12.45**	**337**	*e*P		**Pn**	**00 42 16.8**	**+3.0**
DAVOX	**Davos/Dischmat**	**12.47**	**310**	Pn		**Pn**	**00 42 14.6**	**+0.5**
DAVOX				Lg			00 45 44.4		
DAVOX	**Davos/Dischmat**	**12.47**	**310**	Pn		**Pn**	**00 42 14.6**	**+0.5**
	comp=Z,1.2nm,0.3s,baz=122,slow=12,SNR=18								
DAVOX				Lg			00 45 44.4		
	baz=138,slow=20,SNR=1.9								
DAVOX	**Davos/Dischmat**	**12.47**	**310**	Pn		**Pn**	**00 42 14.6**	**+0.5**
DAVOX				Lg			00 45 44.4		
SOC	**Sochi**	**12.53**	**66**	*e*P		**Pn**	**00 42 07.8**	**-7.2**
SOC				pmax	pmax				
	comp=Z,8.0nm,0.8s								
SOC				MLR	MLR				
	comp=Z,2µm,12.0s								
TUE	**Stuetta**	**12.64**	**308**	*e*Pn		**Pn**	**00 42 17.2**	**+0.7**
	comp=Z,36nm,1.1s								
TUE				*e*Sn		**Sn**	**00 44 21.3**	**-16**
TUE	**Stuetta**	**12.64**	**308**	*e*Pn		**Pn**	**00 42 17.2**	**+0.8**
	comp=Z,36nm,1.1s								
TUE				*e*Sn		**Sn**	**00 44 21.3**	**-16**
PVCC	**Panska Ves**	**12.75**	**332**	*e*P		**Pn**	**00 42 22.6**	**+4.7**
PVCC				MLR	MLR				
	comp=Z,8µm,10.6s								
PVCC	**Panska Ves**	**12.75**	**332**	*e*P		**Pn**	**00 42 22.6**	**+4.7**
PVCC				AMS	AMS		00 48 40.0		
	comp=Z,8µm,10.6s								
WAR	**Warsaw**	**12.81**	**352**	*e*P		**Pn**	**00 42 26.2**	**+7.4**
WAR				LMZ			00 48 11.3		
	comp=Z,7µm,14.5s								
ASF	**Jabal al Asfar**	**12.90**	**121**	Pn		**Pn**	**00 42 19.5**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=157,slow=15,SNR=3.1								
ASF				Lg			00 46 09.4		
	comp=Z,0.1nm,0.3s,baz=340,slow=14,SNR=2.5								
ASF				LR	LR		00 48 16.6		
	comp=Z,1µm,19.4s,baz=339,slow=42								
SAOF	**Saorge**	**12.93**	**295**	*e*P		**Pn**	**00 42 26.3**	**+5.9**
SBF	**Sospel**	**12.98**	**295**	*e*P		**Pn**	**00 42 20.2**	**-1.0**
	comp=Z,96nm,1.0s								
SBF	**Sospel**	**12.98**	**295**	*e*P		**Pn**	**00 42 20.2**	**-1.0**
	comp=Z,48nm,1.0s								
SBF	**Sospel**	**12.98**	**295**	*e*P		**Pn**	**00 42 20.2**	**-1.0**
SBF				pmax	pmax				
	comp=Z,48nm,1.0s								
SBF	**Sospel**	**12.98**	**295**	*e*P		**Pn**	**00 42 20.2**	**-1.0**
	comp=Z,48nm,1.0s								
MVIF	**Mont Vial**	**13.19**	**294**	*e*P		**Pn**	**00 42 27.6**	**+3.6**
BRG	**Berggiesshubel**	**13.26**	**332**	*e*P		**Pn**	**00 42 27.5**	**+2.6**
BRG	**Berggiesshubel**	**13.26**	**332**	*e*P		**Pn**	**00 42 28.0**	**+3.1**
	comp=Z,6.3nm,1.2s								
BRG				*e*PP			00 42 36.6		
	comp=Z,18nm,1.2s								
BRG				S		**Sn**	**00 44 56.0**	**+3.7**
BRG									
	comp=N,6µm,10.1s								
BRG									
	comp=E,7µm,10.8s								
BRG									
	comp=Z,7µm,10.0s								
BRG	**Berggiesshubel**	**13.26**	**332**	*e*P		**Pn**	**00 42 28.0**	**+3.1**
BRG				S		**Sn**	**00 44 56.0**	**+3.7**
BRG				pmax	pmax				
	comp=Z,4.0nm,1.3s								
BRG				MLR	MLR				
	comp=N,11µm,10.1s								
BRG				MLR	MLR				
	comp=E,4µm,10.8s								
BRG				MLR	MLR				
	comp=Z,4µm,10.0s								
CMAH	**Djebel Manchou**	**13.28**	**262**	P		**Pn**	**00 42 29.0**	**+3.8**
ABSA	**Djebel Ababsia**	**13.34**	**261**	P		**Pn**	**00 42 30.9**	**+4.8**
CALN	**Calern**	**13.35**	**294**	*e*P		**Pn**	**00 42 27.2**	**+1.1**
CALN	**Calern**	**13.35**	**294**	*e*P		**Pn**	**00 42 27.2**	**+1.1**
NKC	**Novy Kostel**	**13.35**	**327**	*e*P		**Pn**	**00 42 28.8**	**+2.7**
NKC				MLR	MLR				
	comp=Z,12µm,9.7s								
NKC	**Novy Kostel**	**13.35**	**327**	*e*P		**Pn**	**00 42 28.8**	**+2.7**
NKC				AMS	AMS		00 48 00.0		
	comp=Z,12µm,9.7s								
EIL	**Elat**	**13.45**	**134**	Pn		**Pn**	**00 42 24.9**	**-2.8**
	comp=Z,0.4nm,0.3s,baz=333,slow=8.4,SNR=20								
EIL				Sn		**Sn**	**00 45 02.9**	**+5.6**
	comp=Z,0.3nm,0.3s,baz=155,slow=22,SNR=2.3								
EIL	**Elat**	**13.45**	**134**	Pn		**Pn**	**00 42 24.9**	**-2.8**
EIL				Sn		**Sn**	**00 45 02.9**	**+5.6**
FRF	**La Foret Royal**	**13.48**	**293**	*e*P		**Pn**	**00 42 26.0**	**-1.9**
	comp=Z,184nm,1.4s								
FRF	**La Foret Royal**	**13.48**	**293**	*e*P		**Pn**	**00 42 26.0**	**-1.9**
	comp=Z,92nm,1.4s								
FRF	**La Foret Royal**	**13.48**	**293**	*e*P		**Pn**	**00 42 26.0**	**-1.9**
FRF				pmax	pmax				
	comp=Z,92nm,1.4s								
FRF	**La Foret Royal**	**13.48**	**293**	*e*P		**Pn**	**00 42 26.0**	**-1.9**
	comp=Z,92nm,1.4s								
TANN	**Tannenbergstha**	**13.48**	**327**	*e*P		**Pn**	**00 42 30.3**	**+2.4**
GUNZ	**Gunzen**	**13.50**	**327**	*e*P		**Pn**	**00 42 30.8**	**+2.7**
GRA1	**Grafenberg Arr**	**13.51**	**323**	*e*P		**Pn**	**00 42 27.0**	**-1.3**
GRA1	**Grafenberg Arr**	**13.51**	**323**	*e*P		**Pn**	**00 42 27.0**	**-1.3**
GRF	**Grafenberg Arr**	**13.51**	**323**	*e*P		**Pn**	**00 42 27.0**	**-1.3**
GRF				*e*L			00 47 31.3		
	comp=Z,3µm,19.6s								
LMR	**La Mourre**	**13.53**	**292**	*e*P		**Pn**	**00 42 30.0**	**+1.3**
	comp=Z,51nm,1.1s								
LMR	**La Mourre**	**13.53**	**292**	*e*P		**Pn**	**00 42 30.0**	**+1.3**
	comp=Z,26nm,1.1s								
LMR	**La Mourre**	**13.53**	**292**	*e*P		**Pn**	**00 42 30.0**	**+1.3**
LMR				pmax	pmax				
	comp=Z,26nm,1.1s								
LMR	**La Mourre**	**13.53**	**292**	*e*P		**Pn**	**00 42 30.0**	**+1.3**
WERD	**Werda**	**13.57**	**327**	*e*P		**Pn**	**00 42 29.9**	**+0.8**
CAEH	**'Ain El Ouahch**	**13.67**	**264**	P		**Pn**	**00 42 34.0**	**+3.5**
MBDF	**Montbardon**	**13.67**	**298**	*e*P		**Pn**	**00 42 31.0**	**+0.5**
	comp=Z,64nm,0.9s								
MBDF	**Montbardon**	**13.67**	**298**	*e*P		**Pn**	**00 42 31.0**	**+0.5**
	comp=Z,32nm,0.9s								
MBDF	**Montbardon**	**13.67**	**298**	*e*P		**Pn**	**00 42 31.0**	**+0.5**
MBDF				pmax	pmax				
	comp=Z,32nm,0.9s								
MBDF	**Montbardon**	**13.67**	**298**	*e*P		**Pn**	**00 42 31.0**	**+0.5**
	comp=Z,32nm,0.9s								
CKFL	**Kef-Lekhel**	**13.88**	**262**	P		**Pn**	**00 42 37.0**	**+3.6**
LPG	**La Plagne**	**13.91**	**301**	*e*P		**Pn**	**00 42 34.4**	**+0.6**
	comp=Z,96nm,0.9s								
LPG	**La Plagne**	**13.91**	**301**	*e*P		**Pn**	**00 42 34.4**	**+0.6**
	comp=Z,48nm,0.9s								
LPG	**La Plagne**	**13.91**	**301**	*e*P		**Pn**	**00 42 34.4**	**+0.6**
LPG				pmax	pmax				
	comp=Z,48nm,0.9s								
LPG	**La Plagne**	**13.91**	**301**	*e*P		**Pn**	**00 42 34.4**	**+0.6**
	comp=Z,48nm,0.9s								
LPL	**La Plagne**	**13.93**	**301**	*e*P		**Pn**	**00 42 34.2**	**+0.1**
	comp=Z,128nm,1.3s								
LPL	**La Plagne**	**13.93**	**301**	*e*P		**Pn**	**00 42 34.2**	**+0.1**
	comp=Z,64nm,1.3s								
LPL	**La Plagne**	**13.93**	**301**	*e*P		**Pn**	**00 42 34.2**	**+0.1**
LPL				pmax	pmax				
	comp=Z,64nm,1.3s								
LPL	**La Plagne**	**13.93**	**301**	*e*P		**Pn**	**00 42 34.2**	**+0.1**
	comp=Z,64nm,1.3s								
STU	**Stuttgart**	**13.94**	**316**	*e*P		**Pn**	**00 42 33.5**	**-0.7**
STU	**Stuttgart**	**13.94**	**316**	*e*Pn		**Pn**	**00 42 33.9**	**-0.4**
	comp=Z,17nm,0.8s								
STU	**Stuttgart**	**13.94**	**316**	*e*P		**Pn**	**00 42 33.9**	**-0.3**
STU				pmax	pmax				
	comp=Z,17nm,0.8s								
STU	**Stuttgart**	**13.94**	**316**	*e*Pn		**Pn**	**00 42 33.8**	**-0.4**
	comp=Z,17nm,0.8s								
CLL	**Collm**	**13.96**	**331**	*e*P		**Pn**	**00 42 38.6**	**+4.2**
CLL	**Collm**	**13.96**	**331**	*e*P		**Pn**	**00 42 39.0**	**+4.6**
	comp=Z,17nm,1.4s								
CLL	**Collm**	**13.96**	**331**	*e*P		**Pn**	**00 42 39.0**	**+4.6**
CLL				pmax	pmax				
	comp=Z,17nm,1.4s								
CLL				MLR	MLR				
	comp=Z,4µm,15.2s								
CLL	**Collm**	**13.96**	**331**	*es*P			00 42 39.0		
	comp=Z,17nm,1.4s								
CLL				*i* (PP)			00 42 44.7		
	comp=Z,66nm,1.4s								
CLL				*e*			00 42 51.0		
CLL				LmH			00 47 00.0		
	comp=N,5µm,20.2s								
CLL				LmH			00 47 00.0		
	comp=E,6µm,20.8s								
CLL				Lmax			00 49 00.0		
MOX	**Moxa**	**14.01**	**326**	*e*P		**Pn**	**00 42 35.3**	**+0.2**
	comp=E,137nm,2.1s								
MOX									
	comp=Z,8µm,11.0s								
MOX	**Moxa**	**14.01**	**326**	*e*P		**Pn**	**00 42 37.2**	**+2.1**
MOX	**Moxa**	**14.01**	**326**	*e*P		**Pn**	**00 42 35.3**	**+0.2**
MOX				pmax	pmax				
	comp=Z,137nm,2.1s								
MOX				MLR	MLR				
	comp=Z,8µm,11.0s								
MOX	**Moxa**	**14.01**	**326**	*e*P		**Pn**	**00 42 35.3**	**+0.2**
	comp=Z,137nm,2.1s								
CASM	**Ain Smara**	**14.10**	**262**	P		**Pn**	**00 42 41.0**	**+4.5**
FELD	**Feldberg im Sc**	**14.12**	**311**	*e*P		**Pn**	**00 42 36.9**	**+0.2**
BFO	**Black Forest**	**14.17**	**313**	*e*P		**Pn**	**00 42 33.8**	**-3.5**
BFO	**Black Forest**	**14.17**	**313**	*e*P		**Pn**	**00 42 33.8**	**-3.5**
BBS	**Basel-Blauen**	**14.21**	**309**	*e*P		**Pn**	**00 42 40.7**	**+2.8**
SMRF	**Simiane la Rot**	**14.32**	**294**	*e*P		**Pn**	**00 42 37.1**	**-2.3**
	comp=Z,262nm,1.6s								
SMRF	**Simiane la Rot**	**14.32**	**294**	*e*P		**Pn**	**00 42 37.1**	**-2.3**
	comp=Z,262nm,1.6s								
SMRF	**Simiane la Rot**	**14.32**	**294**	*e*P		**Pn**	**00 42 37.1

ONI Oni 15.08 72 P Pn 00 42 51.8 +2.1
VIVF Saint-Julien-I 15.14 297 *e*P Pn 00 42 51.6 +1.0
comp=Z,111nm,1.4s
VIVF Saint-Julien-I 15.14 297 *e*P Pn 00 42 51.6 +1.0
comp=Z,55nm,1.4s
VIVF Saint-Julien-I 15.14 297 *e*P Pn 00 42 51.6 +1.0
VIVF pmax pmax
comp=Z,55nm,1.4s
VIVF Saint-Julien-I 15.14 297 *e*P Pn 00 42 51.6 +1.0
comp=Z,55nm,1.4s
HAU Haudompre 15.16 309 *e*P Pn 00 42 48.1 -2.7
comp=Z,45nm,1.0s
HAU *e*MLR MLR
comp=Z,9µm,18.0s
HAU Haudompre 15.16 309 *e*P Pn 00 42 48.1 -2.7
comp=Z,23nm,1.0s
HAU Haudompre 15.16 309 *e*P Pn 00 42 48.1 -2.7
HAU pmax pmax
comp=Z,23nm,1.0s
HAU Haudompre 15.16 309 *e*P Pn 00 42 48.1 -2.7
comp=Z,23nm,1.0s
MNK Minsk 15.16 9 *e*P Pn 00 42 46.0 -4.7
MNK *e*S Sn 00 45 34.0 -4.7
MNK MLR MLR
comp=Z,28µm,18.0s
MNK MLR MLR
comp=N,8µm,14.0s
MICGM Minsk 15.17 9 *e*P Pn 00 42 46.0 -4.8
SSB Saint Sauveur 15.34 298 *e*P Pn 00 42 54.0 +0.9
SSB Saint Sauveur 15.34 298 *e*Pn Pn 00 42 52.7 -0.5
comp=N,8.1nm,0.8s
SSB Saint Sauveur 15.34 298 *e*P Pn 00 42 52.7 -0.4
SSB pmax pmax
comp=Z,8.0nm,0.8s
SSB Saint Sauveur 15.34 298 *e*Pn Pn 00 42 52.7 -0.4
comp=Z,8.1nm,0.8s
KEH Kehvi 15.42 73 P Pn 00 42 54.3 +0.1
CLZ Clausthal 15.42 327 *e*P Pn 00 42 55.3 +1.1
comp=Z,82nm,1.3s
CLZ Clausthal 15.42 327 *e*P Pn 00 42 55.3 +1.1
CLZ pmax pmax
comp=Z,82nm,1.3s
CLZ Clausthal 15.42 327 *e*P Pn 00 42 55.3 +1.1
comp=Z,82nm,1.3s
ZEI Tsey 15.43 72 *e*P Pn 00 43 01.5 +7.2
ZEI pmax pmax
comp=Z,107nm,1.6s
ZEI MLR MLR
comp=Z,804nm,9.0s
NACGM Naroch 15.45 6 *e*P Pn 00 42 49.0 -5.5
AKF Akfadou 15.46 265 P Pn 00 43 01.4 +6.6
THEF They Montfort 15.48 310 *e*P Pn 00 43 00.3 +5.4
THEF They Montfort 15.48 310 *e*P Pn 00 43 00.3 +5.4
LASF Ste Croix 15.56 293 *e*P Pn 00 42 54.7 -1.3
comp=Z,192nm,1.8s
LASF Ste Croix 15.56 293 *e*P Pn 00 42 54.7 -1.3
RUP Ruppelstein 15.62 316 *e*P Pn 00 42 58.1 +1.3
VORD Divnogorie 15.70 38 *e*P Pn 00 42 56.7 -1.1
VORD *e*S Sn 00 45 54.2 +2.4
VORD pmax pmax
comp=N,70nm,1.3s
VORD pmax pmax
comp=Z,30nm,1.3s
VORD pmax pmax
comp=E,40nm,0.6s
VORD smax
comp=N,80nm,0.8s
VORD smax
comp=E,30nm,0.8s
VORD MLR MLR
comp=N,4µm,16.0s
VORD MLR MLR
comp=E,4µm,16.0s
VORD MLR MLR
comp=Z,7µm,16.0s
VSR Storozhevoye 15.80 38 *e*P Pn 00 42 57.4 -1.7
VSR *e*S Sn 00 45 52.5 -1.8
VSR pmax pmax
comp=N,50nm,1.0s
VSR pmax pmax
comp=E,40nm,1.0s
VSR pmax pmax
comp=Z,30nm,1.0s
VSR smax
comp=N,70nm,1.4s
VSR smax
comp=E,70nm,1.4s
VSR smax
comp=Z,20nm,1.4s
VSR MLR MLR
comp=N,4µm,15.0s
VSR MLR MLR
comp=E,5µm,15.0s
VSR MLR MLR
comp=Z,9µm,15.0s
ATAF Djebel Tarf 15.92 263 P Pn 00 43 08.9 +8.1
TBLG Delisi 15.99 76 *e*P Pn 00 43 03.9 +2.2
TBLG Delisi 15.99 76 P Pn 00 43 04.0 +2.3
NRDL Niedersach Rie 16.02 328 *e*P Pn 00 43 06.0 +4.1
comp=Z,379nm,2.3s
MTA Mtatsminda 16.03 76 P Pn 00 43 04.0 +1.8
GNI Garni 16.05 81 *e*Pn Pn 00 43 04.2 +1.7
comp=Z,290nm,1.3s
GNI Garni 16.05 81 Pn Pn 00 43 06.7 +4.2
comp=Z,0.2nm,0.3s,baz=316,slow=2.9,SNR=14
GNI Sn Sn 00 46 07.2 +6.7
comp=Z,0.2nm,0.3s,baz=238,slow=23,SNR=1.7
GNI Lg 00 47 57.1
comp=Z,0.2nm,0.3s,baz=334,slow=23,SNR=2.0
GNI LR LR 00 49 17.8
comp=Z,4µm,19.0s,baz=90,slow=38
GNI Garni 16.05 81 *c i*P Pn 00 43 02.0 -0.4
GNI pmax pmax
comp=Z,102nm,1.4s
GNI MLR MLR
comp=Z,3µm,16.0s
GNI Garni 16.05 81 *e*Pn Pn 00 43 04.2 +1.8
comp=Z,290nm,1.3s
EJON La Jonquera 16.08 287 P Pn 00 43 07.0 +4.3
comp=Z,40nm,1.2s
EJON La Jonquera 16.08 287 P Pn 00 43 07.0 +4.3
comp=Z,40nm,1.2s
WLF Walferdange 16.10 315 P Pn 00 43 07.7 +4.8
comp=Z,27nm,2.1s
WLF Walferdange 16.10 315 *e*Pn Pn 00 43 02.9 -0.1
comp=Z,23nm,1.0s
WLF Walferdange 16.10 315 *e*P Pn 00 43 02.9 0.0
WLF pmax pmax
comp=Z,23nm,1.0s
WLF Walferdange 16.10 315 *e*Pn Pn 00 43 02.9 0.0
comp=Z,23nm,1.0s
WLF Walferdange 16.10 315 P Pn 00 43 07.7 +4.8
comp=Z,27nm,2.1s
MEZF Maizieres J'vi 16.16 310 *e*P Pn 00 43 00.6 -3.1
comp=Z,224nm,1.7s
MEZF Maizieres J'vi 16.16 310 *e*P Pn 00 43 00.6 -3.1
comp=Z,224nm,1.7s
MEZF Maizieres J'vi 16.16 310 *e*P Pn 00 43 00.6 -3.1
comp=Z,224nm,1.7s
VOR Voronezh 16.16 36 *e*P Pn 00 43 03.0 -0.8
VOR pmax pmax
comp=Z,200nm,1.4s
AKET Djebel Ketaf 16.17 264 P Pn 00 43 09.2 +5.2
ETOS Mallorca 16.20 277 P Pn 00 43 08.5 +4.2
comp=Z,72nm,1.6s
ETOS Mallorca 16.20 277 P Pn 00 43 08.5 +4.2
comp=Z,72nm,1.6s
SMF Signal de Mont 16.20 302 *e*P Pn 00 43 01.4 -2.9
comp=Z,83nm,1.2s
SMF Signal de Mont 16.20 302 *e*P Pn 00 43 01.4 -2.9
comp=Z,42nm,1.2s
SMF Signal de Mont 16.20 302 *e*P Pn 00 43 01.4 -2.9
SMF pmax pmax
comp=Z,42nm,1.2s
LBL Lubilhac 16.21 297 *e*P Pn 00 43 08.9 +4.4
LBL Lubilhac 16.21 297 *e*P Pn 00 43 08.9 +4.4
CFON Fontmartina 16.39 285 P Pn 00 43 11.1 +4.4
comp=Z,19nm,0.8s
CFON Fontmartina 16.39 285 P Pn 00 43 11.1 +4.3
comp=Z,19nm,0.8s
LOR Lormes 16.40 304 *e*P Pn 00 43 05.2 -1.7
comp=Z,81nm,1.0s
LOR *e*MLR MLR
comp=Z,5µm,17.0s
LOR Lormes 16.40 304 *e*P Pn 00 43 05.2 -1.7
comp=Z,41nm,1.0s
LOR Lormes 16.40 304 *e*P Pn 00 43 05.2 -1.7
LOR pmax pmax
comp=Z,41nm,1.0s
LOR Lormes 16.40 304 *e*P Pn 00 43 05.2 -1.7
DGRG David-gareji 16.47 77 P Pn 00 43 09.6 +1.8
ADJB Djebel Djouab 16.48 264 P Pn 00 43 08.9 +1.0
ADJB Djebel Djouab 16.48 264 P Pn 00 43 08.9 +1.0
AGO Saint Agoulin 16.50 300 *e*P Pn 00 43 08.7 +0.6
AGO Saint Agoulin 16.50 300 *e*P Pn 00 43 08.7 +0.6
PYM Petit Puy Mans 16.50 299 *e*P Pn 00 43 12.4 +4.2
PYM Petit Puy Mans 16.50 299 *e*P Pn 00 43 12.4 +4.2
BUG Bochum-Univer 16.55 321 *e*P Pn 00 43 11.4 +2.6
comp=Z,107nm,1.3s
SSF Saint Saulge 16.56 303 *e*P Pn 00 43 06.5 -2.3
comp=Z,181nm,1.6s
SSF Saint Saulge 16.56 303 *e*P Pn 00 43 06.5 -2.3
comp=Z,91nm,1.6s
SSF Saint Saulge 16.56 303 *e*P Pn 00 43 06.5 -2.3
SSF pmax pmax
comp=Z,91nm,1.6s
SSF Saint Saulge 16.56 303 *e*P Pn 00 43 06.5 -2.3
comp=Z,91nm,1.6s
AVF Avril sur Loir 16.57 302 *e*P Pn 00 43 07.1 -1.9
comp=Z,252nm,1.6s
AVF Avril sur Loir 16.57 302 *e*P Pn 00 43 07.1 -1.9
comp=Z,126nm,1.6s
AVF Avril sur Loir 16.57 302 *e*P Pn 00 43 07.1 -1.9
AVF pmax pmax
comp=Z,126nm,1.6s
AVF Avril sur Loir 16.57 302 *e*P Pn 00 43 07.1 -1.9
comp=Z,126nm,1.6s
ABA Alger-Bouzarea 16.60 267 P Pn 00 43 14.0 +4.6
MTLF Montolieu 16.64 290 *e*P Pn 00 43 11.2 +1.3
comp=Z,185nm,1.7s
MTLF Montolieu 16.64 290 *e*P Pn 00 43 11.2 +1.3
comp=Z,92nm,1.7s
MTLF Montolieu 16.64 290 *e*P Pn 00 43 11.2 +1.3
MTLF pmax pmax
comp=Z,92nm,1.7s
MTLF Montolieu 16.64 290 *e*P Pn 00 43 11.2 +1.3
comp=Z,92nm,1.7s
BSD Bornholm Skovb 16.65 342 *i*P Pn 00 43 09.4 -0.6
BSD MLR MLR
comp=Z,2µm,16.0s
BSD Bornholm Skovb 16.65 342 *i*P Pn 00 43 09.4 -0.6
BSD *i*S Sn 00 46 24.3 +9.5
BSD
comp=Z,2µm,16.0s
CARF Carcanieres 16.67 288 *e*P Pn 00 43 11.3 +1.0
CARF Carcanieres 16.67 288 *e*P Pn 00 43 11.3 +1.0
MEM Membach 16.69 317 P Pn 00 43 15.5 +5.0
comp=Z,17nm,1.5s
CLLI Llivia 16.75 287 P Pn 00 43 15.7 +4.3
CLLI Llivia 16.75 287 P Pn 00 43 15.7 +4.3
BGF Bois d'Agland 16.83 301 *e*P Pn 00 43 09.9 -2.4
comp=Z,418nm,1.7s
BGF Bois d'Agland 16.83 301 *e*P Pn 00 43 09.9 -2.4
comp=Z,209nm,1.7s
BGF Bois d'Agland 16.83 301 *e*P Pn 00 43 09.9 -2.4
BGF pmax pmax
comp=Z,209nm,1.7s
BGF Bois d'Agland 16.83 301 *e*P Pn 00 43 09.9 -2.4
comp=Z,209nm,1.7s
EMHD Djebel Mahouad 16.84 265 P Pn 00 43 14.4 +1.9
EMHD Djebel Mahouad 16.84 265 P Pn 00 43 14.4 +1.9
VERF Verneugheol 16.86 298 *e*P Pn 00 43 16.0 +3.3
VERF Verneugheol 16.86 298 *e*P Pn 00 43 16.0 +3.3
IBBN Ibbenburen 16.89 324 *e*P Pn 00 43 17.2 +4.1
comp=Z,89nm,1.4s
VRHR Novokhopersk 16.94 41 *e*P Pn 00 43 14.7 +1.1
VRHR *e*S Sn 00 46 24.0 +2.2
VRHR pmax pmax
comp=N,130nm,1.6s
VRHR pmax pmax
comp=E,160nm,1.6s
VRHR pmax pmax
comp=Z,110nm,1.6s
VRHR smax
comp=E,100nm,1.3s
VRHR smax
comp=N,20nm,0.7s
VRHR smax
comp=Z,7.0nm,0.7s
VRHR Novokhopersk 16.94 41 *e*P Pn 00 43 14.7 +1.1
BCLA Clavier 16.96 316 P Pn 00 43 18.9 +4.9
CAF Calviac 16.97 295 *e*P Pn 00 43 14.8 +0.7
comp=Z,193nm,1.5s
CAF Calviac 16.97 295 *e*P Pn 00 43 14.8 +0.7
comp=Z,97nm,1.5s
CAF Calviac 16.97 295 *e*P Pn 00 43 14.8 +0.7
CAF pmax pmax
comp=Z,97nm,1.5s
CAF Calviac 16.97 295 *e*P Pn 00 43 14.8 +0.7
comp=Z,97nm,1.5s
BSEG Bad Segeberg 17.04 332 *e*P Pn 00 43 16.7 +1.8
comp=Z,120nm,1.4s
BSEG Bad Segeberg 17.04 332 *e*P Pn 00 43 16.7 +1.8
BSEG pmax pmax
comp=Z,120nm,1.4s
BSEG Bad Segeberg 17.04 332 *e*P Pn 00 43 16.7 +1.8
comp=Z,120nm,1.4s
GIVF Givet 17.06 314 *e*P Pn 00 43 14.7 -0.5
comp=Z,76nm,1.2s
GIVF Givet 17.06 314 *e*P Pn 00 43 14.7 -0.5
comp=Z,38nm,1.2s
GIVF Givet 17.06 314 *e*P Pn 00 43 14.7 -0.5
GIVF pmax pmax
comp=Z,38nm,1.2s
GIVF Givet 17.06 314 *e*P Pn 00 43 14.7 -0.5
comp=Z,38nm,1.2s
EMIR Miracle 17.07 285 P Pn 00 43 19.6 +4.2
comp=Z,115nm,1.6s
EMIR Miracle 17.07 285 P Pn 00 43 19.6 +4.2
comp=Z,115nm,1.6s
TCF Toulx Ste Croi 17.18 300 *e*P Pn 00 43 15.2 -1.5
comp=Z,115nm,1.4s
TCF Toulx Ste Croi 17.18 300 *e*P Pn 00 43 15.2 -1.5
comp=Z,58nm,1.4s
TCF Toulx Ste Croi 17.18 300 *e*P Pn 00 43 15.2 -1.5
TCF pmax pmax
comp=Z,58nm,1.4s
TCF Toulx Ste Croi 17.18 300 *e*P Pn 00 43 15.2 -1.5
comp=Z,58nm,1.4s
DOU Doubes 17.18 314 P Pn 00 43 18.9 +2.2
comp=Z,25nm,2.3s
HYF Humbligny 17.18 303 *e*P Pn 00 43 16.5 -0.2
HYF Humbligny 17.18 303 *e*P Pn 00 43 16.5 -0.2
CSOR Sort 17.37 287 P Pn 00 43 20.6 +1.5
comp=Z,130nm,1.5s
CSOR Sort 17.37 287 P Pn 00 43 20.6 +1.5
comp=Z,130nm,1.5s
BAIF Baives 17.38 313 *e*P Pn 00 43 16.3 -2.9
comp=Z,155nm,1.7s
BAIF Baives 17.38 313 *e*P Pn 00 43 16.3 -2.9
comp=Z,78nm,1.7s
BAIF Baives 17.38 313 *e*P Pn 00 43 16.3 -2.9
BAIF pmax pmax
comp=Z,78nm,1.7s
BAIF Baives 17.38 313 *e*P Pn 00 43 16.3 -2.9
comp=Z,78nm,1.7s
EPOB Poblet 17.41 283 P Pn 00 43 20.3 +0.7
comp=Z,169nm,2.3s
EPOB Poblet 17.41 283 P Pn 00 43 20.3 +0.6
comp=Z,169nm,2.3s
RJF Les Rejaudoux 17.43 296 *e*P Pn 00 43 20.8 +1.0
comp=Z,155nm,1.4s
RJF *e*MLR MLR
comp=Z,4µm,17.2s
RJF Les Rejaudoux 17.43 296 *e*P Pn 00 43 20.8 +1.0
comp=Z,78nm,1.4s
RJF Les Rejaudoux 17.43 296 *e*P Pn 00 43 20.8 +1.0
RJF pmax pmax
comp=Z,78nm,1.4s
RJF Les Rejaudoux 17.43 296 *e*P Pn 00 43 20.8 +1.0
comp=Z,78nm,1.4s
MLS Moulis 17.43 289 *e*P Pn 00 43 20.4 +0.6
MLS Moulis 17.43 289 *e*P Pn 00 43 20.4 +0.6
EIBI Ibiza 17.43 275 P Pn 00 43 21.7 +1.8
comp=Z,75nm,1.3s
EIBI Ibiza 17.43 275 P Pn 00 43 21.7 +1.9
comp=Z,75nm,1.3s
SNF Seneffe 17.56 315 P Pn 00 43 25.1 +3.7
comp=Z,21nm,1.8s
BHD Baghdad 17.66 105 *ex* Pn 00 43 22.8 0.0
BHD *ex* x 00 46 32.8
BHD *ex* x 00 47 55.0
BHD *ex* x 00 48 46.0
BHD *ex* x 00 49 28.0
OBN Obninsk 17.72 25 *e*Pn Pn 00 43 21.1 -2.2
comp=Z,478nm,1.7s
OBN Obninsk 17.72 25 *c i*P Pn 00 43 20.5 -2.8
OBN pmax pmax
comp=Z,412nm,2.4s
OBN MLR MLR
comp=Z,5µm,21.0s
OBN Obninsk 17.72 25 *e*Pn Pn 00 43 21.1 -2.2
comp=Z,478nm,1.7s
COP Copenhagen 17.81 338 *i*P Pn 00 43 25.8 +1.3
COP pmax pmax
comp=Z,17nm,0.9s
COP MLR MLR
comp=Z,820nm,16.0s
COP Copenhagen 17.81 338 *i*P Pn 00 43 25.8 +1.3
comp=Z,17nm,0.9s
COP *i*S Sn 00 46 50.2 +7.3
COP
comp=Z,820nm,16.0s
COP Copenhagen 17.81 338 *i*P Pn 00 43 25.8 +1.3
comp=Z,820nm,16.0s
COP *i*S Sn 00 46 50.3 +7.4
SNR=47
LFF La Frestale 17.90 295 *e*P Pn 00 43 25.4 -0.3
comp=Z,260nm,1.9s
LFF La Frestale 17.90 295 *e*P Pn 00 43 25.4 -0.3
comp=Z,130nm,1.9s
LFF La Frestale 17.90 295 *e*P Pn 00 43 25.4 -0.3
LFF pmax pmax
comp=Z,130nm,1.9s
LFF La Frestale 17.90 295 *e*P Pn 00 43 25.4 -0.3
comp=Z,130nm,1.9s
EBNR Beni Rached 17.91 266 P Pn 00 43 23.8 -2.0
EBNR Beni Rached 17.91 266 P Pn 00 43 23.8 -2.0
EPF Esparros 17.98 289 *e*P Pn 00 43 25.6 -1.1
comp=Z,34nm,1.2s
EPF Esparros 17.98 289 *e*P Pn 00 43 25.6 -1.1
comp=Z,17nm,1.2s
EPF Esparros 17.98 289 *e*P Pn 00 43 25.6 -1.1
EPF pmax pmax
comp=Z,17nm,1.2s
EPF Esparros 17.98 289 *e*P Pn 00 43 25.6 -1.1
comp=Z,17nm,1.2s
ERTA Horta de San J 17.99 282 P Pn 00 43 27.0 +0.2
comp=Z,33nm,0.8s
ERTA Horta de San J 17.99 282 P Pn 00 43 27.0 +0.2
comp=Z,33nm,0.8s
ECHA Ech Chlef 18.07 266 P Pn 00 43 31.2 +3.3
MAK Makhachkala 18.08 72 *e*P Pn 00 43 29.2 +1.3
MAK *e*S Sn 00 46 52.9 +3.2
MAK pmax pmax
comp=Z,224nm,1.5s
MAK MLR MLR
comp=Z,2µm,10.0s
MAK Makhachkala 18.08 72 *e*P Pn 00 43 29.2 +1.3
comp=Z,224nm,1.5s
MAK *e*S Sn 00 46 52.9 +3.2
comp=Z,2µm,10.0s
EBIE Bielsa 18.11 288 P Pn 00 43 28.8 +0.5
comp=Z,44nm,1.4s
EBIE Bielsa 18.11 288 P Pn 00 43 28.8 +0.5
comp=Z,44nm,1.4s
EANR 'Ain N'Sour 18.34 266 P Pn 00 43 31.6 +0.5
EANR 'Ain N'Sour 18.34 266 P Pn 00 43 31.6 +0.5
ETRT Tiaret 18.37 264 P Pn 00 43 32.3 +0.8
ETRT Tiaret 18.37 264 P Pn 00 43 32.3 +0.8
REYF Montagne du Re 18.52 289 *e*P Pn 00 43 34.3 +1.0
REYF Montagne du Re 18.52 289 *e*P Pn 00 43 34.3 +1.0
ESAC San Caprasio 18.57 284 P Pn 00 43 33.5 -0.3
comp=Z,28nm,0.9s
ESAC San Caprasio 18.57 284 P Pn 00 43 33.5 -0.3
comp=Z,28nm,0.9s
MOS Moscow 18.58 25 *c i*P Pn 00 43 31.5 -2.3
MOS *i*S Sn 00 47 02.6 +1.2
MOS pmax pmax
comp=Z,2µm,2.3s
MOS pmax pmax
comp=Z,498nm,1.8s
MOS smax
comp=E,2µm,5.3s
MOS MLR MLR
comp=Z,3µm,10.0s
MOS Moscow 18.58 25 *i*P Pn 00 43 31.5 -2.3
comp=Z,498nm,1.8s
MOS *i*S Sn 00 47 02.6 +1.2
comp=Z,3µm,10.0s
ETSF Etsaut 18.64 288 *e*P Pn 00 43 33.7 -1.0
comp=Z,74nm,1.1s
ETSF Etsaut 18.64 288 *e*P Pn 00 43 33.7 -1.0
comp=Z,37nm,1.1s
ETSF Etsaut 18.64 288 *e*P Pn 00 43 33.7 -1.0
ETSF pmax pmax
comp=Z,37nm,1.1s
ETSF Etsaut 18.64 288 *e*P Pn 00 43 33.7 -1.0
comp=Z,37nm,1.1s
EMOS Mosqueruela 18.65 280 P Pn 00 43 36.5 +1.6
comp=Z,34nm,0.9s
EMOS Mosqueruela 18.65 280 P Pn 00 43 36.5 +1.6
comp=Z,34nm,0.9s
EBEN Beniarda 18.69 275 P Pn 00 43 36.4 +1.1
comp=Z,49nm,1.4s
EBEN Beniarda 18.69 275 P Pn 00 43 36.4 +1.0
comp=Z,49nm,1.4s
MFF Saint Martin d 18.83 300 *e*P Pn 00 43 35.5 -1.6
comp=Z,75nm,1.2s
MFF Saint Martin d 18.83 300 *e*P Pn 00 43 35.5 -1.6
comp=Z,38nm,1.2s
MFF Saint Martin d 18.83 300 *e*P Pn 00 43 35.5 -1.6
MFF pmax pmax
comp=Z,38nm,1.2s
MFF Saint Martin d 18.83 300 *e*P Pn 00 43 35.5 -1.6
comp=Z,38nm,1.2s
VSU Vasula 18.98 5 *c i*P Pn 00 43 38.8 0.0
VSU pmax pmax
comp=Z,144nm,1.1s
VSU MLR MLR
comp=Z,7µm,16.0s
VSU Vasula 18.98 5 *i*P Pn 00 43 38.8 0.0
comp=Z,7µm,16.0s
ECHE Chera 19.12 278 P Pn 00 43 41.3 +0.7
comp=Z,25nm,0.8s
ECHE Chera 19.12 278 P Pn 00 43 41.3 +0.7
ECHE pmax pmax
comp=Z,25nm,0.8s
ECHE Chera 19.12 278 P Pn 00 43 41.3 +0.7
comp=Z,25nm,0.8s
SJPF Ste Jean 19.13 289 *e*P Pn 00 43 40.0 -0.7
comp=Z,93nm,1.3s
SJPF Ste Jean 19.13 289 *e*P Pn 00 43 40.0 -0.7
comp=Z,46nm,1.3s
SJPF Ste Jean 19.13 289 *e*P Pn 00 43 40.0 -0.7
SJPF pmax pmax
comp=Z,46nm,1.3s
SJPF Ste Jean 19.13 289 *e*P Pn 00 43 40.0 -0.7
comp=Z,46nm,1.3s
EALK Alkurruntz 19.34 289 P Pn 00 43 43.9 +0.7
comp=Z,24nm,1.1s
EALK Alkurruntz 19.34 289 P Pn 00 43 43.9 +0.7
comp=Z,24nm,1.1s
ELIZ Elizondo 19.36 289 P Pn 00 43 44.0 +0.6
comp=Z,35nm,1.0s
ELIZ Elizondo 19.36 289 P Pn 00 43 44.0 +0.6
ELIZ pmax pmax
comp=Z,35nm,1.0s
ELIZ Elizondo 19.36 289 P Pn 00 43 44.0 +0.6
comp=Z,35nm,1.0s
LDF La Druitiere 19.37 306 *e*P Pn 00 43 41.4 -2.1
comp=Z,31nm,0.9s
LDF La Druitiere 19.37 306 *e*P Pn 00 43 41.4 -2.1
comp=Z,16nm,0.9s
LDF La Druitiere 19.37 306 *e*P Pn 00 43 41.4 -2.1
LDF pmax pmax
comp=Z,16nm,0.9s
LDF La Druitiere 19.37 306 *e*P Pn 00 43 41.4 -2.1
comp=Z,16nm,0.9s
MUD Monsted U'grnd 19.45 335 *i*P Pn 00 43 46.8 +2.4
MUD *i*S Sn 00 47 25.6 +3.0
MUD pmax pmax
comp=Z,24nm,1.0s
MUD MLR MLR
comp=Z,2µm,19.0s
MUD Monsted U'grnd 19.45 335 *i*P Pn 00 43 46.8 +2.4
comp=Z,24nm,1.0s
MUD *i*S Sn 00 47 25.6 +3.0
MUD

comp=Z,2µm,19.0s
EMUR La Murta 19.64 273 P **Pn** **00 43 45.0 -1.9**
comp=Z,98nm,1.5s
EMUR La Murta 19.64 273 P **Pn** **00 43 45.0 -1.9**
comp=Z,98nm,1.5s
FLN La Foliniere 19.65 306 *e*P **Pn** **00 43 45.3 -1.5**
comp=Z,252nm,1.5s
FLN *e*MLR MLR
comp=Z,6µm,17.5s
FLN La Foliniere 19.65 306 *e*P **Pn** **00 43 45.3 -1.5**
comp=Z,126nm,1.5s
FLN La Foliniere 19.65 306 *e*P **Pn** **00 43 45.3 -1.5**
FLN pmax pmax
comp=Z,126nm,1.5s
FLN La Foliniere 19.65 306 *e*P **Pn** **00 43 45.3 -1.5**
comp=Z,126nm,1.5s
ETOB Tobarra 19.72 275 P **Pn** **00 43 46.5 -1.3**
comp=Z,24nm,0.8s
ETOB Tobarra 19.72 275 P **Pn** **00 43 46.5 -1.2**
comp=Z,24nm,0.8s
ETOR Torete 19.81 282 P **Pn** **00 43 46.7 -2.1**
comp=Z,28nm,0.9s
ETOR Torete 19.81 282 P **Pn** **00 43 46.7 -2.1**
ETOR pmax pmax
comp=Z,28nm,0.9s
ETOR Torete 19.81 282 P **Pn** **00 43 46.7 -2.1**
comp=Z,28nm,0.9s
EVIA Vianos 20.45 276 P **P** **00 43 55.3 +1.0**
comp=Z,264nm,1.0s
EVIA Vianos 20.45 276 P **P** **00 43 55.3 +1.0**
EVIA pmax pmax
comp=Z,264nm,1.0s
EVIA Vianos 20.45 276 P **P** **00 43 55.3 +1.0**
comp=Z,264nm,1.0s
ENIJ Nijar 20.60 271 P **P** **00 43 58.3 +2.4**
comp=Z,94nm,1.1s
ENIJ Nijar 20.60 271 P **P** **00 43 58.3 +2.4**
ENIJ pmax pmax
comp=Z,94nm,1.1s
ENIJ Nijar 20.60 271 P **P** **00 43 58.3 +2.4**
comp=Z,94nm,1.1s
PUL Pulkovo 20.61 9 *j*P **P** **00 43 58.3 +2.5**
PUL pmax pmax
comp=Z,164nm,0.9s
PUL MLR MLR
comp=Z,7µm,16.0s,MS5.1
EHUE Huescar 20.69 274 P **P** **00 43 57.9 +1.0**
comp=Z,84nm,1.1s
EHUE Huescar 20.69 274 P **P** **00 43 57.9 +1.0**
EHUE pmax pmax
comp=Z,84nm,1.1s
EHUE Huescar 20.69 274 P **P** **00 43 57.9 +1.0**
comp=Z,84nm,1.1s
ELAN Lanestosa 20.75 289 P **P** **00 43 58.7 +1.2**
comp=Z,154nm,1.3s
ELAN Lanestosa 20.75 289 P **P** **00 43 58.7 +1.2**
comp=Z,154nm,1.3s
SGMF Saint Gilles 20.82 303 *e*P **P** **00 43 57.1 -1.1**
comp=Z,302nm,1.7s
SGMF Saint Gilles 20.82 303 *e*P **P** **00 43 57.1 -1.1**
comp=Z,151nm,1.7s
SGMF Saint Gilles 20.82 303 *e*P **P** **00 43 57.1 -1.1**
SGMF pmax pmax
comp=Z,151nm,1.7s
SGMF Saint Gilles 20.82 303 *e*P **P** **00 43 57.1 -1.1**
comp=Z,151nm,1.7s
JSA Saint Aubin 20.84 306 AMS AMS 00 53 18.0
comp=Z,4µm,18.7s,MS4.9
JSA Saint Aubin 20.84 306 AMS AMS 00 53 18.0
comp=Z,4µm,18.7s
WOL Wolverton 21.03 312 AMS AMS 00 53 10.3
comp=Z,8µm,12.5s,MS5.3
WOL Wolverton 21.03 312 AMS AMS 00 53 10.3
comp=Z,8µm,12.5s
EQES Quesada 21.07 274 P **P** **00 44 01.9 +1.0**
comp=Z,50nm,1.3s,mb4.7
EQES Quesada 21.07 274 P **P** **00 44 01.9 +1.0**
comp=Z,50nm,1.3s,mb4.7
QUIF Quistinic 21.14 302 *e*P **P** **00 44 00.7 -0.9**
comp=Z,110nm,0.9s,mb4.9
QUIF Quistinic 21.14 302 *e*P **P** **00 44 00.7 -0.9**
comp=Z,55nm,0.9s,mb4.9
QUIF Quistinic 21.14 302 *e*P **P** **00 44 00.7 -0.9**
QUIF pmax pmax
comp=Z,55nm,0.9s,mb4.9
QUIF Quistinic 21.14 302 *e*P **P** **00 44 00.7 -0.9**
comp=Z,55nm,0.9s,mb4.9
EBER Berja 21.15 271 P **P** **00 44 02.8 +1.0**
comp=Z,67nm,1.1s,mb4.9
EBER Berja 21.15 271 P **P** **00 44 02.8 +1.0**
comp=Z,67nm,1.1s,mb4.9
ROSF Rostrenen 21.31 303 *e*P **P** **00 44 02.7 -0.7**
comp=Z,99nm,1.1s,mb4.8
ROSF Rostrenen 21.31 303 *e*P **P** **00 44 02.7 -0.7**
comp=Z,50nm,1.1s,mb4.8
ROSF Rostrenen 21.31 303 *e*P **P** **00 44 02.7 -0.7**
ROSF pmax pmax
comp=Z,50nm,1.1s,mb4.8
ROSF Rostrenen 21.31 303 *e*P **P** **00 44 02.7 -0.7**
comp=Z,50nm,1.1s,mb4.8
ESDC Sonseca Array 21.39 279 P **P** **00 44 02.6 -1.9**
comp=Z,11nm,0.8s,mb4.2
ESDC Sonseca Array 21.39 279 P **P** **00 44 04.3 -0.2**
comp=Z,6.3nm,0.6s,mb4.1,baz=74,slow=11,SNR=28
ESDC Sonseca Array 21.39 279 P **P** **00 44 02.6 -1.9**
comp=Z,11nm,0.8s,mb4.2
ESLA Sonseca Array 21.39 279 *e*P **P** **00 44 05.0 +0.6**
comp=Z,24nm,1.3s,mb4.4
ESLA LR LR
comp=Z,7µm,20.0s,MS5.0
ESLA Sonseca Array 21.39 279 *e*P **P** **00 44 05.1 +0.6**
comp=Z,24nm,1.3s,mb4.4
GUD Guadarrama 21.41 282 P **P** **00 44 03.7 -0.9**
comp=Z,36nm,0.9s,mb4.7
GUD Guadarrama 21.41 282 P **P** **00 44 03.7 -1.0**
GUD pmax pmax
comp=Z,36nm,0.9s,mb4.7
GUD Guadarrama 21.41 282 P **P** **00 44 03.7 -1.0**
comp=Z,36nm,0.9s,mb4.7
EBAN Banos Encina 21.54 275 P **P** **00 44 08.1 +2.1**
comp=Z,81nm,0.8s,mb5.2
EBAN Banos Encina 21.54 275 P **P** **00 44 08.1 +2.1**
EBAN pmax pmax
comp=Z,81nm,0.8s,mb5.2
EBAN Banos Encina 21.54 275 P **P** **00 44 08.1 +2.1**
comp=Z,81nm,0.8s,mb5.2
HFS Hagfors 21.54 346 P **P** **00 44 05.5 -0.3**
comp=Z,6.4nm,0.5s,mb4.3,baz=156,slow=11,SNR=23
HFS Hagfors 21.54 346 P **P** **00 44 05.5 -0.3**
HFS pmax pmax
comp=Z,6.0nm,0.5s
HFS Hagfors 21.54 346 P **P** **00 44 05.5 -0.3**
comp=Z,6.0nm,0.5s,mb4.3
ECOG Cogollos-Vega 21.57 273 P **P** **00 44 07.9 +1.5**
comp=Z,7.5nm,0.6s,mb4.3
ECOG Cogollos-Vega 21.57 273 P **P** **00 44 07.9 +1.5**
ECOG pmax pmax
comp=Z,8.0nm,0.6s,mb4.3
ECOG Cogollos-Vega 21.57 273 P **P** **00 44 07.9 +1.5**
comp=Z,8.0nm,0.6s,mb4.3
MIB Mutribah 21.58 110 *e*P **P** **00 44 06.9 +0.3**
MIB AMb AMB 00 44 08.7
comp=Z,693nm,1.0s,mb6.0
EGUA Guajares 21.69 271 P **P** **00 44 09.0 +1.4**
comp=Z,210nm,0.9s,mb5.6
EGUA Guajares 21.69 271 P **P** **00 44 09.0 +1.4**
EGUA pmax pmax
comp=Z,210nm,0.9s,mb5.6
EGUA Guajares 21.69 271 P **P** **00 44 09.0 +1.4**
comp=Z,210nm,0.9s,mb5.6
CWF Charnwood Fore 21.69 316 *e*P **P** **00 44 05.6 -1.9**
CWF AMb AMB 00 44 15.0
comp=Z,63nm,1.9s,mb4.7
CWF AMS AMS 00 52 07.7
comp=Z,2µm,13.2s,MS4.8
CWF Charnwood Fore 21.69 316 *e*P **P** **00 44 05.6 -2.0**
comp=Z,63nm,1.9s,mb4.7
PAB San Pablo 21.71 279 *e*P **P** **00 44 07.9 +0.1**
comp=Z,65nm,1.1s,mb5.0
PAB LR LR
comp=Z,1µm,20.0s,MS4.3
PAB San Pablo 21.71 279 *e*P **P** **00 44 07.9 +0.1**
PAB pmax pmax
comp=Z,65nm,1.1s,mb5.0
PAB MLR MLR
comp=Z,1µm,20.0s,MS4.3
PAB San Pablo 21.71 279 *e*P **P** **00 44 07.9 +0.1**
comp=Z,1µm,20.0s

ERON Agron 21.82 272 P **P** **00 44 10.6 +1.5**
comp=Z,14nm,0.9s,mb4.4
ERON Agron 21.82 272 P **P** **00 44 10.6 +1.5**
comp=Z,14nm,0.9s,mb4.4
FINES FINESS Array B 21.93 3 P **P** **00 44 08.8 -1.2**
comp=Z,27nm,0.7s,mb4.8,baz=180,slow=6.1,SNR=39
FINES LR LR 00 53 44.0
comp=Z,7µm,18.3s,MS5.1,baz=186,slow=40
FINES FINESS Array B 21.93 3 P **P** **00 44 08.8 -1.2**
FINES pmax pmax
comp=Z,27nm,0.7s
FINES MLR MLR
comp=Z,7µm,18.3s
FINES FINESS Array B 21.93 3 P **P** **00 44 08.8 -1.2**
comp=Z,7µm,18.3s
OSL Oslo 21.99 342 *e*P **P** **00 44 10.8 +0.2**
OSL Oslo 21.99 342 *e*P **P** **00 44 10.9 +0.3**
SNR=34
UMR Umm Al-Rimmam 22.00 110 *e*P **P** **00 44 11.4 +0.5**
UMR AMb AMB 00 44 13.2
comp=Z,442nm,1.0s,mb5.8
KONO Kongsberg 22.01 341 *e*P **P** **00 44 11.9 +1.0**
KONO AMB AMB 00 44 16.0
comp=Z,87nm,1.4s,mb5.0
KONO *e*S **S** **00 48 15.2 +1.6**
KONO AMS AMS 00 54 09.3
comp=Z,3µm,9.2s
KONO Kongsberg 22.01 341 *e*P **P** **00 44 10.8 -0.1**
comp=Z,56nm,0.9s,mb5.0
KONO LR LR
comp=Z,2µm,21.0s,MS4.5
KONO Kongsberg 22.01 341 *e*P **P** **00 44 10.8 -0.1**
KONO pmax pmax
comp=Z,56nm,0.9s,mb5.0
KONO MLR MLR
comp=Z,2µm,21.0s,MS4.5
KONO Kongsberg 22.01 341 *e*P **P** **00 44 10.8 -0.1**
comp=Z,2µm,21.0s
EARI Arriondas 22.05 289 P **P** **00 44 12.5 +1.1**
comp=Z,67nm,1.4s,mb4.9
EARI Arriondas 22.05 289 P **P** **00 44 12.5 +1.1**
comp=Z,67nm,1.4s,mb4.9
KBI1 Birley Grange 22.05 317 *e*P **P** **00 44 09.3 -2.1**
KBI1 Birley Grange 22.05 317 *e*P **P** **00 44 09.3 -2.1**
ELOJ Sierra Loja 22.06 273 P **P** **00 44 11.0 -0.6**
comp=Z,1.5nm,0.5s,mb3.7
ELOJ Sierra Loja 22.06 273 P **P** **00 44 11.0 -0.6**
HGH Gray Hill 22.07 312 *e*P **P** **00 44 10.9 -0.6**
HGH Gray Hill 22.07 312 *e*P **P** **00 44 10.9 -0.6**
EADA Adamuz 22.14 275 P **P** **00 44 11.9 -0.6**
comp=Z,125nm,1.5s,mb5.1
EADA Adamuz 22.14 275 P **P** **00 44 11.9 -0.6**
comp=Z,125nm,1.5s,mb5.1
KBD Kabd 22.19 111 *e*P **P** **00 44 13.2 +0.2**
KBD AMb AMB 00 44 19.9
comp=Z,99nm,1.8s,mb5.0
RDF Al-Radifah 22.23 111 *e*P **P** **00 44 13.9 +0.4**
RDF AMb AMB 00 44 18.6
comp=Z,174nm,2.1s,mb5.1
DYA Yadsworthy 22.31 308 *e*P **P** **00 44 13.1 -1.1**
DYA AMb AMB 00 44 19.1
comp=Z,95nm,1.6s,mb5.0
DYA AMS AMS 00 54 13.7
comp=Z,5µm,16.6s,MS5.0
DYA Yadsworthy 22.31 308 *e*P **P** **00 44 13.1 -1.1**
comp=Z,95nm,1.6s,mb5.0
MCH1 Michaelchurch 22.32 313 *e*P **P** **00 44 12.7 -1.5**
MCH1 AMb AMB 00 44 18.8
comp=Z,69nm,1.8s,mb4.8
MCH1 AMS AMS 00 54 07.7
comp=Z,4µm,10.3s,MS5.1
MCH1 Michaelchurch 22.32 313 *e*P **P** **00 44 12.7 -1.5**
comp=Z,69nm,1.8s,mb4.8
HEX Exmoor 22.44 310 *e*P **P** **00 44 14.3 -1.2**
HEX Exmoor 22.44 310 *e*P **P** **00 44 14.3 -1.2**
HPK Haverah Park 22.44 318 *e*P **P** **00 44 13.6 -1.9**
HPK AMb AMB 00 44 20.8
comp=Z,70nm,2.4s,mb4.7
HPK AMS AMS 00 54 48.7
comp=Z,3µm,12.0s,MS4.9
HPK Haverah Park 22.44 318 *e*P **P** **00 44 13.6 -1.9**
comp=Z,70nm,2.4s,mb4.7
HTR Trewern Hill 22.50 313 *e*P **P** **00 44 15.5 -0.7**
HTR Trewern Hill 22.50 313 *e*P **P** **00 44 15.5 -0.7**
KAF Kangasniemi 22.61 3 *e*P **P** **00 44 11.8 -5.4**
comp=Z,2.0nm,0.4s,mb3.9
KAF Kangasniemi 22.61 3 *e*P **P** **00 44 11.8 -5.4**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb3.9
KAF Kangasniemi 22.61 3 *e*p **P** **00 44 11.8 -5.4**
comp=Z,2.0nm,0.4s,mb3.9
EMIJ Mijas 22.70 271 P **P** **00 44 19.1 +0.7**
comp=Z,70nm,1.1s,mb5.0
EMIJ Mijas 22.70 271 P **P** **00 44 19.1 +0.7**
comp=Z,70nm,1.1s,mb5.0
NAO01 NORSAR Array S 22.76 344 *e*P **P** **00 44 18.9 0.0**
comp=Z,26nm,0.7s,mb4.8
NAO01 NORSAR Array S 22.76 344 *e*P **P** **00 44 18.9 +0.1**
comp=Z,26nm,0.7s,mb4.8
ECAB El Cabril 22.81 276 P **P** **00 44 19.9 +0.3**
comp=Z,308nm,1.6s,mb5.5
ECAB El Cabril 22.81 276 P **P** **00 44 19.9 +0.3**
comp=Z,308nm,1.6s,mb5.5
HTL Hartland 22.82 309 *e*P **P** **00 44 19.1 -0.4**
HTL AMb AMB 00 44 22.6
comp=Z,76nm,1.5s,mb4.9
HTL AMS AMS 00 54 42.5
comp=Z,6µm,16.4s,MS5.1
TAM Tamanrasset 22.86 228 *e*P **P** **00 44 22.0 +1.8**
comp=Z,61nm,1.1s,mb5.0
TAM LR LR
comp=Z,2µm,20.0s,MS4.7
TAM Tamanrasset 22.86 228 *e*P **P** **00 44 22.0 +1.8**
TAM pmax pmax
comp=Z,61nm,1.1s,mb4.9
TAM MLR MLR
comp=Z,2µm,20.0s,MS4.7
TAM Tamanrasset 22.86 228 *e*P **P** **00 44 22.0 +1.8**
comp=Z,2µm,20.0s
NB2 NORSAR Subarra 22.86 344 P **P** **00 44 19.7 -0.2**
comp=Z,50nm,0.9s,mb5.0,SNR=5.7
NOA NORSAR Array B 22.86 344 P **P** **00 44 19.4 -0.6**
comp=Z,5.7nm,0.7s,mb4.1,baz=23,slow=21,SNR=29
NOA LR LR 00 53 41.7
comp=Z,1µm,19.9s,MS4.3,baz=155,slow=38
NOA NORSAR Array B 22.86 344 P **P** **00 44 19.4 -0.5**
NOA pmax pmax
comp=Z,6.0nm,0.7s
NOA MLR MLR
comp=Z,1µm,19.9s
NOA NORSAR Array B 22.86 344 P **P** **00 44 19.4 -0.5**
comp=Z,1µm,19.9s
EPLA Plasencia 22.95 281 P **P** **00 44 20.2 -0.8**
comp=Z,65nm,1.3s,mb4.9
EPLA Plasencia 22.95 281 P **P** **00 44 20.2 -0.8**
EPLA pmax pmax
comp=Z,65nm,1.3s,mb4.9
EPLA Plasencia 22.95 281 P **P** **00 44 20.2 -0.8**
comp=Z,65nm,1.3s,mb4.9
CCA1 Carmenellis 23.03 307 *e*P **P** **00 44 20.4 -1.4**
CCA1 AMb AMB 00 44 23.9
comp=Z,139nm,1.7s,mb5.1
CCA1 AMS AMS 00 54 43.8
comp=Z,4µm,18.8s,MS4.9
XAL Allendale 23.19 320 *e*P **P** **00 44 20.6 -2.9**
ECAL Calabor 23.23 286 P **P** **00 44 23.0 -1.0**
comp=Z,66nm,1.7s,mb4.8
ECAL Calabor 23.23 286 P **P** **00 44 23.0 -1.0**
comp=Z,66nm,1.7s,mb4.8
PBRG Braganca 23.25 285 *e*P **P** **00 44 24.8 +0.6**
comp=Z,104nm,1.8s,mb5.0
PBRG Braganca 23.25 285 *e*P **P** **00 44 24.8 +0.6**
comp=Z,104nm,1.8s,mb5.0
EJIF Jimena Fronter 23.27 272 P **P** **00 44 23.1 -1.3**
comp=Z,48nm,1.4s,mb4.7
EJIF Jimena Fronter 23.27 272 P **P** **00 44 23.1 -1.3**
EJIF pmax pmax
comp=Z,48nm,1.4s,mb4.7
EJIF Jimena Fronter 23.27 272 P **P** **00 44 23.1 -1.3**
comp=Z,48nm,1.4s,mb4.7
WPM1 Penmaenmawr 23.33 315 *e*P **P** **00 44 22.9 -2.1**
KLMR Klimovskoe 23.41 19 *d*/P **P** **00 44 24.6 -1.1**
KLMR pmax pmax
comp=Z,440nm,9.6s
KLMR pmax pmax
comp=Z,297nm,1.4s,mb5.5
KLMR MLR MLR

comp=Z,5µm,14.0s,MS5.1
KLMR Klimovskoe 23.41 19 *i*P **P** **00 44 24.6 -1.1**
comp=Z,5µm,14.0s
ESPR Espera 23.45 273 P **P** **00 44 26.0 -0.4**
comp=Z,33nm,1.3s,mb4.6
ESPR Espera 23.45 273 P **P** **00 44 26.0 -0.3**
comp=Z,33nm,1.3s,mb4.6
EPON Pontenova 23.46 289 P **P** **00 44 25.1 -1.3**
comp=Z,153nm,1.5s,mb5.2
EPON Pontenova 23.46 289 P **P** **00 44 25.1 -1.3**
comp=Z,153nm,1.5s,mb5.2
ERUA La Rua 23.50 287 P **P** **00 44 26.1 -0.8**
comp=Z,74nm,1.6s,mb4.9
ERUA La Rua 23.50 287 P **P** **00 44 26.1 -0.7**
ERUA pmax pmax
comp=Z,74nm,1.6s,mb4.9
ERUA La Rua 23.50 287 P **P** **00 44 26.1 -0.7**
comp=Z,74nm,1.6s,mb4.9
MVO Moncorvo 23.52 284 *e*P **P** **00 44 27.6 +0.5**
comp=Z,113nm,1.7s,mb5.0
MVO *e*S **S** **00 48 43.7 +3.1**
MVO Moncorvo 23.52 284 P **P** **00 44 26.3 -0.8**
MVO Moncorvo 23.52 284 *e*P **P** **00 44 27.6 +0.5**
comp=Z,113nm,1.7s,mb5.0
MVO *e*S **S** **00 48 43.7 +3.1**
WLF1 Llynfaes 23.61 315 AMS AMS 00 53 19.7
comp=Z,7µm,12.3s,MS5.3
WLF1 Llynfaes 23.61 315 AMS AMS 00 53 19.7
comp=Z,7µm,12.3s
XDE Dent Fell 23.67 318 *e*P **P** **00 44 26.6 -1.7**
JOF Joensuu 23.80 8 *e*P **P** **00 44 28.9 -0.5**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb3.9
JOF Joensuu 23.80 8 *e*p **P** **00 44 28.9 -0.5**
comp=Z,1.6nm,0.4s,mb3.8
JOF Joensuu 23.80 8 *e*P **P** **00 44 28.9 -0.5**
comp=Z,2.0nm,0.4s,mb3.9
ECK Cauldkaine Hil 23.81 320 *e*P **P** **00 44 28.2 -1.4**
BER Bergen 23.82 337 *e*S **S** **00 48 46.8 +1.7**
BER *e*ScP ScP 00 51 57.1 +6.2
BER AMS AMS 00 55 39.9
comp=Z,3µm,15.9s,MS4.9
EMIN Mina Concepcio 23.85 275 P **P** **00 44 29.8 -0.3**
comp=Z,38nm,1.2s,mb4.7
EMIN Mina Concepcio 23.85 275 P **P** **00 44 29.8 -0.3**
comp=Z,38nm,1.2s,mb4.7
MDT Midelt 23.88 262 P **P** **00 44 30.8 +0.3**
comp=Z,24nm,0.9s,mb4.6,baz=89,slow=13,SNR=12
MDT Midelt 23.88 262 P **P** **00 44 30.8 +0.3**
EBAD Badajoz 23.89 278 P **P** **00 44 29.6 -0.9**
comp=Z,45nm,1.4s,mb4.7
EBAD Badajoz 23.89 278 P **P** **00 44 29.6 -0.9**
comp=Z,45nm,1.4s,mb4.7
EKA Eskdalemuir Ar 23.90 320 P **P** **00 44 29.2 -1.2**
comp=Z,11nm,0.7s,mb4.4,baz=116,slow=9.5,SNR=30
EKA Eskdalemuir Ar 23.90 320 P **P** **00 44 29.2 -1.2**
EKA pmax pmax
comp=Z,11nm,0.7s
EKA Eskdalemuir Ar 23.90 320 P **P** **00 44 29.2 -1.2**
comp=Z,11nm,0.7s,mb4.4
ESK Eskdalemuir 23.91 320 P **P** **00 44 29.4 -1.1**
comp=Z,219nm,0.9s,mb5.6,SNR=7.7
ESK Eskdalemuir 23.91 320 *e*P **P** **00 44 28.3 -2.3**
ESK AMb AMB 00 44 36.0
comp=Z,80nm,2.1s,mb4.8
ESK AMS AMS 00 55 51.9
comp=Z,3µm,13.7s,MS5.0
ESK Eskdalemuir 23.91 320 *e*P **P** **00 44 29.5 -1.1**
comp=Z,121nm,1.4s,mb5.1
ESK LR LR
comp=Z,2µm,20.0s,MS4.6
ESK Eskdalemuir 23.91 320 *i*P **P** **00 44 31.6 +1.1**
ESK Eskdalemuir 23.91 320 *e*P **P** **00 44 29.5 -1.0**
comp=Z,121nm,1.4s,mb5.1
MTE Manteigas 24.01 282 *e*P **P** **00 44 33.0 +1.4**
comp=Z,87nm,1.4s,mb5.0
MTE *e*S **S** **00 48 53.4 +4.9**
MTE Manteigas 24.01 282 *e*P **P** **00 44 32.3 +0.8**
comp=Z,175nm,1.6s,mb5.2
MTE LR LR
comp=Z,1µm,20.0s,MS4.4
MTE Manteigas 24.01 282 *e*P **P** **00 44 32.3 +0.7**
comp=Z,175nm,1.6s,mb5.2
PBAR Barrancos 24.03 277 *e*P **P** **00 44 33.5 +1.7**
comp=Z,57nm,2.2s,mb4.6
PBAR *e*S **S** **00 48 49.0 0.0**
PBAR Barrancos 24.03 277 *e*P **P** **00 44 33.5 +1.7**
comp=Z,57nm,2.2s,mb4.6
PBAR *e*S **S** **00 48 49.0 0.0**
PCBR Castelo Branco 24.04 281 *e*P **P** **00 44 32.3 +0.4**
comp=Z,82nm,1.6s,mb4.9
PCBR Castelo Branco 24.04 281 *e*P **P** **00 44 32.3 +0.4**
comp=Z,82nm,1.6s,mb4.9
PMRV Marv??o 24.05 280 *e*P **P** **00 44 35.2 +3.3**
comp=Z,62nm,1.3s,mb4.9
PMRV *e*S **S** **00 48 50.1 +0.9**
PMRV Marv??o 24.05 280 *e*P **P** **00 44 35.2 +3.3**
comp=Z,62nm,1.3s,mb4.9
PMRV *e*S **S** **00 48 50.1 +0.9**
EDI Edinburgh 24.21 321 *e*P **P** **00 44 32.0 -1.2**
EDI AMb AMB 00 44 34.7
comp=Z,76nm,2.3s,mb4.7
EDI AMS AMS 00 56 07.1
comp=Z,4µm,12.8s,MS5.1
PESTR Estremoz 24.31 278 *e*P **P** **00 44 37.4 +3.1**
comp=Z,45nm,1.4s,mb4.7
PESTR *e*S **S** **00 48 54.1 +0.7**
PESTR Estremoz 24.31 278 *e*P **P** **00 44 37.4 +3.1**
comp=Z,45nm,1.4s,mb4.7
PESTR *e*S **S** **00 48 54.1 +0.7**
GAL1 Galloway 24.46 318 AMS AMS 00 56 07.8
comp=Z,2µm,13.3s,MS4.8
STS Santiago 24.51 288 P **P** **00 44 35.1 -0.9**
STS Santiago 24.51 288 P **P** **00 44 35.2 -0.9**
EBH Black Hill 24.54 322 *e*P **P** **00 44 35.2 -1.0**
EVO Evora 24.70 278 *e*P **P** **00 44 37.2 -0.7**
comp=Z,59nm,1.3s,mb4.7
EVO *e*MLR MLR
comp=Z,2µm,22.8s,MS4.2
PBEJ Beja 24.70 277 *e*P **P** **00 44 39.6 +1.7**
comp=Z,85nm,1.5s,mb5.0
PBEJ Beja 24.70 277 *e*P **P** **00 44 39.6 +1.7**
comp=Z,85nm,1.5s,mb5.0
PVAQ Vaqueiros 24.74 275 *e*P **P** **00 44 39.8 +1.5**
comp=Z,81nm,1.3s,mb5.1
PVAQ *e*S **S** **00 49 03.7 +3.3**
PVAQ Vaqueiros 24.74 275 *e*P **P** **00 44 39.8 +1.5**
comp=Z,81nm,1.3s,mb5.1
PVAQ *e*S **S** **00 49 03.7 +3.3**
EVOP Sao Brissos 24.79 278 *e*P **P** **00 44 41.3 +2.6**
EVOP *e*S **S** **00 49 05.3 +4.2**
EVOP *e*S **S** **00 49 05.6 +4.5**
EVOP *e*S **S** **00 49 06.7 +5.6**
EVOP AMb AMB 00 49 36.3
comp=E,103nm,0.8s
EVOP Sao Brissos 24.79 278 *e*P **P** **00 44 41.2 +2.5**
PGBU Glenifferbraes 24.79 320 *e*P **P** **00 44 37.4 -1.2**
PGBU AMb AMB 00 44 44.0
comp=Z,71nm,2.8s,mb4.7
PGBU AMS AMS 00 56 21.7
comp=Z,2µm,10.5s,MS5.0
DLF Lyons Farm 24.80 314 *e*P **P** **00 44 42.0 +3.4**
MME1 Meikle Cairn 24.86 324 *e*P **P** **00 44 38.3 -0.8**
FOO Floro 24.88 339 *e*S **S** **00 49 03.3 +1.2**
FOO AMS AMS 00 55 56.0
comp=Z,2µm,13.1s,MS4.9
EAB Aberfoyle 24.91 321 *e*P **P** **00 44 39.4 -0.2**
PCVE Castro Verde 24.93 276 *e*P **P** **00 44 41.9 +1.9**
comp=Z,86nm,1.9s,mb5.0
PCVE *e*S **S** **00 49 07.3 +3.9**
PCVE Castro Verde 24.93 276 *e*P **P** **00 44 41.9 +1.9**
comp=Z,86nm,1.9s,mb5.0
PCVE *e*S **S** **00 49 07.3 +3.9**
PBDV Barranco-do-Ve 24.95 275 *e*P **P** **00 44 40.5 +0.3**
comp=Z,136nm,1.5s,mb5.3
PBDV *e*S **S** **00 49 09.1 +5.4**
PBDV Barranco-do-Ve 24.95 275 *e*P **P** **00 44 40.5 +0.3**
comp=Z,136nm,1.5s,mb5.3
PBDV *e*S **S** **00 49 09.1 +5.4**
MESJ Messejana 25.02 276 *e*P **P** **00 44 43.4 +2.6**
MESJ AMb AMB 00 45 05.6
comp=Z,96nm,1.2s,mb5.2
MESJ *e*S **S** **00 49 08.6 +3.7**
MESJ *e*S **S** **00 49 08.8 +3.9**
MESJ Messejana 25.02 276 *e*P **P** **00 44 43.4 +2.6**
comp=Z,96nm,1.2s,mb5.2

MESJ eS **S** **00 49 08.6 +3.8**
MESJ Messejana 25.02 276 eP **P** **00 44 43.3 +2.5**
MESJ eS **S** **00 49 08.7 +3.9**
MESJ Messejana 25.02 276 eP **P** **00 44 43.4 +2.6**
comp=Z,96nm,1.2s,mb5.2
MESJ eS **S** **00 49 08.6 +3.8**
MCD Coleburn Disti 25.14 325 eP **P** **00 44 40.5 -1.2**
MORF Marmelete 25.48 275 eS **S** **00 49 17.2 +4.9**
MORF Marmelete 25.48 275 eP **P** **00 44 47.4 +2.4**
MORF Marmelete 25.48 275 eS **S** **00 49 17.2 +4.9**
LIS Lisbon 25.53 279 eP **P** **00 44 48.3 +2.8**
LIS AMb AMB 00 45 02.8
comp=Z,172nm,1.3s,mb5.4
LIS eS **S** **00 49 17.0 +4.0**
LIS Lisbon 25.53 279 eP **P** **00 44 48.3 +2.9**
comp=Z,172nm,1.3s,mb5.4
LIS eS **S** **00 49 17.0 +4.0**
LIS Lisbon 25.53 279 eP **P** **00 44 48.3 +2.8**
LIS eS **S** **00 49 17.0 +4.0**
LIS Lisbon 25.53 279 eP **P** **00 44 48.3 +2.9**
comp=Z,172nm,1.3s,mb5.4
LIS eS **S** **00 49 17.0 +4.0**
PMAFR Mafra 25.58 279 eP **P** **00 44 50.1 +4.2**
PMAFR eS **S** **00 49 16.9 +3.1**
PMAFR Mafra 25.58 279 eP **P** **00 44 50.1 +4.2**
PMAFR eS **S** **00 49 16.9 +3.1**
PFVI Vila Bisbo 25.67 275 eP **P** **00 44 49.6 +2.9**
PFVI eS **S** **00 49 19.7 +4.6**
PFVI Vila Bisbo 25.67 275 eP **P** **00 44 49.6 +2.9**
PFVI eS **S** **00 49 19.7 +4.6**
LRW Lerwick 25.86 331 AMS AMS 01 00 18.7
comp=Z,2μm,14.5s,MS4.8
NSS Namsos 25.94 348 eP **P** **00 44 48.7 -0.2**
NSS eS **S** **00 49 19.7 +0.8**
NSS AMS AMS 00 56 30.2
comp=Z,6μm,11.7s,MS5.3
KAR1 Arisaig 25.98 322 eP **P** **00 44 49.0 -0.4**
KPL Plockton 26.11 323 AMS AMS 00 57 24.9
comp=Z,4μm,13.2s,MS5.2
AKTK Aktyubinsk 26.25 54 P **P** **00 44 52.3 +0.4**
AKTK LR LR 00 57 21.5
AKTK Aktyubinsk 26.25 54 P **P** **00 44 52.3 +0.4**
AKTO Aktyubinsk 26.25 54 P **P** **00 44 52.3 +0.4**
comp=Z,2.3nm,0.5s,mb4.0,baz=261,slow=9.6,SNR=26
AKTO LR LR 00 57 21.5
comp=Z,2μm,19.5s,MS4.6,baz=123,slow=41
AKTO Aktyubinsk 26.25 54 P **P** **00 44 52.3 +0.4**
AKTO pmax pmax
comp=Z,2.0nm,0.5s,mb3.9
AKTO MLR MLR
comp=Z,2μm,19.5s,MS4.6
ABKT Ailbek 26.68 83 P **P** **00 44 57.8 +1.9**
comp=Z,164nm,1.3s,mb5.4,SNR=10
AB31 Akbulak array 27.30 57 *i* P **P** **00 45 01.8 +0.5**
AB31 pmax pmax
comp=Z,23nm,1.4s,mb4.5
ABKAR Akbulak array 27.30 57 *e*P **P** **00 45 01.0 -0.3**
comp=Z,13nm,0.9s,mb4.5
ABKAR Akbulak array 27.30 57 *e*P **P** **00 45 01.0 -0.3**
comp=Z,13nm,0.9s,mb4.5
ARU Arti 28.28 42 *e*P **P** **00 45 10.0 0.0**
comp=Z,34nm,1.2s,mb4.9
ARU LR LR
comp=Z,2μm,22.0s,MS4.7
ARU Arti 28.28 42*d i*P **P** **00 45 10.1 +0.1**
ARU *e* 00 45 59.4
ARU PPP 00 46 06.8
ARU 00 48 21.3
ARU S **S** **00 49 58.2 +2.2**
ARU SS 00 51 19.2
ARU pmax pmax
comp=Z,56nm,2.5s,mb4.8
ARU MLR MLR
comp=Z,3μm,16.0s,MS4.9
ARU Arti 28.28 42 *e*P **P** **00 45 10.0 0.0**
comp=Z,34nm,1.2s,mb4.9
ARU Arti 28.28 42 PcP PcP 00 48 21.3 -1.5
ARU S **S** **00 49 58.2 +2.2**
APA Apatity 28.54 8⇑*e*P **P** **00 45 17.0 +4.9**
APA eS **S** **00 50 03.0 +3.2**
APA pmax pmax
comp=Z,300nm,4.6s
APA pmax pmax
comp=Z,13nm,1.0s,mb4.6
APA MLR MLR
comp=Z,9μm,13.0s,MS5.5
SOKR Solikamsk 28.79 35*d i*P **P** **00 45 20.9 +6.5**
SOKR S **S** **00 50 02.5 -1.4**
SOKR pmax pmax
comp=Z,60nm,1.5s,mb5.1
SOKR MLR MLR
comp=Z,3μm,16.0s,MS4.9
KTK1 Kautokeino 29.49 360 AMS AMS 00 57 54.7
comp=Z,6μm,13.9s,MS5.4
SVE Sverdlovsk 29.50 42⇑*e*P **P** **00 45 21.2 +0.4**
SVE eS **S** **00 50 17.3 +2.2**
SVE *e*SS SS 00 51 47.7 -32
SVE pmax pmax
comp=Z,52nm,1.4s,mb5.1
SVE MLR MLR
comp=Z,3μm,14.0s,MS5.1
ARCES ARCESS Array B 30.03 1 P **P** **00 45 24.2 -1.1**
comp=Z,12nm,1.0s,mb4.6,baz=195,slow=8.8,SNR=10
ARCES LR LR 00 58 33.5
comp=Z,6μm,18.2s,MS5.3,baz=359,slow=39
ARCES ARCESS Array B 30.03 1 P **P** **00 45 24.2 -1.1**
ARCES pmax pmax
comp=Z,12nm,1.0s
ARCES MLR MLR
comp=Z,6μm,18.2s
ARCES ARCESS Array B 30.03 1 P **P** **00 45 24.2 -1.1**
TRO Tromso 30.23 357 eS **S** **00 50 27.2 +0.9**
TRO AMS AMS 00 58 32.9
comp=Z,3μm,14.2s,MS5.1
KEV Kevo 30.28 2 *e*P **P** **00 45 25.3 -2.3**
comp=Z,3.9nm,0.8s,mb4.2
KEV LR LR
comp=Z,6μm,22.0s,MS5.2
KEV Kevo 30.28 2 *e*p **P** **00 45 25.3 -2.3**
comp=Z,3.9nm,0.8s,mb4.2
KEV Kevo 30.28 2 *e*P **P** **00 45 25.3 -2.3**
comp=Z,3.9nm,0.8s,mb4.2
ARQ Araqi 32.01 111 P **P** **00 45 44.7 +1.4**
SNR=6.9
ARQ Araqi 32.01 111 P **P** **00 45 44.7 +1.3**
SNR=6.9
ZRNK Zerenda 33.38 51 *i* P **P** **00 45 55.6 +0.6**
ZRNK pmax pmax
comp=Z,86nm,1.4s,mb5.5
BRVK Borovoye 34.16 51 P **P** **00 46 03.2 +1.4**
comp=Z,209nm,1.3s,mb5.9,SNR=12
BRVK Borovoye 34.16 51 *e*P **P** **00 46 03.1 +1.3**
comp=Z,226nm,1.9s,mb5.8
BRVK LR LR
comp=Z,811nm,19.0s,MS4.5
BRVK Borovoye 34.16 51*d i*P **P** **00 46 03.0 +1.2**
BRVK pmax pmax
comp=Z,34nm,1.0s,mb5.2
BRVK MLR MLR
comp=Z,1μm,19.0s,MS4.6
BRVK Borovoye 34.16 51 *e*P **P** **00 46 03.1 +1.3**
comp=Z,226nm,1.9s,mb5.8
BVA0 Borovoye Array 34.22 51 *i* P **P** **00 46 03.4 +1.1**
BVA0 pmax pmax
comp=Z,19nm,2.1s,mb4.7
BVAR Borovoye Array 34.22 51 P **P** **00 46 03.1 +0.9**
comp=Z,12nm,0.9s,mb4.8,baz=257,slow=5.9,SNR=51
BVAR Borovoye Array 34.22 51 P **P** **00 46 03.1 +0.8**
BVAR pmax pmax
comp=Z,12nm,0.9s
BVAR Borovoye Array 34.22 51 P **P** **00 46 03.1 +0.8**
VOSK Vostochnaya 34.56 52 P **P** **00 46 05.9 +0.7**
VOSK pmax pmax
comp=Z,40nm,1.2s,mb5.2
KK31 Karatay Array 34.86 69 *i* P **P** **00 46 08.0 +0.1**
KK31 pmax pmax
comp=Z,45nm,1.6s,mb5.2
JMIC Jan Mayen 35.56 342 eS **S** **00 51 47.7 -1.3**
JMIC AMS AMS 01 02 56.6
comp=Z,1μm,15.0s,MS4.9
JMIC Jan Mayen 35.56 342 P **P** **00 46 14.9 +1.3**
comp=Z,12nm,0.7s,mb5.0,baz=166,slow=3.9,SNR=2.9
JMIC LR LR 00 59 49.3
comp=Z,460nm,19.8s,MS4.2,baz=312,slow=35
JMIC Jan Mayen 35.56 342 P **P** **00 46 14.9 +1.3**

KBL Kabul 36.12 83 *e*P **P** **00 46 20.6 +1.7**
comp=Z,7.5nm,0.6s,mb4.8
KBL Kabul 36.12 83 *e*P **P** **00 46 20.6 +1.7**
KBL pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
KBL Kabul 36.12 83 *e*P **P** **00 46 20.6 +1.7**
comp=Z,7.5nm,0.6s,mb4.8
EKS2 Erkin-Say 37.30 69 P **P** **00 46 30.6 +1.8**
SNR=16
EKS2 Erkin-Say 37.30 69 *e*P **P** **00 46 30.3 +1.5**
comp=Z,10.0nm,0.8s,mb4.7
EKS2 LR LR
comp=Z,1μm,20.0s,MS4.6
EKS2 Erkin-Say 37.30 69 *e*P **P** **00 46 30.3 +1.5**
comp=Z,10.0nm,0.8s,mb4.7
AML Almayashu 37.36 70 *e*P **P** **00 46 30.6 +1.2**
comp=Z,7.0nm,1.0s,mb4.5
AML *e*PP PP 00 47 56.3 +1.9
AML LR LR
comp=Z,673nm,20.0s,MS4.4
AML Almayashu 37.36 70 *e*P **P** **00 46 30.6 +1.3**
comp=Z,7.0nm,1.0s,mb4.5
USP Ospenovka 37.69 68 P **P** **00 46 33.1 +1.0**
SNR=7.0
AAK Ala-Archa 37.82 69 PFAKE 00 46 50.0 +17
AAK LR LR
comp=Z,906nm,19.0s,MS4.6
AAK Ala-Archa 37.82 69*d i*P **P** **00 46 34.9 +1.6**
AAK pmax pmax
comp=Z,8.0nm,1.7s,mb4.2
FRU Bishkek 37.86 68⇓*i*P **P** **00 46 36.0 +2.4**
FRU pmax pmax
comp=Z,200nm,2.0s,mb5.5
KZA Kyzart 38.49 69 P **P** **00 46 41.9 +3.0**
SNR=9.5
TKM2 Tokmak 2 38.55 68 P **P** **00 46 40.5 +1.1**
SNR=6.3
TKM2 Tokmak 2 38.55 68 *e*P **P** **00 46 40.4 +1.0**
comp=Z,4.1nm,1.1s,mb4.1
TKM2 Tokmak 2 38.55 68 *e*P **P** **00 46 40.4 +1.0**
TKM2 pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
TKM2 Tokmak 2 38.55 68 *e*P **P** **00 46 40.4 +1.0**
comp=Z,4.1nm,1.1s,mb4.1
SPITS Spitsbergen Ar 38.83 358 P **P** **00 46 41.9 +0.5**
comp=Z,3.6nm,0.9s,mb4.1,baz=181,slow=14,SNR=6.2
SPITS LR LR 01 04 22.5
comp=Z,2μm,18.1s,MS4.9,baz=145,slow=39
SPITS Spitsbergen Ar 38.83 358 P **P** **00 46 41.9 +0.6**
SPITS pmax pmax
comp=Z,4.0nm,0.9s
SPITS MLR MLR
comp=Z,2μm,18.1s
SPITS Spitsbergen Ar 38.83 358 P **P** **00 46 41.9 +0.6**
SCO Scoresbysund 38.85 337 *i* P **P** **00 46 41.5 -0.1**
SCO MLR MLR
comp=Z,900nm,17.0s,MS4.7
SCO Scoresbysund 38.85 337 *i* P **P** **00 46 41.5 -0.1**
SCO
comp=Z,900nm,17.0s
SCO Scoresbysund 38.85 337 *i* P **P** **00 46 41.5 -0.1**
ULHL Ulahol 39.17 69 P **P** **00 46 47.0 +2.4**
SNR=6.2
KURK Kurchatov 39.35 55 P **P** **00 46 46.5 +0.5**
comp=Z,223nm,1.0s,mb5.8,SNR=31
KURK Kurchatov 39.35 55 *e*P **P** **00 46 46.5 +0.6**
comp=Z,71nm,1.3s,mb5.2
KURK LR LR
comp=Z,1μm,19.0s,MS4.8
KURK Kurchatov 39.35 55*d i*P **P** **00 46 46.6 +0.6**
KURK pmax pmax
comp=Z,36nm,1.0s,mb5.1
KURK MLR MLR
comp=Z,1μm,19.0s,MS4.8
KURK Kurchatov 39.35 55 *e*P **P** **00 46 46.5 +0.5**
comp=Z,71nm,1.3s,mb5.2
KURK Kurchatov 39.35 55 ⇑P **P** **00 46 46.8 +0.8**
SNR=28
KSH Kashi 39.71 73 P **P** **00 46 49.2 0.0**
KSH *e*pP pP 00 46 53.5 +1.5
KSH *e*sP sP 00 46 56.3 +3.2
KSH *e*PP PP 00 48 23.9 +3.7
KSH *e*PcP PcP 00 48 57.8 +2.1
KSH *e*ScP ScP 00 52 44.5 -0.1
KSH *e*PcS PcS 00 52 46.2 +0.5
KSH *e*S **S** **00 52 49.8 -3.0**
KSH *e*ScS ScS 00 56 55.1 -2.0
KSH pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
KSH pmax pmax
comp=Z,210nm,3.1s
KSH LR LR
comp=N,1μm,16.7s,MS5.0
KSH LR LR
comp=E,780nm,13.5s,MS5.0
KSH LR LR
comp=Z,770nm,14.7s,MS4.7
KBS Kingsbay 39.75 356 *e*P **P** **00 46 49.2 +0.2**
KBS Kingsbay 39.75 356 *e*P **P** **00 46 49.8 +0.8**
comp=Z,53nm,1.5s,mb5.0
KBS LR LR
comp=Z,1μm,19.0s,MS4.8
KBS Kingsbay 39.75 356 *e*P **P** **00 46 49.8 +0.8**
KBS pmax pmax
comp=Z,53nm,1.5s,mb5.0
KBS MLR MLR
comp=Z,1μm,19.0s,MS4.8
KBS Kingsbay 39.75 356 *e*P **P** **00 46 49.8 +0.8**
comp=Z,53nm,1.5s,mb5.0
MBAR Mbarara 40.49 169 *e*P **P** **00 46 55.5 -0.3**
DAG Danmarks Havn 41.51 346 *e*P **P** **00 47 04.5 +0.9**
DAG pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
DAG Danmarks Havn 41.51 346 *i* P **P** **00 47 04.5 +0.9**
comp=Z,2.5nm,0.9s,mb3.8
DBIC Dimbokro 41.71 226 *e*P **P** **00 47 05.2 -0.7**
comp=Z,27nm,0.7s,mb5.0
DBIC LR LR
comp=Z,1μm,22.0s,MS4.7
DBIC Dimbokro 41.71 226 P **P** **00 47 05.6 -0.3**
comp=Z,20nm,0.7s,mb4.8,baz=24,slow=11,SNR=12
DBIC LR LR 01 05 05.8
comp=Z,831nm,20.6s,MS4.6,baz=18,slow=37
DBIC Dimbokro 41.71 226 *e*P **P** **00 47 05.2 -0.7**
DBIC pmax pmax
comp=Z,27nm,0.7s
DBIC MLR MLR
comp=Z,1μm,22.0s
DBIC Dimbokro 41.71 226 *e*P **P** **00 47 05.2 -0.7**
comp=Z,27nm,0.7s,mb5.0
NVS Novosibirsk 41.81 48⇓*i*P **P** **00 47 07.5 +1.2**
NVS *e* 00 48 40.5
NVS *e*S **S** **00 53 23.4 -0.3**
NVS pmax pmax
comp=Z,193nm,1.6s,mb5.5
NVS pmax pmax
comp=N,27nm,1.5s
NVS pmax pmax
comp=E,91nm,1.5s
NVS pmax pmax
comp=Z,65nm,1.7s,mb5.0
NVS pmax pmax
comp=E,73nm,1.8s
NVS smax
comp=N,47nm,2.5s
NVS smax
comp=E,32nm,2.1s
TIC Toumodi 41.82 226 *e*P **P** **00 47 10.2 +3.4**
comp=E,124nm,1.2s,mb5.4
TIC Toumodi 41.82 226 *e*P **P** **00 47 10.2 +3.4**
TIC pmax pmax
comp=Z,125nm,1.2s,mb5.4
KIC Kosan Boka 41.90 225 *e*P **P** **00 47 06.9 -0.6**
comp=Z,74nm,0.8s,mb5.4
KIC Kosan Boka 41.90 225 *e*P **P** **00 47 06.9 -0.6**
comp=Z,74nm,0.8s,mb5.4
LIC Lamto 42.17 226 *e*P **P** **00 47 09.2 -0.5**
comp=Z,174nm,0.7s,mb5.8
LIC Lamto 42.17 226 *e*P **P** **00 47 09.0 -0.7**
comp=Z,109nm,0.7s,mb5.3
LIC *e*MLR MLR
comp=Z,2μm,22.2s,MS4.6
LIC Lamto 42.17 226 *e*P **P** **00 47 09.0 -0.7**
comp=Z,54nm,0.7s,mb5.3
LIC LR LR
comp=Z,830nm,22.2s,MS4.6
LIC Lamto 42.17 226 *e*P **P** **00 47 09.0 -0.7**
comp=Z,54nm,0.7s,mb5.3
KMBO Kilima Mbogo 42.34 160 P **P** **00 47 13.0 +2.0**
comp=Z,3.8nm,0.9s,mb4.0,baz=179,slow=24,SNR=8.5
KMBO Kilima Mbogo 42.34 160 P **P** **00 47 13.0 +2.0**
KMBO pmax pmax
comp=Z,4.0nm,0.9s
KMBO Kilima Mbogo 42.34 160 P **P** **00 47 13.0 +2.0**
MK31 Makanchi Array 42.35 60 *e*P **P** **00 47 11.6 +0.8**
MK31 Makanchi Array 42.35 60 *i* P **P** **00 47 11.4 +0.6**
MK31 pmax pmax
comp=Z,28nm,0.9s,mb4.9
MK31 Makanchi Array 42.35 60 *e*P **P** **00 47 11.6 +0.8**
MKAR Makanchi Array 42.35 60 P **P** **00 47 11.5 +0.7**
comp=Z,11nm,0.6s,mb4.7,baz=281,slow=7.0,SNR=64
MKAR LR LR 01 07 44.3
comp=Z,704nm,18.7s,MS4.6,baz=268,slow=40
MKAR Makanchi Array 42.35 60 P **P** **00 47 11.5 +0.7**
MKAR pmax pmax
comp=Z,11nm,0.6s
MKAR MLR MLR
comp=Z,704nm,18.7s
ZALV Zalesovo Beam 42.81 50 P **P** **00 47 15.0 +0.5**
comp=Z,55nm,0.7s,mb5.4,baz=275,slow=8.4,SNR=208
ZALV LR LR 01 07 24.7
comp=Z,672nm,18.9s,MS4.6,baz=1.0,slow=40
ZALV Zalesovo Beam 42.81 50 P **P** **00 47 15.0 +0.6**
ZALV pmax pmax
comp=Z,55nm,0.7s,mb5.4
ZALV MLR MLR
comp=Z,672nm,18.9s,MS4.6
ZALV Zalesovo Beam 42.81 50 P **P** **00 47 15.0 +0.6**
SUMG Summit 44.49 338 *e*P **P** **00 47 29.1 +1.4**
comp=Z,21nm,0.9s,mb4.9
SUMG Summit 44.49 338 *i* P **P** **00 47 28.9 +1.2**
SUMG
comp=Z,880nm,16.0s
SUMG Summit 44.49 338 *i* P **P** **00 47 28.9 +1.2**
NDI New Delhi 44.91 87 *e*PKP **P** **00 47 30.0 -1.7**
WMQ Urumqi 46.80 63 P **P** **00 47 47.9 +1.5**
WMQ pP pP 00 47 52.4 +3.1
WMQ sP sP 00 47 54.9 +4.5
WMQ PcP PcP 00 49 21.4 +2.0
WMQ PP PP 00 49 37.7 +1.5
WMQ ScP ScP 00 53 13.2 0.0
WMQ S **S** **00 54 36.9 +0.3**
WMQ ScS ScS 00 57 39.6 -1.6
WMQ SS SS 00 57 56.0 -6.7
WMQ pmax pmax
comp=Z,41nm,1.2s,mb5.2
WMQ pmax pmax
comp=Z,370nm,4.0s
WMQ LR LR
comp=N,810nm,18.9s,MS4.8
WMQ LR LR
comp=E,590nm,17.0s,MS4.8
WMQ LR LR
comp=Z,690nm,17.6s,MS4.7
KOLN Koldanda 50.27 84 *e*P **P** **00 48 13.6 +0.3**
comp=Z,28nm,0.8s,mb5.4
GKN Gorkha 50.95 84 *e*P **P** **00 48 18.5 0.0**
comp=Z,102nm,1.2s,mb5.6
DMN Daman 51.51 84 *e*P **P** **00 48 23.1 +0.4**
comp=Z,116nm,1.2s,mb5.7
KKN Kakani 51.55 83 *e*P **P** **00 48 23.1 +0.1**
comp=Z,48nm,0.9s,mb5.4
PKIN Phulchoki 51.75 84 *e*P **P** **00 48 24.3 -0.2**
comp=Z,72nm,1.3s,mb5.4
PKI Pulchoki 51.76 84 *e*P **P** **00 48 24.8 +0.3**
comp=Z,46nm,1.0s,mb5.3
GUN Gumba 51.95 83 *e*P **P** **00 48 26.6 +0.6**
comp=Z,52nm,0.9s,mb5.5
MOY Mondy 52.87 50 *e*P **P** **00 48 34.5 +2.1**
MOY pmax pmax
comp=Z,70nm,2.9s,mb5.1
RAMN Ramite 52.99 84 *e*P **P** **00 48 33.2 -0.5**
comp=Z,171nm,1.2s,mb5.9
TAPN Taplejung 53.64 83 *e*P **P** **00 48 38.8 +0.4**
comp=Z,162nm,1.3s,mb5.8
ODAN Odare 53.64 83 *e*P **P** **00 48 37.9 -0.6**
comp=Z,155nm,1.6s,mb5.7
TLY Talaya 54.41 49 PFAKE 00 49 00.0 +16
TLY LR LR
comp=Z,1μm,21.0s,MS4.9
TLY Talaya 54.41 49*d i*P **P** **00 48 45.4 +1.7**
TLY *e* 00 50 44.2
TLY pmax pmax
comp=Z,49nm,1.7s,mb5.2
TLY MLR MLR
comp=Z,1μm,15.0s,MS5.1
IRK Irkutsk 54.58 48 *e*P **P** **00 48 44.9 0.0**
IRK pmax pmax
comp=Z,69nm,2.3s,mb5.3
ZAK Zakamensk 54.67 50⇓*i*P **P** **00 48 47.0 +1.4**
ZAK pmax pmax
comp=Z,8.0nm,1.7s,mb4.5
LSZ Lusaka 54.72 175 *e*P **P** **00 48 47.3 +1.0**
comp=Z,14nm,1.3s,mb4.8
LSZ LR LR
comp=Z,648nm,19.0s,MS4.7
LSZ Lusaka 54.72 175 *e*P **P** **00 48 47.3 +1.0**
LSZ pmax pmax
comp=Z,14nm,1.3s,mb4.8
LSZ MLR MLR
comp=Z,648nm,19.0s,MS4.7
LSZ Lusaka 54.72 175 *e*P **P** **00 48 47.3 +1.0**
comp=Z,14nm,1.3s,mb4.8
LSA Lhasa 55.09 78 P **P** **00 48 50.4 +1.4**
LSA S **S** **00 56 32.1 +0.4**
LSA pmax pmax
comp=Z,40nm,1.0s,mb5.4
LSA LR LR
comp=N,390nm,18.0s,MS4.7
LSA LR LR
comp=E,480nm,20.0s,MS4.7
LSA LR LR
comp=Z,560nm,18.0s,MS4.7
LSA Lhasa 55.09 78 *e*P **P** **00 48 50.5 +1.5**
comp=Z,16nm,0.6s,mb5.2
LSA LR LR
comp=Z,581nm,20.0s,MS4.7
LSA Lhasa 55.09 78 *e*P **P** **00 48 50.5 +1.5**
LSA pmax pmax
comp=Z,16nm,0.6s,mb5.2
LSA MLR MLR
comp=Z,581nm,20.0s,MS4.7
LSA Lhasa 55.09 78 *e*P **P** **00 48 50.5 +1.5**
comp=Z,16nm,0.6s,mb5.2
GTA Gaotai 56.87 64 ⇓P **P** **00 49 02.4 +0.8**
GTA pP pP 00 49 06.4 +1.9
GTA sP sP 00 49 08.5 +2.9
GTA S **S** **00 56 54.7 -0.5**
GTA SS SS 01 00 44.0 +1.0
GTA pmax pmax
comp=Z,24nm,1.3s,mb5.1
GTA pmax pmax
comp=Z,330nm,7.5s
GTA LR LR
comp=N,670nm,18.3s,MS4.9
GTA LR LR
comp=E,580nm,17.1s,MS4.9
GTA LR LR
comp=Z,650nm,20.7s,MS4.7
TIXI Tiksi 57.41 21 *e*P **P** **00 49 04.5 -0.5**
TIXI LR LR
comp=Z,2μm,19.0s,MS5.3
TIXI Tiksi 57.41 21 *e*P **P** **00 49 04.5 -0.4**
SONM Songino Array 57.55 52 P **P** **00 49 07.0 +0.8**
comp=Z,14nm,1.1s,mb4.9,baz=285,slow=7.5,SNR=68
SONM LR LR 01 15 25.6
comp=Z,683nm,20.4s,MS4.8,baz=297,slow=38
SONM Songino Array 57.55 52 P **P** **00 49 07.0 +0.7**
ULN Ulaanbaatar 57.94 52 *e*P **P** **00 49 10.0 +1.0**
comp=Z,13nm,0.8s,mb5.0
ULN LR LR
comp=Z,996nm,20.0s,MS4.9
ULN Ulaanbaatar 57.94 52 P **P** **00 49 10.1 +1.1**
comp=Z,348nmcomp=Z,21nm,1.6s,mb4.9
ULN Ulaanbaatar 57.94 52 *e*P **P** **00 49 10.0 +1.0**
comp=Z,13nm,0.8s,mb5.0
TSUM Tsumeb 58.77 187 PFAKE 00 49 30.0 +15
TSUM LR LR
comp=Z,957nm,19.0s,MS4.9
SCHQ Schefferville 59.18 318 *e*P **P** **00 49 17.5 -0.1**
comp=Z,33nm,0.9s,mb5.4
SCHQ LR LR
comp=Z,1μm,19.0s,MS5.0

SCHQ Schefferville 59.18 318 P **P** **00 49 17.4 -0.1**
comp=Z,8.7nm,0.7s,mb4.9,baz=74,slow=6.7,SNR=12
SCHQ LR LR 01 13 37.4
comp=Z,860nm,18.8s,MS4.9,baz=62,slow=35
SCHQ Schefferville 59.18 318 *e*P **P** **00 49 17.5 0.0**
comp=Z,33nm,0.9s,mb5.4
LZH Lanzhou 61.25 65 *e*P **P** **00 49 33.4 +1.4**
LZH pP pP 00 49 36.7 +1.7
LZH sP sP 00 49 38.2 +2.1
LZH *e*S **S** **00 57 50.2 -1.9**
LZH pmax pmax
comp=Z,32nm,1.3s,mb5.3
LZH pmax pmax
comp=Z,160nm,6.0s
LZH LR LR
comp=N,610nm,16.0s
LZH LR LR
comp=Z,900nm,18.5s,MS5.0
YAK Yakutsk 62.59 31 PFAKE 00 49 50.0 +9.4
YAK LR LR
comp=Z,648nm,19.0s,MS4.8
BTO Baotou 63.21 58 *e*P **P** **00 49 40.8 -4.3**
CD2 Chengdu 63.84 71 P **P** **00 49 50.0 +0.6**
CD2 pP pP 00 49 54.6 +2.2
CD2 sP sP 00 49 57.0 +3.5
CD2 PP PP 00 52 11.6 +2.0
CD2 S **S** **00 58 21.8 -3.1**
CD2 ScS ScS 00 59 39.1 -4.3
CD2 pmax pmax
comp=Z,80nm,1.0s,mb5.7
CD2 pmax pmax
comp=Z,230nm,5.7s
CD2 LR LR
comp=N,460nm,19.1s,MS5.0
CD2 LR LR
comp=E,610nm,14.2s,MS5.0
CD2 LR LR
comp=Z,500nm,16.5s,MS4.8
HHC Hu-ho-hao-te 64.09 57 *e*P **P** **00 49 51.8 +0.9**
HHC pP pP 00 49 56.3 +2.4
HHC sP sP 00 49 59.0 +4.0
HHC PP PP 00 52 13.9 +2.4
HHC PcS 00 54 30.4
HHC S **S** **00 58 24.7 -3.0**
HHC pmax pmax
comp=Z,46nm,0.7s,mb5.6
HHC pmax pmax
comp=Z,220nm,3.7s
HHC LR LR
comp=N,510nm,15.5s,MS5.0
HHC LR LR
comp=E,570nm,15.5s,MS5.0
HHC LR LR
comp=Z,900nm,17.8s,MS5.0
LBTB Lobatse 64.28 178 *e*P **P** **00 49 53.9 +1.8**
comp=Z,32nm,1.0s,mb5.3
LBTB LR LR
comp=Z,402nm,22.0s,MS4.6
LBTB Lobatse 64.28 178 *e*P **P** **00 49 53.9 +1.8**
comp=Z,32nm,1.0s,mb5.3
HIA Hailar 64.69 46 *e*P **P** **00 49 56.0 +1.3**
comp=Z,27nm,0.8s,mb5.3
HIA LR LR
comp=Z,694nm,19.0s,MS4.9
HIA Hailar 64.69 46 *e*P **P** **00 49 56.0 +1.4**
comp=Z,27nm,0.8s,mb5.3
PKME Peaks-Kenny Pk 65.20 309 PFAKE 00 50 10.0 +12
PKME LR LR
comp=Z,855nm,19.0s,MS5.0
XAN Xi'an 65.87 65 P **P** **00 50 02.9 +0.3**
XAN pP pP 00 50 12.0 +6.4
XAN sP sP 00 50 16.2 +10
XAN PcP PcP 00 50 28.9 -4.6
XAN PP PP 00 52 30.1 +2.8
XAN ScP 00 54 32.8
XAN PcS 00 54 37.1
XAN S S 00 58 48.9 -0.8
XAN ScS ScS 00 59 50.9 -8.0
XAN SS SS 01 03 06.7 +2.7
XAN pmax pmax
comp=Z,13nm,1.5s,mb4.7
XAN pmax pmax
comp=Z,56nm,7.3s
XAN LR LR
comp=N,350nm,29.7s
XAN LR LR
comp=E,88nm,19.6s
XAN LR LR
comp=Z,170nm,18.0s
KMI Kunming 66.24 76 ⇑P **P** **00 50 05.6 +0.5**
KMI pP pP 00 50 08.8 +0.8
KMI sP sP 00 50 10.1 +1.0
KMI S S 00 58 53.5 -0.9
KMI pmax pmax
comp=Z,27nm,1.1s,mb5.2
KMI LR LR
comp=N,240nm,22.0s,MS4.5
KMI LR LR
comp=E,270nm,23.0s,MS4.5
KMI LR LR
comp=Z,410nm,24.0s,MS4.6
CHG Chiang Mai 66.94 84 ⇓P **P** **00 50 09.4 -0.2**
comp=Z,39nm,1.0s,mb5.4
CHTO Chiang Mai 66.94 84 *e*P **P** **00 50 09.5 -0.1**
comp=Z,42nm,1.1s,mb5.4
CHTO LR LR
comp=Z,247nm,21.0s,MS4.4
CHTO Chiang Mai 66.94 84 P **P** **00 50 09.4 -0.2**
comp=Z,711nmcomp=Z,48nm,1.2s,mb5.4
CHTO Chiang Mai 66.94 84 P **P** **00 50 09.8 +0.2**
SNR=11
CHTO Chiang Mai 66.94 84 P **P** **00 50 09.8 +0.2**
SNR=11
CHRT Chiangrai 66.97 83 ⇓P **P** **00 50 09.0 -0.8**
comp=Z,118nm,1.2s,mb5.8
CMAR Chiang Mai Arr 67.14 85 P **P** **00 50 10.8 -0.1**
comp=Z,15nm,0.8s,mb5.1,baz=302,slow=7.7,SNR=73
CMAR LR LR 01 24 23.9
comp=Z,230nm,19.6s,MS4.4,baz=289,slow=40
CMAR Chiang Mai Arr 67.14 85 P **P** **00 50 10.8 -0.1**
LBNH Lisbon 67.34 309 PFAKE 00 50 20.0 +8.2
LBNH LR LR
comp=Z,580nm,20.0s,MS4.8
BJI Beijing 67.50 56 P **P** **00 50 13.2 +0.3**
BJI S S 00 59 08.8 -0.5
BJI pmax pmax
comp=Z,24nm,1.7s,mb5.0
BJI pmax pmax
comp=Z,200nm,4.1s
BJI LR LR
comp=N,490nm,15.2s
BJI LR LR
comp=E,670nm,22.5s
BJI LR LR
comp=Z,560nm,33.1s
BJT Baijiatuau 67.51 56 *e*P **P** **00 50 13.2 +0.2**
comp=Z,16nm,0.7s,mb5.2
BJT LR LR
comp=Z,790nm,20.0s,MS4.9
BJT Baijiatuau 67.51 56 *e*P **P** **00 50 13.2 +0.2**
comp=Z,16nm,0.7s,mb5.2
BOSA Boshof 67.86 179 *e*P **P** **00 50 16.7 +1.7**
comp=Z,24nm,1.0s,mb5.2
BOSA LR LR
comp=Z,1μm,19.0s,MS5.1
BOSA Boshof 67.86 179 P **P** **00 50 16.4 +1.4**
comp=Z,21nm,1.0s,mb5.1,baz=354,slow=6.5,SNR=8.9
BOSA LR LR 01 24 05.7
comp=Z,813nm,18.5s,MS5.0,baz=360,slow=40
BOSA Boshof 67.86 179 *e*P **P** **00 50 16.7 +1.7**
comp=Z,24nm,1.0s,mb5.2
ENH Enshi 68.33 68 *e*P **P** **00 50 18.8 +0.5**
comp=Z,62nm,1.1s,mb5.5
ENH LR LR
comp=Z,596nm,21.0s,MS4.8
ENH Enshi 68.33 68 *e*P **P** **00 50 18.8 +0.5**
comp=Z,62nm,1.1s,mb5.5
GYA Guiyang 68.41 73 ⇑*i*P **P** **00 50 18.7 -0.1**
GYA PP PP 00 52 52.8 +3.2
GYA ScP 00 54 48.9
GYA S S 00 59 20.4 -0.2
GYA SKS 01 00 15.0
GYA SS SS 01 03 44.7 +1.0
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,140nm,6.0s
GYA LR LR
comp=N,680nm,18.5s,MS5.0
GYA LR LR
comp=E,590nm,19.3s,MS5.0
GYA LR LR
comp=Z,740nm,18.9s,MS4.9
LONY Lake Ozonia 68.70 311 PFAKE 00 50 30.0 +10
LONY LR LR
comp=Z,673nm,19.0s,MS4.9
BINY Binghamton 70.94 309 PFAKE 00 50 50.0 +16
BINY LR LR
comp=Z,677nm,19.0s,MS4.9
CN2 Changchun 71.02 49 *e*P **P** **00 50 34.2 -0.4**
CN2 *es*P sP 00 50 42.0 +3.3
CN2 *e*S S 00 59 49.8 -0.9
CN2 pmax pmax
comp=Z,30nm,0.9s,mb5.2
CN2 pmax pmax
comp=Z,300nm,6.0s
CN2 LR LR
comp=N,700nm,15.0s,MS5.2
CN2 LR LR
comp=E,800nm,15.0s,MS5.2
CN2 LR LR
comp=Z,1μm,14.0s,MS5.3
SNY Shenyang 71.09 51 ⇑P **P** **00 50 31.0 -4.1**
SNY S S 00 59 48.6 -3.0
SNY pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
SNY pmax pmax
comp=Z,170nm,4.2s
SNY LR LR
comp=N,520nm,14.1s,MS5.2
SNY LR LR
comp=E,1μm,16.9s,MS5.2
SNY LR LR
comp=Z,980nm,17.6s,MS5.1
RCBR Riachuelo 71.14 245 PFAKE 00 50 50.0 +14
RCBR LR LR
comp=Z,944nm,21.0s,MS5.0
WHN Wuhan 71.63 65 ⇓P **P** **00 50 37.5 -1.1**
WHN pmax pmax
comp=Z,44nm,1.1s,mb5.3
WHN LR LR
comp=N,590nm,12.3s,MS5.2
WHN LR LR
comp=E,380nm,11.1s,MS5.2
WHN LR LR
comp=Z,970nm,18.0s
SUR Sutherland 71.66 183 PFAKE 00 50 50.0 +12
SUR LR LR
comp=Z,2μm,22.0s,MS5.3
MDJ Mudanjiang 72.87 46 P **P** **00 50 45.8 +0.1**
MDJ pP pP 00 50 49.0 +0.3
MDJ sP sP 00 50 50.0 +0.2
MDJ PcP PcP 00 51 02.6 -0.2
MDJ PP PP 00 53 28.7 +1.3
MDJ S S 01 00 10.7 -1.3
MDJ ScS ScS 01 00 52.3 -1.2
MDJ pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
MDJ pmax pmax
comp=Z,130nm,4.9s
MDJ LR LR
comp=N,920nm,14.4s,MS5.2
MDJ LR LR
comp=E,560nm,15.6s,MS5.2
MDJ LR LR
comp=Z,1μm,14.4s,MS5.3
MDJ Mudanjiang 72.87 46 PFAKE 00 51 00.0 +14
MDJ LR LR
comp=Z,435nm,22.0s,MS4.7
YKA Yellowknife Ar 72.93 341 P **P** **00 50 45.8 0.0**
YKA Yellowknife Ar 72.93 341 P **P** **00 50 45.8 0.0**
comp=Z,6.6nm,0.9s,mb4.6,baz=35,slow=5.7,SNR=7.6
YKA Yellowknife Ar 72.93 341 P **P** **00 50 45.8 0.0**
ERPA Erie 73.35 311 PFAKE 00 51 00.0 +11
ERPA LR LR
comp=Z,589nm,19.0s,MS4.9
COLD Coldfoot 73.42 358 *e*P **P** **00 50 49.8 +1.2**
comp=Z,7.4nm,1.0s,mb4.6
COLD Coldfoot 73.42 358 *e*P **P** **00 50 49.8 +1.2**
comp=Z,7.3nm,1.0s,mb4.6
NJ2 Nanjing 73.86 62 *e*P **P** **00 50 51.0 -0.8**
NJ2 pP pP 00 50 55.8 +1.0
NJ2 sP sP 00 50 58.1 +2.2
NJ2 S S 01 00 20.0 -3.6
NJ2 SKS 01 00 53.0
NJ2 SS SS 01 05 10.5 +3.5
NJ2 pmax pmax
comp=Z,30nm,1.1s,mb5.1
NJ2 pmax pmax
comp=Z,130nm,3.6s
NJ2 LR LR
comp=N,410nm,15.1s,MS4.9
NJ2 LR LR
comp=E,240nm,18.1s,MS4.9
NJ2 LR LR
comp=Z,280nm,15.8s,MS4.7
CBN Corbin 74.19 307 *e*P **P** **00 50 55.5 +1.9**
comp=Z,9.9nm,0.3s,mb5.2
CBN LR LR
comp=Z,515nm,20.0s,MS4.8
CBN Corbin 74.19 307 *e*P **P** **00 50 55.5 +1.9**
comp=Z,9.9nm,0.3s,mb5.2
MCWV Mont Chateau 74.80 309 *e*P **P** **00 50 59.6 +2.5**
comp=Z,22nm,1.0s,mb5.0
MCWV LR LR
comp=Z,588nm,19.0s,MS4.9
MCWV Mont Chateau 74.80 309 *e*P **P** **00 50 59.6 +2.5**
comp=Z,22nm,1.0s,mb5.0
TPTI 75.10 98 P **P** **00 51 05.0 +5.8**
comp=Z,28nm,1.3s,mb5.0
QIZ Qiongzhong 75.12 78 P **P** **00 51 00.2 +0.9**
QIZ S S 01 00 39.2 +1.2
QIZ pmax pmax
comp=Z,25nm,1.3s,mb5.0
QIZ pmax pmax
comp=Z,97nm,5.9s
QIZ LR LR
comp=N,210nm,19.8s,MS4.5
QIZ LR LR
comp=E,100nm,21.9s,MS4.5
QIZ LR LR
comp=Z,250nm,30.0s
QIZ Qiongzhong 75.12 78 *e*P **P** **00 50 60.0 +0.7**
comp=Z,17nm,0.9s,mb5.0
QIZ LR LR
comp=Z,270nm,22.0s,MS4.5
QIZ Qiongzhong 75.12 78 *e*P **P** **00 51 00.0 +0.7**
comp=Z,17nm,0.9s,mb5.0
FFC Flin Flon 75.25 331 *e*P **P** **00 51 00.1 +0.6**
comp=Z,16nm,0.9s,mb5.0
FFC LR LR
comp=Z,896nm,19.0s,MS5.1
FFC Flin Flon 75.25 331 *e*P **P** **00 51 00.1 +0.6**
comp=Z,16nm,0.9s,mb5.0
EGAK Eagle 75.31 353 *e*P **P** **00 51 00.4 +0.7**
comp=Z,8.9nm,1.7s,mb4.4
EGAK LR LR
comp=Z,314nm,20.0s,MS4.6
EGAK Eagle 75.31 353 *e*P **P** **00 51 00.4 +0.8**
comp=Z,8.9nm,1.7s,mb4.4
AAM Ann Arbor 75.34 313 PFAKE 00 51 10.0 +10
AAM LR LR
comp=Z,678nm,20.0s,MS5.0
INCN Inchon 75.61 53 PFAKE 00 51 10.0 +8.2
INCN LR LR
comp=Z,487nm,19.0s,MS4.8
ANWB Willy Bob 75.67 281 PFAKE 00 51 10.0 +7.5
ANWB LR LR
comp=Z,271nm,21.0s,MS4.5
COLA College 75.68 356 PFAKE 00 51 10.0 +8.3
COLA LR LR
comp=Z,304nm,20.0s,MS4.6
EYMN Ely 75.68 321 PFAKE 00 51 10.0 +8.0
EYMN LR LR
comp=Z,630nm,19.0s,MS4.9
ILAR Eielson Array 75.73 356 P **P** **00 51 01.7 -0.3**
comp=Z,2.1nm,0.9s,mb4.1,baz=335,slow=3.2,SNR=12
ILAR LR LR 01 25 50.9
comp=Z,218nm,19.4s,MS4.5,baz=191,slow=37
ILAR Eielson Array 75.73 356 P **P** **00 51 01.7 -0.3**
COWI Conover 75.77 319 *e*P **P** **00 51 03.7 +1.1**
comp=Z,49nm,1.3s,mb5.3
COWI LR LR
comp=Z,692nm,19.0s,MS5.0
COWI Conover 75.77 319 *e*P **P** **00 51 03.7 +1.1**
comp=Z,49nm,1.3s,mb5.3
DAWY Dawson 75.84 352 *e*P **P** **00 51 03.5 +0.9**
DAWY Dawson 75.84 352 *e*P **P** **00 51 03.5 +0.8**
ULM Lac du Bonnet 76.08 325 *e*P **P** **00 51 04.3 +0.1**
comp=Z,39nm,1.0s,mb5.3
ULM LR LR
comp=Z,939nm,20.0s,MS5.1
ULM Lac du Bonnet 76.08 325 P **P** **00 51 04.2 0.0**
comp=Z,29nm,0.8s,mb5.2,baz=53,slow=6.1,SNR=11
ULM LR LR 01 23 55.9
comp=Z,739nm,19.0s,MS5.0,baz=237,slow=35
ULM Lac du Bonnet 76.08 325 *e*P **P** **00 51 04.3 0.0**
comp=Z,39nm,1.0s,mb5.3
ACSO Alum Creek Sta 76.29 311 PFAKE 00 51 20.0 +14
ACSO LR LR
comp=Z,693nm,20.0s,MS5.0
CNNC Cliffs of the 76.36 304 PFAKE 00 51 20.0 +14
CNNC LR LR
comp=Z,511nm,20.0s,MS4.8
KSRS Korea Array 76.42 53 P **P** **00 51 06.2 -0.3**
comp=Z,24nm,1.0s,mb5.1,baz=308,slow=5.2,SNR=21
KSRS LR LR 01 28 34.4
comp=Z,472nm,19.4s,MS4.8,baz=310,slow=39
KULM Kulim 76.47 94 *e*P **P** **00 51 06.8 -0.3**
comp=Z,108nm,1.4s,mb5.6
KULM Kulim 76.47 94 *e*P **P** **00 51 06.8 -0.3**
comp=Z,108nm,1.4s,mb5.6
BPAW Bear Paw Mtn. 76.58 358 *e*P **P** **00 51 07.2 +0.3**
comp=Z,7.3nm,0.9s,mb4.6
BPAW Bear Paw Mtn. 76.58 358 *e*P **P** **00 51 07.2 +0.4**
comp=Z,7.3nm,0.9s,mb4.6
BLA Blacksburg 76.70 307 PFAKE 00 51 20.0 +12
BLA LR LR
comp=Z,524nm,19.0s,MS4.9
FDF Fort de France 76.97 278 PFAKE 00 51 20.0 +10
FDF LR LR
comp=Z,204nm,20.0s,MS4.4
IPM Ipoh 77.28 95 P **P** **00 51 11.0 -0.6**
comp=Z,30nm,1.4s,mb5.0
AGMN Agassiz Nation 77.49 324 PFAKE 00 51 20.0 +7.7
AGMN LR LR
comp=Z,712nm,22.0s,MS5.0
YSS Yuzh-Sakhalins 78.08 38 *e*P **P** **00 51 16.8 +1.2**
comp=Z,54nm,0.9s,mb5.5
YSS LR LR
comp=Z,388nm,19.0s,MS4.8
YSS Yuzh-Sakhalins 78.08 38 *e*P **P** **00 51 16.8 +1.2**
comp=Z,54nm,0.9s,mb5.5
MNSI Mandailing Nat 78.51 99 P **P** **00 51 17.9 -0.6**
comp=Z,2μmcomp=Z,24nm,1.1s,mb5.1
JFWS Jewell Farm 78.54 317 PFAKE 00 51 30.0 +12
JFWS LR LR
comp=Z,793nm,19.0s,MS5.1
SJG San Juan 78.69 284 PFAKE 00 51 30.0 +11
SJG LR LR
comp=Z,224nm,19.0s,MS4.5
GRGR Grenville 78.94 277 PFAKE 00 51 30.0 +9.1
GRGR LR LR
comp=Z,198nm,21.0s,MS4.4
PMR Palmer 79.01 357 *e*P **P** **00 51 20.5 0.0**
comp=Z,2.0nm,0.4s,mb4.4
PMR LR LR
comp=Z,300nm,20.0s,MS4.6
PMR Palmer 79.01 357 *e*P **P** **00 51 20.5 0.0**
comp=Z,2.0nm,0.4s,mb4.4
BLO Bloomington 79.04 312 *e*P **P** **00 51 22.7 +1.7**
comp=Z,18nm,0.8s,mb5.1
BLO Bloomington 79.04 312 *e*P **P** **00 51 22.7 +1.7**
comp=Z,18nm,0.8s,mb5.1
NHSC New Hope 79.18 304 PFAKE 00 51 30.0 +8.1
NHSC LR LR
comp=Z,535nm,19.0s,MS4.9
BMRM Bremner River 79.36 354 *e*P **P** **00 51 24.1 +1.7**
comp=Z,9.6nm,1.1s,mb4.6
BMRM Bremner River 79.36 354 *e*P **P** **00 51 24.1 +1.8**
comp=Z,9.6nm,1.1s,mb4.6
WCI Wyandotte Cave 79.54 311 PFAKE 00 51 40.0 +16
WCI LR LR
comp=Z,573nm,19.0s,MS4.9
HDIL Hopedale 79.65 315 PFAKE 00 51 40.0 +16
HDIL LR LR
comp=Z,965nm,19.0s,MS5.2
PET Petropavlovsk 79.81 26 PFAKE 00 51 40.0 +15
PET LR LR
comp=Z,800nm,20.0s,MS5.1
PPI Padang Panjang 79.93 99 P **P** **00 51 26.1 -0.2**
comp=Z,29nm,0.8s,mb5.2
TATO Taipei 80.02 66 PFAKE 00 51 40.0 +13
TATO LR LR
comp=Z,396nm,20.0s,MS4.8
YHNB Yeheng 80.13 66 *e*P **P** **00 51 28.4 +1.2**
comp=Z,33nm,1.0s,mb5.2
YHNB LR LR
comp=Z,251nm,20.0s,MS4.6
YHNB Yeheng 80.13 66 *e*P **P** **00 51 28.4 +1.2**
comp=Z,33nm,1.0s,mb5.2
OLIL Olney 80.24 313 *e*P **P** **00 51 28.4 +0.9**
comp=Z,24nm,1.1s,mb5.0
OLIL Olney 80.24 313 *e*P **P** **00 51 28.4 +0.8**
comp=Z,24nm,1.1s,mb5.0
PDSI Padang 80.28 99 P **P** **00 51 27.7 -0.4**
comp=Z,120nm,1.2s,mb5.7
GRTK Grand Turk 80.28 290 PFAKE 00 51 40.0 +12
GRTK LR LR
comp=Z,264nm,19.0s,MS4.6
CPCT Cooper Cave 80.35 308 *e*P **P** **00 51 30.1 +1.9**
CPCT Cooper Cave 80.35 308 *e*P **P** **00 51 30.1 +1.9**
SSLB Suanglung 80.39 67 *e*P **P** **00 51 29.7 +1.1**
comp=Z,69nm,2.1s,mb5.2
SSLB Suanglung 80.39 67 *e*P **P** **00 51 29.7 +1.1**
comp=Z,69nm,2.1s,mb5.2
EDM Edmonton 80.44 336 *e*P **P** **00 51 29.0 +0.7**
EDM Edmonton 80.44 336 *e*P **P** **00 51 29.0 +0.7**
SCIA State Center 80.80 318 PFAKE 00 51 40.0 +9.5
SCIA LR LR
comp=Z,643nm,20.0s,MS5.0
SDSI Sungai Dareh 81.03 99 P **P** **00 51 30.9 -1.2**
GOGA Godfrey 81.06 306 *e*P **P** **00 51 33.4 +1.3**
comp=Z,12nm,1.0s,mb4.8
GOGA LR LR
comp=Z,445nm,19.0s,MS4.8
GOGA Godfrey 81.06 306 *e*P **P** **00 51 33.4 +1.3**
comp=Z,12nm,1.0s,mb4.8
ECSD EROS Data Cent 81.19 321 PFAKE 00 51 40.0 +7.4
ECSD LR LR
comp=Z,457nm,19.0s,MS4.8
WVT Waverly 81.87 311 PFAKE 00 51 50.0 +14
WVT LR LR
comp=Z,728nm,19.0s,MS5.1
ERM Erimo 81.88 41 PFAKE 00 51 50.0 +14
ERM LR LR
comp=Z,428nm,20.0s,MS4.8
SDDR Presa de Saban 81.97 288 PFAKE 00 51 50.0 +13
SDDR LR LR
comp=Z,287nm,19.0s,MS4.7
FVM French Village 82.08 313 *e*P **P** **00 51 37.3 -0.1**
comp=Z,17nm,1.1s,mb4.9
FVM French Village 82.08 313 *e*P **P** **00 51 37.3 -0.1**
comp=Z,17nm,1.1s,mb4.9
CCM Cathedral Cave 82.48 314 PFAKE 00 51 50.0 +11
CCM LR LR
comp=Z,898nm,20.0s,MS5.1
A18A Metzger Ranch, 82.83 331 ⇑P **P** **00 51 40.5 -0.6**
baz=82,SNR=21
KDAK Kodiak Island 82.95 358 PFAKE 00 51 50.0 +8.5
KDAK LR LR
comp=Z,388nm,21.0s,MS4.8
MAJO Matsushiro 83.13 48 *e*P **P** **00 51 43.1 +0.2**
comp=Z,20nm,1.1s,mb5.0
MAJO LR LR
comp=Z,495nm,19.0s,MS4.9
MAJO Matsushiro 83.13 48 *e*P **P** **00 51 43.1 +0.2**
comp=Z,20nm,1.1s,mb5.0
MAT Matsushiro 83.13 48 P **P** **00 51 42.8 -0.1**
MAT S S 01 01 57.0 -5.8
LAO LASA Array 83.23 328 *e*P **P** **00 51 44.5 +1.3**
comp=Z,68nm,0.9s,mb5.7
LAO LR LR
comp=Z,554nm,19.0s,MS5.0
LAO LASA Array 83.23 328 *e*P **P** **00 51 44.5 +1.3**
comp=Z,68nm,0.9s,mb5.7
B18A Beardsley Farm 83.24 331 ⇓P **P** **00 51 42.7 -0.5**
baz=83,SNR=24
DWPF Disney 83.25 301 PFAKE 00 51 50.0 +6.3

DWPF LR LR
comp=Z,333nm,20.0s,MS4.7
A16A West Butte Ran 83.44 332 ⇓P **P 00 51 43.0 -1.3**
baz=83
LRAL Lakeview Retre 83.49 308 *eP* **P 00 51 45.4 +0.6**
comp=Z,18nm,1.0s,mb5.1
LRAL LR LR
comp=Z,560nm,20.0s,MS4.9
LRAL Lakeview Retre 83.49 308 *eP* **P 00 51 45.4 +0.6**
comp=Z,18nm,1.0s,mb5.1
EGMT Eagleton 83.53 331 ⇓P **P 00 51 43.9 -0.9**
baz=83,SNR=23
EGMT Eagleton 83.53 331 PFAKE 00 52 00.0 +15
EGMT LR LR
comp=Z,840nm,20.0s,MS5.1
B17A L&G Farms, Che 83.70 331 ⇑P **P 00 51 44.1 -1.5**
baz=83,SNR=6.0
A15A Johnson Ranch, 83.82 333 ⇑P **P 00 51 45.9 -0.3**
baz=83
A14A Double T Ranch 84.07 333 ⇑P **P 00 51 46.6 -0.9**
baz=84,SNR=18
GTBY Guantanamo Bay 84.16 291 PFAKE 00 52 00.0 +12
GTBY LR LR
comp=Z,248nm,19.0s,MS4.6
WALA Waterton Lakes 84.17 334 *eP* **P 00 51 48.4 +0.4**
comp=Z,0.8nm,1.0s,mb3.8
WALA Waterton Lakes 84.17 334 *eP* **P 00 51 48.4 +0.5**
comp=Z,0.8nm,1.0s,mb3.8
C17A Wharram Farm, 84.24 331 ⇓P **P 00 51 47.6 -0.7**
baz=84,SNR=6.6
B15A Bradely Ranch, 84.33 332 ⇓P **P 00 51 48.2 -0.6**
baz=84,SNR=33
RSSD Black Hills 84.35 325 PFAKE 00 52 00.0 +11
RSSD LR LR
comp=Z,740nm,19.0s,MS5.1
A13A Flathead Natio 84.44 334 ⇑P **P 00 51 48.9 -0.5**
baz=84
C16A Fuhringer Ranc 84.46 332 ⇑P **P 00 51 48.9 -0.6**
baz=84
D17A Six Diamond Ra 84.61 331 ⇓P **P 00 51 50.2 0.0**
baz=84,SNR=12
KSU1 Kansas State U 84.62 318 *eP* **P 00 51 51.5 +1.0**
comp=Z,17nm,0.6s,mb5.3
KSU1 LR LR
comp=Z,680nm,20.0s,MS5.0
KSU1 Kansas State U 84.62 318 *eP* **P 00 51 51.5 +1.1**
comp=Z,17nm,0.6s,mb5.3
C15A Salmond Ranch, 84.80 332 ⇓P **P 00 51 50.1 -1.1**
baz=84,SNR=11
E18A Harlowton 84.80 330 ⇑P **P 00 51 49.7 -1.5**
baz=84,SNR=22
BRAL Brewton 84.92 306 PFAKE 00 52 00.0 +7.9
BRAL LR LR
comp=Z,457nm,19.0s,MS4.9
B13A Whitefish 84.94 334 ⇓P **P 00 51 51.4 -0.5**
baz=85,SNR=12
D16A Dana Ranch, Ca 85.04 331 ⇓P **P 00 51 51.2 -1.2**
baz=85
C14A Swan Lake 85.21 333 ⇓P **P 00 51 52.1 -1.1**
baz=85
E17A Martinsdale 85.25 330 ⇓P **P 00 51 53.7 +0.2**
baz=85,SNR=14
F18A Big Timber 85.27 329 ⇑P **P 00 51 52.9 -0.7**
baz=85,SNR=25
GCMT Greycliff 85.35 329 *eP* **P 00 51 55.0 +1.1**
comp=Z,20nm,0.9s,mb5.2
GCMT Greycliff 85.35 329 *eP* **P 00 51 55.0 +1.0**
comp=Z,20nm,0.9s,mb5.2
HRY Holter Researc 85.41 331 *eP* **P 00 51 55.3 +1.0**
comp=Z,24nm,1.0s,mb5.3
JTMT Jette 85.42 333 *eP* **P 00 51 55.2 +0.9**
comp=Z,35nm,1.1s,mb5.4
JTMT Jette 85.42 333 *eP* **P 00 51 55.2 +0.9**
comp=Z,35nm,1.1s,mb5.4
UALR University of 85.44 312 *eP* **P 00 51 56.0 +1.3**
comp=Z,21nm,1.2s,mb5.1
BSMT Bassoo Peak 85.50 333 *eP* **P 00 51 55.9 +1.2**
comp=Z,14nm,1.1s,mb5.1
SWMT Swartz Lake 85.52 333 *eP* **P 00 51 56.0 +1.2**
comp=Z,42nm,1.2s,mb5.5
SLMT Seeley Lake 85.57 332 *eP* **P 00 51 55.7 +0.7**
comp=Z,45nm,1.5s,mb5.5
C13A Hot Springs 85.58 333 ⇑P **P 00 51 55.1 0.0**
baz=85,SNR=10.0
F17A Fitzpatrick Pl 85.64 330 ⇓P **P 00 51 55.2 -0.2**
baz=85,SNR=30
G18A Lazy EL Ranch, 85.70 329 ⇓P **P 00 51 55.6 -0.1**
baz=85
D14A Greenough 85.71 332 ⇓P **P 00 51 55.3 -0.5**
baz=85
RLMT Red Lodge 85.74 329 ⇑P **P 00 51 55.7 -0.3**
baz=85,SNR=8.3
RLMT Red Lodge 85.74 329 PFAKE 00 52 10.0 +14
RLMT LR LR
comp=Z,469nm,21.0s,MS4.9
CHMT Chamberlain Mo 85.76 332 *eP* **P 00 51 56.5 +0.5**
comp=Z,27nm,1.5s,mb5.3
OGNE Ogallala 85.92 322 PFAKE 00 52 10.0 +13
OGNE LR LR
comp=Z,410nm,20.0s,MS4.8
NEW Newport 85.93 335 PFAKE 00 52 10.0 +13
NEW LR LR
comp=Z,481nm,20.0s,MS4.9
E15A Deer Lodge 85.95 331 ⇓P **P 00 51 56.7 -0.2**
baz=86,SNR=16
C11A Tepee Creek (N 86.01 334 ⇓P **P 00 51 56.8 -0.4**
baz=86
D13A Huson 86.04 333 ⇓P **P 00 51 57.6 +0.3**
baz=86,SNR=24
MSO Missoula 86.08 332 *eP* **P 00 51 58.6 +1.1**
comp=Z,17nm,1.1s,mb5.2
MSO LR LR
comp=Z,396nm,20.0s,MS4.8
F16A Kennard Place, 86.11 331 ⇓P **P 00 51 57.7 0.0**
baz=86
VBMS Vicksburg 86.19 309 PFAKE 00 52 10.0 +12
VBMS LR LR
comp=Z,617nm,19.0s,MS5.0
E14A Clinton 86.27 332 ⇑P **P 00 51 58.2 -0.4**
baz=86
MIAR Mount Ida 86.31 313 PFAKE 00 52 10.0 +11
MIAR LR LR
comp=Z,935nm,21.0s,MS5.2
KSM Kuching 86.33 91 *eP* **P 00 52 00.3 +1.0**
comp=Z,52nm,1.5s,mb5.5
KSM Kuching 86.33 91 *eP* **P 00 52 00.3 +0.9**
comp=Z,52nm,1.5s,mb5.5
D12A Red Ives Fores 86.38 333 ⇓P **P 00 51 57.8 -1.3**
baz=86,SNR=15
LRM Limekiln Ridge 86.39 331 *eP* **P 00 51 59.9 +0.8**
comp=Z,104nm,0.9s,mb6.1
CBKS Cedar Bluff 86.44 319 PFAKE 00 52 10.0 +10
CBKS LR LR
comp=Z,696nm,21.0s,MS5.0
E13A Victor 86.50 332 ⇓P **P 00 51 58.5 -1.1**
baz=86,SNR=27
G16A Moss Hill, Enn 86.65 330 ⇑P **P 00 52 00.1 -0.3**
baz=86,SNR=34
LKWY Lake 86.66 329 PFAKE 00 52 10.0 +10
LKWY LR LR
comp=Z,1μm,21.0s,MS5.2
C09A Chrisman Ranch 86.71 336 ⇑P **P 00 51 58.9 -1.7**
baz=86
F14A Wisdom 86.74 332 ⇑P **P 00 51 59.8 -1.1**
baz=86,SNR=5.2
DLMT Dillon 86.83 331 *eP* **P 00 52 02.8 +1.5**
comp=Z,37nm,1.2s,mb5.5
DLMT Dillon 86.83 331 *eP* **P 00 52 02.8 +1.5**
comp=Z,37nm,1.2s,mb5.5
G15A Dillon 86.96 331 ⇑P **P 00 52 01.3 -0.6**
baz=87,SNR=12
MTDJ Mount Denham 87.00 291 PFAKE 00 52 10.0 +7.4
MTDJ LR LR
comp=Z,251nm,19.0s,MS4.6
E12A Beaver Dam Sad 87.01 333 ⇓P **P 00 52 01.0 -1.2**
baz=87
F13A Darby 87.11 332 ⇓P **P 00 52 02.0 -0.6**
baz=87,SNR=52
FLWY Flagg Ranch 87.17 329 *eP* **P 00 52 05.8 +2.8**
comp=Z,107nm,1.7s,mb5.8
FLWY Flagg Ranch 87.17 329 *eP* **P 00 52 05.8 +2.8**
comp=Z,107nm,1.7s,mb5.8
OD2 Odessa Site #2 87.21 336 *eP* **P 00 52 04.3 +1.2**
comp=Z,58nm,1.4s,mb5.6
OD2 Odessa Site #2 87.21 336 *eP* **P 00 52 04.3 +1.2**
comp=Z,58nm,1.4s,mb5.6
PHWY Pilot Hill 87.22 324 *eP* **P 00 52 04.5 +1.2**
comp=Z,28nm,0.9s,mb5.5
PHWY Pilot Hill 87.22 324 *eP* **P 00 52 04.5 +1.2**
comp=Z,28nm,0.9s,mb5.5
N24A Carr 87.34 324 ⇑P **P 00 52 03.6 -0.3**
baz=87
MCMT McKenzie Canyo 87.38 331 *eP* **P 00 52 05.5 +1.5**
comp=Z,4.4nm,1.1s,mb4.6
MCMT McKenzie Canyo 87.38 331 *eP* **P 00 52 05.5 +1.5**
comp=Z,4.4nm,1.1s,mb4.6
K20A Yellowstone Ra 87.39 327 ⇑P **P 00 52 04.3 +0.3**
baz=87
IMW Indian Meadow 87.43 329 *eP* **P 00 52 06.2 +2.0**
comp=Z,6.4nm,0.9s,mb4.8
IMW Indian Meadow 87.43 329 *eP* **P 00 52 06.2 +2.0**
comp=Z,6.4nm,0.9s,mb4.8
K19A Absolon Red Bu 87.46 327 ⇑P **P 00 52 04.3 -0.1**
baz=87,SNR=5.3
F12A Elk City 87.47 333 ⇑P **P 00 52 04.3 -0.1**
baz=87
H15A Lima 87.48 331 ⇑P **P 00 52 04.2 -0.3**
baz=87,SNR=8.4
LOHW Long Hollow 87.53 329 *eP* **P 00 52 05.9 +1.2**
comp=Z,9.5nm,1.3s,mb4.9
LOHW Long Hollow 87.53 329 *eP* **P 00 52 05.9 +1.2**
comp=Z,9.5nm,1.3s,mb4.9
L21A Rawlins 87.54 326 ⇑P **P 00 52 04.5 -0.3**
baz=87
O25A Wiggins 87.56 323 ⇓P **P 00 52 04.2 -0.7**
baz=87
J18A Kendall Valley 87.63 328 ⇑P **P 00 52 04.6 -0.6**
baz=87
G13A Cobalt 87.67 332 ⇓P **P 00 52 05.1 -0.2**
baz=87,SNR=27
H14A Leadore 87.76 331 ⇑P **P 00 52 04.6 -1.2**
baz=87
N23A Red Feather La 87.77 324 ⇑P **P 00 52 05.8 -0.1**
baz=87,SNR=30
TPAW Teton Pass 87.77 329 *eP* **P 00 52 07.2 +1.3**
comp=Z,6.7nm,0.9s,mb4.9
TPAW Teton Pass 87.77 329 *eP* **P 00 52 07.2 +1.3**
comp=Z,6.7nm,0.9s,mb4.9
BW06 Boulder Array 87.81 328 ⇑P **P 00 52 04.7 -1.4**
baz=87
BW06 Boulder Array 87.81 328 PFAKE 00 52 20.0 +14
BW06 LR LR
comp=Z,621nm,19.0s,MS5.0
M21A Separation Pea 87.82 326 ⇓P **P 00 52 05.1 -1.1**
baz=88
SDV Santo Domingo 87.84 280 *eP* **P 00 52 07.4 +0.7**
comp=Z,15nm,0.8s,mb5.3
SDV LR LR
comp=Z,111nm,21.0s,MS4.2
SDV Santo Domingo 87.84 280 *eP* **P 00 52 07.4 +0.7**
comp=Z,15nm,0.8s,mb5.3
F10A Beach Ranch, E 87.96 334 ⇓P **P 00 52 05.8 -1.0**
baz=88
G12A Big Creek, Yel 88.03 332 ⇓P **P 00 52 05.8 -1.4**
baz=88
RRI2 Red Ridge 88.04 329 *eP* **P 00 52 09.5 +2.4**
P25A Willow Gulch B 88.05 322 ⇓P **P 00 52 06.7 -0.7**
baz=88
N22A Wattenberg Ran 88.07 325 ⇑P **P 00 52 06.8 -0.6**
baz=88
K18A Toltan Ranch, 88.11 328 ⇑P **P 00 52 07.4 -0.1**
baz=88
H13A Challis 88.13 331 ⇑P **P 00 52 07.1 -0.5**
baz=88
M20A Sweetwater, Wa 88.28 326 ⇑P **P 00 52 07.2 -1.1**
baz=88
O23A Lake Granby, G 88.31 324 ⇓P **P 00 52 07.9 -0.6**
baz=88
HAWA Hanford 88.35 336 PFAKE 00 52 20.0 +11
HAWA LR LR
comp=Z,713nm,20.0s,MS5.1
H12A Diamond D Ranc 88.36 332 ⇓P **P 00 52 06.9 -1.8**
baz=88,SNR=9.1
AHID Auburn Hatcher 88.44 329 PFAKE 00 52 20.0 +11
AHID LR LR
comp=Z,300nm,19.0s,MS4.7
ISCO Idaho Springs 88.50 323 PFAKE 00 52 20.0 +11
ISCO LR LR
comp=Z,620nm,19.0s,MS5.0
N21A Black Mountain 88.58 325 ⇑P **P 00 52 09.6 -0.2**
baz=88,SNR=11
O22A Kremmling 88.63 324 ⇑P **P 00 52 09.5 -0.6**
baz=88,SNR=18
I13A Wildhorse Cree 88.64 331 ⇑P **P 00 52 10.0 0.0**
baz=88,SNR=17
M19A Rock Springs 88.68 327 ⇑P **P 00 52 10.2 -0.1**
baz=88
NLWA Neilton Lookou 88.75 339 PFAKE 00 52 20.0 +10
NLWA LR LR
comp=Z,629nm,22.0s,MS5.0
N20A Spence Gulch, 88.85 326 ⇑P **P 00 52 10.4 -0.6**
baz=88
P23A Jefferson 88.94 323 ⇑P **P 00 52 11.8 +0.2**
baz=89,SNR=27
Q24A Divide 88.95 323 ⇑P **P 00 52 12.1 +0.6**
baz=89,SNR=9.8
NATX Nacogdoches 88.96 312 *eP* **P 00 52 13.7 +2.0**
NATX LR LR
comp=Z,431nm,19.0s,MS4.9
NATX Nacogdoches 88.96 312 *eP* **P 00 52 13.7 +2.0**
BMO Blue Mountains 88.97 334 *eP* **P 00 52 11.5 0.0**
comp=Z,11nm,1.1s,mb5.1
BMO LR LR
comp=Z,521nm,20.0s,MS5.0
BMO Blue Mountains 88.97 334 *eP* **P 00 52 11.5 0.0**
comp=Z,11nm,1.1s,mb5.1
O21A Pagoda 89.00 325 ⇑P **P 00 52 10.9 -0.9**
baz=89
WMOK Wichita Mounta 89.04 316 PFAKE 00 52 20.0 +7.9
WMOK LR LR
comp=Z,654nm,19.0s,MS5.1
HLID Hailey 89.05 331 PFAKE 00 52 20.0 +8.1
HLID LR LR
comp=Z,779nm,19.0s,MS5.2
K15A Arbon 89.07 329 ⇑P **P 00 52 11.5 -0.6**
baz=89
J13A Cove Ranch, Pi 89.10 331 ⇓P **P 00 52 11.8 -0.4**
baz=89
I12A Atlanta 89.12 332 ⇓P **P 00 52 11.2 -1.0**
baz=89
P22A Eagle 89.19 324 ⇓P **P 00 52 13.0 +0.3**
baz=89
N19A John Jarvie Ra 89.19 326 ⇑P **P 00 52 11.8 -0.9**
baz=89
L16A Fish Haven 89.20 328 ⇓P **P 00 52 12.1 -0.6**
baz=89
N18A Larsen Ranch, 89.33 327 ⇑P **P 00 52 12.4 -1.0**
baz=89
O20A White River Ci 89.41 325 ⇑P **P 00 52 13.2 -0.5**
baz=89
E03A Leham 89.44 338 ⇓P **P 00 52 13.4 -0.3**
baz=89
K14A Jones Ranch, D 89.44 330 ⇑P **P 00 52 13.5 -0.3**
baz=89
R24A Sanders Place, 89.52 322 ⇓P **P 00 52 13.8 -0.4**
baz=89,SNR=9.6
HWUT Hardware Ranch 89.59 328 *eP* **P 00 52 15.2 +0.6**
comp=Z,51nm,1.6s,mb5.6
HWUT LR LR
comp=Z,507nm,19.0s,MS5.0
HWUT Hardware Ranch 89.59 328 *eP* **P 00 52 15.2 +0.7**
comp=Z,51nm,1.6s,mb5.6
SMCO Snowmass 89.62 324 *eP* **P 00 52 15.5 +0.8**
comp=Z,8.7nm,1.0s,mb5.0
SMCO Snowmass 89.62 324 *eP* **P 00 52 15.5 +0.8**
comp=Z,8.7nm,1.0s,mb5.0
S25A Robets Cordova 89.65 321 ⇑P **P 00 52 15.1 +0.3**
baz=89,SNR=9.8
O19A Miners Draw (B 89.66 326 ⇓P **P 00 52 15.1 +0.2**
baz=89
MFID Camas Ranch 89.70 332 ⇓P **P 00 52 14.8 -0.2**
baz=89
K13A Stover Farm, H 89.71 330 ⇑P **P 00 52 14.5 -0.5**
baz=89
Q22A Crested Butte, 89.85 324 ⇓P **P 00 52 15.6 -0.1**
baz=90,SNR=32
P20A De Beque 89.99 325 ⇓P **P 00 52 15.7 -0.7**
baz=90
F03A Seaside 90.00 338 ⇓P **P 00 52 16.5 +0.2**
baz=90
S24A Houchin Ranch, 90.04 322 ⇑P **P 00 52 16.3 -0.4**
baz=90
T25A Trinidad 90.05 321 ⇓P **P 00 52 17.2 +0.4**
baz=90,SNR=6.7
O18A Roosevelt 90.07 327 ⇑P **P 00 52 16.2 -0.6**
baz=90
M15A Larsen Ranch, 90.07 329 ⇑P **P 00 52 16.7 -0.1**
baz=90
SDCO Great Sand Dun 90.09 322 *eP* **P 00 52 17.4 +0.5**
comp=Z,20nm,1.2s,mb5.3
SDCO LR LR
comp=Z,636nm,19.0s,MS5.1
SDCO Great Sand Dun 90.09 322 *eP* **P 00 52 17.4 +0.5**
comp=Z,20nm,1.2s,mb5.3
L13A Double Diamond 90.13 330 ⇑P **P 00 52 17.3 +0.3**
baz=90
P19A Cripple Cowboy 90.14 326 ⇑P **P 00 52 16.9 -0.2**
baz=90,SNR=7.9
SPUT South Promonto 90.20 329 *eP* **P 00 52 19.3 +1.9**
comp=Z,24nm,1.7s,mb5.2
SPUT South Promonto 90.20 329 *eP* **P 00 52 19.3 +1.9**
comp=Z,24nm,1.7s,mb5.2
R22A Saguache, Gunn 90.29 323 ⇑P **P 00 52 18.4 +0.5**
baz=90,SNR=16
U26A Atchley Ranch, 90.31 320 ⇑P **P 00 52 17.5 -0.5**
baz=90
JLU Jordanelle 90.39 328 *eP* **P 00 52 19.3 +1.0**
comp=Z,23nm,1.3s,mb5.3
JLU Jordanelle 90.39 328 *eP* **P 00 52 19.3 +1.0**
comp=Z,23nm,1.3s,mb5.3
I07A Izee 90.39 335 ⇑P **P 00 52 17.6 -0.6**
baz=90
M14A Sheep Mountain 90.40 329 ⇓P **P 00 52 17.8 -0.5**
baz=90
Q20A Ridgley Place, 90.40 325 ⇓P **P 00 52 17.6 -0.7**
baz=90,SNR=14
O17A Robinson Place 90.43 327 ⇓P **P 00 52 18.2 -0.2**
baz=90
AMTX Amarillo 90.45 318 PFAKE 00 52 30.0 +11
AMTX LR LR
comp=Z,625nm,19.0s,MS5.1
L12A House Creek Ra 90.49 331 ⇑P **P 00 52 18.9 +0.2**
baz=90
R21A Cimarron 90.54 324 ⇓P **P 00 52 18.9 -0.1**
baz=90,SNR=8.4
U25A Circle Dot Ran 90.64 321 ⇑P **P 00 52 18.9 -0.6**
baz=90
P18A Preston Nutter 90.70 326 ⇓P **P 00 52 18.0 -1.7**
baz=90
S22A 4UR Ranch, Cre 90.71 323 ⇑P **P 00 52 18.7 -1.2**
baz=90,SNR=32
L11A Cat Creek Ranc 90.75 331 ⇑P **P 00 52 20.4 +0.5**
baz=90,SNR=13
BGU Big Grassy Mou 90.76 329 *eP* **P 00 52 20.8 +0.8**
comp=Z,9.6nm,1.1s,mb5.0
BGU Big Grassy Mou 90.76 329 *eP* **P 00 52 20.8 +0.8**
comp=Z,9.6nm,1.1s,mb5.0
Q19A Hogan Spring (90.83 325 ⇓P **P 00 52 19.5 -0.8**
baz=90
N14A Grayback Hills 90.89 329 ⇑P **P 00 52 19.2 -1.4**
baz=90
T23A Casias Ranch, 90.91 322 ⇑P **P 00 52 20.2 -0.6**
baz=91,SNR=16
HKT Hockley 90.97 311 PFAKE 00 52 30.0 +8.8
HKT LR LR
comp=Z,561nm,19.0s,MS5.0
R20A Redvale 91.06 324 ⇑P **P 00 52 21.0 -0.4**
baz=91,SNR=16
M12A Wells 91.08 330 ⇓P **P 00 52 20.2 -1.2**
baz=91
Q18A Rafter H Ranch 91.08 326 ⇓P **P 00 52 20.2 -1.3**
baz=91
PV04 Paradox Valley 91.13 325 *eP* **P 00 52 22.7 +0.9**
PV04 Paradox Valley 91.13 325 *eP* **P 00 52 22.7 +0.9**
COR Corvallis 91.14 337 PFAKE 00 52 30.0 +8.3
COR LR LR
comp=Z,436nm,19.0s,MS4.9
PV01 Paradox Valley 91.19 324 *eP* **P 00 52 22.6 +0.6**
comp=Z,2μm,1.1s
PV01 Paradox Valley 91.19 324 *eP* **P 00 52 22.6 +0.6**
comp=Z,2μm,1.1s
SRU San Rafael 91.25 326 ⇓P **P 00 52 21.2 -1.1**
baz=91
SRU San Rafael 91.25 326 *eP* **P 00 52 23.0 +0.8**
comp=Z,9.0nm,0.9s,mb5.1
SRU San Rafael 91.25 326 *eP* **P 00 52 23.0 +0.7**
comp=Z,9.0nm,0.9s,mb5.1
DUG Dugway 91.29 328 ⇓P **P 00 52 21.5 -0.9**
baz=91
DUG Dugway 91.29 328 PFAKE 00 52 30.0 +7.5
DUG LR LR
comp=Z,324nm,21.0s,MS4.7
T22A Edith 91.34 323 ⇓P **P 00 52 23.1 +0.4**
baz=91,SNR=10
M11A Holland Ranch, 91.40 331 ⇓P **P 00 52 22.2 -0.8**
baz=91
SPB Sao Paulo 91.44 240 PFAKE 00 52 30.0 +6.8
SPB LR LR
comp=Z,954nm,21.0s,MS5.2
U23A El Rito 91.56 322 ⇓P **P 00 52 22.8 -1.0**
baz=91
WVOR Wild Horse Val 91.56 333 PFAKE 00 52 40.0 +16
WVOR LR LR
comp=Z,596nm,19.0s,MS5.0
R18A Canyonlands Na 91.57 325 ⇑P **P 00 52 22.3 -1.5**
baz=91
W25A X Bar L Ranch, 91.60 320 ⇑P **P 00 52 23.2 -0.8**
baz=91
N12A Clover Valley, 91.61 330 *eP* **P 00 52 25.3 +1.4**
comp=Z,14nm,1.3s,mb5.1
N12A Clover Valley, 91.61 330 *eP* **P 00 52 25.3 +1.4**
comp=Z,14nm,1.3s,mb5.1
T21A Navajo Lake 91.65 323 ⇑P **P 00 52 23.2 -1.0**
baz=91
Q16A Castle Valley 91.69 327 ⇓P **P 00 52 23.6 -0.7**
baz=91
MSTX Muleshoe 91.73 318 ⇑P **P 00 52 24.1 -0.6**
baz=91
S19A Harvey Farm, M 91.77 325 ⇑P **P 00 52 24.0 -0.7**
baz=91,SNR=16
U22A Llaves 91.83 322 ⇓P **P 00 52 24.9 -0.1**
baz=92,SNR=32
R17A Hanksville Air 91.90 326 ⇓P **P 00 52 25.0 -0.4**
baz=92
MVCO Mesa Verde 91.92 324 ⇑P **P 00 52 25.0 -0.4**
baz=92
MVCO Mesa Verde 91.92 324 PFAKE 00 52 40.0 +15
MVCO LR LR
comp=Z,723nm,20.0s,MS5.1
K05A Summer Lake 92.06 335 ⇓P **P 00 52 26.3 +0.3**
baz=92
W24A Lazy 6 Ranch, 92.07 321 ⇓P **P 00 52 26.0 -0.2**
baz=92,SNR=8.4
U21A Nageezi 92.17 323 ⇓P **P 00 52 26.7 +0.1**
baz=92,SNR=18
S18A Hurst Farm, Bl 92.19 325 ⇑P **P 00 52 25.4 -1.3**
baz=92
V22A San Miguel Ran 92.23 322 ⇑P **P 00 52 27.0 +0.1**
baz=92
P13A Bates Ranch, G 92.41 329 ⇑P **P 00 52 27.1 -0.6**
baz=92
T19A Beclabito 92.47 324 ⇓P **P 00 52 27.6 -0.3**
baz=92
Z27A Tatum 92.47 318 ⇓P **P 00 52 28.0 -0.1**
baz=92
W23A Werner Place, 92.48 321 ⇓P **P 00 52 27.4 -0.6**
baz=92
Q14A Sevier Lake (B 92.51 328 ⇑P **P 00 52 27.3 -0.8**
baz=92
MOD Modoc 92.60 334 *eP* **P 00 52 30.1 +1.7**
comp=Z,10nm,1.1s,mb5.2
MOD LR LR
comp=Z,734nm,19.0s,MS5.2
MOD Modoc 92.60 334 *eP* **P 00 52 30.1 +1.6**
comp=Z,10nm,1.1s,mb5.2
T18A Mexican Hat 92.60 325 ⇑P **P 00 52 28.1 -0.5**
baz=92,SNR=16
ANMO Albuquerque 92.80 321 *eP* **P 00 52 30.2 +0.7**
comp=Z,3.7nm,1.1s,mb4.7
ANMO LR LR
comp=Z,615nm,19.0s,MS5.1
ANMO Albuquerque 92.80 321 *eP* **P 00 52 30.2 +0.7**
comp=Z,3.7nm,1.1s,mb4.7
BMN Battle Mountai 92.80 331 PFAKE 00 52 40.0 +11
BMN LR LR
comp=Z,452nm,21.0s,MS4.9
HUMO Hull Mountain 92.83 336 PFAKE 00 52 40.0 +10
HUMO LR LR
comp=Z,453nm,20.0s,MS4.9
JCT Junction City 92.83 314 PFAKE 00 52 40.0 +10
JCT LR LR
comp=Z,823nm,21.0s,MS5.2
S16A Weppner Ranch, 92.87 326 ⇓P **P 00 52 29.2 -0.6**
baz=92,SNR=8.9

Z26A	**Caprock**	**92.90**	**319**	⇑P		**P**	**00 52 29.0**	**-1.1**
	baz=93							
U19A	**Dine' College,**	**93.00**	**324**	⇓P		**P**	**00 52 29.5**	**-0.9**
	baz=93							
Y24A	**Capitan**	**93.11**	**320**	⇑P		**P**	**00 52 30.5**	**-0.5**
	baz=93							
TEIG	**Tepich**	**93.17**	**299**		PFAKE		00 52 40.0	+8.5
TEIG					LR	LR		
	comp=Z,282nm,20.0s,MS4.7							
U18A	**Rough Rock, Ch**	**93.19**	**324**	⇓P		**P**	**00 52 29.7**	**-1.6**
	baz=93							
ROSC	**El Rosal**	**93.22**	**279**		LR	LR	01 30 03.6	
	comp=Z,114nm,20.6s,MS4.3,baz=207,slow=33							
Z25A	**Roswell**	**93.27**	**319**	⇑P		**P**	**00 52 30.3**	**-1.5**
	baz=93							
BNM	**Barren Site**	**93.52**	**321**	*e*P		**P**	**00 52 33.9**	**+1.0**
	comp=Z,11nm,1.5s,mb5.1							
BNM	**Barren Site**	**93.52**	**321**	*e*P		**P**	**00 52 33.9**	**+1.0**
	comp=Z,11nm,1.5s,mb5.1							
YBH	**Yreka Blue Hor**	**93.54**	**336**		PFAKE		00 52 40.0	+7.2
YBH					LR	LR		
	comp=Z,781nm,19.0s,MS5.2							
LAZ	**Ladron**	**93.57**	**321**	*e*P		**P**	**00 52 34.9**	**+1.8**
	comp=Z,7.1nm,1.5s,mb4.9							
LAZ	**Ladron**	**93.57**	**321**	*e*P		**P**	**00 52 34.8**	**+1.7**
	comp=Z,7.1nm,1.5s,mb4.9							
125A	**Gardner Draw,**	**93.73**	**319**	⇓P		**P**	**00 52 32.7**	**-1.2**
	baz=93							
328A	**Wristen Ranch,**	**93.77**	**317**	⇑P		**P**	**00 52 34.3**	**+0.2**
	baz=94							
X21A	**Alamocita Cree**	**93.84**	**322**	⇓P		**P**	**00 52 34.0**	**-0.4**
	baz=94,SNR=13							
226A	**Malaga, Loving**	**93.92**	**318**	⇑P		**P**	**00 52 34.4**	**-0.3**
	baz=94							
KVTX	**Kingsville**	**93.96**	**311**		PFAKE		00 52 50.0	+15
KVTX					LR	LR		
	comp=Z,481nm,19.0s,MS5.0							
R11A	**Troy Canyon, C**	**93.98**	**329**	⇓P		**P**	**00 52 34.7**	**-0.2**
	baz=94							
U16A	**Tuba City**	**93.98**	**325**	⇓P		**P**	**00 52 34.6**	**-0.4**
	baz=94							
124A	**Stringfield Ra**	**94.10**	**319**	⇑P		**P**	**00 52 35.2**	**-0.4**
	baz=94							
X20A	**Quemado**	**94.10**	**322**	⇑P		**P**	**00 52 34.8**	**-0.7**
	baz=94							
Y21A	**Point of Rocks**	**94.14**	**321**	⇑P		**P**	**00 52 35.1**	**-0.6**
	baz=94							
U15A	**North Rim**	**94.25**	**326**	⇓P		**P**	**00 52 36.3**	**+0.1**
	baz=94							
V17A	**Tonalea, Kykot**	**94.27**	**324**	⇓P		**P**	**00 52 36.1**	**-0.2**
	baz=94							
DAV	**Davao City (W)**	**94.49**	**77**		PFAKE		00 52 50.0	+12
DAV					LR	LR		
	comp=Z,334nm,19.0s,MS4.8							
WDC	**Whiskeytown Da**	**94.53**	**335**		PFAKE		00 52 50.0	+13
WDC					LR	LR		
	comp=Z,592nm,19.0s,MS5.1							
BCIP	**Isla Barro Col**	**94.60**	**286**		PFAKE		00 52 50.0	+12
BCIP					LR	LR		
	comp=Z,139nm,19.0s,MS4.4							
WUAZ	**Wupatki**	**94.62**	**325**		PFAKE		00 52 50.0	+12
WUAZ					LR	LR		
	comp=Z,505nm,21.0s,MS5.0							
U14A	**Mt Trumbull**	**94.64**	**327**	⇑P		**P**	**00 52 37.6**	**-0.4**
	baz=94							
528A	**Cox Ranch, San**	**94.71**	**316**	⇓P		**P**	**00 52 38.5**	**+0.1**
	baz=94,SNR=6.9							
TPH	**Tonopah**	**94.86**	**330**		PFAKE		00 52 50.0	+11
TPH					LR	LR		
	comp=Z,467nm,20.0s,MS5.0							
MNTX	**Cornudas Mount**	**94.86**	**318**	*e*P		**P**	**00 52 39.2**	**+0.1**
	comp=Z,4.9nm,1.1s,mb4.8							
MNTX					LR	LR		
	comp=Z,460nm,21.0s,MS4.9							
MNTX	**Cornudas Mount**	**94.86**	**318**	*e*P		**P**	**00 52 39.2**	**+0.1**
	comp=Z,4.9nm,1.1s,mb4.8							
NVAR	**Mina Array Bea**	**94.96**	**331**	P		**P**	**00 52 39.9**	**+0.5**
	comp=Z,3.5nm,0.8s,mb4.8,baz=355,slow=3.2,SNR=16							
NVAR	**Mina Array Bea**	**94.96**	**331**	P		**P**	**00 52 39.9**	**+0.5**
426A	**McDonald Obser**	**94.98**	**317**	⇑P		**P**	**00 52 39.2**	**-0.4**
	baz=95,SNR=11							
324A	**Moseley Ranch,**	**95.12**	**318**	⇑P		**P**	**00 52 39.7**	**-0.5**
	baz=95,SNR=9.4							
628A	**Black Gap, Mar**	**95.29**	**315**	⇓P		**P**	**00 52 39.0**	**-2.1**
	baz=95,SNR=7.0							
Z20A	**Nine Sixteen R**	**95.31**	**322**	⇓P		**P**	**00 52 41.2**	**+0.1**
	baz=95							
V13A	**Grand Canyon W**	**95.47**	**327**	⇑P		**P**	**00 52 42.2**	**+0.4**
	baz=95							
526A	**Mary Lane Ranc**	**95.49**	**317**	⇓P		**P**	**00 52 41.2**	**-0.8**
	baz=95							
627A	**Terlingua Ranc**	**95.59**	**316**	⇓P		**P**	**00 52 42.2**	**-0.2**
	baz=95							
TXAR	**Lajitas Array**	**95.83**	**316**	P		**P**	**00 52 43.9**	**+0.3**
	comp=Z,2.1nm,1.1s,mb4.5,baz=44,slow=4.2,SNR=11							
TXAR					LR	LR	01 35 59.4	
	comp=Z,554nm,18.9s,MS5.1,baz=345,slow=36							
TXAR	**Lajitas Array**	**95.83**	**316**	P		**P**	**00 52 43.8**	**+0.2**
X15A	**Humboldt**	**95.86**	**325**	⇓P		**P**	**00 52 43.5**	**-0.2**
	baz=96							
CMB	**Columbia Colle**	**96.07**	**332**		PFAKE		00 53 00.0	+16
CMB					LR	LR		
	comp=Z,468nm,19.0s,MS5.0							
HOPS	**Hopland**	**96.14**	**335**		PFAKE		00 53 00.0	+15
HOPS					LR	LR		
	comp=Z,680nm,20.0s,MS5.1							
DAC	**Darwin (Calif)**	**96.57**	**330**		PFAKE		00 53 00.0	+13
DAC					LR	LR		
	comp=Z,433nm,19.0s,MS5.0							
TGUH	**Tegucigalpa,Un**	**96.72**	**294**		PFAKE		00 53 00.0	+12
TGUH					LR	LR		
	comp=Z,339nm,21.0s,MS4.8							
MCCM	**Marconi Confer**	**96.84**	**334**		PFAKE		00 53 00.0	+12
MCCM					LR	LR		
	comp=Z,701nm,19.0s,MS5.2							
TUC	**Tucson**	**97.02**	**323**		PFAKE		00 53 00.0	+11
TUC					LR	LR		
	comp=Z,951nm,19.0s,MS5.3							
SAO	**San Andreas Ge**	**97.58**	**333**		PFAKE		00 53 00.0	+8.6
SAO					LR	LR		
	comp=Z,619nm,19.0s,MS5.1							
JTS	**JuntasAbangare**	**97.61**	**290**		PFAKE		00 53 00.0	+8.2
JTS					LR	LR		
	comp=Z,257nm,22.0s,MS4.7							
PFO	**Pinyon Flat Ob**	**98.43**	**327**		PFAKE		00 53 10.0	+15
PFO					LR	LR		
	comp=Z,574nm,20.0s,MS5.1							
LPAZ	**La Paz**	**101.69**	**259**		PFAKE		00 53 20.0	+10
LPAZ					LR	LR		
	comp=Z,216nm,19.0s,MS4.7							
TRQA	**Tornquist**	**110.20**	**237**		PFAKE		00 58 00.0	+11
TRQA					LR	LR		
	comp=Z,488nm,19.0s,MS5.1							
PLCA	**Paso Flores**	**117.23**	**238**		PFAKE		00 58 10.0	+8.1
PLCA					LR	LR		
	comp=Z,401nm,21.0s,MS5.0							
ASAR	**Alice Springs**	**119.75**	**97**	PKP		PKPdf	00 58 06.5	-0.7
	comp=Z,0.9nm,0.8s,baz=327,slow=1.5,SNR=7.8							
ASAR	**Alice Springs**	**119.75**	**97**	PKIKP		PKPdf	00 58 06.6	-0.7
QSPA	**South Pole Qui**	**129.43**	**180**	*e*PKPdf		PKPdf	00 58 23.9	-0.2
QSPA					LR	LR		
	comp=Z,379nm,20.0s,MS5.1							
QSPA	**South Pole Qui**	**129.43**	**180**	*e*PKIKP		PKPdf	00 58 23.9	-0.2
HNR	**Honiara**	**130.74**	**65**		PFAKE		00 58 40.0	+11
HNR					LR	LR		
	comp=Z,167nm,19.0s,MS4.8							

*THR **03** 00:44:38.4±0.3,27.66N×57.03E,h15km±3km, ML3.5*
*ISCJB **03** 00:44:40.2±0.9,27.85N±0.06×57.25E±0.06,h10km, Error ellipse: s-maj=9.6km s-min=5.2km az=140.3*
*TEH **03** 00:44:40.9,27.71N×57.27E,h12km*
ISC 03 00:44:41.6±1.2,27.83N±0.06×57.19E±0.06,h5km±11km, n8,∘0889/13,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**0.69**	**237**	*e*Pg	**Pg**	**00 44 53.4**	**-1.5**
IBND				*e*Pg	**Pg**	**00 44 53.6**	**-1.3**
IBND				*e*Sg	**Sg**	**00 45 05.8**	**+1.9**
IBND				*e*		00 45 16.0	
	comp=Z,36μm,0.2s						
IBND				*e*		00 45 16.3	
	comp=Z,40μm,0.2s						
BNDS	**Bandar-Abbas**	**1.00**	**245**	*e*Pg	**Pg**	**00 44 53.8**	**-7.1**
BNDS				AML	AML	00 45 17.2	
	comp=N,3μm,0.3s						
KRBR	**Kerman**	**2.17**	**350**	*e*Pn	**Pn**	**00 45 18.5**	**+0.1**
KRBR				*e*Sg	**Sg**	**00 45 51.8**	**+0.3**
KRBR				AML	AML	00 46 02.9	
	comp=N,244nm,0.6s						
KRBR				AML	AML	00 46 03.1	
	comp=E,184nm,0.2s						
ZHSF	**Zahedan**	**3.61**	**60**	*e*Pn	**Pn**	**00 45 39.0**	**+0.8**
ZHSF				*e*Sg	**Sg**	**00 46 37.4**	**-0.2**
ISRV	**Sarvestan**	**3.90**	**294**	*e*	**Pn**	**00 45 40.0**	**-2.2**
	comp=Z,1μm,0.5s						
ISRV				*e*Pn	**Pn**	**00 45 42.3**	**+0.1**
IPAR	**Pars**	**4.15**	**300**	*e*Pn	**Pn**	**00 45 45.4**	**-0.2**
IPAR				*e*		00 45 46.7	
	comp=Z,499nm,0.4s						
IMEH	**Mehriz**	**4.20**	**328**	*e*Pn	**Pn**	**00 45 46.4**	**+0.2**
IMEH				*e*		00 45 53.4	
	comp=Z,430nm,0.4s						
ISAD	**Sadrabad**	**5.08**	**324**	*e*Pn	**Pn**	**00 45 58.3**	**0.0**

BJI 03 00:50:21.7,31.33N×103.22E,h12km,ML3.5/8,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.62**	**132**	Pg	Pg	00 50 30.4	-3.4
CD2				Sg	Sg	00 50 39.5	-2.5
CD2				smax			
	comp=N,2μm,0.8s						
CD2				smax			
	comp=E,3μm,0.5s						

IGQ 03 00:51:44.2,0.53N×80.13W,h17km±3km, Mb4.2,Ms4.0, 5C-4D,Error ellipse: s-maj=7.3km s-min=1.6km az=54.8, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAG1	**Magdalena**	**0.70**	**149**	⇓P	Pg	00 51 58.7	+0.8
JAMA	**Jama**	**0.79**	**186**	P	Pb	00 51 58.6	-0.9
PINO	**Pino**	**1.67**	**114**	⇑P	Pn	00 52 14.8	+2.0
TERV	**Terraza Guagua**	**1.68**	**115**	P	Pn	00 52 15.6	+2.7
CHIS	**Cerro-Chispas-**	**1.68**	**201**	S	Sn	00 52 36.2	+2.2
CHIS	**Cerro-Chispas-**	**1.68**	**201**	P	Pn	00 52 14.3	+1.4
YANA	**Yana**	**1.69**	**113**	⇑S	Sn	00 52 36.5	+2.3
YANA	**Yana**	**1.69**	**113**	⇑P	Pn	00 52 15.1	+2.2
GGP	**Refugio Guagua**	**1.69**	**115**	P	Pn	00 52 14.8	+1.9
JUA2	**San Juan 2**	**1.69**	**116**	P	Pn	00 52 15.0	+2.0
OTAV	**Otavalo**	**1.70**	**100**	⇓P	Pn	00 52 15.9	+2.7
COTA	**Cotacachi**	**1.80**	**96**	⇓S	Sn	00 52 44.3	+7.3
COTA	**Cotacachi**	**1.80**	**96**	⇓P	Pn	00 52 18.6	+4.1
PITA	**Cotopaxi Volc**	**2.01**	**123**	P	Pn	00 52 20.3	+2.8
CAMI	**Rancho Maria**	**2.02**	**126**	P	Pn	00 52 20.5	+3.0
NAS2	**Nasa**	**2.03**	**125**	P	Pn	00 52 20.9	+3.3
VC1	**Cotopaxi 1**	**2.08**	**124**	P	Pn	00 52 21.5	+3.1
MOV1	**Cotopaxi Vol s**	**2.09**	**126**	P	Pn	00 52 22.1	+3.6
TAMB	**Tambo**	**2.14**	**125**	P	Pn	00 52 22.6	+3.4
COV1	**Cotopaxi Volc**	**2.14**	**124**	P	Pn	00 52 21.5	+2.3
CAYR	**Refugio Cayamb**	**2.18**	**104**	P	Pn	00 52 25.4	+5.6
CAYA	**Cayambe**	**2.19**	**102**	S	Sn	00 52 55.1	+8.5
CAYA	**Cayambe**	**2.19**	**102**	P	Pn	00 52 25.2	+5.3
ANTI	**Antisana**	**2.19**	**116**	⇑P	Pn	00 52 23.5	+3.6
PISA	**Pisayambo**	**2.35**	**132**	P	Pn	00 52 26.2	+4.0
IGUA	**Igualata**	**2.50**	**143**	P	Pn	00 52 28.1	+4.0
CHAR	**Charly**	**2.53**	**104**	P	Pn	00 52 32.2	+7.6
RUN5	**Runtun**	**2.58**	**139**	P	Pn	00 52 30.3	+5.1
BRUN	**Tungurahua Vol**	**2.59**	**138**	P	Pn	00 52 25.9	+0.5
BUL	**Ulba Tungurahu**	**2.60**	**139**	P	Pn	00 52 26.0	+4.0
BMAS	**Trigal station**	**2.61**	**141**	P	Pn	00 52 29.9	+4.2
ARRY	**Arrayan**	**2.63**	**140**	⇑P	Pn	00 52 30.0	+4.1

*BJI **03** 00:52:52.1,39.60N×23.90E,h10km,mB5.0/10,mb4.7/16, Ms5.0/6,Ms7.4/6*
*PDG **03** 00:52:53.8±0.6,39.54N×23.91E,h11km±1km,ML4.1/10, Error ellipse: s-maj=0.7km s-min=1.3km az=0.0*
*ISCJB **03** 00:52:54.2±0.3,39.58N±0.01×23.88E±0.01,h18km±3km, mb4.3/33,MS4.8/4,Error ellipse: s-maj=1.9km s-min=1.5km az=25.7*
*CSEM **03** 00:52:54.7±0.1,39.56N×23.88E,h10km,mb4.5/8,Error ellipse: s-maj=1.7km s-min=1.4km az=25.0*
*NEIC **03** 00:52:54.1,39.56N×23.90E,h27km,mb3.8/19, ML4.5(THE),ML4.4(ATH),After ATH.*
NEIC Felt at Thessaloniki and Volos.
*ATH **03** 00:52:54.1,39.56N×23.90E,h27km±1km,ML4.4*
*THE **03** 00:52:55.2,39.58N×23.90E,h2km±1km,ML4.5/10,Error ellipse: s-maj=1.5km s-min=0.7km az=336.0*
*MOS **03** 00:52:55.9±1.4,39.59N×23.76E,h33km,mb4.4/10,Error ellipse: s-maj=4.8km s-min=3.1km az=109.0*
*IDC **03** 00:52:56.4±4.8,39.45N×23.88E,h20km±32km,mb3.9/15, mb1 3.9/23,mb1mx3.8/32,mbtmp3.9/23,ML3.8/8,Error ellipse: s-maj=13.8km s-min=11.3km az=1.0*
*DDA **03** 00:53:03.3,39.55N×24.99E,h18km±4km,Md3.6*
ISC 03 00:52:54.4±0.3,39.55N±0.01×23.87E±0.01,h7km±2km, h15km±.5km:pP-P,n699,∘1912/805,mb4.3/33,MS4.8/4, 27C-29D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.38**	**179**	P	**Pg**	**00 53 03.0**	**+1.3**
AOS	**Alonnisos**	**0.38**	**179**	P	**Pg**	**00 53 03.4**	**+1.7**
AOS				S	**Sg**	**00 53 09.8**	**+3.1**
AOS	**Alonnisos**	**0.38**	**179**	P	**Pg**	**00 53 03.0**	**+1.3**
AOS				S	**Sg**	**00 53 09.8**	**+3.1**
PAIG	**Paliouri**	**0.41**	**339**	P	**Pg**	**00 53 02.4**	**+0.1**
PAIG	**Paliouri**	**0.41**	**339**	P	**Pg**	**00 53 02.8**	**+0.5**
PAIG				S	**Sg**	**00 53 08.8**	**+1.2**
PAIG	**Paliouri**	**0.41**	**339**	P	**Pg**	**00 53 02.4**	**+0.1**
PAIG				S	**Sg**	**00 53 08.8**	**+1.2**
NEO	**Neokhori**	**0.56**	**244**	*e*Pn	**Pg**	**00 53 07.0**	**+1.9**
NEO				*e*Sn	**Sg**	**00 53 15.6**	**+3.2**
NEO	**Neokhori**	**0.56**	**244**	*e*PN	**Pg**	**00 53 07.0**	**+1.9**
NEO				*e*SN	**Sg**	**00 53 15.6**	**+3.2**
NEO	**Neokhori**	**0.56**	**244**	*e*Pn	**Pg**	**00 53 07.0**	**+1.9**
XOR	**Xorichti**	**0.56**	**251**	P	**Pg**	**00 53 06.6**	**+1.5**
XOR	**Xorichti**	**0.56**	**251**	P	**Pg**	**00 53 06.2**	**+1.1**
XOR				S	**Sg**	**00 53 15.3**	**+2.9**
XOR	**Xorichti**	**0.56**	**251**	P	**Pg**	**00 53 06.2**	**+1.1**
XOR				S	**Sg**	**00 53 15.3**	**+2.9**
OUR	**Ouranopolis**	**0.79**	**6**	P	**Pg**	**00 53 08.8**	**-0.8**
OUR	**Ouranopolis**	**0.79**	**6**	P	**Pg**	**00 53 09.1**	**-0.5**
OUR				S	**Sg**	**00 53 20.8**	**+1.0**
OUR	**Ouranopolis**	**0.79**	**6**	P	**Pg**	**00 53 09.1**	**-0.5**
OUR				S	**Sg**	**00 53 20.8**	**+1.0**
LIA	**Limnos Island**	**1.07**	**71**	*e*Pn	**Pn**	**00 53 14.3**	**-1.5**
LIA				*e*Sn	**Sn**	**00 53 29.2**	**-1.7**
LIA	**Limnos Island**	**1.07**	**71**	*e*PN	**Pn**	**00 53 14.3**	**-1.5**
LIA				*e*SN	**Sn**	**00 53 29.2**	**-1.7**
LIA	**Limnos Island**	**1.07**	**71**	P	**Pg**	**00 53 14.2**	**-0.7**
LIA				S	**Sg**	**00 53 29.9**	**+1.1**
LIA	**Limnos Island**	**1.07**	**71**	P	**Pg**	**00 53 14.2**	**-0.7**
LIA				*e*Sn	**Sn**	**00 53 29.2**	**-1.7**
LIA				S	**Sg**	**00 53 29.9**	**+1.1**
ATAL	**Atalanti**	**1.08**	**218**	P	**Pg**	**00 53 15.2**	**+0.1**
ATAL				S	**Sg**	**00 53 30.2**	**+1.0**
ATAL	**Atalanti**	**1.08**	**218**	P	**Pg**	**00 53 15.2**	**+0.1**
ATAL				S	**Sg**	**00 53 30.2**	**+1.0**
LKR	**Lokris**	**1.13**	**217**	*e*Pn	**Pn**	**00 53 15.9**	**-0.7**
LKR	**Lokris**	**1.13**	**217**	*e*PN	**Pn**	**00 53 15.9**	**-0.7**
LKR	**Lokris**	**1.13**	**217**	P	**Pg**	**00 53 15.8**	**-0.2**
LKR	**Lokris**	**1.13**	**217**	P	**Pg**	**00 53 15.8**	**-0.2**
LIT	**Litokhoron**	**1.20**	**298**	*e*Pb	**Pb**	**00 53 15.6**	**-1.9**
LIT	**Litokhoron**	**1.20**	**298**	*e*PB	**Pb**	**00 53 15.6**	**-1.9**
LIT	**Litokhoron**	**1.20**	**298**	P	**Pg**	**00 53 15.3**	**-2.1**
LIT				S	**Sg**	**00 53 32.2**	**-0.8**
LIT	**Litokhoron**	**1.20**	**298**	P	**Pg**	**00 53 15.3**	**-2.1**
LIT	**Litokhoron**	**1.20**	**298**	*e*Pb	**Pb**	**00 53 15.6**	**-1.9**
LIT				S	**Sg**	**00 53 32.2**	**-0.8**
HORT	**Hortiatis**	**1.20**	**331**	P	**Pg**	**00 53 16.2**	**-1.3**
HORT	**Hortiatis**	**1.20**	**331**	P	**Pg**	**00 53 17.4**	**-0.1**
HORT				S	**Sg**	**00 53 34.1**	**+1.0**
HORT	**Hortiatis**	**1.20**	**331**	P	**Pg**	**00 53 17.4**	**-0.1**
HORT				S	**Sg**	**00 53 34.1**	**+1.0**
THE	**Thessaloniki**	**1.29**	**328**	P	**Pn**	**00 53 18.6**	**-0.2**
THE	**Thessaloniki**	**1.29**	**328**	P	**Pn**	**00 53 18.6**	**-0.2**
AGG	**Agios Georgios**	**1.31**	**247**	*e*Pn	**Pn**	**00 53 18.5**	**-0.6**
AGG				*e*Sn	**Sn**	**00 53 37.3**	**+0.5**
AGG	**Agios Georgios**	**1.31**	**247**	*e*PN	**Pn**	**00 53 18.5**	**-0.6**
AGG					*e*SN	**Sn**	**00 53 37.3**	**+0.5**
AGG	**Agios Georgios**	**1.31**	**247**	*e*Pn	**Pn**	**00 53 19.2**	**+0.1**
AGG	**Agios Georgios**	**1.31**	**247**	P	**Pn**	**00 53 19.2**	**+0.1**
AGG				S	**Sb**	**00 53 39.5**	**+3.2**
AGG	**Agios Georgios**	**1.31**	**247**	*e*Pn	**Pn**	**00 53 18.5**	**-0.6**
AGG	**Agios Georgios**	**1.31**	**247**	P	**Pn**	**00 53 19.2**	**+0.1**
AGG				*e*Sn	**Sn**	**00 53 37.3**	**+0.5**
AGG				S	**Sb**	**00 53 39.5**	**+3.2**
SOH	**Sokhos**	**1.33**	**343**	*e*Pn	**Pn**	**00 53 18.6**	**-0.8**
SOH				*e*Sn	**Sn**	**00 53 38.2**	**+0.8**
SOH	**Sokhos**	**1.33**	**343**	*e*PN	**Pn**	**00 53 18.6**	**-0.8**
SOH				*e*SN	**Sn**	**00 53 38.2**	**+0.8**
SOH	**Sokhos**	**1.33**	**343**	P	**Pn**	**00 53 20.5**	**+1.1**
SOH				S	**Sn**	**00 53 38.2**	**+0.8**
SOH	**Sokhos**	**1.33**	**343**	*e*Pn	**Pn**	**00 53 18.6**	**-0.8**
SOH	**Sokhos**	**1.33**	**343**	P	**Pn**	**00 53 20.5**	**+1.1**
SOH				S	**Sn**	**00 53 38.2**	**+0.8**
THL	**Klokotos Trika**	**1.44**	**271**	*e*PN	**Pn**	**00 53 20.1**	**-0.8**
THL	**Klokotos Trika**	**1.44**	**271**	P	**Pn**	**00 53 20.0**	**-0.9**
THL	**Klokotos Trika**	**1.44**	**271**	*e*Pn	**Pn**	**00 53 20.1**	**-0.8**
PTL	**Penteli**	**1.50**	**180**	*e*Pn	**Pn**	**00 53 21.4**	**-0.3**
PTL	**Penteli**	**1.50**	**180**	*e*PN	**Pn**	**00 53 21.4**	**-0.3**
PTL	**Penteli**	**1.50**	**180**	*e*Pn	**Pn**	**00 53 21.4**	**-0.3**
KAVA	**Kavala**	**1.53**	**19**	P	**Pn**	**00 53 22.0**	**-0.1**
KAVA				S	**Sn**	**00 53 44.0**	**+1.8**
KAVA	**Kavala**	**1.53**	**19**	P	**Pn**	**00 53 22.0**	**-0.1**
KAVA				S	**Sn**	**00 53 44.0**	**+1.8**
DSF	**Desfina**	**1.55**	**223**	P	**Pn**	**00 53 21.5**	**-0.9**
DSF	**Desfina**	**1.55**	**223**	P	**Pn**	**00 53 21.5**	**-0.9**
ATH	**Athens Observa**	**1.58**	**184**	*e*Pn	**Pn**	**00 53 22.6**	**-0.2**
ATH				*e*Sn	**Sn**	**00 53 43.1**	**-0.4**
ATH	**Athens Observa**	**1.58**	**184**	*e*PN	**Pn**	**00 53 22.6**	**-0.2**
ATH				*e*SN	**Sn**	**00 53 43.1**	**-0.4**
ATH	**Athens Observa**	**1.58**	**184**	*e*Pn	**Pn**	**00 53 22.6**	**-0.2**
ATH				*e*Sn	**Sn**	**00 53 43.1**	**-0.4**
SRS	**Serrai**	**1.58**	**352**	P	**Pn**	**00 53 21.3**	**-1.6**
SRS	**Serrai**	**1.58**	**352**	P	**Pn**	**00 53 22.4**	**-0.5**
SRS	**Serrai**	**1.58**	**352**	P	**Pn**	**00 53 22.4**	**-0.5**
ATHU	**Athens Univers**	**1.58**	**183**	P	**Pn**	**00 53 23.0**	**+0.1**
ATHU				S	**Sn**	**00 53 46.9**	**+3.3**
ATHU	**Athens Univers**	**1.58**	**183**	P	**Pn**	**00 53 23.0**	**+0.1**
ATHU				S	**Sn**	**00 53 46.9**	**+3.3**
LTK	**Loutraki**	**1.68**	**205**	*e*PB	**Pb**	**00 53 23.8**	**-1.9**
LTK	**Loutraki**	**1.68**	**205**	P	**Pn**	**00 53 23.7**	**-0.5**
LTK	**Loutraki**	**1.68**	**205**	P	**Pn**	**00 53 23.7**	**-0.5**
GADA	**Gvkgeada**	**1.69**	**67**	*e*PN	**Pn**	**00 53 23.0**	**-1.3**
GADA				*e*SN	**Sn**	**00 53 47.7**	**+1.6**
GADA	**Gvkgeada**	**1.69**	**67**	*e*Pn	**Pn**	**00 53 23.0**	**-1.3**
GADA				*e*Sn	**Sn**	**00 53 47.7**	**+1.6**
VLY	**Voula,Athens**	**1.69**	**182**	*e*Pn	**Pn**	**00 53 24.1**	**-0.3**
VLY				*e*Sn	**Sn**	**00 53 46.5**	**+0.1**
VLY	**Voula,Athens**	**1.69**	**182**	*e*PN	**Pn**	**00 53 24.1**	**-0.3**
VLY				*e*SN	**Sn**	**00 53 46.5**	**+0.1**
VLY	**Voula,Athens**	**1.69**	**182**	*e*Pn	**Pn**	**00 53 24.1**	**-0.3**
VLY				*e*Sn	**Sn**	**00 53 46.5**	**+0.1**
EVR	**Evrytania**	**1.72**	**249**	*e*Pn	**Pn**	**00 53 24.8**	**0.0**
EVR	**Evrytania**	**1.72**	**249**	*e*PN	**Pn**	**00 53 24.8**	**0.0**
EVR	**Evrytania**	**1.72**	**249**	*e*Pn	**Pn**	**00 53 24.8**	**0.0**
KNT	**Kendrikon**	**1.77**	**335**	P	**Pn**	**00 53 25.9**	**+0.4**
KNT				S	**Sn**	**00 53 49.9**	**+1.5**
KNT	**Kendrikon**	**1.77**	**335**	P	**Pn**	**00 53 25.9**	**+0.4**
KNT				S	**Sn**	**00 53 49.9**	**+1.5**
KALE	**Kalithea**	**1.78**	**230**	P	**Pn**	**00 53 25.2**	**-0.4**
KALE	**Kalithea**	**1.78**	**230**	P	**Pn**	**00 53 25.2**	**-0.4**
KZN	**Kozani**	**1.79**	**296**	*e*Pb	**Pb**	**00 53 25.2**	**-2.2**
KZN	**Kozani**	**1.79**	**296**	*e*PB	**Pb**	**00 53 25.2**	**-2.2**
KZN	**Kozani**	**1.79**	**296**	P	**Pn**	**00 53 25.0**	**-0.7**
KZN	**Kozani**	**1.79**	**296**	P	**Pn**	**00 53 25.0**	**-0.7**
NVR	**Nevrokopi**	**1.80**	**360**	*e*Pb	**Pb**	**00 53 24.7**	**-3.0**
NVR	**Nevrokopi**	**1.80**	**360**	*e*PB	**Pb**	**00 53 24.7**	**-3.0**
NVR	**Nevrokopi**	**1.80**	**360**	*e*Pb	**Pb**	**00 53 24.7**	**-3.0**
GRG	**Griva**	**1.80**	**322**	P	**Pn**

BLCB	Balcova	2.73	114	*e*Pn	Pn	00 53 37.3	-1.4	NPS	Neapolis	4.50	162	*e*PN	Pn	00 54 02.7	-0.3		9.8nm,0.9s				
BLCB	Balcova	2.73	114	P	Pn	00 53 39.9	+1.2	NPS	Neapolis	4.50	162	*e*Pn	Pn	00 54 02.7	-0.3	BR131	**Keskin Array S**	7.54	86	*e*Pn	Pn	00 54 44.8	+0.1
IGT	Igoumenitsa	2.74	271	P	Pn	00 53 40.8	+2.0	BOLS	Boljevac	4.51	342	⇓*i*Pn	Pn	00 54 02.1	-1.0		9.8nm,0.9s				
IGT	Igoumenitsa	2.74	271	P	Pn	00 53 40.8	+2.0	PDG	Podgorica	4.52	311	⇓*i*Pn	Pn	00 54 04.3	+1.0	BRTR	**Keskin Array B**	7.54	86	Pn	Pn	00 54 44.5	-0.3
IGT				S	Sn	00 54 14.5	+2.4	PDG				*e*Sn	Sn	00 54 57.6	+1.5		0.7nm,0.3s,baz=257,slow=11,SNR=25				
IGT	Igoumenitsa	2.74	271	P	Pn	00 53 40.8	+2.0	TTG	Podgorica	4.52	311	⇓*i*Pn	Pn	00 54 04.3	+1.0	BRTR				Sn	Sn	00 56 07.3	-3.1
IGT				S	Sn	00 54 14.5	+2.4	TTG				*e*Sn	Sn	00 54 57.6	+1.5		baz=67,slow=34,SNR=1.6				
RKY	Sarkoy-Tekirda	2.78	65	*e*PN	Pn	00 53 38.8	-0.5	KHAL	Karahalli	4.54	103	*i* P	Pn	00 54 04.5	+1.0	BRTR				Lg		00 56 57.6	
RKY	Sarkoy-Tekirda	2.78	65	*e*Pn	Pn	00 53 38.8	-0.5	KHAL	Karahalli	4.54	103	*i* P	Pn	00 54 04.5	+1.0		baz=269,slow=24,SNR=4.1				
APE	Apeiranthos	2.80	152	*e*PN	Pn	00 53 37.7	-1.9	LAST	Lasithi	4.56	163	*e*Pn	Pn	00 54 03.8	-0.1	**BRTR**	**Keskin Array B**	**7.54**	**86**	*i* P	**Pn**	**00 54 45.2**	**+0.5**
APE	Apeiranthos	2.80	152	*e*P	Pn	00 53 39.3	-0.3	LAST	Lasithi	4.56	163	*e*PN	Pn	00 54 03.8	-0.1	BRTR				pmax	pmax		
APE	Apeiranthos	2.80	152	*e*PN	Pn	00 53 39.2	-0.4	LAST	Lasithi	4.56	163	P	Pn	00 54 03.8	-0.1		comp=Z,2.0nm,0.5s				
APE	Apeiranthos	2.80	152	P	Pn	00 53 39.4	-0.2	LAST	Lasithi	4.56	163	P	Pn	00 54 03.8	-0.1	**BRTR**	**Keskin Array B**	**7.54**	**86**	Pn	**Pn**	**00 54 44.5**	**-0.2**
APE	Apeiranthos	2.80	152	P	Pn	00 53 39.4	-0.2	KHL	Karahalli	4.57	104	*e*PN	Pn	00 54 04.0	0.0	**BRTR**	**Keskin Array B**	**7.54**	**86**	*i* P	**Pn**	**00 54 45.2**	**+0.5**
KFL	Anninata	2.81	240	P	Pn	00 53 41.6	+1.9	KHL	Karahalli	4.57	104	*e*Pn	Pn	00 54 04.0	0.0		comp=Z,2.0nm,0.5s				
KFL	Anninata	2.81	240	P	Pn	00 53 41.6	+1.9	SIVA	Sivas	4.58	170	*e*Pn	Pn	00 54 05.7	+1.5	**RHK3**	**Tenkes**	**7.56**	**329**	⇓*e*P	**Pn**	**00 54 45.8**	**+0.7**
ITM	Ithomi	2.82	213	*e*Pn	Pn	00 53 41.1	+1.2	SIVA	Sivas	4.58	170	*e*PN	Pn	00 54 05.7	+1.5	**PKSM**	**Moragy**	**7.69**	**332**	⇓P	**Pn**	**00 54 46.5**	**-0.2**
ITM	Ithomi	2.82	213	*e*PN	Pn	00 53 41.1	+1.2	SIVA	Sivas	4.58	170	P	Pn	00 54 05.5	+1.3	**PKSM**	**Moragy**	**7.69**	**332**	P	**Pn**	**00 54 46.5**	**-0.2**
ITM	Ithomi	2.82	213	P	Pn	00 53 40.7	+0.8	SIVA	Sivas	4.58	170	P	Pn	00 54 05.5	+1.3	**VAE**	**Valguarnera**	**7.70**	**257**	Pn	**Pn**	**00 54 48.4**	**+1.4**
ITM	Ithomi	2.82	213	P	Pn	00 53 40.7	+0.8	ADVT	Abdulvahap	4.59	77	*e*PN	Pn	00 54 04.5	+0.2	VAE				Sn	Sn	00 56 18.1	+3.7
ITM	Ithomi	2.82	213	*e*Pn	Pn	00 53 41.1	+1.2	ADVT	Abdulvahap	4.59	77	*e*Pn	Pn	00 54 04.5	+0.3	**VAE**	**Valguarnera**	**7.70**	**257**	Pn	**Pn**	**00 54 48.4**	**+1.4**
OHR	Ohrid	2.82	305	*e*Pn	Pn	00 53 39.2	-0.7	HRT	Hereke	4.62	72	*e*PN	Pn	00 54 05.0	+0.4		comp=Z,2.9nm,0.3s,baz=274,slow=16,SNR=9.1				
OHR				*e*Sg	Sn	00 54 14.3	+0.2	HRT	Hereke	4.62	72	*e*Pn	Pn	00 54 05.0	+0.4	VAE				Sn	Sn	00 56 18.1	+3.7
IZM	Izmir	2.88	112	*e*PN	Pn	00 53 39.6	-1.2	CAVI	Cavuskoy	4.64	80	*e*PN	Pn	00 54 05.1	+0.2		comp=Z,3.6nm,0.3s,baz=85,slow=12,SNR=3.0				
KDAG	Bornova	2.88	112	*i* P	Pn	00 53 40.6	-0.1	CAVI	Cavuskoy	4.64	80	*e*Pn	Pn	00 54 05.1	+0.2	**VAE**	**Valguarnera**	**7.70**	**257**	Pn	**Pn**	**00 54 48.4**	**+1.5**
KDAG	Bornova	2.88	112	*i* P	Pn	00 53 40.6	-0.1	BUM	Brajici-Budva	4.66	308	⇑*i*Pn	Pn	00 54 06.1	+0.9	BURAR	**Bucovina Array**	**8.12**	**6**	⇓P	**Pn**	**00 54 52.6**	**-0.1**
MFT	Murefte	2.89	64	*e*PN	Pn	00 53 41.3	+0.5	BUM				*e*Sn	Sn	00 55 00.7	+1.1	BURAR	**Bucovina Array**	**8.12**	**6**	⇓P	**Pn**	**00 54 52.6**	**-0.1**
MFT	Murefte	2.89	64	*e*Pn	Pn	00 53 40.8	0.0	BUM	Brajici-Budva	4.66	308	⇑*i*Pn	Pn	00 54 06.1	+0.9	PKS9	**Tamasi**	**8.14**	**332**	*e*P	**Pn**	**00 54 52.4**	**-0.5**
BALY	Balya	2.90	85	*i* P	Pn	00 53 40.8	-0.2	BUM				*e*Sn	Sn	00 55 00.7	+1.1	BUR08	**Bucovina Ar. S**	**8.15**	**6**	*e*Pn	**Pn**	**00 54 52.7**	**-0.4**
BALY	Balya	2.90	85	*i* P	Pn	00 53 40.8	-0.2	GVD	Gavdhos	4.71	178	*e*Pn	Pn	00 54 07.4	+1.6	BUR08	**Bucovina Ar. S**	**8.15**	**6**	*e*Pn	**Pn**	**00 54 52.7**	**-0.4**
VLS	Valsamata	2.91	243	*e*Pn	Pn	00 53 42.6	+1.5	GVD	Gavdhos	4.71	178	*e*PN	Pn	00 54 07.4	+1.6	PKS7	**Kunszentmiklos**	**8.24**	**337**	*e*P	**Pn**	**00 54 54.1**	**-0.2**
VLS	Valsamata	2.91	243	*e*PN	Pn	00 53 42.5	+1.5	GVD	Gavdhos	4.71	178	*e*Pn	Pn	00 54 07.4	+1.6	KIS	**Kishinev**	**8.27**	**24**	*e*	**Pn**	**00 55 03.0**	**+8.3**
VLS	Valsamata	2.91	243	P	Pn	00 53 42.5	+1.4	ARG	Arkhangelos	4.73	133	*e*Pn	Pn	00 54 07.0	+0.8	WDD	**Wield Dalam**	**8.27**	**247**	*e*Pn	**Pn**	**00 54 53.8**	**-0.8**
VLS	Valsamata	2.91	243	P	Pn	00 53 42.5	+1.4	ARG	Arkhangelos	4.73	133	*e*PN	Pn	00 54 07.0	+0.8	BOJS				*e*Sn	Sn	00 56 23.9	-4.6
VLI	Veliai	2.92	195	*e*Pn	Pn	00 53 40.9	-0.4	ARG	Arkhangelos	4.73	133	*e*Pn	Pn	00 54 07.0	+0.8	**WDD**	**Wield Dalam**	**8.27**	**247**	*e*Pn	**Pn**	**00 54 53.9**	**-0.9**
VLI	Veliai	2.92	195	*e*PN	Pn	00 53 40.9	-0.4	KARP	Karpathos	4.77	146	*e*Pn	Pn	00 54 06.6	-0.1	**NVLJ**	**Novalja**	**8.36**	**310**	*e*Pn	**Pn**	**00 54 54.9**	**-1.1**
VLI	Veliai	2.92	195	*e*Pn	Pn	00 53 40.9	-0.4	KARP	Karpathos	4.77	146	*e*PN	Pn	00 54 06.6	-0.1	NVLJ				Sn	Sn	00 56 26.7	-3.9
GONE	Gonen-Balikesi	2.98	79	*e*PN	Pn	00 53 41.6	-0.5	KARP	Karpathos	4.77	146	*e*Pn	Pn	00 54 06.6	-0.1	**NVLJ**	**Novalja**	**8.36**	**310**	*e*Pn	**Pn**	**00 54 54.8**	**-1.2**
GONE	Gonen-Balikesi	2.98	79	*e*Pn	Pn	00 53 41.6	-0.5	ZKR	Zakros	4.80	156	*e*Pn	Pn	00 54 07.8	+0.6	**AQU**	**L'Aquila**	**8.40**	**293**	*e*Pn	**Pn**	**00 54 56.1**	**-0.5**
SRN	Sarande	3.00	278	*e*PN	Pn	00 53 44.3	+1.9	ZKR	Zakros	4.80	156	*e*PN	Pn	00 54 07.8	+0.6	**AQU**	**L'Aquila**	**8.40**	**293**	*e*P	**Pn**	**00 54 56.1**	**-0.5**
SRN	Sarande	3.00	278	*e*Pn	Pn	00 53 44.3	+1.9	ZKR	Zakros	4.80	156	*e*Pn	Pn	00 54 07.8	+0.6	**BOJS**	**Bojanci**	**8.71**	**316**	*i* Pn	**Pn**	**00 55 00.6**	**-0.2**
SKO	Skopje	3.04	323	P	Pn	00 53 43.3	+0.3	ALT	Altintas	4.86	94	*e*PN	Pn	00 54 07.9	-0.1	BOJS				*e*Sn	Sn	00 56 35.5	-3.7
SKO	Skopje	3.04	323	*e*Pn	Pn	00 53 43.1	+0.1	ALT	Altintas	4.86	94	*e*Pn	Pn	00 54 07.9	-0.1	**BOJS**	**Bojanci**	**8.71**	**316**	*i* Pn	**Pn**	**00 55 00.6**	**-0.2**
SKO				*e*Sg	Sn	00 54 18.5	-1.2	NKY	Niksic	4.92	313	⇓*i*Pn	Pn	00 54 10.1	+1.4	**PKSG**		**8.79**	**335**	*e*P	**Pn**	**00 55 01.9**	**0.0**
SKO	Skopje	3.04	323	P	Pn	00 53 43.3	+0.3	NKY				*e*Sn	Sn	00 55 06.6	+0.8	**PSZ**	**Piszkesteto**	**8.85**	**342**	*e*Pn	**Pn**	**00 55 08.3**	**+5.7**
VTS	Vitosha	3.08	351	⇑P	Pn	00 53 42.6	-0.9	NKY	Niksic	4.92	313	⇓*i*Pn	Pn	00 54 10.1	+1.4	**VISS**	**Visnje**	**9.12**	**316**	*e*Pn	**Pn**	**00 55 06.1**	**-0.3**
VTS	Vitosha	3.08	351	P	Pn	00 53 43.5	0.0	NKY				*e*Sn	Sn	00 55 06.6	+0.8	VISS				*i* Sn	Sn	00 56 47.8	-1.6
VTS	Vitosha	3.08	351	P	Pn	00 53 43.5	0.0	HCY	Herceg Novi	4.99	307	⇑*i*Pn	Pn	00 54 10.1	+0.4	**VISS**	**Visnje**	**9.12**	**316**	*e*Pn	**Pn**	**00 55 06.1**	**-0.3**
BALB	Balikesir	3.10	87	*e*PN	Pn	00 53 43.1	-0.6	HCY				*e*Sn	Sn	00 55 08.4	+0.7	VISS				*i* Sn	Sn	00 56 47.8	-1.6
BALB	Balikesir	3.10	87	*e*Pn	Pn	00 53 43.1	-0.6	HCY	Herceg Novi	4.99	307	⇑*i*Pn	Pn	00 54 10.1	+0.4	UZH	**Uzhgorod**	**9.15**	**353**	*e*P	**Pn**	**00 55 10.0**	**+3.2**
AKS	Akhisar	3.13	101	*e*PN	Pn	00 53 43.4	-0.8	HCY				*e*Sn	Sn	00 55 08.4	+0.7	LJU	**Ljubljana**	**9.45**	**316**	*e*Pn	**Pn**	**00 55 10.6**	**-0.2**
AKS	Akhisar	3.13	101	*e*Pn	Pn	00 53 43.4	-0.8	GPA	Golpazari	5.00	79	*e*PN	Pn	00 54 10.5	+0.6	LJU	**Ljubljana**	**9.45**	**316**	*i* Pn	**Pn**	**00 55 10.6**	**-0.2**
AKHS	Akhisar	3.13	101	*i* P	Pn	00 53 44.6	+0.4	GLHS	Glhisar (BURDU	5.03	117	*e*PN	Pn	00 54 09.8	-0.4	PERS	**Pernice**	**9.54**	**321**	*i* Pn	**Pn**	**00 55 12.9**	**+0.7**
AKHS	Akhisar	3.13	101	*i* P	Pn	00 53 44.6	+0.4	GLHS	Glhisar (BURDU	5.03	117	*e*Pn	Pn	00 54 09.8	-0.4	PERS				*e*Sn	Sn	00 56 52.6	-7.1
PYL	PYLOS	3.14	213	*e*PN	Pn	00 53 45.7	+1.5	GOLH	Golhisar	5.03	116	*i* P	Pn	00 54 12.0	+1.7	**PERS**	**Pernice**	**9.54**	**321**	*i* Pn	**Pn**	**00 55 12.9**	**+0.7**
PYL	PYLOS	3.14	213	P	Pn	00 53 45.7	+1.5	GOLH	Golhisar	5.03	116	*i* P	Pn	00 54 12.0	+1.7	**SOKA**	**Soboth**	**9.62**	**321**	⇑*i*Pn	**Pn**	**00 55 13.8**	**+0.6**
PYL	PYLOS	3.14	213	P	Pn	00 53 45.7	+1.5	PLE	Pljevlja	5.06	320	⇓*i*Pn	Pn	00 54 12.1	+1.4	**SOKA**	**Soboth**	**9.62**	**321**	Pn	**Pn**	**00 55 13.8**	**+0.6**
TKR	Tekirdag	3.15	62	*e*PN	Pn	00 53 44.2	-0.3	PLE				*e*Sn	Sn	00 55 10.0	+0.7	**VYHS**	**Vyhne**	**9.65**	**340**	*e*Pn	**Pn**	**00 55 15.5**	**+1.9**
TKR	Tekirdag	3.15	62	*e*Pn	Pn	00 53 44.2	-0.2	PLE	Pljevlja	5.06	320	⇓*i*Pn	Pn	00 54 12.1	+1.4	VYHS				*e*		00 55 31.3	
KEK	Kerkira	3.15	274	*e*Pb	Pb	00 53 46.3	-4.4	PLE				*e*Sn	Sn	00 55 10.0	+0.7	VYHS				*e*Sn	Sn	00 57 00.1	-2.1
KEK	Kerkira	3.15	274	*e*PB	Pb	00 53 46.3	-4.4	SPNC	Sapanca-Adapaz	5.06	75	*e*PN	Pn	00 54 11.3	+0.6	VYHS				*e*Sg	Sn	00 58 11.6	+69
KEK	Kerkira	3.15	274	P	Pn	00 53 46.1	+1.7	SPNC	Sapanca-Adapaz	5.06	75	*e*Pn	Pn	00 54 11.3	+0.6	**VYHS**	**Vyhne**	**9.65**	**340**	*e*P	**Pn**	**00 55 15.5**	**+1.9**
KEK	Kerkira	3.15	274	P	Pn	00 53 46.1	+1.7	BORA	Eskisehir	5.08	84	*i* P	Pn	00 54 11.3	+0.3	VYHS				*e*		00 57 00.1	
EDRB	Edirne	3.17	43	*e*PN	Pn	00 53 44.2	-0.4	BORA	Eskisehir	5.08	84	*i* P	Pn	00 54 11.3	+0.3	**VYHS**	**Vyhne**	**9.65**	**340**	*e*PN	**Pn**	**00 55 15.5**	**+1.9**
EDRB	Edirne	3.17	43	*e*Pn	Pn	00 53 44.2	-0.5	PE1	Pezze di Greco	5.10	286	*e*Pn	Pn	00 54 10.7	-0.5	VYHS				*e*		00 55 31.3	
EDC	Edincik	3.17	74	*e*PN	Pn	00 53 44.4	-0.3	PE1				*e*Sn	Sn	00 55 06.5	-3.8	**VYHS**	**Vyhne**	**9.65**	**340**	*e*SN	**Sn**	**00 57 00.1**	**-2.1**
EDC	Edincik	3.17	74	*e*Pn	Pn	00 53 44.4	-0.3	TAR1	Taranto	5.15	283	*e*Pn	Pn	00 54 13.6	+0.8	VYHS				*e*		00 58 11.6	
BNT	Bandirma	3.21	74	*e*PN	Pn	00 53 44.6	-0.7	GULT	Gulveren	5.18	78	*e*PN	Pn	00 54 13.1	+0.8	VYHS				*e*S	Sn	00 57 00.1	-2.1
GCAM	G?zelcaml?	3.21	124	*i* P	Pn	00 53 46.4	+1.1	GULT	Gulveren	5.18	78	*e*Pn	Pn	00 54 13.1	+0.8	**VYHS**	**Vyhne**	**9.65**	**340**	*e*Pn	**Pn**	**00 55 15.5**	**+1.9**
GCAM	G?zelcaml?	3.21	124	*i* P	Pn	00 53 46.4	+1.1	UPM	Unac-Piva	5.22	316	⇑*i*Pn	Pn	00 54 14.3	+1.4	**TRI**	**Trieste**	**9.66**	**313**	*e*Pn	**Pn**	**00 55 13.1**	**-0.7**
KYTH	Kithira	3.33	192	*e*Pn	Pn	00 53 46.9	0.0	UPM				*e*Sn	Sn	00 55 14.0	+0.7	TRI				*e*Sn	Sn	00 56 54.3	-8.2
KYTH	Kithira	3.33	192	*e*PN	Pn	00 53 46.9	0.0	UPM	Unac-Piva	5.22	316	⇑*i*Pn	Pn	00 54 14.3	+1.4	**TRI**	**Trieste**	**9.66**	**313**	*e*P	**Pn**	**00 55 13.1**	**-0.7**
KYTH	Kithira	3.33	192	*e*Pn	Pn	00 53 46.9	0.0	UPM				*e*Sn	Sn	00 55 14.0	+0.7	**VOY**	**Vojsko**	**9.78**	**315**	*e*Pn	**Pn**	**00 55 15.3**	**-0.1**
THR5	Thira Island,	3.34	159	P	Pn	00 53 47.1	+0.1	BRY	Bratogost	5.23	312	⇓*i*Pn	Pn	00 54 13.7	+0.7	VOY				*e*Sn	Sn	00 57 00.7	-4.8
THR5	Thira Island,	3.34	159	P	Pn	00 53 47.1	+0.1	BRY				*e*Sn	Sn	00 55 14.1	+0.6	**VOY**	**Vojsko**	**9.78**	**315**	*e*Pn	**Pn**	**00 55 15.3**	**-0.1**
CRLT	Corlu	3.35	61	*e*PN	Pn	00 53 46.9	-0.2	BRY	Bratogost	5.23	312	⇓*i*Pn	Pn	00 54 13.7	+0.7	**ARSA**	**Arzberg**	**9.80**	**324**	⇑*i*Pn	**Pn**	**00 55 16.5**	**+0.8**
CRLT	Corlu	3.35	61	*e*Pn	Pn	00 53 46.9	-0.2	BRY				*e*Sn	Sn	00 55 14.1	+0.6		SNR=12				
THR3	Thira Island,	3.36	158	P	Pn	00 53 47.8	+0.5	SHUT	Suhut-Afyon	5.29	99	*e*PN	Pn	00 54 14.2	+0.3	ARSA				⇓*i*Sn	Sn	00 57 08.4	+2.4
THR3	Thira Island,	3.36	158	P	Pn	00 53 47.8	+0.5	SHUT	Suhut-Afyon	5.29	99	*e*Pn	Pn	00 54 14.2	+0.3	**ARSA**	**Arzberg**	**9.80**	**324**	Pn	**Pn**	**00 55 16.5**	**+0.8**
KCTX	Karacabey (Bur	3.52	77	*e*PN	Pn	00 53 49.1	-0.5	TRUS	Trudelj	5.34	332	⇓*i*Pn	Pn	00 54 13.8	-0.7		SNR=12				
KCTX	Karacabey (Bur	3.52	77	*e*Pn	Pn	00 53 49.1	-0.4	DIVS	Divibare	5.39	329	P	Pn	00 54 15.0	-0.2	KOLL	**Kolacno**	**9.85**	**338**	*e*Pn	**Pn**	**00 55 19.9**	**+3.6**
TIR	Tirane	3.55	302	*e*Pn	Pn	00 53 51.9	+2.0	DIVS	Divibare	5.39	329	P	Pn	00 54 15.0	-0.2	KOLL	**Kolacno**	**9.85**	**338**	*e*PN	**Pn**	**00 55 19.9**	**+3.6**
TIR	Tirane	3.55	302	P	Pn	00 53 51.4	+1.5	ESKT	Eskisehir	5.39	88	*e*PN	Pn	00 54 15.9	+0.6	ZST	**Bratislava**	**9.93**	**333**	*e*Pn	**Pn**	**00 55 19.1**	**+1.7**
TIR	Tirane	3.55	302	P	Pn	00 53 51.4	+1.5	ESKT	Eskisehir	5.39	88	*i* P	Pn	00 54 15.4	+0.1	ZST	**Bratislava**	**9.93**	**333**	*e*PN	**Pn**	**00 55 19.1**	**+1.7**
TIR	Tirane	3.55	302	*e*Pn	Pn	00 53 51.9	+2.0	ESKT	Eskisehir	5.39	88	*e*Pn	Pn	00 54 15.4	+0.1	ZST	**Bratislava**	**9.93**	**333**	*e*P	**Pn**	**00 55 19.1**	**+1.7**
JMB	Yambol	3.56	34	P	Pn	00 53 49.0	-1.1	SEYT	Eskypehyr	5.39	88	*i* P	Pn	00 54 15.4	+0.1	**STHS**	**Stebnicka Huta**	**10.04**	**350**	*e*Pn	**Pn**	**00 55 26.7**	**+7.7**
JMB				S	Sg	00 54 49.0	+0.2	SULR		5.42	18	P	Pg	00 54 38.6	+0.4	STHS				*e*Sg		00 58 24.8	
JMB	Yambol	3.56	34	P	Pn	00 53 49.0	-1.1	BBLS	Lazići	5.46	324	⇑*i*Pn	Pn	00 54 16.5	+0.4	**STHS**	**Stebnicka Huta**	**10.04**	**350**	*e*PN	**Pn**	**00 55 26.7**	**+7.7**
BARS	Barje	3.62	335	⇓*i*Pn	Pn	00 53 50.7	-0.1	ISP	Isparta	5.48	106	*e*PN	Pn	00 54 17.0	+0.6	STHS				*e*		00 58 24.8	
AYDN	Tasoluk	3.66	120	*i* P	Pn	00 53 52.0	+0.6	ISP	Isparta	5.48	106	*e*Pn	Pn	00 54 17.7	+1.2	**MOA**	**Molln**	**10.82**	**323**	⇓*i*Pn	**Pn**	**00 55 30.8**	**+1.1**
AYDN	Tasoluk	3.66	120	*i* P	Pn	00 53 52.0	+0.5	ELL	Elmali	5.52	119	*e*PN	Pn	00 54 16.8	-0.2	MOA				⇑*i*Sn	Sn	00 57 34.3	+3.5
BODT	Bodrum	3.67	131	*e*PN	Pn	00 53 50.1	-1.5	ELL	Elmali	5.52	119	*e*Pn	Pn	00 54 16.8	-0.2	**MOA**	**Molln**	**10.82**	**323**	Pn	**Pn**	**00 55 30.8**	**+1.2**
BODT	Bodrum	3.67	131	*e*Pn	Pn	00 53 50.1	-1.5	TIP	Timpagrande	5.53	268	*e*Pn	Pn	00 54 17.6	+0.5	**ABTA**	**Abfaltersbach**	**10.98**	**315**	*i* Pn	**Pn**	**00 55 31.1**	**-0.7**
SLVT	Silivri	3.71	62	*e*PN	Pn	00 53 52.1	0.0	TIP	Timpagrande	5.53	268	*e*PN	Pn	00 54 17.6	+0.5		SNR=8.7				
SLVT	Silivri	3.71	62	*e*Pn	Pn	00 53 52.1	-0.1	BOLV	Bolvadin	5.56	96	*i* P	Pn	00 54 19.1	+1.5	ABTA				⇓*i*Sn	Sn	00 57 37.4	+2.6
BDRM	Kayabasi	3.75	130	*i* P	Pn	00 53 53.7	+1.1	BOLV	Bolvadin	5.56	96	*i* P	Pn	00 54 19.1	+1.5	**ABTA**	**Abfaltersbach**	**10.98**	**315**	Pn	**Pn**	**00 55 31.1**	**-0.7**
BDRM	Kayabasi	3.75	130	*i* P	Pn	00 53 53.7	+1.1	BAI	Bari	5.57	288	*e*Pn	Pn	00 54 17.0	-0.6		SNR=8.7				
DEMI	Demirci	3.79	96	*i* P	Pn	00 53 54.0	+0.8	SG1	Sgolgore (BA)	5.66	285	*e*Pn	Pn	00 54 18.5	-0.4	**VRAC**	**Vranov**	**11.05**	**334**	Pn	**Pn**	**00 55 36.2**	**+3.4**
DEMI	Demirci	3.79	96	*i* P	Pn	00 53 54.0	+0.8	BCK	Bucak	5.67	109	*e*PN	Pn	00 54 19.2	+0.2		comp=Z,0.3nm,0.3s,baz=169,slow=6.1,SNR=3.6				
MLSB	Milas	3.80	125	*e*PN	Pn	00 53 52.2	-1.2	BCK	Bucak	5.67	109	*e*Pn	Pn	00 54 19.2	+0.2	VSL	**Villasalto**	**11.20**	**274**	*e*Pn	**Pn**	**00 55 36.0**	**+1.1**
MLSB	Milas	3.80	125	*e*Pn	Pn	00 53 52.2	-1.2	CVD	Cernavoda	5.68	32	⇓P	Pn	00 54 18.9	-0.4	VSL	**Villasalto**	**11.20**	**274**	*e*Pn	**Pn**	**00 55 36.0**	**+1.1**
KULA	Kula-Manisa	3.87	104	*e*PN	Pn	00 53 53.8	-0.5	CVD	Cernavoda	5.68	32	P	Pn	00 54 18.9	-0.3	MMAI	**Mount Meron Ar**	**11.36**	**121**	Pn	**Pn**	**00 55 36.4**	**-0.6**
KULA	Kula-Manisa	3.87	104	*e*Pn	Pn	00 53 53.8	-0.5	MDU	Mudurnu	5.71	78	*e*PN	Pn	00 54 20.6	+1.0		comp=Z,1.0nm,0.3s,baz=305,slow=12,SNR=6.8				
CTYL	Yal??k??y-??at	3.88	59	*e*PN	Pn	00 53 54.3	-0.1	MDU	Mudurnu	5.71	78	*e*Pn	Pn	00 54 20.6	+1.0	**PGF**	**Pioggiola**	**11.62**	**290**	*e*P	**Pn**	**00 55 39.6**	**-1.1**
CTYL	Yal??k??y-??at	3.88	59	*e*Pn	Pn	00 53 54.3	-0.1	STON	Ston	5.72	307	*e*Pn	Pn	00 54 17.7	-2.0		comp=Z,90nm,1.5s				
PUK	Puka	3.92	311	*e*PN	Pn	00 53 55.6	+0.7	STON				Sn	Sn	00 55 21.1	-4.4	**PGF**	**Pioggiola**	**11.62**	**290**	*e*P	**Pn**	**00 55 39.6**	**-1.1**
PUK	Puka	3.92	311	*e*Pn	Pn	00 53 55.6	+0.7	STON	Ston	5.72	307	*e*PN	Pn	00 54 17.7	-2.0		comp=Z,45nm,1.5s				
CTKS	Kestanelik-??a	3.92	63	*e*PN	Pn	00 53 55.1	+0.1	GZR	Gura Zlata	5.90	352	⇑P	Pn	00 54 21.5	-0.6	PGF				pmax	pmax		
CTKS	Kestanelik-??a	3.92	63	*e*Pn	Pn	00 53 55.1	+0.1	GZR	Gura Zlata	5.90	352	P	Pn	00 54 21.5	-0.7	**PGF**	**Pioggiola**	**11.62**	**290**	*e*P	**Pn**	**00 55 39.6**	**-1.1**
MDNY	Mudanya-Bursa	3.94	76	*e*PN	Pn	00 53 55.2	0.0	SVRH	Sivrihisar-ESK	5.92	89	*e*PN	Pn	00 54 23.2	+0.7		comp=Z,45nm,1.5s				
ARMT	Armutlu	3.96	74	*e*PN	Pn	00 53 55.7	+0.1	SVRH	Sivrihisar-ESK	5.92	89	*e*Pn	Pn	00 54 23.2	+0.7	**AKASG**	**Malin Array Be**	**11.77**	**17**	Pn	**Pn**	**00 55 43.0**	**+0.4**
ARMT	Armutlu	3.96	74	*e*Pn	Pn	00 53 55.7	+0.1	VOIR		5.95	8	⇓P	Pn	00 54 22.4	-0.4		comp=Z,0.8nm,0.3s,baz=197,slow=12,SNR=2.6				
BCI	Bajram Curri	4.03	316	*e*PN	Pn	00 53 56.5	0.0	VOIR		5.95	8	P	Pn	00 54 22.4	-0.5	**AKASG**	**Malin Array Be**	**11.77**	**17**	P	**Pn**	**00 55 43.0**	**+0.4**
BCI	Bajram Curri	4.03	316	*e*Pn	Pn	00 53 56.5	0.0	TIRR	Tirgusor	5.96	33	*e*Pn	Pn	00 54 21.6	-1.4	AKASG				pmax	pmax		
DAT	Datca	4.06	133	*e*PN	Pn	00 53 55.5	-1.4	TIRR				*e*Sg	Sg	00 56 06.0	+0.4		comp=Z,1.0nm,0.3s				
DAT	Datca	4.06	133	*e*Pn	Pn	00 53 55.5	-1.4	TIRR	Tirgusor	5.96	33	⇓P	Pn	00 54 21.7	-1.3	**AKASG**	**Malin Array Be**	**11.77**	**17**	P	**Pn**	**00 55 43.0**	**+0.4**
BGKT	Bogazkoy	4.08	65	*e*PN	Pn	00 53 57.4	+0.2	TIRR	Tirgusor	5.96	33	P	Pn	00 54 21.7	-1.3	

	comp=Z,13nm,0.8s								
LPL	**La Plagne**	**13.96**	**301**	*e*P		**Pn**	**00 56 12.0**	**-0.6**
	comp=Z,6.3nm,0.8s								
LPL	**La Plagne**	**13.96**	**301**	*e*P		**Pn**	**00 56 12.0**	**-0.6**
LPL				pmax		pmax			
	comp=Z,6.0nm,0.8s								
LPL	**La Plagne**	**13.96**	**301**	*e*P		**Pn**	**00 56 12.0**	**-0.6**
	comp=Z,6.3nm,0.8s								
CLL	**Collm**	**14.00**	**331**	*e*sPP			00 56 26.0		
MOX	**Moxa**	**14.05**	**326**	*e*P		**Pn**	**00 56 14.5**	**+0.8**
MOX	**Moxa**	**14.05**	**326**	*e*P		**Pn**	**00 56 14.5**	**+0.8**
BFO	**Black Forest**	**14.21**	**313**	*e*Pn		**Pn**	**00 56 15.7**	**-0.2**
	comp=Z,2.5nm,0.9s								
BFO	**Black Forest**	**14.21**	**313**	*e*P		**Pn**	**00 56 15.7**	**-0.2**
BFO				pmax		pmax			
	comp=Z,3.0nm,0.9s								
BFO	**Black Forest**	**14.21**	**313**	*e*Pn		**Pn**	**00 56 15.7**	**-0.2**
	comp=Z,2.5nm,0.9s								
ORIF	**Oris-en-Rattie**	**14.36**	**298**	*e*P		**Pn**	**00 56 15.0**	**-3.0**
KIV	**Kislovodsk**	**14.71**	**67**	*e*P		**Pn**	**00 56 23.9**	**+1.1**
KIV				pmax		pmax			
	comp=Z,9.0nm,1.1s								
CABF	**La Chapelle**	**14.77**	**304**	*e*P		**Pn**	**00 56 20.8**	**-2.8**
	comp=Z,14nm,0.8s								
CABF	**La Chapelle**	**14.77**	**304**	*e*P		**Pn**	**00 56 20.8**	**-2.8**
	comp=Z,6.9nm,0.8s								
CABF	**La Chapelle**	**14.77**	**304**	*e*P		**Pn**	**00 56 20.8**	**-2.8**
CABF				pmax		pmax			
	comp=Z,7.0nm,0.8s								
HINF	**Hinteralfeld**	**14.81**	**309**	*e*P		**Pn**	**00 56 19.8**	**-4.3**
	comp=Z,3.9nm,0.6s								
HINF	**Hinteralfeld**	**14.81**	**309**	*e*P		**Pn**	**00 56 19.8**	**-4.3**
	comp=Z,2.0nm,0.6s								
HINF	**Hinteralfeld**	**14.81**	**309**	*e*P		**Pn**	**00 56 19.8**	**-4.3**
HINF				pmax		pmax			
	comp=Z,2.0nm,0.6s								
CDF	**Champ du Feu**	**14.85**	**312**	*e*P		**Pn**	**00 56 21.3**	**-3.4**
VIVF	**Saint-Julien-l**	**15.18**	**297**	*e*P		**Pn**	**00 56 29.4**	**+0.3**
	comp=Z,15nm,1.1s								
VIVF	**Saint-Julien-l**	**15.18**	**297**	*e*P		**Pn**	**00 56 29.4**	**+0.3**
	comp=Z,7.4nm,1.1s								
VIVF	**Saint-Julien-l**	**15.18**	**297**	*e*P		**Pn**	**00 56 29.4**	**+0.3**
VIVF				pmax		pmax			
	comp=Z,7.0nm,1.1s								
HAU	**Haudompre**	**15.20**	**310**	*e*P		**Pn**	**00 56 27.1**	**-2.2**
	comp=Z,17nm,1.0s								
HAU	**Haudompre**	**15.20**	**310**	*e*P		**Pn**	**00 56 27.1**	**-2.2**
	comp=Z,8.4nm,1.0s								
HAU	**Haudompre**	**15.20**	**310**	*e*P		**Pn**	**00 56 27.1**	**-2.2**
HAU				pmax		pmax			
	comp=Z,8.0nm,1.0s								
ZEI	**Tsey**	**15.42**	**72**	*e*P		**Pn**	**00 56 38.8**	**+6.5**
ZEI				pmax		pmax			
	comp=Z,9.0nm,0.5s								
LASF	**Ste Croix**	**15.59**	**293**	*e*P		**Pn**	**00 56 32.4**	**-2.1**
VORD	**Divnogorie**	**15.72**	**38**	*e*P		**Pn**	**00 56 43.9**	**+7.8**
VORD				pmax		pmax			
	comp=N,10.0nm,0.7s								
VORD				pmax		pmax			
	comp=E,10.0nm,0.7s								
VORD				pmax		pmax			
	comp=Z,10.0nm,0.7s								
VSR	**Storozhevoye**	**15.82**	**37**	*e*P		**Pn**	**00 56 39.1**	**+1.6**
VSR				pmax		pmax			
	comp=N,5.0nm,0.5s								
VSR				pmax		pmax			
	comp=E,8.0nm,0.5s								
VSR				pmax		pmax			
	comp=Z,5.0nm,0.5s								
MEZF	**Maizieres J'vi**	**16.19**	**310**	*e*P		**Pn**	**00 56 37.8**	**-4.5**
SMF	**Signal de Mont**	**16.23**	**302**	*e*P		**Pn**	**00 56 39.1**	**-3.8**
	comp=Z,23nm,1.1s								
SMF	**Signal de Mont**	**16.23**	**302**	*e*P		**Pn**	**00 56 39.1**	**-3.8**
	comp=Z,12nm,1.1s								
SMF	**Signal de Mont**	**16.23**	**302**	*e*P		**Pn**	**00 56 39.1**	**-3.8**
SMF				pmax		pmax			
	comp=Z,12nm,1.1s								
LOR	**Lormes**	**16.43**	**305**	*e*P		**Pn**	**00 56 42.5**	**-2.9**
	comp=Z,9.8nm,0.8s								
LOR	**Lormes**	**16.43**	**305**	*e*P		**Pn**	**00 56 42.5**	**-2.9**
	comp=Z,4.9nm,0.8s								
LOR	**Lormes**	**16.43**	**305**	*e*P		**Pn**	**00 56 42.5**	**-2.9**
LOR				pmax		pmax			
	comp=Z,5.0nm,0.8s								
SSF	**Saint Saulge**	**16.59**	**304**	*e*P		**Pn**	**00 56 44.6**	**-2.8**
	comp=Z,12nm,1.1s								
SSF	**Saint Saulge**	**16.59**	**304**	*e*P		**Pn**	**00 56 44.6**	**-2.8**
	comp=Z,6.1nm,1.1s								
SSF	**Saint Saulge**	**16.59**	**304**	*e*P		**Pn**	**00 56 44.6**	**-2.8**
SSF				pmax		pmax			
	comp=Z,6.0nm,1.1s								
AVF	**Avril sur Loir**	**16.60**	**303**	*e*P		**Pn**	**00 56 44.7**	**-2.8**
	comp=Z,9.3nm,0.9s								
AVF	**Avril sur Loir**	**16.60**	**303**	*e*P		**Pn**	**00 56 44.7**	**-2.8**
	comp=Z,4.7nm,0.9s								
AVF	**Avril sur Loir**	**16.60**	**303**	*e*P		**Pn**	**00 56 44.7**	**-2.8**
AVF				pmax		pmax			
	comp=Z,5.0nm,0.9s								
MTLF	**Montolieu**	**16.66**	**290**	*e*P		**Pn**	**00 56 48.8**	**+0.4**
	comp=Z,6.9nm,0.9s								
MTLF	**Montolieu**	**16.66**	**290**	*e*P		**Pn**	**00 56 48.8**	**+0.4**
	comp=Z,3.5nm,0.9s								
MTLF	**Montolieu**	**16.66**	**290**	*e*P		**Pn**	**00 56 48.8**	**+0.4**
MTLF				pmax		pmax			
	comp=Z,3.0nm,0.9s								
MTLF	**Montolieu**	**16.66**	**290**	*e*P		**Pn**	**00 56 48.8**	**+0.4**
	comp=Z,3.5nm,0.9s								
BGF	**Bois d'Agland**	**16.86**	**301**	*e*P		**Pn**	**00 56 48.1**	**-2.7**
	comp=Z,18nm,0.9s								
BGF	**Bois d'Agland**	**16.86**	**301**	*e*P		**Pn**	**00 56 48.1**	**-2.7**
	comp=Z,8.9nm,0.9s								
BGF	**Bois d'Agland**	**16.86**	**301**	*e*P		**Pn**	**00 56 48.1**	**-2.7**
BGF				pmax		pmax			
	comp=Z,9.0nm,0.9s								
VRHR	**Novokhopersk**	**16.95**	**41**	*e*P		**Pn**	**00 56 59.4**	**+7.5**
VRHR				pmax		pmax			
	comp=N,20nm,1.1s								
VRHR				pmax		pmax			
	comp=E,20nm,1.1s								
VRHR				pmax		pmax			
	comp=Z,20nm,1.1s								
CAF	**Calviac**	**17.00**	**296**	*e*P		**Pn**	**00 56 52.2**	**-0.4**
	comp=Z,16nm,1.1s								
CAF	**Calviac**	**17.00**	**296**	*e*P		**Pn**	**00 56 52.2**	**-0.4**
	comp=Z,8.0nm,1.1s								
CAF	**Calviac**	**17.00**	**296**	*e*P		**Pn**	**00 56 52.2**	**-0.4**
CAF				pmax		pmax			
	comp=Z,8.0nm,1.1s								
CAF	**Calviac**	**17.00**	**296**	*e*P		**Pn**	**00 56 52.2**	**-0.4**
	comp=Z,8.0nm,1.1s								
TCF	**Toulx Ste Croi**	**17.21**	**300**	*e*P		**Pn**	**00 56 53.0**	**-2.2**
	comp=Z,7.2nm,0.8s								
TCF	**Toulx Ste Croi**	**17.21**	**300**	*e*P		**Pn**	**00 56 53.0**	**-2.2**
	comp=Z,3.6nm,0.8s								
TCF	**Toulx Ste Croi**	**17.21**	**300**	*e*P		**Pn**	**00 56 53.0**	**-2.2**
TCF				pmax		pmax			
	comp=Z,4.0nm,0.8s								
RJF	**Les Rejaudoux**	**17.45**	**297**	*e*P		**Pn**	**00 56 59.0**	**+0.7**
RJF	**Les Rejaudoux**	**17.45**	**297**	*e*P		**Pn**	**00 56 59.0**	**+0.7**
OBN	**Obninsk**	**17.74**	**24**	*e*P		**Pn**	**00 57 05.2**	**+3.4**
OBN				*e*S		**Sn**	**01 00 23.8**	**+4.3**
OBN				pmax		pmax			
	comp=Z,7.0nm,1.3s								
LFF	**La Frestale**	**17.93**	**295**	*e*P		**Pn**	**00 57 03.1**	**-1.0**
	comp=Z,81nm,1.6s								
LFF	**La Frestale**	**17.93**	**295**	*e*P		**Pn**	**00 57 03.1**	**-1.0**
	comp=Z,40nm,1.6s								
LFF	**La Frestale**	**17.93**	**295**	*e*P		**Pn**	**00 57 03.1**	**-1.0**
LFF				pmax		pmax			
	comp=Z,41nm,1.6s								
LFF	**La Frestale**	**17.93**	**295**	*e*P		**Pn**	**00 57 03.1**	**-1.0**
	comp=Z,40nm,1.6s								
EPF	**Esparros**	**18.01**	**289**	*e*P		**Pn**	**00 57 03.4**	**-1.7**
EPF	**Esparros**	**18.01**	**289**	*e*P		**Pn**	**00 57 03.4**	**-1.7**
ETSF	**Etsaut**	**18.66**	**288**	*e*P		**Pn**	**00 57 11.3**	**-1.8**
	comp=Z,7.7nm,0.7s								
ETSF	**Etsaut**	**18.66**	**288**	*e*P		**Pn**	**00 57 11.3**	**-1.8**
	comp=Z,3.8nm,0.7s								
ETSF	**Etsaut**	**18.66**	**288**	*e*P		**Pn**	**00 57 11.3**	**-1.8**
ETSF				pmax		pmax			
	comp=Z,4.0nm,0.7s								
ETSF	**Etsaut**	**18.66**	**288**	*e*P		**Pn**	**00 57 11.3**	**-1.8**
	comp=Z,3.8nm,0.7s								
MFF	**Saint Martin d**	**18.87**	**300**	*e*P		**Pn**	**00 57 13.5**	**-2.1**
	comp=Z,22nm,1.1s								
MFF	**Saint Martin d**	**18.87**	**300**	*e*P		**Pn**	**00 57 13.5**	**-2.1**
	comp=Z,11nm,1.1s								

MFF	**Saint Martin d**	**18.87**	**300**	*e*P		**Pn**	**00 57 13.5**	**-2.1**
MFF				pmax		pmax			
	comp=Z,11nm,1.1s								
MFF	**Saint Martin d**	**18.87**	**300**	*e*P		**Pn**	**00 57 13.5**	**-2.1**
	comp=Z,11nm,1.1s								
VSU	**Vasula**	**19.02**	**5**	*e*P		**Pn**	**00 57 20.4**	**+3.1**
SJPF	**Ste Jean**	**19.16**	**289**	*e*P		**Pn**	**00 57 18.0**	**-1.1**
	comp=Z,28nm,1.1s								
SJPF	**Ste Jean**	**19.16**	**289**	*e*P		**Pn**	**00 57 18.0**	**-1.1**
	comp=Z,14nm,1.1s								
SJPF	**Ste Jean**	**19.16**	**289**	*e*P		**Pn**	**00 57 18.0**	**-1.1**
SJPF				pmax		pmax			
	comp=Z,14nm,1.1s								
SJPF	**Ste Jean**	**19.16**	**289**	*e*P		**Pn**	**00 57 18.0**	**-1.1**
	comp=Z,14nm,1.1s								
LDF	**La Druitiere**	**19.40**	**306**	*e*P		**Pn**	**00 57 19.0**	**-3.0**
	comp=Z,6.6nm,0.8s								
LDF	**La Druitiere**	**19.40**	**306**	*e*P		**Pn**	**00 57 19.0**	**-3.0**
	comp=Z,3.3nm,0.8s								
LDF	**La Druitiere**	**19.40**	**306**	*e*P		**Pn**	**00 57 19.0**	**-3.0**
LDF				pmax		pmax			
	comp=Z,3.0nm,0.8s								
LDF	**La Druitiere**	**19.40**	**306**	*e*P		**Pn**	**00 57 19.0**	**-3.0**
	comp=Z,3.3nm,0.8s								
ESDC	**Sonseca Array**	**21.42**	**279**	P		**P**	**00 57 42.9**	**0.0**
	comp=Z,0.5nm,0.4s,baz=76,slow=11,SNR=10.0								
ESDC	**Sonseca Array**	**21.42**	**279**	P		**P**	**00 57 42.8**	**-0.1**
HFS	**Hagfors**	**21.58**	**346**	P		**P**	**00 57 45.5**	**+1.2**
	comp=Z,1.3nm,0.5s,mb3.7,baz=144,slow=12,SNR=8.6								
HFS	**Hagfors**	**21.58**	**346**	P		**P**	**00 57 45.5**	**+1.1**
FINES	**FINESS Array B**	**21.96**	**3**	P		**P**	**00 57 47.8**	**-0.7**
	comp=Z,3.8nm,0.8s,mb3.9,baz=169,slow=9.9,SNR=11								
FINES	**FINESS Array B**	**21.96**	**3**	P		**P**	**00 57 47.8**	**-0.7**
FINES				pmax		pmax			
	comp=Z,4.0nm,0.8s								
FINES	**FINESS Array B**	**21.96**	**3**	P		**P**	**00 57 47.8**	**-0.7**
	comp=Z,4.0nm,0.8s,mb3.9								
KAF	**Kangasniemi**	**22.64**	**3**	*e*P		**P**	**00 57 51.9**	**-3.8**
	comp=Z,0.5nm,0.4s,mb3.3								
KAF	**Kangasniemi**	**22.64**	**3**	*e*p		**P**	**00 57 51.9**	**-3.8**
	comp=Z,0.5nm,0.4s,mb3.3								
TAM	**Tamanrasset**	**22.85**	**228**	*e*P		**P**	**00 57 59.6**	**+1.3**
	comp=Z,6.0nm,1.1s,mb3.9								
TAM	**Tamanrasset**	**22.85**	**228**	*e*P		**P**	**00 57 59.6**	**+1.3**
TAM				pmax		pmax			
	comp=Z,6.0nm,1.1s,mb3.9								
TAM	**Tamanrasset**	**22.85**	**228**	*e*P		**P**	**00 57 59.6**	**+1.3**
	comp=Z,6.0nm,1.1s,mb3.9								
NB2	**NORSAR Subarra**	**22.90**	**344**	P		**P**	**00 57 57.7**	**-0.8**
	comp=Z,17nm,1.4s,mb4.3,baz=154,slow=11,SNR=9.9								
NOA	**NORSAR Array B**	**22.90**	**344**	P		**P**	**00 57 58.0**	**-0.5**
	comp=Z,1.3nm,0.7s,mb3.5,baz=148,slow=9.9,SNR=6.3								
NOA	**NORSAR Array B**	**22.90**	**344**	P		**P**	**00 57 58.0**	**-0.5**
KLMR	**Klimovskoe**	**23.44**	**19**	P		**P**	**00 58 02.1**	**-2.0**
KLMR				pmax		pmax			
	comp=Z,37nm,1.4s,mb4.6								
KLMR	**Klimovskoe**	**23.44**	**19**	P		**P**	**00 58 02.1**	**-2.0**
	comp=Z,37nm,1.4s,mb4.6								
JOF	**Joensuu**	**23.83**	**8**	*e*P		**P**	**00 58 07.1**	**-0.7**
JOF	**Joensuu**	**23.83**	**8**	*e*p		**P**	**00 58 07.1**	**-0.7**
	comp=Z,0.4nm,0.3s,mb3.3								
JOF	**Joensuu**	**23.83**	**8**	*e*P		**P**	**00 58 07.1**	**-0.7**
MDT	**Midelt**	**23.89**	**263**	P		**P**	**00 58 08.4**	**-0.3**
	comp=Z,1.4nm,0.7s,mb3.5,baz=55,slow=12,SNR=4.5								
MDT	**Midelt**	**23.89**	**263**	P		**P**	**00 58 08.4**	**-0.3**
EKA	**Eskdalemuir Ar**	**23.94**	**320**	P		**P**	**00 58 08.2**	**-0.7**
	comp=Z,1.5nm,0.6s,mb3.6,baz=115,slow=10.0,SNR=14								
EKA	**Eskdalemuir Ar**	**23.94**	**320**	P		**P**	**00 58 08.2**	**-0.7**
EKA				pmax		pmax			
	comp=Z,2.0nm,0.6s								
EKA	**Eskdalemuir Ar**	**23.94**	**320**	P		**P**	**00 58 08.2**	**-0.7**
	comp=Z,2.0nm,0.6s,mb3.7								
ARU	**Arti**	**28.30**	**42**	*c i*P		**P**	**00 58 51.3**	**+3.0**
ARU							00 59 38.8		
ARU				S		**S**	**01 03 40.4**	**+5.7**
ARU				SS			01 04 57.0		
ARU				pmax		pmax			
	comp=Z,22nm,2.5s,mb4.3								
BRVK	**Borovoye**	**34.17**	**51**	*e*P		**P**	**00 59 41.0**	**+1.0**
BRVK				pmax		pmax			
	comp=Z,4.0nm,0.9s,mb4.3								
BVAR	**Borovoye Array**	**34.23**	**51**	P		**P**	**00 59 42.4**	**+1.8**
	comp=Z,1.2nm,0.7s,mb3.9,baz=223,slow=36,SNR=7.8								
BVAR	**Borovoye Array**	**34.23**	**51**	P		**P**	**00 59 42.4**	**+1.9**
BVAR				pmax		pmax			
	comp=Z,1.0nm,0.7s								
BVAR	**Borovoye Array**	**34.23**	**51**	P		**P**	**00 59 42.4**	**+1.9**
KURK	**Kurchatov**	**39.35**	**55**	*e*P		**P**	**01 00 24.4**	**+0.2**
	comp=Z,3.8nm,0.7s,mb4.2								
KURK				*e*			01 00 29.7		
KURK	**Kurchatov**	**39.35**	**55**	*e*P		**P**	**01 00 24.5**	**+0.3**
KURK				pmax		pmax			
	comp=Z,3.0nm,1.1s,mb3.9								
KURK	**Kurchatov**	**39.35**	**55**	*e*P		**P**	**01 00 24.4**	**+0.2**
DBIC	**Dimbokro**	**41.70**	**226**	P		**P**	**01 00 43.6**	**-0.4**
	comp=Z,5.9nm,0.7s,mb4.3,baz=17,slow=11,SNR=9.5								
DBIC	**Dimbokro**	**41.70**	**226**	P		**P**	**01 00 43.6**	**-0.4**
DBIC				pmax		pmax			
	comp=Z,6.0nm,0.7s								
DBIC	**Dimbokro**	**41.70**	**226**	P		**P**	**01 00 43.6**	**-0.4**
TIC	**Toumodi**	**41.81**	**226**	*e*P		**P**	**01 00 44.8**	**-0.1**
	comp=Z,179nm,1.9s								
TIC	**Toumodi**	**41.81**	**226**	*e*P		**P**	**01 00 44.8**	**-0.1**
	comp=Z,179nm,1.9s								
NVS	**Novosibirsk**	**41.82**	**48**	*e*P		**P**	**01 00 45.0**	**+0.5**
NVS				pmax		pmax			
	comp=E,23nm,1.4s								
NVS				pmax		pmax			
	comp=Z,26nm,1.4s,mb4.7								
KIC	**Kosan Boka**	**41.89**	**225**	*e*P		**P**	**01 00 44.7**	**-0.8**
	comp=Z,40nm,1.0s,mb5.0								
KIC	**Kosan Boka**	**41.89**	**225**	*e*P		**P**	**01 00 44.7**	**-0.8**
	comp=Z,40nm,1.0s,mb5.0								
LIC	**Lamto**	**42.16**	**226**	*e*P		**P**	**01 00 46.9**	**-0.8**
	comp=Z,75nm,1.3s,mb5.2								
LIC	**Lamto**	**42.16**	**226**	*i*P		**P**	**01 00 47.2**	**-0.5**
	comp=Z,20nm,0.6s,mb4.6								
LIC	**Lamto**	**42.16**	**226**	*i*P		**P**	**01 00 47.2**	**-0.5**
	comp=Z,9.9nm,0.6s,mb4.6								
LIC	**Lamto**	**42.16**	**226**	*i*P		**P**	**01 00 47.2**	**-0.5**
	comp=Z,9.9nm,0.6s,mb4.6								
KMBO	**Kilima Mbogo**	**42.30**	**160**	P		**P**	**01 00 47.4**	**-1.4**
	comp=Z,1.1nm,0.3s,mb4.0,baz=360,slow=24,SNR=10.0								
KMBO	**Kilima Mbogo**	**42.30**	**160**	P		**P**	**01 00 47.4**	**-1.4**
KMBO				pmax		pmax			
	comp=Z,1.0nm,0.3s								
KMBO	**Kilima Mbogo**	**42.30**	**160**	P		**P**	**01 00 47.4**	**-1.4**
MK31	**Makanchi Array**	**42.35**	**60**	*e*P		**P**	**01 00 49.5**	**+0.5**
MK31				*e*			01 00 54.7		
MK31	**Makanchi Array**	**42.35**	**60**	*e*P		**P**	**01 00 49.5**	**+0.5**
MKAR	**Makanchi Array**	**42.35**	**60**	P		**P**	**01 00 49.3**	**+0.3**
	comp=Z,3.0nm,0.6s,mb4.1,baz=280,slow=6.9,SNR=15								
MKAR	**Makanchi Array**	**42.35**	**60**	*i* P		**P**	**01 00 49.2**	**+0.2**
MKAR				pmax		pmax			
	comp=Z,3.0nm,0.6s								
ZALV	**Zalesovo Beam**	**42.82**	**49**	P		**P**	**01 00 53.1**	**+0.4**
	comp=Z,10nm,0.6s,mb4.8,baz=274,slow=8.8,SNR=39								
ZALV	**Zalesovo Beam**	**42.82**	**49**	P		**P**	**01 00 53.1**	**+0.4**
ZALV				pmax		pmax			
	comp=Z,10.0nm,0.6s,mb4.7								
ZALV	**Zalesovo Beam**	**42.82**	**49**	P		**P**	**01 00 53.1**	**+0.4**
WMQ	**Urumqi**	**46.81**	**63**	*e*P		**P**	**01 01 25.9**	**+1.3**
WMQ				pP		pP	01 01 30.4	+3.7
WMQ				sP		sP	01 01 32.9	+5.4
WMQ				pmax		pmax			
	comp=Z,5.0nm,1.2s,mb4.3								
WMQ				pmax		pmax			
	comp=Z,50nm,4.0s								
GTA	**Gaotai**	**56.87**	**64**	*e*P		**P**	**01 02 40.5**	**+0.7**
GTA				pP		pP	01 02 44.4	+2.5
GTA				sP		sP	01 02 45.8	+3.1
GTA				pmax		pmax			
	comp=Z,5.0nm,1.0s,mb4.5								
SONM	**Songino Array**	**57.56**	**52**	P		**P**	**01 02 45.3**	**+0.8**
	comp=Z,1.2nm,0.9s,mb3.9,baz=294,slow=11,SNR=3.2								
SONM	**Songino Array**	**57.56**	**52**	P		**P**	**01 02 45.3**	**+0.8**
SCHQ	**Schefferville**	**59.22**	**318**	P		**P**	**01 02 57.4**	**+1.4**
SCHQ	**Schefferville**	**59.22**	**318**	P		**P**	**01 02 57.4**	**+1.4**
	comp=Z,3.3nm,0.7s,mb4.5,baz=57,slow=8.5,SNR=4.3								
SCHQ	**Schefferville**	**59.22**	**318**	P		**P**	**01 02 57.4**	**+1.4**
CD2	**Chengdu**	**63.84**	**71**	P		**P**	**01 03 27.6**	**0.0**
CD2				pP		pP	01 03 32.2	+2.5
CD2				sP		sP	01 03 34.6	+4.0
CD2				PP		PP	01 05 49.2	+1.5
CD2				S		**S**	**01 11 59.4**	**-3.9**
CD2				sS		sS	01 12 07.1	+0.3
CD2						ScS	ScS	01 13 16.7	-5.2
CD2						SS	SS	01 16 08.4	-2.6
CD2						pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0								
CD2						pmax	pmax		
	comp=Z,140nm,5.7s								
CD2						LR	LR		
	comp=N,460nm,20.1s								
CD2						LR	LR		
	comp=E,610nm,14.7s								
CD2						LR	LR		
	comp=Z,500nm,16.7s,MS4.8								
HHC	**Hu-ho-hao-te**	**64.10**	**57**	*e*P		**P**	**01 03 29.9**	**+0.8**
HHC				pP		pP	01 03 34.5	+3.2
HHC				sP		sP	01 03 37.1	+5.0
HHC				PcP		PcP	01 04 05.4	+1.1
HHC				PP		PP	01 05 52.1	+2.4
HHC				S		**S**	**01 12 03.7**	**-2.5**
HHC				sS		sS	01 12 10.3	+0.6
HHC				SS		SS	01 16 11.7	-2.8
HHC				pmax		pmax			
	comp=Z,10.0nm,0.8s,mb4.9								
HHC				pmax		pmax			
	comp=Z,140nm,5.1s								
HHC				LR		LR			
	comp=N,310nm,13.1s,MS4.8								
HHC				LR		LR			
	comp=E,250nm,14.3s,MS4.8								
HHC				LR		LR			
	comp=Z,310nm,15.5s,MS4.6								
CMAR	**Chiang Mai Arr**	**67.13**	**85**	P		**P**	**01 03 48.4**	**-0.7**
	comp=Z,0.8nm,0.4s,mb4.1,baz=304,slow=6.9,SNR=7.2								
CMAR	**Chiang Mai Arr**	**67.13**	**85**	P		**P**	**01 03 48.3**	**-0.7**
BJI	**Beijing**	**67.51**	**56**	P		**P**	**01 03 48.3**	**-2.8**
BJI				pmax		pmax			
	comp=Z,6.0nm,0.7s,mb4.7								
GYA	**Guiyang**	**68.41**	**73**	*e*P		**P**	**01 03 58.0**	**+1.0**
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s,mb4.8								
CN2	**Changchun**	**71.03**	**49**	*e*P		**P**	**01 04 13.0**	**+0.1**
CN2				*e*sP		sP	01 04 20.0	+4.1
CN2				*e*S		S	01 13 26.1	-3.2
CN2				pmax		pmax			
	comp=Z,10.0nm,0.6s,mb4.9								
CN2				pmax		pmax			
	comp=Z,200nm,5.0s								
CN2				LR		LR			
	comp=N,500nm,15.0s,MS5.1								
CN2				LR		LR			
	comp=E,600nm,15.0s,MS5.1								
CN2				LR		LR			
	comp=Z,600nm,15.0s,MS5.0								
NJ2	**Nanjing**	**73.86**	**62**	*e*P		**P**	**01 04 30.6**	**+0.6**
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.8s,mb4.8								
SSE	**Sheshan**	**76.03**	**61**	P		**P**	**01 04 40.3**	**-2.2**
SSE				S		S	01 14 22.1	-4.1
SSE				pmax		pmax			
	comp=Z,15nm,0.6s,mb5.1								
SSE				pmax		pmax			
	comp=Z,52nm,4.5s								
SSE				LR		LR			
	comp=N,230nm,21.0s,MS4.6								
SSE				LR		LR			
	comp=E,250nm,21.0s,MS4.6								
SSE				LR		LR			
	comp=Z,340nm,16.2s,MS4.7								
KSRS	**Korea Array**	**76.43**	**53**	P		**P**	**01 04 45.2**	**+0.5**
	comp=Z,1.3nm,0.8s,mb3.9,baz=233,slow=31,SNR=2.6								

MAN 03 01:06:35, 18.39N×120.72E, h19km, mb4.5, ML3.3, MS3.2, 3C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**0.11**	**236**	⇑*i*P		Pg	01 06 41.5	+2.6
SIPP	**Brgy, Tapao**	**0.52**	**208**	⇑*i*P		Pg	01 06 46.8	+1.2
APYP	**Conner**	**0.72**	**136**	*e*P		Pb	01 06 49.5	+0.4
APYP				*

LKR	Lokris	1.14 218	P	Pb	01 22 52.9	-0.7
HORT	Hortiatis	1.22 330	P	Pn	01 22 54.1	-0.8
HORT	Hortiatis	1.22 330	P	Pn	01 22 54.5	-0.4
HORT			S	Sb	01 23 11.5	+0.8
HORT	Hortiatis	1.22 330	P	Pn	01 22 54.5	-0.4
HORT			S	Sb	01 23 11.5	+0.8
LIT	Litokhoron	1.22 297	*e*Pb	Pn	01 22 52.5	-2.4
LIT	Litokhoron	1.22 297	*e*PB	Pn	01 22 52.5	-2.4
LIT	Litokhoron	1.22 297	P	Pn	01 22 52.5	-2.4
LIT	Litokhoron	1.22 297	*e*Pb	Pn	01 22 52.5	-2.4
THE	Thessaloniki	1.30 327	P	Pn	01 22 55.5	-0.5
THE			S	Sb	01 23 13.9	+0.8
THE	Thessaloniki	1.30 327	P	Pn	01 22 55.5	-0.5
THE			S	Sb	01 23 13.9	+0.8
AGG	Agios Georgios	1.33 247	*e*Pn	Pn	01 22 55.7	-0.7
AGG			*e*Sn	Sn	01 23 13.1	-0.9
AGG	Agios Georgios	1.33 247	*e*PN	Pn	01 22 55.7	-0.7
AGG			*e*SN	Sn	01 23 13.1	-0.9
AGG	Agios Georgios	1.33 247	P	Pn	01 22 56.0	-0.4
AGG			S	Sb	01 23 14.1	+0.3
AGG	Agios Georgios	1.33 247	*e*Pn	Pn	01 22 55.7	-0.7
AGG	Agios Georgios	1.33 247	P	Pn	01 22 56.0	-0.4
AGG			*e*Sn	Sn	01 23 13.1	-0.9
AGG			S	Sb	01 23 14.1	+0.3
SOH	Sokhos	1.34 342	*e*Pn	Pn	01 22 56.0	-0.6
SOH			*e*Sn	Sn	01 23 14.1	-0.2
SOH	Sokhos	1.34 342	*e*PN	Pn	01 22 56.0	-0.6
SOH			*e*SN	Sn	01 23 14.1	-0.2
SOH	Sokhos	1.34 342	P	Pn	01 22 56.0	-0.6
SOH			S	Sb	01 23 14.7	+0.5
SOH	Sokhos	1.34 342	P	Pn	01 22 56.0	-0.6
SOH			*e*Sn	Sn	01 23 14.1	-0.2
SOH			S	Sb	01 23 14.7	+0.5
THL	Klokotos Trika	1.46 271	*e*PN	Pn	01 22 57.0	-1.2
THL			*e*SN	Sn	01 23 16.5	-0.7
THL	Klokotos Trika	1.46 271	P	Pn	01 22 57.6	-0.6
THL			S	Sn	01 23 16.4	-0.8
THL	Klokotos Trika	1.46 271	*e*Pn	Pn	01 22 57.0	-1.2
THL	Klokotos Trika	1.46 271	P	Pn	01 22 57.6	-0.6
THL			S	Sn	01 23 16.4	-0.8
PTL	Penteli	1.50 181	*e*Pn	Pn	01 22 58.4	-0.3
PTL	Penteli	1.50 181	*e*PN	Pn	01 22 58.4	-0.3
PTL	Penteli	1.50 181	*e*Pn	Pn	01 22 58.4	-0.3
KAVA	Kavala	1.52 18	P	Pn	01 22 57.8	-1.2
KAVA			S	Sn	01 23 20.5	+1.7
KAVA	Kavala	1.52 18	P	Pn	01 22 57.8	-1.2
KAVA			S	Sn	01 23 20.5	+1.7
DSF	Desfina	1.56 224	P	Pn	01 22 58.6	-0.9
DSF	Desfina	1.56 224	P	Pn	01 22 58.6	-0.9
ATH	Athens Observa	1.58 185	*e*Pn	Pn	01 22 59.5	-0.3
ATH	Athens Observa	1.58 185	*e*PN	Pn	01 22 59.5	-0.3
ATH	Athens Observa	1.58 185	*e*Pn	Pn	01 22 59.5	-0.3
SRS	Serrai	1.59 352	P	Pn	01 22 58.9	-1.0
SRS	Serrai	1.59 352	P	Pn	01 22 59.0	-0.9
SRS			S	Sn	01 23 20.4	0.0
SRS	Serrai	1.59 352	P	Pn	01 22 59.0	-0.9
SRS			S	Sn	01 23 20.4	0.0
GADA	Gvkgeada	1.67 67	*e*PN	Pn	01 23 00.3	-0.7
GADA			*e*SN	Sn	01 23 17.2	-5.2
GADA	Gvkgeada	1.67 67	*e*Pn	Pn	01 23 00.3	-0.7
GADA			*e*Sn	Sn	01 23 17.2	-5.1
LTK	Loutraki	1.69 206	*e*PB	Pb	01 23 00.8	-2.2
LTK	Loutraki	1.69 206	P	Pn	01 23 00.9	-0.4
LTK	Loutraki	1.69 206	P	Pn	01 23 00.9	-0.4
VLY	Voula,Athens	1.69 183	P	Pn	01 23 01.0	-0.4
VLY	Voula,Athens	1.69 183	P	Pn	01 23 01.0	-0.4
EVR	Evrytania	1.74 250	*e*Pn	Pn	01 23 02.2	+0.1
EVR	Evrytania	1.74 250	*e*PN	Pn	01 23 02.2	+0.1
EVR	Evrytania	1.74 250	*e*Pn	Pn	01 23 02.2	+0.1
KNT	Kendrikon	1.79 335	P	Pn	01 23 02.7	0.0
KNT			S	Sn	01 23 26.4	+1.1
KNT	Kendrikon	1.79 335	P	Pn	01 23 02.7	0.0
KNT			S	Sn	01 23 26.4	+1.1
KALE	Kalithea	1.79 231	P	Pn	01 23 02.4	-0.4
KALE	Kalithea	1.79 231	P	Pn	01 23 02.4	-0.4
NVR	Nevrokopi	1.80 359	*e*Pb	Pb	01 23 02.1	-2.8
NVR	Nevrokopi	1.80 359	*e*PB	Pb	01 23 02.1	-2.8
NVR	Nevrokopi	1.80 359	*e*Pb	Pb	01 23 02.1	-2.8
KZN	Kozani	1.81 296	*e*Pn	Pn	01 23 02.1	-0.8
KZN	Kozani	1.81 296	*e*PN	Pn	01 23 02.1	-0.8
KZN	Kozani	1.81 296	P	Pn	01 23 02.3	-0.6
KZN	Kozani	1.81 296	P	Pn	01 23 02.3	-0.6
NAIG	Nisos Aigina	1.81 190	*e*Pb	Pb	01 23 02.7	-2.4
NAIG	Nisos Aigina	1.81 190	*e*PB	Pb	01 23 02.7	-2.4
NAIG	Nisos Aigina	1.81 190	*e*Pb	Pb	01 23 02.7	-2.4
GRG	Griva	1.82 321	P	Pn	01 23 02.6	-0.5
GRG	Griva	1.82 321	P	Pn	01 23 03.1	0.0
GRG			S	Sn	01 23 26.4	+0.3
GRG	Griva	1.82 321	P	Pn	01 23 03.1	0.0
GRG			S	Sn	01 23 26.4	+0.3
TRIZ	Trizonia	1.85 231	P	Pn	01 23 03.1	-0.4
TRIZ	Trizonia	1.85 231	P	Pn	01 23 03.1	-0.4
PRK	Paraskevi	1.86 99	*e*Pn	Pn	01 23 05.3	+1.6
PRK	Paraskevi	1.86 99	*e*PN	Pn	01 23 05.3	+1.6
PRK	Paraskevi	1.86 99	P	Pn	01 23 04.3	+0.6
PRK			S	Sn	01 23 27.1	0.0
PRK	Paraskevi	1.86 99	P	Pn	01 23 04.3	+0.6
PRK	Paraskevi	1.86 99	*e*Pn	Pn	01 23 05.3	+1.6
PRK			S	Sn	01 23 27.1	0.0
EZN	Ezine	1.89 81	*e*PN	Pn	01 23 03.3	-0.8
EZN			*e*SN	Sn	01 23 21.3	-6.6
EZN	Ezine	1.89 81	*e*Pn	Pn	01 23 03.3	-0.8
EFP	Efpalio	1.92 235	*e*PN	Pn	01 23 04.3	-0.1
EFP	Efpalio	1.92 235	P	Pn	01 23 03.9	-0.5
EFP	Efpalio	1.92 235	P	Pn	01 23 03.9	-0.5
EFP	Efpalio	1.92 235	*e*Pn	Pn	01 23 04.3	-0.1
LAKA	Lakka	1.99 230	P	Pn	01 23 05.7	+0.3
LAKA	Lakka	1.99 230	P	Pn	01 23 05.7	+0.3
GUR	Goura	2.02 218	*e*PN	Pn	01 23 05.5	-0.3
GUR	Goura	2.02 218	P	Pn	01 23 05.8	-0.1
GUR	Goura	2.02 218	*e*Pn	Pn	01 23 05.5	-0.3
GUR	Goura	2.02 218	P	Pn	01 23 05.8	-0.1
CHOS	Chios island	2.04 124	*e*PB	Pb	01 23 07.0	-2.0
CHOS	Chios island	2.04 124	P	Pn	01 23 06.8	+0.7
CHOS			S	Sn	01 23 32.9	+1.4
CHOS	Chios island	2.04 124	P	Pn	01 23 06.8	+0.7
CHOS			S	Sn	01 23 32.9	+1.4
VAY	Valandovo	2.04 331	P	Pn	01 23 05.5	-0.7
VAY	Valandovo	2.04 331	*e*Pn	Pn	01 23 08.7	+2.4
VAY			*e*Sg	Sg	01 23 34.9	-2.8
VAY	Valandovo	2.04 331	P	Pn	01 23 05.5	-0.7
ENEZ	Enez	2.10 55	*e*PN	Pn	01 23 07.4	+0.5
ENEZ	Enez	2.10 55	*e*Pn	Pn	01 23 07.4	+0.5
DID	Didima	2.10 195	*e*PN	Pn	01 23 06.6	-0.4
DID	Didima	2.10 195	P	Pn	01 23 06.6	-0.4
DID	Didima	2.10 195	P	Pn	01 23 06.6	-0.4
ALN	Alexandroupoli	2.12 50	*e*Pn	Pn	01 23 06.3	-1.0
ALN	Alexandroupoli	2.12 50	*e*PN	Pn	01 23 06.3	-1.0
ALN	Alexandroupoli	2.12 50	P	Pn	01 23 06.2	-1.1
ALN	Alexandroupoli	2.12 50	*e*Pn	Pn	01 23 06.3	-1.0
GELI	Tayfur-Gelibol	2.15 66	*e*PN	Pn	01 23 07.3	-0.4
GELI	Tayfur-Gelibol	2.15 66	*e*Pn	Pn	01 23 07.3	-0.4
ERIK	Erikli-Kesan	2.30 60	*e*PN	Pn	01 23 09.0	-0.6
ERIK	Erikli-Kesan	2.30 60	*e*Pn	Pn	01 23 09.0	-0.7
FNA	Florina	2.30 303	P	Pn	01 23 09.2	-0.5
FNA	Florina	2.30 303	P	Pn	01 23 09.4	-0.3
FNA	Florina	2.30 303	P	Pn	01 23 09.4	-0.3
LPK	Lapseki	2.35 68	*e*PN	Pn	01 23 09.7	-0.7
LPK	Lapseki	2.35 68	*e*Pn	Pn	01 23 09.7	-0.7
NEST	Nestorio	2.36 292	P	Pn	01 23 10.8	+0.3
NEST	Nestorio	2.36 292	P	Pn	01 23 10.8	+0.3
JAN	Janina	2.36 274	P	Pn	01 23 14.3	+3.7
RLS	Riolos of Patr	2.41 233	*e*Pb	Pb	01 23 12.5	-2.9
RLS	Riolos of Patr	2.41 233	*e*PB	Pb	01 23 12.5	-2.9
RLS	Riolos of Patr	2.41 233	*e*Pb	Pb	01 23 12.5	-2.9
BIA	Bitola	2.46 308	*e*Pn	Pn	01 23 11.2	-0.8
VLX	Vlachokerasia	2.48 209	*e*PN	Pn	01 23 12.5	+0.3
VLX	Vlachokerasia	2.48 209	P	Pn	01 23 12.5	+0.3
VLX	Vlachokerasia	2.48 209	P	Pn	01 23 12.5	+0.3
PLD	Plovdiv	2.63 13	P	Pn	01 23 14.6	+0.4
PLD	Plovdiv	2.63 13	P	Pn	01 23 14.6	+0.4
LKD2	Lefkada island	2.63 254	P	Pn	01 23 16.4	+2.1
LKD2	Lefkada island	2.63 254	P	Pn	01 23 16.4	+2.1
BLCB	Balcova	2.71 114	*e*PN	Pn	01 23 14.9	-0.5
BLCB	Balcova	2.71 114	*e*Pn	Pn	01 23 14.9	-0.4
KRUS	Krusevo	2.72 313	*e*Pn	Pn	01 23 15.1	-0.5
KRBG	Karabiga-Canak	2.74 71	*e*PN	Pn	01 23 15.5	-0.4
KRBG	Karabiga-Canak	2.74 71	*e*Pn	Pn	01 23 15.5	-0.3
RKY	Sarkoy-Tekirda	2.76 65	*e*PN	Pn	01 23 16.0	0.0
RKY	Sarkoy-Tekirda	2.76 65	*e*Pn	Pn	01 23 16.0	0.0
IGT	Igoumenitsa	2.76 271	P	Pn	01 23 18.5	+2.4
IGT	Igoumenitsa	2.76 271	P	Pn	01 23 18.2	+2.1
IGT	Igoumenitsa	2.76 271	P	Pn	01 23 18.2	+2.1
APE	Apeiranthos	2.79 152	*e*Pn	Pn	01 23 17.5	+1.1
APE	Apeiranthos	2.79 152	*e*PN	Pn	01 23 17.5	+1.1
APE	Apeiranthos	2.79 152	*e*Pn	Pn	01 23 17.5	+1.1
ITM	Ithomi	2.83 214	*e*Pn	Pn	01 23 17.7	+0.7
ITM	Ithomi	2.83 214	*e*PN	Pn	01 23 17.7	+0.7
ITM	Ithomi	2.83 214	P	Pn	01 23 17.9	+0.9
ITM	Ithomi	2.83 214	*e*Pn	Pn	01 23 17.7	+0.7
IZM	Izmir	2.86 113	*e*PN	Pn	01 23 16.8	-0.6
VLI	Veliai	2.92 195	P	Pn	01 23 18.9	+0.6
VLI	Veliai	2.92 195	P	Pn	01 23 18.9	+0.6
GONE	Gonen-Balikesi	2.96 79	*e*PN	Pn	01 23 17.8	-1.0
GONE	Gonen-Balikesi	2.96 79	*e*Pn	Pn	01 23 17.8	-1.0
BALB	Balikesir	3.08 87	*e*PN	Pn	01 23 19.5	-0.9
BALB	Balikesir	3.08 87	*e*Pn	Pn	01 23 19.5	-0.9
VTS	Vitosha	3.09 350	||P	Pn	01 23 20.8	+0.3
VTS	Vitosha	3.09 350	P	Pn	01 23 21.1	+0.5
VTS	Vitosha	3.09 350	||P	Pn	01 23 20.8	+0.2
EDC	Edincik	3.15 74	*e*PN	Pn	01 23 21.2	-0.2
EDC	Edincik	3.15 74	*e*Pn	Pn	01 23 21.2	-0.2
EDRB	Edirne	3.15 42	*e*PN	Pn	01 23 24.1	+2.6
EDRB	Edirne	3.15 42	*e*Pn	Pn	01 23 24.1	+2.6
KEK	Kerkira	3.17 274	*e*Pb	Pb	01 23 23.4	-4.9
KEK	Kerkira	3.17 274	*e*PB	Pb	01 23 23.4	-4.9
KEK	Kerkira	3.17 274	*e*Pb	Pb	01 23 23.4	-4.9
KCTX	Karacabey (Bur	3.50 77	*e*PN	Pn	01 23 25.4	-0.8
KCTX	Karacabey (Bur	3.50 77	*e*Pn	Pn	01 23 25.4	-0.8
TIR	Tirane	3.57 302	*e*Pn	Pn	01 23 27.0	-0.1
TIR	Tirane	3.57 302	*e*PN	Pn	01 23 27.0	-0.2
BARS	Barje	3.63 335	||Pn	Pn	01 23 28.0	0.0
CTKS	Kestanelik-??a	3.90 63	*e*PN	Pn	01 23 32.4	+0.6
CTKS	Kestanelik-??a	3.90 63	*e*Pn	Pn	01 23 32.4	+0.7
ARMT	Armutlu	3.94 73	*e*PN	Pn	01 23 32.2	-0.1
ARMT	Armutlu	3.94 73	*e*Pn	Pn	01 23 32.2	-0.1
GEMT	Gemlik	4.16 76	*e*PN	Pn	01 23 35.1	-0.2
GEMT	Gemlik	4.16 76	*e*Pn	Pn	01 23 35.1	-0.2
YLV	Yalova	4.32 75	*e*PN	Pn	01 23 38.2	+0.7
YLV	Yalova	4.32 75	*e*Pn	Pn	01 23 38.2	+0.7
DIVS	Divibare	5.41 329	*e*Pn	Pn	01 23 52.4	0.0
TIP	Timpagrande 3.8nm,0.6s	5.55 268	*e*Pn	Pn	01 23 54.7	+0.3
TIP	Timpagrande 3.8nm,0.6s	5.55 268	*e*Pn	Pn	01 23 54.7	+0.3
TIRR	Tirgusor	5.95 33	*e*PN	Pn	01 24 00.8	+0.9
TIRR	Tirgusor	5.95 33	*e*Pn	Pn	01 24 00.8	+1.0
VOIR		5.95 8	||P	Pn	01 24 00.3	+0.5
VOIR		5.95 8	||P	Pn	01 24 00.3	+0.5
MLR	Muntele Rosu	6.13 14	||P	Pn	01 24 04.3	+2.0
MLR	Muntele Rosu	6.13 14	||P	Pn	01 24 04.3	+2.0
CUC	Castrocucco 4.2nm,0.6s	6.25 277	*e*Pn	Pn	01 24 05.0	+1.0
CUC	Castrocucco 4.2nm,0.6s	6.25 277	*e*Pn	Pn	01 24 05.0	+1.0
CEL	Celeste	6.38 261	*e*Pn	Pn	01 24 06.5	+0.7
CEL			*e*Sn	Sn	01 25 18.6	+0.1
CEL	Celeste	6.38 261	*e*Pn	Pn	01 24 06.5	+0.7
CEL			*e*Sn	Sn	01 25 18.6	+0.1
VRI	Vrincioaia	6.65 17	||P	Pn	01 24 11.4	+1.9
VRI	Vrincioaia	6.65 17	||P	Pn	01 24 11.4	+1.9
BR131	Keskin Array S	7.52 86	*e*Pn	Pn	01 24 23.6	+2.2
BR131	Keskin Array S	7.52 86	*e*Pn	Pn	01 24 23.6	+2.2
BURAR	Bucovina Array	8.12 6	||P	Pn	01 24 30.4	+0.8
BURAR	Bucovina Array	8.12 6	||P	Pn	01 24 30.4	+0.7
BUR08	Bucovina Ar. S	8.15 6	*e*Pn	Pn	01 24 30.3	+0.3
BUR08	Bucovina Ar. S	8.15 6	*e*Pn	Pn	01 24 30.3	+0.3

PDG ***03*** *01:56:23.5±0.6,39°.60N×23°.83E,h15km±1km, ML3.9/10, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*
ATH ***03*** *01:56:23.5,39°.58N×23°.86E, h27km±1km, ML4.3*
NEIC ***03*** *01:56:23.5,39°.58N×23°.86E, h27km, mb3.8/9, ML4.3(ATH), ML3.9(BUC), After ATH.*
ISCJB ***03*** *01:56:23.8±0.3,39°.60N±0°.01×23°.80E±0°.01, h20km±3km, mb3.9/20, Error ellipse: s-maj=2.0km s-min=1.7km az=24.4*
THE ***03*** *01:56:24.2,39°.58N×23°.92E, h12km, ML4.3/8, Error ellipse: s-maj=1.0km s-min=0.5km az=265.0*
CSEM ***03*** *01:56:24.2±0.1,39°.57N×23°.81E, h10km, mb4.0/14, Error ellipse: s-maj=2.0km s-min=1.7km az=28.0*
IDC ***03*** *01:56:25.4±1.1,39°.91N×23°.64E, h0km, mb3.7/11, mb1 3.9/14,mb1mx3.8/26,mbtmp3.8/14, ML3.7/3, MS3.2/2, Ms1 3.2/2, ms1mx2.6/37, Error ellipse: s-maj=26.9km s-min=14.1km az=172.0*
MOS ***03*** *01:56:25.6±1.2,39°.68N×23°.75E, h33km, mb4.1/13, Error ellipse: s-maj=5.6km s-min=3.5km az=107.8*
DDA ***03*** *01:56:52.2,39°.00N×26°.74E, h10km±6km, Md3.5*
ISC 03 01:56:24.4±0.4, 39°.57N±0°.01×23°.81E±0°.01, h12km±2km, n570, σ1°09/642, mb3.9/20, 31C-20D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PAIG	Paliouri	0.37	344	P	Pg		01 56 31.6	-0.1
PAIG	Paliouri	0.37	344	P	Pg		01 56 32.0	+0.3
PAIG				S	Sg		01 56 37.8	+1.2
PAIG	Paliouri	0.37	344	P	Pg		01 56 31.6	-0.1
PAIG				S	Sg		01 56 37.8	+1.2
AOS	Alonnisos	0.41	172	P	Pg		01 56 32.0	-0.4
AOS	Alonnisos	0.41	172	P	Pg		01 56 32.5	+0.1
AOS				S	Sg		01 56 38.7	+0.8
AOS	Alonnisos	0.41	172	P	Pg		01 56 32.0	-0.4
AOS				S	Sg		01 56 38.7	+0.8
XOR	Xorichti	0.52	247	P	Pg		01 56 35.0	+0.5
XOR	Xorichti	0.52	247	P	Pg		01 56 35.5	+1.0
XOR				S	Sg		01 56 44.8	+3.4
XOR	Xorichti	0.52	247	P	Pg		01 56 35.0	+0.5
XOR				S	Sg		01 56 44.8	+3.4
NEO	Neokhori	0.53	240	*e*Pn	Pg		01 56 35.6	+1.0
NEO				*e*Sn	Sg		01 56 43.6	+2.0
NEO	Neokhori	0.53	240	*e*PN	Pg		01 56 35.6	+1.0
NEO				*e*SN	Sg		01 56 43.6	+2.0
NEO	Neokhori	0.53	240	*e*Pn	Pg		01 56 35.6	+1.0
OUR	Ouranopolis	0.77	10	P	Pg		01 56 38.1	-1.2
OUR	Ouranopolis	0.77	10	P	Pg		01 56 38.4	-0.9
OUR				S	Sg		01 56 49.5	+0.1
OUR	Ouranopolis	0.77	10	P	Pg		01 56 38.4	-0.9
OUR				S	Sg		01 56 49.5	+0.1
ATAL	Atalanti	1.07	215	P	Pb		01 56 44.5	-0.4
ATAL	Atalanti	1.07	215	P	Pb		01 56 44.5	-0.4
LIA	Limnos Island	1.11	73	*e*Pn	Pb		01 56 43.7	-1.8
LIA				*e*Sn	Sn		01 56 59.9	-1.1
LIA	Limnos Island	1.11	73	*e*PN	Pb		01 56 43.7	-1.8
LIA				*e*SN	Sn		01 56 59.9	-1.1
LIA	Limnos Island	1.11	73	P	Pb		01 56 43.7	-1.8
LIA				S	Sb		01 56 57.8	-2.1
LIA	Limnos Island	1.11	73	P	Pb		01 56 43.7	-1.8
LIA				S	Sb		01 56 57.8	-2.1
LIA				*e*Sn	Sn		01 56 59.9	-1.1
LKR	Lokris	1.12	215	*e*Pn	Pn		01 56 45.1	-0.7
LKR	Lokris	1.12	215	*e*PN	Pn		01 56 45.1	-0.7
LKR	Lokris	1.12	215	P	Pb		01 56 45.0	-0.6
LKR	Lokris	1.12	215	P	Pb		01 56 45.0	-0.6
LIT	Litokhoron	1.14	298	*e*Pb	Pb		01 56 44.4	-1.7
LIT	Litokhoron	1.14	298	*e*PB	Pb		01 56 44.4	-1.7
LIT	Litokhoron	1.14	298	P	Pb		01 56 44.3	-1.8
LIT	Litokhoron	1.14	298	*e*Pb	Pb		01 56 44.4	-1.7
HORT	Hortiatis	1.16	332	P	Pb		01 56 45.3	+1.0
HORT	Hortiatis	1.16	332	P	Pb		01 56 45.6	-0.7
HORT				S	Sb		01 57 02.3	+1.0
HORT	Hortiatis	1.16	332	P	Pb		01 56 45.6	-0.7
HORT				S	Sb		01 57 02.3	+1.0
THE	Thessaloniki	1.24	329	P	Pn		01 56 47.1	-0.4
THE				S	Sb		01 57 05.0	+1.3
THE	Thessaloniki	1.24	329	P	Pn		01 56 47.1	-0.4
THE				S	Sb		01 57 05.0	+1.3
AGG	Agios Georgios	1.27	245	*e*Pn	Pn		01 56 47.7	-0.3
AGG				*e*Sn	Sn		01 57 05.5	+0.5
AGG	Agios Georgios	1.27	245	*e*PN	Pn		01 56 47.7	-0.3
AGG	Agios Georgios	1.27	245	P	Pn		01 56 47.5	-0.5
AGG	Agios Georgios	1.27	245	P	Pn		01 56 47.5	-0.5
AGG				*e*Sn	Sn		01 57 05.5	+0.5
SOH	Sokhos	1.29	345	*e*Pn	Pn		01 56 48.1	-0.2
SOH	Sokhos	1.29	345	*e*PN	Pn		01 56 48.1	-0.2
SOH	Sokhos	1.29	345	P	Pn		01 56 47.8	-0.5
SOH	Sokhos	1.29	345	P	Pn		01 56 47.8	-0.5
SOH	Sokhos	1.29	345	*e*Pn	Pn		01 56 48.1	-0.2

THL	Klokotos Trika	1.39 270	*e*PN	Pn	01 56 49.3	-0.2
THL	Klokotos Trika	1.39 270	P	Pn	01 56 49.2	-0.3
THL	Klokotos Trika	1.39 270	P	Pn	01 56 49.2	-0.3
KAVA	Kavala	1.52 21	P	Pn	01 56 49.5	-1.9
KAVA	Kavala	1.52 21	P	Pn	01 56 49.5	-1.9
PTL	Penteli	1.52 178	*e*Pn	Pn	01 56 50.6	-0.8
PTL			*e*Sn	Sn	01 57 11.4	+0.2
PTL	Penteli	1.52 178	*e*PN	Pn	01 56 50.6	-0.8
PTL			*e*SN	Sn	01 57 11.4	+0.2
PTL	Penteli	1.52 178	*e*Pn	Pn	01 56 50.6	-0.8
PTL			*e*Sn	Sn	01 57 11.4	+0.2
DSF	Desfina	1.53 221	P	Pn	01 56 50.7	-0.8
DSF	Desfina	1.53 221	P	Pn	01 56 50.7	-0.8
SRS	Serrai	1.55 354	P	Pn	01 56 50.5	-1.3
SRS	Serrai	1.55 354	P	Pn	01 56 50.9	-0.9
SRS	Serrai	1.55 354	P	Pn	01 56 50.9	-0.9
ATH	Athens Observa	1.60 183	*e*Pn	Pn	01 56 51.8	-0.7
ATH			*e*Sn	Sn	01 57 12.1	-1.0
ATH	Athens Observa	1.60 183	*e*PN	Pn	01 56 51.8	-0.7
ATH			*e*SN	Sn	01 57 12.1	-1.0
ATH	Athens Observa	1.60 183	*e*Pn	Pn	01 56 51.8	-0.7
ATH			*e*Sn	Sn	01 57 12.1	-1.0
ATHU	Athens Univers	1.60 181	P	Pn	01 56 52.2	-0.4
ATHU	Athens Univers	1.60 181	P	Pn	01 56 52.2	-0.4
LTK	Loutraki	1.68 203	*e*PB	Pn	01 56 52.9	-0.7
LTK	Loutraki	1.68 203	P	Pn	01 56 52.9	-0.7
LTK	Loutraki	1.68 203	P	Pn	01 56 52.9	-0.7
EVR	Evrytania	1.69 248	*e*Pn	Pn	01 56 54.1	+0.4
EVR	Evrytania	1.69 248	*e*PN	Pn	01 56 54.1	+0.4
EVR	Evrytania	1.69 248	*e*Pn	Pn	01 56 54.1	+0.4
VLY	Voula,Athens	1.72 180	*e*Pb	Pb	01 56 53.3	-2.6
VLY	Voula,Athens	1.72 180	*e*PB	Pb	01 56 53.3	-2.6
VLY	Voula,Athens	1.72 180	*e*Pb	Pb	01 56 53.3	-2.6
GADA	Gvkgeada	1.72 68	*e*PN	Pn	01 56 53.4	-0.8
GADA			*e*SN	Sn	01 57 17.7	+1.6
GADA	Gvkgeada	1.72 68	*e*Pn	Pn	01 56 53.4	-0.8
GADA			*e*Sn	Sn	01 57 17.7	+1.6
KZN	Kozani	1.73 296	*e*Pn	Pn	01 56 54.3	0.0
KZN	Kozani	1.73 296	*e*PN	Pn	01 56 54.3	0.0
KZN	Kozani	1.73 296	P	Pn	01 56 54.3	0.0
KZN	Kozani	1.73 296	P	Pn	01 56 54.3	0.0
KNT	Kendrikon	1.73 337	P	Pn	01 56 54.4	+0.1
KNT	Kendrikon	1.73 337	P	Pn	01 56 54.4	+0.1
GRG	Griva	1.75 323	P	Pn	01 56 54.1	-0.5
GRG	Griva	1.75 323	P	Pn	01 56 54.5	-0.1
GRG	Griva	1.75 323	P	Pn	01 56 54.5	-0.1
KALE	Kalithea	1.76 228	P	Pn	01 56 54.5	-0.1
KALE	Kalithea	1.76 228	P	Pn	01 56 54.5	-0.1
NVR	Nevrokopi	1.77 1	*e*Pb	Pb	01 56 54.1	-2.8
NVR	Nevrokopi	1.77 1	*e*PB	Pb	01 56 54.1	-2.8
NVR	Nevrokopi	1.77 1	*e*Pb	Pb	01 56 54.1	-2.8
TRIZ	Trizonia	1.81 229	P	Pn	01 56 55.2	-0.2
TRIZ	Trizonia	1.81 229	P	Pn	01 56 55.2	-0.2
NAIG	Nisos Aigina	1.83 188	*e*Pb	Pb	01 56 54.8	-3.0
NAIG	Nisos Aigina	1.83 188	*e*PB	Pb	01 56 54.8	-3.0
NAIG	Nisos Aigina	1.83 188	*e*Pb	Pb	01 56 54.8	-3.0
EFP	Efpalio	1.87 233	*e*PB	Pb	01 56 56.3	-2.2
EFP	Efpalio	1.87 233	P	Pn	01 56 56.2	0.0
EFP	Efpalio	1.87 233	P	Pn	01

GONE	Gonen-Balikesi	3.02	80	ePN	Pn	01 57 12.0	-0.1		
GONE	Gonen-Balikesi	3.02	80	ePn	Pn	01 57 12.0	-0.1		
VTS	Vitosha	3.05	352	⇑P	Pn	01 57 12.8	+0.4		
VTS	Vitosha	3.05	352	P	Pn	01 57 12.8	+0.4		
VTS	Vitosha	3.05	352	P	Pn	01 57 12.8	+0.4		
KEK	Kerkira	3.10	274	ePb	Pb	01 57 15.3	-4.1		
KEK	Kerkira	3.10	274	ePB	Pb	01 57 15.3	-4.1		
KEK	Kerkira	3.10	274	P	Pn	01 57 14.9	+1.8		
KEK	Kerkira	3.10	274	P	Pn	01 57 14.9	+1.8		
KEK	Kerkira	3.10	274	ePb	Pb	01 57 15.3	-4.1		
PYL	PYLOS	3.13	212	ePN	Pn	01 57 14.9	+1.4		
PYL	PYLOS	3.13	212	P	Pn	01 57 14.7	+1.2		
PYL	PYLOS	3.13	212	P	Pn	01 57 14.7	+1.2		
BALB	Balikesir	3.15	88	ePN	Pn	01 57 13.4	-0.3		
BALB	Balikesir	3.15	88	ePn	Pn	01 57 13.4	-0.4		
TKR	Tekirdag	3.18	62	ePN	Pn	01 57 15.0	+0.8		
TKR	Tekirdag	3.18	62	ePn	Pn	01 57 15.0	+0.7		
EDRB	Edirne	3.18	44	ePN	Pn	01 57 13.6	-0.7		
EDRB	Edirne	3.18	44	ePn	Pn	01 57 13.6	-0.7		
AKHS	Akhisar	3.19	101	*i* P	Pn	01 57 14.6	+0.2		
AKHS	Akhisar	3.19	101	*i* P	Pn	01 57 14.6	+0.3		
AKS	Akhisar	3.19	101	ePN	Pn	01 57 13.6	-0.7		
AKS	Akhisar	3.19	101	ePn	Pn	01 57 13.6	-0.7		
EDC	Edincik	3.21	75	ePN	Pn	01 57 15.2	+0.6		
EDC	Edincik	3.21	75	ePn	Pn	01 57 15.3	+0.7		
BNT	Bandirma	3.26	75	ePN	Pn	01 57 15.6	+0.3		
GCAM	G?zelcaml?	3.27	124	eP	Pn	01 57 23.5	+8.0		
KYTH	Kithira	3.34	191	ePn	Pn	01 57 16.3	-0.2		
KYTH	Kithira	3.34	191	ePN	Pn	01 57 16.2	-0.3		
KYTH	Kithira	3.34	191	ePn	Pn	01 57 16.3	-0.2		
THR5	Thira Island,	3.38	158	P	Pn	01 57 16.4	-0.6		
THR5	Thira Island,	3.38	158	P	Pn	01 57 16.4	-0.6		
CRLT	Corlu	3.38	61	ePN	Pn	01 57 18.1	+1.1		
CRLT	Corlu	3.38	61	ePn	Pn	01 57 18.1	+1.1		
THR3	Thira Island,	3.40	158	P	Pn	01 57 17.0	-0.3		
THR3	Thira Island,	3.40	158	P	Pn	01 57 17.0	-0.3		
TIR	Tirane	3.49	302	ePn	Pn	01 57 20.4	+1.9		
TIR				ePg	Pg	01 57 29.2	-2.1		
TIR	Tirane	3.49	302	eP	Pn	01 57 20.4	+1.9		
KCTX	Karacabey (Bur	3.57	77	ePN	Pn	01 57 19.8	+0.3		
KCTX	Karacabey (Bur	3.57	77	ePn	Pn	01 57 19.8	+0.3		
BARS	Barje	3.57	336	⇓*i*Pn	Pn	01 57 19.8	+0.2		
AYDN	Tasoluk	3.72	120	*i* P	Pn	01 57 21.2	-0.4		
AYDN	Tasoluk	3.72	120	*i* P	Pn	01 57 21.2	-0.4		
BODT	Bodrum	3.73	131	ePN	Pn	01 57 20.1	-1.6		
BODT	Bodrum	3.73	131	ePn	Pn	01 57 20.1	-1.6		
SLVT	Silivri	3.75	62	ePN	Pn	01 57 23.2	+1.2		
SLVT	Silivri	3.75	62	ePn	Pn	01 57 23.3	+1.3		
BDRM	Kayabasi	3.80	130	*i* P	Pn	01 57 23.0	+0.2		
BDRM	Kayabasi	3.80	130	*i* P	Pn	01 57 23.0	+0.2		
MLSB	Milas	3.86	125	ePN	Pn	01 57 22.3	-1.3		
MLSB	Milas	3.86	125	ePn	Pn	01 57 22.3	-1.3		
PUK	Puka	3.86	311	ePN	Pn	01 57 25.3	+1.7		
PUK	Puka	3.86	311	ePn	Pn	01 57 25.3	+1.7		
KULA	Kula-Manisa	3.92	104	ePN	Pn	01 57 23.9	-0.5		
KULA	Kula-Manisa	3.92	104	ePn	Pn	01 57 23.9	-0.6		
CTKS	Kestanelik-??a	3.95	64	ePN	Pn	01 57 26.2	+1.3		
CTKS	Kestanelik-??a	3.95	64	ePn	Pn	01 57 26.2	+1.4		
BCI	Bajram Curri	3.97	316	ePN	Pn	01 57 26.0	+0.9		
BCI	Bajram Curri	3.97	316	ePn	Pn	01 57 26.0	+0.9		
MDNY	Mudanya-Bursa	3.98	77	ePN	Pn	01 57 26.0	+0.8		
MDNY	Mudanya-Bursa	3.98	77	ePn	Pn	01 57 26.0	+0.8		
ARMT	Armutlu	4.00	74	ePN	Pn	01 57 26.6	+1.1		
ARMT	Armutlu	4.00	74	ePn	Pn	01 57 26.6	+1.1		
DAT	Datca	4.11	133	ePN	Pn	01 57 25.6	-1.4		
DAT	Datca	4.11	133	ePn	Pn	01 57 25.6	-1.4		
BGKT	Bogazkoy	4.12	65	ePN	Pn	01 57 28.2	+1.1		
BGKT	Bogazkoy	4.12	65	ePn	Pn	01 57 28.2	+1.1		
ULDT	Uludag	4.14	80	*i* P	Pn	01 57 28.6	+1.2		
ULDT	Uludag	4.14	80	*i* P	Pn	01 57 28.6	+1.2		
KARN	Karanos	4.17	179	ePN	Pn	01 57 29.0	+1.2		
KARN	Karanos	4.17	179	ePn	Pn	01 57 29.0	+1.2		
VAM	Vamos	4.17	176	ePn	Pn	01 57 28.1	+0.2		
VAM	Vamos	4.17	176	ePN	Pn	01 57 28.1	+0.2		
VAM	Vamos	4.17	176	ePn	Pn	01 57 28.1	+0.2		
PVY	Plav	4.18	317	⇑*i*Pn	Pn	01 57 28.6	+0.6		
PVY				eSn	Sn	01 58 17.5	+0.7		
PVY	Plav	4.18	317	⇑*i*Pn	Pn	01 57 28.6	+0.6		
PVY				eSn	Sn	01 58 17.5	+0.7		
ULC	Ulcinj	4.20	306	ePn	Pn	01 57 29.4	+1.1		
ULC				eSn	Sn	01 58 18.4	+1.1		
ULC	Ulcinj	4.20	306	ePn	Pn	01 57 29.4	+1.1		
ULC				eSn	Sn	01 58 18.4	+1.1		
YER	Yerkesik	4.28	123	ePN	Pn	01 57 28.2	-1.1		
YER	Yerkesik	4.28	123	ePn	Pn	01 57 28.2	-1.0		
ISK	Istanbul-Kandi	4.28	68	ePN	Pn	01 57 30.8	+1.5		
ISK	Istanbul-Kandi	4.28	68	ePn	Pn	01 57 30.8	+1.4		
KLYT	Kilyos	4.33	66	ePN	Pn	01 57 31.5	+1.5		
KLYT	Kilyos	4.33	66	ePn	Pn	01 57 31.5	+1.4		
IDI	Anoyia	4.36	168	ePn	Pn	01 57 30.0	-0.5		
IDI	Anoyia	4.36	168	ePN	Pn	01 57 30.0	-0.5		
IDI	Anoyia	4.36	168	ePn	Pn	01 57 30.0	-0.5		
BEY	Berane	4.42	319	⇑*i*Pn	Pn	01 57 32.1	+0.8		
BEY				eSn	Sn	01 58 22.9	+0.3		
IVA	Berane	4.42	319	⇑*i*Pn	Pn	01 57 32.1	+0.8		
IVA				eSn	Sn	01 58 22.9	+0.3		
GDZ	Gediz	4.43	94	*i* P	Pn	01 57 30.1	-1.3		
GDZ	Gediz	4.43	94	*i* P	Pn	01 57 30.1	-1.3		
PDG	Podgorica	4.47	311	⇑*i*Pn	Pn	01 57 32.7	+0.8		
PDG				eSn	Sn	01 58 24.2	+0.4		
TTG	Podgorica	4.47	311	⇑*i*Pn	Pn	01 57 32.7	+0.8		
TTG				eSn	Sn	01 58 24.2	+0.4		
BOLS	Boljevac	4.47	343	⇑*i*Pn	Pn	01 57 31.6	-0.4		
DNZL	Cakiroluk	4.51	113	*i* P	Pn	01 57 32.9	+0.4		
DNZL	Cakiroluk	4.51	113	*i* P	Pn	01 57 32.9	+0.4		
NPS	Neapolis	4.54	161	ePn	Pn	01 57 33.4	+0.5		
NPS	Neapolis	4.54	161	ePN	Pn	01 57 33.4	+0.5		
NPS	Neapolis	4.54	161	ePn	Pn	01 57 33.4	+0.5		
KHAL	Karahalli	4.59	103	*i* P	Pn	01 57 33.1	-0.5		
KHAL	Karahalli	4.59	103	*i* P	Pn	01 57 33.1	-0.5		
BUM	Brajici-Budva	4.61	308	⇑*i*Pn	Pn	01 57 35.1	+1.3		
BUM				eSn	Sn	01 58 28.0	+0.7		
BUM	Brajici-Budva	4.61	308	⇑*i*Pn	Pn	01 57 35.1	+1.3		
BUM				eSn	Sn	01 58 28.0	+0.7		
SIVA	Sivas	4.62	170	ePn	Pn	01 57 34.3	+0.3		
SIVA	Sivas	4.62	170	ePN	Pn	01 57 34.2	+0.2		
SIVA	Sivas	4.62	170	ePn	Pn	01 57 34.3	+0.3		
KHL	Karahalli	4.63	104	ePN	Pn	01 57 34.1	0.0		
KHL	Karahalli	4.63	104	ePn	Pn	01 57 34.1	0.0		
ADVT	Abdulvahap	4.63	77	ePN	Pn	01 57 35.3	+1.1		
ADVT	Abdulvahap	4.63	77	ePn	Pn	01 57 35.3	+1.1		
HRT	Hereke	4.66	73	ePN	Pn	01 57 35.6	+1.1		
HRT	Hereke	4.66	73	ePn	Pn	01 57 35.6	+1.1		
GVD	Gavdhos	4.73	177	ePn	Pn	01 57 37.0	+1.4		
GVD	Gavdhos	4.73	177	ePN	Pn	01 57 37.0	+1.4		
GVD	Gavdhos	4.73	177	ePn	Pn	01 57 37.0	+1.4		
KARP	Karpathos	4.82	145	ePn	Pn	01 57 37.7	+0.9		
KARP	Karpathos	4.82	145	ePN	Pn	01 57 37.7	+0.9		
KARP	Karpathos	4.82	145	ePn	Pn	01 57 37.7	+0.9		
ZKR	Zakros	4.85	156	ePn	Pn	01 57 38.0	+0.9		
ZKR	Zakros	4.85	156	ePN	Pn	01 57 38.0	+0.9		
ZKR	Zakros	4.85	156	ePn	Pn	01 57 38.0	+0.9		
NKY	Niksic	4.86	313	⇑*i*Pn	Pn	01 57 37.9	+0.6		
NKY				eSn	Sn	01 58 33.8	+0.3		
NKY	Niksic	4.86	313	⇑*i*Pn	Pn	01 57 37.9	+0.6		
NKY				eSn	Sn	01 58 33.8	+0.3		
ALT	Altintas	4.92	94	ePN	Pn	01 57 38.4	+0.3		
ALT	Altintas	4.92	94	ePn	Pn	01 57 38.4	+0.3		
HCY	Herceg Novi	4.94	307	⇑*i*Pn	Pn	01 57 39.1	+0.8		
HCY				eSn	Sn	01 58 35.5	+0.1		
HCY	Herceg Novi	4.94	307	⇑*i*Pn	Pn	01 57 39.1	+0.8		
HCY				eSn	Sn	01 58 35.5	+0.1		
PLE	Pljevlja	5.01	320	⇑*i*Pn	Pn	01 57 39.8	+0.5		
PLE				eSn	Sn	01 58 37.0	-0.1		
PLE	Pljevlja	5.01	320	⇑*i*Pn	Pn	01 57 39.8	+0.5		
PLE				eSn	Sn	01 58 37.0	-0.1		
PE1	Pezze di Greco	5.04	286	ePn	Pn	01 57 40.0	+0.2		
PE1				eSn	Sn	01 58 36.1	-1.9		
TAR1	Taranto	5.09	283	ePn	Pn	01 57 39.5	-1.0		
BORA	Eskisehir	5.13	84	*i* P	Pn	01 57 41.0	0.0		
BORA	Eskisehir	5.13	84	*i* P	Pn	01 57 41.0	-0.1		
UPM	Unac-Piva	5.17	316	ePn	Pn	01 57 42.7	+1.2		
UPM				eSn	Sn	01 58 40.6	-0.5		
UPM	Unac-Piva	5.17	316	ePn	Pn	01 57 42.7	+1.2		
UPM				eSn	Sn	01 58 40.6	-0.5		
BRY	Bratogost	5.17	312	ePn	Pn	01 57 42.5	+0.9		
BRY				eSn	Sn	01 58 40.7	-0.5		
BRY	Bratogost	5.17	312	ePn	Pn	01 57 42.5	+0.9		
BRY				eSn	Sn	01 58 40.7	-0.5		
GULT	Gulveren	5.22	78	ePN	Pn	01 57 43.6	+1.4		
GULT	Gulveren	5.22	78	ePn	Pn	01 57 43.6	+1.3		
TRUS	Trudelj	5.29	332	⇑*i*Pn	Pn	01 57 42.4	-0.8		
DIVS	Divibare	5.34	329	P	Pn	01 57 44.3	+0.4		
DIVS	Divibare	5.34	329	⇓*i*Pn	Pn	01 57 44.2	+0.3		
SHUT	Suhut-Afyon	5.35	99	ePN	Pn	01 57 44.4	+0.4		
SHUT	Suhut-Afyon	5.35	99	ePn	Pn	01 57 44.4	+0.4		
BBLS	Lazići	5.41	324	⇑*i*Pn	Pn	01 57 45.8	+1.0		
SULR		5.42	19	⇓P	Pn	01 57 44.4	-0.5		
SULR		5.42	19	⇓P	Pn	01 57 44.4	-0.5		
ESKT	Eskisehir	5.44	88	ePN	Pn	01 57 45.7	+0.3		
ESKT	Eskisehir	5.44	88	ePn	Pn	01 57 45.7	+0.4		
TIP	Timpagrande	5.48	268	ePn	Pn	01 57 46.5	+0.7		
	29nm,0.6s								
TIP	Timpagrande	5.48	268	ePn	Pn	01 57 46.5	+0.7		
	29nm,0.6s								
BAI	Bari	5.51	288	ePn	Pn	01 57 46.1	-0.1		
BAI				eSn	Sn	01 58 48.2	-1.3		
ELL	Elmali	5.57	118	ePN	Pn	01 57 46.9	-0.3		
ELL	Elmali	5.57	118	ePn	Pn	01 57 46.9	-0.2		
SG1	Sgolgore (BA)	5.60	285	ePn	Pn	01 57 47.9	+0.4		
SG1				eSn	Sn	01 58 51.6	-0.2		
BOLV	Bolvadin	5.62	96	*i* P	Pn	01 57 47.5	-0.2		
STON	Ston	5.66	308	ePn	Pn	01 57 47.5	-0.8		
STON				Sn	Sn	01 58 51.8	-1.4		
STON	Ston	5.66	308	ePn	Pn	01 57 47.4	-0.9		
STON				Sn	Sn	01 58 51.8	-1.4		
CVD	Cernavoda	5.69	32	⇑P	Pn	01 57 49.2	+0.5		
CVD	Cernavoda	5.69	32	P	Pn	01 57 49.2	+0.5		
BCK	Bucak	5.72	110	ePN	Pn	01 57 49.2	0.0		
BCK	Bucak	5.72	110	ePn	Pn	01 57 49.2	+0.1		
MDU	Mudurnu	5.76	79	ePN	Pn	01 57 50.7	+1.0		
MDU	Mudurnu	5.76	79	ePn	Pn	01 57 50.7	+1.1		
GZR	Gura Zlata	5.87	353	⇓P	Pn	01 57 50.8	-0.3		
GZR	Gura Zlata	5.87	353	P	Pn	01 57 50.8	-0.3		
VOIR		5.93	8	⇓P	Pn	01 57 51.9	-0.1		
VOIR		5.93	8	P	Pn	01 57 51.9	-0.1		
TIRR	Tirgusor	5.96	34	ePn	Pn	01 57 51.2	-1.3		
	19nm,0.7s								
TIRR				ePg	Pg	01 58 15.3	-3.2		
TIRR				eSg	Sg	01 59 26.9	-8.9		
TIRR	Tirgusor	5.96	34	eP	Pn	01 57 51.2	-1.3		
TIRR				pmax	pmax				
	comp=Z,19nm,0.7s								
TIRR	Tirgusor	5.96	34	eP	Pn	01 57 51.2	-1.3		
	comp=Z,19nm,0.7s								
SVRH	Sivrihisar-ESK	5.97	89	ePN	Pn	01 57 53.8	+1.3		
SVRH	Sivrihisar-ESK	5.97	89	ePn	Pn	01 57 53.8	+1.3		
SUTC	Sutluce-Ispart	6.02	108	ePN	Pn	01 57 53.7	+0.5		
SUTC	Sutluce-Ispart	6.02	108	ePn	Pn	01 57 53.7	+0.5		
MLR	Muntele Rosu	6.12	14	⇑P	Pn	01 57 54.6	0.0		
MLR	Muntele Rosu	6.12	14	P	Pn	01 57 54.6	0.0		
CUC	Castrocucco	6.17	276	ePn	Pn	01 57 56.9	+1.6		
	comp=Z,24nm,0.6s								
CUC				eSn	Sn	01 59 05.0	-0.7		
CUC	Castrocucco	6.17	276	ePn	Pn	01 57 56.9	+1.6		
	comp=Z,24nm,0.6s								
CUC				eSn	Sn	01 59 05.0	-0.8		
BZS	Buzias	6.25	346	⇑P	Pn	01 57 55.5	-0.9		
BZS	Buzias	6.25	346	P	Pn	01 57 55.5	-0.9		
KIZT	Kizilcal	6.31	94	ePN	Pn	01 57 58.4	+1.2		
KIZT	Kizilcal	6.31	94	ePn	Pn	01 57 58.4	+1.2		
CEL	Celeste	6.31	260	ePn	Pn	01 57 57.7	+0.5		
	comp=Z,26nm,0.3s								
CEL				eSn	Sn	01 59 07.3	-1.9		
CEL	Celeste	6.31	260	ePn	Pn	01 57 57.7	+0.5		
	comp=Z,26nm,0.3s								
CEL				eSn	Sn	01 59 07.3	-1.9		
FGSL	Fruska Gora	6.32	333	⇑*i*Pn	Pn	01 57 57.4	+0.1		
DEV	Deva	6.34	354	⇓P	Pn	01 57 58.1	+0.5		
DEV	Deva	6.34	354	P	Pn	01 57 58.1	+0.5		
MS1	Monte Sant'Ang	6.35	292	ePn	Pn	01 57 57.4	-0.4		
SGKT	Sivrigoynuk	6.41	78	*i* P	Pn	01 57 56.4	-2.1		
CFR	Carcaliu	6.45	28	⇑P	Pn	01 57 58.2	-0.9		
CFR	Carcaliu	6.45	28	P	Pn	01 57 58.2	-0.9		
MDB	Medias	6.58	3	⇓P	Pn	01 58 01.9	+1.0		
MDB	Medias	6.58	3	P	Pn	01 58 01.9	+1.0		
PLOR	Plostina	6.61	18	⇓P	Pn	01 58 02.0	+0.6		
PLOR	Plostina	6.61	18	P	Pn	01 58 02.0	+0.6		
VRI	Vrincioaia	6.65	18	⇑P	Pn	01 58 02.4	+0.6		
VRI	Vrincioaia	6.65	18	P	Pn	01 58 02.4	+0.6		
TLCR		6.72	32	⇓P	Pn	01 58 01.9	-0.9		
TLCR		6.72	32	P	Pn	01 58 01.9	-1.0		
TESR		7.24	16	⇑P	Pn	01 58 10.1	+0.1		
TESR		7.24	16	⇑P	Pn	01 58 10.1	+0.1		
DRGR		7.26	354	⇓P	Pn	01 58 09.9	-0.3		
DRGR		7.26	354	P	Pn	01 58 09.9	-0.3		
RHK3	Tenkes	7.52	329	eS	Sn	01 59 38.7	-0.2		
BR131	Keskin Array S	7.59	86	ePn	Pn	01 58 14.9	+0.1		
	comp=Z,2.5nm,0.5s								
BR131	Keskin Array S	7.59	86	ePn	Pn	01 58 14.9	+0.1		
	comp=Z,2.5nm,0.5s								
BRTR	Keskin Array B	7.59	86	Pn	Pn	01 58 14.9	+0.1		
	comp=Z,0.6nm,0.3s,baz=264,slow=11,SNR=18								
BRTR				Pg	Pn	01 58 45.7	+31		
	comp=Z,0.2nm,0.3s,baz=272,slow=13,SNR=5.7								
BRTR				Lg		02 00 29.4			
	baz=276,slow=22,SNR=5.7								
BRTR	Keskin Array B	7.59	86	P	Pn	01 58 14.9	+0.1		
BRTR				pmax	pmax				
	comp=Z,1.0nm,0.3s								
BRTR	Keskin Array B	7.59	86	P	Pn	01 58 14.9	+0.1		
	comp=Z,1.0nm,0.3s								
PKSM	Moragy	7.64	332	⇓P	Pn	01 58 15.7	+0.3		
PKSM	Moragy	7.64	332	P	Pn	01 58 15.7	+0.3		
VAE	Valguarnera	7.66	257	Pn	Pn	01 58 18.8	+3.1		
VAE				Sn	Sn	01 59 46.4	+4.1		
VAE	Valguarnera	7.66	257	Pn	Pn	01 58 18.8	+3.1		
	comp=Z,2.0nm,0.3s,baz=136,slow=4.5,SNR=2.9								
VAE				Sn	Sn	01 59 46.4	+4.1		
	comp=Z,1.0nm,0.3s,baz=174,slow=12,SNR=2.3								
PKS2	Kecel	7.69	336	⇑eP	Pn	01 58 17.0	+0.9		
PKS2				eS	Sn	01 59 42.0	-1.1		
PKS9	Tamasi	8.09	332	⇑eP	Pn	01 58 22.1	+0.5		
BURAR	Bucovina Array	8.10	7	⇓P	Pn	01 58 22.2	+0.5		
BURAR	Bucovina Array	8.10	7	⇓P	Pn	01 58 22.2	+0.4		
BUR08	Bucovina Ar. S	8.13	7	ePn	Pn	01 58 22.1	-0.1		
BUR08	Bucovina Ar. S	8.13	7	ePn	Pn	01 58 22.1	-0.1		
PKS7	Kunszentmiklos	8.20	337	eP	Pn	01 58 22.6	-0.5		
WDD	Wield Dalam	8.23	246	ePn	Pn	01 58 23.0	-0.7		
	comp=Z,81nm,0.4s								
WDD	Wild Dalam	8.23	246	ePn	Pn	01 58 23.0	-0.6		
	comp=Z,81nm,0.4s								
NVLJ	Novalja	8.31	310	*i* Pn	Pn	01 58 24.0	-0.6		
NVLJ				Sn	Sn	01 59 55.9	-2.4		
NVLJ	Novalja	8.31	310	*i* Pn	Pn	01 58 24.0	-0.6		
AQU	L'Aquila	8.35	293	ePn	Pn	01 58 25.1	-0.1		
	comp=Z,24nm,0.9s								
AQU	L'Aquila	8.35	293	eP	Pn	01 58 25.1	-0.1		
AQU				pmax	pmax				
	comp=Z,24nm,0.9s								
AQU	L'Aquila	8.35	293	eP	Pn	01 58 25.1	-0.1		
	comp=Z,24nm,0.9s								
BOJS	Bojanci	8.66	316	*i* Pn	Pn	01 58 30.0	+0.6		
BOJS				*i* Sn	Sn	02 00 07.5	+0.6		
BOJS	Bojanci	8.66	316	*i* Pn	Pn	01 58 30.0	+0.6		
BOJS				*i* Sn	Sn	02 00 07.5	+0.6		
PKSG		8.75	335	⇑eP	Pn	01 58 31.6	+1.0		
PSZ	Piszkesteto	8.81	343	⇓*e*	Pn	01 58 41.9	+10		
VISS	Visnje	9.07	316	*i* Pn	Pn	01 58 35.3	+0.2		
VISS	Visnje	9.07	316	*i* Pn	Pn	01 58 35.3	+0.2		
UZH	Uzhgorod	9.12	354	eP	Pn	01 58 33.4	-2.3		
UZH	Uzhgorod	9.12	354	eP	Pn	01 58 33.4	-2.3		
LJU	Ljubljana	9.39	317	*i* Pn	Pn	01 58 39.8	+0.3		
LJU	Ljubljana	9.39	317	*i* P	Pn	01 58 39.8	+0.3		
PERS	Pernice	9.49	321	*i* Pn	Pn	01 58 42.1	+1.2		
PERS	Pernice	9.49	321	*i* Pn	Pn	01 58 42.1	+1.2		
SOKA	Soboth	9.56	321	⇓*i*Pn	Pn	01 58 42.8	+1.0		
SOKA	Soboth	9.56	321	Pn	Pn	01 58 42.8	+1.0		
VYHS	Vyhne	9.61	340	ePn	Pn	01 58 46.7	+4.3		
VYHS				eSn	Sn	02 00 29.3	-0.9		
VYHS				eSg	Sn	02 01 40.0	+70		
VYHS	Vyhne	9.61	340	eP	Pn	01 58 46.7	+4.3		
VYHS				*e*		02 00 29.3			
VYHS	Vyhne	9.61	340	ePN	Pn	01 58 46.7	+4.3		
VYHS				eSN	Sn	02 00 29.3	-0.9		
VYHS				*e*		02 01 40.0			
OBKA	Obir	9.69	319	⇑*i*Pn	Pn	01 58 44.3	+0.8		
OBKA	Obir	9.69	319	Pn	Pn	01 58 44.3	+0.8		
VOY	Vojsko	9.73	315	ePn	Pn	01 58 44.6	+0.5		
VOY				eSn	Sn	02 00 30.5	-2.7		
VOY	Vojsko	9.73	315	ePn	Pn	01 58 44.6	+0.5		
ARSA	Arzberg	9.75	325	⇓*i*Pn	Pn	01 58 45.7	+1.3		
	SNR=10								
ARSA				⇓*i*Sn	Sn	02 00 34.3	+0.6		
ARSA	Arzberg	9.75	325	Pn	Pn	01 58 45.7	+1.3		
	SNR=10								
ARSA				Sn	Sn	02 00 34.3	+0.5		
KOLL	Kolacno	9.80	338	ePn	Pn	01 58 48.8	+3.7		
KOLL	Kolacno	9.80	338	ePN	Pn	01 58 48.8	+3.7		
ZST	Bratislava	9.88	333	ePn	Pn	01 58 47.8	+1.6		
ZST	Bratislava	9.88	333	ePN	Pn	01 58 47.8	+1.6		
ZST	Bratislava	9.88	333	eP	Pn	01 58 47.8	+1.6		
STHS	Stebnicka Huta	10.01	350	eP	Pn	01 58 54.7	+6.8		
STHS				*e*		01 59 17.3			
STHS				eSg		02 01 54.5			
STHS	Stebnicka Huta	10.01	350	*e*	Pn	01 58 54.7	+6.8		
STHS				*e*		01 59 17.3			
STHS				*e*		02 01 54.5			
MOA	Molln	10.77	323	⇓*i*Pn	Pn	01 59 00.0	+1.7		
MOA				⇓*i*Sn	Sn	02 01 04.2	+5.5		
MOA	Molln	10.77	323	Pn	Pn	01 59 00.0	+1.7		
ABTA	Abfaltersbach	10.92	315	⇑*i*Pn	Pn	01 59 00.2	-0.2		
	SNR=5.9								
ABTA	Abfaltersbach	10.92	315	Pn	Pn	01 59 00.2	-0.2		
	SNR=5.9								
OKC	Ostrava-Krasne	11.02	340	AMS	AMS	02 03 40.0			
	comp=Z,200nm,13.5s								
TREC	Trest	11.38	331	AMS	AMS	02 04 10.0			
	comp=Z,200nm,12.7s								
MMAI	Mount Meron Ar	11.41	121	LR	LR	02 04 01.9			
	comp=Z,77nm,21.2s,baz=140,slow=39								
DPC	Dobruska-Polom	12.00	336	eP	Px	01 59 26.5		

QUIF	**Quistinic**	**21.11**	**302**	*e*P		**P**	**02 01 08.1**	**-0.7**
	comp=Z,17nm,1.0s,mb4.3							
ESDC	**Sonseca Array**	**21.36**	**279**	P		**P**	**02 01 12.4**	**+0.9**
	comp=Z,1.4nm,0.6s,mb3.5,baz=76,slow=11,SNR=8.2							
ESDC	**Sonseca Array**	**21.36**	**279**	P		**P**	**02 01 12.4**	**+0.9**
HFS	**Hagfors**	**21.54**	**346**	P		**P**	**02 01 12.8**	**-0.5**
	comp=Z,1.1nm,0.5s,mb3.6,baz=145,slow=16,SNR=7.8							
HFS	**Hagfors**	**21.54**	**346**	P		**P**	**02 01 12.8**	**-0.4**
FINES	**FINESS Array B**	**21.94**	**3**	P		**P**	**02 01 16.4**	**-1.2**
	comp=Z,2.7nm,0.6s,mb3.8,baz=205,slow=8.4,SNR=9.5							
FINES				LR		LR	02 11 00.3	
	comp=Z,93nm,19.3s,baz=339,slow=40							
FINES	**FINESS Array B**	**21.94**	**3**	P		**P**	**02 01 16.4**	**-1.1**
FINES				pmax	pmax			
	comp=Z,3.0nm,0.6s							
FINES				MLR	MLR			
	comp=Z,93nm,19.3s							
FINES	**FINESS Array B**	**21.94**	**3**	P		**P**	**02 01 16.4**	**-1.1**
	comp=Z,93nm,19.3s							
KAF	**Kangasniemi**	**22.62**	**3**	*e*P		**P**	**02 01 16.7**	**-8.0**
	comp=Z,0.2nm,0.4s,mb2.9							
KAF	**Kangasniemi**	**22.62**	**3**	*e*p		**P**	**02 01 16.7**	**-8.0**
	comp=Z,0.2nm,0.4s,mb2.9							
NAO01	**NORSAR Array S**	**22.76**	**344**	*e*P		**P**	**02 01 26.3**	**+0.1**
	comp=Z,10nm,0.9s,mb4.2							
NAO01	**NORSAR Array S**	**22.76**	**344**	*e*P		**P**	**02 01 26.3**	**+0.1**
	comp=Z,10nm,0.9s,mb4.2							
TAM	**Tamanrasset**	**22.83**	**228**	*e*P		**P**	**02 01 29.0**	**+1.7**
	comp=Z,3.8nm,1.2s,mb3.7							
TAM	**Tamanrasset**	**22.83**	**228**	*e*P		**P**	**02 01 29.0**	**+1.7**
TAM				pmax	pmax			
	comp=Z,4.0nm,1.2s,mb3.7							
TAM	**Tamanrasset**	**22.83**	**228**	*e*P		**P**	**02 01 29.0**	**+1.7**
	comp=Z,3.8nm,1.2s,mb3.7							
NB2	**NORSAR Subarra**	**22.86**	**344**	P		**P**	**02 01 28.2**	**+0.9**
	comp=Z,2.7nm,0.8s,mb3.7,SNR=5.4							
NOA	**NORSAR Array B**	**22.86**	**344**	P		**P**	**02 01 26.9**	**-0.4**
NOA	**NORSAR Array B**	**22.86**	**344**	P		**P**	**02 01 26.9**	**-0.4**
	comp=Z,1.7nm,0.9s,mb3.8,baz=147,slow=9.5,SNR=4.8							
NOA	**NORSAR Array B**	**22.86**	**344**	P		**P**	**02 01 26.9**	**-0.4**
NOA				pmax	pmax			
	comp=Z,2.0nm,0.9s							
NOA	**NORSAR Array B**	**22.86**	**344**	P		**P**	**02 01 26.9**	**-0.4**
	comp=Z,2.0nm,0.9s,mb3.5							
KLMR	**Klimovskoe**	**23.43**	**19**	*e*P		**P**	**02 01 31.2**	**-2.1**
KLMR				pmax	pmax			
	comp=Z,18nm,1.5s,mb4.3							
KLMR	**Klimovskoe**	**23.43**	**19**	*e*P		**P**	**02 01 31.2**	**-2.1**
	comp=Z,18nm,1.5s,mb4.3							
MDT	**Midelt**	**23.85**	**262**	P		**P**	**02 01 38.0**	**+0.5**
	comp=Z,1.3nm,0.9s,mb3.4,baz=248,slow=11,SNR=2.4							
MDT	**Midelt**	**23.85**	**262**	P		**P**	**02 01 38.0**	**+0.5**
EKA	**Eskdalemuir Ar**	**23.89**	**320**	P		**P**	**02 01 36.9**	**-0.8**
	comp=Z,1.7nm,0.6s,mb3.6,baz=116,slow=9.5,SNR=10							
EKA	**Eskdalemuir Ar**	**23.89**	**320**	P		**P**	**02 01 36.9**	**-0.8**
EKA				pmax	pmax			
	comp=Z,2.0nm,0.6s							
EKA	**Eskdalemuir Ar**	**23.89**	**320**	P		**P**	**02 01 36.9**	**-0.8**
	comp=Z,2.0nm,0.6s,mb3.7							
ARU	**Arti**	**28.31**	**42**	*e*P		**P**	**02 02 18.4**	**+0.7**
	comp=Z,1.6nm,0.6s,mb3.8							
ARU	**Arti**	**28.31**	**42**	P		**P**	**02 02 17.3**	**-0.3**
ARU	**Arti**	**28.31**	**42**	*e*P		**P**	**02 02 18.4**	**+0.8**
	comp=Z,1.6nm,0.6s,mb3.8							
BRVK	**Borovoye**	**34.19**	**51**	*i* P		**P**	**02 03 11.0**	**+1.6**
BRVK	**Borovoye**	**34.19**	**51**	*i* P		**P**	**02 03 11.0**	**+1.6**
BVAR	**Borovoye Array**	**34.25**	**51**	P		**P**	**02 03 12.6**	**+2.7**
	comp=Z,1.5nm,0.7s,mb4.1,baz=242,slow=38,SNR=4.3							
BVAR	**Borovoye Array**	**34.25**	**51**	P		**P**	**02 03 12.6**	**+2.7**
BVAR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
BVAR	**Borovoye Array**	**34.25**	**51**	P		**P**	**02 03 12.6**	**+2.7**
	comp=Z,2.0nm,0.7s,mb4.2							
KURK	**Kurchatov**	**39.38**	**55**	*e*P		**P**	**02 03 55.2**	**+1.5**
	comp=Z,5.0nm,1.3s,mb4.1							
KURK	**Kurchatov**	**39.38**	**55**	*e*P		**P**	**02 03 55.2**	**+1.6**
KURK				pmax	pmax			
	comp=Z,5.0nm,1.3s,mb4.1							
KURK	**Kurchatov**	**39.38**	**55**	*e*P		**P**	**02 03 55.2**	**+1.6**
	comp=Z,5.0nm,1.3s,mb4.1							
MKAR	**Makanchi Array**	**42.38**	**60**	P		**P**	**02 04 20.0**	**+1.6**
MKAR	**Makanchi Array**	**42.38**	**60**	P		**P**	**02 04 20.0**	**+1.6**
	comp=Z,1.3nm,0.6s,mb3.8,baz=282,slow=6.3,SNR=6.3							
MKAR	**Makanchi Array**	**42.38**	**60**	P		**P**	**02 04 20.0**	**+1.6**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**42.38**	**60**	P		**P**	**02 04 20.0**	**+1.6**
	comp=Z,1.0nm,0.6s,mb3.6							
ZALV	**Zalesovo Beam**	**42.84**	**49**	P		**P**	**02 04 22.8**	**+0.7**
ZALV	**Zalesovo Beam**	**42.84**	**49**	P		**P**	**02 04 22.8**	**+0.7**
	comp=Z,10nm,0.6s,mb4.8,baz=273,slow=9.1,SNR=39							
ZALV	**Zalesovo Beam**	**42.84**	**49**	P		**P**	**02 04 22.8**	**+0.7**
ZALV				pmax	pmax			
	comp=Z,10.0nm,0.6s,mb4.7							
ZALV	**Zalesovo Beam**	**42.84**	**49**	P		**P**	**02 04 22.8**	**+0.7**
	comp=Z,10.0nm,0.6s,mb4.7							
ZAK	**Zakamensk**	**54.70**	**50**	*e*P		**P**	**02 06 02.3**	**+9.1**
ZAK				pmax	pmax			
	comp=Z,1.0nm,0.8s,mb3.9							
SONM	**Songino Array**	**57.58**	**52**	P		**P**	**02 06 15.4**	**+1.5**
	comp=Z,0.7nm,0.7s,mb3.8,baz=269,slow=7.2,SNR=4.3							
SONM	**Songino Array**	**57.58**	**52**	P		**P**	**02 06 15.4**	**+1.6**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.7s							
SONM	**Songino Array**	**57.58**	**52**	P		**P**	**02 06 15.4**	**+1.6**
	comp=Z,1.0nm,0.7s,mb4.0							
SCHQ	**Schefferville**	**59.17**	**318**	P		**P**	**02 06 24.9**	**+0.1**
SCHQ	**Schefferville**	**59.17**	**318**	P		**P**	**02 06 24.9**	**+0.1**
	comp=Z,2.1nm,0.8s,mb4.2,baz=11,slow=5.2,SNR=3.0							
SCHQ	**Schefferville**	**59.17**	**318**	P		**P**	**02 06 24.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**67.18**	**84**	P		**P**	**02 07 23.5**	**+5.0**
	comp=Z,0.6nm,0.3s,mb4.1,baz=305,slow=9.5,SNR=4.2							
CMAR	**Chiang Mai Arr**	**67.18**	**84**	P		**P**	**02 07 23.5**	**+5.0**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							

IDC ***03*** *02:04:33.8±5.7,2.16N×95.55E,h0km,mb4.0/4,mb1 4.0/6, mb1mx3.7/22,mbtmp4.0/6,ML3.8/2,MS3.1/2,Ms1 3.1/2, ms1mx2.7/27,Error ellipse: s-maj=113.1km s-min=30.8km az=13.0*

ISCJB ***03*** *02:04:37.8±3.2,2.38N±0.09×95.70E±0.06,h29km±24km, mb4.2/9,Error ellipse: s-maj=16.2km s-min=9.2km az=14.4*

DJA ***03*** *02:04:39,2.37N×95.88E,h10km,MLv3.9/5*

NEIC ***03*** *02:04:41.7±3.9,2.39N×95.86E,h45km±30km,mb4.0/4, Error ellipse: s-maj=42.5km s-min=19.6km az=52.0*

ISC 03 02:04:39.7±3.3,2.43N±0.10×95.73E±0.06,h25km±24km, n22,σ0°86/25,mb4.2/9,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TPTI		**1.67**	**60**	P		P	**Pn**	**02 05 05.1**	**-2.3**
TPTI				S		S	**Sn**	**02 05 27.9**	**-0.1**
TSI	**Tuntungan**	**3.02**	**69**	S		S	**Sn**	**02 06 02.6**	**+1.1**
PSI	**Prapat**	**3.21**	**83**	Pn		Pn	**Pn**	**02 05 28.7**	**+0.1**
PSI				Sn		Sn	**Sn**	**02 06 10.8**	**+4.6**
PSI				LR		LR		02 06 52.9	
PSI	**Prapat**	**3.21**	**83**	Pn		Pn	**Pn**	**02 05 28.7**	**+0.1**
	1.0nm,0.3s,baz=285,slow=6.1,SNR=6.0								
PSI				Sn		Sn	**Sn**	**02 06 10.8**	**+4.7**
	2.9nm,0.3s,baz=345,slow=13,SNR=3.8								
PSI				LR		LR		02 06 52.9	
	comp=Z,219nm,18.5s,baz=264,slow=41								
MNSI	**Mandailing Nat**	**4.17**	**113**	P		Pn	**Pn**	**02 05 43.1**	**+1.2**
MNSI				S		Sn	**Sn**	**02 06 29.4**	**-0.5**
IPM	**Ipoh**	**5.67**	**69**	P		Pn	**Pn**	**02 06 02.9**	**+0.5**
	0.1nm20nm,1.2s								
KULM	**Kulim**	**5.67**	**60**	*e*Pn		Pn	**Pn**	**02 06 00.9**	**-1.6**
	26nm,0.9s								
KULM	**Kulim**	**5.67**	**60**	P		Pn	**Pn**	**02 06 01.5**	**-1.0**
CMAR	**Chiang Mai Arr**	**16.24**	**11**	Pn		Pn	**Pn**	**02 08 28.0**	**+1.7**
	0.6nm,0.3s,baz=204,slow=11,SNR=4.5								
LZH	**Lanzhou**	**34.33**	**12**	*e*P		P	**P**	**02 11 23.0**	**-1.4**
LZH				pP		pP		02 11 34.0	+2.2
LZH				sP		sP		02 11 38.3	+3.4
LZH				pmax	pmax				
	comp=Z,19nm,1.3s								
GTA	**Gaotai**	**37.00**	**5**	*e*P		P	**P**	**02 11 47.1**	**-0.2**
GTA				pP		pP		02 11 51.7	-3.1
GTA				sP		sP		02 11 54.2	-3.6
GTA				pmax	pmax				
	comp=Z,6.0nm,1.0s,mb4.4								

BJT	**Baijiatuan**	**41.76**	**24**	*e*P		**P**	**02 12 27.2**	**+0.2**
	comp=Z,10.0nm,0.5s								
BJI	**Beijing**	**41.78**	**24**	P		**P**	**02 12 27.4**	**+0.2**
BJI				pmax	pmax				
	comp=Z,14nm,0.8s,mb4.6								
EKS2	**Erkin-Say**	**44.61**	**337**	*e*P		**P**	**02 12 50.6**	**+0.7**
	comp=Z,1.3nm,0.7s,mb3.9								
KSRS	**Korea Array**	**45.71**	**36**	LR		LR	02 34 36.6		
	comp=Z,30nm,18.7s,baz=110,slow=39								
MK31	**Makanchi Array**	**45.72**	**347**	*e*P		**P**	**02 12 58.7**	**0.0**
MKAR	**Makanchi Array**	**45.72**	**347**	P		**P**	**02 12 59.0**	**+0.3**
	comp=Z,1.9nm,0.6s,mb4.2,baz=163,slow=8.0,SNR=13								
SONM	**Songino Array**	**46.16**	**10**	P		**P**	**02 13 01.9**	**-0.4**
	comp=Z,1.4nm,0.6s,mb4.0,baz=189,slow=8.8,SNR=9.7								
KURK	**Kurchatov**	**50.24**	**346**	*e*P		**P**	**02 13 34.2**	**+0.5**
	comp=Z,1.1nm,0.6s,mb4.1								
ZALV	**Zalesovo Beam**	**52.13**	**352**	P		**P**	**02 13 47.0**	**-0.8**
	comp=Z,1.5nm,0.5s,mb4.2,baz=183,slow=6.5,SNR=11								
BVAR	**Borovoye Array**	**54.62**	**342**	P		**P**	**02 14 05.7**	**-0.4**
	comp=Z,1.2nm,0.8s,mb4.0,baz=130,slow=5.8,SNR=5.7								
ABKAR	**Akbulak array**	**55.75**	**332**	*e*P		**P**	**02 14 14.5**	**+0.2**
	comp=Z,1.3nm,0.8s,mb4.0								

SKHL ***03*** *02:12:10.1±1.3,46.01N×150.33E,h33km±8km,mb4.5/4*

IDC ***03*** *02:12:11.7±11.0,45.88N×149.92E,h75km±105km, mb3.6/12,mb1 3.8/12,mb1mx3.6/23,mbtmp3.6/12,Error ellipse: s-maj=29.1km s-min=18.1km az=161.0*

JMA ***03*** *02:12:11.9±0.4,45.76N×150.16E,h30km,M4.4*

ISCJB ***03*** *02:12:13.5±0.6,45.77N±0.07×149.82E±0.09, h115km±6km,mb4.0/21,Error ellipse: s-maj=15.4km s-min=5.8km az=139.2*

MOS ***03*** *02:12:13.9±1.0,45.88N×149.80E,h118km,mb4.2/12, Error ellipse: s-maj=17.3km s-min=12.1km az=59.1*

NEIC ***03*** *02:12:17.3±1.7,45.94N×149.84E,h129km±15km,mb4.1/8, Error ellipse: s-maj=19.1km s-min=9.2km az=161.0*

ISC 03 02:12:14.8±0.6,45.74N±0.07×149.83E±0.10,h112km±6km, n55,σ1°26/67,mb4.0/21,4C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.47**	**250**	⇑ *i* P	N		**Pn**	**02 12 40.0**	**-1.3**
KUR					*e*S		**Sn**	**02 13 00.5**	**-1.0**
KUR				pmax	pmax				
	comp=N,100nm,0.7s								
KUR				pmax	pmax				
	comp=E,120nm,0.7s								
KUR				pmax	pmax				
	comp=Z,340nm,0.7s								
KUR				smax					
	comp=N,2μm,0.5s								
KUR				smax					
	comp=E,2μm,0.5s								
KUR				smax					
	comp=N,11μm,1.0s								
KUR				smax					
	comp=E,5μm,1.0s								
KUR	**Kuril'sk**	**1.47**	**250**	⇑ *i* P			**Pn**	**02 12 40.0**	**-1.3**
KUR				AMB	AMB		AMB	02 12 40.3	
KUR				AMB	AMB		AMB	02 12 40.3	
	comp=E,70nm,0.7s								
KUR				AMB	AMB		AMB	02 12 40.3	
	comp=E,250nm,0.7s								
KUR				*e*S			**Sn**	**02 13 01.4**	**-0.1**
KUR				A				02 13 03.2	
	comp=E,2μm,0.5s								
KUR				A				02 13 03.2	
	comp=E,3μm,0.5s								
KUR				A				02 13 04.2	
	comp=E,12μm,1.5s								
KUR				A				02 13 04.2	
	comp=E,5μm,1.5s								
YUK	**Yuzh-Kuril'sk**	**3.30**	**240**	⇑ *i* P	N		**Pn**	**02 13 06.3**	**+1.6**
YUK				*i* S			**Sn**	**02 13 43.8**	**+0.5**
YUK				pmax	pmax				
	comp=N,70nm,0.5s								
YUK				pmax	pmax				
	comp=E,100nm,0.5s								
YUK				pmax	pmax				
	comp=Z,130nm,0.5s								
YUK				smax					
	comp=N,320nm,0.7s								
YUK				smax					
	comp=E,470nm,0.7s								
YUK				smax					
	comp=N,650nm,1.0s								
YUK				smax					
	comp=E,900nm,1.0s								
YUK	**Yuzh-Kuril'sk**	**3.30**	**240**	⇑ *i* P			**Pn**	**02 13 06.3**	**+1.6**
YUK				AMB	AMB		AMB	02 13 13.2	
	comp=E,180nm,0.5s								
YUK				*i* S			**Sn**	**02 13 43.8**	**+0.5**
YUK				A				02 13 54.9	
	comp=E,520nm,0.5s								
YUK				A				02 13 54.9	
	comp=E,440nm,0.5s								
NEM2	**Nemuro 2**	**3.77**	**232**	P			**Pn**	**02 13 09.8**	**-1.2**
NEM2				*e*S			**Sn**	**02 13 52.6**	**-1.9**
JNK	**Nakash**	**4.24**	**241**	P			**Pn**	**02 13 18.3**	**+1.0**
JNK				*e*S			**Sn**	**02 14 07.3**	**+1.5**
JTKR	**Abashiri--Toko**	**4.57**	**249**	P			**Pn**	**02 13 24.4**	**+2.6**
JAK	**Akkeshi**	**4.59**	**235**	P			**Pn**	**02 13 21.2**	**-0.9**
JAK				*e*S			**Sn**	**02 14 12.9**	**-1.4**
JAR	**Ashorobuto**	**4.97**	**243**	P			**Pn**	**02 13 28.7**	**+1.4**
JAR				*e*S			**Sn**	**02 14 25.5**	**+1.9**
YSS	**Yuzh-Sakhalins**	**5.04**	**286**	*e*Pn			**Pn**	**02 13 30.4**	**+2.2**
YSS	**Yuzh-Sakhalins**	**5.04**	**286**	*e*PN			**Pn**	**02 13 29.3**	**+1.1**
YSS	**Yuzh-Sakhalins**	**5.04**	**286**	*e*P			**Pn**	**02 13 29.3**	**+1.1**
YSS				AMB	AMB		AMB	02 13 31.0	
	comp=E,40nm,1.0s								
YSS				*e*pP				02 13 39.0	
YSS				*e*S			**Sn**	**02 14 29.7**	**+4.4**
YSS				A				02 14 32.3	
	comp=E,60nm,0.8s								
JOB	**Onbets**	**5.15**	**239**	P			**Pn**	**02 13 29.7**	**0.0**
JKK2	**Kamakawa 2**	**5.37**	**252**	P			**Pn**	**02 13 35.8**	**+3.2**
JCH	**Churui**	**5.60**	**238**	P			**Pn**	**02 13 35.2**	**-0.6**
JCH				*e*S			**Sn**	**02 14 36.7**	**-2.1**
SKR	**Severo-Kuril's**	**6.49**	**38**	*e*PN			**Pn**	**02 13 47.5**	**-0.1**
SKR				*e*S			**Sn**	**02 15 01.2**	**+1.1**
SKR				pmax	pmax				
	comp=E,20nm,0.5s								
SKR				pmax	pmax				
	comp=Z,40nm,0.5s								
SKR				pmax	pmax				
	comp=N,40nm,0.3s								
SKR				smax					
	comp=E,40nm,0.5s								
SKR				smax					
	comp=N,60nm,0.7s								
TYV	**Tymovskoe**	**7.01**	**320**	*e*P			**Pn**	**02 13 52.5**	**-2.2**
TYV				AMB	AMB		AMB	02 13 55.0	
	comp=N,13nm,1.0s								
TYV				AMB	AMB		AMB	02 13 55.0	
	comp=N,18nm,1.0s								
JKB	**Kayabe**	**7.44**	**242**	P			**Pn**	**02 13 59.9**	**-0.7**
JKB				*e*S			**Sn**	**02 15 19.6**	**-3.7**
YAK	**Yakutsk**	**20.03**	**332**	*e*P			**P**	**02 16 41.7**	**+3.1**
	comp=N,82nm,0.8s								
YAK	**Yakutsk**	**20.03**	**332**	*e*P			**P**	**02 16 42.1**	**+3.6**
YAK				pmax	pmax				
	comp=E,17nm,0.9s								
YAK				pmax	pmax				
	comp=Z,57nm,0.8s								
YAK				pmax	pmax				
	comp=N,19nm,0.9s								
SONM	**Songino Array**	**29.52**	**290**	P			**P**	**02 18 10.7**	**+2.3**
	comp=N,0.3nm,0.5s,mb3.2,baz=60,slow=8.5,SNR=2.6								
KDAK	**Kodiak Island**	**36.50**	**49**	P			**P**	**02 19 07.6**	**-1.3**
KDAK	**Kodiak Island**	**36.50**	**49**	P			**P**	**02 19 07.6**	**-1.3**
	comp=N,3.8nm,0.7s,mb4.5,baz=269,slow=9.3,SNR=4.6								
KDAK	**Kodiak Island**	**36.50**	**49**	P			**P**	**02 19 07.6**	**-1.3**
KDAK				pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.5								
COLD	**Coldfoot**	**37.44**	**34**	*e*P			**P**	**02 19 16.2**	**-0.5**
	comp=Z,1.6nm,0.5s,mb4.2								
COLA	**College**	**38.33**	**38**	*e*P			**P**	**02 19 24.2**	**0.0**
	comp=Z,2.9nm,0.6s,mb4.3								
COLA	**College**	**38.33**	**38**	*e*P			**P**	**02 19 24.2**	**0.0**
COLA				pmax	pmax				
	comp=Z,3.0nm,0.6s,mb4.3								
ILAR	**Eielson Array**	**38.75**	**38**	P			**P**	**02 19 25.9**	**-1.8**
	comp=Z,0.7nm,0.6s,mb3.6,baz=269,slow=7.4,SNR=17								
INK	**Inuvik**	**43.71**	**32**	*e*P			**P**	**02 20 07.8**	**-0.5**
	comp=Z,4.8nm,1.0s,mb4.2								

INK	**Inuvik**	**43.71**	**32**	P			**P**	**02 20 08.7**	**+0.4**
	comp=Z,2.1nm,0.6s,mb4.1,baz=306,slow=4.4,SNR=9.2								
INK	**Inuvik**	**43.71**	**32**	*e*P			**P**	**02 20 07.8**	**-0.4**
INK				pmax	pmax				
	comp=Z,5.0nm,1.0s								
MK31	**Makanchi Array**	**45.37**	**297**	*e*P			**P**	**02 20 20.5**	**-1.2**
MKAR	**Makanchi Array**	**45.37**	**297**	P			**P**	**02 20 21.9**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.3,baz=66,slow=8.2,SNR=6.1								
CHTO	**Chiang Mai**	**49.66**	**255**	*e*P			**P**	**02 20 56.4**	**+1.2**
	comp=Z,2.0nm,0.8s,mb4.1								
CHTO				pmax	pmax				
	comp=Z,2.0nm,0.8s,mb4.1								
YKA	**Yellowknife Ar**	**53.08**	**35**	P			**P**	**02 21 20.0**	**-0.1**
	comp=Z,2.0nm,0.8s,mb4.2,baz=300,slow=5.8,SNR=4.9								
YKA	**Yellowknife Ar**	**53.08**	**35**	P			**P**	**02 21 20.0**	**-0.1**
YKA				pmax	pmax				
	comp=Z,2.0nm,0.8s								
ARU	**Arti**	**54.20**	**317**	*e*P			**P**	**02 21 27.4**	**-0.9**
	comp=Z,1.4nm,0.6s,mb4.2								
ARU	**Arti**	**54.20**	**317**	*e*P			**P**	**02 21 27.4**	**-0.9**
ARU				pmax	pmax				
	comp=Z,1.0nm,0.6s,mb4.0								
ABKAR	**Akbulak array**	**57.30**	**309**	*e*P			**P**	**02 21 49.4**	**-1.2**
	comp=Z,0.6nm,0.4s,mb4.0								
JOF	**Joensuu**	**61.20**	**333**	*e*P			**P**	**02 22 15.8**	**-1.4**
JOF				pmax	pmax				
	comp=Z,1.0nm,0.3s,mb4.3								
JOF	**Joensuu**	**61.20**	**333**	*e*p			**P**	**02 22 15.8**	**-1.4**
	comp=Z,0.7nm,0.3s,mb4.2								
FINES	**FINESS Array B**	**63.95**	**334**	P			**P**	**02 22 35.0**	**-0.5**
	comp=Z,1.2nm,0.5s,mb4.0,baz=24,slow=8.4,SNR=15								
FINES	**FINESS Array B**	**63.95**	**334**	P			**P**	**02 22 35.0**	**-0.5**
FINES				pmax	pmax				
	comp=Z,1.0nm,0.5s								
OBN	**Obninsk**	**64.82**	**324**	*e*P			**P**	**02 22 33.9**	**-7.4**
OBN				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.4								
NVAR	**Mina Array Bea**	**64.92**	**60**	P			**P**	**02 22 43.1**	**+1.0**
	comp=Z,0.6nm,0.5s,mb3.7,baz=298,slow=6.7,SNR=5.1								
TPAW	**Teton Pass**	**65.93**	**52**	*e*P			**P**	**02 22 48.9**	**+0.2**
	comp=Z,1.9nm,0.7s,mb4.0								
BW06	**Boulder Array**	**67.17**	**52**	*e*P			**P**	**02 22 56.4**	**-0.1**
	comp=Z,1.0nm,0.6s,mb3.8								
NOA	**NORSAR Array B**	**68.41**	**340**	P			**P**	**02 23 04.3**	**+0.3**
	comp=Z,2.0nm,1.1s,mb3.9,baz=29,slow=6.5,SNR=3.3								
NOA	**NORSAR Array B**	**68.41**	**340**	P			**P**	**02 23 04.3**	**+0.3**
NOA				pmax	pmax				
	comp=Z,2.0nm,1.1s								
ASAR	**Alice Springs**	**70.58**	**195**	P			**P**	**02 23 19.3**	**+1.6**
	comp=Z,0.4nm,0.5s,mb3.5,baz=14,slow=6.4,SNR=6.2								
SCHQ	**Schefferville**	**75.09**	**21**	P			**P**	**02 23 44.1**	**+0.1**
	comp=Z,2.1nm,0.7s,mb4.0,baz=256,slow=6.9,SNR=3.3								
TXAR	**Lajitas Array**	**79.97**	**58**	P			**P**	**02 24 12.4**	**+0.8**
TXAR	**Lajitas Array**	**79.97**	**58**	P			**P**	**02 24 12.4**	**+0.8**
	comp=Z,0.9nm,0.5s,mb3.9,baz=296,slow=4.4,SNR=25								
TXAR	**Lajitas Array**	**79.97**	**58**	P			**P**	**02 24 12.4**	**+0.8**
TXAR				pmax	pmax				
	comp=Z,1.0nm,0.5s								

MEX 03 02:12:17.4±0.9,17.99N×99.89W,h56km±9km,MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.26**	**104**	*i* P		P	**Pn**	**02 12 25.6**	**-1.3**
MEIG				*i* S		S	**Sn**	**02 12 32.5**	**-1.1**
PLIG	**Platanillo**	**0.54**	**42**	*i* P		P	**Pn**	**02 12 27.8**	**-1.8**
PLIG				*i* S		S	**Sn**	**02 12 36.5**	**-1.9**
CAIG	**El Cayaco**	**1.00**	**201**	*i* P		P	**Pn**	**02 12 33.3**	**-2.0**
CAIG				*i* S		S	**Sn**	**02 12 47.1**	**-1.5**
MZVM		**1.35**	**28**	*i* P		P	**Pn**	**02 12 38.8**	**-1.2**
MZVM				*i* S		S	**Sn**	**02 12 55.7**	**-1.1**
ZIIG	**Zihuatanejo**	**1.55**	**256**	*i* P		P	**Pn**	**02 12 41.9**	**-0.8**
ZIIG				*i* S		S	**Sn**	**02 12 59.2**	**-2.6**
IIO	**Organos**	**1.94**	**35**	*i* P		P	**Pn**	**02 12 46.9**	**-1.1**
IIO				*i* S		S	**Sn**	**02 13 09.9**	**-1.3**
PNIG	**Pinotepa**	**2.31**	**133**	*e*P		P	**Pn**	**02 12 52.6**	**-0.5**
PNIG				*i* S		S	**Sn**	**02 13 19.0**	**-1.4**

IDC ***03*** *02:13:21.5±17.0,36.39N×143.01E,h0km,mb3.7/4, mb1 3.8/4,mb1mx3.5/23,mbtmp3.7/4,MS2.6/1,Ms1

*NEIC **03** 02:41:47.1±4.0, 18.77N×145.57E, h287km±38km, mb3.8/3, Error ellipse: s-maj=24.5km s-min=17.5km az=86.0*

ISC 03 02:41:47.3±4.1, 18.8N±0.1×145.6E±0.2, h289km±38km, n16, σ0=98/16, mb3.5/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAJO	**Matsushiro**	**18.83**	**341**	*e*P	**P**	**02 45 46.8**	**+0.5**
	6.1nm,0.6s						
MAT	**Matsushiro**	**18.83**	**341**	P	**P**	**02 45 45.5**	**-0.8**
SONM	**Songino Array**	**42.99**	**321**	P	**P**	**02 49 18.6**	**+0.1**
	0.3nm,0.4s,mb2.8,baz=131,slow=10.0,SNR=2.5						
ASAR	**Alice Springs**	**43.72**	**196**	P	**P**	**02 49 24.2**	**-0.3**
	0.1nm,0.3s,mb2.5,baz=18,slow=6.0,SNR=5.5						
MKAR	**Makanchi Array**	**58.31**	**314**	P	**P**	**02 51 13.3**	**+1.0**
	0.3nm,0.3s,mb3.3,baz=94,slow=8.0,SNR=4.9						
KURK	**Kurchatov**	**61.12**	**318**	*e*P	**P**	**02 51 31.2**	**0.0**
	0.7nm,0.4s,mb3.5						
ILAR	**Eielson Array**	**63.61**	**26**	P	**P**	**02 51 46.8**	**-0.6**
	0.4nm,0.8s,mb3.1,baz=232,slow=6.9,SNR=4.4						
BVAR	**Borovoye Array**	**66.32**	**320**	P	**P**	**02 52 05.5**	**+0.5**
	2.0nm,0.4s,mb4.2,baz=93,slow=8.1,SNR=12						
ABKAR	**Akbulak array**	**73.19**	**317**	*e*P	**P**	**02 52 46.9**	**+0.1**
	1.1nm,0.6s,mb3.7						
AKTK	**Aktyubinsk**	**74.21**	**318**	P	**P**	**02 52 53.4**	**+0.8**
AKTO	**Aktyubinsk**	**74.21**	**318**	P	**P**	**02 52 53.4**	**+0.8**
	0.9nm,0.6s,mb3.6,baz=95,slow=5.8,SNR=5.4						
SPITS	**Spitsbergen Ar**	**79.05**	**351**	P	**P**	**02 53 20.2**	**+1.1**
	1.6nm,0.7s,mb3.9,baz=216,slow=1.7,SNR=3.8						
NVAR	**Mina Array Bea**	**83.17**	**52**	P	**P**	**02 53 42.9**	**+1.4**
	0.7nm,0.6s,mb3.7,baz=249,slow=6.2,SNR=4.7						
JOF	**Joensuu**	**83.88**	**335**	*e*p	**P**	**02 53 42.7**	**-1.8**
	0.7nm,0.4s,mb3.8						
KAF	**Kangasniemi**	**86.28**	**336**	*e*p	**P**	**02 53 54.0**	**-2.4**
	0.3nm,0.3s,mb3.6						
FINES	**FINESS Array B**	**86.75**	**335**	P	**P**	**02 53 57.6**	**-1.1**
	0.9nm,0.4s,mb3.9,baz=56,slow=4.1,SNR=19						

*IDC **03** 02:57:39.6±10.0, 10.65S×166.18E, h95km±93km, mb3.7/9, mb1 3.9/9, mb1mx3.7/15, mbtmp3.7/9, MS3.1/1, Ms1 3.1/1, ms1mx2.8/17, Error ellipse: s-maj=47.6km s-min=29.6km az=124.0*

*ISCJB **03** 02:57:41.2±4.8, 10.7S±0.2×166.1E±0.1, h121km±44km, mb3.8/10, Error ellipse: s-maj=24.8km s-min=22.6km az=174.4*

*NEIC **03** 02:57:42.2±3.9, 10.65S×166.14E, h119km±37km, mb4.0/2, Error ellipse: s-maj=28.7km s-min=15.3km az=164.0*

ISC 03 02:57:42.5±4.7, 10.7S±0.2×166.1E±0.1, h120km±45km, n13, σ0=75/14, mb3.8/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.33**	**179**	*e*Pn	**Pn**	**03 00 21.1**	**+0.3**
DZM				*e*Sn	**Sn**	**03 02 25.3**	**-0.2**
CTA	**Charters Tower**	**21.30**	**242**	P	**P**	**03 02 20.1**	**+0.4**
	8.7nm,0.8s,mb4.1,baz=81,slow=11,SNR=11						
CTA				LR	LR	03 08 43.0	
	comp=Z,55nm,19.4s,baz=58,slow=31						
CTAO	**Charters Tower**	**21.30**	**242**	*e*P	**P**	**03 02 20.3**	**+0.6**
	6.0nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**30.96**	**223**	P	**P**	**03 03 48.9**	**+0.6**
STKA	**Stephens Creek**	**30.96**	**223**	P	**P**	**03 03 48.9**	**+0.6**
	3.1nm,0.9s,mb4.0,baz=339,slow=5.8,SNR=4.2						
WRAB	**Tennant Creek**	**31.95**	**249**	*e*P	**P**	**03 03 56.1**	**-1.0**
	1.9nm,0.7s,mb3.9						
ASAR	**Alice Springs**	**33.29**	**243**	P	**P**	**03 04 07.7**	**-1.1**
	1.2nm,0.7s,mb3.8,baz=62,slow=10,SNR=15						
ASAR				pP	pP	03 04 33.8	-1.5
	0.9nm,0.7s,baz=68,slow=9.1,SNR=5.1						
ASAR				PcP	PcP	03 06 48.2	-0.2
	0.3nm,0.6s,baz=71,slow=1.9,SNR=4.3						
SONM	**Songino Array**	**78.60**	**324**	P	**P**	**03 09 31.5**	**+0.7**
	0.3nm,0.5s,mb3.4,baz=168,slow=7.4,SNR=3.1						
ILAR	**Eielson Array**	**83.05**	**18**	P	**P**	**03 09 54.1**	**0.0**
	1.3nm,0.6s,mb3.9,baz=237,slow=5.1,SNR=21						
MAW	**Mawson**	**85.20**	**202**	P	**P**	**03 10 06.0**	**+0.9**
	0.5nm,0.3s,mb3.9,baz=105,slow=10,SNR=3.5						
NVAR	**Mina Array Bea**	**85.50**	**50**	P	**P**	**03 10 07.7**	**+0.6**
	0.2nm,0.3s,mb3.5,baz=246,slow=6.3,SNR=4.1						
MKAR	**Makanchi Array**	**93.52**	**317**	P	**P**	**03 10 44.8**	**+0.1**
	0.3nm,0.2s,mb4.2,baz=35,slow=3.5,SNR=2.7						
TXAR	**Lajitas Array**	**95.33**	**61**	P	**P**	**03 10 51.9**	**-1.5**
	0.2nm,0.9s,mb3.6,baz=350,slow=4.6,SNR=3.6						

RSPR 03 03:13:35.9, 18.97N×65.89W, h11km±7km, 2C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBYP	**Canovanas**	**0.70**	**177**⇓	*e*P	Pg	03 13 48.5	-1.0
CBYP	**Canovanas**	**0.70**	**177**⇓	*e*P	Pg	03 13 48.5	-1.0
CBYP				*e*S	Sg	03 13 58.2	-0.4
HUMP	**Col San Antoni**	**0.83**	**177**	*e*S	Sg	03 14 01.4	-1.2
HUMP	**Col San Antoni**	**0.83**	**177**	*e*S	Sg	03 14 01.4	-1.2
MTP	**Monte Pirata**	**0.93**	**160**⇑	*e*P	Pg	03 13 51.6	-2.2
MTP	**Monte Pirata**	**0.93**	**160**⇑	*e*P	Pg	03 13 51.6	-2.2
MTP				*e*S	Sg	03 14 04.0	-1.9

IDC 03 03:16:49.1±8.0, 17.18S×178.79W, h657km±101km, mb2.9/4, mb1 3.1/4, mb1mx2.9/14, mbtmp2.9/4, Error ellipse: s-maj=85.3km s-min=37.2km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.66**	**240**	P	P	03 23 19.1	-0.4
	1.4nm,0.4s,baz=76,slow=8.3,SNR=3.6						
WRA	**Warramunga Arr**	**44.41**	**259**	P	P	03 24 05.0	+0.4
	1.4nm,0.4s,baz=94,slow=7.5,SNR=57						
ASAR	**Alice Springs**	**44.64**	**254**	P	P	03 24 06.5	+0.3
	4.2nm,0.6s,baz=86,slow=7.9,SNR=65						
ASAR				PcP	PcP	03 25 33.8	-0.3
	0.4nm,0.5s,baz=101,slow=3.7,SNR=4.9						
ILAR	**Eielson Array**	**85.27**	**13**	P	P	03 28 17.6	-0.4
	0.2nm,0.6s,baz=215,slow=4.9,SNR=5.0						
TXAR	**Lajitas Array**	**85.92**	**58**	P	P	03 28 22.7	+0.7
	0.2nm,0.7s,baz=224,slow=7.2,SNR=3.2						

*NEIC **03** 03:22:47.9, 39.60N×23.89E, h28km, ML2.6(ATH), After ATH.*

*ATH **03** 03:22:47.9, 39.60N×23.89E, h28km±1km, ML2.6*

*ISCJB **03** 03:22:48.1±0.6, 39.57N±0.02×23.89E±0.03, h13km±4km, Error ellipse: s-maj=4.6km s-min=3.3km az=14.6*

*CSEM **03** 03:22:48.4±0.1, 39.58N×23.89E, h15km, ML2.6, Error ellipse: s-maj=3.2km s-min=2.3km az=104.0*

*THE **03** 03:22:48.6, 39.59N×23.90E, h11km, ML2.4/11, Error ellipse: s-maj=0.9km s-min=0.5km az=164.0*

ISC 03 03:22:48.5±0.5, 39.58N±0.02×23.90E±0.03, h14km±3km, n80, σ0=85/113, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.39**	**334**	P	**Pg**	**03 22 56.1**	**-0.1**
PAIG	**Paliouri**	**0.39**	**334**	P	**Pg**	**03 22 56.2**	**0.0**
PAIG				S	**Sg**	**03 23 01.7**	**+0.2**
PAIG	**Paliouri**	**0.39**	**334**	P	**Pg**	**03 22 56.1**	**-0.1**
PAIG				S	**Sg**	**03 23 01.7**	**+0.2**
AOS	**Alonnisos**	**0.41**	**182**	P	**Pg**	**03 22 56.2**	**-0.4**
AOS	**Alonnisos**	**0.41**	**182**	P	**Pg**	**03 22 56.6**	**0.0**
AOS				S	**Sg**	**03 23 03.1**	**+0.9**
AOS	**Alonnisos**	**0.41**	**182**	P	**Pg**	**03 22 56.2**	**-0.4**
AOS				S	**Sg**	**03 23 03.1**	**+0.9**
XOR	**Xorichti**	**0.59**	**249**	P	**Pg**	**03 23 00.5**	**+0.5**
XOR	**Xorichti**	**0.59**	**249**	P	**Pg**	**03 23 00.0**	**0.0**
XOR				S	**Sg**	**03 23 09.1**	**+1.3**
XOR	**Xorichti**	**0.59**	**249**	P	**Pg**	**03 23 00.0**	**0.0**
XOR				S	**Sg**	**03 23 09.1**	**+1.3**
NEO	**Neokhori**	**0.59**	**243**	*e*Pn	**Pg**	**03 23 00.1**	**+0.1**
NEO				*e*Sn	**Sg**	**03 23 08.7**	**+0.8**
NEO	**Neokhori**	**0.59**	**243**	*e*PN	**Pg**	**03 23 00.1**	**+0.1**
NEO				*e*SN	**Sg**	**03 23 08.7**	**+0.8**
NEO	**Neokhori**	**0.59**	**243**	*e*Pn	**Pg**	**03 23 00.1**	**+0.1**
OUR	**Ouranopolis**	**0.76**	**5**	P	**Pg**	**03 23 02.4**	**-0.7**
OUR	**Ouranopolis**	**0.76**	**5**	P	**Pg**	**03 23 02.7**	**-0.4**
OUR				S	**Sg**	**03 23 13.2**	**+0.1**
OUR	**Ouranopolis**	**0.76**	**5**	P	**Pg**	**03 23 02.7**	**-0.4**
OUR				S	**Sg**	**03 23 13.2**	**+0.1**
LIA	**Limnos Island**	**1.04**	**72**	*e*Pn	**Pb**	**03 23 08.1**	**-0.1**
LIA				*e*Sn	**Sn**	**03 23 22.5**	**-0.4**
LIA	**Limnos Island**	**1.04**	**72**	P	**Pb**	**03 23 08.1**	**-0.1**
LIA				S	**Sb**	**03 23 23.3**	**+1.7**
LIA	**Limnos Island**	**1.04**	**72**	P	**Pb**	**03 23 08.1**	**-0.1**
LIA				*e*Sn	**Sn**	**03 23 22.5**	**-0.4**
LIA				S	**Sb**	**03 23 23.3**	**+1.7**
LKR	**Lokris**	**1.16**	**217**	*e*Pb	**Pb**	**03 23 09.3**	**-1.0**
LKR	**Lokris**	**1.16**	**217**	*e*PB	**Pb**	**03 23 09.3**	**-1.0**
LKR	**Lokris**	**1.16**	**217**	*e*Pb	**Pb**	**03 23 09.3**	**-1.0**
HORT	**Hortiatis**	**1.19**	**329**	P	**Pn**	**03 23 10.3**	**-0.3**
HORT	**Hortiatis**	**1.19**	**329**	P	**Pn**	**03 23 10.3**	**-0.3**
HORT				S	**Sb**	**03 23 27.1**	**+1.1**
HORT	**Hortiatis**	**1.19**	**329**	P	**Pn**	**03 23 10.3**	**-0.3**
HORT				S	**Sb**	**03 23 27.1**	**+1.1**
LIT	**Litokhoron**	**1.21**	**296**	*e*Pb	**Pb**	**03 23 09.3**	**-1.7**
LIT	**Litokhoron**	**1.21**	**296**	*e*PB	**Pb**	**03 23 09.3**	**-1.7**
LIT	**Litokhoron**	**1.21**	**296**	*e*Pb	**Pb**	**03 23 09.3**	**-1.7**
THE	**Thessaloniki**	**1.27**	**326**	P	**Pn**	**03 23 11.7**	**-0.1**
THE				S	**Sb**	**03 23 29.1**	**+0.7**
THE	**Thessaloniki**	**1.27**	**326**	P	**Pn**	**03 23 11.7**	**-0.1**
THE				S	**Sb**	**03 23 29.1**	**+0.7**
SOH	**Sokhos**	**1.31**	**341**	*e*Pn	**Pn**	**03 23 12.0**	**-0.3**
SOH				*e*Sn	**Sn**	**03 23 29.8**	**+0.2**
SOH	**Sokhos**	**1.31**	**341**	*e*PN	**Pn**	**03 23 12.0**	**-0.3**
SOH				*e*SN	**Sn**	**03 23 29.8**	**+0.2**
SOH	**Sokhos**	**1.31**	**341**	P	**Pn**	**03 23 12.1**	**-0.2**
SOH				S	**Sb**	**03 23 29.5**	**0.0**
SOH	**Sokhos**	**1.31**	**341**	P	**Pn**	**03 23 12.1**	**-0.2**
SOH				S	**Sb**	**03 23 29.5**	**0.0**
SOH				*e*Sn	**Sn**	**03 23 29.8**	**+0.2**
AGG	**Agios Georgios**	**1.34**	**246**	*e*Pn	**Pn**	**03 23 12.2**	**-0.5**
AGG	**Agios Georgios**	**1.34**	**246**	*e*PN	**Pn**	**03 23 12.2**	**-0.5**
AGG	**Agios Georgios**	**1.34**	**246**	P	**Pn**	**03 23 12.4**	**-0.3**
AGG	**Agios Georgios**	**1.34**	**246**	P	**Pn**	**03 23 12.4**	**-0.3**
THL	**Klokotos Trika**	**1.46**	**270**	*e*PN	**Pn**	**03 23 14.0**	**-0.4**
THL				*e*SN	**Sn**	**03 23 33.2**	**-0.1**
THL	**Klokotos Trika**	**1.46**	**270**	P	**Pn**	**03 23 13.7**	**-0.7**
THL				S	**Sn**	**03 23 33.2**	**-0.1**
THL	**Klokotos Trika**	**1.46**	**270**	P	**Pn**	**03 23 13.7**	**-0.7**
THL	**Klokotos Trika**	**1.46**	**270**	*e*Pn	**Pn**	**03 23 14.0**	**-0.4**
THL				S	**Sn**	**03 23 33.2**	**-0.1**
KAVA	**Kavala**	**1.49**	**18**	P	**Pn**	**03 23 13.7**	**-1.1**
KAVA				S	**Sn**	**03 23 35.0**	**+1.0**
KAVA	**Kavala**	**1.49**	**18**	P	**Pn**	**03 23 13.7**	**-1.1**
KAVA				S	**Sn**	**03 23 35.0**	**+1.0**
SRS	**Serrai**	**1.55**	**351**	P	**Pn**	**03 23 15.1**	**-0.6**
SRS	**Serrai**	**1.55**	**351**	P	**Pn**	**03 23 15.2**	**-0.5**
SRS				S	**Sn**	**03 23 35.9**	**+0.3**
SRS	**Serrai**	**1.55**	**351**	P	**Pn**	**03 23 15.2**	**-0.5**
SRS				S	**Sn**	**03 23 35.9**	**+0.3**
ATH	**Athens Observa**	**1.61**	**185**	*e*Pn	**Pn**	**03 23 17.2**	**+0.7**
ATH	**Athens Observa**	**1.61**	**185**	*e*PN	**Pn**	**03 23 17.2**	**+0.7**
ATH	**Athens Observa**	**1.61**	**185**	*e*Pn	**Pn**	**03 23 17.2**	**+0.7**
LTK	**Loutraki**	**1.72**	**205**	*e*PN	**Pn**	**03 23 18.5**	**+0.6**
LTK	**Loutraki**	**1.72**	**205**	*e*Pn	**Pn**	**03 23 18.5**	**+0.6**
VLY	**Voula,Athens**	**1.73**	**183**	*e*Pn	**Pn**	**03 23 18.5**	**+0.4**
VLY	**Voula,Athens**	**1.73**	**183**	*e*PN	**Pn**	**03 23 18.5**	**+0.4**
VLY	**Voula,Athens**	**1.73**	**183**	*e*Pn	**Pn**	**03 23 18.5**	**+0.4**
EVR	**Evrytania**	**1.75**	**248**	*e*Pn	**Pn**	**03 23 18.8**	**+0.4**
EVR	**Evrytania**	**1.75**	**248**	*e*PN	**Pn**	**03 23 18.8**	**+0.4**
EVR	**Evrytania**	**1.75**	**248**	*e*Pn	**Pn**	**03 23 18.8**	**+0.4**
KNT	**Kendrikon**	**1.76**	**334**	P	**Pn**	**03 23 18.6**	**+0.1**
KNT	**Kendrikon**	**1.76**	**334**	P	**Pn**	**03 23 18.6**	**+0.1**
NVR	**Nevrokopi**	**1.77**	**359**	*e*Pb	**Pb**	**03 23 18.2**	**-2.4**
NVR	**Nevrokopi**	**1.77**	**359**	*e*PB	**Pb**	**03 23 18.2**	**-2.4**
NVR	**Nevrokopi**	**1.77**	**359**	*e*Pb	**Pb**	**03 23 18.2**	**-2.4**
GRG	**Griva**	**1.79**	**321**	P	**Pn**	**03 23 20.3**	**+1.4**
GRG	**Griva**	**1.79**	**321**	P	**Pn**	**03 23 19.1**	**+0.2**
GRG				S	**Sn**	**03 23 42.5**	**+1.0**
GRG	**Griva**	**1.79**	**321**	P	**Pn**	**03 23 19.1**	**+0.2**
GRG				S	**Sn**	**03 23 42.5**	**+1.0**
KZN	**Kozani**	**1.79**	**295**	*e*Pb	**Pb**	**03 23 18.6**	**-2.4**
KZN	**Kozani**	**1.79**	**295**	*e*PB	**Pb**	**03 23 18.6**	**-2.4**
KZN	**Kozani**	**1.79**	**295**	P	**Pn**	**03 23 18.7**	**-0.2**
KZN	**Kozani**	**1.79**	**295**	P	**Pn**	**03 23 18.7**	**-0.2**
EFP	**Efpalio**	**1.94**	**234**	*e*PB	**Pb**	**03 23 21.5**	**-2.0**
EFP	**Efpalio**	**1.94**	**234**	*e*Pb	**Pb**	**03 23 21.5**	**-2.0**
GUR	**Goura**	**2.04**	**217**	*e*PN	**Pn**	**03 23 22.2**	**-0.2**
GUR	**Goura**	**2.04**	**217**	*e*Pn	**Pn**	**03 23 22.2**	**-0.2**
ALN	**Alexandroupoli**	**2.10**	**51**	P	**Pn**	**03 23 22.6**	**-0.6**
ALN	**Alexandroupoli**	**2.10**	**51**	P	**Pn**	**03 23 22.6**	**-0.6**
FNA	**Florina**	**2.28**	**303**	P	**Pn**	**03 23 26.3**	**+0.7**
FNA	**Florina**	**2.28**	**303**	P	**Pn**	**03 23 26.3**	**+0.7**
VTS	**Vitosha**	**3.05**	**350**	P	**Pn**	**03 23 37.0**	**+0.7**
VTS	**Vitosha**	**3.05**	**350**	P	**Pn**	**03 23 37.0**	**+0.7**

*IDC **03** 03:37:20.1±2.5, 33.10N×91.76E, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.3/22, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=92.6km s-min=29.8km az=76.0*

ISC 03 03:37:24.8±2.7, 33.2N±0.1×92.2E±0.2, h18km±20km, n10, σ0=76/11, mb3.5/2, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.63**	**194**	Pg	**Pn**	**03 38 25.3**	**+5.1**
LSA				Sg	**Pg**	**03 38 34.0**	**-0.4**
LSA				smax			
	comp=N,30nm,0.9s						
LSA				smax			
	comp=E,60nm,0.9s						
TAPN	**Taplejung**	**7.02**	**215**	*e*P	**Pn**	**03 39 07.0**	**+0.2**
	comp=E,13nm,0.8s						
ODAN	**Odare**	**7.59**	**214**	*e*P	**Pn**	**03 39 14.8**	**+0.3**
	comp=E,4.1nm,0.4s						
KKN	**Kakani**	**8.05**	**229**	*e*P	**Pn**	**03 39 20.7**	**-0.2**
	comp=E,14nm,0.5s						
PKI	**Pulchoki**	**8.13**	**228**	*e*P	**Pn**	**03 39 22.1**	**+0.2**
	comp=E,13nm,0.5s						
GKN	**Gorkha**	**8.33**	**233**	*e*P	**Pn**	**03 39 24.7**	**0.0**
	comp=E,14nm,0.5s						
KOLN	**Koldanda**	**9.19**	**236**	*e*P	**Pn**	**03 39 37.0**	**+0.6**
	comp=E,8.7nm,0.6s						
SONM	**Songino Array**	**18.10**	**32**	P	**Pn**	**03 41 36.7**	**+1.5**
	comp=E,0.2nm,0.3s,baz=215,slow=11,SNR=5.1						
ZALV	**Zalesovo Beam**	**21.36**	**348**	P	**P**	**03 42 09.4**	**-1.5**
	comp=E,0.6nm,0.5s,mb3.2,baz=148,slow=8.5,SNR=3.1						
ASAR	**Alice Springs**	**69.16**	**139**	P	**P**	**03 48 29.4**	**-0.8**
	comp=E,0.8nm,0.7s,mb3.8,baz=327,slow=6.9,SNR=10						

*IDC **03** 03:54:58.2±21.0, 41.60N×143.14E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.6/21, mbtmp3.9/4, Error ellipse: s-maj=485.3km s-min=94.1km az=160.0*

*ISCJB **03** 03:55:09.9±0.7, 42.05N±0.07×142.55E±0.06, h68km±5km, mb3.9/4, Error ellipse: s-maj=12.5km s-min=5.5km az=152.8*

*JMA **03** 03:55:10.5±0.2, 42.04N×142.61E, h63km±2km, M3.3*

ISC 03 03:55:10.8±0.7, 42.05N±0.07×142.55E±0.06, h61km±5km, n16, σ0=39/24, mb3.9/4, 3C-5D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.28**	**33**	⇑P	**Pn**	**03 55 20.5**	**-0.3**
JNBK				*e*S	**Sn**	**03 55 28.1**	**0.0**
JEM	**Erimo**	**0.45**	**94**	⇑P	**Pn**	**03 55 22.1**	**-0.2**
JBT2	**Biratori 2**	**0.74**	**349**	⇓P	**Pn**	**03 55 25.5**	**-0.1**
JBT2				*e*S	**Sn**	**03 55 36.8**	**+0.3**
JCH	**Churui**	**0.83**	**46**	⇑P	**Pn**	**03 55 26.3**	**-0.3**
JCH				*e*S	**Sn**	**03 55 37.9**	**-0.4**
JFR	**Furan**	**1.12**	**2**	P	**Pn**	**03 55 30.1**	**-0.3**
JEW	**Eniwo**	**1.14**	**315**	⇓P	**Pn**	**03 55 30.9**	**+0.3**
JKB	**Kayabe**	**1.14**	**263**	⇓P	**Pn**	**03 55 30.7**	**0.0**
JKB				*e*S	**Sn**	**03 55 45.7**	**+0.2**
JNB	**Noboribetsu**	**1.20**	**291**	⇓P	**Pn**	**03 55 31.0**	**-0.4**
JNB				*e*S	**Sn**	**03 55 46.6**	**-0.3**
JOB	**Onbets**	**1.28**	**48**	P	**Pn**	**03 55 33.2**	**+0.7**
JOB				*e*S	**Sn**	**03 55 49.9**	**+1.1**
JOT	**Ohata**	**1.31**	**240**	⇓P	**Pn**	**03 55 32.8**	**-0.1**
JOT				*e*S	**Sn**	**03 55 49.7**	**+0.3**
JAB	**Ashibetsu**	**1.48**	**351**	P	**Pn**	**03 55 35.5**	**+0.4**
JAR	**Ashorobuto**	**1.54**	**35**	P	**Pn**	**03 55 35.8**	**-0.2**
JAR				*e*S	**Sn**	**03 55 54.4**	**-0.6**
ZALV	**Zalesovo Beam**	**39.35**	**308**	P	**P**	**04 02 33.9**	**0.0**
	0.7nm,0.3s,mb3.8,baz=79,slow=8.0,SNR=4.2						
MKAR	**Makanchi Array**	**42.38**	**298**	P	**P**	**04 02 58.9**	**0.0**
	0.4nm,0.2s,mb3.6,baz=81,slow=7.5,SNR=5.4						
BVAR	**Borovoye Array**	**47.97**	**309**	P	**P**	**04 03 43.2**	**+0.2**
	0.8nm,0.5s,mb4.0,baz=75,slow=7.8,SNR=5.0						
FINES	**FINESS Array B**	**64.81**	**332**	P	**P**	**04 05 42.1**	**-0.5**
	1.6nm,0.6s,mb4.2,baz=69,slow=6.3,SNR=8.6						

*IDC **03** 04:06:07.3±1.1, 31.80N×104.67E, h0km, mb3.7/7, mb1 3.8/10, mb1mx3.6/23, mbtmp3.6/10, ML3.6/3, MS3.0/2, Ms1 3.0/2, ms1mx2.4/26, Error ellipse: s-maj=32.1km s-min=20.6km az=56.0*

*NEIC **03** 04:06:09.3±0.4, 31.79N×104.52E, h10km, mb4.1/2, Error ellipse: s-maj=11.0km s-min=7.1km az=61.0*

*BJI **03** 04:06:10.9, 31.84N×104.58E, h11km, ML3.6/14*

ISC 03 04:06:08.6±0.7, 31.87N±0.03×104.55E±0.04, h2km±5km, n23, σ0=88/31, mb3.8/9, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.17**	**215**	Pg	**Pg**	**04 06 31.3**	**+0.3**
CD2				Sg	**Sg**	**04 06 45.5**	**-0.7**
CD2				smax			
	comp=N,4μm,0.4s						
CD2				smax			
	comp=E,8μm,0.6s						
LZH	**Lanzhou**	**4.25**	**352**	Pn	**Pn**	**04 07 18.0**	**+3.7**
LZH				Pg	**Pg**	**04 07 30.2**	**+0.1**
LZH				Sn	**Sn**	**04 08 09.7**	**+5.2**
LZH				Sg	**Sg**	**04 08 26.0**	**+0.9**
LZH				smax			
	comp=N,170nm,1.0s						
LZH				smax			
	comp=E,140nm,1.0s						
XAN	**Xi'an**	**4.27**	**58**	Pn	**Pn**	**04 07 19.8**	**+5.2**
XAN				Sn	**Sn**	**04 08 05.4**	**+0.4**
XAN				Sg	**Sg**	**04 08 24.7**	**-1.1**
XAN				smax			
	comp=N,64nm,0.8s						
XAN				smax			
	comp=E,49nm,0.7s						
ENH	**Enshi**	**4.53**	**109**	*e*Pn	**Pn**	**04 07 18.7**	**+0.5**
ENH				*e*Pg	**Pg**	**04 07 35.8**	**+0.3**
GYA	**Guiyang**	**5.70**	**160**	Pn	**Pn**	**04 07 36.5**	**+2.2**
GYA				Sn	**Sn**	**04 08 40.9**	**+0.6**
GYA				Sg	**Sg**	**04 09 12.1**	**+0.4**
GYA				smax			
	comp=N,90nm,0.8s						
GYA				smax			
	comp=E,90nm,0.8s						
GTA	**Gaotai**	**8.45**	**334**	*e*P	**Pg**	**04 08 49.8**	**-0.7**
GTA				sP		04 08 56.9	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CMAR	**Chiang Mai Ar**	**14.28**	**202**	Pn	**Pn**	**04 09 30.8**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=11,slow=9.5,SNR=3.1						
SONM	**Songino Array**	**16.01**	**5**	Pn	**Pn**	**04 09 55.8**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=179,slow=12,SNR=3.3						
SONM				LR	LR	04 15 26.9	
	comp=Z,26nm,18.6s,baz=131,slow=35						
KSRS	**Korea Array**	**20.00**	**67**	P	**P**	**04 10 39.7**	**-2.8**
	comp=Z,0.0nm,0.3s,baz=260,slow=9.0,SNR=3.5						
MK31	**Makanchi Array**	**22.66**	**318**	*e*P	**P**	**04 11 11.6**	**+0.6**
MKAR	**Makanchi Array**	**22.66**	**318**	P	**P**	**04 11 11.3**	**+0.3**
	comp=Z,1.9nm,0.7s,mb3.6,baz=112,slow=12,SNR=17						
ZAA0	**Zalesovo Array**	**26.21**	**333**	*e*P	**P**	**04 11 44.5**	**0.0**
ZALV	**Zalesovo Beam**	**26.21**	**333**	P	**P**	**04 11 44.7**	**+0.2**
	comp=Z,1.3nm,0.7s,mb3.6,baz=132,slow=10,SNR=5.5						
KURK	**Kurchatov**	**26.87**	**322**	*e*P	**P**	**04 11 50.3**	**-0.2**
	comp=Z,3.0nm,1.0s,mb3.8						
ARU	**Arti**	**40.06**	**322**	*e*P	**P**	**04 13 45.2**	**+0.2**
	comp=Z,3.7nm,0.6s,mb4.3						
ARCES	**ARCESS Array B**	**56.72**	**336**	P	**P**	**04 15 53.3**	**0.0**
	comp=Z,4.8nm,1.2s,mb4.4,baz=88,slow=6.2,SNR=4.5						
FINES	**FINESS Array B**	**57.15**	**326**	P	**P**	**04 15 56.4**	**0.0**
	comp=Z,1.2nm,0.5s,mb4.2,baz=91,slow=6.2,SNR=13						
EIL	**Elat**	**58.87**	**288**	LR	LR	04

GUR	**Goura**	**1.71**	**94**	P		**Pn**	**04 17 23.5**	**0.0**
GUR	**Goura**	**1.71**	**94**	P		**Pn**	**04 17 23.5**	**0.0**
GUR	**Goura**	**1.71**	**94**	*e*Pn		**Pn**	**04 17 23.9**	**+0.4**
GUR				*e*Sn		**Sn**	**04 17 48.0**	**+1.9**
PYL	**PYLOS**	**1.72**	**133**	*e*PG		**Pb**	**04 17 24.6**	**-0.3**
PYL	**PYLOS**	**1.72**	**133**	*e*Pg		**Pb**	**04 17 24.6**	**-0.3**
SRN	**Sarande**	**1.80**	**356**	*e*PN		**Pn**	**04 17 28.3**	**+3.6**
SRN	**Sarande**	**1.80**	**356**	*e*Pn		**Pn**	**04 17 28.3**	**+3.6**
DSF	**Desfina**	**1.88**	**79**	P		**Pn**	**04 17 25.7**	**-0.1**
DSF	**Desfina**	**1.88**	**79**	P		**Pn**	**04 17 25.7**	**-0.1**
VLX	**Vlachokerasia**	**1.89**	**112**	*e*PN		**Pb**	**04 17 27.0**	**-0.7**
VLX	**Vlachokerasia**	**1.89**	**112**	P		**Pb**	**04 17 27.5**	**-0.2**
VLX				S		**Sb**	**04 17 50.5**	**-1.3**
VLX	**Vlachokerasia**	**1.89**	**112**	*e*Pn		**Pb**	**04 17 27.0**	**-0.7**
VLX	**Vlachokerasia**	**1.89**	**112**	P		**Pb**	**04 17 27.5**	**-0.2**
VLX				S		**Sb**	**04 17 50.5**	**-1.3**
AGG	**Agios Georgios**	**1.93**	**60**	*e*Pg		**Pb**	**04 17 28.4**	**-0.1**
AGG	**Agios Georgios**	**1.93**	**60**	*e*PG		**Pb**	**04 17 28.4**	**-0.1**
AGG	**Agios Georgios**	**1.93**	**60**	P		**Pb**	**04 17 28.0**	**-0.5**
AGG	**Agios Georgios**	**1.93**	**60**	P		**Pb**	**04 17 28.0**	**-0.5**
AGG	**Agios Georgios**	**1.93**	**60**	*e*Pg		**Pb**	**04 17 28.4**	**-0.1**
THL	**Klokotos Trika**	**2.06**	**44**	*e*PN		**Pn**	**04 17 29.6**	**+1.3**
THL	**Klokotos Trika**	**2.06**	**44**	P		**Pn**	**04 17 29.7**	**+1.4**
THL				S		**Sn**	**04 17 54.2**	**-0.4**
THL	**Klokotos Trika**	**2.06**	**44**	P		**Pn**	**04 17 29.7**	**+1.4**
THL				S		**Sn**	**04 17 54.2**	**-0.4**
LTK	**Loutraki**	**2.20**	**91**	*e*PB		**Pb**	**04 17 30.3**	**-2.8**
LTK	**Loutraki**	**2.20**	**91**	*e*Pb		**Pb**	**04 17 30.3**	**-2.8**
LKR	**Lokris**	**2.29**	**75**	*e*Pb		**Pb**	**04 17 31.9**	**-2.7**
LKR	**Lokris**	**2.29**	**75**	*e*PB		**Pb**	**04 17 31.9**	**-2.7**
LKR	**Lokris**	**2.29**	**75**	*e*Pb		**Pb**	**04 17 31.9**	**-2.7**
DID	**Didima**	**2.49**	**102**	*e*PB		**Pb**	**04 17 34.8**	**-3.2**
DID	**Didima**	**2.49**	**102**	*e*Pb		**Pb**	**04 17 34.8**	**-3.2**
KZN	**Kozani**	**2.54**	**29**	*e*Pn		**Pn**	**04 17 37.0**	**+2.1**
KZN	**Kozani**	**2.54**	**29**	*e*PN		**Pn**	**04 17 37.0**	**+2.1**
KZN	**Kozani**	**2.54**	**29**	*e*Pn		**Pn**	**04 17 37.0**	**+2.1**
KBN	**Korca**	**2.58**	**10**	*e*PN		**Sn**	**04 18 01.3**	**-6.1**
VLI	**Veliai**	**2.59**	**121**	*e*Pn		**Pn**	**04 17 37.4**	**+1.9**
VLI	**Veliai**	**2.59**	**121**	*e*PN		**Pn**	**04 17 37.4**	**+1.9**
VLI	**Veliai**	**2.59**	**121**	*e*Pn		**Pn**	**04 17 37.4**	**+1.9**
NEO	**Neokhori**	**2.68**	**62**	*e*Pn		**Pn**	**04 17 37.4**	**+0.7**
NEO	**Neokhori**	**2.68**	**62**	*e*PN		**Pn**	**04 17 37.4**	**+0.7**
LIT	**Litokhoron**	**2.70**	**41**	*e*Pb		**Pb**	**04 17 38.3**	**-3.3**
LIT	**Litokhoron**	**2.70**	**41**	*e*PB		**Pb**	**04 17 38.3**	**-3.3**
LIT	**Litokhoron**	**2.70**	**41**	*e*Pb		**Pb**	**04 17 38.3**	**-3.3**
FNA	**Florina**	**2.85**	**19**	P		**Pb**	**04 17 43.2**	**-1.0**
FNA	**Florina**	**2.85**	**19**	P		**Pb**	**04 17 43.2**	**-1.0**
VLY	**Voula,Athens**	**2.87**	**94**	*e*Pn		**Pn**	**04 17 39.0**	**-0.4**
VLY	**Voula,Athens**	**2.87**	**94**	*e*PN		**Pn**	**04 17 39.0**	**-0.4**
VLY	**Voula,Athens**	**2.87**	**94**	*e*Pn		**Pn**	**04 17 39.0**	**-0.4**
TIP	**Timpagrande**	**2.89**	**293**	P		**Pn**	**04 17 40.7**	**+1.0**
TIP	**Timpagrande**	**2.89**	**293**	P		**Pn**	**04 17 40.7**	**+1.0**
KYTH	**Kithira**	**2.91**	**127**	*e*Pb		**Pb**	**04 17 41.9**	**-3.3**
KYTH	**Kithira**	**2.91**	**127**	*e*PB		**Pb**	**04 17 41.9**	**-3.3**
KYTH	**Kithira**	**2.91**	**127**	*e*Pb		**Pb**	**04 17 41.9**	**-3.3**
PTL	**Penteli**	**2.91**	**90**	*e*Pn		**Pn**	**04 17 38.5**	**-1.5**
PTL	**Penteli**	**2.91**	**90**	*e*PN		**Pn**	**04 17 38.5**	**-1.5**
PTL	**Penteli**	**2.91**	**90**	*e*Pn		**Pn**	**04 17 38.5**	**-1.5**
OHR	**Ohrid**	**3.06**	**9**	*e*Pn		**Pn**	**04 17 43.3**	**+1.3**
OHR				*e*Sg		**Sn**	**04 18 19.6**	**+0.3**
TIR	**Tirane**	**3.27**	**356**	*e*Pn		**Pn**	**04 17 45.7**	**+0.9**
TIR	**Tirane**	**3.27**	**356**	*e*Pn		**Pn**	**04 17 45.7**	**+0.8**
TAR1	**Taranto**	**3.31**	**318**	*e*Pn		**Pn**	**04 17 46.6**	**+1.1**
CEL	**Celeste**	**3.38**	**274**	*e*Pn		**Pn**	**04 17 47.0**	**+0.6**
CEL				*e*Sn		**Sn**	**04 18 27.8**	**+0.6**
CEL	**Celeste**	**3.38**	**274**	*e*Pn		**Pn**	**04 17 47.0**	**+0.6**
CEL				*e*Sn		**Sn**	**04 18 27.8**	**+0.6**
KRUS	**Krusevo**	**3.38**	**14**	*e*Pn		**Pn**	**04 17 46.6**	**+0.2**
KRUS				*e*Sg		**Sn**	**04 18 25.5**	**-1.8**
PE1	**Pezze di Greco**	**3.45**	**323**	*e*Pn		**Pn**	**04 17 47.2**	**-0.2**
PE1				*e*Sn		**Sn**	**04 18 26.4**	**-2.6**
SOH	**Sokhos**	**3.67**	**41**	*e*Pn		**Pn**	**04 17 50.9**	**+0.4**
SOH	**Sokhos**	**3.67**	**41**	*e*PN		**Pn**	**04 17 50.9**	**+0.4**
SOH	**Sokhos**	**3.67**	**41**	*e*Pn		**Pn**	**04 17 50.9**	**+0.4**
SG1	**Sgolgore (BA)**	**3.86**	**317**	*e*Pn		**Pn**	**04 17 53.8**	**+0.8**
SG1				*e*Sn		**Sn**	**04 18 37.3**	**-1.7**
CUC	**Castrocucco**	**3.90**	**301**	*e*Pn		**Pn**	**04 17 56.0**	**+2.6**
CUC	**Castrocucco**	**3.90**	**301**	*e*Pn		**Pn**	**04 17 56.0**	**+2.5**
BCI	**Bajram Curri**	**4.28**	**359**	*e*PN		**Pn**	**04 18 01.5**	**+2.8**
BCI	**Bajram Curri**	**4.28**	**359**	*e*Pn		**Pn**	**04 18 01.5**	**+2.8**
WDD	**Wield Dalam**	**5.04**	**246**	*e*Pn		**Pn**	**04 18 09.4**	**+0.2**
STON	**Ston**	**5.14**	**339**	*e*Pn		**Pn**	**04 18 08.0**	**-2.7**
STON				Sn		**Sn**	**04 19 04.9**	**-5.7**
STON	**Ston**	**5.14**	**339**	*e*Pn		**Pn**	**04 18 07.9**	**-2.7**

NIED ***03*** *05:02:00.2, 26°.50N×141°.90E, h44km, Mw4.2 Best double couple: M0 2.36000×10^15 NP1:φ=204.00000°, δ=54.00000°, λ=105.00000°. NP2:φ=360.00000°, δ=38.00000°, λ=71.00000°.*

BJI ***03*** *05:02:34.5, 26°.02N×142°.45E, h25km, mB4.5/4, mb4.5/7*

IDC ***03*** *05:02:36.6±0.6, 26°.44N×141°.81E, h0km, mb4.2/19, mb1 4.3/19, mb1mx4.2/25, mbtmp4.2/19, MS3.0/3, Ms1 3.0/3, ms1mx2.7/23, Error ellipse: s-maj=20.6km s-min=14.7km az=89.0*

ISCJB ***03*** *05:02:41.1±0.9, 26°.45N±0°.04×141°.77E±0°.06, h39km±7.7km, mb4.2/31, Error ellipse: s-maj=10.1km s-min=6.2km az=159.8*

NEIC ***03*** *05:02:42.3±0.3, 26°.44N×141°.87E, h35km, mb4.3/13, Error ellipse: s-maj=10.6km s-min=9.0km az=139.0*

NEIC Recorded [1 JMA] in the Chichijima-retto.

JMA ***03*** *05:02:42.2±0.2, 26°.47N×141°.78E, h27km, M4.5*

JMA Felt I J1.

ISC 03 05:02:42.8±0.7, 26°.41N±0°.04×141°.92E±0°.06, h39km±6km, n54, σ1ᵍ05/60, mb4.2/31, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**0.32**	**46**	P	**Pn**	**05 02 50.6**	**-0.7**
JHHJ				S	**Sn**	**05 02 56.3**	**-0.9**
CBIJ	**Chichi jima**	**0.73**	**19**	P	**Pn**	**05 02 55.5**	**-1.2**
CBIJ				*e*S	**Sn**	**05 03 05.3**	**-1.3**
BSO1	**Boso 1**	**8.26**	**355**	P	**Pn**	**05 04 41.9**	**+1.8**
BSO1				*e*S	**Sn**	**05 06 12.7**	**+0.6**
BSO3	**Boso 3**	**8.46**	**352**	P	**Pn**	**05 04 44.7**	**+1.9**
BSO3				*e*S	**Sn**	**05 06 20.4**	**+3.5**
BSO4	**Boso 4**	**8.66**	**351**	P	**Pn**	**05 04 46.8**	**+1.2**
BSO4				*e*S	**Sn**	**05 06 22.7**	**+0.7**
JIE	**Ise**	**9.14**	**332**	P	**Pn**	**05 04 42.4**	**-10**
JHU	**Hanno**	**9.68**	**347**	P	**Pn**	**05 05 00.2**	**+0.6**
JHU				*e*S	**Sn**	**05 06 46.1**	**-1.0**
JYT	**Yasato**	**9.90**	**352**	*e*S	**Sn**	**05 06 53.4**	**+1.0**
JRY	**Ryogami san**	**9.92**	**346**	P	**Pn**	**05 05 06.7**	**+3.8**
JRY				*e*S	**Sn**	**05 06 51.8**	**-1.1**
JAG	**Ashikaga**	**10.21**	**349**	P	**Pn**	**05 05 08.0**	**+1.2**
JAG				*e*S	**Sn**	**05 06 57.7**	**-2.2**
JHO	**Hitachi**	**10.24**	**354**	P	**Pn**	**05 05 07.7**	**+0.5**
JHO				*e*S	**Sn**	**05 06 54.1**	**-6.6**
GUMO	**Guam**	**13.05**	**167**	LR	LR	05 09 21.8	
	comp=Z,49nm,21.0s,baz=81,slow=31						
KSRS	**Korea Array**	**16.18**	**316**	LR	LR	05 12 08.3	
	comp=Z,58nm,19.0s,baz=161,slow=36						
YHNB	**Yeheng**	**18.62**	**269**	*e*P	**Pn**	**05 06 58.0**	**+0.4**
	17nm,0.9s						
SSLB	**Suanglung**	**19.17**	**267**	*e*P	**Pn**	**05 07 07.0**	**+2.8**
	20nm,1.0s						
TPUB	**Ta-pu**	**19.56**	**266**	P	**Pn**	**05 07 10.1**	**+1.2**
	18nm,0.9s						
SONM	**Songino Array**	**35.05**	**317**	P	**P**	**05 09 28.9**	**-2.9**
SONM				PcP	PcP	05 12 00.9	-2.1
SONM	**Songino Array**	**35.05**	**317**	P	**P**	**05 09 29.0**	**-2.8**
	0.5nm,0.9s,mb3.5,baz=111,slow=7.9,SNR=2.7						
SONM				PcP	PcP	05 12 00.9	-2.1
	0.5nm,0.7s,baz=101,slow=2.9,SNR=3.1						
CMAR	**Chiang Mai Arr**	**40.36**	**268**	P	**P**	**05 10 15.4**	**-1.6**
	0.8nm,0.6s,mb3.7,baz=56,slow=7.6,SNR=5.3						
CTA	**Charters Tower**	**46.41**	**174**	P	**P**	**05 11 05.5**	**0.0**
	4.4nm,0.6s,mb4.5,baz=350,slow=6.0,SNR=6.6						
WRAB	**Tennant Creek**	**46.64**	**190**	*e*P	**P**	**05 11 07.3**	**-0.2**
	19nm,0.6s,mb5.2						
FITZ	**Fitzroy Crossi**	**46.98**	**201**	P	**P**	**05 11 10.1**	**0.0**
	3.1nm,0.7s,mb4.3,baz=23,slow=11,SNR=4.0						
ZALV	**Zalesovo Beam**	**49.86**	**320**	P	**P**	**05 11 30.9**	**-1.1**
	0.4nm,0.3s,mb3.9,baz=91,slow=7.9,SNR=2.8						
ZALV				PcP	PcP	05 12 51.5	-0.5
	0.9nm,0.6s,baz=90,slow=2.9,SNR=4.2						
ZALV				LR	LR	05 34 46.5	
	comp=Z,16nm,18.4s,baz=229,slow=39						
ASAR	**Alice Springs**	**50.38**	**190**	P	**P**	**05 11 35.3**	**-0.8**
	1.4nm,0.6s,mb4.2,baz=14,slow=14,SNR=12						
MKAR	**Makanchi Array**	**50.73**	**310**	P	**P**	**05 11 37.7**	**-1.0**
	0.3nm,0.3s,mb3.8,baz=85,slow=9.0,SNR=2.7						
KDAK	**Kodiak Island**	**55.06**	**36**	P	**P**	**05 12 09.8**	**-0.6**
KDAK	**Kodiak Island**	**55.06**	**36**	P	**P**	**05 12 09.8**	**-0.6**
	2.5nm,0.6s,mb4.4,baz=332,slow=13,SNR=5.9						
STKA	**Stephens Creek**	**57.96**	**180**	P	**P**	**05 12 30.4**	**-0.9**
	3.6nm,1.0s,mb4.4,baz=323,slow=9.1,SNR=3.7						
BVAR	**Borovoye Array**	**58.39**	**318**	P	**P**	**05 12 32.7**	**-1.4**
	1.0nm,0.4s,mb4.2,baz=99,slow=9.2,SNR=6.5						
ILAR	**Eielson Array**	**58.43**	**28**	P	**P**	**05 12 33.2**	**-1.0**
	1.1nm,0.8s,mb3.9,baz=255,slow=5.7,SNR=15						
ABKAR	**Akbulak array**	**65.41**	**314**	*e*P	**P**	**05 13 20.0**	**-1.3**
	0.5nm,0.4s,mb3.9						
SPITS	**Spitsbergen Ar**	**71.02**	**350**	P	**P**	**05 13 56.5**	**+0.4**
	2.0nm,0.6s,mb4.2,baz=46,slow=11,SNR=5.2						
YKA	**Yellowknife Ar**	**72.86**	**28**	P	**P**	**05 14 06.8**	**-0.5**
	1.2nm,0.6s,mb4.0,baz=297,slow=6.2,SNR=3.9						
ARCES	**ARCESS Array B**	**74.11**	**341**	P	**P**	**05 14 15.0**	**+0.4**
ARCES	**ARCESS Array B**	**74.11**	**341**	P	**P**	**05 14 15.0**	**+0.5**
	6.2nm,0.8s,mb4.6,baz=67,slow=9.3,SNR=12						
JOF	**Joensuu**	**75.59**	**334**	*e*p	**P**	**05 14 22.6**	**-0.6**
	4.9nm,0.7s,mb4.5						
NEW	**Newport**	**77.58**	**42**	*e*P	**P**	**05 14 35.1**	**+0.4**
	4.7nm,1.1s,mb4.3						
KAF	**Kangasniemi**	**77.99**	**334**	*e*p	**P**	**05 14 32.0**	**-4.8**
	2.4nm,0.7s,mb4.2						
FINES	**FINESS Array B**	**78.46**	**334**	P	**P**	**05 14 39.1**	**-0.2**
	3.0nm,0.5s,mb4.5,baz=70,slow=4.9,SNR=30						
WALA	**Waterloon Lakes**	**79.12**	**41**	*e*P	**P**	**05 14 44.4**	**+1.1**
	0.1nm,0.6s						
WALA				*e*pP	pP	05 14 55.4	+0.2
SWMT	**Swartz Lake**	**79.79**	**42**	*e*P	**P**	**05 14 47.3**	**+0.4**
	2.8nm,1.0s,mb4.2						
SLMT	**Seeley Lake**	**80.22**	**42**	*e*P	**P**	**05 14 49.5**	**+0.3**
	2.4nm,0.9s,mb4.1						
NVAR	**Mina Array Bea**	**81.13**	**52**	P	**P**	**05 14 54.8**	**+0.5**
	1.6nm,0.7s,mb4.1,baz=296,slow=5.7,SNR=13						
AKASG	**Malin Array Be**	**83.03**	**324**	P	**P**	**05 15 03.3**	**-0.8**
	1.0nm,0.5s,mb4.1,baz=53,slow=5.4,SNR=4.7						
IMW	**Indian Meadow**	**83.42**	**44**	*e*P	**P**	**05 15 07.9**	**+1.7**
	1.3nm,0.6s,mb4.1						
DUG	**Dugway**	**84.06**	**48**	*e*P	**P**	**05 15 09.9**	**+0.4**
	7.0nm,1.2s,mb4.7						
NOA	**NORSAR Array B**	**84.16**	**338**	P	**P**	**05 15 09.0**	**-0.6**
NOA	**NORSAR Array B**	**84.16**	**338**	P	**P**	**05 15 09.0**	**-0.6**
	4.1nm,0.8s,mb4.6,baz=47,slow=4.8,SNR=12						
HWUT	**Hardware Ranch**	**84.18**	**46**	*e*P	**P**	**05 15 11.1**	**+1.0**
	1.2nm,0.6s,mb4.2						
DAU	**Daniels Canyon**	**84.98**	**47**	*e*P	**P**	**05 15 15.0**	**+0.8**
SRU	**San Rafael**	**86.13**	**48**	*e*P	**P**	**05 15 20.4**	**+0.5**
	1.1nm,0.5s,mb4.3						
MNTX	**Cornudas Mount**	**93.65**	**52**	*e*P	**P**	**05 15 56.0**	**+0.5**
	1.3nm,1.1s,mb4.3						
TXAR	**Lajitas Array**	**96.20**	**53**	P	**P**	**05 16 07.9**	**+0.7**
	0.5nm,0.7s,mb4.0,baz=310,slow=2.5,SNR=7.8						
LPAZ	**La Paz**	**150.32**	**76**	PKPbc	PKPbc	05 22 31.4	+0.8
	1.8nm,0.9s,baz=301,slow=1.6,SNR=7.8						

IDC ***03*** *06:25:28.2±3.7, 3°.08N×96°.24E, h0km, mb4.1/3, mb1 4.1/5, mb1mx3.7/22, mbtmp4.0/5, ML3.8/2, MS3.4/2, Ms1 3.5/2, ms1mx2.6/25, Error ellipse: s-maj=77.8km s-min=32.9km az=36.0*

ISCJB ***03*** *06:25:30.0±1.1, 2°.96N±0°.09×96°.2E±0°.1, h33km, mb4.2/6, MS3.5/2, Error ellipse: s-maj=17.4km s-min=11.8km az=149.3*

NEIC ***03*** *06:25:32.1±1.1, 2°.96N×96°.20E, h35km, mb4.2/2, Error ellipse: s-maj=22.6km s-min=11.9km az=217.0*

ISC 03 06:25:32.4±1.0, 2°.97N±0°.09×96°.2E±0°.1, h35km, n13, σ0ᵍ66/12, mb4.2/6, MS3.5/2, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**2.72**	**93**	Pn	**Pn**	**06 26 13.1**	**-0.6**
	4.4nm,0.3s,baz=279,slow=13,SNR=11						
KULM	**Kulim**	**5.00**	**62**	*e*Pn	**Pn**	**06 26 46.1**	**+1.2**
	45nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.63**	**10**	Pn	**Pn**	**06 29 08.6**	**-1.5**
	0.4nm,0.3s,baz=196,slow=11,SNR=6.3						
CMAR				Sn	**Sn**	**06 32 02.0**	**-0.2**
	0.4nm,0.3s,baz=196,slow=25,SNR=2.9						
FITZ	**Fitzroy Crossi**	**35.77**	**127**	*e*P	**P**	**06 32 27.9**	**-0.5**
	7.2nm,1.4s,mb4.4						
GTA	**Gaotai**	**36.42**	**5**	*e*P	**P**	**06 32 34.2**	**+0.5**
GTA				pP	pP	06 32 38.0	-5.8
GTA				sP	sP	06 32 39.4	-8.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
KSRS	**Korea Array**	**44.99**	**36**	LR	LR	06 55 40.9	
	comp=Z,18nm,18.4s,MS3.0,baz=210,slow=40						
MK31	**Makanchi Array**	**45.30**	**347**	*e*P	**P**	**06 33 47.1**	**+0.4**
MKAR	**Makanchi Array**	**45.30**	**347**	P	**P**	**06 33 47.1**	**+0.4**
	comp=Z,1.4nm,0.4s,mb4.2,baz=159,slow=8.2,SNR=20						
SONM	**Songino Array**	**45.55**	**10**	P	**P**	**06 33 49.0**	**+0.3**
	comp=Z,1.2nm,0.6s,mb4.0,baz=191,slow=6.9,SNR=7.5						
ZALV	**Zalesovo Beam**	**51.67**	**351**	P	**P**	**06 34 35.7**	**+0.1**
ZALV	**Zalesovo Beam**	**51.67**	**351**	P	**P**	**06 34 35.7**	**+0.1**
	comp=Z,2.0nm,0.5s,mb4.3,baz=165,slow=7.3,SNR=10						
ABKAR	**Akbulak array**	**55.50**	**332**	*e*P	**P**	**06 35 03.5**	**-0.3**
	comp=Z,1.0nm,0.8s,mb3.9						
ARCES	**ARCESS Array B**	**80.55**	**340**	LR	LR	07 22 07.2	
	comp=Z,50nm,18.4s,MS3.9,baz=77,slow=42						

DDA ***03*** *06:35:47.3, 39°.40N×32°.97E, h6km±5km, Md2.8*

CSEM ***03*** *06:35:48.9±0.3, 39°.48N×33°.05E, h10km, MD2.8, Error ellipse: s-maj=8.9km s-min=6.3km az=148.0*

ISCJB ***03*** *06:35:49.3±0.7, 39°.45N±0°.04×33°.00E±0°.05, h4km±7km, Error ellipse: s-maj=7.4km s-min=5.1km az=144.3*

ISK ***03*** *06:35:49.5, 39°.47N×32°.98E, h17km, MD3.0*

ISC 03 06:35:49.7±0.7, 39°.45N±0°.04×33°.02E±0°.04, h4km±8km, n17, σ1ᵍ16/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBAL	**Bala**	**0.12**	**39**	*i* P	**Pg**	**06 35 51.8**	**-0.4**
BBAL				*i* S	**Sg**	**06 35 53.9**	**0.0**
BBAL	**Bala**	**0.12**	**39**	*i* P	**Pg**	**06 35 51.8**	**-0.4**
BBAL				*i* S	**Sg**	**06 35 53.9**	**+0.1**
LOD	**Lodumlu**	**0.49**	**336**	*e*PG	**Pg**	**06 35 59.3**	**+0.3**
LOD				*e*SG	**Sg**	**06 36 05.9**	**+0.6**
LOD	**Lodumlu**	**0.49**	**336**	*e*Pg	**Pg**	**06 35 59.3**	**+0.3**
LOD				*e*Sg	**Sg**	**06 36 05.9**	**+0.6**
KIZT	**Kizilcal**	**1.05**	**238**	*e*PG	**Pg**	**06 36 09.6**	**-0.2**
KIZT				*e*SG	**Sg**	**06 36 24.6**	**+1.2**
KIZT	**Kizilcal**	**1.05**	**238**	*e*Pg	**Pg**	**06 36 09.6**	**-0.2**
KIZT				*e*Sg	**Sg**	**06 36 24.6**	**+1.1**
CDAG	**Cicekdag**	**1.06**	**80**	*i* P	**Pg**	**06 36 08.7**	**-1.3**
CDAG				*i* S	**Sg**	**06 36 23.8**	**+0.1**
CDAG	**Cicekdag**	**1.06**	**80**	*i* P	**Pg**	**06 36 08.7**	**-1.3**
CDAG				*i* S	**Sg**	**06 36 23.8**	**+0.1**
ELDT	**Eldivan**	**1.09**	**16**	*i* P	**Pg**	**06 36 07.8**	**-2.8**
ELDT				*i* S	**Sg**	**06 36 27.0**	**+2.3**
ELDT	**Eldivan**	**1.09**	**16**	*i* P	**Pg**	**06 36 07.8**	**-2.8**
SVRH	**Sivrihisar-ESK**	**1.16**	**271**	*e*PN	**Pn**	**06 36 10.8**	**-1.8**
SVRH	**Sivrihisar-ESK**	**1.16**	**271**	*e*Pn	**Pn**	**06 36 10.9**	**-1.8**
CORM	**Corum**	**1.44**	**59**	*e*PN	**Pn**	**06 36 15.5**	**-1.0**
CORM	**Corum**	**1.44**	**59**	*e*Pn	**Pn**	**06 36 15.5**	**-1.0**
AVNT	**Avonos**	**1.57**	**114**	*i* P	**Pn**	**06 36 19.9**	**+1.5**
AVNT				*i* S	**Sn**	**06 36 40.3**	**+1.1**
KONT	**Konya--Tatoy**	**1.58**	**199**	*e*PN	**Pn**	**06 36 18.2**	**-0.3**
KONT	**Konya--Tatoy**	**1.58**	**199**	*e*Pn	**Pn**	**06 36 18.2**	**-0.3**

CSEM ***03*** *06:44:58.9, 38°.09N×26°.19W, h10km, ML2.3, After PDA*

PDA 03 06:44:58.9±0.9, 38°.09N×26°.19W, h10km±5km, MD3.6, ML2.3, Error ellipse: s-maj=5.7km s-min=2.5km az=37.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSET	**Sete Cidades**	**0.46**	**126**	*e*P	Pg	06 45 06.3	-1.5
PSET				*e*S	Sg	06 45 12.9	-1.0
PSET				A		06 45 15.3	
	48nm,0.3s						
PSET	**Sete Cidades**	**0.46**	**126**	*e*P	Pg	06 45 06.3	-1.5
PSET				*e*S	Sg	06 45 12.9	-1.0
PDA	**Ponta Delgada**	**0.54**	**130**	*e*P	Pg	06 45 07.7	-1.7
PDA				*e*S	Sg	06 45 14.6	-1.9
PDA	**Ponta Delgada**	**0.54**	**130**	*e*P	Pg	06 45 07.7	-1.7
PDA				*e*S	Sg	06 45 14.6	-1.9
GRON	**Grota Negra**	**0.61**	**122**	*e*P	Pg	06 45 10.3	-0.4
GRON				*e*S	Sg	06 45 19.0	+0.3
GRON				A		06 45 21.5	
	20nm,0.1s						
BART	**Pico Bartolome**	**0.86**	**111**	*e*P	Pg	06 45 12.4	-3.2
BART				*e*S	Sg	06 45 22.4	-4.4
BART				A		06 45 23.8	
	11nm,0.2s						
BART	**Pico Bartolome**	**0.86**	**111**	*e*P	Pg	06 45 12.4	-3.2
BART				*e*S	Sg	06 45 22.4	-4.4
ADH	**Angra Heroismo**	**1.00**	**305**	*e*P	Pg	06 45 14.5	-3.6
ADH				*e*S	Sg	06 45 25.7	-5.3
ADH				A		06 45 26.9	
	40nm,0.2s						
ADH	**Angra Heroismo**	**1.00**	**305**	*e*P	Pg	06 45 14.5	-3.6
ADH				*e*S	Sg	06 45 25.7	-5.3
PSMA	**Santa Maria**	**1.38**	**142**	*e*P	Pn	06 45 19.4	-4.8
PSMA				*e*S	Sb	06 45 35.2	-7.3
PSMA				A		06 45 37.9	
	36nm,0.2s						
PSMN	**Pico do Norte,**	**1.41**	**140**	*e*P	Pn	06 45 19.7	-4.9
PSMN				*e*S	Sn	06 45 35.6	-7.5
PSMN	**Pico do Norte,**	**1.41**	**140**	*e*P	Pn	06 45 19.7	-4.9
PSMN				*e*S	Sn	06 45 35.6	-7.5
PID	**Ribeirinha**	**1.56**	**283**	*e*S	Sn	06 45 39.5	-7.4
PID	**Ribeirinha**	**1.56**	**283**	*e*S	Sn	06 45 39.5	-7.4
PMAN	**Manadas**	**1.59**	**290**	*e*P	Pn	06 45 22.1	-5.0
PMAN				*e*S	Sn	06 45 39.8	-7.8
PMAN				A		06 45 41.0	
	15nm,0.1s						
PMAN	**Manadas**	**1.59**	**290**	*e*P	Pn	06 45 22.1	-5.0
PMAN				*e*S	Sn	06 45 39.8	-7.8
ROSA	**Rosais**	**1.73**	**292**	*e*P	Pn	06 45 24.4	-4.6
ROSA				*e*S	Sn	06 45 43.6	-7.5
ROSA	**Rosais**	**1.73**	**292**	*e*P	Pn	06 45 24.4	-4.6
ROSA				*e*S	Sn	06 45 43.6	-7.5
PICO	**Pico**	**1.81**	**284**	*e*P	Pn	06 45 25.9	-4.2
PICO				*e*S	Sn	06 45 45.4	-7.6
PICO	**Pico**	**1.81**	**284**	*e*P	Pn	06 45 25.9	-4.2
PICO				*e*S	Sn	06 45 45.4	-7.6
PCAN	**Candelaria**	**1.85**	**282**	*e*P	Pn	06 45 26.0	-4.6
PCAN				*e*S	Sn	06 45 46.5	-7.5
PCAN				A		06 45 47.6	
	22nm,0.3s						
PCAN	**Candelaria**	**1.85**	**282**	*e*P	Pn	06 45 26.0	-4.6
PCAN				*e*S	Sn	06 45

NLC					*i* S		**Sn**	07 21 11.4	-1.1
GNL	**Ganaly**	**2.56**	**230**	*e*P		**Pn**	07 20 42.6	+0.7
AVH	**Avacha**	**2.58**	**215**	*e*P		**Pn**	07 20 43.0	+0.8
BKI	**Bering**	**2.72**	**92**	*e*P		**Pn**	07 20 44.8	+1.0
BKI				*i* S		**Sn**	07 21 17.6	0.0
PET	**Petropavlovsk**	**2.82**	**213**	*e*P		**Pn**	07 20 45.6	+0.5
PET				*i* S		**Sn**	07 21 19.3	-0.5
PET	**Petropavlovsk**	**2.82**	**213**	*e*PN		**Pn**	07 20 45.5	+0.4
PET				*e*S		**Sn**	07 21 19.4	-0.4
PET				smax				
	comp=E,300nm,1.3s							
PET				smax				
	comp=N,149nm,0.5s							
PET				smax				
	comp=E,199nm,0.4s							

KRSC 03 07:52:53.7±0.8, 50.75N×157.21E, h66km±65km, ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALID	**Alaid**	**1.06**	**277**	*e*P	Pn	07 53 13.2	+0.5
ALID				*e*S	Sn	07 53 26.7	-0.2
MIPR	**Malaya Ipel'ka**	**1.55**	**350**	*e*P	Pn	07 53 21.3	+2.1
MIPR				S	Sn	07 53 41.5	+3.0
GRL	**Gorelyy**	**1.88**	**16**	*e*P	Pn	07 53 26.4	+2.8
GRL				*e*S	Sn	07 53 49.8	+3.4
PET	**Petropavlovsk**	**2.45**	**21**	*e*P	Pn	07 53 33.6	+2.4
PET				*e*S	Sn	07 54 03.1	+3.1
AVH	**Avacha**	**2.69**	**20**	*e*P	Pn	07 53 37.7	+3.2
SPN	**Mys Shipunski**	**2.93**	**35**	*e*S	Sn	07 54 13.1	+1.4
GNL	**Ganaly**	**2.98**	**8**	*e*P	Pn	07 53 41.8	+3.3
MKZ	**Mys Kozlova**	**4.70**	**34**	*e*P	Pn	07 54 03.7	+1.7
MKZ				*e*S	Sn	07 54 56.3	+1.2
KBTR	**Krutoberegovo**	**6.41**	**29**	*e*P	Pn	07 54 27.0	+1.7

*IDC **03** 08:25:43.7±7.6, 51.67N×177.74E, h0km, mb3.3/4, mb1 3.8/5, mb1mx3.5/25, mbtmp3.5/5, ML4.2/1, Error ellipse: s-maj=149.4km s-min=60.2km az=89.0*

NEIC 03 08:25:40.7, 51.47N×176.09E, h25km, ML3.7(PMR), **ML3.5**(AEIC), **After AEIC., Rat Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMY	**Shemya**	**1.76**	**316**	P	Pn	08 26 09.8	+0.2
SMY				S	Sn	08 26 30.6	-0.5
AMKA	**Amchitka**	**2.01**	**91**	P	Pn	08 26 12.9	-0.1
AMKA				S	Sn	08 26 39.0	+1.7
FX1	**Attu Island--F**	**2.29**	**309**	P	Pn	08 26 17.4	+0.6
FX1				S	Sn	08 26 46.0	+1.9
ATKA	**Atka Island**	**6.07**	**79**	P	Pn	08 27 09.7	+1.0
KDAK	**Kodiak Island**	**19.08**	**58**	P	Pn	08 29 58.0	-3.9
	0.7nm,0.3s,baz=272,slow=5.7,SNR=14						
ILAR	**Eielson Array**	**23.22**	**41**	P	P	08 30 42.5	-3.0
	0.3nm,0.6s,baz=251,slow=9.4,SNR=4.9						
YKA	**Yellowknife Ar**	**37.47**	**46**	P	P	08 32 50.5	-1.1
	0.4nm,0.7s,baz=278,slow=9.6,SNR=3.8						
NVAR	**Mina Array Bea**	**46.70**	**79**	P	P	08 34 06.4	-0.7
	0.2nm,0.6s,baz=301,slow=9.2,SNR=3.9						
TXAR	**Lajitas Array**	**61.78**	**78**	P	P	08 35 56.9	-0.1
TXAR	**Lajitas Array**	**61.78**	**78**	P	P	08 35 56.9	-0.1
	0.3nm,0.4s,baz=308,slow=6.0,SNR=17						

*NIED **03** 09:16:00, 47.20N×155.00E, h41km, Mw4.1 Best double couple: M0 1.84000×10^15 NP1:φs 59.00000°, δ82.00000°, λ69.00000°. NP2:φs 309.00000°, δ22.00000°, λ159.00000°.*
*IDC **03** 09:16:42.9±0.9, 46.49N×155.43E, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.9/23, mbtmp3.9/9, MS3.3/4, Ms1 3.3/4, ms1mx2.9/31, Error ellipse: s-maj=27.6km s-min=19.0km az=169.0*
*ISCJB **03** 09:16:45.6±0.8, 46.5N±0.2×155.3E±0.1, h33km, mb4.0/13, MS3.3/5, Error ellipse: s-maj=23.1km s-min=14.0km az=167.7*
*MOS **03** 09:16:47.0±1.6, 46.51N×155.28E, h45km, mb4.3/13, Error ellipse: s-maj=21.6km s-min=16.3km az=126.5*

ISC 03 09:16:48.0±0.8, 46.5N±0.2×155.3E±0.1, h35km, n26, σ1§24/24, mb4.0/13, MS3.3/5, 1C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**5.35**	**259**	*e*PN	**Pn**	**09 18 02.8**	**-2.5**
KUR				pmax	pmax		
	comp=Z,110nm,0.5s						
KSRS	**Korea Array**	**22.19**	**256**	P	**P**	**09 21 43.6**	**+2.6**
	comp=Z,3.1nm,0.8s,mb3.8,baz=57,slow=10,SNR=12						
KSRS	**Korea Array**	**22.19**	**256**	P	**P**	**09 21 43.6**	**+2.7**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.8						
SONM	**Songino Array**	**32.82**	**290**	LR	LR	09 36 49.0	
	comp=Z,58nm,19.0s,MS3.3,baz=214,slow=37						
ZAK	**Zakamensk**	**34.13**	**296**	*e*P	**P**	**09 23 29.0**	**-0.2**
ILAR	**Eielson Array**	**35.78**	**38**	P	**P**	**09 23 41.9**	**-1.4**
	comp=Z,0.2nm,0.6s,mb3.2,baz=249,slow=7.6,SNR=4.9						
ZALV	**Zalesovo Beam**	**43.95**	**307**	P	**P**	**09 24 52.0**	**+0.8**
	comp=Z,0.5nm,0.4s,mb3.6,baz=77,slow=6.2,SNR=3.0						
ZALV				LR	LR	09 42 56.1	
	comp=Z,28nm,18.6s,MS3.2,baz=72,slow=36						
ZALV	**Zalesovo Beam**	**43.95**	**307**	P	**P**	**09 24 52.0**	**+0.8**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
ZALV				MLR	MLR		
	comp=Z,29nm,18.6s,MS3.2						
MKAR	**Makanchi Array**	**48.37**	**298**	P	**P**	**09 25 25.7**	**-0.4**
	comp=Z,0.8nm,0.7s,mb3.9,baz=55,slow=7.6,SNR=6.8						
MKAR				LR	LR	09 47 09.6	
	comp=Z,18nm,18.6s,MS3.1,baz=175,slow=38						
MKAR	**Makanchi Array**	**48.37**	**298**	*e*P	**P**	**09 25 27.8**	**+1.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**48.73**	**305**	*e*P	**P**	**09 25 29.1**	**+0.3**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.6						
KURK				MLR	MLR		
	comp=Z,27nm,17.0s,MS3.3						
BVAR	**Borovoye Array**	**52.15**	**310**	P	**P**	**09 25 55.0**	**+0.4**
	comp=Z,1.3nm,0.7s,mb4.0,baz=68,slow=8.2,SNR=7.2						
BVAR	**Borovoye Array**	**52.15**	**310**	*e*P	**P**	**09 25 56.3**	**+1.7**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NVAR	**Mina Array Bea**	**61.19**	**63**	P	**P**	**09 26 60.0**	**+1.0**
	comp=Z,1.4nm,0.7s,mb4.2,baz=292,slow=7.1,SNR=14						
JOF	**Joensuu**	**62.18**	**335**	*e*P	**P**	**09 27 05.1**	**-0.2**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.3						
JOF	**Joensuu**	**62.18**	**335**	*e*p	**P**	**09 27 05.1**	**-0.2**
	comp=Z,1.8nm,0.8s,mb4.2						
FINES	**FINESS Array B**	**64.87**	**336**	P	**P**	**09 27 24.5**	**+1.5**
	comp=Z,2.4nm,0.7s,mb4.3,baz=36,slow=7.3,SNR=19						
FINES	**FINESS Array B**	**64.87**	**336**	P	**P**	**09 27 24.5**	**+1.5**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
OBN	**Obninsk**	**66.33**	**327**	*e*P	**P**	**09 27 30.2**	**-2.3**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
HFS	**Hagfors**	**69.17**	**341**	LR	LR	09 59 54.2	
	comp=Z,26nm,21.6s,MS3.4,baz=28,slow=37						
ASAR	**Alice Springs**	**72.51**	**201**	P	**P**	**09 28 10.7**	**-0.3**
	comp=Z,0.6nm,0.7s,mb3.6,baz=21,slow=5.5,SNR=9.7						
ASAR	**Alice Springs**	**72.51**	**201**	P	**P**	**09 28 10.7**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**76.28**	**62**	P	**P**	**09 28 33.3**	**+0.2**
	comp=Z,2.7nm,0.6s,mb4.3,baz=302,slow=4.1,SNR=48						
TXAR	**Lajitas Array**	**76.28**	**62**	P	**P**	**09 28 33.3**	**+0.2**
TXAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CLL	**Collm**	**77.27**	**337**	*e*P	**P**	**09 28 38.0**	**-0.3**
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
BRTR	**Keskin Array B**	**79.57**	**318**	*i* P	**P**	**09 28 50.0**	**-1.2**

*CSEM **03** 09:42:29.7±0.3, 37.73N×18.79W, h30km, ML3.8, Error ellipse: s-maj=9.6km s-min=5.3km az=174.0*
*PDA **03** 09:42:29.6, 37.87N×18.58W, h10km, ML4.6*
*IDC **03** 09:42:30.1±2.5, 37.44N×18.41W, h0km, mb3.9/4, mb1 4.0/6, mb1mx3.6/30, mbtmp3.9/6, ML4.3/2, MS3.0/3, Ms1 3.1/3, ms1mx2.6/28, Error ellipse: s-maj=53.7km s-min=37.6km az=73.0*

*LDG **03** 09:42:31.4±0.2, 37.71N×18.76W, h30km, Ml4.1/5, Error ellipse: s-maj=5.9km s-min=3.6km az=156.0*
*IGIL **03** 09:42:31.7, 37.78N×18.67W, h10km, ML3.7*
*NEIC **03** 09:42:31.0, 37.84N×18.72W, h21km, MG4.1(MDD), After MDD.*
*INMG **03** 09:42:36.9±2.8, 37.75N×18.52W, h10km, ML3.8, Error ellipse: s-maj=19.4km s-min=6.0km az=107.0*

MDD 03 09:42:31.1±1.4, 37.72N×18.45W, h0km, mbLg4.2/36, 2C, Error ellipse: s-maj=15.9km s-min=8.9km az=122.0, PRIMO, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMPS	**Porto Santo**	**4.96**	**159**	*i* P	Pn	09 43 46.5	-0.3
PMPS				*e*S	Sn	09 44 37.6	-7.3
PMPS				A		09 44 38.7	
	49nm,0.4s						
PMPS	**Porto Santo**	**4.96**	**159**	⇑P	Pn	09 43 46.5	-0.3
PMPS				S	Sn	09 44 37.6	-7.3
	24nm,0.4s						
PMPS	**Porto Santo**	**4.96**	**159**	⇑P	Pn	09 43 46.5	-0.3
PMPS				S	Sn	09 44 37.6	-7.3
	24nm,0.4s						
PMAR	**Madeira**	**5.14**	**165**	*e*P	Pn	09 43 49.1	-0.2
PMAR				*e*S	Sn	09 44 42.0	-7.2
PMAR				A		09 44 48.4	
	161nm,0.3s						
PMAR	**Madeira**	**5.14**	**165**	P	Pn	09 43 49.1	-0.2
PMAR				S	Sn	09 44 42.0	-7.2
	81nm,0.3s						
PMAR	**Madeira**	**5.14**	**165**	P	Pn	09 43 49.1	-0.2
PMAR				S	Sn	09 44 42.0	-7.2
	81nm,0.3s						
FUL	**Funchal**	**5.23**	**166**	*e*P	Pn	09 43 49.3	-1.2
FUL				*e*S	Sn	09 44 42.4	-9.1
FUL				A		09 44 49.4	
	71nm,0.2s						
FUL	**Funchal**	**5.23**	**166**	P	Pn	09 43 49.3	-1.2
FUL				S	Sn	09 44 42.4	-9.1
	36nm,0.2s						
FUL	**Funchal**	**5.23**	**166**	P	Pn	09 43 49.3	-1.2
FUL				S	Sn	09 44 42.4	-9.1
	36nm,0.2s						
PSET	**Sete Cidades**	**5.76**	**273**	*e*P	Sn	09 44 48.0	-17
PMAFR	**Mafra**	**7.31**	**77**	*e*P	Pn	09 44 17.7	-1.4
PMAFR				*e*S	Sn	09 45 37.6	-5.2
PMAFR				A		09 45 40.9	
	176nm,0.2s						
PMAFR	**Mafra**	**7.31**	**77**	P	Pn	09 44 19.7	+0.6
	0.1nm,0.2s,SNR=7.9						
PMAFR				S	Sn	09 45 37.6	-5.2
	238nm,0.2s,SNR=39						
PMAFR	**Mafra**	**7.31**	**77**	P	Pn	09 44 19.7	+0.6
	0.1nm,0.2s,SNR=7.9						
PMAFR				S	Sn	09 45 37.6	-5.2
	238nm,0.2s,SNR=39						
PMAFR	**Mafra**	**7.31**	**77**	*e*P	Pn	09 44 17.7	-1.4
PMAFR	**Mafra**	**7.31**	**77**	Pn	Pn	09 44 19.7	+0.6
	0.1nm,0.2s,SNR=7.9						
LIS	**Lisbon**	**7.39**	**79**	*e*S	Sn	09 45 36.4	-8.4
LIS				*e*S	Sn	09 45 36.4	-8.3
LIS				AML	AML	09 45 36.8	
	comp=N,73nm,0.4s						
PFVI	**Vila Bisbo**	**7.68**	**91**	*e*P	Pn	09 44 22.9	-1.3
PFVI				*e*S	Sn	09 45 43.8	-8.0
PFVI				A		09 45 50.7	
	comp=N,18nm,0.5s						
PFVI	**Vila Bisbo**	**7.68**	**91**	Pn	Pn	09 44 22.4	-1.8
PFVI				Sn	Sn	09 45 43.7	-8.1
PFVI	**Vila Bisbo**	**7.68**	**91**	P	Pn	09 44 22.4	-1.8
	comp=N,3.1nm,0.2s,SNR=7.6						
PFVI				S	Sn	09 45 43.7	-8.1
	comp=N,31nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**7.68**	**91**	P	Pn	09 44 22.4	-1.8
	comp=N,3.1nm,0.2s,SNR=7.6						
PFVI				S	Sn	09 45 43.7	-8.1
	comp=N,31nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**7.68**	**91**	Pn	Pn	09 44 22.4	-1.8
	comp=N,3.1nm,0.2s,SNR=7.6						
PFVI	**Vila Bisbo**	**7.68**	**91**	*e*P	Pn	09 44 22.9	-1.3
PFVI				*e*S	Sn	09 45 43.8	-8.0
	comp=N,18nm,0.5s						
PTEO	**Sao Teotonio**	**7.72**	**88**	*e*P	Pn	09 44 23.3	-1.4
PTEO				*e*S	Sn	09 45 43.3	-10
PTEO				A		09 45 50.8	
	comp=N,81nm,0.5s						
PTEO	**Sao Teotonio**	**7.72**	**88**	P	Pn	09 44 23.3	-1.4
PTEO				S	Sn	09 45 43.3	-10
	comp=N,40nm,0.5s						
PTEO	**Sao Teotonio**	**7.72**	**88**	P	Pn	09 44 23.3	-1.4
PTEO				S	Sn	09 45 43.3	-10
	comp=N,40nm,0.5s						
PTEO	**Sao Teotonio**	**7.72**	**88**	*e*P	Pn	09 44 23.3	-1.4
PTEO				*e*S	Sn	09 45 43.3	-10
	comp=N,81nm,0.5s						
MORF	**Marmelete**	**7.80**	**90**	*e*P	Pn	09 44 24.1	-1.7
MORF				*e*S	Sn	09 45 46.2	-8.6
MORF				A		09 45 55.6	
	comp=N,33nm,0.2s						
MORF	**Marmelete**	**7.80**	**90**	P	Pn	09 44 24.1	-1.7
MORF				S	Sn	09 45 46.2	-8.6
	comp=N,33nm,0.2s						
MORF	**Marmelete**	**7.80**	**90**	P	Pn	09 44 24.1	-1.7
MORF				S	Sn	09 45 46.2	-8.6
	comp=N,33nm,0.2s						
MORF	**Marmelete**	**7.80**	**90**	*e*P	Pn	09 44 24.1	-1.7
MORF				*e*S	Sn	09 45 46.2	-8.6
	comp=N,33nm,0.2s						
ALMR	**Almeirim**	**7.88**	**76**	*e*P	Pn	09 44 25.3	-1.6
ALMR				AML	AML	09 45 47.0	
	comp=E,43nm,0.7s						
ALMR				*e*S	Sn	09 45 48.5	-8.3
ALMR				*e*S	Sn	09 45 48.6	-8.2
MOE	**Montemor**	**8.00**	**81**	*e*S	Sn	09 45 53.5	-6.3
MOE	**Montemor**	**8.00**	**81**	S	Sn	09 45 53.5	-6.3
MOE	**Montemor**	**8.00**	**81**	S	Sn	09 45 53.5	-6.3
MOE	**Montemor**	**8.00**	**81**	*e*S	Sn	09 45 53.5	-6.3
PTOM	**Tomar**	**8.08**	**73**	*e*P	Pn	09 44 28.7	-1.0
PTOM				*e*S	Sn	09 45 55.0	-6.7
PTOM				A		09 46 01.6	
	comp=E,61nm,0.3s						
PTOM	**Tomar**	**8.08**	**73**	P	Pn	09 44 28.7	-1.0
PTOM				S	Sn	09 45 55.0	-6.7
	comp=E,31nm,0.3s						
PTOM	**Tomar**	**8.08**	**73**	P	Pn	09 44 28.7	-1.0
PTOM				S	Sn	09 45 55.0	-6.7
	comp=E,31nm,0.3s						
PTOM	**Tomar**	**8.08**	**73**	*e*P	Pn	09 44 28.7	-1.0
MESJ	**Messejana**	**8.10**	**86**	*e*P	Pn	09 44 28.5	-1.5
MESJ				*e*S	Sn	09 45 53.1	-9.2
MESJ				*e*S	Sn	09 45 53.2	-9.0
EVOP	**Sao Brissos**	**8.18**	**81**	*e*Pn	Pn	09 44 28.6	-2.4
EVOP				*e*Sn	Sn	09 45 55.5	-8.7
	comp=E,49nm,0.3s						
PCVE	**Castro Verde**	**8.26**	**87**	*e*P	Pn	09 44 31.5	-0.6
PCVE				*e*S	Sn	09 45 57.6	-8.4
PCVE				A		09 46 07.6	
	comp=E,25nm,0.5s						
PCVE	**Castro Verde**	**8.26**	**87**	P	Pn	09 44 31.5	-0.6
PCVE				S	Sn	09 45 57.6	-8.4
	comp=E,25nm,0.5s						
PCVE	**Castro Verde**	**8.26**	**87**	P	Pn	09 44 31.5	-0.6
PCVE				S	Sn	09 45 57.6	-8.4
	comp=E,25nm,0.5s						
PCVE	**Castro Verde**	**8.26**	**87**	*e*P	Pn	09 44 31.5	-0.6
PCVE				*e*S	Sn	09 45 57.6	-8.4
	comp=E,25nm,0.5s						
EVO	**Evora**	**8.27**	**81**	*e*Pn	Pn	09 44 28.6	-3.6
EVO				*e*Sn	Sn	09 45 55.5	-11
	comp=E,98nm,0.3s						
EVO	**Evora**	**8.27**	**81**	*e*P	Pn	09 44 32.7	+0.5
EVO				*e*S	Sn	09 46 00.2	-6.1
EVO				A		09 46 04.3	
	comp=E,40nm,0.6s						
EVO	**Evora**	**8.27**	**81**	P	Pn	09 44 32.7	+0.5
EVO				S	Sn	09 46 00.2	-6.1
	comp=E,40nm,0.6s						
EVO	**Evora**	**8.27**	**81**	P	Pn	09 44 32.7	+0.5
EVO				S	Sn	09 46 00.2	-6.1
	comp=E,40nm,0.6s						
EVO	**Evora**	**8.27**	**81**	*e*P	Pn	09 44 32.7	+0.5
PBDV	**Barranco-do-Ve**	**8.38**	**90**	*e*P	Pn	09 44 32.3	-1.4
PBDV				*e*S	Sn	09 46 00.4	-8.6
PBDV				A		09 46 09.3	
	comp=E,26nm,0.4s						
PBDV	**Barranco-do-Ve**	**8.38**	**90**	P	Pn	09 44 32.3	-1.4
PBDV				S	Sn	09 46 00.4	-8.6
	comp=E,26nm,0.4s						
PBDV	**Barranco-do-Ve**	**8.38**	**90**	*e*P	Pn	09 44 32.3	-1.4
PBDV				*e*S	Sn	09 46 00.4	-8.6
	comp=E,26nm,0.4s						
PBEJ	**Beja**	**8.38**	**85**	*e*P	Pn	09 44 33.8	+0.1
PBEJ				*e*S	Sn	09 46 01.3	-7.7
PBEJ				A		09 46 04.3	
	comp=E,32nm,0.5s						
PBEJ	**Beja**	**8.38**	**85**	P	Pn	09 44 33.8	+0.1
PBEJ				S	Sn	09 46 01.3	-7.7
	comp=E,16nm,0.5s						
PBEJ	**Beja**	**8.38**	**85**	P	Pn	09 44 33.8	+0.1
PBEJ				S	Sn	09 46 01.3	-7.7
	comp=E,16nm,0.5s						
PBEJ	**Beja**	**8.38**	**85**	*e*P	Pn	09 44 33.8	+0.1
PBEJ				*e*S	Sn	09 46 01.3	-7.7
	comp=E,32nm,0.5s						
PVAQ	**Vaqueiros**	**8.53**	**89**	*e*P	Pn	09 44 34.7	-1.1
PVAQ				*e*S	Sn	09 46 05.0	-7.8
PVAQ				A		09 46 13.3	
	comp=E,35nm,0.4s						
PVAQ	**Vaqueiros**	**8.53**	**89**	P	Pn	09 44 34.7	-1.1
PVAQ				S	Sn	09 46 05.0	-7.8
	comp=E,35nm,0.4s						
PVAQ	**Vaqueiros**	**8.53**	**89**	P	Pn	09 44 34.7	-1.1
PVAQ				S	Sn	09 46 05.0	-7.8
	comp=E,35nm,0.4s						
PVAQ	**Vaqueiros**	**8.53**	**89**	*e*P	Pn	09 44 34.7	-1.1
PVAQ				*e*S	Sn	09 46 05.0	-7.8
	comp=E,35nm,0.4s						
PESTR	**Estremoz**	**8.62**	**79**	*e*P	Pn	09 44 36.7	-0.3
PESTR				*e*S	Sn	09 46 07.1	-7.8
PESTR				A		09 46 10.9	
	comp=E,38nm,0.4s						
PESTR	**Estremoz**	**8.62**	**79**	P	Pn	09 44 36.7	-0.3
PESTR				S	Sn	09 46 07.1	-7.8
	comp=E,38nm,0.4s						
PESTR	**Estremoz**	**8.62**	**79**	P	Pn	09 44 36.7	-0.3
PESTR				S	Sn	09 46 07.1	-7.8
	comp=E,38nm,0.4s						
PESTR	**Estremoz**	**8.62**	**79**	*e*P	Pn	09 44 36.7	-0.3
PESTR				*e*S	Sn	09 46 07.1	-7.8
	comp=E,38nm,0.4s						
EZAM	**Zamans**	**8.70**	**56**	Pn	Pn	09 44 36.1	-2.1
EZAM				Sn	Sn	09 46 06.9	-10
EZAM	**Zamans**	**8.70**	**56**	P	Pn	09 44 36.1	-2.1
	comp=E,5.6nm,0.2s,SNR=7.9						
EZAM				S	Sn	09 46 06.9	-10
	comp=E,22nm,0.3s,SNR=7.9						
EZAM	**Zamans**	**8.70**	**56**	P	Pn	09 44 36.1	-2.1
	comp=E,5.6nm,0.2s,SNR=7.9						
EZAM				S	Sn	09 46 06.9	-10
	comp=E,22nm,0.3s,SNR=7.9						
EZAM	**Zamans**	**8.70**	**56**	Pn	Pn	09 44 36.1	-2.1
	comp=E,5.6nm,0.2s,SNR=7.9						
EZAM				Sn	Sn	09 46 06.9	-10
	comp=E,22nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**8.70**	**88**	Pn	Pn	09 44 37.2	-1.1
EGRO				Sn	Sn	09 46 09.8	-7.2
EGRO	**El Granado**	**8.70**	**88**	P	Pn	09 44 37.2	-1.1
	comp=E,0.8nm,0.2s,SNR=7.9						
EGRO				S	Sn	09 46 09.8	-7.2
	comp=E,42nm,0.3s,SNR=4.5						
EGRO	**El Granado**	**8.70**	**88**	P	Pn	09 44 37.2	-1.1
	comp=E,0.8nm,0.2s,SNR=7.9						
EGRO				S	Sn	09 46 09.8	-7.2
	comp=E,42nm,0.3s,SNR=4.5						
EGRO	**El Granado**	**8.70**	**88**	Pn	Pn	09 44 37.2	-1.0
	comp=E,0.8nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	09 46 09.8	-7.2
	comp=E,42nm,0.3s,SNR=4.5						
PVIS	**Viseu**	**8.72**	**67**	*e*P	Pn	09 44 37.4	-1.1
PVIS				*e*S	Sn	09 46 08.9	-8.6
PVIS				A		09 46 21.9	
	comp=E,12nm,0.3s						
PVIS	**Viseu**	**8.72**	**67**	P	Pn	09 44 37.4	-1.1
PVIS				S	Sn	09 46 08.9	-8.6
	comp=E,6.2nm,0.3s						
PVIS	**Viseu**	**8.72**	**67**	P	Pn	09 44 37.4	-1.1
PVIS				S	Sn	09 46 08.9	-8.6
	comp=E,6.2nm,0.3s						
PVIS	**Viseu**	**8.72**	**67**	*e*P	Pn	09 44 37.4	-1.1
PVIS				*e*S	Sn	09 46 08.9	-8.6
	comp=E,12nm,0.3s						
PCBR	**Castelo Branco**	**8.83**	**73**	*e*P	Pn	09 44 38.5	-1.4
PCBR				*e*S	Sn	09 46 11.6	-8.5
PCBR				A		09 46 19.7	
	comp=E,23nm,0.7s						
PCBR	**Castelo Branco**	**8.83**	**73**	P	Pn	09 44 38.5	-1.4
PCBR				S	Sn	09 46 11.6	-8.5
	comp=E,12nm,0.7s						
PCBR	**Castelo Branco**	**8.83**	**73**	P	Pn	09 44 38.5	-1.4
PCBR				S	Sn	09 46 11.6	-8.5
	comp=E,12nm,0.7s						
PCBR	**Castelo Branco**	**8.83**	**73**	*e*P	Pn	09 44 38.5	-1.4
PCBR				*e*S	Sn	09 46 11.6	-8.5
	comp=E,23nm,0.7s						
PMRV	**Marv??o**	**8.83**	**75**	*e*P	Pn	09 44 39.1	-0.8
PMRV				*e*S	Sn	09 46 12.8	-7.3
PMRV				A		09 46 16.6	
	comp=E,32nm,0.6s						
PMRV	**Marv??o**	**8.83**	**75**	P	Pn	09 44 39.1	-0.8
PMRV				S	Sn	09 46 12.8	-7.3
	comp=E,32nm,0.6s						
PMRV	**Marv??o**	**8.83**	**75**	P	Pn	09 44 39.1	-0.8
PMRV				S	Sn	09 46 12.8	-7.3
	comp=E,32nm,0.6s						
PMRV	**Marv??o**	**8.83**	**75**	*e*P	Pn	09 44 39.1	-0.8
PMRV				*e*S	Sn	09 46 12.8	-7.3
	comp=E,32nm,0.6s						
MTE	**Manteigas**	**8.90**	**69**	*e*S	Sn	09 46 14.0	-7.8
MTE				A		09 46 20.2	
	comp=E,31nm,0.4s						
MTE	**Manteigas**	**8.90**	**69**	S	Sn	09 46 14.0	-7.8
	comp=E

PVRL	**Vila Real**	**9.03**	**63**	*e*P	Pn	09 44 41.8	-0.8
PVRL				*e*S	Sn	09 46 14.8	-10
PVRL				A		09 46 22.7	
	comp=E,20nm,0.6s						
PVRL	**Vila Real**	**9.03**	**63**	P	Pn	09 44 41.8	-0.8
PVRL				S	Sn	09 46 14.8	-10
	comp=E,9.9nm,0.6s						
PVRL	**Vila Real**	**9.03**	**63**	P	Pn	09 44 41.8	-0.8
PVRL				S	Sn	09 46 14.8	-10
	comp=E,9.9nm,0.6s						
PVRL	**Vila Real**	**9.03**	**63**	*e*P	Pn	09 44 41.8	-0.8
PVRL				*e*S	Sn	09 46 14.8	-10
	comp=E,20nm,0.6s						
PBAR	**Barrancos**	**9.03**	**84**	*e*P	Pn	09 44 42.2	-0.5
PBAR				*e*S	Sn	09 46 16.4	-8.6
PBAR				A		09 46 21.5	
	comp=E,31nm,0.4s						
PBAR	**Barrancos**	**9.03**	**84**	P	Pn	09 44 42.2	-0.5
PBAR				S	Sn	09 46 16.4	-8.6
	comp=E,31nm,0.4s						
PBAR	**Barrancos**	**9.03**	**84**	P	Pn	09 44 42.2	-0.5
PBAR				S	Sn	09 46 16.4	-8.6
	comp=E,31nm,0.4s						
PBAR	**Barrancos**	**9.03**	**84**	*e*P	Pn	09 44 42.2	-0.5
PBAR				*e*S	Sn	09 46 16.4	-8.6
	comp=E,31nm,0.4s						
EBAD	**Badajoz**	**9.06**	**80**	Pn	Pn	09 44 42.9	-0.2
EBAD				Sn	Sn	09 46 18.3	-7.5
EBAD	**Badajoz**	**9.06**	**80**	P	Pn	09 44 42.8	-0.3
	comp=E,1.0nm,0.1s,SNR=6.5						
EBAD				S	Sn	09 46 18.3	-7.5
	comp=E,20nm,0.0s,SNR=4.6						
EBAD	**Badajoz**	**9.06**	**80**	P	Pn	09 44 42.8	-0.3
	comp=E,1.0nm,0.1s,SNR=6.5						
EBAD				S	Sn	09 46 18.3	-7.5
	comp=E,20nm,0.0s,SNR=4.6						
EBAD	**Badajoz**	**9.06**	**80**	Pn	Pn	09 44 42.8	-0.3
	comp=E,1.0nm,0.1s,SNR=6.5						
EBAD				Sn	Sn	09 46 18.3	-7.5
	comp=E,20nm,0.0s,SNR=4.6						
STS	**Santiago**	**9.15**	**53**	Pn	Pn	09 44 42.8	-1.6
STS				Sn	Sn	09 46 19.2	-8.9
STS	**Santiago**	**9.15**	**53**	P	Pn	09 44 42.8	-1.6
	comp=E,8.4nm,0.2s,SNR=12						
STS				S	Sn	09 46 19.2	-8.9
	comp=E,13nm,0.2s,SNR=7.9						
STS	**Santiago**	**9.15**	**53**	P	Pn	09 44 42.8	-1.6
	comp=E,8.4nm,0.2s,SNR=12						
STS				S	Sn	09 46 19.2	-8.9
	comp=E,13nm,0.2s,SNR=7.9						
STS	**Santiago**	**9.15**	**53**	Pn	Pn	09 44 42.8	-1.6
	comp=E,8.4nm,0.2s,SNR=12						
STS				Sn	Sn	09 46 19.2	-8.9
	comp=E,13nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**9.33**	**86**	Pn	Pn	09 44 46.2	-0.7
EMIN				Sn	Sn	09 46 23.5	-8.9
EMIN	**Mina Concepcio**	**9.33**	**86**	P	Pn	09 44 46.2	-0.7
	comp=E,1.2nm,0.2s,SNR=5.6						
EMIN				S	Sn	09 46 23.5	-8.9
	comp=E,9.5nm,0.2s,SNR=8.6						
EMIN	**Mina Concepcio**	**9.33**	**86**	P	Pn	09 44 46.2	-0.7
	comp=E,1.2nm,0.2s,SNR=5.6						
EMIN				S	Sn	09 46 23.5	-8.9
	comp=E,9.5nm,0.2s,SNR=8.6						
EMIN	**Mina Concepcio**	**9.33**	**86**	Pn	Pn	09 44 46.2	-0.6
	comp=E,1.2nm,0.2s,SNR=5.6						
EMIN				Sn	Sn	09 46 23.5	-8.9
	comp=E,9.5nm,0.2s,SNR=8.6						
MVO	**Moncorvo**	**9.48**	**65**	*e*P	Pn	09 44 48.0	-0.9
MVO				*e*S	Sn	09 46 26.9	-9.2
MVO				A		09 46 31.9	
	comp=E,28nm,0.4s						
MVO	**Moncorvo**	**9.48**	**65**	Pn	Pn	09 44 47.3	-1.5
MVO				Sn	Sn	09 46 26.6	-10
MVO	**Moncorvo**	**9.48**	**65**	P	Pn	09 44 47.3	-1.5
	comp=E,2.3nm,0.2s,SNR=12						
MVO				S	Sn	09 46 26.6	-10
	comp=E,13nm,0.2s,SNR=11						
MVO	**Moncorvo**	**9.48**	**65**	P	Pn	09 44 47.3	-1.5
	comp=E,2.3nm,0.2s,SNR=12						
MVO				S	Sn	09 46 26.6	-10
	comp=E,13nm,0.2s,SNR=11						
MVO	**Moncorvo**	**9.48**	**65**	Pn	Pn	09 44 47.3	-1.6
	comp=E,2.3nm,0.2s,SNR=12						
MVO	**Moncorvo**	**9.48**	**65**	*e*P	Pn	09 44 48.0	-0.9
MVO				Sn	Sn	09 46 26.6	-10
	comp=E,13nm,0.2s,SNR=11						
MVO				*e*S	Sn	09 46 26.9	-9.2
	comp=E,28nm,0.4s						
ERUA	**La Rua**	**9.84**	**58**	Pn	Pn	09 44 50.5	-3.4
ERUA				Sn	Sn	09 46 37.1	-7.9
ERUA	**La Rua**	**9.84**	**58**	P	Pn	09 44 50.5	-3.4
	comp=E,1.4nm,0.1s,SNR=7.9						
ERUA				S	Sn	09 46 37.1	-7.9
	comp=E,4.3nm,0.2s,SNR=7.9						
ERUA	**La Rua**	**9.84**	**58**	P	Pn	09 44 50.5	-3.4
	comp=E,1.4nm,0.1s,SNR=7.9						
ERUA				S	Sn	09 46 37.1	-7.9
	comp=E,4.3nm,0.2s,SNR=7.9						
ERUA	**La Rua**	**9.84**	**58**	Pn	Pn	09 44 50.5	-3.3
	comp=E,1.4nm,0.1s,SNR=7.9						
ERUA				Sn	Sn	09 46 37.1	-7.9
	comp=E,4.3nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**9.89**	**62**	*e*S	Sn	09 46 36.1	-10
PBRG				A		09 46 46.1	
	comp=E,9.9nm,0.3s						
PBRG	**Braganca**	**9.89**	**62**	S	Sn	09 46 36.1	-10
	comp=E,4.9nm,0.3s						
PBRG	**Braganca**	**9.89**	**62**	S	Sn	09 46 36.1	-10
	comp=E,4.9nm,0.3s						
PBRG	**Braganca**	**9.89**	**62**	*e*S	Sn	09 46 36.1	-10
	comp=E,9.9nm,0.3s						
EPLA	**Plasencia**	**9.92**	**73**	Pn	Pn	09 44 52.9	-2.1
EPLA				Sn	Sn	09 46 38.0	-9.1
EPLA	**Plasencia**	**9.92**	**73**	P	Pn	09 44 52.9	-2.1
	comp=E,0.3nm,0.1s,SNR=7.9						
EPLA				S	Sn	09 46 37.9	-9.1
	comp=E,15nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**9.92**	**73**	P	Pn	09 44 52.9	-2.1
	comp=E,0.3nm,0.1s,SNR=7.9						
EPLA				S	Sn	09 46 37.9	-9.1
	comp=E,15nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**9.92**	**73**	Pn	Pn	09 44 52.9	-2.1
	comp=E,0.3nm,0.1s,SNR=7.9						
EPLA				Sn	Sn	09 46 37.9	-9.1
	comp=E,15nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**9.95**	**61**	Pn	Pn	09 44 53.5	-1.7
	comp=E,1.3nm,0.2s						
ECAL				Sn	Sn	09 46 38.3	-9.3
ECAL	**Calabor**	**9.95**	**61**	P	Pn	09 44 53.5	-1.7
	comp=E,1.3nm,0.2s,SNR=8.0						
ECAL				S	Sn	09 46 38.3	-9.3
	comp=E,20nm,0.2s,SNR=7.8						
ECAL	**Calabor**	**9.95**	**61**	P	Pn	09 44 53.5	-1.7
	comp=E,1.3nm,0.2s,SNR=8.0						
ECAL				S	Sn	09 46 38.3	-9.3
	comp=E,20nm,0.2s,SNR=7.8						
ECAL	**Calabor**	**9.95**	**61**	Pn	Pn	09 44 53.5	-1.7
	comp=E,1.3nm,0.2s,SNR=8.0						
ECAL				Sn	Sn	09 46 38.3	-9.2
	comp=E,20nm,0.2s,SNR=7.8						
ESPR	**Espera**	**10.07**	**91**	Pn	Pn	09 44 56.5	-0.4
	comp=E,1.2nm,0.1s						
ESPR				Sn	Sn	09 46 43.5	-7.2
ESPR	**Espera**	**10.07**	**91**	P	Pn	09 44 56.5	-0.4
	comp=E,1.2nm,0.1s,SNR=5.4						
ESPR				S	Sn	09 46 43.5	-7.2
	comp=E,25nm,0.3s,SNR=5.2						
ESPR	**Espera**	**10.07**	**91**	P	Pn	09 44 56.5	-0.4
	comp=E,1.2nm,0.1s,SNR=5.4						
ESPR				S	Sn	09 46 43.5	-7.2
	comp=E,25nm,0.3s,SNR=5.2						
ESPR	**Espera**	**10.07**	**91**	Pn	Pn	09 44 56.5	-0.5
	comp=E,1.2nm,0.1s,SNR=5.4						
ESPR				Sn	Sn	09 46 43.5	-7.1
	comp=E,25nm,0.3s,SNR=5.2						
EPON	**Pontenova**	**10.26**	**53**	Pn	Pn	09 44 57.1	-2.4
	comp=E,1.8nm,0.2s						
EPON				Sn	Sn	09 46 43.6	-12
EPON	**Pontenova**	**10.26**	**53**	P	Pn	09 44 57.1	-2.4
	comp=E,1.8nm,0.2s,SNR=7.9						
EPON				S	Sn	09 46 43.6	-12
	comp=E,11nm,0.3s,SNR=7.9						
EPON	**Pontenova**	**10.26**	**53**	P	Pn	09 44 57.1	-2.4
	comp=E,1.8nm,0.2s,SNR=7.9						
EPON				S	Sn	09 46 43.6	-12
	comp=E,11nm,0.3s,SNR=7.9						
EPON	**Pontenova**	**10.26**	**53**	Pn	Pn	09 44 57.1	-2.5
	comp=E,1.8nm,0.2s,SNR=7.9						
EPON				Sn	Sn	09 46 43.6	-12
	comp=E,11nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**10.31**	**84**	Pn	Pn	09 44 59.9	-0.3
	comp=E,0.5nm,0.1s						
ECAB				Sn	Sn	09 46 47.5	-8.9
ECAB	**El Cabril**	**10.31**	**84**	P	Pn	09 44 59.9	-0.3
	comp=E,0.5nm,0.1s,SNR=5.1						
ECAB				S	Sn	09 46 47.5	-8.9
	comp=E,28nm,0.4s,SNR=7.4						
ECAB	**El Cabril**	**10.31**	**84**	P	Pn	09 44 59.9	-0.3
	comp=E,0.5nm,0.1s,SNR=5.1						
ECAB				S	Sn	09 46 47.5	-8.9
	comp=E,28nm,0.4s,SNR=7.4						
ECAB	**El Cabril**	**10.31**	**84**	Pn	Pn	09 44 59.9	-0.3
	comp=E,0.5nm,0.1s,SNR=5.1						
ECAB				Sn	Sn	09 46 47.5	-8.9
	comp=E,28nm,0.4s,SNR=7.4						
EADA	**Adamuz**	**10.97**	**83**	Pn	Pn	09 45 07.4	-1.9
	comp=E,0.4nm,0.2s						
EADA				Sn	Sn	09 47 03.1	-10
EADA	**Adamuz**	**10.97**	**83**	P	Pn	09 45 07.4	-1.9
	comp=E,0.4nm,0.2s,SNR=7.9						
EADA				S	Sn	09 47 03.1	-10
	comp=E,12nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**10.97**	**83**	P	Pn	09 45 07.4	-1.9
	comp=E,0.4nm,0.2s,SNR=7.9						
EADA				S	Sn	09 47 03.1	-10
	comp=E,12nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**10.97**	**83**	Pn	Pn	09 45 07.4	-1.8
	comp=E,0.4nm,0.2s,SNR=7.9						
EADA				Sn	Sn	09 47 03.1	-9.5
	comp=E,12nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**10.98**	**92**	Pn	Pn	09 45 14.2	+4.7
	comp=E,0.3nm,0.2s						
EMIJ				Sn	Sn	09 47 06.6	-6.3
EMIJ	**Mijas**	**10.98**	**92**	P	Pn	09 45 11.8	+2.4
	comp=E,0.3nm,0.2s,SNR=4.0						
EMIJ				S	Sn	09 47 06.6	-6.3
	comp=E,6.4nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**10.98**	**92**	P	Pn	09 45 11.8	+2.4
	comp=E,0.3nm,0.2s,SNR=4.0						
EMIJ				S	Sn	09 47 06.6	-6.3
	comp=E,6.4nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**10.98**	**92**	Sn	Sn	09 47 06.6	-6.3
	comp=E,6.4nm,0.4s,SNR=7.9						
PAB	**San Pablo**	**11.18**	**76**	*e*Pn	Pn	09 45 11.0	-1.2
PAB				*e*Sn	Sn	09 47 11.2	-6.7
PAB	**San Pablo**	**11.18**	**76**	*e*Pn	Pn	09 45 11.0	-1.2
PAB				*e*Sn	Sn	09 47 11.2	-6.7
GUD	**Guadarrama**	**11.47**	**71**	Pn	Pn	09 45 15.5	-0.7
	comp=E,0.5nm,0.2s						
GUD				Sn	Sn	09 47 16.6	-8.5
GUD	**Guadarrama**	**11.47**	**71**	P	Pn	09 45 15.5	-0.7
	comp=E,0.5nm,0.2s,SNR=7.9						
GUD				S	Sn	09 47 16.6	-8.5
	comp=E,4.1nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**11.47**	**71**	P	Pn	09 45 15.5	-0.7
	comp=E,0.5nm,0.2s,SNR=7.9						
GUD				S	Sn	09 47 16.6	-8.5
	comp=E,4.1nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**11.47**	**71**	Pn	Pn	09 45 15.5	-0.7
	comp=E,0.5nm,0.2s,SNR=7.9						
GUD				Sn	Sn	09 47 16.5	-8.5
	comp=E,4.1nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**11.49**	**76**	Pn	Pn	09 45 14.8	-1.6
	comp=E,1.1nm,0.3s,baz=264,slow=13,SNR=14						
ESDC				Sn	Sn	09 47 16.8	-8.6
	comp=E,4.4nm,0.3s,baz=262,slow=23,SNR=14						
ESDC	**Sonseca Array**	**11.49**	**76**	Pn	Pn	09 45 14.8	-1.6
ESDC				Sn	Sn	09 47 16.8	-8.6
ESLA	**Sonseca Array**	**11.49**	**76**	*e*Pn	Pn	09 45 14.3	-2.1
ESLA				*e*Sn	Sn	09 47 17.6	-7.8
ESLA	**Sonseca Array**	**11.49**	**76**	*e*Pn	Pn	09 45 14.3	-2.1
ESLA				*e*Sn	Sn	09 47 17.6	-7.8
EARI	**Arriondas**	**11.51**	**57**	Pn	Pn	09 45 17.0	+0.3
	comp=E,1.2nm,0.2s						
EARI				Sn	Sn	09 47 16.4	-10
EARI	**Arriondas**	**11.51**	**57**	P	Pn	09 45 17.0	+0.3
	comp=E,1.2nm,0.2s,SNR=4.0						
EARI				S	Sn	09 47 16.4	-10
	comp=E,1.7nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**11.51**	**57**	P	Pn	09 45 17.0	+0.3
	comp=E,1.2nm,0.2s,SNR=4.0						
EARI				S	Sn	09 47 16.4	-10
	comp=E,1.7nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**11.51**	**57**	Pn	Pn	09 45 17.0	+0.3
	comp=E,1.2nm,0.2s,SNR=4.0						
EARI				Sn	Sn	09 47 16.4	-10
	comp=E,1.7nm,0.3s,SNR=7.9						
EBAN	**Banos Encina**	**11.59**	**83**	S	Sn	09 47 17.7	-10
	comp=E,26nm,0.5s,SNR=14						
EBAN	**Banos Encina**	**11.59**	**83**	S	Sn	09 47 17.7	-10
	comp=E,26nm,0.5s,SNR=14						
EBAN	**Banos Encina**	**11.59**	**83**	Sn	Sn	09 47 17.7	-10
	comp=E,26nm,0.5s,SNR=14						
EGUA	**Guajares**	**11.89**	**90**	S	Sn	09 47 27.5	-7.8
	comp=E,8.4nm,0.4s,SNR=7.9						
EGUA	**Guajares**	**11.89**	**90**	S	Sn	09 47 27.5	-7.8
	comp=E,8.4nm,0.4s,SNR=7.9						
EGUA	**Guajares**	**11.89**	**90**	Sn	Sn	09 47 27.5	-7.8
	comp=E,8.4nm,0.4s,SNR=7.9						
EQUE	**Quentar**	**11.94**	**88**	P	Pn	09 45 23.4	+0.8
	comp=E,0.4nm,0.3s,SNR=7.9						
EQUE				S	Sn	09 47 28.4	-8.1
	comp=E,11nm,0.4s,SNR=7.9						
EQUE	**Quentar**	**11.94**	**88**	P	Pn	09 45 23.4	+0.8
	comp=E,0.4nm,0.3s,SNR=7.9						
EQUE				S	Sn	09 47 28.4	-8.1
	comp=E,11nm,0.4s,SNR=7.9						
EQUE	**Quentar**	**11.94**	**88**	Pn	Pn	09 45 23.4	+0.8
	comp=E,0.4nm,0.3s,SNR=7.9						
EQUE				Sn	Sn	09 47 28.4	-8.1
	comp=E,11nm,0.4s,SNR=7.9						
EQES	**Quesada**	**12.17**	**85**	S	Sn	09 47 32.9	-9.3
	comp=E,4.5nm,0.4s,SNR=7.9						
EQES	**Quesada**	**12.17**	**85**	S	Sn	09 47 32.9	-9.3
	comp=E,4.5nm,0.4s,SNR=7.9						
EQES	**Quesada**	**12.17**	**85**	Sn	Sn	09 47 32.9	-9.3
	comp=E,4.5nm,0.4s,SNR=7.9						
MDT	**Midelt**	**12.31**	**109**	Pn	Pn	09 45 26.7	-1.0
	comp=E,0.4nm,0.3s,baz=296,slow=11,SNR=11						
MDT				Sn	Sn	09 47 34.0	-12
	comp=E,1.0nm,0.3s,baz=11,slow=20,SNR=8.8						
MDT				LR	LR	09 49 29.7	
	comp=E,46nm,18.5s,baz=278,slow=34						
MDT	**Midelt**	**12.31**	**109**	Pn	Pn	09 45 26.7	-1.0
EBER	**Berja**	**12.42**	**89**	S	Sn	09 47 40.7	-7.5
	comp=E,20nm,0.7s,SNR=7.9						
EBER	**Berja**	**12.42**	**89**	S	Sn	09 47 40.7	-7.5
	comp=E,20nm,0.7s,SNR=7.9						
EBER	**Berja**	**12.42**	**89**	Sn	Sn	09 47 42.8	-5.4
	comp=E,20nm,0.7s,SNR=7.9						
EHUE	**Huescar**	**12.55**	**85**	S	Sn	09 47 41.8	-10
	comp=E,3.6nm,0.4s,SNR=7.9						
EHUE	**Huescar**	**12.55**	**85**	S	Sn	09 47 41.8	-10
	comp=E,3.6nm,0.4s,SNR=7.9						
EHUE	**Huescar**	**12.55**	**85**	Sn	Sn	09 47 41.8	-10
	comp=E,3.6nm,0.4s,SNR=7.9						
EVIA	**Vianos**	**12.59**	**81**	S	Sn	09 47 40.8	-11
	comp=E,7.1nm,0.4s,SNR=4.6						
EVIA	**Vianos**	**12.59**	**81**	S	Sn	09 47 40.8	-11
	comp=E,7.1nm,0.4s,SNR=4.6						
ELAN	**Lanestosa**	**12.69**	**60**	Pn	Pn	09 45 32.3	-0.4
	comp=E,0.5nm,0.2s						
ELAN				Sn	Sn	09 47 44.7	-10
ELAN	**Lanestosa**	**12.69**	**60**	P	Pn	09 45 32.3	-0.4
	comp=E,0.5nm,0.2s,SNR=7.9						
ELAN				S	Sn	09 47 44.7	-10
	comp=E,1.1nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**12.69**	**60**	Pn	Pn	09 45 32.3	-0.4
	comp=E,0.5nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	09 47 44.7	-10
	comp=E,1.1nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**12.69**	**60**	P	Pn	09 45 32.3	-0.4
	comp=E,0.5nm,0.2s,SNR=7.9						
ELAN				S	Sn	09 47 44.7	-10
	comp=E,1.1nm,0.3s,SNR=7.9						
ETOR	**Torete**	**13.08**	**71**	Pn	Pn	09 45 36.8	-1.3
	comp=E,2.2nm,0.3s						
ETOR				Sn	Sn	09 47 54.2	-10
ETOR	**Torete**	**13.08**	**71**	P	Pn	09 45 36.7	-1.3
	comp=E,2.2nm,0.3s,SNR=7.9						
ETOR				S	Sn	09 47 54.2	-10
	comp=E,9.1nm,0.4s,SNR=7.9						
ETOR	**Torete**	**13.08**	**71**	Pn	Pn	09 45 36.7	-1.4
	comp=E,2.2nm,0.3s,SNR=7.9						
ETOR	**Torete**	**13.08**	**71**	Pn	Pn	09 45 36.8	-1.3
	comp=E,2.2nm,0.3s						
ETOR				Sn	Sn	09 47 54.2	-10
	comp=E,9.1nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**13.33**	**81**	S	Sn	09 48 00.5	-10
	comp=E,1.6nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**13.33**	**81**	S	Sn	09 48 00.5	-10
	comp=E,1.6nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**13.33**	**81**	Sn	Sn	09 48 03.4	-7.1
	comp=E,1.6nm,0.2s,SNR=7.9						
SJPF	**Ste Jean**	**14.18**	**62**	*e*Pn	Pn	09 45 51.2	-1.9
SJPF				*e*Sn	Sn	09 48 20.4	-11
	comp=E,4.8nm,0.5s						
SJPF	**Ste Jean**	**14.18**	**62**	P	Pn	09 45 51.2	-1.9
SJPF				S	Sn	09 48 20.4	-11
	comp=E,2.4nm,0.5s						
SJPF	**Ste Jean**	**14.18**	**62**	P	Pn	09 45 51.2	-1.9
SJPF				S	Sn	09 48 20.4	-11
	comp=E,2.4nm,0.5s						
SJPF	**Ste Jean**	**14.18**	**62**	*e*Pn	Pn	09 45 51.2	-1.9
SJPF				*e*Sn	Sn	09 48 20.4	-11
	comp=E,2.4nm,0.5s						
EMOS	**Mosqueruela**	**14.22**	**74**	Pn	Pn	09 45 56.6	+2.9
	comp=E,0.5nm,0.2s						
EMOS				Sn	Sn	09 48 23.3	-8.8
EMOS	**Mosqueruela**	**14.22**	**74**	Sn	Sn	09 48 23.3	-8.9
	comp=E,9.2nm,0.5s,SNR=7.9						
ESAC	**San Caprasio**	**14.40**	**68**	S	Sn	09 48 26.8	-10
	comp=E,30nm,0.4s,SNR=7.9						
ESAC	**San Caprasio**	**14.40**	**68**	S	Sn	09 48 26.8	-10
	comp=E,30nm,0.4s,SNR=7.9						
ETSF	**Etsaut**	**14.59**	**64**	*e*Pn	Pn	09 45 56.7	-2.0
ETSF				*e*Sn	Sn	09 48 29.7	-11
	comp=E,4.1nm,0.5s						
ETSF	**Etsaut**	**14.59**	**64**	P	Pn	09 45 56.7	-2.0
ETSF				S	Sn	09 48 29.7	-11
	comp=E,2.0nm,0.5s						
ETSF	**Etsaut**	**14.59**	**64**	P	Pn	09 45 56.7	-2.0
ETSF				S	Sn	09 48 29.7	-11
	comp=E,2.0nm,0.5s						
ETSF	**Etsaut**	**14.59**	**64**	*e*Pn	Pn	09 45 56.7	-2.0
ETSF				*e*Sn	Sn	09 48 29.7	-11
	comp=E,2.0nm,0.5s						
ERTA	**Horta de San J**	**14.89**	**72**	Sn	Sn	09 48 41.1	-7.3
	comp=E,1.7nm,0.3s,SNR=7.9						
EBIE	**Bielsa**	**15.04**	**65**	Pn	Pn	09 46 04.8	-0.1
	comp=E,0.1nm,0.1s						
EBIE				Sn	Sn	09 48 41.0	-11
EBIE	**Bielsa**	**15.04**	**65**	P	Pn	09 46 04.8	-0.1
	comp=E,0.1nm,0.1s,SNR=7.9						
EBIE				S	Sn	09 48 41.0	-11
	comp=E,0.8nm,0.2s,SNR=7.9						
EBIE	**Bielsa**	**15.04**	**65**	P	Px	09 46 04.8	
	comp=E,0.1nm,0.1s,SNR=7.9						
EBIE				S	Sx	09 48 41.0	
	comp=E,0.8nm,0.2s,SNR=7.9						
EBIE	**Bielsa**	**15.04**	**65**	Pn	Pn	09 46 04.8	-0.1
	comp=E,0.1nm,0.1s,SNR=7.9						
EBIE				Sn	Sn	09 48 41.0	-11
	comp=E,0.8nm,0.2s,SNR=7.9						
QUIF	**Quistinic**	**15.13**	**43**	*e*Pn	Pn	09 46 02.7	-3.3
QUIF	**Quistinic**	**15.13**	**43**	P	Pn	09 46 02.7	-3.3
QUIF	**Quistinic**	**15.13**	**43**	P	Pn	09 46 02.7	-3.3
QUIF	**Quistinic**	**15.13**	**43**	*e*Pn	Pn	09 46 02.7	-3.3
EPF	**Esparros**	**15.26**	**64**	*e*Pn	Pn	09 46 04.7	-3.1
EPF				*e*Sn	Sn	09 48 46.2	-11
	comp=E,0.8nm,0.2s						
EPF	**Esparros**	**15.26**	**64**	P	Pn	09 46 04.7	-3.1
EPF				S	Sn	09 48 46.2	-11
	comp=E,0.4nm,0.2s						
EPF	**Esparros**	**15.26**	**64**	P	Px	09 46 04.7	
EPF				S	Sx	09 48 46.2	
	comp=E,0.4nm,0.2s						
EPF	**Esparros**	**15.26**	**64**	*e*Pn	Pn	09 46 04.7	-3.1
EPF				*e*Sn	Sn	09 48 46.2	-11
	comp=E,0.4nm,0.2s						
ROSF	**Rostrenen**	**15.33**	**41**	*e*Pn	Pn	09 46 05.8	-2.8
ROSF	**Rostrenen**	**15.33**	**41**	P	Pn	09 46 05.8	-2.8
ROSF	**Rostrenen**	**15.33**	**41**	P	Pn	09 46 05.8	-2.8
ROSF	**Rostrenen**	**15.33**	**41**	*e*Pn	Pn	09 46 05.8	-2.8
EPOB	**Poblet**	**15.49**	**70**	Sn	Sn	09 48 53.6	-10
	comp=E,1.2nm,0.4s,SNR=7.9						
SGMF	**Saint Gilles**	**15.66**	**43**	*e*Pn	Pn	09 46 10.1	-2.9
SGMF	**Saint Gilles**	**15.66**	**43**	P	Pn	09 46 10.1	-2.9
SGMF	**Saint Gilles**	**15.66**	**43**	P	Pn	09 46 10.1	-2.9
SGMF	**Saint Gilles**	**15.66**	**43**	*e*Pn	Pn	09 46 10.1	-2.9
MFF

WHY **Whitehorse** 2.26 35 ⇓Pn Pn 09 45 06.4 +1.0
WHY ⇓Pg Pg 09 45 08.6 -2.7
WHY ⇑Sg Sg 09 45 39.3 -1.3
DLBC Dease Lake 3.92 93 P Pn 09 45 26.7 -1.4
DLBC Dease Lake 3.92 93 Pn Pn 09 45 28.4 +0.2
7.3nm,0.3s,baz=271,slow=10,SNR=63
DLBC Lg 09 46 25.2
115nm,0.3s,baz=111,slow=12,SNR=8.0
DLBC LR LR 09 47 11.5
comp=Z,1µm,18.9s,baz=272,slow=42
DLBC Dease Lake 3.92 93 ⇑Pn Pn 09 45 27.1 -1.0
DLBC ⇓Pg Pg 09 45 37.0 -6.0
DLBC ⇓Sg Sg 09 46 26.9 -6.9
CRAG Craig 4.12 143 P Pn 09 45 27.4 -3.5
BMRM Bremner River 4.18 304 P Pn 09 45 31.8 +0.1
EYAK Cordova Ski Ar 4.53 296 P Pn 09 45 35.7 -0.8
MID Middleton Isla 4.60 281 P Pn 09 45 36.5 -1.0
BCA3 Beaver Creek A 4.74 336 P Pn 09 45 39.3 -0.1
DIV Divide 4.76 303 ePn Pn 09 45 39.7 +0.1
DIV eSg Sg 09 46 57.3 -3.3
MENT Mentasta 5.12 326 ePn Pn 09 45 47.7 +3.0
MENT ePg Pg 09 46 03.4 -2.6
DAWY Dawson 5.34 351 P Pn 09 45 48.6 +1.0
DAWY Dawson 5.34 351 ⇓Pn Pn 09 45 48.9 +1.3
DAWY ⇑Sn Sn 09 46 49.6 +0.7
DAWY ⇓Sg Sg 09 47 15.7 -3.4
NDB Naden 5.50 151 ⇑Pn Pn 09 45 47.2 -2.6
PAX Paxson 5.70 320 ePn Pn 09 45 54.1 +1.7
20nm,0.5s
RUBB Prince Rupert 6.03 135 ⇑Pn Pn 09 45 56.2 -0.8
RUBB ⇓Sn Sn 09 47 02.6 -3.4
RUBB ⇓Sg Sg 09 47 33.3 -8.0
EGAK Eagle 6.22 345 P Pn 09 46 00.8 +1.1
SEW Seward 6.23 287 P Pn 09 45 58.1 -1.8
DIB Dawson Inlet, 6.30 151 ⇓Pn Pn 09 45 57.5 -3.3
DIB ⇓Sn Sn 09 47 06.6 -6.1
DHY Denali Highway 6.43 316 P Pn 09 46 03.8 +1.3
PMR Palmer 6.43 300 ePn Pn 09 46 02.9 +0.3
23nm,0.4s
MOBC Moresby Island 6.48 149 ⇓Pn Pn 09 46 00.9 -2.4
MOBC ⇑Sn Sn 09 47 11.3 -5.9
RC01 Rabbit Creek A 6.56 295 ePn Pn 09 46 03.9 -0.4
34nm,0.5s
SLKM Skilak Lake 6.67 290 P Pn 09 46 04.8 -1.1
BNB Barry Inlet 7.05 150 ⇓Pn Pn 09 46 09.4 -1.7
MCK McKinley 7.38 317 ePn Pn 09 46 17.2 +1.5
ILAR Eielson Array 7.44 327 Pn Pn 09 46 15.8 -0.6
2.0nm,0.3s,baz=152,slow=12,SNR=133
ILAR Lg 09 48 22.4
0.8nm,0.3s,baz=124,slow=29,SNR=6.2
ILAR LR LR 09 49 31.5
comp=Z,445nm,19.2s,baz=154,slow=41
FNBB Fort Nelson 7.51 83 ⇓Pn Pn 09 46 17.4 0.0
FNBB ⇑Sg Sg 09 48 20.1 -8.6
TRF Thorofare Moun 7.73 312 ePn Pn 09 46 21.6 +1.2
2.9nm,0.9s
COLA College 7.79 325 P Pn 09 46 22.3 +1.0
RSO Redoubt South 7.91 288 ePn Pn 09 46 22.4 -0.5
KDAK Kodiak Island 8.02 269 P Pn 09 46 21.8 -2.7
KDAK Kodiak Island 8.02 269 Pn Pn 09 46 21.8 -2.6
3.2nm,0.3s,baz=80,slow=9.8,SNR=36
KDAK Sn Sn 09 47 49.4 -5.6
baz=258,slow=20,SNR=3.5
PPLA Purkeypile 8.25 306 P Pn 09 46 28.4 +0.9
BPAW Bear Paw Mtn. 8.34 315 P Pn 09 46 28.8 0.0
FSB Fort Saint Jam 8.46 115 ⇑Pn Pn 09 46 29.9 -0.4
BBB Bella Bella 8.51 137 Pn Pn 09 46 29.9 -1.3
BBB Sn Sn 09 48 05.8 -1.4
BBB Lg 09 48 50.5
BBB LR LR 09 49 34.7
BBB Bella Bella 8.51 137 Pn Pn 09 46 29.9 -1.3
0.7nm,0.3s,baz=150,slow=13,SNR=12
BBB Sn Sn 09 48 05.8 -1.4
0.7nm,0.3s,baz=8.2,slow=6.2,SNR=6.6
BBB Lg 09 48 50.5
0.8nm,0.3s,baz=235,slow=23,SNR=6.7
BBB LR LR 09 49 34.7
comp=Z,322nm,20.4s,baz=360,slow=36
OHAK Old Harbor 8.54 266 eP Pn 09 46 28.7 -2.8
CHUM Lake Minchumin 8.73 312 P Pn 09 46 34.5 +0.4
BM3 Burnt Mountain 9.20 343 P Pn 09 46 41.9 +1.4
INK Inuvik 9.68 9 ePn Pn 09 46 49.2 +2.1
INK Inuvik 9.68 9 Pn Pn 09 46 47.9 +0.9
1.1nm,0.3s,baz=177,slow=13,SNR=22
INK Sn Sn 09 48 34.0 -1.7
0.7nm,0.3s,baz=165,slow=16,SNR=2.5
INK Lg 09 49 31.6
0.4nm,0.3s,baz=228,slow=24,SNR=5.1
INK LR LR 09 50 19.3
comp=Z,144nm,20.6s,baz=210,slow=36
TT01 Tatalina 9.90 302 P Pn 09 46 49.2 -1.0
TTA Tatalina 9.91 302 eP Pn 09 46 49.1 -1.1
COLD Coldfoot 10.19 331 ePn Pn 09 46 56.2 +2.1
13nm,1.0s
CHGN Chignik 11.51 266 ePn Pn 09 47 12.3 +0.2
YKA Yellowknife Ar 11.78 62 Pn Pn 09 47 14.6 -1.3
YKA Sn Sn 09 49 20.6 -6.5
YKA Lg 09 50 34.0
YKA Yellowknife Ar 11.78 62 Pn Pn 09 47 14.5 -1.3
0.6nm,0.3s,baz=262,slow=12,SNR=26
YKA Sn Sn 09 49 20.6 -6.5
0.3nm,0.3s,baz=257,slow=22,SNR=4.1
YKA Lg 09 50 34.0
0.1nm,0.3s,baz=252,slow=26,SNR=5.5
NLWA Neilton Lookou 14.04 139 ⇑P Pn 09 47 57.3 +11
baz=14,SNR=6.4
JCW Jim Creek 14.07 132 eP Pn 09 47 56.2 +9.1
20nm,1.2s
EDM Edmonton 14.57 102 ePn Pn 09 47 53.5 -0.3
D05A Enumclaw 14.88 135 ⇑P Pn 09 47 59.2 +1.0
baz=15,SNR=6.4
B08A Colville Reser 14.98 126 ⇑P Pn 09 48 01.9 +2.4
baz=15
ETW Entiat 15.17 130 ePn Pn 09 48 04.5 +2.4
LON Longmire 15.32 135 eP Pn 09 48 10.2 +6.2
17nm,1.0s
NEW Newport 16.00 122 eP Pn 09 48 16.5 +3.6
5.8nm,1.0s
HAWA Hanford 16.48 131 eP Pn 09 48 19.5 +0.5
2.2nm,0.8s
WALA Waterton Lakes 16.89 115 eP Pn 09 48 28.6 +4.4
0.1nm,0.9s
H04A Detroit Lake 16.97 140 ⇑P Pn 09 48 27.8 +2.5
baz=17
A14A Double T Ranch 17.18 115 ⇑P Pn 09 48 26.2 -1.6
baz=17,SNR=5.4
LNOR Lincton Mounta 17.40 130 eP Pn 09 48 32.0 +1.5
A15A Johnson Ranch, 17.50 113 ⇑P Pn 09 48 30.6 -1.3
baz=17
G08A Pilot Rock 17.62 132 ⇑P Pn 09 48 33.5 +0.3
baz=18,SNR=10
D12A Red Ives Fores 17.70 122 ⇓P Pn 09 48 34.5 +0.2
baz=18
F10A Beach Ranch, E 17.75 128 ⇑P Pn 09 48 35.6 +0.7
baz=18,SNR=5.7
C14A Swan Lake 17.89 118 ⇓P Pn 09 48 35.5 -1.1
baz=18
SWMT Swartz Lake 17.96 119 eP Pn 09 48 39.8 +2.3
4.4nm,1.2s
B15A Bradely Ranch, 18.05 115 ⇑P Pn 09 48 38.8 +0.2
baz=18,SNR=6.8
D13A Huson 18.06 120 ⇓P Pn 09 48 35.8 -3.0
baz=18
E12A Beaver Dam Sad 18.10 124 ⇓P Pn 09 48 37.9 -1.3
baz=18
SLMT Seeley Lake 18.39 119 eP Pn 09 48 44.6 +1.8
C15A Salmond Ranch, 18.41 116 ⇓P Pn 09 48 42.6 -0.4
baz=18,SNR=9.6
I07A Izee 18.44 135 ⇑P Pn 09 48 42.1 -1.3
baz=18,SNR=9.4
MSO Missoula 18.50 120 eP Pn 09 48 45.9 +1.8
4.3nm,1.0s
A17A Triple J Farms 18.50 111 ⇑P Pn 09 48 41.8 -2.4
baz=18,SNR=6.1
D14A Greenough 18.50 119 ⇓P Pn 09 48 44.1 -0.1
baz=18,SNR=9.2
BMO Blue Mountains 18.63 130 eP Pn 09 48 46.8 +1.1
8.6nm,1.5s
CHMT Chamberlain Mo 18.75 119 eP Pn 09 48 49.0 +1.9
F12A Elk City 18.75 125 ⇑P Pn 09 48 46.9 -0.3
baz=19,SNR=6.7
C16A Fuhringer Ranc 18.80 115 ⇓P Pn 09 48 44.9 -2.8
baz=19
B17A L&G Farms, Che 18.90 112 ⇑P Pn 09 48 49.1 +0.1
baz=19

F13A Darby 19.12 123 ⇑P Pn 09 48 51.5 -0.2
baz=19,SNR=12
K05A Summer Lake 19.14 140 ⇓P Pn 09 48 51.7 -0.2
baz=19,SNR=5.0
B18A Beardsley Farm 19.33 111 ⇑P Pn 09 48 50.5 -3.6
baz=19
C17A Wharram Farm, 19.38 114 ⇑P Pn 09 48 55.0 +0.3
baz=19,SNR=5.9
J08A Circle Bar Ran 19.44 134 ⇓P Pn 09 48 55.8 +0.2
baz=19,SNR=13
D16A Dana Ranch, Ca 19.45 116 ⇓P Pn 09 48 51.9 -3.6
baz=19,SNR=12
YBH Yreka Blue Hor 19.47 145 eP Pn 09 48 58.7 +2.9
97nm,2.6s
YBH Yreka Blue Hor 19.47 145 P Pn 09 48 55.9 +0.1
0.0nm,0.3s,baz=28,slow=17,SNR=4.0
YBH LR LR 09 55 22.1
comp=Z,279nm,19.9s,baz=330,slow=34
HRY Holter Researc 19.55 117 eP Pn 09 48 56.7 -0.1
EGMT Eagleton 19.59 111 ⇑P Pn 09 48 51.7 -5.6
baz=19
EGMT Eagleton 19.59 111 eP Pn 09 48 57.5 +0.2
11nm,1.0s
G13A Cobalt 19.71 124 ⇓P Pn 09 48 57.0 -1.8
baz=20,SNR=7.3
FFC Flin Flon 19.73 87 eP Pn 09 48 58.4 -0.5
9.2nm,1.1s
E16A East Helena 19.75 117 ⇓P Pn 09 48 57.7 -1.5
baz=20
D17A Six Diamond Ra 19.76 114 ⇓P Pn 09 48 59.0 -0.4
baz=20
H12A Diamond D Ranc 19.88 126 ⇑P Pn 09 48 58.1 -2.7
baz=20
LRM Limekiln Ridge 19.93 120 eP Pn 09 49 02.6 +1.3
MOD Modoc 20.07 140 eP P 09 49 03.9 +2.7
8.6nm,0.9s
D18A Linn Farms, 20.15 113 ⇓P P 09 49 03.3 +1.2
baz=20,SNR=5.5
WVOR Wild Horse Val 20.18 136 eP P 09 49 03.3 +0.8
9.8nm,1.1s
E17A Martinsdale 20.18 116 ⇓P P 09 48 59.4 -3.0
baz=20
DLMT Dillon 20.22 121 eP P 09 49 05.4 +2.5
6.0nm,0.9s
I12A Atlanta 20.39 128 ⇑P P 09 49 02.9 -1.7
baz=20,SNR=11
MFID Camas Ranch 20.42 130 ⇑P P 09 49 04.2 -0.8
baz=20,SNR=6.5
G15A Dillon 20.42 121 ⇓P P 09 49 03.8 -1.2
baz=20
H14A Leadore 20.47 123 ⇑P P 09 49 02.9 -2.6
baz=20,SNR=7.9
MCMT McKenzie Canyo 20.53 122 eP P 09 49 07.6 +1.4
3.3nm,1.0s
E18A Harleton 20.55 115 ⇓P P 09 49 06.0 -0.4
baz=20,SNR=5.8
WDC Whiskeytown Da 20.58 146 eP P 09 49 09.7 +3.0
11nm,0.9s
G16A Moss Hill, Enn 20.68 120 ⇑P P 09 49 07.7 -0.1
baz=20,SNR=14
F17A Fitzpatrick Pl 20.69 117 ⇑P P 09 49 07.3 -0.6
baz=20,SNR=8.6
I13A Wildhorse Cree 20.71 126 ⇓P P 09 49 06.5 -1.6
baz=21,SNR=13
H15A Lima 20.78 122 ⇑P P 09 49 09.7 +0.8
baz=21,SNR=11
HLID Hailey 20.87 127 ⇑P P 09 49 10.3 +0.4
baz=21,SNR=5.1
HLID Hailey 20.87 127 eP P 09 49 11.6 +1.7
4.2nm,0.8s
G17A Pierce Place, 21.09 118 ⇑P P 09 49 12.1 -0.2
baz=21
F18A Big Timber 21.13 116 ⇑P P 09 49 12.1 -0.6
baz=21
GCMT Greycliff 21.24 116 eP P 09 49 15.6 +1.7
4.5nm,1.2s,mb3.7
L10A Juniper Basin 21.30 133 ⇑P P 09 49 14.3 -0.2
baz=21,SNR=10.0
H16A Russell Place, 21.34 120 ⇓P P 09 49 14.8 -0.1
baz=21,SNR=9.8
J14A Carey 21.44 126 ⇑P P 09 49 17.1 +1.0
baz=21,SNR=14
YMR Madison River 21.49 120 eP P 09 49 19.4 +2.8
15nm,0.7s,mb4.4
L11A Cat Creek Ranc 21.50 131 ⇓P P 09 49 16.4 -0.2
baz=21,SNR=6.3
G18A Lazy EL Ranch, 21.64 116 ⇑P P 09 49 19.3 +1.1
baz=22
M10A I.L. Ranch, Tu 21.75 134 ⇑P P 09 49 19.3 -0.1
baz=22
K13A Stover Farm, H 21.76 128 ⇑P P 09 49 19.5 0.0
baz=22,SNR=5.3
L12A House Creek Ra 21.81 130 ⇓P P 09 49 20.9 +0.9
baz=22,SNR=11
H17A Grant Village 21.88 119 ⇓P P 09 49 23.0 +2.3
baz=22,SNR=8.7
RLMT Red Lodge 21.93 116 ⇓P P 09 49 21.1 -0.1
baz=22
RLMT Red Lodge 21.93 116 eP P 09 49 23.2 +2.0
7.0nm,1.0s,mb4.0
FLWY Flagg Ranch 22.07 120 eP P 09 49 23.8 +1.1
22nm,1.6s,mb4.3
IMW Indian Meadow 22.11 121 eP P 09 49 27.2 +4.1
18nm,0.9s,mb4.5
M11A Holland Ranch, 22.11 132 ⇑P P 09 49 24.4 +1.2
baz=22,SNR=6.7
K14A Jones Ranch, D 22.23 126 ⇑P P 09 49 24.8 +0.4
baz=22,SNR=14
DCID1 Drake Creek 22.23 122 eP P 09 49 27.5 +3.0
25nm,1.0s,mb4.6
LAO LASA Array 22.25 109 eP P 09 49 24.9 +0.3
7.4nm,0.9s,mb4.1
MOOW Moose Ponds 22.31 121 eP P 09 49 27.5 +2.2
12nm,1.4s,mb4.1
RES Resolute Bay 22.31 28 LR LR 09 58 48.0
comp=Z,313nm,18.6s,MS3.8,baz=228,slow=39
PAHR Pah Rah Range 22.35 141 eP P 09 49 28.3 +2.5
17nm,1.2s,mb4.3
TPAW Teton Pass 22.42 122 eP P 09 49 28.9 +2.4
22nm,1.3s,mb4.4
M12A Wells 22.47 131 ⇑P P 09 49 28.2 +1.2
baz=22,SNR=8.6
LOHW Long Hollow 22.48 121 eP P 09 49 29.0 +1.9
5.7nm,1.0s,mb4.0
SNOW Snow King Moun 22.53 121 eP P 09 49 30.2 +2.5
7.4nm,1.0s,mb4.1
REDW Red Top Meadow 22.57 122 eP P 09 49 30.4 +2.4
3.2nm,1.1s,mb4.1
M13A Montello 22.81 130 eP P 09 49 33.4 +2.7
3.8nm,0.9s,mb3.8
J18A Kendall Valley 23.06 121 ⇓P P 09 49 31.0 -2.2
baz=23
K18A Toltan Ranch, 23.50 121 ⇓P P 09 49 35.5 -2.4
baz=23
O12A Currie 23.52 132 ⇑P P 09 49 35.8 -2.3
baz=23
CMB Columbia Colle 23.56 144 eP P 09 49 40.4 +1.8
2.0nm,0.8s,mb3.6
BW06 Boulder Array 23.61 121 ⇑P P 09 49 38.0 -1.0
baz=24
BW06 Boulder Array 23.61 121 eP P 09 49 40.4 +1.4
5.4nm,1.3s,mb3.8
HWUT Hardware Ranch 23.68 125 eP P 09 49 40.8 +1.3
17nm,1.7s,mb4.2
NVAR Mina Array Bea 23.86 140 P P 09 49 42.2 +0.9
4.4nm,0.8s,mb3.9,baz=320,slow=6.5,SNR=28
K19A Absolon Red Bu 23.89 119 ⇓P P 09 49 40.9 -0.6
baz=24,SNR=6.1
P12A McGill 24.14 133 ⇓P P 09 49 41.1 -2.7
baz=24
Q10A Clear Creek Ra 24.16 137 ⇑P P 09 49 43.3 -0.7
baz=24
K20A Yellowstone Ra 24.25 119 ⇑P P 09 49 43.2 -1.6
baz=24
DUG Dugway 24.34 129 ⇑P P 09 49 44.6 -1.1
baz=24,SNR=8.8
DUG Dugway 24.34 129 eP P 09 49 48.3 +2.6
9.1nm,1.0s,mb4.2
Q11A Duckwater 24.42 135 ⇑P P 09 49 44.8 -1.5
baz=24,SNR=7.6
P13A Bates Ranch, G 24.50 132 ⇓P P 09 49 45.2 -1.9
baz=24
JLU Jordanelle 24.56 126 eP P 09 49 49.5 +1.9
4.0nm,0.9s,mb4.0
P14A Drum Mountains 24.75 130 ⇑P P 09 49 48.2 -1.3
baz=25,SNR=7.4
R11A Troy Canyon, C 24.88 136 ⇓P P 09 49 49.4 -1.2
baz=25,SNR=12

S10A Tonopah Range, 24.90 138 ⇓P P 09 49 48.8 -2.0
baz=25,SNR=9.5
RSSD Black Hills 25.16 111 eP P 09 49 54.3 +1.2
6.0nm,1.1s,mb4.0
Q14A Sevier Lake (B 25.19 131 ⇑P P 09 49 52.9 -0.5
baz=25
ULM Lac du Bonnet 25.24 91 LR LR 10 00 30.6
comp=Z,164nm,19.3s,MS3.6,baz=13,slow=38
S11A Rachel 25.45 137 ⇑P P 09 49 56.6 +0.8
baz=25
GRAC Grapevine Rang 25.47 140 ⇑P P 09 49 55.8 -0.1
baz=25
R13A O'Grain Ranch, 25.63 133 ⇑P P 09 49 54.7 -2.7
baz=26,SNR=9.5
P18A Preston Nutter 25.88 126 ⇓P P 09 49 59.5 -0.1
baz=26,SNR=5.3
MSU Marysvale 26.04 130 eP P 09 50 02.8 +1.7
M22A Cedar Creek Ra 26.04 118 ⇑P P 09 50 00.2 -0.9
baz=26
N21A Black Mountain 26.13 121 ⇑P P 09 50 02.3 +0.3
baz=26,SNR=6.5
SRU San Rafael 26.20 127 eP P 09 50 03.4 +0.9
3.0nm,1.0s,mb3.8
CCUT Cedar City 26.41 133 eP P 09 50 05.4 +1.0
14nm,1.7s,mb4.2
N22A Wattenberg Ran 26.58 119 ⇓P P 09 50 02.8 -3.2
baz=26
PHWY Pilot Hill 26.64 117 eP P 09 50 09.7 +3.1
6.0nm,1.0s,mb4.1
T13A Saint George 26.67 135 ⇑P P 09 50 07.7 +0.9
baz=26
T14A Hurricane 26.95 133 ⇑P P 09 50 09.1 -0.2
baz=27
S16A Weppner Ranch, 26.95 130 ⇓P P 09 50 09.5 +0.2
baz=27
O22A Kremmling 27.05 120 ⇓P P 09 50 09.7 -0.6
baz=27
GSC Goldstone 27.20 141 eP P 09 50 13.5 +1.9
8.3nm,1.2s,mb4.1
O23A Lake Granby, G 27.30 119 ⇓P P 09 50 12.5 +0.1
baz=27
S17A Black Ridge (B 27.34 129 ⇑P P 09 50 12.5 -0.3
baz=27
P22A Eagle 27.42 121 ⇑P P 09 50 14.2 +0.6
baz=27
PV10 Paradox Valley 27.44 126 eP P 09 50 15.6 +1.9
Q21A Lamborn Mesa, 27.68 123 ⇓P P 09 50 17.0 +1.1
baz=28
PV01 Paradox Valley 27.84 125 eP P 09 50 17.2 -0.1
520nm,1.0s
R20A Redvale 27.88 125 ⇑P P 09 50 18.2 +0.6
baz=28
R21A Cimarron 28.08 124 ⇓P P 09 50 20.1 +0.6
baz=28
V15A Kaibab Nationa 28.38 133 ⇑P P 09 50 22.5 +0.3
baz=28,SNR=5.8
EYMN Ely 28.93 92 eP P 09 50 28.0 +1.1
2.9nm,0.6s,mb4.2
V17A Tonalea, Kykot 29.09 131 ⇑P P 09 50 27.2 -1.2
baz=29,SNR=7.4
ECSD EROS Data Cent 29.14 103 eP P 09 50 28.7 -0.1
1.7nm,0.8s,mb3.8
U23A El Rito 30.38 124 ⇓P P 09 50 39.4 -0.5
baz=30,SNR=7.8
V23A Ortiz Mt. (NFS 30.88 125 ⇑P P 09 50 41.9 -2.3
baz=31,SNR=5.3
Y19A Nutrioso 31.16 131 ⇓P P 09 50 43.4 -3.3
baz=31,SNR=5.7
V24A Rampart Ranch, 31.29 123 ⇑P P 09 50 45.1 -2.8
baz=31,SNR=6.0
X21A Alamocita Cree 31.32 128 ⇑P P 09 50 46.1 -2.1
baz=31,SNR=6.1
ANMO Albuquerque 31.44 126 eP P 09 50 51.1 +1.9
4.0nm,1.4s,mb4.1
LAZ Ladron 31.62 127 eP P 09 50 51.6 +0.7
1.3nm,1.0s,mb3.7
V26A Tequesquite Ra 31.88 121 ⇑P P 09 50 52.6 -0.4
baz=32,SNR=12
FRB Frobisher Bay 32.00 52 LR LR 10 04 31.1
comp=Z,82nm,21.0s,MS3.4,baz=148,slow=38
BNM Barren Site 32.05 127 eP P 09 50 56.2 +1.6
3.7nm,1.0s,mb4.2
KSU1 Kansas State U 32.59 109 eP P 09 51 00.3 +1.0
14nm,0.8s,mb4.9
Y25A Mesa, Roswell 33.07 124 ⇑P P 09 51 00.4 -3.1
baz=33,SNR=6.9
Z24A Sheeppen Canyo 33.29 126 ⇑P P 09 51 04.6 -0.8
baz=33,SNR=6.0
Z25A Roswell 33.61 125 ⇑P P 09 51 08.0 -0.2
baz=34,SNR=6.7
Y27A Causey 33.77 122 ⇑P P 09 51 09.3 -0.3
baz=34,SNR=5.9
MSTX Muleshoe 33.87 122 ⇓P P 09 51 11.2 +0.8
baz=34,SNR=6.2
Z26A Caprock 33.93 124 ⇑P P 09 51 11.2 +0.1
baz=34
125A Gardner Draw, 34.17 125 ⇓P P 09 51 11.3 -1.7
baz=34,SNR=6.5
Z27A Tatum 34.23 123 ⇑P P 09 51 13.3 -0.3
baz=34,SNR=6.0
GDL2 Guadalupe Moun 34.69 126 eP P 09 51 19.0 +1.4
40nm,0.8s,mb5.4
WMOK Wichita Mounta 35.04 116 eP P 09 51 21.2 +0.6
5.5nm,0.8s,mb4.5
527A Woodward Ranch 36.79 126 ⇓P P 09 51 33.4 -2.2
baz=37
SCHQ Schefferville 37.22 64 LR LR 10 07 24.0
comp=Z,173nm,18.7s,MS3.9,baz=351,slow=37
TXAR Lajitas Array 37.48 127 P P 09 51 42.4 +1.0
TXAR LR LR 10 06 14.0
TXAR Lajitas Array 37.48 127 P P 09 51 42.4 +1.0
0.9nm,1.0s,mb3.5,baz=330,slow=7.2,SNR=7.5
TXAR LR LR 10 06 14.0
comp=Z,40nm,21.2s,MS3.2,baz=0.0,slow=35
MIAR Mount Ida 37.68 111 eP P 09 51 42.9 -0.3
6.8nm,0.9s,mb4.4
SUMG Summit 37.84 29 eP P 09 51 45.6 +1.5
7.9nm,1.2s,mb4.3
ACSO Alum Creek Sta 38.68 94 eP P 09 51 52.7 +1.2
11nm,0.9s,mb4.6
WVT Waverly 39.29 103 eP P 09 51 56.6 0.0
3.1nm,0.8s,mb4.1
TKL Tuckaleechee C 41.72 99 P P 09 52 17.0 +0.2
4.8nm,1.0s,mb4.1,baz=40,slow=10,SNR=4.6
ARCES ARCESS Array B 51.35 8 P P 09 53 31.6 -0.2
0.9nm,0.7s,mb3.8,baz=14,slow=6.4,SNR=3.9
CN2 Changchun 57.13 301 eP P 09 54 15.1 +0.8
NOA NORSAR Array B 58.01 17 LR LR 10 20 12.2
comp=Z,27nm,20.0s,MS3.4,baz=335,slow=37
HFS Hagfors 59.25 16 P P 09 54 28.8 0.0
2.0nm,0.9s,mb4.2,baz=116,slow=3.4,SNR=4.2
FINES FINESS Array B 59.39 9 LR LR 10 22 04.2
comp=Z,43nm,19.4s,MS3.6,baz=11,slow=38
EKA Eskdalemuir Ar 60.45 28 P P 09 54 37.6 +0.5
0.8nm,0.7s,mb3.8,baz=329,slow=8.0,SNR=3.5
KSRS Korea Array 61.05 295 P P 09 54 42.0 +0.5
1.5nm,0.8s,mb4.2,baz=32,slow=6.1,SNR=4.9
SONM Songino Array 61.52 317 P P 09 54 45.8 +1.2
2.8nm,0.8s,mb4.4,baz=38,slow=7.5,SNR=9.0
ZALV Zalesovo Beam 62.52 333 P P 09 54 50.3 -0.9
2.9nm,0.8s,mb4.5,baz=18,slow=6.2,SNR=10
BJI Beijing 64.22 305 P P 09 55 00.1 -2.6
BJI pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
HHC Hu-ho-hao-te 65.46 309 eP P 09 55 10.5 -0.2
HHC pP pP 09 55 15.3 +1.3
HHC sP sP 09 55 17.7 +2.5
HHC PP PP 09 57 35.7 +1.5
HHC eS S 10 03 50.4 -4.6
HHC ScS ScS 10 05 00.8 -5.1
HHC pmax pmax
comp=Z,19nm,1.2s,mb5.0
HHC pmax pmax
comp=Z,97nm,4.2s
HHC LR LR
comp=N,140nm,14.8s,MS4.4
HHC LR LR
comp=E,140nm,15.5s,MS4.4
HHC LR LR
comp=Z,98nm,16.7s,MS4.1
BVAR Borovoye Array 66.24 342 P P 09 55 15.1 -0.5
comp=Z,0.9nm,0.4s,mb4.1,baz=358,slow=4.6,SNR=7.4
CLL Collm 67.62 20 eP P 09 55 26.0 +1.6
NJ2 Nanjing 69.71 298 eP P 09 55 34.8 -2.9
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
MKAR Makanchi Array 69.77 332 P P 09 55 37.0 -0.8
comp=Z,0.4nm,0.4s,mb3.7,baz=45,slow=3.6,SNR=6.1

MKAR					LR	LR	10 30 22.1		
	comp=Z,54nm,19.5s,MS3.8,baz=154,slow=40								
AKASG	**Malin Array Be**	**70.29**	**9**	P	**P**		**09 55 40.5**	**-0.5**	
	comp=Z,1.2nm,0.4s,mb4.2,baz=348,slow=5.3,SNR=6.7								
AKTO	**Aktyubinsk**	**70.36**	**350**	P	**P**		**09 55 40.8**	**-0.6**	
	comp=Z,3.0nm,0.8s,mb4.3,baz=354,slow=5.8,SNR=9.7								
WMQ	**Urumqi**	**71.10**	**327**	*e*P	**P**		**09 55 47.7**	**+1.7**	
WMQ				pP	pP		09 55 52.2	+2.9	
WMQ				sP	sP		09 55 54.7	+4.2	
WMQ				pmax	pmax				
	comp=Z,4.0nm,1.0s,mb4.3								
WMQ				pmax	pmax				
	comp=Z,38nm,4.2s								
ABKAR	**Akbulak array**	**71.34**	**348**	*e*P	**P**		**09 55 47.1**	**-0.3**	
	comp=Z,8.7nm,0.9s,mb4.7								
ESDC	**Sonseca Array**	**74.54**	**35**	P	**P**		**09 56 06.9**	**+0.4**	
	comp=Z,1.0nm,0.8s,mb3.8,baz=328,slow=5.4,SNR=5.5								
EKS2	**Erkin-Say**	**75.60**	**337**	*e*P	**P**		**09 56 13.3**	**+0.7**	
	comp=Z,9.4nm,0.9s,mb4.7								
CD2	**Chengdu**	**77.20**	**309**	P	**P**		**09 56 20.9**	**-1.0**	
CD2				pmax	pmax				
	comp=Z,10.0nm,0.6s,mb4.9								
GYA	**Guiyang**	**79.91**	**305**	*e*P	**P**		**09 56 38.5**	**+1.6**	
GYA				pmax	pmax				
	comp=Z,10.0nm,1.0s,mb4.7								
BRTR	**Keskin Array B**	**81.53**	**7**	P	**P**		**09 56 45.0**	**-0.4**	
	comp=Z,1.2nm,0.8s,mb3.9,baz=23,slow=6.7,SNR=4.8								
CMAR	**Chiang Mai Arr**	**90.25**	**308**	P	**P**		**09 57 28.6**	**-0.2**	
	comp=Z,2.6nm,0.8s,mb4.6,baz=4.2,slow=5.3,SNR=12								
CMAR				LR	LR		10 41 40.1		
	comp=Z,46nm,20.3s,MS3.9,baz=135,slow=38								

*DDA **03** 10:05:20.6,38°.88N×26°.07E,h5km±2km,Md3.0*
*ISCJB **03** 10:05:21.8±0.7,38°.87N±0°.03×26°.03E±0°.05,h10km,Error ellipse: s-maj=6.1km s-min=4.0km az=172.3*
*THE **03** 10:05:21.8,38°.87N×26°.15E,h10km±11km,ML2.4/2,Error ellipse: s-maj=18.6km s-min=0.5km az=99.0*
*CSEM **03** 10:05:21.5±0.4,38°.86N×26°.04E,h2km,ML2.4/2,Error ellipse: s-maj=7.7km s-min=5.1km az=78.0*

ISC 03 10:05:21.8±0.7,**38°.87N**±0°.03×**26°.04E**±0°.05,**h2**km±10km,
n16,σ0**992**/32,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.41**	**26**	P			**Pg**	**10 05 29.8**	**0.0**
PRK				S			**Sg**	**10 05 35.1**	**-0.1**
PRK	**Paraskevi**	**0.41**	**26**	P			**Pg**	**10 05 29.8**	**0.0**
PRK				S			**Sg**	**10 05 35.1**	**-0.1**
CHOS	**Chios island**	**0.49**	**178**	P			**Pg**	**10 05 31.3**	**+0.2**
CHOS				S			**Sg**	**10 05 38.5**	**+1.1**
CHOS	**Chios island**	**0.49**	**178**	P			**Pg**	**10 05 31.3**	**+0.2**
CHOS				S			**Sg**	**10 05 38.5**	**+1.1**
AYVA	**Ayvalik**	**0.67**	**49**	*i* P			**Pg**	**10 05 34.3**	**-0.4**
AYVA				*i* S			**Sg**	**10 05 43.4**	**0.0**
AYVA	**Ayvalik**	**0.67**	**49**	*i* P			**Pg**	**10 05 34.3**	**-0.4**
AYVA				*i* S			**Sg**	**10 05 43.4**	**0.0**
URLA	**Izmir**	**0.68**	**139**	*i* P			**Pg**	**10 05 33.2**	**-1.6**
URLA				*i* S			**Sg**	**10 05 44.0**	**+0.5**
URLA	**Izmir**	**0.68**	**139**	*i* P			**Pg**	**10 05 33.2**	**-1.6**
URLA				*i* S			**Sg**	**10 05 44.0**	**+0.5**
KDAG	**Bornova**	**1.07**	**116**	*i* P			**Pg**	**10 05 40.5**	**-1.9**
KDAG				*i* S			**Sg**	**10 05 57.2**	**+0.9**
KDAG	**Bornova**	**1.07**	**116**	*i* P			**Pg**	**10 05 40.5**	**-1.9**
KDAG				*i* S			**Sg**	**10 05 57.2**	**+0.9**
LIA	**Limnos Island**	**1.22**	**327**	P			**Pg**	**10 05 44.7**	**-0.5**
LIA				S			**Sg**	**10 06 02.1**	**+1.1**
LIA	**Limnos Island**	**1.22**	**327**	P			**Pg**	**10 05 44.7**	**-0.5**
LIA				S			**Sg**	**10 06 02.1**	**+1.1**
AKHS	**Akhisar**	**1.39**	**89**	*i* P			**Pn**	**10 05 48.3**	**+0.1**
AKHS				*i* S			**Sg**	**10 06 07.0**	**+0.5**
AKHS	**Akhisar**	**1.39**	**89**	*i* P			**Pn**	**10 05 48.3**	**+0.1**
AKHS				*i* S			**Sg**	**10 06 06.9**	**+0.5**
BALY	**Balya**	**1.50**	**54**	*i* P			**Pn**	**10 05 48.3**	**-1.5**
BALY				*i* S			**Sb**	**10 06 11.3**	**+1.3**
BALY	**Balya**	**1.50**	**54**	*i* P			**Pn**	**10 05 48.3**	**-1.5**
BALY				*i* S			**Sb**	**10 06 11.3**	**+1.3**

*IDC **03** 10:08:13.5±0.8,4°.80S×133°.78E,h0km,mb4.2/8,*
mb1 4.5/11,mb1mx4.4/15,mbtmp4.4/11,ML4.4/3,MS4.0/8,
Ms1 4.0/8,ms1mx3.6/24,Error ellipse: s-maj=41.1km
s-min=16.7km az=70.0
*BJI **03** 10:08:14.0,5°.39S×134°.21E,h30km,mB4.9/24,mb4.7/33,*
Ms4.6/21,Ms7 4.4/21
*ISCJB **03** 10:08:16.8±0.8,5°.01S±0°.04×134°.14E±0°.04,h38km±7km,*
mb4.5/31,MS4.0/18,Error ellipse: s-maj=7.7km
s-min=5.4km az=152.9
*DJA **03** 10:08:18,4°.80S×134°.01E,h59km,mb5.1/7*
*NEIC **03** 10:08:20.2±2.6,4°.89S×133°.78E,h43km±25km,mb4.6/17,*
Error ellipse: s-maj=20.0km s-min=10.6km az=56.0

ISC 03 10:08:19.4±0.8,**4°.97S**±0°.04×**134°.06E**±0°.04,**h37**km±7km,
h34km±1.3km:**pP-P**,**n72**,σ1**946**/84,**mb4.5**/31,**MS4.0**/18,
Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TLE	**Tual**	**1.48**	**243**	P			**Pn**	**10 08 43.5**	**0.0**
TLE				S			**Sn**	**10 09 02.7**	**+1.1**
BNDI	**Bandanaira**	**4.17**	**276**	P			**Pn**	**10 09 22.2**	**+1.6**
BNDI				S			**Sn**	**10 10 08.7**	**+0.6**
BAKI	**Biak**	**4.27**	**29**	P			**Pn**	**10 09 20.7**	**-1.3**
BAKI				S			**Sn**	**10 10 07.7**	**-3.0**
AAI	**Ambon**	**5.99**	**282**	P			**Pn**	**10 09 40.4**	**-5.2**
NLAI	**Namlea**	**7.16**	**284**	P			**Pn**	**10 10 04.3**	**+2.7**
NLAI				S			**Sn**	**10 11 20.1**	**-1.6**
KAKA	**Kakadu**	**7.86**	**192**	*e*P			**Pn**	**10 10 11.9**	**+0.7**
	106nm,0.6s								
KAKA				*e*S			**Sn**	**10 11 39.1**	**+0.2**
KAKA	**Kakadu**	**7.86**	**192**	*e*Pn			**Pn**	**10 10 11.7**	**+0.5**
	295nm,0.6s								
KAKA				*e*Sn			**Sn**	**10 11 39.0**	**+0.1**
MNI	**Manado**	**11.20**	**304**	P			**Pn**	**10 10 52.2**	**-4.9**
	153nm,1.0s								
KDI	**Kendari**	**11.45**	**275**	P			**Pn**	**10 11 01.3**	**+0.7**
	30nm,0.9s								
KNA	**Kununurra**	**11.91**	**206**	*e*P			**Pn**	**10 11 04.8**	**-2.0**
	453nm,0.8s								
KNA	**Kununurra**	**11.91**	**206**	P			**Pn**	**10 11 05.5**	**-1.3**
	2um,0.9s								
COEN	**Coen**	**12.66**	**135**	*e*Pn			**Pn**	**10 11 17.1**	**+0.1**
	426nm,0.6s								
COEN				*e*Sn			**Sn**	**10 13 35.0**	**-1.9**
COEN	**Coen**	**12.66**	**135**	P			**Pn**	**10 11 18.3**	**+1.2**
	85nm,0.7s								
PMG	**Port Moresby**	**13.72**	**109**	P			**Pn**	**10 11 37.6**	**+6.1**
WRAB	**Tennant Creek**	**14.87**	**179**	*e*Pn			**Pn**	**10 11 43.7**	**-3.4**
	35nm,0.6s								
WRAB				*e*Sn			**Sn**	**10 14 28.8**	**-2.0**
WRAB	**Tennant Creek**	**14.87**	**179**	P			**Pn**	**10 11 46.1**	**-1.1**
	65nm,0.8s								
FITZ	**Fitzroy Crossi**	**15.43**	**212**	*e*P			**Pn**	**10 11 49.9**	**-4.6**
	29nm,0.6s								
FITZ				*e*S			S	10 14 34.7	-25
FITZ	**Fitzroy Crossi**	**15.43**	**212**	*e*P			**Pn**	**10 11 49.7**	**-4.8**
	15nm,0.6s								
FITZ	**Fitzroy Crossi**	**15.43**	**212**	Pn			**Pn**	**10 11 50.5**	**-4.0**
	1.8nm,0.3s,baz=32,slow=12,SNR=46								
FITZ				Sn			**Sn**	**10 14 34.2**	**-10**
	2.9nm,0.3s,baz=99,slow=14,SNR=7.5								
FITZ	**Fitzroy Crossi**	**15.43**	**212**	P			**Pn**	**10 11 51.1**	**-3.4**
	70nm,0.9s								
MYLDM	**Lahad Datu**	**18.53**	**303**	P			**Pn**	**10 12 33.8**	**+0.5**
ASAR	**Alice Springs**	**18.59**	**180**	P			**Pn**	**10 12 32.8**	**-1.2**
	0.9nm,0.3s,baz=356,slow=12,SNR=75								
CTA	**Charters Tower**	**19.14**	**143**	*e*P			**Pn**	**10 12 44.1**	**+3.4**
	13nm,0.8s								
CTA	**Charters Tower**	**19.14**	**143**	P			**Pn**	**10 12 43.1**	**+2.4**
	0.5nm,0.3s,baz=323,slow=12,SNR=16								
CTAO	**Charters Tower**	**19.14**	**143**	*e*P			**Pn**	**10 12 44.1**	**+3.4**
	20nm,0.9s								
KKM	**Kota Kinabalu**	**20.91**	**301**	*e*P			**P**	**10 12 57.9**	**-1.0**
	26nm,0.9s								
MBWA	**Marble Bar**	**21.27**	**220**	*e*P			**P**	**10 13 02.3**	**-0.4**
MBWA	**Marble Bar**	**21.27**	**220**	*e*P			**P**	**10 13 02.6**	**-0.1**
	29nm,1.0s,mb4.6								
MBWA	**Marble Bar**	**21.27**	**220**	P			**P**	**10 13 01.7**	**-1.0**
GUMO	**Guam**	**21.33**	**30**	LR			LR	10 19 47.0	
	comp=Z,344nm,22.0s,MS3.7,baz=100,slow=32								
QLP	**Quilpie**	**23.59**	**157**	*e*P			**P**	**10 13 28.8**	**+1.9**
KSM	**Kuching**	**24.58**	**285**	*e*P			**P**	**10 13 33.6**	**-2.6**
	31nm,1.1s,mb4.8								

FORT	**Forrest**	**26.29**	**192**	*e*P			**P**	**10 13 53.9**	**+2.4**
	32nm,0.6s,mb5.0								
FORT	**Forrest**	**26.29**	**192**	*e*P			**P**	**10 13 53.0**	**+1.5**
	41nm,0.9s,mb5.0								
STKA	**Stephens Creek**	**27.68**	**166**	*e*P			**P**	**10 14 05.5**	**+1.5**
	4.6nm,0.9s,mb4.1								
STKA	**Stephens Creek**	**27.68**	**166**	*e*P			**P**	**10 14 05.0**	**+1.0**
	1.4nm,0.9s,mb3.6								
STKA	**Stephens Creek**	**27.68**	**166**	P			**P**	**10 14 04.8**	**+0.8**
	6.0nm,0.9s,mb4.2,baz=7.1,slow=5.8,SNR=5.7								
STKA				LR			LR	10 26 26.2	
	comp=Z,827nm,18.1s,MS4.3,baz=345,slow=39								
QIZ	**Qiongzhong**	**33.73**	**316**	P			**P**	**10 14 58.1**	**+0.6**
QIZ				S			**S**	**10 20 20.8**	**+2.1**
QIZ				LR			LR		
	comp=N,160nm,18.6s,MS3.8								
QIZ				LR			LR		
	comp=E,59nm,17.3s,MS3.8								
QIZ				LR			LR		
	comp=Z,170nm,17.6s,MS3.8								
NJ2	**Nanjing**	**39.56**	**340**	*e*P			**P**	**10 15 48.1**	**+1.1**
NJ2				pP			pP	10 15 58.1	+0.4
NJ2				sP			sP	10 16 02.0	-0.2
NJ2				PP			PP	10 17 23.1	+4.7
NJ2				pmax			pmax		
	comp=Z,10.0nm,0.6s,mb4.7								
NJ2				pmax			pmax		
	comp=Z,60nm,3.9s								
NJ2				LR			LR		
	comp=N,220nm,23.9s,MS4.1								
NJ2				LR			LR		
	comp=E,200nm,20.0s,MS4.1								
NJ2				LR			LR		
	comp=Z,150nm,15.6s,MS3.9								
GYA	**Guiyang**	**40.99**	**321**	P			**P**	**10 16 00.9**	**+1.9**
GYA				pP			pP	10 16 09.8	+0.1
GYA				PP			PP	10 17 38.3	+4.2
GYA				PcP			PcP	10 18 01.0	+2.3
GYA				ScP			ScP	10 21 46.7	+0.9
GYA				S			**S**	**10 22 07.9**	**-1.0**
GYA				sS			sS	10 22 25.6	-1.0
GYA				pmax			pmax		
	comp=Z,10.0nm,0.8s,mb4.5								
GYA				pmax			pmax		
	comp=Z,80nm,4.9s								
GYA				LR			LR		
	comp=N,480nm,16.5s,MS4.6								
GYA				LR			LR		
	comp=E,440nm,17.3s,MS4.6								
GYA				LR			LR		
	comp=Z,470nm,16.9s,MS4.4								
CMAR	**Chiang Mai Arr**	**41.72**	**305**	P			**P**	**10 16 01.5**	**-3.6**
	comp=Z,2.0nm,0.6s,mb3.9,baz=134,slow=7.4,SNR=6.0								
KSRS	**Korea Array**	**42.59**	**353**	LR			LR	10 32 45.2	
	comp=Z,122nm,20.9s,MS3.8,baz=171,slow=35								
KMI	**Kunming**	**42.68**	**316**	P			**P**	**10 16 13.0**	**+0.2**
KMI				pP			pP	10 16 23.6	0.0
KMI				sP			sP	10 16 28.1	+0.1
KMI				PP			PP	10 17 55.3	+3.0
KMI				S			**S**	**10 22 33.5**	**-0.4**
KMI				sS			sS	10 22 50.6	-1.1
KMI				pmax			pmax		
	comp=Z,8.0nm,0.7s,mb4.6								
KMI				pmax			pmax		
	comp=Z,98nm,5.0s								
KMI				LR			LR		
	comp=N,150nm,21.4s,MS4.0								
KMI				LR			LR		
	comp=E,100nm,20.1s,MS4.0								
KMI				LR			LR		
	comp=Z,120nm,14.9s								
CD2	**Chengdu**	**45.95**	**323**	P			**P**	**10 16 39.8**	**+0.9**
CD2				pP			pP	10 16 49.7	0.0
CD2				sP			sP	10 16 53.6	-0.6
CD2				PP			PP	10 18 27.4	+0.2
CD2				S			**S**	**10 23 20.5**	**-0.8**
CD2				sS			sS	10 23 37.0	-2.2
CD2				pmax			pmax		
	comp=Z,10.0nm,0.5s,mb5.0								
CD2				pmax			pmax		
	comp=Z,90nm,6.5s								
CD2				LR			LR		
	comp=N,210nm,8.3s								
CD2				LR			LR		
	comp=E,210nm,16.2s								
CD2				LR			LR		
	comp=Z,240nm,8.3s								
BJI	**Beijing**	**47.72**	**341**	P			**P**	**10 16 51.5**	**-1.1**
BJI				PP			PP	10 18 44.8	+0.2
BJI				S			**S**	**10 23 46.6**	**+0.3**
BJI				SS			SS	10 27 16.5	+1.3
BJI				pmax			pmax		
	comp=Z,5.0nm,0.8s,mb4.6								
BJI				pmax			pmax		
	comp=Z,34nm,4.3s								
BJI				LR			LR		
	comp=N,96nm,22.1s,MS4.2								
BJI				LR			LR		
	comp=E,260nm,18.4s,MS4.2								
BJI				LR			LR		
	comp=Z,75nm,22.1s,MS3.6								
CN2	**Changchun**	**49.17**	**352**	*e*P			**P**	**10 17 07.0**	**+3.4**
CN2				*e*sP			sP	10 17 20.8	+1.8
CN2				*e*S			**S**	**10 24 09.2**	**+2.7**
CN2				pmax			pmax		
	comp=Z,10.0nm,0.6s,mb5.0								
CN2				pmax			pmax		
	comp=Z,200nm,5.0s								
CN2				LR			LR		
	comp=N,200nm,14.0s,MS4.4								
CN2				LR			LR		
	comp=E,200nm,14.0s,MS4.4								
CN2				LR			LR		
	comp=Z,200nm,14.0s,MS4.3								
MDJ	**Mudanjiang**	**49.52**	**356**	P			**P**	**10 17 07.5**	**+1.2**
MDJ				pmax			pmax		
	comp=Z,10.0nm,1.0s,mb4.8								
MDJ				pmax			pmax		
	comp=Z,47nm,5.6s								
MDJ	**Mudanjiang**	**49.52**	**356**	*e*P			**P**	**10 17 06.7**	**+0.3**
	comp=Z,34nm,1.8s,mb5.1								
LZH	**Lanzhou**	**49.70**	**328**	*e*P			**P**	**10 17 12.5**	**+4.7**
LZH				pP			pP	10 17 22.4	+3.6
LZH				sP			sP	10 17 26.3	+3.1
LZH				PP			PP	10 19 02.6	-0.1
LZH				pmax			pmax		
	comp=Z,21nm,1.3s,mb5.0								
LZH				pmax			pmax		
	comp=Z,73nm,6.5s								
LZH				LR			LR		
	comp=E,410nm,14.2s								
LZH				LR			LR		
	comp=Z,580nm,18.0s,MS4.6								
HHC	**Hu-ho-hao-te**	**50.05**	**338**	*e*P			**P**	**10 17 13.1**	**+2.7**
HHC				pP			pP	10 17 23.0	+1.7
HHC				sP			sP	10 17 27.2	+1.5
HHC				PP			PP	10 19 08.1	+2.3
HHC				*e*S			**S**	**10 24 20.5**	**+1.6**
HHC				ScS			ScS	10 26 58.3	-0.5
HHC				SS			SS	10 27 49.3	-3.3
HHC				pmax			pmax		
	comp=Z,11nm,0.9s,mb4.9								
HHC				pmax			pmax		
	comp=Z,85nm,4.4s								
HHC				LR			LR		
	comp=N,110nm,14.3s,MS4.2								
HHC				LR			LR		
	comp=E,130nm,14.3s,MS4.2								
HHC				LR			LR		
	comp=Z,110nm,15.5s,MS4.0								
GTA	**Gaotai**	**54.30**	**328**	*e*P			**P**	**10 17 41.1**	**-0.9**
GTA				pP			pP	10 17 48.9	-4.2
GTA				sP			sP	10 17 53.6	-3.9
GTA				S			**S**	**10 25 13.4**	**-3.9**
GTA				sS			sS	10 25 31.9	-3.7
GTA				pmax			pmax		
	comp=Z,4.0nm,1.1s,mb4.3								
GTA				pmax			pmax		
	comp=Z,89nm,4.8s								
GTA				LR			LR		
	comp=N,83nm,15.6s,MS4.0								
GTA				LR			LR		
	comp=E,88nm,17.4s,MS4.0								
GTA				LR			LR		
	comp=Z,120nm,15.0s,MS4.1								
ULN	**Ulaanbaatar**	**57.72**	**339**	*e*P			**P**	**10 18 07.6**	**+1.2**
	comp=Z,6.6nm,1.2s,mb4.5								
SONM	**Songino Array**	**57.94**	**338**	P			**P**	**10 18 06.2**	**-1.6**
	comp=Z,0.4nm,0.4s,mb3.8,baz=157,slow=6.8,SNR=3.9								
SONM				LR			LR	10 45 52.1	
	comp=Z,105nm,19.2s,MS4.0,baz=306,slow=39								
PETK	**Petropavlovsk-**	**61.21**	**16**	LR			LR	10 42 50.4	
	comp=Z,53nm,18.3s,MS3.7,baz=39,slow=34								
WMQ	**Urumqi**	**64.01**	**324**	*e*P			**P**	**10 18 50.6**	**+1.4**
WMQ				pP			pP	10 19 00.8	+0.3
WMQ				sP			sP	10 19 04.6	-0.2
WMQ				PcP			PcP	10 19 26.2	+1.8
WMQ				PP			PP	10 21 12.7	+2.3
WMQ				pmax			pmax		
	comp=Z,14nm,0.8s,mb5.0								
WMQ				pmax			pmax		
	comp=Z,110nm,4.0s								
WMQ				LR			LR		
	comp=N,97nm,24.0s								
WMQ				LR			LR		
	comp=Z,53nm,21.6s,MS3.7								
MK31	**Makanchi Array**	**68.84**	**325**	*e*P			**P**	**10 19 18.2**	**-1.8**
MKAR	**Makanchi Array**	**68.84**	**325**	P			**P**	**10 19 18.3**	**-1.7**
	comp=Z,4.5nm,0.7s,mb4.5,baz=119,slow=6.9,SNR=45								
MKAR				LR			LR	10 49 16.6	
	comp=Z,62nm,21.2s,MS3.8,baz=246,slow=36								
KSH	**Kashi**	**69.34**	**315**	*e*P			**P**	**10 19 24.0**	**+0.7**
KSH				*e*pP			pP	10 19 34.7	0.0
KSH				*e*sP			sP	10 19 38.3	-0.7
KSH				*e*PcP			PcP	10 19 48.5	+1.8
KSH				*e*PP			PP	10 21 58.2	+1.2
KSH				*e*S			S	10 28 23.6	-4.0
KSH				*e*ScS			ScS	10 29 18.2	-3.6
KSH				pmax			pmax		
	comp=Z,3.0nm,0.9s,mb4.2								
KSH				LR			LR		
	comp=N,36nm,9.6s								
KSH				LR			LR		
	comp=E,60nm,4.3s								
KSH				LR			LR		
	comp=Z,76nm,6.0s								
TKM2	**Tokmak 2**	**71.07**	**319**	*e*P			**P**	**10 19 33.3**	**-0.5**
	comp=Z,2.7nm,0.7s,mb4.3								
ZALV	**Zalesovo Beam**	**71.64**	**332**	P			**P**	**10 19 35.3**	**-1.7**
	comp=Z,1.2nm,0.4s,mb4.2,baz=111,slow=3.3,SNR=4.5								
AML	**Almayashu**	**72.01**	**317**	*e*P			**P**	**10 19 39.7**	**+0.2**
	comp=Z,11nm,1.3s,mb4.6								
KURK	**Kurchatov**	**72.97**	**327**	*e*P			**P**	**10 19 43.5**	**-1.6**
	comp=Z,13nm,1.2s,mb4.7								
MAW	**Mawson**	**78.31**	**202**	*e*P			**P**	**10 20 17.2**	**+1.9**
	comp=Z,1.8nm,1.3s,mb3.8								
MAW	**Mawson**	**78.31**	**202**	P			**P**	**10 20 16.8**	**+1.5**
	comp=Z,1.9nm,0.8s,mb4.0,baz=78,slow=11,SNR=4.1								
MAW				LR			LR	10 52 16.8	
	comp=Z,205nm,19.8s,MS4.5,baz=229,slow=34								
BVAR	**Borovoye Array**	**78.56**	**326**	P			**P**	**10 20 15.1**	**-1.8**
	comp=Z,2.8nm,0.7s,mb4.3,baz=124,slow=9.2,SNR=12								
BRVK	**Borovoye**	**78.64**	**326**	*e*P			**P**	**10 20 15.4**	**-1.9**
	comp=Z,9.0nm,1.0s,mb4.7								
ABKAR	**Akbulak array**	**83.48**	**321**	*e*P			**P**	**10 20 42.5**	**-0.7**
	comp=Z,3.9nm,0.9s,mb4.4								
TTA	**Talatina**	**85.42**	**26**	*e*P			**P**	**10 20 57.0**	**+4.3**
	comp=Z,8.3nm,1.1s,mb4.8								
PMR	**Palmer**	**88.10**	**28**	*e*P			**P**	**10 21 07.8**	**+1.9**
	comp=Z,9.7nm,1.1s,mb5.0								
ILAR	**Eielson Array**	**89.81**	**25**	P			**P**	**10 21 12.1**	**-1.7**
	comp=Z,0.5nm,0.7s,mb4.0,baz=287,slow=4.8,SNR=4.8								
ILAR				LR			LR	11 00 26.4	
	comp=Z,57nm,18.2s,MS4.0,baz=284,slow=35								
LPAZ	**La Paz**	**149.53**	**134**	*e*PKPbc			PKPbc	10 28 06.9	+1.1
LPAZ	**La Paz**	**149.53**	**134**	PKPbc			PKPbc	10 28 07.3	+1.5
	comp=Z,1.3nm,1.0s,baz=258,slow=3.1,SNR=3.0								

*DDA **03** 10:18:55.1,38°.29N×38°.93E,h7km±5km,Md2.9*
*ISK **03** 10:18:55.8,38°.40N×38°.83E,h23km,MD2.4*
*ISCJB **03** 10:18:57.0±0.8,38°.38N±0°.06×38°.84E±0°.05,h10km±7km,*
Error ellipse: s-maj=10.8km s-min=5.2km az=153.5
*CSEM **03** 10:18:56.8±0.2,38°.41N×38°.84E,h10km,MD2.9,Error ellipse: s-maj=6.9km s-min=3.7km az=164.0*

ISC 03 10:18:57.1±1.0,**38°.40N**±0°.07×**38°.84E**±0°.05,**h13**km±9km,
n12,σ0**964**/22,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.15**	**48**	*i* P			**Pg**	**10 19 00.7**	**-0.2**
ELZG				*i* S			**Sg**	**10 19 03.3**	**-0.2**
ELZG	**Elazig**	**0.15**	**48**	*i* P			**Pg**	**10 19 00.7**	**-0.2**
ELZG				*i* S			**Sg**	**10 19 03.3**	**-0.2**
MYA	**Malataya**	**0.33**	**258**	*e*PG			**Pg**	**10 19 03.9**	**0.0**
MYA				*e*SG			**Sg**	**10 19 08.5**	**0.0**
MYA	**Malataya**	**0.33**	**258**	*e*Pg			**Pg**	**10 19 03.8**	**-0.1**
MYA				*e*Sg			**Sg**	**10 19 09.0**	**+0.6**
SVRC	**Sivrice-ELAZID**	**0.37**	**92**	*e*PG			**Pg**	**10 19 04.6**	**+0.1**
SVRC	**Sivrice-ELAZID**	**0.37**	**92**	*e*Pg			**Pg**	**10 19 04.7**	**+0.2**
SVRC				*e*Sg			**Sg**	**10 19 10.1**	**+0.6**
PTK	**Pertek**	**0.66**	**41**	*e*PG			**Pg**	**10 19 08.2**	**-1.8**
PTK	**Pertek**	**0.66**	**41**	*e*Pg			**Pg**	**10 19 08.6**	**-1.4**
PTK				*e*Sg			**Sg**	**10 19 19.5**	**+0.8**
AKCD	**Akcadag**	**0.73**	**262**	*i* P			**Pg**	**10 19 11.0**	**-0.3**
AKCD				*i* S			**Sg**	**10 19 21.

AGG	**Agios Georgios**	**1.37**	**247**	*e*PN	**Pn**	**10 30 02.5**	**-0.6**
AGG	**Agios Georgios**	**1.37**	**247**	*e*Pn	**Pn**	**10 30 02.5**	**-0.6**
SRS	**Serrai**	**1.58**	**350**	P	**Pn**	**10 30 06.2**	**+0.2**
SRS	**Serrai**	**1.58**	**350**	P	**Pn**	**10 30 06.2**	**+0.2**

*ISCJB **03** 10:32:48.5±0.7,39°.55N±0°.03×23°.91E±0°.08,h23km±6km, Error ellipse: s-maj=10.6km s-min=5.0km az=9.4*
*CSEM **03** 10:32:48.7±0.6,39°.54N×23°.94E,h26km±2km,ML2.3/3, Error ellipse: s-maj=15.6km s-min=7.0km az=102.0*
*THE **03** 10:32:48.7,39°.58N×23°.92E,h2km±17km,ML2.3/3,Error ellipse: s-maj=17.2km s-min=0.4km az=103.0*
*ATH **03** 10:32:48.2,39°.56N×23°.88E,h31km±2km, MD2.9/7*
*NEIC **03** 10:32:48.2,39°.56N×23°.88E,h31km, MD2.9(ATH),After ATH.*

ISC 03 10:32:48.3±0.8,39°.55N±0°.03×23°.94E±0°.08,h17km±5km, n36,σ0°.82/47,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AOS	**Alonnisos**	**0.39**	**187**	P	**Pg**	**10 32 56.2**	**0.0**
AOS	**Alonnisos**	**0.39**	**187**	P	**Pg**	**10 32 56.6**	**+0.4**
AOS				S	**Sg**	**10 33 02.6**	**+1.0**
AOS	**Alonnisos**	**0.39**	**187**	P	**Pg**	**10 32 56.6**	**+0.4**
AOS				S	**Sg**	**10 33 02.6**	**+1.0**
PAIG	**Paliouri**	**0.42**	**332**	P	**Pg**	**10 32 56.4**	**-0.5**
PAIG	**Paliouri**	**0.42**	**332**	P	**Pg**	**10 32 56.5**	**-0.4**
PAIG				S	**Sg**	**10 33 02.1**	**-0.6**
PAIG	**Paliouri**	**0.42**	**332**	P	**Pg**	**10 32 56.5**	**-0.4**
PAIG				S	**Sg**	**10 33 02.1**	**-0.6**
NEO	**Neokhori**	**0.60**	**246**	*e*Pn	**Pn**	**10 33 00.2**	**-1.8**
NEO				*e*Sn	**Sb**	**10 33 08.8**	**+0.2**
NEO	**Neokhori**	**0.60**	**246**	*e*PN	**Pn**	**10 33 00.2**	**-1.8**
NEO				*e*SN	**Sb**	**10 33 08.8**	**+0.2**
NEO	**Neokhori**	**0.60**	**246**	*e*Pn	**Pn**	**10 33 00.2**	**-1.8**
NEO				*e*Sn	**Sb**	**10 33 08.8**	**+0.2**
XOR	**Xorichti**	**0.61**	**252**	P	**Pb**	**10 33 02.0**	**+1.6**
XOR	**Xorichti**	**0.61**	**252**	P	**Pb**	**10 33 00.4**	**0.0**
XOR				S	**Sb**	**10 33 09.0**	**+0.4**
XOR	**Xorichti**	**0.61**	**252**	P	**Pb**	**10 33 00.4**	**0.0**
XOR				S	**Sb**	**10 33 09.0**	**+0.4**
OUR	**Ouranopolis**	**0.78**	**3**	P	**Pb**	**10 33 03.0**	**-0.4**
OUR	**Ouranopolis**	**0.78**	**3**	P	**Pb**	**10 33 03.0**	**-0.4**
OUR				S	**Sb**	**10 33 14.0**	**+0.3**
OUR	**Ouranopolis**	**0.78**	**3**	P	**Pb**	**10 33 03.0**	**-0.4**
OUR				S	**Sb**	**10 33 14.0**	**+0.3**
LKR	**Lokris**	**1.16**	**219**	*e*Pn	**Pn**	**10 33 09.2**	**-0.5**
LKR	**Lokris**	**1.16**	**219**	*e*PN	**Pn**	**10 33 09.2**	**-0.5**
LKR	**Lokris**	**1.16**	**219**	*e*Pn	**Pn**	**10 33 09.2**	**-0.5**
HORT	**Hortiatis**	**1.23**	**329**	P	**Pn**	**10 33 11.4**	**+0.8**
HORT	**Hortiatis**	**1.23**	**329**	P	**Pn**	**10 33 11.4**	**+0.8**
LIT	**Litokhoron**	**1.24**	**297**	*e*Pn	**Pn**	**10 33 10.1**	**-0.7**
LIT	**Litokhoron**	**1.24**	**297**	*e*PN	**Pn**	**10 33 10.1**	**-0.7**
LIT	**Litokhoron**	**1.24**	**297**	*e*Pn	**Pn**	**10 33 10.1**	**-0.7**
SOH	**Sokhos**	**1.34**	**341**	*e*Pn	**Pn**	**10 33 12.5**	**+0.3**
SOH	**Sokhos**	**1.34**	**341**	*e*PN	**Pn**	**10 33 12.5**	**+0.3**
SOH	**Sokhos**	**1.34**	**341**	*e*Pn	**Pn**	**10 33 12.5**	**+0.3**
AGG	**Agios Georgios**	**1.35**	**247**	*e*Pn	**Pn**	**10 33 13.0**	**+0.6**
AGG	**Agios Georgios**	**1.35**	**247**	*e*PN	**Pn**	**10 33 13.0**	**+0.6**
AGG	**Agios Georgios**	**1.35**	**247**	*e*Pn	**Pn**	**10 33 13.0**	**+0.6**
THL	**Klokotos Trika**	**1.49**	**271**	*e*PN	**Pn**	**10 33 14.2**	**0.0**
THL	**Klokotos Trika**	**1.49**	**271**	*e*Pn	**Pn**	**10 33 14.2**	**0.0**
SRS	**Serrai**	**1.58**	**351**	P	**Pn**	**10 33 16.9**	**+1.4**
SRS	**Serrai**	**1.58**	**351**	P	**Pn**	**10 33 16.9**	**+1.4**
VLY	**Voula,Athens**	**1.70**	**184**	*e*Pb	**Pb**	**10 33 17.5**	**-1.6**
VLY	**Voula,Athens**	**1.70**	**184**	*e*PB	**Pb**	**10 33 17.5**	**-1.6**
VLY	**Voula,Athens**	**1.70**	**184**	*e*Pb	**Pb**	**10 33 17.5**	**-1.6**

MAN 03 10:38:40,16°.86N×120°.17E,h33km,mb4.7,ML3.6,MS3.6, 2C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOLP	**Bolinao**	**0.53**	**208**	*e*P	Pb	10 38 52.8	+1.6
BOLP				*e*S	Sb	10 38 59.9	+1.1
BCPH	**Baguio City Da**	**0.61**	**140**	⇑*i*P	Pn	10 38 53.8	+1.4
ABRA	**Dolores**	**0.94**	**33**	*e*P	Pn	10 38 57.9	+0.9
ABRA				*e*S	Sn	10 39 06.9	-2.4
SIPP	**Brgy, Tapao**	**1.10**	**14**	⇓*e*P	Pn	10 38 59.5	+0.5
SCZP	**Santa Cruz**	**1.10**	**193**	*e*P	Pn	10 39 00.9	+1.8
SCZP				*e*S	Sn	10 39 06.9	-6.3
APYP	**Conner**	**1.43**	**45**	*e*P	Pn	10 39 04.8	+1.2
PIP	**Pasuquin**	**1.52**	**16**	⇑*i*P	Pn	10 39 06.3	+1.4
CAUP	**Cauayan**	**1.58**	**87**	*e*P	Pn	10 39 10.2	+4.5
BALP	**Baler**	**1.75**	**129**	*e*P	Pn	10 39 12.2	+4.2

*CSEM **03** 10:41:27.7±0.8,39°.38N×22°.62E,h2km, ML2.0/2, Error ellipse: s-maj=30.7km s-min=9.7km az=134.0*

THE 03 10:41:39.3,39.59N×23°.91E,h4km±13km,ML2.0/2,Error ellipse: s-maj=13.4km s-min=0.3km az=263.0,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.38**	**333**	P	Pg	10 41 46.9	+0.2
PAIG				S	Sg	10 41 52.6	+0.9
PAIG	**Paliouri**	**0.38**	**333**	P	Pg	10 41 46.9	+0.2
PAIG	**Paliouri**	**0.38**	**333**	P	Pg	10 41 46.9	+0.2
PAIG				S	Sg	10 41 52.6	+0.9
AOS	**Alonnisos**	**0.41**	**183**	P	Pg	10 41 47.2	-0.1
AOS				S	Sg	10 41 53.6	+1.0
AOS	**Alonnisos**	**0.41**	**183**	P	Pg	10 41 47.2	-0.1
AOS				S	Sg	10 41 53.6	+1.0
AOS	**Alonnisos**	**0.41**	**183**	P	Pg	10 41 47.2	-0.1
AOS				S	Sg	10 41 53.6	+1.0
OUR	**Ouranopolis** 100nm,0.3s	**0.75**	**4**	P	Pg	10 41 53.5	-0.2
OUR				S	Sg	10 42 04.3	+0.8
OUR	**Ouranopolis**	**0.75**	**4**	P	Pg	10 41 53.8	+0.1
OUR	**Ouranopolis** 100nm,0.3s	**0.75**	**4**	P	Pg	10 41 53.5	-0.2
OUR				S	Sg	10 42 04.3	+0.8

*ATH **03** 10:41:45.5,38°.33N×22°.11E,h20km±3km,MD2.9/15*
*NEIC **03** 10:41:45.5,38°.33N×22°.11E,h20km, MD2.9(ATH),After ATH.*
*CSEM **03** 10:41:45.2±0.1,38°.35N×22°.13E,h10km,ML2.6/5,Error ellipse: s-maj=3.5km s-min=3.1km az=95.0*

THE 03 10:41:45.7,38°.32N×22°.15E,h8km±1km,ML2.6/5,Error ellipse: s-maj=1.0km s-min=0.3km az=307.0,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KALE	**Kalithea**	**0.07**	**355**	P	Pg	10 41 47.7	+0.1
KALE				S	Sg	10 41 49.2	+0.2
KALE	**Kalithea**	**0.07**	**355**	P	Pg	10 41 47.7	+0.1
KALE				S	Sg	10 41 49.2	+0.2
TRIZ	**Trizonia**	**0.07**	**307**	P	Pg	10 41 47.5	-0.2
TRIZ				S	Sg	10 41 48.9	-0.2
TRIZ	**Trizonia**	**0.07**	**307**	P	Pg	10 41 47.5	-0.2
TRIZ				S	Sg	10 41 48.9	-0.2
LAKA	**Lakka**	**0.16**	**238**	P	Pg	10 41 49.0	0.0
LAKA				S	Sg	10 41 51.7	+0.5
LAKA	**Lakka**	**0.16**	**238**	P	Pg	10 41 49.0	0.0
LAKA				S	Sg	10 41 51.7	+0.5
EFP	**Efpalio**	**0.22**	**299**	*e*PB	Pg	10 41 49.9	-0.2
EFP				*e*SB	Sg	10 41 53.6	+0.6
EFP	**Efpalio**	**0.22**	**299**	P	Pg	10 41 49.9	-0.2
EFP				S	Sg	10 41 53.5	+0.5
EFP	**Efpalio**	**0.22**	**299**	*e*Pb	Pg	10 41 49.9	-0.2
EFP	**Efpalio**	**0.22**	**299**	P	Pg	10 41 49.9	-0.2
EFP				S	Sg	10 41 53.5	+0.5
UPR	**University Cam**	**0.29**	**262**	*e*PB	Pg	10 41 51.4	0.0
UPR	**University Cam**	**0.29**	**262**	P	Pg	10 41 51.5	+0.1
UPR				S	Sg	10 41 55.5	+0.3
UPR	**University Cam**	**0.29**	**262**	*e*Pb	Pg	10 41 51.4	0.0
UPR	**University Cam**	**0.29**	**262**	P	Pg	10 41 51.5	+0.1
UPR				S	Sg	10 41 55.5	+0.3
DSF	**Desfina**	**0.31**	**73**	P	Pg	10 41 51.7	-0.1
DSF				S	Sg	10 41 56.7	+0.7
DSF	**Desfina**	**0.31**	**73**	P	Pg	10 41 51.7	-0.1
DSF				S	Sg	10 41 56.7	+0.7
GUR	**Goura**	**0.41**	**158**	*e*PB	Pg	10 41 53.8	0.0
GUR				*e*SB	Sg	10 41 59.8	+0.6
GUR	**Goura**	**0.41**	**158**	P	Pg	10 41 53.7	-0.1
GUR				S	Sg	10 41 59.6	+0.4
GUR	**Goura**	**0.41**	**158**	*e*Pb	Pg	10 41 53.8	0.0
GUR	**Goura**	**0.41**	**158**	P	Pg	10 41 53.7	-0.1
GUR				*e*Sb	Sg	10 41 59.8	+0.6
RLS	**Riolos of Patr**	**0.60**	**244**	*e*Pn	Pg	10 41 57.0	-0.2
RLS				*e*Sn	Sg	10 42 06.9	+1.9
RLS	**Riolos of Patr**	**0.60**	**244**	*e*PN	Pg	10 41 57.0	-0.2
RLS				*e*SN	Sg	10 42 06.9	+1.9
RLS	**Riolos of Patr**	**0.60**	**244**	*e*Pn	Pg	10 41 57.0	-0.2
EVR	**Evrytania**	**0.65**	**336**	*e*Pn	Pg	10 41 57.8	-0.5
EVR				*e*Sn	Sg	10 42 08.0	+1.3
EVR	**Evrytania**	**0.65**	**336**	*e*PN	Pg	10 41 57.8	-0.5
EVR				*e*SN	Sg	10 42 08.0	+1.3
EVR	**Evrytania**	**0.65**	**336**	*e*Pn	Pg	10 41 57.8	-0.5
LTK	**Loutraki**	**0.71**	**115**	*e*PN	Pn	10 42 00.6	-1.4
LTK	**Loutraki**	**0.71**	**115**	*e*Pn	Pn	10 42 00.6	-1.4
AGG	**Agios Georgios**	**0.71**	**12**	*e*Pb	Pb	10 41 58.3	-2.1
AGG	**Agios Georgios**	**0.71**	**12**	*e*PB	Pb	10 41 58.2	-2.2
AGG	**Agios Georgios**	**0.71**	**12**	P	Pg	10 41 58.8	-0.7
AGG				S	Sg	10 42 09.4	+0.6
AGG	**Agios Georgios**	**0.71**	**12**	*e*Pb	Pb	10 41 58.3	-2.1
AGG	**Agios Georgios**	**0.71**	**12**	P	Pg	10 41 58.8	-0.7
AGG				S	Sg	10 42 09.4	+0.6
LKR	**Lokris**	**0.74**	**64**	*e*Pb	Pb	10 41 59.6	-1.3
LKR				*e*Sn	Sg	10 42 12.0	+2.3
LKR	**Lokris**	**0.74**	**64**	*e*PB	Pb	10 41 59.6	-1.3
LKR				*e*SN	Sg	10 42 12.0	+2.3
LKR	**Lokris**	**0.74**	**64**	P	Pg	10 41 59.7	-0.3
LKR				S	Sg	10 42 10.3	+0.6
LKR	**Lokris**	**0.74**	**64**	P	Pg	10 41 59.7	-0.3
LKR				S	Sg	10 42 10.3	+0.6
VLX	**Vlachokerasia**	**0.97**	**169**	*e*PN	Pn	10 42 02.4	-3.1
VLX				*e*SN	Sn	10 42 18.5	-0.9
VLX	**Vlachokerasia**	**0.97**	**169**	*e*Pn	Pn	10 42 02.4	-3.1
ITM	**Ithomi**	**1.15**	**189**	*e*PN	Pn	10 42 07.3	-0.8
ITM				*e*Sn	Sn	10 42 24.8	+0.8
ITM	**Ithomi**	**1.15**	**189**	*e*PN	Pn	10 42 07.3	-0.8
ITM				*e*SN	Sn	10 42 24.8	+0.8
ITM	**Ithomi**	**1.15**	**189**	*e*Pn	Pn	10 42 07.3	-0.8
DID	**Didima**	**1.19**	**133**	*e*PN	Pn	10 42 08.8	+0.3
DID	**Didima**	**1.19**	**133**	*e*Pn	Pn	10 42 08.8	+0.3
VLS	**Valsamata**	**1.23**	**264**	*e*Pn	Pn	10 42 08.1	-1.1
VLS	**Valsamata**	**1.23**	**264**	*e*PN	Pn	10 42 08.1	-1.1
VLS	**Valsamata**	**1.23**	**264**	*e*Pn	Pn	10 42 08.1	-1.1
THL	**Klokotos Trika**	**1.25**	**355**	*e*PN	Pn	10 42 08.8	-0.6
THL	**Klokotos Trika**	**1.25**	**355**	*e*Pn	Pn	10 42 08.8	-0.6
PYL	**PYLOS**	**1.46**	**193**	*e*PN	Pn	10 42 12.6	+0.3
PYL	**PYLOS**	**1.46**	**193**	*e*Pn	Pn	10 42 12.6	+0.3
VLI	**Veliai**	**1.72**	**158**	*e*Pn	Pn	10 42 16.7	+0.8
VLI	**Veliai**	**1.72**	**158**	*e*PN	Pn	10 42 16.7	+0.8
VLI	**Veliai**	**1.72**	**158**	*e*Pn	Pn	10 42 16.7	+0.8
RDO	**Rodhopi**	**3.84**	**42**	P	Pg	10 42 58.6	-0.8

*IDC **03** 10:41:44.3±1.0, 19°.06S×173°.79W,h0km,mb4.3/9, mb1 4.5/10,mb1mx4.4/18,mbtmp4.3/10,ML2.3/1,MS3.8/5, Ms1 3.8/5,ms1mx3.4/21,Error ellipse: s-maj=38.7km s-min=18.1km az=138.0*
*ISCJB **03** 10:41:47.4±0.6, 19°.2S±0°.1×173°.8W±0°.1,h33km,mb4.6/19, MS3.8/5,Error ellipse: s-maj=25.9km s-min=9.4km az=142.5*
*NEIC **03** 10:41:49.5±0.6,19°.04S×173°.75W,h35km,mb4.9/11, Error ellipse: s-maj=26.6km s-min=9.4km az=142.0*

ISC 03 10:41:49.4±0.6,19°.1S±0°.1×173°.8W±0°.1,h35km,n39, σ1°.02/36,mb4.6/19,MS3.8/5,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.51**	**21**	*e*Pn	**Pn**	**10 43 06.6**	**-2.4**
AFI				Sn	**Sn**	**10 44 06.1**	**-5.0**
AFI	**Afiamalu** 6.1nm,0.3s,baz=119,slow=7.2,SNR=7.6	**5.51**	**21**	Pn	**Pn**	**10 43 06.4**	**-2.6**
AFI	6.7nm,0.3s,baz=49,slow=20,SNR=3.2			Sn	**Sn**	**10 44 06.1**	**-5.0**
RAR	**Rarotonga** 3.3nm,0.3s,baz=264,slow=2.2,SNR=8.4	**13.30**	**101**	Pn	**Pn**	**10 44 38.5**	**-17**
DZM	**Mont Dzumac** 21nm,0.9s	**18.76**	**258**	*e*P	**Pn**	**10 46 08.0**	**+1.8**
PPT	**Papeete** comp=Z,257nm,20.2s,MS3.7,baz=202,slow=28	**23.01**	**90**	LR	LR	10 52 22.6	
RPZ	**Rata Peaks** 5.6nm,0.5s,mb4.4,baz=18,slow=16,SNR=4.9	**27.65**	**204**	P	**P**	**10 47 35.3**	**+1.5**
CNB	**Canberra Magne**	**36.30**	**236**	*e*P	**P**	**10 48 49.0**	**-0.8**
CTA	**Charters Tower** 10nm,0.7s,mb4.7	**37.62**	**262**	*e*P	**P**	**10 49 00.9**	**-0.2**
CTA	**Charters Tower** 12nm,0.6s,mb4.8,baz=95,slow=10,SNR=22	**37.62**	**262**	P	**P**	**10 49 00.8**	**-0.4**
CTAO	**Charters Tower** 14nm,0.8s,mb4.7	**37.62**	**262**	*e*P	**P**	**10 49 01.2**	**+0.1**
CMSA	**Cobar Meteorol**	**38.47**	**243**	*e*P	**P**	**10 49 06.8**	**-1.4**
TOO	**Toolangi**	**39.93**	**234**	*e*P	**P**	**10 49 18.8**	**-1.5**
COEN	**Coen** 65nm,0.8s,mb5.3	**41.52**	**270**	*e*P	**P**	**10 49 34.5**	**+0.8**
STKA	**Stephens Creek** 3.8nm,0.8s,mb4.1	**41.98**	**243**	*e*P	**P**	**10 49 36.1**	**-1.1**
STKA	**Stephens Creek**	**41.98**	**243**	P	**P**	**10 49 35.5**	**-1.8**
STKA	**Stephens Creek** 5.4nm,0.9s,mb4.2,baz=111,slow=10,SNR=5.7	**41.98**	**243**	P	**P**	**10 49 35.5**	**-1.8**
STKA	comp=Z,172nm,18.4s,MS4.0,baz=25,slow=34			LR	LR	11 05 25.3	
ASAR	**Alice Springs** 11nm,0.9s,mb4.9,baz=95,slow=7.5,SNR=66	**48.73**	**255**	P	**P**	**10 50 30.4**	**-0.5**
WRAB	**Tennant Creek** 11nm,1.0s,mb4.8	**48.75**	**260**	*e*P	**P**	**10 50 30.1**	**-0.9**
KAKA	**Kakadu** 9.1nm,0.6s,mb4.9	**51.97**	**269**	*e*P	**P**	**10 50 56.0**	**+0.5**
KAKA	**Kakadu**	**51.97**	**269**	*e*P	**P**	**10 50 55.9**	**+0.4**
FITZ	**Fitzroy Crossi** 7.4nm,0.6s,mb4.9	**57.18**	**260**	*e*P	**P**	**10 51 33.5**	**+0.2**
FITZ	**Fitzroy Crossi** 4.5nm,0.6s,mb4.7	**57.18**	**260**	*e*P	**P**	**10 51 33.4**	**+0.1**
MBWA	**Marble Bar** 7.1nm,0.7s,mb4.9	**62.05**	**256**	*e*P	**P**	**10 52 06.7**	**-0.2**
YBH	**Yreka Blue Hor** comp=Z,69nm,18.6s,MS4.0,baz=297,slow=30	**76.75**	**37**	LR	LR	11 20 39.8	
NVAR	**Mina Array Bea** 1.1nm,0.8s,mb3.8,baz=229,slow=9.0,SNR=5.6	**77.31**	**42**	P	**P**	**10 53 40.6**	**+0.2**
KSRS	**Korea Array** 1.2nm,0.9s,mb3.8,baz=132,slow=7.0,SNR=2.6	**78.57**	**316**	P	**P**	**10 53 47.5**	**+0.1**
KSRS	comp=Z,30nm,18.7s,MS3.6,baz=159,slow=34			LR	LR	11 26 48.3	
TXAR	**Lajitas Array** 0.7nm,0.9s,mb3.7,baz=218,slow=6.4,SNR=7.3	**82.96**	**56**	P	**P**	**10 54 10.9**	**-0.2**
PV10	**Paradox Valley** 52nm,0.8s,mb5.6	**83.33**	**46**	*e*P	**P**	**10 54 12.2**	**-0.5**
PV01	**Paradox Valley** 217nm,1.0s	**83.53**	**46**	*e*P	**P**	**10 54 13.6**	**-0.2**
TRF	**Thorofare Moun** 5.8nm,0.9s,mb4.7	**84.31**	**10**	*e*P	**P**	**10 54 15.9**	**-1.3**
MCK	**McKinley** 11nm,0.8s,mb5.0	**84.81**	**11**	*e*P	**P**	**10 54 20.8**	**+1.1**
COLA	**College** 8.8nm,0.8s,mb5.0	**86.05**	**11**	*e*P	**P**	**10 54 26.6**	**+0.8**
ILAR	**Eielson Array** 1.2nm,0.7s,mb4.2,baz=215,slow=6.1,SNR=16	**86.13**	**11**	P	**P**	**10 54 27.1**	**+0.8**
DAWY	**Dawson**	**87.08**	**14**	*e*P	**P**	**10 54 32.0**	**+1.1**
EGAK	**Eagle** 4.6nm,1.1s,mb4.6	**87.29**	**13**	*e*P	**P**	**10 54 33.0**	**+1.1**
CMAR	**Chiang Mai Arr** 0.8nm,0.5s,mb4.4,baz=124,slow=2.2,SNR=6.3	**93.44**	**288**	P	**P**	**10 55 02.7**	**+1.0**
CMAR	comp=Z,34nm,18.6s,MS3.8,baz=103,slow=36			LR	LR	11 37 19.1	
AKASG	**Malin Array Be** 0.2nm,0.3s,baz=43,slow=4.8,SNR=6.2	**143.58**	**335**	PKP	PKPdf	11 01 18.1	-2.2
BR131	**Keskin Array S**	**148.71**	**317**	*e*PKPbc	PKPbc	11 01 34.5	+1.3
BRTR	**Keskin Array B** 1.7nm,0.9s,baz=122,slow=1.6,SNR=7.7	**148.71**	**317**	PKPbc	PKPbc	11 01 34.0	+0.8
BRTR	3.1nm,0.8s,baz=67,slow=2.5,SNR=10			PKPab	PKPab	11 01 39.2	+2.3

*ISCJB **03** 11:06:22.4±0.7,24°.81N±0°.07×122°.48E±0°.02, h115km±7km,Error ellipse: s-maj=11.1km s-min=3.6km az=178.0*
*TAP **03** 11:06:22.1,24°.84N×122°.43E,h121km,ML3.6,C*
*JMA **03** 11:06:22.8±0.3,24°.96N×122°.52E,h109km±4km,M2.5*

ISC 03 11:06:22.9±0.7,24°.81N±0°.07×122°.47E±0°.02,h115km±7km, n31,σ0°.58/51,3D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao** baz=293	**0.48**	**294**	⇓*i*P	**Pn**	**11 06 40.2**	**+0.1**
YOJ	**Yonaguni jima**	**0.60**	**125**	P	**Pn**	**11 06 40.9**	**-0.1**
YOJ				S	**Sn**	**11 06 54.8**	**+0.3**
TWC	**Suao** baz=241	**0.60**	**251**	P	**Pn**	**11 06 40.7**	**-0.3**
TWC	baz=241			*e*S	**Sn**	**11 06 54.0**	**-0.5**
NWF	**Wu-fen Shan** baz=296	**0.68**	**292**	*e*P	**Pn**	**11 06 41.5**	**0.0**
TWE	**Neicheng** baz=260	**0.74**	**263**	⇓*i*P	**Pn**	**11 06 42.0**	**-0.1**
TWE	baz=260			*e*S	**Sn**	**11 06 56.1**	**-0.4**
ENA	**Nanau** baz=237	**0.77**	**240**	⇓*i*P	**Pn**	**11 06 42.5**	**+0.2**
ENA	baz=237			S	**Sn**	**11 06 56.9**	**0.0**
ENTT	**Nioudou** baz=259	**0.84**	**258**	P	**Pn**	**11 06 43.1**	**+0.2**
ENTT	baz=259			*e*S	**Sn**	**11 06 59.4**	**+1.3**
TWY	**Chenhua** baz=300	**0.92**	**300**	*e*P	**Pn**	**11 06 43.4**	**-0.2**
TWS1	**Kuangyinshan** baz=280	**1.00**	**287**	P	**Pn**	**11 06 44.4**	**-0.1**
NSK	**Sanguang** baz=268	**1.02**	**263**	P	**Pn**	**11 06 44.7**	**0.0**
NSK	baz=268			S	**Sn**	**11 07 01.1**	**-0.1**
NNS	**Nan Shan** baz=242	**1.07**	**250**	*i* P	**Pn**	**11 06 45.5**	**+0.3**
NNS	baz=242			S	**Sn**	**11 07 02.4**	**+0.4**
TWD	**Chiawan** baz=222	**1.08**	**228**	*e*P	**Pn**	**11 06 45.0**	**-0.4**
TWD	baz=222			*e*S	**Sn**	**11 07 02.1**	**-0.2**
HWA	**Hwalien** baz=215	**1.15**	**224**	*e*P	**Pn**	**11 06 45.8**	**-0.3**
IRIF	**Iriomote-Funau**	**1.24**	**112**	P	**Pn**	**11 06 46.8**	**-0.2**
IRIF				S	**Sn**	**11 07 05.3**	**+0.1**
WHF	**Hehuan Shan** baz=237	**1.29**	**239**	P	**Pn**	**11 06 47.9**	**+0.3**
WHF	baz=237			S	**Sn**	**11 07 06.3**	**+0.1**
TWT	**Tachien** baz=240	**1.31**	**245**	P	**Pn**	**11 06 48.6**	**+0.8**
TWT	baz=240			*e*S	**Sn**	**11 07 07.2**	**+0.6**
NSTT	**Nanjuang** baz=261	**1.35**	**263**	P	**Pn**	**11 06 47.9**	**-0.4**
NSTT	baz=261			S	**Sn**	**11 07 07.0**	**-0.6**
ESL	**Shilin** baz=229	**1.38**	**224**	P	**Pn**	**11 06 47.5**	**-1.1**
ESL	baz=229			S	**Sn**	**11 07 06.4**	**-1.6**
HATJ	**Hateruma jima**	**1.43**	**122**	P	**Pn**	**11 06 49.9**	**+0.7**
HATJ				*e*S	**Sn**	**11 07 09.7**	**+0.6**
JKRS	**Kuro-shima**	**1.51**	**112**	P	**Pn**	**11 06 50.2**	**+0.1**
JKRS				*e*S	**Sn**	**11 07 11.1**	**+0.3**
JIJ	**Ishigaki jima**	**1.58**	**106**	P	**Pn**	**11 06 50.7**	**-0.3**
JIJ				S	**Sn**	**11 07 11.6**	**-0.7**
NSY	**Sanyi** baz=254	**1.61**	**256**	P	**Pn**	**11 06 51.4**	**+0.1**
TWQ1	**Liyutan** baz=252	**1.62**	**254**	P	**Pn**	**11 06 51.1**	**-0.2**
TWQ1	baz=252			S	**Sn**	**11 07 12.1**	**-0.9**
EHY	**Hungye** baz=224	**1.67**	**219**	*e*P	**Pn**	**11 06 51.6**	**-0.5**
SMLT	**Sun Moon Lake** baz=233	**1.71**	**238**	*e*P	**Pn**	**11 06 53.4**	**+0.9**
SMLT	baz=233			*e*S	**Sn**	**11 07 16.7**	**+1.7**
TYC	**Yuchr** baz=237	**1.73**	**239**	*e*P	**Pn**	**11 06 53.4**	**+0.6**
TWF1	**Yuli** baz=221	**1.81**	**217**	*e*P	**Pn**	**11 06 52.7**	**-1.0**
JTJ	**Tarama**	**2.03**	**94**	P	**Pn**	**11 06 56.6**	**+0.1**
JTJ				*e*S	**Sn**	**11 07 21.6**	**-0.6**
CHN5	**Tsauling** baz=240	**2.04**	**234**	*e*P	**Pn**	**11 06 57.0**	**+0.4**
JOGS	**Gusukube**	**2.67**	**91**	P	**Pn**	**11 07 05.5**	**+0.9**
JOGS				*e*S	**Sn**	**11 07 36.8**	**+0.1**
JKE	**Kume jima 2**	**4.18**	**68**	P	**Pn**	**11 07 24.3**	**-0.4**

*IDC **03** 11:54:35.2±1.4,30°.46S×110°.25W,h0km,mb4.0/3, mb1 4.4/4,mb1mx4.1/14,mbtmp4.0/4,ML4.2/1,MS3.8/6, Ms1 3.8/6,ms1mx3.6/15,Error ellipse: s-maj=40.8km s-min=36.1km az=129.0*
*NEIC **03** 11:54:37.0±0.5,30°.36S×110°.13W,h10km,mb4.5/16, Error ellipse: s-maj=19.3km s-min=11.5km az=95.0*

ISC 03 11:54:38.8±6.3,30°.28S±0°.09×110°.1W±0°.2,h19km±39km, n117,σ0°.76/110,mb4.2/19,MS3.9/5,42C-39D,Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**3.21**	**12**	*e*Pn	**Pn**	**11 55 28.3**	**0.0**
RPN	**Rapa Nui** 22nm,0.3s,baz=192,slow=7.7,SNR=10	**3.21**	**12**	Pn	**Pn**	**11 55 28.5**	**+0.2**
RPN	9.5nm,0.3s,baz=336,slow=19,SNR=4.0			Sn	**Sn**	**11 56 05.8**	**-0.3**
RPN	comp=Z,436nm,19.0s,baz=302,slow=30			LR	LR	11 56 19.1	
**

W20A	**Ramah** baz=64	**65.08**	**1**	⇑P		**P**	**12 05 18.0**	**0.0**
W23A	**Werner Place,** baz=64	**65.20**	**4**	⇑P		**P**	**12 05 19.0**	**+0.3**
W24A	**Lazy 6 Ranch,** baz=65,SNR=8.2	**65.29**	**4**	⇓P		**P**	**12 05 18.8**	**-0.6**
W25A	**X Bar L Ranch,** baz=65,SNR=5.3	**65.36**	**5**	⇓P		**P**	**12 05 18.8**	**-1.0**
V17A	**Tonalea, Kykot** baz=65,SNR=7.8	**65.56**	**359**	⇑P		**P**	**12 05 21.6**	**+0.6**
V26A	**Tequesquite Ra** baz=65,SNR=5.1	**65.99**	**6**	⇑P		**P**	**12 05 22.7**	**-1.2**
U16A	**Tuba City** baz=65	**66.08**	**359**	⇑P		**P**	**12 05 25.2**	**+0.8**
MIAR	**Mount Ida** 0.9nm,0.7s,mb3.9	**66.33**	**15**	*e*P		**P**	**12 05 26.1**	**0.0**
U18A	**Rough Rock, Ch** baz=66,SNR=5.3	**66.35**	**0**	⇓P		**P**	**12 05 26.5**	**+0.4**
U23A	**El Rito** baz=66,SNR=6.1	**66.36**	**3**	⇓P		**P**	**12 05 25.5**	**-0.7**
U22A	**Llaves** baz=66	**66.38**	**3**	⇓P		**P**	**12 05 27.3**	**+1.0**
U15A	**North Rim** baz=66	**66.39**	**358**	⇑P		**P**	**12 05 27.2**	**+0.8**
U21A	**Nageezi** baz=66	**66.40**	**2**	⇑P		**P**	**12 05 26.7**	**+0.2**
U26A	**Atchley Ranch,** baz=66	**66.59**	**6**	⇓P		**P**	**12 05 28.3**	**+0.6**
T19A	**Beclabito** baz=66,SNR=5.9	**66.77**	**1**	⇑P		**P**	**12 05 28.8**	**0.0**
T15A	**Red Dirt Ranch** baz=66	**66.98**	**358**	⇓P		**P**	**12 05 29.2**	**-0.9**
T13A	**Saint George** baz=66	**67.04**	**357**	⇓P		**P**	**12 05 29.8**	**-0.7**
T18A	**Mexican Hat** baz=66,SNR=6.3	**67.06**	**0**	⇑P		**P**	**12 05 30.9**	**+0.2**
T25A	**Trinidad** baz=67	**67.28**	**5**	⇑P		**P**	**12 05 32.8**	**+0.8**
CCUT	**Cedar City** 6.7nm,1.3s,mb4.5	**67.55**	**357**	*e*P		**P**	**12 05 34.9**	**+1.2**
S22A	**4UR Ranch, Cre** baz=67	**67.74**	**3**	⇓P		**P**	**12 05 34.0**	**-1.0**
S25A	**Robets Cordova** baz=67	**67.79**	**5**	⇓P		**P**	**12 05 34.7**	**-0.5**
SDCO	**Great Sand Dun** 4.0nm,1.3s,mb4.3	**67.81**	**4**	*e*P		**P**	**12 05 35.6**	**+0.2**
PV01	**Paradox Valley**	**68.08**	**1**	*e*P		**P**	**12 05 37.2**	**+0.1**
R20A	**Redvale** baz=68	**68.13**	**1**	⇑P		**P**	**12 05 37.7**	**+0.3**
R19A	**Curley Farm, L** baz=68,SNR=7.8	**68.22**	**1**	⇑P		**P**	**12 05 38.5**	**+0.5**
R22A	**Saguache, Gunn** baz=68	**68.23**	**3**	⇓P		**P**	**12 05 38.6**	**+0.6**
R21A	**Cimarron** baz=68	**68.33**	**2**	⇑P		**P**	**12 05 39.7**	**+1.0**
R17A	**Hanksville Air** baz=68,SNR=6.1	**68.35**	**359**	⇑P		**P**	**12 05 38.6**	**-0.1**
NVAR	**Mina Array Bea**	**68.79**	**353**	P		**P**	**12 05 42.7**	**+1.2**
NVAR	**Mina Array Bea** 3.6nm,0.8s,mb4.3,baz=184,slow=8.3,SNR=25	**68.79**	**353**	P		**P**	**12 05 42.7**	**+1.2**
Q16A	**Castle Valley** baz=68	**68.85**	**359**	⇑P		**P**	**12 05 42.2**	**+0.4**
Q19A	**Hogan Spring (** baz=68,SNR=5.5	**68.89**	**1**	⇓P		**P**	**12 05 42.4**	**+0.3**
Q13A	**Wheeler Ranch,** baz=68,SNR=5.2	**68.98**	**357**	⇓P		**P**	**12 05 43.2**	**+0.6**
SWET	**Sewanee**	**69.00**	**21**	*e*P		**P**	**12 05 42.7**	**-0.2**
Q18A	**Rafter H Ranch** baz=68	**69.03**	**360**	⇓P		**P**	**12 05 42.3**	**-0.6**
SRU	**San Rafael** baz=68,SNR=6.2	**69.04**	**360**	⇓P		**P**	**12 05 42.6**	**-0.4**
SRU	**San Rafael** 4.5nm,0.8s,mb4.5	**69.04**	**360**	*e*P		**P**	**12 05 43.5**	**+0.5**
P13A	**Bates Ranch, G** baz=69,SNR=6.8	**69.48**	**357**	⇑P		**P**	**12 05 45.9**	**+0.1**
CPCT	**Cooper Cave**	**69.67**	**22**	*e*P		**P**	**12 05 45.8**	**-1.2**
ISCO	**Idaho Springs** 5.0nm,1.3s,mb4.3	**69.85**	**4**	*e*P		**P**	**12 05 49.0**	**+1.0**
O22A	**Kremmling** baz=70	**70.16**	**3**	⇑P		**P**	**12 05 50.5**	**+0.5**
DAU	**Daniels Canyon** 11nm,1.2s,mb4.7	**70.34**	**359**	*e*P		**P**	**12 05 51.8**	**+0.7**
N20A	**Spence Gulch,** baz=70	**70.78**	**1**	⇑P		**P**	**12 05 54.1**	**+0.4**
M12A	**Wells** baz=71	**71.48**	**356**	⇑P		**P**	**12 05 58.1**	**+0.1**
L21A	**Rawlins** baz=71	**71.93**	**2**	⇑P		**P**	**12 06 01.1**	**+0.5**
MOD	**Modoc** 17nm,1.5s,mb4.8	**72.44**	**352**	*e*P		**P**	**12 06 04.8**	**+1.1**
K20A	**Yellowstone Ra** baz=72	**72.60**	**1**	⇑P		**P**	**12 06 04.4**	**-0.2**
BW06	**Boulder Array** baz=72	**72.69**	**0**	⇑P		**P**	**12 06 04.1**	**-1.0**
J16A	**Bone** baz=73	**73.21**	**359**	⇓P		**P**	**12 06 08.3**	**+0.1**
J14A	**Carey** baz=73	**73.31**	**357**	⇓P		**P**	**12 06 09.1**	**+0.3**
J13A	**Cove Ranch, Pi** baz=73	**73.42**	**357**	⇑P		**P**	**12 06 09.5**	**0.0**
TPAW	**Teton Pass** 3.8nm,0.8s,mb4.4	**73.42**	**359**	*e*P		**P**	**12 06 09.8**	**+0.3**
HLID	**Hailey** baz=73	**73.59**	**357**	⇑P		**P**	**12 06 10.9**	**+0.4**
HLID	**Hailey** 3.8nm,0.9s,mb4.3	**73.59**	**357**	*e*P		**P**	**12 06 11.1**	**+0.6**
IMW	**Indian Meadow** 2.7nm,0.7s,mb4.3	**73.82**	**359**	*e*P		**P**	**12 06 11.9**	**+0.1**
I12A	**Atlanta** baz=73	**73.86**	**356**	⇓P		**P**	**12 06 11.9**	**-0.2**
I13A	**Wildhorse Cree** baz=73	**73.93**	**357**	⇓P		**P**	**12 06 12.8**	**+0.4**
FLWY	**Flagg Ranch** 1.1nm,0.6s,mb4.0	**74.01**	**360**	*e*P		**P**	**12 06 13.0**	**+0.1**
I07A	**Izee** baz=74	**74.50**	**353**	⇓P		**P**	**12 06 16.8**	**+1.0**
H15A	**Lima** baz=74	**74.58**	**358**	⇑P		**P**	**12 06 15.5**	**-0.7**
H16A	**Russell Place,** baz=74	**74.63**	**359**	⇑P		**P**	**12 06 17.1**	**+0.5**
BMO	**Blue Mountains** 1.1nm,1.1s,mb3.7	**75.06**	**355**	*e*P		**P**	**12 06 19.0**	**0.0**
G12A	**Big Creek, Yel** baz=75	**75.20**	**356**	⇑P		**P**	**12 06 19.9**	**+0.1**
G18A	**Lazy EL Ranch,** baz=75	**75.24**	**0**	⇓P		**P**	**12 06 19.1**	**-0.9**
G08A	**Pilot Rock** baz=75	**75.64**	**354**	⇑P		**P**	**12 06 23.1**	**+0.7**
F13A	**Darby** baz=75	**75.81**	**357**	⇓P		**P**	**12 06 22.6**	**-0.7**
F12A	**Elk City** baz=75	**75.82**	**356**	⇓P		**P**	**12 06 22.4**	**-1.0**
F10A	**Beach Ranch, E** baz=76	**76.17**	**355**	⇑P		**P**	**12 06 25.4**	**+0.1**
E16A	**East Helena** baz=76	**76.47**	**359**	⇓P		**P**	**12 06 27.4**	**+0.4**
E18A	**Harlowton** baz=76	**76.49**	**0**	⇓P		**P**	**12 06 27.0**	**-0.2**
CHMT	**Chamberlain Mo** 0.3nm,0.4s,mb3.6	**76.89**	**358**	*e*P		**P**	**12 06 30.0**	**+0.6**
D17A	**Six Diamond Ra** baz=76	**77.08**	**360**	⇑P		**P**	**12 06 30.8**	**+0.4**
C14A	**Swan Lake** baz=77	**77.76**	**357**	⇓P		**P**	**12 06 34.2**	**0.0**
B18A	**Beardsley Farm** baz=78	**78.32**	**0**	⇑P		**P**	**12 06 38.5**	**+1.2**
NEW	**Newport** 5.3nm,1.0s,mb4.4	**78.44**	**355**	*e*P		**P**	**12 06 38.2**	**+0.2**
A17A	**Triple J Farms** baz=78	**78.87**	**360**	⇑P		**P**	**12 06 41.4**	**+1.1**
ULM	**Lac du Bonnet** comp=Z,33nm,21.1s,MS3.7,baz=214,slow=32	**81.16**	**9**	LR		LR	12 38 27.6	
EDM	**Edmonton**	**83.20**	**358**	*e*P		**P**	**12 07 02.7**	**-0.6**
STKA	**Stephens Creek** comp=Z,157nm,20.1s,MS4.4,baz=191,slow=31	**88.15**	**234**	LR		LR	12 39 56.7	
SONM	**Songino Array** 3.8nm,1.0s,baz=106,slow=5.3,SNR=4.7	**147.08**	**313**	PKPbc		PKPbc	12 14 18.6	-1.6
CMAR	**Chiang Mai Arr** 2.3nm,0.9s,baz=167,slow=0.9,SNR=10	**151.15**	**253**	PKPbc		PKPbc	12 14 30.1	-1.3
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=32,slow=5.9,SNR=3.9	**154.00**	**340**	PKPab		PKPab	12 14 48.9	-1.2
MKAR	**Makanchi Array** 0.4nm,0.9s,baz=64,slow=4.2,SNR=4.0	**160.92**	**333**	PKPab		PKPab	12 15 20.8	+0.7

NIED ***03*** *11:55:00,42.˚30N×139.˚10E,h5km,Mw3.6 Best double couple: M₀2.57000×10¹⁴ NP1:φs349.00000°,δ54.00000°,λ77.00000°. NP2:φs190.00000°,δ38.00000°,λ107.00000°.*

JMA 03 11:55:46.9±0.1,42.˚27N×139.˚11E,h18km±1km,M3.8,
2C-2D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSM	**Okushiri--Mats**	**0.33**	**124**	⇓P	Pg	11 55 53.8	-0.1
JOSM				*e*S	Sg	11 55 58.2	-0.5
JSH	**Shimam**	**0.79**	**61**	⇑P	Pb	11 56 01.7	-0.3
JSH				*e*S	Sb	11 56 11.9	-0.4
JYM2	**Yakumo 2**	**0.95**	**99**	P	Pb	11 56 05.0	+0.2
JYM2				*e*S	Sb	11 56 17.9	+0.9
JSR	**Shiriuchi**	**1.23**	**127**	P	Pn	11 56 08.8	-0.3
JSR				*e*S	Sb	11 56 24.8	-0.1
JNB	**Noboribetsu**	**1.44**	**81**	P	Pn	11 56 11.4	-0.7
JSK	**Shakotan**	**1.48**	**42**	⇑P	Pn	11 56 11.9	-0.7
JSK				*e*S	Sn	11 56 29.3	-2.1
JKB	**Kayabe**	**1.48**	**104**	⇓P	Pn	11 56 12.9	+0.3
JSI2	**Shiura 2**	**1.56**	**141**	P	Pn	11 56 13.0	-0.6
JSI2				*e*S	Sn	11 56 32.8	-0.5

ISCJB ***03*** *12:04:46.6±0.3,32.˚80N±0.˚03×105.˚67E±0.˚04,h10km, mb4.1/20,Error ellipse: s-maj=4.7km s-min=4.2km az=25.9*

IDC ***03*** *12:04:46.7±1.0,32.˚88N×105.˚74E,h0km,mb4.0/10, mb1 4.1/10,mb1mx4.0/22,mbtmp4.0/10,MS3.2/2, Ms1 3.2/2,ms1mx2.6/26,Error ellipse: s-maj=45.3km s-min=20.2km az=52.0*

BJI ***03*** *12:04:48.1,32.˚78N×105.˚67E,h10km,mB4.5/5,mb4.3/6, ML3.6/17,Ms3.6/4,Ms7 3.5/5*

NEIC ***03*** *12:04:49.3±0.5,32.˚94N×105.˚68E,h10km,mb4.5/7,Error ellipse: s-maj=15.2km s-min=8.9km az=60.0*

ISC 03 12:04:48.7±0.3,32.˚79N±0.˚03×105.˚58E±0.˚04,h10km,n40,
σ1s07/56,mb4.1/20,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.43**	**220**	Pn	**Pn**	**12 05 28.5**	**0.0**
CD2				Pg	**Pg**	**12 05 32.5**	**-2.8**
CD2				Sn	**Sn**	**12 05 59.7**	**+1.4**
CD2				Sg	**Sg**	**12 06 03.7**	**-3.2**
CD2				smax			
	comp=N,4μm,0.8s						
CD2				smax			
	comp=E,1μm,0.7s						
XAN	**Xi'an**	**3.06**	**65**	Pn	**Pn**	**12 05 39.8**	**+2.7**
XAN				Pg	**Pg**	**12 05 45.9**	**-1.4**
XAN				Sn	**Sn**	**12 06 19.2**	**+5.5**
XAN				Sg	**Sg**	**12 06 26.2**	**-0.7**
XAN				smax			
	comp=N,310nm,0.8s						
XAN				smax			
	comp=E,190nm,0.7s						
LZH	**Lanzhou**	**3.59**	**337**	Pn	**Pn**	**12 05 46.0**	**+1.6**
LZH				Pg	**Pg**	**12 05 55.0**	**-2.5**
LZH				Sn	**Sn**	**12 06 26.6**	**-0.2**
LZH				Sg	**Sg**	**12 06 40.4**	**-3.6**
LZH				smax			
	comp=N,310nm,1.0s						
LZH				smax			
	comp=E,420nm,1.0s						
LZH				LR	LR		
	comp=E,430nm,4.2s						
LZH				LR	LR		
	comp=Z,460nm,6.0s						
ENH	**Enshi**	**4.17**	**126**	Pn	**Pn**	**12 05 53.8**	**+1.4**
ENH				*e*Pg	**Pg**	**12 06 04.9**	**-3.7**
ENH				*e*S	**Sg**	**12 07 08.4**	**+5.7**
GYA	**Guiyang**	**6.38**	**171**	Pn	**Pn**	**12 06 22.8**	**+0.1**
GYA				Pg	**Pg**	**12 06 43.1**	**-7.8**
GYA				Sn	**Sn**	**12 07 34.9**	**-0.7**
GYA				Sg	**Sg**	**12 08 00.5**	**-13**
GYA				smax			
	comp=N,90nm,0.8s						
GYA				smax			
	comp=E,70nm,0.8s						
WHN	**Wuhan**	**7.80**	**104**	Pn	**Pn**	**12 06 41.5**	**-0.7**
WHN				Sn	**Sn**	**12 08 10.5**	**-0.1**
WHN				LR	LR		
	comp=Z,270nm,15.4s						
GTA	**Gaotai**	**8.09**	**326**	*e*P	**Pn**	**12 06 46.4**	**+0.2**
GTA				pP		12 06 50.2	
GTA				sP		12 06 52.5	
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**9.36**	**29**	*e*P	**Pn**	**12 07 02.9**	**-0.7**
HHC				pP		12 07 06.2	
HHC				sP		12 07 08.9	
HHC				S	**Sn**	**12 08 49.4**	**+0.5**
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC				pmax	pmax		
	comp=Z,88nm,4.1s						
HHC				LR	LR		
	comp=N,76nm,4.8s						
HHC				LR	LR		
	comp=E,160nm,5.6s						
HHC				LR	LR		
	comp=Z,140nm,6.2s						
SONM	**Songino Array**	**15.04**	**2**	Pn	**Pn**	**12 08 22.6**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=183,slow=8.7,SNR=2.2						
CMAR	**Chiang Mai Arr** baz=14,slow=9.5,SNR=9.5	**15.47**	**204**	Pn	**Pn**	**12 08 32.5**	**+5.5**
CMAR				Sn	**Sn**	**12 11 19.3**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=186,slow=19,SNR=2.8						
KSRS	**Korea Array**	**18.84**	**69**	Pn	**Pn**	**12 09 10.4**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=256,slow=10,SNR=15						
KSRS				LR	LR	12 16 59.0	
	comp=Z,28nm,20.4s,baz=250,slow=39						
MK31	**Makanchi Array**	**22.61**	**315**	*e*P	**P**	**12 09 49.2**	**-0.1**
MKAR	**Makanchi Array**	**22.61**	**315**	P	**P**	**12 09 49.3**	**0.0**
	comp=Z,1.5nm,0.6s,mb3.6,baz=118,slow=12,SNR=17						
ZALV	**Zalesovo Beam**	**25.80**	**331**	P	**P**	**12 10 20.3**	**+0.6**
	comp=Z,0.7nm,0.5s,mb3.5,baz=139,slow=12,SNR=4.9						
AML	**Almayashu**	**26.85**	**300**	*e*P	**P**	**12 10 30.4**	**+1.1**
	comp=Z,1.6nm,0.6s,mb3.7						
BVAR	**Borovoye Array**	**32.29**	**319**	P	**P**	**12 11 17.8**	**+0.4**
	comp=Z,1.0nm,0.8s,mb3.7,baz=115,slow=10,SNR=4.6						
JOF	**Joensuu**	**54.29**	**327**	*e*P	**P**	**12 14 14.0**	**-0.7**
JOF	**Joensuu**	**54.29**	**327**	*e*p	**P**	**12 14 14.0**	**-0.7**
	comp=Z,0.8nm,0.3s,mb4.1						
KEV	**Kevo**	**55.71**	**336**	*e*p	**P**	**12 14 16.1**	**-8.8**
	comp=Z,0.5nm,0.4s,mb3.9						
ARCES	**ARCESS Array B**	**56.25**	**335**	P	**P**	**12 14 28.0**	**-0.7**
	comp=Z,3.0nm,1.1s,mb4.3,baz=79,slow=13,SNR=3.8						
KAF	**Kangasniemi**	**56.68**	**326**	*e*p	**P**	**12 14 29.9**	**-2.0**
	comp=Z,0.7nm,0.4s,mb4.0						
FINES	**FINESS Array B**	**56.88**	**326**	P	**P**	**12 14 33.2**	**-0.1**
	comp=Z,2.5nm,0.4s,mb4.6,baz=97,slow=7.8,SNR=33						
BRTR	**Keskin Array B**	**57.01**	**299**	P	**P**	**12 14 34.4**	**-0.3**
	comp=Z,0.5nm,0.6s,mb3.8,baz=92,slow=6.4,SNR=4.3						
AKASG	**Malin Array Be**	**57.16**	**313**	P	**P**	**12 14 35.0**	**-0.5**
	comp=Z,3.6nm,0.7s,mb4.5,baz=66,slow=7.7,SNR=2.8						
WRAB	**Tennant Creek**	**59.20**	**148**	*e*P	**P**	**12 14 50.3**	**+0.2**
	comp=Z,5.0nm,0.9s,mb4.5						
ASAR	**Alice Springs**	**62.31**	**151**	P	**P**	**12 15 11.2**	**0.0**
	comp=Z,1.5nm,0.8s,mb4.2,baz=332,slow=6.7,SNR=23						
NOA	**NORSAR Array B**	**63.92**	**327**	P	**P**	**12 15 20.5**	**-1.0**
	comp=Z,2.6nm,0.8s,mb4.3,baz=70,slow=6.5,SNR=7.2						
COLA	**College**	**67.37**	**26**	*e*P	**P**	**12 15 44.0**	**+0.4**
	comp=Z,3.7nm,1.0s,mb4.4						
ILAR	**Eielson Array**	**67.78**	**26**	P	**P**	**12 15 44.8**	**-1.4**
	comp=Z,0.7nm,1.0s,mb3.6,baz=286,slow=6.1,SNR=7.2						
CDF	**Champ du Feu**	**71.29**	**316**	*e*P	**P**	**12 16 09.7**	**+1.5**
LPG	**La Plagne**	**73.01**	**313**	*e*P	**P**	**12 16 19.4**	**+0.8**
	comp=Z,9.9nm,0.8s,mb4.5						
LPG	**La Plagne**	**73.01**	**313**	*e*P	**P**	**12 16 19.4**	**+0.8**
	comp=Z,4.9nm,0.8s,mb4.5						
LPL	**La Plagne**	**73.02**	**313**	*e*P	**P**	**12 16 19.2**	**+0.6**
	comp=Z,5.8nm,0.7s,mb4.3						
LPL	**La Plagne**	**73.02**	**313**	*e*P	**P**	**12 16 19.2**	**+0.6**
	comp=Z,2.9nm,0.7s,mb4.3						
MBDF	**Montbardon**	**73.38**	**313**	*e*P	**P**	**12 16 21.1**	**+0.3**
	comp=Z,3.8nm,0.8s,mb4.1						
MBDF	**Montbardon**	**73.38**	**313**	*e*P	**P**	**12 16 21.1**	**+0.3**
	comp=Z,1.9nm,0.8s,mb4.1						
ORIF	**Oris-en-Rattie**	**73.83**	**313**	*e*P	**P**	**12 16 24.2**	**+0.7**
	comp=Z,16nm,1.1s,mb4.6						
ORIF	**Oris-en-Rattie**	**73.83**	**313**	*e*P	**P**	**12 16 24.2**	**+0.7**
	comp=Z,8.1nm,1.1s,mb4.6						
SMF	**Signal de Mont**	**74.18**	**315**	*e*P	**P**	**12 16 25.2**	**-0.3**
MDT	**Midelt**	**87.37**	**308**	LR	LR	12 57 23.9	
	comp=Z,41nm,21.2s,baz=354,slow=36						

IDC ***03*** *12:21:09.0±1.6,32.˚38S×178.˚64W,h0km,mb4.2/3, mb1 4.3/5,mb1mx4.0/15,mbtmp4.3/5,ML3.9/1,MS3.5/2, Ms1 3.7/2,ms1mx3.2/15,Error ellipse: s-maj=41.5km s-min=28.9km az=61.0*

ISC 03 12:21:11.8±1.8,32.˚83S±0.˚08×178.˚1W±0.˚2,h35km,n22,
σ1s15/23,mb4.2/3,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**6.02**	**209**	*e*PN	**Pn**	**12 22 39.3**	**+0.9**
PUZ				SN	**Sn**	**12 23 46.4**	**+0.4**
CNGZ	**Carnagh Statio**	**6.39**	**207**	*e*PN	**Pn**	**12 22 43.7**	**+0.2**
MWZ	**Matawai**	**6.55**	**212**	*e*PN	**Pn**	**12 22 46.0**	**+0.4**
URZ	**Urewera** 4.7nm,0.3s,baz=270,slow=12,SNR=34	**6.68**	**214**	Pn	**Pn**	**12 22 49.7**	**+2.3**
URZ				Sn	**Sn**	**12 24 00.9**	**-1.4**
	4.4nm,0.3s,baz=246,slow=20,SNR=7.6						
URZ	**Urewera**	**6.68**	**214**	*e*PN	**Pn**	**12 22 48.1**	**+0.7**
URZ				SN	**Sn**	**12 24 02.4**	**+0.1**
WCZ	**Waipu Caves**	**6.98**	**242**	PN	**Pn**	**12 22 54.3**	**+2.8**
KNZ	**Kokohu**	**7.07**	**208**	*e*PN	**Pn**	**12 22 52.4**	**-0.3**
KNZ				SN	**Sn**	**12 24 10.8**	**-1.0**
MHGZ	**Mahia Peninsul**	**7.09**	**206**	*e*PN	**Pn**	**12 22 52.9**	**-0.2**
OUZ	**Omahuta**	**7.30**	**249**	*e*PN	**Pn**	**12 22 57.4**	**+1.4**
CKHZ	**Cape Kidnapper**	**7.85**	**208**	SN	**Sn**	**12 24 30.1**	**-0.9**
KAHZ	**Kahuranaki**	**8.05**	**209**	*e*PN	**Pn**	**12 23 05.3**	**-0.9**
HOWZ	**Holdsworth Sta**	**9.54**	**211**	SN	**Sn**	**12 25 05.6**	**-7.0**
LTZ	**Lake Taylor**	**12.51**	**215**	SN	**Sn**	**12 26 14.4**	**-11**
MQZ	**McQueen's Vall**	**13.06**	**211**	SN	**Sn**	**12 26 27.4**	**-11**
RPZ	**Rata Peaks** 0.5nm,0.3s,baz=28,slow=17,SNR=3.1	**13.80**	**215**	Pn	**Pn**	**12 24 26.3**	**+1.5**
RPZ				Sn	**Sn**	**12 26 43.5**	**-13**
	0.7nm,0.3s,baz=96,slow=19,SNR=7.8						
RAR	**Rarotonga** comp=Z,88nm,20.8s,baz=99,slow=28	**19.97**	**59**	LR	LR	12 30 28.1	
CTA	**Charters Tower** 2.7nm,0.8s,mb4.4,baz=108,slow=10,SNR=4.3	**34.18**	**283**	P	**P**	**12 27 53.0**	**-1.0**
ASAR	**Alice Springs** 1.0nm,0.5s,mb3.8,baz=111,slow=7.6,SNR=32	**42.95**	**270**	P	**P**	**12 29 05.5**	**-2.0**
QSPA	**South Pole Qui** 1.7nm,0.6s,mb4.3,baz=20,slow=2.3,SNR=24	**57.29**	**180**	P	**P**	**12 31 02.3**	**+6.9**
CMAR	**Chiang Mai Arr** comp=Z,39nm,18.6s,baz=330,slow=35	**94.12**	**289**	LR	LR	13 15 29.4	
FINES	**FINESS Array B**	**147.38**	**339**	PKPbc	PKPbc	12 40 51.0	0.0
	2.2nm,0.5s,mb4.2,slow=4.3,SNR=13						
TORD	**Torodi Ar. Bea** 0.4nm,0.6s,baz=177,slow=5.1,SNR=6.6	**160.41**	**179**	PKPab	PKPab	12 41 52.6	+3.5

ISCJB ***03*** *12:36:21.6±0.8,22.˚34S±0.˚08×179.˚2W±0.˚1,h597km±13km, mb4.1/15,Error ellipse: s-maj=16.7km s-min=9.8km az=36.2*

IDC ***03*** *12:36:21.9±2.2,22.˚24S×179.˚17W,h577km±27km,mb3.3/6, mb1 3.6/8,mb1mx3.4/15,mbtmp3.5/8,Error ellipse: s-maj=30.9km s-min=16.6km az=139.0*

NEIC ***03*** *12:36:23.0±0.9,22.˚23S×179.˚28W,h591km±10km, mb4.3/10,Error ellipse: s-maj=17.7km s-min=11.2km az=136.0*

ISC 03 12:36:22.9±1.0,22.˚3S±0.˚1×179.˚2W±0.˚1,h593km±13km,
n33,σ1s04/28,mb4.1/15,1C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu** 140nm,0.5s	**5.19**	**330**	*e*Pn	**P**	**12 37 58.0**	**+1.0**
AFI	**Afiamalu** 1.6nm,0.3s,baz=211,slow=12,SNR=3.5	**10.93**	**42**	P	**P**	**12 38 50.0**	**-1.0**
AFI				S	**S**	**12 40 47.8**	**-4.6**
	1.0nm,0.3s,baz=75,slow=19,SNR=3.1						
URZ	**Urewera** 18nm,0.3s	**16.24**	**190**	*e*P	**P**	**12 39 41.4**	**-1.2**
URZ				S	**S**	**12 42 20.3**	**-4.9**
URZ	**Urewera** 6.7nm,0.3s,baz=37,slow=10.0,SNR=22	**16.24**	**190**	P	**P**	**12 39 41.4**	**-1.2**
URZ				S	**S**	**12 42 20.3**	**-4.9**
	0.6nm,0.3s,baz=126,slow=19,SNR=4.0						
RPZ	**Rata Peaks** 11nm,0.9s,mb4.5,baz=36,slow=14,SNR=3.6	**22.85**	**198**	P	**P**	**12 40 43.1**	**+0.9**
ARMA	**Armidale**	**27.29**	**247**	*e*P	**P**	**12 41 23.0**	**+1.5**
ARMA	**Armidale** 5.3nm,0.4s,mb4.5	**27.29**	**247**	*e*P	**P**	**12 41 22.8**	**+1.2**
EIDS	**Eidsvold** 3.2nm,0.5s,mb4.2	**27.31**	**258**	*e*P	**P**	**12 41 21.2**	**-0.5**
CTA	**Charters Tower** 7.7nm,0.4s,mb4.7	**32.22**	**267**	*e*P	**P**	**12 42 03.8**	**-0.2**
CTAO	**Charters Tower** 9.5nm,0.5s,mb4.7	**32.22**	**267**	*e*P	**P**	**12 42 03.5**	**-0.6**
STKA	**Stephens Creek** 3.6nm,1.3s,mb3.7	**36.00**	**246**	*e*P	**P**	**12 42 36.1**	**+0.6**
STKA	**Stephens Creek** 2.7nm,0.5s,mb4.0,baz=87,slow=11,SNR=8.9	**36.00**	**246**	P	**P**	**12 42 35.8**	**+0.3**
ASAR	**Alice Springs** 7.3nm,0.6s,mb4.4,baz=92,slow=8.3,SNR=128	**43.02**	**259**	P	**P**	**12 43 31.5**	**-0.2**
ASAR				S	**S**	**12 49 11.2**	**-4.4**
	1.7nm,1.2s,baz=100,slow=14,SNR=4.2						
WRAB	**Tennant Creek** 7.9nm,0.8s,mb4.3	**43.24**	**264**	*e*P	**P**	**12 43 32.4**	**-1.1**
KAKA	**Kakadu** 8.2nm,0.6s,mb4.4	**46.90**	**273**	*e*P	**P**	**12 44 00.4**	**-1.0**
KAKA	**Kakadu** 4.4nm,0.4s,mb4.1	**46.90**	**273**	*e*P	**P**	**12 44 00.2**	**-1.2**
FITZ	**Fitzroy Crossi** 2.9nm,0.6s,mb3.8	**51.68**	**264**	*e*P	**P**	**12 44 36.3**	**-0.2**
FITZ	**Fitzroy Crossi** 4.9nm,0.5s,mb4.0	**51.68**	**264**	*e*P	**P**	**12 44 36.1**	**-0.3**
MBWA	**Marble Bar** 1.9nm,0.8s,mb4.0,baz=131,slow=3.6,SNR=10	**56.37**	**259**	*e*P	**P**	**12 45 08.5**	**-0.8**
QSPA	**South Pole Qui** 9.1nm,1.2s,mb4.1	**67.80**	**180**	*e*P	**P**	**12 46 25.3**	**+3.1**
**T

VLY	Voula,Athens	0.57	23	*e*Pn	Pg	12 47 23.4	0.0
VLY				*e*Sn	Sg	12 47 31.7	+0.8
VLY	Voula,Athens	0.57	23	*e*PN	Pg	12 47 23.4	0.0
VLY	Voula,Athens	0.57	23	*e*Pn	Pg	12 47 23.4	0.0
ATH	Athens Observa	0.66	14	*e*Pn	Pn	12 47 25.1	-2.7
ATH				*e*Sn	Sg	12 47 34.8	+1.0
ATH	Athens Observa	0.66	14	*e*PN	Pn	12 47 25.1	-2.7
ATH	Athens Observa	0.66	14	*e*Pn	Pn	12 47 25.1	-2.7
ATHU	Athens Univers	0.67	19	P	Pg	12 47 25.6	+0.3
ATHU				S	Sg	12 47 34.8	+0.6
ATHU	Athens Univers	0.67	19	P	Pg	12 47 25.6	+0.3
ATHU				S	Sg	12 47 34.8	+0.6
VLI	Veliai	0.76	217	*e*Pn	Pb	12 47 27.5	-0.2
VLI	Veliai	0.76	217	*e*PB	Pb	12 47 27.5	-0.2
VLI	Veliai	0.76	217	*e*Pn	Pb	12 47 27.5	-0.2
PTL	Penteli	0.77	21	*e*Pn	Pn	12 47 27.0	-2.3
PTL				*e*Sn	Sg	12 47 37.9	+0.6
PTL	Penteli	0.77	21	*e*PN	Pn	12 47 27.0	-2.3
PTL	Penteli	0.77	21	*e*Pn	Pn	12 47 27.0	-2.3
LTK	Loutraki	0.82	328	*e*PN	Pn	12 47 27.5	-2.4
LTK				*e*SN	Sn	12 47 38.7	-3.3
LTK	Loutraki	0.82	328	P	Pg	12 47 27.3	-0.8
LTK	Loutraki	0.82	328	P	Pg	12 47 27.3	-0.8
VLX	Vlachokerasia	0.90	273	*e*PN	Pn	12 47 29.4	-1.6
VLX				*e*SN	Sn	12 47 41.5	-2.6
VLX	Vlachokerasia	0.90	273	P	Pg	12 47 29.3	-0.4
VLX				S	Sg	12 47 41.7	+0.3
VLX	Vlachokerasia	0.90	273	P	Pg	12 47 29.3	-0.4
VLX				S	Sg	12 47 41.7	+0.3
GUR	Goura	1.11	304	*e*PN	Pn	12 47 32.2	-1.7
GUR				*e*SN	Sn	12 47 48.2	-1.0
GUR	Goura	1.11	304	P	Pb	12 47 32.1	-1.5
GUR				S	Sg	12 47 48.3	+0.3
GUR	Goura	1.11	304	P	Pb	12 47 32.1	-1.5
GUR				S	Sg	12 47 48.3	+0.3
KYTH	Kithira	1.11	200	*e*Pn	Pn	12 47 34.7	+0.8
KYTH	Kithira	1.11	200	*e*PN	Pn	12 47 34.7	+0.8
KYTH	Kithira	1.11	200	*e*Pn	Pn	12 47 34.7	+0.8
ITM	Ithomi	1.27	264	*e*Pn	Pn	12 47 36.2	+0.1
ITM	Ithomi	1.27	264	*e*PN	Pn	12 47 36.2	+0.1
ITM	Ithomi	1.27	264	P	Pn	12 47 36.1	0.0
ITM	Ithomi	1.27	264	P	Pn	12 47 36.1	0.0
DSF	Desfina	1.33	325	P	Pn	12 47 36.5	-0.5
DSF				S	Sb	12 47 54.5	0.0
DSF	Desfina	1.33	325	P	Pn	12 47 36.5	-0.5
DSF				S	Sb	12 47 54.5	0.0
LKR	Lokris	1.38	343	*e*Pn	Pn	12 47 37.2	-0.4
LKR				*e*Sn	Sn	12 47 55.5	-0.4
LKR	Lokris	1.38	343	*e*PN	Pn	12 47 37.2	-0.4
LKR				*e*SN	Sn	12 47 55.5	-0.4
LKR	Lokris	1.38	343	P	Pn	12 47 37.2	-0.4
LKR				S	Sb	12 47 55.8	-0.1
LKR	Lokris	1.38	343	P	Pn	12 47 37.2	-0.4
LKR				*e*Sn	Sn	12 47 55.5	-0.4
LKR				S	Sb	12 47 55.8	-0.1
ATAL	Atalanti	1.42	344	P	Pn	12 47 37.6	-0.5
ATAL	Atalanti	1.42	344	P	Pn	12 47 37.6	-0.5
PYL	PYLOS	1.48	254	*e*PN	Pn	12 47 39.9	+0.9
PYL				*e*SN	Sn	12 47 59.8	+1.5
PYL	PYLOS	1.48	254	P	Pn	12 47 40.2	+1.2
PYL	PYLOS	1.48	254	*e*Pn	Pn	12 47 39.9	+0.9
PYL	PYLOS	1.48	254	P	Pn	12 47 40.2	+1.2
PYL				*e*Sn	Sn	12 47 59.8	+1.5
KALE	Kalithea	1.52	315	P	Pn	12 47 39.4	-0.1
KALE	Kalithea	1.52	315	P	Pn	12 47 39.4	-0.1
LAKA	Lakka	1.52	307	P	Pn	12 47 39.4	-0.1
LAKA	Lakka	1.52	307	P	Pn	12 47 39.4	-0.1
TRIZ	Trizonia	1.54	313	P	Pn	12 47 40.0	+0.2
TRIZ	Trizonia	1.54	313	P	Pn	12 47 40.0	+0.2
APE	Apeiranthos	1.63	99	*e*Pb	Pb	12 47 41.6	-0.9
APE	Apeiranthos	1.63	99	*e*PB	Pb	12 47 41.6	-0.9
APE	Apeiranthos	1.63	99	P	Pn	12 47 41.9	+0.8
APE	Apeiranthos	1.63	99	*e*Pb	Pb	12 47 41.6	-0.9
APE	Apeiranthos	1.63	99	P	Pn	12 47 41.9	+0.8
UPR	University Cam	1.67	305	*e*PN	Pn	12 47 41.6	+0.1
UPR	University Cam	1.67	305	P	Pn	12 47 45.4	+3.9
UPR	University Cam	1.67	305	*e*Pn	Pn	12 47 41.6	+0.1
UPR	University Cam	1.67	305	P	Pn	12 47 45.4	+3.9
EFP	Efpalio	1.68	311	*e*PN	Pn	12 47 42.1	+0.4
EFP	Efpalio	1.68	311	P	Pn	12 47 42.1	+0.4
EFP	Efpalio	1.68	311	P	Pn	12 47 42.1	+0.4
THR5	Thira Island,	1.73	121	P	Pn	12 47 44.0	+1.6
THR5	Thira Island,	1.73	121	P	Pn	12 47 44.0	+1.6
RLS	Riolos of Patr	1.78	295	*e*Pn	Pn	12 47 44.0	+0.9
RLS	Riolos of Patr	1.78	295	*e*PN	Pn	12 47 44.0	+0.9
RLS	Riolos of Patr	1.78	295	*e*Pn	Pn	12 47 44.0	+0.9
AOS	Alonnisos	1.86	9	P	Pn	12 47 43.4	-0.8
AOS	Alonnisos	1.86	9	P	Pn	12 47 43.4	-0.8
AGG	Agios Georgios	1.93	332	*e*Pn	Pn	12 47 45.8	+0.6
AGG	Agios Georgios	1.93	332	*e*PN	Pn	12 47 45.8	+0.6
AGG	Agios Georgios	1.93	332	P	Pn	12 47 45.8	+0.6
AGG	Agios Georgios	1.93	332	P	Pn	12 47 45.8	+0.6
KARN	Karanos	1.95	170	*e*PB	Pb	12 47 47.2	-0.7
NEO	Neokhori	1.99	354	*e*Pb	Pb	12 47 45.8	-2.8
NEO	Neokhori	1.99	354	*e*PB	Pb	12 47 45.8	-2.8
VAM	Vamos	2.00	164	*e*Pb	Pb	12 47 47.6	-1.1
VAM	Vamos	2.00	164	*e*PB	Pb	12 47 47.6	-1.1
XOR	Xorichti	2.05	353	P	Pn	12 47 46.4	-0.4
XOR	Xorichti	2.05	353	P	Pn	12 47 46.4	-0.4
EVR	Evrytania	2.08	320	*e*Pn	Pn	12 47 48.2	+1.0
EVR	Evrytania	2.08	320	*e*PN	Pn	12 47 48.2	+1.0
EVR	Evrytania	2.08	320	*e*Pn	Pn	12 47 48.2	+1.0
CHOS	Chios island	2.27	62	*e*PN	Pn	12 47 50.4	+0.5
CHOS	Chios island	2.27	62	P	Pn	12 47 50.3	+0.4
CHOS	Chios island	2.27	62	P	Pn	12 47 50.3	+0.4
KFL	Anninata	2.29	291	P	Pn	12 47 54.0	+3.8
KFL	Anninata	2.29	291	P	Pn	12 47 54.0	+3.8
IDI	Anoyia	2.32	151	*e*Pn	Pn	12 47 52.1	+1.5
IDI	Anoyia	2.32	151	*e*PN	Pn	12 47 52.1	+1.5
IDI	Anoyia	2.32	151	*e*Pn	Pn	12 47 52.1	+1.5
VLS	Valsamata	2.46	291	*e*PN	Pn	12 47 53.1	+0.6
VLS	Valsamata	2.46	291	*e*PN	Pn	12 47 53.1	+0.6
VLS	Valsamata	2.46	291	P	Pn	12 47 54.2	+1.7
VLS	Valsamata	2.46	291	*e*Pn	Pn	12 47 53.1	+0.6
VLS	Valsamata	2.46	291	P	Pn	12 47 54.2	+1.7
THL	Klokotos Trika	2.52	333	*e*PN	Pn	12 47 53.6	+0.3
THL	Klokotos Trika	2.52	333	P	Pn	12 47 53.8	+0.5
THL	Klokotos Trika	2.52	333	*e*Pn	Pn	12 47 53.6	+0.3
GVD	Gavdhos	2.53	169	*e*Pb	Pb	12 47 57.1	-0.7
GVD	Gavdhos	2.53	169	*e*PB	Pb	12 47 57.1	-0.7
SIVA	Sivas	2.54	155	*e*Pb	Pb	12 47 57.5	-0.4
SIVA	Sivas	2.54	155	*e*PB	Pb	12 47 57.5	-0.4
NPS	Neapolis	2.67	140	*e*Pb	Pb	12 47 58.1	-2.1
NPS	Neapolis	2.67	140	*e*PB	Pb	12 47 58.1	-2.1
LIT	Litokhoron	2.88	344	*e*Pn	Pn	12 47 57.3	-1.0
LIT	Litokhoron	2.88	344	*e*PN	Pn	12 47 57.3	-1.0
LIT	Litokhoron	2.88	344	P	Pn	12 47 57.1	-1.2
LIT	Litokhoron	2.88	344	*e*Pn	Pn	12 47 57.3	-1.0
PRK	Paraskevi	2.90	48	*e*Pb	Pb	12 48 02.0	-2.0
PRK	Paraskevi	2.90	48	*e*PB	Pb	12 48 02.0	-2.0
PRK	Paraskevi	2.90	48	P	Pn	12 48 05.1	+6.6
XRY	Khrisi	3.02	144	*e*Pn	Pn	12 48 03.4	+3.2
XRY	Khrisi	3.02	144	*e*PN	Pn	12 48 03.4	+3.2
XRY	Khrisi	3.02	144	*e*Pn	Pn	12 48 03.4	+3.2
OUR	Ouranopolis	3.02	7	P	Pn	12 47 59.2	-1.0
OUR	Ouranopolis	3.02	7	P	Pn	12 47 59.2	-1.0
ZKR	Zakros	3.11	134	*e*Pn	Pn	12 48 03.8	+2.4
ZKR	Zakros	3.11	134	*e*PN	Pn	12 48 03.8	+2.4
ZKR	Zakros	3.11	134	*e*Pn	Pn	12 48 03.8	+2.4
SOH	Sokhos	3.49	358	*e*Pn	Pn	12 48 06.8	+0.2
SOH	Sokhos	3.49	358	*e*PN	Pn	12 48 06.8	+0.2
SOH	Sokhos	3.49	358	*e*Pn	Pn	12 48 06.8	+0.2
NVR	Nevrokopi	4.03	4	*e*Pn	Pn	12 48 13.8	-0.2
NVR	Nevrokopi	4.03	4	*e*PN	Pn	12 48 13.8	-0.2
NVR	Nevrokopi	4.03	4	*e*Pn	Pn	12 48 13.8	-0.2
ALN	Alexandroupoli	4.07	28	*e*Pn	Pn	12 48 13.0	-1.6
ALN	Alexandroupoli	4.07	28	*e*PN	Pn	12 48 13.0	-1.6
ALN	Alexandroupoli	4.07	28	*e*Pn	Pn	12 48 13.0	-1.6
VTS	Vitosha	5.26	358	⇑P	Pn	12 48 32.3	+1.3
VTS	Vitosha	5.26	358	⇑*i*P	Pn	12 48 32.3	+1.3
VTS	Vitosha	5.26	358	⇑P	Pn	12 48 32.3	+1.3
TIP	Timpagrande 6.6nm,0.6s	5.63	291	*e*Pn	Pn	12 48 37.0	+1.0
TIP	Timpagrande 6.6nm,0.6s	5.63	291	*e*Pn	Pn	12 48 37.0	+1.0
CUC	Castrocucco 7.4nm,0.6s	6.58	296	*e*Pn	Pn	12 48 51.5	+2.4
CUC	Castrocucco 7.4nm,0.6s	6.58	296	*e*Pn	Pn	12 48 51.5	+2.4
GZR	Gura Zlata	8.08	356	⇓P	Pn	12 49 11.4	+1.8
GZR	Gura Zlata	8.08	356	⇓*i*P	Pn	12 49 11.4	+1.8
GZR	Gura Zlata	8.08	356	⇓P	Pn	12 49 11.4	+1.8
VOIR		8.18	8	⇑P	Pn	12 49 11.6	+0.6
VOIR		8.18	8	⇑*i*P	Pn	12 49 11.6	+0.5
VOIR		8.18	8	⇑P	Pn	12 49 11.6	+0.5
BRTR	Keskin Array B 0.2nm,0.3s,baz=249,slow=14,SNR=5.5	8.29	70	Pn	Pn	12 49 12.5	0.0
BRTR	Keskin Array B	8.29	70	Pn	Pn	12 49 12.5	-0.1
MLR	Muntele Rosu	8.36	12	⇓P	Pn	12 49 14.6	+1.2
MLR	Muntele Rosu	8.36	12	⇓*i*P	Pn	12 49 14.6	+1.2
MLR	Muntele Rosu	8.36	12	⇓P	Pn	12 49 14.6	+1.2
VRI	Vrincioaia	8.86	15	⇑P	Pn	12 49 22.0	+1.6
VRI	Vrincioaia	8.86	15	⇑*i*P	Pn	12 49 22.0	+1.6
VRI	Vrincioaia	8.86	15	⇑P	Pn	12 49 22.0	+1.6
CABF	La Chapelle 15nm,1.0s	15.91	311	*e*P	Pn	12 50 57.9	+1.8
LOR	Lormes 6.2nm,0.8s	17.56	311	*e*P	Pn	12 51 19.7	+2.6
LOR	Lormes 3.1nm,0.8s	17.56	311	*e*P	Pn	12 51 19.7	+2.6
LOR	Lormes 3.1nm,0.8s	17.56	311	*e*P	Pn	12 51 19.7	+2.6
SSF	Saint Saulge 6.0nm,0.8s	17.68	310	*e*P	Pn	12 51 21.1	+2.5
SSF	Saint Saulge 3.0nm,0.8s	17.68	310	*e*P	Pn	12 51 21.1	+2.5
SSF	Saint Saulge 3.0nm,0.8s	17.68	310	*e*P	Pn	12 51 21.1	+2.5
RJF	Les Rejaudoux	18.30	303	*e*P	Pn	12 51 28.3	+2.1
RJF	Les Rejaudoux	18.30	303	*e*P	Pn	12 51 28.3	+2.1
MFF	Saint Martin d	19.82	305	*e*P	Pn	12 51 45.0	+0.5
LDF	La Druitiere 5.7nm,0.5s	20.55	311	*e*P	P	12 51 49.4	-1.5
LDF	La Druitiere 2.8nm,0.5s	20.55	311	*e*P	P	12 51 49.4	-1.5
LDF	La Druitiere 2.8nm,0.5s	20.55	311	*e*P	P	12 51 49.4	-1.5
FLN	La Foliniere	20.84	311	*e*P	P	12 51 54.7	+0.7
FLN	La Foliniere	20.84	311	*e*P	P	12 51 54.7	+0.7
GRR	Gorron	20.92	310	*e*P	P	12 51 54.9	+0.1
GRR	Gorron	20.92	310	*e*P	P	12 51 54.9	+0.1
ESDC	Sonseca Array 0.2nm,0.3s,mb3.0,baz=80,slow=9.0,SNR=4.7	21.60	285	P	P	12 52 00.6	-1.7
SGMF	Saint Gilles	21.92	308	*e*P	P	12 52 05.4	-0.2
SGMF	Saint Gilles	21.92	308	*e*P	P	12 52 05.4	-0.2
HFS	Hagfors 4.7nm,1.0s,mb3.9,baz=155,slow=10,SNR=3.3	23.67	348	P	P	12 52 23.2	-0.7
NOA	NORSAR Array B 1.0nm,0.8s,mb3.4,baz=158,slow=8.5,SNR=3.3	24.97	346	P	P	12 52 36.6	+0.9
EKA	Eskdalemuir Ar 2.1nm,0.8s,mb3.7,baz=126,slow=9.2,SNR=8.3	25.50	323	P	P	12 52 42.1	+1.4
TORD	Torodi Ar. Bea 0.3nm,0.5s,mb3.4,baz=32,slow=11,SNR=2.9	30.98	225	P	P	12 53 28.6	-1.2
MKAR	Makanchi Array 0.3nm,0.4s,mb3.4,baz=272,slow=7.5,SNR=4.5	43.73	58	P	P	12 55 17.0	-0.5
ZALV	Zalesovo Beam 0.4nm,0.3s,mb3.7,baz=269,slow=8.6,SNR=2.6	44.50	48	P	P	12 55 22.4	-1.2
ZALV	comp=Z,21nm,18.4s,baz=46,slow=43			LR	LR	13 19 24.4	
ASAR	Alice Springs 0.1nm,0.3s,baz=310,slow=1.5,SNR=5.7	119.72	98	PKP	PKPdf	13 06 01.9	-0.9

*DDA **03** 12:50:14.7, 39˚.19N×29˚.37E, h7km±3km, Md2.9*
*ISCJB **03** 12:50:15.2±0.6, 39˚.19N±0˚.03×29˚.38E±0˚.03, h5km±7km, Error ellipse: s-maj=5.7km s-min=3.6km az=170.0*
*ISK **03** 12:50:15.0, 39˚.17N×29˚.38E, h7km, MD2.8*
*CSEM **03** 12:50:15.1±0.1, 39˚.20N×29˚.39E, h2km, MD2.9, Error ellipse: s-maj=2.4km s-min=2.2km az=147.0*

ISC 03 12:50:15.5±0.4, **39˚.21N**±0˚.02×**29˚.38E**±0˚.03, **h5**km±5km, **n55**, σ0**s56**/75, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	Gediz	0.14	145	*i* P	Pg	12 50 18.1	-0.2
GDZ				*i* S	Sg	12 50 20.7	+0.4
GDZ	Gediz	0.14	145	*i* P	Pg	12 50 18.1	-0.2
GDZ				*i* S	Sg	12 50 20.7	+0.5
DEMI	Demirci	0.54	253	*i* P	Pg	12 50 26.2	+0.4
DEMI				*i* S	Sg	12 50 33.5	+0.7
DEMI	Demirci	0.54	253	*i* P	Pg	12 50 26.2	+0.4
DEMI				*i* S	Sg	12 50 33.5	+0.7
ALT	Altintas	0.59	105	*e*PG	Pg	12 50 26.4	-0.4
ALT				*e*SG	Sg	12 50 35.0	+0.5
ALT	Altintas	0.59	105	*e*Pg	Pg	12 50 26.4	-0.4
ALT				*e*Sg	Sg	12 50 35.0	+0.5
KHAL	Karahalli	0.84	174	*i* P	Pg	12 50 31.3	-0.3
KHAL				*i* S	Sg	12 50 42.1	-0.4
KHAL	Karahalli	0.84	174	*i* P	Pg	12 50 31.3	-0.3
KHAL				*i* S	Sg	12 50 42.1	-0.3
KULA	Kula-Manisa	0.89	219	*e*PG	Pg	12 50 32.3	-0.2
KULA				*e*SG	Sg	12 50 44.2	+0.2
KULA	Kula-Manisa	0.89	219	*e*Pg	Pg	12 50 32.3	-0.2
KULA				*e*Sg	Sg	12 50 44.2	+0.2
KHL	Karahalli	0.89	172	*e*PG	Pg	12 50 32.3	-0.2
KHL				*e*SG	Sg	12 50 43.9	-0.1
KHL	Karahalli	0.89	172	*e*Pg	Pg	12 50 32.3	-0.2
KHL				*e*Sg	Sg	12 50 43.9	-0.1
ULDT	Uludag	0.95	349	*i* P	Pg	12 50 33.2	-0.6
ULDT				*i* S	Sg	12 50 45.3	-0.8
ULDT	Uludag	0.95	349	*i* P	Pg	12 50 33.2	-0.6
ULDT				*i* S	Sg	12 50 45.3	-0.8
CAVI	Cavuskoy	1.06	20	*e*PN	Pn	12 50 36.0	-0.9
CAVI	Cavuskoy	1.06	20	*e*Pn	Pn	12 50 36.0	-1.0
BORA	Eskisehir	1.07	51	*i* P	Pg	12 50 35.9	-0.1
BORA				*i* S	Sg	12 50 50.4	+0.5
BORA	Eskisehir	1.07	51	*i* P	Pg	12 50 35.9	-0.1
BORA				*i* S	Sg	12 50 50.4	+0.5
SHUT	Suhut-Afyon	1.13	125	*e*PN	Pn	12 50 37.3	-0.6
SHUT	Suhut-Afyon	1.13	125	*e*Pn	Pn	12 50 37.3	-0.6
ESKT	Eskisehir	1.19	74	*e*PN	Pn	12 50 38.1	-0.6
ESKT	Eskisehir	1.19	74	*e*Pn	Pn	12 50 38.1	-0.6
MDNY	Mudanya-Bursa	1.22	342	*e*PN	Pn	12 50 39.1	-0.1
BALB	Balikesir	1.24	291	*e*PN	Pn	12 50 39.4	0.0
BALB	Balikesir	1.24	291	*e*Pn	Pn	12 50 39.4	0.0
ADVT	Abdulvahap	1.26	13	*e*PN	Pn	12 50 40.0	+0.3
ADVT	Abdulvahap	1.26	13	*e*Pn	Pn	12 50 40.0	+0.3
AKHS	Akhisar	1.26	255	*i* P	Pg	12 50 39.7	+0.1
AKHS				*i* S	Sg	12 50 56.1	+0.2
AKHS	Akhisar	1.26	255	*i* P	Pg	12 50 39.7	+0.1
AKHS				*i* S	Sg	12 50 56.1	+0.2
AKS	Akhisar	1.26	255	*e*PN	Pn	12 50 39.1	-0.6
AKS	Akhisar	1.26	255	*e*Pn	Pn	12 50 39.1	-0.6
KCTX	Karacabey (Bur	1.32	324	*e*PN	Pn	12 50 40.8	+0.3
KCTX	Karacabey (Bur	1.32	324	*e*Pn	Pn	12 50 40.8	+0.3
YLV	Yalova	1.36	360	*e*PN	Pn	12 50 41.8	+0.7
YLV	Yalova	1.36	360	*e*Pn	Pn	12 50 41.8	+0.7
ARMT	Armutlu	1.41	344	*e*PN	Pn	12 50 41.7	-0.2
ARMT	Armutlu	1.41	344	*e*Pn	Pn	12 50 41.7	-0.2
BALY	Balya	1.46	292	*i* P	Pn	12 50 41.8	-0.7
BALY				*i* S	Sb	12 51 01.2	-0.8
BALY	Balya	1.46	292	*i* P	Pn	12 50 41.8	-0.7
BALY				*i* S	Sb	12 51 01.2	-0.8
GULT	Gulveren	1.51	35	*e*PN	Pn	12 50 44.0	+0.8
GULT	Gulveren	1.51	35	*e*Pn	Pn	12 50 44.0	+0.9
GONE	Gonen-Balikesi	1.55	303	*e*PN	Pn	12 50 43.4	-0.3
GONE	Gonen-Balikesi	1.55	303	*e*Pn	Pn	12 50 43.4	-0.3
HRT	Hereke	1.63	8	*e*PN	Pn	12 50 44.7	-0.1
HRT	Hereke	1.63	8	*e*Pn	Pn	12 50 44.7	-0.1
SVRH	Sivrihisar-ESK	1.68	81	*e*PN	Pn	12 50 46.0	+0.5
SVRH	Sivrihisar-ESK	1.68	81	*e*Pn	Pn	12 50 46.0	+0.5
MDU	Mudurnu	1.89	48	*e*PN	Pn	12 50 48.3	-0.2
MDU	Mudurnu	1.89	48	*e*Pn	Pn	12 50 48.3	-0.1
KIZT	Kizilcal	1.98	99	*e*PN	Pn	12 50 49.7	+0.1
KIZT	Kizilcal	1.98	99	*e*Pn	Pn	12 50 49.7	+0.1
RKY	Sarkoy-Tekirda	2.25	312	*e*PN	Pn	12 50 54.8	+1.5
RKY	Sarkoy-Tekirda	2.25	312	*e*Pn	Pn	12 50 54.8	+1.5
MFT	Murefte	2.25	315	*e*PN	Pn	12 50 54.8	+1.4
MFT	Murefte	2.25	315	*e*Pn	Pn	12 50 54.8	+1.4

*ISCJB **03** 12:52:12.7±0.6, 24˚.21N±0˚.03×122˚.47E±0˚.02, h32km±5km, Error ellipse: s-maj=5.0km s-min=3.2km az=173.5*
*TAP **03** 12:52:12.5, 24˚.23N×122˚.52E, h30km, ML2.9, D*
*JMA **03** 12:52:12.6±0.2, 24˚.68N×122˚.52E, h52km, M1.7*

ISC 03 12:52:13.0±0.5, **24˚.23N**±0˚.03×**122˚.47E**±0˚.02, **h30**km±4km, **n29**, σ0**s44**/56, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.54	64	P	Pb	12 52 23.9	-0.2
YOJ				S	Sb	12 52 32.1	+0.4
TWC	Suao baz=302	0.68	304	P	Pb	12 52 25.9	-0.6
TWC				S	Sb	12 52 34.9	-0.8
ENA	Nanau baz=285	0.70	287	*i* P	Pb	12 52 26.2	-0.4
ENA				*i* S	Sb	12 52 36.6	+0.6
TWD	Chiawan baz=260	0.81	260	P	Pn	12 52 28.3	-0.1
TWD				S	Sb	12 52 39.7	+0.4
ILA	Ilan baz=307	0.85	309	P	Pn	12 52 28.7	-0.2
ILA				*e*S	Sb	12 52 40.7	+0.4
TWE	Neicheng baz=302	0.88	304	P	Pn	12 52 29.0	-0.4
TWE				S	Sn	12 52 41.1	-0.1
TWB1	Santiao Chiao baz=328	0.89	330	*e*P	Pn	12 52 28.9	-0.6
ENTT	Nioudou baz=295	0.92	297	P	Pn	12 52 29.8	-0.1
ENTT				S	Sn	12 52 42.3	+0.2
NNS	Nan Shan baz=281	1.03	282	*e*P	Pn	12 52 31.5	+0.2
NNS				*e*S	Sn	12 52 44.9	+0.2
ESL	Shilin baz=247	1.04	247	*e*P	Pn	12 52 31.1	-0.4
ESL				*e*S	Sn	12 52 44.8	-0.2
NWF	Wu-fen Shan baz=321	1.05	323	*e*P	Pn	12 52 31.6	0.0
NWF				*e*S	Sn	12 52 45.5	+0.2
WHF	Hehuan Shan baz=265	1.11	266	*e*P	Pn	12 52 31.9	-0.6
WHF				*e*S	Sn	12 52 46.3	-0.3
NSK	Sanguang baz=293	1.11	294	*e*P	Pn	12 52 32.8	+0.4
NSK				*e*S	Sn	12 52 47.2	+0.4
IRIF	Iriomote-Funau	1.15	84	P	Pn	12 52 32.4	-0.6
IRIF				*e*S	Sn	12 52 47.7	-0.1
EHY	Hungye baz=236	1.28	236	*e*P	Pn	12 52 34.9	+0.1
EHY				*e*S	Sn	12 52 49.7	-1.1
TWF1	Yuli baz=231	1.39	231	*e*P	Pn	12 52 35.5	-0.8
TWF1				*e*S	Sn	12 52 52.8	-0.8
NSTT	Nanjuang baz=286	1.40	287	*e*P	Pn	12 52 36.5	0.0
NSTT				*e*S	Sn	12 52 54.2	+0.2
JKRS	Kuro-shima	1.40	89	P	Pn	12 52 36.9	+0.4
JKRS				*e*S	Sn	12 52 54.8	+0.8
SMLT	Sun Moon Lake baz=256	1.48	257	*e*P	Pn	12 52 37.9	+0.3
TYC	Yuchr baz=257	1.51	258	*e*P	Pn	12 52 38.0	0.0
TYC				*e*S	Sn	12 52 56.9	+0.2
JIJ	Ishigaki jima	1.53	85	P	Pn	12 52 38.0	-0.2
JIJ				*e*S	Sn	12 52 56.7	-0.4
TWQ1	Liyutan baz=274	1.56	275	*e*P	Pn	12 52 38.2	-0.4
TWQ1				*e*S	Sn	12 52 57.4	-0.3
ELDTW	Lidau baz=232	1.69	233	*e*P	Pn	12 52 40.6	+0.2
ELDTW				*e*S	Sn	12 53 01.3	+0.3
CHN5	Tsauling baz=249	1.76	249	*e*P	Pn	12 52 42.1	+0.8
CHN5				*e*S	Sn	12 53 02.8	0.0
STYT	Tauyuan baz=236	1.90	236	*e*P	Pn	12 52 43.6	+0.3
STYT				*e*S	Sn	12 53 06.5	+0.3
TWG	Pinlang baz=223	1.90	223	*e*P

VLX	Vlachokerasia	0.88	273	P	Pg	13 01 25.5	+0.5	KEK	Kerkira	3.74	311	ePn	Pn	13 02 06.6	+0.7
VLX				eSn	Sn	13 01 37.0	-2.5	KEK	Kerkira	3.74	311	ePN	Pn	13 02 06.6	+0.7
GUR	Goura	1.09	304	ePN	Pn	13 01 27.9	-1.5	KEK	Kerkira	3.74	311	ePn	Pn	13 02 06.6	+0.7
GUR				eSN	Sn	13 01 43.9	-0.7	AKHS	Akhisar	3.75	64	*i* P	Pg	13 02 20.3	+0.6
GUR	Goura	1.09	304	P	Pg	13 01 27.8	-1.1	AKS	Akhisar	3.75	64	ePN	Pn	13 02 12.8	+6.9
GUR				S	Sn	13 01 43.9	-0.7	SRS	Serrai	3.78	1	P	Pn	13 02 06.6	+0.2
GUR	Goura	1.09	304	P	Pg	13 01 27.8	-1.1	SRS	Serrai	3.78	1	P	Pn	13 02 06.6	+0.2
GUR				S	Sn	13 01 43.9	-0.7	FNA	Florina	3.82	335	P	Pn	13 02 10.0	+3.1
KYTH	Kithira	1.11	199	ePn	Pn	13 01 30.5	+0.8	FNA	Florina	3.82	335	P	Pn	13 02 10.0	+3.1
KYTH	Kithira	1.11	199	ePN	Pn	13 01 30.5	+0.8	YER	Yerkesik	3.83	91	ePN	Pn	13 02 07.7	+0.6
KYTH	Kithira	1.11	199	ePn	Pn	13 01 30.5	+0.8	YER	Yerkesik	3.83	91	ePn	Pn	13 02 07.7	+0.6
ITM	Ithomi	1.25	264	ePn	Pn	13 01 32.0	+0.4	KNT	Kendrikon	3.85	353	P	Pn	13 02 07.8	+0.4
ITM	Ithomi	1.25	264	ePN	Pn	13 01 32.0	+0.4	KNT	Kendrikon	3.85	353	P	Pn	13 02 07.8	+0.4
ITM	Ithomi	1.25	264	P	Pn	13 01 31.9	+0.3	ARG	Arkhangelos	3.89	105	ePn	Pn	13 02 09.8	+1.9
ITM	Ithomi	1.25	264	ePn	Pn	13 01 32.0	+0.4	ARG	Arkhangelos	3.89	105	ePN	Pn	13 02 09.8	+1.9
DSF	Desfina	1.32	325	P	Pn	13 01 32.1	-0.4	ARG	Arkhangelos	3.89	105	ePn	Pn	13 02 09.8	+1.9
DSF				S	Sb	13 01 50.4	+0.5	KBN	Korca	3.90	328	ePN	Pg	13 02 21.4	-1.3
DSF	Desfina	1.32	325	P	Pn	13 01 32.1	-0.4	ENEZ	Enez	3.98	31	ePN	Pg	13 02 20.0	-4.2
DSF				S	Sb	13 01 50.4	+0.5	NVR	Nevrokopi	4.02	4	ePn	Pn	13 02 09.4	-0.3
LKR	Lokris	1.37	344	ePn	Pn	13 01 33.1	-0.2	NVR	Nevrokopi	4.02	4	ePN	Pn	13 02 09.4	-0.3
LKR	Lokris	1.37	344	ePN	Pn	13 01 33.1	-0.2	NVR	Nevrokopi	4.02	4	ePn	Pn	13 02 09.4	-0.3
LKR	Lokris	1.37	344	P	Pn	13 01 33.0	-0.3	BALY	Balya	4.04	52	*i* P	Pg	13 02 22.4	-2.9
LKR				S	Sb	13 01 51.4	0.0	VAY	Valandovo	4.05	350	ePn	Pn	13 02 10.1	0.0
LKR	Lokris	1.37	344	ePn	Pn	13 01 33.1	-0.2	ALN	Alexandroupoli	4.08	28	ePn	Pn	13 02 05.9	-4.6
LKR				S	Sb	13 01 51.4	0.0	ERIK	Erikli-Kesan	4.08	34	ePN	Pg	13 02 21.5	-4.7
ATAL	Atalanti	1.41	345	P	Pn	13 01 33.2	-0.6	BALB	Balikesir	4.15	55	ePN	Pg	13 02 20.0	-7.4
ATAL	Atalanti	1.41	345	P	Pn	13 01 33.2	-0.6	KULA	Kula-Manisa	4.26	72	ePN	Pn	13 02 18.1	+5.1
PYL	PYLOS	1.46	253	ePN	Pn	13 01 36.2	+1.7	KULA	Kula-Manisa	4.26	72	ePn	Pn	13 02 18.1	+5.1
PYL	PYLOS	1.46	253	P	Pn	13 01 35.9	+1.4	GONE	Gonen-Balikesi	4.26	49	ePN	Pg	13 02 21.1	-8.4
PYL	PYLOS	1.46	253	P	Pn	13 01 35.9	+1.4	KRUS	Krusevo	4.39	337	ePn	Pn	13 02 15.7	+1.0
PYL	PYLOS	1.46	253	ePn	Pn	13 01 36.3	+1.8	MFT	Murefte	4.54	39	ePN	Pg	13 02 27.2	-7.7
LAKA	Lakka	1.50	308	P	Pn	13 01 35.0	0.0	ELL	Elmali	5.17	95	ePN	Pn	13 02 26.5	+1.0
LAKA	Lakka	1.50	308	P	Pn	13 01 35.0	0.0	ELL	Elmali	5.17	95	ePn	Pn	13 02 26.5	+1.0
KALE	Kalithea	1.50	315	P	Pn	13 01 35.0	-0.1	VTS	Vitosha	5.26	358	⇓P	Pn	13 02 26.8	+0.2
KALE				S	Sn	13 01 56.0	+1.3	VTS	Vitosha	5.26	358	⇓P	Pn	13 02 26.8	+0.1
KALE	Kalithea	1.50	315	P	Pn	13 01 35.0	-0.1	PUK	Puka	5.46	331	ePN	Pn	13 02 34.7	+5.3
KALE				S	Sn	13 01 56.0	+1.3	TIP	Timpagrande	5.61	291	P	Pn	13 02 33.4	+1.9
TRIZ	Trizonia	1.52	313	P	Pn	13 01 35.4	+0.1	TIP	Timpagrande	5.61	291	P	Pn	13 02 33.4	+1.9
TRIZ	Trizonia	1.52	313	P	Pn	13 01 35.4	+0.1	BARS	Barje	5.63	347	⇑*i* Pn	Pn	13 02 33.1	+1.4
UPR	University Cam	1.65	306	ePN	Pn	13 01 38.4	+1.3	PE1	Pezze di Greco	5.86	308	ePn	Pn	13 02 36.2	+1.3
UPR	University Cam	1.65	306	ePn	Pn	13 01 38.4	+1.3	SG1	Sgolgore (BA)	6.35	306	ePn	Pn	13 02 42.4	+0.7
APE	Apeiranthos	1.65	99	ePN	Pn	13 01 37.5	+0.4	SG1				eSn	Sn	13 03 52.8	-1.4
APE				eSN	Sn	13 01 56.3	-2.1	CUC	Castrocucco	6.56	296	P	Pn	13 02 48.3	+3.7
APE	Apeiranthos	1.65	99	ePb	Pb	13 01 37.6	-1.0	STON	Ston	7.09	323	⇑*i* Pn	Pn	13 02 50.4	-1.5
APE	Apeiranthos	1.65	99	ePB	Pb	13 01 37.6	-1.0	STON				Sn	Sn	13 04 08.6	-3.9
APE	Apeiranthos	1.65	99	P	Pn	13 01 37.5	+0.4	BBLS	Lazići	7.23	336	⇑*i* Pn	Pn	13 02 54.0	+0.3
APE	Apeiranthos	1.65	99	P	Pn	13 01 37.5	+0.4	DIVS	Divibare	7.26	340	*i* Pn	Pn	13 02 53.3	-0.9
APE				eSn	Sn	13 01 56.3	-2.2	VOIR		8.18	8	⇑P	Pn	13 03 07.5	+0.7
EFP	Efpalio	1.66	312	ePN	Pn	13 01 38.0	+0.8	VOIR		8.18	8	⇑P	Pn	13 03 07.5	+0.7
EFP	Efpalio	1.66	312	P	Pn	13 01 37.7	+0.5	BRTR	Keskin Array B	8.31	70	Pn	Pn	13 03 07.0	-1.6
EFP	Efpalio	1.66	312	P	Pn	13 01 37.7	+0.5		0.1nm,0.3s,baz=249,slow=16,SNR=2.3						
EFP	Efpalio	1.66	312	ePn	Pn	13 01 38.0	+0.8	BRTR	Keskin Array B	8.31	70	Pn	Pn	13 03 07.0	-1.6
THR5	Thira Island,	1.75	121	P	Pn	13 01 39.8	+1.3	MLR	Muntele Rosu	8.36	12	⇑P	Pn	13 03 10.3	+1.1
THR5	Thira Island,	1.75	121	P	Pn	13 01 39.8	+1.3	MLR	Muntele Rosu	8.36	12	⇑P	Pn	13 03 10.3	+1.1
RLS	Riolos of Patr	1.76	295	ePn	Pn	13 01 39.7	+1.1	TLCR		8.81	25	⇑P	Pn	13 03 16.6	+1.2
RLS	Riolos of Patr	1.76	295	ePN	Pn	13 01 39.7	+1.1	TLCR		8.81	25	⇑P	Pn	13 03 16.6	+1.2
RLS	Riolos of Patr	1.76	295	ePn	Pn	13 01 39.7	+1.1	VRI	Vrincioaia	8.87	15	⇓P	Pn	13 03 17.0	+0.8
AOS	Alonnisos	1.86	9	P	Pn	13 01 39.1	-0.9	VRI	Vrincioaia	8.87	15	⇓P	Pn	13 03 17.0	+0.8
AOS	Alonnisos	1.86	9	P	Pn	13 01 39.2	-0.8	DRGR		9.47	357	⇑P	Pn	13 03 24.1	-0.4
AOS	Alonnisos	1.86	9	P	Pn	13 01 39.2	-0.8	DRGR		9.47	357	⇑P	Pn	13 03 24.0	-0.5
AGG	Agios Georgios	1.92	332	ePn	Pn	13 01 41.2	+0.4	NVLJ	Novalja	9.72	321	ePn	Pn	13 03 26.7	-1.3
AGG	Agios Georgios	1.92	332	ePN	Pn	13 01 41.2	+0.4	NVLJ				Sn	Sn	13 05 10.5	-6.8
AGG	Agios Georgios	1.92	332	P	Pn	13 01 41.4	+0.6	BOJS	Bojanci	10.24	325	ePn	Pn	13 03 34.0	-1.0
AGG	Agios Georgios	1.92	332	ePn	Pn	13 01 41.2	+0.4	BOJS				eSn	Sn	13 05 28.6	-1.1
KARN	Karanos	1.96	170	ePN	Pn	13 01 43.1	+1.8	BOJS	Bojanci	10.24	325	ePn	Pn	13 03 34.0	-1.0
KARN	Karanos	1.96	170	P	Pn	13 01 42.9	+1.6	BOJS				eSn	Sn	13 05 28.6	-1.2
KARN	Karanos	1.96	170	P	Pn	13 01 42.9	+1.6	MMAI	Mount Meron Ar	10.66	110	Pn	Pn	13 03 40.9	+0.1
NEO	Neokhori	1.98	354	ePb	Pb	13 01 41.7	-2.5		2.7nm,0.3s,baz=309,slow=14,SNR=3.6						
NEO	Neokhori	1.98	354	ePB	Pb	13 01 41.7	-2.5	EIL	Elat	12.24	125	Pn	Pn	13 04 01.6	-0.8
VAM	Vamos	2.01	163	ePb	Pb	13 01 43.4	-1.2		0.6nm,0.3s,baz=300,slow=14,SNR=2.9						
VAM	Vamos	2.01	163	ePB	Pb	13 01 43.4	-1.2	EIL	Elat	12.24	125	Pn	Pn	13 04 01.6	-0.8
XOR	Xorichti	2.04	354	P	Pn	13 01 42.2	-0.3	LPG	La Plagne	14.95	308	eP	Pn	13 04 42.1	+2.7
XOR	Xorichti	2.04	354	P	Pn	13 01 42.1	-0.4		7.7nm,0.7s						
XOR	Xorichti	2.04	354	P	Pn	13 01 42.2	-0.3	LPG	La Plagne	14.95	308	eP	Pn	13 04 42.1	+2.7
EVR	Evrytania	2.06	321	ePn	Pn	13 01 43.7	+0.9		3.8nm,0.7s						
EVR	Evrytania	2.06	321	ePN	Pn	13 01 43.7	+0.9	CABF	La Chapelle	15.89	311	eP	Pn	13 04 53.7	+2.0
EVR	Evrytania	2.06	321	ePn	Pn	13 01 43.7	+0.9		11nm,0.8s						
KFL	Anninata	2.28	291	P	Pn	13 01 49.9	+4.2	CABF	La Chapelle	15.89	311	eP	Pn	13 04 53.7	+2.0
KFL	Anninata	2.28	291	P	Pn	13 01 49.9	+4.2		5.4nm,0.8s						
CHOS	Chios island	2.29	62	ePN	Pn	13 01 46.4	+0.5	CABF	La Chapelle	15.89	311	eP	Pn	13 04 53.7	+2.0
CHOS	Chios island	2.29	62	P	Pn	13 01 46.5	+0.6		5.4nm,0.8s						
CHOS	Chios island	2.29	62	ePn	Pn	13 01 46.4	+0.5	SMF	Signal de Mont	17.28	309	eP	Pn	13 05 08.8	-0.5
IDI	Anoyia	2.33	151	ePn	Pn	13 01 47.8	+1.3		9.5nm,0.9s						
IDI	Anoyia	2.33	151	ePN	Pn	13 01 47.8	+1.3	SMF	Signal de Mont	17.28	309	eP	Pn	13 05 08.8	-0.5
IDI	Anoyia	2.33	151	ePn	Pn	13 01 47.8	+1.3		4.8nm,0.9s						
VLS	Valsamata	2.45	291	ePb	Pb	13 01 50.6	-1.5	SMF	Signal de Mont	17.28	309	eP	Pn	13 05 08.8	-0.5
VLS	Valsamata	2.45	291	ePB	Pb	13 01 50.6	-1.5		4.8nm,0.9s						
VLS	Valsamata	2.45	291	P	Pb	13 01 50.6	-1.5	LOR	Lormes	17.55	311	eP	Pn	13 05 15.0	+2.4
VLS	Valsamata	2.45	291	P	Pb	13 01 50.6	-1.5		7.1nm,0.8s						
THL	Klokotos Trika	2.51	333	ePN	Pn	13 01 49.2	+0.3	LOR	Lormes	17.55	311	eP	Pn	13 05 15.0	+2.4
THL	Klokotos Trika	2.51	333	P	Pn	13 01 48.6	-0.3		3.5nm,0.8s						
THL	Klokotos Trika	2.51	333	P	Pn	13 01 48.6	-0.3	LOR	Lormes	17.55	311	eP	Pn	13 05 15.0	+2.4
THL	Klokotos Trika	2.51	333	ePn	Pn	13 01 49.2	+0.3		3.5nm,0.8s						
GVD	Gavdhos	2.54	169	ePb	Pb	13 01 53.0	-0.6	AVF	Avril sur Loir	17.64	309	eP	Pn	13 05 12.7	-1.2
GVD	Gavdhos	2.54	169	ePB	Pb	13 01 53.0	-0.6		8.0nm,0.9s						
SIVA	Sivas	2.55	155	ePb	Pb	13 01 53.0	-0.8	AVF	Avril sur Loir	17.64	309	eP	Pn	13 05 12.7	-1.2
SIVA	Sivas	2.55	155	ePB	Pb	13 01 53.0	-0.8		4.0nm,0.9s						
SIVA	Sivas	2.55	155	P	Pn	13 01 53.6	+4.2	AVF	Avril sur Loir	17.64	309	eP	Pn	13 05 12.7	-1.2
SIVA	Sivas	2.55	155	P	Pn	13 01 53.6	+4.2		4.0nm,0.9s						
PAIG	Paliouri	2.60	3	P	Pn	13 01 49.3	-0.8	SSF	Saint Saulge	17.67	310	eP	Pn	13 05 16.4	+2.3
PAIG	Paliouri	2.60	3	P	Pn	13 01 49.5	-0.6		6.7nm,0.7s						
PAIG	Paliouri	2.60	3	P	Pn	13 01 49.5	-0.6	SSF	Saint Saulge	17.67	310	eP	Pn	13 05 16.4	+2.3
LKD2	Lefkada island	2.67	304	P	Pn	13 01 54.9	+3.9		3.3nm,0.7s						
LKD2	Lefkada island	2.67	304	P	Pn	13 01 54.9	+3.9	SSF	Saint Saulge	17.67	310	eP	Pn	13 05 16.4	+2.3
NPS	Neapolis	2.69	140	ePn	Pn	13 01 52.6	+1.3		3.3nm,0.7s						
NPS	Neapolis	2.69	140	ePN	Pn	13 01 52.6	+1.3	MFF	Saint Martin d	19.80	305	eP	Pn	13 05 40.6	+0.5
NPS	Neapolis	2.69	140	ePn	Pn	13 01 52.6	+1.3	MFF	Saint Martin d	19.80	305	eP	Pn	13 05 40.6	+0.5
LIT	Litokhoron	2.87	345	ePn	Pn	13 01 53.3	-0.6	LDF	La Druitiere	20.53	311	eP	P	13 05 46.2	-0.3
LIT	Litokhoron	2.87	345	ePN	Pn	13 01 53.3	-0.6		6.3nm,0.5s						
LIT	Litokhoron	2.87	345	P	Pn	13 01 53.0	-0.9	LDF	La Druitiere	20.53	311	eP	P	13 05 46.2	-0.3
LIT	Litokhoron	2.87	345	P	Pn	13 01 53.0	-0.9		3.2nm,0.5s						
LIT	Litokhoron	2.87	345	ePn	Pn	13 01 53.3	-0.6	LDF	La Druitiere	20.53	311	eP	P	13 05 46.2	-0.3
LIA	Limnos Island	2.89	27	ePn	Pn	13 01 53.7	-0.4		3.2nm,0.5s						
LIA	Limnos Island	2.89	27	ePN	Pn	13 01 53.7	-0.4	FLN	La Foliniere	20.82	311	eP	P	13 05 51.4	+1.8
LIA	Limnos Island	2.89	27	ePn	Pn	13 01 53.7	-0.4	FLN	La Foliniere	20.82	311	eP	P	13 05 51.4	+1.8
PRK	Paraskevi	2.91	48	ePb	Pb	13 01 56.7	-3.3	ESDC	Sonseca Array	21.58	285	P	P	13 05 57.5	-0.3
PRK	Paraskevi	2.91	48	ePB	Pb	13 01 56.7	-3.3		1.2nm,0.5s,mb3.5,baz=84,slow=10,SNR=4.7						
PRK	Paraskevi	2.91	48	P	Pn	13 01 57.0	+2.6	ESDC	Sonseca Array	21.58	285	P	P	13 05 57.5	-0.3
PRK	Paraskevi	2.91	48	P	Pn	13 01 57.0	+2.6	SGMF	Saint Gilles	21.90	308	eP	P	13 06 02.2	+1.0
BLCB	Balcova	3.00	69	ePN	Pn	13 02 01.7	+5.4		28nm,1.0s,mb4.3						
OUR	Ouranopolis	3.02	7	P	Pn	13 01 55.0	-1.0	SGMF	Saint Gilles	21.90	308	eP	P	13 06 02.2	+1.0
OUR	Ouranopolis	3.02	7	P	Pn	13 01 55.0	-1.0		14nm,1.0s,mb4.4						
XRY	Khrisi	3.04	143	ePb	Pb	13 01 59.8	-2.3	SGMF	Saint Gilles	21.90	308	eP	P	13 06 02.2	+1.0
XRY	Khrisi	3.04	143	ePB	Pb	13 01 59.8	-2.3		14nm,1.0s,mb4.3						
BODT	Bodrum	3.06	94	ePN	Pn	13 01 56.9	+0.3	QUIF	Quistinic	22.18	307	eP	P	13 06 04.4	+0.3
BODT				eSN	Sn	13 02 29.8	-3.5		117nm,1.4s,mb4.8						
BODT	Bodrum	3.06	94	ePn	Pn	13 01 56.9	+0.3	QUIF	Quistinic	22.18	307	eP	P	13 06 04.4	+0.3
BODT				eSn	Sn	13 02 29.8	-3.5		58nm,1.4s,mb4.8						
JAN	Janina	3.11	319	ePb	Pb	13 02 00.6	-2.8	QUIF	Quistinic	22.18	307	eP	P	13 06 04.4	+0.3
JAN	Janina	3.11	319	ePB	Pb	13 02 00.6	-2.8		58nm,1.4s,mb4.8						
ZKR	Zakros	3.13	134	ePb	Pb	13 02 01.0	-2.7	ROSF	Rostrenen	22.38	308	eP	P	13 06 02.8	-3.5
ZKR	Zakros	3.13	134	ePB	Pb	13 02 01.0	-2.7		142nm,1.6s,mb4.8						
IZM	Izmir	3.17	69	ePN	Pn	13 02 03.7	+5.7	ROSF	Rostrenen	22.38	308	eP	P	13 06 02.8	-3.5
KZN	Kozani	3.26	336	ePn	Pn	13 01 59.4	+0.2		71nm,1.6s,mb4.8						
KZN	Kozani	3.26	336	ePN	Pn	13 01 59.4	+0.2	HFS	Hagfors	23.66	348	P	P	13 06 19.0	-0.6
KZN	Kozani	3.26	336	ePn	Pn	13 01 59.4	+0.2		1.2nm,0.6s,mb3.5,baz=146,slow=10,SNR=4.4						
HORT	Hortiatis	3.27	355	P	Pn	13 01 59.5	+0.1	HFS	Hagfors	23.66	348	P	P	13 06 19.0	-0.6
HORT	Hortiatis	3.27	355	P	Pn	13 01 59.7	+0.3	FINES	FINESS Array B	24.19	3	P	P	13 06 23.4	-1.0
HORT	Hortiatis	3.27	355	P	Pn	13 01 59.5	+0.1		2.6nm,0.8s,mb3.7,baz=171,slow=9.8,SNR=4.2						
IGT	Igoumenitsa	3.31	313	P	Pn	13 02 03.8	+3.9	FINES	FINESS Array B	24.19	3	P	P	13 06 23.4	-1.0
IGT	Igoumenitsa	3.31	313	P	Pn	13 02 03.8	+3.9	NOA	NORSAR Array B	24.96	346	P	P	13 06 31.2	-0.2
DAT	Datca	3.33	99	ePN	Pn	13 02 00.5	+0.3		1.2nm,0.7s,mb3.5,baz=147,slow=9.8,SNR=4.2						
DAT	Datca	3.33	99	ePn	Pn	13 02 00.5	+0.3	NOA	NORSAR Array B	24.96	346	P	P	13 06 31.2	-0.2
EZN	Ezine	3.34	41	ePN	Pn	13 02 09.7	+9.3	EKA	Eskdalemuir Ar	25.49	323	P	P	13 06 36.3	+0.1
MLSB	Milas	3.42	89	ePN	Pn	13 02 02.3	+0.9		1.4nm,0.6s,mb3.7,baz=129,slow=8.5,SNR=10						
MLSB	Milas	3.42	89	ePn	Pn	13 02 02.3	+0.9	EKA	Eskdalemuir Ar	25.49	323	P	P	13 06 36.3	0.0
GADA	Gvkgeada	3.42	33	ePN	Pg	13 02 12.6	-1.0	TORD	Torodi Ar. Bea	30.97	225	P	P	13 07 25.5	0.0
KARP	Karpathos	3.46	120	ePn	Pn	13 02 02.8	+0.9		1.0nm,0.6s,mb3.8,baz=34,slow=11,SNR=6.1						
KARP	Karpathos	3.46	120	ePN	Pn	13 02 02.8	+0.9	TORD				LR	LR	13 20 10.7	
KARP	Karpathos	3.46	120	ePn	Pn	13 02 02.8	+0.9		comp=Z,27nm,18.9s,baz=165,slow=37						
SOH	Sokhos	3.49	358	ePn	Pn	13 02 02.7	+0.4	DBIC	Dimbokro	39.96	227	P	P	13 08 42.8	0.0
SOH	Sokhos	3.49	358	ePN	Pn	13 02 02.7	+0.4		2.2nm,0.7s,mb4.0,baz=30,slow=8.1,SNR=2.0						
SOH	Sokhos	3.49	358	ePn	Pn	13 02 02.7	+0.4	DBIC	Dimbokro	39.96	227	P	P	13 08 42.8	0.0
NEST	Nestorio	3.62	329	P	Pn	13 02 05.7	+1.5	MKAR	Makanchi Array	43.74	58	P	P	13 09 12.8	-0.7
NEST	Nestorio	3.62	329	P	Pn	13 02 05.7	+1.5		0.5nm,0.6s,mb3.4,baz=283,slow=6.3,SNR=6.0						
GRG	Griva	3.72	347	P	Pn	13 02 06.6	+1.1	ZALV	Zalesovo Beam	44.51	48	P	P	13 09 18.7	-0.8
GRG	Griva	3.72	347	P	Pn	13 02 06.0	+0.5		0.4nm,0.4s,mb3.6,baz=270,slow=5.7,SNR=2.9						
GRG	Griva	3.72	347	P	Pn	13 02 06.0	+0.5	ZALV	Zalesovo Beam	44.51	48	P	P	13 09 18.7	-0.8
SRN	Sarande	3.73	314	ePN	Pg	13 02 26.6	+7.1	ASAR	Alice Springs	119.73	98	PKP	PKPdf	13 19 57.4	-1.2
									0.3nm,0.6s,baz=314,slow=1.4,SNR=6.9						

*ISCJB **03** 13:03:42.1±0.3, 34°.56N±0°.02×5°.54W±0°.03, h10km, Error*

ellipse: s-maj=4.0km s-min=2.7km az=154.6
*CSEM **03** 13:03:43.4±0.2, 34°.52N×5°.48W, h10km, ML3.1/10, Error ellipse: s-maj=5.6km s-min=3.8km az=74.0*
*IGIL **03** 13:03:43.1, 34°.45N×5°.46W, h0km*
*NEIC **03** 13:03:44.3, 34°.55N×5°.50W, h0km, MG3.9(MDD), After MDD.*
*INMG **03** 13:03:44.8±0.9, 34°.51N×5°.52W, h10km, ML2.3, Error ellipse: s-maj=4.1km s-min=3.2km az=8.0*
*CNRM **03** 13:03:45.8, 34°.38N×5°.41W, h5km, MD3.3*
*MDD **03** 13:03:46.0±0.7, 34°.45N×5°.46W, h22km±5km, mb4.2/8, Error ellipse: s-maj=5.0km s-min=3.6km az=75.0, PRIMO*
*LDG **03** 13:03:45.2±0.4, 34°.80N×5°.56W, h2km, Ml2.9/1, Error ellipse: s-maj=8.2km s-min=5.0km az=3.0*

ISC 03 13:03:43.0±0.3, 34°.53N±0°.02×5°.48W±0°.03, h10km, n146, σ1§23/247, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res ISC
				Op			h m s	
RSA	Sarsar	0.45	321	Pg	Pg		13 03 56.0	+4.2
RSA				Lg			13 04 04.0	
RSA	Sarsar	0.45	321	Pg	Pg		13 03 56.0	+4.2
RSA				Lg			13 04 04.0	
RSA	Sarsar	0.45	321	*i* P	Pg		13 03 56.0	+4.2
RSA				*i* S	Sg		13 04 04.0	+6.2
DKH	Dar Kharkhour	0.97	6	Pg	Pg		13 04 06.0	+4.4
DKH				Lg			13 04 21.0	
DKH	Dar Kharkhour	0.97	6	Pg	Pg		13 04 06.0	+4.4
DKH				Lg			13 04 21.0	
DKH	Dar Kharkhour	0.97	6	*i* P	Pg		13 04 06.0	+4.4
DKH				*i* S	Sg		13 04 21.0	+6.8
TZK	Tazeka	1.16	112	Pg	Pb		13 04 05.0	-0.1
TZK				Lg			13 04 19.0	
TZK	Tazeka	1.16	112	Pg	Pb		13 04 05.0	-0.1
TZK				Lg			13 04 19.0	
TZK	Tazeka	1.16	112	*i* P	Pb		13 04 05.0	-0.1
TZK				*i* S	Sb		13 04 19.0	-1.2
RTC	Rabat Centre	1.26	245	Pg	Pg		13 04 09.0	+1.9
RTC				Lg			13 04 25.0	
RTC	Rabat Centre	1.26	245	Pg	Pg		13 04 09.0	+1.9
RTC				Lg			13 04 25.0	
RTC	Rabat Centre	1.26	245	*i* P	Pg		13 04 09.0	+1.9
RTC				*i* S	Sb		13 04 25.0	+2.0
TOU	Touzarine	1.49	72	Pn	Pn		13 04 12.5	+2.7
TOU				Sn	Sn		13 04 30.0	+0.7
TOU	Touzarine	1.49	72	Pn	Pn		13 04 12.5	+2.7
TOU				Sn	Sn		13 04 30.0	+0.7
TOU	Touzarine	1.49	72	*i* P	Pn		13 04 12.5	+2.7
TOU				*i* S	Sn		13 04 30.0	+0.7
CZD	Col de Zad	1.53	166	Pn	Pn		13 04 12.0	+1.6
CZD				Sn	Sn		13 04 28.0	-2.4
CZD	Col de Zad	1.53	166	Pn	Pn		13 04 12.0	+1.6
CZD				Sn	Sn		13 04 28.0	-2.4
CZD	Col de Zad	1.53	166	*i* P	Pn		13 04 12.0	+1.6
CZD				*i* S	Sn		13 04 28.0	-2.4
KIB	El Ksiba	2.00	194	Pn	Pn		13 04 18.0	+1.2
KIB				Sn	Sn		13 04 40.0	-1.9
KIB	El Ksiba	2.00	194	Pn	Pn		13 04 18.0	+1.2
KIB				Sn	Sn		13 04 40.0	-1.9
KIB	El Ksiba	2.00	194	eP	Pn		13 04 18.0	+1.2
KIB				*i* S	Sn		13 04 40.0	-1.9
EMIJ	Mijas	2.12	16	P	Pn		13 04 19.0	+1.5
EMIJ				S	Sn		13 04 45.8	+1.0
EMIJ	Mijas	2.12	16	Pn	Pn		13 04 19.0	+1.5
	0.8nm,0.2s,SNR=7.9							
EMIJ				Sn	Sn		13 04 45.8	+1.0
	2.3nm,0.2s,SNR=7

EADA	**Adamuz**	**3.71**	**11**	P	**Pn**	**13 04 41.8**	**+1.4**
EADA				S	**Sn**	**13 05 23.6**	**-0.4**
EADA	**Adamuz**	**3.71**	**11**	Pn	**Pn**	**13 04 41.7**	**+1.4**
	0.6nm,0.1s,SNR=7.9						
EADA				Sn	**Sn**	**13 05 23.6**	**-0.4**
	1.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**3.71**	**11**	Pn	**Pn**	**13 04 41.7**	**+1.4**
	0.6nm,0.1s,SNR=7.9						
EADA				Sn	**Sn**	**13 05 23.6**	**-0.4**
	1.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**3.71**	**11**	P	**Pn**	**13 04 41.7**	**+1.4**
	0.6nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**13 05 23.6**	**-0.4**
	1.2nm,0.1s,SNR=7.9						
PCVE	**Castro Verde**	**3.73**	**327**	*e*Pn	**Pn**	**13 04 41.6**	**+1.0**
PCVE				*e*Sn	**Sn**	**13 05 23.9**	**-0.6**
PCVE				A		13 05 25.1	
	7.7nm,0.3s						
PCVE	**Castro Verde**	**3.73**	**327**	Pn	**Pn**	**13 04 41.6**	**+1.0**
PCVE				Sn	**Sn**	**13 05 23.9**	**-0.6**
	7.7nm,0.3s						
PCVE	**Castro Verde**	**3.73**	**327**	Pn	**Pn**	**13 04 41.6**	**+1.0**
PCVE				Sn	**Sn**	**13 05 23.9**	**-0.6**
	7.7nm,0.3s						
PCVE	**Castro Verde**	**3.73**	**327**	*e*Pn	**Pn**	**13 04 41.6**	**+1.0**
PCVE				*e*Sn	**Sn**	**13 05 23.9**	**-0.6**
	7.7nm,0.3s						
PFVI	**Vila Bisbo**	**3.76**	**315**	*e*Pn	**Pn**	**13 04 41.7**	**+0.6**
PFVI				*e*Sn	**Sn**	**13 05 24.6**	**-0.8**
PFVI	**Vila Bisbo**	**3.76**	**315**	P	**Pn**	**13 04 41.8**	**+0.8**
PFVI				S	**Sn**	**13 05 24.3**	**-1.1**
PFVI	**Vila Bisbo**	**3.76**	**315**	Pn	**Pn**	**13 04 41.8**	**+0.8**
	0.7nm,0.1s,SNR=7.9						
PFVI				Sn	**Sn**	**13 05 24.3**	**-1.1**
	3.3nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.76**	**315**	Pn	**Pn**	**13 04 41.8**	**+0.8**
	0.7nm,0.1s,SNR=7.9						
PFVI				Sn	**Sn**	**13 05 24.3**	**-1.1**
	3.3nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.76**	**315**	S	**Sn**	**13 05 24.3**	**-1.1**
	3.3nm,0.1s,SNR=7.9						
PFVI				*e*Sn	**Sn**	**13 05 24.6**	**-0.8**
MORF	**Marmelete**	**3.78**	**318**	*e*Pn	**Pn**	**13 04 41.6**	**+0.3**
MORF				*e*Sn	**Sn**	**13 05 24.6**	**-1.3**
MORF				A		13 05 26.5	
	8.1nm,0.8s						
MORF	**Marmelete**	**3.78**	**318**	Pn	**Pn**	**13 04 41.6**	**+0.3**
MORF				Sn	**Sn**	**13 05 24.6**	**-1.3**
	8.1nm,0.8s						
MORF	**Marmelete**	**3.78**	**318**	Pn	**Pn**	**13 04 41.6**	**+0.3**
MORF				Sn	**Sn**	**13 05 24.6**	**-1.3**
	8.1nm,0.8s						
EQES	**Quesada**	**3.81**	**30**	P	**Pn**	**13 04 46.6**	**+4.9**
EQES				S	**Sn**	**13 05 31.8**	**+5.3**
EQES	**Quesada**	**3.81**	**30**	Pn	**Pn**	**13 04 46.6**	**+4.9**
	0.2nm,0.1s,SNR=7.9						
EQES				Sn	**Sn**	**13 05 27.5**	**+0.9**
	0.7nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.81**	**30**	Pn	**Pn**	**13 04 46.6**	**+4.9**
	0.2nm,0.1s,SNR=7.9						
EQES				Sn	**Sn**	**13 05 27.5**	**+0.9**
	0.7nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.81**	**30**	P	**Pn**	**13 04 46.6**	**+4.9**
	0.2nm,0.1s,SNR=7.9						
PBAR	**Barrancos**	**3.85**	**341**	*e*Pn	**Pn**	**13 04 43.1**	**+0.8**
PBAR				*e*Sn	**Sn**	**13 05 27.2**	**-0.4**
PBAR				A		13 05 33.7	
	3.3nm,0.5s						
PBAR	**Barrancos**	**3.85**	**341**	Pn	**Pn**	**13 04 43.1**	**+0.8**
PBAR				Sn	**Sn**	**13 05 27.2**	**-0.4**
	3.3nm,0.5s						
PBAR	**Barrancos**	**3.85**	**341**	Pn	**Pn**	**13 04 43.1**	**+0.8**
PBAR				Sn	**Sn**	**13 05 27.2**	**-0.4**
	3.3nm,0.5s						
PBAR	**Barrancos**	**3.85**	**341**	*e*Pn	**Pn**	**13 04 43.1**	**+0.8**
PBAR				*e*Sn	**Sn**	**13 05 27.2**	**-0.4**
	3.3nm,0.5s						
MESJ	**Messejana**	**3.98**	**327**	*e*P	**Pn**	**13 04 44.4**	**+0.3**
MESJ				*e*S	**Sn**	**13 05 29.5**	**-1.3**
MESJ				*e*S	**Sn**	**13 05 29.5**	**-1.2**
PBEJ	**Beja**	**3.99**	**332**	*e*Sn	**Sn**	**13 05 30.7**	**-0.3**
PBEJ				A		13 05 32.7	
	3.6nm,0.3s						
PBEJ	**Beja**	**3.99**	**332**	Sn	**Sn**	**13 05 30.7**	**-0.3**
	1.8nm,0.3s						
PBEJ	**Beja**	**3.99**	**332**	Sn	**Sn**	**13 05 30.7**	**-0.3**
	1.8nm,0.3s						
PBEJ	**Beja**	**3.99**	**332**	*e*Sn	**Sn**	**13 05 30.7**	**-0.3**
	3.6nm,0.3s						
PTEO	**Sao Teotonio**	**4.00**	**320**	*e*Pn	**Pn**	**13 04 45.0**	**+0.7**
PTEO				*e*Sn	**Sn**	**13 05 30.4**	**-0.8**
PTEO				A		13 05 31.9	
	8.3nm,0.3s						
PTEO	**Sao Teotonio**	**4.00**	**320**	Pn	**Pn**	**13 04 45.0**	**+0.7**
PTEO				Sn	**Sn**	**13 05 30.4**	**-0.8**
	4.2nm,0.3s						
PTEO	**Sao Teotonio**	**4.00**	**320**	Pn	**Pn**	**13 04 45.0**	**+0.7**
PTEO				Sn	**Sn**	**13 05 30.4**	**-0.8**
	4.2nm,0.3s						
EBAD	**Badajoz**	**4.40**	**344**	P	**Pn**	**13 04 51.0**	**+1.2**
EBAD				S	**Sn**	**13 05 39.9**	**-1.1**
EBAD	**Badajoz**	**4.40**	**344**	Pn	**Pn**	**13 04 51.0**	**+1.2**
	2.8nm,0.1s,SNR=19						
EBAD				Sn	**Sn**	**13 05 39.9**	**-1.1**
	1.8nm,0.1s						
EBAD	**Badajoz**	**4.40**	**344**	Pn	**Pn**	**13 04 51.0**	**+1.2**
	2.8nm,0.1s,SNR=19						
EBAD				Sn	**Sn**	**13 05 39.9**	**-1.1**
	1.8nm,0.1s						
EBAD	**Badajoz**	**4.40**	**344**	P	**Pn**	**13 04 51.0**	**+1.2**
	2.8nm,0.1s,SNR=19						
EBAD				S	**Sn**	**13 05 39.9**	**-1.2**
	1.8nm,0.1s						
EVO	**Evora**	**4.49**	**334**	*e*P	**Pn**	**13 04 52.1**	**+1.1**
EVO				*e*Sn	**Sn**	**13 05 37.0**	**-6.3**
	7.3nm,0.5s						
EVO	**Evora**	**4.49**	**334**	*e*Pn	**Pn**	**13 04 51.8**	**+0.8**
EVO				*e*Sn	**Sn**	**13 05 42.5**	**-0.8**
EVO				A		13 05 43.6	
	5.2nm,0.1s						
EVO	**Evora**	**4.49**	**334**	Pn	**Pn**	**13 04 51.8**	**+0.8**
EVO				Sn	**Sn**	**13 05 42.5**	**-0.8**
	5.2nm,0.1s						
EVO	**Evora**	**4.49**	**334**	Pn	**Pn**	**13 04 51.8**	**+0.8**
EVO				Sn	**Sn**	**13 05 42.5**	**-0.8**
	5.2nm,0.1s						
EVO	**Evora**	**4.49**	**334**	*e*Pn	**Pn**	**13 04 51.8**	**+0.8**
EVO				*e*Sn	**Sn**	**13 05 42.5**	**-0.8**
	5.2nm,0.1s						
EVOP	**Sao Brissos**	**4.53**	**333**	*e*P	**Pn**	**13 04 52.1**	**+0.6**
MOE	**Montemor**	**4.61**	**331**	*e*Sn	**Sn**	**13 05 45.9**	**-0.4**
MOE	**Montemor**	**4.61**	**331**	Sn	**Sn**	**13 05 45.9**	**-0.4**
MOE	**Montemor**	**4.61**	**331**	Sn	**Sn**	**13 05 45.9**	**-0.4**
MOE	**Montemor**	**4.61**	**331**	*e*Sn	**Sn**	**13 05 45.9**	**-0.4**
PESTR	**Estremoz**	**4.65**	**339**	*e*Pn	**Pn**	**13 04 54.8**	**+1.5**
PESTR				*e*Sn	**Sn**	**13 05 46.1**	**-1.2**
PESTR				A		13 05 54.6	
	2.1nm,0.9s						
PESTR	**Estremoz**	**4.65**	**339**	Pn	**Pn**	**13 04 54.8**	**+1.5**
PESTR				Sn	**Sn**	**13 05 46.1**	**-1.2**
	1.1nm,0.9s						
PESTR	**Estremoz**	**4.65**	**339**	Pn	**Pn**	**13 04 54.8**	**+1.5**
PESTR				Sn	**Sn**	**13 05 46.1**	**-1.2**
	1.1nm,0.9s						
PESTR	**Estremoz**	**4.65**	**339**	*e*Pn	**Pn**	**13 04 54.8**	**+1.5**
PESTR				*e*Sn	**Sn**	**13 05 46.1**	**-1.2**
	2.1nm,0.9s						
EVIA	**Vianos**	**4.75**	**29**	Sn	**Sn**	**13 05 49.5**	**-0.3**
	0.9nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**4.75**	**29**	Sn	**Sn**	**13 05 49.5**	**-0.3**
	0.9nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**4.75**	**29**	S	**Sn**	**13 05 49.5**	**-0.3**
	0.9nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**5.13**	**343**	*e*Pn	**Pn**	**13 05 01.2**	**+1.4**
PMRV				*e*Sn	**Sn**	**13 05 57.9**	**-1.1**
PMRV				A		13 06 03.4	
	1.8nm,0.8s						
PMRV	**Marv??o**	**5.13**	**343**	Pn	**Pn**	**13 05 01.2**	**+1.4**
PMRV				Sn	**Sn**	**13 05 57.9**	**-1.1**
	1.8nm,0.8s						
PMRV	**Marv??o**	**5.13**	**343**	Pn	**Pn**	**13 05 01.2**	**+1.4**
PMRV				Sn	**Sn**	**13 05 57.9**	**-1.1**
	1.8nm,0.8s						
PMRV	**Marv??o**	**5.13**	**343**	*e*Pn	**Pn**	**13 05 01.2**	**+1.4**
PMRV				*e*Sn	**Sn**	**13 05 57.9**	**-1.1**
	1.8nm,0.8s						
PMAFR	**Mafra**	**5.37**	**327**	*e*Sn	**Sn**	**13 06 03.9**	**-1.2**
PMAFR				A		13 06 09.6	
	7.7nm,0.2s						
PMAFR	**Mafra**	**5.37**	**327**	Pn	**Pn**	**13 05 04.7**	**+1.5**
	0.8nm,0.1s,SNR=7.9						
PMAFR				Sn	**Sn**	**13 06 03.9**	**-1.1**
	17nm,0.4s,SNR=7.9						
PMAFR	**Mafra**	**5.37**	**327**	Pn	**Pn**	**13 05 04.7**	**+1.5**
	0.8nm,0.1s,SNR=7.9						
PMAFR				Sn	**Sn**	**13 06 03.9**	**-1.1**
	17nm,0.4s,SNR=7.9						
PMAFR	**Mafra**	**5.37**	**327**	P	**Pn**	**13 05 04.7**	**+1.5**
	0.8nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**13 06 03.9**	**-1.2**
	17nm,0.4s,SNR=7.9						
PCBR	**Castelo Branco**	**5.54**	**344**	*e*Pn	**Pn**	**13 05 06.8**	**+1.3**
PCBR				*e*Sn	**Sn**	**13 06 07.5**	**-1.7**
PCBR				A		13 06 16.8	
	1.7nm,0.7s						
PCBR	**Castelo Branco**	**5.54**	**344**	Pn	**Pn**	**13 05 06.8**	**+1.3**
PCBR				Sn	**Sn**	**13 06 07.5**	**-1.7**
	0.9nm,0.7s						
PCBR	**Castelo Branco**	**5.54**	**344**	Pn	**Pn**	**13 05 06.8**	**+1.3**
PCBR				Sn	**Sn**	**13 06 07.5**	**-1.7**
	0.9nm,0.7s						
PCBR	**Castelo Branco**	**5.54**	**344**	*e*Pn	**Pn**	**13 05 06.8**	**+1.3**
PCBR				*e*Sn	**Sn**	**13 06 07.5**	**-1.7**
	1.7nm,0.7s						
EPLA	**Plasencia**	**5.55**	**355**	P	**Pn**	**13 05 05.7**	**+0.1**
EPLA	**Plasencia**	**5.55**	**355**	Pn	**Pn**	**13 05 05.7**	**+0.1**
	1.5nm,0.1s,SNR=6.8						
EPLA	**Plasencia**	**5.55**	**355**	Pn	**Pn**	**13 05 05.7**	**+0.1**
	1.5nm,0.1s,SNR=6.8						
EPLA	**Plasencia**	**5.55**	**355**	P	**Pn**	**13 05 05.7**	**+0.1**
	1.5nm,0.1s,SNR=6.8						
MVO	**Moncorvo**	**6.74**	**350**	*e*Pn	**Pn**	**13 05 23.1**	**+1.1**
MVO	**Moncorvo**	**6.74**	**350**	P	**Pn**	**13 05 23.1**	**+1.2**
MVO	**Moncorvo**	**6.74**	**350**	Pn	**Pn**	**13 05 23.1**	**+1.2**
	1.3nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**6.74**	**350**	Pn	**Pn**	**13 05 23.1**	**+1.2**
	1.3nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**6.74**	**350**	P	**Pn**	**13 05 23.1**	**+1.1**
	1.3nm,0.2s,SNR=7.9						
ETOR	**Torete**	**6.85**	**22**	P	**Pn**	**13 05 23.4**	**0.0**
ETOR				S	**Sn**	**13 06 38.7**	**-2.6**
ETOR	**Torete**	**6.85**	**22**	Pn	**Pn**	**13 05 23.4**	**0.0**
	3.4nm,0.2s,SNR=5.7						
ETOR				Sn	**Sn**	**13 06 38.7**	**-2.6**
	2.1nm,0.2s,SNR=7.9						
ETOR	**Torete**	**6.85**	**22**	Pn	**Pn**	**13 05 23.4**	**0.0**
	3.4nm,0.2s,SNR=5.7						
ETOR				Sn	**Sn**	**13 06 38.7**	**-2.6**
	2.1nm,0.2s,SNR=7.9						
ETOR	**Torete**	**6.85**	**22**	P	**Pn**	**13 05 23.4**	**0.0**
	3.4nm,0.2s,SNR=5.7						
ETOR				S	**Sn**	**13 06 38.7**	**-2.7**
	2.1nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**7.33**	**353**	*e*Pn	**Pn**	**13 05 31.3**	**+1.2**
PBRG	**Braganca**	**7.33**	**353**	Pn	**Pn**	**13 05 31.3**	**+1.2**
PBRG	**Braganca**	**7.33**	**353**	Pn	**Pn**	**13 05 31.3**	**+1.2**
PBRG	**Braganca**	**7.33**	**353**	*e*Pn	**Pn**	**13 05 31.3**	**+1.2**
ECAL	**Calabor**	**7.47**	**353**	P	**Pn**	**13 05 33.5**	**+1.5**
ECAL	**Calabor**	**7.47**	**353**	Pn	**Pn**	**13 05 33.5**	**+1.5**
	0.7nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**7.47**	**353**	Pn	**Pn**	**13 05 33.5**	**+1.5**
	0.7nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**7.47**	**353**	P	**Pn**	**13 05 33.5**	**+1.5**
	0.7nm,0.1s,SNR=7.9						
SJPF	**Ste Jean**	**9.20**	**20**	*e*Pn	**Pn**	**13 05 52.9**	**-2.7**
ETSF	**Etsaut**	**9.20**	**23**	*e*Pn	**Pn**	**13 05 54.1**	**-1.6**
ETSF	**Etsaut**	**9.20**	**23**	*e*Pn	**Pn**	**13 05 54.1**	**-1.6**
EPF	**Esparros**	**9.63**	**26**	*e*Pn	**Pn**	**13 05 59.5**	**-2.1**
EPF	**Esparros**	**9.63**	**26**	*e*Pn	**Pn**	**13 05 59.5**	**-2.1**
ROSF	**Rostrenen**	**13.90**	**6**	*e*Pn	**Pn**	**13 06 54.1**	**-5.8**

IDC 03 13:16:43.7±2.9, 18°61S×176°82W, h374km±32km, mb3.0/3, mb1 3.2/4, mb1mx3.0/13, mbtmp3.1/4, Error ellipse: s-maj=150.6km s-min=22.3km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.73**	**47**	P	Pn	13 18 23.4	-0.3
	1.7nm,0.3s,baz=270,slow=19,SNR=8.5						
STKA	**Stephens Creek**	**39.63**	**242**	P	P	13 23 41.8	+0.9
	1.4nm,0.8s,baz=85,slow=11,SNR=2.5						
ASAR	**Alice Springs**	**46.06**	**255**	P	P	13 24 31.5	-0.5
	0.7nm,0.7s,baz=85,slow=8.3,SNR=15						
ASAR				PcP	PcP	13 25 59.9	-1.5
	0.3nm,0.5s,baz=100,slow=3.9,SNR=7.3						
ILAR	**Eielson Array**	**86.24**	**12**	P	P	13 28 44.3	+0.8
	0.2nm,0.5s,baz=223,slow=5.2,SNR=10						

*CSEM **03** 13:34:03.6±0.4, 37°.91N×21°.04E, h2km, ML2.1/2, Error ellipse: s-maj=11.0km s-min=5.8km az=51.0*
*THE **03** 13:34:03.6, 37°.88N×20°.96E, h22km, ML2.1/2, Error ellipse: s-maj=2.4km s-min=0.7km az=236.0*
*ISCJB **03** 13:34:04.3±0.7, 37°.96N±0°.04×21°.05E±0°.05, h12km±6km, Error ellipse: s-maj=8.4km s-min=4.7km az=136.0*
*NEIC **03** 13:34:04.2, 38°.02N×21°.03E, h18km, MD3.0(ATH), After ATH.*
*ATH **03** 13:34:04.2, 38°.02N×21°.03E, h18km±2km, MD3.0/11*

ISC 03 13:34:04.4±0.6, 37°.94N±0°.04×21°.05E±0°.05, h12km±5km, n36, σ1s25/54, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KFL	**Anninata**	**0.26**	**309**	P	**Pg**	**13 34 09.9**	**0.0**
KFL				S	**Sg**	**13 34 14.6**	**+1.0**
KFL	**Anninata**	**0.26**	**309**	P	**Pg**	**13 34 09.9**	**0.0**
KFL				S	**Sg**	**13 34 14.6**	**+1.0**
RLS	**Riolos of Patr**	**0.35**	**71**	*e*Pb	**Pg**	**13 34 11.2**	**-0.3**
RLS				*e*Sb	**Sg**	**13 34 17.0**	**+0.7**
RLS	**Riolos of Patr**	**0.35**	**71**	*e*PB	**Pg**	**13 34 11.2**	**-0.3**
RLS				*e*SB	**Sg**	**13 34 17.0**	**+0.7**
RLS	**Riolos of Patr**	**0.35**	**71**	*e*Pb	**Pg**	**13 34 11.2**	**-0.3**
RLS				*e*Sb	**Sg**	**13 34 17.0**	**+0.7**
VLS	**Valsamata**	**0.43**	**303**	*e*Pb	**Pg**	**13 34 12.0**	**-0.9**
VLS				*e*Sb	**Sg**	**13 34 18.7**	**0.0**
VLS	**Valsamata**	**0.43**	**303**	*e*PB	**Pg**	**13 34 12.0**	**-0.9**
VLS				*e*SB	**Sg**	**13 34 18.7**	**0.0**
VLS	**Valsamata**	**0.43**	**303**	P	**Pg**	**13 34 12.1**	**-0.8**
VLS				S	**Sg**	**13 34 18.9**	**+0.2**
VLS	**Valsamata**	**0.43**	**303**	P	**Pg**	**13 34 12.1**	**-0.8**
VLS				*e*Sb	**Sg**	**13 34 18.7**	**0.0**
UPR	**University Cam**	**0.68**	**60**	*e*PN	**Pn**	**13 34 17.8**	**-2.0**
UPR	**University Cam**	**0.68**	**60**	*e*Pn	**Pn**	**13 34 17.8**	**-2.0**
LKD2	**Lefkada island**	**0.90**	**340**	P	**Pg**	**13 34 20.7**	**-1.1**
LKD2				S	**Sg**	**13 34 34.2**	**+0.7**
LKD2	**Lefkada island**	**0.90**	**340**	P	**Pg**	**13 34 20.7**	**-1.1**
LKD2				S	**Sg**	**13 34 34.2**	**+0.7**
GUR	**Goura**	**1.02**	**90**	*e*PN	**Pn**	**13 34 24.4**	**-0.2**
GUR	**Goura**	**1.02**	**90**	*e*Pn	**Pn**	**13 34 24.4**	**-0.2**
ITM	**Ithomi**	**1.03**	**137**	*e*Pb	**Pb**	**13 34 24.3**	**+0.1**
ITM				*e*Sn	**Sn**	**13 34 40.9**	**+1.8**
ITM	**Ithomi**	**1.03**	**137**	*e*PB	**Pb**	**13 34 24.3**	**+0.1**
ITM				*e*SN	**Sn**	**13 34 40.9**	**+1.8**
ITM	**Ithomi**	**1.03**	**137**	P	**Pb**	**13 34 23.6**	**-0.6**
ITM	**Ithomi**	**1.03**	**137**	P	**Pb**	**13 34 23.6**	**-0.6**
ITM	**Ithomi**	**1.03**	**137**	*e*Pb	**Pb**	**13 34 24.3**	**+0.1**
ITM				*e*Sn	**Sn**	**13 34 40.9**	**+1.8**
EVR	**Evrytania**	**1.14**	**31**	*e*Pn	**Pn**	**13 34 24.9**	**-1.3**
EVR				*e*Sn	**Sn**	**13 34 39.0**	**-2.7**
EVR	**Evrytania**	**1.14**	**31**	*e*PN	**Pn**	**13 34 24.9**	**-1.3**
EVR				*e*SN	**Sn**	**13 34 39.0**	**-2.7**
EVR	**Evrytania**	**1.14**	**31**	*e*Pn	**Pn**	**13 34 24.9**	**-1.3**
PYL	**PYLOS**	**1.18**	**152**	*e*PB	**Pb**	**13 34 25.8**	**-1.0**
PYL	**PYLOS**	**1.18**	**152**	*e*Pb	**Pb**	**13 34 25.8**	**-1.0**
LTK	**Loutraki**	**1.52**	**86**	*e*PN	**Pn**	**13 34 33.0**	**+1.6**
LTK	**Loutraki**	**1.52**	**86**	*e*Pn	**Pn**	**13 34 33.0**	**+1.6**
IGT	**Igoumenitsa**	**1.68**	**341**	P	**Pn**	**13 34 34.7**	**+1.1**
IGT	**Igoumenitsa**	**1.68**	**341**	P	**Pn**	**13 34 34.7**	**+1.1**
THL	**Klokotos Trika**	**1.79**	**25**	*e*PN	**Pn**	**13 34 36.3**	**+1.2**
THL				*e*SN	**Sn**	**13 34 58.1**	**+0.4**
THL	**Klokotos Trika**	**1.79**	**25**	*e*Pn	**Pn**	**13 34 36.3**	**+1.2**
THL				*e*Sn	**Sn**	**13 34 58.1**	**+0.4**
DID	**Didima**	**1.79**	**103**	*e*PN	**Pn**	**13 34 37.6**	**+2.5**
DID	**Didima**	**1.79**	**103**	*e*Pn	**Pn**	**13 34 37.6**	**+2.5**
KYTH	**Kithira**	**2.30**	**136**	*e*Pb	**Pb**	**13 34 43.7**	**-2.1**
KYTH	**Kithira**	**2.30**	**136**	*e*PB	**Pb**	**13 34 43.7**	**-2.1**

TAP 03 13:50:03.9, 25°.07N×121°.63E, h138km, ML3.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWA	**Mucha**	**0.10**	**205**	*i* P	Pn	13 50 22.5	-0.1
	baz=200						
TWA				*i* S	Sn	13 50 36.1	-0.5
	baz=200						
TAP1	**Taipei**	**0.10**	**251**	*i* P	Pn	13 50 22.3	-0.2
	baz=251						
TAP1				*i* S	Sn	13 50 35.6	-0.9
	baz=251						
NWF	**Wu-fen Shan**	**0.14**	**91**	P	Pn	13 50 22.7	+0.2
	baz=90						
NWF				S	Sn	13 50 36.1	-0.5
	baz=90						
TWS1	**Kuangyinshan**	**0.20**	**278**	P	Pn	13 50 22.6	-0.1
	baz=278						
TWS1				S	Sn	13 50 36.8	0.0
	baz=278						
TWY	**Chenhua**	**0.20**	**352**	P	Pn	13 50 22.7	0.0
	baz=353						
TWY				S	Sn	13 50 36.6	-0.4
	baz=353						
ILA	**Ilan**	**0.32**	**161**	P	Pn	13 50 23.2	+0.1
	baz=159						
ILA				S	Sn	13 50 37.6	+0.1
	baz=159						
TWB1	**Santiao Chiao**	**0.33**	**101**	P	Pn	13 50 23.0	0.0
	baz=101						
TWB1				S	Sn	13 50 37.3	-0.2
	baz=101						
TWE	**Neicheng**	**0.35**	**175**	P	Pn	13 50 23.3	+0.1
	baz=172						
TWE				S	Sn	13 50 37.0	-0.8
	baz=172						
NCU	**National Centr**	**0.42**	**256**	P	Pn	13 50 23.4	0.0
	baz=255						
NCU				S	Sn	13 50 38.2	0.0
	baz=255						
ENTT	**Nioudou**	**0.43**	**188**	P	Pn	13 50 23.6	0.0
	baz=186						
ENTT				S	Sn	13 50 37.9	-0.5
	baz=186						
NSK	**Sanguang**	**0.47**	**212**	*e*P	Pn	13 50 23.5	-0.1
	baz=211						
NSK				*e*S	Sn	13 50 37.6	-1.0
	baz=211						
TWC	**Suao**	**0.50**	**157**	P	Pn	13 50 24.0	+0.2
	baz=155						
TWC				S	Sn	13 50 38.9	-0.1
	baz=155						
ENA	**Nanau**	**0.65**	**171**	*e*P	Pn	13 50 25.7	+1.0
	baz=170						
ENA				*e*S	Sn	13 50 40.0	-0.6
	baz=170						
NNS	**Nan Shan**	**0.67**	**201**	*e*P	Pn	13 50 25.4	+0.5
	baz=199						
NNS				*e*S	Sn	13 50 40.5	-0.4
	baz=199						
NSTT	**Nanjuang**	**0.72**	**233**	*e*P	Pn	13 50 25.3	+0.1
	baz=232						
NSTT				*e*S	Sn	13 50 41.0	-0.4
	baz=232						
TWT	**Tachien**	**0.92**	**207**	*e*P	Pn	13 50 26.5	-0.3
	baz=207						
TWT				*e*S	Sn	13 50 44.6	+0.4
	baz=207						
WHF	**Hehuan Shan**	**0.98**	**200**	*e*P	Pn	13 50 28.4	+1.0
	baz=199						
WHF				*e*S	Sn	13 50 46.2	+1.1
	baz=199						
TWD	**Chiawan**	**0.99**	**182**	*e*P	Pn	13 50 27.2	-0.2
	baz=181						
TWD				*e*S	Sn	13 50 44.9	-0.4
	baz=181						
TWQ1	**Liyutan**	**1.06**	**227**	*e*P	Pn	13 50 28.6	+0.5
	baz=226						
TWQ1				*e*S	Sn	13 50 46.3	-0.1
	baz=226						
ESL	**Shilin**	**1.27**	**188**	*e*P	Pn	13 50 30.7	+0.6
	baz=187						
ESL				*e*S	Sn	13 50 49.2	-0.8
	baz=187						
TCU	**Taichung**	**1.27**	**224**	*e*P	Pn	13 50 30.0	-0.1
	baz=223						
TCU				*e*S	Sn	13 50 49.7	-0.3
	baz=223						
SMLT	**Sun Moon Lake**	**1.36**	**210**	*e*P	Pn	13 50 31.0	-0.1
	baz=209						
SMLT				*e*S	Sn	13 50 51.2	-0.5
	baz=209						
TYC	**Yuchr**	**1.36**	**211**	*e*P	Pn	13 50 32.0	+0.9
	baz=210						
TYC				*e*S	Sn	13 50 51.0	-0.7
	baz=210						
EHY	**Hungye**	**1.58**	**190**	*e*P	Pn	13 50 34.4	+0.8
	baz=190						
EHY				*e*S	Sn	13 50 55.5	-0

Ms1 2.9/2,ms1mx2.5/27,Error ellipse: s-maj=47.4km s-min=19.9km az=3.0

ISC 03 14:42:04.9±1.2,32°29N±0.07×140°84E±0.08,h69km±8km, n47,σ1§15/53,mb4.0/15,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.20**	**314**	P	**Pn**	**14 42 24.6**	**-1.2**
JHJ2				*e*S	**Sn**	**14 42 40.5**	**-0.9**
JHJ	**Hachijo jima 2**	**1.22**	**313**	P	**Pn**	**14 42 24.7**	**-1.4**
	408nm,0.3s,baz=229,slow=22,SNR=904						
JHJ				S	**Sn**	**14 42 39.5**	**-2.5**
	323nm,0.3s,baz=241,slow=24,SNR=12						
JMY	**Miyakejima3**	**2.10**	**328**	P	**Pn**	**14 42 37.6**	**-0.2**
JMY				*e*S	**Sn**	**14 43 03.5**	**+0.5**
BSO1	**Boso 1**	**2.37**	**3**	P	**Pn**	**14 42 40.2**	**-1.2**
BSO1				*e*S	**Sn**	**14 43 08.0**	**-1.4**
JKO	**Kozu shima**	**2.38**	**323**	P	**Pn**	**14 42 41.8**	**+0.3**
JKO				*e*S	**Sn**	**14 43 10.7**	**+1.1**
BSO2	**Boso 2**	**2.46**	**358**	*e*S	**Sn**	**14 43 11.8**	**+0.1**
BSO3	**Boso 3**	**2.52**	**354**	P	**Pn**	**14 42 42.4**	**-1.2**
BSO3				S	**Sn**	**14 43 12.4**	**-0.9**
JOD2	**Odawara 2**	**3.31**	**334**	P	**Pn**	**14 42 54.4**	**+0.1**
JOD2				*e*S	**Sn**	**14 43 31.2**	**-1.2**
JYN	**Shimob**	**3.73**	**330**	P	**Pn**	**14 43 01.8**	**+1.8**
JIE	**Ise**	**4.05**	**302**	P	**Pn**	**14 43 05.0**	**+0.6**
JRY	**Ryogami san**	**4.06**	**337**	P	**Pn**	**14 43 05.8**	**+1.4**
JRY				*e*S	**Sn**	**14 43 50.8**	**+0.2**
JAG	**Ashikaga**	**4.29**	**345**	P	**Pn**	**14 43 07.5**	**-0.1**
JWZ	**Kozaga**	**4.49**	**287**	P	**Pn**	**14 43 09.8**	**-0.6**
MAJO	**Matsushiro**	**4.77**	**334**	*e*Pn	**Pn**	**14 43 17.3**	**+3.1**
MAT	**Matsushiro**	**4.77**	**334**	P	**Pn**	**14 43 16.8**	**+2.6**
MAT				S	**Sn**	**14 44 09.6**	**+1.4**
MAT	**Matsushiro**	**4.77**	**334**	P	**Pn**	**14 43 17.6**	**+3.4**
JWY	**Kouya**	**4.80**	**295**	P	**Pn**	**14 43 15.4**	**+0.8**
JGM	**Miyama**	**4.83**	**316**	P	**Pn**	**14 43 17.1**	**+2.1**
CBIJ	**Chichi jima**	**5.30**	**167**	P	**Pn**	**14 43 14.9**	**-6.6**
JWT	**Wachi**	**5.43**	**305**	P	**Pn**	**14 43 24.9**	**+1.7**
ERM	**Erimo**	**9.88**	**10**	P	**Pn**	**14 44 23.6**	**-0.5**
KSRS	**Korea Array**	**11.79**	**299**	P	**Pn**	**14 44 53.0**	**+2.9**
	0.1nm,0.3s,baz=122,slow=14,SNR=7.1						
KSRS				LR	LR	14 49 19.6	
	comp=Z,44nm,18.5s,baz=161,slow=37						
ZALV	**Zalesovo Beam**	**44.88**	**316**	P	**P**	**14 50 10.8**	**-1.5**
ZALV				PcP	PcP	14 51 51.9	-0.8
ZALV				LR	LR	15 10 37.5	
ZALV	**Zalesovo Beam**	**44.88**	**316**	P	**P**	**14 50 10.8**	**-1.5**
	0.9nm,0.7s,mb3.6,baz=94,slow=6.4,SNR=2.8						
ZALV				PcP	PcP	14 51 51.9	-0.8
	1.0nm,0.7s,baz=99,slow=4.5,SNR=4.2						
ZALV				LR	LR	15 10 37.5	
	comp=Z,13nm,18.2s,baz=225,slow=38						
MK31	**Makanchi Array**	**46.38**	**306**	*e*P	**P**	**14 50 23.7**	**-0.5**
MKAR	**Makanchi Array**	**46.38**	**306**	P	**P**	**14 50 23.5**	**-0.7**
	0.9nm,0.4s,mb3.8,baz=90,slow=9.6,SNR=13						
MKAR				PcP	PcP	14 51 57.8	-0.3
	0.3nm,0.2s,baz=76,slow=6.5,SNR=4.0						
KDAK	**Kodiak Island**	**51.00**	**39**	P	**P**	**14 50 59.1**	**-0.3**
	3.0nm,0.7s,mb4.4,baz=286,slow=3.9,SNR=6.4						
PPLA	**Purkeypile**	**51.37**	**33**	*e*P	**P**	**14 51 03.7**	**+1.6**
WRAB	**Tennant Creek**	**52.29**	**188**	*e*P	**P**	**14 51 05.6**	**-3.8**
AML	**Almayashu**	**53.14**	**301**	*e*P	**P**	**14 51 15.7**	**+0.2**
	1.4nm,0.4s,mb4.3						
COLA	**College**	**53.37**	**30**	*e*P	**P**	**14 51 18.4**	**+1.5**
BVAR	**Borovoye Array**	**53.50**	**315**	P	**P**	**14 51 17.7**	**-0.4**
	1.8nm,0.6s,mb4.2,baz=91,slow=8.8,SNR=14						
BRVK	**Borovoye**	**53.56**	**315**	*e*P	**P**	**14 51 19.4**	**+0.9**
	3.4nm,0.9s,mb4.4						
ILAR	**Eielson Array**	**53.78**	**30**	P	**P**	**14 51 19.9**	**-0.1**
ILAR	**Eielson Array**	**53.78**	**30**	P	**P**	**14 51 19.9**	**-0.1**
	2.4nm,0.7s,mb4.3,baz=268,slow=6.2,SNR=40						
MENT	**Mentasta**	**55.24**	**33**	*e*P	**P**	**14 51 31.8**	**+1.3**
EGAK	**Eagle**	**56.24**	**30**	*e*P	**P**	**14 51 37.7**	**+0.1**
	1.5nm,0.6s,mb4.2						
ABKAR	**Akbulak array**	**60.70**	**312**	*e*P	**P**	**14 52 08.5**	**-0.5**
	1.4nm,0.6s,mb4.2						
FINES	**FINESS Array B**	**72.80**	**333**	P	**P**	**14 53 25.1**	**-0.6**
	1.7nm,0.7s,mb4.0,baz=43,slow=8.4,SNR=8.2						
AKASG	**Malin Array Be**	**77.77**	**323**	P	**P**	**14 53 52.8**	**-1.5**
	0.9nm,0.5s,mb3.8,baz=54,slow=4.7,SNR=4.7						
NVAR	**Mina Array Bea**	**78.24**	**52**	P	**P**	**14 53 57.9**	**+0.7**
	0.7nm,0.7s,mb3.5,baz=299,slow=6.1,SNR=6.5						
NOA	**NORSAR Array B**	**78.38**	**337**	P	**P**	**14 53 56.6**	**-0.9**
	1.1nm,0.8s,mb3.7,baz=42,slow=5.5,SNR=4.1						
BRTR	**Keskin Array B**	**81.66**	**312**	P	**P**	**14 54 14.1**	**-1.5**
	0.5nm,0.6s,mb3.5,baz=20,slow=4.6,SNR=3.0						
TXAR	**Lajitas Array**	**93.39**	**52**	P	**P**	**14 55 13.3**	**+0.5**
	1.9nm,0.7s,mb4.6,baz=295,slow=3.0,SNR=33						
TORD	**Torodi Ar. Bea**	**120.26**	**312**	PKP	PKPdf	15 00 47.4	-1.4
	0.5nm,0.5s,baz=33,slow=1.8,SNR=7.5						
LPAZ	**La Paz**	**149.29**	**66**	*e*PKPbc	PKPbc	15 01 46.5	+0.3
LPAZ	**La Paz**	**149.29**	**66**	PKPbc	PKPbc	15 01 46.9	+0.6
	2.1nm,0.8s,baz=358,slow=5.8,SNR=11						

MAN 03 14:59:44,7°21N×124°16E,h29km,mb4.1,ML2.9,MS2.6, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.08**	**82**	*i*P	Pb	14 59 50.4	+1.3
CTBH				*i* S	Sb	14 59 53.8	+1.3
PAGZ	**Pagadian**	**1.00**	**309**	*e*P	Pn	15 00 02.2	+0.1
PAGZ				*e*S	Sn	15 00 10.9	-4.4
BUKP	**Musuan**	**1.11**	**53**	*e*P	Pn	15 00 04.8	+1.1
BUKP				*e*S	Sn	15 00 18.7	+0.8

DJA 03 15:08:10,3°66S×99°20E,h20km,MLv4.0/6,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SISI	**Saibi**	**2.32**	**357**	P	Pn	15 08 46.1	-1.0
SISI				S	Sn	15 09 18.8	+3.7
KRJI	**Kerinci**	**2.74**	**55**	P	Pn	15 08 53.9	+1.0
KRJI				S	Sn	15 09 27.3	+1.8
PDSI	**Padang**	**3.01**	**25**	P	Pn	15 08 56.6	+0.1
PDSI				S	Sn	15 09 33.8	+1.8
KSI	**Kapahiang**	**3.39**	**90**	P	Pn	15 09 17.9	+16
PPI	**Padang Panjang**	**3.40**	**21**	P	Pn	15 09 02.1	+0.2
PPI				S	Sn	15 09 44.1	+2.4
SDSI	**Sungai Dareh**	**3.51**	**39**	P	Pn	15 09 03.4	0.0
MDSI	**Maura Dua**	**5.03**	**100**	P	Pn	15 09 26.1	+1.7
KLSI		**5.61**	**101**	P	Pb	15 09 53.0	+5.7

CASC 03 15:18:37.7±2.6,8°40N×82°95W,h6km±13km,MD3.8,2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**0.33**	**319**	*e*P	Pg	15 18 44.0	-0.2
ACR				*e*S	Sg	15 18 48.5	-0.1
BRU2	**Volcan**	**0.46**	**33**	*i*P	Pg	15 18 47.7	+1.1
BRU2				*e*S	Sg	15 18 55.2	+2.5
TBS2		**0.48**	**36**	*e*P	Pg	15 18 47.4	+0.4
TBS2				*e*S	Sg	15 18 56.3	+3.0
BRU	**Baru**	**0.55**	**43**	*e*P	Pg	15 18 41.1	-7.3
BRU				*e*S	Sg	15 18 49.0	-6.6
BAR1		**0.91**	**337**	*e*P	Pg	15 18 54.1	-1.0
BAR1				*e*S	Sg	15 19 07.1	+0.1
CNI	**Changuinola**	**1.09**	**23**	*e*P	Pg	15 18 56.5	-2.2
BUS	**Buena Vista**	**1.40**	**325**	*e*P	Pn	15 19 03.1	-0.7
BUS				*e*S	Sb	15 19 22.0	-0.4
URSC	**Urasca**	**1.64**	**330**	*e*P	Pn	15 19 06.4	-0.7
LAJ	**Bijagual**	**1.86**	**321**	*e*P	Pn	15 19 13.1	+3.0
PRS1	**Puriscal**	**2.07**	**319**	*e*P	Pn	15 19 13.0	0.0
CGA2	**Cerro Gallo 2**	**2.19**	**317**	*e*P	Pn	15 19 16.7	+2.0

*ISCJB **03** 15:44:34.6±0.7,24°29S±0.04×66°97W±0.08,h166km±9km, mb3.7/6,Error ellipse: s-maj=11.4km s-min=7.1km az=10.1*
*IDC **03** 15:44:34.3±1.6,24°30S×66°92W,h153km±15km,mb3.6/4, mb1 3.9/6,mb1mx3.7/14,mbtmp3.7/6,Error ellipse: s-maj=25.5km s-min=12.8km az=94.0*
*NEIC **03** 15:44:35.6±0.9,24°24S×67°02W,h166km±9km,mb4.7/2, Error ellipse: s-maj=17.4km s-min=9.8km az=94.0*
*GUC **03** 15:44:37.8±0.9,24°30S×67°59W,h203km±57km,ML4.5*
ISC 03 15:44:35.1±0.7,24°30S±0.04×66°91W±0.07,h155km±8km, n23,σ1§22/29,mb3.7/6,3C-2D,Salta Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB04	**Plate Boundary**	**3.11**	**310**	*i*P	**Pn**	**15 45 30.9**	**+6.8**
PB04				*i* S	**Sn**	**15 46 11.0**	**+9.0**
PB04				AML	AML	15 46 16.9	
	comp=N,1μm,0.5s						
CEN1	**Los Morros**	**3.14**	**286**	*i*P	**Pn**	**15 45 27.5**	**+3.0**
CEN1				*i* S	**Sn**	**15 46 03.7**	**+1.1**
CEN1				AML	AML	15 46 08.7	
	comp=N,670nm,0.5s						
ANCH	**Antofagasta**	**3.26**	**280**	*i*P	**Pn**	**15 45 24.9**	**-1.0**
ANCH				*i* S	**Sn**	**15 46 00.7**	**-4.6**
ANCH	**Antofagasta**	**3.26**	**280**	*i*P	**Sn**	**15 45 24.9**	**-1.0**
ANCH				*i* S	**Sn**	**15 46 00.7**	**-4.6**
MACH	**Maria Elena**	**3.35**	**308**	*i*P	**Pn**	**15 45 28.8**	**+1.7**
MACH				*i* S	**Sn**	**15 46 06.9**	**-0.5**
MECH	**Mejillones**	**3.45**	**289**	*i*P	**Pn**	**15 45 29.4**	**+1.0**
MECH				*i* S	**Sn**	**15 46 07.3**	**-2.4**
MECH				AML	AML	15 46 13.1	
	comp=N,1μm,0.4s						
LCO	**Las Campanas**	**5.79**	**215**	*e*Pn	**Pn**	**15 45 59.0**	**0.0**
	comp=N,56nm,0.3s						
LCO				*e*Sn	**Sn**	**15 46 58.9**	**-5.8**
CFAA	**Coronel Fontan**	**7.37**	**189**	P	**Pn**	**15 46 20.4**	**+0.3**
	comp=N,0.2nm,0.3s,baz=17,slow=14,SNR=13						
CFAA				S	**Sn**	**15 47 40.4**	**-2.2**
	comp=N,0.4nm,0.3s,baz=180,slow=17,SNR=6.3						
LPAZ	**La Paz**	**8.05**	**352**	*e*Pn	**Pn**	**15 46 31.0**	**+1.8**
LPAZ				S	**Sn**	**15 47 57.5**	**-1.5**
LPAZ	**La Paz**	**8.05**	**352**	P	**Pn**	**15 46 30.4**	**+1.2**
	comp=N,3.5nm,0.3s,baz=162,slow=8.0,SNR=91						
LPAZ				S	**Sn**	**15 47 57.5**	**-1.5**
	comp=N,0.1nm,0.3s,baz=234,slow=19,SNR=2.6						
SIV	**San Ignacio**	**9.91**	**35**	P	**Pn**	**15 46 53.7**	**-0.2**
	comp=N,1.9nm,0.3s,baz=220,slow=14,SNR=60						
SIV				S	**Sn**	**15 48 43.8**	**-0.1**
	comp=N,0.1nm,0.3s,baz=120,slow=20,SNR=3.4						
TRQA	**Tornquist**	**14.35**	**164**	*e*P	**Pn**	**15 47 54.4**	**+3.4**
TXAR	**Lajitas Array**	**63.97**	**324**	P	**P**	**15 54 51.2**	**-0.6**
	comp=N,0.3nm,0.5s,mb3.4,baz=138,slow=8.2,SNR=6.5						
QSPA	**South Pole Qui**	**65.91**	**180**	*e*P	**P**	**15 55 04.8**	**+1.1**
	comp=N,1.9nm,0.6s,mb4.1						
TORD	**Torodi Ar. Bea**	**76.60**	**69**	P	**P**	**15 56 08.3**	**-0.6**
	comp=N,0.7nm,0.5s,mb3.6,baz=256,slow=5.3,SNR=7.4						
NVAR	**Mina Array Bea**	**78.82**	**321**	P	**P**	**15 56 21.2**	**+0.5**
	comp=N,0.6nm,0.7s,mb3.4,baz=145,slow=6.5,SNR=5.6						
MAW	**Mawson**	**81.13**	**163**	P	**P**	**15 56 33.1**	**+0.3**
	comp=N,1.9nm,0.7s,mb3.8,baz=218,slow=11,SNR=4.3						
YKA	**Yellowknife Ar**	**94.43**	**340**	P	**P**	**15 57 35.8**	**-1.1**
	comp=N,0.8nm,0.6s,mb4.0,baz=128,slow=5.6,SNR=4.8						
ASAR	**Alice Springs**	**128.22**	**205**	PKP	PKPdf	16 03 22.5	-1.1
	comp=N,0.5nm,0.7s,baz=145,slow=1.4,SNR=10						
ZALV	**Zalesovo Beam**	**143.62**	**28**	PKP	PKPdf	16 03 49.2	-1.9
ZALV	**Zalesovo Beam**	**143.62**	**28**	PKP	PKPdf	16 03 49.2	-1.9
	comp=N,1.0nm,0.6s,baz=306,slow=4.8,SNR=5.9						
MK31	**Makanchi Array**	**146.70**	**40**	*e*PKPbc	PKPbc	16 03 56.6	-1.9
MKAR	**Makanchi Array**	**146.70**	**40**	PKPbc	PKPbc	16 03 57.0	-1.5
	comp=N,1.9nm,0.7s,baz=301,slow=1.6,SNR=21						

GUC 03 15:49:28.7±0.6,23°16S×70°96W,h28km±18km,MD4.0, ML2.9,4D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.47**	**83**	*e*P	Pb	15 49 37.8	-0.8
MECH				*i* S	Sb	15 49 44.6	-0.6
MECH				AML	AML	15 49 58.1	
	comp=N,1μm,0.4s						
ANCH	**Antofagasta**	**0.72**	**136**	*e*P	Pb	15 49 40.1	-2.6
ANCH				*e*S	Sb	15 49 49.8	-2.4
ANCH				AML	AML	15 49 52.1	
	comp=E,799nm,0.9s						
CEN1	**Los Morros**	**0.73**	**108**	*e*P	Pb	15 49 41.6	-1.2
CEN1				*e*S	Sb	15 49 51.2	-1.3
PB04	**Plate Boundary**	**1.62**	**57**	*e*P	Pn	15 49 48.1	-7.3
PB04				*i* S	Sn	15 50 03.6	-12
PB04				AML	AML	15 50 06.4	
	comp=N,826nm,0.5s						
PB01	**Plate Boundary**	**2.51**	**33**	*e*P	Pn	15 50 11.3	+3.7

*THE **03** 15:58:52.8,38°03N×21°62E,h7km±22km,ML2.2/1,Error ellipse: s-maj=22.3km s-min=0.6km az=324.0*
*NEIC **03** 15:58:53.9,38°10N×21°54E,h18km,MD3.2(ATH),After ATH.*
*ATH **03** 15:58:53.9,38°10N×21°54E,h18km±1km,MD3.2/15*
*ISCJB **03** 15:58:54.4±0.4,38°09N±0.03×21°56E±0.03,h18km±4km, Error ellipse: s-maj=5.5km s-min=4.1km az=150.2*
*CSEM **03** 15:58:54.2±0.2,38°12N×21°53E,h20km,MD3.2,Error ellipse: s-maj=5.7km s-min=4.4km az=156.0*
ISC 03 15:58:54.4±0.5,38°11N±0.03×21°54E±0.03,h17km±3km, n39,σ1§02/67,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.08**	**232**	*e*Pb	**Pg**	**15 58 57.0**	**-0.7**
RLS				*e*Sb	**Sg**	**15 59 00.4**	**+0.5**
RLS				*e*Sb	**Sg**	**15 59 04.5**	**+4.6**
RLS	**Riolos of Patr**	**0.08**	**232**	*e*PB	**Pg**	**15 58 57.0**	**-0.7**
RLS				*e*SB	**Sg**	**15 59 00.4**	**+0.5**
RLS	**Riolos of Patr**	**0.08**	**232**	*e*Pb	**Pg**	**15 58 57.0**	**-0.7**
RLS				*e*Sb	**Sg**	**15 59 00.4**	**+0.5**
UPR	**University Cam**	**0.26**	**47**	*e*PB	**Pg**	**15 58 59.7**	**-0.5**
UPR				*e*SB	**Sg**	**15 59 04.5**	**+0.4**
UPR	**University Cam**	**0.26**	**47**	*e*Pb	**Pg**	**15 58 59.7**	**-0.5**
UPR				*e*Sb	**Sg**	**15 59 04.5**	**+0.4**
EFP	**Efpalio**	**0.43**	**41**	*e*PB	**Pb**	**15 59 02.3**	**-1.2**
EFP				*e*SB	**Sb**	**15 59 08.8**	**-0.8**
EFP	**Efpalio**	**0.43**	**41**	*e*Pb	**Pb**	**15 59 02.3**	**-1.2**
EFP				*e*Sb	**Sb**	**15 59 08.8**	**-0.8**
KFL	**Anninata**	**0.60**	**271**	P	**Pg**	**15 59 05.6**	**-0.5**
KFL				S	**Sg**	**15 59 15.1**	**+1.0**
KFL	**Anninata**	**0.60**	**271**	P	**Pg**	**15 59 05.6**	**-0.5**
KFL				S	**Sg**	**15 59 15.1**	**+1.0**
GUR	**Goura**	**0.65**	**105**	*e*PB	**Pb**	**15 59 06.1**	**-1.2**
GUR				*e*SN	**Sg**	**15 59 15.9**	**0.0**
GUR	**Goura**	**0.65**	**105**	*e*Pb	**Pb**	**15 59 06.1**	**-1.2**
GUR				*e*Sn	**Sg**	**15 59 15.9**	**0.0**
VLS	**Valsamata**	**0.76**	**276**	*e*Pb	**Pb**	**15 59 07.8**	**-1.2**
VLS				*e*Sn	**Sn**	**15 59 20.1**	**-1.1**
VLS	**Valsamata**	**0.76**	**276**	*e*PB	**Pb**	**15 59 07.8**	**-1.2**
VLS				*e*SN	**Sn**	**15 59 20.1**	**-1.1**
VLS	**Valsamata**	**0.76**	**276**	P	**Pb**	**15 59 07.8**	**-1.2**
VLS				S	**Sb**	**15 59 20.4**	**+1.4**
VLS	**Valsamata**	**0.76**	**276**	P	**Pb**	**15 59 07.8**	**-1.2**
VLS				*e*Sn	**Sn**	**15 59 20.1**	**-1.1**
VLS				S	**Sb**	**15 59 20.4**	**+1.4**
EVR	**Evrytania**	**0.84**	**14**	*e*Pn	**Pn**	**15 59 10.3**	**-1.0**
EVR				*e*Sn	**Sn**	**15 59 22.6**	**-0.6**
EVR	**Evrytania**	**0.84**	**14**	*e*PN	**Pn**	**15 59 10.3**	**-1.0**
EVR				*e*SN	**Sn**	**15 59 22.6**	**-0.6**
EVR	**Evrytania**	**0.84**	**14**	*e*Pn	**Pn**	**15 59 10.3**	**-1.0**
EVR				*e*Sn	**Sn**	**15 59 22.6**	**-0.6**
ITM	**Ithomi**	**0.97**	**162**	*e*Pn	**Pn**	**15 59 12.5**	**-0.7**
ITM				*e*Sn	**Sn**	**15 59 25.3**	**-1.2**
ITM	**Ithomi**	**0.97**	**162**	*e*PN	**Pn**	**15 59 12.5**	**-0.7**
ITM				*e*SN	**Sn**	**15 59 25.3**	**-1.2**
ITM	**Ithomi**	**0.97**	**162**	*e*Pn	**Pn**	**15 59 12.5**	**-0.7**
ITM				*e*Sn	**Sn**	**15 59 25.3**	**-1.2**
VLX	**Vlachokerasia**	**0.99**	**138**	*e*PN	**Pn**	**15 59 13.7**	**+0.3**
VLX	**Vlachokerasia**	**0.99**	**138**	*e*Pn	**Pn**	**15 59 13.7**	**+0.3**
AGG	**Agios Georgios**	**1.10**	**34**	*e*Pb	**Pb**	**15 59 14.0**	**-1.0**
AGG				*e*Sn	**Sn**	**15 59 30.1**	**+0.3**
AGG	**Agios Georgios**	**1.10**	**34**	*e*PB	**Pb**	**15 59 14.0**	**-1.0**
AGG				*e*SN	**Sn**	**15 59 30.1**	**+0.3**
AGG	**Agios Georgios**	**1.10**	**34**	P	**Pb**	**15 59 14.0**	**-1.0**
AGG				S	**Sb**	**15 59 30.4**	**+1.4**
AGG	**Agios Georgios**	**1.10**	**34**	P	**Pb**	**15 59 14.0**	**-1.0**
AGG				*e*Sn	**Sn**	**15 59 30.1**	**+0.3**
AGG				S	**Sb**	**15 59 30.4**	**+1.4**
LTK	**Loutraki**	**1.13**	**94**	*e*PN	**Pn**	**15 59 15.6**	**+0.3**
LTK	**Loutraki**	**1.13**	**94**	*e*Pn	**Pn**	**15 59 15.6**	**+0.3**
PYL	**PYLOS**	**1.22**	**173**	*e*PN	**Pn**	**15 59 17.8**	**+1.2**
PYL	**PYLOS**	**1.22**	**173**	*e*Pn	**Pn**	**15 59 17.8**	**+1.2**
LKR	**Lokris**	**1.27**	**64**	*e*Pn	**Pn**	**15 59 17.7**	**+0.5**
LKR	**Lokris**	**1.27**	**64**	*e*PN	**Pn**	**15 59 17.7**	**+0.5**
LKR	**Lokris**	**1.27**	**64**	*e*Pn	**Pn**	**15 59 17.7**	**+0.5**
DID	**Didima**	**1.47**	**114**	*e*PN	**Pn**	**15 59 22.5**	**+2.5**
THL	**Klokotos Trika**	**1.50**	**14**	*e*PN	**Pn**	**15 59 22.2**	**+1.7**
VLY	**Voula,Athens**	**1.80**	**97**	*e*Pn	**Pn**	**15 59 25.9**	**+1.4**
VLY	**Voula,Athens**	**1.80**	**97**	*e*PN	**Pn**	**15 59 25.9**	**+1.4**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLY	**Voula,Athens**	**1.80**	**97**	*e*Pn	**Pn**	**15 59 25.9**	**+1.4**

*DDA **03** 16:01:16.2,37°14N×29°88E,h7km±4km,Md3.5*
*ISK **03** 16:01:16.8,37°17N×29°87E,h8km,ML3.8*
*CSEM **03** 16:01:17.4±0.1,37°16N×29°86E,h2km,MD3.5,Error ellipse: s-maj=3.4km s-min=2.5km az=47.0*
*ISCJB **03** 16:01:17.2±0.2,37°16N±0.02×29°89E±0.02,h10km, mb3.7/8,MS2.9/3,Error ellipse: s-maj=2.8km s-min=2.3km az=14.4*
*IDC **03** 16:01:17.5±1.0,37°09N×29°83E,h0km,mb3.7/5, mb1 3.9/9,mb1mx3.6/24,mbtmp3.8/9,ML3.6/4,MS3.1/9, Ms1 3.1/9,ms1mx2.8/32,Error ellipse: s-maj=20.6km s-min=18.0km az=116.0*
*NEIC **03** 16:01:18.6±1.9,37°18N×29°96E,h4km±13km,mb3.5/1, ML3.8(ISK),Error ellipse: s-maj=9.6km s-min=7.2km az=223.0*
ISC 03 16:01:18.4±0.2,37°15N±0.02×29°88E±0.02,h10km,n152, σ1§06/167,mb3.7/8,MS2.9/3,7C-4D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.27**	**289**	*i*P	**Pg**	**16 01 20.7**	**-3.1**
GOLH				*i* S	**Sg**	**16 01 26.8**	**-0.6**
GOLH	**Golhisar**	**0.27**	**289**	*i*P	**Pg**	**16 01 20.7**	**-3.1**
GOLH				*i* S	**Sg**	**16 01 26.8**	**-0.6**
GLHS	**Glhisar (BURDU**	**0.30**	**271**	*e*PG	**Pg**	**16 01 22.7**	**-1.8**
GLHS				*e*SG	**Sg**	**16 01 28.0**	**-0.5**
GLHS	**Glhisar (BURDU**	**0.30**	**271**	*e*Pg	**Pg**	**16 01 22.7**	**-1.7**
GLHS				*e*Sg	**Sg**	**16 01 28.0**	**-0.5**
ELL	**Elmali**	**0.41**	**176**	*e*PG	**Pg**	**16 01 24.9**	**-1.4**
ELL				*e*SG	**Sg**	**16 01 32.2**	**+0.5**
ELL	**Elmali**	**0.41**	**176**	*e*Pg	**Pg**	**16 01 24.9**	**-1.4**
ELL				*e*Sg	**Sg**	**16 01 32.2**	**+0.5**
KORT	**Korkueli**	**0.41**	**112**	*i*P	**Pg**	**16 01 24.7**	**-1.8**
KORT				*i* S	**Sg**	**16 01 34.2**	**+2.3**
KORT	**Korkueli**	**0.41**	**112**	*i*P	**Pg**	**16 01 24.7**	**-1.7**
BCK	**Bucak**	**0.65**	**61**	*e*PG	**Pg**	**16 01 29.2**	**-1.7**
BCK				*e*SG	**Sg**	**16 01 40.0**	**+0.6**
BCK	**Bucak**	**0.65**	**61**	*e*Pg	**Pg**	**16 01 29.2**	**-1.7**
BCK				*e*Sg	**Sg**	**16 01 40.0**	**+0.6**
ANTB	**Antalya**	**0.67**	**112**	*e*PG	**Pg**	**16 01 30.7**	**-0.7**
ANTB	**Antalya**	**0.67**	**112**	*e*Pg	**Pg**	**16 01 30.7**	**-0.7**
ISP	**Isparta**	**0.84**	**37**	*e*PG	**Pg**	**16 01 33.7**	**-1.0**
ISP	**Isparta**	**0.84**	**37**	*e*Pg	**Pg**	**16 01 32.6**	**-2.1**
DNZL	**Cakiroluk**	**0.85**	**309**	*i*P	**Pg**	**16 01 32.0**	**-2.7**
DNZL				*i* S	**Sg**	**16 01 47.5**	**+1.6**
DNZL	**Cakiroluk**	**0.85**	**309**	*i*P	**Pg**	**16 01 32.0**	**-2.8**
DENT	**Denizli**	**0.90**	**312**	*e*PG	**Pg**	**16 01 34.0**	**-1.7**
DENT	**Denizli**	**0.90**	**312**	*e*Pg	**Pg**	**16 01 34.0**	**-1.7**
AKAS	**Kas**	**0.94**	**193**	*i*P	**Pg**	**16 01 34.1**	**-2.4**
AKAS	**Kas**	**0.94**	**193**	*i*P	**Pg**	**16 01 34.1**	**-2.4**
SUTC	**Sutluce-Ispart**	**0.95**	**70**	*e*PG	**Pg**	**16 01 35.6**	**-1.2**
SUTC	**Sutluce-Ispart**	**0.95**	**70**	*e*Pg	**Pg**	**16 01 35.6**	**-1.1**
KSL	**Kastellorizon**	**1.03**	**193**	*e*P	**Pg**	**16 01 37.9**	**-0.2**
TURN	**Turunc**	**1.06**	**255**	*i*P	**Pg**	**16 01 43.2**	**+4.5**
TURN				*i* S	**Sg**	**16 02 04.2**	**+12**
KHL	**Karahalli**	**1.20**	**347**	*e*PN	**Pn**	**16 01 39.5**	**-1.7**
KHL	**Karahalli**	**1.20**	**347**	*e*P

ASF				LR	LR	16 06 29.9	
	comp=Z,123nm,20.7s,baz=8.2,slow=41						
TLCR		**8.07**	**355**	⇑P	**Pn**	**16 03 15.8**	**+0.3**
TLCR		**8.07**	**355**	⇑P	**Pn**	**16 03 15.8**	**+0.3**
EIL	**Elat**	**8.58**	**149**	Pn	**Pn**	**16 03 23.0**	**+0.3**
	1.0nm,0.3s,baz=338,slow=9.9,SNR=18						
EIL				Sn	**Sn**	**16 04 59.8**	**+0.2**
	0.5nm,0.3s,baz=306,slow=17,SNR=3.4						
EIL				LR	LR	16 07 36.8	
	comp=Z,69nm,21.1s,baz=277,slow=44						
EIL	**Elat**	**8.58**	**149**	Pn	**Pn**	**16 03 23.0**	**+0.3**
EIL				Sn	**Sn**	**16 04 59.8**	**+0.3**
MLR	**Muntele Rosu**	**8.84**	**342**	⇑P	**Pn**	**16 03 27.2**	**+1.1**
MLR	**Muntele Rosu**	**8.84**	**342**	⇑P	**Pn**	**16 03 27.2**	**+1.1**
VRI	**Vrincioaia**	**9.02**	**346**	⇓P	**Pn**	**16 03 29.7**	**+1.1**
VRI	**Vrincioaia**	**9.02**	**346**	⇓P	**Pn**	**16 03 29.7**	**+1.1**
VOIR		**9.04**	**338**	⇓P	**Pn**	**16 03 30.0**	**+1.2**
VOIR		**9.04**	**338**	⇓P	**Pn**	**16 03 30.0**	**+1.2**
TESR		**9.66**	**347**	⇑P	**Pn**	**16 03 37.8**	**+0.5**
TESR		**9.66**	**347**	⇑P	**Pn**	**16 03 37.8**	**+0.5**
TIP	**Timpagrande**	**10.53**	**285**	*eP*	**Pn**	**16 03 51.4**	**+2.2**
	14nm,1.2s						
TIP	**Timpagrande**	**10.53**	**285**	*eP*	**Pn**	**16 03 51.4**	**+2.1**
	14nm,1.2s						
CUC	**Castrocucco**	**11.37**	**289**	P	**Pn**	**16 04 04.5**	**+3.7**
	5.5nm,0.8s						
GNI	**Garni**	**12.00**	**71**	LR	LR	16 10 04.0	
	comp=Z,70nm,21.8s,baz=14,slow=44						
AKASG	**Malin Array Be**	**13.55**	**358**	Pn	**Pn**	**16 04 31.5**	**+0.9**
	0.3nm,0.3s,baz=173,slow=11,SNR=2.8						
AKASG	**Malin Array Be**	**13.55**	**358**	Pn	**Pn**	**16 04 31.5**	**+0.9**
VRAC	**Vranov**	**15.50**	**326**	LR	LR	16 11 37.6	
	comp=Z,55nm,18.2s,baz=316,slow=40						
DAVOX	**Davos/Dischmat**	**17.67**	**309**	LR	LR	16 13 20.9	
	comp=Z,101nm,18.7s,baz=264,slow=41						
AKTK	**Aktyubinsk**	**24.10**	**48**	P	**P**	**16 06 34.1**	**+0.2**
AKTK	**Aktyubinsk**	**24.10**	**48**	P	**P**	**16 06 34.1**	**+0.2**
AKTO	**Aktyubinsk**	**24.10**	**48**	P	**P**	**16 06 34.1**	**+0.2**
	1.0nm,0.8s,mb3.3,baz=249,slow=14,SNR=3.6						
FINES	**FINESS Array B**	**24.43**	**356**	P	**P**	**16 06 37.5**	**+0.7**
	5.8nm,0.9s,mb4.0,baz=171,slow=14,SNR=4.0						
FINES	**FINESS Array B**	**24.43**	**356**	P	**P**	**16 06 37.5**	**+0.6**
ABKAR	**Akbulak array**	**24.86**	**51**	*eP*	**P**	**16 06 40.5**	**-0.4**
	0.7nm,0.7s,mb3.3						
ABKAR	**Akbulak array**	**24.86**	**51**	*eP*	**P**	**16 06 40.5**	**-0.4**
	0.7nm,0.7s,mb3.3						
HFS	**Hagfors**	**25.22**	**341**	LR	LR	16 17 52.7	
	comp=Z,27nm,21.5s,MS2.7,baz=135,slow=39						
ESDC	**Sonseca Array**	**26.55**	**286**	P	**P**	**16 06 56.8**	**+0.5**
	0.3nm,0.5s,mb3.1,baz=66,slow=9.1,SNR=3.3						
ESDC	**Sonseca Array**	**26.55**	**286**	P	**P**	**16 06 56.8**	**+0.5**
NOA	**NORSAR Array B**	**26.65**	**340**	LR	LR	16 19 18.2	
	comp=Z,49nm,19.5s,MS3.1,baz=155,slow=40						
ARCES	**ARCESS Array B**	**32.53**	**357**	P	**P**	**16 07 50.8**	**+1.8**
	1.4nm,0.7s,mb4.0,baz=199,slow=10.0,SNR=4.2						
ARCES	**ARCESS Array B**	**32.53**	**357**	P	**P**	**16 07 50.8**	**+1.8**
TORD	**Torodi Ar. Bea**	**34.72**	**234**	P	**P**	**16 08 08.6**	**0.0**
	4.1nm,0.8s,mb4.4,baz=33,slow=9.2,SNR=20						
MK31	**Makanchi Array**	**39.49**	**59**	*eP*	**P**	**16 08 49.5**	**+0.6**
MK31	**Makanchi Array**	**39.49**	**59**	*eP*	**P**	**16 08 49.5**	**+0.6**
MKAR	**Makanchi Array**	**39.49**	**59**	P	**P**	**16 08 51.1**	**+2.2**
	0.6nm,0.7s,mb3.4,baz=276,slow=7.3,SNR=6.3						
MKAR	**Makanchi Array**	**39.49**	**59**	P	**P**	**16 08 51.1**	**+2.2**
ZALV	**Zalesovo Beam**	**40.86**	**48**	LR	LR	16 29 09.7	
	comp=Z,31nm,18.4s,MS3.0,baz=212,slow=41						
CMAR	**Chiang Mai Arr**	**62.60**	**87**	P	**P**	**16 11 41.1**	**-1.9**
	0.7nm,0.8s,mb3.8,baz=302,slow=8.4,SNR=3.4						
CMAR	**Chiang Mai Arr**	**62.60**	**87**	P	**P**	**16 11 41.2**	**-1.8**

*NEIC **03** 16:36:42.3±1.3, 19.°59S×178.°25W, h600km, mb4.3/1, Error ellipse: s-maj=68.4km s-min=21.3km az=160.0*
*ISCJB **03** 16:36:43.1±3.5, 19.°4S±0.°8×178.°5W±0.°5, h612km±26km, mb3.7/4, Error ellipse: s-maj=135.0km s-min=29.4km az=152.1*
*IDC **03** 16:36:43.8±7.5, 19.°45S×178.°40W, h609km±84km, mb3.0/3, mb1 3.4/3, mb1mx2.9/12, mbtmp3.0/3, Error ellipse: s-maj=105.9km s-min=34.6km az=150.0*

ISC 03 16:36:44.0±3.5, 19.°3S±0.°8×178.°4W±0.°5, h606km±24km, n10, σ0°45/6, mb3.7/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.70**	**295**	*eP*	**P**	**16 38 07.9**	**0.0**
DZM	**Mont Dzumac**	**14.41**	**257**	*eP*	**P**	**16 39 51.5**	**+5.1**
CTAO	**Charters Tower**	**33.21**	**263**	*eP*	**P**	**16 42 33.1**	**+0.4**
	3.8nm,0.5s,mb4.3						
ASAR	**Alice Springs**	**44.40**	**256**	P	**P**	**16 44 02.1**	**-0.4**
	2.0nm,0.6s,mb3.8,baz=84,slow=8.3,SNR=80						
ASAR				PcP	PcP	16 45 32.2	-0.5
	0.8nm,1.0s,baz=107,slow=4.2,SNR=5.1						
TXAR	**Lajitas Array**	**86.78**	**58**	P	**P**	**16 48 25.4**	**+0.1**
	0.3nm,0.6s,mb3.2,baz=228,slow=6.6,SNR=5.3						
ILAR	**Eielson Array**	**87.28**	**13**	P	**P**	**16 48 26.7**	**-0.1**
	0.6nm,0.7s,mb3.4,baz=214,slow=4.8,SNR=8.4						
ARCES	**ARCESS Array B**	**127.71**	**350**	PKP	PKPdf	16 54 39.9	-0.8
	1.2nm,0.8s,baz=56,slow=3.1,SNR=5.2						
FINES	**FINESS Array B**	**134.55**	**344**	PKP	PKPdf	16 54 51.6	-2.3
	2.0nm,0.9s,baz=21,slow=4.6,SNR=2.9						
AKASG	**Malin Array Be**	**141.81**	**331**	PKP	PKPdf	16 55 03.0	-4.4
	0.6nm,0.3s,baz=43,slow=4.4,SNR=4.8						
BRTR	**Keskin Array B**	**145.75**	**313**	PKPbc	PKPbc	16 55 16.6	+0.1
	0.7nm,0.5s,baz=152,slow=5.6,SNR=4.2						

WEL 03 16:38:53.6±0.7, 37.°39S×179.°38E, h12km, ML3.5/4, 1C, Error ellipse: s-maj=6.1km s-min=4.3km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.87**	**258**	P*	Pb	16 39 09.5	-1.2
MXZ				S*	Sb	16 39 21.6	-0.7
PUZ	**Puketiti**	**1.12**	**232**	⇑P*	Pb	16 39 14.1	-0.8
CNGZ	**Carnagh Statio**	**1.44**	**220**	*e*PN	Pn	16 39 19.3	-0.1
MWZ	**Matawai**	**1.75**	**237**	PN	Pn	16 39 22.2	-1.5
MWZ				SN	Sn	16 39 44.2	-1.6
PRGZ	**Paritu Road**	**1.94**	**217**	PN	Pn	16 39 25.2	-1.1
URZ	**Urewera**	**2.00**	**244**	PN	Pn	16 39 26.7	-0.4
MHGZ	**Mahia Peninsul**	**2.11**	**213**	PN	Pn	16 39 28.0	-0.7
KNZ	**Kokohu**	**2.11**	**219**	PN	Pn	16 39 27.3	-1.4
MCHZ	**McNeill Hill**	**2.94**	**225**	PN	Pn	16 39 38.6	-1.6
KUZ	**Kuaotunu**	**3.00**	**281**	*e*PN	Pn	16 39 39.3	-1.6
PRHZ	**Porangahau**	**3.59**	**216**	*e*PN	Pn	16 39 45.4	-3.6
BFZ	**Birch Farm**	**4.09**	**216**	*e*PN	Pn	16 39 52.8	-3.2
MRZ	**Mangatainoka R**	**4.41**	**221**	*e*PN	Pn	16 39 57.1	-3.2
MQZ	**McQueen's Vall**	**8.13**	**217**	SN	Sn	16 42 10.2	-13

*CSEM **03** 16:41:33.2, 35.°87N×4.°86E, h0km, ML3.5, After ALG*
*CRAAG **03** 16:41:33.2, 35.°87N×4.°86E, Ml3.5*
*ISCJB **03** 16:41:38.0±0.9, 36.°2N±0.°1×5.°02E±0.°08, h19km±13km, Error ellipse: s-maj=18.0km s-min=9.6km az=15.5*
*MDD **03** 16:41:38.8±0.9, 36.°14N×5.°04E, h5km±9km, mb3.8/4, mbLg2.0/1, Error ellipse: s-maj=13.3km s-min=5.9km az=23.0, PRIMO*

ISC 03 16:41:39.1±0.8, 36.°25N±0.°08×5.°10E±0.°07, h15km±8km, n48, σ1°9/16/50, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SET	**Setif**	**0.25**	**102**	P	**Pg**	**16 41 44.0**	**-0.5**
SET	**Setif**	**0.25**	**102**	P	**Pg**	**16 41 44.0**	**-0.5**
SET	**Setif**	**0.25**	**102**	P	**Pg**	**16 41 44.0**	**-0.5**
SET	**Setif**	**0.25**	**102**	P	**Pg**	**16 41 44.0**	**-0.5**
CKHR	**Kef el Ahmar**	**0.41**	**125**	P	**Pg**	**16 41 46.0**	**-1.3**
CKHR	**Kef el Ahmar**	**0.41**	**125**	P	**Pg**	**16 41 46.0**	**-1.3**
CKHR	**Kef el Ahmar**	**0.41**	**125**	P	**Pg**	**16 41 46.0**	**-1.3**
CKHR	**Kef el Ahmar**	**0.41**	**125**	P	**Pg**	**16 41 46.0**	**-1.3**
AKF	**Akfadou**	**0.57**	**312**	P	**Pg**	**16 41 49.8**	**-0.5**
AKF	**Akfadou**	**0.57**	**312**	P	**Pg**	**16 41 49.8**	**-0.5**
AKF	**Akfadou**	**0.57**	**312**	P	**Pg**	**16 41 49.8**	**-0.5**
AKF	**Akfadou**	**0.57**	**312**	P	**Pg**	**16 41 49.8**	**-0.5**
DFRA	**Djebel Bou Aff**	**0.69**	**65**	P	**Pg**	**16 41 54.3**	**+1.7**
DFRA	**Djebel Bou Aff**	**0.69**	**65**	P	**Pg**	**16 41 54.3**	**+1.7**
DFRA	**Djebel Bou Aff**	**0.69**	**65**	P	**Pg**	**16 41 54.3**	**+1.7**
DFRA	**Djebel Bou Aff**	**0.69**	**65**	P	**Pg**	**16 41 54.3**	**+1.7**
CASM	**Ain Smara**	**1.12**	**89**	P	**Pb**	**16 42 08.0**	**+7.8**
CASM	**Ain Smara**	**1.12**	**89**	P	**Pb**	**16 42 08.0**	**+7.8**
CKFL	**Kef-Lekhel**	**1.32**	**83**	P	**Pn**	**16 42 03.0**	**+0.1**
CKFL	**Kef-Lekhel**	**1.32**	**83**	P	**Pn**	**16 42 03.0**	**+0.1**
CKFL	**Kef-Lekhel**	**1.32**	**83**	P	**Pn**	**16 42 03.0**	**+0.1**
CKFL	**Kef-Lekhel**	**1.32**	**83**	P	**Pn**	**16 42 03.0**	**+0.1**
EMHD	**Djebel Mahouad**	**1.74**	**269**	P	**Pn**	**16 42 08.7**	**0.0**
EMHD	**Djebel Mahouad**	**1.74**	**269**	P	**Pn**	**16 42 08.7**	**0.0**
EMHD	**Djebel Mahouad**	**1.74**	**269**	P	**Pn**	**16 42 08.7**	**0.0**
EMHD	**Djebel Mahouad**	**1.74**	**269**	P	**Pn**	**16 42 08.7**	**0.0**
CMAH	**Djebel Manchou**	**1.91**	**78**	P	**Pn**	**16 42 17.4**	**+6.3**
CMAH	**Djebel Manchou**	**1.91**	**78**	P	**Pn**	**16 42 17.4**	**+6.3**
ABSA	**Djebel Ababsia**	**1.92**	**89**	P	**Pn**	**16 42 17.9**	**+6.6**
ABSA	**Djebel Ababsia**	**1.92**	**89**	P	**Pn**	**16 42 17.9**	**+6.6**
ETRT	**Tiaret**	**3.21**	**256**	P	**Pn**	**16 42 35.0**	**+6.1**
ETRT	**Tiaret**	**3.21**	**256**	P	**Pn**	**16 42 35.0**	**+6.1**
EANR	**'Ain N'Sour**	**3.25**	**266**	P	**Pb**	**16 42 39.5**	**+3.0**
EANR	**'Ain N'Sour**	**3.25**	**266**	P	**Pb**	**16 42 39.5**	**+3.0**
ETOS	**Mallorca**	**3.94**	**333**	P	**Pn**	**16 42 39.7**	**+0.7**
	5.0nm,0.3s,SNR=12						
ETOS				S	**Sn**	**16 43 22.7**	**-2.4**
	1.9nm,0.4s,SNR=22						
ETOS	**Mallorca**	**3.94**	**333**	P	**Pn**	**16 42 39.7**	**+0.7**
	5.0nm,0.3s,SNR=12						
ETOS				S	**Sn**	**16 43 22.7**	**-2.4**
	1.9nm,0.4s,SNR=22						
EIBI	**Ibiza**	**4.07**	**314**	P	**Pn**	**16 42 41.2**	**+0.5**
	1.1nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**4.07**	**314**	P	**Pn**	**16 42 41.2**	**+0.5**
	1.1nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**4.89**	**302**	P	**Pn**	**16 42 52.3**	**+0.3**
	0.1nm,0.1s,SNR=7.9						
EBEN	**Beniarda**	**4.89**	**302**	P	**Pn**	**16 42 52.3**	**+0.3**
	0.1nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**5.31**	**289**	P	**Pn**	**16 42 57.4**	**-0.5**
	0.9nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**5.31**	**289**	P	**Pn**	**16 42 57.4**	**-0.5**
	0.9nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**5.80**	**296**	P	**Pn**	**16 43 05.8**	**+1.2**
	1.1nm,0.3s,SNR=4.9						
ETOB	**Tobarra**	**5.80**	**296**	P	**Pn**	**16 43 05.8**	**+1.2**
	1.1nm,0.3s,SNR=4.9						
EBER	**Berja**	**6.46**	**278**	P	**Pn**	**16 43 11.9**	**-1.8**
	1.2nm,0.2s,SNR=5.9						
EBER	**Berja**	**6.46**	**278**	P	**Pn**	**16 43 11.9**	**-1.8**
	1.2nm,0.2s,SNR=5.9						
EQES	**Quesada**	**6.72**	**286**	P	**Pn**	**16 43 17.9**	**+0.7**
	0.4nm,0.1s,SNR=7.9						
EQES	**Quesada**	**6.72**	**286**	P	**Pn**	**16 43 17.9**	**+0.7**
	0.4nm,0.1s,SNR=7.9						

*ISCJB **03** 17:24:36.1±0.5, 1.°78N±0.°04×124.°90E±0.°05, h212km±4km, mb4.2/30, Error ellipse: s-maj=8.6km s-min=6.4km az=156.9*
*IDC **03** 17:24:36.6±5.9, 1.°81N×124.°79E, h200km±60km, mb3.8/11, mb1 3.9/12, mb1mx3.7/22, mbtmp3.8/12, Error ellipse: s-maj=35.1km s-min=12.6km az=72.0*
*DJA **03** 17:24:38, 1.°63N×124.°94E, h190km, MLv4.7/14*
*NEIC **03** 17:24:39.2±3.5, 1.°76N×124.°79E, h228km±37km, mb4.4/10, Error ellipse: s-maj=21.4km s-min=9.3km az=64.0*
*BJI **03** 17:24:39.0, 1.°82N×124.°82E, h226km, mB4.6/4, mb4.2/7*

ISC 03 17:24:37.0±0.5, 1.°78N±0.°04×124.°88E±0.°05, h204km±4km, n60, σ0°82/63, mb4.2/30, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**0.34**	**187**	P	**Pn**	**17 25 03.5**	**-0.6**
KMSI	**Cibinong**	**1.50**	**217**	P	**Pn**	**17 25 11.3**	**+0.2**
SGSI	**Sangihe**	**2.00**	**19**	P	**Pn**	**17 25 16.3**	**+0.5**
TNTI	**Ternate**	**2.68**	**112**	P	**Pn**	**17 25 23.1**	**-0.1**
MRSI	**Marisa**	**3.21**	**246**	P	**Pn**	**17 25 30.2**	**+0.8**
LUWI	**Luwuk**	**3.51**	**217**	P	**Pn**	**17 25 32.0**	**-1.0**
LUWI				S	**Sn**	**17 26 15.6**	**-1.3**
TOLI	**Toli-Toli**	**4.14**	**261**	P	**Pn**	**17 25 40.2**	**-0.5**
APSI	**Ampana**	**4.20**	**230**	S	**Sn**	**17 26 32.3**	**+0.2**
NLAI	**Namlea**	**5.46**	**156**	P	**Pn**	**17 25 56.5**	**-1.0**
	3.2nm9μm47nm,0.5s						
NLAI				S	**Sn**	**17 26 56.3**	**-4.8**
	3.2nm9μm47nm,0.5s						
PCI	**Palu**	**5.71**	**242**	P	**Pn**	**17 26 00.7**	**0.0**
	0.2nm1μm87nm,1.0s						
KDI	**Kendari**	**6.14**	**202**	P	**Pn**	**17 26 06.3**	**+0.1**
	0.4nm2μm58nm,0.6s						
KDI				S	**Sn**	**17 27 12.1**	**-4.7**
	0.4nm2μm58nm,0.6s						
AAI	**Ambon**	**6.36**	**149**	P	**Pn**	**17 26 08.7**	**-0.4**
	0.6nm2μm85nm,0.9s						
TTSI	**Tana Toraja**	**6.97**	**227**	P	**Pn**	**17 26 17.2**	**+0.2**
	0.5nm1μm131nm,0.8s						
MYLDM	**Lahad Datu**	**7.21**	**298**	P	**Pn**	**17 26 21.6**	**+1.5**
	0.2nm52nm,1.2s						
SPSI	**Sidrap Palu**	**7.66**	**222**	P	**Pn**	**17 26 25.8**	**-0.2**
	0.3nm906nm78nm,0.7s						
BKSI	**Bulukumba**	**8.51**	**214**	P	**Pn**	**17 26 38.5**	**+1.5**
	19nm,1.5s						
KKM	**Kota Kinabalu**	**9.63**	**296**	P	**Pn**	**17 26 52.9**	**+1.4**
KAKA	**Kakadu**	**16.24**	**153**	*eP*	**P**	**17 28 13.5**	**0.0**
	11nm,0.6s						
KAKA	**Kakadu**	**16.24**	**153**	*eP*	**P**	**17 28 13.2**	**-0.3**
	36nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.77**	**178**	*eP*	**P**	**17 28 50.9**	**-1.0**
	17nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.77**	**178**	*eP*	**P**	**17 28 50.9**	**-0.9**
FITZ	**Fitzroy Crossi**	**19.77**	**178**	P	**P**	**17 28 51.2**	**-0.7**
	2.1nm,0.3s,baz=14,slow=9.2,SNR=60						
MBWA	**Marble Bar**	**23.35**	**192**	*eP*	**P**	**17 29 26.9**	**-0.4**
	16nm,0.6s,mb4.7						
WRAB	**Tennant Creek**	**23.50**	**157**	*eP*	**P**	**17 29 29.7**	**+1.0**
	53nm,1.0s,mb5.0						
ASAR	**Alice Springs**	**26.78**	**161**	P	**P**	**17 29 58.5**	**+0.3**
	3.7nm,0.5s,mb4.3,baz=345,slow=7.5,SNR=193						
CMAR	**Chiang Mai Arr**	**30.36**	**305**	P	**P**	**17 30 29.9**	**-0.1**
	0.4nm,0.4s,mb3.4,baz=110,slow=8.1,SNR=4.6						
FORT	**Forrest**	**32.52**	**175**	*eP*	**P**	**17 30 48.7**	**-0.1**
	29nm,1.1s,mb4.7						
KLBR	**Kellerberrin**	**33.88**	**191**	*eP*	**P**	**17 31 00.4**	**-0.1**
	14nm,0.5s,mb4.7						
NWAO	**Narrogin (SRO)**	**35.27**	**191**	P	**P**	**17 31 12.8**	**+0.3**
NWAO	**Narrogin (SRO)**	**35.27**	**191**	P	**P**	**17 31 12.8**	**+0.3**
	5.0nm,0.4s,mb4.4,baz=324,slow=6.1,SNR=20						
KSRS	**Korea Array**	**35.60**	**4**	P	**P**	**17 31 15.1**	**-0.1**
	0.8nm,0.8s,mb3.3,baz=184,slow=11,SNR=5.3						
STKA	**Stephens Creek**	**37.04**	**156**	*eP*	**P**	**17 31 28.1**	**+0.6**
	4.6nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**37.04**	**156**	*eP*	**P**	**17 31 28.1**	**+0.6**
	0.9nm,0.4s,mb3.6						
STKA	**Stephens Creek**	**37.04**	**156**	P	**P**	**17 31 28.2**	**+0.8**
	5.3nm,0.5s,mb4.4,baz=336,slow=6.9,SNR=24						
LSA	**Lhasa**	**42.40**	**314**	*eP*	**P**	**17 32 12.5**	**+0.8**
	4.9nm,0.8s,mb4.0						
CNB	**Canberra Magne**	**43.44**	**150**	*eP*	**P**	**17 32 22.3**	**+2.4**
TOO	**Toolangi**	**43.56**	**156**	*eP*	**P**	**17 32 23.2**	**+2.3**
ODAN	**Odare**	**43.75**	**308**	*eP*	**P**	**17 32 22.9**	**+0.3**
	6.9nm,0.5s,mb4.2						
GTA	**Gaotai**	**43.87**	**332**	P	**P**	**17 32 24.5**	**+1.2**
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.1						
RAMN	**Ramite**	**44.41**	**308**	*eP*	**P**	**17 32 28.5**	**+0.7**
	comp=Z,17nm,0.7s,mb4.5						
JIRN	**Jiri**	**45.07**	**308**	*eP*	**P**	**17 32 33.3**	**+0.3**
	comp=Z,16nm,0.6s,mb4.5						
GUN	**Gumba**	**45.43**	**309**	*eP*	**P**	**17 32 35.6**	**-0.2**
	comp=Z,23nm,0.6s,mb4.7						
KKN	**Kakani**	**45.84**	**308**	*eP*	**P**	**17 32 38.9**	**-0.2**
	comp=Z,10nm,0.7s,mb4.3						
DMN	**Daman**	**45.90**	**308**	*eP*	**P**	**17 32 39.2**	**-0.3**
	comp=Z,14nm,0.8s,mb4.3						
GKN	**Gorkha**	**46.45**	**308**	*eP*	**P**	**17 32 43.2**	**-0.6**
	comp=Z,12nm,0.7s,mb4.3						
KOLN	**Koldanda**	**47.16**	**307**	*eP*	**P**	**17 32 49.5**	**+0.2**
	comp=Z,34nm,0.7s,mb4.8						
SONM	**Songino Array**	**48.58**	**343**	P	**P**	**17 33 00.4**	**+0.6**
	comp=Z,1.4nm,0.8s,mb3.3,baz=170,slow=9.0,SNR=5.7						
MK31	**Makanchi Array**	**58.13**	**327**	*eP*	**P**	**17 34 08.3**	**-1.0**
MKAR	**Makanchi Array**	**58.13**	**327**	P	**P**	**17 34 08.6**	**-0.7**
	comp=Z,3.8nm,0.5s,mb4.3,baz=120,slow=7.8,SNR=56						
MKAR				PcP	PcP	17 34 58.3	-0.3
	comp=Z,2.0nm,0.8s,baz=119,slow=4.7,SNR=7.3						
YAK	**Yakutsk**	**60.21**	**3**	*eP*	**P**	**17 34 23.7**	**+0.4**
	comp=Z,8.6nm,0.6s,mb4.6						
AML	**Almayashu**	**60.88**	**318**	*eP*	**P**	**17 34 28.5**	**+0.3**
	comp=Z,1.9nm,0.5s,mb4.0						
KBL	**Kabul**	**61.26**	**309**	*eP*	**P**	**17 34 30.6**	**-0.4**
	comp=Z,5.0nm,0.6s,mb4.3						
ZALV	**Zalesovo Beam**	**61.50**	**334**	P	**P**	**17 34 32.0**	**-0.1**
	comp=Z,1.7nm,0.4s,mb4.0,baz=130,slow=5.4,SNR=9.6						
KURK	**Kurchatov**	**62.41**	**329**	*eP*	**P**	**17 34 37.2**	**-1.0**
	comp=Z,1.1nm,0.6s,mb4.7						
BVAR	**Borovoye Array**	**67.96**	**328**	P	**P**	**17 35 12.8**	**-1.0**
	comp=Z,0.8nm,0.6s,mb3.5,baz=123,slow=11,SNR=5.8						
BRVK	**Borovoye**	**68.03**	**328**	*eP*	**P**	**17 35 13.9**	**-0.4**
ABKAR	**Akbulak array**	**72.50**	**322**	*eP*	**P**	**17 35 40.0**	**-1.5**
	comp=Z,1.5nm,0.6s,mb3.8						
ARCES	**ARCESS Array B**	**91.62**	**340**	P	**P**	**17 37 19.5**	**-1.0**
ARCES	**ARCESS Array B**	**91.62**	**340**	P	**P**	**17 37 19.5**	**-1.0**
	comp=Z,1.1nm,0.7s,mb3.9,baz=85,slow=6.7,SNR=6.9						
FINES	**FINESS Array B**	**92.66**	**332**	P	**P**	**17 37 23.9**	**-1.6**
	comp=Z,2.8nm,1.0s,mb4.3,baz=66,slow=6.7,SNR=3.4						

*ISCJB **03** 17:36:19.6±4.3, 18.°23S±0.°10×173.°3W±0.°1, h15km±30km, mb4.1/12, MS3.3/2, Error ellipse: s-maj=23.6km s-min=9.1km az=38.5*
*IDC **03** 17:36:19.3±1.0, 18.°36S×173.°31W, h0km, mb4.0/9, mb1 4.3/10, mb1mx4.2/18, mbtmp4.1/10, ML2.0/1, MS3.5/3, Ms1 3.5/3, ms1mx3.0/22, Error ellipse: s-maj=40.3km s-min=17.5km az=139.0*
*NEIC **03** 17:36:20.7±5.4, 18.°29S×173.°26W, h11km±33km, mb3.9/3, Error ellipse: s-maj=20.4km s-min=9.4km az=137.0*

ISC 03 17:36:22.4±4.3, 18.°24S±0.°09×173.°3W±0.°1, h22km±30km, n31, σ0°89/27, mb4.1/12, MS3.3/2, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.54**	**19**	*e*Pn	**Pn**	**17 37 29.4**	**-0.5**
AFI				Sn	**Sn**	**17 38 21.0**	**-1.1**
AFI	**Afiamalu**	**4.54**	**19**	Pn	**Pn**	**17 37 29.8**	**-0.2**
	4.3nm,0.3s,baz=140,slow=13,SNR=6.8						
AFI				Sn	**Sn**	**17 38 21.0**	**-1.1**
	15nm,0.3s,baz=159,slow=19,SNR=3.8						
MSVF	**Nonsavu**	**8.25**	**272**	P	**Pn**	**17 38 21.7**	**+0.9**
	32nm,1.0s						
RAR	**Rarotonga**	**13.07**	**105**	LR	LR	17 42 41.8	
	comp=Z,202nm,18.4s,baz=88,slow=29						
DZM	**Mont Dzumac**	**19.40**	**255**	*eP*	**Pn**	**17 40 49.0**	**+0.7**
URZ	**Urewera**	**21.64**	**201**	*eP*	**P**	**17 41 11.1**	**-0.1**
URZ	**Urewera**	**21.64**	**201**	P	**P**	**17 41 10.8**	**-0.4**
	7.6nm,0.5s,mb4.4,baz=350,slow=12,SNR=7.0						
PPT	**Papeete**	**22.58**	**92**	LR	LR	17 48 25.9	
	comp=Z,116nm,19.8s,MS3.3,baz=162,slow=32						
HNR	**Honiara**	**27.38**	**285**	LR	LR	17 51 49.0	
	comp=Z,77nm,19.2s,MS3.3,baz=349,slow=34						
RPZ	**Rata Peaks**	**28.62**	**204**	*eP*	**P**	**17 42 21.4**	**+4.3**
RPZ	**Rata Peaks**	**28.62**	**204**	P	**P**	**17 42 21.2**	**+4.1**
	12nm,0.5s,mb4.8,baz=311,slow=5.1,SNR=12						
CTA	**Charters Tower**	**38.19**	**261**	*eP*	**P**	**17 43 40.3**	**-0.4**
	5.9nm,1.2s,mb4.2						
CTA	**Charters Tower**	**38.19**	**261**	P	**P**	**17 43 40.1**	**-0.6**
	4.2nm,0.5s,mb4.4,baz=102,slow=9.2,SNR=12						
**C

az=161.1
NEIC ***03*** *17:40:47.9±0.7,36°.43N×70°.78E,h195km±6km, mb4.1/6, Error ellipse: s-maj=11.5km s-min=7.5km az=120.0*

ISC 03 17:40:47.5±0.4,36°.45N±0°.03×70°.80E±0°.06,h188km±6km, n45,σ0°89/52,mb3.7/11,1C-1D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.38**	**217**	*e*Pn	**Pn**	**17 41 30.9**	**+1.6**
KBL				*e*S	**Sn**	**17 42 01.8**	**0.0**
KSH	**Kashi**	**5.11**	**52**	⇓*i*P	**Pn**	**17 42 00.3**	**-2.7**
KSH				S	**Sn**	**17 42 53.3**	**-9.1**
KSH				smax			
	comp=N,59nm,0.4s						
KSH				smax			
	comp=E,41nm,0.7s						
AML	**Almayashu**	**6.11**	**21**	*e*Pn	**Pn**	**17 42 16.8**	**+0.9**
	comp=E,51nm,0.5s						
AML				*e*S	**Sn**	**17 43 19.9**	**-5.7**
EKS2	**Erkin-Say**	**6.62**	**19**	*e*Pn	**Pn**	**17 42 23.2**	**+0.6**
	comp=E,4.8nm,0.5s						
KK31	**Karatay Array**	**6.65**	**358**	P	**Pn**	**17 42 23.2**	**+0.2**
	comp=E,19nm,0.5s,baz=184,slow=14,SNR=382						
KK31				⇑S	**Sn**	**17 43 33.5**	**-5.0**
	comp=E,42nm,0.5s,baz=185,slow=24						
AAK	**Ala-Archa**	**6.81**	**24**	*e*P	**Pn**	**17 42 25.9**	**+0.9**
AAK				S	**Sn**	**17 43 40.7**	**-1.5**
AAK	**Ala-Archa**	**6.81**	**24**	P	**Pn**	**17 42 25.8**	**+0.8**
	comp=E,2.9nm,0.3s,baz=172,slow=7.0,SNR=6.2						
AAK				S	**Sn**	**17 43 40.7**	**-1.5**
	comp=E,1.6nm,0.3s,baz=118,slow=22,SNR=17						
SDNR	**Sundarnagar**	**7.12**	**132**	*e*PKP	**Pn**	**17 42 28.5**	**-0.7**
SDNR				*ex*	x	17 43 47.5	
KLP	**Kalpa**	**7.89**	**126**	*e*PKP	**Pn**	**17 42 39.5**	**+0.1**
KLP				*e*S	**Sn**	**17 43 57.8**	**-10**
KLP				AML	AML	17 44 07.3	
	comp=E,47nm,0.4s						
KLP				AML	AML	17 44 08.5	
	comp=N,49nm,0.3s						
JOSI	**Joshimath**	**9.38**	**126**	*e*PKP	**Pn**	**17 42 58.2**	**-0.6**
JOSI				*ex*	x	17 44 31.7	
JOSI				AML	AML	17 44 38.8	
	comp=E,105nm,0.5s						
JOSI				AML	AML	17 44 43.7	
	comp=N,107nm,0.8s						
KUDL	**Kundal**	**9.57**	**148**	*e*PKP	**Pn**	**17 42 59.8**	**-1.6**
KUDL				*e*S	**Sn**	**17 44 38.6**	**-10**
SONA	**Sohna**	**9.75**	**145**	*e*PKP	**Pn**	**17 43 02.6**	**-1.1**
SONA				*ex*	x	17 44 32.1	
MK31	**Makanchi Array**	**13.43**	**36**	*e*Pn	**Pn**	**17 43 50.4**	**-0.2**
MKAR	**Makanchi Array**	**13.43**	**36**	P	**Pn**	**17 43 50.7**	**+0.1**
MKAR	**Makanchi Array**	**13.43**	**36**	P	**Pn**	**17 43 50.7**	**+0.1**
	comp=N,4.4nm,0.3s,baz=217,slow=8.8,SNR=25						
KOLN	**Koldanda**	**13.87**	**125**	*e*P	**Pn**	**17 43 55.3**	**-0.9**
	comp=N,12nm,0.4s						
GKN	**Gorkha**	**14.41**	**122**	*e*P	**Pn**	**17 44 03.2**	**+0.2**
	comp=N,14nm,0.3s						
DMN	**Daman**	**14.98**	**122**	*e*P	**Pn**	**17 44 10.1**	**+0.1**
	comp=N,27nm,0.5s						
KKN	**Kakani**	**14.99**	**121**	*e*P	**Pn**	**17 44 10.5**	**+0.4**
	comp=N,36nm,0.6s						
ABKAR	**Akbulak array**	**15.05**	**332**	*e*P	**Pn**	**17 44 09.2**	**-1.4**
	comp=N,5.2nm,0.4s						
PKI	**Pulchoki**	**15.22**	**121**	*e*P	**Pn**	**17 44 12.7**	**-0.2**
	comp=N,25nm,0.6s						
GUN	**Gumba**	**15.33**	**119**	*e*P	**Pn**	**17 44 15.0**	**+0.7**
	comp=N,24nm,0.4s						
KURK	**Kurchatov**	**15.34**	**19**	*e*P	**Pn**	**17 44 15.7**	**+1.7**
	comp=N,2.5nm,0.9s						
JIRN	**Jiri**	**15.70**	**120**	*e*P	**Pn**	**17 44 19.2**	**+0.4**
	comp=N,61nm,0.6s						
RAMN	**Ramite**	**16.43**	**121**	*e*P	**Pn**	**17 44 28.0**	**+0.5**
	comp=N,16nm,0.5s						
BVAR	**Borovoye Array**	**16.58**	**359**	P	**Pn**	**17 44 28.6**	**-0.5**
	comp=N,0.4nm,0.3s,baz=176,slow=12,SNR=9.1						
AKTK	**Aktyubinsk**	**16.75**	**331**	P	**Pn**	**17 44 31.2**	**+0.2**
AKTO	**Aktyubinsk**	**16.75**	**331**	P	**Pn**	**17 44 31.2**	**+0.2**
	comp=N,0.9nm,0.3s,baz=135,slow=11,SNR=25						
TAPN	**Taplejung**	**16.97**	**118**	*e*P	**Pn**	**17 44 36.0**	**+2.0**
	comp=N,18nm,0.4s						
ODAN	**Odare**	**17.04**	**119**	*e*P	**Pn**	**17 44 36.1**	**+1.3**
	comp=N,20nm,0.6s						
ZAA0	**Zalesovo Array**	**20.03**	**25**	*e*P	**P**	**17 45 05.6**	**-0.2**
ZALV	**Zalesovo Beam**	**20.03**	**25**	P	**P**	**17 45 06.2**	**+0.4**
	comp=N,6.1nm,0.5s,baz=222,slow=11,SNR=36						
SHL	**Shillong**	**21.03**	**115**	*ex*	x	17 42 47.0	
JOF	**Joensuu**	**35.83**	**330**	*e*P	**P**	**17 47 27.9**	**-0.7**
JOF	**Joensuu**	**35.83**	**330**	*e*p	**P**	**17 47 27.9**	**-0.7**
	comp=N,0.9nm,0.3s,mb3.9						
FINES	**FINESS Array B**	**37.44**	**326**	P	**P**	**17 47 42.4**	**+0.2**
	comp=N,3.5nm,1.1s,mb3.9,baz=127,slow=9.4,SNR=8.7						
ARCES	**ARCESS Array B**	**41.13**	**338**	P	**P**	**17 48 13.9**	**+1.2**
	comp=N,1.6nm,0.8s,mb3.7,baz=106,slow=7.7,SNR=5.6						
NOA	**NORSAR Array B**	**44.33**	**323**	P	**P**	**17 48 38.5**	**+0.1**
	comp=N,0.6nm,0.5s,mb3.5,baz=97,slow=8.0,SNR=2.8						
TIXI	**Tiksi**	**45.89**	**22**	*e*P	**P**	**17 48 50.9**	**+0.4**
	comp=N,5.3nm,0.3s,mb4.7						
TORD	**Torodi Ar. Bea**	**65.55**	**269**	P	**P**	**17 51 09.4**	**-1.7**
	comp=N,0.3nm,0.5s,mb3.4,baz=50,slow=5.5,SNR=5.3						
ILAR	**Eielson Array**	**74.88**	**16**	P	**P**	**17 52 06.5**	**-0.5**
	comp=N,0.4nm,0.8s,mb3.1,baz=307,slow=3.9,SNR=4.6						
BOSA	**Boshof**	**77.60**	**220**	P	**P**	**17 52 22.6**	**-0.1**
	comp=N,2.3nm,0.9s,mb3.8,baz=346,slow=4.2,SNR=2.9						
YKA	**Yellowknife Ar**	**81.31**	**3**	P	**P**	**17 52 42.8**	**+0.5**
	comp=N,0.6nm,0.3s,mb3.7,baz=349,slow=5.4,SNR=8.8						
WRAB	**Tennant Creek**	**82.10**	**122**	*e*P	**P**	**17 52 47.1**	**0.0**
	comp=N,0.7nm,0.4s,mb3.6						
ASAR	**Alice Springs**	**84.36**	**125**	P	**P**	**17 52 57.6**	**-0.9**
	comp=N,0.8nm,0.7s,mb3.5,baz=316,slow=4.7,SNR=17						

KRSC 03 17:49:34.9±1.2,50°.16N×156°.97E,h48km±47km,ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALID	**Alaid**	**1.15**	**309**	*e*P	Pn	17 49 55.8	+1.2
ALID				*i* S	Sn	17 50 10.7	+1.5
PET	**Petropavlovsk**	**3.05**	**19**	P	Pn	17 50 23.4	+2.8
PET				*i* S	Sn	17 50 59.4	+3.5
AVH	**Avacha**	**3.30**	**19**	*e*P	Pn	17 50 26.8	+2.9
GNL	**Ganaly**	**3.59**	**9**	*e*P	Pn	17 50 32.4	+4.4
MKZ	**Mys Kozlova**	**5.28**	**32**	*e*P	Pn	17 50 53.1	+2.0

ATH ***03*** *17:56:14.9,35°.59N×26°.19E,h36km±2km, MD3.5/14, ML3.4*
NEIC ***03*** *17:56:14.9,35°.59N×26°.19E,h36km, MD3.5(ATH), After ATH.*
ISCJB ***03*** *17:56:15.5±0.6,35°.61N±0°.03×26°.18E±0°.03,h24km±6km, Error ellipse: s-maj=5.6km s-min=4.6km az=159.6*
CSEM ***03*** *17:56:15.1±0.1,35°.61N×26°.19E,h15km,ML3.4, Error ellipse: s-maj=3.6km s-min=2.7km az=161.0*
THE ***03*** *17:56:15.8,35°.62N×26°.17E,h5km±2km, Error ellipse: s-maj=2.2km s-min=0.7km az=95.0*

ISC 03 17:56:15.0±1.4,35°.61N±0°.03×26°.19E±0°.04,h16km±9km, n57,σ0°68/84,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.50**	**178**	*e*Pb	**Pb**	**17 56 26.0**	**+0.6**
ZKR				*e*Sb	**Sb**	**17 56 33.0**	**+0.6**
ZKR	**Zakros**	**0.50**	**178**	*e*PB	**Pb**	**17 56 26.0**	**+0.6**
ZKR				*e*SB	**Sb**	**17 56 33.0**	**+0.6**
ZKR	**Zakros**	**0.50**	**178**	P	**Pb**	**17 56 25.9**	**+0.5**
ZKR				S	**Sb**	**17 56 33.2**	**+0.8**
ZKR	**Zakros**	**0.50**	**178**	P	**Pb**	**17 56 25.9**	**+0.5**
ZKR				*e*Sb	**Sb**	**17 56 33.0**	**+0.6**
NPS	**Neapolis**	**0.59**	**234**	*e*Pn		17 56 27.2	
NPS				*e*Sn	**Sb**	**17 56 35.5**	**+0.4**
NPS	**Neapolis**	**0.59**	**234**	*e*PN		17 56 27.2	
NPS				*e*SN	**Sb**	**17 56 35.5**	**+0.4**
NPS	**Neapolis**	**0.59**	**234**	*e*Pn		17 56 27.2	
KARP	**Karpathos**	**0.79**	**94**	*e*Pn	**Pn**	**17 56 30.8**	**-0.7**
KARP				*e*Sn	**Sn**	**17 56 42.0**	**-1.0**
KARP	**Karpathos**	**0.79**	**94**	*e*PN	**Pn**	**17 56 30.8**	**-0.7**
KARP				*e*SN	**Sn**	**17 56 42.0**	**-1.0**
KARP	**Karpathos**	**0.79**	**94**	*e*Pn	**Pn**	**17 56 30.8**	**-0.7**
KARP				*e*Sn	**Sn**	**17 56 42.0**	**-1.0**
THR1	**Thera Island**	**0.96**	**322**	P	**Pb**	**17 56 33.5**	**+0.2**
THR1	**Thera Island**	**0.96**	**322**	P	**Pb**	**17 56 33.5**	**+0.2**
THR3	**Thira Island,**	**1.02**	**321**	P	**Pb**	**17 56 34.4**	**0.0**
THR3	**Thira Island,**	**1.02**	**321**	P	**Pb**	**17 56 34.4**	**0.0**
THR5	**Thira Island,**	**1.06**	**320**	P	**Pb**	**17 56 35.0**	**+0.1**
THR5	**Thira Island,**	**1.06**	**320**	P	**Pb**	**17 56 35.0**	**+0.1**
IDI	**Anoyia**	**1.11**	**253**	*e*Pb	**Pb**	**17 56 35.1**	**-0.8**
IDI				*e*Sn	**Sn**	**17 56 51.0**	**0.0**
IDI	**Anoyia**	**1.11**	**253**	*e*PB	**Pb**	**17 56 35.1**	**-0.8**
IDI				*e*SN	**Sn**	**17 56 51.0**	**0.0**
IDI	**Anoyia**	**1.11**	**253**	*e*Pb	**Pb**	**17 56 35.1**	**-0.8**
IDI				*e*Sn	**Sn**	**17 56 51.0**	**0.0**
SIVA	**Sivas**	**1.28**	**243**	*e*Pn	**Pn**	**17 56 38.3**	**+0.1**
SIVA				*e*Sn	**Sn**	**17 56 55.1**	**+0.1**
SIVA	**Sivas**	**1.28**	**243**	*e*PN	**Pn**	**17 56 38.3**	**+0.1**
SIVA				*e*SN	**Sn**	**17 56 55.1**	**+0.1**
SIVA	**Sivas**	**1.28**	**243**	P	**Pn**	**17 56 39.1**	**+0.9**
SIVA				S	**Sn**	**17 56 56.1**	**+1.1**
SIVA	**Sivas**	**1.28**	**243**	*e*Pn	**Pn**	**17 56 38.3**	**+0.1**
SIVA	**Sivas**	**1.28**	**243**	P	**Pn**	**17 56 39.1**	**+0.9**
SIVA				*e*Sn	**Sn**	**17 56 55.1**	**+0.1**
SIVA				S	**Sn**	**17 56 56.1**	**+1.1**
APE	**Apeiranthos**	**1.55**	**340**	*e*Pb	**Pb**	**17 56 41.9**	**-1.4**
APE				*e*Sn	**Sn**	**17 57 02.3**	**+0.5**
APE	**Apeiranthos**	**1.55**	**340**	*e*PB	**Pb**	**17 56 41.9**	**-1.4**
APE				*e*SN	**Sn**	**17 57 02.2**	**+0.4**
APE	**Apeiranthos**	**1.55**	**340**	P	**Pn**	**17 56 42.5**	**+0.5**
APE	**Apeiranthos**	**1.55**	**340**	P	**Pn**	**17 56 42.5**	**+0.5**
APE				*e*Sn	**Sn**	**17 57 02.3**	**+0.5**
VAM	**Vamos**	**1.64**	**263**	*e*Pn	**Pn**	**17 56 42.8**	**-0.4**
VAM				*e*Sn	**Sn**	**17 57 03.0**	**-1.0**
VAM	**Vamos**	**1.64**	**263**	*e*PN	**Pn**	**17 56 42.8**	**-0.4**
VAM				*e*SN	**Sn**	**17 57 03.0**	**-1.0**
VAM	**Vamos**	**1.64**	**263**	*e*Pn	**Pn**	**17 56 42.8**	**-0.4**
VAM				*e*Sn	**Sn**	**17 57 03.0**	**-1.0**
ARG	**Arkhangelos**	**1.68**	**68**	*e*Pn	**Pn**	**17 56 44.1**	**+0.3**
ARG				*e*Sn	**Sn**	**17 57 05.1**	**+0.1**
ARG	**Arkhangelos**	**1.68**	**68**	*e*PN	**Pn**	**17 56 44.1**	**+0.3**
ARG				*e*SN	**Sn**	**17 57 05.1**	**+0.1**
ARG	**Arkhangelos**	**1.68**	**68**	P	**Pn**	**17 56 44.4**	**+0.6**
ARG				S	**Sn**	**17 57 05.9**	**+0.9**
ARG	**Arkhangelos**	**1.68**	**68**	*e*Pn	**Pn**	**17 56 44.1**	**+0.3**
ARG	**Arkhangelos**	**1.68**	**68**	P	**Pn**	**17 56 44.4**	**+0.6**
ARG				*e*Sn	**Sn**	**17 57 05.1**	**+0.1**
ARG				S	**Sn**	**17 57 05.9**	**+0.9**
KARN	**Karanos**	**1.87**	**264**	*e*PN	**Pn**	**17 56 46.1**	**-0.3**
KARN				*e*SN	**Sn**	**17 57 09.2**	**-0.4**
KARN	**Karanos**	**1.87**	**264**	P	**Pn**	**17 56 46.8**	**+0.4**
KARN	**Karanos**	**1.87**	**264**	*e*Pn	**Pn**	**17 56 46.1**	**-0.3**
KARN	**Karanos**	**1.87**	**264**	P	**Pn**	**17 56 46.8**	**+0.4**
KARN				*e*Sn	**Sn**	**17 57 09.2**	**-0.4**
GVD	**Gavdhos**	**1.89**	**247**	*e*Pn	**Pn**	**17 56 46.6**	**0.0**
GVD	**Gavdhos**	**1.89**	**247**	*e*PN	**Pn**	**17 56 46.6**	**0.0**
GVD	**Gavdhos**	**1.89**	**247**	P	**Pn**	**17 56 49.4**	**+2.8**
GVD	**Gavdhos**	**1.89**	**247**	*e*Pn	**Pn**	**17 56 46.6**	**0.0**
GVD	**Gavdhos**	**1.89**	**247**	P	**Pn**	**17 56 49.4**	**+2.8**
KYTH	**Kithira**	**2.65**	**286**	*e*Pn	**Pn**	**17 56 56.7**	**-0.4**
KYTH	**Kithira**	**2.65**	**286**	*e*PN	**Pn**	**17 56 56.7**	**-0.4**
KYTH	**Kithira**	**2.65**	**286**	*e*Pn	**Pn**	**17 56 56.7**	**-0.4**
VLI	**Veliai**	**2.86**	**294**	*e*Pn	**Pn**	**17 57 00.2**	**+0.3**
VLI	**Veliai**	**2.86**	**294**	*e*PN	**Pn**	**17 57 00.2**	**+0.3**
VLI	**Veliai**	**2.86**	**294**	*e*Pn	**Pn**	**17 57 00.2**	**+0.3**
VLY	**Voula,Athens**	**2.95**	**320**	*e*Pn	**Pn**	**17 57 02.2**	**+1.0**
VLY	**Voula,Athens**	**2.95**	**320**	*e*PN	**Pn**	**17 57 02.2**	**+1.0**
VLY	**Voula,Athens**	**2.95**	**320**	*e*Pn	**Pn**	**17 57 02.2**	**+1.0**
ATH	**Athens Observa**	**3.08**	**321**	*e*Pn	**Pn**	**17 57 03.8**	**+0.8**
ATH	**Athens Observa**	**3.08**	**321**	*e*PN	**Pn**	**17 57 03.8**	**+0.8**
ATH	**Athens Observa**	**3.08**	**321**	*e*Pn	**Pn**	**17 57 03.8**	**+0.8**

ISCJB ***03*** *18:04:32.0±1.3,46°.63N±0°.10×153°.3E±0°.1,h41km±10km, mb4.0/15, Error ellipse: s-maj=21.3km s-min=7.1km az=138.4*
MOS ***03*** *18:04:32.4±1.8,46°.58N×153°.31E,h49km,mb4.5/8, Error ellipse: s-maj=12.9km s-min=9.5km az=69.0*
IDC ***03*** *18:04:37.2±3.9,46°.58N×153°.27E,h76km±35km, mb3.6/12, mb1 3.8/13,mb1mx3.7/24,mbtmp3.6/13,MS2.6/1, Ms1 2.6/1,ms1mx2.6/18, Error ellipse: s-maj=23.0km s-min=16.8km az=151.0*
NEIC ***03*** *18:04:38.6±1.7,46°.64N×153°.23E,h88km±12km,mb4.0/2, Error ellipse: s-maj=21.4km s-min=10.5km az=160.0*

ISC 03 18:04:34.0±1.2,46°.6N±0°.1×153°.3E±0°.1,h43km±8km,n41, σ1900/43,mb4.0/15,2C-2D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**4.03**	**252**	⇑*i*PN	**Pn**	**18 05 32.4**	**-0.7**
KUR				*e*S	**Sn**	**18 06 18.9**	**0.0**
KUR				pmax	pmax		
	comp=N,40nm,0.6s						
KUR				pmax	pmax		
	comp=E,40nm,0.6s						
KUR				pmax	pmax		
	comp=Z,150nm,0.6s						
KUR				smax			
	comp=N,190nm,0.7s						
KUR				smax			
	comp=E,70nm,0.7s						
SKR	**Severo-Kuril's**	**4.47**	**24**	*e*PN	**Pn**	**18 05 40.5**	**+1.4**
SKR				*e*S	**Sn**	**18 06 30.0**	**+0.2**
SKR				pmax	pmax		
	comp=N,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax			
	comp=E,90nm,0.5s						
SKR				smax			
	comp=N,90nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**5.84**	**246**	⇓*i*PN	**Pn**	**18 05 57.0**	**-0.9**
YUK				pmax	pmax		
	comp=E,60nm,0.6s						
YUK				pmax	pmax		
	comp=Z,90nm,0.6s						
YUK				pmax	pmax		
	comp=N,50nm,0.8s						
PETK	**Petropavlovsk-**	**7.08**	**22**	P	**Pn**	**18 06 19.7**	**+4.8**
PETK				LR	LR	18 08 49.7	
	comp=N,51nm,21.4s,baz=247,slow=35						
YSS	**Yuzh-Sakhalins**	**7.23**	**276**	*e*P	**Pn**	**18 06 21.2**	**+4.1**
	comp=N,14nm,1.0s						
YSS	**Yuzh-Sakhalins**	**7.23**	**276**	*e*PN	**Pn**	**18 06 21.2**	**+4.2**
YSS				pmax	pmax		
	comp=Z,14nm,1.0s						
PET	**Petropavlovsk**	**7.28**	**27**	*e*PN	**Pn**	**18 06 15.3**	**-2.4**
ERM	**Erimo**	**8.60**	**241**	*i* PN	**Pn**	**18 06 37.4**	**+1.6**
KSRS	**Korea Array**	**20.87**	**253**	P	**P**	**18 09 12.9**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=62,slow=10,SNR=10						
KSRS	**Korea Array**	**20.87**	**253**	*e*P	**P**	**18 09 12.9**	**+0.7**
ULN	**Ulaanbaatar**	**31.04**	**289**	*e*P	**P**	**18 10 47.2**	**-0.3**
SONM	**Songino Array**	**31.48**	**290**	P	**P**	**18 10 53.2**	**+1.8**
	comp=Z,0.4nm,0.5s,mb3.5,baz=54,slow=7.4,SNR=2.7						
ILAR	**Eielson Array**	**36.57**	**38**	P	**P**	**18 11 34.4**	**-0.9**
	comp=Z,0.4nm,1.0s,mb3.2,baz=261,slow=6.3,SNR=4.4						
ZALV	**Zalesovo Beam**	**42.77**	**306**	P	**P**	**18 12 25.0**	**-1.9**
	comp=Z,0.5nm,0.5s,mb3.5,baz=93,slow=6.2,SNR=2.9						
ZALV	**Zalesovo Beam**	**42.77**	**306**	P	**P**	**18 12 25.0**	**-1.9**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
MK31	**Makanchi Array**	**47.10**	**298**	*e*P	**P**	**18 13 01.0**	**-0.4**
MKAR	**Makanchi Array**	**47.10**	**298**	P	**P**	**18 13 01.0**	**-0.4**
MKAR	**Makanchi Array**	**47.10**	**298**	P	**P**	**18 13 01.0**	**-0.4**
	comp=Z,1.9nm,0.8s,mb4.1,baz=60,slow=7.4,SNR=18						
MKAR	**Makanchi Array**	**47.10**	**298**	*e*P	**P**	**18 13 01.0**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**47.52**	**304**	*e*P	**P**	**18 13 03.5**	**-1.2**
	comp=Z,2.4nm,0.9s,mb4.2						
KURK	**Kurchatov**	**47.52**	**304**	⇓*e*P	**P**	**18 13 03.9**	**-0.8**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
YKA	**Yellowknife Ar**	**50.95**	**37**	P	**P**	**18 13 31.0**	**+0.3**
	comp=Z,0.9nm,0.6s,mb3.9,baz=296,slow=7.0,SNR=4.5						
YKA	**Yellowknife Ar**	**50.95**	**37**	P	**P**	**18 13 31.0**	**+0.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**51.02**	**310**	P	**P**	**18 13 31.2**	**-0.1**
	comp=Z,0.6nm,0.4s,mb3.9,baz=56,slow=11,SNR=6.7						
BVAR	**Borovoye Array**	**51.02**	**310**	*e*P	**P**	**18 13 31.2**	**-0.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRVK	**Borovoye**	**51.06**	**310**	*e*P	**P**	**18 13 30.4**	**-1.2**
BRVK	**Borovoye**	**51.06**	**310**	⇓*e*P	**P**	**18 13 31.8**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
ABKAR	**Akbulak array**	**58.59**	**310**	*e*P	**P**	**18 14 25.1**	**-1.0**
	comp=Z,0.4nm,0.4s,mb3.8						
FINES	**FINESS Array B**	**64.20**	**335**	P	**P**	**18 15 03.8**	**+0.1**
	comp=Z,5.3nm,0.8s,mb4.6,baz=39,slow=7.0,SNR=12						
FINES	**FINESS Array B**	**64.20**	**335**	P	**P**	**18 15 03.8**	**0.0**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NOA	**NORSAR Array B**	**68.38**	**341**	P	**P**	**18 15 31.4**	**+0.9**
	comp=Z,2.6nm,0.7s,mb4.4,baz=27,slow=6.2,SNR=7.7						
NOA	**NORSAR Array B**	**68.38**	**341**	P	**P**	**18 15 31.5**	**+1.0**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**71.71**	**326**	P	**P**	**18 15 51.0**	**-0.1**
	comp=Z,2.3nm,0.6s,mb4.3,baz=34,slow=6.5,SNR=8.9						
AKASG	**Malin Array Be**	**71.71**	**326**	*e*P	**P**	**18 15 51.0**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**72.13**	**199**	P	**P**	**18 15 53.3**	**-0.5**
	comp=Z,1.4nm,0.6s,mb4.1,baz=351,slow=6.5,SNR=33						
BUR08	**Bucovina Ar. S**	**75.73**	**327**	*e*P	**P**	**18 16 15.5**	**+0.8**
CLL	**Collm**	**76.62**	**336**	*e*P	**P**	**18 16 21.0**	**+1.3**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
CLL	**Collm**	**76.62**	**336**	*e*P	**P**	**18 16 20.0**	**+0.3**
	comp=Z,4.0nm,0.9s,mb4.3						
TXAR	**Lajitas Array**	**77.45**	**61**	P	**P**	**18 16 24.7**	**-0.1**
	comp=Z,0.4nm,0.5s,mb3.6,baz=299,slow=4.0,SNR=5.0						
KHC	**Kasperske Hory**	**78.39**	**334**	*e*P	**P**	**18 16 31.5**	**+1.8**
KHC	**Kasperske Hory**	**78.39**	**334**	*e*P	**P**	**18 16 31.5**	**+1.8**

NIED ***03*** *18:07:00,25°.20N×128°.20E,h8km,Mw4.6 Best double couple: M0 7.54000×10^15 NP1:φs=230.00000°,δ61.00000°, λ=-116.00000°. NP2:φs=94.00000°,δ38.00000°, λ=-52.00000°.*
BJI ***03*** *18:07:07.9,25°.18N×128°.16E,h12km,mB4.8/34,mb4.7/57, Ms4.5/58,Ms7 4.4/55*
IDC ***03*** *18:07:08.8±0.5,25°.23N×128°.09E,h0km,mb4.7/21, mb1 4.8/22,mb1mx4.7/28,mbtmp4.7/22,ML3.0/1,MS3.9/18, Ms1 3.9/18,ms1mx3.8/26,Error ellipse: s-maj=18.0km s-min=12.5km az=79.0*
ISCJB ***03*** *18:07:09.9±0.2,25°.22N±0°.02×128°.06E±0°.02,h14km, mb4.9/134,MS4.3/40,Error ellipse: s-maj=3.6km s-min=2.8km az=145.3*
NEIC ***03*** *18:07:10.6±0.2,25°.21N×128°.01E,h10km,mb5.0/59, MS4.7/3,MW4.5(NIED),Error ellipse: s-maj=6.4km s-min=4.0km az=159.0*
JMA ***03*** *18:07:10.7±0.2,25°.18N×128°.15E,h66km,M5.1*
MOS ***03*** *18:07:12.9±1.2,25°.34N×128°.10E,h33km,mb5.1/53,Error ellipse: s-maj=9.0km s-min=4.7km az=111.9*
DJA ***03*** *18:07:28,25°.44N×128°.53E,h203km,mb4.7/13*

ISC 03 18:07:10.8±0.8,25°.23N±0°.02×128°.03E±0°.03,h9km±4km, h15km±.4km:pP-P,n352,σ1904/380,mb4.9/134,MS4.3/40, 18C-32D,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJT2	**Tamagusuku 2**	**0.94**	**344**	P	**Pg**	**18 07 29.6**	**+0.8**
JJT2				S	**Sg**	**18 07 43.7**	**+2.6**
NAH1	**Naha**	**1.02**	**342**	P	**Pg**	**18 07 30.5**	**+0.2**
NAH1				S	**Sg**	**18 07 44.4**	**+0.9**
JAGN	**Aguni-jima**	**1.53**	**332**	P	**Pn**	**18 07 38.0**	**-0.2**
JAGN				S	**Sn**	**18 07 57.1**	**-1.1**
JKE	**Kume jima 2**	**1.57**	**314**	P	**Pn**	**18 07 38.2**	**-0.5**
JKE				S	**Sn**	**18 07 58.6**	**-0.5**
JOW	**Kunigami**	**1.61**	**8**	P	**Pn**	**18 07 38.0**	**-1.3**
JOW				S	**Sn**	**18 07 58.3**	**-1.9**
JIH	**Iheya**	**1.80**	**358**	P	**Pn**	**18 07 41.2**	**-0.7**
JIH				*e*S	**Sn**	**18 08 03.3**	**-1.5**
JOGS	**Gusukube**	**2.43**	**259**	P	**Pn**	**18 07 50.3**	**-0.3**
JOGS				*e*S	**Sn**	**18 08 19.3**	**-1.1**
JMJ	**Miyako jima 2**	**2.52**	**261**	P	**Pn**	**18 07 51.4**	**-0.4**
JMJ				*e*S	**Sn**	**18 08 21.2**	**-1.4**
JTK	**Tokunoshima**	**2.67**	**18**	P	**Pn**	**18 07 52.6**	**-1.4**
JTK				S	**Sn**	**18 08 22.

SNY pmax pmax
comp=Z,300nm,3.6s
SNY LR LR
comp=N,1μm,11.3s
SNY LR LR
comp=E,550nm,10.8s
SNY LR LR
comp=Z,990nm,14.5s
ENH Enshi 17.16 291 *e*P **Pn 18 11 09.8 -1.0**
comp=Z,37nm,1.3s
BJT Baijiatuau 17.79 329 *e*P **Pn 18 11 19.3 +0.8**
comp=Z,75nm,1.0s
BJT Baijiatuau 17.79 329 *e*P **Pn 18 11 19.3 +0.8**
BJT pmax pmax
comp=Z,75nm,1.0s
BJI Beijing 17.80 329 P **Pn 18 11 19.6 +1.0**
BJI S **Sn 18 14 40.5 +3.4**
BJI pmax pmax
comp=Z,62nm,1.0s
BJI pmax pmax
comp=Z,260nm,3.1s
BJI LR LR
comp=N,490nm,19.0s
BJI LR LR
comp=E,350nm,18.3s
BJI LR LR
comp=Z,380nm,26.8s
QIZ Qiongzhong 17.94 254 P **Pn 18 11 21.0 +0.5**
QIZ pP pP 18 11 25.4 +1.7
QIZ sP sP 18 11 29.0 +4.1
QIZ S **Sn 18 14 44.5 +3.8**
QIZ sS sS 18 14 51.1 -0.2
QIZ pmax pmax
comp=Z,15nm,1.2s
QIZ pmax pmax
comp=Z,150nm,8.8s
QIZ LR LR
comp=N,500nm,14.2s
QIZ LR LR
comp=E,190nm,13.3s
QIZ LR LR
comp=Z,640nm,14.4s
TIY Taiyuan 18.19 317 *e*P **Pn 18 11 24.8 +1.4**
TIY S **Sn 18 14 49.7 +3.2**
TIY pmax pmax
comp=Z,260nm,4.0s
TIY LR LR
comp=N,730nm,12.2s
TIY LR LR
comp=E,470nm,9.3s
TIY LR LR
comp=Z,570nm,12.0s
DAV Davao City (W) 18.21 188 LR LR 18 17 10.1
comp=Z,448nm,19.6s,baz=227,slow=33
CN2 Changchun 18.65 354 ⇑P **Pn 18 11 29.8 +0.8**
CN2 *es*P sP 18 11 36.8 +4.3
CN2 *e*S **Sn 18 15 01.9 +4.4**
CN2 pmax pmax
comp=Z,70nm,1.2s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,800nm,14.0s
CN2 LR LR
comp=E,700nm,14.0s
CN2 LR LR
comp=Z,400nm,14.0s
XAN Xi'an 18.77 302 P **Pn 18 11 31.1 +0.6**
XAN pP pP 18 11 40.4 +7.6
XAN pmax pmax
comp=Z,11nm,1.0s
XAN LR LR
comp=N,450nm,14.1s
XAN LR LR
comp=E,83nm,6.2s
XAN LR LR
comp=Z,390nm,11.9s
GYA Guiyang 19.27 278 ⇑*i*P **Pn 18 11 36.1 -0.6**
GYA PP 18 11 55.0
GYA S **Sn 18 15 08.9 -4.0**
GYA SS 18 15 34.2
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,140nm,4.0s
GYA LR LR
comp=N,7μm,12.5s
GYA LR LR
comp=E,4μm,13.3s
GYA LR LR
comp=Z,8μm,11.9s
MDJ Mudanjiang 19.38 3 P **Pn 18 11 40.2 +2.3**
MDJ pP pP 18 11 43.1 +3.7
MDJ sP sP 18 11 44.5 +3.9
MDJ S **Sn 18 15 16.1 +0.8**
MDJ ScP ScP 18 19 34.7 +0.1
MDJ PcS PcS 18 19 36.0 +0.6
MDJ ScS ScS 18 23 17.6 +1.3
MDJ pmax pmax
comp=Z,7.0nm,1.1s
MDJ pmax pmax
comp=Z,44nm,4.1s
MDJ LR LR
comp=N,380nm,13.1s
MDJ LR LR
comp=E,470nm,11.7s
MDJ LR LR
comp=Z,600nm,12.6s
GUMO Guam 19.63 123 LR LR 18 18 55.9
comp=Z,194nm,19.1s,baz=106,slow=36
HHC Hu-ho-hao-te 20.76 323 *e*P **P 18 11 51.2 -0.6**
HHC pP 18 11 55.1
HHC sP sP 18 11 58.1 +2.5
HHC PP 18 12 12.6
HHC S **S 18 15 35.3 -8.2**
HHC PcP PcP 18 16 01.8 +0.8
HHC SS 18 16 06.5
HHC PcS PcS 18 19 37.4 -1.4
HHC pmax pmax
comp=Z,24nm,1.2s
HHC pmax pmax
comp=Z,180nm,4.3s
HHC LR LR
comp=N,770nm,9.9s
HHC LR LR
comp=E,390nm,11.9s
HHC LR LR
comp=Z,650nm,11.0s,MS4.3
ERM Erimo 20.89 33 ⇑*i*P **P 18 11 51.8 -1.4**
ERM Erimo 20.89 33*c i*P **P 18 11 51.7 -1.5**
BTO Baotou 21.47 320 *e*P **P 18 11 51.3 -8.2**
MYLDM Lahad Datu 21.93 206 P **P 18 12 07.8 +3.2**
comp=Z,848nmcomp=Z,40nm,1.9s,mb4.5
CD2 Chengdu 22.14 290 ⇑P **P 18 12 06.0 -0.7**
CD2 pP 18 12 10.2
CD2 sP sP 18 12 13.0 +2.4
CD2 PP 18 12 32.2
CD2 S **S 18 16 05.2 -5.6**
CD2 sS sS 18 16 11.0 -4.1
CD2 SS 18 16 43.8
CD2 pmax pmax
comp=Z,140nm,0.9s,mb5.4
CD2 pmax pmax
comp=Z,140nm,5.7s
CD2 LR LR
comp=N,2μm,9.6s
CD2 LR LR
comp=E,1μm,10.4s
CD2 LR LR
comp=Z,2μm,11.6s,MS4.8
KMI Kunming 22.88 275 ⇓P **P 18 12 15.9 +1.2**
KMI sP sP 18 12 21.6 +3.0
KMI S **S 18 16 20.6 -4.2**
KMI sS sS 18 16 27.2 -2.2
KMI pmax pmax
comp=Z,54nm,1.0s,mb4.9
KMI pmax pmax
comp=Z,110nm,3.1s
KMI LR LR
comp=N,1μm,13.5s,MS4.5
KMI LR LR
comp=E,660nm,12.6s,MS4.5
KMI LR LR
comp=Z,560nm,12.1s,MS4.2
LZH Lanzhou 23.39 303 ⇓P **P 18 12 18.8 -1.2**
LZH pP 18 12 21.7
LZH sP sP 18 12 23.5 -0.4
LZH PP 18 12 50.3
LZH S **S 18 16 27.6 -5.3**
LZH SS 18 17 14.6
LZH pmax pmax
comp=Z,65nm,1.2s,mb4.9
LZH pmax pmax
comp=Z,230nm,4.3s
LZH LR LR
comp=E,730nm,11.4s
LZH LR LR
comp=Z,1μm,12.5s,MS4.5
HABR Khabarovsk 23.85 12*ce*P **P 18 12 22.4 -1.8**
HABR *e* 18 16 04.7
HABR *eS* **S 18 16 39.4 -0.6**
HABR *e*SSS 18 17 32.5
HABR *e* 18 23 30.0
HABR pmax pmax
comp=Z,66nm,1.2s,mb4.9
HABR pmax pmax
comp=N,23nm,1.1s
HABR pmax pmax
comp=E,18nm,1.1s
HABR MLR MLR
comp=Z,238nm,19.0s,MS3.7
MNI Manado 23.85 188 P **P 18 12 23.6 -0.9**
comp=Z,1μmcomp=Z,86nm,1.1s,mb5.1
KLR Kul'dur 24.13 6 *e*P **P 18 12 22.0 -4.8**
KLR pmax pmax
comp=Z,140nm,1.6s,mb5.1
KLR MLR MLR
comp=N,500nm,12.0s
KLR MLR MLR
comp=Z,2μm,12.0s,MS4.8
TNTI Ternate 24.32 182 P **P 18 12 27.6 -1.2**
comp=Z,2μmcomp=Z,156nm,1.3s,mb5.3
YSS Yuzh-Sakhalins 24.65 25 *e*P **P 18 12 30.9 -0.6**
comp=Z,188nm,1.2s,mb5.5
YSS Yuzh-Sakhalins 24.65 25⇑*e*P **P 18 12 30.8 -0.7**
YSS *i* *SP sP 18 12 34.8 -0.7
YSS *eS* **S 18 16 48.0 -4.9**
YSS *e*SS 18 17 37.0
YSS pmax pmax
comp=Z,90nm,1.0s,mb5.2
YSS MLR MLR
comp=Z,200nm,16.0s,MS3.7
YSS MLR MLR
comp=E,300nm,14.0s
HIA Hailar 24.85 347 *e*P **P 18 12 31.4 -1.9**
PCI Palu 27.17 198 P **P 18 12 57.6 +3.0**
comp=E,930nmcomp=E,70nm,1.1s,mb5.1
SBUM Sibu 27.30 216 P **P 18 12 58.9 +3.1**
comp=E,15nm,1.6s,mb4.3
GTA Gaotai 27.59 308 ⇓P **P 18 12 57.0 -1.2**
GTA pP pP 18 13 01.0 0.0
GTA sP sP 18 13 03.0 +0.8
GTA S **S 18 17 37.4 -2.3**
GTA sS sS 18 17 45.5 +1.1
GTA SS 18 18 57.6
GTA pmax pmax
comp=Z,27nm,0.9s,mb4.9
GTA pmax pmax
comp=Z,100nm,5.4s
GTA LR LR
comp=N,430nm,12.6s,MS4.5
GTA LR LR
comp=E,560nm,11.7s,MS4.5
GTA LR LR
comp=Z,700nm,11.7s,MS4.5
CHTO Chiang Mai 27.68 263 *e*P **P 18 12 59.6 +0.4**
comp=Z,9.3nm,0.9s,mb4.4
CHTO Chiang Mai 27.68 263 *e*P **P 18 12 59.6 +0.4**
CHTO pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
CHTO Chiang Mai 27.68 263 P **P 18 13 00.2 +1.0**
comp=Z,14nm,1.2s,mb4.5
CMAR Chiang Mai Arr 27.79 262 P **P 18 13 01.4 +1.1**
comp=Z,3.5nm,1.0s,mb4.0,baz=63,slow=8.5,SNR=16
CMAR LR LR 18 26 16.9
comp=Z,178nm,18.9s,MS3.7,baz=258,slow=41
CMAR Chiang Mai Arr 27.79 262 P **P 18 13 01.4 +1.2**
CMAR pmax pmax
comp=Z,4.0nm,1.0s
CMAR MLR MLR
comp=Z,178nm,18.9s
ULN Ulaanbaatar 28.01 329 *e*P **P 18 13 01.0 -0.9**
comp=Z,19nm,1.0s,mb4.7
ULN Ulaanbaatar 28.01 329 *e*P **P 18 13 01.0 -0.9**
ULN pmax pmax
comp=Z,19nm,1.0s,mb4.7
ULN Ulaanbaatar 28.01 329 P **P 18 13 00.6 -1.3**
comp=Z,256nmcomp=Z,21nm,1.1s,mb4.7
SONM Songino Array 28.30 328 P **P 18 13 03.1 -1.4**
comp=Z,11nm,1.0s,mb4.5,baz=142,slow=8.6,SNR=20
SONM Songino Array 28.30 328 P **P 18 13 03.1 -1.4**
SONM pmax pmax
comp=Z,11nm,1.0s
ZAK Zakamensk 31.55 329 *e*P **P 18 13 30.5 -2.7**
CLNS Chul'man 31.66 357 *e*P **P 18 13 33.2 -0.9**
CLNS pmax pmax
comp=Z,11nm,0.9s,mb4.7
CLNS pmax pmax
comp=N,8.0nm,1.6s
CLNS MLR MLR
comp=Z,549nm,12.0s,MS4.5
CLNS MLR MLR
comp=N,447nm,12.0s,MS4.3
CLNS MLR MLR
comp=E,182nm,17.0s,MS4.3
TLY Talaya 32.30 331 *e*P **P 18 13 38.8 -1.0**
comp=E,4.1nm,0.8s,mb4.3
TLY Talaya 32.30 331 *e*P **P 18 13 38.8 -0.9**
TLY pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
LSA Lhasa 32.94 286 *e*P **P 18 13 47.2 +1.5**
comp=Z,9.0nm,0.8s,mb4.8
LSA Lhasa 32.94 286 *e*P **P 18 13 47.2 +1.6**
LSA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MOY Mondy 33.48 329 *e*P **P 18 13 49.5 -0.6**
PETK Petropavlovsk- 35.64 31 P **P 18 14 07.2 -1.6**
comp=Z,20nm,1.1s,mb5.0,baz=184,slow=12,SNR=8.0
PETK LR LR 18 29 58.1
comp=Z,49nm,18.2s,MS3.3,baz=65,slow=38
PETK Petropavlovsk- 35.64 31 P **P 18 14 07.2 -1.6**
PETK pmax pmax
comp=Z,20nm,1.1s,mb5.0
PETK MLR MLR
comp=Z,49nm,18.2s,MS3.3
PSI Prapat 35.81 236 LR LR 18 27 52.9
comp=Z,122nm,18.4s,MS3.7,baz=35,slow=35
PET Petropavlovsk 36.03 32 *e*P **P 18 14 11.2 -1.0**
comp=Z,31nm,1.2s,mb5.1
PET *e* 18 14 17.6
PET Petropavlovsk 36.03 32 *e*P **P 18 14 09.3 -2.9**
PET *eS* **S 18 19 46.2 -4.8**
PET pmax pmax
comp=Z,46nm,1.3s,mb5.2
PET MLR MLR
comp=Z,200nm,17.0s,MS4.0
TAPN Taplejung 36.11 282 *e*P **P 18 14 14.6 +1.5**
comp=Z,79nm,1.0s,mb5.6
ODAN Odare 36.45 282 *e*P **P 18 14 16.9 +0.9**
comp=Z,197nm,1.2s,mb5.9
YAK Yakutsk 36.80 1 *e*P **P 18 14 17.6 -1.0**
comp=Z,143nm,1.0s,mb5.8
YAK Yakutsk 36.80 1*d i*P **P 18 14 17.8 -0.8**
YAK pmax pmax
comp=Z,114nm,1.0s,mb5.7
YAK pmax pmax
comp=N,119nm,1.6s
YAK pmax pmax
comp=E,7.0nm,1.1s
PPI Padang Panjang 36.97 230 P **P 18 14 24.2 +3.7**
comp=E,838nmcomp=E,20nm,1.4s,mb4.8
RAMN Ramite 37.13 282 *e*P **P 18 14 22.7 +0.8**
comp=E,69nm,1.4s,mb5.3
JIRN Jiri 37.42 283 *e*P **P 18 14 25.4 +1.1**
comp=E,39nm,0.9s,mb5.2
MDSI Maura Dua 37.54 221 P **P 18 14 26.8 +1.4**
comp=E,16nm,1.0s,mb4.7
WMQ Urumqi 37.61 310 P **P 18 14 25.9 +0.2**
WMQ pP pP 18 14 30.3 +1.7
WMQ sP sP 18 14 32.9 +3.2
WMQ PP PP 18 15 54.4 +2.9
WMQ PcP PcP 18 16 44.0 +0.7
WMQ S **S 18 20 14.6 -0.7**
WMQ ScP ScP 18 20 29.6 -1.3
WMQ SS SS 18 22 48.1 -12
WMQ ScS ScS 18 24 36.7 -2.6
WMQ pmax pmax
comp=Z,25nm,1.0s,mb4.9
WMQ pmax pmax
comp=Z,150nm,4.6s
WMQ LR LR
comp=N,150nm,18.4s,MS4.2
WMQ LR LR
comp=E,290nm,18.6s,MS4.2
WMQ LR LR
comp=Z,310nm,18.4s,MS4.1
GUN Gumba 37.66 284 *e*P **P 18 14 27.5 +1.1**
comp=Z,108nm,1.1s,mb5.5
PKI Pulchoki 38.12 283 *e*P **P 18 14 30.8 +0.6**
comp=Z,54nm,1.1s,mb5.2
KKN Kakani 38.20 283 *e*P **P 18 14 31.5 +0.5**
comp=Z,55nm,1.0s,mb5.2
DMN Daman 38.38 283 *e*P **P 18 14 32.9 +0.5**
comp=Z,61nm,1.0s,mb5.3
GKN Gorkha 38.75 284 *e*P **P 18 14 36.1 +0.6**
comp=Z,159nm,1.5s,mb5.5
KOLN Koldanda 39.69 284 *e*P **P 18 14 44.2 +0.8**
comp=Z,35nm,1.0s,mb5.0
KNA Kunumurra 40.74 179 *e*P **P 18 14 50.8 -1.2**
comp=Z,23nm,0.9s,mb4.8
KNA Kunumurra 40.74 179 P **P 18 14 50.5 -1.5**
comp=Z,698nmcomp=Z,82nm,0.8s,mb5.4
SEY Seymchan 41.02 17⇓*e*P **P 18 14 54.4 +0.5**
MK31 Makanchi Array 42.07 313 *e*P **P 18 15 01.9 -0.9**
MK31 *e* 18 15 13.5
MK31 Makanchi Array 42.07 313 *e*P **P 18 15 01.9 -0.9**
MK31 pmax pmax
comp=Z,6.0nm,0.5s,mb4.5
MKAR Makanchi Array 42.07 313 P **P 18 15 02.0 -0.8**
comp=Z,5.4nm,0.5s,mb4.5,baz=99,slow=8.0,SNR=74
MKAR LR LR 18 34 08.4
comp=Z,164nm,19.4s,MS3.9,baz=109,slow=38
MKAR Makanchi Array 42.07 313 P **P 18 15 02.0 -0.8**
MKAR pmax pmax
comp=Z,5.0nm,0.5s
MKAR MLR MLR
comp=Z,165nm,19.4s
ZAA0 Zalesovo Array 42.94 324 *e*P **P 18 15 08.7 -1.0**
ZALV Zalesovo Beam 42.94 324 P **P 18 15 08.8 -0.9**
comp=Z,5.8nm,0.5s,mb4.6,baz=110,slow=8.1,SNR=25
ZALV LR LR 18 34 46.0
comp=Z,196nm,19.8s,MS4.0,baz=221,slow=39
ZALV Zalesovo Beam 42.94 324 P **P 18 15 08.8 -0.9**
ZALV pmax pmax
comp=Z,6.0nm,0.5s,mb4.6
ZALV MLR MLR
comp=Z,196nm,19.8s,MS4.0
FITZ Fitzroy Crossi 43.13 183 *e*P **P 18 15 10.3 -1.3**
comp=Z,8.3nm,0.6s,mb4.6
FITZ Fitzroy Crossi 43.13 183 P **P 18 15 10.4 -1.2**
comp=Z,8.6nm,0.9s,mb4.5,baz=5.8,slow=8.1,SNR=21
FITZ Fitzroy Crossi 43.13 183 P **P 18 15 11.5 -0.1**
comp=Z,23nm,1.0s,mb4.9
NVS Novosibirsk 44.15 324⇑*i*P **P 18 15 18.3 -1.1**
NVS *i* 18 17 02.7
NVS pmax pmax
comp=Z,36nm,2.3s,mb4.7
NVS pmax pmax
comp=N,26nm,2.2s
NVS pmax pmax
comp=E,38nm,2.4s
WRAB Tennant Creek 45.31 172 P **P 18 15 27.6 -1.4**
comp=E,100nm,0.8s,mb5.7,SNR=5.6
WRAB Tennant Creek 45.31 172 *e*P **P 18 15 28.4 -0.6**
comp=E,15nm,0.9s,mb4.8
WRAB Tennant Creek 45.31 172 P **P 18 15 29.5 +0.5**
KURK Kurchatov 45.43 317 P **P 18 15 29.8 +0.1**
comp=E,87nm,0.6s,mb5.8,SNR=11
KURK Kurchatov 45.43 317 *e*P **P 18 15 28.9 -0.8**
KURK Kurchatov 45.43 317*d i*P **P 18 15 28.6 -1.1**
KURK pmax pmax
comp=Z,20nm,1.0s,mb4.9
KURK MLR MLR
comp=Z,328nm,19.0s,MS4.3
KSH Kashi 45.62 301 *e*P **P 18 15 34.6 +3.2**
KSH *ep*P pP 18 15 39.1 +4.7
KSH *es*P sP 18 15 41.6 +6.1
KSH *e*PcP PcP 18 17 12.5 +2.8
KSH *e*PP PP 18 17 22.1 +3.9
KSH *e*ScP ScP 18 21 03.5 +0.6
KSH *e*PcS PcS 18 21 05.2 +1.4
KSH *eS* **S 18 22 17.3 +3.2**
KSH *e*ScS ScS 18 25 27.7 -0.4
KSH *e*SS SS 18 25 33.1 -5.0
KSH pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
KSH LR LR
comp=N,400nm,15.4s,MS4.6
KSH LR LR
comp=E,200nm,11.5s,MS4.6
KSH LR LR
comp=Z,230nm,11.9s,MS4.3
TIXI Tiksi 46.45 0 *e*P **P 18 15 36.3 -1.2**
comp=Z,60nm,1.8s,mb5.2
TIXI Tiksi 46.45 0 *e*P **P 18 15 36.9 -0.6**
TIXI pmax pmax
comp=Z,31nm,1.7s,mb5.0
TIXI MLR MLR
comp=Z,308nm,13.0s,MS4.4
EKS2 Erkin-Say 47.43 306 *e*P **P 18 15 45.5 -0.1**
comp=Z,3.3nm,0.8s,mb4.3
AML Almayashu 47.46 305 *e*P **P 18 15 47.0 +1.2**
comp=Z,3.7nm,0.8s,mb4.4
AML *e* 18 15 57.4
CTA Charters Tower 48.41 157 *e*P **P 18 15 52.8 -0.5**
comp=Z,4.7nm,0.8s,mb4.6
CTA Charters Tower 48.41 157 P **P 18 15 52.6 -0.7**
comp=Z,7.1nm,1.0s,mb4.6,baz=333,slow=10,SNR=10
CTA Charters Tower 48.41 157 P **P 18 15 52.6 -0.7**
CTA pmax pmax
comp=Z,7.0nm,1.0s
ASAR Alice Springs 48.94 173 P **P 18 15 56.6 -0.7**
ASAR PcP PcP 18 17 20.7 -0.8
ASAR Alice Springs 48.94 173 P **P 18 15 56.6 -0.7**
comp=Z,2.7nm,0.7s,mb4.4,baz=351,slow=7.2,SNR=34
ASAR PcP PcP 18 17 20.7 -0.8
comp=Z,2.0nm,0.8s,baz=347,slow=3.7,SNR=4.6
KK31 Karatay Array 49.85 306 *i* P **P 18 16 04.1 -0.1**
KK31 pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
BVA0 Borovoye Array 50.90 319 *i* P **P 18 16 11.4 -0.6**
BVA0 pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
BVAR Borovoye Array 50.90 319 P **P 18 16 11.8 -0.2**
comp=Z,4.1nm,0.7s,mb4.5,baz=99,slow=9.3,SNR=32
BVAR Borovoye Array 50.90 319 P **P 18 16 11.8 -0.2**
BVAR pmax pmax
comp=Z,4.0nm,0.7s
BRVK Borovoye 50.97 319 P **P 18 16 12.2 -0.3**
comp=Z,119nm,1.1s,mb5.7,SNR=6.8
BRVK Borovoye 50.97 319 *i* P **P 18 16 12.4 -0.1**
BRVK Borovoye 50.97 319*d i*P **P 18 16 12.3 -0.2**
BRVK pmax pmax
comp=Z,29nm,1.2s,mb5.1
BRVK MLR MLR
comp=Z,257nm,18.0s,MS4.3
KBL Kabul 51.36 295 *e*P **P 18 16 16.1 +0.4**
RMQ Roma 55.17 157 *e*P **P 18 16 42.7 -1.0**
comp=Z,12nm,1.3s,mb4.8
SVE Sverdlovsk 56.94 323⇓*e*P **P 18 16 56.5 +0.4**
SVE *e* 18 19 01.7
SVE pmax pmax
comp=Z,25nm,1.4s,mb5.0
SVE MLR MLR
comp=Z,534nm,19.0s,MS4.7
AB31 Akbulak array 57.20 314 *i* P **P 18 16 58.0 -0.1**
AB31 pmax pmax
comp=Z,11nm,0.8s,mb4.9
ABKAR Akbulak array 57.20 314 *e*P **P 18 16 58.1 +0.1**
comp=Z,16nm,0.9s,mb5.1
ARU Arti 58.07 322 P **P 18 17 03.4 -0.6**
comp=Z,79nm,0.9s,mb5.7,SNR=6.3
ARU Arti 58.07 322 *e*P **P 18 17 03.4 -0.6**
comp=Z,28nm,1.3s,mb5.1
ARU Arti 58.07 322*d i*P **P 18 17 03.4 -0.6**
ARU *e* 18 19 10.0
ARU S **S 18 25 06.5 +1.7**
ARU SS SS 18 28 54.7 -1.0

ARU pmax pmax
comp=Z,32nm,1.7s,mb5.1
ARU MLR MLR
comp=Z,456nm,19.0s,MS4.6
STKA Stephens Creek 58.25 166 *eP* **P 18 17 04.6 -0.9**
comp=Z,3.9nm,1.3s,mb4.3
STKA Stephens Creek 58.25 166 P **P 18 17 04.7 -0.8**
comp=Z,2.8nm,0.6s,mb4.5,baz=358,slow=3.2,SNR=7.2
ABKT Ailbek 59.64 301 P **P 18 17 16.4 +1.1**
comp=Z,110nm,1.2s,mb5.8,SNR=8.6
TTA Tatalina 61.48 30 *eP* **P 18 17 28.1 +0.7**
SVW2 Sparrevohn 61.70 32 *eP* **P 18 17 29.6 +0.7**
comp=Z,22nm,1.4s,mb5.1
RSO Redoubt South 63.11 33 *eP* **P 18 17 38.5 +0.2**
PPLA Purkeypile 63.23 30 *eP* **P 18 17 39.9 +0.8**
comp=Z,27nm,1.3s,mb5.2
KDAK Kodiak Island 63.43 36 P **P 18 17 40.3 -0.2**
comp=Z,113nm,0.9s,mb6.0,SNR=6.3
KDAK Kodiak Island 63.43 36 P **P 18 17 40.1 -0.4**
comp=Z,10.0nm,0.7s,mb5.0,baz=312,slow=2.4,SNR=16
KDAK Kodiak Island 63.43 36 *i* P **P 18 17 40.2 -0.3**
BPAW Bear Paw Mtn. 63.69 29 *eP* **P 18 17 42.3 +0.1**
comp=Z,30nm,1.5s,mb5.1
COLD Coldfoot 63.83 25 *eP* **P 18 17 43.8 +0.7**
comp=Z,11nm,1.3s,mb4.7
TRF Thorofare Moun 64.05 30 *eP* **P 18 17 44.1 -0.4**
comp=Z,36nm,1.9s,mb5.1
RC01 Rabbit Creek A 64.53 32 *eP* **P 18 17 47.0 -0.7**
comp=Z,16nm,1.1s,mb5.0
MCK McKinley 64.63 29 *eP* **P 18 17 47.6 -0.6**
comp=Z,33nm,1.0s,mb5.3
MCK McKinley 64.63 29 *eP* **P 18 17 47.7 -0.6**
MCK pmax pmax
comp=Z,33nm,1.0s,mb5.3
PMR Palmer 64.77 32 *eP* **P 18 17 48.6 -0.6**
comp=Z,28nm,1.5s,mb5.1
PMR Palmer 64.77 32 *eP* **P 18 17 48.6 -0.6**
PMR pmax pmax
comp=Z,28nm,1.5s,mb5.1
SEW Seward 64.79 33 *eP* **P 18 17 48.7 -0.7**
comp=Z,23nm,1.0s,mb5.2
COLA College 64.98 28 *eP* **P 18 17 50.7 +0.1**
comp=Z,10nm,0.9s,mb4.9
COLA College 64.98 28 *eP* **P 18 17 50.7 +0.1**
COLA pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ILAR Eielson Array 65.40 28 P **P 18 17 52.0 -1.3**
comp=Z,2.3nm,0.7s,mb4.3,baz=273,slow=6.1,SNR=31
ILAR Eielson Array 65.40 28 P **P 18 17 52.1 -1.2**
ILAR pmax pmax
comp=Z,2.0nm,0.7s
DIV Divide 66.43 32 *eP* **P 18 18 00.5 +0.4**
comp=Z,28nm,1.1s,mb5.2
MAK Makhachkala 66.59 308 *eP* **P 18 17 59.6 -1.8**
BMRM Bremner River 67.02 32 *eP* **P 18 18 03.9 +0.1**
comp=Z,20nm,1.0s,mb5.1
MENT Mentasta 67.07 30 *eP* **P 18 18 04.2 +0.2**
KLMR Klimovskoe 67.59 328 *eP* **P 18 18 05.3 -2.1**
KLMR pmax pmax
comp=Z,99nm,1.4s,mb5.7
EGAK Eagle 67.82 28 *eP* **P 18 18 08.6 -0.1**
comp=Z,10nm,1.2s,mb4.7
VRHR Novokhopersk 68.61 317 *eP* **P 18 18 13.3 -0.6**
VRHR pmax pmax
comp=N,20nm,0.9s
VRHR pmax pmax
comp=E,20nm,0.9s
VRHR pmax pmax
comp=Z,40nm,0.9s,mb5.3
APA Apatity 68.69 336⇑ *eP* **P 18 18 14.6 +0.4**
APA *i* 18 18 25.4
APA *i* 18 18 34.0
APA pmax pmax
comp=Z,16nm,1.0s,mb4.9
APA MLR MLR
comp=Z,300nm,14.0s,MS4.7
DAWY Dawson 68.73 28 *eP* **P 18 18 14.3 -0.2**
ZEI Tsey 69.21 308 *eP* **P 18 18 17.6 -0.3**
ZEI pmax pmax
comp=Z,30nm,0.9s,mb5.2
GNI Garni 69.31 306 *i* P **P 18 18 16.9 -1.6**
GNI MLR MLR
comp=Z,61nm,24.0s
ONI Oni 69.57 308 P **P 18 18 21.5 +1.4**
KIV Kislovodsk 69.74 310 P **P 18 18 22.5 +1.4**
comp=Z,293nm,1.4s,mb6.0,SNR=7.2
KIV Kislovodsk 69.74 310 *eP* **P 18 18 22.4 +1.3**
comp=Z,91nm,1.3s,mb5.5
KIV Kislovodsk 69.74 310 *eP* **P 18 18 22.2 +1.1**
KIV pmax pmax
comp=Z,53nm,1.0s,mb5.4
KIV MLR MLR
comp=Z,106nm,18.0s,MS4.1
MOS Moscow 69.76 323 *eP* **P 18 18 20.3 -0.7**
MOS pmax pmax
comp=Z,99nm,1.1s,mb5.7
MOS pmax pmax
comp=Z,200nm,1.8s,mb5.8
PNL Peninsula 69.84 33 *eP* **P 18 18 21.6 +0.2**
comp=Z,4.7nm,0.8s,mb4.5
INK Inuvik 69.88 23 P **P 18 18 21.7 +0.2**
INK LR LR 18 51 39.0
INK Inuvik 69.88 23 P **P 18 18 21.7 +0.2**
comp=Z,14nm,1.0s,mb4.8,baz=286,slow=3.8,SNR=10
INK LR LR 18 51 39.0
comp=Z,45nm,19.1s,MS3.7,baz=283,slow=38
INK Inuvik 69.88 23 P **P 18 18 21.7 +0.2**
INK pmax pmax
comp=Z,14nm,1.0s
INK MLR MLR
comp=Z,45nm,19.1s
VSR Storozhevoye 70.07 318 *eP* **P 18 18 22.7 -0.3**
VSR pmax pmax
comp=Z,20nm,0.6s,mb5.2
VSR pmax pmax
comp=N,30nm,1.2s
VSR pmax pmax
comp=E,50nm,1.2s
VSR MLR MLR
comp=N,110nm,16.0s,MS4.3
VSR MLR MLR
comp=E,90nm,16.0s,MS4.3
VSR MLR MLR
comp=Z,210nm,16.0s,MS4.5
KBS Kingsbay 70.19 349 *eP* **P 18 18 23.1 -0.2**
comp=Z,15nm,1.3s,mb4.8
KBS Kingsbay 70.19 349 *i* P **P 18 18 23.2 -0.1**
KEV Kevo 70.30 339 *eP* **P 18 18 22.6 -1.5**
comp=Z,0.4nm,0.4s,mb3.7
KEV Kevo 70.30 339 *ep* **P 18 18 22.6 -1.5**
comp=Z,0.4nm,0.4s,mb3.7
OBN Obninsk 70.51 322 *eP* **P 18 18 25.4 -0.2**
comp=Z,44nm,1.2s,mb5.3
OBN Obninsk 70.51 322 *d iP* **P 18 18 25.6 0.0**
OBN *e* 18 18 44.3
OBN pmax pmax
comp=Z,86nm,1.7s,mb5.4
OBN MLR MLR
comp=Z,200nm,20.0s,MS4.4
JOF Joensuu 70.83 331 *eP* **P 18 18 25.9 -1.5**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
JOF Joensuu 70.83 331 *ep* **P 18 18 25.9 -1.5**
comp=Z,0.8nm,0.4s,mb4.0
ARCES ARCESS Array B 70.87 339 P **P 18 18 27.4 -0.1**
ARCES ARCESS Array B 70.87 339 P **P 18 18 27.4 -0.1**
comp=Z,7.3nm,0.9s,mb4.6,baz=80,slow=6.8,SNR=10
ARCES ARCESS Array B 70.87 339 P **P 18 18 27.4 -0.2**
ARCES pmax pmax
comp=Z,7.0nm,0.9s
SOC Sochi 71.91 310 *c iP* **P 18 18 33.2 -1.1**
SOC *e* PPP 18 22 53.2
SOC *e* S S 18 27 54.7 -0.8
SOC pmax pmax
comp=Z,36nm,1.0s,mb5.3
ANN Anapa 73.09 312 *eP* **P 18 18 40.6 -0.7**
ANN *e* S S 18 28 07.6 -1.3
ANN pmax pmax
comp=Z,58nm,1.0s,mb5.5
KAF Kangasniemi 73.29 331 *eP* **P 18 18 38.8 -3.4**
comp=Z,0.7nm,0.4s,mb3.9
KAF Kangasniemi 73.29 331 *eP* **P 18 18 38.8 -3.4**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
KAF Kangasniemi 73.29 331 *ep* **P 18 18 38.8 -3.4**
comp=Z,0.7nm,0.4s,mb3.9

FINES FINESS Array B 73.64 331 P **P 18 18 44.5 +0.2**
comp=Z,10nm,0.9s,mb4.8,baz=61,slow=5.4,SNR=19
FINES LR LR 18 55 06.8
comp=Z,383nm,18.9s,MS4.7,baz=244,slow=39
FINES FINESS Array B 73.64 331 P **P 18 18 44.5 +0.2**
FINES pmax pmax
comp=Z,10.0nm,0.9s
FINES MLR MLR
comp=Z,383nm,18.9s
SIM Simferopol' 75.25 313 *d iP* **P 18 18 54.0 0.0**
SIM pmax pmax
comp=Z,20nm,1.2s,mb4.9
MICGM Minsk 75.45 324 *e* **P 18 18 51.0 -3.9**
MNK Minsk 75.48 324 *eP* **P 18 18 51.0 -4.1**
AKASG Malin Array Be 76.17 320 P **P 18 18 59.0 -0.2**
comp=Z,24nm,0.9s,mb5.1,baz=56,slow=6.1,SNR=50
AKASG LR LR 18 56 01.5
comp=Z,215nm,19.0s,MS4.5,baz=90,slow=38
AKASG Malin Array Be 76.17 320 P **P 18 18 59.0 -0.1**
AKASG pmax pmax
comp=Z,24nm,0.9s
AKASG MLR MLR
comp=Z,215nm,19.0s
AKBB Malin Array Si 76.17 320 *eP* **P 18 18 58.6 -0.6**
KIEV Kiev 76.19 320 *eP* **P 18 18 58.6 -0.6**
comp=Z,20nm,1.0s,mb5.0
KIEV Kiev 76.19 320 *eP* **P 18 18 58.6 -0.6**
KIEV pmax pmax
comp=Z,20nm,1.0s,mb5.0
RES Resolute Bay 76.56 11 P **P 18 19 01.2 +0.3**
comp=Z,8.5nm,0.9s,mb4.7,baz=288,slow=2.0,SNR=3.7
RES Resolute Bay 76.56 11 P **P 18 19 01.2 +0.3**
RES pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
BR131 Keskin Array S 77.51 308 *eP* **P 18 19 07.2 +0.3**
comp=Z,10nm,0.9s,mb4.8
BRTR Keskin Array B 77.51 308 P **P 18 19 07.3 +0.4**
comp=Z,11nm,0.9s,mb4.8,baz=91,slow=4.7,SNR=31
BRTR LR LR 18 58 23.6
comp=Z,37nm,19.2s,MS3.7,baz=247,slow=40
BRTR Keskin Array B 77.51 308 P **P 18 19 07.3 +0.4**
BRTR pmax pmax
comp=Z,11nm,0.9s
BRTR MLR MLR
comp=Z,37nm,19.2s
SUW Suwalki 78.16 324 *eP* **P 18 19 10.4 +0.2**
BBB Bella Bella 78.43 38 LR LR 18 57 44.3
comp=Z,42nm,18.4s,MS3.8,baz=305,slow=39
MMAI Mount Meron Ar 78.76 301 LR LR 18 59 39.4
comp=Z,56nm,18.4s,MS3.9,baz=210,slow=40
TESR 79.45 316 ⇓ P **P 18 19 17.9 +0.4**
TESR 79.45 316 ⇓ *iP* **P 18 19 17.9 +0.4**
YKA Yellowknife Ar 79.50 25 P **P 18 19 17.2 -0.2**
comp=Z,6.0nm,0.9s,mb4.5,baz=300,slow=5.3,SNR=15
YKA Yellowknife Ar 79.50 25 P **P 18 19 17.3 -0.1**
LVV L'vov 79.57 320 *eP* **P 18 19 18.4 +0.3**
VRI Vrincioaia 79.68 316 ⇓ P **P 18 19 19.6 +0.9**
VRI Vrincioaia 79.68 316 ⇓ *iP* **P 18 19 19.6 +0.9**
PLOR Plostina 79.73 316 ⇓ P **P 18 19 19.7 +0.7**
PLOR Plostina 79.73 316 ⇓ *iP* **P 18 19 19.7 +0.7**
BUR08 Bucovina Ar. S 79.85 318 *eP* **P 18 19 20.1 +0.5**
BURAR Bucovina Array 79.85 318 ⇓ P **P 18 19 20.4 +0.8**
BURAR Bucovina Array 79.85 318 ⇓ *iP* **P 18 19 20.4 +0.8**
NB2 NORSAR Subarra 80.13 334 P **P 18 19 20.3 -0.6**
NB2 NORSAR Subarra 80.13 334 P **P 18 19 20.3 -0.6**
NOA NORSAR Array B 80.13 334 P **P 18 19 20.4 -0.4**
NOA LR LR 18 58 32.0
NOA NORSAR Array B 80.13 334 P **P 18 19 20.4 -0.4**
comp=Z,9.1nm,0.9s,mb4.7,baz=62,slow=4.7,SNR=21
NOA LR LR 18 58 32.0
comp=Z,145nm,20.5s,MS4.3,baz=330,slow=38
NOA NORSAR Array B 80.13 334 P **P 18 19 20.4 -0.5**
NOA pmax pmax
comp=Z,9.0nm,0.9s
NOA MLR MLR
comp=Z,145nm,20.5s
MLR Muntele Rosu 80.33 316 ⇓ P **P 18 19 23.5 +1.2**
MLR Muntele Rosu 80.33 316 ⇓ *iP* **P 18 19 23.5 +1.2**
KWP Kalwaria Pacla 80.42 321 *eP* **P 18 19 23.5 +0.9**
ISP Isparta 80.50 307 *eP* **P 18 19 23.0 -0.3**
comp=Z,5.9nm,0.9s,mb4.5
ISP Isparta 80.50 307 *eP* **P 18 19 23.0 -0.3**
ISP pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
VOIR 80.92 316 ⇓ P **P 18 19 26.1 +0.7**
VOIR 80.92 316 ⇓ *iP* **P 18 19 26.1 +0.7**
UZH Uzhgorod 81.13 320 ⇑ *iP* **P 18 19 27.7 +1.2**
UZH *e* 18 19 46.3
STHS Stebnicka Huta 81.36 321 *eP* **P 18 19 29.2 +1.5**
comp=Z,3.4nm,1.0s,mb4.2
STHS Stebnicka Huta 81.36 321 *eP* **P 18 19 29.2 +1.5**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
STHS Stebnicka Huta 81.36 321 *eP* **P 18 19 29.2 +1.5**
DRGR 81.75 318 ⇓ P **P 18 19 30.5 +0.7**
DRGR 81.75 318 ⇓ *iP* **P 18 19 30.5 +0.7**
OJC Ojcow 81.79 322 *eP* **P 18 19 30.4 +0.5**
NIE Niedzica 81.89 321 *eP* **P 18 19 31.8 +1.3**
SUMG Summit 82.02 356 *eP* **P 18 19 31.5 +0.8**
comp=Z,55nm,1.1s,mb5.4
OKC Ostrava-Krasne 82.90 322 *eP* **P 18 19 36.3 +0.5**
VYHS Vyhne 83.20 321 *eP* **P 18 19 38.5 +1.2**
comp=Z,6.4nm,1.0s,mb4.6
VYHS Vyhne 83.20 321 *eP* **P 18 19 38.5 +1.2**
VYHS pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
VYHS Vyhne 83.20 321 *eP* **P 18 19 38.5 +1.2**
MORC Moravsky Berou 83.27 322 *eP* **P 18 19 38.1 +0.5**
comp=Z,14nm,1.5s,mb4.8
MORC Moravsky Berou 83.27 322 ⇓ *iP* **P 18 19 38.2 +0.5**
KSP Ksiaz 83.39 324 *eP* **P 18 19 38.8 +0.6**
KSP Ksiaz 83.39 324 *eP* **P 18 19 38.7 +0.8**
KOLL Kolacno 83.40 321 *eP* **P 18 19 39.7 +1.3**
KOLL Kolacno 83.40 321 *eP* **P 18 19 39.7 +1.3**
VTS Vitosha 83.41 314 ⇓ P **P 18 19 39.7 +1.2**
VTS Vitosha 83.41 314 ⇓ *iP* **P 18 19 39.7 +1.1**
DPC Dobruska-Polom 83.64 323 *eP* **P 18 19 40.5 +1.0**
RUE Ruedersdorf 83.81 326 *eP* **P 18 19 40.9 +0.5**
comp=Z,55nm,1.3s,mb5.5
JCW Jim Creek 83.83 39 P **P 18 19 41.0 +0.4**
VRAC Vranov 84.04 322 ⇓ P **P 18 19 42.8 +1.1**
VRAC Vranov 84.04 322 ⇓ *iP* **P 18 19 42.8 +1.2**
PKSM Moragy 84.48 319 ⇑ P **P 18 19 44.4 +0.4**
PKSM Moragy 84.48 319 ⇑ *iP* **P 18 19 44.4 +0.5**
PVCC Panska Ves 84.48 324 *eP* **P 18 19 44.7 +0.9**
PVCC Panska Ves 84.48 324 *eP* **P 18 19 44.7 +0.9**
BRG Berggiesshubel 84.62 324 *eP* **P 18 19 45.1 +0.6**
comp=Z,18nm,1.2s,mb5.0
BRG pmax pmax
comp=N,139nm,20.8s
BRG MLR MLR
comp=E,205nm,20.6s
BRG MLR MLR
comp=Z,261nm,15.2s
BRG Berggiesshubel 84.62 324 *eP* **P 18 19 45.1 +0.6**
BRG pmax pmax
comp=Z,20nm,1.2s,mb5.1
BRG MLR MLR
comp=N,1 μm,20.8s,MS5.2
BRG MLR MLR
comp=E,83nm,20.6s,MS5.2
BRG MLR MLR
comp=Z,123nm,15.2s
TREC Trest 84.66 323 *eP* **P 18 19 45.7 +0.9**
TREC Trest 84.66 323 *eP* **P 18 19 45.7 +0.9**
PRU Pruhonice 84.79 324 *eP* **P 18 19 47.0 +1.6**
NLW Nelson Butte 84.80 39 P **P 18 19 46.0 +0.5**
CLL Collm 84.87 325 *eP* **P 18 19 46.0 +0.2**
comp=Z,20nm,1.0s,mb5.2
CLL Collm 84.87 325 ⇑ *iP* **P 18 19 46.4 +0.6**
comp=Z,20nm,1.0s,mb5.2
CLL LR LR
comp=Z,400nm,19.7s,MS4.8
CLL Collm 84.87 325 ⇑ *iP* **P 18 19 46.4 +0.6**
CLL pmax pmax
comp=Z,20nm,1.0s,mb5.2
CLL MLR MLR
comp=Z,400nm,19.7s,MS4.8
CLL Collm 84.87 325 ⇑ *iP* **P 18 19 46.4 +0.6**
comp=Z,20nm,1.0s,mb5.2
CLL *eS* S 18 30 24.0 +10
CLL Lm 19 01 00.0
comp=N,200nm,18.6s
CLL Lm 19 01 00.0
comp=E,200nm,20.1s
CLL Lm 19 01 00.0
comp=Z,400nm,19.7s
ETW Entiat 85.06 39 P **P 18 19 47.1 +0.3**
TANN Tannenbergstha 85.66 325 *eP* **P 18 19 50.3 +0.5**
comp=Z,10.0nm,1.2s,mb4.9
WERD Werda 85.72 325 *eP* **P 18 19 50.6 +0.5**
comp=Z,10.0nm,1.1s,mb5.0
ARSA Arzberg 85.75 321 ⇑ *iPcP* **P 18 19 51.0 +0.7**
comp=Z,8.9nm,1.2s,mb4.9
GUNZ Gunzen 85.76 325 *eP* **P 18 19 50.9 +0.7**
comp=Z,15nm,1.0s,mb5.2
NKC Novy Kostel 85.77 324 *eP* **P 18 19 51.8 +1.5**
KHC Kasperske Hory 85.79 323 *i* P **P 18 19 51.8 +1.3**
KHC Kasperske Hory 85.79 323 *eP* **P 18 19 51.4 +0.9**
GEC2 GERESS Array S 85.89 323 *eP* **P 18 19 51.4 +0.5**
comp=Z,10.0nm,1.0s,mb5.0
GEC2 GERESS Array S 85.89 323 *eP* **P 18 19 51.4 +0.5**
GEC2 pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
CLZ Clausthal 85.89 327 *eP* **P 18 19 52.3 +1.4**
comp=Z,12nm,1.2s,mb5.0
CLZ Clausthal 85.89 327 *eP* **P 18 19 52.3 +1.4**
CLZ pmax pmax
comp=Z,12nm,1.2s,mb5.0
MOX Moxa 85.97 325 *eP* **P 18 19 52.5 +1.2**
comp=Z,16nm,1.8s,mb5.0
MOX
comp=Z,300nm,19.0s
MOX Moxa 85.97 325 *eP* **P 18 19 52.2 +0.9**
comp=Z,13nm,1.5s,mb4.9
MOX Moxa 85.97 325 *eP* **P 18 19 52.5 +1.2**
MOX pmax pmax
comp=Z,16nm,1.8s,mb5.0
MOX MLR MLR
comp=Z,300nm,19.0s,MS4.7
MOA Molln 86.13 322 ⇑ *iPcP* **P 18 19 53.1 +0.9**
comp=Z,6.6nm,0.9s,mb4.8
WET Wettzell 86.16 323 *eP* **P 18 19 53.1 +0.8**
comp=Z,17nm,1.7s,mb5.0
WET Wettzell 86.16 323 *eP* **P 18 19 53.1 +0.8**
WET pmax pmax
comp=Z,17nm,1.7s,mb5.0
PERS Pernice 86.32 321 *i* P **P 18 19 53.3 +0.2**
SOKA Soboth 86.34 321 ⇓ *iPcP* **P 18 19 53.5 +0.3**
comp=Z,11nm,1.3s,mb4.9
NEW Newport 86.50 37 *eP* **P 18 19 53.5 -0.5**
comp=Z,7.2nm,1.1s,mb4.8
NEW Newport 86.50 37 *eP* **P 18 19 53.5 -0.4**
NEW pmax pmax
comp=Z,7.0nm,1.1s
YBH Yreka Blue Hor 86.70 45 LR LR 18 54 16.4
comp=Z,30nm,19.4s,MS3.7,baz=82,slow=33
GRA1 Grafenberg Arr 86.73 325 *eP* **P 18 19 56.5 +1.4**
comp=Z,23nm,1.3s,mb5.2
GRA1 LR LR
comp=Z,300nm,20.2s,MS4.7
GRF Grafenberg Arr 86.73 325 *eP* **P 18 19 56.5 +1.4**
comp=Z,23nm,1.3s,mb5.2
GRF *eL* 19 01 50.5
comp=Z,292nm,20.2s
GRF Grafenberg Arr 86.73 325 *eP* **P 18 19 56.5 +1.4**
GRF pmax pmax
comp=Z,23nm,1.3s,mb5.2
GRF MLR MLR
comp=Z,300nm,20.2s,MS4.7
BOJS Bojanci 86.86 320 *eP* **P 18 19 56.6 +0.9**
VISS Visnje 86.94 320 *i* P **P 18 19 56.6 +0.5**
JAVS Javornik 87.34 320 *i* P **P 18 19 57.8 -0.3**
FUR Furstenfeldbru 87.60 323 *eP* **P 18 20 00.3 +1.0**
comp=Z,26nm,1.1s,mb5.4
FUR Furstenfeldbru 87.60 323 *eP* **P 18 20 00.3 +1.0**
FUR pmax pmax
comp=Z,26nm,1.1s,mb5.4
MOD Modoc 88.14 44 *eP* **P 18 20 02.3 +0.3**
comp=Z,19nm,1.4s,mb5.1
BMO Blue Mountains 88.33 40 *eP* **P 18 20 02.9 0.0**
comp=Z,4.2nm,1.3s,mb4.5
BMO Blue Mountains 88.33 40 *eP* **P 18 20 02.9 0.0**
BMO pmax pmax
comp=Z,4.0nm,1.3s,mb4.5
STU Stuttgart 88.34 325 *eP* **P 18 20 04.1 +1.3**
comp=Z,10.0nm,0.6s,mb5.2
WVOR Wild Horse Val 88.89 43 *eP* **P 18 20 05.8 +0.3**
comp=Z,13nm,1.8s,mb5.0
WVOR Wild Horse Val 88.89 43 *eP* **P 18 20 05.8 +0.3**
WVOR pmax pmax
comp=Z,13nm,1.8s,mb5.0
FFC Flin Flon 89.56 26 *i* P **P 18 20 08.8 +0.4**
CDF Champ du Feu 89.57 325 *eP* **P 18 20 07.9 -0.7**
comp=Z,30nm,1.4s,mb5.2
CDF Champ du Feu 89.57 325 *eP* **P 18 20 07.9 -0.7**
comp=Z,15nm,1.4s,mb5.1
CDF Champ du Feu 89.57 325 *eP* **P 18 20 07.9 -0.7**
CDF pmax pmax
comp=Z,15nm,1.4s,mb5.1
GIVF Givet 89.72 327 *eP* **P 18 20 09.1 -0.2**
BAIF Baives 90.05 328 *eP* **P 18 20 10.2 -0.6**
HINF Hinteralfeld 90.16 325 *eP* **P 18 20 10.6 -0.8**
HAU Haudompre 90.31 325 *eP* **P 18 20 11.6 -0.5**
DLMT Dillon 90.72 38 *eP* **P 18 20 14.6 +0.5**
comp=Z,10nm,1.3s,mb5.0
PPT Papeete 90.73 109 LR LR 18 57 05.1
comp=Z,95nm,19.6s,MS4.2,baz=324,slow=33
HLID Hailey 90.77 40 *eP* **P 18 20 15.0 +0.7**
comp=Z,4.7nm,0.1s,mb5.8
NVAR Mina Array Bea 91.32 46 P **P 18 20 17.7 +0.7**
comp=Z,2.6nm,1.0s,mb4.5,baz=266,slow=6.1,SNR=13
LPL La Plagne 91.68 323 *eP* **P 18 20 17.4 -1.1**
comp=Z,18nm,1.4s,mb4.9
LPL La Plagne 91.68 323 *eP* **P 18 20 17.4 -1.1**
comp=Z,9.1nm,1.4s,mb4.9
LPL La Plagne 91.68 323 *eP* **P 18 20 17.4 -1.1**
LPL pmax pmax
comp=Z,9.0nm,1.4s,mb4.9
LPG La Plagne 91.69 323 *eP* **P 18 20 18.0 -0.5**
comp=Z,21nm,1.2s,mb5.0
LPG La Plagne 91.69 323 *eP* **P 18 20 18.0 -0.5**
comp=Z,11nm,1.2s,mb5.0
LPG La Plagne 91.69 323 *eP* **P 18 20 18.0 -0.5**
LPG pmax pmax
comp=Z,11nm,1.2s,mb5.1
N12A Clover Valley, 92.00 43 *eP* **P 18 20 20.9 +0.8**
RLMT Red Lodge 92.69 37 *eP* **P 18 20 23.7 +0.5**
comp=Z,2.7nm,0.9s,mb4.7
HWUT Hardware Ranch 93.63 40 P **P 18 20 28.1 +0.5**
comp=Z,4.3nm,1.2s,mb4.8
GSC Goldstone 94.08 48 *eP* **P 18 20 30.2 +0.4**
comp=Z,9.9nm,1.3s,mb5.1
GSC Goldstone 94.08 48 *eP* **P 18 20 30.2 +0.4**
GSC pmax pmax
comp=Z,10.0nm,1.3s,mb5.1
SCHQ Schefferville 99.25 9 LR LR 19 09 46.7
comp=Z,72nm,18.2s,MS4.2,baz=281,slow=38

*ISCJB **03** 18:20:35.7±0.3,38°56N±0°02×117°75W±0°03,h10km, Error ellipse: s-maj=3.1km s-min=2.3km az=17.6*
*NEIC **03** 18:20:36.1,38°55N×117°75W,h14km,ML2.9(REN),After REN.*

ISC 03 18:20:35.2±0.5,38°57N±0°02×117°76W±0°02,h1km±3km, n45,σ0°87/75,29C-30D,Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
Q10A	**Clear Creek Ra**	**1.09**	**76**	⇑P	Op	**Pg**	**18 20 56.5**	**+0.3**
	baz=1.1,SNR=149							
Q10A				⇑S		**Sg**	**18 21 11.2**	**+0.8**
	baz=1.1							
S10A	**Tonopah Range,**	**1.12**	**125**	⇓P		**Pg**	**18 20 56.9**	**+0.1**
	baz=1.1,SNR=1000							
S10A				⇑S		**Sg**	**18 21 11.4**	**+0.1**
	baz=1.1							
R10A	**Warm Springs**	**1.18**	**103**	⇓P		**Pg**	**18 20 58.0**	**+0.2**
	baz=1.2,SNR=527							
R10A				⇑S		**Sg**	**18 21 13.5**	**+0.4**
	baz=1.2							
MLAC	**Mammoth Lakes**	**1.27**	**222**	⇑Pg		**Pg**	**18 21 00.2**	**+0.8**
	baz=1.3							
MLAC				⇓S		**Sg**	**18 21 17.5**	**+1.7**
	baz=1.3							
P10A	**Eureka**	**1.46**	**43**	⇓Pb		**Pb**	**18 21 02.9**	**-0.3**
	baz=1.5,SNR=43							
P10A				⇑S		**Sg**	**18 21 21.9**	**-0.1**
	baz=1.5							
P10A				⇓Sg		**Sg**	**18 21 23.8**	**+1.8**
	baz=1.5							

TIN	**Tinemaha**	**1.56**	**194**	⇓Pg		**Pg**	**18 21 05.5**	**+0.4**
	baz=1.5							
TIN				⇑Sn		**Sn**	**18 21 24.7**	**-0.1**
	baz=1.5							
TIN				⇓Sb		**Sb**	**18 21 25.9**	**+0.9**
	baz=1.5							
GRAC	**Grapevine Rang**	**1.60**	**169**	⇓Pb		**Pb**	**18 21 04.9**	**-0.6**
	baz=1.6,SNR=66							
GRAC				⇓Sg		**Sg**	**18 21 28.4**	**+1.9**
	baz=1.6							
Q11A	**Duckwater**	**1.67**	**80**	⇓Pg		**Pg**	**18 21 07.0**	**-0.3**
	baz=1.7,SNR=18							
WCN	**Washoe City**	**1.72**	**296**	⇓Pn		**Pn**	**18 21 06.1**	**-0.2**
	baz=1.7,SNR=185							
WCN				⇓Sn		**Sn**	**18 21 29.9**	**+1.0**
	baz=1.7							
WCN	**Washoe City**	**1.72**	**296**	*e*Pn		**Pn**	**18 21 06.1**	**-0.2**
WCN				*e*S		**Sn**	**18 21 30.3**	**+1.4**
R11A	**Troy Canyon, C**	**1.72**	**97**	⇑Pn		**Pn**	**18 21 05.3**	**-1.0**
	baz=1.7,SNR=200							
R11A				⇑Sn		**Sn**	**18 21 28.0**	**-0.9**
	baz=1.7							
R11A				⇓Sb		**Sb**	**18 21 29.7**	**-0.1**
	baz=1.7							
S11A	**Rachel**	**1.84**	**120**	⇓Pg		**Pg**	**18 21 09.9**	**-0.6**
	baz=1.8,SNR=23							
S11A				⇓Sg		**Sg**	**18 21 35.1**	**+0.9**
	baz=1.8							
P11A	**Circle Ranch,**	**1.85**	**57**	⇑Pn		**Pn**	**18 21 07.3**	**-0.8**
	baz=1.8,SNR=8.5							
BMN	**Battle Mountai**	**1.91**	**12**	*e*Pn		**Pn**	**18 21 08.7**	**-0.2**
BMN				*e*Pg		**Pg**	**18 21 11.1**	**-0.6**
BMN				*e*Sn		**Sn**	**18 21 33.4**	**-0.1**
BMN				*e*Sg		**Sg**	**18 21 37.0**	**+0.5**
O10A	**Cortez Mining,**	**1.98**	**29**	⇑Pn		**Pn**	**18 21 09.6**	**-0.3**
	baz=2.0,SNR=7.9							
O10A				⇓Sn		**Sn**	**18 21 35.3**	**0.0**
	baz=2.0							
O10A				⇑Sb		**Sb**	**18 21 38.3**	**+1.1**
	baz=2.0							
CMB	**Columbia Colle**	**2.13**	**256**	*e*Pn		**Pn**	**18 21 12.4**	**+0.4**
O11A	**Cowboy Ranch,**	**2.26**	**46**	⇑Pn		**Pn**	**18 21 13.2**	**-0.4**
	baz=2.3,SNR=60							
O11A				⇓Sb		**Sb**	**18 21 46.6**	**+1.4**
	baz=2.3							
Q12A	**Willow Creek R**	**2.34**	**77**	⇑Pn		**Pn**	**18 21 14.0**	**-0.8**
	baz=2.3,SNR=8.4							
N10A	**Dunphy**	**2.35**	**24**	⇓Sn		**Sn**	**18 21 43.8**	**-0.8**
	baz=2.4							
N10A				⇑Sb		**Sb**	**18 21 49.7**	**+1.7**
	baz=2.4							
P12A	**McGill**	**2.40**	**67**	⇑Pn		**Pn**	**18 21 15.1**	**-0.6**
	baz=2.4							
T11A	**Corn Creek, Al**	**2.41**	**123**	⇓Pn		**Pn**	**18 21 15.0**	**-0.7**
	baz=2.4							
T11A				⇑Pb		**Pb**	**18 21 18.5**	**-0.8**
	baz=2.4							
U10A	**Ash Meadows, A**	**2.43**	**152**	⇓Pn		**Pn**	**18 21 15.5**	**-0.5**
	baz=2.4							
S12A	**Delamar Landin**	**2.49**	**112**	⇑Pn		**Pn**	**18 21 16.4**	**-0.5**
	baz=2.5,SNR=7.8							
S12A				⇓Sn		**Sn**	**18 21 46.6**	**-1.3**
	baz=2.5							
S12A				⇓Sb		**Sb**	**18 21 52.6**	**+0.7**
	baz=2.5							
MPMC	**Manual Prospec**	**2.51**	**175**	⇓Pn		**Pn**	**18 21 17.0**	**-0.2**
	baz=2.5							
RCTC	**Rector, Farmer**	**2.54**	**208**	⇑Sb		**Sb**	**18 21 55.6**	**+2.2**
	baz=2.5							
N11A	**Elko Archery C**	**2.73**	**34**	⇑Pn		**Pn**	**18 21 19.7**	**-0.5**
	baz=2.7,SNR=11							
N11A				⇓Sn		**Sn**	**18 21 53.7**	**-0.3**
	baz=2.7							
Q13A	**Wheeler Ranch,**	**2.95**	**81**	⇓Sb		**Sb**	**18 22 06.2**	**+1.1**
	baz=2.9							
ISA	**Isabella**	**2.96**	**191**	*e*Pg		**Pg**	**18 21 29.9**	**-2.0**
R13A	**O'Grain Ranch,**	**3.00**	**96**	⇑Pb		**Pb**	**18 21 28.3**	**-1.2**
	baz=3.0							
R13A				⇑Sb		**Sb**	**18 22 07.6**	**+0.9**
	baz=3.0							
P13A	**Bates Ranch, G**	**3.05**	**72**	⇑Pb		**Pb**	**18 21 29.4**	**-0.8**
	baz=3.0							
P13A				⇑Pg		**Pg**	**18 21 33.2**	**-0.5**
	baz=3.0							
P13A				⇓Sb		**Sb**	**18 22 09.5**	**+1.5**
	baz=3.0							
N12A	**Clover Valley,**	**3.10**	**42**	⇑Pn		**Pn**	**18 21 24.9**	**-0.3**
	baz=3.1							
N12A				⇓Sn		**Sn**	**18 22 02.6**	**-0.3**
	baz=3.1							
N12A				⇑Sb		**Sb**	**18 22 11.4**	**+2.0**
	baz=3.1							
N12A	**Clover Valley,**	**3.10**	**42**	*e*Pn		**Pn**	**18 21 25.4**	**+0.1**
M11A	**Holland Ranch,**	**3.23**	**27**	⇓Sn		**Sn**	**18 22 06.0**	**-0.3**
	baz=3.3							
U12A	**Valley of Fire**	**3.33**	**129**	⇑Pg		**Pg**	**18 21 38.3**	**-0.9**
	baz=3.3							
GSC	**Goldstone**	**3.35**	**167**	*e*Pg		**Pg**	**18 21 37.7**	**-1.7**
T13A	**Saint George**	**3.42**	**116**	⇓Pg		**Pg**	**18 21 40.3**	**-0.5**
	baz=3.4							
ARUT	**Antelope Range**	**3.49**	**102**	*e*Pn		**Pn**	**18 21 30.9**	**+0.2**
M12A	**Wells**	**3.59**	**37**	⇑Sn		**Sn**	**18 22 15.0**	**+0.1**
	baz=3.6							
CCUT	**Cedar City**	**3.62**	**105**	*e*Pg		**Pg**	**18 21 44.9**	**+0.3**
MOD	**Modoc**	**3.86**	**331**	*e*Pg		**Pg**	**18 21 48.1**	**-1.0**
WVOR	**Wild Horse Val**	**3.92**	**350**	*e*Pg		**Pg**	**18 21 49.1**	**-1.2**
M13A	**Montello**	**3.92**	**44**	⇓Pn		**Pn**	**18 21 36.2**	**-0.4**
	baz=3.9,SNR=5.5							
M13A	**Montello**	**3.92**	**44**	*e*Pn		**Pn**	**18 21 37.1**	**+0.6**
DUG	**Dugway**	**4.16**	**65**	⇑Pg		**Pg**	**18 21 55.1**	**+0.1**
	baz=4.2,SNR=5.7							
MSU	**Marysvale**	**4.38**	**89**	*e*Pg		**Pg**	**18 21 59.4**	**+0.3**

*NEIC **03** 18:38:51.0,53.98N×163.52W,h31km,ML3.2(AEIC),After AEIC.*
*ISCJB **03** 18:38:51.0±0.9,54.1N±0.1×163.52W±0.08,h33km, mb3.3/2,Error ellipse: s-maj=19.4km s-min=5.0km az=166.9*
*IDC **03** 18:38:58.4±3.8,53.42N×161.10W,h0km,mb3.4/2, mb1 3.6/4,mb1mx3.3/26,mbtmp3.3/4,ML3.1/2,Error ellipse: s-maj=74.1km s-min=31.6km az=108.0*

ISC 03 18:38:50.6±2.6,54.1N±0.1×163.58W±0.08,h18km±19km, n14,σ0.92/20,mb3.3/2,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUT	**Akutan**	**1.29**	**274**	P	**Pn**	**18 39 14.1**	**+0.4**
AKUT				S	**Sn**	**18 39 30.6**	**0.0**
AKLV	**Akutan Long Va**	**1.40**	**275**	P	**Pn**	**18 39 14.7**	**-0.5**
AKLV				S	**Sn**	**18 39 32.5**	**-0.8**
AKGG	**Akutan Green G**	**1.43**	**276**	P	**Pn**	**18 39 15.3**	**-0.3**
AKGG				S	**Sn**	**18 39 33.3**	**-0.5**
UNV	**Unalaska Valle**	**1.74**	**264**	P	**Pn**	**18 39 19.6**	**-0.2**
SDPT	**Sand Point**	**2.22**	**53**	P	**Pn**	**18 39 26.9**	**+0.4**
SDPT				S	**Sn**	**18 39 54.0**	**+0.7**
NIKO	**Nikolski**	**3.33**	**253**	P	**Pn**	**18 39 43.2**	**+1.5**
SPIA	**Saint Paul Isl**	**4.90**	**312**	P	**Pn**	**18 40 04.7**	**+1.4**
OHAK	**Old Harbor**	**6.63**	**57**	*e*P	**Pn**	**18 40 25.8**	**-1.2**
	9.7nm,1.9s						
KDAK	**Kodiak Island**	**7.21**	**54**	Pn	**Pn**	**18 40 33.5**	**-1.6**
KDAK				Sn	**Sn**	**18 41 49.4**	**-7.0**
KDAK				Lg		18 42 23.5	
KDAK	**Kodiak Island**	**7.21**	**54**	Pn	**Pn**	**18 40 33.5**	**-1.6**
	0.1nm,0.3s,baz=327,slow=4.3,SNR=2.9						
KDAK				Sn	**Sn**	**18 41 49.4**	**-7.0**
	baz=167,slow=8.1,SNR=2.2						
KDAK				Lg		18 42 23.5	
	0.3nm,0.3s,baz=91,slow=22,SNR=3.6						
BPAW	**Bear Paw Mtn.**	**11.94**	**28**	P	**Pn**	**18 41 39.1**	**-0.6**
ILAR	**Eielson Array**	**13.63**	**31**	Pn	**Pn**	**18 42 08.6**	**+5.8**
	0.1nm,0.3s,baz=226,slow=11,SNR=4.6						
YKA	**Yellowknife Ar**	**26.48**	**52**	P	**P**	**18 44 28.1**	**+1.8**
	0.4nm,0.6s,mb3.1,baz=270,slow=9.7,SNR=4.2						
TXAR	**Lajitas Array**	**49.33**	**95**	P	**P**	**18 47 38.0**	**-0.5**
	0.3nm,0.6s,mb3.5,baz=295,slow=5.5,SNR=5.9						

ATH 03 18:42:32.4,37.70N×23.23E,h36km±6km,MD2.9/4, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DID	**Didima**	**0.19**	**178**	*e*PB	Pn	18 42 40.2	+1.0
DID				*e*SB	Sn	18 42 44.2	+0.3
VLI	**Veliai**	**1.01**	**194**	*e*PN	Pn	18 42 51.2	+1.2
VLI				*e*SN	Sn	18 43 04.9	+2.0
KYTH	**Kithira**	**1.43**	**186**	*e*PB	Pn	18 42 57.3	+1.5
PYL	**PYLOS**	**1.43**	**236**	*e*PN	Pn	18 42 58.7	+2.8
PYL	**PYLOS**	**1.43**	**236**	*e*Pn	Pn	18 42 58.7	+2.8
RLS	**Riolos of Patr**	**1.44**	**285**	*e*PB	Pn	18 42 57.3	+1.3
RLS	**Riolos of Patr**	**1.44**	**285**	*e*Pb	Pn	18 42 57.3	+1.3

*IDC **03** 18:54:47.9±4.4,9.74S×112.68E,h0km,mb3.9/4, mb1 3.9/5,mb1mx3.7/19,mbtmp3.9/5,ML3.8/1,Error ellipse: s-maj=184.0km s-min=42.7km az=46.0*
*ISCJB **03** 18:54:54.0±1.2,9.7S±0.1×112.77E±0.05,h66km±11km, mb3.8/4,Error ellipse: s-maj=17.2km s-min=7.8km az=7.2*
*DJA **03** 18:54:56,9.37S×112.83E,h9km,MLv4.2/13*

ISC 03 18:54:55.1±1.2,9.7S±0.1×112.7E±0.05,h53km±11km, n18,σ1.08/21,mb3.9/4,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRKI	**Karangkates**	**1.58**	**348**	P	**Pn**	**18 55 20.0**	**-0.7**
GMJI	**Gumukmas**	**1.58**	**25**	P	**Pn**	**18 55 18.3**	**-2.4**
JAGI	**Jajag, Banyuwa**	**1.84**	**48**	P	**Pn**	**18 55 22.5**	**-1.8**
PWJI	**Pagerwojo**	**1.93**	**330**	P	**Pn**	**18 55 24.9**	**-0.7**
PWJI				S	**Sn**	**18 55 47.0**	**-1.7**
BYJI	**Banyuwangi**	**2.16**	**47**	P	**Pn**	**18 55 28.7**	**0.0**
BYJI				S	**Sn**	**18 55 55.5**	**+1.2**
PCJI	**Pacitan**	**2.18**	**314**	P	**Pn**	**18 55 29.7**	**+0.7**
SJI	**Sawahan**	**2.20**	**333**	P	**Pn**	**18 55 29.2**	**-0.1**
NBBI	**Negara**	**2.26**	**54**	P	**Pn**	**18 55 31.2**	**+1.1**
NBBI				S	**Sn**	**18 55 56.9**	**+0.1**
NGJI	**Ngawi**	**2.67**	**331**	P	**Pn**	**18 55 39.4**	**+3.8**
UGM	**Wanagama**	**2.85**	**309**	P	**Pn**	**18 55 39.5**	**+1.3**
SRBI	**Singaraja**	**2.91**	**56**	P	**Pn**	**18 55 40.1**	**+1.2**
SMRI	**Semarang**	**3.51**	**319**	P	**Pn**	**18 55 48.4**	**+1.2**
BJII	**Banjamegara**	**3.84**	**308**	P	**Pn**	**18 55 56.1**	**+4.4**
FITZ	**Fitzroy Crossi**	**15.01**	**125**	Pn	**Pn**	**18 58 22.8**	**-1.2**
	0.3nm,0.3s,baz=305,slow=11,SNR=14						
CMAR	**Chiang Mai Air**	**31.14**	**334**	P	**P**	**19 01 09.1**	**+0.1**
	0.3nm,0.8s,mb3.1,baz=231,slow=19,SNR=3.6						
SONM	**Songino Array**	**57.57**	**355**	P	**P**	**19 04 39.5**	**+0.3**
	1.0nm,0.6s,mb4.0,baz=172,slow=8.2,SNR=12						
MKAR	**Makanchi Array**	**62.49**	**337**	P	**P**	**19 05 12.9**	**0.0**
	1.1nm,0.7s,mb4.1,baz=146,slow=7.4,SNR=16						
ZALV	**Zalesovo Beam**	**67.69**	**343**	P	**P**	**19 05 46.3**	**-0.3**
	1.5nm,0.5s,mb4.2,baz=168,slow=5.1,SNR=8.5						

*BJI **03** 18:55:20.6,3.88S×131.36E,h15km,mB5.0/13,mb4.6/25, Ms4.3/5,Ms7.4/5*
*IDC **03** 18:55:24.6±0.5,3.48S×131.02E,h0km,mb4.5/16, mb1 4.6/17,mb1mx4.5/21,mbtmp4.5/17,ML4.5/1,MS3.7/2, Ms1 3.8/2,ms1mx3.1/14,Error ellipse: s-maj=23.9km s-min=12.9km az=74.0*
*ISCJB **03** 18:55:29.6±0.7,3.46S±0.04×131.05E±0.04,h51km±6km, mb4.8/57,MS3.7/4,Error ellipse: s-maj=7.9km s-min=4.9km az=135.2*
*NEIC **03** 18:55:29.4±0.2,3.54S×131.08E,h35km,mb4.7/25,Error ellipse: s-maj=9.6km s-min=5.5km az=64.0*
*DJA **03** 18:55:29,3.47S×131.11E,h30km,mb4.9/23*

ISC 03 18:55:31.0±0.6,3.48S±0.04×131.07E±0.04,h47km±5km, h14km±7.8km:pP-P,n139,σ0.97/139,mb4.8/57,MS3.7/4, 2C-1D,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.56**	**228**	P	**Pn**	**18 55 57.2**	**+0.9**
TLE	**Tual**	**2.71**	**142**	P	**Pn**	**18 56 12.5**	**+0.4**
TLE				S	**Sn**	**18 56 45.5**	**+1.8**
AAI	**Ambon**	**2.88**	**266**	P	**Pn**	**18 56 14.7**	**+0.3**
NLAI	**Namlea**	**3.97**	**273**	P	**Pn**	**18 56 30.0**	**+0.6**
BAKI	**Biak**	**5.52**	**66**	P	**Pn**	**18 56 51.4**	**+0.8**
	1.2nm5μm233nm,1.8s						
BAKI	**Biak**	**5.52**	**66**	P	**Pn**	**18 56 50.8**	**+0.2**
	1.2nm5μm233nm,1.8s						
TNTI	**Ternate**	**5.61**	**319**	P	**Pn**	**18 56 50.6**	**-1.3**
TNTI	**Ternate**	**5.61**	**319**	P	**Pn**	**18 56 50.5**	**-1.4**
	0.5nm2μm176nm,0.8s						
MNI	**Manado**	**7.92**	**308**	P	**Pn**	**18 57 25.9**	**+2.3**
	2μm116nm,0.8s						
MNI	**Manado**	**7.92**	**308**	P	**Pn**	**18 57 23.5**	**-0.1**
	0.4nm1μm115nm,0.8s						
KMSI	**Cibinong**	**8.15**	**299**	P	**Sn**	**18 58 59.1**	**+1.5**
KMSI	**Cibinong**	**8.15**	**299**	P	**Pn**	**18 57 23.7**	**-3.1**
KDI	**Kendari**	**8.45**	**266**	P	**Pn**	**18 57 36.4**	**+5.5**
	48nm,1.1s						
LUWI	**Luwuk**	**8.64**	**286**	P	**Pn**	**18 57 33.4**	**-0.1**
	2μm159nm,1.2s						
LUWI	**Luwuk**	**8.64**	**286**	P	**Pn**	**18 57 30.3**	**-3.2**
	2μm159nm,1.2s						
KAKA	**Kakadu**	**9.28**	**172**	*e*P	**Pn**	**18 57 38.2**	**-4.0**
	29nm,0.4s						
KAKA	**Kakadu**	**9.28**	**172**	*e*P	**Pn**	**18 57 37.8**	**-4.4**
	152nm,0.6s						
KAKA	**Kakadu**	**9.28**	**172**	P	**Pn**	**18 57 38.4**	**-3.8**
	1μm124nm,0.6s						
KAKA	**Kakadu**	**9.28**	**172**	P	**Pn**	**18 57 38.6**	**-3.6**
	1μm124nm,0.6s						
APSI	**Ampana**	**9.76**	**285**	P	**Pn**	**18 57 47.6**	**-1.2**
MRSI	**Marisa**	**9.94**	**293**	P	**Pn**	**18 57 49.2**	**-2.0**
MRSI	**Marisa**	**9.94**	**293**	P	**Pn**	**18 57 49.0**	**-2.2**
	524nm55nm,1.1s						
MMRI	**Maumere**	**10.17**	**239**	P	**Pn**	**18 57 56.1**	**+1.7**
	1μm101nm,1.5s						
BKSI	**Bulukumba**	**11.07**	**260**	P	**Pn**	**18 58 09.7**	**+2.9**
	692nm57nm,0.9s						
BKSI	**Bulukumba**	**11.07**	**260**	P	**Pn**	**18 58 09.8**	**+3.0**
	692nm57nm,0.9s						
TTSI	**Tana Toraja**	**11.24**	**272**	P	**Pn**	**18 58 13.2**	**+4.1**
SPSI	**Sidrap Palu**	**11.29**	**267**	P	**Pn**	**18 58 11.3**	**+1.5**
	31nm,0.9s						
PCI	**Palu**	**11.51**	**283**	P	**Pn**	**18 58 17.3**	**+4.5**
	1μm62nm,1.1s						
PCI	**Palu**	**11.51**	**283**	P	**Pn**	**18 58 20.4**	**+7.6**
DAV	**Davao City (W)**	**11.82**	**332**	P	**Pn**	**18 58 16.0**	**-1.1**
WSI	**Waingapu**	**12.34**	**240**	P	**Pn**	**18 58 24.0**	**-0.2**
	259nm,1.1s						
KNA	**Kununurra**	**12.41**	**190**	P	**Pn**	**18 58 20.3**	**-4.7**
	3μm189nm,0.7s						
KNA	**Kununurra**	**12.41**	**190**	P	**Pn**	**18 58 20.4**	**-4.6**
MYLDM	**Lahad Datu**	**15.22**	**304**	P	**Pn**	**18 59 10.8**	**+7.9**
FITZ	**Fitzroy Crossi**	**15.48**	**200**	*e*P	**Pn**	**18 59 00.6**	**-5.7**
	43nm,1.4s						
FITZ				*e*S	**Sn**	**19 01 46.9**	**-10**
FITZ	**Fitzroy Crossi**	**15.48**	**200**	*e*P	**Pn**	**18 59 00.9**	**-5.4**
FITZ				Sn	**Sn**	**19 01 47.8**	**-9.0**
FITZ	**Fitzroy Crossi**	**15.48**	**200**	Pn	**Pn**	**18 59 02.0**	**-4.3**
	1.3nm,0.3s,baz=40,slow=8.1,SNR=27						
FITZ				Sn	**Sn**	**19 01 47.8**	**-9.0**
	0.7nm,0.3s,baz=103,slow=20,SNR=3.8						
FITZ	**Fitzroy Crossi**	**15.48**	**200**	P	**Pn**	**18 59 01.8**	**-4.5**
	34nm,1.2s						
COEN	**Coen**	**15.85**	**132**	*e*P	**Pn**	**18 59 07.6**	**-3.5**
	126nm,0.9s						
COEN	**Coen**	**15.85**	**132**	P	**Pn**	**18 59 08.7**	**-2.3**
	75nm,0.9s						
WRAB	**Tennant Creek**	**16.67**	**169**	*e*P	**Pn**	**18 59 14.0**	**-7.3**
	18nm,0.7s						
WRAB	**Tennant Creek**	**16.67**	**169**	P	**Pn**	**18 59 18.2**	**-3.2**
	29nm,0.8s						
SBUM	**Sibu**	**19.74**	**287**	P	**Pn**	**18 59 57.7**	**-1.2**
	396nm31nm,1.0s						
SBUM	**Sibu**	**19.74**	**287**	P	**Pn**	**18 59 59.3**	**+0.4**
	397nm31nm,1.0s						
STKI	**Sintang**	**19.90**	**280**	P	**Pn**	**18 59 59.6**	**-1.1**
	1μm54nm,1.1s						
STKI	**Sintang**	**19.90**	**280**	P	**Pn**	**18 59 59.3**	**-1.4**
	1μm54nm,1.1s						
ASAR	**Alice Springs**	**20.26**	**172**	P	**P**	**19 00 01.7**	**-0.9**
	6.0nm,0.7s,baz=204,slow=25,SNR=4.2						
MBWA	**Marble Bar**	**20.75**	**211**	*e*P	**P**	**19 00 05.8**	**-2.2**
MBWA	**Marble Bar**	**20.75**	**211**	*e*P	**P**	**19 00 05.7**	**-2.3**
	16nm,0.8s						
MBWA	**Marble Bar**	**20.75**	**211**	P	**P**	**19 00 05.5**	**-2.5**
	26nm,1.1s						
MBWA	**Marble Bar**	**20.75**	**211**	P	**P**	**19 00 06.5**	**-1.5**
	26nm,1.1s						
KSM	**Kuching**	**21.33**	**283**	*e*P	**P**	**19 00 14.9**	**+0.7**
	50nm,0.9s,mb4.8						
KSM	**Kuching**	**21.33**	**283**	P	**P**	**19 00 15.2**	**+0.9**
	604nm62nm,0.9s,mb4.9						
KSM	**Kuching**	**21.33**	**283**	P	**P**	**19 00 15.1**	**+0.8**
	604nm62nm,0.9s,mb4.9						
CTA	**Charters Tower**	**22.18**	**139**	*e*P	**P**	**19 00 23.0**	**-0.2**
	14nm,1.0s,mb4.4						
CTA	**Charters Tower**	**22.18**	**139**	P	**P**	**19 00 23.1**	**-0.2**
	9.2nm,0.7s,mb4.3,baz=322,slow=11,SNR=18						
CTAO	**Charters Tower**	**22.18**	**139**	*e*P	**P**	**19 00 23.0**	**-0.2**
	28nm,1.1s,mb4.6						
CTAO	**Charters Tower**	**22.18**	**139**	P	**P**	**19 00 23.3**	**+0.1**
	23nm,1.1s,mb4.5						
CTAO	**Charters Tower**	**22.18**	**139**	P	**P**	**19 00 23.3**	**+0.1**
	23nm,1.1s,mb4.5						
KMBL	**Kambalda**	**29.06**	**196**	*e*P	**P**	**19 01 25.0**	**-2.0**
	88nm,0.5s,mb5.8						
SDSI	**Sungai Dareh**	**29.73**	**274**	P	**P**	**19 01 32.9**	**-0.2**
	20nm,1.7s,mb4.6						
SDSI	**Sungai Dareh**	**29.73**	**274**	P	**P**	**19 01 33.0**	**-0.1**
	20nm,1.7s,mb4.6						
STKA	**Stephens Creek**	**29.93**	**162**	*e*P	**P**	**19 01 34.3**	**-0.4**
	6.9nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**29.93**	**162**	P	**P**	**19 01 34.7**	**0.0**
	4.4nm,0.6s,mb4.3,baz=332,slow=11,SNR=15						
KLBR	**Kellerberrin**	**30.65**	**203**	*e*P	**P**	**19 01 39.6**	**-1.4**
	12nm,0.6s,mb4.9						
PDSI	**Padang**	**30.69**	**274**	P	**P**	**19 01 44.1**	**+2.4**
	47nm,1.4s,mb5.1						
PDSI	**Padang**	**30.69**	**274**	P	**P**	**19 01 41.4**	**-0.3**
	47nm,1.4s,mb5.1						
PPI	**Padang Panjang**	**30.80**	**275**	P	**P**	**19 01 42.7**	**+0.1**
	1μm44nm,1.0s,mb5.2						
PPI	**Padang Panjang**	**30.80**	**275**	P	**P**	**19 01 43.0**	**+0.4**
	1μm44nm,1.0s,mb5.2						
IPM	**Ipoh**	**31.05**	**285**	P	**P**	**19 01 45.7**	**+0.9**
	22nm,1.2s,mb4.9						
IPM	**Ipoh**	**31.05**	**285**	P	**P**	**19 01 45.7**	**+0.9**
	22nm,1.2s,mb4.9						
NWAO	**Narrogin (SRO)**	**32.04**	**202**	P	**P**	**19 01 52.5**	**-0.7**
	6.7nm,1.9s,mb4.5,baz=159,slow=20,SNR=7.5						
PSI	**Prapat**	**32.73**	**281**	*e*P	**P**	**19 01 57.5**	**-2.1**
PSI	**Prapat**	**32.73**	**281**	P	**P**	**19 01 57.5**	**-2.1**
	4.8nm,0.5s,mb4.7,baz=195,slow=6.5,SNR=3.9						
ARMA	**Armidale**	**33.10**	**146**	*e*P	**P**	**19 02 03.6**	**+1.0**
YNG	**Young**	**34.65**	**154**	*e*P	**P**	**19 02 17.0**	**+1.0**
	17nm,0.6s,mb5.2						
CAN	**Canberra**	**35.78**	**154**	*e*P	**P**	**19 02 26.5**	**+0.8**
	15nm,0.6s,mb5.1						
CNB	**Canberra Magne**	**35.93**	**154**	*e*P	**P**	**19 02 28.0**	**+1.0**
NJ2	**Nanjing**	**37.19**	**343**	*e*P	**P**	**19 02 38.2**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
BDT	**Bhumibol Dam**	**37.76**	**304**	P	**P**	**19 02 42.5**	**-0.3**
CM31	**Chiang Mai Arr**	**38.43**	**306**	*e*P	**P**	**19 02 48.8**	**+0.4**
	comp=Z,8.5nm,0.9s,mb4.5						
CMAR	**Chiang Mai Arr**	**38.43**	**306**	P	**P**	**19 02 49.0**	**+0.6**
	comp=Z,3.1nm,0.7s,mb4.1,baz=136,slow=7.1,SNR=20						
CHRT	**Chiangrai**	**38.51**	**308**	P	**P**	**19 02 49.0**	**-0.1**
CHG	**Chiang Mai**	**38.61**	**306**	⇑P	**P**	**19 02 50.4**	**+0.5**
	comp=Z,15nm,1.0s,mb4.7						
CHTO	**Chiang Mai**	**38.61**	**306**	*e*P	**P**	**19 02 50.3**	**+0.3**
	comp=Z,10nm,0.8s,mb4.6						
CHTO	**Chiang Mai**	**38.61**	**306**	P	**P**	**19 02 50.5**	**+0.6**
CHTO	**Chiang Mai**	**38.61**	**306**	P	**P**	**19 02 50.8**	**+0.9**
	comp=Z,19nm,0.9s,mb4.8						
ENH	**Enshi**	**39.40**	**330**	*e*P	**P**	**19 02 55.6**	**-0.7**
	comp=Z,8.8nm,0.8s,mb4.5						
KSRS	**Korea Array**	**40.82**	**356**	P	**P**	**19 03 08.0**	**-0.1**
	comp=Z,2.3nm,0.6s,mb4.0,baz=178,slow=10,SNR=22						
KSRS				LR	LR	19 19 13.0	
	comp=Z,97nm,20.9s,MS3.6,baz=179,slow=35						
XAN	**Xi'an**	**42.76**	**333**	P	**P**	**19 03 22.9**	**-1.1**
XAN				pP	pP	19 03 31.5	-5.1
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
BJI	**Beijing**	**45.41**	**344**	P	**P**	**19 03 44.7**	**-0.4**
BJI				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
BJI				pmax	pmax		
	comp=Z,100nm,4.1s						
BJI				LR	LR		
	comp=N,96nm,27.1s,MS3.7						
BJI				LR	LR		
	comp=E,99nm,30.8s,MS3.7						
BJI				LR	LR		
	comp=Z,57nm,26.8s,MS3.4						
SNY	**Shenyang**	**45.60**	**352**	⇓P	**P**	**19 03 46.6**	**+0.1**
SNY				S

BRVK	**Borovoye**		**75.76**	**327**	*e*P		**P**	**19 07 11.9**	**+0.2**
	comp=Z,9.5nm,0.8s,mb4.8								
MAW	**Mawson**		**78.60**	**201**	P		**P**	**19 07 28.2**	**+0.8**
	comp=Z,1.8nm,0.6s,mb4.2,baz=85,slow=6.5,SNR=8.7								
ABKAR	**Akbulak array**		**80.44**	**321**	*e*P		**P**	**19 07 37.5**	**-0.2**
	comp=Z,2.4nm,0.7s,mb4.2								
OPO	**Ambohidratompo**		**83.11**	**252**	P		**P**	**19 07 53.4**	**+0.9**
	comp=Z,2.0nm,0.6s,mb4.3,baz=110,slow=3.6,SNR=5.1								
ARU	**Arti**		**83.31**	**328**	*e*P		**P**	**19 07 52.1**	**-0.5**
	comp=Z,2.1nm,0.6s,mb4.3								
OHAK	**Old Harbor**		**85.17**	**32**	*e*P		**P**	**19 08 02.5**	**+0.4**
	comp=Z,5.0nm,0.7s,mb4.8								
TTA	**Tatalina**		**85.38**	**26**	*e*P		**P**	**19 08 03.6**	**+0.6**
	comp=Z,5.9nm,0.6s,mb4.9								
KDAK	**Kodiak Island**		**85.67**	**31**	*e*P		**P**	**19 08 04.7**	**+0.1**
	comp=Z,5.1nm,0.8s,mb4.8								
QSPA	**South Pole Qui**		**86.48**	**180**	*e*P		**P**	**19 08 08.3**	**+0.1**
	comp=Z,14nm,1.5s,mb5.0								
SYO	**Syowa Base**		**87.31**	**201**↑	*e*P		**P**	**19 08 11.9**	**-0.6**
RC01	**Rabbit Creek A**		**87.80**	**29**	*e*P		**P**	**19 08 14.0**	**-0.9**
	comp=Z,5.5nm,0.6s,mb5.0								
ILAR	**Eielson Array**		**89.72**	**25**	P		**P**	**19 08 22.8**	**-1.1**
	comp=Z,1.1nm,0.6s,mb4.3,baz=258,slow=4.8,SNR=22								
ILAR					LR		LR	19 49 29.9	
	comp=Z,35nm,18.1s,MS3.8,baz=299,slow=36								
DAWY	**Dawson**		**92.89**	**26**	*e*P		**P**	**19 08 38.9**	**+0.3**
ARCES	**ARCESS Array B**		**98.66**	**340**	P		**P**	**19 09 04.5**	**-0.3**
ARCES	**ARCESS Array B**		**98.66**	**340**	P		**P**	**19 09 04.5**	**-0.3**
	comp=Z,3.4nm,1.0s,mb4.8,baz=112,slow=8.0,SNR=6.5								
TXAR	**Lajitas Array**		**122.17**	**57**	PKP		PKPdf	19 14 22.6	+1.3
	comp=Z,0.3nm,0.7s,baz=248,slow=1.2,SNR=4.1								
TORD	**Torodi Ar. Bea**		**129.09**	**284**	PKP		PKPdf	19 14 35.7	+0.8
TORD	**Torodi Ar. Bea**		**129.09**	**284**	PKP		PKPdf	19 14 35.7	+0.8
	comp=Z,2.0nm,0.6s,baz=96,slow=1.3,SNR=14								
LPAZ	**La Paz**		**152.69**	**136**	PKPbc		PKPbc	19 15 26.0	+2.4
LPAZ					PKPab		PKPab	19 15 34.9	+0.7
LPAZ	**La Paz**		**152.69**	**136**	PKPbc		PKPbc	19 15 26.0	+2.4
	comp=Z,1.9nm,0.5s,baz=240,slow=2.2,SNR=15								
LPAZ					PKPab		PKPab	19 15 34.9	+0.7
	comp=Z,1.8nm,0.6s,baz=72,slow=5.6,SNR=7.8								

*CNRM **03** 19:04:44.5, 34.81N×1.57W, h30km, MD3.7*
*CSEM **03** 19:04:47.2±0.4, 34.81N×1.92W, h40km, MD3.7, Error ellipse: s-maj=10.8km s-min=5.8km az=112.0*

MDD 03 19:04:46.8±1.7, 34.80N×1.83W, h25km±15km, mb3.6/7, Error ellipse: s-maj=11.5km s-min=7.0km az=128.0, PRIMO, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAI	**Zaio**	**0.77**	**283**	P	Pb	19 05 01.0	-0.6
ZAI				S	Sb	19 05 12.0	+0.3
ZAI	**Zaio**	**0.77**	**283**	*i* P	Pb	19 05 01.0	-0.6
ZAI				*i* S	Sb	19 05 12.0	+0.3
ENIJ	**Nijar**	**2.19**	**352**	P	Pn	19 05 20.5	-1.2
	1.5nm,0.1s,SNR=4.0						
ENIJ				S	Sn	19 05 46.1	-1.9
	1.9nm,0.2s,SNR=4.0						
ENIJ	**Nijar**	**2.19**	**352**	P	Pn	19 05 20.5	-1.2
	1.5nm,0.1s,SNR=4.0						
ENIJ				S	Sn	19 05 46.1	-1.9
	1.9nm,0.2s,SNR=4.0						
ENIJ	**Nijar**	**2.19**	**352**	P	Pn	19 05 20.5	-1.1
	1.5nm,0.1s,SNR=4.0						
ENIJ				S	Sn	19 05 46.1	-1.9
	1.9nm,0.2s,SNR=4.0						
EBER	**Berja**	**2.27**	**338**	P	Pn	19 05 20.9	-1.7
	1.6nm,0.2s,SNR=6.1						
EBER				S	Sn	19 05 46.3	-3.5
	12nm,0.5s						
EBER	**Berja**	**2.27**	**338**	P	Pn	19 05 20.9	-1.7
	1.6nm,0.2s,SNR=6.1						
EBER				S	Sn	19 05 46.3	-3.5
	12nm,0.5s						
EBER	**Berja**	**2.27**	**338**	P	Pn	19 05 20.9	-1.8
	1.6nm,0.2s,SNR=6.1						
EBER				S	Sn	19 05 46.3	-3.5
	12nm,0.5s						
EGUA	**Guajares**	**2.48**	**326**	P	Pn	19 05 23.5	-2.0
	10nm,0.4s,SNR=7.9						
EGUA				S	Sn	19 05 52.2	-2.8
	2.8nm,0.2s,SNR=7.9						
EGUA	**Guajares**	**2.48**	**326**	P	Pn	19 05 23.5	-2.0
	10nm,0.4s,SNR=7.9						
EGUA				S	Sn	19 05 52.2	-2.8
	2.8nm,0.2s,SNR=7.9						
EGUA	**Guajares**	**2.48**	**326**	P	Pn	19 05 23.5	-2.0
	10nm,0.4s,SNR=7.9						
EGUA				S	Sn	19 05 52.2	-2.7
	2.8nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**2.74**	**332**	P	Pn	19 05 28.5	-0.5
	1.7nm,0.3s,SNR=7.7						
EQUE				S	Sn	19 05 58.5	-2.9
	1.8nm,0.4s						
EQUE	**Quentar**	**2.74**	**332**	P	Pn	19 05 28.5	-0.5
	1.7nm,0.3s,SNR=7.7						
EQUE				S	Sn	19 05 58.5	-2.9
	1.8nm,0.4s						
EQUE	**Quentar**	**2.74**	**332**	P	Pn	19 05 28.5	-0.6
	1.7nm,0.3s,SNR=7.7						
EQUE				S	Sn	19 05 58.5	-2.8
	1.8nm,0.4s						
ERON	**Agron**	**2.74**	**325**	P	Pn	19 05 28.2	-0.9
	0.9nm,0.2s,SNR=4.0						
ERON	**Agron**	**2.74**	**325**	P	Pn	19 05 28.2	-0.9
	0.9nm,0.2s,SNR=4.0						
ERON	**Agron**	**2.74**	**325**	P	Pn	19 05 28.2	-0.9
	0.9nm,0.2s,SNR=4.0						
EMIJ	**Mijas**	**2.98**	**307**	P	Pn	19 05 31.0	-1.3
	0.2nm,0.1s,SNR=7.9						
EMIJ				S	Sn	19 06 04.5	-2.8
	2.6nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**2.98**	**307**	P	Pn	19 05 31.0	-1.3
	0.2nm,0.1s,SNR=7.9						
EMIJ				S	Sn	19 06 04.5	-2.8
	2.6nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**2.98**	**307**	P	Pn	19 05 31.0	-1.4
	0.2nm,0.1s,SNR=7.9						
EMIJ				S	Sn	19 06 04.5	-2.8
	2.6nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**3.08**	**9**	P	Pn	19 05 33.0	-0.8
	1.4nm,0.2s,SNR=6.7						
EMUR				S	Sn	19 06 06.0	-3.7
	4.5nm,0.5s						
EMUR	**La Murta**	**3.08**	**9**	P	Pn	19 05 33.0	-0.8
	1.4nm,0.2s,SNR=6.7						
EMUR				S	Sn	19 06 06.0	-3.7
	4.5nm,0.5s						
EMUR	**La Murta**	**3.08**	**9**	P	Pn	19 05 33.0	-0.8
	1.4nm,0.2s,SNR=6.7						
EMUR				S	Sn	19 06 06.0	-3.8
	4.5nm,0.5s						
EQES	**Quesada**	**3.17**	**342**	P	Pn	19 05 35.7	+0.7
	0.5nm,0.2s,SNR=7.9						
EQES				S	Sn	19 06 10.9	-1.0
	2.4nm,0.4s,SNR=7.9

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKZ	**Black Stump Fm**	**1.28**	**99**	*e*PN	Pn	19 26 35.3	+0.3
BKZ				SN	Sn	19 26 58.5	-0.9
TSZ	**Takapari Road**	**1.38**	**142**	PN	Pn	19 26 36.1	+0.4
TSZ				SN	Sn	19 27 00.0	-0.9
PNHZ	**Pukenui**	**1.40**	**133**	PN	Pn	19 26 36.0	+0.1
PNHZ				SN	Sn	19 27 01.5	+0.4
WPHZ	**Waipukurau**	**1.64**	**132**	SN	Sn	19 27 04.6	-0.4
MRZ	**Mangatainoka R**	**1.78**	**162**	PN	Pn	19 26 39.1	-0.4
MRZ				SN	Sn	19 27 06.8	-0.6
OGWZ	**Otaki Gorge**	**1.86**	**173**	PN	Pn	19 26 40.2	-0.1
PXZ	**Pawanui**	**1.88**	**125**	PN	Pn	19 26 40.0	-0.4
KIW	**Kapiti Island**	**1.89**	**179**	PN	Pn	19 26 40.2	-0.3
HOWZ	**Holdsworth Sta**	**1.99**	**166**	PN	Pn	19 26 40.9	-0.7
CAW	**Cannon Point**	**2.14**	**176**	PN	Pn	19 26 42.4	-0.8
CAW				SN	Sn	19 27 13.2	-1.0
MTW	**Mount Morrison**	**2.24**	**168**	PN	Pn	19 26 43.2	-1.0
TCW	**Tory Channel**	**2.28**	**191**	PN	Pn	19 26 44.4	-0.3
SNZO	**South Karori**	**2.34**	**183**	SN	Sn	19 27 16.8	-1.2
TUWZ	**Tuamarina**	**2.56**	**196**	PN	Pn	19 26 47.1	-0.7
QRZ	**Quartz Range**	**2.58**	**223**	PN	Pn	19 26 46.8	-1.2
PLWZ	**Palliser**	**2.61**	**174**	PN	Pn	19 26 47.0	-1.4
THZ	**Tophouse**	**3.16**	**208**	SN	Sn	19 27 33.7	-1.3
KHZ	**Kahutara**	**3.59**	**196**	PN	Pn	19 26 58.8	-1.1
LTZ	**Lake Taylor**	**4.28**	**206**	PN	Pn	19 27 06.4	-2.2
MQZ	**McQueen's Vall**	**5.01**	**199**	SN	Sn	19 28 10.2	-6.5

NIED ***03*** *20:12:00,25.2°20N×128.2°10E,h8km,Mw3.8 Best double couple: M₀6.44000×10¹⁴ NP1:φs50.00000°,δ66.00000°, λ-138.00000°. NP2:φs300.00000°,δ53.00000°, λ-31.00000°.*

IDC ***03*** *20:12:45.2±0.8,25.2°22N×128.2°09E,h0km,mb3.9/12, mb1 4.0/13,mb1mx4.0/23,mbtmp3.9/13,MS3.3/6, Ms1 3.3/6,ms1mx2.9/35,Error ellipse: s-maj=28.4km s-min=17.2km az=74.0*

NEIC ***03*** *20:12:46.7±0.5,25.2°16N×127.9°6E,h10km,mb4.5/2, MW3.8(NIED),Error ellipse: s-maj=10.5km s-min=8.4km az=142.0*

ISCJB ***03*** *20:12:47.7±0.4,25.2°20N±0.0°03×128.2°08E±0.0°04,h33km, mb3.9/19,MS3.4/5,Error ellipse: s-maj=5.4km s-min=3.6km az=40.1*

JMA ***03*** *20:12:48.4±0.2,25.2°24N×128.2°07E,h65km±4km,M3.7*

BJI ***03*** *20:12:49.0,25.2°36N×128.2°14E,h42km,mB4.6/3,mb4.1/8*

ISC 03 20:12:50.0±0.4,25.2°6N±0.0°03×128.2°02E±0.0°04,h35km,n50, σ1§10/61,**mb3.9**/19,**MS3.4**/5,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.91**	**344**	P	**Pn**	**20 13 06.1**	**-0.2**
JJT2				S	**Sn**	**20 13 18.9**	**+0.8**
NAH1	**Naha**	**0.99**	**342**	P	**Pn**	**20 13 07.1**	**-0.2**
NAH1				S	**Sn**	**20 13 20.7**	**+0.6**
JAGN	**Aguni-jima**	**1.50**	**332**	P	**Pn**	**20 13 14.6**	**+0.2**
JAGN				S	**Sn**	**20 13 33.3**	**+0.6**
JKE	**Kume jima 2**	**1.54**	**314**	P	**Pn**	**20 13 14.7**	**-0.2**
JKE				*e*S	**Sn**	**20 13 34.9**	**+1.2**
JOW	**Kunigami**	**1.58**	**8**	P	**Pn**	**20 13 14.7**	**-0.8**
JOW				S	**Sn**	**20 13 33.8**	**-1.0**
JIH	**Iheya**	**1.77**	**358**	P	**Pn**	**20 13 17.9**	**-0.2**
JIH				*e*S	**Sn**	**20 13 38.2**	**-1.2**
JOGS	**Gusukube**	**2.43**	**259**	P	**Pn**	**20 13 26.7**	**-0.4**
JOGS				S	**Sn**	**20 13 55.9**	**+0.3**
JMJ	**Miyako jima 2**	**2.52**	**260**	P	**Pn**	**20 13 27.7**	**-0.6**
JMJ				*e*S	**Sn**	**20 13 57.6**	**-0.2**
JTK	**Tokunoshima**	**2.65**	**18**	P	**Pn**	**20 13 29.5**	**-0.7**
JTK				*e*S	**Sn**	**20 13 58.9**	**-2.2**
JMZ	**Minamidaito 2**	**2.94**	**78**	P	**Pn**	**20 13 30.2**	**-4.0**
JMZ				*e*S	**Sn**	**20 14 02.7**	**-5.6**
JTJ	**Tarama**	**3.08**	**259**	P	**Pn**	**20 13 35.0**	**-1.1**
JTJ				S	**Sn**	**20 14 10.4**	**-1.2**
JAM	**Amami Oshima**	**3.44**	**24**	P	**Pn**	**20 13 39.9**	**-1.2**
JAM				S	**Sn**	**20 14 17.3**	**-3.4**
JZK	**Kikaishima**	**3.51**	**29**	P	**Pn**	**20 13 41.2**	**-0.8**
JZK				S	**Sn**	**20 14 20.4**	**-1.8**
JIJ	**Ishigaki jima**	**3.64**	**257**	P	**Pn**	**20 13 42.1**	**-1.7**
JIJ				*e*S	**Sn**	**20 14 21.3**	**-4.2**
JKRS	**Kuro-shima**	**3.79**	**255**	P	**Pn**	**20 13 44.5**	**-1.4**
IRIF	**Iriomote-Funau**	**4.01**	**258**	P	**Pn**	**20 13 47.5**	**-1.4**
JNN	**Nakanoshima**	**4.85**	**19**	P	**Pn**	**20 13 59.8**	**-0.6**
YHNB	**Yeheng** 14nm,0.6s	**6.06**	**266**	*e*P	**Pn**	**20 14 17.4**	**+0.3**
SSLB	**Suanglung** 17nm,0.3s	**6.60**	**259**	*e*P	**Pn**	**20 14 22.2**	**-2.3**
TWG	**Pinlang**	**6.80**	**251**	*e*P	**Pn**	**20 14 23.1**	**-4.2**
TPUB	**Ta-pu** 15nm,0.4s	**7.02**	**255**	*e*P	**Pn**	**20 14 28.5**	**-1.8**
KSRS	**Korea Array** baz=163,slow=13,SNR=5.4	**12.16**	**360**	Pn	**Pn**	**20 15 41.9**	**+1.2**
KSRS				LR	LR	20 20 13.1	
	comp=Z,31nm,19.7s,baz=180,slow=37						
LZH	**Lanzhou**	**23.37**	**303**	*e*P	**P**	**20 17 55.5**	**-0.1**
LZH				pP		20 18 04.3	
LZH				sP	sP	20 18 09.0	-0.4
LZH				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.5						
YSS	**Yuzh-Sakhalins** comp=Z,26nm,0.9s,mb4.8	**24.62**	**25**	*e*P	**P**	**20 18 08.3**	**+1.3**
GTA	**Gaotai**	**27.56**	**308**	*e*P	**P**	**20 18 35.0**	**+1.4**
GTA				pP	pP	20 18 45.0	+1.4
GTA				sP	sP	20 18 49.0	+1.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
CMAR	**Chiang Mai Arr** comp=Z,0.9nm,0.9s,mb3.4,baz=48,slow=11,SNR=5.2	**27.79**	**262**	P	**P**	**20 18 37.3**	**+1.5**
SONM	**Songino Array** comp=Z,0.7nm,0.5s,mb3.6,baz=141,slow=9.6,SNR=5.9	**28.27**	**328**	P	**P**	**20 18 40.1**	**+0.3**
SONM				LR	LR	20 31 21.8	
	comp=Z,46nm,18.4s,MS3.1,baz=63,slow=39						
MK31	**Makanchi Array**	**42.05**	**313**	P	**P**	**20 20 38.3**	**+0.2**
MKAR	**Makanchi Array** comp=Z,1.2nm,0.6s,mb3.7,baz=97,slow=9.7,SNR=19	**42.05**	**313**	P	**P**	**20 20 38.5**	**+0.5**
ZALV	**Zalesovo Beam** comp=Z,0.9nm,0.3s,mb3.9,baz=110,slow=7.9,SNR=8.4	**42.91**	**324**	P	**P**	**20 20 45.0**	**+0.1**
ZALV				LR	LR	20 40 22.1	
	comp=Z,21nm,18.1s,MS3.1,baz=346,slow=39						
WRAB	**Tennant Creek**	**45.34**	**172**	P	**P**	**20 21 04.4**	**-0.4**
WRA	**Warramunga Arr** comp=Z,2.3nm,1.0s,mb4.0,baz=353,slow=8.7,SNR=13	**45.35**	**172**	P	**P**	**20 21 04.3**	**-0.5**
KURK	**Kurchatov**	**45.40**	**317**	*e*P	**P**	**20 21 05.9**	**+0.9**
ASAR	**Alice Springs** comp=Z,0.6nm,0.7s,mb3.7,baz=5.8,slow=14,SNR=9.9	**48.97**	**173**	P	**P**	**20 21 33.2**	**+0.2**
BVAR	**Borovoye Array** comp=Z,0.9nm,0.6s,mb3.9,baz=108,slow=9.5,SNR=7.2	**50.88**	**319**	P	**P**	**20 21 48.3**	**+1.1**
ABKAR	**Akbulak array** comp=Z,1.4nm,0.8s,mb4.0	**51.18**	**314**	*e*P	**P**	**20 22 34.6**	**+1.4**
CHGN	**Chignik**	**60.32**	**38**	*e*P	**P**	**20 22 56.7**	**+1.7**
ILAR	**Eielson Array** comp=Z,0.3nm,0.6s,mb3.5,baz=262,slow=5.4,SNR=5.4	**65.38**	**28**	P	**P**	**20 23 28.9**	**+0.4**
JOF	**Joensuu**	**70.80**	**331**	*e*P	**P**	**20 24 02.5**	**-0.1**
JOF	**Joensuu** comp=Z,0.4nm,0.4s,mb3.7	**70.80**	**331**	*e*p	**P**	**20 24 02.5**	**-0.1**
KAF	**Kangasniemi** comp=Z,0.3nm,0.3s,mb3.7	**73.26**	**331**	*e*p	**P**	**20 24 12.6**	**-4.7**
FINES	**FINESS Array B** comp=Z,1.7nm,0.7s,mb4.1,baz=44,slow=5.7,SNR=12	**73.61**	**331**	P	**P**	**20 24 20.6**	**+1.1**
AKASG	**Malin Array Be** comp=Z,1.6nm,0.6s,mb4.2,baz=60,slow=5.4,SNR=7.9	**76.15**	**320**	P	**P**	**20 24 35.6**	**+1.4**
BRTR	**Keskin Array B** comp=Z,1.7nm,1.0s,mb4.0,baz=86,slow=6.3,SNR=6.8	**77.48**	**308**	P	**P**	**20 24 44.0**	**+2.0**
YKA	**Yellowknife Ar** comp=Z,0.4nm,0.6s,mb3.5,baz=304,slow=5.6,SNR=3.5	**79.48**	**25**	P	**P**	**20 24 54.1**	**+1.5**
HFS	**Hagfors** comp=Z,28nm,18.8s,MS3.6,baz=212,slow=38	**79.59**	**332**	LR	LR	21 02 39.0	
NOA	**NORSAR Array B** comp=Z,0.6nm,0.6s,mb3.7,baz=43,slow=9.2,SNR=3.1	**80.10**	**334**	P	**P**	**20 24 56.7**	**+0.8**
VRAC	**Vranov** comp=Z,25nm,19.4s,MS3.6,baz=359,slow=38	**84.01**	**322**	LR	LR	21 06 11.2	
CLL	**Collm**	**84.84**	**325**	*e*P	**P**	**20 25 23.0**	**+2.1**
DAVOX	**Davos/Dischmat** comp=Z,25nm,19.7s,MS3.6,baz=262,slow=41	**89.16**	**323**	LR	LR	21 13 22.3	

ISCJB ***03*** *20:14:29.5±0.6,70.2°92N×0.1°10×6.2°5W±0.1°,1,h10km,Error ellipse: s-maj=14.3km s-min=4.5km az=7.4*

NEIC ***03*** *20:14:31.7±0.8,70.2°79N×6.2°61W,h10km,ML3.9(BER), Error ellipse: s-maj=21.4km s-min=7.0km az=198.0*

CSEM ***03*** *20:14:31.8±0.3,70.2°90N×6.2°63W,h10km,ML4.0,Error ellipse: s-maj=13.7km s-min=5.0km az=10.0*

BER ***03*** *20:14:34.6±1.2,70.2°84N×6.2°90W,h5km,MD3.4,ML4.0*

ISC 03 20:14:31.8±0.6,70.2°9N±0.1°×6.2°7W±0.1°,1,h10km,n21, σ0§86/30,**7C**,**Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**0.55**	**283**	*i*P	**Pg**	**20 14 43.2**	**+0.8**
JNE				*e*S	**Sg**	**20 14 49.2**	**-0.4**
JNE				AML	AML	20 14 52.0	
	comp=Z,14μm,0.3s						
JNE	**Jan Mayen East**	**0.55**	**283**	*i*P	**Pg**	**20 14 43.2**	**+0.8**
JNE				*e*S	**Sg**	**20 14 49.2**	**-0.4**
JNE	**Jan Mayen East** SNR=95	**0.55**	**283**	*i*P	**Pg**	**20 14 43.2**	**+0.8**
JNE				*e*S	**Sg**	**20 14 49.2**	**-0.4**
	comp=Z,14μm,0.3s,SNR=95						
JNW	**Jan Mayen West**	**0.60**	**286**	*i*P	**Pg**	**20 14 43.9**	**+0.5**
JNW				*e*S	**Sg**	**20 14 50.9**	**-0.3**
JNW				AML	AML	20 14 51.6	
	comp=Z,10μm,0.3s						
JNW	**Jan Mayen West**	**0.60**	**286**	*i*P	**Pg**	**20 14 43.9**	**+0.5**
JNW				*e*S	**Sg**	**20 14 50.9**	**-0.3**
JNW	**Jan Mayen West** SNR=95	**0.60**	**286**	*i*P	**Pg**	**20 14 43.8**	**+0.4**
JNW				*e*S	**Sg**	**20 14 50.9**	**-0.3**
	comp=Z,10μm,0.3s,SNR=95						
JMI	**Jan Mayen**	**0.68**	**276**	*e*P	**Pg**	**20 14 45.5**	**+0.6**
JMI				*e*S	**Sg**	**20 14 53.4**	**-0.4**
JMI				AML	AML	20 14 56.8	
	comp=Z,3μm,0.3s						
JMI	**Jan Mayen**	**0.68**	**276**	*e*P	**Pg**	**20 14 45.5**	**+0.6**
JMI				*e*S	**Sg**	**20 14 53.4**	**-0.4**
JMI	**Jan Mayen** SNR=94	**0.68**	**276**	*e*P	**Pg**	**20 14 45.5**	**+0.6**
JMI				*e*S	**Sg**	**20 14 53.4**	**-0.4**
	comp=Z,3μm,0.3s,SNR=94						
DAG	**Danmarks Havn** comp=Z,8.7nm,0.6s	**6.79**	**336**	*i*P	**Pn**	**20 16 10.2**	**-1.0**
LOF	**Lofoten**	**7.59**	**101**	*e*P	**Pn**	**20 16 22.5**	**+0.3**
LOF	**Lofoten** SNR=48	**7.59**	**101**	*e*P	**Pn**	**20 16 22.5**	**+0.3**
STOK	**Stokkvaagen**	**8.48**	**113**	*e*P	**Pn**	**20 16 35.5**	**+1.1**
STOK	**Stokkvaagen**	**8.48**	**113**	*e*P	**Pn**	**20 16 35.5**	**+1.0**
TRO	**Tromso**	**8.72**	**86**	*e*P	**Pn**	**20 16 36.7**	**-1.0**
TRO	**Tromso** SNR=48	**8.72**	**86**	*e*P	**Pn**	**20 16 36.7**	**-1.0**
MOR8	**Moi Rana**	**9.03**	**111**	*e*P	**Pn**	**20 16 38.6**	**-3.3**
KBS	**Kingsbay**	**9.36**	**22**	*e*P	**Pn**	**20 16 47.5**	**+1.1**
KBS	**Kingsbay** SNR=48	**9.36**	**22**	*e*P	**Pn**	**20 16 47.5**	**+1.1**
NSS	**Namsos**	**9.48**	**123**	*e*P	**Pn**	**20 16 47.8**	**-0.2**
NSS	**Namsos** SNR=48	**9.48**	**123**	*e*P	**Pn**	**20 16 47.8**	**-0.3**

SKHL 03 20:22:36.6±0.7,47.2°41N×142.7°10E,h10km,mb3.9/2, **Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.64**	**135**	*e*Pg	Pg	20 22 49.0	+0.1
YSS				AMB	AMB	20 22 52.0	
	58nm,0.4s						
YSS				*e*Sg	Sg	20 22 57.0	-0.3
YSS				A		20 22 58.6	
	250nm,0.2s						
YSS				A		20 22 58.6	
	240nm,0.2s						
UGL	**Uglegorsk**	**1.67**	**359**	*e*Pg	Pg	20 23 10.0	+1.4
UGL				AMB	AMB	20 23 11.0	
	70nm,0.3s						
UGL				*e*Sg	Sg	20 23 32.0	+1.7
UGL				A		20 23 34.0	
	80nm,0.6s						
UGL				A		20 23 34.0	
	88nm,0.6s						
TYV	**Tymovskoe**	**3.48**	**6**	*e*Sg	Sg	20 24 34.8	+6.7
TYV				A		20 24 39.0	
	7.0nm,0.5s						

ISCJB ***03*** *20:32:21.6±1.6,4.2°13N±0.0°08×95.2°8E±0.1°,1,h73km±14km, mb4.0/19,Error ellipse: s-maj=22.6km s-min=9.6km az=152.2*

NEIC ***03*** *20:32:21.6±0.4,4.2°11N×95.2°73E,mb4.2/4,Error ellipse: s-maj=12.1km s-min=5.9km az=50.0*

IDC ***03*** *20:32:22.1±0.9,4.2°16N×95.2°82E,h57km±7km,mb3.8/12, mb1 3.9/14,mb1mx3.8/23,mbtmp3.8/14,MS3.4/5, Ms1 3.4/5,ms1mx3.0/28,Error ellipse: s-maj=27.6km s-min=9.4km az=42.0*

DJA ***03*** *20:32:32,3.2°89N×96.2°62E,h23km,MLv4.3/5*

ISC 03 20:32:22.8±1.5,4.2°12N±0.0°08×95.2°8E±0.1°,h67km±14km, **h58km±.8km**§**pP-P,n44,**σ0§**70**/42,**mb4.0**/19,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.65**	**121**	P	**Pn**	**20 32 48.3**	**-1.4**
TPTI				S	**Sn**	**20 32 59.4**	**-11**
TSI	**Tuntungan**	**2.86**	**102**	P	**Pn**	**20 33 06.4**	**+0.3**
PSI	**Prapat** 16nm,0.3s,baz=301,slow=7.4,SNR=38	**3.41**	**112**	P	**Pn**	**20 33 14.7**	**+1.0**
PSI				S	**Sn**	**20 33 53.2**	**+0.2**
	20nm,0.3s,baz=12,slow=15,SNR=7.8						
PSI				LR	LR	20 34 56.4	
	comp=Z,246nm,18.8s,baz=55,slow=45						
KULM	**Kulim** 87nm,0.6s	**5.01**	**76**	*e*Pn	**Pn**	**20 33 34.9**	**-0.6**
KULM	**Kulim**	**5.01**	**76**	P	**Pn**	**20 33 35.3**	**-0.1**
KULM	**Kulim**	**5.01**	**76**	P	**Pn**	**20 33 35.1**	**-0.4**
MNSI	**Mandailing Nat**	**5.04**	**131**	P	**Pn**	**20 33 36.0**	**+0.1**
IPM	**Ipoh**	**5.26**	**86**	P	**Pn**	**20 33 38.5**	**-0.4**
IPM	**Ipoh**	**5.26**	**86**	P	**Pn**	**20 33 38.3**	**-0.6**
SISI	**Saibi**	**6.35**	**148**	P	**Pn**	**20 33 49.5**	**-4.3**
BKNI	**Bangkinang** 0.3nm844nm32nm,1.2s	**6.48**	**125**	P	**Pn**	**20 33 55.7**	**+0.1**
KTGM	**Kuala Tenggan**	**7.44**	**80**	P	**Pn**	**20 34 08.8**	**-0.1**
MYKOM	**Kota Tinggi**	**8.40**	**106**	P	**Pn**	**20 34 24.2**	**+2.3**
MDSI	**Maura Dua**	**11.99**	**135**	P	**Pn**	**20 35 10.6**	**-0.3**
CMAR	**Chiang Mai Arr** 0.1nm,0.3s,baz=190,slow=9.8,SNR=3.4	**14.59**	**12**	P	**Pn**	**20 35 45.5**	**-0.2**
CMAR				LR	LR	20 41 54.6	
	comp=Z,100nm,18.1s,baz=136,slow=39						
MYLDM	**Lahad Datu**	**22.68**	**86**	P	**P**	**20 37 22.9**	**+3.8**
LSA	**Lhasa** 3.0nm,0.4s,mb4.1	**25.82**	**351**	P	**P**	**20 37 48.4**	**+0.4**
FITZ	**Fitzroy Crossi**	**36.81**	**128**	*e*P	**P**	**20 39 23.7**	**-0.9**
MK31	**Makanchi Array**	**44.09**	**347**	*e*P	**P**	**20 40 23.7**	**-0.6**
MKAR	**Makanchi Array** 1.6nm,0.4s,mb4.1,baz=157,slow=8.0,SNR=58	**44.09**	**347**	P	**P**	**20 40 23.8**	**-0.5**
KSRS	**Korea Array** comp=Z,40nm,18.1s,baz=256,slow=40	**44.34**	**37**	LR	LR	21 01 34.4	
SONM	**Songino Array** 1.9nm,0.6s,mb4.0,baz=188,slow=9.2,SNR=15	**44.50**	**10**	P	**P**	**20 40 27.6**	**-0.1**
SONM				pP	pP	20 40 42.0	-2.4
	0.5nm,0.4s,baz=199,slow=8.1,SNR=3.0						
SONM				PcP	PcP	20 42 11.5	+1.6
	0.6nm,0.5s,baz=190,slow=4.0,SNR=3.8						
SONM				LR	LR	21 01 09.9	
	comp=Z,46nm,18.9s,baz=246,slow=39						
ULN	**Ulaanbaatar** 1.2nm,0.6s,mb3.8	**44.65**	**11**	*e*P	**P**	**20 40 28.5**	**-0.3**
WRA	**Warramunga Arr**	**44.81**	**124**	P	**P**	**20 40 30.2**	**-0.3**
WRA	**Warramunga Arr** 7.0nm,1.0s,mb4.3,baz=303,slow=9.2,SNR=34	**44.81**	**124**	P	**P**	**20 40 30.2**	**-0.3**
WRAB	**Tennant Creek** 5.0nm,0.9s,mb4.2	**44.81**	**124**	*e*P	**P**	**20 40 30.6**	**0.0**
ASAR	**Alice Springs** 0.9nm,0.3s,mb4.0,baz=299,slow=7.0,SNR=44	**46.30**	**128**	P	**P**	**20 40 42.0**	**-0.3**
ASAR				pP	pP	20 40 57.0	-2.1
	0.6nm,0.4s,baz=302,slow=8.2,SNR=3.7						
ZAA0	**Zalesovo Array**	**50.48**	**352**	*e*P	**P**	**20 41 13.5**	**-0.3**
ZALV	**Zalesovo Beam** 3.3nm,0.5s,mb4.5,baz=170,slow=7.1,SNR=21	**50.48**	**352**	P	**P**	**20 41 13.6**	**-0.2**
BVAR	**Borovoye Array** 1.1nm,0.8s,mb4.0,baz=148,slow=8.6,SNR=5.8	**53.04**	**341**	P	**P**	**20 41 32.4**	**-0.6**
ABKAR	**Akbulak array** 1.5nm,0.4s,mb4.4	**54.28**	**332**	*e*P	**P**	**20 41 42.7**	**+0.5**
STKA	**Stephens Creek** 1.8nm,0.7s,mb4.2,baz=319,slow=14,SNR=3.4	**56.37**	**133**	P	**P**	**20 41 57.5**	**+0.1**
BRTR	**Keskin Array B** 0.7nm,0.4s,mb3.9,baz=142,slow=5.4,SNR=7.8	**66.11**	**312**	P	**P**	**20 43 04.3**	**+1.2**
BRTR				pP	pP	20 43 19.6	-1.3
	0.6nm,0.5s,baz=141,slow=6.5,SNR=4.5						
AKASG	**Malin Array Be**	**72.09**	**322**	P	**P**	**20 43 39.0**	**-1.0**
AKASG	**Malin Array Be** 0.3nm,0.3s,mb3.5,baz=105,slow=4.2,SNR=4.2	**72.09**	**322**	P	**P**	**20 43 39.0**	**-1.0**
JOF	**Joensuu** 0.7nm,0.4s,mb3.7	**74.91**	**335**	*e*p	**P**	**20 43 56.2**	**-0.1**
FINES	**FINESS Array B** 2.5nm,0.8s,mb4.0,baz=94,slow=5.4,SNR=9.1	**76.77**	**332**	P	**P**	**20 44 07.4**	**+0.5**
KAF	**Kangasniemi** 0.4nm,0.3s,mb3.6	**76.85**	**333**	*e*p	**P**	**20 44 07.7**	**+0.3**
KEV	**Kevo** 0.4nm,0.5s,mb3.5	**78.89**	**341**	*e*p	**P**	**20 44 10.1**	**-8.5**
ARCES	**ARCESS Array B** 0.9nm,0.4s,mb4.0,baz=95,slow=6.5,SNR=18	**79.33**	**340**	P	**P**	**20 44 21.9**	**+0.9**
NOA	**NORSAR Array B** 0.8nm,0.8s,mb3.6,baz=91,slow=5.9,SNR=3.0	**83.78**	**331**	P	**P**	**20 44 45.4**	**+0.8**
QSPA	**South Pole Qui** comp=Z,54nm,20.9s,baz=285,slow=32	**94.04**	**180**	LR	LR	21 23 21.2	
CFAA	**Coronel Fontan**	**148.79**	**207**	PKPbc	PKPbc	20 52 03.7	+0.2
CFAA	**Coronel Fontan** 0.2nm,0.6s,baz=149,slow=2.9,SNR=4.0	**148.79**	**207**	PKPbc	PKPbc	20 52 03.7	+0.2

WEL 03 20:42:38.1±0.6,37.2°16S×176.4°45E,h373km±5km,ML3.6/8, **Error ellipse: s-maj=10.3km s-min=7.5km az=90.0,** **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.22**	**155**	PN	Pn	20 43 27.2	+0.1
URZ				SN	S	20 44 06.3	-0.3
MWZ	**Matawai**	**1.45**	**144**	PN	Pn	20 43 28.5	+0.3
PUZ	**Puketiti**	**1.70**	**123**	*e*PN	Pn	20 43 29.4	-0.2
PUZ				SN	S	20 44 09.2	-1.9
BKZ	**Black Stump Fm**	**2.00**	**179**	PN	Pn	20 43 31.9	+0.4
KNZ	**Kokohu**	**2.09**	**153**	PN	Pn	20 43 32.6	+0.6
TSZ	**Takapari Road**	**2.92**	**187**	PN	Pn	20 43 38.7	+0.3
MRZ	**Mangatainoka R**	**3.56**	**191**	PN	Pn	20 43 43.9	-0.2
KIW	**Kapiti Island**	**3.89**	**198**	PN	Pn	20 43 46.9	-0.4
MTW	**Mount Morrison**	**4.06**	**190**	PN	Pn	20 43 48.8	-0.2
TCW	**Tory Channel**	**4.39**	**202**	*e*PN	Pn	20 43 51.4	-0.8
TUWZ	**Tuamarina**	**4.69**	**204**	*e*PN	Pn	20 43 55.1	-0.3
THZ	**Tophouse**	**5.36**	**210**	*e*PN	Pn	20 44 01.7	-0.8

ISCJB ***03*** *21:12:01.3±0.6,57.7°7S±0.1°×25.2°8W±0.2°,2,h10km,mb4.2/10, MS3.6/1,Error ellipse: s-maj=17.0km s-min=15.2km az=43.4*

IDC ***03*** *21:12:01.4±0.7,57.6°68S×25.2°70W,h0km,mb4.1/6, mb1 4.1/6,mb1mx4.0/15,mbtmp4.1/6,MS3.6/1,Ms1 3.5/1, ms1mx3.1/13,Error ellipse: s-maj=26.9km s-min=23.3km az=61.0*

NEIC ***03*** *21:12:06.5±0.3,57.6°68S×25.2°78W,h35km,mb4.2/6,Error ellipse: s-maj=11.5km s-min=10.0km az=220.0*

ISC 03 21:12:03.2±0.6,57.7°5S±0.1°×25.2°7W±0.2°,h10km,n22, σ0§63/14,**mb4.2**/10,**MS3.6**/1,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRQA	**Tornquist** 4.2nm,0.8s,mb4.3	**30.71**	**294**	*e*P	**P**	**21 18 17.6**	**-0.5**
QSPA	**South Pole Qui** 2.2nm,0.6s,mb4.3,baz=195,slow=2.9,SNR=13	**32.55**	**180**	P	**P**	**21 18 35.0**	**+1.3**
MAW	**Mawson** 0.6nm,0.7s,mb3.4	**38.35**	**142**	*e*P	**P**	**21 19 23.5**	**-0.2**
MAW	**Mawson** 3.2nm,0.8s,mb4.1,baz=235,slow=8.6,SNR=9.5	**38.35**	**142**	P	**P**	**21 19 23.3**	**-0.4**
SBA	**Scott Base** 5.4nm,1.3s,mb4.1	**44.48**	**184**	*e*P	**P**	**21 20 13.4**	**-0.5**
BOSA	**Boshof**	**45.65**	**73**	P	**P**	**21 20 23.9**	**+0.2**
BOSA				LR	LR	21 34 58.8	
BOSA	**Boshof** 3.3nm,1.0s,mb4.2,baz=22,slow=11,SNR=4.5	**45.65**	**73**	P	**P**	**21 20 23.9**	**+0.2**
BOSA				LR	LR	21 34 58.8	
	comp=Z,61nm,18.8s,MS3.6,baz=181,slow=30						
LBTB	**Lobatse** 2.6nm,0.9s,mb4.2,baz=235,slow=16,SNR=3.9	**48.77**	**70**	P	**P**	**21 20 48.0**	**0.0**
LPAZ	**La Paz** 0.8nm,0.6s,mb3.8	**51.98**	**305**	*e*P	**P**	**21 21 12.8**	**+0.4**
LPAZ	**La Paz** 0.8nm,0.7s,mb3.8,baz=152,slow=6.4,SNR=5.7	**51.98**	**305**	P	**P**	**21 21 13.8**	**+1.5**
LSZ	**Lusaka** 2.8nm,0.7s,mb4.4	**58.26**	**67**	*e*P	**P**	**21 21 57.5**	**-0.3**
DBIC	**Dimbokro** 1.4nm,0.4s,mb4.3,baz=182,slow=4.8,SNR=6.1	**66.36**	**23**	P	**P**	**21 22 52.5**	**+0.5**
OTAV	**Otavalo**	**71.23**	**303**	P	**P**	**21 23 21.7**	**-0.6**
STKA	**Stephens Creek** 1.5nm,1.0s,mb4.3	**90.13**	**169**	*e*P	**P**	**21 25 02.7**	**-0.6**
FINES	**FINESS Array B** 2.6nm,0.9s,baz=222,slow=2.6,SNR=7.0	**125.48**	**28**	PKP	PKPdf	21 31 01.1	-1.7
ARCES	**ARCESS Array B** 1.0nm,0.7s,baz=270,slow=2.3,SNR=4.3

ILAR	Eielson Array	85.22	23	P	P	21 27 16.4	-0.2
	0.2nm,0.5s,mb3.3,baz=247,slow=5.7,SNR=5.2							
ARU	Arti	94.20	326	*eP*	P	21 27 59.2	-0.1

ISCJB ***03*** *21:16:41.0±0.4, 6.61N±0.04×125.84E±0.07, h157km±4km, mb4.2/14, Error ellipse: s-maj=11.3km s-min=7.0km az=177.1*
DJA ***03*** *21:16:41, 6.68N×126.32E, h133km, mb4.9/8*
NEIC ***03*** *21:16:42.1±0.6, 6.60N×125.70E, h154km±6km, mb4.1/5, Error ellipse: s-maj=10.9km s-min=7.5km az=77.0*
IDC ***03*** *21:16:42.1±0.7, 6.60N×125.70E, h151km±7km, mb3.6/8, mb1 3.8/8, mb1mx3.5/22, mbtmp3.6/8, Error ellipse: s-maj=41.8km s-min=11.9km az=81.0*
MAN ***03*** *21:16:43, 6.88N×125.92E, h132km, mb4.8, ML3.7, MS3.8*

ISC 03 21:16:42.2±0.4, 6.61N±0.04×125.83E±0.07, h152km±4km, n50, σ1º01/58, mb4.2/14, 6D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	0.52	331	*e*Pn	Pn	21 17 03.8	0.0
DAV				S	Sn	21 17 20.0	-0.4
DAV	Davao City (W)	0.52	331	P	Pn	21 17 04.0	+0.2
	840nm,0.3s,baz=247,slow=1.7,SNR=115						
DAV	Davao City (W)	0.52	331	P	Pn	21 17 04.0	+0.2
MATI	Mati	0.54	52	*e*P	Pn	21 17 02.9	-1.0
MATI				*e*S	Sn	21 17 13.1	-7.4
DMPH	Davao City--Mi	0.57	326	⇓*i*P	Pn	21 17 04.1	0.0
DMPH				*i* S	Sn	21 17 20.0	-0.8
KCP	Kidapawan	0.83	298	⇓*e*P	Pn	21 17 08.2	+2.4
KCP				*e*S	Sn	21 17 28.7	+4.9
GSPH	General Santos	1.02	239	⇓*e*P	Pn	21 17 06.8	-0.5
GSPH				*i* S	Sn	21 17 26.3	-0.1
BUKP	Musuan	1.47	329	*e*P	Pn	21 17 12.3	+0.7
BUKP				*e*S	Sn	21 17 28.2	-6.0
CTBH	Cotabato--PC H	1.69	291	⇓*i*P	Pn	21 17 14.1	+0.3
CTBH				*i* S	Sn	21 17 38.0	-0.1
CGP	Cagayan de Oro	2.15	328	⇓*e*P	Sn	21 18 00.1	+12
BUTP	Butuan	2.35	355	*e*P	Pn	21 17 22.6	+1.0
PAGZ	Pagadian	2.72	297	*e*P	Pn	21 17 27.5	+1.3
SCPH	Surigao	3.17	354	⇓*e*P	Pn	21 17 31.0	-0.8
MNI	Manado	5.23	191	P	Pn	21 17 59.3	+0.6
	0.8nm3µm150nm,0.6s						
TNTI	Ternate	6.00	165	P	Pn	21 18 07.2	-1.7
	2.9nm10µm583nm,0.6s						
KMSI	Cibinong	6.27	197	P	Pn	21 18 15.4	+2.8
	0.5nm111nm,0.7s						
MRSI	Marisa	7.22	213	P	Pn	21 18 28.2	+2.9
	1µm44nm,0.6s						
NLAI	Namlea	9.87	173	P	Pn	21 18 57.7	-2.7
	3µm136nm,0.7s						
SBUM	Sibu	14.18	254	P	Pn	21 20 00.8	+4.4
	13nm,0.9s						
KSM	Kuching	16.30	252	Pn	Pn	21 20 21.0	-1.6
TPUB	Ta-pu	17.33	344	*e*P	Pn	21 20 33.2	-1.7
GUMO	Guam	19.97	68	*e*P	P	21 21 04.1	+1.3
KAKA	Kakadu	20.29	161	*e*P	P	21 21 05.9	-0.3
	13nm,0.6s						
KAKA	Kakadu	20.29	161	*e*P	P	21 21 06.2	0.0
	34nm,0.6s						
KAKA				*e*S	S	21 24 46.5	+1.1
KAKA	Kakadu	20.29	161	P	P	21 21 06.2	0.0
	237nm31nm,0.6s						
KAKA	Kakadu	20.29	161	P	P	21 21 06.2	0.0
KNA	Kununurra	22.41	173	P	P	21 21 28.1	-0.3
KNA	Kununurra	22.41	173	P	P	21 21 28.1	-0.3
FITZ	Fitzroy Crossi	24.55	180	*e*P	P	21 21 47.9	-0.1
	4.9nm,0.7s,mb4.2						
FITZ	Fitzroy Crossi	24.55	180	*e*P	P	21 21 47.8	-0.2
	2.7nm,0.6s,mb4.0						
FITZ	Fitzroy Crossi	24.55	180	P	P	21 21 47.9	-0.1
	3.5nm,0.7s,mb4.0,baz=39,slow=5.6,SNR=10						
FITZ	Fitzroy Crossi	24.55	180	P	P	21 21 47.9	-0.1
PMG	Port Moresby	26.55	127	P	P	21 22 07.3	+1.2
WRAB	Tennant Creek	27.68	163	*e*P	P	21 22 15.0	-1.1
	1.7nm,0.5s,mb4.0						
KSRS	Korea Array	30.76	3	P	P	21 22 43.6	+0.5
	1.1nm,0.5s,mb3.8,baz=172,slow=10,SNR=7.4						
ASAR	Alice Springs	31.11	166	P	P	21 22 46.0	-0.4
	2.5nm,0.3s,mb4.4,baz=341,slow=7.0,SNR=50						
FORT	Forrest	37.24	177	*e*P	P	21 23 38.9	-0.2
	18nm,0.5s,mb5.0						
KMBL	Kambalda	37.95	185	*e*P	P	21 23 44.7	-0.4
	28nm,0.4s,mb5.2						
KLBR	Kellerberrin	38.76	191	*e*P	P	21 23 51.5	-0.4
	3.9nm,0.3s,mb4.5						
NWAO	Narrogin (SRO)	40.16	191	*e*P	P	21 24 03.4	0.0
	74nm,1.0s,mb5.3						
NWAO	Narrogin (SRO)	40.16	191	*e*P	P	21 24 03.7	+0.3
	4.5nm,0.6s,mb4.3						
NWAO	Narrogin (SRO)	40.16	191	P	P	21 24 03.6	+0.2
	19nm,1.1s,mb4.6,baz=87,slow=4.1,SNR=11						
BBOO	Buckleboo	40.39	167	*e*P	P	21 24 05.6	+0.3
	16nm,0.3s,mb5.1						
STKA	Stephens Creek	41.12	159	*e*P	P	21 24 11.5	+0.2
	2.6nm,0.3s,mb4.3						
STKA	Stephens Creek	41.12	159	*e*P	P	21 24 11.2	-0.1
	1.2nm,0.7s,mb3.6						
STKA	Stephens Creek	41.12	159	P	P	21 24 11.6	+0.2
	3.5nm,0.3s,mb4.4,baz=334,slow=7.9,SNR=23						
SONM	Songino Array	44.30	341	P	P	21 24 36.5	-0.2
	0.2nm,0.3s,mb3.2,baz=189,slow=7.3,SNR=2.7						
YNG	Young	45.95	154	*e*P	P	21 24 50.7	+0.8
	3.3nm,0.4s,mb4.3						
MKAR	Makanchi Array	54.70	325	P	P	21 25 54.6	-0.9
	0.5nm,0.4s,mb3.6,baz=116,slow=6.6,SNR=8.7						
ILAR	Eielson Array	82.91	26	P	P	21 28 50.0	+0.5
	0.3nm,0.6s,mb3.2,baz=236,slow=5.0,SNR=7.8						

ISCJB ***03*** *21:18:52.7±1.4, 24.78S±0.09×179.8E±0.1, h503km±17km, mb3.8/10, Error ellipse: s-maj=19.4km s-min=13.9km az=12.2*
NEIC ***03*** *21:18:55.2±1.1, 24.84S×179.69E, h519km±14km, mb4.2/5, Error ellipse: s-maj=17.0km s-min=12.1km az=114.0*
IDC ***03*** *21:18:58.9±9.9, 24.72S×179.66E, h560km±116km, mb3.2/7, mb1 3.5/7, mb1mx3.3/14, mbtmp3.2/7, Error ellipse: s-maj=42.6km s-min=23.6km az=94.0*

ISC 03 21:18:54.1±1.2, 24.82S±0.09×179.8E±0.1, h506km±15km, n26, σ0º83/25, mb3.8/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	7.23	347	*e*P	P	21 20 42.0	-1.0
	22nm,0.7s						
AFI	Afiamalu	13.45	38	*e*P	P	21 21 52.8	+4.7
URZ	Urewera	13.60	189	*e*P	P	21 21 48.7	-0.6
	21nm,0.5s						
FUNA	Funafuti	16.21	358	P	P	21 22 19.3	+2.3
HNR	Honiara	24.31	306	P	P	21 23 31.9	+0.6
CTA	Charters Tower	31.30	272	*e*P	P	21 24 32.7	+0.3
	6.8nm,0.4s,mb4.4						
CTA	Charters Tower	31.30	272	P	P	21 24 33.0	+0.6
	9.6nm,0.4s,mb4.6,baz=99,slow=11,SNR=19						
CTAO	Charters Tower	31.30	272	*e*P	P	21 24 32.5	+0.1
	8.4nm,0.4s,mb4.5						
MCQ	Macquarie Isla	33.44	202	P	P	21 24 50.2	0.0
PMG	Port Moresby	34.62	291	*e*P	P	21 25 01.0	+0.4
	15nm,1.0s,mb4.4						
ASAR	Alice Springs	41.70	262	P	P	21 25 58.0	-0.3
	0.5nm,0.4s,mb3.3,baz=94,slow=7.4,SNR=9.1						
WRAB	Tennant Creek	42.15	267	*e*P	P	21 26 01.2	-0.7
	2.6nm,0.3s,mb4.1						
FITZ	Fitzroy Crossi	50.57	266	*e*P	P	21 27 05.7	-0.2
	2.4nm,0.7s,mb3.6						
FITZ	Fitzroy Crossi	50.57	266	P	P	21 27 06.2	+0.3
	2.4nm,0.6s,mb3.7,baz=98,slow=8.7,SNR=7.2						
MIDW	Midway	52.80	3	P	P	21 27 21.5	-0.2
QSPA	South Pole Qui	65.27	180	*e*P	P	21 28 46.0	+1.2
	2.8nm,0.8s,mb3.9						
QSPA	South Pole Qui	65.27	180	P	P	21 28 46.0	+1.2
	baz=282,slow=2.1						
MAJO	Matsushiro	72.54	326	P	P	21 29 29.0	-0.3
MAW	Mawson	76.83	201	*e*P	P	21 29 53.2	+0.2
	0.3nm,0.7s,mb2.9						
MAW	Mawson	76.83	201	P	P	21 29 53.4	+0.4
	1.0nm,0.5s,mb3.6,baz=153,slow=8.9,SNR=5.1						
KDAK	Kodiak Island	85.48	14	P	P	21 30 36.3	-1.2
NVAR	Mina Array Bea	85.54	44	P	P	21 30 38.4	0.0
NVAR	Mina Array Bea	85.54	44	P	P	21 30 38.4	0.0
	0.6nm,0.6s,mb3.4,baz=228,slow=7.6,SNR=4.8						
TXAR	Lajitas Array	91.08	58	P	P	21 31 05.2	+0.7
	1.0nm,0.8s,mb3.8,baz=204,slow=6.5,SNR=13						
ILAR	Eielson Array	92.96	14	P	P	21 31 10.8	-1.4
	0.1nm,0.5s,mb3.1,baz=238,slow=5.2,SNR=2.8						
ARCES	ARCESS Array B	132.74	348	PKP	PKPdf	21 37 09.1	-1.2
	1.3nm,0.8s,baz=72,slow=4.0,SNR=6.6						

IDC 03 21:49:38.0±3.7, 13.21S×171.21E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/14, mbtmp4.0/3, Error ellipse: s-maj=198.0km s-min=34.3km az=134.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	9.91	207	*e*P	Pn	21 52 09.9	+8.1
DZM				*e*S	Sn	21 53 27.4	-26
STKA	Stephens Creek	32.90	231	P	P	21 56 14.0	0.0
	5.9nm,0.9s,baz=59,slow=5.9,SNR=5.7						
ASAR	Alice Springs	36.79	248	P	P	21 56 47.8	0.0
	2.2nm,1.1s,baz=76,slow=8.9,SNR=10						
ILAR	Eielson Array	83.94	17	P	P	22 02 09.6	+0.1
	0.5nm,1.0s,baz=240,slow=4.7,SNR=4.1						

NEIC ***03*** *22:18:53.6, 51.29N×174.12W, h22km, ML3.0(AEIC), After AEIC.*
IDC ***03*** *22:19:00.7±6.4, 52.91N×175.32W, h0km, mb3.7/3, mb1 3.9/5, mb1mx3.5/25, mbtmp3.8/5, ML4. 1/2, Error ellipse: s-maj=152.1km s-min=28.3km az=170.0*

ISC 03 22:18:53.3±4.0, 51.2N±0.1×174.06W±0.10, h30km±31km, n9, σ0º78/12, mb3.9/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	Atka Island	0.96	355	P	Pn	22 19 09.9	-0.8
ATKA				S	Sn	22 19 24.2	+0.8
GSTR	Great Sitkin T	1.51	305	*e*Pn	Pn	22 19 18.3	+0.1
GSTR				Sn	Sn	22 19 36.5	-0.3
NIKO	Nikolski	3.65	60	P	Pn	22 19 49.0	+1.4
NIKO				S	Sn	22 20 29.0	-0.5
KDAK	Kodiak Island	14.05	54	Pn	Pn	22 22 18.4	+8.4
	1.4nm,0.3s,baz=276,slow=4.7,SNR=13						
ILAR	Eielson Array	19.55	36	P	Pn	22 23 18.6	-1.0
	0.2nm,0.3s,baz=236,slow=9.3,SNR=17						
ARCES	ARCESS Array B	58.69	352	P	P	22 28 46.9	-0.4
	2.1nm,0.8s,mb4.2,baz=19,slow=9.0,SNR=4.7						
MKAR	Makanchi Array	62.41	311	P	P	22 29 12.6	-0.4
MKAR	Makanchi Array	62.41	311	P	P	22 29 12.6	-0.4
	0.4nm,0.8s,mb3.6,baz=42,slow=6.5,SNR=4.3						
BVAR	Borovoye Array	62.87	322	P	P	22 29 17.0	+1.1
	0.4nm,0.4s,mb3.9,baz=46,slow=8.3,SNR=3.0						

NEIC ***03*** *22:28:21.4, 35.59N×26.20E, h40km, MD3.4(ATH), After ATH.*
ATH ***03*** *22:28:21.4, 35.59N×26.20E, h40km±3km, MD3.4/10*
ISCJB ***03*** *22:28:22.8±0.6, 35.60N±0.05×26.17E±0.04, h29km±7km, Error ellipse: s-maj=8.3km s-min=4.7km az=163.5*
CSEM ***03*** *22:28:22.8±0.2, 35.59N×26.18E, h27km±3km, MD3.4, Error ellipse: s-maj=4.3km s-min=3.3km az=161.0*
THE ***03*** *22:28:23.3, 35.61N×26.17E, h15km±2km, Error ellipse: s-maj=2.7km s-min=0.9km az=172.0*

ISC 03 22:28:22.9±0.6, 35.60N±0.04×26.18E±0.04, h26km±6km, n42, σ0º58/68, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.49	176	*e*P	Pb	22 28 32.5	-0.4
ZKR				*e*S	Sb	22 28 39.0	+0.1
ZKR	Zakros	0.49	176	*e*P	Pb	22 28 32.5	-0.4
ZKR				*e*S	Sb	22 28 39.9	+0.1
ZKR	Zakros	0.49	176	P	Pb	22 28 32.8	-0.1
ZKR				S	Sb	22 28 40.2	+0.5
ZKR	Zakros	0.49	176	P	Pb	22 28 32.8	-0.1
ZKR				*e*S	Sb	22 28 39.9	+0.1
NPS	Neapolis	0.57	234	*e*P	Pb	22 28 34.4	+0.1
NPS	Neapolis	0.57	234	*e*P	Pb	22 28 34.4	+0.1
NPS				*e*S	Sb	22 28 42.8	+0.7
NPS	Neapolis	0.57	234	*e*P	Pb	22 28 34.4	+0.1
NPS				*e*S	Sb	22 28 42.8	+0.7
NPS	Neapolis	0.57	234	*e*S	Sb	22 28 42.8	+0.7
KARP	Karpathos	0.81	94	*e*P	Pb	22 28 37.5	-0.7
KARP				*e*S	Sb	22 28 48.3	-0.4
KARP	Karpathos	0.81	94	*e*P	Pb	22 28 37.5	-0.7
KARP				*e*S	Sb	22 28 48.3	-0.4
KARP	Karpathos	0.81	94	*e*P	Pb	22 28 37.5	-0.7
KARP				*e*S	Sb	22 28 48.3	-0.4
THR1	Thera Island	0.96	323	P	Pn	22 28 40.4	-0.3
THR1				S	Sb	22 28 53.7	+0.5
THR1	Thera Island	0.96	323	P	Pn	22 28 40.4	-0.3
THR1				S	Sb	22 28 53.7	+0.5
THR3	Thira Island,	1.02	322	P	Pn	22 28 41.3	-0.2
THR3				S	Sn	22 28 55.6	+0.6
THR3	Thira Island,	1.02	322	P	Pn	22 28 41.3	-0.2
THR3				S	Sn	22 28 55.6	+0.6
THR2	Thira island,	1.03	325	P	Pn	22 28 41.9	+0.2
THR2	Thira island,	1.03	325	P	Pn	22 28 41.9	+0.2
THR5	Thira Island,	1.05	321	P	Pn	22 28 42.3	+0.3
THR5	Thira Island,	1.05	321	P	Pn	22 28 42.3	+0.3
IDI	Anoyia	1.10	254	*e*P	Pn	22 28 42.4	-0.2
IDI				*e*S	Sn	22 28 56.8	-0.1
IDI	Anoyia	1.10	254	*e*P	Pn	22 28 42.4	-0.2
IDI				*e*S	Sn	22 28 56.8	-0.1
IDI	Anoyia	1.10	254	*e*P	Pn	22 28 42.4	-0.2
IDI				*e*S	Sn	22 28 56.8	-0.1
SIVA	Sivas	1.26	243	*e*P	Pn	22 28 44.8	0.0
SIVA	Sivas	1.26	243	*e*P	Pn	22 28 44.8	0.0
SIVA	Sivas	1.26	243	P	Pn	22 28 46.1	+1.3
SIVA				S	Sn	22 29 01.5	+0.6
SIVA	Sivas	1.26	243	*e*P	Pn	22 28 44.8	0.0
SIVA				S	Sn	22 29 01.5	+0.6
APE	Apeiranthos	1.55	341	*e*P	Pn	22 28 48.3	-0.5
APE	Apeiranthos	1.55	341	*e*P	Pn	22 28 48.3	-0.5
APE	Apeiranthos	1.55	341	*e*P	Pn	22 28 48.3	-0.5
VAM	Vamos	1.62	264	*e*P	Pn	22 28 50.0	+0.2
VAM				*e*S	Sn	22 29 09.8	-0.1
VAM	Vamos	1.62	264	*e*P	Pn	22 28 50.0	+0.2
VAM				*e*S	Sn	22 29 09.8	-0.1
VAM	Vamos	1.62	264	*e*P	Pn	22 28 50.0	+0.2
VAM				*e*S	Sn	22 29 09.8	-0.1
ARG	Arkhangelos	1.70	68	P	Pn	22 28 51.4	+0.6
ARG				S	Sn	22 29 12.6	+0.9
ARG	Arkhangelos	1.70	68	P	Pn	22 28 51.4	+0.6
ARG				S	Sn	22 29 12.6	+0.9
KARN	Karanos	1.85	264	*e*P	Pn	22 28 51.7	-1.3
KARN	Karanos	1.85	264	*e*P	Pn	22 28 51.7	-1.3
KYTH	Kithira	2.64	286	*e*P	Pn	22 29 03.0	-0.7
KYTH	Kithira	2.64	286	*e*P	Pn	22 29 03.0	-0.7
KYTH	Kithira	2.64	286	*e*P	Pn	22 29 03.0	-0.7
VLI	Veliai	2.85	294	*e*P	Pn	22 29 07.4	+0.8
VLI				*e*S	Sn	22 29 39.0	-1.1
VLI	Veliai	2.85	294	*e*P	Pn	22 29 07.4	+0.8
VLI				*e*S	Sn	22 29 39.0	-1.1
VLI	Veliai	2.85	294	*e*P	Pn	22 29 07.4	+0.8
VLI				*e*S	Sn	22 29 39.0	-1.1

BJI ***03*** *22:32:10.5, 9.20S×120.50E, h10km, mB4.9/4, mb4.7/17, Ms4.6/1, Ms7 4.4/1*
IDC ***03*** *22:32:15.0±6.0, 9.15S×120.45E, h33km±46km, mb4.4/14, mb1 4.5/16, mb1mx4.4/20, mbtmp4.4/16, ML4.5/2, MS3.2/4, Ms1 3.3/4, ms1mx2.9/25, Error ellipse: s-maj=26.7km s-min=15.0km az=60.0*
NEIC ***03*** *22:32:17.6±0.9, 9.25S×120.46E, h64km±9km, mb4.6/15, Error ellipse: s-maj=8.7km s-min=5.5km az=221.0*
ISCJB ***03*** *22:32:19.4±0.4, 9.46S±0.04×120.39E±0.03, h106km±4km, mb4.7/43, Error ellipse: s-maj=6.7km s-min=4.9km az=21.2*
DJA ***03*** *22:32:20, 9.54S×120.40E, h74km, mb5.0/24*

ISC 03 22:32:20.6±0.4, 9.43S±0.04×120.41E±0.03, h97km±4km, h18km±6.4km: pP-P, n126, σ1º13/125, mb4.7/42, 2D, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSI	Waingapu	0.26	205	P	Pn	22 32 33.7	-1.0
MMRI	Maumere	1.97	66	P	Pn	22 32 52.6	-0.1
BKSI	Bulukumba	4.09	356	P	Pn	22 33 20.3	-0.7
KHKI	Kahang-Kahang	4.86	282	P	Pn	22 33 31.2	-0.2
BNSI	Bone	5.01	357	P	Pn	22 33 35.0	+1.6
	0.7nm2µm186nm,0.8s						
IGBI	Denpasar	5.23	276	P	Pn	22 33 37.3	+0.9
	4.2nm545nm,0.7s						
SRBI	Singaraja	5.31	284	P	Pn	22 33 36.9	-0.6
	1.3nm4µm174nm,1.0s						
SPSI	Sidrap Palu	5.47	353	P	Pn	22 33 41.3	+1.6
	0.5nm2µm142nm,0.7s						
KDI	Kendari	5.87	22	P	Pn	22 33 46.0	+0.9
	0.4nm1µm127nm,1.0s						
TTSI	Tana Toraja	6.37	355	P	Pn	22 33 54.8	+2.8
	156nm,1.2s						
KMMI	Kalianget	6.80	290	P	Pn	22 33 58.8	+1.0
	0.7nm117nm,2.2s						
GMJI	Gumukmas	6.98	279	P	Pn	22 33 58.6	-1.6
	1.0nm3µm87nm,0.9s						
PCI	Palu	8.49	356	P	Pn	22 34 24.4	+3.6
	1µm76nm,1.1s						
PWJI	Pagerwojo	8.62	279	P	Pn	22 34 23.4	+0.8
	64nm,0.7s						
LUWI	Luwuk	8.66	16	P	Pn	22 34 25.0	+1.9
	1µm99nm,0.9s						
SJI	Sawahan	8.71	281	P	Pn	22 34 24.0	+0.2
	68nm,0.6s						
NLAI	Namlea	9.06	48	P	Pn	22 34 30.0	+1.5
	2µm210nm,1.2s						
PCJI	Pacitan	9.21	277	P	Pn	22 34 30.6	+0.1
	99nm,1.3s						
UGM	Wanagama	9.89	278	P	Pn	22 34 39.7	-0.1
	144nm,2.1s						
FITZ	Fitzroy Crossi	10.00	150	*e*P	Pn	22 34 39.2	-2.1
	41nm,0.6s						
FITZ				*e*S	Sn	22 36 24.3	-7.4
FITZ	Fitzroy Crossi	10.00	150	*e*Pn	Pn	22 34 39.5	-1.9
	22nm,0.6s						
FITZ				*e*Sn	Sn	22 36 25.0	-6.7
FITZ				LR	LR	22 39 20.4	
FITZ	Fitzroy Crossi	10.00	150	Pn	Pn	22 34 39.4	-2.0
	2.0nm,0.3s,baz=331,slow=5.9,SNR=79						
FITZ				LR	LR	22 39 20.4	
	comp=Z,83nm,19.9s,baz=332,slow=42						
FITZ	Fitzroy Crossi	10.00	150	P	Pn	22 34 39.4	-1.9
	60nm,0.6s						
KNA	Kununurra	10.29	128	*e*P	Pn	22 34 43.0	-2.3
	432nm,1.0s						
KNA				*e*S	Sn	22 36 29.2	-10
KNA	Kununurra	10.29	128	P	Pn	22 34 43.4	-1.9
MBWA	Marble Bar	11.68	183	*e*P	Pn	22 35 02.2	-1.8
MBWA				*e*S	Sn	22 37 02.5	-10
MBWA	Marble Bar	11.68	183	*e*Pn	Pn	22 35 02.5	-1.6
MBWA				*e*Sn	Sn	22 37 03.4	-9.0
KAKA	Kakadu	12.25	107	*e*P	Pn	22 35 09.6	-2.1
	37nm,0.4s						
KAKA	Kakadu	12.25	107	*e*Pn	Pn	22 35 09.5	-2.2
	120nm,0.5s						
KAKA				*e*Sn	Sn	22 37 21.6	-4.8
KAKA	Kakadu	12.25	107	P	Pn	22 35 09.9	-1.8
	1µm101nm,0.6s						
TNTI	Ternate	12.28	35	P	Pn	22 35 13.0	+0.9
	85nm,1.0s						
CISI	Cisompet, Garu	12.59	278	P	Pn	22 35 13.8	-2.5
	1µm73nm,0.6s						
TLE	Tual	12.79	74	P	Pn	22 35 17.4	-1.5
	105nm,0.9s						
SBUM	Sibu	14.35	325	P	Pn	22 35 44.9	+5.7
KSM	Kuching	14.78	317	*e*Pn	Pn	22 35 43.5	-1.3
	20nm,0.9s						
KSM	Kuching	14.78	317	P	Pn	22 35 49.7	+4.9
KLSI		16.25	286	P	Pn	22 36 03.6	+0.3
	57nm,0.7s						
WRAB	Tennant Creek	17.04	129	*e*Pn	Pn	22 36 11.5	-1.4
	56nm,0.6s						
WRAB				*e*Sn	Sn	22 39 11.2	-11
WRAB	Tennant Creek	17.04	129	P	Pn	22 36 13.5	+0.6
	92nm,0.7s						
MEEK	Meekatharra	17.20	185	*e*P	Pn	22 36 17.7	+3.0
MEEK				*e*S	S	22 39 07.0	-20
BAKI	Biak	17.63	63	P	Pn	22 36 21.0	+0.8
	2µm202nm,0.8s						
ASAR	Alice Springs	19.15	139	P	Pn	22 36 38.6	+0.4
	1.9nm,0.3s,baz=327,slow=12,SNR=160						
MORW	Morawa	19.96	191	*e*P	Pn	22 36 52.0	+4.4
MORW				*e*S	S	22 40 13.8	-10
QIS	Mount Isa	21.56	123	*e*P	P	22 37 04.1	+1.8
KLBR	Kellerberrin	22.19	186	*e*P	P	22 37 14.7	+5.9
	80nm,1.7s,mb4.8						
KLBR				*e*S	S	22 41 06.7	-0.1
COEN	Coen	22.74	104	*e*P	P	22 37 15.1	+0.3
COEN	Coen	22.74	104	*e*P	P	22 37 14.6	-0.2
COEN	Coen	22.74	104	P	P	22 37 16.4	+1.6
COCO	West Island	23.31	261	P	P	22 37 21.8	+1.6
NWAO	Narrogin (SRO)	23.56	187	*e*P	P	22 37 24.2	+2.0
NWAO				*e*S	S	22 41 34.9	+5.7
NWAO	Narrogin (SRO)	23.56	187	P	P	22 37 24.3	+2.0
	5.6nm,0.7s,mb4.0,baz=134,slow=7.1,SNR=5.4						
KULM	Kulim	24.53	306	*e*P	P	22 37 31.1	-0.1
PSI	Prapat	24.62	299	P	P	22 37 31.4	-0.7
	5.8nm,0.3s,mb4.5,baz=173,slow=8.0,SNR=9.6						
PSI				LR	LR	22 49 38.1	
	comp=Z,74nm,19.5s,baz=137,slow=43						
PMG	Port Moresby	26.39	92	*e*P	P	22 37 48.8	+0.7
	8.2nm,0.4s,mb4.5						
CTAO	Charters Tower	27.10	116	*e*P	P	22 37 54.6	+0.1
	8.4nm,1.1s,mb4.2						
BBOO	Buckleboo	27.39	150	*e*P	P	22 37 58.8	+1.9
	6.7nm,0.6s,mb4.3						
STKA	St

GKN	**Gorkha**	**50.82**	**318**	*e*P		**P**	**22 41 10.4**	**-0.9**
	comp=Z,18nm,0.3s,mb5.5							
KOLN	**Koldanda**	**51.35**	**317**	*e*P		**P**	**22 41 14.9**	**-0.4**
	comp=Z,14nm,0.5s,mb5.3							
GTA	**Gaotai**	**52.22**	**340**	⇓P		**P**	**22 41 22.9**	**+1.3**
GTA				pP		pP	22 41 27.7	-17
GTA				sP		sP	22 41 29.9	-26
GTA				pmax		pmax		
	comp=Z,9.0nm,1.2s,mb4.7							
MDJ	**Mudanjiang**	**54.43**	**8**	*e*P		**P**	**22 41 36.5**	**-1.1**
ULN	**Ulaanbaatar**	**58.26**	**349**	*e*P		**P**	**22 42 04.6**	**-0.2**
	comp=Z,1.5nm,0.4s,mb4.4							
SONM	**Songino Array**	**58.35**	**349**	P		**P**	**22 42 05.6**	**+0.1**
	comp=Z,3.5nm,0.6s,mb4.5,baz=168,slow=8.3,SNR=22							
KSH	**Kashi**	**63.78**	**323**	*e*P		**P**	**22 42 42.1**	**-0.2**
KSH				*e*pP		pP	22 42 52.2	-15
KSH				*e*sP		sP	22 42 56.5	-21
KSH				*e*PcP		PcP	22 43 19.3	+1.8
KSH				*e*PP		PP	22 45 03.2	-0.7
KSH				*e*ScP			22 47 17.0	
KSH				*e*PcS			22 47 21.0	
KSH				*e*ScS		ScS	22 52 28.7	+1.8
KSH				pmax		pmax		
	comp=Z,6.0nm,0.6s,mb4.6							
KSH				pmax		pmax		
	comp=Z,86nm,4.9s							
KSH				LR		LR		
	comp=N,65nm,7.9s							
KSH				LR		LR		
	comp=E,64nm,5.1s							
KSH				LR		LR		
	comp=Z,65nm,5.1s							
KBL	**Kabul**	**65.38**	**315**	*e*P		**P**	**22 42 51.9**	**-1.0**
MK31	**Makanchi Array**	**65.48**	**332**	*e*P		**P**	**22 42 53.6**	**+0.4**
MKAR	**Makanchi Array**	**65.48**	**332**	P		**P**	**22 42 53.6**	**+0.4**
	comp=Z,8.9nm,0.5s,mb4.9,baz=148,slow=7.4,SNR=173							
UCH	**Uchtor**	**66.36**	**324**	*e*P		**P**	**22 43 05.7**	**+6.7**
	comp=Z,6.3nm,0.4s,mb4.8							
AAK	**Ala-Archa**	**66.63**	**325**	P		**P**	**22 43 00.6**	**-0.1**
	comp=Z,4.8nm,0.6s,mb4.5							
EKS2	**Erkin-Say**	**67.06**	**324**	*e*P		**P**	**22 43 04.0**	**+0.6**
	comp=Z,6.0nm,0.8s,mb4.5							
MAW	**Mawson**	**69.31**	**200**	*e*P		**P**	**22 43 16.8**	**-0.3**
ZAA0	**Zalesovo Array**	**69.94**	**339**	*e*P		**P**	**22 43 20.3**	**-0.8**
ZALV	**Zalesovo Beam**	**69.94**	**339**	P		**P**	**22 43 20.4**	**-0.7**
	comp=Z,15nm,0.5s,mb5.1,baz=138,slow=4.5,SNR=76							
KURK	**Kurchatov**	**70.00**	**333**	*e*P		**P**	**22 43 21.6**	**+0.1**
	comp=Z,7.4nm,1.0s,mb4.5							
YAK	**Yakutsk**	**71.61**	**5**	P		**P**	**22 43 30.3**	**-0.7**
BVAR	**Borovoye Array**	**75.33**	**331**	P		**P**	**22 43 53.4**	**+0.3**
	comp=Z,2.4nm,0.7s,mb4.1,baz=121,slow=6.0,SNR=22							
BRVK	**Borovoye**	**75.40**	**331**	*e*P		**P**	**22 43 53.9**	**+0.5**
ABKAR	**Akbulak array**	**78.72**	**324**	*e*P		**P**	**22 44 11.7**	**-0.5**
	comp=Z,2.1nm,0.6s,mb4.1							
TIXI	**Tiksi**	**81.10**	**3**	*e*P		**P**	**22 44 23.2**	**-1.3**
	comp=Z,6.9nm,0.8s,mb4.5							
GNI	**Garni**	**85.26**	**312**	P		**P**	**22 44 47.3**	**+0.7**
LSZ	**Lusaka**	**89.67**	**255**	*e*P		**P**	**22 45 09.5**	**+1.1**
BOSA	**Boshof**	**90.02**	**241**	*e*P		**P**	**22 45 13.1**	**+3.3**
BOSA	**Boshof**	**90.02**	**241**	P		**P**	**22 45 13.0**	**+3.2**
	comp=Z,3.8nm,1.0s,mb4.5,baz=126,slow=2.9,SNR=6.8							
LBTB	**Lobatse**	**90.38**	**245**	P		**P**	**22 45 13.3**	**+1.8**
MMAI	**Mount Meron Ar**	**90.92**	**303**	P		**P**	**22 45 15.9**	**+2.1**
	comp=Z,1.5nm,0.5s,mb4.4,baz=89,slow=6.9,SNR=8.5							
BR131	**Keskin Array S**	**93.48**	**310**	*e*P		**P**	**22 45 24.9**	**-0.6**
BRTR	**Keskin Array B**	**93.48**	**310**	P		**P**	**22 45 25.1**	**-0.5**
	comp=Z,0.7nm,0.8s,mb4.1,baz=121,slow=4.5,SNR=4.8							
OBN	**Obninsk**	**94.15**	**325**	P		**P**	**22 45 27.9**	**-0.3**
AKASG	**Malin Array Be**	**97.97**	**320**	P		**P**	**22 45 44.9**	**-0.7**
	comp=Z,0.3nm,0.4s,mb4.1,baz=75,slow=4.9,SNR=2.7							
PMR	**Palmer**	**98.44**	**29**	P		**P**	**22 45 46.9**	**-0.6**
ILAR	**Eielson Array**	**99.62**	**26**	P		Pdif	22 45 51.6	-1.3
	comp=Z,0.2nm,0.6s,baz=245,slow=4.8,SNR=4.4							
AQU	**L'Aquila**	**108.86**	**311**	PKIKP		PKiKP	22 50 40.2	+1.5
YKA	**Yellowknife Ar**	**114.01**	**25**	PKPdf		PKiKP	22 50 48.0	+0.2
YKA	**Yellowknife Ar**	**114.01**	**25**	PKIKP		PKiKP	22 50 48.0	+0.2
	comp=Z,0.8nm,0.5s,baz=302,slow=1.7,SNR=12							
NVAR	**Mina Array Bea**	**120.21**	**51**	PKP		PKPdf	22 51 03.5	+3.0
	comp=Z,0.9nm,0.6s,baz=281,slow=1.2,SNR=8.5							
TXAR	**Lajitas Array**	**134.29**	**58**	PKP		PKPdf	22 51 30.4	+2.7
	comp=Z,0.4nm,0.6s,baz=217,slow=4.4,SNR=3.2							
LRAL	**Lakeview Retre**	**145.50**	**43**	*e*PKPdf		PKPdf	22 51 48.5	+0.7
TKL	**Tuckaleechee C**	**145.84**	**36**	*e*PKPdf		PKPdf	22 51 49.7	+1.3
ELN	**Prospectdale**	**146.36**	**31**	*e*PKP		PKPdf	22 51 50.6	+1.5
LPAZ	**La Paz**	**153.09**	**162**	PKPbc		PKPbc	22 52 12.2	+4.3
	comp=Z,0.4nm,0.4s,baz=180,slow=2.0,SNR=2.1							

IDC ***03*** *22:44:48.9±1.5, 6.33S×147.70E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.9/15, mbtmp3.9/7, MS3.1/6, Ms1 3.1/6, ms1mx2.9/18, Error ellipse: s-maj=56.1km s-min=22.8km az=106.0*

ISCJB ***03*** *22:44:53.6±2.2, 6.36S±0.09×147.59E±0.09, h41km±22km, mb4.0/9, MS3.1/3, Error ellipse: s-maj=17.8km s-min=13.1km az=44.4*

NEIC ***03*** *22:44:55.1±1.2, 6.34S×147.55E, h38km±13km, mb4.2/4, Error ellipse: s-maj=11.6km s-min=7.7km az=138.0*

ISC 03 22:44:55.5±1.8, 6.37S±0.10×147.57E±0.10, h41km±19km, n32, σ0.957/29, mb4.0/9, MS3.0/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.04**	**188**	*e*Pn	**Pn**	**22 45 41.9**	**+0.7**
PMG				*e*Sn	**Sn**	**22 46 16.6**	**+0.2**
HNR	**Honiara**	**12.63**	**105**	Pn	**Pn**	**22 47 52.9**	**+0.1**
HNR	**Honiara**	**12.63**	**105**	LR	LR	22 52 09.7	
	comp=Z,48nm,21.3s,baz=153,slow=35						
CTA	**Charters Tower**	**13.70**	**185**	LR	LR	22 52 43.4	
	comp=Z,111nm,19.8s,baz=350,slow=34						
CTAO	**Charters Tower**	**13.70**	**185**	*e*Pn	**Pn**	**22 48 06.2**	**-1.1**
KAKA	**Kakadu**	**16.19**	**246**	*e*Pn	**Pn**	**22 48 40.5**	**+0.3**
WRAB	**Tennant Creek**	**18.62**	**222**	*e*P	**Pn**	**22 49 09.7**	**-0.6**
	4.4nm,0.7s						
GUMO	**Guam**	**20.01**	**352**	LR	LR	22 55 02.6	
	comp=Z,33nm,21.5s,MS2.6,baz=121,slow=31						
ASAR	**Alice Springs**	**21.64**	**216**	P	**P**	**22 49 42.6**	**+0.2**
	2.6nm,0.5s,mb3.9,baz=49,slow=8.8,SNR=38						
FITZ	**Fitzroy Crossi**	**24.36**	**239**	*e*P	**P**	**22 50 09.5**	**-0.4**
	5.0nm,0.5s,mb4.2						
FITZ				LR	LR	23 00 14.0	
FITZ	**Fitzroy Crossi**	**24.36**	**239**	P	**P**	**22 50 10.0**	**+0.1**
	5.7nm,0.4s,mb4.3,baz=60,slow=8.8,SNR=38						
FITZ				LR	LR	23 00 14.0	
	comp=Z,70nm,18.8s,MS3.2,baz=40,slow=38						
STKA	**Stephens Creek**	**25.98**	**192**	*e*P	**P**	**22 50 26.2**	**+1.7**
STKA				LR	LR	23 00 43.8	
STKA	**Stephens Creek**	**25.98**	**192**	P	**P**	**22 50 23.9**	**-0.6**
	2.1nm,0.6s,mb3.9,baz=359,slow=14,SNR=5.2						
STKA				LR	LR	23 00 43.8	
	comp=Z,77nm,19.6s,MS3.2,baz=25,slow=37						
MBWA	**Marble Bar**	**30.69**	**239**	*e*P	**P**	**22 51 06.9**	**+0.3**
NWAO	**Narrogin (SRO)**	**38.64**	**223**	P	**P**	**22 52 14.3**	**-0.8**
KSRS	**Korea Array**	**47.30**	**339**	LR	LR	23 10 46.7	
	comp=Z,12nm,18.8s,MS2.9,baz=130,slow=33						
KULM	**Kulim**	**48.24**	**283**	*e*P	**P**	**22 53 32.3**	**-0.5**
COCO	**West Island**	**50.34**	**259**	P	**P**	**22 53 48.8**	**0.0**
BJT	**Baijiatuan**	**54.48**	**331**	P	**P**	**22 54 18.9**	**-0.1**
ULN	**Ulaanbaatar**	**64.70**	**331**	P	**P**	**22 55 29.4**	**+0.1**
LSA	**Lhasa**	**64.91**	**307**	P	**P**	**22 55 31.5**	**+0.4**
TLY	**Talaya**	**68.93**	**332**	*e*P	**P**	**22 55 56.2**	**0.0**
MK31	**Makanchi Array**	**78.14**	**320**	*e*P	**P**	**22 56 50.7**	**+0.3**
MKAR	**Makanchi Array**	**78.14**	**320**	P	**P**	**22 56 51.4**	**+1.0**
	0.4nm,0.7s,mb3.5,baz=95,slow=8.5,SNR=4.6						
ZALV	**Zalesovo Beam**	**79.62**	**328**	P	**P**	**22 56 58.2**	**-0.2**
ZALV	**Zalesovo Beam**	**79.62**	**328**	P	**P**	**22 56 58.2**	**-0.2**
	0.8nm,0.4s,mb4.0,baz=115,slow=6.4,SNR=5.5						
KURK	**Kurchatov**	**81.84**	**323**	*e*P	**P**	**22 57 10.4**	**+0.1**
	1.2nm,0.5s,mb4.1						
QSPA	**South Pole Qui**	**83.60**	**180**	*e*P	**P**	**22 57 19.4**	**+0.4**
	14nm,1.2s,mb5.0						
KBL	**Kabul**	**84.20**	**306**	P	**P**	**22 57 23.5**	**+0.5**
ILAR	**Eielson Array**	**85.60**	**23**	P	**P**	**22 57 28.8**	**-0.5**
	0.3nm,0.9s,mb3.5,baz=262,slow=5.5,SNR=4.2						
BVAR	**Borovoye Array**	**87.40**	**324**	P	**P**	**22 57 37.1**	**-1.3**
BVAR	**Borovoye Array**	**87.40**	**324**	P	**P**	**22 57 37.1**	**-1.3**
	0.2nm,0.5s,mb3.6,baz=90,slow=4.6,SNR=2.5						

DJA 03 22:48:17, 3.95S×128.11E, h62km, MLv2.4/4, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.28**	**18**	P	Pn	22 48 29.3	+2.1
AAI				S	Sn	22 48 37.3	+2.8
AAI	**Ambon**	**0.28**	**18**	P	Sn	22 48 43.2	+8.7
	238nm,0.6s						
MSAI	**Masohi**	**1.01**	**54**	P	Pn	22 48 35.4	+0.1
MSAI				S	Sn	22 48 49.9	+1.0
MSAI	**Masohi**	**1.01**	**54**	P	Sn	22 48 48.1	-0.8
	60nm,1.1s						
NLAI	**Namlea**	**1.23**	**305**	P	Pn	22 48 37.7	-0.5
NLAI				S	Sn	22 48 55.5	+1.5
NLAI	**Namlea**	**1.23**	**305**	P	Pn	22 48 37.9	-0.3
	5μm189nm,0.5s						

IGQ 03 22:59:47.8, 1.79S×78.79W, h13km±1km, Mb4.2, Ms4.0, 3C-17D, Error ellipse: s-maj=1.4km s-min=0.8km az=161.2, Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIOE	**Riobamba**	**0.16**	**77**	⇓S	Sg	22 59 54.9	+0.5
RIOE	**Riobamba**	**0.16**	**77**	⇓P	Pg	22 59 52.4	+0.8
IGUA	**Igualata**	**0.33**	**27**	⇓P	Pg	22 59 55.4	+0.8
BMAS	**Trigal station**	**0.42**	**47**	⇓P	Pg	22 59 56.7	+0.5
ARRY	**Arrayan**	**0.44**	**50**	⇓P	Pg	22 59 56.6	+0.1
BIL2	**Estacion Bilba**	**0.44**	**41**	⇓P	Pg	22 59 57.1	+0.6
BBIL	**Ulba Tungurahu**	**0.45**	**42**	⇓P	Pg	22 59 57.3	+0.5
PATA	**Patacocha**	**0.46**	**51**	⇑P	Pg	22 59 57.3	+0.4
RETU	**Refugio**	**0.48**	**46**	⇓P	Pg	22 59 57.9	+0.6
JUI6	**Juive**	**0.48**	**42**	⇓S	Sg	23 00 04.9	+1.1
JUI6	**Juive**	**0.48**	**42**	⇓P	Pg	22 59 57.7	+0.3
ULBA	**Ulba**	**0.51**	**48**	⇓P	Pg	22 59 58.3	+0.5
BULB	**Ulba Tungurahu**	**0.52**	**47**	⇓S	Sg	23 00 05.7	+0.8
BULB	**Ulba Tungurahu**	**0.52**	**47**	⇓P	Pg	22 59 58.4	+0.4
RUN5	**Runtun**	**0.52**	**44**	P	Pg	22 59 58.1	+0.1
BRUN	**Tungurahua Vol**	**0.53**	**46**	⇓P	Pg	22 59 58.3	+0.2
MACE	**Macas**	**0.75**	**128**	P	Pg	23 00 02.2	-0.2
MACE	**Macas**	**0.75**	**128**	S	Sg	23 00 11.9	-0.4
PISA	**Pisayambo**	**0.83**	**29**	⇑S	Sg	23 00 15.7	+0.8
PISA	**Pisayambo**	**0.83**	**29**	⇑P	Pg	23 00 04.2	+0.3
MOV1	**Cotopaxi Vol s**	**1.12**	**18**	P	Pb	23 00 09.3	+0.1
CAMI	**Rancho Maria**	**1.14**	**14**	S	Sb	23 00 26.1	+1.8
CAMI	**Rancho Maria**	**1.14**	**14**	P	Pb	23 00 10.3	+0.8
TAMB	**Tambo**	**1.17**	**21**	S	Sb	23 00 26.7	+1.8
TAMB	**Tambo**	**1.17**	**21**	P	Pb	23 00 10.5	+0.6
NAS2	**Nasa**	**1.18**	**16**	⇓P	Pn	23 00 11.3	+1.2
VC1	**Cotopaxi 1**	**1.20**	**19**	S	Sb	23 00 28.1	+2.1
VC1	**Cotopaxi 1**	**1.20**	**19**	P	Pn	23 00 11.3	+0.9
COV1	**Cotopaxi Volc**	**1.21**	**22**	P	Pn	23 00 11.0	+0.5
PITA	**Cotopaxi Volc**	**1.27**	**16**	⇓P	Pn	23 00 12.6	+1.2
ANTI	**Antisana**	**1.47**	**25**	P	Pn	23 00 14.8	+0.7
JUA2	**San Juan 2**	**1.58**	**7**	S	Sn	23 00 38.8	+2.9
JUA2	**San Juan 2**	**1.58**	**7**	P	Pn	23 00 17.6	+2.1
PECV	**Mancha de Ca P**	**1.61**	**309**	P	Pn	23 00 21.6	+5.6
TERV	**Terraza Guagua**	**1.62**	**7**	P	Pn	23 00 18.4	+2.3
GGP	**Refugio Guagua**	**1.62**	**7**	P	Pn	23 00 18.1	+2.0
PINO	**Pino**	**1.63**	**6**	P	Pn	23 00 18.6	+2.3
YANA	**Yana**	**1.68**	**8**	P	Pn	23 00 18.9	+2.0
CAYA	**Cayambe**	**2.02**	**23**	P	Pn	23 00 26.3	+4.7
CHAR	**Charly**	**2.03**	**33**	P	Pn	23 00 25.6	+3.9
OTAV	**Otavalo**	**2.04**	**10**	⇓P	Pn	23 00 25.7	+3.7
CONE	**Cono NE Rev Vo**	**2.06**	**34**	P	Pn	23 00 26.7	+4.5
COTA	**Cotacachi**	**2.16**	**12**	P	Pn	23 00 27.5	+3.9

IDC 03 23:17:04.2±4.7, 20.76N×144.53E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/21, mbtmp3.8/6, Error ellipse: s-maj=122.5km s-min=46.0km az=3.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**22.02**	**323**	P	P	23 22 00.7	+0.5
	1.6nm,0.7s,baz=147,slow=9.0,SNR=9.4						
ZALV	**Zalesovo Beam**	**55.73**	**322**	P	P	23 26 41.5	-0.9
	0.3nm,0.4s,baz=120,slow=10,SNR=3.2						
MKAR	**Makanchi Array**	**56.26**	**313**	P	P	23 26 46.8	+0.4
	0.7nm,0.6s,baz=84,slow=9.1,SNR=6.1						
ILAR	**Eielson Array**	**62.30**	**27**	P	P	23 27 27.9	+0.1
	0.2nm,0.6s,baz=253,slow=5.3,SNR=4.3						
BVAR	**Borovoye Array**	**64.20**	**320**	P	P	23 27 40.8	+0.1
	1.0nm,0.4s,baz=100,slow=5.4,SNR=8.9						
FINES	**FINESS Array B**	**84.57**	**335**	P	P	23 29 39.3	+0.2
	1.1nm,0.4s,baz=72,slow=4.9,SNR=16						

GUC 03 23:23:39.2±0.5, 23.44S×70.25W, h33km±5km, MD3.6, ML2.5, 2C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEN1	**Los Morros**	**0.07**	**43**	*i* P	Pb	23 23 47.9	+3.1
CEN1				*i* S	Sb	23 23 52.5	+3.9
ANCH	**Antofagasta**	**0.28**	**211**	*e*P	Pb	23 23 44.6	-2.1
ANCH				*i* S	Sb	23 23 49.6	-2.2
ANCH				AML	AML	23 23 50.2	
	comp=E,1μm,0.3s						
MECH	**Mejillones**	**0.38**	**331**	*e*P	Pb	23 23 47.3	-0.7
MECH				*i* S	Sb	23 23 53.6	-0.4
MECH				AML	AML	23 23 54.8	
	comp=E,492nm,0.2s						
PB04	**Plate Boundary**	**1.36**	**31**	*e*P	Pn	23 23 59.6	-2.3
PB04				*e*S	Sn	23 24 14.9	-3.9
PB04				AML	AML	23 24 18.7	
	comp=N,168nm,0.5s						

ISCJB ***04*** *00:29:25.9±0.5, 38.09N±0.03×21.33E±0.03, h10km, Error ellipse: s-maj=4.0km s-min=3.3km az=174.6*

NEIC ***04*** *00:29:25.8, 38.10N×21.26E, h3km, MD3.0(ATH), After ATH.*

ATH ***04*** *00:29:25.8, 38.10N×21.26E, h3km±3km, MD3.0/12*

CSEM ***04*** *00:29:26.0±0.2, 38.10N×21.34E, h2km, MD3.0, Error ellipse: s-maj=3.6km s-min=3.3km az=159.0*

THE ***04*** *00:29:26.9, 38.15N×21.40E, h0km±2km, ML2.2/5, Error ellipse: s-maj=2.5km s-min=0.7km az=178.0*

ISC 04 00:29:25.9±0.5, 38.12N±0.03×21.31E±0.03, h1km±5km, n56, σ0.990/89, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.14**	**114**	*e*Pg	**Pg**	**00 29 29.0**	**+0.5**
RLS				*e*Sg	**Sg**	**00 29 32.0**	**+1.7**
RLS	**Riolos of Patr**	**0.14**	**114**	*e*PG	**Pg**	**00 29 29.0**	**+0.5**
RLS				*e*SG	**Sg**	**00 29 32.0**	**+1.7**
RLS	**Riolos of Patr**	**0.14**	**114**	*e*Pg	**Pg**	**00 29 29.0**	**+0.5**
RLS				*e*Sg	**Sg**	**00 29 32.0**	**+1.7**
KFL	**Anninata**	**0.41**	**269**	P	**Pg**	**00 29 35.6**	**+1.8**
KFL				S	**Sg**	**00 29 43.3**	**+4.2**
KFL	**Anninata**	**0.41**	**269**	P	**Pg**	**00 29 35.6**	**+1.8**
KFL				S	**Sg**	**00 29 43.3**	**+4.2**
UPR	**University Cam**	**0.41**	**66**	*e*PG	**Pg**	**00 29 34.0**	**+0.2**
UPR				*e*SG	**Sg**	**00 29 40.6**	**+1.4**
UPR	**University Cam**	**0.41**	**66**	P	**Pg**	**00 29 33.8**	**0.0**
UPR				S	**Sg**	**00 29 38.5**	**-0.7**
UPR	**University Cam**	**0.41**	**66**	P	**Pg**	**00 29 33.8**	**0.0**
UPR				S	**Sg**	**00 29 38.5**	**-0.7**
UPR				*e*Sg	**Sg**	**00 29 40.6**	**+1.4**
LAKA	**Lakka**	**0.54**	**76**	P	**Pg**	**00 29 35.7**	**-0.6**
LAKA				S	**Sg**	**00 29 42.5**	**-0.8**
LAKA	**Lakka**	**0.54**	**76**	P	**Pg**	**00 29 35.7**	**-0.6**
LAKA				S	**Sg**	**00 29 42.5**	**-0.8**
EFP	**Efpalio**	**0.56**	**56**	*e*PG	**Pg**	**00 29 35.9**	**-0.8**
EFP				*e*SG	**Sg**	**00 29 45.8**	**+1.8**
EFP	**Efpalio**	**0.56**	**56**	P	**Pg**	**00 29 36.1**	**-0.6**
EFP				S	**Sg**	**00 29 43.1**	**-0.9**
EFP	**Efpalio**	**0.56**	**56**	P	**Pg**	**00 29 36.1**	**-0.6**
EFP				S	**Sg**	**00 29 43.1**	**-0.9**
EFP				*e*Sg	**Sg**	**00 29 45.8**	**+1.8**
VLS	**Valsamata**	**0.57**	**277**	*e*Pg	**Pg**	**00 29 37.2**	**+0.4**
VLS				*e*Sg	**Sg**	**00 29 43.5**	**-0.7**
VLS	**Valsamata**	**0.57**	**277**	*e*PG	**Pg**	**00 29 37.2**	**+0.4**
VLS				*e*SG	**Sg**	**00 29 43.5**	**-0.7**
VLS	**Valsamata**	**0.57**	**277**	*e*Pg	**Pg**	**00 29 37.2**	**+0.4**
VLS				*e*Sg	**Sg**	**00 29 43.5**	**-0.7**
TRIZ	**Trizonia**	**0.65**	**67**	P	**Pg**	**00 29 37.3**	**-1.1**
TRIZ	**Trizonia**	**0.65**	**67**	P	**Pg**	**00 29 37.3**	**-1.1**
KALE	**Kalithea**	**0.71**	**67**	P	**Pg**	**00 29 38.7**	**-0.8**
KALE				S	**Sg**	**00 29 48.0**	**-0.7**
KALE	**Kalithea**	**0.71**	**67**	P	**Pg**	**00 29 38.7**	**-0.8**
KALE				S	**Sg**	**00 29 48.0**	**-0.7**
GUR	**Goura**	**0.83**	**102**	*e*PG	**Pg**	**00 29 41.8**	**-0.1**
GUR	**Goura**	**0.83**	**102**	P	**Pg**	**00 29 41.2**	**-0.7**
GUR				S	**Sg**	**00 29 53.7**	**+1.0**
GUR	**Goura**	**0.83**	**102**	P	**Pg**	**00 29 53.7**	**+1.0**
GUR	**Goura**	**0.83**	**102**	*e*Pg	**Pg**	**00 29 41.8**	**-0.1**
GUR				S	**Sg**	**00 29 53.7**	**+1.0**
EVR	**Evrytania**	**0.89**	**26**	*e*Pg	**Pg**	**00 29 42.9**	**-0.1**
EVR	**Evrytania**	**0.89**	**26**	*e*PG	**Pg**	**00 29 42.9**	**-0.1**
EVR	**Evrytania**	**0.89**	**26**	*e*Pg	**Pg**	**00 29 42.9**	**-0.1**
ITM	**Ithomi**	**1.05**	**152**	*e*Pg	**Pg**	**00 29 45.5**	**-0.6**
ITM	**Ithomi**	**1.05**	**152**	*e*PG	**Pg**	**00 29 45.5**	**-0.6**
ITM	**Ithomi**	**1.05**	**152**	*e*Pg	**Pg**	**00 29 45.5**	**-0.6**
AGG	**Agios Georgios**	**1.21**	**41**	*e*Pb	**Pb**	**00 29 49.7**	**+0.1**
AGG				*e*Sb	**Sn**	**00 30 06.9**	**-0.1**
AGG	**Agios Georgios**	**1.21**	**41**	*e*PB	**Pb**	**00 29 49.7**	**+0.1**
AGG				*e*SB	**Sn**	**00 30 06.9**	**-0.1**
AGG	**Agios Georgios**	**1.21**	**41**	P	**Pg**	**00 29 47.8**	**-1.3**
AGG				S	**Sg**	**00 30 04.9**	**+0.1**
AGG	**Agios Georgios**	**1.21**	**41**	P	**Pg**	**00 29 47.8**	**-1.3**
AGG	**Agios Georgios**	**1.21**	**41**	*e*Pb	**Pb**	**00 29 49.7**	**+0.1**
AGG				S	**Sg**	**00 30 04.9**	**+0.1**
AGG				*e*Sb	**Sn**	**00 30 06.9**	**-0.1**
PYL	**PYLOS**	**1.27**	**164**	*e*PB	**Pb**	**00 29 49.6**	**-0.9**
PYL	**PYLOS**	**1.27**	**164**	*e*Pb	**Pb**	**00 29 49.6**	**-0.9**
LTK	**Loutraki**	**1.31**	**93**	*e*PB	**Pb**	**00 29 51.1**	**-0.2**
LTK	**Loutraki**	**1.31**	**93**	*e*Pb	**Pb**	**00 29 51.1**	**-0.2**
LKR	**Lokris**	**1.43**	**68**	*e*Pn	**Pn**	**00 29 53.7**	**+0.7**
LKR	**Lokris**	**1.43**	**68**	*e*PN	**Pn**	**00 29 53.7**	**+0.7**
LKR	**Lokris**	**1.43**	**68**	P	**Pn**	**00 29 53.0**	**0.0**
LKR	**Lokris**	**1.43**	**68**	P	**Pn**	**00 29 53.0**	**0.0**
LKR	**Lokris**	**1.43**	**68**	*e*Pn	**Pn**	**00 29 53.7**	**+0.7**
THL	**Klokotos Trika**	**1.55**	**21**	*e*PB	**Pb**	**00 29 55.6**	**+0.2**
THL				*e*SB	**Sg**	**00 30 17.4**	**+1.7**
THL	**Klokotos Trika**	**1.55**	**21**	P	**Pn**	**00 29 54.8**	**+0.2**
THL				S	**Sn**	**00 30 15.8**	**+0.4**
THL	**Klokotos Trika**	**1.55**	**21**	P	**Pn**	**00 29 54.8**	**+0.2**
THL	**Klokotos Trika**	**1.55**	**21**	*e*Pb	**Pb**	**00 29 55.6**	**+0.2**
THL				S	**Sn**	**00 30 15.8**	**+0.4**
THL				*e*Sb	**Sg**	**00 30 17.4**	**+1.7**
DID	**Didima**	**1.64**	**111**	*e*PN	**Pn**	**00 29 56.3**	**+0.4**
DID				*e*SB	**Sg**	**00 30 20.6**	**+1.9**
DID	**Didima**	**1.64**	**111**	*e*Pn	**Pn**	**00 29 56.3**	**+0.4**
DID				*e*Sb	**Sg**	**00 30 20.6**	**+1.9**
VLI	**Veliai**	**1.90**	**137**	*e*Pg	**Pg**	**00 30 01.9**	**-0.5**
VLI	**Veliai**	**1.90**	**137**	*e*PG	**Pg**	**00 30 01.9**	**-0.5**
VLI	**Veliai**	**1.90**	**137**	*e*Pg	**Pg**	**00 30 01.9**	**-0.5**
VLY	**Voula,Athens**	**1.98**	**97**	*e*Pb	**Pb**	**00 30 01.5**	**-1.3**
VLY	**Voula,Athens**	**1.98**	**97**	*e*PB	**Pb**	**00 30 01.5**	**-1.3**
VLY	**Voula,Athens**	**1.98**	**97**	*e*Pb	**Pb**	**00 30 01.5**	**-1.3**

NEIC ***04*** *00:41:03.0, 38.09N×21.11E, h4km, MD3.4(ATH), After ATH.*

ISCJB ***04*** *00:41:05.6±0.4, 38.11N±0.02×21.33E±0.02, h3km±4km, Error ellipse: s-maj=3.9km s-min=2.9km az=177.

LKR				*e*SB	**Sb**	**00 41 52.5**	**+1.1**
LKR	**Lokris**	**1.42**	**67**	*e*Pb	**Pb**	**00 41 33.1**	**0.0**
LKR				*e*Sb	**Sb**	**00 41 52.5**	**+1.1**
THL	**Klokotos Trika**	**1.55**	**20**	*e*PB	**Pb**	**00 41 34.4**	**-0.9**
THL	**Klokotos Trika**	**1.55**	**20**	*e*PB	**Pb**	**00 41 35.1**	**-0.2**
THL				*e*SB	**Sb**	**00 41 56.3**	**+1.0**
THL	**Klokotos Trika**	**1.55**	**20**	*e*Pb	**Pb**	**00 41 35.1**	**-0.2**
THL				*e*Sb	**Sb**	**00 41 56.3**	**+1.0**
DID	**Didima**	**1.62**	**111**	*e*PB	**Pb**	**00 41 37.0**	**+0.5**
DID	**Didima**	**1.62**	**111**	*e*PB	**Pb**	**00 41 37.6**	**+1.1**
DID				*e*SB	**Sb**	**00 42 00.7**	**+3.5**
DID	**Didima**	**1.62**	**111**	*e*Pb	**Pb**	**00 41 37.6**	**+1.1**
DID				*e*Sb	**Sb**	**00 42 00.7**	**+3.5**
NAIG	**Nisos Aigina**	**1.74**	**101**	*e*Pg	**Pg**	**00 41 39.3**	**-0.2**
NAIG	**Nisos Aigina**	**1.74**	**101**	*e*PG	**Pg**	**00 41 39.3**	**-0.2**
NAIG	**Nisos Aigina**	**1.74**	**101**	*e*Pg	**Pg**	**00 41 39.3**	**-0.2**

ISCJB ***04*** *00:48:22.9±1.7,* **7°.11S±0°.07×147°.88E±0°.09,** *h42*$^{km}_{\pm}$*17km, mb3.8/10, MS3.2/2, Error ellipse: s-maj=16.3km s-min=10.9km az=27.6*

IDC ***04*** *00:48:25.9±1.1,* **7°.19S×147°.88E,** *h52*$^{km}_{\pm}$*6km, mb3.6/9, mb1 3.8/9, mb1mx3.7/15, mbtmp3.6/9, MS3.3/3, Ms1 3.3/3, ms1mx2.7/16, Error ellipse: s-maj=36.2km s-min=16.8km az=106.0*

NEIC ***04*** *00:48:26.6±1.2,* **7°.18S×147°.88E,** *h61*$^{km}_{\pm}$*12km, mb3.9/3, Error ellipse: s-maj=12.6km s-min=9.8km az=127.0*

ISC 04 00:48:26.3±1.3, 7°.19S±0°.08×147°.86E±0°.09, h57$^{km}_{\pm}$**14km, n25,σ0°78/27, mb3.8/10, MS3.2/2, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.31**	**198**	*e*Pn	**Pn**	**00 49 02.9**	**+1.0**
PMG				*e*Sn	**Sn**	**00 49 28.8**	**-0.3**
COEN	**Coen**	**8.15**	**214**	*e*Pn	**Pn**	**00 50 21.8**	**-0.1**
COEN				*e*Sn	**Sn**	**00 51 47.8**	**-4.9**
HNR	**Honiara**	**12.16**	**101**	*e*Pn	**Pn**	**00 51 16.8**	**-0.1**
CTA	**Charters Tower**	**12.91**	**187**	P	**Pn**	**00 51 30.1**	**+3.1**
	0.4nm,0.3s,baz=6.0,slow=15,SNR=3.6						
CTA				LR	LR	00 55 47.1	
	comp=Z,125nm,20.1s,baz=53,slow=34						
CTAO	**Charters Tower**	**12.91**	**187**	*e*Pn	**Pn**	**00 51 26.6**	**-0.4**
	3.0nm,0.5s						
WRAB	**Tennant Creek**	**18.23**	**225**	*e*P	**Pn**	**00 52 34.3**	**-1.0**
	11nm,1.0s						
EIDS	**Eidsvold**	**18.34**	**171**	*e*P	**Pn**	**00 52 35.6**	**-1.0**
ASAR	**Alice Springs**	**21.16**	**218**	P	**P**	**00 53 07.0**	**+0.1**
	4.3nm,0.6s,mb3.9,baz=55,slow=9.3,SNR=77						
ASAR				S	**S**	**00 56 58.4**	**-0.8**
	1.8nm,0.8s,baz=38,slow=23,SNR=6.3						
FITZ	**Fitzroy Crossi**	**24.21**	**241**	*e*P	**P**	**00 53 37.5**	**-0.2**
FITZ				pP		00 53 50.9	
FITZ				LR	LR	01 03 38.9	
FITZ	**Fitzroy Crossi**	**24.21**	**241**	P	**P**	**00 53 36.8**	**-1.0**
	2.6nm,0.8s,mb3.7,baz=90,slow=9.6,SNR=11						
FITZ				pP		00 53 50.9	
	2.4nm,0.4s,baz=56,slow=3.2,SNR=3.8						
FITZ				LR	LR	01 03 38.9	
	comp=Z,62nm,19.4s,MS3.1,baz=316,slow=38						
STKA	**Stephens Creek**	**25.25**	**193**	*e*P	**P**	**00 53 47.4**	**+0.4**
	0.7nm,0.6s,mb3.4						
STKA				LR	LR	01 03 37.0	
STKA	**Stephens Creek**	**25.25**	**193**	P	**P**	**00 53 48.0**	**+1.0**
	2.7nm,0.4s,mb4.1,baz=344,slow=15,SNR=10						
STKA				LR	LR	01 03 37.0	
	comp=Z,81nm,20.9s,MS3.2,baz=24,slow=36						
KKM	**Kota Kinabalu**	**34.20**	**292**	*e*P	**P**	**00 55 06.7**	**0.0**
KSRS	**Korea Array**	**48.16**	**339**	P	**P**	**00 57 00.2**	**-0.7**
	0.7nm,0.5s,mb4.0,baz=146,slow=8.5,SNR=4.0						
KSRS				pP	pP	00 57 15.6	-0.2
	1.4nm,0.7s,baz=151,slow=8.5,SNR=3.4						
MDJ	**Mudanjiang**	**54.14**	**344**	*e*P	**P**	**00 57 44.8**	**-0.7**
CMAR	**Chiang Mai Arr**	**54.57**	**299**	P	**P**	**00 57 50.5**	**+1.3**
	0.7nm,0.4s,mb4.0,baz=117,slow=6.7,SNR=3.4						
CASY	**Casey**	**64.34**	**196**	P	**P**	**00 58 56.2**	**+0.5**
SONM	**Songino Array**	**65.86**	**331**	P	**P**	**00 59 06.1**	**+0.4**
	0.3nm,0.6s,mb3.5,baz=132,slow=2.1,SNR=2.9						
YAK	**Yakutsk**	**70.44**	**351**	*e*P	**P**	**00 59 33.2**	**-1.0**
MKAR	**Makanchi Array**	**78.96**	**320**	P	**P**	**01 00 23.6**	**-0.3**
	0.4nm,0.6s,mb3.5,baz=94,slow=9.2,SNR=3.0						
ZALV	**Zalesovo Beam**	**80.47**	**328**	P	**P**	**01 00 33.1**	**+1.3**
	0.2nm,0.3s,mb3.5,baz=96,slow=5.8,SNR=2.7						
KURK	**Kurchatov**	**82.67**	**323**	*e*P	**P**	**01 00 44.1**	**+0.5**
	1.2nm,0.5s,mb4.2						
QSPA	**South Pole Qui**	**82.78**	**180**	P	**P**	**01 00 44.5**	**+0.8**
ILAR	**Eielson Array**	**86.24**	**23**	P	**P**	**01 01 00.5**	**-0.8**
	0.3nm,0.7s,mb3.7,baz=255,slow=4.7,SNR=5.8						
ILAR				pP	pP	01 01 16.8	-0.8
	0.5nm,0.7s,baz=249,slow=4.9,SNR=4.6						
TORD	**Torodi Ar. Bea**	**146.20**	**283**	PKPbc	PKPbc	01 08 01.3	0.0
	0.7nm,1.0s,baz=38,slow=2.6,SNR=4.7						
TORD				pPKPbc	pPKPbc	01 08 16.2	-1.9
	1.6nm,0.6s,baz=69,slow=4.4,SNR=7.8						

WEL 04 00:56:03.1±0.3, 37°.81S×176°.15E, h284$^{km}_{\pm}$**2km, ML3.9/7, Error ellipse: s-maj=4.4km s-min=3.7km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**0.88**	**121**	PN	Pn	00 56 41.1	-0.1
URZ				SN	S	00 57 10.9	-0.5
MWZ	**Matawai**	**1.21**	**116**	PN	Pn	00 56 43.1	+0.3
MWZ				SN	S	00 57 13.9	-0.4
BKZ	**Black Stump Fm**	**1.38**	**169**	PN	Pn	00 56 44.3	+0.4
BKZ				SN	S	00 57 15.9	-0.3
WNVZ	**Wahianoa**	**1.57**	**196**	PN	Pn	00 56 45.5	+0.4
MCHZ	**McNeill Hill**	**1.69**	**165**	PN	Pn	00 56 45.8	-0.1
KNZ	**Kokohu**	**1.70**	**136**	PN	Pn	00 56 46.3	+0.2
KAHZ	**Kahuranaki**	**2.06**	**164**	PN	Pn	00 56 49.1	+0.2
PNHZ	**Pukenui**	**2.10**	**179**	PN	Pn	00 56 49.0	-0.2
WAZ	**Wanganui**	**2.14**	**205**	PN	Pn	00 56 49.7	+0.1
DVHZ	**Dannevirke**	**2.48**	**186**	PN	Pn	00 56 51.2	-1.4
BFZ	**Birch Farm**	**2.87**	**178**	PN	Pn	00 56 55.6	-0.7
MRZ	**Mangatainoka R**	**2.88**	**189**	PN	Pn	00 56 55.3	-1.2
TIWZ	**Tintock**	**2.97**	**184**	PN	Pn	00 56 56.3	-1.0
OGWZ	**Otaki Gorge**	**3.10**	**194**	PN	Pn	00 56 57.4	-1.3
HOWZ	**Holdsworth Sta**	**3.12**	**189**	PN	Pn	00 56 57.4	-1.5
TMWZ	**Te Maipa**	**3.30**	**183**	PN	Pn	00 56 59.4	-1.4
MTW	**Mount Morrison**	**3.38**	**188**	PN	Pn	00 56 59.9	-1.7
CAW	**Cannon Point**	**3.40**	**194**	PN	Pn	00 57 00.1	-1.7
DUWZ	**D'Urville Isla**	**3.45**	**209**	PN	Pn	00 57 00.4	-2.0
TRWZ	**Traveller**	**3.60**	**185**	PN	Pn	00 57 02.7	-1.3
PAWZ	**Paruwai Farm**	**3.61**	**189**	PN	Pn	00 57 02.4	-1.7
MSWZ	**Moikau Station**	**3.66**	**191**	PN	Pn	00 57 02.9	-1.8
SNZO	**South Karori**	**3.67**	**197**	PN	Pn	00 57 03.0	-1.7
TCW	**Tory Channel**	**3.69**	**202**	PN	Pn	00 57 03.0	-2.0
BHW	**Baring Head**	**3.72**	**195**	PN	Pn	00 57 03.5	-1.8
PLWZ	**Palliser**	**3.82**	**190**	PN	Pn	00 57 04.4	-2.0
TUWZ	**Tuamarina**	**3.99**	**205**	PN	Pn	00 57 06.3	-2.1
QRZ	**Quartz Range**	**4.11**	**222**	PN	Pn	00 57 06.5	-3.2
BSWZ	**Blackbirch Sta**	**4.27**	**203**	PN	Pn	00 57 09.6	-1.9
THZ	**Tophouse**	**4.67**	**211**	PN	Pn	00 57 13.0	-3.0
KHZ	**Kahutara**	**5.01**	**203**	PN	Pn	00 57 17.6	-2.5
LTZ	**Lake Taylor**	**5.78**	**210**	PN	Pn	00 57 26.0	-3.3
MQZ	**McQueen's Vall**	**6.46**	**203**	PN	Pn	00 57 33.8	-3.6
WVZ	**Waitaha Valley**	**6.68**	**216**	PN	Pn	00 57 36.2	-4.0
LBZ	**Lake Benmore**	**7.96**	**213**	PN	Pn	00 57 51.8	-4.1
ODZ	**Otahua Downs**	**8.32**	**208**	PN	Pn	00 57 57.5	-2.9
JCZ	**Jackson Bay**	**8.39**	**219**	PN	Pn	00 57 56.9	-4.3

MEX 04 01:28:45.2±0.4, 16°.86N×100°.18W, h10$^{km}_{\pm}$**2km, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.21**	**336**	*i* P	Pg	01 28 49.1	-0.5
CAIG				*i* S	Sg	01 28 52.5	-0.1
ACX	**Acapulco**	**0.31**	**87**	*i* P	Pg	01 28 49.9	-1.4
ACX				*i* S	Sg	01 28 53.8	-1.7
MEIG	**Mezcala**	**1.19**	**27**	*i* P	Pb	01 29 04.6	-3.2
MEIG				*i* S	Sb	01 29 18.7	-4.6
PNIG	**Pinotepa**	**2.02**	**103**	*i* P	Pn	01 29 16.4	-3.0
PNIG				*i* S	Sn	01 29 39.9	-4.8
MZVM		**2.49**	**21**	*e*P	Pn	01 29 22.8	-3.0
MZVM				*i* S	Sn	01 29 52.5	-3.8
IIO	**Organos**	**3.05**	**27**	*e*P	Pn	01 29 30.9	-2.6
IIO				*i* S	Sn	01 30 06.5	-3.6

ISCJB ***04*** *01:45:12.7±1.2,* **7°.1N±0°.1×126°.4E±0°.2,** *h188*$^{km}_{\pm}$*9km, mb3.7/7, Error ellipse: s-maj=36.2km s-min=16.7km az=175.2*

NEIC ***04*** *01:45:12.7±1.7,* **7°.17N×126°.66E,** *h171*$^{km}_{\pm}$*14km, Error ellipse: s-maj=47.3km s-min=12.6km az=74.0*

IDC ***04*** *01:45:12.7±1.9,* **7°.17N×126°.68E,** *h170*$^{km}_{\pm}$*15km, mb3.4/7, mb1 3.5/7, mb1mx3.3/21, mbtmp3.4/7, Error ellipse: s-maj=48.4km s-min=14.9km az=73.0*

ISC 04 01:45:13.5±1.4, 7°.1N±0°.1×126°.5E±0°.2, h177$^{km}_{\pm}$**10km, n12,σ0°58/16, mb3.7/7, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.88**	**269**	*e*Pn	**Pn**	**01 45 40.1**	**0.0**
DAV				*e*S	**Sn**	**01 46 00.2**	**-0.3**
DAV	**Davao City (W)**	**0.88**	**269**	P	**Pn**	**01 45 40.0**	**-0.1**
	80nm,0.3s,baz=215,slow=4.5,SNR=3.9						
DAV				S	**Sn**	**01 46 01.4**	**+1.0**
	119nm,0.3s,baz=325,slow=22,SNR=18						
DMPH	**Davao City--Mi**	**0.95**	**270**	*i* P	**Pn**	**01 45 40.5**	**0.0**
DMPH				*i* S	**Sn**	**01 46 05.2**	**+3.9**
GSPH	**General Santos**	**1.81**	**237**	*e*P	**Pn**	**01 45 47.9**	**-0.4**
GSPH				*e*S	**Sn**	**01 46 14.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**25.05**	**182**	P	**P**	**01 50 22.2**	**+0.7**
	2.3nm,0.5s,mb3.9,baz=6.5,slow=7.0,SNR=10						
ASAR	**Alice Springs**	**31.42**	**167**	P	**P**	**01 51 18.1**	**0.0**
	0.3nm,0.4s,mb3.4,baz=343,slow=7.4,SNR=5.0						
SONM	**Songino Array**	**44.05**	**341**	P	**P**	**01 53 04.0**	**+0.4**
	0.2nm,0.3s,mb3.2,baz=157,slow=7.8,SNR=2.3						
MKAR	**Makanchi Array**	**54.68**	**324**	P	**P**	**01 54 24.4**	**+0.3**
MKAR	**Makanchi Array**	**54.68**	**324**	P	**P**	**01 54 24.4**	**+0.3**
	2.4nm,0.5s,mb4.2,baz=121,slow=8.3,SNR=14						
ZALV	**Zalesovo Beam**	**57.50**	**332**	P	**P**	**01 54 43.2**	**-0.8**
	0.7nm,0.3s,mb3.9,baz=123,slow=5.3,SNR=4.2						
BVAR	**Borovoye Array**	**64.39**	**326**	P	**P**	**01 55 30.9**	**+0.5**
	1.4nm,0.5s,mb4.1,baz=120,slow=5.7,SNR=13						
ILAR	**Eielson Array**	**82.20**	**26**	P	**P**	**01 57 13.6**	**-0.8**
	0.3nm,0.7s,mb3.0,baz=238,slow=5.2,SNR=4.0						

DJA 04 02:11:03, 1°.08N×126°.42E, h30$^{km}_{\pm}$**, MLv3.8/3, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.99**	**108**	P	Pn	02 11 21.6	+0.7
TNTI				S	Sn	02 11 34.6	+0.6
MNI	**Manado**	**1.62**	**283**	P	Pn	02 11 31.5	+2.0
MNI				S	Sn	02 11 50.2	+0.8
LBMI	**Labuha**	**2.02**	**148**	P	Pn	02 11 36.3	+1.3
KMSI	**Cibinong**	**2.49**	**258**	P	Pn	02 11 42.4	+0.9

IDC 04 02:17:18.8±2.1, 23°.45S×179°.91W, h0$^{km}_{\pm}$**, mb3.9/5, mb1 4.2/5, mb1mx4.0/13, mbtmp3.9/5, Error ellipse: s-maj=143.2km s-min=26.4km az=154.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**34.97**	**248**	P	P	02 24 12.6	-0.2
	1.1nm,0.4s,baz=108,slow=12,SNR=3.4						
ASAR	**Alice Springs**	**42.20**	**260**	P	P	02 25 13.9	+0.3
	1.1nm,0.3s,baz=94,slow=7.5,SNR=29						
NVAR	**Mina Array Bea**	**84.37**	**44**	P	P	02 29 55.0	+2.1
	0.7nm,0.7s,baz=221,slow=8.0,SNR=3.6						
TXAR	**Lajitas Array**	**90.12**	**58**	P	P	02 30 20.3	-0.7
	0.4nm,0.7s,baz=214,slow=5.8,SNR=6.0						
ILAR	**Eielson Array**	**91.57**	**14**	P	P	02 30 26.2	-0.7
	0.3nm,0.9s,baz=193,slow=3.7,SNR=3.0						
BRTR	**Keskin Array B**	**147.37**	**308**	PKPbc	PKPbc	02 37 03.3	-1.3
	0.6nm,1.0s,baz=92,slow=4.6,SNR=3.0						

IDC 04 03:18:59.4±1.0, 8°.97S×158°.17E, h0$^{km}_{\pm}$**, mb3.8/6, mb1 4.0/6, mb1mx3.8/15, mbtmp3.8/6, MS3.8/2, Ms1 3.8/2, ms1mx3.0/22, Error ellipse: s-maj=33.7km s-min=22.5km az=157.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.81**	**105**	Pn	Pn	03 19 31.2	-0.7
	98nm,0.3s,baz=235,slow=4.1,SNR=18						
HNR				Sn	Sn	03 20 01.5	+5.9
	489nm,0.3s,baz=252,slow=23,SNR=16						
ASAR	**Alice Springs**	**27.42**	**235**	P	P	03 24 46.2	-0.8
	0.4nm,0.8s,baz=61,slow=11,SNR=3.1						
STKA	**Stephens Creek**	**27.50**	**212**	P	P	03 24 49.2	+1.6
	2.0nm,0.8s,baz=21,slow=16,SNR=4.3						
FITZ	**Fitzroy Crossi**	**32.85**	**251**	P	P	03 25 33.9	-1.3
	2.3nm,1.1s,baz=90,slow=6.1,SNR=3.3						
SONM	**Songino Array**	**72.70**	**326**	P	P	03 30 30.3	+1.2
	0.2nm,0.4s,baz=140,slow=7.0,SNR=2.5						
KDAK	**Kodiak Island**	**77.61**	**25**	LR	LR	04 00 50.4	
	comp=Z,35nm,18.6s,baz=267,slow=32						
ILAR	**Eielson Array**	**84.08**	**21**	P	P	03 31 30.2	-1.4
	0.3nm,0.9s,baz=232,slow=4.4,SNR=3.8						
MKAR	**Makanchi Array**	**86.96**	**318**	LR	LR	04 10 27.2	
	comp=Z,76nm,19.2s,baz=163,slow=36						
NVAR	**Mina Array Bea**	**90.48**	**51**	P	P	03 32 04.9	+1.5
	1.1nm,0.8s,baz=254,slow=6.5,SNR=6.5						

CASC 04 03:24:49.3±1.7, 13°.43N×90°.16W, h46$^{km}_{\pm}$**26km, MD3.9, ML3.9, 1C-3D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOQS	**Boqueron**	**0.91**	**70**	*e*P	Pn	03 25 05.7	0.0
SNET	**Serv Nac Est T**	**0.94**	**74**	*e*P	Pn	03 25 05.8	-0.2
SNET				*e*S	Sn	03 25 19.6	+1.3
SNET				AML	AML	03 25 20.6	
	comp=Z,3μm,0.4s						
PCG	**Pacaya**	**1.05**	**336**	*e*P	Pn	03 25 08.1	+0.4
PCG				*e*S	Sn	03 25 22.9	+1.6
LFRS	**El Faro**	**1.08**	**80**	*e*P	Pn	03 25 07.7	-0.3
NBG	**Las Nubes**	**1.17**	**351**	*e*P	Pn	03 25 09.6	+0.4
FUG	**Fuego 3**	**1.21**	**327**	*e*P	Pn	03 25 10.0	+0.2
SNVI	**San Vicente**	**1.29**	**82**	*e*P	Pn	03 25 10.8	-0.2
SNVI				*e*S	Sn	03 25 28.8	+1.7
FG6		**1.33**	**328**	*e*P	Pn	03 25 11.6	+0.2
TP2	**Tecpan 2**	**1.58**	**328**	*e*P	Pn	03 25 15.8	+0.8
TP2				*e*S	Sn	03 25 36.4	+2.1
JAT	**Jato**	**1.69**	**302**	*e*P	Pn	03 25 17.2	+0.9
MRL	**Marmol**	**1.69**	**15**	*e*P	Pn	03 25 16.2	-0.1
VSM	**San Miguel**	**1.83**	**90**	*e*P	Pn	03 25 18.8	+0.5
BLLM	**Bellamira**	**1.87**	**89**	*e*P	Pn	03 25 18.7	-0.1
BLLM				*e*S	Sn	03 25 43.6	+2.4
CAHU	**Cacacuatique**	**1.92**	**80**	*e*P	Pn	03 25 18.0	-1.6
CNCH	**Conchagua**	**2.27**	**94**	*e*P	Pn	03 25 24.6	+0.3
CNCH				*e*S	Sn	03 25 53.5	+2.5

BJI ***04*** *03:26:40.8, 9°.17S×120°.73E, h39km, mB5.1/31, mb5.0/40, Ms4.7/35, Ms7 4.4/34*

ISCJB ***04*** *03:26:46.6±0.9, 8°.22S±0°.03×120°.27E±0°.04, h22*$^{km}_{\pm}$*6km, mb5.0/75, MS4.3/27, Error ellipse: s-maj=7.1km s-min=4.2km az=151.4*

MOS ***04*** *03:26:47.9±1.1, 8°.12S×120°.38E, h33km, mb5.1/24, Error ellipse: s-maj=14.3km s-min=7.7km az=119.1*

NEIC ***04*** *03:26:50.4±0.8, 8°.20S×120°.31E, h40*$^{km}_{\pm}$*8km, mb5.0/27, Error ellipse: s-maj=9.0km s-min=4.8km az=57.0*

NEIC Felt [III] at Ruteng, Flores and in western Sumbawa.

GCMT ***04*** *03:26:50.9±0.2, 8°.06S×120°.26E, h26km, MW5.1, Moment Tensor Solution. s47,c64; s72,c111; Moment tensor: Scale 10*^{16}*Nm; Mrr3.86±.19; Mθθ-4.67±.12; Mφφ0.81±.15; Mrθ-3.48±.24; Mrφ-0.04±.12; Mθφ-1.47±.40; Best double couple: M*$_0$*5.70000×10*^{16} *NP1:*ϕ_s*108.00000°, δ28.00000°, λ121.00000°. NP2:*ϕ_s*254.00000°, δ66.00000°, λ75.00000°. Principal axes: T 5.5000, Plg65.0000°, Azm138.0000°; N 0.4500, Plg14.0000°, Azm260.0000°; P -5.9500, Plg20.0000°, Azm355.0000°; Data Used: IU IC G CN II.*

IDC ***04*** *03:26:51.7±2.2, 8°.14S×120°.26E, h49*$^{km}_{\pm}$*20km, mb4.6/16, mb1 4.7/16, mb1mx4.6/21, mbtmp4.7/16, MS4.1/11, Ms1 4.1/11, ms1mx3.8/25 Error ellipse: s-maj=18.5km s-min=9.6km az=62.0*

DJA ***04*** *03:26:51, 8°.22S×120°.34E, h36km, mb5.1/15*

ISC 04 03:26:50.0±0.9, 8°.23S±0°.03×120°.28E±0°.04, h32$^{km}_{\pm}$**6km, h34**$^{km}_{\pm}$**9km: pP-P, n173,σ1°08/180, mb5.0/75, MS4.3/27, 7C-4D, Flores region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**1.43**	**179**	P	**Pn**	**03 27 15.9**	**+2.2**
MMRI	**Maumere**	**1.98**	**102**	P	**Pn**	**03 27 21.2**	**-0.1**
KHKI	**Kahang-Kahang**	**4.62**	**268**	P	**Pn**	**03 27 56.4**	**-1.2**
KDI	**Kendari**	**4.84**	**29**	P	**Pn**	**03 28 00.0**	**-0.7**
IGBI	**Denpasar**	**5.11**	**263**	P	**Pn**	**03 28 08.5**	**+4.2**
	14nm3μm,0.9s						
JAGI	**Jajag, Banyuwa**	**6.07**	**267**	P	**Pn**	**03 28 18.5**	**+1.0**
	3.3nm9μm769nm,0.6s						
LUWI	**Luwuk**	**7.56**	**19**	P	**Pn**	**03 28 38.8**	**+0.7**
	0.5nm2μm158nm,0.8s						
FITZ	**Fitzroy Crossi**	**11.11**	**153**	*e*P	**Pn**	**03 29 26.4**	**-0.3**
	130nm,0.9s						
FITZ				*e*S	**Sn**	**03 31 28.4**	**-1.5**
FITZ	**Fitzroy Crossi**	**11.11**	**153**	*e*Pn	**Pn**	**03 29 27.3**	**+0.6**
FITZ	**Fitzroy Crossi**	**11.11**	**153**	P	**Pn**	**03 29 26.5**	**-0.2**
	1.8nm,0.3s,baz=340,slow=7.5,SNR=42						
FITZ				S	**Sn**	**03 31 28.6**	**-1.3**
	4.2nm,0.3s,baz=146,slow=16,SNR=6.6						
KAKA	**Kakadu**	**12.76**	**111**	*e*P	**Pn**	**03 29 46.9**	**-2.4**
	69nm,0.8s						
KAKA	**Kakadu**	**12.76**	**111**	*e*Pn	**Pn**	**03 29 47.6**	**-1.7**
KAKA				*e*S	**Sn**	**03 32 05.5**	**-4.8**
MBWA	**Marble Bar**	**12.86**	**182**	*e*Pn	**Pn**	**03 29 50.3**	**-0.3**
MBWA				*e*S	**Sn**	**03 32 07.7**	**-5.0**
SBUM	**Sibu**	**13.31**	**323**	P	**Pn**	**03 29 56.8**	**0.0**
	484nm20nm,1.5s						
MYLDM	**Lahad Datu**	**13.44**	**352**	P	**Pn**	**03 30 00.6**	**+2.0**
	46nm,1.2s						
KSM	**Kuching**	**13.85**	**314**	*e*Pn	**Pn**	**03 30 04.1**	**0.0**
KSM	**Kuching**	**13.85**	**314**	P	**Pn**	**03 30 04.1**	**-0.1**
	686nm36nm,1.6s						
KKM	**Kota Kinabalu**	**14.75**	**344**	*e*Pn	**Pn**	**03 30 16.8**	**+0.3**
KKM	**Kota Kinabalu**	**14.75**	**344**	P	**Pn**	**03 30 16.2**	**-0.3**
	727nm41nm,1.2s						
DAV	**Davao City (W)**	**16.09**	**19**	LR	LR	03 37 03.8	
	comp=Z,422nm,21.7s,baz=185,slow=38						
BAKI	**Biak**	**17.25**	**67**	P	**Pn**	**03 30 50.0**	**+1.4**
	4μm346nm,1.4s						
WRAB	**Tennant Creek**	**17.91**	**132**	*e*Pn	**Pn**	**03 30 55.2**	**-1.5**
	67nm,0.8s						
WRAB				*e*S	**Sn**	**03 34 05.9**	**-10**
WRAB	**Tennant Creek**	**17.91**	**132**	*e*P	**Pn**	**03 30 55.3**	**-1.5**
WRAB				*e*S	**Sn**	**03 34 05.9**	**-10**
WRAB				pmax	pmax		
	comp=Z,67nm,0.8s						
WRAB	**Tennant Creek**	**17.91**	**132**	Pn	**Pn**	**03 30 55.8**	**-1.0**
	comp=Z,484nm,0.6s,SNR=33						
TBP	**Tagbilaran**	**18.16**	**11**	*e*P	**Pn**	**03 30 54.4**	**-5.4**
KSI	**Kapahiang**	**18.16**	**283**	P	**Pn**	**03 31 03.9**	**+4.0**
	comp=Z,108nm,0.9s						
MEEK	**Meekatharra**	**18.37**	**185**	*e*P	**Pn**	**03 31 04.4**	**+2.1**
ASAR	**Alice Springs**	**20.15**	**141**	P	**P**	**03 31 22.2**	**+0.6**
	comp=Z,96nm,0.9s,baz=316,slow=9.2,SNR=390						
ASAR				S	**S**	**03 35 10.2**	**+3.8**
	comp=Z,11nm,0.9s,baz=316,slow=23,SNR=6.2						
TGY	**Tagaytay City**	**22.20**	**2**	P	**P**	**03 31 44.1**	**+0.4**
	comp=Z,100nm,0.3s,mb5.7,baz=195,slow=12,SNR=2.6						
QIS	**Mount Isa**	**22.34**	**125**	*e*P	**P**	**03 31 44.8**	**-0.5**
IPM	**Ipoh**	**22.98**	**303**	P	**P**	**03 31 53.1**	**+1.0**
	comp=Z,1μmcomp=Z,48nm,1.0s,mb4.9						
COEN	**Coen**	**23.17**	**106**	*e*P	**P**	**03 31 52.4**	**-1.7**
	comp=Z,243nm,0.8s,mb5.7						
COEN	**Coen**	**23.17**	**106**	P	**P**	**03 31 53.0**	**-1.1**
	comp=Z,284nm,1.1s,mb5.6						
KLBR	**Kellerberrin**	**23.36**	**185**	*e*P	**P**	**03 31 55.5**	**-0.4**
	comp=Z,75nm,0.7s,mb5.2						
FORT	**Forrest**	**23.58**	**163**	*e*P	**P**	**03 31 57

GYA LR LR
comp=Z,970nm,16.9s,MS4.7
TOO Toolangi 37.07 146 *e*P **P** **03 33 58.8 +1.6**
KMI Kunming 37.30 333 P **P** **03 34 01.6 +2.4**
KMI pP pP 03 34 10.4 +1.8
KMI S **S** **03 39 44.5 -0.3**
KMI pmax pmax
comp=Z,21nm,1.1s,mb4.9
KMI LR LR
comp=N,520nm,13.5s,MS4.6
KMI LR LR
comp=E,350nm,13.0s,MS4.6
KMI LR LR
comp=Z,600nm,13.0s,MS4.6
MGCD Mangrove Creek 37.80 135 *e*P **P** **03 34 05.4 +1.9**
comp=Z,34nm,0.6s,mb5.2
WHN Wuhan 38.97 352 *e*P **P** **03 34 13.8 +0.5**
WHN pP pP 03 34 24.6 +1.9
WHN S **S** **03 40 12.5 +2.5**
WHN LR LR
comp=N,530nm,12.5s,MS4.6
WHN LR LR
comp=E,290nm,12.2s,MS4.6
WHN LR LR
comp=Z,610nm,22.8s
SSE Sheshan 39.11 1 P **P** **03 34 13.1 -1.3**
SSE sP sP 03 34 25.9 -1.8
SSE S **S** **03 40 15.4 +3.3**
SSE pmax pmax
comp=Z,24nm,0.7s,mb5.0
SSE pmax pmax
comp=Z,46nm,3.8s
SSE LR LR
comp=N,140nm,20.0s,MS3.9
SSE LR LR
comp=E,100nm,20.0s,MS3.9
SSE LR LR
comp=Z,240nm,29.0s
NJ2 Nanjing 40.08 358 *e*P **P** **03 34 22.3 -0.2**
NJ2 pP pP 03 34 32.0 +0.1
NJ2 sP sP 03 34 35.7 -0.1
NJ2 PP PP 03 36 00.1 +5.0
NJ2 S **S** **03 40 26.0 -0.6**
NJ2 pmax pmax
comp=Z,20nm,0.9s,mb4.8
NJ2 pmax pmax
comp=Z,160nm,4.9s
NJ2 LR LR
comp=N,170nm,16.2s,MS4.1
NJ2 LR LR
comp=E,130nm,14.0s,MS4.1
NJ2 LR LR
comp=Z,510nm,14.2s,MS4.5
CD2 Chengdu 42.02 339 P **P** **03 34 41.3 +2.8**
CD2 pP pP 03 34 51.1 +3.1
CD2 sP sP 03 34 55.1 +3.3
CD2 PP PP 03 36 22.5 +6.3
CD2 S **S** **03 40 57.0 +1.5**
CD2 sS sS 03 41 15.3 +4.2
CD2 ScS ScS 03 44 38.6 -0.3
CD2 pmax pmax
comp=Z,50nm,0.8s,mb5.2
CD2 pmax pmax
comp=Z,130nm,4.7s
CD2 LR LR
comp=N,370nm,16.6s,MS4.7
CD2 LR LR
comp=E,540nm,12.5s,MS4.7
CD2 LR LR
comp=Z,460nm,13.2s,MS4.5
XAN Xi'an 43.40 346 P **P** **03 34 49.2 -0.4**
XAN pP pP 03 34 58.4 -0.7
XAN sP sP 03 35 03.5 +0.5
XAN PP PP 03 36 30.9 -0.1
XAN PcP PcP 03 36 38.1 +0.3
XAN ScS ScS 03 44 45.6 -1.8
XAN pmax pmax
comp=Z,4.0nm,1.1s,mb4.1
XAN pmax pmax
comp=Z,16nm,4.1s
XAN LR LR
comp=N,210nm,24.4s,MS4.0
XAN LR LR
comp=E,60nm,24.7s,MS4.0
XAN LR LR
comp=Z,110nm,28.2s,MS3.6
KSRS Korea Array 46.01 8 P **P** **03 35 10.4 0.0**
comp=Z,1.7nm,0.8s,mb4.0,baz=180,slow=8.8,SNR=9.1
KSRS LR LR 03 56 17.8
comp=Z,104nm,19.1s,MS3.8,baz=49,slow=38
DZM Mont Dzumac 46.45 113 *e*P **P** **03 35 14.5 +0.3**
comp=Z,61nm,1.1s,mb5.5
DZM *e*S **S** **03 42 02.1 +1.7**
comp=Z,105nm,28.9s
DZM *e*LR LR 03 48 32.8
comp=Z,321nm,22.8s
LZH Lanzhou 46.72 342 *e*P **P** **03 35 16.5 +0.5**
LZH pP pP 03 35 27.0 +1.4
LZH sP sP 03 35 30.8 +1.4
LZH PP PP 03 37 06.4 +0.2
LZH *e*S **S** **03 42 04.3 +0.6**
LZH pmax pmax
comp=Z,42nm,1.2s,mb5.2
LZH pmax pmax
comp=Z,150nm,5.3s
LZH LR LR
comp=E,640nm,14.5s
LZH LR LR
comp=Z,960nm,18.0s,MS4.8
LSA Lhasa 46.98 325 *e*P **P** **03 35 12.0 -6.2**
ODAN Odare 47.27 319 *e*P **P** **03 35 21.0 +0.6**
comp=Z,57nm,1.1s,mb5.4
TAPN Taplejung 47.39 319 *e*P **P** **03 35 22.4 +1.0**
comp=Z,56nm,0.9s,mb5.5
MAJO Matsushiro 47.62 20 *e*P **P** **03 35 25.0 +2.0**
comp=Z,23nm,1.3s,mb5.1
MAJO Matsushiro 47.62 20 *e*P **P** **03 35 25.0 +2.0**
MAJO pmax pmax
comp=Z,23nm,1.3s,mb5.0
MAT Matsushiro 47.62 20 P **P** **03 35 22.2 -0.8**
RAMN Ramite 47.84 318 *e*P **P** **03 35 25.8 +0.9**
comp=Z,30nm,0.7s,mb5.4
BJI Beijing 48.18 356 P **P** **03 35 25.9 -1.4**
BJI PP PP 03 37 20.0 +0.1
BJI S **S** **03 42 23.5 -0.8**
BJI pmax pmax
comp=Z,15nm,1.2s,mb4.9
BJI pmax pmax
comp=Z,95nm,3.7s
BJI LR LR
comp=N,180nm,18.7s
BJI LR LR
comp=E,160nm,25.6s
BJI LR LR
comp=Z,130nm,25.0s
GUN Gumba 48.96 318 *e*P **P** **03 35 34.3 +0.8**
comp=Z,63nm,0.8s,mb5.7
PKI Pulchoki 49.05 318 *e*P **P** **03 35 34.4 +0.2**
comp=Z,16nm,0.6s,mb5.2
DMN Daman 49.27 318 *e*P **P** **03 35 35.7 -0.2**
comp=Z,43nm,0.9s,mb5.5
KKN Kakani 49.28 318 *e*P **P** **03 35 36.0 0.0**
HHC Hu-ho-hao-te 49.49 351 *e*P **P** **03 35 39.2 +1.9**
HHC pP pP 03 35 50.4 +3.4
HHC sP sP 03 35 56.0 +5.2
HHC PP PP 03 37 31.4 -0.5
HHC S **S** **03 42 43.2 +0.4**
HHC sS sS 03 43 02.6 +3.9
HHC ScS ScS 03 45 22.8 -4.0
HHC pmax pmax
comp=Z,14nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,120nm,4.4s
HHC LR LR
comp=N,170nm,16.7s,MS4.2
HHC LR LR
comp=E,110nm,13.3s,MS4.2
HHC LR LR
comp=Z,180nm,14.5s,MS4.2
GKN Gorkha 49.84 318 *e*P **P** **03 35 39.6 -0.7**
comp=Z,26nm,0.8s,mb5.3
KOLN Koldanda 50.39 317 *e*P **P** **03 35 43.4 -1.0**
comp=Z,24nm,0.7s,mb5.3
GTA Gaotai 51.06 340 ⇑P **P** **03 35 49.5 +0.2**
GTA pP pP 03 35 58.6 -0.3
GTA sP sP 03 36 03.0 +0.3
GTA S **S** **03 43 05.2 +0.5**
GTA SS SS 03 46 38.9 -1.5
GTA pmax pmax
comp=Z,11nm,1.1s,mb4.7
GTA pmax pmax
comp=Z,77nm,5.4s
GTA LR LR
comp=N,160nm,18.3s,MS4.3
GTA LR LR
comp=E,200nm,18.6s,MS4.3
GTA LR LR
comp=Z,170nm,21.6s,MS4.0
CN2 Changchun 52.00 5 *e*P **P** **03 36 02.6 +6.4**
CN2 *ep*P pP 03 36 10.3 +4.4
CN2 PcP PcP 03 37 14.3 +6.1
CN2 *e*S **S** **03 43 24.5 +7.0**
CN2 SS SS 03 47 01.3 +6.2
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CN2 pmax pmax
comp=Z,200nm,9.0s
CN2 LR LR
comp=N,300nm,16.0s,MS4.7
CN2 LR LR
comp=E,500nm,16.0s,MS4.7
CN2 LR LR
comp=Z,400nm,17.0s,MS4.5
MDJ Mudanjiang 53.27 8 P **P** **03 36 06.1 +0.5**
MDJ pP pP 03 36 15.2 -0.1
MDJ sP sP 03 36 19.1 0.0
MDJ S **S** **03 43 36.4 +1.6**
MDJ sS sS 03 43 51.8 +1.0
MDJ pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
MDJ pmax pmax
comp=Z,39nm,4.1s
MDJ LR LR
comp=N,130nm,38.1s
MDJ LR LR
comp=E,92nm,30.8s
MDJ LR LR
comp=Z,150nm,40.8s,MS3.7
RPZ Rata Peaks 56.51 138 *e*P **P** **03 36 29.2 +0.1**
MSVF Nonsavu 56.90 106 *e*P **P** **03 36 32.9 +0.6**
comp=Z,37nm,1.1s,mb5.3
ULN Ulaanbaatar 57.07 349 *e*P **P** **03 36 32.5 -0.4**
comp=Z,29nm,1.1s,mb5.2
ULN Ulaanbaatar 57.07 349 *e*P **P** **03 36 32.5 -0.4**
ULN pmax pmax
comp=Z,29nm,1.1s,mb5.2
SONM Songino Array 57.16 349 P **P** **03 36 33.1 -0.4**
SONM LR LR 04 02 15.5
SONM P'P' 04 06 22.7
SONM ⇑*e* 04 06 34.7
SONM Songino Array 57.16 349 P **P** **03 36 33.1 -0.4**
comp=Z,13nm,1.1s,mb4.9,baz=170,slow=8.0,SNR=44
SONM LR LR 04 02 15.5
comp=Z,192nm,21.9s,MS4.2,baz=175,slow=37
SONM PKPPKP 04 06 22.7
comp=Z,0.8nm,1.1s,baz=355,slow=3.3,SNR=3.6
SONM PKP2bc 04 06 34.7
comp=Z,0.3nm,0.7s,baz=333,slow=3.2,SNR=3.7
KLR Kul'dur 58.10 9 *e*P **P** **03 36 34.8 -5.3**
CASY Casey 58.35 185 *e*P **P** **03 36 41.6 -0.1**
comp=Z,4.7nm,0.7s,mb4.6
WMQ Urumqi 59.63 333 P **P** **03 36 51.4 +0.5**
WMQ pP pP 03 37 01.5 +0.8
WMQ sP sP 03 37 05.4 +0.9
WMQ PcP PcP 03 37 38.2 +0.4
WMQ PP PP 03 39 04.9 +2.0
WMQ ScP ScP 03 41 35.0 -1.6
WMQ *e*S **S** **03 44 57.5 -1.6**
WMQ ScS ScS 03 46 35.3 -3.6
WMQ pmax pmax
comp=Z,21nm,0.9s,mb5.2
WMQ pmax pmax
comp=Z,150nm,4.1s
WMQ LR LR
comp=N,180nm,26.0s,MS4.2
WMQ LR LR
comp=E,180nm,25.8s,MS4.2
WMQ LR LR
comp=Z,130nm,24.6s,MS4.0
ZAK Zakamensk 60.22 348 *e*P **P** **03 36 52.9 -1.9**
ZAK pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
MIR Mirnyy 61.15 192 ⇓*i*P **P** **03 37 01.6 +0.6**
MIR pmax pmax
comp=Z,37nm,1.0s,mb5.5
TLY Talaya 61.37 348 *e*P **P** **03 37 01.1 -1.5**
TLY *e* 03 39 21.9
TLY *e*S **S** **03 45 13.7 -7.4**
TLY *e*SS SS 03 49 16.1 -6.2
TLY *e*SSS 03 52 00.3
TLY pmax pmax
comp=Z,18nm,0.9s,mb5.2
TLY MLR MLR
comp=Z,137nm,23.0s,MS4.0
MOY Mondy 61.93 347 *e*P **P** **03 37 14.2 +7.8**
MOY pmax pmax
comp=Z,31nm,1.4s,mb5.2
KSH Kashi 62.76 323 P **P** **03 37 11.1 -1.1**
KSH *ep*P pP 03 37 21.1 -1.0
KSH *e*sP sP 03 37 25.1 -0.7
KSH *e*PcP PcP 03 37 51.1 +0.5
KSH *e*PP PP 03 39 30.1 -0.5
KSH *e*ScP ScP 03 41 48.4 -2.2
KSH *e*PcS PcS 03 41 52.3 -1.6
KSH *e*S **S** **03 45 32.1 -7.0**
KSH *e*ScS ScS 03 46 56.7 -5.8
KSH pmax pmax
comp=Z,6.0nm,0.5s,mb5.0
KSH pmax pmax
comp=Z,100nm,3.4s
KSH LR LR
comp=N,890nm,16.2s,MS5.1
KSH LR LR
comp=E,190nm,11.5s,MS5.1
KSH LR LR
comp=Z,150nm,4.8s
MK31 Makanchi Array 64.36 332 *e*P **P** **03 37 22.0 -0.7**
MKAR Makanchi Array 64.36 332 P **P** **03 37 21.8 -0.9**
comp=Z,4.2nm,0.6s,mb4.6,baz=145,slow=7.7,SNR=17
KBL Kabul 64.45 314 *e*P **P** **03 37 23.0 -0.4**
comp=Z,15nm,0.9s,mb5.0
KBL Kabul 64.45 314 *e*P **P** **03 37 23.0 -0.5**
KBL pmax pmax
comp=Z,15nm,0.9s,mb5.0
TKM2 Tokmak 2 65.14 325 *e*P **P** **03 37 27.5 -0.3**
comp=Z,5.9nm,1.0s,mb4.6
TKM2 Tokmak 2 65.14 325 *e*P **P** **03 37 27.5 -0.3**
TKM2 pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
AAK Ala-Archa 65.58 324 *e*P **P** **03 37 30.6 0.0**
comp=Z,16nm,0.9s,mb5.0
AAK Ala-Archa 65.58 324 *e*P **P** **03 37 30.7 0.0**
AAK pmax pmax
comp=Z,16nm,0.9s,mb5.0
AML Almayashu 65.73 324 *e*P **P** **03 37 31.3 -0.3**
comp=Z,32nm,0.9s,mb5.3
EKS2 Erkin-Say 66.01 324 *e*P **P** **03 37 33.1 -0.3**
comp=Z,8.1nm,1.1s,mb4.7
EKS2 *ep*P pP 03 37 42.8 -0.6
EKS2 *e*sP sP 03 37 48.3 +1.2
KK31 Karatay Array 68.20 323 *ce*P **P** **03 37 45.9 -1.4**
KK31 pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
ZAA0 Zalesovo Array 68.79 338 *e*P **P** **03 37 49.6 -1.2**
ZALV Zalesovo Beam 68.79 338 P **P** **03 37 49.4 -1.4**
comp=Z,14nm,0.9s,mb4.9,baz=134,slow=4.3,SNR=21
PETK Petropavlovsk- 68.87 23 P **P** **03 37 51.3 0.0**
comp=Z,4.7nm,0.8s,mb4.5,baz=172,slow=3.9,SNR=3.1
PETK LR LR 04 03 59.6
comp=Z,112nm,21.9s,MS4.1,baz=97,slow=32
KURK Kurchatov 68.88 333 *e*P **P** **03 37 49.7 -1.7**
comp=Z,14nm,0.9s,mb4.9
KURK *ep*P pP 03 37 59.6 -1.7
KURK Kurchatov 68.88 333 *c i*P **P** **03 37 49.7 -1.7**
KURK pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KURK MLR MLR
comp=Z,182nm,19.0s,MS4.3
MAW Mawson 70.38 200 *e*P **P** **03 38 01.4 +0.9**
comp=Z,6.2nm,1.1s,mb4.5
MAW Mawson 70.38 200 P **P** **03 38 01.2 +0.7**
comp=Z,20nm,1.0s,mb5.0,baz=99,slow=10,SNR=28
MAW Mawson 70.38 200 *e*P **P** **03 38 01.4 +0.9**
MAW pmax pmax
comp=Z,6.0nm,1.1s
SBA Scott Base 73.54 171 *e*P **P** **03 38 20.8 +1.6**
comp=Z,7.0nm,0.9s,mb4.6
SBA Scott Base 73.54 171 *e*P **P** **03 38 20.8 +1.6**
SBA pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
BVAR Borovoye Array 74.23 331 P **P** **03 38 22.8 -0.8**
comp=Z,3.5nm,0.9s,mb4.3,baz=141,slow=7.6,SNR=13
BRVK Borovoye 74.30 331 *e*P **P** **03 38 23.2 -0.8**
comp=Z,12nm,1.1s,mb4.7
BRVK Borovoye 74.30 331 *e*P **P** **03 38 23.2 -0.8**
BRVK pmax pmax
comp=Z,12nm,1.1s,mb4.7
SEY Seymchan 75.10 15⇑*e*P **P** **03 38 28.1 -0.3**
AB31 Akbulak array 77.67 324 *ce*P **P** **03 38 40.3 -3.0**
AB31 pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
ABKAR Akbulak array 77.67 324 *e*P **P** **03 38 41.6 -1.7**
comp=Z,6.3nm,0.9s,mb4.5
SYO Syowa Base 79.02 201⇓*e*P **P** **03 38 49.0 -1.5**
QSPA South Pole Qui 81.76 180 *e*P **P** **03 39 05.2 +0.2**
comp=Z,37nm,1.3s,mb5.2
ARU Arti 81.82 330 P **P** **03 39 14.1 +8.5**
KMBO Kilima Mbogo 82.94 270 *e*P **P** **03 39 12.2 -0.2**
comp=Z,34nm,2.2s,mb5.0
KMBO Kilima Mbogo 82.94 270 P **P** **03 39 12.8 +0.4**
comp=Z,1.9nm,0.9s,mb4.1,baz=0.0,slow=20,SNR=3.1
KMBO Kilima Mbogo 82.94 270 *e*P **P** **03 39 12.2 -0.3**
KMBO pmax pmax
comp=Z,34nm,2.2s
ZEI Tsey 85.68 314 *e*P **P** **03 39 26.9 +1.2**
ZEI pmax pmax
comp=Z,11nm,0.5s,mb5.3
PPT Papeete 87.69 107 *e*S S 03 50 11.8 -4.8
comp=Z,64nm,26.0s
PPT *e*LR LR 04 07 32.3
comp=Z,69nm,25.0s
NVL N'lazarevskaya 88.26 198 *e*P **P** **03 39 35.4 -2.4**
MAIT Maitri 88.28 198 *e*P **P** **03 39 38.8 +0.9**
LSZ Lusaka 89.86 255 *e*P **P** **03 39 45.5 -0.9**
comp=Z,32nm,1.8s,mb5.3
LSZ Lusaka 89.86 255 *e*P **P** **03 39 45.5 -0.9**
LSZ pmax pmax
comp=Z,32nm,1.8s,mb5.3
MMAI Mount Meron Ar 90.16 303 LR LR 04 25 54.9
comp=Z,137nm,18.5s,MS4.4,baz=125,slow=39
BOSA Boshof 90.48 241 *e*P **P** **03 39 48.9 -0.2**
comp=Z,10.0nm,1.2s,mb5.0
BOSA Boshof 90.48 241 P **P** **03 39 48.6 -0.5**
comp=Z,3.4nm,0.8s,mb4.7,baz=125,slow=20,SNR=7.3
BOSA LR LR 04 13 48.2
comp=Z,141nm,18.9s,MS4.4,baz=235,slow=31
BOSA Boshof 90.48 241 *e*P **P** **03 39 48.9 -0.2**
BOSA pmax pmax
comp=Z,10.0nm,1.2s,mb5.0
LBTB Lobatse 90.77 245 *e*P **P** **03 39 50.4 -0.1**
VSR Storozhevoye 90.83 322 *e*P **P** **03 39 50.3 +0.2**
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,1.0nm,0.3s
VSR pmax pmax
comp=Z,3.0nm,0.3s,mb5.1
BRTR Keskin Array B 92.62 310 P **P** **03 39 58.3 -0.4**
comp=Z,0.5nm,0.9s,mb4.0,baz=87,slow=4.3,SNR=3.2
BRTR LR LR 04 31 16.2
comp=Z,51nm,18.8s,MS4.0,baz=98,slow=42
OBN Obninsk 93.10 325⇓*e*P **P** **03 39 58.6 -1.9**
OBN *e* 03 43 50.2
OBN *e*S SKSac 03 50 25.0 -7.1
OBN *i* PS PS 03 52 17.3 -4.0
OBN pmax pmax
comp=Z,5.0nm,0.5s,mb5.2
VNA1 Neumayer--Stat 94.10 195 *e*P **P** **03 40 03.0 -1.9**
VNA1 *e* pP 03 40 13.0 -2.2
AKASG Malin Array Be 96.97 320 *ce*P **P** **03 40 12.6 -5.7**
TAOE Nuku Hiva Isla 98.10 100 *e*LR LR 04 12 34.9
comp=Z,84nm,26.0s
ILAR Eielson Array 98.60 26 PKKPbc PKKPbc 03 56 54.0 -3.2
comp=Z,0.4nm,0.8s,baz=86,slow=2.8,SNR=4.2
TORD Torodi Ar. Bea 119.57 280 PKP PKPdf 03 45 34.6 -2.9
comp=Z,0.5nm,0.6s,baz=44,slow=2.3,SNR=8.4
DBIC Dimbokro 125.61 272 PKP PKPdf 03 45 47.7 -1.5
comp=Z,5.0nm,1.0s,baz=180,slow=5.1,SNR=3.2
PLCA Paso Flores 130.27 169 SKPbc SKPbc 03 49 16.8 -1.3
comp=Z,12nm,1.3s,baz=137,slow=6.6,SNR=3.8
SCHQ Schefferville 133.18 6 PKP PKPdf 03 46 01.3 -1.1
SCHQ Schefferville 133.18 6 PKP PKPdf 03 46 01.3 -1.1
comp=Z,1.9nm,0.7s,baz=0.0,slow=1.0,SNR=2.9
TXAR Lajitas Array 133.76 57 PKP PKPdf 03 46 04.0 -0.3
comp=Z,0.1nm,0.5s,baz=220,slow=3.5,SNR=2.6
TXAR SKPbc SKPbc 03 49 27.9 -3.1
comp=Z,0.7nm,1.0s,baz=281,slow=1.5,SNR=4.9
LRAL Lakeview Retre 144.71 42 *e*PKPdf PKPdf 03 46 20.0 -4.1
TKL Tuckaleechee C 144.95 35 *e*PKPdf PKPdf 03 46 20.1 -4.3
CAM4 Nova Friburgo 145.26 209 *e*P PKPbc 03 46 25.2 +0.2
CAM4 *i* 03 46 26.5
CAM4 *i* 03 46 29.8
CAM4 *i* 03 46 33.1
CAM4 *i* 03 46 35.8
CAM4 *i* 03 46 39.8
CAM4 *i* 03 46 59.0
ELN Prospectdale 145.40 30 *e*PKPdf PKPdf 03 46 22.7 -2.4
LPAZ La Paz 154.25 161 *e*PKPdf PKPdf 03 46 39.6 -0.1
LPAZ PKPbc PKPbc 03 46 48.0 +0.2
LPAZ *e* 03 46 48.5
LPAZ PKPab PKPab 03 47 02.8 +1.2
LPAZ La Paz 154.25 161 PKPbc PKPbc 03 46 48.0 +0.2
comp=Z,0.7nm,0.7s,baz=154,slow=4.1,SNR=3.8
LPAZ PKPab PKPab 03 47 02.8 +1.2
comp=Z,14nm,1.0s,baz=190,slow=3.4,SNR=17
LPAZ La Paz 154.25 161 *e*PKIKP PKPdf 03 46 39.6 -0.1
LPAZ 03 46 48.1
LPAZ *e* 03 46 48.5

ISC 04 04:17:50.1±0.7, 41°.26N±0°.08×43°.60E±0°.06, h10km, n8, σ0.91/12, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DIGO	**Kars**	**0.86**	**191**	*i* P	**Pg**	**04 18 06.0**	**-0.7**
TBLG	**Delisi**	**0.98**	**61**	P	**Pg**	**04 18 08.9**	**-0.1**
TBLG				S	**Sg**	**04 18 21.9**	**+0.3**
MTA	**Mtatsminda**	**1.00**	**64**	P	**Pg**	**04 18 08.0**	**-1.3**
MTA				S	**Sg**	**04 18 22.1**	**-0.1**
ARTV	**Artvin**	**1.26**	**267**	*i* P	**Pn**	**04 18 13.2**	**-0.6**
DAGI	**Agillar**	**1.28**	**262**	*i* P	**Pn**	**04 18 15.1**	**+1.0**
ONI	**Oni**	**1.33**	**355**	P	**Pn**	**04 18 14.4**	**-0.4**
ONI				S	**Sb**	**04 18 41.5**	**+9.2**
DGRG	**David-gareji**	**1.35**	**81**	P	**Pn**	**04 18 14.1**	**-0.9**
DGRG				S	**Sb**	**04 18 34.8**	**+1.9**
DDEM	**Demirkent**	**1.44**	**256**	*i* P	**Pn**	**04 18 17.4**	**+1.1**

IDC 04 04:18:13.8±3.0, 5.70S×152.06E, h0km, mb4.1/2, mb1 4.4/2, mb1mx3.7/14, mbtmp4.1/2, Error ellipse: s-maj=252.9km s-min=33.1km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**25.00**	**223**	P	P	04 23 39.4	0.0
	4.2nm,0.8s,baz=56,slow=9.5,SNR=37						
ILAR	**Eielson Array**	**83.26**	**22**	P	P	04 30 42.0	+0.1
	0.9nm,0.7s,baz=247,slow=5.3,SNR=14						
TORD	**Torodi Ar. Bea**	**149.87**	**286**	PKPbc	PKPbc	04 38 06.7	-0.3
	0.5nm,0.7s,baz=79,slow=1.9,SNR=5.4						

*ISCJB **04** 04:28:23.1±0.5, 31°.12S±0°.04×68°.64W±0°.06, h109km±6km, mb3.7/3, Error ellipse: s-maj=8.9km s-min=6.1km az=9.8*
*NEIC **04** 04:28:23.2, 31.04S×69°.11W, h151km, MD3.9(GUC), After GUC.*
*IDC **04** 04:28:23.8±0.8, 31°.27S×68°.61W, h106km±6km, mb3.6/3, mb1 3.8/6, mb1mx3.7/15, mbtmp3.6/6, Error ellipse: s-maj=31.3km s-min=19.5km az=67.0*
*GUC **04** 04:28:23.2±0.7, 31°.04S×69°.11W, h151km±21km, MD3.9, ML4.0*
ISC 04 04:28:24.0±0.5, 31°.11S±0°.04×68°.64W±0°.06, h102km±6km,

n28,σ1⁰15/44, mb3.7/3, 3C-3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.60**	**145**	P	**Pn**	**04 28 41.0**	**+0.2**
CFAA				S	**Sn**	**04 28 53.9**	**+0.5**
CFAA	**Coronel Fontan**	**0.60**	**145**	P	**Pn**	**04 28 41.0**	**+0.2**
	45nm,0.3s,baz=319,slow=6.4,SNR=5380						
CFAA				S	**Sn**	**04 28 53.9**	**+0.5**
	78nm,0.3s,baz=343,slow=20,SNR=154						
TLL	**Tololo Astrono**	**2.09**	**296**	*i* P	**Pn**	**04 28 58.8**	**+0.9**
TLL				*i* S	**Sn**	**04 29 23.5**	**-0.2**
TLL	**Tololo Astrono**	**2.09**	**296**	*i* P	**Pn**	**04 28 58.8**	**+0.9**
TLL				*i* S	**Sn**	**04 29 23.5**	**-0.2**
TLL				AML	AML	04 29 27.6	
	comp=N,1μm,0.4s						
CHNG	**Los Chungos**	**2.56**	**252**	*i* P	**Pn**	**04 29 01.4**	**-2.6**
CHNG				*i* S	**Sn**	**04 29 29.8**	**-5.0**
FCH	**Farellones**	**2.62**	**212**	⇓*i* P	**Pn**	**04 29 06.4**	**+1.7**
FCH				*i* S	**Sn**	**04 29 38.4**	**+2.3**
FCH				AML	AML	04 29 41.2	
	comp=E,430nm,0.3s						
ROCH	**El Roble**	**2.74**	**227**	⇑*i* P	**Pn**	**04 29 05.7**	**-0.7**
ROCH				*i* S	**Sn**	**04 29 37.9**	**-1.1**
LCO	**Las Campanas**	**2.75**	**319**	*e*Pn	**Pn**	**04 29 07.2**	**+0.7**
LCO				*e*S	**Sn**	**04 29 36.4**	**-2.9**
CLCH	**Cerro Calan**	**2.79**	**215**	*i* P	**Pn**	**04 29 06.8**	**-0.3**
CLCH				*i* S	**Sn**	**04 29 40.2**	**+0.1**
CLCH				AML	AML	04 29 42.6	
	comp=E,754nm,0.6s						
SJCH	**San Jose de Ma**	**2.91**	**209**	⇑*i* P	**Pn**	**04 29 09.3**	**+0.7**
SJCH				*i* S	**Sn**	**04 29 44.1**	**+1.1**
SJCH	**San Jose de Ma**	**2.91**	**209**	⇑*i* P	**Pn**	**04 29 09.3**	**+0.7**
SJCH				*i* S	**Sn**	**04 29 44.1**	**+1.1**
SJCH				AML	AML	04 29 50.7	
	comp=N,174nm,0.7s						
ANTU	**Antumapu**	**2.98**	**214**	*i* P	**Pn**	**04 29 09.2**	**-0.3**
ANTU				*i* S	**Sn**	**04 29 44.1**	**-0.5**
ANTU	**Antumapu**	**2.98**	**214**	*i* P	**Pn**	**04 29 09.2**	**-0.3**
ANTU				*i* S	**Sn**	**04 29 44.1**	**-0.5**
ANTU				AML	AML	04 29 47.8	
	comp=E,481nm,0.3s						
LMEL	**Las Melosas**	**3.04**	**205**	*i* P	**Pn**	**04 29 10.6**	**+0.3**
LMEL				*i* S	**Sn**	**04 29 47.1**	**+1.2**
LMEL	**Las Melosas**	**3.04**	**205**	*i* P	**Pn**	**04 29 10.6**	**+0.3**
LMEL				*i* S	**Sn**	**04 29 47.1**	**+1.2**
LMEL				AML	AML	04 29 53.2	
	comp=N,261nm,0.5s						
CHCH	**Chadas Angostu**	**3.29**	**211**	⇓*i* P	**Pn**	**04 29 13.0**	**-0.7**
CHCH				*i* S	**Sn**	**04 29 51.3**	**-0.7**
CHCH	**Chadas Angostu**	**3.29**	**211**	⇓*i* P	**Pn**	**04 29 13.0**	**-0.7**
CHCH				*i* S	**Sn**	**04 29 51.3**	**-0.7**
TRQA	**Tornquist**	**8.84**	**143**	*e*Pn	**Pn**	**04 30 26.9**	**-1.9**
	comp=N,27nm,0.4s						
TRQA				*e*S	**Sn**	**04 32 02.7**	**-3.9**
PLCA	**Paso Flores**	**9.73**	**189**	P	**Pn**	**04 30 38.3**	**-2.6**
	comp=N,0.4nm,0.3s,baz=344,slow=14,SNR=5.4						
LPAZ	**La Paz**	**14.76**	**2**	*e*Pn	**Pn**	**04 31 49.7**	**+2.1**
LPAZ	**La Paz**	**14.76**	**2**	P	**Pn**	**04 31 48.4**	**+0.8**
	comp=N,0.3nm,0.3s,baz=177,slow=9.6,SNR=21						
SIV	**San Ignacio**	**16.56**	**26**	P	**Pn**	**04 32 09.9**	**-0.2**
	comp=N,0.5nm,0.3s,baz=207,slow=8.0,SNR=21						
TXAR	**Lajitas Array**	**68.73**	**327**	P	**P**	**04 39 17.0**	**+0.2**
	comp=N,0.6nm,0.6s,mb3.6,baz=152,slow=7.7,SNR=12						
TORD	**Torodi Ar. Bea**	**80.50**	**68**	P	**P**	**04 40 25.0**	**-0.1**
TORD				pP	pP	04 40 53.1	+1.6
TORD	**Torodi Ar. Bea**	**80.50**	**68**	P	**P**	**04 40 25.0**	**-0.1**
	comp=N,2.2nm,0.7s,mb4.1,baz=243,slow=6.3,SNR=25						
TORD				pP	pP	04 40 53.1	+1.6
	comp=N,0.6nm,0.6s,baz=285,slow=5.9,SNR=2.6						
NVAR	**Mina Array Bea**	**83.23**	**323**	P	**P**	**04 40 39.8**	**+0.9**
	comp=N,0.5nm,0.6s,mb3.5,baz=161,slow=6.3,SNR=3.1						
ZALV	**Zalesovo Beam**	**150.25**	**32**	PKPbc	PKPbc	04 48 02.3	-0.3
	comp=N,2.6nm,0.4s,baz=311,slow=3.1,SNR=9.6						
ZALV				pPKPbc	pPKPbc	04 48 30.9	+0.3
	comp=N,1.5nm,0.5s,baz=325,slow=3.0,SNR=2.6						
MKAR	**Makanchi Array**	**152.70**	**47**	PKPbc	PKPbc	04 48 07.8	-0.6
	comp=N,0.8nm,0.6s,baz=280,slow=2.1,SNR=6.7						
MKAR				PKPab	PKPab	04 48 18.9	-0.7
	comp=N,0.9nm,0.9s,baz=280,slow=3.5,SNR=4.8						
MKAR				pPKPbc	pPKPbc	04 48 36.8	+0.4
	comp=N,0.4nm,0.6s,baz=275,slow=2.6,SNR=2.9						

*ISK **04** 04:36:00.6, 40.˚39N×37.˚38E, h5km, MD3.3*
*ISCJB **04** 04:36:01.2±0.6, 40.˚38N±0.˚03×37.˚37E±0.˚03, h5km±5km, Error ellipse: s-maj=5.1km s-min=3.4km az=21.1*
*CSEM **04** 04:36:01.2±0.2, 40.˚42N×37.˚41E, h2km, MD3.3, Error ellipse: s-maj=4.7km s-min=2.8km az=10.0*
*DDA **04** 04:36:01.2, 40.˚38N×37.˚40E, h14km±2km, Md3.6*
ISC 04 04:36:01.8±0.6, 40.˚41N±0.˚03×37.˚39E±0.˚03, h7km±5km, n45,σ0⁰83/68, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERBA	**Erbaa**	**0.56**	**300**	*i* P	**Pg**	**04 36 12.9**	**+0.4**
ERBA				*i* S	**Sg**	**04 36 20.8**	**+1.1**
ERBA	**Erbaa**	**0.56**	**300**	*i* P	**Pg**	**04 36 12.9**	**+0.4**
ERBA				*i* S	**Sg**	**04 36 20.8**	**+1.1**
SVSK	**Karacayir**	**0.57**	**212**	*e*PG	**Pg**	**04 36 11.9**	**-0.9**
SVSK				*e*SG	**Sg**	**04 36 19.6**	**-0.6**
SVSK	**Karacayir**	**0.57**	**212**	*e*Pg	**Pg**	**04 36 11.9**	**-0.9**
SVSK				*e*Sg	**Sg**	**04 36 19.6**	**-0.6**
SCER	**sogukcermik**	**0.58**	**200**	*i* P	**Pg**	**04 36 11.9**	**-1.0**
SCER				*i* S	**Sg**	**04 36 20.6**	**+0.1**
SCER	**sogukcermik**	**0.58**	**200**	*i* P	**Pg**	**04 36 11.9**	**-1.0**
SCER				*i* S	**Sg**	**04 36 20.6**	**+0.1**
TOKT	**Tokat**	**0.65**	**263**	*e*PG	**Pg**	**04 36 13.6**	**-0.7**
TOKT				*e*SG	**Sg**	**04 36 23.2**	**+0.5**
TOKT	**Tokat**	**0.65**	**263**	*e*Pg	**Pg**	**04 36 13.6**	**-0.7**
TOKT				*e*Sg	**Sg**	**04 36 23.3**	**+0.6**
SUSE	**Susehri**	**0.65**	**107**	*i* P	**Pg**	**04 36 13.1**	**-1.3**
SUSE				*i* S	**Sg**	**04 36 23.8**	**+0.9**
SUSE	**Susehri**	**0.65**	**107**	*i* P	**Pg**	**04 36 13.1**	**-1.3**
SUSE				*i* S	**Sg**	**04 36 23.8**	**+0.9**
TOKA	**Tokat**	**0.70**	**264**	*i* P	**Pg**	**04 36 14.8**	**-0.4**
TOKA				*i* S	**Sg**	**04 36 25.5**	**+1.2**
TOKA	**Tokat**	**0.70**	**264**	*i* P	**Pg**	**04 36 14.8**	**-0.4**
TOKA				*i* S	**Sg**	**04 36 25.5**	**+1.2**
KVT	**Kavak**	**1.22**	**304**	*e*PN	**Pn**	**04 36 24.3**	**-0.9**
KVT				*e*SN	**Sn**	**04 36 41.8**	**-0.2**
KVT	**Kavak**	**1.22**	**304**	*e*Pn	**Pn**	**04 36 24.3**	**-0.9**
KVT				*e*Sn	**Sn**	**04 36 41.8**	**-0.2**
KEMA	**Kemaliye**	**1.42**	**143**	*i* P	**Pn**	**04 36 27.6**	**-0.3**
KEMA				*i* S	**Sb**	**04 36 48.6**	**+1.9**
KEMA	**Kemaliye**	**1.42**	**143**	*i* P	**Pn**	**04 36 27.6**	**-0.3**
KEMA				*i* S	**Sb**	**04 36 48.7**	**+1.9**
KELT	**Kelkit**	**1.45**	**100**	*i* P	**Pn**	**04 36 27.9**	**-0.5**
KELT				*i* S	**Sn**	**04 36 47.3**	**-0.4**
KELT	**Kelkit**	**1.45**	**100**	*i* P	**Pn**	**04 36 27.9**	**-0.5**
KELT				*i* S	**Sn**	**04 36 47.3**	**-0.3**
DARE	**Darende-Malaty**	**1.49**	**167**	*e*PN	**Pn**	**04 36 33.4**	**+4.6**
GUMT	**Gumushane**	**1.60**	**87**	*e*PN	**Pn**	**04 36 30.3**	**-0.1**
GUMT	**Gumushane**	**1.60**	**87**	*e*Pn	**Pn**	**04 36 30.3**	**-0.1**
YOZ	**Yozgat**	**1.76**	**245**	*e*PN	**Pn**	**04 36 33.4**	**+0.8**
YOZ	**Yozgat**	**1.76**	**245**	*e*Pn	**Pn**	**04 36 33.4**	**+0.8**
SARI	**SarD1z-Kayseri**	**1.81**	**197**	*e*PN	**Pg**	**04 36 37.7**	**+1.4**
PINB	**Pinarbasi**	**1.89**	**204**	*i* P	**Pb**	**04 36 35.9**	**-0.6**
PINB				*i* S	**Sg**	**04 37 02.6**	**+0.2**
PINB	**Pinarbasi**	**1.89**	**204**	*i* P	**Pb**	**04 36 35.9**	**-0.6**
PINB				*i* S	**Sg**	**04 37 02.6**	**+0.2**
KTUT	**Trabzon**	**1.90**	**71**	*e*PN	**Pn**	**04 36 34.6**	**0.0**
KTUT	**Trabzon**	**1.90**	**71**	*e*Pn	**Pn**	**04 36 34.6**	**0.0**
CORM	**Corum**	**2.12**	**265**	*e*PN	**Pn**	**04 36 37.7**	**+0.2**
CORM	**Corum**	**2.12**	**265**	*e*Pn	**Pn**	**04 36 37.7**	**+0.1**
AKCD	**Akcadag**	**2.15**	**169**	*e*P	**Pb**	**04 36 39.4**	**-1.6**
AKCD				*i* S	**Sg**	**04 37 11.7**	**+0.9**
AKCD	**Akcadag**	**2.15**	**169**	*e*P	**Pb**	**04 36 39.3**	**-1.6**
PTK	**Pertek**	**2.16**	**134**	*e*PN	**Pn**	**04 36 38.4**	**+0.2**
PTK	**Pertek**	**2.16**	**134**	*e*Pn	**Pn**	**04 36 38.4**	**+0.2**
MYA	**Malataya**	**2.23**	**158**	*e*PN	**Pn**	**04 36 39.1**	**0.0**
MYA	**Malataya**	**2.23**	**158**	*e*Pn	**Pn**	**04 36 39.1**	**+0.1**
CDAG	**Cicekdag**	**2.44**	**252**	*i* P	**Pn**	**04 36 43.1**	**+1.1**
CDAG				*i* S	**Sg**	**04 37 19.6**	**-0.7**
CDAG	**Cicekdag**	**2.44**	**252**	*i* P	**Pn**	**04 36 43.1**	**+1.1**
SVRC	**Sivrice-ELAZID**	**2.51**	**143**	*e*PN	**Pn**	**04 36 43.2**	**+0.2**
SVRC	**Sivrice-ELAZID**	**2.51**	**143**	*e*Pn	**Pn**	**04 36 43.2**	**+0.2**
AVNT	**Avonos**	**2.54**	**231**	*i* P	**Pb**	**04 36 45.7**	**-2.0**
AVNT				*i* S	**Sg**	**04 37 23.2**	**-0.2**
AVNT	**Avonos**	**2.54**	**231**	*i* P	**Pb**	**04 36 45.7**	**-2.0**
TOS	**Tosya**	**2.63**	**285**	*e*PN	**Pn**	**04 36 44.9**	**+0.3**
TOS	**Tosya**	**2.63**	**285**	*e*Pn	**Pn**	**04 36 44.9**	**+0.3**
KOZT	**Kozan**	**3.16**	**203**	*e*PN	**Pn**	**04 36 52.7**	**+0.8**

*BGS **04** 04:42:10.9±1.4, 49.˚79N×155.˚33E, h40km, mb5.7*
*BJI **04** 04:42:11.6, 49.˚84N×156.˚29E, h69km, mB5.6/42, mb5.6/66, Ms5.2/71, Ms7 5.1/64*
*IDC **04** 04:42:12.1±1.8, 49.˚98N×156.˚32E, h50km±14km, mb5.1/31, mb1 5.2/31, mb1mx5.2/32, mbtmp5.1/31, MS4.7/18, Ms1 4.7/18, ms1mx4.5/24, Error ellipse: s-maj=14.2km s-min=9.4km az=155.0*
*SZGRF **04** 04:42:12.8, 50.˚23N×156.˚31E, h33km, mb6.0, MS5.0, Kuril Islands, Russia*
*KRSC **04** 04:42:13.1±1.2, 49.˚92N×157.˚26E, h5km±5km, ML6.0*
*ISCJB **04** 04:42:13.5±0.1, 49.˚80N±0.˚02×156.˚46E±0.˚02, h82km, mb5.5/463, Error ellipse: s-maj=2.6km s-min=1.4km az=169.9*
*DJA **04** 04:42:14, 50.˚17N×157.˚62E, h118km, mb5.4/20*
*NEIC **04** 04:42:14.8±0.5, 49.˚85N×156.˚38E, h77km±4km, mb5.6/295, MW5.8, MW5.7, Error ellipse: s-maj=3.7km s-min=2.0km az=171.0, Moment Tensor Solution. s147 Moment tensor: Scale 10¹⁷Nm; Mrr=0.88; Mθθ 0.54; Mφφ 0.34; Mrθ 0.78; Mθφ -0.43; Mφr 4.32; Best double couple: M₀4.50000×10¹⁷ NP1:φs189.00000°, δ86.00000°, λ-85.00000°. NP2:φs314.00000°, δ6.00000°, λ-145.00000°. Principal axes: T 4.1000, Plg41.0000°, Azm273.0000°; N 0.6800, Plg5.0000°, Azm8.0000°; P -4.7800, Plg48.0000°, Azm104.0000°;'*
*MOS **04** 04:42:16.0±1.0, 50.˚10N×156.˚27E, h102km, mb5.7/147, MS4.9/51 Error ellipse: s-maj=7.9km s-min=5.4km az=75.0*
MOS Felt (V) at Severo-Kuril'sk; (III-IV) at Petropavlovsk-Kamchatskiy.
*GCMT **04** 04:42:18.3±0.1, 49.˚77N×156.˚70E, h90km±1km, MW5.7, Moment Tensor Solution. s102,c218; s52,c57; Moment tensor: Scale 10¹⁷Nm; Mrr=0.54±.06; Mθθ -0.16±.06; Mφφ 0.69±.06; Mrθ 0.71±.04; Mθφ -0.56±.06; Mφr 4.86±.04; Best double couple: M₀5.00000×10¹⁷ NP1:φs300.00000°, δ8.00000°, λ-158.00000°. NP2:φs188.00000°, δ87.00000°, λ-82.00000°. Principal axes: T 4.9800, Plg41.0000°, Azm271.0000°; N 0.0100, Plg8.0000°, Azm7.0000°; P -4.9900, Plg48.0000°, Azm106.0000°; Data Used: Il IU IC G CN. Surface waves: sta=108, comp=236, per= 50.*
ISC 04 04:42:15.7±0.1, 49.˚86N±0.˚02×156.˚36E±0.˚02, h84km±2.2km; pP-P, n1739, σ0⁰84/1760, mb5.5/463, 311C-227D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.83**	**349**	⇓*i* PN	**Pn**	**04 42 34.4**	**+1.4**
SKR				*e*S	**Sn**	**04 42 47.0**	**+1.0**
SKR				pmax	pmax		
	comp=N,3μm,0.5s						
SKR				pmax	pmax		
	comp=E,3μm,0.5s						
SKR				pmax	pmax		
	comp=Z,7μm,0.5s						
SKR				smax			
	comp=N,317μm,2.0s						
SKR				smax			
	comp=E,778μm,2.0s						
ALID	**Alaid**	**1.13**	**333**	*e*P	**Pn**	**04 42 38.2**	**+1.7**
MIPR	**Malaya Ipel'ka**	**2.43**	**6**	*e*P	**Pn**	**04 42 54.2**	**+0.9**
GRL	**Gorelyy**	**2.90**	**21**	*e*P	**Pn**	**04 42 59.9**	**+0.3**
GRL				*i* S	**Sn**	**04 43 33.6**	**+0.1**
PETK	**Petropavlovsk-**	**3.35**	**14**	P	**Pn**	**04 43 06.7**	**+0.9**
	comp=E,219nm,0.3s,baz=183,slow=12,SNR=651						
PETK				LR	LR	04 44 30.1	
	comp=E,4μm,18.6s,baz=93,slow=42						
PET	**Petropavlovsk**	**3.47**	**23**	*e*Pn	**Pn**	**04 43 06.8**	**-0.5**
PET				*e*Sn	**Sn**	**04 43 48.3**	**+0.9**
PET	**Petropavlovsk**	**3.47**	**23**	*e*P	**Pn**	**04 43 07.0**	**-0.4**
PET				*i* S	**Sn**	**04 43 46.7**	**-0.7**
PET	**Petropavlovsk**	**3.47**	**23**	⇑*i* PN	**Pn**	**04 43 06.9**	**-0.5**
PET				*i* S	**Sn**	**04 43 47.4**	**0.0**
PET				pmax	pmax		
	comp=Z,3μm,1.5s						
PET				pmax	pmax		
	comp=Z,2μm,10.7s						
PET				pmax	pmax		
	comp=Z,2μm,0.6s						
PET				smax			
	comp=E,25μm,1.9s						
PET				smax			
	comp=N,18μm,0.5s						
PET				smax			
	comp=E,14μm,0.5s						
PET				MLR	MLR		
	comp=Z,12μm,10.0s						
PET				MLR	MLR		
	comp=Z,18μm,8.0s						
INSR	**Institute**	**3.50**	**23**	*e*P	**Pn**	**04 43 06.9**	**-0.8**
INSR				*i* S	**Sn**	**04 43 46.6**	**-1.4**
AVH	**Avacha**	**3.71**	**23**	*e*P	**Pn**	**04 43 11.4**	**+0.8**
NLC	**Nalytchevo**	**3.80**	**28**	*e*P	**Pn**	**04 43 09.7**	**-2.1**
NLC				*i* S	**Sn**	**04 43 51.4**	**-3.9**
GNL	**Ganaly**	**3.96**	**14**	*e*P	**Pn**	**04 43 15.3**	**+1.3**
SPN	**Mys Shipunski**	**3.96**	**34**	*e*P	**Pn**	**04 43 12.5**	**-1.5**
SPN				*i* S	**Sn**	**04 43 56.3**	**-3.0**
KII	**Karymskiy**	**4.59**	**23**	*e*P	**Pn**	**04 43 23.4**	**+0.8**
MKZ	**Mys Kozlova**	**5.74**	**33**	*e*P	**Pn**	**04 43 35.5**	**-2.7**
MKZ				*i* S	**Sn**	**04 44 37.2**	**-5.4**
KMNR	**Kamenistaya**	**6.35**	**20**	*e*P	**Pn**	**04 43 47.7**	**+1.2**
KPT	**Kopyto**	**6.54**	**19**	*e*P	**Pn**	**04 43 49.1**	**0.0**
KOZ	**Kozyrevsk**	**6.56**	**18**	*e*P	**Pn**	**04 43 49.3**	**0.0**
KOZR	**Kozyr**	**6.57**	**18**	PN	**Pn**	**04 43 49.3**	**-0.2**
BZMR	**Bezymyannaya**	**6.57**	**21**	*e*P	**Pn**	**04 43 49.8**	**+0.3**
ZLN	**Zelenaya**	**6.72**	**22**	*e*P	**Pn**	**04 43 52.8**	**+1.3**
SRDR	**Sredinnyy**	**6.77**	**16**	*e*P	**Pn**	**04 43 52.5**	**+0.3**
CIRR	**Tsirk**	**6.80**	**21**	*e*P	**Pn**	**04 43 53.6**	**+1.0**
KRSR	**Krestovskiy**	**6.85**	**20**	*e*P	**Pn**	**04 43 53.3**	**0.0**
KLY	**Klyuchi**	**6.96**	**20**	*e*P	**Pn**	**04 43 55.4**	**+0.7**
BDR	**Baidarnaya**	**7.32**	**22**	*e*P	**Pn**	**04 43 59.9**	**+0.3**
KUR	**Kuril'sk**	**7.38**	**234**	*e*PN	**Pn**	**04 43 59.0**	**-1.6**
KUR				pmax	pmax		
	comp=Z,1μm,0.7s						
SRKR	**Sorokina**	**7.39**	**21**	*e*P	**Pn**	**04 44 00.9**	**+0.3**
SMKR	**Semkarok**	**7.39**	**22**	*e*P	**Pn**	**04 44 01.7**	**+1.0**
KBTR	**Krutoberegovo**	**7.45**	**29**	*e*P	**Pn**	**04 43 59.7**	**-1.7**
KBTR				*i* S	**Sn**	**04 45 19.5**	**-4.8**
BKI	**Bering**	**7.93**	**44**	*e*P	**Pn**	**04 44 05.1**	**-2.9**
YUK	**Yuzh-Kuril'sk**	**9.25**	**235**	*c* iPN	**Pn**	**04 44 23.6**	**-2.4**
YUK				pmax	pmax		
	comp=Z,1μm,0.5s						
YUK				pmax	pmax		
	comp=N,263nm,0.3s						
YUK				pmax	pmax		
	comp=E,420nm,0.3s						
YUK				MLR	MLR		
	comp=N,4μm,20.0s						
YUK				MLR	MLR		
	comp=E,9μm,20.0s						
YUK				MLR	MLR		
	comp=Z,12μm,20.0s						
UGL	**Uglegorsk**	**9.35**	**271**	*c* iPN	**Pn**	**04 44 30.5**	**+3.2**
UGL				pmax	pmax		
	comp=Z,656nm,0.9s						
UGL				pmax	pmax		
	comp=E,6μm,4.0s						
YSS	**Yuzh-Sakhalins**	**9.51**	**257**	*e*Pn	**Pn**	**04 44 31.1**	**+1.5**
YSS				*e*S	**Sn**	**04 44 18.1**	**+3.5**
YSS	**Yuzh-Sakhalins**	**9.51**	**257**	⇑*i* PN	**Pn**	**04 44 32.0**	**+2.4**
YSS				*e*S	**Sn**	**04 44 19.0**	**+4.4**
YSS				pmax	pmax		
	comp=Z,350nm,1.1s						
YSS				pmax	pmax		
	comp=Z,3μm,7.0s						
YSS				smax			
	comp=Z,320nm,0.8s						
YSS				MLR	MLR		
	comp=Z,3μm,15.0s						
YSS				MLR	MLR		
	comp=N,2μm,11.0s						
YSS				MLR	MLR		
	comp=E,3μm,14.0s						
ASAJ	**Asahikawa**	**11.01**	**244**	P	**Pn**	**04 44 50.5**	**+0.4**
SMY	**Shemya**	**11.47**	**69**	*e*P	**Pn**	**04 44 53.0**	**-3.2**
	comp=E,363nm,0.6s						
SMY	**Shemya**	**11.47**	**69**	*e*PN	**Pn**	**04 44 53.0**	**-3.2**
SMY				pmax	pmax		
	comp=Z,363nm,0.6s						
ERM	**Erimo**	**12.07**	**234**	*e*Pn	**Pn**	**04 45 01.2**	**-3.4**
ERM				*e*Sn	**Sn**	**04 47 03.5**	**-14**
SEY	**Seymchan**	**13.28**	**352**	⇓*e*P	**Pn**	**04 45 22.6**	**+2.2**
SEY	**Seymchan**	**13.28**	**352**	⇓*e*PN	**Pn**	**04 45 22.5**	**+2.1**
HABR	**Khabarovsk**	**14.01**	**272**	*c i*P	**Pn**	**04 45 31.5**	**+1.4**
HABR				S	**Sn**	**04 48 04.7**	**+0.7**
HABR				pmax	pmax		
	comp=Z,964nm,1.4s						
HABR				pmax	pmax		
	comp=E,819nm,1.5s						
HABR				pmax	pmax		
	comp=N,213nm,1.5s						
HABR				MLR	MLR		
	comp=Z,9μm,17.0s						
AMKA	**Amchitka**	**14.63**	**75**	*e*Pn	**Pn**	**04 45 38.9**	**+0.8**
KLR	**Kul'dur**	**15.97**	**277**	*e*P	**Pn**	**04 45 52.7**	**-2.4**
KLR				pmax	pmax		
	comp=E,1μm,1.6s						
KLR				pmax	pmax		
	comp=Z,600nm,1.6s						
KLR				pmax	pmax		
	comp=E,4μm,11.0s						
KLR				pmax	pmax		
	comp=Z,8μm,11.0s						
KLR				MLR	MLR		
	comp=N,4μm,12.5s						
KLR				MLR	MLR		
	comp=Z,19μm,12.5s						
VLA	**Vladivostok**	**18.10**	**257**	*i* P	**Pn**	**04 46 19.9**	**-1.4**
VLA				pmax	pmax		
	comp=Z,264nm,1.6s						
VLA				MLR	MLR		
	comp=Z,3μm,19.0s						
ATKA	**Atka Island**	**18.61**	**71**	*e*Pn	**Pn**	**04 46 25.3**	**-2.0**
MAJO	**Matsushiro**	**18.71**	**231**	*e*Pn	**Pn**	**04 46 26.5**	**-2.1**
	comp=E,569nm,0.8s						
MAJO	**Matsushiro**	**18.71**	**231**	*e*P	**Pn**	**04 46 26.5**	**-2.1**
MAJO				pmax	pmax		
	comp=Z,569nm,0.8s						
MAT	**Matsushiro**	**18.71**	**231**	P	**Pn**	**04 46 25.8**	**-2.8**
MAT				S	**S**	**04 49 54.9**	**-0.9**
MDJ	**Mudanjiang**	**18.87**	**264**	P	**Pn**	**04 46 27.0**	**-3.4**
MDJ				pP	pP	04 46 41.3	-4.1
MDJ				sP	sP	04 46 50.5	-5.5
MDJ				S	**S**	**04 49 55.3**	**-3.6**
MDJ				sS	sS	04 50 21.1	-4.7
MDJ				ScP	ScP	04 54 20.9	+1.1
MDJ				PcS	PcS	04 54 28.7	+0.1
MDJ				pmax	pmax		
	comp=Z,25nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,1μm,10.4s						
MDJ				LR	LR		
	comp=N,4μm,32.4s						
MDJ				LR	LR		
	comp=E,5μm,41.7s						
MDJ				LR	LR		
	comp=Z,8μm,37.7s						
MDJ	**Mudanjiang**	**18.87**	**264**	*e*P	**Pn**	**04 46 27.0**	**-3.5**
	comp=Z,361nm,0.8s						
MDJ				*e*		04 46 51.2	
YAK	**Yakutsk**	**19.10**	**320**	*e*P	**Pn**	**04 46 30.6**	**-2.5**
	comp=Z,517nm,0.8s						
YAK				*e*S	**S**	**04 50 05.0**	**+1.8**
YAK	**Yakutsk**	**19.10**	**320**	*c i*P	**Pn**	**04 46 30.7**	**-2.4**
YAK				*e*S	**S**	**04 50 01.1**	**-2.2**
YAK				pmax	pmax		
	comp=Z,1μm,1.3s						
YAK				pmax	pmax		
	comp=N,796nm,1.5s						
YAK				pmax	pmax		
	comp=E,1μm,1.5s						
YAK				smax			
	comp=N,861nm,1.6s						
YAK				smax			
	comp=E,592nm,1.4s						
CLNS	**Chul'man**	**19.91**	**303**	*e*P	**Pn**	**04 46 41.2**	**-1.3**
CLNS				pmax	pmax		
	comp=Z,506nm,1.5s						
CLNS				pmax	pmax		
	comp=E,391nm,1.5s						
CLNS				pmax	pmax		
	comp=N,408nm,1.4s						
CLNS				MLR	MLR		
	comp=E,2μm,14.0s						
CLNS				MLR	MLR		
	comp=Z,2μm,14.0s						
CLNS				MLR	MLR		
	comp=N,2μm,15.0s						
JHJ2	**Mitsune**	**20.75**	**222**	P	**P**	**04 46 49.6**	**+0.2**
JHJ	**Hachijo jima 2**	**20.76**	**223**	P	**P**	**04 46 49.4**	**-0.1**
	comp=N,880nm,0.9s,baz=141,slow=4.6,SNR=34						
JHJ				S	**S**	**04 50 30.8**	**-5.7**
	comp=N,33nm,0.3s,baz=43,slow=18,SNR=3.2						
NIKO	**Nikolski**	**21.78**	**68**	P	**P**	**04 47 00.6**	**+0.3**
	comp=N,34nm,0.7s,mb4.8						
CN2	**Changchun**	**21.90**	**266**	⇓P	**P**	**04 46 58.3**	**-3.4**
CN2				*e*S	**S**	**04 50 48.2**	**-10**
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,3μm,20.0s						
CN2				LR	LR		
	comp=E,4μm,20.0s						
CN2				LR	LR		
	comp=Z,3μm,20.0s						
UNV	**Unalaska Valle**	**23.10**	**66**	*e*P	**P**	**04 47 12.7**	**-1.3**
	comp=Z,150nm,1.1s,mb5.2						
AKUT	**Akutan**	**23.50**	**65**	*e*P	**

TTA Tatalina 28.66 45 *e*P P **04 48 04.2 +0.2**
SVW2 Sparrevohn 28.78 49 *e*P P **04 48 05.2 +0.2**
comp=Z,240nm,2.3s,mb5.4
BJI Beijing 29.77 266 P P **04 48 13.0 -1.0**
BJI S **S** **04 53 03.2 -0.9**
BJI pmax pmax
comp=Z,67nm,1.3s,mb5.1
BJI pmax pmax
comp=Z,780nm,5.9s
BJI LR LR
comp=N,2μm,19.2s
BJI LR LR
comp=E,3μm,21.9s
BJI LR LR
comp=Z,4μm,32.5s
BJT Baijiatuau 29.78 266 *e*P P **04 48 13.0 -1.2**
comp=Z,58nm,0.4s,mb5.6
BJT Baijiatuau 29.78 266 *e*P P **04 48 13.0 -1.2**
BJT pmax pmax
comp=Z,58nm,0.4s
RSO Redoubt South 30.17 50 *e*P P **04 48 18.5 +1.1**
OHAK Old Harbor 30.19 56 *e*P P **04 48 16.3 -1.3**
comp=Z,114nm,1.3s,mb5.3
PPLA Purkeypile 30.41 45 *e*P P **04 48 20.3 +0.8**
comp=Z,392nm,1.6s,mb5.8
KDAK Kodiak Island 30.50 55 *e*P P **04 48 18.6 -1.6**
comp=Z,44nm,0.8s,mb5.1
KDAK Kodiak Island 30.50 55 P P **04 48 18.3 -2.0**
comp=Z,17nm,0.7s,mb4.8,baz=293,slow=5.7,SNR=18
KDAK Kodiak Island 30.50 55 *i* P P **04 48 18.5 -1.8**
BPAW Bear Paw Mtn. 30.98 43 *e*P P **04 48 24.5 0.0**
comp=Z,84nm,0.9s,mb5.5
TRF Thorofare Moun 31.28 44 *e*P P **04 48 26.9 -0.2**
comp=Z,113nm,1.0s,mb5.5
TIA Tai'an 31.38 259 ⇑P P **04 48 27.6 -0.7**
TIA S **S** **04 53 33.0 +3.6**
TIA LR LR
comp=N,2μm,26.5s
TIA LR LR
comp=E,2μm,30.9s
JOW Kunigami 31.52 234 P P **04 48 29.8 +0.2**
COLD Coldfoot 31.54 37 *e*P P **04 48 29.6 +0.2**
comp=E,57nm,0.9s,mb5.3
RC01 Rabbit Creek A 31.61 49 *e*P P **04 48 29.2 -0.9**
comp=E,119nm,1.3s,mb5.5
RC01 *e*PcP PcP 04 51 19.7 -0.5
SEW Seward 31.84 50 *e*P P **04 48 31.2 -0.9**
comp=E,85nm,1.0s,mb5.4
PMR Palmer 31.87 48 *e*P P **04 48 30.8 -1.5**
comp=E,68nm,1.4s,mb5.2
PMR Palmer 31.87 48 *e*P P **04 48 30.8 -1.5**
PMR pmax pmax
comp=Z,68nm,1.4s,mb5.2
MCK McKinley 31.88 43 *e*P P **04 48 32.1 -0.3**
comp=Z,145nm,1.0s,mb5.7
MCK McKinley 31.88 43 *e*P P **04 48 32.1 -0.3**
MCK pmax pmax
comp=Z,145nm,1.0s,mb5.7
ULN Ulaanbaatar 32.03 286 *e*P P **04 48 33.2 -0.7**
comp=Z,65nm,1.0s,mb5.3
ULN Ulaanbaatar 32.03 286 *e*P P **04 48 33.2 -0.7**
ULN pmax pmax
comp=Z,65nm,1.0s,mb5.3
ULN Ulaanbaatar 32.03 286 P P **04 48 33.1 -0.8**
SNR=38
IRK Irkutsk 32.25 295 *e*P P **04 48 35.0 -0.8**
IRK *e* pP 04 48 57.4 +2.2
IRK pmax pmax
comp=Z,281nm,2.0s,mb5.7
SSE Sheshan 32.27 248 P P **04 48 33.5 -2.6**
SSE PP PP 04 49 46.8 -3.6
SSE S **S** **04 53 41.2 -2.2**
SSE sS sS 04 54 14.2 -2.6
SSE pmax pmax
comp=Z,160nm,1.4s,mb5.6
SSE pmax pmax
comp=Z,810nm,11.2s
SSE LR LR
comp=N,1μm,20.0s
SSE LR LR
comp=E,2μm,20.0s
SSE LR LR
comp=Z,3μm,20.0s
HHC Hu-ho-hao-te 32.32 271 *e*P P **04 48 35.9 -0.6**
HHC pP pP 04 48 54.0 -1.9
HHC sP sP 04 49 02.8 -2.8
HHC PcP PcP 04 51 23.9 +1.5
HHC S **S** **04 53 41.4 -2.6**
HHC sS sS 04 54 10.7 -6.8
HHC PcS PcS 04 55 07.6 +0.2
HHC SS SS 04 55 38.5 -27
HHC ScS ScS 04 58 57.1 -0.4
HHC pmax pmax
comp=Z,74nm,1.3s,mb5.3
HHC pmax pmax
comp=Z,290nm,4.6s
HHC LR LR
comp=N,2μm,14.9s
HHC LR LR
comp=E,2μm,19.1s
HHC LR LR
comp=Z,4μm,18.4s
COLA College 32.35 41 *e*P P **04 48 36.5 0.0**
comp=Z,182nm,0.9s,mb5.8
COLA College 32.35 41 *e*P P **04 48 36.5 0.0**
COLA pmax pmax
comp=Z,182nm,0.9s,mb5.8
SONM Songino Array 32.46 286 P P **04 48 36.5 -1.1**
comp=Z,8.5nm,0.4s,mb4.9,baz=64,slow=7.5,SNR=60
SONM PcP PcP 04 51 23.6 +0.9
comp=Z,7.8nm,0.6s,baz=85,slow=2.5,SNR=5.0
SONM ScP ScP 04 55 02.7 +4.0
comp=Z,2.2nm,0.9s,baz=71,slow=3.0,SNR=3.1
SONM LR LR 05 03 19.1
comp=Z,2μm,18.3s,baz=56,slow=39
ILAR Eielson Array 32.77 41 P P **04 48 39.4 -0.7**
ILAR LR LR 05 01 06.3
ILAR *e* 05 19 59.5
ILAR Eielson Array 32.77 41 P P **04 48 39.4 -0.7**
comp=Z,42nm,0.7s,mb5.4,baz=252,slow=8.0,SNR=260
ILAR LR LR 05 01 06.3
comp=Z,1μm,21.5s,baz=270,slow=35
ILAR P3KPbc 05 19 59.5
comp=Z,0.5nm,1.0s,baz=106,slow=3.6,SNR=5.0
TLY Talaya 32.79 294 P P **04 48 41.2 +0.7**
comp=Z,941nm,0.8s,SNR=32
TLY Talaya 32.79 294 *e*P P **04 48 40.6 +0.1**
comp=Z,586nm,1.5s,mb6.2
TLY Talaya 32.79 294 *e*P P **04 48 38.5 -2.0**
TLY *e* pP 04 49 01.0 +1.1
TLY *e*S **S** **04 53 50.9 -0.2**
TLY pmax pmax
comp=Z,223nm,1.3s,mb5.8
TLY MLR MLR
comp=Z,973nm,15.0s
TLY Talaya 32.79 294 P P **04 48 41.3 +0.8**
SNR=92
NJ2 Nanjing 33.01 252 *e*P P **04 48 42.6 0.0**
NJ2 pP pP 04 49 02.8 +0.7
NJ2 sP sP 04 49 09.5 -2.3
NJ2 PP PP 04 49 55.7 -2.9
NJ2 S **S** **04 53 53.6 -1.3**
NJ2 sS sS 04 54 22.9 -5.6
NJ2 pmax pmax
comp=Z,110nm,0.7s,mb5.8
NJ2 pmax pmax
comp=Z,1μm,6.2s
NJ2 LR LR
comp=N,3μm,16.7s
NJ2 LR LR
comp=E,2μm,17.7s
NJ2 LR LR
comp=Z,10μm,22.6s
ZAK Zakamensk 33.44 292⇑ *i*P P **04 48 45.8 -0.3**
ZAK pmax pmax
comp=Z,81nm,1.4s,mb5.4
BTO Baotou 33.45 272 *e*P P **04 48 45.2 -1.1**
PAX Paxson 33.48 45 *e*P P **04 48 45.9 -0.5**
comp=Z,72nm,1.2s,mb5.4
PAX *e*ScP ScP 04 55 03.9 +2.0
PAX Paxson 33.48 45 *e*P P **04 48 45.9 -0.4**
PAX pmax pmax
comp=Z,72nm,1.2s,mb5.4
TIY Taiyuan 33.49 266 *e*P P **04 48 46.8 +0.1**
TIY S **S** **04 54 00.3 -1.9**
TIY LR LR
comp=N,2μm,21.2s
TIY LR LR
comp=E,860nm,9.9s
TIY LR LR
comp=Z,2μm,21.2s
MID Middleton Isla 33.49 51 *e*P P **04 48 48.7 +2.2**
comp=Z,517nm,2.4s,mb5.9
MID Middleton Isla 33.49 51 *e*P P **04 48 48.7 +2.2**
MID pmax pmax
comp=Z,517nm,2.4s,mb5.9
DIV Divide 33.53 48 *e*P P **04 48 46.5 -0.3**
comp=Z,125nm,1.1s,mb5.7
BMRM Bremner River 34.11 48 *e*P P **04 48 51.6 -0.2**
comp=Z,183nm,1.1s,mb5.8
MOY Mondy 34.36 295 *e*P P
MOY pmax pmax
comp=Z,268nm,1.6s,mb5.8
EGAK Eagle 35.22 41 *e*P P **04 49 00.6 -0.7**
comp=Z,169nm,0.9s,mb5.9
EGAK *e* 04 49 12.2
DAWY Dawson 36.06 42 *e*P P **04 49 08.3 -0.2**
PNL Peninsula 36.91 50 *e*P P **04 49 15.5 -0.3**
comp=Z,42nm,0.9s,mb5.4
YHNB Yeheng 36.98 240 *e*P P **04 49 17.8 +0.9**
comp=Z,47nm,0.6s,mb5.6
YHNB *e* pP 04 49 38.8 +2.3
NACB Ninganchiao 37.25 239 *e*P P **04 49 17.8 -1.3**
INK Inuvik 37.86 35 *e*P P **04 49 24.1 +0.4**
comp=Z,32nm,0.6s,mb5.3
INK Inuvik 37.86 35 P P **04 49 23.4 -0.3**
comp=Z,26nm,0.7s,mb5.2,baz=285,slow=6.9,SNR=60
INK LR LR 05 05 50.0
comp=Z,822nm,22.0s,baz=267,slow=38
INK Inuvik 37.86 35 *e*P P **04 49 24.1 +0.4**
INK pmax pmax
comp=Z,32nm,0.6s
SSLB Suanglung 37.91 240 *e*P P **04 49 23.9 -0.8**
comp=Z,24nm,0.6s,mb5.2
XAN Xi'an 37.98 264 P P **04 49 24.3 -0.8**
XAN pP pP 04 49 42.6 -2.3
XAN sP sP 04 49 51.7 -2.9
XAN PP PP 04 50 58.0 +4.7
XAN PcP PcP 04 51 34.3 -4.8
XAN S **S** **04 55 13.3 +2.4**
XAN ScP ScP 04 55 15.4 -3.5
XAN PcS PcS 04 55 24.7 -3.4
XAN ScS ScS 04 59 25.9 -2.5
XAN pmax pmax
comp=Z,17nm,1.0s,mb4.8
XAN pmax pmax
comp=Z,180nm,12.8s
XAN LR LR
comp=N,2μm,23.8s
XAN LR LR
comp=E,430nm,24.4s
XAN LR LR
comp=Z,740nm,24.6s
QZH Quanzhou 38.36 244⇑ *i*P P **04 49 28.2 -0.2**
QZH pP pP 04 49 45.5 -2.7
QZH S **S** **04 55 22.0 +5.2**
QZH pmax pmax
comp=Z,280nm,1.4s,mb5.9
QZH pmax pmax
comp=Z,2μm,6.8s
QZH LR LR
comp=Z,9μm,36.7s
TPUB Ta-pu 38.48 240 *e*P P **04 49 29.2 -0.2**
comp=Z,73nm,0.6s,mb5.7
SKAG Skagway 38.96 49 *e*P P **04 49 34.1 +1.1**
comp=Z,168nm,1.4s,mb5.7
SIT Sitka 39.72 53 *e*P P **04 49 41.1 +1.7**
comp=Z,152nm,1.6s,mb5.6
SIT Sitka 39.72 53 *e*P P **04 49 41.1 +1.7**
SIT pmax pmax
comp=Z,152nm,1.6s,mb5.6
LZH Lanzhou 40.00 270⇓ P P **04 49 42.4 +0.4**
LZH pP pP 04 50 00.1 -1.8
LZH S **S** **04 55 42.0 +0.8**
LZH sS sS 04 56 12.7 -2.7
LZH SS SS 04 58 35.5 -5.6
LZH pmax pmax
comp=Z,730nm,1.5s,mb6.3
LZH pmax pmax
comp=Z,1μm,5.0s
LZH LR LR
comp=E,5μm,15.0s
LZH LR LR
comp=Z,6μm,18.2s
ENH Enshi 40.09 259 *e*P P **04 49 42.0 -0.7**
comp=Z,95nm,0.6s,mb5.8
GTA Gaotai 40.67 277⇑ P P **04 49 47.2 -0.3**
GTA pP pP 04 50 02.8 -4.6
GTA PP PP 04 51 25.9 +3.3
GTA S **S** **04 55 52.3 +1.1**
GTA sS sS 04 56 21.5 -3.9
GTA SS SS 04 58 51.8 -2.5
GTA pmax pmax
comp=Z,120nm,1.7s,mb5.5
GTA pmax pmax
comp=Z,630nm,8.7s
GTA LR LR
comp=N,2μm,16.2s
GTA LR LR
comp=E,3μm,15.9s
GTA LR LR
comp=Z,5μm,17.1s
CRAG Craig 41.44 54 *e*P P **04 49 56.2 +2.6**
comp=Z,71nm,1.4s,mb5.3
DLBC Dease Lake 41.89 49 *e*P P **04 49 58.5 +1.3**
DLBC Dease Lake 41.89 49 P P **04 49 58.2 +1.0**
comp=Z,35nm,0.9s,mb5.1,baz=294,slow=7.4,SNR=45
ZAA0 Zalesovo Array 42.61 304 *e*P P **04 50 01.9 -1.2**
ZALV Zalesovo Beam 42.61 304 P P **04 50 01.8 -1.3**
ZALV PcP PcP 04 51 54.8 +1.1
ZALV ScP ScP 04 55 39.8 +3.1
ZALV ScS ScS 04 59 55.0 -0.4
ZALV LR LR 05 10 25.1
ZALV Zalesovo Beam 42.61 304 P P **04 50 01.8 -1.3**
comp=Z,34nm,0.3s,mb5.5,baz=62,slow=7.0,SNR=63
ZALV PcP PcP 04 51 54.8 +1.1
comp=Z,14nm,0.7s,baz=56,slow=3.7,SNR=3.9
ZALV ScP ScP 04 55 39.8 +3.1
comp=Z,0.8nm,0.3s,baz=78,slow=2.1,SNR=3.1
ZALV ScS ScS 04 59 55.0 -0.4
comp=Z,0.9nm,0.3s,baz=347,slow=6.1,SNR=3.7
ZALV LR LR 05 10 25.1
comp=Z,442nm,18.4s,baz=63,slow=40
ZALV Zalesovo Beam 42.61 304 P P **04 50 01.8 -1.3**
ZALV 04 51 54.8
ZALV 04 59 55.0
ZALV pmax pmax
comp=Z,34nm,0.3s,mb5.5
ZALV MLR MLR
comp=Z,443nm,18.4s
GZH Guangzhou 42.87 247 P P **04 50 00.4 -5.1**
GZH LR LR
comp=N,820nm,11.3s
GZH LR LR
comp=E,1μm,15.4s
GZH LR LR
comp=Z,3μm,45.1s
NVS Novosibirsk 43.07 306⇑ *i*P P **04 50 06.3 -0.5**
NVS *e* pP 04 50 29.6 +2.7
NVS *e*PPP 04 51 51.0
NVS pmax pmax
comp=Z,542nm,1.7s,mb6.0
NVS pmax pmax
comp=N,216nm,1.6s
NVS pmax pmax
comp=E,608nm,1.6s
CD2 Chengdu 43.33 264⇑ P P **04 50 09.1 -0.1**
CD2 pP pP 04 50 27.6 -1.7
CD2 sP sP 04 50 36.5 -2.3
CD2 PcP PcP 04 51 58.8 +2.3
CD2 PcS PcS 04 55 51.0 +1.8
CD2 S **S** **04 56 29.8 -0.6**
CD2 sS sS 04 57 01.7 -3.2
CD2 SS SS 04 59 37.6 -9.1
CD2 pmax pmax
comp=Z,240nm,1.0s,mb5.9
CD2 pmax pmax
comp=Z,1μm,7.3s
CD2 LR LR
comp=N,1μm,21.1s
CD2 LR LR
comp=E,2μm,24.0s
CD2 LR LR
comp=Z,2μm,25.0s
GYA Guiyang 44.52 257⇑ *i*P P **04 50 18.2 -0.5**
GYA pP pP 04 50 36.9 -2.0
GYA sP sP 04 50 46.2 -2.3
GYA PcP PcP 04 52 01.2 +0.6
GYA PP PP 04 52 04.3 +0.3
GYA ScP ScP 04 55 47.0 +2.1
GYA PcS PcS 04 55 55.7 +1.5
GYA S **S** **04 56 46.1 -1.7**
GYA sS sS 04 57 18.9 -3.5
GYA SS SS 05 00 01.6 -8.3
GYA pmax pmax
comp=Z,180nm,0.6s,mb6.0
GYA pmax pmax
comp=Z,250nm,4.6s
GYA LR LR
comp=N,7μm,17.0s
GYA LR LR
comp=E,6μm,18.5s
GYA LR LR
comp=Z,9μm,16.8s
WMQ Urumqi 45.86 290 P P **04 50 29.5 +0.3**
WMQ pP pP 04 50 46.5 -3.0
WMQ sP sP 04 50 54.5 -4.5
WMQ PcP PcP 04 52 06.3 +1.3
WMQ PP PP 04 52 18.2 +0.4
WMQ ScP ScP 04 55 51.2 +1.0
WMQ S **S** **04 57 07.4 +0.6**
WMQ sS sS 04 57 39.0 -2.5
WMQ ScS ScS 05 00 15.4 -0.9
WMQ SS SS 05 00 24.2 -7.7
WMQ pmax pmax
comp=Z,160nm,1.2s,mb5.6
WMQ pmax pmax
comp=Z,850nm,4.8s
WMQ LR LR
comp=N,3μm,27.0s
WMQ LR LR
comp=E,2μm,28.0s
WMQ LR LR
comp=Z,3μm,26.0s
TGY Tagaytay City 45.88 232 P P **04 50 31.4 +1.8**
comp=Z,144nm,0.3s,mb6.2,baz=15,slow=20,SNR=5.3
TGY Tagaytay City 45.88 232 P P **04 50 31.4 +1.8**
TGY pmax pmax
comp=Z,144nm,0.3s
ALE Alert 46.41 7 P P **04 50 34.0 +0.9**
comp=Z,646nm,0.6s,mb6.5,SNR=43
YKA Yellowknife Ar 47.13 39 P P **04 50 39.0 +0.1**
YKA Yellowknife Ar 47.13 39 P P **04 50 39.0 +0.1**
comp=Z,24nm,0.9s,mb4.9,baz=291,slow=7.7,SNR=51
YKA Yellowknife Ar 47.13 39 P P **04 50 39.0 +0.1**
YKA pmax pmax
comp=Z,24nm,0.9s
RES Resolute Bay 47.18 20 P P **04 50 39.2 +0.1**
RES Resolute Bay 47.18 20 P P **04 50 39.2 +0.1**
comp=Z,26nm,0.8s,mb5.0,baz=294,slow=6.3,SNR=7.2
RES Resolute Bay 47.18 20 P P **04 50 39.2 +0.1**
RES pmax pmax
comp=Z,26nm,0.8s,mb5.0
MK31 Makanchi Array 47.47 296 *e*P P **04 50 41.0 -0.7**
MK31 Makanchi Array 47.47 296 *i* P P **04 50 40.9 -0.8**
MK31 pmax pmax
comp=Z,61nm,0.4s,mb5.7
MKAR Makanchi Array 47.47 296 P P **04 50 40.5 -1.2**
MKAR ScP ScP 04 55 60.0 +3.0
MKAR ScS ScS 05 00 24.5 -2.3
MKAR LR LR 05 11 23.7
MKAR Makanchi Array 47.47 296 P P **04 50 40.5 -1.2**
comp=Z,35nm,0.4s,mb5.4,baz=47,slow=5.5,SNR=221
MKAR ScP ScP 04 55 60.0 +3.0
comp=Z,0.6nm,0.6s,baz=49,slow=2.9,SNR=1.8
MKAR ScS ScS 05 00 24.5 -2.3
comp=Z,3.2nm,1.1s,baz=60,slow=8.5,SNR=5.8
MKAR LR LR 05 11 23.7
comp=Z,3μm,21.8s,baz=50,slow=37
MKAR Makanchi Array 47.47 296 *i* P P **04 50 40.5 -1.2**
MKAR pmax pmax
comp=Z,35nm,0.4s
KURK Kurchatov 47.48 303 *e*P P **04 50 40.6 -1.1**
comp=Z,393nm,1.0s,mb6.1
KURK Kurchatov 47.48 303*c i*P P **04 50 40.5 -1.2**
KURK pmax pmax
comp=Z,472nm,1.2s,mb6.1
KURK Kurchatov 47.48 303 P P **04 50 40.9 -0.8**
SNR=159
KMI Kunming 47.95 259⇑ P P **04 50 46.7 +1.1**
KMI PP PP 04 52 39.1 +0.9
KMI S **S** **04 57 37.4 +0.4**
KMI pmax pmax
comp=Z,250nm,1.4s,mb5.8
KMI pmax pmax
comp=Z,870nm,3.1s
KMI LR LR
comp=N,1μm,18.2s
KMI LR LR
comp=E,1μm,19.2s
KMI LR LR
comp=Z,2μm,32.4s
QIZ Qiongzhong 48.06 247 P P **04 50 46.2 -0.4**
QIZ pP pP 04 51 04.5 -2.5
QIZ sP sP 04 51 13.4 -3.1
QIZ PP PP 04 52 40.4 +1.1
QIZ S **S** **04 57 39.5 +0.9**
QIZ sS sS 04 58 12.8 -0.8
QIZ pmax pmax
comp=Z,57nm,1.3s,mb5.2
QIZ pmax pmax
comp=Z,820nm,10.8s
QIZ LR LR
comp=N,740nm,25.5s
QIZ LR LR
comp=E,320nm,21.5s
QIZ LR LR
comp=Z,2μm,41.9s
QIZ Qiongzhong 48.06 247 *e*P P **04 50 48.5 +1.9**
comp=Z,33nm,0.6s,mb5.3
KBS Kingsbay 49.74 352 *e*P P **04 50 58.8 +0.1**
KBS AMB AMB 04 51 01.2
comp=Z,26nm,0.8s,mb5.2
KBS *e*S **S** **04 58 02.3 +1.4**
KBS AMS AMS 05 07 50.6
comp=Z,453nm,29.5s
KBS Kingsbay 49.74 352 *e*P P **04 50 58.8 +0.1**
comp=Z,31nm,1.0s,mb5.2
DAV Davao City (W) 49.83 222⇓ *e*P P **04 51 01.0 +0.8**
PGC Sidney 49.93 59 *e*P P **04 51 00.2 -0.3**
comp=Z,1.2nm,0.7s
SPITS Spitsbergen Ar 49.93 350 P P **04 50 57.5 -2.6**
comp=Z,15nm,0.5s,mb5.2,baz=28,slow=5.3,SNR=79
SPITS Spitsbergen Ar 49.93 350 P P **04 50 57.6 -2.5**
SPITS pmax pmax
comp=Z,15nm,0.5s
OSR Olympics--Salm 50.28 60 P P **04 51 03.9 +0.7**
NLWA Neilton Lookou 50.40 60 ⇓P P **04 51 03.9 -0.1**
baz=50,SNR=17
NLWA ⇑S **S** **04 58 14.5 +3.8**
baz=50
NLWA Neilton Lookou 50.40 60 *e*P P **04 51 04.1 0.0**
comp=Z,88nm,1.0s,mb5.6
VOSK Vostochnaya 50.45 308 P P **04 51 03.0 -1.3**
VOSK pmax pmax
comp=Z,239nm,1.1s,mb6.0
BVAR Borovoye Array 50.58 309 P P **04 51 04.3 -1.0**
comp=Z,131nm,0.7s,mb6.1,baz=57,slow=8.5,SNR=158
BVAR PcP PcP 04 52 22.6 +0.8
comp=Z,6.8nm,0.3s,baz=92,slow=4.5,SNR=5.9
BVAR ScP ScP 04 56 15.0 +4.9
comp=Z,1.5nm,0.7s,baz=61,slow=4.1,SNR=2.5
BVAR S **S** **04 58 09.6 -3.5**
comp=Z,7.6nm,0.9s,baz=61,slow=12,SNR=6.4
BVAR Borovoye Array 50.58 309 P P **04 51 04.3 -1.0**
BVAR 04 52 22.6
BVAR S **S** **04 58 09.6 -3.5**
BVAR pmax pmax
comp=Z,131nm,0.7s
BVAR smax
comp=N,8.0nm,0.9s
BRVK Borovoye 50.62 309 *e*P P **04 51 04.7 -0.9**
comp=N,220nm,0.8s,mb6.2
BRVK *e*S **S** **04 58 10.9 -2.7**
BRVK Borovoye 50.62 309*c i*P P **04 51 04.2 -1.4**
BRVK pmax pmax

comp=Z,488nm,1.7s,mb6.3
BRVK MLR MLR
comp=Z,977nm,23.0s
BRVK Borovoye 50.62 309 P **P** **04 51 04.7 -0.9**
SNR=98
HDW Hoodsport 50.71 60 P **P** **04 51 06.4 0.0**
GNW Green Mountain 50.88 60 *e*P **P** **04 51 07.9 +0.2**
comp=Z,65nm,1.7s,mb5.4
JCW Jim Creek 51.02 58 *e*P **P** **04 51 08.7 0.0**
comp=Z,108nm,1.0s,mb5.8
E03A Lebam 51.05 61 ⇓P **P** **04 51 08.9 0.0**
baz=51
E03A ⇑S **S** **04 58 21.3 +1.5**
baz=51
B06A Marblemount 51.08 58 ⇑P **P** **04 51 08.6 -0.6**
baz=51,SNR=5.6
B06A ⇓S **S** **04 58 22.2 +2.0**
baz=51
RPW Rockport 51.11 58 *e*P **P** **04 51 08.4 -1.0**
comp=Z,35nm,0.9s,mb5.4
ZRNK Zerenda 51.32 309 *i* P **P** **04 51 09.7 -1.2**
ZRNK pmax pmax
comp=Z,210nm,0.7s,mb6.3
D05A Enumclaw 51.56 59 ⇓P **P** **04 51 12.9 +0.1**
baz=51,SNR=12
D05A ⇑S **S** **04 58 29.9 +3.0**
baz=51
HEBO Mount Hebo 51.71 62 *e*P **P** **04 51 14.4 +0.5**
LON Longmire 51.92 60 *e*P **P** **04 51 14.2 -1.2**
comp=Z,96nm,1.6s,mb5.6
LON Longmire 51.92 60 *e*P **P** **04 51 14.3 -1.1**
LON pmax pmax
comp=Z,96nm,1.6s,mb5.6
NLW Nelson Butte 51.96 58 P **P** **04 51 15.8 +0.1**
F04A Amboy 52.05 61 ⇑P **P** **04 51 15.9 -0.5**
baz=52,SNR=9.9
WPW White Pass 52.10 60 P **P** **04 51 16.7 0.0**
ETW Entiat 52.24 58 *e*P **P** **04 51 17.7 -0.1**
comp=Z,190nm,1.2s,mb6.0
LSA Lhasa 52.28 273 P **P** **04 51 20.1 +1.8**
LSA pmax pmax
comp=Z,100nm,0.8s,mb5.9
LSA LR LR
comp=N,970nm,32.0s
LSA LR LR
comp=E,2μm,32.0s
LSA LR LR
comp=Z,4μm,29.0s
LSA Lhasa 52.28 273 *e*P **P** **04 51 19.5 +1.2**
comp=Z,62nm,0.6s,mb5.8
LSA Lhasa 52.28 273 *e*P **P** **04 51 19.5 +1.2**
LSA pmax pmax
comp=Z,62nm,0.6s,mb5.8
COR Corvallis 52.34 63 *e*P **P** **04 51 18.8 +0.2**
comp=Z,51nm,1.0s,mb5.5
COR Corvallis 52.34 63 *e*P **P** **04 51 18.8 +0.2**
COR pmax pmax
comp=Z,51nm,1.0s,mb5.5
B08A Colville Reser 52.35 57 ⇓P **P** **04 51 18.0 -0.6**
baz=52,SNR=46
B08A ⇑S **S** **04 58 38.9 +1.4**
baz=52
ASR Mount Adams--S 52.39 60 P **P** **04 51 18.9 -0.1**
G04A Mulino 52.45 62 ⇑P **P** **04 51 19.3 -0.1**
baz=52
EDM Edmonton 52.61 49 *e*P **P** **04 51 20.3 -0.2**
VLL Laurance Lake 52.75 61 P **P** **04 51 21.9 +0.4**
H04A Detroit Lake 52.92 62 ⇓P **P** **04 51 22.6 -0.3**
baz=53,SNR=11
SVE Sverdlovsk 53.03 317 ⇓*e*P **P** **04 51 22.8 -0.7**
SVE *e* 04 53 25.0
SVE *e*S **S** **04 58 40.5 -6.1**
SVE pmax pmax
comp=Z,211nm,1.1s,mb6.1
SVE MLR MLR
comp=Z,1μm,16.0s
E07A Sunnyside 53.12 59 ⇓P **P** **04 51 23.9 -0.4**
baz=53
C09A Chrisman Ranch 53.25 57 ⇓P **P** **04 51 24.3 -1.0**
baz=53,SNR=18
OD2 Odessa Site #2 53.26 58 *e*P **P** **04 51 24.6 -0.7**
comp=Z,81nm,1.1s,mb5.7
OD2 *e* 04 51 37.4
D08A Wollman Farm, 53.34 58 ⇑P **P** **04 51 24.9 -1.0**
baz=53,SNR=16
RSW Rattlesnake Hi 53.37 59 *e*P **P** **04 51 26.2 +0.1**
comp=Z,102nm,1.1s,mb5.8
HAWA Hanford 53.40 59 *e*P **P** **04 51 26.1 -0.3**
comp=Z,73nm,1.3s,mb5.5
G06A Carlson Farm, 53.47 61 ⇓P **P** **04 51 26.5 -0.4**
baz=53,SNR=5.9
TKM2 Tokmak 2 53.59 296 P **P** **04 51 27.6 -0.2**
SNR=50
TKM2 Tokmak 2 53.59 296 *e*P **P** **04 51 27.4 -0.4**
comp=Z,53nm,0.7s,mb5.7
TKM2 *e*PcP PcP 04 52 34.9 +1.6
TKM2 Tokmak 2 53.59 296 *e*P **P** **04 51 27.4 -0.4**
TKM2 *e* 04 52 34.9
TKM2 pmax pmax
comp=Z,53nm,0.7s,mb5.7
NEW Newport 53.60 56 *e*P **P** **04 51 27.4 -0.4**
comp=Z,81nm,1.4s,mb5.6
NEW *e* 04 51 40.0
NEW Newport 53.60 56 *e*P **P** **04 51 27.4 -0.4**
NEW pmax pmax
comp=Z,81nm,1.4s
E08A Dider Farm, El 53.60 59 ⇓P **P** **04 51 27.1 -0.7**
baz=53
DAG Danmarks Havn 53.60 359 ⇓*i*P **P** **04 51 27.0 -0.4**
DAG pmax pmax
comp=Z,530nm,1.5s,mb6.3
DAG Danmarks Havn 53.60 359 ⇓*i*P **P** **04 51 27.0 -0.4**
comp=Z,527nm,1.5s,mb6.3
ULHL Ulahol 53.62 295 P **P** **04 51 28.2 +0.1**
SNR=18
CHRT Chiangrai 53.63 257 P **P** **04 51 28.0 -0.3**
comp=Z,921nm,0.6s
HUMO Hull Mountain 53.73 65 *e*P **P** **04 51 29.4 +0.5**
comp=Z,118nm,1.4s,mb5.7
A12A Yaak River Ran 53.98 55 ⇑P **P** **04 51 30.2 -0.3**
baz=54,SNR=12
USP Ospenovka 54.02 297 P **P** **04 51 30.6 -0.3**
SNR=161
CHMS Chumysh 54.03 296 P **P** **04 51 30.6 -0.5**
SNR=26
E09A Wood Farm, Sta 54.09 58 ⇓P **P** **04 51 30.8 -0.6**
baz=54,SNR=24
KBK Karagaybulak 54.13 296 P **P** **04 51 31.8 +0.1**
SNR=28
ARU Arti 54.19 317 P **P** **04 51 31.8 -0.2**
comp=Z,1μm,0.8s,SNR=19
ARU Arti 54.19 317 *e*P **P** **04 51 31.0 -1.0**
comp=Z,278nm,1.0s,mb6.2
ARU Arti 54.19 317 *c i*P **P** **04 51 30.8 -1.2**
ARU *SP sP 04 51 59.4 -2.8
ARU *e* 04 52 35.0
ARU *e* 04 53 33.9
ARU S **S** **04 59 02.3 0.0**
ARU 05 01 05.1
ARU SS SS 05 02 37.8 -6.5
ARU pmax pmax
comp=Z,348nm,1.2s,mb6.3
ARU MLR MLR
comp=Z,1μm,16.0s
B12A Libby 54.29 55 ⇓P **P** **04 51 32.6 -0.2**
baz=54
KZA Kyzart 54.31 295 P **P** **04 51 33.5 +0.4**
SNR=33
C11A Tepee Creek (N 54.32 56 ⇑P **P** **04 51 32.6 -0.4**
baz=54,SNR=40
G08A Pilot Rock 54.38 60 ⇓P **P** **04 51 33.1 -0.5**
baz=54,SNR=17
LNOR Lincton Mounta 54.41 59 *e*P **P** **04 51 33.8 +0.1**
comp=Z,31nm,1.3s,mb5.2
LNOR Lincton Mounta 54.41 59 *e*P **P** **04 51 33.8 +0.1**
LNOR pmax pmax
comp=Z,31nm,1.3s,mb5.2
AAK Ala-Archa 54.41 296 P **P** **04 51 33.3 -0.5**
comp=Z,680nm,0.7s,mb6.8,SNR=19
AAK Ala-Archa 54.41 296 P **P** **04 51 33.4 -0.4**
SNR=36
AAK Ala-Archa 54.41 296 *e*P **P** **04 51 33.2 -0.6**
comp=Z,87nm,0.8s,mb5.8
AAK Ala-Archa 54.41 296 P **P** **04 51 33.6 -0.1**
comp=Z,43nm,0.6s,mb5.7,baz=110,slow=4.8,SNR=36
AAK Ala-Archa 54.41 296 *c i*P **P** **04 51 33.3 -0.5**
AAK pmax pmax
comp=Z,101nm,1.7s,mb5.6
AAK MLR MLR
comp=Z,1μm,15.0s
AAK Ala-Archa 54.41 296 P **P** **04 51 33.7 -0.1**
SNR=50
YBH Yreka Blue Hor 54.41 65 *e*P **P** **04 51 34.6 +0.8**
comp=Z,151nm,1.4s,mb5.8
YBH *e* 04 51 48.3
YBH Yreka Blue Hor 54.41 65 P **P** **04 51 34.4 +0.6**
comp=Z,31nm,0.9s,mb5.3,baz=341,slow=3.7,SNR=67
YBH Yreka Blue Hor 54.41 65 *e*P **P** **04 51 34.6 +0.8**
YBH pmax pmax
comp=Z,151nm,1.4s
SHL Shillong 54.62 269 ⇑*i*P **P** **04 51 35.5 0.0**
SHL *e*S **S** **04 59 10.0 +1.2**
A13A Flathead Natio 54.63 54 ⇓P **P** **04 51 34.5 -0.7**
baz=54
UCH Uchtor 54.65 296 *e*P **P** **04 51 36.4 +0.9**
comp=Z,9.0nm,0.9s,mb4.8
MYLDM Lahad Datu 54.74 228 P **P** **04 51 37.9 +1.4**
comp=Z,2μmcomp=Z,81nm,1.6s,mb5.5
EKS2 Erkin-Say 54.81 296 P **P** **04 51 36.5 -0.1**
SNR=15
EKS2 Erkin-Say 54.81 296 *e*P **P** **04 51 36.5 -0.2**
comp=Z,84nm,0.8s,mb5.8
C12B Naegeli Ranch, 54.81 56 ⇑P **P** **04 51 36.2 -0.4**
baz=55,SNR=16
WALA Waterton Lakes 54.81 54 *e*P **P** **04 51 36.5 -0.1**
comp=Z,1.1nm,0.6s
WALA *e* 04 51 49.6
I07A Izee 54.82 61 ⇑P **P** **04 51 36.5 -0.2**
baz=55,SNR=31
K05A Summer Lake 54.86 63 ⇑P **P** **04 51 36.4 -0.6**
baz=55
F10A Beach Ranch, E 54.93 58 ⇓P **P** **04 51 36.9 -0.5**
baz=55,SNR=20
CHG Chiang Mai 54.94 257 ⇑P **P** **04 51 38.6 +0.7**
comp=Z,404nm,0.7s,mb6.6
CHTO Chiang Mai 54.94 257 *e*P **P** **04 51 38.9 +1.0**
comp=Z,226nm,0.7s,mb6.3
CHTO Chiang Mai 54.94 257 *e*P **P** **04 51 38.9 +1.0**
CHTO pmax pmax
comp=Z,226nm,0.7s,mb6.3
CHTO Chiang Mai 54.94 257 P **P** **04 51 38.9 +1.0**
SNR=105
B13A Whitefish 54.94 55 ⇓P **P** **04 51 37.1 -0.4**
baz=55,SNR=44
SDKM Sandakan 54.99 230 P **P** **04 51 39.7 +1.4**
BSMT Bassoo Peak 55.09 55 *e*P **P** **04 51 38.8 +0.2**
comp=Z,150nm,1.3s,mb5.9
A14A Double T Ranch 55.12 53 ⇑P **P** **04 51 38.1 -0.7**
baz=55,SNR=54
KEV Kevo 55.12 341 *e*P **P** **04 51 36.2 -2.3**
comp=Z,12nm,0.6s,mb5.1
KEV Kevo 55.12 341 *e*P **P** **04 51 36.7 -1.8**
KEV Kevo 55.12 341 *e*p **P** **04 51 36.7 -1.8**
comp=Z,3.0nm,0.3s,mb4.8
KKM Kota Kinabalu 55.13 231 *e*P **P** **04 51 41.1 +1.8**
comp=Z,154nm,1.8s,mb5.7
KKM Kota Kinabalu 55.13 231 P **P** **04 51 41.4 +2.1**
KKM Kota Kinabalu 55.13 231 P **P** **04 51 41.1 +1.8**
comp=Z,1μmcomp=Z,47nm,1.8s,mb5.2
AML Almayashu 55.18 296 P **P** **04 51 40.0 +0.6**
SNR=5.5
AML Almayashu 55.18 296 *e*P **P** **04 51 39.9 +0.5**
comp=Z,48nm,0.9s,mb5.5
CM31 Chiang Mai Arr 55.20 257 *e*P **P** **04 51 41.3 +1.5**
comp=Z,100nm,0.6s,mb6.0
CMAR Chiang Mai Arr 55.20 257 P **P** **04 51 40.8 +1.0**
comp=Z,94nm,0.7s,mb6.0,baz=33,slow=7.2,SNR=181
CMAR LR LR 05 15 27.3
comp=Z,993nm,19.2s,baz=53,slow=36
CMAR Chiang Mai Arr 55.20 257 P **P** **04 51 40.8 +1.0**
CMAR pmax pmax
comp=Z,94nm,0.7s
CMAR MLR MLR
comp=Z,993nm,19.2s
WDC Whiskeytown Da 55.23 66 *e*P **P** **04 51 39.8 +0.1**
comp=Z,219nm,1.7s,mb5.9
WDC Whiskeytown Da 55.23 66 *e*P **P** **04 51 39.8 +0.1**
WDC pmax pmax
comp=Z,219nm,1.7s,mb5.9
D12A Red Ives Fores 55.28 56 ⇑P **P** **04 51 39.5 -0.5**
baz=55,SNR=13
C13A Hot Springs 55.31 55 ⇑P **P** **04 51 39.8 -0.4**
baz=55,SNR=15
APA Apatity 55.33 337 ⇑*i*P **P** **04 51 38.0 -2.0**
APA *i* pP 04 52 00.0 -0.9
APA *e* 04 53 44.0
APA *e*S **S** **04 59 15.0 -2.2**
APA *i* 05 01 18.0
APA pmax pmax
comp=Z,14nm,0.8s,mb5.0
APA pmax pmax
comp=Z,300nm,14.0s
APA MLR MLR
comp=Z,1μm,18.0s
JTMT Jette 55.42 55 *e*P **P** **04 51 41.2 +0.2**
comp=Z,78nm,1.3s,mb5.6
A15A Johnson Ranch, 55.48 53 ⇓P **P** **04 51 40.4 -0.9**
baz=55,SNR=55
KSH Kashi 55.48 292 P **P** **04 51 45.3 +3.8**
KSH *e*pP pP 04 52 01.1 -1.3
KSH *e*sP sP 04 52 08.0 -3.8
KSH *e*PcP PcP 04 52 44.6 +4.0
KSH *e*PP PP 04 53 51.1 +5.2
KSH *e*ScP ScP 04 56 36.9 +5.2
KSH *e*PcS PcS 04 56 43.4 +2.6
KSH *e*S **S** **04 59 23.2 +3.2**
KSH *e*sS sS 04 59 55.6 0.0
KSH ScS ScS 05 01 25.1 +2.6
KSH *e*SS SS 05 03 08.3 +3.0
KSH pmax pmax
comp=Z,26nm,0.8s,mb5.3
KSH pmax pmax
comp=Z,850nm,5.3s
KSH LR LR
comp=N,1μm,15.2s
KSH LR LR
comp=E,1μm,14.9s
KSH LR LR
comp=Z,1μm,13.1s
YBMT Yellow Bay 55.50 55 *e*P **P** **04 51 41.9 +0.4**
comp=Z,31nm,0.9s,mb5.3
E12A Beaver Dam Sad 55.56 57 ⇑P **P** **04 51 41.5 -0.4**
baz=55,SNR=59
BMO Blue Mountains 55.58 59 *e*P **P** **04 51 41.9 -0.3**
comp=Z,28nm,1.0s,mb5.2
ARCES ARCESS Array B 55.61 341 P **P** **04 51 40.6 -1.4**
comp=Z,12nm,0.5s,mb5.2,baz=34,slow=7.3,SNR=88
ARCES LR LR 05 18 06.2
comp=Z,884nm,21.1s,baz=211,slow=39
ARCES ARCESS Array B 55.61 341 P **P** **04 51 40.6 -1.4**
ARCES pmax pmax
comp=Z,12nm,0.5s
ARCES MLR MLR
comp=Z,884nm,21.1s
ARE0 ARCESS Array S 55.61 341 *e*P **P** **04 51 40.5 -1.5**
C14A Swan Lake 55.70 55 ⇑P **P** **04 51 42.3 -0.6**
baz=56
MOD Modoc 55.71 64 *e*P **P** **04 51 43.4 +0.2**
comp=Z,417nm,1.5s,mb6.2
MOD *e* 04 51 56.9
SWMT Swartz Lake 55.72 55 *e*P **P** **04 51 43.1 -0.1**
comp=Z,105nm,1.6s,mb5.6
D13A Huson 55.74 56 ⇓P **P** **04 51 42.6 -0.7**
baz=56,SNR=24
TSM Tawau 55.82 229 P **P** **04 51 46.0 +1.8**
J08A Circle Bar Ran 55.85 61 ⇑P **P** **04 51 43.9 -0.3**
baz=56
HOPS Hopland 55.91 68 *e*P **P** **04 51 45.1 +0.4**
comp=Z,274nm,2.0s,mb5.9
B15A Bradely Ranch, 55.98 54 ⇑P **P** **04 51 44.2 -0.7**
baz=56,SNR=43
BDT Bhumibol Dam 56.07 256 P **P** **04 51 44.0 -2.0**
comp=Z,44nm,0.8s,mb5.5
A16A West Butte Ran 56.08 53 ⇓P **P** **04 51 44.7 -0.9**
baz=56
TAPN Taplejung 56.09 273 *e*P **P** **04 51 47.4 +1.4**
comp=Z,100nm,0.7s,mb6.0
F12A Elk City 56.14 57 ⇑P **P** **04 51 46.1 -0.1**
baz=56,SNR=46
SLMT Seeley Lake 56.16 55 *e*P **P** **04 51 46.2 0.0**
comp=Z,81nm,1.1s,mb5.7
SLMT *e* 04 51 59.1
MSO Missoula 56.18 56 *e*P **P** **04 51 46.4 0.0**
comp=Z,81nm,1.3s,mb5.6
AGT Agartala 56.20 268 *i* P **P** **04 51 45.0 -1.9**
AGT *i* x x 04 52 01.0
D14A Greenough 56.25 55 ⇑P **P** **04 51 46.6 -0.3**
baz=56,SNR=60
E13A Victor 56.29 56 ⇑P **P** **04 51 46.4 -0.8**
baz=56,SNR=26
C15A Salmond Ranch, 56.29 54 ⇑P **P** **04 51 47.2 0.0**
baz=56,SNR=140
WVOR Wild Horse Val 56.34 62 *e*P **P** **04 51 48.0 +0.3**
comp=Z,226nm,1.3s,mb6.0
WVOR *e* 04 52 14.7
WVOR Wild Horse Val 56.34 62 *e*P **P** **04 51 48.0 +0.4**
WVOR *e* 04 52 14.7
WVOR pmax pmax
comp=Z,226nm,1.3s,mb6.0
B16A M & M Farms, S 56.36 53 ⇑P **P** **04 51 46.6 -1.1**
baz=56
KK31 Karatay Array 56.40 299 *i* P **P** **04 51 47.2 -0.9**
KK31 Karatay Array 56.40 299 *i* P **P** **04 51 47.1 -1.0**
KK31 pmax pmax
comp=Z,73nm,0.7s,mb5.8
CHMT Chamberlain Mo 56.49 55 *e*P **P** **04 51 48.1 -0.5**
comp=Z,32nm,1.1s,mb5.3
CHMT *e* 04 52 01.4
KTK1 Kautokeino 56.51 342 *e*P **P** **04 51 47.5 -0.9**
KTK1 AMS AMS 05 13 01.4
comp=Z,1μm,33.2s
A17A Triple J Farms 56.54 52 ⇓P **P** **04 51 48.0 -0.9**
baz=56,SNR=62
NST Nakhon Sawan 56.55 254 P **P** **04 51 51.0 +1.6**
F13A Darby 56.62 57 ⇑P **P** **04 51 49.1 -0.5**
baz=56,SNR=29
ODAN Odare 56.63 273 *e*P **P** **04 51 51.3 +1.4**
comp=Z,126nm,0.9s,mb6.0
E14A Clinton 56.68 56 ⇑P **P** **04 51 49.6 -0.4**
baz=56,SNR=39
C16A Fuhringer Ranc 56.73 54 ⇑P **P** **04 51 49.9 -0.3**
baz=56,SNR=52
TRO Tromso 56.82 344 *e*P **P** **04 51 49.6 -1.1**
TRO AMB AMB 04 51 52.1
comp=Z,58nm,1.8s,mb5.3
TRO *e*S **S** **04 59 36.9 -0.1**
TRO AMS AMS 05 11 18.4
comp=Z,1μm,35.5s
TRO Tromso 56.82 344 P **P** **04 51 52.6 +2.0**
JIRN Jiri 56.86 275 *e*P **P** **04 51 52.8 +1.3**
comp=Z,26nm,0.2s,mb5.9
GUN Gumba 56.89 275 *e*P **P** **04 51 52.1 +0.4**
comp=Z,111nm,0.4s,mb6.2
B17A L&G Farms, Che 56.90 53 ⇓P **P** **04 51 51.2 -0.3**
baz=57,SNR=12
FFC Flin Flon 56.97 43 *e*P **P** **04 51 51.9 +0.1**
comp=Z,71nm,1.3s,mb5.5
FFC Flin Flon 56.97 43 *i* P **P** **04 51 52.5 +0.6**
A18A Metzger Ranch, 56.99 52 ⇑P **P** **04 51 51.4 -0.8**
baz=57,SNR=43
RAMN Ramite 57.08 274 *e*P **P** **04 51 53.2 +0.1**
comp=Z,320nm,0.6s,mb6.5
G13A Cobalt 57.12 58 ⇑P **P** **04 51 52.8 -0.2**
baz=57,SNR=66
H12A Diamond D Ranc 57.12 58 ⇓P **P** **04 51 52.7 -0.5**
baz=57,SNR=15
E15A Deer Lodge 57.13 55 ⇑P **P** **04 51 53.0 -0.1**
baz=57,SNR=32
F14A Wisdom 57.13 56 ⇓P **P** **04 51 53.1 0.0**
baz=57,SNR=13
MFID Camas Ranch 57.31 60 ⇑P **P** **04 51 54.3 -0.1**
baz=57,SNR=40
D16A Dana Ranch, Ca 57.32 54 ⇑P **P** **04 51 54.5 0.0**
baz=57,SNR=35
C17A Wharram Farm, 57.34 53 ⇑P **P** **04 51 54.1 -0.6**
baz=57,SNR=74
KKN Kakani 57.35 276 *e*P **P** **04 51 55.6 +0.6**
comp=Z,245nm,0.7s,mb6.3
B18A Beardsley Farm 57.36 52 ⇓P **P** **04 51 54.3 -0.4**
baz=57,SNR=62
HRY Holter Researc 57.38 55 *e*P **P** **04 51 55.2 +0.3**
comp=Z,79nm,1.3s,mb5.6
HRY *e* 04 52 07.9
PKI Pulchoki 57.42 275 *e*P **P** **04 51 55.8 +0.3**
comp=Z,166nm,0.9s,mb6.1
SUMG Summit 57.42 5 *e*P **P** **04 51 56.4 +1.6**
comp=Z,118nm,0.8s,mb6.0
SUMG Summit 57.42 5 *i* P **P** **04 51 56.1 +1.3**
comp=Z,133nm,0.9s,mb6.0
SUMG *i* pP 04 52 16.6 +0.8
SUMG
comp=Z,410nm,18.0s
G14A Jackson 57.44 57 ⇓P **P** **04 51 54.6 -0.8**
baz=57
H13A Challis 57.45 58 ⇓P **P** **04 51 55.1 -0.3**
baz=57,SNR=43
I12A Atlanta 57.45 59 ⇑P **P** **04 51 55.5 0.0**
baz=57,SNR=72
FCC Fort Churchill 57.47 36 *e*P **P** **04 51 55.1 -0.2**
comp=Z,0.7nm,0.5s
E16A East Helena 57.57 55 ⇑P **P** **04 51 56.3 0.0**
baz=57,SNR=9.4
DMN Daman 57.59 276 *e*P **P** **04 51 57.1 +0.4**
comp=Z,241nm,0.8s,mb6.3
EGMT Eagleton 57.61 52 ⇓P **P** **04 51 56.2 -0.3**
baz=57,SNR=35
EGMT Eagleton 57.61 52 *e*P **P** **04 51 56.1 -0.4**
comp=Z,106nm,1.3s,mb5.7
LRM Limekiln Ridge 57.62 56 *e*P **P** **04 51 57.3 +0.7**
comp=Z,312nm,1.2s,mb6.2
GKN Gorkha 57.62 276 *e*P **P** **04 51 57.3 +0.4**
comp=Z,198nm,0.4s,mb6.5
D17A Six Diamond Ra 57.69 54 ⇓P **P** **04 51 57.2 +0.1**
baz=58,SNR=38
WCN Washoe City 57.69 66 ⇓P **P** **04 51 57.3 +0.1**
baz=58,SNR=18
L10A Juniper Basin 57.80 61 ⇑P **P** **04 51 58.3 +0.3**
baz=58,SNR=14
DLMT Dillon 57.83 56 *e*P **P** **04 51 59.2 +1.1**
comp=Z,80nm,1.4s,mb5.6
H14A Leadore 57.90 57 ⇓P **P** **04 51 58.7 +0.2**
baz=58,SNR=25
I13A Wildhorse Cree 57.94 59 ⇑P **P** **04 51 59.2 +0.4**
baz=58,SNR=102
HLID Hailey 58.00 59 ⇑P **P** **04 51 59.5 +0.2**
baz=58,SNR=63
HLID Hailey 58.00 59 *e*P **P** **04 51 59.4 0.0**
comp=Z,141nm,1.5s,mb5.8
G15A Dillon 58.02 56 ⇑P **P** **04 51 59.2 -0.2**
baz=58,SNR=41
MCMT McKenzie Canyo 58.04 57 *e*P **P** **04 51 59.6 0.0**
comp=Z,15nm,1.0s,mb5.0
E17A Martinsdale 58.05 54 ⇓P **P** **04 52 00.3 +0.7**
baz=58,SNR=63
F16A Kennard Place, 58.08 55 ⇓P **P** **04 51 59.7 -0.1**
baz=58,SNR=25
AB31 Akbulak array 58.09 310 *i* P **P** **04 51 58.9 -1.0**
AB31 pmax pmax
comp=Z,147nm,0.7s,mb6.1
ABKAR Akbulak array 58.09 310 *e*P **P** **04 51 58.8 -1.0**
comp=Z,60nm,0.6s,mb5.8
D18A Linhart Farms, 58.12 53 ⇓P **P** **04 52 00.3 +0.2**
baz=58,SNR=15
M10A I.L. Ranch, Tu 58.12 62 ⇓P **P** **04 52 00.3 +0.1**
baz=58
CMB Columbia Colle 58.14 67 *e*P **P** **04 51 59.9 -0.5**
comp=Z,185nm,1.7s,mb5.8
CMB Columbia Colle 58.14 67 *e*P **P** **04 51 59.9 -0.5**
CMB pmax pmax
comp=Z,185nm,1.7s,mb5.8
L11A Cat Creek Ranc 58.15 61 ⇑P **P** **04 52 00.9 +0.5**
baz=58,SNR=57
J13A Cove Ranch, Pi 58.24 59 ⇑P **P** **04 52 01.3 +0.3**
baz=58,SNR=63
H15A Lima 58.29 57 ⇑P **P** **04 52 01.2 -0.1**
baz=58,SNR=22
SAO San Andreas Ge 58.34 69 *e*P **P** **04 52 01.9 +0.2**
comp=Z,25nm,1.3s,mb5.1
SAO San Andreas Ge 58.34 69 *e*P **P** **04 52 01.9 +0.2**
SAO pmax pmax
comp=Z,25nm,1.3s,mb5.1
G16A Moss Hill, Enn 58.35 56 ⇑P **P** **04 52 01.8 +0.1**
baz=58,SNR=58
BMN Battle Mountai 58.44 63 *e*P **P** **04 52 03.3 +0.9**
comp=Z,194nm,1.6s,mb5.9
BMN *e* 04 52 16.3
BMN Battle Mountai 58.44 63 *e*P **P** **04 52 03.3 +0.9**
BMN pmax pmax
comp=Z,193nm,1.6s,mb5.9
KOLN Koldanda 58.45 277 *e*P **P** **04 52 03.2 +0.5**
comp=Z,96nm,0.6s,mb6.0

E18A **Harlowton** 58.48 54 ⇑P P 04 52 02.8 +0.2
baz=58,SNR=30
F17A **Fitzpatrick Pl** 58.52 55 ⇓P P 04 52 03.1 +0.2
baz=58,SNR=31
KLMR **Klimovskoe** 58.55 329 *e*P P 04 52 01.5 -1.4
KLMR *e**PP pP 04 52 23.7 -0.2
KLMR S S 04 59 52.4 -7.4
KLMR pmax pmax
comp=Z,204nm,1.4s,mb6.0
KLMR pmax pmax
comp=Z,169nm,8.1s
L12A **House Creek Ra** 58.58 61 ⇑P P 04 52 03.9 +0.5
baz=58,SNR=39
M11A **Holland Ranch,** 58.61 62 ⇑P P 04 52 04.1 +0.5
baz=58,SNR=21
J14A **Carey** 58.65 59 ⇓P P 04 52 04.8 +1.0
baz=58,SNR=90
N10A **Dunphy** 58.67 63 ⇓P P 04 52 04.4 +0.5
baz=58
I15A **Monteview** 58.78 58 ⇑P P 04 52 05.1 +0.4
baz=59,SNR=6.9
K13A **Stover Farm, H** 58.78 60 ⇑P P 04 52 05.4 +0.6
baz=59,SNR=14
G17A **Pierce Place,** 58.85 55 ⇑P P 04 52 05.7 +0.5
baz=59,SNR=26
O10A **Cortez Mining,** 58.95 63 ⇑P P 04 52 06.7 +0.7
baz=59,SNR=15
JMIC **Jan Mayen** 58.97 354 *e*P P 04 52 06.7 +1.1
JMIC AMB AMB 04 52 09.1
comp=Z,175nm,1.3s,mb5.9
JMIC *e*S S 05 00 08.3 +3.4
H16A **Russell Place,** 58.99 56 ⇑P P 04 52 06.6 +0.5
baz=59,SNR=41
F18A **Big Timber** 59.01 54 ⇓P P 04 52 06.7 +0.4
baz=59,SNR=67
N11A **Elko Archery C** 59.04 62 ⇓P P 04 52 07.0 +0.4
baz=59,SNR=18
CAL **Calcutta** 59.05 269 *e*PKP P 04 52 07.2 +0.4
CAL *ex* x 05 00 17.3
GCMT **Greycliff** 59.12 54 *e*P P 04 52 07.7 +0.7
comp=Z,63nm,1.2s,mb5.5
M12A **Wells** 59.12 61 ⇑P P 04 52 07.7 +0.6
baz=59,SNR=43
NVAR **Mina Array Bea** 59.12 66 P P 04 52 07.4 +0.2
comp=Z,14nm,0.6s,mb5.2,baz=295,slow=7.4,SNR=142
BTM **Bintulu** 59.16 233 P P 04 52 09.6 +1.9
YMR **Madison River** 59.16 56 *e*P P 04 52 08.1 +0.7
comp=Z,189nm,1.3s,mb6.0
J15A **Blackfoot** 59.20 58 ⇑P P 04 52 08.5 +0.9
baz=59,SNR=28
L13A **Double Diamond** 59.22 60 ⇓P P 04 52 08.2 +0.4
baz=59,SNR=35
YNR **Norris Junctio** 59.29 56 *e*P P 04 52 09.8 +1.6
comp=Z,100nm,1.4s,mb5.7
MLAC **Mammoth Lakes** 59.33 67 ⇑P P 04 52 09.1 +0.5
baz=59
K14A **Jones Ranch, D** 59.35 59 ⇓P P 04 52 09.3 +0.6
baz=59,SNR=35
YFT **Old Faithful** 59.38 56 *e*P P 04 52 10.8 +1.9
comp=Z,72nm,0.9s,mb5.7
PTH **Pithoragarh** 59.40 281 *e*PKP P 04 52 09.0 -0.2
I16A **Newdale** 59.40 57 ⇑P P 04 52 09.5 +0.5
baz=59,SNR=32
N12A **Clover Valley,** 59.42 62 ⇓P P 04 52 09.7 +0.5
baz=59,SNR=30
N12A **Clover Valley,** 59.42 62 *e*P P 04 52 09.8 +0.7
comp=Z,134nm,1.5s,mb5.8
PCI **Palu** 59.47 224 P P 04 52 09.1 -0.7
comp=Z,1μmcomp=Z,75nm,0.9s,mb5.7
G18A **Lazy EL Ranch,** 59.48 55 ⇓P P 04 52 09.5 0.0
baz=59,SNR=26
JOF **Joensuu** 59.49 334 *e*P P 04 52 07.5 -1.8
JOF pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
JOF **Joensuu** 59.49 334 *ep* P 04 52 07.5 -1.8
comp=Z,6.6nm,0.4s,mb5.0
LKWY **Lake** 59.53 56 *e*P P 04 52 12.1 +2.2
comp=Z,130nm,1.3s,mb5.8
LKWY **Lake** 59.53 56 *e*P P 04 52 12.1 +2.2
LKWY pmax pmax
comp=Z,130nm,1.3s,mb5.8
O11A **Cowboy Ranch,** 59.54 63 ⇑P P 04 52 10.1 +0.1
baz=59,SNR=8.8
H17A **Grant Village** 59.55 56 ⇓P P 04 52 12.0 +2.0
baz=59,SNR=46
M13A **Montello** 59.58 61 ⇑P P 04 52 10.5 +0.2
baz=59,SNR=38
M13A **Montello** 59.58 61 *e*P P 04 52 10.6 +0.3
comp=Z,94nm,1.4s,mb5.6
K15A **Arbon** 59.62 59 ⇑P P 04 52 11.2 +0.6
baz=59,SNR=30
L14A **Malta** 59.65 60 ⇓P P 04 52 11.3 +0.5
baz=59,SNR=40
IMW **Indian Meadow** 59.69 57 *e*P P 04 52 12.0 +1.1
comp=Z,104nm,1.3s,mb5.7
FLWY **Flagg Ranch** 59.69 56 *e*P P 04 52 11.7 +0.7
comp=Z,163nm,1.4s,mb5.9
J16A **Bone** 59.73 58 ⇓P P 04 52 12.0 +0.7
baz=60,SNR=29
DCID1 **Drake Creek** 59.76 57 *e*P P 04 52 12.8 +1.3
comp=Z,83nm,1.1s,mb5.7
RLMT **Red Lodge** 59.77 55 ⇓P P 04 52 12.2 +0.6
baz=60,SNR=86
RLMT **Red Lodge** 59.77 55 *e*P P 04 52 12.3 +0.8
comp=Z,73nm,0.6s,mb5.9
RRI2 **Red Ridge** 59.84 57 *e*P P 04 52 13.2 +1.1
comp=Z,69nm,0.8s,mb5.7
I17A **Pilgrim Ck.** 59.87 57 ⇑P P 04 52 12.7 +0.5
baz=60
P11A **Circle Ranch,** 59.87 63 ⇑P P 04 52 12.5 +0.2
baz=60
MOOW **Moose Ponds** 59.89 57 *e*P P 04 52 13.2 +0.8
comp=Z,52nm,1.1s,mb5.5
N13A **Wendover, West** 59.89 61 ⇓P P 04 52 12.8 +0.4
baz=60,SNR=21
N13A **Wendover, West** 59.89 61 *e*P P 04 52 12.9 +0.5
comp=Z,100nm,1.1s,mb5.8
M14A **Sheep Mountain** 59.95 60 ⇑P P 04 52 12.9 +0.1
baz=60,SNR=26
TPAW **Teton Pass** 59.95 57 *e*P P 04 52 13.7 +0.9
comp=Z,242nm,1.5s,mb6.0
SCO **Scoresbysund** 59.96 359 ⇑*i*P P 04 52 13.3 +0.9
SCO *i* S S 05 00 17.4 -0.3
SCO pmax pmax
comp=Z,51nm,0.9s,mb5.5
SCO MLR MLR
comp=Z,300nm,19.0s
SCO **Scoresbysund** 59.96 359 ⇑*i*P P 04 52 13.3 +0.9
comp=Z,51nm,0.9s,mb5.5
SCO *i* S S 05 00 17.4 -0.3
SCO
comp=Z,290nm,19.0s
RCTC **Rector, Farmer** 59.97 68 ⇓P P 04 52 12.8 -0.2
baz=60,SNR=9.4
O12A **Currie** 59.97 62 ⇓P P 04 52 13.1 +0.1
baz=60,SNR=59
Q10A **Clear Creek Ra** 59.98 64 ⇓P P 04 52 13.1 +0.1
baz=60,SNR=32
K16A **Soda Springs** 60.04 58 ⇑P P 04 52 13.9 +0.5
baz=60,SNR=37
LOHW **Long Hollow** 60.06 57 *e*P P 04 52 14.2 +0.7
comp=Z,278nm,1.7s,mb6.0
SNOW **Snow King Moun** 60.08 57 *e*P P 04 52 15.1 +1.4
comp=Z,105nm,1.2s,mb5.7
TIN **Tinemaha** 60.08 67 ⇓P P 04 52 14.0 +0.2
baz=60,SNR=6.9
REDW **Red Top Meadow** 60.09 57 *e*P P 04 52 14.7 +1.0
comp=Z,193nm,1.3s,mb6.0
SDNR **Sundarnagar** 60.12 284 *e*PKP P 04 52 13.5 -0.6
L15A **Malad City** 60.15 59 ⇑P P 04 52 14.2 +0.1
baz=60,SNR=31
J17A **Brown Place, J** 60.16 57 ⇓P P 04 52 15.0 +0.8
baz=60,SNR=37
SMMC **Simmler** 60.18 70 ⇑P P 04 52 14.9 +0.5
baz=60,SNR=10
SBUM **Sibu** 60.24 233 P P 04 52 16.7 +1.6
SBUM **Sibu** 60.24 233 P P 04 52 16.0 +0.9
comp=Z,984nmcomp=Z,54nm,1.1s,mb5.5
SMLA **Simla** 60.25 284 *i* P P 04 52 13.1 -2.0
THN **Thein Dam** 60.27 286 *ex* x 04 52 12.1
LAO **LASA Array** 60.30 52 *e*P P 04 52 15.7 +0.6
comp=Z,150nm,1.0s,mb6.0
VES **Vestal, Richgr** 60.37 69 ⇑P P 04 52 14.8 -1.0
baz=60,SNR=19
R10A **Warm Springs** 60.39 65 ⇑P P 04 52 15.7 -0.1
baz=60,SNR=23
Q11A **Duckwater** 60.40 64 ⇑P P 04 52 15.6 -0.3
baz=60,SNR=23
P12A **McGill** 60.41 63 ⇓P P 04 52 16.4 +0.4
baz=60,SNR=37
I18A **Diamond G Ranc** 60.42 56 ⇑P P 04 52 16.9 +0.8
baz=60,SNR=23
K17A **Gardner Place,** 60.46 58 ⇓P P 04 52 16.6 +0.3
baz=60
S10A **Tonopah Range,** 60.46 65 ⇓P P 04 52 16.3 0.0
baz=60,SNR=44
N14A **Grayback Hills** 60.47 61 ⇑P P 04 52 16.6 +0.2
baz=60,SNR=32
M15A **Larsen Ranch,** 60.48 60 ⇑P P 04 52 16.5 +0.1
baz=60,SNR=57
O13A **Hicks Ranch, I** 60.50 62 ⇑P P 04 52 16.8 +0.2
baz=60,SNR=11
BGU **Big Grassy Mou** 60.51 61 *e*P P 04 52 16.9 +0.3
comp=Z,14nm,1.0s,mb4.9
BHK **Bhakra** 60.53 285 *ex* x 04 52 12.6
CWC **Cottonwood Cre** 60.58 67 ⇓P P 04 52 16.9 -0.2
baz=60
SPUT **South Promonto** 60.58 60 *e*P P 04 52 17.7 +0.6
comp=Z,95nm,1.4s,mb5.6
GRAC **Grapevine Rang** 60.62 66 ⇓P P 04 52 17.7 +0.2
baz=60,SNR=15
J18A **Kendall Valley** 60.64 57 ⇑P P 04 52 17.7 +0.2
baz=60,SNR=26
L16A **Fish Haven** 60.67 59 ⇑P P 04 52 17.8 +0.1
baz=60
MOR8 **Moi Rana** 60.68 343 *e*P P
MOR8 AMB AMB 04 52 17.9
comp=Z,54nm,0.9s,mb5.6
Q12A **Willow Creek R** 60.74 63 ⇑P P 04 52 18.4 +0.2
baz=60,SNR=25
R11A **Troy Canyon, C** 60.77 64 ⇑P P 04 52 18.2 -0.2
baz=61
N15A **Stansbury Isla** 60.82 60 ⇑P P 04 52 18.7 -0.1
baz=61,SNR=24
ISA **Isabella** 60.86 68 ⇓P P 04 52 18.4 -0.7
baz=61,SNR=15
ISA **Isabella** 60.86 68 *e*P P 04 52 18.0 -1.1
comp=Z,29nm,1.0s,mb5.3
ISA **Isabella** 60.86 68 *e*P P
ISA pmax pmax
comp=Z,29nm,1.0s,mb5.3
HWUT **Hardware Ranch** 60.87 59 *e*P P 04 52 19.6 +0.5
comp=Z,63nm,1.1s,mb5.6
L17A **Cokeville** 60.92 58 ⇓P P 04 52 19.6 +0.1
baz=61,SNR=17
P13A **Bates Ranch, G** 60.93 62 ⇑P P 04 52 19.6 +0.1
baz=61,SNR=38
SBC **Santa Barbara** 60.93 70 ⇓P P 04 52 19.3 -0.3
baz=61
ARVC **Arvin** 61.01 69 ⇑P P 04 52 19.7 -0.4
baz=61,SNR=8.7
KDI **Kendari** 61.01 219 P P 04 52 19.6 -0.7
comp=Z,102nmcomp=Z,40nm,1.1s,mb5.4
K18A **Toltan Ranch,** 61.02 57 ⇓P P 04 52 20.6 +0.5
baz=61,SNR=42
DUG **Dugway** 61.12 61 ⇓P P 04 52 21.0 +0.2
baz=61,SNR=53
DUG **Dugway** 61.12 61 *e*P P 04 52 21.1 +0.3
comp=Z,74nm,1.2s,mb5.6
DUG **Dugway** 61.12 61 *e*P P 04 52 21.1 +0.3
DUG pmax pmax
comp=Z,74nm,1.2s,mb5.6
S11A **Rachel** 61.15 65 ⇑P P 04 52 21.0 0.0
baz=61,SNR=35
MPMC **Manual Prospec** 61.18 67 ⇓P P 04 52 21.0 -0.3
baz=61,SNR=41
BW06 **Boulder Array** 61.19 57 ⇓P P 04 52 21.4 +0.1
baz=61,SNR=78
BW06 **Boulder Array** 61.19 57 *e*P P 04 52 21.3 +0.1
comp=Z,88nm,1.1s,mb5.7
BW06 *e* 04 52 34.7
O15A **The Old Anders** 61.26 61 ⇑P P 04 52 21.8 0.0
baz=61
Q13A **Wheeler Ranch,** 61.27 63 ⇑P P 04 52 22.1 +0.2
baz=61,SNR=67
FURC **Furnace Creek,** 61.28 67 ⇑P P 04 52 21.7 -0.2
baz=61,SNR=20
BSC **Santa Cruz Isl** 61.29 70 ⇓P P 04 52 21.4 -0.6
baz=61
R12A **Pony Springs,** 61.35 64 ⇓P P 04 52 22.4 0.0
baz=61,SNR=16
P14A **Drum Mountains** 61.38 62 ⇓P P 04 52 22.7 +0.1
baz=61,SNR=45
OSI **Osito Adit** 61.42 69 ⇑P P 04 52 22.6 -0.3
baz=61,SNR=6.0
N16A **Rees Ranch, Co** 61.43 60 ⇓P P 04 52 23.0 +0.1
baz=61,SNR=8.3
LRMC **Laurel Mountai** 61.46 68 ⇑P P 04 52 22.9 -0.3
baz=61,SNR=9.7
M17A **Scelys Gap (B** 61.46 59 ⇓P P 04 52 23.0 -0.1
baz=61,SNR=39
L18A **Fontenelle, Gr** 61.50 58 ⇓P P 04 52 23.6 +0.2
baz=61,SNR=17
KAF **Kangasniemi** 61.51 336 *e*P P 04 52 19.9 -3.2
KAF pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
KAF **Kangasniemi** 61.51 336 *ep* P 04 52 19.9 -3.2
comp=Z,4.8nm,0.4s,mb4.9
K19A **Absolon Red Bu** 61.54 57 ⇑P P 04 52 23.3 -0.2
baz=61,SNR=21
BLG **Laguna Peak** 61.55 70 ⇑P P 04 52 23.2 -0.7
baz=61
JLU **Jordanelle** 61.61 60 *e*P P 04 52 24.3 +0.2
comp=Z,85nm,1.5s,mb5.5
U10A **Ash Meadows, A** 61.63 66 ⇓P P 04 52 24.3 0.0
baz=61,SNR=16
Q14A **Sevier Lake (B** 61.67 62 ⇓P P 04 52 24.4 -0.2
baz=62,SNR=56
EDW2 **Edwards Air Fo** 61.68 69 ⇑P P 04 52 24.1 -0.5
baz=62,SNR=40
S12A **Delamar Landin** 61.70 64 ⇓P P 04 52 24.8 +0.1
baz=62,SNR=65
NLU **North Lily Min** 61.70 61 *e*P P 04 52 25.2 +0.5
comp=Z,33nm,0.9s,mb5.4
N17A **Moffit Pass** 61.73 59 ⇓P P 04 52 25.0 +0.2
baz=62,SNR=22
T11A **Corn Creek, Al** 61.73 65 ⇑P P 04 52 24.8 -0.1
baz=62,SNR=77
L19A **Farson** 61.75 57 ⇓P P 04 52 25.1 0.0
baz=62,SNR=12
R13A **O'Grain Ranch,** 61.82 63 ⇓P P 04 52 25.6 +0.1
baz=62,SNR=27
M18A **Lyman** 61.82 58 ⇑P P 04 52 25.4 -0.1
baz=62,SNR=16
P15A **Leamington** 61.85 61 ⇓P P 04 52 25.6 -0.1
baz=62
DAU **Daniels Canyon** 61.85 60 *e*P P 04 52 26.4 +0.7
comp=Z,67nm,1.2s,mb5.5
DAU **Daniels Canyon** 61.85 60 *e*P P 04 52 26.4 +0.7
DAU pmax pmax
comp=Z,67nm,1.2s,mb5.5
O16A **Springville** 61.85 60 ⇑P P 04 52 26.2 +0.4
baz=62,SNR=21
NDI **New Delhi** 61.90 282 *e*PKP P 04 52 25.0 -1.2
NDI *e*PKP 04 52 26.0
NDI AMb AMB 04 52 28.4
comp=Z,199nm,2.0s,mb5.8
DECC **Green Verdugo** 61.90 69 ⇓P P 04 52 25.5 -0.7
baz=62
K20A **Yellowstone Ra** 61.92 56 ⇑P P 04 52 25.6 -0.6
baz=62,SNR=18
SHOC **Shoshone** 62.01 67 ⇑P P 04 52 26.6 -0.3
baz=62,SNR=7.3
PASC **Pasadena Art C** 62.05 69 *e*P P 04 52 26.4 -0.7
comp=Z,281nm,1.3s,mb6.1
KSM **Kuching** 62.07 235 *e*P P 04 52 28.9 +1.4
KSM **Kuching** 62.07 235 P P 04 52 29.1 +1.7
KSM **Kuching** 62.07 235 P P 04 52 29.0 +1.6
comp=Z,859nmcomp=Z,58nm,1.7s,mb5.3
MWC **Mount Wilson** 62.09 69 *e*P P 04 52 26.9 -0.5
comp=Z,140nm,1.3s,mb5.8
MWC **Mount Wilson** 62.09 69 *e*P P 04 52 26.9 -0.5
MWC pmax pmax
comp=Z,140nm,1.3s,mb5.8
GSC **Goldstone** 62.11 68 ⇑P P 04 52 27.0 -0.5
baz=62,SNR=30
GSC **Goldstone** 62.11 68 *e*P P 04 52 26.9 -0.6
comp=Z,42nm,0.9s,mb5.5
GSC **Goldstone** 62.11 68 *e*P P 04 52 26.9 -0.6
GSC pmax pmax
comp=Z,42nm,0.9s,mb5.5
FINES **FINESS Array B** 62.13 336 P P 04 52 26.1 -1.1
comp=Z,33nm,0.9s,mb5.3,baz=31,slow=8.1,SNR=95
FINES LR LR 05 23 02.7
comp=Z,2μm,18.9s,baz=182,slow=40
FINES **FINESS Array B** 62.13 336 P P 04 52 26.2 -1.0
FINES pmax pmax
comp=Z,33nm,0.9s
FINES MLR MLR
comp=Z,2μm,18.9s
P16A **Fountain Green** 62.17 61 ⇓P P 04 52 28.3 +0.5
baz=62
Q15A **Fillmore** 62.18 62 ⇑P P 04 52 28.0 +0.1
baz=62,SNR=19
U11A **Corn Creek** 62.19 66 ⇑P P 04 52 28.3 +0.2
baz=62,SNR=15
M19A **Rock Springs** 62.27 58 ⇑P P 04 52 28.4 -0.1
baz=62,SNR=6.0
RRX **Edison Barstow** 62.28 68 ⇓P P 04 52 28.2 -0.5
baz=62
R14A **James Farms, M** 62.29 63 ⇓P P 04 52 28.1 -0.6
baz=62
O17A **Robinson Place** 62.29 60 ⇓P P 04 52 29.1 +0.4
baz=62,SNR=33
S13A **Holt Ranch, En** 62.29 64 ⇑P P 04 52 28.6 -0.1
baz=62,SNR=53
FMP **Fort Macarthur** 62.29 70 ⇑P P 04 52 28.2 -0.6
baz=62
BFSC **Mount Baldy Ra** 62.32 69 ⇑P P 04 52 28.3 -0.7
baz=62,SNR=15
N18A **Larsen Ranch,** 62.35 59 ⇑P P 04 52 28.3 -0.7
baz=62,SNR=27
L20A **Wamsutter** 62.37 57 ⇓P P 04 52 29.1 0.0
baz=62,SNR=23
T12A **Moapa** 62.38 65 ⇑P P 04 52 29.4 +0.2
baz=62
ARUT **Antelope Range** 62.39 63 *e*P P 04 52 29.5 +0.1
comp=Z,36nm,0.9s,mb5.4
ARUT **Antelope Range** 62.39 63 *e*P P 04 52 29.5 +0.1
ARUT pmax pmax
comp=Z,36nm,0.9s,mb5.4
CIS **Catalina Islan** 62.44 70 ⇑P P 04 52 28.6 -1.1
baz=62
TUQ **Turquoise Moun** 62.54 67 ⇓P P 04 52 29.8 -0.5
baz=62,SNR=17
V11A **Goodsprings** 62.56 66 ⇑P P 04 52 30.3 -0.2
baz=62,SNR=38
S14A **Cedar City** 62.57 63 ⇑P P 04 52 30.4 -0.1
baz=62,SNR=16
CCUT **Cedar City** 62.60 64 *e*P P 04 52 31.1 +0.3
comp=Z,41nm,1.1s,mb5.3
MSU **Marysvale** 62.62 62 *e*P P 04 52 31.5 +0.6
comp=Z,114nm,1.6s,mb5.5
MSU **Marysvale** 62.62 62 *e*P P 04 52 31.5 +0.6
MSU pmax pmax
comp=Z,114nm,1.6s,mb5.5
TMUT **Trail Mountain** 62.64 61 *e*P P 04 52 31.5 +0.5
comp=Z,32nm,0.7s,mb5.4
SCI **San Clemente I** 62.64 71 ⇓P P 04 52 30.9 -0.2
baz=62
O18A **Roosevelt** 62.65 59 ⇓P P 04 52 31.7 +0.7
baz=62,SNR=43
N19A **John Jarvie Ra** 62.68 58 ⇓P P 04 52 31.3 +0.1
baz=62,SNR=16
U12A **Valley of Fire** 62.68 65 ⇑P P 04 52 31.3 0.0
baz=62,SNR=11
HEC **Hector,Ludlow** 62.71 68 ⇑P P 04 52 31.2 -0.4
baz=62,SNR=12
BBRC **Big Bear Solar** 62.75 68 ⇓P P 04 52 31.6 -0.2
baz=63,SNR=6.2
ULM **Lac du Bonnet** 62.76 43 *e*P P 04 52 30.7 -0.9
comp=Z,18nm,0.8s,mb5.0
ULM **Lac du Bonnet** 62.76 43 P P 04 52 30.9 -0.7
comp=Z,15nm,0.9s,mb4.9,baz=307,slow=6.2,SNR=9.7
ULM LR LR 05 21 47.6
comp=Z,555nm,20.8s,baz=160,slow=38
R15A **Junction** 62.77 62 ⇑P P 04 52 32.2 +0.3
baz=63,SNR=7.3
P17A **Butcher Ranch,** 62.78 60 ⇑P P 04 52 32.1 +0.1
baz=63,SNR=15
M20A **Sweetwater, Wa** 62.81 57 ⇓P P 04 52 32.2 +0.1
baz=63,SNR=22
KTGM **Kuala Trenggan** 62.87 244 P P 04 52 35.6 +2.8
KBL **Kabul** 62.92 292 *e*P P 04 52 31.5 -1.4
comp=Z,170nm,1.3s,mb5.8
KBL **Kabul** 62.92 292 *e*P P 04 52 31.5 -1.4
KBL pmax pmax
comp=Z,170nm,1.3s,mb5.8
L21A **Rawlins** 62.92 56 ⇓P P 04 52 32.5 -0.4
baz=63,SNR=42
P18A **Preston Nutter** 62.95 60 ⇑P P 04 52 33.3 +0.2
baz=63,SNR=29
V12A **Nelson** 62.98 66 ⇑P P 04 52 33.1 -0.1
baz=63,SNR=38
MURC **Murrieta** 63.03 69 ⇓P P 04 52 33.1 -0.6
baz=63,SNR=20
MOS **Moscow** 63.08 326 *e*P P 04 52 31.1 -2.5
MOS *e**PP pP 04 52 54.7 -0.3
MOS *e* 04 52 50.8
MOS *e*S S 05 00 54.5 -3.0
MOS *e* 05 02 15.2
MOS pmax pmax
comp=Z,400nm,1.6s,mb6.1
MOS pmax pmax
comp=Z,168nm,1.4s,mb5.8
MOS MLR MLR
comp=Z,2μm,25.0s
S15A **Panguitch** 63.09 63 ⇑P P 04 52 34.5 +0.5
baz=63,SNR=30
T14A **Hurricane** 63.10 64 ⇓P P 04 52 34.2 +0.1
baz=63,SNR=56
O19A **Miners Draw (B** 63.12 59 ⇑P P 04 52 33.9 -0.2
baz=63,SNR=20
GMRC **Granite Mounta** 63.15 67 ⇑P P 04 52 34.2 -0.2
baz=63,SNR=50
SRU **San Rafael** 63.15 61 ⇓P P 04 52 34.5 +0.1
baz=63,SNR=80
SRU **San Rafael** 63.15 61 *e*P P 04 52 34.4 0.0
comp=Z,78nm,0.9s,mb5.6
SRU **San Rafael** 63.15 61 *e*P P 04 52 34.4 0.0
SRU pmax pmax
comp=Z,78nm,0.9s,mb5.6
M21A **Separation Pea** 63.17 57 ⇑P P 04 52 34.3 -0.2
baz=63,SNR=25
R16A **Teasdale** 63.18 62 ⇓P P 04 52 35.2 +0.6
baz=63,SNR=86
RSSD **Black Hills** 63.18 53 *e*P P 04 52 34.4 -0.1
comp=Z,94nm,1.0s,mb5.7
RSSD **Black Hills** 63.18 53 *e*P P 04 52 34.4 -0.1
RSSD pmax pmax
comp=Z,94nm,1.0s,mb5.7
RWWY **Rawlins** 63.20 56 *e*P P 04 52 34.5 -0.1
comp=Z,42nm,0.8s,mb5.4
N20A **Spence Gulch,** 63.22 58 ⇑P P 04 52 35.3 +0.5
baz=63,SNR=60
W12A **Cal Nev Ari** 63.26 66 ⇓P P 04 52 34.9 -0.3
baz=63
Q18A **Rafter H Ranch** 63.38 60 ⇑P P 04 52 35.4 -0.4
baz=63,SNR=22
L22A **Ellis Ranch, M** 63.38 56 ⇓P P 04 52 36.2 +0.4
baz=63
V13A **Grand Canyon W** 63.40 65 ⇑P P 04 52 36.0 -0.1
baz=63,SNR=79
PFO **Pinyon Flat Ob** 63.48 69 ⇑P P 04 52 35.7 -0.9
baz=63,SNR=17
PFO **Pinyon Flat Ob** 63.48 69 *e*P P 04 52 36.0 -0.6
comp=Z,75nm,1.5s,mb5.4
PFO **Pinyon Flat Ob** 63.48 69 *e*P P 04 52 36.0 -0.6
PFO pmax pmax
comp=Z,75nm,1.5s,mb5.4
BELC **Belle Mtn. Jos** 63.48 68 ⇑P P 04 52 35.6 -1.0
baz=63,SNR=24
U14A **Mt Trumbull** 63.48 64 ⇑P P 04 52 36.7 +0.1
baz=63,SNR=77
S16A **Weppner Ranch,** 63.50 62 ⇓P P 04 52 37.1 +0.4
baz=63,SNR=99
R17A **Hanksville Air** 63.52 61 ⇓P P 04 52 36.4 -0.4
baz=63,SNR=60
T15A **Red Dirt Ranch** 63.53 63 ⇓P P 04 52 36.9 0.0
baz=63,SNR=34
109C **Camp Elliot, M** 63.58 70 ⇑P P 04 52 36.5 -0.8
baz=63,SNR=10
P19A **Cripple Cowboy** 63.66 59 ⇓P P 04 52 37.6 -0.1
baz=63,SNR=45
N21A **Black Mountain** 63.68 57 ⇑P P 04 52 37.6 -0.3
baz=63,SNR=19
O20A **White River Ci** 63.72 58 ⇑P P 04 52 38.1 0.0
baz=64,SNR=20
M22A **Cedar Creek Ra** 63.73 56 ⇑P P 04 52 37.9 -0.3
baz=64,SNR=38
NEE2 **Needles Airpor** 63.78 67 ⇑P P 04 52 37.7 -0.9
baz=64
IRM **Iron Mountain** 63.88 67 ⇓P P 04 52 38.9 -0.4

baz=64,SNR=40
OBN **Obninsk** 63.95 326 P P 04 52 38.7 -0.6
comp=Z,637nm,1.1s,mb6.4,SNR=7.1
OBN **Obninsk** 63.95 326 *e*P P 04 52 38.5 -0.9
comp=Z,147nm,1.1s,mb5.7
OBN **Obninsk** 63.95 326⇑ *e*P P 04 52 37.6 -1.7
OBN *e* 04 54 58.7
OBN *i* S S 05 01 01.6 -6.7
OBN pmax pmax
comp=Z,221nm,1.7s,mb5.7
OBN MLR MLR
comp=Z,1μm,23.0s
Q19A **Hogan Spring (** 63.97 60 ⇓P P 04 52 39.2 -0.5
baz=64,SNR=65
W13A **Hualapai Mount** 63.98 66 ⇓P P 04 52 39.8 -0.1
baz=64,SNR=36
BAR **Barrett** 63.99 70 *e*P P 04 52 39.3 -0.7
comp=Z,29nm,1.1s,mb5.0
U15A **North Rim** 63.99 64 ⇑P P 04 52 40.0 0.0
baz=64,SNR=46
MONP **Monument Peak** 63.99 69 ⇓P P 04 52 39.3 -0.7
baz=64,SNR=15
R18A **Canyonlands Na** 64.01 61 ⇑P P 04 52 39.6 -0.4
baz=64,SNR=75
S17A **Black Ridge (B** 64.02 62 ⇑P P 04 52 40.0 -0.1
baz=64,SNR=144
BC3 **Big Chuckawall** 64.05 68 ⇓P P 04 52 39.5 -0.8
baz=64,SNR=26
T16A **Glen Canyon Da** 64.06 63 ⇑P P 04 52 39.6 -0.8
baz=64
V14A **Boquillas Ranc** 64.07 65 ⇑P P 04 52 40.6 +0.1
baz=64,SNR=81
P20A **De Beque** 64.08 59 ⇑P P 04 52 40.0 -0.5
baz=64,SNR=25
O21A **Pagoda** 64.08 58 ⇑P P 04 52 40.3 -0.2
baz=64,SNR=20
AGMN **Agassiz Nation** 64.18 45 *e*P P 04 52 40.4 -0.6
comp=Z,55nm,1.2s,mb5.3
N22A **Wattenberg Ran** 64.23 57 ⇑P P 04 52 42.0 +0.6
baz=64,SNR=27
SWSC **Sam W. Stewart** 64.34 69 ⇓P P 04 52 41.6 -0.6
baz=64
DVTC **Desert V Tower** 64.35 69 ⇑P P 04 52 42.1 -0.3
baz=64
KULM **Kulim** 64.35 246 *e*P P 04 52 42.6 0.0
comp=Z,76nm,0.8s,mb5.6
KULM **Kulim** 64.35 246 P P 04 52 45.4 +2.9
KULM **Kulim** 64.35 246 P P 04 52 43.6 +1.0
comp=Z,833nmcomp=Z,98nm,0.9s,mb5.7
X13A **Yucca** 64.36 66 ⇓P P 04 52 41.9 -0.5
baz=64,SNR=58
W14A **Seligman** 64.37 65 ⇑P P 04 52 42.4 -0.1
baz=64,SNR=66
R19A **Curley Farm, L** 64.43 60 ⇑P P 04 52 42.5 -0.3
baz=64,SNR=38
S18A **Hurst Farm, Bl** 64.44 61 ⇓P P 04 52 42.3 -0.6
baz=64,SNR=83
N23A **Red Feather La** 64.44 56 ⇑P P 04 52 43.0 +0.1
baz=64,SNR=37
T17A **Navajo Res., N** 64.46 62 ⇑P P 04 52 42.2 -0.8
baz=64,SNR=23
V15A **Kaibab Nationa** 64.48 64 ⇓P P 04 52 43.6 +0.4
baz=64,SNR=80
Q20A **Ridgley Place,** 64.51 59 ⇑P P 04 52 42.9 -0.4
baz=64,SNR=27
PV04 **Paradox Valley** 64.56 60 *e*P P 04 52 43.7 0.0
PV04 *e* 04 52 57.3
P21A **Newcastle** 64.58 58 ⇓P P 04 52 44.0 +0.3
baz=64,SNR=40
COEN **Coen** 64.60 194 *e*P P 04 52 43.4 -0.6
COEN *e*pP pP 04 53 05.4 0.0
COEN *e*S S 05 01 19.0 +2.0
COEN **Coen** 64.60 194 *e*P P 04 52 43.6 -0.3
comp=Z,235nm,0.8s,mb6.1
COEN *e* pP 04 53 06.7 +1.3
COEN **Coen** 64.60 194 P P 04 52 42.3 -1.7
comp=Z,3μmcomp=Z,179nm,0.8s,mb5.9
O22A **Kremmling** 64.63 57 ⇓P P 04 52 44.3 +0.3
baz=64,SNR=18
IPM **Ipoh** 64.78 245 P P 04 52 47.3 +1.9
IPM **Ipoh** 64.78 245 P P 04 52 46.1 +0.7
comp=Z,660nmcomp=Z,58nm,1.4s,mb5.2
U17A **Shonto** 64.82 63 ⇓P P 04 52 45.0 -0.4
baz=65,SNR=23
GLA **Glamis** 64.84 68 ⇓P P 04 52 45.3 -0.3
baz=65,SNR=19
GLA **Glamis** 64.84 68 *e*P P 04 52 45.5 -0.1
comp=Z,166nm,1.4s,mb5.7
GLA **Glamis** 64.84 68 *e*P P 04 52 45.5 -0.1
GLA pmax pmax
comp=Z,166nm,1.4s,mb5.7
U16A **Tuba City** 64.86 63 ⇑P P 04 52 45.7 +0.1
baz=65,SNR=40
W15A **Williams** 64.88 65 ⇓P P 04 52 46.4 +0.7
baz=65,SNR=20
S19A **Harvey Farm, M** 64.88 61 ⇑P P 04 52 45.4 -0.3
baz=65,SNR=101
T18A **Mexican Hat** 64.89 62 ⇓P P 04 52 45.1 -0.7
baz=65,SNR=33
Y13A **Salome** 64.91 67 ⇑P P 04 52 45.7 -0.3
baz=65
P22A **Eagle** 64.91 58 ⇑P P 04 52 46.0 +0.1
baz=65,SNR=46
PV01 **Paradox Valley** 64.93 60 *e*P P 04 52 46.2 +0.1
comp=Z,5μm,1.2s
O23A **Lake Granby, G** 64.93 57 ⇑P P 04 52 46.9 +0.8
baz=65,SNR=47
Q21A **Lamborn Mesa,** 64.99 59 ⇑P P 04 52 46.6 +0.1
baz=65,SNR=83
R20A **Redvale** 65.00 60 ⇓P P 04 52 46.7 +0.2
baz=65,SNR=35
X14A **Yava** 65.01 66 ⇑P P 04 52 46.6 0.0
baz=65,SNR=55
N24A **Carr** 65.06 56 ⇑P P 04 52 47.3 +0.5
baz=65,SNR=17
AJM **Ajmer** 65.06 282 *e*PKP P 04 52 46.5 -0.6
AJM AMb AMB 04 52 50.4
comp=Z,222nm,1.0s,mb5.9
SMCO **Snowmass** 65.08 58 *e*P P 04 52 47.3 +0.2
comp=Z,39nm,0.9s,mb5.2
VRHR **Novokhopersk** 65.11 321 *e*P P 04 52 45.0 -2.0
VRHR pmax pmax
comp=Z,100nm,0.7s,mb5.8
VRHR pmax pmax
comp=N,10.0nm,0.3s
VRHR pmax pmax
comp=E,8.0nm,0.3s
WUAZ **Wupatki** 65.16 64 ⇑P P 04 52 47.8 +0.2
baz=65,SNR=22
WUAZ **Wupatki** 65.16 64 *e*P P 04 52 48.0 +0.4
comp=E,93nm,1.3s,mb5.5
WUAZ *e* 04 53 01.6
Y14A **Wickenburg** 65.31 66 ⇓P P 04 52 48.3 -0.3
baz=65
MYKOM **Kota Tinggi** 65.33 241 P P 04 52 51.8 +2.8
MYKOM **Kota Tinggi** 65.33 241 P P 04 52 50.8 +1.9
comp=E,37nm,1.1s,mb5.1
R21A **Cimarron** 65.33 59 ⇑P P 04 52 49.1 +0.4
baz=65,SNR=114
Q22A **Crested Butte,** 65.34 59 ⇑P P 04 52 49.0 +0.3
baz=65,SNR=49
112A **Yuma** 65.35 68 ⇓P P 04 52 48.4 -0.5
baz=65
W16A **Flagstaff** 65.36 64 ⇓P P 04 52 49.2 +0.3
baz=65,SNR=9.6
X15A **Humboldt** 65.38 65 ⇑P P 04 52 49.1 +0.1
baz=65,SNR=88
ISCO **Idaho Springs** 65.39 57 *e*P P 04 52 49.5 +0.5
comp=E,112nm,1.3s,mb5.5
ISCO **Idaho Springs** 65.39 57 *e*P P 04 52 49.5 +0.5
ISCO pmax pmax
comp=Z,112nm,1.3s,mb5.5
U18A **Rough Rock, Ch** 65.40 62 ⇑P P 04 52 48.8 -0.3
baz=65,SNR=31
MMRI **Maumere** 65.42 218 P P 04 52 43.7 -5.7
comp=Z,112nm,0.9s,mb5.7
V17A **Tonalea, Kykot** 65.42 63 ⇑P P 04 52 49.9 +0.6
baz=65,SNR=138
FRIM **Kepong** 65.43 244 P P 04 52 52.6 +3.0
Z13A **Yuma Proving G** 65.44 67 ⇓P P 04 52 49.1 -0.3
baz=65,SNR=55
KGM **Kluang** 65.45 241 P P 04 52 52.5 +2.8
O24A **Longmont** 65.45 56 ⇓P P 04 52 50.1 +0.7
baz=65,SNR=17
N25A **Grover** 65.49 55 ⇑P P 04 52 50.1 +0.5
baz=65
P23A **Jefferson** 65.57 58 ⇑P P 04 52 50.8 +0.7
baz=65,SNR=19
BHPL **Bhopal** 65.59 278 *e*PKP P 04 52 50.2 -0.3
T19A **Beclabito** 65.59 61 ⇑P P 04 52 50.4 0.0
baz=65,SNR=34
MVCO **Mesa Verde** 65.62 61 ⇑P P 04 52 50.5 -0.1
baz=65,SNR=38
MVCO **Mesa Verde** 65.62 61 *e*P P 04 52 50.4 -0.2
comp=Z,141nm,1.5s,mb5.6
113A **Mohawk Valley,** 65.68 68 ⇓P P 04 52 50.2 -0.7
baz=66,SNR=15
Y15A **Casa Rosa Ranc** 65.70 66 ⇑P P 04 52 51.0 0.0
baz=66,SNR=54
BORG **Borgarnes** 65.72 359 *e*P P 04 52 52.4 +1.8
comp=Z,172nm,1.3s,mb5.7
BORG **Borgarnes** 65.72 359 *e*P P 04 52 52.4 +1.7
BORG pmax pmax
comp=Z,172nm,1.3s
Z14A **Wintersburg** 65.75 67 ⇓P P 04 52 50.7 -0.7
baz=66,SNR=8.0
VIS **Vishakhapatnam** 65.76 269 *e*PKP P 04 52 50.9 -0.8
KAKA **Kakadu** 65.76 206 *e*P P 04 52 50.4 -1.1
comp=Z,32nm,0.8s,mb5.2
KAKA **Kakadu** 65.76 206 *e*P P 04 52 50.6 -0.9
comp=Z,118nm,0.8s,mb5.8
KAKA **Kakadu** 65.76 206 P P 04 52 50.5 -1.0
comp=Z,658nmcomp=Z,69nm,0.8s,mb5.6
W17A **Winslow** 65.85 64 ⇑P P 04 52 51.9 -0.2
baz=66
V18A **Ganado** 65.86 63 ⇓P P 04 52 52.2 +0.2
baz=66,SNR=50
U19A **Dine' College,** 65.86 62 ⇓P P 04 52 52.6 +0.5
baz=66,SNR=32
R22A **Saguache, Gunn** 65.88 59 ⇑P P 04 52 53.0 +0.9
baz=66,SNR=56
X16A **Lo Mia Camp, P** 65.89 65 ⇑P P 04 52 52.6 +0.3
baz=66,SNR=59
Q23A **Hartsel** 65.90 58 ⇑P P 04 52 52.8 +0.5
baz=66,SNR=17
NB2 **NORSAR Subarra** 65.95 342 P P 04 52 51.2 -1.0
comp=Z,36nm,0.6s,mb5.4,baz=25,slow=6.9
NOA **NORSAR Array B** 65.95 342 P P 04 52 51.4 -0.8
NOA LR LR 05 27 34.3
NOA **NORSAR Array B** 65.95 342 P P 04 52 51.4 -0.8
comp=Z,28nm,0.7s,mb5.2,baz=25,slow=6.5,SNR=50
NOA LR LR 05 27 34.3
comp=Z,390nm,18.2s,baz=30,slow=41
O25A **Wiggins** 65.97 56 ⇓P P 04 52 52.7 0.0
baz=66
P24A **Kohler Place,** 65.97 57 ⇑P P 04 52 53.5 +0.8
baz=66,SNR=12
VSR **Storozhevoye** 66.00 322 *c i*P P 04 52 51.4 -1.3
VSR pmax pmax
comp=N,20nm,0.7s
VSR pmax pmax
comp=E,10.0nm,0.7s
VSR pmax pmax
comp=Z,60nm,0.7s,mb5.5
VSR MLR MLR
comp=N,530nm,18.0s
VSR MLR MLR
comp=E,530nm,18.0s
VSR MLR MLR
comp=Z,1μm,18.0s
VORD **Divnogorie** 66.15 322 *e*P P 04 52 53.4 -0.3
VORD pmax pmax
comp=E,20nm,0.7s
VORD pmax pmax
comp=Z,50nm,0.7s,mb5.5
VORD pmax pmax
comp=N,20nm,0.3s
VORD MLR MLR
comp=N,510nm,16.0s
VORD MLR MLR
comp=E,450nm,16.0s
VORD MLR MLR
comp=Z,850nm,16.0s
S22A **4UR Ranch, Cre** 66.18 59 ⇓P P 04 52 54.5 +0.4
baz=66,SNR=52
U20A **Newcomb** 66.20 61 ⇑P P 04 52 54.3 0.0
baz=66
114A **Black Gap (USA** 66.22 67 ⇓P P 04 52 54.1 -0.3
baz=66,SNR=34
Q24A **Divide** 66.24 57 ⇑P P 04 52 54.4 -0.1
baz=66,SNR=13
Y16A **Circle Bar Ran** 66.25 65 ⇑P P 04 52 54.9 +0.2
baz=66,SNR=24
HFA0 **Hagfors New Ar** 66.26 341 P P 04 52 53.0 -1.2
Z15A **Gila River Ind** 66.27 66 ⇓P P 04 52 53.8 -0.9
baz=66,SNR=10.0
T21A **Navajo Lake** 66.32 60 ⇑P P 04 52 55.2 +0.2
baz=66,SNR=11
X17A **Forest Lakes** 66.32 64 ⇑P P 04 52 55.5 +0.5
baz=66,SNR=26
V19A **Window Rock** 66.37 62 ⇑P P 04 52 55.6 +0.3
baz=66,SNR=32
P25A **Willow Gulch B** 66.38 56 ⇓P P 04 52 55.8 +0.4
baz=66,SNR=38
W18A **Petrified Fore** 66.39 63 ⇓P P 04 52 55.7 +0.2
baz=66,SNR=5.8
EYMN **Ely** 66.40 43 *e*P P 04 52 54.6 -0.7
comp=Z,46nm,0.8s,mb5.4
OGNE **Ogallala** 66.48 54 *e*P P 04 52 56.4 +0.4
comp=Z,235nm,1.1s,mb5.9
FOO **Floro** 66.54 346 *e*P P 04 52 55.2 -0.8
FOO *e*S S 05 01 40.1 +0.4
W19A **Sanders** 66.60 63 ⇑P P 04 52 57.3 +0.5
baz=66,SNR=46
V20A **Brimhall** 66.64 62 ⇓P P 04 52 57.0 0.0
baz=66,SNR=13
115A **Sonoran Desert** 66.64 67 ⇑P P 04 52 57.3 +0.2
baz=66,SNR=30
U21A **Nageezi** 66.65 61 ⇓P P 04 52 57.0 -0.1
baz=66,SNR=50
T22A **Edith** 66.66 60 ⇑P P 04 52 57.8 +0.6
baz=66,SNR=50
Z16A **Peralta Trail,** 66.66 66 ⇓P P 04 52 57.0 -0.3
baz=66,SNR=20
S23A **Nye Farm, Mont** 66.67 59 ⇑P P 04 52 57.8 +0.6
baz=66,SNR=12
X18A **Snowflake** 66.69 64 ⇓P P 04 52 57.8 +0.4
baz=66,SNR=29
Y17A **Roosevelt** 66.75 65 ⇓P P 04 52 57.8 0.0
baz=67,SNR=49
HYA **Hoyanger** 66.76 345 *e*P P 04 52 58.0 +0.6
Q25A **Bedland, Calha** 66.76 57 ⇑P P 04 52 57.9 +0.1
baz=66,SNR=31
R24A **Sanders Place,** 66.78 58 ⇓P P 04 52 58.1 +0.1
baz=66,SNR=36
214A **Organ Pipe Nat** 66.82 68 ⇓P P 04 52 57.7 -0.5
baz=67,SNR=23
ABKT **Ailbek** 66.84 302 P P 04 52 58.4 +0.1
comp=Z,547nm,0.9s,mb6.4,SNR=14
SDCO **Great Sand Dun** 66.91 59 *e*P P 04 52 59.0 +0.3
comp=Z,72nm,1.5s,mb5.3
116A **Eloy** 67.05 66 ⇓P P 04 52 59.6 -0.1
baz=67,SNR=17
W20A **Ramah** 67.10 62 ⇑P P 04 52 59.8 -0.2
baz=67,SNR=42
V21A **Milan** 67.11 61 ⇑P P 04 52 59.9 -0.1
baz=67,SNR=9.0
T23A **Casias Ranch,** 67.12 59 ⇑P P 04 53 00.1 0.0
baz=67,SNR=14
U22A **Llaves** 67.14 60 ⇓P P 04 53 00.3 +0.1
baz=67,SNR=41
X19A **St. Johns** 67.14 63 ⇓P P 04 53 00.5 +0.2
baz=67,SNR=62
S24A **Houchin Ranch,** 67.15 58 ⇑P P 04 53 00.5 +0.2
baz=67,SNR=30
ECSD **EROS Data Cent** 67.18 49 *e*P P 04 52 59.4 -0.9
comp=Z,58nm,0.8s,mb5.5
ECSD *e* 04 53 12.2
Z17A **San Carlos Hig** 67.25 65 ⇑P P 04 53 01.3 +0.2
baz=67,SNR=15
MICGM **Minsk** 67.40 330 *e*P P 04 53 01.0 -0.5
NACGM **Naroch** 67.41 331 *e*P P 04 53 01.0 -0.6
MNK **Minsk** 67.41 330 *e*P P 04 53 01.0 -0.6
MNK pmax pmax
comp=Z,500nm,1.0s,mb6.3
V22A **San Miguel Ran** 67.44 61 ⇑P P 04 53 02.2 0.0
baz=67,SNR=26
Y19A **Nutrioso** 67.50 64 ⇓P P 04 53 03.3 +0.8
baz=67,SNR=51
X20A **Quemado** 67.52 63 ⇑P P 04 53 03.2 +0.5
baz=67,SNR=63
U23A **El Rito** 67.55 60 ⇑P P 04 53 03.1 +0.3
baz=67,SNR=74
KONO **Kongsberg** 67.55 342 *e*P P 04 53 02.7 +0.3
KONO *e*S S 05 01 52.1 +0.1
comp=Z,130nm,1.4s,mb5.6
KONO **Kongsberg** 67.55 342 *e*P P 04 53 02.2 -0.2
KONO pmax pmax
comp=Z,130nm,1.4s,mb5.6
S25A **Robets Cordova** 67.56 58 ⇑P P 04 53 02.4 -0.5
baz=67,SNR=24
W21A **San Fidel** 67.59 62 ⇑P P 04 53 02.8 -0.3
baz=67
216A **Three Points,** 67.59 67 ⇑P P 04 53 02.9 -0.3
baz=67,SNR=8.6
117A **Oracle** 67.61 66 ⇑P P 04 53 03.1 -0.2
baz=67,SNR=31
BER **Bergen** 67.64 345 *e*P P 04 53 03.0 +0.1
BER *e*S S 05 01 54.8 +1.8
Z18A **Geronimo** 67.66 65 ⇑P P 04 53 03.7 +0.2
baz=68,SNR=13
AKL **Akola** 67.67 276 *e*PKP P 04 53 04.2 +0.4
TUC **Tucson** 67.78 66 *e*P P 04 53 04.0 -0.3
comp=Z,36nm,1.2s,mb5.1
TUC **Tucson** 67.78 66 *e*P P 04 53 04.0 -0.3
TUC pmax pmax
comp=Z,36nm,1.2s,mb5.1
T25A **Trinidad** 67.95 58 ⇓P P 04 53 05.4 +0.1
baz=68,SNR=57
Z19A **T-Link Ranch,** 67.96 64 ⇓P P 04 53 05.6 +0.1
baz=68,SNR=14
V23A **Ortiz Mt. (NFS** 67.97 60 ⇓P P 04 53 06.4 +0.9
baz=68,SNR=52
KHKI **Kahang-Kahang** 67.98 224 P P 04 53 04.9 -0.8
comp=Z,76nm,0.9s,mb5.5
X21A **Alamocita Cree** 67.99 62 ⇓P P 04 53 06.1 +0.4
baz=68,SNR=71
U24A **Moreno Valley** 68.00 59 ⇑P P 04 53 06.3 +0.7
baz=68,SNR=13
118A **Homack Ranch,** 68.02 65 ⇓P P 04 53 05.9 +0.1
baz=68
TPTI 68.03 248 P P 04 53 04.4 -1.7
comp=Z,26nm,0.9s,mb5.0
Y20A **Horse Springs,** 68.04 63 ⇓P P 04 53 06.5 +0.5
baz=68,SNR=51
W22A **Albuquerque** 68.07 61 ⇑P P 04 53 06.4 +0.3
baz=68
BKNI **Bangkinang** 68.13 242 P P 04 53 08.1 +1.4
comp=Z,322nm,1.2s,mb6.0
217A **Green Valley** 68.14 66 ⇑P P 04 53 06.5 0.0
baz=68,SNR=10
119A **Ashpeak Ranch,** 68.32 65 ⇑P P 04 53 07.6 -0.1
baz=68,SNR=14
Y21A **Point of Rocks** 68.37 63 ⇓P P 04 53 08.5 +0.5
baz=68,SNR=22
ANMO **Albuquerque** 68.39 61 *e*P P 04 53 08.3 +0.2
comp=Z,27nm,1.1s,mb5.0
ANMO *e* 04 53 21.6
ANMO **Albuquerque** 68.39 61 *e*P P 04 53 08.3 +0.2
ANMO pmax pmax
comp=Z,27nm,1.1s
X22A **Bernardo** 68.39 62 ⇑P P 04 53 08.8 +0.7
baz=68
LAZ **Ladron** 68.39 62 *e*P P 04 53 08.9 +0.7
comp=Z,38nm,1.3s,mb5.1
W23A **Werner Place,** 68.41 61 ⇑P P 04 53 08.3 +0.1
baz=68,SNR=17
218A **Dragoon** 68.45 66 ⇓P P 04 53 08.7 +0.2
baz=68,SNR=59
Z20A **Nine Sixteen R** 68.48 64 ⇓P P 04 53 09.0 +0.3
baz=68,SNR=19
U25A **Circle Dot Ran** 68.49 59 ⇑P P 04 53 08.5 -0.2
baz=68,SNR=47
V24A **Rampart Ranch,** 68.50 60 ⇓P P 04 53 09.1 +0.4
baz=68,SNR=43
MAK **Makhachkala** 68.65 312 *e*P P 04 53 08.8 -0.8
MAK *e* pP 04 53 33.2 +2.0
MAK *e* 04 55 40.4
MAK *e*PPP 04 57 18.9
MAK *e*S S 05 02 03.6 -2.0
MAK *e* 05 02 57.5
MAK pmax pmax
comp=Z,377nm,1.4s,mb6.0
LENM **Lemitar** 68.66 62 *e*P P 04 53 10.4 +0.6
comp=Z,47nm,1.5s,mb5.1
Y22D **IRIS PASSCAL I** 68.76 62 ⇓P P 04 53 10.5 +0.1
baz=68
V25A **Rancho No Teng** 68.78 59 ⇑P P 04 53 10.6 0.0
baz=69,SNR=43
W24A **Lazy 6 Ranch,** 68.79 60 ⇑P P 04 53 11.1 +0.5
baz=69,SNR=47
WAL1 **Walls** 68.80 348 *e*P P 04 53 09.7 -0.5
X23A **Hourglass Bar** 68.81 61 ⇓P P 04 53 11.1 +0.4
baz=69
Y22A **Socorro** 68.83 62 ⇑P P 04 53 11.1 +0.2
baz=69
COWI **Conover** 68.85 43 *e*P P 04 53 09.9 -0.8
comp=Z,16nm,0.7s,mb5.0
LRW **Lerwick** 68.86 348 *e*P P 04 53 09.5 -1.1
LRW AMb AMB 04 53 12.9
comp=Z,79nm,3.0s,mb5.0
U26A **Atchley Ranch,** 68.86 58 ⇑P P 04 53 10.7 -0.3
baz=69,SNR=23
318A **Bisbee** 68.87 66 ⇓P P 04 53 11.0 -0.1
baz=69,SNR=36
120A **U Bar Ranch, L** 68.87 64 ⇓P P 04 53 11.1 0.0
baz=69,SNR=41
BNM **Barren Site** 68.87 62 *e*P P 04 53 11.8 +0.7
comp=Z,53nm,1.5s,mb5.2
Z21A **St. Cloud Mine** 68.88 63 ⇓P P 04 53 11.5 +0.3
baz=69,SNR=34
219A **White Tail Can** 68.90 65 ⇑P P 04 53 11.3 0.0
baz=69
HYB **Hyderabad** 69.07 272 ⇑*i*P P 04 53 12.5 0.0
comp=Z,320nm,1.0s,mb6.1
HYB *e*pP pP 04 53 35.5 +1.3
PPI **Padang Panjang** 69.14 242 P P 04 53 13.3 +0.3
comp=Z,2μmcomp=Z,30nm,1.3s,mb5.0
SNART **Snartemo** 69.23 343 *e*P P 04 53 13.4 +0.5
SNART AMB AMB 04 53 15.7
comp=Z,96nm,1.0s,mb5.6
CBKS **Cedar Bluff** 69.24 54 *e*P P 04 53 12.2 -1.1
comp=Z,108nm,1.3s,mb5.5
CBKS **Cedar Bluff** 69.24 54 *e*P P 04 53 12.3 -1.0
CBKS pmax pmax
comp=Z,108nm,1.3s,mb5.5
X24A **Lazy VL Ranch,** 69.25 61 ⇓P P 04 53 13.7 +0.2
baz=69,SNR=45
SUW **Suwalki** 69.27 333 *e*P P 04 53 13.1 -0.1
SUW *e*S S 05 02 08.0 -4.5
SUW LMZ 05 24 35.5
comp=Z,2μm,24.2s
SUW **Suwalki** 69.27 333 *e*P P 04 53 13.1 -0.1
SUW *e*S S 05 02 07.9 -4.6
SUW MLR MLR
comp=Z,2μm,24.2s
V26A **Tequesquite Ra** 69.27 59 ⇑P P 04 53 13.4 -0.2
baz=69,SNR=15
W25A **X Bar L Ranch,** 69.32 60 ⇑P P 04 53 13.6 -0.3
baz=69,SNR=54
Z22A **Elephant Butte** 69.32 63 ⇑P P 04 53 14.1 +0.1
baz=69,SNR=49
319A **Douglas** 69.33 66 ⇓P P 04 53 14.0 0.0
baz=69,SNR=43
Y23A **Lovelace Mesa,** 69.36 62 ⇓P P 04 53 14.1 0.0
baz=69,SNR=35
121A **Cookes Peak, D** 69.37 64 ⇑P P 04 53 14.5 +0.2
baz=69,SNR=35
220A **Playas Peak, P** 69.39 65 ⇑P P 04 53 14.3 -0.1
baz=69,SNR=36
SCHQ **Schefferville** 69.58 25 *e*P P 04 53 15.3 +0.2
comp=Z,42nm,0.9s,mb5.3
SCHQ **Schefferville** 69.58 25 P P 04 53 14.9 -0.2
comp=Z,18nm,0.8s,mb4.9,baz=350,slow=5.6,SNR=24
SCHQ LR LR 05 27 42.9
comp=Z,446nm,21.9s,baz=337,slow=39
LATR **Latur** 69.63 275 *e*PKP P 04 53 14.8 -1.2
LATR *e*PKP 04 53 16.4
122A **Conniff Cattle** 69.71 63 ⇓P P 04 53 16.7 +0.4
baz=70,SNR=16
X25A **Clemmons Ranch** 69.71 60 ⇓P P 04 53 16.4 +0.1
baz=70
Y24A **Capitan** 69.71 61 ⇓P P 04 53 16.4 +0.1
baz=70,SNR=50
KNA **Kununurra** 69.72 208 P P 04 53 16.9 +0.5
comp=Z,726nmcomp=Z,80nm,1.0s,mb5.5
Z23A **Rita Site, Whi** 69.74 62 ⇓P P 04 53 16.8 +0.3
baz=70,SNR=14
221A **Mesquite Ranch** 69.76 64 ⇓P P 04 53 16.9 +0.3
baz=70,SNR=10
W26A **Owens Ranch, T** 69.80 59 ⇓P P 04 53 17.1 +0.3

baz=70,SNR=11
320A Kipp Ranch, An 69.81 65 ⇑P P 04 53 17.0 +0.1
baz=70,SNR=20
222A Williams Famil 70.08 64 ⇓P P 04 53 18.6 0.0
baz=70,SNR=19
AKASG Malin Array Be 70.13 327 P P 04 53 17.8 -0.8
comp=Z,8.8nm,0.3s,mb5.0,baz=32,slow=6.0,SNR=86
AKASG LR LR 05 26 33.7
comp=Z,614nm,21.4s,baz=35,slow=38
AKASG Malin Array Be 70.13 327 P P 04 53 17.8 -0.8
AKASG pmax pmax
comp=Z,9.0nm,0.3s
AKASG MLR MLR
comp=Z,614nm,21.4s
AKBB Malin Array Si 70.13 327 *e*P P 04 53 17.8 -0.8
Y25A Mesa, Roswell 70.13 61 ⇓P P 04 53 18.7 -0.2
baz=70,SNR=67
KIEV Kiev 70.14 327 *e*P P 04 53 18.0 -0.6
comp=Z,139nm,1.3s,mb5.6
KIEV Kiev 70.14 327 *e*P P 04 53 18.0 -0.6
KIEV pmax pmax
comp=Z,139nm,1.3s,mb5.6
KIV Kislovodsk 70.15 315 P P 04 53 19.7 +0.9
comp=Z,363nm,1.2s,mb6.1,SNR=11
KIV Kislovodsk 70.15 315 *e*P P 04 53 19.8 +1.0
comp=Z,87nm,1.1s,mb5.5
KIV Kislovodsk 70.15 315 *e*P P 04 53 19.1 +0.3
KIV *e* 04 55 54.1
KIV *e*PPP 04 57 35.6
KIV *e*S S 05 02 24.1 +0.9
KIV pmax pmax
comp=Z,56nm,0.9s,mb5.4
KIV MLR MLR
comp=Z,758nm,20.0s
KIV Kislovodsk 70.15 315 P P 04 53 20.0 +1.2
SNR=23
X26A CR and CF Fran 70.17 60 ⇑P P 04 53 19.1 0.0
baz=70,SNR=34
123A Bell Site, Whi 70.18 63 ⇑P P 04 53 19.4 +0.2
baz=70,SNR=9.4
Z24A Sheeppen Canyo 70.19 62 ⇑P P 04 53 19.2 -0.1
baz=70,SNR=42
SCIA State Center 70.20 48 *e*P P 04 53 18.7 -0.4
comp=Z,126nm,0.6s,mb5.9
W27A Bowe Ranch, En 70.21 59 ⇓P P 04 53 19.2 -0.1
baz=70,SNR=12
CTA Charters Tower 70.21 190 *e*P P 04 53 18.1 -1.2
comp=Z,8.5nm,1.1s,mb4.5
CTA *e*pP pP 04 53 40.1 -0.9
CTA *e*S S 05 02 24.5 +0.3
CTAO Charters Tower 70.21 190 *e*P P 04 53 18.0 -1.3
comp=Z,15nm,0.8s,mb4.9
CTAO Charters Tower 70.21 190 *e*P P 04 53 18.0 -1.3
CTAO pmax pmax
comp=Z,15nm,0.8s,mb4.9
CTAO Charters Tower 70.21 190 P P 04 53 17.7 -1.6
comp=Z,25nm,0.9s,mb5.0
X27A F and S Farms, 70.50 59 ⇓P P 04 53 21.0 -0.1
baz=70,SNR=14
ZEI Tsey 70.51 314 *e*P P 04 53 17.9 -3.1
ZEI pmax pmax
comp=Z,92nm,1.5s,mb5.4
ZEI pmax pmax
comp=N,38nm,0.8s
ZEI pmax pmax
comp=E,88nm,1.2s
BSD Bornholm Skovb 70.54 338 *i* P P 04 53 20.9 -0.1
BSD pmax pmax
comp=Z,30nm,0.9s,mb5.1
BSD MLR MLR
comp=Z,1μm,19.0s
BSD Bornholm Skovb 70.54 338 *i* P P 04 53 20.9 -0.1
comp=Z,30nm,0.9s,mb5.1
BSD
comp=Z,1μm,19.0s
223A Chaparral, Ant 70.54 63 ⇓P P 04 53 21.3 -0.1
baz=70
Z25A Roswell 70.59 61 ⇓P P 04 53 21.6 -0.1
baz=70
124A Stringfield Ra 70.60 62 ⇓P P 04 53 21.7 0.0
baz=70,SNR=27
MUD Monsted U'grnd 70.60 341⇑*i*P P 04 53 22.9 +1.5
MUD Monsted U'grnd 70.60 341⇑*i*P P 04 53 22.9 +1.5
COP Copenhagen 70.61 339 *e*P P 04 53 22.7 +1.3
COP *i* S S 05 02 27.0 -1.1
COP pmax pmax
comp=Z,20nm,0.9s,mb5.0
COP MLR MLR
comp=Z,410nm,18.0s
COP Copenhagen 70.61 339 *i* P P 04 53 22.7 +1.3
comp=Z,20nm,0.9s,mb4.9
COP *i* S S 05 02 27.0 -1.1
COP
comp=Z,400nm,18.0s
Y26A Elida 70.62 60 ⇑P P 04 53 21.6 -0.2
baz=70
KSU1 Kansas State U 70.65 52 *e*P P 04 53 20.2 -1.7
comp=Z,29nm,0.6s,mb5.3
KSU1 *e* 04 53 32.8
DGRG David-gareji 70.82 312 P P 04 53 22.2 -0.7
JFWS Jewell Farm 70.82 46 *e*P P 04 53 21.5 -1.4
comp=Z,15nm,0.8s,mb4.9
JFWS Jewell Farm 70.82 46 *e*P P 04 53 21.5 -1.4
JFWS pmax pmax
comp=Z,15nm,0.8s,mb4.9
ONI Oni 70.85 314 P P 04 53 23.7 +0.6
TBLG Delisi 70.91 313 *e*P P 04 53 23.9 +0.4
TBLG Delisi 70.91 313 P P 04 53 23.9 +0.4
MTA Mtatsminda 70.91 313 P P 04 53 21.3 -2.2
GOR Gori 71.01 313 P P 04 53 24.7 +0.6
224A Cornudas Mount 71.01 63 ⇓P P 04 53 24.2 -0.1
baz=71,SNR=37
Z26A Caprock 71.02 61 ⇑P P 04 53 24.0 -0.2
baz=71,SNR=51
Y27A Causey 71.02 60 ⇓P P 04 53 24.0 -0.3
baz=71,SNR=48
125A Gardner Draw, 71.08 62 ⇑P P 04 53 24.4 -0.3
baz=71,SNR=39
RSC Scourie 71.09 350⇑*e*P P 04 53 23.9 -0.4
AMTX Amarillo 71.11 58 *e*P P 04 53 24.9 +0.1
comp=Z,137nm,1.5s,mb5.6
MSTX Muleshoe 71.18 60 ⇓P P 04 53 24.8 -0.4
baz=71,SNR=35
MDRS Chennai 71.18 268 *ex* x 04 53 38.2
MDRS *ex* x 04 56 09.2
POO Poona 71.29 277 *e*PKP P 04 53 26.3 +0.2
MNTX Cornudas Mount 71.37 63 *e*P P 04 53 26.1 -0.3
comp=Z,66nm,1.4s,mb5.3
MVH1 Achvaich 71.39 349⇑*e*P P 04 53 25.7 -0.3
225A Deer Hill, Car 71.39 62 ⇓P P 04 53 26.4 -0.2
baz=71,SNR=17
Z27A Tatum 71.42 60 ⇑P P 04 53 26.1 -0.6
baz=71,SNR=47
WAR Warsaw 71.45 333 *e*P P 04 53 27.9 +1.3
WAR *e*S S 05 02 33.0 -5.0
WAR LMZ 05 25 52.1
comp=Z,2μm,25.6s
126A Clayton Basin, 71.45 61 ⇓P P 04 53 26.3 -0.6
baz=71,SNR=19
324A Moseley Ranch, 71.50 63 ⇓P P 04 53 26.9 -0.3
baz=71,SNR=15
GKP Gorka Klasztor 71.60 336 *e*P P 04 53 27.0 -0.4
GKP *e*S S 05 02 44.7 +5.0
GKP LMZ 05 20 24.8
comp=Z,2μm,33.4s
GKP Gorka Klasztor 71.60 336 *e*P P 04 53 27.0 -0.4
GKP *e*S S 05 02 44.7 +5.0
MCD Coleburn Disti 71.61 349⇑*i*P P 04 53 27.1 -0.2
RRH Rhenigidale 71.68 351⇑*e*P P 04 53 27.6 -0.2
SOC Sochi 71.77 317⇑*i*P P 04 53 27.5 -1.1
SOC Sochi 71.77 317 *c i*P P 04 53 28.7 +0.1
SOC *e**PP pP 04 53 52.1 +1.7
SOC *e*S S 05 02 39.3 -2.7
SOC *e**SS sS 05 03 23.9 +4.8
SOC *e*SS SS 05 07 27.4 +9.1
SOC *e*SSS 05 10 28.4
SOC pmax pmax
comp=Z,169nm,1.7s,mb5.6
SOC pmax pmax
comp=Z,364nm,2.0s,mb5.9
SOC MLR MLR
comp=Z,619nm,13.0s
ANN Anapa 71.79 319 *c i*P P 04 53 27.8 -0.9
ANN *e**PP pP 04 53 48.7 -1.8
ANN *i* 04 56 07.9
ANN *i* PPP 04 57 51.8
ANN *e*S S 05 02 42.2 0.0
ANN *e*SS SS 05 07 22.4 +3.8
ANN pmax pmax
comp=E,54nm,1.8s
ANN pmax pmax
comp=Z,128nm,1.8s,mb5.5
127A Arkansas Junct 71.81 61 ⇑P P 04 53 28.3 -0.7
baz=72
GLMI Grayling 71.81 41 *e*P P 04 53 28.4 -0.4
comp=Z,44nm,0.7s,mb5.4
MME1 Meikle Cairn 71.83 348 *e*P P 04 53 28.1 -0.6
226A Malaga, Loving 71.84 62 ⇓P P 04 53 28.7 -0.5
baz=72,SNR=48
325A Bean Ranch, Si 71.85 63 ⇑P P 04 53 28.8 -0.5
baz=72,SNR=22
MDO Dochfour 71.88 349 *e*P P 04 53 28.2 -0.8
KAC Achnashellach 71.94 350⇑*e*P P 04 53 28.4 -0.9
KAD Karad 71.97 276 *e*PKP P 04 53 30.3 +0.1
GNI Garni 72.13 312 *e*P P 04 53 32.0 +1.1
comp=Z,325nm,1.4s,mb6.0
GNI Garni 72.13 312 *c i*P P 04 53 32.2 +1.4
GNI pmax pmax
comp=Z,343nm,1.7s
GNI MLR MLR
comp=Z,838nm,23.0s
GNI Garni 72.13 312 P P 04 53 32.8 +1.9
SNR=37
KPL Plockton 72.13 350⇑*e*P P 04 53 30.3 -0.2
KPL AMb AMB 04 53 32.6
comp=Z,127nm,1.1s,mb5.7
DZM Mont Dzumac 72.17 170 *e*P P 04 53 32.1 +1.0
comp=Z,149nm,1.4s,mb5.6
DZM *e*S S 05 02 44.0 -2.7
comp=Z,2μm,26.0s
DZM *e*LR LR 05 15 45.4
comp=Z,2μm,31.9s
DZM Mont Dzumac 72.17 170 *e*P P 04 53 31.9 +0.8
comp=Z,54nm,1.1s,mb5.3
WRAB Tennant Creek 72.18 202 *e*P P 04 53 29.9 -1.3
comp=Z,46nm,1.0s,mb5.3
WRAB Tennant Creek 72.18 202 *e*P P 04 53 29.9 -1.3
WRAB pmax pmax
comp=Z,46nm,1.0s,mb5.3
WRAB Tennant Creek 72.18 202 P P 04 53 30.0 -1.2
comp=Z,148nm,0.9s,mb5.8,SNR=12
KSB Sheil Bridge 72.23 350 *e*P P 04 53 30.7 -0.5
227A Bennet, Jal 72.33 61 ⇑P P 04 53 31.4 -0.8
baz=72
326A Caldwell Ranch 72.46 62 ⇑P P 04 53 32.2 -0.8
baz=72,SNR=52
KARS Kars 72.56 313 *e*P P 04 53 34.5 +1.1
KAR1 Arisaig 72.57 350⇑*e*P P 04 53 32.6 -0.5
BCA Borcka 72.60 314 *e*P P 04 53 32.9 -0.7
LVV L'vov 72.63 330 *e*P P 04 53 33.1 -0.5
LVV *e* 04 56 15.0
LVV *e*S S 05 02 48.3 -3.3
LVV *e*SS SS 05 07 29.1 -2.0
LVV MLR MLR
comp=N,400nm,16.0s
LVV MLR MLR
comp=E,300nm,16.0s
LVV MLR MLR
comp=Z,400nm,16.0s
ARTV Artvin 72.66 314 *i* P P 04 53 32.9 -1.1
BSEG Bad Segeberg 72.70 340 *e*P P 04 53 34.0 0.0
comp=Z,88nm,1.0s,mb5.5
BSEG *e*S S 05 02 51.1 -1.1
BSEG *e*L 05 33 12.7
comp=Z,421nm,21.5s
BSEG Bad Segeberg 72.70 340 *e*P P 04 53 34.0 0.0
BSEG *e*S S 05 02 51.1 -1.1
327A Balmorhea Ranc 72.70 62 ⇑P P 04 53 33.4 -0.9
baz=72
DAGI Agillar 72.75 314 *i* P P 04 53 34.2 -0.3
WMOK Wichita Mounta 72.80 56 *e*P P 04 53 34.2 -0.6
comp=Z,30nm,0.8s,mb5.2
WMOK Wichita Mounta 72.80 56 *e*P P 04 53 34.3 -0.6
WMOK pmax pmax
comp=Z,30nm,0.8s,mb5.2
426A McDonald Obser 72.91 63 ⇓P P 04 53 34.9 -0.7
baz=73,SNR=23
FITZ Fitzroy Crossi 72.92 211 *e*P P 04 53 35.2 -0.4
comp=Z,79nm,0.8s,mb5.6
FITZ *e*pP pP 04 53 57.2 -0.3
FITZ *e*S S 05 02 57.0 +1.6
FITZ Fitzroy Crossi 72.92 211 P P 04 53 35.7 +0.1
EBH Black Hill 72.94 348⇑*e*P P 04 53 35.0 -0.3
DDEM Demirkent 72.97 314 *i* P P 04 53 36.0 +0.2
SIM Simferopol' 73.05 321 *c i*P P 04 53 36.0 -0.2
SIM *e* 04 56 18.0
SIM *e*PPP 04 58 06.0
SIM *e*S S 05 02 55.0 -1.5
SIM *e*PS 05 03 25.0
SIM pmax pmax
comp=Z,55nm,0.9s,mb5.4
SIM MLR MLR
comp=Z,542nm,14.0s
328A Wristen Ranch, 73.08 61 ⇓P P 04 53 35.9 -0.7
baz=73,SNR=46
EAB Aberfoyle 73.10 349⇑*e*P P 04 53 36.2 -0.2
HDIL Hopedale 73.11 47 *e*P P 04 53 35.6 -1.1
comp=Z,58nm,0.6s,mb5.6
427A Hayter Ranch, 73.14 62 ⇓P P 04 53 36.3 -0.7
baz=73,SNR=25
ESY Stoneypath 73.14 348⇑*e*P P 04 53 36.2 -0.3
EDI Edinburgh 73.21 348 *e*P P 04 53 36.5 -0.4
EDI AMb AMB 04 53 38.9
comp=Z,95nm,1.1s,mb5.5
RUE Ruedersdorf 73.22 337 *e*P P 04 53 36.8 -0.2
comp=Z,172nm,1.0s,mb5.8
RUE *e*S S 05 02 55.3 -2.8
RUE *e*L 05 29 23.5
comp=Z,960nm,20.1s
KWP Kalwaria Pacla 73.22 331 *e*P P 04 53 37.9 +0.8
comp=Z,700nm,1.2s,mb6.4
KWP *e*S S 05 02 55.0 -3.3
KWP LMZ 05 20 39.3
comp=Z,2μm,33.2s
CLDR Caldiran 73.31 311 *e*P P 04 53 37.1 -0.8
EAU Auchinoon 73.32 348⇑*e*P P 04 53 37.6 0.0
526A Mary Lane Ranc 73.33 63 ⇑P P 04 53 37.8 -0.3
baz=73,SNR=40
EBL Broad Law 73.34 348⇑*e*P P 04 53 37.5 -0.3
KIS Kishinev 73.39 326 *e*P P 04 53 37.0 -1.2
KIS *e*S S 05 02 54.0 -6.3
KIS LRM 05 29 44.0
comp=Z,1μm,16.0s
KIS Kishinev 73.39 326 *e*P P 04 53 37.0 -1.2
KIS *e* 04 53 51.0
KIS *e* 04 56 20.0
KIS *e* 04 58 08.0
KIS *e*S S 05 02 54.0 -6.3
KIS *e* 05 03 34.0
KIS MLR MLR
comp=Z,2μm,16.0s
KIS MLR MLR
comp=N,1μm,15.0s
KIS MLR MLR
comp=E,500nm,15.0s
AGRB Hanur-Agry 73.42 312 *e*P P 04 53 40.3 +1.8
PGBU Glenifferbraes 73.49 349 *e*P P 04 53 38.2 -0.4
PGBU AMb AMB 04 53 41.0
comp=Z,386nm,1.1s,mb6.1
527A Woodward Ranch 73.54 63 ⇓P P 04 53 38.8 -0.6
baz=73,SNR=40
HOMI Horasan 73.57 313 *i* P P 04 53 40.7 +1.3
OJC Ojcow 73.60 333 *e*P P 04 53 39.5 +0.2
OJC *e*S S 05 02 58.7 -3.8
OJC L 05 27 55.9
comp=Z,1.1nm,22.3s
428A Kincaid Ranch, 73.64 62 ⇑P P 04 53 39.8 -0.2
baz=73,SNR=44
626A Big Bend Ranch 73.68 64 ⇑P P 04 53 39.7 -0.4
baz=74,SNR=48
ESK Eskdalemuir 73.81 348⇑*e*P P 04 53 39.2 -1.2
ESK AMb AMB 04 53 41.7
comp=Z,135nm,1.1s,mb5.6
ESK Eskdalemuir 73.81 348 *e*P P 04 53 40.2 -0.3
comp=Z,161nm,1.1s,mb5.7
ESK Eskdalemuir 73.81 348 *i* P P 04 53 41.1 +0.6
STHS Stebnicka Huta 73.87 331 *e*P P 04 53 41.8 +0.9
comp=Z,83nm,0.9s,mb5.5
STHS Stebnicka Huta 73.87 331 *e*P P 04 53 41.8 +0.9
STHS pmax pmax
comp=Z,83nm,0.9s,mb5.5
ECK Cauldkaine Hil 73.93 348⇑*e*P P 04 53 40.9 -0.3
VANB Van 74.00 311 *e*P P 04 53 43.2 +1.3
528A Cox Ranch, San 74.00 62 ⇓P P 04 53 41.8 -0.2
baz=74,SNR=45
KSP Ksiaz 74.04 335 *e*P P 04 53 42.1 +0.2
comp=Z,400nm,1.5s,mb5.9
KSP *e*S S 05 03 04.7 -2.8
KSP *e*SKS 05 03 40.0
KSP LMZ 05 24 37.7
comp=Z,2μm,29.5s
KSP Ksiaz 74.04 335 *e*P P 04 53 41.9 0.0
KSP *e*S S 05 03 02.7 -4.8
TXAR Lajitas Array 74.11 63 P P 04 53 42.4 -0.3
comp=Z,25nm,0.6s,mb5.1,baz=299,slow=4.4,SNR=402
TXAR PKKP PKKPbc 05 12 51.0 -19
comp=Z,0.3nm,0.9s,baz=202,slow=2.3,SNR=3.4
XAL Allendale 74.11 347⇑*e*P P 04 53 42.7 +0.4
BUR08 Bucovina Ar. S 74.12 328 *e*P P 04 53 42.2 -0.2
CCM Cathedral Cave 74.14 49 *e*P P 04 53 41.3 -1.4
comp=Z,64nm,1.3s,mb5.2
CCM Cathedral Cave 74.14 49 *e*P P 04 53 41.3 -1.4
CCM pmax pmax
comp=Z,64nm,1.3s,mb5.2
BUR01 Bucovina Ar. S 74.14 328 P P 04 53 43.2 +0.7
BURAR Bucovina Array 74.14 328 ⇓P P 04 53 42.1 -0.5
BURAR Bucovina Array 74.14 328 ⇓*i*P P 04 53 42.1 -0.5
NIE Niedzica 74.15 332 *e*P P 04 53 43.3 +0.7
SLM Saint Louis 74.17 48 *e*P P 04 53 42.1 -0.8
comp=Z,116nm,1.3s,mb5.5
SLM Saint Louis 74.17 48 *e*P P 04 53 42.1 -0.8
SLM pmax pmax
comp=Z,116nm,1.3s,mb5.5
627A Terlingua Ranc 74.19 63 ⇑P P 04 53 42.8 -0.4
baz=74,SNR=52
RAC Raciborz 74.19 333 *e*P P 04 53 43.6 +0.8
RAC *e*S S 05 03 08.9 -0.3
UZH Uzhgorod 74.23 330 *c i*P P 04 53 43.0 0.0
UZH *e*S S 05 03 04.0 -5.6
AAM Ann Arbor 74.26 42 *e*P P 04 53 43.1 -0.2
comp=Z,34nm,0.6s,mb5.2
AAM *e* 04 53 55.4
AAM Ann Arbor 74.26 42 *e*P P 04 53 43.1 -0.2
AAM *e* 04 53 55.4
AAM pmax pmax
comp=Z,34nm,0.6s,mb5.2
GCD Castle Douglas 74.35 348⇑*e*P P 04 53 43.4 -0.3
GUMT Gumushane 74.36 315 *e*P P 04 53 45.0 +1.0
UPC Upice 74.42 335 P P 04 53 44.6 +0.5
UPC Upice 74.42 335 *e*P P 04 53 44.8 +0.7
OKC Ostrava-Krasne 74.42 333 P P 04 53 45.2 +1.0
OKC Ostrava-Krasne 74.42 333 *e*P P 04 53 45.3 +1.1
OKC *e*S S 05 03 08.6 -3.2
OKC MLR MLR
comp=Z,1μm,17.6s
OKC Ostrava-Krasne 74.42 333 *e*P P 04 53 45.3 +1.1
OKC *e*S S 05 03 08.6 -3.2
OKC AMS AMS 05 30 00.0
comp=Z,1μm,17.6s
GAL1 Galloway 74.44 349 *e*P P 04 53 44.0 -0.2
GAL1 AMb AMB 04 53 46.8
comp=Z,178nm,1.4s,mb5.6
628A Black Gap, Mar 74.45 63 ⇓P P 04 53 44.1 -0.5
baz=74,SNR=28
DPC Dobruska-Polom 74.48 335 P P 04 53 44.8 +0.3
DPC Dobruska-Polom 74.48 335 *e*P P 04 53 45.2 +0.7
DPC *e*S S 05 03 10.3 -2.1
DPC MLR MLR
comp=Z,1μm,23.9s
DPC Dobruska-Polom 74.48 335 *e*P P 04 53 45.2 +0.7
DPC *e*S S 05 03 10.3 -2.1
DPC AMS AMS 05 25 00.0
comp=Z,1μm,23.9s
CLL Collm 74.48 337 *i* P P 04 53 44.2 -0.3
comp=Z,207nm,1.1s,mb5.8
CLL *e*S S 05 03 09.0 -3.4
CLL LR LR
comp=Z,1μm,22.0s
CLL Collm 74.48 337 *i* P P 04 53 44.2 -0.3
CLL *e*S S 05 03 09.0 -3.4
CLL pmax pmax
comp=Z,207nm,1.1s,mb5.8
CLL MLR MLR
comp=Z,1μm,22.0s
CLL Collm 74.48 337 *i* P P 04 53 44.2 -0.3
comp=Z,207nm,1.1s,mb5.8
CLL *e*Plp pP 04 54 02.0 -4.4
comp=Z,200nm,18.3s
CLL *e*S S 05 03 09.0 -3.4
CLL *e*S S 05 03 09.0 -3.4
comp=E,400nm,10.2s
CLL *e*PS 05 03 57.0
CLL *e*SS SS 05 07 54.0 -5.1
CLL *e*SSS 05 11 36.0
CLL L 05 29 00.0
comp=Z,1μm,22.0s
TRPA Tarpa 74.59 330⇓*i*P P 04 53 45.2 +0.1
TESR 74.59 327 ⇑P P 04 53 44.9 -0.2
TESR 74.59 327⇑*i*P P 04 53 44.9 -0.3
FVM French Village 74.59 49 *e*P P 04 53 44.4 -1.0
comp=Z,37nm,0.6s,mb5.3
FVM *e* 04 53 57.1
FVM French Village 74.59 49 *e*P P 04 53 44.4 -0.9
FVM *e* 04 53 57.2
FVM pmax pmax
comp=Z,37nm,0.6s,mb5.3
TATV Tatvan 74.61 312 *i* P P 04 53 46.1 +0.6
CLZ Clausthal 74.63 339 *e*P P 04 53 45.5 +0.2
comp=Z,294nm,1.1s,mb5.9
CLZ *e*S S 05 03 13.9 -0.1
CLZ *e*L 05 30 46.7
comp=Z,1μm,19.0s
CLZ Clausthal 74.63 339 *e*P P 04 53 45.5 +0.2
CLZ *e*S S 05 03 13.9 -0.1
CLZ pmax pmax
comp=Z,294nm,1.1s,mb5.9
CLZ MLR MLR
comp=Z,1μm,19.0s
XDE Dent Fell 74.64 348⇑*e*P P 04 53 45.1 -0.2
BRG Berggiesshubel 74.64 336 *e*P P 04 53 44.9 -0.5
comp=Z,86nm,1.1s,mb5.4
BRG *e*S S 05 03 11.3 -2.9
BRG *e*L 05 30 09.8
comp=Z,539nm,20.3s
BRG Berggiesshubel 74.64 336⇑*i*P P 04 53 45.3 -0.1
comp=Z,86nm,1.1s,mb5.4
BRG PCP PcP 04 54 03.0 +3.7
BRG PP PP 04 56 30.0 -2.5
comp=Z,16nm,1.3s
BRG S S 05 03 14.0 -0.2
BRG
comp=N,908nm,17.9s
BRG
comp=E,793nm,17.5s
BRG
comp=Z,1μm,16.2s
BRG Berggiesshubel 74.64 336⇑*i*P P 04 53 45.3 -0.1
BRG pP 04 54 03.0 -4.3
BRG 04 56 30.0
BRG S S 05 03 14.0 -0.2
BRG pmax pmax
comp=Z,52nm,1.2s,mb5.1
BRG pmax pmax
comp=Z,10.0nm,1.3s,mb4.4
BRG MLR MLR
comp=N,544nm,17.9s
BRG MLR MLR
comp=E,475nm,17.5s
BRG MLR MLR
comp=Z,863nm,16.2s
MORC Moravsky Berou 74.65 334 *e*P P 04 53 45.7 +0.2
comp=Z,313nm,1.3s,mb5.9
MORC Moravsky Berou 74.65 334 P P 04 53 45.9 +0.4
MORC Moravsky Berou 74.65 334⇑*i*P P 04 53 45.7 +0.2
HAKT HAKKARI 74.66 310 *i* P P 04 53 46.8 +1.0
BMR Baia Mare 74.67 329 P P 04 53 46.2 +0.6
KELT Kelkit 74.72 315 *i* P P 04 53 46.8 +0.8
IBBN Ibbenburen 74.78 341 *e*P P 04 53 46.0 -0.2
comp=Z,146nm,1.0s,mb5.7
IBBN *e*L 05 29 22.2
comp=Z,620nm,21.7s
BNGL BINGOL 74.79 313 *i* P P 04 53 46.9 +0.4
PVCC Panska Ves 74.79 336 P P 04 53 46.6 +0.3
PVCC Panska Ves 74.79 336 *e*P P 04 53 46.7 +0.4

PVCC eS S 05 03 15.8 -0.1
PVCC MLR MLR
comp=Z,1µm,16.3s
PVCC Panska Ves 74.79 336 eP **P 04 53 46.7 +0.4**
PVCC eS S 05 03 15.8 -0.1
PVCC AMS AMS 05 30 50.0
comp=Z,1µm,16.3s
LIKS Likavka 74.84 332 eP **P 04 53 49.4 +2.8**
comp=Z,192nm,1.2s,mb5.7
LIKS Likavka 74.84 332 eP **P 04 53 49.4 +2.8**
LIKS pmax pmax
comp=Z,192nm,1.2s,mb5.7
LIKS Likavka 74.84 332 eP **P 04 53 49.4 +2.8**
HPK Haverah Park 74.90 347⇑eP **P 04 53 47.0 +0.2**
HPK AMb AMB 04 53 49.9
comp=Z,329nm,1.3s,mb5.9
CUKT Cukurca 74.95 310 eP **P 04 53 46.8 -0.7**
EIDS Eidsvold 75.04 185 eP **P 04 53 47.5 -0.3**
EIDS epP pP 04 54 08.8 -1.0
EIDS Eidsvold 75.04 185 eP **P 04 53 47.9 +0.1**
comp=Z,19nm,1.4s,mb4.6
PETR 75.05 326 ⇓P **P 04 53 49.3 +1.4**
PETR 75.05 326 ⇓iP **P 04 53 49.3 +1.4**
VRI Vrincioaia 75.11 326 ⇑P **P 04 53 48.0 -0.3**
VRI Vrincioaia 75.11 326 P **P 04 53 49.1 +0.9**
VRI Vrincioaia 75.11 326⇑iP **P 04 53 48.0 -0.2**
OLIL Olney 75.12 47 eP **P 04 53 47.7 -0.7**
comp=Z,94nm,1.4s,mb5.3
SUSE Susehri 75.15 316 iP **P 04 53 45.7 -2.8**
BINT Bingol 75.16 313 eP **P 04 53 49.2 +0.6**
CFR Carcaliu 75.19 325 P **P 04 53 48.6 0.0**
CFR Carcaliu 75.19 325⇑iP **P 04 53 48.0 -0.6**
GMM Mts of Mourne 75.21 349⇑eP **P 04 53 48.3 -0.3**
PRA Prague 75.25 336 P **P 04 53 52.0 +3.1**
PRU Pruhonice 75.29 336 P **P 04 53 49.9 +0.8**
PRU Pruhonice 75.29 336 eP **P 04 53 50.4 +1.3**
PRU eS S 05 03 19.9 -1.5
PRU MLR MLR
comp=Z,1µm,16.9s
PRU Pruhonice 75.29 336 eP **P 04 53 50.4 +1.3**
PRU eS S 05 03 19.9 -1.5
PRU AMS AMS 05 31 00.0
comp=Z,1µm,16.9s
VRAC Vranov 75.34 334 ⇓P **P 04 53 50.0 +0.6**
VRAC Vranov 75.34 334 P **P 04 53 50.3 +0.8**
VRAC Vranov 75.34 334 ⇓iP **P 04 53 50.0 +0.5**
SIUC Southern Illin 75.39 48 eP **P 04 53 49.3 -0.7**
comp=Z,32nm,0.6s,mb5.2
KVT Kavak 75.40 318 eP **P 04 53 51.2 +1.3**
ERBA Erbaa 75.41 317 iP **P 04 53 51.2 +1.2**
VYHS Vyhne 75.42 332 eP **P 04 53 50.1 +0.2**
comp=Z,67nm,1.0s,mb5.3
VYHS eS S 05 03 23.7 +0.8
VYHS LR LR
comp=Z,800nm,26.2s
VYHS Vyhne 75.42 332 eP **P 04 53 50.1 +0.2**
VYHS eS S 05 03 23.7 +0.8
MOX Moxa 75.44 338 eP **P 04 53 50.1 +0.1**
comp=Z,219nm,1.4s,mb5.7
MOX eS S 05 03 24.0 +1.0
MOX
comp=Z,800nm,22.0s
MOX Moxa 75.44 338 eP **P 04 53 49.8 -0.2**
comp=Z,136nm,1.1s,mb5.6
MOX eS S 05 03 20.7 -2.3
MOX eL 05 30 49.0
comp=Z,1µm,20.8s
GRER 75.44 326 P **P 04 53 51.7 +1.6**
TANN Tannenbergstha 75.44 337 eP **P 04 53 50.0 0.0**
comp=Z,83nm,1.1s,mb5.4
TANN Tannenbergstha 75.44 337 P **P 04 53 50.3 +0.3**
WERD Werda 75.45 337 eP **P 04 53 50.0 0.0**
comp=Z,166nm,1.2s,mb5.6
JCT Junction City 75.45 60 eP **P 04 53 49.8 -0.6**
comp=Z,109nm,1.3s,mb5.4
JCT Junction City 75.45 60 eP **P 04 53 49.8 -0.6**
JCT pmax pmax
comp=Z,109nm,1.3s,mb5.4
KOLL Kolacno 75.47 333 eP **P 04 53 50.8 +0.6**
KOLL Kolacno 75.47 333 eP **P 04 53 50.8 +0.6**
BLO Bloomington 75.50 46 eP **P 04 53 49.7 -0.9**
comp=Z,23nm,0.8s,mb5.0
BLO Bloomington 75.50 46 eP **P 04 53 49.7 -0.9**
BLO pmax pmax
comp=Z,23nm,0.8s,mb5.0
GUNZ Gunzen 75.52 337 eP **P 04 53 50.5 0.0**
comp=Z,136nm,1.0s,mb5.6
BZK Bozkurt 75.55 319 eP **P 04 53 49.1 -1.7**
KBI1 Birley Grange 75.57 346⇑eP **P 04 53 50.6 -0.1**
BEST Besiri 75.58 312 iP **P 04 53 51.9 +0.9**
NKC Novy Kostel 75.61 337 P **P 04 53 51.3 +0.3**
NKC Novy Kostel 75.61 337 eP **P 04 53 51.9 +0.9**
NKC eS S 05 03 20.4 -4.5
NKC MLR MLR
comp=Z,1µm,17.0s
NKC Novy Kostel 75.61 337 eP **P 04 53 51.9 +0.9**
NKC eS S 05 03 20.4 -4.5
NKC AMS AMS 05 31 40.0
comp=Z,1µm,17.0s
PSZ Piszkesteto 75.61 331 eP **P 04 53 51.3 +0.3**
comp=Z,147nm,1.2s,mb5.6
PSZ Piszkesteto 75.61 331 P **P 04 53 52.1 +1.1**
PSZ Piszkesteto 75.61 331⇑iP **P 04 53 51.3 +0.3**
PSZ Piszkesteto 75.61 331⇑eP **P 04 53 51.6 +0.6**
BYBT Boyabat 75.63 319 eP **P 04 53 52.9 +1.6**
PTK Pertek 75.66 314 eP **P 04 53 51.6 +0.2**
TREC Trest 75.67 335 eP **P 04 53 51.7 +0.4**
TREC eS S 05 03 30.6 +5.0
TREC MLR MLR
comp=Z,1µm,17.9s
TREC Trest 75.67 335 eP **P 04 53 51.7 +0.4**
TREC eS S 05 03 30.6 +5.0
TREC AMS AMS 05 31 10.0
comp=Z,1µm,17.9s
TIRR Tirgusor 75.69 324 eP **P 04 53 50.9 -0.7**
comp=Z,148nm,1.1s,mb5.6
TIRR Tirgusor 75.69 324 P **P 04 53 51.8 +0.2**
TIRR Tirgusor 75.69 324 ⇓iP **P 04 53 51.0 -0.6**
MIAR Mount Ida 75.70 53 eP **P 04 53 50.9 -0.9**
comp=Z,34nm,0.7s,mb5.2
MIAR Mount Ida 75.70 53 eP **P 04 53 50.9 -0.8**
MIAR pmax pmax
comp=Z,34nm,0.7s,mb5.2
BUG Bochum--Univer 75.70 341 eP **P 04 53 51.1 -0.3**
comp=Z,226nm,1.2s,mb5.8
BUG eS S 05 03 24.1 -1.7
BUG eL 05 30 44.2
comp=Z,485nm,19.7s
DRGR 75.70 329 ⇓P **P 04 53 51.3 -0.2**
DRGR 75.70 329 P **P 04 53 51.9 +0.3**
DRGR 75.70 329 ⇓iP **P 04 53 51.3 -0.3**
MLR Muntele Rosu 75.72 326 ⇓P **P 04 53 52.3 +0.7**
MLR Muntele Rosu 75.72 326 P **P 04 53 52.6 +0.9**
MLR Muntele Rosu 75.72 326 ⇓iP **P 04 53 52.3 +0.6**
KEMA Kemaliye 75.77 315 iP **P 04 53 52.2 +0.1**
TOKA Tokat 75.83 317 iP **P 04 53 52.0 -0.4**
WME Myndd Eilian 75.83 348 eP **P 04 53 51.4 -0.8**
ASAR Alice Springs 75.87 201 P **P 04 53 52.4 -0.3**
comp=Z,7.2nm,0.6s,mb4.6,baz=14,slow=5.1,SNR=54
WPM1 Penmaenmawr 75.91 348⇑eP **P 04 53 52.5 -0.1**
SCER sogukcermik 75.91 316 iP **P 04 53 53.8 +0.9**
SVSK Karacayir 75.93 316 eP **P 04 53 54.3 +1.3**
ERPA Erie 75.96 40 eP **P 04 53 52.6 -0.5**
comp=Z,76nm,1.1s,mb5.3
PARMO Parma 75.96 49 eP **P 04 53 52.8 -0.4**
AMRR Amara 75.97 325 P **P 04 53 54.3 +1.2**
LONY Lake Ozonia 75.97 35 eP **P 04 53 51.8 -1.3**
comp=Z,11nm,0.8s,mb4.6
CWF Charnwood Fore 76.04 346⇑eP **P 04 53 52.1 -1.2**
CWF AMb AMB 04 53 55.4
comp=Z,193nm,1.3s,mb5.7
VOIR 76.08 327 ⇑P **P 04 53 54.0 +0.2**
VOIR 76.08 327 P **P 04 53 54.6 +0.9**
VOIR 76.08 327⇑iP **P 04 53 54.0 +0.3**
DIYA Diyarbakir 76.10 313 iP **P 04 53 55.1 +1.1**
SVRC Sivrice-ELAZID 76.11 314 eP **P 04 53 55.3 +1.3**
UALR University of 76.15 52 eP **P 04 53 53.7 -0.6**
comp=Z,28nm,1.2s,mb4.9
BALT Daday 76.17 320 iP **P 04 53 54.0 -0.3**
ELZG Elazig 76.17 314 iP **P 04 53 55.6 +1.2**
ZST Bratislava 76.20 333 eP **P 04 53 55.9 +1.5**
comp=Z,88nm,0.9s,mb5.5
ZST eS S 05 03 32.5 +1.0
ZST LR LR
comp=Z,400nm,16.8s
ZST Bratislava 76.20 333 eP **P 04 53 55.9 +1.5**
ZST eS S 05 03 32.5 +1.0
DLF Lyons Farm 76.20 350⇓iP **P 04 53 54.2 -0.1**
ACSO Alum Creek Sta 76.24 43 eP **P 04 53 54.1 -0.6**
comp=Z,36nm,1.0s,mb5.1
ACSO epPcP PcP 04 54 06.5 +0.1
YRE Yr Eifl 76.25 348⇑eP **P 04 53 54.5 0.0**
BUD Budapest 76.27 332⇑eP **P 04 53 55.5 +0.7**
MARD Mardin 76.27 312 iP **P 04 53 55.4 +0.4**
SULR 76.30 326 P **P 04 53 55.0 0.0**
CTKT Corum 76.32 318 iP **P 04 53 55.3 +0.1**
KHC Kasperske Hory 76.33 336 eP **P 04 53 55.1 0.0**
comp=Z,321nm,1.3s,mb5.9
KHC Kasperske Hory 76.33 336 eP **P 04 53 55.1 0.0**
KHC pmax pmax
comp=Z,321nm,1.3s,mb5.9
KHC Kasperske Hory 76.33 336 eP **P 04 53 55.7 +0.6**
KHC eS S 05 03 29.4 -3.5
KHC AMS AMS 05 31 50.0
comp=Z,1µm,16.4s
DARE Darende-Malaty 76.34 315 eP **P 04 53 57.2 +1.9**
WCI Wyandotte Cave 76.37 46 eP **P 04 53 54.9 -0.6**
comp=Z,57nm,0.8s,mb5.3
WCI epPcP PcP 04 54 07.7 +0.7
WCI Wyandotte Cave 76.37 46 eP **P 04 53 54.9 -0.6**
WCI e 04 54 07.7
WCI pmax pmax
comp=Z,57nm,0.8s,mb5.3
GNAR Gosnell 76.38 50 eP **P 04 53 55.5 -0.1**
comp=Z,2µm,1.3s
HBAR Harrisburg 76.39 51 eP **P 04 53 54.9 -0.8**
PSN Preselentsi 76.44 324 iP **P 04 53 56.4 +0.6**
WET Wettzell 76.50 336 eP **P 04 53 56.4 +0.3**
comp=Z,243nm,1.1s,mb5.8
WET eS S 05 03 33.2 -1.6
WET eL 05 32 06.5
comp=Z,851nm,18.4s
WET Wettzell 76.50 336 eP **P 04 53 56.4 +0.3**
WET eS S 05 03 33.2 -1.6
WET pmax pmax
comp=Z,243nm,1.1s,mb5.8
WET MLR MLR
comp=Z,900nm,18.4s
MYA Malatya 76.56 314 eP **P 04 53 57.7 +1.0**
SAFT Safranbolu 76.70 320 eP **P 04 53 58.2 +0.9**
BANOM Banah 76.72 294 P **P 04 53 58.6 +0.9**
SNR=8.8
MEM Membach 76.75 341 P **P 04 53 57.1 -0.3**
comp=Z,208nm,1.2s,mb5.7
CORM Corum 76.75 318 eP **P 04 53 58.6 +0.9**
AKCD Akcadag 76.82 315 iP **P 04 53 58.6 +0.5**
CANT Cankiri 76.83 319 eP **P 04 53 59.2 +1.2**
YOZ Yozgat 76.90 317 eP **P 04 53 59.3 +0.8**
GZR Gura Zlata 76.91 328⇑P **P 04 53 57.9 -0.5**
GZR Gura Zlata 76.91 328⇑iP **P 04 53 57.9 -0.5**
MCH1 Michaelchurch 77.01 347 eP **P 04 53 58.7 -0.2**
MCH1 AMb AMB 04 54 01.1
comp=Z,92nm,1.7s,mb5.2
ELDT Eldivan 77.01 319 iP **P 04 53 59.7 +0.6**
SARI SarD1z-Kayseri 77.07 316 eP **P 04 54 01.9 +2.4**
BCLA Clavier 77.08 341 P **P 04 53 59.0 -0.3**
comp=Z,144nm,1.4s,mb5.5
TOD Tromm 77.08 339 eP **P 04 53 59.6 +0.3**
URFA Urfa 77.10 314 eP **P 04 54 00.3 +0.7**
BZS Buzias 77.10 329⇑P **P 04 53 59.1 -0.4**
BZS Buzias 77.10 329⇑iP **P 04 53 59.1 -0.4**
ABH Alteburg 77.10 340 eP **P 04 53 59.9 +0.5**
PRD Provadia 77.15 324 iP **P 04 53 59.9 +0.1**
SNF Seneffe 77.20 342 P **P 04 53 59.9 0.0**
comp=Z,84nm,1.4s,mb5.3
PINB Pinarbasi 77.20 316 iP **P 04 54 00.2 0.0**
LBNH Lisbon 77.26 33 eP **P 04 54 00.6 +0.2**
comp=Z,25nm,1.0s,mb4.9
LBNH Lisbon 77.26 33 eP **P 04 54 00.6 +0.2**
LBNH pmax pmax
comp=Z,25nm,1.0s,mb4.9
PKME Peaks-Kenny Pk 77.27 31 eP **P 04 54 00.5 0.0**
comp=Z,46nm,1.1s,mb5.1
NATX Nacogdoches 77.29 56 eP **P 04 54 01.6 +0.9**
comp=Z,226nm,1.3s,mb5.7
SWN1 Swindon 77.30 346 eP **P 04 54 00.2 -0.3**
SWN1 AMb AMB 04 54 03.7
comp=Z,487nm,1.4s,mb6.0
ATAB Bozova 77.32 314 iP **P 04 54 01.4 +0.5**
MOA Molln 77.32 335 P **P 04 54 00.9 +0.2**
MOA Molln 77.32 335⇓iP **P 04 54 00.5 -0.1**
comp=Z,98nm,1.0s,mb5.5,SNR=38
CDAG Cicekdag 77.32 318 iP **P 04 54 01.4 +0.5**
WVT Waverly 77.32 48 eP **P 04 54 00.4 -0.5**
comp=Z,30nm,0.9s,mb5.0
WVT Waverly 77.32 48 eP **P 04 54 00.4 -0.5**
WVT pmax pmax
comp=Z,30nm,0.9s,mb5.0
RUP Ruppelstein 77.38 340 eP **P 04 54 01.4 +0.4**
WOL Wolverton 77.41 346 eP **P 04 54 00.2 -0.9**
WOL AMb AMB 04 54 03.3
comp=Z,230nm,1.1s,mb5.8
GIVF Givet 77.47 342 eP **P 04 54 01.0 -0.5**
comp=Z,236nm,1.0s,mb5.6
GIVF Givet 77.47 342 eP **P 04 54 01.0 -0.5**
comp=Z,118nm,1.0s,mb5.6
GIVF Givet 77.47 342 eP **P 04 54 01.0 -0.5**
GIVF pmax pmax
comp=Z,118nm,1.0s,mb5.6
CRAR CRAIOVA 77.49 327 P **P 04 54 02.6 +0.9**
ARSA Arzberg 77.51 334 P **P 04 54 02.3 +0.6**
ARSA Arzberg 77.51 334 ⇓iP **P 04 54 02.1 +0.3**
comp=Z,164nm,1.1s,mb5.7,SNR=91
PKSM Moragy 77.52 331⇑P **P 04 54 01.1 -0.7**
PKSM Moragy 77.52 331 P **P 04 54 01.5 -0.3**
PKSM Moragy 77.52 331⇑iP **P 04 54 01.1 -0.7**
SGKT Sivrigoynuk 77.52 320 iP **P 04 54 01.9 0.0**
DOU Dourbes 77.53 342 P **P 04 54 02.0 +0.2**
comp=Z,78nm,1.5s,mb5.2
BR131 Keskin Array S 77.56 318 eP **P 04 54 02.2 0.0**
comp=Z,115nm,1.0s,mb5.6
MENF Mencas 77.56 343 eP **P 04 54 02.3 +0.4**
BRTR Keskin Array B 77.56 318 P **P 04 54 01.9 -0.2**
comp=Z,90nm,0.9s,mb5.5,baz=60,slow=3.0,SNR=104
BRTR Keskin Array B 77.56 318 iP **P 04 54 02.0 -0.1**
BRTR pmax pmax
comp=Z,90nm,0.9s
WLF Walferdange 77.61 341 P **P 04 54 02.4 +0.1**
comp=Z,108nm,1.7s,mb5.3
WLF Walferdange 77.61 341 eS S 05 03 46.5 -0.3
WLF eL 05 33 09.5
comp=Z,952nm,18.2s
WLF Walferdange 77.61 341 eP **P 04 54 02.7 +0.4**
comp=Z,182nm,1.4s,mb5.6
WLF Walferdange 77.61 341 eP **P 04 54 02.7 +0.4**
WLF pmax pmax
comp=Z,182nm,1.4s,mb5.6
WBK Wadi Bani Khal 77.62 290 P **P 04 54 05.1 +2.4**
SNR=16
DJES Djerdap 77.63 328 P **P 04 54 01.8 -0.7**
SZH Strazhica 77.64 325 iP **P 04 54 02.4 -0.1**
BAIF Baives 77.64 342 eP **P 04 54 02.1 -0.3**
comp=Z,244nm,0.9s,mb5.6
BAIF Baives 77.64 342 eP **P 04 54 02.1 -0.3**
comp=Z,122nm,0.9s,mb5.6
BAIF Baives 77.64 342 eP **P 04 54 02.1 -0.3**
BAIF pmax pmax
comp=Z,122nm,0.9s,mb5.6
HATD Hatta, Dubai 77.65 294 P **P 04 54 03.6 +0.7**
SNR=33
STU Stuttgart 77.76 338 eP **P 04 54 02.9 -0.2**
comp=Z,221nm,1.1s,mb5.8
STU eS S 05 03 47.2 -1.2
STU eL 05 32 19.1
comp=Z,788nm,20.3s
STU Stuttgart 77.76 338 eP **P 04 54 03.3 +0.2**
comp=Z,272nm,1.3s,mb5.8
STU Stuttgart 77.76 338 eP **P 04 54 03.3 +0.2**
STU pmax pmax
comp=Z,272nm,1.3s,mb5.8
HENT Hendek 77.79 321 iP **P 04 54 02.5 -0.9**
ASHO Ashiyiah 77.80 294 P **P 04 54 04.7 +0.9**
SNR=28
NAZ Nazwa, Dubai 77.81 294 P **P 04 54 03.9 +0.2**
SNR=13
AVNT Avonos 77.81 317 iP **P 04 54 04.2 +0.7**
MBWA Marble Bar 77.81 215 eP **P 04 54 04.3 +0.7**
FUR Furstenfeldbru 77.82 337 eP **P 04 54 03.6 +0.2**
comp=Z,268nm,1.0s,mb5.9
FUR eS S 05 03 47.3 -1.7
FUR eL 05 31 40.4
comp=Z,742nm,21.7s
FUR Furstenfeldbru 77.82 337 eP **P 04 54 03.6 +0.2**
FUR eS S 05 03 47.3 -1.7
FUR pmax pmax
comp=Z,268nm,1.0s,mb5.9
FUR MLR MLR
comp=Z,700nm,21.7s
SMDO Samad 77.84 291 P **P 04 54 05.0 +1.0**
SNR=16
HOQ Hoqain 77.89 292 P **P 04 54 04.6 +0.4**
SNR=29
LANF Langenberg 77.89 339 eP **P 04 54 04.4 +0.6**
BBAL Bala 77.93 319 iP pP 04 54 18.6 -7.7
KMRS Kahramanmaras 77.93 315 eP **P 04 54 05.5 +1.2**
VAL Valentia 77.94 352⇓iP **P 04 54 06.5 +2.5**
MDU Mudurnu 77.96 320 eP **P 04 54 04.0 -0.4**
KOGS Kog 78.03 333 P **P 04 54 05.0 +0.4**
HKT Hockley 78.06 58 eP **P 04 54 05.0 -0.1**
comp=Z,40nm,1.4s,mb5.0
HKT Hockley 78.06 58 eP **P 04 54 05.0 -0.1**
HKT pmax pmax
comp=Z,39nm,1.4s,mb4.9
GAZ Gaziantep 78.06 315 eP **P 04 54 06.4 +1.4**
MCWV Mont Chateau 78.07 41 eP **P 04 54 04.7 -0.3**
comp=Z,27nm,1.0s,mb4.9
JMB Yambol 78.09 324 P **P 04 54 05.4 +0.4**
ANDN Andirin 78.13 315 iP **P 04 54 05.8 +0.5**
SPNC Sapanca-Adapaz 78.15 321 eP **P 04 54 06.4 +1.0**
SOKA Soboth 78.17 334⇑iP **P 04 54 05.6 +0.2**
comp=Z,379nm,1.3s,mb5.7
PERS Pernice 78.19 334 iP **P 04 54 05.5 0.0**
PERS eS S 05 03 51.5 -1.5
GULT Gulveren 78.28 321 eP **P 04 54 05.5 -0.7**
KBA Koelnbreinsper 78.28 335 iP **P 04 54 06.7 +0.7**
comp=Z,535nm,0.8s,mb6.3,SNR=360
ASUD Al Ashush, Dub 78.28 294 P **P 04 54 07.0 +0.6**
SNR=12
HRT Hereke 78.29 322 eP **P 04 54 03.7 -2.5**
JMDO Jabal Madar 78.32 291 P **P 04 54 07.0 +0.4**
SNR=28
ISK Istanbul-Kandi 78.33 322 eP **P 04 54 03.6 -2.8**
BFO Black Forest 78.38 339 eP **P 04 54 06.3 -0.2**
comp=Z,167nm,1.1s,mb5.7
BFO eS S 05 03 53.7 -1.4
BFO eL 05 31 40.5
comp=Z,586nm,21.7s
BFO Black Forest 78.38 339 eP **P 04 54 06.3 -0.2**
comp=Z,167nm,1.1s,mb5.7
BFO eS S 05 03 53.7 -1.4
BFO Black Forest 78.38 339 eP **P 04 54 06.3 -0.2**
BFO eS S 05 03 53.7 -1.4
BFO pmax pmax
comp=Z,167nm,1.1s,mb5.7
BFO MLR MLR
comp=Z,600nm,21.7s
ZAVS Zavodnje 78.40 334 iP **P 04 54 06.2 -0.4**
SVIS Svilajnac 78.42 329 P **P 04 54 07.1 +0.2**
KOZT Kozan 78.44 316 eP **P 04 54 08.0 +1.0**
KUZU Kuzuini 78.45 314 iP **P 04 54 07.8 +0.7**
OBKA Obir 78.46 334 P **P 04 54 07.3 +0.3**
OBKA Obir 78.46 334⇑iP **P 04 54 07.1 0.0**
comp=Z,180nm,1.0s,mb5.7,SNR=58
SPAK Spaichingen-Ko 78.49 338 eP **P 04 54 07.6 +0.5**
WATA Walderalm 78.51 336⇓iP **P 04 54 07.6 +0.3**
comp=Z,180nm,1.0s,mb5.9,SNR=42
DOBS Dobrina 78.53 333 iP **P 04 54 06.7 -0.7**
ARQ Araqi 78.54 292 P **P 04 54 07.8 0.0**
SNR=17
CDF Champ du Feu 78.55 340 eP **P 04 54 07.1 -0.3**
comp=Z,444nm,1.1s,mb5.9
CDF Champ du Feu 78.55 340 eP **P 04 54 07.1 -0.3**
comp=Z,222nm,1.1s,mb5.9
CDF Champ du Feu 78.55 340 eP **P 04 54 07.1 -0.3**
CDF pmax pmax
comp=Z,222nm,1.1s,mb5.9
EDRB Edirne 78.56 324 eP **P 04 54 05.1 -2.6**
WTTA Wattenberg 78.56 336⇑iP **P 04 54 08.0 +0.5**
comp=Z,399nm,1.0s,mb6.2,SNR=157
RETA Reutte 78.58 337⇑iP **P 04 54 08.3 +0.6**
comp=Z,122nm,0.9s,mb5.7,SNR=48
BSY Bisya 78.58 292 P **P 04 54 08.5 +0.4**
SNR=20
ADVT Abdulvahap 78.59 321 eP **P 04 54 07.1 -0.7**
MYKA Terra Mystica 78.61 335⇓iP **P 04 54 07.4 -0.4**
comp=Z,215nm,1.7s,mb5.7
GOLS Golise 78.61 333 iP **P 04 54 07.0 -0.9**
MOTA Moosalm 78.62 337⇑iP **P 04 54 08.0 +0.1**
comp=Z,305nm,1.0s,mb6.1,SNR=130
YLV Yalova 78.62 322 eP **P 04 54 07.7 -0.3**
DYA Yadsworthy 78.67 347 eP **P 04 54 07.5 -0.6**
DYA AMb AMB 04 54 09.3
comp=Z,139nm,1.3s,mb5.6
SVRH Sivrihisar-ESK 78.69 320 eP **P 04 54 06.3 -2.0**
LIBD Limburg 78.72 339 eP **P 04 54 08.9 +0.5**
GCIS Gornji Cirnik 78.74 333 iP **P 04 54 07.9 -0.7**
CAVI Cavuskoy 78.74 321 eP **P 04 54 06.5 -2.2**
ECH Echery 78.76 340 eP **P 04 54 08.9 +0.3**
ECH Echery 78.76 340 eP **P 04 54 07.9 -0.8**
comp=Z,233nm,1.3s,mb5.8
ECH Echery 78.76 340 eP **P 04 54 07.9 -0.7**
ECH pmax pmax
comp=Z,233nm,1.3s,mb5.8
ABTA Abfaltersbach 78.81 336 iP **P 04 54 09.4 +0.5**
comp=Z,221nm,1.1s,mb5.9,SNR=46
GEMT Gemlik 78.81 322 eP **P 04 54 06.4 -2.7**
CRES Cresnjev 78.83 333 iP **P 04 54 08.5 -0.6**
UMR Umm Al-Rimmam 78.83 303 eP **P 04 54 08.9 -0.4**
UMR AMb AMB 04 54 12.0
comp=Z,673nm,1.7s,mb6.2
ARMT Armutlu 78.83 322 eP **P 04 54 06.6 -2.6**
MIB Mutribah 78.83 303 eP **P 04 54 08.5 -0.9**
MIB AMb AMB 04 54 12.0
comp=Z,701nm,0.9s,mb6.5
CEYT Ceyhan 78.86 315 eP **P 04 54 08.2 -1.2**
SULT Sultanhani-AKS 78.88 318 eP **P 04 54 10.2 +0.8**
SISC Sisak 78.88 333 P **P 04 54 06.4 -2.9**
FELD Feldberg im Sc 78.88 339 eP **P 04 54 09.7 +0.4**
PTCC Patocco-Chiusa 78.89 335 P **P 04 54 08.8 -0.6**
LJU Ljubljana 78.89 334 iP **P 04 54 08.6 -0.8**
LJU eS S 05 03 56.0 -4.6
LJU e 05 04 11.5
ESKT Eskisehir 78.91 320 eP **P 04 54 08.5 -1.1**
CRNS Crni Vrh 78.94 334 iP **P 04 54 08.5 -1.2**
MEZF Maizieres J'vi 78.95 341 eP **P 04 54 09.6 0.0**
comp=Z,593nm,1.3s,mb6.0
MEZF Maizieres J'vi 78.95 341 eP **P 04 54 09.6 0.0**
comp=Z,593nm,1.3s,mb6.3
KARA Karaisali 78.97 316 eP **P 04 54 11.0 +1.0**
SWET Sewanee 78.97 48 eP **P 04 54 09.1 -1.0**
DIVS Divibare 78.98 330 P **P 04 54 09.0 -0.9**
DAVA Damuels 78.98 337 P **P 04 54 10.3 +0.4**
DAVA Damuels 78.98 337⇑iP **P 04 54 10.0 +0.2**
comp=Z,155nm,1.0s,mb5.8,SNR=53
MDNY Mudanya-Bursa 78.99 322 eP **P 04 54 09.2 -0.8**
THEF They Montfort 79.01 340 eP **P 04 54 10.5 +0.5**
KIZT Kizilcal 79.01 319 eP **P 04 54 10.3 +0.1**
FETA Feichten 79.02 337⇑iP **P 04 54 10.5 +0.4**
comp=Z,180nm,1.0s,mb5.8,SNR=86
VISS Visnje 79.03 334 iP **P 04 54 09.2 -0.9**
YURE YUREGIR 79.07 315 iP **P 04 54 11.5 +0.9**
GULE Gulek 79.08 316 iP **P 04 54 11.9 +1.3**
VOJS Vojsko 79.09 334 iP **P 04 54 09.0 -1.4**
PLD Plovdiv 79.10 326 P **P 04 54 10.3 -0.3**
VBMS Vicksburg 79.10 53 eP **P 04 54 11.0 +0.2**
comp=Z,156nm,1.3s,mb5.7
MOF Molkenrain 79.11 339 eP **P 04 54 10.9 +0.4**
KBD Kabd 79.13 302 eP **P 04 54 10.5 -0.5**
KBD AMb AMB 04 54 13.3
comp=Z,309nm,1.0s,mb6.1
HAU Haudompre 79.14 340 eP **P 04 54 10.2 -0.5**
comp=Z,330nm,1.2s,mb5.7
HAU eMLR MLR
comp=Z,591nm,18.5s
HAU Haudompre 79.14 340 eP **P 04 54 10.2 -0.5**
comp=Z,165nm,1.2s,mb5.7
HAU LR LR
comp=Z,590nm,18.5s
HAU Haudompre 79.14 340 eP **P 04 54 10.2 -0.5**
HAU pmax pmax
comp=Z,165nm,1.2s,mb5.7
HAU MLR MLR

comp=Z,590nm,18.5s
JAVS Javornik 79.16 334 *i* P **P 04 54 09.8 -1.1**
JAVS *i* 04 54 19.7
JAVS *e*S S 05 03 59.2 -4.3
BOJS Bojanci 79.18 333 *i* P **P 04 54 10.4 -0.6**
BOJS *i* 04 54 25.9
BOJS *e*S S 05 03 58.8 -4.9
BOJS *e* 05 04 15.1
CEY Cerknica 79.20 334 *i* P **P 04 54 10.2 -0.9**
HINF Hinteralfeld 79.20 340 *e*P **P 04 54 10.4 -0.7**
comp=Z,248nm,1.4s,mb5.6
HINF Hinteralfeld 79.20 340 *e*P **P 04 54 10.4 -0.7**
comp=Z,124nm,1.4s,mb5.5
HINF Hinteralfeld 79.20 340 *e*P **P 04 54 10.4 -0.7**
HINF pmax pmax
comp=Z,124nm,1.4s,mb5.5
VTS Vitosha 79.21 327 P **P 04 54 10.6 -0.6**
VTS Vitosha 79.21 327 ‖*i*P **P 04 54 11.0 -0.2**
VTS Vitosha 79.21 327 *i* P **P 04 54 11.3 +0.1**
KDZ Kurdzhali 79.23 325 *i* P **P 04 54 11.4 +0.1**
BLY Banja Luka 79.29 332 P **P 04 54 11.0 -0.6**
KCTX Karacabey (Bur 79.29 322 *e*P **P 04 54 11.7 +0.1**
NAY Al-Naaiem 79.32 303 *e*P **P 04 54 11.3 -0.7**
NAY AMb AMB 04 54 14.6
comp=Z,359nm,1.5s,mb6.0
QRN Al-Qurain 79.34 302 *e*P **P 04 54 11.4 -0.7**
QRN AMb AMB 04 54 16.0
comp=Z,525nm,1.3s,mb6.2
LADK Ladik-KONYA 79.38 318 *e*P **P 04 54 10.2 -2.0**
BBS Basel-Blauen 79.39 339 *e*P **P 04 54 12.6 +0.5**
APPI Appiano 79.39 336 P **P 04 54 13.1 +1.0**
RDF Al-Radifah 79.40 302 *e*P **P 04 54 12.1 -0.4**
RDF AMb AMB 04 54 15.6
comp=Z,1µm,1.2s,mb6.5
EDC Edincik 79.41 323 *e*P **P 04 54 10.0 -2.4**
TRI Trieste 79.42 334 *e*P **P 04 54 11.4 -0.9**
comp=Z,121nm,0.9s,mb5.7
TRI Trieste 79.42 334 *e*P **P 04 54 11.4 -0.9**
TRI pmax pmax
comp=Z,121nm,0.9s,mb5.7
CPCT Cooper Cave 79.45 47 *e*P **P 04 54 11.7 -0.9**
RZN Rozhen 79.45 325 *i* P **P 04 54 07.9 -4.6**
SKDS Skadanscina 79.50 334 *i* P **P 04 54 11.4 -1.3**
BARS Barje 79.50 328 P **P 04 54 11.0 -1.8**
BOLV Bolvadin 79.54 320 *i* P **P 04 54 13.2 +0.1**
KONT Konya--Tatoy 79.59 318 *e*P **P 04 54 11.5 -1.8**
ALT Altintas 79.61 320 *e*P **P 04 54 13.6 +0.2**
JSA Saint Aubin 79.62 346 *e*P **P 04 54 12.0 -1.3**
JSA AMb AMB 04 54 14.8
comp=Z,191nm,1.4s,mb5.8
TKL Tuckaleechee C 79.63 46 *e*P **P 04 54 12.9 -0.7**
ALN Alexandroupoli 79.64 324 P **P 04 54 13.3 -0.3**
LOMF Lomont 79.65 339 *e*P **P 04 54 13.9 +0.4**
ERIK Erikli-Kesan 79.66 324 *e*P **P 04 54 11.7 -2.0**
ELN Prospectdale 79.70 43 *e*P **P 04 54 13.4 -0.5**
GONE Gonen-Balikesi 79.74 322 *e*P **P 04 54 11.7 -2.4**
ENEZ Enez 79.74 324 *e*P **P 04 54 13.8 -0.4**
FLN La Foliniere 79.75 345 *e*P **P 04 54 13.6 -0.4**
comp=Z,731nm,1.4s,mb6.0
FLN *e*MLR MLR
comp=Z,555nm,21.0s
FLN La Foliniere 79.75 345 *e*P **P 04 54 13.6 -0.4**
comp=Z,365nm,1.4s,mb6.0
FLN LR LR
comp=Z,560nm,21.0s
FLN La Foliniere 79.75 345 *e*P **P 04 54 13.6 -0.4**
FLN pmax pmax
comp=Z,365nm,1.4s,mb6.0
FLN MLR MLR
comp=Z,560nm,21.0s
LPK Lapseki 79.82 323 *e*P **P 04 54 13.7 -0.9**
GDZ Gediz 79.84 321 *i* P **P 04 54 13.7 -0.9**
SHUT Suhut-Afyon 79.85 320 *e*P **P 04 54 15.0 +0.3**
LDF La Druitiere 79.86 344 *e*P **P 04 54 14.1 -0.5**
PLE Pljevlja 79.86 330 ‖*i*P **P 04 54 14.6 -0.1**
PLE Pljevlja 79.86 330 P **P 04 54 15.0 +0.3**
BLA Blacksburg 79.86 43 *e*P **P 04 54 14.3 -0.5**
comp=Z,44nm,1.0s,mb5.2
BLA Blacksburg 79.86 43 *e*P **P 04 54 14.3 -0.5**
BLA pmax pmax
comp=Z,44nm,1.0s,mb5.2
TUE Stuetta 79.88 338 *e*P **P 04 54 15.3 +0.6**
comp=Z,159nm,0.9s,mb5.8
KKB Krupnik 79.89 326 *i* P **P 04 54 14.9 0.0**
MMB Musomiste 79.90 326 *i* P **P 04 54 15.4 +0.4**
GELI Tayfur-Gelibol 79.91 323 *e*P **P 04 54 15.4 +0.4**
MABI Malga Bissina 79.97 337 P **P 04 54 15.4 +0.2**
BALB Balikesir 80.01 322 *e*P **P 04 54 15.7 +0.1**
BALY Balya 80.03 322 *i* P **P 04 54 13.7 -2.0**
ARMA Armidale 80.03 184 *e*P **P 04 54 15.6 +0.1**
ARMA Armidale 80.03 184 *e*P **P 04 54 16.1 +0.6**
comp=Z,43nm,1.6s,mb5.0
IVA Berane 80.10 329 ‖*i*P **P 04 54 15.5 -0.5**
IVA Berane 80.10 329 P **P 04 54 16.0 0.0**
KAVA Kavala 80.13 325 P **P 04 54 16.2 0.0**
UPM Unac-Piva 80.13 330 ‖*i*P **P 04 54 15.2 -1.0**
UPM Unac-Piva 80.13 330 P **P 04 54 15.0 -1.2**
NVLJ Novalja 80.15 333 P **P 04 54 14.7 -1.5**
GRR Gorron 80.18 345 *e*P **P 04 54 16.1 -0.2**
comp=Z,707nm,1.3s,mb6.2
GRR Gorron 80.18 345 *e*P **P 04 54 16.1 -0.2**
comp=Z,354nm,1.3s,mb6.0
GRR Gorron 80.18 345 *e*P **P 04 54 16.1 -0.2**
GRR pmax pmax
comp=Z,354nm,1.3s,mb6.0
LRAL Lakeview Retre 80.22 50 *e*P **P 04 54 15.5 -1.3**
comp=Z,9.7nm,0.8s,mb4.7
TAOE Nuku Hiva Isla 80.28 116 *e*S S 05 04 19.2 +3.2
comp=Z,1µm,31.9s
TAOE *e*LR LR 05 18 51.5
comp=Z,5µm,33.8s
PVY Plav 80.32 329 ‖*i*P **P 04 54 15.8 -1.4**
PVY Plav 80.32 329 P **P 04 54 19.0 +1.8**
HDMB Hadim 80.36 318 *e*P **P 04 54 17.9 +0.4**
SRS Serrai 80.36 326 P **P 04 54 16.6 -0.9**
LOR Lormes 80.37 341 *e*P **P 04 54 17.0 -0.4**
comp=Z,550nm,1.4s,mb5.9
LOR *e*MLR MLR
comp=Z,763nm,21.8s
LOR Lormes 80.37 341 *e*P **P 04 54 17.0 -0.4**
comp=Z,275nm,1.4s,mb5.9
LOR LR LR
comp=Z,760nm,21.8s
LOR Lormes 80.37 341 *e*P **P 04 54 17.0 -0.4**
LOR pmax pmax
comp=Z,275nm,1.4s,mb5.9
LOR MLR MLR
comp=Z,760nm,21.8s
SKO Skopje 80.38 328 *e*P **P 04 54 18.4 +0.9**
IKL Isikli 80.43 316 *e*P **P 04 54 15.7 -2.2**
KHAL Karahalli 80.44 320 *i* P **P 04 54 17.6 -0.3**
NKY Niksic 80.45 330 ‖*i*P **P 04 54 17.2 -0.7**
ISP Isparta 80.48 319 *e*P **P 04 54 17.6 -0.5**
ISP Isparta 80.48 319 *e*P **P 04 54 17.4 -0.7**
comp=Z,152nm,1.4s,mb5.6
ISP Isparta 80.48 319 P **P 04 54 18.1 0.0**
CABF La Chapelle 80.51 340 *e*P **P 04 54 18.1 -0.1**
comp=Z,406nm,1.4s,mb5.8
CABF La Chapelle 80.51 340 *e*P **P 04 54 18.1 -0.1**
comp=Z,203nm,1.4s,mb5.8
CABF La Chapelle 80.51 340 *e*P **P 04 54 18.1 -0.1**
CABF pmax pmax
comp=Z,203nm,1.4s,mb5.8
BRY Bratogost 80.52 330 ‖*i*P **P 04 54 16.8 -1.5**
BRY Bratogost 80.52 330 P **P 04 54 17.0 -1.3**
VAY Valandovo 80.55 327 P **P 04 54 18.1 -0.4**
VAY Valandovo 80.55 327 *e*P **P 04 54 18.2 -0.3**
SUTC Sutluce-Ispart 80.57 319 *e*P **P 04 54 16.5 -2.1**
KNT Kendrikon 80.58 326 P **P 04 54 18.2 -0.4**
SGMF Saint Gilles 80.59 346 *e*P **P 04 54 18.2 -0.3**
comp=Z,221nm,1.1s,mb5.6
SGMF Saint Gilles 80.59 346 *e*P **P 04 54 18.2 -0.3**
comp=Z,111nm,1.1s,mb5.6
SGMF Saint Gilles 80.59 346 *e*P **P 04 54 18.2 -0.3**
SGMF pmax pmax
comp=Z,111nm,1.1s,mb5.6
HYF Humbligny 80.61 342 *e*P **P 04 54 18.8 +0.1**
ROSF Rostrenen 80.62 346 *e*P **P 04 54 18.5 -0.2**
comp=Z,590nm,1.5s,mb5.9
ROSF Rostrenen 80.62 346 *e*P **P 04 54 18.5 -0.2**
comp=Z,295nm,1.5s,mb5.9
ROSF Rostrenen 80.62 346 *e*P **P 04 54 18.5 -0.2**
ROSF pmax pmax
comp=Z,295nm,1.5s,mb5.9
SSF Saint Saulge 80.64 342 *e*P **P 04 54 18.4 -0.4**
comp=Z,198nm,1.4s,mb5.5
SSF Saint Saulge 80.64 342 *e*P **P 04 54 18.4 -0.4**
comp=Z,99nm,1.4s,mb5.5
SSF Saint Saulge 80.64 342 *e*P **P 04 54 18.4 -0.4**
SSF pmax pmax
comp=Z,99nm,1.4s,mb5.5
KULA Kula-Manisa 80.66 321 *e*P **P 04 54 19.1 0.0**
AKHS Akhisar 80.69 322 *i* P **P 04 54 18.6 -0.7**
AKS Akhisar 80.69 322 *e*P **P 04 54 18.0 -1.3**
TTG Podgorica 80.71 329 ‖*i*P **P 04 54 18.3 -1.0**
TTG Podgorica 80.71 329 P **P 04 54 18.0 -1.3**
SOH Sokhos 80.71 326 P **P 04 54 19.5 +0.2**
BST Brest 80.77 347 *e*P **P 04 54 21.5 +2.0**
EREN Erenkoy 80.80 316 *e*P **P 04 54 18.4 -1.5**
STON Ston 80.82 331 P **P 04 54 16.9 -2.9**
LIA Limnos Island 80.84 324 P **P 04 54 20.0 0.0**
OUR Ouranopolis 80.91 325 P **P 04 54 19.4 -1.0**
AVF Avril sur Loir 80.93 342 *e*P **P 04 54 20.1 -0.3**
comp=Z,640nm,1.6s,mb5.9
AVF Avril sur Loir 80.93 342 *e*P **P 04 54 20.1 -0.3**
comp=Z,320nm,1.6s,mb5.9
AVF Avril sur Loir 80.93 342 *e*P **P 04 54 20.1 -0.3**
AVF pmax pmax
comp=Z,320nm,1.6s,mb5.9
GRG Griva 80.94 326 P **P 04 54 19.6 -0.9**
BUM Brajici-Budva 80.94 329 ‖*i*P **P 04 54 19.8 -0.7**
BUM Brajici-Budva 80.94 329 P **P 04 54 20.0 -0.5**
HCY Herceg Novi 80.94 330 ‖*i*P **P 04 54 19.0 -1.5**
SMF Signal de Mont 80.97 341 *e*P **P 04 54 20.4 -0.2**
comp=Z,803nm,1.5s,mb6.0
SMF Signal de Mont 80.97 341 *e*P **P 04 54 20.4 -0.2**
comp=Z,401nm,1.5s,mb6.0
SMF Signal de Mont 80.97 341 *e*P **P 04 54 20.4 -0.2**
SMF pmax pmax
comp=Z,401nm,1.5s,mb6.0
KRUS Krusevo 80.98 327 *e*P **P 04 54 20.0 -0.7**
PRK Paraskevi 80.98 323 P **P 04 54 19.2 -1.6**
HORT Hortiatis 81.00 326 P **P 04 54 19.3 -1.6**
QUIF Quistinic 81.01 346 *e*P **P 04 54 20.5 -0.3**
comp=Z,90nm,0.8s,mb5.3
QUIF Quistinic 81.01 346 *e*P **P 04 54 20.5 -0.3**
comp=Z,45nm,0.8s,mb5.3
QUIF Quistinic 81.01 346 *e*P **P 04 54 20.5 -0.3**
QUIF pmax pmax
comp=Z,45nm,0.8s,mb5.3
RAVA Ravarino 81.02 336 P **P 04 54 22.8 +1.9**
HWQ Hawqa 81.02 314 *e*P **P 04 54 21.0 -0.1**
ULC Ulcinj 81.13 329 ‖*i*P **P 04 54 21.1 -0.4**
ULC Ulcinj 81.13 329 P **P 04 54 23.0 +1.5**
DENT Denizli 81.16 320 *e*P **P 04 54 22.0 +0.3**
DNZL Cakiroluk 81.20 320 *i* P **P 04 54 22.1 +0.1**
KORT Korkueli 81.24 319 *i* P **P 04 54 21.8 -0.4**
BGF Bois d'Agland 81.25 342 *e*P **P 04 54 22.0 -0.1**
comp=Z,252nm,1.4s,mb5.6
BGF Bois d'Agland 81.25 342 *e*P **P 04 54 22.0 -0.1**
comp=Z,126nm,1.4s,mb5.5
BGF Bois d'Agland 81.25 342 *e*P **P 04 54 22.0 -0.1**
BGF pmax pmax
comp=Z,126nm,1.4s,mb5.5
BIA Bitola 81.26 327 *e*P **P 04 54 21.5 -0.7**
LFK Lefkose 81.30 316 *e*P **P 04 54 21.1 -1.4**
PESA Pesaro 81.30 334 P **P 04 54 23.5 +1.1**
PHNC Paralimni 81.30 315 P **P 04 54 22.9 +0.3**
comp=Z,2.6nm,1.2s
KDAG Bornova 81.32 322 *i* P **P 04 54 21.1 -1.5**
IZM Izmir 81.32 322 *e*P **P 04 54 21.8 -0.9**
PAIG Paliouri 81.37 325 P **P 04 54 21.2 -1.7**
GOLH Golhisar 81.38 320 *i* P **P 04 54 21.7 -1.2**
LPL La Plagne 81.40 339 *e*P **P 04 54 23.5 +0.6**
comp=Z,291nm,1.3s,mb5.7
LPL La Plagne 81.40 339 *e*P **P 04 54 23.5 +0.6**
comp=Z,146nm,1.3s,mb5.7
LPL La Plagne 81.40 339 *e*P **P 04 54 23.5 +0.6**
LPL pmax pmax
comp=Z,146nm,1.3s,mb5.7
LPG La Plagne 81.41 339 *e*P **P 04 54 23.8 +0.8**
comp=Z,501nm,1.4s,mb5.8
LPG La Plagne 81.41 339 *e*P **P 04 54 23.8 +0.8**
comp=Z,250nm,1.4s,mb5.8
LPG La Plagne 81.41 339 *e*P **P 04 54 23.8 +0.8**
LPG pmax pmax
comp=Z,251nm,1.4s,mb5.8
BLCB Balcova 81.42 322 *e*P **P 04 54 22.3 -0.9**
AOI Ancona 81.44 334 P **P 04 54 23.7 +0.5**
FNA Florina 81.45 327 P **P 04 54 22.7 -0.5**
BHL Bhannes 81.47 314 *e*P **P 04 54 22.8 -0.7**
TIR Tirane 81.47 328 *e*P **P 04 54 23.1 -0.2**
comp=Z,358nm,1.2s,mb6.1
TIR Tirane 81.47 328 *e*P **P 04 54 23.1 -0.2**
TIR pmax pmax
comp=Z,358nm,1.2s,mb6.1
TIR Tirane 81.47 328 P **P 04 54 23.1 -0.2**
ERBM Ermo 81.52 336 P **P 04 54 25.1 +1.6**
MAMC Mammari 81.53 316 P **P 04 54 24.2 +0.4**
GSCL Gusciola 81.53 336 P **P 04 54 24.6 +1.0**
FSSB Fossombrone 81.55 334 P **P 04 54 24.0 +0.3**
FNVD Fontana Vidola 81.56 335 P **P 04 54 25.2 +1.4**
CMSA Cobar Meteorol 81.59 189 *e*P **P 04 54 23.6 -0.2**
SEI Scarperia 81.61 335 P **P 04 54 25.5 +1.5**
GOGA Godfrey 81.62 47 *e*P **P 04 54 23.4 -0.8**
comp=Z,47nm,1.5s,mb5.1
GOGA Godfrey 81.62 47 *e*P **P 04 54 23.4 -0.9**
GOGA pmax pmax
comp=Z,47nm,1.5s,mb5.1
TCF Toulx Ste Croi 81.64 342 *e*P **P 04 54 24.1 0.0**
comp=Z,419nm,1.6s,mb5.7
TCF Toulx Ste Croi 81.64 342 *e*P **P 04 54 24.1 0.0**
comp=Z,209nm,1.6s,mb5.7
TCF Toulx Ste Croi 81.64 342 *e*P **P 04 54 24.1 0.0**
TCF pmax pmax
comp=Z,209nm,1.6s,mb5.7
ELL Elmali 81.65 319 *e*P **P 04 54 19.7 -4.6**
CSS Prodhromos 81.65 316 P **P 04 54 24.0 -0.4**
comp=Z,1.6nm,1.2s
LIT Litokhoron 81.66 326 P **P 04 54 22.2 -2.1**
PLDF La Plantade 81.66 341 *e*P **P 04 54 25.5 +1.3**
AGO Saint Agoulin 81.68 342 *e*P **P 04 54 25.7 +1.4**
AYDN Tasoluk 81.71 321 *i* P **P 04 54 25.2 +0.5**
CING Cingoli 81.72 334 P **P 04 54 25.0 +0.4**
LEF Lefka 81.72 316 *e*P **P 04 54 22.4 -2.4**
KZN Kozani 81.73 327 P **P 04 54 24.7 0.0**
RCY Rachaya 81.73 313 *e*P **P 04 54 25.2 +0.3**
VLC Villacollemand 81.77 336 *e*P **P 04 54 25.6 +0.8**
comp=Z,431nm,1.5s,mb6.1
MFF Saint Martin d 81.78 344 *e*P **P 04 54 25.1 +0.2**
comp=Z,234nm,1.3s,mb5.6
MFF Saint Martin d 81.78 344 *e*P **P 04 54 25.1 +0.2**
comp=Z,117nm,1.3s,mb5.5
MFF Saint Martin d 81.78 344 *e*P **P 04 54 25.1 +0.2**
MFF pmax pmax
comp=Z,117nm,1.3s,mb5.5
CHOS Chios island 81.81 323 P **P 04 54 25.2 0.0**
ALFC Alevga 81.82 317 P **P 04 54 25.0 -0.3**
comp=Z,1.5nm,0.7s
GDM Grand'Maison 81.84 339 *e*P **P 04 54 26.6 +1.4**
BADI Badiali 81.86 334 P **P 04 54 26.6 +1.2**
NEST Nestorio 81.89 327 P **P 04 54 24.8 -0.8**
SNTG Esanatoglia 81.90 334 P **P 04 54 26.1 +0.5**
CDCA Citt' di Caste 81.92 334 P **P 04 54 27.3 +1.7**
AOS Alonnisos 81.96 325 P **P 04 54 23.9 -2.1**
OFFI Offida 81.98 333 P **P 04 54 26.7 +0.7**
PYM Petit Puy Mans 81.99 342 *e*P **P 04 54 27.1 +1.1**
MURB Monte Urbino 82.01 334 P **P 04 54 27.1 +0.9**
XOR Xorichti 82.05 325 P **P 04 54 24.6 -1.8**
MLSB Milas 82.06 321 *e*P **P 04 54 25.5 -1.0**
TURN Turunc 82.09 320 *i* P **P 04 54 27.6 +0.9**
SSB Saint Sauveur 82.12 340 *e*P **P 04 54 27.6 +0.9**
SSB Saint Sauveur 82.12 340 *e*P **P 04 54 26.7 0.0**
comp=Z,106nm,1.2s,mb5.5
SSB Saint Sauveur 82.12 340 *e*P **P 04 54 26.7 0.0**
SSB pmax pmax
comp=Z,106nm,1.2s,mb5.5
QLNO Quiliano 82.13 337 P **P 04 54 25.6 -1.2**
MBDF Montbardon 82.14 339 *e*P **P 04 54 27.0 +0.2**
comp=Z,115nm,1.0s,mb5.3
MBDF Montbardon 82.14 339 *e*P **P 04 54 27.0 +0.2**
comp=Z,58nm,1.0s,mb5.4
MBDF Montbardon 82.14 339 *e*P **P 04 54 27.0 +0.2**
MBDF pmax pmax
comp=Z,58nm,1.0s,mb5.4
PPCY Paphos 82.16 317 P **P 04 54 26.7 -0.4**
CSNT Castellina Chi 82.16 335 P **P 04 54 27.0 +0.1**
ORIF Oris-en-Rattie 82.16 339 *e*P **P 04 54 27.5 +0.6**
comp=Z,466nm,1.4s,mb5.8
ORIF *e*MLR MLR
comp=Z,494nm,21.5s
ORIF Oris-en-Rattie 82.16 339 *e*P **P 04 54 27.5 +0.6**
comp=Z,233nm,1.4s,mb5.8
ORIF Oris-en-Rattie 82.16 339 *e*P **P 04 54 27.5 +0.6**
ORIF pmax pmax
comp=Z,233nm,1.4s,mb5.8
AKAS Kas 82.21 319 *i* P **P 04 54 25.0 -2.3**
TERO Teramo 82.29 333 P **P 04 54 28.2 +0.6**
THL Klokotos Trika 82.30 326 P **P 04 54 27.6 -0.1**
MMAI Mount Meron Ar 82.32 313 P **P 04 54 28.3 +0.4**
comp=Z,50nm,0.5s,mb5.6,baz=37,slow=7.3,SNR=50
MMAI LR LR 05 36 56.5
comp=Z,331nm,18.2s,baz=355,slow=40
PPT Papeete 82.32 129 *e*S S 05 04 37.7 +0.8
comp=Z,1µm,62.0s
PPT *e*LR LR 05 19 36.9
comp=Z,3µm,35.8s,baz=326
PPT Papeete 82.32 129 LR LR 05 26 06.3
comp=Z,503nm,19.5s,baz=320,slow=32
SURF Saint Ours 82.36 339 *e*P **P 04 54 29.4 +1.5**
BDRM Kayabasi 82.40 321 *i* P **P 04 54 26.9 -1.4**
MSAG Monte S. Angel 82.43 331 P **P 04 54 28.4 0.0**
STKA Stephens Creek 82.43 193 P **P 04 54 29.1 +0.9**
comp=Z,3.8nm,0.7s,baz=45,slow=4.3,SNR=4.3
STKA LR LR 05 25 20.7
comp=Z,375nm,21.9s,baz=117,slow=31
SGRT San Giovanni R 82.44 331 P **P 04 54 28.1 -0.3**
MGAB Montegabbione 82.45 334 P **P 04 54 29.1 +0.6**
VIVF Saint-Julien-l 82.49 340 *e*P **P 04 54 28.9 +0.3**
comp=Z,453nm,1.5s,mb5.8
VIVF Saint-Julien-l 82.49 340 *e*P **P 04 54 28.9 +0.3**
comp=Z,226nm,1.5s,mb5.8
VIVF Saint-Julien-l 82.49 340 *e*P **P 04 54 28.9 +0.3**
VIVF pmax pmax
comp=Z,227nm,1.5s,mb5.8
RGNG Rignano Grg 82.56 331 P **P 04 54 28.6 -0.5**
AQU L'Aquila 82.60 333 *e*P **P 04 54 30.0 +0.8**
comp=Z,179nm,1.2s,mb5.8
AQU L'Aquila 82.60 333 ‖*i*P **P 04 54 30.7 +1.5**
AQU L'Aquila 82.60 333 ‖*i*P **P 04 54 30.7 +1.5**
OCF Saint Nazaire 82.62 340 *e*P **P 04 54 30.6 +1.3**
OG26 St.-Nazaire-De 82.62 340 *e*P **P 04 54 30.6 +1.3**
IMI Imperia 82.64 338 P **P 04 54 29.8 +0.4**
SAOF Saorge 82.65 338 *e*P **P 04 54 29.7 +0.3**
AUTN L'Aution 82.67 338 *e*P **P 04 54 30.6 +1.0**
TOUF Mont Tournerai 82.69 338 *e*P **P 04 54 30.3 +0.6**
RJF Les Rejaudoux 82.72 342 *e*P **P 04 54 29.7 -0.1**
comp=Z,287nm,1.6s,mb5.6
RJF *e*MLR MLR
comp=Z,859nm,19.2s
RJF Les Rejaudoux 82.72 342 *e*P **P 04 54 29.7 -0.1**
comp=Z,143nm,1.6s,mb5.5
RJF LR LR
comp=Z,860nm,19.3s
RJF Les Rejaudoux 82.72 342 *e*P **P 04 54 29.7 -0.1**
RJF pmax pmax
comp=Z,143nm,1.6s,mb5.5
RJF MLR MLR
comp=Z,860nm,19.3s
FIAM Fiamignano 82.76 333 P **P 04 54 30.7 +0.6**
INTR Introdacqua 82.77 333 P **P 04 54 30.1 0.0**
LUCF Luceram 82.78 338 *e*P **P 04 54 30.6 +0.4**
SBF Sospel 82.79 338 *e*P **P 04 54 29.7 -0.5**
comp=Z,650nm,1.5s,mb5.9
SBF Sospel 82.79 338 *e*P **P 04 54 29.7 -0.5**
comp=Z,325nm,1.5s,mb5.9
SBF Sospel 82.79 338 *e*P **P 04 54 29.7 -0.5**
SBF pmax pmax
comp=Z,325nm,1.5s,mb5.9
CIGN Sant'Elia a Pi 82.79 332 P **P 04 54 31.1 +0.9**
LATE Laterza 82.82 334 P **P 04 54 29.6 -0.7**
MVIF Mont Vial 82.83 338 *e*P **P 04 54 31.1 +0.7**
MON Monaco 82.92 338 P **P 04 54 31.0 +0.1**
REVF Revere 82.92 338 *e*P **P 04 54 31.1 +0.2**
CAF Calviac 82.97 342 *e*P **P 04 54 31.3 +0.2**
comp=Z,65nm,0.9s,mb5.2
CAF Calviac 82.97 342 *e*P **P 04 54 31.3 +0.2**
comp=Z,33nm,0.9s,mb5.2
CAF Calviac 82.97 342 *e*P **P 04 54 31.3 +0.2**
CAF pmax pmax
comp=Z,33nm,0.9s,mb5.2
RNI2 Rionero Sannit 82.97 332 P **P 04 54 32.2 +1.0**
VVLD Villa Vallelon 82.98 333 P **P 04 54 31.5 +0.3**
MIDA Miranda 83.00 332 P **P 04 54 31.9 +0.6**
FG5 Orsara di Pugl 83.02 332 P **P 04 54 32.3 +0.9**
CALN Calern 83.03 338 *e*P **P 04 54 32.3 +0.9**
CERT Cerreto 83.09 333 P **P 04 54 31.8 0.0**
SMRF Simiane la Rot 83.12 339 *e*P **P 04 54 32.3 +0.4**
comp=Z,319nm,1.5s,mb5.6
SMRF Simiane la Rot 83.12 339 *e*P **P 04 54 32.3 +0.4**
comp=Z,319nm,1.5s,mb5.9
GUAR Guarcino 83.14 333 P **P 04 54 32.3 +0.3**
LTRZ Laterza 83.15 330 P **P 04 54 31.9 -0.2**
SGG Gregorio Mates 83.20 332 P **P 04 54 32.7 +0.4**
PSB1 Pescosannita 83.21 332 P **P 04 54 32.7 +0.3**
LFF La Frestale 83.22 343 *e*P **P 04 54 32.4 0.0**
comp=Z,193nm,1.2s,mb5.5
LFF La Frestale 83.22 343 *e*P **P 04 54 32.4 0.0**
comp=Z,96nm,1.2s,mb5.5
LFF La Frestale 83.22 343 *e*P **P 04 54 32.4 0.0**
LFF pmax pmax
comp=Z,96nm,1.2s,mb5.5
MRB1 Monte Rocchett 83.25 332 P **P 04 54 33.0 +0.4**
ACER Acerenza 83.26 331 P **P 04 54 33.3 +0.6**
FRF La Foret Royal 83.27 338 *e*P **P 04 54 32.2 -0.5**
comp=Z,343nm,1.5s,mb5.7
FRF La Foret Royal 83.27 338 *e*P **P 04 54 32.2 -0.5**
comp=Z,172nm,1.5s,mb5.7
FRF La Foret Royal 83.27 338 *e*P **P 04 54 32.2 -0.5**
FRF pmax pmax
comp=Z,172nm,1.5s,mb5.7
TOLF Tolfa 83.27 334 P **P 04 54 32.9 +0.2**
RFI Roccamonfina 83.39 332 P **P 04 54 34.7 +1.4**
LASF Ste Croix 83.41 340 *e*P **P 04 54 33.8 +0.4**
comp=Z,179nm,1.5s,mb5.4
MRLC Muro Lucano 83.43 331 P **P 04 54 33.6 +0.1**
PTRP Pietrapertosa 83.46 331 P **P 04 54 34.6 +0.9**
LMR La Mourre 83.51 338 *e*P **P 04 54 33.5 -0.4**
comp=Z,368nm,1.4s,mb5.7
LMR La Mourre 83.51 338 *e*P **P 04 54 33.5 -0.4**
comp=Z,184nm,1.4s,mb5.7
LMR La Mourre 83.51 338 *e*P **P 04 54 33.5 -0.4**
LMR pmax pmax
comp=Z,184nm,1.4s,mb5.7
PGF Pioggiola 83.63 336 *e*P **P 04 54 34.0 -0.5**
comp=Z,192nm,1.0s,mb5.6
PGF Pioggiola 83.63 336 *e*P **P 04 54 34.0 -0.5**
comp=Z,96nm,1.0s,mb5.6
PGF Pioggiola 83.63 336 *e*P **P 04 54 34.0 -0.5**
PGF pmax pmax
comp=Z,96nm,1.0s,mb5.6
MGR Morigerati 83.97 331 P **P 04 54 36.2 -0.1**
CUC Castrocucco 84.02 331 *e*P **P 04 54 36.1 -0.5**
comp=Z,78nm,1.4s,mb5.3
FORT Forrest 84.13 204 *e*P **P 04 54 36.6 -0.4**
comp=Z,80nm,0.9s,mb5.5
FORT Forrest 84.13 204 *e*P **P 04 54 36.8 -0.2**
comp=Z,74nm,0.8s,mb5.6
TIP Timpagrande 84.46 330 *e*P **P 04 54 39.0 +0.2**
comp=Z,240nm,1.3s,mb5.9
MTLF Montolieu 84.46 341 *e*P **P 04 54 38.7 -0.1**
comp=Z,95nm,1.1s,mb5.2
MTLF Montolieu 84.46 341 *e*P **P 04 54 38.7 -0.1**
comp=Z,48nm,1.1s,mb5.2
MTLF Montolieu 84.46 341 *e*P **P 04 54 38.7 -0.1**
MTLF pmax pmax
comp=Z,48nm,1.1s,mb5.2
LRDF Laroque-de-Fa 84.78 341 *e*P **P 04 54 40.8 +0.4**
MLS Moulis 85.06 342 *e*P **P 04 54 42.8 +1.0**
CARF Carcanieres 85.09 341 *e*P **P 04 54 43.4 +1.5**
EPF Esparros 85.14 343 *e*P **P 04 54 42.2 +0.1**
comp=Z,28nm,0.6s,mb5.1
EPF Esparros 85.14 343 *e*P **P 04 54 42.2 +0.1**
comp=Z,14nm,0.6s,mb5.1
EPF Esparros 85.14 343 *e*P **P 04 54 42.2 +0.1**
EPF pmax pmax
comp=Z,14nm,0.6s,mb5.1
FILF Fillols 85.14 341 *e*P **P 04 54 44.0 +1.8**
EJON La Jonquera 85.18 341 P **P 04 54 45.1 +2.7**
comp=Z,207nm,2.2s,mb5.7
EALK Alkurruntz 85.30 344 P **P 04 54 46.1 +3.2**
comp=Z,22nm,1.0s,mb5.0
CLLI Llivia 85.34 341 P **P 04 54 45.2 +2.0**

VIEF	**Viey**	**85.34**	**343**	*eP*	**P**	**04 54 44.4**	**+1.2**
SJPF	**Ste Jean**	**85.35**	**344**	*eP*	**P**	**04 54 42.9**	**-0.3**
	comp=Z,17nm,0.5s,mb4.9						
SJPF	**Ste Jean**	**85.35**	**344**	*eP*	**P**	**04 54 42.9**	**-0.3**
	comp=Z,8.6nm,0.5s,mb4.9						
SJPF	**Ste Jean**	**85.35**	**344**	*eP*	**P**	**04 54 42.9**	**-0.3**
SJPF				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
RESF	**Ens**	**85.35**	**343**	*eP*	**P**	**04 54 45.0**	**+1.8**
LARF	**Larrau**	**85.38**	**344**	*eP*	**P**	**04 54 44.3**	**+0.9**
VALF	**Valcebollere**	**85.41**	**341**	*eP*	**P**	**04 54 44.8**	**+1.3**
ETSF	**Etsaut**	**85.44**	**343**	*eP*	**P**	**04 54 44.2**	**+0.6**
	comp=Z,32nm,0.6s,mb5.1						
ETSF	**Etsaut**	**85.44**	**343**	*eP*	**P**	**04 54 44.2**	**+0.6**
	comp=Z,16nm,0.6s,mb5.1						
ETSF	**Etsaut**	**85.44**	**343**	*eP*	**P**	**04 54 44.2**	**+0.6**
ETSF				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.1						
EBIE	**Bielsa**	**85.51**	**343**	P	**P**	**04 54 46.2**	**+2.2**
	comp=Z,32nm,0.9s,mb5.2						
DGI	**Dorgali Grotta**	**85.56**	**335**	P	**P**	**04 54 45.1**	**+0.8**
CEL	**Celeste**	**85.57**	**330**	*eP*	**P**	**04 54 44.1**	**-0.3**
	comp=Z,120nm,1.4s,mb5.6						
CSOR	**Sort**	**85.61**	**342**	P	**P**	**04 54 46.4**	**+1.9**
	comp=Z,34nm,1.5s,mb5.0						
ELAN	**Lanestosa**	**85.62**	**345**	P	**P**	**04 54 45.9**	**+1.3**
	comp=Z,48nm,1.5s,mb5.2						
SLNA	**Salina**	**85.64**	**331**	P	**P**	**04 54 44.3**	**-0.4**
GVD	**Gavdhos**	**85.67**	**322**	*eP*	**P**	**04 54 45.2**	**+0.3**
	comp=Z,260nm,1.0s,mb6.1						
EARI	**Arriondas**	**85.83**	**347**	P	**P**	**04 54 46.6**	**+1.1**
	comp=Z,43nm,1.3s,mb5.2						
CFON	**Fontmartina**	**85.93**	**341**	P	**P**	**04 54 49.8**	**+3.7**
	comp=Z,18nm,1.0s,mb4.9						
EMIR	**Miracle**	**85.97**	**341**	P	**P**	**04 54 48.5**	**+2.2**
	comp=Z,23nm,1.1s,mb5.0						
EPON	**Pontenova**	**86.08**	**348**	P	**P**	**04 54 47.3**	**+0.5**
	comp=Z,40nm,0.9s,mb5.3						
VSL	**Villasalto**	**86.39**	**335**	*eP*	**P**	**04 54 48.5**	**+0.2**
	comp=Z,87nm,1.1s,mb5.6						
ESAC	**San Caprasio**	**86.56**	**343**	P	**P**	**04 54 49.4**	**+0.3**
	comp=Z,65nm,1.1s,mb5.5						
EPOB	**Poblet**	**86.61**	**342**	P	**P**	**04 54 50.1**	**+0.6**
	comp=Z,19nm,1.1s,mb4.9						
EMAZ	**Mazaricos**	**86.68**	**349**	P	**P**	**04 54 51.0**	**+1.2**
	comp=Z,37nm,1.1s,mb5.2						
STS	**Santiago**	**86.69**	**349**	P	**P**	**04 54 51.0**	**+1.2**
	comp=Z,39nm,1.2s,mb5.2						
STS	**Santiago**	**86.69**	**349**	P	**P**	**04 54 51.0**	**+1.2**
STS				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.2						
ERC	**Erice**	**86.81**	**332**	P	**P**	**04 54 51.6**	**+1.1**
SSY	**Sortino**	**86.85**	**330**	P	**P**	**04 54 51.0**	**+0.3**
HVZN	**Vizzini**	**86.94**	**330**	P	**P**	**04 54 51.2**	**+0.1**
ERUA	**La Rua**	**87.00**	**348**	P	**P**	**04 54 52.8**	**+1.5**
	comp=Z,33nm,1.2s,mb5.1						
ERUA	**La Rua**	**87.00**	**348**	P	**P**	**04 54 52.8**	**+1.5**
ERUA				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.1						
HMDC	**Modica**	**87.12**	**330**	P	**P**	**04 54 52.5**	**+0.5**
ECAL	**Calabor**	**87.38**	**347**	P	**P**	**04 54 53.5**	**+0.3**
	comp=Z,15nm,0.8s,mb5.0						
PBRG	**Braganca**	**87.52**	**347**	*eP*	**P**	**04 54 54.9**	**+1.1**
	comp=Z,29nm,1.7s,mb5.0						
ELOB	**Lobios**	**87.63**	**348**	P	**P**	**04 54 55.1**	**+0.7**
	comp=Z,29nm,1.9s,mb5.0						
ETOR	**Torete**	**87.72**	**344**	P	**P**	**04 54 55.0**	**+0.2**
	comp=Z,14nm,0.7s,mb5.1						
ETOR	**Torete**	**87.72**	**344**	P	**P**	**04 54 55.0**	**+0.2**
ETOR				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
ETOS	**Mallorca**	**87.76**	**340**	P	**P**	**04 54 56.9**	**+1.9**
	comp=Z,20nm,1.0s,mb5.1						
PCAB	**Cabril**	**87.78**	**348**	*eP*	**P**	**04 54 56.1**	**+1.0**
	comp=Z,44nm,1.6s,mb5.2						
EMOS	**Mosqueruela**	**87.87**	**342**	P	**P**	**04 54 56.8**	**+1.2**
	comp=Z,22nm,0.9s,mb5.2						
KLBR	**Kellerberrin**	**88.04**	**212**	*eP*	**P**	**04 54 55.6**	**-0.6**
	comp=Z,19nm,0.7s,mb5.2						
PVRL	**Vila Real**	**88.17**	**348**	*eP*	**P**	**04 54 57.2**	**+0.3**
	comp=Z,73nm,1.3s,mb5.5						
MVO	**Moncorvo**	**88.19**	**348**	*eP*	**P**	**04 54 57.4**	**+0.4**
	comp=Z,49nm,1.7s,mb5.3						
MVO				*eS*	S	05 05 22.7	-12
MVO	**Moncorvo**	**88.19**	**348**	P	**P**	**04 54 58.0**	**+1.0**
GUD	**Guadarrama**	**88.26**	**345**	P	**P**	**04 54 57.8**	**+0.4**
	comp=Z,17nm,1.2s,mb4.9						
GUD	**Guadarrama**	**88.26**	**345**	P	**P**	**04 54 57.8**	**+0.4**
GUD				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.0						
PVIS	**Viseu**	**88.75**	**348**	*eP*	**P**	**04 55 00.8**	**+1.1**
	comp=Z,50nm,1.5s,mb5.3						
EIBI	**Ibiza**	**88.79**	**341**	P	**P**	**04 55 02.0**	**+2.1**
	comp=Z,20nm,1.1s,mb5.1						
MTE	**Manteigas**	**89.01**	**348**	*eP*	**P**	**04 55 02.1**	**+1.2**
	comp=Z,51nm,2.0s,mb5.2						
MTE				*eS*	S	05 05 28.3	-14
MTE				*eLR*	LR	05 25 05.5	
	comp=Z,420nm,16.0s						
EPLA	**Plasencia**	**89.13**	**347**	P	**P**	**04 55 01.0**	**-0.4**
	comp=Z,27nm,1.1s,mb5.2						
EPLA	**Plasencia**	**89.13**	**347**	P	**P**	**04 55 01.0**	**-0.5**
EPLA				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.2						
ESDC	**Sonseca Array**	**89.17**	**345**	P	**P**	**04 55 01.2**	**-0.5**
	comp=Z,14nm,0.9s,mb5.0,baz=7.3,slow=4.3,SNR=47						
ESDC				LR	LR	05 42 12.3	
	comp=Z,435nm,18.6s,baz=75,slow=40						
ESLA	**Sonseca Array**	**89.17**	**345**	*eP*	**P**	**04 55 01.6**	**0.0**
	comp=Z,12nm,1.2s,mb4.9						
PAB	**San Pablo**	**89.36**	**345**	*eP*	**P**	**04 55 02.5**	**0.0**
	comp=Z,24nm,1.1s,mb5.1						
PAB	**San Pablo**	**89.36**	**345**	*eP*	**P**	**04 55 02.5**	**-0.1**
PAB				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.1						
PCBR	**Castelo Branco**	**89.55**	**348**	*eP*	**P**	**04 55 03.7**	**+0.3**
	comp=Z,34nm,1.7s,mb5.2						
CMAH	**Djebel Manchou**	**89.61**	**335**	P	**P**	**04 55 04.4**	**+0.6**
ETOB	**Tobarra**	**89.74**	**343**	P	**P**	**04 55 06.4**	**+2.0**
	comp=Z,20nm,0.9s,mb5.2						
PTOM	**Tomar**	**89.89**	**348**	*eP*	**P**	**04 55 05.1**	**0.0**
	comp=Z,46nm,1.8s,mb5.3						
KEST	**Kesra**	**89.91**	**334**	P	**P**	**04 55 04.9**	**-0.3**
	comp=Z,12nm,0.8s,mb5.1,baz=84,slow=0.7						
ABSA	**Djebel Ababsia**	**89.92**	**335**	P	**P**	**04 55 04.9**	**-0.4**
EVIA	**Vianos**	**89.92**	**344**	P	**P**	**04 55 05.9**	**+0.7**
	comp=Z,23nm,0.8s,mb5.4						
EVIA	**Vianos**	**89.92**	**344**	P	**P**	**04 55 05.9**	**+0.7**
EVIA				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.4						
PMRV	**Marv??o**	**89.94**	**347**	*eS*	SKSac	05 05 31.8	+3.4
PMRV				*eLR*	LR	05 25 11.1	
	comp=Z,577nm,18.0s						
CKFL	**Kef-Lekhel**	**90.01**	**336**	P	**P**	**04 55 06.2**	**+0.6**
DFRA	**Djebel Bou Aff**	**90.09**	**337**	P	**P**	**04 55 09.5**	**+3.5**
CASM	**Ain Smara**	**90.20**	**336**	P	**P**	**04 55 06.9**	**+0.4**
PESTR	**Estremoz**	**90.52**	**348**	*eP*	**P**	**04 55 08.3**	**+0.3**
	comp=Z,40nm,1.6s,mb5.3						
PESTR				*eS*	S	05 05 41.0	-15
PESTR				*eLR*	LR	05 25 26.9	
SET	**Setif**	**90.54**	**337**	P	**P**	**04 55 09.0**	**+0.9**
EBAD	**Badajoz**	**90.55**	**347**	P	**P**	**04 55 09.2**	**+1.1**
	comp=Z,15nm,1.2s,mb5.0						
EBAN	**Banos Encina**	**90.61**	**344**	P	**P**	**04 55 09.7**	**+1.3**
	comp=Z,8.0nm,0.6s,mb5.0						
EBAN	**Banos Encina**	**90.61**	**344**	P	**P**	**04 55 09.7**	**+1.3**
EBAN				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.0						
PMAFR	**Mafra**	**90.66**	**349**	*eS*	SKSac	05 05 37.6	+5.1
PMAFR				*eLR*	LR	05 26 06.0	
	comp=Z,270nm,16.0s						
EHUE	**Huescar**	**90.74**	**343**	P	**P**	**04 55 09.7**	**+0.7**
	comp=Z,76nm,1.7s,mb5.5						
EHUE	**Huescar**	**90.74**	**343**	P	**P**	**04 55 09.7**	**+0.7**
EHUE				pmax	pmax		
	comp=Z,76nm,1.7s,mb5.5						
EADA	**Adamuz**	**90.74**	**345**	P	**P**	**04 55 09.6**	**+0.5**
	comp=Z,21nm,1.1s,mb5.2						
EQES	**Quesada**	**90.84**	**344**	P	**P**	**04 55 10.9**	**+1.4**
	comp=Z,12nm,1.2s,mb4.9						
EVO	**Evora**	**90.91**	**348**	*eP*	**P**	**04 55 10.6**	**+0.8**
	comp=Z,26nm,1.4s,mb5.2						
EVOP	**Sao Brissos**	**90.93**	**348**	*eP*	**P**	**04 55 10.2**	**+0.4**
EVOP				*eS*	SKSac	05 05 34.7	+0.6
EVOP				*eS*	SKSac	05 05 34.7	+0.6
EVOP				AMS	AMS	05 43 59.2	
	comp=Z,526nm,19.5s						
EVOP	**Sao Brissos**	**90.93**	**348**	*eP*	**P**	**04 55 15.7**	**+5.8**
EVOP				*eS*	SKSac	05 05 34.7	+0.6
PBAR	**Barrancos**	**91.12**	**347**	*eP*	**P**	**04 55 11.6**	**+0.8**
	comp=Z,34nm,1.6s,mb5.2						
PBAR				*eS*	SKSac	05 05 39.6	+4.4
PBAR				*eLR*	LR	05 26 07.6	
	comp=Z,447nm,18.0s						
PBEJ	**Beja**	**91.39**	**348**	*eP*	**P**	**04 55 12.5**	**+0.5**
	comp=Z,35nm,1.6s,mb5.2						
ECOG	**Cogollos-Vega**	**91.44**	**344**	P	**P**	**04 55 13.0**	**+0.7**
	comp=Z,13nm,0.8s,mb5.1						
ECOG	**Cogollos-Vega**	**91.44**	**344**	P	**P**	**04 55 13.0**	**+0.7**
ECOG				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.1						
EMIN	**Mina Concepcio**	**91.47**	**347**	P	**P**	**04 55 12.3**	**-0.1**
	comp=Z,16nm,1.1s,mb5.1						
MESJ	**Messejana**	**91.62**	**348**	*eP*	**P**	**04 55 13.2**	**+0.2**
MESJ				*eS*	SKSac	05 05 39.5	+1.5
MESJ				AMS	AMS	05 44 17.9	
	comp=Z,474nm,15.3s						
MESJ	**Messejana**	**91.62**	**348**	*eP*	**P**	**04 55 13.2**	**+0.1**
MESJ				*eS*	SKSac	05 05 39.5	+1.5
ELOJ	**Sierra Loja**	**91.67**	**345**	P	**P**	**04 55 14.4**	**+1.1**
	comp=Z,25nm,1.1s,mb5.3						
ELOJ	**Sierra Loja**	**91.67**	**345**	P	**P**	**04 55 14.4**	**+1.1**
ELOJ				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.4						
ERON	**Agron**	**91.73**	**344**	P	**P**	**04 55 13.9**	**+0.3**
	comp=Z,10nm,0.8s,mb5.1						
PCVE	**Castro Verde**	**91.80**	**348**	*eP*	**P**	**04 55 14.6**	**+0.7**
	comp=Z,64nm,1.6s,mb5.6						
PCVE				*eS*	SKSac	05 05 46.4	+7.3
PCVE				*eLR*	LR	05 27 00.8	
EGRO	**El Granado**	**91.81**	**347**	P	**P**	**04 55 13.5**	**-0.5**
	comp=Z,28nm,1.6s,mb5.2						
EGUA	**Guajares**	**91.87**	**344**	P	**P**	**04 55 14.6**	**+0.4**
	comp=Z,118nm,0.8s,mb6.2						
EGUA	**Guajares**	**91.87**	**344**	P	**P**	**04 55 14.6**	**+0.3**
EGUA				pmax	pmax		
	comp=Z,118nm,0.8s,mb6.2						
PVAQ	**Vaqueiros**	**91.98**	**347**	*eP*	**P**	**04 55 15.8**	**+1.0**
	comp=Z,65nm,1.7s,mb5.6						
PVAQ				*eS*	SKSac	05 05 41.0	+0.9
PVAQ				*eLR*	LR	05 26 54.1	
	comp=Z,334nm,16.0s						
PBDV	**Barranco-do-Ve**	**92.16**	**348**	*eS*	SKSac	05 05 45.2	+4.1
PBDV				*eLR*	LR	05 26 16.8	
	comp=Z,360nm,16.0s						
MORF	**Marmelete**	**92.20**	**348**	*eS*	SKSac	05 05 39.8	-1.5
MORF				*eLR*	LR	05 26 13.5	
	comp=Z,534nm,18.0s						
MORF	**Marmelete**	**92.20**	**348**	*eP*	**P**	**04 55 15.9**	**+0.1**
MORF				*eS*	SKSac	05 05 43.1	+1.8
ESPR	**Espera**	**92.22**	**346**	P	**P**	**04 55 17.6**	**+1.7**
	comp=Z,33nm,1.4s,mb5.4						
EMIJ	**Mijas**	**92.34**	**345**	P	**P**	**04 55 16.8**	**+0.3**
	comp=Z,12nm,0.7s,mb5.2						
PFVI	**Vila Bisbo**	**92.39**	**348**	*eS*	SKSac	05 05 42.2	-0.2
PFVI				*eLR*	LR	05 27 12.8	
EJIF	**Jimena Fronter**	**92.57**	**345**	P	**P**	**04 55 18.4**	**+0.9**
	comp=Z,34nm,0.9s,mb5.7						
EJIF	**Jimena Fronter**	**92.57**	**345**	P	**P**	**04 55 18.4**	**+0.9**
EJIF				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.7						
TORD	**Torodi Ar. Bea**	**113.42**	**333**	Pdif	Pdif	04 56 53.2	+2.2
TORD				PKPdf	PKiKP	05 00 43.9	0.0
TORD				PKKPbc	PKKPbc	05 11 26.4	0.0
TORD	**Torodi Ar. Bea**	**113.42**	**333**	Pdiff	Pdif	04 56 53.2	+2.2
	comp=Z,1.2nm,1.1s,baz=9.6,slow=4.2,SNR=2.7						
TORD				PKiKP	PKiKP	05 00 43.9	0.0
	comp=Z,0.7nm,0.9s,baz=0.1,slow=3.7,SNR=3.4						
TORD				PKKPbc	PKKPbc	05 11 26.4	0.0
	comp=Z,0.4nm,0.5s,baz=221,slow=1.5,SNR=8.4						
DBIC	**Dimbokro**	**121.38**	**338**	PKP	PKPdf	05 01 00.5	+1.1
	comp=Z,2.7nm,0.8s,baz=66,slow=2.7,SNR=2.9						
DBIC	**Dimbokro**	**121.38**	**338**	PKIKP	PKPdf	05 01 00.5	+1.2
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIC	**Toumodi**	**121.44**	**338**	*eP*	PKPdf	05 01 08.2	+8.8
KIC	**Kosan Boka**	**121.64**	**338**	*eP*	PKPdf	05 01 04.7	+4.9
LIC	**Lamto**	**121.85**	**338**	*eP*	PKPdf	05 01 06.1	+5.9
LPAZ	**La Paz**	**130.98**	**63**	*e*PKPdf	PKPdf	05 01 18.2	+0.7
LPAZ	**La Paz**	**130.98**	**63**	PKP	PKPdf	05 01 18.2	+0.8
	comp=Z,5.8nm,0.8s,baz=19,slow=7.4,SNR=24						
LPAZ	**La Paz**	**130.98**	**63**	PKIKP	PKPdf	05 01 18.2	+0.7
LPAZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SIV	**San Ignacio**	**134.66**	**55**	PKhKP	PKPpre	05 01 10.6	
	comp=Z,2.9nm,0.8s,baz=311,slow=3.4,SNR=17						
SIV				PKP	PKPdf	05 01 23.1	-1.3
	comp=Z,3.1nm,0.7s,baz=296,slow=0.5,SNR=13						
MAW	**Mawson**	**136.00**	**213**	PKP	PKPdf	05 01 25.1	-0.2
	comp=Z,2.9nm,0.8s,baz=358,slow=3.5,SNR=7.0						
MAW	**Mawson**	**136.00**	**213**	PKIKP	PKPdf	05 01 25.1	-0.2
MAW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BOSA	**Boshof**	**137.50**	**281**	PKP	PKPdf	05 01 29.2	-0.1
	comp=Z,5.2nm,0.9s,baz=22,slow=3.4,SNR=5.2						
BOSA	**Boshof**	**137.50**	**281**	PKIKP	PKPdf	05 01 29.2	-0.1
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
QSPA	**South Pole Qui**	**139.60**	**180**	*e*PKPdf	PKPdf	05 01 23.7	-7.9
CFAA	**Coronel Fontan**	**142.25**	**78**	PKhKP	PKPpre	05 01 30.4	
	comp=Z,0.6nm,0.5s,baz=312,slow=4.2,SNR=11						
SYO	**Syowa Base**	**144.71**	**214**⇓	*e*P	PKPdf	05 01 36.4	-4.6
SYO	**Syowa Base**	**144.71**	**214**⇓	*e*P	PKPdf	05 01 37.7	-3.3
PLCA	**Paso Flores**	**146.25**	**93**	PKPbc	PKPbc	05 01 45.2	-0.6
	comp=Z,18nm,0.8s,baz=276,slow=3.4,SNR=24						
PLCA	**Paso Flores**	**146.25**	**93**	*e*PKP2	PKPab	05 01 44.8	-1.9
CAM4	**Nova Friburgo**	**148.76**	**35**	*e*P	PKPdf	05 01 51.3	+2.0
CAM4				*i*		05 01 52.2	
CAM4				*i*		05 01 54.1	
CAM4				*i*		05 01 57.7	
CAM4				*i*		05 02 06.6	
CAM4				*i*		05 02 08.9	
CAM4				*i*		05 02 12.3	
CAM4				*i*		05 02 14.3	
CAM4				*i*		05 02 18.4	
TRQA	**Tornquist**	**150.30**	**81**	*e*PKPbc	PKPbc	05 01 55.7	-0.8
USHA	**Ushuaia**	**152.56**	**118**	PKPbc	PKPbc	05 02 00.6	-0.6
	comp=Z,7.1nm,0.7s,baz=98,slow=5.0,SNR=7.0						
NVL	**N'lazarevskaya**	**153.37**	**205**	*e*PKIKP	PKPbc	05 01 59.5	-3.0
NVL				pmax	pmax		
	comp=Z,21nm,0.9s						
MAIT	**Maitri**	**153.40**	**205**	*e*PKPdif	PKPbc	05 02 01.7	-0.8
MAIT				*e*		05 02 14.5	
VNA1	**Neumayer--Stat**	**157.94**	**194**	*e*PKPdf	PKPdf	05 02 07.9	+7.0

TIR 04 04:53:56.3, 41.13N×19.76E, h3km, ML3.3, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUK	**Puka**	**0.92**	**6**	*e*PG	Pg	04 54 13.8	-0.1
PUK				*i* SG	Sg	04 54 28.4	+2.6
BCI	**Bajram Curri**	**1.26**	**10**	*e*PG	Pg	04 54 18.8	-1.6
BCI				*i* SG	Sg	04 54 33.4	-3.3
SRN	**Sarande**	**1.26**	**172**	*e*PG	Pg	04 54 19.6	-0.9
SRN				*i* SG	Sg	04 54 35.7	-1.2

IDC 04 05:00:41.8±2.6, 8.95S×74.50W, h145km±31km, mb3.3/4, mb1 3.4/7, mb1mx3.3/18, mbtmpg3.2/7, Error ellipse: s-maj=33.7km s-min=14.0km az=62.0, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**3.79**	**217**	P	Pn	05 01 40.5	+1.2
	4.2nm,0.3s,baz=38,slow=10.0,SNR=26						
NNA				S	Sn	05 02 23.9	+0.1
	14nm,0.3s,baz=342,slow=20,SNR=8.0						
ATAH	**Atahualpa**	**4.26**	**295**	P	Pn	05 01 46.6	+1.3
	3.6nm,0.3s,baz=73,slow=4.6,SNR=20						
ATAH				S	Sn	05 02 35.0	+0.3
	7.2nm,0.3s,baz=285,slow=3.1,SNR=17						
SIV	**San Ignacio**	**14.86**	**119**	P	Pn	05 04 06.6	+1.8
	0.1nm,0.3s,baz=297,slow=12,SNR=3.1						
TXAR	**Lajitas Array**	**47.31**	**325**	P	P	05 09 02.5	+1.5
	0.1nm,0.6s,baz=126,slow=9.0,SNR=2.7						
TXAR				pP	pP	05 09 36.1	+2.3
	0.3nm,0.8s,baz=144,slow=8.0,SNR=3.5						
DBIC	**Dimbokro**	**71.13**	**80**	P	P	05 11 44.6	-0.6
	1.8nm,0.4s,baz=220,slow=8.1,SNR=5.5						
YKA	**Yellowknife Ar**	**77.65**	**342**	P	P	05 12 21.8	-0.1
	0.1nm,0.3s,baz=135,slow=6.0,SNR=5.0						
YKA				pP	pP	05 12 58.6	+0.9
	0.3nm,0.5s,baz=140,slow=6.0,SNR=6.8						
TORD	**Torodi Ar. Bea**	**78.78**	**75**	P	P	05 12 28.9	-0.2
	0.7nm,0.5s,baz=247,slow=4.4,SNR=9.6						

CASC 04 05:17:27.9±1.7, 13.87N×93.09W, h20km±338km, MD3.9, 1C-1D, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**1.48**	**72**⇓	*e*P	Pn	05 17 54.1	+0.7
TP2	**Tecpan 2**	**2.20**	**65**	*e*P	Pn	05 18 03.4	+0.1
TP2				*e*S	Sn	05 18 33.3	+3.4
FG6		**2.25**	**72**	*e*P	Pn	05 18 04.1	+0.1
FG6				*e*S	Sn	05 18 33.8	+2.7
FUG	**Fuego 3**	**2.25**	**75**	*e*P	Pn	05 18 03.8	-0.2
FUG				*e*S	Sn	05 18 36.9	+5.6
NBG	**Las Nubes**	**2.75**	**75**	*e*P	Pn	05 18 12.5	+1.6
RBDL	**Robledal**	**3.31**	**85**	*e*P	Pn	05 18 18.9	+0.3
RBDL				⇑*e*S	Sn	05 18 57.6	+0.2
RTR	**El Retiro**	**3.34**	**89**	*e*P	Pn	05 18 19.9	+0.8
SBLS	**San Blas**	**3.37**	**90**	*e*P	Pn	05 18 20.1	+0.8
SBLS				*e*S	Sn	05 19 00.5	+1.7
SNJE	**San Jose**	**3.38**	**90**	*e*P	Pn	05 18 19.9	+0.3
MRL	**Marmol**	**3.50**	**70**	*e*P	Pn	05 18 21.7	+0.5
LFRS	**El Faro**	**3.92**	**93**	*e*P	Pn	05 18 27.6	+0.6
LFRS				*e*S	Sn	05 19 14.2	+1.8
LBRS	**Las Brisas**	**3.93**	**91**	*e*P	Pn	05 18 27.5	+0.4
SNVI	**San Vicente**	**4.14**	**93**	*e*P	Pn	05 18 30.8	+0.8

KRSC 04 05:26:44.0±0.8, 54.06N×160.56E, h17km±17km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KII	**Karymskiy**	**0.66**	**268**	*e*P	Pg	05 26 59.8	+2.9
MKZ	**Mys Kozlova**	**0.85**	**54**	*e*P	Pb	05 27 03.5	+3.3
MKZ				*e*S	Sb	05 27 17.3	+6.0
SPN	**Mys Shipunski**	**1.02**	**199**	*e*P	Pb	05 27 05.1	+2.0
SPN				*e*S	Sb	05 27 20.7	+4.6
NLC	**Nalytchevo**	**1.15**	**220**	*e*P	Pn	05 27 06.5	+1.3
NLC				*e*S	Sb	05 27 23.2	+3.3
AVH	**Avacha**	**1.34**	**234**	*e*P	Pn	05 27 09.1	+1.2
AVH				*e*S	Sn	05 27 27.9	+2.5
PET	**Petropavlovsk**	**1.54**	**228**	*e*S	Sn	05 27 32.1	+1.9
GNL	**Ganaly**	**1.59**	**258**	*e*P	Pn	05 27 10.9	-0.4
KBTR	**Krutoberegovo**	**2.51**	**30**	*e*P	Pn	05 27 26.5	+2.5
BKI	**Bering**	**3.35**	**68**	*e*S	Sn	05 28 13.3	-1.5

*ISCJB **04** 05:27:59.5±0.5, 24.51N±0.03×122.33E±0.02, h68km±7km, Error ellipse: s-maj=5.8km s-min=3.1km az=172.5*
*TAP **04** 05:27:59.2, 24.51N×122.29E, h76km, ML3.4, C*
*JMA **04** 05:27:59.6±0.2, 24.62N×122.37E, h74km, M2.3*

ISC 04 05:28:00.0±0.5, 24.52N±0.03×122.33E±0.02, h67km±7km, n40, σ0.85/70, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.45**	**282**	P	**Pn**	**05 28 11.8**	**-0.2**
	baz=288						
TWC				S	**Sn**	**05 28 20.7**	**-0.1**
	baz=288						
ENA	**Nanau**	**0.55**	**261**	*i* P	**Pn**	**05 28 12.9**	**0.0**
	baz=257						
ENA				S	**Sn**	**05 28 23.3**	**+0.8**
	baz=257						
ILA	**Ilan**	**0.59**	**295**	*e*S	**Sn**	**05 28 23.8**	**+0.6**
	baz=300						
YOJ	**Yonaguni jima**	**0.62**	**95**	P	**Pn**	**05 28 13.8**	**0.0**
YOJ				*e*S	**Sn**	**05 28 24.4**	**+0.5**
TWE	**Neicheng**	**0.64**	**289**	P	**Pn**	**05 28 14.2**	**+0.2**
	baz=293						
ENTT	**Nioudou**	**0.71**	**280**	*i* P	**Pn**	**05 28 15.1**	**+0.3**
	baz=283						
ENTT				S	**Sn**	**05 28 26.4**	**+0.7**
	baz=

CHN4	**Tsaushan**	**1.97**	**234**	*e*P		**Pn**	**05 28 32.3**	**+1.1**
	baz=233							
CHN4				*e*S		**Sn**	**05 28 56.1**	**+1.2**
	baz=233							
STYT	**Tauyuan**	**1.97**	**227**	P		**Pn**	**05 28 31.5**	**+0.3**
	baz=226							
STYT				*e*S		**Sn**	**05 28 55.4**	**+0.5**
	baz=226							
WTP	**Ta-pu**	**2.02**	**232**	*e*P		**Pn**	**05 28 32.2**	**+0.4**
	baz=230							
TWG	**Pinlang**	**2.04**	**215**	*e*P		**Pn**	**05 28 30.8**	**-1.4**
	baz=213							
TWK	**Hsinying**	**2.10**	**234**	*e*P		**Pn**	**05 28 33.7**	**+0.8**
	baz=233							
TWK				*e*S		**Sn**	**05 28 58.9**	**+0.9**
	baz=233							
SGST	**Jiashian**	**2.15**	**229**	*e*P		**Pn**	**05 28 34.1**	**+0.6**
	baz=227							
SGST				*e*S		**Sn**	**05 29 00.6**	**+1.5**
	baz=227							
JTJ	**Tarama**	**2.16**	**86**	P		**Pn**	**05 28 34.2**	**+0.4**
JTJ				S		**Sn**	**05 29 00.9**	**+1.4**
SSD	**Sandimen**	**2.35**	**222**	*e*P		**Pn**	**05 28 37.2**	**+0.8**
	baz=221							
SCZT	**Fangliau**	**2.65**	**217**	*e*P		**Pn**	**05 28 41.2**	**+0.8**
	baz=216							

*TRN **04** 05:33:08.1, 17.74N×61.48W, h23km*
*RSPR **04** 05:33:11.2, 17.84N×61.43W, h34km±18km, MD4.0/6*
*NEIC **04** 05:33:11.2, 17.84N×61.43W, h34km, MD4.0(RSPR), After RSPR.*

ISC 04 05:33:10.2±1.6, 17.7N±0.1×61.5W±0.1, h27km±9km, n24, σ0°47/38, 8C-6D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**0.31**	**257**	*e*Pg	**Pb**	**05 33 17.4**	**-0.2**
SEG	**Port Louis**	**1.33**	**182**	*e*P	**Pn**	**05 33 32.8**	**-0.2**
SEUS	**St. Eustatius**	**1.47**	**261**	⇓*e*P	**Pn**	**05 33 34.5**	**-0.3**
SEUS				*e*S	**Sn**	**05 33 53.2**	**0.0**
SEUS	**St. Eustatius**	**1.47**	**261**	⇓*e*P	**Pn**	**05 33 34.5**	**-0.3**
SEUS				*e*S	**Sn**	**05 33 53.2**	**0.0**
DEG	**La Desirade**	**1.47**	**165**	*e*P	**Pn**	**05 33 34.7**	**-0.2**
DEG				*e*S	**Sn**	**05 33 53.0**	**-0.3**
SMRT	**St. Maarten**	**1.56**	**282**	⇓*e*P	**Pn**	**05 33 36.1**	**-0.1**
SMRT				*e*S	**Sn**	**05 33 54.2**	**-1.4**
SMRT	**St. Maarten**	**1.56**	**282**	⇓*e*P	**Pn**	**05 33 36.1**	**-0.1**
SMRT				*e*S	**Sn**	**05 33 54.2**	**-1.4**
BCG	**Bois Riant Cap**	**1.65**	**185**	*e*P	**Pn**	**05 33 37.4**	**0.0**
SABA	**Saba**	**1.70**	**266**	⇓*e*P	**Pn**	**05 33 38.0**	**-0.1**
SABA	**Saba**	**1.70**	**266**	⇓*e*P	**Pn**	**05 33 38.0**	**-0.1**
SCG	**Saint Claude**	**1.71**	**187**	*e*P	**Pn**	**05 33 38.6**	**+0.3**
PHG	**Guadaloupe-2**	**1.72**	**186**	*e*P	**Pn**	**05 33 38.5**	**+0.1**
HMG	**Houelmont**	**1.76**	**187**	*e*P	**Pn**	**05 33 39.6**	**+0.6**
MGG	**Marie-Galante**	**1.82**	**175**	*e*P	**Pn**	**05 33 39.8**	**+0.1**
TBG	**Guadaloupe-3**	**1.88**	**185**	*e*P	**Pn**	**05 33 40.2**	**-0.4**
TBVI	**Tortola**	**3.07**	**283**	⇑*e*P	**Pn**	**05 33 56.6**	**-0.4**
TBVI				*e*S	**Sn**	**05 34 32.6**	**-0.3**
TBVI	**Tortola**	**3.07**	**283**	⇑*e*P	**Pn**	**05 33 56.6**	**-0.4**
TBVI				*e*S	**Sn**	**05 34 32.6**	**-0.3**
STVI	**Saint Thomas**	**3.38**	**281**	⇑*e*P	**Pn**	**05 34 00.6**	**-0.5**
STVI				*e*S	**Sn**	**05 34 40.5**	**+0.2**
STVI	**Saint Thomas**	**3.38**	**281**	⇑*e*P	**Pn**	**05 34 00.6**	**-0.5**
STVI				*e*S	**Sn**	**05 34 40.5**	**+0.2**
HUMP	**Col San Antoni**	**4.19**	**276**	⇑*e*P	**Pn**	**05 34 13.1**	**+0.7**
HUMP				*e*S	**Sn**	**05 35 00.7**	**+0.2**
HUMP	**Col San Antoni**	**4.19**	**276**	⇑*e*P	**Pn**	**05 34 13.1**	**+0.7**
HUMP				*e*S	**Sn**	**05 35 00.7**	**+0.2**
CBYP	**Canovanas**	**4.21**	**278**	*e*Pn	**Pn**	**05 34 12.9**	**+0.3**
CBYP				*e*Sn	**Sn**	**05 35 01.9**	**+0.9**
SJG	**San Juan**	**4.48**	**275**	⇑*e*P	**Pn**	**05 34 17.2**	**+0.9**
SJG				*e*S	**Sn**	**05 35 07.5**	**0.0**
SJG	**San Juan**	**4.48**	**275**	⇑*e*P	**Pn**	**05 34 17.2**	**+0.9**
SJG				*e*S	**Sn**	**05 35 07.5**	**0.0**

*IDC **04** 05:35:49.3±1.7, 3.75S×142.97E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.8/15, mbtmp3.8/4, MS3.3/1, Ms1 3.3/1, ms1mx2.5/19, Error ellipse: s-maj=71.8km s-min=26.2km az=116.0*
*ISCJB **04** 05:35:56.0±1.2, 3.8S±0.1×142.3E±0.1, h33km, mb3.7/4, Error ellipse: s-maj=15.5km s-min=13.8km az=139.6*
*NEIC **04** 05:35:57.0±1.6, 3.66S×142.24E, h35km, mb4.1/2, Error ellipse: s-maj=23.7km s-min=17.4km az=177.0*

ISC 04 05:35:58.8±1.2, 3.89S±0.10×142.26E±0.09, h35km, n16, σ0°97/19, mb3.7/4, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.33**	**139**	*e*Pn	**Pn**	**05 37 43.3**	**-0.1**
COEN	**Coen**	**10.04**	**175**	*e*P	**Pn**	**05 38 25.4**	**+4.8**
COEN	**Coen**	**10.04**	**175**	Pn	**Pn**	**05 38 23.4**	**+2.8**
KAKA	**Kakadu**	**13.08**	**227**	*e*P	**Pn**	**05 39 01.6**	**-0.6**
	18nm,0.4s						
KAKA	**Kakadu**	**13.08**	**227**	*e*Pn	**Pn**	**05 39 01.6**	**-0.5**
	62nm,0.5s						
KAKA				*e*Sn	**Sn**	**05 41 25.9**	**-0.5**
CTA	**Charters Tower**	**16.56**	**167**	LR	LR	05 45 55.8	
	comp=Z,119nm,21.6s,baz=222,slow=37						
WRAB	**Tennant Creek**	**17.71**	**205**	*e*Pn	**Pn**	**05 40 03.5**	**+0.7**
	13nm,0.7s						
WRAB				*e*Sn	**Sn**	**05 43 17.6**	**-1.6**
KNA	**Kununurra**	**17.75**	**227**	*e*P	**Pn**	**05 40 04.0**	**+0.8**
	19nm,0.6s						
ASAR	**Alice Springs**	**21.25**	**202**	P	**P**	**05 40 41.9**	**-0.1**
	2.0nm,0.5s,mb3.7,baz=28,slow=11,SNR=19						
ASAR				S	**S**	**05 44 36.7**	**+0.4**
	0.9nm,0.8s,baz=20,slow=22,SNR=4.1						
FITZ	**Fitzroy Crossi**	**21.54**	**228**	*e*P	**P**	**05 40 46.5**	**+1.3**
	7.8nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**21.54**	**228**	*e*P	**P**	**05 40 45.9**	**+0.7**
	5.0nm,0.9s,mb3.9						
FITZ				S	**S**	**05 44 44.0**	**+1.8**
FITZ	**Fitzroy Crossi**	**21.54**	**228**	P	**P**	**05 40 46.5**	**+1.3**
	4.3nm,0.6s,mb4.1,baz=40,slow=8.1,SNR=26						
FITZ				S	**S**	**05 44 44.0**	**+1.8**
	2.5nm,0.8s,baz=68,slow=19,SNR=2.4						
EIDS	**Eidsvold**	**22.98**	**159**	*e*P	**P**	**05 40 59.9**	**-0.5**
MKAR	**Makanchi Array**	**72.89**	**322**	P	**P**	**05 47 23.2**	**-1.1**
	0.1nm,0.4s,mb3.1,baz=123,slow=5.3,SNR=2.3						
ILAR	**Eielson Array**	**85.45**	**24**	P	**P**	**05 48 26.1**	**-6.4**
	0.5nm,0.5s,mb3.9,baz=262,slow=4.8,SNR=12						
ISCO	**Idaho Springs**	**109.42**	**49**	*e*PKPdf	PKiKP	05 54 24.6	-1.3

*ISK **04** 06:01:12.4, 39.48N×33.08E, h5km, MD2.9*
*ISCJB **04** 06:01:13.8±0.8, 39.46N±0.03×33.03E±0.04, h2km±7km, Error ellipse: s-maj=5.3km s-min=4.4km az=31.8*
*CSEM **04** 06:01:13.6±0.2, 39.45N×33.03E, h2km, MD2.9, Error ellipse: s-maj=4.0km s-min=3.5km az=106.0*

ISC 04 06:01:14.4±0.9, 39.46N±0.03×33.03E±0.04, h4km±6km, n36, σ0°86/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOD	**Lodumlu**	**0.47**	**334**	*e*PG	**Pg**	**06 01 22.3**	**-1.2**
LOD				*e*SG	**Sg**	**06 01 30.5**	**+0.8**
LOD	**Lodumlu**	**0.47**	**334**	*e*Pg	**Pg**	**06 01 22.3**	**-1.2**
LOD				*e*Sg	**Sg**	**06 01 30.5**	**+0.8**
KIZT	**Kizilcal**	**1.07**	**237**	*e*PN	**Pg**	**06 01 34.8**	**-0.1**
KIZT				*e*SN	**Sg**	**06 01 51.1**	**+2.4**
KIZT	**Kizilcal**	**1.07**	**237**	*e*Pn	**Pg**	**06 01 34.8**	**0.0**
KIZT				*e*Sn	**Sg**	**06 01 51.1**	**+2.5**
ELDT	**Eldivan**	**1.07**	**16**	*i* P	**Pg**	**06 01 34.0**	**-0.9**
ELDT	**Eldivan**	**1.07**	**16**	*i* P	**Pg**	**06 01 34.0**	**-0.9**
ELDT				*i* S	**Sg**	**06 01 50.1**	**+1.3**
SVRH	**Sivrihisar-ESK**	**1.17**	**270**	*e*PN	**Pn**	**06 01 36.7**	**-0.7**
SVRH	**Sivrihisar-ESK**	**1.17**	**270**	*e*Pn	**Pn**	**06 01 36.7**	**-0.7**
SULT	**Sultanhani-AKS**	**1.32**	**163**	*e*PN	**Pn**	**06 01 38.9**	**-0.6**
SULT	**Sultanhani-AKS**	**1.32**	**163**	*e*Pn	**Pn**	**06 01 38.9**	**-0.6**
SGKT	**Sivrigoynuk**	**1.34**	**326**	*i* P	**Pn**	**06 01 39.4**	**-0.4**
SGKT	**Sivrigoynuk**	**1.34**	**326**	*i* P	**Pn**	**06 01 39.4**	**-0.4**
SGKT				*i* S	**Sg**	**06 01 57.1**	**-0.3**
LADK	**Ladik-KONYA**	**1.36**	**203**	*e*PN	**Pn**	**06 01 39.3**	**-0.8**
LADK	**Ladik-KONYA**	**1.36**	**203**	*e*Pn	**Pn**	**06 01 39.3**	**-0.8**
CORM	**Corum**	**1.43**	**59**	*e*PN	**Pn**	**06 01 40.0**	**-1.0**
CORM	**Corum**	**1.43**	**59**	*e*Pn	**Pn**	**06 01 40.0**	**-1.0**
AVNT	**Avonos**	**1.57**	**115**	*i* P	**Pn**	**06 01 43.2**	**+0.1**
AVNT	**Avonos**	**1.57**	**115**	*i* P	**Pn**	**06 01 43.2**	**+0.2**
AVNT				*i* S	**Sn**	**06 02 04.8**	**+1.0**
ILGA	**Ilgaz**	**1.67**	**18**	*i* P	**Pn**	**06 01 45.4**	**+1.0**
ILGA				*i* S	**Sn**	**06 02 07.1**	**+0.8**
ESKT	**Eskisehir**	**1.69**	**273**	*e*PN	**Pn**	**06 01 45.0**	**+0.4**
ESKT	**Eskisehir**	**1.69**	**273**	*i* P	**Pn**	**06 01 37.7**	**-6.9**
ESKT	**Eskisehir**	**1.69**	**273**	*e*Pn	**Pn**	**06 01 45.0**	**+0.4**
SEYT	**Eskypehyr**	**1.69**	**273**	*i* S	**Sn**	**06 02 06.3**	**-0.4**
TOS	**Tosya**	**1.75**	**25**	*e*PN	**Pn**	**06 01 44.4**	**-1.1**
TOS	**Tosya**	**1.75**	**25**	*e*Pn	**Pn**	**06 01 44.4**	**-1.0**
YOZ	**Yozgat**	**1.78**	**84**	*e*PN	**Pn**	**06 01 45.0**	**-0.8**
YOZ	**Yozgat**	**1.78**	**84**	*e*Pn	**Pn**	**06 01 45.0**	**-0.8**
CTKT	**Corum**	**1.78**	**49**	*i* P	**Pn**	**06 01 45.6**	**-0.3**
CTKT	**Corum**	**1.78**	**49**	*i* P	**Pn**	**06 01 45.6**	**-0.3**
CTKT				*i* S	**Sn**	**06 02 09.8**	**+0.9**
SAFT	**Safranbolu**	**1.80**	**352**	*e*PN	**Pn**	**06 01 45.6**	**-0.5**
SAFT	**Safranbolu**	**1.80**	**352**	*e*Pn	**Pn**	**06 01 45.6**	**-0.5**
GULT	**Gulveren**	**2.16**	**297**	*e*PN	**Pn**	**06 01 51.7**	**+0.6**
GULT	**Gulveren**	**2.16**	**297**	*e*Pn	**Pn**	**06 01 51.7**	**+0.6**
HDMB	**Hadim**	**2.53**	**190**	*e*PN	**Pn**	**06 01 56.9**	**+0.8**
HDMB	**Hadim**	**2.53**	**190**	*e*Pn	**Pn**	**06 01 56.9**	**+0.7**

*IDC **04** 06:21:26.8±1.2, 19.91N×121.61E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.8/22, mbtmp3.9/7, ML3.9/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/31, Error ellipse: s-maj=46.4km s-min=23.6km az=72.0*
*ISCJB **04** 06:21:33.1±2.0, 20.0N±0.1×121.5E±0.2, h60km±16km, mb3.8/6, MS3.4/4, Error ellipse: s-maj=36.2km s-min=16.7km az=172.4*
*NEIC **04** 06:21:33.9±2.1, 19.88N×121.46E, h54km±17km, Error ellipse: s-maj=39.3km s-min=19.6km az=68.0*

ISC 04 06:21:34.2±2.0, 19.9N±0.1×121.5E±0.2, h55km±17km, n15, σ0°72/14, mb3.8/6, MS3.4/4, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**2.91**	**351**	*e*Pn	**Pn**	**06 22 18.0**	**-0.1**
TPUB	**Ta-pu**	**3.46**	**346**	*e*Pn	**Pn**	**06 22 24.3**	**-1.4**
SSLB	**Suanglung**	**3.88**	**352**	*e*Pn	**Pn**	**06 22 31.4**	**+0.1**
SSLB				*e*Sn	**Sn**	**06 23 15.4**	**-0.3**
YHNB	**Yeheng**	**4.72**	**358**	*e*Pn	**Pn**	**06 22 45.2**	**+2.3**
YHNB				*e*Sn	**Sn**	**06 23 36.4**	**0.0**
KSRS	**Korea Array**	**18.33**	**16**	P	**Pn**	**06 25 44.1**	**-0.4**
	0.3nm,0.3s,baz=194,slow=11,SNR=8.9						
BJI	**Beijing**	**20.57**	**348**	P	**P**	**06 26 08.5**	**+0.1**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GUMO	**Guam**	**23.20**	**102**	LR	LR	06 34 21.1	
	comp=Z,60nm,18.7s,MS3.1,baz=304,slow=34						
SONM	**Songino Array**	**30.43**	**340**	P	**P**	**06 27 41.6**	**+0.3**
	comp=Z,0.4nm,0.4s,mb3.5,baz=133,slow=8.8,SNR=3.5						
SONM				LR	LR	06 42 04.6	
	comp=Z,37nm,18.9s,MS3.0,baz=138,slow=41						
MKAR	**Makanchi Array**	**41.69**	**319**	P	**P**	**06 29 18.2**	**+0.7**
	comp=Z,0.8nm,0.7s,mb3.5,baz=113,slow=8.4,SNR=5.4						
ZALV	**Zalesovo Beam**	**44.02**	**329**	P	**P**	**06 29 35.6**	**-0.6**
	comp=Z,1.4nm,0.3s,mb4.1,baz=123,slow=8.2,SNR=4.5						
ASAR	**Alice Springs**	**44.97**	**164**	P	**P**	**06 29 43.9**	**-0.2**
	comp=Z,1.3nm,0.7s,mb3.9,baz=341,slow=6.8,SNR=10						
ILAR	**Eielson Array**	**72.84**	**27**	P	**P**	**06 32 56.8**	**0.0**
	comp=Z,0.3nm,0.5s,mb3.5,baz=271,slow=4.6,SNR=6.3						
HFS	**Hagfors**	**81.43**	**331**	LR	LR	07 11 59.4	
	comp=Z,35nm,21.3s,MS3.7,baz=203,slow=37						
NOA	**NORSAR Array B**	**82.13**	**333**	LR	LR	07 13 57.5	
	comp=Z,31nm,20.0s,MS3.7,baz=140,slow=38						
YKA	**Yellowknife Ar**	**86.75**	**23**	P	**P**	**06 34 12.0**	**-0.1**
	comp=Z,1.0nm,0.6s,mb4.2,baz=308,slow=4.5,SNR=12						

IDC 04 06:46:20.0±1.7, 33.12N×92.04E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.5/22, mbtmp3.5/4, ML3.8/1, Error ellipse: s-maj=58.0km s-min=26.9km az=65.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**15.55**	**334**	Pn	Pn	06 50 02.8	+2.4
	0.1nm,0.3s,baz=140,slow=11,SNR=2.5						
SONM	**Songino Array**	**18.27**	**32**	P	Pn	06 50 35.7	+1.0
	0.3nm,0.3s,baz=209,slow=12,SNR=8.9						
ZALV	**Zalesovo Beam**	**21.44**	**348**	P	P	06 51 08.8	-0.8
	0.6nm,0.3s,baz=172,slow=12,SNR=2.4						
BVAR	**Borovoye Array**	**25.23**	**328**	P	P	06 51 47.9	+0.5
	0.4nm,0.5s,baz=128,slow=12,SNR=3.6						
ASAR	**Alice Springs**	**69.15**	**139**	P	P	06 57 28.4	+0.2
	0.7nm,0.8s,baz=322,slow=6.1,SNR=6.2						
ILAR	**Eielson Array**	**72.20**	**23**	P	P	06 57 46.1	-0.2
	0.3nm,0.8s,baz=302,slow=4.3,SNR=4.8						

*ISCJB **04** 06:52:27.2±0.8, 60.7S±0.2×26.7W±0.4, h10km, mb4.3/7, MS3.7/3, Error ellipse: s-maj=35.8km s-min=13.0km az=41.3*
*IDC **04** 06:52:28.1±0.8, 60.55S×26.75W, h0km, mb4.2/3, mb1 4.3/3, mb1mx4.0/11, mbtmp4.2/3, MS3.7/3, Ms1 3.6/3, ms1mx3.3/13, Error ellipse: s-maj=35.0km s-min=22.0km az=55.0*
*NEIC **04** 06:52:29.6±0.5, 60.54S×26.69W, h10km, mb4.9/2, Error ellipse: s-maj=22.8km s-min=11.9km az=223.0*

ISC 04 06:52:29.2±0.8, 60.7S±0.2×26.7W±0.4, h10km, n16, σ1°04/9, mb4.3/7, MS3.7/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**12.47**	**151**	*e*	**Pn**	**06 55 21.3**	**-5.0**
VNA1				*e*		06 55 25.4	
VNA1				*e*		06 57 04.8	
MAIT	**Maitri**	**18.34**	**139**	*e*P	**Pn**	**06 56 41.9**	**-1.3**
QSPA	**South Pole Qui**	**29.55**	**180**	P	**P**	**06 58 36.2**	**+2.9**
	3.0nm,0.8s,mb4.1,baz=207,slow=8.1,SNR=13						
QSPA				LR	LR	07 10 11.5	
	comp=Z,127nm,19.1s,MS3.6,baz=360,slow=36						
TRQA	**Tornquist**	**31.65**	**300**	*e*P	**P**	**06 58 52.6**	**+0.5**
	2.4nm,0.6s,mb4.2						
PLCA	**Paso Flores**	**33.35**	**287**	*e*P	**P**	**06 59 06.5**	**-0.6**
	156nm,2.7s,mb5.5						
MAW	**Mawson**	**36.32**	**140**	P	**P**	**06 59 33.0**	**+0.6**
	1.4nm,0.8s,mb4.0,baz=235,slow=7.1,SNR=3.9						
CFAA	**Coronel Fontan**	**39.83**	**298**	P	**P**	**07 00 01.3**	**-1.0**
	0.3nm,0.3s,mb3.5,baz=150,slow=11,SNR=8.0						
BOSA	**Boshof**	**47.02**	**71**	LR	LR	07 16 48.6	
	comp=Z,38nm,21.0s,MS3.3,baz=174,slow=31						
LPAZ	**La Paz**	**53.37**	**308**	P	**P**	**07 01 49.0**	**+0.4**
	3.3nm,0.4s,mb4.6,baz=116,slow=5.5,SNR=60						
TORD	**Torodi Ar. Bea**	**76.99**	**28**	P	**P**	**07 04 22.2**	**+0.4**
	5.6nm,0.8s,mb4.6,baz=201,slow=6.1,SNR=35						
CTA	**Charters Tower**	**99.31**	**173**	LR	LR	07 52 38.4	
	comp=Z,75nm,18.4s,MS4.2,baz=335,slow=36						
YKA	**Yellowknife Ar**	**139.72**	**314**	PKP	PKPdf	07 11 56.0	+0.6
YKA	**Yellowknife Ar**	**139.72**	**314**	PKP	PKPdf	07 11 56.0	+0.6
	1.2nm,0.9s,baz=129,slow=2.1,SNR=8.3						
SONM	**Songino Array**	**150.41**	**94**	PKPbc	PKPbc	07 12 20.4	+0.8
	0.8nm,0.8s,baz=222,slow=1.9,SNR=4.6						
KDAK	**Kodiak Island**	**152.85**	**288**	PKPbc	PKPbc	07 12 25.6	+0.7
	1.7nm,0.4s,baz=113,slow=13,SNR=5.6						
ILAR	**Eielson Array**	**153.22**	**305**	PKPbc	PKPbc	07 12 25.5	0.0
	0.4nm,0.6s,baz=126,slow=1.5,SNR=8.8						

KRSC 04 07:05:52.8±0.6, 51.38N×157.97E, h120km±39km, ML3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIPR	**Malaya Ipel'ka**	**1.17**	**321**	P	Pn	07 06 17.0	+0.5
GRL	**Gorelyy**	**1.18**	**3**	*e*P	Pn	07 06 18.3	+1.7
GRL				*i* S	Sn	07 06 37.2	+2.6
ALID	**Alaid**	**1.61**	**252**	*e*P	Pn	07 06 19.6	-1.8
ALID				*i* S	Sn	07 06 39.5	-3.7
PET	**Petropavlovsk**	**1.70**	**14**	*e*P	Pn	07 06 23.9	+1.4
PET				*i* S	Sn	07 06 46.2	+1.0
AVH	**Avacha**	**1.95**	**14**	*e*P	Pn	07 06 28.2	+2.7
AVH				*i* S	Sn	07 06 53.5	+3.0
NLC	**Nalytchevo**	**1.98**	**25**	*e*P	Pn	07 06 26.8	+0.8
NLC				*i* S	Sn	07 06 51.2	-0.2
SPN	**Mys Shipunski**	**2.13**	**35**	*e*P	Pn	07 06 29.7	+1.9
SPN				*i* S	Sn	07 06 56.2	+1.5
GNL	**Ganaly**	**2.32**	**360**	*e*P	Pn	07 06 31.8	+1.6
GNL				*i* S	Sn	07 07 00.7	+1.8
KII	**Karymskiy**	**2.81**	**18**	*e*P	Pn	07 06 38.9	+2.4
MKZ	**Mys Kozlova**	**3.91**	**34**	*e*P	Pn	07 06 52.5	+1.5
MKZ				*i* S	Sn	07 07 36.2	+0.1
KPT	**Kopyto**	**4.79**	**15**	*e*P	Pn	07 07 05.6	+2.9
BZMR	**Bezymyannaya**	**4.80**	**17**	*e*P	Pn	07 07 06.5	+3.5
KOZ	**Kozyrevsk**	**4.82**	**13**	*e*P	Pn	07 07 05.0	+1.8
SRDR	**Sredinnyy**	**5.05**	**11**	*e*P	Pn	07 07 09.1	+2.8
KBTR	**Krutoberegovo**	**5.62**	**29**	*e*P	Pn	07 07 15.7	+1.7
BKI	**Bering**	**6.14**	**48**	*e*P	Pn	07 07 23.1	+2.2
BKI				*i* S	Sn	07 08 26.9	-2.8

*ISCJB **04** 07:25:32.4±0.9, 50.00N±0.06×78.9E±0.2, h33km, Error ellipse: s-maj=14.8km s-min=6.3km az=158.8*
*NNC **04** 07:25:32.7±0.3, 50.02N×78.90E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=8.8km s-min=1.6km az=65.0*
*IDC **04** 07:25:39.0±1.3, 50.02N×79.48E, h0km, mb1 2.8/3, mb1mx2.8/25, mbtmp2.8/3, ML2.8/3, Error ellipse: s-maj=38.2km s-min=10.7km az=50.0*

ISC 04 07:25:31.0±0.6, 49.97N±0.09×79.0E±0.2, h16km±11km, n25, σ0°45/50, 6C-1D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR10	**Kurchatov Arra**	**0.65**	**328**	P	**Pg**	**07 25 43.8**	**0.0**
KUR10				S	**Sg**	**07 25 52.2**	**-0.3**
KUR09	**Kurchatov Arra**	**0.67**	**329**	P	**Pg**	**07 25 44.3**	**+0.2**
KUR09				S	**Sg**	**07 25 53.1**	**+0.2**
KUR11	**Kurchatov Arra**	**0.67**	**341**	P	**Pg**	**07 25 45.0**	**+0.8**
KUR11				S	**Sg**	**07 25 53.2**	**+0.2**
KUR12	**Kurchatov Arra**	**0.68**	**339**	P	**Pg**	**07 25 44.9**	**+0.6**
KUR12				S	**Sg**	**07 25 53.2**	**-0.2**
KUR08	**Kurchatov Arra**	**0.68**	**331**	P	**Pg**	**07 25 44.9**	**+0.5**
KUR08				S	**Sg**	**07 25 53.1**	**-0.4**
KUR13	**Kurchatov Arra**	**0.69**	**338**	P	**Pg**	**07 25 45.1**	**+0.5**
KUR13				S	**Sg**	**07 25 53.7**	**-0.1**
KUR07	**Kurchatov Arra**	**0.70**	**332**	P	**Pg**	**07 25 45.1**	**+0.4**
KUR07				S	**Sg**	**07 25 54.0**	**+0.1**
KUR14	**Kurchatov Arra**	**0.70**	**336**	P	**Pg**	**07 25 45.1**	**+0.3**
KUR14				S	**Sg**	**07 25 54.1**	**-0.1**
KUR06	**Kurchatov Arra**	**0.71**	**333**	P	**Pg**	**07 25 45.2**	**+0.3**
KUR06				S	**Sg**	**07 25 54.9**	**+0.5**
KUR15	**Kurchatov Arra**	**0.72**	**335**	P	**Pg**	**07 25 45.2**	**+0.1**
KUR15				S	**Sg**	**07 25 55.1**	**+0.6**
KURBB	**Kurchatov Arra**	**0.73**	**334**	P	**Pg**	**07 25 45.5**	**+0.3**
KURBB				⇑S	**Sg**	**07 25 54.3**	**-0.6**
	14nm,0.6s						
KUR16	**Kurchatov Arra**	**0.74**	**332**	P	**Pg**	**07 25 45.7**	**+0.2**
KUR16				S	**Sg**	**07 25 54.8**	**-0.5**
KUR05	**Kurchatov Arra**	**0.74**	**335**	P	**Pg**	**07 25 45.9**	**+0.3**
KUR05				S	**Sg**	**07 25 54.7**	**-0.7**
KUR17	**Kurchatov Arra**	**0.76**	**331**	P	**Pg**	**07 25 46.1**	**+0.4**
KUR17				S	**Sg**	**07 25 55.5**	**-0.2**
KUR04	**Kurchatov Arra**	**0.76**	**336**	P	**Pg**	**07 25 46.3**	**+0.4**
KUR04				S	**Sg**	**07 25 55.5**	**-0.4**
KUR18	**Kurchatov Arra**	**0.77**	**330**	P	**Pg**	**07 25 46.2**	**+0.2**
KUR18				S	**Sg**	**07 25 55.7**	**+0.5**
KUR03	**Kurchatov Arra**	**0.78**	**336**	P	**Pg**	**07 25 46.6**	**+0.4**
KUR03				S	**Sg**	**07 25 56.1**	**-0.3**
KUR19	**Kurchatov Arra**	**0.78**	**329**	P	**Pg**	**07 25 46.0**	**-0.2**
KUR19				S	**Sg**	**07 25 55.0**	**-1.6**
KURK	**Kurchatov**	**0.79**	**340**	⇑P	**Pg**	**07 25 46.9**	**+0.5**
	9.7nm,0.4s						
KURK				⇑S	**Sg**	**07 25 57.1**	**+0.2**
	43nm,0.6s						
KUR02	**Kurchatov Arra**	**0.79**	**337**	P	**Pg**	**07 25 46.9**	**+0.4**
KUR02				S	**Sg**	**07 25 56.6**	**-0.4**
KUR01	**Kurchatov Arra**	**0.81**	**338**	P	**Pg**	**07 25 46.3**	**-0.5**
KUR01				S	**Sg**	**07 25 57.0**	**-0.4**
MK31	**Makanchi

ANMO	**Albuquerque**	**16.11**	**7**	LR	LR	08 25 29.2			
	comp=Z,39nm,21.5s,baz=207,slow=37								
NVAR	**Mina Array Bea**	**21.19**	**339**	P	P	08 20 27.5	+0.3		
	1.9nm,0.9s,baz=155,slow=12,SNR=9.7								
TKL	**Tuckaleechee C**	**27.59**	**48**	LR	LR	08 33 42.3			
	comp=Z,25nm,20.0s,baz=35,slow=39								
ILAR	**Eielson Array**	**52.43**	**340**	P	P	08 24 53.9	-0.2		
	0.2nm,0.6s,baz=143,slow=6.7,SNR=5.8								

BJI ***04*** *08:34:57.7,4.°50N×127.°70E,h15km,mB4.6/4,mb4.5/7*
NEIC ***04*** *08:35:11.8±0.3,4.°54N×127.°74E,mb4.6/9,Error ellipse: s-maj=13.5km s-min=8.1km az=84.0*
ISCJB ***04*** *08:35:12.7±1.0,4.°46N±0.°05×127.°49E±0.°07, h158km±10km,mb4.4/26,Error ellipse: s-maj=13.1km s-min=7.5km az=152.4*
IDC ***04*** *08:35:13.7±5.2,4.°56N×127.°77E,h153km±49km,mb4.0/13, mb1 4.1/13,mb1mx3.9/22,mbtmp4.0/13,MS2.9/1, Ms1 3.1/1,ms1mx2.3/26,Error ellipse: s-maj=29.4km s-min=11.4km az=80.0*
DJA ***04*** *08:35:19,4.°16N×127.°23E,h133km,MLv4.9/9*

ISC 04 08:35:13.0±1.1,4.°49N±0.°06×127.°59E±0.°08,h145km±11km, h5km±11.0km:pP-P,n54,σ1s22/55,mb4.4/26,3C,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.20**	**249**	P		**Pn**		**08 35 49.1**	**-1.1**
SGSI				S		**Sn**		**08 36 17.8**	**+2.2**
TNTI	**Ternate**	**3.69**	**183**	P		**Pn**		**08 36 10.9**	**+1.7**
TNTI				S		**Sn**		**08 36 53.7**	**+2.0**
MNI	**Manado**	**4.08**	**222**	P		**Pn**		**08 36 12.7**	**-1.5**
MNI				S		**Sn**		**08 36 57.1**	**-3.9**
LBMI	**Labuha**	**5.09**	**181**	P		**Pn**		**08 36 30.6**	**+3.0**
KMSI	**Cibinong**	**5.30**	**223**	P		**Pn**		**08 36 30.8**	**+0.4**
KMSI				S		**Sn**		**08 37 26.9**	**-3.5**
MRSI	**Marisa**	**6.90**	**235**	P		**Pn**		**08 36 52.5**	**+0.7**
	1.1nm3μm326nm,0.6s								
MRSI				S		**Sn**		**08 38 06.2**	**-2.9**
	1.1nm3μm326nm,0.6s								
LUWI	**Luwuk**	**7.30**	**221**	P		**Pn**		**08 36 55.4**	**-1.7**
	0.4nm91nm,1.1s								
TOLI	**Toli-Toli**	**7.56**	**244**	P		**Pn**		**08 37 00.6**	**-0.1**
	0.7nm5μm208nm,0.9s								
NLAI	**Namlea**	**7.69**	**184**	P		**Pn**		**08 37 03.0**	**+0.7**
	0.2nm23nm,0.7s								
APSI	**Ampana**	**8.00**	**228**	P		**Pn**		**08 37 09.0**	**+2.5**
MYLDM	**Lahad Datu**	**9.08**	**275**	P		**Pn**		**08 37 23.2**	**+2.2**
	36nm,0.9s								
KDI	**Kendari**	**9.74**	**211**	P		**Pn**		**08 37 28.4**	**-1.4**
KSM	**Kuching**	**17.51**	**261**	*e*P		**Pn**		**08 39 09.3**	**+0.9**
	8.3nm,0.8s								
KAKA	**Kakadu**	**17.75**	**164**	*e*P		**Pn**		**08 39 09.6**	**-1.7**
	5.0nm,0.6s								
FITZ	**Fitzroy Crossi**	**22.52**	**185**	*e*P		**P**		**08 40 01.4**	**+0.4**
	9.5nm,0.8s,mb4.3								
FITZ	**Fitzroy Crossi**	**22.52**	**185**	P		**P**		**08 40 01.4**	**+0.4**
FITZ				*e*P				08 40 01.7	
FITZ	**Fitzroy Crossi**	**22.52**	**185**	P		**P**		**08 40 01.4**	**+0.4**
	3.1nm,0.5s,mb4.0,baz=20,slow=6.9,SNR=28								
WRAB	**Tennant Creek**	**25.16**	**165**	*e*P		**P**		**08 40 24.5**	**-0.5**
	6.3nm,0.3s,mb4.6								
ASAR	**Alice Springs**	**28.65**	**168**	P		**P**		**08 40 56.1**	**-0.1**
	1.5nm,0.5s,mb4.0,baz=355,slow=7.0,SNR=40								
ASAR				PcP		PcP		08 44 03.6	+0.1
	0.9nm,0.4s,baz=347,slow=2.4,SNR=10								
CMAR	**Chiang Mai Arr**	**31.25**	**299**	LR		LR		08 54 19.9	
	comp=Z,22nm,18.5s,baz=170,slow=36								
KSRS	**Korea Array**	**32.81**	**0**	P		**P**		**08 41 31.8**	**-0.9**
	6.6nm,0.7s,mb4.5,baz=177,slow=10.0,SNR=29								
XAN	**Xi'an**	**34.15**	**332**	P		**P**		**08 41 44.9**	**+0.6**
XAN				pP		pP		08 41 50.7	-25
XAN				sP		sP		08 41 53.5	-39
XAN				pmax		pmax			
	comp=Z,3.0nm,1.0s,mb4.0								
XAN				pmax		pmax			
	comp=Z,16nm,5.3s								
FORT	**Forrest**	**35.07**	**179**	*e*P		**P**		**08 41 52.1**	**-0.1**
	comp=Z,18nm,0.6s,mb4.9								
BJI	**Beijing**	**36.87**	**345**	P		**P**		**08 42 07.4**	**0.0**
BJI				pmax		pmax			
	comp=Z,15nm,0.8s,mb4.7								
BJI				pmax		pmax			
	comp=Z,68nm,5.6s								
LZH	**Lanzhou**	**38.30**	**328**	⇑P		**P**		**08 42 21.2**	**+1.6**
LZH				pP		pP		08 42 26.0	-25
LZH				sP		sP		08 42 28.3	-39
LZH				pmax		pmax			
	comp=Z,25nm,1.3s,mb4.7								
NWAO	**Narrogin (SRO)**	**38.48**	**194**	P		**P**		**08 42 22.2**	**+1.1**
NWAO	**Narrogin (SRO)**	**38.48**	**194**	P		**P**		**08 42 22.2**	**+1.1**
	comp=Z,3.8nm,0.4s,mb4.4,baz=13,slow=10,SNR=5.9								
STKA	**Stephens Creek**	**38.54**	**161**	⇑*i*P		**P**		**08 42 21.4**	**-0.2**
	comp=Z,3.9nm,0.3s,mb4.5								
STKA	**Stephens Creek**	**38.54**	**161**	P		**P**		**08 42 21.4**	**-0.2**
STKA				*e*P				08 42 21.5	
STKA	**Stephens Creek**	**38.54**	**161**	P		**P**		**08 42 21.4**	**-0.1**
	comp=Z,5.1nm,0.3s,mb4.6,baz=342,slow=8.1,SNR=26								
ARMA	**Armidale**	**41.64**	**148**	⇑*i*P		**P**		**08 42 47.1**	**0.0**
GTA	**Gaotai**	**42.90**	**328**	*e*P		**P**		**08 42 58.9**	**+1.6**
GTA				pP		pP		08 43 02.5	-27
GTA				sP		sP		08 43 04.1	-42
GTA				pmax		pmax			
	comp=Z,6.0nm,1.3s,mb4.1								
TOO	**Toolangi**	**45.04**	**160**	*e*P		**P**		**08 43 15.3**	**+1.0**
SONM	**Songino Array**	**46.87**	**341**	P		**P**		**08 43 28.6**	**+0.1**
	comp=Z,1.7nm,0.8s,mb3.7,baz=156,slow=10,SNR=8.0								
SONM				PcP		PcP		08 44 59.4	+0.4
	comp=Z,0.7nm,0.6s,baz=196,slow=1.9,SNR=3.5								
PETK	**Petropavlovsk-**	**54.41**	**22**	P		**P**		**08 44 24.8**	**-0.1**
	comp=Z,1.0nm,0.7s,mb4.7,baz=191,slow=5.5,SNR=8.0								
MK31	**Makanchi Array**	**57.43**	**325**	*e*P		**P**		**08 44 47.5**	**+1.0**
MKAR	**Makanchi Array**	**57.43**	**325**	P		**P**		**08 44 47.5**	**+0.9**
	comp=Z,4.4nm,0.5s,mb4.6,baz=121,slow=8.2,SNR=43								
MKAR				pP		pP		08 45 19.0	-1.6
	comp=Z,1.2nm,0.6s,baz=124,slow=9.1,SNR=3.0								
ZALV	**Zalesovo Beam**	**60.31**	**332**	P		**P**		**08 45 05.9**	**-0.4**
	comp=Z,1.8nm,0.3s,mb4.3,baz=115,slow=9.7,SNR=3.9								
EKS2	**Erkin-Say**	**60.88**	**317**	*e*P		**P**		**08 45 10.7**	**+0.4**
	comp=Z,2.4nm,0.7s,mb4.1								
KURK	**Kurchatov**	**61.57**	**327**	*e*P		**P**		**08 45 15.3**	**+0.4**
	comp=Z,9.0nm,0.6s,mb4.8								
BVAR	**Borovoye Array**	**67.16**	**327**	P		**P**		**08 45 50.8**	**-0.4**
	comp=Z,4.7nm,0.8s,mb4.4,baz=124,slow=7.9,SNR=14								
BVAR				pP		pP		08 46 23.9	-2.3
	comp=Z,1.6nm,0.7s,baz=121,slow=11,SNR=3.8								
KDAK	**Kodiak Island**	**80.80**	**32**	*e*P		**P**		**08 47 10.3**	**0.0**
	comp=Z,29nm,1.6s,mb4.7								
RC01	**Rabbit Creek A**	**82.55**	**29**	*e*P		**P**		**08 47 18.8**	**-0.7**
COLD	**Coldfoot**	**82.87**	**23**	*e*P		**P**		**08 47 21.9**	**+0.9**
	comp=Z,8.7nm,1.0s,mb4.4								
MCK	**McKinley**	**83.11**	**26**	*e*P		**P**		**08 47 21.9**	**-0.4**
	comp=Z,48nm,1.7s,mb5.0								
ILAR	**Eielson Array**	**84.06**	**25**	P		**P**		**08 47 25.4**	**-1.8**
	comp=Z,1.7nm,0.6s,mb3.9,baz=247,slow=5.8,SNR=31								
BMRM	**Bremner River**	**85.04**	**29**	*e*P		**P**		**08 47 32.3**	**+0.1**
	comp=Z,9.5nm,0.7s,mb4.6								
EGAK	**Eagle**	**86.51**	**25**	*e*P		**P**		**08 47 38.4**	**-1.0**
	comp=Z,1.4nm,0.7s,mb3.9								
ARCES	**ARCESS Array B**	**90.04**	**340**	P		**P**		**08 47 53.8**	**-2.1**
	comp=Z,1.1nm,0.6s,mb4.0,baz=86,slow=7.4,SNR=8.6								
YKA	**Yellowknife Ar**	**98.46**	**25**	P		**P**		**08 48 32.2**	**-2.4**
YKA	**Yellowknife Ar**	**98.46**	**25**	P		**P**		**08 48 32.2**	**-2.4**
	comp=Z,0.7nm,0.7s,mb4.2,baz=297,slow=4.7,SNR=5.2								
TXAR	**Lajitas Array**	**120.46**	**52**	PKP		PKPdf		08 53 48.5	+0.4
TXAR	**Lajitas Array**	**120.46**	**52**	PKP		PKPdf		08 53 48.5	+0.4
	comp=Z,0.3nm,0.8s,baz=110,slow=1.9,SNR=3.6								
TORD	**Torodi Ar. Bea**	**123.49**	**289**	PKP		PKPdf		08 53 54.1	-0.1
	comp=Z,0.6nm,0.8s,baz=59,slow=2.4,SNR=3.4								

IDC ***04*** *09:08:44.1±1.0,26.°70N×54.°81E,h0km,mb4.1/18, mb1 4.2/20,mb1mx4.1/29,mbtmp4.1/20,ML4.2/2,MS3.1/2, Ms1 3.1/2,ms1mx2.5/28,Error ellipse: s-maj=25.8km s-min=14.6km az=169.0*
ISCJB ***04*** *09:08:45.2±0.3,26.°70N±0.°03×54.°79E±0.°03,h10km, mb4.2/23,MS3.0/2,Error ellipse: s-maj=5.0km s-min=3.8km az=17.0*
NEIC ***04*** *09:08:45.6,26.°41N×54.°85E,h10km,MN4.0(TEH),After TEH.*
THR ***04*** *09:08:45.7±0.6,26.°65N×54.°79E,h15km,ML3.9*
OMAN ***04*** *09:08:47.6±99.0,26.°69N×54.°86E,h8km,Error ellipse: s-maj=23.8km s-min=5.5km az=338.0*
CSEM ***04*** *09:08:48.4±0.2,26.°71N×54.°81E,h20km,ML4.0,Error ellipse: s-maj=9.9km s-min=6.6km az=62.0*
TEH ***04*** *09:08:48.5,26.°54N×54.°89E,h25km*

ISC 04 09:08:46.9±0.3,26.°70N±0.°03×54.°81E±0.°03,h10km,n92, σ1s31/99,mb4.2/23,MS3.0/2,3C-4D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**1.40**	**60**	*e*Pg		**Pg**		**09 09 12.2**	**-1.5**
BNDS				*e*Sg		**Sg**		**09 09 31.7**	**-0.2**
BNDS				AML		AML		09 09 37.5	
	comp=N,3μm,0.3s								
BANOM	**Banah**	**1.54**	**120**	P		**Pn**		**09 09 14.8**	**+0.4**
	SNR=35								
BANOM				S		**Sn**		**09 09 35.0**	**+0.5**
BANOM	**Banah**	**1.54**	**120**	⇑P		**Pn**		**09 09 14.8**	**+0.4**
	SNR=35								
BANOM				⇓S		**Sn**		**09 09 35.0**	**+0.5**
IBND	**Bandar-abas**	**1.71**	**64**	*e*Pn		**Pn**		**09 09 16.7**	**-0.1**
IBND				*e*Pn		**Pn**		**09 09 16.9**	**+0.1**
IBND				*e*Sg		**Sg**		**09 09 42.6**	**+0.6**
IBND				*e*Sg		**Sg**		**09 09 43.1**	**+1.1**
IBND				*e*				09 09 51.3	
	comp=Z,65μm,0.3s								
IBND				*e*				09 10 00.0	
	comp=Z,49μm,0.3s								
IBND	**Bandar-abas**	**1.71**	**64**	*e*Pn		**Pn**		**09 09 16.7**	**-0.1**
NAZ	**Nazwa, Dubai**	**1.87**	**156**	P		**Pn**		**09 09 21.2**	**+2.3**
	SNR=12								
NAZ	**Nazwa, Dubai**	**1.87**	**156**	⇑P		**Pn**		**09 09 21.2**	**+2.3**
	SNR=12								
ASUD	**Al Ashush, Dub**	**2.12**	**167**	P		**Pn**		**09 09 23.9**	**+1.5**
	SNR=67								
ASUD	**Al Ashush, Dub**	**2.12**	**167**	P		**Pn**		**09 09 23.9**	**+1.5**
	SNR=67								
ASHO	**Ashiyiah**	**2.30**	**151**	P		**Pn**		**09 09 25.4**	**+0.5**
	SNR=35								
ASHO	**Ashiyiah**	**2.30**	**151**	P		**Pn**		**09 09 25.4**	**+0.6**
	SNR=35								
ISRV	**Sarvestan**	**3.07**	**331**	Pn		**Pn**		**09 09 37.9**	**+2.4**
ISRV				Sg		**Sg**		**09 10 29.5**	**+4.0**
ISRV	**Sarvestan**	**3.07**	**331**	*e*Pn		**Pn**		**09 09 37.7**	**+2.2**
ISRV				*e*Sg		**Sg**		**09 10 29.5**	**+4.0**
ISRV				*e*				09 10 31.9	
	comp=Z,3μm,0.3s								
ISRV	**Sarvestan**	**3.07**	**331**	*e*Pn		**Pn**		**09 09 37.7**	**+2.2**
ISRV				*e*Sg		**Sg**		**09 10 29.5**	**+4.0**
IPAR	**Pars**	**3.50**	**334**	Pn		**Pn**		**09 09 44.3**	**+2.9**
IPAR	**Pars**	**3.50**	**334**	*e*Pn		**Pn**		**09 09 43.5**	**+2.1**
IPAR				*e*				09 10 57.0	
	comp=Z,2μm,0.5s								
IPAR	**Pars**	**3.50**	**334**	*e*Pn		**Pn**		**09 09 43.5**	**+2.1**
SHI	**Shiraz**	**3.57**	**326**	*e*Pn		**Pn**		**09 09 44.2**	**+1.9**
SHI				*e*				09 11 02.0	
	comp=Z,1μm,0.2s								
SHI	**Shiraz**	**3.57**	**326**	*e*Pn		**Pn**		**09 09 44.2**	**+1.9**
KRBR	**Kerman**	**3.69**	**27**	*e*Pn		**Pn**		**09 09 45.7**	**+1.6**
KRBR				AML		AML		09 10 41.5	
	comp=N,170nm,0.4s								
KRBR				AML		AML		09 10 43.0	
	comp=E,169nm,0.5s								
SMDO	**Samad**	**4.66**	**140**	P		**Pn**		**09 09 57.9**	**+0.5**
	SNR=16								
SMDO	**Samad**	**4.66**	**140**	P		**Pn**		**09 09 57.9**	**+0.5**
	SNR=16								
IMEH	**Mehriz**	**4.68**	**358**	Pn		**Pn**		**09 09 59.7**	**+2.1**
IMEH	**Mehriz**	**4.68**	**358**	⇓*e*Pn		**Pn**		**09 09 59.3**	**+1.7**
IMEH				*e*				09 11 34.2	
	comp=Z,634nm,0.3s								
IMEH	**Mehriz**	**4.68**	**358**	⇓*e*Pn		**Pn**		**09 09 59.3**	**+1.7**
IBAF	**Bafgh**	**4.92**	**8**	*e*		**Pn**		**09 10 02.8**	**+1.9**
	comp=Z,1μm,0.1s								
IBAF				*e*Pn		**Pn**		**09 10 02.0**	**+1.1**
IBAF	**Bafgh**	**4.92**	**8**	*e*Pn		**Pn**		**09 10 02.0**	**+1.1**
ISAD	**Sadrabad**	**5.29**	**350**	Pn		**Pn**		**09 10 08.0**	**+2.0**
ISAD	**Sadrabad**	**5.29**	**350**	*e*Pn		**Pn**		**09 10 08.0**	**+2.0**
ISAD				*e*				09 11 12.1	
	comp=Z,720nm,0.2s								
ISAD	**Sadrabad**	**5.29**	**350**	*e*Pn		**Pn**		**09 10 08.0**	**+2.0**
ICHK	**Chekchek**	**5.54**	**356**	*e*Pn		**Pn**		**09 10 10.9**	**+1.5**
ICHK				*e*				09 10 48.4	
	comp=Z,456nm,0.3s								
ICHK	**Chekchek**	**5.54**	**356**	*e*Pn		**Pn**		**09 10 10.9**	**+1.5**
NASN	**Na'in**	**6.33**	**344**	*e*Pn		**Pn**		**09 10 21.2**	**+1.0**
QRN	**Al-Qurain**	**6.44**	**290**	*e*P		**Pn**		**09 10 22.7**	**+0.9**
QRN				AML		AML		09 11 34.6	
	comp=Z,34nm,0.2s								
KBD	**Kabd**	**6.76**	**293**	*e*P		**Pn**		**09 10 27.4**	**+1.1**
IKLH	**Kolahrood**	**7.17**	**338**	Pn		**Pn**		**09 10 33.4**	**+1.6**
IKLH	**Kolahrood**	**7.17**	**338**	*e*Pn		**Pn**		**09 10 33.2**	**+1.4**
IKLH				*e*				09 12 01.1	
	comp=E,262nm,0.2s								
IKLH	**Kolahrood**	**7.17**	**338**	*e*Pn		**Pn**		**09 10 33.2**	**+1.4**
MIB	**Mutribah**	**7.28**	**297**	*e*P		**Pn**		**09 10 34.3**	**+0.9**
MIB				AML		AML		09 11 56.3	
	comp=Z,44nm,0.5s								
RBK	**Rabkut**	**9.17**	**184**	P		**Pn**		**09 11 00.6**	**+1.3**
	SNR=6.3								
RBK	**Rabkut**	**9.17**	**184**	P		**Pn**		**09 11 00.6**	**+1.3**
	SNR=6.3								
KBL	**Kabul**	**14.52**	**54**	*e*Pn		**Pn**		**09 12 15.3**	**+2.9**
	comp=Z,5.1nm,0.7s								
KBL	**Kabul**	**14.52**	**54**	*e*Pn		**Pn**		**09 12 15.4**	**+2.9**
	comp=Z,5.1nm,0.7s								
ASF	**Jabal al Asfar**	**16.53**	**294**	Pn		**Pn**		**09 12 37.7**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=338,slow=19,SNR=3.2								
MMAI	**Mount Meron Ar**	**17.96**	**295**	P		**Pn**		**09 12 56.2**	**-0.6**
	comp=Z,1.3nm,0.3s,baz=100,slow=15,SNR=4.2								
AML	**Almayashu**	**21.83**	**40**	*e*P		**P**		**09 13 39.2**	**-0.1**
	comp=Z,7.7nm,0.6s,mb4.3								
AML	**Almayashu**	**21.83**	**40**	*e*P		**P**		**09 13 39.2**	**-0.1**
	comp=Z,7.7nm,0.6s,mb4.3								
BRTR	**Keskin Array B**	**21.90**	**312**	P		**P**		**09 13 40.7**	**+0.5**
	comp=Z,7.9nm,0.7s,mb4.2,baz=132,slow=12,SNR=24								
BRTR	**Keskin Array B**	**21.90**	**312**	P		**P**		**09 13 40.7**	**+0.5**
EKS2	**Erkin-Say**	**22.21**	**39**	*e*P		**P**		**09 13 43.1**	**-0.3**
	comp=Z,21nm,1.0s,mb4.5								
EKS2	**Erkin-Say**	**22.21**	**39**	*e*P		**P**		**09 13 43.1**	**-0.3**
	comp=Z,21nm,1.0s,mb4.5								
AAK	**Ala-Archa**	**22.60**	**40**	P		**P**		**09 13 47.3**	**-0.3**
AAK				LR		LR		09 24 13.5	
AAK	**Ala-Archa**	**22.60**	**40**	P		**P**		**09 13 47.3**	**-0.3**
	comp=Z,2.3nm,0.4s,mb3.9,baz=223,slow=12,SNR=3.8								
AAK				LR		LR		09 24 13.5	
	comp=Z,68nm,18.0s,MS3.1,baz=14,slow=41								
AAK	**Ala-Archa**	**22.60**	**40**	P		**P**		**09 13 47.3**	**-0.3**
AKTK	**Aktyubinsk**	**23.83**	**5**	P		**P**		**09 13 59.5**	**-0.6**
AKTK	**Aktyubinsk**	**23.83**	**5**	P		**P**		**09 13 59.5**	**-0.6**
AKTO	**Aktyubinsk**	**23.83**	**5**	P		**P**		**09 13 59.5**	**-0.6**
	comp=Z,2.8nm,0.6s,mb3.9,baz=198,slow=8.4,SNR=13								
BVAR	**Borovoye Array**	**28.76**	**20**	P		**P**		**09 14 43.3**	**-1.2**
	comp=Z,1.9nm,0.6s,mb4.0,baz=193,slow=6.1,SNR=8.9								
BVAR	**Borovoye Array**	**28.76**	**20**	P		**P**		**09 14 43.3**	**-1.2**
MKAR	**Makanchi Array**	**29.54**	**40**	P		**P**		**09 14 50.6**	**-0.9**
	comp=Z,1.3nm,0.6s,mb3.8,baz=226,slow=8.8,SNR=9.0								
MKAR				LR		LR		09 28 26.0	
	comp=Z,27nm,20.5s,MS2.9,baz=335,slow=40								
MKAR	**Makanchi Array**	**29.54**	**40**	P		**P**		**09 14 50.6**	**-1.0**
AKASG	**Malin Array Be**	**30.91**	**328**	P		**P**		**09 15 00.6**	**-3.0**
	comp=Z,0.9nm,0.3s,mb4.1,baz=139,slow=8.6,SNR=5.2								
AKASG	**Malin Array Be**	**30.91**	**328**	P		**P**		**09 15 00.6**	**-3.0**
ZAA0	**Zalesovo Array**	**35.08**	**31**	*e*P		**P**		**09 15 38.4**	**-1.6**
ZAA0	**Zalesovo Array**	**35.08**	**31**	*e*P		**P**		**09 15 38.4**	**-1.6**
ZALV	**Zalesovo Beam**	**35.08**	**31**	P		**P**		**09 15 38.3**	**-1.6**
	comp=Z,7.5nm,0.6s,mb4.8,baz=237,slow=9.3,SNR=23								
FINES	**FINESS Array B**	**39.75**	**339**	P		**P**		**09 16 17.9**	**-1.5**
	comp=Z,1.7nm,0.6s,mb3.9,baz=141,slow=12,SNR=5.6								
FINES	**FINESS Array B**	**39.75**	**339**	P		**P**		**09 16 18.0**	**-1.5**
FETA	**Feichten**	**40.04**	**312**	⇓*i*P		**P**		**09 16 21.1**	**-1.0**
	comp=Z,2.5nm,0.4s,mb4.3								
DAVA	**Damuels**	**40.67**	**312**	⇑*i*P		**P**		**09 16 25.9**	**-1.5**
	comp=Z,13nm,0.4s,mb4.9								
CMAR	**Chiang Mai Arr**	**41.40**	**92**	P		**P**		**09 16 33.5**	**-0.2**
	comp=Z,0.6nm,0.4s,mb3.5,baz=286,slow=10.0,SNR=3.1								
CMAR	**Chiang Mai Arr**	**41.40**	**92**	P		**P**		**09 16 33.5**	**-0.2**
HFS	**Hagfors**	**43.60**	**331**	P		**P**		**09 16 49.3**	**-1.8**
	comp=Z,2.2nm,0.7s,mb4.0,baz=126,slow=9.9,SNR=4.8								
HFS	**Hagfors**	**43.60**	**331**	P		**P**		**09 16 49.3**	**-1.7**
NOA	**NORSAR Array B**	**45.12**	**332**	P		**P**		**09 17 01.3**	**-1.9**
NOA	**NORSAR Array B**	**45.12**	**332**	P		**P**		**09 17 01.3**	**-1.9**
	comp=Z,1.1nm,0.6s,mb3.9,baz=139,slow=7.0,SNR=3.6								
NOA	**NORSAR Array B**	**45.12**	**332**	P		**P**		**09 17 01.3**	**-1.8**
SONM	**Songino Array**	**45.19**	**48**	P		**P**		**09 17 03.7**	**-0.2**
	comp=Z,2.6nm,0.8s,mb4.1,baz=256,slow=8.8,SNR=13								
SONM	**Songino Array**	**45.19**	**48**	P		**P**		**09 17 03.7**	**-0.2**
ARCES	**ARCESS Array B**	**46.16**	**346**	P		**P**		**09 17 10.5**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=161,slow=7.7,SNR=4.8								
ARCES				PcP		PcP		09 18 45.2	-1.8
	comp=Z,1.8nm,0.8s,baz=114,slow=2.3,SNR=3.3								
ARCES	**ARCESS Array B**	**46.16**	**346**	P		**P**		**09 17 10.5**	**-0.8**
ARCES	**ARCESS Array B**	**46.16**	**346**	PcP		PcP		09 18 45.2	-1.8
MDT	**Midelt**	**51.38**	**292**	P		**P**		**09 17 51.5**	**-0.4**
	comp=Z,2.2nm,0.7s,mb4.2,baz=83,slow=9.2,SNR=8.2								
MDT	**Midelt**	**51.38**	**292**	P		**P**		**09 17 51.5**	**-0.5**
TORD	**Torodi Ar. Bea**	**51.39**	**266**	P		**P**		**09 17 51.0**	**-1.2**
	comp=Z,1.3nm,0.7s,mb4.0,baz=62,slow=8.1,SNR=15								
DBIC	**Dimbokro**	**59.98**	**262**	P		**P**		**09 18 52.8**	**-1.2**
	comp=Z,2.3nm,0.5s,mb4.5,baz=51,slow=6.7,SNR=3.9								
DBIC	**Dimbokro**	**59.98**	**262**	P		**P**		**09 18 52.8**	**-1.2**
KSRS	**Korea Array**	**61.48**	**60**	P		**P**		**09 19 01.4**	**-2.5**
	comp=Z,1.5nm,0.5s,mb4.4,baz=274,slow=7.0,SNR=5.9								
ILAR	**Eielson Array**	**87.28**	**9**	P		**P**		**09 21 31.3**	**-2.2**
	comp=Z,0.6nm,0.6s,mb4.0,baz=322,slow=4.4,SNR=14								
YKA	**Yellowknife Ar**	**90.72**	**355**	P		**P**		**09 21 48.6**	**-1.1**
	comp=Z,0.5nm,0.6s,mb4.1,baz=1.7,slow=4.7,SNR=11								
NVAR	**Mina Array Bea**	**114.89**	**354**	PKP		PKiKP		09 27 27.9	-0.3
	comp=Z,0.3nm,0.5s,baz=39,slow=1.9,SNR=3.5								
TXAR	**Lajitas Array**	**120.59**	**338**	PKP		PKPdf		09 27 37.3	-2.2
	comp=Z,0.3nm,1.0s,baz=29,slow=3.3,SNR=2.5								

ISCJB ***04*** *09:19:08.6±1.0,31.°65N±0.°04×103.°30E±0.°08,h7km±6km, mb3.5/7,MS2.8/2,Error ellipse: s-maj=11.9km s-min=6.0km az=165.6*
IDC ***04*** *09:19:10.0±1.4,31.°74N×103.°15E,h0km,mb3.6/7, mb1 3.8/8,mb1mx3.6/23,mbtmp3.6/8,ML3.2/1,MS3.0/2, Ms1 3.0/2,ms1mx2.6/17,Error ellipse: s-maj=41.9km s-min=24.7km az=51.0*
NEIC ***04*** *09:19:11.0±0.8,31.°62N×103.°11E,h10km,Error ellipse: s-maj=22.3km s-min=10.5km az=47.0*
BJI ***04*** *09:19:12.2,31.°39N×103.°40E,h10km,mb4.0/1,ML3.9/14, Ms3.7/4,Ms7 3.4/4*

ISC 04 09:19:10.7±1.0,31.°59N±0.°04×103.°34E±0.°07,h10km±7km, n17,σ1s26/21,mb3.5/7,MS2.8/2,1C-1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.77**	**152**	⇑*i*Pg		**Pg**		**09 19 25.2**	**-0.

ellipse: s-maj=5.9km s-min=3.1km az=94.0
*NSSC **04** 09:51:06,33.77N×35.82E,h5km±5km*
ISC 04 09:51:06.5±0.6, 33.79N±0.03×35.77E±0.06, h5km±8km, n18,σ0s45/30, 10D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BHL	**Bhannes**	**0.15**	**319**	*eP*		**Pg**	**09 51 09.7**	**+0.2**
BHL	**Bhannes**	**0.15**	**319**	*eP*		**Pg**	**09 51 09.6**	**+0.2**
RCY	**Rachaya**	**0.31**	**173**	*eP*		**Pg**	**09 51 12.2**	**-0.2**
RCY				*eS*		**Sg**	**09 51 16.2**	**-0.3**
RCY	**Rachaya**	**0.31**	**173**	*eP*		**Pg**	**09 51 12.2**	**-0.3**
RCY				*eS*		**Sg**	**09 51 16.2**	**-0.3**
BRBR	**Barbar**	**0.41**	**158**	⇑P		**Pg**	**09 51 14.0**	**-0.4**
BRBR				⇑S		**Sg**	**09 51 20.0**	**+0.3**
BRBR	**Barbar**	**0.41**	**158**	⇑*i*P		**Pg**	**09 51 14.4**	**0.0**
BRBR				⇑*i*S		**Sg**	**09 51 20.6**	**+0.9**
MATL	**Matarih**	**0.48**	**231**	*eP*		**Pg**	**09 51 15.8**	**+0.1**
MATL	**Matarih**	**0.48**	**231**	*eP*		**Pg**	**09 51 15.8**	**+0.1**
QASN	**Qassioun**	**0.49**	**121**	⇓P		**Pg**	**09 51 16.0**	**0.0**
QASN				⇓S		**Sg**	**09 51 22.0**	**-0.4**
QASN	**Qassioun**	**0.49**	**121**	⇓*i*P		**Pg**	**09 51 16.3**	**+0.3**
QASN				⇓*i*S		**Sg**	**09 51 22.4**	**0.0**
HWQ	**Hawqa**	**0.51**	**17**	*eP*		**Pg**	**09 51 16.0**	**-0.2**
HWQ				*eS*		**Sg**	**09 51 22.6**	**-0.2**
HWQ	**Hawqa**	**0.51**	**17**	*eP*		**Pg**	**09 51 16.0**	**-0.2**
HWQ				*eS*		**Sg**	**09 51 22.6**	**-0.2**
TOTH	**TOTAH**	**0.70**	**128**	⇓P		**Pg**	**09 51 20.0**	**+0.1**
TOTH	**TOTAH**	**0.70**	**128**	⇓*i*P		**Pg**	**09 51 20.3**	**+0.4**
BIDA	**Albida**	**1.30**	**20**	⇓P		**Pn**	**09 51 30.0**	**-1.4**
BIDA				⇓S		**Sb**	**09 51 49.0**	**+0.5**
BIDA	**Albida**	**1.30**	**20**	⇓*i*P		**Pn**	**09 51 30.9**	**-0.5**
BIDA				⇓*i*S		**Sb**	**09 51 49.4**	**+0.9**
WRDH	**Warideh**	**1.79**	**17**	⇑P		**Pn**	**09 51 38.0**	**-0.1**
WRDH				⇑S		**Sn**	**09 52 01.0**	**-0.2**
WRDH	**Warideh**	**1.79**	**17**	⇑*i*P		**Pn**	**09 51 38.9**	**+0.8**
WRDH				⇑*i*S		**Sn**	**09 52 01.2**	**-0.1**

*NIED **04** 09:55:00, 33.50N×142.20E, h8km, Mw3.7 Best double couple: M0 3.37000×10^14 NP1:φs164.00000°,δ65.00000°, λ-97.00000°. NP2:φs1.00000°,δ26.00000°,λ-74.00000°.*
JMA 04 09:55:00.7±0.4, 33.51N×142.22E, h60km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.54**	**318**	P		Pn	09 55 26.4	+0.5
BSO1				S		Sn	09 55 46.2	+1.4
BSO3	**Boso 3**	**1.92**	**313**	P		Pn	09 55 31.9	+0.9
JHJ2	**Mitsune**	**2.05**	**259**	P		Pn	09 55 33.9	+1.1
JHJ2				S		Sn	09 55 59.6	+2.3
BSO4	**Boso 4**	**2.15**	**314**	P		Pn	09 55 35.8	+1.7
JIM2	**Oshima 3**	**2.61**	**298**	P		Pn	09 55 40.8	+0.4
JIM2				S		Sn	09 56 11.8	+0.9
JIZS	**Izushimoda**	**3.02**	**294**	P		Pn	09 55 47.4	+1.3
JIZS				S		Sn	09 56 22.2	+1.1
JOD2	**Odawara 2**	**3.12**	**305**	P		Pn	09 55 48.3	+0.8
JOD2				S		Sn	09 56 24.9	+1.3
JYT	**Yasato**	**3.18**	**329**	P		Pn	09 55 49.4	+1.1
JYT				S		Sn	09 56 25.4	+0.4
MAT	**Matsushiro**	**4.47**	**314**	P		Pn	09 56 08.7	+2.8
MAT				S		Sn	09 56 59.1	+2.5

*NIED **04** 10:08:00, 38.90N×140.90E, h5km, Mw3.6 Best double couple: M0 2.79000×10^14 NP1:φs15.00000°,δ48.00000°, λ68.00000°. NP2:φs225.00000°,δ46.00000°,λ112.00000°.*
*IDC **04** 10:08:31.0±1.3, 38.76N×141.16E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.5/24, mbtmp3.7/5, ML3.4/2, Error ellipse: s-maj=48.4km s-min=22.3km az=117.0*
*ISCJB **04** 10:08:31.2±0.6, 38.87N±0.03×140.89E±0.04, h12km±4km, mb3.6/3, Error ellipse: s-maj=5.0km s-min=4.1km az=32.0*
*JMA **04** 10:08:31.7, 38.88N×140.87E, h6km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs345.00000°,δ45.00000°,λ23.00000°. NP2: φs238.00000°,δ74.00000°,λ133.00000°. Principal axes: T Plg44.0000°, Azm190.0000°; N Plg41.0000°, Azm44.0000°; P Plg18.0000°, Azm298.0000°;*
JMA Felt II J1.
ISC 04 10:08:31.7±0.5, 38.87N±0.02×140.88E±0.03, h4km±5km, n15,σ0s59/25, mb3.6/3, 4C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.28**	**73**	⇓P		**Pg**	**10 08 37.2**	**+0.1**
JMK				*eS*		**Sg**	**10 08 41.2**	**+0.4**
JYK	**Kaneyama**	**0.41**	**277**	⇓P		**Pg**	**10 08 39.5**	**0.0**
JYK				*eS*		**Sg**	**10 08 44.7**	**-0.1**
JOU	**Okura**	**0.53**	**198**	⇑P		**Pg**	**10 08 42.1**	**+0.3**
JOU				*eS*		**Sg**	**10 08 49.3**	**+0.6**
JIO	**Ouri**	**0.56**	**138**	⇓P		**Pg**	**10 08 42.2**	**-0.1**
JIO				*eS*		**Sg**	**10 08 50.0**	**+0.5**
JRG	**Rokugo**	**0.56**	**340**	⇓P		**Pg**	**10 08 42.2**	**-0.2**
JRG				*eS*		**Sg**	**10 08 50.2**	**+0.5**
JOM	**Ohasama**	**0.69**	**28**	⇑P		**Pg**	**10 08 44.3**	**-0.5**
JOM				*eS*		**Sg**	**10 08 53.8**	**+0.1**
JYS	**Shirataka**	**0.91**	**225**	⇑P		**Pg**	**10 08 48.8**	**-0.3**
JYS				*eS*		**Sg**	**10 09 01.1**	**+0.3**
JYA	**Atsumi**	**0.95**	**254**	⇓P		**Pg**	**10 08 49.4**	**-0.5**
JYA				*eS*		**Sg**	**10 09 02.1**	**-0.1**
JMM	**Marumori**	**1.00**	**184**	⇑P		**Pg**	**10 08 49.9**	**-1.0**
JMM				S		**Sg**	**10 09 03.4**	**-0.5**
MAT	**Matsushiro**	**3.14**	**223**	P		**Pn**	**10 09 23.1**	**+1.2**
JHJ	**Hachijo jima 2**	**5.80**	**189**	Pn		**Pn**	**10 09 58.7**	**+0.1**
	4.4nm,0.3s,baz=330,slow=20,SNR=6.2							
JHJ				Sn		**Sn**	**10 11 05.5**	**0.0**
	2.2nm,0.3s,baz=90,slow=20,SNR=3.6							
KSRS	**Korea Array**	**10.30**	**266**	Pn		**Pn**	**10 11 03.5**	**+3.3**
	0.2nm,0.3s,baz=81,slow=14,SNR=8.3							
ILAR	**Eielson Array**	**48.19**	**33**	P		**P**	**10 17 12.2**	**-0.5**
	0.4nm,0.7s,mb3.5,baz=257,slow=6.1,SNR=6.3							
ASAR	**Alice Springs**	**62.55**	**187**	P		**P**	**10 18 55.5**	**-1.0**
	0.7nm,0.7s,mb3.9,baz=12,slow=5.9,SNR=9.6							
NVAR	**Mina Array Bea**	**74.23**	**53**	P		**P**	**10 20 09.9**	**+0.1**
	0.5nm,0.8s,mb3.5,baz=302,slow=6.1,SNR=3.9							

*NIED **04** 10:25:00, 27.00N×126.50E, h8km, Mw5.2 Best double couple: M0 8.18000×10^16 NP1:φs10.00000°,δ68.00000°, λ-156.00000°. NP2:φs271.00000°,δ68.00000°, λ-23.00000°.*
*JMA **04** 10:25:51.3±0.3, 26.97N×126.54E, h11km±3km, M5.4*
JMA Felt II J1.
*IDC **04** 10:25:51.5±0.5, 26.87N×126.44E, h0km, mb4.4/21, mb1 4.5/23, mb1mx4.4/29, mbtmp4.3/23, ML3.2/2, MS4.8/22, Ms1 4.8/22, ms1mx4.6/26, Error ellipse: s-maj=17.9km s-min=12.6km az=81.0*
*ISCJB **04** 10:25:54.5±0.1, 26.91N±0.02×126.39E±0.02, h26km, mb4.9/135, MS5.0/46, Error ellipse: s-maj=2.9km s-min=2.5km az=141.2*
*BJI **04** 10:25:54.6, 27.06N×126.31E, h20km, mB5.1/30, mb4.8/54, ML5.2/3, Ms5.3/62, Ms7 5.0/44*
*MOS **04** 10:25:55.6±1.5, 26.85N×126.10E, h33km, mb5.2/48, MS4.8/23, Error ellipse: s-maj=9.0km s-min=5.4km az=104.0*
*GCMT **04** 10:25:56.0±0.1, 26.91N×126.50E, h13km, MW5.3, Moment Tensor Solution. s68,c107; s94,c174; Moment tensor: Scale 10^17Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mrφ0.00; Mθφ0.00; Best double couple: M0 1.00000×10^17 NP1:φs4.00000°,δ73.00000°, λ-180.00000°. NP2:φs274.00000°,δ90.00000°, λ-17.00000°. Principal axes: T 1.1000, Plg12.0000°, Azm320.0000°; N -0.2100, Plg73.0000°, Azm93.0000°; P -0.9000, Plg12.0000°, Azm227.0000°; Data Used: II IU IC G CN.*
*NEIC **04** 10:25:58.0±0.2, 27.08N×126.17E, mb5.1/72, MS4.5/3, MW5.2(NIED) Error ellipse: s-maj=7.8km s-min=4.3km az=145.0*
NEIC Recorded [2 JMA] on Kume-jima and Okinawa; [1 JMA] on Aguni-jima.
*DJA **04** 10:26:33, 26.94N×126.75E, h489km, mb4.7/18*
ISC 04 10:25:56.3±0.1, 26.92N±0.02×126.43E±0.02, h27km, h27km±1.3km:pP-P, n462, σ1s24/465, mb4.9/135, MS5.0/46, 90C-67D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.67**	**151**	P		**Pb**	**10 26 04.3**	**-5.2**
JKE				*eS*		**Sb**	**10 26 13.3**	**-5.1**
JAGN	**Aguni-jima**	**0.80**	**114**	P		**Pb**	**10 26 05.4**	**-6.2**
JAGN				*eS*		**Sb**	**10 26 14.8**	**-7.3**
NAH1	**Naha**	**1.34**	**122**	P		**Pn**	**10 26 15.3**	**-3.9**
NAH1				*eS*		**Sn**	**10 26 32.3**	**-3.8**
JIH	**Iheya**	**1.38**	**85**	P		**Pn**	**10 26 14.1**	**-5.7**
JIH				*eS*		**Sn**	**10 26 32.0**	**-5.2**
JJT2	**Tamagusuku 2**	**1.42**	**123**	P		**Pn**	**10 26 15.8**	**-4.5**
JJT2				*eS*		**Sn**	**10 26 35.3**	**-2.8**
JOW	**Kunigami**	**1.65**	**92**	P		**Pn**	**10 26 18.5**	**-5.1**
JOW				*eS*		**Sn**	**10 26 40.4**	**-3.5**
JMJ	**Miyako jima 2**	**2.33**	**206**	P		**Pn**	**10 26 31.9**	**-1.0**
JOGS	**Gusukube**	**2.33**	**203**	P		**Pn**	**10 26 32.8**	**-0.2**
JTK	**Tokunoshima**	**2.41**	**68**	P		**Pn**	**10 26 29.3**	**-4.6**
JTJ	**Tarama**	**2.75**	**215**	P		**Pn**	**10 26 39.2**	**+0.6**
JAM	**Amami Oshima**	**3.19**	**61**	P		**Pn**	**10 26 41.1**	**-3.6**
JIJ	**Ishigaki jima**	**3.27**	**220**	P		**Pn**	**10 26 45.2**	**-0.6**
JZK	**Kikaishima**	**3.44**	**65**	P		**Pn**	**10 26 46.3**	**-1.9**
JKRS	**Kuro-shima**	**3.45**	**220**	P		**Pn**	**10 26 48.6**	**+0.4**
IRIF	**Iriomote-Funau**	**3.54**	**224**	P		**Pn**	**10 26 49.5**	**0.0**
HATJ	**Hateruma jima**	**3.70**	**220**	P		**Pn**	**10 26 53.3**	**+1.5**
YOJ	**Yonaguni jima**	**3.93**	**232**	P		**Pn**	**10 26 55.8**	**+0.9**
JNN	**Nakanoshima**	**4.21**	**45**	P		**Pn**	**10 26 58.1**	**-0.6**
JMZ	**Minamidaito 2**	**4.44**	**103**	P		**Pn**	**10 26 55.6**	**-6.3**
JMZ				*eS*		**Sn**	**10 27 45.6**	**-7.1**
TATO	**Taipei**	**4.85**	**248**	*e*Pn		**Pn**	**10 27 08.2**	**+0.8**
YHNB	**Yeheng**	**5.07**	**245**	*e*Pn		**Pn**	**10 27 11.7**	**+1.1**
NACB	**Ninganchiao**	**5.15**	**239**	*e*Pn		**Pn**	**10 27 13.6**	**+2.0**
	372nm,1.0s							
YULB	**Yu-li**	**5.82**	**234**	*e*Pn		**Pn**	**10 27 21.6**	**+0.7**
	290nm,1.0s							
SSLB	**Suanglung**	**5.85**	**239**	*e*Pn		**Pn**	**10 27 22.9**	**+1.7**
	513nm,0.8s							
SSE	**Sheshan**	**6.20**	**313**	Pn		**Pn**	**10 27 22.4**	**-3.6**
SSE				LR		LR		
	comp=N,7μm,11.0s							
SSE				LR		LR		
	comp=E,6μm,11.0s							
SSE				LR		LR		
	comp=Z,10μm,10.0s							
TWG	**Pinlang**	**6.34**	**231**	*e*Pn		**Pn**	**10 27 28.5**	**+0.4**
	comp=Z,350nm,1.1s							
TPUB	**Ta-pu**	**6.37**	**237**	*e*Pn		**Pn**	**10 27 30.8**	**+2.3**
	comp=Z,1μm,1.3s							
JIU2	**Izumi 2**	**6.78**	**33**	P		**Pn**	**10 27 36.8**	**+2.7**
QZH	**Quanzhou**	**7.32**	**256**	⇑*i*P		**Pn**	**10 27 36.4**	**-5.1**
QZH				S		**Sn**	**10 29 03.9**	**+0.2**
QZH				LR		LR		
	comp=N,12μm,9.4s							
QZH				LR		LR		
	comp=E,20μm,11.1s							
QZH				LR		LR		
	comp=Z,11μm,12.9s							
NJ2	**Nanjing**	**8.35**	**310**	*e*P		**Pn**	**10 27 54.2**	**-1.4**
NJ2				pP			10 28 00.0	
NJ2				sP			10 28 03.2	
NJ2				S		**Sn**	**10 29 24.9**	**-4.1**
NJ2				sS			10 29 34.3	
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
NJ2				smax				
	comp=N,2μm,1.4s							
NJ2				smax				
	comp=E,660nm,1.0s							
NJ2				LR	LR			
	comp=N,12μm,13.6s							
NJ2				LR	LR			
	comp=E,13μm,10.1s							
INCN	**Inchon**	**10.54**	**1**	*e*Pn		**Pn**	**10 28 25.6**	**+0.1**
KSRS	**Korea Array**	**10.58**	**7**	Pn		**Pn**	**10 28 26.9**	**+0.8**
	comp=E,0.1nm,0.3s,baz=189,slow=14,SNR=17							
KSRS				LR		LR	10 32 39.1	
	comp=E,3μm,19.2s,baz=189,slow=38							
WHN	**Wuhan**	**11.20**	**292**	P		**Pn**	**10 28 34.7**	**+0.1**
WHN				S		**Sn**	**10 30 47.4**	**+8.5**
WHN				LR	LR			
	comp=N,22μm,10.6s							
WHN				LR	LR			
	comp=E,22μm,11.0s							
WHN				LR	LR			
	comp=Z,19μm,12.7s							
HKC	**Hong Kong Obse**	**12.05**	**250**	P		**Pn**	**10 28 52.0**	**+5.6**
TIA	**Tai'an**	**12.19**	**322**	P		**Pn**	**10 28 49.3**	**+1.1**
TIA				LR	LR			
	comp=N,9μm,10.1s							
TIA				LR	LR			
	comp=E,7μm,12.8s							
GZH	**Guangzhou**	**12.46**	**255**	P		**Pn**	**10 28 47.2**	**-4.7**
GZH				S		**Sn**	**10 31 03.2**	**-6.7**
GZH				LR	LR			
	comp=N,7μm,7.9s							
GZH				LR	LR			
	comp=E,4μm,10.2s							
DL2	**Dalian**	**12.61**	**343**	P		**Pn**	**10 28 52.2**	**-1.8**
DL2				pmax	pmax			
	comp=Z,20nm,0.9s							
DL2				pmax	pmax			
	comp=Z,220nm,8.1s							
DL2				LR	LR			
	comp=N,3μm,13.4s							
DL2				LR	LR			
	comp=E,10μm,14.4s							
DL2				LR	LR			
	comp=Z,8μm,12.6s							
JHJ	**Hachijo jima 2**	**13.12**	**59**	LR		LR	10 33 50.4	
	comp=Z,4μm,19.1s,baz=70,slow=36							
TGY	**Tagaytay City**	**13.74**	**203**	Pn		**Pn**	**10 29 19.0**	**+9.5**
	comp=Z,31nm,0.3s,baz=130,slow=7.4,SNR=4.7							
TGY	**Tagaytay City**	**13.74**	**203**	P		**Pn**	**10 29 19.0**	**+10**
TGY				pmax	pmax			
	comp=Z,31nm,0.3s							
MAJO	**Matsushiro**	**13.87**	**43**	*e*Pn		**Pn**	**10 29 13.5**	**+2.5**
	comp=Z,3.5nm,0.6s							
MAJO	**Matsushiro**	**13.87**	**43**	*e*P		**Pn**	**10 29 13.5**	**+2.4**
MAJO				pmax	pmax			
	comp=Z,4.0nm,0.6s							
MAT	**Matsushiro**	**13.87**	**43**	P		**Pn**	**10 29 13.9**	**+2.8**
MAT				S		**Sn**	**10 31 58.0**	**+14**
MJAR	**Matsushiro Arr**	**13.87**	**43**	Pn		**Pn**	**10 29 08.1**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=241,slow=12,SNR=5.0							
SNY	**Shenyang**	**15.06**	**352**	⇑P		**Pn**	**10 29 27.3**	**+0.1**
SNY				S		**Sn**	**10 32 16.2**	**+3.1**
SNY				pmax	pmax			
	comp=Z,61nm,1.8s							
SNY				LR	LR			
	comp=N,4μm,11.6s							
SNY				LR	LR			
	comp=Z,5μm,12.6s							
ENH	**Enshi**	**15.25**	**287**	*e*Pn		**Pn**	**10 29 30.9**	**+1.2**
	comp=Z,176nm,1.4s							
BJT	**Baijiatuan**	**15.60**	**329**	*e*Pn		**Pn**	**10 29 33.8**	**-0.5**
	comp=Z,244nm,1.5s							
BJT	**Baijiatuan**	**15.60**	**329**	*e*P		**Pn**	**10 29 33.8**	**-0.5**
BJT				pmax	pmax			
	comp=Z,244nm,1.5s							
BJI	**Beijing**	**15.62**	**330**	P		**Pn**	**10 29 34.3**	**-0.2**
BJI				S		**Sn**	**10 32 25.8**	**-0.9**
BJI				pmax	pmax			
	comp=Z,32nm,1.9s							
BJI				pmax	pmax			
	comp=Z,920nm,6.5s							
BJI				LR	LR			
	comp=N,6μm,14.3s							
BJI				LR	LR			
	comp=E,3μm,13.0s							
BJI				LR	LR			
	comp=Z,3μm,26.5s							
TIY	**Taiyuan**	**15.97**	**316**	*e*P		**Pn**	**10 29 39.9**	**+0.8**
TIY				pP	pP		10 29 46.7	-3.0
TIY				PP			10 29 53.1	
TIY				S		**Sn**	**10 32 35.8**	**+0.4**
TIY				pmax	pmax			
	comp=Z,790nm,4.5s							
TIY				LR	LR			
	comp=N,2μm,11.1s							
TIY				LR	LR			
	comp=E,4μm,10.4s							
TIY				LR	LR			
	comp=Z,4μm,10.6s							
XAN	**Xi'an**	**16.66**	**299**	P		**Pn**	**10 29 47.4**	**-0.6**
XAN				pP	pP		10 29 54.9	-2.5
XAN				sP	sP		10 29 59.4	-1.5
XAN				PP			10 30 00.6	
XAN				S		**Sn**	**10 32 52.4**	**+0.2**
XAN				pmax	pmax			
	comp=Z,160nm,11.8s							
XAN				LR	LR			
	comp=N,7μm,17.6s							
XAN				LR	LR			
	comp=E,2μm,15.6s							
XAN				LR	LR			
	comp=Z,2μm,16.0s							
VLA	**Vladivostok**	**16.77**	**14**	*c i*P		**Pn**	**10 29 49.2**	**0.0**
CN2	**Changchun**	**16.87**	**358**	*e*P		**Pn**	**10 29 49.2**	**-1.2**
CN2				*e*S		**Sn**	**10 32 53.7**	**-3.3**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.8s							
CN2				pmax	pmax			
	comp=Z,200nm,3.0s							
CN2				LR	LR			
	comp=N,8μm,12.0s							
CN2				LR	LR			
	comp=E,6μm,12.0s							
CN2				LR	LR			
	comp=Z,4μm,12.0s							
QIZ	**Qiongzhong**	**17.16**	**246**	P		**Pn**	**10 29 54.7**	**+0.5**
QIZ				sP	sP		10 30 04.9	-1.6
QIZ				S		**Sn**	**10 33 03.7**	**-0.6**
QIZ				sS	sS		10 33 13.4	-11
QIZ				SS			10 33 24.9	
QIZ				pmax	pmax			
	comp=Z,23nm,2.0s							
QIZ				pmax	pmax			
	comp=Z,480nm,10.9s							
QIZ				LR	LR			
	comp=N,4μm,12.3s							
QIZ				LR	LR			
	comp=E,1μm,11.5s							
QIZ				LR	LR			
	comp=Z,2μm,11.5s							
GYA	**Guiyang**	**17.67**	**273**	⇑*i*P		**Pn**	**10 30 01.2**	**+0.6**
GYA				sP	sP		10 30 09.7	-2.4
GYA				S		**Sn**	**10 33 09.3**	**-7.3**
GYA				pmax	pmax			
	comp=Z,40nm,1.0s							
GYA				pmax	pmax			
	comp=Z,360nm,5.0s							
GYA				LR	LR			
	comp=N,12μm,15.0s							
GYA				LR	LR			
	comp=E,6μm,15.8s							
GYA				LR	LR			
	comp=Z,6μm,15.4s							
MDJ	**Mudanjiang**	**17.85**	**7**	P		**Pn**	**10 30 03.4**	**+0.8**
MDJ				pP	pP		10 30 09.9	-0.5
MDJ				sP	sP		10 30 12.6	-1.3
MDJ				S		**Sn**	**10 33 23.9**	**+3.2**
MDJ				ScP	ScP		10 38 15.4	+3.5
MDJ				PcS	PcS		10 38 17.8	+3.1
MDJ				pmax	pmax			
	comp=Z,15nm,1.2s							
MDJ				pmax	pmax			
	comp=Z,380nm,5.2s							
MDJ				LR	LR			
	comp=N,3μm,13.1s							
MDJ				LR	LR			
	comp=E,8μm,13.1s							
MDJ				LR	LR			
	comp=Z,4μm,11.7s							
MDJ	**Mudanjiang**	**17.85**	**7**	*e*Pn		**Pn**	**10 30 04.0**	**+1.5**
	comp=Z,192nm,1.6s							
HHC	**Hu-ho-hao-te**	**18.55**	**322**	*e*P		**Pn**	**10 30 11.1**	**-0.1**
HHC				pP	pP		10 30 16.8	-1.4
HHC				sP	sP		10 30 21.0	-0.7
HHC				PP			10 30 25.8	
HHC				S		**Sn**	**10 33 29.2**	**-8.5**
HHC				sS	sS		10 33 40.0	-13
HHC				SS			10 33 51.6	
HHC				PcP	PcP		10 34 46.0	+6.3
HHC				pmax	pmax			
	comp=Z,42nm,1.2s							
HHC				pmax	pmax			
	comp=Z,1μm,4.2s							
HHC				LR	LR			
	comp=N,4μm,10.9s							
HHC				LR	LR			
	comp=E,3μm,10.4s							
HHC				LR	LR			
	comp=Z,4μm,11.6s							
BTO	**Baotou**	**19.25**	**319**	*e*P		**Pn**	**10 30 17.5**	**-2.2**
DAV	**Davao City (W)**	**19.75**	**182**	LR		LR	10 36 31.6	
	comp=Z,2μm,19.7s,baz=352,slow=32							
CD2	**Chengdu**	**20.23**	**287**	⇑P		**P**	**10 30 29.4**	**0.0**
CD2				pP			10 30 35.8	
CD2				sP	sP		10 30 39.7	-0.5
CD2				PP			10 30 48.1	
CD2				S		**S**	**10 34 09.3**	**-5.7**
CD2				pmax	pmax			
	comp=Z,160nm,1.1s							
CD2				pmax	pmax			
	comp=Z,380nm,3.8s							
CD2				LR	LR			
	comp=N,20μm,13.9s,MS5.7							
CD2				LR	LR			
	comp=E,10μm,11.3s,MS5.7							
CD2				LR	LR			
	comp=Z,9μm,13.3s,MS5.3							
LZH	**Lanzhou**	**21.27**	**301**	⇑P		**P**	**10 30 41.1**	**+0.5**
LZH				pP			10 30 48.0	
LZH				sP	sP		10 30 51.6	+0.1
LZH				PP			10 31 03.5	
LZH				S		**S**	**10 34 27.5**	**-8.1**
LZH				sS	sS		10 34 38.2	-9.3
LZH				SS			10 34 59.3	
LZH				pmax	pmax			
	comp=Z,78nm,1.0s,mb5.0							
LZH				pmax	pmax			
	comp=Z,440nm,4.6s							
LZH				LR	LR			
	comp=N,6μm,11.7s							
LZH				LR	LR			
	comp=Z,7μm,15.0s,MS5.2							
KMI	**Kunming**	**21.36**	**271**	⇓P		**P**	**10 30 43.7**	**+2.1**
KMI				sP	sP		10 30 55.8	+3.3
KMI				PP			10 31 05.3	
KMI				S		**S**	**10 34 29.3**	**-8.1**
KMI				sS	sS		10 34 42.5	-6.7
KMI				pmax	pmax			
	comp=Z,53nm,0.8s,mb4.9							
KMI				pmax	pmax			
	comp=Z,230nm,3.1s							
KMI				LR	LR			
	comp=N,7μm,12.6s,MS5.4							
KMI				LR	LR			
	comp=E,6μm,12.6s,MS5.4							
KMI				LR	LR			
	comp=Z,6μm,12.6s,MS5.2							
GUMO	**Guam**	**21.76**	**124**	*e*P		**P**	**10 30 53.6**	**+7.6**
	comp=Z,177nm,1.4s,mb5.3							
GUMO	**Guam**	**21.76**	**124**	LR		LR	10 37 27.3	
	comp=Z,548nm,20.5s,MS4.0,baz=317,slow=32							
GUMO	**Guam**	**21.76**	**124**	*e*P		**P**	**10 30 53.6**	**+7.6**
GUMO				pmax	pmax			
	comp=Z,177nm,1.4s,mb5.3							
HABR	**Khabarovsk**	**22.55**	**15**	*e*P		**P**	**10 31 00.7**	**+6.6**
HABR				*e*			10 31 15.9	
HABR				*e*PPP			10 31 24.9	
HABR				*e*S		**S**	**10 34 58.7**	**-1.4**
HABR				*e**SS		sS	10 35 14.1	+2.0
HABR				*e*SSS			10 35 44.2	
HABR				*e*			10 42 05.2	
HABR				MLR	MLR			
	comp=Z,3μm,18.0s,MS4.7							
KLR	**Kul'dur**	**22.66**	**9**	*e*P		**P**	**10 30 49.5**	**-5.7**
KLR

comp=Z,77nm,1.3s
KKM Kota Kinabalu 22.92 207 *e*P **P 10 30 58.8 +0.5**
comp=Z,72nm,1.1s,mb5.0
KKM Kota Kinabalu 22.92 207 P **P 10 30 58.5 +0.2**
comp=Z,1µmcomp=Z,68nm,1.3s,mb4.9
YUK Yuzh-Kuril'sk 23.19 38*d i*P **P 10 31 01.1 +0.1**
YUK *i* SSS 10 36 07.2
YUK pmax pmax
comp=Z,879nm,15.0s
YUK pmax pmax
comp=E,507nm,9.9s
YUK MLR MLR
comp=N,2µm,21.0s,MS4.7
YUK MLR MLR
comp=E,3µm,21.0s,MS4.7
YUK MLR MLR
comp=Z,2µm,21.0s,MS4.5
YSS Yuzh-Sakhalins 23.79 29 *e*P **P 10 31 08.5 +1.7**
comp=Z,23nm,1.0s,mb4.5
YSS Yuzh-Sakhalins 23.79 29⇑ *e*P **P 10 31 09.0 +2.3**
YSS *e*S **S 10 35 21.0 +0.5**
YSS MLR MLR
comp=Z,3µm,13.0s,MS5.0
YSS MLR MLR
comp=E,3µm,14.0s
GTA Gaotai 25.42 306 ⇑P **P 10 31 20.6 -1.1**
GTA pP pP 10 31 28.1 -1.5
GTA sP sP 10 31 31.4 -1.6
GTA S **S 10 35 43.4 -3.4**
GTA sS sS 10 35 54.8 -5.2
GTA SS 10 36 45.9
GTA pmax pmax
comp=Z,38nm,1.4s,mb4.7
GTA pmax pmax
comp=Z,360nm,6.3s
GTA LR LR
comp=N,4µm,15.9s,MS5.1
GTA LR LR
comp=E,3µm,15.9s,MS5.1
GTA LR LR
comp=Z,5µm,14.4s,MS5.2
ULN Ulaanbaatar 25.83 329 *e*P **P 10 31 24.4 -0.9**
comp=Z,41nm,1.0s,mb4.9
ULN Ulaanbaatar 25.83 329 *e*P **P 10 31 24.4 -0.9**
ULN pmax pmax
comp=Z,41nm,1.0s,mb4.9
ULN Ulaanbaatar 25.83 329 P **P 10 31 24.7 -0.6**
comp=Z,716nmcomp=Z,49nm,1.2s,mb4.9
TNTI Ternate 26.01 178 P **P 10 31 30.0 +2.8**
comp=Z,2µmcomp=Z,154nm,1.2s,mb5.4
SONM Songino Array 26.11 328 P **P 10 31 27.6 -0.2**
comp=Z,35nm,1.3s,mb4.7,baz=145,slow=7.9,SNR=71
SONM LR LR 10 42 54.4
comp=Z,3µm,19.1s,MS4.9,baz=145,slow=39
SONM Songino Array 26.11 328 P **P 10 31 27.6 -0.2**
SONM pmax pmax
comp=Z,35nm,1.3s
SONM MLR MLR
comp=Z,3µm,19.1s
CHTO Chiang Mai 26.53 258 P **P 10 31 41.1 +9.2**
comp=Z,19nm,1.1s,mb4.5
MRSI Marisa 26.64 190 P **P 10 31 33.5 +0.6**
comp=Z,675nmcomp=Z,48nm,1.6s,mb4.8
CMAR Chiang Mai Arr 26.67 257 P **P 10 31 32.7 -0.5**
comp=Z,0.8nm,0.7s,baz=64,slow=6.4,SNR=4.7
CMAR LR LR 10 42 11.8
comp=Z,2µm,18.0s,baz=68,slow=37
LBMI Labuha 27.41 179 P **P 10 31 39.7 -0.1**
comp=Z,1µmcomp=Z,111nm,1.3s,mb5.2
SBUM Sibu 27.88 212 P **P 10 31 46.8 +2.8**
comp=Z,854nmcomp=Z,90nm,1.2s,mb5.3
ZAK Zakamensk 29.36 329 *e*P **P 10 31 55.6 -1.3**
ZAK *e* 10 42 32.2
KSM Kuching 29.65 214 *e*P **P 10 32 00.3 +0.5**
comp=Z,21nm,0.9s,mb4.9
KSM Kuching 29.65 214 P **P 10 32 00.3 +0.5**
comp=Z,29nm,1.3s,mb4.8
TLY Talaya 30.13 331 P **P 10 32 03.1 -0.5**
comp=Z,92nm,1.4s,mb5.3,SNR=7.7
TLY Talaya 30.13 331 *e*P **P 10 32 03.4 -0.2**
comp=Z,80nm,1.8s,mb5.2
TLY Talaya 30.13 331 *e*P **P 10 32 01.5 -2.1**
TLY *e*S **S 10 36 49.4 -11**
TLY pmax pmax
comp=Z,29nm,1.6s,mb4.8
TLY MLR MLR
comp=Z,2µm,19.0s,MS4.8
IRK Irkutsk 30.28 333 *e*P **P 10 32 04.0 -1.0**
IRK pmax pmax
comp=Z,52nm,1.3s,mb5.1
SHL Shillong 30.96 275 *e*PKP **P 10 32 12.5 +1.2**
LSA Lhasa 31.11 283 *e*P **P 10 31 53.2 -19**
MOY Mondy 31.30 329 *e*P **P 10 32 12.8 -1.2**
MOY pmax pmax
comp=Z,75nm,1.8s,mb5.2
KULM Kulim 32.66 233 *e*P **P 10 32 26.8 +0.4**
comp=Z,41nm,1.3s,mb5.2
KULM Kulim 32.66 233 P **P 10 32 26.6 +0.3**
comp=Z,35nm,1.3s,mb5.1
IPM Ipoh 32.96 232 P **P 10 32 29.0 +0.1**
comp=Z,53nm,1.2s,mb5.4
PETK Petropavlovsk- 34.98 33 LR LR 10 46 23.3
comp=Z,1µm,21.8s,MS4.6,baz=228,slow=35
YAK Yakutsk 35.18 3 *e*P pP 10 33 00.1 +4.4
YAK pmax pmax
comp=Z,25nm,0.8s,mb5.2
YAK pmax pmax
comp=N,13nm,0.9s
YAK MLR MLR
comp=Z,1µm,13.0s,MS4.9
YAK MLR MLR
comp=E,1µm,14.0s,MS4.9
YAK MLR MLR
comp=N,1µm,13.0s,MS4.9
PET Petropavlovsk 35.40 34 *e*P **P 10 32 52.4 +2.7**
PET *e*S **S 10 38 21.4 -1.2**
PET pmax pmax
comp=Z,100nm,4.1s
PET MLR MLR
comp=Z,2µm,20.0s,MS4.8
PET MLR MLR
comp=Z,1µm,19.0s
WMQ Urumqi 35.43 309 P **P 10 32 49.8 -0.3**
WMQ pP pP 10 32 57.1 -1.0
WMQ sP sP 10 33 00.5 -0.9
WMQ PP PP 10 34 08.3 -2.4
WMQ PcP PcP 10 35 21.9 +2.5
WMQ S **S 10 38 19.5 -3.8**
WMQ ScP ScP 10 39 04.6 +1.1
WMQ SS SS 10 40 34.8 -23
WMQ ScS ScS 10 43 06.8 -1.0
WMQ pmax pmax
comp=Z,35nm,1.4s,mb5.1
WMQ pmax pmax
comp=Z,180nm,4.0s
WMQ LR LR
comp=N,2µm,18.7s,MS5.1
WMQ LR LR
comp=E,2µm,21.4s,MS5.1
WMQ LR LR
comp=Z,2µm,21.4s,MS4.9
PSI Prapat 35.62 232 P **P 10 32 52.9 +0.9**
comp=Z,27nm,0.9s,mb5.2,baz=7.5,slow=3.3,SNR=10
PSI LR LR 10 47 49.3
comp=Z,769nm,19.7s,MS4.5,baz=39,slow=37
PSI Prapat 35.62 232 P **P 10 32 52.9 +0.9**
PSI pmax pmax
comp=Z,27nm,0.9s,mb5.2
PSI MLR MLR
comp=Z,769nm,19.7s,MS4.5
MNSI Mandailing Nat 36.60 229 P **P 10 32 58.8 -1.6**
comp=Z,50nm,1.0s,mb5.3
SDSI Sungai Dareh 36.69 225 P **P 10 33 00.3 -0.9**
comp=Z,2µmcomp=Z,13nm,1.4s,mb4.6
PPI Padang Panjang 36.99 227 P **P 10 33 04.3 +0.6**
comp=Z,34nm,1.2s,mb5.1
MDSI Maura Dua 37.91 218 P **P 10 33 12.1 +0.6**
comp=Z,27nm,1.3s,mb4.8
MK31 Makanchi Array 39.87 312 *e*P **P 10 33 26.6 -1.0**
MK31 Makanchi Array 39.87 312 *i* P **P 10 33 26.5 -1.1**
MK31 pmax pmax
comp=Z,14nm,0.7s,mb4.8
MKAR Makanchi Array 39.87 312 P **P 10 33 26.8 -0.9**
comp=Z,7.4nm,0.7s,mb4.5,baz=96,slow=11,SNR=44
MKAR LR LR 10 51 09.9
comp=Z,1µm,18.2s,MS4.9,baz=110,slow=38
MKAR Makanchi Array 39.87 312 P **P 10 33 26.8 -0.8**
MKAR pmax pmax
comp=Z,7.0nm,0.7s
MKAR MLR MLR
comp=Z,1µm,18.2s
ZAA0 Zalesovo Array 40.73 323 *e*P **P 10 33 33.2 -1.4**
ZALV Zalesovo Beam 40.73 323 P **P 10 33 32.5 -2.1**
comp=Z,4.7nm,0.6s,mb4.3,baz=112,slow=7.9,SNR=24
ZALV LR LR 10 51 54.7
comp=Z,2µm,18.9s,MS4.9,baz=106,slow=38
ZALV Zalesovo Beam 40.73 323 P **P 10 33 32.5 -2.1**
ZALV pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
ZALV MLR MLR
comp=Z,2µm,18.9s,MS4.9
PMG Port Moresby 41.33 148 *e*P **P 10 33 39.1 -0.9**
NVS Novosibirsk 41.94 324⇑ *i*P **P 10 33 42.0 -2.5**
NVS pmax pmax
comp=N,25nm,1.6s
NVS pmax pmax
comp=E,26nm,1.6s
NVS pmax pmax
comp=Z,37nm,1.6s,mb4.8
KNA Kununurra 42.47 177 *e*P **P 10 33 48.3 -0.9**
comp=Z,65nm,1.1s,mb5.2
KNA Kununurra 42.47 177 P **P 10 33 48.5 -0.7**
comp=Z,983nmcomp=Z,126nm,1.1s,mb5.5
KURK Kurchatov 43.21 317 P **P 10 33 53.2 -1.7**
comp=Z,224nm,1.9s,mb5.6,SNR=17
KURK Kurchatov 43.21 317 *e*P **P 10 33 53.2 -1.7**
comp=Z,110nm,1.5s,mb5.4
KURK *e*pP pP 10 34 01.5 -1.6
KURK Kurchatov 43.21 317 *ce*P **P 10 33 53.1 -1.8**
KURK pmax pmax
comp=Z,38nm,1.2s,mb5.0
NDI New Delhi 43.32 284 *e*PKP **P 10 33 54.0 -2.1**
KSH Kashi 43.52 300 *e*P **P 10 34 07.2 +10**
KSH *e*pP pP 10 34 14.6 +8.8
KSH *e*sP sP 10 34 17.7 +8.6
KSH *e*PP PP 10 35 51.1 +12
KSH *e*PcP PcP 10 35 53.1 +7.9
KSH *e*ScP ScP 10 39 41.7 +6.8
KSH *e*PcS PcS 10 39 44.7 +6.9
KSH *e*S **S 10 40 37.4 +13**
KSH *e*sS sS 10 40 49.6 +11
KSH *e*SS SS 10 43 46.1 +6.4
KSH *e*ScS ScS 10 44 01.8 +6.3
KSH pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
KSH pmax pmax
comp=Z,130nm,3.9s
KSH LR LR
comp=N,850nm,9.6s
KSH LR LR
comp=E,1µm,11.1s
KSH LR LR
comp=Z,1µm,12.8s,MS5.0
COEN Coen 43.77 156 P **P 10 33 58.7 -1.0**
comp=Z,68nm,1.9s,mb5.0
TKM2 Tokmak 2 43.96 305 *e*P **P 10 34 00.8 -0.2**
comp=Z,26nm,0.9s,mb5.0
TKM2 Tokmak 2 43.96 305 *e*P **P 10 34 00.8 -0.3**
TKM2 pmax pmax
comp=Z,26nm,0.9s,mb5.0
AAK Ala-Archa 44.75 304 P **P 10 34 12.4 +5.0**
comp=Z,2.8nm,0.4s,mb4.5,baz=198,slow=5.7,SNR=5.5
AAK Ala-Archa 44.75 304 *e*P **P 10 34 05.5 -1.9**
FITZ Fitzroy Crossi 44.76 181 *e*P **P 10 34 05.8 -1.8**
comp=Z,20nm,0.9s,mb5.0
FITZ Fitzroy Crossi 44.76 181 *e*P **P 10 34 05.9 -1.7**
comp=Z,13nm,0.9s,mb4.8
FITZ Fitzroy Crossi 44.76 181 P **P 10 34 06.0 -1.6**
comp=Z,12nm,0.8s,mb4.8,baz=15,slow=7.8,SNR=25
TIXI Tiksi 44.79 1 *e*P **P 10 34 07.5 +0.2**
TIXI *e*S **S 10 40 42.1 -0.4**
TIXI pmax pmax
comp=Z,28nm,1.9s,mb4.8
TIXI MLR MLR
comp=Z,2µm,11.0s,MS5.3
EKS2 Erkin-Say 45.28 304 P **P 10 34 12.1 +0.5**
comp=Z,6.5nm,0.8s,mb4.5
WRAB Tennant Creek 47.20 170 P **P 10 34 25.0 -1.8**
comp=Z,71nm,0.8s,mb5.7,SNR=6.4
WRAB Tennant Creek 47.20 170 *e*P **P 10 34 25.3 -1.5**
comp=Z,12nm,0.9s,mb4.8
WRAB Tennant Creek 47.20 170 *e*P **P 10 34 25.3 -1.5**
WRAB pmax pmax
comp=Z,13nm,0.9s,mb4.9
KK31 Karatay Array 47.70 305 *i* P **P 10 34 30.5 -0.1**
KK31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
MTSU Mount Surprise 48.03 157 *e*P **P 10 34 32.6 -0.7**
comp=Z,31nm,0.8s,mb5.4
VOSK Vostochnaya 48.28 318 P **P 10 34 32.9 -2.1**
VOSK pmax pmax
comp=Z,26nm,1.6s,mb5.0
BVA0 Borovoye Array 48.69 318 P **P 10 34 37.0 -1.1**
BVA0 pmax pmax
comp=Z,6.0nm,1.5s,mb4.4
BVAR Borovoye Array 48.69 318 P **P 10 34 37.3 -0.7**
comp=Z,3.2nm,0.7s,mb4.5,baz=90,slow=7.4,SNR=21
BVAR Borovoye Array 48.69 318 P **P 10 34 37.3 -0.8**
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 48.76 318 P **P 10 34 37.2 -1.4**
comp=Z,135nm,1.0s,mb5.9,SNR=5.9
BRVK Borovoye 48.76 318 *e*P **P 10 34 37.5 -1.1**
comp=Z,30nm,1.1s,mb5.2
BRVK *e*pP pP 10 34 45.0 -1.9
BRVK Borovoye 48.76 318 *ce*P **P 10 34 37.4 -1.2**
BRVK pmax pmax
comp=Z,31nm,1.7s,mb5.1
KBL Kabul 49.35 294 *e*P **P 10 34 43.5 +0.1**
KBL *e*pP pP 10 34 50.5 -1.2
ZRNK Zerenda 49.50 318 *i* P **P 10 34 42.2 -2.1**
ZRNK pmax pmax
comp=Z,42nm,1.3s,mb5.3
CTA Charters Tower 50.52 156 *e*P **P 10 34 50.5 -1.9**
comp=Z,5.4nm,0.9s,mb4.5
CTA Charters Tower 50.52 156 P **P 10 34 50.6 -1.7**
comp=Z,8.5nm,1.1s,mb4.6,baz=334,slow=8.4,SNR=6.1
CTA Charters Tower 50.52 156 P **P 10 34 50.6 -1.8**
CTA pmax pmax
comp=Z,9.0nm,1.1s
CTAO Charters Tower 50.52 156 *e*P **P 10 34 50.6 -1.8**
comp=Z,24nm,1.3s,mb5.0
CTAO Charters Tower 50.52 156 *e*P **P 10 34 50.6 -1.8**
CTAO pmax pmax
comp=Z,24nm,1.3s,mb5.0
ASAR Alice Springs 50.80 171 P **P 10 34 53.4 -1.0**
comp=Z,2.6nm,0.6s,mb4.3,baz=356,slow=14,SNR=46
ASAR Alice Springs 50.80 171 P **P 10 34 53.4 -1.0**
ASAR pmax pmax
comp=Z,3.0nm,0.6s
MEEK Meekatharra 53.77 189 *e*P **P 10 35 15.3 -1.1**
SVE Sverdlovsk 54.73 322 *e*P **P 10 35 24.1 +1.0**
SVE *e*PPP 10 38 35.7
SVE *e*S **S 10 43 03.2 +1.5**
SVE *e*SS SS 10 46 35.5 -9.0
SVE pmax pmax
comp=Z,22nm,1.1s,mb5.1
SVE MLR MLR
comp=Z,4µm,17.0s,MS5.5
AB31 Akbulak array 55.00 313 *i* P **P 10 35 24.4 -0.8**
AB31 pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ABKAR Akbulak array 55.00 313 *e*P **P 10 35 24.5 -0.6**
comp=Z,24nm,1.2s,mb5.1
ARU Arti 55.85 322 *d i*P **P 10 35 30.4 -0.8**
ARU 10 36 28.7
ARU 10 37 31.5
ARU S **S 10 43 15.8 -0.9**
ARU SS SS 10 46 54.7 -7.5
ARU pmax pmax
comp=Z,14nm,1.7s,mb4.7
ARU MLR MLR
comp=Z,4µm,18.0s,MS5.5
AKTK Aktyubinsk 56.20 314 P **P 10 35 33.7 -0.1**
AKTO Aktyubinsk 56.20 314 P **P 10 35 33.7 -0.1**
comp=Z,2.6nm,0.9s,mb4.3,baz=89,slow=11,SNR=4.8
AKTO Aktyubinsk 56.20 314 P **P 10 35 33.7 -0.1**
AKTO pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
MORW Morawa 56.55 191 *e*P **P 10 35 35.8 -0.6**
SOKR Solikamsk 56.92 325 *c i*P **P 10 35 47.1 +8.3**
SOKR pmax pmax
comp=Z,20nm,1.4s,mb5.0
SOKR MLR MLR
comp=Z,1µm,15.0s,MS5.2
RMQ Roma 57.28 156 *e*P **P 10 35 40.8 -0.9**
comp=Z,13nm,1.2s,mb4.8
NWAO Narrogin (SRO) 60.15 189 *e*P **P 10 36 00.5 -1.0**
comp=Z,107nm,1.2s,mb5.8
STKA Stephens Creek 60.23 165 *e*P **P 10 36 00.9 -1.1**
comp=Z,8.6nm,0.7s,mb4.9
STKA Stephens Creek 60.23 165 P **P 10 36 01.0 -1.0**
STKA LR LR 11 00 36.1
STKA Stephens Creek 60.23 165 P **P 10 36 01.0 -1.0**
comp=Z,9.6nm,0.8s,mb4.9,baz=354,slow=8.6,SNR=13
STKA LR LR 11 00 36.1
comp=Z,576nm,20.6s,MS4.7,baz=246,slow=35
TTA Tatalina 60.77 31 *e*P **P 10 36 09.4 +4.0**
CMSA Cobar Meteorol 60.96 161 *e*P **P 10 36 07.2 +0.1**
SVW2 Sparrevohn 61.07 33 *e*P **P 10 36 05.4 -2.1**
comp=Z,10nm,1.8s,mb4.7
SVW2 LR LR
comp=Z,300nm,20.0s,MS4.4
DZM Mont Dzumac 62.22 138 *e*S **S 10 44 48.9 +8.9**
comp=Z,450nm,25.8s
DZM *e*LR LR 10 55 04.5
comp=Z,2µm,24.8s
PPLA Purkeypile 62.52 31 *e*P **P 10 36 19.2 +2.0**
comp=Z,21nm,1.2s,mb5.2
KDAK Kodiak Island 62.93 36 *e*P **P 10 36 20.6 +0.6**
KDAK Kodiak Island 62.93 36 P **P 10 36 20.6 +0.6**
comp=Z,17nm,0.7s,mb5.3,baz=275,slow=2.1,SNR=13
KDAK Kodiak Island 62.93 36 *i* P **P 10 36 20.8 +0.8**
BPAW Bear Paw Mtn. 62.93 29 *e*P **P 10 36 21.3 +1.3**
comp=Z,7µm,1.3s
MCK McKinley 63.87 30 *e*P **P 10 36 28.4 +2.2**
comp=Z,5.2nm,0.6s,mb4.7
MCK McKinley 63.87 30 *e*P **P 10 36 28.4 +2.2**
MCK pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
PMR Palmer 64.10 32 *e*P **P 10 36 30.2 +2.5**
comp=Z,28nm,1.8s,mb5.0
PMR LR LR
comp=Z,300nm,18.0s,MS4.5
PMR Palmer 64.10 32 *e*P **P 10 36 30.2 +2.5**
PMR pmax pmax
comp=Z,28nm,1.8s,mb5.0
PMR MLR MLR
comp=Z,300nm,18.0s,MS4.5
COLA College 64.18 28 *e*P **P 10 36 29.9 +1.8**
comp=Z,3.2nm,0.6s,mb4.5
COLA College 64.18 28 *e*P **P 10 36 29.9 +1.7**
COLA pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
YNG Young 64.34 160 *e*P **P 10 36 30.0 +0.4**
comp=Z,6.7nm,0.7s,mb4.8
ILAR Eielson Array 64.60 28 P **P 10 36 31.2 +0.3**
comp=Z,1.1nm,0.6s,mb4.0,baz=248,slow=4.3,SNR=17
ILAR LR LR 11 06 16.0
comp=Z,378nm,19.2s,MS4.6,baz=129,slow=38
KLMR Klimovskoe 65.41 327 *e*P **P 10 36 38.6 +2.4**
KLMR pmax pmax
comp=Z,28nm,1.7s,mb5.0
KLMR MLR MLR
comp=Z,2µm,14.0s,MS5.5
PAX Paxson 65.54 30 *e*P **P 10 36 38.8 +1.7**
comp=Z,4.0nm,0.7s,mb4.6
PAX Paxson 65.54 30 *e*P **P 10 36 38.8 +1.7**
PAX pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
CNB Canberra Magne 65.58 160 *e*P **P 10 36 38.4 +0.8**
MENT Mentasta 66.33 30 *e*P **P 10 36 43.5 +1.3**
BMRM Bremner River 66.37 32 *e*P **P 10 36 43.1 +0.7**
comp=Z,17nm,1.0s,mb5.0
VRHR Novokhopersk 66.39 317 *e*P **P 10 36 41.3 -1.5**
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.5s
VRHR pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
VRHR MLR MLR
comp=E,250nm,13.0s,MS4.7
VRHR MLR MLR
comp=Z,220nm,13.0s,MS4.5
VRHR MLR MLR
comp=N,150nm,12.0s,MS4.7
APA Apatity 66.56 335⇑ *e*P **P 10 36 38.0 -5.6**
APA pmax pmax
comp=Z,13nm,1.0s,mb4.9
APA MLR MLR
comp=Z,2µm,15.0s,MS5.5
EGAK Eagle 67.00 28 *e*P **P 10 36 47.9 +1.5**
comp=Z,2.8nm,0.7s,mb4.4
ZEI Tsey 67.04 308 *e*P **P 10 36 53.4 +6.4**
ZEI pmax pmax
comp=Z,16nm,0.5s,mb5.3
MOS Moscow 67.55 322 *e*P **P 10 36 57.3 +7.3**
MOS pmax pmax
comp=Z,44nm,1.1s,mb5.4
KIV Kislovodsk 67.56 309 *e*P **P 10 36 49.8 -0.5**
comp=Z,76nm,1.3s,mb5.6
KIV Kislovodsk 67.56 309 *e*P **P 10 36 49.1 -1.2**
KIV *e*S S 10 45 42.9 -2.4
KIV pmax pmax
comp=Z,43nm,1.1s,mb5.4
KIV MLR MLR
comp=Z,757nm,19.0s,MS4.9
VORD Divnogorie 67.85 317 *e*P **P 10 36 50.0 -2.0**
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
VORD MLR MLR
comp=N,1µm,23.0s,MS5.2
VORD MLR MLR
comp=E,820nm,23.0s,MS5.2
VORD MLR MLR
comp=Z,1µm,23.0s,MS5.0
VSR Storozhevoye 67.86 317 *e*P **P 10 36 50.4 -1.7**
VSR *e*PP pP 10 36 57.2 -3.4
VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
VSR pmax pmax
comp=E,2.0nm,0.3s
VSR MLR MLR
comp=E,910nm,19.0s
VSR MLR MLR
comp=Z,2µm,19.0s,MS5.2
VSR MLR MLR
comp=N,270nm,10.0s
DAWY Dawson 67.93 28 *e*P **P 10 36 53.4 +1.1**
OBN Obninsk 68.30 322⇑ *e*P **P 10 36 52.8 -1.9**
OBN *e*S S 10 45 48.2 -5.5
OBN pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
OBN MLR MLR
comp=Z,1µm,19.0s,MS5.2
ARCES ARCESS Array B 68.78 338 P **P 10 36 57.9 +0.4**
comp=Z,2.9nm,1.1s,mb4.1,baz=28,slow=10,SNR=2.4
ARCES LR LR 11 13 42.3
comp=Z,592nm,18.0s,MS4.9,baz=252,slow=42
INK Inuvik 68.90 23 *e*P **P 10 36 59.3 +1.0**
SOC Sochi 69.72 309 *e*P **P 10 37 06.0 +2.2**
SOC *e*S S 10 46 05.7 -5.3
SOC MLR MLR
comp=Z,33µm,21.0s
HYT Haines Junctio 69.74 31 *e*P **P 10 37 05.9 +2.3**
ANN Anapa 70.89 311 *e*P **P 10 37 06.6 -4.4**
ANN *e**PP pP 10 37 16.9 -2.7
ANN *e* 10 37 28.3
ANN *e*PPP 10 41 23.2
ANN *e*S S 10 46 15.2 -9.4
ANN pmax pmax
comp=Z,42nm,1.8s,mb5.1
SKAG Skagway 71.23 32 *e*P **P 10 37 15.4 +2.7**
comp=Z,22nm,1.7s,mb4.8
SKAG LR LR
comp=Z,300nm,18.0s,MS4.6
FINES FINESS Array B 71.47 330 P **P 10 37 15.4 +1.3**
comp=Z,2.2nm,0.7s,mb4.2,baz=46,slow=4.0,SNR=2.8
FINES LR LR 11 12 08.2
comp=Z,1µm,18.5s,MS5.2,baz=287,slow=39

FINES FINES Array B 71.47 330 P P 10 37 15.5 +1.4
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES MLR MLR
comp=Z,1μm,18.5s
AKASG Malin Array Be 73.96 319 P **P 10 37 29.3 +0.1**
comp=Z,0.4nm,0.4s,mb3.7,baz=59,slow=5.8,SNR=3.2
AKASG LR LR 11 12 04.3
comp=Z,2μm,21.2s,MS5.4,baz=70,slow=38
DLBC Dease Lake 74.16 32 *e*P **P 10 37 33.0 +2.8**
BRTR Keskin Array B 75.34 307 P **P 10 37 36.5 -0.8**
comp=Z,0.7nm,0.8s,mb3.7,baz=87,slow=3.0,SNR=3.3
BRTR LR LR 11 13 22.1
comp=Z,370nm,21.8s,MS4.7,baz=218,slow=38
BRTR Keskin Array B 75.34 307 P **P 10 37 36.6 -0.7**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR MLR MLR
comp=Z,371nm,21.8s
MMAI Mount Meron Ar 76.66 300 LR LR 11 16 12.2
comp=Z,659nm,20.0s,MS5.0,baz=60,slow=39
TIRR Tirgusor 76.99 313 ⇑*i*P sP 10 38 04.5 +6.0
TESR 77.24 316 ⇓*i*P sP 10 38 06.5 +6.6
VRI Vrincioaia 77.47 315 ⇑*i*P sP 10 38 04.7 +3.5
BUR08 Bucovina Ar. S 77.63 317 P **P 10 37 50.1 -0.1**
BURAR Bucovina Array 77.64 317 ⇑*i*P sP 10 38 06.7 +4.6
NOA NORSAR Array B 77.98 333 P **P 10 37 52.3 +0.5**
comp=Z,0.8nm,0.7s,mb3.8,baz=55,slow=5.6,SNR=2.9
NOA LR LR 11 16 25.0
comp=Z,1μm,18.8s,MS5.2,baz=60,slow=39
NOA NORSAR Array B 77.98 333 P **P 10 37 52.3 +0.4**
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA MLR MLR
comp=Z,1μm,18.8s
MLR Muntele Rosu 78.12 315 ⇑*i*P sP 10 38 07.2 +2.4
YKA Yellowknife Ar 78.58 24 P **P 10 37 53.1 -2.0**
comp=Z,3.4nm,0.7s,mb4.4,baz=299,slow=5.5,SNR=12
STHS Stebnicka Huta 79.15 320 *e*sP sP 10 38 15.9 +5.5
DRGR 79.53 317 ⇑*i*P sP 10 38 18.8 +6.2
GZR Gura Zlata 80.15 316 ⇓*i*P sP 10 38 19.7 +3.8
OKC Ostrava-Krasne 80.69 321 AMS AMS 11 19 20.0
comp=Z,1μm,14.0s
VYHS Vyhne 80.98 320 *e*P **P 10 38 09.1 +0.6**
comp=Z,30nm,2.9s,mb4.7
VYHS *e* 10 38 24.5
VYHS *e*S S 10 48 16.6 +0.9
VYHS *e*SS SS 10 53 45.5 +16
VYHS LR LR
comp=Z,600nm,27.0s,MS4.8
VYHS Vyhne 80.98 320 *e*P **P 10 38 09.1 +0.6**
VYHS *e* 10 38 24.5
VYHS *e*S S 10 48 16.6 +0.9
VYHS pmax pmax
comp=Z,30nm,2.9s,mb4.7
VYHS MLR MLR
comp=Z,600nm,27.0s,MS4.8
VYHS Vyhne 80.98 320 *e*P **P 10 38 09.1 +0.6**
VYHS *e*sP sP 10 38 24.5 +4.1
VYHS *e*S S 10 48 16.6 +0.9
VYHS *e*SS SS 10 53 45.5 +16
VTS Vitosha 81.21 313 ⇓*i*P sP 10 38 28.6 +6.9
DPC Dobruska-Polom 81.42 323 AMS AMS 11 16 50.0
comp=Z,1μm,16.8s
PVCC Panska Ves 82.27 323 AMS AMS 11 17 00.0
comp=Z,2μm,18.5s
TREC Trest 82.45 322 AMS AMS 11 18 00.0
comp=Z,2μm,16.4s
PRU Pruhonice 82.58 323 AMS AMS 11 17 30.0
comp=Z,1μm,18.0s
OSR Olympics--Salm 82.66 40 P **P 10 38 22.7 +5.4**
CLL Collm 82.66 324 *e*(sPcP) sP 10 38 34.0 +4.9
CLL *e*PP PP 10 41 27.0 +0.5
CLL *e*S S 10 48 24.0 -8.9
CLL *e*SSS 10 57 18.0
CLL Lm 11 18 00.0
comp=Z,2μm,20.6s
NLWA Neilton Lookou 82.77 40 ⇑P **P 10 38 18.6 +0.7**
baz=83
NLWA Neilton Lookou 82.77 40 *e*P **P 10 38 20.9 +3.0**
comp=Z,26nm,1.3s,mb5.1
GNW Green Mountain 83.28 40 *e*P **P 10 38 23.3 +2.8**
comp=Z,18nm,1.5s,mb4.9
E03A Lebam 83.40 41 ⇑P **P 10 38 21.4 +0.2**
baz=83
JCW Jim Creek 83.44 39 *e*P **P 10 38 23.2 +1.9**
RPW Rockport 83.53 38 *e*P **P 10 38 29.6 +7.8**
NKC Novy Kostel 83.56 324 AMS AMS 11 18 10.0
comp=Z,2μm,17.1s
KHC Kasperske Hory 83.58 322 AMS AMS 11 17 20.0
comp=Z,2μm,23.1s
D05A Enumclaw 83.96 40 ⇑P **P 10 38 24.7 +0.7**
baz=84
SOKA Soboth 84.13 320 P sP 10 38 43.2 +6.4
comp=Z,4.2nm,1.0s
WRW Wenatchee Ridg 84.21 39 P **P 10 38 29.9 +4.6**
LON Longmire 84.30 40 *e*P **P 10 38 27.9 +2.1**
NLW Nelson Butte 84.39 38 P **P 10 38 28.5 +2.3**
F04A Amboy 84.40 41 ⇑P **P 10 38 26.2 -0.1**
baz=84
ETW Entiat 84.66 39 *e*P **P 10 38 30.0 +2.4**
G04A Mulino 84.77 41 ⇓P **P 10 38 28.1 0.0**
baz=85
B08A Colville Reser 84.78 38 ⇑P **P 10 38 27.7 -0.4**
baz=84
EDM Edmonton 84.87 31 *e*P **P 10 38 30.1 +1.7**
H04A Detroit Lake 85.22 42 ⇓P **P 10 38 30.4 0.0**
baz=85
GBB Gable Butte 85.63 39 P **P 10 38 37.2 +4.8**
OD2 Odessa Site #2 85.68 38 *e*P **P 10 38 34.0 +1.3**
C09A Chrisman Ranch 85.68 38 ⇑P **P 10 38 32.7 0.0**
baz=85
D08A Wollman Farm, 85.76 39 ⇑P **P 10 38 32.5 -0.5**
baz=86
RSW Rattlesnake Hi 85.77 39 *e*P **P 10 38 36.9 +3.7**
HAWA Hanford 85.80 39 *e*P **P 10 38 36.3 +3.0**
comp=Z,32nm,1.4s,mb5.4
G06A Carlson Farm, 85.83 41 ⇓P **P 10 38 33.0 -0.5**
baz=86
VTHM Trough 85.90 41 P **P 10 38 36.9 +3.1**
MOTA Moosalm 85.96 322 ⇑*i*P **P 10 38 32.7 -1.4**
comp=Z,1.7nm,0.6s,mb4.5
E08A Dider Farm, El 86.01 39 ⇑P **P 10 38 34.1 -0.3**
baz=86
NEW Newport 86.03 37 *e*P **P 10 38 36.8 +2.4**
comp=Z,14nm,1.2s,mb5.1
NEW Newport 86.03 37 *e*P **P 10 38 36.8 +2.4**
NEW pmax pmax
comp=Z,14nm,1.2s
A12A Yaak River Ran 86.40 36 ⇑P **P 10 38 35.8 -0.4**
baz=86
E09A Wood Farm, Sta 86.51 39 ⇑P **P 10 38 36.4 -0.4**
baz=86
YBH Yreka Blue Hor 86.53 44 *e*P **P 10 38 39.6 +2.6**
comp=Z,8.8nm,1.1s,mb4.9
YBH Yreka Blue Hor 86.53 44 *e*P **P 10 38 39.6 +2.6**
YBH pmax pmax
comp=Z,9.0nm,1.1s
B12A Libby 86.72 36 ⇓P **P 10 38 37.1 -0.6**
baz=86
G08A Pilot Rock 86.77 40 ⇑P **P 10 38 37.6 -0.5**
baz=86
LNOR Lincton Mounta 86.81 39 *e*P **P 10 38 40.0 +1.7**
A13A Flathead Natio 87.05 35 ⇑P **P 10 38 38.7 -0.7**
baz=87
K05A Summer Lake 87.10 43 ⇑P **P 10 38 39.0 -0.8**
baz=87
I07A Izee 87.15 41 ⇓P **P 10 38 38.4 -1.6**
baz=87
WALA Waterton Lakes 87.22 35 *e*P **P 10 38 43.3 +3.1**
comp=Z,0.3nm,1.0s
WDC Whiskeytown Da 87.27 45 *e*P **P 10 38 42.8 +2.2**
comp=Z,22nm,1.3s,mb5.2
WDC Whiskeytown Da 87.27 45 *e*P **P 10 38 42.8 +2.2**
WDC pmax pmax
comp=Z,22nm,1.3s,mb5.2
F10A Beach Ranch, E 87.34 39 ⇓P **P 10 38 39.8 -1.1**
baz=87
B13A Whitefish 87.37 36 ⇓P **P 10 38 40.2 -0.7**
baz=87
BSMT Bassoo Peak 87.53 36 *e*P **P 10 38 43.9 +2.2**
comp=Z,6.7nm,0.9s,mb4.9
A14A Double T Ranch 87.53 35 ⇓P **P 10 38 40.5 -1.2**
baz=87,SNR=25
D12A Red Ives Fores 87.72 37 ⇓P **P 10 38 41.6 -1.0**
baz=88
C13A Hot Springs 87.74 36 ⇑P **P 10 38 41.2 -1.5**
baz=88
JTMT Jette 87.86 36 *e*P **P 10 38 44.4 +1.2**
comp=Z,9.2nm,1.1s,mb4.9
A15A Johnson Ranch, 87.87 34 ⇑P **P 10 38 42.0 -1.3**
baz=88,SNR=12
MOD Modoc 87.92 43 *e*P **P 10 38 42.8 -0.9**
comp=Z,26nm,1.3s,mb5.3
BMO Blue Mountains 87.97 40 *e*P **P 10 38 42.7 -1.2**
comp=Z,10nm,1.3s,mb4.9
SWMT Swartz Lake 88.15 36 *e*P **P 10 38 46.3 +1.6**
D13A Huson 88.17 37 ⇓P **P 10 38 43.4 -1.4**
baz=88
J08A Circle Bar Ran 88.18 41 ⇑P **P 10 38 43.6 -1.3**
baz=88
B15A Bradely Ranch, 88.39 35 ⇓P **P 10 38 44.5 -1.3**
baz=88,SNR=9.1
A16A West Butte Ran 88.46 34 ⇑P **P 10 38 44.4 -1.7**
baz=88,SNR=7.8
F12A Elk City 88.57 38 ⇑P **P 10 38 45.2 -1.5**
baz=88
SLMT Seeley Lake 88.59 36 *e*P **P 10 38 45.4 -1.4**
comp=Z,14nm,0.8s,mb5.3
MSO Missoula 88.61 37 *e*P **P 10 38 49.3 +2.5**
comp=Z,13nm,1.3s,mb5.1
WVOR Wild Horse Val 88.63 42 *e*P **P 10 38 49.5 +2.5**
comp=Z,8.4nm,1.2s,mb5.0
WVOR Wild Horse Val 88.63 42 *e*P **P 10 38 49.5 +2.5**
WVOR pmax pmax
comp=Z,8.0nm,1.2s,mb4.9
D14A Greenough 88.69 36 ⇓P **P 10 38 45.9 -1.3**
baz=88
FFC Flin Flon 88.69 26 *e*P **P 10 38 45.4 -1.7**
comp=Z,16nm,0.9s,mb5.4
FFC Flin Flon 88.69 26 *i*P **P 10 38 46.1 -1.0**
C15A Salmond Ranch, 88.71 35 ⇑P **P 10 38 46.1 -1.2**
baz=88,SNR=28
E13A Victor 88.72 37 ⇑P **P 10 38 46.6 -0.8**
baz=88
B16A M & M Farms, S 88.76 34 ⇑P **P 10 38 46.8 -0.7**
baz=88
A17A Triple J Farms 88.91 34 ⇓P **P 10 38 47.0 -1.3**
baz=89,SNR=26
CHMT Chamberlain Mo 88.92 36 *e*P **P 10 38 50.8 +2.4**
comp=Z,12nm,1.7s,mb5.0
F13A Darby 89.06 38 ⇑P **P 10 38 47.9 -1.1**
baz=89
E14A Clinton 89.11 37 ⇓P **P 10 38 48.0 -1.3**
baz=89,SNR=5.9
C16A Fuhringer Ranc 89.14 35 ⇓P **P 10 38 47.5 -1.9**
baz=89,SNR=26
B17A L&G Farms, Che 89.29 34 ⇑P **P 10 38 48.3 -1.8**
baz=89,SNR=7.2
A18A Metzger Ranch, 89.35 33 ⇑P **P 10 38 48.4 -1.9**
baz=89
H12A Diamond D Ranc 89.54 39 ⇑P **P 10 38 50.6 -0.7**
baz=89,SNR=13
G13A Cobalt 89.55 38 ⇑P **P 10 38 50.8 -0.5**
baz=89,SNR=5.7
E15A Deer Lodge 89.56 36 ⇑P **P 10 38 50.3 -1.1**
baz=89,SNR=5.3
F14A Wisdom 89.56 37 ⇑P **P 10 38 50.5 -0.9**
baz=89
MFID Camas Ranch 89.69 40 ⇑P **P 10 38 50.6 -1.4**
baz=90
B18A Beardsley Farm 89.73 34 ⇓P **P 10 38 50.7 -1.4**
baz=89,SNR=21
D16A Dana Ranch, Ca 89.74 35 ⇓P **P 10 38 50.6 -1.6**
baz=90,SNR=28
C17A Wharram Farm, 89.75 35 ⇑P **P 10 38 50.9 -1.3**
baz=90,SNR=7.2
HRY Holter Researc 89.80 36 *e*P **P 10 38 57.3 +4.9**
I12A Atlanta 89.85 40 ⇓P **P 10 38 51.6 -1.2**
baz=90
H13A Challis 89.87 39 ⇑P **P 10 38 51.8 -1.0**
baz=90
EGMT Eagleton 90.00 34 ⇑P **P 10 38 51.8 -1.5**
baz=90,SNR=6.2
EGMT Eagleton 90.00 34 *e*P **P 10 38 52.5 -0.8**
comp=Z,25nm,0.9s,mb5.5
E16A East Helena 90.00 36 ⇓P **P 10 38 51.9 -1.5**
baz=90
LRM Linekiln Ridge 90.05 37 *e*P **P 10 38 56.3 +2.7**
D17A Six Diamond Ra 90.11 35 ⇓P **P 10 38 52.6 -1.3**
baz=90,SNR=10
L10A Juniper Basin 90.13 42 ⇓P **P 10 38 53.5 -0.6**
baz=90
DLMT Dillon 90.27 37 *e*P **P 10 38 55.7 +1.0**
comp=Z,29nm,1.2s,mb5.5
H14A Leadore 90.33 38 ⇑P **P 10 38 54.4 -0.5**
baz=90
I13A Wildhorse Cree 90.35 39 ⇑P **P 10 38 54.6 -0.5**
baz=90,SNR=14
HLID Hailey 90.41 39 ⇓P **P 10 38 54.6 -0.7**
baz=90,SNR=12
HLID Hailey 90.41 39 *e*P **P 10 38 54.9 -0.4**
comp=Z,18nm,1.4s,mb5.2
G15A Dillon 90.45 37 ⇑P **P 10 38 54.9 -0.7**
baz=90,SNR=23
E17A Martinsdale 90.47 36 ⇑P **P 10 38 54.7 -0.9**
baz=90,SNR=27
MCMT McKenzie Canyo 90.47 38 *e*P **P 10 38 58.9 +3.2**
comp=Z,6.8nm,1.6s,mb4.7
L11A Cat Creek Ranc 90.50 41 ⇓P **P 10 38 55.3 -0.5**
baz=90
F16A Kennard Place, 90.52 36 ⇑P **P 10 38 55.1 -0.7**
baz=90,SNR=5.9
D18A Linhart Farms, 90.53 35 ⇓P **P 10 38 55.3 -0.5**
baz=90,SNR=5.4
J13A Cove Ranch, Pi 90.64 39 ⇓P **P 10 38 56.6 +0.1**
baz=90,SNR=8.6
H15A Lima 90.72 38 ⇓P **P 10 38 56.0 -0.8**
baz=90
G16A Moss Hill, Enn 90.78 37 ⇑P **P 10 38 56.5 -0.6**
baz=90,SNR=7.3
E18A Harlowton 90.89 35 ⇑P **P 10 38 57.6 +0.1**
baz=91,SNR=7.3
M11A Holland Ranch, 90.93 42 ⇓P **P 10 38 58.4 +0.6**
baz=91,SNR=5.5
L12A House Creek Ra 90.94 41 ⇑P **P 10 38 57.7 -0.2**
baz=91
F17A Fitzpatrick Pl 90.94 36 ⇓P **P 10 38 57.6 -0.2**
baz=91,SNR=8.7
J14A Carey 91.06 39 ⇓P **P 10 38 58.3 -0.1**
baz=91,SNR=6.3
K13A Stover Farm, H 91.17 40 ⇑P **P 10 38 58.6 -0.4**
baz=91,SNR=5.3
NVAR Mina Array Bea 91.19 45 P **P 10 38 58.8 -0.3**
NVAR Mina Array Bea 91.19 45 P **P 10 38 58.8 -0.3**
comp=Z,12nm,0.6s,mb4.4,baz=294,slow=4.4,SNR=11
G17A Pierce Place, 91.29 36 ⇓P **P 10 38 59.3 -0.1**
baz=91
N11A Elko Archery C 91.33 42 ⇑P **P 10 38 60.0 +0.2**
baz=91,SNR=5.2
H16A Russell Place, 91.42 37 ⇓P **P 10 39 00.3 +0.3**
baz=91
F18A Big Timber 91.44 35 ⇓P **P 10 38 59.9 -0.2**
baz=91,SNR=7.8
M12A Wells 91.45 41 ⇓P **P 10 39 00.6 +0.3**
baz=91,SNR=6.6
GCMT Greycliff 91.54 36 *e*P **P 10 39 02.8 +2.2**
comp=Z,12nm,1.1s,mb5.1
L13A Double Diamond 91.60 40 ⇓P **P 10 39 01.1 +0.1**
baz=91,SNR=5.5
J15A Blackfoot 91.62 39 ⇑P **P 10 39 02.0 +1.0**
baz=91,SNR=7.4
N12A Clover Valley, 91.73 42 ⇓P **P 10 39 01.8 +0.2**
baz=92
N12A Clover Valley, 91.73 42 *e*P **P 10 39 04.8 +3.3**
comp=Z,15nm,1.2s,mb5.2
K14A Jones Ranch, D 91.75 40 ⇓P **P 10 39 01.9 +0.2**
baz=92
O11A Cowboy Ranch, 91.80 43 ⇓P **P 10 39 01.9 0.0**
baz=92
YFT Old Faithful 91.81 37 *e*P **P 10 39 05.4 +3.5**
comp=Z,19nm,1.0s,mb5.4
I16A Newdale 91.84 38 ⇓P **P 10 39 02.0 0.0**
baz=92
M13A Montello 91.93 41 ⇑P **P 10 39 02.4 -0.1**
baz=92
M13A Montello 91.93 41 *e*P **P 10 39 04.8 +2.3**
comp=Z,7.3nm,1.0s,mb5.0
LKWY Lake 91.97 37 *e*P **P 10 39 06.3 +3.7**
comp=Z,23nm,1.2s,mb5.4
LKWY Lake 91.97 37 *e*P **P 10 39 06.3 +3.7**
LKWY pmax pmax
comp=Z,23nm,1.2s,mb5.4
H17A Grant Village 91.99 37 ⇑P **P 10 39 02.8 +0.1**
baz=92,SNR=7.7
K15A Arbon 92.03 39 ⇑P **P 10 39 03.2 +0.3**
baz=92
L14A Malta 92.04 40 ⇑P **P 10 39 03.3 +0.4**
baz=92
IMW Indian Meadow 92.12 38 *e*P **P 10 39 05.8 +2.5**
comp=Z,18nm,1.3s,mb5.2
FLWY Flagg Ranch 92.13 37 *e*P **P 10 39 04.0 +0.7**
comp=Z,16nm,0.9s,mb5.4
Q10A Clear Creek Ra 92.14 44 ⇑P **P 10 39 03.3 -0.2**
baz=92,SNR=5.2
J16A Bone 92.16 38 ⇓P **P 10 39 03.4 -0.1**
baz=92
DCID1 Drake Creek 92.19 38 *e*P **P 10 39 07.5 +3.9**
comp=Z,15nm,1.2s,mb5.2
RLMT Red Lodge 92.20 36 ⇑P **P 10 39 03.2 -0.4**
baz=92,SNR=8.8
RLMT Red Lodge 92.20 36 *e*P **P 10 39 04.7 +1.1**
comp=Z,28nm,1.3s,mb5.4
N13A Wendover, West 92.22 41 *e*P **P 10 39 07.2 +3.4**
comp=Z,15nm,1.0s,mb5.3
O12A Currie 92.27 42 ⇓P **P 10 39 04.1 +0.1**
baz=92,SNR=6.1
M14A Sheep Mountain 92.32 41 ⇓P **P 10 39 04.9 +0.6**
baz=92,SNR=8.9
MOOW Moose Ponds 92.33 38 *e*P **P 10 39 07.1 +2.9**
comp=Z,8.9nm,1.4s,mb4.9
TPAW Teton Pass 92.38 38 *e*P **P 10 39 07.7 +3.2**
comp=Z,6.3nm,0.8s,mb5.0
K16A Soda Springs 92.46 39 ⇓P **P 10 39 06.8 +1.9**
baz=92,SNR=5.8
HVU Hansel Valley 92.47 40 *e*P **P 10 39 07.5 +2.6**
comp=Z,15nm,1.3s,mb5.2
HVU Hansel Valley 92.47 40 *e*P **P 10 39 07.6 +2.6**
HVU pmax pmax
comp=Z,15nm,1.3s,mb5.2
LOHW Long Hollow 92.49 38 *e*P **P 10 39 08.7 +3.7**
comp=Z,17nm,1.6s,mb5.1
REDW Red Top Meadow 92.52 38 *e*P **P 10 39 07.9 +2.7**
comp=Z,22nm,1.5s,mb5.4
L15A Malad City 92.55 40 ⇓P **P 10 39 05.3 0.0**
baz=92
S10A Tonopah Range, 92.57 45 ⇓P **P 10 39 05.4 -0.1**
baz=92
J17A Brown Place, J 92.60 38 ⇑P **P 10 39 05.5 0.0**
baz=92
PPT Papeete 92.64 108 *e*LQ 11 04 36.9
comp=Z,1μm,32.5s
PPT *e*LR LR 11 08 49.1
comp=Z,746nm,23.8s,baz=298
PPT Papeete 92.64 108 LR LR 11 11 46.9
comp=Z,355nm,20.2s,MS4.8,baz=292,slow=30
P12A McGill 92.66 43 ⇓P **P 10 39 06.4 +0.5**
baz=92
O13A Hicks Ranch, I 92.81 42 ⇓P **P 10 39 06.6 0.0**
baz=93
N14A Grayback Hills 92.82 41 ⇑P **P 10 39 06.6 0.0**
baz=93
I18A Diamond G Ranc 92.86 37 ⇑P **P 10 39 06.5 -0.3**
baz=93
Q12A Willow Creek R 92.98 43 ⇓P **P 10 39 07.7 +0.3**
baz=93
J18A Kendall Valley 93.08 38 ⇓P **P 10 39 08.0 +0.3**
baz=93,SNR=6.2
L16A Fish Haven 93.08 39 ⇑P **P 10 39 08.0 +0.2**
baz=93
MPMC Manual Prospec 93.11 47 ⇓P **P 10 39 08.4 +0.4**
baz=93
P13A Bates Ranch, G 93.21 42 ⇑P **P 10 39 08.8 +0.3**
baz=93,SNR=5.8
S11A Rachel 93.27 45 ⇓P **P 10 39 08.5 -0.2**
baz=93
HWUT Hardware Ranch 93.27 40 *e*P **P 10 39 10.3 +1.6**
comp=Z,21nm,1.3s,mb5.4
DUG Dugway 93.46 41 ⇓P **P 10 39 09.9 +0.4**
baz=93,SNR=5.0
DUG Dugway 93.46 41 *e*P **P 10 39 10.6 +1.0**
comp=Z,14nm,1.3s,mb5.2
DUG Dugway 93.46 41 *e*P **P 10 39 10.6 +1.0**
DUG pmax pmax
comp=Z,13nm,1.3s,mb5.2
BW06 Boulder Array 93.62 38 ⇑P **P 10 39 09.6 -0.6**
baz=93
P14A Drum Mountains 93.69 42 ⇑P **P 10 39 10.3 -0.4**
baz=94
T11A Corn Creek, Al 93.85 45 ⇓P **P 10 39 11.3 -0.1**
baz=94
Q14A Sevier Lake (B 93.95 42 ⇑P **P 10 39 11.9 0.0**
baz=94
JLU Jordanelle 93.99 40 *e*P **P 10 39 16.1 +4.1**
comp=Z,4.7nm,1.2s,mb4.8
GSC Goldstone 94.01 47 ⇑P **P 10 39 12.0 -0.2**
baz=94
GSC Goldstone 94.01 47 *e*P **P 10 39 14.7 +2.5**
comp=Z,10nm,1.2s,mb5.1
GSC Goldstone 94.01 47 *e*P **P 10 39 14.7 +2.5**
GSC pmax pmax
comp=Z,10.0nm,1.2s,mb5.1
BFSC Mount Baldy Ra 94.08 48 ⇑P **P 10 39 13.1 +0.5**
baz=94
N17A Moffit Pass 94.12 40 ⇓P **P 10 39 12.4 -0.2**
baz=94
L19A Farson 94.18 38 ⇓P **P 10 39 13.1 +0.2**
baz=94
DAU Daniels Canyon 94.23 40 *e*P **P 10 39 14.8 +1.7**
comp=Z,9.9nm,1.3s,mb5.1
DAU Daniels Canyon 94.23 40 *e*P **P 10 39 14.8 +1.7**
DAU pmax pmax
comp=Z,10.0nm,1.3s,mb5.1
ULM Lac du Bonnet 94.52 26 P **P 10 39 14.9 +0.7**
comp=Z,4.7nm,0.8s,mb5.0,baz=323,slow=5.2,SNR=4.0
ULM LR LR 11 24 12.6
comp=Z,388nm,20.7s,MS4.8,baz=5.7,slow=37
O17A Robinson Place 94.67 40 ⇑P **P 10 39 14.7 -0.5**
baz=94
MSU Marysvale 94.92 42 *e*P **P 10 39 19.0 +2.7**
comp=Z,9.2nm,1.5s,mb5.0
MSU Marysvale 94.92 42 *e*P **P 10 39 19.0 +2.7**
MSU pmax pmax
comp=Z,9.0nm,1.5s,mb5.0
R15A Junction 95.05 43 ⇓P **P 10 39 16.8 -0.1**
baz=95
P17A Butcher Ranch, 95.14 41 ⇑P **P 10 39 17.1 -0.2**
baz=95
PFO Pinyon Flat Ob 95.26 48 ⇓P **P 10 39 17.9 0.0**
baz=95
PFO Pinyon Flat Ob 95.26 48 *e*P **P 10 39 20.9 +2.9**
comp=Z,8.4nm,1.4s,mb5.0
PFO Pinyon Flat Ob 95.26 48 *e*P **P 10 39 20.9 +3.0**
PFO pmax pmax
comp=Z,8.0nm,1.4s,mb5.0
P18A Preston Nutter 95.33 40 ⇑P **P 10 39 18.1 -0.1**
baz=95
S15A Panguitch 95.34 43 ⇑P **P 10 39 18.1 -0.1**
baz=95
L21A Rawlins 95.36 37 ⇑P **P 10 39 17.6 -0.6**
baz=95
SRU San Rafael 95.51 41 ⇑P **P 10 39 18.5 -0.5**
baz=95
RSSD Black Hills 95.57 34 *e*P **P 10 39 21.4 +2.3**
comp=Z,19nm,1.5s,mb5.3
RSSD Black Hills 95.57 34 *e*P **P 10 39 21.4 +2.3**
RSSD pmax pmax
comp=Z,19nm,1.5s,mb5.3
N20A Spence Gulch, 95.64 38 ⇑P **P 10 39 19.3 -0.3**
baz=95
P19A Cripple Cowboy 96.05 40 ⇑P **P 10 39 21.2 -0.3**
baz=96
V14A Boquillas Ranc 96.18 45 ⇓P **P 10 39 21.9 -0.2**
baz=96
U15A North Rim 96.19 44 ⇓P **P 10 39 21.9 -0.2**
baz=96
R18A Canyonlands Na 96.36 41 ⇓P **P 10 39 22.4 -0.5**
baz=96
R19A Curley Farm, L 96.79 41 ⇑P **P 10 39 24.7 -0.1**
baz=97
TAOE Nuku Hiva Isla 96.98 96 *e*LR LR 11 10 59.6
comp=Z,224nm,25.1s
PV01 Paradox Valley 97.30 41 *e*P **P 10 39 29.8 +2.7**
comp=Z,760nm,1.4s
R20A Redvale 97.37 40 ⇓P **P 10 39 27.8 +0.3**
baz=97
V17A Tonalea, Kykot 97.63 44 ⇑P **P 10 39 29.1 +0.4**
baz=97
U18A Rough Rock, Ch 97.67 43 ⇑P **P 10 39 29.2 +0.4**
baz=98
R21A Cimarron 97.73 40 ⇓P **P 10 39 29.3 +0.3**
baz=98

SCHQ	**Schefferville**	**97.79**	**8**	LR	LR	11 28 30.3		
	comp=Z,356nm,18.2s,MS4.9,baz=166,slow=38							
MVCO	**Mesa Verde**	**97.96**	**41**	*e*P	**P**	**10 39 34.4**	**+4.2**	
	comp=Z,1.4nm,0.9s,mb4.5							
ESDC	**Sonseca Array**	**99.22**	**323**	LR	LR	11 31 19.8		
	comp=Z,395nm,18.0s,MS5.0,baz=20,slow=40							
TXAR	**Lajitas Array**	**106.31**	**44**	Pdiff	Pdif	10 40 11.9	+4.9	
	comp=Z,0.2nm,0.7s,baz=316,slow=3.8,SNR=3.1							
RKT	**Rikitea**	**107.38**	**107**	*e*LR	LR	11 15 58.1		
	comp=Z,437nm,32.8s							
TORD	**Torodi Ar. Bea**	**113.19**	**299**	PKiKP	PKiKP	10 44 29.9	-2.2	
	comp=Z,0.6nm,0.6s,baz=7.2,slow=3.3,SNR=3.7							

*NEIC **04** 10:28:57.3, 19.44N×73.28W, h30km, MD3.7(RSPR), After RSPR.*
*JSN **04** 10:30:19.5±3.3, 18.22N×75.70W, h15km*

RSPR 04 10:28:57.3, 19.44N×73.28W, h30km±14km, MD3.7/4, 2C-2D, Haiti region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTBY	**Guantanamo Bay**	**1.80**	**286**	⇓*iP*	Pn	10 29 24.8	-1.5
GTBY				*eS*	Sn	10 29 45.9	-2.1
SDDR	**Presa de Saban**	**1.93**	**103**	⇓*eP*	Pn	10 29 25.8	-2.3
SDDR				*eS*	Sn	10 29 49.2	-2.1
GRTK	**Grand Turk**	**2.88**	**44**	⇑*eP*	Pn	10 29 39.6	-1.5
GRTK				*eS*	Sn	10 30 13.4	-1.4
CMJ	**Castle Mountai**	**3.21**	**247**	*i* P	Sn	10 30 28.7	+5.8
GWJ	**Greenwich**	**3.54**	**248**	*i* P	Sn	10 30 37.1	+6.0
STH	**Stony Hill**	**3.61**	**249**	*i* P	Sn	10 30 40.1	+7.2
SMN1	**Samana, DR**	**3.79**	**93**	⇑*eP*	Pn	10 29 52.9	-0.8
SMN1				*eS*	Sn	10 30 36.4	-0.8

JMA 04 10:29:01.8±0.2, 26.94N×126.54E, h11km±3km, M4.6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**0.65**	**160**	P	Pg	10 29 14.2	-0.2
JKE				S	Sg	10 29 23.0	+0.1
JAGN	**Aguni-jima**	**0.72**	**119**	P	Pg	10 29 15.5	-0.2
JAGN				S	Sg	10 29 24.8	-0.3
NAH1	**Naha**	**1.27**	**125**	P	Pn	10 29 25.5	+0.1
NAH1				S	Sb	10 29 41.8	-0.1
JIH	**Iheya**	**1.28**	**85**	P	Pn	10 29 25.2	-0.4
JIH				S	Sb	10 29 41.9	-0.4
JJT2	**Tamagusuku 2**	**1.34**	**126**	P	Pn	10 29 26.1	-0.4
JJT2				S	Sb	10 29 44.1	-0.1
JOW	**Kunigami**	**1.55**	**94**	P	Pn	10 29 28.7	-0.7
JOW				S	Sn	10 29 49.0	-0.5
JTK	**Tokunoshima**	**2.30**	**68**	P	Pn	10 29 40.8	+1.1

JMA 04 10:30:03.2±0.3, 26.97N×126.50E, h11km±5km, M3.6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**0.69**	**158**	P	Pg	10 30 16.2	-0.4
JKE				S	Sg	10 30 25.8	+0.2
JAGN	**Aguni-jima**	**0.76**	**120**	P	Pg	10 30 17.8	-0.2
JAGN				S	Sg	10 30 27.4	-0.6
JIH	**Iheya**	**1.31**	**87**	P	Pn	10 30 26.8	-0.6
JIH				S	Sb	10 30 44.1	-0.5
JJT2	**Tamagusuku 2**	**1.39**	**126**	P	Pn	10 30 28.8	+0.2
JJT2				S	Sn	10 30 46.1	-0.8
JOW	**Kunigami**	**1.59**	**95**	P	Pn	10 30 31.5	+0.2
JOW				S	Sn	10 30 52.7	+0.9

*NIED **04** 10:57:00, 42.30N×144.70E, h35km, Mw4.0 Best double couple: Mo1.00000×10^15 NP1:φs355.00000°, δ74.00000°, λ76.00000°. NP2:φs219.00000°, δ21.00000°, λ132.00000°.*
*IDC **04** 10:57:21.4±1.3, 42.21N×144.47E, h0km, mb3.7/8, mb1 3.9/10, mb1mx3.7/24, mbtmpb3.8/10, ML3.6/2, Error ellipse: s-maj=36.5km s-min=20.7km az=173.0*
*MOS **04** 10:57:25.4±1.9, 42.22N×144.71E, h36km, mb4.0/7, Error ellipse: s-maj=16.2km s-min=14.7km az=56.8*
*ISCJB **04** 10:57:25.5±0.8, 42.29N±0.05×144.71E±0.07, h45km±7km, mb3.6/11, Error ellipse: s-maj=11.1km s-min=5.2km az=138.0*
*NEIC **04** 10:57:26.1, 42.33N×144.69E, h37km, MG4.1(JMA), After JMA.*
NEIC Recorded [1 JMA] in eastern Hokkaido.
*JMA **04** 10:57:26.1, 42.33N×144.69E, h37km±1km, M4.1*
JMA Felt I J1.

ISC 04 10:57:25.6±1.1, 42.29N±0.04×144.70E±0.06, h29km±8km, n37, σ0.93/47, mb3.6/11, 4C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAK	**Akkeshi**	**0.70**	**360**	⇑P	**Pb**	**10 57 39.0**	**-0.3**
JAK				*e*S	**Sb**	**10 57 49.1**	**+0.4**
JOB	**Onbets**	**0.88**	**314**	⇓P	**Pn**	**10 57 42.0**	**-0.1**
JCH	**Churui**	**1.04**	**288**	⇓P	**Pn**	**10 57 44.5**	**+0.3**
JCH				*e*S	**Sn**	**10 57 58.4**	**+0.6**
JEM	**Erimo**	**1.18**	**257**	P	**Pn**	**10 57 46.8**	**+0.6**
ERM	**Erimo**	**1.18**	**257**	*e*Pn	**Pn**	**10 57 47.4**	**+1.2**
ERM				*e*Sn	**Sn**	**10 58 02.4**	**+1.2**
JAR	**Ashorobuto**	**1.21**	**326**	⇓P	**Pn**	**10 57 46.2**	**-0.4**
JAR				*e*S	**Sn**	**10 58 01.0**	**-1.1**
JNK	**Nakash**	**1.29**	**1**	⇑P	**Pn**	**10 57 47.1**	**-0.6**
NEM2	**Nemuro 2**	**1.32**	**35**	P	**Pn**	**10 57 48.0**	**-0.1**
NEM2				*e*S	**Sn**	**10 58 04.7**	**+0.1**
JNBK	**Urakawa-nobuka**	**1.45**	**270**	⇓P	**Pn**	**10 57 49.5**	**-0.3**
JRA	**Rausu**	**1.67**	**11**	⇑P	**Pn**	**10 57 52.9**	**0.0**
JRA				*e*S	**Sn**	**10 58 12.9**	**-0.5**
YUK	**Yuzh-Kuril'sk**	**1.94**	**26**	⇑*i*PN	**Pn**	**10 57 56.7**	**+0.1**
YUK				*i* S	**Sn**	**10 58 20.3**	**+0.4**
YUK	comp=N,36nm,0.3s			pmax	pmax		
YUK	comp=Z,288nm,0.3s			pmax	pmax		
YUK	comp=E,16nm,0.1s			pmax	pmax		
YUK	comp=Z,88nm,0.6s			smax			
YUK	comp=N,762nm,0.3s			smax			
YUK	comp=E,1μm,0.3s			smax			
YUK	comp=N,1μm,0.8s			smax			
YUK	comp=E,460nm,0.8s			smax			
MAJO	**Matsushiro**	**7.63**	**223**	*e*Pn	**Pn**	**10 59 14.9**	**+0.2**
MAJO	comp=E,12nm,0.8s **Matsushiro**	**7.63**	**223**	*e*PN	**Pn**	**10 59 15.0**	**+0.2**
MAJO	comp=Z,12nm,0.8s			pmax	pmax		
MAT	**Matsushiro**	**7.63**	**223**	P	**Pn**	**10 59 14.9**	**+0.1**
MAT				S	**Sn**	**11 00 36.9**	**-3.3**
JHJ	**Hachijo jima 2**	**9.95**	**205**	Pn	**Pn**	**10 59 44.1**	**-2.5**
JHJ	comp=Z,7.5nm,0.3s,baz=19,slow=20,SNR=4.7			Sn	**Sn**	**11 01 28.1**	**-9.2**
KSRS	comp=Z,3.3nm,0.3s,baz=107,slow=19,SNR=4.6 **Korea Array**	**13.76**	**255**	Pn	**Pn**	**11 00 33.9**	**-4.7**
KSRS	comp=Z,0.1nm,0.3s,baz=80,slow=18,SNR=3.6			Sn	**Sn**	**11 03 00.1**	**-10**
KSRS	comp=Z,0.2nm,0.3s,baz=24,slow=22,SNR=8.7 **Korea Array**	**13.76**	**255**	*e*P	**Pn**	**11 00 39.5**	**+0.9**
SONM	**Songino Array**	**27.41**	**295**	P	**P**	**11 03 08.0**	**-0.5**
SONM	comp=Z,0.7nm,0.5s,mb3.5,baz=75,slow=8.4,SNR=6.3 **Songino Array**	**27.41**	**295**	P	**P**	**11 03 08.0**	**-0.5**
SONM	comp=Z,1.0nm,0.5s			pmax	pmax		
ZAK	**Zakamensk**	**29.40**	**300**	*e*P	**P**	**11 03 27.4**	**+1.3**
ZAK	comp=Z,1.0nm,1.3s,mb3.4			pmax	pmax		
ZALV	**Zalesovo Beam**	**40.46**	**308**	P	**P**	**11 05 01.2**	**-0.1**
ZALV	comp=Z,1.2nm,0.3s,mb4.1,baz=90,slow=8.6,SNR=2.9 **Zalesovo Beam**	**40.46**	**308**	P	**P**	**11 05 01.2**	**-0.1**
ZALV	comp=Z,1.0nm,0.3s,mb4.0			pmax	pmax		
RC01	**Rabbit Creek A**	**42.68**	**41**	P	**P**	**11 05 17.9**	**-1.5**
MKAR	**Makanchi Array**	**43.68**	**298**	P	**P**	**11 05 26.9**	**-0.7**
MKAR	comp=Z,0.3nm,0.5s,mb3.3,baz=76,slow=8.8,SNR=3.4 **Makanchi Array**	**43.68**	**298**	*i* P	**P**	**11 05 33.5**	**+5.9**
ILAR	**Eielson Array**	**43.72**	**35**	P	**P**	**11 05 29.7**	**+2.0**
	comp=Z,0.3nm,0.8s,mb3.1,baz=260,slow=7.1,SNR=4.8						
KURK	**Kurchatov**	**44.87**	**305**	*e*P	**P**	**11 05 41.3**	**+4.2**
KURK	comp=Z,1.0nm,0.7s,mb3.8			pmax	pmax		
BVAR	**Borovoye Array**	**49.04**	**310**	P	**P**	**11 06 08.9**	**-0.7**
BVAR	comp=Z,0.9nm,0.3s,mb4.2,baz=80,slow=11,SNR=5.5			pmax	pmax		
BVAR	**Borovoye Array**	**49.04**	**310**	*e*P	**P**	**11 06 09.5**	**-0.1**
BRVK	comp=Z,1.0nm,0.3s			pmax	pmax		
BRVK	**Borovoye**	**49.09**	**310**	*e*P	**P**	**11 06 09.6**	**-0.4**
BRVK	comp=Z,2.0nm,1.2s,mb4.0			pmax	pmax		
ABKAR	**Akbulak array**	**56.57**	**309**	*e*P	**P**	**11 07 04.0**	**-1.3**
FINES	**FINESS Array B**	**65.34**	**332**	P	**P**	**11 08 04.1**	**-0.6**
FINES	comp=Z,1.8nm,0.7s,mb4.2,baz=46,slow=6.9,SNR=2.7 **FINESS Array B**	**65.34**	**332**	P	**P**	**11 08 04.1**	**-0.6**
FINES	comp=Z,2.0nm,0.5s,mb3.4,baz=302,slow=5.2,SNR=2.9			pmax	pmax		
TXAR	**Lajitas Array**	**84.96**	**55**	P	**P**	**11 09 59.3**	**+1.2**
TXAR	comp=Z,0.2nm,0.9s,mb3.3,baz=294,slow=2.9,SNR=2.8 **Lajitas Array**	**84.96**	**55**	P	**P**	**11 09 59.3**	**+1.1**

FUNV 04 11:04:49.0, 6.79N×73.19W, h163km, MW3.5, 3C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.38**	**39**	⇑*iP*	Pn	11 05 18.1	-0.3
CAPV				*e*S	Sn	11 05 39.2	-1.8
VIGV	**El Vigia**	**2.73**	**41**	⇑*eP*	Pn	11 05 32.5	-1.0
VIGV				*e*S	Sn	11 06 04.6	-3.3
SOCV	**Socops**	**2.75**	**57**	*e*P	Pn	11 05 32.8	-1.0
SOCV				*i* S	Sn	11 06 04.6	-3.8
VIRV	**Villa del Rosa**	**3.77**	**12**	⇑*eP*	Pn	11 05 44.7	-2.0
VIRV				*e*S	Sn	11 06 27.2	-4.4
QARV	**Quebrada Arrib**	**4.30**	**38**	*e*P	Pn	11 05 52.6	-0.9
SANV	**Sanarito**	**4.51**	**53**	*e*P	Pn	11 05 53.9	-2.3
TEPV	**Terepaima**	**5.06**	**51**	*e*P	Pn	11 06 01.9	-1.6
SIQV	**Siquisique**	**5.09**	**41**	*e*P	Pn	11 06 01.4	-2.4
BAUV	**El Baul**	**5.53**	**67**	*e*P	Pn	11 06 06.9	-2.7
BAUV				*e*S	Sn	11 07 06.2	-6.6
MAPV	**Macapo**	**5.57**	**57**	*e*P	Pn	11 06 09.1	-1.1
MONV	**Montecano**	**6.04**	**31**	*e*P	Pn	11 06 14.3	-2.1
CAOV	**Caicara del Or**	**6.84**	**85**	*e*P	Pn	11 06 24.5	-2.4
CUPV	**Cœpira**	**8.01**	**66**	*e*P	Pn	11 06 40.8	-1.7

MAN 04 11:09:36, 8.85N×126.19E, h33km, mb4.3, ML3.1, MS2.9, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**0.57**	**282**	*e*P	Pb	11 09 48.9	+1.1
BUTP				*e*S	Sb	11 09 57.3	+1.4
SCPH	**Surigao**	**1.15**	**323**	⇓*e*P	Pn	11 09 55.5	-0.3
BUKP	**Musuan**	**1.48**	**229**	*e*P	Pn	11 09 59.1	-1.2
BUKP				*e*S	Sn	11 10 13.1	-5.4
CGP	**Cagayan de Oro**	**1.53**	**255**	⇑*e*P	Pn	11 10 02.5	+1.4
CGP				*e*S	Sn	11 10 30.5	+11
TBP	**Tagbilaran**	**2.44**	**290**	*e*P	Pn	11 10 16.0	+2.4
TBP				*e*S	Sn	11 10 53.5	+11

DJA 04 12:24:14, 0.11N×98.51E, h10km, MLv3.6/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNSI	**Mandailing Nat**	**1.27**	**58**	P	Pn	12 24 26.7	-11
MNSI				S	Sb	12 24 54.8	+0.4
SBSI	**Sibolga**	**1.48**	**15**	P	Pn	12 24 40.4	-0.3
SBSI				S	Sn	12 25 14.8	+15
PPI	**Padang Panjang**	**1.97**	**107**	P	Pn	12 24 37.5	-10
PDSI	**Padang**	**2.20**	**117**	P	Pn	12 24 51.4	+0.8
BKNI	**Bangkinang**	**2.54**	**85**	P	Pn	12 25 09.2	+14
SDSI	**Sungai Dareh**	**3.10**	**110**	P	Pn	12 25 06.0	+3.0
TSI	**Tuntungan**	**3.37**	**1**	P	Pn	12 25 08.1	+1.4
JMBI	**JAMBI**	**5.42**	**109**	P	Pn	12 25 32.8	-2.1

*IDC **04** 12:45:57.1±1.5, 56.00N×162.12E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.5/25, mbtmpb3.6/5, ML3.1/1, Error ellipse: s-maj=45.7km s-min=28.4km az=154.0*
*ISCJB **04** 12:46:01.3±0.4, 55.71N±0.03×162.21E±0.05, h52km±7km, mb3.6/4, Error ellipse: s-maj=5.2km s-min=4.6km az=18.3*
*KRSC **04** 12:46:01.2±1.1, 55.71N×162.19E, h38km±38km, ML3.8*

ISC 04 12:46:02.2±0.4, 55.73N±0.03×162.22E±0.05, h43km±8km, n25, σ0.975/40, mb3.6/4, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.59**	**35**	*e*P	**Pn**	**12 46 13.2**	**-0.9**
KBTR				*e*S	**Sn**	**12 46 22.8**	**+0.2**
ZLN	**Zelenaya**	**0.85**	**290**	*e*P	**Pn**	**12 46 17.2**	**-0.5**
ZLN				*e*S	**Sn**	**12 46 29.3**	**+0.4**
CIRR	**Tsirk**	**0.92**	**296**	*e*P	**Pn**	**12 46 18.1**	**-0.3**
CIRR				*e*S	**Sn**	**12 46 30.9**	**+0.4**
SMKR	**Semkarok**	**0.95**	**334**	*e*P	**Pn**	**12 46 18.4**	**-0.7**
SMKR				*e*S	**Sn**	**12 46 31.3**	**-0.2**
BZMR	**Bezymyannaya**	**1.00**	**283**	*e*P	**Pn**	**12 46 19.2**	**-0.5**
BZMR				*e*S	**Sn**	**12 46 32.5**	**-0.1**
BDR	**Baidarnaya**	**1.01**	**326**	*e*P	**Pn**	**12 46 19.5**	**-0.4**
BDR				*e*S	**Sn**	**12 46 33.4**	**+0.4**
KRSR	**Krestovskiy**	**1.05**	**298**	*e*P	**Pn**	**12 46 19.4**	**-1.0**
KRSR				*e*S	**Sn**	**12 46 32.7**	**-1.2**
SRKR	**Sorokina**	**1.10**	**328**	*e*P	**Pn**	**12 46 20.6**	**-0.5**
SRKR				*e*S	**Sn**	**12 46 34.7**	**-0.3**
KMNR	**Kamenistaya**	**1.12**	**272**	P	**Pn**	**12 46 21.3**	**-0.1**
KPT	**Kopyto**	**1.15**	**283**	*e*P	**Pn**	**12 46 21.8**	**0.0**
KPT				*e*S	**Sn**	**12 46 37.1**	**+0.8**
MKZ	**Mys Kozlova**	**1.21**	**194**	*e*P	**Pn**	**12 46 21.8**	**-0.8**
MKZ				*e*S	**Sn**	**12 46 37.5**	**-0.2**
KOZ	**Kozyrevsk**	**1.36**	**285**	*e*P	**Pn**	**12 46 25.3**	**+0.6**
KOZ				*e*S	**Sn**	**12 46 43.4**	**+1.9**
SRDR	**Sredinnyy**	**1.52**	**294**	*e*P	**Pn**	**12 46 27.4**	**+0.5**
SRDR				*e*S	**Sn**	**12 46 46.4**	**+0.9**
BKI	**Bering**	**2.20**	**102**	*e*P	**Pn**	**12 46 36.9**	**+0.8**
BKI				*e*S	**Sn**	**12 47 03.2**	**+1.1**
KII	**Karymskiy**	**2.33**	**225**	*e*P	**Pn**	**12 46 37.2**	**-0.8**
SPN	**Mys Shipunski**	**2.93**	**207**	*e*S	**Sn**	**12 47 18.4**	**-1.7**
NLC	**Nalytchevo**	**3.06**	**214**	*e*P	**Pn**	**12 46 48.2**	**+0.2**
NLC				*e*S	**Sn**	**12 47 22.9**	**-0.5**
AVH	**Avacha**	**3.20**	**221**	P	**Pn**	**12 46 49.5**	**-0.3**
GNL	**Ganaly**	**3.21**	**232**	*e*P	**Pn**	**12 46 51.1**	**+1.1**
PET	**Petropavlovsk**	**3.42**	**219**	*e*P	**Pn**	**12 46 53.8**	**+0.9**
PET				*e*S	**Sn**	**12 47 32.5**	**+0.4**
PETK	**Petropavlovsk-**	**3.73**	**227**	Pn	**Pn**	**12 46 58.1**	**+1.0**
	1.3nm,0.3s,baz=61,slow=16,SNR=20						
KDAK	**Kodiak Island**	**24.51**	**66**	P	**P**	**12 51 16.7**	**-0.4**
	3.5nm,0.8s,mb3.9,baz=292,slow=5.4,SNR=2.6						
ILAR	**Eielson Array**	**26.11**	**49**	P	**P**	**12 51 31.5**	**+0.1**
	0.5nm,1.0s,mb3.0,baz=266,slow=7.7,SNR=6.6						
FINES	**FINESS Array B**	**58.19**	**337**	P	**P**	**12 55 50.1**	**-1.1**
	1.8nm,0.7s,mb4.2,baz=42,slow=11,SNR=2.7						
TXAR	**Lajitas Array**	**68.50**	**69**	P	**P**	**12 57 00.8**	**+1.0**
	0.3nm,0.7s,mb3.3,baz=325,slow=4.6,SNR=4.7						

*IDC **04** 12:57:15.5±1.4, 0.09S×123.16E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/19, mbtmpb3.7/4, Error ellipse: s-maj=95.2km s-min=25.4km az=62.0*
*ISCJB **04** 12:57:24.8±0.6, 0.18S±0.06×122.93E±0.05, h92km±7km, mb3.6/4, Error ellipse: s-maj=10.2km s-min=8.9km az=169.5*
*DJA **04** 12:57:27, 0.18S×122.96E, h58km, MLv4.2/8*

ISC 04 12:57:26.0±0.6, 0.17S±0.06×122.93E±0.05, h83km±7km, n14, σ0.976/16, mb3.6/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.88**	**190**	P	**Pn**	**12 57 44.2**	**+0.3**
MRSI	**Marisa**	**1.18**	**303**	P	**Pn**	**12 57 47.2**	**-0.2**
MRSI				S	**Sn**	**12 58 02.8**	**-0.7**
KMSI	**Cibinong**	**1.29**	**55**	P	**Pn**	**12 57 48.3**	**-0.5**
KMSI				S	**Sn**	**12 58 06.4**	**+0.5**
TOLI	**Toli-Toli**	**2.49**	**301**	P	**Pn**	**12 58 05.6**	**+1.0**
PCI	**Palu**	**3.17**	**257**	P	**Pn**	**12 58 18.9**	**+5.1**
KDI	**Kendari**	**3.77**	**185**	P	**Pn**	**12 58 21.7**	**-0.3**
TTSI	**Tana Toraja**	**4.22**	**227**	P	**Pn**	**12 58 27.7**	**-0.3**
LBMI	**Labuha**	**4.60**	**96**	P	**Pn**	**12 58 33.0**	**-0.2**
SPSI	**Sidrap Palu**	**4.92**	**220**	P	**Pn**	**12 58 37.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**18.02**	**172**	P	**Pn**	**13 01 34.2**	**+3.1**
ASAR	0.1nm,0.3s,baz=319,slow=9.3,SNR=3.4 **Alice Springs**	**25.67**	**156**	P	**P**	**13 02 47.3**	**-1.1**
CMAR	0.3nm,0.6s,mb2.9,baz=342,slow=15,SNR=6.6 **Chiang Mai Arr**	**29.97**	**309**	P	**P**	**13 03 27.8**	**+1.0**
SONM	0.8nm,0.7s,mb3.5,baz=134,slow=7.6,SNR=4.9 **Songino Array**	**49.93**	**345**	P	**P**	**13 06 11.2**	**-0.1**
MKAR	1.3nm,0.8s,mb3.9,baz=163,slow=8.3,SNR=7.3 **Makanchi Array**	**58.72**	**328**	P	**P**	**13 07 14.5**	**-0.6**
	0.7nm,0.3s,mb4.1,baz=123,slow=8.3,SNR=4.9						

IDC 04 12:58:43.6±1.6, 33.17N×92.10E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.4/24, mbtmpb3.5/5, ML3.7/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/21, Error ellipse: s-maj=66.3km s-min=24.0km az=67.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.88**	**156**	Pn	Pn	13 02 27.9	-0.6
	0.1nm,0.3s,baz=339,slow=12,SNR=4.8						
AAK	**Ala-Archa**	**16.78**	**309**	LR	LR	13 10 01.3	
	comp=Z,54nm,21.4s,baz=202,slow=40						
SONM	**Songino Array**	**18.20**	**32**	P	Pn	13 02 57.8	+0.3
	0.2nm,0.3s,baz=210,slow=13,SNR=4.3						
ZALV	**Zalesovo Beam**	**21.41**	**348**	P	P	13 03 32.4	-0.5
	0.4nm,0.3s,baz=168,slow=7.4,SNR=3.2						
BVAR	**Borovoye Array**	**25.23**	**328**	P	P	13 04 11.2	+0.3
	0.7nm,0.7s,baz=116,slow=6.6,SNR=3.4						
ASAR	**Alice Springs**	**69.15**	**139**	P	P	13 09 52.0	+0.2
	0.7nm,0.8s,baz=320,slow=6.4,SNR=11						

*FUNV **04** 13:14:32.2, 11.14N×60.14W, h20km, MW3.6*
*NEIC **04** 13:14:32.1, 11.39N×60.12W, h27km, MD3.5(TRN), After TRN.*

TRN 04 13:14:32.1, 11.39N×60.12W, h27km, MD3.5, 4C-10D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOSP	**Speyside**	**0.42**	**258**	⇑*iP*	Pb	13 14 41.3	+0.2
TOSP				*e*S	Sb	13 14 48.2	+1.1
BOT	**Bacolet**	**0.63**	**250**	*e*P	Pb	13 14 45.1	+0.6
BOT				*e*S	Sb	13 14 53.5	+0.6
BOT	**Bacolet**	**0.63**	**250**	*e*P	Pb	13 14 45.1	+0.6
BOT				*e*S	Sb	13 14 53.5	+0.6
TPR	**Prospect**	**0.67**	**253**	*e*P	Pb	13 14 45.8	+0.5
TPR				*e*S	Sb	13 14 54.9	+0.6
TPR	**Prospect**	**0.67**	**253**	*e*P	Pb	13 14 45.8	+0.5
TPR				*e*S	Sb	13 14 54.9	+0.6
TBH	**Brigand Hill**	**1.29**	**226**	⇓*e*P	Pn	13 14 54.8	+0.4
TBH				*e*S	Sn	13 15 12.1	+1.3
TBH	**Brigand Hill**	**1.29**	**226**	⇓*e*P	Pn	13 14 54.8	+0.4
TBH				*e*S	Sn	13 15 12.1	+1.3
TRN	**Trinidad (W)**	**1.46**	**240**	⇓*i*P	Pn	13 14 56.8	+0.1
TRN				*e*S	Sn	13 15 14.6	-0.4
TRN	**Trinidad (W)**	**1.46**	**240**	⇓*i*P	Pn	13 14 56.8	+0.1
TRN				*e*S	Sn	13 15 14.6	-0.4
GRGR	**Grenville**	**1.68**	**296**	*e*P	Pn	13 14 58.7	-1.0
GRIC	**Isle de Caille**	**1.69**	**302**	*e*P	Pn	13 15 00.9	+0.9
GRIC				*e*S	Sn	13 15 21.3	+0.5
GRCU	**Cariacou**	**1.69**	**310**	⇑*e*P	Pn	13 14 59.8	-0.1
GRCU				*e*S	Sn	13 15 20.7	0.0
GRCU	**Cariacou**	**1.69**	**310**	⇑*e*P	Pn	13 14 59.8	-0.1
GRCU				*e*S	Sn	13 15 20.7	0.0
GRW	**Mount Saint Ca**	**1.69**	**297**	⇓*e*P	Pn	13 15 00.5	+0.5
GRW				*e*S	Sn	13 15 21.2	+0.4
GRW	**Mount Saint Ca**	**1.69**	**297**	⇓*e*P	Pn	13 15 00.5	+0.5
GRW				*e*S	Sn	13 15 21.2	+0.4
GRHS	**Sauteurs**	**1.71**	**299**	*e*P	Pn	13 15 00.3	+0.2
GRHS				*e*S	Sn	13 15 21.2	+0.1
GRHS	**Sauteurs**	**1.71**	**299**	*e*P	Pn	13 15 00.3	+0.2
GRHS				*e*S	Sn	13 15 21.2	+0.1
GRSS	**Sisters**	**1.72**	**302**	*e*P	Pn	13 15 00.1	-0.3
GRSS				*e*S	Sn	13 15 21.8	+0.3
GRSS	**Sisters**	**1.72**	**302**	*e*P	Pn	13 15 00.1	-0.3
GRSS				*e*S	Sn	13 15 21.8	+0.3
TCE	**Chacachacare**	**1.74**	**247**	⇓*e*P	Pn	13 15 01.4	+0.7
TCE				*e*S	Sn	13 15 21.6	-0.5
TCE	**Chacachacare**	**1.74**	**247**	⇓*e*P	Pn	13 15 01.4	+0.7
TCE				*e*S	Sn	13 15 21.6	-0.5
SVB	**Belmont**	**2.18**	**330**	⇓*e*P	Pn	13 15 06.6	-0.1
SVB				*e*S	Sn	13 15 33.3	+0.5
SVB	**Belmont**	**2.18**	**330**	⇓*e*P	Pn	13 15 06.6	-0.1
SVB				*e*S	Sn	13 15 33.3	+0.5
GUIV	**Guiria**	**2.19**	**251**	*e*P	Pn	13 15 06.2	-0.6
GUIV				*e*S	Sn	13 15 36.0	-2.4
MCLT	**Moule a Chique**	**2.44**	**341**	*e*P	Pn	13 15 10.5	+0.2
MCLT				*e*S	Sn	13 15 39.9	+0.6
MCLT	**Moule a Chique**	**2.44**	**341**	*e*P	Pn	13 15 10.5	+0.2
MCLT				*e*S	Sn	13 15 39.9	+0.6
SLDE	**Delcer**	**2.57**	**339**	*e*S	Sn	13 15 41.8	-0.7
SLW	**Petit Monier**	**2.74**	**343**	*e*P	Sn	13 15 49.2	+2.6
ITEV	**Isla Los Testi**	**2.95**	**270**	*e*P	Pn	13 15 16.9	-0

5.6nm,0.6s,mb3.9,baz=92,slow=8.2,SNR=234
WRAB Tennant Creek 45.60 261 *eP* **P 13 37 23.6 -2.4**
KSRS Korea Array 76.82 318 P **P 13 40 53.3 +0.3**
0.5nm,0.6s,mb3.5,baz=132,slow=6.8,SNR=3.5
NVAR Mina Array Bea 79.77 43 P **P 13 41 13.1 +4.1**
1.9nm,0.7s,mb3.9,baz=222,slow=8.8,SNR=16
HLID Hailey 85.08 40 *eP* **P 13 41 40.0 +3.9**
TRF Thorofare Moun 85.41 12 *eP* **P 13 41 37.5 +0.3**
1.3nm,0.5s,mb4.0
TXAR Lajitas Array 85.83 57 P **P 13 41 45.2 +5.1**
1.5nm,0.9s,mb3.8,baz=221,slow=6.3,SNR=11
ILAR Eielson Array 87.26 12 P **P 13 41 46.7 +0.6**
0.3nm,0.3s,mb3.5,baz=216,slow=5.2,SNR=18
BRTR Keskin Array B 146.89 314 PKPbc PKPbc 13 48 44.1 +3.4
1.0nm,0.8s,baz=135,slow=0.3,SNR=3.8

*TIR **04** 13:42:43.8, 39˚.11N×20˚.55E, h0km, ML4.7*
*IDC **04** 13:42:46.4±1.3, 39˚.29N×20˚.65E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.7/25, mbtmp3.8/8, ML3.7/1, MS2.8/3, Ms1 2.8/3, ms1mx2.4/33, Error ellipse: s-maj=28.9km s-min=21.1km az=128.0*
*NEIC **04** 13:42:48.8, 39˚.42N×20˚.67E, h8km, MD3.1(ATH), After ATH.*
*ATH **04** 13:42:48.8, 39˚.42N×20˚.67E, h8km±3km, MD3.1/5*
*THE **04** 13:42:49.3, 39˚.43N×20˚.63E, h0km±1km, ML3.6/10, Error ellipse: s-maj=1.9km s-min=0.7km az=271.0*
*ISCJB **04** 13:42:49.9±0.4, 39˚.45N±0˚.02×20˚.48E±0˚.03, h23km±3km, mb3.7/8, MS2.6/2, Error ellipse: s-maj=3.6km s-min=2.2km az=146.4*
*CSEM **04** 13:42:49.0±0.1, 39˚.42N×20˚.58E, h2km, ML3.6/10, Error ellipse: s-maj=3.7km s-min=2.5km az=52.0*
*SKO **04** 13:42:52.5, 39˚.40N×20˚.81E, h17km*
*PDG **04** 13:43:00.4±1.8, 40˚.00N×20˚.01E, h14km±7km, ML3.3/9, Error ellipse: s-maj=7.9km s-min=14.0km az=0.0*
ISC 04 13:42:50.4±0.4, 39˚.43N±0˚.01×20˚.54E±0˚.02, h15km±3km, n197, σ1s31/266, mb3.7/8, MS2.6/2, 19C-17D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IGT	**Igoumenitsa**	**0.19**	**303**	P		**Pg**	**13 42 52.9**	**-2.0**
IGT	**Igoumenitsa**	**0.19**	**303**	P		**Pg**	**13 42 53.2**	**-1.7**
IGT				S		**Sg**	**13 42 57.8**	**-0.2**
IGT	**Igoumenitsa**	**0.19**	**303**	P		**Pg**	**13 42 53.2**	**-1.7**
IGT				S		**Sg**	**13 42 57.8**	**-0.2**
SRN	**Sarande**	**0.62**	**317**	*e*PG		**Pg**	**13 43 02.8**	**+0.3**
SRN				*i* SG		**Sg**	**13 43 17.3**	**+6.6**
SRN	**Sarande**	**0.62**	**317**	*e*Pg		**Pg**	**13 43 02.8**	**+0.3**
KEK	**Kerkira**	**0.64**	**297**	*e*Pb		**Pb**	**13 43 02.8**	**-0.5**
KEK	**Kerkira**	**0.64**	**297**	*e*PB		**Pb**	**13 43 02.8**	**-0.5**
KEK	**Kerkira**	**0.64**	**297**	P		**Pg**	**13 43 01.7**	**-1.2**
KEK				S		**Sg**	**13 43 14.5**	**+3.0**
KEK	**Kerkira**	**0.64**	**297**	P		**Pg**	**13 43 01.7**	**-1.2**
KEK	**Kerkira**	**0.64**	**297**	*e*Pb		**Pb**	**13 43 02.8**	**-0.5**
LKD2	**Lefkada island**	**0.64**	**172**	P		**Pg**	**13 43 00.8**	**-2.2**
LKD2				S		**Sg**	**13 43 11.2**	**-0.3**
LKD2	**Lefkada island**	**0.64**	**172**	P		**Pg**	**13 43 00.8**	**-2.2**
LKD2				S		**Sg**	**13 43 11.2**	**-0.3**
LSK	**Leskovik**	**0.72**	**3**	*e*PG		**Pg**	**13 43 00.8**	**-3.7**
LSK				*i* SN		**Sg**	**13 43 13.7**	**-0.3**
LSK	**Leskovik**	**0.72**	**3**	*e*Pg		**Pg**	**13 43 00.8**	**-3.7**
NEST	**Nestorio**	**1.06**	**21**	P		**Pb**	**13 43 08.7**	**-1.8**
NEST				S		**Sb**	**13 43 24.2**	**+0.1**
NEST	**Nestorio**	**1.06**	**21**	P		**Pb**	**13 43 08.7**	**-1.8**
NEST				S		**Sb**	**13 43 24.2**	**+0.1**
EVR	**Evrytania**	**1.11**	**117**	*e*Pg		**Pg**	**13 43 08.0**	**-3.7**
EVR	**Evrytania**	**1.11**	**117**	*e*PG		**Pg**	**13 43 08.0**	**-3.7**
EVR	**Evrytania**	**1.11**	**117**	*e*Pg		**Pg**	**13 43 08.0**	**-3.7**
THL	**Klokotos Trika**	**1.15**	**83**	P		**Pn**	**13 43 09.2**	**-2.7**
THL				S		**Sb**	**13 43 24.7**	**-1.9**
THL	**Klokotos Trika**	**1.15**	**83**	P		**Pn**	**13 43 09.2**	**-2.7**
THL				S		**Sb**	**13 43 24.7**	**-1.9**
KBN	**Korca**	**1.21**	**9**	*e*PN		**Pn**	**13 43 12.7**	**-0.1**
KBN				*i* SN		**Sn**	**13 43 34.8**	**+5.9**
KBN	**Korca**	**1.21**	**9**	*e*Pn		**Pn**	**13 43 12.7**	**-0.1**
KBN				*i* Sn		**Sn**	**13 43 34.8**	**+5.9**
VLS	**Valsamata**	**1.25**	**178**	*e*Pn		**Pn**	**13 43 11.7**	**-1.6**
VLS	**Valsamata**	**1.25**	**178**	*e*PN		**Pn**	**13 43 11.7**	**-1.6**
VLS	**Valsamata**	**1.25**	**178**	P		**Pn**	**13 43 11.8**	**-1.5**
VLS				S		**Sb**	**13 43 31.1**	**+1.5**
VLS	**Valsamata**	**1.25**	**178**	P		**Pn**	**13 43 11.8**	**-1.5**
KZN	**Kozani**	**1.29**	**47**	*e*Pb		**Pb**	**13 43 12.1**	**-2.3**
KZN	**Kozani**	**1.29**	**47**	*e*PB		**Pb**	**13 43 12.1**	**-2.3**
KZN	**Kozani**	**1.29**	**47**	P		**Pn**	**13 43 12.9**	**-1.0**
KZN				S		**Sb**	**13 43 30.0**	**-0.8**
KZN	**Kozani**	**1.29**	**47**	*e*Pb		**Pb**	**13 43 12.1**	**-2.3**
KZN	**Kozani**	**1.29**	**47**	P		**Pn**	**13 43 12.9**	**-1.0**
KZN				S		**Sb**	**13 43 30.0**	**-0.8**
KFL	**Anninata**	**1.33**	**172**	P		**Pn**	**13 43 14.3**	**-0.1**
KFL				S		**Sn**	**13 43 32.9**	**+1.0**
KFL	**Anninata**	**1.33**	**172**	P		**Pn**	**13 43 14.3**	**-0.1**
KFL				S		**Sn**	**13 43 32.9**	**+1.0**
AGG	**Agios Georgios**	**1.45**	**106**	P		**Pn**	**13 43 13.6**	**-2.4**
AGG	**Agios Georgios**	**1.45**	**106**	P		**Pn**	**13 43 13.6**	**-2.4**
AGG				S		**Sn**	**13 43 34.6**	**-0.1**
AGG	**Agios Georgios**	**1.45**	**106**	P		**Pn**	**13 43 13.6**	**-2.4**
AGG				S		**Sn**	**13 43 34.6**	**-0.1**
EFP	**Efpalio**	**1.46**	**133**	P		**Pn**	**13 43 15.9**	**-0.3**
EFP				S		**Sn**	**13 43 36.3**	**+1.2**
EFP	**Efpalio**	**1.46**	**133**	P		**Pn**	**13 43 15.9**	**-0.3**
EFP				S		**Sn**	**13 43 36.3**	**+1.2**
FNA	**Florina**	**1.50**	**25**	P		**Pn**	**13 43 16.9**	**+0.1**
FNA	**Florina**	**1.50**	**25**	P		**Pn**	**13 43 16.5**	**-0.3**
FNA				S		**Sn**	**13 43 36.9**	**+0.9**
FNA	**Florina**	**1.50**	**25**	P		**Pn**	**13 43 16.9**	**+0.1**
FNA				S		**Sn**	**13 43 36.9**	**+0.9**
RLS	**Riolos of Patr**	**1.55**	**152**	*e*Pb		**Pb**	**13 43 17.8**	**-0.9**
RLS	**Riolos of Patr**	**1.55**	**152**	*e*PB		**Pb**	**13 43 17.8**	**-0.9**
RLS	**Riolos of Patr**	**1.55**	**152**	*e*Pb		**Pb**	**13 43 17.8**	**-0.9**
TRIZ	**Trizonia**	**1.60**	**131**	P		**Pn**	**13 43 17.3**	**-0.8**
TRIZ				S		**Sn**	**13 43 38.3**	**-0.2**
TRIZ	**Trizonia**	**1.60**	**131**	P		**Pn**	**13 43 17.3**	**-0.8**
TRIZ				S		**Sn**	**13 43 38.3**	**-0.2**
KALE	**Kalithea**	**1.62**	**129**	P		**Pn**	**13 43 17.6**	**-0.8**
KALE				S		**Sn**	**13 43 39.9**	**+0.9**
KALE	**Kalithea**	**1.62**	**129**	P		**Pn**	**13 43 17.6**	**-0.8**
KALE				S		**Sn**	**13 43 39.9**	**+0.9**
LAKA	**Lakka**	**1.63**	**136**	P		**Pn**	**13 43 18.2**	**-0.4**
LAKA	**Lakka**	**1.63**	**136**	P		**Pn**	**13 43 18.2**	**-0.4**
LIT	**Litokhoron**	**1.64**	**65**	P		**Pn**	**13 43 17.1**	**-1.7**
LIT	**Litokhoron**	**1.64**	**65**	P		**Pn**	**13 43 16.5**	**-2.3**
LIT				S		**Sn**	**13 43 40.7**	**+1.1**
LIT	**Litokhoron**	**1.64**	**65**	P		**Pn**	**13 43 17.1**	**-1.7**
LIT				S		**Sn**	**13 43 40.7**	**+1.1**
BIA	**Bitola**	**1.70**	**20**	*e*Pn		**Pn**	**13 43 21.5**	**+2.0**
BIA				*e*Sg		**Sg**	**13 43 45.8**	**+0.7**
DSF	**Desfina**	**1.85**	**123**	P		**Pn**	**13 43 20.2**	**-1.4**
DSF				S		**Sn**	**13 43 45.1**	**+0.4**
DSF	**Desfina**	**1.85**	**123**	P		**Pn**	**13 43 20.2**	**-1.4**
DSF				S		**Sn**	**13 43 45.1**	**+0.4**
TIR	**Tirane**	**1.99**	**345**	*e*P		**Pn**	**13 43 25.6**	**+2.1**
TIR	**Tirane**	**1.99**	**345**	*e*P		**Pn**	**13 43 25.6**	**+2.1**
KRUS	**Krusevo**	**2.01**	**15**	*e*Pn		**Pn**	**13 43 55.9**	**+2.0**
KRUS				*e*Sg		**Sg**	**13 43 55.0**	**-0.1**
GUR	**Goura**	**2.05**	**136**	P		**Pn**	**13 43 24.2**	**-0.1**
GUR	**Goura**	**2.05**	**136**	P		**Pn**	**13 43 24.2**	**-0.1**
XOR	**Xorichti**	**2.05**	**91**	P		**Pn**	**13 43 24.3**	**-0.1**
XOR	**Xorichti**	**2.05**	**91**	P		**Pn**	**13 43 22.9**	**-1.5**
XOR	**Xorichti**	**2.05**	**91**	P		**Pn**	**13 43 24.3**	**-0.1**
ATAL	**Atalanti**	**2.06**	**110**	P		**Pn**	**13 43 24.4**	**-0.1**
ATAL				S		**Sn**	**13 43 51.0**	**+1.0**
ATAL	**Atalanti**	**2.06**	**110**	P		**Pn**	**13 43 24.4**	**-0.1**
ATAL				S		**Sn**	**13 43 51.0**	**+1.0**
LKR	**Lokris**	**2.06**	**111**	*e*Pn		**Pn**	**13 43 24.0**	**-0.5**
LKR	**Lokris**	**2.06**	**111**	*e*PN		**Pn**	**13 43 24.0**	**-0.5**
LKR	**Lokris**	**2.06**	**111**	P		**Pn**	**13 43 24.6**	**+0.1**
LKR	**Lokris**	**2.06**	**111**	*e*Pn		**Pn**	**13 43 24.0**	**-0.5**
LKR	**Lokris**	**2.06**	**111**	P		**Pn**	**13 43 24.6**	**+0.1**
NEO	**Neokhori**	**2.08**	**92**	*e*Pn		**Pn**	**13 43 24.8**	**0.0**
NEO	**Neokhori**	**2.08**	**92**	*e*PN		**Pn**	**13 43 24.8**	**0.0**
NEO	**Neokhori**	**2.08**	**92**	*e*Pn		**Pn**	**13 43 24.8**	**0.0**
GRG	**Griva**	**2.09**	**42**	P		**Pn**	**13 43 25.3**	**+0.4**
GRG	**Griva**	**2.09**	**42**	P		**Pn**	**13 43 25.1**	**+0.2**
GRG	**Griva**	**2.09**	**42**	P		**Pn**	**13 43 25.1**	**+0.2**
PHP	**Peshkopia**	**2.26**	**358**	*e*PN		**Pg**	**13 43 35.4**	**+1.8**
PHP				*i* SG		**Sg**	**13 44 14.4**	**+11**
HORT	**Hortiatis**	**2.29**	**58**	P		**Pn**	**13 43 28.8**	**+1.2**
HORT	**Hortiatis**	**2.29**	**58**	P		**Pn**	**13 43 27.3**	**-0.3**
HORT	**Hortiatis**	**2.29**	**58**	P		**Pn**	**13 43 27.3**	**-0.3**
LTK	**Loutraki**	**2.36**	**126**	P		**Pn**	**13 43 28.6**	**0.0**
LTK	**Loutraki**	**2.36**	**126**	P		**Pn**	**13 43 28.6**	**0.0**
VAY	**Valandovo**	**2.44**	**39**	*e*Pn		**Pn**	**13 43 30.7**	**+0.9**
VAY				*e*Sn		**Sn**	**13 43 56.9**	**-2.5**
PAIG	**Paliouri**	**2.47**	**77**	P		**Pn**	**13 43 29.8**	**-0.3**
PAIG	**Paliouri**	**2.47**	**77**	P		**Pn**	**13 43 28.7**	**-1.4**
PAIG				S		**Sn**	**13 44 00.2**	**+0.1**
PAIG	**Paliouri**	**2.47**	**77**	P		**Pn**	**13 43 29.8**	**-0.3**
PAIG				S		**Sn**	**13 44 00.2**	**+0.1**
ITM	**Ithomi**	**2.49**	**154**	*e*Pn		**Pn**	**13 43 32.0**	**+1.6**
ITM	**Ithomi**	**2.49**	**154**	*e*PN		**Pn**	**13 43 32.0**	**+1.6**
ITM	**Ithomi**	**2.49**	**154**	P		**Pn**	**13 43 30.5**	**+0.1**
ITM	**Ithomi**	**2.49**	**154**	P		**Pn**	**13 43 30.5**	**+0.1**
ITM	**Ithomi**	**2.49**	**154**	*e*Pn		**Pn**	**13 43 32.0**	**+1.6**
KNT	**Kendrikon**	**2.50**	**45**	P		**Pn**	**13 43 30.3**	**-0.2**
KNT	**Kendrikon**	**2.50**	**45**	P		**Pn**	**13 43 30.3**	**-0.2**
VLX	**Vlachokerasia**	**2.51**	**144**	P		**Pn**	**13 43 30.8**	**+0.1**
VLX	**Vlachokerasia**	**2.51**	**144**	P		**Pn**	**13 43 30.8**	**+0.1**
SOH	**Sokhos**	**2.57**	**56**	P		**Pn**	**13 43 32.1**	**+0.7**
SOH	**Sokhos**	**2.57**	**56**	P		**Pn**	**13 43 31.4**	**0.0**
SOH				S		**Sn**	**13 44 03.1**	**+0.7**
SOH	**Sokhos**	**2.57**	**56**	P		**Pn**	**13 43 31.4**	**0.0**
SOH				S		**Sn**	**13 44 03.1**	**+0.7**
AOS	**Alonnisos**	**2.60**	**95**	P		**Pn**	**13 43 32.7**	**+0.8**
AOS	**Alonnisos**	**2.60**	**95**	P		**Pn**	**13 43 32.7**	**+0.8**
SKO	**Skopje**	**2.63**	**15**	*e*Pn		**Pn**	**13 43 25.1**	**-2.7**
PUK	**Puka**	**2.66**	**349**	*e*PN		**Pn**	**13 43 29.7**	**-3.0**
PUK				*i* SN		**Sn**	**13 44 03.6**	**-1.1**
PUK	**Puka**	**2.66**	**349**	*e*Pn		**Pn**	**13 43 29.7**	**-3.0**
PUK				*i* Sn		**Sn**	**13 44 03.6**	**-1.1**
PYL	**PYLOS**	**2.70**	**159**	P		**Pn**	**13 43 32.8**	**-0.5**
PYL	**PYLOS**	**2.70**	**159**	P		**Pn**	**13 43 32.8**	**-0.5**
ULC	**Ulcinj**	**2.72**	**339**	⇑*i*Pn		**Pn**	**13 43 34.8**	**+1.3**
ULC				*e*Sn		**Sn**	**13 44 03.6**	**-2.5**
ULC	**Ulcinj**	**2.72**	**339**	⇑*i*Pn		**Pn**	**13 43 34.8**	**+1.3**
ULC				*e*Sn		**Sn**	**13 44 03.6**	**-2.5**
PE1	**Pezze di Greco**	**2.76**	**301**	*e*Pn		**Pn**	**13 43 35.9**	**+1.8**
OUR	**Ouranopolis**	**2.80**	**70**	P		**Pn**	**13 43 34.4**	**-0.2**
OUR	**Ouranopolis**	**2.80**	**70**	P		**Pn**	**13 43 34.4**	**-0.2**
DID	**Didima**	**2.85**	**131**	P		**Pn**	**13 43 35.8**	**+0.4**
DID	**Didima**	**2.85**	**131**	P		**Pn**	**13 43 35.8**	**+0.4**
SRS	**Serrai**	**2.88**	**53**	P		**Pn**	**13 43 36.4**	**+0.7**
SRS	**Serrai**	**2.88**	**53**	P		**Pn**	**13 43 35.7**	**0.0**
SRS	**Serrai**	**2.88**	**53**	P		**Pn**	**13 43 35.7**	**0.0**
TIP	**Timpagrande**	**2.95**	**266**	*e*Pn		**Pn**	**13 43 36.8**	**+0.1**
TIP	**Timpagrande**	**2.95**	**266**	*e*Pn		**Pn**	**13 43 36.8**	**+0.1**
BCI	**Bajram Curri**	**2.96**	**353**	*e*PN		**Pn**	**13 43 40.4**	**+3.6**
BCI				*i* SN		**Sn**	**13 44 19.1**	**+7.0**
BCI	**Bajram Curri**	**2.96**	**353**	*e*Pn		**Pn**	**13 43 40.4**	**+3.6**
VLY	**Voula,Athens**	**2.99**	**121**	*e*Pb		**Pb**	**13 43 37.4**	**-6.0**
VLY	**Voula,Athens**	**2.99**	**121**	*e*PB		**Pb**	**13 43 37.4**	**-6.0**
BUM	**Brajici-Budva**	**3.13**	**337**	⇑*i*Pn		**Pn**	**13 43 40.8**	**+1.6**
BUM				*e*Sn		**Sn**	**13 44 12.6**	**-3.7**
BUM	**Brajici-Budva**	**3.13**	**337**	⇑*i*Pn		**Pn**	**13 43 40.8**	**+1.6**
PDG	**Podgorica**	**3.15**	**342**	⇓*i*Pn		**Pn**	**13 43 40.9**	**+1.4**
PDG				*e*Sn		**Sn**	**13 44 13.7**	**-3.2**
TTG	**Podgorica**	**3.15**	**342**	⇓*i*Pn		**Pn**	**13 43 40.9**	**+1.4**
TTG				*e*Sn		**Sn**	**13 44 13.7**	**-3.2**
NVR	**Nevrokopi**	**3.18**	**52**	P		**Pn**	**13 43 40.8**	**+0.9**
NVR	**Nevrokopi**	**3.18**	**52**	P		**Pn**	**13 43 40.8**	**+0.9**
PVY	**Plav**	**3.19**	**352**	⇓*i*Pn		**Pn**	**13 43 42.8**	**+2.7**
PVY				*e*Sn		**Sn**	**13 44 15.6**	**-2.3**
PVY	**Plav**	**3.19**	**352**	⇓*i*Pn		**Pn**	**13 43 42.8**	**+2.7**
PVY				*e*Sn		**Sn**	**13 44 15.6**	**-2.3**
HCY	**Herceg Novi**	**3.39**	**333**	⇑*i*Pn		**Pn**	**13 43 43.6**	**+0.8**
HCY				*e*Sn		**Sn**	**13 44 18.3**	**-4.4**
HCY	**Herceg Novi**	**3.39**	**333**	⇑*i*Pn		**Pn**	**13 43 43.6**	**+0.8**
BEY	**Berane**	**3.48**	**352**	⇓*i*Pn		**Pn**	**13 43 47.3**	**+3.4**
BEY				*e*Sn		**Sn**	**13 44 22.3**	**-2.5**
IVA	**Berane**	**3.48**	**352**	⇓*i*Pn		**Pn**	**13 43 47.3**	**+3.4**
IVA				*e*Sn		**Sn**	**13 44 22.3**	**-2.5**
BARS	**Barje**	**3.52**	**15**	⇑*i*Pn		**Pn**	**13 43 45.3**	**+0.8**
LIA	**Limnos Island**	**3.61**	**81**	P		**Pn**	**13 43 47.0**	**+1.2**
LIA	**Limnos Island**	**3.61**	**81**	P		**Pn**	**13 43 47.0**	**+1.2**
CUC	**Castrocucco**	**3.69**	**280**	*e*Pn		**Pn**	**13 43 48.1**	**+1.2**
CUC	**Castrocucco**	**3.69**	**280**	*e*Pn		**Pn**	**13 43 48.1**	**+1.2**
KYTH	**Kithira**	**3.71**	**147**	*e*Pb		**Pb**	**13 43 49.4**	**-6.2**
KYTH	**Kithira**	**3.71**	**147**	*e*PB		**Pb**	**13 43 49.4**	**-6.2**
VTS	**Vitosha**	**3.75**	**32**	⇓P		**Pn**	**13 43 49.3**	**+1.6**
VTS	**Vitosha**	**3.75**	**32**	⇓*i*P		**Pn**	**13 43 49.3**	**+1.6**
VTS	**Vitosha**	**3.75**	**32**	⇓P		**Pn**	**13 43 49.3**	**+1.6**
BRY	**Bratogost**	**3.78**	**337**	⇑*i*Pn		**Pn**	**13 43 49.2**	**+1.0**
BRY				*e*Sn		**Sn**	**13 44 28.6**	**-3.5**
BRY	**Bratogost**	**3.78**	**337**	⇑*i*Pn		**Pn**	**13 43 49.2**	**+1.0**
BRY				*e*Sn		**Sn**	**13 44 28.9**	**-3.5**
CEL	**Celeste**	**3.81**	**254**	*e*Pn		**Pn**	**13 43 48.3**	**-0.3**
CEL	**Celeste**	**3.81**	**254**	*e*Pn		**Pn**	**13 43 48.3**	**-0.3**
UPM	**Unac-Piva**	**3.97**	**342**	*e*Pn		**Pn**	**13 43 53.0**	**+2.3**
UPM				*e*Sn		**Sn**	**13 44 32.4**	**-4.5**
UPM	**Unac-Piva**	**3.97**	**342**	*e*Pn		**Pn**	**13 43 53.0**	**+2.3**
PLE	**Pljevlja**	**3.99**	**348**	⇑*i*Pn		**Pn**	**13 43 53.6**	**+2.5**
PLE				*e*Sn		**Sn**	**13 44 34.6**	**-3.0**
PLE	**Pljevlja**	**3.99**	**348**	⇑*i*Pn		**Pn**	**13 43 53.6**	**+2.5**
PLE				*e*Sn		**Sn**	**13 44 34.6**	**-3.0**
STON	**Ston**	**4.06**	**329**	*e*Pn		**Pn**	**13 43 51.0**	**-0.9**
STON				Sn		**Sn**	**13 44 37.9**	**-1.2**
STON	**Ston**	**4.06**	**329**	*e*Pn		**Pn**	**13 43 51.0**	**-0.9**
STON				Sn		**Sn**	**13 44 37.8**	**-1.3**
GRUS	**Gruza**	**4.46**	**2**	*e*Pn		**Pn**	**13 43 58.0**	**+0.6**
ALN	**Alexandroupoli**	**4.46**	**69**	P		**Pn**	**13 43 58.5**	**+1.0**
ALN	**Alexandroupoli**	**4.46**	**69**	P		**Pn**	**13 43 58.5**	**+1.0**
BBLS	**Lazići**	**4.52**	**349**	*e*Pn		**Pn**	**13 43 57.4**	**-0.8**
DIVS	**Divibare**	**4.69**	**355**	⇑*i*Pn		**Pn**	**13 44 01.0**	**+0.4**
GZR	**Gura Zlata**	**6.19**	**15**	⇓*i*P		**Pb**	**13 44 41.4**	**+3.6**
NVLJ	**Novalja**	**6.65**	**322**	*e*Pn		**Pn**	**13 44 28.2**	**+0.7**
NVLJ				Sn		**Sn**	**13 45 42.6**	**-0.3**
NVLJ	**Novalja**	**6.65**	**322**	*e*Pn		**Pn**	**13 44 28.2**	**+0.7**
NVLJ				Sn		**Sn**	**13 45 42.6**	**-0.3**
VOIR		**6.87**	**28**	⇓P		**Pn**	**13 44 32.7**	**+2.2**
VOIR		**6.87**	**28**	⇓*i*P		**Pn**	**13 44 32.7**	**+2.2**
VOIR		**6.87**	**28**	⇓P		**Pn**	**13 44 32.7**	**+2.2**
MLR	**Muntele Rosu**	**7.25**	**32**	⇑P		**Pn**	**13 44 38.9**	**+3.0**
MLR	**Muntele Rosu**	**7.25**	**32**	Pn		**Pn**	**13 44 38.0**	**+2.2**
	0.4nm,0.3s,baz=227,slow=11,SNR=6.8							
MLR				Sn		**Sn**	**13 46 04.6**	**+6.7**
	0.2nm,0.3s,baz=190,slow=17,SNR=1.8							
MLR	**Muntele Rosu**	**7.25**	**32**	⇑*i*P		**Pn**	**13 44 38.9**	**+3.1**
PLOR	**Plostina**	**7.84**	**33**	⇑*i*P		**Pn**	**13 44 47.2**	**+3.4**
VRI	**Vrincioaia**	**7.88**	**33**	⇓P		**Pn**	**13 44 48.5**	**+4.0**
VRI	**Vrincioaia**	**7.88**	**33**	⇓*i*P		**Pn**	**13 44 48.5**	**+4.1**
VOY	**Vojsko**	**8.21**	**326**	*e*Pn		**Pn**	**13 44 48.8**	**-0.2**
VOY				*e*Sn		**Sn**	**13 46 22.9**	**+1.4**
VOY	**Vojsko**	**8.21**	**326**	*e*Pn		**Pn**	**13 44 48.8**	**-0.2**
VOY				*e*Sn		**Sn**	**13 46 22.9**	**+1.4**
OBKA	**Obir**	**8.33**	**330**	⇓*i*Pn		**Pn**	**13 44 50.8**	**+0.2**
OBKA				⇑*i*Sn		**Sn**	**13 46 23.7**	**-0.6**
OBKA	**Obir**	**8.33**	**330**	Pn		**Pn**	**13 44 50.8**	**+0.2**
OBKA				Sn		**Sn**	**13 46 23.7**	**-0.6**
TESR		**8.37**	**30**	⇑P		**Pn**	**13 44 44.4**	**-6.8**
TESR		**8.37**	**30**	⇑P		**Pn**	**13 44 44.4**	**-6.8**
MOA	**Molln**	**9.57**	**334**	⇑*i*Pn		**Pn**	**13 45 07.5**	**0.0**
MOA				⇓*i*Sn		**Sn**	**13 46 53.6**	**-1.0**
MOA	**Molln**	**9.57**	**334**	Pn		**Pn**	**13 45 07.5**	**0.0**
BRTR	**Keskin Array B**	**10.12**	**84**	Pn		**Pn**	**13 45 17.1**	**+2.1**
	0.1nm,0.3s,baz=273,slow=13,SNR=3.2							
BRTR	**Keskin Array B**	**10.12**	**84**	Pn		**Pn**	**13 45 17.1**	**+2.0**
DAVOX	**Davos/Dischmat**	**10.71**	**317**	LR		LR	13 50 06.8	
	comp=Z,34nm,20.9s,baz=256,slow=40							
HFS	**Hagfors**	**21.17**	**350**	P		**P**	**13 47 34.4**	**-0.5**
	5.0nm,0.9s,mb3.8,baz=123,slow=10,SNR=2.6							
HFS				LR		LR	13 56 17.8	
	comp=Z,35nm,18.6s,MS2.8,baz=133,slow=38							
HFS	**Hagfors**	**21.17**	**350**	P		**P**	**13 47 34.4**	**-0.5**
FINES	**FINESS Array B**	**22.31**	**7**	P		**P**	**13 47 47.0**	**0.0**
	1.1nm,0.5s,mb3.6,baz=172,slow=13,SNR=2.7							
FINES	**FINESS Array B**	**22.31**	**7**	P		**P**	**13 47 47.0**	**0.0**
NOA	**NORSAR Array B**	**22.40**	**348**	P		**P**	**13 47 47.1**	**-0.9**
	1.3nm,0.8s,mb3.4,baz=156,slow=12,SNR=3.5							
NOA				LR		LR	13 57 38.6	
	comp=Z,21nm,21.6s,MS2.5,baz=245,slow=40							
NOA	**NORSAR Array B**	**22.40**	**348**	P		**P**	**13 47 47.1**	**-0.9**
EKA	**Eskdalemuir Ar**	**22.43**	**323**	P		**P**	**13 47 47.7**	**-0.6**
	3.6nm,0.8s,mb3.9,baz=118,slow=10,SNR=10							
EKA	**Eskdalemuir Ar**	**22.43**	**323**	P		**P**	**13 47 47.7**	**-0.7**
TORD	**Torodi Ar. Bea**	**31.02**	**218**	P		**P**	**13 49 06.4**	**-1.1**
TORD	**Torodi Ar. Bea**	**31.02**	**218**	P		**P**	**13 49 06.4**	**-1.1**
	0.8nm,0.8s,mb3.6,baz=35,slow=7.4,SNR=5.0							
MKAR	**Makanchi Array**	**44.64**	**59**	P		**P**	**13 50 60.0**	**-2.2**
	0.8nm,0.4s,mb3.9,baz=276,slow=7.3,SNR=6.5							
ZALV	**Zalesovo Beam**	**44.85**	**49**	P		**P**	**13 51 01.2**	**-2.6**
ZALV	**Zalesovo Beam**	**44.85**	**49**	P		**P**	**13 51 01.2**	**-2.6**
	1.3nm,0.4s,mb4.1,baz=278,slow=8.3,SNR=7.6							
SONM	**Songino Array**	**59.66**	**51**	P		**P**	**13 52 52.0**	**-1.8**
	0.5nm,0.7s,mb3.6,baz=278,slow=10.0,SNR=3.5							

*ISCJB **04** 14:02:22.9±1.2, 12˚.3N±0˚.3×143˚.3E±0˚.3, h10km, mb3.6/4, Error ellipse: s-maj=58.6km s-min=12.2km az=43.3*
*IDC **04** 14:02:22.7±1.3, 12˚.35N×143˚.35E, h0km, mb3.6/4, mb1 4.0/4, mb1mx3.6/21, mbtmp3.6/4, Error ellipse: s-maj=75.8km s-min=22.2km az=123.0*
*NEIC **04** 14:02:24.4±1.2, 12˚.30N×143˚.40E, h10km, Error ellipse: s-maj=71.4km s-min=17.9km az=123.0*
ISC 04 14:02:24.5±1.2, 12˚.3N±0˚.3×143˚.4E±0˚.3, h10km, n6, σ0s73/8, mb3.6/4, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUMO	**Guam**	**1.91**	**48

	SNR=21								
KK31	**Karatay Array**	**6.03**	**351**		P		**Pn**	**14 41 32.6**	**+0.3**
	comp=E,37nm,0.3s,baz=181,slow=14,SNR=834								
KK31					S		**Sn**	**14 42 33.7**	**-6.3**
	comp=E,48nm,0.3s,baz=188,slow=26,SNR=17								
ULHL	**Ulahol**	**6.11**	**32**		P		**Pn**	**14 41 33.8**	**+0.3**
	SNR=50								
CHMS	**Chumysh**	**6.25**	**20**		P		**Pn**	**14 41 36.0**	**+0.7**
	SNR=34								
USP	**Ospenovka**	**6.44**	**18**		P		**Pn**	**14 41 37.8**	**0.0**
	SNR=18								
TKM2	**Tokmak 2**	**6.44**	**25**	⇓	P		**Pn**	**14 41 38.6**	**+0.7**
	comp=E,22nm,0.7s								
TKM2				⇓	S		**Sn**	**14 42 39.4**	**-11**
	comp=E,24nm,0.6s								
TKM2	**Tokmak 2**	**6.44**	**25**		P		**Pn**	**14 41 38.5**	**+0.6**
	SNR=11								
TKM2	**Tokmak 2**	**6.44**	**25**		*e*P		**Pn**	**14 41 38.4**	**+0.5**
	comp=E,22nm,0.6s								
BHK	**Bhakra**	**6.86**	**145**		*ex*		x	14 42 58.4	
BHK					*ex*		x	14 43 34.0	
SDNR	**Sundarnagar**	**7.05**	**142**		*e*PKP		**Pn**	**14 41 47.5**	**+1.2**
SMLA	**Simla**	**7.45**	**142**		*i* P		**Pn**	**14 41 53.1**	**+1.4**
SMLA					*i* S		**Sn**	**14 43 11.7**	**-3.0**
SMLA					*i* S		**Sn**	**14 43 11.9**	**-2.7**
SMLA				⇓				14 43 14.2	
	comp=E,3μm,0.2s								
SMLA				⇓				14 43 14.8	
	comp=N,3μm,0.3s								
KLP	**Kalpa**	**7.71**	**135**		*e*PKP		**Pn**	**14 41 55.6**	**+0.4**
KLP					*e*S		**Sn**	**14 43 15.2**	**-5.7**
KLP					AML		AML	14 43 26.9	
	comp=N,174nm,0.3s								
KLP					AML		AML	14 43 27.3	
	comp=E,386nm,0.5s								
IMYA	**Miami**	**9.46**	**269**		*e*Pn		**Pn**	**14 42 18.8**	**-0.1**
IMYA					*e*			14 42 21.0	
	comp=Z,1μm,0.1s								
NDI	**New Delhi**	**9.57**	**150**		*e*PKP		**Pn**	**14 42 20.0**	**-0.5**
NDI					*e*S		**Sn**	**14 44 02.0**	**-4.1**
KHET	**Khetri**	**9.65**	**159**		*e*PKP		**Pn**	**14 42 22.5**	**+1.0**
KHET					*e*S		**Sn**	**14 44 03.1**	**-4.8**
KUDL	**Kundal**	**9.80**	**155**		*e*PKP		**Pn**	**14 42 22.8**	**-0.6**
KUDL					*e*S		**Sn**	**14 44 06.3**	**-5.2**
KUDL					AML		AML	14 44 10.3	
	comp=N,32nm,0.5s								
KUDL					AML		AML	14 44 11.3	
	comp=E,35nm,0.3s								
SONA	**Sohna**	**9.91**	**152**		*e*PKP		**Pn**	**14 42 25.2**	**+0.2**
SONA					*e*S		**Sn**	**14 44 09.3**	**-5.0**
SONA					AML		AML	14 44 14.6	
	comp=N,32nm,0.6s								
SONA					AML		AML	14 44 15.4	
	comp=E,67nm,0.3s								
IMOG	**Moghan**	**10.11**	**268**		*e*Pn		**Pn**	**14 42 28.3**	**+0.8**
IMOG					*e*			14 42 30.5	
	comp=Z,723nm,0.1s								
IPAY	**Payeh**	**10.33**	**270**		*e*Pn		**Pn**	**14 42 31.4**	**+0.9**
IPAY					*e*			14 44 26.0	
	comp=Z,733nm,0.2s								
IAKL	**Akhelmad**	**10.50**	**271**		*e*Pn		**Pn**	**14 42 33.2**	**+0.4**
IAKL					*e*			14 42 36.6	
	comp=Z,682nm,0.1s								
IAKL					*e*Sg		**Sn**	**14 44 26.0**	**-2.5**
IEMG	**Emamgholi**	**10.52**	**275**		*e*Pn		**Pn**	**14 42 32.7**	**-0.3**
IEMG					*e*			14 44 30.6	
	comp=Z,1μm,0.1s								
ISFR	**Sfrayin**	**11.06**	**274**		*e*Pn		**Pn**	**14 42 40.2**	**-0.1**
ISFR					*e*			14 44 54.8	
	comp=Z,536nm,0.3s								
MK31	**Makanchi Array**	**12.37**	**36**	⇑	P		**Pn**	**14 42 55.4**	**-2.0**
	comp=Z,1.1nm,0.4s,baz=214,slow=10.0,SNR=34								
MK31	**Makanchi Array**	**12.37**	**36**		*e*P		**Pn**	**14 42 55.6**	**-1.8**
MKAR	**Makanchi Array**	**12.37**	**36**		P		**Pn**	**14 42 57.3**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=224,slow=16,SNR=12								
KOLN	**Koldanda**	**13.63**	**130**		*e*P		**Pn**	**14 43 13.3**	**-0.7**
	comp=Z,22nm,0.4s								
GKN	**Gorkha**	**14.11**	**127**		*e*P		**Pn**	**14 43 19.6**	**-0.7**
	comp=Z,47nm,0.3s								
KURBB	**Kurchatov Arra**	**14.29**	**17**	⇓	P		**Pn**	**14 43 25.0**	**+2.6**
	comp=Z,2.4nm,0.8s								
KURK	**Kurchatov**	**14.40**	**18**	⇓	P		**Pn**	**14 43 25.9**	**+2.2**
	comp=Z,12nm,0.9s								
KURK	**Kurchatov**	**14.40**	**18**		*e*P		**Pn**	**14 43 26.3**	**+2.6**
	comp=Z,12nm,0.8s								
KKN	**Kakani**	**14.67**	**126**		*e*P		**Pn**	**14 43 26.3**	**-1.1**
	comp=Z,32nm,0.5s								
DMN	**Daman**	**14.69**	**127**		*e*P		**Pn**	**14 43 26.5**	**-1.0**
	comp=Z,28nm,0.3s								
AB31	**Akbulak array**	**14.86**	**328**		P		**Pn**	**14 43 28.4**	**-1.2**
	comp=Z,1.2nm,0.3s,baz=137,slow=12,SNR=29								
ABKAR	**Akbulak array**	**14.86**	**328**		*e*P		**Pn**	**14 43 27.8**	**-1.8**
	comp=Z,3.5nm,0.3s								
PKI	**Pulchoki**	**14.91**	**126**		*e*P		**Pn**	**14 43 29.8**	**-0.5**
	comp=Z,16nm,0.2s								
GUN	**Gumba**	**14.99**	**124**		*e*P		**Pn**	**14 43 30.3**	**-1.0**
	comp=Z,30nm,0.3s								
JIRN	**Jiri**	**15.36**	**124**		*e*P		**Pn**	**14 43 35.4**	**-0.6**
	comp=Z,51nm,0.4s								
VOSK	**Vostochnaya**	**15.58**	**358**	⇑	P		**Pn**	**14 43 36.2**	**-2.4**
	comp=Z,3.3nm,0.8s								
BVAR	**Borovoye Array**	**15.90**	**357**		P		**Pn**	**14 43 40.7**	**-1.8**
	comp=Z,1.8nm,0.3s,baz=160,slow=12,SNR=12								
BVAR					S		**Sn**	**14 46 28.9**	**-10**
	comp=Z,0.4nm,0.3s,baz=175,slow=26,SNR=6.4								
ZRNK	**Zerenda**	**15.92**	**354**	⇑	P		**Pn**	**14 43 40.9**	**-1.9**
	comp=Z,3.5nm,0.5s								
BRVK	**Borovoye**	**15.94**	**357**		P		**Pn**	**14 43 40.9**	**-2.2**
	comp=Z,7.9nm,0.8s								
RAMN	**Ramite**	**16.10**	**125**		*e*P		**Pn**	**14 43 44.8**	**-0.5**
AKTK	**Aktyubinsk**	**16.57**	**328**		P		**Pn**	**14 43 51.9**	**+1.1**
AKTK					S		**Sn**	**14 46 44.2**	**-11**
AKTO	**Aktyubinsk**	**16.57**	**328**		P		**Pn**	**14 43 51.9**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=130,slow=13,SNR=8.5								
AKTO					S		**Sn**	**14 46 44.2**	**-11**
	comp=Z,0.6nm,0.3s,baz=29,slow=17,SNR=5.3								
TAPN	**Taplejung**	**16.58**	**122**		*e*P		**Pn**	**14 43 51.9**	**+0.8**
ODAN	**Odare**	**16.69**	**124**		*e*P		**Pn**	**14 43 53.0**	**+0.6**
ZAA0	**Zalesovo Array**	**19.04**	**24**		*e*P		**P**	**14 44 17.7**	**-0.6**
ZALV	**Zalesovo Beam**	**19.04**	**24**		P		**P**	**14 44 17.8**	**-0.5**
	comp=Z,3.3nm,0.3s,baz=213,slow=10,SNR=37								
GTA	**Gaotai**	**22.04**	**76**		P		**P**	**14 44 52.6**	**+2.0**
GTA					pmax		pmax		
	comp=Z,12nm,1.2s,mb4.1								
SONM	**Songino Array**	**27.41**	**56**		P		**P**	**14 45 41.3**	**+1.4**
	comp=Z,2.4nm,1.0s,mb3.7,baz=254,slow=9.2,SNR=9.6								
SONM					pP		pP	14 46 13.0	+7.5
	comp=Z,0.5nm,0.4s,baz=253,slow=11,SNR=2.8								
ULN	**Ulaanbaatar**	**27.85**	**56**		P		**P**	**14 45 45.1**	**+1.3**
FINES	**FINESS Array B**	**37.33**	**325**		P		**P**	**14 47 07.1**	**+1.0**
FINES	**FINESS Array B**	**37.33**	**325**		P		**P**	**14 47 07.1**	**+1.0**
	comp=Z,2.3nm,0.8s,mb4.2,baz=116,slow=9.4,SNR=3.6								
ARCES	**ARCESS Array B**	**40.80**	**337**		P		**P**	**14 47 35.5**	**+0.6**
	comp=Z,0.7nm,0.4s,mb3.8,baz=113,slow=8.7,SNR=14								
KSRS	**Korea Array**	**44.03**	**72**		P		**P**	**14 48 02.5**	**+1.0**
	comp=Z,2.0nm,1.1s,mb3.7,baz=296,slow=6.6,SNR=5.0								
NOA	**NORSAR Array B**	**44.27**	**323**		P		**P**	**14 48 03.8**	**+0.7**
	comp=Z,1.4nm,0.8s,mb3.7,baz=93,slow=8.0,SNR=3.4								
TIXI	**Tiksi**	**44.92**	**22**		*e*P		**P**	**14 48 07.7**	**-0.4**
BPAW	**Bear Paw Mtn.**	**73.57**	**18**		*e*P		**P**	**14 51 24.7**	**-0.6**
COLA	**College**	**73.66**	**17**		*e*P		**P**	**14 51 26.1**	**+0.3**
	comp=Z,1.8nm,0.8s,mb3.9								
ILAR	**Eielson Array**	**73.97**	**16**		P		**P**	**14 51 27.1**	**-0.5**
	comp=Z,0.9nm,0.9s,mb3.5,baz=314,slow=5.2,SNR=13								
YKA	**Yellowknife Ar**	**80.56**	**3**		P		**P**	**14 52 04.5**	**+0.1**
	comp=Z,0.6nm,0.3s,mb3.9,baz=350,slow=5.5,SNR=8.7								

MAN 04 14:43:24.9‡11.1N×122.2E,h32km, mb3.8, ML2.6, MS2.2, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
IPIL	**Ipil**	**1.35**	**165**	*e*P	Pn	14 43 46.9		+0.2
GUIM	**Jordan**	**1.56**	**14**	*e*P	Pn	14 43 50.5		+1.0
GUIM				*e*S	Sn	14 44 08.3		-0.2
PAGZ	**Pagadian**	**1.70**	**137**	*e*P	Pn	14 43 52.3		+0.9

*BJI **04** 15:16:49.7, 5.25S×152.18E, h48km, mB5.2/37, mb4.9/44, Ms4.9/45, Ms7 4.8/43*
*MOS **04** 15:16:50.2±1.3, 4.97S×151.76E, h33km, mb5.3/21, Error ellipse: s-maj=10.8km s-min=7.6km az=81.2*
*ISCJB **04** 15:16:52.2±0.1, 5.12S±0.03×151.77E±0.03, h45km, mb5.1/112, MS4.7/37, Error ellipse: s-maj=4.2km*
s-min=3.5km az=158.2
*NEIC **04** 15:16:53.2±0.1, 5.06S×151.80E, mb5.2/54, MS4.8/6, MW5.5, Error ellipse: s-maj=5.8km s-min=4.1km az=118.0, Moment Tensor Solution. s47 Moment tensor: Scale 10^{17}Nm; M_{rr}=2.19; $M_{\theta\theta}$=1.57; $M_{\phi\phi}$=0.63; $M_{r\theta}$=0.54; $M_{r\phi}$=0.49; $M_{\theta\phi}$=0.07; Best double couple: M_{o}2.10000×10^{17} NP1: ϕ_s242.00000°, δ39.00000°, λ81.00000°. NP2: ϕ_s73.00000°, δ52.00000°, λ97.00000°. Principal axes: T 2.2700, Plg81.0000°, Azm18.0000°; N -0.4500, Plg5.0000°, Azm248.0000°; P -1.8300, Plg6.0000°, Azm158.0000°;*
*IDC **04** 15:16:53.5±0.5, 5.16S×151.91E, h51km±3km, mb4.5/19, mb1 4.6/20, mb1mx4.6/21, mbtmp4.5/20, MS4.6/15, Ms1 4.6/15, ms1mx4.5/19 Error ellipse: s-maj=16.4km s-min=10.2km az=106.0*
*DJA **04** 15:16:56, 5.54S×152.26E, h55km, mb5.6/21*
*GCMT **04** 15:16:57.8±0.1, 5.43S×151.98E, h51km, MW5.4, Moment Tensor Solution. s95,c173; s94,c178; Moment tensor: Scale 10^{17}Nm; M_{rr}1.57±.03; $M_{\theta\theta}$-1.65±.02; $M_{\phi\phi}$0.08±.02; $M_{r\theta}$0.31±.02; $M_{\theta\phi}$-0.65±.02; $M_{r\phi}$-0.31±.02; Best double couple: M_{o}1.80000×10^{17} NP1: ϕ_s236.00000°, δ44.00000°, λ67.00000°. NP2: ϕ_s87.00000°, δ50.00000°, λ110.00000°. Principal axes: T 1.6900, Plg74.0000°, Azm61.0000°; N 0.1900, Plg16.0000°, Azm253.0000°; P -1.8800, Plg3.0000°, Azm162.0000°; Data Used: II IU IC G CN.*
ISC 04 15:16:53.9±0.1, 5.14S±0.03×151.84E±0.03, h47km, h47km±1.1km:pP-P, n486, σ0.86/393, mb5.1/112, MS4.7/37, 96C-86D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
PMG	**Port Moresby**	**6.29**	**227**	*de*P	**Pn**	**15 18 25.7**		**+1.6**
PMG				pmax	pmax			
	comp=Z,938nm,1.0s							
PMG	**Port Moresby**	**6.29**	**227**	P	**Sn**	**15 19 40.9**		**+6.2**
PMG	**Port Moresby**	**6.29**	**227**	P	**Pn**	**15 18 26.9**		**+2.8**
	comp=Z,7.3nmcomp=Z,1μm,1.1s							
HNR	**Honiara**	**9.10**	**118**	*e*Pn	**Pn**	**15 19 03.5**		**+0.7**
	comp=Z,308nm,0.8s							
HNR	**Honiara**	**9.10**	**118**	P	**Pn**	**15 19 04.0**		**+1.2**
	comp=Z,19nm,0.3s,baz=228,slow=3.2,SNR=35							
HNR				LR	LR	15 21 44.2		
	comp=Z,2μm,21.2s,baz=150,slow=32							
HNR	**Honiara**	**9.10**	**118**	*e*P	**Pn**	**15 19 03.5**		**+0.7**
HNR				pmax	pmax			
	comp=Z,308nm,0.8s							
JAY	**Jayapura**	**11.41**	**283**	P	**Pn**	**15 19 42.4**		**+8.0**
	comp=Z,6μmcomp=Z,156nm,1.7s							
COEN	**Coen**	**12.23**	**224**	*e*P	**Pn**	**15 19 46.2**		**+0.6**
	comp=Z,29nm,0.6s							
COEN	**Coen**	**12.23**	**224**	P	**Pn**	**15 19 46.4**		**+0.8**
	comp=Z,4μmcomp=Z,214nm,1.5s							
CTA	**Charters Tower**	**15.82**	**200**	*e*P	**Pn**	**15 20 34.0**		**+0.4**
	comp=Z,58nm,1.2s							
CTA				*ep*P	pP	15 20 47.8		+0.2
CTA				*e*S	**S**	**15 23 30.7**		**-10**
CTA	**Charters Tower**	**15.82**	**200**	P	**Pn**	**15 20 34.2**		**+0.6**
	comp=Z,0.6nm,0.3s,baz=24,slow=14,SNR=42							
CTA				LR	LR	15 26 00.9		
	comp=Z,4μm,21.3s,baz=24,slow=35							
CTAO	**Charters Tower**	**15.82**	**200**	*e*P	**Pn**	**15 20 33.8**		**+0.2**
	comp=Z,133nm,1.2s							
CTAO	**Charters Tower**	**15.82**	**200**	*e*P	**Pn**	**15 20 33.8**		**+0.2**
CTAO				pmax	pmax			
	comp=Z,133nm,1.2s							
CTAO	**Charters Tower**	**15.82**	**200**	P	**Pn**	**15 20 34.1**		**+0.5**
	comp=Z,3μmcomp=Z,119nm,1.3s							
CTAO	**Charters Tower**	**15.82**	**200**	P	**Pn**	**15 20 33.7**		**+0.1**
	comp=Z,3μmcomp=Z,119nm,1.3s							
BAKI	**Biak**	**16.19**	**283**	P	Px	15 20 53.4		
TLE	**Tual**	**19.02**	**268**	P	Px	15 21 34.9		
	comp=Z,239nm,1.3s							
TLE	**Tual**	**19.02**	**268**	P	**Pn**	**15 21 15.7**		**+2.4**
	comp=Z,4μmcomp=Z,240nm,1.3s							
GUMO	**Guam**	**19.85**	**340**	*e*P	**Pn**	**15 21 22.9**		**-0.1**
	comp=Z,507nm,1.1s							
GUMO	**Guam**	**19.85**	**340**	P	**Pn**	**15 21 23.6**		**+0.6**
	comp=Z,3.5nm,0.3s,baz=189,slow=5.1,SNR=9.2							
GUMO				LR	LR	15 27 45.8		
	comp=Z,1μm,20.9s,baz=341,slow=33							
GUMO	**Guam**	**19.85**	**340**	*e*P	**Pn**	**15 21 22.9**		**-0.1**
GUMO				pmax	pmax			
	comp=Z,507nm,1.1s							
GUMO	**Guam**	**19.85**	**340**	P	**Pn**	**15 21 25.5**		**+2.5**
GUMO	**Guam**	**19.85**	**340**	P	**Pn**	**15 21 24.8**		**+1.8**
	comp=Z,525nm,1.1s							
EIDS	**Eidsvold**	**20.13**	**182**	*e*P	**P**	**15 21 24.0**		**-0.1**
KAKA	**Kakadu**	**20.58**	**247**	*e*P	**P**	**15 21 28.9**		**-0.2**
	comp=Z,1μm,1.4s							
KAKA				*e*S	**S**	**15 25 11.3**		**-5.5**
KAKA	**Kakadu**	**20.58**	**247**	*e*P	**P**	**15 21 28.8**		**-0.3**
	comp=Z,3μm,1.3s							
KAKA	**Kakadu**	**20.58**	**247**	P	**P**	**15 21 28.7**		**-0.4**
	comp=Z,682nm,1.1s							
NOUC	**Port Laguerre**	**21.92**	**142**	*e*P	**P**	**15 21 47.5**		**+4.1**
DZM	**Mont Dzumac**	**21.98**	**141**	*e*P	**P**	**15 21 43.2**		**-0.9**
	comp=Z,105nm,1.3s,mb5.1							
DZM				*e*LR	LR	15 27 00.1		
	comp=Z,7μm,23.8s							
DZM	**Mont Dzumac**	**21.98**	**141**	*e*P	**P**	**15 21 43.4**		**-0.7**
WRAB	**Tennant Creek**	**22.49**	**228**	P	**P**	**15 21 49.0**		**-0.6**
	comp=Z,2μm,1.3s,mb6.4,SNR=29							
WRAB	**Tennant Creek**	**22.49**	**228**	*e*P	**P**	**15 21 48.9**		**-0.6**
	comp=Z,424nm,1.1s,mb5.8							
WRAB				LR	LR			
	comp=Z,3μm,19.0s,MS4.7							
WRAB	**Tennant Creek**	**22.49**	**228**	*e*P	**P**	**15 21 48.9**		**-0.7**
WRAB				pmax	pmax			
	comp=Z,424nm,1.1s,mb5.8							
WRAB				MLR	MLR			
	comp=Z,3μm,19.0s,MS4.7							
WRAB	**Tennant Creek**	**22.49**	**228**	P	**P**	**15 21 50.2**		**+0.6**
	comp=Z,6μmcomp=Z,409nm,1.3s,mb5.7							
WRAB	**Tennant Creek**	**22.49**	**228**	P	**P**	**15 21 50.2**		**+0.6**
	comp=Z,6μmcomp=Z,409nm,1.3s,mb5.7							
NLAI	**Namlea**	**24.74**	**273**	P	**P**	**15 22 18.3**		**+7.0**
	comp=Z,59nm,1.3s,mb5.0							
KNA	**Kununurra**	**24.99**	**243**	*e*P	**P**	**15 22 13.3**		**-0.2**
	comp=Z,113nm,0.9s,mb5.4							
KNA				*ep*P		15 22 26.2		
KNA				*e*S	**S**	**15 26 40.0**		**+5.6**
KNA	**Kununurra**	**24.99**	**243**	P	**P**	**15 22 13.4**		**-0.1**
	comp=Z,9μmcomp=Z,1μm,0.9s,mb6.4							
KNA	**Kununurra**	**24.99**	**243**	P	**P**	**15 22 13.6**		**+0.1**
	comp=Z,9μmcomp=Z,1μm,0.9s,mb6.4							
TNTI	**Ternate**	**25.14**	**283**	P	pP	15 22 29.5		+2.4
	comp=Z,2μmcomp=Z,137nm,1.4s							
ARMA	**Armidale**	**25.15**	**180**	*e*P	**P**	**15 22 16.5**		**+1.7**
ARMA				*ep*P	pP	15 22 26.3		-0.6
ARMA				*e*S	**S**	**15 26 34.7**		**-1.9**
ARMA	**Armidale**	**25.15**	**180**	*e*P	**P**	**15 22 16.0**		**+1.2**
ASAR	**Alice Springs**	**25.26**	**221**	P	**P**	**15 22 15.5**		**-0.4**
	comp=Z,51nm,0.8s,mb5.1,baz=56,slow=9.0,SNR=108							
ASAR				pP	pP	15 22 29.6		+1.6
	comp=Z,309nm,0.9s,baz=59,slow=7.4,SNR=52							
ASAR				S	**S**	**15 26 38.6**		**+0.1**
	comp=Z,9.0nm,1.2s,baz=41,slow=18,SNR=2.3							
ASAR				ScP	ScP	15 29 21.7		-2.3
	comp=Z,1.4nm,0.8s,baz=48,slow=1.4,SNR=4.4							
ASAR				pScP		15 29 32.2		
	comp=Z,2.2nm,0.7s,baz=31,slow=2.5,SNR=5.6							
ASAR	**Alice Springs**	**25.26**	**221**	P	**P**	**15 22 15.5**		**-0.4**
ASAR				*PP	pP	15 22 29.6		+1.6
ASAR				S	**S**	**15 26 38.6**		**+0.1**
SGSI	**Sangihe**	**27.71**	**288**	P	**P**	**15 22 46.1**		**+8.0**
	comp=Z,8μmcomp=Z,106nm,1.5s,mb5.2							
MNI	**Manado**	**27.75**	**283**	P	pP	15 22 53.5		+2.8
	comp=Z,129nm,1.3s							
MNI	**Manado**	**27.75**	**283**	P	**P**	**15 22 39.6**		**+1.1**
	comp=Z,129nm,1.3s,mb5.4							
STKA	**Stephens Creek**	**28.28**	**199**	*e*P	**P**	**15 22 42.4**		**-0.6**
	comp=Z,10.0nm,0.9s,mb4.5							
STKA				*ep*P	pP	15 22 54.3		-0.9
STKA				*e*S	**S**	**15 27 28.9**		**+2.9**
STKA	**Stephens Creek**	**28.28**	**199**	*e*P	**P**	**15 22 42.7**		**-0.2**
	comp=Z,17nm,1.0s,mb4.6							
STKA				*e*	pP	15 22 54.3		-0.9
STKA	**Stephens Creek**	**28.28**	**199**	P	**P**	**15 22 42.2**		**-0.7**
	comp=Z,5.5nm,0.8s,mb4.2,baz=21,slow=11,SNR=12							
STKA				LR	LR	15 34 23.3		
	comp=Z,2μm,19.2s,MS4.7,baz=13,slow=37							
KMSI	**Cibinong**	**28.40**	**281**	P	pP	15 23 01.2		+4.7
	comp=Z,2μmcomp=Z,286nm,0.9s							
KMSI	**Cibinong**	**28.40**	**281**	P	**P**	**15 22 50.5**		**+6.2**
	comp=Z,2μmcomp=Z,285nm,0.9s,mb5.9							
RIV	**Riverview**	**28.55**	**181**	*e*P	pP	15 22 57.1		-0.5
FITZ	**Fitzroy Crossi**	**28.66**	**241**	*e*P	**P**	**15 22 45.6**		**-0.9**
	comp=Z,82nm,1.0s,mb5.4							
FITZ				*ep*P	pP	15 22 58.6		-0.2
FITZ				*e*S	**S**	**15 27 23.5**		**-8.8**
FITZ	**Fitzroy Crossi**	**28.66**	**241**	*e*P	**P**	**15 22 45.6**		**-0.9**
FITZ	**Fitzroy Crossi**	**28.66**	**241**	P	**P**	**15 22 45.7**		**-0.8**
	comp=Z,19nm,0.4s,mb5.2,baz=74,slow=7.0,SNR=78							
FITZ				pP	pP	15 22 58.5		-0.3
	comp=Z,294nm,0.8s,baz=86,slow=7.6,SNR=58							
FITZ				LR	LR	15 35 40.0		
	comp=Z,2μm,19.4s,MS4.7,baz=59,slow=39							
FITZ	**Fitzroy Crossi**	**28.66**	**241**	P	**P**	**15 22 45.6**		**-0.9**
	comp=Z,9μmcomp=Z,896nm,0.9s							
FITZ	**Fitzroy Crossi**	**28.66**	**241**	P	**P**	**15 22 45.3**		**-1.2**
	comp=Z,9μmcomp=Z,896nm,0.9s							
DAV	**Davao City (W)**	**28.88**	**295**	LR	LR	15 35 10.8		
	comp=Z,865nm,18.1s,MS4.4,baz=284,slow=38							
DAV	**Davao City (W)**	**28.88**	**295**	*e*P	**P**	**15 22 48.8**		**+0.3**
KDI	**Kendari**	**29.15**	**271**	P	**P**	**15 22 56.1**		**+5.1**
	comp=Z,14nm,0.9s,mb4.7							
MMRI	**Maumere**	**29.59**	**262**	P	pP	15 23 08.6		+1.5
	comp=Z,2μmcomp=Z,206nm,1.0s							
MMRI	**Maumere**	**29.59**	**262**	P	**P**	**15 23 01.3**		**+6.5**
	comp=Z,2μmcomp=Z,206nm,1.0s,mb5.8							
CNB	**Canberra Magne**	**30.12**	**184**	*e*P	pP	15 23 11.0		-0.5
CNB				*e*S	**S**	**15 27 55.0**		**+0.2**
CAN	**Canberra**	**30.15**	**185**	P	**P**	**15 23 00.3**		**+0.8**
	comp=Z,50nm,1.1s,mb5.2							
CAN				*e*	pP	15 23 10.8		-1.0
CAN	**Canberra**	**30.15**	**185**	P	**P**	**15 23 00.3**		**+0.8**
CAN				*e*	pP	15 23 10.8		-1.0
CAN				pmax	pmax			
	comp=Z,50nm,1.1s,mb5.2							
MRSI	**Marisa**	**30.38**	**280**	P	pP	15 23 14.8		+0.7
	comp=Z,411nmcomp=Z,28nm,1.1s							
MRSI	**Marisa**	**30.38**	**280**	P	pP	15 23 11.9		-2.2
	comp=Z,28nm,1.1s							
WSI	**Waingapu**	**31.59**	**260**	P	pP	15 23 25.3		+0.5
	comp=Z,6μmcomp=Z,587nm,1.1s							
WSI	**Waingapu**	**31.59**	**260**	P	**P**	**15 23 17.8**		**+5.3**
	comp=Z,5μmcomp=Z,588nm,1.1s,mb6.3							
PCI	**Palu**	**32.23**	**276**	P	**P**	**15 23 21.3**		**+3.2**
PCI	**Palu**	**32.23**	**276**	P	**P**	**15 23 19.8**		**+1.7**
	comp=Z,797nmcomp=Z,74nm,1.1s,mb5.5							
TOO	**Toolangi**	**32.80**	**189**	*e*P	pP	15 23 34.0		-1.1
TOO				*e*PCP	PcP	15 26 20.5		+13
TOO				*e*S	**S**	**15 28 36.2**		**-0.5**
PVCP	**Virac**	**33.19**	**304**	*e*P	PP	15 24 47.3		+5.0
FORT	**Forrest**	**33.93**	**218**	*e*P	**P**	**15 23 32.2**		**-0.5**
	comp=Z,28nm,0.9s,mb5.2							
FORT				*ep*P	pP	15 23 44.1		-1.0
FORT	**Forrest**	**33.93**	**218**	*e*P	**P**	**15 23 31.8**		**-1.0**
	comp=Z,454nm,0.6s							
FORT				*e*	pP	15 23 43.8		-1.3
MYLDM	**Lahad Datu**	**34.84**	**287**	P	sP	15 24 01.8		+3.0
MYLDM	**Lahad Datu**	**34.84**	**287**	P	pP	15 23 51.0		-2.2
MBWA	**Marble Bar**	**34.97**	**240**	*e*P	**P**	**15 23 40.7**		**-1.2**
	comp=Z,277nm,1.0s,mb6.1							
MBWA				*e*	pP	15 23 53.7		-0.6
MBWA	**Marble Bar**	**34.97**	**240**	P	**P**	**15 23 42.4**		**+0.5**
	comp=Z,4μmcomp=Z,368nm,1.1s,

YUK MLR MLR
comp=N,391nm,18.0s
YUK MLR MLR
comp=Z,345nm,18.0s,MS4.4
WHN Wuhan 50.44 317 P **P** **15 25 48.0 +0.9**
WHN S **S** **15 32 59.3 +1.7**
WHN pmax pmax
comp=Z,21nm,0.7s,mb5.3
WHN pmax pmax
comp=Z,530nm,11.0s
WHN LR LR
comp=N,810nm,14.8s
WHN LR LR
comp=E,3µm,23.6s
WHN LR LR
comp=Z,3µm,24.2s
SDSI Sungai Dareh 50.50 273 P **P** **15 25 47.7 -0.2**
comp=Z,26nm,1.5s,mb5.0
PPI Padang Panjang 51.57 273 P **P** **15 25 55.3 -0.7**
comp=Z,38nm,1.2s,mb5.2
DL2 Dalian 51.98 330 P **P** **15 25 58.2 -0.3**
DL2 S **S** **15 33 19.0 +0.5**
DL2 sS sS 15 33 39.8 -0.4
DL2 pmax pmax
comp=Z,20nm,1.1s,mb5.0
DL2 pmax pmax
comp=Z,120nm,5.8s
DL2 LR LR
comp=N,240nm,24.9s,MS4.3
DL2 LR LR
comp=E,190nm,22.3s,MS4.3
DL2 LR LR
comp=Z,530nm,29.1s
KULM Kulim 52.16 281 *e*P **P** **15 25 59.8 -0.5**
comp=Z,14nm,0.9s,mb4.9
YSS Yuzh-Sakhalins 52.48 352 *e*P **P** **15 26 04.0 +1.9**
YSS *e*S **S** **15 33 22.0 -3.2**
YSS *e*PS 15 33 37.0
MNSI Mandailing Nat 52.53 275 P **P** **15 26 02.3 -0.8**
comp=Z,48nm,0.7s,mb5.5
MDJ Mudanjiang 53.41 340 P **P** **15 26 08.6 -0.3**
MDJ pP pP 15 26 20.0 -1.9
MDJ sP sP 15 26 25.1 -2.2
MDJ ScP ScP 15 31 09.7 -0.1
MDJ PcS PcS 15 31 14.4 -0.1
MDJ S **S** **15 33 38.6 +0.8**
MDJ sS sS 15 33 58.4 -1.1
MDJ pmax pmax
comp=Z,7.0nm,1.8s,mb4.3
MDJ pmax pmax
comp=Z,160nm,8.0s
MDJ LR LR
comp=N,530nm,32.0s,MS4.5
MDJ LR LR
comp=E,420nm,32.7s,MS4.5
MDJ LR LR
comp=Z,830nm,32.4s,MS4.6
GYA Guiyang 53.84 308 P **P** **15 26 14.0 +1.5**
GYA pP pP 15 26 27.2 +1.7
GYA sP sP 15 26 32.6 +1.7
GYA PcP PcP 15 27 19.8 +2.0
GYA PP PP 15 28 16.5 +2.4
GYA ScP ScP 15 31 11.0 -1.2
GYA S **S** **15 33 44.2 -0.2**
GYA SS SS 15 37 24.3 -1.8
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.2
GYA pmax pmax
comp=Z,140nm,6.3s
GYA LR LR
comp=N,780nm,17.0s,MS4.9
GYA LR LR
comp=E,640nm,18.8s,MS4.9
GYA LR LR
comp=Z,800nm,17.4s,MS4.8
HABR Khabarovsk 55.38 346 P **P** **15 26 20.5 -2.7**
HABR *e**SP sP 15 26 35.1 -6.5
HABR 15 27 19.7
BJI Beijing 55.65 327 P **P** **15 26 25.8 +0.5**
BJI PP PP 15 28 30.5 +0.5
BJI S **S** **15 34 04.1 -4.1**
BJI SS SS 15 37 54.3 +0.1
BJI pmax pmax
comp=Z,5.0nm,1.4s,mb4.3
BJI pmax pmax
comp=Z,150nm,10.1s
BJI LR LR
comp=N,530nm,24.5s,MS4.7
BJI LR LR
comp=E,520nm,21.3s,MS4.7
BJI LR LR
comp=Z,950nm,29.1s
KMI Kunming 56.38 305 ⇓P **P** **15 26 33.1 +2.2**
KMI pP pP 15 26 46.0 +2.1
KMI sP sP 15 26 51.8 +2.5
KMI PP PP 15 28 38.6 +1.7
KMI S **S** **15 34 20.4 +1.9**
KMI SS SS 15 38 08.6 +2.3
KMI pmax pmax
comp=Z,31nm,1.3s,mb5.2
KMI pmax pmax
comp=Z,200nm,5.9s
KMI LR LR
comp=N,240nm,24.0s,MS4.4
KMI LR LR
comp=E,350nm,25.8s,MS4.4
KMI LR LR
comp=Z,730nm,32.6s
CHRT Chiangrai 56.88 298 ⇑P **P** **15 26 34.0 -0.5**
comp=Z,132nm,1.2s,mb5.8
CM31 Chiang Mai Arr 57.16 296 *e*P **P** **15 26 36.5 0.0**
comp=Z,73nm,1.2s,mb5.6
CM31 *e* pP 15 26 50.7 +1.2
CMAR Chiang Mai Arr 57.16 296 P **P** **15 26 37.1 +0.7**
CMAR pP pP 15 26 51.0 +1.5
CMAR LR LR 15 51 00.7
CMAR P'P' 15 56 29.1
CMAR ⇑*e* 15 56 39.7
CMAR Chiang Mai Arr 57.16 296 P **P** **15 26 37.1 +0.7**
comp=Z,3.8nm,0.7s,mb4.5,baz=119,slow=5.2,SNR=23
CMAR pP pP 15 26 51.0 +1.5
comp=Z,1.1nm,0.3s,baz=313,slow=55,SNR=24
CMAR LR LR 15 51 00.6
comp=Z,306nm,20.2s,MS4.4,baz=110,slow=36
CMAR PKPPKP 15 56 29.1
comp=Z,0.9nm,0.9s,baz=292,slow=2.8,SNR=5.2
CMAR PKP2bc 15 56 39.7
comp=Z,1.3nm,0.8s,baz=293,slow=4.0,SNR=6.7
CMAR Chiang Mai Arr 57.16 296 P **P** **15 26 37.2 +0.8**
CMAR *PP pP 15 26 51.1 +1.6
CHG Chiang Mai 57.27 296 ⇓P **P** **15 26 38.3 +1.1**
comp=Z,39nm,1.4s,mb5.2
CHTO Chiang Mai 57.27 296 *e*P **P** **15 26 36.4 -0.9**
comp=Z,62nm,1.4s,mb5.5
CHTO *e* pP 15 26 51.5 +1.1
CHTO LR LR
comp=Z,247nm,20.0s,MS4.3
CHTO Chiang Mai 57.27 296 *e*P **P** **15 26 36.4 -0.8**
CHTO *e* pP 15 26 51.5 +1.2
CHTO pmax pmax
comp=Z,62nm,1.4s,mb5.5
CHTO MLR MLR
comp=Z,247nm,20.0s,MS4.3
CHTO Chiang Mai 57.27 296 P **P** **15 26 38.5 +1.3**
comp=Z,630nmcomp=Z,43nm,1.6s,mb5.2
PET Petropavlovsk 58.23 5 *e*P **P** **15 26 38.5 -4.8**
PET *e*S **S** **15 34 37.4 -4.3**
PET pmax pmax
comp=Z,200nm,13.6s
PET MLR MLR
comp=Z,400nm,15.0s,MS4.7
PET MLR MLR
comp=Z,500nm,18.0s
CD2 Chengdu 58.23 311 P **P** **15 26 46.0 +2.2**
CD2 pP pP 15 26 56.1 -0.8
CD2 sP sP 15 27 00.1 -2.2
CD2 PP PP 15 28 56.8 +3.6
CD2 S **S** **15 34 43.0 +0.4**
CD2 sS sS 15 35 01.0 -3.5
CD2 SS SS 15 38 37.5 +2.3
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CD2 pmax pmax
comp=Z,180nm,5.3s
CD2 LR LR
comp=N,520nm,17.6s,MS4.9
CD2 LR LR
comp=E,760nm,18.6s,MS4.9
CD2 LR LR
comp=Z,950nm,22.5s,MS4.9
PETK Petropavlovsk- 58.24 4 P **P** **15 26 43.7 +0.4**
PETK LR LR 15 48 46.1
PETK Petropavlovsk- 58.24 4 P **P** **15 26 43.7 +0.4**
comp=Z,2.4nm,0.7s,mb4.3,baz=153,slow=6.4,SNR=9.7
PETK LR LR 15 48 46.1
comp=Z,394nm,20.9s,MS4.5,baz=198,slow=33
PPT Papeete 58.54 107 *e*S **S** **15 34 46.2 -0.8**
comp=Z,353nm,25.0s
PPT *e*SS SS 15 38 41.2 +0.9
comp=Z,250nm,29.2s
PPT *e*LR LR 15 43 59.0
comp=Z,550nm,24.0s
PPT Papeete 58.54 107 LR LR 15 46 44.4
comp=Z,288nm,18.4s,MS4.4,baz=288,slow=31
HHC Hu-ho-hao-te 58.77 325 *e*P **P** **15 26 48.8 +1.5**
HHC pP pP 15 26 59.6 -0.8
HHC sP sP 15 27 03.6 -2.2
HHC PcP PcP 15 27 38.3 +1.7
HHC PP PP 15 29 00.4 +2.6
HHC S **S** **15 34 50.2 +1.0**
HHC sS sS 15 35 07.6 -3.5
HHC ScS ScS 15 36 32.7 -0.7
HHC SS SS 15 38 45.6 +2.4
HHC pmax pmax
comp=Z,21nm,0.8s,mb5.2
HHC pmax pmax
comp=Z,160nm,3.6s
HHC LR LR
comp=N,520nm,18.6s,MS4.8
HHC LR LR
comp=E,430nm,19.2s,MS4.8
HHC LR LR
comp=Z,850nm,21.0s,MS4.8
BTO Baotou 59.50 324 *e*P **P** **15 26 52.8 +0.4**
DRV Dumont d'Urvil 61.97 185 P pP 15 27 22.0 0.0
DRV S **S** **15 35 34.0 +4.6**
DRV R 15 46 00.0
GTA Gaotai 65.26 318 *e*P **P** **15 27 31.2 +0.3**
GTA pP pP 15 27 44.3 +0.1
GTA sP sP 15 27 49.2 -0.3
GTA S S 15 36 11.2 0.0
GTA sS sS 15 36 33.4 0.0
GTA SS SS 15 40 27.9 +3.0
GTA pmax pmax
comp=Z,8.0nm,1.6s,mb4.5
GTA pmax pmax
comp=Z,190nm,9.3s
GTA LR LR
comp=N,400nm,19.5s,MS4.7
GTA LR LR
comp=E,330nm,20.7s,MS4.7
GTA LR LR
comp=Z,480nm,21.9s,MS4.7
SHL Shillong 65.66 301 *e*PKP **P** **15 27 35.0 +1.2**
ULN Ulaanbaatar 65.78 329 *e*P **P** **15 27 35.1 +1.0**
comp=Z,31nm,1.2s,mb5.2
ULN Ulaanbaatar 65.78 329 *e*P **P** **15 27 35.1 +1.0**
ULN pmax pmax
comp=Z,31nm,1.2s,mb5.2
ULN Ulaanbaatar 65.78 329 P **P** **15 27 35.4 +1.3**
SONM Songino Array 66.10 328 P **P** **15 27 36.3 +0.1**
comp=Z,4.0nm,0.5s,mb4.7,baz=149,slow=6.3,SNR=18
SONM pP pP 15 27 50.6 +1.1
comp=Z,14nm,1.0s,baz=140,slow=5.8,SNR=13
SONM LR LR 15 55 01.8
comp=Z,587nm,20.3s,MS4.8,baz=125,slow=35
SONM PKP2ab 15 56 24.0
comp=Z,0.5nm,0.6s,baz=260,slow=5.7,SNR=3.9
SONM Songino Array 66.10 328 P **P** **15 27 36.3 +0.1**
SONM *PP pP 15 27 50.6 +1.1
CASY Casey 67.42 197 *e*P **P** **15 27 43.3 -1.0**
comp=Z,87nm,1.4s,mb5.6
CASY *e* pP 15 27 56.2 -1.4
TAOE Nuku Hiva Isla 67.53 97 *e*LR LR 15 48 10.8
comp=Z,526nm,32.3s
YAK Yakutsk 69.12 349 P **P** **15 27 54.8 -0.1**
comp=Z,15nm,0.9s,mb4.9
YAK Yakutsk 69.12 349 *e*P pP 15 28 06.5 -1.8
YAK pmax pmax
comp=Z,19nm,1.3s,mb4.9
ZAK Zakamensk 69.28 329 *e*P **P** **15 27 55.8 -0.4**
ZAK *e* pP 15 28 09.7 +0.1
ZAK pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
TAPN Taplejung 69.76 301 *e*P **P** **15 27 59.1 -0.5**
comp=Z,22nm,0.7s,mb5.2
ODAN Odare 69.89 301 *e*P **P** **15 28 00.1 -0.3**
comp=Z,38nm,0.8s,mb5.4
RAMN Ramite 70.59 301 *e*P **P** **15 28 03.7 -1.0**
comp=Z,11nm,0.6s,mb5.0
MOY Mondy 71.21 329 *e*P **P** **15 28 08.5 +0.6**
MOY pmax pmax
comp=Z,53nm,1.7s,mb5.2
GUN Gumba 71.48 302 *e*P **P** **15 28 10.1 0.0**
comp=Z,51nm,0.7s,mb5.6
PKI Pulchoki 71.78 301 *e*P **P** **15 28 11.7 -0.2**
KKN Kakani 71.95 301 *e*P **P** **15 28 12.5 -0.5**
comp=Z,30nm,0.7s,mb5.3
DMN Daman 72.05 301 *e*P **P** **15 28 13.3 -0.2**
comp=Z,33nm,0.7s,mb5.4
RKT Rikitea 72.55 113 *e*LR LR 15 50 23.3
comp=Z,1µm,31.0s
GKN Gorkha 72.56 301 *e*P **P** **15 28 15.8 -0.8**
comp=Z,48nm,0.9s,mb5.4
SBA Scott Base 73.09 177 *e*P **P** **15 28 19.1 +0.3**
comp=Z,45nm,1.1s,mb5.3
SBA *e* pP 15 28 32.1 -0.2
SBA Scott Base 73.09 177 *e*P **P** **15 28 19.2 +0.4**
SBA *e* pP 15 28 32.1 -0.2
SBA pmax pmax
comp=Z,45nm,1.1s,mb5.3
KOLN Koldanda 73.38 301 *e*P **P** **15 28 20.6 -0.8**
comp=Z,30nm,0.6s,mb5.4
WMQ Urumqi 75.34 318 P **P** **15 28 32.0 -0.5**
WMQ pP pP 15 28 42.3 -3.7
WMQ PcP PcP 15 28 45.6 0.0
WMQ sP sP 15 28 46.3 -5.0
WMQ PP PP 15 31 22.9 +1.1
WMQ S S 15 38 07.8 -1.0
WMQ SKS 15 38 33.9
WMQ SS SS 15 43 00.4 +0.6
WMQ pmax pmax
comp=Z,23nm,1.3s,mb5.0
WMQ pmax pmax
comp=Z,230nm,6.3s
WMQ LR LR
comp=N,370nm,24.4s,MS4.8
WMQ LR LR
comp=E,460nm,27.0s,MS4.8
WMQ LR LR
comp=Z,460nm,27.0s,MS4.7
HYB Hyderabad 75.70 289 *i* P **P** **15 28 36.5 +1.4**
TRD Trivandrum 75.88 280 ⇓*ex* P **P** **15 28 45.0 +8.8**
KDAK Kodiak Island 76.91 27 ⇓P **P** **15 28 40.8 -0.3**
comp=Z,4.9nm,0.8s,mb4.5,baz=253,slow=14,SNR=3.1
KDAK Kodiak Island 76.91 27 *e*P **P** **15 28 40.5 -0.6**
TIXI Tiksi 78.11 353 *e*P **P** **15 28 44.7 -2.8**
TIXI pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
RSO Redoubt South 78.29 25 P **P** **15 28 48.9 +0.1**
RSO *e* pP 15 29 00.5 -1.9
TTA Tatalina 78.43 22 *e*P **P** **15 28 49.1 -0.4**
comp=Z,24nm,1.0s,mb5.1
TTA Tatalina 78.43 22 *e*P **P** **15 28 49.1 -0.4**
TTA pmax pmax
comp=Z,23nm,1.0s,mb5.1
NDI New Delhi 79.07 300 *ex* P **P** **15 28 48.0 -5.7**
SEW Seward 79.50 26 *e*P **P** **15 28 54.3 -1.1**
comp=Z,25nm,0.9s,mb5.1
RC01 Rabbit Creek A 79.88 25 P **P** **15 28 56.6 -0.8**
comp=Z,44nm,1.2s,mb5.3
MK31 Makanchi Array 79.95 319 *e*P **P** **15 28 56.7 -1.4**
MKAR Makanchi Array 79.95 319 P **P** **15 28 57.1 -1.0**
comp=Z,3.3nm,0.7s,mb4.4,baz=108,slow=5.9,SNR=21
MKAR PKPPKP 15 56 01.6
comp=Z,0.6nm,1.0s,baz=356,slow=5.8,SNR=5.0
MKAR LR LR 16 02 52.7
comp=Z,360nm,20.7s,MS4.7,baz=100,slow=34
MKAR Makanchi Array 79.95 319 *i* P **P** **15 28 57.0 -1.1**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
PMR Palmer 80.39 25 *e*P **P** **15 28 59.1 -1.0**
comp=Z,36nm,1.2s,mb5.2
PMR Palmer 80.39 25 *e*P **P** **15 28 59.1 -1.0**
PMR pmax pmax
comp=Z,36nm,1.2s,mb5.2
TRF Thorofare Moun 80.88 23 *e*P **P** **15 29 01.9 -0.9**
comp=Z,10.0nm,0.8s,mb4.8
ZAA0 Zalesovo Array 80.90 327 *e*P **P** **15 29 00.7 -2.3**
ZALV Zalesovo Beam 80.90 327 P **P** **15 29 01.3 -1.7**
comp=Z,6.1nm,0.6s,mb4.7,baz=114,slow=5.9,SNR=24
ZALV PKPPKP 15 55 58.6
comp=Z,0.7nm,0.7s,baz=236,slow=0.5,SNR=3.6
ZALV LR LR 16 03 46.2
comp=Z,336nm,21.1s,MS4.7,baz=186,slow=35
BPAW Bear Paw Mtn. 80.95 22 *e*P **P** **15 29 00.5 -2.6**
comp=Z,9.5nm,1.0s,mb4.7
MCK McKinley 81.54 23 *e*P **P** **15 29 05.1 -1.2**
comp=Z,68nm,1.1s,mb5.5
MCK McKinley 81.54 23 *e*P **P** **15 29 05.1 -1.1**
MCK pmax pmax
comp=Z,68nm,1.1s,mb5.5
BMRM Bremner River 82.03 26 *e*P **P** **15 29 07.8 -1.0**
comp=Z,66nm,1.3s,mb5.4
NVS Novosibirsk 82.09 327 *e*P **P** **15 29 07.0 -2.3**
KSH Kashi 82.43 311 *e*P **P** **15 29 13.2 +1.7**
KSH *e*pP pP 15 29 23.6 -1.6
KSH *e*sP sP 15 29 27.6 -2.8
KSH *e*PP PP 15 32 23.7 +2.6
KSH *e*S S 15 39 24.0 -0.5
KSH *e*SKS 15 39 26.3
KSH *e*SS SS 15 44 48.1 +1.7
KSH pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
KSH pmax pmax
comp=Z,200nm,4.7s
KSH LR LR
comp=N,400nm,10.9s,MS5.1
KSH LR LR
comp=E,290nm,11.3s,MS5.1
KSH LR LR
comp=Z,260nm,17.8s
COLA College 82.52 22 *e*P **P** **15 29 08.4 -2.9**
comp=Z,5.4nm,0.8s,mb4.6
COLA College 82.52 22 *e*P **P** **15 29 08.5 -2.8**
COLA pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
ILAR Eielson Array 82.83 22 P **P** **15 29 10.8 -2.2**
comp=Z,2.2nm,0.6s,mb4.4,baz=246,slow=5.3,SNR=25
ILAR LR LR 16 04 01.5
comp=Z,424nm,20.2s,MS4.8,baz=66,slow=34
COLD Coldfoot 82.89 19 P **P** **15 29 10.9 -2.3**
comp=Z,15nm,1.1s,mb4.9
MENT Mentasta 83.25 25 *e*P **P** **15 29 14.9 -0.3**
KURK Kurchatov 83.44 322 P **P** **15 29 16.6 +0.1**
comp=Z,118nm,1.1s,mb5.8,SNR=5.0
KURK Kurchatov 83.44 322 *e*P **P** **15 29 14.7 -1.7**
comp=Z,23nm,1.0s,mb5.2
KURK *e* pP 15 29 28.0 -2.2
KURK LR LR
comp=Z,466nm,21.0s,MS4.8
KURK Kurchatov 83.44 322 *e*P **P** **15 29 15.0 -1.4**
KURK pmax pmax
comp=Z,34nm,1.2s,mb5.2
AAK Ala-Archa 84.20 314 P **P** **15 29 20.6 +0.1**
comp=Z,15nm,0.9s,mb5.1
AAK Ala-Archa 84.20 314 P **P** **15 29 20.6 +0.1**
AAK pmax pmax
comp=Z,15nm,0.9s,mb5.1
AML Almayashu 84.68 313 *e*P **P** **15 29 23.2 +0.3**
comp=Z,108nm,1.3s,mb5.8
EKS2 Erkin-Say 84.73 314 *e*P **P** **15 29 22.7 -0.4**
comp=Z,66nm,1.4s,mb5.6
MAW Mawson 84.89 203 *e*P **P** **15 29 22.4 -1.1**
comp=Z,29nm,1.4s,mb5.2
MAW *e* pP 15 29 36.1 -1.1
MAW Mawson 84.89 203 P **P** **15 29 22.7 -0.8**
comp=Z,12nm,0.6s,mb5.2,baz=94,slow=7.6,SNR=32
MAW pP pP 15 29 36.8 -0.5
comp=Z,41nm,0.9s,baz=94,slow=6.1,SNR=19
MAW LR LR 16 05 49.9
comp=Z,496nm,19.6s,MS4.9,baz=95,slow=35
MAW Mawson 84.89 203 *e*P **P** **15 29 22.4 -1.1**
MAW *e* pP 15 29 36.1 -1.2
MAW pmax pmax
comp=Z,29nm,1.4s
EGAK Eagle 85.05 23 *e*P **P** **15 29 24.5 +0.2**
comp=Z,19nm,1.1s,mb5.1
DAWY Dawson 85.48 24 *e*P **P** **15 29 26.0 -0.5**
DIB Dawson Inlet, 85.58 36 T 17 02 57.1
SKAG Skagway 85.78 29 *e*P **P** **15 29 26.6 -1.4**
comp=Z,5.0nm,0.7s,mb4.8
SKAG *e* pP 15 29 41.4 -0.4
DLBC Dease Lake 88.16 31 *e*P **P** **15 29 39.1 -0.5**
DLBC *e* pP 15 29 53.1 -0.3
BVAR Borovoye Array 88.94 323 P **P** **15 29 41.5 -1.9**
comp=Z,6.1nm,0.7s,mb5.1,baz=101,slow=5.3,SNR=28
BRVK Borovoye 89.01 323 *e*P **P** **15 29 42.5 -1.2**
comp=Z,13nm,1.1s,mb5.2
BRVK *e* pP 15 29 55.2 -2.3
BRVK Borovoye 89.01 323 *ce*P **P** **15 29 42.3 -1.4**
BRVK pmax pmax
comp=Z,10.0nm,1.7s,mb4.9
NLWA Neilton Lookou 89.88 43 ⇓P **P** **15 29 48.1 +0.2**
baz=90
HUMO Hull Mountain 89.92 47 *e*P **P** **15 29 48.5 +0.3**
comp=Z,18nm,1.0s,mb5.3
E03A Lebam 89.98 43 ⇑P **P** **15 29 49.0 +0.5**
baz=90
YBH Yreka Blue Hor 89.99 48 P **P** **15 29 46.6 -2.1**
comp=Z,5.6nm,1.0s,mb4.9,baz=157,slow=1.8,SNR=5.7
PGC Sidney 90.33 41 P **P** **15 29 48.5 -1.5**
F04A Amboy 90.69 44 ⇓P **P** **15 29 51.4 -0.4**
baz=91
H04A Detroit Lake 90.71 45 ⇑P **P** **15 29 51.4 -0.5**
baz=91
D05A Enumclaw 91.13 43 ⇑P **P** **15 29 53.9 +0.1**
baz=91
JCW Jim Creek 91.28 42 *e*P **P** **15 29 54.8 +0.3**
comp=Z,11nm,1.0s,mb5.1
SMMC Simmler 91.44 55 ⇓P **P** **15 29 56.2 +0.7**
baz=92
K05A Summer Lake 91.44 47 ⇑P **P** **15 29 55.8 +0.4**
baz=92
MOD Modoc 91.80 48 *e*P **P** **15 29 55.6 -1.4**
comp=Z,16nm,1.1s,mb5.3
G06A Carlson Farm, 91.87 45 ⇓P **P** **15 29 57.1 -0.1**
baz=92
WCN Washoe City 91.98 51 ⇓P **P** **15 29 58.4 +0.5**
baz=92
BLG Laguna Peak 92.10 56 ⇓P **P** **15 29 59.0 +0.4**
baz=92
ETW Entiat 92.29 43 *e*P **P** **15 29 58.7 -0.4**
comp=Z,5.6nm,0.7s,mb5.0
MLAC Mammoth Lakes 92.56 53 ⇑P **P** **15 30 01.3 +0.7**
baz=93
I07A Izee 92.57 46 ⇓P **P** **15 30 00.2 -0.3**
baz=93,SNR=8.8
CIS Catalina Islan 92.59 57 ⇑P **P** **15 30 01.2 +0.3**
baz=93
ISA Isabella 92.70 55 ⇓P **P** **15 30 01.3 -0.1**
baz=93
ISA Isabella 92.70 55 *e*P **P** **15 30 01.3 0.0**
comp=Z,12nm,1.4s,mb5.1
ISA *e* pP 15 30 14.4 -0.8
ISA Isabella 92.70 55 *e*P **P** **15 30 01.3 -0.1**
ISA *e* pP 15 30 14.5 -0.7
ISA pmax pmax
comp=Z,12nm,1.4s,mb5.1
FMP Fort Macarthur 92.71 57 ⇓P **P** **15 30 01.6 +0.2**
baz=93
DECC Green Verdugo 92.72 56 ⇓P **P** **15 30 01.2 -0.3**
baz=93
HAWA Hanford 92.73 44 *e*P **P** **15 30 01.4 +0.2**
HAWA LR LR
comp=Z,324nm,20.0s,MS4.8
MWC Mount Wilson 92.94 56 *e*P **P** **15 30 03.6 +1.1**
comp=Z,39nm,1.1s,mb5.8
MWC *e* pP 15 30 15.8 -0.6
TIN Tinemaha 93.01 53 ⇓P **P** **15 30 03.1 +0.4**
baz=93
B08A Colville Reser 93.02 42 ⇑P **P** **15 30 02.0 -0.5**
baz=93
SYO Syowa Base 93.03 200 ⇑*e*P **P** **15 30 00.3 -1.9**
SYO Syowa Base 93.03 200 ⇓*i*pP pP 15 30 13.3 -2.7

EDW2	Edwards Air Fo	93.04	55	⇑P		P	15 30 03.3	+0.4	
	baz=93								
NVAR	Mina Array Bea	93.04	52	P		P	15 30 02.9	0.0	
	comp=Z,6.3nm,0.7s,mb5.1,baz=253,slow=6.5,SNR=45								
NVAR				pP		pP	15 30 16.6	-0.1	
	comp=Z,9.9nm,0.9s,baz=257,slow=6.1,SNR=11								
G08A	Pilot Rock	93.05	45	⇓P		P	15 30 01.9	-0.8	
	baz=93,SNR=7.1								
E08A	Dider Farm, El	93.07	44	⇓P		P	15 30 02.4	-0.4	
	baz=93								
WVOR	Wild Horse Val	93.08	48	*e*P		P	15 30 02.9	0.0	
	comp=Z,16nm,1.4s,mb5.3								
WVOR	Wild Horse Val	93.08	48	*e*P		P	15 30 02.9	0.0	
WVOR				pmax		pmax			
	comp=Z,16nm,1.4s,mb5.3								
CWC	Cottonwood Cre	93.08	54	⇑P		P	15 30 02.7	-0.4	
	baz=93								
J08A	Circle Bar Ran	93.26	47	⇑P		P	15 30 03.2	-0.5	
	baz=93,SNR=6.2								
BFSC	Mount Baldy Ra	93.27	56	⇑P		P	15 30 03.6	-0.4	
	baz=93								
LRMC	Laurel Mountai	93.33	55	⇓P		P	15 30 04.7	+0.4	
	baz=93								
OD2	Odessa Site #2	93.37	43	*e*P		P	15 30 03.9	-0.2	
	comp=Z,2.9nm,0.5s,mb5.0								
MPMC	Manual Prospec	93.53	54	⇑P		P	15 30 05.2	+0.1	
	baz=94,SNR=14								
MURC	Murrieta	93.61	57	⇓P		P	15 30 05.5	0.0	
	baz=94								
109C	Camp Elliot, M	93.64	57	⇓P		P	15 30 05.5	-0.2	
	baz=94								
GRAC	Grapevine Rang	93.69	53	⇓P		P	15 30 06.0	+0.1	
	baz=94,SNR=5.8								
C09A	Chrisman Ranch	93.69	42	⇑P		P	15 30 05.3	-0.3	
	baz=94								
E09A	Wood Farm, Sta	93.70	44	⇑P		P	15 30 05.5	-0.1	
	baz=94								
RRX	Edison Barstow	93.86	55	⇓P		P	15 30 06.9	+0.2	
	baz=94								
BAR	Barrett	93.99	58	*e*P		P	15 30 08.2	+0.9	
	comp=Z,4.5nm,0.7s,mb5.0								
GSC	Goldstone	94.04	55	⇑P		P	15 30 08.1	+0.6	
	baz=94								
GSC	Goldstone	94.04	55	*e*P		P	15 30 08.0	+0.5	
	comp=Z,6.2nm,1.0s,mb5.0								
GSC				*e*		pP	15 30 20.8	-0.6	
GSC	Goldstone	94.04	55	*e*P		P	15 30 08.0	+0.5	
GSC				*e*		pP	15 30 20.8	-0.6	
GSC				pmax		pmax			
	comp=Z,6.0nm,1.0s,mb5.0								
FURC	Furnace Creek,	94.06	54	⇑P		P	15 30 07.9	+0.3	
	baz=94								
BMO	Blue Mountains	94.19	45	*e*P		P	15 30 06.8	-1.1	
	comp=Z,24nm,1.6s,mb5.4								
BMO	Blue Mountains	94.19	45	*e*P		P	15 30 06.9	-1.1	
BMO				pmax		pmax			
	comp=Z,24nm,1.6s,mb5.4								
MONP	Monument Peak	94.22	57	⇑P		P	15 30 08.9	+0.5	
	baz=94,SNR=6.5								
PFO	Pinyon Flat Ob	94.23	57	⇓P		P	15 30 08.6	+0.1	
	baz=94								
F10A	Beach Ranch, E	94.31	44	⇑P		P	15 30 08.7	+0.2	
	baz=94								
S10A	Tonopah Range,	94.36	52	⇑P		P	15 30 09.0	+0.1	
	baz=94,SNR=14								
HEC	Hector,Ludlow	94.40	56	⇓P		P	15 30 09.0	-0.2	
	baz=94								
U10A	Ash Meadows, A	94.49	54	⇓P		P	15 30 09.9	+0.4	
	baz=94								
SHOC	Shoshone	94.50	54	⇓P		P	15 30 10.0	+0.4	
	baz=94								
P10A	Eureka	94.55	51	⇓P		P	15 30 10.5	+0.8	
	baz=95								
O10A	Cortez Mining,	94.55	50	⇑P		P	15 30 09.9	+0.2	
	baz=95								
Q10A	Clear Creek Ra	94.56	52	⇑P		P	15 30 10.4	+0.6	
	baz=95								
N10A	Dunphy	94.57	50	⇑P		P	15 30 10.5	+0.7	
	baz=95								
M10A	I.L. Ranch, Tu	94.58	49	⇑P		P	15 30 10.6	+0.7	
	baz=95								
R10A	Warm Springs	94.61	52	⇓P		P	15 30 10.5	+0.5	
	baz=95								
BELC	Belle Mtn. Jos	94.63	56	⇓P		P	15 30 10.8	+0.5	
	baz=95,SNR=5.5								
L10A	Juniper Basin	94.66	48	⇓P		P	15 30 09.8	-0.4	
	baz=95								
SWSC	Sam W. Stewart	94.74	57	⇓P		P	15 30 11.0	+0.2	
	baz=95								
TUQ	Turquoise Moun	94.77	55	⇑P		P	15 30 11.1	+0.2	
	baz=95								
GMRC	Granite Mounta	94.95	56	⇓P		P	15 30 12.5	+0.8	
	baz=95,SNR=5.4								
S11A	Rachel	95.01	53	⇓P		P	15 30 12.0	+0.1	
	baz=95								
C11A	Tepee Creek (N	95.05	43	⇓P		P	15 30 11.6	-0.3	
	baz=95								
BC3	Big Chuckawall	95.07	57	⇓P		P	15 30 12.8	+0.5	
	baz=95,SNR=7.1								
P11A	Circle Ranch,	95.09	51	⇓P		P	15 30 12.1	-0.1	
	baz=95								
ABKAR	Akbulak array	95.09	319	*e*P		P	15 30 09.0	-3.0	
	comp=Z,1.7nm,0.8s,mb4.5								
Q11A	Duckwater	95.14	52	⇓P		P	15 30 12.7	+0.2	
	baz=95,SNR=6.6								
M11A	Holland Ranch,	95.14	49	⇑P		P	15 30 12.7	+0.3	
	baz=95								
N11A	Elko Archery C	95.16	50	⇓P		P	15 30 12.8	+0.3	
	baz=95								
R11A	Troy Canyon, C	95.17	52	⇑P		P	15 30 12.7	+0.1	
	baz=95,SNR=8.4								
MFID	Camas Ranch	95.19	47	⇓P		P	15 30 12.1	-0.5	
	baz=95								
O11A	Cowboy Ranch,	95.19	50	⇓P		P	15 30 12.9	+0.3	
	baz=95								
L11A	Cat Creek Ranc	95.20	48	⇓P		P	15 30 12.4	-0.3	
	baz=95,SNR=5.4								
U11A	Corn Creek	95.25	54	⇑P		P	15 30 13.5	+0.5	
	baz=95								
IRM	Iron Mountain	95.34	56	⇑P		P	15 30 13.5	0.0	
	baz=95,SNR=8.7								
T11A	Corn Creek, Al	95.42	53	⇑P		P	15 30 13.8	0.0	
	baz=95								
E12A	Beaver Dam Sad	95.47	44	⇑P		P	15 30 13.6	-0.2	
	baz=96								
A12A	Yaak River Ran	95.49	41	⇓P		P	15 30 14.5	+0.7	
	baz=96								
B12A	Libby	95.52	42	⇑P		P	15 30 14.0	+0.1	
	baz=96								
GLA	Glamis	95.56	57	⇑P		P	15 30 14.9	+0.3	
	baz=96								
C12B	Naegeli Ranch,	95.57	43	⇓P		P	15 30 13.7	-0.6	
	baz=96								
W12A	Cal Nev Ari	95.62	55	⇑P		P	15 30 15.0	+0.3	
	baz=96								
D12A	Red Ives Fores	95.64	43	⇓P		P	15 30 14.2	-0.3	
	baz=96								
V12A	Nelson	95.65	55	⇑P		P	15 30 15.0	+0.1	
	baz=96								
F12A	Elk City	95.67	45	⇑P		P	15 30 14.3	-0.4	
	baz=96								
N12A	Clover Valley,	95.69	50	⇑P		P	15 30 14.6	-0.3	
	baz=96								
N12A	Clover Valley,	95.69	50	*e*P		P	15 30 15.9	+0.9	
	comp=Z,11nm,1.2s,mb5.2								
I12A	Atlanta	95.71	47	⇑P		P	15 30 14.8	-0.1	
	baz=96								
S12A	Delamar Landin	95.72	53	⇑P		P	15 30 15.6	+0.4	
	baz=96								
P12A	McGill	95.74	51	⇓P		P	15 30 15.3	+0.1	
	baz=96								
L12A	House Creek Ra	95.75	48	⇓P		P	15 30 15.4	+0.2	
	baz=96								
112A	Yuma	95.75	58	⇑P		P	15 30 15.6	+0.2	
	baz=96								
Q12A	Willow Creek R	95.79	51	⇑P		P	15 30 15.6	+0.2	
	baz=96								
M12A	Wells	95.80	49	⇑P		P	15 30 15.5	0.0	
	baz=96								
T12A	Moapa	95.80	54	⇑P		P	15 30 15.8	+0.2	
	baz=96								
NEE2	Needles Airpor	95.81	56	⇓P		P	15 30 15.9	+0.3	
	baz=96								
O12A	Currie	95.89	50	⇑P		P	15 30 15.9	0.0	
	baz=96								
H12A	Diamond D Ranc	95.93	46	⇓P		P	15 30 15.3	-0.6	
	baz=96								
U12A	Valley of Fire	95.93	54	⇑P		P	15 30 16.3	+0.2	
	baz=96								
R12A	Pony Springs,	95.94	52	⇓P		P	15 30 16.5	+0.4	
	baz=96								
BSMT	Bassoo Peak	96.04	43	*e*P		P	15 30 15.3	-1.1	
	comp=Z,7.0nm,1.1s,mb5.0								
ARU	Arti	96.06	326	*d i*P		P	15 30 13.9	-2.3	
ARU							15 34 12.0		
ARU					S	SKSac	15 40 47.1	-1.7	
ARU					PS	PS	15 42 52.0	-4.6	
ARU					pmax	pmax			
	comp=Z,10.0nm,2.5s,mb4.8								
ARU					MLR	MLR			
	comp=Z,915nm,22.0s,MS5.2								
YKA	Yellowknife Ar	96.17	28	P		P	15 30 15.7	-0.8	
	comp=Z,1.2nm,0.7s,mb4.4,baz=271,slow=5.0,SNR=7.7								
YKA	Yellowknife Ar	96.17	28	P		P	15 30 15.7	-0.9	
C13A	Hot Springs	96.18	43	⇓P		P	15 30 15.9	-1.1	
	baz=96								
HLID	Hailey	96.22	47	⇓P		P	15 30 17.3	0.0	
	baz=96								
HLID	Hailey	96.22	47	*e*P		P	15 30 15.8	-1.5	
	comp=Z,3.2nm,0.9s,mb4.8								
HLID				*e*		pP	15 30 30.8	-0.4	
HLID				LR		LR			
	comp=Z,273nm,20.0s,MS4.7								
B13A	Whitefish	96.26	42	⇓P		P	15 30 17.3	-0.1	
	baz=96								
A13A	Flathead Natio	96.30	41	⇓P		P	15 30 17.1	-0.4	
	baz=96								
F13A	Darby	96.32	45	⇓P		P	15 30 16.8	-0.9	
	baz=96								
N13A	Wendover, West	96.32	50	⇑P		P	15 30 17.7	-0.1	
	baz=96								
H13A	Challis	96.36	46	⇓P		P	15 30 17.8	-0.1	
	baz=96								
M13A	Montello	96.36	49	⇑P		P	15 30 18.0	0.0	
	baz=96								
M13A	Montello	96.36	49	*e*P		P	15 30 18.1	+0.2	
	comp=Z,5.9nm,1.0s,mb5.0								
M13A				*e*		pP	15 30 30.8	-1.1	
V13A	Grand Canyon W	96.36	55	⇑P		P	15 30 18.6	+0.5	
	baz=96,SNR=8.3								
G13A	Cobalt	96.38	45	⇓P		P	15 30 17.5	-0.5	
	baz=96								
J13A	Cove Ranch, Pi	96.39	47	⇑P		P	15 30 18.0	0.0	
	baz=96								
W13A	Hualapai Mount	96.42	55	⇓P		P	15 30 18.1	-0.3	
	baz=96								
P13A	Bates Ranch, G	96.43	51	⇑P		P	15 30 18.5	+0.2	
	baz=96								
R13A	O'Grain Ranch,	96.44	52	⇓P		P	15 30 19.1	+0.7	
	baz=96								
113A	Mohawk Valley,	96.44	58	⇑P		P	15 30 19.2	+0.6	
	baz=96								
I13A	Wildhorse Cree	96.44	47	⇓P		P	15 30 18.4	+0.1	
	baz=96								
X13A	Yucca	96.45	56	⇑P		P	15 30 18.6	+0.1	
	baz=96								
T13A	Saint George	96.46	53	⇑P		P	15 30 19.2	+0.7	
	baz=96								
O13A	Hicks Ranch, I	96.47	50	⇑P		P	15 30 18.6	+0.1	
	baz=96								
S13A	Holt Ranch, En	96.51	53	⇑P		P	15 30 19.1	+0.3	
	baz=96								
Z13A	Yuma Proving G	96.55	57	⇑P		P	15 30 19.6	+0.5	
	baz=97								
WALA	Waterton Lakes	96.64	41	*e*P		P	15 30 19.4	+0.3	
	comp=Z,0.4nm,1.1s								
CCUT	Cedar City	96.90	53	*e*P		P	15 30 20.8	+0.2	
	comp=Z,9.5nm,1.1s,mb5.1								
A14A	Double T Ranch	96.96	41	⇓P		P	15 30 20.6	+0.1	
	baz=97								
EDM	Edmonton	96.97	37	*e*P		P	15 30 20.0	-0.4	
M14A	Sheep Mountain	96.98	49	⇑P		P	15 30 20.4	-0.4	
	baz=97								
H14A	Leadore	96.99	46	⇑P		P	15 30 20.8	+0.1	
	baz=97								
Q14A	Sevier Lake (B	97.00	51	⇓P		P	15 30 21.0	+0.1	
	baz=97								
U14A	Mt Trumbull	97.03	54	⇓P		P	15 30 21.4	+0.3	
	baz=97,SNR=9.0								
L14A	Malta	97.06	48	⇑P		P	15 30 21.0	-0.1	
	baz=97								
V14A	Boquillas Ranc	97.07	55	⇓P		P	15 30 22.1	+0.7	
	baz=97								
W14A	Seligman	97.08	55	⇑P		P	15 30 21.7	+0.3	
	baz=97								
K14A	Jones Ranch, D	97.12	48	⇑P		P	15 30 21.9	+0.5	
	baz=97								
T14A	Hurricane	97.12	53	⇑P		P	15 30 22.0	+0.5	
	baz=97								
Z14A	Wintersburg	97.15	57	⇑P		P	15 30 22.4	+0.6	
	baz=97								
P14A	Drum Mountains	97.17	51	⇓P		P	15 30 21.6	-0.1	
	baz=97								
X14A	Yava	97.22	56	⇑P		P	15 30 22.8	+0.8	
	baz=97								
214A	Organ Pipe Nat	97.23	59	⇑P		P	15 30 23.1	+0.9	
	baz=97								
A15A	Johnson Ranch,	97.41	41	⇓P		P	15 30 22.0	-0.5	
	baz=97								
E15A	Deer Lodge	97.50	44	⇑P		P	15 30 22.1	-0.9	
	baz=98								
H15A	Lima	97.51	46	⇑P		P	15 30 22.6	-0.4	
	baz=98								
C15A	Salmond Ranch,	97.51	43	⇓P		P	15 30 23.1	+0.1	
	baz=98								
K15A	Arbon	97.59	48	⇓P		P	15 30 24.0	+0.5	
	baz=98								
J15A	Blackfoot	97.66	47	⇑P		P	15 30 24.3	+0.5	
	baz=98								
U15A	North Rim	97.74	54	⇓P		P	15 30 25.1	+0.7	
	baz=98								
X15A	Humboldt	97.76	56	⇑P		P	15 30 25.5	+1.0	
	baz=98								
V15A	Kaibab Nationa	97.83	55	⇓P		P	15 30 25.7	+0.9	
	baz=98								
A16A	West Butte Ran	98.16	41	⇓P		P	15 30 26.7	+0.8	
	baz=98								
116A	Eloy	98.18	58	⇑P		P	15 30 27.2	+0.8	
	baz=98								
D16A	Dana Ranch, Ca	98.24	43	⇓P		P	15 30 26.9	+0.6	
	baz=98								
J16A	Bone	98.26	47	⇑P		P	15 30 27.2	+0.7	
	baz=98								
S16A	Weppner Ranch,	98.31	53	⇑P		P	15 30 27.5	+0.6	
	baz=98								
R16A	Teasdale	98.40	52	⇑P		P	15 30 28.0	+0.7	
	baz=98								
WUAZ	Wupatki	98.48	55	P		P	15 30 28.3	+0.6	
	comp=Z,10.0nm,1.2s,mb5.2								
IMW	Indian Meadow	98.74	47	*e*P		P	15 30 28.2	-0.5	
A17A	Triple J Farms	98.75	41	⇑P		P	15 30 29.2	+0.7	
	baz=99								
D17A	Six Diamond Ra	98.83	43	⇑P		P	15 30 29.9	+1.0	
	baz=99								
F17A	Fitzpatrick Pl	98.89	44	⇓P		P	15 30 30.4	+1.2	
	baz=99								
S17A	Black Ridge (B	98.94	53	⇑P		P	15 30 30.2	+0.6	
	baz=99								
T17A	Navajo Res., N	98.94	53	⇑P		P	15 30 30.6	+0.9	
	baz=99								
V17A	Tonalea, Kykot	98.95	55	⇑P		P	15 30 30.5	+0.7	
	baz=99								
O17A	Robinson Place	98.96	50	⇓P		P	15 30 30.5	+0.8	
	baz=99								
R17A	Hanksville Air	99.00	52	⇑P		P	15 30 30.8	+0.8	
	baz=99								
Q18A	Rafter H Ranch	99.45	51	⇓P		P	15 30 32.0	+0.1	
	baz=99								
I18A	Diamond G Ranc	99.56	47	⇓P		Pdif	15 30 32.6	+0.5	
	baz=100								
R18A	Canyonlands Na	99.64	52	⇑P		Pdif	15 30 33.0	+0.6	
	baz=100								
U18A	Rough Rock, Ch	99.70	54	⇓P		Pdif	15 30 33.8	+1.2	
	baz=100								
MAIT	Maitri	99.74	192	*e*P		Pdif	15 30 30.6	-2.3	
MAIT				*e*			15 30 44.3		
Y19A	Nutrioso	100.23	57	⇓P		Pdif	15 30 36.0	+1.0	
	baz=100								
U19A	Dine' College,	100.23	54	⇑P		Pdif	15 30 36.1	+1.0	
	baz=100								
S19A	Harvey Farm, M	100.26	53	⇑P		Pdif	15 30 35.8	+0.7	
	baz=100								
P19A	Cripple Cowboy	100.32	51	⇑P		Pdif	15 30 36.7	+1.2	
	baz=100								
T19A	Beclabito	100.37	54	⇑P		Pdif	15 30 36.9	+1.3	
	baz=100								
PV01	Paradox Valley	100.69	52	*e*Pdif		Pdif	15 30 37.3	+0.2	
	comp=Z,307nm,1.0s								
N20A	Spence Gulch,	100.83	50	⇑P		Pdif	15 30 38.3	+0.6	
	baz=101								
R21A	Cimarron	101.49	52	⇓P		Pdif	15 30 41.7	+1.1	
	baz=102								
Q22A	Crested Butte,	101.97	52	⇑P		Pdif	15 30 43.8	+1.1	
	baz=102								
S22A	4UR Ranch, Cre	102.08	53	⇑P		Pdif	15 30 44.3	+1.0	
	baz=102								
N23A	Red Feather La	102.58	49	⇓P		Pdif	15 30 46.7	+1.2	
	baz=103								
VNA3	Neumayer Olymp	102.79	186	*e*Pdiff		Pdif	15 30 42.4	-4.0	
S25A	Robets Cordova	103.99	53	⇓P		Pdif	15 30 53.0	+1.3	
	baz=104								
TXAR	Lajitas Array	105.13	61	Pdiff		Pdif	15 31 03.3	+6.5	
	comp=Z,0.2nm,0.8s,baz=227,slow=7.3,SNR=2.9								
TXAR				PKiKP		PKiKP	15 35 11.4	-0.5	
	comp=Z,0.3nm,0.7s,baz=256,slow=2.3,SNR=4.8								
TXAR				PKKPab		PKKPab	15 46 52.6	-3.5	
	comp=Z,0.6nm,0.8s,baz=116,slow=5.1,SNR=5.8								
527A	Woodward Ranch	105.14	60	⇑P		PKiKP	15 35 11.6	-0.2	
	baz=105								
627A	Terlingua Ranc	105.37	61	⇓P		PKiKP	15 35 11.9	-0.4	
	baz=105								
ARCES	ARCESS Array B	106.91	343	PKPdf		PKiKP	15 35 12.5	-1.4	
ARCES	ARCESS Array B	106.91	343	PKiKP		PKiKP	15 35 12.5	-1.4	
	comp=Z,1.7nm,0.7s,baz=62,slow=2.1,SNR=4.6								
OBN	Obninsk	108.49	327	⇑*e*P		Pdif	15 31 12.9	+1.2	
OBN				*e*			15 35 36.5		
OBN				*e*S		SKSac	15 41 42.3	-5.4	
OBN				*i* PS		PS	15 45 05.9	-2.1	
OBN				pmax		pmax			
	comp=Z,10.0nm,1.0s								
OBN				MLR		MLR			
	comp=Z,500nm,23.0s,MS5.0								
FINES	FINESS Array B	110.96	335	PKiKP		PKiKP	15 35 20.8	-1.0	
	comp=Z,3.9nm,1.0s,baz=112,slow=1.5,SNR=4.0								
AKASG	Malin Array Be	114.21	324	PKP		PKiKP	15 35 27.2	-1.1	
AKASG	Malin Array Be	114.21	324	PKP		PKiKP	15 35 27.2	-1.1	
	comp=Z,0.5nm,0.4s,baz=59,slow=3.6,SNR=3.1								
BRTR	Keskin Array B	114.81	312	PKP		PKiKP	15 35 28.2	-1.6	
	comp=Z,0.7nm,0.6s,baz=96,slow=1.2,SNR=2.1								
NOA	NORSAR Array B	116.90	340	PKP		PKPdf	15 35 32.3	-0.9	
	comp=Z,0.6nm,0.6s,baz=49,slow=2.4,SNR=3.1								
BOSA	Boshof	118.66	234	PKP		PKPdf	15 35 36.8	-0.8	
	comp=Z,3.8nm,0.8s,baz=129,slow=3.2,SNR=6.3								
STHS	Stebnicka Huta	119.38	325	*e*PKP		PKPdf	15 35 38.3	0.0	
STHS	Stebnicka Huta	119.38	325	*e*PKP		PKPdf	15 35 38.3	0.0	
PLCA	Paso Flores	120.08	144	PKP		PKPdf	15 35 39.4	-0.6	
	comp=Z,2.8nm,0.8s,baz=270,slow=4.5,SNR=4.2								
LSZ	Lusaka	120.62	249	*e*PKPdf		PKPdf	15 35 41.0	-0.6	
OKC	Ostrava-Krasne	120.88	327	AMS		AMS	16 28 20.0		
	comp=Z,300nm,17.2s								
VYHS	Vyhne	121.22	325	*e*PKP		PKPdf	15 35 40.2	-1.6	
VYHS	Vyhne	121.22	325	*e*PKP		PKPdf	15 35 40.2	-1.6	
DPC	Dobruska-Polom	121.57	328	*e*PKiKP		PKPdf	15 35 43.8	+1.3	
DPC				*e*			15 35 53.8		
DPC				MLR		MLR			
	comp=Z,500nm,21.9s,MS5.1								
DPC	Dobruska-Polom	121.57	328	*e*PKPdf		PKPdf	15 35 43.8	+1.3	
DPC				*ep*PKP		pPKPdf	15 35 53.8	-3.0	
DPC				AMS		AMS	16 27 30.0		
	comp=Z,500nm,21.9s								
PVCC	Panska Ves	122.38	329	AMS		AMS	16 26 20.0		
	comp=Z,400nm,24.0s								
BRG	Berggiesshubel	122.48	330	*e*PKPdf		pPKPdf	15 35 57.4	-1.1	
BRG	Berggiesshubel	122.48	330	*e*P		pPKPdf	15 35 57.3	-1.2	
	comp=Z,8.3nm,1.1s								
BRG	Berggiesshubel	122.48	330	*e*PKiKP		pPKPdf	15 35 57.3	-1.2	
BRG				pmax		pmax			
	comp=Z,5.0nm,1.1s								
TREC	Trest	122.62	328	AMS		AMS	16 28 20.0		
	comp=Z,600nm,22.9s								
CLL	Collm	122.68	331	*e*PKiKP		pPKPdf	15 35 58.0	-0.9	
CLL				MLR		MLR			
	comp=Z,400nm,21.5s,MS5.0								
CLL	Collm	122.68	331	*ep*PKPdf		pPKPdf	15 35 58.0	-0.9	
	comp=Z,7.0nm,0.8s								
CLL				*e*PP		PP	15 37 30.0	+8.0	
CLL				*e*(SS)			15 54 42.0		
CLL				L			16 31 00.0		
	comp=Z,400nm,21.5s								
PRU	Pruhonice	122.71	329	AMS		AMS	16 31 00.0		
	comp=Z,400nm,19.1s								
TANN	Tannenbergstha	123.51	330	*e*PKPdf		pPKPdf	15 35 59.6	-0.9	
CLZ	Clausthal	123.58	332	*e*PKPdf		pPKPdf	15 35 59.7	-0.9	
GUNZ	Gunzen	123.60	330	*e*PKPdf		pPKPdf	15 35 59.7	-1.0	
NKC	Novy Kostel	123.63	330	AMS		AMS	16 28 20.0		
	comp=Z,500nm,24.3s								
KHC	Kasperske Hory	123.73	328	*e*PKPdf		PKPdf	15 35 45.7	-1.0	
KHC				*e*			15 35 58.6		
KHC	Kasperske Hory	123.73	328	*e*PKiKP		PKPdf	15 35 46.3	-0.3	
KHC				*e*			15 35 59.6		
KHC				MLR		MLR			
	comp=Z,400nm,22.1s,MS5.0								
KHC	Kasperske Hory	123.73	328	*e*PKPdf		PKPdf	15 35 46.3	-0.3	
KHC				*ep*PKP		pPKPdf	15 35 59.6	-1.4	
KHC				AMS		AMS	16 26 10.0		
	comp=Z,400nm,22.1s								
MOX	Moxa	123.78	331	*e*PKPdf		pPKPdf	15 35 59.4	-1.6

FDF	**Fort de France**	**146.18**	**71**	*e*PKPdf	PKPdf	15 36 29.7	+0.6
TORD	**Torodi Ar. Bea**	**149.50**	**287**	PKPbc	PKPbc	15 36 37.6	-1.5
	comp=Z,28nm,0.9s,baz=28,slow=1.7,SNR=29						
TORD				pPKPbc	pPKPbc	15 36 52.1	-1.3
	comp=Z,104nm,1.1s,baz=62,slow=2.0,SNR=22						

*IDC **04** 15:41:57.8±1.1, 43°.90N×151°.43E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.6/23, mbtmp3.6/9, ML3.2/1, Error ellipse: s-maj=31.9km s-min=23.0km az=4.0*
*JMA **04** 15:42:00.6±0.7, 44°.34N×151°.22E, h30km, M4.0*
*NEIC **04** 15:42:01.7±6.6, 43°.87N×151°.34E, h25km±45km, mb4.2/1, Error ellipse: s-maj=23.9km s-min=18.5km az=192.0*
*ISCJB **04** 15:42:03.8±1.2, 43°.26N±0°.09×150°.94E±0°.08, h76km±11km, mb3.7/11, Error ellipse: s-maj=16.2km s-min=9.0km az=158.1*
*MOS **04** 15:42:06.9±1.2, 43°.77N×151°.26E, h90km, mb3.9/4, Error ellipse: s-maj=23.7km s-min=14.2km az=42.5*

ISC 04 15:42:04.9±1.2, 43°.36N±0°.10×151°.00E±0°.09, h65km±10km, n42, σ1s01/51, mb3.7/11, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**3.79**	**282**	*e*PN	**Pn**	**15 43 04.1**	**+3.4**
NEM2	**Nemuro 2**	**3.84**	**272**	P	**Pn**	**15 43 00.1**	**-1.3**
NEM2				*e*S	**Sn**	**15 43 44.1**	**-1.1**
JRA	**Rausu**	**4.31**	**280**	P	**Pn**	**15 43 06.9**	**-0.9**
JNK	**Nakash**	**4.58**	**275**	P	**Pn**	**15 43 10.6**	**-1.0**
JNK				*e*S	**Sn**	**15 44 02.5**	**-0.9**
JAK	**Akkeshi**	**4.63**	**268**	P	**Pn**	**15 43 12.1**	**-0.1**
JAK				*e*S	**Sn**	**15 44 04.5**	**-0.1**
JTKR	**Abashiri--Toko**	**5.18**	**279**	P	**Pn**	**15 43 19.2**	**-0.6**
JOB	**Onbets**	**5.27**	**267**	P	**Pn**	**15 43 20.9**	**-0.1**
JOB				*e*S	**Sn**	**15 44 20.8**	**+0.5**
JAR	**Ashorobuto**	**5.28**	**272**	P	**Pn**	**15 43 20.8**	**-0.3**
JAR				*e*S	**Sn**	**15 44 21.5**	**+1.0**
JCH	**Churui**	**5.66**	**265**	P	**Pn**	**15 43 26.7**	**+0.4**
JCH				*e*S	**Sn**	**15 44 29.7**	**-0.1**
JEM	**Erimo**	**5.94**	**260**	P	**Pn**	**15 43 32.8**	**+2.7**
JKK2	**Kamakawa 2**	**6.01**	**278**	P	**Pn**	**15 43 33.1**	**+1.9**
JFR	**Furan**	**6.14**	**271**	P	**Pn**	**15 43 32.8**	**-0.2**
JNBK	**Urakawa-nobuka**	**6.16**	**263**	P	**Pn**	**15 43 34.0**	**+0.8**
JBT2	**Biratori 2**	**6.36**	**268**	P	**Pn**	**15 43 35.9**	**+0.1**
YSS	**Yuzh-Sakhalins**	**6.85**	**304**	P	**Pn**	**15 43 39.5**	**-3.0**
YSS	**Yuzh-Sakhalins**	**6.85**	**304**	*e*PN	**Pn**	**15 43 48.0**	**+5.5**
JNB	**Noboribetsu**	**7.37**	**266**	*e*S	**Sn**	**15 45 12.9**	**+1.0**
JKB	**Kayabe**	**7.50**	**262**	P	**Pn**	**15 43 52.5**	**+1.0**
JKB				*e*S	**Sn**	**15 45 14.5**	**-0.6**
JTH	**Tanohata**	**7.65**	**247**	*e*S	**Sn**	**15 45 17.9**	**-0.9**
JANG	**Nango**	**7.69**	**250**	P	**Pn**	**15 43 54.1**	**+0.1**
JANG				*e*S	**Sn**	**15 45 19.1**	**-0.5**
JTM	**Tenmabayashi**	**7.83**	**254**	P	**Pn**	**15 43 57.1**	**+1.1**
JTM				*e*S	**Sn**	**15 45 22.3**	**-0.7**
JRG	**Rokugo**	**8.74**	**247**	P	**Pn**	**15 44 10.1**	**+1.6**
JIO	**Ouri**	**8.80**	**239**	*e*S	**Sn**	**15 45 45.3**	**-1.6**
KSRS	**Korea Array**	**18.52**	**259**	P	**Pn**	**15 46 22.2**	**+5.5**
	0.1nm,0.3s,baz=69,slow=12,SNR=3.0						
SEY	**Seymchan**	**19.62**	**2**	*e*P	**Pn**	**15 46 25.6**	**-4.0**
ULN	**Ulaanbaatar**	**30.75**	**294**	*e*P	**P**	**15 48 14.4**	**+0.7**
SONM	**Songino Array**	**31.20**	**294**	P	**P**	**15 48 18.4**	**+0.7**
	0.2nm,0.3s,mb3.3,baz=73,slow=11,SNR=2.4						
ZALV	**Zalesovo Beam**	**43.45**	**308**	P	**P**	**15 50 00.9**	**-0.2**
	0.5nm,0.4s,mb3.6,baz=70,slow=4.7,SNR=2.4						
ZALV	**Zalesovo Beam**	**43.45**	**308**	P	**P**	**15 50 00.9**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
MKAR	**Makanchi Array**	**47.23**	**299**	P	**P**	**15 50 32.6**	**+1.5**
	comp=Z,0.5nm,0.7s,mb3.4,baz=67,slow=8.7,SNR=4.1						
MKAR	**Makanchi Array**	**47.23**	**299**	*e*P	**P**	**15 50 34.7**	**+3.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**48.05**	**305**	*e*P	**P**	**15 50 38.3**	**+0.9**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.7						
BVAR	**Borovoye Array**	**51.90**	**311**	P	**P**	**15 51 07.9**	**+1.4**
	comp=Z,0.4nm,0.3s,mb4.0,baz=66,slow=7.2,SNR=6.0						
BVAR	**Borovoye Array**	**51.90**	**311**	*e*P	**P**	**15 51 08.0**	**+1.5**
ABKAR	**Akbulak array**	**59.47**	**310**	*e*P	**P**	**15 52 00.9**	**+0.1**
	comp=Z,0.8nm,0.4s,mb4.1						
NVAR	**Mina Array Bea**	**65.38**	**60**	P	**P**	**15 52 39.6**	**-0.8**
	comp=Z,0.4nm,0.6s,mb3.4,baz=295,slow=6.6,SNR=4.5						
FINES	**FINESS Array B**	**66.46**	**335**	P	**P**	**15 52 45.9**	**-1.0**
	comp=Z,2.0nm,0.9s,mb3.9,baz=44,slow=8.7,SNR=4.0						
FINES	**FINESS Array B**	**66.46**	**335**	P	**P**	**15 52 45.9**	**-1.0**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OBN	**Obninsk**	**67.25**	**325**	*e*P	**P**	**15 52 51.0**	**-1.0**
OBN				*e*	S	15 55 19.6	
OBN				*e*S	S	16 01 30.2	-11
OBN				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.6						
ASAR	**Alice Springs**	**68.53**	**197**	P	**P**	**15 53 05.3**	**+5.1**
	comp=Z,0.2nm,0.6s,mb3.1,baz=15,slow=6.9,SNR=5.1						
ASAR	**Alice Springs**	**68.53**	**197**	*e*P	**P**	**15 53 05.1**	**+4.8**
TXAR	**Lajitas Array**	**80.50**	**59**	P	**P**	**15 54 08.7**	**-1.2**
	comp=Z,0.3nm,0.7s,mb3.2,baz=299,slow=3.8,SNR=4.3						

*ISCJB **04** 16:07:44.4±1.6, 44°.60S±0°.04×167°.05E±0°.09, h6km±10km, Error ellipse: s-maj=11.3km s-min=6.3km az=22.7*
*NEIC **04** 16:07:44.7, 44°.58S×167°.03E, h5km, ML3.7(WEL), After WEL.*
*WEL **04** 16:07:45.3±0.6, 44°.63S×167°.10E, h5km, ML3.7/7, Error ellipse: s-maj=3.7km s-min=3.4km az=90.0*

ISC 04 16:07:44.8±1.4, 44°.62S±0°.04×167°.06E±0°.08, h6km±7km, n24, σ0s97/32, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	**0.62**	**95**	P*	**Pb**	**16 07 57.3**	**-0.8**
MSZ				SG	**Sg**	**16 08 04.6**	**-0.3**
MSZ				SG	**Sg**	**16 08 04.8**	**0.0**
MSZ	**Milford Sound**	**0.62**	**95**	P	**Pg**	**16 07 57.3**	**+0.6**
DCZ	**Deep Cove**	**0.86**	**176**	P*	**Pb**	**16 08 01.4**	**-0.8**
DCZ				S*	**Sb**	**16 08 12.3**	**-1.7**
DCZ	**Deep Cove**	**0.86**	**176**	P	**Pg**	**16 08 01.4**	**0.0**
MLZ	**Mavora Lakes**	**1.08**	**133**	P*	**Pb**	**16 08 05.5**	**-0.3**
MLZ				S*	**Sb**	**16 08 19.3**	**-0.8**
MLZ	**Mavora Lakes**	**1.08**	**133**	P	**Pg**	**16 08 05.5**	**+0.1**
MLZ				S	**Sg**	**16 08 19.3**	**-0.1**
JCZ	**Jackson Bay**	**1.33**	**67**	P*	**Pb**	**16 08 09.3**	**-0.9**
JCZ				S*	**Sb**	**16 08 27.0**	**-0.5**
JCZ	**Jackson Bay**	**1.33**	**67**	P	**Pn**	**16 08 09.3**	**-0.6**
WKZ	**Wanaka**	**1.41**	**99**	PN	**Pn**	**16 08 11.5**	**+0.6**
WKZ	**Wanaka**	**1.41**	**99**	P	**Pn**	**16 08 11.5**	**+0.5**
WHZ	**Wether Hill Ro**	**1.42**	**154**	PN	**Pn**	**16 08 11.2**	**0.0**
WHZ				SN	**Sn**	**16 08 29.7**	**-0.5**
WHZ	**Wether Hill Ro**	**1.42**	**154**	P	**Pn**	**16 08 11.2**	**0.0**
WHZ				S	**Sb**	**16 08 30.4**	**+0.3**
PYZ	**Puysegur Point**	**1.57**	**190**	PN	**Pn**	**16 08 12.6**	**-0.6**
EAZ	**Earnscleugh**	**1.71**	**112**	PN	**Pn**	**16 08 16.6**	**+1.5**
FOZ	**Fox Glacier**	**2.17**	**62**	P	**Pn**	**16 08 20.9**	**-0.5**
LBZ	**Lake Benmore**	**2.25**	**85**	P	**Pn**	**16 08 23.6**	**+1.1**
TUZ	**Tuapeka**	**2.26**	**127**	P	**Pn**	**16 08 23.9**	**+1.3**
APZ	**The Paps**	**2.31**	**164**	P	**Pn**	**16 08 25.1**	**+1.8**
SYZ	**Scrubby Hill**	**2.41**	**143**	P	**Pn**	**16 08 26.2**	**+1.4**
ODZ	**Otahua Downs**	**2.59**	**101**	P	**Pn**	**16 08 27.8**	**+0.7**
RPZ	**Rata Peaks**	**3.01**	**74**	*e*P	**Pn**	**16 08 35.3**	**+2.3**
WVZ	**Waitaha Valley**	**3.07**	**61**	P	**Pn**	**16 08 32.2**	**-1.6**
QRZ	**Quartz Range**	**5.53**	**49**	P	**Pn**	**16 09 06.3**	**-1.3**
BKZ	**Black Stump Fm**	**8.89**	**56**	P	**Pn**	**16 10 03.6**	**+10**

*NIED **04** 16:12:00, 27°.00N×126°.60E, h5km, Mw4.2 Best double couple: Mo1.93000×10^15 NP1:φs13.00000°, δ67.00000°, λ-139.00000°. NP2:φs265.00000°, δ53.00000°, λ-29.00000°.*
*ISCJB **04** 16:12:27.3±0.5, 26°.98N±0°.04×126°.57E±0°.03, h10km, mb3.3/4, MS3.2/3, Error ellipse: s-maj=6.0km s-min=4.2km az=7.5*
*JMA **04** 16:12:27.0±0.3, 26°.99N×126°.55E, h10km±3km, M3.7*
*NEIC **04** 16:12:29.1±1.5, 27°.21N×126°.67E, h10km, MG4.0(JMA), Error ellipse: s-maj=27.8km s-min=16.1km az=109.0*
*IDC **04** 16:12:30.5±1.6, 26°.57N×125°.19E, h0km, mb3.4/4, mb1 3.4/5, mb1mx3.3/23, mbtmp3.3/5, MS3.3/3, Ms1 3.3/3, ms1mx2.7/19, Error ellipse: s-maj=54.0km s-min=22.5km az=79.0*

ISC 04 16:12:28.3±0.5, 26°.96N±0°.04×126°.60E±0°.04, h10km, n23, σ0s93/28, mb3.3/4, MS3.2/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**0.65**	**165**	P	**Pg**	**16 12 40.2**	**-0.8**
JKE				S	**Sg**	**16 12 49.2**	**-0.3**
JAGN	**Aguni-jima**	**0.68**	**123**	P	**Pg**	**16 12 41.0**	**-0.5**
JAGN				S	**Sg**	**16 12 50.6**	**+0.2**
JIH	**Iheya**	**1.22**	**86**	P	**Pn**	**16 12 49.8**	**-1.6**
JIH				S	**Sb**	**16 13 07.4**	**+0.1**
NAH1	**Naha**	**1.23**	**128**	P	**Pn**	**16 12 50.7**	**-0.9**
NAH1				S	**Sb**	**16 13 07.6**	**0.0**
JJT2	**Tamagusuku 2**	**1.31**	**128**	P	**Pn**	**16 12 52.5**	**-0.2**
JJT2				S	**Sb**	**16 13 10.4**	**+0.4**
JOW	**Kunigami**	**1.50**	**95**	P	**Pn**	**16 12 54.4**	**-0.9**
JOW				S	**Sn**	**16 13 14.9**	**0.0**
JTK	**Tokunoshima**	**2.24**	**68**	P	**Pn**	**16 13 05.2**	**-0.3**
JOGS	**Gusukube**	**2.44**	**206**	P	**Pn**	**16 13 06.8**	**-1.5**
JAM	**Amami Oshima**	**3.03**	**61**	P	**Pn**	**16 13 16.8**	**+0.5**
JZK	**Kikaishima**	**3.28**	**65**	P	**Pn**	**16 13 20.3**	**+0.5**
JIJ	**Ishigaki jima**	**3.41**	**221**	P	**Pn**	**16 13 22.0**	**+0.5**
IRIF	**Iriomote-Funau**	**3.68**	**225**	P	**Pn**	**16 13 25.9**	**+0.6**
JNN	**Nakanoshima**	**4.07**	**44**	P	**Pn**	**16 13 35.1**	**+4.5**
JMZ	**Minamidaito 2**	**4.29**	**104**	*e*S	**Sn**	**16 14 26.1**	**+2.2**
YHNB	**Yeheng**	**5.23**	**245**	*e*P	**Pn**	**16 13 47.9**	**+1.2**
SSLB	**Suanglung**	**6.01**	**239**	*e*P	**Pn**	**16 14 01.3**	**+4.0**
	45nm,1.1s						
TPUB	**Ta-pu**	**6.53**	**237**	P	**Pn**	**16 14 09.1**	**+4.7**
KSRS	**Korea Array**	**10.52**	**6**	Pn	**Pn**	**16 15 11.8**	**+13**
	baz=181,slow=12,SNR=4.7						
KSRS				Lg		16 18 21.1	
	0.1nm,0.3s,baz=192,slow=28,SNR=2.8						
SONM	**Songino Array**	**26.16**	**328**	P	**P**	**16 18 02.8**	**+0.2**
	0.9nm,0.7s,mb3.4,baz=126,slow=7.3,SNR=5.3						
SONM				LR	LR	16 28 44.7	
	comp=Z,87nm,21.1s,MS3.3,baz=84,slow=38						
CMAR	**Chiang Mai Arr**	**26.84**	**257**	LR	LR	16 29 30.3	
	comp=Z,48nm,21.4s,MS3.0,baz=60,slow=40						
MKAR	**Makanchi Array**	**39.96**	**312**	P	**P**	**16 20 01.7**	**-1.2**
	0.4nm,0.7s,mb3.3,baz=102,slow=8.7,SNR=4.1						
ZALV	**Zalesovo Beam**	**40.79**	**323**	P	**P**	**16 20 09.4**	**-0.2**
	0.2nm,0.3s,mb3.3,baz=106,slow=3.1,SNR=2.8						
ZALV				LR	LR	16 38 07.8	
	comp=Z,39nm,19.1s,MS3.3,baz=251,slow=38						
ASAR	**Alice Springs**	**50.82**	**171**	P	**P**	**16 21 31.5**	**+2.4**
	0.3nm,0.6s,mb3.4,baz=359,slow=7.3,SNR=7.7						

GUC 04 16:18:56.0±0.4, 41°.25S×73°.59W, h46km±2km, ML4.3, 2C-1D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OSCH	**Osorno**	**0.76**	**28**	*i*P	Pn	16 19 10.8	+0.5
OSCH				*i* S	Sn	16 19 21.8	+1.1
OSCH				AML	AML	16 19 23.7	
	comp=E,15μm,0.5s						
HOCH	**HornopirØn**	**1.11**	**127**	*i*P	Pn	16 19 15.8	+0.8
HOCH				*i* S	Sn	16 19 30.6	+1.4
HOCH				AML	AML	16 19 31.2	
	comp=E,25μm,0.3s						
ILCA	**Isla Las Cabra**	**1.14**	**136**	*i*P	Pn	16 19 15.9	+0.5
ILCA				*i* S	Sn	16 19 31.1	+1.3
ILCA				AML	AML	16 19 32.1	
	comp=N,7μm,0.4s						

*BJI **04** 16:37:38.7, 39°.84N×73°.80E, h17km, ML3.2/4*
*IDC **04** 16:37:38.9±1.4, 39°.47N×74°.02E, h0km, mb3.8/5, mb1 3.8/9, mb1mx3.6/25, mbtmp3.6/9, ML3.0/4, Error ellipse: s-maj=23.8km s-min=16.3km az=103.0*
*NEIC **04** 16:37:43.4±1.2, 39°.39N×73°.78E, h35km, Error ellipse: s-maj=18.3km s-min=16.5km az=59.0*

ISC 04 16:37:42.1±3.3, 39°.3N±0°.1×73°.6E±0°.1, h29km±23km, n25, σ1s10/28, mb3.8/5, 1D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.86**	**82**	*i*Pg	**Pn**	**16 38 04.3**	**-7.6**
KSH				Sg	**Sn**	**16 38 22.3**	**-12**
KSH				smax			
	comp=N,260nm,0.8s						
KSH				smax			
	comp=E,260nm,0.5s						
AML	**Almayashu**	**2.85**	**1**	P	**Pn**	**16 38 26.1**	**+0.5**
	SNR=52						
AML	**Almayashu**	**2.85**	**1**	*e*P	**Pn**	**16 38 26.0**	**+0.3**
UCH	**Uchtor**	**3.03**	**13**	P	**Pn**	**16 38 28.8**	**+0.7**
	SNR=10						
KZA	**Kyzart**	**3.07**	**24**	P	**Pn**	**16 38 29.8**	**+1.2**
	SNR=6.8						
EKS2	**Erkin-Say**	**3.38**	**2**	P	**Pn**	**16 38 33.9**	**+0.9**
	SNR=8.1						
EKS2	**Erkin-Say**	**3.38**	**2**	*e*P	**Pn**	**16 38 33.3**	**+0.4**
AAK	**Ala-Archa**	**3.42**	**11**	*e*P	**Pn**	**16 38 33.4**	**-0.1**
AAK				Sn	**Sn**	**16 39 12.9**	**-0.1**
AAK				Lg		16 39 18.6	
AAK	**Ala-Archa**	**3.42**	**11**	Pn	**Pn**	**16 38 34.2**	**+0.8**
	comp=E,3.7nm,0.3s,baz=178,slow=8.6,SNR=24						
AAK				Sn	**Sn**	**16 39 12.9**	**-0.1**
	comp=E,5.1nm,0.3s,baz=84,slow=19,SNR=3.4						
AAK				Lg		16 39 18.6	
	comp=E,16nm,0.3s,baz=100,slow=18,SNR=16						
KBK	**Karagaybulak**	**3.53**	**16**	P	**Pn**	**16 38 35.3**	**+0.4**
	SNR=24						
ULHL	**Ulahol**	**3.58**	**33**	P	**Pn**	**16 38 36.1**	**+0.4**
	SNR=8.4						
CHMS	**Chumysh**	**3.82**	**13**	P	**Pn**	**16 38 39.0**	**+0.1**
	SNR=6.4						
USP	**Ospenovka**	**4.04**	**9**	P	**Pn**	**16 38 42.4**	**+0.4**
	SNR=6.4						
MKAR	**Makanchi Array**	**9.84**	**37**	Pn	**Pn**	**16 39 59.5**	**-2.1**
	comp=E,0.0nm,0.3s,baz=198,slow=18,SNR=3.5						
MKAR				Lg		16 42 38.4	
	comp=E,0.1nm,0.3s,baz=230,slow=20,SNR=3.0						
BVAR	**Borovoye Array**	**13.93**	**352**	Pn	**Pn**	**16 40 54.7**	**-2.6**
	comp=E,0.1nm,0.3s,baz=156,slow=14,SNR=3.8						
BVAR				Lg		16 44 50.5	
	comp=E,0.2nm,0.3s,baz=166,slow=28,SNR=3.2						
ABKAR	**Akbulak array**	**13.95**	**320**	P	**Pn**	**16 40 54.8**	**-2.9**
	comp=E,1.7nm,0.6s						
AKTK	**Aktyubinsk**	**15.66**	**320**	Pn	**Pn**	**16 41 20.1**	**-0.5**
AKTO	**Aktyubinsk**	**15.66**	**320**	Pn	**Pn**	**16 41 20.1**	**-0.5**
	comp=E,0.2nm,0.3s,baz=129,slow=11,SNR=3.6						
FINES	**FINESS Array B**	**36.41**	**323**	P	**P**	**16 44 44.8**	**+1.2**
	comp=E,1.5nm,0.5s,mb4.2,baz=120,slow=9.0,SNR=12						
ARCES	**ARCESS Array B**	**39.42**	**336**	P	**P**	**16 45 09.7**	**+0.8**
	comp=E,0.8nm,0.5s,mb3.7,baz=110,slow=11,SNR=8.8						
TIXI	**Tiksi**	**42.43**	**23**	*e*P	**P**	**16 45 31.8**	**-1.9**
NOA	**NORSAR Array B**	**43.46**	**321**	P	**P**	**16 45 43.2**	**+1.0**
NOA	**NORSAR Array B**	**43.46**	**321**	P	**P**	**16 45 43.2**	**+1.0**
	comp=E,1.5nm,0.6s,mb3.9,baz=91,slow=8.0,SNR=4.0						
ILAR	**Eielson Array**	**71.54**	**17**	P	**P**	**16 48 58.6**	**-1.2**
	comp=E,0.5nm,0.9s,mb3.4,baz=315,slow=5.6,SNR=5.0						
ASAR	**Alice Springs**	**84.21**	**127**	P	**P**	**16 50 11.2**	**+0.5**
	comp=E,0.4nm,0.9s,mb3.5,baz=318,slow=6.3,SNR=3.6						

*CSEM **04** 17:06:26.9±0.3, 38°.03N×21°.76E, h27km±3km, ML2.4/6, Error ellipse: s-maj=6.8km s-min=4.0km az=165.0*

THE 04 17:06:27.5, 38°.02N×21°.75E, h22km±1km, ML2.4/6, Error ellipse: s-maj=1.4km s-min=0.6km az=79.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UPR	**University Cam**	**0.26**	**6**	*e*PN	Pb	17 06 33.5	-0.2
UPR	**University Cam**	**0.26**	**6**	P	Pb	17 06 33.5	-0.2
UPR	**University Cam**	**0.26**	**6**	*e*Pn	Pb	17 06 33.5	-0.2
UPR	**University Cam**	**0.26**	**6**	P	Pb	17 06 33.5	-0.2
LAKA	**Lakka**	**0.28**	**40**	P	Pb	17 06 33.9	-0.1
LAKA				S	Sb	17 06 38.7	+0.2
LAKA	**Lakka**	**0.28**	**40**	P	Pb	17 06 33.9	-0.1
LAKA				S	Sb	17 06 38.7	+0.2
EFP	**Efpalio**	**0.42**	**17**	P	Pb	17 06 35.9	-0.4
EFP	**Efpalio**	**0.42**	**17**	P	Pb	17 06 35.9	-0.4
EFP				S	Sb	17 06 43.2	+0.9
EFP	**Efpalio**	**0.42**	**17**	P	Pb	17 06 35.9	-0.4
EFP	**Efpalio**	**0.42**	**17**	P	Pb	17 06 35.9	-0.4
EFP				S	Sb	17 06 43.2	+0.9
TRIZ	**Trizonia**	**0.42**	**36**	P	Pb	17 06 36.0	-0.4
TRIZ				S	Sb	17 06 42.6	+0.2
TRIZ	**Trizonia**	**0.42**	**36**	P	Pb	17 06 36.0	-0.4
TRIZ				S	Sb	17 06 42.6	+0.2
GUR	**Goura**	**0.47**	**100**	P	Pb	17 06 37.0	-0.2
GUR				S	Sb	17 06 44.7	+0.9
GUR	**Goura**	**0.47**	**100**	P	Pb	17 06 37.0	-0.2
GUR				S	Sb	17 06 44.7	+0.9
KALE	**Kalithea**	**0.48**	**40**	P	Pb	17 06 37.0	-0.3
KALE				S	Sb	17 06 44.1	+0.2
KALE	**Kalithea**	**0.48**	**40**	P	Pb	17 06 37.0	-0.3
KALE				S	Sb	17 06 44.1	+0.2
DSF	**Desfina**	**0.72**	**57**	P	Pb	17 06 41.1	-0.3
DSF				S	Sb	17 06 51.6	+0.7
DSF	**Desfina**	**0.72**	**57**	P	Pb	17 06 41.1	-0.3
DSF				S	Sb	17 06 51.6	+0.7
KFL	**Anninata**	**0.77**	**277**	P	Pb	17 06 41.9	-0.2
KFL				S	Sb	17 06 53.0	+0.9
KFL	**Anninata**	**0.77**	**277**	P	Pb	17 06 41.9	-0.2
KFL				S	Sb	17 06 53.0	+0.9
EVR	**Evrytania**	**0.89**	**3**	*e*PB	Pb	17 06 43.2	-1.1
EVR	**Evrytania**	**0.89**	**3**	*e*Pb	Pb	17 06 43.2	-1.1
VLS	**Valsamata**	**0.93**	**280**	P	Pb	17 06 43.9	-1.0
VLS				S	Sb	17 06 58.0	+1.2
VLS	**Valsamata**	**0.93**	**280**	P	Pb	17 06 43.9	-1.0
VLS				S	Sb	17 06 58.0	+1.2
AGG	**Agios Georgios**	**1.09**	**24**	P	Pn	17 06 45.5	-2.0
AGG				S	Sb	17 07 02.1	+0.5
AGG	**Agios Georgios**	**1.09**	**24**	P	Pn	17 06 45.5	-2.0
AGG				S	Sb	17 07 02.1	+0.5

*BJI **04** 17:32:31.7, 46°.69N×89°.99E, h17km, ML3.2/5*
*NNC **04** 17:32:35.8±3.4, 46°.59N×89°.22E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=25.3km s-min=21.1km az=93.0*

ISC 04 17:32:34.3±2.3, 46°.65N±0°.06×89°.7E±0°.2, h10km, n4, σ1s11/9, 6C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**3.16**	**207**	*e*Pn	**Pn**	**17 33 26.0**	**+2.0**
WMQ				Sg	**Sg**	**17 34 14.5**	**-1.2**
WMQ				smax			
	comp=N,61nm,0.8s						
WMQ				smax			
	comp=E,75nm,0.7s						
MK31	**Makanchi Array**	**5.10**	**274**	Pn	**Pn**	**17 33 51.6**	**+1.0**
	comp=E,0.3nm,0.3s,baz=91,slow=16,SNR=38						
MK31				⇓Pg	**Pg**	**17 34 06.2**	**-5.7**
	comp=E,2.3nm,0.5s,baz=87,slow=18,SNR=5.6						
MK31				⇑Sn	**Sn**	**17 34 50.5**	**+0.9**
	comp=E,1.4nm,0.3s,baz=88,slow=26,SNR=6.7						
MK31				⇑Lg		17 35 10.0	
	comp=E,8.2nm,0.4s,baz=90,slow=28,SNR=4.5						
KURK	**Kurchatov**	**8.38**	**303**	⇑Pn	**Pn**	**17 34 34.2**	**-1.5**
	comp=E,3.8nm,1.1s						
KURK				⇑Sn	**Sn**	**17 36 10.6**	**+0.3**
	comp=E,3.6nm,0.7s						
KURK				⇓Lg		17 36 56.0	
	comp=E,12nm,0.7s						
KURBB	**Kurchatov Arra**	**8.40**	**302**	⇑Pn	**Pn**	**17 34 35.3**	**-0.6**
	comp=E,0.2nm,0.3s						
KURBB				⇑Sn	**Sn**	**17 36 10.2**	**-0.5**
	comp=E,1.1nm,1.0s						
KURBB				⇓Lg		17 36 58.5	
	comp=E,4.5nm,0.7s						

*IDC **04** 17:42:02.0±0.9, 35°.20N×75°.86E, h0km, mb4.0/12, mb1 4.2/16, mb1mx4.1/25, mbtmp4.0/16, ML4.3/4, MS3.4/5, Ms1 3.4/5, ms1mx2.9/27, Error ellipse: s-maj=22.9km s-min=15.0km az=33.0*
*BJI **04** 17:42:04.2, 35°.29N×75°.87E, h26km, mB4.4/3, mb3.9/11, ML4.2/4, Ms3.8/3*
*ISCJB **04** 17:42:05.5±0.6, 35°.32N±0°.02×76°.22E±0°.04, h39km±7km, mb4.2/31, MS3.2/5, Error ellipse: s-maj=6.0km s-min=3.5km az=153.5*
*MOS **04** 17:42:05.2±1.0, 35°.29N×75°.87E, h33km, mb4.3/19, Error ellipse: s-maj=12.5km s-min=6.8km az=99.1*
*NEIC **04** 17:42:08.0±1.0, 35°.26N×75°.89E, h44km±9km, mb4.1/6, Error ellipse: s-maj=8.8km s-min=7.5km az=200.0*
*NNC **04** 17:42:16.1±6.7, 35°.85N×75°.59E, h67km±60km, mb3.8, mpv4.4, Error ellipse: s-maj=54.1km s-min=32.2km az=9.0*

ISC 04 17:42:07.6±0.4, 35°.30N±0°.02×76°.10E±0°.04, h37km±6km, n114, σ1s24/125, mb4.2/31, MS3.2/5, 15C-4D, Eastern Kashmir

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

	comp=Z,1.0nm,0.5s,baz=197,slow=11,SNR=73								
MK31					⇑S		Sn	17 47 16.5	-1.6
	comp=Z,2.5nm,0.7s								
MK31	**Makanchi Array**	**12.39**	**20**	*e*P			**Pn**	**17 45 02.6**	**+1.2**
MK31	**Makanchi Array**	**12.39**	**20**	*ce*P			**Pn**	**17 45 02.8**	**+1.4**
MK31					pmax	pmax			
	comp=Z,1.0nm,0.3s								
MKAR	**Makanchi Array**	**12.39**	**20**	Pn			**Pn**	**17 45 03.0**	**+1.7**
	comp=Z,1.3nm,0.3s,baz=197,slow=12,SNR=72								
MKAR					Sn		**Sn**	**17 47 19.4**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=181,slow=16,SNR=3.6								
MKAR	**Makanchi Array**	**12.39**	**20**	*i* P			**Pn**	**17 45 03.0**	**+1.6**
MKAR					pmax	pmax			
	comp=Z,2.0nm,0.4s								
TAPN	**Taplejung**	**12.70**	**125**	*e*Pn			**Pn**	**17 45 02.9**	**-2.8**
ODAN	**Odare**	**12.82**	**128**	*e*Pn			**Pn**	**17 45 04.8**	**-2.5**
ODAN					*e*Sn		**Sn**	**17 47 25.7**	**-3.0**
	comp=Z,22nm,0.5s								
KURBB	**Kurchatov Arra**	**15.41**	**6**	⇑P			**Pn**	**17 45 46.3**	**+4.1**
	comp=Z,2.6nm,0.7s								
KURK	**Kurchatov**	**15.51**	**6**	⇑P			**Pn**	**17 45 45.8**	**+2.3**
	comp=Z,18nm,0.6s								
KURK	**Kurchatov**	**15.51**	**6**	*e*P			**Pn**	**17 45 45.3**	**+1.8**
	comp=Z,21nm,0.6s								
KURK	**Kurchatov**	**15.51**	**6**	*ce*P			**Pn**	**17 45 42.2**	**-1.3**
KURK					pmax	pmax			
	comp=Z,19nm,1.0s								
VOSK	**Vostochnaya**	**17.79**	**350**	⇑P			**Pn**	**17 46 11.4**	**-0.8**
	comp=Z,2.9nm,0.7s								
HYB	**Hyderabad**	**17.95**	**172**	*i* P			**Pn**	**17 46 15.0**	**+0.7**
BVA0	**Borovoye Array**	**18.18**	**349**	⇑P			**Pn**	**17 46 16.3**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=269,slow=42,SNR=15								
BVAR	**Borovoye Array**	**18.18**	**349**	P			**Pn**	**17 46 16.7**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=158,slow=12,SNR=16								
BVAR	**Borovoye Array**	**18.18**	**349**	P			**Pn**	**17 46 16.7**	**-0.2**
BVAR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
BRVK	**Borovoye**	**18.22**	**349**	*e*P			**Pn**	**17 46 16.9**	**-0.6**
	comp=Z,5.2nm,0.6s								
BRVK	**Borovoye**	**18.22**	**349**	*ce*P			**Pn**	**17 46 17.3**	**-0.2**
BRVK					pmax	pmax			
	comp=Z,16nm,1.7s								
AB31	**Akbulak array**	**18.31**	**325**	⇑P			**Pn**	**17 46 15.5**	**-3.0**
	comp=Z,1.6nm,0.5s,baz=112,slow=12,SNR=32								
AB31					⇓S		**S**	**17 49 30.0**	**-16**
	comp=Z,1.0nm,0.5s,baz=164,slow=21,SNR=3.3								
AB31	**Akbulak array**	**18.31**	**325**	*i* P			**Pn**	**17 46 15.5**	**-3.1**
AB31					pmax	pmax			
	comp=Z,2.0nm,0.5s								
ABKAR	**Akbulak array**	**18.31**	**325**	*e*P			**Pn**	**17 46 15.2**	**-3.4**
	comp=Z,3.0nm,0.6s								
ZRNK	**Zerenda**	**18.35**	**346**	⇑P			**Pn**	**17 46 18.0**	**-1.0**
	comp=Z,4.3nm,1.0s								
GTA	**Gaotai**	**19.28**	**71**	*e*P			**Pn**	**17 46 32.8**	**+2.4**
GTA					pP	pP		17 46 37.3	-1.3
GTA					sP	sP		17 46 41.2	-2.0
GTA					pmax	pmax			
	comp=Z,5.0nm,1.3s								
ZAA0	**Zalesovo Array**	**19.62**	**15**	*e*P			**Pn**	**17 46 32.8**	**-1.4**
ZALV	**Zalesovo Beam**	**19.62**	**15**	P			**Pn**	**17 46 32.9**	**-1.4**
	comp=Z,1.2nm,0.3s,baz=208,slow=9.9,SNR=19								
ZALV	**Zalesovo Beam**	**19.62**	**15**	P			**Pn**	**17 46 32.9**	**-1.4**
ZALV					pmax	pmax			
	comp=Z,1.0nm,0.3s								
AKTK	**Aktyubinsk**	**20.03**	**325**	P			**P**	**17 46 36.5**	**-0.7**
AKTO	**Aktyubinsk**	**20.03**	**325**	P			**P**	**17 46 36.5**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=120,slow=12,SNR=22								
AKTO	**Aktyubinsk**	**20.03**	**325**	P			**P**	**17 46 36.5**	**-0.7**
AKTO					pmax	pmax			
	comp=Z,1.0nm,0.3s								
NVS	**Novosibirsk**	**20.16**	**12**	*i* P			**P**	**17 46 39.7**	**+1.2**
LZH	**Lanzhou**	**22.52**	**80**	*e*P			**P**	**17 47 08.5**	**+4.3**
LZH					pP			17 47 13.0	
LZH					sP	sP		17 47 15.3	-3.0
LZH					pmax	pmax			
	comp=Z,18nm,1.3s,mb4.3								
ARU	**Arti**	**24.27**	**336**	*e*P			**P**	**17 47 20.8**	**-0.2**
	comp=Z,9.6nm,0.8s,mb4.3								
ARU	**Arti**	**24.27**	**336**	*d* iP			**P**	**17 47 19.9**	**-1.2**
ARU								17 47 58.9	
ARU					pmax	pmax			
	comp=Z,12nm,1.0s,mb4.3								
KBD	**Kabd**	**24.74**	**264**	*e*P			**P**	**17 47 25.7**	**0.0**
KBD					AMb	AMB		17 47 28.8	
	comp=Z,16nm,0.7s,mb4.7								
ZAK	**Zakamensk**	**24.80**	**44**	*e*P			**P**	**17 47 27.3**	**+1.3**
ZAK					pmax	pmax			
	comp=Z,3.0nm,1.1s,mb3.7								
MIB	**Mutribah**	**24.81**	**265**	*e*P			**P**	**17 47 26.6**	**+0.4**
MIB					AMb	AMB		17 47 29.5	
	comp=Z,39nm,1.1s,mb4.8								
RDF	**Al-Radifah**	**24.95**	**263**	*e*P			**P**	**17 47 27.9**	**+0.4**
RDF					AMb	AMB		17 47 30.3	
	comp=Z,28nm,0.7s,mb4.9								
GNI	**Garni**	**25.19**	**290**	LR		LR		18 00 02.9	
	comp=Z,26nm,18.2s,MS2.8,baz=77,slow=43								
SONM	**Songino Array**	**25.72**	**52**	P			**P**	**17 47 36.8**	**+2.5**
SONM					pmax	pmax			
	comp=Z,11nm,0.9s								
SONM					MLR	MLR			
	comp=Z,174nm,18.7s								
CHTO	**Chiang Mai**	**26.05**	**123**	*e*P			**P**	**17 47 38.0**	**+0.4**
	comp=Z,3.5nm,0.8s,mb3.9								
CHTO	**Chiang Mai**	**26.05**	**123**	*e*P			**P**	**17 47 38.0**	**+0.4**
CHTO					pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.0								
ULN	**Ulaanbaatar**	**26.15**	**52**	*e*P			**P**	**17 47 40.5**	**+2.3**
	comp=Z,6.3nm,0.8s,mb4.2								
ULN	**Ulaanbaatar**	**26.15**	**52**	*e*P			**P**	**17 47 40.5**	**+2.2**
ULN					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.2								
CMAR	**Chiang Mai Arr**	**26.30**	**124**	P			**P**	**17 47 39.6**	**-0.2**
	comp=Z,2.8nm,0.6s,mb3.9,baz=308,slow=12,SNR=17								
CMAR	**Chiang Mai Arr**	**26.30**	**124**	P			**P**	**17 47 39.7**	**-0.1**
CMAR					pmax	pmax			
	comp=Z,3.0nm,0.6s								
KIV	**Kislovodsk**	**27.00**	**299**	*e*P			**P**	**17 47 48.7**	**+2.8**
KIV					pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.0								
KIV					MLR	MLR			
	comp=Z,25nm,13.0s,MS3.0								
OBN	**Obninsk**	**33.56**	**319**	⇑*e*P			**P**	**17 48 43.8**	**0.0**
OBN					pmax	pmax			
	comp=Z,14nm,1.6s,mb4.6								
BRTR	**Keskin Array B**	**33.73**	**290**	P			**P**	**17 48 44.8**	**-0.8**
	comp=Z,0.8nm,0.6s,mb3.8,baz=108,slow=8.6,SNR=5.0								
BRTR	**Keskin Array B**	**33.73**	**290**	*i* P			**P**	**17 48 47.4**	**+1.9**
BRTR					pmax	pmax			
	comp=Z,1.0nm,0.6s								
KLMR	**Klimovskoe**	**34.59**	**329**	*e*P			**P**	**17 48 52.3**	**-0.4**
KLMR					pmax	pmax			
	comp=Z,16nm,1.4s,mb4.8								
AKASG	**Malin Array Be**	**36.91**	**309**	P			**P**	**17 49 10.3**	**-2.4**
AKASG	**Malin Array Be**	**36.91**	**309**	P			**P**	**17 49 10.3**	**-2.4**
	comp=Z,1.1nm,0.6s,mb3.9,baz=79,slow=7.6,SNR=4.2								
AKASG	**Malin Array Be**	**36.91**	**309**	*i* P			**P**	**17 49 12.3**	**-0.4**
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.6s								
JOF	**Joensuu**	**38.99**	**329**	*e*P			**P**	**17 49 28.8**	**-1.3**
JOF					pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.8								
JOF	**Joensuu**	**38.99**	**329**	*ep*			**P**	**17 49 28.7**	**-1.4**
	comp=Z,1.4nm,0.4s,mb4.0								
FINES	**FINESS Array B**	**40.80**	**326**	P			**P**	**17 49 44.9**	**-0.1**
FINES	**FINESS Array B**	**40.80**	**326**	P			**P**	**17 49 44.9**	**-0.1**
	comp=Z,2.0nm,0.4s,mb4.1,baz=119,slow=8.9,SNR=15								
FINES	**FINESS Array B**	**40.80**	**326**	P			**P**	**17 49 44.9**	**-0.1**
FINES					pmax	pmax			
	comp=Z,2.0nm,0.4s								
KAF	**Kangasniemi**	**40.89**	**327**	*e*P			pP	17 49 56.3	-0.1
KAF					pmax	pmax			
	comp=Z,1.0nm,0.3s,mb3.9								
KSRS	**Korea Array**	**41.35**	**71**	P			**P**	**17 49 52.7**	**+2.8**
	comp=Z,0.4nm,0.5s,mb3.3,baz=271,slow=9.2,SNR=3.3								
KEV	**Kevo**	**43.47**	**338**	*e*P			**P**	**17 50 04.0**	**-2.7**
KEV	**Kevo**	**43.47**	**338**	*ep*			**P**	**17 50 03.9**	**-2.8**
	comp=Z,0.4nm,0.3s,mb3.6								
ARCES	**ARCESS Array B**	**43.85**	**337**	P			**P**	**17 50 09.7**	**-0.1**
	comp=Z,4.3nm,0.8s,mb4.2,baz=108,slow=8.1,SNR=17								
ARCES	**ARCESS Array B**	**43.85**	**337**	P			**P**	**17 50 09.7**	**-0.1**
ARCES					pmax	pmax			
	comp=Z,4.0nm,0.8s								

NOA	**NORSAR Array B**	**47.81**	**324**	P			**P**	**17 50 40.0**	**-1.2**
	comp=Z,1.8nm,0.9s,mb4.1,baz=94,slow=7.6,SNR=3.1								
NOA	**NORSAR Array B**	**47.81**	**324**	P			**P**	**17 50 40.0**	**-1.2**
NOA					pmax	pmax			
	comp=Z,2.0nm,0.9s								
SPITS	**Spitsbergen Ar**	**49.61**	**346**	LR		LR		18 14 16.7	
	comp=Z,21nm,21.6s,MS3.1,baz=190,slow=39								
LPG	**La Plagne**	**52.27**	**304**	*e*P			**P**	**17 51 15.7**	**+0.5**
LPL	**La Plagne**	**52.28**	**304**	*e*P			**P**	**17 51 15.7**	**+0.4**
	comp=Z,9.2nm,0.9s,mb4.4								
SMF	**Signal de Mont**	**53.93**	**306**	*e*P			**P**	**17 51 27.7**	**+0.3**
	comp=Z,11nm,0.9s,mb4.5								
SSF	**Saint Saulge**	**54.05**	**306**	*e*P			**P**	**17 51 28.5**	**+0.3**
	comp=Z,6.3nm,0.8s,mb4.3								
AVF	**Avril sur Loir**	**54.22**	**306**	*e*P			**P**	**17 51 29.7**	**+0.2**
	comp=Z,5.4nm,0.7s,mb4.3								
TCF	**Toulx Ste Croi**	**55.12**	**306**	*e*P			**P**	**17 51 35.9**	**-0.1**
	comp=Z,9.7nm,1.0s,mb4.5								
ESDC	**Sonseca Array**	**61.66**	**300**	P			**P**	**17 52 21.8**	**0.0**
	comp=Z,0.3nm,0.4s,mb3.8,baz=55,slow=7.5,SNR=4.7								
GUMO	**Guam**	**65.02**	**91**	LR		LR		18 23 20.9	
	comp=Z,35nm,21.6s,MS3.5,baz=98,slow=38								
ILAR	**Eielson Array**	**74.73**	**18**	P			**P**	**17 53 42.9**	**-0.4**
	comp=Z,0.4nm,0.7s,mb3.5,baz=310,slow=3.5,SNR=4.5								
WRAB	**Tennant Creek**	**77.88**	**125**	*e*P			**P**	**17 54 01.4**	**-0.3**
ASAR	**Alice Springs**	**80.22**	**128**	P			**P**	**17 54 14.8**	**+0.4**
	comp=Z,1.1nm,0.6s,mb3.9,baz=313,slow=5.5,SNR=23								
ASAR	**Alice Springs**	**80.22**	**128**	P			**P**	**17 54 14.8**	**+0.4**
ASAR					pmax	pmax			
	comp=Z,1.0nm,0.6s								
YKA	**Yellowknife Ar**	**82.16**	**5**	P			**P**	**17 54 24.2**	**-0.1**
YKA	**Yellowknife Ar**	**82.16**	**5**	P			**P**	**17 54 24.2**	**-0.1**
	comp=Z,0.7nm,0.5s,mb3.9,baz=345,slow=5.2,SNR=6.2								
YKA	**Yellowknife Ar**	**82.16**	**5**	P			**P**	**17 54 24.2**	**-0.1**
YKA					pmax	pmax			
	comp=Z,1.0nm,0.5s								
CTAO	**Charters Tower**	**86.30**	**118**	*e*P			**P**	**17 54 46.2**	**+0.4**

*ISCJB **04** 18:10:58.9±0.7, 39.°59N±0.°03×23.°93E±0.°05, h6km±6km, Error ellipse: s-maj=7.4km s-min=4.5km az=24.6*
*THE **04** 18:10:59.9, 39.°56N×23.°88E, h2km×2km, ML2.9/5, Error ellipse: s-maj=2.4km s-min=0.8km az=88.0*
*CSEM **04** 18:10:59.3±0.2, 39.°57N×23.°91E, h10km, ML2.9/5, Error ellipse: s-maj=7.3km s-min=4.2km az=115.0*
*SOF **04** 18:10:59.5, 39.°83N×24.°76E, h20km, MD3.0*

ISC 04 18:10:59.8±0.5, 39.°57N±0.°03×23.°90E±0.°05, h10km±5km, n33,σ1s91/44, 4C-5D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.39**	**335**	P	**Pg**	**18 11 07.4**	**-0.1**
PAIG				S	**Sg**	**18 11 13.2**	**+0.5**
PAIG	**Paliouri**	**0.39**	**335**	P	**Pg**	**18 11 07.4**	**-0.1**
PAIG				S	**Sg**	**18 11 13.2**	**+0.5**
AOS	**Alonnisos**	**0.40**	**182**	P	**Pg**	**18 11 07.0**	**-0.7**
AOS				S	**Sg**	**18 11 12.7**	**-0.3**
AOS	**Alonnisos**	**0.40**	**182**	P	**Pg**	**18 11 07.0**	**-0.7**
AOS				S	**Sg**	**18 11 12.7**	**-0.3**
XOR	**Xorichti**	**0.58**	**249**	P	**Pg**	**18 11 10.8**	**-0.3**
XOR				S	**Sg**	**18 11 19.0**	**+0.2**
XOR	**Xorichti**	**0.58**	**249**	P	**Pg**	**18 11 10.8**	**-0.3**
XOR				S	**Sg**	**18 11 19.0**	**+0.2**
OUR	**Ouranopolis**	**0.76**	**5**	P	**Pg**	**18 11 14.0**	**-0.5**
OUR	**Ouranopolis**	**0.76**	**5**	P	**Pg**	**18 11 14.0**	**-0.5**
LIA	**Limnos Island**	**1.04**	**72**	P	**Pg**	**18 11 20.4**	**+0.5**
LIA				S	**Sg**	**18 11 34.8**	**+1.4**
LIA	**Limnos Island**	**1.04**	**72**	P	**Pg**	**18 11 20.4**	**+0.5**
ATAL	**Atalanti**	**1.11**	**218**	P	**Pb**	**18 11 19.4**	**-1.7**
ATAL				S	**Sb**	**18 11 36.8**	**+1.2**
ATAL	**Atalanti**	**1.11**	**218**	P	**Pb**	**18 11 19.4**	**-1.7**
ATAL				S	**Sb**	**18 11 36.8**	**+1.2**
AGG	**Agios Georgios**	**1.33**	**246**	P	**Pn**	**18 11 24.9**	**+0.4**
AGG				S	**Sb**	**18 11 43.2**	**+1.2**
AGG	**Agios Georgios**	**1.33**	**246**	P	**Pn**	**18 11 24.9**	**+0.4**
AGG				S	**Sb**	**18 11 43.2**	**+1.2**
MMB	**Musomiste**	**2.02**	**356**	*i* P	**Pn**	**18 11 32.8**	**-1.1**
MMB	**Musomiste**	**2.02**	**356**	*i* P	**Pn**	**18 11 32.8**	**-1.1**
RZN	**Rozhen**	**2.20**	**16**	*i* P	**Pn**	**18 11 31.8**	**-4.6**
RZN	**Rozhen**	**2.20**	**16**	*i* P	**Pn**	**18 11 31.8**	**-4.6**
KKB	**Krupnik**	**2.37**	**345**	*i* P	**Pn**	**18 11 38.1**	**-0.6**
KKB	**Krupnik**	**2.37**	**345**	*i* P	**Pn**	**18 11 38.1**	**-0.6**
KDZ	**Kurdzhali**	**2.38**	**29**	P	**Pn**	**18 11 36.9**	**-1.9**
KDZ	**Kurdzhali**	**2.38**	**29**	P	**Pn**	**18 11 36.9**	**-1.9**
APE	**Apeiranthos**	**2.81**	**152**	⇑*i* P	**Pn**	**18 11 40.1**	**-4.7**
APE	**Apeiranthos**	**2.81**	**152**	⇑*i* P	**Pn**	**18 11 40.1**	**-4.7**
VTS	**Vitosha**	**3.06**	**350**	⇓*i* P	**Pn**	**18 11 56.7**	**+8.5**
VTS	**Vitosha**	**3.06**	**350**	*i* P	**Pn**	**18 11 48.0**	**-0.2**
VTS	**Vitosha**	**3.06**	**350**	*i* P	**Pn**	**18 11 48.0**	**-0.2**
VOIR		**5.92**	**8**	⇓*i* P	**Pn**	**18 12 27.7**	**+0.2**
VOIR		**5.92**	**8**	⇓*i* P	**Pn**	**18 12 27.7**	**+0.2**
TIRR	**Tirgusor**	**5.93**	**33**	⇑*i* P	**Pn**	**18 12 23.5**	**-4.1**
MLR	**Muntele Rosu**	**6.10**	**14**	⇓*i* P	**Pn**	**18 12 35.6**	**+5.6**
VRI	**Vrincioaia**	**6.62**	**17**	⇓*i* P	**Pn**	**18 12 39.4**	**+2.2**
PKSM	**Moragy**	**7.67**	**332**	⇑*i* P	**Pn**	**18 12 42.5**	**-9.0**

MEX 04 18:44:59.8±0.5, 17.°32N×100.°35W, h15km±8km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.28**	**164**	*i* P	Pg	18 45 05.0	-0.8
CAIG				*i* S	Sg	18 45 09.4	-0.5
ACX	**Acapulco**	**0.65**	**134**	*i* P	Pg	18 45 10.2	-2.3
ACX				*i* S	Sg	18 45 17.4	-3.7
MEIG	**Mezcala**	**0.92**	**49**	*i* P	Pb	18 45 14.8	-2.6
MEIG				*i* S	Sb	18 45 25.6	-3.9
PNIG	**Pinotepa**	**2.32**	**113**	*i* P	Pn	18 45 35.2	-2.3
PNIG				*i* S	Sn	18 46 01.6	-4.1

*CSEM **04** 18:55:20.8, 42.°64N×46.°71E, h12km, mb3.9, After OBN*
MOS 04 18:55:20.8±1.4, 42.°64N×46.°71E, h12km, mb3.9/1, 3C-2D, Error ellipse: s-maj=11.4km s-min=7.4km az=39.0, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XNZR	**Khunzakh**	**0.09**	**183**	*e*PG	Pg	18 55 25.0	+1.5
XNZR				*e*S	Sg	18 55 28.0	+2.5
XNZR				pmax	pmax		
	comp=Z,219nm,0.1s						
XNZR	**Khunzakh**	**0.09**	**183**	*e*Pg	Pg	18 55 25.0	+1.5
	comp=Z,219nm,0.1s						
XNZR				*e*Sg	Sg	18 55 28.0	+2.5
UNCR	**Uncukul**	**0.10**	**38**	⇑*i* PG	Pg	18 55 24.5	+0.9
UNCR				*e*S	Sg	18 55 27.5	+1.8
UNCR	**Uncukul**	**0.10**	**38**	*i* Pg	Pg	18 55 24.5	+0.9
UNCR				*e*Sg	Sg	18 55 27.5	+1.8
KRNR	**Karanay**	**0.24**	**37**	⇑*i* PG	Pg	18 55 26.8	+1.0
KRNR				*i* S	Sg	18 55 31.0	+1.8
KRNR				pmax	pmax		
	comp=Z,172nm,0.2s						
KRNR	**Karanay**	**0.24**	**37**	*i* Pg	Pg	18 55 26.8	+1.0
	comp=Z,172nm,0.2s						
KRNR				*i* Sg	Sg	18 55 31.0	+1.8
GNBR	**Gunib**	**0.31**	**143**	*e*PG	Pg	18 55 28.5	+1.5
GNBR				*e*S	Sg	18 55 34.5	+3.3
GNBR	**Gunib**	**0.31**	**143**	*e*Pg	Pg	18 55 28.5	+1.5
GNBR				*e*Sg	Sg	18 55 34.5	+3.3
BTLR	**Botlikh**	**0.36**	**275**	⇓*i* PG	Pg	18 55 25.7	-2.3
BTLR				pmax	pmax		
	comp=Z,85nm,0.2s						
BTLR	**Botlikh**	**0.36**	**275**	*i* Pg	Pg	18 55 25.7	-2.3
	comp=Z,85nm,0.2s						
KMKR	**Kumukh**	**0.58**	**150**	*e*PG	Pg	18 55 34.5	+2.4
KMKR				*e*S	Sg	18 55 45.0	+5.3
KMKR				pmax	pmax		
	comp=Z,28nm,0.2s						
KMKR	**Kumukh**	**0.58**	**150**	*e*Pg	Pg	18 55 34.5	+2.4
	comp=Z,28nm,0.2s						
KMKR				*e*Sg	Sg	18 55 45.0	+5.3
SNJR	**Sundja**	**1.46**	**288**	⇑*i* PG	Pg	18 55 48.1	-0.8
SNJR				*e*S	Sn	18 56 07.8	+1.7
SNJR	**Sundja**	**1.46**	**288**	*i* Pg	Pg	18 55 48.1	-0.8
SNJR				*i* Sg	Sg	18 56 07.8	-0.1
VLKR	**Vladikavkaz**	**1.55**	**286**	*e*PG	Pg	18 55 49.2	-1.4
VLKR				*e*S	Sn	18 56 09.5	+1.2
VLKR	**Vladikavkaz**	**1.55**	**286**	*e*Pg	Pg	18 55 49.2	-1.4
VLKR				*e*Sg	Sg	18 56 09.5	-1.2
BTKR	**Batakoyurt**	**1.75**	**296**	*e*PN	Pn	18 55 53.2	+2.2
BTKR				*e*Sn	Sn	18 56 17.1	+3.9
BTKR	**Batakoyurt**	**1.75**	**296**	*e*Pn	Pn	18 55 53.2	+2.2
BTKR				*e*Sg	Sg	18 56 17.1	-0.1
LACR	**Lac**	**1.79**	**277**	⇓*i* PN	Pn	18 55 51.7	+0.2
LACR	**Lac**	**1.79**	**277**	*i* Pn	Pn	18 55 51.7	+0.2
TRKR	**Terskaya**	**1.81**	**308**	*e*PN	Pn	18 55 53.2	+1.4
TRKR				*e*S	Sn	18 56 17.9	+3.2
TRKR	**Terskaya**	**1.81**	**308**	*e*Pn	Pn	18 55 53.2	+1.4
TRKR				*e*Sg	Sg	18 56 17.9	-1.1
ARNR	**Ardon**	**1.87**	**288**	*e*PN	Pn	18 55 53.8	+1.2
ARNR	**Ardon**	**1.87**	**288**	*e*Pn	Pn	18 55 53.8	+1.2
KMSR	**Komsomolskaya**	**1.92**	**293**	*e*PN	Pn	18 55 55.1	+1.8
KMSR				*e*S	Sn	18 56 20.8	+3.4
KMSR	**Komsomolskaya**	**1.92**	**293**	*e*Pn	Pn	18 55 55.1	+1.8
KMSR				*e*Sg	Sg	18 56 20.8	-1.8
KORR	**Kora**	**2.00**	**284**	*e*PN	Pn	18 55 55.0	+0.7
KORR	**Kora**	**2.00**	**284**	*e*Pn	Pn	18 55 55.0	+0.7
ZEI	**Tsey**	**2.08**	**275**	*e*PN	Pn	18 55 55.7	+0.3
ZEI	**Tsey**	**2.08**	**275**	*e*Pn	Pn	18 55 55.7	+0.3
PRTR	**Priterechnaya**	**2.10**	**303**	*e*PN	Pn	18 55 58.5	+2.8
PRTR				*e*S	Sn	18 56 26.1	+4.4
PRTR	**Priterechnaya**	**2.10**	**303**	*e*Pn	Pn	18 55 58.5	+2.8
PRTR				*e*Sb	Sb	18 56 26.1	+1.3
LSNR	**Lesken**	**2.22**	**288**	*e*PN	Pn	18 55 58.8	+1.4
LSNR				*e*S	Sn	18 56 26.7	+2.0
LSNR	**Lesken**	**2.22**	**288**	*e*Pn	Pn	18 55 58.8	+1.4
LSNR				*e*Sn	Sn	18 56 26.7	+2.0

*SZGRF **04** 19:38:17.6, 33.°78N×27.°07E, h10km, mb5.4, Eastern Mediterranean Sea*
*BGS **04** 19:38:18.3±1.3, 33.°57N×27.°38E, h33km, mb5.4, MS4.5*
*PDG **04** 19:38:19.4±0.2, 33.°26N×24.°25E, h10km±11km, MD5.4/6, ML5.4/9, Error ellipse: s-maj=636.1km s-min=317.3km az=90.0*
*ATH **04** 19:38:22.8, 33.°89N×26.°56E, h32km±8km, ML5.0*
*BJI **04** 19:38:22.4, 34.°07N×26.°22E, h37km, mB5.3/26, mb5.5/61, Ms4.9/49, Ms7 4.7/44*
*ISCJB **04** 19:38:23.3±0.1, 34.°07N±0.°01×26.°628E±0.°010, h33km, mb5.4/303, MS4.5/52, Error ellipse: s-maj=1.6km s-min=1.1km az=22.5*
*CSEM **04** 19:38:24.8±0.1, 34.°04N×26.°64E, h32km, mb5.4/99, Ms4.4, Mw5.0, Error ellipse: s-maj=2.8km s-min=1.7km az=32.0*
*MOS **04** 19:38:24.5±1.0, 34.°19N×26.°49E, h33km, mb5.6/108, MS4.3/40, Error ellipse: s-maj=4.3km s-min=1.8km az=110.9*
*NEIC **04** 19:38:25.3±0.2, 34.°10N×26.°58E, mb5.3/200, MS4.5/4, MW5.2, ML4.8(ATH), Error ellipse: s-maj=3.4km s-min=2.2km az=204.0, Moment Tensor Solution. s23 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.26; $M_{\theta\theta}$6.44; $M_{\phi\phi}$-2.18; $M_{r\theta}$3.28; $M_{r\phi}$2.10; $M_{\theta\phi}$4.46; Best double couple: $M_0$8.20000×10^{16} NP1:ϕ_s227.00000°,δ71.00000°, λ-121.00000°. NP2:ϕ_s109.00000°,δ36.00000°, λ-34.00000°. Principal axes: T 8.4500, Plg19.0000°, Azm340.0000°; N -0.5300, Plg29.0000°, Azm238.0000°; P -7.9200, Plg53.0000°, Azm99.0000°;*
*IGIL **04** 19:38:25.1, 34.°16N×26.°55E, h30km, mb5.4*
*SFS **04** 19:38:26.0, 34.°18N×26.°64E, h30km, ML5.4*
*NIC **04** 19:38:27.0±0.2, 34.°21N×26.°72E, h30km, mb5.2, ML4.9, MW4.2*
*GCMT **04** 19:38:27.6±0.2, 33.°97N×26.°68E, h20km, MW5.3, Moment Tensor Solution. s64,c95; s83,c137; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{r\phi}$0.00; $M_{\theta\phi}$0.00; Best double couple: $M_0$1.30000×10^{17} NP1

LTBQ	Tobruq	3.00	229	iP	Pn	19 39 11.8	+1.3
	SNR=24						
LTBQ				eS	Sn	19 39 47.0	+1.7
	SNR=24						
BODT	Bodrum	3.07	11	ePN	Pn	19 39 11.4	0.0
APE	Apeiranthos	3.15	344	ePN	Pn	19 39 13.5	+1.0
APE	Apeiranthos	3.15	344	ePN	Pn	19 39 13.1	+0.6
APE				eSn	Sn	19 39 51.6	+2.8
APE	Apeiranthos	3.15	344	ePN	Pn	19 39 13.1	+0.6
APE				eSN	Sn	19 39 51.6	+2.8
APE	Apeiranthos	3.15	344	P	Pn	19 39 13.1	+0.6
APE				S	Sn	19 39 48.8	0.0
APE	Apeiranthos	3.15	344	⇑iP	Pb	19 39 26.0	+5.4
APE	Apeiranthos	3.15	344	P	Pn	19 39 13.1	+0.6
APE				S	Sn	19 39 48.8	0.0
APE				eSn	Sn	19 39 51.6	+2.8
KSL	Kastellorizon	3.22	48	ePN	Pn	19 39 14.6	+1.1
KSL	Kastellorizon	3.22	48	ePN	Pn	19 39 14.6	+1.1
AKAS	Kas	3.29	47	⇓iP	Pn	19 39 14.0	-0.4
YER	Yerkesik	3.37	23	ePN	Pn	19 39 17.6	+2.0
MLSB	Milas	3.38	16	ePN	Pn	19 39 17.1	+1.4
KYTH	Kithira	3.68	308	ePn	Pn	19 39 21.0	+1.2
KYTH	Kithira	3.68	308	ePN	Pn	19 39 21.0	+1.2
KYTH	Kithira	3.68	308	ePn	Pn	19 39 21.0	+1.2
AYDN	Tasoluk	3.75	16	⇑iP	Pn	19 39 22.2	+1.4
ELL	Elmali	3.81	44	ePN	Pn	19 39 23.7	+2.1
GLHS	Glhisar (BURDU	3.90	36	ePN	Pn	19 39 24.9	+2.1
VLI	Veliai	4.02	313	ePn	Pn	19 39 24.6	+0.2
VLI	Veliai	4.02	313	ePN	Pn	19 39 24.6	+0.2
VLI	Veliai	4.02	313	ePn	Pn	19 39 24.6	+0.2
DNZL	Cakiroluk	4.14	28	⇑iP	Pn	19 39 27.8	+1.6
DENT	Denizli	4.19	27	ePN	Pn	19 39 27.8	+1.0
BLCB	Balcova	4.35	4	ePN	Pn	19 39 29.8	+0.8
BLCB	Balcova	4.35	4	P	Pn	19 39 29.8	+0.8
BLCB	Balcova	4.35	4	P	Pn	19 39 30.0	+1.0
BLCB	Balcova	4.35	4	P	Pn	19 39 30.0	+1.0
CHOS	Chios island	4.36	354	ePN	Pn	19 39 30.1	+1.0
CHOS	Chios island	4.36	354	P	Pn	19 39 29.8	+0.7
CHOS				S	Sn	19 40 19.1	+0.4
CHOS	Chios island	4.36	354	P	Pn	19 39 29.8	+0.7
CHOS	Chios island	4.36	354	ePn	Pn	19 39 30.1	+1.0
CHOS				S	Sn	19 40 19.1	+0.4
ANTB	Antalya	4.36	48	ePN	Pn	19 39 31.2	+2.0
IZM	Izmir	4.38	7	ePN	Pn	19 39 30.7	+1.3
HBRG	Burj al 'Arab	4.41	141	P	Pn	19 39 28.3	-1.5
	baz=141						
DID	Didima	4.41	323	ePN	Pn	19 39 30.4	+0.5
DID				eSN	Sn	19 40 21.7	+1.7
DID	Didima	4.41	323	P	Pn	19 39 30.3	+0.4
DID				S	Sn	19 40 19.4	-0.6
DID	Didima	4.41	323	P	Pn	19 39 30.3	+0.4
DID				S	Sn	19 40 19.4	-0.6
DID				eSn	Sn	19 40 21.7	+1.7
VLY	Voula,Athens	4.44	330	⇑iPn	Pn	19 39 31.1	+0.9
VLY	Voula,Athens	4.44	330	⇑iPN	Pn	19 39 31.1	+0.9
VLY	Voula,Athens	4.44	330	⇑iPn	Pn	19 39 31.1	+0.9
NAIG	Nisos Aigina	4.49	327	ePn	Pn	19 39 31.4	+0.5
NAIG	Nisos Aigina	4.49	327	ePN	Pn	19 39 31.4	+0.5
NAIG	Nisos Aigina	4.49	327	ePn	Pn	19 39 31.4	+0.5
ATHU	Athens Univers	4.54	330	P	Pn	19 39 32.9	+1.3
ATHU				S	Sn	19 40 23.0	-0.1
ATHU	Athens Univers	4.54	330	P	Pn	19 39 32.9	+1.3
ATHU				S	Sn	19 40 23.0	-0.1
ATH	Athens Observa	4.57	330	⇑iPn	Pn	19 39 33.1	+1.1
ATH				eSn	Sn	19 40 25.9	+2.0
ATH	Athens Observa	4.57	330	⇑iPN	Pn	19 39 33.1	+1.1
ATH				eSN	Sn	19 40 25.9	+2.0
ATH	Athens Observa	4.57	330	⇑iPn	Pn	19 39 33.1	+1.1
ATH				eSn	Sn	19 40 25.9	+2.0
PTL	Penteli	4.58	332	⇑iPn	Pn	19 39 33.4	+1.3
PTL				eSn	Sn	19 40 25.5	+1.5
PTL	Penteli	4.58	332	⇑iPN	Pn	19 39 33.4	+1.3
PTL				eSN	Sn	19 40 25.5	+1.5
PTL	Penteli	4.58	332	⇑iPn	Pn	19 39 33.4	+1.3
PTL				eSn	Sn	19 40 25.5	+1.5
BCK	Bucak	4.70	42	ePN	Pn	19 39 35.7	+1.9
KULA	Kula-Manisa	4.76	20	ePN	Pn	19 39 35.5	+0.8
VLX	Vlachokerasia	4.78	315	ePN	Pn	19 39 35.5	+0.5
VLX	Vlachokerasia	4.78	315	P	Pn	19 39 35.5	+0.5
VLX	Vlachokerasia	4.78	315	P	Pn	19 39 35.5	+0.5
PPCY	Paphos	4.81	78	P	Pn	19 39 34.3	-1.0
PPCY	Paphos	4.81	78	P	Pn	19 39 34.3	-1.0
KHL	Karahalli	4.88	28	ePN	Pn	19 39 37.0	+0.7
SWA2		4.88	192	P	Pn	19 39 36.4	0.0
	baz=197						
SWA2		4.88	192	P	Pn	19 39 36.4	0.0
PYL	PYLOS	4.89	307	ePN	Pn	19 39 35.7	-0.7
PYL	PYLOS	4.89	307	P	Pn	19 39 35.8	-0.6
PYL				S	Sn	19 40 29.8	-1.9
PYL	PYLOS	4.89	307	ePN	Pn	19 39 35.7	-0.7
PYL				S	Sn	19 40 29.8	-1.9
AKS	Akhisar	4.92	11	ePN	Pn	19 39 38.0	+1.1
ISP	Isparta	4.93	39	ePN	Pn	19 39 37.6	+0.7
ISP	Isparta	4.93	39	eP	Pn	19 39 38.2	+1.2
ISP	Isparta	4.93	39	P	Pn	19 39 38.3	+1.3
ISP	Isparta	4.93	39	⇓iP	Pn	19 39 38.2	+1.2
ISP	Isparta	4.93	39	P	Pn	19 39 38.3	+1.3
ISP	Isparta	4.93	39	Pn	Pn	19 39 37.8	+0.8
ITM	Ithomi	4.94	311	ePn	Pn	19 39 37.9	+0.8
ITM				eSn	Sn	19 40 33.0	+0.1
ITM	Ithomi	4.94	311	ePN	Pn	19 39 37.9	+0.8
ITM				eSN	Sn	19 40 33.0	+0.1
ITM	Ithomi	4.94	311	P	Pn	19 39 38.0	+0.9
ITM	Ithomi	4.94	311	P	Pn	19 39 38.0	+0.9
ITM				eSn	Sn	19 40 33.0	+0.1
SUTC	Sutluce-Ispart	4.95	45	ePN	Pn	19 39 41.3	+4.1
LTK	Loutraki	4.95	324	ePN	Pn	19 39 38.0	+0.8
LTK	Loutraki	4.95	324	P	Pn	19 39 37.9	+0.7
LTK	Loutraki	4.95	324	P	Pn	19 39 37.9	+0.7
ALFC	Alevga	5.06	76	P	Pn	19 39 37.7	-1.1
	comp=N,56nm,0.3s						
ALFC				S	Sn	19 40 33.2	-2.8
ALFC	Alevga	5.06	76	P	Pn	19 39 37.7	-1.1
	comp=N,56nm,0.3s						
ALFC				S	Sn	19 40 33.2	-2.8
PRK	Paraskevi	5.20	357	P	Pn	19 39 41.3	+0.6
PRK	Paraskevi	5.20	357	P	Pn	19 39 41.2	+0.5
PRK	Paraskevi	5.20	357	P	Pn	19 39 41.2	+0.5
GUR	Goura	5.20	320	ePN	Pn	19 39 41.0	+0.3
GUR	Goura	5.20	320	P	Pn	19 39 41.1	+0.4
GUR	Goura	5.20	320	P	Pn	19 39 41.1	+0.4
SZAC	Souni-Zanaja	5.23	80	P	Pn	19 39 40.3	-0.9
SZAC	Souni-Zanaja	5.23	80	P	Pn	19 39 40.3	-0.9
LEF	Lefka	5.29	77	ePN	Pn	19 39 40.3	-1.6
LKR	Lokris	5.45	329	⇑iPn	Pn	19 39 44.8	+0.8
LKR	Lokris	5.45	329	⇑iPN	Pn	19 39 44.8	+0.8
LKR	Lokris	5.45	329	P	Pn	19 39 44.9	+0.9
LKR	Lokris	5.45	329	P	Pn	19 39 44.9	+0.9
DSF	Desfina	5.47	324	P	Pn	19 39 44.7	+0.3
DSF				S	Sn	19 40 43.7	-2.3
DSF	Desfina	5.47	324	P	Pn	19 39 44.7	+0.3
DSF				S	Sn	19 40 43.7	-2.3
ATAL	Atalanti	5.47	329	P	Pn	19 39 44.8	+0.4
ATAL	Atalanti	5.47	329	P	Pn	19 39 44.8	+0.4
SHUT	Suhut-Afyon	5.51	34	ePN	Pn	19 39 46.0	+1.1
AANS		5.52	131	P	Pn	19 39 43.0	-2.1
	baz=131						
HMYD	Mayadein	5.53	139	P	Pn	19 39 44.6	-0.7
	baz=139						
HMYD	Mayadein	5.53	139	P	Pn	19 39 44.6	-0.7
HNAT	Natroun	5.56	141	P	Pn	19 39 45.0	-0.7
	baz=141						
HNAT	Natroun	5.56	141	P	Pn	19 39 45.0	-0.7
MAMC	Mammari	5.56	76	P	Pn	19 39 45.2	-0.5
MAMC	Mammari	5.56	76	P	Pn	19 39 45.2	-0.5
AOS	Alonnisos	5.57	338	P	Pn	19 39 46.6	+0.8
AOS	Alonnisos	5.57	338	P	Pn	19 39 46.8	+1.0
AOS	Alonnisos	5.57	338	P	Pn	19 39 46.8	+1.0
HDMB	Hadim	5.61	57	ePN	Pn	19 39 47.8	+1.5
LAKA	Lakka	5.62	320	P	Pn	19 39 46.4	-0.1
LAKA	Lakka	5.62	320	P	Pn	19 39 46.4	-0.1
CSS	Prodhromos	5.62	79	P	Pn	19 39 45.3	-1.2
	comp=N,33nm,0.5s						
CSS				S	Sn	19 40 47.6	-2.3
CSS	Prodhromos	5.62	79	ePn	Pn	19 39 43.9	-2.6
	comp=N,625nm,0.3s						
CSS				eSn	Sn	19 40 44.5	-5.4
CSS	Prodhromos	5.62	79	ePn	Pn	19 39 43.9	-2.6
	comp=N,625nm,0.3s						
CSS	Prodhromos	5.62	79	P	Pn	19 39 45.3	-1.2
	comp=N,33nm,0.5s						
CSS				eSn	Sn	19 40 44.5	-5.4
CSS				S	Sn	19 40 47.6	-2.3
KALE	Kalithea	5.65	322	P	Pn	19 39 48.5	+1.7
KALE	Kalithea	5.65	322	P	Pn	19 39 48.5	+1.7
TRIZ	Trizonia	5.66	321	P	Pn	19 39 47.1	+0.1
TRIZ	Trizonia	5.66	321	P	Pn	19 39 47.1	+0.1
BALB	Balikesir	5.68	10	ePN	Pn	19 39 48.0	+0.7
SQR		5.69	136	P	Pn	19 39 46.0	-1.5
	baz=135						
SQR		5.69	136	P	Pn	19 39 46.0	-1.4
ALT	Altintas	5.74	28	ePN	Pn	19 39 48.2	+0.1
FYM	Al Fayyum	5.75	138	P	Pn	19 39 47.6	-0.6
	baz=138						
FYM				S	Sn	19 40 44.0	-9.0
	baz=138						
FYM	Al Fayyum	5.75	138	P	Pn	19 39 47.6	-0.6
UPR	University Cam	5.76	319	ePN	Pn	19 39 49.2	+0.9
UPR	University Cam	5.76	319	P	Pn	19 39 49.8	+1.5
UPR	University Cam	5.76	319	ePn	Pn	19 39 49.2	+0.9
UPR	University Cam	5.76	319	P	Pn	19 39 49.8	+1.5
EZN	Ezine	5.78	358	ePN	Pn	19 39 48.2	-0.4
RLS	Riolos of Patr	5.78	315	ePn	Pn	19 39 49.7	+1.0
RLS	Riolos of Patr	5.78	315	ePN	Pn	19 39 49.7	+1.0
RLS				eSN	Sn	19 40 55.0	+1.3
RLS	Riolos of Patr	5.78	315	ePn	Pn	19 39 49.7	+1.0
EFP	Efpalio	5.80	320	P	Pn	19 39 48.8	-0.1
EFP	Efpalio	5.80	320	P	Pn	19 39 48.8	-0.1
LFK	Lefkose	5.84	76	ePN	Pn	19 39 48.2	-1.3
NEO	Neokhori	5.92	334	⇑iPn	Pn	19 39 51.8	+1.3
NEO	Neokhori	5.92	334	⇑iPN	Pn	19 39 51.8	+1.3
NEO	Neokhori	5.92	334	⇑iPn	Pn	19 39 51.8	+1.3
LIA	Limnos Island	5.96	349	ePn	Pn	19 39 52.3	+1.2
LIA	Limnos Island	5.96	349	ePN	Pn	19 39 52.3	+1.2
LIA	Limnos Island	5.96	349	P	Pn	19 39 51.9	+0.8
LIA	Limnos Island	5.96	349	P	Pn	19 39 51.9	+0.8
LIA	Limnos Island	5.96	349	ePn	Pn	19 39 52.3	+1.2
XOR	Xorichti	5.98	334	P	Pn	19 39 52.2	+0.8
XOR	Xorichti	5.98	334	P	Pn	19 39 52.5	+1.1
XOR	Xorichti	5.98	334	P	Pn	19 39 52.5	+1.1
AWBH		6.03	160	P	Pn	19 39 50.7	-1.4
	baz=162						
AWBH		6.03	160	P	Pn	19 39 50.7	-1.4
KOT	Kottamia	6.04	131	P	Pn	19 39 50.2	-2.1
	baz=131						
KOT	Kottamia	6.04	131	P	Pn	19 39 50.2	-2.0
AGG	Agios Georgios	6.05	327	ePn	Pn	19 39 52.9	+0.6
AGG	Agios Georgios	6.05	327	ePN	Pn	19 39 52.9	+0.6
AGG				eSN	Sn	19 41 01.0	+0.7
AGG	Agios Georgios	6.05	327	P	Pn	19 39 52.5	+0.2
AGG				S	Sn	19 40 58.0	-2.3
AGG	Agios Georgios	6.05	327	P	Pn	19 39 52.5	+0.2
AGG	Agios Georgios	6.05	327	ePn	Pn	19 39 52.9	+0.6
AGG				S	Sn	19 40 58.0	-2.3
GONE	Gonen-Balikesi	6.05	8	ePN	Pn	19 39 52.7	+0.3
KONT	Konya--Tatoy	6.07	48	ePN	Pn	19 39 54.7	+2.0
GADA	Gvkgeada	6.16	355	ePN	Pn	19 39 54.4	+0.5
HHAG	Hagoal	6.19	130	P	Pn	19 39 51.7	-2.7
	baz=129						
HHAG				S	Sn	19 40 54.2	-10
	baz=129						
HHAG				AMP		19 41 00.0	
	comp=E,2940µm,0.5s,logA/T=6.8,baz=129						
HHAG	Hagoal	6.19	130	P	Pn	19 39 51.7	-2.6
IKL	Isikli	6.20	67	ePN	Pn	19 39 54.4	0.0
PHNC	Paralimni	6.20	79	P	Pn	19 39 54.7	+0.3
	comp=E,58nm,0.9s						
PHNC				S	Sn	19 41 02.2	-1.9
PHNC	Paralimni	6.20	79	P	Pn	19 39 54.7	+0.3
	comp=E,58nm,0.9s						
PHNC				S	Sn	19 41 02.2	-1.9
EVR	Evrytania	6.21	323	ePn	Pn	19 39 56.3	+1.7
EVR	Evrytania	6.21	323	ePN	Pn	19 39 56.3	+1.7
EVR	Evrytania	6.21	323	ePn	Pn	19 39 56.3	+1.7
KFL	Anninata	6.22	312	P	Pn	19 39 55.0	+0.3
KFL	Anninata	6.22	312	P	Pn	19 39 55.0	+0.3
LADK	Ladik-KONYA	6.24	47	ePN	Pn	19 39 55.7	+0.7
LJBD	Adjabya	6.25	242	iP	Pn	19 39 55.8	+0.6
	SNR=22						
LPK	Lapseki	6.32	1	ePN	Pn	19 39 56.5	+0.5
PAIG	Paliouri	6.33	339	P	Pn	19 39 56.4	+0.3
PAIG	Paliouri	6.33	339	P	Pn	19 39 56.4	+0.3
GELI	Tayfur-Gelibol	6.35	359	ePN	Pn	19 39 57.7	+1.3
KCTX	Karacabey (Bur	6.37	12	ePN	Pn	19 39 56.3	-0.4
EDC	Edincik	6.37	9	ePN	Pn	19 39 57.2	+0.5
VLS	Valsamata	6.38	312	ePn	Pn	19 39 58.5	+1.5
VLS	Valsamata	6.38	312	ePN	Pn	19 39 58.5	+1.5
VLS				eSN	Sn	19 41 09.9	+1.3
VLS	Valsamata	6.38	312	P	Pn	19 39 56.1	-0.9
VLS				S	Sn	19 41 07.9	-0.7
VLS	Valsamata	6.38	312	P	Pn	19 39 56.1	-0.9
VLS	Valsamata	6.38	312	ePn	Pn	19 39 58.5	+1.5
VLS				S	Sn	19 41 07.9	-0.7
BNT	Bandirma	6.39	9	ePN	Pn	19 39 57.2	+0.2
EREN	Erenkoy	6.39	74	ePN	Pn	19 39 58.7	+1.6
HBNS	Bani Suwayf	6.42	141	P	Pn	19 39 56.7	-0.7
	baz=141						
HBNS	Bani Suwayf	6.42	141	P	Pn	19 39 56.7	-0.7
KIZT	Kizilcal	6.43	40	ePN	Pn	19 39 58.3	+0.8
ESKT	Eskisehir	6.44	31	ePN	Pn	19 39 57.8	+0.1
AMAG	Maghara	6.53	119	P	Pn	19 39 55.8	-3.2
	baz=118						
AMAG	Maghara	6.53	119	P	Pn	19 39 55.8	-3.2
MDNY	Mudanya-Bursa	6.57	15	ePN	Pn	19 40 02.4	+2.9
ERIK	Erikli-Kesan	6.62	359	ePN	Pn	19 39 59.7	-0.4
OUR	Ouranopolis	6.62	342	P	Pn	19 40 01.5	+1.3
OUR	Ouranopolis	6.62	342	P	Pn	19 40 01.6	+1.4
OUR	Ouranopolis	6.62	342	P	Pn	19 40 01.6	+1.4
THL	Klokotos Trika	6.63	328	ePN	Pn	19 40 01.4	+1.1
THL	Klokotos Trika	6.63	328	P	Pn	19 40 00.2	-0.1
THL				S	Sn	19 41 14.8	+0.2
THL	Klokotos Trika	6.63	328	P	Pn	19 40 00.2	-0.1
THL	Klokotos Trika	6.63	328	ePn	Pn	19 40 01.4	+1.1
THL				S	Sn	19 41 14.8	+0.2
RKY	Sarkoy-Tekirda	6.65	4	ePN	Pn	19 40 02.0	+1.4
LUJL	Ujela	6.68	224	iP	Pn	19 40 00.8	-0.2
	SNR=22						
SVRH	Sivrihisar-ESK	6.68	35	ePN	Pn	19 40 01.0	-0.1
ENEZ	Enez	6.69	357	ePN	Pn	19 40 01.7	+0.6
GEMT	Gemlik	6.70	17	ePN	Pn	19 40 02.9	+1.6
LKD2	Lefkada island	6.74	316	P	Pn	19 40 01.9	0.0
LKD2	Lefkada island	6.74	316	P	Pn	19 40 01.9	0.0
ARMT	Armutlu	6.75	15	ePN	Pn	19 40 01.0	-1.1
MFT	Murefte	6.75	4	ePN	Pn	19 40 03.0	+1.0
ADVT	Abdulvahap	6.85	20	ePN	Pn	19 40 02.6	-0.7
ALN	Alexandroupoli	6.86	356	P	Pn	19 40 04.4	+1.0
ALN	Alexandroupoli	6.86	356	P	Pn	19 40 04.4	+1.0
YLV	Yalova	6.87	18	ePN	Pn	19 40 04.3	+0.6
LIT	Litokhoron	6.89	333	P	Pn	19 40 03.3	-0.5
LIT	Litokhoron	6.89	333	P	Pn	19 40 03.1	-0.7
GPA	Golpazari	6.90	24	ePN	Pn	19 40 01.7	-2.3
SULT	Sultanhani-AKS	6.96	51	ePN	Pn	19 40 04.2	-0.6
HFRF	Wahat Farafira	7.03	168	P	Pn	19 40 04.4	-1.4
	baz=169						
HFRF	Wahat Farafira	7.03	168	P	Pn	19 40 04.4	-1.4
ZNM		7.08	129	P	Pn	19 40 04.6	-2.0
	baz=129						
ZNM		7.08	129	P	Pn	19 40 04.6	-1.9
GULT	Gulveren	7.10	25	ePN	Pn	19 40 07.1	+0.4
HORT	Hortiatis	7.12	338	P	Pn	19 40 08.2	+1.2
HORT	Hortiatis	7.12	338	P	Pn	19 40 07.9	+0.9
HORT	Hortiatis	7.12	338	P	Pn	19 40 07.9	+0.9
CRLT	Corlu	7.13	7	ePN	Pn	19 40 07.1	-0.1
KAVA	Kavala	7.14	347	P	Pn	19 40 08.3	+1.0
KAVA	Kavala	7.14	347	P	Pn	19 40 08.2	+0.9
KAVA	Kavala	7.14	347	P	Pn	19 40 08.2	+0.9
OFRI	'Ofer	7.15	99	Pn	Pn	19 40 04.7	-2.8
OFRI	'Ofer	7.15	99	Pn	Pn	19 40 04.7	-2.8
OFRI	'Ofer	7.15	99	Pn	Pn	19 40 04.7	-2.8
THE	Thessaloniki	7.19	337	P	Pn	19 40 09.0	+1.0
THE	Thessaloniki	7.19	337	P	Pn	19 40 09.0	+1.0
HRT	Hereke	7.19	19	ePN	Pn	19 40 07.1	-0.9
HNTI	Hanita	7.21	95	Pn	Pn	19 40 06.4	-1.9
HNTI	Hanita	7.21	95	Pn	Pn	19 40 06.4	-1.9
HNTI	Hanita	7.21	95	Pn	Pn	19 40 06.4	-1.9
SOH	Sokhos	7.25	340	ePn	Pn	19 40 10.6	+1.8
SOH	Sokhos	7.25	340	ePN	Pn	19 40 10.6	+1.8
SOH	Sokhos	7.25	340	P	Pn	19 40 10.5	+1.7
SOH	Sokhos	7.25	340	P	Pn	19 40 10.5	+1.7
ISK	Istanbul-Kandi	7.28	15	ePN	Pn	19 40 06.2	-2.9
MATL	Matarih	7.28	92	eP	Pn	19 40 07.8	-1.5
KZIT	Kziot	7.28	113	Pn	Pn	19 40 07.1	-2.2
KZIT	Kziot	7.28	113	Pn	Pn	19 40 07.1	-2.2
KZIT	Kziot	7.28	113	Pn	Pn	19 40 07.1	-2.2
SLVT	Silivri	7.29	10	ePN	Pn	19 40 09.8	+0.5
BLGI	Bet Lehem HaGe	7.29	98	Pn	Pn	19 40 06.9	-2.6
SLTI	Sal'it	7.29	102	Pn	Pn	19 40 07.6	-1.9
SLTI	Sal'it	7.29	102	Pn	Pn	19 40 07.6	-1.9
SLTI	Sal'it	7.29	102	Pn	Pn	19 40 07.6	-1.9
BGKT	Bogazkoy	7.33	13	ePN	Pn	19 40 08.9	-1.0
CTKS	Kestanelik-??a	7.34	11	ePN	Pn	19 40 09.8	-0.2
KZN	Kozani	7.35	330	ePn	Pn	19 40 12.6	+2.4
KZN				eSn	Sn	19 41 33.0	+0.7
KZN	Kozani	7.35	330	ePN	Pn	19 40 12.6	+2.4
KZN				eSN	Sn	19 41 33.0	+0.7
KZN	Kozani	7.35	330	P	Pn	19 40 10.9	+0.7
KZN	Kozani	7.35	330	P	Pn	19 40 10.9	+0.7
KZN	Kozani	7.35	330	ePn	Pn	19 40 12.6	+2.4
KZN				eSn	Sn	19 41 33.0	+0.7
MDU	Mudurnu	7.39	28	ePN	Pn	19 40 11.2	+0.5
MMAI	Mount Meron Ar	7.41	96	P	Pn	19 40 08.9	-2.2
	comp=E,111nm,0.3s,baz=266,slow=12,SNR=112						
MMAI				S	Sn	19 41 26.1	-7.9
	comp=E,61nm,0.3s,baz=312,slow=13,SNR=2.4						
IGT	Igoumenitsa	7.44	319	P	Pn	19 40 09.7	-1.8
IGT	Igoumenitsa	7.44	319	P	Pn	19 40 09.7	-1.8
RTMI	Retamim	7.44	111	Pn	Pn	19 40 09.2	-2.3
RTMI				S	Sn	19 41 27.3	-7.4
RTMI	Retamim	7.44	111	Pn	Pn	19 40 09.2	-2.3
RTMI				S	Sn	19 41 27.3	-7.4
RTMI	Retamim	7.44	111	Pn	Pn	19 40 09.2	-2.3
RTMI				Sn	Sn	19 41 27.3	-7.4
KLYT	Kilyos	7.45	14	ePN	Pn	19 40 07.1	-4.5
SRS	Serrai	7.46	342	P	Pn	19 40 13.2	+1.5
SRS	Serrai	7.46	342	P	Pn	19 40 12.6	+0.9
SILT	Sile	7.50	18	ePN	Pn	19 40 11.6	-0.5
BHL	Bhannes	7.51	89	eP	Pn	19 40 09.6	-2.9
CTYL	Yal??k??y-??at	7.54	10	ePN	Pn	19 40 12.5	-0.2
MMLI	Mount Malkishu	7.55	100	Pn	Pn	19 40 11.3	-1.7
MMLI				S	Sn	19 41 30.7	-6.7
MMLI	Mount Malkishu	7.55	100	Pn	Pn	19 40 11.3	-1.7
MMLI				S	Sn	19 41 30.7	-6.7
MMLI	Mount Malkishu	7.55	100	Pn	Pn	19 40 11.3	-1.7
MMLI				Sn	Sn	19 41 30.7	-6.7
KARA	Karaisali	7.59	63	ePN	Pn	19 40 13.4	0.0
KRTS	Karatas	7.60	68	ePN	Pn	19 40 12.2	-1.3
NVR	Nevrokopi	7.61	344	⇑iPn	Pn	19 40 15.2	+1.4
NVR	Nevrokopi	7.61	344	⇑iPN	Pn	19 40 15.2	+1.4
NVR	Nevrokopi	7.61	344	⇑iPn	Pn	19 40 15.2	+1.4
LOD	Lodumlu	7.63	38	ePN	Pn	19 40 11.8	-2.3
HRI	Mount Hermon	7.65	93	Pn	Pn	19 40 12.8	-1.5
HRI	Mount Hermon	7.65	93	Pn	Pn	19 40 12.8	-1.5
HRI	Mount Hermon	7.65	93	Pn	Pn	19 40 12.8	-1.5
YTIR	Yattir	7.65	108	Pn	Pn	19 40 12.5	-1.8
YTIR	Yattir	7.65	108	Pn	Pn	19 40 12.5	-1.8
YTIR	Yattir	7.65	108	Pn	Pn	19 40 12.5	-1.8
GRG	Griva	7.67	335	P	Pn	19 40 14.8	+0.2
GRG	Griva	7.67	335	P	Pn	19 40 14.8	+0.2
HMDT	Nahal Hemdat	7.69	101	Pn	Pn	19 40 12.8	-2.0
HMDT				S	Sn	19 41 33.9	-6.8
HMDT	Nahal Hemdat	7.69	101	Pn	Pn	19 40 12.8	-2.0
HMDT				S	Sn	19 41 33.9	-6.8
HMDT	Nahal Hemdat	7.69	101	Pn	Pn	19 40 12.8	-2.0
HMDT				Sn	Sn	19 41 33.9	-6.8
RCY	Rachaya	7.69	92	eP	Pn	19 40 13.7	-1.2
KNT	Kendrikon	7.69	339	P	Pn	19 40 15.6	+0.7
KNT	Kendrikon	7.69	339	P	Pn	19 40 15.6	+0.7
HWQ	Hawqa	7.74	86	eP	Pn	19 40 13.9	-1.7
NEST	Nestorio	7.75	327	P	Pn	19 40 16.2	+0.5
NEST	Nestorio	7.75	327	P	Pn	19 40 16.2	+0.5
KSHT	Keshet	7.76	95	Pn	Pn	19 40 14.5	-1.3
KSHT	Keshet	7.76	95	Pn	Pn	19 40 14.5	-1.3
KSHT	Keshet	7.76	95	Pn	Pn	19 40 14.5	-1.3
DSI	Dead Sea	7.78	106	Pn	Pn	19 40 14.7	-1.5
DSI				S	Sn	19 41 37.0	-6.0
DSI	Dead Sea	7.78	106	Pn	Pn	19 40 14.7	-1.5
DSI				S	Sn	19 41 37.0	-6.0
DSI	Dead Sea	7.78	106	Pn	Pn	19 40 14.7	-1.5
DSI				Sn	Sn	19 41 37.0	-6.0
EDRB	Edirne	7.79	1	ePN	Pn	19 40 17.3	+1.1
HRDS	Abu Rudays	7.80	131	P	Pn	19 40 14.7	-1.7
	baz=131						
BRBR	Barbar	7.81	92	⇑P	Pn	19 40 15.0	-1.5
BRBR				⇑S	Sn	19 41 16.0	-28
BRBR	Barbar	7.81	92	⇑iP	Pn	19 40 15.2	-1.3
BRBR				⇑iS	Sn	19 41 16.4	-27
GRB	Gharib	7.81	136	P	Pn	19 40 14.4	-2.3
	baz=136						
GRB	Gharib	7.81	136	P	Pn	19 40 14.4	-2.2
KEK	Kerkira	7.86	318	P	Pn	19 40 15.8	-1.4
KEK	Kerkira	7.86	318	P	Pn	19 40 15.8	-1.4
KEK	Kerkira	7.86	318	P	Pn	19 40 15.8	-1.4
SRN	Sarande	7.87	320	ePN	Pn	19 40 15.8	-1.5
ASUT		7.88	146	P	Pn	19 40 16.5	-0.9
	baz=146						
ASUT		7.88	146	P	Pn	19 40 16.5	-1.0
FNA	Florina	7.91	330	P	Pn	19 40 17.8	-0.1
FNA	Florina	7.91	330	P	Pn	19 40 17.9	0.0
KRMI	Paran Flat	7.92	117	Pn	Pn	19 40 16.3	-1.7
KRMI				S	Sn	19 41 39.6	-6.8
KRMI	Paran Flat	7.92	117	Pn	Pn	19 40 16.3	-1.7
KRMI				S	Sn	19 41 39.6	-6.8
KRMI	Paran Flat	7.92	117	Pn	Pn	19 40 16.3	-1.7
KRMI				Sn	Sn	19 41 39.6	-6.8
VAY	Valandovo	7.94	337	P	Pn	19 40 19.2	+0.9
VAY	Valandovo	7.94	337	ePn	Pn	19 40 19.1	+0.8
VAY	Valandovo	7.94	337	P	Pn	19 40 18.1	-0.2
BRTR	Keskin Array B	7.99	43	P	Pn	19 40 19.1	+0.2
	comp=E,9.0nm,0.3s,baz=227,slow=14,SNR=114						
BRTR				S	Sn	19 41 46.9	-1.2
	comp=E,25nm,0.3s,baz=212,slow=26,SNR=18						
BRTR				ScP	ScP	19 50 24.1	+0.6
	comp=E,0.2nm,0.3s,baz=187,slow=2.4,SNR=21						
BRTR	Keskin Array B	7.99	43	P	Pn	19 40 19.2	+0.2
BRTR				S	Sn	19 41 46.9	-1.2
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.3s						
BRTR				smax			
	comp=N,25nm,0.3s						
BRTR	Keskin Array B	7.99	43	P	Pn	19 40 19.1	+0.1
BRTR				S	Sn	19 41 46.8	-1.3
BR131	Keskin Array S	7.99	43	ePn	Pn	19 40 20.1	+1.1
BR131	Keskin Array S	7.99	43	ePn	Pn	19 40 20.1	+1.1
PRNI	Paran	8.01	115	Pn	Pn	19 40 17.6	-1.7
PRNI	Paran	8.01	115	Pn	Pn	19 40 17.6	-1.7
PRNI	Paran	8.01	115	Pn	Pn	19 40 17.6	-1.7
CEYT	Ceyhan	8.02	66	ePN	Pn	19 40 17.0	-2.3
KBN	Korca	8.04	326	ePN	Pn	19 40 21.7	+2.0
ZFRI	Zfri	8.04	113	Pn	Pn	19 40 18.1	-1.6
ZFRI				S	Sn	19 41 42.0	-7.4
ZFRI	Zfri	8.04	113	Pn	Pn	19 40 18.1	-1.6
ZFRI				S	Sn	19 41 42.0	-7.4
ZFRI	Zfri	8.04	113	Pn	Pn	19 40 18.1	-1.6
ZFRI				Sn	Sn	19 41 42.0	-7.4
SLNF	Slenfeh	8.05	76	⇑P	Pn	19 40 18.0	-1.9
SLNF				⇑S	Sn	19 41 21.0	-29
SLNF	Slenfeh	8.05	76	⇑iP	Pn	19 40 18.6	-1.3
SLNF				⇑iS	Sn	19 41 21.8	-28
QASN	Qassioun	8.06	91	⇑P	Pn	19 40 18.0	-2.0
QASN				⇑S	Sn	19 41 21.0	-29
QASN	Qassioun	8.06	91	⇑iP	Pn	19 40 18.7	-1.3
QASN				⇑iS	Sn	19 41 21.7	-28
BIDA	Albida	8.07	80	⇑P	Pn	19 40 18.0	-2.1
BIDA				⇑S	Sn	19 41 22.0	-28
BIDA	Albida	8.07	80	⇑iP	Pn	19 40 19.0	-1.1
BIDA				⇑iS	Sn	19 41 22.5	-28
HTY	Hatay	8.08	72	ePN	Pn	19 40 17.4	-2.9
FKH	Fakeheh	8.12	86	eP	Pn	19 40 19.4	-1.4
HAWK	Haweek	8.12	84	⇑P	Pn	19 40 20.0	-0.8
HAWK				⇑S	Sn	19 41 23.0	-28
HAWK	Haweek	8.12	84	⇑iP	Pn	19 40 20.1	-0.7
HAWK				⇑iS	Sn	19 41 23.7	-28
BIA	Bitola	8.13	330	P	Pn	19 40 20.5	-0.4
BIA	Bitola	8.13	330	P	Pn	19 40 20.7	-0.2
BIA	Bitola	8.13	330	ePN	Pn	19 40 23.5	+2.6
BIA				eSg	Sg	19 41 51.0	-0.6
BIA	Bitola	8.13	330	P	Pn	19 40 20.5	-0.4
PLD	Plovdiv	8.19	350	P	Pn	19 40 23.4	+1.7
PLD	Plovdiv	8.19	350	P	Pn	19 40 23.4	+1.7
HRFI	Mount Harif	8.19	117	Pn	Pn	19 40 20.6	-1.2
HRFI	Mount Harif	8.19	117	Pn	Pn	19 40 20.6	-1.2
HRFI	Mount Harif	8.19	117	Pn	Pn	19 40 20.6	-1.2

MARH Ras Al Marh 8.19 87 ⇑P Pn 19 40 20.0 -1.8
MARH Ras Al Marh 8.19 87 ⇑*i*P Pn 19 40 20.3 -1.5
WRDH Warideh 8.20 77 ⇑P Pn 19 40 20.0 -1.8
WRDH ⇑S Sn 19 41 25.0 -28
WRDH Warideh 8.20 77 ⇑*i*P Pn 19 40 20.7 -1.1
WRDH ⇑*i*S Sn 19 41 25.6 -28
KDZE Karadeniz Ereo 8.21 26 *e*PN Pn 19 40 21.5 -0.4
TOTH TOTAH 8.21 92 ⇑P Pn 19 40 21.0 -1.0
TOTH ⇑S Sn 19 41 26.0 -28
TOTH TOTAH 8.21 92 ⇑*i*P Pn 19 40 21.2 -0.8
TOTH ⇑*i*S Sn 19 41 26.9 -27
MBRI Mt Berech 8.23 119 Pn Pn 19 40 21.2 -1.1
KOZT Kozan 8.24 63 *e*PN Pn 19 40 22.3 -0.1
TR2 8.30 131 P Pn 19 40 20.3 -2.9
baz=130
TR2 8.30 131 P Pn 19 40 20.3 -2.9
BTCH Batrach 8.32 73 ⇑P Pn 19 40 23.0 -0.5
BTCH ⇑S Sn 19 41 29.0 -27
BTCH Batrach 8.32 73 ⇑*i*P Pn 19 40 23.1 -0.4
BTCH ⇑*i*S Sn 19 41 29.4 -27
EIL Elat 8.32 119 Pn Pn 19 40 21.6 -2.0
EIL Elat 8.32 119 P Pn 19 40 22.1 -1.5
comp=N,47nm,0.3s,baz=326,slow=9.2,SNR=199
EIL S Sn 19 41 47.5 -8.9
comp=N,107nm,0.3s,baz=43,slow=18,SNR=6.8
EIL Elat 8.32 119 Pn Pn 19 40 21.6 -2.0
EIL Elat 8.32 119 Pn Pn 19 40 21.6 -2.0
AQBJ Aqaba 8.36 119 Pn Pn 19 40 22.8 -1.4
HKAT Jabal Katrina 8.37 129 P Pn 19 40 21.5 -2.8
baz=129
HKAT Jabal Katrina 8.37 129 P Pn 19 40 21.5 -2.8
JMB Yambol 8.41 360 P Pn 19 40 25.4 +0.7
HBST Basata 8.43 123 P Pn 19 40 23.4 -1.7
baz=122
HBST Basata 8.43 123 P Pn 19 40 23.4 -1.7
KRUS Krusevo 8.46 331 *e*Pn Pn 19 40 25.7 +0.3
KFRA Kufra 8.48 79 ⇑P Pn 19 40 24.0 -1.7
KFRA Kufra 8.48 79 ⇑*i*P Pn 19 40 24.9 -0.8
SALA Sala 8.57 96 ⇑P Pn 19 40 26.0 -1.0
SALA ⇑S Sn 19 41 36.2 -26
SALA Sala 8.57 96 ⇑*i*P Pn 19 40 26.1 -0.9
SALA ⇑*i*S Sn 19 41 36.6 -26
CANT Cankiri 8.61 38 *e*PN Pn 19 40 26.9 -0.5
SAFT Safranbolu 8.65 32 *e*PN Pn 19 40 28.7 +0.7
HDHB Dhahab 8.66 126 P Pn 19 40 26.0 -2.2
baz=125
HDHB Dhahab 8.66 126 P Pn 19 40 26.0 -2.2
TR1 8.71 132 P Pn 19 40 26.1 -2.7
baz=131
TR1 8.71 132 P Pn 19 40 26.1 -2.8
RABH Abou Rabah 8.78 84 ⇑P Pn 19 40 29.0 -0.9
RABH Abou Rabah 8.78 84 ⇑*i*P Pn 19 40 29.3 -0.6
HDK1 Dakhla 8.81 163 P Pn 19 40 29.4 -0.9
baz=164
HDK1 Dakhla 8.81 163 P Pn 19 40 29.4 -0.9
ASF Jabal al Asfar 8.83 99 P Pn 19 40 29.1 -1.4
comp=N,22nm,0.3s,baz=152,slow=7.0,SNR=74
ASF S Sn 19 42 04.6 -4.2
comp=N,19nm,0.3s,baz=25,slow=19,SNR=4.0
ASF LR LR 19 44 41.6
comp=N,2µm,19.7s,baz=292,slow=42
ROOS tl_alroos 8.86 86 ⇑P Pn 19 40 30.0 -0.9
ROOS tl_alroos 8.86 86 ⇑*i*P Pn 19 40 30.1 -0.8
CORM Corum 8.86 44 *e*PN Pn 19 40 30.3 -0.6
SHRM 8.90 132 P Pn 19 40 29.4 -2.2
baz=131
SHRM 8.90 132 P Pn 19 40 29.4 -2.1
LSRT Sirt 8.90 253 *i* P Pn 19 40 31.9 +0.4
SNR=22
SKO Skopje 8.90 334 *e*Pn Pn 19 40 31.7 +0.2
SKO Skopje 8.90 334 P Pn 19 40 31.2 -0.3
VTS Vitosha 8.94 344 ⇑P Pn 19 40 32.9 +0.9
VTS Vitosha 8.94 344 P Pn 19 40 33.0 +1.0
VTS Vitosha 8.94 344 ⇓*i*P Pn 19 40 32.9 +0.9
VTS Vitosha 8.94 344 P Pn 19 40 33.0 +1.0
TIR Tirane 9.04 326 *e*P Pn 19 40 31.5 -1.8
comp=N,304nm,0.4s
TIR Tirane 9.04 326 *e*P Pn 19 40 31.5 -1.9
TIR pmax pmax
comp=Z,304nm,0.4s
TIR Tirane 9.04 326 P Pn 19 40 32.9 -0.5
TIR Tirane 9.04 326 P Pn 19 40 32.9 -0.5
KMRS Kahramanmaras 9.05 65 *e*PN Pn 19 40 31.4 -2.1
TOS Tosya 9.13 38 *e*PN Pn 19 40 35.7 +1.2
AKRG Al Kharijah 9.15 157 P Pn 19 40 33.4 -1.6
baz=158
GTR Jabal at Tayr 9.17 157 P Pn 19 40 33.8 -1.4
baz=158
GTR Jabal at Tayr 9.17 157 P Pn 19 40 33.8 -1.4
GAZ Gaziantep 9.18 67 *e*PN Pn 19 40 35.3 0.0
SARI SarD1z-Kayseri 9.36 57 *e*PN Pn 19 40 31.4 -6.3
TIP Timpagrande 9.43 306 *e*Pn Pn 19 40 37.2 -1.6
TIP Timpagrande 9.43 306 *e*Pn Pn 19 40 37.2 -1.6
SOI Samo 9.44 298 P Pn 19 40 37.7 -1.2
LZLA Zalla 9.48 237 *i* P Pn 19 40 38.9 -0.5
SNR=22
LZLA *e*S Sn 19 42 17.3 -7.4
SNR=22
GRI Girifalco 9.49 303 P Pn 19 40 38.6 -1.0
SLMH Al Salmeh 9.52 74 ⇓P Pn 19 40 38.0 -2.0
SLMH Al Salmeh 9.52 74 ⇓*i*P Pn 19 40 38.9 -1.1
BARS Barje 9.53 338 P Pn 19 40 40.2 +0.1
BARS Barje 9.53 338 P Pn 19 40 40.2 +0.1
PUK Puka 9.58 328 *e*PN Pn 19 40 40.2 +0.6
CEL Celeste 9.63 299 *e*Pn Pn 19 40 39.6 -1.9
comp=Z,261nm,0.6s
CEL *e*Sn Sn 19 42 18.3 -10
CEL Celeste 9.63 299 *e*Pn Pn 19 40 39.6 -1.9
comp=Z,261nm,0.6s
CEL *e*Sn Sn 19 42 18.3 -10
MTTG Motta San Giov 9.68 297 P Pn 19 40 41.0 -1.2
MTTG Motta San Giov 9.68 297 P Pn 19 40 41.0 -1.2
SCLL Scilla 9.76 299 P Pn 19 40 42.6 -0.7
SCLL Scilla 9.76 299 P Pn 19 40 42.6 -0.7
HSFG 9.77 138 P Pn 19 40 41.0 -2.5
baz=138
HSFG 9.77 138 P Pn 19 40 41.0 -2.4
BCI Bajram Curri 9.77 330 *e*PN Pn 19 40 43.4 0.0
AGST Augusta-Monte 9.80 292 P Pn 19 40 43.1 -0.7
AGST Augusta-Monte 9.80 292 P Pn 19 40 43.1 -0.7
ULC Ulcinj 9.81 326 ⇑*i*Pn Pn 19 40 39.9 -4.0
ULC *e*Sn Sn 19 42 24.0 -8.7
ULC Ulcinj 9.81 326 ⇑*i*Pn Pn 19 40 39.9 -4.0
ULC *e*Sn Sn 19 42 24.0 -8.7
BZK Bozkurt 9.82 34 *e*PN Pn 19 42 42.2 -1.8
JHLN Al Jahlan 9.86 77 ⇑P Pn 19 40 44.0 -0.6
JHLN Al Jahlan 9.86 77 ⇑*i*P Pn 19 40 44.4 -0.2
LMSR Misrath 9.88 263 *i* P Pn 19 40 45.2 +0.3
SNR=22
SSY Sortino 9.90 292 P Pn 19 40 43.5 -1.6
SSY Sortino 9.90 292 P Pn 19 40 43.5 -1.6
HDK2 Wahat Dakhilah 9.90 167 P Pn 19 40 43.6 -1.7
baz=169
HDK2 Wahat Dakhilah 9.90 167 P Pn 19 40 43.6 -1.7
PVY Plav 10.00 331 ⇑*i*Pn Pn 19 40 44.4 -2.1
PVY *e*Sn Sn 19 42 31.8 -5.7
PVY Plav 10.00 331 ⇑*i*Pn Pn 19 40 44.4 -2.1
PVY *e*Sn Sn 19 42 31.8 -5.7
HMDC Modica 10.07 290 P Pn 19 40 45.6 -1.9
HMDC Modica 10.07 290 P Pn 19 40 45.6 -1.9
WDD Wield Dalam 10.09 284 *e*Pn Pn 19 40 46.0 -1.7
comp=Z,354nm,0.6s
WDD *e*Sn Sn 19 42 21.4 -18
WDD Wield Dalam 10.09 284 *e*Pn Pn 19 40 46.0 -1.8
comp=Z,354nm,0.6s
WDD *e*Sn Sn 19 42 21.4 -18
SVSK Karacayir 10.17 52 *e*PN Pn 19 40 51.1 +2.4
PDG Podgorica 10.17 328 ⇑*i*Pn Pn 19 40 44.8 -4.1
PDG *e*Sn Sn 19 42 33.2 -8.4
TTG Podgorica 10.17 328 ⇑*i*Pn Pn 19 40 44.8 -4.1
TTG *e*Sn Sn 19 42 33.2 -8.4
HVZN Vizzini 10.18 291 P Pn 19 40 47.6 -1.4
HVZN Vizzini 10.18 291 P Pn 19 40 47.6 -1.4
BUM Brajici-Budva 10.23 326 ⇓*i*Pn Pn 19 40 44.8 -4.9
BUM *e*Sn Sn 19 42 33.3 -10
BUM Brajici-Budva 10.23 326 ⇓*i*Pn Pn 19 40 44.8 -4.9
BUM *e*Sn Sn 19 42 33.3 -10
DARE Darende-Malaty 10.26 58 *e*PN Pn 19 40 43.1 -6.9
BEY Berane 10.26 331 ⇓*i*Pn Pn 19 40 47.9 -2.2
BEY *e*Sn Sn 19 42 38.8 -5.1
IVA Berane 10.26 331 ⇓*i*Pn Pn 19 40 47.9 -2.2
IVA *e*Sn Sn 19 42 38.8 -5.1

KVT Kavak 10.26 44 *e*PN Pn 19 40 49.4 -0.7
LKFR Kufra 10.28 198 *i* P Pn 19 40 48.3 -2.2
SNR=22
SCHR S. Chirico Rap 10.41 309 P Pn 19 40 50.4 -1.8
SCHR S. Chirico Rap 10.41 309 P Pn 19 40 50.4 -1.8
LJFR Jufra 10.44 245 *i* P Pn 19 40 51.7 -0.9
SNR=22
RAFF Raffo Rosso 10.46 291 P Pn 19 40 52.0 -0.9
RAFF Raffo Rosso 10.46 291 P Pn 19 40 52.0 -0.9
CUC Castrocucco 10.47 308 *e*Pn Pn 19 40 51.2 -1.8
comp=Z,337nm,0.6s
CUC *e*Sn Sn 19 42 40.3 -8.8
CUC Castrocucco 10.47 308 *e*Pn Pn 19 40 51.2 -1.8
comp=Z,337nm,0.6s
CUC *e*Sn Sn 19 42 40.3 -8.8
URFA Urfa 10.49 68 *e*PN Pn 19 40 50.3 -2.9
VAE Valguarnera 10.49 293 P Pn 19 40 53.8 +0.6
VAE S Sn 19 42 38.9 -11
VAE Valguarnera 10.49 293 P Pn 19 40 53.8 +0.6
comp=Z,22nm,0.3s,baz=34,slow=1.7,SNR=49
VAE S Sn 19 42 38.9 -11
comp=Z,28nm,0.3s,baz=243,slow=2.4,SNR=3.8
VAE Valguarnera 10.49 293 P Pn 19 40 53.8 +0.6
VAE S Sn 19 42 38.9 -11
TIRR Tirgusor 10.49 7 *e*P Pn 19 40 54.2 +0.9
comp=Z,36nm,0.9s
TIRR Tirgusor 10.49 7 *e*P Pn 19 40 54.2 +0.9
TIRR pmax pmax
comp=Z,36nm,0.9s
TIRR Tirgusor 10.49 7 ⇓*i*P Pn 19 40 53.9 +0.6
TIRR Tirgusor 10.49 7 *e*P Pn 19 40 54.2 +0.9
comp=Z,36nm,0.9s
SLNA Salina 10.52 299 P Pn 19 40 52.6 -1.0
SLNA Salina 10.52 299 P Pn 19 40 52.6 -1.0
HCY Herceg Novi 10.54 325 ⇑*i*Pn Pn 19 40 48.8 -5.0
HCY *e*Sn Sn 19 42 40.1 -10
HCY Herceg Novi 10.54 325 ⇑*i*Pn Pn 19 40 48.8 -5.0
HCY *e*Sn Sn 19 42 40.1 -10
AMRR Amara 10.57 3 P Pn 19 40 56.1 +1.8
AMRR Amara 10.57 3 P Pn 19 40 56.1 +1.8
NKY Niksic 10.59 328 ⇓*i*Pn Pn 19 40 51.0 -3.6
NKY *e*Sn Sn 19 42 44.0 -8.0
NKY Niksic 10.59 328 ⇓*i*Pn Pn 19 40 51.0 -3.6
NKY *e*Sn Sn 19 42 44.0 -8.0
PTRP Pietrapertosa 10.60 311 P Pn 19 40 53.7 -1.0
PTRP Pietrapertosa 10.60 311 P Pn 19 40 53.7 -1.0
SULR 10.63 359 ⇓P Pn 19 40 55.8 +0.7
SULR 10.63 359 ⇓*i*P Pn 19 40 55.8 +0.7
SULR 10.63 359 ⇓P Pn 19 40 55.8 +0.7
RSDY Resadiye-TOKAT 10.64 50 *e*PN Pn 19 40 53.2 -2.0
MGR Morigerati 10.72 308 P Pn 19 40 53.8 -2.6
MGR Morigerati 10.72 308 P Pn 19 40 53.8 -2.6
ACER Acerenza 10.82 312 P Pn 19 40 55.3 -2.5
ACER Acerenza 10.82 312 P Pn 19 40 55.3 -2.5
GRUS Gruza 10.85 337 P Pn 19 40 57.8 -0.3
GRUS Gruza 10.85 337 P Pn 19 40 57.8 -0.3
PLE Pljevlja 10.85 331 ⇓*i*Pn Pn 19 40 55.5 -2.6
PLE *e*Sn Sn 19 42 52.6 -5.6
PLE Pljevlja 10.85 331 ⇓*i*Pn Pn 19 40 55.5 -2.6
PLE *e*Sn Sn 19 42 52.6 -5.6
BRY Bratogost 10.87 327 ⇓*i*Pn Pn 19 40 53.8 -4.6
BRY *e*Sn Sn 19 42 49.3 -9.4
BRY Bratogost 10.87 327 ⇓*i*Pn Pn 19 40 53.8 -4.6
BRY *e*Sn Sn 19 42 49.3 -9.4
CSLB Castelbuono 10.89 295 P Pn 19 40 58.4 -0.3
CSLB Castelbuono 10.89 295 P Pn 19 40 58.4 -0.3
GIB Gibilmanna 10.93 295 P Pn 19 40 58.6 -0.6
UPM Unac-Piva 10.95 329 ⇓*i*Pn Pn 19 40 56.0 -3.5
UPM *e*Sn Sn 19 42 53.1 -7.5
UPM Unac-Piva 10.95 329 ⇓*i*Pn Pn 19 40 56.0 -3.5
UPM *e*Sn Sn 19 42 53.1 -7.5
SVIS Svilajnac 11.03 339 P Pn 19 41 00.6 0.0
DJES Djerdap 11.07 345 P Pn 19 41 00.5 -0.6
MRLC Muro Lucano 11.09 310 P Pn 19 40 58.9 -2.6
MRLC Muro Lucano 11.09 310 P Pn 19 40 58.9 -2.6
SGO Sicignano 11.10 309 P Pn 19 40 59.7 -1.9
HADB 11.11 139 P Pn 19 40 59.8 -2.0
baz=139
HADB 11.11 139 P Pn 19 40 59.8 -2.0
SVRC Sivrice-ELAZID 11.13 63 *e*PN Pn 19 40 58.3 -3.7
CFR Carcaliu 11.18 6 ⇑P Pn 19 41 04.3 +1.6
CFR Carcaliu 11.18 6 ⇑*i*P Pn 19 41 04.3 +1.6
CFR Carcaliu 11.18 6 ⇑P Pn 19 41 04.3 +1.6
STON Ston 11.24 324 *e*Pn Pn 19 42 58.2 -5.3
STON Sn Sn 19 42 53.9 -14
LSHF Shwairf 11.24 252 *i* P Pn 19 41 03.2 -0.4
SNR=22
TLCR 11.26 8 ⇓P Pn 19 41 05.0 +1.3
TLCR 11.26 8 ⇓*i*P Pn 19 41 05.1 +1.4
TLCR 11.26 8 ⇓P Pn 19 41 05.1 +1.4
DIVS Divibare 11.28 335 P Pn 19 41 01.2 -2.8
DIVS Divibare 11.28 335 P Pn 19 41 01.2 -2.8
BBLS Lazići 11.29 332 P Pn 19 41 01.6 -2.6
BBLS Lazići 11.29 332 P Pn 19 41 01.6 -2.6
PTK Pertek 11.37 61 *e*PN Pn 19 42 02.0 -3.3
MSAG Monte S. Angel 11.40 315 P Pn 19 41 02.0 -3.7
MSAG Monte S. Angel 11.40 315 P Pn 19 41 02.0 -3.7
VOIR 11.44 354 ⇑P Pn 19 41 06.3 0.0
VOIR 11.44 354 ⇑*i*P Pn 19 41 06.3 0.0
VOIR 11.44 354 ⇑P Pn 19 41 06.3 0.0
MLR Muntele Rosu 11.45 358 ⇑P Pn 19 41 07.2 +0.9
MLR P 19 41 07.6
MLR Muntele Rosu 11.45 358 P Pn 19 41 06.9 +0.6
comp=Z,0.3nm,0.3s,baz=181,slow=3.8,SNR=38
MLR ScP ScP 19 50 27.7 +0.2
comp=Z,0.1nm,0.3s,baz=104,slow=1.8,SNR=5.6
MLR Muntele Rosu 11.45 358 ⇑*i*P Pn 19 41 07.2 +0.9
MLR Muntele Rosu 11.45 358 P Pn 19 41 07.6 +1.3
GHAR Gharyan 11.51 264 *i* P Pn 19 41 07.2 0.0
SNR=22
SGRT San Giovanni R 11.52 315 P Pn 19 41 03.6 -3.8
SGRT San Giovanni R 11.52 315 P Pn 19 41 03.6 -3.6
FG5 Orsara di Pugl 11.53 312 P Pn 19 41 05.3 -2.1
FG5 Orsara di Pugl 11.53 312 P Pn 19 41 05.3 -2.1
RGNG Rignano Grg 11.57 314 P Pn 19 41 04.6 -3.4
RGNG Rignano Grg 11.57 314 P Pn 19 41 04.6 -3.4
AAHD Abu Hadid 11.58 151 P Pn 19 41 06.3 -1.9
baz=151
AAHD Abu Hadid 11.58 151 P Pn 19 41 06.3 -1.9
MRB1 Monte Rocchett 11.62 311 P Pn 19 41 06.7 -2.0
MRB1 Monte Rocchett 11.62 311 P Pn 19 41 06.7 -2.0
AKRL Khor El Raml 11.64 151 P Pn 19 41 07.3 -1.8
baz=152
AKRL Khor El Raml 11.64 151 P Pn 19 41 07.3 -1.8
EZC Erzincan 11.68 57 *e*PN Pn 19 41 07.2 -2.3
PSB1 Pescosannita 11.78 311 P Pn 19 41 08.6 -2.3
PSB1 Pescosannita 11.78 311 P Pn 19 41 08.6 -2.3
USI Ustica 11.78 297 P Pn 19 41 08.7 -2.2
USI Ustica 11.78 297 P Pn 19 41 08.7 -2.2
PLOR Plostina 11.79 0 ⇓*i*P Pn 19 41 12.2 +1.1
VRI Vrincioaia 11.81 0 ⇑P Pn 19 41 12.0 +0.8
VRI P 19 41 12.6
VRI Vrincioaia 11.81 0 ⇑*i*P Pn 19 41 12.0 +0.7
VRI Vrincioaia 11.81 0 P Pn 19 41 12.6 +1.3
FG2 Serracapriola 11.90 314 P Pn 19 41 09.9 -2.6
FG2 Serracapriola 11.90 314 P Pn 19 41 09.9 -2.6
CIGN Sant'Elia a Pi 11.96 313 P Pn 19 41 11.3 -2.1
CIGN Sant'Elia a Pi 11.96 313 P Pn 19 41 11.3 -2.1
ERC Erice 12.03 293 P Pn 19 41 16.9 +2.6
ERC Erice 12.03 293 P Pn 19 41 16.9 +2.6
GUMT Gumushane 12.08 54 *e*PN Pn 19 41 12.8 -2.2
HKFR Khafra 12.13 159 P Pn 19 41 14.4 -1.4
baz=160
HKFR Khafra 12.13 159 P Pn 19 41 14.4 -1.4
SGG Gregorio Mates 12.14 311 P Pn 19 41 13.6 -2.2
SGG Gregorio Mates 12.14 311 P Pn 19 41 13.6 -2.2
DEV Deva 12.16 348 ⇓P Pn 19 41 14.2 -1.8
DEV Deva 12.16 348 ⇓*i*P Pn 19 41 14.2 -1.9
DEV Deva 12.16 348 ⇓P Pn 19 41 14.2 -1.9
SIM Simferopol' 12.33 26 *ce*P Pn 19 41 20.1 +1.7
SIM S Sn 19 43 38.0 +3.5
SIM pmax pmax
comp=Z,58nm,1.1s
SIM pmax pmax
comp=Z,36nm,0.9s
SIM MLR MLR
comp=Z,2µm,16.0s
RFI Roccamonfina 12.34 310 P Pn 19 41 16.7 -1.9
RFI Roccamonfina 12.34 310 P Pn 19 41 16.7 -1.9
MIDA Miranda 12.36 311 P Pn 19 41 16.5 -2.3
MIDA Miranda 12.36 311 P Pn 19 41 16.5 -2.3

RNI2 Rionero Sannit 12.46 311 P Pn 19 41 19.2 -0.9
RNI2 Rionero Sannit 12.46 311 P Pn 19 41 19.2 -0.9
TESR 12.46 0 ⇓P Pn 19 41 20.0 -0.1
TESR 12.46 0 ⇓*i*P Pn 19 41 20.0 -0.1
TESR 12.46 0 ⇓P Pn 19 41 20.0 -0.1
SDI San Donato 12.67 311 P Pn 19 41 20.8 -2.3
INTR Introdacqua 12.78 312 P Pn 19 41 22.9 -1.7
INTR Introdacqua 12.78 312 P Pn 19 41 22.9 -1.7
VVLD Villa Vallelon 12.88 311 P Pn 19 41 23.7 -2.2
VVLD Villa Vallelon 12.88 311 P Pn 19 41 23.7 -2.2
BLY Banja Luka 12.93 329 P Pn 19 41 23.7 -2.9
BLY Banja Luka 12.93 329 P Pn 19 41 23.7 -2.9
LUMB Murzuk 12.93 236 *i* P Pn 19 41 23.6 -3.1
SNR=22
GUAR Guarcino 13.03 310 P Pn 19 41 25.7 -2.3
GUAR Guarcino 13.03 310 P Pn 19 41 25.7 -2.3
KIS Kishinev 13.05 7 *e*PP 19 41 36.0
KIS *e*S Sn 19 43 52.0 0.0
KIS LRM 19 47 20.0
comp=Z,4µm,14.0s
KIS Kishinev 13.05 7 *e*P Pn 19 41 26.0 -2.2
KIS *e*S Sn 19 43 52.0 0.0
KIS MLR MLR
comp=Z,3µm,14.0s
KIS MLR MLR
comp=Z,4µm,14.0s
DRGR 13.07 348 P Pn 19 41 28.8 +0.3
DRGR 13.07 348 ⇑*i*P Pn 19 41 28.9 +0.4
DRGR 13.07 348 P Pn 19 41 28.8 +0.3
EZM Erzurum 13.16 59 *e*PN Pn 19 41 25.4 -4.3
AQU L'Aquila 13.28 313 *e*Pn Pn 19 41 30.8 -0.6
AQU L'Aquila 13.28 313 ⇑*i*P Pn 19 41 30.9 -0.5
AQU L'Aquila 13.28 313 *e*Pn Pn 19 41 30.8 -0.6
TERO Teramo 13.32 314 P Pn 19 41 29.9 -1.9
TERO Teramo 13.32 314 P Pn 19 41 29.9 -1.9
CERT Cerreto 13.32 310 P Pn 19 41 29.9 -2.1
CERT Cerreto 13.32 310 P Pn 19 41 29.9 -2.1
FIAM Fiamignano 13.41 312 P Pn 19 41 31.3 -1.9
FIAM Fiamignano 13.41 312 P Pn 19 41 31.3 -1.9
OFFI Offida 13.45 315 P Pn 19 41 32.1 -1.6
OFFI Offida 13.45 315 P Pn 19 41 32.1 -1.6
MTCE Montecelio 13.52 310 P Pn 19 41 33.9 -0.7
MTCE Montecelio 13.52 310 P Pn 19 41 33.9 -0.7
PKSM Moragy 13.59 336 P Pn 19 41 32.8 -2.8
PKSM ⇓P 19 41 33.6
PKSM Moragy 13.59 336 ⇓*i*P Pn 19 41 33.6 -1.9
PKSM Moragy 13.59 336 ⇓P Pn 19 41 33.6 -1.9
BUR01 Bucovina Ar. S 13.60 356 P Pn 19 41 36.3 +0.7
BUR01 Bucovina Ar. S 13.60 356 P Pn 19 41 36.3 +0.6
BURAR Bucovina Array 13.60 356 ⇓P Pn 19 41 36.3 +0.6
BURAR P 19 41 36.9
BURAR Bucovina Array 13.60 356 ⇓*i*P Pn 19 41 36.3 +0.6
BURAR Bucovina Array 13.60 356 P Pn 19 41 36.8 +1.1
ANN Anapa 13.60 35 *e*P Pn 19 41 36.2 +0.5
ANN Anapa 13.60 35 *c i*P Pn 19 41 36.4 +0.7
ANN *e*S Sn 19 44 07.6 +2.1
ANN pmax pmax
comp=Z,20nm,0.9s
ANN pmax pmax
comp=N,25nm,1.0s
ANN pmax pmax
comp=E,13nm,1.0s
ANN MLR MLR
comp=N,882nm,19.0s
ANN MLR MLR
comp=E,1µm,19.0s
ANN MLR MLR
comp=Z,1µm,19.0s
ANN Anapa 13.60 35 *e*P Pn 19 41 36.2 +0.5
BUR08 Bucovina Ar. S 13.63 356 *e*P Pn 19 41 36.2 +0.1
BUR08 Bucovina Ar. S 13.63 356 *e*P Pn 19 41 36.2 +0.1
NRCA Norcia 13.73 314 P Pn 19 41 35.2 -2.3
NRCA Norcia 13.73 314 P Pn 19 41 35.2 -2.3
MNS Montasola 13.75 311 P Pn 19 41 35.2 -2.5
BMR Baia Mare 13.82 351 P Pn 19 41 38.7 0.0
BMR Baia Mare 13.82 351 P Pn 19 41 38.7 0.0
NVLJ Novalja 13.88 323 *e*Pn Pn 19 41 35.4 -4.1
NVLJ Sn Sn 19 43 57.8 -14
AOI Ancona 13.88 317 P Pn 19 41 38.1 -1.4
AOI Ancona 13.88 317 P Pn 19 41 38.1 -1.4
SOC Sochi 13.95 43 *i* P Pn 19 41 42.7 +2.2
SOC Sochi 13.95 43 *c i*P Pn 19 41 42.2 +1.7
SOC *e* 19 44 14.7
SOC pmax pmax
comp=Z,154nm,1.2s
SOC MLR MLR
comp=Z,2µm,15.0s
SOC Sochi 13.95 43 *i* P Pn 19 41 42.7 +2.2
BCA Borcka 13.98 54 *e*PN Pn 19 41 37.8 -3.1
CING Cingoli 14.00 316 P Pn 19 41 37.8 -3.4
CING Cingoli 14.00 316 P Pn 19 41 37.8 -3.4
TOLF Tolfa 14.01 309 P Pn 19 41 43.3 +2.0
TOLF Tolfa 14.01 309 P Pn 19 41 43.3 +2.0
SNTG Esanatoglia 14.08 315 P Pn 19 41 40.5 -1.8
SNTG Esanatoglia 14.08 315 P Pn 19 41 40.5 -1.8
ASS Assisi 14.14 314 P Pn 19 41 41.8 -1.3
CUKT Cukurca 14.19 72 *e*PN Pn 19 41 40.4 -3.4
AGRB Hanur-Agry 14.23 62 *e*PN Pn 19 41 40.4 -4.0
KEST Kesra 14.28 282 P Pn 19 41 44.9 -0.1
comp=Z,0.2nm,0.3s,baz=66,slow=6.1,SNR=20
KEST S Sn 19 44 17.2 -4.8
comp=Z,0.4nm,0.3s,baz=193,slow=23,SNR=5.6
MURB Monte Urbino 14.33 314 P Pn 19 41 44.8 -0.9
MURB Monte Urbino 14.33 314 P Pn 19 41 44.8 -0.9
BOJS Bojanci 14.38 326 *i* Pn Pn 19 41 41.4 -5.0
BOJS *i* 19 41 43.1
BOJS *i* Sn Sn 19 44 11.7 -13
BOJS Bojanci 14.38 326 *i* Pn Pn 19 41 41.4 -5.0
MGAB Montegabbione 14.39 312 P Pn 19 41 43.7 -2.7
MGAB Montegabbione 14.39 312 P Pn 19 41 43.7 -2.7
TRPA Tarpa 14.40 349 ⇓*i*P Pn 19 41 46.9 +0.3
LATE Laterza 14.42 311 P Pn 19 41 45.7 -1.2
LATE Laterza 14.42 311 P Pn 19 41 45.7 -1.2
FSSB Fossombrone 14.44 316 P Pn 19 41 43.2 -3.9
FSSB Fossombrone 14.44 316 P Pn 19 41 43.2 -3.9
KMPD K-Podol'skiy 14.51 360 P Pn 19 41 47.0 -1.1
PESA Pesaro 14.55 317 P Pn 19 41 47.3 -1.4
PESA Pesaro 14.55 317 P Pn 19 41 47.3 -1.4
BUD Budapest 14.60 339 ⇑*e*P Pn 19 41 48.2 -1.1
BUD Budapest 14.60 339 P Pn 19 41 46.9 -2.4
CDCA Citt' di Caste 14.62 314 P Pn 19 41 49.1 -0.5
CDCA Citt' di Caste 14.62 314 P Pn 19 41 49.1 -0.5
BADI Badiali 14.64 314 P Pn 19 41 47.9 -2.0
BADI Badiali 14.64 314 P Pn 19 41 47.9 -2.0
MAON Monte Argentar 14.75 309 P Pn 19 41 51.0 -0.4
MAON Monte Argentar 14.75 309 P Pn 19 41 51.0 -0.4
PSZ Piszkesteto 14.75 342 *e*Pn Pn 19 41 49.4 -2.0
PSZ Piszkesteto 14.75 342 ⇓*i*P Pn 19 41 50.5 -0.9
PSZ Piszkesteto 14.75 342 ⇓*e*P Pn 19 41 49.0 -2.4
PSZ Piszkesteto 14.75 342 *e*Pn Pn 19 41 49.4 -2.0
RSM Repubblica di 14.77 316 P Pn 19 41 51.4 -0.3
CLDR Caldiran 14.80 65 *e*PN Pn 19 41 49.3 -2.8
VSL Villasalto 14.84 296 *e*P Pn 19 41 51.6 -1.0
VSL Villasalto 14.84 296 *e*P Pn 19 41 51.6 -1.0
DGI Dorgali Grotta 14.92 300 P Pn 19 41 51.5 -2.2
DGI Dorgali Grotta 14.92 300 P Pn 19 41 51.5 -2.2
UZH Uzhgorod 14.93 349 ⇑*i*P Pn 19 41 54.0 +0.3
UZH *e*S Sn 19 44 38.0 +0.2
UZH MLR MLR
comp=N,2µm,13.0s
UZH MLR MLR
comp=E,1µm,13.0s
SKDS Skadanscina 15.00 324 *i* Pn Pn 19 41 50.0 -4.8
LGHD Ghdames 15.10 259 *i* P Pn 19 41 57.2 +1.0
SNR=45
SFI Santa Sofia 15.11 315 P Pn 19 41 55.3 -0.8
LJU Ljubljana 15.12 326 *e*Pn Pn 19 41 52.2 -4.0
LJU *i* 19 41 53.9
LJU *i* Sn Sn 19 44 33.6 -8.9
LJU Ljubljana 15.12 326 *e*Pn Pn 19 41 52.2 -4.1
CSNT Castellina Chi 15.19 313 P Pn 19 41 55.5 -1.8
CSNT Castellina Chi 15.19 313 P Pn 19 41 55.5 -1.8
JAVS Javornik 15.23 325 *i* Pn Pn 19 41 53.2 -4.5
JAVS *i* 19 41 55.0
JAVS *i* Sn Sn 19 44 32.6 -13
JAVS Javornik 15.23 325 *i* Pn Pn 19 41 53.2 -4.5
TRI Trieste 15.24 324 *e*P Pn 19 41 53.9 -4.0
comp=E,258nm,0.9s
TRI *e* 19 42 02.5
TRI Trieste 15.24 324 *e*P Pn 19 41 53.9 -4.0
TRI pmax pmax

comp=Z,258nm,0.9s
TRI Trieste 15.24 324 *e*P **Pn** **19 41 53.9 -4.0**
PERS Pernice 15.31 329 *i* Pn **Pn** **19 41 53.6 -5.1**
PERS *i* 19 41 55.4
PERS *i* Sn **Sn** **19 44 37.2 -10**
PERS Pernice 15.31 329 *i* Pn **Pn** **19 41 53.6 -5.1**
VMG Vicchio 15.32 315 P **Pn** **19 41 58.0 -0.9**
VMG Vicchio 15.32 315 P **Pn** **19 41 58.0 -0.9**
SOKA Soboth 15.38 329⇓*i* Pn **Pn** **19 41 54.4 -5.3**
comp=Z,35nm,0.6s
VOY Vojsko 15.41 325 *e*Pn **Pn** **19 41 55.8 -4.3**
VOY *e* 19 41 57.8
VOY *e* 19 42 05.0
VOY *e*(Sn) **Sn** **19 44 37.3 -12**
VOY Vojsko 15.41 325 *e*Pn **Pn** **19 41 55.8 -4.3**
OBKA Obir 15.46 327 P **Pn** **19 41 57.2 -3.5**
OBKA Obir 15.46 327 *i* Pn **Pn** **19 41 57.1 -3.6**
comp=Z,22nm,0.4s,SNR=23
OBKA Obir 15.46 327 P **Pn** **19 41 57.2 -3.5**
SEI Scarperia 15.48 315 P **Pn** **19 42 02.8 +1.8**
SEI Scarperia 15.48 315 P **Pn** **19 42 02.8 +1.8**
VYHS Vyhne 15.56 340 *e*P **Pn** **19 41 59.2 -2.8**
comp=Z,50nm,1.2s
VYHS *e*S **Sn** **19 45 02.8 +10**
VYHS *e* 19 50 34.4
VYHS *e* 19 51 02.6
VYHS Vyhne 15.56 340 *e*P **Pn** **19 41 59.2 -2.8**
VYHS pmax pmax
comp=Z,50nm,1.2s
VYHS Vyhne 15.56 340 *e*P **Pn** **19 41 59.2 -2.8**
VYHS *e*S **Sn** **19 45 02.8 +10**
VYHS *e* 19 50 34.4
VYHS *e* 19 51 02.5
VYHS Vyhne 15.56 340 *e*P **Pn** **19 41 59.2 -2.8**
comp=Z,50nm,1.2s
VYHS *e*S **Sn** **19 45 02.8 +10**
ARSA Arzberg 15.63 331 P **Pn** **19 42 00.4 -2.4**
ARSA Arzberg 15.63 331⇓*i* Pn **Pn** **19 41 59.3 -3.6**
comp=Z,45nm,0.8s,SNR=49
ARSA Arzberg 15.63 331 P **Pn** **19 42 00.4 -2.4**
FNVD Fontana Vidola 15.68 315 P **Pn** **19 42 01.6 -2.0**
FNVD Fontana Vidola 15.68 315 P **Pn** **19 42 01.6 -2.0**
GNI Garni 15.69 62 *e*PN **Pn** **19 42 00.7 -3.0**
GNI Garni 15.69 62 *e*P **Pn** **19 42 05.1 +1.4**
comp=Z,89nm,0.9s
GNI Garni 15.69 62 P **Pn** **19 42 03.0 -0.8**
comp=Z,2.6nm,0.3s,baz=273,slow=2.8,SNR=16
GNI ScP ScP 19 50 34.6 0.0
comp=Z,0.2nm,0.3s,baz=278,slow=0.7,SNR=3.2
GNI Garni 15.69 62 *de*P **Pn** **19 42 04.4 +0.7**
GNI pmax pmax
comp=Z,176nm,1.7s
GNI Garni 15.69 62 *e*P **Pn** **19 42 05.1 +1.4**
comp=Z,89nm,0.9s
GNI Garni 15.69 62 Pn **Pn** **19 42 05.9 +2.2**
SNR=28
GNI Garni 15.69 62 Pn **Pn** **19 42 05.9 +2.1**
SNR=28
ONI Oni 15.71 52 P **Pn** **19 42 04.6 +0.5**
FIU Minerbio Fiu 15.75 317 P **Pn** **19 42 04.8 +0.4**
FIU Minerbio Fiu 15.75 317 P **Pn** **19 42 04.8 +0.4**
KOLL Kolacno 15.76 340 *e*P **Pn** **19 42 03.0 -1.6**
KOLL *e* 19 56 08.3
KOLL Kolacno 15.76 340 *e*P **Pn** **19 42 03.0 -1.6**
KOLL *e* 19 56 08.3
KOLL Kolacno 15.76 340 *e*P **Pn** **19 42 03.0 -1.6**
PII Pisa 15.80 312 P **Pn** **19 42 03.3 -1.8**
ABSA Djebel Ababsia 15.81 284 P **Pn** **19 42 06.2 +0.9**
ZST Bratislava 15.83 336 *e*P **Pn** **19 42 03.7 -1.8**
comp=Z,38nm,1.1s
ZST *e*S **Sn** **19 45 09.1 +9.3**
ZST Bratislava 15.83 336 *e*P **Pn** **19 42 03.7 -1.8**
ZST pmax pmax
comp=Z,38nm,1.1s
ZST MLR MLR
comp=Z,2µm,12.7s
ZST Bratislava 15.83 336 *e*P **Pn** **19 42 03.7 -1.8**
ZST *e*S **Sn** **19 45 09.0 +9.2**
ZST Bratislava 15.83 336 *e*P **Pn** **19 42 03.7 -1.8**
comp=Z,38nm,1.1s
ZST *e*S **Sn** **19 45 09.1 +9.3**
KWP Kalwaria Pacla 15.84 351 *e*P **Pn** **19 42 05.0 -0.7**
KWP *e*S **Sn** **19 45 13.9 +14**
KWP LMZ 19 47 40.5
comp=Z,2µm,27.4s
KWP Kalwaria Pacla 15.84 351 *e*P **Pn** **19 42 06.0 +0.3**
comp=Z,150nm,1.2s
KWP Kalwaria Pacla 15.84 351 *e*P **Pn** **19 42 06.0 +0.4**
KWP pmax pmax
comp=Z,150nm,1.2s
KWP Kalwaria Pacla 15.84 351 *e*P **Pn** **19 42 06.0 +0.4**
comp=Z,150nm,1.2s
STHS Stebnicka Huta 15.87 347 *e*P **Pn** **19 42 06.9 +0.9**
comp=Z,66nm,1.1s
STHS Stebnicka Huta 15.87 347 *e*P **Pn** **19 42 06.9 +0.9**
STHS pmax pmax
comp=Z,66nm,1.1s
STHS Stebnicka Huta 15.87 347 *e*P **Pn** **19 42 06.9 +0.9**
STHS Stebnicka Huta 15.87 347 *e*P **Pn** **19 42 06.9 +0.9**
comp=Z,66nm,1.1s
CMAH Djebel Manchou 15.87 285 P **Pn** **19 42 08.3 +2.2**
CMAH Djebel Manchou 15.87 285 P **Pn** **19 42 08.3 +2.2**
ZCCA Zocca 15.88 315 P **Pn** **19 42 05.7 -0.4**
ZCCA Zocca 15.88 315 P **Pn** **19 42 05.7 -0.4**
LVV L'vov 15.88 354 *i* P **Pn** **19 42 05.2 -0.9**
LVV *e*S **Sn** **19 45 01.4 +0.5**
LVV MLR MLR
comp=N,900nm,10.0s
LVV MLR MLR
comp=E,300nm,10.0s
LVV MLR MLR
comp=Z,900nm,10.0s
KEH Kehvi 15.91 54 P **Pn** **19 42 05.9 -0.6**
KIV Kislovodsk 15.92 47 Pn **Pn** **19 42 07.3 +0.7**
comp=Z,1µm,1.1s,SNR=37
KIV Kislovodsk 15.92 47 *e*Pn **Pn** **19 42 07.9 +1.3**
comp=Z,365nm,1.2s
KIV Kislovodsk 15.92 47 *d*/P **Pn** **19 42 07.8 +1.2**
KIV *e*S **Sn** **19 45 01.1 -0.8**
KIV pmax pmax
comp=Z,233nm,1.2s
KIV MLR MLR
comp=Z,548nm,11.0s
KIV Kislovodsk 15.92 47 *e*Pn **Pn** **19 42 07.9 +1.3**
comp=Z,365nm,1.2s
KIV Kislovodsk 15.92 47 Pn **Pn** **19 42 08.1 +1.5**
SNR=66
MODS Modra-Piesok 15.93 337 *e*P **Pn** **19 42 05.7 -1.0**
comp=Z,460nm,1.3s
MODS Modra-Piesok 15.93 337 *e*P **Pn** **19 42 05.7 -1.0**
MODS pmax pmax
comp=Z,460nm,1.3s
MODS Modra-Piesok 15.93 337 *e*P **Pn** **19 42 05.7 -1.0**
MODS Modra-Piesok 15.93 337 *e*P **Pn** **19 42 05.7 -1.0**
comp=Z,460nm,1.3s
BDI Bagni Di Lucca 15.94 314 P **Pn** **19 42 04.3 -2.6**
MYKA Terra Mystica 15.97 326⇑*i* Pn **Pn** **19 42 04.6 -2.7**
comp=Z,19nm,0.5s
LIKS Likavka 16.00 342 *e*P **Pn** **19 42 07.9 +0.3**
comp=Z,48nm,0.7s
LIKS Likavka 16.00 342 *e*P **Pn** **19 42 07.9 +0.3**
LIKS pmax pmax
comp=Z,48nm,0.7s
LIKS Likavka 16.00 342 *e*P **Pn** **19 42 07.9 +0.3**
LIKS Likavka 16.00 342 *e*P **Pn** **19 42 07.9 +0.3**
comp=Z,48nm,0.7s
RAVA Ravarino 16.03 316 P **Pn** **19 42 07.5 -0.6**
RAVA Ravarino 16.03 316 P **Pn** **19 42 07.5 -0.6**
NIE Niedzica 16.06 345 *e*P **Pn** **19 42 07.5 -0.9**
NIE Niedzica 16.06 345 P **Pn** **19 42 07.7 -0.7**
NIE Niedzica 16.06 345 P **Pn** **19 42 07.7 -0.7**
ZEI Tsey 16.09 52 *e*P **Pn** **19 42 09.2 +0.4**
ZEI pmax pmax
comp=Z,252nm,1.7s
VLC Villacollemand 16.12 314 *e*P **Pn** **19 42 06.8 -2.4**
comp=Z,69nm,1.1s
VLC Villacollemand 16.12 314 *e*P **Pn** **19 42 06.8 -2.4**
comp=Z,69nm,1.1s
PGF Pioggiola 16.20 307⇑*i*/P **Pn** **19 42 09.4 -0.9**
comp=Z,682nm,1.2s
PGF Pioggiola 16.20 307⇑*i*/P **Pn** **19 42 09.4 -0.9**
comp=Z,341nm,1.2s
PGF Pioggiola 16.20 307⇑*i*/P **Pn** **19 42 09.4 -0.9**
PGF pmax pmax
comp=Z,341nm,1.2s
PGF Pioggiola 16.20 307⇑*i*/P **Pn** **19 42 09.4 -0.9**
comp=Z,341nm,1.2s
TBLG Delisi 16.22 56 P **Pn** **19 42 11.9 +1.4**
TBLG Delisi 16.22 56 P **Pn** **19 42 12.0 +1.4**
JAVC Velka Javorina 16.23 338 P **Pn** **19 42 09.1 -1.5**
MTA Mtatsminda 16.25 57 P **Pn** **19 42 11.0 +0.1**
ERBM Eremo 16.25 314 P **Pn** **19 42 07.5 -3.3**
ERBM Eremo 16.25 314 P **Pn** **19 42 07.5 -3.3**
CAEH 'Ain El Ouahch 16.34 285 P **Pn** **19 42 13.0 +0.9**
CAEH 'Ain El Ouahch 16.34 285 P **Pn** **19 42 13.0 +0.9**
FVI Forni Avoltri 16.35 324 P **Pn** **19 42 10.1 -2.1**
CKFL Kef-Lekhel 16.43 284 P **Pn** **19 42 13.6 +0.4**
CKFL Kef-Lekhel 16.43 284 P **Pn** **19 42 13.6 +0.4**
KBA Koelnbreinsper 16.44 326⇓*i*/Pn **Pn** **19 42 10.1 -3.2**
comp=Z,47nm,0.5s,SNR=20
KBA Koelnbreinsper 16.44 326 P **Pn** **19 42 10.6 -2.6**
CTI Castel Tesino 16.55 321 P **Pn** **19 42 11.4 -3.3**
DGRG David-gareji 16.56 58 P **Pn** **19 42 14.8 -0.1**
ABTA Abfaltersbach 16.59 324⇓*i*/Pn **Pn** **19 42 11.2 -4.0**
comp=Z,100nm,0.7s,SNR=38
CASM Ain Smara 16.61 283 P **Pn** **19 42 15.7 +0.2**
CASM Ain Smara 16.61 283 P **Pn** **19 42 15.7 +0.2**
MOA Molln 16.62 330 P **Pn** **19 42 13.7 -1.8**
MOA Molln 16.62 330⇑*i*/Pn **Pn** **19 42 12.5 -3.0**
comp=Z,34nm,0.8s,SNR=28
MOA Molln 16.62 330 P **Pn** **19 42 13.7 -1.8**
CTEI Djebel Teioual 16.67 283 P **Pn** **19 42 17.1 +0.8**
CTEI Djebel Teioual 16.67 283 P **Pn** **19 42 17.1 +0.8**
GOF Gofitskoye 16.74 44 *e*P pP 19 42 28.7 +0.6
GOF pmax pmax
comp=Z,270nm,1.3s
KIEV Kiev 16.75 6 *e*P **Pn** **19 42 15.6 -1.5**
comp=Z,268nm,1.0s
KIEV Kiev 16.75 6 *e*P **Pn** **19 42 15.6 -1.6**
KIEV pmax pmax
comp=Z,268nm,1.0s
KIEV Kiev 16.75 6 *e*P **Pn** **19 42 15.6 -1.6**
comp=Z,268nm,1.0s
AKASG Malin Array Be 16.76 6 P **Pn** **19 42 15.4 -1.8**
AKASG S **Sn** **19 45 24.5 +2.3**
AKASG LR LR 19 49 50.5
AKASG ScP ScP 19 50 36.1 -0.3
AKASG Malin Array Be 16.76 6 P **Pn** **19 42 15.4 -1.8**
comp=Z,34nm,0.3s,baz=192,slow=11,SNR=162
AKASG S **Sn** **19 45 24.5 +2.3**
baz=193,slow=22,SNR=14
AKASG LR LR 19 49 50.5
comp=Z,2µm,19.5s,baz=190,slow=41
AKASG ScP ScP 19 50 36.1 -0.3
baz=222,slow=2.1,SNR=10
AKASG Malin Array Be 16.76 6 P **Pn** **19 42 15.4 -1.9**
AKASG S **Sn** **19 45 24.5 +2.3**
AKASG pmax pmax
comp=Z,34nm,0.3s
AKASG MLR MLR
comp=Z,2µm,19.5s
AKASG Malin Array Be 16.76 6 P **Pn** **19 42 15.4 -1.9**
AKASG S **Sn** **19 45 24.5 +2.3**
AKBB Malin Array Si 16.76 6 *e*P **Pn** **19 42 15.6 -1.7**
AKBB Malin Array Si 16.76 6 *e*P **Pn** **19 42 15.6 -1.7**
KRUC Moravsky 16.82 336 P **Pn** **19 42 15.7 -2.3**
OJC Ojcow 16.92 345 *e*P **Pn** **19 42 17.4 -1.9**
OJC *e*pP pP 19 42 28.8 -1.3
OJC *e*S **Sn** **19 45 30.2 +4.0**
OJC L 19 51 43.5
comp=Z,1.8nm,18.0s
OJC Ojcow 16.92 345 P **Pn** **19 42 17.7 -1.6**
OJC Ojcow 16.92 345 P **Pn** **19 42 17.7 -1.6**
VRAC Vranov 16.96 337 P **Pn** **19 42 17.8 -2.1**
VRAC Vranov 16.96 337 P **Pn** **19 42 17.9 -2.0**
comp=Z,2.6nm,0.3s,baz=158,slow=13,SNR=54
VRAC S **Sn** **19 45 29.7 +2.4**
comp=Z,0.5nm,0.3s,baz=73,slow=19,SNR=2.9
VRAC ScP ScP 19 50 36.7 -0.2
comp=Z,0.3nm,0.3s,baz=80,slow=9.6,SNR=3.8
VRAC Vranov 16.96 337 P **Pn** **19 42 17.9 -2.0**
VRAC S **Sn** **19 45 29.7 +2.5**
VRAC pmax pmax
comp=Z,3.0nm,0.3s
VRAC smax
comp=N,1.0nm,0.3s
VRAC Vranov 16.96 337⇓*i*/P **Pn** **19 42 18.0 -1.9**
VRAC Vranov 16.96 337 P **Pn** **19 42 17.8 -2.1**
OKC Ostrava-Krasne 16.97 341 P **Pn** **19 42 18.7 -1.3**
OKC Ostrava-Krasne 16.97 341 *e*P **Pn** **19 42 18.9 -1.1**
OKC *e*S **Sn** **19 45 32.0 +4.6**
OKC MLR MLR
comp=Z,1µm,25.5s
OKC Ostrava-Krasne 16.97 341 *e*P **Pn** **19 42 18.9 -1.1**
OKC *ex* x 19 42 22.8
OKC *e*S **Sn** **19 45 32.0 +4.6**
OKC AMS AMS 19 48 30.0
comp=Z,1µm,25.5s
OKC Ostrava-Krasne 16.97 341 P **Pn** **19 42 18.7 -1.3**
MORC Moravsky Berou 17.09 340 *e*Pn **Pn** **19 42 19.7 -1.7**
comp=Z,350nm,1.2s
MORC Moravsky Berou 17.09 340 *e*P **Pn** **19 42 19.7 -1.7**
MORC pmax pmax
comp=Z,350nm,1.2s
MORC Moravsky Berou 17.09 340⇑*i*/P **Pn** **19 42 19.9 -1.5**
MORC Moravsky Berou 17.09 340 *e*Pn **Pn** **19 42 19.7 -1.7**
comp=Z,350nm,1.2s
DFRA Djebel Bou Aff 17.11 284 P **Pn** **19 42 18.0 -3.8**
RAC Raciborz 17.18 341 *e*P **Pn** **19 42 21.4 -1.2**
RAC *e*S **Sn** **19 45 36.8 +4.3**
RAC Raciborz 17.18 341 P **Pn** **19 42 22.2 -0.4**
TREC Trest 17.33 335 *e*P **Pn** **19 42 22.9 -1.5**
TREC *e*S **Sn** **19 45 35.9 -0.1**
TREC MLR MLR
comp=Z,2µm,24.9s
TREC Trest 17.33 335 *e*P **Pn** **19 42 22.9 -1.5**
TREC *ex* x 19 42 26.6
TREC *e*S **Sn** **19 45 35.9 -0.1**
TREC AMS AMS 19 48 10.0
comp=Z,2µm,24.9s
WTTA Wattenberg 17.38 324⇓*i*/Pn **Pn** **19 42 23.9 -1.1**
comp=Z,161nm,1.3s,SNR=20
WTTA Wattenberg 17.38 324 P **Pn** **19 42 24.4 -0.7**
CKHR Kef el Ahmar 17.39 282 P **Pn** **19 42 19.2 -6.1**
WATA Walderalm 17.46 324⇑*i*/Pn **Pn** **19 42 24.7 -1.3**
comp=Z,125nm,0.8s,SNR=16
SET Setif 17.49 283 P **Pn** **19 42 20.0 -6.4**
GEC2 GERESS Array S 17.64 331 *e*P **Pn** **19 42 25.7 -2.5**
comp=Z,148nm,1.2s
GEC2 *e*S **Sn** **19 45 47.0 +3.5**
GEC2 GERESS Array S 17.64 331 *e*P **Pn** **19 42 25.7 -2.5**
GEC2 *e*S **Sn** **19 45 47.0 +3.5**
GEC2 pmax pmax
comp=Z,148nm,1.2s
GEC2 GERESS Array S 17.64 331 *e*P **Pn** **19 42 25.7 -2.5**
comp=Z,148nm,1.2s
GEC2 *e*S **Sn** **19 45 47.0 +3.5**
FETA Feichten 17.67 322⇓*i*/Pn **Pn** **19 42 25.9 -2.7**
comp=Z,112nm,0.9s,SNR=152
MOTA Moosalm 17.70 323⇑*i*/Pn **Pn** **19 42 26.7 -2.2**
comp=Z,189nm,1.0s,SNR=47
MON Monaco 17.76 309 P **Pn** **19 42 30.0 +0.2**
MON Monaco 17.76 309 P **Pn** **19 42 30.0 +0.2**
SAOF Saorge 17.79 310 *e*P **Pn** **19 42 29.3 -0.9**
SAOF Saorge 17.79 310 *e*P **Pn** **19 42 29.3 -0.9**
REVF Revere 17.80 309 *e*P **Pn** **19 42 29.0 -1.3**
REVF Revere 17.80 309 *e*P **Pn** **19 42 29.0 -1.3**
SBF Sospel 17.81 309 *e*P **Pn** **19 42 27.4 -3.0**
comp=Z,402nm,1.1s
SBF Sospel 17.81 309 *e*P **Pn** **19 42 27.4 -3.0**
comp=Z,201nm,1.1s
SBF Sospel 17.81 309 *e*P **Pn** **19 42 27.4 -3.0**
SBF pmax pmax
comp=Z,201nm,1.1s
SBF Sospel 17.81 309 *e*P **Pn** **19 42 27.4 -3.0**
comp=Z,201nm,1.1s
AUTN L'Aution 17.88 309 *e*P **Pn** **19 42 30.9 -0.3**
AUTN L'Aution 17.88 309 *e*P **Pn** **19 42 30.9 -0.3**
KHC Kasperske Hory 17.91 331 *e*P **Pn** **19 42 29.2 -2.4**
comp=Z,174nm,1.3s
KHC Kasperske Hory 17.91 331 *e*P **Pn** **19 42 30.3 -1.3**
KHC *e*S **Sn** **19 45 49.8 -0.4**
KHC MLR MLR
comp=Z,2µm,16.8s
KHC Kasperske Hory 17.91 331 *e*P **Pn** **19 42 30.3 -1.3**
KHC *e*pP pP 19 42 41.9 +0.9
KHC *e*S **Sn** **19 45 49.8 -0.4**
KHC AMS AMS 19 48 50.0
comp=Z,2µm,16.8s
KHC Kasperske Hory 17.91 331 *e*P **Pn** **19 42 29.2 -2.4**
comp=Z,174nm,1.3s
DAVOX Davos/Dischmat 17.96 320 P **Pn** **19 42 30.9 -1.2**
comp=Z,12nm,0.3s,baz=137,slow=11,SNR=93
DAVOX S **Sn** **19 45 43.5 -7.8**
comp=Z,1.7nm,0.3s,baz=302,slow=18,SNR=3.1
DAVOX Davos/Dischmat 17.96 320 P **Pn** **19 42 30.9 -1.3**
DAVOX S **Sn** **19 45 43.5 -7.8**
DPC Dobruska-Polom 17.96 338 P **Pn** **19 42 30.5 -1.7**
DPC Dobruska-Polom 17.96 338 *e*P **Pn** **19 42 30.4 -1.8**
DPC *e*S **Sn** **19 45 54.0 +2.7**
DPC MLR MLR
comp=Z,1µm,25.2s
DPC Dobruska-Polom 17.96 338 *e*P **Pn** **19 42 30.4 -1.8**
DPC *e*pP pP 19 42 40.4 -1.1
DPC *e*S **Sn** **19 45 54.0 +2.7**
DPC AMS AMS 19 48 20.0
comp=Z,1µm,25.2s
DPC Dobruska-Polom 17.96 338 P **Pn** **19 42 30.5 -1.7**
RETA Reutte 17.97 323 *i* Pn **Pn** **19 42 31.6 -0.7**
comp=Z,65nm,0.5s,SNR=68
TOUF Mont Tournerai 18.00 309 *e*P **Pn** **19 42 32.6 -0.1**
TOUF Mont Tournerai 18.00 309 *e*P **Pn** **19 42 32.6 -0.1**
MVIF Mont Vial 18.01 309 *e*P **Pn** **19 42 32.3 -0.5**
MVIF Mont Vial 18.01 309 *e*P **Pn** **19 42 32.3 -0.5**
TUE Stuetta 18.06 319 *e*P **Pn** **19 42 32.4 -0.9**
comp=Z,132nm,0.9s
TUE Stuetta 18.06 319 *e*P **Pn** **19 42 32.4 -1.0**
comp=Z,132nm,0.9s
MIB Mutribah 18.09 98 *e*P **Pn** **19 42 33.0 -0.9**
MIB AMb AMB 19 42 35.9
comp=Z,310nm,0.5s
CALN Calern 18.12 308 *e*P **Pn** **19 42 33.7 -0.5**
CALN Calern 18.12 308 *e*P **Pn** **19 42 33.7 -0.5**
FUR Furstenfeldbru 18.19 325 *e*P **Pn** **19 42 33.5 -1.5**
comp=Z,577nm,1.3s
FUR Furstenfeldbru 18.19 325 *e*P **Pn** **19 42 33.5 -1.5**
FUR pmax pmax
comp=Z,577nm,1.3s
FUR Furstenfeldbru 18.19 325 *e*P **Pn** **19 42 33.5 -1.5**
comp=Z,577nm,1.3s
LMR La Mourre 18.19 307⇑*i*/P **Pn** **19 42 30.1 -5.0**
comp=Z,314nm,1.3s
LMR La Mourre 18.19 307⇑*i*/P **Pn** **19 42 30.1 -5.0**
comp=Z,157nm,1.3s
LMR La Mourre 18.19 307⇑*i*/P **Pn** **19 42 30.1 -5.0**
LMR pmax pmax
comp=Z,157nm,1.3s
LMR La Mourre 18.19 307⇑*i*/P **Pn** **19 42 30.1 -5.0**
comp=Z,157nm,1.3s
FRF La Foret Royal 18.20 307⇑*i*/P **Pn** **19 42 31.2 -3.9**
comp=Z,248nm,1.2s
FRF La Foret Royal 18.20 307⇑*i*/P **Pn** **19 42 31.2 -3.9**
comp=Z,124nm,1.2s
FRF La Foret Royal 18.20 307⇑*i*/P **Pn** **19 42 31.2 -3.9**
FRF pmax pmax
comp=Z,124nm,1.2s
FRF La Foret Royal 18.20 307⇑*i*/P **Pn** **19 42 31.2 -3.9**
comp=Z,124nm,1.2s
UPC Upice 18.20 338 P **Pn** **19 42 33.9 -1.1**
UPC Upice 18.20 338 *e*P **Pn** **19 42 33.8 -1.2**
UPC Upice 18.20 338 P **Pn** **19 42 33.9 -1.1**
WET Wettzell 18.21 330 *e*P **Pn** **19 42 33.0 -2.2**
comp=Z,173nm,1.2s
WET *e*S **Sn** **19 45 58.4 +1.1**
WET Wettzell 18.21 330 *e*P **Pn** **19 42 33.0 -2.2**
WET *e*S **Sn** **19 45 58.4 +1.1**
WET pmax pmax
comp=Z,173nm,1.2s
WET Wettzell 18.21 330 *e*P **Pn** **19 42 33.0 -2.2**
comp=Z,173nm,1.2s
PRU Pruhonice 18.25 334 P **Pn** **19 42 34.0 -1.7**
PRU Pruhonice 18.25 334 *e*P **Pn** **19 42 34.4 -1.3**
PRU *e*S **Sn** **19 45 52.6 -5.6**
PRU smax
comp=N,3.0nm,0.6s
PRU Pruhonice 18.25 334 *e*P **Pn** **19 42 34.4 -1.3**
PRU *e*S **Sn** **19 45 52.6 -5.6**
PRU AMS AMS 19 48 40.0
comp=N,2µm,32.3s
PRU Pruhonice 18.25 334 P **Pn** **19 42 34.0 -1.7**
DAVA Damuels 18.28 321 P **Pn** **19 42 35.5 -0.6**
DAVA Damuels 18.28 321⇓*i* Pn **Pn** **19 42 35.2 -1.0**
comp=N,105nm,0.5s,SNR=118
DAVA Damuels 18.28 321 P **Pn** **19 42 35.5 -0.6**
KSP Ksiaz 18.40 339 *e*P **Pn** **19 42 36.4 -1.2**
comp=N,1µm,1.5s
KSP *e*S **Sn** **19 46 02.5 +0.5**
KSP *e*sS sS 19 46 18.1 -1.9
KSP LMZ 19 48 48.4
comp=N,3µm,29.6s
KSP Ksiaz 18.40 339⇑*e*P **Pn** **19 42 36.2 -1.4**
KSP *e*S **Sn** **19 46 01.6 -0.4**
KSP Ksiaz 18.40 339 P **Pn** **19 42 36.2 -1.4**
UMR Umm Al-Rimmam 18.48 98 *e*P **Pn** **19 42 37.5 -1.3**
UMR AMb AMB 19 42 40.9
comp=Z,807nm,1.6s
SURF Saint Ours 18.49 310 *e*P **Pn** **19 42 39.1 +0.4**
SURF Saint Ours 18.49 310 *e*P **Pn** **19 42 39.1 +0.4**
RDF Al-Radifah 18.56 100 *e*P **Pn** **19 42 38.1 -1.6**
MAK Makhachkala 18.58 55*d*/P **Pn** **19 42 41.3 +1.5**
MAK *e* 19 46 09.1
KBD Kabd 18.59 99 *e*P **Pn** **19 42 38.4 -1.7**
WAR Warsaw 18.63 349 *e*P **Pn** **19 42 39.2 -1.2**
WAR *e*S **Sn** **19 46 09.6 +2.1**
WAR LMZ 19 49 00.3
comp=Z,2µm,31.1s
WAR Warsaw 18.63 349 *e*P **Pn** **19 42 39.2 -1.1**
WAR *e*S **Sn** **19 46 09.6 +2.1**
MBDF Montbardon 18.64 311⇑*i*/P **Pn** **19 42 38.9 -1.5**
comp=Z,703nm,1.0s
MBDF Montbardon 18.64 311⇑*i*/P **Pn** **19 42 38.9 -1.5**
comp=Z,351nm,1.0s
MBDF Montbardon 18.64 311⇑*i*/P **Pn** **19 42 38.9 -1.5**
MBDF pmax pmax
comp=Z,351nm,1.0s
MBDF Montbardon 18.64 311⇑*i*/P **Pn** **19 42 38.9 -1.5**
comp=Z,351nm,1.0s
PVCC Panska Ves 18.69 335 P **Pn** **19 42 38.9 -2.1**
PVCC Panska Ves 18.69 335 *e*P **Pn** **19 42 39.3 -1.7**
PVCC *e*S **Sn** **19 46 08.1 -0.8**
PVCC Panska Ves 18.69 335 *e*P **Pn** **19 42 39.3 -1.7**
PVCC *e*pP pP 19 42 49.9 +0.3
PVCC *e*S **Sn** **19 46 08.1 -0.8**
PVCC AMS AMS 19 48 50.0
PVCC Panska Ves 18.69 335 P **Pn** **19 42 38.9 -2.1**
MAHO Mahon 18.77 295 P **Pn** **19 42 43.3 +1.2**
MAHO Mahon 18.77 295 *i* P **Pn** **19 42 41.4 -0.7**
MAHO *i* S **Sn** **19 46 03.5 -7.5**
HDH Heidenheim-Cha 18.99 325 P **Pn** **19 42 42.9 -1.8**
HDH Heidenheim-Cha 18.99 325 P **Pn** **19 42 42.9 -1.8**
SISB Singen-Schiene 19.02 321 P **Pn** **19 42 44.7 -0.3**
SISB Singen-Schiene 19.02 321 P **Pn** **19 42 44.7 -0.3**
LPG La Plagne 19.02 313 *e*P **Pn** **19 42 42.8 -2.3**
comp=Z,205nm,0.9s
LPG La Plagne 19.02 313 *e*P **Pn** **19 42 42.8 -2.3**
comp=Z,103nm,0.9s
LPG La Plagne 19.02 313 *e*P **Pn** **19 42 42.8 -2.3**
LPG pmax pmax
comp=Z,103nm,0.9s
LPG La Plagne 19.02 313 *e*P **Pn** **19 42 42.8 -2.3**
comp=Z,103nm,0.9s
LPL La Plagne 19.04 313 *e*P **Pn** **19 42 42.7 -2.7**
comp=Z,108nm,0.5s
LPL La Plagne 19.04 313 *e*P **Pn** **19 42 42.7 -2.7**
comp=Z,54nm,0.5s
LPL La Plagne 19.04 313 *e*P **Pn** **19 42 42.7 -2.7**
LPL pmax pmax
comp=Z,54nm,0.5s
LPL La Plagne 19.04 313 *e*P **Pn** **19 42 42.7 -2.7**
comp=Z,54nm,0.5s
SMRF Simiane la Rot 19.07 308⇑*i*/P **Pn** **19 42 44.6 -1.2**
comp=Z,188nm,1.2s
SMRF Simiane la Rot 19.07 308⇑*i*/P **Pn** **19 42 44.6 -1.2**
comp=Z,188nm,1.2s
SMRF Simiane la Rot 19.07 308⇑*i*/P **Pn** **19 42 44.6 -1.2**
comp=Z,94nm,1.2s
GUT Gutenstein 19.18 322 P **Pn** **19 42 45.7 -1.3**
GUT Gutenstein 19.18 322 P **Pn** **19 42 45.7 -1.3**
BRG Berggiesshubel 19.20 335 *e*P **Pn** **19 42 44.8 -2.3**
comp=Z,83nm,1.2s
BRG Berggiesshubel 19.20 335⇓*i*/P **Pn** **19 42 44.8 -2.3**
comp=Z,82nm,1.4s

BRG S Sn 19 46 19.0 -2.1
BRG e 19 50 42.0
comp=Z,26nm,1.9s
BRG
comp=N,765nm,10.8s
BRG
comp=E,2µm,20.5s
BRG
comp=Z,1µm,14.4s
BRG Berggiesshubel 19.20 335 P Pn 19 42 44.9 -2.2
BRG Berggiesshubel 19.20 335 P Pn 19 42 44.9 -2.2
NKC Novy Kostel 19.23 332 P Pn 19 42 45.4 -2.2
NKC Novy Kostel 19.23 332 eP Pn 19 42 45.9 -1.7
NKC eS Sn 19 46 23.2 +1.1
NKC Novy Kostel 19.23 332 eP Pn 19 42 45.9 -1.7
NKC epP pP 19 42 56.6 +1.0
NKC eS Sn 19 46 23.2 +1.1
NKC AMS AMS 19 49 20.0
comp=Z,2µm,30.8s
NKC Novy Kostel 19.23 332 P Pn 19 42 45.4 -2.2
GDM Grand'Maison 19.27 311 eP Pn 19 42 47.3 -0.8
GDM Grand'Maison 19.27 311 eP Pn 19 42 47.3 -0.8
VORD Divnogorie 19.28 25 eP Pn 19 42 47.8 -0.3
VORD eS Sn 19 46 18.0 -5.1
VORD pmax pmax
comp=N,240nm,1.2s
VORD pmax pmax
comp=Z,120nm,1.2s
VORD pmax pmax
comp=E,140nm,0.6s
VORD smax
comp=E,370nm,2.1s
VORD smax
comp=Z,220nm,2.1s
VORD smax
comp=N,130nm,1.0s
ORIF Oris-en-Rattie 19.29 310⇑ *i*P Pn 19 42 46.9 -1.4
comp=N,248nm,1.0s
ORIF *e*MLR MLR
comp=Z,4µm,22.8s
ORIF Oris-en-Rattie 19.29 310⇑ *i*P Pn 19 42 46.9 -1.4
comp=Z,124nm,1.0s
ORIF Oris-en-Rattie 19.29 310⇑ *i*P Pn 19 42 46.9 -1.4
ORIF pmax pmax
comp=Z,124nm,1.0s
ORIF Oris-en-Rattie 19.29 310⇑ *i*P Pn 19 42 46.9 -1.4
comp=Z,124nm,1.0s
SLE Schleitheim 19.31 321 P Pn 19 42 46.6 -2.0
BUCH Bad Urach 19.32 323 P Pn 19 42 47.3 -1.3
BUCH Bad Urach 19.32 323 P Pn 19 42 47.3 -1.3
GRFO Grafenberg 19.33 329 P Pn 19 42 47.3 -1.4
TANN Tannenbergstha 19.37 332 eP Pn 19 42 47.1 -2.2
comp=Z,202nm,1.1s
TANN eS Sn 19 46 33.6 +8.2
TANN Tannenbergstha 19.37 332 P Pn 19 42 47.9 -1.4
TANN Tannenbergstha 19.37 332 P Pn 19 42 47.9 -1.4
SPAK Spaichingen-Ko 19.37 322 eP Pn 19 42 47.7 -1.6
SPAK Spaichingen-Ko 19.37 322 eP Pn 19 42 47.7 -1.6
GUNZ Gunzen 19.38 332 eP Pn 19 42 47.2 -2.2
comp=Z,292nm,1.2s
ABA Alger-Bouzarea 19.40 285 P Pn 19 42 50.0 +0.3
ABA Alger-Bouzarea 19.40 285 P Pn 19 42 50.0 +0.3
VSR Storozhevoye 19.44 24 eP Pn 19 42 49.6 -0.5
VSR eS Sn 19 46 19.8 -7.3
VSR pmax pmax
comp=N,10.0nm,0.4s
VSR pmax pmax
comp=E,8.0nm,0.4s
VSR pmax pmax
comp=Z,30nm,0.4s
VSR smax
comp=N,180nm,1.6s
VSR smax
comp=E,210nm,1.6s
VSR smax
comp=Z,130nm,1.6s
VSR MLR MLR
comp=N,310nm,14.0s
VSR MLR MLR
comp=E,430nm,14.0s
VSR MLR MLR
comp=Z,800nm,14.0s
WERD Werda 19.46 332 eP Pn 19 42 48.3 -2.0
comp=Z,226nm,1.1s
EMHD Djebel Mahouad 19.46 283 P Pn 19 42 53.0 +2.5
OCF Saint Nazaire 19.50 309 eP Pn 19 42 50.2 -0.7
OCF Saint Nazaire 19.50 309 eP Pn 19 42 50.2 -0.7
OG26 St.-Nazaire-De 19.50 309 eP Pn 19 42 50.2 -0.7
OG26 St.-Nazaire-De 19.50 309 eP Pn 19 42 50.2 -0.7
STU Stuttgart 19.61 324 eP Pn 19 42 50.3 -1.8
comp=Z,136nm,1.0s
STU Stuttgart 19.61 324 eP Pn 19 42 50.7 -1.4
comp=Z,114nm,0.9s
STU Stuttgart 19.61 324 eP Pn 19 42 50.7 -1.4
STU pmax pmax
comp=Z,114nm,0.9s
STU Stuttgart 19.61 324 eP Pn 19 42 50.7 -1.4
comp=Z,114nm,0.9s
FELD Feldberg im Sc 19.64 320 eP Pn 19 42 50.3 -2.2
FELD Feldberg im Sc 19.64 320 eP Pn 19 42 50.3 -2.2
BBS Basel-Blauen 19.66 319 eP Pn 19 42 50.8 -1.9
BBS Basel-Blauen 19.66 319 eP Pn 19 42 50.8 -1.9
KIZ Kirchzarten 19.73 320 P Pn 19 42 51.7 -1.9
LBG Lerchenberg 19.73 323 P Pn 19 42 52.4 -1.2
LBG Lerchenberg 19.73 323 P Pn 19 42 52.4 -1.2
BFO Black Forest 19.75 322 P Pn 19 42 52.5 -1.3
comp=Z,1µm,1.1s,SNR=50
BFO Black Forest 19.75 322 eP Pn 19 42 51.6 -2.2
comp=Z,305nm,1.1s
BFO Black Forest 19.75 322 eP Pn 19 42 51.6 -2.2
BFO pmax pmax
comp=Z,305nm,1.1s
BFO Black Forest 19.75 322 eP Pn 19 42 51.6 -2.2
comp=Z,305nm,1.1s
SIND Sindeldorf 19.81 326 P Pn 19 42 52.7 -1.7
SIND Sindeldorf 19.81 326 P Pn 19 42 52.7 -1.7
ETOS Mallorca 19.84 294 P Pn 19 42 53.2 -1.8
comp=Z,201nm,1.5s
ETOS Mallorca 19.84 294 P Pn 19 42 53.2 -1.8
comp=Z,201nm,1.5s
MOX Moxa 19.89 331 eP Pn 19 42 54.2 -1.2
comp=Z,325nm,1.1s
MOX eS Sn 19 46 44.9 +7.1
MOX
comp=Z,1µm,22.0s
MOX Moxa 19.89 331 eP Pn 19 42 53.1 -2.3
comp=Z,271nm,0.9s
MOX Moxa 19.89 331 eP Pn 19 42 54.2 -1.2
comp=Z,325nm,1.1s
MOX eS Sn 19 46 44.9 +7.1
MOX Moxa 19.89 331 eP Pn 19 42 54.2 -1.2
comp=Z,325nm,1.1s
CLL Collm 19.89 334⇑ *i*P Pn 19 42 52.6 -2.8
comp=Z,128nm,0.7s
CLL *e* 19 42 59.0
CLL eS Sn 19 46 36.0 -1.8
CLL Collm 19.89 334⇑ *i*P Pn 19 42 52.6 -2.8
CLL eS Sn 19 46 36.0 -1.8
CLL pmax pmax
comp=Z,128nm,0.7s
CLL Collm 19.89 334⇑ *i*P Pn 19 42 52.6 -2.8
comp=Z,128nm,0.7s
CLL eP|p 19 42 53.0
CLL *i* pP pP 19 42 58.8 -3.9
comp=Z,225nm,1.1s
CLL eS Sn 19 46 36.0 -1.8
CLL eS|p 19 46 40.0
CLL eS|p 19 46 40.0
CLL eS|p 19 46 40.0
CLL Lmax 19 53 00.0
CLL Collm 19.89 334⇑ *i*P Pn 19 42 52.6 -2.8
LOMF Lomont 19.97 318 eP Pn 19 42 54.2 -2.2
LOMF Lomont 19.97 318 eP Pn 19 42 54.2 -2.2
CABF La Chapelle 19.99 315⇑ *i*P Pn 19 42 53.7 -2.9
comp=Z,218nm,0.6s
CABF La Chapelle 19.99 315⇑ *i*P Pn 19 42 53.7 -2.9
comp=Z,109nm,0.6s
CABF La Chapelle 19.99 315⇑ *i*P Pn 19 42 53.7 -2.9
CABF pmax pmax
comp=Z,109nm,0.6s
CABF La Chapelle 19.99 315⇑ *i*P Pn 19 42 53.7 -2.9
comp=Z,109nm,0.6s
LIBD Limburg 20.02 320 eP P 19 42 54.9 -0.2
LIBD Limburg 20.02 320 eP P 19 42 54.9 -0.2
VIVF Saint-Julien-l 20.03 309⇑ *i*P P 19 42 53.6 -1.6
comp=Z,318nm,1.2s
VIVF Saint-Julien-l 20.03 309⇑ *i*P P 19 42 53.6 -1.6
comp=Z,159nm,1.2s
VIVF Saint-Julien-l 20.03 309⇑ *i*P P 19 42 53.6 -1.6
VIVF pmax pmax
comp=Z,159nm,1.2s
VIVF Saint-Julien-l 20.03 309⇑ *i*P P 19 42 53.6 -1.6
comp=Z,159nm,1.2s
MOF Molkenrain 20.09 319 eP P 19 42 55.7 -0.1
MOF Molkenrain 20.09 319 eP P 19 42 55.7 -0.1
SUW Suwalki 20.11 354 eP P 19 42 54.8 -1.2
comp=Z,1µm,1.0s
SUW eS S 19 46 34.6 -5.2
SUW LMZ 19 50 53.8
comp=Z,3µm,26.5s
SUW Suwalki 20.11 354 eP P 19 42 55.1 -0.8
comp=Z,959nm,1.1s
SUW Suwalki 20.11 354 eP P 19 42 54.8 -1.2
SUW eS S 19 46 34.6 -5.3
SUW pmax pmax
comp=Z,1µm,0.0s
SUW MLR MLR
comp=Z,3µm,26.5s,MS4.5
SUW Suwalki 20.11 354 eP P 19 42 55.2 -0.8
comp=Z,959nm,1.1s
HINF Hinteralfeld 20.22 319⇑ *i*P P 19 42 56.7 -0.6
comp=Z,202nm,0.8s
HINF Hinteralfeld 20.22 319⇑ *i*P P 19 42 56.7 -0.6
comp=Z,101nm,0.8s
HINF Hinteralfeld 20.22 319⇑ *i*P P 19 42 56.7 -0.6
HINF pmax pmax
comp=Z,101nm,0.8s
HINF Hinteralfeld 20.22 319⇑ *i*P P 19 42 56.7 -0.6
comp=Z,101nm,0.8s
VRHR Novokhopersk 20.25 28 eP P 19 42 59.3 +1.8
VRHR *e* 19 43 13.3
VRHR eS S 19 46 40.8 -1.8
VRHR pmax pmax
comp=Z,100nm,0.7s
VRHR pmax pmax
comp=N,20nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.4s
VRHR pmax pmax
comp=N,2µm,1.5s
VRHR pmax pmax
comp=E,910nm,1.5s
VRHR pmax pmax
comp=Z,730nm,1.5s
VRHR smax
comp=N,290nm,1.4s
VRHR smax
comp=Z,40nm,1.4s
VRHR smax
comp=E,60nm,0.7s
LASF Ste Croix 20.25 306⇑ *i*P P 19 42 56.8 -0.8
comp=E,96nm,0.8s
LASF Ste Croix 20.25 306⇑ *i*P P 19 42 56.8 -0.8
comp=E,48nm,0.8s
SSB Saint Sauveur 20.30 310 eP P 19 42 57.8 -0.3
SSB Saint Sauveur 20.30 310 eP P 19 42 56.2 -1.9
comp=E,60nm,0.8s
SSB Saint Sauveur 20.30 310 eP P 19 42 56.2 -1.9
SSB pmax pmax
comp=Z,60nm,0.8s
SSB Saint Sauveur 20.30 310 eP P 19 42 57.8 -0.3
ECH Echery 20.30 320 eP P 19 42 57.9 -0.2
ECH Echery 20.30 320 eP P 19 42 57.9 -0.2
GKP Gorka Klasztor 20.35 344 eP P 19 42 57.6 -1.0
GKP epP 19 43 05.0
GKP eS S 19 46 46.9 +2.4
GKP esS sS 19 46 56.3 -2.8
GKP LMZ 19 50 32.1
comp=Z,2µm,26.2s
GKP Gorka Klasztor 20.35 344 P P 19 42 57.8 -0.8
GKP Gorka Klasztor 20.35 344 P P 19 42 57.8 -0.8
CDF Champ du Feu 20.35 321⇑ *i*P P 19 42 58.6 -0.1
comp=Z,994nm,1.1s
CDF Champ du Feu 20.35 321⇑ *i*P P 19 42 58.6 -0.1
comp=Z,497nm,1.1s
CDF Champ du Feu 20.35 321⇑ *i*P P 19 42 58.6 -0.1
CDF pmax pmax
comp=Z,497nm,1.1s
CDF Champ du Feu 20.35 321⇑ *i*P P 19 42 58.6 -0.1
comp=Z,497nm,1.1s
TOD Tromm 20.36 325 eP P 19 42 58.8 0.0
TOD Tromm 20.36 325 eP P 19 42 58.8 0.0
EJON La Jonquera 20.39 301 P P 19 42 58.5 -0.6
comp=Z,260nm,1.2s
EJON La Jonquera 20.39 301 P P 19 42 58.5 -0.6
comp=Z,260nm,1.2s
LANF Langenberg 20.44 323 eP P 19 43 00.1 +0.5
LANF Langenberg 20.44 323 eP P 19 43 00.1 +0.5
MNK Minsk 20.47 2 eP P 19 42 59.0 -0.9
MNK pmax pmax
comp=Z,840nm,1.0s
MICGM Minsk 20.47 2 eP P 19 42 59.0 -0.9
KTD Kalmit 20.52 324 eP P 19 43 00.7 +0.2
KTD Kalmit 20.52 324 eP P 19 43 00.7 +0.2
CFON Fontmartina 20.53 299 P P 19 43 00.1 -0.6
comp=Z,38nm,0.5s
CFON Fontmartina 20.53 299 P P 19 43 00.1 -0.6
comp=Z,38nm,0.5s
RUE Ruedersdorf 20.61 337 eP P 19 42 59.9 -1.4
comp=Z,516nm,1.2s
RUE Ruedersdorf 20.61 337 eP P 19 42 59.8 -1.6
comp=Z,498nm,1.2s
RUE Ruedersdorf 20.61 337 eP P 19 42 59.8 -1.6
comp=Z,498nm,1.2s
HAU Haudompre 20.61 319⇑ *i*P P 19 43 01.3 -0.2
comp=Z,307nm,0.7s
HAU *e*MLR MLR
comp=Z,2µm,21.8s,MS4.2
HAU Haudompre 20.61 319⇑ *i*P P 19 43 01.3 -0.2
comp=Z,153nm,0.7s
HAU LR LR
comp=Z,2µm,21.8s,MS4.5
HAU Haudompre 20.61 319⇑ *i*P P 19 43 01.3 -0.2
HAU pmax pmax
comp=Z,153nm,0.7s
HAU MLR MLR
comp=Z,2µm,21.8s,MS4.5
HAU Haudompre 20.61 319⇑ *i*P P 19 43 01.3 -0.2
comp=Z,153nm,0.7s
EBNR Beni Rached 20.61 283 P P 19 43 02.0 +0.4
EBNR Beni Rached 20.61 283 P P 19 43 02.0 +0.4
FILF Fillols 20.65 301 eP P 19 43 03.0 +1.0
FILF Fillols 20.65 301 eP P 19 43 03.0 +1.0
UBBA Unterbreizbach 20.69 329 eP P 19 43 01.5 -0.8
comp=Z,223nm,1.6s
ECHA Ech Chlef 20.75 283 P P 19 43 11.0 +7.9
LRDF Laroque-de-Fa 20.78 302 eP P 19 43 03.1 -0.2
LRDF Laroque-de-Fa 20.78 302 eP P 19 43 03.1 -0.2
ETRT Tiaret 20.84 281 P P 19 43 05.5 +1.5
ETRT Tiaret 20.84 281 P P 19 43 05.5 +1.5
NACGM Naroch 20.86 0 eP P 19 43 00.0 -4.0
EIBI Ibiza 20.88 291 P P 19 43 04.6 +0.2
comp=Z,77nm,1.0s
EIBI Ibiza 20.88 291 P P 19 43 04.6 +0.2
comp=Z,77nm,1.0s
THEF They Montfort 20.94 319 eP P 19 43 05.5 +0.5
THEF They Montfort 20.94 319 eP P 19 43 05.5 +0.5
EANR 'Ain N'Sour 20.97 282 P P 19 43 06.4 +0.9
EANR 'Ain N'Sour 20.97 282 P P 19 43 06.4 +0.9
VALF Valcebollere 21.00 301 eP P 19 43 06.4 +0.7
VALF Valcebollere 21.00 301 eP P 19 43 06.4 +0.7
CARF Carcanieres 21.02 302 eP P 19 43 05.4 -0.5
CARF Carcanieres 21.02 302 eP P 19 43 05.4 -0.5
CLLI Llivia 21.05 301 P P 19 43 06.1 -0.2
CLLI Llivia 21.05 301 P P 19 43 06.1 -0.1
LBL Lubilhac 21.11 309 eP P 19 43 07.8 +1.0
LBL Lubilhac 21.11 309 eP P 19 43 07.8 +1.0
MTLF Montolieu 21.12 303⇑ *i*P P 19 43 06.5 -0.5
comp=Z,249nm,1.1s,mb5.2
MTLF Montolieu 21.12 303⇑ *i*P P 19 43 06.5 -0.5
comp=Z,124nm,1.1s,mb5.2
MTLF Montolieu 21.12 303⇑ *i*P P 19 43 06.5 -0.5
MTLF pmax pmax
comp=Z,124nm,1.1s,mb5.2
MTLF Montolieu 21.12 303⇑ *i*P P 19 43 06.5 -0.5
comp=Z,124nm,1.1s,mb5.2
ABH Alteburg 21.15 324 eP P 19 43 07.0 -0.3
ABH Alteburg 21.15 324 eP P 19 43 07.0 -0.3
PLDF La Plantade 21.18 311 eP P 19 43 08.0 +0.4
PLDF La Plantade 21.18 311 eP P 19 43 08.0 +0.4
EMIR Miracle 21.23 299 P P 19 43 08.1 0.0
comp=Z,284nm,0.8s,mb5.7
EMIR Miracle 21.23 299 P P 19 43 08.1 -0.1
comp=Z,284nm,0.8s,mb5.7
RUP Ruppelstein 21.27 323 eP P 19 43 08.9 +0.3
RUP Ruppelstein 21.27 323 eP P 19 43 08.9 +0.3
CLZ Clausthal 21.31 331 eP P 19 43 07.7 -1.3
comp=Z,339nm,1.1s,mb5.6
CLZ Clausthal 21.31 331 eP P 19 43 07.7 -1.3
CLZ pmax pmax
comp=Z,339nm,1.1s,mb5.6
CLZ Clausthal 21.31 331 eP P 19 43 07.7 -1.3
comp=Z,339nm,1.1s,mb5.6
SMF Signal de Mont 21.35 313⇑ *i*P P 19 43 08.4 -1.0
comp=Z,259nm,0.9s,mb5.2
SMF Signal de Mont 21.35 313⇑ *i*P P 19 43 08.4 -1.0
comp=Z,130nm,0.9s,mb5.3
SMF Signal de Mont 21.35 313⇑ *i*P P 19 43 08.4 -1.0
SMF pmax pmax
comp=Z,130nm,0.9s,mb5.3
SMF Signal de Mont 21.35 313⇑ *i*P P 19 43 08.4 -1.0
comp=Z,130nm,0.9s,mb5.2
CFF Clermont-Ferra 21.41 310 P P 19 43 11.1 +1.0
EPOB Poblet 21.43 297 P P 19 43 09.9 -0.5
comp=Z,217nm,0.7s,mb5.6
EPOB Poblet 21.43 297 P P 19 43 09.9 -0.5
comp=Z,217nm,0.7s,mb5.6
PYM Petit Puy Mans 21.47 310 eP P 19 43 11.0 +0.2
PYM Petit Puy Mans 21.47 310 eP P 19 43 11.0 +0.2
AGO Saint Agoulin 21.52 311 eP P 19 43 11.1 -0.2
AGO Saint Agoulin 21.52 311 eP P 19 43 11.1 -0.2
MEZF Maizieres J'vi 21.61 318⇑ *i*P P 19 43 12.1 -0.1
comp=Z,2µm,1.2s,mb6.0,baz=128
MEZF Maizieres J'vi 21.61 318⇑ *i*P P 19 43 12.1 -0.1
comp=Z,2µm,1.2s,mb6.3
MEZF Maizieres J'vi 21.61 318⇑ *i*P P 19 43 12.1 -0.1
comp=Z,818nm,1.2s,mb6.0
CSOR Sort 21.62 300 P P 19 43 12.8 +0.4
comp=Z,340nm,1.3s,mb5.6
CSOR Sort 21.62 300 P P 19 43 12.9 +0.5
comp=Z,340nm,1.3s,mb5.6
LOR Lormes 21.64 314⇑ *i*P P 19 43 11.8 -0.7
comp=Z,302nm,1.0s,mb5.4,baz=116
LOR *e*MLR MLR
comp=Z,2µm,20.8s,MS4.2
LOR Lormes 21.64 314⇑ *i*P P 19 43 11.8 -0.7
comp=Z,151nm,1.0s,mb5.4
LOR LR LR
comp=Z,2µm,20.8s,MS4.5
LOR Lormes 21.64 314⇑ *i*P P 19 43 11.8 -0.7
LOR pmax pmax
comp=Z,151nm,1.0s,mb5.4
LOR MLR MLR
comp=Z,2µm,20.8s,MS4.5
LOR Lormes 21.64 314⇑ *i*P P 19 43 11.8 -0.7
comp=Z,151nm,1.0s,mb5.4
SALF Salau 21.68 301 eP P 19 43 14.3 +1.3
SALF Salau 21.68 301 eP P 19 43 14.3 +1.3
WLF Walferdange 21.71 322 P P 19 43 13.5 +0.2
comp=Z,148nm,1.0s,mb5.4
WLF Walferdange 21.71 322 eP P 19 43 13.5 +0.2
comp=Z,258nm,0.9s,mb5.7
WLF Walferdange 21.71 322 eP P 19 43 13.5 +0.2
comp=Z,225nm,0.8s,mb5.7
WLF Walferdange 21.71 322 eP P 19 43 13.5 +0.2
WLF pmax pmax
comp=Z,225nm,0.8s,mb5.7
WLF Walferdange 21.71 322 eP P 19 43 13.5 +0.2
comp=Z,225nm,0.8s,mb5.7
AVF Avril sur Loir 21.72 313⇑ *i*P P 19 43 12.4 -1.0
comp=Z,130nm,0.8s,mb5.1
AVF Avril sur Loir 21.72 313⇑ *i*P P 19 43 12.4 -1.0
comp=Z,65nm,0.8s,mb5.1
AVF Avril sur Loir 21.72 313⇑ *i*P P 19 43 12.4 -1.0
AVF pmax pmax
comp=Z,65nm,0.8s,mb5.1
AVF Avril sur Loir 21.72 313⇑ *i*P P 19 43 12.4 -1.0
comp=Z,65nm,0.8s,mb5.1
SSF Saint Saulge 21.75 314⇑ *i*P P 19 43 13.2 -0.5
comp=Z,592nm,1.2s,mb5.6
SSF Saint Saulge 21.75 314⇑ *i*P P 19 43 13.2 -0.5
comp=Z,296nm,1.2s,mb5.6
SSF Saint Saulge 21.75 314⇑ *i*P P 19 43 13.2 -0.5
SSF pmax pmax
comp=Z,296nm,1.2s,mb5.6
SSF Saint Saulge 21.75 314⇑ *i*P P 19 43 13.2 -0.5
comp=Z,296nm,1.2s,mb5.6
CAF Calviac 21.76 307⇑ *i*P P 19 43 13.4 -0.5
comp=Z,272nm,1.0s,mb5.3
CAF Calviac 21.76 307⇑ *i*P P 19 43 13.4 -0.5
comp=Z,136nm,1.0s,mb5.3
CAF Calviac 21.76 307⇑ *i*P P 19 43 13.4 -0.5
CAF pmax pmax
comp=Z,136nm,1.0s,mb5.3
CAF Calviac 21.76 307⇑ *i*P P 19 43 13.4 -0.5
comp=Z,136nm,1.0s,mb5.3
MLS Moulis 21.80 302 eP P 19 43 13.7 -0.6
MLS Moulis 21.80 302 eP P 19 43 13.7 -0.6
ERTA Horta de San J 21.91 296 P P 19 43 15.1 -0.4
comp=Z,231nm,1.0s,mb5.6
ERTA Horta de San J 21.91 296 P P 19 43 15.1 -0.4
comp=Z,231nm,1.0s,mb5.6
BGF Bois d'Agland 21.92 312⇑ *i*P P 19 43 15.2 -0.4
comp=Z,732nm,0.9s,mb5.8
BGF Bois d'Agland 21.92 312⇑ *i*P P 19 43 15.2 -0.4
comp=Z,366nm,0.9s,mb5.8
BGF Bois d'Agland 21.92 312⇑ *i*P P 19 43 15.2 -0.4
BGF pmax pmax
comp=Z,366nm,0.9s,mb5.8
BGF Bois d'Agland 21.92 312⇑ *i*P P 19 43 15.2 -0.4
comp=Z,366nm,0.9s,mb5.8
MELF Melles 22.01 301 eP P 19 43 18.6 +2.0
MELF Melles 22.01 301 eP P 19 43 18.6 +2.0
EBEN Beniarda 22.07 290 P P 19 43 17.3 +0.1
comp=Z,69nm,1.0s,mb5.0
EBEN Beniarda 22.07 290 P P 19 43 17.3 +0.1
comp=Z,69nm,1.0s,mb5.0
OBN Obninsk 22.19 15 P P 19 43 17.7 -0.6
comp=Z,1µm,0.5s,mb6.6,SNR=8.0
OBN Obninsk 22.19 15 eP P 19 43 17.4 -0.9
comp=Z,236nm,1.2s,mb5.5
OBN Obninsk 22.19 15⇑ eP P 19 43 16.8 -1.5
OBN *e* 19 43 42.7
OBN *i* S S 19 47 17.0 -3.6
OBN pmax pmax
comp=Z,106nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,1µm,17.0s,MS4.4
OBN Obninsk 22.19 15 eP P 19 43 17.4 -0.9
comp=Z,236nm,1.2s,mb5.5
TCF Toulx Ste Croi 22.20 311⇑ *i*P P 19 43 18.2 -0.4
comp=Z,333nm,1.0s,mb5.4
TCF Toulx Ste Croi 22.20 311⇑ *i*P P 19 43 18.2 -0.4
comp=Z,166nm,1.0s,mb5.4
TCF Toulx Ste Croi 22.20 311⇑ *i*P P 19 43 18.2 -0.4
TCF pmax pmax
comp=Z,166nm,1.0s,mb5.4
TCF Toulx Ste Croi 22.20 311⇑ *i*P P 19 43 18.2 -0.4
comp=Z,166nm,1.0s,mb5.4
RJF Les Rejaudoux 22.26 308⇑ *i*P P 19 43 18.9 -0.3
comp=Z,181nm,0.7s,mb5.3
RJF *e*MLR MLR
comp=Z,1µm,20.5s,MS4.0
RJF Les Rejaudoux 22.26 308⇑ *i*P P 19 43 18.9 -0.3
comp=Z,91nm,0.7s,mb5.3
RJF LR LR
comp=Z,1µm,20.5s,MS4.3
RJF Les Rejaudoux 22.26 308⇑ *i*P P 19 43 18.9 -0.3
RJF pmax pmax
comp=Z,91nm,0.7s,mb5.3
RJF MLR MLR
comp=Z,1µm,20.5s,MS4.3
RJF Les Rejaudoux 22.26 308⇑ *i*P P 19 43 18.9 -0.3
comp=Z,91nm,0.7s,mb5.3
RESF Ens 22.30 301 eP P 19 43 21.4 +1.8
RESF Ens 22.30 301 eP P 19 43 21.4 +1.8
BUG Bochum--Univer 22.34 327 eP P 19 43 19.6 -0.3
comp=Z,386nm,1.2s,mb5.7
BUG Bochum--Univer 22.34 327 P P 19 43 19.6 -0.3
EPF Esparros 22.35 301⇑ *i*P P 19 43 18.3 -1.9
comp=Z,57nm,1.0s,mb4.7
EPF Esparros 22.35 301⇑ *i*P P 19 43 18.3 -1.9
comp=Z,29nm,1.0s,mb4.7
EPF Esparros 22.35 301⇑ *i*P P 19 43 18.3 -1.9
EPF pmax pmax
comp=Z,29nm,1.0s,mb4.7
EPF Esparros 22.35 301⇑ *i*P P 19 43 18.3 -1.9

comp=Z,29nm,1.0s,mb4.7
HYF Humbligny 22.37 313 *e*P **P 19 43 20.2 -0.1**
HYF Humbligny 22.37 313 *e*P **P 19 43 20.2 -0.1**
MEM Membach 22.38 324 P **P 19 43 20.9 +0.5**
comp=Z,212nm,1.2s,mb5.5
MEM SCP ScP 19 50 50.3 +1.0
MEM Membach 22.38 324 P **P 19 43 20.7 +0.3**
MEM Membach 22.38 324 P **P 19 43 20.7 +0.3**
EBIE Bielsa 22.41 300 P **P 19 43 20.6 -0.2**
comp=Z,200nm,1.3s,mb5.4
EBIE Bielsa 22.41 300 P **P 19 43 20.6 -0.2**
comp=Z,200nm,1.3s,mb5.4
EMOS Mosqueruela 22.43 294 P **P 19 43 21.4 +0.4**
comp=Z,114nm,1.7s,mb5.0
EMOS Mosqueruela 22.43 294 P **P 19 43 21.4 +0.4**
comp=Z,114nm,1.7s,mb5.0
HGN Heimansgroeve 22.51 324 P **P 19 43 22.3 +0.5**
HGN Heimansgroeve 22.51 324 P **P 19 43 22.3 +0.5**
VIEF Viey 22.54 301 *e*P **P 19 43 23.0 +0.8**
VIEF Viey 22.54 301 *e*P **P 19 43 23.0 +0.8**
LABF Labassere 22.55 301 *e*P **P 19 43 23.0 +0.8**
LABF Labassere 22.55 301 *e*P **P 19 43 23.0 +0.8**
BSD Bornholm Skovb 22.60 342 P **P 19 43 20.0 -2.6**
BSD P 19 43 28.6
BSD Bornholm Skovb 22.60 342 *i*P **P 19 43 22.7 +0.1**
BSD pmax pmax
comp=Z,76nm,1.0s,mb5.1
BSD MLR MLR
comp=Z,820nm,18.0s,MS4.2
BSD Bornholm Skovb 22.60 342 *i*P **P 19 43 22.7 +0.1**
comp=Z,76nm,1.0s,mb5.1
BSD
comp=Z,820nm,18.0s
BCLA Clavier 22.61 323 P **P 19 43 22.9 +0.1**
comp=Z,167nm,1.3s,mb5.3
BCLA SCP ScP 19 50 50.9 +1.0
CART Cartagena 22.64 287 *e*P **P 19 43 23.0 -0.2**
comp=Z,109nm,0.9s,mb5.3
CART Cartagena 22.64 287 *e*P **P 19 43 21.7 -1.6**
CART *i*S **S 19 47 25.8 -3.5**
ESAC San Caprasio 22.64 298 P **P 19 43 22.6 -0.7**
comp=Z,192nm,1.0s,mb5.5
ESAC San Caprasio 22.64 298 P **P 19 43 22.6 -0.7**
comp=Z,192nm,1.0s,mb5.5
LFF La Frestale 22.64 306⇑*i*P **P 19 43 23.1 -0.2**
comp=Z,375nm,1.1s,mb5.4
LFF La Frestale 22.64 306⇑*i*P **P 19 43 23.1 -0.2**
comp=Z,187nm,1.1s,mb5.4
LFF La Frestale 22.64 306⇑*i*P **P 19 43 23.1 -0.2**
LFF pmax pmax
comp=Z,187nm,1.1s,mb5.4
LFF La Frestale 22.64 306⇑*i*P **P 19 43 23.1 -0.2**
comp=Z,187nm,1.1s,mb5.4
GIVF Givet 22.66 322⇑*i*P **P 19 43 22.6 -0.7**
comp=Z,303nm,0.9s,mb5.4
GIVF Givet 22.66 322⇑*i*P **P 19 43 22.6 -0.7**
comp=Z,152nm,0.9s,mb5.4
GIVF Givet 22.66 322⇑*i*P **P 19 43 22.6 -0.7**
GIVF pmax pmax
comp=Z,152nm,0.9s,mb5.4
GIVF Givet 22.66 322⇑*i*P **P 19 43 22.6 -0.7**
comp=Z,152nm,0.9s,mb5.4
ECHE Chera 22.72 292 P **P 19 43 24.6 +0.5**
comp=Z,108nm,0.9s,mb5.3
ECHE Chera 22.72 292 P **P 19 43 24.6 +0.5**
ECHE pmax pmax
comp=Z,108nm,0.9s,mb5.3
ECHE Chera 22.72 292 P **P 19 43 24.6 +0.5**
comp=Z,108nm,0.9s,mb5.3
IBBN Ibbenburen 22.73 329 *e*P **P 19 43 23.5 -0.6**
comp=Z,268nm,1.2s,mb5.5
IBBN Ibbenburen 22.73 329 P **P 19 43 23.5 -0.6**
DOU Dourbes 22.77 321 P **P 19 43 24.0 -0.6**
comp=Z,86nm,1.3s,mb5.0
DOU SCP ScP 19 50 51.6 +1.3
EMUR La Murta 22.83 288 P **P 19 43 25.3 0.0**
comp=Z,46nm,1.0s,mb4.9
EMUR La Murta 22.83 288 P **P 19 43 25.3 0.0**
comp=Z,46nm,1.0s,mb4.9
REYF Montagne du Re 22.88 301 *e*P **P 19 43 27.2 +1.4**
REYF Montagne du Re 22.88 301 *e*P **P 19 43 27.2 +1.4**
WTSB Winterswijk 22.91 327 P **P 19 43 25.5 -0.5**
WTSB Winterswijk 22.91 327 P **P 19 43 25.5 -0.5**
BAIF Baives 22.95 321⇑*i*P **P 19 43 25.7 -0.8**
comp=Z,271nm,0.7s,mb5.5
BAIF Baives 22.95 321⇑*i*P **P 19 43 25.7 -0.8**
comp=Z,136nm,0.6s,mb5.5
BAIF Baives 22.95 321⇑*i*P **P 19 43 25.7 -0.8**
BAIF pmax pmax
comp=Z,136nm,0.6s,mb5.6
BAIF Baives 22.95 321⇑*i*P **P 19 43 25.7 -0.8**
comp=Z,136nm,0.7s,mb5.5
ETSF Etsaut 22.96 301⇑*i*P **P 19 43 25.9 -0.7**
comp=Z,58nm,0.7s,mb4.8
ETSF Etsaut 22.96 301⇑*i*P **P 19 43 25.9 -0.7**
comp=Z,29nm,0.7s,mb4.8
ETSF Etsaut 22.96 301⇑*i*P **P 19 43 25.9 -0.7**
ETSF pmax pmax
comp=Z,29nm,0.7s,mb4.8
ETSF Etsaut 22.96 301⇑*i*P **P 19 43 25.9 -0.7**
comp=Z,29nm,0.7s,mb4.8
BSEG Bad Segeberg 22.98 335 *e*P **P 19 43 24.2 -2.5**
comp=Z,178nm,1.2s,mb5.4
BSEG Bad Segeberg 22.98 335 *e*P **P 19 43 24.2 -2.5**
BSEG pmax pmax
comp=Z,178nm,1.2s,mb5.4
BSEG Bad Segeberg 22.98 335 *e*P **P 19 43 24.2 -2.5**
MOS Moscow 23.00 16 *e*P **P 19 43 23.4 -3.5**
MOS *e*PPP 19 43 52.5
MOS *e*S **S 19 47 28.5 -6.3**
MOS pmax pmax
comp=Z,400nm,1.6s,mb5.6
MOS pmax pmax
comp=Z,193nm,1.4s,mb5.3
MOS MLR MLR
comp=Z,2µm,19.0s,MS4.5
ETOB Tobarra 23.10 290 P **P 19 43 28.3 +0.2**
comp=Z,51nm,1.1s,mb4.9
ETOB Tobarra 23.10 290 P **P 19 43 28.3 +0.2**
comp=Z,51nm,1.1s,mb4.9
SNF Seneffe 23.18 322 P **P 19 43 28.9 +0.1**
comp=Z,108nm,1.4s,mb5.1
LARF Larrau 23.30 301 *e*P **P 19 43 30.5 +0.3**
LARF Larrau 23.30 301 *e*P **P 19 43 30.5 +0.3**
SJPF Ste Jean 23.48 301⇑*i*P **P 19 43 31.6 -0.4**
comp=Z,269nm,1.0s,mb5.3
SJPF Ste Jean 23.48 301⇑*i*P **P 19 43 31.6 -0.4**
comp=Z,134nm,1.0s,mb5.3
SJPF Ste Jean 23.48 301⇑*i*P **P 19 43 31.6 -0.4**
SJPF pmax pmax
comp=Z,134nm,1.0s,mb5.3
SJPF Ste Jean 23.48 301⇑*i*P **P 19 43 31.6 -0.4**
comp=Z,134nm,1.0s,mb5.3
OSSF Osses 23.54 301 *e*P **P 19 43 31.1 -1.5**
OSSF Osses 23.54 301 *e*P **P 19 43 31.1 -1.5**
WIT Witteveen 23.56 329 P **P 19 43 32.6 0.0**
ENIJ Nijar 23.60 285 P **P 19 43 35.0 +1.8**
comp=Z,32nm,0.6s,mb4.9
ENIJ Nijar 23.60 285 P **P 19 43 35.0 +1.8**
ENIJ pmax pmax
comp=Z,32nm,0.6s,mb4.9
ENIJ Nijar 23.60 285 P **P 19 43 35.0 +1.8**
comp=Z,32nm,0.6s,mb4.9
ETOR Torete 23.68 295 P **P 19 43 32.4 -1.4**
comp=Z,56nm,0.5s,mb5.2
ETOR Torete 23.68 295 P **P 19 43 32.4 -1.4**
ETOR pmax pmax
comp=Z,56nm,0.5s,mb5.2
ETOR Torete 23.68 295 P **P 19 43 32.4 -1.4**
comp=Z,56nm,0.5s,mb5.2
EALK Alkurruntz 23.71 301 P **P 19 43 34.7 +0.7**
comp=Z,144nm,1.1s,mb5.3
EALK Alkurruntz 23.71 301 P **P 19 43 34.7 +0.6**
comp=Z,144nm,1.1s,mb5.3
ELIZ Elizondo 23.71 301 P **P 19 43 34.0 -0.1**
comp=Z,146nm,0.9s,mb5.4
ELIZ Elizondo 23.71 301 P **P 19 43 34.0 -0.1**
ELIZ pmax pmax
comp=Z,146nm,0.9s,mb5.4
ELIZ Elizondo 23.71 301 P **P 19 43 34.0 -0.1**
comp=Z,146nm,0.9s,mb5.4
COP Copenhagen 23.77 340 *i*P **P 19 43 33.1 -1.4**
COP *e*S **S 19 47 46.5 -0.8**
COP pmax pmax
comp=Z,76nm,0.9s,mb5.1
COP Copenhagen 23.77 340 *i*P **P 19 43 33.1 -1.4**
comp=Z,76nm,0.9s,mb5.1
COP *e*S **S 19 47 46.5 -0.8**
comp=Z,480nm,21.0s
COP Copenhagen 23.77 340 *i*P **P 19 43 33.1 -1.4**
comp=Z,76nm,0.9s,mb5.1,SNR=33
COP *e*S **S 19 47 46.5 -0.8**
SNR=29
MFF Saint Martin d 23.82 310⇑*i*P **P 19 43 34.9 -0.2**
comp=Z,272nm,0.8s,mb5.4
MFF Saint Martin d 23.82 310⇑*i*P **P 19 43 34.9 -0.2**
comp=Z,136nm,0.8s,mb5.4
MFF Saint Martin d 23.82 310⇑*i*P **P**
MFF pmax pmax
comp=Z,136nm,0.8s,mb5.4
MFF Saint Martin d 23.82 310⇑*i*P **P 19 43 34.9 -0.2**
comp=Z,136nm,0.8s,mb5.4
EVIA Vianos 23.85 290 P **P 19 43 35.9 +0.5**
comp=Z,76nm,1.0s,mb5.1
EVIA Vianos 23.85 290 P **P 19 43 35.9 +0.5**
EVIA pmax pmax
comp=Z,76nm,1.0s,mb5.1
EVIA Vianos 23.85 290 P **P 19 43 35.9 +0.5**
comp=Z,76nm,1.0s,mb5.1
EHUE Huescar 23.90 287 P **P 19 43 37.9 +2.0**
comp=Z,48nm,1.1s,mb4.8
EHUE Huescar 23.90 287 P **P 19 43 37.9 +2.0**
EHUE pmax pmax
comp=Z,48nm,1.1s,mb4.8
EHUE Huescar 23.90 287 P **P 19 43 37.9 +2.0**
comp=Z,48nm,1.1s,mb4.8
EBER Berja 24.15 285 P **P 19 43 39.4 +1.2**
comp=Z,255nm,1.2s,mb5.5
EBER Berja 24.15 285 P **P 19 43 39.4 +1.2**
comp=Z,255nm,1.2s,mb5.5
EQES Quesada 24.28 287 P **P 19 43 39.4 +0.1**
comp=Z,58nm,0.8s,mb5.1
EQES Quesada 24.28 287 P **P 19 43 39.4 +0.1**
comp=Z,58nm,0.8s,mb5.1
MELI Melilla 24.30 281 *e*P **P 19 43 45.7 +6.2**
MELI *e*S **S 19 48 11.5 +15**
MENF Mencas 24.32 320 *e*P **P 19 43 39.2 -0.3**
MENF Mencas 24.32 320 *e*P **P 19 43 39.2 -0.3**
EALB Alboran 24.32 283 P **P 19 43 41.7 +1.9**
comp=Z,81nm,0.9s,mb5.2
EALB Alboran 24.32 283 P **P 19 43 41.7 +2.0**
comp=Z,81nm,0.9s,mb5.2
LDF La Druitiere 24.63 314⇑*i*P **P 19 43 42.1 -0.3**
comp=Z,197nm,0.5s,mb5.6
LDF La Druitiere 24.63 314⇑*i*P **P 19 43 42.1 -0.3**
comp=Z,99nm,0.5s,mb5.6
LDF La Druitiere 24.63 314⇑*i*P **P 19 43 42.1 -0.3**
LDF pmax pmax
comp=Z,99nm,0.5s,mb5.6
LDF La Druitiere 24.63 314⇑*i*P **P 19 43 42.1 -0.3**
comp=Z,99nm,0.5s,mb5.6
ECOG Cogollos-Vega 24.68 286 P **P 19 43 45.6 +2.6**
comp=Z,29nm,0.6s,mb5.0
ECOG Cogollos-Vega 24.68 286 P **P 19 43 45.6 +2.6**
ECOG pmax pmax
comp=Z,29nm,0.6s,mb5.0
ECOG Cogollos-Vega 24.68 286 P **P 19 43 45.6 +2.6**
comp=Z,29nm,0.6s,mb5.0
EGUA Guajares 24.70 285 P **P 19 43 44.4 +1.3**
comp=Z,839nm,1.0s,mb6.2
EGUA Guajares 24.70 285 P **P 19 43 44.4 +1.2**
comp=Z,839nm,1.0s,mb6.2
EBAN Banos Encina 24.84 288 P **P 19 43 46.2 +1.7**
comp=Z,57nm,0.9s,mb5.1
EBAN Banos Encina 24.84 288 P **P 19 43 46.2 +1.7**
EBAN pmax pmax
comp=Z,57nm,0.9s,mb5.1
EBAN Banos Encina 24.84 288 P **P 19 43 46.2 +1.7**
comp=Z,57nm,0.9s,mb5.1
ERON Agron 24.88 286 P **P 19 43 46.8 +2.0**
comp=Z,22nm,0.7s,mb4.8
ERON Agron 24.88 286 P **P 19 43 46.8 +2.0**
comp=Z,22nm,0.7s,mb4.8
FLN La Foliniere 24.91 314⇑*i*P **P 19 43 44.8 -0.2**
comp=Z,150nm,0.4s,mb5.5,baz=125
FLN *e*MLR MLR
comp=Z,1µm,20.5s,MS4.2
FLN La Foliniere 24.91 314⇑*i*P **P 19 43 44.8 -0.2**
comp=Z,75nm,0.4s,mb5.5
GRR Gorron 24.98 313⇑*i*P **P 19 43 45.3 -0.3**
comp=Z,366nm,0.7s,mb5.7
GRR Gorron 24.98 313⇑*i*P **P 19 43 45.3 -0.3**
comp=Z,183nm,0.7s,mb5.7
GRR Gorron 24.98 313⇑*i*P **P**
GRR pmax pmax
comp=Z,183nm,0.7s,mb5.7
GRR Gorron 24.98 313⇑*i*P **P 19 43 45.3 -0.3**
comp=Z,183nm,0.7s,mb5.7
ESDC Sonseca Array 25.03 292 P **P 19 43 47.0 +0.8**
comp=Z,13nm,0.5s,mb4.8,baz=84,slow=9.5,SNR=146
ESDC SCP ScP 19 50 56.5 -0.2
comp=Z,2.0nm,0.9s,baz=46,slow=2.5,SNR=7.2
ESDC Sonseca Array 25.03 292 P **P 19 43 47.0 +0.8**
ESLA Sonseca Array 25.03 292 *e*P **P 19 43 47.0 +0.9**
ESLA Sonseca Array 25.03 292 *e*P **P 19 43 47.0 +0.8**
ELAN Lanestosa 25.09 300 P **P 19 43 47.4 +0.8**
comp=Z,135nm,1.1s,mb5.4
ELAN Lanestosa 25.09 300 P **P 19 43 47.4 +0.8**
comp=Z,135nm,1.1s,mb5.4
ELOJ Sierra Loja 25.15 286 P **P 19 43 49.7 +2.4**
comp=Z,16nm,0.7s,mb4.7
ELOJ Sierra Loja 25.15 286 P **P 19 43 49.7 +2.4**
comp=Z,16nm,0.7s,mb4.7
GUD Guadarrama 25.25 294 P **P 19 43 49.1 +1.0**
comp=Z,140nm,0.6s,mb5.7
GUD Guadarrama 25.25 294 P **P 19 43 49.1 +1.0**
GUD pmax pmax
comp=Z,140nm,0.6s,mb5.7
GUD Guadarrama 25.25 294 P **P 19 43 49.1 +1.0**
comp=Z,140nm,0.6s,mb5.7
PAB San Pablo 25.32 292 *e*P **P 19 43 49.2 +0.4**
comp=Z,118nm,1.4s,mb5.2
PAB San Pablo 25.32 292 *e*P **P 19 43 49.2 +0.4**
PAB pmax pmax
comp=Z,118nm,1.4s,mb5.2
PAB San Pablo 25.32 292 *e*P **P 19 43 49.2 +0.4**
comp=Z,118nm,1.4s,mb5.2
EMAL Malaga-Limoner 25.39 285 P **P 19 43 50.8 +1.3**
EMAL Malaga-Limoner 25.39 285 *i*P **P 19 43 49.2 -0.3**
EMAL *e*S **S 19 48 11.2 -2.6**
MUD Monsted U'grnd 25.41 337 P **P 19 43 50.8 +1.4**
MUD Monsted U'grnd 25.41 337⇑*i*P **P 19 43 49.1 -0.3**
comp=Z,43nm,1.1s,mb4.9
MUD pmax pmax
comp=Z,530nm,20.0s
MUD Monsted U'grnd 25.41 337⇑*i*P **P 19 43 49.2 -0.2**
comp=Z,43nm,1.1s,mb4.9,SNR=28
EADA Adamuz 25.47 288 P **P 19 43 51.4 +1.2**
comp=Z,83nm,1.1s,mb5.2
EADA Adamuz 25.47 288 P **P 19 43 51.4 +1.2**
comp=Z,83nm,1.1s,mb5.2
SRPE Suurupi 25.47 357 P **P 19 43 51.1 +1.2**
SRPE Suurupi 25.47 357 P **P 19 43 51.1 +1.2**
EMIJ Mijas 25.68 285 P **P 19 43 52.5 +0.4**
comp=Z,112nm,1.0s,mb5.3
EMIJ Mijas 25.68 285 P **P 19 43 52.5 +0.4**
comp=Z,112nm,1.0s,mb5.3
ABKT Ailbek 25.72 72 P **P 19 43 53.2 +0.7**
comp=Z,1µm,0.7s,mb6.5,SNR=82
DESE Dese 25.74 149 *e*P **P 19 43 44.0 -8.7**
DESE *e*S **S 19 48 20.5 +1.0**
PUL Pulkovo 25.85 4 *e*P **P 19 43 54.2 +0.8**
PUL Pulkovo 25.85 4 *e*P **P 19 43 54.2 +0.8**
AEU East Anglia Un 25.96 323 *e*P **P 19 43 54.6 +0.1**
AEU East Anglia Un 25.96 323 *e*P **P 19 43 54.6 +0.1**
SGMF Saint Gilles 25.96 312⇑*i*P **P 19 43 54.2 -0.3**
comp=Z,462nm,1.0s,mb5.7
SGMF Saint Gilles 25.96 312⇑*i*P **P 19 43 54.2 -0.3**
comp=Z,231nm,1.0s,mb5.7
SGMF Saint Gilles 25.96 312⇑*i*P **P**
SGMF pmax pmax
comp=Z,231nm,1.0s,mb5.7
SGMF Saint Gilles 25.96 312⇑*i*P **P 19 43 54.2 -0.3**
comp=Z,231nm,1.0s,mb5.7
MDT Midelt 26.04 276 P **P 19 43 56.6 +1.2**
comp=Z,7.3nm,0.4s,mb4.6,baz=92,slow=10,SNR=21
MDT Midelt 26.04 276 P **P 19 43 56.6 +1.2**
JSA Saint Aubin 26.10 314 P **P 19 43 55.0 -0.8**
JSA Saint Aubin 26.10 314 P **P 19 43 55.0 -0.8**
TRBA At Turbah 26.12 138⇑*e*P **P 19 43 60.0 +3.8**
LIJA Lijar 26.16 285 *i*P **P 19 43 59.0 +2.5**
QUIF Quistinic 26.22 311⇑*i*P **P 19 43 56.6 -0.2**
comp=Z,492nm,1.0s,mb5.7
QUIF Quistinic 26.22 311⇑*i*P **P 19 43 56.6 -0.2**
comp=Z,246nm,1.0s,mb5.7
QUIF Quistinic 26.22 311⇑*i*P **P 19 43 56.6 -0.2**
QUIF pmax pmax
comp=Z,246nm,1.0s,mb5.7
QUIF Quistinic 26.22 311⇑*i*P **P 19 43 56.6 -0.2**
comp=Z,246nm,1.0s,mb5.7
MEF Metsahovi 26.23 357 P **P 19 43 56.4 -0.4**
MEF Metsahovi 26.23 357 P **P 19 43 56.4 -0.4**
EJIF Jimena Fronter 26.25 284 P **P 19 43 59.7 +2.5**
comp=Z,36nm,0.8s,mb5.0
EJIF Jimena Fronter 26.25 284 P **P 19 43 59.7 +2.5**
EJIF pmax pmax
comp=Z,36nm,0.8s,mb5.0
EJIF Jimena Fronter 26.25 284 P **P 19 43 59.7 +2.5**
comp=Z,36nm,0.8s,mb5.0
EARI Arriondas 26.38 300 P **P 19 43 59.1 +0.7**
comp=Z,194nm,1.4s,mb5.4
EARI Arriondas 26.38 300 P **P 19 43 59.1 +0.8**
comp=Z,194nm,1.4s,mb5.4
ROSF Rostrenen 26.44 312⇑*i*P **P 19 43 58.3 -0.5**
comp=Z,222nm,0.8s,mb5.5
ROSF Rostrenen 26.44 312⇑*i*P **P 19 43 58.3 -0.5**
comp=Z,111nm,0.8s,mb5.4
ROSF Rostrenen 26.44 312⇑*i*P **P 19 43 58.3 -0.5**
ROSF pmax pmax
comp=Z,111nm,0.8s,mb5.4
ROSF Rostrenen 26.44 312⇑*i*P **P 19 43 58.3 -0.5**
comp=Z,111nm,0.8s,mb5.5
ESPR Espera 26.53 285 P **P 19 44 02.0 +2.3**
comp=Z,40nm,0.9s,mb5.0
ESPR Espera 26.53 285 P **P 19 44 02.0 +2.2**
comp=Z,40nm,0.9s,mb5.0
WOL Wolverton 26.54 319 *e*P **P 19 43 59.8 +0.2**
WOL AMb AMB 19 44 00.2
comp=Z,113nm,0.9s,mb5.4
WOL AMS AMS 19 56 27.3
comp=Z,1µm,12.1s,MS4.7
WOL Wolverton 26.54 319 *e*P **P 19 43 59.8 +0.2**
comp=Z,113nm,0.9s,mb5.4
ASUD Al Ashush, Dub 26.66 103 P **P 19 44 03.0 +1.9**
SNR=6.6
ASUD Al Ashush, Dub 26.66 103 P **P 19 44 03.0 +2.0**
SNR=6.6
EPLA Plasencia 26.68 293 P **P 19 44 00.8 -0.3**
comp=Z,108nm,0.9s,mb5.4
EPLA Plasencia 26.68 293 P **P 19 44 00.8 -0.3**
EPLA pmax pmax
comp=Z,108nm,0.9s,mb5.4
EPLA Plasencia 26.68 293 P **P 19 44 00.8 -0.3**
comp=Z,108nm,0.9s,mb5.4
NAZ Nazwa, Dubai 26.77 102 P **P 19 44 03.9 +1.9**
SNR=17
NAZ Nazwa, Dubai 26.77 102 P **P 19 44 03.9 +1.9**
SNR=17
SFS San Fernando 26.84 285 *e*S **S 19 48 52.0 +15**
ATD Arta Tunnel 26.87 143 P **P 19 44 05.5 +2.5**
comp=Z,9.0nm,0.6s,mb4.5,baz=309,slow=23,SNR=4.0
ATD LR LR 19 55 21.9
comp=Z,617nm,18.6s,MS4.2,baz=162,slow=38
ATD Arta Tunnel 26.87 143 P **P 19 44 05.4 +2.4**
SWN1 Swindon 26.95 319 *e*P **P 19 44 03.6 +0.2**
SWN1 AMb AMB 19 44 05.5
comp=Z,245nm,2.3s,mb5.3
SWN1 AMS AMS 19 56 48.3
comp=Z,1µm,18.0s,MS4.5
SWN1 Swindon 26.95 319 *e*P **P 19 44 03.6 +0.2**
comp=Z,245nm,2.3s,mb5.3
EMIN Mina Concepcio 27.13 288 P **P 19 44 04.9 -0.3**
comp=Z,154nm,2.1s,mb5.2
EMIN Mina Concepcio 27.13 288 P **P 19 44 04.9 -0.3**
comp=Z,154nm,2.1s,mb5.2
HATD Hatta, Dubai 27.22 102 P **P 19 44 07.3 +1.2**
SNR=9.6
HATD Hatta, Dubai 27.22 102 P **P 19 44 07.3 +1.2**
SNR=9.6
ASHO Ashiyiah 27.23 102 P **P 19 44 08.0 +1.8**
SNR=10
ASHO Ashiyiah 27.23 102 P **P 19 44 08.0 +1.8**
SNR=10
PBRG Braganca 27.30 296 *e*P **P 19 44 07.1 +0.5**
comp=Z,126nm,1.3s,mb5.3
PBRG Braganca 27.30 296 *e*P **P 19 44 07.1 +0.5**
comp=Z,126nm,1.3s,mb5.3
ECAL Calabor 27.31 297 P **P 19 44 06.9 +0.1**
comp=Z,166nm,0.9s,mb5.6
ECAL Calabor 27.31 297 P **P 19 44 06.9 +0.2**
comp=Z,166nm,0.9s,mb5.6
CWF Charnwood Fore 27.31 322 *e*P **P 19 44 06.2 -0.4**
CWF AMb AMB 19 44 06.4
comp=Z,93nm,1.1s,mb5.2
CWF AMS AMS 19 58 05.5
comp=Z,675nm,16.2s,MS4.3
CWF Charnwood Fore 27.31 322 *e*P **P 19 44 06.2 -0.4**
comp=Z,93nm,1.1s,mb5.2
EBAD Badajoz 27.38 290 P **P 19 44 07.4 0.0**
comp=Z,51nm,0.7s,mb5.2
EBAD Badajoz 27.38 290 P **P 19 44 07.4 0.0**
comp=Z,51nm,0.7s,mb5.2
FURI Furi 27.38 153 *e*P **P 19 44 09.8 +2.3**
FALU Falun 27.38 348 P **P 19 44 06.7 -0.5**
PBAR Barrancos 27.41 288 *e*P **P 19 44 07.5 -0.2**
comp=Z,154nm,1.6s,mb5.3
PBAR *e*S **S 19 48 44.2 -1.4**
PBAR A 19 56 23.5
comp=Z,462nm,20.0s
PBAR Barrancos 27.41 288 *e*P **P 19 44 07.5 -0.2**
comp=Z,154nm,1.6s,mb5.3
PBAR *e*S **S 19 48 44.2 -1.4**
comp=Z,462nm,20.0s
FINES FINESS Array B 27.42 359 P **P 19 44 07.0 -0.5**
FINES PcP PcP 19 47 26.6 +1.2
FINES S **S 19 48 40.2 -5.1**
FINES FINESS Array B 27.42 359 P **P 19 44 07.0 -0.5**
comp=Z,47nm,0.7s,mb5.2,baz=160,slow=11,SNR=153
FINES PcP PcP 19 47 26.6 +1.2
comp=Z,9.4nm,0.5s,baz=163,slow=2.7,SNR=6.6
FINES S **S 19 48 40.2 -5.1**
comp=Z,10.0nm,0.8s,baz=141,slow=18,SNR=3.3
FINES PKiKP PKiKP 19 55 02.5 +0.4
comp=Z,1.6nm,0.6s,baz=172,slow=2.9,SNR=6.5
FINES FINESS Array B 27.42 359 P **P 19 44 07.0 -0.5**
FINES 19 47 26.6
FINES S **S 19 48 40.2 -5.0**
FINES pmax pmax
comp=Z,47nm,0.7s
FINES smax
comp=N,10.0nm,0.8s
FINES FINESS Array B 27.42 359 P **P 19 44 07.0 -0.5**
FINES FINESS Array B 27.42 359 PcP PcP 19 47 26.6 +1.2
HFS Hagfors 27.44 346 P **P 19 44 06.8 -0.9**
comp=N,43nm,0.4s,mb5.3,baz=145,slow=9.0,SNR=141
HFS LR LR 19 55 37.4
comp=N,667nm,21.3s,MS4.2,baz=160,slow=38
HFS Hagfors 27.44 346 P **P 19 44 06.8 -0.9**
HFS pmax pmax
comp=Z,43nm,0.4s
HFS MLR MLR
comp=Z,667nm,21.3s
HFS Hagfors 27.44 346 P **P 19 44 06.8 -0.9**
HFA0 Hagfors New Ar 27.45 346 P **P 19 44 06.0 -1.8**
HFA0 Hagfors New Ar 27.45 346 P **P 19 44 06.0 -1.8**
MVO Moncorvo 27.46 295 *e*P **P 19 44 08.0 -0.1**
comp=Z,195nm,0.8s,mb5.7
MVO *e*S **S 19 48 47.6 +1.2**
MVO A 19 56 36.7
comp=Z,644nm,22.0s
MVO Moncorvo 27.46 295 P **P 19 44 08.3 +0.2**
MVO Moncorvo 27.46 295 P **P 19 44 08.3 +0.2**
MVO *e*S **S 19 48 47.6 +1.2**
comp=Z,644nm,22.0s
HGH Gray Hill 27.56 319 *e*P **P 19 44 08.7 -0.2**
HGH Gray Hill 27.56 319 *e*P **P 19 44 08.7 -0.1**
SNART Snartemo 27.56 338 *e*P **P 19 44 09.0 +0.3**
ERUA La Rua 27.66 298 P **P 19 44 09.9 +0.1**
comp=Z,7.5nm,0.4s,mb4.7
ERUA La Rua 27.66 298 P **P 19 44 09.9 +0.1**
ERUA pmax pmax
comp=Z,8.0nm,0.4s,mb4.7
ERUA La Rua 27.66 298 P **P 19 44 09.9 +0.1**
comp=Z,7.5nm,0.4s,mb4.7
DYA Yadsworthy 27.66 316 *e*P **P 19 44 09.6 -0.1**
DYA AMb AMB 19 44 09.8
comp=Z,102nm,1.3s,mb5.3

DYA AMS AMS 19 56 57.6
comp=Z,1μm,20.2s,MS4.5
DYA Yadsworthy 27.66 316 P **P** **19 44 09.0 -0.8**
DYA Yadsworthy 27.66 316 *eP* **P** **19 44 09.6 -0.2**
comp=Z,102nm,1.3s,mb5.3
PMRV Marv??o 27.67 291 *eP* **P** **19 44 10.5 +0.5**
comp=Z,98nm,1.9s,mb5.1
PMRV *eS* **S** **19 48 50.6 +0.9**
PMRV A 19 56 29.4
comp=Z,596nm,22.0s
PMRV Marv??o 27.67 291 *eP* **P** **19 44 10.5 +0.5**
comp=Z,98nm,1.9s,mb5.1
KBI1 Birley Grange 27.70 322 *eP* **P** **19 44 10.0 -0.1**
KBI1 Birley Grange 27.70 322 *eP* **P** **19 44 10.0 -0.1**
KWE Weaver Farm 27.74 322 *eP* **P** **19 44 10.1 -0.3**
KWE Weaver Farm 27.74 322 *eP* **P** **19 44 10.1 -0.3**
PCBR Castelo Branco 27.74 292 *eP* **P** **19 44 11.7 +1.1**
comp=Z,57nm,1.6s,mb5.0
PCBR Castelo Branco 27.74 292 *eP* **P** **19 44 11.7 +1.1**
comp=Z,57nm,1.6s,mb5.0
EPON Pontenova 27.78 300 P **P** **19 44 11.1 +0.2**
comp=Z,79nm,1.2s,mb5.2
EPON Pontenova 27.78 300 P **P** **19 44 11.1 +0.2**
comp=Z,79nm,1.2s,mb5.2
EGRO El Granado 27.79 287 P **P** **19 44 11.0 -0.1**
comp=Z,57nm,0.9s,mb5.2
EGRO El Granado 27.79 287 P **P** **19 44 11.0 -0.1**
comp=Z,57nm,0.9s,mb5.2
MTE Manteigas 27.81 293 *eP* **P** **19 44 12.2 +1.0**
comp=Z,89nm,1.2s,mb5.3
MTE *eS* **S** **19 48 51.1 -0.8**
MTE A 19 56 46.1
comp=Z,714nm,22.0s
MTE Manteigas 27.81 293 *eP* **P** **19 44 11.4 +0.2**
comp=Z,43nm,1.0s,mb5.0
MTE Manteigas 27.81 293 *eP* **P** **19 44 11.4 +0.2**
comp=Z,43nm,1.0s,mb5.0
PESTR Estremoz 27.83 290 *eP* **P** **19 44 11.3 -0.1**
comp=Z,101nm,1.3s,mb5.3
PESTR *eS* **S** **19 48 50.4 -1.7**
PESTR A 19 56 35.0
comp=Z,543nm,22.0s
PESTR Estremoz 27.83 290 *eP* **P** **19 44 11.3 -0.1**
comp=Z,101nm,1.3s,mb5.3
PESTR *eS* **S** **19 48 50.4 -1.7**
comp=Z,543nm,22.0s
MCH1 Michaelchurch 27.84 319 *eP* **P** **19 44 11.0 -0.3**
MCH1 AMb AMB 19 44 14.7
comp=Z,54nm,1.6s,mb4.9
MCH1 AMS AMS 19 57 24.4
comp=Z,700nm,12.1s,MS4.5
MCH1 Michaelchurch 27.84 319 *eP* **P** **19 44 11.0 -0.3**
comp=Z,54nm,1.6s,mb4.9
OSL Oslo 27.93 343 *eP* **P** **19 44 10.9 -1.2**
OSL Oslo 27.93 343 *eP* **P** **19 44 10.9 -1.1**
SNR=31
STNC Stoke 27.96 322 *eP* **P** **19 44 12.9 +0.5**
STNC Stoke 27.96 322 *eP* **P** **19 44 12.9 +0.5**
KONO Kongsberg 27.96 342 *eP* **P** **19 44 12.5 +0.1**
KONO Kongsberg 27.96 342 *eP* **P** **19 44 10.6 -1.8**
comp=Z,58nm,0.9s,mb5.2
KONO Kongsberg 27.96 342 *eP* **P** **19 44 10.6 -1.8**
KONO pmax pmax
comp=Z,58nm,0.9s,mb5.2
KONO Kongsberg 27.96 342 *eP* **P** **19 44 12.5 +0.1**
SNR=31
PVAQ Vaqueiros 27.98 287 *eP* **P** **19 44 13.3 +0.5**
comp=Z,147nm,1.3s,mb5.5
PVAQ *eS* **S** **19 48 52.0 -2.6**
PVAQ A 19 57 41.0
comp=Z,218nm,20.0s
PVAQ Vaqueiros 27.98 287 *eP* **P** **19 44 13.3 +0.5**
comp=Z,147nm,1.3s,mb5.5
PVRL Vila Real 27.99 295 *eP* **P** **19 44 13.7 +0.9**
comp=Z,85nm,1.4s,mb5.2
PVRL Vila Real 27.99 295 *eP* **P** **19 44 13.7 +0.9**
comp=Z,85nm,1.4s,mb5.2
HTR Trewern Hill 28.02 319 *eP* **P** **19 44 12.5 -0.5**
HTR Trewern Hill 28.02 319 *eP* **P** **19 44 12.5 -0.5**
PBEJ Beja 28.07 288 *eP* **P** **19 44 14.4 +0.9**
comp=Z,96nm,1.3s,mb5.3
PBEJ Beja 28.07 288 *eP* **P** **19 44 14.4 +0.9**
comp=Z,96nm,1.3s,mb5.3
KAF Kangasniemi 28.09 360 *eP* **P** **19 44 12.2 -1.3**
KAF pmax pmax
comp=Z,16nm,0.3s,mb5.1
KAF Kangasniemi 28.09 360 *ep* **P** **19 44 12.2 -1.3**
comp=Z,16nm,0.3s,mb5.1
PVIS Viseu 28.09 294 *eP* **P** **19 44 15.0 +1.3**
comp=Z,76nm,1.3s,mb5.2
PVIS Viseu 28.09 294 *eP* **P** **19 44 15.0 +1.3**
comp=Z,76nm,1.3s,mb5.2
KLMR Klimovskoe 28.10 13*c i*P **P** **19 44 12.9 -0.7**
KLMR *i* S **S** **19 48 50.8 -5.2**
KLMR pmax pmax
comp=Z,134nm,1.4s,mb5.4
KLMR MLR MLR
comp=Z,2μm,19.0s,MS4.6
HPK Haverah Park 28.14 324 P **P** **19 44 13.7 -0.3**
HPK Haverah Park 28.14 324 P **P** **19 44 13.7 -0.3**
PBDV Barranco-do-Ve 28.16 287 *eP* **P** **19 44 15.6 +1.2**
comp=Z,176nm,1.3s,mb5.5
PBDV *eS* **S** **19 49 00.4 +2.9**
PBDV A 19 57 46.0
comp=Z,316nm,22.0s
PBDV Barranco-do-Ve 28.16 287 *eP* **P** **19 44 15.6 +1.2**
comp=Z,176nm,1.3s,mb5.5
AKTK Aktyubinsk 28.16 45 P **P** **19 44 14.8 +0.6**
AKTK Aktyubinsk 28.16 45 P **P** **19 44 14.8 +0.5**
AKTO Aktyubinsk 28.16 45 P **P** **19 44 14.8 +0.6**
comp=Z,12nm,0.7s,mb4.7,baz=240,slow=8.3,SNR=42
AKTO Aktyubinsk 28.16 45 P **P** **19 44 14.8 +0.5**
AKTO pmax pmax
comp=Z,13nm,0.7s,mb4.7
EVO Evora 28.16 289⇓ *i*P **P** **19 44 15.2 +0.8**
comp=Z,109nm,1.0s,mb5.1
EVO *e*MLR MLR
comp=Z,418nm,18.0s,MS3.8
EVO Evora 28.16 289 *eP* **P** **19 44 15.3 +0.9**
comp=Z,146nm,1.6s,mb5.4
EVO Evora 28.16 289 *eP* **P** **19 44 15.3 +0.9**
comp=Z,146nm,1.6s,mb5.4
HTL Hartland 28.21 316 *eP* **P** **19 44 15.3 +0.6**
HTL AMb AMB 19 44 15.8
comp=Z,132nm,1.3s,mb5.4
HTL AMS AMS 19 57 19.1
comp=Z,1μm,15.3s,MS4.6
HTL Hartland 28.21 316 *eP* **P** **19 44 15.3 +0.6**
comp=Z,132nm,1.3s,mb5.4
PCVE Castro Verde 28.22 287 *eP* **P** **19 44 16.0 +1.1**
comp=Z,92nm,1.5s,mb5.2
PCVE *eS* **S** **19 48 59.1 +0.7**
PCVE A 19 59 35.7
comp=Z,208nm,16.0s
PCVE Castro Verde 28.22 287 *eP* **P** **19 44 16.0 +1.1**
comp=Z,92nm,1.5s,mb5.2
ARQ Araqi 28.23 104 P **P** **19 44 16.9 +1.8**
SNR=32
ARQ Araqi 28.23 104 P **P** **19 44 16.9 +1.8**
SNR=32
PCAB Cabril 28.25 296 *eP* **P** **19 44 15.7 +0.6**
comp=Z,109nm,1.1s,mb5.4
PCAB Cabril 28.25 296 *eP* **P** **19 44 15.7 +0.6**
comp=Z,109nm,1.1s,mb5.4
EVOP Sao Brissos 28.25 289 *eP* **P** **19 44 15.5 +0.3**
EVOP AMb AMB 19 44 33.5
comp=Z,124nm,1.4s,mb5.3
EVOP *eS* **S** **19 48 58.6 -0.2**
EVOP *eS* **S** **19 48 58.8 0.0**
EVOP Sao Brissos 28.25 289 *eP* **P** **19 44 15.4 +0.2**
EVOP *eS* **S** **19 48 58.6 -0.2**
EVOP Sao Brissos 28.25 289⇓ *i*P **P** **19 44 15.2 0.0**
comp=Z,55nm,1.0s,mb5.1
ELOB Lobios 28.29 296 P **P** **19 44 16.8 +1.3**
comp=Z,53nm,1.1s,mb5.1
ELOB Lobios 28.29 296 P **P** **19 44 16.8 +1.3**
comp=Z,53nm,1.1s,mb5.1
MESJ Messejana 28.35 288 *eP* **P** **19 44 16.5 +0.4**
MESJ AMb AMB 19 44 32.2
comp=Z,61nm,1.2s,mb5.1
MESJ *eS* **S** **19 49 00.2 -0.3**
MESJ *eS* **S** **19 49 00.2 -0.3**
MESJ Messejana 28.35 288 *eP* **P** **19 44 16.4 +0.3**
MESJ *eS* **S** **19 49 00.2 -0.3**
PTOM Tomar 28.46 292 *eP* **P** **19 44 18.7 +1.7**
comp=Z,66nm,1.0s,mb5.2
PTOM Tomar 28.46 292 *eP* **P** **19 44 18.7 +1.7**
comp=Z,66nm,1.0s,mb5.2
PTO Porto 28.65 295 *eP* **P** **19 44 20.9 +2.2**
comp=Z,89nm,1.3s,mb5.3
PTO Porto 28.65 295 *eP* **P** **19 44 20.9 +2.2**
comp=Z,89nm,1.3s,mb5.3
BLS5 Blasjo 28.67 338 *eP* **P** **19 44 18.0 -0.7**
BLS5 Blasjo 28.67 338 *eP* **P** **19 44 18.0 -0.6**
SNR=31
NAO01 NORSAR Array S 28.69 344 *eP* **P** **19 44 18.1 -0.7**
NAO01 NORSAR Array S 28.69 344 *eP* **P** **19 44 18.1 -0.7**
SUF Sumiainen 28.70 360 P **P** **19 44 18.0 -0.9**
MORF Marmelete 28.73 287 *eS* **S** **19 49 04.2 -2.2**
MORF A 19 52 05.7
comp=Z,243nm,18.0s
MORF Marmelete 28.73 287 *eP* **P** **19 44 19.6 +0.1**
MORF *eS* **S** **19 49 06.3 -0.1**
STS Santiago 28.74 298 P **P** **19 44 20.1 +0.6**
comp=Z,23nm,0.8s,mb5.0
STS Santiago 28.74 298 P **P** **19 44 20.1 +0.6**
STS pmax pmax
comp=Z,23nm,0.8s,mb5.0
STS Santiago 28.74 298 P **P** **19 44 20.1 +0.6**
comp=Z,23nm,0.8s,mb5.0
HOQ Hoqain 28.75 103 P **P** **19 44 21.2 +1.5**
SNR=26
HOQ Hoqain 28.75 103 P **P** **19 44 21.2 +1.5**
SNR=26
PTEO Sao Teotonio 28.77 287 *eP* **P** **19 44 20.7 +0.9**
comp=Z,117nm,1.6s,mb5.4
PTEO Sao Teotonio 28.77 287 *eP* **P** **19 44 20.7 +0.9**
comp=Z,117nm,1.6s,mb5.4
EZAM Zamans 28.78 297 P **P** **19 44 21.5 +1.6**
comp=Z,63nm,0.9s,mb5.3
EZAM Zamans 28.78 297 P **P** **19 44 21.5 +1.6**
EZAM pmax pmax
comp=Z,63nm,0.9s,mb5.3
EZAM Zamans 28.78 297 P **P** **19 44 21.5 +1.6**
comp=Z,63nm,0.9s,mb5.3
NB2 NORSAR Subarra 28.79 344 P **P** **19 44 18.0 -1.7**
NB2 NORSAR Subarra 28.79 344 P **P** **19 44 18.4 -1.3**
comp=Z,14nm,0.6s,mb4.9,SNR=1.4
NOA NORSAR Array B 28.79 344 P **P** **19 44 18.3 -1.4**
comp=Z,17nm,0.5s,mb5.0,baz=148,slow=9.4,SNR=36
NOA NORSAR Array B 28.79 344 P **P** **19 44 18.3 -1.4**
NOA pmax pmax
comp=Z,17nm,0.5s
NOA NORSAR Array B 28.79 344 P **P** **19 44 18.3 -1.4**
PFVI Vila Bisbo 28.88 286 *eP* **P** **19 44 21.5 +0.7**
comp=Z,86nm,1.6s,mb5.2
PFVI *eS* **S** **19 49 10.4 +1.6**
PFVI A 19 57 55.6
comp=Z,295nm,22.0s
PFVI Vila Bisbo 28.88 286 P **P** **19 44 21.6 +0.8**
PFVI Vila Bisbo 28.88 286 *eP* **P** **19 44 21.5 +0.7**
comp=Z,86nm,1.6s,mb5.2
WPM1 Penmaenmawr 28.93 321 *eP* **P** **19 44 21.1 +0.1**
WPM1 Penmaenmawr 28.93 321 *eP* **P** **19 44 21.1 +0.1**
JOF Joensuu 29.05 4 *ep* **P** **19 44 20.8 -1.2**
comp=Z,9.1nm,0.3s,mb5.0
JOF Joensuu 29.05 4 P **P** **19 44 21.1 -0.9**
EMAZ Mazaricos 29.06 298 P **P** **19 44 23.1 +0.7**
comp=Z,58nm,0.8s,mb5.4
EMAZ Mazaricos 29.06 298 P **P** **19 44 23.1 +0.8**
comp=Z,58nm,0.8s,mb5.4
BSY Bisya 29.06 105 P **P** **19 44 24.2 +1.6**
SNR=39
BSYO Bisya 29.10 105 P **P** **19 44 24.2 +1.3**
SNR=39
VAF Ylistaro 29.13 356 P **P** **19 44 22.3 -0.4**
PMAFR Mafra 29.14 290 *eS* **S** **19 49 17.7 +4.8**
PMAFR A 19 57 13.8
comp=Z,436nm,22.0s
WLF1 Llynfaes 29.20 321 *eP* **P** **19 44 23.2 -0.3**
WLF1 AMb AMB 19 44 23.9
comp=Z,110nm,1.1s,mb5.5
WLF1 Llynfaes 29.20 321 *eP* **P** **19 44 23.2 -0.3**
comp=Z,110nm,1.1s,mb5.5
YRC Rhoscolyn 29.28 320 *eP* **P** **19 44 24.4 +0.3**
YRC Rhoscolyn 29.28 320 *eP* **P** **19 44 24.4 +0.3**
XDE Dent Fell 29.35 323 *eP* **P** **19 44 25.3 +0.5**
XDE Dent Fell 29.35 323 *eP* **P** **19 44 25.3 +0.5**
ECK Cauldkaine Hil 29.54 325 *eP* **P** **19 44 26.7 +0.3**
ECK Cauldkaine Hil 29.54 325 *eP* **P** **19 44 26.7 +0.3**
SMDO Samad 29.59 103 P **P** **19 44 28.8 +1.6**
SNR=30
SMDO Samad 29.59 103 P **P** **19 44 28.8 +1.6**
SNR=30
EKA Eskdalemuir Ar 29.64 325 P **P** **19 44 27.6 +0.3**
comp=Z,64nm,0.8s,mb5.4,baz=125,slow=9.0,SNR=142
EKA ScP ScP 19 51 10.1 -0.2
comp=Z,5.5nm,1.0s,baz=111,slow=4.6,SNR=7.8
EKA Eskdalemuir Ar 29.64 325 P **P** **19 44 27.6 +0.3**
EKA 19 51 10.1
EKA pmax pmax
comp=Z,64nm,0.9s
EKA Eskdalemuir Ar 29.64 325 P **P** **19 44 27.6 +0.3**
ESK Eskdalemuir 29.65 325 P **P** **19 44 28.2 +0.8**
comp=Z,678nm,1.0s,mb6.3,SNR=20
ESK Eskdalemuir 29.65 325 P **P** **19 44 26.5 -0.9**
ESK AMb AMB 19 44 27.7
comp=Z,120nm,1.1s,mb5.5
ESK Eskdalemuir 29.65 325 *eP* **P** **19 44 26.5 -0.9**
ESK AMb AMB 19 44 27.7
comp=Z,120nm,1.1s,mb5.5
ESK Eskdalemuir 29.65 325 *eP* **P** **19 44 27.9 +0.5**
comp=Z,113nm,1.0s,mb5.5
ESK Eskdalemuir 29.65 325 *i* P **P** **19 44 27.9 +0.5**
ESK Eskdalemuir 29.65 325 *eP* **P** **19 44 27.9 +0.5**
comp=Z,113nm,1.0s,mb5.5
RBK Rabkut 29.68 117 P **P** **19 44 30.0 +2.0**
SNR=7.8
RBK Rabkut 29.68 117 P **P** **19 44 30.0 +2.0**
SNR=7.8
ESY Stoneypath 29.72 326 *eP* **P** **19 44 28.1 +0.1**
ESY Stoneypath 29.72 326 *eP* **P** **19 44 28.1 +0.1**
GIM North Isle of 29.73 322 *eP* **P** **19 44 28.3 +0.1**
GIM North Isle of 29.73 322 *eP* **P** **19 44 28.3 +0.2**
BER Bergen 29.78 339 *eP* **P** **19 44 28.5 +0.1**
BER *eS* **S** **19 49 21.9 -0.5**
BER AMS AMS 19 59 10.8
comp=Z,824nm,15.3s,MS4.5
BER Bergen 29.78 339 *eP* **P** **19 44 28.5 0.0**
SNR=31
EBL Broad Law 29.83 326 *eP* **P** **19 44 29.2 +0.2**
EBL Broad Law 29.83 326 *eP* **P** **19 44 29.2 +0.2**
JMDO Jabal Madar 29.97 105 P **P** **19 44 31.7 +1.1**
SNR=37
JMDO Jabal Madar 29.97 105 P **P** **19 44 31.7 +1.1**
SNR=37
EDI Edinburgh 29.98 326 *eP* **P** **19 44 30.4 0.0**
EDI AMb AMB 19 44 31.8
comp=Z,124nm,2.1s,mb5.3
EDI AMS AMS 19 58 19.2
comp=Z,653nm,22.5s,MS4.2
EDI Edinburgh 29.98 326 *eP* **P** **19 44 30.4 +0.1**
comp=Z,124nm,2.1s,mb5.3
GAL1 Galloway 30.15 323 *eP* **P** **19 44 32.3 +0.5**
GAL1 AMb AMB 19 44 33.2
comp=Z,160nm,1.2s,mb5.6
GAL1 AMS AMS 19 58 32.8
comp=Z,871nm,23.3s,MS4.3
GAL1 Galloway 30.15 323 P **P** **19 44 32.2 +0.4**
GAL1 Galloway 30.15 323 P **P** **19 44 32.2 +0.4**
DSB Dublin 30.24 319 *eP* **P** **19 44 32.9 +0.3**
comp=Z,80nm,1.2s,mb5.3
DSB Dublin 30.24 319 *eP* **P** **19 44 32.9 +0.3**
comp=Z,80nm,1.2s,mb5.3
EBH Black Hill 30.32 326 *i* P **P** **19 44 33.0 -0.3**
EBH Black Hill 30.32 326 *i* P **P** **19 44 33.0 -0.3**
DLF Lyons Farm 30.34 319⇑ *i*P **P** **19 44 33.6 0.0**
GMM Mts of Mourne 30.47 321 *eP* **P** **19 44 34.8 +0.2**
GMM Mts of Mourne 30.47 321 *eP* **P** **19 44 34.8 +0.2**
WBK Wadi Bani Khal 30.55 103 P **P** **19 44 39.0 +3.2**
SNR=19
EAB Aberfoyle 30.67 326 *eP* **P** **19 44 36.3 -0.1**
EAB Aberfoyle 30.67 326 *eP* **P** **19 44 36.3 -0.1**
MME1 Meikle Cairn 30.69 328 *eP* **P** **19 44 35.9 -0.7**
MME1 Meikle Cairn 30.69 328 *eP* **P** **19 44 35.9 -0.7**
FOO Floro 30.84 340 *eP* **P** **19 44 37.0 -0.8**
FOO AMS AMS 19 58 51.3
comp=Z,754nm,8.7s
FOO Floro 30.84 340 *eP* **P** **19 44 37.0 -0.8**
SNR=31
MCD Coleburn Disti 30.98 329 *eP* **P** **19 44 38.4 -0.4**
MCD Coleburn Disti 30.98 329 *eP* **P** **19 44 38.7 -0.4**
OUL Oulu 31.08 359 P **P** **19 44 38.9 -1.0**
ARU Arti 31.27 34 P **P** **19 44 42.5 +0.8**
comp=Z,347nm,0.4s,mb6.5,SNR=31
ARU Arti 31.27 34 *eP* **P** **19 44 41.8 +0.1**
comp=Z,58nm,1.0s,mb5.4
ARU Arti 31.27 34*d i*P **P** **19 44 41.9 +0.2**
ARU *e* 19 45 42.6
ARU *e* 19 47 33.0
ARU S **S** **19 49 45.4 -0.4**
ARU SS SS 19 51 25.2 -35
ARU 19 55 08.6
ARU pmax pmax
comp=Z,90nm,1.2s,mb5.5
ARU Arti 31.27 34 *eP* **P** **19 44 41.8 +0.1**
comp=Z,58nm,1.0s,mb5.4
MDO Dochfour 31.38 328 *eP* **P** **19 44 42.1 -0.5**
MDO Dochfour 31.38 328 *eP* **P** **19 44 42.2 -0.5**
LILU Lilltraesk 31.54 355 P **P** **19 44 43.3 -0.7**
MVH1 Achvaich 31.58 329 *eP* **P** **19 44 43.9 -0.6**
MVH1 Achvaich 31.58 329 *eP* **P** **19 44 43.8 -0.6**
SJUU Sjulsmark 31.64 356 P **P** **19 44 44.4 -0.5**
KSB Sheil Bridge 31.73 327 *eP* **P** **19 44 45.3 -0.4**
KSB Sheil Bridge 31.73 327 *eP* **P** **19 44 45.3 -0.4**
KAR1 Arisaig 31.76 326 *eP* **P** **19 44 46.0 0.0**
KAR1 Arisaig 31.76 326 *eP* **P** **19 44 46.0 0.0**
ORE Reay 31.78 330 *eP* **P** **19 44 45.8 -0.3**
ORE Reay 31.78 330 *eP* **P** **19 44 45.8 -0.3**
LRW Lerwick 31.78 334 *eP* **P** **19 44 45.5 -0.7**
LRW AMb AMB 19 44 46.8
comp=Z,181nm,1.3s,mb5.7
LRW Lerwick 31.78 334 P **P** **19 44 45.9 -0.2**
LRW Lerwick 31.78 334 P **P** **19 44 45.9 -0.2**
NSS Namsos 31.81 348 *eP* **P** **19 44 45.1 -1.2**
NSS Namsos 31.81 348 *eP* **P** **19 44 45.1 -1.2**
SNR=31
KPL Plockton 31.91 327 *eP* **P** **19 44 46.6 -0.7**
KPL AMb AMB 19 44 49.6
comp=Z,102nm,2.9s,mb5.2
KPL Plockton 31.91 327 P **P** **19 44 47.2 -0.1**
KPL Plockton 31.91 327 P **P** **19 44 47.2 -0.1**
VAL Valentia 31.91 315 P **P** **19 44 48.2 +0.9**
KALU Kalix 31.91 357 P **P** **19 44 47.1 -0.1**
MSF Maaselka 31.94 2 P **P** **19 44 46.7 -0.7**
WAL1 Walls 32.03 334 *eP* **P** **19 44 47.4 -0.9**
WAL1 Walls 32.03 334 *eP* **P** **19 44 47.4 -0.9**
RSC Scourie 32.26 329 *eP* **P** **19 44 50.0 -0.3**
RSC Scourie 32.26 329 *eP* **P** **19 44 50.0 -0.3**
SOKR Solikamsk 32.33 29*d i*P **P** **19 44 51.6 +0.7**
SOKR S **S** **19 49 59.3 -2.9**
SOKR pmax pmax
comp=Z,150nm,1.1s,mb5.7
SOKR MLR MLR
comp=Z,390nm,17.0s,MS4.2
HARU Harads 32.33 356 P **P** **19 44 49.6 -1.3**
SVE Sverdlovsk 32.46 35⇓ *e*P **P** **19 44 53.4 +1.3**
SVE *e*S **S** **19 50 06.8 +2.5**
SVE pmax pmax
comp=Z,121nm,0.9s,mb5.7
SVE MLR MLR
comp=Z,523nm,17.0s,MS4.3
RRH Rhenigidale 32.69 327 *eP* **P** **19 44 53.9 -0.2**
RRH Rhenigidale 32.69 327 *eP* **P** **19 44 53.9 -0.2**
MOR8 Moi Rana 32.97 351 *eP* **P** **19 44 56.5 0.0**
MOR8 Moi Rana 32.97 351 *eP* **P** **19 44 56.5 0.0**
SNR=31
PAJU Pajala 33.09 357 P **P** **19 44 59.0 +1.5**
FLOS Flostrand 33.27 350 *eP* **P** **19 44 59.3 +0.2**
DUNU Dundret 33.31 356 P **P** **19 45 01.6 +2.2**
SGF Sodankyl 33.44 360 P **P** **19 45 00.5 -0.1**
APA Apatity 33.80 5⇓ *i*P **P** **19 45 03.2 -0.5**
APA *i* pP 19 45 13.6 -0.1
APA *i* S **S** **19 50 20.0 -4.9**
APA pmax pmax
comp=Z,81nm,1.0s,mb5.6
APA pmax pmax
comp=Z,200nm,3.4s
APA MLR MLR
comp=Z,1μm,19.0s,MS4.7
EFAM Famara 34.39 273 P **P** **19 45 10.8 +1.5**
comp=Z,135nm,1.1s,mb5.8
EFAM Famara 34.39 273 P **P** **19 45 10.8 +1.5**
comp=Z,135nm,1.1s,mb5.8
STEI Steigen 34.56 352 *eP* **P** **19 45 10.1 -0.1**
STEI AMB AMB 19 45 13.1
comp=Z,50nm,1.3s,mb5.3
MBAR Mbarara 34.68 173 P **P** **19 45 13.4 +1.6**
comp=Z,57nm,0.6s,mb5.6,SNR=7.5
MBAR Mbarara 34.68 173 *eP* **P** **19 45 13.4 +1.6**
KBL Kabul 34.87 77 *eP* **P** **19 45 14.9 +1.5**
comp=Z,88nm,1.4s,mb5.5
KBL Kabul 34.87 77 *eP* **P** **19 45 14.9 +1.5**
KBL pmax pmax
comp=Z,88nm,1.4s,mb5.5
KBL Kabul 34.87 77 *eP* **P** **19 45 14.9 +1.5**
comp=Z,88nm,1.4s,mb5.5
KTK1 Kautokeino 35.07 358 *eP* **P** **19 45 13.2 -1.5**
KTK1 *eS* **S** **19 50 45.1 +0.6**
KTK1 Kautokeino 35.07 358 *eP* **P** **19 45 13.2 -1.5**
SNR=30
ARCES ARCESS Array B 35.55 359 P **P** **19 45 18.2 -0.6**
ARCES ARCESS Array B 35.55 359 P **P** **19 45 18.2 -0.6**
comp=Z,13nm,0.4s,mb5.2,baz=180,slow=9.3,SNR=185
ARCES ARCESS Array B 35.55 359 P **P** **19 45 18.2 -0.6**
ARCES pmax pmax
comp=Z,13nm,0.4s
ARCES ARCESS Array B 35.55 359 P **P** **19 45 18.2 -0.6**
ARE0 ARCESS Array S 35.55 359 *eP* **P** **19 45 18.2 -0.5**
ARE0 ARCESS Array S 35.55 359 *eP* **P** **19 45 18.2 -0.6**
PMPS Porto Santo 35.61 281 *eP* **P** **19 45 21.7 +1.9**
comp=Z,166nm,1.3s,mb5.8
PMPS Porto Santo 35.61 281 *eP* **P** **19 45 21.7 +1.9**
comp=Z,166nm,1.3s,mb5.8
KEV Kevo 35.77 0 *eP* **P** **19 45 20.0 -0.7**
comp=Z,56nm,1.1s,mb5.4
KEV Kevo 35.77 0 *eP* **P** **19 45 20.6 0.0**
KEV pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
KEV Kevo 35.77 0 *ep* **P** **19 45 20.6 0.0**
comp=Z,9.1nm,0.4s,mb5.1
KEV Kevo 35.77 0 *eP* **P** **19 45 20.0 -0.6**
comp=Z,56nm,1.1s,mb5.4
TRO Tromso 35.90 355 *eP* **P** **19 45 20.6 -1.2**
TRO AMB AMB 19 45 22.9
comp=Z,50nm,1.2s,mb5.3
TRO *eS* **S** **19 50 53.3 -3.9**
TRO AMS AMS 20 01 42.2
comp=Z,1μm,18.1s,MS4.8
TRO Tromso 35.90 355 P **P** **19 45 21.2 -0.6**
TRO Tromso 35.90 355 P **P** **19 45 21.2 -0.6**
PMAR Madeira 36.17 280 *eP* **P** **19 45 26.8 +2.3**
comp=Z,220nm,1.4s,mb5.9
BRVK Borovoye 36.22 45 P **P** **19 45 26.2 +1.5**
comp=Z,238nm,1.1s,mb6.0,SNR=10
BRVK Borovoye 36.22 45 *eP* **P** **19 45 26.1 +1.4**
comp=Z,56nm,1.1s,mb5.4
BRVK Borovoye 36.22 45*de*P **P** **19 45 25.9 +1.2**
BRVK pmax pmax
comp=Z,91nm,1.7s,mb5.4
BRVK Borovoye 36.22 45 *eP* **P** **19 45 26.1 +1.4**
comp=Z,56nm,1.1s,mb5.4
BRVK Borovoye 36.22 45 P **P** **19 45 26.3 +1.6**
SNR=29
BVAR Borovoye Array 36.27 45 P **P** **19 45 25.9 +0.7**
BVAR S **S** **19 51 02.5 -0.8**
BVAR Borovoye Array 36.27 45 P **P** **19 45 25.9 +0.8**
comp=Z,13nm,0.7s,mb5.0,baz=245,slow=6.4,SNR=68
BVAR S **S** **19 51 02.5 -0.8**
comp=Z,1.9nm,0.9s,baz=280,slow=17,SNR=2.4
BVAR P3KPbc 20 16 01.8
comp=Z,0.4nm,0.5s,baz=124,slow=1.5,SNR=4.0
BVAR Borovoye Array 36.27 45 P **P** **19 45 25.9 +0.7**
BVAR S **S** **19 51 02.5 -0.7**
BVAR pmax pmax
comp=Z,13nm,0.7s
BVAR smax
comp=N,2.0nm,0.9s
BVAR Borovoye Array 36.27 45 P **P** **19 45 25.9 +0.7**
BVAR S **S** **19 51 02.5 -0.7**
KMBO Kilima Mbogo 36.38 162 *eP* **P** **19 45 29.7 +3.3**
comp=N,22nm,1.4s,mb4.9
KMBO Kilima Mbogo 36.38 162 P **P** **19 45 30.0 +3.5**
comp=N,3.9nm,0.6s,mb4.5,baz=179,slow=24,SNR=10
KMBO PcP PcP 19 47 53.4 +2.8

comp=N,11nm,1.0s,baz=180,slow=24,SNR=7.5
KMBO LR LR 20 01 40.6
comp=N,890nm,19.6s,MS4.5,baz=90,slow=38
KMBO Kilima Mbogo 36.38 162 *e*P **P** **19 45 29.7 +3.2**
KMBO pmax pmax
comp=Z,22nm,1.4s
AML Almayashu 37.53 63 P **P** **19 45 38.6 +2.6**
SNR=11
EKS2 Erkin-Say 37.57 63 P **P** **19 45 38.2 +1.9**
SNR=88
USP Ospenovka 38.07 62 P **P** **19 45 41.5 +1.0**
SNR=24
AAK Ala-Archa 38.09 63 P **P** **19 45 42.4 +1.6**
comp=Z,561nm,0.5s,mb6.5,SNR=22
AAK Ala-Archa 38.09 63 *e*P **P** **19 45 42.8 +2.0**
comp=Z,73nm,0.8s,mb5.5
AAK Ala-Archa 38.09 63*d i*P **P** **19 45 42.6 +1.8**
AAK pmax pmax
comp=Z,96nm,1.7s,mb5.2
AAK Ala-Archa 38.09 63 P **P** **19 45 42.6 +1.8**
comp=Z,243nmcomp=Z,25nm,0.9s,mb4.9
AAK Ala-Archa 38.09 63 *e*P **P** **19 45 42.8 +2.0**
comp=Z,73nm,0.8s,mb5.5
AAK Ala-Archa 38.09 63 P **P** **19 45 43.0 +2.2**
SNR=48
UCH Uchtor 38.13 63 P **P** **19 45 47.7 +6.5**
SNR=7.6
CHMS Chumysh 38.26 62 P **P** **19 45 43.5 +1.3**
SNR=58
KBK Karagaybulak 38.43 62 P **P** **19 45 45.8 +2.2**
SNR=42
KZA Kyzart 38.69 63 P **P** **19 45 48.4 +2.6**
SNR=53
ULHL Ulahol 39.41 63 P **P** **19 45 54.3 +2.5**
SNR=15
KSH Kashi 39.52 67⇓*i*P **P** **19 45 52.4 -0.3**
KSH *e*pP pP 19 46 01.9 -1.0
KSH *e*sP sP 19 46 05.6 -1.4
KSH *e*PP PP 19 47 26.3 +2.6
KSH *e*PcP PcP 19 48 02.7 +2.8
KSH *e*ScP ScP 19 51 47.1 +1.2
KSH *e*S **S** **19 51 48.4 -4.3**
KSH *e*PcS PcS 19 51 50.3 +0.6
KSH *e*ScS ScS 19 55 57.2 -0.9
KSH pmax pmax
comp=Z,38nm,1.1s,mb5.0
KSH pmax pmax
comp=Z,270nm,3.1s
KSH LR LR
comp=N,670nm,18.3s
KSH LR LR
comp=E,160nm,7.2s
KSH LR LR
comp=Z,1μm,25.7s
DBIC Dimbokro 39.84 234 *e*P **P** **19 45 56.2 +0.6**
comp=Z,101nm,0.8s,mb5.6
DBIC Dimbokro 39.84 234 P **P** **19 45 56.2 +0.5**
comp=Z,19nm,0.5s,mb5.1,baz=26,slow=9.3,SNR=48
DBIC LR LR 20 04 25.0
comp=Z,805nm,21.2s,MS4.5,baz=25,slow=39
DBIC Dimbokro 39.84 234 *e*P **P** **19 45 56.3 +0.6**
DBIC pmax pmax
comp=Z,101nm,0.8s
DBIC Dimbokro 39.84 234 *e*P **P** **19 45 56.2 +0.5**
comp=Z,101nm,0.8s,mb5.6
TIC Toumodi 39.97 234⇓*i*P **P** **19 45 57.1 +0.4**
comp=Z,309nm,1.0s,mb6.0
TIC Toumodi 39.97 234⇓*i*P **P** **19 45 57.1 +0.4**
TIC pmax pmax
comp=Z,309nm,1.0s,mb6.0
TIC Toumodi 39.97 234⇓*i*P **P** **19 45 57.1 +0.4**
comp=Z,309nm,1.0s,mb6.0
KIC Kosan Boka 39.99 234⇓*i*P **P** **19 45 57.5 +0.6**
comp=Z,323nm,0.9s,mb6.0
KIC Kosan Boka 39.99 234⇓*i*P **P** **19 45 57.5 +0.6**
comp=Z,323nm,0.9s,mb6.1
LIC Lamto 40.28 234⇓*i*P **P** **19 45 59.9 +0.6**
comp=Z,490nm,1.0s,mb6.2
LIC Lamto 40.28 234⇓*i*P **P** **19 45 59.8 +0.5**
comp=Z,372nm,1.0s,mb5.8,baz=46
LIC *e*MLR MLR
comp=Z,2μm,19.0s,MS4.6
LIC Lamto 40.28 234⇓*i*P **P** **19 45 59.8 +0.5**
comp=Z,186nm,1.0s,mb5.8
LIC LR LR
comp=Z,830nm,19.0s,MS4.6
LIC Lamto 40.28 234⇓*i*P **P** **19 45 59.8 +0.5**
comp=Z,186nm,1.0s,mb5.8
BJO Bjornoya 40.71 357 *e*P **P** **19 45 59.3 -2.9**
THN Thein Dam 40.79 78 *e*PKP **P** **19 46 03.0 -0.4**
KURK Kurchatov 40.97 50 P **P** **19 46 05.4 +0.8**
comp=Z,470nm,0.9s,mb6.1,SNR=76
KURK Kurchatov 40.97 50 *e*P **P** **19 46 05.0 +0.4**
comp=Z,97nm,1.0s,mb5.4
KURK Kurchatov 40.97 50*de*P **P** **19 46 05.6 +1.0**
KURK pmax pmax
comp=Z,140nm,1.2s,mb5.5
KURK Kurchatov 40.97 50 *e*P **P** **19 46 05.1 +0.5**
comp=Z,97nm,1.0s,mb5.4
KURK Kurchatov 40.97 50 P **P** **19 46 06.1 +1.5**
SNR=43
JMIC Jan Mayen 41.50 343 *e*S **S** **19 52 21.8 +0.3**
JMIC AMB AMB 20 05 00.8
comp=Z,561nm,21.5s,MS4.4
JMIC Jan Mayen 41.50 343 *e*S **S** **19 52 21.8 +0.3**
SNR=30
BHK Bhakra 41.65 79 *ex* **P** **19 46 07.5 -3.0**
AJM Ajmer 41.86 87 *e*PKP **P** **19 46 12.8 +0.6**
AJM AMb AMB 19 46 15.2
comp=Z,41nm,0.7s,mb5.2
SDNR Sundarnagar 42.08 79 *e*PKP **P** **19 46 14.5 +0.5**
BORG Borgarnes 42.10 332 *e*P **P** **19 46 15.2 +1.6**
comp=Z,143nm,1.6s,mb5.3
BORG Borgarnes 42.10 332 *e*P **P** **19 46 15.2 +1.5**
BORG pmax pmax
comp=Z,143nm,1.6s
BORG Borgarnes 42.10 332 *e*P **P** **19 46 15.2 +1.5**
comp=Z,143nm,1.6s,mb5.3
KHET Khetri 42.24 84 *e*PKP **P** **19 46 17.1 +1.8**
KHET AMb AMB 19 46 18.9
comp=Z,78nm,1.2s,mb5.2
SMLA Simla 42.35 79 *i* P **P** **19 46 16.8 +0.6**
KUDL Kundal 42.78 84 *e*PKP **P** **19 46 20.9 +1.2**
KUDL AMb AMB 19 46 22.0
comp=Z,106nm,1.0s,mb5.5
KLP Kalpa 43.11 78 *e*PKP **P** **19 46 23.9 +1.6**
AYAN Aya Nagar 43.19 83 *e*PKP **P** **19 46 24.7 +1.7**
NDI New Delhi 43.19 83 *e*PKP **P** **19 46 22.0 -1.0**
SONA Sohna 43.23 83 *e*PKP **P** **19 46 24.4 +1.0**
SONA AMb AMB 19 46 27.4
comp=Z,78nm,1.3s,mb5.3
MK31 Makanchi Array 43.40 56 *e*P **P** **19 46 25.7 +1.2**
MK31 Makanchi Array 43.40 56 *e*P **P** **19 46 25.7 +1.2**
MKAR Makanchi Array 43.40 56 P **P** **19 46 25.7 +1.2**
comp=Z,52nm,0.6s,mb5.5,baz=270,slow=7.0,SNR=700
MKAR ScP ScP 19 52 01.4 +0.2
comp=Z,2.8nm,0.8s,baz=294,slow=1.2,SNR=4.3
MKAR S **S** **19 52 49.6 -0.5**
comp=Z,1.3nm,0.9s,baz=262,slow=11,SNR=2.8
MKAR Makanchi Array 43.40 56 *i* P **P** **19 46 25.7 +1.2**
MKAR pmax pmax
comp=Z,52nm,0.6s
NVS Novosibirsk 44.05 44⇓*i*P **P** **19 46 31.0 +1.5**
NVS *i* 19 48 14.5
NVS *i* S **S** **19 52 58.8 -0.5**
NVS *i* SS SS 19 56 25.4 +8.5
NVS pmax pmax
comp=Z,167nm,1.2s,mb5.6
NVS pmax pmax
comp=N,32nm,0.8s
NVS pmax pmax
comp=E,70nm,1.0s
NVS pmax pmax
comp=N,47nm,1.9s
NVS pmax pmax
comp=E,60nm,1.9s
NVS pmax pmax
comp=Z,128nm,1.9s,mb5.3
NVS smax
comp=N,234nm,2.6s
NVS smax
comp=E,42nm,1.3s
AGRA Agra 44.31 84 *e*PKP **P** **19 46 31.6 -0.4**
JOSI Joshimath 44.48 79 *e*PKP **P** **19 46 34.6 +1.2**
POO Poona 44.69 98 *e*PKP **P** **19 46 35.4 +0.2**
POO AMb AMB 19 46 38.6
comp=Z,103nm,1.4s,mb5.5
SCO Scoresbysund 44.81 339⇑*i*P **P** **19 46 36.8 +1.4**
SCO pmax pmax
comp=Z,30nm,1.0s,mb5.1
SCO MLR MLR
comp=Z,190nm,20.0s,MS4.0
SCO Scoresbysund 44.81 339⇑*i*P **P** **19 46 36.8 +1.4**
comp=Z,30nm,1.0s,mb5.1
SCO
comp=Z,180nm,20.0s
SCO Scoresbysund 44.81 339⇑*i*P **P** **19 46 36.8 +1.4**
comp=Z,30nm,1.0s,mb5.1,SNR=25
ZAA0 Zalesovo Array 44.92 45 *e*P **P** **19 46 37.0 +0.4**
ZAA0 Zalesovo Array 44.92 45 *e*P **P** **19 46 37.0 +0.4**
ZALV Zalesovo Beam 44.92 45 P **P** **19 46 37.1 +0.6**
comp=Z,27nm,0.3s,mb5.5,baz=266,slow=9.1,SNR=153
ZALV ScP ScP 19 52 06.9 -0.3
comp=Z,2.0nm,0.8s,baz=282,slow=2.8,SNR=3.2
ZALV S **S** **19 53 10.8 -1.3**
comp=Z,1.2nm,0.6s,baz=256,slow=18,SNR=4.2
ZALV Zalesovo Beam 44.92 45 P **P** **19 46 37.2 +0.6**
ZALV S **S** **19 53 10.8 -1.3**
ZALV pmax pmax
comp=Z,27nm,0.4s,mb5.4
ZALV smax
comp=N,1.0nm,0.6s
KBS Kingsbay 45.41 356 *e*P **P** **19 46 40.0 -0.2**
KBS *e*ScP ScP 19 52 08.6 -0.3
KBS AMS AMS 20 05 30.8
comp=Z,971nm,24.2s,MS4.7
KBS Kingsbay 45.41 356 *e*P **P** **19 46 40.2 +0.1**
comp=Z,57nm,1.1s,mb5.3
KBS Kingsbay 45.41 356 *e*P **P** **19 46 40.6 +0.5**
KBS pmax pmax
comp=Z,50nm,1.0s,mb5.3
KBS Kingsbay 45.41 356 *e*P **P** **19 46 40.2 +0.1**
comp=Z,57nm,1.1s,mb5.3
KBS *e*ScP ScP 19 52 08.6 -0.3
SNR=8.0
BHPL Bhopal 45.48 90 *e*PKP **P** **19 46 42.3 +1.0**
KAD Karad 45.58 99 *e*PKP **P** **19 46 43.0 +0.8**
KAD AMb AMB 19 46 45.6
comp=Z,104nm,1.2s,mb5.7
AKL Akola 46.27 93 *e*PKP **P** **19 46 49.7 +2.1**
AKL AMb AMB 19 46 51.3
comp=Z,98nm,1.8s,mb5.4
LATR Latur 46.98 96 *e*PKP **P** **19 46 54.5 +1.2**
LATR AMb AMB 19 46 56.3
comp=Z,117nm,1.2s,mb5.7
DAG Danmarks Havn 47.40 347⇓*e*P **P** **19 46 55.9 +0.1**
DAG pmax pmax
comp=Z,18nm,1.0s,mb5.0
DAG Danmarks Havn 47.40 347⇓*i*P **P** **19 46 55.9 +0.1**
comp=Z,18nm,1.0s,mb5.0
WMQ Urumqi 47.54 59 P **P** **19 46 59.8 +2.5**
WMQ pP pP 19 47 09.7 +2.1
WMQ sP sP 19 47 13.6 +1.9
WMQ PcP PcP 19 48 30.1 +3.2
WMQ PP PP 19 48 50.5 +1.8
WMQ ScP ScP 19 52 20.2 +1.8
WMQ S **S** **19 53 51.3 +1.4**
WMQ ScS ScS 19 56 48.2 0.0
WMQ SS SS 19 57 13.1 -4.7
WMQ pmax pmax
comp=Z,96nm,1.4s,mb5.6
WMQ pmax pmax
comp=Z,500nm,4.0s
WMQ LR LR
comp=N,2μm,30.0s,MS4.9
WMQ LR LR
comp=E,1μm,32.0s,MS4.9
WMQ LR LR
comp=Z,900nm,21.6s
KOLN Koldanda 48.77 81 *e*P **P** **19 47 08.0 +1.0**
comp=Z,311nm,1.1s,mb6.2
LSZ Lusaka 49.06 178 *e*P **P** **19 47 10.6 +1.4**
comp=Z,15nm,0.7s,mb5.1
LSZ *e*PcP PcP 19 48 34.9 +2.3
LSZ Lusaka 49.06 178 *e*P **P** **19 47 10.6 +1.4**
LSZ *e* 19 48 34.9
LSZ pmax pmax
comp=Z,15nm,0.7s,mb5.1
LSZ Lusaka 49.06 178 *e*P **P** **19 47 10.6 +1.4**
comp=Z,15nm,0.7s,mb5.1
HYB Hyderabad 49.12 96 *i* P **P** **19 47 11.0 +1.2**
GKN Gorkha 49.53 80 *e*P **P** **19 47 13.8 +1.0**
comp=Z,716nm,1.1s,mb6.6
DMN Daman 50.06 81 *e*P **P** **19 47 18.2 +1.3**
comp=Z,843nm,1.2s,mb6.7
KKN Kakani 50.14 80 *e*P **P** **19 47 18.7 +1.3**
comp=Z,619nm,1.0s,mb6.6
PKIN Phulchoki 50.31 81 *e*P **P** **19 47 19.9 +1.1**
comp=Z,178nm,0.8s,mb6.2
PKI Pulchoki 50.33 81 *e*P **P** **19 47 20.0 +1.1**
comp=Z,744nm,1.2s,mb6.6
SUMG Summit 50.45 339 *e*P **P** **19 47 20.9 +1.7**
comp=Z,56nm,1.1s,mb5.5
SUMG Summit 50.45 339⇑*i*P **P** **19 47 20.2 +1.1**
comp=Z,37nm,1.0s,mb5.4
SUMG Summit 50.45 339⇑*i*P **P** **19 47 20.3 +1.2**
comp=Z,37nm,1.0s,mb5.4,SNR=23
GUN Gumba 50.58 80 *e*P **P** **19 47 22.1 +1.3**
comp=Z,510nm,0.8s,mb6.5
JIRN Jiri 50.93 80 *e*P **P** **19 47 24.9 +1.5**
comp=Z,370nm,0.8s,mb6.3
RAMN Ramite 51.54 81 *e*P **P** **19 47 28.3 +0.3**
comp=Z,248nm,1.1s,mb6.1
ODAN Odare 52.23 81 *e*P **P** **19 47 33.4 +0.3**
comp=Z,208nm,1.1s,mb6.0
TAPN Taplejung 52.30 80 *e*P **P** **19 47 34.5 +0.9**
comp=Z,285nm,0.9s,mb6.2
TSUM Tsumeb 53.64 191 *e*P **P** **19 47 45.0 +1.5**
comp=Z,14nm,0.7s,mb5.0
TSUM Tsumeb 53.64 191 *e*P **P** **19 47 45.0 +1.6**
comp=Z,14nm,0.7s,mb5.0
MOY Mondy 54.89 47 *e*P **P** **19 47 54.2 +1.9**
MOY pmax pmax
comp=Z,107nm,2.5s,mb5.4
MSNA Messina 56.17 176 P **P** **19 48 03.5 +1.8**
MSNA Messina 56.17 176 P **P** **19 48 03.5 +1.8**
ALE Alert 56.33 351 P **P** **19 48 02.8 +0.5**
comp=Z,293nm,1.0s,mb6.3,SNR=19
SHL Shillong 56.44 80 *i* P **P** **19 48 05.0 +1.2**
TLY Talaya 56.49 47 P **P** **19 48 06.9 +3.1**
comp=Z,154nm,0.7s,mb6.1,SNR=5.6
TLY Talaya 56.49 47 *e*P **P** **19 48 06.4 +2.6**
comp=Z,46nm,1.1s,mb5.4
TLY Talaya 56.49 47 *e*P **P** **19 48 04.2 +0.4**
TLY pmax pmax
comp=Z,36nm,1.1s,mb5.3
TLY MLR MLR
comp=Z,458nm,21.0s,MS4.5
TLY Talaya 56.49 47 P **P** **19 48 06.2 +2.4**
SNR=12
TLY Talaya 56.49 47 P **P** **19 48 06.2 +2.4**
SNR=12
ZAK Zakamensk 56.59 48⇑*e*P **P** **19 48 06.0 +1.5**
ZAK pmax pmax
comp=Z,27nm,1.1s,mb5.2
IRK Irkutsk 56.73 46 *e*P **P** **19 48 04.5 -1.0**
IRK *e*S **S** **19 55 56.4 +0.7**
IRK pmax pmax
comp=Z,123nm,1.6s,mb5.7
GTA Gaotai 57.44 62 ⇓P **P** **19 48 12.0 +1.3**
GTA pP pP 19 48 22.1 +0.9
GTA sP sP 19 48 26.2 +0.9
GTA S **S** **19 56 05.0 -0.3**
GTA sS sS 19 56 21.2 -1.5
GTA SS SS 19 59 55.1 +0.1
GTA pmax pmax
comp=Z,78nm,1.2s,mb5.6
GTA pmax pmax
comp=Z,270nm,5.7s
GTA LR LR
comp=N,370nm,20.4s,MS4.6
GTA LR LR
comp=E,330nm,19.8s,MS4.6
GTA LR LR
comp=Z,520nm,20.1s,MS4.6
LBTB Lobatse 58.74 181 *e*P **P** **19 48 22.0 +2.3**
comp=Z,23nm,0.8s,mb5.3
LBTB Lobatse 58.74 181 *e*P **P** **19 48 22.0 +2.3**
LBTB pmax pmax
comp=Z,23nm,0.8s,mb5.3
LBTB Lobatse 58.74 181 *e*P **P** **19 48 22.0 +2.3**
comp=Z,23nm,0.8s,mb5.3
SONM Songino Array 59.27 50 P **P** **19 48 24.8 +1.5**
comp=Z,22nm,0.5s,mb5.4,baz=284,slow=7.7,SNR=183
SONM ScP ScP 19 53 10.0 +0.7
comp=Z,2.0nm,0.9s,baz=265,slow=5.2,SNR=4.8
SONM Songino Array 59.27 50 P **P** **19 48 24.8 +1.5**
ULN Ulaanbaatar 59.68 50 *e*P **P** **19 48 27.9 +1.7**
comp=Z,54nm,1.0s,mb5.5
ULN Ulaanbaatar 59.68 50 *e*P **P** **19 48 27.9 +1.7**
ULN pmax pmax
comp=Z,54nm,1.0s,mb5.5
ULN Ulaanbaatar 59.68 50 P **P** **19 48 27.9 +1.7**
comp=Z,601nmcomp=Z,64nm,1.4s,mb5.5
ULN Ulaanbaatar 59.68 50 *e*P **P** **19 48 27.9 +1.7**
comp=Z,54nm,1.0s,mb5.5
ULN Ulaanbaatar 59.68 50 P **P** **19 48 27.9 +1.8**
SNR=25
LZH Lanzhou 61.62 64 ⇓P **P** **19 48 41.0 +1.5**
LZH pP pP 19 48 51.0 +0.9
LZH sP sP 19 48 55.2 +1.0
LZH PP PP 19 50 58.0 +2.8
LZH S **S** **19 56 57.5 -1.9**
LZH sS sS 19 57 15.0 -1.8
LZH SS SS 20 01 00.3 -0.3
LZH pmax pmax
comp=Z,99nm,1.5s,mb5.7
LZH pmax pmax
comp=Z,190nm,4.3s
LZH LR LR
comp=E,770nm,15.2s
LZH LR LR
comp=Z,1μm,18.0s,MS5.0
TIXI Tiksi 61.79 21 *e*P **P** **19 48 40.3 +0.2**
comp=Z,13nm,0.7s,mb5.2
TIXI Tiksi 61.79 21 *e*P **P** **19 48 40.6 +0.5**
TIXI *e*S **S** **19 56 57.9 -2.6**
TIXI pmax pmax
comp=Z,19nm,1.0s,mb5.2
TIXI MLR MLR
comp=Z,531nm,18.0s,MS4.7
TIXI Tiksi 61.79 21 *e*P **P** **19 48 40.3 +0.2**
comp=Z,13nm,0.7s,mb5.2
CIT Chita 62.26 44 *e*P **P** **19 48 44.0 +0.4**
CIT *e* pP 19 48 55.6 +1.4
CIT *e* 19 49 22.3
CIT pmax pmax
comp=Z,112nm,1.8s,mb5.7
BOSA Boshof 62.33 181 *e*P **P** **19 48 45.5 +1.3**
comp=Z,38nm,1.3s,mb5.4
BOSA Boshof 62.33 181 P **P** **19 48 46.0 +1.9**
comp=Z,11nm,0.5s,mb5.2,baz=360,slow=7.0,SNR=53
BOSA LR LR 20 18 33.1
comp=Z,425nm,20.8s,MS4.6,baz=2.6,slow=38
BOSA Boshof 62.33 181 P **P** **19 48 46.1 +1.9**
BOSA pmax pmax
comp=Z,11nm,0.5s,mb5.2
BOSA MLR MLR
comp=Z,425nm,20.8s,MS4.6
BOSA Boshof 62.33 181 *e*P **P** **19 48 45.5 +1.3**
comp=Z,38nm,1.3s,mb5.4
CD2 Chengdu 63.67 69 P **P** **19 48 54.4 +1.1**
CD2 pP pP 19 49 04.6 +0.7
CD2 sP sP 19 49 08.5 +0.5
CD2 PP PP 19 51 15.5 +2.1
CD2 S **S** **19 57 23.1 -2.2**
CD2 sS sS 19 57 40.0 -2.8
CD2 SS SS 20 01 31.9 -1.0
CD2 pmax pmax
comp=Z,190nm,0.9s,mb6.1
CD2 pmax pmax
comp=Z,180nm,4.9s
CD2 LR LR
comp=N,280nm,28.0s,MS4.5
CD2 LR LR
comp=E,330nm,27.0s,MS4.5
CD2 LR LR
comp=Z,390nm,22.0s,MS4.5
BTO Baotou 64.29 57 *e*P **P** **19 48 53.7 -3.5**
SCHQ Schefferville 64.81 320 *e*P **P** **19 49 01.4 +1.0**
comp=Z,34nm,0.8s,mb5.4
SCHQ Schefferville 64.81 320 P **P** **19 49 01.2 +0.8**
comp=Z,18nm,0.4s,mb5.4,baz=57,slow=5.4,SNR=37
SCHQ LR LR 20 17 25.2
comp=Z,256nm,21.9s,MS4.4,baz=69,slow=36
SCHQ Schefferville 64.81 320 *e*P **P** **19 49 01.4 +1.0**
comp=Z,34nm,0.8s,mb5.4
HHC Hu-ho-hao-te 65.26 56 *e*P **P** **19 49 05.5 +1.9**
HHC pP pP 19 49 15.4 +1.2
HHC sP sP 19 49 19.4 +1.1
HHC PcS 19 53 41.1
HHC S S 19 57 44.2 -0.5
HHC sS sS 19 58 01.3 -0.9
HHC ScS ScS 19 58 53.6 -2.6
HHC SS SS 20 01 57.9 +0.6
HHC pmax pmax
comp=Z,180nm,0.7s,mb6.2
HHC pmax pmax
comp=Z,160nm,4.1s
HHC LR LR
comp=N,280nm,19.0s,MS4.8
HHC LR LR
comp=E,430nm,16.5s,MS4.8
HHC LR LR
comp=Z,500nm,18.4s,MS4.8
CHTO Chiang Mai 65.33 83 *e*P **P** **19 49 04.5 +0.1**
comp=Z,119nm,1.4s,mb5.7
CHTO Chiang Mai 65.33 83 *e*P **P** **19 49 04.5 +0.1**
CHTO pmax pmax
comp=Z,119nm,1.4s,mb5.7
CHTO Chiang Mai 65.33 83 P **P** **19 49 05.1 +0.7**
comp=Z,902nmcomp=Z,70nm,1.5s,mb5.5
CHTO Chiang Mai 65.33 83 *e*P **P** **19 49 04.5 +0.1**
comp=Z,119nm,1.4s,mb5.7
CHTO Chiang Mai 65.33 83 P **P** **19 49 05.2 +0.9**
SNR=18
KMI Kunming 65.44 75 ⇓P **P** **19 49 05.6 +0.7**
KMI pP pP 19 49 16.2 +0.6
KMI sP sP 19 49 20.5 +0.8
KMI PcP PcP 19 49 37.5 +0.8
KMI PP PP 19 51 28.9 -0.1
KMI S S 19 57 47.6 +0.4
KMI SS SS 20 02 00.8 +0.1
KMI pmax pmax
comp=Z,45nm,1.1s,mb5.4
KMI pmax pmax
comp=Z,220nm,4.0s
KMI LR LR
comp=N,310nm,22.9s,MS4.5
KMI LR LR
comp=E,170nm,22.1s,MS4.5
KMI LR LR
comp=Z,290nm,19.1s,MS4.5
CM31 Chiang Mai Arr 65.51 84 *e*P **P** **19 49 06.1 +0.6**
CM31 Chiang Mai Arr 65.51 84 *e*P **P** **19 49 06.1 +0.6**
CMAR Chiang Mai Arr 65.51 84 P **P** **19 49 06.0 +0.5**
comp=Z,40nm,0.7s,mb5.5,baz=297,slow=8.2,SNR=191
CMAR Chiang Mai Arr 65.51 84 P **P** **19 49 06.0 +0.5**
CMAR pmax pmax
comp=Z,40nm,0.7s
CMAR Chiang Mai Arr 65.51 84 P **P** **19 49 05.9 +0.4**
CHRT Chiangrai 65.51 82 ⇓P **P** **19 49 05.5 0.0**
comp=Z,1μm,1.1s
BDT Bhumibol Dam 66.16 85 P **P** **19 49 10.0 +0.3**
comp=Z,18nm,1.0s,mb5.0
YAK Yakutsk 66.24 30 *e*P **P** **19 49 09.4 -0.1**
comp=Z,38nm,0.6s,mb5.6
YAK Yakutsk 66.24 30 *e*P **P** **19 49 09.5 0.0**
YAK pmax pmax
comp=Z,23nm,0.9s,mb5.2
YAK pmax pmax
comp=E,13nm,1.3s
YAK Yakutsk 66.24 30 *e*P **P** **19 49 09.4 -0.1**
comp=E,38nm,0.6s,mb5.6
XAN Xi'an 66.25 64 P **P** **19 49 11.9 +1.8**
XAN pP pP 19 49 23.6 +2.9
XAN pmax pmax
comp=Z,22nm,1.1s,mb5.1
CLNS Chul'man 66.44 36 *e*P **P** **19 49 12.2 +1.4**
CLNS pmax pmax
comp=Z,34nm,1.1s,mb5.3
CLNS pmax pmax
comp=N,9.0nm,1.1s
CLNS pmax pmax
comp=E,10.0nm,1.1s
NST Nakhon Sawan 67.89 86 P **P** **19 49 21.5 +0.8**
GYA Guiyang 67.94 72⇑*i*P **P** **19 49 21.4 +0.5**
GYA pP pP 19 49 32.3 +0.7

GYA sP sP 19 49 38.5 +2.8
GYA PcP PcP 19 49 51.0 +3.8
GYA PP PP 19 51 55.2 +4.4
GYA ScP 19 53 51.0
GYA SKS 19 59 16.2
GYA SS SS 20 02 41.6 +2.0
GYA pmax pmax
comp=Z,80nm,1.0s,mb5.7
GYA pmax pmax
comp=Z,180nm,6.8s
GYA LR LR
comp=N,880nm,19.0s,MS5.1
GYA LR LR
comp=E,740nm,20.8s,MS5.1
GYA LR LR
comp=Z,970nm,18.4s,MS5.1
BJI Beijing 68.78 55 P **P 19 49 26.9 +0.9**
BJI PP PP 19 52 01.1 +3.4
BJI S S 19 58 28.4 +1.3
BJI SS SS 20 02 53.8 +1.9
BJI pmax pmax
comp=Z,71nm,1.1s,mb5.5
BJI LR LR
comp=N,430nm,35.3s,MS4.5
BJI LR LR
comp=E,240nm,38.9s,MS4.5
BJI LR LR
comp=Z,140nm,38.9s,MS3.9
RCBR Riachuelo 71.03 249 *e*P **P 19 49 42.5 +2.4**
comp=Z,21nm,0.9s,mb5.1
RCBR *e*pP pP 19 49 52.2 +1.4
RCBR Riachuelo 71.03 249 *e*P **P 19 49 42.5 +2.4**
comp=Z,21nm,0.9s,mb5.1
RCBR *e*pP pP 19 49 52.2 +1.4
TIA Tai'an 71.23 59 *e*P **P 19 49 41.9 +0.8**
WHN Wuhan 71.94 65 ⇑P **P 19 49 46.5 +1.1**
WHN S S 19 59 02.6 -1.7
WHN pmax pmax
comp=Z,330nm,1.7s,mb6.0
WHN LR LR
comp=N,540nm,17.8s,MS4.9
WHN LR LR
comp=E,450nm,21.5s,MS4.9
WHN LR LR
comp=Z,750nm,20.4s,MS5.0
TPTI 72.11 98 P **P 19 49 47.8 +1.2**
comp=Z,1μmcomp=Z,98nm,0.7s,mb5.8
LBNH Lisbon 72.61 312 *e*P **P 19 49 52.2 +3.0**
comp=Z,30nm,0.9s,mb5.2
LBNH Lisbon 72.61 312 *e*P **P 19 49 52.2 +3.0**
LBNH pmax pmax
comp=Z,30nm,0.9s,mb5.2
SNG Songkhla 72.77 93 P **P 19 49 51.0 +0.4**
comp=Z,160nm,0.8s,mb6.0
CN2 Changchun 73.03 48 *e*P **P 19 49 52.1 +0.5**
CN2 *e*pP pP 19 50 02.5 +0.1
CN2 *e*S S 19 59 16.5 +0.2
CN2 SS SS 20 03 55.6 -1.1
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,700nm,20.0s,MS5.0
CN2 LR LR
comp=E,500nm,20.0s,MS5.0
CN2 LR LR
comp=Z,400nm,21.0s,MS4.7
DL2 Dalian 73.03 54 P **P 19 49 51.7 -0.1**
DL2 S S 19 59 14.3 -2.2
DL2 pmax pmax
comp=Z,20nm,0.6s,mb5.2
DL2 LR LR
comp=N,160nm,19.4s,MS4.4
DL2 LR LR
comp=E,80nm,18.8s,MS4.4
DL2 LR LR
comp=Z,190nm,19.9s,MS4.4
TSI Tuntungan 73.11 97 P **P 19 49 52.6 0.0**
HNH Hanover 73.11 312 *e*P **P 19 49 54.4 +2.2**
HNH Hanover 73.11 312 *e*P **P 19 49 54.4 +2.2**
FRNY Flat Rock 73.33 313 *e*P **P 19 49 55.4 +2.0**
comp=Z,24nm,0.9s,mb5.1
FRNY Flat Rock 73.33 313 *e*P **P 19 49 55.4 +2.0**
comp=Z,24nm,0.9s,mb5.1
MDV Middlebury 73.51 312 *e*P **P 19 50 00.9 +6.4**
KLR Kul'dur 73.82 41 *e*P **P 19 49 53.2 -3.0**
KLR pmax pmax
comp=E,28nm,1.4s
KLR pmax pmax
comp=Z,62nm,1.4s,mb5.3
KULM Kulim 73.83 95 P **P 19 49 57.8 +0.9**
comp=Z,1μmcomp=Z,109nm,1.1s,mb5.7
LONY Lake Ozonia 74.04 313 *e*P **P 19 49 58.6 +1.0**
comp=Z,27nm,1.1s,mb5.1
LONY Lake Ozonia 74.04 313 *e*P **P 19 49 58.6 +1.0**
comp=Z,27nm,1.1s,mb5.1
ACCN Adirondack Com 74.14 312 *e*P **P 19 50 02.0 +3.8**
comp=Z,24nm,0.8s,mb5.2
NCB Newcomb 74.17 313 *e*P **P 19 49 58.9 +0.5**
comp=Z,29nm,1.4s,mb5.0
NCB Newcomb 74.17 313 *e*P **P 19 49 58.9 +0.5**
comp=Z,29nm,1.4s,mb5.0
NJ2 Nanjing 74.53 62 *e*P **P 19 50 01.5 +0.8**
NJ2 pP pP 19 50 12.3 +0.8
NJ2 sP sP 19 50 16.3 +0.8
NJ2 PP PP 19 52 48.7 +1.5
NJ2 S S 19 59 33.0 -0.7
NJ2 sS sS 19 59 50.0 -1.5
NJ2 pmax pmax
comp=Z,40nm,0.9s,mb5.3
NJ2 pmax pmax
comp=Z,1μm,7.8s
NJ2 LR LR
comp=N,1μm,21.1s,MS5.7
NJ2 LR LR
comp=E,4μm,24.2s,MS5.7
NJ2 LR LR
comp=Z,2μm,23.4s,MS5.4
IPM Ipoh 74.59 95 P **P 19 50 00.9 -0.4**
IPM Ipoh 74.59 95 P **P 19 50 01.8 +0.5**
IPM Ipoh 74.59 95 P **P 19 50 01.3 0.0**
comp=Z,38nm,1.6s,mb5.1
MDJ Mudanjiang 75.12 46 P **P 19 50 02.6 -1.3**
MDJ pP pP 19 50 12.1 -2.6
MDJ sP sP 19 50 15.8 -2.9
MDJ PP PP 19 52 49.3 -2.5
MDJ S S 19 59 37.1 -2.7
MDJ pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
MDJ pmax pmax
comp=Z,74nm,4.2s
MDJ LR LR
comp=N,310nm,32.3s,MS4.5
MDJ LR LR
comp=E,170nm,32.3s,MS4.5
MDJ LR LR
comp=Z,230nm,19.4s
FCC Fort Churchill 75.25 332 *e*P **P 19 50 06.1 +1.7**
comp=Z,1.3nm,1.4s
FCC Fort Churchill 75.25 332 *e*P **P 19 50 06.1 +1.8**
comp=Z,1.3nm,1.4s
MNSI Mandailing Nat 75.47 99 P **P 19 50 06.9 +0.5**
comp=Z,890nmcomp=Z,67nm,1.4s,mb5.4
HABR Khabarovsk 76.05 41 *e*P **P 19 50 09.2 +0.1**
HABR *e* pP 19 50 20.3 +0.4
HABR *e**SP sP 19 50 22.9 -1.0
HABR *e* 19 52 59.0
HABR *e*S S 19 59 50.7 +0.8
HABR *e**SS sS 20 00 07.4 -0.4
HABR *e* 20 00 20.4
HABR pmax pmax
comp=Z,70nm,2.1s,mb5.2
HABR pmax pmax
comp=N,34nm,2.3s
HABR pmax pmax
comp=E,44nm,2.1s
HABR MLR MLR
comp=Z,118nm,18.0s,MS4.2
BINY Binghamton 76.21 312 *e*P **P 19 50 12.4 +2.2**
comp=Z,29nm,0.8s,mb5.3
BINY Binghamton 76.21 312 *e*P **P 19 50 12.4 +2.2**
comp=Z,29nm,0.8s,mb5.3
PPI Padang Panjang 76.85 100 P **P 19 50 15.1 +0.9**
comp=Z,2μmcomp=Z,71nm,0.8s,mb5.7
BKNI Bangkinang 76.94 99 P **P 19 50 15.2 +0.5**
comp=Z,2μmcomp=Z,204nm,1.4s,mb5.9
INCN Inchon 77.13 53 *e*P **P 19 50 16.3 +0.9**
comp=Z,38nm,0.7s,mb5.4
INCN Inchon 77.13 53 *e*P **P 19 50 16.3 +0.8**
comp=Z,38nm,0.7s,mb5.4
INCN Inchon 77.13 53 P **P 19 50 16.7 +1.3**
SNR=6.1
PDSI Padang 77.17 100 P **P 19 50 16.8 +0.8**
comp=Z,3μmcomp=Z,350nm,0.9s,mb6.3
VLA Vladivostok 77.34 46 *e*P **P 19 50 16.0 -0.5**
VLA pmax pmax
comp=Z,64nm,1.2s,mb5.4
MVL Millersville 77.66 310 *e*P **P 19 50 21.3 +2.9**
comp=Z,36nm,0.9s,mb5.3
KGM Kluang 77.86 96 P **P 19 50 21.2 +1.3**
SDSI Sungai Dareh 77.97 99 P **P 19 50 20.6 +0.1**
comp=Z,2μmcomp=Z,148nm,0.9s,mb5.9
KSRS Korea Array 78.01 53 P **P 19 50 21.1 +0.8**
comp=Z,25nm,0.7s,mb5.3,baz=303,slow=4.8,SNR=119
KSRS PKKP PKKPdf 20 09 05.2 -1.1
comp=Z,0.5nm,0.3s,baz=295,slow=5.7,SNR=4.7
KSRS LR LR 20 30 31.8
comp=Z,349nm,21.6s,MS4.7,baz=310,slow=40
SDMD Soldier's Deli 78.31 310 *e*P **P 19 50 25.4 +3.4**
comp=Z,37nm,1.0s,mb5.3
RGRI Rengat 78.38 98 P **P 19 50 22.7 0.0**
comp=Z,66nm,1.1s,mb5.5
MYKOM Kota Tinggi 78.43 96 P **P 19 50 24.4 +1.4**
MYKOM Kota Tinggi 78.43 96 P **P 19 50 23.7 +0.7**
comp=Z,68nm,1.1s,mb5.5
ERPA Erie 78.71 313 *e*P **P 19 50 26.6 +2.4**
ERPA Erie 78.71 313 *e*P **P 19 50 26.6 +2.5**
YKA Yellowknife Ar 78.88 343 P **P 19 50 25.2 +0.6**
YKA Yellowknife Ar 78.88 343 P **P 19 50 25.2 +0.6**
comp=Z,8.2nm,0.7s,mb4.8,baz=35,slow=5.3,SNR=29
YKA Yellowknife Ar 78.88 343 P **P 19 50 25.2 +0.6**
YKA pmax pmax
comp=Z,8.0nm,0.7s
YKA Yellowknife Ar 78.88 343 P **P 19 50 25.2 +0.6**
COLD Coldfoot 79.02 359 *e*P **P 19 50 26.6 +1.3**
comp=Z,28nm,1.2s,mb5.1
COLD Coldfoot 79.02 359 *e*P **P 19 50 26.6 +1.3**
comp=Z,28nm,1.2s,mb5.1
JSRW J. Sargeant Re 79.95 309 *e*pP pP 19 50 43.1 +1.3
JSRW J. Sargeant Re 79.95 309 *e*pP pP 19 50 43.1 +1.2
YHNB Yeheng 80.30 67 *e*P **P 19 50 34.3 +1.2**
comp=Z,63nm,1.3s,mb5.4
YHNB Yeheng 80.30 67 *e*P **P 19 50 34.3 +1.2**
comp=Z,63nm,1.3s,mb5.4
TPUB Ta-pu 80.47 68 *e*P **P 19 50 32.6 -1.4**
comp=Z,1μm,2.5s,mb6.4
TPUB Ta-pu 80.47 68 *e*P **P 19 50 32.6 -1.4**
comp=Z,1μm,2.5s,mb6.4
KSI Kapahiang 80.47 101 P **P 19 50 35.2 +1.1**
comp=Z,138nm,0.9s,mb5.9
EGAK Eagle 81.04 355 *e*P **P 19 50 38.8 +2.5**
comp=Z,46nm,1.6s,mb5.2
EGAK Eagle 81.04 355 *e*P **P 19 50 38.8 +2.5**
comp=Z,46nm,1.6s,mb5.2
YSS Yuzh-Sakhalins 81.07 38 *e*P **P 19 50 37.9 +1.1**
comp=Z,41nm,1.0s,mb5.3
YSS Yuzh-Sakhalins 81.07 38⇓*e*P **P 19 50 38.0 +1.2**
YSS *e* 19 50 56.0
YSS *e*S S 20 00 42.0 -1.7
YSS pmax pmax
comp=Z,50nm,1.1s,mb5.4
YSS Yuzh-Sakhalins 81.07 38 *e*P **P 19 50 37.9 +1.1**
comp=Z,41nm,1.0s,mb5.3
FFC Flin Flon 81.17 333 *e*P **P 19 50 37.6 +0.4**
comp=Z,28nm,1.2s,mb5.1
FFC Flin Flon 81.17 333 *i* P **P 19 50 39.7 +2.5**
FFC Flin Flon 81.17 333 *e*P **P 19 50 37.6 +0.4**
comp=Z,28nm,1.2s,mb5.1
COLA College 81.32 358 *e*P **P 19 50 38.9 +1.1**
comp=Z,16nm,1.1s,mb4.9
COLA College 81.32 358 *e*P **P 19 50 38.9 +1.1**
COLA pmax pmax
comp=Z,16nm,1.1s,mb4.9
COLA College 81.32 358 *e*P **P 19 50 38.9 +1.1**
comp=Z,16nm,1.1s,mb4.9
ILAR Eielson Array 81.38 357 P **P 19 50 38.7 +0.6**
comp=Z,4.1nm,0.8s,mb4.4,baz=351,slow=3.8,SNR=40
ILAR PKKPbc PKKPbc 20 09 08.3 -4.3
comp=Z,1.8nm,0.8s,baz=238,slow=3.4,SNR=5.5
ILAR PKPPKP 20 17 12.8
comp=Z,0.5nm,0.8s,baz=251,slow=2.8,SNR=3.9
ILAR LR LR 20 29 12.0
comp=Z,132nm,21.2s,MS4.3,baz=141,slow=38
ILAR Eielson Array 81.38 357 P **P 19 50 38.7 +0.6**
EYMN Ely 81.40 323 *e*P **P 19 50 38.5 0.0**
comp=Z,46nm,1.8s,mb5.1
EYMN Ely 81.40 323 *e*P **P 19 50 38.5 0.0**
comp=Z,46nm,1.8s,mb5.1
COWI Conover 81.42 321 *e*P **P 19 50 38.5 -0.2**
comp=Z,24nm,0.9s,mb5.1
COWI Conover 81.42 321 *e*P **P 19 50 38.5 -0.2**
comp=Z,24nm,0.9s,mb5.1
DAWY Dawson 81.60 354 *e*P **P 19 50 40.4 +1.2**
DAWY Dawson 81.60 354 *e*P **P 19 50 40.4 +1.1**
ULM Lac du Bonnet 81.90 327 *e*P **P 19 50 41.6 +0.4**
comp=Z,41nm,1.5s,mb5.1
ULM Lac du Bonnet 81.90 327 P **P 19 50 42.0 +0.9**
comp=Z,5.0nm,0.6s,mb4.6,baz=28,slow=4.1,SNR=4.9
ULM LR LR 20 31 24.6
comp=Z,235nm,18.9s,MS4.6,baz=254,slow=39
ULM Lac du Bonnet 81.90 327 *e*P **P 19 50 41.6 +0.5**
comp=Z,41nm,1.5s,mb5.1
HUMP Col San Antoni 82.04 286 *e*pP pP 19 50 54.0 +0.7
HUMP Col San Antoni 82.04 286 *e*pP pP 19 50 54.0 +0.7
MDSI Maura Dua 82.25 101 P **P 19 50 43.4 -0.1**
comp=Z,1μmcomp=Z,92nm,1.1s,mb5.6
LWLI Liwa 82.45 101 P **P 19 50 45.4 +0.8**
comp=Z,2μmcomp=Z,179nm,1.1s,mb5.9
MCK McKinley 82.49 358 *e*P **P 19 50 42.1 -1.9**
comp=Z,24nm,1.0s,mb5.1
MCK McKinley 82.49 358 *e*P **P 19 50 42.1 -1.9**
MCK pmax pmax
comp=Z,24nm,1.0s,mb5.1
MCK McKinley 82.49 358 *e*P **P 19 50 42.1 -1.9**
comp=Z,24nm,1.0s,mb5.1
CELP Cerrillos 82.65 287 *e*pP pP 19 50 57.0 +0.4
CELP Cerrillos 82.65 287 *e*pP pP 19 50 57.0 +0.4
TRF Thorofare Moun 82.81 359 *e*P **P 19 50 44.3 -1.3**
comp=Z,19nm,1.0s,mb5.1
TRF Thorofare Moun 82.81 359 *e*P **P 19 50 44.3 -1.3**
comp=Z,19nm,1.0s,mb5.1
KLSI 82.81 101 P **P 19 50 46.1 -0.4**
comp=Z,104nm,1.7s,mb5.6
KLI Kotabumi 83.01 101 P **P 19 50 47.1 -0.4**
comp=Z,3μmcomp=Z,70nm,1.0s,mb5.6
MENT Mentasta 83.05 356 *e*P **P 19 50 48.4 +1.5**
MENT Mentasta 83.05 356 *e*P **P 19 50 48.4 +1.6**
AGMN Agassiz Nation 83.28 325 *e*P **P 19 50 49.8 +1.4**
comp=Z,20nm,1.1s,mb5.0
AGMN Agassiz Nation 83.28 325 *e*P **P 19 50 49.8 +1.5**
comp=Z,20nm,1.1s,mb5.0
TTA Tatalina 83.34 1 *e*P **P 19 50 50.0 +1.6**
TTA Tatalina 83.34 1 *e*P **P 19 50 50.0 +1.6**
PETK Petropavlovsk- 83.37 27 P **P 19 50 48.6 0.0**
comp=Z,4.1nm,0.8s,mb4.5,baz=129,slow=2.1,SNR=4.2
PETK Petropavlovsk- 83.37 27 P **P 19 50 48.7 0.0**
PETK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
PPLA Purkeypile 83.39 359 *e*P **P 19 50 49.8 +1.2**
comp=Z,17nm,0.5s,mb5.3
PPLA Purkeypile 83.39 359 *e*P **P 19 50 49.8 +1.2**
comp=Z,17nm,0.5s,mb5.3
BLSI Bandar Lampung 83.62 101 P **P 19 50 50.8 +0.2**
comp=Z,115nm,1.1s,mb5.9
KSM Kuching 83.95 92 *e*P **P 19 50 54.2 +1.8**
comp=Z,73nm,1.1s,mb5.7
KSM Kuching 83.95 92 P **P 19 50 54.4 +2.0**
comp=Z,729nmcomp=Z,70nm,1.3s,mb5.6
KSM Kuching 83.95 92 *e*P **P 19 50 54.2 +1.8**
comp=Z,73nm,1.1s,mb5.7
TPI Tanjungpandan 84.11 97 P **P 19 50 55.2 +2.0**
comp=Z,56nm,1.1s,mb5.6
JFWS Jewell Farm 84.12 319 *e*P **P 19 50 54.3 +1.5**
comp=Z,44nm,1.3s,mb5.4
JFWS *e*pP pP 19 51 03.7 0.0
JFWS Jewell Farm 84.12 319 *e*P **P 19 50 54.3 +1.5**
JFWS *e**PP pP 19 51 03.7 0.0
JFWS pmax pmax
comp=Z,44nm,1.3s,mb5.4
JFWS Jewell Farm 84.12 319 *e*P **P 19 50 54.3 +1.5**
comp=Z,44nm,1.3s,mb5.4
JFWS *e*pP pP 19 51 03.7 0.0
BLO Bloomington 84.44 314 *e*P **P 19 50 53.9 -0.6**
comp=Z,41nm,0.7s,mb5.7
BLO Bloomington 84.44 314 *e*P **P 19 50 53.9 -0.5**
BLO pmax pmax
comp=Z,41nm,0.7s,mb5.7
BLO Bloomington 84.44 314 *e*P **P 19 50 53.9 -0.5**
comp=Z,41nm,0.7s,mb5.7
ERM Erimo 84.55 42 *e*P **P 19 50 57.3 +2.4**
comp=Z,41nm,1.1s,mb5.5
ERM Erimo 84.55 42 *e*P **P 19 50 57.3 +2.3**
ERM pmax pmax
comp=Z,41nm,1.1s,mb5.5
HYT Haines Junctio 84.58 352 *e*P **P 19 50 56.7 +1.9**
HYT Haines Junctio 84.58 352 *e*P **P 19 50 56.7 +2.0**
PMR Palmer 84.64 358 *e*P **P 19 50 55.0 0.0**
comp=Z,21nm,0.9s,mb5.3
PMR Palmer 84.64 358 *e*P **P 19 50 55.1 +0.1**
PMR pmax pmax
comp=Z,21nm,0.9s,mb5.3
PMR Palmer 84.64 358 *e*P **P 19 50 55.0 0.0**
comp=Z,21nm,0.9s,mb5.3
YUK Yuzh-Kuril'sk 84.65 39⇑*i*P **P 19 50 59.0 +3.6**
YUK *i* S S 20 01 22.9 +2.7
YUK pmax pmax
comp=Z,300nm,1.5s,mb6.2
SBUM Sibu 85.00 90 P **P 19 51 00.2 +2.5**
SBUM Sibu 85.00 90 P **P 19 51 00.3 +2.6**
comp=Z,692nmcomp=Z,65nm,1.3s,mb5.6
HDIL Hopedale 85.16 317 *e*P **P 19 51 00.1 +2.1**
HDIL Hopedale 85.16 317 *e*P **P 19 51 00.1 +2.1**
MAJO Matsushiro 85.17 49 *e*P **P 19 50 58.1 -0.1**
comp=Z,49nm,0.8s,mb5.7
MAJO *e* pP 19 51 09.2 +0.1
MAJO Matsushiro 85.17 49 *e*P **P 19 50 58.1 -0.1**
MAJO *e* pP 19 51 09.2 0.0
MAJO pmax pmax
comp=Z,49nm,0.8s,mb5.7
MAJO Matsushiro 85.17 49 *e*P **P 19 50 58.1 -0.1**
MAT Matsushiro 85.17 49 P **P 19 50 58.7 +0.5**
MAT S S 20 01 24.0 -1.7
SKAG Skagway 85.65 351 P **P 19 51 02.2 +2.1**
SKAG Skagway 85.65 351 P **P 19 51 02.2 +2.1**
OLIL Olney 85.66 315 *e*P **P 19 51 02.8 +2.2**
comp=Z,51nm,0.8s,mb5.8
OLIL Olney 85.66 315 *e*P **P 19 51 02.8 +2.2**
comp=Z,51nm,0.8s,mb5.8
STKI Sintang 85.70 93 P **P 19 51 04.0 +2.8**
comp=Z,103nm,1.4s,mb5.9
DLBC Dease Lake 85.82 348 *e*P **P 19 51 02.3 +1.3**
DLBC *e*pP pP 19 51 13.6 +1.7
DLBC Dease Lake 85.82 348 *e*P **P 19 51 02.3 +1.3**
DLBC *e*pP pP 19 51 13.6 +1.7
SDDR Presa de Saban 85.86 290 *e*P **P 19 51 03.6 +1.7**
SDDR Presa de Saban 85.86 290 *e*P **P 19 51 03.6 +1.7**
EDM Edmonton 86.39 337 *e*P **P 19 51 05.7 +1.8**
EDM Edmonton 86.39 337 *e*P **P 19 51 05.7 +1.8**
SCIA State Center 86.42 320 P **P 19 51 03.2 -1.0**
comp=Z,36nm,1.1s,mb5.5
SCIA State Center 86.42 320 P **P 19 51 03.2 -1.1**
comp=Z,36nm,1.1s,mb5.5
ECSD EROS Data Cent 86.90 323 *e*P **P 19 51 07.4 +0.8**
comp=Z,78nm,1.8s,mb5.6
ECSD EROS Data Cent 86.90 323 *e*P **P 19 51 07.4 +0.8**
comp=Z,78nm,1.8s,mb5.6
CISI Cisompet, Garu 86.96 101 P **P 19 51 08.4 +1.1**
comp=Z,166nm,1.4s,mb6.1
SLM Saint Louis 86.97 316 *e*P **P 19 51 08.6 +1.5**
SLM Saint Louis 86.97 316 *e*P **P 19 51 08.6 +1.5**
SIUC Southern Illin 86.99 314 *e*P **P 19 51 08.6 +1.5**
comp=Z,40nm,0.8s,mb5.7
SIUC Southern Illin 86.99 314 *e*P **P 19 51 08.6 +1.4**
comp=Z,40nm,0.8s,mb5.7
SDKM Sandakan 87.36 85 P **P 19 51 10.9 +1.6**
SDKM Sandakan 87.36 85 P **P 19 51 10.9 +1.6**
FVM French Village 87.52 315 *e*P **P 19 51 11.7 +1.9**
comp=Z,59nm,0.7s,mb5.9
FVM French Village 87.52 315 *e*P **P 19 51 11.7 +2.0**
FVM pmax pmax
comp=Z,59nm,0.7s,mb5.9
FVM French Village 87.52 315 *e*P **P 19 51 11.7 +2.0**
comp=Z,59nm,0.7s,mb5.9
CCM Cathedral Cave 87.95 316 *e*P **P 19 51 13.1 +1.4**
comp=Z,24nm,0.8s,mb5.5
CCM Cathedral Cave 87.95 316 *e*P **P 19 51 13.1 +1.3**
CCM pmax pmax
comp=Z,24nm,0.8s,mb5.5
CCM Cathedral Cave 87.95 316 *e*P **P 19 51 13.1 +1.3**
comp=Z,24nm,0.8s,mb5.5
SIT Sitka 87.98 350 *e*P **P 19 51 13.3 +1.9**
comp=Z,10nm,0.9s,mb5.1
SIT Sitka 87.98 350 *e*P **P 19 51 13.4 +1.9**
SIT pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
SIT Sitka 87.98 350 *e*P **P 19 51 13.4 +1.9**
comp=Z,10nm,0.9s,mb5.1
KDAK Kodiak Island 88.53 360 P **P 19 51 15.6 +1.5**
comp=Z,7.5nm,0.7s,mb5.1,baz=10,slow=1.7,SNR=7.6
KDAK Kodiak Island 88.53 360 *i* P **P 19 51 16.1 +2.0**
KDAK Kodiak Island 88.53 360 P **P 19 51 15.6 +1.5**
TSM Tawau 88.67 86 P **P 19 51 16.7 +1.2**
LRAL Lakeview Retre 88.68 310 *e*P **P 19 51 16.8 +1.4**
comp=Z,25nm,0.8s,mb5.6
LRAL Lakeview Retre 88.68 310 *e*P **P 19 51 16.8 +1.5**
comp=Z,25nm,0.8s,mb5.6
MYLDM Lahad Datu 88.70 85 P **P 19 51 17.2 +1.6**
MYLDM Lahad Datu 88.70 85 P **P 19 51 19.3 +3.6**
OHAK Old Harbor 89.09 360 *e*P **P 19 51 17.6 +0.9**
comp=Z,32nm,0.9s,mb5.7
OHAK Old Harbor 89.09 360 *e*P **P 19 51 17.6 +0.9**
comp=Z,32nm,0.9s,mb5.7
LAO LASA Array 89.11 330 *e*P **P 19 51 19.1 +2.0**
comp=Z,67nm,1.3s,mb5.8
LAO LASA Array 89.11 330 *e*P **P 19 51 19.1 +2.0**
comp=Z,67nm,1.3s,mb5.8
EGMT Eagleton 89.45 332 *e*P **P 19 51 21.0 +2.4**
comp=Z,172nm,2.0s,mb6.0
EGMT Eagleton 89.45 332 *e*P **P 19 51 21.0 +2.4**
comp=Z,172nm,2.0s,mb6.0
WALA Waterton Lakes 90.11 335 *e*P **P 19 51 21.9 +0.3**
comp=Z,0.5nm,0.9s
WALA Waterton Lakes 90.11 335 *e*P **P 19 51 21.9 +0.2**
comp=Z,0.5nm,0.9s
RSSD Black Hills 90.17 327 *e*P **P 19 51 23.9 +1.8**
comp=Z,42nm,1.4s,mb5.6
RSSD Black Hills 90.17 327 *e*P **P 19 51 23.9 +1.8**
RSSD pmax pmax
comp=Z,42nm,1.4s,mb5.6
RSSD Black Hills 90.17 327 *e*P **P 19 51 23.9 +1.8**
comp=Z,42nm,1.4s,mb5.6
KSU1 Kansas State U 90.23 319 *e*P **P 19 51 23.7 +1.2**
KSU1 Kansas State U 90.23 319 *e*P **P 19 51 23.7 +1.2**
SDV Santo Domingo 91.03 281 *e*P **P 19 51 26.9 +0.4**
comp=Z,18nm,0.9s,mb5.4
SDV Santo Domingo 91.03 281 *e*P **P 19 51 26.9 +0.3**
comp=Z,18nm,0.9s,mb5.4
YBMT Yellow Bay 91.16 335 *e*P **P 19 51 28.9 +2.3**
YBMT Yellow Bay 91.16 335 *e*P **P 19 51 28.9 +2.3**
GCMT Greycliff 91.25 331 *e*P **P 19 51 26.7 -0.4**
comp=Z,14nm,1.4s,mb5.1
GCMT Greycliff 91.25 331 *e*P **P 19 51 26.7 -0.3**
comp=Z,14nm,1.4s,mb5.1
HRY Holter Researc 91.33 333 *e*P **P 19 51 29.9 +2.5**
HRY Holter Researc 91.33 333 *e*P **P 19 51 30.0 +2.6**
JTMT Jette 91.36 335 *e*P **P 19 51 28.8 +1.3**
JTMT Jette 91.36 335 *e*P **P 19 51 28.8 +1.3**
BSMT Bassoo Peak 91.45 335 *e*P **P 19 51 29.6 +1.7**
BSMT Bassoo Peak 91.45 335 *e*P **P 19 51 29.6 +1.7**
SWMT Swartz Lake 91.46 335 *e*P **P 19 51 29.5 +1.5**
SWMT Swartz Lake 91.46 335 *e*P **P 19 51 29.5 +1.5**
SLMT Seeley Lake 91.50 334 *e*P **P 19 51 29.4 +1.2**
SLMT Seeley Lake 91.50 334 *e*P **P 19 51 29.4 +1.2**
RLMT Red Lodge 91.63 330 *e*P **P 19 51 30.9 +2.1**
comp=Z,26nm,1.5s,mb5.3
RLMT Red Lodge 91.63 330 *e*P **P 19 51 30.9 +2.1**
comp=Z,26nm,1.5s,mb5.3
CHMT Chamberlain Mo 91.69 334 *e*P **P 19 51 30.6 +1.5**
CHMT *e*pP pP 19 51 39.9 -0.2
CHMT Chamberlain Mo 91.69 334 *e*P **P 19 51 30.5 +1.4**
CHMT *e*pP pP 19 51 39.9 -0.2
MIAR Mount Ida 91.72 314 *e*P **P 19 51 32.5 +3.0**
comp=Z,63nm,2.0s,mb5.6
MIAR *e*pP pP 19 51 41.5 +1.0
MIAR Mount Ida 91.72 314 *e*P **P 19 51 32.5 +3.0**
MIAR *e**PP pP 19 51 41.6 +1.1
MIAR pmax pmax

comp=Z,63nm,2.0s,mb5.6
NEW Newport 91.88 337 *e*P **P** **19 51 31.7 +1.8**
comp=Z,30nm,1.3s,mb5.5
NEW Newport 91.88 337 *e*P **P** **19 51 31.7 +1.8**
NEW pmax pmax
comp=Z,30nm,1.3s
NEW Newport 91.88 337 *e*P **P** **19 51 31.7 +1.8**
comp=Z,30nm,1.3s,mb5.5
MSO Missoula 92.02 334 *e*P **P** **19 51 31.7 +1.1**
comp=Z,9.7nm,1.2s,mb5.0
MSO Missoula 92.02 334 *e*P **P** **19 51 31.7 +1.1**
comp=Z,9.7nm,1.2s,mb5.0
LRM Limekiln Ridge 92.31 333 *e*P **P** **19 51 33.8 +1.9**
LRM Limekiln Ridge 92.31 333 *e*P **P** **19 51 33.8 +1.8**
DLMT Dillon 92.75 333 *e*P **P** **19 51 35.1 +1.1**
comp=Z,11nm,1.2s,mb5.2
DLMT Dillon 92.75 333 *e*P **P** **19 51 35.1 +1.1**
comp=Z,11nm,1.2s,mb5.2
PHWY Pilot Hill 93.03 326 *e*P **P** **19 51 36.4 +1.0**
comp=Z,18nm,1.1s,mb5.4
PHWY Pilot Hill 93.03 326 *e*P **P** **19 51 36.3 +0.9**
comp=Z,18nm,1.1s,mb5.4
FLWY Flagg Ranch 93.07 331 *e*P **P** **19 51 38.0 +2.5**
comp=Z,4.8nm,0.6s,mb5.1
FLWY Flagg Ranch 93.07 331 *e*P **P** **19 51 38.0 +2.5**
comp=Z,4.8nm,0.6s,mb5.1
OD2 Odessa Site #2 93.16 337 *e*P **P** **19 51 37.9 +2.0**
OD2 *e*pP pP 19 51 47.4 +0.6
OD2 Odessa Site #2 93.16 337 *e*P **P** **19 51 37.9 +2.0**
OD2 *e*pP pP 19 51 47.4 +0.5
MCMT McKenzie Canyo 93.30 332 *e*P **P** **19 51 37.7 +1.2**
comp=Z,0.8nm,0.6s,mb4.3
MCMT McKenzie Canyo 93.30 332 *e*P **P** **19 51 37.7 +1.2**
comp=Z,0.8nm,0.6s,mb4.3
IMW Indian Meadow 93.32 331 *e*P **P** **19 51 39.1 +2.4**
comp=Z,8.0nm,1.0s,mb5.1
IMW Indian Meadow 93.32 331 *e*P **P** **19 51 39.1 +2.4**
comp=Z,8.0nm,1.0s,mb5.1
JCW Jim Creek 93.43 340 *e*P **P** **19 51 37.6 +0.5**
JCW Jim Creek 93.43 340 *e*P **P** **19 51 37.6 +0.5**
TPAW Teton Pass 93.66 331 *e*P **P** **19 51 40.7 +2.5**
comp=Z,11nm,1.2s,mb5.2
TPAW Teton Pass 93.66 331 *e*P **P** **19 51 40.7 +2.5**
comp=Z,11nm,1.2s,mb5.2
GNW Green Mountain 94.26 340 *e*P **P** **19 51 42.5 +1.6**
comp=Z,11nm,1.0s,mb5.2
GNW Green Mountain 94.26 340 *e*P **P** **19 51 42.5 +1.6**
comp=Z,11nm,1.0s,mb5.2
ISCO Idaho Springs 94.28 325 *e*P **P** **19 51 42.8 +1.7**
comp=Z,7.3nm,1.3s,mb5.0
ISCO Idaho Springs 94.28 325 *e*P **P** **19 51 42.8 +1.6**
ISCO pmax pmax
comp=Z,7.0nm,1.3s,mb4.9
ISCO Idaho Springs 94.28 325 *e*P **P** **19 51 42.8 +1.6**
comp=Z,7.3nm,1.3s,mb5.0
HAWA Hanford 94.31 337 *e*P **P** **19 51 40.8 -0.4**
comp=Z,13nm,1.1s,mb5.3
HAWA Hanford 94.31 337 *e*P **P** **19 51 40.8 -0.3**
comp=Z,13nm,1.1s,mb5.3
WMOK Wichita Mounta 94.59 318 *e*P **P** **19 51 47.8 +5.1**
comp=Z,4.6nm,0.9s,mb4.9
WMOK Wichita Mounta 94.59 318 *e*P **P** **19 51 47.8 +5.1**
WMOK pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
BMO Blue Mountains 94.92 335 *e*P **P** **19 51 41.7 -2.2**
comp=Z,4.5nm,0.9s,mb4.9
BMO Blue Mountains 94.92 335 *e*P **P** **19 51 41.7 -2.3**
comp=Z,4.5nm,0.9s,mb4.9
HWUT Hardware Ranch 95.48 330 *e*P **P** **19 51 47.4 +0.8**
comp=Z,11nm,1.1s,mb5.2
HWUT *e*pP pP 19 51 57.2 -0.4
HWUT Hardware Ranch 95.48 330 *e*P **P** **19 51 47.4 +0.8**
comp=Z,11nm,1.1s,mb5.2
HWUT *e*pP pP 19 51 57.2 -0.4
SDCO Great Sand Dun 95.84 324 *e*P **P** **19 51 49.2 +0.9**
comp=Z,6.6nm,1.1s,mb5.0
SDCO Great Sand Dun 95.84 324 *e*P **P** **19 51 49.2 +0.9**
comp=Z,6.6nm,1.1s,mb5.0
PV01 Paradox Valley 97.00 326 *e*P **P** **19 51 55.5 +2.0**
PV01 Paradox Valley 97.00 326 *e*P **P** **19 51 55.5 +1.9**
TXAR Lajitas Array 101.37 317 P Pdif 19 52 13.4 +0.3
comp=Z,0.6nm,0.9s,baz=116,slow=8.1,SNR=4.2
TXAR PKKPbc PKKPbc 20 08 23.1 +1.9
comp=Z,1.1nm,0.8s,baz=199,slow=5.9,SNR=8.9
TXAR Lajitas Array 101.37 317 P Pdif 19 52 13.4 +0.4
MTUM Tungsten Hills 101.92 332 *e*Pdif Pdif 19 52 15.7 +0.3
SYO Syowa Base 103.19 175‖ *e*Pdiff Pdif 19 52 21.8 +0.7
WRAB Tennant Creek 115.27 98 *e*PKPdf PKPdf 19 57 03.6 0.0
ASAR Alice Springs 116.66 102 PKP PKPdf 19 57 06.5 +0.3
comp=Z,4.4nm,0.5s,baz=321,slow=1.4,SNR=10.4
ASAR Alice Springs 116.66 102 PKIKP PKPdf 19 57 06.5 +0.3
ASAR pmax pmax
comp=Z,4.0nm,0.5s
ASAR Alice Springs 116.66 102 PKIKP PKPdf 19 57 06.4 +0.2
QSPA South Pole Qui 123.90 180 *e*PKPdf PKPdf 19 57 19.3 +0.8
QSPA South Pole Qui 123.90 180 *e*PKIKP PKPdf 19 57 19.3 +0.9
CTA Charters Tower 125.19 92 *e*PKP PKPdf 19 57 23.9 +1.3
comp=Z,14nm,0.9s
CTA Charters Tower 125.19 92 PKP PKPdf 19 57 23.9 +1.3
CTA Charters Tower 125.19 92 PKP PKPdf 19 57 23.9 +1.3
comp=Z,18nm,0.8s,baz=262,slow=2.3,SNR=27
CTA Charters Tower 125.19 92 PKIKP PKPdf 19 57 23.9 +1.3
CTA pmax pmax
comp=Z,18nm,0.8s
CTA Charters Tower 125.19 92 PKIKP PKPdf 19 57 23.9 +1.3
CTAO Charters Tower 125.19 92 *e*PKPdf PKPdf 19 57 23.6 +1.0
CTAO Charters Tower 125.19 92 *e*PKIKP PKPdf 19 57 23.6 +1.0
STKA Stephens Creek 126.24 107 *e*PKP PKPdf 19 57 25.6 +1.3
comp=Z,12nm,0.8s
STKA Stephens Creek 126.24 107 *e*PKPdf PKPdf 19 57 25.0 +0.7
STKA Stephens Creek 126.24 107 PKP PKPdf 19 57 24.9 +0.6
comp=Z,16nm,0.8s,baz=333,slow=3.1,SNR=21
STKA Stephens Creek 126.24 107 *e*PKIKP PKPdf 19 57 25.0 +0.7
SBA Scott Base 132.81 169 *e*PKPdf PKPdf 19 57 36.9 +1.4
SBA Scott Base 132.81 169 *e*PKIKP PKPdf 19 57 36.9 +1.4
ARMA Armidale 133.81 101 *e*PKP PKPdf 19 57 41.9 +3.1
MSVF Nonsavu 149.74 65 *e*PKPbc PKPbc 19 58 13.6 +1.5
MSVF Nonsavu 149.74 65 *e*PKPbc PKPbc 19 58 13.6 +1.6
RPZ Rata Peaks 150.87 120 PKPbc PKPbc 19 58 15.6 +1.6
RPZ Rata Peaks 150.87 120 PKPbc PKPbc 19 58 15.6 +1.6
comp=Z,71nm,0.8s,baz=80,slow=2.2,SNR=13
RPZ Rata Peaks 150.87 120 PKPbc PKPbc 19 58 15.6 +1.6

*ISCJB **04** 19:55:38.4±0.6,50.°10N±0.°04×18.°39E±0.°03,h0km, Error ellipse: s-maj=5.7km s-min=3.2km az=0.4*
*CSEM **04** 19:55:38.8±0.3,50.°09N×18.°42E,h1km,ML2.4/6, Error ellipse: s-maj=8.4km s-min=5.2km az=174.0*
*WAR **04** 19:55:39.7,50.°06N×18.°45E*
*IPEC **04** 19:55:39.9±0.1,50.°07N×18.°44E,h8km±1km,ML1.5/3, Error ellipse: s-maj=1.2km s-min=0.7km az=166.0*
*PRU **04** 19:55:40.8,50.°06N×18.°37E,h0km*
ISC 04 19:55:39.5±0.6, 50.°07N±0.°04×18.°40E±0.°03, h0km, n21, σ1s02/36, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.29**	**215**	*e*PG	**Pg**	**19 55 45.8**	**+0.8**
OKC				*e*SG	**Sg**	**19 55 50.2**	**+1.5**
	comp=Z,38nm,0.6s						
OKC	**Ostrava-Krasne**	**0.29**	**215**	Pg	**Pg**	**19 55 45.8**	**+0.8**
OKC				*e*Sg	**Sg**	**19 55 50.2**	**+1.5**
MORC	**Moravsky Berou**	**0.63**	**242**	*e*Pg	**Pg**	**19 55 51.9**	**+0.4**
MORC				*e*Sg	**Sg**	**19 56 01.4**	**+1.7**
	comp=Z,11nm,0.3s						
OJC	**Ojcow**	**0.91**	**80**	*e*Pg	**Pg**	**19 55 56.3**	**-0.6**
OJC				*e*Sg	**Sg**	**19 56 08.7**	**0.0**
OJC	**Ojcow**	**0.91**	**80**	*e*Pg	**Pg**	**19 55 56.2**	**-0.7**
OJC				*e*Sg	**Sg**	**19 56 08.6**	**-0.1**
JAVC	**Velka Javorina**	**1.31**	**202**	*e*Pn	**Pn**	**19 56 04.9**	**0.0**
DPC	**Dobruska-Polom**	**1.36**	**282**	*e*PG	**Pg**	**19 56 05.7**	**+0.1**
DPC				*e*SG	**Sg**	**19 56 24.0**	**+0.8**
	comp=Z,13nm,0.6s						
DPC	**Dobruska-Polom**	**1.36**	**282**	*e*Pn	**Pn**	**19 56 05.4**	**-0.3**
DPC	**Dobruska-Polom**	**1.36**	**282**	Pg	**Pg**	**19 56 05.7**	**+0.1**
DPC				Sg	**Sg**	**19 56 24.0**	**+0.8**
	comp=Z,13nm,0.6s						
VRAC	**Vranov**	**1.40**	**238**	*e*Pn	**Pn**	**19 56 05.8**	**-0.4**
VRAC				*e*Sg	**Sg**	**19 56 24.8**	**+0.3**
	comp=Z,6.5nm,0.3s						
NIE	**Niedzica**	**1.40**	**117**	*e*Pg	**Pg**	**19 56 06.2**	**-0.2**
NIE				*e*Sg	**Sg**	**19 56 25.7**	**+1.2**
KOLL	**Kolacno**	**1.50**	**180**	*e*SN	**Sn**	**19 56 28.0**	**+0.2**
KOLL	**Kolacno**	**1.50**	**180**	*e*Sn	**Sn**	**19 56 28.0**	**+0.2**
VYHS	**Vyhne**	**1.61**	**170**	*e*PN	**Pn**	**19 56 08.5**	**-0.6**
VYHS				*e*SN	**Sn**	**19 56 30.1**	**-0.4**
VYHS	**Vyhne**	**1.61**	**170**	*e*Pn	**Pn**	**19 56 08.3**	**-0.8**
VYHS				*e*Sg	**Sg**	**19 56 29.6**	**-1.5**
KRUC	**Moravsky**	**1.65**	**233**	*e*Pn	**Pn**	**19 56 09.3**	**-0.4**
KRUC				*e*Sg	**Sg**	**19 56 31.1**	**-1.4**
	comp=Z,3.5nm,0.3s						
STHS	**Stebnicka Huta**	**1.96**	**109**	*e*PN	**Pn**	**19 56 16.9**	**+3.0**
STHS				*e*SN	**Sn**	**19 56 42.9**	**+3.8**
PRU	**Pruhonice**	**2.49**	**269**	*e*SG	**Sg**	**19 57 00.0**	**+0.6**
	comp=Z,3.4nm,0.6s						
PRU	**Pruhonice**	**2.49**	**269**	Sg	**Sg**	**19 57 00.0**	**+0.6**
	comp=Z,3.4nm,0.6s						
KHC	**Kasperske Hory**	**3.28**	**255**	*e*PN	**Pn**	**19 56 29.0**	**-3.0**
KHC				*e*PG	**Pg**	**19 56 41.0**	**-1.2**
KHC				*e*SG	**Sg**	**19 57 23.9**	**-0.8**
	comp=Z,1.7nm,0.5s						
KHC	**Kasperske Hory**	**3.28**	**255**	Pn	**Pn**	**19 56 29.0**	**-3.0**

NEIC 04 20:03:24.5,37.°33N×118.°74W,h18km,ML3.7(NCEDC), 28C-42D, After NCEDC., California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLAC	**Mammoth Lakes**	**0.31**	**346**	⇑P	**Pg**	**20 03 31.2**	**0.0**
	baz=0.3						
MLAC				⇓S	Sg	20 03 36.2	+0.5
	baz=0.3						
TIN	**Tinemaha**	**0.49**	**124**	⇑P	**Pg**	**20 03 34.4**	**0.0**
	baz=0.5						
TIN				⇑S	Sg	20 03 41.5	+0.4
	baz=0.5						
CWC	**Cottonwood Cre**	**1.03**	**149**	⇑P	**Pb**	**20 03 43.7**	**-0.1**
	baz=1.0						
CWC				⇓S	Sb	20 03 57.3	+0.3
	baz=1.0						
RCTC	**Rector, Farmer**	**1.09**	**202**	⇓P	**Pb**	**20 03 44.8**	**0.0**
	baz=1.1						
RCTC				⇓S	Sb	20 03 59.6	+0.8
	baz=1.1						
GRAC	**Grapevine Rang**	**1.14**	**106**	⇓P	**Pn**	**20 03 46.3**	**+0.7**
	baz=1.1,SNR=45						
GRAC				⇑S	Sb	20 04 01.9	+1.7
	baz=1.1						
CMB	**Columbia Colle**	**1.48**	**299**	*e*P	Pn	20 03 51.1	+0.8
CMB				*e*S	Sn	20 04 08.3	-0.8
VES	**Vestal, Richgr**	**1.51**	**191**	⇓P	Pn	20 03 52.2	+1.6
	baz=1.5						
VES				⇑S	Sn	20 04 12.2	+2.4
	baz=1.5						
MPMC	**Manual Prospec**	**1.62**	**141**	⇓P	Pn	20 03 53.3	+1.2
	baz=1.6						
MPMC				⇓S	Sn	20 04 15.1	+2.7
	baz=1.6						
ISA	**Isabella**	**1.68**	**173**	⇑Pb	Pb	20 03 55.2	+0.4
	baz=1.7,SNR=409						
ISA				⇑S	Sn	20 04 16.4	+2.5
	baz=1.7						
ISA	**Isabella**	**1.68**	**173**	*e*P	Pn	20 03 54.7	+1.8
ISA				*e*S	Sn	20 04 16.2	+2.3
FURC	**Furnace Creek,**	**1.73**	**119**	⇓Pb	Pb	20 03 56.4	+0.6
	baz=1.7						
FURC				⇑Sb	Sb	20 04 20.0	+2.9
	baz=1.7						
S10A	**Tonopah Range,**	**1.80**	**70**	⇓P	Pn	20 03 55.4	+0.8
	baz=1.8						
LRMC	**Laurel Mountai**	**2.04**	**155**	⇑Sb	Sb	20 04 28.6	+2.8
	baz=2.0						
WCN	**Washoe City**	**2.12**	**338**	⇓P	Pn	20 04 01.0	+2.0
	baz=2.1						
WCN				⇑Sb	Sb	20 04 32.7	+4.2
	baz=2.1						
U10A	**Ash Meadows, A**	**2.13**	**114**	⇓P	Pn	20 04 00.9	+1.7
	baz=2.1						
R10A	**Warm Springs**	**2.15**	**63**	⇑Pb	Pb	20 04 04.0	+1.1
	baz=2.1						
R10A				⇓Sb	Sb	20 04 33.0	+3.7
	baz=2.1						
ARVC	**Arvin**	**2.20**	**182**	⇓P	Pn	20 04 01.9	+1.8
	baz=2.2						
ARVC				⇑Sb	Sb	20 04 33.4	+2.8
	baz=2.2						
SAO	**San Andreas Ge**	**2.24**	**256**	*e*Pn	Pn	20 04 02.3	+1.7
SAO				*e*Sn	Sn	20 04 27.8	0.0
SMMC	**Simmler**	**2.26**	**207**	⇑P	Pn	20 04 02.5	+1.6
	baz=2.3						
SMMC				⇓S	Sn	20 04 31.5	+3.3
	baz=2.3						
Q10A	**Clear Creek Ra**	**2.37**	**50**	⇓Pb	Pb	20 04 08.3	+1.7
	baz=2.4						
Q10A				⇓Sb	Sb	20 04 39.9	+4.3
	baz=2.4						
S11A	**Rachel**	**2.40**	**82**	⇓Pb	Pb	20 04 09.0	+1.9
	baz=2.4						
SHOC	**Shoshone**	**2.44**	**125**	⇑Sb	Sb	20 04 41.3	+3.8
	baz=2.4						
EDW2	**Edwards Air Fo**	**2.52**	**166**	⇑Pb	Pb	20 04 09.9	+0.7
	baz=2.5						
EDW2				⇓Sb	Sb	20 04 43.1	+3.3
	baz=2.5						
GSC	**Goldstone**	**2.56**	**142**	*e*Pn	Pn	20 04 04.0	-0.9
GSC				*e*Pg	Pg	20 04 11.9	-1.6
R11A	**Troy Canyon, C**	**2.69**	**67**	⇑P	Pn	20 04 07.5	+0.6
	baz=2.7						
R11A				⇓Sb	Sb	20 04 49.6	+4.8
	baz=2.7						
OSI	**Osito Adit**	**2.71**	**180**	⇓Pb	Pb	20 04 12.7	+0.3
	baz=2.7						
OSI				⇓Sb	Sb	20 04 47.9	+2.6
	baz=2.7						
OSI	**Osito Adit**	**2.71**	**180**	*e*P	Pn	20 04 12.4	+5.4
T11A	**Corn Creek, Al**	**2.81**	**91**	⇑P	Pn	20 04 09.1	+0.7
	baz=2.8						
RRX	**Edison Barstow**	**2.82**	**150**	⇓Sb	Sb	20 04 54.0	+5.5
	baz=2.8						
Q11A	**Duckwater**	**2.87**	**57**	⇓Pb	Pb	20 04 17.0	+2.0
	baz=2.9						
Q11A				⇓Sb	Sb	20 04 55.1	+5.3
	baz=2.9						
P10A	**Eureka**	**2.90**	**37**	⇑P	Pn	20 04 12.1	+2.4
	baz=2.9,SNR=9.6						
P10A				⇓Sb	Sb	20 04 56.5	+5.8
	baz=2.9						
TUQ	**Turquoise Moun**	**2.96**	**129**	⇓Sb	Sb	20 04 57.3	+5.0
	baz=3.0						
S12A	**Delamar Landin**	**3.11**	**84**	⇑P	Pn	20 04 13.5	+1.0
	baz=3.1						
MWC	**Mount Wilson**	**3.15**	**170**	*e*Pn	Pn	20 04 15.8	+2.6
MWC				*e*Pg	Pg	20 04 21.0	-3.9
PASC	**Pasadena Art C**	**3.19**	**172**	*e*Pn	Pn	20 04 11.4	-2.2
P11A	**Circle Ranch,**	**3.23**	**46**	⇓Sb	Sb	20 05 06.6	+6.4
	baz=3.2						
BMN	**Battle Mountai**	**3.31**	**20**	*e*Pg	Pg	20 04 25.7	-2.3
R12A	**Pony Springs,**	**3.42**	**72**	⇓Sb	Sb	20 05 11.6	+5.9
	baz=3.4						
O10A	**Cortez Mining,**	**3.44**	**30**	⇓Sb	Sb	20 05 13.1	+7.0
	baz=3.4						
Q12A	**Willow Creek R**	**3.52**	**60**	⇑Sb	Sb	20 05 14.9	+6.3
	baz=3.5						
GMRC	**Granite Mounta**	**3.56**	**135**	⇓Sb	Sb	20 05 16.1	+6.2
	baz=3.6						
O11A	**Cowboy Ranch,**	**3.69**	**40**	⇓Sb	Sb	20 05 20.4	+6.9
	baz=3.7						
R13A	**O'Grain Ranch,**	**3.87**	**76**	⇓P	Pn	20 04 24.9	+1.8
	baz=3.9						
S13A	**Holt Ranch, En**	**3.89**	**85**	⇓P	Pn	20 04 24.3	+1.0
	baz=3.9						
Q13A	**Wheeler Ranch,**	**4.06**	**65**	⇓Sb	Sb	20 05 31.4	+7.3
	baz=4.0						
PFO	**Pinyon Flat Ob**	**4.16**	**153**	*e*Pn	Pn	20 04 28.1	+1.2
N11A	**Elko Archery C**	**4.19**	**33**	⇓Sb	Sb	20 05 36.4	+8.5
	baz=4.2						
ARUT	**Antelope Range**	**4.24**	**82**	*e*Pg	Pg	20 04 43.9	-1.7
P13A	**Bates Ranch, G**	**4.27**	**59**	⇑Sb	Sb	20 05 37.5	+7.3
	baz=4.3						
O12A	**Currie**	**4.28**	**46**	⇓Sb	Sb	20 05 38.0	+7.5
	baz=4.3						
CCUT	**Cedar City**	**4.28**	**85**	*e*Pn	Pn	20 04 29.4	+0.6
WDC	**Whiskeytown Da**	**4.39**	**319**	Pn	Pn	20 04 29.6	-0.6
M10A	**I.L. Ranch, Tu**	**4.52**	**21**	⇓Sb	Sb	20 05 46.4	+9.1
	baz=4.5						
N12A	**Clover Valley,**	**4.54**	**38**	⇓Sb	Sb	20 05 46.8	+8.7
	baz=4.5						
N12A	**Clover Valley,**	**4.54**	**38**	*e*Pn	Pn	20 04 32.4	+0.1
U14A	**Mt Trumbull**	**4.55**	**100**	⇑Sb	Sb	20 05 46.1	+7.9
	baz=4.5						
Q14A	**Sevier Lake (B**	**4.61**	**67**	⇑Sb	Sb	20 05 48.4	+8.4
	baz=4.6						
O13A	**Hicks Ranch, I**	**4.65**	**52**	⇑Sb	Sb	20 05 50.1	+8.9
	baz=4.6						
M11A	**Holland Ranch,**	**4.69**	**28**	⇑Sb	Sb	20 05 51.6	+9.4
	baz=4.7						
MOD	**Modoc**	**4.72**	**346**	*e*Pg	Pg	20 04 50.7	-4.2
MONP	**Monument Peak**	**4.82**	**156**	⇓Sb	Sb	20 05 53.2	+7.2
	baz=4.8						
P14A	**Drum Mountains**	**4.99**	**61**	⇑Sb	Sb	20 05 58.8	+8.0
	baz=5.0						
M12A	**Wells**	**5.04**	**35**	⇓Sb	Sb	20 06 02.0	+10
	baz=5.0						
L10A	**Juniper Basin**	**5.05**	**20**	⇓Sb	Sb	20 06 02.9	+10
	baz=5.1						
T15A	**Red Dirt Ranch**	**5.09**	**92**	⇑Sb	Sb	20 06 02.4	+8.7
	baz=5.1						
WVOR	**Wild Horse Val**	**5.10**	**1**	*e*Pg	Pg	20 04 57.7	-4.4
	7.3nm,0.9s						
MSU	**Marysvale**	**5.32**	**75**	*e*Pg	Pg	20 05 03.5	-2.8
	7.4nm,0.5s						
DUG	**Dugway**	**5.44**	**56**	*e*Pg	Pg	20 05 07.0	-1.7
	4.8nm,0.6s						

ISC 04 20:07:31.2±0.6, 46.°48N±0.°04×13.°04E±0.°04, h10km, n9, σ0s56/16, 4C, Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUSE	**Fusea**	**0.07**	**200**	⇑*i*Pg	**Pg**	**20 07 33.0**	**-0.4**
FUSE				*i* Sg	**Sg**	**20 07 34.2**	**-0.7**
ZOU	**Zoufplan**	**0.09**	**331**	⇑*e*Pg	**Pg**	**20 07 33.8**	**+0.2**
ZOU				*e*Sg	**Sg**	**20 07 35.8**	**+0.4**
PLRO	**Paularo**	**0.10**	**48**	⇑*i*Pg	**Pg**	**20 07 33.7**	**-0.2**
PLRO				*i* Sg	**Sg**	**20 07 35.5**	**-0.2**
VINO	**Villanova**	**0.28**	**143**	⇑*i*Pg	**Pg**	**20 07 36.3**	**-0.5**
VINO				*i* Sg	**Sg**	**20 07 40.5**	**-0.1**
ROBS	**Robic**	**0.40**	**125**	*i* Pg	**Pg**	**20 07 38.3**	**-0.8**
ROBS				*i* Sg	**Sg**	**20 07 44.7**	**+0.3**
CIMO	**Cimolais**	**0.45**	**248**	*e*Pg	**Pg**	**20 07 39.9**	**0.0**
CIMO				*e*Sg	**Sg**	**20 07 46.6**	**+0.8**
CADS	**Cadrg**	**0.55**	**117**	*i* Pg	**Pg**	**20 07 41.0**	**-0.8**
CADS				*i* Sg	**Sg**	**20 07 49.5**	**+0.5**
CADS							
	comp=Z,1.0nm,0.1s						
GORS	**Gorjuse**	**0.68**	**103**	*i* Sg	**Sg**	**20 07 53.5**	**+0.2**
VOJS	**Vojsko**	**0.74**	**127**	*i* Sg	**Sg**	**20 07 56.4**	**+1.3**

*IDC **04** 20:09:17.4±1.4,2.°49N×95.°72E,h0km,mb3.9/9, mb1 3.9/11,mb1mx3.7/24,mbtmp3.8/11,ML3.8/2, Error ellipse: s-maj=45.2km s-min=17.6km az=55.0*
*ISCJB **04** 20:09:22.6±4.2,2.°6N±0.°2×95.°9E±0.°2,h50km±32km, mb4.0/12, Error ellipse: s-maj=47.1km s-min=14.5km az=151.0*
*NEIC **04** 20:09:22.9±0.6,2.°51N×95.°80E,h35km,mb3.7/1, Error ellipse: s-maj=14.2km s-min=8.4km az=46.0*
ISC 04 20:09:24.7±4.2, 2.°6N±0.°2×95.°9E±0.°3, h49km±32km, n18, σ0s51/18, mb4.0/12, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**3.01**	**86**	Pn	**Pn**	**20 10 10.2**	**+0.2**
	3.5nm,0.3s,baz=312,slow=9.5,SNR=9.7						
KULM	**Kulim**	**5.44**	**60**	*e*P	**Pn**	**20 10 42.8**	**-0.5**
	34nm,0.8s						
CMAR	**Chiang Mai Arr**	**16.06**	**10**	Pn	**Pn**	**20 13 08.1**	**+0.7**
	0.3nm,0.3s,baz=202,slow=11,SNR=14						
FITZ	**Fitzroy Crossi**	**35.77**	**126**	P	**P**	**20 16 18.4**	**-1.0**
	1.6nm,0.9s,mb4.0,baz=281,slow=10,SNR=2.9						
GTA	**Gaotai**	**36.83**	**5**	*e*P	**P**	**20 16 27.8**	**-0.3**
GTA				pP	pP	20 16 32.6	-8.5
GTA				sP	sP	20 16 36.1	-11
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
BJI	**Beijing**	**41.57**	**24**	P	**P**	**20 17 08.5**	**+0.8**
BJI				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6						
ASAR	**Alice Springs**	**45.24**	**127**	P	**P**	**20 17 38.0**	**+0.5**
	comp=Z,0.2nm,0.5s,mb3.2,baz=297,slow=8.3,SNR=6.8						
KSRS	**Korea Array**	**45.48**	**36**	P	**P**	**20 17 38.6**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.5,baz=223,slow=8.2,SNR=3.0						
MK31	**Makanchi Array**	**45.61**	**347**	*e*P	**P**	**20 17 40.0**	**-0.1**
MKAR	**Makanchi Array**	**45.61**	**347**	P	**P**	**20 17 40.0**	**-0.1**
MKAR	**Makanchi Array**	**45.61**	**347**	P	**P**	**20 17 40.0**	**-0.1**
	comp=Z,1.2nm,0.4s,mb4.2,baz=159,slow=8.7,SNR=44						
SONM	**Songino Array**	**45.98**	**10**	P	**P**	**20 17 43.2**	**+0.2**
	comp=Z,1.4nm,0.6s,mb4.1,baz=190,slow=9.1,SNR=14						
KURK	**Kurchatov**	**50.15**	**346**	*e*P	**P**	**20 18 10.4**	**-4.7**
ZALV	**Zalesovo Beam**	**52.01**	**352**	P	**P**	**20 18 28.8**	**-0.2**
	comp=Z,1.9nm,0.5s,mb4.3,baz=183,slow=6.8,SNR=13						
BVAR	**Borovoye Array**	**54.54**	**341**	P	**P**	**20 18 47.1**	**-0.6**
	comp=Z,0.9nm,0.7s,mb3.9,baz=148,slow=8.6,SNR=6.7						
STKA	**Stephens Creek**	**55.23**	**132**	P	**P**	**20 18 53.8**	**+0.8**
	comp=Z,1.6nm,0.8s,mb4.1,baz=297,slow=11,SNR=2.3						
ABKAR	**Akbulak array**	**55.70**	**332**	*e*P	**P**	**20 18 56.1**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.7						
ARCES	**ARCESS Array B**	**80.82**	**340**	P	**P**	**20 21 33.0**	**+0.2**
	comp=Z,1.2nm,0.8s,mb3.9,baz=86,slow=6.2,SNR=5.6						

*IDC **04** 20:20:49.0±11.0,21.°72S×175.°93W,h105km±92km, mb3.8/7,mb1 4.0/7,mb1mx3.8/15,mbtmp3.8/7, Error ellipse: s-maj=62.4km s-min=29.2km az=142.0*
*NEIC **04** 20:21:03.1±3.8,21.°47S×176.°36W,h218km±28km,mb4.4/4, Error ellipse: s-maj=46.6km s-min=15.3km az=142.0*
ISC 04 20:21:06.5±3.1, 21.°2S±0.°1×176.°6W±0.°2, h240km±26km, n34, σ1s02/15, mb3.8/10, 4C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res

1.2nm,0.4s,baz=76,slow=7.0,SNR=6.8

PRU	Pruhonice	149.95 346	⇑	*e*PKP	PKPbc	20 40 29.7	+1.4
VRAC	Vranov	150.05 343		PKPbc	PKPbc	20 40 29.3	+0.7
	1.0nm,0.3s,baz=178,slow=13,SNR=3.2						
VYHS	Vyhne	150.09 339		*e*PKP	PKPbc	20 40 29.3	+0.6
NKC	Novy Kostel	150.16 348	⇑	*e*PKP	PKPbc	20 40 29.8	+1.1
KHC	Kasperske Hory	150.97 346		*e*PKPbc	PKPbc	20 40 31.5	+0.8
KHC	Kasperske Hory	150.97 346	⇑	*e*PKP	PKPbc	20 40 31.6	+0.9
DAVOX	Davos/Dischmat	153.94 350		PKPbc	PKPbc	20 40 38.0	+0.6
	2.0nm,0.3s,baz=203,slow=2.7,SNR=9.5						

IGQ 04 20:37:44.0, 2°36S×77°28W, h136km±4km, Mb4.3, Ms4.1, 4C-18D, Error ellipse: s-maj=3.9km s-min=2.5km az=28.4, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MACE	Macas	0.93 277		⇓S	Sn	20 38 23.9	-0.2
MACE	Macas	0.93 277		⇓P	Pn	20 38 07.3	+0.5
PATA	Patacocha	1.44 307		⇑S	Sn	20 38 33.2	+0.2
PATA	Patacocha	1.44 307		⇑P	Pn	20 38 12.4	+0.6
ULBA	Ulba	1.45 309		⇓P	Pn	20 38 12.5	+0.6
ARRY	Arrayan	1.45 306		⇓P	Pn	20 38 12.3	+0.3
ARRY	Arrayan	1.45 306		⇓S	Sn	20 38 32.9	-0.5
BULB	Ulba Tungurahu	1.46 309		⇓P	Pn	20 38 12.6	+0.5
BULB	Ulba Tungurahu	1.46 309		⇓S	Sn	20 38 33.4	-0.1
BRUN	Tungurahua Vol	1.47 310		⇓P	Pn	20 38 12.9	+0.7
BMAS	Trigal station	1.47 305		⇓P	Pn	20 38 12.8	+0.6
RIOE	Riobamba	1.48 294		⇓S	Sn	20 38 34.1	+0.2
RIOE	Riobamba	1.48 294		⇓P	Pn	20 38 13.3	+1.0
RUN5	Runtun	1.48 309		P	Pn	20 38 12.8	+0.4
BBIL	Ulba Tungurahu	1.51 307		⇓P	Pn	20 38 13.3	+0.7
JUI6	Juive	1.51 308		P	Pn	20 38 12.8	+0.1
BIL2	Estacion Bilba	1.52 306		P	Pn	20 38 13.4	+0.7
IGUA	Igualata	1.61 303		⇓P	Pn	20 38 14.8	+1.0
PISA	Pisayambo	1.70 320		⇑P	Pn	20 38 15.8	+1.0
TAMB	Tambo	1.98 327		⇓P	Pn	20 38 20.0	+1.8
COV1	Cotopaxi Volc	2.00 328		P	Pn	20 38 21.1	+2.8
MOV1	Cotopaxi Vol s	2.01 325		⇓P	Pn	20 38 20.1	+1.7
VC1	Cotopaxi 1	2.05 327		P	Pn	20 38 20.4	+1.5
CAMI	Rancho Maria	2.08 324		P	Pn	20 38 21.4	+2.1
ANTI	Antisana	2.10 335		⇓P	Pn	20 38 20.8	+1.2
PITA	Cotopaxi Volc	2.13 327		P	Pn	20 38 21.3	+1.4
LAV3	Lava3-Reventad	2.28 351		P	Pn	20 38 23.1	+1.3
CHAR	Charly	2.29 350		P	Pn	20 38 23.1	+1.1
CONE	Cono NE Rev Vo	2.31 351		⇑P	Pn	20 38 23.1	+1.0
CAYR	Refugio Cayamb	2.47 343		P	Pn	20 38 26.4	+2.3
JUA2	San Juan 2	2.51 328		P	Pn	20 38 25.6	+0.9
CAYA	Cayambe	2.52 344		⇓P	Pn	20 38 26.7	+1.9
GGP	Refugio Guagua	2.54 329		P	Pn	20 38 26.2	+1.2
TERV	Terraza Guagua	2.55 329		P	Pn	20 38 26.6	+1.6
PINO	Pino	2.56 329		⇓P	Pn	20 38 26.7	+1.4
YANA	Yana	2.58 330		P	Pn	20 38 26.8	+1.3
OTAV	Otavalo	2.84 336		P	Pn	20 38 29.6	+0.8
COTA	Cotacachi	2.88 338		P	Pn	20 38 31.2	+1.8
CHIS	Cerro-Chispas-	3.68 291		P	Pn	20 38 40.7	+1.0

BJI ***04*** *20:45:07.1, 6°33S×130°66E, h160km, mB6.0/52, mb5.8/64*
TEH ***04*** *20:45:10.0, 5°91S×130°28E, h118km*
MOS ***04*** *20:45:13.2±0.9, 5°90S×130°24E, h177km, mb6.2/60, MS5.5/23, Error ellipse: s-maj=9.6km s-min=6.5km az=110.6*
BGS ***04*** *20:45:13.9±1.3, 5°92S×130°20E, h175km, mb6.1(NEIC)*
IGIL ***04*** *20:45:13.3, 5°90S×130°27E, h158km*
NEIC ***04*** *20:45:14.0±0.1, 5°92S×130°20E, mb6.1/105, MW6.3, MW6.1, Error ellipse: s-maj=3.7km s-min=3.0km az=48.0, Moment Tensor Solution. s36 Moment tensor: Scale 10^{18}Nm; M_{rr}=1.59; $M_{\theta\theta}$=0.89; $M_{\phi\phi}$=0.70; $M_{r\theta}$=-0.13; $M_{\theta\phi}$=0.41; $M_{\phi r}$=0.54; Best double couple: M_0=1.50000×10^{18} NP1: ϕ_s=238.00000°, δ=37.00000°, λ=-76.00000°. NP2: ϕ_s=41.00000°, δ=55.00000°, λ=-100.00000°. Principal axes: T 1.2800, Plg=9.0000°, Azm=138.0000°; N 0.4300, Plg=8.0000°, Azm=46.0000°; P -1.7100, Plg=77.0000°, Azm=274.0000°;*
NEIC Felt [III] at Saumlaki and Tual, Indonesia. Also felt at Biak and Sorong. Felt [II] at Darwin, Australia.
ISCJB ***04*** *20:45:14.6±0.3, 5°94S±0°02×130°31E±0°02, h192km±2km, mb5.9/201 Error ellipse: s-maj=3.5km s-min=2.7km az=144.3*
CASC ***04*** *20:45:15.7±3.3, 5°92S×130°20E, h174km, mb6.1(NEIC)*
IDC ***04*** *20:45:15.2±0.4, 5°84S×130°27E, h183km±3km, mb5.6/28, mb1 5.6/30, mb1mx5.6/30, mbtmp5.6/30, MS5.5/11, Ms1 5.5/11, ms1mx5.1/30, Error ellipse: s-maj=9.0km s-min=5.9km az=59.0*
DJA ***04*** *20:45:16.2±0.2, 6°S±3°×13°0E±°, h184km±3km, mB6.5/67, mb6.0/67, MLv6.9/8, Mw(mB)6.2/67*
GCMT ***04*** *20:45:19.7±0.1, 5°93S×130°47E, h174km, MW6.3, Moment Tensor Solution. s112, c274; s95, c155; Moment tensor: Scale 10^{18}Nm; M_{rr}=2.87±.01; $M_{\theta\theta}$=1.66±.02; $M_{\phi\phi}$=1.22±.02; $M_{r\theta}$=0.19±.02; $M_{\theta\phi}$=1.59±.02; $M_{\phi r}$=0.38±.02; Best double couple: M_0=3.00000×10^{18} NP1: ϕ_s=232.00000°, δ=41.00000°, λ=-85.00000°. NP2: ϕ_s=46.00000°, δ=49.00000°, λ=-95.00000°. Principal axes: T 3.0700, Plg=4.0000°, Azm=139.0000°; N -0.1600, Plg=3.0000°, Azm=49.0000°; P -2.9100, Plg=85.0000°, Azm=277.0000°; Data Used: II IU CN IC G. Surface waves: sta=109, comp=261, per= 50.*

ISC 04 20:45:15.8±0.3, 5°93S±0°02×130°31E±0°02, h188km±2km, h172km±1.5km; pP-P, n1203, σ1s11/604, mb6.0/201, 38C-125D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	Bandanaira	1.45 344		P	Pn	20 45 47.7	-0.4
TLE	Tual	2.44 83		P	Pn	20 45 59.4	+1.1
AAI	Ambon	3.06 317		P	Pn	20 46 05.5	-0.1
NLAI	Namlea	4.16 310		P	Pn	20 46 19.8	+0.5
KAKA	Kakadu	7.06 163	⇑	*i*P	Pn	20 46 54.1	-2.8
	5μm,1.0s						
KAKA	Kakadu	7.06 163		*e*Pn	Pn	20 46 54.1	-2.8
	967nm,0.8s						
KAKA				Sn	Sn	20 48 14.3	-2.6
KAKA	Kakadu	7.06 163		P	Pn	20 46 54.4	-2.5
	18nm4μm,0.9s						
TNTI	Ternate	7.27 336		P	Pn	20 46 58.5	-1.1
BAKI	Biak	7.46 51		P	Pn	20 47 02.6	+0.5
KDI	Kendari	7.90 284		P	Pn	20 47 10.1	+2.2
	26nm8μm,1.7s						
MMRI	Maumere	8.44 251		P	Pn	20 47 15.8	+0.9
	784nm,0.9s						
LUWI	Luwuk	8.95 303		P	Pn	20 47 21.8	+0.2
	6μm,1.4s						
KMSI	Cibinong	9.03 315		P	Pn	20 47 21.8	-0.9
MNI	Manado	9.13 323		P	Pn	20 47 22.7	-1.3
	10μm,1.8s						
KNA	Kununurra	9.88 189		P	Pn	20 47 31.6	-2.1
BKSI	Bulukumba	10.15 273		P	Pn	20 47 37.7	+0.4
	1000nm,1.2s						
BNSI	Bone	10.27 278		P	Pn	20 47 39.7	+0.9
	2μm,1.8s						
MMPI	Merauke	10.31 105		P	Pn	20 47 38.0	-1.4
MRSI	Marisa	10.50 307		P	Pn	20 47 41.8	0.0
WSI	Waingapu	10.59 249		P	Pn	20 47 41.8	-1.1
	3μm,0.6s						
TTSI	Tana Toraja	10.84 285		P	Pn	20 47 48.2	+2.0
	4μm,1.3s						
JAY	Jayapura	10.91 72		P	Pn	20 47 46.4	-0.7
	973nm,1.0s						
PCI	Palu	11.58 295		P	Pn	20 47 57.5	+1.8
	4μm,1.0s						
TOLI	Toli-Toli	11.80 306		P	Pn	20 47 57.8	-0.7
	3μm,1.1s						
FITZ	Fitzroy Crossi	12.93 200		*e*P	Pn	20 48 07.5	-5.4
	729nm,0.8s						
FITZ				*e*S	Sn	20 50 24.5	-12
FITZ	Fitzroy Crossi	12.93 200		P	Pn	20 48 09.2	-3.7
	13nm,0.3s,baz=31,slow=12,SNR=194						
FITZ				S	Sn	20 50 26.6	-10
	94nm,0.3s,baz=197,slow=17,SNR=8.2						
FITZ				LR	LR	20 53 41.8	
	comp=Z,11μm,20.5s,baz=24,slow=39						
FITZ	Fitzroy Crossi	12.93 200		P	Pn	20 48 09.2	-3.7
	976nm,0.8s						
GSPH	General Santos	13.08 336		*e*P	Pn	20 48 12.3	-2.5
MATI	Mati	13.41 342		*e*P	Pn	20 48 19.1	+0.2
DAV	Davao City (W)	13.74 340		*e*Pn	Pn	20 48 22.8	-0.3
DAV	Davao City (W)	13.74 340		P	Pn	20 48 22.7	-0.4
	77nm,0.3s,baz=49,slow=1.0,SNR=49						
DAV				S	Sn	20 50 52.5	-3.9
	68nm,0.3s,baz=292,slow=23,SNR=1.9						
DAV	Davao City (W)	13.74 340	⇑	*e*P	Pn	20 48 17.5	-5.7
DMPH	Davao City--Mi	13.78 340		*e*P	Pn	20 48 22.9	-0.7
KCP	Kidapawan	13.86 338	⇓	*e*P	Pn	20 48 23.2	-1.4
KBKI	Kotabaru	14.33 280		P	Pn	20 48 31.6	+1.2
	2μm,1.3s						
CTBH	Cotabato--PC H	14.39 335	⇑	*e*P	Pn	20 48 29.5	-1.7
CTBH				*i* S	x	20 48 50.0	
WRAB	Tennant Creek	14.47 165		Pn	Pn	20 48 28.7	-3.4
	15μm,0.3s						
WRAB	Tennant Creek	14.47 165		*e*P	Pn	20 48 27.7	-4.3
WRAB	Tennant Creek	14.47 165		P	Pn	20 48 29.4	-2.6
	1μm,0.5s						
BUKP	Musuan	14.68 339		*e*P	Pn	20 48 34.8	+0.1
KHKI	Kahang-Kahang	14.78 260		P	Pn	20 48 34.1	-1.9
	8μm717nm,0.8s						
COEN	Coen	14.97 123		*e*Pn	Pn	20 48 36.4	-1.9
COEN	Coen	14.97 123		P	Pn	20 48 36.8	-1.5
SRBI	Singaraja	15.13 261		P	Pn	20 48 40.2	-0.1
	895nm,1.1s						
ZMPH	Zamboanga City	15.21 327	⇑	*e*P	Pn	20 48 41.2	0.0
IGBI	Denpasar	15.31 258		P	Pn	20 48 42.4	0.0
	906nm,0.6s						
PAGZ	Pagadian	15.33 333		*e*P	Pn	20 48 41.6	-1.0
CGP	Cagayan de Oro	15.34 339	⇓	*e*P	Pn	20 48 42.6	-0.3
BUTP	Butuan	15.52 342		*e*P	Pn	20 48 45.5	+0.5
IPIL	Ipil	15.65 330		*e*P	Pn	20 48 47.3	+0.7
NBBI	Negara	15.75 260		P	Pn	20 48 47.8	0.0
	1μm,0.7s						
TSM	Tawau	16.04 309		P	Pn	20 48 51.7	+0.4
MYLDM	Lahad Datu	16.14 313		P	Pn	20 48 53.9	+1.3
	6μm,1.2s						
KMMI	Kalianget	16.27 265		P	Pn	20 48 55.4	+1.3
	3μm,1.5s						
SCPH	Surigao	16.32 343	⇑	*e*P	Pn	20 48 54.5	-0.2
SNPH	Sibulan	16.72 335	⇓	*e*P	Pn	20 49 00.2	+0.7
TBP	Tagbilaran	16.79 337	⇓	*e*P	Pn	20 49 00.2	-0.1
GMJI	Gumukmas	16.89 261		P	Pn	20 48 59.0	-2.6
	7μm510nm,1.0s						
PMG	Port Moresby	17.06 103		*e*P	Pn	20 49 00.7	-2.8
	7μm,1.1s						
PMG	Port Moresby	17.06 103		*ce*P	Pn	20 49 03.0	-0.5
PMG				pmax	pmax		
	comp=Z,4μm,1.2s						
PMG	Port Moresby	17.06 103		P	Pn	20 49 05.0	+1.5
	comp=Z,6μm,1.2s						
LLP	Lapu-Lapu	17.33 339	⇑	*e*P	Pn	20 49 06.3	-0.4
LLP				*e*S	S	20 52 30.5	+15
OCLP	Ormoc	17.79 341		*e*P	Pn	20 49 12.2	0.0
KRKI	Karangkates	17.86 262		P	Pn	20 49 14.4	+1.5
	comp=Z,1μm,0.6s						
ASAR	Alice Springs	17.98 169		P	Pn	20 49 12.7	-1.6
ASAR				S	S	20 52 26.8	-1.9
ASAR	Alice Springs	17.98 169		P	Pn	20 49 12.7	-1.6
	comp=Z,89nm,0.3s,baz=350,slow=10.0,SNR=3141						
ASAR				S	S	20 52 26.8	-1.9
	comp=Z,13nm,0.3s,baz=342,slow=20,SNR=6.6						
ASAR				P3KPbc		21 23 40.5	
	comp=Z,0.1nm,0.3s,baz=162,slow=3.9,SNR=6.4						
ASAR	Alice Springs	17.98 169		P	Pn	20 49 12.7	-1.5
ASAR				S	S	20 52 26.8	-1.9
ASAR				pmax	pmax		
	comp=Z,89nm,0.3s						
ASAR				smax			
	comp=N,13nm,0.3s						
GUIM	Jordan	18.15 335		*e*P	P	20 49 14.6	+0.4
MBWA	Marble Bar	18.28 213		*e*P	P	20 49 15.2	-0.4
	comp=N,2.0nm,0.1s						
MBWA	Marble Bar	18.28 213		P	P	20 49 15.3	-0.3
	comp=N,7μmcomp=N,428nm,1.1s						
MBWA	Marble Bar	18.28 213		P	P	20 49 15.5	-0.1
	SNR=19						
KKM	Kota Kinabalu	18.42 310		*e*P	P	20 49 17.4	+0.3
	6μm,1.3μm,0.8s						
KKM	Kota Kinabalu	18.42 310		P	P	20 49 18.9	+1.8
PWJI	Pagerwojo	18.48 262		P	P	20 49 18.2	+0.4
	comp=N,9μmcomp=N,517nm,0.7s						
SJI	Sawahan	18.49 263		P	P	20 49 18.1	+0.1
	comp=N,783nm,1.2s						
KDM	Kudat	18.53 313		P	P	20 49 20.6	+2.2
NGJI	Ngawi	18.77 265		P	P	20 49 24.7	+3.7
	comp=N,634nm,1.2s						
CUYO	Cuyo Island	19.06 331		*e*P	P	20 49 25.3	+1.3
PCJI	Pacitan	19.12 262		P	P	20 49 23.6	-1.1
	comp=N,8μmcomp=N,654nm,0.6s						
CNP	Catarman	19.16 343		*e*P	P	20 49 25.1	+0.1
BATP	Bataraza	19.22 319		*e*P	P	20 49 26.0	+0.2
MMPH	Masbate	19.34 340		*e*P	P	20 49 28.5	+1.5
PPR	Puerto Princes	19.40 323	⇑	*i*P	P	20 49 30.0	+2.3
BTM	Bintulu	19.44 297		P	P	20 49 28.8	+0.6
STKI	Sintang	19.71 287		P	P	20 49 30.5	-0.7
	comp=N,2μm,1.4s						
UGM	Wanagama	19.74 263		P	P	20 49 31.6	+0.2
	comp=N,521nm,1.0s						
SMRI	Semarang	19.77 266		P	P	20 49 32.8	+1.1
	comp=N,766nm,1.0s						
SBUM	Sibu	19.89 294		P	P	20 49 33.4	+0.4
SBUM	Sibu	19.89 294		P	P	20 49 33.0	0.0
	comp=N,1μm,1.0s						
OTRP	Odiongan	19.95 336		*e*P	P	20 49 34.0	+0.4
YOGI	Yogyakarta	19.95 263		P	P	20 49 34.8	+1.1
	comp=N,893nm,1.1s						
ENPP	El Nido	20.17 328		*e*P	P	20 49 36.8	+0.8
PVCP	Virac	20.33 343		*e*P	P	20 49 38.2	+0.5
PVCP	Virac	20.33 343	⇓	*i*P	S	20 53 13.0	-2.2
BUSP	Coron	20.45 331		*e*P	P	20 49 39.6	+0.6
BJII	Banjamegara	20.50 265		P	P	20 49 39.5	-0.1
	comp=N,437nm,1.8s						
CTA	Charters Tower	20.94 134	⇑	*i*P	P	20 49 44.9	+0.8
	comp=N,442nm,0.9s						
CTA				*e*S	S	20 53 29.5	+2.7
CTA	Charters Tower	20.94 134		P	P	20 49 45.0	+0.9
	comp=N,678nm,1.2s,baz=314,slow=11,SNR=136						
CTA				S	S	20 53 27.9	+1.0
	comp=N,315nm,1.0s,baz=222,slow=23,SNR=3.2						
CTA	Charters Tower	20.94 134		P	P	20 49 45.0	+0.9
CTA				S	S	20 53 27.9	+1.1
CTA				pmax	pmax		
	comp=Z,679nm,1.2s						
CTA				smax			
	comp=N,315nm,1.0s						
CTAO	Charters Tower	20.94 134		*e*P	P	20 49 44.8	+0.7
	comp=N,12μm,2.6s						
CTAO	Charters Tower	20.94 134		*e*P	P	20 49 44.8	+0.7
CTAO				pmax	pmax		
	comp=Z,10μm,2.6s						
CTAO	Charters Tower	20.94 134		P	P	20 49 44.9	+0.8
	comp=Z,1μm,1.2s						
BOAC	Bonac	21.01 336		*e*P	P	20 49 45.8	+0.9
GQP	Guinayangan	21.19 338	⇓	*e*P	P	20 49 47.0	+0.2
KSM	Kuching	21.28 290		*e*P	P	20 49 45.8	-2.0
	comp=Z,654nm,1.0s,mb5.9						
KSM	Kuching	21.28 290		P	P	20 49 46.3	-1.5
	comp=Z,741nm,1.1s,mb5.9						
PGP	Puerto Galera	21.42 334	⇑	*i*P	P	20 49 49.6	+0.4
LQP	Lukban	21.73 336	⇓	*e*P	P	20 49 53.2	+0.8
JCJI	Jatiwangi	21.91 267		P	P	20 49 53.6	-0.8
	comp=Z,2μm,1.4s,mb6.3						
TGY	Tagaytay City	21.96 335		P	P	20 49 54.8	0.0
	comp=Z,6μm,0.8s,mb7.1,baz=205,slow=1.2,SNR=188						
TGY				S	S	20 53 40.8	-3.0
	comp=Z,998nm,0.9s,baz=162,slow=23,SNR=4.4						
TGY	Tagaytay City	21.96 335		P	P	20 49 54.8	0.0
TGY				S	S	20 53 40.8	-3.0
TGY				smax			
	comp=N,998nm,0.9s						
TGY	Tagaytay City	21.96 335	⇑	*i*P	P	20 49 56.4	+1.6
POLP	Polillo Island	22.13 338		*e*P	P	20 49 56.0	-0.3
CISI	Cisompet, Garu	22.39 265		P	P	20 49 56.9	-1.9
	comp=N,1μm,0.7s,mb6.5						
LEM	Lembang	22.57 266		P	P	20 49 59.0	-1.4
	comp=N,911nm,1.0s,mb6.2						
TPI	Tanjungpandan	22.80 277		P	P	20 50 01.5	-1.1
	comp=N,7μmcomp=N,340nm,0.8s,mb5.8						
BALP	Baler	23.20 338		*e*P	P	20 50 05.2	-0.9
PCPH	Palayan	23.22 337	⇓	*e*P	P	20 50 04.9	-1.4
CBJI	Citeko	23.32 268		P	P	20 50 06.0	-1.3
	comp=N,3μm,0.8s,mb6.7						
TNG	Tangerang	23.53 268		P	P	20 50 09.1	-0.1
	comp=N,883nm,1.0s,mb6.2						
SKJI	Sukabumi	23.62 266		P	P	20 50 09.0	-1.1
	comp=N,1μm,0.8s,mb6.6						
SCZP	Santa Cruz	23.89 335		*e*P	P	20 50 10.8	-1.6
SBJI	Serang	24.04 268		P	P	20 50 13.2	-0.7
	comp=N,8μmcomp=N,327nm,1.6s,mb5.6						
PALP	Palanan	24.13 341		*e*P	P	20 50 17.0	+2.4
GUMO	Guam	24.19 37		*e*P	P	20 50 15.0	-0.1
	comp=N,1μm,0.8s,mb6.4						
GUMO	Guam	24.19 37		P	P	20 50 15.1	0.0
	comp=N,1μm,0.8s,mb6.4,baz=188,slow=6.9,SNR=79						
GUMO				S	S	20 54 19.7	+0.1
	comp=N,93nm,0.7s,baz=314,slow=23,SNR=3.6						
GUMO				ScP	ScP	20 57 10.2	-1.4
	comp=N,114nm,1.0s,baz=3.5,slow=23,SNR=3.6						
GUMO	Guam	24.19 37		P	P	20 50 15.1	0.0
GUMO				S	S	20 54 19.7	+0.1
GUMO				smax			
	comp=N,93nm,0.7s						
GUMO				pmax	pmax		
	comp=N,114nm,1.0s						
GUMO	Guam	24.19 37		P	P	20 50 15.0	-0.1
	comp=N,2μm,1.0s,mb6.5						
CAUP	Cauayan	24.22 340		*e*P	P	20 50 15.7	+0.3
BOLP	Bolinao	24.43 335		*e*P	P	20 50 16.2	-1.1
RBSI	Rajabasa	24.43 269		P	P	20 50 16.3	-1.1
	comp=N,6μmcomp=N,230nm,0.9s,mb5.7						
CGJI	Cibinong	24.47 267		P	P	20 50 16.0	-1.8
	comp=N,10μmcomp=N,625nm,0.7s,mb6.3						
FORT	Forrest	24.81 185	⇓	*i*P	P	20 50 20.2	-0.4
	comp=N,499nm,0.6s,mb6.2						
FORT				*e*pP		20 50 47.6	
FORT				*e*S	S	20 54 27.6	-1.6
FORT	Forrest	24.81 185		*e*P	P	20 50 19.3	-1.4
	comp=N,788nm,0.7s,mb6.3						
ABRA	Dolores	25.27 338		*e*P	P	20 50 23.6	-1.3
APYP	Conner	25.27 339		*e*P	P	20 50 23.7	-1.2
KLI	Kotabumi	25.36 271		P	P	20 50 26.8	+1.0
	comp=N,6μmcomp=N,318nm,1.0s,mb5.8						
KLSI		25.49 272		P	P	20 50 29.7	+2.7
	comp=N,434nm,1.3s,mb5.8						
MDSI	Maura Dua	26.06 272		P	P	20 50 32.4	+0.3
	comp=N,6μmcomp=N,130nm,1.7s,mb5.3						
LWLI	Liwa	26.14 271		P	P	20 50 34.8	+1.9
	comp=N,6μmcomp=N,447nm,0.8s,mb6.1						
MYKOM	Kota Tinggi	27.51 285		P	sP	20 51 39.5	-5.9
MYKOM	Kota Tinggi	27.51 285		P	P	20 50 44.8	-0.3
	comp=N,5μmcomp=N,150nm,1.9s,mb5.4						
KSI	Kapahiang	27.70 273		P	P	20 50 48.6	+1.8
	comp=N,7μmcomp=N,212nm,1.0s,mb5.8						
EIDS	Eidsvold	27.74 136		*e*P	P	20 50 46.5	-0.4
	comp=N,543nm,1.0s,mb6.2						
STKA	Stephens Creek	27.89 159	⇓	*i*P	P	20 50 48.3	+0.1
	comp=N,179nm,0.4s,mb6.2						
STKA				*e*sP	pP	20 51 31.9	+5.1
STKA				*e*S	S	20 55 14.3	-3.5
STKA	Stephens Creek	27.89 159		*e*P	P	20 50 48.6	+0.4
	comp=N,343nm,1.4s,mb5.9						
STKA	Stephens Creek	27.89 159		P	P	20 50 48.5	+0.3
	comp=N,281nm,1.0s,mb6.0,baz=331,slow=8.8,SNR=230						
STKA				pP	pP	20 51 27.6	+0.9
	comp=N,266nm,0.6s,baz=334,slow=9.5,SNR=2.6						
STKA				S	S	20 55 11.0	-6.8
	comp=N,81nm,0.6s,baz=109,slow=19,SNR=1.7						
STKA				LR	LR	21 03 19.2	
	comp=N,67μm,18.2s,baz=330,slow=39						
STKA				P3KPbc		21 23 09.6	
	comp=N,2.6nm,0.9s,baz=239,slow=5.2,SNR=3.5						
KLBR	Kellerberrin	28.11 203	⇓	*i*P	P	20 50 50.0	-0.1
	comp=N,310nm,0.7s,mb6.2						
RGRI	Rengat	28.46 280		P	P	20 50 55.8	+2.3
	comp=N,312nm,0.7s,mb6.2						
KRJI	Kerinci	29.02 276		P	P	20 51 01.3	+2.8
	comp=N,626nm,1.1s,mb6.3						
SDSI	Sungai Dareh	29.24 279		P	P	20 51 01.0	+0.6
	comp=N,5μmcomp=N,331nm,0.9s,mb6.0						
NWAO	Narrogin (SRO)	29.50 203		*e*P	P	20 51 01.4	-1.0
	comp=N,118nm,0.8s,mb5.7						
NWAO	Narrogin (SRO)	29.50 203		P	P	20 51 02.4	0.0
	comp=N,100nm,0.6s,mb5.7,baz=30,slow=8.6,SNR=65						
NWAO				S	S	20 55 32.2	-11
	comp=N,69nm,0.9s,baz=308,slow=18,SNR=1.4						
NWAO				LR	LR	21 05 10.0	
	comp=N,12μm,18.3s,baz=22,slow=40						
NWAO	Narrogin (SRO)	29.50 203		P	P	20 51 02.7	+0.3
	SNR=6.0						
HNR	Honiara	29.57 99		*e*P	P	20 51 02.9	-0.4
	comp=N,2μm,1.1s,mb6.7						
HNR	Honiara	29.57 99		P	P	20 51 02.8	-0.6
	comp=N,961nm,0.9s,mb6.5,baz=213,slow=2.9,SNR=76						
HNR				S	S	20 55 35.1	-10
	comp=N,104nm,0.8s,baz=189,slow=13,SNR=1.7						
HNR				LR	LR	21 03 33.4	
	comp=N,9μm,18.8s,baz=119,slow=37						
HNR	Honiara	29.57 99		*e*P	P	20 51 02.9	-0.5
HNR				pmax	pmax		
	comp=Z,2μm,1.1s,mb6.7						
TWG	Pinlang	29.96 343		*e*P	P	20 51 03.6	-3.1
	comp=Z,76nm,0.6s,mb5.6						
PDSI	Padang	30.19 278		P	P	20 51 10.9	+2.1
YULB	Yu-li	30.44 344		*e*P	P	20 51 08.6	-2.2
	comp=Z,90nm,0.9s,mb5.5						
TPUB	Ta-pu	30.55

DZM Mont Dzumac 38.42 118 *e*P **P 20 52 18.4 -1.0**
DZM Mont Dzumac 38.42 118 *e*P **P 20 52 19.6 +0.2**
comp=Z,1µm,1.7s,mb6.3
BDT Bhumibol Dam 38.56 307 P **P 20 52 20.0 -0.6**
comp=Z,78nm,1.0s,mb5.3
CM31 Chiang Mai Arr 39.29 309 *e*P **P 20 52 27.3 +0.7**
CMAR Chiang Mai Arr 39.29 309 P **P 20 52 27.1 +0.5**
CMAR pP pP 20 53 03.6 -3.1
CMAR PcP PcP 20 54 32.9 +1.2
CMAR ScP ScP 20 58 02.8 +0.3
CMAR Chiang Mai Arr 39.29 309 P **P 20 52 27.1 +0.5**
comp=Z,135nm,0.8s,mb5.6,baz=136,slow=7.3,SNR=222
CMAR pP pP 20 53 03.6 -3.1
comp=Z,30nm,0.8s,baz=143,slow=6.4,SNR=1.6
CMAR PcP PcP 20 54 32.9 +1.2
comp=Z,71nm,0.9s,baz=159,slow=3.7,SNR=6.1
CMAR ScP ScP 20 58 02.8 +0.3
comp=Z,30nm,0.9s,baz=160,slow=3.7,SNR=6.4
CMAR PKiKP PKiKP 21 01 43.2 -0.6
comp=Z,6.7nm,0.9s,baz=248,slow=1.1,SNR=6.2
CMAR Chiang Mai Arr 39.29 309 P **P 20 52 27.1 +0.5**
CMAR *PP pP 20 53 03.6 -3.1
CMAR 20 54 32.9
CMAR pmax pmax
comp=Z,135nm,0.8s
NJ2 Nanjing 39.31 345 *e*P **P 20 52 27.4 +0.8**
NJ2 pP pP 20 53 05.9 -0.8
NJ2 PP PP 20 54 05.8 +4.8
NJ2 S **S 20 58 13.5 +0.1**
NJ2 sS sS 20 59 19.0 -5.0
NJ2 pmax pmax
comp=Z,190nm,0.7s,mb5.8
NJ2 pmax pmax
comp=Z,2µm,8.8s
NJ2 LR LR
comp=N,4µm,15.4s
NJ2 LR LR
comp=E,7µm,16.1s
NJ2 LR LR
comp=Z,4µm,14.4s
MOO Moorlands 39.33 160⇓*i*P **P 20 52 28.3 +1.7**
MOO *e*S **S 20 58 16.1 +2.7**
WHN Wuhan 39.35 338⇑P **P 20 52 27.5 +0.5**
WHN PP PP 20 54 02.5 +1.0
WHN S **S 20 58 13.8 -0.3**
WHN pmax pmax
comp=Z,4µm,8.6s
WHN LR LR
comp=N,10µm,16.8s
WHN LR LR
comp=E,7µm,18.7s
WHN LR LR
comp=Z,11µm,25.5s
CHRT Chiangrai 39.48 311⇑P **P 20 52 27.0 -1.2**
comp=Z,1µm,1.0s,mb6.4
CHTO Chiang Mai 39.49 309 *e*P **P 20 52 28.5 +0.2**
CHTO Chiang Mai 39.49 309 P **P 20 52 29.0 +0.7**
SNR=63
GYA Guiyang 39.52 326⇑*i*P **P 20 52 28.5 +0.1**
GYA pP pP 20 53 05.8 -2.7
GYA sP sP 20 53 21.8 -8.1
GYA PP PP 20 54 07.5 +4.2
GYA PcP PcP 20 54 34.3 +2.1
GYA ScP ScP 20 58 05.3 +2.1
GYA S **S 20 58 20.3 +3.6**
GYA sS sS 20 59 22.0 -5.3
GYA SS SS 21 01 17.4 -2.3
GYA ScS ScS 21 02 16.2 +0.1
GYA pmax pmax
comp=Z,250nm,0.8s,mb5.9
GYA pmax pmax
comp=Z,1µm,8.0s
GYA LR LR
comp=N,6µm,17.0s
GYA LR LR
comp=E,6µm,16.9s
GYA LR LR
comp=Z,8µm,17.2s
KWAJ Kwajalein Atol 39.97 69 *e*P **P 20 52 33.2 +0.8**
comp=Z,1µm,1.6s,mb6.3
KMI Kunming 40.88 320⇑P **P 20 52 40.8 +1.2**
KMI pP pP 20 53 19.5 -0.5
KMI PP PP 20 54 20.2 +2.1
KMI S **S 20 58 42.7 +5.7**
KMI pmax pmax
comp=Z,180nm,1.2s,mb5.6
KMI pmax pmax
comp=Z,2µm,8.1s
KMI LR LR
comp=N,3µm,16.5s
KMI LR LR
comp=E,4µm,15.6s
KMI LR LR
comp=Z,5µm,20.6s
MAJO Matsushiro 42.89 9 *e*P **P 20 52 54.7 -1.0**
comp=Z,453nm,0.7s,mb6.2
MAJO Matsushiro 42.89 9 *e*P **P 20 52 54.7 -1.0**
MAJO pmax pmax
comp=Z,453nm,0.7s,mb6.2
MAT Matsushiro 42.89 9 P **P 20 52 54.2 -1.5**
MAT S **S 20 59 01.6 -4.5**
KSRS Korea Array 43.21 357 P **P 20 52 58.7 +0.4**
comp=Z,47nm,0.6s,mb5.3,baz=173,slow=8.8,SNR=305
KSRS pP pP 20 53 36.4 -2.7
comp=Z,18nm,0.8s,baz=188,slow=8.8,SNR=1.7
KSRS PP PP 20 54 35.5 -7.3
comp=Z,22nm,0.9s,baz=181,slow=12,SNR=4.2
KSRS ScP ScP 20 58 17.7 +0.1
comp=Z,20nm,0.7s,baz=175,slow=4.1,SNR=11
KSRS S **S 20 59 07.8 -3.0**
comp=Z,0.7nm,0.6s,baz=354,slow=23,SNR=2.1
KSRS PKiKP PKiKP 21 01 46.0 -0.9
comp=Z,1.4nm,0.8s,baz=213,slow=0.6,SNR=4.1
KSRS PKP2ab 21 26 01.1
comp=Z,4.5nm,1.1s,baz=351,slow=4.6,SNR=7.2
KSRS Korea Array 43.21 357 P **P 20 52 58.7 +0.4**
KSRS *PP pP 20 53 36.4 -2.7
KSRS 20 54 35.6
KSRS S **S 20 59 07.8 -2.9**
KSRS pmax pmax
comp=Z,47nm,0.6s,mb5.3
KSRS smax
comp=N,1.0nm,0.6s
INCN Inchon 43.32 356 *e*P **P 20 52 59.3 +0.2**
comp=N,132nm,0.7s,mb5.7
INCN Inchon 43.32 356 P **P 20 53 00.0 +0.9**
SNR=21
TIA Tai'an 43.70 345⇑P **P 20 53 01.5 -0.7**
TIA S **S 20 59 15.5 -2.4**
TIA LR LR
comp=N,5µm,13.2s
TIA LR LR
comp=E,7µm,18.1s
CD2 Chengdu 44.57 327 P **P 20 53 08.7 -0.5**
CD2 pP pP 20 53 44.3 -5.9
CD2 sP sP 20 54 02.5 -8.9
CD2 PcP PcP 20 54 49.2 +0.3
CD2 PP PP 20 54 56.0 -1.3
CD2 S **S 20 59 31.5 +0.8**
CD2 sS sS 21 00 34.2 -8.3
CD2 SS SS 21 02 48.3 -7.3
CD2 pmax pmax
comp=Z,2µm,1.0s,mb6.7
CD2 pmax pmax
comp=Z,2µm,6.5s
CD2 LR LR
comp=N,5µm,12.7s
CD2 LR LR
comp=E,5µm,16.2s
CD2 LR LR
comp=Z,6µm,16.1s
XAN Xi'an 44.60 334 P **P 20 53 09.8 +0.4**
XAN pmax pmax
comp=Z,110nm,0.9s,mb5.5
XAN pmax pmax
comp=Z,500nm,9.1s
XAN LR LR
comp=N,5µm,26.6s
XAN LR LR
comp=E,1µm,18.4s
XAN LR LR
comp=Z,2µm,33.1s
DL2 Dalian 45.32 350 P **P 20 53 15.4 +0.4**
DL2 pP pP 20 53 49.1 -7.0
DL2 sP sP 20 54 07.1 -10
DL2 S **S 20 59 39.3 -1.9**
DL2 sS sS 21 00 44.1 -9.2
DL2 pmax pmax
comp=Z,70nm,0.9s,mb5.3
DL2 pmax pmax
comp=Z,1µm,6.6s
TIY Taiyuan 46.50 340 *e*P **P 20 53 24.5 +0.3**
TIY S **S 20 59 55.3 -2.8**
TIY pmax pmax
comp=Z,2µm,4.9s
IMP Imphal 46.74 312 *i* x x 20 53 56.0
IMP *i* x x 20 59 03.0
BJI Beijing 47.56 345 P **P 20 53 32.4 0.0**
BJI pP pP 20 54 08.2 -5.7
BJI sP sP 20 54 25.3 -10
BJI S **S 21 00 10.8 -2.2**
BJI sS sS 21 01 14.9 -11
BJI pmax pmax
comp=Z,320nm,0.7s,mb6.1
MSVF Nonsavu 48.05 108 P **P 20 53 38.0 +1.5**
comp=Z,2µm,1.0s,mb6.6,SNR=36
MSVF Nonsavu 48.05 108 *e*P **P 20 53 37.2 +0.6**
comp=Z,414nm,1.2s,mb5.9
AGT Agartala 48.26 309 *i* P **P 20 53 35.0 -3.0**
AGT *i* x x 20 53 55.0
FUNA Funafuti 48.55 96 *e*P **P 20 53 40.4 -0.1**
comp=Z,596nm,1.1s,mb6.1
LZH Lanzhou 48.61 331⇑P **P 20 53 41.4 +0.9**
LZH pP pP 20 54 17.3 -4.9
LZH PP PP 20 55 37.0 +1.6
LZH ScP ScP 20 58 41.0 +0.9
LZH S **S 21 00 28.0 +0.1**
LZH sS sS 21 01 34.5 -6.3
LZH ScS ScS 21 03 12.6 -0.8
LZH pmax pmax
comp=Z,290nm,1.0s,mb5.9
LZH pmax pmax
comp=Z,3µm,8.1s
LZH LR LR
comp=E,3µm,13.2s
LZH LR LR
comp=Z,5µm,17.5s
VLA Vladivostok 48.84 2*d i*P **P 20 53 42.3 +0.2**
VLA pmax pmax
comp=Z,317nm,0.8s,mb6.0
ERM Erimo 49.13 13 P **P 20 53 44.5 +0.2**
comp=Z,484nm,0.8s,mb6.2,SNR=14
ERM Erimo 49.13 13 *e*P **P 20 53 44.5 +0.2**
comp=Z,80nm,0.8s,mb5.4
ERM Erimo 49.13 13 *e*P **P 20 53 44.5 +0.2**
ERM pmax pmax
comp=Z,80nm,0.8s,mb5.4
OUZ Omahuta 49.33 132 *e*P **P 20 53 47.6 +1.5**
comp=Z,293nm,1.2s,mb5.8
HHC Hu-ho-hao-te 49.63 341 *e*P **P 20 53 48.4 +0.3**
HHC pP pP 20 54 24.8 -5.2
HHC sP sP 20 54 42.6 -8.3
HHC PcP PcP 20 55 05.9 -0.8
HHC PP PP 20 55 45.7 +1.1
HHC S **S 21 00 43.2 +1.3**
HHC sS sS 21 01 48.6 -6.4
HHC ScS ScS 21 03 19.4 -0.7
HHC SS SS 21 04 15.9 -1.0
HHC pmax pmax
comp=Z,89nm,0.9s,mb5.4
HHC pmax pmax
comp=Z,3µm,5.9s
CN2 Changchun 49.69 355⇓P **P 20 53 47.5 -1.0**
CN2 *e*pP pP 20 54 22.4 -8.0
CN2 *e*sP sP 20 54 42.4 -8.9
CN2 PcP PcP 20 55 07.7 +0.9
CN2 *e*S **S 21 00 38.1 -4.6**
CN2 SS SS 21 04 14.9 -2.9
CN2 pmax pmax
comp=Z,20nm,0.6s,mb4.9
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,4µm,20.0s
CN2 LR LR
comp=E,3µm,20.0s
CN2 LR LR
comp=Z,2µm,21.0s
CAL Calcutta 49.86 306 *e*PKP **P 20 53 49.1 -1.1**
CAL *ex* x 20 54 58.3
CAL *ex* x 21 00 48.7
BTO Baotou 49.92 340 *e*P **P 20 53 50.2 -0.1**
MDJ Mudanjiang 50.31 359 P **P 20 53 53.7 +0.5**
MDJ pP pP 20 54 31.9 -3.3
MDJ sP sP 20 54 50.9 -5.2
MDJ ScP ScP 20 58 48.8 +1.6
MDJ PcS PcS 20 59 07.0 +0.6
MDJ S **S 21 00 51.5 +0.2**
MDJ sS sS 21 02 01.3 -3.3
MDJ ScS ScS 21 03 26.7 +2.1
MDJ pmax pmax
comp=Z,230nm,0.9s,mb5.8
MDJ pmax pmax
comp=Z,340nm,3.9s
MDJ LR LR
comp=N,3µm,21.0s
MDJ LR LR
comp=E,6µm,32.0s
MDJ LR LR
comp=Z,5µm,24.0s
JCZ Jackson Bay 50.76 145 PN **P 20 53 57.9 +1.3**
JCZ sP pP 20 54 44.1 +5.4
BWNR Bhubaneshwar 50.90 302 *ex* x 20 53 51.0
QRZ Quartz Range 51.26 139 PN **P 20 54 01.5 +1.1**
WKZ Wanaka 51.36 145 PN **P 20 54 01.6 +0.5**
WHZ Wether Hill Ro 51.43 147 PN **P 20 54 01.7 +0.2**
LSA Lhasa 51.64 316 P **P 20 54 04.7 +1.3**
LSA S **S 21 01 07.7 -2.4**
LSA SS SS 21 04 52.5 +3.3
LSA pmax pmax
comp=Z,200nm,1.0s,mb5.7
LSA pmax pmax
comp=Z,2µm,6.0s
LSA LR LR
comp=N,2µm,27.0s
LSA LR LR
comp=E,4µm,21.0s
LSA LR LR
comp=Z,5µm,24.0s
YUK Yuzh-Kuril'sk 51.67 14⇓*i*P **P 20 54 03.2 -0.2**
YUK *i* *PP pP 20 54 44.5 -1.0
YUK *i* PPP 20 57 09.7
YUK *i* S **S 21 01 07.9 -2.1**
YUK *i* 21 02 16.8
YUK *i* SS SS 21 04 43.4 -5.8
YUK pmax pmax
comp=N,132nm,1.0s
YUK pmax pmax
comp=E,174nm,1.0s
YUK pmax pmax
comp=Z,690nm,1.0s,mb6.2
YUK smax
comp=N,1µm,2.0s
YUK smax
comp=E,670nm,2.0s
LBZ Lake Benmore 51.77 144 PN **P 20 54 04.5 +0.3**
LBZ pP pP 20 54 47.3 +1.0
RPZ Rata Peaks 51.90 143 *e*P **P 20 54 05.8 +0.7**
comp=E,911nm,1.7s,mb6.1
RPZ Rata Peaks 51.90 143 LR LR 21 18 39.3
comp=E,15µm,18.2s,baz=213,slow=38
RPZ Rata Peaks 51.90 143 *e*PN **P 20 54 05.6 +0.4**
LTZ Lake Taylor 52.12 141 PN **P 20 54 06.5 -0.3**
LTZ pP pP 20 54 50.7 +1.6
ODZ Otahua Downs 52.42 145 *e*P **P 20 54 09.0 +0.1**
comp=E,924nm,1.7s,mb6.1
TUWZ Tuamarina 52.49 139 *e*PN **P 20 54 09.1 -0.4**
KHZ Kahutara 52.73 140 *e*P **P 20 54 10.9 -0.3**
comp=E,95nm,0.7s,mb5.6
KHZ Kahutara 52.73 140 PN **P 20 54 10.9 -0.3**
KHZ pP pP 20 54 51.6 -2.0
ODAN Odare 52.79 310 *e*P **P 20 54 12.4 +0.5**
comp=E,815nm,0.7s,mb6.5
ODAN Odare 52.79 310 *e*P **P 20 54 12.3 +0.4**
comp=E,815nm,0.7s,mb6.5
TAPN Taplejung 52.81 311 *e*P **P 20 54 12.6 +0.5**
comp=E,685nm,0.6s,mb6.6
TAPN Taplejung 52.81 311 *e*P **P 20 54 12.6 +0.5**
comp=E,685nm,0.6s,mb6.6
SNZO South Karori 52.93 139 *e*P **P 20 54 11.8 -0.9**
MDRS Chennai 53.18 291⇓*ex* x 20 54 32.2
MDRS *e*S **S 21 01 31.2 -0.3**
MDRS *ex* x 21 18 41.2
URZ Urewera 53.18 134 *e*P **P 20 54 13.8 -0.9**
comp=E,186nm,1.1s,mb5.7
GTA Gaotai 53.19 331⇑*i*P **P 20 54 15.7 +1.1**
GTA pP pP 20 54 52.5 -4.5
GTA sP sP 20 55 10.5 -7.3
GTA S **S 21 01 35.3 +4.6**
GTA sS sS 21 02 39.5 -5.2
GTA SS SS 21 05 17.6 +4.3
GTA pmax pmax
comp=Z,200nm,1.3s,mb5.7
GTA pmax pmax
comp=Z,2µm,6.0s
GTA LR LR
comp=N,1µm,17.4s
GTA LR LR
comp=E,860nm,17.7s
GTA LR LR
comp=Z,2µm,17.4s
RAMN Ramite 53.44 310 *e*P **P 20 54 17.5 +0.8**
comp=Z,1µm,0.6s,mb6.8
RAMN Ramite 53.44 310 *e*P **P 20 54 17.3 +0.6**
comp=Z,1µm,0.6s,mb6.8
MWZ Matawai 53.51 134 PN **P 20 54 17.0 0.0**
MCQ Macquarie Isla 53.67 160 *e*P **P 20 54 19.4 +1.6**
MCQ *e* 20 54 27.6
MCQ Macquarie Isla 53.67 160 *e*P **P 20 54 19.2 +1.4**
comp=Z,36µm,1.0s
YSS Yuzh-Sakhalins 53.79 11 *e*P **P 20 54 18.2 -0.7**
YSS Yuzh-Sakhalins 53.79 11⇓*i*P **P 20 54 18.2 -0.6**
YSS *e* 20 55 22.0
YSS *i*S **S 21 01 37.0 -1.6**
YSS *e**SS sS 21 02 46.0 -6.8
YSS pmax pmax
comp=Z,150nm,0.8s,mb5.8
YSS pmax pmax
comp=Z,2µm,6.0s
YSS smax
comp=E,2µm,9.0s
YSS MLR MLR
comp=Z,2µm,19.0s
JIRN Jiri 54.12 310 *e*P **P 20 54 22.2 +0.6**
comp=Z,773nm,0.6s,mb6.6
JIRN Jiri 54.12 310 *e*P **P 20 54 22.2 +0.6**
comp=Z,773nm,0.6s,mb6.6
HABR Khabarovsk 54.33 4*d i*P **P 20 54 23.1 +0.4**
HABR *e* 20 55 25.8
HABR *e* 20 56 23.4
HABR *e*S **S 21 01 46.5 +0.8**
HABR *i* 21 02 02.2
HABR 21 03 55.1
HABR *e*SS SS 21 05 27.0 -3.9
HABR *e*SSS 21 07 38.4
HABR pmax pmax
comp=Z,700nm,1.0s,mb6.3
HABR pmax pmax
comp=Z,774nm,1.4s,mb6.2
HABR pmax pmax
comp=E,120nm,1.1s
HABR pmax pmax
comp=N,243nm,1.4s
HABR smax
comp=N,457nm,4.8s
HABR smax
comp=Z,251nm,4.7s
HABR smax
comp=E,1µm,5.2s
HABR MLR MLR
comp=Z,3µm,18.0s
GUN Gumba 54.48 310 *e*P **P 20 54 24.8 +0.6**
comp=Z,1µm,0.6s,mb6.8
GUN Gumba 54.48 310 *e*P **P 20 54 24.8 +0.6**
comp=Z,1µm,0.6s,mb6.8
PKI Pulchoki 54.67 310 *e*P **P 20 54 25.7 +0.1**
comp=Z,622nm,0.7s,mb6.5
PKI Pulchoki 54.67 310 *e*P **P 20 54 25.6 0.0**
comp=Z,622nm,0.7s,mb6.5
PKIN Phulchoki 54.68 310 *e*P **P 20 54 26.3 +0.7**
comp=Z,621nm,0.7s,mb6.5
PKIN Phulchoki 54.68 310 *e*P **P 20 54 25.6 0.0**
comp=Z,491nm,0.7s,mb6.4
KKN Kakani 54.88 310 *e*P **P 20 54 27.4 +0.3**
comp=Z,885nm,0.7s,mb6.6
KKN Kakani 54.88 310 *e*P **P 20 54 27.3 +0.2**
comp=Z,885nm,0.7s,mb6.6
DMN Daman 54.92 310 *e*P **P 20 54 27.9 +0.5**
comp=Z,843nm,0.8s,mb6.5
DMN Daman 54.92 310 *e*P **P 20 54 27.8 +0.4**
comp=Z,843nm,0.8s,mb6.5
KLR Kul'dur 54.94 1⇑*i*P **P 20 54 23.0 -4.1**
KLR *e*SS SS 21 05 40.5 0.0
KLR pmax pmax
comp=Z,470nm,1.6s,mb6.0
KLR pmax pmax
comp=Z,3µm,9.0s
KLR MLR MLR
comp=Z,5µm,12.5s
GKN Gorkha 55.48 310 *e*P **P 20 54 31.6 +0.3**
comp=Z,1µm,0.7s,mb6.8
GKN Gorkha 55.48 310 *e*P **P 20 54 31.6 +0.3**
comp=Z,1µm,0.7s,mb6.8
HYB Hyderabad 56.12 295 *i* P **P 20 54 36.0 -0.1**
comp=Z,111nm,0.5s,mb6.0
HYB *e*pP pP 20 55 16.0 -2.9
HYB *e*ScP ScP 20 59 13.0 -0.2
HYB *e*S **S 21 02 06.0 -4.6**
KOLN Koldanda 56.16 309 *e*P **P 20 54 36.7 +0.5**
comp=Z,769nm,0.6s,mb6.7
KOLN Koldanda 56.16 309 *e*P **P 20 54 36.7 +0.5**
comp=Z,769nm,0.6s,mb6.7
ULN Ulaanbaatar 57.34 342 *e*P **P 20 54 45.3 +1.2**
comp=Z,269nm,0.7s,mb6.2
ULN Ulaanbaatar 57.34 342 *e*P **P 20 54 45.3 +1.2**
ULN pmax pmax
comp=Z,269nm,0.7s,mb6.2
ULN Ulaanbaatar 57.34 342 P **P 20 54 45.7 +1.6**
SNR=96
DGAR Diego Garcia 57.45 265 *e*P **P 20 54 46.2 +0.7**
comp=Z,1µm,1.1s,mb6.6
DGAR Diego Garcia 57.45 265 *e*P **P 20 54 46.2 +0.7**
DGAR pmax pmax
comp=Z,1µm,1.1s,mb6.6
AFI Afiamalu 57.48 103 *e*P **P 20 54 46.4 +0.7**
comp=Z,694nm,1.1s,mb6.4
AFI Afiamalu 57.48 103 P **P 20 54 46.3 +0.6**
comp=Z,386nm,0.9s,mb6.2,baz=236,slow=1.4,SNR=25
AFI Afiamalu 57.48 103 *e*P **P 20 54 46.4 +0.7**
AFI pmax pmax
comp=Z,695nm,1.1s,mb6.4
SONM Songino Array 57.53 341 P **P 20 54 46.4 +1.0**
SONM pP pP 20 55 25.9 -2.6
SONM S **S 21 02 24.3 -3.7**
SONM ⇑*e* 21 24 41.1
SONM Songino Array 57.53 341 P **P 20 54 46.4 +1.0**
comp=Z,67nm,0.6s,mb5.6,baz=162,slow=6.5,SNR=569
SONM pP pP 20 55 25.9 -2.6
comp=Z,24nm,0.8s,baz=184,slow=6.2,SNR=1.0
SONM S **S 21 02 24.3 -3.7**
comp=Z,6.1nm,0.9s,baz=153,slow=3.1,SNR=2.6
SONM PKP2bc 21 24 41.1
comp=Z,24nm,1.2s,baz=292,slow=1.5,SNR=12
SONM P4KPbc 21 31 55.8
comp=Z,1.1nm,0.7s,baz=162,slow=7.4,SNR=6.8
LATR Latur 58.24 296 *e*PKP **P 20 54 49.7 -1.2**
LATR *e*PKP 20 54 49.8
AKL Akola 58.62 298⇑*i*P **P 20 54 52.8 -0.8**
AKL *i* x x 21 02 37.0
BHPL Bhopal 59.21 301 *e*PKP **P 20 54 57.5 -0.1**
BHPL AMb AMB 20 55 07.2
comp=Z,151nm,0.5s,mb6.0
PTH Pithoragarh 59.62 309 *e*PKP **P 20 55 00.0 -0.2**
PTH *e*S **S 21 02 53.0 -2.7**
GOA Goa 59.84 292⇑*e*PKP **P 20 55 02.0 0.0**
GOA *e*S **S 21 02 55.4 -3.6**
GOA Goa 59.84 292 *e*S **S 21 02 55.4 -3.6**
KAD Karad 60.04 294 *e*PKP **P 20 55 02.2 -1.1**
KAD AMb AMB 20 55 13.5
comp=Z,235nm,0.5s,mb6.2
AGRA Agra 60.38 306 *e*PKP **P 20 55 04.3 -1.2**
AGRA AMb AMB 20 55 08.2
comp=Z,134nm,0.5s,mb6.1
JOSI Joshimath 60.59 310 *e*PKP **P 20 55 07.7 +0.8**

JOSI AMb AMB 20 55 18.9
comp=Z,7μm,1.2s
SKR Severo-Kuril's 60.62 19⇓ *i*P **P 20 55 08.5 +1.9**
SKR *e* 20 57 21.0
SKR *e*S **S 21 03 12.0 +4.3**
SKR pmax pmax
comp=N,180nm,1.0s
SKR pmax pmax
comp=Z,270nm,1.0s,mb6.0
SKR pmax pmax
comp=Z,3μm,4.0s
SKR pmax pmax
comp=N,1μm,6.0s
SKR pmax pmax
comp=E,2μm,6.0s
SKR smax
comp=N,3μm,8.0s
SKR smax
comp=E,5μm,8.0s
POO Poona 60.72 295 *e*PKP **P 20 55 07.4 -0.5**
ZAK Zakamensk 60.76 341⇑ *i*P **P 20 55 07.9 +0.4**
ZAK *e* pP 20 55 50.0 -1.0
ZAK *e* 21 03 11.6
MIDW Midway 60.77 53 *e*P **P 20 55 08.6 +0.5**
comp=E,337nm,0.8s,mb6.2
DRV Dumont d'Urvil 61.01 176 P **P 20 55 07.0 -2.0**
DRV S **S 21 03 21.0 +8.8**
DRV R 21 16 00.0
SONA Sohna 61.50 306 *e*PKP **P 20 55 12.1 -0.9**
SONA AMb AMB 20 55 22.9
comp=Z,536nm,0.7s,mb6.5
AYAN Aya Nagar 61.56 307 *e*PKP **P 20 55 12.2 -1.2**
AYAN AMb AMB 20 55 22.2
comp=Z,236nm,0.7s,mb6.1
NDI New Delhi 61.58 307 *ex* **P 20 55 10.0 -3.5**
TLY Talaya 61.76 342 P **P 20 55 15.8 +1.6**
comp=Z,626nm,1.0s,mb6.4,SNR=18
TLY Talaya 61.76 342 *e*P **P 20 55 14.7 +0.5**
TLY Talaya 61.76 342 *d i*P **P 20 55 15.2 +1.0**
TLY *e* pP 20 55 54.5 -3.4
TLY *e*S **S 21 03 23.7 +1.7**
TLY *e*PS 21 03 34.6
TLY *e* 21 03 51.9
TLY *e* 21 04 44.4
TLY pmax pmax
comp=Z,64nm,0.8s,mb5.5
TLY MLR MLR
comp=Z,2μm,19.0s
TLY Talaya 61.76 342 P **P 20 55 15.7 +1.5**
SNR=26
CASY Casey 61.80 189⇓ *i*P **P 20 55 14.4 +0.1**
CASY Casey 61.80 189 *e*P **P 20 55 13.9 -0.4**
comp=Z,239nm,1.1s,mb5.9
KUDL Kundal 61.93 306 *e*PKP **P 20 55 14.1 -1.8**
KUDL AMb AMB 20 55 24.8
comp=Z,324nm,0.9s,mb6.2
KLP Kalpa 62.03 310 *e*PKP **P 20 55 17.4 +0.9**
KLP AMb AMB 20 55 28.7
comp=Z,329nm,0.2s,mb6.8
IRK Irkutsk 62.05 342 *e*P **P 20 55 16.4 +0.3**
IRK *e* pP 20 55 55.0 -4.8
IRK *e*S **S 21 03 24.8 -0.8**
IRK pmax pmax
comp=Z,312nm,1.7s,mb5.9
MOY Mondy 62.62 340 *e*P **P 20 55 21.3 +1.4**
MOY pmax pmax
comp=Z,503nm,3.1s
WMQ Urumqi 62.67 327 P **P 20 55 22.0 +1.6**
WMQ pP pP 20 55 57.5 -6.7
WMQ PcP PcP 20 55 59.0 +1.6
WMQ sP sP 20 56 14.1 -11
WMQ PP PP 20 57 43.5 +2.7
WMQ ScP ScP 20 59 44.2 +2.6
WMQ S **S 21 03 36.6 +2.9**
WMQ sS sS 21 04 42.0 -7.9
WMQ ScS ScS 21 04 54.7 +0.3
WMQ SS SS 21 07 45.1 +3.1
WMQ pmax pmax
comp=Z,630nm,0.8s,mb6.5
WMQ pmax pmax
comp=Z,3μm,5.8s
WMQ LR LR
comp=N,3μm,22.6s
WMQ LR LR
comp=E,3μm,23.6s
WMQ LR LR
comp=Z,2μm,22.4s
CLNS Chul'man 62.70 357 *e*P **P 20 55 21.0 +0.6**
CLNS *e* 20 55 57.7
CLNS *e* 20 57 42.6
CLNS *e*PPP 20 59 13.8
CLNS *e*S **S 21 03 34.4 +0.8**
CLNS *e* 21 04 53.4
CLNS *e*SS SS 21 07 44.0 +1.9
CLNS pmax pmax
comp=Z,188nm,0.8s,mb6.0
CLNS pmax pmax
comp=E,52nm,0.9s
CLNS pmax pmax
comp=N,126nm,1.0s
CLNS pmax pmax
comp=N,96nm,1.4s
CLNS pmax pmax
comp=Z,69nm,1.3s,mb5.3
CLNS pmax pmax
comp=E,54nm,1.5s
CLNS smax
comp=E,602nm,10.5s
CLNS smax
comp=N,737nm,10.6s
AJM Ajmer 62.78 304 *e*PKP **P 20 55 20.9 -0.6**
AJM AMb AMB 20 55 31.1
comp=Z,163nm,0.6s,mb6.1
SDNR Sundarnagar 62.99 310 *e*PKP **P 20 55 23.4 +0.5**
SDNR *e*S **S 21 03 37.5 -0.8**
PETK Petropavlovsk- 63.22 18 P **P 20 55 24.5 +0.7**
PETK PcP PcP 20 55 59.4 -0.1
PETK LR LR 21 17 46.6
PETK ⇑*e* 21 24 28.5
PETK Petropavlovsk- 63.22 18 P **P 20 55 24.5 +0.7**
comp=Z,424nm,0.8s,mb6.3,baz=182,slow=4.6,SNR=376
PETK PcP PcP 20 55 59.4 -0.1
comp=Z,87nm,0.8s,baz=170,slow=1.2,SNR=4.3
PETK LR LR 21 17 46.6
comp=Z,2μm,21.6s,baz=202,slow=31
PETK PKP2bc 21 24 28.5
comp=Z,9.1nm,1.0s,baz=76,slow=6.3,SNR=5.1
PETK Petropavlovsk- 63.22 18 P **P 20 55 24.5 +0.7**
PETK 20 55 59.4
PETK pmax pmax
comp=Z,424nm,0.8s,mb6.3
PETK MLR MLR
comp=Z,2μm,21.6s
PETK pmax pmax
comp=Z,9.0nm,1.0s
BHV Bhavnagar 63.25 298 *e*PKP **P 20 55 23.5 -1.2**
BHK Bhakra 63.38 309 *e*PKP **P 20 55 22.2 -3.2**
BHK *ex* x 20 56 22.4
PET Petropavlovsk 63.44 19 *e*P **P 20 55 25.2 -0.1**
PET Petropavlovsk 63.44 19⇓ *i*P **P 20 55 25.6 +0.3**
PET *e**PP pP 20 55 58.3 -11
PET *i* S **S 21 03 42.6 -0.3**
PET pmax pmax
comp=Z,2μm,5.5s
PET pmax pmax
comp=Z,748nm,0.9s,mb6.5
PET pmax pmax
comp=Z,2μm,14.6s
PET MLR MLR
comp=Z,1μm,18.0s
PET MLR MLR
comp=Z,1μm,18.0s
JOHN Johnston Islan 63.59 68 *e*P **P 20 55 27.6 +0.6**
comp=Z,1μm,1.2s,mb6.6
DLH Dalhousie 64.22 310 *ex* **P 20 55 34.0 +3.1**
DLH *ex* x 21 03 50.0
THN Thein Dam 64.36 310 *e*PKP **P 20 55 29.9 -1.9**
THN *ex* x 21 03 50.2
MIR Mirnyy 65.75 195⇓ *i*P **P 20 55 40.0 -0.1**
MIR *e*S S 21 04 12.0 +1.1
MIR *e*SP 21 04 43.0
MIR pmax pmax
comp=N,505nm,2.0s
MIR pmax pmax
comp=E,404nm,2.0s
MIR pmax pmax
comp=Z,2μm,2.0s,mb6.5
MIR pmax pmax
comp=Z,667nm,1.2s,mb6.3
MIR smax
comp=N,1μm,8.0s
MIR smax
comp=E,3μm,9.0s
KSH Kashi 67.44 317⇑ *i*P **P 20 55 52.9 +1.6**
KSH *e*PcP PcP 20 56 20.5 +3.2
KSH *e*pP pP 20 56 31.3 -4.4
KSH sP sP 20 56 48.8 -7.2
KSH *e*PP PP 20 58 24.0 +1.4
KSH ScP 21 00 07.0
KSH *e*PcS 21 00 23.5
KSH S S 21 04 30.9 -1.2
KSH ScS ScS 21 05 30.6 -0.8
KSH pmax pmax
comp=Z,44nm,0.6s,mb5.5
KSH pmax pmax
comp=Z,2μm,5.1s
KSH LR LR
comp=N,1μm,14.3s
KSH LR LR
comp=E,1μm,12.3s
KSH LR LR
comp=Z,1μm,12.6s
MKAR Makanchi Array 67.50 326 P **P 20 55 52.2 +0.7**
MKAR pP pP 20 56 34.9 -1.0
MKAR S S 21 04 33.1 +0.6
MKAR ⇑*e* 21 24 15.0
MKAR Makanchi Array 67.50 326 P **P 20 55 52.2 +0.7**
comp=Z,306nm,0.4s,mb6.3,baz=115,slow=7.5,SNR=692
MKAR pP pP 20 56 34.9 -1.0
comp=Z,80nm,0.7s,baz=117,slow=8.0,SNR=1.1
MKAR S S 21 04 33.1 +0.6
comp=Z,27nm,1.0s,baz=138,slow=12,SNR=9.9
MKAR PKP2bc 21 24 15.0
comp=Z,2.7nm,0.9s,baz=302,slow=2.7,SNR=5.1
MKAR P4KPbc 21 32 38.6
comp=Z,1.7nm,0.8s,baz=130,slow=3.8,SNR=12
YAK Yakutsk 67.76 360 *e*P **P 20 55 52.8 0.0**
YAK Yakutsk 67.76 360 *d i*P **P 20 55 53.1 +0.3**
YAK *e**PP PcP 20 56 18.5 +0.4
YAK *e*S S 21 04 33.8 -1.2
YAK *e**SS 21 05 17.6
YAK *e* 21 05 28.3
YAK *e*SS SS 21 08 56.7 -3.7
YAK *e*SSS 21 12 01.1
YAK pmax pmax
comp=Z,1μm,0.9s,mb6.6
YAK pmax pmax
comp=N,271nm,1.0s
YAK pmax pmax
comp=E,24nm,0.8s
YAK smax
comp=N,196nm,1.3s
YAK smax
comp=E,1μm,1.6s
ULHL Ulahol 68.61 320 P **P 20 56 00.1 +1.7**
SNR=14
AAA Alma-Ata 68.68 321 *i* P **P 20 56 00.1 +1.2**
AAA *i* S S 21 04 48.8 +2.2
AAA pmax pmax
comp=Z,4μm,12.7s
AAA smax
comp=E,7μm,11.4s
KZA Kyzart 69.16 319 P **P 20 56 04.5 +2.6**
SNR=58
RAR Rarotonga 69.17 110 *e*P **P 20 56 03.4 +1.0**
comp=E,241nm,1.4s,mb5.7
RAR Rarotonga 69.17 110 *e*P **P 20 56 03.4 +0.9**
RAR pmax pmax
comp=Z,241nm,1.4s
SMY Shemya 69.19 27 *e*P **P 20 56 02.3 +0.5**
comp=Z,2μm,1.8s,mb6.5
SMY LR LR
comp=Z,3μm,21.0s
SMY Shemya 69.19 27 *e*P **P 20 56 02.3 +0.5**
SMY pmax pmax
comp=Z,2μm,1.8s,mb6.5
SMY MLR MLR
comp=Z,3μm,21.0s
KBK Karagaybulak 69.64 320 P **P 20 56 06.4 +1.5**
SNR=30
UCH Uchtor 69.72 319 P **P 20 56 05.1 -0.2**
SNR=11
AAK Ala-Archa 69.92 319 P **P 20 56 08.0 +1.4**
comp=Z,2μm,0.5s,mb7.0,SNR=32
AAK Ala-Archa 69.92 319 P **P 20 56 07.2 +0.7**
SNR=30
AAK Ala-Archa 69.92 319 *e*P **P 20 56 07.0 +0.4**
AAK Ala-Archa 69.92 319 P **P 20 56 07.2 +0.6**
comp=Z,41nm,0.4s,mb5.5,baz=128,slow=5.8,SNR=31
AAK S S 21 05 00.7 -0.5
comp=Z,1.8nm,0.3s,baz=227,slow=20,SNR=12
AAK PKPPKP 21 24 11.5
comp=Z,1.8nm,0.2s,baz=250,slow=2.6,SNR=16
AAK Ala-Archa 69.92 319 *d i*P **P 20 56 07.6 +1.0**
AAK pmax pmax
comp=Z,112nm,1.7s,mb5.3
AAK Ala-Archa 69.92 319 P **P 20 56 08.0 +1.4**
SNR=40
CHMS Chumysh 69.93 320 P **P 20 56 07.3 +0.7**
SNR=30
AML Almayashu 70.20 319 P **P 20 56 10.4 +2.1**
SNR=30
AML Almayashu 70.20 319 *e*P **P 20 56 09.7 +1.5**
USP Ospenovka 70.22 320 P **P 20 56 09.4 +1.0**
SNR=67
KBL Kabul 70.31 310 *e*P **P 20 56 09.3 +0.2**
comp=Z,197nm,0.8s,mb5.9
KBL Kabul 70.31 310 *e*P **P 20 56 09.4 +0.3**
KBL pmax pmax
comp=Z,197nm,0.8s,mb5.9
EKS2 Erkin-Say 70.40 319 P **P 20 56 11.0 +1.6**
SNR=79
EKS2 Erkin-Say 70.40 319 *e*P **P 20 56 10.6 +1.1**
comp=Z,296nm,1.2s,mb5.9
QUE Quetta 70.43 305 *e*P **P 20 56 12.0 +2.1**
QUE *e*S S 21 05 08.0 +0.4
SEY Seymchan 70.70 10 *e*P **P 20 56 11.5 +0.7**
SEY Seymchan 70.70 10 *de*P **P 20 56 11.4 +0.6**
ZAA0 Zalesovo Array 70.76 333 *e*P **P 20 56 10.7 -0.7**
ZALV Zalesovo Beam 70.76 333 P **P 20 56 11.1 -0.3**
ZALV pP pP 20 56 52.5 -3.6
ZALV S S 21 05 07.8 -2.7
ZALV ⇑*e* 21 24 03.5
ZALV LR LR 21 28 07.4
ZALV Zalesovo Beam 70.76 333 P **P 20 56 11.1 -0.3**
comp=Z,156nm,0.5s,mb6.0,baz=139,slow=5.4,SNR=96
ZALV pP pP 20 56 52.5 -3.6
comp=Z,75nm,0.8s,baz=134,slow=8.4,SNR=1.7
ZALV S S 21 05 07.8 -2.7
comp=Z,28nm,1.1s,baz=212,slow=8.1,SNR=5.1
ZALV PKP2bc 21 24 03.5
comp=Z,11nm,1.0s,baz=295,slow=4.2,SNR=10
ZALV LR LR 21 28 07.4
comp=Z,1μm,18.6s,baz=202,slow=36
ZALV P4KPbc 21 32 52.3
comp=Z,0.3nm,0.3s,baz=72,slow=4.8,SNR=5.0
AMKA Amchitka 70.78 30 *e*P **P 20 56 11.3 -0.3**
comp=Z,117nm,0.7s,mb5.7
KURK Kurchatov 71.77 328 P **P 20 56 17.6 +0.1**
comp=Z,2μm,1.0s,mb6.8,SNR=40
KURK Kurchatov 71.77 328 *e*P **P 20 56 17.9 +0.4**
KURK Kurchatov 71.77 328 *de*P **P 20 56 17.9 +0.4**
KURK pmax pmax
comp=Z,218nm,0.8s,mb5.9
KURK Kurchatov 71.77 328 P **P 20 56 18.3 +0.8**
SNR=22
NVS Novosibirsk 72.05 334⇓ *i*P **P 20 56 18.2 -0.9**
NVS *i**PP pP 20 57 00.4 -3.6
NVS *i* S S 21 05 18.5 -6.7
NVS *i* 21 05 57.7
NVS pmax pmax
comp=Z,335nm,1.2s,mb6.0
NVS pmax pmax
comp=N,332nm,1.5s
NVS pmax pmax
comp=E,404nm,1.9s
NVS smax
comp=N,1μm,1.8s
NVS smax
comp=E,2μm,1.8s
XMAS Kiritimati 72.58 86 *e*P **P 20 56 24.5 +1.4**
comp=E,618nm,1.1s,mb6.2
SBA Scott Base 74.35 172 *e*P **P 20 56 33.2 +0.9**
comp=E,264nm,1.1s,mb5.9
SBA Scott Base 74.35 172 *e*P **P 20 56 33.2 +0.9**
SBA pmax pmax
comp=Z,264nm,1.1s,mb5.9
MSEY Mahe Island 74.47 267 *e*P **P 20 56 32.4 -1.7**
comp=Z,267nm,1.6s,mb5.7
MSEY Mahe Island 74.47 267 *e*P **P 20 56 32.4 -1.7**
MSEY pmax pmax
comp=Z,267nm,1.6s,mb5.7
ATKA Atka Island 74.58 32 *e*P **P 20 56 33.8 -0.2**
WBK Wadi Bani Khal 75.23 295 P **P 20 56 39.4 +1.1**
SNR=23
HON Honolulu 75.27 66 *e*P **P 20 56 40.4 +1.8**
KIP Kipapa 75.28 66 *e*P **P 20 56 40.2 +1.5**
comp=Z,2μm,1.5s,mb6.4
KIP Kipapa 75.28 66 *e*P **P 20 56 40.2 +1.6**
KIP pmax pmax
comp=Z,2μm,1.5s,mb6.4
JMDO Jabal Madar 75.96 295 P **P 20 56 43.0 +0.6**
SNR=19
MAW Mawson 76.05 201⇓ *i*P **P 20 56 42.4 +0.3**
comp=Z,206nm,1.2s,mb5.6
MAW Mawson 76.05 201 *e*P **P 20 56 42.4 +0.3**
comp=Z,101nm,1.1s,mb5.4
MAW Mawson 76.05 201 P **P 20 56 42.7 +0.6**
comp=Z,210nm,0.8s,mb5.8,baz=71,slow=6.7,SNR=251
MAW PKP2ab 21 23 48.5
comp=Z,1.8nm,0.8s,baz=188,slow=3.5,SNR=3.9
MAW LR LR 21 30 43.8
comp=Z,3μm,18.2s,baz=69,slow=36
SMDO Samad 76.16 295 P **P 20 56 44.2 +0.7**
SNR=31
BSY Bisya 76.85 295 P **P 20 56 48.0 +0.5**
SNR=21
HOQ Hoqain 76.93 296 P **P 20 56 49.0 +1.1**
SNR=28
KHU Kahuku 77.04 69 *e*P **P 20 56 50.0 +1.4**
POHA Pohakuloa 77.22 68 *e*P **P 20 56 51.4 +1.8**
comp=Z,482nm,1.0s,mb6.1
BVAR Borovoye Array 77.32 328 P **P 20 56 49.5 +0.1**
comp=Z,106nm,0.7s,mb5.6,baz=120,slow=9.1,SNR=158
BVAR pP pP 20 57 32.1 -2.8
comp=Z,92nm,0.9s,baz=114,slow=6.6,SNR=1.7
BVAR S S 21 06 22.4 -1.3
comp=Z,15nm,1.1s,baz=80,slow=9.2,SNR=6.5
BVAR PKKPbc PKKPbc 21 15 53.9 -2.5
comp=Z,1.1nm,0.7s,baz=228,slow=1.8,SNR=3.8
BVAR Borovoye Array 77.32 328 P **P 20 56 49.5 +0.1**
BVAR *PP pP 20 57 32.1 -2.9
BVAR S S 21 06 22.4 -1.3
BVAR pmax pmax
comp=Z,106nm,0.7s
BVAR smax
comp=N,15nm,1.1s
BRVK Borovoye 77.39 328 P **P 20 56 50.9 +1.1**
comp=N,2μm,1.0s,mb6.6,SNR=39
BRVK Borovoye 77.39 328 P **P 20 56 50.4 +0.6**
SNR=36
TIXI Tiksi 77.42 360 *e*P **P 20 56 48.3 -1.3**
comp=N,222nm,0.6s,mb6.0
TIXI Tiksi 77.42 360 *d i*P **P 20 56 48.5 -1.1**
TIXI *e*S S 21 06 19.5 -4.7
TIXI *e**SS sS 21 07 25.4 -18
TIXI pmax pmax
comp=Z,337nm,1.0s,mb5.9
TIXI pmax pmax
comp=N,50nm,0.6s
TIXI pmax pmax
comp=E,19nm,0.6s
TIXI pmax pmax
comp=Z,1μm,8.8s
TIXI smax
comp=N,399nm,7.3s
TIXI smax
comp=E,244nm,3.7s
PUH Pauahi 77.44 69 *e*P **P 20 56 51.7 +0.9**
ARQ Araqi 77.59 295 P **P 20 56 51.7 +0.2**
SNR=18
IMYA Miami 77.79 309 *e*P **P 20 56 54.8 +2.4**
NIKO Nikolski 77.79 33 *e*P **P 20 56 51.4 -0.6**
comp=E,753nm,1.3s,mb6.2
HATD Hatta, Dubai 78.25 297 P **P 20 56 56.1 +0.9**
SNR=6.0
ISRO Mashad 78.27 309 *e*P **P 20 56 55.0 -0.1**
ASHO Ashiyiah 78.28 297 P **P 20 56 56.6 +1.2**
SNR=9.4
IMOG Moghan 78.31 309 *e*P **P 20 56 56.7 +1.4**
RBK Rabkut 78.62 289 P **P 20 56 56.7 -0.6**
SNR=8.1
IPAY Payeh 78.68 309 *e*P **P 20 56 58.6 +1.3**
NAZ Nazwa, Dubai 78.70 297 P **P 20 56 57.9 +0.3**
SNR=12
TBI Tubuai 78.73 113 *e*P **P 20 56 59.3 +1.4**
comp=E,498nm,1.0s,mb6.1
PAE Paea 78.83 107 *e*P **P 20 56 59.5 +1.0**
comp=E,55nm,1.1s,mb5.1
PAE Paea 78.83 107 *e*P **P 20 56 59.5 +1.0**
PAE pmax pmax
comp=Z,55nm,1.1s,mb5.1
PPT Papeete 78.84 107 *e*P **P 20 57 00.8 +2.2**
comp=Z,186nm,1.2s,mb5.6
PPT *e*S S 21 06 39.3 -2.0
comp=Z,9μm,29.2s
PPT *e*LQ 21 18 16.3
comp=Z,9μm,32.0s
PPT *e*LR LR 21 21 32.7
comp=Z,4μm,23.5s
PPT Papeete 78.84 107 P **P 20 57 00.7 +2.2**
comp=Z,61nm,0.5s,mb5.5,baz=186,slow=20,SNR=4.8
PPT Papeete 78.84 107 P **P 20 57 00.7 +2.1**
PPT pmax pmax
comp=Z,61nm,0.5s
IAKL Akhelmad 78.90 309 *e*P **P 20 56 58.9 +0.4**
ASUD Al Ashush, Dub 78.92 296 P **P 20 56 59.9 +1.1**
SNR=10
IKRD Kardeh 79.14 309 *e*P **P 20 56 56.8 -3.0**
IEMG Emamgholi 79.21 310 *e*P **P 20 57 01.5 +1.4**
UNV Unalaska Valle 79.44 33 *e*P **P 20 57 00.9 -0.1**
comp=Z,429nm,1.0s,mb6.0
ABTO Aybut 79.45 289 P **P 20 57 02.7 +0.9**
SNR=11
ISFR Sfrayin 79.61 309 *e*P **P 20 57 03.4 +1.1**
ABKT Ailbek 79.75 310 P **P 20 57 03.7 +0.6**
comp=Z,903nm,1.0s,mb6.4,SNR=38
AKUT Akutan 79.96 32 *e*P **P 20 57 03.4 -0.4**
comp=Z,3μm,2.2s,mb6.5
AKUT LR LR
comp=Z,3μm,21.0s
IBAF Bafgh 80.21 303 *e*P **P 20 57 05.8 +0.1**
PMOR Pomariorio Ree 80.59 104 *e*P **P 20 57 10.2 +2.2**
comp=Z,350nm,0.9s,mb6.0
VAH Vaihoa 80.83 104 *e*P **P 20 57 11.2 +1.9**
comp=Z,187nm,1.0s,mb5.7
IMEH Mehriz 80.96 303 *e*P **P 20 57 08.6 -1.1**
ICHK Chekchek 81.32 304 *e*P **P 20 57 11.1 -0.4**
ABPO Ambohimpanom 81.57 252 *e*P **P 20 57 13.3 +0.1**
comp=Z,211nm,1.7s,mb5.5
ABPO Ambohimpanom 81.57 252 *e*P **P 20 57 13.3 +0.2**
ABPO pmax pmax
comp=Z,211nm,1.7s,mb5.5
OPO Ambohidratompo 81.63 252 P **P 20 57 14.0 +0.5**
comp=Z,36nm,0.7s,mb5.1,baz=83,slow=4.4,SNR=66
OPO pP pP 20 57 57.4 -2.1
comp=Z,8.0nm,0.7s,baz=102,slow=5.3,SNR=1.4
ISRV Sarvestan 81.81 301 *e*P **P 20 57 14.6 +0.4**
GAMB Gambell 81.82 22 *e*P **P 20 57 13.9 +0.5**
comp=Z,182nm,1.0s,mb5.7
ISAD Sadrabad 81.85 303 *e*P **P 20 57 13.4 -0.9**
ABKAR Akbulak array 81.86 321 *e*P **P 20 57 13.5 -0.4**
comp=Z,74nm,0.7s,mb5.4
IPAR Pars 81.96 301 *e*P **P 20 57 15.3 +0.3**
SHI Shiraz 82.38 301 *e*P **P 20 57 16.9 -0.2**
IANJ Anjilo 82.42 307 *e*P **P 20 57 17.3 +0.1**
ISHM Shahmirzad 82.99 307 *e*P **P 20 57 21.0 +0.8**
MUKL Al Mukalla 83.06 285⇓ *e*P **P 20 57 22.0 +1.1**
ILAS Lasjerd 83.17 307 *e*P **P 20 57 20.9 -0.2**
SDPT Sand Point 83.26 33 *e*P **P 20 57 20.8 -0.2**
comp=Z,2μm,1.2s,mb6.8
SDPT LR LR
comp=Z,2μm,22.0s
IFIR Firoozkooh 83.39 307 *e*P **P 20 57 22.5 +0.3**
AKTK Aktyubinsk 83.42 322 P **P 20 57 22.0 0.0**
AKTK pP pP 20 58 05.5 -2.7
AKTK S S 21 07 21.9 -5.3

AKTK PKKPbc PKKPbc 21 15 39.7 -2.7
AKTK P'P' 21 23 44.2
AKTK LR LR 21 39 47.3
AKTO Aktyubinsk 83.42 322 P **P** **20 57 22.0 0.0**
comp=Z,90nm,0.7s,mb5.6,baz=112,slow=6.5,SNR=51
AKTO pP pP 20 58 05.5 -2.7
comp=Z,40nm,1.0s,baz=279,slow=14,SNR=1.2
AKTO S S 21 07 21.9 -5.3
comp=Z,10nm,0.8s,baz=227,slow=22,SNR=35
AKTO PKKPbc PKKPbc 21 15 39.7 -2.7
comp=Z,3.5nm,0.9s,baz=258,slow=1.6,SNR=4.7
AKTO PKPPKP 21 23 44.2
comp=Z,1.5nm,0.6s,baz=189,slow=0.6,SNR=7.9
AKTO LR LR 21 39 47.3
comp=Z,1μm,18.8s,baz=113,slow=39
ISFB Sefidab 83.53 305 *eP* **P** **20 57 22.7 -0.3**
IDMV Damavand 83.95 307 *eP* **P** **20 57 25.7 +0.7**
SVE Sverdlovsk 84.01 329‖ *eP* **P** **20 57 24.7 -0.1**
SVE *eS* S 21 07 24.4 -8.5
SVE pmax pmax
comp=Z,616nm,1.2s,mb6.2
QSPA South Pole Qui 84.04 180 *eP* **P** **20 57 24.3 -0.3**
comp=Z,8.6nm,1.1s
QSPA South Pole Qui 84.04 180 S S 21 07 26.8 -5.8
comp=Z,5.8nm,0.9s,baz=113,slow=20,SNR=5.6
QSPA PKKPbc PKKPbc 21 15 38.3 -3.3
comp=Z,8.2nm,0.8s,baz=218,slow=0.8,SNR=7.3
QSPA PKPPKP 21 23 28.3
comp=Z,4.1nm,0.9s,baz=261,slow=3.1,SNR=5.6
TNA Tin City 84.12 22 *eP* **P** **20 57 25.3 +0.1**
comp=Z,621nm,1.5s,mb6.1
CHGN Chignik 84.67 32 *eP* **P** **20 57 27.6 -0.6**
IR3 Iran Long-Peri 84.74 306 *eP* **P** **20 57 29.7 +0.7**
SYO Syowa Base 84.77 201⇑ *iP* **P** **20 57 26.2 -2.3**
ARU Arti 84.96 328 *eP* **P** **20 57 28.5 -1.1**
ARU Arti 84.96 328 *e iP* **P** **20 57 28.2 -1.4**
ARU *PP pP 20 58 09.3 -6.7
ARU 21 00 53.0
ARU PPP 21 02 40.3
ARU S S 21 07 36.9 -5.4
ARU SS SS 21 13 16.4 -3.4
ARU pmax pmax
comp=Z,312nm,1.0s,mb6.0
ARU Arti 84.96 328 P **P** **20 57 28.8 -0.8**
comp=Z,1μm,0.5s,mb7.0,SNR=37
IMHD Mahdasht 85.06 307 *eP* **P** **20 57 30.7 +0.1**
IRAZ Razeghan 85.60 306 *eP* **P** **20 57 33.6 +0.3**
QRN Al-Qurain 86.18 299 *eP* **P** **20 57 35.5 -0.8**
QRN AMb AMB 20 57 39.4
comp=Z,401nm,1.2s,mb6.0
KBD Kabd 86.44 300 *eP* **P** **20 57 36.9 -0.7**
KBD AMb AMB 20 57 40.4
comp=Z,143nm,1.6s,mb5.5
UMR Umm Al-Rimmam 86.48 300 *eP* **P** **20 57 36.9 -0.9**
UMR AMb AMB 20 57 38.7
comp=Z,272nm,0.7s,mb6.1
RDF Al-Radifah 86.53 299 *eP* **P** **20 57 37.1 -0.9**
RDF AMb AMB 20 57 41.0
comp=Z,361nm,1.6s,mb6.0
SOKR Solikamsk 86.82 331 *d iP* **P** **20 57 37.4 -1.3**
SOKR PP 21 01 02.6 -1.5
SOKR S SKSac 21 07 43.9 -3.5
SOKR pmax pmax
comp=Z,180nm,1.1s,mb5.8
MIB Mutribah 86.84 300 *eP* **P** **20 57 38.6 -0.9**
MIB AMb AMB 20 57 41.7
comp=Z,380nm,0.7s,mb6.3
SVW2 Sparrevohn 87.56 28 *eP* **P** **20 57 42.6 +0.4**
comp=Z,379nm,1.0s,mb6.2
SVW2 LR LR
comp=Z,3μm,22.0s
OHAK Old Harbor 87.64 32 *eP* **P** **20 57 42.7 0.0**
comp=Z,737nm,0.9s,mb6.5
OHAK LR LR
comp=Z,3μm,21.0s
TRBA At Turbah 87.65 283‖ *eP* **P** **20 57 45.2 +1.6**
TTA Tatalina 87.90 26 *eP* **P** **20 57 43.6 -0.1**
comp=Z,486nm,1.1s,mb6.2
TTA Tatalina 87.90 26 *eP* **P** **20 57 43.6 -0.1**
TTA pmax pmax
comp=Z,486nm,1.1s,mb6.2
ILIN Lien 87.92 305 *eP* **P** **20 57 43.8 -0.7**
IVIS Veis 87.95 305 *eP* **P** **20 57 42.8 -1.9**
KDAK Kodiak Island 88.15 31 P **P** **20 57 45.0 0.0**
comp=Z,3μm,1.0s,mb7.0,SNR=48
KDAK Kodiak Island 88.15 31 *eP* **P** **20 57 45.0 -0.1**
comp=Z,599nm,1.1s,mb6.3
KDAK Kodiak Island 88.15 31 P **P** **20 57 45.2 +0.1**
comp=Z,329nm,0.9s,mb6.2,baz=240,slow=2.1,SNR=123
KDAK S SKSac 21 07 56.4 +0.9
comp=Z,22nm,1.1s,baz=296,slow=23,SNR=5.8
IGHG Ghaleghazi 88.15 305 *eP* **P** **20 57 44.2 -1.4**
IHRS Heris 88.37 309 *eP* **P** **20 57 46.6 +0.1**
TAOE Nuku Hiva Isla 88.66 99 *eP* **P** **20 57 50.5 +2.1**
comp=Z,849nm,1.2s,mb6.5
TAOE *eS* S 21 08 16.6 -3.0
TAOE *eSS* SS 21 14 11.1 -4.5
comp=Z,2μm,25.9s
TAOE *eLQ* 21 22 20.6
comp=Z,3μm,28.7s
TAOE *eLR* LR 21 26 09.0
comp=Z,4μm,23.6s
TAOE Nuku Hiva Isla 88.66 99 *eP* **P** **20 57 50.5 +2.1**
comp=Z,849nm,1.2s,mb6.5
TAOE *eS* S 21 08 16.6 -3.0
TAOE *eSS* SS 21 14 11.1 -4.5
TAOE *eLQ* 21 22 20.6
ATD Arta Tunnel 88.69 282 P **P** **20 57 49.3 +0.7**
ATD pP pP 20 58 32.7 -2.6
ATD Arta Tunnel 88.69 282 P **P** **20 57 49.3 +0.7**
comp=Z,73nm,0.9s,mb5.6,baz=70,slow=1.9,SNR=23
ATD pP pP 20 58 32.7 -2.6
comp=Z,18nm,0.8s,baz=96,slow=14,SNR=1.8
RSO Redoubt South 88.72 29 *eP* **P** **20 57 46.4 -1.2**
MAK Makhachkala 88.75 313 *d iP* **P** **20 57 48.5 +0.3**
MAK *e*PP pP 20 58 31.0 -4.0
MAK *e*SP sP 20 58 48.8 -5.9
MAK *e* 21 01 25.8
MAK *e*PPP 21 03 25.3
MAK *e*S SKSac 21 08 00.6 +0.8
MAK *e* ScS 21 08 26.1 +2.1
MAK *e*SS SS 21 14 17.2 +1.5
MAK pmax pmax
comp=Z,227nm,1.4s,mb5.9
MAK pmax pmax
comp=Z,4μm,7.1s
MAK pmax pmax
comp=E,137nm,1.5s
MAK pmax pmax
comp=N,255nm,1.6s
ITBZ Tabriz 89.05 308 *eP* **P** **20 57 49.7 -0.1**
IAZR Azarshahr 89.11 308 *eP* **P** **20 57 50.5 +0.5**
IMRD Marand 89.47 309 *eP* **P** **20 57 51.7 0.0**
ISHB Shabestar 89.47 308 *eP* **P** **20 57 52.3 +0.6**
PPLA Purkeypile 89.58 27 *eP* **P** **20 57 50.9 -0.8**
comp=N,110nm,1.1s,mb5.7
DGRG David-gareji 90.09 312 P **P** **20 57 54.9 +0.4**
RC01 Rabbit Creek A 90.31 29 *eP* **P** **20 57 53.9 -1.2**
comp=N,146nm,0.8s,mb6.0
BPAW Bear Paw Mtn. 90.38 26 *eP* **P** **20 57 54.2 -1.1**
comp=N,11nm,1.1s
GNI Garni 90.39 310 *eP* **P** **20 57 56.6 +0.6**
comp=N,381nm,1.8s,mb6.0
GNI Garni 90.39 310 *d iP* **P** **20 57 55.9 -0.1**
GNI pmax pmax
comp=Z,55nm,1.2s
GNI Garni 90.39 310 P **P** **20 57 57.2 +1.2**
SNR=9.7
TRF Thorofare Moun 90.54 26 *eP* **P** **20 57 54.7 -1.4**
comp=Z,13nm,0.7s,mb5.1
MTA Mtatsminda 90.55 312 P **P** **20 57 57.2 +0.5**
TBLG Delisi 90.60 312 P **P** **20 57 57.3 +0.4**
TBLG Delisi 90.60 312 P **P** **20 57 57.3 +0.4**
PMR Palmer 90.69 28 *eP* **P** **20 57 56.1 -0.7**
comp=Z,78nm,1.2s,mb5.6
PMR LR LR
comp=Z,2μm,23.0s
PMR Palmer 90.69 28 *eP* **P** **20 57 56.1 -0.7**
PMR pmax pmax
comp=Z,79nm,1.2s,mb5.6
PMR MLR MLR
comp=Z,2μm,23.0s
MCK McKinley 91.19 26 *eP* **P** **20 57 57.9 -1.2**
comp=Z,315nm,1.1s,mb6.3
MCK McKinley 91.19 26 *eP* **P** **20 57 57.9 -1.2**
MCK pmax pmax
comp=Z,315nm,1.1s,mb6.3
KEH Kehvi 91.27 312 P **P** **20 57 58.5 -1.4**
ZEI Tsey 91.34 313 *eP* **P** **20 57 59.3 -1.0**
ZEI pmax pmax
comp=N,50nm,0.9s
ZEI pmax pmax
comp=Z,95nm,1.4s,mb5.6
ZEI pmax pmax
comp=E,20nm,0.6s
COLD Coldfoot 91.37 23 *eP* **P** **20 57 59.6 -0.2**
comp=E,244nm,0.9s,mb6.2
ONI Oni 91.65 312 P **P** **20 58 02.3 +0.6**
MID Middleton Isla 91.68 31 *eP* **P** **20 58 01.6 +0.2**
comp=E,124nm,1.0s,mb5.9
MID Middleton Isla 91.68 31 *eP* **P** **20 58 01.7 +0.2**
MID pmax pmax
comp=Z,125nm,1.0s,mb5.9
COLA College 91.86 25 *eP* **P** **20 58 00.2 -1.9**
comp=Z,102nm,0.8s,mb5.9
COLA College 91.86 25 *eP* **P** **20 58 00.2 -2.0**
COLA pmax pmax
comp=Z,102nm,0.8s,mb5.9
RKT Rikitea 92.03 113 *eP* **P** **20 58 06.1 +2.2**
comp=Z,169nm,1.0s,mb6.0
RKT *e*LR LR 21 27 47.7
comp=Z,3μm,38.8s
DIV Divide 92.21 29 *eP* **P** **20 58 03.7 -0.1**
comp=Z,179nm,0.8s,mb6.2
GOF Gofitskoye 92.22 315 *eP* PcP 20 58 15.0 +10
ILAR Eielson Array 92.25 25 P **P** **20 58 01.7 -2.3**
comp=Z,114nm,0.8s,mb6.0,baz=273,slow=4.2,SNR=799
ILAR PKiKP PKiKP 21 02 54.6 +2.3
comp=Z,5.5nm,0.9s,baz=278,slow=3.6,SNR=4.5
ILAR S SKSac 21 08 16.1 -2.9
comp=Z,1.6nm,1.0s,baz=211,slow=8.5,SNR=2.9
ILAR PKKPbc PKKPbc 21 15 18.5 -2.8
comp=Z,4.3nm,0.7s,baz=347,slow=0.5,SNR=14
ILAR PKPPKP 21 23 27.7
comp=Z,1.2nm,0.9s,baz=358,slow=2.2,SNR=5.5
ILAR LR LR 21 38 31.9
comp=Z,2μm,21.2s,baz=283,slow=35
ILAR Eielson Array 92.25 25 P **P** **20 58 01.7 -2.3**
ILAR S SKSac 21 08 16.1 -2.8
ILAR 21 15 18.5
ILAR pmax pmax
comp=Z,114nm,0.8s
ILAR smax
comp=N,2.0nm,1.0s
ILAR MLR MLR
comp=Z,2μm,21.2s
KIV Kislovodsk 92.36 314 P **P** **20 58 04.3 -0.6**
comp=Z,92nm,0.9s,mb5.8,SNR=5.5
KIV Kislovodsk 92.36 314 *eP* **P** **20 58 04.8 -0.1**
comp=Z,17nm,0.9s,mb5.1
KIV Kislovodsk 92.36 314 *eP* **P** **20 58 03.5 -1.4**
KIV *e* 21 01 47.7
KIV *e* 21 08 21.7
KIV pmax pmax
comp=Z,20nm,1.2s,mb5.0
KIV MLR MLR
comp=Z,813nm,20.0s
PAX Paxson 92.61 27 *eP* **P** **20 58 05.3 -0.3**
comp=Z,313nm,1.2s,mb6.3
PAX Paxson 92.61 27 *eP* **P** **20 58 05.3 -0.4**
PAX pmax pmax
comp=Z,313nm,1.2s,mb6.3
BMRM Bremner River 92.75 29 *eP* **P** **20 58 05.9 -0.4**
comp=Z,204nm,1.5s,mb6.0
KMBO Kilima Mbogo 92.92 269 *eP* **P** **20 58 08.4 +0.1**
comp=Z,73nm,1.3s,mb5.7
KMBO Kilima Mbogo 92.92 269 P **P** **20 58 08.6 +0.4**
comp=Z,33nm,1.0s,mb5.4,baz=358,slow=24,SNR=30
KMBO pP pP 20 58 53.2 -1.9
comp=Z,18nm,1.2s,baz=0.5,slow=23,SNR=1.7
KMBO LR LR 21 37 13.5
comp=Z,869nm,21.5s,baz=90,slow=34
KMBO Kilima Mbogo 92.92 269 *eP* **P** **20 58 08.4 +0.1**
KMBO pmax pmax
comp=Z,73nm,1.3s
KMBO Kilima Mbogo 92.92 269 P **P** **20 58 09.2 +1.0**
SNR=14
NVL N'lazarevskaya 93.46 197‖ *iP* **P** **20 58 09.0 -0.5**
NVL *e* 21 01 51.8
NVL *e*S SKSac 21 08 21.3 -4.3
NVL *e* 21 19 08.9
NVL pmax pmax
comp=Z,139nm,1.4s,mb5.9
NVL MLR MLR
comp=Z,4μm,16.0s
MAIT Maitri 93.49 197 *eP* **P** **20 58 10.3 +0.7**
VRHR Novokhopersk 93.74 321 *eP* **P** **20 58 09.2 -1.9**
VRHR *e* 21 08 25.3
VRHR *e*S S 21 09 03.8 -0.1
VRHR *i* SP SP 21 10 18.6 -0.1
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,90nm,0.7s,mb6.0
VRHR smax
comp=N,420nm,1.4s
VRHR smax
comp=E,560nm,1.4s
VRHR smax
comp=Z,30nm,0.9s
SOC Sochi 94.47 313 *eP* **P** **20 58 12.2 -2.5**
SOC *e*PP pP 20 58 53.3 -8.3
SOC *e* 20 59 11.0
SOC *e* 21 02 02.3
SOC *e*PPP 21 04 14.6
SOC *i* 21 08 29.3
SOC *e* 21 09 06.0
SOC *e* 21 10 26.9
SOC pmax pmax
comp=Z,21nm,0.8s,mb5.3
EGAK Eagle 94.69 25 *eP* **P** **20 58 14.5 -0.7**
comp=Z,251nm,0.9s,mb6.4
VORD Divnogorie 95.20 321 *eP* **P** **20 58 16.2 -1.6**
VORD *e* 21 08 33.1
VORD *e*SP SP 21 10 34.9 +0.1
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,30nm,0.6s
VORD pmax pmax
comp=Z,40nm,0.6s,mb5.8
PNL Peninsula 95.22 31 *eP* **P** **20 58 16.7 -1.0**
comp=Z,90nm,1.0s,mb6.0
VSR Storozhevoye 95.29 321 *eP* **P** **20 58 16.3 -1.9**
VSR *e*PP pP 20 58 57.1 -8.1
VSR *e* 21 02 12.5
VSR *e* 21 08 32.9
VSR *e*S S 21 09 13.1 -4.3
VSR *e*SP SP 21 10 35.3 -0.5
VSR pmax pmax
comp=Z,20nm,0.4s,mb5.7
VSR pmax pmax
comp=N,5.0nm,0.8s
VSR pmax pmax
comp=E,20nm,0.8s
VSR pmax pmax
comp=N,130nm,3.3s
VSR pmax pmax
comp=Z,300nm,3.3s
VSR pmax pmax
comp=E,30nm,0.8s
VSR smax
comp=E,120nm,2.3s
VSR smax
comp=Z,50nm,2.3s
VSR smax
comp=N,80nm,1.1s
DAWY Dawson 95.42 26 *eP* **P** **20 58 18.4 -0.1**
KLMR Klimovskoe 95.52 331 *d iP* **P** **20 58 16.9 -2.1**
KLMR *e*PP pP 20 58 57.6 -8.4
KLMR *e* 21 02 11.7
KLMR *i* S SKSac 21 08 34.5 -2.3
KLMR *e*SP SP 21 10 34.0 -3.7
KLMR *e*SS SS 21 15 52.0 +0.4
KLMR pmax pmax
comp=Z,295nm,1.5s,mb6.4
KLMR pmax pmax
comp=Z,90nm,4.0s
ASF Jabal al Asfar 96.00 302 P **P** **20 58 21.8 -0.1**
comp=Z,21nm,0.8s,mb5.5,baz=345,slow=3.5,SNR=28
ASF pP pP 20 59 05.8 -3.1
comp=Z,6.1nm,0.9s,baz=328,slow=2.4,SNR=1.7
ASF S SKSac 21 08 42.2 +1.6
comp=Z,1.1nm,0.5s,baz=318,slow=22,SNR=7.0
ASF PKPPKP 21 23 24.7
comp=Z,0.9nm,0.3s,baz=350,slow=7.3,SNR=4.6
ASF Jabal al Asfar 96.00 302 P **P** **20 58 21.8 -0.1**
ASF *PP pP 20 59 05.8 -3.1
ASF S SKSac 21 08 42.2 +1.6
ASF pmax pmax
comp=Z,21nm,0.9s
ASF smax
comp=N,1.0nm,0.5s
ANN Anapa 96.17 314 *d iP* **P** **20 58 19.9 -2.5**
ANN *e* 21 02 12.9
ANN *e*PPP 21 04 19.4
ANN *e*S SKSac 21 08 41.4 +0.5
ANN *e* S 21 09 24.5 -0.8
ANN *e*PS SP 21 10 47.8 +2.1
ANN pmax pmax
comp=N,39nm,2.1s
ANN pmax pmax
comp=E,31nm,2.1s
ANN pmax pmax
comp=Z,109nm,2.1s,mb5.8
MOS Moscow 96.37 325 *eP* **P** **20 58 20.3 -2.7**
MOS *e*PP pP 20 59 03.4 -6.6
MOS pmax pmax
comp=Z,155nm,1.2s,mb6.2
OBN Obninsk 96.96 325 P **P** **20 58 24.3 -1.4**
comp=Z,730nm,0.7s,mb7.1,SNR=8.2
OBN Obninsk 96.96 325 *eP* **P** **20 58 23.1 -2.6**
comp=Z,36nm,0.6s,mb5.9
OBN Obninsk 96.96 325‖ *eP* **P** **20 58 23.8 -1.9**
OBN *e*PP pP 20 59 09.1 -3.6
OBN *e* 21 02 32.3
OBN *e*S SKSac 21 08 44.9 +0.4
OBN *i* SS SS 21 16 06.9 -5.4
OBN pmax pmax
comp=Z,119nm,1.0s,mb6.2
SKAG Skagway 97.29 31 *eP* **P** **20 58 27.5 +0.4**
comp=Z,55nm,1.0s,mb5.8
MMAI Mount Meron Ar 97.30 302 P **P** **20 58 27.9 +0.1**
comp=Z,9.4nm,0.7s,mb5.3,baz=91,slow=8.5,SNR=11
MMAI pP pP 20 59 11.7 -3.1
comp=Z,15nm,1.1s,baz=84,slow=8.5,SNR=1.8
MMAI PKiKP PKiKP 21 03 03.6 +1.5
comp=Z,3.0nm,0.6s,baz=94,slow=5.3,SNR=7.2
MMAI S SKSac 21 08 41.0 -6.2
comp=Z,6.0nm,1.0s,baz=310,slow=53,SNR=2.4
SIT Sitka 97.31 33 *eP* **P** **20 58 26.4 -0.9**
comp=Z,125nm,1.7s,mb6.0
SIT Sitka 97.31 33 *eP* **P** **20 58 26.4 -0.9**
SIT pmax pmax
comp=Z,125nm,1.7s,mb6.0
EIL Elat 97.54 299 P **P** **20 58 28.0 -1.0**
comp=Z,12nm,0.7s,mb5.5,baz=81,slow=2.7,SNR=8.6
INK Inuvik 97.76 22 *eP* **P** **20 58 27.8 -1.2**
comp=Z,257nm,1.2s,mb6.5
INK Inuvik 97.76 22 P **P** **20 58 27.6 -1.4**
comp=Z,186nm,1.2s,mb6.4,baz=283,slow=4.8,SNR=13
INK PKiKP PKiKP 21 03 02.1 +0.3
comp=Z,6.3nm,0.6s,baz=322,slow=6.0,SNR=5.4
INK S SKSac 21 08 45.5 -2.5
comp=Z,1.5nm,0.4s,baz=360,slow=28,SNR=6.0
INK PKKPbc PKKPbc 21 15 03.0 -3.7
comp=Z,13nm,0.8s,baz=68,slow=2.3,SNR=12
INK Inuvik 97.76 22 P **P** **20 58 27.7 -1.3**
INK S SKSac 21 08 45.6 -2.5
INK pmax pmax
comp=Z,186nm,1.2s
INK smax
comp=N,2.0nm,0.4s
APA Apatity 98.08 337⇑ *iP* **P** **20 58 28.3 -2.2**
APA *i* *PP pP 20 59 09.0 -8.5
APA *i* 21 02 38.0
APA *i* 21 08 48.0
APA *eS* S 21 09 30.0 -11
APA *i* PS PS 21 11 09.0 -21
APA pmax pmax
comp=Z,52nm,1.0s,mb5.9
APA MLR MLR
comp=Z,3μm,19.0s
SIM Simferopol' 98.53 314 *de*P **P** **20 58 31.9 -1.1**
SIM *e*PP pP 20 59 21.5 +1.4
SIM *i* SKSac 21 08 52.0 -1.0
SIM *e*PS SP 21 11 11.0 -0.3
SIM *e* 21 12 03.0
SIM *e*SS SS 21 16 30.0 -4.9
SIM pmax pmax
comp=Z,20nm,0.7s,mb5.7
SIM pmax pmax
comp=Z,174nm,12.1s
CRAG Craig 98.58 35 *eP* **P** **20 58 33.3 +0.3**
comp=Z,72nm,1.4s,mb5.9
VNA1 Neumayer--Stat 98.74 193 *eP* **P** **20 58 31.4 -2.0**
VNA1 *e* 21 02 33.4
VNA1 *e* 21 14 57.5
BR131 Keskin Array S 98.88 309 *eP* **P** **20 58 33.7 -1.0**
comp=Z,6.2nm,0.7s,mb5.2
BRTR Keskin Array B 98.88 309 P **P** **20 58 33.6 -1.1**
comp=Z,11nm,0.9s,mb5.3,baz=116,slow=5.6,SNR=18
BRTR pP pP 20 59 17.6 -4.1
comp=Z,1.6nm,0.8s,baz=301,slow=31,SNR=1.9
BRTR PP PP 21 02 36.4 -2.5
comp=Z,6.6nm,0.9s,baz=86,slow=6.3,SNR=4.1
BRTR PKKPbc PKKPbc 21 15 01.9 -0.5
comp=Z,4.6nm,1.0s,baz=204,slow=2.7,SNR=10
JOF Joensuu 99.34 333 *eP* Pdif 20 58 33.7 -2.8
JOF pmax pmax
comp=Z,9.0nm,0.4s,mb5.5
JOF Joensuu 99.34 333 *ep* Pdif 20 58 33.7 -2.8
comp=Z,8.5nm,0.4s
LSZ Lusaka 100.06 253 *e*Pdif Pdif 20 58 40.1 +0.5
comp=Z,24nm,1.0s
LSZ Lusaka 100.06 253 P Pdif 20 58 40.2 +0.6
comp=Z,27nm,1.0s,baz=111,slow=3.8,SNR=25
LSZ PKiKP PKiKP 21 03 08.5 +1.0
comp=Z,8.6nm,0.8s,baz=16,slow=1.5,SNR=6.7
LSZ S SKSac 21 09 01.6 -0.2
comp=Z,3.6nm,1.1s,baz=131,slow=24,SNR=9.2
LSZ Lusaka 100.06 253 P Pdif 20 58 40.2 +0.6
LSZ S SKSac 21 09 01.6 -0.2
LSZ pmax pmax
comp=Z,27nm,1.0s
LSZ smax
comp=N,4.0nm,1.1s
DLBC Dease Lake 100.08 32 *e*Pdif Pdif 20 58 39.6 -0.2
DLBC Dease Lake 100.08 32 P Pdif 20 58 38.6 -1.1
comp=N,12nm,0.7s,baz=275,slow=3.6,SNR=7.1
DLBC PP PP 21 02 48.0 +0.5
comp=N,8.8nm,1.1s,baz=315,slow=8.3,SNR=3.7
DLBC PKKPbc PKKPbc 21 14 58.7 -1.2
comp=N,1.8nm,0.6s,baz=167,slow=3.1,SNR=4.1
KEV Kevo 100.12 340 *e*Pdif Pdif 20 58 37.3 -2.7
comp=N,22nm,0.8s
KEV Kevo 100.12 340 *eP* Pdif 20 58 38.6 -1.3
KEV pmax pmax
comp=Z,3.0nm,0.5s
KEV Kevo 100.12 340 *ep* Pdif 20 58 38.6 -1.3
comp=Z,2.8nm,0.5s
BOSA Boshof 100.27 240 P Pdif 20 58 40.4 -0.1
BOSA Boshof 100.27 240 P Pdif 20 58 40.4 -0.1
comp=Z,26nm,1.1s,baz=94,slow=5.1,SNR=12
BOSA PKiKP PKiKP 21 03 08.5 +0.9
comp=Z,3.8nm,0.8s,baz=151,slow=1.0,SNR=7.3
BOSA PKKPbc PKKPbc 21 14 58.2 +0.1
comp=Z,10nm,0.9s,baz=325,slow=0.7,SNR=8.9
ARCES ARCESS Array B 100.68 340 P Pdif 20 58 40.9 -1.5
comp=Z,46nm,0.8s,baz=60,slow=4.8,SNR=97
ARCES PKiKP PKiKP 21 03 07.3 +0.2
comp=Z,13nm,0.9s,baz=105,slow=0.8,SNR=13
ARCES SKiKP 21 06 24.2
comp=Z,2.5nm,0.6s,baz=188,slow=2.6,SNR=4.2
ARCES S SKSac 21 08 58.3 -4.3
comp=Z,4.5nm,0.9s,baz=85,slow=2.6,SNR=4.6
ARCES PKKPbc PKKPbc 21 14 50.2 -8.2
comp=Z,2.6nm,0.7s,baz=191,slow=1.2,SNR=5.2
ARCES ARCESS Array B 100.68 340 P Pdif 20 58 40.9 -1.5
ARCES S SKSac 21 08 58.3 -4.3
ARCES pmax pmax
comp=Z,46nm,0.8s
ARCES smax
comp=N,5.0nm,0.9s
ARE0 ARCESS Array S 100.68 340 *e*Pdif Pdif 20 58 40.6 -1.8

LBTB Lobatse 100.72 243 *e*Pdif Pdif 20 58 42.8 +0.2
comp=N,43nm,1.0s
LBTB Lobatse 100.72 243 *e*P Pdif 20 58 42.8 +0.2
LBTB pmax pmax
comp=Z,43nm,1.0s
KBS Kingsbay 101.07 350 *e* Pdif 20 58 43.4 -0.7
KBS *e*PP PP 21 02 52.6 -1.8
KBS AMS AMS 21 44 50.7
comp=Z,3µm,19.0s
BJO Bjornoya 101.25 345 *e* Pdif 20 58 42.6 -2.4
BJO AMS AMS 21 47 52.3
comp=Z,2µm,26.3s
AKASG Malin Array Be 101.58 320 P Pdif 20 58 44.7 -1.7
comp=Z,6.3nm,0.6s,baz=71,slow=4.6,SNR=14
AKASG PKiKP PKiKP 21 03 09.3 +0.1
comp=Z,3.5nm,0.6s,baz=73,slow=6.3,SNR=7.6
AKASG S SKSac 21 09 02.6 -5.0
comp=Z,0.3nm,0.2s,baz=82,slow=7.1,SNR=4.0
AKASG PKKPbc PKKPbc 21 14 49.7 -5.5
comp=Z,0.5nm,0.3s,baz=283,slow=3.0,SNR=4.0
AKBB Malin Array Si 101.58 320 *e*Pdif Pdif 20 58 44.4 -2.0
KTK1 Kautokeino 101.59 339 *e* Pdif 20 58 45.0 -1.4
KTK1 *e*PP PP 21 02 57.5 -0.9
KTK1 AMS AMS 21 48 58.0
comp=Z,2µm,21.0s
KIEV Kiev 101.59 320 *e*Pdif Pdif 20 58 44.2 -2.3
comp=Z,6.3nm,0.6s
KIEV Kiev 101.59 320 *e*P Pdif 20 58 44.2 -2.2
KIEV pmax pmax
comp=Z,6.0nm,0.6s
KAF Kangasniemi 101.75 332 *e*P Pdif 20 58 44.6 -2.6
KAF pmax pmax
comp=Z,3.0nm,0.4s
KAF Kangasniemi 101.75 332 *e*p Pdif 20 58 44.6 -2.6
comp=Z,2.9nm,0.4s
BBB Bella Bella 101.76 38 P Pdif 20 58 47.1 0.0
comp=Z,30nm,1.0s
BBB PKiKP PKiKP 21 03 09.2 -0.3
comp=Z,8.4nm,0.8s,baz=90,slow=4.0,SNR=2.8
FINES FINESS Array B 101.97 332 P Pdif 20 58 46.6 -1.5
comp=Z,22nm,0.8s,baz=50,slow=5.8,SNR=31
FINES PKiKP PKiKP 21 03 08.8 -0.8
comp=Z,9.1nm,0.7s,baz=56,slow=4.0,SNR=8.5
FINES S SKSac 21 09 04.2 -4.8
comp=Z,11nm,1.1s,baz=277,slow=17,SNR=3.9
FINES PKKPbc PKKPbc 21 14 51.6 -2.9
comp=Z,6.0nm,0.8s,baz=79,slow=4.1,SNR=8.0
FINES FINESS Array B 101.97 332 P Pdif 20 58 46.6 -1.5
FINES 21 03 08.8
FINES S SKSac 21 09 04.2 -4.8
FINES pmax pmax
comp=Z,22nm,0.8s
FINES pmax pmax
comp=Z,9.0nm,0.7s
FINES smax
comp=N,11nm,1.1s
MICGM Minsk 102.01 324 *e*P Pdif 20 58 45.0 -3.3
MNK Minsk 102.04 324 *e*P Pdif 20 58 45.0 -3.4
KIS Kishinev 102.14 317 *e*P Pdif 20 58 46.0 -2.9
KIS *e*pP 20 59 30.0
KIS Kishinev 102.14 317 *e*PP PKiKP 21 03 16.0 +5.6
KIS Kishinev 102.14 317 *e*P Pdif 20 58 46.0 -2.9
KIS *e* 21 09 08.0
KIS *e* 21 12 35.0
TRO Tromso 102.89 340 *e* Pdif 20 58 48.6 -3.6
TRO *e*PP PP 21 03 07.6 -0.5
TRO *e*SKS 21 09 12.7
SUR Sutherland 103.07 235 PKKPbc PKKPbc 21 14 50.7 +0.6
comp=N,24nm,0.9s,baz=303,slow=3.0,SNR=7.9
VRI Vrincioaia 103.68 316 ⇓*i*P SKSac 21 09 19.1 +1.4
BUR08 Bucovina Ar. S 104.53 318 *e*Pdif Pdif 20 58 59.8 +0.3
OOW Octopus West 104.78 42 P Pdif 20 59 02.6 +1.9
SUW Suwalki 104.81 324 *e*P Pdif 20 58 58.4 -2.4
SUW *e*PP PP 21 03 35.5 +13
SUW *e*SKS 21 09 20.8
SUW Suwalki 104.81 324 *e*Pdif Pdif 20 58 59.8 -1.0
comp=N,99nm,1.0s
LVV L'vov 104.99 320 *i* P Pdif 20 59 00.8 -0.8
NLWA Neilton Lookou 105.04 43 *e*Pdif Pdif 20 59 03.2 +1.4
comp=N,47nm,1.3s
NLWA PKiKP PKiKP 21 03 15.2 -0.4
PGC Sidney 105.15 41 *e*Pdif Pdif 20 59 02.7 +0.5
comp=N,2.7nm,1.3s
HDW Hoodsport 105.56 42 P Pdif 20 59 05.3 +1.2
GNW Green Mountain 105.72 42 *e*Pdif Pdif 20 59 06.0 +1.2
comp=N,19nm,1.2s
KWP Kalwaria Pacla 105.87 320 *e*P Pdif 20 59 03.6 -1.9
KWP *e*PP PP 21 03 42.3 +12
KWP *e*SKS SKSac 21 09 27.6 +0.2
KWP *e*SP SP 21 12 28.4 0.0
KWP Kalwaria Pacla 105.87 320 *e*Pdif Pdif 20 59 05.3 -0.2
comp=N,39nm,1.1s
JCW Jim Creek 106.22 42 P Pdif 20 59 07.8 +0.8
HUMO Hull Mountain 106.30 47 *e*Pdif Pdif 20 59 08.9 +1.5
comp=N,26nm,1.1s
HUMO *e*PKiKP PKiKP 21 03 19.1 +1.0
UZH Uzhgorod 106.31 319 ⇓*i*P Pdif 20 59 06.5 -0.9
UZH *i* PS PS 21 12 39.0 -17
UZH *i* PPS 21 13 37.0
TDL Tradedollar La 106.31 44 P Pdif 20 59 09.0 +1.5
RPW Rockport 106.45 41 *e*PKiKP PKiKP 21 03 17.9 -0.3
RES Resolute Bay 106.57 11 PKiKP PKiKP 21 03 17.5 -0.3
comp=N,12nm,0.7s,baz=316,slow=6.9,SNR=3.6
YBH Yreka Blue Hor 106.59 48 *e*Pdif Pdif 20 59 10.3 +1.7
comp=N,23nm,1.1s
YBH *e*PKiKP PKiKP 21 03 18.8 +0.1
YBH Yreka Blue Hor 106.59 48 *e*P Pdif 20 59 10.3 +1.6
YBH pmax pmax
comp=Z,23nm,1.1s
YKA Yellowknife Ar 106.66 26 Pdif Pdif 20 59 08.3 -0.6
YKA PKPdf PKiKP 21 03 17.9 -0.3
YKA PKKPbc PKKPbc 21 14 34.5 -5.9
YKA Yellowknife Ar 106.66 26 Pdiff Pdif 20 59 08.3 -0.6
comp=Z,6.4nm,0.7s,baz=293,slow=4.8,SNR=24
YKA pPdiff 20 59 54.1
comp=Z,4.5nm,1.1s,baz=266,slow=4.8,SNR=4.1
YKA PKiKP PKiKP 21 03 17.9 -0.3
comp=Z,22nm,0.6s,baz=294,slow=1.7,SNR=92
YKA SKiKP 21 06 34.9
comp=Z,3.7nm,0.7s,baz=295,slow=1.7,SNR=4.4
YKA PKKPbc PKKPbc 21 14 34.5 -5.9
comp=Z,9.6nm,0.7s,baz=107,slow=2.9,SNR=5.1
YKA Yellowknife Ar 106.66 26 P Pdif 20 59 08.3 -0.7
YKA pmax pmax
comp=Z,6.0nm,0.7s
STHS Stebnicka Huta 106.85 320 *e*Pdif Pdif 20 59 10.7 +0.9
STHS *e*PKP PKiKP 21 03 19.8 +0.9
STHS Stebnicka Huta 106.85 320 PDIF PDIF 20 59 10.7 +0.9
WDC Whiskeytown Da 106.85 50 *e*Pdif Pdif 20 59 11.6 +1.7
comp=Z,21nm,1.1s
WDC Whiskeytown Da 106.85 50 *e*P Pdif 20 59 11.6 +1.8
WDC pmax pmax
comp=Z,21nm,1.1s
DAG Danmarks Havn 107.22 353 ⇑*i*P Pdif 20 59 10.0 -1.5
DAG pmax pmax
comp=Z,7.0nm,0.7s
DAG Danmarks Havn 107.22 353 ⇑*i*P Pdif 20 59 10.0 -1.5
comp=Z,6.8nm,0.7s
NSS Namsos 107.26 337 *e* Pdif 20 59 07.9 -3.7
NSS *e*PP PP 21 03 36.1 -4.3
NSS *e*SKS SKSac 21 09 33.8 +0.9
TBM Table Mountain 107.28 42 P Pdif 20 59 12.5 +0.7
ETW Entiat 107.38 42 *e*Pdif Pdif 20 59 11.6 -0.6
comp=Z,26nm,1.1s
NIE Niedzica 107.44 320 *e*P Pdif 20 59 12.6 +0.1
NIE *e*PP PKiKP 21 03 21.0 +1.0
OJC Ojcow 107.61 321 *e*Pdiff Pdif 20 59 13.4 +0.2
OJC *e*PP PP 21 03 27.5 -16
OJC *e*SKSac SKSac 21 09 33.8 -1.2
OJC *e*S Sdif 21 10 57.9 -2.9
OJC *e*PS PS 21 12 39.1 -31
OJC L 22 03 33.4
comp=Z,0.7nm,19.7s
VIPM Ingram Point 107.71 45 P Pdif 20 59 14.4 +0.7
PSZ Piszkesteto 108.01 318 *e*PKiKP PKiKP 21 03 21.2 0.0
RSW Rattlesnake Hi 108.10 43 *e*PKiKP PKiKP 21 03 21.7 +0.3
HAWA Hanford 108.14 43 *e*PKiKP PKiKP 21 03 22.2 +0.8
KRUS Krusevo 108.18 312 *e*Pn PKiKP 21 03 20.3 -1.4
MOD Modoc 108.35 48 *e*Pdif Pdif 20 59 17.7 +1.2
comp=Z,22nm,1.0s
MOD *e*PKiKP PKiKP 21 03 21.7 -0.3
MOD *e*PKKPbc PKKPbc 21 14 34.1 -0.2
MOD *e*PKKPdf PKKPdf 21 14 48.2 -0.1
OD2 Odessa Site #2 108.50 42 *e*Pdif Pdif 20 59 17.6 +0.4
comp=Z,15nm,0.8s
VYHS Vyhne 108.59 319 *e*Pdif Pdif 20 59 17.6 0.0
VYHS *e*PKP PKiKP 21 03 22.3 +0.1
VYHS *e*S SP 21 13 00.0 +3.8
VYHS *e* 21 13 55.0
VYHS *e* 21 14 31.0
VYHS *e* 21 14 46.8
VYHS Vyhne 108.59 319 PDIF Pdif 20 59 17.6 0.0
VYHS Vyhne 108.59 319 *e*PKP PKiKP 21 03 22.3 +0.1
VYHS *e*SP SP 21 13 00.0 +3.8
VYHS *e* 21 13 55.0
VYHS *e* 21 14 31.0
VYHS *e* 21 14 46.8
OKC Ostrava-Krasne 108.73 321 *e*PKP PKiKP 21 03 22.9 +0.5
OKC *ep*PKP 21 04 04.7
OKC *ex* x 21 04 56.4
OKC *ex* x 21 12 37.9
OKC *ex* x 21 13 55.8
OKC *ex* x 21 19 15.3
CMB Columbia Colle 108.82 52 *e*Pdif Pdif 20 59 20.1 +1.5
comp=Z,30nm,1.4s
CMB Columbia Colle 108.82 52 *e*P Pdif 20 59 20.1 +1.5
CMB pmax pmax
comp=Z,30nm,1.4s
KOLL Kolacno 108.85 319 *e*PKP PKiKP 21 03 22.9 +0.2
KOLL Kolacno 108.85 319 *e*PKP PKiKP 21 03 22.9 +0.2
NB2 NORSAR Subarra 108.96 333 P Pdif 20 59 17.4 -1.8
comp=Z,16nm,0.9s,baz=69,slow=4.8
NOA NORSAR Array B 108.96 333 Pdif Pdif 20 59 17.9 -1.3
NOA PKPdf PKiKP 21 03 22.2 -0.3
NOA PP PP 21 03 48.8 -4.1
NOA PKKPbc PKKPbc 21 14 31.0 -2.2
NOA NORSAR Array B 108.96 333 Pdiff Pdif 20 59 17.9 -1.3
comp=Z,12nm,0.9s,baz=68,slow=4.6,SNR=16
NOA PKiKP PKiKP 21 03 22.2 -0.3
comp=Z,17nm,0.9s,baz=270,slow=3.2,SNR=16
NOA PP PP 21 03 48.8 -4.1
comp=Z,4.0nm,0.8s,baz=68,slow=6.7,SNR=3.5
NOA PKKPbc PKKPbc 21 14 31.0 -2.2
comp=Z,8.6nm,0.8s,baz=65,slow=2.8,SNR=18
NOA NORSAR Array B 108.96 333 P Pdif 20 59 17.9 -1.3
NOA 21 14 31.0
NOA pmax pmax
comp=Z,12nm,0.9s
LNOR Lincton Mounta 109.09 43 *e*PKiKP PKiKP 21 03 23.3 +0.1
MORC Moravsky Berou 109.12 321 *e*Pdif Pdif 20 59 20.2 +0.2
MORC *e*PKiKP PKiKP 21 03 23.5 +0.3
NAO01 NORSAR Array S 109.19 333 *e*PKiKP PKiKP 21 03 24.1 +1.1
BSD Bornholm Skovb 109.21 327 *e*P Pdif 20 59 24.0 +3.7
BSD *i* PP 21 03 51.6 -3.2
BSD *e*S tx 21 14 03.2
BSD MLR MLR
comp=Z,1µm,19.0s
BSD Bornholm Skovb 109.21 327 *i* P Pdif 20 59 24.0 +3.7
BSD *i* PP PP 21 03 51.6 -3.2
TSUM Tsumeb 109.24 247 *e*PKiKP PKiKP 21 03 24.6 +0.3
TSUM Tsumeb 109.24 247 PKKPbc PKKPbc 21 14 33.5 +2.7
comp=Z,8.7nm,1.0s,baz=162,slow=2.1,SNR=6.4
NEW Newport 109.36 41 *e*Pdif Pdif 20 59 21.3 +0.3
WVOR Wild Horse Val 109.48 47 *e*Pdif Pdif 20 59 22.8 +1.3
WVOR *e*PKKPbc PKKPbc 21 14 30.3 -0.5
WVOR *e*PKKPab PKKPab 21 14 42.1 +0.2
WVOR Wild Horse Val 109.48 47 *e*P Pdif 20 59 22.8 +1.3
WVOR *e* 21 14 30.3
KSP Ksiaz 109.63 322 *e*P Pdif 20 59 21.4 -0.8
KSP *e*PP PP 21 04 10.9 +13
KSP *e*SKS SKSac 21 09 43.1 -0.4
KSP *e*PS PS 21 13 13.9 -15
KSP Ksiaz 109.63 322 *e*P Pdif 20 59 28.9 +6.7
KSP *e* 21 09 44.8
KSP *e*SS SS 21 19 13.0 +6.9
DPC Dobruska-Polom 109.74 322 *e*PKP PKiKP 21 03 24.7 +0.4
DPC *ep*PKP 21 04 07.4
DPC *ex* x 21 05 05.2
DPC *e*SP SP 21 13 17.6 +10
DPC *e*PKKP PKKPbc 21 14 18.9 -11
DPC *ex* x 21 19 32.9
DPC *ex* x 21 24 52.3
ZST Bratislava 109.78 319 *e*PKP PKiKP 21 03 25.2 +0.7
ZST *e*S SP 21 13 14.9 +7.0
ZST *e* 21 14 20.8
ZST Bratislava 109.78 319 *e*PKP PKiKP 21 03 25.2 +0.7
ZST *e*SP SP 21 13 14.9 +7.0
ZST *e* 21 14 20.8
UPC Upice 109.89 322 *e*PKP PKiKP 21 03 25.3 +0.7
UPC *ep*PKP 21 04 06.7
BMO Blue Mountains 109.97 44 *e*Pdif Pdif 20 59 24.3 +0.6
BMO *e*P 21 03 24.8
BMO Blue Mountains 109.97 44 *e*PKIKP PKiKP 21 03 24.8 -0.1
JMIC Jan Mayen 110.02 347 *e* Pdif 20 59 28.9 +5.0
JMIC *e*PP PP 21 03 54.9 -5.3
JMIC *e*SS SS 21 19 13.5 +3.5
KONO Kongsberg 110.26 332 *e* Pdif 20 59 29.6 +4.7
KONO *e*PP PP 21 04 04.7 +2.5
KONO *e*SKS SKSac 21 09 45.6 -0.2
EDM Edmonton 110.33 35 *e*Pdif Pdif 20 59 25.7 +0.5
EDM *e*PKiKP PKiKP 21 03 25.4 +0.1
EDM *e*PKKPbc PKKPbc 21 14 25.7 -2.8
EDM *e*PKKPab PKKPab 21 14 36.2 -1.7
EDM Edmonton 110.33 35 *i* PKIKP PKiKP 21 03 25.4 +0.1
EDM *i* 21 14 25.7
COP Copenhagen 110.36 328 *e*P Pdif 20 59 36.2 +11
COP Copenhagen 110.36 328 *i* P Pdif 20 59 36.2 +11
NVAR Mina Array Bea 110.39 51 Pdif Pdif 20 59 27.7 +2.2
NVAR PKPdf PKiKP 21 03 27.3 +1.3
NVAR PP PP 21 04 03.0 -1.1
NVAR PKKPbc PKKPbc 21 14 28.3 +0.6
NVAR Mina Array Bea 110.39 51 Pdiff Pdif 20 59 27.7 +2.1
comp=Z,7.2nm,0.8s,baz=266,slow=5.4,SNR=22
NVAR pPdiff 21 00 13.9
comp=Z,2.4nm,0.8s,baz=267,slow=6.0,SNR=1.5
NVAR PKiKP PKiKP 21 03 27.3 +1.3
comp=Z,9.0nm,0.8s,baz=242,slow=2.2,SNR=11
NVAR PP PP 21 04 03.0 -1.1
comp=Z,6.0nm,0.9s,baz=271,slow=6.9,SNR=3.4
NVAR PKKPbc PKKPbc 21 14 28.3 +0.6
comp=Z,4.3nm,0.7s,baz=118,slow=4.1,SNR=16
TREC Trest 110.54 321 *e*PKIKP PKiKP 21 03 26.0 +0.1
TREC *e*SP SP 21 13 16.7 +1.9
TREC *e* 21 14 28.4
TREC Trest 110.54 321 *e*PKP PKiKP 21 03 26.0 +0.1
TREC *es*PKP 21 04 16.8
TREC *ex* x 21 05 11.7
TREC *e*SP SP 21 13 16.7 +1.9
TREC *e*PKKP PKKPbc 21 14 28.4 +0.7
TREC *ex* x 21 19 56.2
TREC *ex* x 21 24 41.4
ISA Isabella 110.65 54 *e*Pdif Pdif 20 59 28.3 +1.6
ISA *e*PKiKP PKiKP 21 03 27.1 +0.5
ISA *e*PKKPbc PKKPbc 21 14 24.0 -2.8
ISA *e*PKKPab PKKPab 21 14 36.9 +0.1
ISA Isabella 110.65 54 *i* PKIKP PKiKP 21 03 27.1 +0.6
ISA *e* 21 14 24.0
RUE Ruedersdorf 110.66 324 *e*PKiKP PKiKP 21 03 26.2 +0.2
PVCC Panska Ves 110.77 322 *e*PKIKP PKiKP 21 03 26.7 +0.4
PVCC *e* 21 04 07.4
PVCC *e* 21 14 32.9
PVCC *e*SS SS 21 19 37.4 +16
PVCC Panska Ves 110.77 322 *e*PKP PKiKP 21 03 26.7 +0.4
PVCC *ep*PKP 21 04 07.4
PVCC *ex* x 21 05 10.0
PVCC *e*SP SP 21 13 26.8 +10
PVCC *e*PKKP PKKPbc 21 14 32.9 +5.9
PVCC *ex* x 21 19 37.4
PVCC *ex* x 21 25 05.4
BMN Battle Mountai 110.89 49 *e*PP PP 21 04 05.1 -2.4
BMN *e*PKKPab PKKPab 21 14 35.8 +0.1
PRU Pruhonice 110.94 322 *e*PKIKP PKiKP 21 03 27.4 +0.8
PRU *e* 21 04 14.4
PRU *e*SP SP 21 13 33.4 +15
PRU *e*SS SS 21 19 35.2 +12
PRU Pruhonice 110.94 322 *e*PKP PKiKP 21 03 27.4 +0.8
PRU *e*PP PP 21 04 14.4 +6.9
PRU *ex* x 21 05 15.1
PRU *e*SP SP 21 13 33.4 +15
PRU *e*PKKP PKKPbc 21 14 35.7 +9.3
PRU *e*SS SS 21 19 35.2 +12
PRU *ex* x 21 23 46.7
BSMT Bassoo Peak 110.98 41 *e*Pdif Pdif 20 59 29.0 +0.8
BSMT *e*PKiKP PKiKP 21 03 26.2 -0.5
PRA Prague 110.98 322 PP PP 21 04 15.0 +7.2
ARSA Arzberg 111.05 318 ⇓*i*PKiKP PKiKP 21 03 26.3 -0.6
comp=Z,12nm,0.7s
BRG Berggiesshubel 111.05 323 *e*PKiKP PKiKP 21 03 26.9 +0.1
BRG Berggiesshubel 111.05 323 *e*PDIF Pdif 20 59 28.1 -0.4
comp=Z,8.2nm,1.0s
BRG Berggiesshubel 111.05 323 *i* PKP PKiKP 21 03 27.0 +0.2
comp=Z,18nm,0.8s
BRG PP PP 21 04 03.7 -4.6
comp=Z,16nm,1.3s
BRG PS PS 21 13 30.0 -12
BRG PKKP PKKPbc 21 14 29.0 +2.9
BRG SS SS 21 19 44.0 +19
BRG
comp=N,2µm,21.8s
BRG
comp=E,1µm,21.7s
BRG
comp=Z,2µm,20.0s
BRG Berggiesshubel 111.05 323 *i* PKIKP PKiKP 21 03 27.0 +0.2
BRG 21 04 03.7
BRG 21 14 29.0
BRG SS SS 21 19 44.0 +19
BRG pmax pmax
comp=Z,11nm,0.9s
BRG pmax pmax
comp=Z,9.0nm,1.3s
BRG MLR MLR
comp=N,869nm,21.8s
BRG MLR MLR
comp=E,668nm,21.7s
BRG MLR MLR
comp=Z,892nm,20.0s
MWC Mount Wilson 111.18 56 *e*Pdif Pdif 20 59 31.7 +2.6
MWC *e*PKiKP PKiKP 21 03 28.5 +0.9
WALA Waterton Lakes 111.21 39 *e*Pdif Pdif 20 59 30.8 +1.5
WALA *e*PKiKP PKiKP 21 03 27.4 +0.3
WALA *e*PKKPbc PKKPbc 21 14 23.3 -2.1
WALA *e*PKKPab PKKPab 21 14 33.5 -0.6
GOLS Golise 111.29 317 *i* PKiKP PKiKP 21 03 27.5 +0.1
GCIS Gornji Cirnik 111.32 317 *i* PKiKP PKiKP 21 03 27.4 0.0
JTMT Jette 111.33 41 *e*PKiKP PKiKP 21 03 26.9 -0.5
FOO Floro 111.39 335 *e* Pdif 20 59 37.0 +7.0
FOO *e*PP PP 21 04 11.7 +1.5
YBMT Yellow Bay 111.48 41 *e*PKiKP PKiKP 21 03 27.3 -0.4
CLL Collm 111.48 323 ⇓*i*PKP PKiKP 21 03 27.2 -0.4
CLL *e*SP SP 21 13 29.0 +5.6
CLL LR LR
comp=Z,2µm,21.9s
CLL Collm 111.48 323 ⇓*i*PKiKP PKiKP 21 03 27.2 -0.4
CLL *e*SP SP 21 13 29.0 +5.6
CLL pmax pmax
comp=Z,22nm,0.8s
CLL MLR MLR
comp=Z,2µm,21.9s
CLL Collm 111.48 323 *es*Pdif Pdif 20 59 34.0 +3.6
CLL ⇓*i*PKiKP PKiKP 21 03 27.2 -0.4
comp=Z,22nm,0.8s
CLL *e*(pPKiKP) 21 04 22.0
CLL *es*PP 21 05 09.0
CLL *es*PPP 21 07 32.0
CLL *e*SP SP 21 13 29.0 +5.6
CLL *es*PS 21 14 34.0
CLL *es*PPS 21 15 51.0
CLL *e*SS SS 21 19 48.0 +17
CLL *es*SSS 21 24 48.0
CLL L 21 56 00.0
comp=Z,2µm,21.9s
LEGS Legarje 111.51 317 *i* PKiKP PKiKP 21 03 27.6 -0.2
SOKA Soboth 111.52 318 ⇑*i*PKiKP PKiKP 21 03 27.3 -0.5
comp=Z,36nm,1.2s
SWMT Swartz Lake 111.58 41 *e*PKiKP PKiKP 21 03 27.9 0.0
ZAVS Zavodnje 111.58 318 *i* PKiKP PKiKP 21 03 27.5 -0.4
BOJS Bojanci 111.66 317 *i* PKPdf PKiKP 21 03 28.1 0.0
BOJS *e* 21 03 36.3
BOJS *e*PP PP 21 04 22.0 +9.1
BOJS *e* 21 05 16.9
BOJS *e*SKSac SKSac 21 09 49.4 -2.7
BOJS Bojanci 111.66 317 *i* PKiKP PKiKP 21 03 28.1 0.0
BOJS *e*PP PP 21 04 22.0 +9.1
BOJS *e* 21 05 16.9
BOJS *e*SKSac SKSac 21 09 49.4 -2.7
BOJS *e*SP SP 21 13 36.3 +11
PDKS Podkum 111.70 317 *i* PKiKP PKiKP 21 03 28.1 -0.1
MOA Molln 111.71 319 ⇓*i*PKiKP PKiKP 21 03 27.4 -0.7
comp=Z,23nm,1.2s
MUD Monsted U'grnd 111.77 329 *e*P Pdif 20 59 44.2 +13
MUD Monsted U'grnd 111.77 329 *i* P Pdif 20 59 44.2 +13
KHC Kasperske Hory 111.79 321 *e*PKiKP PKiKP 21 03 28.3 +0.1
KHC Kasperske Hory 111.79 321 *e*PKIKP PKiKP 21 03 28.2 0.0
KHC *e* 21 04 15.7
KHC *e*SP SP 21 13 39.8 +13
KHC *e* 21 14 42.0
KHC *e*SS SS 21 19 50.7 +16
KHC Kasperske Hory 111.79 321 *e*PKP PKiKP 21 03 28.2 0.0
KHC *e*PP PP 21 04 15.7 +2.1
KHC *ex* x 21 05 19.9
KHC *e*SP SP 21 13 39.8 +13
KHC *e*PKKP PKKPbc 21 14 42.0 +18
KHC *ex* x 21 19 50.7
KHC *ex* x 21 23 58.4
MSO Missoula 111.80 42 *e*PKiKP PKiKP 21 03 28.1 -0.2
BER Bergen 111.85 334 *e* Pdif 20 59 36.8 +4.8
BER *e*PP PP 21 04 17.9 +4.4
BER *e*SKS SKSac 21 09 53.8 +1.5
BER AMS AMS 21 56 58.0
comp=Z,2µm,20.4s
VISS Visnje 111.87 317 *i* PKiKP PKiKP 21 03 28.3 -0.2
VISS *e*PP PP 21 04 23.1 +8.9
VISS *e* 21 05 18.9
VISS *i* SKSac SKSac 21 09 51.8 -1.1
TIP Timpagrande 111.93 310 *e*PKiKP PKiKP 21 03 29.2 +0.3
SLMT Seeley Lake 111.98 41 *e*PKiKP PKiKP 21 03 28.5 -0.2
LJU Ljubljana 112.02 317 *i* PKPdf PKiKP 21 03 28.7 -0.1
LJU *e*PP PP 21 04 24.3 +8.9
LJU *e* 21 05 21.8
LJU *i* SKSac SKSac 21 09 52.8 -0.7
LJU Ljubljana 112.02 317 *i* PKIKP PKiKP 21 03 28.7 -0.1
LJU *e* 21 04 24.3
LJU *i* 21 09 52.8
LJU Ljubljana 112.02 317 *i* PKiKP PKiKP 21 03 28.7 -0.1
LJU *e*PP PP 21 04 24.3 +8.9
LJU *e* 21 05 21.8
LJU *i* SKSac SKSac 21 09 52.8 -0.7
LJU *e*SP SP 21 13 27.4 -1.2
GSC Goldstone 112.05 54 *e*Pdif Pdif 20 59 34.9 +1.9
GSC *e*PKiKP PKiKP 21 03 30.4 +1.2
GSC *e*PKKPab PKKPab 21 14 30.1 -0.5
TANN Tannenbergstha 112.09 322 *e*PKiKP PKiKP 21 03 28.8 0.0
BSEG Bad Segeberg 112.13 326 *e*PKiKP PKiKP 21 03 29.2 +0.5
BSEG Bad Segeberg 112.13 326 *i* PKIKP PKiKP 21 03 29.2 +0.5
NKC Novy Kostel 112.16 322 *e*PKIKP PKiKP 21 03 29.0 +0.1
NKC *e* 21 04 11.7
NKC *e*SP SP 21 13 28.1 -1.5
NKC *e* 21 14 46.8
NKC Novy Kostel 112.16 322 *e*PKP PKiKP 21 03 29.0 +0.1
NKC *ep*PKP 21 04 11.7
NKC *e*SP SP 21 13 28.1 -1.5
NKC *e*PKKP PKKPdf 21 14 46.8 +5.5
NKC *ex* x 21 20 07.7
NKC *ex* x 21 24 58.0
CEY Cerknica 112.16 317 *i* PKiKP PKiKP 21 03 28.8 -0.3
WERD Werda 112.17 322 *e*PKiKP PKiKP 21 03 29.0 +0.1
GUNZ Gunzen 112.19 322 *e*PKiKP PKiKP 21 03 29.1 +0.1
CRNS Crni Vrh 112.19 318 *i* PKiKP PKiKP 21 03 28.7 -0.4
WET Wettzell 112.22 321 *e*PKiKP PKiKP 21 03 29.1 0.0
WET Wettzell 112.22 321 *i* PKIKP PKiKP 21 03 29.1 0.0
CHMT Chamberlain Mo 112.23 42 *e*Pdif Pdif 20 59 33.6 -0.1
CHMT *e*PKiKP PKiKP 21 03 29.0 -0.2
HLID Hailey 112.29 45 *e*Pdif Pdif 20 59 35.1 +1.1
HLID *e*PKiKP PKiKP 21 03 30.1 +0.8
JAVS Javornik 112.37 317 *i* PKiKP PKiKP 21 03 29.0 -0.4
JAVS *e*PP PP 21 04 26.4 +8.5
JAVS *i* 21 05 23.1
JAVS *i* SKSac SKSac 21 09 54.2 -0.7
N12A Clover Valley, 112.43 48 *e*Pdif Pdif 20 59 33.8 -0.8
N12A *e*PKiKP PKiKP 21 03 30.2 +0.4
VOY Vojsko 112.45 318 *i* PKPdf PKiKP 21 03 29.2 -0.4
VOY *e* 21 03 36.1
VOY *e*PP PP 21 04 25.7 +7.3
VOY *e* 21 04 35.2
VOY *e* 21 05 04.3

VOY e 21 06 00.8
MYKA Terra Mystica 112.45 318 ⇓ePKiKP PKiKP 21 03 28.9 -0.7
comp=Z,13nm,0.7s
VOJS Vojsko 112.45 318 *i* PKiKP PKiKP 21 03 29.2 -0.4
CUC Castrocucco 112.48 311 *e*PKiKP PKiKP 21 03 28.3 -1.6
SKDS Skadanscina 112.49 317 *i* PKiKP PKiKP 21 03 29.1 -0.6
KBA Koelnbreinsper 112.53 319 ⇓*i*PKiKP PKiKP 21 03 28.4 -1.3
comp=Z,43nm,1.4s,SNR=16
MOX Moxa 112.53 323 *e*PKP PKiKP 21 03 29.5 -0.1
comp=Z,49nm,1.9s
MOX e 21 04 31.0
MOX eSP SP 21 13 43.0 +10
MOX
comp=Z,1μm,20.0s
MOX Moxa 112.53 323 *e*PKiKP PKiKP 21 03 29.6 0.0
MOX Moxa 112.53 323 *e*PKiKP PKiKP 21 03 29.5 -0.1
MOX e 21 04 31.0
MOX pmax pmax
comp=Z,1.0nm,1.9s
MOX MLR MLR
comp=Z,49μm,20.0s
BAR Barrett 112.53 57 *e*PKiKP PKiKP 21 03 30.8 +0.6
PFO Pinyon Flat Ob 112.59 56 *e*PKiKP PKiKP 21 03 31.2 +0.9
TRI Trieste 112.62 317 *e*PKiKP PKiKP 21 03 29.4 -0.5
CEL Celeste 112.76 309 *e*PKiKP PKiKP 21 03 29.9 -0.6
CLZ Clausthal 112.85 324 *e*PKiKP PKiKP 21 03 30.6 +0.4
CLZ Clausthal 112.85 324 *i* PKiKP PKiKP 21 03 30.6 +0.4
M13A Montello 112.97 48 *e*Pdif Pdif 20 59 39.0 +2.0
M13A ePKiKP PKiKP 21 03 31.6 +0.9
M13A *e*PKKPbc PKKPbc 21 14 18.2 -1.2
M13A *e*PKKPab PKKPab 21 14 26.7 +0.3
N13A Wendover, West 113.05 48 *e*Pdif Pdif 20 59 39.3 +1.9
N13A ePKiKP PKiKP 21 03 31.6 +0.7
MCMT McKenzie Canyo 113.06 44 *e*Pdif Pdif 20 59 38.7 +1.3
MCMT ePKiKP PKiKP 21 03 32.1 +1.3
MCMT ePP PP 21 04 18.4 -4.4
SUMG Summit 113.06 356 *e*PKiKP PKiKP 21 03 30.9 +0.8
SUMG Summit 113.06 356 ⇓*i*P PKiKP 21 03 30.7 +0.7
comp=Z,50nm,0.9s
LRM Limekiln Ridge 113.06 43 *e*Pdif Pdif 20 59 37.9 +0.4
LRM ePKiKP PKiKP 21 03 31.0 +0.2
DLMT Dillon 113.09 43 *e*PKiKP PKiKP 21 03 31.8 +0.9
SCO Scoresbysund 113.11 350 *i* PKIKP PKiKP 21 03 30.3 +0.1
SCO pmax pmax
comp=Z,16nm,0.9s
SCO Scoresbysund 113.11 350 *i* P Pdif 20 59 45.8 +8.1
SCO *i* PP PP 21 04 24.9 +2.8
SCO
comp=Z,860nm,23.0s
ABTA Abfaltersbach 113.17 319 *i* PKiKP PKiKP 21 03 30.2 -0.7
comp=Z,59nm,0.8s,SNR=47
HRY Holter Researc 113.22 41 *e*Pdif Pdif 20 59 38.4 +0.2
HRY ePKiKP PKiKP 21 03 31.3 +0.2
FUR Furstenfeldbru 113.54 320 *e*PKiKP PKiKP 21 03 31.3 -0.3
FUR Furstenfeldbru 113.54 320 *i* PKiKP PKiKP 21 03 31.3 -0.3
WTTA Wattenberg 113.59 319 *i* PKiKP PKiKP 21 03 31.6 -0.2
comp=Z,128nm,0.5s,SNR=84
WATA Walderalm 113.60 319 ⇓*i*PKiKP PKiKP 21 03 31.5 -0.3
comp=Z,28nm,0.5s,SNR=10
AQU L'Aquila 113.73 314 *e*PKiKP PKiKP 21 03 31.9 -0.3
HVU Hansel Valley 113.89 47 *e*PKiKP PKiKP 21 03 33.3 +0.8
BGU Big Grassy Mou 113.90 48 *e*PKiKP PKiKP 21 03 32.2 -0.3
BGU *e*PKKPbc PKKPbc 21 14 15.0 -1.2
BGU *e*PKKPab PKKPab 21 14 22.1 -0.3
MOTA Moosalm 113.91 320 *i* PKiKP PKiKP 21 03 31.9 -0.5
comp=Z,40nm,0.5s,SNR=29
GLA Glamis 114.02 57 *e*Pdif Pdif 20 59 43.0 +1.3
GLA ePKiKP PKiKP 21 03 33.5 +0.5
RETA Reutte 114.08 320 *i* PKiKP PKiKP 21 03 32.2 -0.5
comp=Z,19nm,0.6s,SNR=9.4
EGMT Eagleton 114.16 40 *e*Pdif Pdif 20 59 41.8 -0.6
EGMT ePKiKP PKiKP 21 03 32.6 -0.2
IBBN Ibbenburen 114.18 325 *e*PKiKP PKiKP 21 03 32.9 +0.2
DUG Dugway 114.23 49 *e*Pdif Pdif 20 59 44.3 +1.7
DUG ePKiKP PKiKP 21 03 33.8 +0.6
SPUT South Promonto 114.24 47 *e*PKiKP PKiKP 21 03 33.3 +0.1
FETA Feichten 114.25 319 ⇓*i*PKiKP PKiKP 21 03 32.9 -0.1
comp=Z,38nm,0.9s,SNR=27
ARUT Antelope Range 114.28 51 *e*PKiKP PKiKP 21 03 33.8 +0.5
CCUT Cedar City 114.39 51 *e*Pdif Pdif 20 59 45.5 +2.1
CCUT ePKiKP PKiKP 21 03 34.6 +1.0
CCUT *e*PKKPbc PKKPbc 21 14 14.0 -0.5
CCUT *e*PKKPab PKKPab 21 14 20.6 +0.3
RRI2 Red Ridge 114.52 45 *e*PKiKP PKiKP 21 03 34.2 +0.6
DCID1 Drake Creek 114.55 45 *e*PKiKP PKiKP 21 03 34.6 +0.9
YFT Old Faithful 114.55 44 *e*PKiKP PKiKP 21 03 36.3 +2.7
TOD Tromm 114.58 322 *e*PKiKP PKiKP 21 03 33.3 -0.3
IMW Indian Meadow 114.63 44 *e*Pdif Pdif 20 59 45.5 +1.1
IMW ePKiKP PKiKP 21 03 35.1 +1.2
NOQ North Oquirrh 114.64 48 *e*PKiKP PKiKP 21 03 34.9 +0.9
STU Stuttgart 114.64 321 *e*PKiKP PKiKP 21 03 33.4 -0.3
STU Stuttgart 114.64 321 *e*PKiKP PKiKP 21 03 33.5 -0.2
DAVA Damuels 114.71 320 ⇓*i*PKiKP PKiKP 21 03 33.8 -0.1
comp=Z,67nm,0.5s,SNR=50
TPAW Teton Pass 114.74 45 *e*PKiKP PKiKP 21 03 35.0 +1.0
TPAW ePP PP 21 04 37.7 +3.0
TPAW *e*PKKPbc PKKPbc 21 14 13.0 -0.5
TPAW *e*PKKPab PKKPab 21 14 18.5 -0.1
LRW Lerwick 114.74 336 *e*P PKiKP 21 03 32.4 -1.1
LRW AMb AMB 21 03 33.1
comp=Z,96nm,2.5s
FLWY Flagg Ranch 114.75 44 *e*PKiKP PKiKP 21 03 34.8 +0.7
BUG Bochum--Univer 114.80 325 *e*PKiKP PKiKP 21 03 33.9 0.0
HWUT Hardware Ranch 114.81 47 *e*PKiKP PKiKP 21 03 34.6 +0.3
MOOW Moose Ponds 114.81 44 *e*PKiKP PKiKP 21 03 35.3 +1.1
AHID Auburn Hatcher 114.83 45 *e*PKKPab PKKPab 21 14 17.2 -1.0
NLU North Lily Min 114.84 49 *e*PKiKP PKiKP 21 03 35.4 +1.0
NLU ePP PP 21 04 34.2 -1.3
REDW Red Top Meadow 114.84 45 *e*PKiKP PKiKP 21 03 35.0 +0.7
REDW *e*PKKPab PKKPab 21 14 17.9 -0.2
SNOW Snow King Moun 114.88 45 *e*PKiKP PKiKP 21 03 35.8 +1.4
GCMT Greycliff 114.93 42 *e*Pdif Pdif 20 59 46.9 +1.1
GCMT ePKiKP PKiKP 21 03 34.7 +0.4
LOHW Long Hollow 114.95 44 *e*PKiKP PKiKP 21 03 35.3 +0.9
LOHW eSKPdf SKPdf 21 06 52.7 +0.5
MSU Marysvale 115.10 50 *e*PKPdf PKPdf 21 03 36.0 +1.1
MSU *e*PKKPbc PKKPbc 21 14 12.5 +0.5
MSU *e*PKKPab PKKPab 21 14 17.2 +0.1
SPAK Spaichingen-Ko 115.13 321 *e*P PKiKP 21 03 33.9 -0.8
JLU Jordanelle 115.14 48 *e*PKPdf PKPdf 21 03 33.4 -1.5
MPU Maple Canyon 115.16 48 *e*PKPdf PKPdf 21 03 35.7 +0.7
MPU ePP PP 21 04 34.9 -2.8
TUE Stuetta 115.33 319 *e*PKPdf PKPdf 21 03 34.7 -0.4
BFO Black Forest 115.33 321 *e*PKiKP PKiKP 21 03 34.4 -0.7
BFO Black Forest 115.33 321 *i* PKIKP PKPdf 21 03 34.4 -0.7
DAU Daniels Canyon 115.34 48 *e*PKPdf PKPdf 21 03 36.2 +0.9
DAU ePP PP 21 04 35.2 -3.8
RLMT Red Lodge 115.41 43 *e*PKPdf PKPdf 21 03 34.9 -0.4
LANF Langenberg 115.42 322 *e*P PKiKP 21 03 35.3 +0.1
RUP Ruppelstein 115.60 323 *e*PKIKP PKPdf 21 03 35.7 +0.2
TMUT Trail Mountain 115.65 49 *e*PKPdf PKPdf 21 03 36.7 +0.7
FELD Feldberg im Sc 115.70 321 *e*P PKPdf 21 03 35.3 -0.5
MEM Membach 115.86 324 PKP PKPdf 21 03 35.9 -0.1
FFC Flin Flon 115.88 31 *e*PKPdf PKPdf 21 03 35.3 -0.6
FFC Flin Flon 115.88 31 *i* PKIKP PKPdf 21 03 35.9 0.0
CDF Champ du Feu 115.96 322 ⇓*i*PKIKP PKPdf 21 03 35.4 -0.9
comp=Z,35nm,1.0s
ECH Echery 116.11 321 *e*P PKPdf 21 03 35.9 -0.6
ECH Echery 116.11 321 *e*PKIKP PKPdf 21 03 35.3 -1.2
WLF Walferdange 116.16 323 *e*PKiKP PKiKP 21 03 37.2 +0.6
WLF Walferdange 116.16 323 *e*PKIKP PKPdf 21 03 37.0 +0.4
BBS Basel-Blauen 116.16 321 *e*PKIKP PKPdf 21 03 35.9 -0.8
SRU San Rafael 116.21 49 *e*PKPdf PKPdf 21 03 37.4 +0.4
SRU *e*PKKPbc PKKPbc 21 14 07.8 -0.4
SRU *e*PKKPab PKKPab 21 14 12.4 +0.2
SRU San Rafael 116.21 49 *e*PKIKP PKPdf 21 03 37.4 +0.4
SRU e 21 14 07.9
MOF Molkenrain 116.26 321 *e*P PKPdf 21 03 36.3 -0.5
BCLA Clavier 116.35 324 PKP PKPdf 21 03 36.7 -0.2
WUAZ Wupatki 116.38 53 *e*PKPdf PKPdf 21 03 38.3 +0.8
HINF Hinteralfeld 116.44 321 ⇓*i*PKIKP PKPdf 21 03 36.4 -0.8
comp=Z,102nm,0.7s
LOMF Lomont 116.64 321 *e*P PKPdf 21 03 37.3 -0.3
HAU Haudompre 116.69 321 ⇓*i*PKIKP PKPdf 21 03 37.1 -0.6
comp=Z,147nm,1.1s
HAU e MLR MLR
comp=Z,2μm,21.8s
HAU Haudompre 116.69 321 ⇓*i*PKIKP PKPdf 21 03 37.1 -0.6
HAU MLR MLR
comp=Z,2μm,21.8s
GIVF Givet 116.76 324 ⇓*i*PKIKP PKPdf 21 03 37.7 0.0
comp=Z,72nm,0.8s
PGF Pioggiola 116.81 315 ⇓*i*PKIKP PKPdf 21 03 37.6 -0.5
comp=Z,75nm,0.8s
THEF They Montfort 116.83 322 *e*P PKPdf 21 03 37.8 -0.1
LAO LASA Array 116.88 40 *e*PKPdf PKPdf 21 03 38.7 +0.7
DOU Dourbes 116.90 324 PKP PKPdf 21 03 38.2 +0.2
SNF Seneffe 116.90 325 PKP PKPdf 21 03 38.1 +0.1
MCD Coleburn Disti 117.11 334 *e*P PKPdf 21 03 37.4 -0.8
MME1 Meikle Cairn 117.14 334 ⇓*e*P PKPdf 21 03 37.2 -1.0
BAIF Baives 117.14 324 ⇓*i*PKIKP PKPdf 21 03 38.4 -0.1
comp=Z,91nm,1.0s
FCC Fort Churchill 117.26 24 *e*PKPdf PKPdf 21 03 36.9 -1.5
MEZF Maizieres J'vi 117.29 322 ⇓*i*PKIKP PKPdf 21 03 38.5 -0.3
comp=Z,28nm,0.6s
MVH1 Achvaich 117.30 335 ⇓*e*P PKPdf 21 03 37.8 -0.7
SAOF Saorge 117.35 317 *e*P PKPdf 21 03 38.6 -0.5
LPG La Plagne 117.36 319 ⇓*i*PKIKP PKPdf 21 03 39.1 +0.1
comp=Z,112nm,0.7s
LPL La Plagne 117.37 319 ⇓*i*PKIKP PKPdf 21 03 39.0 -0.1
comp=Z,114nm,0.6s
CABF La Chapelle 117.38 320 ⇓*i*PKIKP PKPdf 21 03 39.0 -0.1
comp=Z,173nm,0.6s
VSL Villasalto 117.42 312 *e*PKPdf PKPdf 21 03 39.0 -0.4
AUTN L'Aution 117.43 317 *e*P PKPdf 21 03 39.0 -0.2
SBF Sospel 117.47 317 ⇓*i*PKIKP PKPdf 21 03 38.7 -0.6
comp=Z,175nm,0.8s
USHA Ushuaia 117.48 168 PKP PKPdf 21 03 39.8 +0.8
comp=Z,41nm,0.7s,baz=156,slow=2.3,SNR=20
USHA PKKPbc PKKPbc 21 14 02.3 -2.2
comp=Z,14nm,0.9s,baz=312,slow=3.7,SNR=3.6
TUC Tucson 117.50 57 *e*PKPdf PKPdf 21 03 40.2 +0.4
LUCF Luceram 117.52 317 *e*P PKPdf 21 03 39.2 -0.2
TOUF Mont Tournerai 117.55 317 *e*P PKPdf 21 03 39.4 -0.1
REVF Revere 117.56 317 *e*P PKPdf 21 03 39.9 +0.4
PV04 Paradox Valley 117.62 50 *e*PKPdf PKPdf 21 03 40.9 +1.1
MBDF Montbardon 117.62 318 ⇓*i*PKIKP PKPdf 21 03 39.0 -0.6
comp=Z,66nm,0.7s
MDO Dochfour 117.67 334 ⇓*e*P PKPdf 21 03 38.3 -0.9
SURF Saint Ours 117.68 318 *e*P PKPdf 21 03 40.2 +0.5
ESY Stoneypath 117.78 332 ⇓*e*P PKPdf 21 03 38.6 -0.9
CALN Calern 117.88 317 *e*P PKPdf 21 03 40.0 -0.1
GDM Grand'Maison 117.89 319 *e*P PKPdf 21 03 40.2 +0.1
RWWY Rawlins 117.91 46 *e*Pdif Pdif 21 00 00.4 +1.4
RWWY *e*PKiKP PKiKP 21 03 40.3 +0.1
RWWY *e*PKKPbc PKKPbc 21 14 01.9 -0.5
RWWY *e*PKKPab PKKPab 21 14 04.9 +0.2
PV01 Paradox Valley 117.94 50 *e*Pdif Pdif 21 00 02.9 +3.8
PV01 *e*PKiKP PKiKP 21 03 40.9 +0.4
PV01 *e*PKKPbc PKKPbc 21 14 01.6 -0.5
EBH Black Hill 118.00 333 ⇓*e*P PKPdf 21 03 39.5 -0.4
RRR Rubha Reidh 118.03 335 *e*P PKPdf 21 03 39.2 -0.7
KAC Achnashellach 118.04 335 ⇓*e*P PKPdf 21 03 39.4 -0.6
EDI Edinburgh 118.04 332 *e*P PKPdf 21 03 39.3 -0.7
EDI AMb AMB 21 03 40.1
comp=Z,48nm,1.1s
EBL Broad Law 118.06 332 ⇓*e*P PKPdf 21 03 39.7 -0.3
MENF Mencas 118.09 325 *e*P PKPdf 21 03 40.5 +0.2
FRF La Foret Royal 118.11 317 ⇓*i*PKIKP PKPdf 21 03 40.1 -0.5
comp=Z,129nm,0.9s
ORIF Oris-en-Rattie 118.14 318 ⇓*i*PKIKP PKPdf 21 03 40.2 -0.4
comp=Z,89nm,0.6s
ORIF *e*MLR MLR
comp=Z,1μm,19.5s
EAU Auchinoon 118.21 332 ⇓*e*P PKPdf 21 03 40.0 -0.3
MVCO Mesa Verde 118.24 51 *e*Pdif Pdif 21 00 05.8 +5.4
MVCO *e*PKiKP PKiKP 21 03 42.0 +0.9
MVCO *e*PKKPbc PKKPbc 21 14 01.1 +0.1
KSB Sheil Bridge 118.27 334 ⇓*e*P PKPdf 21 03 40.1 -0.3
LMR La Mourre 118.28 316 ⇓*i*PKIKP PKPdf 21 03 40.4 -0.5
comp=Z,58nm,0.8s
KPL Plockton 118.29 335 ⇓*e*P PKPdf 21 03 40.0 -0.5
KPL AMb AMB 21 03 41.2
comp=Z,86nm,1.0s
RRH Rhenigidale 118.36 336 *e*P PKPdf 21 03 40.1 -0.5
HPK Haverah Park 118.39 330 *e*P PKPdf 21 03 40.6 -0.2
HPK AMb AMB 21 03 41.2
comp=Z,68nm,0.9s
ESK Eskdalemuir 118.40 332 AMb AMB 21 03 39.9
comp=Z,52nm,1.6s
ESK ⇓*e*P 21 03 40.1
ESK Eskdalemuir 118.40 332 *e*PKPdf PKPdf 21 03 39.8 -1.0
ESK Eskdalemuir 118.40 332 *i* PKIKP PKPdf 21 03 41.2 +0.5
ESK Eskdalemuir 118.40 332 AMb AMB 21 03 39.9
comp=Z,52nm,1.6s
EAB Aberfoyle 118.41 333 ⇓*e*P PKPdf 21 03 40.3 -0.4
KEST Kesra 118.42 308 PKP PKPdf 21 03 41.5 +0.1
comp=Z,18nm,0.9s,baz=288,slow=1.7,SNR=42
KEST PP PP 21 04 58.5 -2.0
comp=Z,4.9nm,0.9s,baz=242,slow=3.1,SNR=2.3
ECK Cauldkaine Hil 118.44 332 ⇓*e*P PKPdf 21 03 40.4 -0.4
LOR Lormes 118.53 321 ⇓*i*PKIKP PKPdf 21 03 40.9 -0.3
comp=Z,88nm,1.0s
LOR *e*MLR MLR
comp=Z,1μm,19.5s
LOR Lormes 118.53 321 ⇓*i*PKIKP PKPdf 21 03 40.9 -0.3
LOR MLR MLR
comp=Z,1μm,19.5s
KAR1 Arisaig 118.62 334 ⇓*e*P PKPdf 21 03 40.9 -0.2
OCF Saint Nazaire 118.65 318 *e*P PKPdf 21 03 41.7 +0.1
OG26 St.-Nazaire-De 118.65 318 *e*P PKPdf 21 03 41.7 +0.1
SMRF Simiane la Rot 118.69 317 ⇓*i*PKIKP PKPdf 21 03 41.7 0.0
comp=Z,132nm,0.8s
PGBU Glenifferbraes 118.70 333 *e*P PKPdf 21 03 41.0 -0.3
PGBU AMb AMB 21 03 42.0
comp=Z,55nm,1.0s
KBI1 Birley Grange 118.72 329 ⇓*e*P PKPdf 21 03 41.0 -0.4
SMF Signal de Mont 118.79 321 ⇓*i*PKIKP PKPdf 21 03 41.2 -0.6
comp=Z,58nm,0.9s
SSF Saint Saulge 118.83 321 ⇓*i*PKIKP PKPdf 21 03 41.5 -0.3
comp=Z,161nm,0.8s
SMCO Snowmass 118.85 48 *e*PKPdf PKPdf 21 03 42.8 +0.7
SMCO *e*PKKPbc PKKPbc 21 13 59.4 +0.5
CWF Charnwood Fore 118.89 329 *e*P PKPdf 21 03 40.2 -1.6
CWF AMb AMB 21 03 41.5
comp=Z,72nm,2.8s
SSB Saint Sauveur 118.89 319 *e*P PKPdf 21 03 41.9 -0.1
SSB Saint Sauveur 118.89 319 *e*PKIKP PKPdf 21 03 41.8 -0.2
VIVF Saint-Julien-l 118.97 319 ⇓*i*PKIKP PKPdf 21 03 41.8 -0.4
comp=Z,103nm,0.9s
XDE Dent Fell 119.00 331 ⇓*e*P PKPdf 21 03 41.3 -0.6
GCD Castle Douglas 119.01 332 ⇓*e*P PKPdf 21 03 41.3 -0.7
KWE Weaver Farm 119.01 329 *e*P PKPdf 21 03 41.5 -0.5
AVF Avril sur Loir 119.04 321 ⇓*i*PKIKP PKPdf 21 03 41.6 -0.6
comp=Z,103nm,0.9s
STNC Stoke 119.16 329 *e*P PKPdf 21 03 42.4 +0.1
RSSD Black Hills 119.26 42 *e*Pdif Pdif 21 00 14.0 +9.0
RSSD *e*PKiKP PKiKP 21 03 42.3 -0.5
RSSD Black Hills 119.26 42 *e*P Pdif 21 00 14.0 +9.0
RSSD *i* 21 03 42.3
HYF Humbligny 119.28 322 ⇓*i*PKIKP PKPdf 21 03 42.9 +0.2
PHWY Pilot Hill 119.28 46 *e*PKPdf PKPdf 21 03 42.8 -0.1
PHWY *e*PKKPbc PKKPbc 21 13 57.2 -0.2
GAL1 Galloway 119.37 332 ⇓*e*P PKPdf 21 03 42.0 -0.6
GAL1 AMb AMB 21 03 43.3
comp=Z,98nm,1.0s
BGF Bois d'Agland 119.45 321 ⇓*i*PKIKP PKPdf 21 03 43.0 0.0
comp=Z,255nm,0.7s
AGO Saint Agoulin 119.48 320 *e*P PKPdf 21 03 44.2 +1.1
WOL Wolverton 119.59 327 *e*P PKPdf 21 03 42.5 -0.7
WOL AMb AMB 21 03 44.0
comp=Z,142nm,1.2s
PYM Petit Puy Mans 119.69 320 *e*P PKPdf 21 03 44.8 +1.3
CMAH Djebel Manchou 119.70 309 P PKPdf 21 03 43.5 -0.3
ABSA Djebel Ababsia 119.75 309 P PKPdf 21 03 44.1 +0.2
SWN1 Swindon 119.79 328 *e*P PKPdf 21 03 43.2 -0.4
SWN1 AMb AMB 21 03 44.5
comp=Z,149nm,1.2s
LASF Ste Croix 119.80 318 ⇓*i*PKIKP PKPdf 21 03 43.5 -0.3
comp=Z,150nm,1.3s
WPM1 Penmaenmawr 119.91 330 ⇓*e*P PKPdf 21 03 43.4 -0.3
TCF Toulx Ste Croi 119.97 321 ⇓*i*PKIKP PKPdf 21 03 43.9 -0.1
comp=Z,166nm,0.8s
LAZ Ladron 120.02 54 *e*PKPdf PKPdf 21 03 45.4 +0.9
WME Myndd Eilian 120.03 330 ⇓*e*P PKPdf 21 03 43.7 -0.3
CAEH 'Ain El Ouahch 120.09 309 P PKPdf 21 03 44.6 0.0
YLL Llanberis 120.11 330 ⇓*e*P PKPdf 21 03 43.4 -0.7
WLF1 Llynfaes 120.14 330 *e*P PKPdf 21 03 43.9 -0.3
MCH1 Michaelchurch 120.16 329 ⇓*e*P PKPdf 21 03 43.6 -0.6
MCH1 AMb AMB 21 03 44.3
comp=Z,78nm,1.2s
LENM Lemitar 120.21 54 *e*PKPdf PKPdf 21 03 45.8 +0.9
LENM *e*PKKPab PKKPab 21 13 54.5 -0.2
YRC Rhoscolyn 120.25 330 ⇓*e*P PKPdf 21 03 43.6 -0.7
HTR Trewern Hill 120.25 329 ⇓*e*P PKPdf 21 03 43.8 -0.6
HGH Gray Hill 120.26 328 ⇓*e*P PKPdf 21 03 43.9 -0.6
CKFL Kef-Lekhel 120.30 309 P PKPdf 21 03 45.1 +0.1
GMM Mts of Mourne 120.32 332 ⇓*e*P PKPdf 21 03 43.8 -0.6
LDF La Druitiere 120.33 324 ⇓*i*PKIKP PKPdf 21 03 44.2 -0.5
comp=Z,20nm,0.5s
SDCO Great Sand Dun 120.38 49 *e*PKPdf PKPdf 21 03 45.9 +0.8
SDCO *e*PKKPbc PKKPbc 21 13 53.3 0.0
ANMO Albuquerque 120.42 53 *e*PKPdf PKPdf 21 03 45.9 +0.7
FLN La Foliniere 120.45 324 ⇓*i*PKIKP PKPdf 21 03 44.5 -0.4
comp=Z,101nm,1.1s
FLN *e*MLR MLR
comp=Z,2μm,22.5s
FLN La Foliniere 120.45 324 ⇓*i*PKIKP PKPdf 21 03 44.5 -0.4
FLN MLR MLR
comp=Z,2μm,22.5s
BNM Barren Site 120.49 54 *e*PKPdf PKPdf 21 03 46.1 +0.7
CASM Ain Smara 120.52 309 P PKPdf 21 03 45.3 -0.1
CAF Calviac 120.64 320 ⇓*i*PKIKP PKPdf 21 03 45.5 +0.1
comp=Z,147nm,1.1s
CTEI Djebel Teioual 120.64 309 P PKPdf 21 03 46.0 +0.3
RJF Les Rejaudoux 120.83 320 ⇓*i*PKIKP PKPdf 21 03 45.7 0.0
comp=Z,80nm,1.1s
RJF *e*MLR MLR
comp=Z,2μm,22.8s
RJF Les Rejaudoux 120.83 320 ⇓*i*PKIKP PKPdf 21 03 45.7 0.0
RJF MLR MLR
comp=Z,2μm,22.8s
GRR Gorron 120.86 324 ⇓*i*PKIKP PKPdf 21 03 45.4 -0.3
comp=Z,96nm,0.9s
DFRA Djebel Bou Aff 120.91 309 P PKPdf 21 03 47.1 +0.9
EJON La Jonquera 121.08 317 PKP PKPdf 21 03 45.4 -1.0
HEX Exmoor 121.09 328 ⇓*e*P PKPdf 21 03 45.7 -0.3
CAIB Dublin 121.12 331 *e*PKPdf PKPdf 21 03 45.8 -0.2
LRDF Laroque-de-Fa 121.13 317 *e*P PKPdf 21 03 46.1 -0.3
MTLF Montolieu 121.19 318 ⇓*i*PKIKP PKPdf 21 03 46.1 -0.4
comp=Z,126nm,1.0s
JSA Saint Aubin 121.21 326 *e*P PKPdf 21 03 45.1 -1.2
JSA AMb AMB 21 03 46.1
comp=Z,69nm,1.3s
FILF Fillols 121.27 317 *e*P PKPdf 21 03 46.4 -0.3
MFF Saint Martin d 121.28 322 ⇓*i*PKIKP PKPdf 21 03 46.2 -0.4
comp=Z,201nm,0.7s
SET Setif 121.38 309 P PKPdf 21 03 47.0 -0.1
ULM Lac du Bonnet 121.39 33 *e*PKPdf PKPdf 21 03 45.5 -1.1
ULM *e*PKKPab PKKPab 21 13 48.3 -1.0
ULM Lac du Bonnet 121.39 33 PKP PKPdf 21 03 45.7 -0.9
comp=Z,63nm,0.8s,baz=317,slow=2.6,SNR=37
ULM PP PP 21 05 18.7 -1.3
comp=Z,12nm,0.8s,baz=303,slow=7.0,SNR=3.6
ULM PKKPbc PKKPbc 21 13 48.0 -1.9
comp=Z,14nm,0.8s,baz=114,slow=4.0,SNR=8.6
LFF La Frestale 121.48 320 ⇓*i*PKIKP PKPdf 21 03 47.1 +0.1
comp=Z,124nm,0.8s
HTL Hartland 121.49 328 *e*P PKPdf 21 03 46.6 -0.2
HTL AMb AMB 21 03 47.4
comp=Z,86nm,1.3s
DYA Yadsworthy 121.51 327 *e*P PKPdf 21 03 45.6 -1.3
DYA AMb AMB 21 03 46.7
comp=Z,99nm,1.0s
CARF Carcanieres 121.51 317 *e*P PKPdf 21 03 46.8 -0.3
CFON Fontmartina 121.66 316 PKP PKPdf 21 03 47.2 -0.2
CLLI Llivia 121.69 317 PKP PKPdf 21 03 47.2 -0.3
VALF Valcebollere 121.70 317 *e*P PKPdf 21 03 47.9 +0.4
OGNE Ogallala 121.83 45 *e*PKPdf PKPdf 21 03 47.7 -0.1
AKF Akfadou 121.89 310 P PKPdf 21 03 49.1 +1.1
SGMF Saint Gilles 121.91 325 ⇓*i*PKIKP PKPdf 21 03 47.3 -0.4
comp=Z,80nm,0.7s
MLS Moulis 122.09 318 *e*P PKPdf 21 03 47.5 -0.7
MNTX Cornudas Mount 122.11 56 *e*PKPdf PKPdf 21 03 49.0 +0.4
MNTX *e*PKKPab PKKPab 21 13 45.3 -1.2
ETOS Mallorca 122.14 314 PKP PKPdf 21 03 48.6 +0.2
EMIR Miracle 122.23 317 PKP PKPdf 21 03 48.5 -0.1
ROSF Rostrenen 122.27 325 ⇓*i*PKIKP PKPdf 21 03 47.9 -0.5
comp=Z,54nm,0.7s
CSOR Sort 122.31 317 PKP PKPdf 21 03 48.8 +0.1
CCA1 Carnmenellis 122.34 328 *e*P PKPdf 21 03 47.1 -1.4
CCA1 AMb AMB 21 03 48.4
comp=Z,122nm,1.2s
ATAF Djebel Tarf 122.34 309 P PKPdf 21 03 50.8 +1.9
QUIF Quistinic 122.43 325 ⇓*i*PKIKP PKPdf 21 03 48.2 -0.5
comp=Z,104nm,0.9s
AGMN Agassiz Nation 122.44 35 *e*PKPdf PKPdf 21 03 47.4 -1.3
AGMN *e*PKKPab PKKPab 21 13 44.3 -0.5
EPF Esparros 122.56 318 ⇓*i*PKIKP PKPdf 21 03 48.9 -0.2
comp=Z,80nm,0.9s
AKET Djebel Ketaf 122.60 309 P PKPdf 21 03 50.8 +1.4
RESF Ens 122.66 318 *e*P PKPdf 21 03 50.0 +0.7
LABF Labassere 122.73 318 *e*P PKPdf 21 03 50.0 +0.5
BST Brest 122.74 325 *e*P PKPdf 21 03 50.4 +1.1
EPOB Poblet 122.76 316 PKP PKPdf 21 03 48.7 -0.8
GDL2 Guadalupe Moun 122.83 55 *e*PKPdf PKPdf 21 03 50.2 +0.3
GDL2 *e*PKKPbc PKKPbc 21 13 43.5 -0.4
VIEF Viey 122.84 318 *e*P PKPdf 21 03 50.2 +0.5
EBIE Bielsa 122.84 318 PKP PKPdf 21 03 49.4 -0.3
ADJB Djebel Djouab 122.90 310 P PKPdf 21 03 51.0 +1.0
REYF Montagne du Re 123.03 318 *e*P PKPdf 21 03 50.5 +0.5
CLNB Carlsbad 123.21 55 *e*PKPdf PKPdf 21 03 50.7 0.0
ETSF Etsaut 123.22 318 ⇓*i*PKIKP PKPdf 21 03 51.0 +0.6
comp=Z,123nm,1.0s
EMHD Djebel Mahouad 123.26 310 P PKPdf 21 03 51.2 +0.5
ERTA Horta de San J 123.43 316 PKP PKPdf 21 03 49.9 -1.0
LARF Larrau 123.44 319 *e*P PKPdf 21 03 51.2 +0.4
EIBI Ibiza 123.47 313 PKP PKPdf 21 03 51.2 +0.2
SJPF Ste Jean 123.56 319 ⇓*i*PKIKP PKPdf 21 03 51.4 +0.4
comp=Z,116nm,1.2s
ESAC San Caprasio 123.66 317 PKP PKPdf 21 03 50.9 -0.4
EALK Alkurruntz 123.70 319 PKP PKPdf 21 03 50.7 -0.6
ELIZ Elizondo 123.73 319 PKP PKPdf 21 03 51.5 +0.1
TXAR Lajitas Array 124.12 59 PKP PKPdf 21 03 52.5 0.0
TXAR PP PP 21 05 36.8 -2.6
TXAR PKKPbc PKKPbc 21 13 38.5 -0.2
TXAR Lajitas Array 124.12 59 PKP PKPdf 21 03 52.5 0.0
comp=Z,25nm,0.9s,baz=252,slow=1.2,SNR=58
TXAR PP PP 21 05 36.8 -2.6
comp=Z,5.3nm,0.8s,baz=302,slow=7.3,SNR=3.1
TXAR PKKPbc PKKPbc 21 13 38.5 -0.2
comp=Z,4.5nm,0.8s,baz=117,slow=7.0,SNR=12
TXAR Lajitas Array 124.12 59 PKIKP PKPdf 21 03 52.5 0.0
TXAR 21 05 36.8
TXAR pmax pmax
comp=Z,25nm,0.9s
TXAR pmax pmax
comp=Z,5.0nm,0.8s
AMTX Amarillo 124.20 52 *e*PKPdf PKPdf 21 03 53.1 +0.6
EMOS Mosqueruela 124.23 316 PKP PKPdf 21 03 53.4 +1.0
CBKS Cedar Bluff 124.27 46 *e*PKPdf PKPdf 21 03 52.4 -0.2
ECSD EROS Data Cent 124.27 40 *e*PKPdf PKPdf 21 03 51.1 -1.3
ECSD *e*PKKPab PKKPab 21 13 36.4 -0.6
EBEN Beniarda 124.73 314 PKP PKPdf 21 03 52.5 -0.9
ECHE Chera 124.90 315 PKP PKPdf 21 03 54.1 +0.4
ELAN Lanestosa 124.94 320 PKP PKPdf 21 03 52.9 -0.8
EYMN Ely 125.06 33 *e*PKPdf PKPdf 21 03 53.0 -0.8
ETOR Torete 125.13 317 PKP PKPdf 21 03 53.7 -0.5
ETOB Tobarra 125.70 314 PKP PKPdf 21 03 55.2 -0.1
CART Cartagena 125.73 313 *e*PKPdf PKPdf 21 03 54.7 -0.6
EMUR La Murta 125.80 313 PKP PKPdf 21 03 53.9 -1.7
EARI Arriondas 126.03 321 PKP PKPdf 21 03 55.1 -0.6
KSU1 Kansas State U 126.38 45 *e*PKPdf PKPdf 21 03 56.7 +0.1
EVIA Vianos 126.38 314 PKP PKPdf 21 03 56.7 +0.1
WMOK Wichita Mounta 126.49 51 *e*PKPdf PKPdf 21 03 55.3 -1.6
GUD Guadarrama 126.63 317 PKP PKPdf 21 03 57.2

ERON	**Agron**	**128.00**	**313**	PKP	PKPdf	21 03 59.2	-0.5		
EADA	**Adamuz**	**128.05**	**315**	PKP	PKPdf	21 03 59.7	-0.1		
ELOJ	**Sierra Loja**	**128.19**	**313**	PKP	PKPdf	21 03 59.5	-0.6		
EPLA	**Plasencia**	**128.20**	**318**	PKP	PKPdf	21 03 59.4	-0.6		
MVO	**Moncorvo**	**128.28**	**319**	*e*PKPdf	PKPdf	21 04 00.8	+0.7		
MVO	**Moncorvo**	**128.28**	**319**	*e*PP	PP	21 06 16.3	+10		
MVO	**Moncorvo**	**128.28**	**319**	PKP	PKPdf	21 04 00.6	+0.5		
STS	**Santiago**	**128.32**	**322**	PKP	PKPdf	21 04 00.6	+0.5		
EMAZ	**Mazaricos**	**128.55**	**322**	PKP	PKPdf	21 04 00.2	-0.4		
ELOB	**Lobios**	**128.57**	**321**	PKP	PKPdf	21 03 59.7	-0.9		
PCAB	**Cabril**	**128.63**	**320**	*e*PKPdf	PKPdf	21 04 01.8	+1.0		
PCAB				*i* P		21 07 03.8			
PVRL	**Vila Real**	**128.66**	**320**	*e*PKPdf	PKPdf	21 04 02.0	+1.1		
PVRL				*i* P		21 07 03.8			
JFWS	**Jewell Farm**	**128.67**	**38**	*e*PKPdf	PKPdf	21 03 58.5	-2.3		
EZAM	**Zamans**	**128.82**	**321**	PKP	PKPdf	21 04 00.4	-0.8		
TORD	**Torodi Ar. Bea**	**128.89**	**282**	PKP	PKPpre	21 03 41.9			
TORD				PKP	PKPdf	21 04 01.2	-0.8		
	comp=Z,59nm,0.7s,baz=71,slow=1.7,SNR=86								
TORD				SKPbc		21 07 04.4			
	comp=Z,117nm,1.1s,baz=81,slow=3.2,SNR=16								
TORD				PKKPbc		21 13 20.7			
	comp=Z,3.0nm,0.8s,baz=327,slow=2.7,SNR=3.5								
TORD				SKKPbc		21 16 36.1			
	comp=Z,4.5nm,0.9s,baz=264,slow=4.0,SNR=4.1								
EMIJ	**Mijas**	**128.90**	**313**	PKP	PKPdf	21 03 59.8	-1.7		
MTE	**Manteigas**	**129.01**	**319**	*e*PKPdf	PKPdf	21 04 02.9	+1.4		
MTE	**Manteigas**	**129.01**	**319**	*e*PP	PP	21 06 22.3	+11		
MTE				*i* P		21 07 05.7			
MTE	**Manteigas**	**129.01**	**319**	*e*PKPdf	PKPdf	21 04 02.1	+0.6		
PVIS	**Viseu**	**129.07**	**319**	*e*PKPdf	PKPdf	21 04 02.7	+1.0		
PVIS				*i* P		21 07 05.3			
PCBR	**Castelo Branco**	**129.25**	**318**	*e*PKPdf	PKPdf	21 04 03.2	+1.2		
PCBR	**Castelo Branco**	**129.25**	**318**	*e*PP	PP	21 06 23.1	+10		
PCBR				*i* P		21 07 05.9			
PTO	**Porto**	**129.31**	**320**	*e*PKPdf	PKPdf	21 04 03.5	+1.4		
SCHQ	**Schefferville**	**129.32**	**13**	*e*PKPdf	PKPdf	21 04 01.4	-0.2		
SCHQ	**Schefferville**	**129.32**	**13**	PKP	PKPdf	21 04 01.1	-0.5		
	comp=Z,32nm,0.6s,baz=345,slow=2.0,SNR=29								
SCHQ				SKPbc		21 07 04.0			
	comp=Z,68nm,0.9s,baz=347,slow=4.6,SNR=14								
SCHQ				PKP2bc		21 14 04.9			
	comp=Z,11nm,0.7s,baz=226,slow=3.5,SNR=8.0								
PMRV	**Marv??o**	**129.40**	**318**	*e*PKPdf	PKPdf	21 04 02.4	+0.1		
PMRV	**Marv??o**	**129.40**	**318**	*e*PP	PP	21 06 24.3	+11		
PMRV				*i* P		21 07 06.6			
EJIF	**Jimena Fronter**	**129.45**	**313**	PKP	PKPdf	21 04 01.7	-0.8		
EBAD	**Badajoz**	**129.47**	**317**	PKP	PKPdf	21 04 01.6	-0.9		
ESPR	**Espera**	**129.54**	**314**	PKP	PKPdf	21 04 01.6	-1.1		
EMIN	**Mina Concepcio**	**129.71**	**315**	PKP	PKPdf	21 04 01.9	-1.1		
PBAR	**Barrancos**	**129.77**	**316**	*e*PKPdf	PKPdf	21 04 03.4	+0.3		
PBAR	**Barrancos**	**129.77**	**316**	*e*PP	PP	21 06 25.1	+9.0		
PBAR				*i* P		21 07 08.3			
PLCA	**Paso Flores**	**129.77**	**159**	PKP	PKPpre	21 03 49.4			
PLCA				*e*PKPdf	PKPdf	21 04 02.4	-0.6		
PLCA	**Paso Flores**	**129.77**	**159**	PKhKP	PKPpre	21 03 49.4			
	comp=Z,1.9nm,0.7s,baz=223,slow=4.7,SNR=4.1								
PLCA				PKP	PKPdf	21 04 04.0	+1.0		
	comp=Z,54nm,1.0s,baz=220,slow=2.8,SNR=32								
PLCA				pPKP	pPKPdf	21 04 57.0	+4.9		
	comp=Z,7.8nm,0.9s,baz=180,slow=8.6,SNR=1.5								
PLCA				SKPbc		21 07 07.7			
	comp=Z,14nm,1.1s,baz=246,slow=8.5,SNR=3.7								
PESTR	**Estremoz**	**129.81**	**317**	*e*PKPdf	PKPdf	21 04 03.1	0.0		
PESTR	**Estremoz**	**129.81**	**317**	*e*PP	PP	21 06 26.8	+10		
PESTR				*i* P		21 07 06.9			
PTOM	**Tomar**	**129.98**	**318**	*e*PKPdf	PKPdf	21 04 04.3	+0.9		
PTOM				*i* P	SKPbc	21 07 09.1	+0.7		
EVO	**Evora**	**130.26**	**317**	*e*PKIKP	PKPdf	21 04 04.0	0.0		
	comp=Z,239nm,1.2s								
EVO				*e*MLR	MLR				
	comp=Z,2μm,21.5s								
EVO	**Evora**	**130.26**	**317**	*e*PKPdf	PKPdf	21 04 04.4	+0.4		
EVO	**Evora**	**130.26**	**317**	*e*PP	PP	21 06 29.9	+11		
EVO				*i* P	SKPbc	21 07 09.2	-0.4		
ALMR	**Almeirim**	**130.33**	**318**	*e*PP	PP	21 06 20.0	+0.3		
EVOP	**Sao Brissos**	**130.34**	**317**	*e*P	PKPdf	21 04 03.8	-0.4		
EVOP				*e*PP	PP	21 06 20.1	+0.3		
EGRO	**El Granado**	**130.38**	**315**	PKP	PKPdf	21 04 04.2	-0.1		
PBEJ	**Beja**	**130.41**	**316**	*e*PKPdf	PKPdf	21 04 05.3	+1.0		
PBEJ				*i* P	SKPbc	21 07 11.0	+0.9		
HKT	**Hockley**	**130.48**	**55**	*e*PKPdf	PKPdf	21 04 04.6	-0.1		
MIAR	**Mount Ida**	**130.52**	**49**	*e*PKPpre	PKPpre	21 03 49.3			
MIAR				*e*PKPdf	PKPdf	21 04 04.8	+0.2		
HDIL	**Hopedale**	**130.57**	**40**	*e*PKPdf	PKPdf	21 04 04.3	-0.2		
HDIL				*e*SKP		21 07 10.4			
CCM	**Cathedral Cave**	**130.59**	**44**	*e*PKPpre	PKPpre	21 03 49.2			
CCM				*e*PKPdf	PKPdf	21 04 04.0	-0.7		
PVAQ	**Vaqueiros**	**130.61**	**315**	*e*PKPdf	PKPdf	21 04 04.5	-0.2		
PVAQ	**Vaqueiros**	**130.61**	**315**	*e*PP	PP	21 06 31.1	+10		
PVAQ				*i* P	SKPbc	21 07 10.7	-0.2		
PCVE	**Castro Verde**	**130.72**	**316**	*e*PKPdf	PKPdf	21 04 05.0	+0.1		
PCVE	**Castro Verde**	**130.72**	**316**	*e*PP	PP	21 06 31.9	+10		
PCVE				*i* P	SKPbc	21 07 11.1	-0.2		
GLMI	**Grayling**	**130.73**	**33**	*e*PKPdf	PKPdf	21 04 04.9	+0.2		
GLMI				*e*SKPbc	SKPbc	21 07 11.2	+0.1		
GLMI				*e*SKPdf	SKPdf	21 07 21.0	-1.2		
MESJ	**Messejana**	**130.75**	**316**	*e*P	PKPdf	21 04 05.5	+0.6		
MESJ				*e*PP	PP	21 06 22.9	+0.5		
NATX	**Nacogdoches**	**130.79**	**53**	*e*PKPdf	PKPdf	21 04 05.8	+0.6		
PBDV	**Barranco-do-Ve**	**130.84**	**315**	*e*PKPdf	PKPdf	21 04 06.0	+0.9		
PBDV	**Barranco-do-Ve**	**130.84**	**315**	*e*PP	PP	21 06 31.9	+8.8		
PBDV				*i* P	SKPbc	21 07 11.7	-0.1		
PMAFR	**Mafra**	**130.90**	**318**	*e*PKPdf	PKPdf	21 04 06.4	+1.2		
PMAFR	**Mafra**	**130.90**	**318**	*e*PP	PP	21 06 26.7	+3.3		
PMAFR				*i* P	SKPbc	21 07 11.8	-0.1		
LIS	**Lisbon**	**130.94**	**318**	*e*P	PKPdf	21 04 05.5	+0.2		
LIS				*e*PP	PP	21 06 24.3	+0.7		
FVM	**French Village**	**131.19**	**43**	*e*PKPdf	PKPdf	21 04 05.5	-0.3		
FVM				*e*SKP		21 07 12.7			
PTEO	**Sao Teotonio**	**131.24**	**316**	*e*PKPdf	PKPdf	21 04 07.2	+1.3		
PTEO				*i* P	SKPbc	21 07 14.2	+1.0		
MORF	**Marmelete**	**131.31**	**316**	*e*PKPdf	PKPdf	21 04 05.3	-0.7		
MORF	**Marmelete**	**131.31**	**316**	*e*PP	PP	21 06 35.9	+10		
MORF				*i* P	SKPbc	21 07 14.1	+0.6		
UALR	**University of**	**131.34**	**48**	*e*PKPdf	PKPdf	21 04 06.4	+0.2		
PFVI	**Vila Bisbo**	**131.51**	**316**	*e*PKPdf	PKPdf	21 04 07.6	+1.2		
PFVI	**Vila Bisbo**	**131.51**	**316**	*e*PP	PP	21 06 36.3	+8.9		
PFVI				*i* P	SKPbc	21 07 14.5	+0.3		
SIUC	**Southern Illin**	**132.14**	**43**	*e*PKPdf	PKPdf	21 04 06.8	-0.8		
GNAR	**Gosnell**	**132.47**	**45**	*e*PKPdf	PKPdf	21 04 08.4	+0.1		
GLAT	**Glass**	**132.83**	**45**	*e*PKPdf	PKPdf	21 04 09.0	+0.1		
AAM	**Ann Arbor**	**132.91**	**34**	*e*PKPdf	PKPdf	21 04 08.6	-0.3		
AAM				*e*SKP		21 07 18.6			
BLO	**Bloomington**	**133.11**	**40**	*e*PKPdf	PKPdf	21 04 09.2	-0.1		
BLO				*e*SKP		21 07 19.3			
SADO	**Sadowa**	**133.55**	**29**	SKPbc	SKPbc	21 07 20.1	-0.9		
	comp=Z,102nm,1.0s,baz=324,slow=4.5,SNR=14								
VBMS	**Vicksburg**	**133.83**	**50**	*e*PKPdf	PKPdf	21 04 11.3	+0.4		
ACSO	**Alum Creek Sta**	**134.63**	**36**	*e*PKPpre	PKPpre	21 04 01.3			
ACSO				*e*PKPdf	PKPdf	21 04 11.8	-0.3		
TRQA	**Tornquist**	**134.77**	**166**	*e*PKPpre	PKPpre	21 04 03.8			
TRQA				*e*PKPdf	PKPdf	21 04 12.6	+0.1		
ERPA	**Erie**	**135.04**	**32**	*e*PKPdf	PKPdf	21 04 12.2	-0.6		
ERPA				*e*SKP		21 07 24.4			
DBIC	**Dimbokro**	**135.44**	**273**	*e*PKPpre	PKPpre	21 03 58.6			
DBIC				PKP	PKPdf	21 04 14.3	-0.1		
DBIC				*e*SKP		21 07 27.1			
DBIC	**Dimbokro**	**135.44**	**273**	PKhKP	PKPpre	21 04 01.2			
	comp=Z,9.4nm,0.6s,baz=81,slow=5.8,SNR=10								
DBIC				PKP	PKPdf	21 04 14.3	-0.1		
	comp=Z,50nm,0.6s,baz=65,slow=1.9,SNR=7.8								
DBIC				SKPbc	SKPbc	21 07 27.1	-1.0		
	comp=Z,114nm,1.0s,baz=74,slow=3.6,SNR=19								
DBIC	**Dimbokro**	**135.44**	**273**	PKHKP	PKPpre	21 04 01.3			
DBIC						21 04 14.3			
DBIC				pmax	pmax				
	comp=Z,9.0nm,0.6s								
DBIC				pmax	pmax				
	comp=Z,50nm,0.6s								
LIC	**Lamto**	**135.59**	**273**	*e*P	PKPpre	21 04 01.0			
	comp=Z,274nm,0.8s								
LIC	**Lamto**	**135.59**	**273**	*e*PKIKP	PKPdf	21 04 14.2	-0.5		
	comp=Z,180nm,0.8s								
LIC				*e*MLR	MLR				
	comp=Z,1μm,20.2s								
LIC	**Lamto**	**135.59**	**273**	*e*P	PKPpre	21 04 01.0			
LIC				*e*PKPdf	PKPdf	21 04 14.2	-0.5		
LIC				LR	LR				
	comp=Z,570nm,20.3s								
TIC	**Toumodi**	**135.60**	**273**	*e*P	PKPpre	21 03 59.7			
	comp=Z,192nm,0.9s								
SWET	**Sewanee**	**135.71**	**44**	*e*PKPpre	PKPpre	21 04 00.0			
LONY	**Lake Ozonia**	**135.74**	**26**	*e*PKPpre	PKPpre	21 04 00.7			
LONY				*e*PKPdf	PKPdf	21 04 13.8	-0.3		
LRAL	**Lakeview Retre**	**136.08**	**47**	*e*Pdif	Pdif	21 01 20.3	+0.5		
LRAL				*e*PKPpre	PKPpre	21 04 00.1			
NCB	**Newcomb**	**136.42**	**26**	*e*SKPbc	SKPbc	21 07 29.4	-0.7		
CPCT	**Cooper Cave**	**136.54**	**43**	*e*PKPpre	PKPpre	21 03 55.0			
CPCT				*e*SKP		21 07 30.7			
MCWV	**Mont Chateau**	**136.82**	**35**	*e*PKPpre	PKPpre	21 04 03.4			
MCWV				*e*SKP		21 07 30.7			
TKL	**Tuckaleechee C**	**136.93**	**42**	SKPbc	SKPbc	21 07 31.0	-0.9		
	comp=Z,37nm,0.9s,baz=200,slow=2.0,SNR=5.6								
BINY	**Binghamton**	**137.00**	**29**	*e*PKPpre	PKPpre	21 04 01.5			
BINY				*e*SKP		21 07 30.6			
BRAL	**Brewton**	**137.00**	**50**	*e*PKPdf	PKPdf	21 04 17.7	+0.9		
LBNH	**Lisbon**	**137.15**	**24**	*e*PKPdf	PKPdf	21 04 16.9	+0.1		
PKME	**Peaks-Kenny Pk**	**137.26**	**20**	*e*PKPpre	PKPpre	21 04 05.2			
ELN	**Prospectdale**	**137.90**	**38**	*e*PKPpre	PKPpre	21 04 02.1			
GOGA	**Godfrey**	**138.40**	**44**	*e*PKPpre	PKPpre	21 04 09.3			
GOGA				*e*SKP		21 07 35.6			
CFAA	**Coronel Fontan**	**138.70**	**156**	PKhKP	PKPpre	21 04 10.7			
	comp=Z,4.1nm,0.8s,baz=209,slow=2.4,SNR=26								
CFAA				PKP	PKPdf	21 04 20.5	+0.5		
	comp=Z,2.2nm,0.4s,baz=240,slow=3.4,SNR=7.8								
TLL	**Tololo Astrono**	**138.80**	**152**	*i* P	PKPpre	21 04 13.2			
TLL	**Tololo Astrono**	**138.80**	**152**	*i* P	PKPpre	21 04 13.2			
PMPS	**Porto Santo**	**138.88**	**315**	*e*PKPdf	PKPdf	21 04 20.6	+0.3		
CBN	**Corbin**	**139.22**	**34**	*e*PKPdf	PKPdf	21 04 18.2	-2.5		
JSC	**Jenkinsville**	**139.40**	**42**	*e*PKPpre	PKPpre	21 04 04.9			
JSC				*e*SKPdf	SKPdf	21 07 38.7	+0.4		
PMAR	**Madeira**	**139.48**	**315**	*e*PKPdf	PKPdf	21 04 22.6	+1.2		
PMAR				*i* P		21 07 40.6			
CFTV	**Fuerteventura**	**139.54**	**308**	PKP	PKPdf	21 04 21.7	+0.1		
LCO	**Las Campanas**	**139.81**	**151**	*e*PKPpre	PKPpre	21 04 14.8			
LCO	**Las Campanas**	**139.81**	**151**	*i* P	PKPdf	21 04 16.2	-5.9		
TEIG	**Tepich**	**139.95**	**66**	*e*PKPpre	PKPpre	21 04 14.6			
NHSC	**New Hope**	**140.83**	**42**	*e*PKPpre	PKPpre	21 04 17.2			
CNNC	**Cliffs of the**	**140.95**	**38**	*e*PKPpre	PKPpre	21 04 17.6			
BART	**Pico Bartolome**	**141.23**	**328**	*e*PKP	PKPdf	21 04 22.5	-1.9		
PDA	**Ponta Delgada**	**141.51**	**329**	*e*PKP	PKPdf	21 04 21.3	-3.6		
ADH	**Angra Heroismo**	**141.59**	**331**	*e*PKP	PKPdf	21 04 21.6	-3.4		
PSMN	**Pico do Norte,**	**141.75**	**327**	*e*PKP	PKPdf	21 04 21.6	-3.7		
PSMA	**Santa Maria**	**141.79**	**327**	*e*PKP	PKPdf	21 04 21.5	-3.9		
PMAN	**Manadas**	**142.01**	**332**	*e*PKP	PKPdf	21 04 21.6	-4.1		
ROSA	**Rosais**	**142.01**	**332**	*e*PKP	PKPdf	21 04 22.3	-3.4		
TGUH	**Tegucigalpa,Un**	**142.17**	**75**	*e*PKPpre	PKPpre	21 04 22.8			
PID	**Ribeirinha**	**142.18**	**332**	*e*PKP	PKPdf	21 04 22.5	-3.6		
PCED	**Cedros**	**142.29**	**333**	*e*PKP	PKPdf	21 04 21.7	-4.6		
CALA	**Caldeira**	**142.33**	**333**	*e*PKP	PKPdf	21 04 23.6	-2.7		
HOR	**Horta**	**142.34**	**333**	*e*PKP	PKPdf	21 04 23.0	-3.3		
DWPF	**Disney**	**142.69**	**50**	*e*PKPpre	PKPdf	21 04 23.0	-4.2		
CNGN	**Cerro Negro**	**142.93**	**77**	*e*P	PKPdf	21 04 24.8	-3.2		
CNGN				AMb	AMB	21 04 27.2			
	comp=E,166nm,1.4s								
MGAN	**Managua**	**143.40**	**78**	*e*P	PKPdf	21 04 26.5	-2.4		
VCR	**Vista de Mar**	**144.19**	**81**	*e*P	PKPdf	21 04 30.1	-0.1		
JCR	**Jicaral**	**144.72**	**81**	*e*P	PKPdf	21 04 31.7	+0.5		
JTS	**JuntasAbangare**	**144.84**	**81**	*e*PKPdf	PKPdf	21 04 31.6	+0.2		
JTS	**JuntasAbangare**	**144.84**	**81**	*e*P	PKPdf	21 04 31.7	+0.3		
CGA2	**Cerro Gallo 2**	**145.34**	**81**	*e*P	PKPdf	21 04 34.3	+2.0		
PRS1	**Puriscal**	**145.49**	**81**	*e*P	PKPab	21 04 35.1	+1.6		
QCR	**Quepos**	**145.67**	**82**	*e*P	PKPab	21 04 35.3	+1.2		
LAJ	**Bijagual**	**145.69**	**81**	*e*P	PKPdf	21 04 33.6	+0.7		
URSC	**Urasca**	**146.03**	**81**	*e*P	PKPdf	21 04 34.8	+1.4		
BUS	**Buena Vista**	**146.07**	**82**	*e*P	PKPab	21 04 36.9	+1.2		
ACR	**Cerro Adams**	**146.69**	**83**	*e*P	PKPdf	21 04 36.3	+1.8		
CPUP	**Villa Florida**	**147.09**	**167**	*e*PKPdf	PKPdf	21 04 35.2	+0.3		
CPUP				*e*PKPbc	PKPbc	21 04 37.9	+0.6		
CPUP	**Villa Florida**	**147.09**	**167**	PKPbc	PKPdf	21 04 35.4	+0.4		
	comp=E,328nm,0.9s,baz=186,slow=2.1,SNR=112								
CPUP	**Villa Florida**	**147.09**	**167**	PKIKP	PKPdf	21 04 35.4	+0.5		
CPUP				pmax	pmax				
	comp=Z,328nm,0.9s								
BRU2	**Volcan**	**147.16**	**83**	*e*P	PKPdf	21 04 35.6	+0.3		
NNA	**Nana**	**147.66**	**123**	*e*PKPdf	PKPdf	21 04 36.9	+0.7		
NNA	**Nana**	**147.66**	**123**	PKPbc	PKPbc	21 04 37.1	-2.1		
	comp=Z,317nm,1.0s,baz=261,slow=3.3,SNR=26								
NNA				pPKPbc	pPKPbc	21 05 30.3	+2.5		
	comp=Z,60nm,1.0s,baz=309,slow=6.2,SNR=0.8								
ATAH	**Atahualpa**	**148.56**	**114**	PKPbc	PKPbc	21 04 40.0	-1.5		
	comp=Z,298nm,0.8s,baz=231,slow=1.1,SNR=88								
BCIP	**Isla Barro Col**	**149.95**	**82**	*e*PKPdf	PKPdf	21 04 39.3	-0.6		
BCIP				*e*PKPbc	PKPbc	21 04 45.0	0.0		
BCIP	**Isla Barro Col**	**149.95**	**82**	*e*P	PKPdf	21 04 39.4	-0.4		
BBSR	**BB Station**	**150.19**	**26**	*e*PKPbc	PKPbc	21 04 45.1	+0.1		
MTDJ	**Mount Denham**	**150.22**	**63**	*e*PKPbc	PKPbc	21 04 45.2	-0.2		
MTDJ	**Mount Denham**	**150.22**	**63**	*e*P	PKPdf	21 04 39.3	-0.9		
OTAV	**Otavalo**	**150.75**	**100**	*e*PKPdf	PKPdf	21 04 41.9	+0.7		
OTAV	**Otavalo**	**150.75**	**100**	*e*P	PKPdf	21 04 42.3	+1.1		
CAM4	**Nova Friburgo**	**151.04**	**194**	*i* P	PKPdf	21 04 41.6	+0.2		
CAM4				*i*		21 04 48.1			
CAM4				*i*		21 04 49.5			
CAM4				*i*		21 04 51.7			
CAM4				*i*		21 04 55.3			
CAM4				*i*		21 05 06.2			
CAM4				*i*		21 05 35.7			
LPAZ	**La Paz**	**151.37**	**141**	*e*PKPdf	PKPdf	21 04 43.2	+1.2		
LPAZ				*e*PKPbc	PKPbc	21 04 49.7	+1.5		
LPAZ	**La Paz**	**151.37**	**141**	PKP	PKPdf	21 04 43.5	+1.5		
	comp=Z,36nm,1.1s,baz=2.2,slow=0.5,SNR=85								
LPAZ				PKPbc	PKPbc	21 04 49.9	+1.7		
	comp=Z,285nm,1.0s,baz=42,slow=3.1,SNR=126								
LPAZ				PKPab	PKPab	21 04 58.4	+1.5		
	comp=Z,126nm,0.6s,baz=331,slow=1.5,SNR=25								
LPAZ	**La Paz**	**151.37**	**141**	PKIKP	PKPdf	21 04 43.5	+1.5		
LPAZ						21 04 58.4			
LPAZ				pmax	pmax				
	comp=Z,36nm,1.1s								
GTBY	**Guantanamo Bay**	**151.65**	**58**	*e*PKPdf	PKPdf	21 04 42.4	+0.1		
GTBY				*e*PKPbc	PKPbc	21 04 48.6	-0.1		
GTBY	**Guantanamo Bay**	**151.65**	**58**	*e*P	PKPdf	21 04 41.2	-1.1		
GRTK	**Grand Turk**	**154.10**	**51**	*e*PKPbc	PKPbc	21 04 54.3	+0.2		
GRTK				*e*PKPab	PKPab	21 05 09.0	+0.6		
GRTK	**Grand Turk**	**154.10**	**51**	*e*P	PKPdf	21 04 45.5	-0.3		
SDDR	**Presa de Saban**	**155.28**	**56**	*e*PKPdf	PKPdf	21 04 46.6	-0.9		
SDDR	**Presa de Saban**	**155.28**	**56**	*e*P	PKPdf	21 04 47.8	+0.2		
ROSC	**El Rosal**	**155.45**	**91**	PKP	PKPdf	21 04 49.1	+1.1		
	comp=Z,33nm,0.8s,baz=126,slow=4.0,SNR=23								
ROSC				PKPab	PKPab	21 05 14.9	+0.4		
	comp=Z,104nm,0.9s,baz=210,slow=0.8,SNR=11								
SIV	**San Ignacio**	**155.48**	**153**	PKP	PKPdf	21 04 48.3	+0.4		
	comp=Z,29nm,0.9s,baz=222,slow=1.9,SNR=97								
SIV				PKPab	PKPab	21 05 14.4	+0.2		
	comp=Z,112nm,0.9s,baz=223,slow=9.0,SNR=4.7								
SIV				PP	PP	21 08 51.0	+0.8		
	comp=Z,14nm,1.0s,baz=211,slow=13,SNR=3.2								
SDV	**Santo Domingo**	**159.03**	**81**	*e*PKPdf	PKPdf	21 04 52.1	-0.3		
SDV	**Santo Domingo**	**159.03**	**81**	*e*P	PKPdf	21 04 51.4	-1.0		
CRPR	**Cabo Rojo, PR**	**159.19**	**53**	*e*PKPdf	PKPdf	21 04 51.8	-0.6		
CRPR				*e*PKPab	PKPab	21 05 30.9	+0.5		
ICM	**Isla Caja Muer**	**159.72**	**53**	*e*PKPdf	PKPdf	21 04 50.5	-2.6		
ICM				*e*PKPab	PKPab	21 05 32.6	-0.1		
SJG	**San Juan**	**159.88**	**52**	*e*PKPdf	PKPdf	21 04 52.0	-1.3		
SJG				*e*PKPab	PKPab	21 05 33.3	-0.1		
SJG	**San Juan**	**159.88**	**52**	PKP	PKPdf	21 04 52.4	-0.9		
	comp=Z,60nm,0.8s,baz=41,slow=4.6,SNR=22								
SJG				PKPab	PKPab	21 05 33.5	+0.1		
	comp=Z,237nm,0.9s,baz=345,slow=3.7,SNR=20								
SJG				PP	PP	21 09 12.5	-2.9		
	comp=Z,24nm,0.9s,baz=315,slow=14,SNR=3.5								
SJG	**San Juan**	**159.88**	**52**	PKIKP	PKPdf	21 04 52.4	-0.8		
SJG						21 05 33.5			
SJG						21 09 12.5			
SJG				pmax	pmax				
	comp=Z,60nm,0.8s								
SJG	**San Juan**	**159.88**	**52**	*e*P	PKPdf	21 04 51.7	-1.6		
CBYP	**Canovanas**	**160.02**	**51**	*e*PKPdf	PKPdf	21 04 52.2	-1.2		
CBYP				*e*PKPab	PKPab	21 05 33.0	-1.0		
MTP	**Monte Pirata**	**160.35**	**51**	*e*PKPdf	PKPdf	21 04 53.0	-0.8		
MTP				*e*PKPab	PKPab	21 05 35.4	0.0		
RCBR	**Riachuelo**	**161.95**	**230**	*e*PKPdf	PKPdf	21 04 55.8	+0.1		
RCBR				*e*PKPab	PKPab	21 05 43.5	+0.9		
PCRV	**Puerto La Cruz**	**164.62**	**73**	PKP	PKPdf	21 04 55.8	-2.3		
	comp=Z,15nm,0.7s,baz=348,slow=6.0,SNR=3.8								
PCRV				PKPab	PKPab	21 05 54.0	-0.4		
	comp=Z,50nm,0.9s,baz=321,slow=0.9,SNR=5.5								
PCRV				pPKPab	pPKPab	21 06 37.5	-4.0		
	comp=Z,16nm,0.8s,baz=12,slow=21,SNR=1.2								

ISCJB ***04*** *20:46:37.6±2.5,2.6′65N±0.6′06×95.8′1E±0.6′04, h6km±17km, mb4.9/30, Error ellipse: s-maj=10.1km s-min=6.4km az=21.2*
IDC ***04*** *20:46:40.8±1.1,3.6′11N×95.6′95E, h0km, mb4.5/11, mb1 4.5/13, mb1mx4.4/26, mbtmp4.5/13, ML4.4/2, MS3.5/1, Ms1 3.5/1, ms1mx3.0/33, Error ellipse: s-maj=25.4km s-min=23.4km az=149.0*
DJA ***04*** *20:46:40,2.6′62N×95.8′86E, h10km, MLv5.0/7*
BJI ***04*** *20:46:43.0,3.6′27N×95.8′81E, h13km, mB4.6/4, mb4.8/14*
NEIC ***04*** *20:46:45.9±0.6,3.6′06N×95.9′92E, h35km, mb4.4/8, Error ellipse: s-maj=12.5km s-min=11.2km az=181.0*
ISC 04 20:46:40.1±3.0, 2.7′0N±0.6′06×95.8′6E±0.6′05, h8km±20km, n75, σ1s04/75, mb4.9/30, 7C-2D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TPTI		**1.43**	**

ellipse: s-maj=1.7km s-min=1.2km az=41.0,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINB	**Pinarbasi**	**0.52**	**140**	*i* P	Pg	21 04 56.9	-0.5
PINB				*i* S	Sg	21 05 04.8	+0.6
PINB	**Pinarbasi**	**0.52**	**140**	*i* P	Pg	21 04 56.9	-0.5
PINB				*i* S	Sg	21 05 04.8	+0.6
SARI	**SarD1z-Kayseri**	**0.69**	**125**	*e*PG	Pg	21 05 00.9	+0.3
SARI				*e*SG	Sg	21 05 11.4	+1.8
SARI	**SarD1z-Kayseri**	**0.69**	**125**	*e*Pg	Pg	21 05 01.0	+0.3
SARI				*e*Sg	Sg	21 05 11.4	+1.8
YOZ	**Yozgat**	**0.76**	**318**	*e*PG	Pg	21 05 01.9	-0.2
YOZ				*e*SG	Sg	21 05 13.4	+1.5
YOZ	**Yozgat**	**0.76**	**318**	*e*Pg	Pg	21 05 01.9	-0.2
YOZ				*e*Sg	Sg	21 05 13.4	+1.5
AVNT	**Avonos**	**0.93**	**252**	*e*P	Pg	21 05 04.7	-0.6
AVNT				*i* S	Sg	21 05 17.1	-0.1
AVNT	**Avonos**	**0.93**	**252**	*e*P	Pg	21 05 04.7	-0.6
AVNT				*i* S	Sg	21 05 17.1	-0.2
SVSK	**Karacayir**	**1.15**	**43**	*e*PN	Pn	21 05 09.1	-1.5
SVSK				*e*SN	Sn	21 05 26.0	-0.9
SVSK	**Karacayir**	**1.15**	**43**	*e*Pn	Pn	21 05 09.1	-1.5
SVSK				*e*Sn	Sn	21 05 26.0	-0.9
SCER	**sogukcermik**	**1.18**	**48**	*e*P	Pg	21 05 09.3	-0.9
SCER				*i* S	Sg	21 05 28.9	+3.3
SCER	**sogukcermik**	**1.18**	**48**	*e*P	Pg	21 05 09.3	-0.9
TOKT	**Tokat**	**1.31**	**19**	*e*PN	Pn	21 05 12.2	-0.6
TOKT	**Tokat**	**1.31**	**19**	*e*Pn	Pn	21 05 12.2	-0.7
DARE	**Darende-Malaty**	**1.43**	**94**	*e*PN	Pn	21 05 10.8	-3.6
DARE	**Darende-Malaty**	**1.43**	**94**	*e*Pn	Pn	21 05 10.8	-3.6
CORM	**Corum**	**1.51**	**317**	*e*PN	Pn	21 05 15.6	0.0
CORM	**Corum**	**1.51**	**317**	*e*Pn	Pn	21 05 15.6	0.0
ANDN	**Andirin**	**1.52**	**169**	*e*P	Pn	21 05 16.9	+1.2
ANDN				*i* S	Sn	21 05 35.7	-0.4
ANDN	**Andirin**	**1.52**	**169**	*e*P	Pn	21 05 16.9	+1.2
ANDN				*i* S	Sn	21 05 35.7	-0.4
KOZT	**Kozan**	**1.60**	**184**	*e*PN	Pn	21 05 16.0	-0.8
RSDY	**Resadiye-TOKAT**	**1.68**	**38**	*e*PN	Pn	21 05 17.6	-0.2
RSDY	**Resadiye-TOKAT**	**1.68**	**38**	*e*Pn	Pn	21 05 17.6	-0.3
KMRS	**Kahramanmaras**	**1.73**	**155**	*e*PN	Pn	21 05 18.3	-0.3
KMRS	**Kahramanmaras**	**1.73**	**155**	*e*Pn	Pn	21 05 18.3	-0.3
CTKT	**Corum**	**1.79**	**330**	*e*P	Pn	21 05 20.2	+0.7
CTKT				*i* S	Sn	21 05 46.6	+3.8
CTKT	**Corum**	**1.79**	**330**	*e*P	Pn	21 05 20.2	+0.7
KARA	**Karaisali**	**1.96**	**202**	*e*PN	Pn	21 05 21.6	0.0
KARA	**Karaisali**	**1.96**	**202**	*e*Pn	Pn	21 05 21.6	-0.1
KEMA	**Kemaliye**	**1.96**	**84**	*e*P	Pn	21 05 21.8	0.0
KEMA				*i* S	Sn	21 05 53.6	+6.7
KEMA	**Kemaliye**	**1.96**	**84**	*e*P	Pn	21 05 21.8	0.0
KVT	**Kavak**	**2.00**	**1**	*e*PN	Pn	21 05 22.1	-0.2
KVT	**Kavak**	**2.00**	**1**	*e*Pn	Pn	21 05 22.1	-0.2
MYA	**Malataya**	**2.06**	**111**	*e*PN	Pn	21 05 23.4	+0.3
MYA	**Malataya**	**2.06**	**111**	*e*Pn	Pn	21 05 23.4	+0.4
CEYT	**Ceyhan**	**2.07**	**185**	*e*PN	Pn	21 05 23.2	-0.1
CEYT	**Ceyhan**	**2.07**	**185**	*e*Pn	Pn	21 05 23.2	-0.1
SULT	**Sultanhani-AKS**	**2.12**	**246**	*e*PN	Pn	21 05 24.2	+0.2
SULT	**Sultanhani-AKS**	**2.12**	**246**	*e*Pn	Pn	21 05 24.2	+0.3
GAZ	**Gaziantep**	**2.14**	**153**	*e*PN	Pn	21 05 24.5	+0.4
GAZ	**Gaziantep**	**2.14**	**153**	*e*Pn	Pn	21 05 24.5	+0.3
CANT	**Cankiri**	**2.37**	**311**	*e*PN	Pn	21 05 27.7	+0.3
TOS	**Tosya**	**2.46**	**323**	*e*PN	Pn	21 05 29.1	+0.4
TOS	**Tosya**	**2.46**	**323**	*e*Pn	Pn	21 05 29.1	+0.4
BYBT	**Boyabat**	**2.56**	**339**	*e*PN	Pn	21 05 30.3	+0.3
BYBT	**Boyabat**	**2.56**	**339**	*e*Pn	Pn	21 05 30.3	+0.3
LOD	**Lodumlu**	**2.62**	**289**	*e*PN	Pn	21 05 31.1	+0.4
LOD	**Lodumlu**	**2.62**	**289**	*e*Pn	Pn	21 05 31.1	+0.3
PTK	**Pertek**	**2.67**	**93**	*e*PN	Pn	21 05 31.6	+0.2
PTK	**Pertek**	**2.67**	**93**	*e*Pn	Pn	21 05 31.6	+0.2
SVRC	**Sivrice-ELAZID**	**2.69**	**104**	*e*PN	Pn	21 05 32.0	+0.2
SVRC	**Sivrice-ELAZID**	**2.69**	**104**	*e*Pn	Pn	21 05 32.1	+0.3
EZC	**Erzincan**	**2.70**	**75**	*e*PN	Pn	21 05 32.4	+0.5
URFA	**Urfa**	**2.77**	**125**	*e*PN	Pn	21 05 33.1	+0.3
URFA	**Urfa**	**2.77**	**125**	*e*Pn	Pn	21 05 33.2	+0.3
GUMT	**Gumushane**	**3.03**	**62**	*e*PN	Pn	21 05 36.9	+0.5
GUMT	**Gumushane**	**3.03**	**62**	*e*Pn	Pn	21 05 36.9	+0.5

*ISCJB **04** 21:22:50.5±0.5,36°.68N±0°.03×70°.77E±0°.06,h161$^{km}_{\pm 8}$km, mb3.8/2, Error ellipse: s-maj=8.1km s-min=5.7km az=4.1*
*NEIC **04** 21:22:51.0±0.8,36°.60N×70°.90E,h162$^{km}_{\pm 11}$km,mb3.5/2, Error ellipse: s-maj=20.8km s-min=8.0km az=133.0*
*IDC **04** 21:22:54.1±9.2,36°.78N×70°.98E,h181$^{km}_{\pm 61}$km,mb3.5/2, mb1 3.3/7,mb1mx3.0/27,mbtmp3.3/7,Error ellipse: s-maj=85.0km s-min=46.2km az=175.0*

ISC 04 21:22:51.4±0.5,36°.67N±0°.04×70°.80E±0°.07,h155$^{km}_{\pm 7}$km, n29,σ0°82/38,mb3.8/2,5C,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.56**	**215**	*e*Pn	**Pn**	**21 23 33.3**	**-0.2**
KBL				*e*Sn	**Sn**	**21 24 05.5**	**-0.5**
KSH	**Kashi**	**4.97**	**54**	⇑*i*Pn	**Pn**	**21 24 00.6**	**-3.9**
KSH				Sn	**Sn**	**21 24 51.1**	**-10**
KSH	comp=N,68nm,0.8s			smax			
KSH	comp=E,59nm,0.5s			smax			
AML	**Almayashu**	**5.90**	**21**	*e*Pn	**Pn**	**21 24 17.3**	**+0.6**
AML	comp=E,62nm,0.5s			*e*Sn	**Sn**	**21 25 24.0**	**+0.5**
EKS2	**Erkin-Say**	**6.41**	**20**	*e*Pn	**Pn**	**21 24 24.4**	**+0.9**
EKS2				*e*Sn	**Sn**	**21 25 36.0**	**+0.3**
KK31	**Karatay Array**	**6.43**	**358**	⇑Pn	**Pn**	**21 24 24.2**	**+0.4**
KK31	comp=E,3.8nm,0.5s,baz=185,slow=12,SNR=49			⇑Sn	**Sn**	**21 25 34.2**	**-2.0**
AAK	**Ala-Archa**	**6.60**	**24**	*e*Pn	**Pn**	**21 24 26.7**	**+0.6**
AAK	comp=E,4.8nm,0.3s,baz=184,slow=25,SNR=14			*e*Sn	**Sn**	**21 25 39.9**	**-0.5**
AAK	**Ala-Archa**	**6.60**	**24**	*e*P	**Pn**	**21 24 27.1**	**+1.0**
AAK	comp=E,1.6nm,0.3s,baz=173,slow=8.1,SNR=6.1			S	**Sn**	**21 25 40.3**	**0.0**
MK31	**Makanchi Array**	**13.25**	**37**	*e*Pn	**Pn**	**21 25 52.6**	**-0.8**
MKAR	**Makanchi Array**	**13.25**	**37**	P	**Pn**	**21 25 52.9**	**-0.5**
GKN	**Gorkha**	**14.53**	**123**	*e*P	**Pn**	**21 26 11.0**	**+1.3**
AB31	**Akbulak array**	**14.86**	**331**	⇑Pn	**Pn**	**21 26 14.6**	**+0.9**
AB31	comp=E,0.6nm,0.5s,baz=165,slow=12,SNR=26			⇑Sn	**Sn**	**21 28 51.8**	**-6.8**
ABKAR	**Akbulak array**	**14.86**	**331**	*e*Pn	**Pn**	**21 26 13.1**	**-0.5**
ABKAR	comp=E,0.8nm,0.3s			*e*Sn	**Sn**	**21 28 53.2**	**-5.5**
DMN	**Daman**	**15.10**	**123**	*e*P	**Pn**	**21 26 17.2**	**+0.4**
KKN	comp=E,27nm,0.8s **Kakani**	**15.10**	**122**	*e*P	**Pn**	**21 26 16.1**	**-0.7**
PKI	comp=E,11nm,0.6s **Pulchoki**	**15.33**	**122**	*e*P	**Pn**	**21 26 19.4**	**-0.2**
BVAR	comp=E,41nm,0.7s **Borovoye Array**	**16.36**	**359**	P	**Pn**	**21 26 32.9**	**+0.9**
BRVK	comp=E,0.4nm,0.3s,baz=176,slow=8.2,SNR=7.7 **Borovoye**	**16.39**	**359**	*e*P	**Pn**	**21 26 31.9**	**-0.6**
RAMN	comp=E,1.4nm,0.5s **Ramite**	**16.54**	**121**	*e*P	**Pn**	**21 26 30.2**	**-4.2**
AKTK	**Aktyubinsk**	**16.56**	**330**	P	**Pn**	**21 26 35.0**	**+0.6**
AKTO	**Aktyubinsk**	**16.56**	**330**	P	**Pn**	**21 26 35.0**	**+0.6**
TAPN	comp=E,0.3nm,0.3s,baz=145,slow=11,SNR=6.7 **Taplejung**	**17.06**	**118**	*e*P	**Pn**	**21 26 30.8**	**-10**
ODAN	**Odare**	**17.14**	**120**	*e*P	**Pn**	**21 26 34.3**	**-7.4**
ZALV	comp=E,22nm,0.9s **Zalesovo Beam**	**19.83**	**25**	P	**P**	**21 27 09.0**	**-0.8**
ARU	comp=E,1.0nm,0.3s,baz=219,slow=10,SNR=18 **Arti**	**21.43**	**341**	P	**P**	**21 27 26.4**	**-0.4**
CSS	**Prodhromos**	**30.31**	**278**	P	**P**	**21 28 49.6**	**+1.5**
FINES	**FINESS Array B**	**37.26**	**326**	P	**P**	**21 29 47.4**	**-0.3**
FINES	**FINESS Array B**	**37.26**	**326**	P	**P**	**21 29 47.4**	**-0.3**
ARCES	comp=E,2.6nm,0.9s,mb3.9,baz=148,slow=11,SNR=3.7 **ARCESS Array B**	**40.93**	**338**	P	**P**	**21 30 17.6**	**-0.4**
AQU	comp=E,1.5nm,0.8s,mb3.7,baz=112,slow=9.5,SNR=6.5 **L'Aquila**	**43.93**	**296**	P	**P**	**21 30 41.5**	**-1.1**

*IDC **04** 21:46:48.0±2.3,21°.31S×168°.45E,h0^{km},mb4.2/7, mb1 4.3/7,mb1mx4.2/13,mbtmp4.3/7,MS4.1/1,Ms1 4.0/1, ms1mx3.4/14,Error ellipse: s-maj=70.5km s-min=27.5km az=137.0*
*NOU **04** 21:46:49.9±0.5,21°.07S×168°.50E,h10^{km},MD2.6,ML3.9*
*ISCJB **04** 21:46:52.0±1.5,21°.5S±0°.1×168°.51E±0°.10,h46$^{km}_{\pm 11}$km, mb4.5/12,Error ellipse: s-maj=20.8km s-min=11.4km*

az=146.6
*NEIC **04** 21:46:53.4±1.2,21°.47S×168°.42E,h36$^{km}_{\pm 10}$km,mb4.6/7, Error ellipse: s-maj=12.8km s-min=7.9km az=142.0*

ISC 04 21:46:53.1±1.5,21°.5S±0°.1×168°.47E±0°.10,h36$^{km}_{\pm 12}$km, n31,σ0°71/32,mb4.5/12,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**1.63**	**245**	*e*P	**Pn**	**21 47 18.0**	**-1.2**
BAYA				*e*S	**Sn**	**21 47 39.6**	**+0.7**
BAYA	comp=Z,285nm,4.2s			AMP		21 47 42.5	
DZM	**Mont Dzumac**	**1.98**	**252**	*e*P	**Pn**	**21 47 23.1**	**-1.0**
DZM				*e*S	**Sn**	**21 47 47.2**	**-0.5**
DZM	comp=Z,17μm,2.8s			AMP		21 47 53.4	
DZM	**Mont Dzumac**	**1.98**	**252**	*e*Pn	**Pn**	**21 47 23.0**	**-1.1**
DZM				*e*Sn	**Sn**	**21 47 49.0**	**+1.3**
NOUC	**Port Laguerre**	**2.11**	**252**	*e*P	**Pn**	**21 47 25.6**	**-0.3**
NOUC				*e*S	**Sn**	**21 47 51.8**	**+0.8**
NOUC	comp=Z,1μm,0.0s			AMP		21 48 05.2	
EIDS	**Eidsvold**	**16.43**	**253**	*e*Pn	**Pn**	**21 50 41.2**	**+0.3**
FUNA	comp=Z,6.5nm,0.8s **Funafuti**	**16.50**	**40**	Pn	**Pn**	**21 50 42.9**	**+0.9**
CTA	**Charters Tower**	**20.82**	**270**	P	**P**	**21 51 32.9**	**+1.3**
CTAO	comp=Z,5.3nm,0.8s,baz=101,slow=14,SNR=6.7 **Charters Tower**	**20.82**	**270**	*e*P	**P**	**21 51 31.4**	**-0.2**
PMG	comp=Z,12nm,0.9s **Port Moresby**	**23.75**	**297**	*e*P	**P**	**21 52 02.5**	**+0.2**
STKA	comp=Z,6.6nm,0.4s,mb4.4 **Stephens Creek**	**26.09**	**241**	*e*P	**P**	**21 52 24.2**	**+0.7**
STKA				LR	LR	22 02 50.4	
STKA	**Stephens Creek**	**26.09**	**241**	P	**P**	**21 52 24.1**	**+0.6**
STKA	comp=Z,3.9nm,0.7s,mb4.0,baz=87,slow=10,SNR=6.7			LR	LR	22 02 50.4	
WRAB	comp=Z,380nm,18.8s,baz=128,slow=37 **Tennant Creek**	**31.92**	**267**	*e*P	**P**	**21 53 14.8**	**-0.7**
ASAR	comp=Z,7.3nm,1.0s,mb4.5 **Alice Springs**	**31.95**	**259**	P	**P**	**21 53 14.9**	**-0.8**
FITZ	comp=Z,3.7nm,0.7s,mb4.3,baz=88,slow=10.0,SNR=40 **Fitzroy Crossi**	**40.36**	**267**	*e*P	**P**	**21 54 27.4**	**-0.2**
GUMO	comp=Z,15nm,0.8s,mb4.8 **Guam**	**41.84**	**324**	P	**P**	**21 54 40.3**	**+0.5**
MBWA	**Marble Bar**	**45.26**	**261**	*e*P	**P**	**21 55 07.2**	**-0.1**
SBA	comp=Z,16nm,0.7s,mb5.0 **Scott Base**	**56.44**	**180**	P	**P**	**21 56 31.3**	**+0.6**
CASY	**Casey**	**57.80**	**204**	P	**P**	**21 56 40.2**	**-0.2**
KSM	**Kuching**	**61.19**	**284**	P	**P**	**21 57 04.4**	**-0.3**
YHNB	**Yeheng**	**64.80**	**313**	P	**P**	**21 57 27.7**	**-0.6**
COCO	**West Island**	**68.70**	**265**	P	**P**	**21 57 53.0**	**-0.5**
KSRS	**Korea Array**	**69.95**	**327**	P	**P**	**21 57 59.2**	**-1.5**
PETK	comp=Z,0.3nm,0.3s,mb3.7,baz=133,slow=7.0,SNR=4.1 **Petropavlovsk-**	**74.85**	**353**	P	**P**	**21 58 29.8**	**+0.2**
PETK	**Petropavlovsk-**	**74.85**	**353**	P	**P**	**21 58 29.8**	**+0.2**
CMAR	comp=Z,7.8nm,0.8s,mb4.7,baz=170,slow=8.8,SNR=6.5 **Chiang Mai Arr**	**78.77**	**295**	P	**P**	**21 58 53.3**	**+0.8**
KMI	comp=Z,3.1nm,0.8s,mb4.3,baz=136,slow=4.1,SNR=19 **Kunming**	**78.85**	**303**	P	**P**	**21 58 53.9**	**+1.1**
KMI	comp=Z,10.0nm,0.8s,mb4.8			pmax	pmax		
CHTO	**Chiang Mai**	**78.94**	**295**	*e*P	**P**	**21 58 53.3**	**-0.1**
SONM	comp=Z,1.4nm,1.3s,mb4.7 **Songino Array**	**88.57**	**323**	P	**P**	**21 59 41.6**	**-0.3**
ARCES	comp=Z,1.3nm,0.8s,mb4.3,baz=141,slow=5.0,SNR=7.9 **ARCESS Array B**	**127.02**	**345**	PKP	PKPdf	22 05 52.8	+0.3
ARE0	comp=Z,1.4nm,0.6s,baz=72,slow=4.0,SNR=12 **ARCESS Array S**	**127.02**	**345**	*e*PKPdf	PKPdf	22 05 52.5	0.0
NOA	**NORSAR Array B**	**137.39**	**344**	PKP	PKPdf	22 06 13.8	+1.5
	comp=Z,0.8nm,0.7s,baz=49,slow=5.7,SNR=3.2						

IGQ 04 22:07:18.1,1°.04S×78°.31W,h10$^{km}_{\pm 4}$km,Mb4.1,Ms3.9, 12C-5D,Error ellipse: s-maj=1.1km s-min=0.4km az=7.2, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PISA	**Pisayambo**	**0.08**	**258**	⇑P	Pg	22 07 21.3	+0.9
TAMB	**Tambo**	**0.35**	**350**	⇑P	Pg	22 07 25.7	+0.7
COV1	**Cotopaxi Volc**	**0.38**	**355**	⇑S	Sg	22 07 32.9	+2.3
COV1	**Cotopaxi Volc**	**0.38**	**355**	⇑P	Pg	22 07 26.9	+1.3
RUN5	**Runtun**	**0.39**	**197**	P	Pg	22 07 26.1	+0.4
BRUN	**Tungurahua Vol**	**0.39**	**195**	⇓P	Pg	22 07 26.2	+0.4
BULB	**Ulba Tungurahu**	**0.41**	**194**	P	Pg	22 07 26.4	+0.4
VC1	**Cotopaxi 1**	**0.41**	**347**	⇑P	Pg	22 07 26.8	+0.7
JUI6	**Juive**	**0.41**	**203**	P	Pg	22 07 26.1	-0.1
CAMI	**Rancho Maria**	**0.41**	**332**	P	Pg	22 07 27.0	+0.8
ULBA	**Ulba**	**0.42**	**194**	⇑P	Pg	22 07 26.4	+0.1
NAS2	**Nasa**	**0.43**	**338**	P	Pg	22 07 27.5	+1.0
BBIL	**Ulba Tungurahu**	**0.44**	**204**	P	Pg	22 07 27.1	+0.3
BBIL	**Ulba Tungurahu**	**0.44**	**204**	S	Sg	22 07 32.6	0.0
BIL2	**Estacion Bilba**	**0.45**	**205**	⇑S	Sg	22 07 33.5	+0.5
BIL2	**Estacion Bilba**	**0.45**	**205**	⇑P	Pg	22 07 27.4	+0.4
PATA	**Patacocha**	**0.47**	**195**	P	Pg	22 07 27.5	+0.2
ARRY	**Arrayan**	**0.48**	**198**	P	Pg	22 07 27.4	-0.1
BMAS	**Trigal station**	**0.49**	**200**	⇑S	Sg	22 07 34.8	+0.7
BMAS	**Trigal station**	**0.49**	**200**	⇑P	Pg	22 07 27.9	+0.3
PITA	**Cotopaxi Volc**	**0.50**	**346**	⇑P	Pg	22 07 28.5	+0.7
IGUA	**Igualata**	**0.55**	**217**	⇓P	Pg	22 07 29.4	+0.5
ANTI	**Antisana**	**0.61**	**14**	⇑P	Pg	22 07 29.9	0.0
JUA2	**San Juan 2**	**0.88**	**340**	S	Sg	22 07 42.2	+1.8
JUA2	**San Juan 2**	**0.88**	**340**	P	Pg	22 07 35.5	+0.6
GGP	**Refugio Guagua**	**0.91**	**342**	S	Sg	22 07 50.3	+2.8
GGP	**Refugio Guagua**	**0.91**	**342**	P	Pg	22 07 36.0	+0.4
TERV	**Terraza Guagua**	**0.91**	**341**	P	Pg	22 07 36.5	+0.9
PINO	**Pino**	**0.93**	**341**	P	Pg	22 07 36.6	+0.7
YANA	**Yana**	**0.95**	**344**	P	Pg	22 07 36.8	+0.3
CAYR	**Refugio Cayamb**	**1.09**	**16**	P	Pb	22 07 39.4	+0.3
CHAR	**Charly**	**1.14**	**34**	S	Sb	22 07 56.2	+1.3
CHAR	**Charly**	**1.14**	**34**	P	Pb	22 07 40.6	+0.7
CAYA	**Cayambe**	**1.15**	**16**	P	Pb	22 07 40.2	+0.1
LAV3	**Lava3-Reventad**	**1.16**	**36**	S	Sb	22 07 56.0	+0.8
LAV3	**Lava3-Reventad**	**1.16**	**36**	P	Pb	22 07 40.7	+0.6
CONE	**Cono NE Rev Vo**	**1.17**	**35**	P	Pb	22 07 41.2	+0.8
MACE	**Macas**	**1.21**	**175**	⇓S	Sb	22 07 58.0	+1.3
MACE	**Macas**	**1.21**	**175**	⇓P	Pn	22 07 41.7	+0.7
OTAV	**Otavalo**	**1.28**	**354**	⇓P	Pn	22 07 41.9	-0.1
COTA	**Cotacachi**	**1.37**	**359**	P	Pn	22 07 47.3	+4.1
GOLV	**Golondrinas**	**1.49**	**326**	P	Pn	22 07 46.2	+1.3

*NEIC **04** 22:15:04.3,39°.58N×24°.01E,h17^{km},ML3.1(ATH),After ATH.*
*CSEM **04** 22:15:05.8±0.1,39°.54N×23°.85E,h10^{km},ML3.1,Error ellipse: s-maj=3.4km s-min=2.9km az=119.0*
*ISCJB **04** 22:15:05.9±0.5,39°.54N±0°.01×23°.90E±0°.02,h12$^{km}_{\pm 4}$km, Error ellipse: s-maj=2.9km s-min=2.4km az=10.7*
*ATH **04** 22:15:05.4,39°.56N×23°.96E,h29$^{km}_{\pm 2}$km,MD3.3/14, ML3.0*
*THE **04** 22:15:06.2,39°.56N×23°.94E,h11^{km},ML2.9/13,Error ellipse: s-maj=1.0km s-min=0.5km az=257.0*
*SKO **04** 22:15:06.1,39°.56N×23°.86E,h0^{km}*
*ISK **04** 22:15:07.4,39°.36N×24°.20E,h6^{km},MD3.5*

ISC 04 22:15:06.4±0.5,39°.55N±0°.01×23°.90E±0°.02,h12$^{km}_{\pm 3}$km, n174,σ1°05/222,3C-4D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.38**	**182**	P	**Pg**	**22 15 13.8**	**-0.2**
AOS	**Alonnisos**	**0.38**	**182**	P	**Pg**	**22 15 14.2**	**+0.2**
AOS				S	**Sg**	**22 15 20.3**	**+1.1**
AOS	**Alonnisos**	**0.38**	**182**	P	**Pg**	**22 15 14.2**	**+0.2**
AOS				S	**Sg**	**22 15 20.3**	**+1.1**
PAIG	**Paliouri**	**0.41**	**336**	P	**Pg**	**22 15 13.8**	**-0.7**
PAIG	**Paliouri**	**0.41**	**336**	P	**Pg**	**22 15 14.2**	**-0.3**
PAIG				S	**Sg**	**22 15 20.4**	**+0.4**
PAIG	**Paliouri**	**0.41**	**336**	P	**Pg**	**22 15 14.2**	**-0.3**
PAIG				S	**Sg**	**22 15 20.4**	**+0.4**
NEO	**Neokhori**	**0.58**	**245**	*e*Pn	**Pg**	**22 15 18.1**	**+0.4**
NEO				*e*Sn	**Sg**	**22 15 27.6**	**+2.3**
NEO	**Neokhori**	**0.58**	**245**	*e*PN	**Pg**	**22 15 18.1**	**+0.4**
NEO				*e*SN	**Sg**	**22 15 27.6**	**+2.3**
NEO	**Neokhori**	**0.58**	**245**	*e*Pn	**Pg**	**22 15 18.1**	**+0.4**
NEO				*e*Sn	**Sg**	**22 15 27.6**	**+2.3**
XOR	**Xorichti**	**0.58**	**251**	P	**Pg**	**22 15 17.3**	**-0.4**
XOR	**Xorichti**	**0.58**	**251**	P	**Pg**	**22 15 17.7**	**0.0**
XOR				S	**Sg**	**22 15 26.9**	**+1.6**
XOR	**Xorichti**	**0.58**	**251**	P	**Pg**	**22 15 17.7**	**0.0**
XOR				S	**Sg**	**22 15 26.9**	**+1.6**
OUR	**Ouranopolis**	**0.78**	**5**	P	**Pg**	**22 15 20.2**	**-1.4**
OUR	**Ouranopolis**	**0.78**	**5**	P	**Pg**	**22 15 20.6**	**-1.0**

OUR				S	**Sg**	**22 15 31.5**	**-0.3**
OUR	**Ouranopolis**	**0.78**	**5**	P	**Pg**	**22 15 20.6**	**-1.0**
OUR				S	**Sg**	**22 15 31.5**	**-0.3**
LIA	**Limnos Island**	**1.05**	**70**	P	**Pb**	**22 15 25.3**	**-1.2**
LIA	**Limnos Island**	**1.05**	**70**	P	**Pb**	**22 15 25.6**	**-0.9**
LIA				S	**Sb**	**22 15 39.6**	**-0.6**
LIA	**Limnos Island**	**1.05**	**70**	P	**Pb**	**22 15 25.6**	**-0.9**
LIA				S	**Sb**	**22 15 39.6**	**-0.6**
ATAL	**Atalanti**	**1.10**	**219**	P	**Pb**	**22 15 26.6**	**-0.7**
ATAL	**Atalanti**	**1.10**	**219**	P	**Pb**	**22 15 26.6**	**-0.7**
LKR	**Lokris**	**1.14**	**218**	*e*Pn	**Pb**	**22 15 27.1**	**-0.9**
LKR	**Lokris**	**1.14**	**218**	*e*PN	**Pb**	**22 15 27.1**	**-0.9**
LKR	**Lokris**	**1.14**	**218**	P	**Pb**	**22 15 27.1**	**-0.9**
LKR	**Lokris**	**1.14**	**218**	P	**Pb**	**22 15 27.1**	**-0.9**
HORT	**Hortiatis**	**1.21**	**330**	P	**Pn**	**22 15 27.9**	**-1.2**
HORT	**Hortiatis**	**1.21**	**330**	P	**Pn**	**22 15 27.9**	**-1.2**
HORT				S	**Sb**	**22 15 44.9**	**+0.1**
HORT	**Hortiatis**	**1.21**	**330**	P	**Pn**	**22 15 27.9**	**-1.2**
HORT				S	**Sb**	**22 15 44.9**	**+0.1**
LIT	**Litokhoron**	**1.21**	**297**	P	**Pn**	**22 15 27.3**	**-1.9**
LIT	**Litokhoron**	**1.21**	**297**	P	**Pn**	**22 15 27.1**	**-2.1**
LIT	**Litokhoron**	**1.21**	**297**	P	**Pn**	**22 15 27.1**	**-2.1**
THE	**Thessaloniki**	**1.29**	**327**	P	**Pn**	**22 15 29.9**	**-0.4**
THE	**Thessaloniki**	**1.29**	**327**	P	**Pn**	**22 15 29.8**	**-0.5**
THE				S	**Sb**	**22 15 47.8**	**+0.6**
THE	**Thessaloniki**	**1.29**	**327**	P	**Pn**	**22 15 29.8**	**-0.5**
THE				S	**Sb**	**22 15 47.8**	**+0.6**
AGG	**Agios Georgios**	**1.33**	**247**	P	**Pn**	**22 15 29.9**	**-0.8**
AGG	**Agios Georgios**	**1.33**	**247**	P	**Pn**	**22 15 29.9**	**-0.8**
SOH	**Sokhos**	**1.33**	**342**	P	**Pn**	**22 15 30.1**	**-0.7**
SOH	**Sokhos**	**1.33**	**342**	P	**Pn**	**22 15 30.4**	**-0.4**
SOH				S	**Sb**	**22 15 48.0**	**0.0**
SOH	**Sokhos**	**1.33**	**342**	P	**Pn**	**22 15 30.4**	**-0.4**
SOH				S	**Sb**	**22 15 48.4**	**0.0**
THL	**Klokotos Trika**	**1.46**	**271**	*e*PB	**Pb**	**22 15 31.9**	**-1.5**
THL	**Klokotos Trika**	**1.46**	**271**	P	**Pn**	**22 15 31.8**	**-0.7**
THL	**Klokotos Trika**	**1.46**	**271**	P	**Pn**	**22 15 31.8**	**-0.7**
THL				*e*Sn	**Sn**	**22 15 55.5**	**+4.0**
PTL	**Penteli**	**1.50**	**181**	*e*Pn	**Pn**	**22 15 32.6**	**-0.5**
PTL				*e*Sn	**Sn**	**22 15 55.1**	**+2.5**
PTL	**Penteli**	**1.50**	**181**	*e*PN	**Pn**	**22 15 32.6**	**-0.5**
PTL	**Penteli**	**1.50**	**181**	*e*Pn	**Pn**	**22 15 32.6**	**-0.5**
PTL				*e*Sn	**Sn**	**22 15 55.1**	**+2.5**
KAVA	**Kavala**	**1.52**	**18**	P	**Pn**	**22 15 31.8**	**-1.5**
KAVA				S	**Sn**	**22 15 52.6**	**-0.4**
KAVA	**Kavala**	**1.52**	**18**	P	**Pn**	**22 15 31.8**	**-1.5**
KAVA				S	**Sn**	**22 15 52.6**	**-0.4**
DSF	**Desfina**	**1.56

ITM	Ithomi	2.83	214	*e*Pn	Pn	22 15 52.3	+0.9
MFT	Murefte	2.87	64	*e*PN	Pn	22 15 54.2	+2.2
MFT	Murefte	2.87	64	*e*Pn	Pn	22 15 54.2	+2.3
VLI	Veliai	2.93	195	*e*Pn	Pn	22 15 52.5	-0.3
VLI	Veliai	2.93	195	*e*PN	Pn	22 15 52.5	-0.3
VLI	Veliai	2.93	195	*e*Pn	Pn	22 15 52.5	-0.3
GONE	Gonen-Balikesi	2.96	79	*e*PN	Pn	22 15 53.2	+0.1
GONE	Gonen-Balikesi	2.96	79	*e*Pn	Pn	22 15 53.2	0.0
VTS	Vitosha	3.08	350	P	Pn	22 15 56.5	+1.7
VTS	Vitosha	3.08	350	P	Pn	22 15 55.3	+0.5
VTS				S	Sn	22 16 32.0	+0.5
VTS	Vitosha	3.08	350	⇓*i*P	Pn	22 15 55.3	+0.5
VTS	Vitosha	3.08	350	P	Pn	22 15 55.3	+0.5
VTS				S	Sn	22 16 32.0	+0.5
EDC	Edincik	3.15	74	*e*PN	Pn	22 15 56.5	+0.7
EDC	Edincik	3.15	74	*e*Pn	Pn	22 15 56.5	+0.7
EDRB	Edirne	3.15	42	*e*PN	Pn	22 15 59.7	+3.9
EDRB	Edirne	3.15	42	*e*Pn	Pn	22 15 59.7	+3.9
KEK	Kerkira	3.17	274	*e*Pn	Pn	22 15 57.5	+1.4
KEK	Kerkira	3.17	274	*e*PN	Pn	22 15 57.5	+1.4
KEK	Kerkira	3.17	274	*e*Pn	Pn	22 15 57.5	+1.4
KYTH	Kithira	3.34	192	*e*Pn	Pn	22 15 57.9	-0.5
KYTH	Kithira	3.34	192	*e*PN	Pn	22 15 57.9	-0.5
KYTH	Kithira	3.34	192	*e*Pn	Pn	22 15 57.9	-0.5
KCTX	Karacabey (Bur	3.50	77	*e*PN	Pn	22 16 00.4	-0.2
KCTX	Karacabey (Bur	3.50	77	*e*Pn	Pn	22 16 01.1	+0.5
ARMT	Armutlu	3.94	74	*e*PN	Pn	22 16 08.3	+1.7
ARMT	Armutlu	3.94	74	*e*Pn	Pn	22 16 08.3	+1.6
YLV	Yalova	4.32	75	*e*PN	Pn	22 16 14.1	+2.2
YLV	Yalova	4.32	75	*e*Pn	Pn	22 16 14.1	+2.2
ARG	Arkhangelos	4.72	134	*e*Pn	Pn	22 16 17.2	-0.2
ARG	Arkhangelos	4.72	134	*e*PN	Pn	22 16 17.2	-0.2
ARG	Arkhangelos	4.72	134	*e*Pn	Pn	22 16 17.2	-0.2
VOIR		5.94	8	⇑P	Pn	22 16 34.3	+0.2
VOIR		5.94	8	⇑*i*P	Pn	22 16 34.3	+0.2
MLR	Muntele Rosu	6.12	14	⇓*i*P	Pn	22 16 39.9	+3.3
BZS	Buzias	6.29	345	⇓*i*P	Pb	22 16 54.9	-0.8
CEL	Celeste	6.38	261	P	Pn	22 16 42.9	+2.8
PLOR	Plostina	6.61	17	⇑*i*P	Pn	22 16 50.4	+7.1
VRI	Vrincioaia	6.64	17	⇓*i*P	Pn	22 16 50.8	+7.0

*ISCJB **04** 22:26:45.9±0.4, 38°.58N±0°.03×22°.93E±0°.04, h11km±3km, Error ellipse: s-maj=5.4km s-min=3.5km az=36.2*
*ATH **04** 22:26:45.6, 38°.66N×22°.96E, h52km, MD2.7/3*
*NEIC **04** 22:26:45.6, 38°.66N×22°.96E, h52km, MD2.7(ATH), After ATH.*
*THE **04** 22:26:45.8, 38°.58N×22°.93E, h14km±1km, ML1.7/6, Error ellipse: s-maj=1.0km s-min=0.4km az=340.0*
*CSEM **04** 22:26:45.6±0.1, 38°.59N×22°.93E, h10km, ML1.7/6, Error ellipse: s-maj=3.0km s-min=2.4km az=123.0*

ISC 04 22:26:45.8±0.4, 38°.58N±0°.03×22°.94E±0°.04, h14km±4km, n32, σ0°60/55, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LKR	**Lokris**	**0.08**	**35**	P		Pg	22 26 48.7	0.0
LKR				S		Sg	22 26 51.0	+0.1
LKR	**Lokris**	**0.08**	**35**	P		Pg	22 26 48.7	0.0
LKR				S		Sg	22 26 51.0	+0.1
ATAL	**Atalanti**	**0.13**	**31**	P		Pg	22 26 49.3	0.0
ATAL				S		Sg	22 26 51.8	+0.1
ATAL	**Atalanti**	**0.13**	**31**	P		Pg	22 26 49.3	0.0
ATAL				S		Sg	22 26 51.8	+0.1
DSF	**Desfina**	**0.37**	**242**	P		Pg	22 26 52.5	-0.7
DSF				S		Sg	22 26 58.1	-0.1
DSF	**Desfina**	**0.37**	**242**	P		Pg	22 26 52.5	-0.7
DSF				S		Sg	22 26 58.1	-0.1
LTK	**Loutraki**	**0.56**	**178**	P		Pg	22 26 56.6	-0.2
LTK				S		Sg	22 27 05.0	+0.8
LTK	**Loutraki**	**0.56**	**178**	P		Pg	22 26 56.6	-0.2
LTK				S		Sg	22 27 05.0	+0.8
AGG	**Agios Georgios**	**0.65**	**313**	P		Pg	22 26 57.9	-0.5
AGG				S		Sg	22 27 07.9	+0.9
AGG	**Agios Georgios**	**0.65**	**313**	P		Pg	22 26 57.9	-0.5
AGG				S		Sg	22 27 07.9	+0.9
TRIZ	**Trizonia**	**0.71**	**252**	P		Pg	22 26 58.8	-0.9
TRIZ				S		Sg	22 27 10.0	+0.9
TRIZ	**Trizonia**	**0.71**	**252**	P		Pg	22 26 58.8	-0.9
TRIZ				S		Sg	22 27 10.0	+0.9
NEO	**Neokhori**	**0.76**	**17**	*e*P		Pg	22 27 00.1	-0.4
NEO				*e*S		Sg	22 27 10.1	-0.3
NEO	**Neokhori**	**0.76**	**17**	*e*P		Pg	22 27 00.1	-0.4
NEO				*e*S		Sg	22 27 10.1	-0.3
NEO	**Neokhori**	**0.76**	**17**	*e*P		Pg	22 27 00.1	-0.4
NEO				*e*S		Sg	22 27 10.1	-0.3
GUR	**Goura**	**0.80**	**216**	P		Pg	22 27 01.0	-0.3
GUR				S		Sg	22 27 12.0	+0.2
GUR	**Goura**	**0.80**	**216**	P		Pg	22 27 01.0	-0.3
GUR				S		Sg	22 27 12.0	+0.2
XOR	**Xorichti**	**0.81**	**14**	P		Pg	22 27 01.2	-0.2
XOR				S		Sg	22 27 12.5	+0.5
XOR	**Xorichti**	**0.81**	**14**	P		Pg	22 27 01.2	-0.2
XOR				S		Sg	22 27 12.5	+0.5
EFP	**Efpalio**	**0.83**	**259**	P		Pg	22 27 00.8	-1.0
EFP				S		Sg	22 27 13.3	+0.7
EFP	**Efpalio**	**0.83**	**259**	P		Pg	22 27 00.8	-1.0
EFP				S		Sg	22 27 13.3	+0.7
PTL	**Penteli**	**0.90**	**126**	*e*P		Pb	22 27 04.0	+0.8
PTL	**Penteli**	**0.90**	**126**	*e*P		Pb	22 27 04.0	+0.8
PTL	**Penteli**	**0.90**	**126**	*e*P		Pb	22 27 04.0	+0.8
NAIG	**Nisos Aigina**	**0.93**	**152**	*e*P		Pb	22 27 04.3	+0.6
NAIG	**Nisos Aigina**	**0.93**	**152**	*e*P		Pb	22 27 04.3	+0.6
NAIG	**Nisos Aigina**	**0.93**	**152**	*e*P		Pb	22 27 04.3	+0.6
AOS	**Alonnisos**	**0.94**	**51**	P		Pb	22 27 03.5	-0.3
AOS				S		Sb	22 27 16.8	+0.7
AOS	**Alonnisos**	**0.94**	**51**	P		Pb	22 27 03.5	-0.3
AOS				S		Sb	22 27 16.8	+0.7
VLY	**Voula,Athens**	**0.99**	**137**	*e*P		Pb	22 27 03.5	-1.2
VLY	**Voula,Athens**	**0.99**	**137**	*e*P		Pb	22 27 03.5	-1.2
VLY	**Voula,Athens**	**0.99**	**137**	*e*P		Pb	22 27 03.5	-1.2

*ISCJB **04** 22:57:34.2±1.8, 11°.65S±0°.08×166°.18E±0°.07, h46km±15km, mb4.3/16, Error ellipse: s-maj=14.2km s-min=11.4km az=0.8*
*NEIC **04** 22:57:36.9±1.3, 11°.65S×166°.22E, h57km±11km, mb4.5/7, Error ellipse: s-maj=12.1km s-min=9.5km az=156.0*
*IDC **04** 22:57:36.3±5.3, 11°.59S×166°.20E, h49km±43km, mb3.9/9, mb1 4.1/10, mb1mx4.0/16, mbtmp4.0/10, ML5.1/1, MS3.4/2, Ms1 3.4/2, ms1mx3.2/17, Error ellipse: s-maj=38.5km s-min=24.0km az=119.0*

ISC 04 22:57:36.5±1.3, 11°.67S±0°.08×166°.20E±0°.07, h53km±12km, n34, σ1°00/31, mb4.3/16, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HNR	**Honiara**	**6.54**	**289**	*e*Pn		**Pn**	**22 59 10.3**	**+0.2**
HNR				S		**Sn**	**23 00 22.4**	**-0.9**
HNR				LR		LR	23 00 49.7	
HNR	**Honiara**	**6.54**	**289**	P		**Pn**	**22 59 11.2**	**+1.1**
	36nm,0.3s,baz=135,slow=4.9,SNR=13							
HNR				S		**Sn**	**23 00 22.4**	**-0.9**
	4.0nm,0.3s,baz=344,slow=23,SNR=1.7							
HNR				LR		LR	23 00 49.7	
	comp=Z,136nm,21.7s,baz=106,slow=30							
FUNA	**Funafuti**	**13.17**	**77**	Pn		**Pn**	**23 00 41.1**	**+0.2**
PMG	**Port Moresby**	**18.85**	**275**	*e*P		**Pn**	**23 01 53.4**	**0.0**
	40nm,1.1s							
EIDS	**Eidsvold**	**19.75**	**224**	*e*P		**Pn**	**23 02 03.5**	**-0.5**
CTA	**Charters Tower**	**20.91**	**244**	P		**P**	**23 02 15.8**	**+1.0**
	1.6nm,0.3s,baz=69,slow=14,SNR=4.5							
STKA	**Stephens Creek**	**30.30**	**225**	*e*P		**P**	**23 03 43.4**	**+0.5**
	0.3nm,0.5s,mb3.3							
STKA				LR		LR	23 14 10.5	
STKA	**Stephens Creek**	**30.30**	**225**	P		**P**	**23 03 43.8**	**+0.8**
	1.7nm,0.5s,mb4.0,baz=59,slow=18,SNR=4.7							
STKA				LR		LR	23 14 10.5	
	comp=Z,204nm,20.4s,baz=289,slow=33							
WRAB	**Tennant Creek**	**31.68**	**251**	*e*P		**P**	**23 03 55.4**	**+0.1**
	1.6nm,0.4s,mb4.2							
GUMO	**Guam**	**32.82**	**319**	P		**P**	**23 04 04.2**	**-0.9**
ASAR	**Alice Springs**	**32.92**	**244**	P		**P**	**23 04 05.3**	**-0.7**
	2.2nm,0.7s,mb4.2,baz=73,slow=9.4,SNR=23							
ASAR				PcP		PcP	23 06 49.0	-0.5
	1.3nm,0.8s,baz=80,slow=3.7,SNR=8.9							
MBWA	**Marble Bar**	**45.42**	**252**	*e*P		**P**	**23 05 51.3**	**+0.9**
MAJO	**Matsushiro**	**54.72**	**332**	P		**P**	**23 06 59.8**	**-0.8**
CASY	**Casey**	**65.97**	**201**	*e*P		**P**	**23 08 14.5**	**-2.4**
	18nm,1.5s,mb4.9							
SBA	**Scott Base**	**66.18**	**180**	*e*P		**P**	**23 08 18.6**	**+0.4**
	2.8nm,0.8s,mb4.3							
CMAR	**Chiang Mai Arr**	**72.77**	**294**	P		**P**	**23 09 01.0**	**+1.3**
CMAR	**Chiang Mai Arr**	**72.77**	**294**	P		**P**	**23 09 01.0**	**+1.3**
	0.6nm,0.4s,mb3.9,baz=131,slow=3.7,SNR=5.3							
CHTO	**Chiang Mai**	**72.88**	**294**	P		**P**	**23 09 00.5**	**0.0**
LZH	**Lanzhou**	**75.50**	**312**	*e*P		**P**	**23 09 17.3**	**+1.9**
LZH				pP		pP	23 09 25.0	-5.4
LZH				sP		sP	23 09 28.5	-7.8
LZH				pmax		pmax		
	comp=Z,15nm,1.3s,mb4.8							
QSPA	**South Pole Qui**	**78.34**	**180**	*e*P		**P**	**23 09 29.6**	**-1.1**
	comp=Z,9.5nm,1.1s,mb4.6							
ULN	**Ulaanbaatar**	**79.06**	**324**	*e*P		**P**	**23 09 35.7**	**+0.6**
	comp=Z,1.5nm,0.3s,mb4.4							
SONM	**Songino Array**	**79.42**	**324**	P		**P**	**23 09 37.6**	**+0.6**
	comp=Z,1.1nm,0.7s,mb3.9,baz=136,slow=5.8,SNR=7.3							
GTA	**Gaotai**	**79.81**	**314**	*e*P		**P**	**23 09 40.8**	**+1.5**
GTA				pP		pP	23 09 51.5	-2.9
GTA				sP		sP	23 09 55.2	-5.1
GTA				pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.5							
ILAR	**Eielson Array**	**83.96**	**18**	P		**P**	**23 09 58.6**	**-1.9**
	comp=Z,0.7nm,0.5s,mb4.0,baz=240,slow=5.2,SNR=14							
NVAR	**Mina Array Bea**	**86.08**	**50**	P		**P**	**23 10 13.1**	**+1.2**
	comp=Z,1.3nm,0.8s,mb4.2,baz=232,slow=7.3,SNR=6.7							
MK31	**Makanchi Array**	**94.28**	**317**	*e*P		**P**	**23 10 49.7**	**-0.3**
MKAR	**Makanchi Array**	**94.28**	**317**	P		**P**	**23 10 50.0**	**-0.1**
	comp=Z,2.6nm,0.7s,mb4.8,baz=97,slow=6.3,SNR=25							
ZALV	**Zalesovo Beam**	**94.31**	**324**	P		**P**	**23 10 48.6**	**-1.5**
	comp=Z,0.4nm,0.5s,mb4.1,baz=134,slow=4.3,SNR=4.1							
KURK	**Kurchatov**	**97.40**	**320**	*e*P		**P**	**23 11 03.6**	**-0.6**
	comp=Z,1.0nm,0.4s,mb4.6							
BRVK	**Borovoye**	**102.77**	**322**	P		Pdif	23 11 27.7	-0.5
PLCA	**Paso Flores**	**106.12**	**139**	PKiKP		PKiKP	23 15 55.2	+0.1
ARCES	**ARCESS Array B**	**117.04**	**346**	PKP		PKPdf	23 16 15.7	+0.8
	comp=Z,0.8nm,0.5s,baz=90,slow=1.2,SNR=10.0							
ARE0	**ARCESS Array S**	**117.04**	**346**	PKPdf		PKPdf	23 16 16.1	+1.2
FINES	**FINESS Array B**	**122.51**	**339**	PKP		PKPdf	23 16 27.2	+1.6
	comp=Z,5.9nm,1.0s,baz=306,slow=5.0,SNR=3.7							

*ISCJB **04** 23:28:15.6±1.4, 13°.71N±0°.05×93°.12E±0°.06, h68km±14km, mb4.0/14, Error ellipse: s-maj=10.6km s-min=7.6km az=156.9*
*NEIC **04** 23:28:17.9±0.8, 13°.69N×93°.15E, h73km±7km, mb4.3/5, Error ellipse: s-maj=7.6km s-min=4.6km az=71.0*
*IDC **04** 23:28:17.6±4.1, 13°.71N×93°.11E, h68km±38km, mb3.6/9, mb1 3.7/11, mb1mx3.5/25, mbtmp3.6/11, ML3.9/2, Error ellipse: s-maj=30.7km s-min=14.2km az=63.0*

ISC 04 23:28:17.6±1.1, 13°.70N±0°.05×93°.09E±0°.06, h69km±11km, n40, σ0°74/42, mb4.0/14, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CM31	**Chiang Mai Arr**	**7.35**	**49**	*e*Pn		**Pn**	**23 30 02.1**	**-0.1**
CM31				*e*Sn		**Sn**	**23 31 24.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**7.35**	**49**	P		**Pn**	**23 30 02.6**	**+0.4**
	0.7nm,0.3s,baz=240,slow=16,SNR=5.1							
CMAR				S		**Sn**	**23 31 24.8**	**+0.7**
	0.7nm,0.3s,baz=237,slow=28,SNR=4.8							
CHTO	**Chiang Mai**	**7.58**	**47**	*e*Pn		**Pn**	**23 30 05.2**	**-0.1**
	9.4nm,1.0s							
KULM	**Kulim**	**11.20**	**138**	*e*Pn		**Pn**	**23 30 54.5**	**-0.3**
PSI	**Prapat**	**12.27**	**151**	P		**Pn**	**23 31 10.9**	**+1.4**
	0.5nm,0.3s,baz=349,slow=12,SNR=3.1							
ODAN	**Odare**	**14.13**	**339**	*e*P		**Pn**	**23 31 25.7**	**-8.8**
ODAN				*e*S		**Sn**	**23 33 59.8**	**-10**
RAMN	**Ramite**	**14.51**	**336**	*e*P		**Pn**	**23 31 34.7**	**-4.7**
DMN	**Daman**	**15.71**	**333**	*e*P		**Pn**	**23 31 53.1**	**-1.7**
	15nm,0.5s							
GKN	**Gorkha**	**16.26**	**332**	*e*P		**Pn**	**23 32 00.0**	**-1.7**
KOLN	**Koldanda**	**16.56**	**329**	*e*P		**Pn**	**23 32 10.0**	**+4.6**
	13nm,0.7s							
COCO	**West Island**	**25.99**	**172**	P		**P**	**23 33 43.9**	**-0.2**
YHNB	**Yeheng**	**28.79**	**64**	*e*P		**P**	**23 34 08.1**	**-1.1**
NACB	**Ninganchiao**	**28.84**	**65**	*e*P		**P**	**23 34 08.8**	**-0.9**
DGAR	**Diego Garcia**	**29.32**	**226**	P		**P**	**23 34 13.9**	**-0.1**
KBL	**Kabul**	**30.06**	**318**	*e*P		**P**	**23 34 20.5**	**+0.2**
	1.7nm,0.8s,mb3.7							
DAV	**Davao City (W)**	**32.60**	**98**	*e*P		**P**	**23 34 42.2**	**-0.7**
	161nm,0.6s							
EKS2	**Erkin-Say**	**33.33**	**334**	*e*P		**P**	**23 34 49.5**	**+0.5**
	0.9nm,0.7s,mb3.7							
MK31	**Makanchi Array**	**34.21**	**347**	*e*P		**P**	**23 34 56.4**	**-0.1**
MKAR	**Makanchi Array**	**34.21**	**347**	P		**P**	**23 34 57.6**	**+1.1**
	0.3nm,0.6s,mb3.3,baz=156,slow=9.2,SNR=3.6							
SONM	**Songino Array**	**35.79**	**15**	P		**P**	**23 35 08.5**	**-1.5**
	0.2nm,0.3s,mb3.5,baz=197,slow=3.4,SNR=2.6							
KURK	**Kurchatov**	**38.74**	**345**	*e*P		**P**	**23 35 35.9**	**+0.9**
	2.6nm,1.0s,mb4.0							
ZALV	**Zalesovo Beam**	**40.68**	**353**	P		**P**	**23 35 52.0**	**+1.0**
	0.8nm,0.6s,mb3.7,baz=178,slow=8.6,SNR=4.2							
BRVK	**Borovoye**	**43.24**	**340**	P		**P**	**23 36 12.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**45.05**	**134**	*e*P		**P**	**23 36 26.4**	**-0.4**
FITZ	**Fitzroy Crossi**	**45.05**	**134**	P		**P**	**23 36 26.4**	**-0.4**
	2.4nm,0.5s,mb4.2,baz=317,slow=6.0,SNR=14							
AKTK	**Aktyubinsk**	**46.40**	**330**	P		**P**	**23 36 37.7**	**+0.6**
AKTO	**Aktyubinsk**	**46.40**	**330**	P		**P**	**23 36 37.7**	**+0.6**
	0.5nm,0.4s,mb3.6,baz=137,slow=11,SNR=4.7							
GNI	**Garni**	**49.74**	**311**	P		**P**	**23 37 03.1**	**0.0**
NWAO	**Narrogin (SRO)**	**51.79**	**154**	*e*P		**P**	**23 37 18.0**	**-0.5**
	13nm,0.9s,mb5.0							
KIV	**Kislovodsk**	**52.40**	**315**	P		**P**	**23 37 22.9**	**0.0**
WRAB	**Tennant Creek**	**52.58**	**129**	*e*P		**P**	**23 37 24.9**	**+0.3**
	8.1nm,0.4s,mb5.1							
ASAR	**Alice Springs**	**54.52**	**133**	P		**P**	**23 37 38.9**	**+0.2**
	3.3nm,0.5s,mb4.6,baz=308,slow=7.2,SNR=48							
BRTR	**Keskin Array B**	**57.94**	**308**	P		**P**	**23 38 02.5**	**-0.5**
	1.2nm,0.7s,mb4.0,baz=112,slow=8.8,SNR=8.6							
CTAO	**Charters Tower**	**62.14**	**122**	P		**P**	**23 38 31.6**	**-0.4**
STKA	**Stephens Creek**	**64.90**	**135**	P		**P**	**23 38 49.5**	**-0.5**
STKA	**Stephens Creek**	**64.90**	**135**	P		**P**	**23 38 50.6**	**+0.7**
	2.3nm,0.8s,mb4.1,baz=302,slow=12,SNR=4.0							
ARCES	**ARCESS Array B**	**69.47**	**340**	P		**P**	**23 39 19.4**	**+1.1**
	2.1nm,1.0s,mb3.9,baz=80,slow=6.7,SNR=4.1							
BOSA	**Boshof**	**77.86**	**236**	*e*P		**P**	**23 40 08.4**	**+0.2**
DBIC	**Dimbokro**	**96.10**	**278**	*e*P		**P**	**23 41 38.9**	**+0.4**
BGU	**Big Grassy Mou**	**120.51**	**23**	PKPdf		PKPdf	23 47 02.5	+0.8

CASC 04 23:28:56.7±2.2, 10°.50N×87°.00W, h36km±999km, MD3.7, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SSN	**San Juan del S**	**1.38**	**55**	*e*P		Pn	23 29 19.1	-0.3
SSN				*e*S		Sn	23 29 38.7	+2.2
LAPC	**Finca la Perla**	**1.56**	**80**	*i* P		Pn	23 29 21.3	-0.7
LAPC				*i* S		Sn	23 29 42.5	+1.5
GPS1	**Guardaparques**	**1.64**	**80**	*i* P		Pn	23 29 22.9	-0.2
COPN	**Copaltepe**	**1.72**	**13**	*e*P		Pn	23 29 23.7	-0.5
COPN				*e*S		Sn	23 29 45.3	+0.4
CSAN		**1.77**	**19**	*e*P		Pn	23 29 24.1	-0.7
CSAN				*e*S		Sn	23 29 46.7	+0.7
MESS	**Mesas**	**1.79**	**82**	*i* P		Pn	23 29 24.5	-0.6
CUI	**Cuipilapa**	**1.81**	**85**	*i* P		Pn	23 29 25.5	+0.1
JCR	**Jicaral**	**1.97**	**109**	*e*S		Sn	23 29 50.9	-0.1
CGA2	**Cerro Gallo 2**	**2.54**	**101**	*e*P		Pn	23 29 36.2	+0.8
CGA2				*e*S		Sn	23 30 05.6	+0.5
PRS1	**Puriscal**	**2.69**	**101**	*e*P		Pn	23 29 38.8	+1.3
LAJ	**Bijagual**	**2.90**	**102**	*e*P		Pn	23 29 36.2	-4.2
URSC	**Urasca**	**3.24**	**101**	*e*P		Pn	23 29 47.6	+2.6
BUS	**Buena Vista**	**3.33**	**106**	*e*P		Pn	23 29 47.9	+1.6
BUS				*e*S		Sn	23 30 25.9	+1.3

*CSEM **04** 23:33:31.4±0.4, 38°.04N×20°.19E, h2km, ML2.8/9, Error ellipse: s-maj=8.7km s-min=5.0km az=51.0*
*TIR **04** 23:33:40.1±9.9, 39°.96N×18°.26E, h0km±88km*

THE 04 23:33:32.1, 38°.07N×20°.24E, h0km±1km, ML2.8/9, Error ellipse: s-maj=2.3km s-min=1.1km az=241.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VLS	**Valsamata**	**0.30**	**68**	P		Pg	23 33 37.6	-0.2
VLS				S		Sg	23 33 42.1	+0.5
VLS	**Valsamata**	**0.30**	**68**	P		Pg	23 33 37.6	-0.2
VLS				S		Sg	23 33 42.1	+0.5
KFL	**Anninata**	**0.43**	**84**	P		Pg	23 33 40.3	-0.1
KFL				S		Sg	23 33 46.3	+0.3
KFL	**Anninata**	**0.43**	**84**	P		Pg	23 33 40.3	-0.1
KFL				S		Sg	23 33 46.3	+0.3
LKD2	**Lefkada island**	**0.79**	**24**	P		Pg	23 33 46.5	-0.8
LKD2				S		Sg	23 33 58.2	+0.6
LKD2	**Lefkada island**	**0.79**	**24**	P		Pg	23 33 46.5	-0.8
LKD2				S		Sg	23 33 58.2	+0.6
EFP	**Efpalio**	**1.36**	**74**	P		Pg	23 33 56.3	-1.8
EFP				S		Sg	23 34 17.4	+1.6
EFP	**Efpalio**	**1.36**	**74**	P		Pg	23 33 56.3	-1.8
EFP				S		Sg	23 34 17.4	+1.6
LAKA	**Lakka**	**1.38**	**82**	P		Pg	23 33 56.9	-1.7
LAKA				S		Sg	23 34 18.0	+1.6
LAKA	**Lakka**	**1.38**	**82**	P		Pg	23 33 56.9	-1.7
LAKA				S		Sg	23 34 18.0	+1.6
IGT	**Igoumenitsa**	**1.47**	**3**	P		Pn	23 33 58.5	-1.3
IGT				S		Sg	23 34 20.1	+0.9
IGT	**Igoumenitsa**	**1.47**	**3**	P		Pn	23 33 58.5	-1.3
IGT				S		Sg	23 34 20.1	+0.9
TRIZ	**Trizonia**	**1.47**	**78**	P		Pn	23 33 58.1	-1.8
TRIZ				S		Sg	23 34 20.2	+0.8
TRIZ	**Trizonia**	**1.47**	**78**	P		Pn	23 33 58.1	-1.8
TRIZ				S		Sg	23 34 20.2	+0.8
KALE	**Kalithea**	**1.53**	**77**	P		Pn	23 33 59.6	-1.1
KALE				S		Sn	23 34 22.2	+1.0
KALE	**Kalithea**	**1.53**	**77**	P		Pn	23 33 59.6	-1.1
KALE				S		Sn	23 34 22.2	+1.0
ITM	**Ithomi**	**1.60**	**123**	P		Pn	23 34 01.7	0.0
ITM	**Ithomi**	**1.60**	**123**	P		Pn	23 34 01.7	0.0
GUR	**Goura**	**1.66**	**94**	P		Pn	23 34 02.2	-0.3
GUR				S		Sn	23 34 23.9	-0.7
GUR	**Goura**	**1.66**	**94**	P		Pn	23 34 02.2	-0.3
GUR				S		Sn	23 34 23.9	-0.7
PYL	**PYLOS**	**1.67**	**134**	P		Pn	23 34 01.7	-0.9
PYL				S		Sn	23 34 25.0	+0.3
PYL	**PYLOS**	**1.67**	**134**	P		Pn	23 34 01.7	-0.9
PYL				S		Sn	23 34 25.0	+0.3
KEK	**Kerkira**	**1.68**	**348**	P		Pn	23 34 01.5	-1.2
KEK				S		Sn	23 34 26.3	+1.3
KEK	**Kerkira**	**1.68**	**348**	P		Pn	23 34 01.5	-1.2
KEK				S		Sn	23 34 26.3	+1.3
SRN	**Sarande**	**1.82**	**354**	*e*PG		Pg	23 34 08.7	+1.7
SRN				*i* SG		Sg	23 34 39.6	+8.9
SRN	**Sarande**	**1.82**	**354**	*e*Pg		Pg	23 34 08.7	+1.7
	SNR=90							
SRN				*i* Sg		Sg	23 34 39.6	+8.9
	SNR=90							
VLX	**Vlachokerasia**	**1.83**	**112**	P		Pn	23 34 05.4	+0.6
VLX				S		Sn	23 34 29.9	+1.2
VLX	**Vlachokerasia**	**1.83**	**112**	P		Pn	23 34 05.4	+0.6
VLX				S		Sn	23 34 29.9	+1.2
DSF	**Desfina**	**1.83**	**78**	P		Pn	23 34 05.8	+1.0
DSF				S		Sn	23 34 29.4	+0.7
DSF	**Desfina**	**1.83**	**78**	P		Pn	23 34 05.8	+1.0
DSF				S		Sn	23 34 29.4	+0.7
AGG	**Agios Georgios**	**1.90**	**59**	P		Pn	23 34 05.5	-0.2
AGG				S		Sn	23 34 31.4	+1.1
AGG	**Agios Georgios**	**1.90**	**59**	P		Pn	23 34 05.5	-0.2
AGG				S		Sn	23 34 31.4	+1.1
**TH

2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.57**	**198**	*eP*	Pb	00 16 53.4	+1.0
ABRA	**Dolores**	**0.92**	**39**	*eP*	Pb	00 16 58.3	-0.1
ABRA				*eS*	Sb	00 17 12.4	+2.2
SIPP	**Brgy, Tapao**	**1.05**	**19**	⇑*iP*	Pb	00 17 00.5	0.0
SIPP				*eS*	Sb	00 17 13.6	-0.1
SCZP	**Santa Cruz**	**1.16**	**189**	*eP*	Pn	00 17 01.7	-0.4
APYP	**Conner**	**1.43**	**49**	*eP*	Pn	00 17 05.5	-0.3
PIP	**Pasuquin**	**1.47**	**20**	⇑*iP*	Pn	00 17 06.7	+0.3
PIP				*eS*	Sn	00 17 27.8	+2.7
CAUP	**Cauayan**	**1.65**	**89**	*eP*	Pn	00 17 11.1	+2.2
PCPH	**Palayan**	**1.66**	**145**	⇓*eP*	Pn	00 17 09.3	+0.3

DJA 05 00:34:17,7˝.66S×106˚.05E, h14km, MLv3.8/3, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.82**	**38**	P	Pg	00 34 32.2	-0.8
SKJI				S	Sg	00 34 44.0	+0.2
CGJI	**Cibinong**	**1.10**	**341**	P	Pb	00 34 35.3	-2.5
CGJI				S	Sb	00 34 52.1	+0.1
CBJI	**Citeko**	**1.47**	**33**	P	Pn	00 34 39.9	-3.1
CISI	**Cisompet, Garu**	**1.75**	**87**	P	Pn	00 34 47.5	+0.5
CISI				S	Sn	00 35 08.9	-0.2
LEM	**Lembang**	**1.76**	**62**	P	Pn	00 34 50.4	+3.3

*IPEC **05** 00:42:10.6±0.2, 50˚.06N×18˚.46E, h7km±1km, ML1.4/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
*CSEM **05** 00:42:11.9±0.4, 50˚.07N×18˚.24E, h1km, ML2.5/7, Error ellipse: s-maj=7.6km s-min=4.7km az=13.0*
*VIE **05** 00:42:12.6±0.6, 49˚.70N×18˚.41E, h0km, mb1.1/2, ML1.9/3, Error ellipse: s-maj=3.6km s-min=2.0km az=93.0 19 km SE of Ostrava Suspected Mining induced.*
*PRU **05** 00:42:13.5, 50˚.02N×18˚.25E, h0km*

WAR 05 00:42:10.8, 50˚.06N×18˚.43E, 1C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.15**	**278**	*eSg*	Sg	00 42 17.6	+1.9
OKC	**Ostrava-Krasne**	**0.29**	**219**	*ePG*	Pg	00 42 16.8	+0.5
OKC				*eSG*	Sg	00 42 21.4	+1.3
	comp=Z,36nm,0.5s						
OKC	**Ostrava-Krasne**	**0.29**	**219**	Pg	Pg	00 42 16.8	+0.5
OKC				Sg	Sg	00 42 21.4	+1.3
	comp=Z,36nm,0.5s						
MORC	**Moravsky Berou**	**0.64**	**244**	*ePg*	Pg	00 42 23.0	0.0
	baz=64						
MORC				*eSg*	Sg	00 42 31.6	+0.3
	comp=Z,11nm,0.2s,baz=64						
OJC	**Ojcow**	**0.90**	**79**	*ePg*	Pg	00 42 27.6	-0.4
OJC				*eSg*	Sg	00 42 40.4	+0.8
DPC	**Dobruska-Polom**	**1.38**	**283**	*ePG*	Pg	00 42 36.5	-0.8
DPC				*eSG*	Sg	00 42 54.8	-0.4
	comp=Z,14nm,0.5s						
DPC	**Dobruska-Polom**	**1.38**	**283**	Pg	Pg	00 42 36.5	-0.8
DPC				Sg	Sg	00 42 54.8	-0.4
	comp=Z,14nm,0.5s						
NIE	**Niedzica**	**1.38**	**117**	*ePg*	Pg	00 42 37.2	-0.1
NIE				*eSg*	Sg	00 42 56.5	+1.3
VRAC	**Vranov**	**1.41**	**238**	*ePg*	Pg	00 42 37.0	-0.8
VRAC				*eSg*	Sg	00 42 55.4	-0.7
	comp=Z,5.1nm,0.2s,baz=58						
KOLL	**Kolacno**	**1.49**	**181**	*ePN*	Pn	00 42 40.0	+1.3
KOLL				*eSN*	Sn	00 42 58.7	-0.1
KOLL	**Kolacno**	**1.49**	**181**	*ePn*	Pn	00 42 40.0	+1.3
KOLL				*eSn*	Sn	00 42 58.7	-0.1
VYHS	**Vyhne**	**1.59**	**170**	*eSN*	Sn	00 43 01.9	+0.5
VYHS	**Vyhne**	**1.59**	**170**	*eSn*	Sn	00 43 01.9	+0.5
KRUC	**Moravsky**	**1.66**	**234**	*ePn*	Pn	00 42 40.4	-0.7
	baz=53						
KRUC				*eSg*	Sg	00 43 03.0	-1.1
	comp=Z,3.2nm,0.2s,baz=53						
STHS	**Stebnicka Huta**	**1.94**	**108**	*ePN*	Pg	00 42 48.5	+0.6
STHS				*eSN*	Sg	00 43 13.6	+0.6
STHS	**Stebnicka Huta**	**1.94**	**108**	*ePn*	Pg	00 42 48.5	+0.6
STHS				*eSn*	Sg	00 43 13.7	+0.7
PRU	**Pruhonice**	**2.51**	**270**	*ePG*	Pg	00 42 57.1	-1.7
PRU				*eSG*	Sg	00 43 29.9	-1.4
	comp=Z,1.9nm,0.2s						
PRU	**Pruhonice**	**2.51**	**270**	Pg	Pg	00 42 57.1	-1.7
PRU				Sg	Sg	00 43 29.9	-1.4
	comp=Z,1.9nm,0.2s						
BRG	**Berggiesshubel**	**2.98**	**288**	SG	Sg	00 43 44.4	-2.0
	comp=Z,1.8nm,0.5s						
KHC	**Kasperske Hory**	**3.29**	**255**	*ePG*	Pg	00 43 11.5	-2.3
KHC				*eSG*	Sg	00 43 53.8	-2.6
	comp=Z,2.9nm,0.4s						
KHC	**Kasperske Hory**	**3.29**	**255**	Pg	Pg	00 43 11.5	-2.3
KHC				Sg	Sg	00 43 53.8	-2.6
	comp=Z,2.9nm,0.4s						
MOA	**Molln**	**3.52**	**233**	⇑*iPg*	Pg	00 43 15.9	-2.4
MOA				⇓*iSg*	Sg	00 44 01.9	-2.1
	comp=Z,2.1nm,0.5s						
MOA	**Molln**	**3.52**	**233**	Pg	Pg	00 43 15.9	-2.4
MOA				Sg	Sg	00 44 01.9	-2.1
	comp=Z,2.1nm,0.5s						

JMA 05 00:46:11.9±0.3, 44˚.28N×147˚.92E, h5km, M4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.82**	**241**	P	Pn	00 46 44.4	+0.5
NEM2				*eS*	Sn	00 47 07.8	+0.5
JRA	**Rausu**	**2.04**	**261**	P	Pn	00 46 47.6	+0.7
JNK	**Nakash**	**2.42**	**254**	P	Pn	00 46 52.8	+0.8
JNK				*eS*	Sn	00 47 23.3	+1.4
JAR	**Ashorobuto**	**3.16**	**253**	P	Pn	00 47 04.2	+1.9
JAR				*eS*	Sn	00 47 42.1	+1.7
JOB	**Onbets**	**3.27**	**247**	*eS*	Sn	00 47 43.9	+0.8
JCH	**Churui**	**3.71**	**245**	*eS*	Sn	00 47 53.8	-0.1
JNBK	**Urakawa-nobuka**	**4.27**	**244**	P	Pn	00 47 19.2	+1.7
JKB	**Kayabe**	**5.58**	**247**	*eS*	Sn	00 48 36.6	-3.4

*SZGRF **05** 00:47:13.5, 20˚.13S×170˚.12E, h33km, Vanuatu Islands*
*NOU **05** 00:47:40.8±1.2, 17˚.19S×169˚.05E, h30km, MD3.5, ML3.3*
*LDG **05** 00:47:45.6±0.1, 17˚.49S×168˚.19E, h180km, Mb4.9/3, Error ellipse: s-maj=14.4km s-min=3.3km az=101.0*
*IDC **05** 00:47:46.4±0.9, 17˚.77S×168˚.80E, h200km±8km, mb4.3/14, mb1 4.5/14, mb1mx4.5/16, mbtmp4.3/14, Error ellipse: s-maj=14.4km s-min=12.2km az=112.0*
*ISCJB **05** 00:47:47.8±0.7, 17˚.82S±0˚.05×168˚.64E±0˚.04, h222km±7km, mb4.6/47, Error ellipse: s-maj=8.8km s-min=6.3km az=158.7*
*BJI **05** 00:47:50.7, 17˚.27S×168˚.90E, h241km, mB4.9/12, mb4.8/25*
*BGS **05** 00:47:51.5±3.6, 17˚.82S×168˚.67E, h243km, mb4.7(NEIC)*
*NEIC **05** 00:47:51.1±0.8, 17˚.82S×168˚.67E, h243km±8km, mb4.7/31, Error ellipse: s-maj=6.4km s-min=4.4km az=160.0*

ISC 05 00:47:48.5±0.7, 17˚.83S±0˚.05×168˚.68E±0˚.04, h215km±7km, h237km±4.1km; pP-P, n328, s077/128, mb4.6/46, 9C-44D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.62**	**201**	*eP*	**Pn**	**00 48 57.2**	**-1.3**
BAYA				*eS*	**S**	**00 49 53.4**	**-0.6**
NOUC	**Port Laguerre**	**4.80**	**207**	*eP*	**Pn**	**00 48 59.2**	**-1.6**
NOUC				AMP		00 50 03.9	
	comp=Z,82nm,1.4s						
LASL	**Noumea**	**4.82**	**204**	*eP*	**Pn**	**00 49 00.4**	**-0.6**
NORM	**Noumea**	**4.84**	**205**	*eP*	**Pn**	**00 49 00.6**	**-0.7**
ONTRN	**Noumea**	**4.92**	**205**	*eP*	**Pn**	**00 49 02.1**	**-0.2**
ONTRN				*eS*	**S**	**00 50 01.8**	**+1.0**
MSVF	**Nonsavu**	**8.92**	**91**	⇑*ePn*	**Pn**	**00 49 54.6**	**+0.9**
	comp=Z,535nm,2.0s						
HNR	**Honiara**	**11.90**	**313**	Pn	**Pn**	**00 50 33.5**	**+1.7**
EIDS	**Eidsvold**	**17.99**	**242**	*eP*	**P**	**00 51 45.4**	**+2.1**
	comp=Z,37nm,0.9s						
AFI	**Afiamalu**	**19.19**	**81**	P	**P**	**00 51 57.7**	**+1.4**
ARMA	**Armidale**	**19.95**	**228**	*eP*	**P**	**00 52 05.7**	**+1.4**
ARMA	**Armidale**	**19.95**	**228**	*eP*	**P**	**00 52 06.6**	**+2.3**
	comp=Z,68nm,1.5s						
CTA	**Charters Tower**	**21.33**	**260**	*eP*	**P**	**00 52 19.0**	**0.0**
	comp=Z,17nm,0.5s,mb4.8						
CTA	**Charters Tower**	**21.33**	**260**	P	**P**	**00 52 19.1**	**+0.2**
	comp=Z,22nm,0.6s,mb4.9,baz=88,slow=11,SNR=39						
CTA				pP		00 52 53.9	
	comp=Z,3.1nm,0.5s,baz=103,slow=6.9,SNR=1.5						
CTAO	**Charters Tower**	**21.33**	**260**	*eP*	**P**	**00 52 18.3**	**-0.7**
	comp=Z,24nm,0.6s,mb4.9						
URZ	**Urewera**	**21.65**	**162**	*eP*	**P**	**00 52 22.5**	**+0.5**
URZ	**Urewera**	**21.65**	**162**	P	**P**	**00 52 22.2**	**+0.1**
	comp=Z,15nm,0.4s,mb4.8,baz=332,slow=3.5,SNR=12						
PMG	**Port Moresby**	**22.51**	**289**	*eP*	**P**	**00 52 31.0**	**+0.8**
	comp=Z,17nm,0.8s,mb4.6						
SNZO	**South Karori**	**23.97**	**169**	*eP*	**P**	**00 52 44.4**	**+1.2**
CNB	**Canberra Magne**	**24.46**	**221**	*eP*	**P**	**00 52 48.9**	**+1.2**
CNB	**Canberra Magne**	**24.46**	**221**	*eP*	pP	00 53 33.8	+5.2
RPZ	**Rata Peaks**	**25.88**	**176**	P	**P**	**00 52 60.0**	**-0.4**
RPZ	**Rata Peaks**	**25.88**	**176**	P	**P**	**00 52 60.0**	**-0.4**
	comp=Z,6.5nm,0.6s,mb4.4,baz=320,slow=17,SNR=3.5						
STKA	**Stephens Creek**	**28.18**	**235**	*eP*	**P**	**00 53 21.9**	**+0.8**
	comp=Z,15nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**28.18**	**235**	*eP*	**P**	**00 53 22.1**	**+1.0**
	comp=Z,3.9nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**28.18**	**235**	P	**P**	**00 53 21.5**	**+0.4**
	comp=Z,16nm,0.7s,mb4.8,baz=59,slow=8.1,SNR=27						
STKA				pP	pP	00 54 00.8	-3.5
	comp=Z,6.7nm,0.9s,baz=27,slow=7.1,SNR=3.5						
TOO	**Toolangi**	**28.30**	**221**	*eP*	**P**	**00 53 22.7**	**+0.7**
WRAB	**Tennant Creek**	**32.52**	**261**	*eP*	**P**	**00 53 57.9**	**-1.4**
	comp=Z,36nm,1.8s,mb4.6						
ASAR	**Alice Springs**	**32.98**	**254**	P	**P**	**00 54 03.1**	**-0.2**
	comp=Z,18nm,0.3s,mb5.0,baz=84,slow=8.6,SNR=257						
ASAR				pP	pP	00 54 43.0	-4.1
	comp=Z,6.9nm,0.8s,baz=81,slow=9.5,SNR=2.5						
ASAR				PcP	PcP	00 56 40.5	-1.6
	comp=Z,1.0nm,0.6s,baz=87,slow=4.1,SNR=4.4						
ASAR				S	**S**	**00 59 04.7**	**-0.9**
	comp=Z,6.0nm,1.0s,baz=83,slow=18,SNR=26						
ASAR				ScP	ScP	01 00 05.9	+0.1
	comp=Z,1.7nm,0.9s,baz=90,slow=4.0,SNR=6.1						
KAKA	**Kakadu**	**35.29**	**273**	*eP*	**P**	**00 54 23.1**	**-0.2**
	comp=Z,6.0nm,0.6s,mb4.3						
GUMO	**Guam**	**39.07**	**321**	*eP*	**P**	**00 54 55.4**	**+0.5**
FITZ	**Fitzroy Crossi**	**40.88**	**263**	*eP*	**P**	**00 55 10.0**	**+0.2**
	comp=Z,14nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**40.88**	**263**	*eP*	pP	00 55 50.6	-4.6
	comp=Z,17nm,0.6s						
FITZ	**Fitzroy Crossi**	**40.88**	**263**	*eP*	**P**	**00 55 10.3**	**+0.5**
	comp=Z,5.6nm,0.7s,mb4.1						
FITZ				*ep*	pP	00 55 59.2	+4.0
FITZ	**Fitzroy Crossi**	**40.88**	**263**	pP	pP	00 55 51.2	-4.0
	comp=Z,5.7nm,0.8s,baz=118,slow=7.7,SNR=3.5						
MBWA	**Marble Bar**	**46.13**	**258**	*eP*	**P**	**00 55 51.3**	**-0.3**
	comp=Z,31nm,1.2s,mb4.5						
KKM	**Kota Kinabalu**	**56.96**	**290**	*eP*	**P**	**00 57 11.8**	**-0.1**
	comp=Z,9.7nm,0.5s,mb4.7						
SBA	**Scott Base**	**60.06**	**180**	*eP*	**P**	**00 57 32.9**	**+0.5**
	comp=Z,4.5nm,0.8s,mb4.2						
SBA				*ePcP*	PcP	00 58 16.8	+1.0
SBA				*epP*	pP	00 58 28.7	+7.5
KSM	**Kuching**	**60.56**	**282**	*eP*	**P**	**00 57 36.6**	**-0.1**
	comp=Z,39nm,1.3s,mb4.9						
KSM				*ePcP*	PcP	00 58 19.7	+0.7
KSM				*epP*	pP	00 58 29.6	+3.8
CASY	**Casey**	**61.21**	**203**	*eP*	**P**	**00 57 39.8**	**-0.4**
	comp=Z,3.1nm,0.6s,mb4.1						
MAJO	**Matsushiro**	**61.27**	**332**	*eP*	**P**	**00 57 40.4**	**-0.6**
	comp=Z,37nm,0.9s,mb5.0						
MAT	**Matsushiro**	**61.27**	**332**	P	**P**	**00 57 40.0**	**-1.0**
TWG	**Pinlang**	**61.63**	**309**	P	**P**	**00 57 44.1**	**+0.4**
YHNB	**Yeheng**	**62.53**	**311**	*eP*	**P**	**00 57 48.3**	**-1.3**
	comp=Z,90nm,1.0s,mb5.4						
ERM	**Erimo**	**64.05**	**339**	*eP*	**P**	**00 58 00.2**	**+1.0**
	comp=Z,15nm,0.8s,mb4.7						
KSRS	**Korea Array**	**67.05**	**326**	P	**P**	**00 58 18.8**	**+0.3**
	comp=Z,6.6nm,0.8s,mb4.3,baz=137,slow=6.4,SNR=38						
YSS	**Yuzh-Sakhalins**	**68.58**	**341**	*eP*	**P**	**00 58 29.0**	**+1.2**
	comp=Z,64nm,1.1s,mb5.2						
COCO	**West Island**	**69.27**	**263**	P	**P**	**00 58 32.8**	**0.0**
WHN	**Wuhan**	**71.02**	**312**	P	**P**	**00 58 42.0**	**-1.1**
PETK	**Petropavlovsk-**	**71.28**	**353**	P	**P**	**00 58 43.5**	**-0.6**
PETK	**Petropavlovsk-**	**71.28**	**353**	P	**P**	**00 58 43.5**	**-0.6**
	comp=Z,9.2nm,0.8s,mb4.5,baz=134,slow=8.1,SNR=13						
DL2	**Dalian**	**71.58**	**323**	P	**P**	**00 58 46.5**	**+0.2**
DL2				*pmax*	*pmax*		
	comp=Z,20nm,0.2s,mb5.4						
MDJ	**Mudanjiang**	**71.64**	**332**	P	**P**	**00 58 46.6**	**+0.1**
MDJ				*pmax*	*pmax*		
	comp=Z,35nm,1.0s,mb4.9						
MDJ				*pmax*	*pmax*		
	comp=Z,62nm,5.5s						
QSPA	**South Pole Qui**	**72.22**	**180**	*eP*	**P**	**00 58 49.0**	**-0.5**
	comp=Z,7.3nm,1.0s,mb4.3						
NIKO	**Nikolski**	**73.14**	**14**	*eP*	**P**	**00 58 53.2**	**-1.9**
BJI	**Beijing**	**75.52**	**321**	P	**P**	**00 59 09.4**	**+0.2**
BJI				*pmax*	*pmax*		
	comp=Z,25nm,0.7s,mb5.0						
XAN	**Xi'an**	**76.77**	**313**	P	**P**	**00 59 16.6**	**+0.2**
XAN				*pmax*	*pmax*		
	comp=Z,6.0nm,0.8s,mb4.3						
CMAR	**Chiang Mai Arr**	**77.45**	**294**	P	**P**	**00 59 21.5**	**+1.0**
	comp=Z,7.3nm,0.8s,mb4.4,baz=131,slow=4.2,SNR=30						
CHTO	**Chiang Mai**	**77.59**	**295**	*eP*	**P**	**00 59 21.6**	**+0.4**
MAW	**Mawson**	**79.54**	**202**	P	**P**	**00 59 31.4**	**+0.4**
	comp=Z,4.9nm,0.9s,mb4.2,baz=95,slow=8.3,SNR=9.1						
LZH	**Lanzhou**	**81.40**	**312**	⇑*iP*	**P**	**00 59 42.5**	**+1.1**
LZH				*pmax*	*pmax*		
	comp=Z,31nm,1.3s,mb4.8						
LZH				*pmax*	*pmax*		
	comp=Z,160nm,5.0s						
KDAK	**Kodiak Island**	**81.89**	**20**	P	**P**	**00 59 42.7**	**-0.8**
KCPM	**Cahto Peak**	**85.12**	**46**	*eP*	**P**	**01 00 01.2**	**+0.8**
ULN	**Ulaanbaatar**	**85.42**	**324**	*eP*	**P**	**01 00 01.9**	**+0.3**
KHMM	**Horse Mountain**	**85.58**	**45**	*eP*	**P**	**01 00 03.6**	**+1.1**
GTA	**Gaotai**	**85.78**	**314**	*iP*	**P**	**01 00 04.1**	**+0.5**
GTA				*pmax*	*pmax*		
	comp=Z,23nm,1.0s,mb4.9						
SONM	**Songino Array**	**85.78**	**323**	P	**P**	**01 00 03.1**	**-0.3**
	comp=Z,9.8nm,0.8s,mb4.6,baz=140,slow=5.6,SNR=49						
PMR	**Palmer**	**85.97**	**19**	*eP*	**P**	**01 00 03.2**	**-0.7**
	comp=Z,5.3nm,0.8s,mb4.3						
SYO	**Syowa Base**	**86.13**	**196**	⇑*eP*	**P**	**01 00 02.8**	**-2.0**
WDC	**Whiskeytown Da**	**86.25**	**45**	*eP*	**P**	**01 00 05.3**	**-0.5**
	comp=Z,44nm,1.4s,mb5.0						
OHCM	**Honcut**	**86.41**	**47**	*eP*	**P**	**01 00 06.8**	**+0.1**
CMB	**Columbia Colle**	**86.61**	**48**	*eP*	**P**	**01 00 07.6**	**-0.1**
YBH	**Yreka Blue Hor**	**86.66**	**44**	*eP*	**P**	**01 00 07.7**	**-0.1**
	comp=Z,28nm,1.2s,mb4.9						
MWC	**Mount Wilson**	**86.73**	**53**	*eP*	**P**	**01 00 08.4**	**+0.1**
HUMO	**Hull Mountain**	**86.90**	**43**	*eP*	**P**	**01 00 09.7**	**+0.7**
	comp=Z,20nm,1.0s,mb4.8						
ISA	**Isabella**	**87.01**	**51**	*eP*	**P**	**01 00 10.0**	**+0.4**
TRF	**Thorofare Moun**	**87.07**	**17**	*eP*	**P**	**01 00 07.6**	**-1.7**
WAKR	**Walker**	**87.49**	**48**	*eP*	**P**	**01 00 12.3**	**+0.4**
MTUM	**Tungsten Hills**	**87.64**	**50**	*eP*	**P**	**01 00 12.9**	**+0.4**
PAHR	**Pah Rah Range**	**88.04**	**47**	*eP*	**P**	**01 00 15.0**	**+0.6**
GSC	**Goldstone**	**88.11**	**52**	*eP*	**P**	**01 00 15.0**	**+0.1**
NVAR	**Mina Array Bea**	**88.27**	**49**	P	**P**	**01 00 15.3**	**-0.2**
	comp=Z,8.6nm,0.8s,mb4.6,baz=228,slow=7.0,SNR=51						
MOD	**Modoc**	**88.34**	**45**	*eP*	**P**	**01 00 16.0**	**+0.2**
NLWA	**Neilton Lookou**	**88.57**	**39**	*eP*	**P**	**01 00 17.3**	**+0.6**
RVW	**Rose Valley**	**88.67**	**40**	P	**P**	**01 00 17.9**	**+0.7**
GLA	**Glamis**	**88.75**	**55**	*eP*	**P**	**01 00 18.7**	**+0.8**
COLA	**College**	**88.85**	**17**	P	**P**	**01 00 15.7**	**-1.9**
HOOD	**Mount Hood Mea**	**88.97**	**41**	*eP*	**P**	**01 00 19.0**	**+0.3**
VLL	**Laurance Lake**	**89.02**	**41**	P	**P**	**01 00 19.3**	**+0.4**
ILAR	**Eielson Array**	**89.05**	**17**	P	**P**	**01 00 15.8**	**-2.7**
	comp=Z,2.1nm,0.6s,mb4.1,baz=237,slow=4.7,SNR=45						
ILAR				pP	pP	01 01 08.4	-3.0
	comp=Z,0.7nm,0.8s,baz=219,slow=7.3,SNR=2.2						
VIPM	**Ingram Point**	**89.27**	**42**	P	**P**	**01 00 20.1**	**+0.1**
TLY	**Talaya**	**89.30**	**326**	*eP*	**P**	**01 00 19.3**	**-0.7**
PGC	**Sidney**	**89.41**	**38**	*eP*	**P**	**01 00 20.8**	**+0.2**
LON	**Longmire**	**89.52**	**40**	*eP*	**P**	**01 00 21.0**	**-0.2**
WVOR	**Wild Horse Val**	**89.69**	**45**	P	**P**	**01 00 22.3**	**+0.2**
RMW	**Rattlesnake Mo**	**89.84**	**39**	P	**P**	**01 00 23.0**	**+0.4**
BMN	**Battle Mountai**	**89.85**	**47**	*eP*	**P**	**01 00 23.1**	**+0.3**
COLD	**Coldfoot**	**90.05**	**15**	*eP*	**P**	**01 00 22.6**	**-0.5**
	comp=Z,3.5nm,1.0s,mb4.1						
COLD				*epP*	pP	01 01 22.3	+6.2
JCW	**Jim Creek**	**90.10**	**39**	*eP*	**P**	**01 00 23.9**	**+0.1**
NAC	**Naches**	**90.12**	**40**	P	**P**	**01 00 24.2**	**+0.2**
JBO	**Jordan Butte**	**90.19**	**42**	P	**P**	**01 00 24.4**	**+0.1**
RPW	**Rockport**	**90.46**	**39**	*eP*	**P**	**01 00 25.4**	**-0.1**
WRW	**Wenatchee Rido**	**90.58**	**39**	P	**P**	**01 00 26.0**	**-0.1**
RSW	**Rattlesnake Hi**	**90.74**	**41**	*eP*	**P**	**01 00 27.4**	**+0.6**
EGAK	**Eagle**	**90.77**	**19**	*eP*	**P**	**01 00 25.7**	**-0.8**
HAWA	**Hanford**	**90.78**	**41**	*eP*	**P**	**01 00 27.1**	**0.0**
	comp=Z,36nm,1.2s,mb5.2						
HAWA				*epP*	pP	01 01 24.0	+4.1
ETW	**Entiat**	**90.80**	**40**	*eP*	**P**	**01 00 27.0**	**-0.1**
DAWY	**Dawson**	**90.86**	**20**	*eP*	**P**	**01 00 26.1**	**-0.8**
DLBC	**Dease Lake**	**91.04**	**27**	*eP*	**P**	**01 00 27.8**	**-0.2**
CCUT	**Cedar City**	**91.53**	**51**	*eP*	**P**	**01 00 31.2**	**+0.4**
N12A	**Clover Valley,**	**91.54**	**47**	*eP*	**P**	**01 00 30.5**	**-0.2**
	comp=Z,14nm,1.2s,mb4.8						
N12A				*epP*	pP	01 01 29.4	+5.8
BMO	**Blue Mountains**	**91.56**	**43**	*eP*	**P**	**01 00 29.5**	**-1.2**
TUC	**Tucson**	**91.67**	**57**	*eP*	**P**	**01 00 31.6**	**0.0**
	comp=Z,24nm,1.6s,mb4.9						
OD2	**Odessa Site #2**	**91.71**	**40**	*eP*	**P**	**01 00 31.3**	**-0.1**
VNA1	**Neumayer--Stat**	**91.73**	**181**	*eP*	**P**	**01 00 23.4**	**-7.7**
WUAZ	**Wupatki**	**92.31**	**54**	*eP*	**P**	**01 00 34.0**	**-0.4**
	comp=Z,6.2nm,0.8s,mb4.6						
MSU	**Marysvale**	**92.75**	**50**	*eP*	**P**	**01 00 37.4**	**+1.0**
DUG	**Dugway**	**92.88**	**49**	*eP*	**P**	**01 00 36.9**	**0.0**
	comp=Z,2.6nm,0.9s,mb4.3						
BGU	**Big Grassy Mou**	**92.98**	**48**	*eP*	**P**	**01 00 36.6**	**-0.8**
	comp=Z,1.6nm,0.9s,mb4.0						
HLID	**Hailey**	**92.98**	**45**	*eP*	**P**	**01 00 37.7**	**+0.4**
	comp=Z,2.4nm,0.8s,mb4.3						
NEW	**Newport**	**93.04**	**40**	*eP*	**P**	**01 00 36.9**	**-0.5**
SPUT	**South Promonto**	**93.53**	**48**	*eP*	**P**	**01 00 40.0**	**+0.1**
HWUT	**Hardware Ranch**	**94.25**	**48**	*eP*	**P**	**01 00 42.7**	**-0.5**
	comp=Z,2.1nm,0.6s,mb4.3						
BSMT	**Bassoo Peak**	**94.33**	**41**	*eP*	**P**	**01 00 43.0**	**-0.4**
PV01	**Paradox Valley**	**95.30**	**52**	*eP*	**P**	**01 00 48.3**	**+0.2**
	comp=Z,141nm,0.9s						
REDW	**Red Top Meadow**	**95.34**	**46**	*eP*	**P**	**01 00 48.7**	**+0.6**
HRY	**Holter Researc**	**95.81**	**43**	*eP*	**P**	**01 00 49.9**	**-0.2**
ANMO	**Albuquerque**	**95.93**	**55**	*eP*	**P**	**01 00 50.4**	**-0.7**
TXAR	**Lajitas Array**	**96.56**	**61**	P	**P**	**01 00 53.0**	**-1.0**
	comp=Z,1.3nm,0.8s,mb4.2,baz=234,slow=6.3,SNR=13						
YKA	**Yellowknife Ar**	**99.66**	**27**	P	Pdif	01 01 05.0	-2.5
YKA	**Yellowknife Ar**	**99.66**	**27**	P	Pdif	01 01 05.0	-2.5
	comp=Z,0.8nm,0.5s,baz=256,slow=4.6,SNR=5.6						
MK31	**Makanchi Array**	**100.37**	**316**	*ePdif*	Pdif	01 01 10.5	-0.1
MKAR	**Makanchi Array**	**100.37**	**316**	P	Pdif	01 01 09.9	-0.7
MKAR	comp=Z,1.8nm,0.5s,baz=93,slow=6.3,SNR=23			PP	PP	01 05 15.9	-4.2
	comp=Z,0.3nm,0.2s,baz=87,slow=9.2,SNR=4.1						
ZALV	**Zalesovo Beam**	**100.68**	**323**	P	Pdif	01 01 10.7	-1.3
	comp=Z,0.4nm,0.3s,baz=104,slow=6.3,SNR=3.6						
BVAR	**Borovoye Array**	**109.00**	**321**	PKiKP	PKiKP	01 05 50.5	-1.6
	comp=Z,0.5nm,0.4s,baz=113,slow=3.7,SNR=4.7						
ARU	**Arti**	**115.79**	**325**	*ePKPdf*	PKPdf	01 06 03.4	-1.6
BOSA	**Boshof**	**121.85**	**218**	PKP	PKPdf	01 06 17.1	-0.5
	comp=Z,2.7nm,0.8s,baz=198,slow=3.2,SNR=4.4						
KEV	**Kevo**	**123.05**	**345**	*ep*	PKPdf	01 06 16.5	-2.0
	comp=Z,7.1nm,0.8s						
ARCES	**ARCESS Array B**	**123.58**	**345**	PKP	PKPdf	01 06 18.5	-1.0
**AR

HTR	Trewern Hill	145.24 351	*e*P		PKPdf	01 06 59.4	-0.8	
WLF	Walferdange	145.26 340	PKP		PKPdf	01 07 00.8	+0.5	
WLF	Walferdange	145.26 340	*e*PKPbc		PKPbc	01 07 00.6	+0.1	
WLF	Walferdange	145.26 340	*e*PKPdf		PKPdf	01 07 00.6	+0.2	
LANF	Langenberg	145.27 338	PKP		PKPdf	01 07 00.5	+0.1	
MCH1	Michaelchurch	145.28 351	*e*P		PKPdf	01 06 59.5	-0.8	
MCH1	comp=Z,66nm,1.0s		AMb	AMB		01 07 00.2		
PYL	PYLOS	145.28 310	P		PKPdf	01 06 57.2	-3.6	
MOTA	Moosalm	145.28 333	⇑*i*	PKPab	PKPab	01 06 59.4	-1.6	
	comp=Z,34nm,0.8s,SNR=27							
GIVF	Givet	145.29 342	⇓*i*	PKP1	PKPbc	01 07 00.2	-0.4	
	comp=Z,38nm,0.7s							
RETA	Reutte	145.32 333	⇓*i*	PKPab	PKPab	01 06 59.7	-1.4	
	comp=Z,23nm,0.9s							
DOU	Dourbes	145.37 342	PKP		PKPdf	01 07 00.5	0.0	
NVLJ	Novalja	145.47 326	P		PKPdf	01 06 59.7	-1.2	
BAIF	Baives	145.51 342	⇓*i*	PKP1	PKPbc	01 07 01.0	-0.3	
	comp=Z,80nm,1.0s							
VLS	Valsamata	145.55 313	P		PKPdf	01 07 01.2	0.0	
SWN1	Swindon	145.55 349	P		PKPdf	01 07 01.0	+0.2	
SWN1			AMb	AMB		01 07 01.4		
	comp=Z,155nm,0.9s							
SWN1	Swindon	145.55 349	*e*P		PKPdf	01 07 01.0	+0.2	
SWN1			AMb	AMB		01 07 01.4		
	comp=Z,155nm,0.9s							
HGH	Gray Hill	145.60 351	*e*P		PKPdf	01 07 00.2	-0.6	
BFO	Black Forest	145.62 337	*e*PKPbc		PKPbc	01 07 01.2	-0.5	
BFO	Black Forest	145.62 337	*e*PKPbc		PKPbc	01 07 01.2	-0.5	
WOL	Wolverton	145.64 349	P		PKPdf	01 07 00.3	-0.6	
WOL			AMb	AMB		01 07 01.4		
	comp=Z,73nm,0.9s							
WOL	Wolverton	145.64 349	*e*P		PKPdf	01 07 00.3	-0.6	
WOL			AMb	AMB		01 07 01.4		
	comp=Z,73nm,0.9s							
FETA	Feichten	145.69 333	⇑*i*	PKPbc	PKPbc	01 07 00.5	-1.4	
	comp=Z,22nm,0.7s,SNR=24							
DAVA	Damuels	145.85 334	*i*	PKPab	PKPab	01 07 02.1	-1.0	
	comp=Z,20nm,0.8s,SNR=8.7							
CDF	Champ du Feu	145.94 338	⇓*i*	PKP1	PKPbc	01 07 02.3	-0.3	
	comp=Z,54nm,0.7s							
ECH	Echery	146.15 338	PKP		PKPdf	01 07 02.4	+0.5	
ECH	Echery	146.15 338	*e*PKPdf		PKPdf	01 07 01.4	-0.5	
HEX	Exmoor	146.30 351	*e*P		PKPdf	01 07 03.0	+0.9	
MOF	Molkenrain	146.47 337	PKP		PKPdf	01 07 03.6	+1.2	
HTL	Hartland	146.47 352	*e*P		PKPdf	01 07 03.1	+0.8	
HTL			AMb	AMB		01 07 03.3		
	comp=Z,44nm,1.5s							
THEF	They Montfort	146.56 339	PKP		PKPdf	01 07 04.1	+1.5	
HINF	Hinteralfeld	146.60 338	⇓*i*	PKP1	PKPbc	01 07 03.8	-0.7	
	comp=Z,23nm,0.9s							
HAU	Haudompre	146.62 338	*e*PKP1		PKPbc	01 07 04.1	-0.5	
	comp=Z,36nm,0.8s							
MEZF	Maizieres J'vi	146.63 340	⇓*i*	PKP1	PKPbc	01 07 04.6	0.0	
	comp=Z,63nm,0.7s,baz=20							
TUE	Stuetta	146.71 334	PKPdf		PKPdf	01 07 02.7	-0.2	
TUE			*e*PKPbc		PKPbc	01 07 04.7	-0.2	
LOMF	Lomont	147.00 337	PKP		PKPdf	01 07 05.5	+2.2	
CCA1	Carnmenellis	147.35 353	P		PKPdf	01 07 04.5	+0.6	
CCA1			AMb	AMB		01 07 05.8		
	comp=Z,43nm,1.8s							
CCA1	Carnmenellis	147.35 353	*e*P		PKPdf	01 07 04.5	+0.6	
CCA1			AMb	AMB		01 07 05.8		
	comp=Z,43nm,1.8s							
TIP	Timpagrande	147.65 317	*e*PKPbc		PKPbc	01 07 07.4	-0.3	
AQU	L'Aquila	147.74 324	*e*PKPdf		PKPdf	01 07 03.5	-1.2	
AQU			*e*PKPbc		PKPbc	01 07 07.5	-0.4	
JSA	Saint Aubin	147.85 349	P		PKPdf	01 07 05.5	+0.8	
JSA			AMb	AMB		01 07 06.8		
	comp=Z,57nm,0.9s							
JSA	Saint Aubin	147.85 349	*e*P		PKPdf	01 07 05.5	+0.8	
JSA			AMb	AMB		01 07 06.8		
	comp=Z,57nm,0.9s							
CABF	La Chapelle	147.90 337	⇓*i*	PKP1	PKPbc	01 07 08.2	+0.1	
	comp=Z,104nm,0.8s							
FLN	La Foliniere	147.91 346	⇓*i*	PKP1	PKPbc	01 07 07.4	-0.7	
	comp=Z,89nm,0.8s,baz=24							
LDF	La Druitiere	147.99 346	⇓*i*	PKP1	PKPbc	01 07 07.4	-0.9	
	comp=Z,28nm,0.6s							
LOR	Lormes	148.10 340	⇓*i*	PKP1	PKPbc	01 07 08.2	-0.4	
	comp=Z,76nm,0.8s,baz=30							
GRR	Gorron	148.35 347	⇓*i*	PKP1	PKPbc	01 07 08.7	-0.5	
	comp=Z,48nm,0.6s							
SSF	Saint Saulge	148.39 341	⇓*i*	PKP1	PKPbc	01 07 09.1	-0.3	
	comp=Z,100nm,0.8s							
HYF	Humbligny	148.47 342	*e*PKP1		PKPbc	01 07 09.6	0.0	
LPL	La Plagne	148.56 335	⇓*i*	PKP1	PKPbc	01 07 10.0	+0.1	
	comp=Z,42nm,0.8s							
LPG	La Plagne	148.57 335	⇓*i*	PKP1	PKPbc	01 07 10.1	+0.2	
	comp=Z,62nm,0.9s							
SMF	Signal de Mont	148.65 340	⇓*i*	PKP1	PKPbc	01 07 09.4	-0.7	
	comp=Z,41nm,1.0s							
AVF	Avril sur Loir	148.68 340	*e*PKP1		PKPbc	01 07 09.4	-0.7	
	comp=Z,42nm,1.0s							
CEL	Celeste	148.71 316	*e*PKPbc		PKPbc	01 07 09.2	-1.3	
CEL			*e*PKPab		PKPab	01 07 14.8	-0.1	
SGMF	Saint Gilles	148.82 349	⇓*i*	PKP1	PKPbc	01 07 09.7	-0.7	
	comp=Z,57nm,0.7s							
ROSF	Rostrenen	148.87 350	⇓*i*	PKP1	PKPbc	01 07 09.8	-0.8	
	comp=Z,57nm,1.0s							
BGF	Bois d'Agland	149.05 341	⇓*i*	PKP1	PKPbc	01 07 10.6	-0.5	
	comp=Z,65nm,0.7s							
MBDF	Montbardon	149.19 334	⇓*i*	PKP1	PKPbc	01 07 11.0	-0.5	
	comp=Z,22nm,0.8s							
QUIF	Quistinic	149.26 349	⇓*i*	PKP1	PKPbc	01 07 10.6	-0.9	
	comp=Z,28nm,0.5s							
PLDF	La Plantade	149.32 339	PKP		PKPbc	01 07 12.7	+1.0	
ORIF	Oris-en-Rattie	149.39 336	⇓*i*	PKP1	PKPbc	01 07 11.7	-0.3	
	comp=Z,59nm,0.7s							
AGO	Saint Agoulin	149.41 340	PKP		PKPbc	01 07 12.7	+0.7	
SAOF	Saorge	149.46 333	PKP		PKPbc	01 07 11.4	-0.8	
TCF	Toulx Ste Croi	149.49 341	⇓*i*	PKP1	PKPbc	01 07 11.7	-0.5	
	comp=Z,83nm,1.0s							
AUTN	L'Aution	149.50 333	PKP		PKPbc	01 07 13.0	+0.7	
TOUF	Mont Tournerai	149.57 333	PKP		PKPbc	01 07 12.0	-0.4	
SSB	Saint Sauveur	149.59 338	PKP		PKPbc	01 07 12.2	-0.3	
SSB	Saint Sauveur	149.59 338	*e*PKPbc		PKPbc	01 07 12.0	-0.5	
SBF	Sospel	149.61 333	*e*PKP1		PKPbc	01 07 11.7	-0.8	
	comp=Z,85nm,0.9s							
LUCF	Luceram	149.62 333	PKP		PKPbc	01 07 11.9	-0.7	
MVIF	Mont Vial	149.70 333	PKP		PKPbc	01 07 12.1	-0.7	
PYM	Petit Puy Mans	149.71 340	PKP		PKPbc	01 07 13.7	+1.0	
REVF	Revere	149.74 333	PKP		PKPbc	01 07 12.8	0.0	
MFF	Saint Martin d	149.86 345	⇓*i*	PKP1	PKPbc	01 07 12.5	-0.5	
	comp=Z,87nm,0.7s							
PGF	Pioggiola	149.90 329	⇓*i*	PKP1	PKPbc	01 07 12.8	-0.5	
	comp=Z,168nm,0.8s							
OG26	St.-Nazaire-De	149.90 336	PKP		PKPbc	01 07 13.3	+0.1	
VIVF	Saint-Julien-l	149.91 337	⇓*i*	PKP1	PKPbc	01 07 12.9	-0.3	
	comp=Z,66nm,0.9s							
LBL	Lubilhac	150.09 339	PKP		PKPbc	01 07 15.2	+1.6	
FRF	La Foret Royal	150.19 333	⇓*i*	PKP1	PKPbc	01 07 13.2	-0.7	
	comp=Z,81nm,0.9s							
SMRF	Simiane la Rot	150.30 335	⇓*i*	PKP1	PKPbc	01 07 14.1	-0.1	
	comp=Z,95nm,0.9s							
LMR	La Mourre	150.43 333	⇓*i*	PKP1	PKPbc	01 07 13.8	-0.7	
	comp=Z,92nm,0.9s							
RJF	Les Rejaudoux	150.58 341	⇓*i*	PKP1	PKPbc	01 07 14.3	-0.5	
	comp=Z,46nm,0.8s							
CAF	Calviac	150.75 340	⇓*i*	PKP1	PKPbc	01 07 14.9	-0.3	
	comp=Z,19nm,0.7s							
LASF	Ste Croix	150.88 337	⇓*i*	PKP1	PKPbc	01 07 15.3	-0.2	
	comp=Z,81nm,0.8s							
LFF	La Frestale	151.15 342	*e*PKP1		PKPbc	01 07 15.7	-0.4	
	comp=Z,76nm,0.7s							
MTLF	Montolieu	152.10 339	⇓*i*	PKP1	PKPbc	01 07 17.8	-0.6	
	comp=Z,18nm,0.8s							
EPF	Esparros	153.00 341	*e*PKP1		PKPbc	01 07 19.6	-0.8	
	comp=Z,9.0nm,0.8s							
SJPF	Ste Jean	153.38 343	*e*PKP1		PKPbc	01 07 20.9	-0.3	
	comp=Z,14nm,0.9s							
ETSF	Etsaut	153.39 342	*e*PKP1		PKPbc	01 07 21.1	-0.1	
	comp=Z,14nm,0.7s							
KEST	Kesra	154.44 318	PKP		PKPdf	01 07 14.8	-0.4	
	comp=Z,0.6nm,0.9s,baz=7.6,slow=15,SNR=2.8							
KEST			PKPbc		PKPbc	01 07 23.6	-0.1	
	comp=Z,1.7nm,0.9s,baz=44,slow=2.4,SNR=4.1							
KEST			PKPab		PKPab	01 07 39.2	+0.3	
	comp=Z,2.1nm,0.8s,baz=356,slow=7.0,SNR=5.7							
PBRG	Braganca	155.78 352	*e*PKPab		PKPab	01 07 44.1	-0.2	
PCAB	Cabril	156.03 354	*e*PKPab		PKPab	01 07 45.3	-0.1	
PVRL	Vila Real	156.43 353	*e*PKPab		PKPab	01 07 47.1	0.0	
MVO	Moncorvo	156.45 352	*e*PKPdf		PKPdf	01 07 17.7	0.0	
MVO	Moncorvo	156.45 352	*e*PKPab		PKPab	01 07 47.2	0.0	
PVIS	Viseu	157.00 353	*e*PKPab		PKPab	01 07 49.5	-0.1	
MTE	Manteigas	157.27 353	*e*PKPab		PKPab	01 07 50.6	-0.2	
ESDC	Sonseca Array	157.32 345	PKPab		PKPab	01 07 50.8	-0.3	
	comp=Z,3.1nm,0.9s,baz=20,slow=3.7,SNR=15							
PCBR	Castelo Branco	157.81 352	*e*PKPab		PKPab	01 07 53.0	-0.1	
PTOM	Tomar	158.14 354	*e*PKPab		PKPab	01 07 54.3	-0.3	
PMRV	Marv??o	158.21 352	*e*PKPab		PKPab	01 07 54.7	-0.2	
PESTR	Estremoz	158.79 352	*e*PKPab		PKPab	01 07 57.3	-0.1	
EVO	Evora	159.17 353	*e*PKP2		PKPab	01 07 58.7	-0.4	
	comp=Z,14nm,0.8s							
EVO	Evora	159.17 353	*e*PKPab		PKPab	01 07 58.5	-0.6	
PBAR	Barrancos	159.39 350	*e*PKPab		PKPab	01 08 00.2	+0.2	
PBEJ	Beja	159.65 352	*e*PKPab		PKPab	01 08 01.5	+0.3	
PCVE	Castro Verde	160.06 352	*e*PKPab		PKPab	01 08 03.1	+0.1	
PVAQ	Vaqueiros	160.24 351	*e*PKPab		PKPab	01 08 04.3	+0.5	
PBDV	Barranco-do-Ve	160.43 352	*e*PKPab		PKPab	01 08 05.3	+0.7	

ISK ***05*** *00:54:52.6,39˚.07N×36˚.03E,h4km,MD3.5*
CSEM ***05*** *00:54:52.6,39˚.07N×36˚.03E,h4km,MD3.5,After ISK*
ISCJB ***05*** *00:54:53.3±0.8,39˚.09N±0˚.03×36˚.03E±0˚.03,h5km±7km, Error ellipse: s-maj=5.7km s-min=3.9km az=33.5*

ISC 05 00:54:54.1±0.8,39˚.09N±0˚.03×36˚.03E±0˚.04,h4km±7km, n72,σ0ᵗ65/76,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARI	SarD1z-Kayseri	0.66	128	*e*PG	Pg	00 55 07.0	+0.2
SARI				*e*SG	Sg	00 55 17.2	+1.7
SARI	SarD1z-Kayseri	0.66	128	*e*Pg	Pg	00 55 07.0	+0.2
SARI				*e*Sg	Sg	00 55 17.2	+1.7
YOZ	Yozgat	0.78	315	*e*PG	Pg	00 55 07.9	-1.1
YOZ				*e*SG	Sg	00 55 19.1	0.0
YOZ	Yozgat	0.78	315	*e*Pg	Pg	00 55 07.9	-1.1
YOZ				*e*Sg	Sg	00 55 19.1	0.0
SVSK	Karacayir	1.11	42	*e*PN	Pg	00 55 14.6	-0.8
SVSK	Karacayir	1.11	42	*e*Pn	Pg	00 55 14.6	-0.8
TOKT	Tokat	1.29	18	*e*PN	Pn	00 55 17.9	-0.9
TOKT	Tokat	1.29	18	*e*Pn	Pn	00 55 17.9	-0.9
DARE	Darende-Malaty	1.39	95	*e*PN	Pn	00 55 16.7	-3.5
DARE	Darende-Malaty	1.39	95	*e*Pn	Pn	00 55 16.7	-3.5
CORM	Corum	1.53	315	*e*PN	Pn	00 55 21.6	-0.5
CORM	Corum	1.53	315	*e*Pn	Pn	00 55 21.7	-0.5
KOZT	Kozan	1.62	186	*e*PN	Pn	00 55 21.9	-1.5
RSDY	Resadiye-TOKAT	1.64	37	*e*PN	Pn	00 55 23.3	-0.3
RSDY	Resadiye-TOKAT	1.64	37	*e*Pn	Pn	00 55 23.3	-0.4
KMRS	Kahramanmaras	1.73	156	*e*PN	Pn	00 55 24.1	-0.7
KMRS	Kahramanmaras	1.73	156	*e*Pn	Pn	00 55 24.1	-0.7
KARA	Karaisali	1.98	203	*e*PN	Pn	00 55 27.7	-0.7
KARA	Karaisali	1.98	203	*e*Pn	Pn	00 55 27.7	-0.7
KVT	Kavak	1.98	0	*e*PN	Pn	00 55 28.3	-0.1
KVT	Kavak	1.98	0	*e*Pn	Pn	00 55 28.3	-0.1
MYA	Malataya	2.02	112	*e*PN	Pn	00 55 28.3	-0.6
MYA	Malataya	2.02	112	*e*Pn	Pn	00 55 28.3	-0.6
CEYT	Ceyhan	2.09	186	*e*PN	Pn	00 55 29.6	-0.2
CEYT	Ceyhan	2.09	186	*e*Pn	Pn	00 55 29.7	-0.2
GAZ	Gaziantep	2.13	154	*e*PN	Pn	00 55 30.1	-0.3
GAZ	Gaziantep	2.13	154	*e*Pn	Pn	00 55 30.1	-0.3
SULT	Sultanhani-AKS	2.16	246	*e*PN	Pn	00 55 30.5	-0.3
SULT	Sultanhani-AKS	2.16	246	*e*Pn	Pn	00 55 30.5	-0.3
CANT	Cankiri	2.39	310	*e*PN	Pn	00 55 34.0	0.0
TOS	Tosya	2.48	322	*e*PN	Pn	00 55 35.3	+0.2
TOS	Tosya	2.48	322	*e*Pn	Pn	00 55 35.3	+0.1
BYBT	Boyabat	2.56	338	*e*PN	Pn	00 55 36.6	+0.3
BYBT	Boyabat	2.56	338	*e*Pn	Pn	00 55 36.7	+0.4
PTK	Pertek	2.63	93	*e*PN	Pn	00 55 37.5	+0.3
PTK	Pertek	2.63	93	*e*Pn	Pn	00 55 37.5	+0.3
LOD	Lodumlu	2.65	288	*e*PN	Pn	00 55 37.6	+0.1
LOD	Lodumlu	2.65	288	*e*Pn	Pn	00 55 37.6	+0.1
EZC	Erzincan	2.66	75	*e*PN	Pn	00 55 37.5	-0.1
SVRC	Sivrice-ELAZID	2.66	105	*e*PN	Pn	00 55 37.5	-0.1
SVRC	Sivrice-ELAZID	2.66	105	*e*Pn	Pn	00 55 37.5	-0.2
URFA	Urfa	2.75	126	*e*PN	Pn	00 55 38.8	0.0
URFA	Urfa	2.75	126	*e*Pn	Pn	00 55 38.8	-0.1
HTY	Hatay	2.97	178	*e*PN	Pn	00 55 41.5	-0.5
HTY	Hatay	2.97	178	*e*Pn	Pn	00 55 41.5	-0.4
GUMT	Gumushane	2.99	62	*e*PN	Pn	00 55 42.3	+0.2
GUMT	Gumushane	2.99	62	*e*Pn	Pn	00 55 42.3	+0.1
LADK	Ladik-KONYA	3.01	254	*e*PN	Pn	00 55 42.4	0.0
LADK	Ladik-KONYA	3.01	254	*e*Pn	Pn	00 55 42.4	0.0
KONT	Konya--Tatoy	3.10	249	*e*PN	Pn	00 55 43.9	+0.1
KONT	Konya--Tatoy	3.10	249	*e*Pn	Pn	00 55 43.9	+0.2
KIZT	Kizilcal	3.24	268	*e*PN	Pn	00 55 45.8	+0.1
KIZT	Kizilcal	3.24	268	*e*Pn	Pn	00 55 45.8	+0.1
BZK	Bozkurt	3.25	332	*e*PN	Pn	00 55 46.3	+0.4
BZK	Bozkurt	3.25	332	*e*Pn	Pn	00 55 46.3	+0.5
SAFT	Safranbolu	3.34	311	*e*PN	Pn	00 55 47.6	+0.6
SAFT	Safranbolu	3.34	311	*e*Pn	Pn	00 55 47.6	+0.6
IKL	Isikli	3.40	214	*e*PN	Pn	00 55 48.0	+0.1
IKL	Isikli	3.40	214	*e*Pn	Pn	00 55 48.0	+0.1
BINT	Bingol	3.48	92	*e*PN	Pn	00 55 49.8	+0.8
BINT	Bingol	3.48	92	*e*Pn	Pn	00 55 49.8	+0.8
HDMB	Hadim	3.52	234	*e*PN	Pn	00 55 49.8	+0.4
HDMB	Hadim	3.52	234	*e*Pn	Pn	00 55 49.8	+0.4
SVRH	Sivrihisar-ESK	3.52	277	*e*PN	Pn	00 55 49.9	+0.5
SVRH	Sivrihisar-ESK	3.52	277	*e*Pn	Pn	00 55 49.9	+0.4
MDU	Mudurnu	3.96	292	*e*PN	Pn	00 55 55.9	+0.4
MDU	Mudurnu	3.96	292	*e*Pn	Pn	00 55 55.9	+0.4
ESKT	Eskisehir	4.04	278	*e*PN	Pn	00 55 57.6	+1.0
ESKT	Eskisehir	4.04	278	*e*Pn	Pn	00 55 57.7	+1.0
EZM	Erzurum	4.20	77	*e*PN	Pn	00 55 59.8	+1.0
GULT	Gulveren	4.46	289	*e*PN	Pn	00 56 03.3	+1.0
GULT	Gulveren	4.46	289	*e*Pn	Pn	00 56 03.3	+0.9

NIED ***05*** *01:00:00,27˚.00N×126˚.50E,h8km,Mw5.1 Best double couple: M₀5.83000×10¹⁶ NP1:φ₀271.00000°,δ71.00000°, λ-32.00000°. NP2:φ₀12.00000°,δ60.00000°, λ-158.00000°.*
JMA ***05*** *01:00:43.0±0.2,26˚.98N×126˚.51E,h14km±3km,M5.2*
JMA Felt I J1.
IDC ***05*** *01:00:43.8±0.5,26˚.82N×126˚.29E,h0km,mb4.4/19, mb1 4.5/20,mb1mx4.4/26,mbtmp4.4/20,MS4.7/22, Ms1 4.7/22,ms1mx4.5/30,Error ellipse: s-maj=19.1km s-min=13.1km az=78.0*
ISCJB ***05*** *01:00:44.5±0.9,26˚.94N±0˚.02×126˚.53E±0˚.02,h14km±6km, mb4.8/90,MS4.9/41,Error ellipse: s-maj=3.6km s-min=2.9km az=11.1*
NEIC ***05*** *01:00:46.6±0.2,26˚.99N×126˚.48E,mb5.0/50, MW5.1(NIED),Error ellipse: s-maj=6.4km s-min=4.3km az=139.0*
NEIC Recorded [1 JMA] on Kume-jima.
MOS ***05*** *01:00:47.4±1.1,26˚.91N×126˚.23E,h33km,mb5.1/36, MS5.1/18,Error ellipse: s-maj=10.7km s-min=6.4km az=115.1*
GCMT ***05*** *01:00:47.4±0.2,26˚.90N×126˚.49E,h12km,MW5.2, Moment Tensor Solution. s44,c62; s88,c159; Moment tensor: Scale 10¹⁶Nm; Mrr-1.46±.13; Mθθ2.05±.12; Mφφ-0.59±.13; Mrθ2.36±.35; Mθφ5.94±.10; Mφr-1.02±.36; Best double couple: M₀6.70000×10¹⁶ NP1:φ₀9.00000°, δ66.00000°,λ-168.00000°. NP2:φ₀273.00000°, δ79.00000°,λ-24.00000°. Principal axes: T 6.9900, Plg9.0000°, Azm323.0000°; N -0.5800, Plg63.0000°, Azm70.0000°; P -6.4200, Plg25.0000°, Azm229.0000°; Data Used: lI IU IC G CN.*
BJI ***05*** *01:00:48.9,27˚.01N×126˚.42E,h43km,mB5.0/41,mb4.7/54, ML5.0/2,Ms5.2/63,Ms7 5.1/56*

ISC 05 01:00:45.1±0.7,26˚.92N±0˚.02×126˚.60E±0˚.02,h10km±4km, n367,σ0ᵗ95/373,mb4.8/90,MS4.9/41,66C-68D,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	Kume jima 2	0.62	164	P	Pg	01 00 56.2	-0.9
JKE				S	Sg	01 01 05.4	+0.2
JAGN	Aguni-jima	0.67	120	P	Pg	01 00 57.4	-0.6
JAGN				S	Sg	01 01 07.1	+0.3
NAH1	Naha	1.22	126	P	Pn	01 01 06.8	-1.4
NAH1				S	Sb	01 01 24.1	+0.2
JIH	Iheya	1.23	85	P	Pn	01 01 06.2	-2.2
JIH				S	Sb	01 01 24.4	0.0
JJT2	Tamagusuku 2	1.30	127	P	Pn	01 01 08.2	-1.1
JJT2				S	Sb	01 01 26.9	+0.6
JOW	Kunigami	1.50	93	P	Pn	01 01 10.4	-1.7
JOW				S	Sn	01 01 31.7	-0.1
JTK	Tokunoshima	2.26	67	P	Pn	01 01 21.6	-1.0
JOGS	Gusukube	2.41	207	P	Pn	01 01 22.9	-1.6
JTJ	Tarama	2.84	217	P	Pn	01 01 30.4	-0.2
JAM	Amami Oshima	3.05	60	P	Pn	01 01 33.1	-0.4
JZK	Kikaishima	3.30	64	P	Pn	01 01 36.5	-0.4
JIJ	Ishigaki jima	3.38	221	P	Pn	01 01 37.5	-0.4
JIJ				S	Sn	01 02 16.5	-1.5
JKRS	Kuro-shima	3.55	222	P	Pn	01 01 41.3	+1.0
IRIF	Iriomote-Funau	3.65	226	P	Pn	01 01 42.3	+0.6
HATJ	Hateruma jima	3.81	222	P	Pn	01 01 43.4	-0.4
HATJ				S	Sn	01 02 29.2	+0.5
YOJ	Yonaguni jima	4.06	234	P	Pn	01 01 50.6	+3.3
JNN	Nakanoshima	4.10	44	P	Pn	01 01 52.3	+4.5
JMZ	Minamidaito 2	4.29	104	P	Pn	01 01 48.1	-2.4
JMZ				*e*S	Sn	01 02 35.7	-5.0
TATO	Taipei	4.99	248	*e*Pn	Pn	01 02 00.8	+0.7
YHNB	Yeheng	5.21	246	*e*Pn	Pn	01 02 03.9	+0.8
NACB	Ninganchiao	5.28	240	*e*Pn	Pn	01 02 04.7	+0.6
YULB	Yu-li	5.95	235	*e*Pn	Pn	01 02 13.9	+0.7
SSLB	Suanglung	5.98	240	*e*Pn	Pn	01 02 15.6	+1.9
JZO	Okuchi	6.26	33	P	Pn	01 02 22.7	+5.2
SSE	Sheshan	6.30	313	*e*P	Pn	01 02 16.2	-1.9
SSE				S	Sn	01 03 27.2	-2.9
SSE				pmax	pmax		
	comp=Z,23nm,0.7s						
SSE				pmax	pmax		
	comp=Z,360nm,8.3s						
SSE				smax			
	comp=N,940nm,1.3s						
SSE				smax			
	comp=E,590nm,1.6s						
SSE				LR	LR		
	comp=N,4μm,10.3s						
SSE				LR	LR		
	comp=E,11μm,10.3s						
SSE				LR	LR		
	comp=Z,11μm,11.3s						
TWG	Pinlang	6.47	232	*e*Pn	Pn	01 02 20.0	-0.4
	comp=Z,143nm,0.9s						
TPUB	Ta-pu	6.50	238	*e*Pn	Pn	01 02 22.8	+2.0
QZH	Quanzhou	7.47	256	⇑*i*	Pn	01 02 40.0	+5.8
QZH				LR	LR		
	comp=N,17μm,8.9s						
QZH				LR	LR		
	comp=E,14μm,8.5s						
QZH				LR	LR		
	comp=Z,14μm,10.0s						
NJ2	Nanjing	8.46	309	*e*P	Pn	01 02 49.3	+1.5
NJ2				sP		01 03 05.0	
NJ2				S	Sn	01 04 20.5	-2.8
NJ2				PcP	PcP	01 09 20.8	+2.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,220nm,5.4s						
NJ2				LR	LR		
	comp=N,12μm,11.4s						
NJ2				LR	LR		
	comp=E,12μm,10.4s						
NJ2				LR	LR		
	comp=Z,15μm,12.4s						
INCN	Inchon	10.53	0	*e*Pn	Pn	01 03 18.3	+2.2
	comp=Z,38nm,0.8s						
INCN				*e*S	Sn	01 05 30.9	+17
KSRS	Korea Array	10.56	6	Pn	Pn	01 03 18.8	+2.3
	baz=190,slow=12,SNR=8.0						
KSRS				LR	LR	01 07 30.1	
	comp=Z,2μm,21.3s,baz=189,slow=38						
WHN	Wuhan	11.34	291	P	Pn	01 03 30.5	+3.4
WHN				S	Sn	01 05 37.4	+3.5
WHN				LR	LR		
	comp=N,14μm,7.2s						
WHN				LR	LR		
	comp=E,21μm,12.6s						
WHN			

GYA LR LR
comp=Z,7μm,13.9s
MDJ Mudanjiang 17.82 7 P **Pn** **01 04 56.1 +3.0**
MDJ pP pP 01 05 07.1 +10
MDJ sP sP 01 05 13.2 +15
MDJ S **Sn** **01 08 14.9 +3.2**
MDJ PcP PcP 01 09 30.5 +0.5
MDJ ScP ScP 01 13 00.3 -5.0
MDJ PcS PcS 01 13 05.2 -1.0
MDJ pmax pmax
comp=Z,18nm,1.5s
MDJ pmax pmax
comp=Z,320nm,5.0s
MDJ LR LR
comp=N,2μm,14.6s
MDJ LR LR
comp=E,6μm,13.4s
MDJ LR LR
comp=Z,4μm,12.2s
HHC Hu-ho-hao-te 18.63 322 *e*P **Pn** **01 05 03.6 +0.5**
HHC pP pP 01 05 15.4 +10
HHC sP sP 01 05 23.4 +16
HHC *e*S **Sn** **01 08 24.1 -7.4**
HHC sS sS 01 08 40.7 +1.1
HHC SS 01 08 48.8
HHC PcP PcP 01 09 32.8 +1.4
HHC PcS PcS 01 13 08.6 +0.5
HHC pmax pmax
comp=Z,27nm,1.2s
HHC pmax pmax
comp=Z,840nm,9.4s
HHC LR LR
comp=N,4μm,11.6s
HHC LR LR
comp=E,3μm,13.6s
HHC LR LR
comp=Z,5μm,11.8s
BTO Baotou 19.35 319 *e*P **Pn** **01 05 10.2 -1.6**
DAV Davao City (W) 19.77 183 LR LR 01 11 23.5
comp=Z,1μm,20.7s,baz=354,slow=32
ERM Erimo 20.27 38 *e*P **P** **01 05 28.9 +8.2**
ERM pmax pmax
comp=Z,15nm,1.2s
CD2 Chengdu 20.37 287 ⇑P **P** **01 05 21.7 -0.3**
CD2 pP 01 05 35.2
CD2 PP 01 05 43.3
CD2 S **S** **01 09 01.5 -8.8**
CD2 sS sS 01 09 19.8 +5.0
CD2 SS 01 09 31.9
CD2 pmax pmax
comp=Z,190nm,1.1s
CD2 pmax pmax
comp=Z,250nm,5.1s
CD2 LR LR
comp=N,15μm,11.7s,MS5.6
CD2 LR LR
comp=E,9μm,12.2s,MS5.6
CD2 LR LR
comp=Z,8μm,13.1s,MS5.3
LZH Lanzhou 21.40 301 P **P** **01 05 33.7 +0.7**
LZH pP 01 05 44.5
LZH sP sP 01 05 51.1 +14
LZH PP 01 05 59.2
LZH S **S** **01 09 20.0 -11**
LZH sS sS 01 09 42.7 +7.6
LZH SS 01 09 58.0
LZH pmax pmax
comp=Z,85nm,1.3s,mb4.9
LZH pmax pmax
comp=Z,290nm,4.0s
LZH LR LR
comp=N,5μm,11.0s
LZH LR LR
comp=Z,5μm,13.0s,MS5.1
KMI Kunming 21.51 271 P **P** **01 05 35.4 +1.1**
KMI pP 01 05 47.7
KMI sP sP 01 05 55.0 +17
KMI PP 01 06 00.7
KMI S **S** **01 09 22.7 -10**
KMI PcP PcP 01 09 39.0 +2.0
KMI sS sS 01 09 45.2 +7.9
KMI SS 01 10 00.1
KMI pmax pmax
comp=Z,37nm,1.3s,mb4.7
KMI pmax pmax
comp=Z,160nm,3.1s
KMI LR LR
comp=N,7μm,12.5s,MS5.4
KMI LR LR
comp=E,5μm,10.4s,MS5.4
KMI LR LR
comp=Z,4μm,11.5s,MS5.1
GUMO Guam 21.64 124 *e*P **P** **01 05 39.6 +3.9**
comp=Z,100nm,1.2s,mb5.1
GUMO Guam 21.64 124 LR LR 01 14 20.9
comp=Z,638nm,18.4s,MS4.1,baz=120,slow=38
GUMO Guam 21.64 124 *e*P **P** **01 05 40.4 +4.7**
GUMO pmax pmax
comp=Z,184nm,1.5s,mb5.3
HABR Khabarovsk 22.50 15 *e*P **P** **01 05 58.4 +14**
HABR *e* 01 06 12.3
HABR *e* 01 09 36.5
HABR *e*S **S** **01 09 52.6 +0.9**
HABR *e*SS 01 10 27.2
HABR *e* 01 16 55.6
HABR MLR MLR
comp=Z,2μm,17.0s,MS4.6
KLR Kul'dur 22.63 9 *e*P **P** **01 05 42.0 -4.0**
KLR *e*S **S** **01 09 49.0 -5.1**
KLR smax
comp=N,600nm,11.5s
KLR smax
comp=E,1μm,11.5s
KLR MLR MLR
comp=N,2μm,11.0s
KLR MLR MLR
comp=Z,4μm,11.0s,MS5.1
KKM Kota Kinabalu 23.00 207 P **P** **01 05 51.6 +1.4**
comp=Z,88nm,1.3s,mb5.0
YUK Yuzh-Kuril'sk 23.09 37⇑ *i*P **P** **01 05 43.4 -7.6**
YUK *i* 01 06 20.1
YUK *i* S **S** **01 10 03.8 +1.8**
YUK pmax pmax
comp=N,80nm,5.0s
YUK pmax pmax
comp=E,50nm,5.0s
YUK pmax pmax
comp=Z,30nm,5.0s
YUK smax
comp=N,190nm,9.0s
YUK smax
comp=E,230nm,9.0s
YUK MLR MLR
comp=N,1μm,21.0s,MS4.6
YUK MLR MLR
comp=E,2μm,21.0s,MS4.6
YUK MLR MLR
comp=Z,1μm,21.0s,MS4.4
YSS Yuzh-Sakhalins 23.71 28 *e*P **P** **01 05 57.6 +0.4**
comp=Z,12nm,1.4s,mb4.1
YSS Yuzh-Sakhalins 23.71 28 *e*P **P** **01 06 04.3 +7.0**
YSS *e**PP 01 06 18.3
YSS *e*S **S** **01 10 14.0 +1.9**
YSS MLR MLR
comp=N,700nm,13.0s,MS4.8
YSS MLR MLR
comp=Z,2μm,13.0s,MS4.9
YSS MLR MLR
comp=E,2μm,12.0s,MS4.8
GTA Gaotai 25.54 306 ⇑P **P** **01 06 12.9 -1.1**
GTA pP pP 01 06 27.3 +10
GTA sP sP 01 06 34.8 +17
GTA S **S** **01 10 35.0 -6.6**
GTA pmax pmax
comp=Z,39nm,1.3s,mb4.8
GTA pmax pmax
comp=Z,250nm,5.7s
GTA LR LR
comp=N,3μm,16.5s,MS5.1
GTA LR LR
comp=E,3μm,15.3s,MS5.1
GTA LR LR
comp=Z,5μm,14.7s,MS5.1
ULN Ulaanbaatar 25.90 329 *e*P **P** **01 06 17.0 -0.1**
comp=Z,36nm,1.2s,mb4.8
ULN Ulaanbaatar 25.90 329 *e*P **P** **01 06 17.0 -0.2**
ULN pmax pmax
comp=Z,36nm,1.2s,mb4.8
SONM Songino Array 26.19 328 P **P** **01 06 19.4 -0.3**
comp=Z,24nm,1.1s,mb4.6,baz=144,slow=9.4,SNR=71
SONM ScP ScP 01 13 29.9 +3.5
comp=Z,0.3nm,0.3s,baz=108,slow=3.2,SNR=3.8
SONM LR LR 01 17 46.0
comp=Z,3μm,19.3s,MS4.8,baz=54,slow=39
CHTO Chiang Mai 26.68 258 *e*P **P** **01 06 24.6 +0.1**
comp=Z,17nm,1.2s,mb4.4
CHTO Chiang Mai 26.68 258 *e*P **P** **01 06 24.6 +0.1**
CHTO pmax pmax
comp=Z,17nm,1.2s,mb4.5
CMAR Chiang Mai Arr 26.82 257 P **P** **01 06 23.6 -2.2**
comp=Z,0.8nm,0.3s,mb3.7,baz=64,slow=7.3,SNR=4.5
CMAR LR LR 01 18 16.6
comp=Z,1μm,18.9s,MS4.5,baz=67,slow=40
CMAR Chiang Mai Arr 26.82 257 P **P** **01 06 23.6 -2.2**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR MLR MLR
comp=Z,1μm,18.9s
ZAK Zakamensk 29.43 329 *e*P **P** **01 06 47.8 -1.0**
ZAK *e* 01 08 00.2
ZAK pmax pmax
comp=Z,5.0nm,1.4s,mb4.0
KSM Kuching 29.75 214 *e*P **P** **01 06 52.5 +0.7**
TLY Talaya 30.20 331 *e*P **P** **01 06 55.6 +0.2**
comp=Z,20nm,0.9s,mb4.9
TLY *e* 01 07 09.1
TLY Talaya 30.20 331 *e*P **P** **01 06 53.8 -1.7**
TLY *e* 01 07 08.1
TLY *e*S **S** **01 11 41.1 -14**
TLY pmax pmax
comp=Z,18nm,1.1s,mb4.7
TLY MLR MLR
comp=Z,1μm,18.0s,MS4.7
MOY Mondy 31.37 329 *e*P **P** **01 07 05.8 0.0**
MOY pmax pmax
comp=Z,53nm,2.1s,mb5.0
PETK Petropavlovsk- 34.89 33 LR LR 01 21 15.1
comp=Z,917nm,21.7s,MS4.5,baz=228,slow=35
YAK Yakutsk 35.16 3 *e*P sP 01 07 51.5 +8.4
YAK pmax pmax
comp=Z,17nm,0.9s,mb5.0
YAK pmax pmax
comp=N,15nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.2s
WMQ Urumqi 35.54 309 P **P** **01 07 42.1 -0.2**
WMQ pP pP 01 07 57.2 +12
WMQ sP sP 01 08 04.4 +18
WMQ PP PP 01 09 02.8 -0.1
WMQ PcP PcP 01 10 11.8 +0.5
WMQ ScP ScP 01 13 51.1 -6.3
WMQ SS SS 01 15 31.1 -21
WMQ ScS ScS 01 17 53.9 -8.0
WMQ pmax pmax
comp=Z,25nm,1.3s,mb5.0
WMQ pmax pmax
comp=Z,140nm,4.8s
WMQ LR LR
comp=N,2μm,18.4s,MS5.0
WMQ LR LR
comp=E,2μm,20.0s,MS5.0
WMQ LR LR
comp=Z,2μm,21.1s,MS4.8
PSI Prapat 35.74 233 P **P** **01 07 43.1 -1.3**
comp=Z,25nm,1.0s,mb5.1,baz=20,slow=3.3,SNR=10
PSI Prapat 35.74 233 P **P** **01 07 43.1 -1.2**
PSI pmax pmax
comp=Z,25nm,1.0s,mb5.1
MK31 Makanchi Array 39.98 312 *e*P **P** **01 08 19.0 -0.9**
MK31 Makanchi Array 39.98 312 *i*P **P** **01 08 18.9 -0.9**
MK31 pmax pmax
comp=Z,12nm,0.7s,mb4.7
MKAR Makanchi Array 39.98 312 P **P** **01 08 18.8 -1.1**
MKAR LR LR 01 26 01.4
MKAR Makanchi Array 39.98 312 P **P** **01 08 18.8 -1.0**
comp=Z,8.5nm,0.7s,mb4.6,baz=98,slow=9.8,SNR=56
MKAR LR LR 01 26 01.4
comp=Z,1μm,18.2s,MS4.8,baz=109,slow=38
MKAR Makanchi Array 39.98 312 *i*P **P** **01 08 18.8 -1.0**
MKAR pmax pmax
comp=Z,9.0nm,0.7s
ZAA0 Zalesovo Array 40.81 323 *e*P **P** **01 08 25.0 -1.6**
ZALV Zalesovo Beam 40.81 323 P **P** **01 08 25.4 -1.2**
ZALV ScP ScP 01 14 19.6 +2.4
ZALV LR LR 01 26 46.1
ZALV Zalesovo Beam 40.81 323 P **P** **01 08 25.4 -1.2**
comp=Z,5.9nm,0.7s,mb4.3,baz=110,slow=7.9,SNR=28
ZALV ScP ScP 01 14 19.6 +2.4
comp=Z,0.3nm,0.3s,baz=101,slow=3.0,SNR=3.7
ZALV LR LR 01 26 46.1
comp=Z,1μm,18.5s,MS4.9,baz=103,slow=38
NVS Novosibirsk 42.02 324⇓ *i*P **P** **01 08 35.5 -1.0**
NVS pmax pmax
comp=N,19nm,1.7s
NVS pmax pmax
comp=E,34nm,1.7s
NVS pmax pmax
comp=Z,36nm,1.7s,mb4.7
KURK Kurchatov 43.31 316 *e*P **P** **01 08 45.5 -1.5**
comp=Z,44nm,1.1s,mb5.1
KURK Kurchatov 43.31 316 *e*P **P** **01 08 45.4 -1.6**
KURK pmax pmax
comp=Z,55nm,1.2s,mb5.2
KSH Kashi 43.65 300 *e*P **P** **01 08 52.9 +3.0**
KSH *e*pP pP 01 09 08.1 +15
KSH *e*PP PP 01 10 37.0 +5.6
KSH *e*PcP PcP 01 10 40.1 +2.9
KSH *e*ScP ScP 01 14 25.1 -3.8
KSH *e*PcS PcS 01 14 29.4 -0.5
KSH *e*S **S** **01 15 17.5 -2.1**
KSH *e*sS sS 01 15 43.7 +19
KSH *e*SS SS 01 18 26.0 -8.7
KSH *e*ScS ScS 01 18 44.2 -5.5
KSH pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
KSH pmax pmax
comp=Z,16nm,4.9s
KSH LR LR
comp=N,750nm,10.9s,MS5.0
KSH LR LR
comp=E,840nm,13.8s,MS5.0
KSH LR LR
comp=Z,980nm,12.1s,MS4.9
TKM2 Tokmak 2 44.08 305 *e*P **P** **01 08 53.1 -0.3**
comp=Z,527nm,0.6s
FITZ Fitzroy Crossi 44.77 181 *e*P **P** **01 08 58.4 -0.6**
comp=Z,16nm,0.9s,mb4.9
FITZ Fitzroy Crossi 44.77 181 *e*P **P** **01 08 58.9 0.0**
comp=Z,11nm,0.9s,mb4.7
FITZ Fitzroy Crossi 44.77 181 P **P** **01 08 57.6 -1.4**
comp=Z,7.4nm,0.8s,mb4.6,baz=16,slow=5.8,SNR=16
TIXI Tiksi 44.78 1 *e*P **P** **01 09 00.7 +2.1**
TIXI pmax pmax
comp=Z,16nm,1.4s,mb4.7
TIXI MLR MLR
comp=Z,2μm,11.0s,MS5.3
AAK Ala-Archa 44.87 304 *e*P **P** **01 08 58.5 -1.2**
EKS2 Erkin-Say 45.40 304 *e*P **P** **01 09 03.4 -0.5**
comp=Z,8.9nm,1.1s,mb4.5
AML Almayashu 45.44 304 *e*P **P** **01 09 05.2 +1.0**
comp=Z,8.6nm,0.9s,mb4.6
WRAB Tennant Creek 47.18 170 *e*P **P** **01 09 18.4 +0.4**
comp=Z,9.8nm,1.2s,mb4.6
WRAB Tennant Creek 47.18 170 *e*P **P** **01 09 18.4 +0.4**
WRAB pmax pmax
comp=Z,16nm,1.2s,mb4.8
VOSK Vostochnaya 48.38 318 P **P** **01 09 25.3 -1.7**
VOSK pmax pmax
comp=Z,16nm,1.2s,mb4.9
COCO West Island 48.44 220 *i*P **P** **01 09 32.0 +4.1**
BVA0 Borovoye Array 48.78 318 *i*P **P** **01 09 29.4 -0.7**
BVA0 pmax pmax
comp=Z,7.0nm,1.6s,mb4.4
BVAR Borovoye Array 48.78 318 P **P** **01 09 29.1 -1.1**
comp=Z,11nm,1.1s,mb4.8,baz=95,slow=7.4,SNR=32
BVAR Borovoye Array 48.78 318 P **P** **01 09 29.1 -1.0**
BVAR pmax pmax
comp=Z,11nm,1.1s
BRVK Borovoye 48.85 318 *e*P **P** **01 09 29.5 -1.2**
comp=Z,33nm,1.1s,mb5.3
BRVK Borovoye 48.85 318 *e*P **P** **01 09 29.9 -0.8**
BRVK pmax pmax
comp=Z,41nm,1.2s,mb5.3
KBL Kabul 49.48 294 *e*P **P** **01 09 36.0 +0.2**
comp=Z,32nm,1.4s,mb5.2
KBL Kabul 49.48 294 *e*P **P** **01 09 36.0 +0.2**
KBL pmax pmax
comp=Z,32nm,1.4s,mb5.2
ZRNK Zerenda 49.60 318 *i*P **P** **01 09 35.1 -1.3**
ZRNK pmax pmax
comp=Z,36nm,1.3s,mb5.2
CTA Charters Tower 50.47 156 P **P** **01 09 44.0 +0.7**
CTA Charters Tower 50.47 156 P **P** **01 09 44.0 +0.7**
comp=Z,2.5nm,0.4s,mb4.6,baz=326,slow=7.7,SNR=4.3
CTA Charters Tower 50.47 156 P **P** **01 09 44.0 +0.7**
CTA pmax pmax
comp=Z,3.0nm,0.4s
CTAO Charters Tower 50.47 156 *e*P **P** **01 09 44.6 +1.3**
comp=Z,24nm,1.4s,mb5.0
CTAO Charters Tower 50.47 156 *e*P **P** **01 09 44.6 +1.3**
CTAO pmax pmax
comp=Z,24nm,1.4s,mb5.0
ASAR Alice Springs 50.79 171 P **P** **01 09 46.1 +0.5**
comp=Z,2.9nm,0.8s,mb4.3,baz=359,slow=8.0,SNR=21
ASAR Alice Springs 50.79 171 P **P** **01 09 46.1 +0.5**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
SVE Sverdlovsk 54.82 322 *e*P **P** **01 10 15.5 +0.4**
SVE *e*S **S** **01 17 49.0 -6.9**
SVE pmax pmax
comp=Z,23nm,1.3s,mb5.0
SVE MLR MLR
comp=Z,4μm,16.0s,MS5.5
AB31 Akbulak array 55.10 313 *i*P **P** **01 10 16.4 -0.9**
AB31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
ABKAR Akbulak array 55.10 313 *e*P **P** **01 10 16.4 -0.9**
comp=Z,2.8nm,0.5s,mb4.5
ABKAR *e*pP pP 01 10 21.6 +1.1
ARU Arti 55.94 322 *e*P **P** **01 10 23.0 -0.2**
comp=Z,15nm,1.1s,mb4.9
ARU Arti 55.94 322 *d i*P **P** **01 10 22.6 -0.6**
ARU *d* 01 12 29.6
ARU S **S** **01 18 04.7 -6.3**
ARU pmax pmax
comp=Z,16nm,1.7s,mb4.8
ARU MLR MLR
comp=Z,3μm,19.0s,MS5.5
AKTO Aktyubinsk 56.30 314 LR LR 01 36 48.9
comp=Z,839nm,21.6s,MS4.8,baz=106,slow=38
FORT Forrest 57.39 179 *e*P **P** **01 10 34.1 +0.4**
comp=Z,10nm,0.8s,mb4.9
STKA Stephens Creek 60.20 165 *e*P **P** **01 10 53.0 -0.2**
comp=Z,6.2nm,0.9s,mb4.6
STKA Stephens Creek 60.20 165 P **P** **01 10 52.9 -0.3**
STKA LR LR 01 35 05.5
STKA Stephens Creek 60.20 165 P **P** **01 10 52.9 -0.3**
comp=Z,9.0nm,1.0s,mb4.8,baz=356,slow=6.8,SNR=7.8
STKA LR LR 01 35 05.5
comp=Z,548nm,20.6s,MS4.7,baz=355,slow=34
TTA Tatalina 60.68 31 *e*P **P** **01 11 00.3 +4.0**
DZM Mont Dzumac 62.12 138 *e*S **S** **01 19 38.3 +6.4**
comp=Z,305nm,26.6s
DZM *e*LR LR 01 29 46.9
comp=Z,1μm,24.7s
PPLA Purkeypile 62.43 31 P **P** **01 11 10.3 +2.2**
comp=Z,27nm,1.7s,mb5.1
KDAK Kodiak Island 62.83 36 P **P** **01 11 12.0 +1.2**
KDAK Kodiak Island 62.83 36 P **P** **01 11 12.0 +1.2**
comp=Z,14nm,0.8s,mb5.2,baz=259,slow=3.2,SNR=6.9
KDAK Kodiak Island 62.83 36 P **P** **01 11 12.0 +1.2**
KDAK pmax pmax
comp=Z,14nm,0.8s,mb5.1
BPAW Bear Paw Mtn. 62.85 29 *e*P **P** **01 11 12.4 +1.6**
comp=Z,26nm,1.7s,mb5.1
ILAR Eielson Array 64.52 28 P **P** **01 11 24.6 +2.7**
comp=Z,0.8nm,0.7s,mb3.8,baz=260,slow=4.4,SNR=5.9
ILAR LR LR 01 41 07.4
comp=Z,248nm,19.2s,MS4.4,baz=121,slow=37
ILAR Eielson Array 64.52 28 P **P** **01 11 24.6 +2.7**
ILAR pmax pmax
comp=Z,1.0nm,0.7s
ILAR MLR MLR
comp=Z,248nm,19.2s
BMRM Bremner River 66.28 32 *e*P **P** **01 11 35.0 +1.8**
comp=Z,12nm,1.0s,mb4.9
VRHR Novokhopersk 66.49 317 *e*P **P** **01 11 32.9 -1.9**
VRHR *e* 01 11 41.7
VRHR *e* 01 11 50.4
VRHR pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
VRHR pmax pmax
comp=N,5.0nm,0.6s
VRHR pmax pmax
comp=E,3.0nm,0.6s
APA Apatity 66.62 335⇑ *e*P **P** **01 11 34.7 -0.7**
APA *i* 01 11 51.0
APA MLR MLR
comp=Z,2μm,15.0s,MS5.4
EGAK Eagle 66.92 28 P **P** **01 11 36.6 -0.8**
comp=Z,9.9nm,1.3s,mb4.7
EGAK *e* pP 01 11 41.1 +0.5
ZEI Tsey 67.15 308 *e*P **P** **01 11 36.4 -2.8**
ZEI pmax pmax
comp=Z,11nm,0.6s,mb5.1
GNI Garni 67.28 305 LR LR 01 44 43.1
comp=Z,628nm,18.6s,MS4.9,baz=307,slow=39
MOS Moscow 67.64 322 *e*P **P** **01 11 48.9 +6.9**
MOS *e* 01 14 10.7
MOS pmax pmax
comp=Z,43nm,1.4s,mb5.3
MOS MLR MLR
comp=Z,2μm,18.0s,MS5.4
MOS MLR MLR
comp=E,2μm,18.0s
KIV Kislovodsk 67.67 309 *e*P **P** **01 11 42.2 -0.3**
comp=E,67nm,1.4s,mb5.5
KIV Kislovodsk 67.67 309 *e*P **P** **01 11 41.8 -0.7**
KIV *e*S S 01 20 34.1 -5.7
KIV pmax pmax
comp=Z,26nm,1.1s,mb5.2
KIV MLR MLR
comp=Z,563nm,19.0s,MS4.8
VSR Storozhevoye 67.95 317 *e*P **P** **01 11 40.3 -3.8**
VSR *e* 01 11 51.6
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,3.0nm,0.4s
VSR pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
VSR MLR MLR
comp=N,260nm,16.0s,MS4.9
VSR MLR MLR
comp=E,510nm,16.0s,MS4.9
VSR MLR MLR
comp=Z,1μm,16.0s,MS5.1
OBN Obninsk 68.38 322 *i*P **P** **01 11 46.1 -0.6**
OBN *i* 01 12 04.1
OBN *i* S S 01 20 49.1 +1.1
OBN pmax pmax
comp=Z,6.0nm,1.6s,mb4.4
OBN MLR MLR
comp=Z,1μm,16.0s,MS5.2
ARCES ARCESS Array B 68.83 338 P **P** **01 11 50.3 +1.1**
comp=Z,1.6nm,0.9s,mb4.0,baz=90,slow=7.2,SNR=2.7
ARCES LR LR 01 46 29.3
comp=Z,494nm,18.2s,MS4.8,baz=240,slow=40
HYT Haines Junctio 69.66 31 *e*P **P** **01 11 54.9 +0.3**
ANN Anapa 71.00 311 *e*P **P** **01 12 00.6 -2.5**
ANN pmax pmax
comp=Z,69nm,2.0s,mb5.2
FINES FINESS Array B 71.54 330 P **P** **01 12 06.6 +0.6**
comp=Z,2.0nm,0.9s,mb4.1,baz=77,slow=3.0,SNR=3.1
FINES LR LR 01 46 59.5
comp=Z,1μm,18.2s,MS5.3,baz=240,slow=39
FINES FINESS Array B 71.54 330 P **P** **01 12 06.6 +0.6**
FINES pmax pmax
comp=Z,2.0nm,0.9s
FINES MLR MLR
comp=Z,1μm,18.2s
AFI Afiamalu 72.28 116 LR LR 01 37 15.1
comp=Z,238nm,20.4s,MS4.5,baz=296,slow=30
SIM Simferopol' 73.16 312 P **P** **01 12 19.3 +3.3**
AKASG Malin Array Be 74.05 319 P **P** **01 12 22.9 +1.7**
comp=Z,0.5nm,0.3s,mb3.9,baz=54,slow=4.8,SNR=2.7
AKASG LR LR 01 46 55.6

comp=Z,2µm,20.0s,MS5.3,baz=70,slow=38
AKASG Malin Array Be 74.05 319 P **P** **01 12 22.9 +1.8**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG MLR MLR
comp=Z,2µm,20.0s
DLBC Dease Lake 74.08 32 *e*P **P** **01 12 21.1 0.0**
DLBC *e* 01 12 26.6
BR131 Keskin Array S 75.45 307 P **P** **01 12 27.4 -2.1**
BRTR Keskin Array B 75.45 307 P **P** **01 12 28.5 -1.0**
comp=Z,3.3nm,1.1s,mb4.2,baz=73,slow=4.8,SNR=6.7
BRTR Keskin Array B 75.45 307 *c*e**P** **P** **01 12 29.8 +0.3**
BRTR pmax pmax
comp=Z,3.0nm,1.1s
MMAI Mount Meron Ar 76.78 300 LR LR 01 51 03.6
comp=Z,464nm,20.4s,MS4.8,baz=40,slow=39
NOA NORSAR Array B 78.04 333 P **P** **01 12 42.9 -0.8**
comp=Z,1.3nm,0.9s,mb3.9,baz=59,slow=5.4,SNR=2.6
NOA LR LR 01 51 16.0
comp=Z,1µm,18.6s,MS5.3,baz=60,slow=39
NOA NORSAR Array B 78.04 333 P **P** **01 12 42.9 -0.8**
NOA pmax pmax
comp=Z,1.0nm,0.9s
NOA MLR MLR
comp=Z,1µm,18.6s
YKA Yellowknife Ar 78.51 25 P **P** **01 12 47.5 +1.2**
YKA Yellowknife Ar 78.51 25 P **P** **01 12 47.5 +1.2**
comp=Z,4.1nm,0.8s,mb4.4,baz=304,slow=5.4,SNR=9.1
YKA Yellowknife Ar 78.51 25 P **P** **01 12 47.5 +1.3**
YKA pmax pmax
comp=Z,4.0nm,0.8s
STHS Stebnicka Huta 79.24 320 *e*P **P** **01 12 54.7 +4.2**
STHS Stebnicka Huta 79.24 320 *e*P **P** **01 12 54.7 +4.2**
OKC Ostrava-Krasne 80.78 322 AMS AMS 01 51 00.0
comp=Z,1µm,15.7s
VYHS Vyhne 81.08 320 *e*P **P** **01 13 03.9 +3.5**
VYHS *e* 01 13 12.9
VYHS *e*S S 01 23 10.8 +0.9
VYHS *e*SS SS 01 28 37.6 +14
VYHS LR LR
comp=Z,600nm,23.7s,MS4.9
VYHS Vyhne 81.08 320 *e*P **P** **01 13 03.9 +3.5**
VYHS *e* 01 13 12.9
VYHS *e*S S 01 23 10.8 +0.9
VYHS MLR MLR
comp=Z,600nm,23.7s,MS4.9
VYHS Vyhne 81.08 320 *e*P **P** **01 13 03.9 +3.5**
VYHS *e* 01 13 12.9
VYHS *e*S S 01 23 10.8 +0.9
VYHS *e*SS SS 01 28 37.6 +14
DPC Dobruska-Polom 81.51 323 AMS AMS 01 51 30.0
comp=Z,1µm,16.5s
ZST Bratislava 82.22 320 *e*S S 01 23 06.3 -15
PVCC Panska Ves 82.36 323 AMS AMS 01 52 00.0
comp=Z,2µm,16.5s
TREC Trest 82.53 322 AMS AMS 01 52 10.0
comp=Z,1µm,16.4s
PRU Pruhonice 82.67 323 AMS AMS 01 52 20.0
comp=Z,1µm,15.4s
NLWA Neilton Lookou 82.67 40 ⇓P **P** **01 13 08.0 -0.8**
baz=83
NLWA Neilton Lookou 82.67 40 *e*P **P** **01 13 11.0 +2.2**
CLL Collm 82.75 325 *e*P **P** **01 13 10.0 +0.8**
CLL *e*S S 01 23 24.0 -3.0
CLL MLR MLR
comp=Z,2µm,20.8s,MS5.4
CLL Collm 82.75 325 *e*(P) **P** **01 13 10.0 +0.8**
CLL *e*PP PP 01 16 17.0 -1.5
CLL *e*S S 01 23 24.0 -3.0
CLL *e*PPS 01 24 36.0
CLL *e*SS SS 01 28 42.0 -6.3
CLL *e* 01 34 00.0
CLL Lm 01 53 00.0
comp=N,2µm,19.2s
CLL Lm 01 53 00.0
comp=E,800nm,19.8s
CLL Lm 01 53 00.0
comp=Z,2µm,20.8s
A05A Maple Falls 82.81 38 ⇑P **P** **01 13 09.2 -0.4**
baz=83
GNW Green Mountain 83.18 40 *e*P **P** **01 13 13.1 +1.7**
comp=Z,9.8nm,1.2s,mb4.7
E03A Lebam 83.30 41 ⇓P **P** **01 13 11.9 -0.2**
baz=83
JCW Jim Creek 83.34 39 *e*P **P** **01 13 11.1 -1.2**
B06A Marblemount 83.41 38 ⇑P **P** **01 13 12.5 -0.2**
baz=83
NKC Novy Kostel 83.65 324 AMS AMS 01 53 10.0
comp=Z,2µm,16.3s
KHC Kasperske Hory 83.67 323 AMS AMS 01 52 50.0
comp=Z,1µm,14.5s
D05A Enumclaw 83.86 40 ⇑P **P** **01 13 15.2 +0.2**
baz=84
F04A Amboy 84.30 41 ⇓P **P** **01 13 17.2 0.0**
baz=84
ETW Entiat 84.56 39 *e*P **P** **01 13 18.6 0.0**
G04A Mulino 84.66 42 ⇑P **P** **01 13 18.7 -0.4**
baz=84
B08A Colville Reser 84.68 38 ⇑P **P** **01 13 19.2 0.0**
baz=84
EDM Edmonton 84.78 32 *e*P **P** **01 13 19.7 +0.1**
HOOD Mount Hood Mea 85.08 41 *e*P **P** **01 13 21.5 +0.3**
comp=Z,31nm,1.0s,mb5.4
OD2 Odessa Site #2 85.58 38 P **P** **01 13 24.7 +1.0**
ABTA Abfaltersbach 85.61 321 ⇑/PcP PcP 01 13 25.8 -1.0
comp=Z,4.8nm,1.1s
RSW Rattlesnake Hi 85.67 39 *e*P **P** **01 13 25.2 +1.1**
comp=Z,9.3nm,0.7s,mb5.1
HAWA Hanford 85.70 39 *e*P **P** **01 13 25.4 +1.1**
comp=Z,15nm,1.2s,mb5.1
G06A Carlson Farm, 85.73 41 ⇓P **P** **01 13 24.5 0.0**
baz=86
HUMO Hull Mountain 85.79 44 *e*P **P** **01 13 26.3 +1.5**
comp=Z,9.8nm,1.0s,mb5.0
NEW Newport 85.93 37 *e*P **P** **01 13 25.6 +0.2**
comp=Z,13nm,1.1s,mb5.1
NEW Newport 85.93 37 *e*P **P** **01 13 25.7 +0.3**
NEW pmax pmax
comp=Z,13nm,1.1s
E09A Wood Farm, Sta 86.41 39 ⇓P **P** **01 13 27.5 -0.3**
baz=86
YBH Yreka Blue Hor 86.42 45 *e*P **P** **01 13 28.2 +0.3**
comp=Z,11nm,1.1s,mb5.0
YBH Yreka Blue Hor 86.42 45 *e*P **P** **01 13 28.2 +0.3**
YBH pmax pmax
comp=Z,11nm,1.1s
G08A Pilot Rock 86.67 40 ⇑P **P** **01 13 29.0 -0.1**
baz=86
K05A Summer Lake 86.99 43 ⇓P **P** **01 13 30.5 -0.2**
baz=87
I07A Izee 87.05 41 ⇓P **P** **01 13 31.0 0.0**
baz=87
WALA Waterton Lakes 87.13 35 *e*P **P** **01 13 31.5 +0.2**
C12B Naegeli Ranch, 87.15 37 ⇑P **P** **01 13 31.0 -0.4**
baz=87
F10A Beach Ranch, E 87.25 39 ⇑P **P** **01 13 31.1 -0.8**
baz=87
B13A Whitefish 87.27 36 ⇑P **P** **01 13 31.8 -0.2**
baz=87
BSMT Bassoo Peak 87.43 36 *e*P **P** **01 13 33.4 +0.6**
comp=Z,11nm,1.2s,mb5.0
A14A Double T Ranch 87.44 35 ⇓P **P** **01 13 32.4 -0.4**
baz=87
C13A Hot Springs 87.65 36 ⇑P **P** **01 13 33.6 -0.2**
baz=88
JTMT Jette 87.76 36 *e*P **P** **01 13 34.3 -0.1**
A15A Johnson Ranch, 87.78 35 ⇓P **P** **01 13 33.7 -0.8**
baz=88
MOD Modoc 87.81 43 *e*P **P** **01 13 34.8 +0.1**
comp=Z,9.9nm,1.1s,mb5.0
BMO Blue Mountains 87.87 40 *e*P **P** **01 13 34.0 -0.9**
comp=Z,6.6nm,1.1s,mb4.8
E12A Beaver Dam Sad 87.89 38 ⇓P **P** **01 13 34.5 -0.5**
baz=88
SWMT Swartz Lake 88.06 36 *e*P **P** **01 13 36.0 +0.3**
D13A Huson 88.08 37 ⇓P **P** **01 13 35.5 -0.4**
baz=88
B15A Bradely Ranch, 88.30 35 ⇑P **P** **01 13 36.2 -0.6**
baz=88
F12A Elk City 88.47 38 ⇓P **P** **01 13 37.4 -0.4**
baz=88
SLMT Seeley Lake 88.49 36 *e*P **P** **01 13 37.4 -0.4**
MSO Missoula 88.52 37 *e*P **P** **01 13 38.3 +0.3**
comp=Z,5.3nm,1.1s,mb4.8
D14A Greenough 88.59 36 ⇓P **P** **01 13 37.6 -0.6**
baz=88
FFC Flin Flon 88.62 26 *e*P **P** **01 13 37.0 -1.3**
comp=Z,14nm,1.0s,mb5.2
FFC Flin Flon 88.62 26 *i* P **P** **01 13 38.2 0.0**
C15A Salmond Ranch, 88.62 35 ⇓P **P** **01 13 37.9 -0.5**
baz=88,SNR=22
A17A Triple J Farms 88.82 34 ⇓P **P** **01 13 38.9 -0.4**
baz=89,SNR=15
CHMT Chamberlain Mo 88.83 36 *e*P **P** **01 13 39.5 +0.1**
F13A Darby 88.96 38 ⇓P **P** **01 13 39.8 -0.2**
baz=89
E14A Clinton 89.02 37 ⇓P **P** **01 13 39.7 -0.6**
baz=89
C16A Fuhringer Ranc 89.04 35 ⇑P **P** **01 13 39.6 -0.8**
baz=89,SNR=17
B17A L&G Farms, Che 89.20 34 ⇓P **P** **01 13 40.6 -0.6**
baz=89,SNR=33
A18A Metzger Ranch, 89.26 33 ⇓P **P** **01 13 40.7 -0.7**
baz=89,SNR=5.1
H12A Diamond D Ranc 89.44 39 ⇑P **P** **01 13 41.7 -0.6**
baz=89,SNR=18
G13A Cobalt 89.45 38 ⇓P **P** **01 13 42.0 -0.4**
baz=89
E15A Deer Lodge 89.47 36 ⇓P **P** **01 13 41.9 -0.5**
baz=89
F14A Wisdom 89.47 37 ⇑P **P** **01 13 41.9 -0.5**
baz=89
MFID Camas Ranch 89.59 40 ⇓P **P** **01 13 42.4 -0.6**
baz=90
B18A Beardsley Farm 89.64 34 ⇑P **P** **01 13 42.9 -0.3**
baz=90,SNR=15
D16A Dana Ranch, Ca 89.65 36 ⇓P **P** **01 13 42.6 -0.7**
baz=90,SNR=27
C17A Wharram Farm, 89.66 35 ⇑P **P** **01 13 42.8 -0.4**
baz=90
HRY Holter Researc 89.71 36 *e*P **P** **01 13 43.9 +0.4**
I12A Atlanta 89.75 40 ⇓P **P** **01 13 43.8 0.0**
baz=90
G14A Jackson 89.78 38 ⇓P **P** **01 13 43.4 -0.5**
baz=90
EGMT Eagleton 89.90 34 ⇑P **P** **01 13 43.3 -1.1**
baz=90,SNR=16
EGMT Eagleton 89.90 34 *e*P **P** **01 13 44.0 -0.4**
comp=Z,28nm,1.0s,mb5.5
E16A East Helena 89.91 36 ⇓P **P** **01 13 43.9 -0.6**
baz=90,SNR=22
D17A Six Diamond Ra 90.01 35 ⇑P **P** **01 13 44.3 -0.7**
baz=90,SNR=21
DLMT Dillon 90.17 37 *e*P **P** **01 13 46.2 +0.5**
comp=Z,16nm,1.1s,mb5.3
H14A Leadore 90.23 38 ⇑P **P** **01 13 45.9 -0.2**
baz=90
I13A Wildhorse Cree 90.25 39 ⇑P **P** **01 13 46.5 +0.4**
baz=90,SNR=20
HLID Hailey 90.30 39 ⇓P **P** **01 13 46.3 -0.1**
baz=90,SNR=17
HLID Hailey 90.30 39 *e*P **P** **01 13 47.1 +0.7**
comp=Z,13nm,1.3s,mb5.1
M10A I.L. Ranch, Tu 90.32 42 ⇓P **P** **01 13 46.2 -0.3**
baz=90
G15A Dillon 90.36 37 ⇓P **P** **01 13 46.1 -0.5**
baz=90,SNR=16
MCMT McKenzie Canyo 90.38 38 *e*P **P** **01 13 47.4 +0.7**
comp=Z,2.2nm,1.2s,mb4.4
E17A Martinsdale 90.38 36 ⇓P **P** **01 13 46.1 -0.6**
baz=90,SNR=28
L11A Cat Creek Ranc 90.39 41 ⇑P **P** **01 13 46.7 -0.1**
baz=90,SNR=14
F16A Kennard Place, 90.42 37 ⇑P **P** **01 13 46.3 -0.6**
baz=90
D18A Linhart Farms, 90.43 35 ⇑P **P** **01 13 46.3 -0.6**
baz=90
J13A Cove Ranch, Pi 90.54 40 ⇑P **P** **01 13 46.7 -0.8**
baz=90
H15A Lima 90.62 38 ⇓P **P** **01 13 47.4 -0.4**
baz=90
E18A Harlowton 90.80 35 ⇓P **P** **01 13 48.4 -0.2**
baz=91,SNR=32
M11A Holland Ranch, 90.82 42 ⇓P **P** **01 13 48.1 -0.7**
baz=91
L12A House Creek Ra 90.84 41 ⇑P **P** **01 13 48.9 0.0**
baz=91
F17A Fitzpatrick Pl 90.85 36 ⇓P **P** **01 13 48.4 -0.5**
baz=91,SNR=13
K13A Styer Farm, H 91.06 40 ⇓P **P** **01 13 50.0 +0.1**
baz=91
NVAR Mina Array Bea 91.07 45 P **P** **01 13 50.5 +0.4**
comp=Z,1.4nm,0.8s,mb4.4,baz=283,slow=5.6,SNR=8.2
H16A Russell Place, 91.33 37 ⇑P **P** **01 13 50.9 -0.2**
baz=91
F18A Big Timber 91.34 36 ⇓P **P** **01 13 50.9 -0.2**
baz=91,SNR=17
M12A Wells 91.35 41 ⇓P **P** **01 13 51.4 +0.1**
baz=91
L13A Double Diamond 91.50 40 ⇓P **P** **01 13 52.2 +0.2**
baz=91
YMR Madison River 91.50 37 *e*P **P** **01 13 49.1 -2.8**
comp=Z,30nm,0.3s
J15A Blackfoot 91.52 39 ⇓P **P** **01 13 52.5 +0.4**
baz=91
N12A Clover Valley, 91.62 42 ⇑P **P** **01 13 52.8 +0.2**
baz=92
N12A Clover Valley, 91.62 42 *e*P **P** **01 13 54.6 +2.0**
comp=Z,13nm,1.2s,mb5.1
K14A Jones Ranch, D 91.65 40 ⇓P **P** **01 13 52.7 +0.1**
baz=92
O11A Cowboy Ranch, 91.69 43 ⇑P **P** **01 13 53.1 +0.1**
baz=92
G18A Lazy EL Ranch, 91.82 36 ⇓P **P** **01 13 53.5 +0.1**
baz=92
M13A Montello 91.82 41 ⇑P **P** **01 13 53.2 -0.3**
baz=92,SNR=5.1
M13A Montello 91.82 41 *e*P **P** **01 13 54.5 +1.0**
comp=Z,7.3nm,0.9s,mb5.0
H17A Grant Village 91.89 37 ⇑P **P** **01 13 53.6 -0.1**
baz=92
L14A Malta 91.94 40 ⇓P **P** **01 13 54.1 +0.1**
baz=92
P11A Circle Ranch, 91.99 43 ⇑P **P** **01 13 54.7 +0.4**
baz=92
IMW Indian Meadow 92.02 38 *e*P **P** **01 13 55.4 +1.1**
comp=Z,14nm,1.3s,mb5.1
FLWY Flagg Ranch 92.03 37 *e*P **P** **01 13 55.9 +1.5**
comp=Z,12nm,1.0s,mb5.2
FLWY *e*pP pP 01 14 01.0 +3.3
Q10A Clear Creek Ra 92.03 44 ⇓P **P** **01 13 54.8 +0.3**
baz=92
J16A Bone 92.06 38 ⇓P **P** **01 13 55.3 +0.8**
baz=92
RLMT Red Lodge 92.10 36 ⇑P **P** **01 13 55.1 +0.4**
baz=92
RLMT Red Lodge 92.10 36 *e*P **P** **01 13 54.9 +0.2**
RLMT *e* 01 14 00.5
N13A Wendover, West 92.12 41 ⇓P **P** **01 13 55.2 +0.3**
baz=92
O12A Currie 92.16 42 ⇓P **P** **01 13 55.1 0.0**
baz=92,SNR=5.2
M14A Sheep Mountain 92.21 41 ⇑P **P** **01 13 54.9 -0.4**
baz=92,SNR=26
MOOW Moose Ponds 92.23 38 *e*P **P** **01 13 57.6 +2.3**
comp=Z,7.3nm,1.4s,mb4.8
K16A Soda Springs 92.36 39 ⇓P **P** **01 13 55.9 -0.1**
baz=92
HVU Hansel Valley 92.37 40 *e*P **P** **01 13 56.7 +0.7**
comp=Z,11nm,1.0s,mb5.2
HVU *e* 01 14 01.9
HVU Hansel Valley 92.37 40 *e*P **P** **01 13 56.7 +0.7**
HVU pmax pmax
comp=Z,11nm,1.0s,mb5.1
LOHW Long Hollow 92.39 38 *e*P **P** **01 13 58.8 +2.7**
comp=Z,9.5nm,1.4s,mb4.9
R10A Warm Springs 92.42 45 ⇓P **P** **01 13 56.7 +0.4**
baz=92
L15A Malad City 92.45 40 ⇑P **P** **01 13 56.8 +0.4**
baz=92
S10A Tonopah Range, 92.45 45 ⇓P **P** **01 13 57.0 +0.5**
baz=92
PPT Papeete 92.50 108 *e*LR LR 01 43 45.5
comp=Z,516nm,23.0s,baz=297
PPT Papeete 92.50 108 LR LR 01 50 19.5
comp=Z,302nm,18.9s,MS4.8,baz=325,slow=32
J17A Brown Place, J 92.50 38 ⇓P **P** **01 13 56.7 +0.1**
baz=92
P12A McGill 92.56 43 ⇑P **P** **01 13 57.2 +0.2**
baz=92
LAO LASA Array 92.57 33 *e*P **P** **01 13 57.5 +0.7**
comp=Z,20nm,1.1s,mb5.5
N14A Grayback Hills 92.72 41 ⇑P **P** **01 13 57.8 +0.2**
baz=93,SNR=13
M15A Larsen Ranch, 92.76 40 ⇓P **P** **01 13 57.4 -0.4**
baz=93,SNR=5.1
I18A Diamond G Ranc 92.76 37 ⇓P **P** **01 13 57.3 -0.5**
baz=93
BGU Big Grassy Mou 92.76 41 *e*P **P** **01 13 58.2 +0.3**
comp=Z,3.7nm,1.0s,mb4.8
R11A Troy Canyon, C 92.83 44 ⇓P **P** **01 13 58.2 0.0**
baz=93,SNR=5.7
Q12A Willow Creek R 92.87 43 ⇓P **P** **01 13 58.4 0.0**
baz=93
J18A Kendall Valley 92.98 38 ⇑P **P** **01 13 59.0 +0.2**
baz=93,SNR=5.0
MPMC Manual Prospec 93.00 47 ⇑P **P** **01 13 59.0 -0.1**
baz=93
N15A Stansbury Isla 93.08 41 ⇑P **P** **01 13 59.6 +0.3**
baz=93
P13A Bates Ranch, G 93.11 42 ⇑P **P** **01 13 59.3 -0.2**
baz=93
HWUT Hardware Ranch 93.17 40 *e*P **P** **01 14 00.2 +0.5**
comp=Z,16nm,1.2s,mb5.3
DUG Dugway 93.36 41 ⇑P **P** **01 14 00.4 -0.2**
baz=93,SNR=5.1
DUG Dugway 93.36 41 *e*P **P** **01 14 01.1 +0.5**
comp=Z,8.6nm,1.0s,mb5.1
DUG Dugway 93.36 41 *e*P **P** **01 14 01.1 +0.5**
DUG pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
BW06 Boulder Array 93.53 38 ⇑P **P** **01 14 00.8 -0.5**
baz=93
P14A Drum Mountains 93.59 42 ⇓P **P** **01 14 01.6 -0.1**
baz=94
M17A Scullys Gap (B 93.77 39 ⇑P **P** **01 14 02.6 +0.1**
baz=94
GSC Goldstone 93.89 47 ⇓P **P** **01 14 02.8 -0.4**
baz=94
GSC Goldstone 93.89 47 *e*P **P** **01 14 05.8 +2.6**
comp=Z,10nm,1.1s,mb5.2
GSC Goldstone 93.89 47 *e*P **P** **01 14 05.8 +2.6**
GSC pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
BFSC Mount Baldy Ra 93.96 48 ⇓P **P** **01 14 03.2 -0.3**
baz=94
L19A Farson 94.08 38 ⇑P **P** **01 14 03.9 0.0**
baz=94
DAU Daniels Canyon 94.12 40 *e*P **P** **01 14 05.1 +0.9**
K20A Yellowstone Ra 94.26 37 ⇓P **P** **01 14 04.9 +0.2**
baz=94
Q15A Fillmore 94.38 42 ⇓P **P** **01 14 05.3 0.0**
baz=94
TUQ Turquoise Moun 94.39 47 ⇑P **P** **01 14 05.6 +0.1**
baz=94
ULM Lac du Bonnet 94.44 26 LR LR 01 59 03.9
comp=Z,269nm,20.5s,MS4.7,baz=3,8,slow=37
O17A Robinson Place 94.57 40 ⇑P **P** **01 14 06.4 +0.2**
baz=94
MSU Marysvale 94.81 42 *e*P **P** **01 14 08.2 +0.9**
GMRC Granite Mounta 94.96 47 ⇑P **P** **01 14 08.2 +0.1**
baz=95
P17A Butcher Ranch, 95.04 41 ⇓P **P** **01 14 08.8 +0.5**
baz=95
PFO Pinyon Flat Ob 95.14 48 ⇑P **P** **01 14 08.9 0.0**
baz=95
M20A Sweetwater, Wa 95.14 38 ⇓P **P** **01 14 09.2 +0.4**
baz=95
Q16A Castle Valley 95.15 41 ⇓P **P** **01 14 09.3 +0.5**
baz=95
P18A Preston Nutter 95.22 40 ⇑P **P** **01 14 09.3 +0.1**
baz=95
R16A Teasdale 95.37 42 ⇑P **P** **01 14 09.8 -0.1**
baz=95
SRU San Rafael 95.40 41 ⇑P **P** **01 14 09.9 -0.2**
baz=95
RSSD Black Hills 95.48 34 *e*P **P** **01 14 11.6 +1.3**
comp=Z,5.4nm,1.1s,mb4.9
RSSD Black Hills 95.48 34 *e*P **P** **01 14 11.6 +1.4**
RSSD pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
N20A Spence Gulch, 95.54 39 ⇑P **P** **01 14 10.4 -0.2**
baz=95
P19A Cripple Cowboy 95.95 40 ⇑P **P** **01 14 12.3 -0.2**
baz=96
V14A Boquillas Ranc 96.07 45 ⇑P **P** **01 14 13.3 +0.1**
baz=96
R18A Canyonlands Na 96.25 41 ⇑P **P** **01 14 13.8 -0.1**
baz=96
W14A Seligman 96.35 45 ⇑P **P** **01 14 14.3 -0.1**
baz=96
Q20A Ridgley Place, 96.80 40 ⇑P **P** **01 14 16.4 0.0**
baz=97
TAOE Nuku Hiva Isla 96.83 96 *e*LR LR 01 45 35.9
comp=Z,171nm,25.1s
X15A Humboldt 97.35 45 ⇓P **P** **01 14 18.6 -0.3**
baz=97
V17A Tonalea, Kykot 97.52 44 ⇑P **P** **01 14 19.6 -0.1**
baz=97
U18A Rough Rock, Ch 97.56 43 ⇓P **P** **01 14 19.6 -0.2**
baz=97
SCHQ Schefferville 97.77 8 LR LR 01 59 39.8
comp=Z,317nm,19.4s,MS4.8,baz=351,slow=36
ESDC Sonseca Array 99.30 324 PP PP 01 18 28.3 -1.4
comp=Z,0.1nm,0.3s,baz=38,slow=8.5,SNR=3.6
ESDC LR LR 02 06 11.2
comp=Z,307nm,19.1s,MS4.8,baz=15,slow=40
TXAR Lajitas Array 106.19 44 Pdiff Pdif 01 14 58.3 +0.3
comp=Z,0.1nm,0.3s,baz=329,slow=3.4,SNR=5.9
TXAR PKiKP PKiKP 01 19 10.1 -0.2
comp=Z,0.1nm,0.7s,baz=319,slow=2.6,SNR=2.5
DBIC Dimbokro 122.35 298 PKP PKPdf 01 19 39.8 -1.6
comp=Z,5.4nm,1.1s,baz=27,slow=2.3,SNR=3.3
DBIC Dimbokro 122.35 298 PKIKP PKPdf 01 19 39.8 -1.6
DBIC pmax pmax
comp=Z,5.0nm,1.1s
LPAZ La Paz 162.71 55 PKP PKPdf 01 20 49.5 +1.3
LPAZ PKPab PKPab 01 21 39.7 +3.0
LPAZ La Paz 162.71 55 PKP PKPdf 01 20 49.5 +1.3
comp=Z,0.8nm,0.9s,baz=315,slow=1.4,SNR=2.6
LPAZ PKPab PKPab 01 21 39.7 +3.0
comp=Z,3.5nm,1.1s,baz=281,slow=5.2,SNR=5.4

IDC ***05*** *01:31:33.2*±*30.0, 25°.72N*×*127°.36E, h0km, mb3.8/4, mb1 3.8/4, mb1mx3.5/22, mbtmp3.8/4, MS3.4/1, Ms1 3.4/1, ms1mx2.5/24, Error ellipse: s-maj=573.7km s-min=196.1km az=119.0*
JMA ***05*** *01:31:45.1*±*0.3, 26°.95N*×*126°.53E, h10km, M3.3*
ISCJB ***05*** *01:31:46.2*±*2.5, 26°.95N*±*0°.05*×*126°.53E*±*0°.06, h15km*±*17km, mb3.6/4, Error ellipse: s-maj=10.6km s-min=6.4km az=38.0*
ISC 05 01:31:46.2±1.3**, 26°.93N**±0°.07**×126°.59E**±0°.05**, h12**km±9km**, n12**, σ0**s95/17, mb3.6/4, Ryukyu Islands**

Code	Station Name	Δ°	Az°	Phase	Op	ID	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.63**	**164**	P		**Pg**	**01 31 57.8**	**-0.6**
JKE				S		**Sg**	**01 32 06.5**	**-0.2**
JAGN	**Aguni-jima**	**0.68**	**120**	P		**Pg**	**01 31 59.1**	**-0.2**
JAGN				S		**Sg**	**01 32 08.7**	**+0.5**
NAH1	**Naha**	**1.22**	**126**	P		**Pn**	**01 32 08.8**	**-0.3**
NAH1				S		**Sb**	**01 32 25.5**	**+0.5**
JIH	**Iheya**	**1.23**	**85**	P		**Pn**	**01 32 08.1**	**-1.1**
JIH				S		**Sb**	**01 32 25.3**	**0.0**
JJT2	**Tamagusuku 2**	**1.30**	**127**	P		**Pn**	**01 32 10.7**	**+0.4**
JJT2				S		**Sb**	**01 32 28.6**	**+1.2**
JOW	**Kunigami**	**1.51**	**93**	P		**Pn**	**01 32 12.3**	**-0.7**
JOW				*e*S		**Sn**	**01 32 30.8**	**-1.8**
JTK	**Tokunoshima**	**2.26**	**67**	P		**Pn**	**01 32 25.8**	**+2.4**
SONM	**Songino Array**	**26.18**	**328**	P		**P**	**01 37 22.2**	**+1.8**
	1.6nm,1.0s,mb3.5,baz=126,slow=7.3,SNR=7.1							
PSI	**Prapat**	**35.75**	**233**	LR		LR	01 53 41.7	
	comp=Z,53nm,19.4s,baz=199,slow=37							
MKAR	**Makanchi Array**	**39.97**	**312**	P		**P**	**01 39 20.2**	**-0.3**
	0.5nm,0.5s,mb3.5,baz=104,slow=6.1,SNR=4.3							
ZALV	**Zalesovo Beam**	**40.80**	**323**	P		**P**	**01 39 26.9**	**-0.4**
	0.6nm,0.3s,mb3.6,baz=111,slow=7.9,SNR=5.0							
BVAR	**Borovoye Array**	**48.77**	**318**	P		**P**	**01 40 30.4**	**-0.4**
	0.6nm,0.6s,mb3.8,baz=91,slow=8.6,SNR=3.7							

ISCJB ***05*** *01:35:42.0*±*0.9, 39°.25N*±*0°.07*×*74°.15E*±*0°.06, h10km, mb3.7/6, Error ellipse: s-maj=9.7km s-min=5.8km az=15.9*
IDC ***05*** *01:35:43.7*±*1.4, 39°.37N*×*74°.32E, h0km, mb3.8/6, mb1 3.8/11, mb1mx3.6/27, mbtmp3.6/11, ML3.3/4, MS3.0/1, Ms1 3.0/1, ms1mx2.6/26, Error ellipse: s-maj=21.7km s-min=16.2km az=131.0*

*NNC **05** 01:35:50.2±3.0,39.˚79N×73.˚66E,h0km,mb3.8,mpv3.5, Error ellipse: s-maj=27.3km s-min=16.4km az=15.0*

*NEIC **05** 01:35:50.4±1.1,39.˚39N×74.˚38E,h53km±10km, Error ellipse: s-maj=17.1km s-min=9.5km az=129.0*

ISC 05 01:35:44.2±0.9,**39.˚27N**±0.˚07×**74.˚17E**±0.˚06,**h10**km,**n40,** σ1º**55/46,mb3.7/6,10C-5D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.42**	**79**	⇓*i*Pg		**Pg**	**Pg**	**01 36 11.1**	**-0.3**
KSH					Sg		**Sg**	**01 36 29.1**	**-0.8**
KSH					smax				
	comp=N,430nm,0.9s								
KSH					smax				
	comp=E,370nm,0.7s								
AML	**Almayashu**	**2.88**	**353**	P			**Pn**	**01 36 33.0**	**+2.8**
	SNR=35								
AML	**Almayashu**	**2.88**	**353**	*e*Pn			**Pn**	**01 36 32.0**	**+1.8**
AML				*e*S			**Sn**	**01 37 04.7**	**-0.2**
KZA	**Kyzart**	**2.93**	**16**	P			**Pn**	**01 36 34.2**	**+3.5**
	SNR=94								
UCH	**Uchtor**	**2.97**	**5**	P			**Pn**	**01 36 35.7**	**+4.4**
	SNR=5.3								
ULHL	**Ulahol**	**3.37**	**27**	P			**Pn**	**01 36 43.0**	**+6.2**
	SNR=8.9								
AAK	**Ala-Archa**	**3.37**	**4**	Pn			**Pn**	**01 36 40.3**	**+3.4**
	comp=E,5.6nm,0.3s,baz=169,slow=6.5,SNR=45								
AAK				Sn			**Sn**	**01 37 19.8**	**+2.9**
	comp=E,8.9nm,0.3s,baz=241,slow=19,SNR=3.7								
AAK				Lg				01 37 26.2	
	comp=E,22nm,0.3s,baz=252,slow=20,SNR=14								
AAK				LR			LR	01 37 59.5	
	comp=E,207nm,18.8s,baz=75,slow=42								
EKS2	**Erkin-Say**	**3.41**	**355**	P			**Pn**	**01 36 42.1**	**+4.7**
	SNR=21								
EKS2	**Erkin-Say**	**3.41**	**355**	*e*Pn			**Pn**	**01 36 39.0**	**+1.7**
EKS2				*e*S			**Sn**	**01 37 18.2**	**+0.5**
KBK	**Karagaybulak**	**3.44**	**10**	P			**Pn**	**01 36 42.2**	**+4.5**
	SNR=36								
CHMS	**Chumysh**	**3.75**	**7**	P			**Pn**	**01 36 46.2**	**+4.0**
	SNR=8.2								
TKM2	**Tokmak 2**	**3.81**	**16**	⇓Pn			**Pn**	**01 36 46.9**	**+4.1**
	comp=E,11nm,0.6s								
TKM2				⇓Lg				01 37 37.9	
	comp=E,43nm,0.6s								
TKM2	**Tokmak 2**	**3.81**	**16**	P			**Pn**	**01 36 46.2**	**+3.4**
	SNR=6.3								
TKM2	**Tokmak 2**	**3.81**	**16**	*e*Pn			**Pn**	**01 36 46.0**	**+3.2**
TKM2				*e*S			**Sn**	**01 37 39.2**	**+12**
USP	**Ospenovka**	**4.00**	**3**	P			**Pn**	**01 36 55.0**	**+9.4**
	SNR=7.1								
KK31	**Karatay Array**	**4.72**	**325**	⇓Pn			**Pn**	**01 36 56.4**	**+1.0**
	comp=E,4.3nm,0.5s,baz=132,slow=15,SNR=8.1								
KK31				⇑Sn			**Sn**	**01 37 49.1**	**-1.2**
	comp=E,9.7nm,0.3s,baz=146,slow=24,SNR=5.1								
KK31				⇑Lg				01 38 03.8	
	comp=E,26nm,0.5s,baz=135,slow=29,SNR=2.7								
KBL	**Kabul**	**6.25**	**223**	Pn			**Pn**	**01 37 23.1**	**+6.7**
KBL				*e*S			**Sn**	**01 38 37.4**	**+9.4**
MKAR	**Makanchi Array**	**9.58**	**36**	Pn			**Pn**	**01 38 01.9**	**-0.2**
MKAR				Lg				01 40 44.7	
MKAR	**Makanchi Array**	**9.58**	**36**	Pn			**Pn**	**01 38 01.9**	**-0.2**
	baz=220,slow=10,SNR=1.9								
MKAR				Lg				01 40 44.7	
	baz=233,slow=32,SNR=3.5								
KURBB	**Kurchatov Arra**	**11.77**	**14**	⇑Lg				01 41 49.2	
	comp=E,5.3nm,1.2s								
KURK	**Kurchatov**	**11.87**	**14**	⇑Lg				01 41 52.6	
	comp=E,17nm,1.1s								
VOSK	**Vostochnaya**	**13.64**	**352**	⇑Pn			**Pn**	**01 38 55.6**	**-1.9**
	comp=E,2.0nm,1.0s								
VOSK				⇑Lg				01 42 39.1	
	comp=E,12nm,1.3s								
BVA0	**Borovoye Array**	**14.01**	**351**	⇑Pn			**Pn**	**01 38 58.5**	**-4.1**
	comp=E,0.4nm,0.6s,baz=168,slow=13,SNR=4.7								
BVA0				⇑Lg				01 42 57.3	
	comp=E,0.6nm,1.0s,baz=160,slow=26,SNR=3.9								
BVAR	**Borovoye Array**	**14.01**	**351**	Pn			**Pn**	**01 39 00.9**	**-1.7**
	comp=E,0.3nm,0.3s,baz=163,slow=12,SNR=5.6								
BVAR				Lg				01 43 00.6	
	comp=E,0.2nm,0.3s,baz=155,slow=32,SNR=3.5								
ZRNK	**Zerenda**	**14.14**	**347**	⇓Pn			**Pn**	**01 39 02.5**	**-1.8**
	comp=E,1.6nm,1.0s								
ZRNK				⇑Lg				01 43 00.8	
	comp=E,14nm,1.2s								
AB31	**Akbulak array**	**14.25**	**319**	Pn			**Pn**	**01 39 03.5**	**-2.3**
	comp=E,3.2nm,0.8s,baz=111,slow=16,SNR=19								
AB31				⇑Sn			**Sn**	**01 41 30.4**	**-13**
	comp=E,0.4nm,0.5s								
ABKAR	**Akbulak array**	**14.25**	**319**	*e*Pn			**Pn**	**01 39 03.5**	**-2.3**
	comp=E,2.9nm,0.7s								
ABKAR				*e*S			**Sn**	**01 41 35.2**	**-8.6**
AKTK	**Aktyubinsk**	**15.96**	**320**	Pn			**Pn**	**01 39 26.2**	**-2.5**
AKTO	**Aktyubinsk**	**15.96**	**320**	Pn			**Pn**	**01 39 26.2**	**-2.4**
	comp=E,0.1nm,0.3s,baz=126,slow=12,SNR=7.2								
ZALV	**Zalesovo Beam**	**16.38**	**23**	Pn			**Pn**	**01 39 33.7**	**-0.3**
ZALV	**Zalesovo Beam**	**16.38**	**23**	Pn			**Pn**	**01 39 33.7**	**-0.3**
	comp=E,0.2nm,0.3s,baz=213,slow=12,SNR=2.6								
SONM	**Songino Array**	**24.73**	**59**	P			**P**	**01 41 05.2**	**-0.4**
	comp=E,0.2nm,0.3s,mb3.1,baz=264,slow=7.1,SNR=2.0								
BRTR	**Keskin Array B**	**31.09**	**284**	P			**P**	**01 42 04.7**	**+2.2**
	comp=E,0.4nm,0.6s,mb3.4,baz=98,slow=6.1,SNR=3.3								
NACGM	**Naroch**	**35.10**	**312**	*e*LQ				01 42 22.0	
FINES	**FINESS Array B**	**36.68**	**323**	P			**P**	**01 42 51.7**	**+0.9**
	comp=E,2.0nm,0.4s,mb4.3,baz=116,slow=9.5,SNR=24								
ARCES	**ARCESS Array B**	**39.61**	**336**	P			**P**	**01 43 16.4**	**+1.1**
ARCES	**ARCESS Array B**	**39.61**	**336**	P			**P**	**01 43 16.4**	**+1.1**
	comp=E,1.1nm,0.5s,mb3.9,baz=111,slow=9.6,SNR=17								
NOA	**NORSAR Array B**	**43.74**	**321**	P			**P**	**01 43 49.9**	**+0.6**
NOA	**NORSAR Array B**	**43.74**	**321**	P			**P**	**01 43 49.9**	**+0.6**
	comp=E,1.6nm,0.6s,mb4.0,baz=91,slow=8.0,SNR=5.9								
ILAR	**Eielson Array**	**71.42**	**17**	P			**P**	**01 47 03.8**	**-0.4**
	comp=E,0.4nm,0.8s,mb3.4,baz=325,slow=5.8,SNR=7.4								

*NIED **05** 01:59:00,44.˚00N×148.˚10E,h50km,Mw4.6 Best double couple: M0 8.12000×10^15 NP1:φs 33.00000°,δ 75.00000°, λ 92.00000°. NP2:φs 204.00000°,δ 15.00000°,λ 82.00000°.*

*MOS **05** 01:59:58.5±0.9,44.˚50N×148.˚07E,h58km,mb4.9/73,Error ellipse: s-maj=8.0km s-min=5.0km az=101.7*

MOS Felt (III-IV) at Kuril'sk, Gornyi; (II) at Yuzhno-Kuril'sk.

*JMA **05** 01:59:58.2±0.3,44.˚03N×148.˚07E,h0km,M4.9*

JMA Felt I J1.

*BJI **05** 01:59:58.5,44.˚46N×148.˚33E,h72km,mB4.8/27,mb4.8/44, Ms4.2/25,Ms7 3.9/25*

*SKHL **05** 01:59:59.1±1.6,44.˚49N×148.˚30E,h60km±29km,mb5.2/7, Ms3.8/1*

SKHL Felt (III-IV) at Kurilsk, Gorny, (II) at Yushno-Kurilsk.

*ISCJB **05** 01:59:59.8±0.4,44.˚53N±0.˚03×148.˚07E±0.˚02,h66km±3km, mb4.6/149,Error ellipse: s-maj=5.2km s-min=2.6km az=162.2*

*IDC **05** 02:00:00.7±2.7,44.˚56N×148.˚10E,h61km±23km,mb4.3/22, mb1 4.4/25,mb1mx4.4/26,mbtmp4.3/25,ML4.3/3,MS3.7/15, Ms1 3.7/15,ms1mx3.5/34,Error ellipse: s-maj=15.4km s-min=11.7km az=152.0*

*NEIC **05** 02:00:01.6±0.6,44.˚52N×148.˚01E,h71km±5km,mb4.7/76, Error ellipse: s-maj=5.9km s-min=3.4km az=161.0*

NEIC Recorded [1 JMA] in eastern Hokkaido.

ISC 05 02:00:01.4±0.3,**44.˚53N**±0.˚03×**148.˚04E**±0.˚03,**h66**km±3km, **h74**km±2.0km**:pP-P,n591,**σ0**577**/599,**mb4.6**/149, **126C-124D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.71**	**350**	⇓*i*P			**Pn**	**02 00 13.4**	**-2.8**
KUR				*e*S			**Sn**	**02 00 25.3**	**-1.7**
KUR				pmax		pmax			
	comp=N,8μm,1.2s								
KUR				pmax		pmax			
	comp=E,6μm,1.2s								
KUR				pmax		pmax			
	comp=E,21μm,1.2s								
KUR				smax					
	comp=N,96μm,1.6s								
KUR				smax					
	comp=E,66μm,1.6s								
KUR	**Kuril'sk**	**0.71**	**350**	⇓*i*P			**Pn**	**02 00 13.4**	**-2.8**
KUR				AMB		AMB	AMB	02 00 14.8	
	comp=E,21μm,1.2s								
KUR				AMB		AMB	AMB	02 00 14.8	
	comp=E,8μm,1.2s								
KUR				AMB		AMB	AMB	02 00 14.8	
	comp=E,6μm,1.2s								
KUR				*e*S			**Sn**	**02 00 25.3**	**-1.7**
KUR				A				02 00 29.6	
	comp=E,50μm,1.6s								
KUR				A				02 00 29.6	
	comp=E,35μm,1.6s								
KUR				A				02 00 29.6	
	comp=E,96μm,1.6s								
KUR				A				02 00 29.6	
	comp=E,66μm,1.6s								
YUK	**Yuzh-Kuril'sk**	**1.64**	**253**	⇑*i*PN			**Pn**	**02 00 27.4**	**-0.7**
YUK				*i*				02 00 43.9	
YUK				pmax		pmax			
	comp=Z,2μm,1.0s								
YUK				pmax		pmax			
	comp=E,2μm,0.3s								
YUK				pmax		pmax			
	comp=Z,8μm,0.3s								
YUK				pmax		pmax			
	comp=N,2μm,0.1s								
YUK				smax					
	comp=N,6μm,0.4s								
YUK				smax					
	comp=E,22μm,0.4s								
YUK				smax					
	comp=N,5μm,1.0s								
YUK				smax					
	comp=E,7μm,1.0s								
YUK	**Yuzh-Kuril'sk**	**1.64**	**253**	⇑*i*P			**Pn**	**02 00 27.4**	**-0.7**
YUK				AMB		AMB	AMB	02 00 28.0	
	comp=E,2μm,1.0s								
YUK				AMB		AMB	AMB	02 00 28.8	
	comp=E,3μm,0.4s								
YUK				AMB		AMB	AMB	02 00 28.8	
	comp=E,8μm,0.4s								
YUK				*i* S			**Sn**	**02 00 47.4**	**-0.9**
YUK				A				02 00 54.5	
	comp=E,17μm,0.5s								
YUK				A				02 00 54.5	
	comp=E,16μm,0.5s								
YUK				A				02 00 58.3	
	comp=E,40μm,0.8s								
YUK				A				02 00 58.3	
	comp=E,32μm,0.8s								
NEM2	**Nemuro 2**	**2.03**	**236**	P			**Pn**	**02 00 30.9**	**-2.4**
NEM2				*e*S			**Sn**	**02 00 54.7**	**-3.0**
JRA	**Rausu**	**2.18**	**255**	P			**Pn**	**02 00 35.6**	**+0.2**
JRA				*e*S			**Sn**	**02 01 03.0**	**+1.7**
JNK	**Nakash**	**2.58**	**250**	P			**Pn**	**02 00 40.4**	**-0.4**
JNK				*e*S			**Sn**	**02 01 10.9**	**0.0**
JAK	**Akkeshi**	**2.87**	**239**	P			**Pn**	**02 00 43.2**	**-1.6**
JAK				*e*S			**Sn**	**02 01 16.3**	**-1.8**
JTKR	**Abashiri--Toko**	**3.02**	**261**	P			**Pn**	**02 00 47.3**	**+0.5**
JAR	**Ashorobuto**	**3.33**	**250**	P			**Pn**	**02 00 51.4**	**+0.4**
JAR				*e*S			**Sn**	**02 01 31.0**	**+1.7**
JKK2	**Kamakawa 2**	**3.87**	**262**	P			**Pn**	**02 01 00.2**	**+1.9**
JCH	**Churui**	**3.90**	**242**	P			**Pn**	**02 00 57.8**	**-1.1**
JCH				*e*S			**Sn**	**02 01 41.7**	**-1.7**
JSE	**Soyaes**	**3.91**	**278**	P			**Pn**	**02 01 00.1**	**+1.1**
JFR	**Furan**	**4.17**	**253**	P			**Pn**	**02 01 04.1**	**+1.6**
ERM	**Erimo**	**4.37**	**237**	*e*Pn			**Pn**	**02 01 06.6**	**+1.5**
ERM				*e*S			**Sn**	**02 01 58.1**	**+3.4**
ERM	**Erimo**	**4.37**	**237**	*d*iPN			**Pn**	**02 01 06.1**	**+0.9**
YSS	**Yuzh-Sakhalins**	**4.42**	**305**	*e*Pn			**Pn**	**02 01 07.5**	**+1.6**
YSS	**Yuzh-Sakhalins**	**4.42**	**305**	⇑*i*PN			**Pn**	**02 01 07.1**	**+1.2**
YSS				*e*S			**Sn**	**02 01 55.0**	**-1.1**
YSS				pmax		pmax			
	comp=N,180nm,0.6s								
YSS				pmax		pmax			
	comp=E,230nm,0.6s								
YSS				pmax		pmax			
	comp=Z,340nm,0.6s								
YSS				smax					
	comp=N,160nm,0.8s								
YSS				MLR		MLR			
	comp=E,500nm,14.0s								
YSS				MLR		MLR			
	comp=Z,700nm,14.0s								
YSS	**Yuzh-Sakhalins**	**4.42**	**305**	⇑*i*P			**Pn**	**02 01 07.1**	**+1.2**
YSS				AMB		AMB	AMB	02 01 07.8	
	comp=Z,340nm,0.6s								
YSS				AMB		AMB	AMB	02 01 07.8	
	comp=Z,180nm,0.6s								
YSS				AMB		AMB	AMB	02 01 07.8	
	comp=Z,230nm,0.6s								
YSS				*e*S			**Sn**	**02 01 55.0**	**-1.1**
YSS				A				02 02 04.8	
	comp=Z,160nm,0.8s								
YSS				*e*LR		LR	LR	02 02 36.0	
YSS				AMS		AMS	AMS	02 03 00.0	
	comp=Z,700nm,14.0s								
YSS				AMS		AMS	AMS	02 03 00.0	
	comp=Z,500nm,14.0s								
JWK2	**Keihoku**	**4.43**	**282**	P			**Pn**	**02 01 08.8**	**+2.7**
JNBK	**Urakawa-nobuka**	**4.46**	**242**	P			**Pn**	**02 01 05.1**	**-1.4**
JHR	**Hokuryu**	**4.62**	**262**	P			**Pn**	**02 01 12.7**	**+4.1**
JYG	**Yagishiri**	**4.74**	**271**	P			**Pn**	**02 01 12.5**	**+2.3**
JEW	**Eniwo**	**5.07**	**253**	P			**Pn**	**02 01 17.8**	**+3.0**
JSK	**Shakotan**	**5.59**	**260**	P			**Pn**	**02 01 25.1**	**+3.2**
JKB	**Kayabe**	**5.76**	**245**	P			**Pn**	**02 01 24.2**	**-0.1**
JKB				*e*S			**Sn**	**02 02 27.7**	**-1.3**
JOT	**Ohata**	**6.02**	**241**	P			**Pn**	**02 01 26.9**	**-0.9**
JOT				*e*S			**Sn**	**02 02 31.6**	**-3.7**
UGL	**Uglegorsk**	**6.12**	**320**	*e*P			**Pn**	**02 01 30.5**	**+1.3**
UGL				AMB		AMB	AMB	02 01 31.5	
	comp=Z,85nm,0.5s								
UGL				*e*L				02 03 38.0	
TEY	**Ternei**	**8.16**	**278**	*e*P			**Pn**	**02 01 59.7**	**+2.7**
TEY				AMB		AMB	AMB	02 02 01.2	
	comp=Z,31nm,0.8s								
TEY				AMB		AMB	AMB	02 02 01.2	
	comp=Z,67nm,0.9s								
SKR	**Severo-Kuril's**	**8.22**	**39**	*e*PN			**Pn**	**02 02 01.2**	**+3.4**
SKR				pmax		pmax			
	comp=N,60nm,0.5s								
SKR				pmax		pmax			
	comp=E,60nm,0.5s								
SKR				pmax		pmax			
	comp=Z,80nm,0.5s								
SKR	**Severo-Kuril's**	**8.22**	**39**	*e*P			**Pn**	**02 02 01.2**	**+3.4**
SKR				AMB		AMB	AMB	02 02 05.5	
	comp=Z,60nm,0.5s								
SKR				AMB		AMB	AMB	02 02 05.5	
	comp=Z,80nm,0.5s								
HABR	**Khabarovsk**	**9.79**	**298**	*e*PN			**Pn**	**02 02 21.4**	**+2.2**
HABR				*e*S			**Sn**	**02 04 10.0**	**+2.6**
HABR				pmax		pmax			
	comp=N,23nm,1.5s								
HABR				pmax		pmax			
	comp=E,44nm,0.9s								
HABR				pmax		pmax			
	comp=Z,72nm,1.3s								
HABR				MLR		MLR			
	comp=Z,367nm,17.0s								
NKL	**Nikolayevsk**	**9.89**	**333**	*e*P			**Pn**	**02 02 16.5**	**-4.1**
NKL				AMB		AMB	AMB	02 02 21.2	
	comp=Z,69nm,1.0s								
NKL				*e*L				02 04 42.0	
NKL				AMS		AMS	AMS	02 06 18.0	
	comp=Z,400nm,16.0s								
NKL				AMS		AMS	AMS	02 06 18.0	
	comp=Z,500nm,16.0s								
PETK	**Petropavlovsk-**	**10.68**	**33**	P			**Pn**	**02 02 31.1**	**-0.2**
	comp=Z,1.9nm,0.3s,baz=193,slow=8.6,SNR=22								
PETK				LR		LR	LR	02 07 09.8	
	comp=Z,138nm,18.6s,baz=62,slow=40								
PETK	**Petropavlovsk-**	**10.68**	**33**	PN			**Pn**	**02 02 31.1**	**-0.2**
PETK				pmax		pmax			
	comp=Z,2.0nm,0.3s								
PETK				MLR		MLR			
	comp=Z,138nm,18.6s								
MAJO	**Matsushiro**	**10.93**	**226**	*e*PN			**Pn**	**02 02 32.8**	**-2.2**
MAT	**Matsushiro**	**10.93**	**226**	P			**Pn**	**02 02 32.3**	**-2.7**
MAT				S			**Sn**	**02 04 38.4**	**+2.8**
MJAR	**Matsushiro Arr**	**10.93**	**226**	P			**Pn**	**02 02 32.9**	**-2.1**
	comp=Z,2.4nm,0.3s,baz=27,slow=13,SNR=24								
MJAR				LR		LR	LR	02 07 31.3	
	comp=Z,177nm,18.4s,baz=40,slow=41								
MJAR	**Matsushiro Arr**	**10.93**	**226**	PN			**Pn**	**02 02 32.9**	**-2.1**
MJAR				pmax		pmax			
	comp=Z,2.0nm,0.3s								
MJAR				MLR		MLR			
	comp=Z,177nm,18.4s								
KLR	**Kul'dur**	**12.09**	**299**	*e*PN			**Pn**	**02 02 50.8**	**+0.1**
MDJ	**Mudanjiang**	**13.16**	**277**	P			**Pn**	**02 03 05.4**	**+0.2**
MDJ				S			**Sn**	**02 05 31.9**	**+2.2**
MDJ				PcP		PcP		02 08 33.0	+1.5
MDJ				ScP		ScP		02 11 55.4	-3.4
MDJ				PcS		PcS		02 12 02.5	-3.3
MDJ				ScS		ScS		02 15 33.8	-1.5
MDJ				pmax		pmax			
	comp=Z,8.0nm,0.9s								
MDJ				pmax		pmax			
	comp=Z,65nm,7.6s								
MDJ				LR		LR			
	comp=N,170nm,17.8s								
MDJ				LR		LR			
	comp=E,230nm,23.1s								
MDJ				LR		LR			
	comp=Z,330nm,23.1s								
CN2	**Changchun**	**16.23**	**275**	*e*P			**Pn**	**02 03 47.1**	**+2.1**
CN2				*e*S			**S**	**02 06 44.5**	**-9.0**
CN2				pmax		pmax			
	comp=Z,20nm,0.6s								
CN2				pmax		pmax			
	comp=Z,200nm,5.0s								
ZEA	**Zeya**	**16.38**	**312**	*e*P			**Pn**	**02 03 44.8**	**-2.0**
ZEA				AMB		AMB	AMB	02 03 46.2	
	comp=Z,29nm,1.0s								
KSRS	**Korea Array**	**16.73**	**252**	P			**Pn**	**02 03 49.9**	**-1.6**
	comp=Z,0.9nm,0.3s,baz=59,slow=12,SNR=20								
KSRS				PcP		PcP		02 08 36.5	-0.1
	comp=Z,0.3nm,0.3s,baz=3.4,slow=1.1,SNR=5.1								
KSRS				LR		LR		02 09 47.4	
	comp=Z,184nm,18.4s,baz=10,slow=35								
INCN	**Inchon**	**17.60**	**254**	*e*Pn			**Pn**	**02 04 00.8**	**-1.3**
SEY	**Seymchan**	**18.61**	**6**	*d*eP			**Pn**	**02 04 13.8**	**-0.2**
CLNS	**Chul'man**	**19.04**	**319**	*e*P			pP	02 04 33.5	+1.9
CLNS				pmax		pmax			
	comp=N,9.0nm,0.9s								
CLNS				pmax		pmax			
	comp=Z,14nm,1.1s								
CLNS				pmax		pmax			
	comp=E,8.0nm,1.1s								
YAK	**Yakutsk**	**20.55**	**335**	*e*P			**P**	**02 04 33.9**	**-0.3**
YAK				*e*				02 05 11.1	
YAK				*e*S			**S**	**02 08 22.0**	**+1.9**
YAK				*e*SS			sS	02 08 49.9	+7.0
YAK				*e*SS				02 09 10.5	
YAK				pmax		pmax			
	comp=Z,21nm,1.1s								
YAK				pmax		pmax			
	comp=E,12nm,1.3s								
YAK				pmax		pmax			
	comp=N,15nm,1.4s								
YAK				smax					
	comp=N,7.0nm,0.4s								
YAK				smax					
	comp=E,10.0nm,0.7s								
YAK				MLR		MLR			
	comp=Z,324nm,23.0s								
YAK				MLR		MLR			
	comp=E,104nm,19.0s								
YAK				MLR		MLR			
	comp=N,216nm,23.0s								
BJI	**Beijing**	**23.91**	**270**	P			**P**	**02 05 09.3**	**+0.3**
BJI				pP				02 05 24.7	
BJI				sP			sP	02 05 33.5	+1.1
BJI				S			**S**	**02 09 20.6**	**0.0**
BJI				pmax		pmax			
	comp=Z,50nm,0.7s,mb5.0								
BJI				LR		LR			
	comp=N,120nm,17.3s								
BJI				LR		LR			
	comp=E,200nm,21.1s								
BJI				LR		LR			
	comp=Z,190nm,23.0s								
HHC	**Hu-ho-hao-te**	**26.92**	**275**	*e*P			**P**	**02 05 36.7**	**+0.4**
HHC				pP		pP		02 05 54.0	+2.0
HHC				sP		sP		02 06 03.2	+3.5
HHC				PP				02 06 24.4	
HHC				S			**S**	**02 10 05.0**	**-3.4**
HHC				sS		sS		02 10 34.7	-0.7
HHC				SS				02 11 23.1	
HHC				PcS		PcS		02 12 38.1	+0.1
HHC				pmax		pmax			
	comp=Z,9.0nm,1.0s,mb4.2								
HHC				pmax		pmax			
	comp=Z,120nm,4.4s								
HHC				LR		LR			
	comp=N,120nm,10.2s								
HHC				LR		LR			
	comp=E,170nm,12.2s								
HHC				LR		LR			
	comp=Z,190nm,15.8s								
SONM	**Songino Array**	**28.77**	**292**	P			**P**	**02 05 53.2**	**+0.6**
SONM				PcP		PcP		02 09 00.9	-0.2
SONM				LR		LR		02 18 29.7	
SONM	**Songino Array**	**28.77**	**292**	P			**P**	**02 05 53.2**	**+0.6**
	comp=Z,6.0nm,0.9s,mb4.2,baz=80,slow=8.3,SNR=25								
SONM				PcP		PcP		02 09 00.9	-0.2
	comp=Z,1.0nm,0.6s,baz=103,slow=3.3,SNR=4.0								
SONM				LR		LR		02 18 29.7	
	comp=Z,227nm,19.5s,baz=20,slow=38								
SONM	**Songino Array**	**28.77**	**292**	P			**P**	**02 05 53.2**	**+0.5**
SONM								02 09 00.9	
SONM				pmax		pmax			
	comp=Z,6.0nm,0.9s								
SONM				MLR		MLR			
	comp=Z,227nm,19.5s								
TLY	**Talaya**	**30.11**	**300**	*e*P			**P**	**02 06 06.3**	**+1.8**
TLY				pmax		pmax			
	comp=Z,6.0nm,0.7s,mb4.3								
TLY				MLR		MLR			
	comp=Z,196nm,20.0s								
GUMO	**Guam**	**30.96**	**186**	LR		LR	LR	02 16 08.8	
	comp=Z,42nm,21.1s,baz=59,slow=31								
XAN	**Xi'an**	**31.77**	**264**	P			**P**	**02 06 19.2**	**-0.1**
XAN				pmax		pmax			
	comp=Z,4.0nm,0.9s,mb4.2								
XAN				pmax		pmax			
	comp=Z,9.0nm,3.7s								
LZH	**Lanzhou**	**34.39**	**271**	*e*P			**P**	**02 06 43.5**	**+1.4**
LZH				pP		pP		02 07 01.0	+2.8
LZH				sP		sP		02 07 11.0	+5.2
LZH				PP		PP		02 08 00.5	-0.5
LZH				pmax		pmax			
	comp=Z,76nm,1.0s,mb5.5								
LZH				pmax		pmax			
	comp=Z,180nm,4.0s								
GTA	**Gaotai**	**35.80**	**279**	P			**P**	**02 06 55.0**	**+0.8**

KDAK Kodiak Island 38.25 48 *ce*P **P 02 07 14.1 -0.6**
BPAW Bear Paw Mtn. 38.71 38 *e*P **P 02 07 18.7 +0.2**
comp=Z,4.8nm,0.9s,mb4.3
BPAW *e*PcP PcP 02 09 29.4 +0.5
COLD Coldfoot 39.15 33 *e*P **P 02 07 21.6 -0.5**
comp=Z,4.1nm,0.6s,mb4.4
COLD *e*PcP PcP 02 09 31.1 +0.8
MCK McKinley 39.62 38 *e*P **P 02 07 26.2 +0.1**
comp=Z,9.2nm,0.8s,mb4.7
MCK McKinley 39.62 38 *e*P **P 02 07 26.2 +0.1**
MCK pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
PMR Palmer 39.65 42 *e*P **P 02 07 25.7 -0.6**
comp=Z,4.6nm,0.7s,mb4.4
PMR Palmer 39.65 42 *e*P **P 02 07 25.7 -0.6**
PMR pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
COLA College 40.06 37 *e*P **P 02 07 30.4 +0.7**
comp=Z,11nm,0.8s,mb4.7
COLA *e* pP 02 07 42.7 -3.4
COLA College 40.06 37 *e*P **P 02 07 30.4 +0.7**
COLA *e* pP 02 07 42.7 -3.3
COLA pmax pmax
comp=Z,11nm,0.8s,mb4.7
ILAR Eielson Array 40.48 37 P **P 02 07 32.5 -0.6**
comp=Z,4.7nm,0.8s,mb4.3,baz=257,slow=7.1,SNR=48
ILAR PcP PcP 02 09 32.9 -1.7
comp=Z,0.5nm,0.4s,baz=290,slow=3.4,SNR=4.8
ILAR Eielson Array 40.48 37 P **P 02 07 32.6 -0.6**
ILAR 02 09 32.9
ILAR pmax pmax
comp=Z,5.0nm,0.8s
ILAR pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 41.05 307 P **P 02 07 38.4 +0.4**
comp=Z,1.1nm,0.3s,mb4.1,baz=72,slow=7.8,SNR=7.5
ZALV PcP PcP 02 09 36.4 -0.2
comp=Z,11nm,0.4s,baz=82,slow=2.8,SNR=33
ZALV LR LR 02 25 40.3
comp=Z,75nm,20.2s,baz=252,slow=38
ZALV Zalesovo Beam 41.05 307 P **P 02 07 38.4 +0.4**
ZALV 02 09 36.4
ZALV pmax pmax
comp=Z,1.0nm,0.3s,mb4.1
ZALV MLR MLR
comp=Z,75nm,20.2s
KMI Kunming 41.31 257 P **P 02 07 41.4 +0.9**
KMI pP pP 02 07 59.3 +2.4
KMI sP sP 02 08 07.8 +3.3
KMI PP PP 02 09 21.0 +4.1
KMI S **S 02 13 50.4 +0.3**
KMI SS SS 02 16 48.6 -7.1
KMI pmax pmax
comp=Z,25nm,1.1s,mb5.0
KMI pmax pmax
comp=Z,110nm,5.1s
KMI LR LR
comp=Z,60nm,18.2s
BMRM Bremner River 41.89 42 *e*P **P 02 07 44.6 -0.2**
comp=Z,12nm,0.9s,mb4.6
MENT Mentasta 42.03 39 *e*P **P 02 07 46.6 +0.6**
WMQ Urumqi 42.41 291 *e*P **P 02 07 49.6 +0.3**
WMQ pP pP 02 08 08.0 +2.3
WMQ sP sP 02 08 17.0 +3.7
WMQ PP PP 02 09 31.9 +3.5
WMQ PcP PcP 02 09 42.2 +0.9
WMQ pmax pmax
comp=Z,17nm,1.0s,mb4.7
WMQ pmax pmax
comp=Z,130nm,4.8s
WMQ LR LR
comp=N,120nm,18.6s
WMQ LR LR
comp=E,100nm,18.2s
WMQ LR LR
comp=Z,170nm,20.6s
EGAK Eagle 42.92 36 *e*P **P 02 07 51.9 -1.2**
comp=Z,18nm,1.2s,mb4.7
DAWY Dawson 43.79 37 *e*P **P 02 08 00.4 +0.3**
MK31 Makanchi Array 44.80 297 *e*P **P 02 08 09.0 +0.6**
MK31 Makanchi Array 44.80 297 *ce*P **P 02 08 08.7 +0.3**
MK31 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
MKAR Makanchi Array 44.80 297 P **P 02 08 08.3 0.0**
comp=Z,7.7nm,0.7s,mb4.6,baz=77,slow=9.1,SNR=50
MKAR PcP PcP 02 09 49.1 -0.2
comp=Z,4.1nm,0.5s,baz=64,slow=4.1,SNR=13
MKAR LR LR 02 28 14.9
comp=Z,260nm,18.3s,baz=5.0,slow=38
MKAR Makanchi Array 44.80 297 *ce*P **P 02 08 09.0 +0.6**
MKAR pmax pmax
comp=Z,8.0nm,0.7s
KURK Kurchatov 45.63 304 *e*P **P 02 08 15.3 +0.4**
comp=Z,4.4nm,0.5s,mb4.4
KURK *e*PcP PcP 02 09 52.1 0.0
KURK Kurchatov 45.63 304 *ce*P **P 02 08 15.4 +0.5**
KURK pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
CHTO Chiang Mai 48.12 254 *e*P **P 02 08 35.4 +0.7**
comp=Z,17nm,0.7s,mb5.0
CHTO Chiang Mai 48.12 254 *e*P **P 02 08 35.4 +0.7**
CHTO pmax pmax
comp=Z,17nm,0.7s,mb5.0
CM31 Chiang Mai Arr 48.36 254 *e*P **P 02 08 38.0 +1.4**
CMAR Chiang Mai Arr 48.36 254 P **P 02 08 37.8 +1.1**
comp=Z,5.6nm,0.8s,mb4.5,baz=37,slow=7.3,SNR=28
CMAR LR LR 02 28 25.2
comp=Z,68nm,19.6s,baz=44,slow=35
CMAR Chiang Mai Arr 48.36 254 P **P 02 08 37.8 +1.2**
CMAR pmax pmax
comp=Z,6.0nm,0.8s
CMAR MLR MLR
comp=Z,68nm,19.6s
SHL Shillong 48.72 267 *e*PKP **P 02 08 39.5 +0.2**
BVAR Borovoye Array 49.51 309 P **P 02 08 45.6 +0.7**
comp=Z,0.9nm,0.4s,mb4.1,baz=64,slow=7.9,SNR=5.3
BVAR PcP PcP 02 10 05.6 -0.3
comp=Z,3.4nm,0.4s,baz=64,slow=3.4,SNR=11
BVAR Borovoye Array 49.51 309 P **P 02 08 45.6 +0.7**
BVAR 02 10 05.6
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BRVK Borovoye 49.55 309 *e*P **P 02 08 45.8 +0.5**
BRVK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
TAPN Taplejung 50.63 271 *e*P **P 02 08 54.9 +1.1**
comp=Z,35nm,0.6s,mb5.6
ODAN Odare 51.16 271 *e*P **P 02 08 58.2 +0.4**
comp=Z,16nm,0.5s,mb5.3
JIRN Jiri 51.54 273 *e*P **P 02 09 02.0 +1.4**
comp=Z,26nm,0.3s,mb5.7
AAK Ala-Archa 51.60 295 *de*P **P 02 09 01.7 +0.8**
AAK pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
GUN Gumba 51.61 273 *e*P **P 02 09 02.0 +0.8**
RAMN Ramite 51.67 272 *e*P **P 02 09 01.9 +0.3**
comp=Z,205nm,0.5s
UCH Uchtor 51.79 295 *e*P **P 02 09 01.9 -0.4**
comp=Z,2.9nm,0.8s,mb4.4
EKS2 Erkin-Say 52.05 296 *e*P **P 02 09 05.1 +0.9**
comp=Z,4.7nm,0.7s,mb4.6
EKS2 *e*PcP PcP 02 10 16.4 +0.8
KKN Kakani 52.11 274 *e*P **P 02 09 05.6 +0.7**
PKI Pulchoki 52.15 273 *e*P **P 02 09 05.8 +0.7**
PKIN Phulchoki 52.15 273 *e*P **P 02 09 05.7 +0.5**
comp=Z,25nm,0.6s,mb5.4
KSH Kashi 52.18 291 *e*P **P 02 09 09.6 +4.4**
KSH *e*pP pP 02 09 28.7 +6.6
KSH *e*sP sP 02 09 37.2 +7.6
KSH *e*PcP PcP 02 10 19.7 +3.6
KSH *e*ScP ScP 02 14 08.0 +0.8
KSH *e*PcS PcS 02 14 16.6 +2.3
KSH *e*S **S 02 16 28.1 +3.4**
KSH *e*sS sS 02 17 01.2 +7.9
KSH *e*ScS ScS 02 18 49.1 +0.2
KSH *e*SS SS 02 20 05.8 +3.5
KSH pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
KSH pmax pmax
comp=Z,30nm,3.6s
KSH LR LR
comp=N,190nm,6.4s
KSH LR LR
comp=E,330nm,14.4s
KSH LR LR
comp=Z,110nm,5.0s
DMN Daman 52.34 273 *e*P **P 02 09 07.4 +0.8**
comp=Z,78nm,0.7s,mb5.9
AML Almayashu 52.37 295 *e*P **P 02 09 08.2 +1.6**
comp=Z,4.7nm,0.7s,mb4.6
AML *e*PcP PcP 02 10 18.4 +1.6
GKN Gorkha 52.44 274 *e*P **P 02 09 07.7 +0.4**
comp=Z,71nm,0.5s
KOLN Koldanda 53.32 275 *e*P **P 02 09 14.4 +0.6**
comp=Z,32nm,0.3s,mb5.8
KK31 Karatay Array 53.92 298 *ce*P **P 02 09 18.1 +0.2**
KK31 pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
ARU Arti 54.22 317 *e*P **P 02 09 19.3 -0.6**
ARU Arti 54.22 317 *c i*P **P 02 09 19.7 -0.2**
ARU *PP pP 02 09 36.3 -0.6
ARU *e* 02 10 22.8
ARU *e* 02 11 19.7
ARU S **S 02 16 54.4 +2.5**
ARU SS SS 02 20 36.1 +2.3
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.7
YKA Yellowknife Ar 54.80 34 P **P 02 09 23.8 -0.2**
comp=Z,7.1nm,0.6s,mb4.9,baz=303,slow=7.9,SNR=17
YKA Yellowknife Ar 54.80 34 P **P 02 09 23.8 -0.2**
YKA pmax pmax
comp=Z,7.0nm,0.6s
AB31 Akbulak array 57.08 309 *ce*P **P 02 09 40.2 -0.3**
AB31 pmax pmax
comp=Z,3.0nm,0.2s,mb5.0
ABKAR Akbulak array 57.08 309 *e*P **P 02 09 40.2 -0.3**
comp=Z,4.0nm,0.3s,mb4.9
NLWA Neilton Lookou 58.06 53 J P **P 02 09 47.0 -0.5**
baz=58
NLWA Neilton Lookou 58.06 53 *e*P **P 02 09 48.3 +0.9**
KEV Kevo 58.21 339 *e*P **P 02 09 46.5 -1.6**
KEV pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
KEV Kevo 58.21 339 *ep* **P 02 09 46.5 -1.6**
comp=Z,2.2nm,0.3s,mb4.7
KAKA Kakadu 58.71 198 *e*P **P 02 09 51.7 -0.5**
ARCES ARCESS Array B 58.74 340 P **P 02 09 51.5 -0.3**
ARCES PcP PcP 02 10 40.7 -0.2
ARCES ARCESS Array B 58.74 340 P **P 02 09 51.5 -0.3**
comp=Z,1.8nm,0.5s,mb4.4,baz=48,slow=7.8,SNR=29
ARCES PcP PcP 02 10 40.7 -0.2
comp=Z,1.3nm,0.4s,baz=58,slow=4.7,SNR=8.8
ARCES ARCESS Array B 58.74 340 P **P 02 09 51.5 -0.3**
ARCES 02 10 40.7
ARCES pmax pmax
comp=Z,2.0nm,0.5s
KBL Kabul 59.53 290 *e*P **P 02 09 57.5 -0.3**
F04A Amboy 59.70 54 J P **P 02 09 58.1 -0.8**
baz=60
B08A Colville Reser 60.07 50 J P **P 02 10 00.6 -0.8**
baz=60
EDM Edmonton 60.39 43 *e*P **P 02 10 03.5 +0.1**
AJM Ajmer 60.46 279 *e*PKP **P 02 10 04.6 +0.3**
HOOD Mount Hood Mea 60.49 54 *e*P **P 02 10 04.3 +0.1**
comp=Z,18nm,1.1s,mb5.0
BHPL Bhopal 60.49 274 *e*PKP **P 02 10 04.5 0.0**
C09A Chrisman Ranch 60.97 50 T P **P 02 10 07.0 -0.5**
baz=61
D08A Wollman Farm, 61.05 51 T P **P 02 10 07.5 -0.5**
baz=61
G06A Carlson Farm, 61.12 54 T P **P 02 10 08.0 -0.5**
baz=61
NEW Newport 61.33 49 *e*P **P 02 10 09.8 -0.2**
comp=Z,4.6nm,0.8s,mb4.6
NEW Newport 61.33 49 *e*P **P 02 10 09.8 -0.1**
NEW pmax pmax
comp=Z,5.0nm,0.8s
JOF Joensuu 61.70 332 *e*P **P 02 10 10.6 -1.5**
JOF pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
JOF Joensuu 61.70 332 *ep* **P 02 10 10.6 -1.5**
comp=Z,6.8nm,0.4s,mb5.0
A12A Yaak River Ran 61.73 48 J P **P 02 10 12.3 -0.3**
baz=62
E09A Wood Farm, Sta 61.80 51 T P **P 02 10 12.8 -0.3**
baz=62
C11A Tepee Creek (N 62.05 49 T P **P 02 10 14.8 0.0**
baz=62,SNR=7.6
G08A Pilot Rock 62.05 53 T P **P 02 10 14.7 -0.1**
baz=62
A13A Flathead Natio 62.39 48 J P **P 02 10 17.1 +0.2**
baz=62
AKL Akola 62.40 272 *e*PKP **P 02 10 16.9 -0.5**
AKL AMb AMB 02 10 55.7
comp=Z,24nm,1.1s,mb5.1
K05A Summer Lake 62.44 56 J P **P 02 10 17.9 +0.5**
baz=62
WALA Waterton Lakes 62.58 47 *e*P **P 02 10 18.4 +0.1**
comp=Z,0.3nm,0.8s
B13A Whitefish 62.70 48 T P **P 02 10 19.2 +0.2**
baz=62,SNR=11
BSMT Bassoo Peak 62.84 49 *e*P **P 02 10 20.7 +0.7**
A14A Double T Ranch 62.89 47 T P **P 02 10 20.1 -0.2**
baz=63,SNR=7.4
D12A Red Ives Fores 63.02 50 T P **P 02 10 20.8 -0.4**
baz=63
C13A Hot Springs 63.06 49 T P **P 02 10 20.9 -0.5**
baz=63
SUMG Summit 63.11 2 *i* P **P 02 10 20.4 -1.0**
comp=Z,5.7nm,0.8s,mb4.5
JTMT Jette 63.17 49 *e*P **P 02 10 23.1 +0.9**
A15A Johnson Ranch, 63.24 47 J P **P 02 10 21.9 -0.7**
baz=63,SNR=8.9
BMO Blue Mountains 63.26 53 *e*P **P 02 10 23.1 +0.2**
E12A Beaver Dam Sad 63.28 50 J P **P 02 10 22.9 -0.1**
baz=63,SNR=16
HYB Hyderabad 63.44 269 *i* P **P 02 10 23.0 -1.4**
C14A Swan Lake 63.45 48 J P **P 02 10 24.3 +0.2**
baz=63
D13A Huson 63.48 49 T P **P 02 10 23.6 -0.6**
baz=63
J08A Circle Bar Ran 63.48 54 T P **P 02 10 24.2 -0.2**
baz=63
B15A Bradely Ranch, 63.74 47 J P **P 02 10 25.8 -0.1**
baz=64,SNR=7.4
A16A West Butte Ran 63.85 46 T P **P 02 10 26.1 -0.5**
baz=64
F12A Elk City 63.86 51 J P **P 02 10 26.7 0.0**
baz=64,SNR=9.0
KAF Kangasniemi 63.90 334 *e*P **P 02 10 24.9 -1.9**
KAF pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
KAF Kangasniemi 63.90 334 *ep* **P 02 10 24.9 -1.9**
comp=Z,4.1nm,0.5s,mb4.5
SLMT Seeley Lake 63.91 49 *e*P **P 02 10 27.6 +0.6**
MSO Missoula 63.92 49 *e*P **P 02 10 27.4 +0.2**
comp=Z,8.1nm,1.1s,mb4.5
D14A Greenough 64.00 49 J P **P 02 10 27.4 -0.3**
baz=64,SNR=7.9
E13A Victor 64.02 50 T P **P 02 10 27.4 -0.4**
baz=64
B16A M & M Farms, S 64.13 47 T P **P 02 10 28.0 -0.5**
baz=64
G12A Big Creek, Yel 64.20 51 J P **P 02 10 28.3 -0.8**
baz=64
LATR Latur 64.21 271 *e*PKP **P 02 10 28.6 -0.8**
LATR AMb AMB 02 10 33.9
comp=Z,21nm,1.3s,mb4.8
CHMT Chamberlain Mo 64.24 49 *e*P **P 02 10 29.4 +0.2**
A17A Triple J Farms 64.31 46 T P **P 02 10 29.3 -0.4**
baz=64,SNR=5.7
F13A Darby 64.35 50 T P **P 02 10 29.3 -0.6**
baz=64
E14A Clinton 64.42 49 J P **P 02 10 29.9 -0.5**
baz=64
FINES FINESS Array B 64.47 333 P **P 02 10 29.6 -0.9**
comp=Z,4.7nm,0.5s,mb4.6,baz=40,slow=7.1,SNR=35
FINES FINESS Array B 64.47 333 P **P 02 10 29.6 -0.9**
FINES pmax pmax
comp=Z,5.0nm,0.5s
C16A Fuhringer Ranc 64.49 47 J P **P 02 10 30.7 -0.1**
baz=64,SNR=20
FFC Flin Flon 64.69 37 *e*P **P 02 10 32.1 +0.1**
comp=Z,17nm,0.8s,mb4.9
FFC Flin Flon 64.69 37 *ce*P **P 02 10 32.4 +0.4**
A18A Metzger Ranch, 64.77 45 J P **P 02 10 32.4 -0.3**
baz=64,SNR=6.0
H12A Diamond D Ranc 64.82 52 J P **P 02 10 32.2 -0.9**
baz=65
G13A Cobalt 64.83 51 J P **P 02 10 32.7 -0.5**
baz=65,SNR=7.7
E15A Deer Lodge 64.87 49 J P **P 02 10 33.3 -0.1**
baz=65,SNR=5.5
MFID Camas Ranch 64.98 53 T P **P 02 10 33.7 -0.4**
baz=65
OBN Obninsk 65.06 324 *e*P **P 02 10 33.6 -0.9**
OBN pmax pmax
comp=Z,28nm,2.5s,mb4.7
OBN MLR MLR
comp=Z,100nm,16.0s
D16A Dana Ranch, Ca 65.08 48 J P **P 02 10 34.8 +0.1**
baz=65,SNR=8.2
C17A Wharram Farm, 65.11 47 J P **P 02 10 34.5 -0.4**
baz=65
HRY Holter Researc 65.13 48 *e*P **P 02 10 35.5 +0.5**
B18A Beardsley Farm 65.14 46 J P **P 02 10 35.0 0.0**
baz=65
I12A Atlanta 65.14 52 J P **P 02 10 35.1 0.0**
baz=65
H13A Challis 65.15 51 T P **P 02 10 35.2 -0.1**
baz=65
E16A East Helena 65.32 48 T P **P 02 10 35.9 -0.4**
baz=65
LRM Limekiln Ridge 65.36 49 *e*P **P 02 10 37.0 +0.5**
WRAB Tennant Creek 65.36 194 *e*P **P 02 10 36.0 -0.7**
comp=Z,18nm,1.3s,mb4.7
WRAB Tennant Creek 65.36 194 *e*P **P 02 10 36.0 -0.7**
WRAB pmax pmax
comp=Z,18nm,1.3s,mb4.7
EGMT Eagleton 65.38 46 J P **P 02 10 36.8 +0.1**
baz=65,SNR=11
EGMT Eagleton 65.38 46 *e*P **P 02 10 36.7 0.0**
comp=Z,15nm,0.9s,mb4.8
D17A Six Diamond Ra 65.45 47 J P **P 02 10 37.3 +0.1**
baz=65,SNR=6.4
VRHR Novokhopersk 65.48 318 *e*P **P 02 10 35.8 -1.5**
VRHR pmax pmax
comp=N,8.0nm,0.6s
VRHR pmax pmax
comp=E,8.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
DLMT Dillon 65.57 50 *e*P **P 02 10 38.8 +0.9**
comp=Z,1.0nm,0.4s,mb4.0
H14A Leadore 65.61 51 J P **P 02 10 37.7 -0.5**
baz=65
I13A Wildhorse Cree 65.64 52 J P **P 02 10 38.6 +0.3**
baz=65,SNR=5.8
HLID Hailey 65.69 52 J P **P 02 10 38.7 0.0**
baz=66
HLID Hailey 65.69 52 *e*P **P 02 10 39.0 +0.3**
comp=Z,0.9nm,0.5s,mb3.9
G15A Dillon 65.75 50 T P **P 02 10 39.4 +0.3**
baz=66,SNR=8.3
L11A Cat Creek Ranc 65.80 54 T P **P 02 10 39.6 +0.2**
baz=66
E17A Martinsdale 65.81 48 T P **P 02 10 40.0 +0.6**
baz=66,SNR=10
F16A Kennard Place, 65.83 49 T P **P 02 10 39.3 -0.3**
baz=66
D18A Linhart Farms, 65.89 47 T P **P 02 10 39.9 0.0**
baz=66
J13A Cove Ranch, Pi 65.93 52 J P **P 02 10 40.3 +0.1**
baz=66
POO Poona 66.07 273 *e*PKP **P 02 10 41.8 +0.2**
POO AMb AMB 02 10 44.2
comp=Z,17nm,0.7s,mb5.0
G16A Moss Hill, Enn 66.08 50 T P **P 02 10 41.2 0.0**
baz=66
L12A House Creek Ra 66.24 54 J P **P 02 10 42.6 +0.3**
baz=66
M11A Holland Ranch, 66.24 55 T P **P 02 10 42.7 +0.5**
baz=66
E18A Harlowton 66.24 48 J P **P 02 10 42.8 +0.6**
baz=66
F17A Fitzpatrick Pl 66.27 48 T P **P 02 10 42.6 +0.2**
baz=66
J14A Carey 66.35 52 J P **P 02 10 44.0 +1.0**
baz=66,SNR=7.7
VSR Storozhevoye 66.56 320 *e*P **P 02 10 43.6 -0.5**
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
VSR pmax pmax
comp=E,1.0nm,0.3s
G17A Pierce Place, 66.60 49 T P **P 02 10 45.3 +0.7**
baz=66
NVAR Mina Array Bea 66.62 59 P **P 02 10 45.2 +0.4**
comp=E,2.6nm,0.5s,mb4.3,baz=293,slow=7.1,SNR=21
KAD Karad 66.64 272 *e*PKP **P 02 10 44.7 -0.4**
VORD Divnogorie 66.67 319 *e*P **P 02 10 44.1 -0.8**
VORD pmax pmax
comp=N,8.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
H16A Russell Place, 66.72 50 T P **P 02 10 45.6 +0.3**
baz=66
M12A Wells 66.76 54 T P **P 02 10 45.8 +0.2**
baz=67
F18A Big Timber 66.77 48 J P **P 02 10 46.1 +0.5**
baz=66,SNR=8.3
GCMT Greycliff 66.87 48 *e*P **P 02 10 47.3 +1.0**
comp=Z,2.5nm,0.7s,mb4.2
J15A Blackfoot 66.91 51 J P **P 02 10 47.1 +0.6**
baz=67
K14A Jones Ranch, D 67.03 52 J P **P 02 10 47.8 +0.5**
baz=67
I16A Newdale 67.12 51 T P **P 02 10 48.2 +0.3**
baz=67
M13A Montello 67.23 54 J P **P 02 10 48.8 +0.2**
baz=67
K15A Arbon 67.31 52 J P **P 02 10 50.3 +1.2**
baz=67
L14A Malta 67.33 53 J P **P 02 10 49.5 +0.3**
baz=67
IMW Indian Meadow 67.41 50 *e*P **P 02 10 50.9 +1.2**
J16A Bone 67.44 51 J P **P 02 10 50.5 +0.6**
baz=67
RLMT Red Lodge 67.52 48 J P **P 02 10 50.7 +0.3**
baz=67
Q10A Clear Creek Ra 67.53 57 J P **P 02 10 50.6 +0.1**
baz=67
N13A Wendover, West 67.53 54 T P **P 02 10 50.8 +0.3**
baz=67
RRI2 Red Ridge 67.56 51 *e*P **P 02 10 52.1 +1.5**
O12A Currie 67.59 55 J P **P 02 10 51.2 +0.4**
baz=67
M14A Sheep Mountain 67.61 53 T P **P 02 10 51.3 +0.3**
baz=67
MOOW Moose Ponds 67.62 50 *e*P **P 02 10 51.4 +0.4**
comp=Z,5.7nm,1.3s,mb4.2
TPAW Teton Pass 67.67 51 *e*P **P 02 10 52.4 +1.1**
comp=Z,5.0nm,0.8s,mb4.4
K16A Soda Springs 67.75 51 T P **P 02 10 52.0 +0.2**
baz=68
REDW Red Top Meadow 67.81 51 *e*P **P 02 10 53.1 +0.9**
comp=Z,2.0nm,0.7s,mb4.1
S10A Tonopah Range, 67.98 58 J P **P 02 10 53.5 +0.1**
baz=68
P12A McGill 68.00 56 J P **P 02 10 53.7 +0.2**
baz=68
LAO LASA Array 68.07 46 *e*P **P 02 10 54.1 +0.3**
comp=Z,6.0nm,0.9s,mb4.4
GRAC Grapevine Rang 68.10 59 T P **P 02 10 54.4 +0.3**
baz=68
N14A Grayback Hills 68.12 54 T P **P 02 10 54.2 0.0**
baz=68
M15A Larsen Ranch, 68.15 53 T P **P 02 10 54.5 +0.1**
baz=68,SNR=11
R11A Troy Canyon, C 68.32 57 T P **P 02 10 55.4 0.0**
baz=68
Q12A Willow Creek R 68.33 56 J P **P 02 10 55.7 +0.2**
baz=68
L16A Fish Haven 68.36 52 T P **P 02 10 56.0 +0.3**
baz=68
N15A Stansbury Isla 68.48 54 T P **P 02 10 56.3 -0.2**
baz=68
P13A Bates Ranch, G 68.54 55 J P **P 02 10 56.9 +0.1**
baz=68
HWUT Hardware Ranch 68.56 52 *e*P **P 02 10 56.7 -0.2**
comp=Z,1.8nm,0.7s,mb4.0
L17A Cokeville 68.62 52 J P **P 02 10 57.5 +0.2**
baz=68
MPMC Manual Prospec 68.63 60 J P **P 02 10 57.4 0.0**
baz=68
K18A Toltan Ranch, 68.73 51 J P **P 02 10 58.3 +0.3**

baz=68
FURC Furnace Creek, 68.75 59 ⇑P P 02 10 58.2 0.0
baz=69
DUG Dugway 68.76 54 ⇑P P 02 10 58.2 0.0
baz=69,SNR=5.2
DUG Dugway 68.76 54 eP P 02 10 58.6 +0.4
comp=Z,2.4nm,0.8s,mb4.1
DUG Dugway 68.76 54 eP P 02 10 58.6 +0.4
DUG pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
Q13A Wheeler Ranch, 68.86 56 ⇓P P 02 10 59.4 +0.5
baz=69
BW06 Boulder Array 68.92 50 ⇓P P 02 10 59.0 -0.1
baz=69,SNR=7.0
P14A Drum Mountains 69.01 55 ⇓P P 02 10 59.6 -0.2
baz=69
EDW2 Edwards Air Fo 69.07 61 ⇑P P 02 11 00.3 +0.1
baz=69
ASAR Alice Springs 69.09 194 P P 02 10 59.9 -0.3
ASAR ⇑e 02 39 10.1
ASAR Alice Springs 69.09 194 P P 02 10 59.9 -0.3
comp=Z,2.5nm,0.6s,mb4.2,baz=11,slow=6.5,SNR=33
ASAR PKP2bc 02 39 10.1
comp=Z,0.6nm,0.8s,baz=180,slow=0.5,SNR=5.3
NOA NORSAR Array B 69.11 339 P P 02 10 58.4 -1.6
comp=Z,3.8nm,0.5s,mb4.5,baz=30,slow=6.4,SNR=23
NOA LR LR 02 43 52.7
comp=Z,69nm,21.7s,baz=350,slow=38
NOA NORSAR Array B 69.11 339 P P 02 10 58.4 -1.6
NOA pmax pmax
comp=Z,4.0nm,0.5s
NOA MLR MLR
comp=Z,69nm,21.7s
M17A Scullys Gap (B 69.15 52 ⇓P P 02 11 00.6 0.0
baz=69
L18A Fontenelle, Gr 69.21 51 ⇓P P 02 11 01.2 +0.2
baz=69
HFS Hagfors 69.22 337 LR LR 02 42 39.4
comp=Z,65nm,21.0s,baz=142,slow=37
S12A Delamar Landin 69.24 57 ⇑P P 02 11 01.0 -0.3
baz=69
T11A Corn Creek, Al 69.26 58 ⇑P P 02 11 01.7 +0.4
baz=69
K19A Absolon Red Bu 69.27 50 ⇓P P 02 11 01.0 -0.3
baz=69
Q14A Sevier Lake (B 69.28 55 ⇑P P 02 11 01.5 +0.1
baz=69
N17A Moffit Pass 69.41 53 ⇓P P 02 11 02.5 +0.3
baz=69
L19A Farson 69.47 51 ⇓P P 02 11 03.1 +0.6
baz=69
O16A Springville 69.51 54 ⇓P P 02 11 02.8 0.0
baz=69
M18A Lyman 69.52 52 ⇑P P 02 11 02.6 -0.3
baz=69
GSC Goldstone 69.54 60 ⇓P P 02 11 02.7 -0.4
baz=69
K20A Yellowstone Ra 69.66 50 ⇓P P 02 11 03.0 -0.7
baz=69
BFSC Mount Baldy Ra 69.69 62 ⇓P P 02 11 04.1 0.0
baz=70
KIV Kislovodsk 69.72 312 eP P 02 11 05.4 +1.3
KIV pmax pmax
comp=Z,11nm,0.7s,mb4.8
KIV MLR MLR
comp=Z,138nm,18.0s
ZEI Tsey 69.87 310 eP P 02 11 04.9 -0.1
ZEI pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
TUQ Turquoise Moun 70.00 60 ⇑P P 02 11 05.6 -0.4
baz=70,SNR=5.5
V11A Goodsprings 70.04 59 ⇓P P 02 11 06.3 +0.1
baz=70
HEC Hector,Ludlow 70.14 61 ⇓P P 02 11 06.8 0.0
baz=70
V12A Nelson 70.47 59 ⇑P P 02 11 08.0 -0.8
baz=70
ULM Lac du Bonnet 70.49 38 P P 02 11 07.8 -0.9
comp=Z,5.4nm,0.5s,mb4.7,baz=302,slow=4.9,SNR=5.6
M20A Sweetwater, Wa 70.53 51 ⇑P P 02 11 09.6 +0.6
baz=70
Q16A Castle Valley 70.56 54 ⇓P P 02 11 09.6 +0.3
baz=70
GMRC Granite Mounta 70.59 60 ⇑P P 02 11 09.5 0.0
baz=70
L21A Rawlins 70.66 50 ⇑P P 02 11 09.9 +0.1
baz=70
T14A Hurricane 70.66 57 ⇑P P 02 11 10.0 +0.1
baz=70
R16A Teasdale 70.80 55 ⇑P P 02 11 11.5 +0.7
baz=71
SRU San Rafael 70.80 54 ⇑P P 02 11 10.6 -0.2
baz=71,SNR=8.3
SRU San Rafael 70.80 54 eP P 02 11 09.9 -0.8
comp=Z,5.3nm,0.8s,mb4.4
SRU San Rafael 70.80 54 eP P 02 11 09.9 -0.9
SRU pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
M21A Separation Pea 70.90 50 ⇓P P 02 11 11.2 -0.2
baz=71
V13A Grand Canyon W 70.92 58 ⇑P P 02 11 11.8 +0.2
baz=71
N20A Spence Gulch, 70.93 51 ⇑P P 02 11 11.8 +0.3
baz=71,SNR=5.8
RSSD Black Hills 70.95 46 eP P 02 11 11.4 -0.2
comp=Z,3.7nm,0.9s,mb4.2
RSSD Black Hills 70.95 46 eP P 02 11 11.4 -0.2
RSSD pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
U14A Mt Trumbull 71.03 57 ⇑P P 02 11 12.5 +0.4
baz=71
S16A Weppner Ranch, 71.11 56 ⇓P P 02 11 13.0 +0.3
baz=71
L22A Ellis Ranch, M 71.12 49 ⇓P P 02 11 13.0 +0.3
baz=71
R17A Hanksville Air 71.16 54 ⇓P P 02 11 12.6 -0.3
baz=71,SNR=8.8
IRM Iron Mountain 71.32 60 ⇓P P 02 11 13.6 -0.3
baz=71
AKASG Malin Array Be 71.33 324 P P 02 11 12.5 -1.3
comp=Z,2.2nm,0.4s,mb4.3,baz=38,slow=6.0,SNR=14
AKASG Malin Array Be 71.33 324 P P 02 11 12.5 -1.2
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKBB Malin Array Si 71.33 324 eP P 02 11 12.4 -1.3
KIEV Kiev 71.34 324 eP P 02 11 12.5 -1.3
comp=Z,4.7nm,0.6s,mb4.5
KIEV Kiev 71.34 324 eP P 02 11 12.5 -1.3
KIEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
N21A Black Mountain 71.39 51 ⇑P P 02 11 14.1 -0.2
baz=71
O20A White River Ci 71.41 52 ⇑P P 02 11 14.3 -0.2
baz=71
BC3 Big Chuckawall 71.46 61 ⇑P P 02 11 14.5 -0.4
baz=71
M22A Cedar Creek Ra 71.46 50 ⇓P P 02 11 14.5 -0.2
baz=71
U15A North Rim 71.56 57 ⇓P P 02 11 16.2 +0.8
baz=71
V14A Boquillas Ranc 71.60 58 ⇑P P 02 11 16.5 +0.9
baz=71
S17A Black Ridge (B 71.63 55 ⇓P P 02 11 15.5 -0.3
baz=71,SNR=6.2
Q19A Hogan Spring (71.63 53 ⇓P P 02 11 15.4 -0.4
baz=71,SNR=6.6
R18A Canyonlands Na 71.66 54 ⇓P P 02 11 15.8 -0.2
baz=71
X13A Yucca 71.84 59 ⇓P P 02 11 17.3 +0.1
baz=72
ANN Anapa 71.85 315 eP P 02 11 12.7 -4.3
ANN e*PP pP 02 11 32.2 -2.5
ANN pmax pmax
comp=Z,48nm,1.5s,mb5.1
W14A Seligman 71.89 58 ⇑P P 02 11 17.6 +0.3
baz=72,SNR=5.5
N22A Wattenberg Ran 71.95 50 ⇓P P 02 11 18.4 +0.7
baz=72
V15A Kaibab Nationa 72.03 57 ⇓P P 02 11 18.9 +0.6
baz=72
S18A Hurst Farm, Bl 72.07 55 ⇑P P 02 11 18.0 -0.4
baz=72,SNR=8.9
N23A Red Feather La 72.17 50 ⇓P P 02 11 19.5 +0.6
baz=72
Q20A Ridgley Place, 72.19 53 ⇓P P 02 11 19.9 +0.8
baz=72
P21A Newcastle 72.28 52 ⇓P P 02 11 20.3 +0.7
baz=72
O22A Kremmling 72.34 51 ⇑P P 02 11 20.3 +0.3
baz=72
X14A Yava 72.50 59 ⇓P P 02 11 21.4 +0.4
baz=72
T18A Mexican Hat 72.51 55 ⇓P P 02 11 20.6 -0.5
baz=72
S19A Harvey Farm, M 72.53 54 ⇓P P 02 11 20.9 -0.3
baz=72,SNR=6.8
O23A Lake Granby, G 72.66 50 ⇑P P 02 11 22.1 +0.2
baz=72
Q21A Lamborn Mesa, 72.68 52 ⇓P P 02 11 22.1 +0.1
baz=72
WUAZ Wupatki 72.72 57 ⇑P P 02 11 22.6 +0.2
baz=72
SMCO Snowmass 72.78 52 eP P 02 11 22.9 +0.3
comp=Z,3.3nm,0.9s,mb4.2
Z13A Yuma Proving G 72.88 60 ⇑P P 02 11 23.3 0.0
baz=73
X15A Humboldt 72.89 58 ⇓P P 02 11 23.6 +0.2
baz=73
V17A Tonalea, Kykot 73.00 57 ⇓P P 02 11 24.1 +0.2
baz=73,SNR=5.7
R21A Cimarron 73.01 53 ⇓P P 02 11 24.6 +0.6
baz=73
Q22A Crested Butte, 73.04 52 ⇓P P 02 11 24.7 +0.6
baz=73
BSD Bornholm Skovb 73.08 334 i P P 02 11 06.1 -18
comp=Z,55nm,1.0s,mb5.3
Y15A Casa Rosa Ranc 73.19 59 ⇑P P 02 11 25.6 +0.5
baz=73
MVCO Mesa Verde 73.27 54 ⇓P P 02 11 26.0 +0.5
baz=73
X16A Lo Mia Camp, P 73.42 58 ⇑P P 02 11 26.8 +0.3
baz=73,SNR=6.6
V18A Ganado 73.45 56 ⇓P P 02 11 27.0 +0.3
baz=73
U19A Dine' College, 73.48 55 ⇑P P 02 11 27.4 +0.6
baz=73
R22A Saguache, Gunn 73.56 52 ⇑P P 02 11 28.0 +0.7
baz=73
114A Black Gap (USA 73.67 60 ⇑P P 02 11 28.3 +0.4
baz=74
S22A 4UR Ranch, Cre 73.85 53 ⇓P P 02 11 29.6 +0.6
baz=74
EYMN Ely 74.12 37 eP P 02 11 29.4 -1.0
comp=Z,3.2nm,0.6s,mb4.2
Y17A Roosevelt 74.28 58 ⇓P P 02 11 31.6 +0.1
baz=74
U21A Nageezi 74.29 54 ⇑P P 02 11 31.5 0.0
baz=74
T22A Edith 74.32 53 ⇑P P 02 11 32.2 +0.5
baz=74
R24A Sanders Place, 74.49 51 ⇑P P 02 11 33.2 +0.6
baz=74
X19A St. Johns 74.71 57 ⇑P P 02 11 34.2 +0.2
baz=74,SNR=5.2
KWP Kalwaria Pacla 74.81 327 ⇑P P 02 11 34.4 +0.1
ECSD EROS Data Cent 74.96 43 eP P 02 11 34.5 -0.7
comp=Z,9.0nm,0.9s,mb4.5
X20A Quemado 75.10 56 ⇓P P 02 11 36.5 +0.2
baz=75
117A Oracle 75.11 59 ⇑P P 02 11 36.2 -0.1
baz=75
U23A El Rito 75.21 53 ⇑P P 02 11 37.5 +0.7
baz=75
S25A Robets Cordova 75.27 51 ⇓P P 02 11 37.6 +0.4
baz=75
BUR08 Bucovina Ar. S 75.37 324 eP P 02 11 38.1 +0.6
BURAR Bucovina Array 75.39 324 ⇓P P 02 11 37.9 +0.3
Z19A T-Link Ranch, 75.51 58 ⇑P P 02 11 39.0 +0.4
baz=75
118A Homack Ranch, 75.53 58 ⇓P P 02 11 38.9 +0.2
baz=75,SNR=5.7
STHS Stebnicka Huta 75.55 327 eP P 02 11 36.4 -2.2
comp=Z,3.6nm,1.0s,mb4.1
STHS Stebnicka Huta 75.55 327 eP P 02 11 36.4 -2.2
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
STHS Stebnicka Huta 75.55 327 eP P 02 11 36.4 -2.2
X21A Alamocita Cree 75.59 56 ⇓P P 02 11 39.4 +0.4
baz=75
217A Green Valley 75.61 60 ⇓P P 02 11 39.6 +0.4
baz=75
Y20A Horse Springs, 75.62 57 ⇑P P 02 11 40.0 +0.7
baz=75
TESR 75.63 323 ⇓P P 02 11 38.9 -0.2
TLCR 75.69 320 ⇑P P 02 11 39.6 +0.1
119A Ashpeak Ranch, 75.85 58 ⇑P P 02 11 41.1 +0.5
baz=76
218A Dragoon 75.94 59 ⇑P P 02 11 41.4 +0.3
baz=76
Z20A Nine Sixteen R 76.04 57 ⇑P P 02 11 42.0 +0.4
baz=76
VRI Vrincioaia 76.10 322 ⇓P P 02 11 41.6 -0.1
V24A Rampart Ranch, 76.16 53 ⇓P P 02 11 42.9 +0.6
baz=76
STKA Stephens Creek 76.27 186 P P 02 11 43.0 +0.4
comp=Z,3.9nm,0.6s,mb4.3,baz=356,slow=8.4,SNR=6.8
318A Bisbee 76.35 59 ⇓P P 02 11 43.7 +0.3
baz=76
120A U Bar Ranch, L 76.41 58 ⇓P P 02 11 44.3 +0.5
baz=76
TIRR Tirgusor 76.43 320 ⇑P P 02 11 43.7 0.0
W24A Lazy 6 Ranch, 76.45 54 ⇑P P 02 11 44.1 +0.2
baz=76
Z21A St. Cloud Mine 76.45 57 ⇓P P 02 11 44.6 +0.6
baz=76
COWI Conover 76.57 37 eP P 02 11 43.2 -1.2
comp=Z,6.1nm,0.8s,mb4.4
DPC Dobruska-Polom 76.60 331 eP P 02 11 44.9 +0.4
DPC MLR MLR
comp=Z,100nm,12.7s
DPC Dobruska-Polom 76.60 331 eP P 02 11 44.9 +0.4
DPC AMS AMS 02 47 50.0
comp=Z,100nm,12.7s
MORC Moravsky Berou 76.64 330 ⇑P P 02 11 44.6 -0.2
SCHQ Schefferville 76.67 20 P P 02 11 44.4 -0.4
SCHQ LR LR 02 50 44.5
SCHQ Schefferville 76.67 20 P P 02 11 44.4 -0.4
comp=Z,3.5nm,0.5s,mb4.3,baz=9.1,slow=6.4,SNR=10
SCHQ LR LR 02 50 44.5
comp=Z,70nm,18.5s,baz=221,slow=40
MIB Mutribah 76.69 299 eP P 02 11 45.1 -0.4
MIB AMb AMB 02 11 46.3
comp=Z,45nm,0.9s,mb5.2
MLR Muntele Rosu 76.74 322 ⇓P P 02 11 45.6 +0.2
319A Douglas 76.83 59 ⇑P P 02 11 46.5 +0.4
baz=77
Z22A Elephant Butte 76.91 56 ⇑P P 02 11 47.0 +0.4
baz=77
CLL Collm 76.92 333 i P P 02 11 45.3 -1.0
comp=Z,7.0nm,0.5s,mb4.7
CLL Collm 76.92 333 i P P 02 11 45.3 -1.0
CLL pmax pmax
comp=Z,7.0nm,0.5s,mb4.7
CLL Collm 76.92 333 i P P 02 11 45.3 -1.0
comp=Z,7.0nm,0.5s,mb4.7
CLL epP pP 02 12 06.0 +1.9
CLL ePS 02 22 17.0
CLL eSS SS 02 26 30.0 +4.9
CLL L 02 49 00.0
comp=Z,100nm,19.0s
220A Playas Peak, P 76.92 58 ⇑P P 02 11 47.0 +0.4
baz=77
Y23A Lovelace Mesa, 76.97 55 ⇓P P 02 11 47.0 +0.1
baz=77
W25A X Bar L Ranch, 76.99 53 ⇓P P 02 11 47.1 +0.1
baz=77
PVCC Panska Ves 77.06 332 eP P 02 11 47.4 +0.3
PVCC MLR MLR
comp=Z,100nm,12.2s
PVCC Panska Ves 77.06 332 eP P 02 11 47.4 +0.3
PVCC AMS AMS 02 49 20.0
comp=Z,100nm,12.2s
QRN Al-Qurain 77.06 298 eP P 02 11 47.2 -0.2
QRN AMb AMB 02 11 48.9
comp=Z,62nm,0.8s,mb5.4
DRGR 77.08 325 ⇓P P 02 11 45.9 -1.4
RDF Al-Radifah 77.17 298 eP P 02 11 48.3 +0.2
RDF AMb AMB 02 11 49.3
comp=Z,76nm,0.8s,mb5.5
VYHS Vyhne 77.23 328 eP P 02 11 48.3 +0.2
comp=Z,3.7nm,1.3s,mb4.0
VYHS Vyhne 77.23 328 eP P 02 11 48.3 +0.2
VYHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.0
VYHS Vyhne 77.23 328 eP P 02 11 48.3 +0.2
PSZ Piszkesteto 77.29 327 ⇑P P 02 11 46.9 -1.5
VRAC Vranov 77.38 330 ⇓P P 02 11 48.7 -0.2
BR131 Keskin Array S 77.47 314 eP P 02 11 50.4 +0.8
comp=Z,3.2nm,0.7s,mb4.2
BRTR Keskin Array B 77.47 314 P P 02 11 50.3 +0.7
comp=Z,3.4nm,0.7s,mb4.2,baz=108,slow=1.9,SNR=23
BRTR LR LR 02 51 30.6
comp=Z,40nm,20.4s,baz=212,slow=40
PRU Pruhonice 77.53 331 eP P 02 11 50.6 +0.9
PRU MLR MLR
comp=Z,100nm,18.3s
PRU Pruhonice 77.53 331 eP P 02 11 50.6 +0.9
PRU AMS AMS 02 49 30.0
comp=Z,100nm,18.3s
Y25A Mesa, Roswell 77.78 54 ⇑P P 02 11 51.3 -0.1
baz=78
TREC Trest 77.78 330 eP P 02 11 51.4 +0.2
TREC Trest 77.78 330 eP P 02 11 51.4 +0.2
ZST Bratislava 78.12 329 eP P 02 11 50.9 -2.1
ZST Bratislava 78.12 329 eP P 02 11 50.9 -2.1
BZS Buzias 78.48 325 ⇑P P 02 11 53.5 -1.6
KHC Kasperske Hory 78.58 331 eP P 02 11 55.3 -0.3
comp=Z,12nm,0.9s,mb4.7
KHC Kasperske Hory 78.58 331 eP P 02 11 55.3 -0.3
KHC pmax pmax
comp=Z,12nm,0.9s,mb4.7
KHC Kasperske Hory 78.58 331 eP P 02 11 55.5 -0.1
KHC AMS AMS 02 50 10.0
comp=Z,200nm,13.3s
Z26A Caprock 78.66 54 ⇓P P 02 11 56.3 0.0
baz=78
Y27A Causey 78.69 53 ⇓P P 02 11 56.7 +0.2
baz=78
125A Gardner Draw, 78.70 55 ⇓P P 02 11 56.5 0.0
baz=78
Z27A Tatum 79.07 54 ⇑P P 02 11 58.5 0.0
baz=79
324A Moseley Ranch, 79.08 57 ⇓P P 02 11 58.4 -0.3
baz=79
PKSM Moragy 79.19 327 ⇑P P 02 11 57.1 -1.8
325A Bean Ranch, Si 79.44 56 ⇑P P 02 12 00.3 -0.3
baz=79
MEM Membach 79.67 337 P P 02 12 01.4 0.0
comp=Z,8.0nm,1.2s,mb4.4
BCLA Clavier 80.04 337 P P 02 12 03.0 -0.5
comp=Z,12nm,1.8s,mb4.4
326A Caldwell Ranch 80.06 56 ⇑P P 02 12 04.1 +0.1
baz=80
SOKA Soboth 80.16 329 ⇑i P P 02 12 04.0 -0.2
comp=Z,8.7nm,0.9s,mb4.6
VTS Vitosha 80.24 322 ⇑P P 02 12 01.3 -3.4
SNF Seneffe 80.24 337 P P 02 12 03.4 -1.1
comp=Z,15nm,2.1s,mb4.5
KBA Koelnbreinsper 80.42 330 ⇑i P P 02 12 06.0 +0.4
comp=Z,20nm,1.3s,mb4.8
426A McDonald Obser 80.50 56 ⇓P P 02 12 06.3 0.0
baz=80
BAIF Baives 80.67 337 eP P 02 12 05.9 -0.9
comp=Z,5.7nm,0.6s,mb4.2
BAIF Baives 80.67 337 eP P 02 12 05.9 -0.9
comp=Z,2.8nm,0.6s,mb4.3
BAIF Baives 80.67 337 eP P 02 12 05.9 -0.9
BAIF pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
328A Wristen Ranch, 80.70 55 ⇑P P 02 12 07.3 -0.2
baz=80
427A Hayter Ranch, 80.74 56 ⇑P P 02 12 07.2 -0.4
baz=80
WATA Walderalm 80.81 332 ⇑i P P 02 12 07.8 +0.1
comp=Z,7.5nm,0.5s,mb4.8
WTTA Wattenberg 80.86 332 ⇓i P P 02 12 08.2 +0.3
comp=Z,6.5nm,0.4s,mb4.8
HDIL Hopedale 80.88 41 eP P 02 12 07.8 -0.3
comp=Z,15nm,0.7s,mb4.9
526A Mary Lane Ranc 80.90 57 ⇑P P 02 12 08.7 +0.2
baz=81
RETA Reutte 80.95 332 ⇑i P P 02 12 08.5 +0.1
comp=Z,7.2nm,0.9s,mb4.5
MOTA Mooselm 80.97 332 ⇑i P P 02 12 08.5 0.0
comp=Z,13nm,0.9s,mb4.8
527A Woodward Ranch 81.13 56 ⇓P P 02 12 09.5 -0.1
baz=81
626A Big Bend Ranch 81.24 57 ⇓P P 02 12 10.2 -0.1
baz=81
CDF Champ du Feu 81.25 335 eP P 02 12 09.3 -0.7
comp=Z,13nm,0.9s,mb4.5
CDF Champ du Feu 81.25 335 eP P 02 12 09.3 -0.7
comp=Z,6.6nm,0.9s,mb4.5
CDF Champ du Feu 81.25 335 eP P 02 12 09.3 -0.7
CDF pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
428A Kincaid Ranch, 81.25 55 ⇑P P 02 12 10.4 +0.1
baz=81
FETA Feichten 81.37 332 ⇑i P P 02 12 10.6 0.0
comp=Z,7.3nm,1.1s,mb4.4
DAVA Damuels 81.42 333 ⇑i P P 02 12 10.9 -0.1
comp=Z,10.0nm,1.0s,mb4.6
MMAI Mount Meron Ar 81.51 308 P P 02 12 12.7 +1.1
comp=Z,17nm,0.6s,mb5.1,baz=46,slow=7.1,SNR=17
MMAI LR LR 02 51 33.9
comp=Z,54nm,18.6s,baz=5.0,slow=38
528A Cox Ranch, San 81.61 56 ⇓P P 02 12 12.2 0.0
baz=81
TXAR Lajitas Array 81.68 57 P P 02 12 12.5 -0.1
TXAR PKKPbc PKKPbc 02 30 43.9 +1.8
TXAR Lajitas Array 81.68 57 P P 02 12 12.5 -0.1
comp=Z,3.8nm,0.5s,mb4.5,baz=299,slow=4.1,SNR=72
TXAR PKKPbc PKKPbc 02 30 43.9 +1.8
comp=Z,0.2nm,0.7s,baz=190,slow=6.4,SNR=3.5
627A Terlingua Ranc 81.76 57 ⇓P P 02 12 12.8 -0.3
baz=82
MEZF Maizieres J'vi 81.83 336 eP P 02 12 12.5 -0.6
comp=Z,14nm,0.6s,mb4.6
MEZF Maizieres J'vi 81.83 336 eP P 02 12 12.5 -0.6
comp=Z,14nm,0.6s,mb5.0
HAU Haudompre 81.90 335 eP P 02 12 12.5 -0.9
HAU eMLR MLR
comp=Z,64nm,20.8s
HAU Haudompre 81.90 335 eP P 02 12 12.5 -0.9
HAU MLR MLR
comp=Z,60nm,20.8s
HINF Hinteralfeld 81.91 335 eP P 02 12 12.3 -1.2
comp=Z,3.4nm,0.6s,mb4.1
HINF Hinteralfeld 81.91 335 eP P 02 12 12.3 -1.2
comp=Z,1.7nm,0.6s,mb4.0
HINF Hinteralfeld 81.91 335 eP P 02 12 12.3 -1.2
HINF pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
CCM Cathedral Cave 81.91 43 eP P 02 12 13.2 -0.5
comp=Z,12nm,0.9s,mb4.7
CCM Cathedral Cave 81.91 43 eP P 02 12 13.2 -0.5
CCM pmax pmax
comp=Z,12nm,0.9s,mb4.7
628A Black Gap, Mar 82.04 56 ⇑P P 02 12 14.5 0.0
baz=82
PMOR Pomariorio Ree 82.96 119 eT 03 43 28.5
comp=Z,34nm,0.2s
FLN La Foliniere 83.08 340 eP P 02 12 18.7 -0.9
comp=Z,16nm,0.6s,mb4.8
FLN eMLR MLR
comp=Z,73nm,20.0s
FLN La Foliniere 83.08 340 eP P 02 12 18.7 -0.9
comp=Z,8.1nm,0.6s,mb4.7
FLN LR LR
comp=Z,70nm,20.0s
FLN La Foliniere 83.08 340 eP P 02 12 18.7 -0.9
FLN pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
FLN MLR MLR
comp=Z,70nm,20.0s
LDF La Druitiere 83.15 339 eP P 02 12 18.9 -1.0
comp=Z,5.4nm,0.5s,mb4.3
LDF La Druitiere 83.15 339 eP P 02 12 18.9 -1.0
comp=Z,2.7nm,0.5s,mb4.3
LDF La Druitiere 83.15 339 eP P 02 12 18.9 -1.0
LDF pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
CABF La Chapelle 83.22 335 eP P 02 12 19.7 -0.6
LOR Lormes 83.29 336 eP P 02 12 19.8 -0.9
comp=Z,8.5nm,0.6s,mb4.5
LOR eMLR MLR
comp=Z,83nm,21.2s
LOR Lormes 83.29 336 eP P 02 12 19.8 -0.9
comp=Z,4.3nm,0.6s,mb4.5
LOR LR LR
comp=Z,80nm,21.3s
LOR Lormes 83.29 336 eP P 02 12 19.8 -0.9

LOR pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
LOR MLR MLR
comp=Z,80nm,21.3s
TAOE Nuku Hiva Isla 83.47 109 *e*LR LR 02 37 42.3
comp=Z,107nm,28.1s
GRR Gorron 83.53 340 *e*P **P 02 12 21.3 -0.6**
comp=Z,17nm,0.5s,mb4.8
GRR Gorron 83.53 340 *e*P **P 02 12 21.3 -0.6**
comp=Z,8.6nm,0.5s,mb4.8
GRR Gorron 83.53 340 *e*P **P 02 12 21.3 -0.6**
GRR pmax pmax
comp=Z,9.0nm,0.5s,mb4.9
SSF Saint Saulge 83.58 336 *e*P **P 02 12 21.2 -1.0**
comp=Z,10.0nm,0.8s,mb4.4
SSF Saint Saulge 83.58 336 *e*P **P 02 12 21.2 -1.0**
comp=Z,5.0nm,0.8s,mb4.4
SSF Saint Saulge 83.58 336 *e*P **P 02 12 21.2 -1.0**
SSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
SMF Signal de Mont 83.86 336 *e*P **P 02 12 22.9 -0.7**
comp=Z,40nm,0.9s,mb5.0
SMF Signal de Mont 83.86 336 *e*P **P 02 12 22.9 -0.7**
comp=Z,20nm,0.9s,mb5.0
SMF Signal de Mont 83.86 336 *e*P **P 02 12 22.9 -0.7**
SMF pmax pmax
comp=Z,20nm,0.9s,mb5.0
AVF Avril sur Loir 83.87 336 *e*P **P 02 12 23.0 -0.7**
comp=Z,21nm,0.8s,mb4.7
AVF Avril sur Loir 83.87 336 *e*P **P 02 12 23.0 -0.7**
comp=Z,10nm,0.8s,mb4.7
AVF Avril sur Loir 83.87 336 *e*P **P 02 12 23.0 -0.7**
AVF pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
PPT Papeete 83.88 122 *e*LR LR 02 37 49.6
comp=Z,139nm,30.5s
PPT *e*T 03 44 36.4
comp=Z,5.8nm,0.2s
PPT Papeete 83.88 122 LR LR 02 42 55.2
comp=Z,66nm,20.9s,baz=337,slow=31
LPL La Plagne 84.00 334 *e*P **P 02 12 24.3 -0.1**
comp=Z,9.4nm,0.5s,mb4.5
LPL La Plagne 84.00 334 *e*P **P 02 12 24.3 -0.1**
comp=Z,4.7nm,0.5s,mb4.6
LPL La Plagne 84.00 334 *e*P **P 02 12 24.3 -0.1**
LPL pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
LPG La Plagne 84.02 334 *e*P **P 02 12 24.5 +0.1**
comp=Z,20nm,0.8s,mb4.7
LPG La Plagne 84.02 334 *e*P **P 02 12 24.5 +0.1**
comp=Z,10nm,0.8s,mb4.7
LPG La Plagne 84.02 334 *e*P **P 02 12 24.5 +0.1**
LPG pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
SGMF Saint Gilles 84.06 341 *e*P **P 02 12 24.2 -0.4**
comp=Z,23nm,0.6s,mb4.9
SGMF Saint Gilles 84.06 341 *e*P **P 02 12 24.2 -0.4**
comp=Z,12nm,0.6s,mb4.9
SGMF Saint Gilles 84.06 341 *e*P **P 02 12 24.2 -0.4**
SGMF pmax pmax
comp=Z,12nm,0.6s,mb4.9
ROSF Rostrenen 84.15 341 *e*P **P 02 12 23.8 -1.2**
comp=Z,67nm,1.0s,mb5.1
ROSF Rostrenen 84.15 341 *e*P **P 02 12 23.8 -1.2**
comp=Z,34nm,1.0s,mb5.1
ROSF Rostrenen 84.15 341 *e*P **P 02 12 23.8 -1.2**
ROSF pmax pmax
comp=Z,34nm,1.0s,mb5.1
BGF Bois d'Agland 84.23 337 *e*P **P 02 12 24.8 -0.7**
comp=Z,11nm,0.7s,mb4.5
BGF Bois d'Agland 84.23 337 *e*P **P 02 12 24.8 -0.7**
comp=Z,5.6nm,0.7s,mb4.5
BGF Bois d'Agland 84.23 337 *e*P **P 02 12 24.8 -0.7**
BGF pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
EIL Elat 84.26 306 LR LR 02 52 50.9
comp=Z,49nm,19.5s,baz=15,slow=38
QUIF Quistinic 84.52 341 *e*P **P 02 12 26.3 -0.6**
comp=Z,21nm,0.6s,mb4.9
QUIF Quistinic 84.52 341 *e*P **P 02 12 26.3 -0.6**
comp=Z,10nm,0.6s,mb4.9
QUIF Quistinic 84.52 341 *e*P **P 02 12 26.3 -0.6**
QUIF pmax pmax
comp=Z,11nm,0.6s,mb5.0
TCF Toulx Ste Croi 84.65 337 *e*P **P 02 12 26.3 -1.3**
comp=Z,7.7nm,0.8s,mb4.4
TCF Toulx Ste Croi 84.65 337 *e*P **P 02 12 26.3 -1.3**
comp=Z,3.8nm,0.8s,mb4.4
TCF Toulx Ste Croi 84.65 337 *e*P **P 02 12 26.3 -1.3**
TCF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
MBDF Montbardon 84.70 333 *e*P **P 02 12 27.1 -0.8**
comp=Z,9.7nm,0.6s,mb4.6
MBDF Montbardon 84.70 333 *e*P **P 02 12 27.1 -0.8**
comp=Z,4.8nm,0.6s,mb4.6
MBDF Montbardon 84.70 333 *e*P **P 02 12 27.1 -0.8**
MBDF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LBNH Lisbon 84.73 28 *e*P **P 02 12 28.0 -0.1**
ORIF Oris-en-Rattie 84.81 334 *e*P **P 02 12 28.3 -0.1**
comp=Z,15nm,0.7s,mb4.8
ORIF *e*MLR MLR
comp=Z,58nm,22.0s
ORIF Oris-en-Rattie 84.81 334 *e*P **P 02 12 28.3 -0.1**
comp=Z,7.4nm,0.7s,mb4.7
ORIF Oris-en-Rattie 84.81 334 *e*P **P 02 12 28.3 -0.1**
ORIF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
MFF Saint Martin d 85.00 339 *e*P **P 02 12 29.2 -0.2**
comp=Z,26nm,0.8s,mb4.9
MFF Saint Martin d 85.00 339 *e*P **P 02 12 29.2 -0.2**
comp=Z,13nm,0.8s,mb4.9
MFF Saint Martin d 85.00 339 *e*P **P 02 12 29.2 -0.2**
MFF pmax pmax
comp=Z,13nm,0.8s,mb4.9
WVT Waverly 85.10 42 *e*P **P 02 12 29.7 -0.3**
comp=Z,3.9nm,0.7s,mb4.5
WVT Waverly 85.10 42 *e*P **P 02 12 29.7 -0.4**
WVT pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
VIVF Saint-Julien-l 85.24 335 *e*P **P 02 12 30.3 -0.3**
comp=Z,6.6nm,0.5s,mb4.5
VIVF Saint-Julien-l 85.24 335 *e*P **P 02 12 30.3 -0.3**
comp=Z,3.3nm,0.5s,mb4.5
VIVF Saint-Julien-l 85.24 335 *e*P **P 02 12 30.3 -0.3**
VIVF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
SBF Sospel 85.25 333 *e*P **P 02 12 29.5 -1.2**
comp=Z,17nm,0.6s,mb4.9
SBF Sospel 85.25 333 *e*P **P 02 12 29.5 -1.2**
comp=Z,8.4nm,0.6s,mb4.8
SBF Sospel 85.25 333 *e*P **P 02 12 29.5 -1.2**
SBF pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
RJF Les Rejaudoux 85.75 337 *e*P **P 02 12 32.9 -0.2**
comp=Z,7.6nm,0.6s,mb4.5
RJF *e*MLR MLR
comp=Z,62nm,20.0s
RJF Les Rejaudoux 85.75 337 *e*P **P 02 12 32.9 -0.2**
comp=Z,3.8nm,0.6s,mb4.5
RJF LR LR
comp=Z,60nm,20.0s
RJF Les Rejaudoux 85.75 337 *e*P **P 02 12 32.9 -0.2**
RJF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
RJF MLR MLR
comp=Z,60nm,20.0s
CAF Calviac 85.94 337 *e*P **P 02 12 34.3 +0.2**
comp=Z,13nm,0.6s,mb4.7
CAF Calviac 85.94 337 *e*P **P 02 12 34.3 +0.2**
comp=Z,6.6nm,0.6s,mb4.7
CAF Calviac 85.94 337 *e*P **P 02 12 34.3 +0.2**
CAF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
LMR La Mourre 86.03 333 *e*P **P 02 12 33.9 -0.6**
comp=Z,18nm,0.8s,mb4.7
LMR La Mourre 86.03 333 *e*P **P 02 12 33.9 -0.6**
comp=Z,8.9nm,0.8s,mb4.8
LMR La Mourre 86.03 333 *e*P **P 02 12 33.9 -0.6**
LMR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LASF Ste Croix 86.19 335 *e*P **P 02 12 35.5 +0.2**
comp=Z,16nm,0.8s,mb4.7
LFF La Frestale 86.30 337 *e*P **P 02 12 36.0 +0.2**
comp=Z,24nm,0.7s,mb4.9
LFF La Frestale 86.30 337 *e*P **P 02 12 36.0 +0.2**
comp=Z,12nm,0.7s,mb4.9
LFF La Frestale 86.30 337 *e*P **P 02 12 36.0 +0.2**
LFF pmax pmax
comp=Z,12nm,0.7s,mb4.9
SWET Sewanee 86.74 42 *e*P **P 02 12 37.4 -0.8**
MTLF Montolieu 87.35 336 *e*P **P 02 12 41.3 +0.3**
comp=Z,3.5nm,0.6s,mb4.2
MTLF Montolieu 87.35 336 *e*P **P 02 12 41.3 +0.3**
comp=Z,1.8nm,0.6s,mb4.2
MTLF Montolieu 87.35 336 *e*P **P 02 12 41.3 +0.3**
MTLF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
EPF Esparros 88.17 337 *e*P **P 02 12 44.9 0.0**
comp=Z,4.0nm,0.7s,mb4.3
EPF Esparros 88.17 337 *e*P **P 02 12 44.9 0.0**
comp=Z,2.0nm,0.7s,mb4.3
EPF Esparros 88.17 337 *e*P **P 02 12 44.9 0.0**
EPF pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
SJPF Ste Jean 88.53 338 *e*P **P 02 12 47.1 +0.5**
comp=Z,6.8nm,0.9s,mb4.4
SJPF Ste Jean 88.53 338 *e*P **P 02 12 47.1 +0.5**
comp=Z,3.4nm,0.9s,mb4.4
SJPF Ste Jean 88.53 338 *e*P **P 02 12 47.1 +0.5**
SJPF pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
ETSF Etsaut 88.54 337 *e*P **P 02 12 46.5 -0.2**
comp=Z,8.4nm,0.6s,mb4.6
ETSF Etsaut 88.54 337 *e*P **P 02 12 46.5 -0.2**
comp=Z,4.2nm,0.6s,mb4.7
ETSF Etsaut 88.54 337 *e*P **P 02 12 46.5 -0.2**
ETSF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KEST Kesra 91.77 328 P **P 02 13 01.2 -0.6**
comp=Z,0.8nm,0.5s,mb4.2,baz=332,slow=3.5,SNR=22
ESDC Sonseca Array 92.47 339 P **P 02 13 04.0 -1.0**
comp=Z,1.5nm,0.7s,mb4.4,baz=16,slow=4.2,SNR=11
TORD Torodi Ar. Bea 114.96 323 PKP PKiKP 02 18 33.8 -1.3
comp=Z,1.1nm,0.4s,baz=14,slow=1.8,SNR=18
DBIC Dimbokro 123.49 327 PKiKP PKPdf 02 18 50.5 -1.0
comp=Z,1.9nm,0.5s,baz=335,slow=6.2,SNR=7.7
DBIC Dimbokro 123.49 327 PKIKP PKPdf 02 18 50.5 -1.0
DBIC pmax pmax
comp=Z,2.0nm,0.5s
LPAZ La Paz 138.53 59 PKP PKPdf 02 19 20.7 +0.9
LPAZ La Paz 138.53 59 PKP PKPdf 02 19 20.7 +0.9
comp=Z,0.9nm,0.8s,baz=42,slow=9.9,SNR=5.3
LPAZ La Paz 138.53 59 PKIKP PKPdf 02 19 20.7 +1.0
LPAZ pmax pmax
comp=Z,1.0nm,0.8s
VNA1 Neumayer--Stat 151.31 196 *e*PKPdf PKPdf 02 19 43.7 +3.7
VNA1 *e* 02 19 48.1
PLCA Paso Flores 151.53 96 PKPbc PKPbc 02 19 47.0 -0.5
comp=Z,3.4nm,0.5s,baz=311,slow=2.6,SNR=13
PLCA Paso Flores 151.53 96 PKIKP PKPbc 02 19 47.0 -0.5
PLCA pmax pmax
comp=Z,3.0nm,0.5s
CPUP Villa Florida 152.66 57 PKPbc PKPbc 02 19 49.6 -0.9
comp=Z,1.2nm,0.5s,baz=303,slow=2.4,SNR=6.4
CPUP Villa Florida 152.66 57 PKIKP PKPbc 02 19 49.6 -0.9
CPUP pmax pmax
comp=Z,1.0nm,0.5s

ISK ***05*** *02:35:44.8,37.°60N×43.°42E,h6km,MD3.4*
ISCJB ***05*** *02:35:45.5±0.5,37.°62N±0.°03×43.°47E±0.°05,h10km, Error ellipse: s-maj=6.1km s-min=4.5km az=162.6*
CSEM ***05*** *02:35:45.3±0.3,37.°63N×43.°45E,h2km,MD3.4, Error ellipse: s-maj=8.2km s-min=6.0km az=73.0*
DDA ***05*** *02:35:45.9,37.°64N×43.°39E,h12km±1km,MD3.4*
ISC 05 02:35:45.6±0.7,37.°62N±0.°03×43.°46E±0.°06,h1km±7km, n34,σ1°913/46,1C,Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
HAKT	**HAKKARI**	**0.20**	**108**	⇑*i*P		**Pg**	**02 35 51.2**	**+1.7**
HAKT				*i* S		**Sg**	**02 35 58.5**	**+6.4**
HAKT	**HAKKARI**	**0.20**	**108**	*i* P		**Pg**	**02 35 51.2**	**+1.7**
HAKT				*i* S		**Sg**	**02 35 58.5**	**+6.3**
CUKT	**Cukurca**	**0.39**	**163**	*e*PG		**Pg**	**02 35 51.9**	**-1.2**
CUKT				*e*SG		**Sg**	**02 35 59.5**	**+1.3**
CUKT	**Cukurca**	**0.39**	**163**	*e*Pg		**Pg**	**02 35 51.9**	**-1.2**
CUKT				*e*Sg		**Sg**	**02 35 59.5**	**+1.4**
VANT	**Van**	**0.81**	**349**	*e*PG		**Pg**	**02 36 01.2**	**-0.1**
VANT				*e*SG		**Sg**	**02 36 13.7**	**+1.9**
VANT	**Van**	**0.81**	**349**	*e*Pg		**Pg**	**02 36 01.2**	**0.0**
VANT				*e*Sg		**Sg**	**02 36 13.7**	**+1.9**
TVAN	**Van**	**0.91**	**357**	*e*P		**Pg**	**02 36 01.8**	**-1.3**
TVAN				*i* S		**Sg**	**02 36 19.7**	**+4.9**
TVAN	**Van**	**0.91**	**357**	*e*P		**Pg**	**02 36 01.8**	**-1.2**
TVAN				*i* S		**Sg**	**02 36 19.7**	**+4.9**
VANB	**Van**	**0.97**	**357**	*e*PG		**Pg**	**02 36 03.4**	**-1.0**
VANB	**Van**	**0.97**	**357**	*e*Pg		**Pg**	**02 36 03.4**	**-0.9**
TATV	**Tatvan**	**1.29**	**314**	*e*P		**Pg**	**02 36 07.9**	**-2.6**
TATV				*i* S		**Sg**	**02 36 29.3**	**+2.1**
TATV	**Tatvan**	**1.29**	**314**	*e*P		**Pg**	**02 36 07.9**	**-2.5**
TATV				*i* S		**Sg**	**02 36 29.3**	**+2.1**
CLDR	**Caldiran**	**1.56**	**13**	*e*PN		**Pn**	**02 36 14.4**	**-0.1**
CLDR	**Caldiran**	**1.56**	**13**	*e*Pn		**Pn**	**02 36 14.4**	**-0.1**
BEST	**Besiri**	**1.76**	**280**	*e*P		**Pn**	**02 36 15.9**	**-1.3**
BEST				*i* S		**Sn**	**02 36 41.7**	**+1.6**
AGRB	**Hanur-Agry**	**1.99**	**349**	*e*PN		**Pn**	**02 36 20.3**	**0.0**
AGRB	**Hanur-Agry**	**1.99**	**349**	*e*Pn		**Pn**	**02 36 20.3**	**0.0**
MARD	**Mardin**	**2.16**	**263**	*e*P		**Pn**	**02 36 20.8**	**-1.9**
MARD				*i* S		**Sn**	**02 36 51.2**	**+1.2**
DIY	**Diyarbakir**	**2.58**	**277**	*e*PN		**Pn**	**02 36 27.3**	**-1.2**
DIY	**Diyarbakir**	**2.58**	**277**	*e*Pn		**Pn**	**02 36 27.3**	**-1.2**
BINT	**Bingol**	**2.66**	**299**	*e*PN		**Pn**	**02 36 29.2**	**-0.3**
BINT	**Bingol**	**2.66**	**299**	*e*Pn		**Pn**	**02 36 29.2**	**-0.3**
GNI	**Garni**	**2.72**	**21**	*e*PN		**Pn**	**02 36 30.5**	**+0.2**
GNI	**Garni**	**2.72**	**21**	*e*Pn		**Pn**	**02 36 30.5**	**+0.2**
EZM	**Erzurum**	**2.81**	**325**	*e*PN		**Pn**	**02 36 31.4**	**-0.3**
SVRC	**Sivrice-ELAZID**	**3.37**	**284**	*e*PN		**Pn**	**02 36 39.5**	**+0.2**
SVRC	**Sivrice-ELAZID**	**3.37**	**284**	*e*Pn		**Pn**	**02 36 39.5**	**+0.2**
PTK	**Pertek**	**3.45**	**293**	*e*PN		**Pn**	**02 36 40.6**	**+0.3**
PTK	**Pertek**	**3.45**	**293**	*e*Pn		**Pn**	**02 36 40.6**	**+0.2**
URFA	**Urfa**	**3.69**	**269**	*e*PN		**Pn**	**02 36 43.4**	**-0.3**
URFA	**Urfa**	**3.69**	**269**	*e*Pn		**Pn**	**02 36 43.4**	**-0.4**
EZC	**Erzincan**	**3.86**	**305**	*e*PN		**Pn**	**02 36 46.4**	**+0.4**
MYA	**Malataya**	**4.04**	**282**	*e*PN		**Pn**	**02 36 48.9**	**+0.3**
MYA	**Malataya**	**4.04**	**282**	*e*Pn		**Pn**	**02 36 48.9**	**+0.3**

ISCJB ***05*** *02:37:50.7±0.8,31.°31N±0.°03×103.°92E±0.°07,h6km±6km, mb3.4/5, Error ellipse: s-maj=10.3km s-min=5.1km az=4.7*
IDC ***05*** *02:37:51.2±1.6,31.°28N×103.°91E,h0km,mb3.5/6, mb1 3.6/7,mb1mx3.4/24,mbtmp3.5/7,MS2.6/1,Ms1 2.6/1, ms1mx2.0/28, Error ellipse: s-maj=43.8km s-min=25.6km az=47.0*
BJI ***05*** *02:37:54.5,31.°11N×103.°83E,h15km,ML3.5/12*
ISC 05 02:37:53.4±0.7,31.°27N±0.°03×103.°82E±0.°07,h12km±5km, n11,σ0°878/18,mb3.4/5,1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**188**	⇓*i*Pg		**Pg**	**02 37 59.7**	**-0.9**
CD2				Sg		**Sg**	**02 38 05.2**	**-0.2**
CD2				smax				
	comp=N,5μm,0.6s							
CD2				smax				
	comp=E,12μm,0.6s							
LZH	**Lanzhou**	**4.81**	**0**	Pg		**Pg**	**02 39 26.4**	**+0.9**
LZH				Sg		**Sg**	**02 40 28.4**	**+0.6**
LZH				smax				
	comp=N,27nm,0.7s							
LZH				smax				
	comp=E,35nm,0.9s							
XAN	**Xi'an**	**5.12**	**56**	Pn		**Pn**	**02 39 09.4**	**-0.5**
XAN				Pg		**Pg**	**02 39 31.4**	**0.0**
XAN				Sn		**Sn**	**02 40 08.7**	**-0.2**
XAN				Sg		**Sg**	**02 40 31.2**	**-6.5**
XAN				smax				
	comp=N,53nm,0.9s							
XAN				smax				
	comp=E,28nm,0.7s							
GYA	**Guiyang**	**5.40**	**152**	Pn		**Pn**	**02 39 16.1**	**+2.3**
GYA				Sn		**Sn**	**02 40 16.9**	**+1.0**
GYA				Sg		**Sg**	**02 40 46.9**	**0.0**
GYA				smax				
	comp=N,70nm,0.8s							
GYA				smax				
	comp=E,70nm,0.8s							
SONM	**Songino Array**	**16.66**	**6**	Pn		**Pn**	**02 41 46.3**	**-0.4**
	baz=182,slow=12,SNR=2.0							
SONM				LR		LR	02 49 04.4	
	comp=E,22nm,20.4s,baz=82,slow=40							
KSRS	**Korea Array**	**20.81**	**66**	P		**P**	**02 42 33.7**	**-0.9**
	comp=E,0.8nm,0.3s,baz=267,slow=11,SNR=4.3							
MKAR	**Makanchi Array**	**22.70**	**319**	P		**P**	**02 42 55.3**	**+0.6**
	comp=E,0.4nm,0.4s,mb3.2,baz=120,slow=11,SNR=7.3							
ZALV	**Zalesovo Beam**	**26.47**	**334**	P		**P**	**02 43 30.4**	**+0.2**
	comp=E,0.4nm,0.3s,mb3.4,baz=126,slow=7.5,SNR=3.8							
ARCES	**ARCESS Array B**	**57.01**	**336**	P		**P**	**02 47 38.1**	**-0.5**
	comp=E,0.7nm,0.6s,mb3.9,baz=88,slow=7.7,SNR=7.1							
ASAR	**Alice Springs**	**61.76**	**149**	P		**P**	**02 48 11.6**	**-0.3**
	comp=E,0.1nm,0.3s,mb3.4,baz=345,slow=6.9,SNR=2.8							
ILAR	**Eielson Array**	**69.80**	**26**	P		**P**	**02 49 02.1**	**-1.1**
	comp=E,0.1nm,0.4s,mb3.1,baz=294,slow=4.3,SNR=3.5							

IDC 05 02:44:24.7±1.9,3.°71S×149.°00E,h0km,mb3.8/6, mb1 4.0/6,mb1mx3.9/14,mbtmp3.8/6,MS3.5/10, Ms1 3.5/10,ms1mx3.3/21,Error ellipse: s-maj=57.8km s-min=26.8km az=113.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.50**	**189**	LR		LR	02 52 59.3	
	comp=Z,45nm,20.3s,baz=222,slow=31							
GUMO	**Guam**		**17.67 347**	LR		LR	02 54 56.4	
	comp=Z,62nm,19.4s,baz=258,slow=36							
ASAR	**Alice Springs**		**24.62 215**	P		P	02 49 48.5	+1.6
	0.9nm,0.6s,baz=46,slow=7.9,SNR=7.8							
FITZ	**Fitzroy Crossi**		**26.97 236**	P		P	02 50 06.8	-1.5
	6.7nm,0.8s,baz=50,slow=9.6,SNR=2.4							
FITZ				LR		LR	03 01 40.4	
	comp=Z,156nm,20.3s,baz=55,slow=38							
STKA	**Stephens Creek**		**28.87 193**	LR		LR	03 02 31.9	
	comp=Z,78nm,19.4s,baz=26,slow=38							
NWAO	**Narrogin (SRO)**		**41.55 222**	LR		LR	03 09 39.5	
	comp=Z,129nm,19.0s,baz=143,slow=36							
URZ	**Urewera**		**42.90 147**	LR		LR	03 07 57.7	
	comp=Z,119nm,18.4s,baz=236,slow=33							
RPZ	**Rata Peaks**		**44.36 157**	LR		LR	03 09 21.1	
	comp=Z,74nm,19.3s,baz=219,slow=34							
KSRS	**Korea Array**		**45.40 336**	LR		LR	03 10 02.7	
	comp=Z,52nm,20.2s,baz=6.9,slow=34							
CMAR	**Chiang Mai Arr**		**53.99 296**	P		P	02 53 50.3	-0.7
	0.4nm,0.3s,baz=97,slow=5.0,SNR=3.4							
PETK	**Petropavlovsk-**		**57.08 6**	LR		LR	03 14 28.0	
	comp=Z,38nm,21.6s,baz=96,slow=32							
SONM	**Songino Array**		**63.42 329**	P		P	02 54 57.3	+1.1
	0.2nm,0.3s,baz=134,slow=4.2,SNR=4.1							
MKAR	**Makanchi Array**		**77.03 320**	P		P	02 56 20.9	+1.3
	0.2nm,0.2s,baz=100,slow=7.9,SNR=3.2							
ZALV	**Zalesovo Beam**		**78.17 327**	LR		LR	03 29 12.4	
	comp=Z,25nm,20.8s,baz=327,slow=34							
ILAR	**Eielson Array**		**82.51 23**	P		P	02 56 48.6	-1.0
	0.3nm,0.8s,baz=242,slow=4.9,SNR=4.1							
TORD	**Torodi Ar. Bea**		**146.37 288**	PKPbc		PKPbc	03 04 07.7	-1.0
	1.0nm,0.9s,baz=66,slow=2.9,SNR=3.9							

IDC ***05*** *02:46:39.0±4.3,36.°21N×70.°21E,h177km±37km,mb3.2/7, mb1 3.3/11,mb1mx3.2/27,mbtmp3.3/11,Error ellipse: s-maj=31.0km s-min=21.4km az=4.0*
BJI ***05*** *02:46:40.9,35.°75N×70.°73E,h238km*
ISCJB ***05*** *02:46:42.8±0.5,36.°56N±0.°03×70.°17E±0.°06,h213km±6km, mb3.2/6, Error ellipse: s-maj=7.7km s-min=5.0km az=173.1*
NEIC ***05*** *02:46:43.1±0.8,36.°45N×70.°27E,h210km±8km,mb3.6/1, Error ellipse: s-maj=15.2km s-min=9.9km az=126.0*
NNC ***05*** *02:46:58.5±9.6,37.°80N×71.°26E,h289km±109km,mb2.8, mpv4.3,Error ellipse: s-maj=98.8km s-min=74.0km az=4.0*
ISC 05 02:46:43.8±0.5,36.°58N±0.°03×70.°16E±0.°07,h203km±6km, n43,σ0°885/54,mb3.2/6,5C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.23**	**204**	*e*Pn		**Pn**	**02 47 25.2**	**+0.2**
KBL				*e*S		**Sn**	**02 47 56.4**	**-0.6**
CHCP	**Chirah Chowk**	**3.87**	**138**	P		**Pn**	**02 47 44.4**	**+0.3**
KSH	**Kashi**	**5.44**	**56**	⇓*i*P		**Pn**	**02 47 58.9**	**-5.0**
KSH				S		**Sn**	**02 48 56.5**	**-11**
KSH				smax				
	comp=N,58nm,0.3s							
KSH				smax				
	comp=E,44nm,0.5s							
AML	**Almayashu**	**6.18**	**25**	P		**Pn**	**02 48 13.8**	**+0.5**
	SNR=215							
AML	**Almayashu**	**6.18**	**25**	*e*Pn		**Pn**	**02 48 13.7**	**+0.4**
	comp=E,256nm,0.5s							
AML				*e*S		**Sn**	**02 49 22.6**	**-1.6**
KK31	**Karatay Array**	**6.52**	**2**	⇓P		**Pn**	**02 48 18.4**	**+0.7**
	comp=E,6.4nm,0.3s,baz=174,slow=12,SNR=128							
KK31				⇑S		**Sn**	**02 49 28.2**	**-4.0**
	comp=E,13nm,0.7s,baz=186,slow=26,SNR=5.7							
UCH	**Uchtor**	**6.57**	**30**	P		**Pn**	**02 48 18.8**	**+0.5**
	SNR=106							
UCH	**Uchtor**	**6.57**	**30**	*e*Pn		**Pn**	**02 48 18.9**	**+0.6**
	comp=E,70nm,0.6s							
UCH				*e*S		**Sn**	**02 49 32.3**	**-1.0**
EKS2	**Erkin-Say**	**6.68**	**24**	P		**Pn**	**02 48 20.5**	**+0.7**
	SNR=31							
EKS2	**Erkin-Say**	**6.68**	**24**	*e*Pn		**Pn**	**02 48 20.0**	**+0.2**
	comp=E,24nm,0.5s							
EKS2				*e*S		**Sn**	**02 49 35.3**	**-0.7**
KZA	**Kyzart**	**6.76**	**34**	P		**Pn**	**02 48 20.9**	**0.0**
	SNR=32							
AAK	**Ala-Archa**	**6.91**	**28**	P		**Pn**	**02 48 23.6**	**+0.9**
	SNR=15							
AAK	**Ala-Archa**	**6.91**	**28**	*e*Pn		**Pn**	**02 48 23.4**	**+0.7**
AAK				*e*S		**Sn**	**02 49 41.8**	**+0.5**
AAK	**Ala-Archa**	**6.91**	**28**	P		**Pn**	**02 48 23.3**	**+0.6**
	comp=E,9.2nm,0.3s,baz=196,slow=13,SNR=23							
AAK				S		**Sn**	**02 49 41.5**	**+0.2**
	comp=E,2.0nm,0.3s,baz=191,slow=3.9,SNR=4.8							
KBK	**Karagaybulak**	**7.10**	**30**	P		**Pn**	**02 48 26.2**	**+0.9**
	SNR=5.7							
CHMS	**Chumysh**	**7.32**	**27**	P		**Pn**	**02 48 28.8**	**+0.8**
	SNR=7.1							
ULHL	**Ulahol**	**7.36**	**38**	P		**Pn**	**02 48 28.3**	**-0.3**
	SNR=40							
USP	**Ospenovka**	**7.46**	**25**	P		**Pn**	**02 48 30.3**	**+0.4**
	SNR=9.2							
TKM2	**Tokmak 2**	**7.59**	**32**	⇑P		**Pn**	**02 48 31.5**	**-0.1**
	comp=E,39nm,0.7s							
TKM2				⇑S		**Sn**	**02 49 40.1**	**-17**
	comp=E,3.1nm,0.6s							
TKM2	**Tokmak 2**	**7.59**	**32**	P		**Pn**	**02 48 31.7**	**+0.1**
	SNR=33							
TKM2	**Tokmak 2**	**7.59**	**32**	*e*Pn		**Pn**	**02 48 30.8**	**-0.8**
	comp=E,33nm,0.5s							
MK31	**Makanchi Array**	**13.63**	**38**	*e*Pn		**Pn**	**02 49 48.1**	**-0.8**
MKAR	**Makanchi Array**	**13.63**	**38**	P		**Pn**	**02 49 48.3**	**-0.6**
	comp=E,0.5nm,0.3s,baz=225,slow=15,SNR=14							
AB31	**Akbulak array**	**14.69**	**333**	⇑P		**Pn**	**02 50 04.8**	**+2.9**
	comp=E,0.9nm,0.6s,baz=110,slow=14,SNR=13							
AB31				⇑S		**S**	**02 52 41.4**	**-3.6**
	comp=E,1.3nm,0.8s,baz=138,slow=27,SNR=4.2							
ABKAR	**Akbulak array**	**14.69**	**333**	*e*Pn		**Pn**	**02 50 02.5**	**+0.5**
	comp=E,1.2nm,0.4s							
ABKAR				*e*S		**S**	**02 52 39.0**	**-6.0**
GKN	**Gorkha**	**14.92**	**121**	*e*P		**Pn**	**02 50 05.5**	**+0.5**
	comp=E,7.6nm,0.3s							
DMN	**Daman**	**15.49**	**121**	*e*P		**Pn**	**02 50 12.2**	**+0.2**
KKN	**Kakani**	**15.50**	**120**	*e*P		**Pn**	**02 50 11.7**	**-0.3**
PKIN	**Phulchoki**	**15.71**	**121**	*

ILAR	**Eielson Array**	**74.88**	**16**	P	**P**	**02 58 01.0**	**-0.7**
	comp=E,0.3nm,0.8s,mb3.0,baz=303,slow=4.2,SNR=4.3						
ASAR	**Alice Springs**	**84.86**	**124**	P	**P**	**02 58 52.0**	**-3.8**
	comp=E,0.2nm,0.6s,mb3.0,baz=316,slow=5.2,SNR=4.1						

ISCJB ***05*** *02:57:41.2±0.5, 32.°55N±0.°04×105.°79E±0.°04, h10km, mb3.7/7, Error ellipse: s-maj=6.8km s-min=4.7km az=148.3*

IDC ***05*** *02:57:42.6±1.2, 32.°18N×105.°02E, h0km, mb3.8/6, mb1 3.9/8, mb1mx3.6/24, mbtmp3.7/8, ML3.6/2, Error ellipse: s-maj=45.2km s-min=22.3km az=50.0*

BJI ***05*** *02:57:43.9, 32.°66N×105.°51E, h12km, mB4.5/6, mb4.1/4, ML4.0/11, Ms3.8/6, Ms7 3.4/6*

NEIC ***05*** *02:57:44.1±1.0, 32.°15N×104.°98E, h10km, mb3.6/1, Error ellipse: s-maj=33.6km s-min=16.9km az=67.0*

ISC 05 02:57:43.5±0.5, 32.°54N±0.°04×105.°68E±0.°05, h10km, n16, σ1s34/28, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.31**	**226**	Pn	**Pn**	**02 58 23.0**	**+1.5**
CD2				Pg	**Pg**	**02 58 28.0**	**+0.3**
CD2				Sn	**Sn**	**02 58 49.0**	**-1.0**
CD2				Sg	**Sg**	**02 58 56.0**	**-1.6**
CD2				smax			
	comp=N,4μm,0.6s						
CD2				smax			
	comp=E,2μm,0.6s						
XAN	**Xi'an**	**3.10**	**60**	Pn	**Pn**	**02 58 35.0**	**+2.6**
XAN				Pg	**Pg**	**02 58 40.1**	**-2.8**
XAN				Sn	**Sn**	**02 59 15.6**	**+6.1**
XAN				Sg	**Sg**	**02 59 22.1**	**-0.9**
LZH	**Lanzhou**	**3.85**	**337**	Pn	**Pn**	**02 58 42.8**	**0.0**
LZH				Pg	**Pg**	**02 58 51.6**	**-5.7**
LZH				Sn	**Sn**	**02 59 25.6**	**-2.5**
LZH				Sg	**Sg**	**02 59 38.1**	**-9.0**
LZH				smax			
	comp=N,340nm,0.6s						
LZH				smax			
	comp=E,600nm,0.5s						
LZH				LR	LR		
	comp=N,720nm,4.6s						
LZH				LR	LR		
	comp=Z,840nm,5.9s						
WHN	**Wuhan**	**7.66**	**103**	P	**Pn**	**02 59 32.2**	**-2.9**
WHN				S	**Sn**	**03 01 02.4**	**+0.4**
GTA	**Gaotai**	**8.34**	**327**	*e*P	**Pn**	**02 59 47.3**	**+2.9**
GTA				pP		02 59 50.9	
GTA				sP		02 59 52.6	
GTA				S	**Sn**	**03 01 24.9**	**+6.3**
GTA				sS		03 01 31.4	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,35nm,5.4s						
GTA				LR	LR		
	comp=N,180nm,10.8s						
GTA				LR	LR		
	comp=E,230nm,12.0s						
GTA				LR	LR		
	comp=Z,140nm,11.1s						
HHC	**Hu-ho-hao-te**	**9.54**	**28**	*e*P	**Pn**	**02 59 59.3**	**-1.6**
HHC				S	**Sn**	**03 01 48.5**	**+0.4**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,87nm,3.9s						
HHC				LR	LR		
	comp=N,150nm,4.1s						
HHC				LR	LR		
	comp=E,220nm,5.6s						
HHC				LR	LR		
	comp=Z,90nm,5.0s						
SONM	**Songino Array**	**15.29**	**2**	Pn	**Pn**	**03 01 26.0**	**+6.7**
	comp=Z,0.2nm,0.3s,baz=180,slow=13,SNR=2.7						
KSRS	**Korea Array**	**18.86**	**69**	P	**Pn**	**03 02 11.3**	**+7.1**
	comp=Z,0.2nm,0.3s,baz=255,slow=10,SNR=6.5						
MKAR	**Makanchi Array**	**22.84**	**315**	P	**P**	**03 02 47.2**	**+0.6**
	comp=Z,1.2nm,0.7s,mb3.4,baz=120,slow=12,SNR=10						
ZALV	**Zalesovo Beam**	**26.06**	**331**	P	**P**	**03 03 16.9**	**0.0**
	comp=Z,0.5nm,0.4s,mb3.4,baz=130,slow=13,SNR=2.6						
KURK	**Kurchatov**	**26.95**	**320**	P	**P**	**03 03 24.7**	**-0.2**
	comp=Z,1.0nm,0.6s,mb3.5						
ARCES	**ARCESS Array B**	**56.51**	**335**	P	**P**	**03 07 26.7**	**+1.3**
ARCES	**ARCESS Array B**	**56.51**	**335**	P	**P**	**03 07 26.7**	**+1.3**
	comp=Z,0.9nm,0.8s,mb3.9,baz=83,slow=9.4,SNR=6.5						
FINES	**FINESS Array B**	**57.13**	**326**	P	**P**	**03 07 29.7**	**-0.2**
	comp=Z,2.9nm,0.8s,mb4.3,baz=81,slow=12,SNR=4.5						
ASAR	**Alice Springs**	**62.05**	**151**	P	**P**	**03 08 04.8**	**+0.6**
	comp=Z,0.4nm,0.3s,mb4.0,baz=336,slow=6.9,SNR=6.9						
NOA	**NORSAR Array B**	**64.18**	**327**	P	**P**	**03 08 18.9**	**+1.0**
	comp=Z,0.4nm,0.6s,mb3.6,baz=78,slow=8.3,SNR=2.7						

GUC 05 03:12:15.3±0.6, 23.°45S×67.°22W, h220km, ML3.5, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB04	**Plate Boundary**	**2.40**	**299**	*e*P	Pn	03 13 07.1	+7.6
PB04				*e*S	S	03 13 46.5	+13
PB04				AML	AML	03 13 51.8	
	comp=N,36nm,0.5s						
CEN1	**Los Morros**	**2.74**	**271**	*e*P	Pn	03 13 06.3	+3.2
CEN1				*e*S	S	03 13 45.3	+4.8
CEN1				AML	AML	03 13 51.1	
	comp=N,23nm,0.6s						
ANCH	**Antofagasta**	**2.94**	**265**	*e*P	Pn	03 13 03.1	-2.2
ANCH				*e*S	S	03 13 42.9	-1.7
ANCH				AML	AML	03 13 45.0	
	comp=E,349nm,0.1s						
PB01	**Plate Boundary**	**3.19**	**318**	*e*P	Pn	03 13 10.9	+2.7
PB01				*e*S	S	03 13 55.5	+5.7
PSGC	**Pisagua**	**4.69**	**324**	*e*P	Pn	03 13 28.1	+1.7
PSGC				*e*S	S	03 14 25.2	+2.5
MNMC	**Miæe Miæ**	**4.83**	**332**	*e*P	Pn	03 13 31.5	+3.3

ISCJB ***05*** *03:43:24.1±1.0, 36.°01N±0.°05×21.°39E±0.°09, h10km, Error ellipse: s-maj=11.2km s-min=5.7km az=155.3*

CSEM ***05*** *03:43:24.8±0.5, 36.°03N×21.°53E, h2km, MD3.1, Error ellipse: s-maj=11.3km s-min=6.1km az=49.0*

ATH ***05*** *03:43:26.0, 36.°11N×21.°51E, h28km±3km, MD3.1/8*

THE ***05*** *03:43:26.5, 36.°08N×21.°56E, h4km±2km, ML3.2/4, Error ellipse: s-maj=5.2km s-min=2.3km az=248.0*

NEIC ***05*** *03:43:34.6, 36.°50N×21.°81E, h5km, ML3.0(ATH), After ATH.*

ISC 05 03:43:24.9±1.3, 36.°05N±0.°06×21.°5E±0.°1, h1km±8km, n75, σ1s01/88, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.86**	**11**	*e*Pn	**Pn**	**03 43 41.9**	**-2.2**
PYL	**PYLOS**	**0.86**	**11**	*e*Pn	**Pg**	**03 43 41.8**	**+0.3**
PYL	**PYLOS**	**0.86**	**11**	P	**Pg**	**03 43 41.8**	**+0.3**
PYL	**PYLOS**	**0.86**	**11**	P	**Pg**	**03 43 41.8**	**+0.3**
ITM	**Ithomi**	**1.18**	**16**	*e*Pn	**Pg**	**03 43 47.4**	**0.0**
ITM				*e*Sn	**Sn**	**03 44 02.9**	**-2.1**
ITM	**Ithomi**	**1.18**	**16**	*e*Pn	**Pg**	**03 43 47.4**	**0.0**
ITM				*e*Sn	**Sn**	**03 44 02.8**	**-2.2**
ITM	**Ithomi**	**1.18**	**16**	*e*Pn	**Pg**	**03 43 47.4**	**0.0**
ITM				*e*Sn	**Sn**	**03 44 02.9**	**-2.1**
ITM	**Ithomi**	**1.18**	**16**	P	**Pg**	**03 43 47.4**	**0.0**
ITM	**Ithomi**	**1.18**	**16**	P	**Pg**	**03 43 47.4**	**0.0**
ITM				*e*Sn	**Sn**	**03 44 02.9**	**-2.1**
KYTH	**Kithira**	**1.24**	**79**	*e*Pn	**Pn**	**03 43 49.3**	**0.0**
KYTH	**Kithira**	**1.24**	**79**	*e*Pn	**Pn**	**03 43 49.3**	**0.0**
KYTH	**Kithira**	**1.24**	**79**	*e*Pn	**Pn**	**03 43 49.4**	**+0.1**
KYTH	**Kithira**	**1.24**	**79**	*e*Pn	**Pn**	**03 43 49.3**	**0.0**
VLI	**Veliai**	**1.32**	**59**	*e*Pb	**Pb**	**03 43 50.1**	**-0.3**
VLI	**Veliai**	**1.32**	**59**	*e*PB	**Pb**	**03 43 50.1**	**-0.3**
VLI	**Veliai**	**1.32**	**59**	*e*Pn	**Pn**	**03 43 49.8**	**-0.6**
VLI	**Veliai**	**1.32**	**59**	*e*Pn	**Pn**	**03 43 49.8**	**-0.6**
VLI	**Veliai**	**1.32**	**59**	*e*Pb	**Pb**	**03 43 50.1**	**-0.3**
VLX	**Vlachokerasia**	**1.49**	**27**	*e*PB	**Pb**	**03 43 52.5**	**-0.8**
VLX	**Vlachokerasia**	**1.49**	**27**	*e*Pn	**Pn**	**03 43 53.0**	**+0.3**
VLX	**Vlachokerasia**	**1.49**	**27**	P	**Pn**	**03 43 52.4**	**-0.3**
VLX				S	**Sn**	**03 44 14.0**	**+1.3**
VLX	**Vlachokerasia**	**1.49**	**27**	P	**Pn**	**03 43 52.4**	**-0.3**
VLX	**Vlachokerasia**	**1.49**	**27**	*e*Pn	**Pn**	**03 43 53.0**	**+0.3**
VLX				S	**Sn**	**03 44 14.0**	**+1.3**
GUR	**Goura**	**2.00**	**19**	*e*Pn	**Pn**	**03 43 58.8**	**-0.9**
GUR	**Goura**	**2.00**	**19**	P	**Pn**	**03 44 00.1**	**+0.4**
GUR				S	**Sn**	**03 44 24.5**	**-0.8**
GUR	**Goura**	**2.00**	**19**	*e*Pn	**Pn**	**03 43 58.8**	**-0.9**
GUR	**Goura**	**2.00**	**19**	P	**Pn**	**03 44 00.1**	**+0.4**
GUR				S	**Sn**	**03 44 24.5**	**-0.8**
DID	**Didima**	**2.00**	**43**	*e*PN	**Pn**	**03 43 59.3**	**-0.4**
DID	**Didima**	**2.00**	**43**	*e*PN	**Pn**	**03 43 59.4**	**-0.3**
DID	**Didima**	**2.00**	**43**	P	**Pn**	**03 43 59.1**	**-0.6**
DID	**Didima**	**2.00**	**43**	P	**Pn**	**03 43 59.1**	**-0.6**
DID	**Didima**	**2.00**	**43**	*e*Pn	**Pn**	**03 43 59.4**	**-0.3**
KARN	**Karanos**	**2.04**	**108**	P	**Pn**	**03 44 00.3**	**-0.1**
KARN	**Karanos**	**2.04**	**108**	P	**Pn**	**03 44 00.3**	**-0.1**
LAKA	**Lakka**	**2.22**	**9**	P	**Pn**	**03 44 03.7**	**+0.9**
LAKA				S	**Sn**	**03 44 30.4**	**-0.4**
LAKA	**Lakka**	**2.22**	**9**	P	**Pn**	**03 44 03.7**	**+0.9**
LAKA				S	**Sn**	**03 44 30.4**	**-0.4**
VLS	**Valsamata**	**2.26**	**341**	*e*Pn	**Pn**	**03 44 02.8**	**-0.5**
VLS	**Valsamata**	**2.26**	**341**	*e*PN	**Pn**	**03 44 00.5**	**-2.8**
VLS	**Valsamata**	**2.26**	**341**	*e*PN	**Pn**	**03 44 02.8**	**-0.5**
VLS	**Valsamata**	**2.26**	**341**	P	**Pn**	**03 44 03.1**	**-0.2**
VLS	**Valsamata**	**2.26**	**341**	*e*Pn	**Pn**	**03 44 02.8**	**-0.5**
VLS	**Valsamata**	**2.26**	**341**	P	**Pn**	**03 44 03.1**	**-0.2**
VAM	**Vamos**	**2.26**	**106**	P	**Pg**	**03 44 12.7**	**+4.5**
VAM	**Vamos**	**2.26**	**106**	*e*PN	**Pn**	**03 44 02.6**	**-0.7**
LTK	**Loutraki**	**2.28**	**30**	P	**Pn**	**03 44 04.7**	**+1.1**
LTK	**Loutraki**	**2.28**	**30**	P	**Pn**	**03 44 04.7**	**+1.1**
TRIZ	**Trizonia**	**2.35**	**10**	P	**Pn**	**03 44 05.5**	**+0.9**
TRIZ				S	**Sn**	**03 44 35.0**	**+0.9**
TRIZ	**Trizonia**	**2.35**	**10**	P	**Pn**	**03 44 05.5**	**+0.9**
TRIZ				S	**Sn**	**03 44 35.0**	**+0.9**
KALE	**Kalithea**	**2.39**	**12**	P	**Pn**	**03 44 05.6**	**+0.5**
KALE	**Kalithea**	**2.39**	**12**	P	**Pn**	**03 44 05.6**	**+0.5**
EFP	**Efpalio**	**2.40**	**7**	*e*PB	**Pb**	**03 44 06.4**	**-2.4**
EFP	**Efpalio**	**2.40**	**7**	P	**Pn**	**03 44 05.0**	**-0.2**
EFP	**Efpalio**	**2.40**	**7**	P	**Pn**	**03 44 05.0**	**-0.2**
VLY	**Voula,Athens**	**2.56**	**44**	*e*Pn	**Pn**	**03 44 07.9**	**+0.5**
VLY	**Voula,Athens**	**2.56**	**44**	*e*PN	**Pn**	**03 44 07.9**	**+0.5**
VLY	**Voula,Athens**	**2.56**	**44**	*e*PN	**Pn**	**03 44 08.0**	**+0.6**
VLY	**Voula,Athens**	**2.56**	**44**	*e*Pn	**Pn**	**03 44 07.9**	**+0.5**
IDI	**Anoyia**	**2.84**	**104**	*e*Pn	**Pn**	**03 44 11.1**	**-0.2**
IDI	**Anoyia**	**2.84**	**104**	*e*Pn	**Pn**	**03 44 11.1**	**-0.1**
LKR	**Lokris**	**2.85**	**24**	*e*Pn	**Pn**	**03 44 10.9**	**-0.5**
LKR	**Lokris**	**2.85**	**24**	*e*PN	**Pn**	**03 44 10.9**	**-0.5**
LKR	**Lokris**	**2.85**	**24**	*e*Pn	**Pn**	**03 44 10.9**	**-0.5**
AGG	**Agios Georgios**	**3.04**	**12**	P	**Pn**	**03 44 17.3**	**+3.3**
AGG	**Agios Georgios**	**3.04**	**12**	P	**Pn**	**03 44 14.8**	**+0.8**
AGG	**Agios Georgios**	**3.04**	**12**	P	**Pn**	**03 44 14.8**	**+0.8**
XOR	**Xorichti**	**3.57**	**21**	P	**Pn**	**03 44 21.9**	**+0.6**
XOR	**Xorichti**	**3.57**	**21**	P	**Pn**	**03 44 21.9**	**+0.6**
HORT	**Hortiatis**	**4.71**	**15**	P	**Pn**	**03 44 38.2**	**+1.2**
HORT	**Hortiatis**	**4.71**	**15**	P	**Pn**	**03 44 38.2**	**+1.2**
GRG	**Griva**	**4.95**	**8**	P	**Pn**	**03 44 42.5**	**+2.2**
GRG	**Griva**	**4.95**	**8**	P	**Pn**	**03 44 42.5**	**+2.2**
SOH	**Sokhos**	**4.98**	**16**	P	**Pn**	**03 44 42.2**	**+1.5**
SOH	**Sokhos**	**4.98**	**16**	P	**Pn**	**03 44 42.2**	**+1.5**
STON	**Ston**	**7.43**	**338**	*e*Pn	**Pn**	**03 45 13.2**	**-1.1**
STON				Sn	**Sn**	**03 46 28.0**	**-11**
STON	**Ston**	**7.43**	**338**	*e*Pn	**Pn**	**03 45 13.2**	**-1.2**

FUNV 05 04:04:53.4, 6.°74N×73.°07W, h177km, MW3.6, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.34**	**34**	↑*i*P	Pn	04 05 22.9	-0.8
CAPV				*e*S	Sn	04 05 44.4	-2.5
SOCV	**Socops**	**2.67**	**55**	*e*P	Pn	04 05 37.5	-0.5
SOCV				*e*S	Sn	04 06 09.1	-3.5
VIGV	**El Vigia**	**2.68**	**39**	*e*P	Pn	04 05 37.2	-0.9
VIGV				*e*S	Sn	04 06 10.3	-2.5
ELOV	**Elorza**	**3.57**	**86**	*e*P	Pn	04 05 48.2	-0.8
VIRV	**Villa del Rosa**	**3.79**	**10**	*e*P	Pn	04 05 49.7	-2.1
VIRV				*e*S	Sn	04 06 33.2	-4.3
QARV	**Quebrada Arrib**	**4.26**	**36**	*e*P	Pn	04 05 57.1	-0.7
QARV				*e*S	Sn	04 06 43.0	-5.1
BAUV	**El Baul**	**5.44**	**66**	*e*P	Pn	04 06 10.9	-2.1
BAUV				*e*S	Sn	04 07 09.4	-6.1
MAPV	**Macapo**	**5.50**	**56**	*e*P	Pn	04 06 11.9	-1.9
MAPV				*e*S	Sn	04 07 09.5	-7.5
MONV	**Montecano**	**6.01**	**30**	*e*P	Pn	04 06 19.0	-1.5
MONV				*e*S	Sn	04 07 21.3	-7.9
CAOV	**Caicara del Or**	**6.72**	**85**	*e*P	Pn	04 06 27.3	-2.6

ISCJB ***05*** *04:21:07.9±2.2, 33.°79S±0.°06×178.°6W±0.°1, h5km±14km, mb4.3/11, MS3.8/3, Error ellipse: s-maj=17.4km s-min=7.8km az=20.1*

IDC ***05*** *04:21:08.2±0.7, 33.°51S×178.°56W, h0km, mb4.3/9, mb1 4.4/10, mb1mx4.4/15, mbtmp4.3/10, ML4.7/1, MS3.8/3, Ms1 3.8/3, ms1mx3.3/15, Error ellipse: s-maj=23.9km s-min=22.8km az=135.0*

NEIC ***05*** *04:21:13.4±0.5, 33.°64S×178.°52W, h35km, mb4.8/2, Error ellipse: s-maj=14.4km s-min=12.0km az=150.0*

ISC 05 04:21:09.3±2.6, 33.°75S±0.°06×178.°5W±0.°1, h4km±16km, n44, σ1s07/31, mb4.3/11, MS3.8/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**5.04**	**210**	PN	**Pn**	**04 22 35.3**	**-0.4**
PUZ				SN	**Sn**	**04 23 25.2**	**+0.7**
CNGZ	**Carnagh Statio**	**5.41**	**208**	PN	**Pn**	**04 22 31.0**	**+0.2**
MWZ	**Matawai**	**5.58**	**214**	PN	**Pn**	**04 22 32.6**	**-0.5**
MWZ				SN	**Sn**	**04 23 36.5**	**-1.2**
URZ	**Urewera**	**5.72**	**217**	Pn	**Pn**	**04 22 35.7**	**+0.6**
	20nm,0.3s,baz=37,slow=5.4,SNR=73						
URZ				Sn	**Sn**	**04 23 41.8**	**+0.6**
	24nm,0.3s,baz=152,slow=21,SNR=14						
URZ	**Urewera**	**5.72**	**217**	PN	**Pn**	**04 22 35.6**	**+0.5**
URZ				SN	**Sn**	**04 23 41.8**	**+0.6**
MHGZ	**Mahia Peninsul**	**6.11**	**207**	PN	**Pn**	**04 22 39.9**	**-0.5**
NMHZ	**Naumai**	**6.53**	**214**	PN	**Pn**	**04 22 46.9**	**+0.8**
OUZ	**Omahuta**	**6.67**	**255**	*e*Pn	**Pn**	**04 22 49.9**	**+1.9**
	77nm,1.2s						
KAHZ	**Kahuranaki**	**7.07**	**210**	PN	**Pn**	**04 22 53.5**	**-0.1**
BFZ	**Birch Farm**	**8.08**	**210**	PN	**Pn**	**04 23 06.6**	**-0.8**
RPZ	**Rata Peaks**	**12.84**	**216**	Pn	**Pn**	**04 24 10.5**	**-2.1**
	0.8nm,0.3s,baz=358,slow=9.3,SNR=3.4						
RPZ				Sn	**Sn**	**04 26 22.7**	**-13**
	1.4nm,0.3s,baz=185,slow=23,SNR=6.2						
DZM	**Mont Dzumac**	**17.63**	**307**	*e*P	**Pn**	**04 25 17.8**	**+1.9**
	34nm,0.8s						
DZM				*e*LR	LR	04 29 22.8	
	216nm,25.6s						
DZM	**Mont Dzumac**	**17.63**	**307**	*e*Pn	**Pn**	**04 25 17.8**	**+1.9**
	204nm,1.1s						
PPT	**Papeete**	**30.53**	**65**	*e*LR	LR	04 34 59.4	
	77nm,20.0s,baz=237						
PPT	**Papeete**	**30.53**	**65**	LR	LR	04 38 14.1	
	comp=Z,136nm,18.2s,MS3.6,baz=226,slow=34						
STKA	**Stephens Creek**	**33.42**	**262**	P	**P**	**04 27 49.4**	**+0.1**
	1.6nm,0.7s,mb4.1,baz=90,slow=9.1,SNR=2.6						
STKA				LR	LR	04 40 27.4	
	comp=Z,114nm,18.9s,MS3.6,baz=203,slow=35						
CTA	**Charters Tower**	**34.04**	**284**	P	**P**	**04 27 54.7**	**0.0**
CTA	**Charters Tower**	**34.04**	**284**	P	**P**	**04 27 54.7**	**0.0**
	2.7nm,0.3s,mb4.7,baz=111,slow=13,SNR=7.4						
ASAR	**Alice Springs**	**42.59**	**271**	P	**P**	**04 29 05.8**	**-0.9**
	7.4nm,0.7s,mb4.5,baz=113,slow=7.1,SNR=69						
ASAR				PcP	PcP	04 30 57.4	-1.7
	1.9nm,0.7s,baz=113,slow=3.5,SNR=4.8						
TAOE	**Nuku Hiva Isla**	**43.11**	**64**	*e*LR	LR	04 40 50.2	
	54nm,24.0s						
WRAB	**Tennant Creek**	**43.88**	**276**	*e*P	**P**	**04 29 15.5**	**-1.6**
	9.2nm,0.7s,mb4.6						
FITZ	**Fitzroy Crossi**	**51.98**	**273**	P	**P**	**04 30 18.3**	**-1.6**
	3.4nm,0.9s,mb4.3,baz=85,slow=5.8,SNR=5.1						
CASY	**Casey**	**51.99**	**209**	*e*P	**P**	**04 30 20.4**	**+1.1**
	9.7nm,0.8s,mb4.8						
QSPA	**South Pole Qui**	**56.37**	**180**	*e*P	**P**	**04 30 53.1**	**+2.0**
QSPA	**South Pole Qui**	**56.37**	**180**	P	**P**	**04 30 53.3**	**+2.2**
	5.4nm,0.9s,mb4.6,baz=48,slow=3.5,SNR=20						
MAW	**Mawson**	**59.03**	**201**	P	**P**	**04 32 17.2**	**+1.5**
	3.9nm,1.0s,mb4.3,baz=122,slow=9.5,SNR=4.9						
KSRS	**Korea Array**	**86.61**	**320**	P	**P**	**04 33 53.2**	**-0.5**
	0.7nm,0.6s,mb4.1,baz=141,slow=6.2,SNR=2.6						
NVAR	**Mina Array Bea**	**90.99**	**43**	P	**P**	**04 34 14.4**	**-0.2**
	0.5nm,0.6s,mb4.0,baz=229,slow=5.5,SNR=4.6						
TXAR	**Lajitas Array**	**94.56**	**58**	P	**P**	**04 34 30.7**	**-0.6**
	0.2nm,0.6s,mb3.8,baz=212,slow=3.2,SNR=3.3						
CPUP	**Villa Florida**	**98.25**	**129**	LR	LR	05 14 07.3	
	comp=Z,88nm,19.9s,MS4.2,baz=359,slow=32						
MKAR	**Makanchi Array**	**119.54**	**309**	PKP	PKPdf	04 39 57.7	-2.2
	1.5nm,1.0s,baz=86,slow=1.8,SNR=4.1						
ZALV	**Zalesovo Beam**	**120.20**	**317**	PKP	PKPdf	04 39 59.0	-2.0
	0.3nm,0.3s,baz=95,slow=4.6,SNR=3.0						
BVAR	**Borovoye Array**	**128.44**	**314**	PKP	PKPdf	04 40 15.7	-1.1
	0.8nm,0.5s,baz=108,slow=4.8,SNR=5.8						
ARCES	**ARCESS Array B**	**141.75**	**347**	PKP	PKPdf	04 40 38.0	-3.1
	1.0nm,0.8s,baz=74,slow=6.4,SNR=3.7						
JOF	**Joensuu**	**145.33**	**336**	*e*p	PKPbc	04 40 45.2	-2.2
	5.4nm,0.9s						
KAF	**Kangasniemi**	**147.52**	**338**	*e*p	PKPdf	04 40 50.0	-1.3
	11nm,1.0s						
FINES	**FINESS Array B**	**148.10**	**338**	PKPbc	PKPbc	04 40 53.8	-1.7
	12nm,0.8s,baz=87,slow=4.0,SNR=14						
MMAI	**Mount Meron Ar**	**151.72**	**278**	PKPbc	PKPbc	04 41 05.0	-0.3
	10nm,0.7s,baz=84,slow=4.3,SNR=6.5						
NOA	**NORSAR Array B**	**151.97**	**350**	PKPbc	PKPbc	04 41 03.8	-1.1
	1.8nm,0.7s,baz=16,slow=4.2,SNR=5.8						
DBIC	**Dimbokro**	**152.43**	**166**	PKPbc	PKPbc	04 41 06.9	-0.5
	2.5nm,0.8s,baz=127,slow=5.1,SNR=3.3						
AKASG	**Malin Array Be**	**153.59**	**318**	PKPbc	PKPbc	04 41 07.7	-1.1
	0.4nm,0.3s,baz=65,slow=2.8,SNR=4.2						
BR131	**Keskin Array S**	**153.63**	**292**	*e*PKPdf	PKPdf	04 41 00.8	-0.7
BR131				*e*PKPbc	PKPbc	04 41 08.7	-0.6
BR131				*e*PKPab	PKPab	04 41 20.5	-1.4
BRTR	**Keskin Array B**	**153.63**	**292**	PKPbc	PKPbc	04 41 08.9	-0.3
	2.2nm,0.7s,baz=144,slow=4.5,SNR=13						
TORD	**Torodi Ar. Bea**	**159.49**	**181**	PKPab	PKPab	04 41 47.4	-0.1
	1.4nm,0.8s,baz=180,slow=3.1,SNR=5.1						

ISCJB ***05*** *04:27:50.3±7.9, 58.°2S±0.°1×25.°9W±0.°2, h69km±75km, mb4.5/15, Error ellipse: s-maj=19.6km s-min=14.0km az=40.0*

IDC ***05*** *04:27:53.8±0.7, 58.°18S×26.°03W, h84km±5km, mb4.1/9, mb1 4.1/9, mb1mx4.0/14, mbtmp4.1/9, MS3.7/5, Ms1 3.6/5, ms1mx3.4/12, Error ellipse: s-maj=18.8km s-min=14.4km az=48.0*

NEIC ***05*** *04:27:55.9±3.2, 58.°18S×26.°00W, h105km±29km, mb4.8/7, Error ellipse: s-maj=11.8km s-min=10.0km az=221.0*

ISC 05 04:27:54.3±6.3, 58.°2S±0.°1×26.°0W±0.°2, h89km±62km, h89km±2.6km:pP-P, n36, σ0s57/20, mb4.5/15, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAIT	**Maitri**	**20.11**	**144**	*e*P	**P**	**04 32 19.9**	**-0.5**
USHA	**Ushuaia**	**23.38**	**260**	LR	LR	04 40 07.5	
	comp=Z,185nm,19.8s,baz=68,slow=31						
QSPA	**South Pole Qui**	**32.06**	**180**	P	**P**	**04 34 12.8**	**+0.9**
	5.6nm,0.7s,mb4.4,baz=213,slow=3.1,SNR=18						
QSPA				ScP	ScP	04 40 35.7	+1.6
	2.1nm,1.1s,baz=241,slow=4.3,SNR=3.7						
PLCA	**Paso Flores**	**33.06**	**282**	P	**P**	**04 34 20.9**	**-0.1**
	3.1nm,0.8s,mb4.2,baz=140,slow=7.7,SNR=4.1						
PLCA				LR	LR	04 45 17.7	
	comp=Z,106nm,21.0s,baz=275,slow=32						
MAW	**Mawson**	**38.05**	**142**	P	**P**	**04 35 03.3**	**-0.1**
	7.7nm,0.9s,mb4.5,baz=236,slow=7.2,SNR=12						
MAW				LR	LR	04 47 50.9	
	comp=Z,81nm,22.0s,baz=1.9,slow=31						
CPUP	**Villa Florida**	**38.72**	**312**	P	**P**	**04 35 08.8**	**-0.7**
CPUP				LR	LR	04 47 37.2	
CPUP	**Villa Florida**	**38.72**	**312**	P	**P**	**04 35 08.0**	**-1.5**
	0.3nm,0.3s,mb3.5,baz=162,slow=8.3,SNR=4.6						
CPUP				LR	LR	04 47 37.2	
	comp=Z,76nm,20.8s,baz=257,slow=31						
CFAA	**Coronel Fontan**	**39.02**	**294**	P	**P**	**04 35 12.7**	**+0.7**
	0.2nm,0.7s,baz=135,slow=4.3,SNR=3.2						
BOSA	**Boshof**	**45.92**	**73**	P	**P**	**04 36 07.8**	**0.0**
	3.3nm,0.6s,mb4.2,baz=211,slow=9.6,SNR=8.

KSH				Sg	Sn	05 14 10.7	-11		
KSH				smax					
	comp=N,360nm,0.4s								
KSH				smax					
	comp=E,340nm,0.3s								
AML	**Almayashu**	**3.45**	**4**	P	Pn	05 14 13.8	+1.8		
	SNR=22								
UCH	**Uchtor**	**3.65**	**14**	P	Pn	05 14 14.8	+0.1		
	SNR=6.4								
EKS2	**Erkin-Say**	**3.99**	**5**	P	Pn	05 14 20.8	+1.5		
	SNR=9.8								
ULHL	**Ulahol**	**4.19**	**31**	P	Pn	05 14 20.8	-1.2		
	SNR=5.2								
TKM2	**Tokmak 2**	**4.56**	**21**	⇑Pn	Pn	05 14 25.8	-1.4		
	comp=E,1.0nm,0.8s								
TKM2				⇑Sn	Sn	05 15 20.6	+0.3		
	comp=E,3.8nm,0.6s								
TKM2	**Tokmak 2**	**4.56**	**21**	P	Pn	05 14 25.9	-1.3		
	SNR=5.4								
KK31	**Karatay Array**	**4.91**	**335**	Pn	Pn	05 14 31.8	-0.2		
	comp=E,1.9nm,0.3s,baz=142,slow=12,SNR=68								
KK31				⇑Sn	Sn	05 15 28.0	-0.7		
	comp=E,2.8nm,0.5s,baz=152,slow=23,SNR=7.7								
AB31	**Akbulak array**	**14.29**	**322**	⇓Pn	Pn	05 16 34.2	-6.2		
	comp=E,1.1nm,0.8s,baz=128,slow=13,SNR=8.0								

NIED ***05*** *05:39:00,25.00N×125.60E,h50km,Mw4.1 Best double couple: M0 1.58000×10^15 NP1:φ52.00000°,δ83.00000°,λ100.00000°. NP2:φ179.00000°,δ12.00000°,λ37.00000°.*
ISCJB ***05*** *05:39:22.8±0.6,25.0N±0.1×125.59E±0.0,h58km±6km, mb4.0/15,MS3.2/4, Error ellipse: s-maj=23.2km s-min=4.0km az=147.9*
JMA ***05*** *05:39:23.4,25.01N×125.63E,h53km±1km,M4.2*
JMA Felt I J1.
NEIC ***05*** *05:39:28.2±3.0,24.46N×125.29E,h118km±27km,mb4.2/4, Error ellipse: s-maj=40.3km s-min=35.4km az=47.0*
NEIC Recorded [1 JMA] on Miyako-jima.
IDC ***05*** *05:39:39.9±4.9,25.71N×125.26E,h159km±46km, mb3.4/10,mb1 3.5/11,mb1mx3.4/23,mbtmp3.4/11,MS3.1/5, Ms1 3.1/5,ms1mx2.7/18, Error ellipse: s-maj=32.3km s-min=19.1km az=65.0*

ISC 05 05:39:23.9±0.5,25°1.1N±0.1×125°57.6E±0.0,h50km±6km, n39,σ0°88/50,mb4.0/15,MS3.2/4,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**0.33**	**208**	P	Pn	**05 39 32.9**	**-0.4**
JOGS				S	Sn	**05 39 39.9**	**0.0**
JMJ	**Miyako jima 2**	**0.35**	**227**	P	Pn	**05 39 33.3**	**-0.1**
JMJ				S	Sn	**05 39 40.4**	**+0.1**
JTJ	**Tarama**	**0.89**	**243**	P	Pn	**05 39 40.3**	**+0.2**
JTJ				eS	Sn	**05 39 52.8**	**+1.1**
JIJ	**Ishigaki jima**	**1.47**	**243**	P	Pn	**05 39 48.1**	**+0.1**
JIJ				eS	Sn	**05 40 06.1**	**+0.1**
JKRS	**Kuro-shima**	**1.64**	**241**	P	Pn	**05 39 50.9**	**+0.6**
JKRS				eS	Sn	**05 40 11.1**	**+1.0**
JKE	**Kume jima 2**	**1.68**	**40**	P	Pn	**05 39 50.5**	**-0.3**
JKE				eS	Sn	**05 40 10.8**	**-0.2**
IRIF	**Iriomote-Funau**	**1.82**	**247**	P	Pn	**05 39 53.0**	**+0.2**
IRIF				eS	Sn	**05 40 15.5**	**+0.8**
HATJ	**Hateruma jima**	**1.89**	**239**	P	Pn	**05 39 54.6**	**+0.9**
JAGN	**Aguni-jima**	**2.15**	**44**	P	Pn	**05 39 57.8**	**+0.6**
JAGN				eS	Sn	**05 40 23.5**	**+0.9**
YOJ	**Yonaguni jima**	**2.40**	**256**	P	Pn	**05 40 01.1**	**+0.4**
YOJ				eS	Sn	**05 40 28.9**	**0.0**
JIH	**Iheya**	**2.92**	**47**	P	Pn	**05 40 08.3**	**+0.5**
JOW	**Kunigami**	**3.01**	**53**	P	Pn	**05 40 09.1**	**+0.1**
TATO	**Taipei**	**3.71**	**270**	ePn	Pn	**05 40 21.8**	**+3.1**
YHNB	**Yeheng**	**3.83**	**265**	ePn	Pn	**05 40 23.3**	**+3.0**
YHNB				eSn	Sn	**05 41 19.2**	**+15**
JTK	**Tokunoshima**	**4.07**	**47**	P	Pn	**05 40 22.7**	**-0.9**
YULB	**Yu-li**	**4.24**	**248**	ePn	Pn	**05 40 24.1**	**-1.8**
YULB				eSn	Sn	**05 41 12.8**	**-1.4**
SSLB	**Suanglung**	**4.39**	**254**	ePn	Pn	**05 40 28.0**	**-0.1**
SSLB				eSn	Sn	**05 41 16.6**	**-1.4**
TWG	**Pinlang**	**4.68**	**243**	ePn	Pn	**05 40 29.5**	**-2.4**
TPUB	**Ta-pu**	**4.84**	**250**	ePn	Pn	**05 40 33.6**	**-0.6**
JAM	**Amami Oshima**	**4.92**	**46**	P	Pn	**05 40 34.2**	**-1.0**
JMZ	**Minamidaito 2**	**5.16**	**80**	P	Pn	**05 40 34.8**	**-3.8**
KSRS	**Korea Array**	**12.53**	**9**	P	Pn	**05 42 25.4**	**+6.1**
	0.1nm,0.3s,baz=194,slow=14,SNR=6.0						
KSRS				LR	LR	05 47 11.8	
	comp=Z,37nm,19.0s,baz=180,slow=38						
GTA	**Gaotai**	**25.96**	**310**	eP	P	**05 44 51.9**	**+0.3**
GTA				pP	pP	05 44 55.4	-9.1
GTA				sP	sP	05 44 57.0	-13
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb3.9						
SONM	**Songino Array**	**27.33**	**331**	P	P	**05 45 03.3**	**-0.6**
	comp=Z,0.6nm,0.6s,mb3.3,baz=158,slow=8.7,SNR=5.0						
SONM				LR	LR	05 57 19.3	
	comp=Z,51nm,19.8s,MS3.1,baz=359,slow=40						
MKAR	**Makanchi Array**	**40.57**	**314**	P	P	**05 46 58.1**	**-0.3**
	comp=Z,1.3nm,0.7s,mb3.7,baz=102,slow=11,SNR=7.7						
MKAR				LR	LR	06 04 54.8	
	comp=Z,21nm,20.2s,MS3.0,baz=174,slow=38						
ZALV	**Zalesovo Beam**	**41.77**	**325**	P	P	**05 47 07.2**	**-0.9**
	comp=Z,2.1nm,0.6s,mb4.0,baz=117,slow=8.4,SNR=12						
FITZ	**Fitzroy Crossi**	**42.89**	**180**	LR	LR	06 04 25.4	
	comp=Z,40nm,20.4s,MS3.3,baz=278,slow=34						
KURK	**Kurchatov**	**44.06**	**318**	eP	P	**05 47 25.7**	**-1.0**
	comp=Z,1.1nm,0.4s,mb3.9						
ASAR	**Alice Springs**	**49.10**	**170**	P	P	**05 48 16.4**	**+10**
	comp=Z,0.4nm,0.6s,mb3.6,baz=358,slow=8.3,SNR=3.9						
BVAR	**Borovoye Array**	**49.58**	**319**	P	P	**05 48 09.2**	**-0.6**
	comp=Z,0.7nm,0.5s,mb4.0,baz=111,slow=7.9,SNR=3.5						
ABKAR	**Akbulak array**	**55.71**	**314**	eP	P	**05 48 55.7**	**+0.5**
	comp=Z,0.8nm,0.4s,mb4.1						
ARU	**Arti**	**56.84**	**322**	eP	P	**05 49 03.0**	**-0.1**
	comp=Z,5.7nm,0.7s,mb4.7						
ILAR	**Eielson Array**	**66.60**	**28**	P	P	**05 50 09.6**	**+0.9**
	comp=Z,0.4nm,0.6s,mb3.7,baz=278,slow=6.2,SNR=7.1						
ARCES	**ARCESS Array B**	**70.22**	**338**	P	P	**05 50 31.0**	**-0.1**
ARCES	**ARCESS Array B**	**70.22**	**338**	P	P	**05 50 31.0**	**-0.1**
	comp=Z,0.3nm,0.4s,mb3.6,baz=71,slow=7.6,SNR=12						
FINES	**FINESS Array B**	**72.70**	**330**	P	P	**05 50 46.3**	**+0.1**
	comp=Z,0.9nm,0.3s,mb4.1,baz=57,slow=7.0,SNR=4.8						
BRTR	**Keskin Array B**	**75.85**	**307**	P	P	**05 51 05.7**	**+0.7**
	comp=Z,2.5nm,0.8s,mb4.2,baz=86,slow=4.5,SNR=10.0						
NOA	**NORSAR Array B**	**79.29**	**333**	P	P	**05 51 24.1**	**+0.3**
	comp=Z,1.1nm,0.7s,mb3.9,baz=50,slow=6.3,SNR=3.4						
NOA				LR	LR	06 30 49.7	
	comp=Z,14nm,19.6s,MS3.3,baz=125,slow=39						
SUMG	**Summit**	**82.02**	**355**	eP	P	**05 51 39.4**	**+1.3**
	comp=Z,5.7nm,0.8s,mb4.5						

IDC 05 05:59:18.7±6.1,6°80S×129°56E,h233km±61km,mb3.4/3, mb1 3.3/5,mb1mx3.2/17,mbtmp3.3/5,MS2.8/1,Ms1 2.8/1, ms1mx2.2/12,Error ellipse: s-maj=71.5km s-min=21.2km az=71.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.86**	**198**	P	Pn	06 02 00.3	-0.7
	1.0nm,0.3s,baz=30,slow=9.3,SNR=92						
FITZ				S	S	06 04 12.7	-0.7
	1.9nm,0.3s,baz=258,slow=16,SNR=8.5						
ASAR	**Alice Springs**	**17.28**	**166**	P	P	06 03 05.6	+1.0
	0.3nm,0.3s,baz=348,slow=11,SNR=10						
ASAR				S	S	06 06 11.9	-0.4
	0.4nm,0.3s,baz=347,slow=27,SNR=5.8						
KSRS	**Korea Array**	**44.05**	**358**	LR	LR	06 25 40.1	
	comp=Z,12nm,21.6s,baz=255,slow=36						
SONM	**Songino Array**	**58.12**	**342**	P	P	06 08 46.9	-0.9
	0.2nm,0.3s,baz=158,slow=5.6,SNR=4.1						
MKAR	**Makanchi Array**	**67.82**	**327**	P	P	06 09 52.6	+1.0
	1.4nm,0.5s,baz=125,slow=7.8,SNR=23						
ZALV	**Zalesovo Beam**	**71.21**	**334**	P	P	06 10 11.3	-0.9
	0.5nm,0.4s,baz=117,slow=5.0,SNR=3.4						

CASC 05 06:00:40.0±1.8,9°57N×84°77W,h15km±7km,MD3.5, 5C-3D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCR	**Jicaral**	**0.44**	**310**	eP	Pg	06 00 48.5	-0.3
JCR				eS	Sg	06 00 55.5	+0.8
CGA2	**Cerro Gallo 2**	**0.54**	**34**	eP	Pg	06 00 50.3	-0.3
CGA2				eS	Sg	06 00 57.5	-0.2
PRS1	**Puriscal**	**0.61**	**48**	eP	Pg	06 00 49.8	-2.2
QCR	**Quepos**	**0.61**	**104**	eP	Pg	06 00 52.0	0.0
QCR				eS	Sg	06 01 02.4	+2.2
LAJ	**Bijagual**	**0.70**	**65**	iP	Pg	06 00 45.3	-8.4
JTS	**JuntasAbangare**	**0.74**	**346**	eP	Pg	06 00 53.2	-1.2
CASO	**Castillo**	**0.86**	**2**	iP	Pb	06 00 55.8	-0.9
CASO				iS	Sb	06 01 07.7	-0.3
A490	**San Lazaro**	**0.97**	**316**	iP	Pb	06 00 57.4	-1.2
A490				iS	Sb	06 01 11.1	-0.2
BUS	**Buena Vista**	**1.00**	**91**	eP	Pb	06 00 58.2	-0.7
URSC	**Urasca**	**1.01**	**75**	eP	Pb	06 00 58.4	-0.8
URSC				eS	Sb	06 01 12.0	-0.4
VCR	**Vista de Mar**	**1.01**	**303**	eP	Pb	06 00 58.8	-0.5
CUI	**Cuipilapa**	**1.15**	**340**	iP	Pn	06 01 00.5	-1.1
CUI				iS	Sb	06 01 17.3	+0.9
LIM1	**Limonal**	**1.22**	**337**	iP	Pn	06 01 01.3	-1.2
MESS	**Mesas**	**1.24**	**340**	iP	Pn	06 01 01.7	-1.1
NY14	**Universidad de**	**1.31**	**325**	iP	Pn	06 01 03.4	-0.4
GPS3	**Bodega del ICE**	**1.32**	**334**	iP	Pn	06 01 03.5	-0.4
LAPC	**Finca la Perla**	**1.36**	**331**	iP	Pn	06 01 04.0	-0.4
GB1A	**Borinquen Arri**	**1.39**	**334**	iP	Pn	06 01 03.7	-1.1
GBS2	**Las Lilas**	**1.43**	**332**	iP	Pn	06 01 04.9	-0.5
ACR	**Cerro Adams**	**1.82**	**120**	eP	Pn	06 01 09.3	-1.6
SSN	**San Juan del S**	**2.02**	**328**	eP	Pn	06 01 13.7	+0.1
TBS2		**2.22**	**110**	eP	Pn	06 01 16.1	-0.3

IDC 05 06:13:06.4±1.3,8°63S×75°18W,h0km,mb3.4/2, mb1 3.7/6,mb1mx3.6/20,mbtmp3.6/6,ML3.3/3,Error ellipse: s-maj=29.9km s-min=19.4km az=45.0,Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**3.51**	**295**	Pn	Pn	06 14 03.5	+1.2
	3.4nm,0.3s,baz=57,slow=5.7,SNR=20						
ATAH				Lg		06 14 54.2	
	7.6nm,0.3s,baz=270,slow=20,SNR=8.1						
NNA	**Nana**	**3.71**	**206**	Pn	Pn	06 14 05.7	+0.8
	9.7nm,0.3s,baz=12,slow=16,SNR=18						
NNA				Sn	Sn	06 14 49.6	+0.2
	7.4nm,0.3s,baz=294,slow=20,SNR=5.9						
LPAZ	**La Paz**	**10.26**	**139**	Pn	Pn	06 15 36.0	+1.0
	0.0nm,0.3s,baz=318,slow=12,SNR=2.7						
LPAZ				Lg		06 18 30.5	
	0.1nm,0.3s,baz=212,slow=8.6,SNR=4.2						
SIV	**San Ignacio**	**15.60**	**119**	Pn	Pn	06 16 49.2	+1.5
	0.3nm,0.3s,baz=296,slow=12,SNR=18						
SIV				Lg		06 21 21.9	
	0.2nm,0.3s,baz=46,slow=19,SNR=3.1						
TXAR	**Lajitas Array**	**46.67**	**325**	P	P	06 21 36.8	-0.1
	0.4nm,0.7s,baz=150,slow=8.6,SNR=6.8						
TORD	**Torodi Ar. Bea**	**79.34**	**75**	P	P	06 25 15.2	+0.5
	0.3nm,0.8s,baz=258,slow=5.7,SNR=2.6						
KSRS	**Korea Array**	**144.50**	**327**	PKP	PKPdf	06 32 42.7	-2.5
	0.4nm,0.3s,baz=32,slow=4.8,SNR=3.8						

ISC 05 06:24:54.3±2.7,38°6N±0.2×75°2E±0.1,h10km,n9, σ1°904/12,2C-2D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.12**	**34**	iPg	**Pg**	**06 25 13.9**	**-1.8**
KSH				Sg	**Sg**	**06 25 31.2**	**+1.0**
KSH				smax			
	comp=N,610nm,0.5s						
KSH				smax			
	comp=E,1μm,0.4s						
KZA	**Kyzart**	**3.49**	**1**	P	**Pn**	**06 25 48.7**	**+0.2**
	SNR=20						
UCH	**Uchtor**	**3.67**	**352**	P	**Pn**	**06 25 51.8**	**+0.8**
	SNR=9.2						
AML	**Almayashu**	**3.71**	**343**	P	**Pn**	**06 25 52.8**	**+1.1**
	SNR=23						
ULHL	**Ulahol**	**3.74**	**12**	P	**Pn**	**06 25 51.2**	**-0.8**
	SNR=11						
EKS2	**Erkin-Say**	**4.21**	**346**	P	**Pn**	**06 26 00.0**	**+1.6**
	SNR=7.7						
TKM2	**Tokmak 2**	**4.34**	**4**	P	**Pg**	**06 26 16.4**	**-1.0**
	SNR=8.6						
KK31	**Karatay Array**	**5.73**	**323**	⇑P	**Pn**	**06 26 18.9**	**-0.4**
	comp=E,2.0nm,0.1s,baz=130,slow=12,SNR=43						
KK31				⇓S	**Sn**	**06 27 24.4**	**-0.7**
	comp=E,8.2nm,0.4s,baz=137,slow=22						
AB31	**Akbulak array**	**15.27**	**319**	P	**Pn**	**06 28 24.9**	**-4.9**
	comp=E,0.3nm,0.5s,baz=108,slow=15,SNR=4.0						
AB31				⇓S	**Sn**	**06 31 09.5**	**-9.4**
	comp=E,0.8nm,0.8s						

ATH ***05*** *06:37:27.9,39.58N×23.82E,h23km±1km,ML3.7*
IDC ***05*** *06:37:27.9±1.8,39.41N×23.85E,h0km,mb3.6/3, mb1 3.5/4,mb1mx3.3/24,mbtmp3.5/4,ML2.7/1,Error ellipse: s-maj=96.4km s-min=26.3km az=144.0*
SKO ***05*** *06:37:27.9,39.52N×23.85E,h5km*
NEIC ***05*** *06:37:27.9,39.58N×23.82E,h23km,ML3.7(ATH),After ATH.*
ISCJB ***05*** *06:37:28.7±0.4,39.57N±0.01×23.78E±0.02,h10km±2km, mb3.5/3,Error ellipse: s-maj=2.8km s-min=2.3km az=31.5*
THE ***05*** *06:37:29.0,39.57N×23.84E,h9km±1km,ML3.5/8,Error ellipse: s-maj=1.3km s-min=0.7km az=316.0*
CSEM ***05*** *06:37:29.1±0.1,39.57N×23.75E,h10km,ML3.5/8,Error ellipse: s-maj=3.1km s-min=2.6km az=120.0*
ISK ***05*** *06:37:30.1,39.35N×24.04E,h5km,MD3.7*

ISC 05 06:37:29.4±0.4,39°57N±0.01×23°75E±0.02,h10km±3km, n185,σ1°14/237,mb3.5/3,10D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.36**	**351**	P	**Pg**	**06 37 36.7**	**+0.1**
PAIG				S	**Sg**	**06 37 42.6**	**+1.2**
PAIG	**Paliouri**	**0.36**	**351**	P	**Pg**	**06 37 36.7**	**+0.1**
PAIG				S	**Sg**	**06 37 42.6**	**+1.2**
AOS	**Alonnisos**	**0.41**	**166**	P	**Pg**	**06 37 36.9**	**-0.6**
AOS				S	**Sg**	**06 37 43.0**	**+0.1**
AOS	**Alonnisos**	**0.41**	**166**	P	**Pg**	**06 37 36.9**	**-0.6**
AOS				S	**Sg**	**06 37 43.0**	**+0.1**
XOR	**Xorichti**	**0.48**	**245**	P	**Pg**	**06 37 39.4**	**+0.6**
XOR				S	**Sg**	**06 37 47.9**	**+2.8**
XOR	**Xorichti**	**0.48**	**245**	P	**Pg**	**06 37 39.4**	**+0.6**
NEO	**Neokhori**	**0.49**	**238**	ePn	**Pg**	**06 37 39.5**	**+0.6**
NEO				eSn	**Sg**	**06 37 47.1**	**+1.8**
NEO	**Neokhori**	**0.49**	**238**	ePn	**Pg**	**06 37 39.5**	**+0.6**
NEO				eSN	**Sg**	**06 37 47.1**	**+1.8**
NEO	**Neokhori**	**0.49**	**238**	ePn	**Pg**	**06 37 39.5**	**+0.6**
OUR	**Ouranopolis**	**0.78**	**13**	P	**Pg**	**06 37 43.4**	**-1.2**
OUR				S	**Sg**	**06 37 54.5**	**-0.3**
OUR	**Ouranopolis**	**0.78**	**13**	P	**Pg**	**06 37 43.4**	**-1.2**
OUR				S	**Sg**	**06 37 54.5**	**-0.3**
ATAL	**Atalanti**	**1.04**	**213**	P	**Pg**	**06 37 48.9**	**-0.6**
ATAL	**Atalanti**	**1.04**	**213**	P	**Pg**	**06 37 48.9**	**-0.6**
LKR	**Lokris**	**1.09**	**213**	ePn	**Pg**	**06 37 49.5**	**-0.8**
LKR				eSn	**Sg**	**06 38 05.4**	**+0.9**
LKR	**Lokris**	**1.09**	**213**	ePN	**Pg**	**06 37 49.5**	**-0.8**
LKR				eSN	**Sg**	**06 38 05.4**	**+0.9**
LKR	**Lokris**	**1.09**	**213**	P	**Pg**	**06 37 49.4**	**-0.9**
LKR	**Lokris**	**1.09**	**213**	P	**Pg**	**06 37 49.4**	**-0.9**
LKR				eSn	**Sg**	**06 38 05.4**	**+0.9**
LIT	**Litokhoron**	**1.11**	**299**	ePn	**Pn**	**06 37 49.1**	**-1.9**
LIT	**Litokhoron**	**1.11**	**299**	ePN	**Pn**	**06 37 49.1**	**-1.9**
LIT	**Litokhoron**	**1.11**	**299**	P	**Pb**	**06 37 49.2**	**-1.5**
LIT	**Litokhoron**	**1.11**	**299**	P	**Pb**	**06 37 49.2**	**-1.5**
HORT	**Hortiatis**	**1.14**	**334**	P	**Pb**	**06 37 50.3**	**-1.0**
HORT	**Hortiatis**	**1.14**	**334**	P	**Pb**	**06 37 50.3**	**-1.0**
LIA	**Limnos Island**	**1.15**	**73**	ePn	**Pg**	**06 37 49.4**	**-2.1**
LIA				eSn	**Sg**	**06 38 04.1**	**-2.4**
LIA	**Limnos Island**	**1.15**	**73**	ePN	**Pg**	**06 37 49.4**	**-2.1**
LIA				eSN	**Sg**	**06 38 04.1**	**-2.4**
LIA	**Limnos Island**	**1.15**	**73**	P	**Pg**	**06 37 49.3**	**-2.2**
LIA				S	**Sg**	**06 38 04.2**	**-2.3**
LIA	**Limnos Island**	**1.15**	**73**	P	**Pg**	**06 37 49.3**	**-2.2**
LIA				S	**Sg**	**06 38 04.2**	**-2.3**
THE	**Thessaloniki**	**1.22**	**331**	P	**Pn**	**06 37 51.7**	**-0.9**
THE	**Thessaloniki**	**1.22**	**331**	P	**Pn**	**06 37 51.7**	**-0.9**
AGG	**Agios Georgios**	**1.23**	**244**	ePn	**Pn**	**06 37 52.1**	**-0.6**
AGG				eSn	**Sn**	**06 38 09.9**	**+0.5**
AGG	**Agios Georgios**	**1.23**	**244**	ePN	**Pn**	**06 37 52.1**	**-0.6**
AGG				eSN	**Sn**	**06 38 09.9**	**+0.5**
AGG	**Agios Georgios**	**1.23**	**244**	P	**Pn**	**06 37 52.0**	**-0.7**
AGG	**Agios Georgios**	**1.23**	**244**	P	**Pn**	**06 37 52.0**	**-0.7**
AGG				eSn	**Sn**	**06 38 09.9**	**+0.5**
SOH	**Sokhos**	**1.29**	**346**	ePn	**Pn**	**06 37 52.9**	**-0.6**
SOH				eSn	**Sn**	**06 38 10.1**	**-0.7**
SOH	**Sokhos**	**1.29**	**346**	ePN	**Pn**	**06 37 52.9**	**-0.6**
SOH				eSN	**Sn**	**06 38 10.1**	**-0.7**
SOH	**Sokhos**	**1.29**	**346**	P	**Pn**	**06 37 52.7**	**-0.8**
SOH	**Sokhos**	**1.29**	**346**	ePn	**Pn**	**06 37 52.9**	**-0.6**
SOH				eSn	**Sn**	**06 38 10.1**	**-0.7**
THL	**Klokotos Trika**	**1.34**	**270**	ePN	**Pn**	**06 37 53.7**	**-0.6**
THL				eSN	**Sn**	**06 38 13.0**	**+0.8**
THL	**Klokotos Trika**	**1.34**	**270**	P	**Pn**	**06 37 53.7**	**-0.6**
THL	**Klokotos Trika**	**1.34**	**270**	P	**Pn**	**06 37 53.7**	**-0.6**
THL				eSn	**Sn**	**06 38 13.0**	**+0.8**
DSF	**Desfina**	**1.50**	**220**	P	**Pn**	**06 37 55.1**	**-1.3**
DSF	**Desfina**	**1.50**	**220**	P	**Pn**	**06 37 55.1**	**-1.3**
PTL	**Penteli**	**1.52**	**177**	ePn	**Pn**	**06 37 55.3**	**-1.4**
PTL				eSn	**Sn**	**06 38 16.2**	**-0.3**
PTL	**Penteli**	**1.52**	**177**	ePN	**Pn**	**06 37 55.3**	**-1.4**
PTL				eSN	**Sn**	**06 38 16.2**	**-0.3**
PTL	**Penteli**	**1.52**	**177**	ePn	**Pn**	**06 37 55.3**	**-1.4**
PTL				eSn	**Sn**	**06 38 16.2**	**-0.3**
KAVA	**Kavala**	**1.54**	**22**	P	**Pn**	**06 37 54.7**	**-2.3**
KAVA	**Kavala**	**1.54**	**22**	P	**Pn**	**06 37 54.7**	**-2.3**
SRS	**Serrai**	**1.55**	**355**	P	**Pn**	**06 37 55.9**	**-1.2**
SRS	**Serrai**	**1.55**	**355**	P	**Pn**	**06 37 55.9**	**-1.2**
ATH	**Athens Observa**	**1.59**	**181**	ePn	**Pn**	**06 37 56.5**	**-1.2**
ATH				eSn	**Sn**	**06 38 18.0**	**-0.4**
ATH	**Athens Observa**	**1.59**	**181**	ePN	**Pn**	**06 37 56.5**	**-1.2**
ATH				eSN	**Sn**	**06 38 18.0**	**-0.4**
ATH	**Athens Observa**	**1.59**	**181**	ePn	**Pn**	**06 37 56.5**	**-1.2**
ATH				eSn	**Sn**	**06 38 18.0**	**-0.4**
ATHU	**Athens Univers**	**1.60**	**179**	P	**Pn**	**06 37 57.1**	**-0.7**
ATHU	**Athens Univers**	**1.60**	**179**	P	**Pn**	**06 37 57.1**	**-0.7**
EVR	**Evrytania**	**1.65**	**247**	ePn	**Pn**	**06 37 59.0**	**+0.6**
EVR	**Evrytania**	**1.65**	**247**	ePN	**Pn**	**06 37 59.0**	**+0.6**
EVR	**Evrytania**	**1.65**	**247**	ePn	**Pn**	**06 37 59.0**	**+0.6**
LTK	**Loutraki**	**1.66**	**202**	ePB	**Pn**	**06 37 57.4**	**-1.2**
LTK				eSN	**Sn**	**06 38 20.4**	**+0.4**
LTK	**Loutraki**	**1.66**	**202**	P	**Pn**	**06 37 57.4**	**-1.2**
LTK	**Loutraki**	**1.66**	**202**	P	**Pn**	**06 37 57.4**	**-1.2**
LTK				eSn	**Sn**	**06 38 20.4**	**+0.4**
KZN	**Kozani**	**1.69**	**296**	ePn	**Pn**	**06 37 58.9**	**-0.2**
KZN	**Kozani**	**1.69**	**296**	ePN	**Pn**	**06 37 58.9**	**-0.2**
KZN	**Kozani**	**1.69**	**296**	P	**Pn**	**06 37 58.9**	**-0.2**
KZN				S	**Sn**	**06 38 21.1**	**+0.3**
KZN	**Kozani**	**1.69**	**296**	P	**Pn**	**06 37 58.9**	**-0.2**
KZN				S	**Sn**	**06 38 21.1**	**+0.3**
VLY	**Voula,Athens**	**1.71**	**179**	ePb	**Pn**	**06 37 57.9**	**-1.4**
VLY				eSn	**Sn**	**06 38 21.6**	**+0.3**
VLY	**Voula,Athens**	**1.71**	**179**	ePB	**Pn**	**06 37 57.9**	**-1.4**
VLY				eSN	**Sn**	**06 38 21.6**	**+0.3**
VLY	**Voula,Athens**	**1.71**	**179**	ePb	**Pn**	**06 37 57.9**	**-1.4**
VLY				eSn	**Sn**	**06 38 21.6**	**+0.3**
KNT	**Kendrikon**	**1.72**	**338**	P	**Pn**	**06 37 59.1**	**-0.3**
KNT				S	**Sn**	**06 38 22.6**	**+1.1**
KNT	**Kendrikon**	**1.72**	**338**	P	**Pn**	**06 37 59.1**	**-0.3**
KNT				S	**Sn**	**06 38 22.6**	**+1.1**
KALE	**Kalithea**	**1.72**	**227**	P	**Pn**	**06 37 59.3**	**-0.1**
KALE	**Kalithea**	**1.72**	**227**	P	**Pn**	**06 37 59.3**	**-0.1**
GRG	**Griva**	**1.73**	**324**	P	**Pn**	**06 37 59.4**	**-0.2**
GRG	**Griva**	**1.73**	**324**	P	**Pn**	**06 37 59.4**	**-0.2**
GADA	**Gvkgeada**	**1.76**	**69**	ePN	**Pn**	**06 38 00.9**	**+0.9**
GADA				eSN	**Sn**	**06 38 24.5**	**+2.0**
GADA	**Gvkgeada**	**1.76**	**69**	ePn	**Pn**	**06 38 00.9**	**+0.9**
GADA				eSn	**Sn**	**06 38 24.5**	**+2.0**
TRIZ	**Trizonia**	**1.78**	**228**	P	**Pn**	**06 37 59.5**	**-0.7**
TRIZ	**Trizonia**	**1.78**	**228**	P	**Pn**	**06 37 59.5**	**-0.7**
NAIG	**Nisos Aigina**	**1.82**	**187**	ePb	**Pn**	**06 37 59.4**	**-1.4**
NAIG	**Nisos Aigina**	**1.82**	**187**	ePB	**Pn**	**06 37 59.4**	**-1.4**
NAIG	**Nisos Aigina**	**1.82**	**187**	ePb	**Pn**	**06 37 59.4**	**-1.4**
EFP	**Efpalio**	**1.84**	**232**	ePN

KCTX	Karacabey (Bur	3.61	77	ePN	Pn	06 38 26.7	+1.3
KCTX	Karacabey (Bur	3.61	77	ePn	Pn	06 38 26.7	+1.3
PUK	Puka	3.83	311	*i* P	Pn	06 38 21.5	-7.0
KULA	Kula-Manisa	3.96	104	ePN	Pn	06 38 30.1	-0.2
KULA	Kula-Manisa	3.96	104	ePn	Pn	06 38 30.1	-0.2
CTKS	Kestenalik-??a	3.99	64	ePN	Pn	06 38 33.8	+3.2
CTKS	Kestenalik-??a	3.99	64	ePn	Pn	06 38 33.8	+3.1
KARN	Karanos	4.16	178	P	Pn	06 38 34.2	+1.2
KARN	Karanos	4.16	178	P	Pn	06 38 34.2	+1.2
YLV	Yalova	4.42	75	ePN	Pn	06 38 38.6	+2.0
TIP	Timpagrande 5.9nm,0.5s	5.43	268	ePn	Pn	06 38 51.5	+1.0
TIP	Timpagrande 5.9nm,0.5s	5.43	268	ePn	Pn	06 38 51.5	+1.0
STON	Ston	5.63	308	*i* Pn	Pn	06 38 51.6	-1.6
STON	Ston	5.63	308	*i* Pn	Pn	06 38 51.5	-1.7
VOIR		5.94	9	⇓P	Pn	06 38 57.4	0.0
VOIR		5.94	9	⇓P	Pn	06 38 57.4	0.0
MLR	Muntele Rosu	6.13	15	⇓P	Pn	06 39 00.3	+0.2
MLR	Muntele Rosu	6.13	15	⇓P	Pn	06 39 00.3	+0.2
VRI	Vrincioaia	6.66	18	⇓P	Pn	06 39 06.7	-0.6
VRI	Vrincioaia	6.66	18	⇓P	Pn	06 39 06.7	-0.6
BRTR	Keskin Array B 0.1nm,0.3s,baz=263,slow=13,SNR=3.3	7.63	86	Pn	Pn	06 39 19.7	-0.9
BURAR	Bucovina Array	8.11	7	⇓P	Pn	06 39 27.3	+0.1
BURAR	Bucovina Array	8.11	7	⇓P	Pn	06 39 27.3	+0.1
TORD	Torodi Ar. Bea 0.3nm,0.4s,mb3.6,baz=30,slow=8.7,SNR=5.4	32.73	223	P	P	06 44 01.8	-0.6
MKAR	Makanchi Array 0.3nm,0.5s,mb3.2,baz=287,slow=6.4,SNR=3.0	42.42	60	P	P	06 45 24.4	+0.3
ZALV	Zalesovo Beam 1.2nm,0.6s,mb3.8,baz=269,slow=8.6,SNR=3.8	42.88	49	P	P	06 45 27.7	0.0

*IDC **05** 06:39:36.1±1.4,39°.53N×23°.68E,h0km,mb3.7/4, mb1 3.7/5,mb1mx3.4/24,mbtmp3.6/5,ML3.1/1,MS2.9/5, Ms1 2.9/5,ms1mx2.5/34,Error ellipse: s-maj=38.0km s-min=24.4km az=158.0*

*NEIC **05** 06:39:36.2,39°.57N×23°.81E,h23km,ML3.8(ATH),After ATH.*

*ATH **05** 06:39:36.2,39°.57N×23°.81E,h23km±1km,ML3.8*

*SKO **05** 06:39:36.9,39°.58N×23°.83E,h4km*

*CSEM **05** 06:39:37.9±0.1,39°.55N×23°.68E,h10km,ML3.8/8,Error ellipse: s-maj=4.4km s-min=3.5km az=141.0*

*THE **05** 06:39:37.4,39°.58N×23°.84E,h14km±1km,ML3.8/8,Error ellipse: s-maj=1.3km s-min=0.7km az=297.0*

*ISCJB **05** 06:39:37.2±0.4,39°.56N±0°.02×23°.77E±0°.02,h10km±3km, mb3.5/4,MS2.8/3,Error ellipse: s-maj=3.0km s-min=2.5km az=138.7*

ISC 05 06:39:37.6±0.4,**39°.55N**±0°.02×**23°.74E**±0°.02,**h7**km±3km, **n161**,σ1§**28**/202,**mb3.5**/4,**MS2.8**/3,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAIG	Paliouri	0.38	353	P	Pg	06 39 45.0	+0.1
PAIG				S	Sg	06 39 51.0	+1.1
PAIG	Paliouri	0.38	353	⇓P	Pg	06 39 45.0	+0.1
PAIG				S	Sg	06 39 51.0	+1.1
AOS	Alonnisos	0.40	164	P	Pg	06 39 45.3	+0.1
AOS				S	Sg	06 39 51.4	+1.0
AOS	Alonnisos	0.40	164	P	Pg	06 39 45.3	+0.1
AOS				S	Sg	06 39 51.4	+1.0
XOR	Xorichti	0.46	247	P	Pg	06 39 48.2	+1.7
XOR	Xorichti	0.46	247	P	Pg	06 39 48.2	+1.7
NEO	Neokhori	0.47	239	ePn	Pg	06 39 47.8	+1.2
NEO				eSn	Sg	06 39 55.4	+2.7
NEO	Neokhori	0.47	239	ePN	Pg	06 39 47.8	+1.2
NEO				eSN	Sg	06 39 55.4	+2.7
NEO	Neokhori	0.47	239	ePn	Pg	06 39 47.8	+1.2
OUR	Ouranopolis	0.80	13	P	Pg	06 39 51.8	-1.2
OUR				S	Sg	06 40 02.8	-0.7
OUR	Ouranopolis	0.80	13	P	Pg	06 39 51.8	-1.2
OUR				S	Sg	06 40 02.8	-0.7
ATAL	Atalanti	1.02	213	P	Pg	06 39 57.2	0.0
ATAL	Atalanti	1.02	213	P	Pg	06 39 57.2	0.0
LKR	Lokris	1.07	213	ePn	Pg	06 39 57.8	-0.2
LKR	Lokris	1.07	213	ePN	Pg	06 39 57.8	-0.2
LKR	Lokris	1.07	213	P	Pg	06 39 57.8	-0.2
LKR	Lokris	1.07	213	P	Pg	06 39 57.8	-0.2
LIT	Litokhoron	1.11	300	ePb	Pg	06 39 57.3	-1.5
LIT				eSn	Sg	06 40 13.4	+0.2
LIT	Litokhoron	1.11	300	ePB	Pg	06 39 57.3	-1.5
LIT				eSN	Sg	06 40 13.4	+0.2
LIT	Litokhoron	1.11	300	P	Pg	06 39 57.4	-1.4
LIT	Litokhoron	1.11	300	P	Pg	06 39 57.4	-1.4
LIT				eSn	Sg	06 40 13.4	+0.2
HORT	Hortiatis	1.16	335	P	Pg	06 39 58.8	-0.9
HORT	Hortiatis	1.16	335	P	Pg	06 39 58.8	-0.9
LIA	Limnos Island	1.17	72	ePn	Pn	06 39 57.2	-3.1
LIA				eSn	Sn	06 40 12.9	-3.5
LIA	Limnos Island	1.17	72	ePN	Pn	06 39 57.2	-3.1
LIA				eSN	Sn	06 40 12.9	-3.5
LIA	Limnos Island	1.17	72	P	Pg	06 39 57.3	-2.6
LIA				S	Sg	06 40 12.5	-2.5
LIA	Limnos Island	1.17	72	ePn	Pg	06 39 57.2	-3.1
AGG	Agios Georgios	1.22	245	ePn	Pn	06 40 00.4	-0.6
AGG				eSn	Sn	06 40 18.8	+1.2
AGG	Agios Georgios	1.22	245	ePN	Pn	06 40 00.4	-0.6
AGG				eSN	Sn	06 40 18.8	+1.2
AGG	Agios Georgios	1.22	245	ePn	Pn	06 40 00.4	-0.6
AGG				eSn	Sn	06 40 18.8	+1.2
THE	Thessaloniki	1.23	331	P	Pb	06 40 00.3	-0.9
THE	Thessaloniki	1.23	331	P	Pb	06 40 00.3	-0.9
SOH	Sokhos	1.30	347	ePn	Pn	06 40 01.1	-1.1
SOH				eSn	Sn	06 40 19.1	-0.7
SOH	Sokhos	1.30	347	ePN	Pn	06 40 01.1	-1.1
SOH				eSN	Sn	06 40 19.1	-0.7
SOH	Sokhos	1.30	347	P	Pn	06 40 01.0	-1.2
SOH	Sokhos	1.30	347	ePn	Pn	06 40 01.1	-1.1
SOH				eSn	Sn	06 40 19.1	-0.7
THL	Klokotos Trika	1.33	271	ePN	Pn	06 40 02.3	-0.3
THL				eSN	Sn	06 40 21.1	+0.5
THL	Klokotos Trika	1.33	271	P	Pn	06 40 02.2	-0.4
THL				S	Sn	06 40 21.1	+0.5
THL	Klokotos Trika	1.33	271	ePn	Pn	06 40 02.3	-0.3
THL				eSn	Sn	06 40 21.1	+0.5
DSF	Desfina	1.48	220	P	Pn	06 40 03.5	-1.1
DSF	Desfina	1.48	220	P	Pn	06 40 03.5	-1.1
PTL	Penteli	1.50	176	ePn	Pn	06 40 03.5	-1.4
PTL				eSn	Sn	06 40 23.0	-1.8
PTL	Penteli	1.50	176	ePN	Pn	06 40 03.5	-1.4
PTL				eSN	Sn	06 40 23.0	-1.8
PTL	Penteli	1.50	176	ePn	Pn	06 40 03.5	-1.4
ATH	Athens Observa	1.58	181	ePn	Pn	06 40 04.6	-1.3
ATH				eSn	Sn	06 40 26.8	+0.2
ATH	Athens Observa	1.58	181	ePN	Pn	06 40 04.6	-1.3
ATH				eSN	Sn	06 40 26.8	+0.2
ATH	Athens Observa	1.58	181	ePn	Pn	06 40 04.6	-1.3
EVR	Evrytania	1.63	248	ePn	Pn	06 40 07.1	+0.5
EVR				eSn	Sn	06 40 29.1	+1.2
EVR	Evrytania	1.63	248	ePN	Pn	06 40 07.1	+0.5
EVR				eSN	Sn	06 40 29.1	+1.2
EVR	Evrytania	1.63	248	ePn	Pn	06 40 07.1	+0.5
EVR				eSn	Sn	06 40 29.1	+1.2
LTK	Loutraki	1.64	202	ePN	Pn	06 40 05.9	-0.9
LTK				eSN	Sn	06 40 28.8	+0.6
LTK	Loutraki	1.64	202	ePn	Pn	06 40 05.9	-0.9
LTK				eSn	Sn	06 40 28.8	+0.6
KZN	Kozani	1.69	297	ePn	Pn	06 40 07.1	-0.4
KZN	Kozani	1.69	297	ePN	Pn	06 40 07.1	-0.4
KZN	Kozani	1.69	297	ePn	Pn	06 40 07.1	-0.4
VLY	Voula,Athens	1.70	179	ePb	Pn	06 40 06.3	-1.3
VLY				eSn	Sn	06 40 29.9	+0.4
VLY	Voula,Athens	1.70	179	ePB	Pn	06 40 06.3	-1.3
VLY				eSN	Sn	06 40 29.9	+0.4
VLY	Voula,Athens	1.70	179	ePb	Pn	06 40 06.3	-1.3
KALE	Kalithea	1.70	228	P	Pn	06 40 07.0	-0.7
KALE	Kalithea	1.70	228	P	Pn	06 40 07.0	-0.7
GADA	Gvkgeada	1.78	68	ePN	Pn	06 40 09.3	+0.6
GADA				eSN	Sn	06 40 32.5	+0.9
GADA	Gvkgeada	1.78	68	ePn	Pn	06 40 09.3	+0.6
GADA				eSn	Sn	06 40 32.5	+0.9
NAIG	Nisos Aigina	1.80	186	ePb	Pn	06 40 07.6	-1.4
NAIG	Nisos Aigina	1.80	186	ePB	Pn	06 40 07.6	-1.4
NAIG	Nisos Aigina	1.80	186	ePb	Pn	06 40 07.6	-1.4
EFP	Efpalio	1.82	232	ePN	Pn	06 40 09.3	+0.1
EFP	Efpalio	1.82	232	ePn	Pn	06 40 09.3	+0.1
GUR	Goura	1.95	215	ePB	Pn	06 40 10.4	-0.6
GUR	Goura	1.95	215	ePb	Pn	06 40 10.4	-0.6
VAY	Valandovo	1.98	334	ePn	Pn	06 40 11.5	0.0
VAY				eSg	Sg	06 40 40.0	-1.2
PRK	Paraskevi	1.98	98	ePn	Pn	06 40 10.0	-1.5
PRK	Paraskevi	1.98	98	ePN	Pn	06 40 10.0	-1.5
PRK	Paraskevi	1.98	98	P	Pn	06 40 12.5	+1.0
PRK				S	Sn	06 40 34.4	-2.2
PRK	Paraskevi	1.98	98	ePn	Pn	06 40 10.0	-1.5
PRK	Paraskevi	1.98	98	P	Pn	06 40 12.5	+1.0
EZN	Ezine	2.01	81	ePN	Pn	06 40 13.0	+1.1
EZN				eSN	Sn	06 40 39.4	+2.1
EZN	Ezine	2.01	81	ePn	Pn	06 40 13.0	+1.1
EZN				eSn	Sn	06 40 39.4	+2.1
DID	Didima	2.08	191	ePB	Pn	06 40 11.7	-1.1
DID	Didima	2.08	191	P	Pn	06 40 11.6	-1.2
DID				S	Sn	06 40 38.4	-0.6
DID	Didima	2.08	191	P	Pn	06 40 11.6	-1.2
DID				S	Sn	06 40 38.4	-0.6
CHOS	Chios island	2.15	122	ePB	Pn	06 40 11.9	-1.9
CHOS	Chios island	2.15	122	P	Pn	06 40 11.9	-1.9
CHOS				S	Sn	06 40 37.9	-2.7
ENEZ	Enez	2.19	57	ePN	Pn	06 40 14.8	+0.4
ENEZ	Enez	2.19	57	ePn	Pn	06 40 14.9	+0.5
ALN	Alexandroupoli	2.22	52	ePb	Pn	06 40 13.2	-1.5
ALN	Alexandroupoli	2.22	52	ePB	Pn	06 40 13.2	-1.5
ALN	Alexandroupoli	2.22	52	P	Pn	06 40 12.4	-2.3
ALN				S	Sn	06 40 38.2	-4.2
JAN	Janina	2.23	274	ePb	Pn	06 40 15.2	+0.2
JAN	Janina	2.23	274	ePB	Pn	06 40 15.2	+0.2
JAN	Janina	2.23	274	ePb	Pn	06 40 15.2	+0.2
GELI	Tayfur-Gelibol	2.26	67	ePN	Pn	06 40 17.2	+1.9
GELI	Tayfur-Gelibol	2.26	67	ePn	Pn	06 40 17.3	+1.9
AYVA	Ayvalik	2.30	95	*i* P	Pn	06 40 14.5	-1.3
AYVA	Ayvalik	2.30	95	*i* P	Pn	06 40 14.5	-1.3
AYVA				*i* S	Sn	06 40 49.4	+5.1
RLS	Riolos of Patr	2.32	231	ePb	Pn	06 40 16.9	+0.8
RLS	Riolos of Patr	2.32	231	ePB	Pn	06 40 16.9	+0.8
RLS	Riolos of Patr	2.32	231	ePb	Pn	06 40 16.9	+0.8
ERIK	Erikli-Kesan	2.40	61	ePN	Pn	06 40 18.2	+1.0
ERIK	Erikli-Kesan	2.40	61	ePn	Pn	06 40 18.2	+0.9
VLX	Vlachokerasia	2.43	207	ePN	Pn	06 40 17.6	0.0
VLX	Vlachokerasia	2.43	207	P	Pn	06 40 17.5	-0.1
VLX	Vlachokerasia	2.43	207	ePn	Pn	06 40 17.6	0.0
LPK	Lapseki	2.46	70	ePN	Pn	06 40 18.4	+0.3
LPK	Lapseki	2.46	70	ePn	Pn	06 40 18.4	+0.3
KRUS	Krusevo	2.63	314	ePn	Pn	06 40 20.3	-0.1
ITM	Ithomi	2.76	212	ePn	Pn	06 40 22.9	+0.6
ITM	Ithomi	2.76	212	ePN	Pn	06 40 22.9	+0.6
ITM	Ithomi	2.76	212	P	Pn	06 40 22.9	+0.6
ITM	Ithomi	2.76	212	P	Pn	06 40 22.9	+0.6
VLS	Valsamata	2.82	242	ePb	Pn	06 40 25.0	+2.0
VLS	Valsamata	2.82	242	ePB	Pn	06 40 25.0	+2.0
VLS	Valsamata	2.82	242	ePb	Pn	06 40 25.0	+2.0
BLCB	Balcova	2.83	113	ePN	Pn	06 40 24.0	+1.0
BLCB	Balcova	2.83	113	ePn	Pn	06 40 24.0	+0.9
APE	Apeiranthos	2.85	150	ePN	Pn	06 40 21.8	-1.6
APE	Apeiranthos	2.85	150	ePn	Pn	06 40 21.8	-1.6
RKY	Sarkoy-Tekirda	2.87	66	ePN	Pn	06 40 24.8	+1.1
RKY	Sarkoy-Tekirda	2.87	66	ePn	Pn	06 40 24.8	+1.1
VLI	Veliai	2.90	193	ePn	Pn	06 40 22.9	-1.2
VLI	Veliai	2.90	193	ePN	Pn	06 40 22.9	-1.2
VLI	Veliai	2.90	193	ePn	Pn	06 40 22.9	-1.2
BALY	Balya	3.00	85	*i* P	Pn	06 40 24.7	-0.8
BALY	Balya	3.00	85	*i* P	Pn	06 40 24.7	-0.8
KEK	Kerkira	3.05	274	ePb	Pn	06 40 27.9	+1.7
KEK	Kerkira	3.05	274	ePB	Pn	06 40 27.9	+1.7
KEK	Kerkira	3.05	274	ePb	Pn	06 40 27.9	+1.7
GONE	Gonen-Balikesi	3.08	80	ePN	Pn	06 40 28.4	+2.1
GONE	Gonen-Balikesi	3.08	80	ePn	Pn	06 40 28.7	+2.1
PYL	PYLOS	3.08	211	ePN	Pn	06 40 27.7	+1.1
PYL	PYLOS	3.08	211	ePn	Pn	06 40 27.7	+1.1
BALB	Balikesir	3.20	87	ePN	Pn	06 40 30.0	+1.8
BALB	Balikesir	3.20	87	ePn	Pn	06 40 30.0	+1.8
AKHS	Akhisar	3.23	101	eP	Pn	06 40 30.9	+2.2
AKHS	Akhisar	3.23	101	eP	Pn	06 40 30.9	+2.2
EDRB	Edirne	3.24	44	ePN	Pn	06 40 29.1	+0.4
EDRB	Edirne	3.24	44	ePn	Pn	06 40 29.1	+0.4
EDC	Edincik	3.27	75	ePN	Pn	06 40 31.2	+2.0
EDC	Edincik	3.27	75	ePn	Pn	06 40 31.2	+2.0
BNT	Bandirma	3.31	75	ePN	Pn	06 40 31.7	+1.9
THR5	Thira Island,	3.38	157	P	Pn	06 40 29.2	-1.5
THR5	Thira Island,	3.38	157	P	Pn	06 40 29.2	-1.5
KCTX	Karacabey (Bur	3.62	77	ePN	Pn	06 40 35.9	+1.9
KCTX	Karacabey (Bur	3.62	77	ePn	Pn	06 40 35.9	+1.9
BODT	Bodrum	3.75	130	ePN	Pn	06 40 35.8	0.0
BODT	Bodrum	3.75	130	ePn	Pn	06 40 35.8	0.0
CTKS	Kestenalik-??a	4.01	64	ePN	Pn	06 40 41.8	+2.5
CTKS	Kestenalik-??a	4.01	64	ePn	Pn	06 40 41.8	+2.4
YLV	Yalova	4.44	75	ePN	Pn	06 40 48.1	+2.8
YLV	Yalova	4.44	75	ePn	Pn	06 40 48.1	+2.8
STON	Ston	5.63	308	Sn	Sn	06 42 03.7	-2.9
STON	Ston	5.63	308	Sn	Sn	06 42 03.7	-2.9
BRTR	Keskin Array B 0.3nm,0.3s,baz=264,slow=15,SNR=4.5	7.64	86	Pn	Pn	06 41 30.6	+1.4
ASF	Jabal al Asfar comp=Z,50nm,18.7s,baz=75,slow=39	12.96	121	LR	LR	06 48 01.9	
EIL	Elat comp=Z,20nm,18.4s,baz=289,slow=40	13.49	134	LR	LR	06 48 41.7	
HFS	Hagfors comp=Z,34nm,18.1s,MS2.8,baz=104,slow=39	21.55	346	LR	LR	06 53 36.5	
FINES	FINESS Array B	21.97	3	LR	LR	06 54 04.2	
	comp=Z,51nm,21.8s,MS2.9,baz=343,slow=40						
EKA	Eskdalemuir Ar 1.1nm,0.6s,mb3.5,baz=121,slow=9.9,SNR=2.4	23.87	320	P	P	06 44 51.2	-0.2
TORD	Torodi Ar. Bea 0.3nm,0.5s,mb3.5,baz=36,slow=8.8,SNR=5.9	32.71	223	P	P	06 46 09.8	-0.9
MKAR	Makanchi Array 0.3nm,0.5s,mb3.1,baz=276,slow=7.7,SNR=3.3	42.44	60	P	P	06 47 32.5	-0.3
ZALV	Zalesovo Beam 1.6nm,0.7s,mb3.9,baz=284,slow=9.2,SNR=3.5	42.90	49	P	P	06 47 36.0	-0.4
ZALV				LR	LR	07 07 16.4	
	comp=Z,11nm,18.7s,MS2.8,baz=2.0,slow=39						

*IDC **05** 06:58:37.7±2.2,36°.12N×26°.85E,h91km±23km,mb3.6/10, mb1 3.7/15,mb1mx3.6/27,mbtmp3.7/15,Error ellipse: s-maj=21.4km s-min=13.2km az=136.0*

*ISCJB **05** 06:58:38.3±0.2,35°.95N±0°.02×27°.00E±0°.02,h121km±3km, mb3.9/11,Error ellipse: s-maj=3.5km s-min=2.3km az=13.8*

*CSEM **05** 06:58:39.7±0.1,35°.94N×26°.99E,h113km±2km,Mw3.4, Error ellipse: s-maj=3.4km s-min=2.2km az=19.0*

*ISK **05** 06:58:39.0,35°.77N×27°.00E,h39km,MD3.8*

*NIC **05** 06:58:41.0±0.2,36°.04N×27°.25E,h65km,mb4.3,ML3.8, MW3.4*

*GII **05** 06:58:41.8±0.0,35°.52N×27°.42E,h1km±1km,Mb4.0/1, Md3.6/2*

*HLW **05** 06:58:41.2,35°.90N×27°.31E,h35km±55km,Ml3.8*

*NEIC **05** 06:58:42.1,36°.21N×26°.59E,h26km,ML3.2(ATH),After ATH.*

*ATH **05** 06:58:42.1,36°.21N×26°.59E,h26km±6km,ML3.2*

*THE **05** 06:58:43.1,36°.04N×26°.87E,h98km±3km,ML3.4/5,Error ellipse: s-maj=4.2km s-min=1.0km az=127.0*

*DDA **05** 06:58:43.7,36°.22N×27°.53E,h20km±5km,Ml3.8*

ISC 05 06:58:39.5±0.2,**35°.95N**±0°.02×**26°.99E**±0°.02,**h114**km±3km, **n260**,σ1§**19**/326,**mb3.9**/11,**3C-3D**,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIS1	Nisyros Isl.	0.67	13	P	Pn	06 58 58.3	+0.4
NIS1				S	Sn	06 59 09.6	-2.2
NIS1	Nisyros Isl.	0.67	13	P	Pn	06 58 58.3	+0.4
NIS1				S	Sn	06 59 09.6	-2.2
ARG	Arkhangelos	0.96	74	P	Pn	06 59 02.0	+1.5
ARG				S	Sn	06 59 16.7	+0.3
ARG	Arkhangelos	0.96	74	P	Pn	06 59 02.0	+1.5
ARG				S	Sn	06 59 16.7	+0.3
ZKR	Zakros	1.04	217	ePn	Pn	06 59 03.4	+2.0
ZKR				eSn	Sn	06 59 20.2	+2.2
ZKR	Zakros	1.04	217	ePN	Pn	06 59 03.4	+2.0
ZKR				eSN	Sn	06 59 20.2	+2.2
ZKR	Zakros	1.04	217	P	Pn	06 59 03.4	+2.0
ZKR				S	Sn	06 59 18.8	+0.8
ZKR	Zakros	1.04	217	P	Pn	06 59 03.4	+2.0
ZKR				S	Sn	06 59 18.8	+0.8
ZKR				eSn	Sn	06 59 20.2	+2.2
BODT	Bodrum	1.14	13	PN	Pn	06 59 01.6	-0.8
BODT				eSN	Sn	06 59 17.8	-2.0
BODT	Bodrum	1.14	13	*i* Pn	Pn	06 59 01.6	-0.8
BODT				eSn	Sn	06 59 18.3	-1.5
THR1	Thera Island	1.31	289	P	Pn	06 59 04.2	0.0
THR1	Thera Island	1.31	289	P	Pn	06 59 04.2	0.0
THR3	Thira Island,	1.36	290	P	Pn	06 59 05.0	+0.1
THR3	Thira Island,	1.36	290	P	Pn	06 59 05.0	+0.1
THR5	Thira Island,	1.41	290	P	Pn	06 59 05.6	+0.2
THR5	Thira Island,	1.41	290	P	Pn	06 59 05.6	+0.2
MLSB	Milas	1.48	25	PN	Pn	06 59 06.9	+0.6
MLSB				eSN	Sn	06 59 26.0	-0.6
MLSB	Milas	1.48	25	*i* Pn	Pn	06 59 06.9	+0.6
MLSB				eSn	Sn	06 59 26.0	-0.7
YER	Yerkesik	1.57	41	PN	Pn	06 59 08.2	+0.8
YER	Yerkesik	1.57	41	*i* Pn	Pn	06 59 08.2	+0.8
TURN	Turunc	1.59	54	⇓*i*P	Pn	06 59 04.9	-2.7
TURN				*i* S	Sn	06 59 17.9	-1.1
TURN	Turunc	1.59	54	*i* P	Pn	06 59 04.9	-2.7
APE	Apeiranthos	1.62	314	ePN	Pn	06 59 07.8	-0.1
APE	Apeiranthos	1.62	314	P	Pn	06 59 07.7	-0.2
APE	Apeiranthos	1.62	314	P	Pn	06 59 07.7	-0.2
GCAM	G?zelcaml?	1.76	6	⇓*i*P	Pn	06 59 10.1	+0.5
GCAM	G?zelcaml?	1.76	6	*i* P	Pn	06 59 10.1	+0.5
IDI	Anoyia	1.83	249	ePb	Pn	06 59 11.0	+0.5
IDI	Anoyia	1.83	249	ePB	Pn	06 59 11.0	+0.5
IDI				eSN	Sn	06 59 33.1	-1.1
IDI	Anoyia	1.83	249	ePb	Pn	06 59 11.0	+0.5
AYDN	Tasoluk	1.85	22	⇓*i*P	Pn	06 59 11.3	+0.6
AYDN				*i* S	Sn	06 59 32.5	-2.0
AYDN	Tasoluk	1.85	22	*i* P	Pn	06 59 11.4	+0.7
AYDN				*i* S	Sn	06 59 32.5	-2.1
SIVA	Sivas	2.01	243	ePb	Pn	06 59 14.4	+1.7
SIVA				eSn	Sn	06 59 39.1	+1.0
SIVA	Sivas	2.01	243	ePB	Pn	06 59 14.4	+1.7
SIVA				eSN	Sn	06 59 39.1	+1.0
SIVA	Sivas	2.01	243	P	Pn	06 59 14.5	+1.8
SIVA				S	Sn	06 59 39.5	+1.4
SIVA	Sivas	2.01	243	P	Pn	06 59 14.5	+1.8
SIVA				eSn	Sn	06 59 39.1	+1.0
SIVA				S	Sn	06 59 39.5	+1.4
AKAS	Kas	2.14	82	⇑*i*P	Pn	06 59 14.9	+0.6
AKAS				eS	Sn	06 59 38.0	-3.0
AKAS	Kas	2.14	82	*i* P	Pn	06 59 14.9	+0.6
AKAS				eS	Sn	06 59 38.0	-3.0
GLHS	Glhisar (BURDU	2.35	58	ePN	Pn	06 59 17.6	+0.6
GLHS	Glhisar (BURDU	2.35	58	ePn	Pn	06 59 17.6	+0.5
DENT	Denizli	2.44	42	ePN	Pn	06 59 19.0	+0.9
DENT	Denizli	2.44	42	ePn	Pn	06 59 19.0	+0.9
GOLH	Golhisar	2.44	57	⇑*i*P	Pn	06 59 18.8	+0.7
GOLH				*i* S	Sn	06 59 43.4	-4.5
GOLH	Golhisar	2.44	57	*i* P	Pn	06 59 18.8	+0.6
GOLH				*i* S	Sn	06 59 43.4	-4.5
ELL	Elmali	2.49	70	ePN	Pn	06 59 19.4	+0.5
ELL	Elmali	2.49	70	ePn	Pn	06 59 19.4	+0.6
CHOS	Chios island	2.54	343	P	Pn	06 59 19.5	-0.1
CHOS	Chios island	2.54	343	P	Pn	06 59 19.5	-0.1
KARN	Karanos	2.56	259	ePN	Pn	06 59 20.5	+0.7
KARN				eSN	Sn	06 59 48.8	-1.9
KARN	Karanos	2.56	259	P	Pn	06 59 20.6	+0.8
KARN				S	Sn	06 59 48.8	-1.9
KARN	Karanos	2.56	259	ePn	Pn	06 59 20.5	+0.7
KARN				S	Sn	06 59 48.8	-1.9
GVD	Gavdhos	2.62	246	ePn	Pn	06 59 22.8	+2.3
GVD	Gavdhos	2.62	246	ePN	Pn	06 59 22.8	+2.3
GVD	Gavdhos	2.62	246	P	Pn	06 59 21.8	+1.3
GVD				S	Sn	06 59 51.0	-1.1
GVD	Gavdhos	2.62	246	P	Pn	06 59 21.8	+1.3
GVD	Gavdhos	2.62	246	ePn	Pn	06 59 22.8	+2.3
GVD				S	Sn	06 59 51.0	-1.1
KULA	Kula-Manisa	2.89	27	ePN	Pn	06 59 26.1	+2.1
KULA	Kula-Manisa	2.89	27

KIZT	Kizilcal	4.87	52	ePN		Pn	06 59 53.8	+3.3
KIZT	Kizilcal	4.87	52	ePn		Pn	06 59 53.8	+3.3
LEF	Lefka	4.88	98	ePN		Pn	06 59 51.5	+0.8
LEF	Lefka	4.88	98	ePn		Pn	06 59 51.5	+0.8
RLS	Riolos of Patr	4.89	297	ePN		Pn	06 59 52.1	+1.2
RLS	Riolos of Patr	4.89	297	ePN		Pn	06 59 52.1	+1.2
RLS	Riolos of Patr	4.89	297	ePn		Pn	06 59 52.1	+1.2
SZAC	Souni-Zanaja	4.96	102	P		Pn	06 59 51.7	-0.1
	13nm,0.2s							
SZAC	Souni-Zanaja	4.96	102	P		Pn	06 59 51.7	-0.1
	13nm,0.2s							
EVR	Evrytania	5.08	307	ePN		Pn	06 59 54.2	+0.9
EVR	Evrytania	5.08	307	ePN		Pn	06 59 54.2	+0.9
EVR	Evrytania	5.08	307	ePn		Pn	06 59 54.2	+0.9
MAMC	Mammari	5.14	97	P		Pn	06 59 54.0	-0.2
MAMC	Mammari	5.14	97	P		Pn	06 59 54.0	-0.2
CSS	Prodhromos	5.27	99	P		Pn	06 59 55.5	-0.4
	2.4nm,0.5s							
CSS				S		Sn	07 00 54.6	-0.9
CSS	Prodhromos	5.27	99	P		Pn	06 59 54.4	-1.5
CSS				S		Sn	07 00 52.4	-3.1
CSS	Prodhromos	5.27	99	P		Pn	06 59 55.5	-0.4
	2.4nm,0.5s							
CSS				S		Sn	07 00 54.6	-0.9
THL	Klokotos Trika	5.34	314	ePN		Pn	06 59 57.8	+0.9
THL	Klokotos Trika	5.34	314	P		Pn	06 59 58.0	+1.1
THL	Klokotos Trika	5.34	314	ePn		Pn	06 59 57.8	+0.9
LFK	Lefkose	5.37	95	ePN		Pn	06 59 59.0	+1.7
LFK	Lefkose	5.37	95	ePn		Pn	06 59 59.1	+1.8
KFL	Anninata	5.41	295	P		Pn	06 59 57.2	-0.6
KFL				S		Sn	07 00 54.9	-3.9
KFL	Anninata	5.41	295	P		Pn	06 59 57.2	-0.6
IKL	Isikli	5.43	85	ePN		Pn	06 59 58.8	+0.7
IKL	Isikli	5.43	85	ePn		Pn	06 59 58.8	+0.7
VLS	Valsamata	5.58	295	ePn		Pn	06 59 59.5	-0.6
VLS	Valsamata	5.58	295	ePN		Pn	06 59 59.5	-0.6
VLS	Valsamata	5.58	295	P		Pn	06 59 58.8	-1.3
VLS				S		Sn	07 00 58.5	-4.4
VLS	Valsamata	5.58	295	P		Pn	06 59 58.8	-1.3
VLS	Valsamata	5.58	295	ePn		Pn	06 59 59.5	-0.6
LKD2	Lefkada island	5.78	301	P		Pn	07 00 02.5	-0.4
LKD2				S		Sn	07 01 03.5	-4.4
LKD2	Lefkada island	5.78	301	P		Pn	07 00 02.5	-0.4
PHNC	Paralimni	5.82	97	P		Pn	07 00 04.6	+1.2
	3.4nm,0.5s							
PHNC				S		Sn	07 01 09.0	+0.1
PHNC	Paralimni	5.82	97	P		Pn	07 00 04.6	+1.2
	3.4nm,0.5s							
PHNC				S		Sn	07 01 09.0	+0.1
EREN	Erenkoy	5.86	92	ePN		Pn	07 00 06.2	+2.4
EREN	Erenkoy	5.86	92	ePn		Pn	07 00 06.2	+2.3
BRTR	Keskin Array B	6.47	52	P		Pn	07 00 12.0	-0.2
	0.3nm,0.3s,baz=226,slow=14,SNR=14							
BRTR				S		Sn	07 01 23.4	-1.2
	0.4nm,0.3s,baz=219,slow=23,SNR=9.8							
BRTR	Keskin Array B	6.47	52	P		Pn	07 00 12.0	-0.2
BRTR				S		Sn	07 01 23.4	-1.1
SWA2		6.81	191	P		Pn	07 00 18.2	+1.4
	baz=194							
SWA2		6.81	191	P		Pn	07 00 18.2	+1.3
KEK	Kerkira	6.82	306	P		Pn	07 00 15.2	-1.7
KEK				S		Sn	07 01 25.3	-7.6
KEK	Kerkira	6.82	306	P		Pn	07 00 15.2	-1.7
HMYD	Mayadein	6.92	151	P		Pn	07 00 18.6	+0.2
	baz=153							
HMYD	Mayadein	6.92	151	P		Pn	07 00 18.6	+0.2
HNAT	Natroun	7.00	153	P		Pn	07 00 19.5	0.0
	baz=155							
HNAT	Natroun	7.00	153	P		Pn	07 00 19.5	+0.1
SQR		7.01	149	P		Pn	07 00 20.0	+0.4
	baz=150							
SQR		7.01	149	P		Pn	07 00 20.0	+0.5
FYM	Al Fayyum	7.11	150	P		Pn	07 00 21.5	+0.6
	baz=152							
FYM	Al Fayyum	7.11	150	P		Pn	07 00 21.5	+0.6
KOT	Kottamia	7.25	145	P		Pn	07 00 22.8	0.0
	baz=146							
KOT				S		Sn	07 01 39.3	-4.3
	baz=146							
KOT	Kottamia	7.25	145	P		Pn	07 00 22.8	0.0
HHAG	Hagoal	7.36	143	P		Pn	07 00 24.7	+0.4
	baz=144							
HHAG				AMP			07 01 00.0	
	comp=E,90μm,0.1s,logA/T=5.8,baz=144							
HHAG	Hagoal	7.36	143	P		Pn	07 00 24.7	+0.4
BHL	Bhannes	7.40	104	eP		Pn	07 00 23.4	-1.5
BHL	Bhannes	7.40	104	eP		Pn	07 00 23.4	-1.4
AMAG	Maghara	7.42	134	P		Pn	07 00 23.7	-1.4
	baz=135							
AMAG	Maghara	7.42	134	P		Pn	07 00 23.7	-1.4
HWQ	Hawqa	7.53	100	eP		Pn	07 00 26.2	-0.3
HWQ	Hawqa	7.53	100	eP		Pn	07 00 26.2	-0.3
MMA0	Mount Meron ar	7.54	110	Pn		Pn	07 00 25.8	-0.9
MMA0B	Mount Meron ar	7.54	110	Pn		Pn	07 00 26.0	-0.7
MMAI	Mount Meron Ar	7.54	110	P		Pn	07 00 26.1	-0.6
	comp=E,26nm,0.3s,baz=327,slow=12,SNR=38							
MMAI				S		Sn	07 01 49.1	-1.4
	comp=E,21nm,0.3s,baz=287,slow=25,SNR=9.5							
LJBD	Adjabya	7.58	230	iP		Pn	07 00 25.6	-1.7
	SNR=76							
KSDI	Kefar Szold	7.66	109	Pn		Pn	07 00 27.7	-0.7
KSDI	Kefar Szold	7.66	109	Pn		Pn	07 00 27.7	-0.7
KSDI	Kefar Szold	7.66	109	Pn		Pn	07 00 27.7	-0.7
RCY	Rachaya	7.67	106	eP		Pn	07 00 28.1	-0.4
RCY	Rachaya	7.67	106	eP		Pn	07 00 28.1	-0.4
AWBH		7.78	167	P		Pn	07 00 29.9	-0.1
	baz=169							
AWBH		7.78	167	P		Pn	07 00 29.9	-0.1
MMLI	Mount Malkishu	7.81	114	Pn		Pn	07 00 30.1	-0.3
MMLI	Mount Malkishu	7.81	114	Pn		Pn	07 00 30.1	-0.3
MMLI	Mount Malkishu	7.81	114	Pn		Pn	07 00 30.1	-0.3
HBNS	Bani Suwayf	7.84	152	P		Pn	07 00 31.1	+0.3
	baz=153							
HBNS	Bani Suwayf	7.84	152	P		Pn	07 00 31.1	+0.3
KZIT	Kziot	7.98	127	Pn		Pn	07 00 31.8	-0.8
KZIT	Kziot	7.98	127	Pn		Pn	07 00 31.8	-0.8
KZIT	Kziot	7.98	127	Pn		Pn	07 00 31.8	-0.8
KZIT				Sn		Sn	07 01 57.5	-3.7
HMDT	Nahal Hemdat	7.98	115	Pn		Pn	07 00 32.4	-0.3
HMDT				S		Sn	07 01 59.3	-2.0
HMDT	Nahal Hemdat	7.98	115	Pn		Pn	07 00 32.4	-0.3
HMDT				S		Sn	07 01 59.3	-2.0
HMDT	Nahal Hemdat	7.98	115	Pn		Pn	07 00 32.4	-0.3
HMDT				Sn		Sn	07 01 59.3	-2.0
RTMI	Retamim	8.07	125	Pn		Pn	07 00 33.0	-1.0
RTMI	Retamim	8.07	125	Pn		Pn	07 00 33.0	-1.0
RTMI	Retamim	8.07	125	Pn		Pn	07 00 33.0	-1.0
DSI	Dead Sea	8.24	120	Pn		Pn	07 00 35.7	-0.5
DSI				S		Sn	07 02 05.7	-1.8
DSI	Dead Sea	8.24	120	Pn		Pn	07 00 35.7	-0.5
DSI				S		Sn	07 02 05.7	-1.8
DSI	Dead Sea	8.24	120	Pn		Pn	07 00 35.7	-0.5
DSI				Sn		Sn	07 02 05.7	-1.8
TIP	Timpagrande	8.74	295	ePn		Pn	07 00 39.9	-3.1
TIP				eSn		Sn	07 02 07.0	-13
HRFI	Mount Harif	8.97	129	Pn		Pn	07 00 45.1	-1.0
HRFI	Mount Harif	8.97	129	Pn		Pn	07 00 45.1	-1.0
HRFI	Mount Harif	8.97	129	Pn		Pn	07 00 45.1	-1.0
ASF	Jabal al Asfar	9.04	112	P		Pn	07 00 46.9	-0.2
	comp=E,0.8nm,0.3s,baz=250,slow=7.4,SNR=5.9							
ASF				S		Sn	07 02 26.6	-0.5
	comp=E,1.0nm,0.3s,baz=241,slow=19,SNR=3.0							
MBRI	Mt Berech	9.06	130	Pn		Pn	07 00 46.6	-0.7
MBRI				Sn		Sn	07 02 23.3	-4.2
EIL	Elat	9.17	131	Pn		Pn	07 00 48.0	-0.8
EIL	Elat	9.17	131	P		Pn	07 00 48.7	-0.1
	comp=E,2.6nm,0.3s,baz=319,slow=7.9,SNR=42							
EIL				S		Sn	07 02 25.4	-4.7
	comp=E,9.1nm,0.3s,baz=33,slow=11,SNR=12							
EIL	Elat	9.17	131	Pn		Pn	07 00 48.0	-0.8
EIL	Elat	9.17	131	Pn		Pn	07 00 48.0	-0.8
HKAT	Jabal Katrina	9.48	139	P		Pn	07 00 52.8	-0.4
	baz=140							
HKAT	Jabal Katrina	9.48	139	P		Pn	07 00 52.8	-0.3
HDHB	Dhahab	9.67	136	P		Pn	07 00 55.8	+0.1
	baz=137							
HDHB	Dhahab	9.67	136	P		Pn	07 00 55.8	+0.1
CUC	Castrocucco	9.70	298	ePn		Pn	07 00 53.0	-3.0
STON	Ston	9.97	317	ePn		Pn	07 00 54.7	-4.8
STON				Sn		Sn	07 02 38.6	-11
VAE	Valguarnera	10.21	282	S		Sn	07 02 45.9	-9.4
	comp=E,4.3nm,0.3s,baz=158,slow=19,SNR=3.2							
NVLJ	Novalja	12.62	317	Sn		Sn	07 03 42.4	-11
KEST	Kesra	14.32	274	P		Pn	07 02 01.2	+4.3
	comp=E,0.1nm,0.3s,baz=92,slow=1.6,SNR=4.7							
AKASG	Malin Array Be	14.83	6	P		Pn	07 02 01.1	-2.2
	comp=E,0.9nm,0.3s,baz=194,slow=11,SNR=4.0							
ESDC	Sonseca Array	24.67	288	P		P	07 03 49.2	-0.4
	comp=E,0.9nm,0.5s,mb3.5,baz=85,slow=10,SNR=5.3							
ESDC	Sonseca Array	24.67	288	P		P	07 03 49.2	-0.4
TORD	Torodi Ar. Bea	32.14	231	P		P	07 04 57.4	+1.1
TORD	Torodi Ar. Bea	32.14	231	P		P	07 04 57.4	+1.1
	comp=E,2.3nm,0.3s,mb4.4,baz=33,slow=8.7,SNR=53							
ARCES	ARCESS Array B	33.65	359	P		P	07 05 07.2	-1.7
	comp=E,0.4nm,0.5s,mb3.5,baz=174,slow=8.0,SNR=7.1							
DBIC	Dimbokro	41.23	233	P		P	07 06 13.9	+0.5
	comp=E,1.8nm,0.5s,mb4.2,baz=272,slow=7.0,SNR=7.1							
DBIC	Dimbokro	41.23	233	P		P	07 06 13.9	+0.6
MK31	Makanchi Array	42.09	57	eP		P	07 06 21.4	+1.3
MK31	Makanchi Array	42.09	57	eP		P	07 06 21.4	+1.3
MKAR	Makanchi Array	42.09	57	P		P	07 06 21.5	+1.4
	comp=E,1.4nm,0.5s,mb4.0,baz=283,slow=6.7,SNR=7.0							
SPITS	Spitsbergen Ar	42.58	357	P		P	07 06 22.4	-1.2
	comp=E,0.4nm,0.3s,mb3.6,baz=178,slow=13,SNR=5.7							
ZALV	Zalesovo Beam	43.38	47	P		P	07 06 30.1	-0.2
	comp=E,1.4nm,0.4s,mb4.0,baz=287,slow=6.7,SNR=4.2							
SONM	Songino Array	57.83	51	P		P	07 08 20.2	+1.3
	comp=E,0.7nm,0.4s,mb4.0,baz=286,slow=6.9,SNR=5.9							
SONM	Songino Array	57.83	51	P		P	07 08 20.2	+1.3
SCHQ	Schefferville	63.55	320	P		P	07 08 56.4	-1.1
SCHQ	Schefferville	63.55	320	P		P	07 08 56.4	-1.1
	comp=E,1.9nm,0.5s,mb4.2,baz=76,slow=6.7,SNR=7.8							
KSRS	Korea Array	76.62	53	P		P	07 10 18.3	+0.6
	comp=E,1.2nm,0.5s,mb3.9,baz=274,slow=4.4,SNR=3.8							
ILAR	Eielson Array	79.50	357	P		P	07 10 32.0	-1.0
	comp=E,0.3nm,0.9s,mb3.1,baz=358,slow=4.1,SNR=4.4							

*ISCJB **05** 07:08:48.4±0.3,38.04N±0.02×21.55E±0.02,h10km, Error ellipse: s-maj=2.4km s-min=2.4km az=2.2*
*CSEM **05** 07:08:48.1±0.2,38.04N×21.55E,h2km, MD3.5, Error ellipse: s-maj=3.6km s-min=3.3km az=72.0*
*THE **05** 07:08:48.5,38.03N×21.59E,h0km±2km, ML3.1/8, Error ellipse: s-maj=2.5km s-min=0.8km az=233.0*
*ATH **05** 07:08:48.6,38.04N×21.53E,h8km±1km, MD3.5/21*
*NEIC **05** 07:08:48.6,38.04N×21.53E,h8km, MD3.5(ATH), After ATH.*

ISC 05 07:08:48.3±0.4, 38°03'N±0°02×21°54'E±0°02, h5km±3km, n96, σ0.85/165, Greece

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.07	296	ePg		Pg	07 08 50.8	+0.9
RLS	Riolos of Patr	0.07	296	ePG		Pg	07 08 50.8	+0.9
RLS	Riolos of Patr	0.07	296	ePg		Pg	07 08 50.8	+0.9
UPR	University Cam	0.32	37	ePG		Pg	07 08 54.5	0.0
UPR				eSB		Sg	07 09 00.1	+1.4
UPR	University Cam	0.32	37	P		Pg	07 08 54.6	+0.1
UPR				S		Sg	07 08 59.7	+1.0
UPR	University Cam	0.32	37	P		Pg	07 08 54.6	+0.1
UPR				S		Sg	07 08 59.7	+1.0
UPR				eSb		Sg	07 09 00.1	+1.4
LAKA	Lakka	0.40	58	P		Pg	07 08 55.6	-0.5
LAKA				S		Sg	07 09 01.8	+0.4
LAKA	Lakka	0.40	58	P		Pg	07 08 55.6	-0.5
LAKA				S		Sg	07 09 01.8	+0.4
EFP	Efpalio	0.49	35	ePB		Pg	07 08 57.4	-0.4
EFP				eSB		Sg	07 09 04.8	+0.6
EFP	Efpalio	0.49	35	P		Pg	07 08 57.3	-0.5
EFP				S		Sg	07 09 04.3	+0.7
EFP	Efpalio	0.49	35	ePb		Pg	07 08 57.4	-0.4
EFP				eSb		Sg	07 09 04.8	+0.6
TRIZ	Trizonia	0.54	51	P		Pg	07 08 58.2	-0.4
TRIZ				S		Sg	07 09 05.5	-0.1
TRIZ	Trizonia	0.54	51	P		Pg	07 08 58.2	-0.4
TRIZ				S		Sg	07 09 05.5	-0.1
KALE	Kalithea	0.59	52	P		Pg	07 08 59.1	-0.6
KALE				S		Sg	07 09 08.9	+1.4
KALE	Kalithea	0.59	52	P		Pg	07 08 59.1	-0.6
KALE				S		Sg	07 09 08.9	+1.4
KFL	Anninata	0.60	278	P		Pg	07 09 00.1	+0.2
KFL				S		Sg	07 09 10.6	+2.9
KFL	Anninata	0.60	278	P		Pg	07 09 00.1	+0.2
KFL				S		Sg	07 09 10.6	+2.9
GUR	Goura	0.64	98	ePB		Pg	07 09 00.2	-0.4
GUR				eSB		Sb	07 09 10.1	-1.0
GUR	Goura	0.64	98	P		Pg	07 09 00.1	-0.5
GUR				S		Sg	07 09 08.9	+0.9
GUR	Goura	0.64	98	ePb		Pg	07 09 00.2	-0.4
GUR				S		Sg	07 09 08.9	+0.9
GUR				eSb		Sb	07 09 10.1	-1.0
VLS	Valsamata	0.77	281	ePb		Pg	07 09 02.4	-0.7
VLS				eSb		Sg	07 09 14.5	+1.5
VLS	Valsamata	0.77	281	ePB		Pg	07 09 02.4	-0.7
VLS				eSB		Sg	07 09 14.5	+1.5
VLS	Valsamata	0.77	281	P		Pg	07 09 02.5	-0.6
VLS	Valsamata	0.77	281	ePb		Pg	07 09 02.4	-0.7
DSF	Desfina	0.86	63	P		Pg	07 09 03.7	-1.2
DSF				S		Sg	07 09 16.5	+0.4
DSF	Desfina	0.86	63	P		Pg	07 09 03.7	-1.2
DSF				S		Sg	07 09 16.5	+0.4
ITM	Ithomi	0.90	160	ePg		Pg	07 09 05.7	+0.1
ITM				eSb		Sb	07 09 18.6	0.0
ITM	Ithomi	0.90	160	ePG		Pg	07 09 05.7	+0.1
ITM				eSB		Sb	07 09 18.6	0.0
ITM	Ithomi	0.90	160	P		Pg	07 09 05.5	-0.1
ITM	Ithomi	0.90	160	ePg		Pg	07 09 05.7	+0.1
ITM				eSb		Sb	07 09 18.6	0.0
EVR	Evrytania	0.91	13	ePb		Pb	07 09 06.1	-0.5
EVR				eSb		Sb	07 09 18.1	-0.9
EVR	Evrytania	0.91	13	ePB		Pb	07 09 06.1	-0.5
EVR				eSB		Sb	07 09 18.1	-0.9
EVR	Evrytania	0.91	13	ePb		Pb	07 09 06.1	-0.5
EVR				eSb		Sb	07 09 18.1	-0.9
VLX	Vlachokerasia	0.93	134	ePG		Pg	07 09 05.8	-0.4
VLX				eSB		Sb	07 09 19.6	0.0
VLX	Vlachokerasia	0.93	134	P		Pg	07 09 06.0	-0.2
VLX	Vlachokerasia	0.93	134	P		Pg	07 09 06.0	-0.2
VLX				eSb		Sb	07 09 19.6	0.0
LKD2	Lefkada island	1.03	318	P		Pg	07 09 07.2	-0.9
LKD2				S		Sg	07 09 25.0	+3.5
LKD2	Lefkada island	1.03	318	P		Pg	07 09 07.2	-0.9
LKD2				S		Sg	07 09 25.0	+3.5
LTK	Loutraki	1.12	90	ePG		Pg	07 09 09.3	-0.6
LTK				eSB		Sb	07 09 25.8	+0.7
LTK	Loutraki	1.12	90	P		Pg	07 09 08.7	-1.2
LTK				S		Sg	07 09 23.8	-0.7
LTK	Loutraki	1.12	90	P		Pg	07 09 08.7	-1.2
LTK	Loutraki	1.12	90	ePg		Pg	07 09 09.3	-0.6
LTK				S		Sg	07 09 23.8	-0.7
LTK				eSb		Sb	07 09 25.8	+0.7
PYL	PYLOS	1.14	172	ePB		Pb	07 09 10.3	-0.2
PYL				eSB		Sb	07 09 26.4	+0.8
PYL	PYLOS	1.14	172	P		Pg	07 09 09.8	-0.4
PYL	PYLOS	1.14	172	P		Pg	07 09 09.8	-0.4
PYL	PYLOS	1.14	172	ePb		Pb	07 09 10.3	-0.2
PYL				eSb		Sb	07 09 26.4	+0.8
AGG	Agios Georgios	1.17	32	ePn		Pn	07 09 10.0	-1.3
AGG				eSb		Sb	07 09 26.0	-0.4
AGG	Agios Georgios	1.17	32	ePN		Pn	07 09 10.0	-1.3
AGG				eSB		Sb	07 09 26.0	-0.4
AGG	Agios Georgios	1.17	32	P		Pg	07 09 09.6	-1.1
AGG				S		Sg	07 09 25.6	-0.3
AGG	Agios Georgios	1.17	32	P		Pg	07 09 09.6	-1.1
AGG	Agios Georgios	1.17	32	ePn		Pn	07 09 10.0	-1.3
AGG				S		Sg	07 09 25.6	-0.3
AGG				eSb		Sb	07 09 26.0	-0.4
LKR	Lokris	1.30	61	ePb		Pb	07 09 13.2	-0.1
LKR				eSb		Sb	07 09 31.1	+0.9
LKR	Lokris	1.30	61	ePB		Pb	07 09 13.2	-0.1
LKR				eSB		Sb	07 09 31.1	+0.9
LKR	Lokris	1.30	61	P		Pn	07 09 11.3	-1.8
LKR				S		Sb	07 09 31.1	+0.9
LKR	Lokris	1.30	61	P		Pn	07 09 11.3	-1.8
LKR	Lokris	1.30	61	ePb		Pb	07 09 13.2	-0.1
LKR				S		Sb	07 09 31.1	+0.9
ATAL	Atalanti	1.34	60	P		Pn	07 09 12.1	-1.5
ATAL				S		Sb	07 09 31.6	+0.3
ATAL	Atalanti	1.34	60	P		Pn	07 09 12.1	-1.5
ATAL				S		Sb	07 09 31.6	+0.3
DID	Didima	1.44	111	ePB		Pb	07 09 16.2	+0.6
DID				eSB		Sb	07 09 35.7	+1.5
DID	Didima	1.44	111	P		Pn	07 09 15.3	+0.3
DID				S		Sb	07 09 35.3	+1.1
DID	Didima	1.44	111	P		Pn	07 09 15.3	+0.3
DID	Didima	1.44	111	ePb		Pb	07 09 16.2	+0.6
DID				S		Sb	07 09 35.3	+1.1
DID				eSb		Sb	07 09 35.7	+1.5
NAIG	Nisos Aigina	1.56	99	ePb		Pb	07 09 18.7	+1.0
NAIG	Nisos Aigina	1.56	99	ePB		Pb	07 09 18.7	+1.0
NAIG	Nisos Aigina	1.56	99	ePb		Pb	07 09 18.7	+1.0
THL	Klokotos Trika	1.58	13	ePB		Pb	07 09 18.1	+0.1
THL				eSB		Sb	07 09 40.1	+1.9
THL	Klokotos Trika	1.58	13	P		Pn	07 09 17.5	+0.6
THL	Klokotos Trika	1.58	13	P		Pn	07 09 17.5	+0.6
THL	Klokotos Trika	1.58	13	ePb		Pb	07 09 18.1	+0.1
THL				eSb		Sb	07 09 40.1	+1.9
VLI	Veliai	1.71	139	ePg		Pg	07 09 20.2	-1.0
VLI				eSn		Sn	07 09 44.9	+3.9
VLI	Veliai	1.71	139	ePG		Pg	07 09 20.2	-1.0
VLI				eSN		Sn	07 09 44.9	+3.9
VLI	Veliai	1.71	139	ePg		Pg	07 09 20.2	-1.0
ATH	Athens Observa	1.72	91	ePn		Pg	07 09 21.7	+0.5
ATH	Athens Observa	1.72	91	ePN		Pg	07 09 21.7	+0.5
ATH	Athens Observa	1.72	91	ePn		Pg	07 09 21.7	+0.5
ATHU	Athens Univers	1.77	91	P		Pn	07 09 18.9	-0.7
ATHU				S		Sn	07 09 43.5	+1.1
ATHU	Athens Univers	1.77	91	P		Pn	07 09 18.9	-0.7
ATHU				S		Sn	07 09 43.5	+1.1
VLY	Voula,Athens	1.79	95	ePg		Pg	07 09 22.2	-0.4
VLY				eSn		Sg	07 09 46.4	+0.6
VLY	Voula,Athens	1.79	95	ePG		Pg	07 09 22.2	-0.4
VLY				eSN		Sg	07 09 46.4	+0.6
VLY	Voula,Athens	1.79	95	ePg		Pg	07 09 22.2	-0.4
VLY				eSn		Sg	07 09 46.4	+0.6
NEO	Neokhori	1.83	45	ePn		Pg	07 09 22.2	-1.3
NEO				eSn		Sg	07 09 47.5	+0.3
NEO	Neokhori	1.83	45	ePN		Pg	07 09 22.2	-1.3
NEO				eSN		Sg	07 09 47.5	+0.3
NEO	Neokhori	1.83	45	ePn		Pg	07 09 22.2	-1.3
PTL	Penteli	1.83	89	ePb		Pn	07 09 21.0	+0.6
PTL				eSn		Sg	07 09 47.6	+0.4
PTL	Penteli	1.83	89	ePB		Pn	07 09 21.0	+0.6
PTL				eSN		Sg	07 09 47.6	+0.4
XOR	Xorichti	1.86	43	P		Pn	07 09 21.3	+0.6
XOR	Xorichti	1.86	43	P		Pn	07 09 21.3	+0.6
KYTH	Kithira	2.11	145	ePn		Pb	07 09 26.2	-0.9
KYTH	Kithira	2.11	145	ePN		Pb	07 09 26.2	-0.9
KYTH	Kithira	2.11	145	ePn		Pb	07 09 26.2	-0.9
KEK	Kerkira	2.17	322	P		Pb	07 09 27.2	-0.8
KEK	Kerkira	2.17	322	P		Pb	07 09 27.2	-0.8
LIT	Litokhoron	2.20	19	P		Pn	07 09 25.4	0.0
LIT	Litokhoron	2.20	19	P		Pn	07 09 25.4	0.0
KZN	Kozani	2.28	4	ePn		Pb	07 09 29.7	-0.3
KZN				eSn		Sb	07 09 58.1	-0.4
KZN	Kozani	2.28	4	ePN		Pb	07 09 29.7	-0.3
KZN				eSN		Sb	07 09 58.1	-0.4

*BJI **05** 07:18:58.2,25.00N×109.70W,h5km,mB5.0/2,mb4.6/3*
*NEIC **05** 07:19:00.3±0.6,24.96N×109.73W,h10km,mb4.3/66, Error ellipse: s-maj=7.7km s-min=5.4km az=24.0*
*MEX **05** 07:19:02.2±0.3,25.09N×109.58W,h20km±23km,MD4.3*
*IDC **05** 07:19:03.2±1.0,25.63N×109.63W,h0km,mb4.1/7, mb1 4.3/11,mb1mx4.2/23,mbtmp4.1/11,ML4.0/4,MS3.8/12, Ms1 3.8/12,ms1mx3.6/24, Error ellipse: s-maj=19.7km s-min=17.7km az=40.0*

ISC 05 07:19:01.2±0.4, 25°08N±0°03×109°52W±0°02, h10km, n475, σ1.18/505, mb4.3/29, MS3.9/11, 187C-156D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LPIG	La Paz	1.21

121A Cookes Peak, D 7.58 11 ⇑P Pn 07 20 49.7 -1.9
baz=7.7,SNR=94
121A ⇓S Sn 07 22 11.5 -6.1
baz=7.7
119A Ashpeak Ranch, 7.66 1 ⇓P Pn 07 20 50.4 -2.4
baz=7.7,SNR=11
116A Eloy 7.70 346 ⇓P Pn 07 20 50.4 -2.9
baz=7.7,SNR=170
528A Cox Ranch, San 7.82 48 ⇑P Pn 07 20 54.4 -0.7
baz=8.0,SNR=20
528A ⇑S Sn 07 22 22.4 -1.3
baz=8.0
427A Hayter Ranch, 7.89 42 ⇓P Pn 07 20 55.5 -0.5
baz=8.1,SNR=11
427A ⇑S Sn 07 22 24.8 -0.4
baz=8.1
326A Caldwell Ranch 7.90 37 ⇓P Pn 07 20 55.7 -0.4
baz=8.1,SNR=21
326A ⇑S Sn 07 22 23.1 -2.4
baz=8.1
122A Conniff Cattle 7.90 16 ⇑P Pn 07 20 54.3 -1.8
baz=8.0,SNR=14
SPIG San Pedro Mart 7.93 320 *i*P Pn 07 20 56.0 -0.5
Z18A Geronimo 7.99 357 ⇑P Pn 07 20 55.5 -1.8
baz=8.1,SNR=18
Z18A ⇑S Sn 07 22 22.7 -5.0
baz=8.1
Z20A Nine Sixteen R 8.04 6 ⇓P Pn 07 20 56.2 -1.9
baz=8.1,SNR=44
Z20A ⇑S Sn 07 22 24.6 -4.5
baz=8.1
123A Bell Site, Whi 8.05 20 ⇓S Sn 07 22 25.6 -3.6
baz=8.2
225A Deer Hill, Car 8.12 29 ⇓P Pn 07 20 59.3 +0.1
baz=8.3,SNR=21
225A ⇑S Sn 07 22 28.8 -2.4
baz=8.3
Z19A T-Link Ranch, 8.18 1 ⇑P Pn 07 20 58.4 -1.6
baz=8.3
Z19A ⇑S Sn 07 22 26.6 -5.9
baz=8.3
114A Black Gap (USA 8.19 340 ⇓P Pn 07 20 57.7 -2.4
baz=8.2,SNR=16
327A Balmorhea Ranc 8.21 39 ⇑P Pn 07 21 01.4 +1.0
baz=8.4
Z17A San Carlos Hig 8.23 354 ⇑P Pn 07 20 58.2 -2.4
baz=8.3,SNR=31
428A Kincaid Ranch, 8.25 46 ⇑P Pn 07 21 00.8 -0.1
baz=8.4,SNR=11
Z21A St. Cloud Mine 8.35 11 ⇑P Pn 07 21 02.7 +0.3
baz=8.5
124A Stringfield Ra 8.38 24 ⇓P Pn 07 21 03.2 +0.5
baz=8.5
124A ⇓S Sn 07 22 32.5 -4.9
baz=8.5
Z16A Peralta Trail, 8.40 349 ⇑P Pn 07 21 01.0 -1.9
baz=8.4,SNR=22
GDL2 Guadalupe Moun 8.41 31 *e*Pn Pn 07 21 03.8 +0.7
GDL2 *e*Sn Sn 07 22 38.5 +0.4
226A Malaga, Loving 8.43 33 ⇓P Pn 07 21 03.3 -0.1
baz=8.6
226A ⇓S Sn 07 22 36.3 -2.2
baz=8.6
Z22A Elephant Butte 8.44 15 ⇑P Pn 07 21 02.2 -1.3
baz=8.6,SNR=76
Z22A ⇑S Sn 07 22 32.6 -6.3
baz=8.6
Z15A Gila River Ind 8.50 345 ⇑P Pn 07 21 02.0 -2.3
baz=8.5,SNR=5.7
328A Wristen Ranch, 8.62 42 ⇓P Pn 07 21 06.5 +0.5
baz=8.8
Z23A Rita Site, Whi 8.64 19 ⇓P Pn 07 21 06.1 -0.1
baz=8.8,SNR=27
Z23A ⇑S Sn 07 22 39.9 -3.9
baz=8.8
Y17A Roosevelt 8.66 353 P Pn 07 21 04.4 -2.1
baz=8.7,SNR=41
CLNB Carlsbad 8.70 33 *e*Pn Pn 07 21 08.8 +1.8
2.0nm,0.3s
Z14A Wintersburg 8.78 341 ⇑P Pn 07 21 06.0 -2.2
baz=8.8
Y19A Nutrioso 8.85 1 ⇓P Pn 07 21 08.3 -0.8
baz=8.9,SNR=28
Y20A Horse Springs, 8.85 6 ⇓P Pn 07 21 08.1 -1.1
baz=9.0,SNR=14
Y20A ⇓S Sn 07 22 44.1 -4.9
baz=9.0
Z13A Yuma Proving G 8.86 337 ⇓P Pn 07 21 06.9 -2.4
baz=8.9,SNR=29
Y16A Circle Bar Ran 8.93 349 ⇑P Pn 07 21 08.8 -1.5
baz=9.0,SNR=33
Z24A Sheeppen Canyo 8.98 23 ⇓P Pn 07 21 11.2 +0.2
baz=9.1,SNR=23
Z24A ⇑S Sn 07 22 48.2 -4.0
baz=9.1
Y21A Point of Rocks 9.04 10 ⇑P Pn 07 21 11.7 0.0
baz=9.2,SNR=50
Y22A Socorro 9.10 14 ⇓P Pn 07 21 12.2 -0.4
baz=9.2,SNR=20
Y15A Casa Rosa Ranc 9.17 345 ⇑P Pn 07 21 11.8 -1.8
baz=9.2,SNR=27
Z25A Roswell 9.18 26 ⇓P Pn 07 21 14.7 +1.0
baz=9.3,SNR=8.9
GLA Glamis 9.20 331 ⇓P Pn 07 21 11.2 -2.7
baz=9.2,SNR=13
GLA Glamis 9.20 331 *e*Pn Pn 07 21 11.3 -2.6
X17A Forest Lakes 9.29 353 ⇑P Pn 07 21 13.4 -1.8
baz=9.3,SNR=53
X19A St. Johns 9.31 1 ⇑P Pn 07 21 14.2 -1.3
baz=9.4,SNR=18
LENM Lemitar 9.32 13 *e*Pn Pn 07 21 17.4 +1.8
Y23A Lovelace Mesa, 9.32 18 ⇓P Pn 07 21 15.1 -0.4
baz=9.5,SNR=24
Y14A Wickenburg 9.33 342 ⇑P Pn 07 21 13.9 -1.9
baz=9.3,SNR=58
BNM Barren Site 9.38 15 *e*Pn Pn 07 21 18.5 +2.1
4.6nm,0.3s
X18A Snowflake 9.42 358 ⇑P Pn 07 21 15.2 -1.8
baz=9.5,SNR=27
X21A Alamocita Cree 9.45 9 P Pn 07 21 17.2 -0.2
baz=9.6,SNR=36
X16A Lo Mia Camp, P 9.45 350 ⇑P Pn 07 21 16.8 -0.6
baz=9.5,SNR=86
X20A Quemado 9.47 5 ⇑P Pn 07 21 17.8 +0.2
baz=9.6,SNR=18
Z26A Caprock 9.48 29 ⇓P Pn 07 21 17.9 +0.1
baz=9.6
DVTC Desert V Tower 9.50 324 ⇓P Pn 07 21 17.8 -0.3
baz=9.4
Y24A Capitan 9.50 21 ⇓P Pn 07 21 18.2 +0.2
baz=9.6,SNR=13
Y24A ⇓S Sn 07 23 00.7 -4.2
baz=9.6
LAZ Ladron 9.51 12 *e*Pn Pn 07 21 20.3 +2.0
41nm,1.0s
LPM Los Pinos Moun 9.53 15 *e*Pn Pn 07 21 21.0 +2.5
SWSC Sam W. Stewart 9.56 326 ⇑P Pn 07 21 18.8 -0.1
baz=9.5,SNR=6.5
X15A Humboldt 9.66 346 ⇑P Pn 07 21 19.3 -1.0
baz=9.7,SNR=43
Y25A Mesa, Roswell 9.76 24 ⇑P Pn 07 21 22.6 +1.0
baz=9.9
X14A Yava 9.80 343 ⇓P Pn 07 21 21.1 -1.1
baz=9.8,SNR=24
BAR Barrett 9.83 322 *e*Pn Pn 07 21 22.1 -0.4
MONP Monument Peak 9.85 324 ⇑P Pn 07 21 22.8 0.0
baz=9.8,SNR=12
BC3 Big Chuckawall 9.99 330 ⇓P Pn 07 21 24.6 -0.1
baz=10.0
W19A Sanders 10.00 1 ⇓P Pn 07 21 25.4 +0.6
baz=10
W18A Petrified Fore 10.00 359 ⇑P Pn 07 21 26.9 +1.9
baz=10,SNR=16
W20A Ramah 10.05 5 ⇑P Pn 07 21 26.9 +1.4
baz=10,SNR=27
X24A Lazy VL Ranch, 10.09 20 ⇓P Pn 07 21 27.6 +1.4
baz=10
W16A Flagstaff 10.13 351 ⇓P Pn 07 21 27.3 +0.6
baz=10,SNR=12
W21A San Fidel 10.13 9 ⇓P Pn 07 21 26.6 -0.1
baz=10,SNR=11
JCT Junction City 10.14 56 *e*Pn Pn 07 21 29.9 +3.1
10nm,0.7s
ANMO Albuquerque 10.18 14 *e*Pn Pn 07 21 28.4 +1.0
ANMO Albuquerque 10.18 14 Pn Pn 07 21 26.9 -0.5
0.2nm,0.3s,baz=203,slow=12,SNR=40
ANMO Sn Sn 07 23 17.9 -3.8
0.2nm,0.3s,baz=184,slow=19,SNR=3.6

ANMO Lg 07 24 15.3
0.3nm,0.3s,baz=95,slow=16,SNR=5.7
X13A Yucca 10.19 339 ⇓P Pn 07 21 26.0 -1.5
baz=10,SNR=20
IRM Iron Mountain 10.29 333 ⇓P Pn 07 21 26.5 -2.3
baz=10,SNR=16
W15A Williams 10.34 347 ⇓P Pn 07 21 29.8 +0.3
baz=10,SNR=40
Y27A Causey 10.37 31 ⇑P Pn 07 21 30.7 +0.7
baz=10
PFO Pinyon Flat Ob 10.43 326 ⇑P Pn 07 21 31.2 +0.5
baz=10,SNR=8.8
PFO Pinyon Flat Ob 10.43 326 *e*Pn Pn 07 21 31.6 +0.9
W23A Werner Place, 10.46 15 ⇓P Pn 07 21 31.9 +0.8
baz=11,SNR=26
WUAZ Wupatki 10.52 352 ⇓P Pn 07 21 31.5 -0.6
baz=11,SNR=17
WUAZ Wupatki 10.52 352 *e*Pn Pn 07 21 33.4 +1.4
28nm,1.0s
BELC Belle Mtn. Jos 10.52 329 ⇓P Pn 07 21 32.1 0.0
baz=10
W14A Seligman 10.56 344 P Pn 07 21 32.4 -0.1
baz=11,SNR=85
V17A Tonalea, Kykot 10.56 354 ⇑P Pn 07 21 32.7 +0.1
baz=11,SNR=23
V18A Ganado 10.60 358 ⇑P Pn 07 21 33.6 +0.5
baz=11,SNR=17
V19A Window Rock 10.61 2 ⇑P Pn 07 21 33.7 +0.5
baz=11,SNR=7.8
MSTX Muleshoe 10.62 32 ⇓P Pn 07 21 33.9 +0.5
baz=11
W13A Hualapai Mount 10.67 340 ⇓P Pn 07 21 32.9 -1.2
baz=11,SNR=27
W24A Lazy 6 Ranch, 10.70 18 ⇑P Pn 07 21 35.2 +0.8
baz=11,SNR=19
V20A Brimhall 10.72 5 ⇑P Pn 07 21 35.8 +1.1
baz=11,SNR=13
V21A Milan 10.81 8 ⇓P Pn 07 21 37.5 +1.6
baz=11,SNR=6.9
MURC Murrieta 10.81 323 ⇑P Pn 07 21 35.1 -0.9
baz=11
V15A Kaibab Nationa 10.94 349 ⇑P Pn 07 21 38.3 +0.4
baz=11,SNR=38
V14A Boquillas Ranc 10.96 344 ⇓P Pn 07 21 38.2 +0.1
baz=11,SNR=42
V23A Ortiz Mt. (NFS 11.01 14 ⇑P Pn 07 21 40.3 +1.6
baz=11,SNR=14
GMRC Granite Mounta 11.03 333 ⇓P Pn 07 21 38.6 -0.4
baz=11,SNR=7.6
U16A Tuba City 11.11 353 ⇓P Pn 07 21 42.2 +2.1
baz=11,SNR=53
W26A Owens Ranch, T 11.14 25 ⇑P Pn 07 21 42.4 +1.8
baz=11
U19A Dine' College, 11.18 1 ⇑P Pn 07 21 42.2 +1.2
baz=11,SNR=26
BBRC Big Bear Solar 11.18 327 ⇓P Pn 07 21 42.5 +1.4
baz=11,SNR=6.2
W12A Cal Nev Ari 11.19 337 ⇓P Pn 07 21 40.9 -0.2
baz=11
V24A Rampart Ranch, 11.22 18 ⇓P Pn 07 21 43.5 +1.9
baz=11,SNR=11
U20A Newcomb 11.29 4 ⇑P Pn 07 21 43.4 +0.9
baz=11,SNR=6.3
U18A Rough Rock, Ch 11.30 359 ⇑P Pn 07 21 43.1 +0.4
baz=11,SNR=10
V13A Grand Canyon W 11.40 341 ⇓P Pn 07 21 44.1 0.0
baz=11,SNR=31
W27A Bowe Ranch, En 11.41 28 ⇑P Pn 07 21 45.6 +1.5
baz=12
U21A Nageezi 11.42 8 ⇑P Pn 07 21 46.2 +1.9
baz=12,SNR=25
U22A Llaves 11.49 11 ⇓P Pn 07 21 47.2 +2.0
baz=12,SNR=9.7
V25A Rancho No Teng 11.52 20 ⇓P Pn 07 21 47.8 +2.1
baz=12,SNR=5.9
U15A North Rim 11.56 349 ⇓P Pn 07 21 47.0 +0.8
baz=12,SNR=39
V12A Nelson 11.56 338 ⇑P Pn 07 21 46.8 +0.5
baz=12,SNR=13
U23A El Rito 11.57 14 ⇑P Pn 07 21 48.1 +1.8
baz=12,SNR=21
TUQ Turquoise Moun 11.71 333 ⇓P Pn 07 21 48.3 +0.1
baz=12,SNR=14
T19A Beclabito 11.72 2 ⇓P Pn 07 21 49.4 +1.0
baz=12,SNR=25
U14A Mt Trumbull 11.73 345 ⇑P Pn 07 21 48.8 +0.2
baz=12,SNR=54
V11A Goodsprings 11.87 336 ⇓P Pn 07 21 51.7 +1.2
baz=12,SNR=12
T17A Navajo Res., N 11.93 355 ⇑P Pn 07 21 52.8 +1.5
baz=12,SNR=24
GSC Goldstone 11.97 330 ⇓P Pn 07 21 52.6 +0.7
baz=12
GSC Goldstone 11.97 330 *e*Pn Pn 07 21 53.7 +1.8
T16A Glen Canyon Da 11.99 352 ⇑P Pn 07 21 54.2 +2.1
baz=12,SNR=6.7
T21A Navajo Lake 11.99 8 ⇓P Pn 07 21 52.7 +0.5
baz=12
T18A Mexican Hat 12.02 359 ⇑P Pn 07 21 53.1 +0.6
baz=12,SNR=25
T22A Edith 12.10 10 ⇑P Pn 07 21 55.4 +1.8
baz=12,SNR=12
U25A Circle Dot Ran 12.10 20 ⇓P Pn 07 21 56.1 +2.5
baz=12,SNR=25
U12A Valley of Fire 12.11 340 ⇓P Pn 07 21 53.8 +0.1
baz=12,SNR=23
MVCO Mesa Verde 12.12 4 ⇓P Pn 07 21 54.5 +0.6
baz=12,SNR=15
MVCO Mesa Verde 12.12 4 *e*Pn Pn 07 21 55.0 +1.1
47nm,1.1s
T15A Red Dirt Ranch 12.15 349 ⇑P Pn 07 21 55.9 +1.6
baz=12,SNR=38
EDW2 Edwards Air Fo 12.21 325 ⇑P Pn 07 21 55.2 0.0
baz=12,SNR=8.1
SHOC Shoshone 12.25 333 ⇑P Pn 07 21 55.9 +0.2
baz=12
T23A Casias Ranch, 12.28 13 ⇑P Pn 07 21 58.5 +2.4
baz=12,SNR=8.1
U26A Atchley Ranch, 12.32 22 ⇓P Pn 07 21 59.2 +2.6
baz=12,SNR=7.6
T14A Hurricane 12.32 347 ⇑P Pn 07 21 57.3 +0.6
baz=12,SNR=55
U11A Corn Creek 12.37 337 ⇑P Pn 07 21 59.1 +1.7
baz=12
T12A Moapa 12.43 340 ⇑P Pn 07 21 58.5 +0.3
baz=12
T13A Saint George 12.48 344 ⇓P Pn 07 21 59.5 +0.7
baz=12,SNR=54
LRMC Laurel Mountai 12.53 328 ⇑P Pn 07 22 00.3 +0.8
baz=12
S17A Black Ridge (B 12.56 355 ⇑P Pn 07 22 00.2 +0.3
baz=13
S18A Hurst Farm, Bl 12.58 358 ⇓P Pn 07 22 01.0 +0.8
baz=13,SNR=24
S19A Harvey Farm, M 12.63 1 ⇑P Pn 07 22 00.8 0.0
baz=13,SNR=12
U10A Ash Meadows, A 12.72 334 ⇓P Pn 07 22 03.1 +0.9
baz=13,SNR=19
S16A Weppner Ranch, 12.72 352 ⇓P Pn 07 22 04.5 +2.3
baz=13,SNR=21
T25A Trinidad 12.79 19 ⇑P Pn 07 22 05.1 +2.1
baz=13
S15A Panguitch 12.79 350 ⇑P Pn 07 22 05.3 +2.2
baz=13,SNR=11
S22A 4UR Ranch, Cre 12.83 10 ⇓P Pn 07 22 04.2 +0.6
baz=13
ARVC Arvin 12.85 323 ⇑P Pn 07 22 03.7 -0.1
baz=13,SNR=5.8
CCUT Cedar City 12.86 346 *e*Pn Pn 07 22 06.5 +2.5
MPMC Manual Prospec 12.91 330 ⇓P Pn 07 22 05.2 +0.5
baz=13,SNR=21
FURC Furnace Creek, 12.98 333 ⇑P Pn 07 22 06.0 +0.3
baz=13
S13A Holt Ranch, En 13.00 344 ⇑P Pn 07 22 07.2 +1.3
baz=13,SNR=15
S14A Cedar City 13.02 347 ⇑P Pn 07 22 08.0 +1.9
baz=13,SNR=11
PV01 Paradox Valley 13.04 3 *e*Pn Pn 07 22 08.2 +1.8
832nm,1.1s
T11A Corn Creek, Al 13.06 339 ⇑P Pn 07 22 07.0 +0.2
baz=13,SNR=13
ISA Isabella 13.07 326 ⇓P Pn 07 22 06.8 0.0
baz=13,SNR=7.7
ISA Isabella 13.07 326 *e*Pn Pn 07 22 07.1 +0.2
SDCO Great Sand Dun 13.08 14 *e*Pn Pn 07 22 09.8 +2.8
ARUT Antelope Range 13.10 346 *e*Pn Pn 07 22 09.5 +2.2
10nm,0.7s
R20A Redvale 13.10 4 ⇑P Pn 07 22 08.0 +0.7
baz=13,SNR=20
S25A Robets Cordova 13.27 18 ⇓P Pn 07 22 10.5 +1.0
baz=13
R16A Teasdale 13.27 353 ⇓P Pn 07 22 11.0 +1.5
baz=13,SNR=12
R18A Canyonlands Na 13.27 359 ⇓P Pn 07 22 10.1 +0.5
baz=13,SNR=31
PV04 Paradox Valley 13.28 2 *e*Pn Pn 07 22 09.6 -0.2
S12A Delamar Landin 13.29 341 ⇑P Pn 07 22 11.1 +1.3
baz=13,SNR=21
R15A Junction 13.30 351 ⇓P Pn 07 22 12.2 +2.2
baz=13,SNR=12
R22A Saguache, Gunn 13.31 9 ⇓P Pn 07 22 11.4 +1.2
baz=13
R17A Hanksville Air 13.34 356 ⇓P Pn 07 22 11.6 +1.1
baz=13,SNR=40
R21A Cimarron 13.35 7 ⇑P Pn 07 22 11.4 +0.7
baz=14
WMOK Wichita Mounta 13.38 42 *e*Pn Pn 07 22 10.0 -1.1
5.7nm,0.8s
CWC Cottonwood Cre 13.49 329 ⇓P Pn 07 22 13.6 +0.9
baz=14
VES Vestal, Richgr 13.52 325 ⇓P Pn 07 22 12.2 -0.9
baz=14
MSU Marysvale 13.58 351 *e*Pn Pn 07 22 17.2 +3.3
R13A O'Grain Ranch, 13.60 345 ⇓P Pn 07 22 15.9 +1.8
baz=14,SNR=14
S11A Rachel 13.60 339 ⇓P Pn 07 22 15.4 +1.3
baz=14,SNR=8.4
SMMC Simmler 13.63 321 ⇑P Pn 07 22 14.6 0.0
baz=14
R24A Sanders Place, 13.63 15 ⇓P Pn 07 22 15.5 +0.9
baz=14
GRAC Grapevine Rang 13.65 332 ⇑P Pn 07 22 15.6 +0.9
baz=14,SNR=7.0
Q19A Hogan Spring (13.83 1 ⇑P Pn 07 22 17.5 +0.2
baz=14
Q16A Castle Valley 13.87 355 ⇑P Pn 07 22 18.8 +1.1
baz=14,SNR=14
Q20A Ridgley Place, 13.87 4 ⇑P Pn 07 22 17.9 +0.1
baz=14,SNR=7.5
R12A Pony Springs, 13.89 343 ⇑P Pn 07 22 19.2 +1.1
baz=14,SNR=30
Q22A Crested Butte, 13.91 8 ⇑P Pn 07 22 17.4 -1.0
baz=14
RCTC Rector, Farmer 13.96 326 ⇑P Pn 07 22 18.4 -0.6
baz=14
Q18A Rafter H Ranch 13.99 358 ⇓P Pn 07 22 19.7 +0.3
baz=14,SNR=10
SRU San Rafael 14.01 357 ⇓P Pn 07 22 19.6 -0.1
baz=14
SRU San Rafael 14.01 357 *e*Pn Pn 07 22 20.9 +1.1
TIN Tinemaha 14.07 330 ⇑P Pn 07 22 21.4 +0.9
baz=14
Q23A Hartsel 14.13 12 ⇓P Pn 07 22 22.3 +1.0
baz=14
S10A Tonopah Range, 14.15 336 ⇑P Pn 07 22 21.7 +0.2
baz=14,SNR=37
R11A Troy Canyon, C 14.19 340 ⇓P Pn 07 22 23.0 +0.8
baz=14,SNR=18
SMCO Snowmass 14.22 8 *e*Pn Pn 07 22 26.1 +3.5
Q14A Sevier Lake (B 14.22 348 ⇑P Pn 07 22 23.2 +0.6
baz=14
TMUT Trail Mountain 14.24 355 *e*Pn Pn 07 22 24.6 +1.7
17nm,1.1s
Q13A Wheeler Ranch, 14.35 346 ⇑P Pn 07 22 26.0 +1.7
baz=14,SNR=22
R10A Warm Springs 14.37 338 ⇑P Pn 07 22 25.7 +1.1
baz=14,SNR=24
P17A Butcher Ranch, 14.39 356 ⇑P Pn 07 22 24.7 -0.1
baz=14
P20A De Beque 14.41 4 ⇑P Pn 07 22 25.1 -0.1
baz=14
MTUM Tungsten Hills 14.46 330 *e*Pn Pn 07 22 26.8 +0.9
P21A Newcastle 14.51 6 ⇑P Pn 07 22 26.5 0.0
baz=15
P19A Cripple Cowboy 14.52 2 ⇑P Pn 07 22 26.9 +0.3
baz=15,SNR=7.7
P23A Jefferson 14.58 11 ⇑P Pn 07 22 27.9 +0.4
baz=15
P16A Fountain Green 14.60 353 ⇓P Pn 07 22 28.2 +0.5
baz=15
Q12A Willow Creek R 14.62 343 ⇑P Pn 07 22 29.4 +1.3
baz=15,SNR=31
Q11A Duckwater 14.67 341 ⇑P Pn 07 22 29.4 +0.7
baz=15,SNR=12
P14A Drum Mountains 14.77 349 ⇑P Pn 07 22 31.0 +0.9
baz=15,SNR=37
P13A Bates Ranch, G 14.82 346 ⇑P Pn 07 22 31.5 +0.6
baz=15,SNR=13
Q10A Clear Creek Ra 14.89 339 ⇑P Pn 07 22 32.1 +0.5
baz=15,SNR=17
MPU Maple Canyon 15.00 354 *e*P Pn 07 22 39.5 +6.3
18nm,1.0s
ISCO Idaho Springs 15.04 12 *e*P Pn 07 22 35.4 +1.6
7.6nm,0.9s
O20A White River Ci 15.05 4 ⇑P Pn 07 22 34.7 +0.9
baz=15,SNR=23
P12A McGill 15.05 344 ⇑P Pn 07 22 34.5 +0.7
baz=15,SNR=10
O17A Robinson Place 15.11 356 ⇓P Pn 07 22 35.1 +0.5
baz=15,SNR=7.9
O19A Miners Draw (B 15.18 1 P Pn 07 22 36.1 +0.5
baz=15,SNR=18
O22A Kremmling 15.24 9 ⇓P Pn 07 22 37.5 +1.1
baz=15,SNR=18
NVAR Mina Array Bea 15.25 333 Pn Pn 07 22 35.6 -0.9
0.1nm,0.3s,baz=146,slow=12,SNR=44
DUG Dugway 15.32 350 ⇓P Pn 07 22 38.0 +0.6
baz=15,SNR=29
DUG Dugway 15.32 350 *e*P Pn 07 22 38.2 +0.7
33nm,1.1s
P11A Circle Ranch, 15.35 342 ⇓P Pn 07 22 38.9 +1.0
baz=15
DAU Daniels Canyon 15.36 355 *e*P Pn 07 22 39.4 +1.4
O23A Lake Granby, G 15.38 10 ⇑P Pn 07 22 39.8 +1.5
baz=16,SNR=22
JLU Jordanelle 15.56 355 *e*P Pn 07 22 41.4 +0.8
28nm,1.4s
CTU Camp Tracy 15.68 354 *e*P Pn 07 22 46.3 +4.2
22nm,1.1s
N21A Black Mountain 15.72 6 ⇓P Pn 07 22 43.6 +0.9
baz=16,SNR=17
N20A Spence Gulch, 15.74 4 ⇑P Pn 07 22 43.8 +0.8
baz=16,SNR=23
O12A Currie 15.76 345 ⇓P Pn 07 22 43.4 +0.2
baz=16,SNR=24
N19A John Jarvie Ra 15.77 1 ⇑P Pn 07 22 44.3 +1.0
baz=16
CMIG Matias Romero 15.79 117 Pn Pn 07 22 49.9 +6.2
0.3nm,0.3s,baz=293,slow=9.8,SNR=9.1
WAKR Walker 15.80 330 *e*Pn Pn 07 22 44.5 +0.8
N16A Rees Ranch, Co 15.84 355 ⇑P Pn 07 22 45.5 +1.2
baz=16
N18A Larsen Ranch, 15.85 360 ⇑P Pn 07 22 44.1 -0.2
baz=16
N17A Moffit Pass 15.86 356 ⇑P Pn 07 22 44.6 +0.2
baz=16
O11A Cowboy Ranch, 15.87 343 ⇑P Pn 07 22 44.8 +0.2
baz=16
CMB Columbia Colle 15.88 327 *e*P Pn 07 22 43.8 -0.9
14nm,1.3s
N22A Wattenberg Ran 15.88 9 ⇑P Pn 07 22 45.7 +1.0
baz=16,SNR=17
N15A Stansbury Isla 15.96 352 ⇑P Pn 07 22 46.2 +0.4
baz=16,SNR=5.6
N14A Grayback Hills 16.02 350 P Pn 07 22 47.4 +0.8
baz=16,SNR=49
N23A Red Feather La 16.05 10 ⇓P Pn 07 22 47.9 +1.0
baz=16
BGU Big Grassy Mou 16.07 350 *e*P Pn 07 22 47.8 +0.6
16nm,1.2s
N13A Wendover, West 16.21 347 ⇑P Pn 07 22 49.5 +0.6
baz=16
N13A Wendover, West 16.21 347 *e*P Pn 07 22 49.5 +0.5
32nm,1.2s
O10A Cortez Mining, 16.26 341 ⇑P Pn 07 22 50.0 +0.4
baz=16,SNR=7.4
SPUT South Promonto 16.37 352 *e*P Pn 07 22 51.9 +0.9
25nm,1.3s
N12A Clover Valley, 16.39 345 ⇑P Pn 07 22 51.5 +0.2
baz=16,SNR=18
N12A Clover Valley, 16.39 345 *e*P Pn 07 22 51.8 +0.6
40nm,1.2s
M15A Larsen Ranch, 16.52 352 ⇑P Pn 07 22 52.7 -0.2
baz=17,SNR=33
PHWY Pilot Hill 16.52 11 *e*P Pn 07 22 54.2 +1.3
6.6nm,1.1s

N11A	Elko Archery C baz=17,SNR=14	16.53	343	⇓P		Pn	07 22 53.0	-0.1
HWUT	Hardware Ranch 26nm,1.1s	16.57	355	*e*P		Pn	07 22 54.1	+0.6
M21A	Separation Pea baz=17,SNR=8.7	16.58	6	⇑P		Pn	07 22 55.3	+1.7
WCN	Washoe City baz=17,SNR=24	16.60	331	⇑P		Pn	07 22 54.3	+0.4
BMN	Battle Mountai 22nm,1.0s	16.61	339	*e*P		Pn	07 22 54.0	-0.1
RWWY	Rawlins 15nm,1.1s	16.67	6	*e*P		Pn	07 22 56.9	+2.1
M14A	Sheep Mountain baz=17,SNR=19	16.68	350	⇓P		Pn	07 22 55.1	+0.1
M13A	Montello baz=17	16.69	348	⇑P		Pn	07 22 55.0	-0.1
M13A	Montello 51nm,1.8s	16.69	348	*e*P		Pn	07 22 55.4	+0.3
MIAR	Mount Ida 11nm,1.0s	16.73	52	*e*P		Pn	07 22 58.6	+3.0
PAHR	Pah Rah Range 161nm,2.4s	16.78	333	*e*Pn		Pn	07 22 56.9	+0.7
L18A	Fontenelle, Gr baz=17	16.80	359	⇑P		Pn	07 22 56.2	-0.4
HVU	Hansel Valley 22nm,1.1s	16.87	352	*e*P		Pn	07 22 58.0	+0.6
M12A	Wells baz=17,SNR=12	16.90	346	⇑P		Pn	07 22 57.8	+0.1
L20A	Wamsutter baz=17	16.91	3	⇓P		Pn	07 22 57.7	-0.1
L21A	Rawlins baz=17	16.93	6	⇓P		Pn	07 22 58.2	0.0
L16A	Fish Haven baz=17	16.96	355	⇓P		Pn	07 22 58.2	-0.4
L19A	Farson baz=17,SNR=20	16.98	0	⇑P		Pn	07 22 58.6	0.0
L17A	Cokeville baz=17,SNR=12	17.01	357	⇑P		Pn	07 22 59.6	+0.4
L15A	Malad City baz=17,SNR=9.5	17.04	353	⇑P		Pn	07 22 59.8	+0.2
L22A	Ellis Ranch, M baz=17	17.10	8	⇓P		Pn	07 23 01.0	+0.8
M11A	Holland Ranch, baz=17,SNR=8.2	17.12	344	⇑P		Pn	07 23 00.9	+0.4
L14A	Malta baz=17	17.19	351	⇓P		Pn	07 23 00.9	-0.5
L13A	Double Diamond baz=17,SNR=11	17.35	349	⇓P		Pn	07 23 03.8	+0.4
K18A	Toltan Ranch, baz=18,SNR=8.0	17.52	359	⇑P		Pn	07 23 05.3	-0.2
K20A	Yellowstone Ra baz=18,SNR=11	17.56	3	⇓P		Pn	07 23 05.3	-0.6
L12A	House Creek Ra baz=18	17.62	346	⇑P		Pn	07 23 06.4	-0.3
BW06	Boulder Array baz=18,SNR=28	17.64	360	⇑P		Pn	07 23 06.3	-0.7
BW06	Boulder Array 23nm,1.2s	17.64	360	*e*P		Pn	07 23 06.2	-0.7
K17A	Gardner Place, baz=18	17.66	357	⇓P		Pn	07 23 06.7	-0.5
K14A	Jones Ranch, D baz=18,SNR=32	17.68	351	⇓P		Pn	07 23 08.1	+0.6
AHID	Auburn Hatcher 10nm,0.7s	17.69	356	*e*P		Pn	07 23 07.7	+0.2
K19A	Absolon Red Bu baz=18,SNR=12	17.71	2	⇑P		Pn	07 23 06.8	-1.0
KSU1	Kansas State U 14nm,0.9s	17.72	35	*e*P		Pn	07 23 09.2	+1.2
UALR	University of 18nm,1.0s	17.72	53	*e*P		Pn	07 23 12.5	+4.4
K15A	Arbon baz=18,SNR=17	17.73	353	⇓P		Pn	07 23 08.8	+0.7
K16A	Soda Springs baz=18	17.79	355	⇑P		Pn	07 23 09.0	+0.2
L11A	Cat Creek Ranc baz=18,SNR=18	17.80	345	⇓P		Pn	07 23 09.7	+0.7
L10A	Juniper Basin baz=18,SNR=7.0	17.90	343	⇑P		Pn	07 23 10.9	+0.7
K13A	Stover Farm, H baz=18,SNR=32	17.92	349	⇓P		Pn	07 23 11.3	+0.8
J18A	Kendall Valley baz=18	18.09	359	⇓P		Pn	07 23 12.3	-0.2
J16A	Bone baz=18,SNR=11	18.23	355	⇑P		Pn	07 23 14.5	+0.3
J17A	Brown Place, J baz=18	18.26	357	⇓P		Pn	07 23 14.0	-0.6
REDW	Red Top Meadow 17nm,1.3s	18.27	357	*e*P		Pn	07 23 14.2	-0.5
RRI2	Red Ridge 12nm,1.3s	18.28	356	*e*P		Pn	07 23 15.1	+0.2
SNOW	Snow King Moun 16nm,1.2s	18.36	357	*e*P		Pn	07 23 15.9	+0.1
TPAW	Teton Pass 28nm,1.5s	18.40	357	*e*P		Pn	07 23 16.6	+0.3
J15A	Blackfoot baz=18,SNR=6.4	18.43	353	⇑P		Pn	07 23 17.0	+0.3
J14A	Carey baz=18,SNR=27	18.49	351	⇓P		Pn	07 23 17.7	+0.3
LOHW	Long Hollow 32nm,1.7s	18.51	358	*e*P		Pn	07 23 17.6	-0.1
DCID1	Drake Creek 43nm,1.4s	18.52	356	*e*P		Pn	07 23 18.5	+0.7
I18A	Diamond G Ranc baz=19,SNR=18	18.58	359	⇑P		Pn	07 23 18.2	-0.2
MOOW	Moose Ponds 26nm,1.6s	18.65	357	*e*P		Pn	07 23 19.0	-0.4
J13A	Cove Ranch, Pi baz=19,SNR=22	18.67	349	⇑P		Pn	07 23 19.4	-0.1
IMW	Indian Meadow 37nm,1.6s	18.81	357	*e*P		Pn	07 23 21.3	+0.1
I17A	Pilgrim Ck. baz=19	18.81	358	⇓P		Pn	07 23 21.1	-0.2
I16A	Newdale baz=19	18.82	356	⇑P		Pn	07 23 19.5	-1.9
HLID	Hailey baz=19,SNR=13	18.87	349	⇑P		Pn	07 23 20.8	-1.2
HLID	Hailey 22nm,1.6s	18.87	349	*e*P		Pn	07 23 21.6	-0.4
WVOR	Wild Horse Val 26nm,1.2s	18.87	339	*e*P		Pn	07 23 21.4	-0.7
WDC	Whiskeytown Da 26nm,1.8s	18.90	328	*e*P		Pn	07 23 20.3	-2.2
FLWY	Flagg Ranch 191nm,2.9s	18.98	357	*e*P		Pn	07 23 23.5	+0.1
MFID	Camas Ranch baz=19,SNR=16	19.01	346	⇓P		Pn	07 23 22.2	-1.5
MOD	Modoc 76nm,1.8s	19.01	335	*e*P		Pn	07 23 23.2	-0.5
I13A	Wildhorse Cree baz=19,SNR=14	19.16	350	⇓P		Pn	07 23 25.2	-0.3
I12A	Atlanta baz=19,SNR=10	19.22	348	⇓P		Pn	07 23 25.5	-0.8
H17A	Grant Village baz=19	19.29	358	⇓P		Pn	07 23 26.8	-0.3
HBAR	Harrisburg	19.31	53	*e*P		Pn	07 23 29.6	+2.3
LKWY	Lake 12nm,1.0s	19.45	358	*e*P		Pn	07 23 31.5	+2.5
RSSD	Black Hills 2.0nm,0.8s	19.51	12	*e*P		Pn	07 23 28.9	-0.8
H16A	Russell Place, baz=20,SNR=15	19.63	356	⇓P		Pn	07 23 30.3	-0.8
H15A	Lima baz=20,SNR=18	19.66	353	P		Pn	07 23 31.2	-0.2
J08A	Circle Bar Ran baz=20	19.66	340	⇑P		Pn	07 23 30.0	-1.5
H14A	Leadore baz=20,SNR=26	19.74	352	⇑P		Pn	07 23 31.8	-0.6
H13A	Challis baz=20,SNR=27	19.82	350	⇑P		Pn	07 23 32.4	-0.9
MCMT	McKenzie Canyo 5.3nm,0.8s	19.89	353	*e*P		Pn	07 23 34.2	+0.1
YBH	Yreka Blue Hor 0.1nm,0.3s,baz=229,slow=4.1,SNR=4.5	19.89	330	P		Pn	07 23 29.7	-4.5
YBH	comp=Z,106nm,19.9s,baz=328,slow=36			LR		LR	07 30 39.6	
H12A	Diamond D Ranc baz=20,SNR=15	19.90	349	⇓P		Pn	07 23 33.1	-1.3
K05A	Summer Lake baz=20,SNR=7.9	19.94	335	⇓P		Pn	07 23 33.3	-1.6
RLMT	Red Lodge baz=20,SNR=7.6	20.00	1	⇑P		Pn	07 23 34.4	-1.0
RLMT	Red Lodge 28nm,1.6s	20.00	1	*e*P		Pn	07 23 34.8	-0.7
G15A	Dillon baz=20,SNR=18	20.18	354	⇓P		P	07 23 36.3	+0.5
TEIG	Tepich 22nm,1.0s	20.18	100	*e*P		P	07 23 39.2	+3.2
G16A	Moss Hill, Enn baz=20,SNR=36	20.19	355	⇑P		P	07 23 37.0	+1.2
G18A	Lazy EL Ranch, baz=20,SNR=17	20.19	360	⇑P		P	07 23 36.1	+0.3
CCM	Cathedral Cave 10nm,1.0s	20.19	46	*e*P		P	07 23 37.5	+1.5
G17A	Pierce Place, baz=20,SNR=9.2	20.22	358	⇑P		P	07 23 36.5	+0.3
G13A	Cobalt baz=20,SNR=21	20.33	350	⇓P		P	07 23 37.6	+0.2
G14A	Jackson baz=20	20.37	352	⇑P		P	07 23 37.4	-0.4
DLMT	Dillon 31nm,1.4s	20.39	354	*e*P		P	07 23 39.2	+1.1
I07A	Izee baz=21,SNR=14	20.63	339	⇓P		P	07 23 40.4	-0.3
GCMT	Greycliff 7.0nm,0.8s	20.66	360	*e*P		P	07 23 41.2	+0.1
FVM	French Village 19nm,1.2s	20.69	47	*e*P		P	07 23 44.2	+2.8
BMO	Blue Mountains 4.6nm,0.8s	20.71	344	*e*P		P	07 23 41.5	0.0
F16A	Kennard Place, baz=21,SNR=7.3	20.73	356	⇓P		P	07 23 42.1	+0.3
F18A	Big Timber baz=21,SNR=19	20.78	360	P		P	07 23 42.5	+0.2
F17A	Fitzpatrick Pl baz=21,SNR=33	20.80	358	⇓P		P	07 23 43.6	+1.1
LRM	Limekiln Ridge	20.83	354	*e*P		P	07 23 43.4	+0.6
F14A	Wisdom baz=21	20.92	352	⇓P		P	07 23 43.5	-0.2
F13A	Darby baz=21,SNR=39	21.02	351	⇑P		P	07 23 44.9	0.0
F12A	Elk City baz=21,SNR=20	21.14	349	⇑P		P	07 23 45.8	-0.4
LRAL	Lakeview Retre 28nm,1.4s,mb4.4	21.19	63	*e*P		P	07 23 49.4	+2.5
E17A	Martinsdale baz=21,SNR=13	21.36	357	⇓P		P	07 23 48.6	+0.1
SIUC	Southern Illin 16nm,0.9s,mb4.3	21.36	49	*e*P		P	07 23 49.6	+0.9
ECSD	EROS Data Cent 6.9nm,0.8s,mb4.0	21.39	26	*e*P		P	07 23 52.1	+3.3
E18A	Harlowton baz=22,SNR=18	21.44	359	⇑P		P	07 23 49.4	0.0
E15A	Deer Lodge baz=22,SNR=13	21.44	354	⇓P		P	07 23 49.1	-0.4
E16A	East Helena baz=22,SNR=11	21.48	356	⇓P		P	07 23 49.7	-0.1
E14A	Clinton baz=22,SNR=11	21.53	352	⇓P		P	07 23 50.0	-0.4
WVT	Waverly 20nm,1.1s,mb4.5	21.62	54	*e*P		P	07 23 53.3	+1.8
E13A	Victor baz=22,SNR=12	21.64	351	⇓P		P	07 23 51.1	-0.5
HRY	Holter Researc	21.66	356	*e*P		P	07 23 51.9	+0.1
LAO	LASA Array 62nm,1.6s,mb4.8	21.72	6	*e*P		P	07 23 52.5	0.0
F10A	Beach Ranch, E baz=22,SNR=19	21.75	345	⇑P		P	07 23 51.9	-0.8
LNOR	Lincton Mounta	21.91	343	*e*P		P	07 23 55.1	+0.7
D16A	Dana Ranch, Ca baz=22,SNR=19	21.96	356	⇑P		P	07 23 54.3	-0.7
MSO	Missoula 26nm,1.5s,mb4.4	21.99	352	*e*P		P	07 23 55.3	0.0
CHMT	Chamberlain Mo	21.99	353	*e*P		P	07 23 55.5	+0.2
G06A	Carlson Farm, baz=22	22.02	339	⇓P		P	07 23 54.4	-1.3
D17A	Six Diamond Ra baz=22,SNR=22	22.05	358	⇓P		P	07 23 55.7	-0.1
D18A	Linhart Farms, baz=22	22.07	359	⇓P		P	07 23 55.6	-0.6
H04A	Detroit Lake baz=22	22.09	335	⇓P		P	07 23 55.7	-0.7
D14A	Greenough baz=22,SNR=60	22.18	353	P		P	07 23 56.9	-0.5
D13A	Huson baz=22,SNR=12	22.32	351	⇓P		P	07 23 58.0	-0.8
SLMT	Seeley Lake	22.34	353	*e*P		P	07 23 59.0	0.0
F07A	Phinny Hill Vi baz=22	22.39	341	⇓P		P	07 23 58.4	-1.2
D12A	Red Ives Fores baz=22	22.41	349	⇑P		P	07 23 58.8	-1.1
HOOD	Mount Hood Mea 21nm,1.0s,mb4.5	22.45	337	*e*P		P	07 23 57.4	-2.8
E09A	Wood Farm, Sta baz=22	22.47	344	⇑P		P	07 23 58.4	-2.1
C17A	Wharram Farm, baz=23,SNR=14	22.53	358	⇓P		P	07 24 00.3	-0.7
OLIL	Olney 16nm,0.8s,mb4.5	22.64	48	*e*P		P	07 24 03.8	+1.5
SWMT	Swartz Lake	22.66	352	*e*P		P	07 24 01.7	-0.7
SWET	Sewanee	22.71	58	*e*P		P	07 24 05.5	+2.4
HAWA	Hanford 8.1nm,1.1s,mb4.1	22.73	342	*e*P		P	07 24 01.3	-1.9
C16A	Fuhringer Ranc baz=23,SNR=21	22.74	356	⇑P		P	07 24 02.1	-1.2
C15A	Salmond Ranch, baz=23	22.78	355	⇑P		P	07 24 02.8	-0.9
HDIL	Hopedale 25nm,0.8s,mb4.7	22.87	43	*e*P		P	07 24 06.8	+2.0
C14A	Swan Lake baz=23	22.89	353	⇑P		P	07 24 03.4	-1.5
EGMT	Eagleton baz=23	22.90	360	⇑P		P	07 24 03.8	-1.1
EGMT	Eagleton 23nm,1.1s,mb4.5	22.90	360	*e*P		P	07 24 04.0	-0.9
C13A	Hot Springs baz=23,SNR=7.5	22.91	351	⇑P		P	07 24 03.5	-1.5
JTMT	Jette	22.93	352	*e*P		P	07 24 04.8	-0.5
YBMT	Yellow Bay	23.01	352	*e*P		P	07 24 06.6	+0.5
C12B	Naegeli Ranch, baz=23	23.07	350	⇑P		P	07 24 05.9	-0.9
BSMT	Bassoo Peak	23.11	351	*e*P		P	07 24 06.2	-0.9
B17A	L&G Farms, Che baz=23,SNR=8.4	23.19	358	⇓P		P	07 24 06.8	-1.2
B18A	Beardsley Farm baz=23,SNR=5.9	23.27	360	⇓P		P	07 24 08.6	-0.3
B15A	Bradely Ranch, baz=23,SNR=12	23.31	355	⇓P		P	07 24 07.7	-1.5
B16A	M & M Farms, S baz=23	23.35	356	⇑P		P	07 24 08.4	-1.3
OD2	Odessa Site #2	23.43	344	*e*P		P	07 24 09.1	-1.4
B13A	Whitefish baz=24,SNR=16	23.57	352	P		P	07 24 10.9	-1.1
LON	Longmire 47nm,1.7s,mb4.7	23.75	339	*e*P		P	07 24 13.1	-0.5
A18A	Metzger Ranch, baz=24,SNR=6.4	23.80	359	⇓P		P	07 24 12.9	-1.1
JFWS	Jewell Farm 4.6nm,0.6s,mb4.1	23.81	37	*e*P		P	07 24 18.0	+3.8
B12A	Libby baz=24,SNR=16	23.83	350	⇓P		P	07 24 13.5	-0.8
A17A	Triple J Farms baz=24,SNR=9.7	23.84	358	⇑P		P	07 24 13.4	-1.0
CPCT	Cooper Cave	23.87	58	*e*P		P	07 24 16.3	+1.4
A16A	West Butte Ran baz=24	23.88	357	⇑P		P	07 24 13.5	-1.2
NEW	Newport 17nm,0.8s,mb4.5	23.90	347	*e*P		P	07 24 13.6	-1.5
A15A	Johnson Ranch, baz=24,SNR=14	23.98	355	⇑P		P	07 24 14.5	-1.3
A14A	Doble T Ranch baz=24,SNR=19	24.04	354	⇑P		P	07 24 15.8	-0.5
ETW	Entiat	24.06	342	*e*P		P	07 24 15.8	-0.6
A13A	Flathead Natio baz=24,SNR=8.2	24.11	352	⇑P		P	07 24 15.8	-1.2
GOGA	Godfrey 5.8nm,0.8s,mb4.1	24.15	64	*e*P		P	07 24 18.6	+1.1
WALA	Waterton Lakes 0.7nm,1.0s	24.18	353	*e*P		P	07 24 17.0	-0.6
E03A	Lebam baz=24	24.19	336	⇑P		P	07 24 15.8	-1.8
D05A	Enumclaw baz=24	24.19	339	⇑P		P	07 24 16.9	-0.8
A12A	Yaak River Ran baz=24,SNR=9.9	24.29	350	⇓P		P	07 24 17.2	-1.4
B08A	Colville Reser baz=24,SNR=12	24.49	344	⇑P		P	07 24 18.8	-1.5
TKL	Tuckaleechee C	24.52	58	*e*P		P	07 24 20.7	-0.1
TKL	Tuckaleechee C 4.5nm,0.8s,mb4.0,baz=211,slow=10.0,SNR=7.9	24.52	58	P		P	07 24 21.6	+0.9
TKL	comp=Z,225nm,21.0s,MS3.6,baz=357,slow=37			LR		LR	07 34 10.6	
GNW	Green Mountain 6.3nm,1.2s,mb4.0	24.80	338	*e*P		P	07 24 22.2	-1.0
AGMN	Agassiz Nation 5.3nm,0.8s,mb4.1	25.55	21	*e*P		P	07 24 32.7	+2.7
A05A	Maple Falls baz=26	25.82	341	⇑P		P	07 24 31.4	-1.1
EYMN	Ely 4.5nm,0.8s,mb4.0	26.90	27	*e*P		P	07 24 42.5	+0.3
ULM	Lac du Bonnet	27.26	19	P		P	07 24 44.0	-1.4
ULM	Lac du Bonnet 2.4nm,0.5s,mb4.0,baz=215,slow=7.6,SNR=3.1	27.26	19	P		P	07 24 44.0	-1.4
JTS	JuntasAbangare comp=Z,100nm,21.9s,MS3.4,baz=299,slow=38	27.57	118	LR		LR	07 36 34.1	
EDM	Edmonton	28.25	355	*e*P		P	07 24 52.8	-1.5
DLBC	Dease Lake	36.36	342	*e*P		P	07 26 05.3	+0.1
YKA	Yellowknife Ar 3.9nm,0.9s,mb4.1,baz=176,slow=7.7,SNR=8.3	37.56	356	P		P	07 26 13.1	-2.2
OTAV	Otavalo 2.4nm,0.6s,mb4.1	38.88	125	*e*P		P	07 26 31.1	+4.1
ROSC	El Rosal comp=Z,74nm,20.9s,MS3.5,baz=21,slow=41	39.29	115	LR		LR	07 45 51.1	
DAWY	Dawson	43.58	341	*e*P		P	07 27 04.6	-0.4
ILAR	Eielson Array 2.7nm,0.7s,mb4.3,baz=151,slow=6.8,SNR=39	46.39	339	P		P	07 27 26.6	-0.8
ILAR	comp=Z,58nm,20.8s,MS3.5,baz=105,slow=38			LR		LR	07 48 06.0	
TRF	Thorofare Moun 21nm,1.5s,mb4.8	46.75	336	*e*P		P	07 27 29.6	-0.6
BPAW	Bear Paw Mtn. 4.6nm,0.9s,mb4.4	47.38	337	*e*P		P	07 27 34.2	-0.9
LPAZ	La Paz 0.6nm,0.8s,mb3.7,baz=333,slow=6.8,SNR=4.1	57.60	131	P		P	07 28 58.5	+7.0
PPT	Papeete comp=Z,158nm,20.0s,MS4.1,baz=92,slow=29	57.62	227	LR		LR	07 46 53.4	
CPUP	Villa Florida 2.4nm,0.8s,mb4.2,baz=304,slow=3.6,SNR=5.3	71.76	132	P		P	07 30 30.6	+6.6
ARCES	ARCESS Array B 1.2nm,0.7s,mb3.9,baz=309,slow=5.7,SNR=5.4	80.27	15	P		P	07 31 14.4	+2.7
NOA	NORSAR Array B comp=Z,46nm,18.6s,MS3.9,baz=180,slow=36	81.79	25	LR		LR	08 07 46.9	
ESDC	Sonseca Array comp=Z,56nm,19.2s,MS4.0,baz=275,slow=36	85.39	48	LR		LR	08 09 56.4	
FINES	FINESS Array B comp=Z,89nm,21.4s,MS4.1,baz=224,slow=34	86.65	20	LR		LR	08 07 15.3	
URZ	Urewera comp=Z,92nm,20.0s,MS4.2,baz=20,slow=29	93.19	229	LR		LR	08 04 37.3	
HNR	Honiara comp=Z,100nm,18.1s,MS4.3,baz=51,slow=31	94.42	262	LR		LR	08 07 24.6	
CN2	Changchun	94.94	323	*e*P		P	07 32 23.6	-0.3
CN2				*e*S		S	07 43 33.6	-4.7
CN2	comp=Z,10.0nm,0.7s,mb5.3			pmax		pmax		
ZALV	Zalesovo Beam comp=Z,21nm,18.4s,MS3.7,baz=350,slow=37	100.33	351	LR		LR	08 21 02.3	
LZH	Lanzhou	111.49	331	*e*PKP		PKiKP	07 37 31.5	-4.5
LZH				sPKP			07 37 41.0	
CD2	Chengdu	115.86	328	PKP		PKPdf	07 37 44.8	+0.2
ASAR	Alice Springs comp=Z,0.2nm,0.4s,baz=92,slow=2.4,SNR=2.9	122.70	257	PKP		PKPdf	07 38 02.4	+4.6

CASC 05 07:20:13.9±1.6, 11°28N×85°60W, h180km±7km, MD3.6, 3C-2D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SSN	San Juan del S	0.25	275	⇑	*e*P	Pn		07 20 37.9	-0.1
SSN					*e*S	Sn		07 20 57.4	+1.1
CONN	Concepcion	0.28	355	⇑	*e*P	Pn		07 20 38.6	+0.6
GBS2	Las Lilas	0.46	162	*i*	P	Pn		07 20 38.8	+0.2
GBS2				*i*	S	Sn		07 20 58.6	+0.9
GB1A	Borinquen Arri	0.50	156	*i*	P	Pn		07 20 39.3	+0.6
BUEV	Buena Vista	0.51	158	*i*	P	Pn		07 20 39.3	+0.4
GBS3	Finca Las Im¯¡	0.51	164	*i*	P	Pn		07 20 38.9	+0.1
GBS3				*i*	S	Sn		07 20 58.8	+0.7
LAPC	Finca la Perla	0.53	162	*i*	P	Pn		07 20 38.8	-0.1
NY14	Universidad de	0.63	174	*i*	P	Pn		07 20 39.6	+0.2
LIM1	Limonal	0.67	149	*i*	P	Pn		07 20 40.1	+0.5
LIM1				*i*	S	Sn		07 20 60.0	+0.6
APON	Apoyo	0.78	324	‖	*e*P	Pn		07 20 40.7	+0.5
A490	San Lazaro	1.01	172	*i*	P	Pn		07 20 42.2	+0.5
A490				*i*	S	Sn		07 21 04.0	+0.7
TISN	Laguna Tiscapa	1.08	323	⇑	*e*P	Pn		07 20 42.0	-0.2
JTS	JuntasAbangare	1.17	147	*e*P		Pn		07 20 43.4	+0.4
CSAN		1.21	318	*e*P		Pn		07 20 43.1	-0.2
COPN	Copaltepe	1.32	313	‖	*e*P	Pn		07 20 43.9	-0.3
JCR	Jicaral	1.50	161	*e*P		Pn		07 20 46.8	+0.9
JCR				*e*S		Sn		07 21 10.6	-0.1
CGA2	Cerro Gallo 2	1.68	138	*e*P		Pn		07 20 48.8	+1.1
CGA2				*e*S		Sn		07 21 15.5	+1.8
PRS1	Puriscal	1.81	135	*e*P		Pn		07 20 50.8	+1.8
PRS1				*e*S		Sn		07 21 17.6	+1.5
LAJ	Bijagual	2.02	134	*e*P		Pn		07 20 50.8	-0.5
URSC	Urasca	2.30	129	*e*P		Pn		07 20 56.7	+2.4
URSC				*e*S		Sn		07 21 28.2	+2.6
BUS	Buena Vista	2.49	133	*e*P		Pn		07 20 58.4	+1.8
BUS				*e*S		Sn		07 21 30.6	+1.0

*ISCJB **05** 07:23:20.5±0.9, 9°72N±0°07×126°9E±0°1, h10km, mb3.6/7, Error ellipse: s-maj=15.9km s-min=8.0km az=25.2*
*IDC **05** 07:23:20.7±1.1, 9°55N×126°55E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.6/21, mbtmp3.6/8, ML4.0/1, Error ellipse: s-maj=49.3km s-min=20.6km az=82.0*
*MAN **05** 07:23:31, 9°43N×126°20E, h15km, mb4.4, ML3.3, MS3.1*
ISC 05 07:23:22.5±0.8, 9°71N±0°07×126°8E±0°1, h10km, n13, σ1°38/16, mb3.6/7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SCPH	Surigao	1.33	273	⇑	*e*P	Pn		07 23 46.0	-1.1
BUTP	Butuan	1.41	238	*e*P		Pn		07 23 46.1	-2.1
BUTP				*e*S		Pg		07 23 52.4	+2.9
BUKP	Musuan	2.53	224	*e*P		Pn		07 24 02.8	-0.9
BUKP				*e*S		Pg		07 24 14.1	+3.1
DAV	Davao City (W) 30nm,0.3s,baz=60,slow=14,SNR=2.0	2.91	205	Pn		Pn		07 24 03.5	-5.4
DAV	34nm,0.3s,baz=194,slow=19,SNR=2.7			Sn		Sn		07 24 43.0	-0.9
DMPH	Davao City--Mi	2.92	207	*e*P		Pn		07 24 11.7	+2.5
TBP	Tagbilaran	2.93	270	*e*P		Pn		07 24 10.3	+1.2
ASAR	Alice Springs 0.1nm,0.3s,mb3.2,baz=340,slow=7.9,SNR=3.2	33.89	168	P		P		07 30 05.4	-0.2
SONM	Songino Array 0.6nm,0.7s,mb3.3,baz=158,slow=4.2,SNR=2.8	41.73	339	P		P		07 31 13.6	+1.9
MKAR	Makanchi Array 0.7nm,0.7s,mb3.7,baz=120,slow=7.9,SNR=5.1	52.80	323	P		P		07 32 37.5	-0.5
ZALV	Zalesovo Beam 0.5nm,0.4s,mb3.9,baz=101,slow=7.5,SNR=2.6	55.38	331	P		P		07 32 55.7	-1.0
BVAR	Borovoye Array 0.4nm,0.4s,mb3.9,baz=101,slow=7.7,SNR=3.5	62.43	325	P		P		07 33 45.4	-0.3
ILAR	Eielson Array 0.2nm,0.8s,mb3.1,baz=243,slow=5.7,SNR=4.1	79.70	26	P		P		07 35 30.9	+0.7
ARCES	ARCESS Array B 0.8nm,0.7s,mb4.0,baz=67,slow=7.0,SNR=3.8	84.90	340	P		P		07 35 56.8	-0.6

*ISCJB **05** 07:26:08.3±0.4, 41°52N±0°02×23°28E±0°03, h6km±4km, Error

	comp=E,187nm,0.3s								
VAY					*e*Lg			07 26 31.3	
	comp=N,226nm,0.4s								
VAY	**Valandovo**	**0.59**	**252**	P		**Pg**		**07 26 21.2**	**+0.5**
VAY				S		**Sg**		**07 26 28.9**	**+0.5**
VAY				*i* Sg		**Sg**		**07 26 29.2**	**+0.8**
SOH	**Sokhos**	**0.68**	**178**	P		**Pg**		**07 26 22.1**	**-0.3**
SOH				S		**Sg**		**07 26 31.4**	**+0.2**
SOH	**Sokhos**	**0.68**	**178**	P		**Pg**		**07 26 22.1**	**-0.3**
SOH				S		**Sg**		**07 26 31.4**	**+0.2**
GRG	**Griva**	**0.88**	**232**	P		**Pg**		**07 26 26.1**	**-0.1**
GRG				S		**Sg**		**07 26 38.1**	**+0.5**
GRG	**Griva**	**0.88**	**232**	P		**Pg**		**07 26 26.1**	**-0.1**
GRG				S		**Sg**		**07 26 38.1**	**+0.5**
THE	**Thessaloniki**	**0.91**	**197**	P		**Pg**		**07 26 26.5**	**-0.2**
THE				S		**Sg**		**07 26 38.7**	**+0.2**
THE	**Thessaloniki**	**0.91**	**197**	P		**Pg**		**07 26 26.5**	**-0.2**
THE				S		**Sg**		**07 26 38.7**	**+0.2**
HORT	**Hortiatis**	**0.92**	**190**	P		**Pg**		**07 26 26.6**	**-0.3**
HORT				S		**Sg**		**07 26 39.1**	**+0.3**
HORT	**Hortiatis**	**0.92**	**190**	P		**Pg**		**07 26 26.6**	**-0.3**
HORT				S		**Sg**		**07 26 39.1**	**+0.3**
KAVA	**Kavala**	**1.03**	**119**	P		**Pg**		**07 26 28.5**	**-0.6**
KAVA				S		**Sg**		**07 26 43.4**	**+0.9**
KAVA	**Kavala**	**1.03**	**119**	P		**Pg**		**07 26 28.5**	**-0.6**
KAVA				S		**Sg**		**07 26 43.4**	**+0.9**
RZN	**Rozhen**	**1.06**	**79**	Pg		**Pg**		**07 26 30.0**	**+0.3**
RZN	**Rozhen**	**1.06**	**79**	Pg		**Pg**		**07 26 30.0**	**+0.3**
VTS	**Vitosha**	**1.09**	**356**	⇑*i*Pg		**Pg**		**07 26 29.9**	**-0.3**
VTS				*i* Sg		**Sg**		**07 26 45.2**	**+0.8**
VTS	**Vitosha**	**1.09**	**356**	P		**Pb**		**07 26 30.0**	**-0.2**
VTS				S		**Sb**		**07 26 46.2**	**+1.7**
VTS	**Vitosha**	**1.09**	**356**	Pg		**Pg**		**07 26 30.6**	**+0.4**
VTS	**Vitosha**	**1.09**	**356**	P		**Pb**		**07 26 30.0**	**-0.2**
VTS				*i* Sg		**Sg**		**07 26 45.2**	**+0.8**
VTS				S		**Sb**		**07 26 46.2**	**+1.7**
PLD	**Plovdiv**	**1.20**	**59**	P		**Pn**		**07 26 32.9**	**+0.9**
PLD				S		**Sb**		**07 26 48.0**	**+0.4**
PLD	**Plovdiv**	**1.20**	**59**	P		**Pn**		**07 26 32.9**	**+0.9**
PLD				S		**Sb**		**07 26 48.0**	**+0.4**
OUR	**Ouranopolis**	**1.27**	**156**	P		**Pn**		**07 26 31.7**	**-1.3**
OUR				S		**Sb**		**07 26 49.6**	**0.0**
OUR	**Ouranopolis**	**1.27**	**156**	P		**Pn**		**07 26 31.7**	**-1.3**
OUR				S		**Sb**		**07 26 49.6**	**0.0**
SKO	**Skopje**	**1.48**	**289**	*e*Pg		**Pg**		**07 26 38.1**	**+0.4**
SKO				*e*Sg		**Sg**		**07 26 56.4**	**-0.5**
SKO				*e*Lg				07 26 58.9	
	comp=E,30nm,0.4s								
SKO				*e*Lg				07 26 59.3	
	comp=N,37nm,0.3s								
LIT	**Litokhoron**	**1.53**	**204**	P		**Pn**		**07 26 36.4**	**-0.2**
LIT				S		**Sn**		**07 26 57.0**	**+0.4**
LIT	**Litokhoron**	**1.53**	**204**	P		**Pn**		**07 26 36.4**	**-0.2**
LIT				S		**Sn**		**07 26 57.0**	**+0.4**
KRUS	**Krusevo**	**1.56**	**266**	*e*Pg		**Pg**		**07 26 38.4**	**-0.8**
KRUS				*e*Sg		**Sg**		**07 27 00.2**	**+0.8**
PAIG	**Paliouri**	**1.60**	**170**	P		**Pn**		**07 26 36.4**	**-1.1**
PAIG				S		**Sn**		**07 26 58.6**	**+0.4**
PAIG	**Paliouri**	**1.60**	**170**	P		**Pn**		**07 26 36.4**	**-1.1**
PAIG				S		**Sn**		**07 26 58.6**	**+0.4**
BARS	**Barje**	**1.72**	**320**	⇓*i*Pn		**Pn**		**07 26 39.1**	**-0.2**
BARS				*i* Sg		**Sg**		**07 27 04.3**	**-0.4**
BARS	**Barje**	**1.72**	**320**	⇓*i*Pn		**Pn**		**07 26 39.1**	**-0.2**
BARS				*i* Sg		**Sg**		**07 27 04.3**	**-0.4**
ZAPS	**Zavoj**	**1.84**	**344**	⇑*i*Pn		**Pn**		**07 26 42.0**	**+1.1**
ZAPS				*i* Sg		**Sg**		**07 27 09.5**	**+1.1**
MPEP	**Malo Peshtene**	**1.88**	**9**	Pg		**Pg**		**07 26 44.7**	**-0.6**
XOR	**Xorichti**	**2.14**	**183**	P		**Pn**		**07 26 44.6**	**-0.3**
XOR				S		**Sn**		**07 27 10.6**	**-0.9**
XOR	**Xorichti**	**2.14**	**183**	P		**Pn**		**07 26 44.6**	**-0.3**
XOR				S		**Sn**		**07 27 10.6**	**-0.9**
ALN	**Alexandroupoli**	**2.15**	**105**	P		**Pn**		**07 26 44.9**	**-0.1**
ALN	**Alexandroupoli**	**2.15**	**105**	P		**Pn**		**07 26 44.9**	**-0.1**
AOS	**Alonnisos**	**2.37**	**169**	P		**Pn**		**07 26 47.0**	**-1.1**
AOS				S		**Sn**		**07 27 18.4**	**+1.2**
AOS	**Alonnisos**	**2.37**	**169**	P		**Pn**		**07 26 47.0**	**-1.1**
AOS				S		**Sn**		**07 27 18.4**	**+1.2**
GRUS	**Gruza**	**3.06**	**322**	*i* Sg		**Sg**		**07 27 46.8**	**-0.7**
GRUS	**Gruza**	**3.06**	**322**	*i* Sg		**Sg**		**07 27 46.8**	**-0.7**
TRUS	**Trudelj**	**3.46**	**323**	*i* Sg		**Sg**		**07 28 00.1**	**-0.2**
TRUS	**Trudelj**	**3.46**	**323**	*i* Sg		**Sg**		**07 28 00.1**	**-0.2**
DIVS	**Divibare**	**3.57**	**318**	⇓*i*Pn		**Pn**		**07 27 04.3**	**-0.3**
DIVS				*i* Sg		**Sg**		**07 28 04.0**	**+0.3**
DIVS	**Divibare**	**3.57**	**318**	⇓*i*Pn		**Pn**		**07 27 04.3**	**-0.3**
DIVS				*i* Sg		**Sg**		**07 28 04.0**	**+0.3**
BBLS	**Lazići**	**3.73**	**311**	*i* Sg		**Sg**		**07 28 08.6**	**-0.3**
BBLS	**Lazići**	**3.73**	**311**	*i* Sg		**Sg**		**07 28 08.6**	**-0.3**
GZR	**Gura Zlata**	**3.91**	**354**	S		**Sg**		**07 28 13.3**	**-1.4**
BZS	**Buzias**	**4.29**	**344**	S		**Sg**		**07 28 23.6**	**-3.5**
DRGR		**5.31**	**355**	S		**Sb**		**07 28 51.4**	**+5.7**

BJI 05 07:42:06.3, 32.41N×105.10E, h15km, mb3.7/1, ML3.7/10, Ms3.6/3, Ms7 3.5/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.59**	**62**	Pn	Pn	07 43 00.9	-0.5
XAN				Pg	Pg	07 43 09.7	-5.4
XAN				Sn	Sn	07 43 41.9	-1.7
XAN				Sg	Sg	07 43 54.6	-7.1
XAN				smax			
	comp=N,190nm,0.6s						
XAN				smax			
	comp=E,85nm,0.5s						
LZH	**Lanzhou**	**3.81**	**345**	Pn	Pn	07 43 06.8	+2.4
LZH				Pg	Pg	07 43 16.9	-2.4
LZH				Sn	Sn	07 43 47.8	-1.2
LZH				Sg	Sg	07 44 04.1	-4.6
LZH				smax			
	comp=N,160nm,0.6s						
LZH				smax			
	comp=E,260nm,0.6s						
LZH				LR	LR		
	comp=E,440nm,4.3s						
LZH				LR	LR		
	comp=Z,680nm,5.8s						
GYA	**Guiyang**	**6.08**	**167**	Pn	Pn	07 43 36.9	+1.2
GYA				Sn	Sn	07 44 43.6	-1.5
GYA				Sg	Sg	07 45 14.9	-6.7
GYA				smax			
	comp=N,40nm,0.8s						
GYA				smax			
	comp=E,50nm,0.7s						

*ISCJB **05** 07:51:29.9±0.7, 10.49N±0.08×61.98W±0.03, h44km±11km, Error ellipse: s-maj=14.1km s-min=4.9km az=179.7*
*FUNV **05** 07:51:30.3, 10.35N×61.98W, h15km, MW2.8*
*NEIC **05** 07:51:32.5, 10.65N×61.78W, h46km, MD2.9(TRN), After TRN.*
*TRN **05** 07:51:32.5, 10.65N×61.78W, h46km, MD2.9*

ISC 05 07:51:30.6±0.5, 10.49N±0.08×61.97W±0.03, h36km±14km, n19, σ0.97/34, 3D, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.29**	**302**	⇓*i*P	**Pn**	**07 51 37.2**	**-1.3**
GUIV				*e*S	**Sn**	**07 51 43.0**	**-1.0**
TCE	**Chacachacare**	**0.30**	**46**	⇓*e*P	**Pn**	**07 51 39.1**	**+0.6**
TCE				*e*S	**Sn**	**07 51 45.2**	**+1.1**
TCE	**Chacachacare**	**0.30**	**46**	⇓*e*P	**Pn**	**07 51 39.1**	**+0.6**
TCE				*e*S	**Sn**	**07 51 45.2**	**+1.1**
TPP	**Pointe-a-Pierr**	**0.54**	**108**	*e*P	**Pn**	**07 51 43.4**	**+1.6**
TPP				*e*S	**Sn**	**07 51 50.4**	**+0.8**
TPP	**Pointe-a-Pierr**	**0.54**	**108**	*e*P	**Pn**	**07 51 43.4**	**+1.6**
TPP				*e*S	**Sn**	**07 51 50.4**	**+0.8**
TRN	**Trinidad (W)**	**0.58**	**74**	*e*P	**Pn**	**07 51 42.7**	**+0.3**
TRN				*e*S	**Sn**	**07 51 49.8**	**-0.9**
TRN	**Trinidad (W)**	**0.58**	**74**	*e*P	**Pn**	**07 51 42.7**	**+0.3**
TRN				*e*S	**Sn**	**07 51 49.8**	**-0.9**
TBH	**Brigand Hill**	**0.89**	**90**	*e*P	**Pn**	**07 51 47.2**	**+0.6**
TBH				*e*S	**Sn**	**07 51 56.4**	**-1.8**
TBH	**Brigand Hill**	**0.89**	**90**	*e*P	**Pn**	**07 51 47.2**	**+0.6**
TBH				*e*S	**Sn**	**07 51 56.4**	**-1.8**
GUNV	**Guanoco**	**1.01**	**251**	*e*P	**Pn**	**07 51 47.9**	**-0.4**
GUNV				*e*S	**Sn**	**07 52 01.8**	**+0.5**
CRUV	**Carupano**	**1.26**	**279**	*e*P	**Pn**	**07 51 52.2**	**+0.5**
CRUV				*e*S	**Sn**	**07 52 08.3**	**+0.9**
TPR	**Prospect**	**1.36**	**59**	*e*P	**Pn**	**07 51 52.1**	**-1.0**
TPR				*e*S	**Sn**	**07 52 05.6**	**-4.3**
TPR	**Prospect**	**1.36**	**59**	*e*P	**Pn**	**07 51 52.1**	**-1.0**
TPR				*e*S	**Sn**	**07 52 05.6**	**-4.3**
ITEV	**Isla Los Testi**	**1.43**	**307**	*e*P	**Pn**	**07 51 55.8**	**+1.7**
ITEV				*e*S	**Sn**	**07 52 16.4**	**+4.7**
ORIV	**Oritupano**	**2.00**	**225**	*e*P	**Pn**	**07 52 02.0**	**0.0**
PCRV	**Puerto La Cruz**	**2.64**	**264**	*e*P	**Pn**	**07 52 10.5**	**-0.2**
PRGV	**PARIAGUAN**	**3.15**	**237**	*e*P	**Pn**	**07 52 18.1**	**+0.4**
CAOV	**Caicara del Or**	**5.33**	**234**	*e*P	**Pn**	**07 52 46.8**	**-0.9**
CAOV				*e*S	**Sn**	**07 53 42.0**	**-5.8**
BAUV	**El Baul**	**6.18**	**256**	*e*P	**Pn**	**07 52 58.1**	**-1.4**

*IDC **05** 07:53:32.3±2.5, 53.61N×87.89E, h0km, mb1 3.4/2, mb1mx3.1/24, mbtmp3.4/2, ML3.4/2, Error ellipse: s-maj=21.6km s-min=11.9km az=80.0*
*NNC **05** 07:53:35.5±1.3, 53.26N×87.80E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=9.5km s-min=8.0km az=53.0*

ISC 05 07:53:34.7±2.0, 53.64N±0.09×87.8E±0.2, h10km, n6, σ0.81/11, 6C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.79**	**281**	Pn	**Pn**	**07 54 05.2**	**-0.5**
	4.1nm,0.3s,baz=103,slow=8.9,SNR=30						
ZALV				Lg		07 54 31.2	
	9.0nm,0.3s,baz=103,slow=25,SNR=16						
KURK	**Kurchatov**	**6.36**	**246**	⇑Pn	**Pn**	**07 55 08.5**	**+0.1**
	2.1nm,1.2s						
KURK				⇓Sn	**Sn**	**07 56 21.5**	**+0.6**
	1.0nm,0.5s						
KURK				⇑Lg		07 56 54.0	
	6.9nm,0.8s						
KURBB	**Kurchatov Arra**	**6.45**	**246**	⇑Pn	**Pn**	**07 55 10.0**	**+0.3**
	0.2nm,0.3s,baz=62,slow=15						
KURBB				⇑Sn	**Sn**	**07 56 22.9**	**-0.4**
	0.9nm,0.6s						
KURBB				⇓Lg		07 56 58.6	
	1.1nm,0.7s						
MK31	**Makanchi Array**	**7.70**	**209**	⇑Pn	**Pn**	**07 55 27.2**	**+0.3**
	0.2nm,0.3s,baz=0.0,slow=0.1,SNR=18						
MK31				⇓Sn	**Sn**	**07 56 55.4**	**+1.3**
	0.2nm,0.3s						
MK31				⇑Lg		07 57 29.2	
	1.2nm,0.6s,baz=1.8,slow=33,SNR=3.9						
MKAR	**Makanchi Array**	**7.70**	**209**	Pn	**Pn**	**07 55 26.8**	**-0.1**
	0.4nm,0.3s,baz=25,slow=14,SNR=6.0						
MKAR				Sn	**Sn**	**07 56 51.9**	**-2.2**
	0.2nm,0.3s,baz=27,slow=24,SNR=3.6						
MKAR				Lg		07 57 35.3	
	0.4nm,0.3s,baz=25,slow=28,SNR=3.8						
BVAR	**Borovoye Array**	**10.43**	**274**	Pn	**Pn**	**07 56 04.2**	**0.0**
	0.3nm,0.3s,baz=71,slow=14,SNR=3.7						
BVAR				Sn	**Sn**	**07 57 55.6**	**-5.5**
	0.2nm,0.3s,baz=68,slow=23,SNR=3.8						

*SZGRF **05** 08:01:35.7, 21.50S×178.56W, h33km, Fiji Islands region*
*BJI **05** 08:02:37.2, 20.16S×177.80W, h577km, mB4.5/11, mb4.5/17*
*ISCJB **05** 08:02:38.7±0.8, 20.19S±0.06×178.30W±0.07, h574km±10km, mb4.4/58, Error ellipse: s-maj=11.7km s-min=6.6km az=136.1*
*NEIC **05** 08:02:40.2±0.7, 20.10S×178.30W, h577km±8km, mb4.4/41, Error ellipse: s-maj=11.9km s-min=6.4km az=138.0*
*IDC **05** 08:02:40.2±1.3, 20.18S×178.30W, h576km±14km, mb3.9/13, mb1 4.0/15, mb1mx3.9/19, mbtmp3.8/15, Error ellipse: s-maj=13.8km s-min=9.4km az=137.0*

ISC 05 08:02:40.2±0.8, 20.13S±0.07×178.30W±0.07, h576km±9km, h570km±9.6km: pP-P, n173, σ0.99/94, mb4.4/58, 12C-11D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.20**	**304**	*e*Pn	**P**	**08 04 06.9**	**+1.5**
AFI	**Afiamalu**	**8.79**	**46**	*e*Pn	**P**	**08 04 44.9**	**-1.7**
	77nm,0.8s						
AFI				*e*S	**S**	**08 06 24.1**	**-6.0**
AFI	**Afiamalu**	**8.79**	**46**	P	**P**	**08 04 45.2**	**-1.4**
	3.9nm,0.3s,baz=224,slow=23,SNR=5.3						
AFI				S	**S**	**08 06 22.5**	**-7.6**
	5.3nm,0.3s,baz=47,slow=23,SNR=5.1						
OUZ	**Omahuta**	**16.64**	**204**	*e*P	**P**	**08 06 08.0**	**+3.7**
	22nm,0.9s						
URZ	**Urewera**	**18.50**	**191**	*e*P	**P**	**08 06 19.4**	**-1.8**
	13nm,0.5s						
URZ	**Urewera**	**18.50**	**191**	P	**P**	**08 06 20.2**	**-1.0**
	2.7nm,0.3s,baz=71,slow=1.0,SNR=10						
URZ				S	**S**	**08 09 16.7**	**-4.0**
	0.5nm,0.3s,baz=255,slow=19,SNR=6.0						
SNZO	**South Karori**	**21.93**	**194**	*e*P	**P**	**08 06 51.0**	**-1.2**
	42nm,1.0s,mb5.0						
KHZ	**Kahutara**	**23.26**	**195**	*e*P	**P**	**08 07 02.9**	**-1.1**
	18nm,1.0s,mb4.7						
EIDS	**Eidsvold**	**28.67**	**254**	*e*P	**P**	**08 07 51.9**	**+0.1**
EIDS	**Eidsvold**	**28.67**	**254**	*e*P	**P**	**08 07 52.1**	**+0.3**
	8.8nm,0.6s,mb4.6						
ARMA	**Armidale**	**28.97**	**243**	*e*P	**P**	**08 07 55.7**	**+1.3**
ARMA	**Armidale**	**28.97**	**243**	*e*P	**P**	**08 07 56.1**	**+1.7**
	12nm,0.6s,mb4.7						
CTA	**Charters Tower**	**33.24**	**264**	*e*P	**P**	**08 08 31.4**	**+0.5**
	35nm,0.4s,mb5.3						
CTA	**Charters Tower**	**33.24**	**264**	P	**P**	**08 08 31.5**	**+0.6**
	51nm,0.5s,mb5.4,baz=93,slow=10,SNR=135						
CTA				ScP	ScP	08 13 48.3	+1.9
	2.5nm,0.8s,baz=80,slow=6.1,SNR=4.6						
CTAO	**Charters Tower**	**33.24**	**264**	*e*P	**P**	**08 08 31.5**	**+0.5**
	43nm,0.6s,mb5.3						
CMSA	**Cobar Meteorol**	**34.19**	**243**	*e*P	**P**	**08 08 39.1**	**+0.4**
PMG	**Port Moresby**	**34.98**	**283**	*e*P	**P**	**08 08 45.6**	**0.0**
	31nm,0.7s,mb5.0						
COEN	**Coen**	**37.27**	**273**	*e*P	**P**	**08 09 04.7**	**+0.3**
COEN	**Coen**	**37.27**	**273**	*e*P	**P**	**08 09 04.5**	**+0.1**
	188nm,0.9s						
STKA	**Stephens Creek**	**37.69**	**244**	*e*P	**P**	**08 09 08.3**	**+0.7**
	5.3nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**37.69**	**244**	*e*P	**P**	**08 09 08.5**	**+0.9**
	4.9nm,1.4s,mb3.8						
STKA	**Stephens Creek**	**37.69**	**244**	P	**P**	**08 09 08.6**	**+1.0**
	6.1nm,0.5s,mb4.3,baz=87,slow=9.6,SNR=19						
STKA				PcP	PcP	08 11 09.3	-0.1
	2.1nm,0.6s,baz=96,slow=6.9,SNR=3.6						
BBOO	**Buckleboo**	**42.46**	**243**	*e*P	**P**	**08 09 45.7**	**+0.1**
	10nm,0.5s,mb4.6						
ASAR	**Alice Springs**	**44.33**	**256**	P	**P**	**08 10 00.2**	**+0.1**
	30nm,0.6s,mb5.0,baz=90,slow=7.6,SNR=430						
ASAR				PcP	PcP	08 11 31.4	-0.3
	3.3nm,0.5s,baz=103,slow=3.9,SNR=6.5						
ASAR				ScP	ScP	08 14 30.9	+1.7
	1.3nm,0.6s,baz=106,slow=4.6,SNR=11						
ASAR				S	**S**	**08 15 51.6**	**-1.7**
	2.6nm,0.8s,baz=86,slow=15,SNR=21						
WRAB	**Tennant Creek**	**44.36**	**262**	*e*P	**P**	**08 09 59.9**	**-0.6**
	36nm,0.4s,mb5.2						
KAKA	**Kakadu**	**47.68**	**271**	*e*P	**P**	**08 10 25.1**	**-0.6**
	39nm,0.6s,mb5.1						
KAKA	**Kakadu**	**47.68**	**271**	*e*P	**P**	**08 10 24.9**	**-0.8**
	104nm,0.6s						
FORT	**Forrest**	**49.18**	**246**	*e*P	**P**	**08 10 36.2**	**-0.4**
	17nm,0.7s,mb4.6						
FORT	**Forrest**	**49.18**	**246**	*e*P	**P**	**08 10 35.8**	**-0.8**
	11nm,0.6s,mb4.5						
KNA	**Kununurra**	**50.38**	**266**	*e*P	**P**	**08 10 45.3**	**-0.3**
	16nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**52.79**	**262**	*e*P	**P**	**08 11 02.9**	**0.0**
	14nm,1.9s,mb4.0						
FITZ	**Fitzroy Crossi**	**52.79**	**262**	*e*P	**P**	**08 11 02.9**	**-0.1**
	5.7nm,0.8s,mb4.0						
FITZ	**Fitzroy Crossi**	**52.79**	**262**	P	**P**	**08 11 02.6**	**-0.3**
	4.9nm,0.5s,mb4.1,baz=108,slow=5.3,SNR=27						
MBWA	**Marble Bar**	**57.66**	**257**	*e*P	**P**	**08 11 36.0**	**-0.6**
	8.9nm,0.6s,mb4.1						
MEEK	**Meekatharra**	**57.77**	**251**	*e*P	**P**	**08 11 36.5**	**-0.9**
KLBR	**Kellerberrin**	**57.95**	**245**	*e*P	**P**	**08 11 38.0**	**-0.5**
SBA	**Scott Base**	**58.22**	**184**	*e*P	**P**	**08 11 42.1**	**+2.6**
	5.0nm,0.6s,mb3.8						
MAT	**Matsushiro**	**69.75**	**324**	P	**P**	**08 12 51.1**	**-2.1**
QSPA	**South Pole Qui**	**69.94**	**180**	P	**P**	**08 12 55.2**	**+1.5**
	11nm,0.6s,mb4.5,baz=20,slow=1.0,SNR=115						
ATKA	**Atka Island**	**72.11**	**3**	*e*P	**P**	**08 13 05.2**	**-1.4**
	36nm,1.0s,mb4.9						
KSM	**Kuching**	**73.08**	**278**	*e*P	**P**	**08 13 13.4**	**+0.2**
	20nm,0.8s,mb4.7						
KSRS	**Korea Array**	**76.42**	**319**	P	**P**	**08 13 31.6**	**+0.3**
	3.0nm,0.6s,mb3.9,baz=128,slow=5.7,SNR=17						
CHGN	**Chignik**	**77.97**	**11**	*e*P	**P**	**08 13 37.8**	**-1.4**
OHAK	**Old Harbor**	**79.86**	**14**	*e*P	**P**	**08 13 48.5**	**-0.7**
	24nm,1.3s,mb4.4						
MDJ	**Mudanjiang**	**80.05**	**325**	P	**P**	**08 13 51.1**	**+0.6**
MDJ				pP	pP	08 15 52.0	-0.3
MDJ				sP	sP	08 16 50.0	-0.8
MDJ				PP	PP	08 17 04.2	+0.5
MDJ				sS	sS	08 26 44.2	-0.9
MDJ				SS	SS	08 28 37.7	+1.8
MDJ				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,40nm,8.8s						
YBH	**Yreka Blue Hor**	**80.18**	**39**	*e*P	**P**	**08 13 51.9**	**+0.6**
	comp=Z,2.8nm,0.6s,mb3.8						
YBH	**Yreka Blue Hor**	**80.18**	**39**	P	**P**	**08 13 52.6**	**+1.3**
	comp=Z,4.2nm,0.8s,mb3.9,baz=26,slow=0.9,SNR=9.5						
KDAK	**Kodiak Island**	**80.53**	**14**	P	**P**	**08 13 51.8**	**-0.8**
	comp=Z,7.7nm,0.6s,mb4.3,baz=216,slow=5.7,SNR=7.4						
NVAR	**Mina Array Bea**	**80.95**	**44**	P	**P**	**08 13 55.8**	**+0.5**
	comp=Z,1.8nm,0.8s,mb3.5,baz=225,slow=10,SNR=12						
MOD	**Modoc**	**81.72**	**40**	*e*P	**P**	**08 13 59.5**	**+0.3**
	comp=Z,4.9nm,0.7s,mb4.2						
CN2	**Changchun**	**81.83**	**323**	*e*P	**P**	**08 14 00.0**	**+0.3**
CN2				*e*S	S	08 23 27.3	+1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
WVOR	**Wild Horse Val**	**83.03**	**40**	*e*P	**P**	**08 14 06.5**	**+0.7**
	comp=Z,3.8nm,1.1s,mb3.8						
GNW	**Green Mountain**	**83.75**	**34**	*e*P	**P**	**08 14 09.3**	**+0.1**
	comp=Z,3.1nm,1.0s,mb3.8						
PGC	**Sidney**	**84.11**	**33**	*e*P	**P**	**08 14 10.7**	**-0.2**
	comp=Z,0.2nm,0.5s						
PMR	**Palmer**	**84.73**	**14**	*e*P	**P**	**08 14 12.2**	**-1.4**
	comp=Z,18nm,1.4s,mb4.5						
PMR				LR	LR		
	comp=Z,100nm,17.0s						
BMO	**Blue Mountains**	**85.21**	**39**	*e*P	**P**	**08 14 16.6**	**+0.2**
	comp=Z,1.7nm,0.8s,mb3.7						
BMRM	**Bremner River**	**85.26**	**16**	*e*P	**P**	**08 14 15.8**	**-0.4**
	comp=Z,8.5nm,0.6s,mb4.5						
BJI	**Beijing**	**85.43**	**315**	P	**P**	**08 14 17.5**	**-0.1**
BJI				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.9						
PNL	**Peninsula**	**85.62**	**19**	*e*P	**P**	**08 14 17.6**	**-0.4**
	comp=Z,6.0nm,0.8s,mb4.3						
TRF	**Thorofare Moun**	**86.15**	**12**	*e*P	**P**	**08 14 19.2**	**-1.2**
	comp=Z,14nm,0.7s,mb4.7						
GYA	**Guiyang**	**86.22**	**300**	*e*P	**P**	**08 14 22.0**	**+0.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
HLID	**Hailey**	**86.23**	**41**	*e*P	**P**	**08 14 22.6**	**+1.2**
	comp=Z,3.3nm,1.0s,mb3.9						
BPAW	**Bear Paw Mtn.**	**86.60**	**12**	*e*P	**P**	**08 14 20.8**	**-1.8**
	comp=Z,1.5nm,0.6s,mb3.9						
MCK	**McKinley**	**86.68**	**13**	*e*P	**P**	**08 14 22.1**	**-0.8**
	comp=Z,12nm,0.8s,mb4.7						
SKAG	**Skagway**	**86.74**	**20**	*e*P	**P**	**08 14 24.0**	**+0.7**
	comp=Z,3.1nm,0.7s,mb4.2						
TXAR	**Lajitas Array**	**87.10**	**57**	P	**P**	**08 14 26.7**	**+1.0**
	comp=Z,0.7nm,0.6s,mb3.6,baz=215,slow=6.7,SNR=16						
HYT	**Haines Junctio**	**87.12**	**19**	*e*P	**P**	**08 14 25.4**	**+0.4**
MENT	**Mentasta**	**87.16**	**15**	*e*P	**P**	**08 14 24.9**	**-0.3**
XAN	**Xi'an**	**87.68**	**307**	P	**P**	**08 14 28.6**	**+0.2**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
XAN				pmax	pmax		
	comp=Z,27nm,4.3s						
DLBC	**Dease Lake**	**87.83**	**23**	*e*P	**P**	**08 14 28.9**	**+0.5**
MCMT	**McKenzie Canyo**	**87.86**	**40**	*e*P	**P**	**08 14 29.9**	**+1.1**
	comp=Z,2.1nm,1.0s,mb3.8						
COLA	**College**	**87.91**	**13**	*e*P	**P**	**08 14 27.2**	**-1.4**
	comp=Z,15nm,0.6s,mb4.9						
ILAR	**Eielson Array**	**88.02**	**13**	P	**P**	**08 14 27.8**	**-1.4**
	comp=Z,6.8nm,0.7s,mb4.5,baz=219,slow=5.6,SNR=93						
DLMT	**Dillon**	**88.29**	**40**	*e*P	**P**	**08 14 31

VRI	Vrincioaia	147.10	327	⇓	*i*P		PKPbc	08 21 18.9	-0.2
TIRR	Tirgusor	147.13	324	⇑	*i*P		PKPbc	08 21 18.8	-0.4
MMAI	Mount Meron Ar	147.38	300		PKPbc		PKPbc	08 21 20.3	0.0
	comp=Z,11nm,0.5s,baz=71,slow=5.4,SNR=16								
TRPA	Tarpa	147.39	334	⇓	*i*P		PKPdf	08 21 19.6	+3.3
IBBN	Ibbenburen	147.54	353		*e*PKPab		PKPab	08 21 23.3	-0.8
CLZ	Clausthal	147.63	350		*e*PKPbc		PKPbc	08 21 20.1	-0.1
CLZ					*e*PKPab		PKPab	08 21 23.9	-0.6
UPC	Upice	147.64	343	⇑	*e*PKP		PKPdf	08 21 20.2	+3.5
UPC					*e*PKPAB		PKPab	08 21 24.9	+0.3
DPC	Dobruska-Polom	147.69	342	⇑	*e*PKP		PKPbc	08 21 20.5	+0.1
DPC					*e*PKPAB		PKPab	08 21 25.2	+0.4
MLR	Muntele Rosu	147.76	327	⇑	*i*P		PKPbc	08 21 20.2	-0.6
BRG	Berggiesshubel	147.83	345		*e*PKPbc		PKPbc	08 21 20.4	-0.4
MORC	Moravsky Berou	147.84	341	⇑	*i*P		PKPbc	08 21 20.6	-0.2
VOIR		148.25	328	⇓	*i*P		PKPbc	08 21 21.8	-0.2
DRGR		148.35	332	⇑	*i*P		PKPbc	08 21 21.6	-0.6
PRU	Pruhonice	148.50	344	⇑	*e*PKP		PKPbc	08 21 22.8	+0.3
PRU					*e*PKPAB		PKPab	08 21 28.7	+0.5
VYHS	Vyhne	148.51	338		*e*PKP		PKPbc	08 21 22.4	-0.2
VYHS					*e*			08 21 28.3	
MOX	Moxa	148.56	348		*e*PKPbc		PKPbc	08 21 22.0	-0.6
MOX					*e*PKPab		PKPab	08 21 27.5	-0.9
KOLL	Kolacno	148.59	339		*e*PKP		PKPbc	08 21 22.9	+0.1
TANN	Tannenbergstha	148.60	347		*e*PKPbc		PKPbc	08 21 22.5	-0.2
WERD	Werda	148.60	347		*e*PKPbc		PKPbc	08 21 22.4	-0.3
PSZ	Piszkesteto	148.61	336	⇓	*i*P		PKPbc	08 21 22.3	-0.5
GUNZ	Gunzen	148.68	347		*e*PKPbc		PKPbc	08 21 22.8	-0.1
GUNZ					*e*PKPab		PKPab	08 21 28.5	-0.4
NKC	Novy Kostel	148.77	347	⇑	*e*PKP		PKPbc	08 21 23.0	-0.1
NKC					*e*PKPAB		PKPab	08 21 29.0	-0.3
MEM	Membach	149.40	355		PKPbc		PKPbc	08 21 24.4	-0.3
KHC	Kasperske Hory	149.54	345		*e*PKPbc		PKPbc	08 21 24.9	-0.1
KHC					*e*PKPab		PKPab	08 21 32.5	0.0
KHC	Kasperske Hory	149.54	345	⇑	*e*PKP		PKPbc	08 21 24.7	-0.3
KHC					*e*PKPAB		PKPab	08 21 32.4	-0.1
SNF	Seneffe	149.62	357		PKPbc		PKPbc	08 21 24.9	-0.2
SNF					PKPab		PKPab	08 21 32.2	-0.5
BCLA	Clavier	149.64	355		PKPbc		PKPbc	08 21 24.5	-0.7
BCLA					PKPab		PKPab	08 21 32.1	-0.8
WET	Wettzell	149.70	345		*e*PKPab		PKPab	08 21 33.0	-0.1
BZS	Buzias	149.74	332	⇓	*i*P		PKPbc	08 21 24.9	-0.7
GIVF	Givet	149.99	356		*e*PKP1		PKPbc	08 21 25.6	-0.5
	comp=Z,37nm,0.7s								
DOU	Dourbes	150.01	356		PKPbc		PKPbc	08 21 25.9	-0.2
BAIF	Baives	150.07	357		*e*PKP1		PKPbc	08 21 26.0	-0.2
	comp=Z,15nm,0.6s								
WLF	Walferdange	150.32	354		PKPbc		PKPbc	08 21 27.2	+0.3
WLF					PKPab		PKPab	08 21 35.3	-0.4
WLF	Walferdange	150.32	354		*e*PKPbc		PKPbc	08 21 27.0	+0.2
MPEP	Malo Peshtene	150.38	326		P		PKPbc	08 21 26.6	-0.6
KDZ	Kurdzhali	150.60	322		P		PKPbc	08 21 26.9	-0.9
STU	Stuttgart	150.80	350		*e*PKPbc		PKPbc	08 21 27.8	-0.2
VTS	Vitosha	151.19	326	⇑	*i*P		PKPbc	08 21 28.7	-0.4
SOKA	Soboth	151.36	341	⇑	*i*PKPbc		PKPbc	08 21 28.1	-1.2
	comp=Z,2.9nm,0.5s								
BFO	Black Forest	151.36	351		*e*PKPbc		PKPbc	08 21 28.7	-0.6
BFO					*e*PKPab		PKPab	08 21 39.2	-0.9
FLN	La Foliniere	151.38	3		*e*PKP1		PKPbc	08 21 28.4	-0.9
	comp=Z,15nm,0.5s								
CDF	Champ du Feu	151.43	352		*e*PKP1		PKPbc	08 21 28.8	-0.6
LDF	La Druitiere	151.57	3		*e*PKP1		PKPbc	08 21 28.6	-1.1
	comp=Z,9.0nm,0.4s								
MEZF	Maizieres J'vi	151.57	355		*e*PKP1		PKPbc	08 21 29.3	-0.4
ROSF	Rostrenen	151.58	7		*e*PKP1		PKPbc	08 21 28.5	-1.2
MMB	Musomiste	151.60	324		P		PKPbc	08 21 28.8	-1.2
WATA	Walderalm	151.70	346	⇓	*i*PKPbc		PKPbc	08 21 29.2	-0.8
	comp=Z,6.0nm,0.5s								
SGMF	Saint Gilles	151.74	6		*e*PKP1		PKPbc	08 21 29.0	-1.1
	comp=Z,14nm,0.6s								
GRR	Gorron	151.74	4		*e*PKP1		PKPbc	08 21 29.3	-0.8
	comp=Z,12nm,0.5s								
WTTA	Wattenberg	151.75	346	⇓	*i*PKPbc		PKPbc	08 21 29.6	-0.6
	comp=Z,8.6nm,0.4s								
MOTA	Moosalm	151.79	346	⇓	*i*PKPbc		PKPbc	08 21 30.0	-0.2
	comp=Z,2.7nm,0.4s								
HAU	Haudompre	151.94	353		*e*PKP1		PKPbc	08 21 29.7	-0.8
	comp=Z,5.6nm,0.5s								
QUIF	Quistinic	152.00	7		*e*PKP1		PKPbc	08 21 29.6	-1.1
ABTA	Abfaltersbach	152.02	344	⇓	*i*PKPbc		PKPbc	08 21 29.4	-1.4
	comp=Z,10nm,0.5s								
HINF	Hinteralfeld	152.07	353		*e*PKP1		PKPbc	08 21 29.9	-0.9
	comp=Z,3.9nm,0.5s								
LJU	Ljubljana	152.09	341		*e*PKPdf		PKPbc	08 21 30.0	-0.9
LOR	Lormes	152.87	357		*e*PKP1		PKPbc	08 21 32.6	0.0
	comp=Z,4.2nm,0.4s								
SSF	Saint Saulge	153.10	357		*e*PKP1		PKPbc	08 21 32.5	-0.6
	comp=Z,2.7nm,0.4s								
MFF	Saint Martin d	153.56	3		*e*PKP1		PKPbc	08 21 33.2	-0.9
	comp=Z,7.3nm,0.6s								
ESDC	Sonseca Array	159.92	13		PKPab		PKPab	08 22 15.8	-1.5
	comp=Z,0.2nm,0.3s,baz=350,slow=7.5,SNR=4.8								
DBIC	Dimbokro	165.18	154		PKPab		PKPab	08 22 41.3	+0.3
	comp=Z,6.1nm,1.0s,baz=193,slow=5.0,SNR=5.1								

NIED ***05*** *08:10:00,42.˚30N×144.˚90E,h26km,Mw4.1 Best double couple: M₀1.35000×10¹⁵ NP1:φ₈19.00000°,δ74.00000°, λ65.00000°. NP2:φ₈258.00000°,δ29.00000°,λ146.00000°.*
BJI ***05*** *08:10:44.9,42.˚19N×145.˚12E,h25km,mB4.6/3,mb4.5/5*
IDC ***05*** *08:10:46.4±2.5,42.˚45N×144.˚82E,h0km,mb4.1/8, mb1 4.2/9,mb1mx3.9/23,mbtmp4.1/9,ML3.3/1,MS3.3/4, Ms1 3.3/4,ms1mx3.0/24,Error ellipse: s-maj=67.7km s-min=24.1km az=172.0*
NEIC ***05*** *08:10:49.9,42.˚27N×144.˚90E,h28km,mb4.2/4,After JMA.*
MOS ***05*** *08:10:49.6±1.2,42.˚27N×144.˚80E,h44km,mb4.5/8,Error ellipse: s-maj=14.5km s-min=13.4km az=111.2*
JMA ***05*** *08:10:49.8,42.˚27N×144.˚90E,h28km±1km,M4.3*
ISC 05 08:10:47.9±1.2,42.˚25N±0.˚05×144.˚96E±0.˚07,h17km±5km, n40,σ1s01/48,mb4.1/12,MS3.3/3,2C-3D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAK	Akkeshi	0.77	345	⇓	P	Pg	08 11 04.0	+1.1
JAK				*e*S		Sg	08 11 14.9	+1.9
JOB	Onbets	1.06	308	⇓	P	Pg	08 11 08.3	0.0
JCH	Churui	1.24	288	⇑	P	Pg	08 11 11.0	-0.8
JCH				*e*S		Sg	08 11 27.0	-0.9
NEM2	Nemuro 2	1.25	27	P		Pg	08 11 11.0	-1.0
NEM2				*e*S		Sg	08 11 27.1	-1.3
JNK	Nakash	1.34	352	⇑	P	Pn	08 11 11.9	0.0
JNK				*e*S		Sg	08 11 28.5	-2.8
ERM	Erimo	1.36	261	*e*Pn		Pn	08 11 13.2	+1.1
ERM				*e*Sn		Sg	08 11 33.2	+1.3
JAR	Ashorobuto	1.36	320	⇓	P	Pn	08 11 12.2	0.0
JNBK	Urakawa-nobuka	1.64	272		P	Pn	08 11 15.7	-0.2
JRA	Rausu	1.69	4		P	Pn	08 11 16.9	+0.3
JRA				*e*S		Sn	08 11 37.8	-0.1
YUK	Yuzh-Kuril'sk	1.90	20	*i* PN		Pn	08 11 20.3	+0.8
YUK				*i* S		Sn	08 11 42.6	-0.4
YUK				pmax		pmax		
	comp=Z,120nm,1.0s							
YUK				smax				
	comp=N,760nm,1.0s							
YUK				smax				
	comp=E,390nm,1.0s							
YUK				smax				
	comp=N,2μm,0.5s							
YUK				smax				
	comp=E,873nm,0.5s							
YSS	Yuzh-Sakhalins	4.96	342	*e*PN		Pb	08 12 17.0	+2.8
YSS				pmax		pmax		
	comp=Z,20nm,0.8s							
MAJO	Matsushiro	7.74	225	*e*Pn		Pn	08 12 39.9	+0.2
MAT	Matsushiro	7.74	225	P		Pn	08 12 39.3	-0.4
MAT				S		Sn	08 14 03.8	-3.1
KLR	Kul'dur	11.56	312	*e*PN		Pn	08 13 32.6	+0.6
KSRS	Korea Array	13.94	256	Pn		Pn	08 14 04.3	-0.2
	comp=Z,0.2nm,0.3s,baz=65,slow=12,SNR=4.1							
KSRS				LR		LR	08 19 24.3	
	comp=Z,131nm,19.0s,baz=65,slow=37							
ULN	Ulaanbaatar	27.16	295	*e*P		P	08 16 31.6	+1.4
	comp=Z,5.8nm,1.0s,mb4.1							
ULN	Ulaanbaatar	27.16	295	*e*P		P	08 16 31.6	+1.4
ULN				pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.1							
SONM	Songino Array	27.61	295	P		P	08 16 33.8	-0.3
SONM				LR		LR	08 28 17.4	
SONM	Songino Array	27.61	295	P		P	08 16 33.8	-0.3
	comp=Z,7.3nm,0.9s,mb4.3,baz=85,slow=8.5,SNR=25							
SONM				LR		LR	08 28 17.4	
	comp=Z,43nm,19.7s,MS3.0,baz=94,slow=38							
SONM	Songino Array	27.61	295	P		P	08 16 33.8	-0.4
SONM				pmax		pmax		
	comp=Z,7.0nm,0.9s							
SONM				MLR		MLR		
	comp=Z,43nm,19.7s							
ZAA0	Zalesovo Array	40.64	308	*e*P		P	08 18 25.4	-1.3
ZALV	Zalesovo Beam	40.64	308	P		P	08 18 26.7	-0.1
ZALV				PcP		PcP	08 20 28.6	+0.4
ZALV	Zalesovo Beam	40.64	308	P		P	08 18 26.7	-0.1
	comp=Z,2.4nm,0.4s,mb4.2,baz=89,slow=8.2,SNR=9.8							
ZALV				PcP		PcP	08 20 28.6	+0.4
	comp=Z,0.6nm,0.3s,baz=147,slow=3.5,SNR=3.8							
ZALV	Zalesovo Beam	40.64	308	P		P	08 18 26.7	0.0
ZALV							08 20 28.7	
ZALV				pmax		pmax		
	comp=Z,2.0nm,0.4s,mb4.1							
ILAR	Eielson Array	43.64	35	P		P	08 18 51.5	+0.5
	comp=Z,1.1nm,1.0s,mb3.6,baz=277,slow=8.1,SNR=9.2							
ILAR	Eielson Array	43.64	35	P		P	08 18 51.6	+0.5
ILAR				pmax		pmax		
	comp=Z,1.0nm,1.0s							
MK31	Makanchi Array	43.87	298	*e*P		P	08 18 52.5	-0.7
MKAR	Makanchi Array	43.87	298	P		P	08 18 52.8	-0.3
	comp=Z,0.5nm,0.3s,mb3.7,baz=79,slow=7.7,SNR=7.6							
MKAR	Makanchi Array	43.87	298	P		P	08 18 52.8	-0.3
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
KURK	Kurchatov	45.05	305	*e*P		P	08 19 01.8	-0.7
	comp=Z,2.1nm,0.6s,mb4.1							
KURK	Kurchatov	45.05	305	*e*P		P	08 19 01.8	-0.7
KURK				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb4.1							
EGAK	Eagle	46.08	35	*e*P		P	08 19 12.6	+2.1
	comp=Z,1.9nm,0.8s,mb4.1							
BVAR	Borovoye Array	49.22	310	P		P	08 19 34.6	-0.4
	comp=Z,2.7nm,0.4s,mb4.6,baz=78,slow=8.3,SNR=18							
BVAR	Borovoye Array	49.22	310	P		P	08 19 34.6	-0.4
BVAR				pmax		pmax		
	comp=Z,3.0nm,0.4s							
ABKAR	Akbulak array	56.75	309	*e*P		P	08 20 30.1	-0.5
	comp=Z,7.3nm,0.6s,mb4.9							
FINES	FINESS Array B	65.47	332	P		P	08 21 28.7	-0.8
	comp=Z,2.7nm,0.4s,mb4.6,baz=44,slow=7.2,SNR=10							
FINES				LR		LR	08 53 09.2	
	comp=Z,32nm,21.6s,MS3.5,baz=190,slow=39							
FINES	FINESS Array B	65.47	332	P		P	08 21 28.7	-0.8
FINES				pmax		pmax		
	comp=Z,3.0nm,0.4s							
FINES				MLR		MLR		
	comp=Z,32nm,21.6s							
NOA	NORSAR Array B	70.41	338	P		P	08 22 00.2	-0.4
	comp=Z,1.9nm,0.7s,mb4.1,baz=36,slow=6.1,SNR=4.8							
NOA				LR		LR	08 56 36.0	
	comp=Z,18nm,21.2s,MS3.3,baz=290,slow=39							
NOA	NORSAR Array B	70.41	338	P		P	08 22 00.2	-0.4
NOA				pmax		pmax		
	comp=Z,2.0nm,0.7s							
NOA				MLR		MLR		
	comp=Z,18nm,21.2s							
TXAR	Lajitas Array	84.82	55	P		P	08 23 23.0	+1.4
	comp=Z,0.2nm,0.7s,mb3.4,baz=296,slow=4.6,SNR=4.8							

ISCJB ***05*** *08:27:02.3±0.7,17.˚75S±0.˚06×178.˚76W±0.˚04, h525km±8km,mb4.5/102,Error ellipse: s-maj=9.8km s-min=4.6km az=151.0*
NEIC ***05*** *08:27:04.8±0.6,17.˚82S×178.˚68W,h548km±6km,mb4.5/80, Error ellipse: s-maj=8.7km s-min=4.9km az=141.0*
IDC ***05*** *08:27:04.9±2.0,17.˚96S×178.˚64W,h554km±23km, mb4.1/14,mb1 4.3/14,mb1mx4.2/16,mbtmp4.1/14,Error ellipse: s-maj=13.8km s-min=10.3km az=129.0*
BJI ***05*** *08:27:07.0,17.˚60S×179.˚07W,h567km,mB4.6/18, mb4.6/27*
SZGRF ***05*** *08:27:52.7,17.˚50S×176.˚50W,h33km,Fiji Islands region*
ISC 05 08:27:02.9±0.7,17.74S±0.˚06×178.˚73W±0.˚04, h520km±8km,h558km±4.3km:pP-P,n591,σ0s56/467, mb4.5/102,186C-166D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	Nonsavu	3.07	270	*e*Pn		P	08 28 23.4	+7.5
AFI	Afiamalu	7.70	61	*e*Pn		P	08 28 57.0	+0.2
	313nm,0.6s							
AFI				*e*S		S	08 30 28.9	-1.3
AFI	Afiamalu	7.70	61	P		P	08 28 57.2	+0.4
	41nm,0.3s,baz=84,slow=2.3,SNR=49							
AFI				S		S	08 30 28.4	-1.8
	6.4nm,0.3s,baz=310,slow=22,SNR=3.6							
DZM	Mont Dzumac	14.59	250	*e*LR		LR	08 32 16.0	
	175nm,26.9s							
DZM	Mont Dzumac	14.59	250	*e*P		P	08 30 08.4	-0.2
NOUC	Port Laguerre	14.73	250	*e*P		P	08 30 10.2	+0.3
OUZ	Omahuta	18.70	200	*e*P		P	08 30 50.7	+2.1
	44nm,0.9s							
URZ	Urewera	20.77	189	*e*P		P	08 31 04.5	-2.8
	38nm,0.5s							
URZ	Urewera	20.77	189	P		P	08 31 04.3	-3.0
	18nm,0.3s,baz=358,slow=2.8,SNR=25							
URZ				S		S	08 34 22.5	-2.9
	11nm,0.9s,baz=184,slow=22,SNR=5.2							
SNZO	South Karori	24.16	192	*e*P		P	08 31 36.3	-1.3
	65nm,1.1s,mb5.2							
KHZ	Kahutara	25.47	193	*e*P		P	08 31 46.9	-2.3
	28nm,0.8s,mb4.9							
RPZ	Rata Peaks	27.30	196	*e*P		P	08 32 03.7	-1.6
	16nm,0.6s,mb4.8							
RPZ	Rata Peaks	27.30	196	P		P	08 32 02.7	-2.6
	11nm,0.6s,mb4.7,baz=27,slow=19,SNR=10							
PPT	Papeete	27.77	94	P		P	08 32 08.9	-0.9
	24nm,0.6s,mb5.0,baz=340,slow=14,SNR=4.7							
EIDS	Eidsvold	29.04	250	*e*P		P	08 32 21.0	+0.2
EIDS	Eidsvold	29.04	250	*e*P		P	08 32 21.1	+0.3
	25nm,0.8s,mb4.9							
KWAJ	Kwajalein Atol	29.62	332	*e*P		P	08 32 27.7	+1.7
	84nm,1.0s,mb5.2							
ARMA	Armidale	29.76	239	*e*P		P	08 32 28.3	+1.3
ARMA	Armidale	29.76	239	*e*P		P	08 32 28.4	+1.4
	39nm,0.7s,mb5.0							
MGCD	Mangrove Creek	31.14	235	*e*P		P	08 32 39.8	+0.9
	78nm,1.3s,mb5.1							
CTA	Charters Tower	33.17	260	*e*P		P	08 32 56.9	+0.5
	11nm,0.8s,mb4.4							
CTAO	Charters Tower	33.17	260	*e*P		P	08 32 56.8	+0.4
	15nm,0.8s,mb4.6							
CNB	Canberra Magne	33.29	232	*e*P		P	08 32 58.0	+0.9
CAN	Canberra	33.56	232	*e*P		P	08 32 60.0	+0.5
	28nm,1.3s,mb4.6							
CMSA	Cobar Meteorol	34.97	240	*e*P		P	08 33 11.7	+0.4
QLP	Quilpie	35.31	249	*e*P		P	08 33 14.4	+0.2
COEN	Coen	36.80	270	*e*P		P	08 33 27.7	+1.0
COEN	Coen	36.80	270	*e*P		P	08 33 27.6	+1.0
	106nm,0.8s,mb5.4							
TOO	Toolangi	37.04	230	*e*P		P	08 33 28.9	+0.5
STKA	Stephens Creek	38.44	241	*e*P		P	08 33 40.7	+0.8
	17nm,0.6s,mb4.8							
STKA	Stephens Creek	38.44	241	*e*P		P	08 33 40.8	+0.9
	12nm,1.1s,mb4.3							
STKA	Stephens Creek	38.44	241	P		P	08 33 40.8	+0.9
	22nm,0.6s,mb4.9,baz=90,slow=9.4,SNR=75							
ARPS	Mount Arapiles	39.51	233	*e*P		P	08 33 48.4	0.0
	35nm,0.7s,mb5.0							
BBOO	Buckleboo	43.22	241	*e*P		P	08 34 18.1	+0.1
	34nm,0.6s,mb5.0							
WRAB	Tennant Creek	44.35	259	*e*P		P	08 34 26.9	-0.1
	11nm,0.6s,mb4.6							
WRAB				*e*		pP	08 36 06.2	+3.9
ASAR	Alice Springs	44.54	254	P		P	08 34 28.5	+0.1
	85nm,0.7s,mb5.4,baz=88,slow=8.1,SNR=1021							
ASAR				PcP		PcP	08 35 59.6	-0.8
	5.3nm,0.9s,baz=98,slow=4.8,SNR=5.4							
ASAR				S		S	08 40 22.4	-3.7
	6.8nm,0.9s,baz=88,slow=16,SNR=21							
GUMO	Guam	47.53	309	*e*P		P	08 34 51.8	+0.6
	82nm,0.7s,mb5.4							
GUMO	Guam	47.53	309	P		P	08 34 51.6	+0.5
	94nm,0.6s,mb5.5,baz=181,slow=12,SNR=16							
FORT	Forrest	49.80	244	*e*P		P	08 35 07.2	-0.7
	38nm,0.6s,mb5.0							
FORT	Forrest	49.80	244	*e*P		P	08 35 07.1	-0.8
	45nm,0.6s,mb5.1							
MBWA	Marble Bar	57.82	256	*e*P		P	08 36 04.0	-0.8
	11nm,0.6s,mb4.2							
MORW	Morawa	60.27	246	*e*P		P	08 36 20.2	-0.9
SBA	Scott Base	60.57	183	*e*P		P	08 36 23.0	+0.7
	4.1nm,0.9s,mb3.8							
CASY	Casey	66.16	205	*e*P		P	08 36 57.3	-1.0
	11nm,1.0s,mb4.3							
MAJO	Matsushiro	67.59	324	*e*P		P	08 37 07.0	-0.6
	24nm,0.8s,mb4.8							
MAT	Matsushiro	67.59	324	P		P	08 37 07.1	-0.4
ATKA	Atka Island	69.75	3	*e*P		P	08 37 19.0	-1.2
	72nm,1.0s,mb5.2							
KSM	Kuching	72.36	277	*e*P		P	08 37 37.0	+0.5
	31nm,0.8s,mb4.8							
KSRS	Korea Array	74.37	318	P		P	08 37 48.2	+0.8
	3.6nm,0.7s,mb3.9,baz=129,slow=6.0,SNR=22							
CHGN	Chignik	75.71	12	*e*P		P	08 37 52.2	-2.3
SCI	San Clemente I	76.45	49	⇓	P	P	08 37 59.1	0.0
	baz=77							
SMMC	Simmler	76.68	46	⇓	P	P	08 38 01.0	+0.7
	baz=77							
PASC	Pasadena Art C	77.33	48	*e*P		P	08 38 03.5	-0.5
	21nm,0.6s,mb4.7							
ARVC	Arvin	77.39	47	⇓	P	P	08 38 04.3	+0.1
	baz=78							
109C	Camp Elliot, M	77.44	49	⇑	P	P	08 38 04.4	-0.1
	baz=78							
MWC	Mount Wilson	77.45	48	*e*P		P	08 38 04.7	+0.1
	12nm,0.6s,mb4.5							
NJ2	Nanjing	77.59	310	*e*P		P	08 38 02.2	-3.2
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb4.4							
VES	Vestal, Richgr	77.60	46	⇑	P	P	08 38 05.1	-0.2
	baz=78							
OHAK	Old Harbor	77.64	14	*e*P		P	08 38 04.2	-0.8
	comp=Z,32nm,0.8s,mb4.7							
MURC	Murrieta	77.74	49	⇑	P	P	08 38 06.2	+0.1
	baz=78							
BFSC	Mount Baldy Ra	77.74	48	⇓	P	P	08 38 06.0	-0.2
	baz=78,SNR=6.5							
RCTC	Rector, Farmer	77.74	45	⇑	P	P	08 38 06.1	0.0
	baz=78							
EDW2	Edwards Air Fo	77.84	47	⇑	P	P	08 38 06.8	+0.1
	baz=78,SNR=16							
MDJ	Mudanjiang	77.87	325	P		P	08 38 07.1	+0.5
MDJ				pmax		pmax		
	comp=Z,32nm,0.6s,mb4.8							
MDJ				pmax		pmax		
	comp=Z,44nm,4.8s							
ISA	Isabella	77.92	46	⇑	P	P	08 38 07.3	+0.3
	baz=78,SNR=14							
ISA	Isabella	77.92	46	*e*P		P	08 38 07.3	+0.2
	comp=Z,12nm,0.9s,mb4.2							
CMB	Columbia Colle	77.93	43	*e*P		P	08 38 07.3	+0.2
	comp=Z,8.9nm,0.9s,mb4.1							
MONP	Monument Peak	77.94	50	⇑	P	P	08 38 07.6	+0.4
	baz=78,SNR=16							
WDC	Whiskeytown Da	78.01	40	*e*P		P	08 38 07.5	+0.1
	comp=Z,8.6nm,1.2s,mb4.0							
DVTC	Desert V Tower	78.06	50	⇑	P	P	08 38 08.2	+0.4
	baz=78							
PFO	Pinyon Flat Ob	78.28	49	⇑	P	P	08 38 09.4	+0.4
	baz=78							
KDAK	Kodiak Island	78.31	14	*e*P		P	08 38 08.9	+0.3
	comp=Z,19nm,0.8s,mb4.5							
LRMC	Laurel Mountai	78.36	47	⇓	P	P	08 38 09.6	+0.1
	baz=79							
SWSC	Sam W. Stewart	78.42	50	⇓	P	P	08 38 09.8	0.0
	baz=79							
YBH	Yreka Blue Hor	78.59	39	*e*P		P	08 38 10.9	+0.4
	comp=Z,10nm,0.9s,mb4.2							
CWC	Cottonwood Cre	78.60	46	⇑	P	P	08 38 11.0	+0.3
	baz=79							
MLAC	Mammoth Lakes	78.73	44	⇓	P	P	08 38 12.1	+0.7
	baz=79							
BELC	Belle Mtn. Jos	78.80	49	⇑	P	P	08 38 12.0	+0.2
	baz=79,SNR=6.6							
MPMC	Manual Prospec	78.81	46	⇑	P	P	08 38 12.1	+0.3
	baz=79,SNR=8.0							
WAKR	Walker	78.81	43	*e*P		P	08 38 12.3	+0.6
GSC	Go

S12A **Delamar Landin** 81.42 46 ⇑P P 08 38 26.2 +0.7
baz=82,SNR=8.0
Y15A **Casa Rosa Ranc** 81.44 50 ⇑P P 08 38 26.1 +0.4
baz=82
VIPM **Ingram Point** 81.45 38 P P 08 38 25.5 +0.1
WVOR **Wild Horse Val** 81.48 40 eP P 08 38 25.5 -0.1
comp=Z,16nm,0.9s,mb4.5
W14A **Seligman** 81.49 49 ⇓P P 08 38 26.5 +0.7
baz=82
Q11A **Duckwater** 81.50 45 ⇓P P 08 38 26.1 +0.3
baz=82,SNR=8.1
217A **Green Valley** 81.57 53 ⇓P P 08 38 27.0 +0.6
baz=82,SNR=11
TDL **Tradedollar La** 81.61 36 P P 08 38 26.6 +0.3
V14A **Boquillas Ranc** 81.67 49 ⇑P P 08 38 27.4 +0.6
baz=82,SNR=20
T13A **Saint George** 81.78 47 ⇓P P 08 38 27.7 +0.4
baz=82
Z16A **Peralta Trail,** 81.83 51 ⇓P P 08 38 27.9 +0.2
baz=82,SNR=7.1
TUC **Tucson** 81.84 52 eP P 08 38 28.4 +0.6
comp=Z,9.2nm,1.0s,mb4.2
G06A **Carlson Farm,** 81.86 37 ⇑P P 08 38 27.1 -0.4
baz=82
I07A **Izee** 81.86 39 ⇓P P 08 38 27.9 +0.3
baz=82,SNR=18
HDW **Hoodsport** 81.94 34 P P 08 38 28.1 +0.3
R12A **Pony Springs,** 81.94 46 ⇓P P 08 38 28.4 +0.3
baz=82,SNR=8.0
U14A **Mt Trumbull** 82.00 48 ⇓P P 08 38 29.0 +0.6
baz=82,SNR=18
GNW **Green Mountain** 82.01 34 eP P 08 38 28.0 -0.2
comp=Z,5.4nm,1.0s,mb3.9
Y16A **Circle Bar Ran** 82.03 51 ⇑P P 08 38 29.3 +0.6
baz=82
318A **Bisbee** 82.06 54 ⇑P P 08 38 29.2 +0.4
baz=82
W15A **Williams** 82.06 49 ⇑P P 08 38 29.7 +0.9
baz=82
J08A **Circle Bar Ran** 82.08 40 ⇑P P 08 38 28.9 +0.2
baz=82
S13A **Holt Ranch, En** 82.09 47 ⇓P P 08 38 29.2 +0.4
baz=82
Q12A **Willow Creek R** 82.15 45 ⇓P P 08 38 29.3 +0.1
baz=82
O11A **Cowboy Ranch,** 82.16 44 ⇑P P 08 38 29.4 +0.3
baz=82
WPW **White Pass** 82.19 36 P P 08 38 29.2 +0.1
D05A **Enumclaw** 82.24 35 ⇓P P 08 38 30.0 +0.6
baz=82
218A **Dragoon** 82.25 53 ⇓P P 08 38 30.6 +0.8
baz=82,SNR=5.3
R13A **O'Grain Ranch,** 82.31 46 ⇑P P 08 38 30.4 +0.4
baz=83
X16A **Lo Mia Camp, P** 82.31 50 ⇑P P 08 38 30.8 +0.7
baz=83
P12A **McGill** 82.32 45 ⇑P P 08 38 30.1 +0.1
baz=83,SNR=5.6
PGC **Sidney** 82.34 33 eP P 08 38 29.9 0.0
comp=Z,0.7nm,0.9s
TTA **Tatalina** 82.36 10 eP P 08 38 29.3 -0.3
T14A **Hurricane** 82.38 47 ⇑P P 08 38 30.9 +0.5
baz=83
Y17A **Roosevelt** 82.42 51 ⇓P P 08 38 30.8 +0.2
baz=83
V15A **Kaibab Nationa** 82.43 49 ⇑P P 08 38 31.3 +0.6
baz=83,SNR=14
N11A **Elko Archery C** 82.45 43 ⇑P P 08 38 30.9 +0.3
baz=83
PMR **Palmer** 82.51 14 eP P 08 38 29.2 -1.2
comp=Z,11nm,0.6s,mb4.6
W16A **Flagstaff** 82.56 50 ⇓P P 08 38 31.6 +0.3
baz=83
319A **Douglas** 82.57 54 ⇓P P 08 38 32.3 +0.8
baz=83,SNR=9.2
118A **Homack Ranch,** 82.60 52 ⇑P P 08 38 32.2 +0.6
baz=83
U15A **North Rim** 82.63 48 ⇓P P 08 38 32.4 +0.7
baz=83,SNR=26
L10A **Juniper Basin** 82.64 42 ⇓P P 08 38 31.7 +0.1
baz=83
F07A **Phinny Hill Vi** 82.64 37 ⇓P P 08 38 31.5 0.0
baz=83
Q13A **Wheeler Ranch,** 82.66 45 ⇓P P 08 38 31.6 -0.1
baz=83,SNR=7.6
M11A **Holland Ranch,** 82.74 42 ⇓P P 08 38 32.3 +0.3
baz=83,SNR=7.9
X17A **Forest Lakes** 82.74 51 ⇑P P 08 38 33.0 +0.8
baz=83,SNR=10
O12A **Currie** 82.83 44 ⇓P P 08 38 32.5 -0.1
baz=83,SNR=7.4
T15A **Red Dirt Ranch** 82.85 48 ⇓P P 08 38 33.1 +0.4
baz=83
WUAZ **Wupatki** 82.86 49 ⇓P P 08 38 33.3 +0.5
baz=83,SNR=10
WUAZ **Wupatki** 82.86 49 eP P 08 38 33.4 +0.5
comp=Z,10.0nm,0.9s,mb4.3
JCW **Jim Creek** 82.87 34 eP P 08 38 32.3 -0.2
P13A **Bates Ranch, G** 82.91 45 ⇑P P 08 38 33.1 +0.2
baz=83,SNR=10
DIV **Divide** 82.91 15 eP P 08 38 31.2 -1.3
comp=Z,26nm,0.6s,mb4.9
N12A **Clover Valley,** 82.93 43 ⇓P P 08 38 33.3 +0.3
baz=83,SNR=8.9
N12A **Clover Valley,** 82.93 43 eP P 08 38 33.5 +0.4
PPLA **Purkeypile** 83.03 12 eP P 08 38 30.9 -2.1
comp=Z,4.7nm,0.7s,mb4.1
E07A **Sunnyside** 83.06 37 ⇓P P 08 38 33.7 +0.1
baz=83
BMRM **Bremner River** 83.08 16 eP P 08 38 32.4 -0.8
comp=Z,10nm,0.5s,mb4.6
RSW **Rattlesnake Hi** 83.12 37 eP P 08 38 34.2 +0.4
320A **Kipp Ranch, An** 83.14 54 ⇓P P 08 38 35.2 +0.9
baz=83
L11A **Cat Creek Ranc** 83.14 42 ⇓P P 08 38 34.2 +0.2
baz=83,SNR=7.7
HAWA **Hanford** 83.15 37 eP P 08 38 34.0 0.0
comp=Z,20nm,1.1s,mb4.6
119A **Ashpeak Ranch,** 83.16 53 ⇓P P 08 38 34.5 +0.1
baz=83
S15A **Panguitch** 83.17 47 ⇑P P 08 38 35.3 +0.9
baz=83
Q14A **Sevier Lake (B** 83.18 46 ⇑P P 08 38 34.5 +0.2
baz=83,SNR=13
O13A **Hicks Ranch, I** 83.26 44 ⇓P P 08 38 35.0 +0.3
baz=84
M12A **Wells** 83.30 43 ⇑P P 08 38 35.0 +0.2
baz=84,SNR=6.4
U16A **Tuba City** 83.33 49 ⇓P P 08 38 35.6 +0.5
baz=84,SNR=17
V17A **Tonalea, Kykot** 83.33 49 ⇑P P 08 38 35.4 +0.3
baz=84,SNR=13
220A **Playas Peak, P** 83.38 54 ⇑P P 08 38 35.5 0.0
baz=84
ETW **Entiat** 83.39 35 P P 08 38 35.0 -0.2
BJI **Beijing** 83.45 316 P P 08 38 35.9 +0.3
BJI pP pP 08 40 35.4 +6.5
BJI sP sP 08 41 33.4 +11
BJI PP PP 08 41 59.3 +1.8
BJI S S 08 48 09.3 -4.5
BJI sS sS 08 51 47.5 +12
BJI SS SS 08 53 56.1 +0.9
BJI pmax pmax
comp=Z,19nm,0.8s,mb4.7
BJI pmax pmax
comp=Z,130nm,5.2s
T16A **Glen Canyon Da** 83.45 48 ⇑P P 08 38 36.2 +0.5
baz=84
X18A **Snowflake** 83.46 51 ⇑P P 08 38 36.1 +0.2
baz=84
N13A **Wendover, West** 83.48 44 ⇑P P 08 38 35.9 +0.1
baz=84
N13A **Wendover, West** 83.48 44 eP P 08 38 36.4 +0.6
E08A **Dider Farm, El** 83.48 37 ⇑P P 08 38 35.5 -0.1
baz=84
R15A **Junction** 83.49 47 ⇑P P 08 38 36.5 +0.6
baz=84
PNL **Peninsula** 83.50 19 eP P 08 38 34.7 -0.7
comp=Z,10nm,1.0s,mb4.3
L12A **House Creek Ra** 83.60 42 ⇓P P 08 38 36.5 +0.2
baz=84,SNR=6.7
BMO **Blue Mountains** 83.60 39 eP P 08 38 35.9 -0.4
comp=Z,3.5nm,0.8s,mb3.9
P14A **Drum Mountains** 83.61 45 ⇓P P 08 38 36.7 +0.3
baz=84
WTV **Waterville** 83.66 36 P P 08 38 36.2 -0.3
MSU **Marysvale** 83.70 46 eP P 08 38 38.0 +1.1

Y19A **Nutrioso** 83.72 52 ⇓P P 08 38 37.7 +0.6
baz=84,SNR=9.1
S16A **Weppner Ranch,** 83.73 47 ⇑P P 08 38 37.2 +0.1
baz=84
MFID **Camas Ranch** 83.74 41 ⇑P P 08 38 37.0 -0.1
baz=84,SNR=9.8
M13A **Montello** 83.75 43 ⇓P P 08 38 37.2 0.0
baz=84,SNR=9.6
Q15A **Fillmore** 83.79 46 ⇑P P 08 38 37.5 +0.1
baz=84
Z20A **Nine Sixteen R** 83.85 53 ⇑P P 08 38 37.8 -0.1
baz=84
D08A **Wollman Farm,** 83.87 36 ⇓P P 08 38 37.6 0.0
baz=84
X19A **St. Johns** 83.90 51 ⇑P P 08 38 38.8 +0.7
baz=84
TRF **Thorofare Moun** 83.91 12 eP P 08 38 35.7 -1.6
comp=Z,35nm,0.7s,mb5.0
MAW **Mawson** 83.92 200 P P 08 38 36.7 -0.8
comp=Z,1.2nm,0.7s,mb3.6,baz=136,slow=3.8,SNR=5.0
T17A **Navajo Res., N** 83.95 48 ⇓P P 08 38 38.8 +0.5
baz=84
V18A **Ganado** 84.00 50 ⇓P P 08 38 38.8 +0.3
baz=84,SNR=8.6
E09A **Wood Farm, Sta** 84.02 37 ⇑P P 08 38 38.1 -0.2
baz=84
R16A **Teasdale** 84.07 47 ⇑P P 08 38 39.2 +0.4
baz=84
OD2 **Odessa Site #2** 84.18 36 P P 08 38 38.7 -0.4
121A **Cookes Peak, D** 84.22 53 ⇓P P 08 38 40.0 +0.4
baz=84
F10A **Beach Ranch, E** 84.25 38 ⇓P P 08 38 38.9 -0.6
baz=84,SNR=26
BPAW **Bear Paw Mtn.** 84.35 12 eP P 08 38 37.4 -2.2
comp=Z,4.6nm,0.7s,mb4.1
Y20A **Horse Springs,** 84.36 52 ⇑P P 08 38 40.9 +0.6
baz=85,SNR=6.7
M14A **Sheep Mountain** 84.36 43 ⇑P P 08 38 40.1 0.0
baz=85,SNR=7.6
U18A **Rough Rock, Ch** 84.36 49 ⇓P P 08 38 40.3 +0.1
baz=85
I12A **Atlanta** 84.37 41 ⇑P P 08 38 40.5 +0.4
baz=85
B08A **Colville Reser** 84.38 35 ⇑P P 08 38 39.1 -1.0
baz=85
MCK **McKinley** 84.44 13 eP P 08 38 38.9 -1.1
comp=Z,25nm,1.0s,mb4.7
K13A **Stover Farm, H** 84.45 42 ⇑P P 08 38 40.8 +0.3
baz=85,SNR=8.0
X20A **Quemado** 84.54 51 ⇑P P 08 38 41.0 -0.1
baz=85
Q16A **Castle Valley** 84.58 46 ⇓P P 08 38 41.7 +0.4
baz=85
N15A **Stansbury Isla** 84.61 44 ⇓P P 08 38 41.2 -0.2
baz=85
SKAG **Skagway** 84.65 21 eP P 08 38 41.1 0.0
comp=Z,8.9nm,0.9s,mb4.3
C09A **Chrisman Ranch** 84.65 36 ⇓P P 08 38 41.1 -0.3
baz=85
R17A **Hanksville Air** 84.67 47 ⇑P P 08 38 41.9 +0.1
baz=85
T18A **Mexican Hat** 84.68 48 ⇓P P 08 38 42.0 +0.2
baz=85,SNR=19
GYA **Guiyang** 84.69 300 eP P 08 38 41.2 -0.9
GYA pP pP 08 40 44.6 +8.9
GYA sP sP 08 41 41.8 +13
GYA PP PP 08 42 11.4 +3.7
GYA SKS 08 48 10.0
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
HLID **Hailey** 84.70 41 ⇑P P 08 38 42.0 +0.3
baz=85,SNR=20
HLID **Hailey** 84.70 41 eP P 08 38 42.1 +0.4
comp=Z,7.7nm,0.8s,mb4.3
TMUT **Trail Mountain** 84.74 46 eP P 08 38 42.6 +0.6
comp=Z,5.5nm,0.8s,mb4.1
J13A **Cove Ranch, Pi** 84.77 41 ⇑P P 08 38 42.3 +0.2
baz=85,SNR=20
U19A **Dine' College,** 84.78 49 ⇑P P 08 38 42.4 0.0
baz=85,SNR=7.6
W20A **Ramah** 84.79 51 ⇓P P 08 38 42.5 +0.1
baz=85
S18A **Hurst Farm, Bl** 84.84 48 ⇑P P 08 38 42.5 -0.1
baz=85
122A **Conniff Cattle** 84.89 54 ⇑P P 08 38 43.6 +0.7
baz=85
Y21A **Point of Rocks** 84.93 52 ⇓P P 08 38 43.5 +0.4
baz=85
H12A **Diamond D Ranc** 84.93 40 ⇑P P 08 38 42.6 -0.2
baz=85,SNR=23
M15A **Larsen Ranch,** 84.93 44 ⇑P P 08 38 42.5 -0.4
baz=85,SNR=5.3
MENT **Mentasta** 84.97 15 eP P 08 38 41.7 -0.9
K14A **Jones Ranch, D** 84.98 42 ⇑P P 08 38 43.2 0.0
baz=85,SNR=8.4
HYT **Haines Junctio** 84.99 19 eP P 08 38 42.4 -0.4
X21A **Alamocita Cree** 85.03 52 ⇓P P 08 38 43.9 +0.3
baz=85
I13A **Wildhorse Cree** 85.07 41 ⇓P P 08 38 43.8 +0.3
baz=85,SNR=8.0
SRU **San Rafael** 85.12 46 ⇓P P 08 38 43.7 -0.2
baz=85
SRU **San Rafael** 85.12 46 eP P 08 38 43.9 0.0
comp=Z,6.9nm,0.7s,mb4.3
Z22A **Elephant Butte** 85.15 53 ⇓P P 08 38 44.3 +0.2
baz=85,SNR=7.1
J14A **Carey** 85.15 42 ⇓P P 08 38 44.4 +0.5
baz=85,SNR=21
T19A **Beclabito** 85.15 49 ⇓P P 08 38 44.6 +0.4
baz=85
R18A **Canyonlands Na** 85.23 47 ⇓P P 08 38 44.2 -0.2
baz=86,SNR=5.2
L15A **Malad City** 85.23 43 ⇑P P 08 38 44.3 -0.1
baz=86
H13A **Challis** 85.31 40 ⇑P P 08 38 44.7 +0.1
baz=86,SNR=11
F12A **Elk City** 85.31 39 ⇑P P 08 38 44.1 -0.5
baz=86,SNR=36
Q18A **Rafter H Ranch** 85.39 47 ⇑P P 08 38 44.6 -0.6
baz=86
Y22A **Socorro** 85.43 52 ⇓P P 08 38 45.2 -0.4
baz=86
K15A **Arbon** 85.47 43 ⇑P P 08 38 45.8 +0.4
baz=86
O17A **Robinson Place** 85.47 45 ⇑P P 08 38 45.8 +0.2
baz=86
S19A **Harvey Farm, M** 85.48 48 ⇑P P 08 38 45.6 -0.1
baz=86
324A **Moseley Ranch,** 85.55 55 ⇓P P 08 38 46.1 -0.1
baz=86,SNR=11
NEW **Newport** 85.55 36 eP P 08 38 45.1 -0.7
comp=Z,5.3nm,0.7s,mb4.3
HWUT **Hardware Ranch** 85.58 44 eP P 08 38 45.9 -0.2
comp=Z,3.4nm,0.8s,mb4.0
G13A **Cobalt** 85.59 40 ⇓P P 08 38 45.8 -0.2
baz=86,SNR=7.7
R19A **Curley Farm, L** 85.63 48 ⇓P P 08 38 46.0 -0.4
baz=86
COLA **College** 85.67 13 eP P 08 38 44.0 -1.9
comp=Z,9.4nm,0.7s,mb4.5
Z23A **Rita Site, Whi** 85.71 53 ⇑P P 08 38 46.8 -0.1
baz=86
MNTX **Cornudas Mount** 85.73 55 eP P 08 38 46.8 -0.2
comp=Z,3.7nm,1.0s,mb4.0
N17A **Moffit Pass** 85.76 45 ⇓P P 08 38 46.9 -0.1
baz=86
ILAR **Eielson Array** 85.79 13 P P 08 38 44.8 -1.7
comp=Z,5.2nm,0.4s,mb4.5,baz=222,slow=5.2,SNR=183
DLBC **Dease Lake** 85.80 23 eP P 08 38 46.6 -0.1
PV10 **Paradox Valley** 85.83 48 eP P 08 38 47.2 -0.1
comp=Z,70nm,0.6s,mb5.5
L16A **Fish Haven** 85.86 44 ⇓P P 08 38 47.1 -0.3
baz=86,SNR=6.4
626A **Big Bend Ranch** 85.87 57 ⇑P P 08 38 48.4 +0.6
baz=86,SNR=16
J15A **Blackfoot** 85.87 42 ⇓P P 08 38 48.0 +0.5
baz=86,SNR=22
F13A **Darby** 85.88 39 ⇑P P 08 38 46.8 -0.6
baz=86,SNR=16
H14A **Leadore** 85.88 41 ⇓P P 08 38 47.6 +0.2
baz=86,SNR=14
XAN **Xi'an** 85.91 308 P P 08 38 48.3 +0.5
XAN pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
XAN pmax pmax
comp=Z,14nm,5.9s
325A **Bean Ranch, Si** 85.92 55 ⇑P P 08 38 47.6 -0.3
baz=86,SNR=6.6

D12A **Red Ives Fores** 85.92 38 ⇑P P 08 38 46.8 -0.8
baz=86,SNR=10
Q19A **Hogan Spring (** 85.93 47 ⇓P P 08 38 47.8 0.0
baz=86
PV04 **Paradox Valley** 85.93 48 eP P 08 38 47.8 0.0
U21A **Nageezi** 85.97 50 ⇓P P 08 38 48.2 +0.1
baz=86,SNR=15
PV01 **Paradox Valley** 86.05 48 eP P 08 38 48.4 0.0
comp=Z,294nm,0.7s
124A **Stringfield Ra** 86.08 54 ⇓P P 08 38 48.6 -0.1
baz=86
M17A **Scullys Gap (B** 86.11 44 ⇓P P 08 38 48.6 -0.1
baz=86
Y23A **Lovelace Mesa,** 86.12 53 ⇓P P 08 38 48.9 +0.1
baz=86
G14A **Jackson** 86.14 40 ⇑P P 08 38 48.7 0.0
baz=86,SNR=5.6
K16A **Soda Springs** 86.14 43 ⇓P P 08 38 48.8 +0.1
baz=86,SNR=8.3
TXAR **Lajitas Array** 86.16 58 P P 08 38 49.9 +0.7
comp=Z,7.1nm,0.7s,mb4.4,baz=217,slow=6.0,SNR=114
C12B **Naegeli Ranch,** 86.20 37 ⇑P P 08 38 48.7 -0.1
baz=86
R20A **Redvale** 86.21 48 ⇑P P 08 38 48.7 -0.4
baz=86
ANMO **Albuquerque** 86.23 52 eP P 08 38 49.2 -0.2
comp=Z,4.0nm,1.0s,mb4.0
L17A **Cokeville** 86.27 44 ⇓P P 08 38 48.7 -0.7
baz=86
E13A **Victor** 86.30 39 ⇑P P 08 38 48.6 -0.8
baz=87
T21A **Navajo Lake** 86.30 49 ⇑P P 08 38 49.2 -0.4
baz=86
MCMT **McKenzie Canyo** 86.31 41 eP P 08 38 50.0 +0.5
comp=Z,9.2nm,1.1s,mb4.3
225A **Deer Hill, Car** 86.33 55 ⇓P P 08 38 50.0 +0.1
baz=87,SNR=7.0
H15A **Lima** 86.33 41 ⇓P P 08 38 49.8 +0.3
baz=87,SNR=19
J16A **Bone** 86.34 42 ⇓P P 08 38 50.3 +0.6
baz=87
426A **McDonald Obser** 86.39 56 ⇓P P 08 38 50.2 0.0
baz=87
Z24A **Sheeppen Canyo** 86.40 53 ⇑P P 08 38 50.0 -0.1
baz=87
P19A **Cripple Cowboy** 86.42 47 ⇑P P 08 38 50.1 -0.1
baz=87
627A **Terlingua Ranc** 86.43 58 ⇑P P 08 38 50.9 +0.5
baz=87,SNR=24
D13A **Huson** 86.47 38 ⇓P P 08 38 49.7 -0.5
baz=87
F14A **Wisdom** 86.47 40 ⇑P P 08 38 49.7 -0.5
baz=87,SNR=7.0
M18A **Lyman** 86.49 45 ⇑P P 08 38 50.1 -0.3
baz=87,SNR=6.0
527A **Woodward Ranch** 86.52 57 ⇑P P 08 38 51.0 +0.2
baz=87,SNR=10
B12A **Libby** 86.53 36 ⇓P P 08 38 50.5 +0.1
baz=87
U22A **Llaves** 86.53 50 ⇓P P 08 38 50.8 +0.1
baz=87
K17A **Gardner Place,** 86.54 43 ⇓P P 08 38 50.6 0.0
baz=87,SNR=5.6
W23A **Werner Place,** 86.55 52 ⇓P P 08 38 50.9 0.0
baz=87
N18A **Larsen Ranch,** 86.55 45 ⇑P P 08 38 50.6 -0.1
baz=87
RRI2 **Red Ridge** 86.56 42 eP P 08 38 51.5 +0.8
comp=Z,20nm,0.8s,mb4.8
Y24A **Capitan** 86.58 53 ⇑P P 08 38 50.9 -0.2
baz=87,SNR=16
Q20A **Ridgley Place,** 86.60 47 ⇑P P 08 38 50.8 -0.2
baz=87
O19A **Miners Draw (B** 86.62 46 ⇓P P 08 38 50.6 -0.5
baz=87
MSO **Missoula** 86.64 38 eP P 08 38 50.7 -0.3
comp=Z,2.4nm,0.6s,mb4.0
BSMT **Bassoo Peak** 86.67 37 eP P 08 38 50.5 -0.5
326A **Caldwell Ranch** 86.68 56 ⇑P P 08 38 51.2 -0.4
baz=87
G15A **Dillon** 86.70 40 ⇑P P 08 38 51.2 -0.1
baz=87,SNR=20
E14A **Clinton** 86.70 39 ⇓P P 08 38 50.9 -0.4
baz=87,SNR=12
C13A **Hot Springs** 86.70 38 ⇑P P 08 38 50.4 -0.9
baz=87
I16A **Newdale** 86.71 42 ⇓P P 08 38 51.9 +0.6
baz=87,SNR=21
GDL2 **Guadalupe Moun** 86.72 55 eP P 08 38 52.1 +0.4
DLMT **Dillon** 86.73 40 eP P 08 38 51.5 +0.1
comp=Z,9.0nm,0.8s,mb4.5
A12A **Yaak River Ran** 86.74 36 ⇓P P 08 38 51.1 -0.3
baz=87,SNR=5.0
L18A **Fontenelle, Gr** 86.74 44 ⇑P P 08 38 51.9 +0.4
baz=87
T22A **Edith** 86.77 50 ⇓P P 08 38 51.6 -0.2
baz=87
V23A **Ortiz Mt. (NFS** 86.77 51 ⇑P P 08 38 52.2 +0.4
baz=87
P20A **De Beque** 86.77 47 ⇑P P 08 38 51.5 -0.3
baz=87
628A **Black Gap, Mar** 86.85 58 ⇑P P 08 38 52.8 +0.4
baz=87
N19A **John Jarvie Ra** 86.85 45 ⇓P P 08 38 52.1 0.0
baz=87
TPAW **Teton Pass** 86.87 42 eP P 08 38 52.8 +0.7
comp=Z,9.5nm,1.0s,mb4.4
REDW **Red Top Meadow** 86.87 43 eP P 08 38 52.2 +0.1
comp=Z,12nm,1.0s,mb4.5
226A **Malaga, Loving** 86.87 55 ⇓P P 08 38 52.2 -0.2
baz=87,SNR=6.1
R21A **Cimarron** 86.88 48 ⇑P P 08 38 52.2 -0.1
baz=87,SNR=6.8
Z25A **Roswell** 86.88 54 ⇑P P 08 38 52.1 -0.3
baz=87
HHC **Hu-ho-hao-te** 86.93 315 eP P 08 38 52.8 +0.3
HHC pP pP 08 40 51.5 +4.6
HHC PP PP 08 42 28.2 +2.9
HHC SKS 08 48 27.1
HHC S S 08 48 45.1 -2.2
HHC sS sS 08 52 15.5 +4.3
HHC SS SS 08 54 46.9 +1.1
HHC pmax pmax
comp=Z,20nm,1.1s,mb4.7
HHC pmax pmax
comp=Z,56nm,4.8s
SWMT **Swartz Lake** 86.95 38 eP P 08 38 52.3 -0.1
comp=Z,1.5nm,0.7s,mb3.7
427A **Hayter Ranch,** 86.96 56 ⇑P P 08 38 53.1 +0.2
baz=87,SNR=10
J17A **Brown Place, J** 86.96 43 ⇓P P 08 38 52.6 0.0
baz=87
SNOW **Snow King Moun** 86.98 43 eP P 08 38 53.0 +0.4
comp=Z,17nm,1.1s,mb4.6
U23A **El Rito** 87.00 50 ⇑P P 08 38 53.1 +0.2
baz=87
DAWY **Dawson** 87.01 16 eP P 08 38 51.6 -0.7
D14A **Greenough** 87.03 38 ⇓P P 08 38 51.9 -0.9
baz=87
LRM **Limekiln Ridge** 87.04 40 eP P 08 38 53.0 +0.1
K18A **Toltan Ranch,** 87.06 44 ⇑P P 08 38 53.1 +0.1
baz=87,SNR=19
IMW **Indian Meadow** 87.06 42 eP P 08 38 53.4 +0.4
comp=Z,12nm,0.8s,mb4.6
CHMT **Chamberlain Mo** 87.09 39 eP P 08 38 52.5 -0.6
B13A **Whitefish** 87.12 37 ⇑P P 08 38 52.1 -1.0
baz=87,SNR=5.4
MOOW **Moose Ponds** 87.12 42 eP P 08 38 53.7 +0.4
comp=Z,4.2nm,0.9s,mb4.1
W24A **Lazy 6 Ranch,** 87.12 52 ⇑P P 08 38 53.0 -0.5
baz=87
S22A **4UR Ranch, Cre** 87.13 49 ⇑P P 08 38 53.7 +0.2
baz=87,SNR=7.9
EGAK **Eagle** 87.13 15 eP P 08 38 51.8 -1.0
comp=Z,29nm,1.6s,mb4.7
M19A **Rock Springs** 87.14 45 ⇑P P 08 38 53.3 -0.1
baz=87
LOHW **Long Hollow** 87.15 42 eP P 08 38 53.5 +0.1
comp=Z,26nm,1.7s,mb4.6
G16A **Moss Hill, Enn** 87.15 41 ⇓P P 08 38 53.5 +0.1
baz=87
O20A **White River Ci** 87.16 46 ⇓P P 08 38 53.6 0.0
baz=87
126A **Clayton Basin,** 87.17 55 ⇓P P 08 38 53.5 -0.3
baz=87
528A **Cox Ranch, San** 87.19 57 ⇑P P 08 38 54.3 +0.4
baz=87,SNR=7.3
E15A **Deer Lodge** 87.22 39 ⇑P P 08 38 53.4 -0.3

baz=88
C14A **Swan Lake** 87.23 38 ⇓P P 08 38 53.0 -0.7
baz=88
H16A **Russell Place,** 87.25 41 ⇑P P 08 38 54.6 +0.7
baz=88,SNR=25
L19A **Farson** 87.27 44 ⇓P P 08 38 54.0 -0.1
baz=88,SNR=13
COLD **Coldfoot** 87.30 11 eP P 08 38 52.8 -0.8
comp=Z,14nm,1.0s,mb4.5
FLWY **Flagg Ranch** 87.31 42 eP P 08 38 54.8 +0.6
comp=Z,12nm,0.9s,mb4.5
I17A **Pilgrim Ck.** 87.31 42 ⇑P P 08 38 54.8 +0.6
baz=88
J18A **Kendall Valley** 87.34 43 ⇑P P 08 38 54.4 +0.1
baz=88,SNR=28
R22A **Saguache, Gunn** 87.38 49 ⇑P P 08 38 54.6 -0.1
baz=88,SNR=7.5
T23A **Casias Ranch,** 87.41 50 ⇑P P 08 38 54.4 -0.4
baz=88
X25A **Clemmons Ranch** 87.41 53 ⇓P P 08 38 54.8 -0.1
baz=88
A13A **Flathead Natio** 87.44 37 ⇑P P 08 38 54.2 -0.4
baz=88
V24A **Rampart Ranch,** 87.44 51 ⇓P P 08 38 54.6 -0.4
baz=88,SNR=5.6
BW06 **Boulder Array** 87.44 44 ⇑P P 08 38 54.4 -0.5
baz=88,SNR=16
Z26A **Caprock** 87.44 54 ⇑P P 08 38 54.5 -0.6
baz=88,SNR=10
N20A **Spence Gulch,** 87.45 46 ⇓P P 08 38 54.7 -0.2
baz=88,SNR=7.1
428A **Kincaid Ranch,** 87.48 57 ⇓P P 08 38 55.5 +0.2
baz=88
KMI **Kunming** 87.48 297 P P 08 38 55.4 0.0
KMI pP pP 08 40 59.2 +9.2
KMI sP sP 08 41 54.8 +12
KMI pmax pmax
comp=Z,14nm,0.8s,mb4.6
F16A **Kennard Place,** 87.53 40 ⇓P P 08 38 55.0 -0.2
baz=88,SNR=8.1
H17A **Grant Village** 87.53 42 ⇑P P 08 38 56.5 +1.3
baz=88,SNR=10
Q22A **Crested Butte,** 87.54 48 ⇑P P 08 38 55.4 0.0
baz=88,SNR=5.9
SMCO **Snowmass** 87.63 48 eP P 08 38 56.0 +0.2
comp=Z,6.2nm,1.3s,mb4.2
127A **Arkansas Junct** 87.69 55 ⇓P P 08 38 55.9 -0.3
baz=88
I18A **Diamond G Ranc** 87.69 43 ⇓P P 08 38 55.9 -0.1
baz=88,SNR=5.4
O21A **Pagoda** 87.72 47 ⇑P P 08 38 56.2 0.0
baz=88
WALA **Waterton Lakes** 87.78 37 eP P 08 38 55.9 -0.4
comp=Z,0.2nm,0.8s
M20A **Sweetwater, Wa** 87.78 45 ⇑P P 08 38 56.7 +0.2
baz=88
Y26A **Elida** 87.81 53 ⇑P P 08 38 56.3 -0.5
baz=88
W25A **X Bar L Ranch,** 87.84 52 ⇑P P 08 38 56.4 -0.5
baz=88
HRY **Holter Researc** 87.84 39 eP P 08 38 56.8 +0.1
E16A **East Helena** 87.85 40 ⇓P P 08 38 56.4 -0.2
baz=88
G17A **Pierce Place,** 87.86 41 ⇓P P 08 38 57.4 +0.7
baz=88
C15A **Salmond Ranch,** 87.90 38 ⇓P P 08 38 56.1 -0.8
baz=88,SNR=9.4
L20A **Wamsutter** 87.91 45 ⇑P P 08 38 57.2 +0.2
baz=88,SNR=8.7
N21A **Black Mountain** 87.92 46 ⇓P P 08 38 57.4 +0.2
baz=88
K19A **Absolon Red Bu** 87.93 44 ⇓P P 08 38 56.3 -0.9
baz=88,SNR=9.8
P22A **Eagle** 87.95 47 ⇓P P 08 38 57.3 0.0
baz=88
V25A **Rancho No Teng** 87.97 51 ⇓P P 08 38 57.1 -0.4
baz=88
A14A **Double T Ranch** 88.02 37 ⇑P P 08 38 56.6 -0.8
baz=88,SNR=13
Z27A **Tatum** 88.05 54 ⇑P P 08 38 57.8 -0.1
baz=88
X26A **CR and CF Fran** 88.07 53 ⇑P P 08 38 57.8 -0.2
baz=88
SDCO **Great Sand Dun** 88.08 49 eP P 08 38 57.6 -0.4
comp=Z,27nm,2.9s,mb4.5
F17A **Fitzpatrick Pl** 88.18 40 ⇑P P 08 38 58.4 +0.1
baz=88
B15A **Bradely Ranch,** 88.19 38 ⇑P P 08 38 57.3 -0.9
baz=88
K20A **Yellowstone Ra** 88.19 44 ⇓P P 08 38 57.5 -0.8
baz=88,SNR=7.6
S24A **Houchin Ranch,** 88.25 50 ⇑P P 08 38 58.8 +0.1
baz=88
Y27A **Causey** 88.31 54 ⇓P P 08 38 58.4 -0.7
baz=88
O22A **Kremmling** 88.34 47 ⇓P P 08 38 59.0 -0.1
baz=89,SNR=9.0
U25A **Circle Dot Ran** 88.34 51 ⇑P P 08 38 58.7 -0.5
baz=89
M21A **Separation Pea** 88.39 45 ⇓P P 08 38 59.1 -0.3
baz=89,SNR=5.9
A15A **Johnson Ranch,** 88.42 37 ⇓P P 08 38 58.7 -0.6
baz=89
C16A **Fuhringer Ranc** 88.42 38 ⇓P P 08 38 58.5 -0.7
baz=89
P23A **Jefferson** 88.51 48 ⇓P P 08 39 00.4 +0.5
baz=89
CMAR **Chiang Mai Arr** 88.54 290 P P 08 39 01.6 +1.0
comp=Z,5.5nm,0.9s,mb4.4,baz=106,slow=2.9,SNR=21
R24A **Sanders Place,** 88.57 49 ⇓P P 08 39 00.3 +0.1
baz=89
G18A **Lazy EL Ranch,** 88.59 41 ⇓P P 08 39 00.1 0.0
baz=89,SNR=5.1
T25A **Trinidad** 88.64 50 ⇑P P 08 39 00.8 +0.3
baz=89
MSTX **Muleshoe** 88.64 54 ⇓P P 08 39 00.1 -0.5
baz=89
X27A **F and S Farms,** 88.65 53 ⇑P P 08 39 00.1 -0.6
baz=89
N22A **Wattenberg Ran** 88.67 46 ⇑P P 08 39 01.0 +0.3
baz=89
RLMT **Red Lodge** 88.69 42 ⇓P P 08 39 00.8 +0.1
baz=89,SNR=6.3
RLMT **Red Lodge** 88.69 42 eP P 08 39 01.3 +0.7
comp=Z,6.6nm,0.9s,mb4.5
B16A **M & M Farms, S** 88.74 38 ⇓P P 08 38 59.8 -0.9
baz=89
D17A **Six Diamond Ra** 88.75 39 ⇓P P 08 39 00.8 -0.1
baz=89,SNR=13
F18A **Big Timber** 88.76 41 ⇓P P 08 39 00.8 -0.1
baz=89
S25A **Robets Cordova** 88.83 50 ⇑P P 08 39 01.8 +0.4
baz=89
M22A **Cedar Creek Ra** 88.83 46 ⇓P P 08 39 01.8 +0.4
baz=89
Q24A **Divide** 88.83 48 ⇑P P 08 39 01.7 +0.2
baz=89
W27A **Bowe Ranch, En** 88.83 53 ⇑P P 08 39 01.3 -0.3
baz=89
U26A **Atchley Ranch,** 88.84 51 ⇓P P 08 39 01.3 -0.2
baz=89
ISCO **Idaho Springs** 88.84 48 eP P 08 39 01.7 +0.2
comp=Z,1.7nm,0.8s,mb3.9
C17A **Wharram Farm,** 88.92 39 ⇓P P 08 39 01.1 -0.5
baz=89,SNR=13
E18A **Harlowton** 88.94 40 ⇑P P 08 39 01.8 0.0
baz=89
A16A **West Butte Ran** 89.06 37 ⇑P P 08 39 02.0 -0.2
baz=89
N23A **Red Feather La** 89.06 46 ⇓P P 08 39 02.6 +0.1
baz=89,SNR=7.3
L22A **Ellis Ranch, M** 89.20 45 ⇑P P 08 39 03.3 +0.2
baz=90
B17A **L&G Farms, Che** 89.21 38 ⇓P P 08 39 02.3 -0.6
baz=90
D18A **Linhart Farms,** 89.30 40 ⇑P P 08 39 03.4 0.0
baz=90,SNR=5.5
A17A **Triple J Farms** 89.58 38 ⇑P P 08 39 04.2 -0.4
baz=90,SNR=14
JCT **Junction City** 89.70 58 eP P 08 39 05.2 -0.5
comp=Z,2.0nm,0.3s,mb4.4
EGMT **Eagleton** 89.71 39 ⇑P P 08 39 05.1 -0.1
baz=90
P25A **Willow Gulch B** 89.75 48 ⇑P P 08 39 05.6 -0.1
baz=90
N24A **Carr** 89.77 47 ⇑P P 08 39 06.1 +0.4
baz=90
B18A **Beardsley Farm** 89.86 38 ⇓P P 08 39 05.5 -0.5
baz=90,SNR=7.7
A18A **Metzger Ranch,** 90.06 38 ⇓P P 08 39 06.2 -0.7
baz=90,SNR=7.7
EDM **Edmonton** 90.18 33 eP P 08 39 06.0 -1.4
LZH **Lanzhou** 90.54 308 eP P 08 39 10.5 +1.1
LZH pP pP 08 41 14.5 +10
LZH pmax pmax
comp=Z,32nm,1.0s,mb5.2
LZH pmax pmax
comp=Z,110nm,5.4s
LAO **LASA Array** 91.28 41 eP P 08 39 12.6 0.0
comp=Z,22nm,1.2s,mb5.0
RSSD **Black Hills** 91.66 44 eP P 08 39 13.6 -0.8
comp=Z,4.2nm,0.8s,mb4.5
ULN **Ulaanbaatar** 92.83 320 eP P 08 39 19.8 +0.2
comp=Z,2.9nm,0.7s,mb4.4
SONM **Songino Array** 93.22 319 P P 08 39 21.1 -0.4
comp=Z,0.9nm,0.5s,mb4.0,baz=102,slow=3.4,SNR=8.4
SONM PP PP 08 43 20.4 +6.0
comp=Z,0.5nm,0.6s,baz=124,slow=9.8,SNR=3.6
YKA **Yellowknife Ar** 94.31 25 P P 08 39 24.8 -1.2
comp=Z,1.6nm,0.5s,mb4.4,baz=238,slow=4.4,SNR=7.6
GTA **Gaotai** 94.69 310 eP P 08 39 28.6 +0.2
GTA pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
MK31 **Makanchi Array** 108.80 314 ePKPdf PKiKP 08 44 30.5 -2.3
MKAR **Makanchi Array** 108.80 314 PKiKP PKiKP 08 44 30.8 -2.0
comp=Z,1.7nm,0.5s,baz=216,slow=1.2,SNR=14
KURK **Kurchatov** 111.49 318 ePKPdf PKiKP 08 44 35.3 -2.4
KSH **Kashi** 112.73 306 ePKP PKiKP 08 44 40.2 -0.3
KSH ePKS 08 48 15.6
KSH eSKS SKSdf 08 51 01.7 -1.5
KSH AMB AMB
comp=Z,72nm,3.8s
AML **Almayashu** 114.61 309 ePKPdf PKPdf 08 44 42.5 -1.5
BVAR **Borovoye Array** 116.52 321 PKP PKPdf 08 44 45.4 -1.9
comp=Z,3.7nm,0.4s,baz=156,slow=1.7,SNR=20
KEV **Kevo** 125.64 349 ep PKPdf 08 45 02.1 -2.3
comp=Z,5.2nm,0.9s
ARCES **ARCESS Array B** 126.09 350 PKP PKPdf 08 45 04.1 -1.1
comp=Z,3.9nm,0.6s,baz=29,slow=1.1,SNR=24
JOF **Joensuu** 130.30 343 ep PKPdf 08 45 10.0 -3.4
comp=Z,9.1nm,0.6s
KAF **Kangasniemi** 132.32 344 ep PKPdf 08 45 13.1 -4.1
FINES **FINESS Array B** 132.94 344 PKP PKPdf 08 45 15.3 -3.2
comp=Z,4.1nm,0.7s,baz=146,slow=1.4,SNR=5.0
NOA **NORSAR Array B** 136.17 353 PKP PKPdf 08 45 22.9 -1.5
comp=Z,0.8nm,0.8s,baz=14,slow=4.1,SNR=3.4
AKASG **Malin Array Be** 140.27 332 PKhKP PKPpre 08 45 24.0
comp=Z,1.4nm,0.3s,baz=44,slow=4.1,SNR=11
AKASG PKP PKPdf 08 45 31.9 -0.4
comp=Z,2.2nm,0.4s,baz=44,slow=2.8,SNR=6.7
BSEG **Bad Segeberg** 143.20 351 ePKPbc PKPdf 08 45 34.3 -3.1
KWP **Kalwaria Pacla** 143.79 336 ePKP PKPdf 08 45 37.0 -1.6
KWP **Kalwaria Pacla** 143.79 336 ⇑iP PKPdf 08 45 36.9 -1.7
TLCR 144.26 326 ⇓iP PKPdf 08 45 38.9 -0.6
BUR08 **Bucovina Ar. S** 144.31 332 ePKPdf PKPdf 08 45 39.1 -0.5
BUR05 **Bucovina Ar. S** 144.31 332 P PKPdf 08 45 39.6 0.0
BUR01 **Bucovina Ar. S** 144.32 332 P PKPdf 08 45 39.6 +0.1
BURAR **Bucovina Array** 144.32 332 ⇑P PKPdf 08 45 38.9 -0.6
BURAR **Bucovina Array** 144.32 332 ⇑iP PKPdf 08 45 38.9 -0.7
BR131 **Keskin Array S** 144.44 315 ePKPdf PKPdf 08 45 39.2 -0.8
BRTR **Keskin Array B** 144.44 315 PKP PKPdf 08 45 39.0 -1.0
comp=Z,11nm,0.5s,baz=106,slow=1.5,SNR=60
TESR 144.46 329 ⇑P PKPdf 08 45 39.1 -0.7
TESR 144.46 329 ⇑iP PKPdf 08 45 39.1 -0.7
STHS **Stebnicka Huta** 144.52 337 ePKP PKPdf 08 45 39.6 -0.2
NIE **Niedzica** 144.85 338 ePKP PKPdf 08 45 40.7 +0.3
KSP **Ksiaz** 144.86 343 ePKP PKPdf 08 45 40.5 +0.2
VRI **Vrincioaia** 144.87 329 ⇓P PKPdf 08 45 40.7 +0.1
VRI **Vrincioaia** 144.87 329 ⇓iP PKPdf 08 45 40.7 +0.1
PLOR **Plostina** 144.92 329 ⇑iP PKPdf 08 45 40.2 -0.5
TIRR **Tirgusor** 144.95 325 ePKPdf PKPdf 08 45 40.0 -0.7
TIRR **Tirgusor** 144.95 325 ⇑iP PKPdf 08 45 40.4 -0.3
TRPA **Tarpa** 145.06 335 ⇓iP PKPdf 08 45 40.7 -0.1
IBBN **Ibbenburen** 145.13 353 ePKPbc PKPbc 08 45 40.8 -0.8
CLZ **Clausthal** 145.22 350 ePKPbc PKPbc 08 45 41.3 -0.6
CLL **Collm** 145.23 347 ⇑iPKPdf PKPdf 08 45 41.1 +0.1
comp=Z,47nm,1.0s
CLL iPKiKP PKiKP 08 45 44.4 -0.7
BRG **Berggiesshubel** 145.43 346 ePKP PKPdf 08 45 41.8 +0.4
comp=Z,34nm,1.1s
BRG e 08 46 37.0
comp=Z,32nm,1.1s
MLR **Muntele Rosu** 145.53 329 ⇑P PKPdf 08 45 41.8 +0.1
MLR **Muntele Rosu** 145.53 329 ⇑iP PKPdf 08 45 41.8 +0.1
PSN **Preselentsi** 145.58 324 P PKPdf 08 45 42.6 +0.8
MMAI **Mount Meron Ar** 145.79 303 PKPbc PKPbc 08 45 43.8 -0.4
comp=Z,18nm,0.6s,baz=64,slow=5.7,SNR=13
VOIR 146.00 329 ⇑iP PKPdf 08 45 44.0 +1.5
DRGR 146.05 333 ⇑P PKPdf 08 45 43.6 +1.1
DRGR 146.05 333 ⇑iP PKPdf 08 45 43.7 +1.2
MOX **Moxa** 146.14 348 ePKP PKPdf 08 45 43.6 +1.0
comp=Z,34nm,1.5s
VYHS **Vyhne** 146.15 339 ePKP PKPdf 08 45 44.2 +1.6
VRAC **Vranov** 146.15 342 ⇓iP PKPdf 08 45 42.3 -0.3
TANN **Tannenbergstha** 146.19 347 ePKPbc PKPbc 08 45 44.1 -0.6
WERD **Werda** 146.19 347 ePKPbc PKPbc 08 45 44.0 -0.7
KOLL **Kolacno** 146.22 339 ePKP PKPdf 08 45 44.7 +1.9
PSZ **Piszkesteto** 146.26 337 ⇓iP PKPdf 08 45 44.5 +1.6
GUNZ **Gunzen** 146.26 347 ePKPbc PKPbc 08 45 44.3 -0.6
GUNZ ePKPab PKPab 08 45 46.7 -0.4
PRD **Provadia** 146.33 324 P PKPdf 08 45 44.8 +1.7
ZST **Bratislava** 146.98 340 ePKP PKPbc 08 45 47.0 0.0
MEM **Membach** 146.99 354 PKPbc PKPbc 08 45 46.2 -0.7
SZH **Strazhica** 147.08 326 P PKPbc 08 45 46.2 -1.2
GZR **Gura Zlata** 147.10 332 ⇓P PKPbc 08 45 46.3 -1.0
GZR **Gura Zlata** 147.10 332 ⇓iP PKPbc 08 45 46.3 -1.1
KHC **Kasperske Hory** 147.13 345 ePKPdf PKPdf 08 45 43.2 -1.0
KHC ePKPbc PKPbc 08 45 46.3 -1.0
KHC ePKPab PKPab 08 45 51.1 +0.5
SNF **Seneffe** 147.22 356 PKPbc PKPbc 08 45 46.7 -0.8
SNF PKPab PKPab 08 45 50.0 -0.9
BCLA **Clavier** 147.24 355 PKPbc PKPbc 08 45 46.7 -0.9
BCLA PKPab PKPab 08 45 49.9 -1.1
WET **Wettzell** 147.29 346 ePKPab PKPab 08 45 51.0 -0.2
BZS **Buzias** 147.44 333 ⇑iP PKPdf 08 45 40.9 -4.0
GIVF **Givet** 147.59 356 ePKP1 PKPbc 08 45 47.6 -0.9
comp=Z,41nm,0.6s
CONA **Conrad Observa** 147.61 342 iPKPbc PKPbc 08 45 48.1 -0.5
comp=Z,19nm,0.6s,SNR=18
DOU **Dourbes** 147.61 356 PKPbc PKPbc 08 45 47.7 -0.8
DOU PKPab PKPab 08 45 51.3 -1.2
BAIF **Baives** 147.67 356 ⇑iPKP1 PKPbc 08 45 48.0 -0.7
comp=Z,27nm,0.6s
WLF **Walferdange** 147.91 354 PKPbc PKPbc 08 45 48.9 -0.4
WLF **Walferdange** 147.91 354 ePKPbc PKPbc 08 45 49.0 -0.3
WLF **Walferdange** 147.91 354 ePKPbc PKPbc 08 45 49.1 -0.2
MPEP **Malo Peshtene** 148.16 328 P PKPbc 08 45 49.0 -1.2
PKSM **Moragy** 148.16 337 ⇓iP PKPbc 08 45 49.1 -1.0
STU **Stuttgart** 148.38 350 ePKPbc PKPbc 08 45 49.8 -0.7
KDZ **Kurdzhali** 148.46 324 P PKPbc 08 45 49.5 -1.5
FUR **Furstenfeldbru** 148.57 347 ePKPab PKPab 08 45 56.2 -0.3
BFO **Black Forest** 148.95 351 ePKPbc PKPbc 08 45 50.8 -1.1
BFO ePKPab PKPab 08 45 56.9 -1.1
BFO **Black Forest** 148.95 351 ePKPbc PKPbc 08 45 50.2 -1.8
BFO ePKPab PKPab 08 45 56.5 -1.6
SOKA **Soboth** 148.98 341 ⇑iPKPbc PKPbc 08 45 50.7 -1.4
comp=Z,19nm,1.2s
VTS **Vitosha** 148.98 328 ⇓iP PKPbc 08 45 51.2 -1.0
VTS **Vitosha** 148.98 328 P PKPbc 08 45 51.0 -1.2
CDF **Champ du Feu** 149.01 352 ePKP1 PKPbc 08 45 51.3 -0.8
comp=Z,20nm,0.5s
FLN **La Foliniere** 149.02 2 ⇑iPKP1 PKPbc 08 45 50.8 -1.3
comp=Z,32nm,0.6s
KBA **Koelnbreinsper** 149.09 344 ⇓iPKPbc PKPbc 08 45 50.7 -1.6
comp=Z,12nm,0.4s,SNR=7.7
MEZF **Maizieres J'vi** 149.16 355 ePKP1 PKPbc 08 45 51.7 -0.7
LDF **La Druitiere** 149.20 2 ePKP1 PKPbc 08 45 51.1 -1.4
comp=Z,22nm,0.3s
ECH **Echery** 149.22 352 ePKPdf PKPdf 08 45 46.4 -1.3
ECH ePKPbc PKPbc 08 45 51.2 -1.4
ECH ePKPab PKPab 08 45 58.1 -1.1
ROSF **Rostrenen** 149.26 6 ePKP1 PKPbc 08 45 51.1 -1.6
comp=Z,13nm,0.5s
WATA **Walderalm** 149.29 346 ⇑iPKPbc PKPbc 08 45 51.7 -1.1
comp=Z,13nm,0.5s
RETA **Reutte** 149.32 347 ⇑iPKPbc PKPbc 08 45 51.8 -1.1
comp=Z,7.7nm,0.4s
WTTA **Wattenberg** 149.34 346 ⇓iPKPbc PKPbc 08 45 52.0 -0.9
comp=Z,29nm,0.5s
GRR **Gorron** 149.38 3 ⇑iPKP1 PKPbc 08 45 51.8 -1.2
comp=Z,29nm,0.5s
MOTA **Moosalm** 149.38 347 ⇑iPKPbc PKPbc 08 45 51.9 -1.1
comp=Z,9.2nm,0.5s
SGMF **Saint Gilles** 149.40 5 ePKP1 PKPbc 08 45 51.6 -1.4
comp=Z,20nm,0.7s
MMB **Musomiste** 149.42 326 P PKPbc 08 45 51.7 -1.6
MYKA **Terra Mystica** 149.42 343 ⇓iPKPbc PKPbc 08 45 51.4 -1.8
comp=Z,16nm,0.5s
HAU **Haudompre** 149.53 353 ⇑iPKP1 PKPbc 08 45 52.3 -1.0
comp=Z,26nm,0.6s
ABTA **Abfaltersbach** 149.61 345 ⇑iPKPbc PKPbc 08 45 52.0 -1.6
comp=Z,24nm,0.6s,SNR=10
HINF **Hinteralfeld** 149.65 353 ePKP1 PKPbc 08 45 52.5 -1.1
comp=Z,15nm,0.6s
QUIF **Quistinic** 149.68 6 ePKP1 PKPbc 08 45 52.0 -1.7
DAVA **Damuels** 149.69 348 ⇑iPKPbc PKPbc 08 45 52.9 -0.9
comp=Z,16nm,0.8s,SNR=6.5
LJU **Ljubljana** 149.70 342 ePKPdf PKPbc 08 45 52.5 -1.3
FETA **Feichten** 149.77 347 ⇑iPKPbc PKPbc 08 45 53.1 -0.9
comp=Z,26nm,1.1s,SNR=7.6
VOY **Vojsko** 149.90 342 ePKPdf PKPbc 08 45 52.5 -1.8
BOJS **Bojanci** 149.96 340 iPKPdf PKPbc 08 45 53.7 -0.8
LOR **Lormes** 150.47 356 ⇑iPKP1 PKPbc 08 45 54.7 -0.9
comp=Z,37nm,0.5s
HYF **Humbligny** 150.53 358 ePKP1 PKPbc 08 45 55.1 -0.6
TUE **Stuetta** 150.57 349 ePKPbc PKPbc 08 45 55.2 -0.6
SSF **Saint Saulge** 150.70 357 ⇑iPKP1 PKPbc 08 45 55.2 -0.9
comp=Z,31nm,0.6s
KRUS **Krusevo** 150.87 328 ePKP PKPbc 08 45 54.5 -2.2
CABF **La Chapelle** 150.93 353 ⇑iPKP1 PKPbc 08 45 56.2 -0.5
comp=Z,32nm,0.8s
AVF **Avril sur Loir** 150.98 357 ⇑iPKP1 PKPbc 08 45 55.4 -1.4
comp=Z,11nm,0.6s
MFF **Saint Martin d** 151.19 2 ePKP1 PKPbc 08 45 56.0 -1.3
comp=Z,37nm,0.8s
BGF **Bois d'Agland** 151.23 358 ⇑iPKP1 PKPbc 08 45 56.3 -1.0
comp=Z,25nm,0.6s
TCF **Toulx Ste Croi** 151.52 359 ePKP1 PKPbc 08 45 56.8 -1.2
comp=Z,21nm,0.8s
LPL **La Plagne** 151.93 352 ePKP1 PKPbc 08 45 58.8 -0.1
comp=Z,7.3nm,0.6s
LPG **La Plagne** 151.94 352 ePKP1 PKPbc 08 45 58.9 -0.1
comp=Z,9.6nm,0.5s
RJF **Les Rejaudoux** 152.51 360 ePKP1 PKPbc 08 45 59.1 -1.1
comp=Z,8.8nm,0.6s
ORIF **Oris-en-Rattie** 152.63 353 ePKP1 PKPbc 08 45 59.7 -0.8
comp=Z,7.0nm,0.6s
MBDF **Montbardon** 152.70 351 ePKP1 PKPbc 08 45 59.9 -0.8
comp=Z,16nm,0.6s
VIVF **Saint-Julien-l** 152.81 355 ePKP1 PKPbc 08 46 00.1 -0.8
comp=Z,6.6nm,0.5s
CAF **Calviac** 152.88 359 ePKP1 PKPbc 08 46 00.1 -0.9
comp=Z,7.4nm,0.5s
ESDC **Sonseca Array** 157.67 11 PKPab PKPab 08 46 34.0 -1.5
comp=Z,2.7nm,0.8s,baz=343,slow=4.4,SNR=7.9
EVO **Evora** 157.75 20 ePKIKP PKPdf 08 45 59.1 -0.9
comp=Z,18nm,1.1s
KEST **Kesra** 160.70 340 PKPab PKPab 08 46 47.9 -0.8
comp=Z,1.5nm,0.7s,baz=337,slow=3.1,SNR=5.6
TORD **Torodi Ar. Bea** 175.42 185 PKP PKPdf 08 46 10.4 -3.5
comp=Z,1.4nm,0.8s,baz=256,slow=1.8,SNR=7.9

*ISCJB **05** 08:46:32.4±0.5, 18°.22N±0°.07×81°.67W±0°.03, h10km, mb3.8/10, MS3.3/2, Error ellipse: s-maj=10.6km s-min=4.4km az=9.5*
*IDC **05** 08:46:32.3±1.6, 18°.22N×81°.62W, h0km, mb3.8/4, mb1 4.0/7, mb1mx3.7/23, mbtmp3.8/7, ML3.3/3, MS3.1/6, Ms1 3.1/6, ms1mx2.8/25, Error ellipse: s-maj=41.1km s-min=27.1km az=115.0*
*NEIC **05** 08:46:34.2±0.5, 18°.26N×81°.71W, h10km, mb3.8/7, Error ellipse: s-maj=9.9km s-min=8.4km az=171.0*
*JSN **05** 08:46:34.1±1.1, 17°.66N×81°.83W, h15km±999km, MD4.6*
ISC 05 08:46:34.4±0.5, 18°.27N±0°.07×81°.68W±0°.03, h10km, n27, σ0°89/27, mb3.8/10, MS3.3/2, 4C-1D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	h m s ISC
MTDJ	**Mount Denham**	3.94	90	ePn		Pn	08 47 34.8 -0.1
MTDJ				eSn		Sn	08 48 20.3 -0.8
BBJ	**Bamboo Saint A**	4.19	88	iP		Pn	08 47 39.6 +1.3
STH	**Stony Hill**	4.63	92	iP		Pn	08 47 44.8 +0.4
STH				iS		Sn	08 48 36.9 -1.4
HOJ	**Hope**	4.69	92	⇑iP		Pn	08 47 45.1 -0.1
HOJ				⇓iS		Sn	08 48 39.6 -0.2
GWJ	**Greenwich**	4.71	92	⇑iP		Pn	08 47 45.8 +0.3
GWJ				⇑iS		Sn	08 48 40.2 0.0
CMJ	**Castle Mountai**	5.04	91	⇑iP		Pn	08 47 51.2 +1.1
TEIG	**Tepich**	6.53	288	ePn		Pn	08 48 07.4 -3.2
	33nm,0.5s						
TGUH	**Tegucigalpa,Un**	6.81	233	ePn		Pn	08 48 16.0 +1.5
	12nm,0.5s						
JTS	**JuntasAbangare**	8.54	202	Pn		Pn	08 48 36.8 -1.3
	0.1nm,0.3s,baz=45,slow=20,SNR=1.8						
JTS				LR		LR	08 51 54.8
	comp=Z,69nm,20.2s,baz=305,slow=38						
SDDR	**Presa de Saban**	9.88	84	ePn		Pn	08 48 57.1 +0.6
	22nm,0.6s						
CMIG	**Matias Romero**	12.64	267	Pn		Pn	08 49 33.3 -1.0
	0.2nm,0.3s,baz=232,slow=6.9,SNR=5.1						
CMIG				LR		LR	08 54 01.3
	comp=Z,112nm,20.0s,baz=151,slow=35						
TKL	**Tuckaleechee C**	17.42	354	P		Pn	08 50 37.2 -0.3
	0.2nm,0.3s,baz=187,slow=12,SNR=3.9						
TKL				LR		LR	08 57 00.6
	comp=Z,29nm,18.9s,baz=3.7,slow=36						
PCRV	**Puerto La Cruz**	18.36	114	LR		LR	08 58 36.8
	comp=Z,79nm,19.3s,baz=171,slow=40						
MIAR	**Mount Ida**	19.37	329	eP		Pn	08 51 00.0 -1.4
	1.8nm,0.6s						
WMOK	**Wichita Mounta**	22.38	320	eP		P	08 51 32.8 0.0
	0.9nm,0.7s,mb3.3						
TXAR	**Lajitas Array**	22.90	303	P		P	08 51 39.2 +0.8
	1.4nm,0.9s,mb3.4,baz=123,slow=10,SNR=16						
AMTX	**Amarillo**	24.30	317	eP		P	08 51 52.5 +0.6
	9.6nm,1.0s,mb4.2						
JFWS	**Jewell Farm**	25.62	345	eP		P	08 52 03.6 -0.4
	5.1nm,0.7s,mb4.2						
SADO	**Sadowa**	26.51	4	P		P	08 52 12.0 0.0
	2.2nm,0.6s,mb3.9,baz=172,slow=7.1,SNR=3.3						
SDCO	**Great Sand Dun**	28.48	318	eP		P	08 52 31.4 +1.7
	2.7nm,1.2s,mb3.8						
HWUT	**Hardware Ranch**	34.52	319	eP		P	08 53 22.4 -0.4
	2.0nm,0.9s,mb4.0						
HLID	**Hailey**	37.35	320	eP		P	08 53 47.6 +0.6
	0.9nm,0.9s,mb3.6						
YBH	**Yreka Blue Hor**	42.00	313	LR		LR	09 13 38.1
	comp=Z,18nm,18.5s,MS3.0,baz=47,slow=39						
ILAR	**Eielson Array**	63.11	334	P		P	08 57 01.4 -0.4
	1.0nm,0.7s,mb4.1,baz=112,slow=4.5,SNR=22						
ARCES	**ARCESS Array B**	78.88	20	P		P	08 58 37.4 -0.1
	0.6nm,0.7s,mb3.7,baz=311,slow=7.0,SNR=4.7						
TORD	**Torodi Ar. Bea**	79.79	79	LR		LR	09 26 30.2
	comp=Z,26nm,21.0s,MS3.6,baz=185,slow=30						
ASAR	**Alice Springs**	146.40	255	PKPbc		PKPbc	09 06 15.8 -0.5
	1.2nm,1.0s,baz=98,slow=4.1,SNR=5.9						

*NEIC **05** 08:51:15.1, 37°.28S×177°.88E, h57km, ML3.9(WEL), After WEL.*
WEL 05 08:51:14.5±0.4, 37°.23S×177°.89E, h60km±4km, ML4.0/6, Error ellipse: s-maj=2.7km s-min=2.0km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	h m s ISC
MXZ	**Matakaoa Point**	0.48	135	P*		Pn	08 51 25.9 -0.2
MXZ				S*		Sn	08 51 35.4 +0.8
MXZ	**Matakaoa Point**	0.48	135	P		Pn	08 51 25.9 -0.3
MXZ				S		Sn	08 51 35.4 +0.8
PUZ	**Puketiti**	0.90	161	PN		Pn	08 51 30.9 -0.2
PUZ				SN		Sn	08 51 43.7 +0.3
PUZ	**Puketiti**	0.90	161	P		Pn	08 51 30.9 -0.3
MWZ	**Matawai**	1.14	194	P*		Pn	08 51 33.8 -0.6
MWZ				S*		Sn	08 51 48.7 -0.5
MWZ	**Matawai**	1.14	194	P		Pn	08 51 33.8 -0.6
URZ	**Urewera**	1.20	211	P*		Pn	08 51 34.8 -0.4
URZ				S*		Sn	08 51 49.7 -0.8
URZ	**Urewera**	1.20	211	P		Pn	08 51 34.8 -0.4
OPRZ	**Ohinepanea**	1.23	239	P*		Pn	08 51 35.6 +0.2
OPRZ				S*		Sn	08 51 50.6 -0.5
CNGZ	**Carnagh Statio**	1.28	169	PN		Pn	08 51 36.0 -0.3
CNGZ				SN		Sn	08 51 53.5 +1.0
TGRZ	**Tauranga**	1.39	248	P*		Pn	08 51 38.0 +0.4
TGRZ				S*		Sn	08 51 55.3 +0.3
PRGZ	**Paritu Road**	1.70	180	PN		Pn	08 51 40.8 -1.0

PRRZ	**Plateau Road**	**1.73**	**222**	P*	Pn	08 51 43.3 +1.0
KUZ	**Kuaotunu**	**1.80**	**285**	PN	Pn	08 51 44.8 +1.6
KUZ	**Kuaotunu**	**1.80**	**285**	P	Pn	08 51 44.8 +1.6
KNZ	**Kokohu**	**1.80**	**185**	PN	Pn	08 51 42.2 -1.0
RAHZ	**Arahi**	**1.80**	**200**	PN	Pn	08 51 43.8 +0.6
MHGZ	**Mahia Peninsul**	**1.93**	**180**	PN	Pn	08 51 43.8 -1.1
NMHZ	**Naumai**	**2.06**	**204**	PN	Pn	08 51 47.3 +0.7
MKAZ	**Moumakai**	**2.17**	**272**	PN	Pn	08 51 50.2 +1.9
MKAZ	**Moumakai**	**2.17**	**272**	P	Pn	08 51 50.2 +1.9
BKZ	**Black Stump Fm**	**2.23**	**209**	P*	Pn	08 51 49.3 +0.3
BKZ	**Black Stump Fm**	**2.23**	**209**	P	Pn	08 51 49.3 +0.3
MCHZ	**McNeill Hill**	**2.41**	**203**	PN	Pn	08 51 51.3 -0.2
CKHZ	**Cape Kidnapper**	**2.51**	**194**	PN	Pn	08 51 50.8 -2.0
KAHZ	**Kahuranaki**	**2.69**	**197**	PN	Pn	08 51 54.2 -1.1
TUVZ	**Tukino**	**2.69**	**220**	P*	Pn	08 51 56.3 +0.9
TUVZ	**Tukino**	**2.69**	**220**	P	Pn	08 51 56.3 +1.0
MTVZ	**Mangateitei**	**2.88**	**221**	P*	Pn	08 51 58.5 +0.6
PXZ	**Pawanui**	**2.92**	**196**	PN	Pn	08 51 56.1 -2.3
PNHZ	**Pukenui**	**2.99**	**206**	PN	Pn	08 51 57.8 -1.6
WPHZ	**Waipukurau**	**3.05**	**201**	PN	Pn	08 51 58.3 -2.0
WCZ	**Waipu Caves**	**3.12**	**293**	P	Pn	08 52 04.5 +3.2
PRHZ	**Porangahau**	**3.19**	**197**	PN	Pn	08 51 59.8 -2.4
TSZ	**Takapari Road**	**3.21**	**207**	PN	Pn	08 52 00.3 -2.1
TSZ	**Takapari Road**	**3.21**	**207**	P	Pn	08 52 00.3 -2.1
DVHZ	**Dannevirke**	**3.35**	**203**	PN	Pn	08 52 01.5 -2.9
MRZ	**Mangatainoka R**	**3.87**	**207**	PN	Pn	08 52 08.3 -3.2
MRZ	**Mangatainoka R**	**3.87**	**207**	P	Pn	08 52 08.3 -3.2
TIWZ	**Tintock**	**3.87**	**203**	PN	Pn	08 52 08.4 -3.1
OUZ	**Omahuta**	**4.00**	**299**	P	Pn	08 52 17.3 +4.0
HOWZ	**Holdsworth Sta**	**4.11**	**206**	PN	Pn	08 52 11.0 -3.6
OGWZ	**Otaki Gorge**	**4.16**	**210**	PN	Pn	08 52 12.3 -3.2
KIW	**Kapiti Island**	**4.31**	**212**	PN	Pn	08 52 14.5 -3.0
KIW	**Kapiti Island**	**4.31**	**212**	P	Pn	08 52 14.5 -2.9
CAW	**Cannon Point**	**4.45**	**209**	PN	Pn	08 52 15.7 -3.8
CAW	**Cannon Point**	**4.45**	**209**	P	Pn	08 52 15.7 -3.7
PLWZ	**Palliser**	**4.79**	**204**	PN	Pn	08 52 19.1 -4.9
TCW	**Tory Channel**	**4.87**	**214**	PN	Pn	08 52 21.5 -3.7
TCW	**Tory Channel**	**4.87**	**214**	P	Pn	08 52 21.5 -3.6
QRZ	**Quartz Range**	**5.51**	**228**	PN	Pn	08 52 31.8 -2.1
QRZ	**Quartz Range**	**5.51**	**228**	P	Pn	08 52 31.8 -2.0
THZ	**Tophouse**	**5.95**	**219**	PN	Pn	08 52 36.6 -3.3
THZ	**Tophouse**	**5.95**	**219**	P	Pn	08 52 36.6 -3.3

NIED ***05*** *08:54:00.29˝.70N×141˝.50E.h32km.Mw3.5 Best double couple: M₀2.09000×10¹⁴ NP1:φ₈91.00000°,δ80.00000°, λ-72.00000°. NP2:φ₈210.00000°,δ20.00000°, λ-149.00000°.*

IDC 05 08:54:47.8±1.4,29˝.77N×141˝.35E,h58km±7km,mb3.6/6, mb1 3.8/7,mb1mx3.5/21,mbtmp3.6/7,Error ellipse: s-maj=40.9km s-min=23.2km az=45.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**7.25**	**340**	P	Pn	08 56 31.7	+0.6
	0.6nm,0.3s,baz=164,slow=11,SNR=4.3						
MJAR				S	Sn	08 57 52.3	+0.3
	0.2nm,0.3s,baz=221,slow=46,SNR=2.7						
ILAR	**Eielson Array**	**55.74**	**30**	P	P	09 04 17.5	-0.7
	0.6nm,1.0s,baz=255,slow=6.0,SNR=5.8						
ARCES	**ARCESS Array B**	**70.79**	**340**	P	P	09 05 57.2	-0.3
	1.2nm,0.9s,baz=57,slow=8.8,SNR=3.7						
FINES	**FINESS Array B**	**75.24**	**333**	P	P	09 06 24.1	+0.1
	4.6nm,0.8s,baz=198,slow=36,SNR=3.2						
NVAR	**Mina Array Bea**	**79.45**	**52**	P	P	09 06 48.7	+0.6
	0.4nm,0.5s,baz=280,slow=6.2,SNR=5.1						
NVAR				pP	pP	09 07 04.9	+0.6
	0.4nm,0.6s,baz=295,slow=5.5,SNR=4.0						
BRTR	**Keskin Array B**	**83.66**	**312**	P	P	09 07 10.7	+0.5
	1.2nm,0.7s,baz=82,slow=4.3,SNR=6.2						
BRTR				pP	pP	09 07 26.6	-0.1
	0.4nm,0.5s,baz=54,slow=7.3,SNR=2.0						
TXAR	**Lajitas Array**	**94.58**	**53**	P	P	09 08 03.0	+0.6
	0.1nm,0.6s,baz=270,slow=1.3,SNR=3.6						
TXAR				pP	pP	09 08 19.1	0.0
	0.3nm,0.9s,baz=270,slow=2.4,SNR=3.7						
LPAZ	**La Paz**	**149.84**	**70**	PKPbc	PKPbc	09 14 32.3	+0.4
	0.9nm,0.8s,baz=228,slow=2.9,SNR=4.3						

NIED ***05*** *09:27:00,27˝.50N×140˝.90E,h360km,Mw4.4 Best double couple: M₀4.77000×10¹⁵ NP1:φ₈112.00000°, δ51.00000°,λ-121.00000°. NP2:φ₈336.00000°, δ48.00000°,λ-58.00000°.*

MOS ***05*** *09:27:22.0±1.0,27˝.26N×140˝.06E,h364km,mb4.3/27, Error ellipse: s-maj=10.3km s-min=6.6km az=93.2*

ISCJB ***05*** *09:27:23.6±0.4,27˝.35N±0˝.04×140˝.11E±0˝.04, h370km±3km,mb4.2/62,Error ellipse: s-maj=6.7km s-min=4.7km az=35.9*

NEIC ***05*** *09:27:24.1±1.1,27˝.29N×140˝.08E,h369km±9km,mb4.3/27, Error ellipse: s-maj=10.3km s-min=4.9km az=177.0*

IDC ***05*** *09:27:24.5±1.6,27˝.31N×140˝.14E,h377km±15km, mb3.8/20,mb1 3.9/23,mb1mx3.8/28,mbtmp3.8/23,Error ellipse: s-maj=13.6km s-min=12.1km az=44.0*

JMA ***05*** *09:27:24.7±0.2,27˝.49N×140˝.86E,h390km±3km,M4.0 BJI* ***05*** *09:27:39.0,28˝.20N×139˝.21E,h447km,mB4.5/21, mb4.4/32*

ISC 05 09:27:24.7±0.4,27˚.39N±0˚.04×140˚.19E±0˚.04,h367km±3km, n447,σ0ᵉ68/460,mb4.2/62,129C-134D,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.80**	**99**	P	**Pn**	**09 28 15.9**	**-0.4**
CBIJ				S	S	09 28 55.5	-2.2
JHHJ	**Haha-jima-NKT**	**1.93**	**113**	P	**Pn**	**09 28 16.9**	**-0.2**
JHHJ				S	S	09 28 58.1	-1.1
JHJ	**Hachijo jima 2**	**5.72**	**357**	P	**Pn**	**09 28 53.7**	**+0.9**
	77nm,0.3s,baz=64,slow=19,SNR=8.3						
JHJ				S	S	09 29 57.0	-7.4
	49nm,0.3s,baz=31,slow=19,SNR=5.3						
JKO	**Kozu shima**	**6.83**	**353**	P	**Pn**	**09 29 07.4**	**+2.0**
JWZ	**Kozaga**	**7.23**	**329**	P	**Pn**	**09 29 13.9**	**+3.9**
BSO1	**Boso 1**	**7.27**	**5**	P	**Pn**	**09 29 10.9**	**+0.5**
BSO1				S	S	09 30 34.5	-2.2
BSO3	**Boso 3**	**7.39**	**2**	P	**Pn**	**09 29 12.3**	**+0.5**
BSO3				S	S	09 30 37.1	-2.2
BSO4	**Boso 4**	**7.58**	**1**	P	**Pn**	**09 29 15.1**	**+1.1**
BSO4				S	S	09 30 42.8	-0.4
JIE	**Ise**	**7.59**	**338**	P	**Pn**	**09 29 17.8**	**+3.6**
JKN2	**Miekihoku**	**7.61**	**335**	P	**Pn**	**09 29 17.5**	**+3.1**
HMMJ	**Hamamatsu 2**	**7.73**	**345**	P	**Pn**	**09 29 18.0**	**+2.2**
JOD2	**Odawara 2**	**7.90**	**353**	P	**Pn**	**09 29 19.5**	**+1.7**
JOD2				S	S	09 30 48.9	-1.3
JNY	**Yasuok**	**8.19**	**347**	P	**Pn**	**09 29 22.9**	**+1.8**
JAO	**Obara**	**8.24**	**343**	P	**Pn**	**09 29 24.3**	**+2.6**
JHU	**Hanno**	**8.47**	**355**	P	**Pn**	**09 29 24.1**	**-0.3**
JHU				S	S	09 30 57.7	-4.7
JRY	**Ryogami san**	**8.67**	**353**	P	**Pn**	**09 29 27.3**	**+0.5**
JRY				S	S	09 31 03.2	-3.5
JYT	**Yasato**	**8.81**	**0**	P	**Pn**	**09 29 28.6**	**+0.2**
JYT				S	S	09 31 04.0	-5.7
JAG	**Ashikaga**	**9.03**	**356**	P	**Pn**	**09 29 30.2**	**-0.8**
JHO	**Hitachi**	**9.20**	**2**	P	**Pn**	**09 29 33.2**	**+0.2**
JHO				S	S	09 31 14.7	-3.5
MJAR	**Matsushiro Arr**	**9.28**	**350**	P	**Pn**	**09 29 34.2**	**+0.3**
	2.5nm,0.3s,baz=165,slow=10,SNR=15						
MJAR	**Matsushiro Arr**	**9.28**	**350**	P	**Pn**	**09 29 34.2**	**+0.3**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MAJO	**Matsushiro**	**9.28**	**350**	*e*Pn	**Pn**	**09 29 33.9**	**0.0**
	comp=Z,16nm,0.6s						
MAJO				*e*Sn	**S**	**09 31 18.2**	**-1.7**
MAJO	**Matsushiro**	**9.28**	**350**	*e*P	**Pn**	**09 29 33.9**	**0.0**
MAJO				*e*		09 31 18.2	
MAJO				pmax	pmax		
	comp=Z,15nm,0.6s						
MAT	**Matsushiro**	**9.28**	**350**	P	**Pn**	**09 29 33.0**	**-0.9**
MAT				S	S	09 31 19.6	-0.3
MAT	**Matsushiro**	**9.28**	**350**	P	**Pn**	**09 29 34.3**	**+0.4**
MAT				S	S	09 31 19.4	-0.5
JHS	**Saijyo**	**9.70**	**323**	P	**Pn**	**09 29 42.5**	**+3.5**
JFK	**Kawauchi**	**9.96**	**3**	P	**Pn**	**09 29 42.6**	**+0.6**
JOW	**Kunigami**	**10.63**	**270**	P	**Pn**	**09 29 52.1**	**+2.0**
KSRS	**Korea Array**	**14.41**	**317**	P	**P**	**09 30 33.4**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=132,slow=11,SNR=25						
KSRS				PcP	PcP	09 35 20.6	-0.3
	comp=Z,0.1nm,0.3s,baz=166,slow=1.1,SNR=8.5						
JOSM	**Okushiri--Mats**	**14.67**	**358**	P	**P**	**09 30 35.7**	**+1.0**
ERM	**Erimo**	**14.79**	**9**	*e*P	**P**	**09 30 37.3**	**+1.2**
ERM	**Erimo**	**14.79**	**9**	*de*P	**P**	**09 30 37.8**	**+1.8**
VLA	**Vladivostok**	**17.08**	**339**	*d*iP	**P**	**09 31 02.9**	**+2.2**
NJ2	**Nanjing**	**19.09**	**289**	*e*P	**P**	**09 31 20.6**	**-1.7**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
MDJ	**Mudanjiang**	**19.18**	**336**	P	**P**	**09 31 24.1**	**+1.1**
MDJ				sP	sP	09 33 16.9	+14
MDJ				S	**S**	**09 34 28.6**	**-11**
MDJ				PcP	PcP	09 35 29.6	+1.3
MDJ				ScP	ScP	09 38 23.6	-5.1
MDJ				PcS	PcS	09 39 04.8	-0.7
MDJ				ScS	ScS	09 42 06.0	-4.6
MDJ				pmax	pmax		
	comp=Z,14nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,52nm,4.9s						
YSS	**Yuzh-Sakhalins**	**19.63**	**5**	*e*P	**P**	**09 31 28.6**	**+1.0**
	comp=Z,15nm,0.3s						
YSS	**Yuzh-Sakhalins**	**19.63**	**5**	⇑*i*P	**P**	**09 31 28.5**	**+0.8**
CN2	**Changchun**	**20.24**	**328**	*e*P	**P**	**09 31 34.3**	**+0.9**
CN2				*e*S	**S**	**09 34 46.0**	**-11**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
HABR	**Khabarovsk**	**21.42**	**351**	*e*P	**P**	**09 31 45.5**	**+1.4**
HABR				S	**S**	**09 35 24.1**	**+8.2**
HABR				*e*		09 35 28.6	
HABR				*e*		09 42 17.1	
HABR				pmax	pmax		
	comp=N,14nm,1.1s						
HABR				pmax	pmax		
	comp=Z,30nm,1.3s,mb4.4						
HABR				pmax	pmax		
	comp=E,19nm,1.2s						
HABR				MLR	MLR		
	comp=Z,45nm,16.0s						
KLR	**Kulʲdur**	**22.76**	**346**	*e*P	**P**	**09 31 52.3**	**-4.0**
HHC	**Hu-ho-hao-te**	**27.10**	**307**	*e*P	**P**	**09 32 35.1**	**-0.1**
HHC				sP	sP	09 34 43.1	+18
HHC				PcP	PcP	09 35 46.1	+0.9
HHC				S	**S**	**09 36 35.7**	**-10**
HHC				PcS	PcS	09 39 27.5	+0.5
HHC				ScS	ScS	09 42 33.6	-8.2
HHC				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.2						
HHC				pmax	pmax		
	comp=Z,94nm,5.1s						
XAN	**Xi'an**	**27.61**	**292**	P	**P**	**09 32 39.9**	**0.0**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb3.8						
XAN				pmax	pmax		
	comp=Z,28nm,4.8s						
GYA	**Guiyang**	**29.86**	**276**	*e*P	**P**	**09 33 02.8**	**+3.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.1						
CD2	**Chengdu**	**31.92**	**285**	P	**P**	**09 33 17.7**	**+0.1**
CD2				pP	pP	09 34 37.0	+11
CD2				sP	sP	09 35 28.7	+20
CD2				S	**S**	**09 37 54.6**	**-6.6**
CD2				pmax	pmax		
	comp=Z,40nm,0.5s,mb4.9						
CD2				pmax	pmax		
	comp=Z,150nm,4.7s						
LZH	**Lanzhou**	**31.95**	**295**	*e*P	**P**	**09 33 18.5**	**+0.7**
LZH				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.1						
SONM	**Songino Array**	**33.28**	**317**	P	**P**	**09 33 28.5**	**-0.5**
	comp=Z,1.8nm,0.6s,mb3.5,baz=130,slow=8.0,SNR=13						
SONM				PcP	PcP	09 36 00.9	-0.5
	comp=Z,0.7nm,0.6s,baz=140,slow=1.8,SNR=4.7						
SONM	**Songino Array**	**33.28**	**317**	P	**P**	**09 33 28.5**	**-0.5**
SONM						09 36 00.9	
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KMI	**Kunming**	**33.58**	**275**	P	**P**	**09 33 36.7**	**+4.8**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb3.9						
GTA	**Gaotai**	**35.50**	**300**	P	**P**	**09 33 48.2**	**+0.2**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb3.9						
ZAK	**Zakamensk**	**36.22**	**319**	*e*P	**P**	**09 33 52.8**	**-1.1**
PMG	**Port Moresby**	**37.20**	**169**	*ce*P	**P**	**09 33 52.9**	**-10**
TIXI	**Tiksi**	**44.75**	**355**	*e*P	**P**	**09 35 01.5**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb3.8						
WMQ	**Urumqi**	**44.96**	**306**	*e*P	**P**	**09 35 04.8**	**+0.2**
WMQ				pP	pP	09 36 30.5	+13
WMQ				sP	sP	09 37 19.4	+20
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb3.7						
WMQ				pmax	pmax		
	comp=Z,55nm,4.6s						
ZALV	**Zalesovo Beam**	**48.10**	**319**	P	**P**	**09 35 25.9**	**-2.7**
	comp=Z,0.7nm,0.4s,mb3.2,baz=101,slow=7.9,SNR=5.2						
ZALV				PcP	PcP	09 36 48.3	-1.4
	comp=Z,2.0nm,0.5s,baz=118,slow=4.5,SNR=8.1						
ZALV				ScP	ScP	09 40 03.8	-4.6
	comp=Z,0.4nm,0.3s,baz=101,slow=4.7,SNR=2.2						
ZALV	**Zalesovo Beam**	**48.10**	**319**	P	**P**	**09 35 25.9**	**-2.7**
ZALV						09 36 48.3	
MK31	**Makanchi Array**	**48.91**	**309**	*e*P	**P**	**09 35 34.9**	**0.0**
MKAR	**Makanchi Array**	**48.91**	**309**	P	**P**	**09 35 34.8**	**-0.1**
MKAR				PcP	PcP	09 36 51.6	-1.2
MKAR				ScP	ScP	09 40 10.3	-1.8
MKAR	**Makanchi Array**	**48.91**	**309**	P	**P**	**09 35 34.8**	**-0.1**
	comp=Z,2.5nm,0.7s,mb3.5,baz=92,slow=9.7,SNR=20						
MKAR				PcP	PcP	09 36 51.6	-1.2
	comp=Z,1.1nm,0.6s,baz=93,slow=6.1,SNR=6.7						
MKAR				ScP	ScP	09 40 10.3	-1.8
	comp=Z,0.3nm,0.3s,baz=86,slow=5.7,SNR=4.3						
MKAR	**Makanchi Array**	**48.91**	**309**	*ce*P	**P**	**09 35 34.7**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ASAR	**Alice Springs**	**51.12**	**187**	P	**P**	**09 35 49.3**	**-2.1**
	comp=Z,0.6nm,0.4s,mb3.2,baz=354,slow=4.7,SNR=17						
ASAR				PcP	PcP	09 37 00.2	-0.9
	comp=Z,0.7nm,0.8s,baz=356,slow=4.1,SNR=4.2						
KURK	**Kurchatov**	**51.51**	**314**	*e*P	**P**	**09 35 53.3**	**-0.7**
	comp=Z,19nm,1.4s,mb4.2						
KURK	**Kurchatov**	**51.51**	**314**	*e*P	**P**	**09 35 53.3**	**-0.7**
KURK				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.2						
TKM2	**Tokmak 2**	**53.79**	**305**	*e*P	**P**	**09 36 11.3**	**+0.7**
	comp=Z,4.4nm,0.9s,mb3.8						
TKM2	**Tokmak 2**	**53.79**	**305**	*e*P	**P**	**09 36 11.3**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.8						
KSH	**Kashi**	**53.90**	**300**	⇑*i*P	**P**	**09 36 15.1**	**+3.6**
KSH				*e*PcP	PcP	09 37 14.0	+2.3
KSH				*e*PP	PP	09 38 23.1	+6.0
KSH				*e*PcS	PcS	09 41 12.0	+0.5
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.2						
KSH				pmax	pmax		
	comp=Z,38nm,7.0s						
AAK	**Ala-Archa**	**54.62**	**304**	P	**P**	**09 36 16.0**	**-0.6**
	comp=Z,1.9nm,0.3s,mb3.9,baz=226,slow=8.9,SNR=4.1						
AAK	**Ala-Archa**	**54.62**	**304**	*d*iP	**P**	**09 36 16.6**	**0.0**
UCH	**Uchtor**	**54.66**	**304**	*e*P	**P**	**09 36 18.1**	**+1.2**
	comp=Z,19nm,1.4s,mb4.2						
UCH				*e*PcP	PcP	09 37 14.9	+0.4
KDAK	**Kodiak Island**	**55.20**	**37**	P	**P**	**09 36 20.1**	**-0.3**
	comp=Z,8.0nm,0.7s,mb4.1,baz=330,slow=24,SNR=4.8						
KDAK	**Kodiak Island**	**55.20**	**37**	P	**P**	**09 36 20.1**	**-0.3**
KDAK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.2						
AML	**Almayashu**	**55.27**	**304**	*e*P	**P**	**09 36 22.3**	**+1.1**
	comp=Z,8.1nm,0.9s,mb4.0						
BPAW	**Bear Paw Mtn.**	**56.48**	**29**	*e*P	**P**	**09 36 29.9**	**+0.6**
	comp=Z,4.6nm,0.8s,mb3.9						
BPAW				*e*PcP	PcP	09 37 21.2	-0.1
BVAR	**Borovoye Array**	**56.62**	**317**	P	**P**	**09 36 30.0**	**-0.5**
	comp=Z,5.9nm,0.5s,mb4.2,baz=93,slow=8.2,SNR=41						
BVAR	**Borovoye Array**	**56.62**	**317**	P	**P**	**09 36 30.0**	**-0.5**
BVAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BRVK	**Borovoye**	**56.68**	**317**	*e*P	**P**	**09 36 30.4**	**-0.5**
	comp=Z,17nm,1.1s,mb4.3						
BRVK	**Borovoye**	**56.68**	**317**	*ce*P	**P**	**09 36 30.3**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.3						
PMR	**Palmer**	**57.14**	**32**	*e*P	**P**	**09 36 33.5**	**-0.4**
	comp=Z,8.7nm,0.8s,mb4.1						
PMR	**Palmer**	**57.14**	**32**	*e*P	**P**	**09 36 33.5**	**-0.5**
PMR				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
MCK	**McKinley**	**57.35**	**30**	*e*P	**P**	**09 36 35.2**	**-0.2**
	comp=Z,17nm,0.8s,mb4.4						
MCK				*e*PcP	PcP	09 37 24.2	-0.5
MCK	**McKinley**	**57.35**	**30**	*e*P	**P**	**09 36 35.2**	**-0.2**
MCK				*e*		09 37 24.2	
MCK				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.4						
COLA	**College**	**57.90**	**29**	*e*P	**P**	**09 36 38.8**	**-0.3**
	comp=Z,2.9nm,0.8s,mb3.7						
COLA	**College**	**57.90**	**29**	*e*P	**P**	**09 36 38.8**	**-0.3**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.7						
ILAR	**Eielson Array**	**58.31**	**29**	P	**P**	**09 36 40.8**	**-1.2**
	comp=Z,4.9nm,0.9s,mb3.9,baz=260,slow=5.7,SNR=53						
ILAR				PcP	PcP	09 37 26.7	-1.8
	comp=Z,0.9nm,0.8s,baz=287,slow=4.6,SNR=5.0						
ILAR	**Eielson Array**	**58.31**	**29**	P	**P**	**09 36 40.8**	**-1.1**
ILAR						09 37 26.7	
ILAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BMRM	**Bremner River**	**59.32**	**33**	*e*P	**P**	**09 36 49.4**	**+0.5**
	comp=Z,22nm,1.0s,mb4.5						
KBL	**Kabul**	**60.30**	**296**	*e*P	**P**	**09 36 56.0**	**0.0**
	comp=Z,6.8nm,0.8s,mb4.1						
KBL	**Kabul**	**60.30**	**296**	*e*P	**P**	**09 36 56.0**	**0.0**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.1						
EGAK	**Eagle**	**60.76**	**29**	*e*P	**P**	**09 36 58.2**	**-0.3**
	comp=Z,2.0nm,0.6s,mb3.7						
DAWY	**Dawson**	**61.57**	**30**	*e*P	**P**	**09 37 04.0**	**+0.1**
HYT	**Haines Junctio**	**62.79**	**33**	*e*P	**P**	**09 37 12.8**	**+0.8**
ARU	**Arti**	**63.10**	**322**	*e*P	**P**	**09 37 13.1**	**-1.0**
	comp=Z,8.4nm,0.8s,mb4.3						
ARU	**Arti**	**63.10**	**322**	*d*iP	**P**	**09 37 12.8**	**-1.2**
ARU				*e*		09 37 44.5	
ARU						09 39 34.6	
ARU				S	**S**	**09 45 20.0**	**+5.1**
ARU				SS	SS	09 49 31.0	+3.1
ARU				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.3						
INK	**Inuvik**	**63.50**	**24**	P	**P**	**09 37 15.9**	**-0.6**
	comp=Z,2.6nm,0.5s,mb4.1						
INK	**Inuvik**	**63.50**	**24**	P	**P**	**09 37 15.9**	**-0.5**
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ABKAR	**Akbulak array**	**63.61**	**314**	*e*P	**P**	**09 37 16.9**	**-0.7**
	comp=Z,5.0nm,0.6s,mb4.3						
AKTK	**Aktyubinsk**	**64.58**	**315**	P	**P**	**09 37 22.3**	**-1.4**
AKTO	**Aktyubinsk**	**64.58**	**315**	P	**P**	**09 37 22.3**	**-1.4**
	comp=Z,3.4nm,0.7s,mb4.1,baz=81,slow=5.3,SNR=11						
AKTO	**Aktyubinsk**	**64.58**	**315**	P	**P**	**09 37 22.3**	**-1.4**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
SPITS	**Spitsbergen Ar**	**69.77**	**349**	P	**P**	**09 37 55.9**	**+0.4**
	comp=Z,4.9nm,0.6s,mb4.4,baz=89,slow=10,SNR=13						
KEV	**Kevo**	**72.11**	**340**	*e*P	**P**	**09 38 08.3**	**-1.3**
KEV				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.7						
KEV	**Kevo**	**72.11**	**340**	*e*p	**P**	**09 38 08.3**	**-1.3**
	comp=Z,8.7nm,0.6s,mb4.7						
ARCES	**ARCESS Array B**	**72.67**	**340**	P	**P**	**09 38 12.6**	**-0.3**
ARCES	**ARCESS Array B**	**72.67**	**340**	P	**P**	**09 38 12.6**	**-0.3**
	comp=Z,6.1nm,0.5s,mb4.6,baz=79,slow=8.6,SNR=65						
ARCES	**ARCESS Array B**	**72.67**	**340**	P	**P**	**09 38 12.6**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.5s						
YKA	**Yellowknife Ar**	**72.72**	**28**	P	**P**	**09 38 12.5**	**-0.8**
YKA	**Yellowknife Ar**	**72.72**	**28**	P	**P**	**09 38 12.5**	**-0.8**
	comp=Z,8.8nm,0.7s,mb4.6,baz=296,slow=5.9,SNR=17						
YKA	**Yellowknife Ar**	**72.72**	**28**	P	**P**	**09 38 12.5**	**-0.8**
YKA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
JOF	**Joensuu**	**74.02**	**333**	*e*P	**P**	**09 38 19.1**	**-1.7**
JOF				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.8						
JOF	**Joensuu**	**74.02**	**333**	*e*p	**P**	**09 38 19.1**	**-1.7**
	comp=Z,12nm,0.6s,mb4.8						
NLWA	**Neilton Lookou**	**74.14**	**45**	⇑P	**P**	**09 38 22.4**	**+0.6**
	baz=73						
HDW	**Hoodsport**	**74.55**	**44**	P	**P**	**09 38 24.9**	**+0.8**
JCW	**Jim Creek**	**75.02**	**43**	*e*P	**P**	**09 38 27.4**	**+0.7**
OBN	**Obninsk**	**75.27**	**325**	*d*iP	**P**	**09 38 26.9**	**-1.1**
OBN				*e*		09 38 35.6	
OBN				pmax	pm

BSMT Bassoo Peak 79.46 41 eP P 09 38 51.8 +0.6
D12A Red Ives Fores 79.51 42 ⇑P P 09 38 51.0 -0.5
baz=79
WVOR Wild Horse Val 79.63 48 eP P 09 38 52.3 +0.1
comp=Z,4.5nm,1.0s,mb4.2
WVOR Wild Horse Val 79.63 48 eP P 09 38 52.3 +0.1
WVOR pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
C13A Hot Springs 79.67 42 ⇓P P 09 38 52.3 0.0
baz=79,SNR=8.1
A14A Double T Ranch 79.69 40 ⇓P P 09 38 52.5 +0.1
baz=79
JTMT Jette 79.80 41 eP P 09 38 53.1 +0.1
D13A Huson 80.02 42 ⇑P P 09 38 53.4 -0.8
baz=79
A15A Johnson Ranch, 80.08 40 ⇓P P 09 38 54.3 -0.2
baz=79
SWMT Swartz Lake 80.09 41 eP P 09 38 54.6 0.0
F12A Elk City 80.20 43 ⇑P P 09 38 55.3 +0.2
baz=79,SNR=12
SUMG Summit 80.30 360 eP P 09 38 55.7 +0.5
WCN Washoe City 80.32 51 ⇑P P 09 38 55.9 0.0
baz=80
PAHR Pah Rah Range 80.39 50 eP P 09 38 56.5 +0.2
comp=Z,8.2nm,0.8s,mb4.5
CMB Columbia Colle 80.46 52 eP P 09 38 56.6 -0.1
E13A Victor 80.50 42 ⇓P P 09 38 55.9 -0.9
baz=80
B15A Bradely Ranch, 80.52 40 ⇑P P 09 38 56.6 -0.2
baz=80
SLMT Seeley Lake 80.52 42 eP P 09 38 56.4 -0.4
D14A Greenough 80.59 42 ⇑P P 09 38 56.4 -0.8
baz=80
F13A Darby 80.74 43 ⇓P P 09 38 57.1 -0.9
baz=80,SNR=8.4
A16A West Butte Ran 80.74 39 ⇓P P 09 38 57.5 -0.4
baz=80
C15A Salmond Ranch, 80.77 41 ⇓P P 09 38 58.1 0.0
baz=80,SNR=9.8
E14A Clinton 80.94 42 ⇓P P 09 38 58.8 -0.2
baz=80
B16A M & M Farms, S 80.96 40 ⇑P P 09 38 58.6 -0.5
baz=80
MFID Camas Ranch 80.98 46 ⇓P P 09 38 59.4 +0.1
baz=80,SNR=13
H12A Diamond D Ranc 81.03 44 ⇓P P 09 38 59.3 -0.3
baz=80,SNR=7.9
G13A Cobalt 81.15 44 ⇓P P 09 38 59.5 -0.7
baz=80,SNR=9.3
L10A Juniper Basin 81.21 47 ⇑P P 09 39 00.7 +0.2
baz=80
I12A Atlanta 81.23 45 ⇑P P 09 39 00.6 0.0
baz=80,SNR=10
A17A Triple J Farms 81.25 39 ⇑P P 09 39 00.4 -0.2
baz=80
C16A Fuhringer Ranc 81.25 40 ⇑P P 09 39 00.2 -0.4
baz=80,SNR=7.0
F14A Wisdom 81.31 43 ⇓P P 09 39 01.1 +0.1
baz=80
AKASG Malin Array Be 81.32 323 P P 09 38 59.3 -1.6
comp=Z,0.6nm,0.3s,mb3.7,baz=50,slow=5.6,SNR=9.8
AKASG Malin Array Be 81.32 323 ceP P 09 38 59.2 -1.7
AKASG pmax pmax
comp=Z,1.0nm,0.3s
H13A Challis 81.40 44 ⇓P P 09 39 01.5 0.0
baz=81,SNR=15
E15A Deer Lodge 81.44 42 ⇑P P 09 39 01.5 -0.1
baz=81
B17A L&G Farms, Che 81.54 40 ⇓P P 09 39 02.1 0.0
baz=81,SNR=12
L11A Cat Creek Ranc 81.64 47 ⇑P P 09 39 03.2 +0.4
baz=81,SNR=11
NVAR Mina Array Bea 81.73 51 P P 09 39 03.6 +0.3
comp=Z,5.5nm,0.6s,mb4.6,baz=293,slow=5.4,SNR=74
A18A Metzger Ranch, 81.74 39 ⇓P P 09 39 02.9 -0.2
baz=81,SNR=12
D16A Dana Ranch, Ca 81.77 41 ⇓P P 09 39 03.2 -0.1
baz=81,SNR=6.1
HRY Holter Researc 81.77 41 eP P 09 39 03.4 0.0
HLID Hailey 81.80 45 ⇑P P 09 39 03.8 +0.2
baz=81,SNR=12
HLID Hailey 81.80 45 eP P 09 39 04.1 +0.6
I13A Wildhorse Cree 81.81 45 ⇑P P 09 39 04.1 +0.5
baz=81,SNR=10
LRM Limekiln Ridge 81.86 42 eP P 09 39 04.0 +0.2
C17A Wharram Farm, 81.91 40 ⇑P P 09 39 03.2 -0.8
baz=81,SNR=7.1
H14A Leadore 81.92 44 ⇑P P 09 39 03.9 -0.3
baz=81,SNR=5.2
E16A East Helena 81.95 41 ⇓P P 09 39 04.2 -0.1
baz=81,SNR=6.7
M11A Holland Ranch, 81.97 47 ⇑P P 09 39 04.8 +0.3
baz=81
DLMT Dillon 82.01 43 eP P 09 39 04.8 +0.2
comp=Z,11nm,1.4s,mb4.5
J13A Cove Ranch, Pi 82.03 45 ⇑P P 09 39 05.0 +0.2
baz=81,SNR=13
B18A Beardsley Farm 82.06 39 ⇓P P 09 39 04.5 -0.3
baz=81,SNR=10
L12A House Creek Ra 82.12 47 ⇑P P 09 39 05.7 +0.4
baz=81,SNR=10
G15A Dillon 82.18 43 ⇓P P 09 39 05.3 -0.1
baz=81,SNR=6.2
D17A Six Diamond Ra 82.20 41 ⇑P P 09 39 05.5 -0.1
baz=81,SNR=13
EGMT Eagleton 82.27 40 ⇓P P 09 39 05.5 -0.4
baz=81,SNR=6.0
EGMT Eagleton 82.27 40 eP P 09 39 05.9 0.0
H15A Lima 82.36 44 ⇑P P 09 39 06.2 -0.2
baz=82
F16A Kennard Place, 82.37 42 ⇓P P 09 39 06.3 -0.1
baz=82
VES Vestal, Richgr 82.40 54 ⇓P P 09 39 06.1 -0.7
baz=82
FFC Flin Flon 82.42 31 eP P 09 39 06.1 -0.4
FFC Flin Flon 82.42 31 iP P 09 39 06.4 -0.1
K13A Stover Farm, H 82.47 46 ⇓P P 09 39 07.4 +0.4
baz=82,SNR=8.9
E17A Martinsdale 82.47 41 ⇓P P 09 39 07.1 +0.1
baz=82,SNR=9.3
J14A Carey 82.48 45 ⇑P P 09 39 07.8 +0.7
baz=82,SNR=22
M12A Wells 82.55 47 ⇑P P 09 39 08.0 +0.5
baz=82,SNR=11
G16A Moss Hill, Enn 82.56 43 ⇑P P 09 39 07.2 -0.2
baz=82
NOA NORSAR Array B 82.67 338 P P 09 39 06.1 -1.5
comp=Z,7.6nm,0.7s,mb4.7,baz=46,slow=4.9,SNR=21
NOA NORSAR Array B 82.67 338 P P 09 39 06.1 -1.6
NOA pmax pmax
comp=Z,8.0nm,0.7s
D18A Linhart Farms, 82.69 40 ⇑P P 09 39 08.0 -0.1
baz=82,SNR=6.6
O11A Cowboy Ranch, 82.70 49 ⇑P P 09 39 08.4 +0.1
baz=82
N12A Clover Valley, 82.75 48 ⇑P P 09 39 08.7 +0.2
baz=82,SNR=5.4
N12A Clover Valley, 82.75 48 eP P 09 39 09.2 +0.7
L13A Double Diamond 82.84 46 ⇑P P 09 39 09.4 +0.5
baz=82,SNR=9.2
Q10A Clear Creek Ra 82.84 50 ⇓P P 09 39 08.7 -0.3
baz=82
F17A Fitzpatrick Pl 82.88 42 ⇓P P 09 39 09.1 0.0
baz=82,SNR=5.9
P11A Circle Ranch, 82.92 49 ⇓P P 09 39 09.3 -0.1
baz=82
E18A Harlowton 82.97 41 ⇑P P 09 39 09.5 0.0
baz=82
M13A Montello 83.07 47 ⇑P P 09 39 10.2 +0.2
baz=82,SNR=5.9
M13A Montello 83.07 47 eP P 09 39 10.5 +0.4
K14A Jones Ranch, D 83.10 45 ⇓P P 09 39 10.3 +0.1
baz=82,SNR=7.9
J15A Blackfoot 83.12 44 ⇓P P 09 39 11.0 +0.6
baz=82,SNR=9.6
G17A Pierce Place, 83.15 42 ⇑P P 09 39 09.9 -0.5
baz=82
S10A Tonopah Range, 83.15 51 ⇓P P 09 39 10.5 -0.1
baz=82,SNR=18
H16A Russell Place, 83.17 43 ⇓P P 09 39 10.8 +0.3
baz=82,SNR=9.1
R10A Warm Springs 83.17 50 ⇓P P 09 39 10.6 -0.1
baz=82,SNR=10
O12A Currie 83.24 48 ⇑P P 09 39 11.0 0.0
baz=82,SNR=19
N13A Wendover, West 83.30 47 ⇓P P 09 39 11.4 +0.2
baz=82
N13A Wendover, West 83.30 47 eP P 09 39 11.8 +0.5
L14A Malta 83.32 46 ⇑P P 09 39 11.7 +0.3
baz=82,SNR=10
Q11A Duckwater 83.34 50 ⇓P P 09 39 11.0 -0.5
baz=83
MPMC Manual Prospec 83.43 53 ⇑P P 09 39 11.7 -0.4
baz=83,SNR=6.1
K15A Arbon 83.43 45 ⇓P P 09 39 12.5 +0.6
baz=83
F18A Big Timber 83.44 41 ⇑P P 09 39 11.8 0.0
baz=83,SNR=7.1
I16A Newdale 83.46 44 ⇓P P 09 39 12.6 +0.5
baz=83
M14A Sheep Mountain 83.52 46 ⇑P P 09 39 12.7 +0.3
baz=83,SNR=16
P12A McGill 83.53 49 ⇑P P 09 39 12.4 0.0
baz=83,SNR=6.3
LRMC Laurel Mountai 83.57 53 ⇑P P 09 39 12.6 -0.1
baz=83
R11A Troy Canyon, C 83.63 50 ⇑P P 09 39 12.8 -0.2
baz=83,SNR=17
EDW2 Edwards Air Fo 83.64 54 ⇑P P 09 39 13.0 -0.1
baz=83
FURC Furnace Creek, 83.67 52 ⇓P P 09 39 12.9 -0.3
baz=83
J16A Bone 83.70 44 ⇑P P 09 39 13.9 +0.7
baz=83
H17A Grant Village 83.74 43 ⇓P P 09 39 15.5 +2.0
baz=83,SNR=11
IMW Indian Meadow 83.79 43 eP P 09 39 14.7 +1.0
comp=Z,7.5nm,0.8s,mb4.6
Q12A Willow Creek R 83.80 49 ⇓P P 09 39 13.8 -0.1
baz=83
FLWY Flagg Ranch 83.83 43 eP P 09 39 15.1 +1.2
comp=Z,8.9nm,0.8s,mb4.7
RRI2 Red Ridge 83.84 44 eP P 09 39 15.0 +1.1
comp=Z,7.4nm,0.7s,mb4.6
S11A Rachel 83.87 51 ⇑P P 09 39 13.9 -0.3
baz=83,SNR=6.9
L15A Malad City 83.88 46 ⇓P P 09 39 13.9 -0.3
baz=83
K16A Soda Springs 83.95 45 ⇑P P 09 39 15.1 +0.6
baz=83,SNR=8.0
N14A Grayback Hills 83.96 47 ⇑P P 09 39 14.6 0.0
baz=83,SNR=5.7
MOOW Moose Ponds 83.98 44 eP P 09 39 15.2 +0.6
comp=Z,12nm,1.5s,mb4.5
I17A Pilgrim Ck. 84.00 43 ⇓P P 09 39 15.4 +0.7
baz=83
TPAW Teton Pass 84.00 44 eP P 09 39 15.5 +0.8
CIS Catalina Islan 84.05 56 ⇓P P 09 39 14.5 -0.7
baz=83
U10A Ash Meadows, A 84.07 52 ⇓P P 09 39 15.3 0.0
baz=83,SNR=5.4
M15A Larsen Ranch, 84.12 46 ⇑P P 09 39 15.0 -0.4
baz=83
REDW Red Top Meadow 84.12 44 eP P 09 39 16.1 +0.7
SNOW Snow King Moun 84.13 44 eP P 09 39 16.3 +0.9
RLMT Red Lodge 84.13 42 ⇑P P 09 39 15.7 +0.3
baz=83,SNR=12
RLMT Red Lodge 84.13 42 eP P 09 39 16.0 +0.6
P13A Bates Ranch, G 84.13 48 ⇑P P 09 39 15.2 -0.3
baz=83,SNR=7.1
LOHW Long Hollow 84.14 44 eP P 09 39 16.1 +0.7
BFSC Mount Baldy Ra 84.19 54 ⇓P P 09 39 15.3 -0.5
baz=84
J17A Brown Place, J 84.21 44 ⇑P P 09 39 16.0 +0.2
baz=83
GSC Goldstone 84.29 53 ⇓P P 09 39 16.0 -0.4
baz=84,SNR=9.1
GSC Goldstone 84.29 53 eP P 09 39 16.0 -0.3
comp=Z,8.6nm,0.8s,mb4.6
GSC Goldstone 84.29 53 eP P 09 39 16.0 -0.3
GSC pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
R12A Pony Springs, 84.31 50 ⇓P P 09 39 16.1 -0.3
baz=84,SNR=6.6
SHOC Shoshone 84.36 52 ⇑P P 09 39 16.2 -0.5
baz=84
N15A Stansbury Isla 84.38 47 ⇑P P 09 39 16.5 -0.2
baz=84,SNR=5.4
Q13A Wheeler Ranch, 84.38 49 ⇓P P 09 39 17.1 +0.4
baz=84
T11A Corn Creek, Al 84.44 51 ⇓P P 09 39 16.7 -0.3
baz=84,SNR=7.5
L16A Fish Haven 84.48 45 ⇑P P 09 39 17.4 +0.3
baz=84,SNR=9.2
BRTR Keskin Array B 84.49 312 P P 09 39 16.2 -1.1
comp=Z,1.1nm,0.7s,mb3.8,baz=98,slow=4.3,SNR=5.7
BRTR Keskin Array B 84.49 312 iP P 09 39 16.2 -1.1
BRTR pmax pmax
comp=Z,1.0nm,0.7s
S12A Delamar Landin 84.51 50 ⇓P P 09 39 17.5 +0.1
baz=84
DUG Dugway 84.55 47 ⇓P P 09 39 17.4 -0.2
baz=84,SNR=9.5
DUG Dugway 84.55 47 eP P 09 39 17.3 -0.2
I18A Diamond G Ranc 84.58 43 ⇑P P 09 39 17.7 +0.1
baz=84
HWUT Hardware Ranch 84.61 46 eP P 09 39 18.3 +0.5
P14A Drum Mountains 84.69 48 ⇓P P 09 39 18.1 -0.1
baz=84,SNR=12
BBRC Big Bear Solar 84.71 54 ⇑P P 09 39 18.4 -0.1
baz=84
J18A Kendall Valley 84.72 44 ⇑P P 09 39 18.5 +0.2
baz=84,SNR=14
L17A Cokeville 84.79 45 ⇓P P 09 39 18.7 0.0
baz=84,SNR=6.1
R13A O'Grain Ranch, 84.81 50 ⇑P P 09 39 19.1 +0.2
baz=84
MURC Murrieta 84.84 55 ⇓P P 09 39 18.6 -0.5
baz=84
TUQ Turquoise Moun 84.85 53 ⇓P P 09 39 19.0 -0.1
baz=84
HEC Hector,Ludlow 84.86 53 ⇑P P 09 39 19.0 -0.2
baz=84
Q14A Sevier Lake (B 84.86 49 ⇓P P 09 39 18.8 -0.4
baz=84,SNR=10
V11A Goodsprings 84.99 52 ⇓P P 09 39 19.5 -0.3
baz=84,SNR=7.2
K18A Toltan Ranch, 85.02 44 ⇓P P 09 39 20.2 +0.4
baz=84,SNR=5.1
S13A Holt Ranch, En 85.19 50 ⇓P P 09 39 20.8 0.0
baz=84,SNR=7.3
BW06 Boulder Array 85.24 44 ⇑P P 09 39 20.4 -0.5
baz=84,SNR=5.8
BW06 Boulder Array 85.24 44 eP P 09 39 20.7 -0.2
M17A Scullys Gap (B 85.25 45 ⇓P P 09 39 20.6 -0.4
baz=84
U12A Valley of Fire 85.31 51 ⇓P P 09 39 21.5 +0.1
baz=85
GMRC Granite Mounta 85.36 53 ⇑P P 09 39 21.3 -0.4
baz=85,SNR=7.4
PFO Pinyon Flat Ob 85.37 55 ⇑P P 09 39 21.2 -0.5
baz=85,SNR=11
PFO Pinyon Flat Ob 85.37 55 eP P 09 39 21.7 0.0
ARUT Antelope Range 85.38 50 eP P 09 39 21.9 +0.2
O16A Springville 85.39 47 ⇓P P 09 39 22.0 +0.3
baz=85
L18A Fontenelle, Gr 85.41 45 ⇓P P 09 39 21.6 -0.1
baz=85
N17A Moffit Pass 85.43 46 ⇓P P 09 39 21.5 -0.4
baz=85
DAU Daniels Canyon 85.44 47 eP P 09 39 22.5 +0.6
T13A Saint George 85.45 51 ⇑P P 09 39 22.0 -0.1
baz=85
V12A Nelson 85.45 52 ⇓P P 09 39 22.0 -0.1
baz=85
Q15A Fillmore 85.46 48 ⇑P P 09 39 21.6 -0.5
baz=85
BELC Belle Mtn. Jos 85.51 54 ⇑P P 09 39 21.6 -0.8
baz=85,SNR=8.8
CCUT Cedar City 85.55 50 eP P 09 39 23.3 +0.8
S14A Cedar City 85.57 50 ⇑P P 09 39 22.6 0.0
baz=85
K19A Absolon Red Bu 85.65 44 ⇓P P 09 39 22.1 -0.8
baz=85
W12A Cal Nev Ari 85.66 52 ⇓P P 09 39 22.6 -0.4
baz=85
L19A Farson 85.73 44 ⇓P P 09 39 23.3 -0.1
baz=85,SNR=6.0
MONP Monument Peak 85.75 55 ⇑P P 09 39 23.2 -0.4
baz=85,SNR=5.6
MSU Marysvale 85.85 49 eP P 09 39 24.6 +0.6
comp=Z,6.0nm,1.4s,mb4.2
MSU Marysvale 85.85 49 eP P 09 39 24.6 +0.7
MSU pmax pmax
comp=Z,6.0nm,1.4s,mb4.2
O17A Robinson Place 85.89 47 ⇓P P 09 39 24.1 -0.1
baz=85
R15A Junction 85.94 49 ⇓P P 09 39 24.7 +0.3
baz=85
T14A Hurricane 85.99 50 ⇓P P 09 39 24.4 -0.3
baz=85
V13A Grand Canyon W 86.00 52 ⇑P P 09 39 24.7 0.0
baz=85
IRM Iron Mountain 86.04 54 ⇓P P 09 39 24.7 -0.2
baz=85
K20A Yellowstone Ra 86.05 43 ⇓P P 09 39 24.4 -0.5
baz=85
BC3 Big Chuckawall 86.07 54 ⇓P P 09 39 24.8 -0.3
baz=85,SNR=9.3
N18A Larsen Ranch, 86.15 45 ⇑P P 09 39 24.8 -0.6
baz=85
S15A Panguitch 86.16 49 ⇑P P 09 39 26.1 +0.7
baz=85
SWSC Sam W. Stewart 86.18 55 ⇑P P 09 39 25.4 -0.3
baz=86
U14A Mt Trumbull 86.26 51 ⇓P P 09 39 26.2 +0.2
baz=86
P17A Butcher Ranch, 86.28 47 ⇓P P 09 39 26.4 +0.4
baz=86
Q16A Castle Valley 86.30 48 ⇓P P 09 39 26.6 +0.4
baz=86
O18A Roosevelt 86.33 46 ⇓P P 09 39 26.7 +0.5
baz=86
W13A Hualapai Mount 86.45 52 ⇓P P 09 39 26.5 -0.5
baz=86
T15A Red Dirt Ranch 86.49 50 ⇓P P 09 39 27.1 0.0
baz=86
SRU San Rafael 86.62 47 ⇓P P 09 39 27.4 -0.3
baz=86
SRU San Rafael 86.62 47 eP P 09 39 27.9 +0.3
S16A Weppner Ranch, 86.65 49 ⇓P P 09 39 28.1 +0.3
baz=86
MMAI Mount Meron Ar 86.70 306 P P 09 39 27.7 -0.5
comp=Z,0.8nm,0.3s,mb4.1,baz=78,slow=11,SNR=2.9
V14A Boquillas Ranc 86.72 51 ⇓P P 09 39 28.4 +0.2
baz=86,SNR=5.1
X13A Yucca 86.75 53 ⇑P P 09 39 28.1 -0.3
baz=86
GLA Glamis 86.83 54 ⇑P P 09 39 28.7 -0.1
baz=86
GLA Glamis 86.83 54 eP P 09 39 29.0 +0.2
U15A North Rim 86.87 50 ⇓P P 09 39 29.0 +0.1
baz=86
R17A Hanksville Air 86.87 48 ⇑P P 09 39 28.3 -0.6
baz=86
Q18A Rafter H Ranch 86.88 47 ⇑P P 09 39 27.8 -1.1
baz=86
W14A Seligman 86.96 52 ⇓P P 09 39 29.9 +0.6
baz=86
N20A Spence Gulch, 87.12 45 ⇓P P 09 39 29.4 -0.6
baz=86
V15A Kaibab Nationa 87.27 51 ⇓P P 09 39 31.5 +0.7
baz=87
P19A Cripple Cowboy 87.33 46 ⇓P P 09 39 31.0 0.0
baz=87
R18A Canyonlands Na 87.42 48 ⇑P P 09 39 30.8 -0.7
baz=87
Z13A Yuma Proving G 87.60 54 ⇓P P 09 39 32.2 -0.2
baz=87,SNR=7.6
Y14A Wickenburg 87.68 53 ⇑P P 09 39 32.6 -0.1
baz=87
S18A Hurst Farm, Bl 87.74 48 ⇑P P 09 39 33.1 +0.1
baz=87
R19A Curley Farm, L 87.89 48 ⇓P P 09 39 32.7 -1.0
baz=87
Y15A Casa Rosa Ranc 88.14 52 ⇑P P 09 39 34.7 -0.2
baz=88
Q20A Ridgley Place, 88.15 47 ⇓P P 09 39 34.6 -0.3
baz=87
N22A Wattenberg Ran 88.27 44 ⇓P P 09 39 34.7 -0.7
baz=88
V17A Tonalea, Kykot 88.32 50 ⇓P P 09 39 35.8 0.0
baz=88
114A Black Gap (USA 88.38 54 ⇓P P 09 39 36.3 +0.2
baz=88
PV01 Paradox Valley 88.43 47 eP P 09 39 36.1 -0.1
comp=Z,137nm,0.6s
U18A Rough Rock, Ch 88.52 49 ⇓P P 09 39 37.3 +0.6
baz=88
R20A Redvale 88.53 47 ⇑P P 09 39 36.7 +0.1
baz=88
N23A Red Feather La 88.53 44 ⇑P P 09 39 36.8 +0.2
baz=88
O22A Kremmling 88.58 45 ⇑P P 09 39 36.7 -0.2
baz=88
P22A Eagle 88.77 45 ⇑P P 09 39 38.2 +0.4
baz=88
214A Organ Pipe Nat 88.85 54 ⇓P P 09 39 38.0 -0.3
baz=88
T19A Beclabito 88.86 49 ⇑P P 09 39 37.9 -0.3
baz=88
V18A Ganado 88.86 50 ⇑P P 09 39 38.4 +0.1
baz=88
SMCO Snowmass 88.87 46 eP P 09 39 38.9 +0.6
O23A Lake Granby, G 88.94 44 ⇓P P 09 39 38.8 +0.3
baz=88
R21A Cimarron 88.96 47 ⇑P P 09 39 38.8 +0.1
baz=88
X17A Forest Lakes 89.01 51 ⇓P P 09 39 38.9 -0.1
baz=88
Q22A Crested Butte, 89.09 46 ⇑P P 09 39 39.7 +0.4
baz=88
116A Eloy 89.33 53 ⇑P P 09 39 40.7 +0.2
baz=89
Y17A Roosevelt 89.33 52 ⇑P P 09 39 40.4 -0.1
baz=89
ISCO Idaho Springs 89.37 45 eP P 09 39 41.2 +0.6
P23A Jefferson 89.48 45 ⇑P P 09 39 41.6 +0.5
baz=89
R22A Saguache, Gunn 89.56 46 ⇓P P 09 39 42.4 +0.9
baz=89
Q23A Hartsel 89.75 45 ⇑P P 09 39 43.1 +0.8
baz=89
S22A 4UR Ranch, Cre 89.79 47 ⇓P P 09 39 42.7 +0.1
baz=89
U21A Nageezi 89.99 48 ⇑P P 09 39 43.6 +0.1
baz=89
X19A St. Johns 90.01 51 ⇓P P 09 39 44.0 +0.4
baz=89
117A Oracle 90.01 53 ⇑P P 09 39 43.8 +0.1
baz=89
TUC Tucson 90.12 53 eP P 09 39 44.2 0.0
T22A Edith 90.16 48 ⇓P P 09 39 44.7 +0.4
baz=89
217A Green Valley 90.39 54 ⇓P P 09 39 45.7 +0.3
baz=90
X20A Quemado 90.49 50 ⇑P P 09 39 46.3 +0.4
baz=90
118A Homack Ranch, 90.52 53 ⇑P P 09 39 46.6 +0.6
baz=90
U22A Llaves 90.55 48 ⇓P P 09 39 46.8 +0.7
baz=90
R24A Sanders Place, 90.61 46 ⇓P P 09 39 46.6 +0.2
baz=90
SDCO Great Sand Dun 90.64 46 eP P 09 39 46.7 +0.1
T23A Casias Ranch, 90.71 47 ⇓P P 09 39 47.2 +0.3
baz=90
Q25A Bedland, Calha 90.75 45 ⇑P P 09 39 46.4 -0.6
baz=90
218A Dragoon 90.83 53 ⇑P P 09 39 47.8 +0.4
baz=90
S24A Houchin Ranch, 90.89 46 ⇑P P 09 39 48.0 +0.3
baz=90
119A Ashpeak Ranch, 90.92 52 ⇑P P 09 39 48.0 +0.1
baz=90
Y20A Horse Springs, 90.92 51 ⇓P P 09 39 48.3 +0.5
baz=90
U23A El Rito 91.02 48 ⇓P P 09 39 48.4 +0.1
baz=90
X21A Alamocita Cree 91.03 50 ⇑P P 09 39 48.8 +0.4
baz=90
Z20A Nine Sixteen R 91.22 51 ⇑P P 09 39 49.7 +0.5
baz=90
Y21A Point of Rocks 91.35 50 ⇓P P 09 39 50.5 +0.6
baz=91
V23A Ortiz Mt. (NFS 91.36 48 ⇑P P 09 39 50.6 +0.8
baz=91
120A U Bar Ranch, L 91.51 52 ⇑P P 09 39 51.1 +0.5
baz=91
ANMO Albuquerque 91.64 49 eP P 09 39 51.0 -0.2
319A Douglas 91.70 53 ⇑P P 09 39 51.6 +0.1
baz=91
T25A Trinidad 91.70 46 ⇓P P 09 39 51.5 +0.1

	baz=91							
W23A	**Werner Place,**	**91.72**	**49**	⇓P		**P**	**09 39 51.7**	**+0.2**
	baz=91							
220A	**Playas Peak, P**	**91.94**	**52**	⇑P		**P**	**09 39 52.6**	**0.0**
	baz=91							
V24A	**Rampart Ranch,**	**91.98**	**48**	⇑P		**P**	**09 39 53.2**	**+0.5**
	baz=91							
121A	**Cookes Peak, D**	**92.11**	**52**	⇓P		**P**	**09 39 53.7**	**+0.4**
	baz=91							
U25A	**Circle Dot Ran**	**92.14**	**47**	⇑P		**P**	**09 39 53.5**	**0.0**
	baz=91							
W24A	**Lazy 6 Ranch,**	**92.19**	**48**	⇓P		**P**	**09 39 54.0**	**+0.3**
	baz=91							
Z22A	**Elephant Butte**	**92.27**	**51**	⇓P		**P**	**09 39 54.0**	**-0.1**
	baz=92							
V25A	**Rancho No Teng**	**92.34**	**47**	⇓P		**P**	**09 39 53.9**	**-0.5**
	baz=92							
U26A	**Atchley Ranch,**	**92.58**	**47**	⇓P		**P**	**09 39 54.9**	**-0.5**
	baz=92							
Z23A	**Rita Site, Whi**	**92.76**	**50**	⇑P		**P**	**09 39 56.0**	**-0.4**
	baz=92							
W25A	**X Bar L Ranch,**	**92.81**	**48**	⇑P		**P**	**09 39 55.9**	**-0.7**
	baz=92							
222A	**Williams Famil**	**92.83**	**52**	⇓P		**P**	**09 39 56.8**	**+0.1**
	baz=92							
V26A	**Tequesquite Ra**	**92.91**	**47**	⇑P		**P**	**09 39 56.5**	**-0.5**
	baz=92							
Y24A	**Capitan**	**92.92**	**49**	⇓P		**P**	**09 39 56.7**	**-0.4**
	baz=92							
X25A	**Clemmons Ranch**	**93.08**	**48**	⇑P		**P**	**09 39 57.8**	**-0.1**
	baz=92							
Y25A	**Mesa, Roswell**	**93.42**	**49**	⇑P		**P**	**09 39 59.0**	**-0.4**
	baz=93							
124A	**Stringfield Ra**	**93.62**	**50**	⇓P		**P**	**09 39 59.9**	**-0.4**
	baz=93							
X26A	**CR and CF Fran**	**93.64**	**48**	⇑P		**P**	**09 39 59.7**	**-0.7**
	baz=93							
426A	**McDonald Obser**	**95.80**	**51**	⇓P		**P**	**09 40 09.7**	**-0.6**
	baz=95							
428A	**Kincaid Ranch,**	**96.69**	**51**	⇓P		**P**	**09 40 13.8**	**-0.5**
	baz=96							
TXAR	**Lajitas Array**	**96.84**	**52**	P		**P**	**09 40 14.7**	**-0.3**
	comp=Z,1.1nm,0.7s,mb4.1,baz=309,slow=2.8,SNR=19							
TXAR	**Lajitas Array**	**96.84**	**52**	P		**P**	**09 40 14.7**	**-0.3**
TXAR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
528A	**Cox Ranch, San**	**96.96**	**51**	⇓P		**P**	**09 40 14.9**	**-0.6**
	baz=96							
627A	**Terlingua Ranc**	**96.96**	**52**	⇑P		**P**	**09 40 15.2**	**-0.3**
	baz=96							
TORD	**Torodi Ar. Bea**	**123.04**	**310**	PKP		PKPdf	09 45 36.5	-2.2
	comp=Z,1.7nm,0.7s,baz=18,slow=2.4,SNR=11							
PLCA	**Paso Flores**	**151.43**	**126**	PKPbc		PKPbc	09 46 34.5	-1.0
	comp=Z,5.8nm,0.7s,baz=214,slow=2.2,SNR=8.4							
PLCA	**Paso Flores**	**151.43**	**126**	*e*PKIKP		PKPbc	09 46 34.8	-0.7
LPAZ	**La Paz**	**151.56**	**73**	PKPbc		PKPbc	09 46 36.3	-0.2
	comp=Z,5.3nm,0.7s,baz=336,slow=2.9,SNR=33							
LPAZ	**La Paz**	**151.56**	**73**	PKIKP		PKPbc	09 46 36.3	-0.2
LPAZ				pmax		pmax		
	comp=Z,5.0nm,0.7s							
CPUP	**Villa Florida**	**164.33**	**90**	PKPab		PKPab	09 47 39.6	-2.2
	comp=Z,3.7nm,1.2s,baz=221,slow=9.4,SNR=2.9							
CPUP	**Villa Florida**	**164.33**	**90**	PKP2		PKPab	09 47 39.6	-2.2
CPUP				pmax		pmax		
	comp=Z,4.0nm,1.2s							

*NEIC **05** 09:34:39.3, 18°.12N×68°.80W, h118km, MD3.7(RSPR), After RSPR.*

RSPR 05 09:34:39.3, 18°.12N×68°.80W, h118km±2km, MD3.7/14, 11C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMO	**Isla Mona**	**0.84**	**90**	⇓*e*P	Pn	09 34 59.1	-0.6
SMN1	**Samana, DR**	**1.16**	**337**	⇓*e*P	Pn	09 35 01.2	-1.7
CRPR	**Cabo Rojo, PR**	**1.61**	**94**	⇑*e*P	Pn	09 35 07.9	0.0
CRPR				*e*S	Sn	09 35 29.7	0.0
LSP	**Las Mesas**	**1.63**	**88**	⇑*e*P	Pn	09 35 08.0	-0.2
AGPR	**Aguadilla, PR**	**1.64**	**78**	⇑*e*P	Pn	09 35 08.2	-0.1
AGPR				*e*S	Sn	09 35 31.1	+0.8
GBPR	**Guanica, Bosqu**	**1.83**	**94**	⇑*e*P	Pn	09 35 10.6	0.0
AOPR	**Arecibo Observ**	**1.96**	**83**	⇑*e*P	Pn	09 35 12.0	-0.2
AOPR				*e*S	Sn	09 35 37.4	+0.1
OBIP	**Obispado Ponce**	**2.08**	**92**	⇑*e*P	Pn	09 35 13.4	-0.4
OBIP				*e*S	Sn	09 35 40.5	+0.4
CELP	**Cerrillos**	**2.11**	**91**	⇓*e*P	Pn	09 35 13.5	-0.5
CELP				*e*S	Sn	09 35 40.8	+0.2
ICM	**Isla Caja Muer**	**2.18**	**96**	⇓*e*P	Pn	09 35 14.4	-0.6
ICM				*e*S	Sn	09 35 42.6	+0.4
SDDR	**Presa de Saban**	**2.51**	**290**	⇑*e*P	Pn	09 35 17.9	-1.3
SDDR				*e*S	Sn	09 35 50.1	+0.2
SJG	**San Juan**	**2.52**	**90**	*e*S	Sn	09 35 50.4	+0.4
CBYP	**Canovanas**	**2.80**	**86**	⇑*e*P	Pn	09 35 23.1	+0.1
HUMP	**Col San Antoni**	**2.80**	**89**	⇑*e*P	Pn	09 35 22.9	-0.1
HUMP				*e*S	Sn	09 35 57.4	+0.8
MTP	**Monte Pirata**	**3.09**	**90**	⇑*e*P	Pn	09 35 27.0	+0.3
MTP				*e*S	Sn	09 36 03.4	+0.2
STVI	**Saint Thomas**	**3.66**	**86**	⇑*e*P	Pn	09 35 34.6	+0.3
STVI				*e*S	Sn	09 36 17.3	+0.5

*JSN **05** 09:49:11.5±1.4, 18°.91N×73°.17W, h0km±999km, MD5.1*
*IDC **05** 09:49:13.9±0.6, 18°.53N×73°.47W, h0km, mb4.1/11, mb1 4.4/15,mb1mx4.3/24, mbtmp4.2/15, ML4.2/2, MS3.4/4, Ms1 3.4/4, ms1mx3.2/41, Error ellipse: s-maj=20.8km s-min=13.2km az=53.0*
*BJI **05** 09:49:14.3, 18°.60N×73°.60W, h10km*
*ISCJB **05** 09:49:15.6±1.0, 18°.56N±0°.03×73°.51W±0°.02, h17km±8km, mb4.3/58, Error ellipse: s-maj=5.2km s-min=3.5km az=12.6*
*NEIC **05** 09:49:16.4±0.2, 18°.56N×73°.56W, h10km, mb4.3/51, Error ellipse: s-maj=4.8km s-min=3.2km az=207.0*
*SSNC **05** 09:49:16.1±3.3, 18°.40N×73°.65W, h7km±318km, MD4.1, ML4.4*

ISC 05 09:49:16.1±1.5, 18°.61N±0°.03×73°.53W±0°.02, h5km±10km, n399, σ0°68/407, mb4.3/58, 147C-136D, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASC	**Masc**	**1.69**	**337**	*e*P	**Pn**	**09 49 45.4**	**-0.9**
MASC				*e*S	**Sn**	**09 50 05.7**	**-2.6**
GTBY	**Guantanamo Bay**	**1.99**	**312**	*e*Pn	**Pn**	**09 49 48.3**	**-2.0**
SDDR	**Presa de Saban**	**2.15**	**80**	*e*Pn	**Pn**	**09 49 52.2**	**-0.4**
SDDR				*e*Sn	**Sn**	**09 50 20.8**	**+1.1**
MOAC	**Moa**	**2.45**	**327**	*i* P	**Pn**	**09 49 57.6**	**+0.9**
MOAC				*i* S	**Sn**	**09 50 26.5**	**-0.4**
	comp=N,703nm,0.4s						
MOAC				*e*			
	comp=E,1μm,0.7s						
RCC	**Rio Carpintero**	**2.47**	**304**	*e*P	**Pn**	**09 49 54.2**	**-2.8**
RCC				*e*S	**Sn**	**09 50 23.2**	**-4.3**
	comp=N,1μm,0.7s						
RCC				*e*			
	comp=E,1μm,0.3s						
CMJ	**Castle Mountai**	**2.74**	**261**	*i* P	**Pn**	**09 50 00.4**	**-0.4**
YHJ	**Yallahs**	**2.91**	**256**	*i* P	**Pn**	**09 50 04.5**	**+1.5**
GWJ	**Greenwich**	**3.08**	**261**	*i* P	**Pn**	**09 50 05.4**	**-0.1**
HOJ	**Hope**	**3.12**	**259**	*i* P	**Pn**	**09 50 06.4**	**+0.5**
STH	**Stony Hill**	**3.16**	**261**	⇑*i* P	**Pn**	**09 50 06.3**	**-0.2**
STH				*i* S	**Sn**	**09 50 48.2**	**+3.7**
HLGC	**Holguin**	**3.29**	**314**	*e*P	**Pn**	**09 50 07.9**	**-0.4**
HLGC				*e*S	**Sn**	**09 50 47.9**	**+0.1**
HLGC				*e*			
BBJ	**Bamboo Saint A**	**3.56**	**267**	*i* P	**Pn**	**09 50 11.9**	**-0.1**
LMGC	**Las Mercedes**	**3.59**	**294**	*e*P	**Pn**	**09 50 09.5**	**-2.9**
LMGC				*e*S	**Sn**	**09 50 49.1**	**-6.0**
	comp=N,846nm,0.1s						
LMGC				*e*			
	comp=E,617nm,0.2s						
GRTK	**Grand Turk**	**3.66**	**38**	*e*Pn	**Pn**	**09 50 12.6**	**-0.8**
GRTK				*e*Sn	**Sn**	**09 50 58.9**	**+1.9**
MTDJ	**Mount Denham**	**3.82**	**265**	*e*Pn	**Pn**	**09 50 14.0**	**-1.6**
MTDJ				*e*Sn	**Sn**	**09 51 06.2**	**+5.2**
MCJ	**Malvern**	**4.01**	**261**	⇑*i*P	**Pn**	**09 50 19.3**	**+1.1**
NEJ	**Negril**	**4.57**	**266**	⇑*i*P	**Pn**	**09 50 26.1**	**+0.1**
AGPR	**Aguadilla, PR**	**6.09**	**90**	*e*Pn	**Pn**	**09 50 46.6**	**-0.1**
	comp=E,181nm,1.0s						
CRPR	**Cabo Rojo, PR**	**6.13**	**95**	*e*Pn	**Pn**	**09 50 47.5**	**+0.2**
	comp=E,23nm,0.5s						
CRPR				*e*Sn	**Sn**	**09 51 56.6**	**-1.2**
AOPR	**Arecibo Observ**	**6.43**	**91**	*e*Pn	**Pn**	**09 50 52.6**	**+1.1**
	comp=E,65nm,0.6s						
OBIP	**Obispado Ponce**	**6.60**	**94**	*e*Pn	**Pn**	**09 50 55.4**	**+1.6**
CELP	**Cerrillos**	**6.62**	**94**	*e*Pn	**Pn**	**09 50 54.4**	**+0.3**
SJG	**San Juan**	**7.03**	**93**	*e*Pn	**Pn**	**09 51 02.0**	**+2.4**
SJG	**San Juan**	**7.03**	**93**	Pn	**Pn**	**09 50 58.8**	**-0.8**
	comp=E,3.6nm,0.3s,baz=312,slow=19,SNR=4.2						
CBYP	**Canovanas**	**7.29**	**91**	*e*Pn	**Pn**	**09 51 04.5**	**+1.3**
	comp=E,47nm,0.8s						
MTP	**Monte Pirata**	**7.59**	**93**	*e*Pn	**Pn**	**09 51 09.5**	**+2.0**
	comp=E,30nm,0.6s						
STVI	**Saint Thomas**	**8.14**	**90**	*e*Pn	**Pn**	**09 51 15.5**	**+0.6**
SDV	**Santo Domingo**	**10.07**	**163**	*e*Pn	**Pn**	**09 51 40.4**	**-1.0**
SDV				*e*Sn	**Sn**	**09 53 26.2**	**-8.5**
BCIP	**Isla Barro Col**	**11.21**	**214**	*e*Pn	**Pn**	**09 51 55.1**	**-1.9**
LZG	**Guadaloupe-1**	**11.49**	**101**	*e*P	**Pn**	**09 52 02.9**	**+2.1**
PCRV	**Puerto La Cruz**	**12.02**	**133**	Pn	**Pn**	**09 52 06.3**	**-1.8**
	comp=E,5.3nm,0.3s,baz=273,slow=6.1,SNR=19						
PCRV				Sn	**Sn**	**09 54 12.5**	**-10**
	comp=E,2.4nm,0.3s,baz=43,slow=20,SNR=3.5						
PCRV				LR	LR	09 56 31.7	
	comp=E,101nm,21.8s,baz=304,slow=37						
ROSC	**El Rosal**	**13.69**	**183**	Pn	**Pn**	**09 52 31.9**	**+0.9**
ROSC				LR	LR	09 58 42.3	
	comp=E,109nm,18.5s,baz=27,slow=42						
JTS	**JuntasAbangare**	**13.80**	**235**	Pn	**Pn**	**09 52 31.6**	**-1.0**
	comp=E,0.4nm,0.3s,baz=107,slow=23,SNR=4.4						
JTS				LR	LR	09 58 03.2	
	comp=E,184nm,18.6s,baz=6.5,slow=38						
TGUH	**Tegucigalpa,Un**	**13.95**	**253**	*e*Pn	**Pn**	**09 52 35.3**	**+0.9**
	comp=E,26nm,0.9s						
TEIG	**Tepich**	**14.01**	**279**	*e*Pn	**Pn**	**09 52 34.5**	**-0.8**
BBSR	**BB Station**	**15.84**	**28**	*e*P	**Pn**	**09 52 57.4**	**-2.4**
	comp=E,98nm,0.7s						
OTAV	**Otavalo**	**18.89**	**195**	*e*P	**Pn**	**09 53 38.2**	**+0.2**
	comp=E,12nm,0.8s						
TKL	**Tuckaleechee C**	**19.25**	**334**	P	**Pn**	**09 53 41.2**	**-1.1**
TKL				S	**Sn**	**09 57 05.8**	**-13**
TKL				LR	LR	10 01 38.9	
TKL	**Tuckaleechee C**	**19.25**	**334**	P	**Pn**	**09 53 41.2**	**-1.1**
	comp=E,0.1nm,0.3s,baz=170,slow=11,SNR=3.6						
TKL				S	**Sn**	**09 57 05.8**	**-13**
	comp=E,0.5nm,0.3s,baz=44,slow=20,SNR=8.1						
TKL				LR	LR	10 01 38.9	
	comp=E,192nm,18.9s,baz=91,slow=38						
CPCT	**Cooper Cave**	**19.40**	**332**	*e*P	**Pn**	**09 53 43.8**	**-0.2**
BLA	**Blacksburg**	**19.50**	**343**	*e*P	**Pn**	**09 53 44.9**	**-0.3**
	comp=E,40nm,1.3s						
SWET	**Sewanee**	**19.87**	**329**	*e*P	**Pn**	**09 53 48.9**	**-0.8**
CMIG	**Matias Romero**	**20.38**	**269**	P	**P**	**09 53 53.4**	**-0.5**
	comp=E,2.8nm,0.7s,baz=65,slow=12,SNR=4.9						
CMIG				S	**S**	**09 57 28.9**	**-14**
	comp=E,3.2nm,0.5s,baz=246,slow=18,SNR=9.3						
WVT	**Waverly**	**21.54**	**327**	*e*P	**P**	**09 54 06.1**	**-0.1**
	comp=E,14nm,0.7s,mb4.5						
UTMT	**University of**	**22.24**	**326**	*e*P	**P**	**09 54 15.1**	**+1.3**
	comp=E,65nm,0.8s,mb5.1						
WCI	**Wyandotte Cave**	**22.50**	**333**	*e*P	**P**	**09 54 16.3**	**-0.1**
	comp=E,87nm,2.3s,mb4.8						
OLIL	**Olney**	**23.72**	**331**	*e*P	**P**	**09 54 29.5**	**+0.4**
	comp=E,15nm,0.9s,mb4.4						
MIAR	**Mount Ida**	**23.87**	**316**	*e*P	**P**	**09 54 30.7**	**+0.2**
	comp=E,4.5nm,1.0s,mb3.9						
CCM	**Cathedral Cave**	**24.79**	**325**	*e*P	**P**	**09 54 39.0**	**+0.1**
	comp=E,8.2nm,0.8s,mb4.3						
JCT	**Junction City**	**26.59**	**301**	*e*P	**P**	**09 54 55.3**	**-0.1**
	comp=E,7.8nm,1.0s,mb4.2						
WMOK	**Wichita Mounta**	**27.59**	**311**	*e*P	**P**	**09 55 03.4**	**-0.8**
	comp=E,3.4nm,0.7s,mb4.1						
JFWS	**Jewell Farm**	**28.06**	**333**	*e*P	**P**	**09 55 08.0**	**-0.4**
	comp=E,8.8nm,1.0s,mb4.3						
KSU1	**Kansas State U**	**28.59**	**320**	*e*P	**P**	**09 55 13.0**	**-0.2**
	comp=E,22nm,0.8s,mb4.9						
628A	**Black Gap, Mar**	**28.84**	**298**	⇓P	**P**	**09 55 15.2**	**-0.2**
	baz=29						
528A	**Cox Ranch, San**	**28.94**	**299**	⇓P	**P**	**09 55 14.8**	**-1.6**
	baz=29,SNR=6.2						
428A	**Kincaid Ranch,**	**29.02**	**300**	⇑P	**P**	**09 55 17.2**	**+0.1**
	baz=29,SNR=17						
627A	**Terlingua Ranc**	**29.25**	**297**	⇓P	**P**	**09 55 18.8**	**-0.3**
	baz=29,SNR=12						
TXAR	**Lajitas Array**	**29.45**	**297**	P	**P**	**09 55 20.7**	**-0.3**
TXAR				PcP	PcP	09 58 25.9	-0.9
TXAR	**Lajitas Array**	**29.45**	**297**	P	**P**	**09 55 20.7**	**-0.3**
	comp=E,2.5nm,0.9s,mb3.9,baz=114,slow=8.6,SNR=22						
TXAR				PcP	PcP	09 58 25.9	-0.9
	comp=E,1.4nm,0.7s,baz=139,slow=4.7,SNR=12						
527A	**Woodward Ranch**	**29.62**	**299**	⇓P	**P**	**09 55 22.1**	**-0.4**
	baz=30,SNR=8.8						
427A	**Hayter Ranch,**	**29.65**	**300**	⇑P	**P**	**09 55 22.4**	**-0.2**
	baz=30,SNR=7.6						
626A	**Big Bend Ranch**	**29.90**	**297**	⇓P	**P**	**09 55 24.9**	**-0.1**
	baz=30						
426A	**McDonald Obser**	**30.11**	**299**	⇓P	**P**	**09 55 26.7**	**0.0**
	baz=30						
MSTX	**Muleshoe**	**30.22**	**306**	⇑P	**P**	**09 55 26.7**	**-1.0**
	baz=30						
Z27A	**Tatum**	**30.31**	**305**	⇓P	**P**	**09 55 27.2**	**-1.3**
	baz=30,SNR=5.4						
CBKS	**Cedar Bluff**	**30.38**	**317**	*e*P	**P**	**09 55 28.9**	**-0.1**
	comp=E,16nm,0.8s,mb4.8						
126A	**Clayton Basin,**	**30.71**	**303**	⇓P	**P**	**09 55 31.7**	**-0.4**
	baz=31						
X27A	**F and S Farms,**	**30.73**	**307**	⇓P	**P**	**09 55 31.7**	**-0.6**
	baz=31						
W27A	**Bowe Ranch, En**	**30.88**	**308**	⇓P	**P**	**09 55 32.7**	**-0.8**
	baz=31						
Z26A	**Caprock**	**30.89**	**304**	⇑P	**P**	**09 55 32.8**	**-0.8**
	baz=31						
325A	**Bean Ranch, Si**	**31.09**	**300**	⇑P	**P**	**09 55 35.4**	**0.0**
	baz=31,SNR=13						
225A	**Deer Hill, Car**	**31.18**	**302**	⇓P	**P**	**09 55 36.3**	**0.0**
	baz=31,SNR=8.9						
X26A	**CR and CF Fran**	**31.24**	**307**	⇑P	**P**	**09 55 36.5**	**-0.1**
	baz=31						
W26A	**Owens Ranch, T**	**31.41**	**308**	⇑P	**P**	**09 55 38.1**	**-0.1**
	baz=31						
Z25A	**Roswell**	**31.48**	**304**	⇓P	**P**	**09 55 37.8**	**-1.0**
	baz=31						
MNTX	**Cornudas Mount**	**31.52**	**301**	*e*P	**P**	**09 55 38.8**	**-0.3**
	comp=E,4.1nm,0.8s,mb4.3						
324A	**Moseley Ranch,**	**31.53**	**300**	⇓P	**P**	**09 55 39.2**	**-0.1**
	baz=32,SNR=16						
Y25A	**Mesa, Roswell**	**31.68**	**305**	⇓P	**P**	**09 55 40.5**	**-0.1**
	baz=32						
ECSD	**EROS Data Cent**	**31.69**	**327**	*e*P	**P**	**09 55 38.9**	**-1.6**
	comp=E,27nm,2.1s,mb4.7						
V26A	**Tequesquite Ra**	**31.72**	**309**	⇑P	**P**	**09 55 40.5**	**-0.3**
	baz=32						
124A	**Stringfield Ra**	**31.88**	**302**	⇓P	**P**	**09 55 42.6**	**+0.3**
	baz=32,SNR=8.6						
U26A	**Atchley Ranch,**	**31.94**	**310**	⇑P	**P**	**09 55 42.5**	**-0.3**
	baz=32,SNR=6.1						
W25A	**X Bar L Ranch,**	**31.99**	**307**	⇓P	**P**	**09 55 43.0**	**-0.2**
	baz=32						
Z24A	**Sheeppen Canyo**	**32.01**	**304**	⇑P	**P**	**09 55 43.7**	**+0.2**
	baz=32,SNR=8.6						
Y24A	**Capitan**	**32.26**	**305**	⇑P	**P**	**09 55 46.0**	**+0.3**
	baz=32,SNR=6.4						
V25A	**Rancho No Teng**	**32.35**	**308**	⇓P	**P**	**09 55 46.8**	**+0.4**
	baz=32,SNR=9.9						
U25A	**Circle Dot Ran**	**32.43**	**309**	⇑P	**P**	**09 55 47.0**	**-0.1**
	baz=32,SNR=5.3						
Z23A	**Rita Site, Whi**	**32.67**	**303**	⇓P	**P**	**09 55 49.7**	**+0.4**
	baz=33						
W24A	**Lazy 6 Ranch,**	**32.70**	**307**	⇑P	**P**	**09 55 50.0**	**+0.5**
	baz=33,SNR=8.1						
T25A	**Trinidad**	**32.74**	**311**	⇓P	**P**	**09 55 50.1**	**+0.3**
	baz=33,SNR=8.6						
V24A	**Rampart Ranch,**	**32.79**	**308**	⇑P	**P**	**09 55 50.6**	**+0.2**
	baz=33						
S25A	**Robets Cordova**	**32.99**	**312**	⇓P	**P**	**09 55 52.2**	**+0.1**
	baz=33,SNR=6.3						
222A	**Williams Famil**	**33.03**	**301**	⇑P	**P**	**09 55 52.6**	**+0.1**
	baz=33						
122A	**Conniff Cattle**	**33.12**	**302**	⇓P	**P**	**09 55 53.7**	**+0.5**
	baz=33						
W23A	**Werner Place,**	**33.25**	**306**	⇑P	**P**	**09 55 54.7**	**+0.4**
	baz=33						
Z22A	**Elephant Butte**	**33.25**	**303**	⇓P	**P**	**09 55 54.3**	**0.0**
	baz=33,SNR=6.2						
BNM	**Barren Site**	**33.27**	**304**	*e*P	**P**	**09 55 55.3**	**+0.8**
	comp=E,10nm,0.2s,mb5.4						
ANMO	**Albuquerque**	**33.41**	**306**	*e*P	**P**	**09 55 56.0**	**+0.3**
	comp=E,14nm,1.9s,mb4.6						
V23A	**Ortiz Mt. (NFS**	**33.49**	**307**	⇓P	**P**	**09 55 57.0**	**+0.6**
	baz=33,SNR=6.5						
S24A	**Houchin Ranch,**	**33.54**	**311**	⇑P	**P**	**09 55 57.3**	**+0.5**
	baz=34						
P25A	**Willow Gulch B**	**33.67**	**315**	⇓P	**P**	**09 55 59.1**	**+1.2**
	baz=34						
X22A	**Bernardo**	**33.69**	**305**	⇓P	**P**	**09 55 58.9**	**+0.8**
	baz=34						
121A	**Cookes Peak, D**	**33.71**	**301**	⇑P	**P**	**09 55 58.8**	**+0.5**
	baz=34						
U23A	**El Rito**	**33.72**	**308**	⇓P	**P**	**09 55 59.4**	**+1.0**
	baz=34,SNR=8.3						
R24A	**Sanders Place,**	**33.72**	**312**	⇑P	**P**	**09 55 58.9**	**+0.5**
	baz=34,SNR=6.3						
LAZ	**Ladron**	**33.75**	**305**	*e*P	**P**	**09 55 59.5**	**+0.8**
	comp=E,3.5nm,1.2s,mb4.2						
W22A	**Albuquerque**	**33.77**	**306**	⇑P	**P**	**09 55 59.1**	**+0.2**
	baz=34						
SDCO	**Great Sand Dun**	**33.79**	**311**	*e*P	**P**	**09 55 59.1**	**+0.2**
	comp=E,3.2nm,1.0s,mb4.2						
T23A	**Casias Ranch,**	**33.88**	**310**	⇑P	**P**	**09 56 00.4**	**+0.6**
	baz=34						
Y21A	**Point of Rocks**	**34.05**	**304**	⇑P	**P**	**09 56 02.1**	**+0.8**
	baz=34,SNR=8.6						
Q24A	**Divide**	**34.08**	**313**	⇓P	**P**	**09 56 01.8**	**+0.3**
	baz=34						
S23A	**Nye Farm, Mont**	**34.13**	**311**	⇓P	**P**	**09 56 02.7**	**+0.8**
	baz=34						
220A	**Playas Peak, P**	**34.15**	**300**	⇑P	**P**	**09 56 02.9**	**+0.7**
	baz=34,SNR=8.9						
P24A	**Kohler Place,**	**34.17**	**314**	⇓P	**P**	**09 56 02.9**	**+0.6**
	baz=34						
U22A	**Llaves**	**34.23**	**308**	⇓P	**P**	**09 56 03.9**	**+1.1**
	baz=34,SNR=8.4						
X21A	**Alamocita Cree**	**34.27**	**304**	⇑P	**P**	**09 56 03.7**	**+0.5**
	baz=34,SNR=7.8						
120A	**U Bar Ranch, L**	**34.40**	**301**	⇑P	**P**	**09 56 05.3**	**+0.9**
	baz=34						
T22A	**Edith**	**34.51**	**309**	⇑P	**P**	**09 56 05.6**	**+0.4**
	baz=34						
Z20A	**Nine Sixteen R**	**34.52**	**302**	⇑P	**P**	**09 56 05.8**	**+0.4**
	baz=34						
Q23A	**Hartsel**	**34.53**	**313**	⇓P	**P**	**09 56 05.6**	**+0.2**
	baz=34						
Y20A	**Horse Springs,**	**34.57**	**303**	⇑P	**P**	**09 56 06.6**	**+0.8**
	baz=34						
O24A	**Longmont**	**34.58**	**315**	⇑P	**P**	**09 56 06.3**	**+0.5**
	baz=35						
V21A	**Milan**	**34.61**	**307**	⇓P	**P**	**09 56 07.2**	**+1.1**
	baz=35,SNR=7.6						
319A	**Douglas**	**34.65**	**298**	⇑P	**P**	**09 56 07.5**	**+0.9**
	baz=35,SNR=16						
AGMN	**Agassiz Nation**	**34.73**	**334**	*e*P	**P**	**09 56 07.6**	**+0.6**
	comp=E,5.8nm,1.1s,mb4.4						
S22A	**4UR Ranch, Cre**	**34.74**	**310**	⇓P	**P**	**09 56 07.8**	**+0.5**
	baz=35						
P23A	**Jefferson**	**34.75**	**313**	⇓P	**P**	**09 56 07.9**	**+0.6**
	baz=35						
ISCO	**Idaho Springs**	**34.79**	**314**	*e*P	**P**	**09 56 08.2**	**+0.5**
	comp=E,3.1nm,0.9s,mb4.2						
N24A	**Carr**	**34.80**	**316**	⇓P	**P**	**09 56 07.9**	**+0.2**
	baz=35						
U21A	**Nageezi**	**34.85**	**308**	⇑P	**P**	**09 56 09.2**	**+1.0**
	baz=35,SNR=10						
X20A	**Quemado**	**34.86**	**304**	⇓P	**P**	**09 56 09.2**	**+0.9**
	baz=35,SNR=10						
R22A	**Saguache, Gunn**	**34.89**	**311**	⇓P	**P**	**09 56 08.8**	**+0.3**
	baz=35						
T21A	**Navajo Lake**	**34.97**	**309**	⇓P	**P**	**09 56 09.9**	**+0.7**
	baz=35						
119A	**Ashpeak Ranch,**	**35.00**	**301**	⇓P	**P**	**09 56 10.3**	**+0.7**
	baz=35						
W20A	**Ramah**	**35.05**	**305**	⇓P	**P**	**09 56 10.3**	**+0.4**
	baz=35						
LPAZ	**La Paz**	**35.08**	**171**	*e*P	**P**	**09 56 09.4**	**-0.9**
	comp=E,6.2nm,0.8s,mb4.6						
LPAZ	**La Paz**	**35.08**	**171**	P	**P**	**09 56 08.5**	**-1.8**
	comp=E,5.6nm,0.7s,mb4.6,baz=14,slow=5.6,SNR=18						
Z19A	**T-Link Ranch,**	**35.11**	**302**	⇓P	**P**	**09 56 10.2**	**-0.3**
	baz

Y16A	Circle Bar Ran baz=37	37.05 302	⇓P	P	09 56 28.1	+1.0
P19A	Cripple Cowboy baz=37	37.05 312	⇑P	P	09 56 26.7	-0.3
N20A	Spence Gulch, baz=37	37.06 314	⇓P	P	09 56 27.7	+0.6
X16A	Lo Mia Camp, P baz=37	37.15 303	⇑P	P	09 56 28.3	+0.3
R18A	Canyonlands Na baz=37	37.22 310	⇓P	P	09 56 28.3	-0.2
M20A	Sweetwater, Wa baz=37	37.31 315	⇑P	P	09 56 29.3	+0.2
U16A	Tuba City baz=37	37.40 306	⇓P	P	09 56 30.4	+0.3
WUAZ	Wupatki baz=37	37.40 305	⇑P	P	09 56 30.3	+0.2
WUAZ	Wupatki comp=E,4.1nm,0.9s,mb4.3	37.40 305	eP	P	09 56 30.8	+0.7
W16A	Flagstaff baz=37	37.41 304	⇑P	P	09 56 30.4	+0.3
T17A	Navajo Res., N baz=37	37.42 307	⇑P	P	09 56 30.8	+0.6
O19A	Miners Draw (B baz=37	37.42 313	⇑P	P	09 56 29.8	-0.4
S17A	Black Ridge (B baz=38	37.63 308	⇓P	P	09 56 32.4	+0.5
L20A	Wamsutter baz=38	37.65 316	⇓P	P	09 56 32.2	+0.2
Q18A	Rafter H Ranch baz=38	37.66 311	⇓P	P	09 56 32.7	+0.5
N19A	John Jarvie Ra baz=38	37.71 314	⇑P	P	09 56 32.2	-0.4
214A	Organ Pipe Nat baz=38	37.72 298	⇑P	P	09 56 32.9	+0.1
Y15A	Casa Rosa Ranc baz=38	37.75 302	⇑P	P	09 56 33.6	+0.5
R17A	Hanksville Air baz=38	37.83 309	⇑P	P	09 56 34.0	+0.3
114A	Black Gap (USA baz=38,SNR=5.7	37.93 300	⇑P	P	09 56 34.8	+0.1
SRU	San Rafael baz=38	37.95 310	⇑P	P	09 56 34.4	-0.3
SRU	San Rafael comp=E,2.3nm,0.8s,mb4.0	37.95 310	eP	P	09 56 35.0	+0.3
K20A	Yellowstone Ra baz=38,SNR=7.7	37.95 317	⇑P	P	09 56 33.8	-0.8
O18A	Roosevelt baz=38	38.03 312	⇓P	P	09 56 35.2	-0.1
N18A	Larsen Ranch, baz=38	38.09 314	⇑P	P	09 56 35.5	-0.3
V15A	Kaibab Nationa baz=38	38.11 305	⇑P	P	09 56 36.5	+0.4
P17A	Butcher Ranch, baz=38	38.24 311	⇑P	P	09 56 36.8	-0.3
S16A	Weppner Ranch, baz=38	38.25 308	⇑P	P	09 56 37.2	0.0
Y14A	Wickenburg baz=38	38.29 301	⇑P	P	09 56 38.0	+0.4
R16A	Teasdale baz=38	38.35 309	⇑P	P	09 56 38.0	-0.1
K19A	Absolon Red Bu baz=38	38.36 317	⇑P	P	09 56 37.7	-0.4
L19A	Farson baz=38	38.36 315	⇓P	P	09 56 37.7	-0.4
U15A	North Rim baz=38,SNR=5.5	38.38 306	⇑P	P	09 56 38.8	+0.5
T15A	Red Dirt Ranch baz=39	38.62 306	⇓P	P	09 56 41.2	+0.8
Z13A	Yuma Proving G baz=39	38.66 300	⇑P	P	09 56 40.6	-0.1
W14A	Seligman baz=39	38.66 303	⇑P	P	09 56 41.4	+0.6
L18A	Fontenelle, Gr baz=39	38.74 315	⇓P	P	09 56 41.1	-0.2
V14A	Boquillas Ranc baz=39,SNR=5.9	38.79 304	⇑P	P	09 56 42.7	+0.9
BW06	Boulder Array baz=39	38.80 316	⇓P	P	09 56 41.3	-0.4
BW06	Boulder Array comp=E,2.5nm,0.9s,mb3.9	38.80 316	eP	P	09 56 41.2	-0.5
S15A	Panguitch baz=39	38.81 307	⇑P	P	09 56 42.7	+0.7
N17A	Moffit Pass baz=39	38.88 313	⇑P	P	09 56 42.4	0.0
K18A	Toltan Ranch, baz=39	39.06 316	⇑P	P	09 56 44.2	+0.2
O16A	Springville baz=39	39.06 312	⇑P	P	09 56 43.7	-0.3
U14A	Mt Trumbull baz=39,SNR=6.5	39.06 305	⇑P	P	09 56 44.7	+0.7
X13A	Yucca baz=39	39.11 302	⇑P	P	09 56 44.7	+0.2
JLU	Jordanelle comp=E,3.9nm,0.8s,mb4.2	39.17 312	eP	P	09 56 45.0	0.0
T14A	Hurricane baz=39	39.17 306	⇑P	P	09 56 45.8	+0.9
Q15A	Fillmore baz=39	39.26 309	⇑P	P	09 56 46.2	+0.5
W13A	Hualapai Mount baz=39,SNR=7.0	39.27 303	⇓P	P	09 56 46.2	+0.4
N16A	Rees Ranch, Co baz=39	39.27 313	⇓P	P	09 56 45.7	-0.1
J18A	Kendall Valley baz=39	39.30 317	⇓P	P	09 56 45.4	-0.6
L17A	Cokeville baz=39	39.38 315	⇑P	P	09 56 46.1	-0.5
I18A	Diamond G Ranc baz=39,SNR=5.8	39.40 317	⇑P	P	09 56 46.5	-0.3
S14A	Cedar City baz=39	39.45 307	⇓P	P	09 56 47.2	0.0
CCUT	Cedar City comp=E,28nm,2.6s,mb4.5	39.53 307	eP	P	09 56 48.6	+0.7
V13A	Grand Canyon W baz=40	39.54 304	⇑P	P	09 56 48.5	+0.4
GLA	Glamis baz=40	39.60 300	⇓P	P	09 56 48.6	0.0
HWUT	Hardware Ranch comp=E,5.3nm,1.1s,mb4.2	39.65 314	eP	P	09 56 48.3	-0.6
ARUT	Antelope Range comp=E,3.1nm,0.7s,mb4.2	39.66 307	eP	P	09 56 48.8	-0.3
RLMT	Red Lodge baz=40,SNR=8.5	39.74 320	⇑P	P	09 56 49.3	-0.3
RLMT	Red Lodge comp=E,6.8nm,0.8s,mb4.4	39.74 320	eP	P	09 56 49.2	-0.4
O15A	The Old Anders baz=40	39.77 311	⇓P	P	09 56 49.8	-0.1
T13A	Saint George baz=40	39.79 306	⇑P	P	09 56 50.7	+0.6
J17A	Brown Place, J baz=40	39.82 317	⇓P	P	09 56 50.2	0.0
LOHW	Long Hollow comp=E,6.9nm,0.9s,mb4.4	39.86 317	eP	P	09 56 50.6	0.0
SNOW	Snow King Moun comp=E,5.9nm,1.0s,mb4.3	39.89 317	eP	P	09 56 50.8	-0.1
Q14A	Sevier Lake (B baz=40,SNR=7.3	39.91 309	⇑P	P	09 56 51.6	+0.5
S13A	Holt Ranch, En baz=40	39.92 307	⇑P	P	09 56 51.3	+0.1
P14A	Drum Mountains baz=40	39.96 310	⇓P	P	09 56 51.9	+0.4
I17A	Pilgrim Ck. baz=40	39.98 317	⇓P	P	09 56 51.8	+0.2
DUG	Dugway baz=40,SNR=6.0	39.99 311	⇑P	P	09 56 51.7	0.0
DUG	Dugway comp=E,4.6nm,0.9s,mb4.2	39.99 311	eP	P	09 56 52.1	+0.3
MOOW	Moose Ponds comp=E,6.6nm,0.8s,mb4.4	40.01 317	eP	P	09 56 51.8	-0.1
G18A	Lazy EL Ranch, baz=40,SNR=11	40.02 320	⇑P	P	09 56 51.1	-0.8
TPAW	Teton Pass comp=E,4.0nm,0.8s,mb4.2	40.03 317	eP	P	09 56 51.0	-1.0
N15A	Stansbury Isla baz=40	40.03 312	⇓P	P	09 56 51.9	-0.2
IRM	Iron Mountain baz=40,SNR=8.7	40.08 301	⇓P	P	09 56 53.1	+0.6
FLWY	Flagg Ranch comp=E,6.2nm,1.0s,mb4.3	40.14 318	eP	P	09 56 53.0	+0.1
K16A	Soda Springs baz=40	40.17 315	⇑P	P	09 56 53.0	-0.2
R13A	O'Grain Ranch, baz=40,SNR=6.6	40.17 308	⇓P	P	09 56 53.8	+0.5
V12A	Nelson baz=40	40.19 304	⇓P	P	09 56 54.1	+0.6
M15A	Larsen Ranch, baz=40,SNR=6.2	40.20 313	⇓P	P	09 56 52.7	-0.8
H17A	Grant Village baz=40	40.20 318	⇓P	P	09 56 53.5	0.0
IMW	Indian Meadow comp=E,4.6nm,0.9s,mb4.2	40.21 317	eP	P	09 56 53.1	-0.4
BC3	Big Chuckawall baz=40	40.23 300	⇓P	P	09 56 53.8	0.0
L15A	Malad City baz=40	40.37 314	⇑P	P	09 56 54.4	-0.5
J16A	Bone baz=40	40.37 316	⇓P	P	09 56 54.5	-0.3
F18A	Big Timber baz=40,SNR=5.5	40.40 320	⇓P	P	09 56 54.5	-0.6
Q13A	Wheeler Ranch, baz=40	40.45 309	⇓P	P	09 56 56.0	+0.5
I16A	Newdale baz=40	40.55 317	⇓P	P	09 56 56.3	0.0
P13A	Bates Ranch, G baz=41	40.61 309	⇓P	P	09 56 57.4	+0.6
GMRC	Granite Mounta baz=41	40.62 302	⇑P	P	09 56 57.2	+0.2
V11A	Goodsprings baz=41	40.67 304	⇓P	P	09 56 58.0	+0.5
S12A	Delamar Landin baz=41	40.68 306	⇑P	P	09 56 58.2	+0.7
R12A	Pony Springs, baz=41	40.70 308	⇑P	P	09 56 58.4	+0.8
K15A	Arbon baz=41	40.74 315	⇑P	P	09 56 57.7	-0.2
G17A	Pierce Place, baz=41	40.74 319	⇓P	P	09 56 57.8	-0.1
H16A	Russell Place, baz=41	40.77 318	⇑P	P	09 56 58.8	+0.7
M14A	Sheep Mountain baz=41	40.84 313	⇓P	P	09 56 58.5	-0.3
E18A	Harlowton baz=41	40.85 321	⇓P	P	09 56 58.7	-0.1
T11A	Corn Creek, Al baz=41	40.86 306	⇑P	P	09 56 59.4	+0.4
MONP	Monument Peak baz=41	40.88 299	⇑P	P	09 56 59.7	+0.5
L14A	Malta baz=41,SNR=8.0	40.97 313	⇓P	P	09 56 58.7	-1.1
J15A	Blackfoot baz=41,SNR=5.6	40.97 316	⇓P	P	09 56 59.0	-0.8
F17A	Fitzpatrick Pl baz=41,SNR=9.5	40.97 320	⇑P	P	09 56 59.3	-0.5
TUQ	Turquoise Moun baz=41	40.97 303	⇓P	P	09 57 00.3	+0.4
Q12A	Willow Creek R baz=41	41.08 309	⇑P	P	09 57 00.7	0.0
D18A	Linhart Farms, baz=41	41.12 322	⇓P	P	09 57 01.1	+0.1
K14A	Jones Ranch, D baz=41	41.12 314	⇑P	P	09 57 00.6	-0.5
P12A	McGill baz=41	41.27 309	⇑P	P	09 57 02.2	-0.1
SHOC	Shoshone baz=41	41.36 303	⇓P	P	09 57 03.8	+0.6
M13A	Montello comp=E,3.6nm,0.8s,mb4.0	41.36 312	eP	P	09 57 01.1	-2.0
G16A	Moss Hill, Enn baz=41	41.36 319	⇑P	P	09 57 03.7	+0.7
E17A	Martinsdale baz=41,SNR=10	41.37 321	⇑P	P	09 57 02.5	-0.5
S11A	Rachel baz=41	41.37 306	⇑P	P	09 57 03.3	+0.1
R11A	Troy Canyon, C baz=41	41.44 307	⇑P	P	09 57 03.3	-0.5
L13A	Double Diamond baz=41	41.47 313	⇑P	P	09 57 03.4	-0.5
F16A	Kennard Place, baz=42	41.51 319	⇑P	P	09 57 04.7	+0.5
U10A	Ash Meadows, A baz=42,SNR=5.6	41.52 304	⇓P	P	09 57 04.9	+0.5
EGMT	Eagleton baz=42	41.52 323	⇓P	P	09 57 03.9	-0.4
EGMT	Eagleton comp=E,8.1nm,1.1s,mb4.3	41.52 323	eP	P	09 57 04.2	-0.1
BBRC	Big Bear Solar baz=42	41.54 301	⇓P	P	09 57 05.2	+0.6
D17A	Six Diamond Ra baz=42,SNR=9.2	41.61 322	⇑P	P	09 57 04.7	-0.4
H15A	Lima baz=42	41.62 317	⇓P	P	09 57 06.0	+0.8
Q11A	Duckwater baz=42	41.63 308	⇑P	P	09 57 05.0	-0.3
GSC	Goldstone baz=42	41.65 302	⇓P	P	09 57 05.7	+0.1
MURC	Murrieta baz=42	41.65 300	⇓P	P	09 57 05.6	+0.1
J14A	Carey baz=42,SNR=7.9	41.66 315	⇑P	P	09 57 04.7	-0.8
B18A	Beardsley Farm baz=42	41.74 324	⇑P	P	09 57 05.8	-0.2
G15A	Dillon baz=42,SNR=7.3	41.77 318	⇑P	P	09 57 06.4	+0.1
N12A	Clover Valley, baz=42	41.81 311	⇑P	P	09 57 06.6	-0.2
MCMT	McKenzie Canyo comp=E,3.3nm,0.9s,mb4.0	41.85 317	eP	P	09 57 07.4	+0.4
E16A	East Helena baz=42,SNR=5.6	41.90 320	⇑P	P	09 57 06.7	-0.7
C17A	Wharram Farm, baz=42,SNR=5.4	41.90 322	⇓P	P	09 57 06.6	-0.8
M12A	Wells baz=42	41.91 312	⇓P	P	09 57 07.2	-0.3
DLMT	Dillon comp=E,6.3nm,1.0s,mb4.2	41.92 318	eP	P	09 57 08.0	+0.4
FURC	Furnace Creek, baz=42	41.95 304	⇑P	P	09 57 08.5	+0.6
R10A	Warm Springs baz=42	41.97 307	⇑P	P	09 57 08.1	0.0
O11A	Cowboy Ranch, baz=42	42.02 310	⇑P	P	09 57 08.8	+0.3
A18A	Metzger Ranch, baz=42,SNR=5.5	42.06 324	⇓P	P	09 57 07.9	-0.7
HRY	Holter Researc	42.08 320	eP	P	09 57 08.5	-0.3
H14A	Leadore baz=42,SNR=15	42.09 317	⇓P	P	09 57 09.2	+0.2
J13A	Cove Ranch, Pi baz=42,SNR=9.6	42.13 315	⇓P	P	09 57 08.8	-0.5
Q10A	Clear Creek Ra baz=42	42.19 308	⇑P	P	09 57 10.3	+0.5
L12A	House Creek Ra baz=42	42.24 313	⇑P	P	09 57 09.5	-0.7
I13A	Wildhorse Cree baz=42,SNR=7.6	42.29 316	⇓P	P	09 57 10.7	+0.1
HLID	Hailey baz=42,SNR=7.2	42.35 315	⇓P	P	09 57 10.7	-0.4
HLID	Hailey comp=E,30nm,2.5s,mb4.5	42.35 315	eP	P	09 57 10.6	-0.5
MPMC	Manual Prospec baz=42	42.35 303	⇑P	P	09 57 11.2	0.0
LRMC	Laurel Mountai baz=42	42.39 302	⇓P	P	09 57 11.7	+0.1
G14A	Jackson baz=42	42.42 318	⇑P	P	09 57 11.3	-0.3
E15A	Deer Lodge baz=42	42.43 320	⇓P	P	09 57 11.6	-0.2
EDW2	Edwards Air Fo baz=42	42.52 302	⇑P	P	09 57 12.7	0.0
M11A	Holland Ranch, baz=42,SNR=5.1	42.53 312	⇑P	P	09 57 12.0	-0.6
A17A	Triple J Farms baz=42,SNR=6.2	42.55 324	⇓P	P	09 57 12.0	-0.7
C16A	Fuhringer Ranc baz=42	42.56 322	⇓P	P	09 57 12.0	-0.7
F14A	Wisdom baz=43,SNR=5.8	42.61 319	⇑P	P	09 57 13.0	-0.2
H13A	Challis baz=43	42.65 316	⇓P	P	09 57 13.8	+0.3
L11A	Cat Creek Ranc baz=43	42.76 313	⇑P	P	09 57 13.9	-0.6
B16A	M & M Farms, S baz=43	42.84 323	⇓P	P	09 57 14.4	-0.6
G13A	Cobalt baz=43	42.85 317	⇓P	P	09 57 14.5	-0.6
CWC	Cottonwood Cre baz=43	42.90 304	⇓P	P	09 57 15.8	+0.1
I12A	Atlanta baz=43	42.92 315	⇓P	P	09 57 15.4	-0.3
E14A	Clinton baz=43	42.95 319	⇑P	P	09 57 16.0	0.0
CHMT	Chamberlain Mo	43.03 320	eP	P	09 57 16.8	+0.2
H12A	Diamond D Ranc baz=43	43.03 316	⇓P	P	09 57 16.3	-0.4
C15A	Salmond Ranch, baz=43	43.05 321	⇓P	P	09 57 16.4	-0.3
F13A	Darby baz=43	43.20 318	⇓P	P	09 57 17.6	-0.4
L10A	Juniper Basin baz=43	43.23 312	⇑P	P	09 57 18.1	-0.1
MFID	Camas Ranch baz=43	43.25 314	⇑P	P	09 57 18.1	-0.4
D14A	Greenough baz=43,SNR=7.5	43.26 320	⇓P	P	09 57 17.7	-0.8
B15A	Bradely Ranch, baz=43	43.29 322	⇓P	P	09 57 17.8	-0.8
SLMT	Seeley Lake comp=E,4.3nm,1.2s,mb4.0	43.33 320	eP	P	09 57 18.7	-0.3
E13A	Victor baz=43	43.40 319	⇑P	P	09 57 19.0	-0.6
NVAR	Mina Array Bea comp=E,0.9nm,0.6s,mb3.6,baz=95,slow=6.3,SNR=9.7	43.52 307	P	P	09 57 21.4	+0.7
NVAR			PcP	PcP	09 59 08.2	-0.4
VES	Vestal, Richgr baz=44	43.58 303	⇓P	P	09 57 22.2	+1.1
A15A	Johnson Ranch, baz=44	43.71 323	⇓P	P	09 57 21.8	-0.3
SWMT	Swartz Lake	43.76 320	eP	P	09 57 22.9	+0.4
F12A	Elk City baz=44	43.78 318	⇑P	P	09 57 22.1	-0.5
RCTC	Rector, Farmer baz=44	43.79 303	⇑P	P	09 57 23.3	+0.4
D13A	Huson baz=44,SNR=5.7	43.85 320	⇓P	P	09 57 22.5	-0.7
A14A	Double T Ranch baz=44	44.11 323	⇑P	P	09 57 25.0	-0.2
C13A	Hot Springs baz=44	44.18 320	⇓P	P	09 57 25.6	-0.3
D12A	Red Ives Fores baz=44	44.38 319	⇓P	P	09 57 27.1	-0.4
WAKR	Walker	44.41 306	eP	P	09 57 28.6	+0.7
A13A	Flathead Natio baz=45	44.66 322	⇓P	P	09 57 29.2	-0.5
C12B	Naegeli Ranch, baz=45	44.74 320	⇑P	P	09 57 30.3	0.0
BMO	Blue Mountains comp=E,8.0nm,1.7s,mb4.3	44.76 316	eP	P	09 57 29.4	-1.1
WVOR	Wild Horse Val comp=E,4.4nm,1.0s,mb4.2	44.87 312	eP	P	09 57 30.9	-0.5
J08A	Circle Bar Ran baz=45	45.04 313	⇑P	P	09 57 32.3	-0.5
F10A	Beach Ranch, E baz=45,SNR=5.3	45.13 317	⇑P	P	09 57 31.9	-1.6
LNOR	Lincton Mounta	45.78 317	eP	P	09 57 38.3	-0.3
NEW	Newport comp=E,7.2nm,1.4s,mb4.4	45.98 320	eP	P	09 57 39.6	-0.5
EDM	Edmonton	46.26 328	eP	P	09 57 41.8	-0.5
G06A	Carlson Farm, baz=47	47.11 315	⇓P	P	09 57 48.7	-0.4
CPUP	Villa Florida comp=E,0.3nm,0.4s,mb3.6,baz=0.0,slow=9.1,SNR=3.1	47.36 160	P	P	09 57 48.1	-3.0
B08A	Colville Reser baz=47	47.37 319	⇑P	P	09 57 50.1	-0.9
H04A	Detroit Lake baz=48	48.00 314	⇑P	P	09 57 55.3	-0.7
YKA	Yellowknife Ar	52.20 337	P	P	09 58 25.8	-1.8
YKA	Yellowknife Ar comp=E,3.7nm,0.8s,mb4.4,baz=123,slow=7.4,SNR=7.6	52.20 337	P	P	09 58 25.8	-1.8
DLBC	Dease Lake	56.97 328	eP	P	09 59 02.5	+0.2
PLCA	Paso Flores comp=E,10nm,0.9s,mb4.9	59.10 177	eP	P	09 59 15.5	-1.8
PLCA	Paso Flores comp=E,8.0nm,1.0s,mb4.7,baz=360,slow=6.7,SNR=6.5	59.10 177	P	P	09 59 15.6	-1.8
EGAK	Eagle comp=E,2.5nm,0.7s,mb4.3	63.82 334	eP	P	09 59 48.2	-0.8
MENT	Mentasta	64.59 332	eP	P	09 59 53.9	-0.2
ILAR	Eielson Array comp=E,1.1nm,0.6s,mb4.0,baz=94,slow=4.8,SNR=20	66.23 333	P	P	10 00 03.4	-1.4
DBIC	Dimbokro comp=E,5.0nm,0.9s,mb4.5,baz=225,slow=8.4,SNR=4.7	67.72 90	P	P	10 00 13.3	-1.7
HGN	Heimansgroeve	69.20 42	i S	S	10 09 51.7	+22
TORD	Torodi Ar. Bea comp=E,1.1nm,0.8s,mb3.9,baz=284,slow=5.7,SNR=9.1	72.10 82	P	P	10 00 40.6	-1.5
SYO	Syowa Base	115.47 158	eX	PKiKP	10 07 51.0	-7.4
CN2	Changchun	115.50 345	ePKP	PKPdf	10 07 55.4	-4.0
CN2			PP	PP	10 09 00.7	+0.9
WMQ	Urumqi	115.54 15	ePKP	PKPdf	10 07 58.6	-0.8
HHC	Hu-ho-hao-te	120.66 356	ePKP	PKPdf	10 08 04.9	-4.5
HHC			PP	PP	10 09 33.3	-2.1
HHC			PKS		10 11 40.8	
HHC			SKS	SKSdf	10 15 12.2	-10
LZH	Lanzhou	125.55 3	ePKP	PKPdf	10 08 14.3	-4.6
LZH			sPKP		10 08 25.9	
CD2	Chengdu	130.70 3	PKP	PKPdf	10 08 28.0	-0.9

BJI ***05*** *09:49:15.8, 32.˙72N×105.˙61E, h13km, mB6.3/29, mb5.8/38, ML6.0/18, Ms6.5/66, Ms7 6.3/53*

ISCJB ***05*** *09:49:16.6±0.1, 32.˙77N±0.˙01×105.˙44E±0.˙01, h10km, mb5.8/421, MS6.0/268, Error ellipse: s-maj=1.9km s-min=1.7km az=32.4*

IDC ***05*** *09:49:16.1±0.4, 32.˙84N×105.˙60E, h0km, mb5.6/29, mb1 5.6/32, mb1mx5.6/32, mbtmp5.6/32, ML5.0/3, MS5.9/33, Ms1 5.9/33, ms1mx5.7/44, Error ellipse: s-maj=13.6km s-min=9.1km az=36.0*

NEIC ***05*** *09:49:17.3±0.1, 32.˙76N×105.˙49E, h6km, mb5.9/276, ME6.1, MS6.0/188, MW5.9, Error ellipse: s-maj=3.6km s-min=2.5km az=24.0 Broadband fault plane solution: P waves. NP1:ϕs15.00000°, δ55.00000°, λ150.00000°. NP2:ϕs123.00000°, δ66.00000°, λ39.00000°. Principal axes: T Plg44.0000°, Azm343.0000°; N Plg0.0000°, Azm0.0000°; P Plg7.0000°, Azm247.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Four people killed, 29 injured, and several buildings and roads damaged in the Qingchuan area. Felt [III] at Chengdu and Xi'an. Also felt at Beibei, Chongqing, Daxian, Guangyuan, Mianyang, Nanchong and Xianyang.

TEH ***05*** *09:49:18.0, 32.˙81N×105.˙56E, h10km*

IGIL ***05*** *09:49:18.0, 32.˙74N×105.˙51E, h10km, MS5.9*

MOS ***05*** *09:49:18.6±1.0, 32.˙74N×105.˙62E, h33km, mb6.1/143, MS6.0/102, Error ellipse: s-maj=7.4km s-min=5.4km az=100.4*

SZGRF ***05*** *09:49:19.7, 32.˙85N×105.˙06E, h11km, mb6.3, MS6.2, Sichuan, China*

GCMT ***05*** *09:49:20.4±0.1, 32.˙69N×105.˙57E, h12km, MW6.0, Moment Tensor Solution. s102,c217; s86,c115; Moment tensor: Scale 1018Nm; Mrr 1.09±.01; Mθθ 0.13±.01; Mϕϕ 0.97±.01; Mrθ 0.18±.02; Mθϕ 0.37±.01; Mϕr 0.01±.02; Best double couple: M0 1.10000×1018 NP1:ϕs348.00000°, δ44.00000°, λ103.00000°. NP2: ϕs151.00000°, δ47.00000°, λ78.00000°. Principal axes: T 1.1200, Plg81.0000°, Azm348.0000°; N -0.0100, Plg9.0000°, Azm159.0000°; P -1.1100, Plg1.0000°, Azm249.0000°; Data Used: II IU CN G IC. Surface waves: sta=116, comp=279, per= 50.*

DJA ***05*** *09:49:24, 32.˙75N×105.˙50E, h53km, Mw6.5/65*

BGS ***05*** *09:49:45.5±1.6, 35.˙08N×99.˙74E, h10km, mb5.5, MS6.1*

ISC 05 09:49:18.4±0.1, 32.˙81N±0.˙01×105.˙50E±0.˙01, h11km, h11km±.9km:pP-P,n1754,σ1§03/1478, mb5.8/420, MS6.0/268, 302C-196D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
CD2	Chengdu	2.41	219	⇓iPn	Pn	09 49 56.6	-1.1
CD2				Pg	Pg	09 50 01.2	-3.3
CD2				Sn	Sn	09 50 28.6	+1.4
CD2				Sg	Sg	09 50 32.2	-3.5
CD2	comp=N,429μm,0.8s			smax			
CD2	comp=E,205μm,0.6s			smax			
XAN	Xi'an	3.11	66	Pn	Pn	09 50 07.5	+0.1
XAN				Pg	Pg	09 50 14.3	-3.7
XAN				Sn	Sn	09 50 47.3	+2.8
XAN				Sg	Sg	09 50 56.2	-2.1
XAN	comp=N,37μm,0.8s			smax			
XAN	comp=E,25μm,0.9s			smax			
XAN	comp=N,234μm,6.7s			LR	LR		
XAN	comp=E,353μm,9.7s			LR	LR		
XAN	comp=Z,323μm,9.7s			LR	LR		

LZH	**Lanzhou**	**3.54**	**338**		Pn		**Pn**	**09 50 15.4**	**+2.1**
LZH					Pg		**Pg**	**09 50 25.2**	**-1.1**
LZH					Sg		**Sg**	**09 51 10.0**	**-2.2**
LZH					smax				
	comp=N,140μm,1.3s								
LZH					smax				
	comp=E,367μm,1.5s								
LZH					LR	LR			
	comp=E,432μm,5.9s								
LZH					LR	LR			
	comp=Z,453μm,7.0s								
ENH	**Enshi**	**4.24**	**126**	*e*Pn		**Pn**		**09 50 22.4**	**-0.5**
ENH				*e*Sg		**Sg**		**09 51 34.8**	**+0.3**
GYA	**Guiyang**	**6.41**	**171**	⇑*i*Pn		**Pn**		**09 50 50.6**	**-2.1**
GYA				Sn		**Sn**		**09 52 05.5**	**-0.4**
GYA				Sg		**Sg**		**09 52 28.6**	**-16**
GYA				smax					
	comp=N,17μm,1.0s								
GYA				smax					
	comp=E,11μm,1.0s								
GYA				LR	LR				
	comp=N,105μm,8.7s								
GYA				LR	LR				
	comp=E,254μm,8.0s								
GYA				LR	LR				
	comp=Z,97μm,7.4s								
TIY	**Taiyuan**	**7.49**	**47**	*e*Pn		**Pn**		**09 51 06.6**	**-0.9**
TIY				Sn		**Sn**		**09 52 30.5**	**-1.9**
TIY				LR	LR				
	comp=N,130μm,6.8s								
TIY				LR	LR				
	comp=E,167μm,10.4s								
TIY				LR	LR				
	comp=Z,67μm,7.3s								
WHN	**Wuhan**	**7.87**	**104**	⇓Pn		**Pn**		**09 51 10.5**	**-2.3**
WHN				Sn		**Sn**		**09 52 37.5**	**-4.4**
WHN				LR	LR				
	comp=N,448μm,12.0s								
WHN				LR	LR				
	comp=E,280μm,7.8s								
WHN				LR	LR				
	comp=Z,662μm,14.0s								
KMI	**Kunming**	**8.03**	**198**	P		**Pn**		**09 51 14.0**	**-1.0**
KMI				S		**Sn**		**09 52 43.1**	**-2.8**
KMI				LR	LR				
	comp=N,198μm,8.8s								
KMI				LR	LR				
	comp=E,303μm,8.8s								
KMI				LR	LR				
	comp=Z,210μm,13.7s								
GTA	**Gaotai**	**8.03**	**327**	⇑P		**Pn**		**09 51 14.8**	**-0.2**
GTA				pP				09 51 18.4	
GTA				sP				09 51 20.8	
GTA				S		**Sn**		**09 52 46.4**	**+0.6**
GTA				pmax	pmax				
	comp=Z,350nm,0.8s								
GTA				pmax	pmax				
	comp=Z,2μm,6.0s								
GTA				LR	LR				
	comp=N,175μm,11.7s								
GTA				LR	LR				
	comp=E,204μm,11.4s								
GTA				LR	LR				
	comp=Z,189μm,14.7s								
BTO	**Baotou**	**8.58**	**24**	*e*P		**Pn**		**09 51 21.2**	**-1.3**
BTO				LR	LR				
	comp=N,171μm,11.0s								
BTO				LR	LR				
	comp=E,72μm,9.2s								
HHC	**Hu-ho-hao-te**	**9.38**	**29**	*e*P		**Pn**		**09 51 32.0**	**-1.4**
HHC				pP				09 51 34.7	
HHC				sP				09 51 38.0	
HHC				S		**Sn**		**09 53 16.2**	**-2.6**
HHC				pmax	pmax				
	comp=Z,210nm,0.8s								
HHC				pmax	pmax				
	comp=Z,5μm,5.4s								
HHC				LR	LR				
	comp=N,121μm,7.1s								
HHC				LR	LR				
	comp=E,127μm,5.4s								
HHC				LR	LR				
	comp=Z,164μm,5.7s								
TIA	**Tai'an**	**10.17**	**67**	P		**Pn**		**09 51 44.5**	**+0.2**
TIA				LR	LR				
	comp=N,54μm,9.6s								
TIA				LR	LR				
	comp=E,50μm,8.1s								
BJT	**Baijiatuau**	**11.20**	**47**	*e*Pn		**Pn**		**09 51 57.8**	**-0.5**
	comp=E,188nm,0.6s								
BJT				*e*Sg		**Sn**		**09 54 04.7**	**+1.1**
BJT	**Baijiatuau**	**11.20**	**47**	*e*P		**Pn**		**09 51 57.8**	**-0.6**
BJT				pmax	pmax				
	comp=Z,189nm,0.6s								
BJI	**Beijing**	**11.22**	**47**	P		**Pn**		**09 51 57.6**	**-1.0**
BJI				pmax	pmax				
	comp=Z,93nm,0.5s								
BJI				pmax	pmax				
	comp=Z,5μm,8.2s								
BJI				LR	LR				
	comp=N,225μm,13.7s								
BJI				LR	LR				
	comp=E,173μm,10.1s								
BJI				LR	LR				
	comp=Z,110μm,18.4s								
NJ2	**Nanjing**	**11.31**	**90**	*e*P		**Pn**		**09 51 58.3**	**-1.6**
NJ2				pP				09 52 06.1	
NJ2				sP				09 52 10.3	
NJ2				S		**Sn**		**09 54 07.5**	**+1.2**
NJ2				pmax	pmax				
	comp=Z,200nm,0.7s								
NJ2				pmax	pmax				
	comp=E,8μm,4.8s								
NJ2				LR	LR				
	comp=N,88μm,17.8s								
NJ2				LR	LR				
	comp=E,248μm,19.7s								
NJ2				LR	LR				
	comp=Z,275μm,12.1s								
LSA	**Lhasa**	**12.66**	**260**	P		**Pn**		**09 52 19.7**	**+1.2**
LSA				pP				09 52 27.5	
LSA				S		**Sn**		**09 54 36.6**	**-2.9**
LSA				pmax	pmax				
	comp=Z,160nm,1.0s								
LSA				pmax	pmax				
	comp=Z,3μm,8.0s								
LSA				LR	LR				
	comp=N,32μm,14.0s								
LSA				LR	LR				
	comp=E,74μm,10.0s								
LSA				LR	LR				
	comp=Z,100μm,10.0s								
LSA	**Lhasa**	**12.66**	**260**	*e*Pn		**Pn**		**09 52 18.5**	**+0.1**
	comp=Z,544nm,1.4s								
LSA	**Lhasa**	**12.66**	**260**	*e*P		**Pn**		**09 52 18.5**	**0.0**
LSA				pmax	pmax				
	comp=Z,544nm,1.4s								
IMP	**Imphal**	**12.91**	**235**	*e*PKP		**Pn**		**09 52 19.0**	**-2.8**
SSE	**Sheshan**	**13.43**	**93**	⇑P		**Pn**		**09 52 22.6**	**-6.3**
SSE				pP				09 52 29.2	
SSE				S		**Sn**		**09 54 54.7**	**-3.5**
SSE				sS				09 54 59.6	
SSE				pmax	pmax				
	comp=Z,100nm,1.1s								
SSE				pmax	pmax				
	comp=Z,2μm,5.1s								
SSE				LR	LR				
	comp=N,90μm,13.4s								
SSE				LR	LR				
	comp=E,181μm,13.5s								
SSE				LR	LR				
	comp=Z,264μm,14.1s								
CHRT	**Chiangrai**	**13.86**	**203**	⇓PN		**Pn**		**09 52 31.0**	**-3.9**
QZH	**Quanzhou**	**13.88**	**121**	⇓*i*P		**Pn**		**09 52 32.3**	**-2.8**
QZH				S		**Sn**		**09 55 00.4**	**-8.9**
QZH				LR	LR				
	comp=N,389μm,12.4s								
QZH				LR	LR				
	comp=E,272μm,11.7s								
QZH				LR	LR				
	comp=Z,346μm,13.5s								
SHL	**Shillong**	**13.91**	**242**	*i* P		**Pn**		**09 52 34.5**	**-0.9**
SHL				*ex*		x		09 55 30.0	
QIZ	**Qiongzhong**	**14.27**	**163**	P		**Pn**		**09 52 38.0**	**-2.4**
QIZ				sP		sP		09 52 46.1	-6.0
QIZ				S		**Sn**		**09 55 16.7**	**-2.0**
QIZ				sS				09 55 22.1	
QIZ				pmax	pmax				
	comp=Z,130nm,0.9s								
QIZ				pmax	pmax				
	comp=Z,2μm,9.1s								
QIZ				LR	LR				
	comp=N,93μm,9.8s								
QIZ				LR	LR				
	comp=E,41μm,6.9s								
QIZ				LR	LR				
	comp=Z,130μm,11.2s								
QIZ	**Qiongzhong**	**14.27**	**163**	*e*Pn		**Pn**		**09 52 37.0**	**-3.4**
	comp=Z,166nm,0.9s								
QIZ				*e*Sn		**Sn**		**09 55 09.0**	**-10**
DL2	**Dalian**	**14.41**	**61**	⇑P		**Pn**		**09 52 43.3**	**+1.0**
DL2				S		**Sn**		**09 55 25.3**	**+3.2**
DL2				pmax	pmax				
	comp=Z,440nm,1.8s								
DL2				pmax	pmax				
	comp=Z,9μm,5.0s								
DL2				LR	LR				
	comp=N,65μm,15.7s								
DL2				LR	LR				
	comp=E,82μm,15.2s								
DL2				LR	LR				
	comp=Z,129μm,15.0s								
SONM	**Songino Array**	**15.02**	**2**	Pn		**Pn**		**09 52 48.7**	**-1.8**
SONM				Sn		**Sn**		**09 55 40.7**	**+3.8**
SONM				Lg				09 57 08.0	
SONM				LR	LR			09 59 07.0	
SONM	**Songino Array**	**15.02**	**2**	Pn		**Pn**		**09 52 48.7**	**-1.8**
	comp=Z,2.9nm,0.3s,baz=186,slow=15,SNR=111								
SONM				Sn		**Sn**		**09 55 40.7**	**+3.8**
	comp=Z,0.4nm,0.3s,baz=176,slow=25,SNR=2.3								
SONM				Lg				09 57 08.0	
	comp=Z,0.6nm,0.3s,baz=183,slow=22,SNR=3.0								
SONM				LR	LR			09 59 07.0	
	comp=Z,99μm,19.5s,baz=181,slow=39								
SONM				P3KPbc				10 28 29.4	
	baz=341,slow=3.5,SNR=6.5								
SONM	**Songino Array**	**15.02**	**2**	P		**Pn**		**09 52 48.7**	**-1.8**
SONM								09 55 40.7	
SONM				pmax	pmax				
	comp=Z,3.0nm,0.3s								
SONM				MLR	MLR				
	comp=Z,99μm,19.5s								
ULN	**Ulaanbaatar**	**15.08**	**4**	*e*Pn		**Pn**		**09 52 49.4**	**-1.9**
	comp=Z,258nm,0.9s								
ULN				*e*Sn		**Sn**		**09 55 45.2**	**+6.9**
ULN	**Ulaanbaatar**	**15.08**	**4**	*e*P		**Pn**		**09 52 49.4**	**-1.9**
ULN				*e*				09 55 45.3	
ULN				pmax	pmax				
	comp=Z,258nm,0.9s								
ULN	**Ulaanbaatar**	**15.08**	**4**	Pn		**Pn**		**09 52 50.9**	**-0.4**
	SNR=202								
CHG	**Chiang Mai**	**15.13**	**204**	⇓P		**Pn**		**09 52 50.6**	**-1.5**
	comp=Z,205nm,1.0s								
CHTO	**Chiang Mai**	**15.13**	**204**	*e*Pn		**Pn**		**09 52 49.8**	**-2.3**
	comp=Z,186nm,1.1s								
CHTO	**Chiang Mai**	**15.13**	**204**	*e*P		**Pn**		**09 52 49.8**	**-2.3**
CHTO				pmax	pmax				
	comp=Z,186nm,1.1s								
CHTO	**Chiang Mai**	**15.13**	**204**	Pn		**Pn**		**09 52 51.6**	**-0.6**
	SNR=35								
AGT	**Agartala**	**15.37**	**238**	*i* x		x		09 52 46.0	
AGT				*i* x		x		09 53 44.0	
CM31	**Chiang Mai Arr**	**15.46**	**204**	*e*Pn		**Pn**		**09 52 55.0**	**-1.4**
	comp=Z,65nm,0.6s								
CMAR	**Chiang Mai Arr**	**15.46**	**204**	Pn		**Pn**		**09 52 54.8**	**-1.7**
	comp=Z,2.3nm,0.3s,baz=15,slow=11,SNR=114								
CMAR				Sn		**Sn**		**09 55 50.2**	**+2.4**
	comp=Z,0.5nm,0.3s,baz=53,slow=5.8,SNR=2.9								
CMAR				Lg				09 57 29.6	
	baz=102,slow=41,SNR=2.8								
CMAR				LR	LR			09 59 35.8	
	comp=Z,74μm,21.4s,baz=260,slow=40								
CMAR				ScP	ScP			10 01 34.0	0.0
	comp=Z,0.1nm,0.3s,baz=323,slow=2.7,SNR=6.9								
CMAR	**Chiang Mai Arr**	**15.46**	**204**	P		**Pn**		**09 52 54.8**	**-1.7**
CMAR								09 55 50.2	
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.3s								
CMAR				smax					
	comp=N,1.0nm,0.3s								
CMAR				MLR	MLR				
	comp=Z,74μm,21.4s								
TATO	**Taipei**	**16.02**	**115**	*e*P		**Pn**		**09 53 06.5**	**+2.8**
	comp=Z,5μm,1.9s								
TATO	**Taipei**	**16.02**	**115**	Pn		**Pn**		**09 53 10.8**	**+7.1**
	SNR=14								
YHNB	**Yeheng**	**16.10**	**116**	*e*Pn		**Pn**		**09 53 05.3**	**+0.5**
	comp=Z,465nm,0.8s								
SSLB	**Suanglung**	**16.29**	**120**	*e*Pn		**Pn**		**09 53 05.8**	**-1.4**
	comp=Z,790nm,1.0s								
TAPN	**Taplejung**	**16.33**	**255**	*e*P		**Pn**		**09 53 04.0**	**-3.7**
	comp=Z,9μm,1.9s								
TPUB	**Ta-pu**	**16.36**	**122**	*e*Pn		**Pn**		**09 53 07.0**	**-1.0**
	comp=Z,384nm,0.9s								
NACB	**Ninganchiao**	**16.54**	**117**	*e*P		**Pn**		**09 53 11.6**	**+1.2**
	comp=Z,1μm,1.3s								
YULB	**Yu-li**	**16.78**	**120**	*e*P		**Pn**		**09 53 13.8**	**+0.4**
	comp=Z,2μm,1.9s								
ODAN	**Odare**	**16.79**	**254**	*e*P		**Pn**		**09 53 09.3**	**-4.2**
SNY	**Shenyang**	**16.94**	**53**	⇑P		**Pn**		**09 53 14.8**	**-0.5**
SNY				S		**Sn**		**09 56 28.0**	**+4.6**
SNY				pmax	pmax				
	comp=Z,650nm,2.9s								
SNY				LR	LR				
	comp=N,47μm,8.1s								
SNY				LR	LR				
	comp=E,114μm,15.6s								
TWG	**Pinlang**	**16.97**	**122**	*e*P		**Pn**		**09 53 16.2**	**+0.3**
	comp=E,1μm,1.4s								
RAMN	**Ramite**	**17.39**	**255**	*e*P		**Pn**		**09 53 17.2**	**-3.9**
	comp=E,4μm,1.4s								
JIRN	**Jiri**	**17.45**	**258**	*e*P		**Pn**		**09 53 18.3**	**-3.5**
UBT	**Ubonrachathani**	**17.49**	**182**	P		**Pn**		**09 53 22.1**	**-0.2**
	comp=E,410nm,0.8s								
GUN	**Gumba**	**17.62**	**259**	*e*P		**Pn**		**09 53 20.6**	**-3.3**
	comp=E,2μm,0.9s								
ZAK	**Zakamensk**	**17.63**	**355**	*e*P		**Pn**		**09 53 23.4**	**-0.5**
ZAK				pmax	pmax				
	comp=Z,51nm,1.4s								
WMQ	**Urumqi**	**17.74**	**313**	P		**Pn**		**09 53 25.9**	**+0.6**
WMQ				pP		pP		09 53 29.5	+0.4
WMQ				sP		sP		09 53 32.9	+2.4
WMQ				PP				09 53 40.7	
WMQ				S		**Sn**		**09 56 41.9**	**-1.0**
WMQ				sS		sS		09 56 47.6	-7.3
WMQ				SS				09 57 04.4	
WMQ				PcP	PcP			09 58 03.7	+0.8
WMQ				ScP	ScP			10 01 37.1	-0.9
WMQ				pmax	pmax				
	comp=Z,340nm,0.8s								
WMQ				pmax	pmax				
	comp=Z,4μm,3.6s								
WMQ				LR	LR				
	comp=N,146μm,10.0s								
WMQ				LR	LR				
	comp=E,81μm,12.0s								
WMQ				LR	LR				
	comp=Z,112μm,12.4s								
NST	**Nakhon Sawan**	**17.74**	**197**	⇑P		**Pn**		**09 53 24.6**	**-0.9**
	comp=Z,161nm,2.0s								
INCN	**Inchon**	**17.89**	**69**	*e*P		**Pn**		**09 53 27.1**	**-0.1**
	comp=Z,4μm,2.3s								
INCN	**Inchon**	**17.89**	**69**	Pn		**Pn**		**09 53 27.9**	**+0.8**
	SNR=127								
PKI	**Pulchoki**	**18.13**	**259**	*e*P		**Pn**		**09 53 26.9**	**-3.3**
PKIN	**Phulchoki**	**18.14**	**259**	*e*P		**Pn**		**09 53 27.9**	**-2.4**
KKN	**Kakani**	**18.16**	**259**	*e*P		**Pn**		**09 53 28.0**	**-2.5**
	comp=Z,806nm,0.7s								
CAL	**Calcutta**	**18.31**	**240**	*e*PKP		**Pn**		**09 53 31.1**	**-1.3**
CAL				*ex*		x		09 57 05.7	
DMN	**Daman**	**18.37**	**259**	*e*P		**Pn**		**09 53 30.5**	**-2.6**
GKN	**Gorkha**	**18.62**	**261**	*e*P		**Pn**		**09 53 33.4**	**-2.8**
KSRS	**Korea Array**	**18.90**	**70**	P		**Pn**		**09 53 36.8**	**-2.8**
	comp=Z,9.1nm,0.3s,baz=256,slow=11,SNR=363								
KSRS				S		**Sn**		**09 57 05.9**	**-5.1**
	baz=251,slow=9.9,SNR=2.2								
KSRS				Lg				09 59 14.8	
	comp=Z,0.2nm,0.3s,baz=21,slow=33,SNR=3.0								
KSRS				LR	LR			10 01 37.5	
	comp=Z,61μm,18.2s,baz=269,slow=40								
KSRS				P3KPbc				10 28 13.8	
	comp=Z,0.1nm,0.3s,baz=97,slow=4.9,SNR=6.8								
KSRS	**Korea Array**	**18.90**	**70**	P		**Pn**		**09 53 36.8**	**-2.7**
KSRS				S		**Sn**		**09 57 05.9**	**-5.2**
KSRS				pmax	pmax				
	comp=Z,9.0nm,0.3s								
KSRS				MLR	MLR				
	comp=Z,61μm,18.2s								
TLY	**Talaya**	**18.91**	**356**	Pn		**Pn**		**09 53 40.2**	**+0.7**
	comp=Z,408nm,1.1s,SNR=52								
TLY	**Talaya**	**18.91**	**356**	*e*P		**Pn**		**09 53 39.3**	**-0.2**
	comp=Z,78nm,1.0s								
TLY	**Talaya**	**18.91**	**356**	*e*P		**Pn**		**09 53 39.4**	**-0.1**
TLY				*e*S		**Sn**		**09 57 09.5**	**-1.4**
TLY				pmax	pmax				
	comp=Z,133nm,1.3s								
TLY				MLR	MLR				
	comp=Z,69μm,17.0s								
TLY	**Talaya**	**18.91**	**356**	P		**Pn**		**09 53 39.9**	**+0.4**
	SNR=62								
CN2	**Changchun**	**19.07**	**49**	⇑P		**Pn**		**09 53 41.7**	**+0.2**
CN2				*e*sP		sP		09 53 48.6	+3.5
CN2				PP				09 53 58.1	
CN2				*e*S		**Sn**		**09 57 10.4**	**-4.5**
CN2				LR	LR				
	comp=N,57μm,12.0s								
CN2				LR	LR				
	comp=E,62μm,12.0s								
CN2				LR	LR				
	comp=Z,77μm,16.0s								
MOY	**Mondy**	**19.13**	**351**	*e*P		**Pn**		**09 53 43.1**	**+1.0**
MOY				pmax	pmax				
	comp=Z,1μm,3.0s								
IRK	**Irkutsk**	**19.44**	**358**	⇑*i*P		**Pn**		**09 53 46.4**	**+0.5**
IRK				pmax	pmax				
	comp=Z,1μm,1.2s								
KOLN	**Koldanda**	**19.56**	**261**	*e*P		**Pn**		**09 53 45.4**	**-2.1**
	comp=Z,1μm,0.9s								
HIA	**Hailar**	**19.58**	**29**	*e*P		**Pn**		**09 53 46.7**	**-0.9**
	comp=Z,6μm,2.3s								
HIA	**Hailar**	**19.58**	**29**	*e*P		**Pn**		**09 53 46.7**	**-0.9**
HIA				pmax	pmax				
	comp=Z,6μm,2.3s								
CIT	**Chita**	**20.07**	**15**	*e*P		**P**		**09 53 52.8**	**+1.2**
CIT				pmax	pmax				
	comp=Z,2μm,3.4s								
APYP	**Conner**	**20.55**	**133**	*e*P		**P**		**09 53 58.3**	**+1.3**
CVP	**Callao Caves**	**21.03**	**132**	⇑*e*P		**P**		**09 54 02.7**	**+0.5**
BWNR	**Bhubaneshwar**	**21.54**	**240**	*ex*		**P**		**09 54 03.0**	**-4.7**
CAUP	**Cauayan**	**21.60**	**133**	*e*P		**P**		**09 54 10.1**	**+1.7**
PTH	**Pithoragarh**	**21.86**	**268**	*e*PKP		**P**		**09 54 11.8**	**+0.7**
PTH				*ex*		x		09 58 07.6	
PALP	**Palanan**	**21.89**	**132**	*e*P		**P**		**09 54 13.3**	**+1.9**
ALBI	**Allahabad**	**21.99**	**256**	*e*PKP		**P**		**09 54 10.0**	**-2.5**
MDJ	**Mudanjiang**	**22.10**	**51**	P		**P**		**09 54 13.2**	**-0.3**
MDJ				pP				09 54 15.9	
MDJ				sP		sP		09 54 17.4	-0.6
MDJ				PcP	PcP			09 58 10.6	-0.2
MDJ				S		**S**		**09 58 17.2**	**+0.2**
MDJ				ScP	ScP			10 01 47.7	-0.4
MDJ				PcS	PcS			10 01 49.0	-0.2
MDJ				ScS	ScS			10 05 33.3	+0.5
MDJ				pmax	pmax				
	comp=Z,340nm,1.9s,mb5.5								
MDJ				pmax	pmax				
	comp=Z,10μm,4.8s								
MDJ				LR	LR				
	comp=N,35μm,20.4s								
MDJ				LR	LR				
	comp=E,51μm,10.6s								
MDJ				LR	LR				
	comp=Z,66μm,12.9s								
MDJ	**Mudanjiang**	**22.10**	**51**	*e*P		**P**		**09 54 14.2**	**+0.6**
	comp=Z,2μm,1.6s,mb6.2								
MDJ				LR	LR				
	comp=Z,46μm,19.0s,MS5.9								
BALP	**Baler**	**22.39**	**136**	*e*P		**P**		**09 54 17.4**	**+0.7**
MK31	**Makanchi Array**	**22.54**	**315**	*e*P		**P**		**09 54 18.2**	**0.0**
MKAR	**Makanchi Array**	**22.54**	**315**	P		**P**		**09 54 18.1**	**-0.2**
MKAR				S		**S**		**09 58 27.1**	**+1.6**
MKAR				ScP	ScP			10 01 49.2	0.0
MKAR				LR	LR			10 03 56.1	
MKAR	**Makanchi Array**	**22.54**	**315**	P		**P**		**09 54 18.1**	**-0.2**
	comp=Z,145nm,0.7s,mb5.5,baz=110,slow=9.4,SNR=193								
MKAR				S		**S**		**09 58 27.1**	**+1.6**
	comp=Z,9.1nm,0.9s,baz=119,slow=5.3,SNR=1.9								
MKAR				ScP	ScP			10 01 49.2	0.0
	comp=Z,9.2nm,1.0s,baz=76,slow=10,SNR=4.6								
MKAR				LR	LR			10 03 56.1	
	comp=Z,38μm,18.4s,MS5.9,baz=120,slow=39								
MKAR				P3KPbc				10 27 58.9	
	comp=Z,0.5nm,0.6s,baz=279,slow=3.8,SNR=4.8								
MKAR	**Makanchi Array**	**22.54**	**315**	*i* P		**P**		**09 54 18.1**	**-0.1**
MKAR				pmax	pmax				
	comp=Z,145nm,0.7s								
VLA	**Vladivostok**	**23.12**	**56**	⇑*i*P		**P**		**09 54 22.9**	**-1.5**
VLA	**Vladivostok**	**23.12**	**56**	*c i*P		**P**		**09 54 22.8**	**-1.6**
VLA				MLR	MLR				
	comp=Z,77μm,20.0s,MS6.2								
LUBP	**Lubang**	**23.27**	**141**	*e*P		**P**		**09 54 26.8**	**+0.6**
TGY	**Tagaytay City**	**23.34**	**139**	P		**P**		**09 54 26.9**	**0.0**
TGY				LR	LR			10 03 33.5	
TGY	**Tagaytay City**	**23.34**	**139**	P		**P**		**09 54 26.9**	**0.0**
	comp=Z,207nm,0.4s,mb5.9,baz=188,slow=18,SNR=3.2								
TGY				LR	LR			10 03 33.5	
	comp=Z,68nm,21.2s,baz=354,slow=37								
ORY	**Orie**	**23.36**	**345**	⇓*i*P		**P**		**09 54 28.8**	**+2.0**
ORY				*e*				09 54 53.9	
ORY				*e*				09 58 16.0	
POLP	**Polilio Island**	**23.40**	**136**	*e*P		**P**		**09 54 27.7**	**+0.2**
SMLA	**Simla**	**24.07**	**274**	*i* P		**P**		**09 54 32.1**	**-1.7**
SMLA				*i* S		**S**		**09 58 51.0**	**-0.1**
SDNR	**Sundarnagar**	**24.16**	**275**	*e*PKP		**P**		**09 54 34.0**	**-0.6**
SDNR				*ex*		x		09 58 58.0	
BOAC	**Boac**	**24.37**	**138**	*e*P		**P**		**09 54 38.8**	**+2.2**
NDI	**New Delhi**	**24.62**	**268**	*ex*		**P**		**09 54 35.5**	**-3.3**
BHK	**Bhakra**	**24.64**	**275**	*e*PKP		**P**		**09 54 36.6**	**-2.4**
BHK				*ex*		x		09 55 09.4	
AAA	**Alma-Ata**	**24.69**	**303**	*i* P		**P**		**09 54 42.0**	**+2.7**
AAA				pmax	pmax				
	comp=Z,8μm,2.6s,mb6.8								
AAA				MLR	MLR				
	comp=Z,32μm,10.0s,MS6.1								
KSH	**Kashi**	**24.69**	**294**	⇓*i*P		**P**		**09 54 43.2**	**+3.8**
KSH				*e*pP				09 54 47.3	
KSH				*e*sP		sP		09 54 50.0	+6.0
KSH				PP				09 55 20.7	
KSH				*e*PcP	PcP			09 58 19.1	+2.7
KSH				S		**S**		**09 59 03.9**	**+2.9**
KSH				sS		sS		09 59 10.5	+4.1
KSH				*e*SS				10 00 02.8	
KSH				*e*ScP	ScP			10 01 56.0	+0.8
KSH				*e*PcS	PcS			10 01 57.6	+1.3
KSH				*e*ScS	ScS			10 05 43.1	+0.1
KSH				pmax	pmax				
	comp=Z,780nm,1.6s,mb6.0								
KSH				LR	LR				
	comp=N,18μm,9.2s								
KSH				LR	LR				
	comp=E,21μm,12.7s								
KSH				LR	LR				
	comp=Z,49μm,13.1s,MS6.2								
DLH	**Dalhousie**	**24.83**	**277**	*e*PKP		**P**		**09 54 41

TKM2 Tokmak 2 25.56 302 P **P** **09 54 48.2 +1.0**
SNR=260
TKM2 Tokmak 2 25.56 302 *e*P **P** **09 54 48.1 +0.9**
comp=Z,133nm,0.5s,mb5.7
TKM2 LR LR
comp=Z,47μm,21.0s,MS6.0
TKM2 Tokmak 2 25.56 302 *e*P **P** **09 54 48.1 +0.9**
TKM2 pmax pmax
comp=Z,133nm,0.5s,mb5.7
TKM2 MLR MLR
comp=Z,47μm,21.0s,MS6.0
PVCP Virac 25.61 134 *e*P **P** **09 54 49.8 +2.0**
KZA Kyzart 25.63 300 P **P** **09 54 50.4 +2.6**
SNR=68
ZAA0 Zalesovo Array 25.75 331 *e*P **P** **09 54 47.8 -1.0**
ZALV Zalesovo Beam 25.75 331 P **P** **09 54 48.5 -0.4**
ZALV LR LR 10 05 27.0
ZALV *e* 10 27 44.6
ZALV Zalesovo Beam 25.75 331 P **P** **09 54 48.5 -0.4**
comp=Z,93nm,0.8s,mb5.4,baz=133,slow=8.8,SNR=86
ZALV LR LR 10 05 27.0
comp=Z,15μm,21.0s,MS5.5,baz=140,slow=38
ZALV P3KPbc 10 27 44.6
comp=Z,0.8nm,0.4s,baz=339,slow=7.9,SNR=3.7
KBK Karagaybulak 25.97 301 P **P** **09 54 52.5 +1.6**
SNR=105
PPR Puerto Princes 25.97 149‖ *e*P **P** **09 54 56.0 +4.9**
CUYO Cuyo Island 26.11 143 *e*P **P** **09 54 54.7 +2.4**
CHMS Chumysh 26.18 302 P **P** **09 54 54.4 +1.6**
SNR=25
UCH Uchtor 26.20 300 P **P** **09 54 54.7 +1.7**
SNR=294
UCH Uchtor 26.20 300 *e*P **P** **09 54 54.3 +1.4**
comp=Z,9.4nm,1.3s
UCH *e*S **S** **09 59 30.6 +5.8**
UCH LR LR
comp=Z,42μm,20.0s
AAK Ala-Archa 26.29 301 P **P** **09 54 55.1 +1.3**
comp=Z,580nm,1.9s,mb5.8,SNR=73
AAK Ala-Archa 26.29 301 P **P** **09 54 55.9 +2.1**
SNR=26
AAK Ala-Archa 26.29 301 *e*P **P** **09 54 55.1 +1.3**
comp=Z,575nm,1.9s,mb5.8
AAK LR LR
comp=Z,54μm,20.0s,MS6.1
AAK Ala-Archa 26.29 301 P **P** **09 54 55.8 +2.0**
comp=Z,32nm,0.7s,mb5.0,baz=135,slow=7.3,SNR=30
AAK LR LR 10 07 20.6
comp=Z,52μm,19.0s,MS6.1,baz=82,slow=41
AAK Ala-Archa 26.29 301*c i*P **P** **09 54 54.8 +1.0**
AAK pmax pmax
comp=Z,191nm,2.5s,mb5.2
AAK MLR MLR
comp=Z,27μm,19.0s,MS5.8
AAK Ala-Archa 26.29 301 P **P** **09 54 55.3 +1.5**
comp=Z,614nmcomp=Z,30nm,1.7s,mb4.5
AAK Ala-Archa 26.29 301 P **P** **09 54 55.6 +1.8**
SNR=120
USP Osenovka 26.42 302 P **P** **09 54 55.9 +0.9**
SNR=147
BATP Bataraza 26.47 152 *e*P **P** **09 54 55.0 -0.6**
BHPL Bhopal 26.49 256 *e*PKP **P** **09 54 56.0 +0.2**
BHPL AMb AMB 09 55 03.4
comp=Z,1μm,2.2s,mb6.0
BHPL *ex* x 09 59 41.8
KURK Kurchatov 26.65 320 *e*P **P** **09 54 56.8 -0.2**
comp=Z,452nm,1.1s,mb5.9
KURK LR LR
comp=Z,43μm,19.0s,MS6.0
KURK Kurchatov 26.65 320*c i*P **P** **09 54 57.0 +0.1**
KURK pmax pmax
comp=Z,536nm,1.2s,mb6.0
KURK MLR MLR
comp=Z,30μm,16.0s,MS5.9
KURK Kurchatov 26.65 320 P **P** **09 54 57.1 +0.2**
SNR=244
AML Almayashu 26.78 300 P **P** **09 55 01.1 +2.9**
SNR=8.7
AML Almayashu 26.78 300 *e*P **P** **09 54 59.5 +1.3**
comp=Z,37nm,1.7s,mb4.6
AML LR LR
comp=Z,32μm,21.0s,MS5.8
EKS2 Erkin-Say 26.81 301 P **P** **09 55 00.0 +1.5**
SNR=65
EKS2 Erkin-Say 26.81 301 *e*P **P** **09 54 59.2 +0.7**
comp=Z,75nm,0.9s,mb5.2
EKS2 LR LR
comp=Z,53μm,19.0s,MS6.1
NIL Nilore 26.94 281 PFAKE 09 55 10.0 +10
NIL LR LR
comp=Z,75nm,20.0s
NVS Novosibirsk 27.04 331‖ *i*P **P** **09 55 00.4 0.0**
NVS *i* S **S** **09 59 44.0 +6.1**
NVS pmax pmax
comp=N,536nm,2.4s
NVS pmax pmax
comp=E,988nm,2.4s
NVS pmax pmax
comp=Z,967nm,2.4s,mb5.9
NVS smax
comp=N,314nm,1.7s
NVS smax
comp=E,824nm,2.5s
MAJO Matsushiro 27.08 73 *e*P **P** **09 54 59.0 -2.1**
comp=E,115nm,1.0s,mb5.4
MAJO LR LR
comp=Z,24μm,20.0s,MS5.8
MAJO Matsushiro 27.08 73 *e*P **P** **09 54 59.0 -2.0**
MAJO pmax pmax
comp=Z,115nm,1.0s,mb5.4
MAJO MLR MLR
comp=Z,24μm,20.0s,MS5.8
MJAR Matsushiro Arr 27.08 73 P **P** **09 55 00.0 -1.0**
MJAR PcP PcP 09 58 21.8 -0.1
MJAR LR LR 10 06 02.4
MJAR *e* 10 27 38.9
MJAR Matsushiro Arr 27.08 73 P **P** **09 55 00.0 -1.0**
comp=Z,40nm,0.8s,mb5.0,baz=274,slow=9.4,SNR=64
MJAR PcP PcP 09 58 21.8 -0.1
comp=Z,12nm,0.9s,baz=284,slow=6.0,SNR=4.5
MJAR LR LR 10 06 02.4
comp=Z,23μm,19.8s,MS5.7,baz=265,slow=37
MJAR P3KPbc 10 27 38.9
comp=Z,1.8nm,0.8s,baz=116,slow=2.4,SNR=5.0
HABR Khabarovsk 27.12 46*c i*P **P** **09 55 01.3 +0.1**
HABR *e* 09 55 43.1
HABR PPP 09 55 51.6
HABR 09 58 21.4
HABR *e*S **S** **09 59 40.1 +0.8**
HABR 10 05 52.8
HABR pmax pmax
comp=Z,871nm,2.9s,mb5.8
HABR pmax pmax
comp=N,149nm,2.8s
HABR pmax pmax
comp=E,574nm,2.8s
HABR pmax pmax
comp=Z,4μm,3.7s
HABR MLR MLR
comp=N,35μm,11.0s,MS6.5
HABR MLR MLR
comp=Z,81μm,10.0s,MS6.6
HABR MLR MLR
comp=E,63μm,10.0s,MS6.5
CLNS Chul'man 27.49 23 *e*P **P** **09 55 05.1 +0.7**
CLNS *e* 09 55 49.0
CLNS *e* 09 58 23.5
CLNS *e*S **S** **09 59 45.0 +0.1**
CLNS pmax pmax
comp=Z,274nm,2.5s,mb5.3
CLNS pmax pmax
comp=E,171nm,2.4s
CLNS pmax pmax
comp=N,184nm,2.5s
CLNS pmax pmax
comp=Z,47nm,1.5s,mb4.8
CLNS pmax pmax
comp=E,26nm,1.4s
CLNS pmax pmax
comp=N,58nm,1.4s
CLNS smax
comp=N,4μm,14.1s
CLNS smax
comp=E,4μm,15.4s
CLNS MLR MLR
comp=Z,62μm,12.0s,MS6.4
CLNS MLR MLR
comp=E,41μm,12.0s,MS6.4
CLNS MLR MLR
comp=N,40μm,11.0s,MS6.4
AJM Ajmer 27.49 265 *e*PKP **P** **09 55 05.2 +0.4**
AJM AMb AMB 09 55 10.5
comp=Z,302nm,0.8s,mb5.8
AJM *i* x x 10 00 00.0
KULM Kulim 27.75 190 *e*P **P** **09 55 06.3 -0.8**
comp=Z,41nm,0.8s,mb5.1
KULM LR LR
comp=Z,16μm,21.0s,MS5.6
KULM Kulim 27.75 190 P **P** **09 55 06.5 -0.6**
KULM Kulim 27.75 190 P **P** **09 55 06.3 -0.9**
comp=Z,3μmcomp=Z,85nm,2.5s,mb4.9
KDM Kudat 27.84 155 P **P** **09 55 07.4 -0.6**
AKL Akola 28.06 252‖ *i*P **P** **09 55 09.8 -0.1**
AKL *ex* x 09 55 14.9
comp=Z,324nm,1.5s
AKL *i* x x 09 59 51.9
KKM Kota Kinabalu 28.44 157 *e*P **P** **09 55 12.2 -1.1**
comp=Z,481nm,1.4s,mb5.9
KKM LR LR
comp=Z,16μm,20.0s,MS5.6
KKM Kota Kinabalu 28.44 157 P **P** **09 55 12.6 -0.7**
KKM Kota Kinabalu 28.44 157 P **P** **09 55 12.1 -1.2**
comp=Z,4μmcomp=Z,201nm,1.5s,mb5.5
IPM Ipoh 28.49 189 P **P** **09 55 12.2 -1.6**
IPM Ipoh 28.49 189 P **P** **09 55 12.1 -1.7**
comp=Z,3μmcomp=Z,80nm,1.3s,mb5.2
JHJ Hachijo jima 2 28.69 80 P **P** **09 55 14.3 -1.2**
comp=Z,58nm,0.3s,mb5.8,baz=94,slow=21,SNR=4.7
JHJ LR LR 10 07 33.8
comp=Z,25μm,19.7s,MS5.8,baz=304,slow=38
HYB Hyderabad 28.70 244 *i* P **P** **09 55 15.0 -0.7**
comp=Z,120nm,1.0s,mb5.6
HYB *e*S **S** **10 00 04.0 -0.7**
SDKM Sandakan 29.15 156 P **P** **09 55 18.5 -1.1**
FRIM Kepong 29.64 188 P **P** **09 55 23.0 -0.9**
LATR Latur 29.66 248 *e*PKP **P** **09 55 24.1 -0.1**
LATR *e*PKP 09 55 24.2
LATR AMb AMB 09 55 28.8
comp=Z,366nm,2.0s,mb5.8
TSI Tuntungan 29.87 194 P **P** **09 55 28.0 +2.0**
MYLDM Lahad Datu 30.05 153 P **P** **09 55 29.0 +1.4**
MYLDM Lahad Datu 30.05 153 P **P** **09 55 28.2 +0.6**
comp=Z,10μmcomp=Z,340nm,1.5s,mb5.9
KBL Kabul 30.29 283 *e*P **P** **09 55 30.5 +0.9**
comp=Z,347nm,1.5s,mb5.9
KBL Kabul 30.29 283 *e*P **P** **09 55 30.5 +0.9**
KBL pmax pmax
comp=Z,347nm,1.5s,mb5.9
TPTI 30.41 197 P **P** **09 55 28.2 -2.6**
PSI Prapat 30.48 193 LR LR 10 08 43.8
comp=Z,22μm,18.5s,MS5.8,baz=197,slow=38
TSM Tawau 30.64 155 P **P** **09 55 31.8 -1.0**
SBUM Sibu 30.85 167 P **P** **09 55 34.7 0.0**
SBUM Sibu 30.85 167 P **P** **09 55 34.3 -0.4**
comp=Z,5μmcomp=Z,211nm,1.4s,mb5.8
MYKOM Kota Tinggi 30.90 183 P **P** **09 55 34.3 -0.8**
MYKOM Kota Tinggi 30.90 183 P **P** **09 55 34.6 -0.5**
comp=Z,3μmcomp=Z,135nm,1.5s,mb5.5
ERM Erimo 31.08 62 P **P** **09 55 34.1 -2.4**
comp=Z,558nm,0.5s,mb6.7,SNR=12
ERM Erimo 31.08 62 *e*P **P** **09 55 35.0 -1.5**
comp=Z,497nm,2.0s,mb6.0
ERM LR LR
comp=Z,31μm,20.0s,MS6.0
ERM Erimo 31.08 62*c i*P **P** **09 55 35.0 -1.5**
ERM pmax pmax
comp=Z,41nm,0.6s,mb5.4
ERM MLR MLR
comp=Z,21μm,14.0s,MS6.0
KSM Kuching 31.50 171 *e*P **P** **09 55 39.8 -0.6**
comp=Z,158nm,1.3s,mb5.7
KSM LR LR
comp=Z,13μm,20.0s,MS5.6
KSM Kuching 31.50 171 P **P** **09 55 39.7 -0.7**
comp=Z,3μmcomp=Z,116nm,1.7s,mb5.4
BHV Bhavnagar 31.51 258 *e*PKP **P** **09 55 39.5 -1.0**
YSS Yuzh-Sakhalins 31.56 52 *e*P **P** **09 55 39.9 -0.8**
comp=Z,599nm,1.3s,mb6.3
YSS LR LR
comp=Z,19μm,20.0s,MS5.8
YSS Yuzh-Sakhalins 31.56 52*c i*P **P** **09 55 40.0 -0.7**
YSS *i* 09 56 40.0
YSS *e*S **S** **10 00 44.0 -5.1**
YSS pmax pmax
comp=Z,830nm,1.5s,mb6.3
YSS pmax pmax
comp=N,120nm,1.0s
YSS pmax pmax
comp=N,1μm,4.0s
YSS pmax pmax
comp=E,3μm,4.0s
YSS pmax pmax
comp=Z,4μm,4.0s
YSS smax
comp=E,9μm,18.0s
YSS MLR MLR
comp=Z,54μm,16.0s,MS6.3
YSS MLR MLR
comp=N,32μm,14.0s,MS6.4
YSS MLR MLR
comp=E,45μm,14.0s,MS6.4
DAV Davao City (W) 31.68 140 P **P** **09 55 42.2 +0.1**
comp=E,111nm,0.4s,mb6.1,baz=82,slow=9.5,SNR=8.6
DAV LR LR 10 09 38.3
comp=E,28μm,20.1s,MS5.9,baz=131,slow=39
DAV Davao City (W) 31.68 140 P **P** **09 55 43.2 +1.1**
comp=E,538nm,1.6s,mb6.1
DAV Davao City (W) 31.68 140 P **P** **09 55 44.0 +2.0**
SNR=5.5
POO Poona 31.73 251 *e*PKP **P** **09 55 42.5 +0.1**
POO AMb AMB 09 55 46.2
comp=Z,306nm,1.3s,mb6.0
POO *i* PP PP 09 56 44.0 -10
KAD Karad 32.15 249 *e*PKP **P** **09 55 46.2 +0.1**
KAD AMb AMB 09 55 49.6
comp=Z,213nm,1.3s,mb5.8
BVAR Borovoye Array 32.23 319 P **P** **09 55 46.5 0.0**
comp=Z,49nm,0.8s,mb5.4,baz=116,slow=9.5,SNR=92
BVAR PcP PcP 09 58 34.7 -0.1
comp=Z,21nm,0.8s,baz=116,slow=3.4,SNR=4.8
BVAR ScP ScP 10 02 17.5 -0.9
comp=Z,14nm,0.9s,baz=146,slow=4.7,SNR=6.4
BVAR LR LR 10 09 45.5
comp=Z,262nm,20.6s,baz=207,slow=38
BVAR Borovoye Array 32.23 319 P **P** **09 55 46.5 0.0**
BVAR 09 58 34.7
BVAR pmax pmax
comp=Z,49nm,0.8s
BRVK Borovoye 32.30 319 P **P** **09 55 47.8 +0.7**
comp=Z,709nm,0.9s,mb6.5,SNR=29
BRVK Borovoye 32.30 319 *e*P **P** **09 55 47.3 +0.2**
comp=Z,125nm,0.9s,mb5.7
BRVK *e*ScP ScP 10 02 20.2 +1.6
BRVK LR LR
comp=Z,28μm,19.0s,MS6.0
BRVK Borovoye 32.30 319*c i*P **P** **09 55 46.8 -0.3**
BRVK pmax pmax
comp=Z,371nm,2.5s,mb5.8
BRVK MLR MLR
comp=Z,21μm,21.0s,MS5.8
BRVK Borovoye 32.30 319 P **P** **09 55 47.6 +0.5**
SNR=80
MNSI Mandailing Nat 32.33 191 P **P** **09 55 45.6 -2.1**
comp=Z,74nm,0.7s,mb5.6
BKNI Bangkinang 32.58 188 P **P** **09 55 51.0 +1.1**
comp=Z,7μmcomp=Z,329nm,1.1s,mb6.2
QUE Quetta 32.86 276 *e*P **P** **09 55 52.0 -0.3**
QUE *e*S **S** **10 01 11.0 +1.3**
STKI Sintang 33.05 169 P **P** **09 55 54.6 +0.6**
comp=Z,169nm,1.5s,mb5.8
YAK Yakutsk 33.09 21 *e*P **P** **09 55 53.9 0.0**
comp=Z,290nm,0.9s,mb6.2
YAK LR LR
comp=Z,89μm,19.0s,MS6.5
YAK Yakutsk 33.09 21 *e*P **P** **09 55 53.3 -0.6**
YAK *e**PP pP 09 56 01.4 +4.2
YAK *e* 09 57 11.3
YAK *e*PPP 09 57 17.5
YAK *e* 09 58 35.9
YAK *e*S **S** **10 01 14.1 +1.5**
YAK pmax pmax
comp=Z,217nm,0.9s,mb6.1
YAK pmax pmax
comp=E,89nm,1.3s
YAK pmax pmax
comp=N,81nm,1.4s
YAK pmax pmax
comp=N,379nm,2.3s
YAK pmax pmax
comp=Z,790nm,3.0s
YAK pmax pmax
comp=E,505nm,2.8s
YAK smax
comp=E,1μm,4.5s
YAK smax
comp=N,2μm,6.1s
YAK MLR MLR
comp=E,14μm,10.0s,MS6.3
YAK MLR MLR
comp=Z,62μm,14.0s,MS6.5
YAK MLR MLR
comp=N,26μm,11.0s,MS6.3
RGRI Rengat 33.12 186 P **P** **09 55 55.4 +0.8**
comp=N,246nm,0.8s,mb6.2
YUK Yuzh-Kuril'sk 33.24 58 *i*P **P** **09 55 54.2 -1.2**
YUK *i* S **S** **10 01 13.8 -1.5**
YUK pmax pmax
comp=N,60nm,2.0s
YUK pmax pmax
comp=E,70nm,2.0s
YUK pmax pmax
comp=Z,120nm,2.0s,mb5.5
YUK smax
comp=N,2μm,12.0s
YUK smax
comp=E,4μm,12.0s
YUK MLR MLR
comp=N,18μm,22.0s,MS5.9
YUK MLR MLR
comp=Z,25μm,22.0s,MS5.9
YUK MLR MLR
comp=E,19μm,22.0s,MS5.9
PPI Padang Panjang 33.44 189 P **P** **09 55 56.4 -1.0**
comp=E,2μmcomp=E,38nm,0.9s,mb5.3
GOA Goa 33.48 247‖ *i*P **P** **09 55 57.2 -0.6**
GOA *i* x x 10 01 15.7
SDSI Sungai Dareh 33.78 187 P **P** **09 55 59.4 -1.0**
comp=E,4μmcomp=E,180nm,1.3s,mb5.8
PDSI Padang 33.88 189 P **P** **09 55 59.2 -2.0**
comp=E,5μmcomp=E,71nm,0.9s,mb5.6
PPBI Pangkal Pinang 34.79 179 P **P** **09 56 09.5 +0.4**
comp=E,4μmcomp=E,207nm,1.9s,mb5.7
SMKI Samarinda 34.87 159 P **P** **09 56 11.0 +1.1**
comp=E,9μmcomp=E,374nm,1.4s,mb6.1
TPI Tanjungpandan 35.43 176 P **P** **09 56 15.5 +0.8**
comp=E,4μmcomp=E,138nm,1.7s,mb5.6
MRSI Marisa 35.70 151 P **P** **09 56 17.1 +0.2**
PBKI Pangkalan Bun 35.80 169 P **P** **09 56 18.8 +1.0**
TRD Trivandrum 35.81 234‖ *ex* x 09 55 42.0
MNI Manado 36.11 146 P **P** **09 56 21.0 +0.5**
comp=E,438nm,1.9s,mb6.1
PCI Palu 36.16 155 P **P** **09 56 20.7 -0.2**
comp=E,7μmcomp=E,246nm,1.5s,mb5.9
KSI Kapahiang 36.37 185 P **P** **09 56 22.8 +0.1**
comp=E,8μmcomp=E,280nm,0.9s,mb6.2
KMSI Cibinong 36.48 148 P **P** **09 56 25.4 +1.7**
comp=E,1μm,1.2s,mb6.7
MDSI Maura Dua 37.11 182 P **P** **09 56 28.3 -0.7**
comp=E,4μmcomp=E,166nm,1.5s,mb5.6
IMYA Miami 37.29 288 *e*P **P** **09 56 31.2 +0.8**
KLSI 37.30 181 P **P** **09 56 30.4 -0.2**
comp=E,431nm,2.6s,mb5.8
KBKI Kotabaru 37.31 162 P **P** **09 56 29.7 -1.0**
comp=E,4μmcomp=E,229nm,1.3s,mb5.9
LUWI Luwuk 37.41 151 P **P** **09 56 30.7 -0.9**
comp=E,6μmcomp=E,362nm,1.3s,mb6.0
ABKAR Akbulak array 37.47 310 *e*P **P** **09 56 32.2 +0.5**
comp=E,120nm,0.8s,mb5.8
KLI Kotabumi 37.47 181 P **P** **09 56 33.8 +1.7**
comp=E,279nm,1.9s,mb5.8
LWLI Liwa 37.64 182 P **P** **09 56 34.2 +0.7**
comp=E,172nm,0.9s,mb5.8
ISRO Mashad 37.80 288 *e*P **P** **09 56 35.2 +0.5**
IMOG Moghan 37.93 288 *e*P **P** **09 56 36.7 +0.8**
TNTI Ternate 37.94 143 P **P** **09 56 35.9 -0.1**
comp=E,412nm,1.5s,mb5.9
TTSI Tana Toraja 38.15 156 P **P** **09 56 38.2 +0.4**
comp=E,5μmcomp=E,236nm,1.5s,mb5.7
IPAY Payeh 38.16 289 *e*P **P** **09 56 38.5 +0.8**
IEMG Emamgholi 38.29 290 *e*P **P** **09 56 40.2 +1.3**
IAKL Akhelmad 38.32 289 *e*P **P** **09 56 40.1 +0.9**
RBSI Rajabasa 38.44 180 P **P** **09 56 43.0 +2.8**
comp=E,7μmcomp=E,335nm,1.9s,mb5.7
IKRD Kardeh 38.49 289 *e*P **P** **09 56 35.4 -5.2**
ABKT Ailbek 38.65 291 P **P** **09 56 43.6 +1.7**
comp=E,940nm,1.1s,mb6.4,SNR=60
VAN Vannovskaya 38.66 291 *i*P **P** **09 56 42.9 +1.0**
ISFR Sfrayin 38.86 290 *e*P **P** **09 56 45.3 +1.7**
SVE Sverdlovsk 38.87 322‖ *e*P **P** **09 56 44.0 +0.6**
SVE *e* 09 58 12.4
SVE *e*S **S** **10 02 35.6 -5.5**
SVE *e*SS SS 10 05 24.7 -7.5
SVE *e* 10 06 53.4
SVE pmax pmax
comp=Z,302nm,1.1s,mb5.9
SVE MLR MLR
comp=Z,10μm,11.0s,MS5.9
AKTK Aktyubinsk 38.88 311 P **P** **09 56 43.7 +0.1**
AKTK ScP ScP 10 02 42.4 -0.2
AKTO Aktyubinsk 38.88 311 P **P** **09 56 43.7 +0.1**
comp=Z,56nm,0.7s,mb5.4,baz=86,slow=6.7,SNR=83
AKTO ScP ScP 10 02 42.4 -0.2
comp=Z,6.2nm,1.1s,baz=141,slow=23,SNR=4.0
AKTO Aktyubinsk 38.88 311 P **P** **09 56 43.7 +0.1**
AKTO 10 02 42.4
AKTO pmax pmax
comp=Z,57nm,0.7s,mb5.4
SPSI Sidrap Palu 39.00 157 P **P** **09 56 44.4 -0.5**
comp=Z,8μmcomp=Z,316nm,1.6s,mb5.8
ISHV Shirvan 39.03 291 *e*P **P** **09 56 47.5 +2.5**
LBMI Labuha 39.21 144 P **P** **09 56 47.6 +0.8**
comp=Z,484nm,1.7s,mb6.0
LEM Lembang 39.47 177 P **P** **09 56 49.0 +0.2**
comp=Z,7μmcomp=Z,246nm,1.7s,mb5.7
ARU Arti 39.84 321 *e*P **P** **09 56 51.8 +0.2**
comp=Z,274nm,0.9s,mb6.0
ARU LR LR
comp=Z,14μm,21.0s,MS5.8
ARU Arti 39.84 321*c i*P **P** **09 56 52.2 +0.6**
ARU *e* 09 58 24.5
ARU *e*PPP 09 58 47.2
ARU *e* 09 58 56.0
ARU S **S** **10 02 58.9 +3.1**
ARU SS SS 10 05 49.6 -2.1
ARU SSS 10 06 16.2
ARU 10 06 54.3
ARU pmax pmax
comp=Z,519nm,1.2s,mb6.1
ARU MLR MLR
comp=Z,11μm,18.0s,MS5.7
ARU Arti 39.84 321 P **P** **09 56 51.0 -0.6**
comp=Z,2μm,1.0s,mb6.8,SNR=51
SMRI Semarang 39.91 172 P **P** **09 56 54.8 +2.2**
comp=Z,422nm,2.4s,mb5.8
KDI Kendari 40.01 153 P **P** **09 56 55.4 +2.0**
comp=Z,3μmcomp=Z,70nm,2.1s,mb5.0
BJII Banjamegara 40.12 174 P **P** **09 56 55.7 +1.4**
comp=Z,453nm,1.6s,mb6.0
NGJI Ngawi 40.35 171 P **P** **09 56 58.8 +2.6**
comp=Z,342nm,1.3s,mb5.9
BKSI Bulukumba 40.38 157 P **P** **09 56 55.4 -1.1**
comp=Z,4μmcomp=Z,144nm,2.4s,mb5.3
KMMI Kalianget 40.45 167 P **P** **09 56 58.8 +1.8**
comp=Z,9μmcomp=Z,313nm,1.5s,mb5.8
GUMO Guam 40.63 109 *e*P **P** **09 56 57.1 -1.4**
comp=Z,368nm,1.1s,mb5.9
GUMO LR LR
comp=Z,15μm,20.0s,MS5.9
GUMO Guam 40.63 109 P **P** **09 56 57.3 -1.3**
comp=Z,167nm,0.8s,mb5.7,baz=232,slow=2.3,SNR=18
GUMO LR LR 10 13 51.6
comp=Z,16μm,20.0s,MS5.9,baz=127,slow=36
GUMO Guam 40.63 109 P **P** **09 56 57.3 -1.3**
GUMO pmax pmax
comp=Z,167nm,0.9s,mb5.7
GUMO MLR MLR
comp=Z,16μm,20.0s,MS5.9
SJI Sawahan 40.76 170 P **P** **09 57 00.6 +1.0**
comp=Z,10μmcomp=Z,414nm,1.5s,mb5.8

UGM Wanagama 40.78 172 P **P** **09 57 00.4 +0.7**
comp=Z,496nm,1.7s,mb5.8
TIXI Tiksi 40.85 11 *e*P **P** **09 56 58.9 -0.9**
comp=Z,550nm,1.5s,mb6.0
TIXI LR LR
comp=Z,47µm,19.0s,MS6.4
TIXI Tiksi 40.85 11*c i*P **P** **09 56 58.8 -1.0**
TIXI *e* 09 58 33.6
TIXI *e*S **S** **10 03 09.1 -1.4**
TIXI *e*SS SS 10 06 12.6 +1.1
TIXI *e* 10 07 02.7
TIXI pmax pmax
comp=Z,609nm,2.3s,mb5.8
TIXI pmax pmax
comp=E,86nm,1.4s
TIXI pmax pmax
comp=N,292nm,2.7s
TIXI MLR MLR
comp=Z,63µm,16.0s,MS6.6
TIXI MLR MLR
comp=E,21µm,12.0s
TIXI MLR MLR
comp=N,17µm,18.0s
SKR Severo-Kuril's 40.88 49 *e*P **P** **09 57 04.5 +4.2**
SKR *e*S **S** **10 03 04.0 -7.5**
SKR *e* 10 07 06.0
SKR pmax pmax
comp=Z,180nm,1.0s,mb5.7
SKR pmax pmax
comp=N,1µm,6.0s
SKR pmax pmax
comp=E,1µm,6.0s
SKR smax
comp=E,3µm,14.0s
SKR smax
comp=N,1µm,12.0s
SKR MLR MLR
comp=N,15µm,18.0s,MS6.1
SKR MLR MLR
comp=E,20µm,18.0s,MS6.1
PWJI Pagerwojo 41.05 170 P **P** **09 57 01.8 -0.1**
comp=E,6µmcomp=E,256nm,1.6s,mb5.6
PCJI Pacitan 41.13 171 P **P** **09 57 09.0 +6.4**
KRKI Karangkates 41.27 170 P **P** **09 57 06.2 +2.4**
comp=E,520nm,1.5s,mb6.0
NLAI Namlea 41.28 146 P **P** **09 57 05.8 +1.9**
comp=E,5µmcomp=E,175nm,2.5s,mb5.2
GMJI Gumukmas 41.55 168 P **P** **09 57 06.4 +0.3**
comp=E,6µmcomp=E,235nm,1.8s,mb5.5
BYJI Banyuwangi 41.66 167 P **P** **09 57 09.0 +2.0**
comp=E,708nm,1.7s,mb6.0
SOKR Solikamsk 41.66 325*c i*P **P** **09 57 07.5 +0.9**
SOKR 09 58 45.3
SOKR S **S** **10 03 22.2 -0.6**
SOKR pmax pmax
comp=Z,440nm,1.1s,mb6.0
SOKR MLR MLR
comp=Z,10µm,15.0s,MS5.8
SRBI Singaraja 41.70 165 P **P** **09 57 08.5 +1.1**
comp=Z,7µmcomp=Z,325nm,2.2s,mb5.6
NBBI Negara 41.86 166 P **P** **09 57 11.4 +2.8**
comp=Z,9µmcomp=Z,520nm,1.7s,mb5.9
JAGI Jajag, Banyuwa 41.87 167 P **P** **09 57 08.0 -0.7**
comp=Z,7µmcomp=Z,366nm,1.4s,mb5.8
IBAF Bafgh 41.95 282 *e*P **P** **09 57 10.0 +0.7**
SEY Seymchan 42.02 30*c i*P **P** **09 57 09.5 0.0**
KHKI Kahang-Kahang 42.06 165 P **P** **09 57 10.3 0.0**
comp=Z,611nm,1.6s,mb6.0
WBK Wadi Bani Khal 42.14 268 P **P** **09 57 12.2 +1.2**
SNR=7.4
AAI Ambon 42.19 145 P **P** **09 57 13.2 +1.8**
comp=Z,7µmcomp=Z,294nm,1.4s,mb5.7
IANJ Anjilo 42.39 288 *e*P **P** **09 57 13.8 +1.0**
PET Petropavlovsk 42.71 45 *e*P **P** **09 57 13.4 -1.7**
comp=Z,454nm,1.3s,mb6.0
PET LR LR
comp=Z,39µm,19.0s,MS6.3
PET Petropavlovsk 42.71 45 *e*P **P** **09 57 13.3 -1.9**
PET *i* 09 58 54.9
PET *e* 09 59 10.4
PET *e*S **S** **10 03 32.4 -6.0**
PET *e* 10 07 10.4
PET pmax pmax
comp=Z,3µm,3.4s
PET pmax pmax
comp=Z,1µm,4.3s
PET pmax pmax
comp=Z,355nm,1.4s,mb5.9
PET pmax pmax
comp=Z,4µm,4.0s
PET pmax pmax
comp=Z,2µm,5.4s
PET smax
comp=E,3µm,10.6s
PET smax
comp=E,6µm,23.9s
PET MLR MLR
comp=Z,48µm,16.7s,MS6.5
PET MLR MLR
comp=Z,47µm,16.0s
SMDO Samad 42.73 269 P **P** **09 57 17.0 +1.2**
SNR=19
JMDO Jabal Madar 42.97 268 P **P** **09 57 18.8 +1.1**
SNR=5.3
HOQ Hoqain 43.15 270 P **P** **09 57 20.1 +1.0**
SNR=6.1
IFIR Firoozkooh 43.28 289 *e*P **P** **09 57 21.6 +1.6**
ISAD Sadrabad 43.41 283 *e*P **P** **09 57 20.9 -0.3**
BSY Bisya 43.58 269 P **P** **09 57 24.0 +1.4**
SNR=22
HATD Hatta, Dubai 43.66 273 P **P** **09 57 25.9 +2.7**
SNR=5.9
ASHO Ashiyiah 43.78 273 P **P** **09 57 26.3 +2.1**
SNR=17
IDMV Damavand 43.87 289 *e*P **P** **09 57 26.1 +1.3**
ARQ Araqi 43.91 271 P **P** **09 57 27.0 +1.7**
SNR=11
ISFB Sefidab 43.97 287 *e*P **P** **09 57 26.6 +0.9**
NAZ Nazwa, Dubai 43.99 273 P **P** **09 57 27.9 +2.0**
SNR=8.0
MMRI Maumere 44.19 156 P **P** **09 57 26.2 -1.3**
comp=Z,672nm,1.6s,mb6.1
IVRN Varamin 44.24 288 *e*P **P** **09 57 28.4 +0.6**
BAKI Biak 44.48 133 P **P** **09 57 30.3 +0.4**
comp=Z,715nm,1.4s,mb6.2
IMHD Mahdasht 44.93 290 *e*P **P** **09 57 34.6 +1.3**
COCO West Island 45.51 192 PFAKE 09 57 50.0 +12
COCO LR LR
comp=Z,9µm,20.0s,MS5.7
COCO West Island 45.51 192 *i* P **P** **09 57 40.4 +2.5**
MAK Makhachkala 46.07 300 *e*P **P** **09 57 42.7 +0.5**
MAK *e* 09 59 18.4
MAK *e* 09 59 31.3
MAK *e*S **S** **10 04 27.8 +0.3**
MAK *e* 10 07 34.3
MAK pmax pmax
comp=Z,290nm,1.6s,mb6.0
MAK MLR MLR
comp=Z,19µm,13.0s,MS6.2
TLE Tual 46.17 141 P **P** **09 57 44.2 +1.0**
comp=Z,488nm,1.9s,mb6.1
DGRG David-gareji 47.86 298 P **P** **09 57 56.6 +0.4**
IMRD Marand 48.14 295 *e*P **P** **09 57 59.3 +0.8**
MTA Mtatsminda 48.25 299 P **P** **09 57 59.4 +0.1**
TBLG Delisi 48.28 299 P **P** **09 58 01.1 +1.6**
TBLG Delisi 48.28 299 P **P** **09 58 01.1 +1.6**
ISHB Shabestar 48.30 294 *e*P **P** **09 58 00.6 +0.9**
IGHG Ghaleghazi 48.52 289 *e*P **P** **09 58 01.6 +0.1**
GNI Garni 48.58 297 *e*P **P** **09 58 03.1 +1.3**
comp=Z,316nm,1.4s,mb6.2
GNI LR LR
comp=Z,12µm,21.0s,MS5.8
GNI Garni 48.58 297*c i*P **P** **09 58 03.3 +1.5**
GNI pmax pmax
comp=Z,211nm,1.7s
GNI Garni 48.58 297 P **P** **09 58 04.2 +2.4**
SNR=46
GOR Gori 48.70 299 P **P** **09 58 04.3 +1.6**
ZEI Tsey 48.72 300 *e*P **P** **09 58 03.2 +0.4**
ZEI *e*S **S** **10 05 04.1 -1.2**
ZEI pmax pmax
comp=Z,107nm,1.4s,mb5.7
ZEI MLR MLR
comp=Z,20µm,18.0s,MS6.2
ZEI MLR MLR
comp=N,7µm,13.0s,MS5.9
ZEI MLR MLR
comp=E,3µm,12.0s,MS5.9
GOF Gofitskoye 48.98 304 ⇓*i*P **P** **09 58 10.3 +5.5**
GOF *e*S **S** **10 05 15.5 +6.6**
GOF pmax pmax
comp=Z,290nm,0.8s,mb6.4
GOF smax
comp=N,70nm,1.1s
GOF smax
comp=E,50nm,1.1s
UMR Umm Al-Rimmam 49.02 282 *e*P **P** **09 58 04.8 -0.6**
UMR AMb AMB 09 58 09.6
comp=Z,553nm,1.1s,mb6.5
ONI Oni 49.07 300 P **P** **09 58 06.5 +1.0**
KBD Kabd 49.16 282 *e*P **P** **09 58 05.9 -0.6**
KBD AMb AMB 09 58 10.8
comp=Z,322nm,1.0s,mb6.3
MIB Mutribah 49.25 283 *e*P **P** **09 58 05.9 -1.2**
MIB AMb AMB 09 58 11.9
comp=Z,928nm,1.1s,mb6.7
ABTO Aybut 49.25 265 P **P** **09 58 07.5 +0.2**
SNR=5.3
VRHR Novokhopersk 49.28 312 *e*P **P** **09 58 06.4 -0.6**
VRHR pmax pmax
comp=E,180nm,0.8s
VRHR pmax pmax
comp=Z,320nm,0.8s,mb6.4
VRHR pmax pmax
comp=N,6.0nm,0.4s
RDF Al-Radifah 49.37 282 *e*P **P** **09 58 07.5 -0.6**
RDF AMb AMB 09 58 12.2
comp=Z,955nm,1.4s,mb6.6
KIV Kislovodsk 49.39 302 P **P** **09 58 09.5 +1.5**
comp=Z,892nm,0.9s,mb6.8,SNR=36
KIV Kislovodsk 49.39 302 *e*P **P** **09 58 09.0 +1.0**
comp=Z,156nm,0.9s,mb6.0
KIV LR LR
comp=Z,19µm,19.0s,MS6.1
KIV Kislovodsk 49.39 302 *e*P **P** **09 58 09.2 +1.2**
KIV *e* 10 00 03.0
KIV *e*S **S** **10 05 17.7 +2.9**
KIV pmax pmax
comp=Z,168nm,2.7s,mb5.6
KIV pmax pmax
comp=Z,171nm,1.0s,mb6.0
KIV MLR MLR
comp=Z,13µm,18.0s,MS6.0
KIV Kislovodsk 49.39 302 P **P** **09 58 09.8 +1.8**
SNR=46
VANB Van 49.93 295 *e*P **P** **09 58 13.7 +1.5**
AGRB Hanur-Agry 50.01 297 *e*P **P** **09 58 14.4 +1.6**
CUKT Cukurca 50.09 293 *e*P **P** **09 58 12.8 -0.7**
KLMR Klimovskoe 50.35 324*c i*P **P** **09 58 14.5 -0.5**
KLMR *e* 10 00 13.5
KLMR *i*S **S** **10 05 26.7 -1.0**
KLMR *e*SS SS 10 08 57.7 -3.2
KLMR pmax pmax
comp=Z,194nm,3.7s
KLMR pmax pmax
comp=Z,861nm,1.4s,mb6.6
KLMR MLR MLR
comp=Z,14µm,15.0s,MS6.1
BHD Baghdad 50.57 288 *ex* x 09 58 10.9
BHD *ex* x 09 59 20.5
BHD *i* x x 10 05 20.9
BHD *i* x x 10 08 01.0
VORD Divnogorie 50.76 312 *e*P **P** **09 58 18.0 -0.3**
VORD *e*S **S** **10 05 32.3 -1.3**
VORD pmax pmax
comp=E,230nm,1.1s
VORD pmax pmax
comp=Z,150nm,1.1s,mb5.8
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD smax
comp=N,1µm,4.1s
VORD smax
comp=E,950nm,4.1s
VORD smax
comp=Z,640nm,4.1s
VORD MLR MLR
comp=N,10µm,23.0s,MS6.0
VORD MLR MLR
comp=E,11µm,23.0s,MS6.0
VORD MLR MLR
comp=Z,14µm,23.0s,MS5.9
VSR Storozhevoye 50.81 312 *e*P **P** **09 58 18.6 -0.1**
VSR *e*S **S** **10 05 33.1 -1.2**
VSR pmax pmax
comp=N,140nm,1.1s
VSR pmax pmax
comp=E,490nm,1.1s
VSR pmax pmax
comp=Z,400nm,1.1s,mb6.3
VSR smax
comp=N,1µm,3.5s
VSR smax
comp=E,1µm,3.5s
VSR smax
comp=Z,370nm,3.5s
VSR MLR MLR
comp=E,10µm,23.0s
VSR MLR MLR
comp=Z,16µm,23.0s,MS6.0
VSR MLR MLR
comp=N,4µm,12.0s
DGAR Diego Garcia 50.88 224 PFAKE 09 58 30.0 +10
DGAR LR LR
comp=Z,10µm,20.0s,MS5.8
EZM Erzurum 51.16 297 *e*P **P** **09 58 24.1 +2.7**
MOS Moscow 51.38 318 *e*P **P** **09 58 17.5 -5.4**
MOS *i*S **S** **10 05 37.8 -4.3**
MOS pmax pmax
comp=Z,328nm,0.8s,mb6.3
MOS pmax pmax
comp=Z,2µm,2.3s,mb6.7
MOS smax
comp=E,2µm,5.1s
MOS MLR MLR
comp=Z,24µm,16.0s,MS6.3
MOS MLR MLR
comp=E,21µm,17.0s
SOC Sochi 51.58 302*c i*P **P** **09 58 24.7 +0.2**
SOC *e* 09 59 35.3
SOC *i*S **S** **10 05 44.7 -0.4**
SOC pmax pmax
comp=Z,1µm,2.5s,mb6.4
SOC pmax pmax
comp=Z,124nm,1.1s,mb5.8
SOC MLR MLR
comp=Z,18µm,18.0s,MS6.1
OBN Obninsk 52.03 317 P **P** **09 58 28.0 +0.3**
comp=Z,1µm,1.0s,mb6.7,SNR=13
OBN Obninsk 52.03 317 *e*P **P** **09 58 26.9 -0.8**
comp=Z,252nm,1.1s,mb6.1
OBN LR LR
comp=Z,22µm,19.0s,MS6.2
OBN Obninsk 52.03 317*c i*P **P** **09 58 26.6 -1.1**
OBN *i*S **S** **10 05 52.7 +1.8**
OBN *i*SS SS 10 09 29.6 +2.0
OBN pmax pmax
comp=Z,622nm,2.5s,mb6.1
OBN MLR MLR
comp=Z,20µm,19.0s,MS6.2
SMY Shemya 52.05 46 *e*P **P** **09 58 27.6 -0.3**
comp=Z,697nm,1.0s,mb6.5
SMY Shemya 52.05 46 *e*P **P** **09 58 27.6 -0.3**
SMY pmax pmax
comp=Z,697nm,1.0s,mb6.5
KAKA Kakadu 52.07 146 *e*P **P** **09 58 25.7 -2.7**
comp=Z,195nm,1.5s,mb5.8
KAKA Kakadu 52.07 146 *e*P **P** **09 58 26.0 -2.4**
comp=Z,598nm,1.4s,mb6.3
KAKA Kakadu 52.07 146 P **P** **09 58 26.3 -2.1**
comp=Z,1µmcomp=Z,100nm,1.3s,mb5.6
GUMT Gumushane 52.43 298 *e*P **P** **09 58 32.5 +1.6**
EZC Erzincan 52.70 298 *e*P **P** **09 58 35.0 +2.1**
PTK Pertek 52.89 297 *e*P **P** **09 58 34.5 +0.1**
ANN Anapa 52.94 304 *i* P **P** **09 58 33.8 -0.8**
ANN Anapa 52.94 304*c i*P **P** **09 58 34.2 -0.4**
ANN *i*S **S** **10 06 03.5 -0.3**
ANN *i* 10 08 20.6
ANN pmax pmax
comp=N,66nm,0.8s
ANN pmax pmax
comp=E,59nm,0.8s
ANN pmax pmax
comp=Z,220nm,0.8s,mb6.1
ANN pmax pmax
comp=N,126nm,7.8s
ANN pmax pmax
comp=E,155nm,7.8s
ANN pmax pmax
comp=Z,423nm,7.8s
ANN smax
comp=N,1µm,9.6s
ANN smax
comp=E,2µm,9.6s
ANN MLR MLR
comp=N,4µm,17.0s,MS6.0
ANN MLR MLR
comp=E,11µm,17.0s,MS6.0
ANN MLR MLR
comp=Z,12µm,17.0s,MS6.0
KNA Kununurra 53.16 152 P **P** **09 58 34.8 -1.7**
comp=Z,6µmcomp=Z,613nm,1.1s,mb6.5
APA Apatity 53.32 333 ⇓*i*P **P** **09 58 38.0 +0.9**
APA *i* 09 58 56.0
APA *i* 10 00 38.0
APA *i* PPP 10 01 48.0
APA *i* S **S** **10 06 05.0 -3.3**
APA *i* PS 10 06 24.0
APA *i* 10 08 19.0
APA pmax pmax
comp=Z,1µm,3.3s
APA pmax pmax
comp=Z,150nm,1.3s,mb5.8
APA MLR MLR
comp=Z,23µm,13.0s,MS6.4
URFA Urfa 53.72 295 *e*P **P** **09 58 40.0 -0.4**
MYA Malataya 53.77 296 *e*P **P** **09 58 42.5 +1.6**
RSDY Resadiye-TOKAT 54.04 299 *e*P **P** **09 58 43.7 +0.9**
DARE Darende-Malaty 54.07 297 *e*P **P** **09 58 45.7 +2.7**
FITZ Fitzroy Crossi 54.16 156 *e*P **P** **09 58 41.6 -2.2**
comp=Z,83nm,1.6s,mb5.4
FITZ *e*S **S** **10 06 16.9 -3.8**
FITZ Fitzroy Crossi 54.16 156 *e*P **P** **09 58 41.3 -2.4**
comp=Z,67nm,1.2s,mb5.5
FITZ Fitzroy Crossi 54.16 156 P **P** **09 58 42.3 -1.5**
comp=Z,5µmcomp=Z,186nm,1.6s,mb5.8
JOF Joensuu 54.23 327 *e*P **P** **09 58 42.9 -0.9**
JOF pmax pmax
comp=Z,394nm,0.8s,mb6.4
JOF Joensuu 54.23 327 *ep* **P** **09 58 42.9 -0.9**
comp=Z,394nm,0.8s,mb6.4
SVSK Karacayir 54.41 298 *e*P **P** **09 58 46.6 +1.2**
KVT Kavak 54.80 300 *e*P **P** **09 58 48.9 +0.6**
PUL Pulkovo 54.96 323 ⇓*i*P **P** **09 58 50.2 +1.0**
PUL pmax pmax
comp=Z,527nm,0.7s,mb6.7
PUL MLR MLR
comp=Z,13µm,24.0s,MS5.9
GAZ Gaziantep 55.02 295 *e*P **P** **09 58 50.6 +0.6**
KMRS Kahramanmaras 55.16 296 *e*P **P** **09 58 51.4 +0.5**
SIM Simferopol' 55.21 305 *i* P **P** **09 58 51.3 +0.1**
SIM *e*S **S** **10 06 34.0 -0.4**
SIM MLR MLR
comp=Z,5µm,15.0s,MS5.7
MBWA Marble Bar 55.36 164 *e*P **P** **09 58 51.7 -0.8**
comp=Z,247nm,1.5s,mb6.0
MBWA LR LR
comp=Z,3µm,20.0s,MS5.4
MBWA Marble Bar 55.36 164 P **P** **09 58 51.7 -0.7**
comp=Z,5µmcomp=Z,163nm,1.6s,mb5.8
MBWA Marble Bar 55.36 164 P **P** **09 58 52.3 -0.1**
SNR=6.8
KEV Kevo 55.67 336 *e*P **P** **09 58 53.5 -0.6**
comp=Z,100nm,0.8s,mb5.9
KEV LR LR
comp=Z,7µm,21.0s,MS5.7
KEV Kevo 55.67 336 *e*P **P** **09 58 53.5 -0.6**
KEV pmax pmax
comp=Z,99nm,0.8s,mb5.9
KEV MLR MLR
comp=Z,7µm,21.0s,MS5.7
KEV Kevo 55.67 336 *ep* **P** **09 58 52.7 -1.4**
comp=Z,98nm,0.7s,mb6.0
KOZT Kozan 55.98 296 *e*P **P** **09 58 57.1 +0.2**
BZK Bozkurt 56.05 301 *e*P **P** **09 58 58.1 +0.8**
CORM Corum 56.08 299 *e*P **P** **09 58 57.8 +0.2**
CEYT Ceyhan 56.19 295 *e*P **P** **09 58 59.6 +1.3**
ARCES ARCESS Array B 56.20 335 P **P** **09 58 57.2 -0.7**
ARCES PcP PcP 09 59 55.3 -0.2
ARCES LR LR 10 25 27.6
ARCES ARCESS Array B 56.20 335 P **P** **09 58 57.2 -0.7**
comp=Z,62nm,0.7s,mb5.7,baz=62,slow=5.6,SNR=96
ARCES PcP PcP 09 59 55.3 -0.2
comp=Z,26nm,0.8s,baz=51,slow=4.8,SNR=5.1
ARCES LR LR 10 25 27.6
comp=Z,15µm,18.2s,MS6.1,baz=262,slow=39
ARCES ARCESS Array B 56.20 335 P **P** **09 58 57.2 -0.7**
ARCES 09 59 55.3
ARCES pmax pmax
comp=Z,62nm,0.7s
ARCES MLR MLR
comp=Z,15µm,18.2s
ARE0 ARCESS Array S 56.20 335 *e*P **P** **09 58 57.5 -0.4**
TOS Tosya 56.29 300 *e*P **P** **09 58 59.6 +0.7**
KAF Kangasniemi 56.62 326 *e*P **P** **09 58 59.1 -1.9**
KAF pmax pmax
comp=Z,215nm,0.8s,mb6.2
KAF Kangasniemi 56.62 326 *ep* **P** **09 58 59.1 -1.9**
comp=Z,215nm,0.8s,mb6.2,baz=81,slow=6.5
KARA Karaisali 56.63 296 *e*P **P** **09 59 02.0 +0.4**
CANT Cankiri 56.70 300 *e*P **P** **09 59 02.5 +0.6**
FINES FINESS Array B 56.83 326 P **P** **09 59 01.8 -0.7**
comp=Z,250nm,0.8s,mb6.3,baz=84,slow=6.4,SNR=142
FINES FINESS Array B 56.83 326 P **P** **09 59 01.8 -0.7**
FINES pmax pmax
comp=Z,250nm,0.8s
HWQ Hawqa 56.91 292 *e*P **P** **09 59 04.3 +0.7**
BR131 Keskin Array S 56.95 299 *e*P **P** **09 59 03.3 -0.4**
comp=Z,27nm,0.7s,mb5.4
BR131 LR LR
comp=Z,6µm,20.0s,MS5.7
BRTR Keskin Array B 56.95 299 P **P** **09 59 03.1 -0.6**
comp=Z,40nm,0.8s,mb5.5,baz=106,slow=5.6,SNR=93
BRTR LR LR 10 27 29.9
comp=Z,7µm,20.9s,MS5.7,baz=308,slow=40
BRTR Keskin Array B 56.95 299*ce*P **P** **09 59 03.0 -0.7**
BRTR pmax pmax
comp=Z,40nm,0.8s
KTK1 Kautokeino 57.05 335 *e*P **P** **09 59 03.9 -0.1**
KTK1 *e*S **S** **10 07 01.9 +3.7**
KTK1 AMS AMS 10 25 26.0
comp=Z,16µm,17.2s,MS6.2
MICGM Minsk 57.09 317 ⇓*i*P **P** **09 59 04.0 -0.5**
AKASG Malin Array Be 57.10 313 P **P** **09 59 03.8 -0.8**
comp=Z,166nm,0.8s,mb6.2,baz=68,slow=6.3,SNR=121
AKASG LR LR 10 24 34.5
comp=Z,13µm,19.2s,MS6.0,baz=80,slow=37
AKASG Malin Array Be 57.10 313 P **P** **09 59 03.8 -0.8**
AKASG pmax pmax
comp=Z,166nm,0.8s
AKASG MLR MLR
comp=Z,13µm,19.2s
AKBB Malin Array Si 57.10 313 *e*P **P** **09 59 03.6 -1.0**
KIEV Kiev 57.11 313 *e*P **P** **09 59 03.6 -1.0**
comp=Z,85nm,0.6s,mb6.0
KIEV LR LR
comp=Z,13µm,20.0s,MS6.0
KIEV Kiev 57.11 313 *e*P **P** **09 59 03.6 -1.1**
KIEV pmax pmax
comp=Z,85nm,0.6s,mb6.0
KIEV MLR MLR
comp=Z,13µm,20.0s,MS6.0
MNK Minsk 57.12 317 ⇓*i*P **P** **09 59 04.0 -0.7**
MNK *e*S **S** **10 07 00.0 +0.5**
MNK *e*PS 10 07 20.0
MNK *e* 10 08 48.0
MNK *e*SS SS 10 10 50.0 +2.2
MNK *e*SSS 10 12 56.0
MNK pmax pmax
comp=Z,840nm,0.8s,mb6.8
MNK pmax pmax
comp=E,440nm,1.4s
MNK MLR MLR
comp=Z,35µm,14.0s,MS6.6
MNK MLR MLR
comp=E,31µm,14.0s
SAFT Safranbolu 57.20 301 *e*P **P** **09 59 05.6 +0.1**

BHL Bhannes 57.27 292 eP P 09 59 06.5 +0.4
RCY Rachaya 57.28 291 eP P 09 59 07.0 +0.8
SULT Sultanhani-AKS 57.50 297 eP P 09 59 08.1 +0.4
LOD Lodumlu 57.54 299 eP P 09 59 06.5 -1.4
NACGM Naroch 57.63 318 eP P 09 59 05.0 -3.3
BJO Bjornoya 57.73 342 eS S 10 07 06.3 -0.6
BJO AMS AMS 10 28 06.5
comp=Z,16µm,19.2s,MS6.2
ADK Adak 57.77 46 eP P 09 59 08.5 -0.8
comp=Z,94nm,1.2s,mb5.7
ADK Adak 57.77 46 eP P 09 59 08.5 -0.8
ADK pmax pmax
comp=Z,94nm,1.2s,mb5.7
PMG Port Moresby 57.77 129 eP P 09 59 08.5 -1.3
comp=Z,209nm,1.4s,mb6.0
PMG LR LR
comp=Z,3µm,22.0s,MS5.4
PMG Port Moresby 57.77 129c iP P 09 59 07.7 -2.1
PMG pmax pmax
comp=Z,175nm,1.2s
PMG Port Moresby 57.77 129 P P 09 59 09.0 -0.8
comp=Z,3µmcomp=Z,129nm,1.4s,mb5.8
MMAI Mount Meron Ar 57.77 291 P P 09 59 09.2 -0.5
comp=Z,42nm,0.9s,mb5.5,baz=81,slow=5.2,SNR=15
EREN Erenkoy 57.87 294 eP P 09 59 09.9 -0.4
GAMB Gambell 57.99 31 eP P 09 59 11.1 +0.4
comp=Z,315nm,1.3s,mb6.2
IKL Isikli 58.01 295 eP P 09 59 09.8 -1.4
KDZE Karadeniz Ereo 58.07 301 eP P 09 59 11.1 -0.5
KIS Kishinev 58.27 308⇑iP P 09 59 12.0 -0.9
comp=Z,600nm,2.0s,mb6.3
KIS Kishinev 58.27 308 ePP PP 10 01 22.0 +0.3
KIS Kishinev 58.27 308 ePPP 10 02 40.0
KIS eScP ScP 10 04 00.0 -4.3
KIS iS S 10 07 12.0 -2.8
comp=Z,1µm,6.0s
KIS Kishinev 58.27 308α iP P 09 59 12.0 -0.9
KIS e 10 01 22.0
KIS iS S 10 07 12.0 -2.8
KIS ePS 10 07 40.0
KIS eSS SS 10 11 06.0 -0.2
KIS pmax pmax
comp=Z,600nm,2.0s,mb6.3
KIS pmax pmax
comp=Z,900nm,2.0s,mb6.5
KIS smax
comp=N,1µm,6.0s
KIS smax
comp=E,2µm,6.0s
KIS MLR MLR
comp=Z,11µm,14.0s,MS6.1
KIS MLR MLR
comp=N,7µm,17.0s,MS6.0
KIS MLR MLR
comp=E,6µm,12.0s,MS6.0
KIS MLR MLR
comp=Z,12µm,22.0s
LADK Ladik-KONYA 58.36 298 eP P 09 59 11.8 -1.8
LFK Lefkose 58.45 294 eP P 09 59 13.7 -0.7
KONT Konya--Tatoy 58.45 297 eP P 09 59 14.4 +0.1
TRO Tromso 58.48 336 eP P 09 59 13.3 -0.7
TRO AMB AMB 09 59 15.5
comp=Z,141nm,1.9s,mb5.7
TRO eS S 10 07 18.7 +1.8
TRO eSS SS 10 11 12.8 +4.1
TRO AMS AMS 10 26 32.6
comp=Z,16µm,16.0s,MS6.2
MDU Mudurnu 58.49 301 eP P 09 59 13.6 -1.0
KIZT Kizilcal 58.50 299 eP P 09 59 14.6 -0.1
SVRH Sivrihisar-ESK 58.59 299 eP P 09 59 14.6 -0.7
HDMB Hadim 58.67 296 eP P 09 59 15.4 -0.5
CSS Prodhromos 58.71 294 P P 09 59 16.1 -0.1
comp=Z,3.1nm,0.9s,mb4.3
CSS Prodhromos 58.71 294 P P 09 59 13.9 -2.3
CSS Prodhromos 58.71 294 P P 09 59 13.9 -2.3
MAMC Mammari 58.72 294 P P 09 59 18.0 +1.7
KBS Kingsbay 58.73 347 eP P 09 59 15.2 -0.5
KBS AMB AMB 09 59 17.1
comp=Z,66nm,1.7s,mb5.4
KBS eS S 10 07 24.0 +3.9
KBS AMS AMS 10 28 46.8
comp=Z,11µm,16.1s,MS6.1
KBS Kingsbay 58.73 347 eP P 09 59 16.0 +0.3
comp=Z,62nm,1.3s,mb5.5
KBS LR LR
comp=Z,11µm,19.0s,MS6.0
KBS Kingsbay 58.73 347c iP P 09 59 15.4 -0.3
KBS pmax pmax
comp=Z,120nm,2.5s,mb5.5
KBS MLR MLR
comp=Z,12µm,18.0s,MS6.1
TLCR 58.77 306 ⇑iP P 09 59 17.5 +1.1
TLCR 58.77 306⇑iP P 09 59 17.5 +1.0
COEN Coen 58.81 136 eP P 09 59 15.5 -1.5
comp=Z,1µm,1.3s,mb6.8
COEN Coen 58.81 136 P P 09 59 16.2 -0.8
comp=Z,10µmcomp=Z,415nm,1.5s,mb6.2
LEF Lefka 58.99 294 eP P 09 59 18.1 -0.1
GULT Gulveren 59.01 301 eP P 09 59 18.4 +0.3
SPNC Sapanca-Adapaz 59.08 301 eP P 09 59 19.1 +0.5
ALFC Alevga 59.20 294 P P 09 59 21.1 +1.5
comp=Z,1.2nm,0.7s
CFR Carcaliu 59.24 307 ⇓P P 09 59 20.7 +1.0
CFR Carcaliu 59.24 307⇓iP P 09 59 20.7 +1.0
TNA Tin City 59.25 29 eP P 09 59 19.3 -0.1
comp=Z,510nm,1.5s,mb6.3
WRAB Tennant Creek 59.26 148 P P 09 59 18.0 -2.0
comp=Z,1µm,0.8s,mb7.0,SNR=81
WRAB Tennant Creek 59.26 148 eP P 09 59 17.9 -2.1
comp=Z,365nm,1.2s,mb6.3
WRAB LR LR
comp=Z,2µm,19.0s,MS5.3
WRAB Tennant Creek 59.26 148 eP P 09 59 17.9 -2.1
WRAB pmax pmax
comp=Z,365nm,1.2s,mb6.3
WRAB MLR MLR
comp=Z,2µm,19.0s,MS5.3
WRAB Tennant Creek 59.26 148 P P 09 59 19.2 -0.8
comp=Z,5µmcomp=Z,295nm,1.4s,mb6.1
TIRR Tirgusor 59.26 306 eP P 09 59 18.8 -1.1
comp=Z,97nm,0.8s,mb5.9
TIRR Tirgusor 59.26 306 eP P 09 59 18.8 -1.0
TIRR pmax pmax
comp=Z,97nm,0.8s,mb5.9
TIRR Tirgusor 59.26 306⇓iP P 09 59 19.8 0.0
PPCY Paphos 59.49 294 P P 09 59 21.9 +0.3
HRT Hereke 59.50 301 eP P 09 59 21.5 0.0
CAVI Cavuskoy 59.57 301 eP P 09 59 21.9 -0.2
ADVT Abdulvahap 59.57 301 eP P 09 59 21.1 -1.0
SHUT Suhut-Afyon 59.59 299 eP P 09 59 21.7 -0.6
SUTC Sutluce-Ispart 59.62 297 eP P 09 59 21.7 -0.7
PSN Preselentsi 59.65 305 P P 09 59 22.7 +0.1
ALT Altintas 59.75 299 eP P 09 59 23.3 0.0
YLV Yalova 59.79 301 eP P 09 59 23.4 -0.2
KLYT Kilyos 59.81 302 eP P 09 59 23.9 +0.2
TESR 59.84 308 ⇑iP P 09 59 23.7 -0.1
TESR 59.84 308⇑iP P 09 59 23.7 -0.1
ISK Istanbul-Kandi 59.86 302 eP P 09 59 22.8 -1.2
ISP Isparta 59.86 298 PFAKE 09 59 40.0 +16
ISP LR LR
comp=Z,8µm,21.0s,MS5.8
SUW Suwalki 59.88 317 eP P 09 59 23.8 -0.1
SUW LMZ 10 26 10.9
comp=Z,18µm,21.0s
SUW Suwalki 59.88 317 eP P 09 59 24.7 +0.7
comp=Z,363nm,1.0s,mb6.4
GRER 59.96 307 ⇑iP P 09 59 26.1 +1.4
GRER 59.96 307⇑iP P 09 59 26.0 +1.4
GEMT Gemlik 59.97 301 eP P 09 59 23.6 -1.2
VRI Vrincioaia 59.98 308 ⇓P P 09 59 25.5 +0.7
VRI Vrincioaia 59.98 308⇓iP P 09 59 25.5 +0.7
BGKT Bogazkoy 60.02 302 eP P 09 59 25.4 +0.3
PLOR Plostina 60.03 308⇓iP P 09 59 25.7 +0.5
ARMT Armutlu 60.16 301 eP P 09 59 25.2 -0.9
CTKS Kestanelik-??a 60.20 302 eP P 09 59 25.2 -1.1
CTYL Yal??k??y-??at 60.27 302 eP P 09 59 26.2 -0.7
MSEY Mahe Island 60.29 242 PFAKE 09 59 40.0 +13
MSEY LR LR
comp=Z,6µm,21.0s,MS5.7
PRD Provadia 60.34 305 P P 09 59 27.3 0.0
SLVT Silivri 60.41 302 eP P 09 59 28.1 +0.2
BURAR Bucovina Array 60.45 310 ⇑P P 09 59 28.5 +0.6
BURAR Bucovina Array 60.45 310⇑iP P 09 59 28.5 +0.6
BUR08 Bucovina Ar. S 60.45 310 eP P 09 59 27.5 -0.4

LVV L'vov 60.54 313⇓iP P 09 59 28.8 +0.2
LVV e 10 01 43.0
LVV eS S 10 07 43.0 -1.1
LVV eSS SS 10 11 46.0 +4.2
LVV pmax pmax
comp=Z,1µm,2.0s,mb6.6
MLR Muntele Rosu 60.62 307 ⇓P P 09 59 29.7 +0.5
MLR Muntele Rosu 60.62 307⇓iP P 09 59 29.7 +0.6
KCTX Karacabey (Bur 60.62 301 eP P 09 59 29.1 -0.2
SULR 60.66 306 ⇓P P 09 59 30.9 +1.4
SULR 60.66 306⇓iP P 09 59 30.9 +1.4
ELL Elmali 60.69 297 eP P 09 59 29.6 -0.2
LOF Lofoten 60.71 335 eP P 09 59 28.0 -1.4
LOF AMB AMB 09 59 32.3
comp=Z,210nm,1.6s,mb6.0
GLHS Glhisar (BURDU 60.85 297 eP P 09 59 30.1 -0.8
MOR8 Moi Rana 60.89 332 eP P 09 59 28.2 -2.5
MOR8 AMB AMB 09 59 32.9
comp=Z,111nm,1.7s,mb5.7
ATD Arta Tunnel 60.91 265 LR LR 10 24 24.5
comp=Z,4µm,21.4s,MS5.6,baz=55,slow=35
EDC Edincik 60.95 301 eP P 09 59 31.9 +0.4
DENT Denizli 60.99 298 eP P 09 59 32.0 +0.2
KULA Kula-Manisa 61.00 299 eP P 09 59 30.6 -1.3
JMB Yambol 61.15 304 P P 09 59 33.6 +0.8
JMB Yambol 61.15 304 P P 09 59 33.6 +0.8
JMB Yambol 61.15 304 P P 09 59 33.7 +0.9
BALB Balikesir 61.18 301 eP P 09 59 32.5 -0.6
GONE Gonen-Balikesi 61.18 301 eP P 09 59 32.6 -0.5
VOIR 61.23 308 ⇑P P 09 59 33.3 0.0
VOIR 61.23 308⇑iP P 09 59 33.3 0.0
EDRB Edirne 61.24 303 eP P 09 59 32.8 -0.6
RKY Sarkoy-Tekirda 61.33 302 eP P 09 59 33.7 -0.3
SZH Strazhica 61.34 305 P P 09 59 34.3 +0.2
KWP Kalwaria Pacla 61.42 313 eP P 09 59 35.1 +0.6
KWP eS S 10 07 57.0 +1.7
KWP LMZ 10 27 15.5
comp=Z,10µm,21.0s
KWP Kalwaria Pacla 61.42 313 eP P 09 59 34.6 +0.1
comp=Z,966nm,1.1s,mb6.8
KWP LR LR
comp=Z,11µm,21.0s,MS6.0
KWP Kalwaria Pacla 61.42 313 eP P 09 59 35.2 +0.7
KWP eS S 10 07 57.0 +1.7
KWP Kalwaria Pacla 61.42 313⇑iP P 09 59 36.0 +1.5
BMR Baia Mare 61.53 310 ⇑P P 09 59 35.7 +0.4
BMR Baia Mare 61.53 310⇑iP P 09 59 35.7 +0.4
ZIMR 61.60 306 ⇓P P 09 59 37.0 +1.1
ZIMR 61.60 306⇓iP P 09 59 37.0 +1.2
WAR Warsaw 61.63 316 eP P 09 59 37.2 +1.3
WAR eS S 10 08 00.5 +2.5
WAR LMZ 10 27 07.0
comp=Z,12µm,19.1s
LPK Lapseki 61.73 302 eP P 09 59 36.5 -0.3
PVL Pavlikeni 61.77 305 P P 09 59 37.4 +0.4
YER Yerkesik 61.77 298 eP P 09 59 35.3 -1.8
ERIK Erikli-Kesan 61.81 302 eP P 09 59 37.5 +0.2
GELI Tayfur-Gelibol 61.93 302 eP P 09 59 37.9 -0.3
UZH Uzngorod 61.99 312⇓iP P 09 59 38.3 -0.1
UZH e 10 00 18.5
UZH e 10 01 54.9
UZH ePPP 10 03 23.5
UZH eS S 10 07 58.1 -4.5
UZH ePS 10 08 22.1
UZH e 10 09 20.0
UZH eSSS 10 14 41.5
UZH MLR MLR
comp=N,6µm,14.0s,MS6.2
UZH MLR MLR
comp=E,9µm,14.0s,MS6.2
UZH MLR MLR
comp=Z,4µm,14.0s,MS5.8
TRPA Tarpa 62.00 311⇑iP P 09 59 39.3 +0.8
DIM Dimitrovgrad 62.02 304 P P 09 59 38.6 -0.1
ENEZ Enez 62.04 302 eP P 09 59 38.8 0.0
ALN Alexandroupoli 62.06 302 P P 09 59 37.9 -1.1
ALN Alexandroupoli 62.06 302 P P 09 59 37.9 -1.1
NIKO Nikolski 62.08 43 eP P 09 59 40.1 +1.2
comp=Z,52nm,0.8s,mb5.7
MLSB Milas 62.09 298 eP P 09 59 39.4 +0.1
BLCB Balcova 62.23 300 eP P 09 59 40.2 0.0
KDZ Kurdzhali 62.24 303 P P 09 59 40.7 +0.5
DRGR 62.33 310 ⇓P P 09 59 41.3 +0.6
DRGR 62.33 310⇓iP P 09 59 41.3 +0.6
ASAR Alice Springs 62.36 151 P P 09 59 39.5 -1.6
comp=Z,66nm,0.9s,mb5.8,baz=334,slow=5.7,SNR=126
ASAR PKPPKP 10 28 38.4
comp=Z,2.3nm,1.1s,baz=160,slow=3.2,SNR=5.6
NSS Namsos 62.37 331 eP P 09 59 38.4 -2.2
NSS eS S 10 08 08.1 +1.3
NSS AMS AMS 10 28 33.0
comp=Z,24µm,15.1s,MS6.5
STHS Stebnicka Huta 62.39 313 eP P 09 59 41.3 +0.2
comp=Z,97nm,1.0s,mb5.9
STHS Stebnicka Huta 62.39 313 eP P 09 59 41.3 +0.2
STHS pmax pmax
comp=Z,97nm,1.0s,mb5.9
STHS Stebnicka Huta 62.39 313 eP P 09 59 41.3 +0.2
GADA Gvkgeada 62.42 302 eP P 09 59 38.6 -2.8
DAT Datca 62.44 298 eP P 09 59 40.8 -0.9
DEV Deva 62.51 309 ⇑P P 09 59 43.5 +1.6
DEV Deva 62.51 309⇑iP P 09 59 43.5 +1.6
BODT Bodrum 62.52 298 eP P 09 59 41.1 -1.0
PLD Plovdiv 62.59 304 P P 09 59 41.4 -1.1
PLD Plovdiv 62.59 304 P P 09 59 41.4 -1.1
PLD Plovdiv 62.59 304 P P 09 59 42.6 +0.1
RZN Rozhen 62.72 304 P P 09 59 43.5 +0.1
GZR Gura Zlata 62.76 308 ⇑P P 09 59 45.0 +1.5
GZR Gura Zlata 62.76 308⇑iP P 09 59 45.0 +1.4
PGB Panagyurishte 62.80 305 P P 09 59 43.6 -0.3
MPEP Malo Peshtene 62.81 306 P P 09 59 43.7 -0.3
CHOS Chios island 62.95 300 P P 09 59 45.3 +0.3
NIE Niedzica 62.97 313 eP P 09 59 46.4 +1.5
OJC Ojcow 63.01 314 eP P 09 59 45.7 +0.5
OJC epP pP 09 59 47.8 -0.9
OJC eS S 10 08 16.3 +0.9
OJC L 10 28 20.3
comp=Z,12nm,19.0s
LIA Limnos Island 63.03 302 P P 09 59 44.7 -0.8
LIA Limnos Island 63.03 302 P P 09 59 44.7 -0.8
KAVA Kavala 63.11 303 P P 09 59 45.3 -0.7
UNV Unalaska Valle 63.14 42 eP P 09 59 45.5 -0.5
comp=Z,100nm,1.2s,mb5.8
BZS Buzias 63.44 309 ⇑P P 09 59 48.9 +0.8
BZS Buzias 63.44 309⇑iP P 09 59 48.9 +0.8
AKUT Akutan 63.45 41 eP P 09 59 46.7 -1.3
comp=Z,238nm,1.3s,mb6.2
VTS Vitosha 63.45 305 P P 09 59 49.8 +1.6
VTS Vitosha 63.45 305 P P 09 59 49.8 +1.6
VTS Vitosha 63.45 305⇑iP P 09 59 48.8 +0.6
VTS Vitosha 63.45 305 P P 09 59 48.5 +0.3
MMB Musomiste 63.45 304 P P 09 59 47.0 -1.2
SRS Serrai 63.72 303 P P 09 59 48.6 -1.4
SRS Serrai 63.72 303 P P 09 59 48.6 -1.4
OUR Ouranopolis 63.73 303 P P 09 59 49.0 -1.1
OUR Ouranopolis 63.73 303 P P 09 59 49.0 -1.1
PSZ Piszkesteto 63.74 312 eP P 09 59 51.1 +1.0
comp=Z,215nm,1.4s,mb6.0
PSZ LR LR
comp=Z,11µm,19.0s,MS6.1
PSZ Piszkesteto 63.74 312 eP P 09 59 51.1 +1.0
PSZ pmax pmax
comp=Z,215nm,1.4s,mb6.0
PSZ MLR MLR
comp=Z,11µm,19.0s,MS6.1
PSZ Piszkesteto 63.74 312⇑iP P 09 59 50.9 +0.8
PSZ Piszkesteto 63.74 312⇑eP P 09 59 50.7 +0.6
APE Apeiranthos 63.84 299 ⇑P P 09 59 50.3 -0.6
APE Apeiranthos 63.84 299⇑iP P 09 59 50.3 -0.6
NOA NORSAR Array B 63.87 327 P P 09 59 49.3 -1.4
comp=Z,160nm,0.8s,mb6.1,baz=70,slow=6.5,SNR=178
NOA LR LR 10 29 35.1
comp=Z,14µm,18.3s,MS6.2,baz=85,slow=38
NOA NORSAR Array B 63.87 327 P P 09 59 49.3 -1.4
NOA pmax pmax
comp=Z,160nm,0.8s
NOA MLR MLR
comp=Z,14µm,18.3s
SOH Sokhos 63.99 303 P P 09 59 50.9 -0.9
SOH Sokhos 63.99 303 P P 09 59 50.9 -0.9
RAC Raciborz 64.03 314 eP P 09 59 53.1 +1.2
RAC eS S 10 08 30.7 +2.7

RAC MLR MLR
comp=E,14µm,16.0s
RAC MLR MLR
comp=Z,8µm,16.0s,MS6.0
ZKR Zakros 64.08 296 P P 09 59 51.5 -1.0
ZKR Zakros 64.08 296 P P 09 59 51.5 -1.0
NAO01 NORSAR Array S 64.09 327 eP P 09 59 50.8 -1.3
comp=Z,115nm,0.9s,mb5.9
NAO01 LR LR
comp=Z,13µm,20.0s,MS6.1
PAIG Paliouri 64.10 302 P P 09 59 50.7 -1.8
PAIG Paliouri 64.10 302 P P 09 59 50.7 -1.8
BSD Bornholm Skovb 64.12 320⇑iP P 09 59 51.7 -0.7
BSD iS S 10 08 26.2 -2.9
BSD pmax pmax
comp=Z,100nm,0.8s,mb5.9
BSD MLR MLR
comp=Z,13µm,19.0s,MS6.1
BSD Bornholm Skovb 64.12 320⇑iP P 09 59 51.7 -0.7
comp=Z,105nm,0.8s,mb5.9
BSD iS S 10 08 26.2 -2.9
BSD
comp=Z,13µm,19.0s
OKC Ostrava-Krasne 64.14 314 eP P 09 59 53.6 +0.9
OKC eS S 10 08 31.4 +1.9
OKC eSS SS 10 12 43.8 +5.8
OKC MLR MLR
comp=Z,9µm,14.6s,MS6.1
OKC Ostrava-Krasne 64.14 314 eP P 09 59 53.6 +0.9
OKC eS S 10 08 31.4 +1.9
OKC eSS SS 10 12 43.8 +5.8
OKC AMS AMS 10 28 10.0
comp=Z,9µm,14.6s
KNT Kendrikon 64.19 304 P P 09 59 50.5 -2.6
KNT Kendrikon 64.19 304 P P 09 59 50.5 -2.6
VYHS Vyhne 64.20 312 eP P 09 59 53.3 +0.2
comp=Z,104nm,1.1s,mb5.8
VYHS eS S 10 08 31.6 +1.4
VYHS eScS ScS 10 09 48.6 +1.6
VYHS eSS SS 10 12 43.1 +4.1
VYHS LR LR
comp=Z,7µm,21.5s,MS5.8
VYHS Vyhne 64.20 312 eP P 09 59 53.2 +0.1
VYHS eS S 10 08 31.6 +1.4
VYHS eSCS ScS 10 09 48.6 +1.6
VYHS eSS SS 10 12 43.1 +4.1
AOS Alonnisos 64.24 301 P P 09 59 52.3 -1.2
AOS Alonnisos 64.24 301 P P 09 59 52.3 -1.2
HORT Hortiatis 64.26 303 P P 09 59 50.9 -2.7
HORT Hortiatis 64.26 303 P P 09 59 50.9 -2.7
VAY Valandovo 64.36 304 P P 09 59 53.4 -0.8
VAY Valandovo 64.36 304 P P 09 59 53.4 -0.8
VAY Valandovo 64.36 304 eP P 09 59 51.9 -2.3
KOLL Kolacno 64.44 313 eP P 09 59 55.2 +0.6
KOLL Kolacno 64.44 313 eP P 09 59 55.2 +0.6
BUD Budapest 64.45 311⇑eP P 09 59 54.5 -0.2
OSL Oslo 64.49 326 eP P 09 59 53.6 -1.1
OSL AMB AMB 09 59 58.2
comp=Z,402nm,1.1s,mb6.4
MORC Moravsky Berou 64.53 314 eP P 09 59 54.8 -0.4
comp=Z,186nm,1.0s,mb6.1
MORC Moravsky Berou 64.53 314 eP P 09 59 54.8 -0.4
MORC pmax pmax
comp=Z,187nm,1.0s,mb6.1
MORC Moravsky Berou 64.53 314⇓iP P 09 59 55.6 +0.4
GRG Griva 64.61 304 P P 09 59 54.4 -1.5
GRG Griva 64.61 304 P P 09 59 54.4 -1.5
XOR Xorichti 64.66 302 P P 09 59 54.4 -1.8
XOR Xorichti 64.66 302 P P 09 59 54.4 -1.8
ALE Alert 64.75 358 P P 09 59 57.0 +0.8
comp=Z,418nm,1.2s,mb6.3,SNR=45
LIT Litokhoron 64.88 303 P P 09 59 55.4 -2.2
LIT Litokhoron 64.88 303 P P 09 59 55.4 -2.2
KSP Ksiaz 64.89 316 eP P 09 59 58.0 +0.5
KSP eS S 10 08 39.8 +1.1
KSP LMZ 10 29 30.0
comp=Z,22µm,18.0s
KSP Ksiaz 64.89 316 eP P 09 59 58.0 +0.5
KSP eS S 10 08 33.4 -5.2
SKO Skopje 64.90 305 eP P 09 59 56.5 -1.2
MOL Molde 64.91 330 eS S 10 08 39.9 +1.4
TTA Tatalina 65.00 30 eP P 09 59 57.2 -0.8
comp=Z,468nm,1.6s,mb6.3
TTA Tatalina 65.00 30 eP P 09 59 57.2 -0.8
TTA pmax pmax
comp=Z,468nm,1.6s,mb6.3
ATAL Atalanti 65.04 301 P P 09 59 56.5 -2.2
DPC Dobruska-Polom 65.05 315 eP P 09 59 59.5 +0.9
DPC eS S 10 08 41.0 +0.3
DPC MLR MLR
comp=Z,7µm,13.7s,MS6.0
DPC Dobruska-Polom 65.05 315 eP P 09 59 59.5 +0.9
DPC eS S 10 08 41.0 +0.3
DPC ex x 10 12 37.3
DPC AMS AMS 10 28 50.0
comp=Z,7µm,13.7s
DIVS Divibare 65.07 308 P P 09 59 56.0 -2.8
LKR Lokris 65.07 301 P P 09 59 57.3 -1.6
LKR Lokris 65.07 301 P P 09 59 57.3 -1.6
KLBR Kellerberrin 65.09 168 eP P 09 59 57.9 -1.0
comp=Z,50nm,0.9s,mb5.5
KONO Kongsberg 65.13 326 eP P 09 59 57.8 -1.2
KONO eS S 10 08 42.0 +0.7
KONO eSKS 10 09 55.4
KONO eSS SS 10 12 51.2 -1.7
KONO AMS AMS 10 30 31.4
comp=Z,7µm,14.5s,MS6.0
KONO Kongsberg 65.13 326 eP P 09 59 57.8 -1.1
comp=Z,154nm,0.9s,mb6.0
KONO LR LR
comp=Z,9µm,21.0s,MS5.9
KONO Kongsberg 65.13 326 eP P 09 59 57.8 -1.1
KONO pmax pmax
comp=Z,154nm,0.9s,mb6.0
KONO MLR MLR
comp=Z,9µm,21.0s,MS5.9
PKSM Moragy 65.16 310 ⇑P P 09 59 59.5 +0.1
PKSM Moragy 65.16 310⇑iP P 09 59 59.5 +0.1
SIVA Sivas 65.17 297 P P 09 59 57.9 -1.8
UPC Upice 65.18 315 eP P 10 00 00.5 +1.1
UPC Upice 65.18 315 eP P 10 00 00.5 +1.1
MODS Modra-Piesok 65.21 313 eP P 10 00 01.4 +1.7
comp=Z,655nm,1.3s,mb6.5
MODS Modra-Piesok 65.21 313 eP P 10 00 01.4 +1.7
MODS pmax pmax
comp=Z,655nm,1.3s,mb6.5
MODS Modra-Piesok 65.21 313 eP P 10 00 01.4 +1.7
MIDW Midway 65.22 71 PFAKE 10 00 10.0 +10
MIDW LR LR
comp=Z,6µm,20.0s,MS5.8
COP Copenhagen 65.23 321 iP P 10 00 00.6 +0.9
COP iS S 10 08 46.0 +3.3
COP pmax pmax
comp=Z,130nm,0.8s,mb6.0
COP MLR MLR
comp=Z,3µm,18.0s,MS5.5
COP Copenhagen 65.23 321 iP P 10 00 00.6 +0.9
comp=Z,130nm,0.8s,mb6.0
COP iS S 10 08 46.0 +3.3
COP
comp=Z,3µm,18.0s
KRUS Krusevo 65.26 304 eP P 09 59 57.4 -2.7
VRAC Vranov 65.28 314 ⇓P P 10 00 00.5 +0.4
VRAC Vranov 65.28 314⇓iP P 10 00 00.5 +0.4
KZN Kozani 65.31 303 P P 09 59 59.5 -0.9
KZN Kozani 65.31 303 P P 09 59 59.5 -0.9
BIA Bitola 65.34 304 eP P 09 59 58.3 -2.4
LTK Loutraki 65.34 300 P P 09 59 58.3 -2.4
DID Didima 65.35 300 P P 09 59 57.7 -3.1
ZST Bratislava 65.39 313 eP P 10 00 02.2 +1.4
comp=Z,48nm,0.9s,mb5.5
ZST eS S 10 08 44.6 -0.2
ZST eSS SS 10 12 54.6 -2.8
ZST LR LR
comp=Z,7µm,15.3s,MS6.0
ZST Bratislava 65.39 313 eP P 10 00 02.2 +1.4
ZST eS S 10 08 44.6 -0.2
ZST eSS SS 10 12 54.6 -2.8
FNA Florina 65.40 304 P P 09 59 59.5 -1.5
FNA Florina 65.40 304 P P 09 59 59.5 -1.5
AGG Agios Georgios 65.41 302 P P 09 59 59.3 -1.8
AGG Agios Georgios 65.41 302 P P 09 59 59.3 -1.8
THL Klokotos Trika 65.42 302 P P 09 59 59.1 -2.1

DAG **Danmarks Havn 65.42 348**⇑*i*P **P 10 00 00.2 -0.4**
DAG pmax pmax
comp=Z,16nm,0.8s,mb5.1
DAG Danmarks Havn 65.42 348⇑*i*P **P 10 00 00.2 -0.4**
comp=Z,16nm,0.8s,mb5.1
COLD Coldfoot 65.43 25 *e*P **P 10 00 00.1 -0.7**
comp=Z,367nm,1.5s,mb6.2
CTA Charters Tower 65.45 138 LR LR 10 27 40.3
comp=Z,7µm,21.4s,MS5.8,baz=312,slow=35
CTAO Charters Tower 65.45 138 *e*P **P 09 59 60.0 -1.5**
comp=Z,240nm,1.6s,mb6.0
CTAO LR LR
comp=Z,7µm,22.0s,MS5.8
CTAO Charters Tower 65.45 138 *e*P **P 10 00 00.0 -1.5**
CTAO pmax pmax
comp=Z,240nm,1.6s,mb6.0
CTAO MLR MLR
comp=Z,7µm,22.0s,MS5.8
CTAO Charters Tower 65.45 138 P **P 10 00 00.8 -0.7**
comp=Z,3µmcomp=Z,101nm,2.3s,mb5.4
DSF Desfina 65.51 301 P **P 09 59 58.9 -2.9**
IVA Berane 65.61 306⇓*i*P **P 10 00 02.9 +0.6**
IVA Berane 65.61 306⇓*i*P **P 10 00 03.0 +0.7**
PVY Plav 65.66 306⇓*i*P **P 10 00 02.6 -0.1**
PVY Plav 65.66 306⇓*i*P **P 10 00 02.6 -0.1**
BCI Bajram Curri 65.69 306 *i* P **P 10 00 04.8 +1.9**
KARN Karanos 65.69 298 P **P 10 00 02.2 -0.8**
RUE Ruedersdorf 65.72 318 *e*P **P 10 00 02.6 -0.3**
comp=Z,332nm,1.2s,mb6.2
RUE *e*pP pP 10 00 05.9 -0.5
comp=Z,332nm,1.2s
RUE *e*S S 10 08 47.6 -1.2
RUE *e*L 10 30 14.4
comp=Z,22µm,18.8s
RUE Ruedersdorf 65.72 318 *e*P **P 10 00 04.0 +1.1**
comp=Z,185nm,1.1s,mb6.0
PLE Pljevlja 65.77 307⇓*i*P **P 10 00 03.5 +0.1**
PLE Pljevlja 65.77 307⇓*i*P **P 10 00 03.6 +0.2**
FURI Furi 65.77 265 *e*P **P 10 00 06.3 +2.5**
GVD Gavdhos 65.79 297 P **P 10 00 02.0 -1.7**
GVD Gavdhos 65.79 297 P **P 10 00 02.0 -1.7**
KALE Kalithea 65.80 301 P **P 10 00 00.6 -3.0**
GUR Goura 65.85 301 P **P 10 00 04.4 +0.5**
TRIZ Trizonia 65.85 301 P **P 10 00 01.4 -2.6**
SDPT Sand Point 65.86 39 *e*P **P 10 00 02.0 -1.8**
comp=Z,235nm,1.4s,mb6.0
KBN Korca 65.87 304 *i* P **P 10 00 03.3 -0.7**
PUK Puka 65.93 306 *i* P **P 10 00 03.5 -0.9**
EFP Efpalio 65.95 301 P **P 10 00 01.4 -3.2**
TREC Trest 65.95 314 *e*P **P 10 00 05.7 +1.3**
TREC *e*S S 10 08 55.0 +3.3
TREC MLR MLR
comp=Z,9µm,13.5s,MS6.2
TREC Trest 65.95 314 *e*P **P 10 00 05.7 +1.3**
TREC *e*S S 10 08 55.0 +3.3
TREC AMS AMS 10 30 00.0
comp=Z,9µm,13.5s
LAKA Lakka 65.97 301 P **P 10 00 03.4 -1.4**
PVCC Panska Ves 66.02 316 *e*P **P 10 00 06.1 +1.2**
PVCC MLR MLR
comp=Z,11µm,15.2s,MS6.2
PVCC Panska Ves 66.02 316 *e*P **P 10 00 06.1 +1.2**
PVCC AMS AMS 10 29 50.0
comp=Z,11µm,15.2s
VLX Vlachokerasia 66.03 300 P **P 10 00 02.6 -2.6**
UPM Unac-Piva 66.14 307⇓*i*P **P 10 00 04.8 -1.0**
UPM Unac-Piva 66.14 307⇓*i*P **P 10 00 04.9 -0.9**
TTG Podgorica 66.21 306⇓*i*P **P 10 00 06.5 +0.3**
TIR Tirane 66.23 305 P **P 10 00 05.7 -0.6**
TIR Tirane 66.23 305 P **P 10 00 05.7 -0.6**
NKY Niksic 66.24 307⇓*i*P **P 10 00 06.2 -0.2**
NKY Niksic 66.24 307⇓*i*P **P 10 00 06.3 -0.1**
PRU Pruhonice 66.25 315 *e*P **P 10 00 08.0 +1.7**
PRU *e*S S 10 08 56.4 +1.1
PRU MLR MLR
comp=Z,8µm,15.6s,MS6.0
PRU Pruhonice 66.25 315 *e*P **P 10 00 08.0 +1.7**
PRU *e*S S 10 08 56.4 +1.1
PRU *ex* x 10 13 02.9
PRU AMS AMS 10 30 10.0
comp=Z,8µm,15.6s
BRG Berggiesshubel 66.25 316 *e*P **P 10 00 06.0 -0.3**
comp=Z,151nm,1.1s,mb5.9
BRG *e*pP pP 10 00 09.1 -0.7
comp=Z,151nm,1.1s
BRG *e*S S 10 08 54.1 -1.2
BRG *e*L 10 30 18.8
comp=Z,15µm,18.6s
BRG Berggiesshubel 66.25 316 *e*P **P 10 00 06.7 +0.3**
comp=Z,151nm,1.1s,mb5.9
BRG PP PP 10 02 30.0 -1.8
BRG S S 10 08 55.0 -0.3
BRG SS SS 10 13 13.0 +2.2
BRG *e*PKPPKP 10 28 41.2
comp=Z,26nm,1.8s
BRG
comp=N,4µm,24.3s
BRG
comp=E,12µm,18.6s
BRG
comp=Z,16µm,17.7s
BRG Berggiesshubel 66.25 316 *e*P **P 10 00 06.7 +0.4**
BRG 10 02 30.0
BRG S S 10 08 55.0 -0.3
BRG SS SS 10 13 13.0 +2.2
BRG pmax pmax
comp=Z,90nm,1.1s,mb5.7
BRG MLR MLR
comp=N,2µm,17.3s,MS5.9
BRG MLR MLR
comp=E,7µm,18.6s,MS5.9
BRG MLR MLR
comp=Z,9µm,17.7s,MS6.0
CONA Conrad Observa 66.26 313⇓*i*pP pP 10 00 07.0 -2.9
comp=Z,674nm,2.7s,SNR=34
PRA Prague 66.28 315 P **P 10 00 09.0 +2.5**
PRA S S 10 08 57.0 +1.3
PRA AMS AMS 10 30 00.0
NWAO Narrogin (SRO) 66.31 169 *e*P **P 10 00 06.6 -0.1**
comp=Z,173nm,1.4s,mb5.9
NWAO LR LR
comp=Z,7µm,22.0s,MS5.8
NWAO Narrogin (SRO) 66.31 169 LR LR 10 31 16.6
comp=Z,6µm,21.7s,MS5.8,baz=337,slow=38
NWAO Narrogin (SRO) 66.31 169 *e*P **P 10 00 06.6 -0.2**
NWAO pmax pmax
comp=Z,173nm,1.4s
NWAO MLR MLR
comp=Z,7µm,22.0s
FOO Floro 66.39 329 *e*P **P 10 00 04.2 -2.9**
FOO *e*S S 10 08 54.3 -2.3
FOO AMS AMS 10 30 55.8
comp=Z,17µm,17.5s,MS6.3
ULC Ulcinj 66.40 306⇓*i*P **P 10 00 07.7 +0.2**
ITM Ithomi 66.44 300 P **P 10 00 05.5 -2.3**
ITM Ithomi 66.44 300 P **P 10 00 05.5 -2.3**
BUM Brajici-Budva 66.51 306⇓*i*P **P 10 00 08.1 0.0**
BUM Brajici-Budva 66.51 306⇓*i*P **P 10 00 08.2 0.0**
BRY Bratogost 66.51 307 *e*P **P 10 00 06.6 -1.5**
BPAW Bear Paw Mtn. 66.54 28 *e*P **P 10 00 07.2 -0.7**
comp=Z,198nm,1.0s,mb6.1
CHGN Chignik 66.55 37 *e*P **P 10 00 06.0 -2.1**
JMIC Jan Mayen 66.60 341 *e*P **P 10 00 07.7 -0.5**
JMIC *e*S S 10 09 02.1 +3.1
JMIC *e*SS SS 10 13 24.8 +10
JMIC AMS AMS 10 31 38.1
comp=Z,6µm,22.6s,MS5.8
PPLA Purkeypile 66.60 29 *e*P **P 10 00 08.2 -0.1**
comp=Z,834nm,1.4s,mb6.6
MUD Monsted U'grnd 66.61 323 *i* P **P 10 00 09.0 +0.5**
MUD *i* S S 10 08 58.5 -1.0
MUD pmax pmax
comp=Z,160nm,1.0s,mb6.0
MUD MLR MLR
comp=Z,6µm,18.0s,MS5.8
MUD Monsted U'grnd 66.61 323 *i* P **P 10 00 09.0 +0.5**
comp=Z,157nm,1.0s,mb6.0
MUD *i* S S 10 08 58.5 -1.0
MUD
comp=Z,6µm,18.0s
CLL Collm 66.62 317 *e*P **P 10 00 08.1 -0.6**
comp=Z,144nm,1.0s,mb6.0
CLL *e*pP pP 10 00 11.3 -0.9
comp=Z,144nm,1.0s
CLL *e*S S 10 08 57.9 -1.9
CLL *e*L 10 30 30.0
comp=Z,14µm,19.3s
CLL Collm 66.62 317⇑*i*P **P 10 00 08.6 -0.1**
comp=Z,144nm,1.0s,mb6.0
CLL *e*S S 10 08 57.0 -2.8
CLL LR LR
comp=Z,14µm,19.3s,MS6.2
CLL Collm 66.62 317⇑*i*P **P 10 00 08.6 -0.1**
CLL *e*S S 10 08 57.0 -2.8
CLL pmax pmax
comp=Z,144nm,1.0s,mb6.0
CLL MLR MLR
comp=Z,14µm,19.3s,MS6.2
CLL Collm 66.62 317⇑*i*P **P 10 00 08.6 -0.1**
comp=Z,144nm,1.0s,mb6.0
CLL *i* 10 00 22.5
CLL *e*PP PP 10 02 37.0 +2.0
CLL *e*S S 10 09 03.0 +3.2
CLL *e*S S 10 09 03.0 +3.2
CLL *e*S S 10 09 03.0 +3.2
CLL *e*PS 10 09 21.0
CLL *e*SKKSac SKKSac 10 10 05.0 -0.3
CLL *e*SS SS 10 13 24.0 +7.5
CLL *e*SSS 10 16 30.0
CLL LmV 10 30 00.0
comp=N,8µm,19.1s
CLL LmV 10 30 00.0
comp=E,8µm,19.3s
CLL LmV 10 30 00.0
comp=Z,14µm,19.3s
PYL PYLOS 66.69 300 P **P 10 00 06.5 -2.9**
LKD2 Lefkada island 66.70 302 P **P 10 00 07.2 -2.2**
HNR Honiara 66.71 119 *e*P **P 10 00 09.4 -0.3**
comp=Z,205nm,1.2s,mb6.0
HNR LR LR
comp=Z,5µm,20.0s,MS5.7
HNR Honiara 66.71 119 LR LR 10 27 32.4
comp=Z,4µm,21.8s,MS5.6,baz=134,slow=34
HNR Honiara 66.71 119 *e*P **P 10 00 09.4 -0.3**
HNR pmax pmax
comp=Z,205nm,1.2s,mb6.0
HNR MLR MLR
comp=Z,5µm,20.0s,MS5.7
SRN Sarande 66.72 303 *i* P **P 10 00 07.6 -1.9**
HCY Herceg Novi 66.72 306⇓*i*P **P 10 00 09.3 -0.2**
ARSA Arzberg 66.73 312⇑*i*pP pP 10 00 09.5 -3.5
comp=Z,291nm,2.3s,SNR=22
FORT Forrest 66.75 159 *e*P **P 10 00 08.1 -1.5**
comp=Z,125nm,0.7s,mb6.0
FORT Forrest 66.75 159 *e*P **P 10 00 08.5 -1.1**
comp=Z,27µm,1.6s
BER Bergen 66.78 328 *e*P **P 10 00 09.0 -0.6**
BER AMB AMB 10 00 10.7
comp=Z,186nm,3.4s
BER *e*S S 10 09 02.9 +1.5
BER *e*SS SS 10 13 21.9 +3.3
BER AMS AMS 10 31 09.0
comp=Z,13µm,20.4s,MS6.2
KFL Anninata 66.88 301 P **P 10 00 08.4 -2.2**
KEK Kerkira 66.93 303 P **P 10 00 07.0 -3.9**
KEK Kerkira 66.93 303 P **P 10 00 07.0 -3.9**
VLS Valsamata 67.00 301 P **P 10 00 08.8 -2.5**
VLS Valsamata 67.00 301 P **P 10 00 08.8 -2.5**
BSEG Bad Segeberg 67.05 320 *e*P **P 10 00 11.6 +0.2**
comp=Z,331nm,1.0s,mb6.3
BSEG *e*pP pP 10 00 14.8 -0.1
comp=Z,331nm,1.0s
BSEG *e*S S 10 09 04.7 -0.2
BSEG *e*L 10 30 54.9
comp=Z,10µm,18.6s
BSEG Bad Segeberg 67.05 320 *e*P **P 10 00 11.6 +0.2**
BSEG *e*pP pP 10 00 14.8 -0.1
BSEG *e*S S 10 09 04.7 -0.2
TRF Thorofare Moun 67.12 28 *e*P **P 10 00 10.5 -1.2**
comp=Z,67nm,0.9s,mb5.7
KHC Kasperske Hory 67.17 315 *e*P **P 10 00 12.0 -0.2**
comp=Z,113nm,1.4s,mb5.7
KHC Kasperske Hory 67.17 315 *e*P **P 10 00 13.0 +0.8**
KHC *e*S S 10 09 08.1 +1.7
KHC *e*SS SS 10 13 23.5 -1.5
KHC MLR MLR
comp=Z,9µm,15.1s,MS6.1
KHC Kasperske Hory 67.17 315 *e*P **P 10 00 13.0 +0.8**
KHC *e*S S 10 09 08.1 +1.7
KHC *e*SS SS 10 13 23.5 -1.5
KHC AMS AMS 10 30 00.0
comp=Z,9µm,15.1s
PERS Pernice 67.24 312 *i* P **P 10 00 12.6 -0.1**
PERS *e*S S 10 09 06.1 -1.3
PERS *e* 10 09 32.6
PERS *e* 10 10 09.8
MOA Molln 67.27 313⇑*i*pP pP 10 00 13.4 -3.0
comp=Z,596nm,2.5s,SNR=40
SOKA Soboth 67.27 312⇑*i*P **P 10 00 12.5 -0.4**
comp=Z,380nm,2.2s,mb6.0
TANN Tannenbergstha 67.30 316 *e*P **P 10 00 12.8 -0.2**
comp=Z,143nm,1.1s,mb5.9
TANN *e*pP pP 10 00 15.9 -0.6
comp=Z,143nm,1.1s
TANN *e*S S 10 09 06.8 -1.2
TANN *e*L 10 30 50.7
comp=Z,13µm,18.7s
COLA College 67.38 26 *e*P **P 10 00 12.5 -0.8**
comp=Z,525nm,1.4s,mb6.4
COLA LR LR
comp=Z,20µm,20.0s,MS6.3
COLA College 67.38 26 *e*P **P 10 00 12.5 -0.8**
COLA pmax pmax
comp=Z,525nm,1.4s,mb6.4
COLA MLR MLR
comp=Z,20µm,20.0s,MS6.3
WERD Werda 67.38 316 *e*P **P 10 00 13.2 -0.3**
comp=Z,149nm,1.2s,mb5.9
WERD *e*pP pP 10 00 16.3 -0.7
comp=Z,140nm,1.2s
NKC Novy Kostel 67.38 316 *e*P **P 10 00 14.6 +1.0**
NKC *e*S S 10 09 11.5 +2.5
NKC *e*SS SS 10 13 23.1 -5.2
NKC MLR MLR
comp=Z,15µm,16.4s,MS6.3
NKC Novy Kostel 67.38 316 *e*P **P 10 00 14.6 +1.0**
NKC *e*S S 10 09 11.5 +2.5
NKC *e*SS SS 10 13 23.1 -5.2
NKC AMS AMS 10 30 50.0
comp=Z,15µm,16.4s
GUNZ Gunzen 67.40 316 *e*P **P 10 00 13.5 -0.1**
comp=Z,181nm,1.1s,mb6.0
RSO Redoubt South 67.45 32 *e*P **P 10 00 13.7 -0.1**
MCK McKinley 67.52 28 *e*P **P 10 00 13.3 -0.8**
comp=Z,105nm,1.1s,mb5.8
MCK McKinley 67.52 28 *e*P **P 10 00 13.3 -0.9**
MCK pmax pmax
comp=Z,105nm,1.1s,mb5.8
WET Wettzell 67.58 315 *e*P **P 10 00 14.8 0.0**
comp=Z,167nm,1.3s,mb5.9
WET *e*S S 10 09 11.5 +0.1
WET *e*L 10 30 32.6
comp=Z,7µm,18.3s
WET Wettzell 67.58 315 *e*P **P 10 00 14.8 0.0**
WET *e*S S 10 09 11.5 +0.1
WET pmax pmax
comp=Z,167nm,1.3s,mb5.9
WET MLR MLR
comp=Z,7µm,18.3s,MS5.9
BOJS Bojanci 67.62 310 *i* P **P 10 00 15.5 +0.3**
BOJS *e*S S 10 09 13.2 +1.2
BOJS *e* 10 10 13.9
OBKA Obir 67.65 312⇑*i*pP pP 10 00 15.1 -3.7
comp=Z,455nm,2.4s,SNR=23
MOX Moxa 67.70 317 *e*P **P 10 00 15.4 -0.1**
comp=Z,538nm,2.3s,mb6.2
MOX *e*S S 10 09 15.0 +2.2
MOX *e*SS SS 10 13 31.0 -2.1
MOX
comp=Z,13µm,18.0s
MOX Moxa 67.70 317 *e*P **P 10 00 15.2 -0.3**
comp=Z,164nm,1.4s,mb5.9
MOX *e*pP pP 10 00 18.4 -0.6
MOX *e*S S 10 09 11.4 -1.4
MOX *e*L 10 31 12.3
comp=Z,14µm,19.3s
MOX Moxa 67.70 317 *e*P **P 10 00 15.4 -0.1**
MOX *e*S S 10 09 15.0 +2.2
MOX *e*SS SS 10 13 31.0 -2.1
MOX pmax pmax
comp=Z,538nm,2.3s,mb6.2
MOX MLR MLR
comp=Z,13µm,18.0s,MS6.2
ILAR Eielson Array 67.79 26 P **P 10 00 14.0 -1.9**
comp=Z,60nm,1.1s,mb5.5,baz=281,slow=5.3,SNR=131
ILAR PP PP 10 02 42.6 -2.2
comp=Z,15nm,1.1s,baz=289,slow=6.8,SNR=3.1
ILAR PKPPKP 10 28 34.7
comp=Z,1.6nm,1.0s,baz=78,slow=2.5,SNR=9.6
ILAR LR LR 10 32 12.2
comp=Z,25µm,18.8s,MS6.5,baz=111,slow=38
ILAR Eielson Array 67.79 26 P **P 10 00 14.0 -1.9**
ILAR 10 02 42.6
ILAR pmax pmax
comp=Z,60nm,1.1s
ILAR MLR MLR
comp=Z,25µm,18.8s
LJU Ljubljana 67.85 311 *e*P **P 10 00 16.5 -0.1**
LJU *i* pP 10 00 19.1 -1.0
LJU *i* S S 10 09 14.4 -0.4
LJU *e* 10 10 16.0
CLZ Clausthal 67.90 318 *e*P **P 10 00 16.8 0.0**
comp=Z,290nm,1.0s,mb6.3
CLZ *e*pP pP 10 00 20.1 -0.2
CLZ *e*S S 10 09 14.4 -0.8
CLZ *e*L 10 31 31.4
comp=Z,26µm,19.5s
CLZ Clausthal 67.90 318 *e*P **P 10 00 16.8 0.0**
CLZ *e*S S 10 09 14.4 -0.8
CLZ pmax pmax
comp=Z,290nm,1.0s,mb6.3
CLZ MLR MLR
comp=Z,26µm,19.5s,MS6.5
KBA Koelnbreinsper 68.16 313⇑*i*pP pP 10 00 18.9 -3.1
comp=Z,394nm,1.8s,SNR=7.3
MYKA Terra Mystica 68.17 312⇓*i*P **P 10 00 18.0 -0.5**
comp=Z,422nm,3.2s
JAVS Javornik 68.21 311 *i* P **P 10 00 18.4 -0.4**
JAVS *e*S S 10 09 16.5 -2.6
JAVS *e* 10 10 15.9
VOY Vojsko 68.26 311 *e*P **P 10 00 18.3 -0.9**
VOY *e* 10 00 30.4
VOY *e* 10 00 44.2
VOY *e* 10 01 20.4
VOY *e* 10 01 37.5
GRA1 Grafenberg Arr 68.33 316 *e*P **P 10 00 19.7 +0.2**
comp=Z,300nm,1.0s,mb6.3
GRA1 *e*S S 10 09 20.3 -0.1
GRA1 LR LR
comp=Z,14µm,18.4s,MS6.2
GRF Grafenberg Arr 68.33 316 *e*P **P 10 00 19.7 +0.2**
comp=Z,300nm,1.0s,mb6.3
GRF *e*S S 10 09 20.3 -0.1
GRF *e*L 10 31 50.0
comp=Z,14µm,18.4s
GRF Grafenberg Arr 68.33 316 *e*P **P 10 00 19.7 +0.2**
GRF *e*S S 10 09 20.3 -0.1
GRF pmax pmax
comp=Z,300nm,1.0s,mb6.3
GRF MLR MLR
comp=Z,14µm,18.4s,MS6.2
GRF Grafenberg Arr 68.33 316 *e*P **P 10 00 19.7 +0.2**
GRF *e*S S 10 09 20.3 -0.1
GRF pmax pmax
comp=Z,300nm,1.0s,mb6.3
GRF MLR MLR
comp=Z,14µm,18.4s,MS6.2
RC01 Rabbit Creek A 68.47 30 *e*P **P 10 00 19.8 -0.4**
comp=Z,34nm,0.3s,mb5.8
RC01 *e*P 10 00 19.9
PMR Palmer 68.48 30 *e*P **P 10 00 18.9 -1.4**
comp=Z,145nm,1.0s,mb6.0
PMR Palmer 68.48 30 *e*P **P 10 00 18.9 -1.3**
PMR pmax pmax
comp=Z,145nm,1.0s,mb6.0
TRI Trieste 68.48 311 *e*P **P 10 00 20.2 -0.3**
comp=Z,167nm,1.0s,mb6.0
TRI LR LR
comp=Z,4µm,19.0s,MS5.7
TRI Trieste 68.48 311 *e*P **P 10 00 20.2 -0.3**
TRI pmax pmax
comp=Z,167nm,1.0s,mb6.0
TRI MLR MLR
comp=Z,4µm,19.0s,MS5.7
OHAK Old Harbor 68.69 35 *e*P **P 10 00 20.7 -0.9**
comp=Z,779nm,1.7s,mb6.4
KDAK Kodiak Island 68.76 34 *e*P **P 10 00 21.4 -0.6**
comp=Z,734nm,1.6s,mb6.4
KDAK LR LR
comp=Z,20µm,22.0s,MS6.3
KDAK Kodiak Island 68.76 34 P **P 10 00 21.3 -0.8**
comp=Z,136nm,1.0s,mb5.8,baz=8.3,slow=4.9,SNR=18
KDAK LR LR 10 33 05.5
comp=Z,23µm,19.0s,MS6.4,baz=296,slow=38
KDAK Kodiak Island 68.76 34*ce*P **P 10 00 21.0 -1.1**
ABTA Abfaltersbach 68.82 313⇑*i*P **P 10 00 22.1 -0.6**
comp=Z,368nm,2.6s,mb5.8,SNR=28
FUR Furstenfeldbru 68.96 314 *e*P **P 10 00 23.8 +0.3**
comp=Z,631nm,1.2s,mb6.4
FUR *e*S S 10 09 27.0 -0.9
FUR *e*L 10 32 23.5
comp=Z,9µm,19.1s
FUR Furstenfeldbru 68.96 314 *e*P **P 10 00 23.8 +0.3**
FUR *e*S S 10 09 27.0 -0.9
FUR pmax pmax
comp=Z,631nm,1.2s,mb6.4
FUR MLR MLR
comp=Z,8µm,19.1s,MS6.0
WTTA Wattenberg 69.13 313⇑*i*P **P 10 00 24.2 -0.4**
comp=Z,936nm,2.6s,mb6.3,SNR=43
WATA Walderalm 69.14 313⇓*i*pP pP 10 00 24.3 -3.8
comp=Z,198nm,1.4s,SNR=16
IBBN Ibbenburen 69.15 319 *e*P **P 10 00 24.4 -0.2**
comp=Z,256nm,1.2s,mb6.0
IBBN *e*L 10 32 32.7
comp=Z,19µm,18.7s
TIP Timpagrande 69.29 304 PFAKE 10 00 40.0 +14
TIP LR LR
comp=Z,4µm,21.0s,MS5.6
MOTA Moosalm 69.42 314⇓*i*P **P 10 00 25.9 -0.5**
comp=Z,162nm,1.1s,mb5.9,SNR=34
WIT Witteveen 69.51 320 *e*P **P 10 00 28.1 +1.3**
comp=Z,1µm,1.5s,mb6.6
RETA Reutte 69.57 314⇓*i*P **P 10 00 26.7 -0.6**
comp=Z,430nm,2.3s,mb6.0,SNR=32
CUC Castrocucco 69.59 305 *e*P **P 10 00 27.3 -0.3**
comp=Z,86nm,0.8s,mb5.7
CUC LR LR
comp=Z,6µm,22.0s,MS5.8
TNS Taunus Mts 69.70 317 *e*P **P 10 00 27.8 -0.3**
comp=Z,166nm,1.0s,mb5.9
TNS *e*pP pP 10 00 31.0 -0.6
TNS *e*S S 10 09 36.5 -0.1
TNS *e*L 10 32 24.6
comp=Z,24µm,19.0s
TNS Taunus Mts 69.70 317 *e*P **P 10 00 27.8 -0.3**
TNS *e*S S 10 09 36.5 -0.1
TNS pmax pmax
comp=Z,166nm,1.0s,mb5.9
TNS MLR MLR
comp=Z,24µm,19.0s,MS6.5
LRW Lerwick 69.76 329 *e*P **P 10 00 27.5 -0.7**
LRW AMb AMB 10 00 30.1
comp=Z,178nm,2.5s,mb5.6
LRW AMS AMS 10 33 09.7
comp=Z,10µm,17.9s,MS6.1
FETA Feichten 69.80 313⇓*i*pP pP 10 00 28.5 -3.7
comp=Z,646nm,2.4s,SNR=104
BUG Bochum--Univer 69.81 319 *e*P **P 10 00 28.6 -0.1**
comp=Z,231nm,1.1s,mb6.0
BUG *e*S S 10 09 37.2 -0.6
BUG *e*L 10 32 51.6
comp=Z,26µm,19.4s
WTSB Winterswijk 69.83 319⇑*i*P **P 10 00 29.3 +0.5**
comp=Z,274nm,2.6s,mb5.7
EGAK Eagle 69.86 25 PFAKE 10 00 40.0 +11
EGAK LR LR
comp=Z,24µm,19.0s,MS6.5
WAL1 Walls 69.89 330⇑*e*P **P 10 00 27.2 -1.8**
STU Stuttgart 69.93 316 *e*P **P 10 00 29.1 -0.4**
comp=Z,184nm,1.1s,mb5.9
STU *e*S S 10 09 37.7 -1.6
STU *e*L 10 32 47.9
comp=Z,11µm,18.0s
STU Stuttgart 69.93 316 *e*P **P 10 00 30.0 +0.5**

comp=Z,167nm,1.1s,mb5.9
STU Stuttgart 69.93 316 *e*P **P 10 00 30.0 +0.5**
STU pmax pmax
comp=Z,167nm,1.1s,mb5.9
INK Inuvik 70.16 20 PP PP 10 03 01.7 -3.5
comp=Z,12nm,1.0s,baz=260,slow=11,SNR=2.4
AQU L'Aquila 70.18 308 *e*P **P 10 00 31.5 +0.4**
comp=Z,302nm,1.2s,mb6.1
AQU LR LR
comp=Z,8µm,22.0s,MS5.9
AQU L'Aquila 70.18 308⇓ *i*P **P 10 00 32.5 +1.4**
DAVA Damuels 70.19 314⇑ *i*P **P 10 00 30.4 -0.7**
comp=Z,583nm,3.6s,SNR=24
CEL Celeste 70.30 303 *e*P **P 10 00 31.7 -0.3**
comp=Z,267nm,1.0s,mb6.1
CEL LR LR
comp=Z,4µm,21.0s,MS5.6
TARA Tarawa 70.37 101 PFAKE 10 00 40.0 +7.3
TARA LR LR
comp=Z,6.0nm,21.0s
SCO Scoresbysund 70.38 344⇑ *i*P **P 10 00 32.1 +0.2**
SCO pmax pmax
comp=Z,22nm,0.8s,mb5.1
SCO Scoresbysund 70.38 344⇑ *i*P **P 10 00 32.1 +0.2**
comp=Z,22nm,0.8s,mb5.1
SPAK Spaichingen-Ko 70.48 315 *e*P **P 10 00 33.2 +0.4**
BFO Black Forest 70.64 315 *e*P **P 10 00 33.1 -0.7**
comp=Z,178nm,1.3s,mb5.8
BFO *e*pP pP 10 00 36.3 -1.1
BFO *e*S S 10 09 46.2 -1.5
BFO *e*L 10 33 18.3
comp=Z,8µm,19.3s
BFO Black Forest 70.64 315 *e*P **P 10 00 33.1 -0.7**
comp=Z,178nm,1.3s,mb5.8
BFO *e*pP pP 10 00 36.3 -1.1
BFO *e*S S 10 09 46.2 -1.5
LANF Langenberg 70.65 316 *e*P **P 10 00 34.1 +0.2**
RUP Ruppelstein 70.74 317 *e*P **P 10 00 34.8 +0.4**
HGN Heimansgroeve 70.87 318⇑ *i*P **P 10 00 35.3 +0.1**
comp=Z,154nm,3.0s,mb5.4
TUE Stuetta 70.89 313 *e*P **P 10 00 34.7 -0.7**
comp=Z,104nm,0.8s,mb5.8
TUE LR LR
comp=Z,10µm,19.0s,MS6.1
MEM Membach 70.91 318 P **P 10 00 36.2 +0.8**
FELD Feldberg im Sc 71.05 315 *e*P **P 10 00 36.5 +0.2**
SOFL Sornfelli, Far 71.08 333 AMS AMS 10 34 43.3
comp=Z,10µm,16.8s,MS6.2
LIBD Limburg 71.16 316 *e*P **P 10 00 37.1 +0.1**
CDF Champ du Feu 71.22 316 *e*P **P 10 00 36.6 -0.8**
comp=Z,271nm,1.0s,mb5.8
CDF Champ du Feu 71.22 316 *e*P **P 10 00 36.6 -0.8**
comp=Z,136nm,1.0s,mb5.8
CDF Champ du Feu 71.22 316 *e*P **P 10 00 36.6 -0.8**
CDF pmax pmax
comp=Z,136nm,1.0s,mb5.8
WLF Walferdange 71.28 317 P **P 10 00 38.3 +0.6**
comp=Z,304nm,1.5s,mb6.0
WLF Walferdange 71.28 317 *e*P **P 10 00 38.0 +0.3**
comp=Z,458nm,1.1s,mb6.3
WLF *e*S S 10 09 54.8 -0.2
WLF *e*L 10 33 23.8
comp=Z,15µm,18.7s
WLF Walferdange 71.28 317 *e*P **P 10 00 38.2 +0.6**
comp=Z,341nm,1.0s,mb6.2
WLF LR LR
comp=Z,12µm,20.0s,MS6.1
WLF Walferdange 71.28 317 *e*P **P 10 00 38.2 +0.5**
WLF pmax pmax
comp=Z,341nm,1.0s,mb6.2
WLF MLR MLR
comp=Z,12µm,20.0s,MS6.1
VLC Villacollemand 71.32 311 *e*P **P 10 00 38.8 +0.8**
comp=Z,236nm,1.3s,mb6.0
ECH Echery 71.39 316 *e*P **P 10 00 38.4 0.0**
ECH Echery 71.39 316 *e*P **P 10 00 37.3 -1.1**
comp=Z,92nm,1.1s,mb5.6
ECH LR LR
comp=Z,8µm,19.0s,MS6.0
ECH Echery 71.39 316 *e*P **P 10 00 37.3 -1.1**
ECH pmax pmax
comp=Z,92nm,1.1s,mb5.6
ECH MLR MLR
comp=Z,8µm,19.0s,MS6.0
BCLA Clavier 71.39 318 P **P 10 00 39.2 +0.8**
comp=Z,94nm,1.6s,mb5.5
BBS Basel-Blauen 71.54 315 *e*P **P 10 00 39.1 -0.2**
MOF Molkenrain 71.58 315 *e*P **P 10 00 39.5 0.0**
RER Riviere de l'E 71.68 229 PFAKE 10 00 50.0 +10
RER LR LR
comp=Z,5µm,20.0s,MS5.8
VAE Valguarnera 71.70 303 LR LR 10 36 49.8
comp=Z,4µm,18.4s,MS5.8,baz=13,slow=40
ORE Reay 71.73 329 *e*P **P 10 00 40.1 -0.1**
HINF Hinteralfeld 71.76 315 *e*P **P 10 00 39.5 -1.1**
comp=Z,230nm,1.1s,mb5.7
HINF Hinteralfeld 71.76 315 *e*P **P 10 00 39.5 -1.1**
comp=Z,115nm,1.1s,mb5.7
HINF Hinteralfeld 71.76 315 *e*P **P 10 00 39.5 -1.1**
HINF pmax pmax
comp=Z,115nm,1.1s,mb5.7
GIVF Givet 71.81 318 *e*P **P 10 00 40.4 -0.5**
comp=Z,256nm,1.1s,mb5.8
GIVF Givet 71.81 318 *e*P **P 10 00 40.4 -0.5**
comp=Z,128nm,1.1s,mb5.8
GIVF Givet 71.81 318 *e*P **P 10 00 40.4 -0.5**
GIVF pmax pmax
comp=Z,128nm,1.1s,mb5.8
SNF Seneffe 71.92 319 P **P 10 00 42.2 +0.7**
RES Resolute Bay 71.93 6 *e*P **P 10 00 41.4 +0.2**
comp=Z,182nm,1.1s,mb5.9
RES Resolute Bay 71.93 6 LR LR 10 31 16.4
comp=Z,6µm,21.7s,MS5.8,baz=188,slow=35
RES Resolute Bay 71.93 6 *e*P **P 10 00 41.4 +0.2**
RES pmax pmax
comp=Z,182nm,1.1s,mb5.9
DOU Dourbes 71.95 318 P **P 10 00 42.5 +0.8**
HAU Haudompre 71.96 316 *e*P **P 10 00 40.8 -1.0**
comp=Z,245nm,1.4s,mb5.7
HAU *e*MLR MLR
comp=Z,13µm,18.8s,MS5.9
HAU Haudompre 71.96 316 *e*P **P 10 00 40.8 -1.0**
comp=Z,122nm,1.4s,mb5.6
HAU LR LR
comp=Z,13µm,18.8s,MS6.2
HAU Haudompre 71.96 316 *e*P **P 10 00 40.8 -1.0**
HAU pmax pmax
comp=Z,122nm,1.4s,mb5.6
HAU MLR MLR
comp=Z,13µm,18.8s,MS6.2
SUMG Summit 72.00 349 *e*P **P 10 00 41.3 -0.3**
comp=Z,240nm,1.4s,mb5.9
SUMG Summit 72.00 349⇑ *i*P **P 10 00 42.3 +0.7**
comp=Z,46nm,1.1s,mb5.3
LOMF Lomont 72.00 315 *e*P **P 10 00 42.1 0.0**
MCD Coleburn Disti 72.03 328⇑ *e*P **P 10 00 41.2 -0.9**
MME1 Meikle Cairn 72.05 327⇑ *e*P **P 10 00 41.0 -1.1**
THEF They Montfort 72.07 316 *e*P **P 10 00 42.5 0.0**
BAIF Baives 72.18 318 *e*P **P 10 00 42.6 -0.5**
comp=Z,287nm,1.2s,mb5.8
BAIF Baives 72.18 318 *e*P **P 10 00 42.6 -0.5**
comp=Z,144nm,1.2s,mb5.8
BAIF Baives 72.18 318 *e*P **P 10 00 42.6 -0.5**
BAIF pmax pmax
comp=Z,144nm,1.2s,mb5.8
MVH1 Achvaich 72.26 328⇑ *e*P **P 10 00 42.9 -0.6**
EIDS Eidsvoid 72.33 137 *e*P **P 10 00 42.7 -1.6**
comp=Z,36nm,1.5s,mb5.1
WDD Wield Dalam 72.37 302 *e*P **P 10 00 44.6 +0.1**
comp=Z,211nm,0.8s,mb6.1
WDD LR LR
comp=Z,2µm,20.0s,MS5.4
KMBO Kilima Mbogo 72.45 257 *e*P **P 10 00 44.8 -0.5**
comp=Z,128nm,1.0s,mb5.8
KMBO Kilima Mbogo 72.45 257 P **P 10 00 45.9 +0.6**
comp=Z,98nm,0.9s,mb5.7,baz=51,slow=11,SNR=62
KMBO LR LR 10 33 53.5
comp=Z,5µm,19.7s,MS5.8,baz=88,slow=37
KMBO Kilima Mbogo 72.45 257 *ce*P **P 10 00 45.9 +0.6**
KMBO pmax pmax
comp=Z,98nm,0.9s
KMBO Kilima Mbogo 72.45 257 P **P 10 00 46.3 +1.0**
SNR=37
RSC Scourie 72.45 329⇑ *e*P **P 10 00 44.0 -0.6**
MEZF Maizieres J'vi 72.48 317 *e*P **P 10 00 44.3 -0.6**
comp=Z,384nm,1.3s,mb5.9
MEZF Maizieres J'vi 72.48 317 *e*P **P 10 00 44.3 -0.6**
comp=Z,384nm,1.3s,mb6.2
MDO Dochfour 72.61 328⇑ *e*P **P 10 00 45.0 -0.5**
ESY Stoneypath 72.65 326⇑ *e*P **P 10 00 45.5 -0.3**
CABF La Chapelle 72.80 315 *e*P **P 10 00 46.0 -0.9**
comp=Z,206nm,1.1s,mb5.7
CABF La Chapelle 72.80 315 *e*P **P 10 00 46.0 -0.9**
comp=Z,103nm,1.1s,mb5.7
CABF La Chapelle 72.80 315 *e*P **P 10 00 46.0 -0.9**
CABF pmax pmax
comp=Z,103nm,1.1s,mb5.7
STKA Stephens Creek 72.81 148 *e*P **P 10 00 45.4 -1.6**
comp=Z,51nm,1.6s,mb5.2
STKA Stephens Creek 72.81 148 P **P 10 00 45.6 -1.3**
comp=Z,33nm,0.8s,mb5.3,baz=332,slow=6.0,SNR=36
STKA LR LR 10 34 51.1
comp=Z,3µm,20.3s,MS5.6,baz=323,slow=38
EDI Edinburgh 72.91 326 *e*P **P 10 00 46.8 -0.6**
EDI AMb AMB 10 00 50.4
comp=Z,144nm,1.5s,mb5.7
EDI AMS AMS 10 38 22.5
comp=Z,5µm,13.6s,MS6.0
EBL Broad Law 72.93 326⇑ *e*P **P 10 00 47.5 +0.1**
LPG La Plagne 72.95 313 *e*P **P 10 00 47.8 0.0**
comp=Z,606nm,0.9s,mb6.2
LPG La Plagne 72.95 313 *e*P **P 10 00 47.8 0.0**
comp=Z,303nm,0.9s,mb6.2
LPG La Plagne 72.95 313 *e*P **P 10 00 47.8 0.0**
LPG pmax pmax
comp=Z,303nm,0.9s,mb6.2
LPL La Plagne 72.95 313 *e*P **P 10 00 47.7 -0.1**
comp=Z,584nm,1.0s,mb6.2
LPL La Plagne 72.95 313 *e*P **P 10 00 47.7 -0.1**
comp=Z,292nm,1.0s,mb6.2
LPL La Plagne 72.95 313 *e*P **P 10 00 47.7 -0.1**
LPL pmax pmax
comp=Z,292nm,1.0s,mb6.2
PGF Pioggiola 72.97 310 *e*P **P 10 00 47.6 -0.4**
comp=Z,796nm,1.3s,mb6.2
PGF Pioggiola 72.97 310 *e*P **P 10 00 47.6 -0.4**
comp=Z,398nm,1.3s,mb6.2
PGF Pioggiola 72.97 310 *e*P **P 10 00 47.6 -0.4**
PGF pmax pmax
comp=Z,398nm,1.3s,mb6.2
KAC Achnashellach 72.99 328⇑ *e*P **P 10 00 46.7 -1.1**
RRR Rubha Reidh 73.01 329⇑ *e*P **P 10 00 47.9 0.0**
MENF Mencas 73.06 320 *e*P **P 10 00 48.9 +0.6**
EAU Auchinoon 73.08 326⇑ *e*P **P 10 00 48.1 -0.3**
SAOF Saorge 73.19 312 *e*P **P 10 00 49.4 +0.2**
HPK Haverah Park 73.23 324 AMS AMS 10 36 56.2
comp=Z,9µm,14.9s,MS6.2
KPL Plockton 73.24 328 *e*P **P 10 00 49.3 0.0**
KPL AMb AMB 10 00 52.5
comp=Z,119nm,1.6s,mb5.6
KPL AMS AMS 10 35 24.2
comp=Z,12µm,16.0s,MS6.3
ESK Eskdalemuir 73.26 326 *e*P **P 10 00 48.4 -1.0**
ESK AMb AMB 10 00 49.9
comp=Z,140nm,3.1s
ESK AMS AMS 10 37 47.4
comp=Z,6µm,17.4s,MS5.9
ESK Eskdalemuir 73.26 326 *e*P **P 10 00 49.8 +0.4**
comp=Z,140nm,1.3s,mb5.7
ESK LR LR
comp=Z,7µm,20.0s,MS5.9
ESK Eskdalemuir 73.26 326 *i* P **P 10 00 50.1 +0.7**
AUTN L'Aution 73.27 312 *e*P **P 10 00 51.0 +1.3**
EAB Aberfoyle 73.30 327⇑ *e*P **P 10 00 49.4 -0.3**
MBDF Montbardon 73.32 313 *e*P **P 10 00 48.8 -1.2**
comp=Z,188nm,1.0s,mb5.7
MBDF Montbardon 73.32 313 *e*P **P 10 00 48.8 -1.2**
comp=Z,94nm,1.0s,mb5.7
MBDF Montbardon 73.32 313 *e*P **P 10 00 48.8 -1.2**
MBDF pmax pmax
comp=Z,94nm,1.0s,mb5.7
SBF Sospel 73.33 312 *e*P **P 10 00 49.2 -0.8**
comp=Z,516nm,1.0s,mb6.1
SBF Sospel 73.33 312 *e*P **P 10 00 49.2 -0.8**
comp=Z,258nm,1.0s,mb6.1
SBF Sospel 73.33 312 *e*P **P 10 00 49.2 -0.8**
SBF pmax pmax
comp=Z,258nm,1.0s,mb6.1
RRH Rhenigidale 73.36 329⇑ *e*P **P 10 00 49.9 -0.1**
LUCF Luceram 73.37 312 *e*P **P 10 00 50.6 +0.3**
TOUF Mont Tournerai 73.37 312 *e*P **P 10 00 50.8 +0.5**
SURF Saint Ours 73.41 312 *e*P **P 10 00 50.9 +0.4**
REVF Revere 73.43 312 *e*P **P 10 00 51.5 +0.8**
GDM Grand'Maison 73.48 313 *e*P **P 10 00 51.4 +0.5**
MVIF Mont Vial 73.49 312 *e*P **P 10 00 51.2 +0.2**
KAR1 Arisaig 73.56 328⇑ *e*P **P 10 00 51.0 -0.2**
KBI1 Birley Grange 73.57 323 *e*P **P 10 00 50.0 -1.3**
PGBU Glenifferbraes 73.58 326 *e*P **P 10 00 51.5 +0.2**
PGBU AMb AMB 10 00 54.7
comp=Z,228nm,1.3s,mb5.9
PGBU AMS AMS 10 38 23.0
comp=Z,6µm,14.7s,MS6.0
KSK Scoval 73.63 329 *e*P **P 10 00 51.9 +0.3**
CALN Calern 73.73 312 *e*P **P 10 00 52.5 +0.1**
CWF Charnwood Fore 73.74 323 *e*P **P 10 00 50.2 -2.1**
CWF AMb AMB 10 00 52.3
comp=Z,93nm,3.1s
CWF AMS AMS 10 35 56.5
comp=Z,7µm,17.4s,MS6.0
ORIF Oris-en-Rattie 73.77 313 *e*P **P 10 00 52.0 -0.6**
comp=Z,320nm,0.9s,mb6.0
ORIF *e*MLR MLR
comp=Z,9µm,21.8s,MS5.7
ORIF Oris-en-Rattie 73.77 313 *e*P **P 10 00 52.0 -0.6**
comp=Z,160nm,0.9s,mb6.0
ORIF Oris-en-Rattie 73.77 313 *e*P **P 10 00 52.0 -0.6**
ORIF pmax pmax
comp=Z,160nm,0.9s,mb6.0
LOR Lormes 73.79 316 *e*P **P 10 00 51.3 -1.4**
comp=Z,248nm,1.4s,mb5.6,baz=63
LOR *e*MLR MLR
comp=Z,10µm,20.2s,MS5.8
LOR Lormes 73.79 316 *e*P **P 10 00 51.3 -1.4**
comp=Z,124nm,1.4s,mb5.7
LOR LR LR
comp=Z,10µm,20.3s,MS6.1
LOR Lormes 73.79 316 *e*P **P 10 00 51.3 -1.4**
LOR pmax pmax
comp=Z,124nm,1.4s,mb5.7
LOR MLR MLR
comp=Z,10µm,20.3s,MS6.1
GCD Castle Douglas 73.86 325⇑ *e*P **P 10 00 51.9 -1.0**
FRF La Foret Royal 73.97 312 *e*P **P 10 00 52.8 -1.0**
comp=Z,233nm,1.2s,mb5.7
FRF La Foret Royal 73.97 312 *e*P **P 10 00 52.8 -1.0**
comp=Z,117nm,1.2s,mb5.7
FRF La Foret Royal 73.97 312 *e*P **P 10 00 52.8 -1.0**
FRF pmax pmax
comp=Z,117nm,1.2s,mb5.7
SSF Saint Saulge 74.10 316 *e*P **P 10 00 53.4 -1.1**
comp=Z,165nm,1.2s,mb5.5
SSF Saint Saulge 74.10 316 *e*P **P 10 00 53.4 -1.1**
comp=Z,82nm,1.2s,mb5.5
SSF Saint Saulge 74.10 316 *e*P **P 10 00 53.4 -1.1**
SSF pmax pmax
comp=Z,82nm,1.2s,mb5.5
SMF Signal de Mont 74.12 315 *e*P **P 10 00 53.6 -1.0**
comp=Z,398nm,1.1s,mb6.0
SMF Signal de Mont 74.12 315 *e*P **P 10 00 53.6 -1.0**
comp=Z,199nm,1.1s,mb6.0
SMF Signal de Mont 74.12 315 *e*P **P 10 00 53.6 -1.0**
SMF pmax pmax
comp=Z,199nm,1.1s,mb6.0
LMR La Mourre 74.17 311 *e*P **P 10 00 54.2 -0.8**
comp=Z,446nm,1.3s,mb5.9
LMR La Mourre 74.17 311 *e*P **P 10 00 54.2 -0.8**
comp=Z,223nm,1.3s,mb5.9
LMR La Mourre 74.17 311 *e*P **P 10 00 54.2 -0.8**
LMR pmax pmax
comp=Z,223nm,1.3s,mb5.9
VSL Villasalto 74.21 307 *e*P **P 10 00 55.9 +0.6**
comp=Z,101nm,1.3s,mb5.6
VSL LR LR
comp=Z,3µm,19.0s,MS5.6
OCF Saint Nazaire 74.30 313 *e*P **P 10 00 56.2 +0.5**
OG26 St.-Nazaire-De 74.30 313 *e*P **P 10 00 56.2 +0.5**
BORG Borgarnes 74.30 339 P **P 10 00 57.2 +1.9**
comp=Z,537nm,1.0s,mb6.4,SNR=6.2
BORG Borgarnes 74.30 339 *e*P **P 10 00 57.7 +2.3**
comp=Z,124nm,1.1s,mb5.8
BORG LR LR
comp=Z,3µm,20.0s,MS5.6
BORG Borgarnes 74.30 339 *e*P **P 10 00 57.7 +2.4**
BORG pmax pmax
comp=Z,124nm,1.1s
BORG MLR MLR
comp=Z,3µm,20.0s
AVF Avril sur Loir 74.33 316 *e*P **P 10 00 54.8 -1.1**
comp=Z,303nm,1.1s,mb5.9
AVF Avril sur Loir 74.33 316 *e*P **P 10 00 54.8 -1.1**
comp=Z,152nm,1.1s,mb5.8
AVF Avril sur Loir 74.33 316 *e*P **P 10 00 54.8 -1.1**
AVF pmax pmax
comp=Z,152nm,1.1s,mb5.8
SSB Saint Sauveur 74.40 314 *e*P **P 10 00 56.4 +0.1**
SSB Saint Sauveur 74.40 314 *e*P **P 10 00 56.3 -0.1**
comp=Z,115nm,1.4s,mb5.6
SSB LR LR
comp=Z,4µm,21.0s,MS5.7
SSB Saint Sauveur 74.40 314 *e*P **P 10 00 56.3 0.0**
SSB pmax pmax
comp=Z,115nm,1.4s,mb5.6
SSB MLR MLR
comp=Z,4µm,21.0s,MS5.7
SMRF Simiane la Rot 74.44 312 *e*P **P 10 00 56.0 -0.5**
comp=Z,227nm,1.4s,mb5.6
SMRF Simiane la Rot 74.44 312 *e*P **P 10 00 56.0 -0.5**
comp=Z,227nm,1.4s,mb5.9
GIM North Isle of 74.44 325⇑ *e*P **P 10 00 56.0 -0.3**
WOL Wolverton 74.47 321 AMS AMS 10 36 09.1
comp=Z,7µm,17.0s,MS6.0
HYF Humbligny 74.50 316 *e*P **P 10 00 56.3 -0.5**
VIVF Saint-Julien-l 74.54 314 *e*P **P 10 00 56.3 -0.8**
comp=Z,263nm,1.1s,mb5.8
VIVF Saint-Julien-l 74.54 314 *e*P **P 10 00 56.3 -0.8**
comp=Z,132nm,1.1s,mb5.8
VIVF Saint-Julien-l 74.54 314 *e*P **P 10 00 56.3 -0.8**
VIVF pmax pmax
comp=Z,132nm,1.1s,mb5.8
PLDF La Plantade 74.60 315 *e*P **P 10 00 57.7 +0.2**
SWN1 Swindon 74.66 322 AMS AMS 10 37 06.3
comp=Z,7µm,12.9s,MS6.1
BGF Bois d'Agland 74.75 316 *e*P **P 10 00 57.3 -1.0**
comp=Z,151nm,1.3s,mb5.5
BGF Bois d'Agland 74.75 316 *e*P **P 10 00 57.3 -1.0**
comp=Z,75nm,1.3s,mb5.5
BGF Bois d'Agland 74.75 316 *e*P **P 10 00 57.3 -1.0**
BGF pmax pmax
comp=Z,75nm,1.3s,mb5.5
WPM1 Penmaenmawr 74.75 324⇑ *e*P **P 10 00 57.0 -1.2**
AGO Saint Agoulin 74.85 315 *e*P **P 10 00 59.2 +0.3**
WLF1 Llynfaes 74.98 324 AMS AMS 10 38 26.0
comp=Z,19µm,14.6s,MS6.5
MCH1 Michaelchurch 75.01 323 *e*P **P 10 00 57.9 -1.8**
MCH1 AMb AMB 10 01 02.5
comp=Z,122nm,1.5s,mb5.6
MCH1 AMS AMS 10 36 48.5
comp=Z,8µm,17.8s,MS6.1
PYM Petit Puy Mans 75.08 315 *e*P **P 10 01 00.5 +0.3**
HTR Trewern Hill 75.10 323⇑ *e*P **P 10 00 59.0 -1.3**
HGH Gray Hill 75.11 322 *e*P **P 10 00 59.8 -0.5**
GMM Mts of Mourne 75.18 326⇑ *e*P **P 10 01 00.4 -0.3**
LBL Lubilhac 75.21 314 *e*P **P 10 01 02.0 +1.0**
TCF Toulx Ste Croi 75.27 316 *e*P **P 10 01 00.6 -0.7**
comp=Z,284nm,1.2s,mb5.8
TCF Toulx Ste Croi 75.27 316 *e*P **P 10 01 00.6 -0.7**
comp=Z,142nm,1.2s,mb5.8
TCF Toulx Ste Croi 75.27 316 *e*P **P 10 01 00.6 -0.7**
TCF pmax pmax
comp=Z,142nm,1.2s,mb5.8
LDF La Druitiere 75.36 319 *e*P **P 10 01 00.8 -1.0**
comp=Z,103nm,1.1s,mb5.4
LDF La Druitiere 75.36 319 *e*P **P 10 01 00.8 -1.0**
comp=Z,52nm,1.1s,mb5.4
LDF La Druitiere 75.36 319 *e*P **P 10 01 00.8 -1.0**
LDF pmax pmax
comp=Z,52nm,1.1s,mb5.4
LASF Ste Croix 75.44 313 *e*P **P 10 01 01.9 -0.5**
comp=Z,318nm,1.1s,mb5.8
FLN La Foliniere 75.47 319 *e*P **P 10 01 01.4 -1.0**
comp=Z,220nm,1.2s,mb5.7,baz=59
FLN *e*MLR MLR
comp=Z,20µm,19.8s,MS6.1
FLN La Foliniere 75.47 319 *e*P **P 10 01 01.4 -1.0**
comp=Z,110nm,1.2s,mb5.7
FLN LR LR
comp=Z,20µm,19.8s,MS6.4
FLN La Foliniere 75.47 319 *e*P **P 10 01 01.4 -1.0**
FLN pmax pmax
comp=Z,110nm,1.2s,mb5.7
FLN MLR MLR
comp=Z,20µm,19.8s,MS6.4
ABPO Ambohimpanom 75.86 236 *e*P **P 10 01 04.8 -0.2**
comp=Z,98nm,1.3s,mb5.6
ABPO LR LR
comp=Z,4µm,19.0s,MS5.7
ABPO Ambohimpanom 75.86 236 *e*P **P 10 01 04.8 -0.2**
ABPO pmax pmax
comp=Z,98nm,1.3s,mb5.6
ABPO MLR MLR
comp=Z,4µm,19.0s,MS5.7
GRR Gorron 75.89 319 *e*P **P 10 01 03.9 -0.9**
comp=Z,252nm,1.1s,mb5.8
GRR Gorron 75.89 319 *e*P **P 10 01 03.9 -0.9**
comp=Z,126nm,1.1s,mb5.8
GRR Gorron 75.89 319 *e*P **P 10 01 03.9 -0.9**
GRR pmax pmax
comp=Z,126nm,1.1s,mb5.8
CAF Calviac 76.08 315 *e*P **P 10 01 05.7 -0.3**
comp=Z,181nm,1.2s,mb5.6
CAF Calviac 76.08 315 *e*P **P 10 01 05.7 -0.3**
comp=Z,91nm,1.2s,mb5.6
CAF Calviac 76.08 315 *e*P **P 10 01 05.7 -0.3**
CAF pmax pmax
comp=Z,91nm,1.2s,mb5.6
KEST Kesra 76.11 304 P **P 10 01 07.1 +0.7**
comp=Z,50nm,1.2s,mb5.3
JSA Saint Aubin 76.16 320 AMS AMS 10 37 04.4
comp=Z,12µm,18.1s,MS6.2
RJF Les Rejaudoux 76.21 315 *e*P **P 10 01 06.4 -0.3**
comp=Z,406nm,1.5s,mb5.8
RJF *e*MLR MLR
comp=Z,8µm,18.5s,MS5.8
RJF Les Rejaudoux 76.21 315 *e*P **P 10 01 06.4 -0.3**
comp=Z,203nm,1.5s,mb5.8
RJF LR LR
comp=Z,8µm,18.5s,MS6.1
RJF Les Rejaudoux 76.21 315 *e*P **P 10 01 06.4 -0.3**
RJF pmax pmax
comp=Z,203nm,1.5s,mb5.8
RJF MLR MLR
comp=Z,8µm,18.5s,MS6.1
HTL Hartland 76.35 322 P **P 10 01 06.9 -0.5**
HTL AMb AMB 10 01 09.2
comp=Z,127nm,2.8s,mb5.4
HTL AMS AMS 10 37 30.7
comp=Z,7µm,17.0s
HTL Hartland 76.35 322 *e*P **P 10 01 06.9 -0.5**
HTL AMb AMB 10 01 09.2
comp=Z,127nm,2.8s,mb5.4
HTL AMS AMS 10 37 30.7
comp=Z,7µm,17.0s,MS6.1
DYA Yadsworthy 76.38 322 P **P 10 01 06.3 -1.3**
DYA AMb AMB 10 01 07.5
comp=Z,93nm,3.7s
DYA Yadsworthy 76.38 322 *e*P **P 10 01 06.3 -1.3**
DYA AMb AMB 10 01 07.5
comp=Z,93nm,3.7s
MFF Saint Martin d 76.47 317 *e*P **P 10 01 07.6 -0.6**
comp=Z,357nm,1.1s,mb5.9
MFF Saint Martin d 76.47 317 *e*P **P 10 01 07.6 -0.6**
comp=Z,178nm,1.1s,mb5.9
MFF Saint Martin d 76.47 317 *e*P **P 10 01 07.6 -0.6**
MFF pmax pmax
comp=Z,179nm,1.1s,mb5.9
ARMA Armidale 76.56 140 *e*P **P 10 01 09.2 +0.5**
ARMA Armidale 76.56 140 *e*P **P 10 01 08.3 -0.4**
comp=Z,17nm,0.6s,mb5.2
MTLF Montolieu 76.84 313 *e*P **P 10 01 09.7 -0.6**
comp=Z,235nm,1.5s,mb5.6
MTLF Montolieu 76.84 313 *e*P **P 10 01 09.7 -0.6**
comp=Z,118nm,1.5s,mb5.6
MTLF Montolieu 76.84 313 *e*P **P 10 01 09.7 -0.6**
MTLF pmax pmax

comp=Z,118nm,1.5s,mb5.6
LRDF Laroque-de-Fa 76.86 313 *e*P **P 10 01 10.6 +0.1**
LFF La Frestale 76.87 315 *e*P **P 10 01 10.2 -0.2**
comp=Z,238nm,1.3s,mb5.7
LFF La Frestale 76.87 315 *e*P **P 10 01 10.2 -0.2**
comp=Z,119nm,1.3s,mb5.7
LFF La Frestale 76.87 315 *e*P **P 10 01 10.2 -0.2**
LFF pmax pmax
comp=Z,119nm,1.3s,mb5.7
SGMF Saint Gilles 76.90 319 *e*P **P 10 01 10.1 -0.4**
comp=Z,272nm,1.1s,mb5.8
SGMF Saint Gilles 76.90 319 *e*P **P 10 01 10.1 -0.4**
comp=Z,136nm,1.1s,mb5.8
SGMF Saint Gilles 76.90 319 *e*P **P 10 01 10.1 -0.4**
SGMF pmax pmax
comp=Z,136nm,1.1s,mb5.8
EJON La Jonquera 76.91 312 ⇑P **P 10 01 10.3 -0.5**
comp=Z,261nm,1.6s,mb5.9
JOHN Johnston Islan 76.99 78 PFAKE 10 01 20.0 +8.4
JOHN LR LR
comp=Z,4µm,20.0s,MS5.7
CMAH Djebel Manchou 76.99 305 P **P 10 01 12.0 +0.7**
FILF Fillols 77.05 312 *e*P **P 10 01 12.2 +0.7**
ABSA Djebel Ababsia 77.14 305 P **P 10 01 13.2 +1.1**
CCA1 Carnmenellis 77.20 322 AMS AMS 10 37 59.4
comp=Z,12µm,16.4s,MS6.3
ROSF Rostrenen 77.24 320 *e*P **P 10 01 12.0 -0.5**
comp=Z,211nm,1.2s,mb5.7
ROSF Rostrenen 77.24 320 *e*P **P 10 01 12.0 -0.5**
comp=Z,106nm,1.2s,mb5.6
ROSF Rostrenen 77.24 320 *e*P **P 10 01 12.0 -0.5**
ROSF pmax pmax
comp=Z,106nm,1.2s,mb5.7
CARF Carcanieres 77.25 313 *e*P **P 10 01 12.3 -0.3**
CAEH 'Ain El Ouahch 77.30 306 P **P 10 01 13.2 +0.1**
QUIF Quistinic 77.43 319 *e*P **P 10 01 12.8 -0.7**
comp=Z,335nm,1.5s,mb5.8
QUIF Quistinic 77.43 319 *e*P **P 10 01 12.8 -0.7**
comp=Z,168nm,1.5s,mb5.8
QUIF Quistinic 77.43 319 *e*P **P 10 01 12.8 -0.7**
QUIF pmax pmax
comp=Z,168nm,1.5s,mb5.8
CLLI Llivia 77.46 313 ⇑P **P 10 01 13.9 +0.1**
VALF Valcebollere 77.48 312 *e*P **P 10 01 14.4 +0.5**
MBAR Mbarara 77.55 261 P **P 10 01 14.6 -0.1**
comp=Z,106nm,1.0s,mb5.7,SNR=5.7
MBAR Mbarara 77.55 261 P **P 10 01 14.6 -0.1**
MBAR LR LR
comp=Z,631nm,22.0s,MS4.9
MBAR Mbarara 77.55 261 *i*P **P 10 01 13.5 -1.2**
CFON Fontmartina 77.56 312 ⇑P **P 10 01 14.9 +0.5**
comp=Z,737nm,2.1s,mb6.2
BST Brest 77.69 320 *e*P **P 10 01 16.4 +1.4**
MLS Moulis 77.74 313 *e*P **P 10 01 15.2 -0.2**
CASM Ain Smara 77.82 305 P **P 10 01 16.8 +0.8**
CTEI Djebel Teioual 77.98 305 P **P 10 01 17.9 +1.0**
DLBC Dease Lake 78.00 26 PP PP 10 04 06.4 -5.5
comp=Z,10nm,0.9s,baz=306,slow=27,SNR=1.6
CSOR Sort 78.04 313 ⇑P **P 10 01 17.2 +0.1**
comp=Z,274nm,1.6s,mb5.9
EMIR Miracle 78.05 312 P **P 10 01 17.6 +0.5**
comp=Z,66nm,0.9s,mb5.6
DFRA Djebel Bou Aff 78.09 306 P **P 10 01 18.5 +1.0**
EPF Esparros 78.16 314 *e*P **P 10 01 16.6 -1.1**
comp=Z,63nm,1.1s,mb5.2
EPF Esparros 78.16 314 *e*P **P 10 01 16.6 -1.1**
comp=Z,32nm,1.1s,mb5.2
EPF Esparros 78.16 314 *e*P **P 10 01 16.6 -1.1**
EPF pmax pmax
comp=Z,32nm,1.1s,mb5.2
RESF Ens 78.29 313 *e*P **P 10 01 19.2 +0.8**
LABF Labassere 78.31 314 *e*P **P 10 01 20.4 +1.8**
ETOS Mallorca 78.40 310 ⇑P **P 10 01 19.4 +0.3**
comp=Z,358nm,1.5s,mb6.1
VIEF Viey 78.44 314 *e*P **P 10 01 20.1 +0.9**
EBIE Bielsa 78.47 313 ⇑P **P 10 01 19.6 +0.2**
comp=Z,265nm,1.7s,mb5.9
SET Setif 78.60 306 P **P 10 01 21.0 +0.7**
CKHR Kef el Ahmar 78.62 305 P **P 10 01 22.9 +2.5**
EPOB Poblet 78.64 312 P **P 10 01 20.4 0.0**
comp=Z,309nm,1.5s,mb6.0
ETSF Etsaut 78.78 314 *e*P **P 10 01 21.0 -0.1**
comp=Z,134nm,1.1s,mb5.5
ETSF Etsaut 78.78 314 *e*P **P 10 01 21.0 -0.1**
comp=Z,67nm,1.1s,mb5.5
ETSF Etsaut 78.78 314 *e*P **P 10 01 21.0 -0.1**
ETSF pmax pmax
comp=Z,67nm,1.1s,mb5.5
ORDF Ordiarp 78.83 314 *e*P **P 10 01 21.6 +0.2**
LARF Larrau 78.96 314 *e*P **P 10 01 22.8 +0.7**
SJPF Ste Jean 79.06 314 *e*P **P 10 01 22.8 +0.1**
comp=Z,115nm,1.1s,mb5.4
SJPF Ste Jean 79.06 314 *e*P **P 10 01 22.8 +0.1**
comp=Z,57nm,1.1s,mb5.4
SJPF Ste Jean 79.06 314 *e*P **P 10 01 22.8 +0.1**
SJPF pmax pmax
comp=Z,57nm,1.1s,mb5.4
EALK Alkurruntz 79.17 315 P **P 10 01 23.3 +0.1**
comp=Z,403nm,2.3s,mb5.9
ELIZ Elizondo 79.22 315 P **P 10 01 24.6 +1.1**
comp=Z,76nm,1.4s,mb5.4
ELIZ Elizondo 79.22 315 P **P 10 01 24.6 +1.1**
ELIZ pmax pmax
comp=Z,76nm,1.4s,mb5.4
ERTA Horta de San J 79.33 312 P **P 10 01 23.6 -0.5**
comp=Z,279nm,2.4s,mb5.8
ESAC San Caprasio 79.39 313 P **P 10 01 23.6 -0.9**
comp=Z,588nm,1.8s,mb6.2
ATAF Djebel Tarf 79.55 306 P **P 10 01 28.2 +2.7**
YKA Yellowknife Ar 79.71 18 P **P 10 01 24.8 -1.0**
YKA PKKPbc PKKPbc 10 20 08.1 -5.0
YKA Yellowknife Ar 79.71 18 P **P 10 01 24.8 -1.0**
comp=Z,38nm,0.9s,mb5.3,baz=323,slow=4.9,SNR=39
YKA PKKPbc PKKPbc 10 20 08.1 -5.1
comp=Z,3.7nm,0.7s,baz=142,slow=1.7,SNR=7.4
YKA Yellowknife Ar 79.71 18 P **P 10 01 24.8 -1.0**
YKA pmax pmax
comp=Z,38nm,0.9s
AKET Djebel Ketaf 79.72 306 P **P 10 01 28.8 +2.4**
DZM Mont Dzumac 79.75 125 *e*P **P 10 01 27.4 +0.8**
comp=Z,387nm,1.4s,mb6.1
DZM *e*S S 10 11 24.5 -4.9
comp=Z,3µm,31.6s
DZM *e*SS SS 10 16 30.4 -8.4
comp=Z,2µm,37.7s
DZM *e*LR LR 10 26 14.7
comp=Z,10µm,23.8s
DZM Mont Dzumac 79.75 125 *e*P **P 10 01 27.1 +0.5**
comp=Z,326nm,1.4s,mb6.1
EIBI Ibiza 79.76 310 P **P 10 01 27.2 +0.6**
comp=Z,549nm,2.7s,mb6.0
ABA Alger-Bouzarea 79.88 307 P **P 10 01 31.1 +3.8**
ADJB Djebel Djouab 79.96 307 P **P 10 01 29.0 +1.3**
EMOS Mosqueruela 80.17 312 P **P 10 01 28.8 +0.1**
comp=Z,332nm,1.5s,mb6.0
EMHD Djebel Mahouad 80.26 307 P **P 10 01 31.0 +1.6**
ELAN Lanestosa 80.31 315 P **P 10 01 30.0 +0.6**
comp=Z,499nm,2.1s,mb6.1
ETOR Torete 80.89 313 P **P 10 01 31.4 -1.2**
comp=Z,30nm,1.5s,mb5.0
ETOR Torete 80.89 313 P **P 10 01 31.4 -1.2**
ETOR pmax pmax
comp=Z,30nm,1.5s,mb5.0
ECHE Chera 80.92 311 P **P 10 01 34.6 +1.8**
comp=Z,58nm,1.1s,mb5.4
ECHE Chera 80.92 311 P **P 10 01 34.6 +1.8**
ECHE pmax pmax
comp=Z,58nm,1.1s,mb5.4
EBEN Beniarda 80.95 310 P **P 10 01 34.3 +1.3**
comp=Z,125nm,1.4s,mb5.7
FUNA Funafuti 81.12 106 PFAKE 10 01 50.0 +16
FUNA LR LR
comp=Z,10µm,20.0s,MS6.2
EBNR Beni Rached 81.17 307 P **P 10 01 38.0 +3.8**
EARI Arriondas 81.31 316 P **P 10 01 34.4 -0.4**
comp=Z,766nm,3.5s
EANR 'Ain N'Sour 81.65 307 P **P 10 01 37.3 +0.6**
ETRT Tiaret 81.83 307 P **P 10 01 39.5 +1.8**
ETOB Tobarra 81.83 311 P **P 10 01 38.9 +1.2**
comp=Z,441nm,2.3s,mb6.0
CART Cartagena 82.10 310 *e*P **P 10 01 40.4 +1.4**
comp=Z,136nm,1.4s,mb5.7
EMUR La Murta 82.10 310 P **P 10 01 39.1 0.0**
comp=Z,348nm,1.9s,mb6.0
GUD Guadarrama 82.28 314 P **P 10 01 40.6 +0.6**
comp=Z,106nm,1.1s,mb5.7
GUD Guadarrama 82.28 314 P **P 10 01 40.6 +0.6**
GUD pmax pmax
comp=Z,106nm,1.1s,mb5.7
EPON Pontenova 82.41 317 P **P 10 01 40.7 +0.1**
comp=Z,354nm,1.8s,mb6.0
EVIA Vianos 82.44 311 P **P 10 01 42.1 +1.2**
comp=Z,49nm,0.9s,mb5.4
EVIA Vianos 82.44 311 P **P 10 01 42.1 +1.2**
EVIA pmax pmax
comp=Z,49nm,0.9s,mb5.4
ESDC Sonseca Array 82.74 313 P **P 10 01 43.2 +0.8**
comp=Z,13nm,0.7s,mb5.0,baz=43,slow=5.4,SNR=32
ESDC LR LR 10 39 51.8
comp=Z,3µm,19.6s,MS5.6,baz=45,slow=37
ESLA Sonseca Array 82.74 313 *e*P **P 10 01 43.1 +0.7**
comp=Z,63nm,1.7s,mb5.4
ESLA LR LR
comp=Z,21µm,19.0s,MS6.5
EHUE Huescar 82.99 311 P **P 10 01 45.1 +1.4**
comp=Z,102nm,1.5s,mb5.6
EHUE Huescar 82.99 311 P **P 10 01 45.1 +1.4**
EHUE pmax pmax
comp=Z,102nm,1.5s,mb5.6
ERUA La Rua 82.99 316 P **P 10 01 45.5 +1.8**
ECAL Calabor 83.03 316 P **P 10 01 43.6 -0.3**
comp=Z,520nm,3.2s
PAB San Pablo 83.06 313 *e*P **P 10 01 43.8 -0.3**
comp=Z,148nm,1.9s,mb5.7
PAB LR LR
comp=Z,4µm,20.0s,MS5.8
PAB San Pablo 83.06 313 *e*P **P 10 01 43.8 -0.2**
PAB pmax pmax
comp=Z,148nm,1.9s,mb5.7
PAB MLR MLR
comp=Z,4µm,20.0s,MS5.8
PBRG Braganca 83.12 316 *e*P **P 10 01 44.9 +0.6**
comp=Z,62nm,2.1s,mb5.3
ENIJ Nijar 83.24 310 P **P 10 01 46.5 +1.5**
comp=Z,15nm,0.7s,mb5.1
ENIJ Nijar 83.24 310 P **P 10 01 46.5 +1.5**
ENIJ pmax pmax
comp=Z,15nm,0.7s,mb5.1
BBB Bella Bella 83.26 30 P **P 10 01 44.6 -0.2**
comp=Z,13nm,1.1s,mb4.9,baz=133,slow=8.9,SNR=6.0
BBB LR LR 10 40 33.4
comp=Z,4µm,20.4s,MS5.8,baz=298,slow=37
EQES Quesada 83.30 311 P **P 10 01 45.2 -0.1**
comp=Z,54nm,0.9s,mb5.6
STS Santiago 83.49 318 P **P 10 01 48.0 +1.8**
comp=Z,5.5nm,0.4s,mb4.9
STS Santiago 83.49 318 P **P 10 01 48.0 +1.8**
STS pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
EBAN Banos Encina 83.54 312 P **P 10 01 47.4 +0.8**
comp=Z,11nm,1.2s,mb4.8
EBAN Banos Encina 83.54 312 P **P 10 01 47.4 +0.9**
EBAN pmax pmax
comp=Z,11nm,1.2s,mb4.9
FRB Frobisher Bay 83.66 357 P **P 10 01 46.1 -0.6**
comp=Z,39nm,0.8s,mb5.6,baz=354,slow=6.7,SNR=14
FRB Frobisher Bay 83.66 357 P **P 10 01 46.1 -0.5**
FRB pmax pmax
comp=Z,39nm,0.8s
MVO Moncorvo 83.69 315 *e*P **P 10 01 47.6 +0.3**
comp=Z,83nm,2.6s,mb5.4
MVO Moncorvo 83.69 315 *e*PP PP 10 05 00.7 +1.2
MVO *e*S S 10 12 12.3 +2.5
MVO *e*LQ 10 32 32.1
MVO *e*LR LR 10 36 24.0
comp=Z,5µm,19.1s
MVO Moncorvo 83.69 315 P **P 10 01 47.7 +0.4**
EMAZ Mazaricos 83.69 318 P **P 10 01 48.2 +1.0**
comp=Z,142nm,2.0s,mb5.8
EBER Berja 83.72 310 P **P 10 01 48.0 +0.5**
comp=Z,281nm,2.4s,mb6.0
EPLA Plasencia 83.80 314 P **P 10 01 47.2 -0.6**
comp=Z,550nm,2.6s,mb6.2
KIP Kipapa 83.84 69 PFAKE 10 02 00.0 +12
KIP LR LR
comp=Z,3µm,22.0s,MS5.6
KIP Kipapa 83.84 69 *d*P **P 10 01 48.7 +0.3**
ELOB Lobios 83.85 316 P **P 10 01 48.2 +0.1**
comp=Z,432nm,2.0s,mb6.2
ECOG Cogollos-Vega 83.93 311 P **P 10 01 49.4 +0.8**
comp=Z,6.5nm,0.4s,mb5.1
ECOG Cogollos-Vega 83.93 311 P **P 10 01 49.4 +0.8**
ECOG pmax pmax
comp=Z,7.0nm,0.4s,mb5.1
PCAB Cabril 83.93 316 *e*P **P 10 01 49.5 +1.0**
comp=Z,116nm,1.9s,mb5.7
PVRL Vila Real 84.02 316 *e*P **P 10 01 50.0 +1.0**
comp=Z,79nm,1.7s,mb5.6
EADA Adamuz 84.03 312 P **P 10 01 48.9 -0.2**
comp=Z,483nm,2.4s,mb6.2
EGUA Guajares 84.19 310 P **P 10 01 49.9 0.0**
comp=Z,289nm,1.0s,mb6.4
ERON Agron 84.24 311 P **P 10 01 50.5 +0.3**
ELOJ Sierra Loja 84.38 311 P **P 10 01 51.1 +0.2**
comp=Z,4.0nm,0.2s,mb5.2
ELOJ Sierra Loja 84.38 311 P **P 10 01 51.1 +0.2**
ELOJ pmax pmax
comp=Z,4.0nm,0.2s,mb5.2
EALB Alboran 84.38 309 P **P 10 01 51.6 +0.6**
comp=Z,724nm,2.1s,mb6.4
MTE Manteigas 84.47 315 *e*P **P 10 01 52.1 +0.8**
comp=Z,153nm,2.2s,mb5.7
MTE *e*S S 10 12 23.9 +6.2
MTE *e*LQ 10 32 50.2
MTE *e*LR LR 10 36 43.0
comp=Z,3µm,13.7s
MTE Manteigas 84.47 315 *e*P **P 10 01 52.6 +1.4**
comp=Z,375nm,2.0s,mb6.2
MTE LR LR
comp=Z,3µm,20.0s,MS5.7
PVIS Viseu 84.48 316 *e*P **P 10 01 52.4 +1.1**
comp=Z,112nm,1.9s,mb5.7
PCBR Castelo Branco 84.78 315 *e*P **P 10 01 53.8 +1.0**
comp=Z,65nm,1.5s,mb5.5
PCBR Castelo Branco 84.78 315 *e*PP PP 10 05 09.4 +1.0
PMRV Marv??o 84.99 314 *e*P **P 10 01 54.1 +0.2**
comp=Z,126nm,2.4s,mb5.6
PMRV Marv??o 84.99 314 *e*PP PP 10 05 11.1 +1.0
PMRV *e*S S 10 12 27.5 +4.6
PMRV *e*LQ 10 35 03.1
PMRV *e*LR LR 10 36 46.7
comp=Z,5µm,19.1s
EMIJ Mijas 85.13 311 P **P 10 01 53.6 -1.0**
comp=Z,84nm,2.1s,mb5.5
EBAD Badajoz 85.18 314 P **P 10 01 54.7 -0.2**
comp=Z,327nm,2.2s,mb6.1
PESTR Estremoz 85.46 314 *e*P **P 10 01 56.6 +0.3**
comp=Z,80nm,1.7s,mb5.6
PESTR Estremoz 85.46 314 *e*PP PP 10 05 14.5 +0.5
PESTR *e*S S 10 12 32.6 +5.0
PESTR *e*LQ 10 34 26.0
PESTR *e*LR LR 10 36 54.2
comp=Z,3µm,21.5s
PTOM Tomar 85.48 315 *e*P **P 10 01 57.3 +1.0**
comp=Z,128nm,2.4s,mb5.6
PBAR Barrancos 85.56 313 *e*P **P 10 01 56.9 +0.1**
comp=Z,140nm,2.0s,mb5.8
PBAR *e*S S 10 12 33.1 +4.5
PBAR *e*LQ 10 30 55.2
PBAR *e*LR LR 10 37 15.7
comp=Z,3µm,20.7s
MSVF Nonsavu 85.56 114 *e*P **P 10 01 58.2 +1.3**
comp=Z,88nm,1.1s,mb5.9
MSVF LR LR
comp=Z,3µm,21.0s,MS5.6
MSVF Nonsavu 85.56 114 P **P 10 01 58.9 +2.0**
comp=Z,450nm,1.1s,mb6.6,SNR=12
EMIN Mina Concepcio 85.58 313 P **P 10 01 56.9 -0.1**
comp=Z,374nm,2.2s,mb6.2
ESPR Espera 85.63 311 P **P 10 01 56.2 -1.0**
comp=Z,488nm,2.7s,mb6.3
EJIF Jimena Fronter 85.64 311 P **P 10 01 56.9 -0.4**
comp=Z,32nm,1.1s,mb5.5
EJIF Jimena Fronter 85.64 311 P **P 10 01 56.9 -0.3**
EJIF pmax pmax
comp=Z,32nm,1.1s,mb5.5
TAM Tamanrasset 85.81 294 *e*P **P 10 01 58.9 +0.6**
comp=Z,60nm,1.1s,mb5.7
TAM LR LR
comp=Z,3µm,20.0s,MS5.8
TAM Tamanrasset 85.81 294 *e*P **P 10 01 58.9 +0.6**
TAM pmax pmax
comp=Z,60nm,1.1s,mb5.7
TAM MLR MLR
comp=Z,3µm,20.0s,MS5.8
EVO Evora 85.93 314 *e*P **P 10 01 59.4 +0.8**
comp=Z,291nm,1.6s,mb6.0
EVO *e*MLR MLR
comp=Z,5µm,22.5s,MS5.6
EVO Evora 85.93 314 *e*P **P 10 01 59.1 +0.5**
comp=Z,120nm,1.8s,mb5.8
EVOP Sao Brissos 86.00 314 *e*P **P 10 01 58.9 -0.1**
EVOP *e*PP PP 10 05 18.9 +0.5
EVOP *e*S S 10 12 22.1 -11
EVOP *e*S S 10 12 22.3 -11
EVOP AMS AMS 10 44 07.5
comp=Z,4µm,22.1s,MS5.8
EVOP Sao Brissos 86.00 314 *e*P **P 10 01 58.8 -0.1**
EVOP *e* 10 05 18.8
EVOP *e*S S 10 12 22.1 -11
PBEJ Beja 86.16 313 *e*P **P 10 02 00.9 +1.2**
comp=Z,105nm,1.8s,mb5.8
EGRO El Granado 86.23 313 P **P 10 02 01.4 +1.3**
comp=Z,32nm,1.6s,mb5.3
PMAFR Mafra 86.42 315 *e*P **P 10 02 01.5 +0.5**
comp=Z,147nm,1.9s,mb5.9
PMAFR Mafra 86.42 315 *e*PP PP 10 05 22.0 +0.2
PMAFR *e*S S 10 12 41.3 +4.3
PMAFR *e*LQ 10 32 32.1
PMAFR *e*LR LR 10 37 27.6
comp=Z,3µm,15.6s
PVAQ Vaqueiros 86.46 313 *e*P **P 10 02 01.6 +0.4**
comp=Z,119nm,2.4s,mb5.7
PVAQ *e*S S 10 12 41.0 +3.6
PVAQ *e*LQ 10 30 05.9
PVAQ *e*LR LR 10 37 33.4
comp=Z,4µm,13.7s
MESJ Messejana 86.49 313 *e*P **P 10 02 01.4 0.0**
MESJ *e*S S 10 12 26.4 -11
MESJ *e*S S 10 12 26.4 -11
MESJ AMS AMS 10 43 59.3
comp=Z,4µm,17.4s,MS5.9
MESJ Messejana 86.49 313 *e*P **P 10 02 01.4 0.0**
MESJ *e*S S 10 12 26.4 -11
LIS Lisbon 86.50 315 *e*P **P 10 02 01.1 -0.3**
LIS *e*S S 10 12 23.7 -14
LIS *e*S S 10 12 24.0 -14
LIS AMS AMS 10 44 48.3
comp=E,6µm,19.2s
LIS Lisbon 86.50 315 *e*P **P 10 02 01.1 -0.3**
LIS *e*S S 10 12 24.0 -14
PCVE Castro Verde 86.51 313 *e*P **P 10 02 02.0 +0.5**
comp=E,117nm,2.0s,mb5.8
PCVE *e*S S 10 12 40.4 +2.5
PCVE *e*LQ 10 32 32.9
PCVE *e*LR LR 10 38 09.6
comp=E,3µm,19.0s
PBDV Barranco-do-Ve 86.69 313 *e*P **P 10 02 02.8 +0.4**
comp=E,156nm,1.8s,mb5.9
PBDV *e*S S 10 12 44.3 +4.6
PBDV *e*LQ 10 32 28.2
PBDV *e*LR LR 10 38 24.4
PBDV A 10 45 07.9
comp=E,3µm,9.5s
POHA Pohakuloa 86.70 69 *e*P **P 10 02 03.2 +0.5**
comp=E,294nm,1.4s,mb6.3
POHA LR LR
comp=Z,4µm,20.0s,MS5.8
PTEO Sao Teotonio 86.99 313 *e*P **P 10 02 04.2 +0.4**
comp=Z,135nm,1.8s,mb5.9
MORF Marmelete 87.09 313 *e*P **P 10 02 05.2 +0.8**
comp=Z,161nm,1.3s,mb6.1
MORF *e*S S 10 12 47.7 +4.1
MORF *e*LQ 10 33 10.8
MORF *e*LR LR 10 38 39.6
comp=Z,3µm,17.3s
MORF Marmelete 87.09 313 *e*P **P 10 02 04.2 -0.2**
MORF *e*S S 10 12 28.8 -15
MDT Midelt 87.31 308 LR LR 10 43 04.7
comp=Z,2µm,19.2s,MS5.5,baz=55,slow=37
PFVI Vila Bisbo 87.31 313 *e*P **P 10 02 06.1 +0.7**
comp=Z,206nm,1.8s,mb6.1
PFVI Vila Bisbo 87.31 313 *e*PP PP 10 05 29.5 +0.5
PFVI *e*S S 10 12 46.5 +0.8
PFVI *e*LQ 10 32 34.8
PFVI *e*LR LR 10 38 46.2
comp=Z,4µm,18.0s
PFVI Vila Bisbo 87.31 313 P **P 10 02 06.8 +1.4**
FCC Fort Churchill 87.32 10 *e*P **P 10 02 04.3 -0.7**
comp=Z,7.7nm,1.2s,mb4.8
PAF Port-aux-Franc 87.62 202 PFAKE 10 02 20.0 +14
PAF LR LR
comp=Z,5µm,19.0s,MS5.9
LSZ Lusaka 87.86 250 *e*P **P 10 02 07.7 -0.6**
comp=Z,118nm,1.0s,mb6.1
LSZ LR LR
comp=Z,5µm,19.0s,MS5.9
LSZ Lusaka 87.86 250 *e*P **P 10 02 07.7 -0.6**
LSZ pmax pmax
comp=Z,118nm,1.0s,mb6.1
LSZ MLR MLR
comp=Z,5µm,19.0s,MS5.9
LSZ Lusaka 87.86 250 P **P 10 02 08.7 +0.5**
SNR=23
PGC Sidney 87.89 30 *e*P **P 10 02 07.5 -0.5**
comp=Z,11nm,1.6s,mb4.8
EDM Edmonton 87.91 22 *e*P **P 10 02 07.2 -0.8**
MCW Mount Constitu 88.12 30 P **P 10 02 10.0 +0.9**
A05A Maple Falls 88.18 29 ⇓P **P 10 02 08.6 -0.7**
baz=88
A05A ⇑SKSac SKSac 10 12 38.3 +0.4
baz=88
NLWA Neilton Lookou 88.68 31 ⇑P **P 10 02 12.3 +0.6**
baz=88,SNR=20
NLWA ⇑SKSac SKSac 10 12 41.1 +0.2
baz=88
NLWA Neilton Lookou 88.68 31 *e*P **P 10 02 12.1 +0.4**
comp=Z,1µm,2.3s,mb6.7
NLWA LR LR
comp=Z,6µm,20.0s,MS6.0
B06A Marblemount 88.81 29 ⇑P **P 10 02 11.9 -0.4**
baz=89
B06A ⇑SKSac SKSac 10 12 43.1 +1.4
baz=89
RPW Rockport 88.85 29 *e*P **P 10 02 12.7 +0.2**
comp=Z,32nm,1.0s,mb5.6
JCW Jim Creek 88.88 30 *e*P **P 10 02 12.6 0.0**
comp=Z,287nm,1.5s,mb6.4
GNW Green Mountain 88.99 30 *e*P **P 10 02 14.1 +0.9**
comp=Z,108nm,1.7s,mb5.9
E03A Lebam 89.46 31 ⇑P **P 10 02 16.4 +1.0**
baz=89,SNR=14
D05A Enumclaw 89.64 30 ⇑P **P 10 02 17.2 +1.0**
baz=89
D05A ⇑SKSac SKSac 10 12 48.8 +2.1
baz=89
FFC Flin Flon 89.66 16 P **P 10 02 15.1 -1.1**
comp=Z,560nm,1.0s,mb6.8,SNR=22
FFC Flin Flon 89.66 16 *e*P **P 10 02 15.1 -1.1**
comp=Z,177nm,1.3s,mb6.2
FFC LR LR
comp=Z,9µm,22.0s,MS6.1
FFC Flin Flon 89.66 16 *ce*P **P 10 02 15.6 -0.6**
B08A Colville Reser 89.80 28 ⇑P **P 10 02 17.1 +0.1**
baz=90
F03A Seaside 89.94 32 ⇑P **P 10 02 18.4 +0.7**
baz=90,SNR=14
ETW Entiat 90.00 29 *e*P **P 10 02 18.2 +0.3**
comp=Z,294nm,1.4s,mb6.4
LON Longmire 90.06 30 *e*P **P 10 02 18.6 +0.4**
comp=Z,108nm,1.6s,mb5.9
LON Longmire 90.06 30 *e*P **P 10 02 18.6 +0.4**
LON pmax pmax
comp=Z,108nm,1.6s,mb5.9
WTV Waterville 90.08 29 P **P 10 02 19.2 +1.0**
TDL Tradedollar La 90.20 31 P **P 10 02 19.8 +0.9**
WPW White Pass 90.21 30 P **P 10 02 19.9 +1.0**
F04A Amboy 90.44 31 ⇑P **P 10 02 20.1 +0.1**
baz=90
C09A Chrisman Ranch 90.67 28 ⇓P **P 10 02 21.2 +0.2**
baz=90,SNR=62
A12A Yaak River Ran 90.73 26 ⇑P **P 10 02 21.4 +0.1**
baz=90,SNR=13
NEW Newport 90.73 27 *e*P **P 10 02 21.8 +0.5**
comp=Z,71nm,0.8s,mb6.0
NEW LR LR
comp=Z,9µm,22.0s,MS6.2
NEW Newport 90.73 27 *e*P **P 10 02 21.8 +0.5**
NEW pmax pmax

comp=Z,71nm,0.8s
NEW MLR MLR
comp=Z,9µm,22.0s
OD2 Odessa Site #2 90.83 28 P P 10 02 21.6 -0.1
D08A Wollman Farm, 91.01 29 ⇑P P 10 02 23.0 +0.3
baz=91
E07A Sunnyside 91.03 29 ⇓P P 10 02 22.9 +0.2
baz=91,SNR=20
COR Corvallis 91.09 33 eP P 10 02 24.6 +1.5
comp=Z,255nm,1.4s,mb6.4
COR LR LR
comp=Z,6µm,20.0s,MS6.0
COR Corvallis 91.09 33 eP P 10 02 24.6 +1.6
COR pmax pmax
comp=Z,255nm,1.4s,mb6.4
COR MLR MLR
comp=Z,6µm,20.0s,MS6.0
B12A Libby 91.14 26 ⇑P P 10 02 23.6 +0.5
baz=91,SNR=13
A13A Flathead Natio 91.18 25 ⇑P P 10 02 23.6 +0.2
baz=91
WALA Waterton Lakes 91.25 25 eP P 10 02 23.5 -0.1
comp=Z,11nm,1.9s,mb4.9
HOOD Mount Hood Mea 91.25 31 eP P 10 02 25.1 +1.3
comp=Z,390nm,1.5s,mb6.5
RSW Rattlesnake Hi 91.27 29 eP P 10 02 24.4 +0.6
comp=Z,289nm,1.4s,mb6.4
HAWA Hanford 91.30 29 eP P 10 02 24.4 +0.5
comp=Z,339nm,1.7s,mb6.4
HAWA LR LR
comp=Z,8µm,20.0s,MS6.1
VFP Flag Point 91.34 31 P P 10 02 24.6 +0.5
E08A Dider Farm, El 91.41 29 ⇓P P 10 02 24.1 -0.4
baz=91,SNR=8.1
AFI Afiamalu 91.44 106 PFAKE 10 02 40.0 +15
AFI LR LR
comp=Z,3µm,22.0s,MS5.7
AFI Afiamalu 91.44 106 LR LR 10 37 26.2
comp=Z,2µm,21.8s,MS5.6,baz=292,slow=32
A14A Double T Ranch 91.49 24 ⇓P P 10 02 24.0 -0.8
baz=91,SNR=42
H04A Detroit Lake 91.52 32 ⇑P P 10 02 24.5 -0.6
baz=91,SNR=26
B13A Whitefish 91.63 25 ⇓P P 10 02 25.8 +0.3
baz=91,SNR=50
A15A Johnson Ranch, 91.73 24 ⇑P P 10 02 25.5 -0.4
baz=92
G06A Carlson Farm, 91.76 31 ⇑P P 10 02 27.1 +0.9
baz=92,SNR=46
E09A Wood Farm, Sta 91.77 28 ⇓P P 10 02 25.8 -0.3
baz=92,SNR=26
C12B Naegeli Ranch, 91.81 26 ⇑P P 10 02 26.6 +0.3
baz=92
BSMT Bassoo Peak 91.95 26 eP P 10 02 27.4 +0.5
comp=Z,162nm,1.6s,mb6.1
A16A West Butte Ran 92.14 23 ⇓P P 10 02 27.2 -0.6
baz=92,SNR=36
C13A Hot Springs 92.17 26 ⇓P P 10 02 27.9 -0.1
baz=92,SNR=57
YBMT Yellow Bay 92.22 25 eP P 10 02 29.3 +1.1
comp=Z,72nm,1.3s,mb5.8
JTMT Jette 92.22 26 eP P 10 02 29.2 +1.0
comp=Z,109nm,1.7s,mb5.9
LNOR Lincton Mounta 92.23 29 eP P 10 02 28.8 +0.5
comp=Z,52nm,1.4s,mb5.7
LNOR Lincton Mounta 92.23 29 eP P 10 02 28.8 +0.5
LNOR pmax pmax
comp=Z,52nm,1.4s,mb5.7
VIPM Ingram Point 92.34 31 P P 10 02 30.1 +1.2
B15A Bradely Ranch, 92.36 24 ⇑P P 10 02 28.0 -0.8
baz=92,SNR=55
D12A Red Ives Fores 92.41 27 ⇓P P 10 02 28.6 -0.4
baz=92
A17A Triple J Farms 92.44 23 ⇑P P 10 02 28.4 -0.8
baz=92,SNR=78
SCHQ Schefferville 92.47 356 eP P 10 02 29.4 +0.3
comp=Z,90nm,1.2s,mb6.0
SCHQ LR LR
comp=Z,9µm,20.0s,MS6.2
SCHQ Schefferville 92.47 356 P P 10 02 28.1 -1.0
comp=Z,44nm,1.0s,mb5.8,baz=16,slow=4.8,SNR=22
SCHQ PKKPbc PKKPbc 10 19 43.5 +0.6
comp=Z,4.1nm,0.8s,baz=198,slow=8.1,SNR=3.7
SWMT Swartz Lake 92.53 26 eP P 10 02 30.4 +0.7
comp=Z,77nm,1.5s,mb5.9
SWMT ePP PP 10 06 11.2 +1.2
B16A M & M Farms, S 92.56 24 ⇓P P 10 02 29.6 -0.2
baz=92
F10A Beach Ranch, E 92.58 28 ⇑P P 10 02 29.7 -0.2
baz=92,SNR=45
D13A Huson 92.71 26 ⇑P P 10 02 30.1 -0.3
baz=92,SNR=20
A18A Metzger Ranch, 92.74 22 ⇑P P 10 02 29.6 -0.9
baz=92,SNR=40
HUMO Hull Mountain 92.78 34 eP P 10 02 32.7 +1.8
comp=Z,107nm,1.4s,mb6.1
HUMO LR LR
comp=Z,6µm,22.0s,MS6.0
C15A Salmond Ranch, 92.80 25 ⇑P P 10 02 30.4 -0.5
baz=92,SNR=50
SLMT Seeley Lake 92.94 25 eP P 10 02 31.2 -0.3
comp=Z,211nm,1.6s,mb6.3
SLMT ePP PP 10 06 16.0 +2.8
B17A L&G Farms, Che 92.97 23 ⇑P P 10 02 31.2 -0.5
baz=93,SNR=38
D14A Greenough 93.07 26 ⇑P P 10 02 31.9 -0.2
baz=93,SNR=31
C16A Fuhringer Ranc 93.08 24 ⇓P P 10 02 31.3 -0.8
baz=93,SNR=32
MSO Missoula 93.12 26 eP P 10 02 32.4 0.0
comp=Z,16nm,0.9s,mb5.5
MSO ePP PP 10 06 17.7 +3.0
MSO LR LR
comp=Z,9µm,22.0s,MS6.2
I07A Izee 93.17 31 ⇓P P 10 02 33.2 +0.5
baz=93,SNR=31
B18A Beardsley Farm 93.22 23 ⇑P P 10 02 32.0 -0.8
baz=93,SNR=18
CHMT Chamberlain Mo 93.30 25 eP P 10 02 32.7 -0.5
comp=Z,12nm,1.0s,mb5.3
CHMT ePP PP 10 06 14.7 -1.4
E13A Victor 93.36 26 ⇓P P 10 02 33.1 -0.3
baz=93
BMO Blue Mountains 93.46 29 eP P 10 02 34.0 0.0
comp=Z,34nm,1.4s,mb5.6
BMO ePP PP 10 06 20.6 +3.2
BMO LR LR
comp=Z,7µm,21.0s,MS6.1
F12A Elk City 93.53 27 ⇓P P 10 02 33.2 -1.1
baz=93,SNR=31
EGMT Eagleton 93.55 23 ⇓P P 10 02 33.7 -0.6
baz=93,SNR=22
EGMT Eagleton 93.55 23 eP P 10 02 34.1 -0.2
comp=Z,566nm,2.3s,mb6.6
EGMT LR LR
comp=Z,6µm,19.0s,MS6.1
C17A Wharram Farm, 93.56 24 ⇑P P 10 02 33.5 -0.8
baz=93,SNR=17
YBH Yreka Blue Hor 93.58 34 eP P 10 02 36.0 +1.4
comp=Z,50nm,1.5s,mb5.7
YBH LR LR
comp=Z,5µm,22.0s,MS6.0
YBH Yreka Blue Hor 93.58 34 P P 10 02 33.0 -1.6
comp=Z,19nm,1.2s,mb5.4,baz=344,slow=3.2,SNR=15
YBH PP PP 10 06 16.1 -2.3
comp=Z,3.0nm,1.0s,baz=133,slow=6.2,SNR=2.8
YBH LR LR 10 50 18.0
comp=Z,4µm,18.2s,MS5.9,baz=325,slow=39
YBH Yreka Blue Hor 93.58 34 P P 10 02 33.0 -1.6
YBH 10 06 16.1
YBH pmax pmax
comp=Z,19nm,1.2s
YBH pmax pmax
comp=Z,3.0nm,1.0s
K05A Summer Lake 93.64 32 ⇑P P 10 02 35.2 +0.4
baz=93
E14A Clinton 93.64 26 ⇓P P 10 02 34.4 -0.4
baz=93,SNR=15
D16A Dana Ranch, Ca 93.81 24 ⇑P P 10 02 35.4 -0.1
baz=94,SNR=21
F13A Darby 93.85 27 ⇓P P 10 02 35.3 -0.5
baz=94,SNR=13
HRY Holter Researc 93.98 25 eP P 10 02 36.0 -0.3
comp=Z,32nm,1.0s,mb5.7
D17A Six Diamond Ra 94.00 24 ⇓P P 10 02 36.2 -0.2
baz=94,SNR=24
E16A East Helena 94.19 25 ⇑P P 10 02 37.5 +0.2
baz=94,SNR=19
J08A Circle Bar Ran 94.19 31 ⇓P P 10 02 37.6 +0.2
baz=94
F14A Wisdom 94.19 26 ⇑P P 10 02 37.1 -0.3
baz=94,SNR=23
TORD Torodi Ar. Bea 94.24 288 P P 10 02 36.6 -1.4
comp=Z,12nm,0.9s,mb5.3,baz=44,slow=4.7,SNR=27
TORD PP PP 10 06 21.2 -3.4
comp=Z,12nm,1.1s,baz=49,slow=4.7,SNR=6.4
TORD LR LR 10 50 31.9
comp=Z,6µm,20.8s,MS6.1,baz=75,slow=39
D18A Linhart Farms, 94.26 23 ⇑P P 10 02 37.7 +0.1
baz=94,SNR=22
G13A Cobalt 94.48 27 ⇑P P 10 02 37.8 -0.9
baz=94,SNR=20
LRM Limekiln Ridge 94.52 26 eP P 10 02 39.3 +0.4
comp=Z,190nm,1.4s,mb6.3
E17A Martinsdale 94.54 24 ⇑P P 10 02 38.1 -0.8
baz=94,SNR=20
WDC Whiskeytown Da 94.55 35 eP P 10 02 39.9 +0.8
comp=Z,33nm,1.3s,mb5.6
WDC LR LR
comp=Z,5µm,22.0s,MS5.9
WDC Whiskeytown Da 94.55 35 eP P 10 02 39.9 +0.8
WDC pmax pmax
comp=Z,33nm,1.3s,mb5.6
WDC MLR MLR
comp=Z,5µm,22.0s,MS5.9
MOD Modoc 94.56 32 eP P 10 02 39.5 +0.4
comp=Z,72nm,1.3s,mb5.9
MOD LR LR
comp=Z,7µm,20.0s,MS6.1
G14A Jackson 94.64 26 ⇓P P 10 02 38.6 -0.8
baz=94,SNR=23
H12A Diamond D Ranc 94.69 28 ⇓P P 10 02 38.8 -0.9
baz=94,SNR=18
E18A Harlowton 94.77 24 ⇓P P 10 02 39.8 -0.1
baz=94
XMAS Kiritimati 94.83 84 PFAKE 10 02 50.0 +9.2
XMAS LR LR
comp=Z,5µm,20.0s,MS5.9
F16A Kennard Place, 94.85 25 ⇓P P 10 02 40.1 -0.3
baz=95,SNR=11
DLMT Dillon 94.86 26 eP P 10 02 40.6 +0.2
comp=Z,26nm,1.1s,mb5.6
DLMT ePP PP 10 06 28.2 -0.1
WVOR Wild Horse Val 94.87 31 eP P 10 02 41.3 +0.8
comp=Z,55nm,1.5s,mb5.8
WVOR LR LR
comp=Z,4µm,19.0s,MS6.0
WVOR Wild Horse Val 94.87 31 eP P 10 02 41.3 +0.8
WVOR pmax pmax
comp=Z,55nm,1.5s,mb5.8
WVOR MLR MLR
comp=Z,4µm,19.0s,MS6.0
H13A Challis 94.91 27 ⇑P P 10 02 40.1 -0.5
baz=95,SNR=10
G15A Dillon 95.07 26 ⇓P P 10 02 40.8 -0.5
baz=95,SNR=46
F17A Fitzpatrick Pl 95.09 24 ⇓P P 10 02 41.6 +0.2
baz=95,SNR=31
ULM Lac du Bonnet 95.16 14 eP P 10 02 40.3 -1.3
comp=Z,33nm,1.1s,mb5.7
ULM LR LR
comp=Z,12µm,21.0s,MS6.3
ULM Lac du Bonnet 95.16 14 P P 10 02 40.3 -1.4
comp=Z,18nm,0.9s,mb5.5,baz=343,slow=4.2,SNR=13
ULM PP PP 10 06 30.5 +0.1
comp=Z,16nm,1.2s,baz=323,slow=7.1,SNR=5.3
ULM PKKPbc PKKPbc 10 19 33.7 -2.1
comp=Z,4.2nm,0.6s,baz=153,slow=3.0,SNR=3.7
ULM PKPPKP 10 27 47.2
comp=Z,3.6nm,0.5s,baz=37,slow=2.8,SNR=4.1
ULM LR LR 10 47 57.6
comp=Z,10µm,21.2s,MS6.2,baz=337,slow=37
H14A Leadore 95.21 27 ⇓P P 10 02 42.3 +0.3
baz=95,SNR=8.1
I12A Atlanta 95.21 28 ⇓P P 10 02 42.5 +0.5
baz=95,SNR=51
MCMT McKenzie Canyo 95.22 26 eP P 10 02 43.2 +1.1
comp=Z,12nm,1.0s,mb5.3
MCMT ePP PP 10 06 27.8 -3.3
MFID Camas Ranch 95.25 29 ⇑P P 10 02 42.7 +0.5
baz=95,SNR=9.6
G16A Moss Hill, Enn 95.27 25 ⇑P P 10 02 42.0 -0.3
baz=95
LBTB Lobatse 95.33 244 eP P 10 02 42.5 -0.2
comp=Z,31nm,1.0s,mb5.7
LBTB LR LR
comp=Z,4µm,21.0s,MS5.8
LBTB Lobatse 95.33 244 eP P 10 02 42.6 -0.2
LBTB pmax pmax
comp=Z,31nm,1.0s,mb5.7
LBTB MLR MLR
comp=Z,4µm,21.0s,MS5.8
F18A Big Timber 95.42 24 ⇑P P 10 02 42.7 -0.2
baz=95,SNR=21
H15A Lima 95.48 26 ⇓P P 10 02 42.9 -0.3
baz=95,SNR=8.8
I13A Wildhorse Cree 95.51 28 ⇑P P 10 02 43.4 -0.1
baz=95,SNR=21
HOPS Hopland 95.52 36 PFAKE 10 02 50.0 +6.4
HOPS LR LR
comp=Z,7µm,22.0s,MS6.1
GCMT Greycliff 95.53 24 eP P 10 02 43.8 +0.4
comp=Z,25nm,1.3s,mb5.5
G17A Pierce Place, 95.57 25 ⇑P P 10 02 43.4 -0.2
baz=95
HLID Hailey 95.69 28 ⇑P P 10 02 44.6 +0.3
baz=95,SNR=50
HLID Hailey 95.69 28 eP P 10 02 44.8 +0.6
comp=Z,77nm,1.5s,mb5.9
HLID ePP PP 10 06 36.0 +1.3
HLID LR LR
comp=Z,10µm,20.0s,MS6.3
LAO LASA Array 95.85 21 eP P 10 02 45.7 +0.8
comp=Z,71nm,1.6s,mb5.8
LAO LR LR
comp=Z,10µm,20.0s,MS6.3
H16A Russell Place, 95.92 25 ⇑P P 10 02 45.2 -0.1
baz=96,SNR=14
J13A Cove Ranch, Pi 95.93 28 ⇓P P 10 02 45.9 +0.6
baz=96,SNR=39
G18A Lazy EL Ranch, 95.98 24 ⇓P P 10 02 44.6 -0.9
baz=96
I15A Monteview 96.07 27 ⇓P P 10 02 46.1 +0.2
baz=96
L10A Juniper Basin 96.09 30 ⇑P P 10 02 46.5 +0.4
baz=96,SNR=16
J14A Carey 96.25 28 ⇑P P 10 02 47.5 +0.8
baz=96,SNR=7.5
RLMT Red Lodge 96.25 24 ⇑P P 10 02 46.8 0.0
baz=96,SNR=13
MCCM Marconi Confer 96.28 36 PFAKE 10 03 00.0 +13
MCCM LR LR
comp=Z,5µm,22.0s,MS5.9
YFT Old Faithful 96.28 25 eP P 10 02 49.1 +2.2
comp=Z,55nm,1.4s,mb5.8
YFT ePP PP 10 06 44.1 +4.9
L11A Cat Creek Ranc 96.31 30 ⇑P P 10 02 47.3 +0.2
baz=96,SNR=25
LKWY Lake 96.34 25 eP P 10 02 49.4 +2.3
comp=Z,28nm,1.5s,mb5.5
LKWY LR LR
comp=Z,15µm,19.0s,MS6.5
LKWY Lake 96.34 25 eP P 10 02 49.4 +2.2
LKWY pmax pmax
comp=Z,27nm,1.5s,mb5.5
LKWY MLR MLR
comp=Z,15µm,19.0s,MS6.5
H17A Grant Village 96.43 25 ⇑P P 10 02 48.2 +0.7
baz=96,SNR=15
I16A Newdale 96.55 26 ⇓P P 10 02 49.3 +1.1
baz=96,SNR=8.3
K13A Stover Farm, H 96.59 28 ⇑P P 10 02 49.0 +0.6
baz=96,SNR=9.7
J15A Blackfoot 96.60 27 ⇑P P 10 02 48.8 +0.4
baz=96,SNR=7.8
L12A House Creek Ra 96.64 29 ⇓P P 10 02 48.7 +0.1
baz=96,SNR=11
FLWY Flagg Ranch 96.65 25 eP P 10 02 50.4 +1.8
comp=Z,165nm,2.2s,mb6.1
IMW Indian Meadow 96.73 26 eP P 10 02 49.6 +0.6
comp=Z,35nm,1.6s,mb5.5
IMW ePP PP 10 06 37.5 -5.2
I17A Pilgrim Ck. 96.84 25 ⇑P P 10 02 50.1 +0.6
baz=97
WCN Washoe City 96.88 34 ⇑P P 10 02 49.6 -0.1
baz=97
DCID1 Drake Creek 96.90 26 eP P 10 02 53.7 +4.0
comp=Z,25nm,1.3s,mb5.5
M11A Holland Ranch, 96.91 30 ⇑P P 10 02 50.3 +0.5
baz=97,SNR=15
MOOW Moose Ponds 96.93 26 eP P 10 02 51.2 +1.4
comp=Z,32nm,1.7s,mb5.5
MOOW ePP PP 10 06 48.4 +4.1
J16A Bone 97.02 26 ⇑P P 10 02 50.1 -0.1
baz=97
AGMN Agassiz Nation 97.02 14 eP P 10 02 49.2 -1.0
comp=Z,53nm,1.7s,mb5.7
AGMN LR LR
comp=Z,7µm,20.0s,MS6.1
K14A Jones Ranch, D 97.04 28 ⇓P P 10 02 50.9 +0.5
baz=97,SNR=8.1
RRI2 Red Ridge 97.06 26 eP P 10 02 51.7 +1.3
comp=Z,4.4nm,0.8s,mb4.9
TPAW Teton Pass 97.07 26 eP P 10 02 51.1 +0.6
comp=Z,24nm,1.6s,mb5.4
TPAW ePP PP 10 06 46.9 +1.5
LOHW Long Hollow 97.09 26 eP P 10 02 52.9 +2.3
comp=Z,14nm,1.7s,mb5.1
BMN Battle Mountai 97.11 31 eP P 10 02 52.3 +1.6
comp=Z,13nm,1.1s,mb5.3
BMN LR LR
comp=Z,6µm,21.0s,MS6.1
BMN Battle Mountai 97.11 31 eP P 10 02 52.3 +1.5
BMN pmax pmax
comp=Z,13nm,1.1s,mb5.3
BMN MLR MLR
comp=Z,6µm,21.0s,MS6.1
L13A Double Diamond 97.12 28 ⇑P P 10 02 51.5 +0.7
baz=97,SNR=11
K15A Arbon 97.17 27 ⇑P P 10 02 51.1 +0.1
baz=97
SNOW Snow King Moun 97.17 26 eP P 10 02 52.2 +1.2
comp=Z,24nm,1.7s,mb5.3
N10A Dunphy 97.19 31 ⇑P P 10 02 51.5 +0.4
baz=97
REDW Red Top Meadow 97.22 26 eP P 10 02 54.0 +2.8
comp=Z,11nm,1.5s,mb5.1
J17A Brown Place, J 97.27 26 ⇓P P 10 02 51.6 +0.2
baz=97
M12A Wells 97.29 29 ⇓P P 10 02 51.6 +0.1
baz=97,SNR=5.9
I18A Diamond G Ranc 97.30 25 ⇓P P 10 02 51.4 -0.1
baz=97
K16A Soda Springs 97.40 27 ⇑P P 10 02 52.1 +0.1
baz=97,SNR=7.0
SNZO South Karori 97.43 135 PFAKE 10 03 00.0 +8.1
SNZO LR LR
comp=Z,3µm,21.0s,MS5.7
N11A Elko Archery C 97.44 30 ⇑P P 10 02 52.6 +0.4
baz=97
L14A Malta 97.45 28 ⇑P P 10 02 52.3 +0.1
baz=97,SNR=9.5
O10A Cortez Mining, 97.55 31 ⇑P P 10 02 53.2 +0.5
baz=97
CMB Columbia Colle 97.58 35 eP P 10 02 53.3 +0.3
comp=Z,22nm,1.4s,mb5.5
CMB LR LR
comp=Z,6µm,22.0s,MS6.0
CMB Columbia Colle 97.58 35 eP P 10 02 53.3 +0.4
CMB pmax pmax
comp=Z,22nm,1.4s,mb5.5
CMB MLR MLR
comp=Z,6µm,22.0s,MS6.0
M13A Montello 97.64 29 ⇓P P 10 02 53.6 +0.5
baz=97,SNR=11
M13A Montello 97.64 29 eP P 10 02 54.0 +0.9
comp=Z,33nm,1.5s,mb5.6
M13A ePP PP 10 06 51.6 +1.8
AHID Auburn Hatcher 97.64 26 PFAKE 10 03 00.0 +6.9
AHID LR LR
comp=Z,11µm,19.0s,MS6.4
J18A Kendall Valley 97.66 25 ⇑P P 10 02 53.6 +0.5
baz=97,SNR=8.1
N12A Clover Valley, 97.70 30 ⇑P P 10 02 54.5 +1.1
baz=97,SNR=14
N12A Clover Valley, 97.70 30 eP P 10 02 54.1 +0.7
comp=Z,36nm,1.4s,mb5.7
N12A ePP PP 10 06 54.4 +4.0
K17A Gardner Place, 97.72 26 ⇑P P 10 02 53.3 -0.1
baz=98
L15A Malad City 97.81 28 ⇓P P 10 02 53.9 +0.1
baz=98
M14A Sheep Mountain 97.85 28 ⇑P P 10 02 53.8 -0.3
baz=98,SNR=16
O11A Cowboy Ranch, 98.04 31 ⇓P P 10 02 55.3 +0.3
baz=98
N13A Wendover, West 98.05 29 ⇑P P 10 02 55.0 +0.1
baz=98
N13A Wendover, West 98.05 29 eP P 10 02 58.5 +3.5
comp=Z,12nm,0.7s,mb5.5
SAO San Andreas Ge 98.06 36 PFAKE 10 03 10.0 +15
SAO LR LR
comp=Z,4µm,21.0s,MS5.9
K18A Toltan Ranch, 98.14 26 ⇓P P 10 02 55.6 +0.2
baz=98
L16A Fish Haven 98.17 27 ⇓P P 10 02 55.3 -0.2
baz=98
EYMN Ely 98.18 11 eP P 10 02 55.1 -0.3
comp=Z,87nm,1.7s,mb6.0
EYMN LR LR
comp=Z,8µm,20.0s,MS6.2
BW06 Boulder Array 98.21 25 ⇑P P 10 02 54.8 -0.8
baz=98
BW06 Boulder Array 98.21 25 eP P 10 02 57.5 +1.9
comp=Z,7.9nm,1.4s,mb5.0
BW06 LR LR
comp=Z,10µm,22.0s,MS6.3
M15A Larsen Ranch, 98.24 28 ⇓P P 10 02 55.8 -0.1
baz=98
NVAR Mina Array Bea 98.25 33 P P 10 02 56.7 +0.8
NVAR PP PP 10 06 49.4 -5.2
NVAR PKKPbc PKKPbc 10 19 26.6 -0.6
NVAR Mina Array Bea 98.25 33 P P 10 02 56.7 +0.8
comp=Z,2.2nm,0.7s,mb4.8,baz=304,slow=4.2,SNR=10
NVAR PP PP 10 06 49.4 -5.2
comp=Z,2.2nm,0.9s,baz=301,slow=5.2,SNR=5.5
NVAR PKKPbc PKKPbc 10 19 26.6 -0.6
comp=Z,3.4nm,0.8s,baz=155,slow=4.6,SNR=14
L17A Cokeville 98.30 26 ⇓P P 10 02 55.5 -0.6
baz=98
O12A Currie 98.31 30 ⇑P P 10 02 56.4 +0.2
baz=98,SNR=16
SPUT South Promonto 98.37 28 eP P 10 02 59.0 +2.6
SPUT ePP PP 10 06 56.7 +1.2
K19A Absolon Red Bu 98.41 25 ⇓P P 10 02 55.5 -1.1
baz=98
HWUT Hardware Ranch 98.46 27 eP P 10 02 57.8 +0.9
comp=Z,219nm,2.6s,mb6.2
HWUT LR LR
comp=Z,9µm,19.0s,MS6.3
BGU Big Grassy Mou 98.47 29 eP P 10 02 55.7 -1.1
comp=Z,174nm,2.6s,mb6.1
N14A Grayback Hills 98.47 29 ⇓P P 10 02 56.5 -0.3
baz=98,SNR=7.7
TSUM Tsumeb 98.48 253 eP P 10 02 57.3 +0.2
comp=Z,34nm,1.6s,mb5.6
TSUM LR LR
comp=Z,4µm,20.0s,MS5.9
TSUM Tsumeb 98.48 253 LR LR 10 46 21.3
comp=Z,2µm,20.0s,MS5.7,baz=53,slow=35
P11A Circle Ranch, 98.48 31 ⇓P P 10 02 57.4 +0.4
baz=98
MLAC Mammoth Lakes 98.65 34 ⇑P P 10 02 58.3 +0.6
baz=98
N15A Stansbury Isla 98.70 28 ⇑P P 10 02 58.3 +0.4
baz=98,SNR=5.5
K20A Yellowstone Ra 98.73 25 ⇑P P 10 02 57.0 -0.9
baz=98
O13A Hicks Ranch, I 98.75 30 ⇓P P 10 02 58.0 -0.1
baz=98
L18A Fontenelle, Gr 98.77 26 ⇑P P 10 02 58.2 0.0
baz=98
Q10A Clear Creek Ra 98.79 32 ⇓P P 10 02 58.8 +0.4
baz=98
RSSD Black Hills 98.83 21 eP P 10 02 59.0 +0.6
comp=Z,79nm,1.5s,mb6.0
RSSD LR LR
comp=Z,10µm,22.0s,MS6.3
RSSD Black Hills 98.83 21 eP P 10 02 59.0 +0.6
RSSD pmax pmax
comp=Z,79nm,1.5s,mb6.0
RSSD MLR MLR
comp=Z,10µm,22.0s,MS6.3
CASY Casey 98.85 178 PFAKE 10 03 10.0 +12

CASY LR LR
comp=Z,3µm,19.0s,MS5.8
L19A Farson 98.86 26 ⇓P **P 10 02 58.4 -0.2**
baz=99
P12A McGill 98.91 31 ⇑P **P 10 02 59.1 +0.3**
baz=99,SNR=10
M17A Scullys Gap (B 98.92 27 ⇓P **P 10 02 58.9 0.0**
baz=99
TPH Tonopah 99.04 33 PFAKE 10 03 10.0 +11
TPH LR LR
comp=Z,4µm,20.0s,MS5.9
Q11A Duckwater 99.11 31 ⇑P **P 10 02 59.9 +0.2**
baz=99,SNR=8.3
N16A Rees Ranch, Co 99.13 27 ⇑P **P 10 03 00.1 +0.3**
baz=99
DUG Dugway 99.17 29 ⇓P **P 10 03 00.0 0.0**
baz=99,SNR=5.9
DUG Dugway 99.17 29 *e*P **P 10 03 01.2 +1.2**
comp=Z,34nm,1.8s,mb5.6
DUG LR LR
comp=Z,5µm,20.0s,MS6.0
DUG Dugway 99.17 29 *e*P **P 10 03 01.2 +1.2**
DUG pmax pmax
comp=Z,34nm,1.8s,mb5.6
DUG MLR MLR
comp=Z,5µm,20.0s,MS6.0
M18A Lyman 99.19 26 ⇑P **P 10 03 00.1 0.0**
baz=99
O15A The Old Anders 99.24 28 ⇓P **P 10 03 00.3 0.0**
baz=99
R10A Warm Springs 99.28 32 ⇑P **P 10 03 00.3 -0.2**
baz=99,SNR=11
P13A Bates Ranch, G 99.30 30 ⇑P **P 10 03 00.6 0.0**
baz=99,SNR=22
Q12A Willow Creek R 99.30 31 ⇓P **P 10 03 00.6 0.0**
baz=99
L20A Wamsutter 99.31 25 ⇓P **P 10 03 00.7 +0.1**
baz=99
N17A Moffit Pass 99.32 27 ⇑P **P 10 03 01.0 +0.4**
baz=99
JLU Jordanelle 99.37 28 *e*P **P 10 03 02.4 +1.6**
comp=Z,15nm,1.5s,mb5.3
TIN Tinemaha 99.40 34 ⇑P **P 10 03 01.5 +0.4**
baz=99
S10A Tonopah Range, 99.45 33 ⇑P **P 10 03 02.0 +0.7**
baz=99,SNR=12
M19A Rock Springs 99.45 26 ⇑P **P 10 03 01.1 -0.1**
baz=99
RCTC Rector, Farmer 99.51 35 ⇓P **P 10 03 00.9 -0.7**
baz=99
R11A Troy Canyon, C 99.55 32 ⇑P **P 10 03 01.7 0.0**
baz=99,SNR=12
P14A Drum Mountains 99.58 29 ⇑P **P 10 03 02.0 +0.1**
baz=99,SNR=6.9
DAU Daniels Canyon 99.61 28 *e*Pdif **P 10 03 05.0 +3.0**
comp=Z,4.3nm,1.0s,mb4.8
DAU Daniels Canyon 99.61 28 *e*P **P 10 03 05.0 +3.1**
DAU pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
NLU North Lily Min 99.68 28 *e*Pdif Pdif 10 03 03.2 +1.1
comp=Z,3.5nm,0.9s
O16A Springville 99.69 28 ⇑P Pdif 10 03 02.4 +0.2
baz=99
Q13A Wheeler Ranch, 99.72 30 ⇓P Pdif 10 03 02.9 +0.5
baz=100,SNR=5.5
N18A Larsen Ranch, 99.72 26 ⇓P Pdif 10 03 02.3 0.0
baz=100
M20A Sweetwater, Wa 99.82 25 ⇑P Pdif 10 03 03.3 +0.6
baz=100
GRAC Grapevine Rang 99.84 34 ⇑P Pdif 10 03 03.5 +0.6
baz=100
P15A Leamington 99.92 29 ⇑P Pdif 10 03 03.9 +0.6
baz=100
SMMC Simmler 99.93 36 ⇓P Pdif 10 03 03.7 +0.5
baz=100
VES Vestal, Richgr 99.96 35 ⇑P Pdif 10 03 03.5 +0.1
baz=100
CWC Cottonwood Cre 99.96 34 ⇓P Pdif 10 03 03.6 +0.2
baz=100
N19A John Jarvie Ra 99.98 26 ⇑P Pdif 10 03 03.6 +0.1
baz=100
R12A Pony Springs, 99.99 31 ⇑P Pdif 10 03 03.8 +0.3
baz=100
O17A Robinson Place 100.00 27 ⇑P Pdif 10 03 03.9 +0.3
baz=100
M21A Separation Pea 100.00 24 ⇑P Pdif 10 03 03.4 -0.2
baz=100
Q14A Sevier Lake (B 100.00 30 ⇑P Pdif 10 03 04.6 +1.0
baz=100,SNR=8.4
S11A Rachel 100.06 32 ⇓P Pdif 10 03 04.9 +1.0
baz=100
P16A Fountain Green 100.14 28 ⇑P Pdif 10 03 04.6 +0.4
baz=100
O18A Roosevelt 100.22 27 ⇑P Pdif 10 03 04.8 +0.2
baz=100
DAC Darwin (Calif) 100.32 34 PFAKE 10 03 20.0 +15
DAC LR LR
comp=Z,5µm,22.0s,MS6.0
COWI Conover 100.35 10 *e*P Pdif 10 03 07.0 +1.8
comp=Z,13nm,1.4s
COWI LR LR
comp=Z,501nm,20.0s,MS5.0
Q15A Fillmore 100.37 29 ⇓P Pdif 10 03 06.0 +0.7
baz=100
N20A Spence Gulch, 100.37 25 ⇑P Pdif 10 03 06.2 +0.9
baz=100
R13A O'Grain Ranch, 100.39 31 ⇑P Pdif 10 03 05.6 +0.3
baz=100
ISA Isabella 100.40 35 ⇓P Pdif 10 03 05.6 +0.2
baz=100
ISA Isabella 100.40 35 *e*P Pdif 10 03 06.8 +1.4
M22A Cedar Creek Ra 100.45 24 ⇑P Pdif 10 03 05.6 +0.1
baz=100
S12A Delamar Landin 100.48 32 ⇓P Pdif 10 03 06.9 +1.1
baz=100
FURC Furnace Creek, 100.51 34 ⇓P Pdif 10 03 06.3 +0.4
baz=100
O19A Miners Draw (B 100.52 26 ⇑P Pdif 10 03 06.0 +0.1
baz=100
MPMC Manual Prospec 100.55 34 ⇓P Pdif 10 03 06.5 +0.4
baz=100,SNR=5.8
TMUT Trail Mountain 100.58 28 *e*Pdif Pdif 10 03 09.0 +2.8
comp=Z,6.2nm,1.0s
P17A Butcher Ranch, 100.62 28 ⇓P Pdif 10 03 05.9 -0.4
baz=100
T11A Corn Creek, Al 100.62 32 ⇓P Pdif 10 03 07.6 +1.3
baz=100,SNR=9.1
ARVC Arvin 100.65 36 ⇑P Pdif 10 03 06.2 -0.3
baz=100
R14A James Farms, M 100.69 30 ⇑P Pdif 10 03 06.4 -0.3
baz=100
N21A Black Mountain 100.70 25 ⇑P Pdif 10 03 06.9 +0.2
baz=100
U10A Ash Meadows, A 100.80 33 ⇓P Pdif 10 03 07.9 +0.8
baz=101,SNR=5.2
MSU Marysvale 100.86 29 *e*Pdif Pdif 10 03 09.6 +2.1
comp=Z,40nm,1.7s
MSU Marysvale 100.86 29 *e*P Pdif 10 03 09.6 +2.2
MSU pmax pmax
comp=Z,40nm,1.7s
Q16A Castle Valley 100.92 28 ⇑P Pdif 10 03 07.4 -0.3
baz=101
PHWY Pilot Hill 100.92 23 *e*Pdif Pdif 10 03 08.8 +1.1
comp=Z,21nm,1.3s
S13A Holt Ranch, En 100.94 31 ⇑P Pdif 10 03 08.4 +0.6
baz=101,SNR=7.6
O20A White River Ci 100.99 26 ⇑P Pdif 10 03 08.3 +0.3
baz=101
SRU San Rafael 101.02 28 ⇓P Pdif 10 03 08.4 +0.3
baz=101
N22A Wattenberg Ran 101.03 24 ⇑P Pdif 10 03 08.9 +0.7
baz=101
R15A Junction 101.08 29 ⇑P Pdif 10 03 09.2 +0.9
baz=101
S14A Cedar City 101.08 30 ⇑P Pdif 10 03 08.5 +0.1
baz=101
N23A Red Feather La 101.12 24 ⇓P Pdif 10 03 08.6 0.0
baz=101
BSC Santa Cruz Isl 101.15 37 ⇓P Pdif 10 03 08.7 0.0
baz=101
P19A Cripple Cowboy 101.15 26 ⇑P Pdif 10 03 08.4 -0.3
baz=101
Q18A Rafter H Ranch 101.17 28 ⇑P Pdif 10 03 08.7 -0.2
baz=101
ECSD EROS Data Cent 101.19 16 *e*Pdif Pdif 10 03 07.2 -1.7
comp=Z,12nm,1.2s
ECSD LR LR
comp=Z,15µm,19.0s,MS6.5
O21A Pagoda 101.20 25 ⇓P Pdif 10 03 09.2 +0.3
baz=101
U11A Corn Creek 101.23 33 ⇓P Pdif 10 03 10.6 +1.5
baz=101
SHOC Shoshone 101.25 33 ⇓P Pdif 10 03 09.6 +0.4
baz=101,SNR=5.6
EDW2 Edwards Air Fo 101.26 35 ⇓P Pdif 10 03 09.8 +0.6
baz=101
T12A Moapa 101.28 32 ⇓P Pdif 10 03 09.9 +0.6
baz=101
R16A Teasdale 101.34 29 ⇓P Pdif 10 03 10.4 +0.8
baz=101
BLG Laguna Peak 101.35 36 ⇓P Pdif 10 03 09.6 0.0
baz=101
T13A Saint George 101.39 31 ⇑P Pdif 10 03 10.5 +0.8
baz=101
GSC Goldstone 101.49 34 ⇓P Pdif 10 03 10.3 +0.1
baz=101
GSC Goldstone 101.49 34 *e*Pdif Pdif 10 03 11.7 +1.5
comp=Z,14nm,1.4s
GSC Goldstone 101.49 34 *e*P Pdif 10 03 11.7 +1.5
GSC pmax pmax
comp=Z,14nm,1.4s
P20A De Beque 101.49 26 ⇑P Pdif 10 03 09.9 -0.3
baz=101
S15A Panguitch 101.50 30 ⇓P Pdif 10 03 11.4 +1.1
baz=101
R17A Hanksville Air 101.54 28 ⇑P Pdif 10 03 10.0 -0.4
baz=101
N24A Carr 101.54 23 ⇑P Pdif 10 03 10.9 +0.4
baz=101
O22A Kremmling 101.57 25 ⇑P Pdif 10 03 11.3 +0.7
baz=101
U12A Valley of Fire 101.60 32 ⇑P Pdif 10 03 11.0 +0.3
baz=101
DECC Green Verdugo 101.60 36 ⇓P Pdif 10 03 10.9 +0.2
baz=101
Q19A Hogan Spring (101.64 27 ⇓P Pdif 10 03 10.7 -0.2
baz=101
V11A Goodsprings 101.69 33 ⇑P Pdif 10 03 11.9 +0.8
baz=101
T14A Hurricane 101.71 31 ⇑P Pdif 10 03 11.8 +0.6
baz=102
RRX Edison Barstow 101.74 35 ⇑P Pdif 10 03 11.7 +0.3
baz=102
O23A Lake Granby, G 101.75 24 ⇑P Pdif 10 03 11.5 +0.2
baz=102
S16A Weppner Ranch, 101.78 29 ⇓P Pdif 10 03 11.6 +0.1
baz=102
TUQ Turquoise Moun 101.79 34 ⇓P Pdif 10 03 12.5 +0.9
baz=102
N25A Grover 101.81 23 ⇑P Pdif 10 03 11.8 +0.2
baz=102
P21A Newcastle 101.81 25 ⇓P Pdif 10 03 12.2 +0.6
baz=102
R18A Canyonlands Na 101.89 28 ⇓P Pdif 10 03 11.6 -0.4
baz=102
BFSC Mount Baldy Ra 101.94 35 ⇓P Pdif 10 03 12.4 +0.2
baz=102
P22A Eagle 102.00 25 ⇑P Pdif 10 03 13.2 +0.7
baz=102
Q20A Ridgley Place, 102.00 26 ⇓P Pdif 10 03 12.8 +0.3
baz=102
T15A Red Dirt Ranch 102.05 30 ⇑P Pdif 10 03 13.1 +0.4
baz=102
V12A Nelson 102.05 33 ⇓P Pdif 10 03 13.6 +0.9
baz=102
FMP Fort Macarthur 102.05 36 ⇑P Pdif 10 03 12.8 +0.1
baz=102
HEC Hector,Ludlow 102.10 34 ⇓P Pdif 10 03 13.3 +0.4
baz=102
O24A Longmont 102.11 24 ⇑P Pdif 10 03 13.1 +0.2
baz=102
PKME Peaks-Kenny Pk 102.15 356 PFAKE 10 03 20.0 +6.8
PKME LR LR
comp=Z,10µm,20.0s,MS6.3
S17A Black Ridge (B 102.17 29 ⇓P Pdif 10 03 13.4 +0.1
baz=102
U14A Mt Trumbull 102.21 31 ⇑P Pdif 10 03 14.7 +1.2
baz=102
R19A Curley Farm, L 102.22 27 ⇓P Pdif 10 03 13.3 -0.2
baz=102
ISCO Idaho Springs 102.22 24 *e*Pdif Pdif 10 03 15.2 +1.7
comp=Z,40nm,2.1s
ISCO LR LR
comp=Z,12µm,19.0s,MS6.4
ISCO Idaho Springs 102.22 24 *e*P Pdif 10 03 15.2 +1.7
ISCO pmax pmax
comp=Z,40nm,2.1s
ISCO MLR MLR
comp=Z,12µm,19.0s,MS6.4
PV10 Paradox Valley 102.23 27 *e*Pdif Pdif 10 03 15.1 +1.6
comp=Z,13nm,1.0s
CIS Catalina Islan 102.24 36 ⇓P Pdif 10 03 14.1 +0.6
baz=102
BBRC Big Bear Solar 102.28 35 ⇑P Pdif 10 03 13.9 +0.2
baz=102
SMCO Snowmass 102.29 25 *e*Pdif Pdif 10 03 15.2 +1.5
comp=Z,16nm,1.4s
SMCO *e*PP PP 10 07 25.1 0.0
V13A Grand Canyon W 102.33 32 ⇑P Pdif 10 03 14.8 +0.9
baz=102
OGNE Ogallala 102.33 21 PFAKE 10 03 30.0 +16
OGNE LR LR
comp=Z,8µm,21.0s,MS6.2
W12A Cal Nev Ari 102.39 33 ⇓P Pdif 10 03 14.1 -0.1
baz=102
O25A Wiggins 102.44 23 ⇑P Pdif 10 03 14.5 0.0
baz=102
T16A Glen Canyon Da 102.44 30 ⇑P Pdif 10 03 13.9 -0.5
baz=102
S18A Hurst Farm, Bl 102.45 28 ⇑P Pdif 10 03 14.5 0.0
baz=102
GMRC Granite Mounta 102.45 34 ⇓P Pdif 10 03 15.3 +0.8
baz=102
SCI San Clemente I 102.51 37 ⇓P Pdif 10 03 15.6 +0.8
baz=102
P23A Jefferson 102.52 24 ⇑P Pdif 10 03 15.3 +0.5
baz=102
U15A North Rim 102.58 30 ⇑P Pdif 10 03 15.5 +0.4
baz=102
Q22A Crested Butte, 102.59 25 ⇑P Pdif 10 03 15.4 +0.3
baz=102
PV01 Paradox Valley 102.62 27 *e*Pdif Pdif 10 03 16.9 +1.6
comp=Z,380nm,0.9s
R20A Redvale 102.64 27 ⇑P Pdif 10 03 16.0 +0.7
baz=102
SADO Sadowa 102.67 3 P Pdif 10 03 17.6 +2.1
comp=Z,1.3nm,0.8s,baz=27,slow=14,SNR=3.1
SADO PP PP 10 07 25.1 -2.6
comp=Z,1.4nm,0.4s,baz=306,slow=20,SNR=4.1
MURC Murrieta 102.68 35 ⇓P Pdif 10 03 16.0 +0.5
baz=102
P24A Kohler Place, 102.71 24 ⇓P Pdif 10 03 16.3 +0.7
baz=102
T17A Navajo Res., N 102.72 29 ⇓P Pdif 10 03 15.4 -0.3
baz=102
S19A Harvey Farm, M 102.74 28 ⇑P Pdif 10 03 16.4 +0.6
baz=102
R21A Cimarron 102.80 26 ⇑P Pdif 10 03 16.8 +0.8
baz=102
SUR Sutherland 102.80 240 PFAKE 10 03 30.0 +14
SUR LR LR
comp=Z,3µm,21.0s,MS5.8
V14A Boquillas Ranc 102.90 31 ⇓P Pdif 10 03 17.3 +0.8
baz=103
BELC Belle Mtn. Jos 102.93 34 ⇓P Pdif 10 03 17.2 +0.6
baz=103
LONY Lake Ozonia 102.94 0 PFAKE 10 03 30.0 +13
LONY LR LR
comp=Z,6µm,20.0s,MS6.1
Q23A Hartsel 102.94 25 ⇑P Pdif 10 03 16.8 +0.2
baz=103
NEE2 Needles Airpor 102.95 33 ⇑P Pdif 10 03 17.5 +0.8
baz=103
P25A Willow Gulch B 102.96 23 ⇑P Pdif 10 03 17.5 +0.8
baz=103
T18A Mexican Hat 102.98 28 ⇓P Pdif 10 03 17.4 +0.6
baz=103
W13A Hualapai Mount 103.00 32 ⇑P Pdif 10 03 17.6 +0.6
baz=103
PFO Pinyon Flat Ob 103.03 35 ⇓P Pdif 10 03 17.5 +0.4
baz=103
PFO Pinyon Flat Ob 103.03 35 PFAKE 10 03 30.0 +13
PFO LR LR
comp=Z,5µm,22.0s,MS6.0
Q24A Divide 103.12 24 ⇓P Pdif 10 03 17.8 +0.3
baz=103
V15A Kaibab Nationa 103.15 31 ⇑P Pdif 10 03 18.5 +0.9
baz=103
IRM Iron Mountain 103.20 34 ⇑P Pdif 10 03 18.9 +1.1
baz=103
R22A Saguache, Gunn 103.21 26 ⇑P Pdif 10 03 18.8 +0.9
baz=103
DBIC Dimbokro 103.23 287 Pdiff Pdif 10 03 18.9 +1.0
comp=Z,2.6nm,0.8s,baz=55,slow=7.2,SNR=3.4
DBIC PP PP 10 07 31.6 -1.9
comp=Z,28nm,1.1s,baz=47,slow=8.3,SNR=7.5
DBIC Dimbokro 103.23 287 P Pdif 10 03 18.9 +1.0
DBIC 10 07 31.6
DBIC pmax pmax
comp=Z,3.0nm,0.8s
DBIC pmax pmax
comp=Z,28nm,1.1s
W14A Seligman 103.27 32 ⇓P Pdif 10 03 19.2 +1.1
baz=103
JFWS Jewell Farm 103.27 12 *e*Pdif Pdif 10 03 17.9 -0.2
comp=Z,12nm,0.9s
JFWS LR LR
comp=Z,5µm,20.0s,MS6.1
JFWS Jewell Farm 103.27 12 *e*P Pdif 10 03 17.9 -0.2
JFWS pmax pmax
comp=Z,12nm,0.9s
JFWS MLR MLR
comp=Z,5µm,20.0s,MS6.1
LBNH Lisbon 103.28 358 PFAKE 10 03 30.0 +12
LBNH LR LR
comp=Z,8µm,19.0s,MS6.2
109C Camp Elliot, M 103.30 36 ⇑P Pdif 10 03 19.0 +0.7
baz=103
KIC Kosan Boka 103.31 287 *e*P PKiKP 10 07 34.1 -4.1
comp=Z,94nm,1.2s
U16A Tuba City 103.32 30 ⇑P Pdif 10 03 18.8 +0.5
baz=103
TIC Toumodi 103.37 287 *e*P PKiKP 10 07 34.5 -3.8
comp=Z,100nm,1.4s
X13A Yucca 103.45 33 ⇑P Pdif 10 03 19.2 +0.3
baz=103
MVCO Mesa Verde 103.45 27 ⇑P Pdif 10 03 20.0 +1.1
baz=103
MVCO Mesa Verde 103.45 27 *e*Pdif Pdif 10 03 21.6 +2.7
comp=Z,7.0nm,1.3s
MVCO LR LR
comp=Z,3µm,19.0s,MS5.9
BC3 Big Chuckawall 103.47 34 ⇓P Pdif 10 03 18.8 -0.2
baz=103
Q25A Bedland, Calha 103.47 23 ⇑P Pdif 10 03 19.1 0.0
baz=103
T19A Beclabito 103.58 28 ⇑P Pdif 10 03 20.0 +0.5
baz=103
NCB Newcomb 103.59 360 PFAKE 10 03 30.0 +10
NCB LR LR
comp=Z,6µm,19.0s,MS6.1
U18A Rough Rock, Ch 103.60 29 ⇓P Pdif 10 03 20.4 +0.8
baz=103
S22A 4UR Ranch, Cre 103.61 26 ⇓P Pdif 10 03 19.7 +0.1
baz=103
LIC Lamto 103.62 287 *e*P PKiKP 10 07 36.4 -2.4
comp=Z,84nm,1.2s
MONP Monument Peak 103.64 35 ⇓P Pdif 10 03 19.9 +0.2
baz=103
W15A Williams 103.65 31 ⇑P Pdif 10 03 20.2 +0.4
baz=103
SCIA State Center 103.68 14 PFAKE 10 03 30.0 +10
SCIA LR LR
comp=Z,9µm,19.0s,MS6.3
WUAZ Wupatki 103.75 30 ⇑P Pdif 10 03 21.4 +1.1
baz=104
WUAZ Wupatki 103.75 30 *e*Pdif Pdif 10 03 22.0 +1.8
comp=Z,5.1nm,1.0s
WUAZ LR LR
comp=Z,5µm,20.0s,MS6.0
R24A Sanders Place, 103.80 24 ⇑P Pdif 10 03 21.0 +0.5
baz=104
SWSC Sam W. Stewart 103.90 35 ⇑P Pdif 10 03 21.8 +0.9
baz=104
V17A Tonalea, Kykot 103.90 30 ⇑P Pdif 10 03 21.9 +1.0
baz=104
S23A Nye Farm, Mont 103.95 25 ⇑P Pdif 10 03 22.1 +0.9
baz=104
U19A Dine' College, 103.97 28 ⇑P Pdif 10 03 21.2 0.0
baz=104
DVTC Desert V Tower 103.98 35 ⇓P Pdif 10 03 22.0 +0.7
baz=104
T21A Navajo Lake 104.01 27 ⇑P Pdif 10 03 22.1 +0.7
baz=104
W16A Flagstaff 104.04 31 ⇓P Pdif 10 03 22.4 +0.9
baz=104
SDCO Great Sand Dun 104.09 25 *e*Pdif Pdif 10 03 20.3 -1.5
comp=Z,13nm,1.8s
SDCO LR LR
comp=Z,8µm,19.0s,MS6.3
U20A Newcomb 104.17 28 ⇓P Pdif 10 03 22.5 +0.3
baz=104
V18A Ganado 104.18 29 ⇑P Pdif 10 03 22.5 +0.3
baz=104
T22A Edith 104.23 26 ⇑P Pdif 10 03 23.0 +0.6
baz=104
GLA Glamis 104.27 34 ⇓P Pdif 10 03 23.0 +0.4
baz=104
S24A Houchin Ranch, 104.29 25 ⇑P Pdif 10 03 23.1 +0.4
baz=104
Y14A Wickenburg 104.37 32 ⇑P Pdif 10 03 23.9 +0.9
baz=104
W17A Winslow 104.40 30 ⇓P Pdif 10 03 24.0 +0.9
baz=104
U21A Nageezi 104.46 27 ⇑P Pdif 10 03 24.6 +1.2
baz=104
T23A Casias Ranch, 104.53 26 ⇓P Pdif 10 03 24.5 +0.8
baz=104
S25A Robets Cordova 104.54 24 ⇓P Pdif 10 03 24.1 +0.3
baz=104
V19A Window Rock 104.54 28 ⇓P Pdif 10 03 24.1 +0.3
baz=104
X16A Lo Mia Camp, P 104.66 31 ⇓P Pdif 10 03 25.2 +0.9
baz=104
Y15A Casa Rosa Ranc 104.66 32 ⇓P Pdif 10 03 25.2 +0.9
baz=104
Z13A Yuma Proving G 104.69 33 ⇓P Pdif 10 03 25.5 +1.0
baz=104
V20A Brimhall 104.70 28 ⇑P Pdif 10 03 25.3 +0.8
baz=104
W18A Petrified Fore 104.78 29 ⇑P Pdif 10 03 25.3 +0.5
baz=104
AAM Ann Arbor 104.78 7 PFAKE 10 03 40.0 +15
AAM LR LR
comp=Z,7µm,20.0s,MS6.2
W19A Sanders 104.92 29 ⇓P Pdif 10 03 26.2 +0.7
baz=105
CBKS Cedar Bluff 104.98 20 *e*PKPdf PKiKP 10 07 39.6 -1.1
CBKS LR LR
comp=Z,10µm,19.0s,MS6.4
RAR Rarotonga 104.99 106 PFAKE 10 03 40.0 +14
RAR LR LR
comp=Z,4µm,20.0s,MS6.0
X17A Forest Lakes 105.00 30 ⇑P Pdif 10 03 26.4 +0.6
baz=105
V21A Milan 105.02 27 ⇑P Pdif 10 03 26.7 +0.8
baz=105
T25A Trinidad 105.02 24 ⇑P Pdif 10 03 26.2 +0.3
baz=105
Y16A Circle Bar Ran 105.10 31 ⇑P Pdif 10 03 26.5 +0.2
baz=105
U23A El Rito 105.10 26 ⇓P Pdif 10 03 26.8 +0.6
baz=105
MAW Mawson 105.11 196 *e*PKPdf PKiKP 10 07 40.7 +0.9
MAW LR LR
comp=Z,5µm,20.0s,MS6.0
MAW Mawson 105.11 196 PP PP 10 07 40.2 -6.6
comp=Z,5.1nm,1.1s,baz=352,slow=6.5,SNR=5.3
MAW PKKPbc PKKPbc 10 19 07.9 -0.6
comp=Z,2.4nm,0.5s,baz=179,slow=3.0,SNR=14
X18A Snowflake 105.19 30 ⇓P Pdif 10 03 27.3 +0.6
baz=105
ERPA Erie 105.27 4 PFAKE 10 07 50.0 +8.9
ERPA LR LR
comp=Z,6µm,19.0s,MS6.2
W20A Ramah 105.27 28 ⇓P Pdif 10 03 27.5 +0.5
baz=105
Z15A Gila River Ind 105.30 32 ⇑P Pdif 10 03 27.0 -0.1
baz=105
BINY Binghamton 105.35 1 PFAKE 10 07 50.0 +8.8
BINY LR LR
comp=Z,8µm,19.0s,MS6.3
Y17A Roosevelt 105.53 31 ⇑P Pdif 10 03 28.5 +0.3
baz=105

X19A	St. Johns	105.56	29	⇑P		Pdif	10 03 28.4	+0.1
	baz=105							
KSU1	Kansas State U	105.56	18	ePKPdf	PKiKP		10 07 43.3	+1.5
KSU1				LR	LR			
	comp=Z,14μm,20.0s,MS6.5							
Z16A	Peralta Trail,	105.58	31	⇓P		Pdif	10 03 28.7	+0.3
	baz=105							
W21A	San Fidel	105.62	28	⇓P		Pdif	10 03 28.5	0.0
	baz=105							
V23A	Ortiz Mt. (NFS	105.62	26	⇑P		Pdif	10 03 29.2	+0.6
	baz=105							
U25A	Circle Dot Ran	105.68	25	⇑P		Pdif	10 03 28.9	0.0
	baz=105							
X20A	Quemado	105.78	29	⇓P		Pdif	10 03 29.5	+0.2
	baz=106							
U26A	Atchley Ranch,	105.92	24	⇑P		Pdif	10 03 29.9	0.0
	baz=106							
W22A	Albuquerque	105.96	27	⇓P		Pdif	10 03 30.2	+0.1
	baz=106							
V24A	Rampart Ranch,	105.98	26	⇓P		Pdif	10 03 29.7	-0.5
	baz=106							
Y19A	Nutrioso	105.98	30	⇑P		Pdif	10 03 29.7	-0.5
	baz=106							
116A	Eloy	106.11	32	⇓P		Pdif	10 03 31.6	+0.8
	baz=106							
V25A	Rancho No Teng	106.11	25	⇑P		Pdif	10 03 30.6	-0.2
	baz=106							
214A	Organ Pipe Nat	106.12	33	⇑P		Pdif	10 03 31.2	+0.4
	baz=106							
X21A	Alamocita Cree	106.15	28	⇑P		Pdif	10 03 31.9	+1.0
	baz=106							
W23A	Werner Place,	106.15	27	⇑P		Pdif	10 03 31.1	+0.2
	baz=106							
ANMO	Albuquerque	106.22	27	ePdif		Pdif	10 03 33.0	+1.7
	comp=Z,2.2nm,1.0s							
ANMO				ePP	PP		10 07 57.6	+3.2
ANMO				LR	LR			
	comp=Z,7μm,20.0s,MS6.2							
ANMO	Albuquerque	106.22	27	Pdiff	Pdif		10 03 32.4	+1.1
	comp=Z,1.3nm,1.1s,baz=334,slow=5.4,SNR=5.3							
ANMO				PP	PP		10 07 46.2	-8.2
	comp=Z,1.7nm,0.9s,baz=4.1,slow=1.6,SNR=7.7							
Y20A	Horse Springs,	106.38	29	⇑P		Pdif	10 03 32.3	+0.4
	baz=106							
W24A	Lazy 6 Ranch,	106.39	26	⇓P		Pdif	10 03 31.6	-0.4
	baz=106							
Z18A	Geronimo	106.40	31	⇓P		Pdif	10 03 32.1	+0.1
	baz=106							
V26A	Tequesquite Ra	106.44	24	⇓P		Pdif	10 03 31.9	-0.3
	baz=106							
117A	Oracle	106.53	31	⇑P		Pdif	10 03 32.9	+0.2
	baz=106							
Z19A	T-Link Ranch,	106.55	30	⇓P		Pdif	10 03 32.9	+0.2
	baz=106							
Y21A	Point of Rocks	106.58	28	⇓P		Pdif	10 03 33.2	+0.3
	baz=106							
LENM	Lemitar	106.72	28	ePKPdf	PKiKP		10 07 40.7	-3.3
W25A	X Bar L Ranch,	106.72	25	⇓P		Pdif	10 03 33.9	+0.4
	baz=106							
TUC	Tucson	106.73	32	ePKPdf	PKiKP		10 07 43.9	-0.2
TUC				LR	LR			
	comp=Z,5μm,20.0s,MS6.1							
118A	Homack Ranch,	106.81	31	⇑P		Pdif	10 03 33.7	-0.1
	baz=107							
W26A	Owens Ranch, T	107.09	25	⇑P		Pdif	10 03 35.5	+0.4
	baz=107							
X26A	CR and CF Fran	107.56	25	⇑P		Pdif	10 03 38.0	+0.8
	baz=107							
X27A	F and S Farms,	107.72	24	⇑P		Pdif	10 03 38.4	+0.5
	baz=108							
MCWV	Mont Chateau	107.73	4	PFAKE			10 08 00.0	+14
MCWV				LR	LR			
	comp=Z,11μm,19.0s,MS6.4							
CCM	Cathedral Cave	107.79	14	PFAKE			10 08 00.0	+14
CCM				LR	LR			
	comp=Z,8μm,19.0s,MS6.3							
AMTX	Amarillo	107.99	23	ePKPdf	PKiKP		10 07 48.5	+2.2
AMTX				LR	LR			
	comp=Z,7μm,22.0s,MS6.2							
Z24A	Sheeppen Canyo	108.08	27	⇓P		Pdif	10 03 40.4	+0.9
	baz=108							
WMOK	Wichita Mounta	109.04	21	ePdif		Pdif	10 03 45.9	+2.1
WMOK				LR	LR			
	comp=Z,8μm,21.0s,MS6.3							
MNTX	Cornudas Mount	109.52	28	ePKPdf	PKiKP		10 07 50.8	+1.4
MNTX				LR	LR			
	comp=Z,6μm,21.0s,MS6.1							
BLA	Blacksburg	110.12	5	PFAKE			10 08 00.0	+10
BLA				LR	LR			
	comp=Z,8μm,19.0s,MS6.3							
WVT	Waverly	110.29	11	PFAKE			10 08 00.0	+9.3
WVT				LR	LR			
	comp=Z,8μm,19.0s,MS6.3							
MIAR	Mount Ida	110.64	17	PFAKE			10 08 00.0	+8.6
MIAR				LR	LR			
	comp=Z,12μm,20.0s,MS6.5							
PPT	Papeete	111.63	97	ePdif	Pdif		10 03 51.9	-3.4
	comp=Z,54nm,26.0s							
PPT	Papeete	111.63	97	ePP	PP		10 08 30.5	-4.9
	comp=Z,155nm,26.5s							
PPT	Papeete	111.63	97	ePS	PS		10 18 03.2	-4.5
	comp=Z,2μm,28.5s							
PPT				eSS	SS		10 24 04.8	-6.4
	comp=Z,1μm,28.0s							
PPT				eLR	LR		10 41 01.4	
	comp=Z,10μm,23.0s,baz=303							
PPT	Papeete	111.63	97	eP	Pdif		10 03 51.9	-3.4
PPT				e			10 08 30.5	
PPT				ePS	PS		10 18 03.2	-4.5
CNNC	Cliffs of the	112.23	3	PFAKE			10 08 10.0	+16
CNNC				LR	LR			
	comp=Z,10μm,19.0s,MS6.4							
TXAR	Lajitas Array	112.29	27	i PKiKP	PKiKP		10 07 53.9	-0.7
	comp=Z,1.2nm,0.6s,baz=215,slow=1.4,SNR=23							
TXAR				PP	PP		10 08 33.6	-4.9
	comp=Z,4.1nm,1.1s,baz=338,slow=3.0,SNR=6.6							
TXAR				PKKPbc	PKKPbc		10 18 44.5	0.0
	comp=Z,8.3nm,1.0s,baz=155,slow=6.2,SNR=33							
TXAR	Lajitas Array	112.29	27	i PKiKP	PKiKP		10 07 53.9	-0.7
TXAR							10 08 33.6	
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
TXAR				pmax	pmax			
	comp=Z,4.0nm,1.1s							
JCT	Junction City	112.65	24	ePKPdf	PKiKP		10 07 54.0	-1.3
JCT				LR	LR			
	comp=Z,7μm,19.0s,MS6.3							
NATX	Nacogdoches	113.01	19	PFAKE			10 08 10.0	+14
NATX				LR	LR			
	comp=Z,8μm,22.0s,MS6.3							
LRAL	Lakeview Retre	113.45	11	PFAKE			10 08 10.0	+13
LRAL				LR	LR			
	comp=Z,9μm,19.0s,MS6.4							
VBMS	Vicksburg	113.58	15	PFAKE			10 08 10.0	+13
VBMS				LR	LR			
	comp=Z,11μm,22.0s,MS6.4							
NHSC	New Hope	114.22	5	PFAKE			10 08 10.0	+12
NHSC				LR	LR			
	comp=Z,7μm,20.0s,MS6.2							
HKT	Hockley	114.39	20	PFAKE			10 08 10.0	+11
HKT				LR	LR			
	comp=Z,9μm,21.0s,MS6.4							
BBSR	BB Station	114.51	351	PFAKE			10 08 10.0	+11
BBSR				LR	LR			
	comp=Z,3μm,20.0s,MS5.9							
TAOE	Nuku Hiva Isla	115.19	84	ePP	PP		10 08 56.3	-4.3
	comp=Z,186nm,24.9s							
TAOE				eSKSac	SKSac		10 14 39.2	-10
	comp=Z,2μm,29.8s							
TAOE	Nuku Hiva Isla	115.19	84	ePS	PS		10 18 34.9	-5.5
	comp=Z,2μm,27.1s							
TAOE				eSS	SS		10 24 50.9	-7.3
	comp=Z,3μm,27.4s							
TAOE				eLR	LR		10 42 43.2	
	comp=Z,11μm,25.9s,baz=307							
BRAL	Brewton	115.42	12	PFAKE			10 08 10.0	+9.4
BRAL				LR	LR			
	comp=Z,7μm,20.0s,MS6.3							
KVTX	Kingsville	115.99	23	PFAKE			10 08 10.0	+8.2
KVTX				LR	LR			
	comp=Z,8μm,21.0s,MS6.3							
SHEL	Horse Pasture	116.16	267	PFAKE			10 08 10.0	+7.8
SHEL				LR	LR			
	comp=Z,2μm,20.0s,MS5.7							
SBA	Scott Base	116.18	168	ePKPdf	PKPdf		10 08 00.4	-0.1
SBA				LR	LR			
	comp=Z,2μm,21.0s,MS5.7							

DWPF	Disney	119.06	7	PFAKE			10 08 20.0	+12
DWPF				LR	LR			
	comp=Z,8μm,19.0s,MS6.4								
NVL	N'lazarevskaya	121.78	203	⇓i PKiKP	PKPdf		10 08 10.0	-1.4
NVL				e			10 15 19.3	
MAIT	Maitri	121.81	203	ePKPab	PKPdf		10 08 10.4	-1.1
QSPA	South Pole Qui	122.58	180	ePKPdf	PKPdf		10 08 11.2	-1.6
QSPA				LR	LR			
	comp=Z,4μm,20.0s,MS6.0								
QSPA	South Pole Qui	122.58	180	PKKPbc	PKKPbc		10 18 07.6	-1.0
	comp=Z,4.4nm,0.7s,baz=127,slow=2.2,SNR=15								
TEIG	Tepich	125.64	16	PFAKE			10 08 30.0	+10
TEIG				LR	LR			
	comp=Z,5μm,19.0s,MS6.2								
GRTK	Grand Turk	125.89	356	PFAKE			10 08 30.0	+9.1
GRTK				LR	LR			
	comp=Z,6μm,20.0s,MS6.3								
RKT	Rikitea	126.34	96	eSS	SS		10 27 15.6	-5.8
	comp=Z,1μm,29.0s								
RKT				eLR	LR		10 47 46.7		
	comp=Z,6μm,34.5s								
RKT	Rikitea	126.34	96	eSS	SS		10 27 15.6	-5.8
CMIG	Matias Romero	126.69	25	PKP	PKPdf		10 08 21.1	-1.4
	comp=Z,6.2nm,0.9s,baz=8.0,slow=3.9,SNR=20								
CMIG				PP	PP		10 10 17.1	-0.6
	comp=Z,4.7nm,1.0s,baz=307,slow=4.3,SNR=6.0								
GTBY	Guantanamo Bay	127.56	1	PFAKE			10 08 40.0	+16
GTBY				LR	LR				
	comp=Z,8μm,20.0s,MS6.4								
ANWB	Willy Bob	128.36	344	PFAKE			10 08 40.0	+14
ANWB				LR	LR				
	comp=Z,2μm,22.0s,MS5.8								
SDDR	Presa de Saban	128.41	356	PFAKE			10 08 40.0	+14
SDDR				LR	LR				
	comp=Z,6μm,20.0s,MS6.2								
VNA1	Neumayer--Stat	128.43	203	e		PKPdf	10 08 23.1	-1.0
MTP	Monte Pirata	128.66	349	ePKPdf	PKPdf		10 08 28.2	+1.9
SJG	San Juan	128.74	350	PFAKE			10 08 40.0	+14
SJG				LR	LR				
	comp=Z,4μm,20.0s,MS6.1								
MTDJ	Mount Denham	129.17	4	PFAKE			10 08 40.0	+13
MTDJ				LR	LR				
	comp=Z,7μm,21.0s,MS6.3								
FDF	Fort de France	131.03	343	PFAKE			10 08 40.0	+9.2
FDF				LR	LR				
	comp=Z,3μm,22.0s,MS5.9								
PTCN	Pitcairn Islan	131.20	96	PFAKE			10 08 40.0	+9.2
PTCN				LR	LR				
	comp=Z,3μm,20.0s,MS6.0								
TGUH	Tegucigalpa,Un	131.82	17	ePKPdf	PKPdf		10 08 33.7	+1.4
TGUH				LR	LR				
	comp=Z,5μm,22.0s,MS6.2								
BBGH	Gun Hill	132.13	340	PFAKE			10 08 40.0	+7.1
BBGH				LR	LR				
	comp=Z,4μm,22.0s,MS6.1								
GRGR	Grenville	133.66	343	PFAKE			10 08 50.0	+14
GRGR				LR	LR				
	comp=Z,2μm,22.0s,MS5.9								
RCBR	Riachuelo	135.17	298	PFAKE			10 08 50.0	+11
RCBR				LR	LR				
	comp=Z,3μm,22.0s,MS5.9								
JTS	JuntasAbangare	136.00	15	PFAKE			10 08 50.0	+10
JTS				LR	LR				
	comp=Z,3μm,22.0s,MS6.0								
BCIP	Isla Barro Col	137.95	8	PFAKE			10 09 00.0	+16
BCIP				LR	LR				
	comp=Z,4μm,20.0s,MS6.2								
SDV	Santo Domingo	138.38	354	ePKPdf	PKPdf		10 08 46.6	+1.9
SDV				LR	LR				
	comp=Z,1μm,19.0s,MS5.6								
ROSC	El Rosal	142.54	360	PKP	PKPdf		10 08 50.8	-1.3
	comp=Z,12nm,0.6s,baz=326,slow=3.7,SNR=9.1								
PAYG	Puerto Ayora	144.75	28	ePKPdf	PKPdf		10 08 52.6	-3.4
PAYG				LR	LR				
	comp=Z,2μm,21.0s,MS5.9								
OTAV	Otavalo	146.92	7	ePKPdf	PKPdf		10 09 00.6	+0.9
OTAV				ePKPbc	PKPbc		10 09 02.5	+0.9
OTAV				ePKPab	PKPab		10 09 03.5	+0.6
OTAV				LR	LR				
	comp=Z,2μm,21.0s,MS6.0								
PMSA	Palmer Station	147.37	188	PFAKE			10 09 10.0	+11
PMSA				LR	LR				
	comp=Z,4μm,21.0s,MS6.2								
CAM4	Nova Friburgo	149.95	282	⇑i P		PKPdf	10 09 06.4	+2.0
CAM4				i			10 09 08.8		
CAM4				i			10 09 11.0		
CAM4				i			10 09 13.0		
CAM4				i			10 09 19.0		
CAM4				i			10 09 41.3		
CAM4				i			10 09 48.2		
CAM4				i			10 10 09.9		
ATAH	Atahualpa	154.20	9	PKP	PKPdf		10 09 11.0	0.0
	comp=Z,23nm,1.2s,baz=353,slow=2.5,SNR=13								
ATAH				PKPab	PKPab		10 09 33.5	+0.8
	comp=Z,87nm,1.0s,baz=334,slow=2.8,SNR=14								
SPB	Sao Paulo	154.50	284	PFAKE			10 09 20.0	+8.9
SPB				LR	LR				
	comp=Z,3μm,20.0s,MS6.1								
USHA	Ushuaia	157.57	189	PKP	PKPdf		10 09 13.9	-0.2
	baz=209,slow=19								
USHA				PKPab	PKPab		10 09 45.6	-0.4
	comp=Z,14nm,0.8s,baz=174,slow=5.8,SNR=2.8								
NNA	Nana	159.16	6	ePKPdf	PKPdf		10 09 17.9	+0.6
NNA				LR	LR				
	comp=Z,2μm,21.0s,MS6.0								
NNA	Nana	159.16	6	PKP	PKPdf		10 09 18.0	+0.6
	comp=Z,4.6nm,0.3s,baz=250,slow=7.1,SNR=3.3								
NNA				PKPab	PKPab		10 09 53.5	-0.4
	comp=Z,24nm,0.8s,baz=297,slow=2.6,SNR=7.9								
SIV	San Ignacio	159.30	321	PKP	PKPdf		10 09 17.2	-0.2
	comp=Z,8.5nm,0.8s,baz=85,slow=2.8,SNR=23								
SIV				PKPab	PKPab		10 09 53.8	-0.8
	comp=Z,28nm,0.9s,baz=67,slow=5.3,SNR=15								
LPAZ	La Paz	162.57	339	PKP	PKPdf		10 09 20.9	0.0
	comp=Z,26nm,1.0s,baz=21,slow=4.8,SNR=30								
LPAZ				PKPab	PKPab		10 10 08.1	-0.7
	comp=Z,4.9nm,0.8s,baz=39,slow=9.9,SNR=2.6								
LPAZ	La Paz	162.57	339	ePKIKP	PKPdf		10 09 21.3	+0.4
LPAZ				MLR	MLR				
	comp=Z,4μm,21.0s								
CPUP	Villa Florida	163.74	289	PKP	PKPdf		10 09 21.5	-0.3
CPUP				PKPab	PKPab		10 10 13.9	0.0
CPUP				LR	LR				
	comp=Z,600nm,21.0s								
CPUP	Villa Florida	163.74	289	PKP	PKPdf		10 09 21.5	-0.3
	comp=Z,27nm,1.2s,baz=49,slow=1.7,SNR=14								
CPUP				PKPab	PKPab		10 10 13.9	0.0
	comp=Z,5.1nm,0.7s,baz=88,slow=4.5,SNR=5.4								
TRQA	Tornquist	168.53	239	ePKPdf	PKPdf		10 09 25.1	-0.1
TRQA				ePKPab	PKPab		10 10 34.7	-0.1
TRQA				LR	LR				
	comp=Z,4μm,19.0s								
PLCA	Paso Flores	171.48	201	PKP	PKPdf		10 09 26.9	0.0
	comp=Z,58nm,1.2s,baz=241,slow=0.9,SNR=7.7								
PLCA	Paso Flores	171.48	201	PKIKP	PKPdf		10 09 26.9	+0.1
PLCA				pmax	pmax				
	comp=Z,58nm,1.2s								
CFAA	Coronel Fontan	174.56	281	PKP	PKPdf		10 09 28.1	-0.2
	comp=Z,4.4nm,1.1s,baz=262,slow=0.7,SNR=16								
CFAA				PKPab	PKPab		10 11 01.1	-0.8
	comp=Z,1.4nm,1.1s,baz=62,slow=3.0,SNR=4.2								
CFAA				PP	PP		10 14 54.0	-0.6
	comp=Z,0.8nm,0.9s,baz=116,slow=4.9,SNR=3.5								
LCO	Las Campanas	175.00	318	ePKPdf	PKPdf		10 09 28.9	+0.4
LCO				LR	LR				
	comp=Z,4μm,22.0s								

*NEIC **05** 09:54:43.0, 17.11N×101.38W, h17km, MD3.8(MEX), After MEX.*

MEX 05 09:54:42.4±0.7, 17.07N×101.45W, h20km±28km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZIIG	Zihuatanejo	0.53	358	i P		Pb	09 54 51.0	-2.1
ZIIG				i S		Sb	09 54 58.5	-1.8
ZIIG	Zihuatanejo	0.53	358	i P		Pb	09 54 51.0	-2.1
ZIIG				i S		Sb	09 54 58.5	-1.8
CAIG	El Cayaco	1.13	91	i P		Pn	09 55 00.0	-3.1
CAIG				i S		Sb	09 55 12.5	-5.0
CAIG	El Cayaco	1.13	91	i P		Pn	09 55 00.0	-3.1
CAIG				i S		Sb	09 55 13.0	-4.5
ACX	Acapulco	1.53	97	i P		Pn	09 55 04.9	-3.7
ACX				i S		Sn	09 55 21.9	-6.1
ACX	Acapulco	1.53	97	i P		Pn	09 55 04.9	-3.7
ACX				i S		Sn	09 55 22.9	-5.1
MEIG	Mezcala	1.94	64	eP		Pn	09 55 10.8	-3.4
MEIG				i S		Sn	09 55 34.7	-3.3
MMIG	Aquila	2.18	304	i P		Pn	09 55 15.6	-1.9
MMIG				i S		Sn	09 55 39.6	-4.3
MZVM		2.98	45	i P		Pn	09 55 26.9	-1.7
MZVM				i S		Sn	09 55 59.9	-3.9
PNIG	Pinotepa	3.25	101	i P		Pn	09 55 30.5	-1.8
PNIG				i S		Sn	09 56 03.0	-7.4
PNIG	Pinotepa	3.25	101	i P		Pn	09 55 30.3	-2.0
PNIG				i S		Sn	09 56 05.6	-4.8
PTVM	Pico Tres Padr	3.35	41	eP		Pn	09 55 30.6	-3.0
PTVM				i S		Sn	09 56 07.0	-5.8
PTVM	Pico Tres Padr	3.35	41	eP		Pn	09 55 33.3	-0.3
PTVM				i S		Sn	09 56 13.2	+0.3
IIO	Organos	3.60	46	i P		Pn	09 55 34.8	-2.3
IIO				i S		Sn	09 56 15.2	-3.9
IIO	Organos	3.60	46	i P		Pn	09 55 36.1	-1.0
IIO				i S		Sn	09 56 16.5	-2.6
TPIG	Tehuac#an	4.12	70	i S		Sn	09 56 29.8	-2.0

*ISCJB **05** 09:57:56.5±0.3, 34.79N±0.04×137.67E±0.05, h287km±2km, mb4.2/22, Error ellipse: s-maj=6.2km s-min=6.0km az=179.1*

*NEIC **05** 09:57:57.5±0.5, 34.78N×137.88E, h287km±5km, mb4.5/3, Error ellipse: s-maj=11.2km s-min=6.4km az=76.0*

*IDC **05** 09:57:57.5±0.5, 34.80N×137.82E, h285km±7km, mb3.9/14, mb1 3.9/16, mb1mx3.8/26, mbtmp3.9/16, Error ellipse: s-maj=23.3km s-min=7.7km az=67.0*

*JMA **05** 09:57:57.1±0.2, 34.78N×137.70E, h285km±2km, M3.6*

ISC 05 09:57:57.4±0.3, 34.79N±0.04×137.67E±0.05, h281km±2km, n59, σ0.972/79, mb4.2/22, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHMK	Hamakita	0.08	68	eS		S	09 59 00.9	-0.6
HMMJ	Hamamatsu 2	0.08	31	P		Pn	09 58 33.4	+0.3
HMMJ				S		S	09 59 01.3	-0.2
JYZW	Yoshizawa	0.21	14	P		Pn	09 58 33.4	+0.2
JYZW				eS		S	09 59 01.7	0.0
JIE	Ise	0.89	244	P		Pn	09 58 35.6	+0.4
JIE				S		S	09 59 04.5	-0.7
JYN	Shimob	1.01	45	P		Pn	09 58 36.4	+0.7
TK01	Tokai 1	1.02	184	P		Pn	09 58 36.2	+0.3
TK01				eS		S	09 59 07.0	+0.6
JGM	Miyama	1.20	320	P		Pn	09 58 37.4	+0.7
JGM				S		S	09 59 07.9	0.0
JOD2	Odawara 2	1.26	67	P		Pn	09 58 37.7	+0.6
JOD2				eS		S	09 59 09.4	+0.9
JRY	Ryogami san	1.59	39	P		Pn	09 58 40.3	+1.1
JRY				eS		S	09 59 12.7	+0.3
MAJO	Matsushiro	1.81	14	ePn		Pn	09 58 41.6	+0.8
MAJO				eSn		S	09 59 15.6	+0.2
MAT	Matsushiro	1.81	14	P		Pn	09 58 41.5	+0.7
MAT				S		S	09 59 15.2	-0.2
MAT	Matsushiro	1.81	14	P		Pn	09 58 41.5	+0.7
MAT				S		S	09 59 15.3	-0.1
MJAR	Matsushiro Arr	1.81	14	P		Pn	09 58 41.2	+0.4
	40nm,0.3s,baz=219,slow=6.3,SNR=265							
MJAR				S		S	09 59 15.4	0.0
	6.4nm,0.3s,baz=303,slow=38,SNR=10							
JWY	Kouya	1.81	252	P		Pn	09 58 41.2	+0.3
JWY				eS		S	09 59 14.4	-1.1
JKG	Kaga	1.84	324	P		Pn	09 58 41.5	+0.4
JKG				eS		S	09 59 16.0	+0.1
JWT	Wachi	1.93	286	P		Pn	09 58 42.1	+0.3
JWT				eS		S	09 59 16.2	-0.9
JWZ	Kozaga	2.05	233	P		Pn	09 58 42.7	-0.2
JWZ				eS		S	09 59 17.9	-1.2
JAG	Ashikaga	2.19	41	P		Pn	09 58 43.7	-0.3
JAG				eS		S	09 59 19.8	-1.2
JHJ	Hachijo jima 2	2.42	133	P		Pn	09 58 46.5	+0.3
	144nm,0.3s,baz=64,slow=23,SNR=19							
JHJ				S		S	09 59 25.9	+0.8
	41nm,0.3s,baz=108,slow=22,SNR=3.3							
JHJ2	Mitsune	2.44	133	P		Pn	09 58 46.4	0.0
JHJ2				eS		S	09 59 26.7	+1.3
JSZ	Suzu	2.67	355	P		Pn	09 58 49.0	+0.6
JSZ				eS		S	09 59 27.7	-1.4
BSO1	Boso 1	2.73	92	P		Pn	09 58 48.0	-1.1
BSO1				eS		S	09 59 28.2	-2.0
KSRS	Korea Array	8.32	291	P		Pn	09 59 55.8	+1.1
	1.8nm,0.3s,baz=104,slow=13,SNR=14							
ERM	Erimo	8.40	29	ePn		Pn	09 59 54.7	-0.9
YSS	Yuzh-Sakhalins	12.74	16	ePn		Pn	10 00 48.4	-0.8
GUMO	Guam	22.09	161	P		P	10 02 28.8	-0.9
	22nm,0.4s,mb4.8,baz=213,slow=6.0,SNR=3.6							
SONM	Songino Array	26.67	309	P		P	10 03 11.4	+0.8
	10nm,0.8s,mb4.3,baz=120,slow=9.3,SNR=12							
CMAR	Chiang Mai Arr	37.98	255	P		P	10 04 50.2	+1.4
	1.0nm,0.7s,mb3.4,baz=47,slow=8.2,SNR=2.5							
LSA	Lhasa	39.40	276	eP		P	10 05 07.6	+7.2
ZALV	Zalesovo Beam	41.25	314	P		P	10 05 15.7	+0.6
	4.9nm,0.3s,mb4.2,baz=97,slow=7.0,SNR=13							
MKAR	Makanchi Array	42.78	304	P		P	10 05 28.2	+0.6
MKAR	Makanchi Array	42.78	304	P		P	10 05 28.2	+0.6
	3.4nm,0.5s,mb3.8,baz=86,slow=10,SNR=9.1							
TAPN	Taplejung	43.07	274	eP		P	10 05 30.0	-0.1
RAMN	Ramite	44.14	274	eP		P	10 05 37.9	-0.7
JIRN	Jiri	44.20	275	eP		P	10 05 39.5	+0.4
GUN	Gumba	44.36	276	eP		P	10 05 40.4	+0.1
PKI	Pulchoki	44.87	276	eP		P	10 05 43.9	-0.5
	21nm,0.5s,mb4.7							
KKN

PLBC				⇓S		**Sg**	**09 59 16.2**	**+0.6**	
SKAG	**Skagway**	**1.27**	**56**	P		**Pn**	**09 59 11.2**	**-0.1**	
SKAG				S		**Sb**	**09 59 28.5**	**+0.6**	
BESE	**Bessie Mountai**	**1.34**	**97**	P		**Pn**	**09 59 12.0**	**-0.3**	
BESE				S		**Sb**	**09 59 30.0**	**0.0**	
PNL	**Peninsula**	**1.36**	**312**	P		**Pn**	**09 59 10.8**	**-1.8**	
PNL				S		**Sb**	**09 59 29.6**	**-0.9**	
YKU2	**Yakutat**	**1.39**	**303**	*e*P		**Pn**	**09 59 11.6**	**-1.3**	
SIT	**Sitka**	**2.05**	**146**	P		**Pn**	**09 59 20.1**	**-1.9**	
SIT				*e*P			09 59 20.4		
SIT				*e*P			09 59 20.7		
SIT				S		**Sn**	**09 59 48.0**	**+0.5**	
HYT	**Haines Junctio**	**2.06**	**359**	⇑Pn		**Pn**	**09 59 23.1**	**+1.0**	
HYT				⇑Sg		**Sg**	**09 59 51.1**	**-2.5**	
WHY	**Whitehorse**	**2.28**	**33**	P		**Pn**	**09 59 26.1**	**+0.9**	
WHY				S		**Sn**	**09 59 55.6**	**+2.3**	
WHY	**Whitehorse**	**2.28**	**33**	⇑Pn		**Pn**	**09 59 26.1**	**+0.9**	
WHY				⇓Pg		**Pg**	**09 59 29.0**	**-2.3**	
WHY				⇓Sg		**Sg**	**09 59 59.3**	**-1.5**	
DLBC	**Dease Lake**	**3.87**	**92**	P		**Pn**	**09 59 47.1**	**+0.1**	
DLBC	**Dease Lake**	**3.87**	**92**	⇑Pn		**Pn**	**09 59 47.9**	**+0.8**	
DLBC				⇓Pg		**Pg**	**09 59 58.2**	**-3.4**	
DLBC				⇓Sg		**Sg**	**10 00 47.0**	**-4.7**	
CRAG	**Craig**	**4.05**	**143**	*e*P		**Pn**	**09 59 49.0**	**-0.5**	
BMRM	**Bremner River**	**4.25**	**304**	P		**Pn**	**09 59 51.6**	**-0.6**	
DIV	**Divide**	**4.83**	**303**	*e*P		**Pn**	**09 59 58.8**	**-1.3**	
DIV				*e*Sn		**Sn**	**10 00 57.1**	**+1.1**	
MENT	**Mentasta**	**5.20**	**326**	*e*P		**Pn**	**10 00 06.7**	**+1.5**	
DAWY	**Dawson**	**5.40**	**351**	*e*Pn		**Pn**	**10 00 08.6**	**+0.7**	
DAWY				*e*Sn		**Sn**	**10 01 08.4**	**-1.6**	
DAWY	**Dawson**	**5.40**	**351**	⇑Pn		**Pn**	**10 00 09.2**	**+1.2**	
DAWY				⇓Sn		**Sn**	**10 01 10.1**	**+0.1**	
NDB	**Naden**	**5.43**	**151**	⇑Pn		**Pn**	**10 00 08.2**	**-0.2**	
PAX	**Paxson**	**5.76**	**320**	*e*Pn		**Pn**	**10 00 14.1**	**+1.1**	
RUBB	**Prince Rupert**	**5.96**	**135**	⇓Pn		**Pn**	**10 00 15.2**	**-0.5**	
DIB	**Dawson Inlet,**	**6.23**	**152**	⇓Pn		**Pn**	**10 00 18.3**	**-1.1**	
DIB				⇓Sn		**Sn**	**10 01 24.4**	**-6.2**	
EGAK	**Eagle**	**6.28**	**345**	*e*Pn		**Pn**	**10 00 21.0**	**+0.9**	
	71nm,0.8s								
EGAK				*e*Sg		**Sg**	**10 02 08.7**	**-0.3**	
SEW	**Seward**	**6.29**	**287**	*e*Pn		**Pn**	**10 00 18.7**	**-1.5**	
	337nm,1.3s								
SEW				*e*Sn		**Sn**	**10 01 27.6**	**-4.4**	
MOBC	**Moresby Island**	**6.41**	**149**	⇓Pn		**Pn**	**10 00 25.2**	**+3.3**	
MOBC				⇓Sn		**Sn**	**10 01 32.4**	**-2.7**	
BNB	**Barry Inlet**	**6.98**	**150**	⇓Pn		**Pn**	**10 00 30.7**	**+1.0**	
FNBB	**Fort Nelson**	**7.47**	**83**	⇓Pn		**Pn**	**10 00 38.0**	**+1.6**	
TTA	**Tatalina**	**9.97**	**303**	Pn		**Pn**	**10 01 10.1**	**-0.6**	
CHGN	**Chignik**	**11.55**	**267**	Pn		**Pn**	**10 01 33.5**	**+1.3**	
SDPT	**Sand Point**	**12.99**	**265**	Pn		**Pn**	**10 01 53.5**	**+1.5**	
PGC	**Sidney**	**13.05**	**135**	Pn		**Pn**	**10 01 52.6**	**-0.1**	
NLW	**Nelson Butte**	**14.72**	**129**	P		**Pn**	**10 02 16.2**	**+0.7**	
CN2	**Changchun**	**57.20**	**301**	*e*P		**P**	**10 08 37.0**	**+2.7**	
CN2				*e*S		**S**	**10 16 30.5**	**+1.0**	
CN2				pmax	pmax				
	comp=Z,10.0nm,0.6s,mb5.0								
CN2				pmax	pmax				
	comp=Z,200nm,7.0s								
HHC	**Hu-ho-hao-te**	**65.53**	**309**	*e*P		**P**	**10 09 30.6**	**-0.1**	
HHC				pP	pP		10 09 35.4	+1.4	
HHC				sP	sP		10 09 37.9	+2.7	
HHC				PP	PP		10 11 55.6	+1.3	
HHC				S	S		10 18 11.0	-4.4	
HHC				ScS	ScS		10 19 21.4	-4.6	
HHC				SS	SS		10 22 23.1	-5.0	
HHC				pmax	pmax				
	comp=Z,29nm,1.0s,mb5.3								
HHC				LR	LR				
	comp=Z,2μm,15.5s								
WMQ	**Urumqi**	**71.17**	**327**	*e*P		**P**	**10 10 07.3**	**+1.3**	
WMQ				pP	pP		10 10 12.0	+2.7	
WMQ				sP	sP		10 10 14.3	+3.8	
WMQ				PcP	PcP		10 10 27.4	+1.4	
WMQ				pmax	pmax				
	comp=Z,6.0nm,0.8s,mb4.6								
WMQ				pmax	pmax				
	comp=Z,52nm,4.5s								
GTA	**Gaotai**	**71.27**	**317**	⇓P		**P**	**10 10 04.9**	**-1.7**	
GTA				pP	pP		10 10 08.7	-1.2	
CD2	**Chengdu**	**77.27**	**309**	P		**P**	**10 10 41.0**	**-0.8**	
GYA	**Guiyang**	**79.98**	**305**	*e*P		**P**	**10 10 58.7**	**+1.9**	
GYA				pmax	pmax				
	comp=Z,10.0nm,1.0s,mb4.7								

BJI ***05*** *10:08:08.4, 13˚.67N×93˚.52E, h36km, mB5.9/27, mb5.4/53, Ms5.4/30, Ms7 5.2/30*

MOS ***05*** *10:08:10.6±0.9, 14˚.00N×93˚.59E, h33km, mb5.5/108, Error ellipse: s-maj=6.7km s-min=4.0km az=118.8*

NEIC ***05*** *10:08:11.9±0.1, 13˚.87N×93˚.58E, h35km, mb5.2/140, Error ellipse: s-maj=4.3km s-min=3.0km az=193.0*

SZGRF ***05*** *10:08:11.0, 13˚.53N×93˚.29E, h33km, mb5.3, Andaman Islands, India, region*

IDC ***05*** *10:08:12.8±0.4, 13˚.88N×93˚.70E, h42km±3km, mb4.8/30, mb1 4.9/30, mb1mx4.8/31, mbtmp4.8/30, ML5.6/1, MS4.9/2, Ms1 5.0/2, ms1mx4.0/38, Error ellipse: s-maj=10.8km s-min=9.7km az=60.0*

ISCJB ***05*** *10:08:12.7±0.1, 13˚.97N±0˚.02×93˚.60E±0˚.02, h54km, mb5.2/250, MS5.4/12, Error ellipse: s-maj=3.4km s-min=2.5km az=36.3*

GCMT ***05*** *10:08:14.2±0.5, 13.88N×93˚.56E, h45km±1km, MW5.2, Moment Tensor Solution. s13,c18; s66,c106; Moment tensor: Scale 10^16 Nm; Mrr6.36±.61; Mθθ0.83±.34; Mφφ-7.18±.35; Mrθ4.08±.24; Mrφ 1.81±.25; Mθφ-1.94±.26; Best double couple: M0 8.40000×10^16 NP1:φs 11.00000°, δ39.00000°, λ130.00000°. NP2:φs 143.00000°, δ61.00000°, λ62.00000°. Principal axes: T 8.5700, Plg63.0000°, Azm7.0000°; N -0.4200, Plg24.0000°, Azm158.0000°; P -8.1500, Plg12.0000°, Azm253.0000°; Data Used: IU II G CN IC.*

DJA ***05*** *10:09:08, 11˚.50N×96˚.31E, h310km, mb4.8/29*

ISC 05 10:08:14.6±0.1, 13˚.95N±0˚.02×93˚.61E±0˚.02, h56km, h56km±1.8km:pP-P, n699, σ0s93/639, mb5.2/249, MS5.4/12, 56C-18D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**6.81**	**48**	*e*Pn	**Pn**	**10 09 52.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**6.81**	**48**	P	**Pn**	**10 09 51.9**	**0.0**
CMAR				S	**Sn**	**10 11 07.7**	**-0.3**
CMAR				LR	LR	10 12 59.0	
CMAR				ScP	ScP	10 20 07.8	+0.1
CMAR	**Chiang Mai Arr**	**6.81**	**48**	P	**Pn**	**10 09 51.9**	**0.0**
	30nm,0.3s,baz=239,slow=15,SNR=513						
CMAR				S	**Sn**	**10 11 07.7**	**-0.3**
	baz=245,slow=18,SNR=2.5						
CMAR				LR	LR	10 12 59.0	
	comp=Z,6μm,18.7s,baz=22,slow=42						
CMAR				ScP	ScP	10 20 07.8	+0.1
	0.4nm,0.3s,baz=285,slow=2.3,SNR=5.2						
CHTO	**Chiang Mai**	**7.04**	**46**	*e*Pn	**Pn**	**10 09 54.9**	**-0.2**
CHTO				*e*Sn	**Sn**	**10 11 15.9**	**+2.1**
CHTO	**Chiang Mai**	**7.04**	**46**	P	**Sn**	**10 10 59.1**	**-15**
	455nm,0.6s,2.0nm						
BWNR	**Bhubaneshwar**	**9.76**	**311**	*ex*	x	10 10 25.0	
BWNR				*ex*	x	10 12 00.0	
VIS	**Vishakhapatnam**	**10.57**	**292**	*e*PKP	**Pn**	**10 10 41.0**	**-2.4**
VIS				*i* S	**Sn**	**10 12 29.8**	**-11**
IMP	**Imphal**	**10.78**	**2**	*i* P	**Pn**	**10 10 45.0**	**-1.2**
IMP				*ex*	x	10 12 40.0	
KULM	**Kulim**	**11.06**	**140**	*e*Pn	**Pn**	**10 10 52.1**	**+2.0**
	40nm,0.8s						
KULM	**Kulim**	**11.06**	**140**	P	**Pn**	**10 10 52.7**	**+2.6**
KULM	**Kulim**	**11.06**	**140**	P	**Pn**	**10 10 52.7**	**+2.6**
	0.8nm85nm,1.6s						
TPTI		**11.20**	**161**	P	**Pn**	**10 10 57.7**	**+5.7**
TSI	**Tuntungan**	**11.48**	**154**	P	Px	10 11 08.4	
	275nm,1.5s						
SHL	**Shillong**	**11.67**	**352**	*e*PKP	**Pn**	**10 10 55.0**	**-3.3**
SHL				*e*S	**Sn**	**10 12 56.0**	**-11**
IPM	**Ipoh**	**11.92**	**141**	P	**Pn**	**10 11 04.2**	**+2.3**
IPM	**Ipoh**	**11.92**	**141**	P	**Pn**	**10 11 03.9**	**+2.0**
	60nm,1.0s						
PSI	**Prapat**	**12.26**	**154**	P	**Pn**	**10 11 10.8**	**+4.2**
	1.9nm,0.3s,baz=329,slow=12,SNR=10						
PSI				S	**Sn**	**10 13 17.6**	**-4.2**
	0.7nm,0.3s,baz=187,slow=24,SNR=1.9						
PSI				ScP	ScP	10 20 14.6	+0.4
	baz=305,slow=5.9,SNR=7.9						
PSI	**Prapat**	**12.26**	**154**	P	**Pn**	**10 11 10.8**	**+4.2**
PSI				S	**Sn**	**10 13 17.7**	**-4.1**
PSI				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PSI				smax			
	comp=N,1.0nm,0.3s						
KTGM	**Kuala Trenggan**	**12.71**	**131**	P	**Pn**	**10 11 15.6**	**+2.9**
FRIM	**Kepong**	**13.27**	**143**	P	**Pn**	**10 11 23.8**	**+3.4**
KMI	**Kunming**	**14.05**	**36**	P	**Pn**	**10 11 33.5**	**+2.7**
KMI				pP		10 11 39.3	
KMI				PP		10 11 42.6	
KMI				sP		10 11 44.9	
KMI				S	**Sn**	**10 14 10.1**	**+4.9**
KMI				sS		10 14 21.6	
KMI				SS		10 14 26.6	
KMI				pmax	pmax		
	comp=Z,26nm,1.3s						
KMI				pmax	pmax		
	comp=Z,2μm,6.6s						
KMI				LR	LR		
	comp=N,3μm,14.3s						
KMI				LR	LR		
	comp=E,5μm,12.0s						
KMI				LR	LR		
	comp=Z,3μm,14.0s						
ODAN	**Odare**	**14.10**	**337**	*e*P	**Pn**	**10 11 26.5**	**-4.9**
	comp=Z,184nm,0.4s						
MNSI	**Mandailing Nat**	**14.35**	**155**	P	**Pn**	**10 11 40.6**	**+5.8**
	comp=Z,95nm,0.8s						
TAPN	**Taplejung**	**14.42**	**338**	*e*P	**Pn**	**10 11 31.2**	**-4.5**
	comp=Z,344nm,0.7s						
TAPN				*e*S	Sn	10 13 49.9	-24
RAMN	**Ramite**	**14.49**	**334**	*e*P	**Pn**	**10 11 32.4**	**-4.2**
	comp=Z,92nm,0.3s						
HYB	**Hyderabad**	**14.90**	**285**	*i* P	**Pn**	**10 11 40.0**	**-2.0**
HYB				*e*		10 14 15.0	
HYB				*e*S	**Sn**	**10 14 28.0**	**+2.1**
KGM	**Kluang**	**15.26**	**140**	P	**Pn**	**10 11 49.2**	**+2.5**
JIRN	**Jiri**	**15.29**	**334**	*e*P	**Pn**	**10 11 44.0**	**-3.0**
BKNI	**Bangkinang**	**15.41**	**151**	P	**Pn**	**10 11 52.1**	**+3.5**
	comp=Z,197nm,0.6s						
PKI	**Pulchoki**	**15.56**	**332**	*e*P	**Pn**	**10 11 46.7**	**-3.7**
PKIN	**Phulchoki**	**15.57**	**332**	*e*P	**Pn**	**10 11 47.3**	**-3.3**
GUN	**Gumba**	**15.64**	**334**	*e*P	**Pn**	**10 11 48.0**	**-3.5**
DMN	**Daman**	**15.73**	**331**	*e*P	**Pn**	**10 11 48.7**	**-3.9**
MYKOM	**Kota Tinggi**	**15.77**	**139**	P	**Pn**	**10 11 57.3**	**+4.1**
	comp=Z,60nm,1.8s						
KKN	**Kakani**	**15.80**	**332**	*e*P	**Pn**	**10 11 50.7**	**-2.9**
PPI	**Padang Panjang**	**15.82**	**154**	P	**Pn**	**10 11 54.0**	**+0.1**
	comp=Z,96nm,1.0s						
ALBI	**Allahabad**	**15.83**	**317**	*ex*	x	10 14 20.5	
LSA	**Lhasa**	**15.83**	**352**	P	**Pn**	**10 11 44.6**	**-9.3**
LSA	**Lhasa**	**15.83**	**352**	*e*P	**Pn**	**10 11 58.0**	**+4.1**
PDSI	**Padang**	**16.26**	**155**	P	**Pn**	**10 11 59.9**	**+0.5**
	comp=Z,232nm,1.2s						
GKN	**Gorkha**	**16.28**	**331**	*e*P	**Pn**	**10 11 56.9**	**-2.7**
QIZ	**Qiongzhong**	**16.36**	**70**	P	**Pn**	**10 12 03.4**	**+2.7**
QIZ				pP	pP	10 12 10.6	-4.3
QIZ				sP	sP	10 12 15.1	-6.9
QIZ				S	**S**	**10 15 03.6**	**-7.7**
QIZ				pmax	pmax		
	comp=Z,44nm,0.9s						
QIZ	**Qiongzhong**	**16.36**	**70**	*e*P	**Pn**	**10 12 02.5**	**+1.7**
KOLN	**Koldanda**	**16.61**	**327**	*e*P	**Pn**	**10 12 00.7**	**-3.0**
	comp=Z,326nm,0.6s						
RGRI	**Rengat**	**16.63**	**148**	P	**Pn**	**10 12 07.4**	**+3.3**
	comp=Z,196nm,0.7s						
SDSI	**Sungai Dareh**	**16.70**	**152**	P	**Pn**	**10 12 05.5**	**+0.6**
	comp=Z,124nm,1.0s						
LATR	**Latur**	**16.96**	**287**	*e*PKP	**Pn**	**10 12 07.0**	**-1.1**
LATR				AMb	AMB	10 12 12.6	
	comp=Z,193nm,1.9s						
LATR				*ex*	x	10 15 00.2	
AKL	**Akola**	**17.19**	**295**	*e*PKP	**Pn**	**10 12 11.5**	**+0.4**
AKL				AMb	AMB	10 12 12.2	
	comp=Z,130nm,1.1s						
GYA	**Guiyang**	**17.44**	**43**	⇑*i* P	**Pn**	**10 12 13.5**	**-0.6**
GYA				sP	sP	10 12 26.8	-7.1
GYA				S	**S**	**10 15 26.7**	**-6.5**
GYA				sS	sS	10 15 40.0	-13
GYA				SS		10 15 49.8	
GYA				pmax	pmax		
	comp=Z,40nm,0.8s						
GYA				LR	LR		
	comp=N,5μm,12.8s						
GYA				LR	LR		
	comp=E,3μm,13.4s						
GYA				LR	LR		
	comp=Z,5μm,13.0s						
BHPL	**Bhopal**	**17.89**	**303**	*e*PKP	**Pn**	**10 12 19.2**	**-0.4**
BHPL				AMb	AMB	10 12 24.8	
	comp=Z,63nm,0.5s						
JMBI	**JAMBI**	**18.41**	**147**	P	**Pn**	**10 12 24.4**	**-1.5**
	comp=Z,329nm,0.8s						
KAD	**Karad**	**19.00**	**283**	*e*PKP	**Pn**	**10 12 32.0**	**-1.0**
CD2	**Chengdu**	**19.29**	**27**	P	**Pn**	**10 12 36.8**	**+0.4**
CD2				pP	pP	10 12 45.0	-2.2
CD2				sP	sP	10 12 49.5	-4.7
CD2				S	**S**	**10 16 08.2**	**-2.1**
CD2				sS	sS	10 16 20.9	-9.3
CD2				pmax	pmax		
	comp=Z,430nm,1.1s						
CD2				pmax	pmax		
	comp=Z,5μm,6.3s						
POO	**Poona**	**19.50**	**286**	*e*PKP	**Pn**	**10 12 38.1**	**-1.0**
KSI	**Kapahiang**	**19.63**	**152**	P	**Pn**	**10 12 39.7**	**-0.9**
	comp=Z,231nm,0.9s						
PTH	**Pithoragarh**	**19.86**	**324**	*e*PKP	**Pn**	**10 12 41.9**	**-1.2**
PTH				*ex*	x	10 16 13.9	
LHSI	**Lahat**	**20.22**	**150**	P	**P**	**10 12 45.5**	**+0.3**
	comp=Z,13nm,1.0s						
PPBI	**Pangkal Pinang**	**20.27**	**141**	P	**P**	**10 12 45.4**	**-0.3**
	comp=Z,101nm,1.7s						
KSM	**Kuching**	**20.66**	**125**	*e*P	**P**	**10 12 50.3**	**+0.4**
	comp=Z,75nm,1.2s						
KSM	**Kuching**	**20.66**	**125**	P	**P**	**10 12 52.5**	**+2.6**
	comp=Z,72nm,1.1s						
MDSI	**Maura Dua**	**21.11**	**149**	P	**P**	**10 12 55.6**	**+0.8**
	comp=Z,35nm,0.8s,mb4.7						
NDI	**New Delhi**	**21.12**	**317**	*e*PKP	**P**	**10 12 56.0**	**+1.2**
LWLI	**Liwa**	**21.51**	**150**	P	**P**	**10 13 00.6**	**+1.5**
	comp=Z,165nm,0.9s,mb5.5						
KLSI		**21.56**	**148**	P	**P**	**10 12 59.5**	**-0.1**
	comp=Z,89nm,1.9s,mb4.9						
SBUM	**Sibu**	**21.66**	**120**	P	**P**	**10 13 00.9**	**+0.2**
SBUM	**Sibu**	**21.66**	**120**	P	**P**	**10 13 00.7**	**+0.1**
	comp=Z,55nm,1.4s,mb4.8						
TPI	**Tanjungpandan**	**21.67**	**139**	P	**P**	**10 12 59.3**	**-1.5**
	comp=Z,96nm,1.3s,mb5.1						
AJM	**Ajmer**	**21.69**	**308**	*e*PKP	**P**	**10 13 02.2**	**+1.3**
AJM				AMb	AMB	10 13 08.6	
	comp=Z,123nm,1.0s,mb5.3						
KLI	**Kotabumi**	**21.77**	**148**	P	**P**	**10 13 01.6**	**-0.3**
	comp=Z,62nm,0.5s,mb5.3						
ENH	**Enshi**	**21.87**	**39**	*e*P	**P**	**10 13 01.7**	**-1.0**
	comp=Z,747nm,0.9s,mb6.1						
BTM	**Bintulu**	**22.00**	**117**	P	**P**	**10 13 05.7**	**+1.4**
KASI	**Kota Agung**	**22.16**	**150**	P	**P**	**10 13 06.4**	**+0.4**
	comp=Z,75nm,0.8s,mb5.2						
STKI	**Sintang**	**22.44**	**126**	P	pP	10 13 22.8	+1.2
SMLA	**Simla**	**22.81**	**321**	*i* P	**P**	**10 13 13.3**	**+0.6**
SMLA				AMb	AMB	10 13 15.3	
	comp=Z,52nm,0.1s,mb5.9						
SMLA				*i* S	**S**	**10 17 19.3**	**+1.2**
SDNR	**Sundarnagar**	**23.19**	**322**	*e*PKP	**P**	**10 13 18.0**	**+1.2**
SDNR				*ex*	x	10 17 30.5	
BHK	**Bhakra**	**23.47**	**321**	*ex*	**P**	**10 13 16.8**	**-2.5**
KKM	**Kota Kinabalu**	**23.59**	**107**	*e*P	**P**	**10 13 20.6**	**0.0**
	comp=Z,247nm,1.5s,mb5.4						
KKM				*e*		10 13 33.2	
KKM	**Kota Kinabalu**	**23.59**	**107**	P	**P**	**10 13 20.8**	**+0.1**
KKM	**Kota Kinabalu**	**23.59**	**107**	P	**P**	**10 13 21.1**	**+0.5**
	comp=Z,100nm,1.4s,mb5.1						
CGJI	**Cibinong**	**23.70**	**149**	P	**P**	**10 13 20.2**	**-1.3**
	comp=Z,62nm,1.5s,mb4.8						
KDM	**Kudat**	**23.88**	**105**	P	**P**	**10 13 23.3**	**+0.2**
LZH	**Lanzhou**	**23.88**	**21**	⇑P	**P**	**10 13 23.8**	**+0.8**
LZH				pP		10 13 32.0	
LZH				sP	sP	10 13 36.0	-7.4
LZH				PP		10 13 59.0	
LZH				S	**S**	**10 17 35.8**	**+0.6**
LZH				sS	sS	10 17 51.0	-7.6
LZH				SS		10 18 27.3	
LZH				pmax	pmax		
	comp=Z,780nm,1.8s,mb5.8						
LZH				pmax	pmax		
	comp=Z,2μm,7.8s						
LZH				LR	LR		
	comp=N,5μm,11.7s						
LZH				LR	LR		
	comp=Z,8μm,12.9s,MS5.4						
XAN	**Xi'an**	**24.34**	**32**	P	**P**	**10 13 26.0**	**-1.3**
XAN				pP		10 13 34.5	
XAN				pmax	pmax		
	comp=Z,95nm,0.9s,mb5.2						
XAN				pmax	pmax		
	comp=Z,2μm,8.0s						
THN	**Thein Dam**	**24.60**	**321**	*ex*	**P**	**10 13 28.8**	**-0.8**
THN				*ex*	x	10 18 01.1	
SDKM	**Sandakan**	**24.65**	**107**	P	**P**	**10 13 29.7**	**-0.5**
TSM	**Tawau**	**25.78**	**110**	P	**P**	**10 13 39.7**	**-0.8**
QZH	**Quanzhou**	**25.93**	**61**	⇑*i*P	**P**	**10 13 41.6**	**-0.1**
QZH				pmax	pmax		
	comp=Z,160nm,0.9s,mb5.5						
GTA	**Gaotai**	**25.94**	**11**	⇑P	**P**	**10 13 43.1**	**+1.4**
GTA				pP	pP	10 13 50.9	-4.7
GTA				sP	sP	10 13 55.2	-7.0
GTA				pmax	pmax		
	comp=Z,220nm,1.5s,mb5.5						
MYLDM	**Lahad Datu**	**26.02**	**107**	P	**P**	**10 13 43.1**	**+0.3**
MYLDM	**Lahad Datu**	**26.02**	**107**	P	**P**	**10 13 43.0**	**+0.2**
	comp=Z,253nm,1.5s,mb5.5						
BJII	**Banjamegara**	**26.51**	**142**	P	**P**	**10 13 45.6**	**-1.5**
	comp=Z,78nm,1.3s,mb5.1						
SMRI	**Semarang**	**26.73**	**140**	P	**P**	**10 13 50.0**	**+0.9**
	comp=Z,195nm,1.0s,mb5.6						
TWG	**Pinlang**	**27.48**	**67**	*e*P	**P**	**10 13 57.2**	**+1.4**
	comp=Z,89nm,1.0s,mb5.2						
SSLB	**Suanglung**	**27.62**	**65**	*e*P	**P**	**10 13 57.5**	**+0.5**
	comp=Z,94nm,0.9s,mb5.4						
YULB	**Yu-li**	**27.82**	**66**	*e*P	**P**	**10 13 59.5**	**+0.8**
YULB				*e*	pP	10 14 11.8	-0.9
YHNB	**Yeheng**	**28.23**	**64**	*e*P	**P**	**10 14 03.0**	**+0.5**
	comp=Z,54nm,0.8s,mb5.2						
NACB	**Ninganchiao**	**28.29**	**65**	*e*P	**P**	**10 14 05.2**	**+2.2**
	comp=Z,33nm,1.1s,mb4.9						
NJ2	**Nanjing**	**29.28**	**48**	*e*P	**P**	**10 14 11.7**	**0.0**
NJ2				PP	PP	10 15 06.0	-13
NJ2				S	**S**	**10 19 03.5**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,220nm,1.1s,mb5.8						
NJ2				pmax	pmax		
	comp=Z,420nm,5.1s						
NJ2				LR	LR		
	comp=N,3μm,10.3s,MS5.3						
NJ2				LR	LR		
	comp=E,3μm,12.4s,MS5.3						
NJ2				LR	LR		
	comp=Z,3μm,11.9s,MS5.2						
KSH	**Kashi**	**29.82**	**332**	⇑*i*P	**P**	**10 14 15.9**	**-0.5**
KSH				*e*pP	pP	10 14 25.5	-4.9
KSH				*e*sP	sP	10 14 29.6	-7.4
KSH				*e*PP	PP	10 15 12.1	-12
KSH				*e*PcP	PcP	10 17 20.9	+2.2
KSH				*e*S	**S**	**10 19 06.9**	**-2.3**
KSH				*e*sS	sS	10 19 22.0	-11
KSH				*e*ScP	ScP	10 20 58.9	+2.7
KSH				*e*PcS	PcS	10 21 03.1	+1.2
KSH				pmax	pmax		
	comp=Z,38nm,0.7s,mb5.2						
KSH				pmax	pmax		
	comp=Z,540nm,2.7s,mb5.8						
KSH				LR	LR		
	comp=N,1μm,10.6s,MS5.2						
KSH				LR	LR		
	comp=E,3μm,11.6s,MS5.2						
KSH				LR	LR		
	comp=Z,2μm,11.2s,MS4.9						
WMQ	**Urumqi**	**30.19**	**351**	*e*P	**P**	**10 14 21.4**	**+1.8**
WMQ				pP	pP	10 14 30.8	-2.8
WMQ				sP	sP	10 14 34.8	-5.4
WMQ				pmax	pmax		
	comp=Z,120nm,0.9s,mb5.6						
WMQ				pmax	pmax		
	comp=Z,680nm,5.2s						
KBL	**Kabul**	**30.21**	**317**	*e*P	**P**	**10 14 21.3**	**+1.4**
	comp=Z,25nm,1.0s,mb4.9						
KBL	**Kabul**	**30.21**	**317**	*e*P	**P**	**10 14 21.3**	**+1.4**
KBL				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.9						
TTSI	**Tana Toraja**	**31.00**	**121**	P	**P**	**10 14 27.9**	**+0.8**
HHC	**Hu-ho-hao-te**	**31.05**	**27**	*e*P	**P**	**10 14 27.7**	**+0.5**
HHC				pP	pP	10 14 37.2	-4.0
HHC				sP	sP	10 14 41.3	-6.5
HHC				PP	PP	10 15 30.9	-7.2
HHC				PcP	PcP	10 17 21.7	-0.2
HHC				S	**S**	**10 19 28.9**	**+0.5**
HHC				sS	sS	10 19 46.2	-6.0
HHC				SS	SS	10 21 16.1	-27
HHC				pmax	pmax		
	comp=Z,65nm,1.1s,mb5.4						
HHC				pmax	pmax		
	comp=Z,3μm,4.3s						
HHC				LR	LR		
	comp=N,2μm,11.9s,MS5.3						
HHC				LR	LR		
	comp=E,3μm,11.9s,MS5.3						
HHC				LR	LR		
	comp=Z,4μm,10.7s,MS5.3						
ULHL	**Ulahol**	**31.95**	**335**	P	**P**	**10 14 36.2**	**+1.1**
	SNR=6.3						
KZA	**Kyzart**	**32.22**	**334**	P	**P**	**10 14 38.8**	**+1.4**
	SNR=17						
BJT	**Baijiatuau**	**32.65**	**33**	*e*P

DL2 pmax pmax
comp=Z,70nm,1.0s,mb5.5
SONM Songino Array 35.42 15 P **P** **10 15 06.0 +0.9**
comp=Z,58nm,0.9s,mb5.5,baz=199,slow=9.6,SNR=142
SONM PcP PcP 10 17 34.4 +0.5
comp=Z,5.5nm,0.9s,baz=171,slow=3.5,SNR=3.5
SONM pPcP 10 17 49.6
comp=Z,1.9nm,0.8s,baz=33,slow=20,SNR=4.4
SONM ScP ScP 10 21 17.0 +1.8
SONM Songino Array 35.42 15 P **P** **10 15 06.0 +0.9**
SONM 10 17 34.4
SONM pmax pmax
comp=Z,58nm,1.0s
ULN Ulaanbaatar 35.61 16 *e*P **P** **10 15 07.6 +0.8**
comp=Z,58nm,1.1s,mb5.4
ULN Ulaanbaatar 35.61 16 *e*P **P** **10 15 07.6 +0.8**
ULN pmax pmax
comp=Z,58nm,1.1s,mb5.4
ULN Ulaanbaatar 35.61 16 P **P** **10 15 08.0 +1.2**
SNR=6.5
ZAK Zakamensk 37.17 10⇓*i*P **P** **10 15 20.8 +0.7**
ZAK *e* 10 16 45.4
ZAK *e* 10 17 39.8
ZAK pmax pmax
comp=Z,33nm,1.0s,mb5.1
INCN Inchon 37.56 45 *e*P **P** **10 15 22.4 -1.1**
comp=Z,25nm,0.6s,mb5.1
INCN Inchon 37.56 45 P **P** **10 15 23.2 -0.4**
SNR=5.4
KSRS Korea Array 38.44 46 P **P** **10 15 30.2 -0.8**
comp=Z,62nm,0.8s,mb5.4,baz=242,slow=8.9,SNR=322
KSRS pP pP 10 15 41.6 -3.7
comp=Z,44nm,1.0s,baz=243,slow=10,SNR=11
KSRS ScP ScP 10 21 26.6 -0.2
comp=Z,1.3nm,0.8s,baz=246,slow=3.7,SNR=6.1
KSRS LR LR 10 33 37.0
comp=Z,2μm,18.6s,MS5.0,baz=245,slow=40
KSRS Korea Array 38.44 46 P **P** **10 15 30.3 -0.7**
KSRS *PP pP 10 15 41.6 -3.7
KSRS 10 21 26.6
KSRS pmax pmax
comp=Z,62nm,0.8s,mb5.4
KSRS MLR MLR
comp=Z,2μm,18.6s,MS5.0
TLY Talaya 38.49 10 P **P** **10 15 33.7 +2.5**
comp=Z,541nm,0.9s,mb6.3,SNR=24
TLY Talaya 38.49 10 *e*P **P** **10 15 33.1 +1.9**
comp=Z,83nm,0.9s,mb5.5
TLY Talaya 38.49 10 *e*P **P** **10 15 32.9 +1.7**
TLY pmax pmax
comp=Z,101nm,1.0s,mb5.5
TLY Talaya 38.49 10 P **P** **10 15 33.4 +2.2**
SNR=10
KURK Kurchatov 38.63 345 P **P** **10 15 32.0 -0.4**
comp=Z,431nm,1.3s,mb6.0,SNR=28
KURK Kurchatov 38.63 345 *e*P **P** **10 15 32.9 +0.5**
comp=Z,156nm,1.3s,mb5.6
KURK Kurchatov 38.63 345*c*e**P** **P** **10 15 32.0 -0.4**
KURK pmax pmax
comp=Z,127nm,1.2s,mb5.5
KURK Kurchatov 38.63 345 P **P** **10 15 33.3 +1.0**
SNR=10
IRK Irkutsk 39.14 10 *e*P **P** **10 15 37.1 +0.5**
IRK pmax pmax
comp=Z,125nm,1.4s,mb5.5
CN2 Changchun 40.32 36 *e*P **P** **10 15 46.6 +0.1**
CN2 *e*pP pP 10 15 56.3 -4.6
CN2 *e*sP sP 10 16 00.5 -6.9
CN2 *e*S **S** **10 21 52.3 +2.0**
CN2 pmax pmax
comp=Z,20nm,0.8s,mb4.9
CN2 pmax pmax
comp=Z,300nm,6.0s
CN2 LR LR
comp=N,3μm,11.0s,MS5.5
CN2 LR LR
comp=E,2μm,11.0s,MS5.5
CN2 LR LR
comp=Z,3μm,14.0s,MS5.2
ZAA0 Zalesovo Array 40.50 352 *e*P **P** **10 15 48.1 +0.2**
ZALV Zalesovo Beam 40.50 352 P **P** **10 15 48.3 +0.5**
comp=Z,171nm,0.7s,mb5.9,baz=175,slow=8.7,SNR=469
ZALV ScP ScP 10 21 34.5 +0.2
comp=Z,1.1nm,0.6s,baz=134,slow=4.2,SNR=3.7
HIA Hailar 41.24 26 *e*P **P** **10 15 53.9 -0.1**
comp=Z,167nm,1.4s,mb5.5
HIA *e* pP 10 16 08.7 +0.3
HIA Hailar 41.24 26 *e*P **P** **10 15 53.9 -0.1**
HIA *e* pP 10 16 08.7 +0.3
HIA pmax pmax
comp=Z,167nm,1.4s
NVS Novosibirsk 41.59 351⇑*i*P **P** **10 15 56.3 -0.5**
NVS *e*S **S** **10 22 07.6 -1.3**
NVS pmax pmax
comp=N,84nm,1.1s
NVS pmax pmax
comp=E,40nm,1.1s
NVS pmax pmax
comp=Z,103nm,1.1s,mb5.4
NVS smax
comp=N,25nm,1.7s
NVS smax
comp=E,60nm,1.9s
BVAR Borovoye Array 43.12 340 P **P** **10 16 09.1 -0.2**
comp=E,10.0nm,0.8s,mb4.6,baz=134,slow=8.5,SNR=37
BVAR PcP PcP 10 17 58.8 +0.6
comp=E,6.6nm,0.7s,baz=128,slow=4.1,SNR=6.1
BVAR ScP ScP 10 21 45.7 +0.8
comp=E,3.7nm,0.7s,baz=122,slow=7.2,SNR=7.8
BRVK Borovoye 43.18 340 P **P** **10 16 09.4 -0.4**
comp=E,139nm,0.7s,mb5.8,SNR=6.2
BRVK Borovoye 43.18 340 *e*P **P** **10 16 09.8 0.0**
comp=E,18nm,0.8s,mb4.8
BRVK Borovoye 43.18 340 *e*P **P** **10 16 09.8 0.0**
BRVK pmax pmax
comp=Z,18nm,0.8s,mb4.8
MDJ Mudanjiang 43.22 38 P **P** **10 16 09.7 -0.5**
MDJ pP pP 10 16 18.6 -6.1
MDJ sP sP 10 16 25.6 -5.6
MDJ PcP PcP 10 17 56.1 -2.6
MDJ ScP ScP 10 21 47.5 +2.1
MDJ PcS PcS 10 21 50.9 -0.2
MDJ S **S** **10 22 36.2 +3.1**
MDJ ScS ScS 10 26 05.0 -0.4
MDJ pmax pmax
comp=Z,19nm,1.4s,mb4.6
MDJ pmax pmax
comp=Z,5μm,14.2s
MDJ LR LR
comp=N,1μm,19.6s,MS5.0
MDJ LR LR
comp=E,1μm,14.7s,MS5.0
MDJ LR LR
comp=Z,2μm,14.2s,MS5.1
MDJ Mudanjiang 43.22 38 *e*P **P** **10 16 09.7 -0.5**
comp=Z,28nm,1.1s,mb4.9
MBWA Marble Bar 43.31 143 *e*P **P** **10 16 09.3 -1.9**
MBWA Marble Bar 43.31 143 *e*P **P** **10 16 09.4 -1.8**
comp=Z,17nm,0.8s,mb4.8
MBWA *e* pP 10 16 23.3 -2.4
VLA Vladivostok 43.85 41 *i*P **P** **10 16 15.2 -0.1**
VLA Vladivostok 43.85 41*d*i**P** **P** **10 16 15.2 -0.1**
VLA pmax pmax
comp=Z,46nm,0.8s,mb5.3
ABKAR Akbulak array 44.73 329 *e*P **P** **10 16 22.8 +0.6**
comp=Z,40nm,0.7s,mb5.3
ABKAR *e* pP 10 16 37.1 +0.3
FITZ Fitzroy Crossi 44.86 134 *e*P **P** **10 16 21.7 -2.0**
comp=Z,43nm,0.4s,mb5.6
FITZ Fitzroy Crossi 44.86 134 P **P** **10 16 21.8 -1.9**
comp=Z,20nm,0.4s,mb5.3,baz=333,slow=6.9,SNR=101
FITZ ScP ScP 10 21 51.5 -1.0
comp=Z,4.8nm,1.0s,baz=248,slow=4.3,SNR=3.8
KNA Kununurra 45.60 129 *e*P **P** **10 16 27.3 -2.3**
comp=Z,11nm,0.3s,mb5.3
MAJO Matsushiro 45.67 52 *e*P **P** **10 16 29.5 -0.5**
comp=Z,71nm,0.8s,mb5.7
MAJO Matsushiro 45.67 52 *e*P **P** **10 16 29.5 -0.5**
MAJO pmax pmax
comp=Z,71nm,0.8s,mb5.7
MAT Matsushiro 45.67 52 P **P** **10 16 29.2 -0.8**
MJAR Matsushiro Arr 45.67 52 P **P** **10 16 30.2 +0.2**
comp=Z,48nm,1.0s,mb5.4,baz=267,slow=11,SNR=26
MJAR PcP PcP 10 18 07.1 -0.2
comp=Z,23nm,0.9s,baz=245,slow=2.7,SNR=15
MJAR ScP ScP 10 21 56.3 +0.6
comp=Z,3.1nm,0.8s,baz=247,slow=3.5,SNR=8.1
KAKA Kakadu 46.72 123 *e*P **P** **10 16 36.0 -2.4**
KLR Kul'dur 47.04 34 *e*P **P** **10 16 35.2 -5.3**
MEEK Meekatharra 47.10 149 *e*P **P** **10 16 39.5 -1.7**
MORW Morawa 47.95 153 *e*P **P** **10 16 46.2 -1.5**
HABR Khabarovsk 48.46 36 *e*P **P** **10 16 49.5 -2.0**
HABR 10 18 14.9
HABR 10 18 42.5
HABR *e*S **S** **10 23 49.1 +0.7**
HABR *e**SS sS 10 24 05.3 -7.8
HABR pmax pmax
comp=E,29nm,1.0s
HABR pmax pmax
comp=Z,69nm,1.1s,mb5.6
HABR pmax pmax
comp=N,17nm,1.3s
HABR MLR MLR
comp=Z,2μm,17.0s,MS5.1
CLNS Chul'man 48.99 22 *e*P **P** **10 16 55.3 -0.1**
CLNS pmax pmax
comp=Z,149nm,0.9s,mb6.0
CLNS pmax pmax
comp=E,68nm,0.8s
CLNS pmax pmax
comp=N,81nm,0.9s
SVE Sverdlovsk 49.61 337⇓*e*P **P** **10 17 00.8 +0.7**
SVE pmax pmax
comp=Z,113nm,0.9s,mb5.9
GUMO Guam 49.71 84 P **P** **10 16 59.9 -1.7**
comp=Z,10nm,0.3s,mb5.3,baz=343,slow=4.7,SNR=4.3
GUMO Guam 49.71 84 P **P** **10 16 59.9 -1.6**
GUMO pmax pmax
comp=Z,10.0nm,0.3s,mb5.3
DGRG David-gareji 49.90 313 P **P** **10 17 03.8 +1.2**
GNI Garni 49.95 311 *e*P **P** **10 17 05.3 +2.2**
comp=Z,51nm,0.9s,mb5.5
GNI Garni 49.95 311*c i*P **P** **10 17 04.7 +1.7**
GNI pmax pmax
comp=Z,75nm,1.5s
GNI Garni 49.95 311 P **P** **10 17 05.9 +2.8**
SNR=8.5
ARU Arti 50.15 335 *e*P **P** **10 17 04.2 0.0**
comp=Z,38nm,0.8s,mb5.5
ARU Arti 50.15 335*c i*P **P** **10 17 04.2 0.0**
ARU *e* 10 18 56.1
ARU S **S** **10 24 16.1 +4.4**
ARU SS SS 10 27 44.6 -0.9
ARU pmax pmax
comp=Z,26nm,0.5s,mb5.5
ARU Arti 50.15 335 P **P** **10 17 04.9 +0.7**
comp=Z,319nm,0.7s,mb6.5,SNR=7.5
KLBR Kellerberrin 50.87 153 *e*P **P** **10 17 08.8 -1.2**
comp=Z,16nm,0.7s,mb5.1
ERM Erimo 51.01 47 P **P** **10 17 11.0 0.0**
comp=Z,249nm,0.9s,mb6.1,SNR=6.4
ERM Erimo 51.01 47 *e*P **P** **10 17 11.2 +0.2**
comp=Z,54nm,1.1s,mb5.4
ERM Erimo 51.01 47*c i*P **P** **10 17 11.0 0.0**
ERM pmax pmax
comp=Z,32nm,0.7s,mb5.4
ZEI Tsey 51.36 314 *e*P **P** **10 17 14.2 +0.6**
ZEI pmax pmax
comp=Z,30nm,0.8s,mb5.3
NWAO Narrogin (SRO) 51.80 155 *e*P **P** **10 17 15.0 -1.9**
comp=Z,263nm,0.9s,mb6.2
NWAO Narrogin (SRO) 51.80 155 *e*P **P** **10 17 16.1 -0.8**
comp=Z,102nm,1.4s,mb5.6
NWAO Narrogin (SRO) 51.80 155 P **P** **10 17 14.8 -2.1**
comp=Z,36nm,1.0s,mb5.3,baz=326,slow=6.8,SNR=11
NWAO pP pP 10 17 26.7 -5.0
comp=Z,34nm,0.9s,baz=323,slow=7.7,SNR=5.7
NWAO Narrogin (SRO) 51.80 155 *e*P **P** **10 17 16.1 -0.8**
NWAO pmax pmax
comp=Z,102nm,1.4s
WRAB Tennant Creek 52.35 129 P **P** **10 17 19.0 -2.2**
comp=Z,249nm,0.4s,mb6.5,SNR=29
WRAB Tennant Creek 52.35 129 *e*P **P** **10 17 19.6 -1.6**
comp=Z,37nm,0.9s,mb5.3
WRAB Tennant Creek 52.35 129 *e*P **P** **10 17 19.6 -1.6**
WRAB pmax pmax
comp=Z,37nm,0.9s,mb5.3
YSS Yuzh-Sakhalins 52.44 41 *e*P **P** **10 17 21.8 +0.2**
comp=Z,82nm,0.9s,mb5.7
YSS Yuzh-Sakhalins 52.44 41 *e*P **P** **10 17 21.8 +0.2**
YSS pmax pmax
comp=Z,82nm,0.9s,mb5.7
KIV Kislovodsk 52.57 315 *e*P **P** **10 17 23.9 +1.4**
comp=Z,64nm,0.9s,mb5.5
KIV Kislovodsk 52.57 315 *e*P **P** **10 17 23.8 +1.2**
KIV pmax pmax
comp=Z,75nm,1.0s,mb5.6
KIV Kislovodsk 52.57 315 P **P** **10 17 24.1 +1.5**
SNR=12
GOF Gofitskoye 52.69 317 *e*P **P** **10 17 27.8 +4.3**
SOKR Solikamsk 52.99 338⇓*i*P **P** **10 17 26.3 +0.9**
SOKR pmax pmax
comp=Z,90nm,1.4s,mb5.5
ASAR Alice Springs 54.32 133 P **P** **10 17 34.1 -1.5**
comp=Z,10nm,0.4s,mb5.1,baz=311,slow=7.2,SNR=209
ASAR PcP PcP 10 18 38.5 -0.7
comp=Z,11nm,1.0s,baz=323,slow=3.7,SNR=7.4
ASAR pPcP 10 18 54.4
comp=Z,6.0nm,0.8s,baz=319,slow=3.8,SNR=5.3
ASAR ScP ScP 10 22 30.9 -2.0
comp=Z,3.1nm,1.0s,baz=316,slow=5.0,SNR=8.6
ASAR Alice Springs 54.32 133 P **P** **10 17 34.1 -1.5**
ASAR 10 18 38.5
ASAR pmax pmax
comp=Z,10.0nm,0.4s
YAK Yakutsk 54.46 20 *e*P **P** **10 17 35.6 -0.5**
comp=Z,147nm,0.8s,mb6.0
YAK Yakutsk 54.46 20 *e*P **P** **10 17 34.4 -1.7**
YAK *e* pP 10 17 47.0 -4.0
YAK pmax pmax
comp=Z,107nm,0.9s,mb5.8
YAK pmax pmax
comp=E,36nm,1.0s
YAK pmax pmax
comp=N,41nm,1.3s
FORT Forrest 55.46 144 *e*P **P** **10 17 42.0 -1.7**
comp=N,29nm,0.9s,mb5.3
VRHR Novokhopersk 55.73 323 *e*P **P** **10 17 45.0 -0.5**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,30nm,0.8s
VRHR pmax pmax
comp=Z,90nm,0.8s,mb5.8
ABPO Ambohimpanom 56.22 235 *e*P **P** **10 17 50.3 +0.9**
comp=Z,13nm,1.2s,mb4.8
ABPO *e*P 10 17 50.4
ABPO Ambohimpanom 56.22 235 *e*P **P** **10 17 50.3 +0.9**
ABPO pmax pmax
comp=Z,13nm,1.2s,mb4.8
COEN Coen 56.37 117 *e*P **P** **10 17 49.1 -1.5**
comp=Z,46nm,0.5s,mb5.8
ANN Anapa 56.42 315 *e*P **P** **10 17 49.1 -1.4**
ANN pmax pmax
comp=Z,32nm,1.0s,mb5.3
VORD Divnogorie 57.06 322 *e*P **P** **10 17 53.8 -1.1**
VORD pmax pmax
comp=E,70nm,1.0s
VORD pmax pmax
comp=Z,40nm,1.0s,mb5.4
VORD pmax pmax
comp=N,9.0nm,0.5s
VSR Storozhevoye 57.22 323 *e*P **P** **10 17 55.2 -0.8**
VSR pmax pmax
comp=N,20nm,0.9s
VSR pmax pmax
comp=E,30nm,0.9s
VSR pmax pmax
comp=Z,40nm,0.9s,mb5.5
KMBO Kilima Mbogo 57.78 260 P **P** **10 18 01.6 +1.0**
comp=Z,2.9nm,0.8s,mb4.4,baz=0.3,slow=24,SNR=6.5
PMG Port Moresby 57.98 111*d i*P **P** **10 18 01.4 -0.6**
BR131 Keskin Array S 58.18 308 *e*P **P** **10 18 03.1 +0.1**
comp=Z,12nm,0.8s,mb5.0
BRTR Keskin Array B 58.18 308 P **P** **10 18 02.7 -0.3**
comp=Z,15nm,0.8s,baz=120,slow=7.2,SNR=76
BRTR pP pP 10 18 15.4 -2.6
comp=Z,16nm,0.8s,baz=123,slow=7.0,SNR=9.9
BRTR Keskin Array B 58.18 308 *i*P **P** **10 18 02.7 -0.3**
BRTR pmax pmax
comp=Z,15nm,0.8s
SIM Simferopol' 58.75 314 *e*P **P** **10 18 07.4 +0.5**
SIM pmax pmax
comp=Z,57nm,0.8s,mb5.7
MOS Moscow 59.68 327 *e*P **P** **10 18 12.0 -1.1**
MOS *i* pP 10 18 24.9 -3.3
MOS *e* 10 20 23.2
MOS *e*S **S** **10 26 17.3 -2.2**
MOS pmax pmax
comp=Z,83nm,1.1s,mb5.7
OBN Obninsk 60.02 326⇑*i*P **P** **10 18 14.7 -0.8**
OBN Obninsk 60.02 326*c i*P **P** **10 18 14.6 -0.9**
OBN *i* pP 10 18 31.3 +0.7
OBN *i* 10 20 28.4
OBN *i* S **S** **10 26 28.0 +4.1**
OBN pmax pmax
comp=Z,86nm,1.3s,mb5.6
KLMR Klimovskoe 60.81 333 P **P** **10 18 19.6 -1.1**
KLMR pmax pmax
comp=Z,54nm,1.3s,mb5.5
TIXI Tiksi 61.42 12 *e*P **P** **10 18 23.7 -1.0**
comp=Z,150nm,1.0s,mb6.1
TIXI Tiksi 61.42 12 *e*P **P** **10 18 23.9 -0.8**
TIXI pmax pmax
comp=Z,199nm,1.4s,mb6.0
CTA Charters Tower 61.85 122 *e*P **P** **10 18 27.1 -1.3**
comp=Z,5.5nm,0.9s,mb4.7
CTAO Charters Tower 61.85 122 *e*P **P** **10 18 27.4 -1.0**
comp=Z,4.7nm,0.9s,mb4.6
SKR Severo-Kuril's 61.97 40 *e*P **P** **10 18 33.0 +4.3**
SKR *e* pP 10 18 47.9 +4.0
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.2
TIRR Tirgusor 62.68 313 *e*P **P** **10 18 33.3 -0.3**
comp=Z,32nm,0.9s,mb5.5
TIRR Tirgusor 62.68 313 *e*P **P** **10 18 33.3 -0.3**
TIRR pmax pmax
comp=Z,32nm,0.9s,mb5.5
TIRR Tirgusor 62.68 313⇑*i*P **P** **10 18 33.6 0.0**
CFR Carcaliu 62.97 314⇑P **P** **10 18 36.0 +0.5**
CFR Carcaliu 62.97 314⇑*i*P **P** **10 18 36.0 +0.5**
AKASG Malin Array Be 63.14 320 P **P** **10 18 35.9 -0.6**
comp=Z,12nm,0.8s,mb5.1,baz=83,slow=5.0,SNR=47
AKASG sP sP 10 18 53.9 -4.1
comp=Z,16nm,0.9s,baz=85,slow=5.5,SNR=7.5
AKASG Malin Array Be 63.14 320 P **P** **10 18 35.9 -0.6**
AKASG *SP sP 10 18 53.9 -4.1
AKASG pmax pmax
comp=Z,12nm,0.8s
KIEV Kiev 63.15 320 *e*P **P** **10 18 35.2 -1.3**
comp=Z,37nm,1.3s,mb5.3
KIEV Kiev 63.15 320 *e*P **P** **10 18 35.2 -1.4**
KIEV pmax pmax
comp=Z,37nm,1.3s,mb5.3
PRD Provadia 63.26 311 P **P** **10 18 37.5 0.0**
SEY Seymchan 63.69 26⇓*i*P **P** **10 18 39.4 -0.5**
SEY Seymchan 63.69 26⇓P **P** **10 18 39.3 +0.4**
MBAR Mbarara 63.88 262⇑*e*P **P** **10 18 42.9 +0.8**
PET Petropavlovsk 64.00 38 *e*P **P** **10 18 41.5 -0.6**
comp=Z,67nm,1.0s,mb5.6
PET Petropavlovsk 64.00 38 *e*P **P** **10 18 42.0 -0.2**
PET *e* pP 10 18 54.4 -3.0
PET pmax pmax
comp=Z,68nm,1.1s,mb5.6
VRI Vrincioaia 64.04 314⇓P **P** **10 18 43.3 +0.8**
VRI Vrincioaia 64.04 314⇓*i*P **P** **10 18 43.3 +0.7**
PLOR Plostina 64.09 314⇑*i*P **P** **10 18 44.0 +1.1**
TESR 64.17 315⇑P **P** **10 18 44.1 +0.7**
TESR 64.17 315⇑*i*P **P** **10 18 44.1 +0.7**
SZH Strazhica 64.34 311 P **P** **10 18 44.2 -0.4**
MLR Muntele Rosu 64.54 314⇑P **P** **10 18 46.7 +0.8**
MLR Muntele Rosu 64.54 314⇑*i*P **P** **10 18 46.7 +0.8**
KDZ Kurdzhali 64.60 310 P **P** **10 18 46.0 -0.3**
PUL Pulkovo 64.69 330⇓*e*P **P** **10 18 46.8 +0.2**
PUL Pulkovo 64.69 330⇓*e*P **P** **10 18 46.7 +0.1**
STKA Stephens Creek 64.73 136 *e*P **P** **10 18 45.8 -1.4**
comp=Z,5.9nm,0.6s,mb4.8
STKA Stephens Creek 64.73 136 P **P** **10 18 46.3 -1.0**
comp=Z,5.2nm,0.7s,mb4.7,baz=336,slow=3.8,SNR=15
PVL Pavlikeni 64.77 311 P **P** **10 18 48.2 +0.8**
RZN Rozhen 65.12 310 P **P** **10 18 49.7 0.0**
VOIR 65.16 314⇓P **P** **10 18 49.9 0.0**
VOIR 65.16 314⇓*i*P **P** **10 18 49.9 0.0**
JOF Joensuu 65.19 333 *e*P **P** **10 18 49.0 -0.7**
JOF pmax pmax
comp=Z,37nm,0.7s,mb5.5
JOF Joensuu 65.19 333 *e*p **P** **10 18 49.0 -0.7**
comp=Z,37nm,0.7s,mb5.5
BUR01 Bucovina Ar. S 65.27 316 P **P** **10 18 51.6 +1.1**
BURAR Bucovina Array 65.27 316⇑P **P** **10 18 51.4 +0.9**
BURAR Bucovina Array 65.27 316⇑*i*P **P** **10 18 51.4 +0.9**
BUR08 Bucovina Ar. S 65.28 316 *e*P **P** **10 18 50.9 +0.3**
NACGM Naroch 65.40 324 *e* **P** **10 18 48.0 -3.3**
PGB Panagyurishte 65.58 311 P **P** **10 18 52.0 -0.7**
MPEP Malo Peshtene 65.94 311 P **P** **10 18 55.0 0.0**
APA Apatity 66.02 339⇓*i*P **P** **10 18 54.6 -0.4**
APA *i* pP 10 19 10.6 +0.3
APA pmax pmax
comp=Z,34nm,1.0s,mb5.3
APA MLR MLR
comp=Z,2μm,17.0s,MS5.4
VTS Vitosha 66.29 311⇑P **P** **10 18 57.1 -0.1**
VTS Vitosha 66.29 311⇑*i*P **P** **10 18 57.1 -0.1**
VTS Vitosha 66.29 311 P **P** **10 18 56.5 -0.7**
LVV L'vov 66.30 318 *e*P **P** **10 18 56.0 -1.1**
LVV MLR MLR
comp=Z,2μm,16.0s,MS5.3
BMR Baia Mare 66.43 316 P **P** **10 18 59.2 +1.2**
VAY Valandovo 66.72 309 *e*P **P** **10 18 58.8 -1.2**
GZR Gura Zlata 66.75 314⇑P **P** **10 19 00.5 +0.3**
GZR Gura Zlata 66.75 314⇑*i*P **P** **10 19 00.5 +0.4**
DRGR 66.89 315⇑P **P** **10 19 01.6 +0.6**
DRGR 66.89 315⇑*i*P **P** **10 19 01.6 +0.6**
TRPA Tarpa 67.11 317⇑*i*P **P** **10 19 02.6 +0.2**
KWP Kalwaria Pacla 67.13 318 *e*P **P** **10 19 02.5 +0.1**
KWP Kalwaria Pacla 67.13 318 *e*P **P** **10 19 02.5 0.0**
comp=Z,86nm,1.0s,mb5.7
KWP Kalwaria Pacla 67.13 318⇓*i*P **P** **10 19 02.7 +0.3**
FINES FINESS Array B 67.14 331 P **P** **10 19 02.0 -0.3**
comp=Z,29nm,0.8s,mb5.4,baz=103,slow=8.2,SNR=32
FINES FINESS Array B 67.14 331 P **P** **10 19 02.0 -0.3**
FINES pmax pmax
comp=Z,29nm,0.8s
UZH Uzhgorod 67.31 317 *i* P **P** **10 19 03.9 +0.3**
SUW Suwalki 67.33 323 *e*P **P** **10 19 03.1 -0.5**
SUW Suwalki 67.33 323 *e*P **P** **10 19 03.3 -0.4**
comp=Z,115nm,0.9s,mb5.9
CMSA Cobar Meteorol 67.38 133 *e*P **P** **10 19 03.1 -1.1**
BZS Buzias 67.58 314 P **P** **10 19 05.4 0.0**
KRUS Krusevo 67.71 309 *e*P **P** **10 19 04.3 -2.0**
STHS Stebnicka Huta 68.06 318 *e*P **P** **10 19 08.8 +0.5**
comp=Z,12nm,0.7s,mb5.0
STHS Stebnicka Huta 68.06 318 *e*P **P** **10 19 08.8 +0.5**
STHS pmax pmax
comp=Z,12nm,0.7s,mb5.0
STHS Stebnicka Huta 68.06 318 *e*P **P** **10 19 08.8 +0.5**
STHS *e*pP pP 10 19 26.7 +3.0
NIE Niedzica 68.67 318 *e*P **P** **10 19 12.8 +0.7**
PSZ Piszkesteto 68.87 316 *e*P **P** **10 19 12.8 -0.6**
comp=Z,33nm,1.0s,mb5.2
PSZ Piszkesteto 68.87 316 *e*P **P** **10 19 12.8 -0.6**
PSZ pmax pmax
comp=Z,33nm,1.0s,mb5.2
PSZ Piszkesteto 68.87 316⇓*i*P **P** **10 19 14.0 +0.6**
PSZ Piszkesteto 68.87 316⇓*e* **P** **10 19 13.6 +0.2**
KEV Kevo 68.97 340 *e*P **P** **10 19 13.6 -0.1**
comp=Z,36nm,1.1s,mb5.2
KEV Kevo 68.97 340 *e*P **P** **10 19 13.6 0.0**
KEV pmax pmax
comp=Z,36nm,1.1s,mb5.2
KEV Kevo 68.97 340 *e*p **P** **10 19 12.1 -1.5**
comp=Z,22nm,0.7s,mb5.2
OJC Ojcow 69.05 319 *e*P **P** **10 19 14.5 0.0**
ARCES ARCESS Array B 69.41 340 P **P** **10 19 16.7 +0.4**
comp=Z,17nm,0.7s,mb5.1,baz=97,slow=6.7,SNR=81
ARCES ARCESS Array B 69.41 340 P **P** **10 19 16.7 +0.4**
ARCES pmax pmax
comp=Z,17nm,0.7s
ARE0 ARCESS Array S 69.41 340 *e*P **P** **10 19 16.3 -0.1**
ARE0 *e* pP 10 19 32.9 +1.1
LIKS Likavka 69.44 317 *e*P **P** **10 19 17.3 +0.4**
comp=Z,17nm,0.7s,mb5.1
LIKS Likavka 69.44 317 *e*P **P** **10 19 17.3 +0.4**
LIKS pmax pmax
comp=Z,17nm,0.7s,mb5.1

LIKS Likavka 69.44 317 *e*P P **10 19 17.2 +0.3**
VYHS Vyhne 69.60 317 *e*P P **10 19 18.0 +0.1**
comp=Z,12nm,1.0s,mb4.8
VYHS Vyhne 69.60 317 *e*P P **10 19 18.0 +0.1**
VYHS pmax pmax
comp=Z,12nm,1.0s,mb4.8
VYHS Vyhne 69.60 317 *e*P P **10 19 18.0 +0.1**
VYHS *e*pP pP 10 19 35.9 +2.6
PKSM Moragy 69.68 314 ⇑P P **10 19 18.6 +0.2**
PKSM Moragy 69.68 314 ⇑*i*P P **10 19 18.6 +0.2**
KOLL Kolacno 69.89 317 *e*P P **10 19 19.6 -0.1**
KOLL *e* pP 10 19 37.7 +2.6
KOLL Kolacno 69.89 317 *e*P P **10 19 19.6 -0.1**
KOLL *e*pP pP 10 19 37.7 +2.6
KTK1 Kautokeino 70.06 339 *e*P P **10 19 20.3 -0.1**
KTK1 *e*pP pP 10 19 30.8 -5.0
OKC Ostrava-Krasne 70.10 318 *e*P P **10 19 21.3 +0.4**
OKC *e**PP pP 10 19 33.6 -2.8
OKC Ostrava-Krasne 70.10 318 *e*P P **10 19 21.3 +0.4**
OKC *e*pP pP 10 19 33.6 -2.8
MORC Moravsky Berou 70.49 318 *e*P P **10 19 23.5 +0.2**
comp=Z,34nm,0.8s,mb5.3
MORC *e* pP 10 19 40.8 +2.0
MORC Moravsky Berou 70.49 318 *e*P P **10 19 23.5 +0.2**
MORC *e* pP 10 19 40.8 +2.0
MORC pmax pmax
comp=Z,34nm,0.8s,mb5.3
MORC Moravsky Berou 70.49 318 ⇑*i*P P **10 19 23.7 +0.4**
BILL Bilibino 70.68 22 *e*P P **10 19 23.4 -0.7**
comp=Z,1μm,3.2s
TOO Toolangi 70.69 139 *e*P P **10 19 24.2 -0.5**
ZST Bratislava 70.75 316 *e*P P **10 19 25.6 +0.7**
comp=Z,19nm,1.2s,mb4.9
ZST Bratislava 70.75 316 *e*P P **10 19 25.6 +0.7**
ZST pmax pmax
comp=Z,19nm,1.2s,mb4.9
ZST Bratislava 70.75 316 *e*P P **10 19 25.5 +0.6**
LSZ Lusaka 70.91 248 P P **10 19 27.7 +1.2**
comp=Z,11nm,0.7s,mb4.9,baz=60,slow=5.5,SNR=27
LSZ Lusaka 70.91 248 P P **10 19 27.7 +1.3**
LSZ pmax pmax
comp=Z,11nm,0.7s,mb4.9
TIP Timpagrande 71.19 307 *e*P P **10 19 26.8 -1.0**
comp=Z,16nm,0.8s,mb5.0
DPC Dobruska-Polom 71.28 319 *e*P P **10 19 28.8 +0.7**
DPC *e**PP pP 10 19 47.1 +3.5
DPC Dobruska-Polom 71.28 319 *e*P P **10 19 28.8 +0.7**
DPC *e*PCP PcP 10 19 47.1 -0.6
KSP Ksiaz 71.31 319 *e*P P **10 19 28.6 +0.3**
KSP Ksiaz 71.31 319 *e*P P **10 19 28.6 +0.3**
KSP *e**PP pP 10 19 37.8 -6.0
UPC Upice 71.48 319 *e*P P **10 19 29.7 +0.4**
UPC *e**PP pP 10 19 42.0 -2.8
UPC Upice 71.48 319 *e*P P **10 19 29.7 +0.4**
UPC *ex* x 10 19 42.0
CONA Conrad Observa 71.58 316 ⇑*i*P P **10 19 30.0 0.0**
comp=Z,13nm,0.9s,mb4.9,SNR=10
TRO Tromso 71.68 339 *e*P P **10 19 29.9 -0.3**
TRO AMB AMB 10 19 30.9
comp=Z,45nm,0.7s,mb5.5
TRO *es*P sP 10 19 45.0 -6.9
ARSA Arzberg 71.82 315 ⇑*i*P P **10 19 31.6 +0.1**
comp=Z,16nm,1.0s,mb4.9
CUC Castrocucco 71.87 308 *e*P P **10 19 30.4 -1.5**
comp=Z,14nm,1.1s,mb4.8
CUC *e* pP 10 19 45.4 -2.0
CEL Celeste 71.92 306 *e*P P **10 19 32.1 -0.1**
comp=Z,61nm,0.9s,mb5.5
BOJS Bojanci 72.05 314 *i* P P **10 19 32.7 -0.2**
BOJS *i* pP 10 19 45.2 -3.1
BOJS *e* pP 10 19 51.1 +2.7
PERS Pernice 72.11 315 *i* P P **10 19 33.3 +0.1**
PERS *e* pP 10 19 51.6 +2.9
SOKA Soboth 72.17 315 ⇑*i*P P **10 19 33.7 +0.1**
comp=Z,32nm,1.3s,mb5.1
PVCC Panska Ves 72.40 319 *e*P P **10 19 35.4 +0.6**
PVCC Panska Ves 72.40 319 *e*P P **10 19 35.4 +0.6**
PRU Pruhonice 72.43 318 *e*P P **10 19 36.1 +1.1**
PRU *e**PP pP 10 19 54.1 +3.6
PRU Pruhonice 72.43 318 *e*P P **10 19 36.1 +1.1**
PRU *e*PCP PcP 10 19 54.1 +1.5
OBKA Obir 72.51 315 ⇑*i*P P **10 19 35.8 +0.2**
comp=Z,29nm,0.9s,mb5.2,SNR=12
LJU Ljubljana 72.54 314 *i* P P **10 19 36.0 +0.2**
LJU *e* pP 10 19 54.3 +3.1
MOA Molln 72.66 316 ⇑*i*P P **10 19 36.1 -0.3**
comp=Z,23nm,0.9s,mb5.1,SNR=8.7
BRG Berggiesshubel 72.80 319 *e*P P **10 19 37.5 +0.3**
comp=Z,31nm,0.9s,mb5.2
BRG *e* pP 10 19 54.7 +2.0
BRG Berggiesshubel 72.80 319 *i* P P **10 19 37.5 +0.3**
comp=Z,27nm,0.8s,mb5.2
BRG *i* PCP PcP 10 19 55.4 +1.3
comp=Z,26nm,0.9s
BRG Berggiesshubel 72.80 319 *i* P P **10 19 37.5 +0.3**
BRG *i* pP 10 19 55.4 +2.7
BRG pmax pmax
comp=Z,16nm,0.9s,mb5.0
JAVS Javornik 72.87 314 *i* P P **10 19 37.3 -0.4**
JAVS *e* pP 10 19 54.0 +0.8
RUE Ruedersdorf 72.88 321 *e*P P **10 19 37.8 +0.2**
comp=Z,78nm,1.1s,mb5.5
VOY Vojsko 72.98 314 *e*P P **10 19 38.0 -0.4**
VOY *e* pP 10 19 48.7 -5.2
VOY *e* pP 10 19 53.3 -0.6
VOY *e* 10 20 03.2
KHC Kasperske Hory 73.08 317 *e*P P **10 19 38.9 0.0**
comp=Z,18nm,0.9s,mb5.0
KHC *e* pP 10 19 57.2 +2.8
KHC Kasperske Hory 73.08 317 *e*P P **10 19 38.9 0.0**
KHC *e*PCP PcP 10 19 57.3 +1.9
SMY Shemya 73.28 39 *e*P P **10 19 39.8 -0.2**
comp=Z,307nm,1.0s,mb6.2
CLL Collm 73.38 320 *e*P P **10 19 40.5 -0.1**
comp=Z,24nm,1.1s,mb5.0
CLL Collm 73.38 320 ⇑*i*P P **10 19 40.2 -0.4**
comp=Z,24nm,1.1s,mb5.0
CLL Collm 73.38 320 ⇑*i*P P **10 19 40.2 -0.4**
CLL pmax pmax
comp=Z,24nm,1.1s,mb5.0
CLL Collm 73.38 320 ⇑*i*P P **10 19 40.2 -0.4**
comp=Z,24nm,1.1s,mb5.0
CLL *e*pP pP 10 19 51.0 -5.2
CLL *i* PcP PcP 10 19 57.8 +1.2
WET Wettzell 73.53 317 *e*P P **10 19 41.8 +0.2**
comp=Z,31nm,1.1s,mb5.2
WET Wettzell 73.53 317 *e*P P **10 19 41.8 +0.2**
WET pmax pmax
comp=Z,31nm,1.1s,mb5.2
TANN Tannenbergstha 73.75 319 *e*P P **10 19 43.1 +0.3**
comp=Z,23nm,1.3s,mb5.0
NKC Novy Kostel 73.77 319 *e*P P **10 19 43.2 +0.3**
NKC *e**PP pP 10 20 00.9 +2.4
NKC Novy Kostel 73.77 319 *e*P P **10 19 43.2 +0.3**
NKC *ex* x 10 20 00.9
GUNZ Gunzen 73.84 319 *e*P P **10 19 43.7 +0.4**
comp=Z,27nm,1.2s,mb5.0
WERD Werda 73.85 319 *e*P P **10 19 43.6 +0.2**
comp=Z,23nm,1.0s,mb5.1
ABTA Abfaltersbach 73.90 315 ⇑*i*P P **10 19 42.8 -1.0**
comp=Z,18nm,1.1s,mb4.9
NSS Namsos 73.91 334 *e*P P **10 19 41.7 -1.7**
NOA NORSAR Array B 74.22 330 P P **10 19 44.8 -0.6**
NOA *es*P sP 10 20 03.2 -3.9
NOA PP PP 10 22 25.5 -5.9
NOA NORSAR Array B 74.22 330 P P **10 19 44.8 -0.6**
comp=Z,10nm,0.8s,mb4.8,baz=89,slow=5.9,SNR=26
NOA *es*P sP 10 20 03.2 -3.9
comp=Z,8.8nm,0.8s,baz=89,slow=5.9,SNR=5.9
NOA PP PP 10 22 25.5 -5.9
comp=Z,1.4nm,0.8s,baz=92,slow=8.9,SNR=3.5
MOX Moxa 74.28 319 *e*P P **10 19 46.0 +0.1**
comp=Z,36nm,1.5s,mb5.1
MOX *e* pP 10 19 58.4 -3.1
MOX Moxa 74.28 319 *e*P P **10 19 46.1 +0.2**
comp=Z,17nm,0.9s,mb5.0
MOX *e* pP 10 20 03.9 +2.4
MOX Moxa 74.28 319 *e*P P **10 19 46.0 +0.1**
MOX *e* pP 10 19 58.4 -3.1
MOX pmax pmax
comp=Z,36nm,1.5s,mb5.1
NAO01 NORSAR Array S 74.39 330 *e*P P **10 19 45.3 -1.0**
comp=Z,16nm,0.8s,mb5.0
WTTA Wattenberg 74.47 316 ⇑*i*P P **10 19 46.3 -0.7**
comp=Z,31nm,1.1s,mb5.1
GRA1 Grafenberg Arr 74.59 318 *e*P P **10 19 48.3 +0.6**
comp=Z,83nm,1.6s,mb5.4
GRA1 *e* pP 10 20 05.3 +2.0
GRF Grafenberg Arr 74.59 318 *e*P P **10 19 48.3 +0.6**
comp=Z,83nm,1.6s,mb5.4
GRF *e* pP 10 20 05.3 +2.0
GRF Grafenberg Arr 74.59 318 *e*P P **10 19 48.3 +0.6**
GRF *e* pP 10 20 05.3 +2.0
GRF pmax pmax
comp=Z,83nm,1.6s,mb5.4
GRF Grafenberg Arr 74.59 318 *e*P P **10 19 48.3 +0.6**
GRF *e* pP 10 20 05.3 +2.0
GRF pmax pmax
comp=Z,83nm,1.6s,mb5.4
FUR Furstenfeldbru 74.65 317 *e*P P **10 19 48.2 +0.1**
comp=Z,21nm,0.4s,mb5.4
FUR Furstenfeldbru 74.65 317 *e*P P **10 19 48.2 +0.1**
FUR pmax pmax
comp=Z,21nm,0.4s,mb5.4
KBS Kingsbay 74.79 349 ⇑*i*P P **10 19 47.2 -1.2**
MOTA Moosalm 74.82 316 ⇑*i*P P **10 19 48.3 -0.8**
comp=Z,29nm,1.0s,mb5.2,SNR=10
BSEG Bad Segeberg 74.91 323 *e*P P **10 19 50.0 +0.5**
comp=Z,45nm,0.9s,mb5.4
BSEG *e* pP 10 20 07.9 +2.8
CLZ Clausthal 75.00 320 *e*P P **10 19 50.3 +0.3**
comp=Z,34nm,1.0s,mb5.2
CLZ Clausthal 75.00 320 *e*P P **10 19 50.3 +0.3**
CLZ pmax pmax
comp=Z,34nm,1.0s,mb5.2
RETA Reutte 75.04 316 ⇑*i*P P **10 19 49.8 -0.6**
comp=Z,45nm,1.4s,mb5.2,SNR=13
FETA Feichten 75.10 315 ⇑*i*P P **10 19 50.1 -0.6**
comp=Z,21nm,1.0s,mb5.0,SNR=10.0
DAVA Damuels 75.66 316 ⇑*i*P P **10 19 53.7 -0.3**
comp=Z,37nm,1.0s,mb5.3,SNR=10
STU Stuttgart 75.98 317 *e*P P **10 19 55.5 -0.2**
comp=Z,14nm,1.2s,mb4.8
TUE Stuetta 76.10 315 *e*P P **10 19 56.4 0.0**
comp=Z,12nm,0.8s,mb4.9
TNS Taunus Mts 76.33 319 *e*P P **10 19 57.9 +0.2**
comp=Z,24nm,0.9s,mb5.1
TNS Taunus Mts 76.33 319 *e*P P **10 19 57.9 +0.2**
TNS pmax pmax
comp=Z,24nm,0.9s,mb5.1
IBBN Ibbenburen 76.57 321 *e*P P **10 19 59.3 +0.3**
comp=Z,45nm,1.2s,mb5.3
BFO Black Forest 76.60 317 *e*P P **10 19 58.7 -0.5**
comp=Z,20nm,1.6s,mb4.8
BFO Black Forest 76.60 317 *e*P P **10 19 58.7 -0.5**
BFO pmax pmax
comp=Z,20nm,1.6s,mb4.8
LBTB Lobatse 76.76 240 *e*P P **10 20 01.0 +0.5**
comp=Z,20nm,0.8s,mb5.1
LBTB Lobatse 76.76 240 *e*P P **10 20 01.0 +0.5**
LBTB pmax pmax
comp=Z,20nm,0.8s,mb5.1
PGF Pioggiola 76.77 311 *e*P P **10 19 59.9 -0.4**
comp=Z,57nm,1.1s,mb5.1
PGF Pioggiola 76.77 311 *e*P P **10 19 59.9 -0.4**
comp=Z,28nm,1.1s,mb5.1
PGF Pioggiola 76.77 311 *e*P P **10 19 59.9 -0.4**
PGF pmax pmax
comp=Z,28nm,1.1s,mb5.1
VSL Villasalto 76.86 308 *e*P P **10 20 00.4 -0.5**
comp=Z,24nm,0.9s,mb5.1
BUG Bochum--Univer 76.96 320 *e*P P **10 20 01.3 +0.1**
comp=Z,36nm,1.1s,mb5.2
CDF Champ du Feu 77.28 317 *e*P P **10 20 02.5 -0.6**
comp=Z,26nm,1.1s,mb4.8
CDF Champ du Feu 77.28 317 *e*P P **10 20 02.5 -0.6**
comp=Z,13nm,1.1s,mb4.8
CDF Champ du Feu 77.28 317 *e*P P **10 20 02.5 -0.6**
CDF pmax pmax
comp=Z,13nm,1.1s,mb4.8
KEST Kesra 77.39 304 P P **10 20 03.9 -0.1**
comp=Z,6.6nm,0.9s,mb4.6,baz=326,slow=2.8,SNR=21
HINF Hinteralfeld 77.64 316 *e*P P **10 20 04.4 -0.7**
SBF Sospel 77.74 312 *e*P P **10 20 05.3 -0.4**
comp=Z,46nm,0.9s,mb5.1
SBF Sospel 77.74 312 *e*P P **10 20 05.3 -0.4**
comp=Z,23nm,0.9s,mb5.1
SBF Sospel 77.74 312 *e*P P **10 20 05.3 -0.4**
SBF pmax pmax
comp=Z,23nm,0.9s,mb5.1
MEM Membach 77.84 319 P P **10 20 06.2 0.0**
WLF Walferdange 77.87 318 P P **10 20 07.2 +0.9**
comp=Z,16nm,1.8s,mb4.7
WLF Walferdange 77.87 318 *e*P P **10 20 06.9 +0.6**
comp=Z,52nm,1.7s,mb5.2
HAU Haudompre 77.95 317 *e*P P **10 20 06.1 -0.7**
comp=Z,31nm,0.8s,mb5.0
HAU Haudompre 77.95 317 *e*P P **10 20 06.1 -0.7**
comp=Z,16nm,0.8s,mb5.0
HAU Haudompre 77.95 317 *e*P P **10 20 06.1 -0.7**
HAU pmax pmax
comp=Z,16nm,0.8s,mb5.0
LPG La Plagne 78.01 314 *e*P P **10 20 07.3 +0.1**
comp=Z,80nm,0.9s,mb5.3
LPG La Plagne 78.01 314 *e*P P **10 20 07.3 +0.1**
comp=Z,40nm,0.9s,mb5.3
LPG La Plagne 78.01 314 *e*P P **10 20 07.3 +0.1**
LPG pmax pmax
comp=Z,40nm,0.9s,mb5.3
LPL La Plagne 78.02 314 *e*P P **10 20 07.3 +0.1**
comp=Z,74nm,0.8s,mb5.3
LPL La Plagne 78.02 314 *e*P P **10 20 07.3 +0.1**
comp=Z,37nm,0.8s,mb5.4
LPL La Plagne 78.02 314 *e*P P **10 20 07.3 +0.1**
LPL pmax pmax
comp=Z,37nm,0.8s,mb5.4
MBDF Montbardon 78.10 313 *e*P P **10 20 06.8 -0.9**
comp=Z,29nm,0.9s,mb4.9
MBDF Montbardon 78.10 313 *e*P P **10 20 06.8 -0.9**
comp=Z,14nm,0.9s,mb4.9
MBDF Montbardon 78.10 313 *e*P P **10 20 06.8 -0.9**
MBDF pmax pmax
comp=Z,14nm,0.9s,mb4.9
BCLA Clavier 78.31 319 P P **10 20 08.9 +0.1**
CABF La Chapelle 78.31 315 *e*P P **10 20 08.7 -0.2**
comp=Z,40nm,1.0s,mb5.0
CABF La Chapelle 78.31 315 *e*P P **10 20 08.7 -0.2**
comp=Z,20nm,1.0s,mb5.0
CABF La Chapelle 78.31 315 *e*P P **10 20 08.7 -0.2**
CABF pmax pmax
comp=Z,20nm,1.0s,mb5.0
FRF La Foret Royal 78.35 312 *e*P P **10 20 08.8 -0.3**
comp=Z,124nm,1.1s,mb5.4
FRF La Foret Royal 78.35 312 *e*P P **10 20 08.8 -0.3**
comp=Z,62nm,1.1s,mb5.5
FRF La Foret Royal 78.35 312 *e*P P **10 20 08.8 -0.3**
FRF pmax pmax
comp=Z,62nm,1.1s,mb5.5
LMR La Mourre 78.48 312 *e*P P **10 20 09.3 -0.5**
comp=Z,72nm,1.1s,mb5.2
LMR La Mourre 78.48 312 *e*P P **10 20 09.3 -0.5**
comp=Z,36nm,1.1s,mb5.2
LMR La Mourre 78.48 312 *e*P P **10 20 09.3 -0.5**
LMR pmax pmax
comp=Z,36nm,1.1s,mb5.2
ORIF Oris-en-Rattie 78.70 314 *e*P P **10 20 10.3 -0.7**
comp=Z,9.8nm,0.7s,mb4.5
ORIF Oris-en-Rattie 78.70 314 *e*P P **10 20 10.3 -0.7**
comp=Z,4.9nm,0.7s,mb4.5
ORIF Oris-en-Rattie 78.70 314 *e*P P **10 20 10.3 -0.7**
ORIF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
SNF Seneffe 78.95 319 P P **10 20 12.9 +0.7**
comp=Z,15nm,1.5s,mb4.7
SMRF Simiane la Rot 79.05 313 *e*P P **10 20 13.1 +0.1**
comp=Z,18nm,0.8s,mb4.8
SMRF Simiane la Rot 79.05 313 *e*P P **10 20 13.1 +0.1**
comp=Z,18nm,0.8s,mb5.1
VIVF Saint-Julien-l 79.56 314 *e*P P **10 20 15.3 -0.4**
comp=Z,44nm,1.1s,mb5.0
VIVF Saint-Julien-l 79.56 314 *e*P P **10 20 15.3 -0.4**
comp=Z,22nm,1.1s,mb5.0
VIVF Saint-Julien-l 79.56 314 *e*P P **10 20 15.3 -0.4**
VIVF pmax pmax
comp=Z,22nm,1.1s,mb5.0
SSB Saint Sauveur 79.58 314 *e*P P **10 20 15.4 -0.4**
comp=Z,24nm,1.1s,mb5.0
SSB *e* pP 10 20 30.9 -0.6
SSB Saint Sauveur 79.58 314 *e*P P **10 20 15.4 -0.4**
SSB *e* pP 10 20 30.9 -0.6
SSB pmax pmax
comp=Z,24nm,1.1s,mb5.0
LOR Lormes 79.72 316 *e*P P **10 20 15.8 -0.8**
comp=Z,38nm,1.0s,mb5.0
LOR Lormes 79.72 316 *e*P P **10 20 15.8 -0.8**
comp=Z,19nm,1.0s,mb5.0
LOR Lormes 79.72 316 *e*P P **10 20 15.8 -0.8**
LOR pmax pmax
comp=Z,19nm,1.0s,mb5.0
SMF Signal de Mont 79.84 316 *e*P P **10 20 16.5 -0.7**
SSF Saint Saulge 80.00 316 ⇑*i*P P **10 20 17.5 -0.5**
comp=Z,26nm,1.0s,mb4.8
SSF Saint Saulge 80.00 316 ⇑*i*P P **10 20 17.5 -0.5**
comp=Z,13nm,1.0s,mb4.8
SSF Saint Saulge 80.00 316 ⇑*i*P P **10 20 17.5 -0.5**
SSF pmax pmax
comp=Z,13nm,1.0s,mb4.8
DFRA Djebel Bou Aff 80.03 305 P P **10 20 19.4 +0.9**
AVF Avril sur Loir 80.15 316 *e*P P **10 20 18.1 -0.8**
comp=Z,21nm,0.8s,mb4.8
AVF Avril sur Loir 80.15 316 *e*P P **10 20 18.1 -0.8**
comp=Z,11nm,0.8s,mb4.8
AVF Avril sur Loir 80.15 316 *e*P P **10 20 18.1 -0.8**
AVF pmax pmax
comp=Z,11nm,0.8s,mb4.8
LASF Ste Croix 80.26 313 *e*P P **10 20 19.5 0.0**
comp=Z,72nm,1.3s,mb5.1
SET Setif 80.47 305 P pP 10 20 33.0 -3.6
BGF Bois d'Agland 80.53 316 *e*P P **10 20 20.6 -0.3**
comp=Z,39nm,1.0s,mb5.0
BGF Bois d'Agland 80.53 316 *e*P P **10 20 20.6 -0.3**
comp=Z,19nm,1.0s,mb5.0
BGF Bois d'Agland 80.53 316 *e*P P **10 20 20.6 -0.3**
BGF pmax pmax
comp=Z,19nm,1.0s,mb5.0
TCF Toulx Ste Croi 81.01 315 *e*P P **10 20 23.3 -0.2**
comp=Z,57nm,1.1s,mb5.1
TCF Toulx Ste Croi 81.01 315 *e*P P **10 20 23.3 -0.2**
comp=Z,29nm,1.1s,mb5.1
TCF Toulx Ste Croi 81.01 315 *e*P P **10 20 23.3 -0.2**
TCF pmax pmax
comp=Z,29nm,1.1s,mb5.1
EJON La Jonquera 81.25 312 P P **10 20 24.8 0.0**
comp=Z,6.2nm,0.7s,mb4.7
CAF Calviac 81.37 314 *e*P P **10 20 25.4 0.0**
comp=Z,30nm,1.0s,mb4.9
CAF Calviac 81.37 314 *e*P P **10 20 25.4 0.0**
comp=Z,15nm,1.0s,mb4.9
CAF Calviac 81.37 314 *e*P P **10 20 25.4 0.0**
CAF pmax pmax
comp=Z,15nm,1.0s,mb4.9
ATAF Djebel Tarf 81.43 305 P P **10 20 26.0 +0.1**
DAG Danmarks Havn 81.46 348 ⇓*i*P P **10 20 24.8 -0.5**
DAG pmax pmax
comp=Z,35nm,1.3s,mb5.1
DAG MLR MLR
comp=N,6μm,20.0s,MS6.1
DAG MLR MLR
comp=E,6μm,20.0s,MS6.1
DAG MLR MLR
comp=Z,16μm,20.0s,MS6.4
DAG Danmarks Havn 81.46 348 ⇓*i*P P **10 20 24.8 -0.5**
comp=Z,35nm,1.3s,mb5.1
DAG
comp=Z,16μm,20.0s
MTLF Montolieu 81.56 312 *e*P P **10 20 26.2 -0.3**
comp=Z,38nm,1.1s,mb5.0
MTLF Montolieu 81.56 312 *e*P P **10 20 26.2 -0.3**
comp=Z,19nm,1.1s,mb4.9
MTLF Montolieu 81.56 312 *e*P P **10 20 26.2 -0.3**
MTLF pmax pmax
comp=Z,19nm,1.1s,mb4.9
RJF Les Rejaudoux 81.67 315 *e*P P **10 20 27.0 0.0**
comp=Z,52nm,1.1s,mb5.1
RJF Les Rejaudoux 81.67 315 *e*P P **10 20 27.0 0.0**
comp=Z,26nm,1.0s,mb5.1
RJF Les Rejaudoux 81.67 315 *e*P P **10 20 27.0 0.0**
RJF pmax pmax
comp=Z,26nm,1.0s,mb5.1
AKET Djebel Ketaf 81.71 305 P P **10 20 28.8 +1.4**
CFON Fontmartina 81.71 311 P P **10 20 27.6 +0.3**
comp=Z,7.6nm,1.2s,mb4.5
TSUM Tsumeb 81.76 248 P P **10 20 28.1 +0.2**
comp=Z,2.1nm,0.8s,mb4.1,baz=230,slow=22,SNR=3.2
TSUM pP pP 10 20 41.8 -1.9
comp=Z,5.9nm,0.8s,baz=59,slow=12,SNR=4.6
TSUM PP PP 10 23 40.5 +4.7
comp=Z,1.0nm,0.3s,baz=242,slow=22,SNR=7.1
ETOS Mallorca 81.82 309 P P **10 20 28.1 +0.2**
comp=Z,25nm,1.5s,mb4.9
CLLI Llivia 81.91 312 P P **10 20 29.1 +0.7**
ADJB Djebel Djouab 82.04 305 P pP 10 20 41.1 -3.9
LDF La Druitiere 82.11 318 *e*P P **10 20 28.6 -0.6**
comp=Z,26nm,0.8s,mb4.9
LDF La Druitiere 82.11 318 *e*P P **10 20 28.6 -0.6**
comp=Z,13nm,0.8s,mb4.9
LDF La Druitiere 82.11 318 *e*P P **10 20 28.6 -0.6**
LDF pmax pmax
comp=Z,13nm,0.8s,mb4.9
LFF La Frestale 82.29 314 *e*P P **10 20 30.2 -0.1**
FLN La Foliniere 82.31 318 *e*P P **10 20 29.7 -0.6**
comp=Z,46nm,1.0s,mb5.1
FLN La Foliniere 82.31 318 *e*P P **10 20 29.7 -0.6**
comp=Z,23nm,1.0s,mb5.1
FLN La Foliniere 82.31 318 *e*P P **10 20 29.7 -0.6**
FLN pmax pmax
comp=Z,23nm,1.0s,mb5.1
EMIR Miracle 82.35 311 P P **10 20 31.5 +0.8**
comp=Z,22nm,0.7s,mb5.2
EMHD Djebel Mahouad 82.42 305 P P **10 20 32.0 +0.9**
ESK Eskdalemuir 82.48 325 *e*P P **10 20 31.3 +0.3**
comp=Z,18nm,0.9s,mb5.0
ESK *e* pP 10 20 46.9 0.0
ESK Eskdalemuir 82.48 325 *e*P P **10 20 31.3 +0.2**
ESK *e* pP 10 20 46.9 0.0
ESK pmax pmax
comp=Z,18nm,0.9s,mb5.0
ESK Eskdalemuir 82.48 325 *i* P P **10 20 32.2 +1.1**
CSOR Sort 82.54 312 P P **10 20 32.1 +0.5**
comp=Z,31nm,1.3s,mb5.2
MFF Saint Martin d 82.55 316 *e*P P **10 20 31.1 -0.5**
comp=Z,52nm,1.0s,mb5.2
MFF Saint Martin d 82.55 316 *e*P P **10 20 31.1 -0.5**
comp=Z,26nm,1.0s,mb5.2
MFF Saint Martin d 82.55 316 *e*P P **10 20 31.1 -0.5**
MFF pmax pmax
comp=Z,26nm,1.0s,mb5.2
GRR Gorron 82.63 318 *e*P P **10 20 31.5 -0.5**
comp=Z,22nm,1.0s,mb4.9
GRR Gorron 82.63 318 *e*P P **10 20 31.5 -0.5**
comp=Z,11nm,1.0s,mb4.8
GRR Gorron 82.63 318 *e*P P **10 20 31.5 -0.5**
GRR pmax pmax
comp=Z,11nm,1.0s,mb4.8
EPOB Poblet 82.79 311 P P **10 20 33.2 +0.2**
comp=Z,15nm,0.8s,mb5.1
EPF Esparros 82.97 312 *e*P P **10 20 32.7 -1.2**
comp=Z,6.1nm,0.8s,mb4.4
EPF Esparros 82.97 312 *e*P P **10 20 32.7 -1.2**
comp=Z,3.0nm,0.8s,mb4.4
TAM Tamanrasset 82.98 292 *e*P P **10 20 35.3 +1.0**
comp=Z,36nm,1.3s,mb5.2
TAM *e* pP 10 20 50.0 -0.1
TAM Tamanrasset 82.98 292 *e*P P **10 20 35.3 +1.0**
TAM *e* pP 10 20 50.0 -0.1
TAM pmax pmax
comp=Z,36nm,1.3s,mb5.2
ALE Alert 83.05 357 P P **10 20 33.0 -0.6**
comp=Z,363nm,0.8s,mb6.5,SNR=30
EIBI Ibiza 83.08 308 P P **10 20 35.0 +0.5**
comp=Z,15nm,1.0s,mb5.0
EBIE Bielsa 83.19 312 P P **10 20 35.8 +0.8**
comp=Z,8.1nm,0.8s,mb4.8
SUR Sutherland 83.38 234 P P **10 20 37.5 +1.4**
comp=Z,6.1nm,0.9s,mb4.6,baz=306,slow=23,SNR=2.3
ERTA Horta de San J 83.43 310 P P **10 20 36.3 +0.1**
comp=Z,15nm,0.8s,mb5.1
EBNR Beni Rached 83.52 306 P P **10 20 46.0 +9.1**
ETSF Etsaut 83.64 312 *e*P P **10 20 37.3 0.0**
comp=Z,26nm,0.9s,mb5.0
ETSF Etsaut 83.64 312 *e*P P **10 20 37.3 0.0**
comp=Z,13nm,0.9s,mb5.1
ETSF Etsaut 83.64 312 *e*P P **10 20 37.3 0.0**
ETSF pmax pmax
comp=Z,13nm,0.9s,mb5.1
SGMF Saint Gilles 83.77 318 *e*P P **10 20 37.5 -0.3**
comp=Z,78nm,1.2s,mb5.4
SGMF Saint Gilles 83.77 318 *e*P P **10 20 37.5 -0.3**

comp=Z,39nm,1.2s,mb5.4
SGMF Saint Gilles 83.77 318 *e*P **P** **10 20 37.5 -0.3**
SGMF pmax pmax
comp=Z,39nm,1.2s,mb5.4
ESAC San Caprasio 83.84 311 P **P** **10 20 38.5 +0.2**
comp=Z,18nm,0.8s,mb5.3
ETRT Tiaret 83.90 305 P **P** **10 20 39.6 +0.8**
EANR 'Ain N'Sour 83.94 305 P **P** **10 20 39.0 0.0**
SJPF Ste Jean 84.07 313 *e*P **P** **10 20 38.7 -0.8**
comp=Z,34nm,1.3s,mb5.0
SJPF Ste Jean 84.07 313 *e*P **P** **10 20 38.7 -0.8**
comp=Z,17nm,1.3s,mb5.0
SJPF Ste Jean 84.07 313 *e*P **P** **10 20 38.7 -0.8**
SJPF pmax pmax
comp=Z,17nm,1.3s,mb5.0
EMOS Mosqueruela 84.16 310 P **P** **10 20 40.3 +0.3**
comp=Z,19nm,1.0s,mb5.2
ROSF Rostrenen 84.21 318 *e*P **P** **10 20 39.8 -0.3**
comp=Z,40nm,1.0s,mb5.2
ROSF Rostrenen 84.21 318 *e*P **P** **10 20 39.8 -0.3**
comp=Z,20nm,1.0s,mb5.2
ROSF Rostrenen 84.21 318 *e*P **P** **10 20 39.8 -0.3**
ROSF pmax pmax
comp=Z,20nm,1.0s,mb5.2
QUIF Quistinic 84.24 318 *e*P **P** **10 20 39.6 -0.7**
comp=Z,20nm,0.9s,mb5.0
QUIF Quistinic 84.24 318 *e*P **P** **10 20 39.6 -0.7**
comp=Z,9.8nm,0.9s,mb4.9
QUIF Quistinic 84.24 318 *e*P **P** **10 20 39.6 -0.7**
QUIF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
EALK Alkurruntz 84.25 313 P **P** **10 20 40.7 +0.3**
comp=Z,12nm,0.9s,mb5.0
MAW Mawson 84.35 191 *e*P **P** **10 20 40.4 +0.2**
comp=Z,7.8nm,0.9s,mb4.8
MAW Mawson 84.35 191 P **P** **10 20 40.7 +0.5**
comp=Z,6.2nm,0.9s,mb4.7,baz=40,slow=7.1,SNR=6.5
MAW Mawson 84.35 191 P **P** **10 20 40.7 +0.5**
MAW pmax pmax
comp=Z,6.0nm,0.9s
ECHE Chera 84.70 309 P **P** **10 20 43.8 +1.0**
comp=Z,9.9nm,0.7s,mb5.0
ECHE Chera 84.70 309 P **P** **10 20 43.8 +1.0**
ECHE pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
SCO Scoresbysund 85.13 342 *i* P **P** **10 20 44.1 -0.2**
SCO pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
SCO MLR MLR
comp=Z,8µm,19.0s,MS6.2
SCO Scoresbysund 85.13 342 *i* P **P** **10 20 44.1 -0.2**
comp=Z,9.3nm,1.1s,mb4.8
SCO
comp=Z,8µm,19.0s
ETOR Torete 85.22 311 P **P** **10 20 44.6 -0.7**
comp=Z,6.9nm,0.7s,mb4.9
ETOR Torete 85.22 311 P **P** **10 20 44.7 -0.6**
ETOR pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
ETOB Tobarra 85.37 309 P **P** **10 20 46.6 +0.5**
comp=Z,11nm,0.9s,mb5.0
EVIA Vianos 86.09 309 P **P** **10 20 50.4 +0.6**
comp=Z,3.9nm,0.6s,mb4.8
EVIA Vianos 86.09 309 P **P** **10 20 50.4 +0.7**
EVIA pmax pmax
comp=Z,4.0nm,0.6s,mb4.8
EHUE Huescar 86.37 308 P **P** **10 20 51.2 +0.1**
comp=Z,10nm,1.0s,mb5.0
EHUE Huescar 86.37 308 P **P** **10 20 51.2 +0.1**
EHUE pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
TTA Tatalina 86.65 25 *e*P **P** **10 20 52.3 +0.4**
comp=Z,39nm,1.2s,mb5.5
TTA Tatalina 86.65 25 *e*P **P** **10 20 52.3 +0.3**
TTA pmax pmax
comp=Z,39nm,1.2s,mb5.5
GUD Guadarrama 86.81 311 P **P** **10 20 53.7 +0.5**
comp=Z,18nm,0.8s,mb5.3
GUD Guadarrama 86.81 311 P **P** **10 20 53.7 +0.5**
GUD pmax pmax
comp=Z,18nm,0.8s,mb5.3
EBER Berja 86.84 307 P **P** **10 20 53.9 +0.5**
comp=Z,12nm,1.0s,mb5.1
COLD Coldfoot 86.91 20 *e*P **P** **10 20 53.3 +0.2**
comp=Z,43nm,1.4s,mb5.5
ESDC Sonseca Array 86.92 310 P **P** **10 20 53.9 +0.1**
comp=Z,6.3nm,0.8s,mb4.9,baz=57,slow=4.8,SNR=14
ESDC pP pP 10 21 07.3 -2.4
comp=Z,6.4nm,0.8s,baz=56,slow=4.6,SNR=6.3
ESLA Sonseca Array 86.92 310 *e*P **P** **10 20 53.6 -0.2**
comp=Z,1.0nm,0.9s,mb4.0
ESLA *e* pP 10 21 08.5 -1.2
EBAN Banos Encina 87.19 308 P **P** **10 20 55.7 +0.6**
comp=Z,2.4nm,0.6s,mb4.6
EBAN Banos Encina 87.19 308 P **P** **10 20 55.7 +0.6**
EBAN pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
PAB San Pablo 87.25 310 *e*P **P** **10 20 55.4 +0.1**
comp=Z,6.2nm,1.1s,mb4.8
PAB San Pablo 87.25 310 *e*P **P** **10 20 55.4 +0.1**
PAB pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
SDPT Sand Point 87.44 33 *e*P **P** **10 20 54.4 -1.6**
comp=Z,34nm,0.9s,mb5.6
EADA Adamuz 87.79 309 P **P** **10 20 58.0 0.0**
comp=Z,7.6nm,0.9s,mb4.9
SUMG Summit 88.14 347 *e*P **P** **10 20 59.2 +0.3**
comp=Z,72nm,1.1s,mb5.8
SUMG *e* pP 10 21 14.4 -0.4
SUMG Summit 88.14 347⇑ *i*P **P** **10 20 59.5 +0.6**
comp=Z,39nm,1.0s,mb5.6
SUMG
comp=Z,8µm,20.0s
BPAW Bear Paw Mtn. 88.15 23 *e*P **P** **10 20 59.4 +0.3**
comp=Z,105nm,1.1s,mb6.0
CHGN Chignik 88.17 32 *e*P **P** **10 20 57.7 -1.7**
PPLA Purkeypile 88.24 25 *e*P **P** **10 20 59.9 +0.3**
comp=Z,27nm,0.9s,mb5.5
TORD Torodi Ar. Bea 88.70 283 P **P** **10 21 02.8 +0.1**
comp=Z,5.9nm,1.1s,mb4.8,baz=85,slow=4.7,SNR=16
TORD pP pP 10 21 17.3 -1.4
comp=Z,14nm,0.8s,baz=94,slow=5.3,SNR=13
TORD PP PP 10 24 29.2 -2.9
comp=Z,2.4nm,1.2s,baz=64,slow=5.0,SNR=5.1
TRF Thorofare Moun 88.74 24 *e*P **P** **10 21 02.0 +0.1**
comp=Z,41nm,0.9s,mb5.8
MVO Moncorvo 88.75 312 *e*P **P** **10 21 02.9 +0.5**
comp=Z,20nm,1.3s,mb5.3
MVO *e*S S 10 32 06.7 +21
MVO A 10 42 05.3
comp=Z,6µm,18.0s
MVO Moncorvo 88.75 312 P **P** **10 21 03.1 +0.7**
COLA College 88.93 22 *e*P **P** **10 21 02.5 -0.3**
comp=Z,14nm,1.0s,mb5.2
COLA *e* pP 10 21 19.7 +0.9
COLA College 88.93 22 *e*P **P** **10 21 02.5 -0.3**
COLA *e* pP 10 21 19.7 +0.9
COLA pmax pmax
comp=Z,14nm,1.0s,mb5.2
EJIF Jimena Fronter 88.95 307 P **P** **10 21 03.5 0.0**
comp=Z,4.1nm,0.6s,mb4.9
EJIF Jimena Fronter 88.95 307 P **P** **10 21 03.5 0.0**
EJIF pmax pmax
comp=Z,4.0nm,0.6s,mb4.9
MCK McKinley 89.12 23 *e*P **P** **10 21 03.9 +0.2**
comp=Z,72nm,1.1s,mb5.9
MCK McKinley 89.12 23 *e*P **P** **10 21 03.9 +0.2**
MCK pmax pmax
comp=Z,73nm,1.1s,mb5.9
RSO Redoubt South 89.13 27 *e*P **P** **10 21 03.5 -0.3**
PVRL Vila Real 89.21 312 *e*P **P** **10 21 05.3 +0.7**
comp=Z,20nm,1.3s,mb5.3
PCAB Cabril 89.30 313 *e*P **P** **10 21 05.5 +0.5**
comp=Z,33nm,1.4s,mb5.5
ILAR Eielson Array 89.34 22 P **P** **10 21 03.5 -1.2**
comp=Z,11nm,0.8s,mb5.3,baz=298,slow=4.1,SNR=102
ILAR PP PP 10 24 32.8 -2.8
comp=Z,4.8nm,0.8s,baz=292,slow=7.8,SNR=4.7
ILAR PKKP PKKPbc 10 38 39.2 -3.3
comp=Z,0.5nm,0.8s,baz=172,slow=2.3,SNR=5.3
MTE Manteigas 89.35 311 *e*P **P** **10 21 06.3 +1.0**
comp=Z,37nm,1.1s,mb5.6
MTE A 10 42 30.4
comp=Z,3µm,18.0s
MTE Manteigas 89.35 311 *e*P **P** **10 21 05.4 +0.1**
comp=Z,30nm,1.0s,mb5.6
EBAD Badajoz 89.46 310 P **P** **10 21 05.6 -0.2**
comp=Z,6.8nm,0.9s,mb5.0
PCBR Castelo Branco 89.47 311 *e*P **P** **10 21 06.4 +0.5**
comp=Z,19nm,1.3s,mb5.3
EMIN Mina Concepcio 89.49 309 P **P** **10 21 05.8 -0.2**
comp=Z,8.5nm,1.0s,mb5.0
PVIS Viseu 89.51 312 *e*P **P** **10 21 06.3 +0.3**
comp=Z,23nm,1.3s,mb5.3
PMRV Marv??o 89.53 311 A 10 43 29.1
comp=Z,6µm,18.0s
EMAZ Mazaricos 89.58 314 P **P** **10 21 07.2 +0.9**
comp=Z,16nm,0.8s,mb5.4
PBAR Barrancos 89.65 309 *e*P **P** **10 21 06.5 -0.2**
comp=Z,32nm,1.7s,mb5.4
PBAR *e*S S 10 32 04.6 +11
PBAR A 10 44 14.4
comp=Z,3µm,18.0s
PESTR Estremoz 89.85 310 A 10 43 52.5
comp=Z,4µm,18.0s
PMR Palmer 90.13 25 *e*P **P** **10 21 08.4 0.0**
comp=Z,61nm,0.9s,mb5.9
RC01 Rabbit Creek A 90.13 26 *e*P **P** **10 21 08.3 -0.2**
comp=Z,103nm,0.9s,mb6.2
EGRO El Granado 90.18 309 P **P** **10 21 09.3 +0.1**
comp=Z,6.6nm,0.8s,mb5.0
EVO Evora 90.27 310 *e*P **P** **10 21 10.1 +0.5**
comp=Z,23nm,1.1s,mb5.1
PBEJ Beja 90.31 309 *e*P **P** **10 21 10.5 +0.6**
comp=Z,44nm,1.5s,mb5.6
OHAK Old Harbor 90.36 30 *e*P **P** **10 21 09.4 -0.2**
comp=Z,67nm,1.2s,mb5.8
PVAQ Vaqueiros 90.39 309 *e*P **P** **10 21 11.1 +0.9**
comp=Z,38nm,1.3s,mb5.6
PVAQ A 10 44 51.3
comp=Z,4µm,18.0s
KDAK Kodiak Island 90.44 29 P **P** **10 21 10.0 0.0**
comp=Z,338nm,1.3s,mb6.5,SNR=7.4
KDAK Kodiak Island 90.44 29 P **P** **10 21 10.1 +0.1**
comp=Z,49nm,1.1s,mb5.8,baz=302,slow=2.7,SNR=14
KDAK Kodiak Island 90.44 29 *i* P **P** **10 21 10.1 +0.1**
KDAK Kodiak Island 90.44 29 *i* P **P** **10 21 10.3 +0.3**
comp=Z,338nm,1.3s,mb6.5,SNR=7.4
PCVE Castro Verde 90.57 309 *e*S S 10 32 13.5 +11
PCVE A 10 43 51.8
comp=Z,3µm,18.0s
PBDV Barranco-do-Ve 90.61 309 *e*P **P** **10 21 12.3 +1.1**
comp=Z,41nm,1.5s,mb5.5
PBDV *e*S S 10 32 21.0 +18
PBDV A 10 44 57.7
comp=Z,3µm,18.0s
SYO Syowa Base 91.03 197⇑ *e*P **P** **10 21 11.6 -0.7**
PMAFR Mafra 91.08 311 *e*S S 10 32 20.4 +13
PMAFR A 10 49 55.5
comp=Z,3µm,18.0s
MORF Marmelete 91.13 309 *e*S S 10 32 26.1 +18
MORF A 10 50 55.8
comp=Z,4µm,18.0s
PFVI Vila Bisbo 91.32 309 *e*S S 10 32 35.7 +26
PFVI A 10 51 09.3
comp=Z,4µm,18.0s
INK Inuvik 91.33 16 P **P** **10 21 13.9 0.0**
comp=Z,27nm,1.0s,mb5.5,baz=269,slow=3.2
INK Inuvik 91.33 16 P **P** **10 21 13.9 0.0**
INK pmax pmax
comp=Z,27nm,1.0s
EGAK Eagle 91.35 20 *e*P **P** **10 21 13.9 -0.2**
comp=Z,17nm,0.9s,mb5.4
MENT Mentasta 91.53 23 *e*P **P** **10 21 15.8 +0.9**
DAWY Dawson 92.39 21 *e*P **P** **10 21 18.8 -0.1**
DAWY *e* pP 10 21 34.3 -0.6
DBIC Dimbokro 96.56 279 P **P** **10 21 40.1 +1.1**
comp=Z,1.4nm,0.7s,mb4.5,baz=134,slow=21,SNR=1.9
DLBC Dease Lake 99.55 22 P Pdif 10 21 51.2 -0.4
DLBC PP PP 10 25 57.1 +2.1
DLBC Dease Lake 99.55 22 P Pdif 10 21 51.2 -0.4
comp=Z,2.5nm,0.7s,baz=354,slow=3.0,SNR=6.7
DLBC PP PP 10 25 57.1 +2.1
comp=Z,3.3nm,1.1s,baz=324,slow=2.1,SNR=5.9
YKA Yellowknife Ar 100.66 13 P Pdif 10 21 55.9 -0.6
YKA Yellowknife Ar 100.66 13 P Pdif 10 21 55.9 -0.6
comp=Z,3.6nm,0.8s,baz=326,slow=3.2,SNR=5.8
YKA Yellowknife Ar 100.66 13 P Pdif 10 21 55.9 -0.7
YKA pmax pmax
comp=Z,4.0nm,0.8s
SLMT Seeley Lake 114.43 20 *e*P PKiKP 10 26 47.6 -0.8
HUMO Hull Mountain 114.46 29 *e*PKPdf PKiKP 10 26 49.0 +0.5
MSO Missoula 114.64 20 *e*P PKiKP 10 26 48.1 -0.7
CHMT Chamberlain Mo 114.79 20 *e*PKPdf PKiKP 10 26 49.0 -0.1
EGMT Eagleton 114.88 17 *e*PKPdf PKiKP 10 26 49.3 +0.1
YBH Yreka Blue Hor 115.25 29 PKP PKPdf 10 26 50.3 +0.2
comp=Z,0.8nm,0.7s,baz=164,slow=17,SNR=3.1
YBH Yreka Blue Hor 115.25 29 PKIKP PKPdf 10 26 50.3 +0.2
YBH pmax pmax
comp=Z,1.0nm,0.7s
MOD Modoc 116.24 28 *e*PKPdf PKPdf 10 26 52.0 0.0
LAO LASA Array 117.06 15 *e*PKPdf PKPdf 10 26 53.8 +0.3
RLMT Red Lodge 117.65 18 *e*PKPdf PKPdf 10 26 55.3 +0.6
EYMN Ely 118.21 4 *e*PKPdf PKPdf 10 26 54.9 -0.7
IMW Indian Meadow 118.22 20 *e*PKPdf PKPdf 10 26 55.5 -0.3
TPAW Teton Pass 118.58 20 *e*PKPdf PKPdf 10 26 57.1 +0.7
LOHW Long Hollow 118.58 20 *e*PKPdf PKPdf 10 26 56.6 +0.2
SNOW Snow King Moun 118.67 20 *e*PKPdf PKPdf 10 26 57.3 +0.7
REDW Red Top Meadow 118.72 20 *e*PKPdf PKPdf 10 26 57.1 +0.4
M13A Montello 119.27 24 *e*PKPdf PKPdf 10 26 58.5 +0.7
N12A Clover Valley, 119.36 25 *e*PKPdf PKPdf 10 26 58.8 +0.8
NVAR Mina Array Bea 119.93 29 PKP PKPdf 10 27 00.1 +0.8
comp=Z,6.8nm,0.7s,baz=300,slow=1.8,SNR=52
RSSD Black Hills 120.01 15 *e*PKPdf PKPdf 10 26 59.1 -0.1
HWUT Hardware Ranch 120.03 22 *e*PKPdf PKPdf 10 26 58.8 -0.6
DUG Dugway 120.80 23 *e*PKPdf PKPdf 10 27 01.0 +0.2
ECSD EROS Data Cent 121.84 9 *e*PKPdf PKPdf 10 27 02.2 -0.5
MSU Marysvale 122.50 24 *e*PKPdf PKPdf 10 27 05.3 +1.1
ARUT Antelope Range 122.61 25 *e*PKPdf PKPdf 10 27 05.6 +1.2
GSC Goldstone 123.16 30 *e*PKPdf PKPdf 10 27 06.5 +1.0
BINY Binghamton 123.31 351 *e*PKPdf PKPdf 10 27 05.6 0.0
MVCO Mesa Verde 125.02 22 *e*PKPdf PKPdf 10 27 09.8 +0.7
KSU1 Kansas State U 126.37 10 *e*PKPdf PKPdf 10 27 11.6 0.0
ANMO Albuquerque 127.77 21 *e*PKPdf PKPdf 10 27 15.6 +1.2
LAZ Ladron 128.02 22 *e*PKPdf PKPdf 10 27 16.0 +1.2
LENM Lemitar 128.29 22 *e*PKPdf PKPdf 10 27 16.9 +1.5
TUC Tucson 128.41 27 *e*PKPdf PKPdf 10 27 16.6 +0.9
BNM Barren Site 128.43 21 *e*PKPdf PKPdf 10 27 16.8 +1.1
WMOK Wichita Mounta 130.17 13 *e*PKPdf PKPdf 10 27 18.5 -0.4
WVT Waverly 130.17 2 *e*PKPdf PKPdf 10 27 19.1 +0.1
GDL2 Guadalupe Moun 130.99 20 *e*PKPdf PKPdf 10 27 21.3 +0.7
MNTX Cornudas Mount 131.09 22 *e*PKPdf PKPdf 10 27 21.2 +0.5
MIAR Mount Ida 131.29 8 *e*PKPdf PKPdf 10 27 21.1 0.0
TXAR Lajitas Array 133.85 21 PKP PKPdf 10 27 26.1 +0.1
TXAR SKPbc SKPbc 10 30 51.8 +1.4
TXAR PKKPbc 10 36 18.6
TXAR Lajitas Array 133.85 21 PKhKP PKPpre 10 27 13.0
comp=Z,0.5nm,0.8s,baz=211,slow=1.5,SNR=6.2
TXAR PKP PKPdf 10 27 26.1 +0.1
comp=Z,3.3nm,0.8s,baz=244,slow=1.3,SNR=24
TXAR SKPbc SKPbc 10 30 51.8 +1.3
comp=Z,5.8nm,0.9s,baz=308,slow=1.5,SNR=15
TXAR PKKPbc 10 36 18.6
comp=Z,0.1nm,0.7s,baz=110,slow=2.9,SNR=3.5
JCT Junction City 133.98 16 *e*PKPdf PKPdf 10 27 26.5 +0.2
SDDR Presa de Saban 144.05 335 *e*PKPdf PKPdf 10 27 43.5 -1.3
PTVM Pico Tres Padr 144.39 21 *i* P PKPdf 10 27 44.8 -0.7
IIO Organos 144.53 20 *i* P PKPdf 10 27 44.8 -0.9
LVIG Laguna Verde 145.11 17 *i* P PKPbc 10 27 43.6 -2.6
ZIIG Zihuatanejo 145.29 26 *i* P PKPbc 10 27 48.0 +1.1
PLIG Platanillo 145.36 22 *i* P PKPbc 10 27 47.3 +0.3
TEIG Tepich 145.99 3 *e*PKPdf PKPdf 10 27 48.9 +0.7
CAIG El Cayaco 146.29 24 *i* P PKPdf 10 27 48.5 -0.3
ACX Acapulco 146.61 24 *i* P PKPab 10 27 51.8 -0.2
VHO Vista Hermosa 147.53 19 *i* P PKPbc 10 27 52.3 -1.1
TRQA Tornquist 147.67 218 *e*PKPbc PKPbc 10 27 53.0 -0.3
PNIG Pinotepa 147.70 21 *i* P PKPbc 10 27 54.6 +0.7
CMIG Matias Romero 148.03 15 *i* P PKPbc 10 27 54.3 -0.5
HUIG Huatulco 148.95 18 *e*P PKPbc 10 27 54.4 -2.8
PLCA Paso Flores 149.94 204 PKPbc PKPbc 10 27 59.3 +0.3
comp=Z,14nm,0.8s,baz=219,slow=1.9,SNR=12
PLCA Paso Flores 149.94 204 PKP2 PKPbc 10 27 59.3 +0.3
PLCA pmax pmax
comp=Z,14nm,0.9s
CPUP Villa Florida 150.14 241 PKPbc PKPbc 10 27 59.5 -0.4
comp=Z,1.4nm,0.4s,baz=95,slow=2.0,SNR=4.2
CPUP Villa Florida 150.14 241 PKIKP PKPbc 10 27 59.6 -0.3
CPUP pmax pmax
comp=Z,1.0nm,0.4s
TGUH Tegucigalpa,Un 152.16 2 *e*PKPdf PKPdf 10 27 59.3 +1.1
TGUH *e*PKPbc PKPbc 10 28 06.0 +1.1
SDV Santo Domingo 152.44 325 *e*PKPdf PKPdf 10 27 59.0 +0.3
SDV *e*PKPbc PKPbc 10 28 05.2 -0.4
ROSC El Rosal 157.81 327 PKP PKPdf 10 28 07.4 +1.3
ROSC *e*PKPdf PKPdf 10 28 07.8 +1.8
ROSC El Rosal 157.81 327 PKP PKPdf 10 28 07.4 +1.4
comp=Z,5.2nm,0.4s,baz=95,slow=20,SNR=4.3
LPAZ La Paz 162.22 260 PKP PKPdf 10 28 11.3 +0.5
LPAZ PKPab PKPab 10 29 04.5 +6.5
LPAZ La Paz 162.22 260 PKP PKPdf 10 28 11.3 +0.5
comp=Z,2.8nm,0.9s,baz=57,slow=1.8,SNR=9.4
LPAZ PKPab PKPab 10 29 04.5 +6.5
comp=Z,2.6nm,0.9s,baz=97,slow=11,SNR=2.2
OTAV Otavalo 163.85 330 *e*PKPdf PKPdf 10 28 13.4 +0.9

TAP 05 10:19:28.6, 25.09N×122.27E, h11km, ML3.1, 1C, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.27**	**252**⇑	*i*P	Pg	10 19 34.6	+0.7
	baz=251						
TWB1				*i* S	Sg	10 19 39.4	+1.8
	baz=251						
NWF	**Wu-fen Shan**	**0.44**	**268**	*e*P	Pg	10 19 37.5	+0.3
	baz=267						
NWF				*i* S	Sg	10 19 45.0	+1.9
	baz=267						
TWC	**Suao**	**0.61**	**218**	P	Pg	10 19 41.3	+0.9
	baz=217						
TWC				S	Sg	10 19 50.2	+1.8
	baz=217						
TWA	**Mucha**	**0.63**	**260**	P	Pg	10 19 41.8	+1.1
	baz=259						
TWA				S	Sg	10 19 50.6	+1.6
	baz=259						
TWY	**Chenhua**	**0.63**	**287**	P	Pg	10 19 41.3	+0.5
	baz=286						
TWY				S	Sg	10 19 51.1	+2.0
	baz=286						
TWE	**Neicheng**	**0.66**	**236**	P	Pg	10 19 41.9	+0.6
	baz=235						
TWE				S	Sg	10 19 51.4	+1.5
	baz=235						
TWS1	**Kuangyinshan**	**0.77**	**271**	*e*P	Pg	10 19 44.6	+1.2
	baz=270						
TWS1				*e*S	Sg	10 19 55.7	+2.2
	baz=270						
ENTT	**Nioudou**	**0.78**	**235**	P	Pg	10 19 43.9	+0.4
	baz=234						
ENTT				*e*S	Sg	10 19 55.8	+2.0
	baz=234						
NSK	**Sanguang**	**0.92**	**244**	*e*P	Pg	10 19 46.4	+0.1
	baz=243						
NSK				*e*S	Sg	10 19 59.7	+1.4
	baz=243						
NNS	**Nan Shan**	**1.04**	**232**	*e*P	Pg	10 19 48.7	+0.1
	baz=231						
NNS				*e*S	Sg	10 20 03.6	+1.6
	baz=231						
NSTT	**Nanjuang**	**1.24**	**249**	*e*P	Pn	10 19 51.3	-0.5
	baz=248						
NSTT				*e*S	Sb	10 20 09.3	+1.4
	baz=248						
WHF	**Hehuan Shan**	**1.31**	**224**	*e*P	Pn	10 19 53.0	+0.2
	baz=223						
WHF				*e*S	Sb	10 20 10.2	+0.2
	baz=223						
SMLT	**Sun Moon Lake**	**1.73**	**226**	*e*P	Pn	10 19 59.4	+0.8
	baz=225						
SMLT				*e*S	Sn	10 20 20.7	0.0
	baz=225						
CHN5	**Tsauling**	**2.08**	**225**	*e*P	Pn	10 20 03.4	0.0
	baz=224						

JMA 05 10:20:00.6±0.3, 24.09N×123.44E, h24km±3km, M1.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.34**	**96**	P	Pb	10 20 07.9	-0.2
HATJ				*e*S	Sb	10 20 12.9	-0.3
IRIF	**Iriomote-Funau**	**0.36**	**47**	P	Pb	10 20 08.3	-0.2
IRIF				S	Sb	10 20 13.8	0.0
JKRS	**Kuro-shima**	**0.54**	**74**	P	Pb	10 20 11.4	-0.1
JKRS				*e*S	Sb	10 20 19.1	+0.3
JIJ	**Ishigaki jima**	**0.70**	**67**	P	Pb	10 20 13.5	-0.6
JIJ				*e*S	Sb	10 20 22.6	-0.7

GUC 05 10:29:12.1±0.6, 21.14S×68.99W, h99km±51km, MD3.9, ML3.8, 1C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**Plate Boundary**	**0.47**	**281**⇑	*i*P	Pn	10 29 27.9	+0.3
PB01				*i* S	Sn	10 29 39.6	+0.4
PB01				AML	AML	10 29 40.4	
	comp=N,17µm,0.1s						
PB04	**Plate Boundary**	**1.21**	**202**	*e*P	Pn	10 29 42.0	+7.2
PB04				*i* S	Sn	10 30 03.2	+11
PB04				AML	AML	10 30 13.5	
	comp=N,808nm,0.1s						
CEN1	**Los Morros**	**2.51**	**206**	*e*P	Pn	10 29 55.3	+4.1
CEN1				*i* S	Sn	10 30 28.4	+7.1
CEN1				AML	AML	10 30 56.3	
	comp=E,156nm,0.7s						
ANCH	**Antofagasta**	**2.85**	**207**	*i* P	Pn	10 29 55.5	-0.4
ANCH				*i* S	Sn	10 30 29.3	-0.3

*IDC **05** 10:35:02.1±0.7, 2.86S×127.16E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.9/20, mbtmp3.9/11, ML3.2/1, Error ellipse: s-maj=44.8km s-min=15.5km az=66.0*
*ISCJB **05** 10:35:06.7±0.4, 2.98S±0.04×126.82E±0.04, h47km±5km, mb4.0/13, Error ellipse: s-maj=7.5km s-min=5.3km az=43.2*
*DJA **05** 10:35:06, 2.85S×126.80E, h10km, MLv4.5/15*
*NEIC **05** 10:35:08.4±1.8, 2.94S×127.06E, h44km±18km, mb4.2/5, Error ellipse: s-maj=20.3km s-min=8.8km az=53.0*

ISC 05 10:35:08.3±0.4, 2.97S±0.04×126.87E±0.04, h42km±5km, n44, σ1.917/46, mb4.0/13, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.35**	**139**	P	**Pn**	**10 35 14.8**	**-2.5**
NLAI				S	**Sn**	**10 35 22.8**	**-0.9**
AAI	**Ambon**	**1.50**	**118**	P	**Pn**	**10 35 34.7**	**+1.9**
AAI				S	**Sn**	**10 35 57.8**	**+6.6**
MSAI	**Masohi**	**2.09**	**100**	P	**Pn**	**10 35 43.3**	**+2.4**
LBMI	**Labuha**	**2.40**	**15**	P	**Pn**	**10 35 44.4**	**-0.7**
LBMI				S	**Sn**	**10 36 13.7**	**+0.4**
BNDI	**Bandanaira**	**3.40**	**117**	P	**Pn**	**10 36 00.6**	**+1.7**
TNTI	**Ternate**	**3.75**	**8**	P	**Pn**	**10 36 02.4**	**-1.3**
KDI	**Kendari**	**4.35**	**257**	P	**Pn**	**10 36 11.3**	**-0.7**
LUWI	**Luwuk**	**4.52**	**295**	P	**Pn**	**10 36 14.3**	**+0.1**
KMSI	**Cibinong**	**4.55**	**321**	P	**Pn**	**10 36 13.7**	**-1.0**
APSI	**Ampana**	**5.60**	**291**	S	**Sn**	**10 37 32.9**	**+0.6**
MRSI	**Marisa**	**6.00**	**305**	P	**Pn**	**10 36 33.9**	**-0.7**
	0.4nm2µm82nm,0.8s						
TLE	**Tual**	**6.42**	**115**	P	**Pn**	**10 36 42.5**	**+2.1**
	0.7nm136nm,2.3s						
TTSI	**Tana Toraja**	**7.04**	**269**	P	**Pn**	**10 36 49.1**	**+0.2**
	0.1nm3µm16nm,1.1s						
BKSI	**Bulukumba**	**7.12**	**251**	P	**Pn**	**10 36 51.1**	**+1.1**
	0.1nm33nm,0.7s						
SPSI	**Sidrap Palu**	**7.15**	**262**	P	**Pn**	**10 36 50.4**	**0.0**
	35nm,0.8s						
PCI	**Palu**	**7.32**	**286**	P	**Pn**	**10 36 52.6**	**-0.1**
	0.3nm85nm,0.7s						
KAKA	**Kakadu**	**11.14**	**151**	*e*P	**Pn**	**10 37 46.7**	**+1.6**
	16nm,0.6s						
KAKA	**Kakadu**	**11.14**	**151**	*e*Pn	**Pn**	**10 37 43.3**	**-1.7**
	38nm,0.6s						
KNA	**Kununurra**	**12.84**	**172**	P	**Pn**	**10 38 09.9**	**+1.6**
FITZ	**Fitzroy Crossi**	**15.09**	**184**	*e*P	**Pn**	**10 38 44.4**	**+5.7**
	8.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**15.09**	**184**	*e*Pn	**Pn**	**10 38 39.1**	**+0.4**
	16nm,1.2s						
FITZ	**Fitzroy Crossi**	**15.09**	**184**	Pn	**Pn**	**10 38 39.6**	**+0.9**
	0.1nm,0.3s,baz=352,slow=15,SNR=2.4						
WRAB	**Tennant Creek**	**18.38**	**157**	*e*P	**Pn**	**10 39 19.4**	**-0.6**
	8.5nm,0.6s						
COEN	**Coen**	**19.46**	**125**	*e*P	**Pn**	**10 39 30.8**	**-2.3**

COEN	**Coen**	**19.46**	**125**	*e*P	**Pn**	**10 39 30.9**	**-2.2**
	182nm,0.8s							
ASAR	**Alice Springs**	**21.67**	**162**	P	**P**	**10 39 55.0**	**-0.4**
	3.2nm,0.7s,mb3.9,baz=340,slow=11,SNR=31							
ASAR				S	**S**	**10 43 53.6**	**+0.5**
	1.3nm,0.7s,baz=348,slow=22,SNR=5.1							
ASAR				ScP	ScP	10 47 33.7	+3.9
	0.5nm,0.6s,baz=357,slow=1.5,SNR=4.5							
MEEK	**Meekatharra**	**24.83**	**198**	*e*P	**P**	**10 40 25.2**	**-1.5**
CTA	**Charters Tower**	**25.44**	**133**	P	**P**	**10 40 31.6**	**-0.8**
	3.7nm,0.7s,mb4.0,baz=323,slow=9.9,SNR=6.0							
STKA	**Stephens Creek**	**31.92**	**156**	P	**P**	**10 41 29.0**	**-1.0**
	1.3nm,0.4s,mb4.1,baz=318,slow=6.8,SNR=5.8							
CMSA	**Cobar Meteorol**	**33.50**	**150**	*e*P	**P**	**10 41 43.0**	**-0.8**
CMAR	**Chiang Mai Arr**	**34.78**	**309**	P	**P**	**10 41 55.8**	**+0.8**
	1.0nm,0.6s,mb4.0,baz=129,slow=7.1,SNR=5.2							
KSRS	**Korea Array**	**40.23**	**1**	P	**P**	**10 42 39.9**	**-1.0**
	0.9nm,0.8s,mb3.5,baz=177,slow=11,SNR=5.9							
LSA	**Lhasa**	**47.15**	**316**	*e*P	**P**	**10 43 39.5**	**+2.7**
	7.0nm,0.5s,mb4.8							
SONM	**Songino Array**	**53.68**	**343**	P	**P**	**10 44 26.0**	**+0.3**
	1.5nm,0.8s,mb4.0,baz=162,slow=9.8,SNR=4.6							
MK31	**Makanchi Array**	**63.17**	**327**	*e*P	**P**	**10 45 32.9**	**+1.0**
MKAR	**Makanchi Array**	**63.17**	**327**	P	**P**	**10 45 32.7**	**+0.8**
	1.7nm,0.8s,mb4.3,baz=131,slow=7.6,SNR=9.0							
UCH	**Uchtor**	**65.25**	**320**	*e*P	**P**	**10 45 46.1**	**+0.3**
	0.6nm,0.6s,mb3.8							
ZALV	**Zalesovo Beam**	**66.62**	**334**	P	**P**	**10 45 54.7**	**+0.4**
ZALV	**Zalesovo Beam**	**66.62**	**334**	P	**P**	**10 45 54.7**	**+0.4**
	0.6nm,0.3s,mb4.0,baz=75,slow=34,SNR=2.8							
KURK	**Kurchatov**	**67.48**	**329**	*e*P	**P**	**10 45 60.0**	**+0.2**
	4.9nm,1.0s,mb4.5							
BVAR	**Borovoye Array**	**73.01**	**328**	P	**P**	**10 46 33.4**	**-0.2**
	0.8nm,0.5s,mb3.9,baz=238,slow=38,SNR=3.2							
ILAR	**Eielson Array**	**91.06**	**25**	P	**P**	**10 48 05.8**	**-2.2**
	0.7nm,1.1s,mb3.9,baz=274,slow=9.6,SNR=5.2							
TORD	**Torodi Ar. Bea**	**124.89**	**284**	PKP	PKPdf	10 54 05.8	+1.0
	0.3nm,0.6s,baz=43,slow=2.9,SNR=2.5							
CPUP	**Villa Florida**	**150.59**	**172**	PKPbc	PKPbc	10 54 56.0	-0.4
	0.4nm,0.4s,baz=148,slow=8.3,SNR=3.1							

*ISCJB **05** 10:37:46.5±0.6,51.5°N±0.1′×75.4°E±0.1′,1,h10km, Error ellipse: s-maj=17.8km s-min=5.4km az=26.0*
*IDC **05** 10:37:46.9±1.0,51.65°N×75.40°E,h0km,mb3.1 3.3/4, mb1mx3.1/25,mbtmp3.3/4,ML3.1/4, Error ellipse: s-maj=24.1km s-min=8.4km az=30.0*
*NEIC **05** 10:37:47.6±0.7,51.54°N×75.31°E,h10km, Error ellipse: s-maj=20.9km s-min=8.6km az=14.0*
*NNC **05** 10:37:48.4±1.8,51.58°N×75.64°E,h0km,mb3.1,mpv2.7, Error ellipse: s-maj=76.2km s-min=12.4km az=24.0*
ISC 05 10:37:47.8±0.6,51.6°N±0.1′×75.38°E±0.09,h10km,n13, σ1s19/19,5C-5D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.20**	**114**	⇓P*n*	**Pn**	**10 38 24.5**	**+0.1**
	1.0nm,0.3s,baz=299,slow=18						
KURBB				⇓L*g*		10 38 54.8	
	9.6nm,0.8s						
KURK	**Kurchatov**	**2.21**	**111**	⇓P*n*	**Pn**	**10 38 24.7**	**+0.2**
	3.5nm,0.4s						
KURK				⇓L*g*		10 38 53.2	
	17nm,0.7s						
KURK	**Kurchatov**	**2.21**	**111**	*e*P*n*	**Pn**	**10 38 24.7**	**+0.1**
KURK				*e*S*n*	**Sn**	**10 38 50.2**	**-1.7**
VOSK	**Vostochnaya**	**2.95**	**295**	⇑P*n*	**Pn**	**10 38 38.7**	**+4.1**
	3.4nm,0.5s						
VOSK				⇓S*n*	**Sn**	**10 39 15.2**	**+5.2**
	29nm,0.6s						
BVA0	**Borovoye Array**	**3.39**	**297**	⇑P*n*	**Pn**	**10 38 40.6**	**-0.1**
	0.5nm,0.5s,baz=113,slow=16,SNR=12						
BVA0				⇑S*n*	**Sn**	**10 39 31.1**	**+10**
	1.5nm,0.5s,baz=113,slow=27,SNR=10.0						
BVAR	**Borovoye Array**	**3.39**	**297**	P*n*	**Pn**	**10 38 41.2**	**+0.5**
	0.9nm,0.3s,baz=112,slow=14,SNR=8.9						
BVAR				P*g*	**Pg**	**10 38 46.6**	**-6.2**
	1.1nm,0.3s,baz=108,slow=16,SNR=14						
BVAR				L*g*		10 39 31.9	
	5.3nm,0.3s,baz=116,slow=30,SNR=16						
BRVK	**Borovoye**	**3.46**	**298**	*e*P*n*	**Pn**	**10 38 42.0**	**+0.3**
ZRNK	**Zerenda**	**4.15**	**292**	⇑P*n*	**Pn**	**10 38 52.9**	**+1.7**
	1.7nm,0.7s						
ZRNK				⇑S*n*	**Sn**	**10 39 49.4**	**+10**
	19nm,1.0s						
ZALV	**Zalesovo Beam**	**6.21**	**64**	P*n*	**Pn**	**10 39 19.2**	**-0.2**
	1.2nm,0.3s,baz=256,slow=14,SNR=9.9						
ZALV				L*g*		10 41 00.1	
	0.2nm,0.3s,baz=164,slow=38,SNR=2.5						
MKAR	**Makanchi Array**	**6.58**	**134**	P*n*	**Pn**	**10 39 25.2**	**+0.7**
	0.3nm,0.3s,baz=317,slow=10,SNR=3.6						
MKAR				S*n*	**Sn**	**10 40 40.9**	**+1.2**
	0.3nm,0.3s,baz=325,slow=25,SNR=3.1						
MKAR				L*g*		10 41 14.2	
	0.5nm,0.3s,baz=318,slow=27,SNR=7.8						
ABKAR	**Akbulak array**	**10.12**	**263**	P*n*	**Pn**	**10 40 12.5**	**-0.5**
AKTK	**Aktyubinsk**	**11.00**	**271**	P*n*	**Pn**	**10 40 22.6**	**-2.5**
AKTO	**Aktyubinsk**	**11.00**	**271**	P*n*	**Pn**	**10 40 22.6**	**-2.5**
	0.2nm,0.3s,baz=91,slow=14,SNR=4.9						

*NEIC **05** 10:42:45.2,18.29°N×69.16°W,h97km,MD3.3(RSPR), After RSPR.*
RSPR 05 10:42:45.2,18.29°N×69.16°W,h97km±10km,MD3.3/5, 3C-4D,Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMN1	**Samana, DR**	**0.90**	**353**	⇓*e*P	**Pn**	**10 43 03.3**	**-1.0**
SMN1				*e*S	Sn	10 43 18.6	0.0
AGPR	**Aguadilla, PR**	**1.95**	**85**	⇑*e*P	Pn	10 43 17.0	0.0
AGPR				*e*S	Sn	10 43 40.8	-0.4
CRPR	**Cabo Rojo, PR**	**1.97**	**98**	⇓*e*P	Pn	10 43 16.8	-0.4
CRPR				*e*S	Sn	10 43 40.6	-1.0
LSP	**Las Mesas**	**1.97**	**93**	⇑*e*P	Pn	10 43 17.6	+0.4
LSP				*e*S	Sn	10 43 43.3	+1.6
SDDR	**Presa de Saban**	**2.13**	**289**	*e*P*n*	Pn	10 43 19.2	-0.2
SDDR				*e*S*n*	Sn	10 43 46.0	+0.4
AOPR	**Arecibo Observ**	**2.28**	**88**	⇑*e*P	Pn	10 43 20.5	-0.8
AOPR				*e*S	Sn	10 43 49.4	+0.4
CELP	**Cerrillos**	**2.46**	**95**	⇓*e*P	Pn	10 43 24.1	+0.5
CELP				*e*S	Sn	10 43 53.8	+0.7
MTP	**Monte Pirata**	**3.43**	**93**	⇓*e*P	Pn	10 43 35.9	-0.7
MTP				*e*S	Sn	10 44 16.5	+0.1

*IDC **05** 10:50:19.0±0.8,5.93°S×130.89°E,h0km,mb4.3/8, mb1 4.5/10,mb1mx4.3/17,mbtmp4.4/10,ML4.8/2, Error ellipse: s-maj=36.8km s-min=17.3km az=64.0*
*NEIC **05** 10:50:31.9±2.1,6.31°S×130.40°E,h103km±21km,mb4.2/4, Error ellipse: s-maj=17.6km s-min=11.5km az=217.0*
*ISCJB **05** 10:50:32.7±0.5,6.42°S±0.04×130.46°E±0.07,h132km±6km, mb4.2/13, Error ellipse: s-maj=12.9km s-min=5.4km az=159.0*
*DJA **05** 10:50:34,6.43°S×130.39°E,h113km,MLv4.9/9*
ISC 05 10:50:33.7±0.5,6.42°S±0.04×130.45°E±0.07,h122km±6km, n47,σ1s18/51,mb4.2/13,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.96**	**344**	P	**Pn**	**10 51 06.4**	**-0.4**
TLE	**Tual**	**2.41**	**71**	P	**Pn**	**10 51 13.5**	**+1.1**
MSAI	**Masohi**	**3.41**	**334**	P	**Pn**	**10 51 25.4**	**-0.1**
AAI	**Ambon**	**3.52**	**320**	P	**Pn**	**10 51 27.9**	**+0.9**
NLAI	**Namlea**	**4.59**	**313**	P	**Pn**	**10 51 43.0**	**+1.7**
LBMI	**Labuha**	**6.45**	**333**	P	**Pn**	**10 52 05.5**	**-0.8**
	1.1nm6µm238nm,0.6s						
KAKA	**Kakadu**	**6.55**	**163**	*e*P	**Pn**	**10 52 07.6**	**-0.1**
	114nm,0.2s						
KAKA				*e*S	**Sn**	**10 53 19.0**	**-2.1**
KAKA	**Kakadu**	**6.55**	**163**	*e*P*n*	**Pn**	**10 52 07.0**	**-0.7**
	491nm,0.5s						
KAKA				*e*S*n*	**Sn**	**10 53 19.4**	**-1.7**
KAKA	**Kakadu**	**6.55**	**163**	P	**Pn**	**10 52 07.7**	**0.0**
	3.8nm447nm,0.6s						
TNTI	**Ternate**	**7.78**	**337**	P	**Pn**	**10 52 22.9**	**-1.4**
	0.9nm258nm,0.7s						
KNA	**Kununurra**	**9.42**	**190**	P	**Pn**	**10 52 46.7**	**+0.3**
	536nm,0.5s						
MRSI	**Marisa**	**10.91**	**309**	P	**Pn**	**10 53 06.8**	**+0.4**
FITZ	**Fitzroy Crossi**	**12.52**	**202**	*e*P	**Pn**	**10 53 25.4**	**-2.3**
	13nm,0.2s						
FITZ				*e*S	**Sn**	**10 55 33.7**	**-12**
FITZ	**Fitzroy Crossi**	**12.52**	**202**	*e*P*n*	**Pn**	**10 53 25.5**	**-2.2**
FITZ				S*n*	**Sn**	**10 55 36.4**	**-9.4**
FITZ	**Fitzroy Crossi**	**12.52**	**202**	P*n*	**Pn**	**10 53 26.7**	**-1.0**
	2.8nm,0.3s,baz=38,slow=10,SNR=99						
FITZ				S*n*	**Sn**	**10 55 36.4**	**-9.4**
	4.1nm,0.3s,baz=89,slow=6.7,SNR=14						
FITZ	**Fitzroy Crossi**	**12.52**	**202**	P	**Pn**	**10 53 26.6**	**-1.1**
	48nm,0.6s						
WRAB	**Tennant Creek**	**13.96**	**165**	P	**Pn**	**10 53 44.7**	**-1.6**
	38nm,0.9s						
COEN	**Coen**	**14.59**	**122**	*e*P	**Pn**	**10 53 54.1**	**-0.2**
COEN				*e*S	**Sn**	**10 56 18.8**	**-17**
COEN	**Coen**	**14.59**	**122**	*e*P*n*	**Pn**	**10 53 55.7**	**+1.3**
COEN	**Coen**	**14.59**	**122**	P	**Pn**	**10 53 56.6**	**+2.3**
ASAR	**Alice Springs**	**17.47**	**169**	P	**Pn**	**10 54 29.6**	**-0.2**
	4.8nm,0.3s,baz=347,slow=14,SNR=260						
ASAR				S	**S**	**10 57 37.4**	**-7.0**
	1.4nm,0.3s,baz=1.2,slow=27,SNR=6.2						
MBWA	**Marble Bar**	**17.96**	**214**	*e*P	**Pn**	**10 54 36.5**	**+0.8**
MBWA	**Marble Bar**	**17.96**	**214**	*e*P	**Pn**	**10 54 35.9**	**+0.2**
CTA	**Charters Tower**	**20.50**	**133**	*e*P	**P**	**10 55 04.5**	**+2.3**
	7.4nm,0.8s						
CTA	**Charters Tower**	**20.50**	**133**	P	**P**	**10 55 02.9**	**+0.7**
	9.8nm,0.8s,baz=324,slow=12,SNR=17						
CTAO	**Charters Tower**	**20.50**	**133**	*e*P	**P**	**10 55 04.3**	**+2.1**
	12nm,0.9s						
MEEK	**Meekatharra**	**23.05**	**208**	*e*P	**P**	**10 55 30.3**	**+1.8**
FORT	**Forrest**	**24.34**	**185**	*e*P	**P**	**10 55 38.8**	**-1.4**
	17nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**27.39**	**159**	*e*P	**P**	**10 56 09.0**	**+1.3**
	3.7nm,0.9s,mb3.9						
STKA	**Stephens Creek**	**27.39**	**159**	P	**P**	**10 56 09.1**	**+1.4**
STKA	**Stephens Creek**	**27.39**	**159**	P	**P**	**10 56 09.1**	**+1.4**
	1.8nm,0.3s,mb4.0,baz=325,slow=9.5,SNR=12						
KLBR	**Kellerberrin**	**27.72**	**204**	*e*P	**P**	**10 56 12.1**	**+1.5**
	29nm,1.5s,mb4.6						
CMSA	**Cobar Meteorol**	**28.77**	**152**	*e*P	**P**	**10 56 21.8**	**+1.8**
PSI	**Prapat**	**32.78**	**285**	P	**P**	**10 56 57.0**	**+1.5**
	5.6nm,0.7s,mb4.5,baz=190,slow=6.1,SNR=2.8						
CMAR	**Chiang Mai Arr**	**39.71**	**309**	P	**P**	**10 57 53.9**	**-0.5**
	2.1nm,0.6s,mb4.2,baz=135,slow=7.1,SNR=11						
CHTO	**Chiang Mai**	**39.91**	**310**	*e*P	**P**	**10 57 55.7**	**-0.4**
	4.1nm,1.0s,mb4.2						
ULN	**Ulaanbaatar**	**57.85**	**342**	*e*P	**P**	**11 00 12.7**	**+0.2**
	3.8nm,0.8s,mb4.5						
SONM	**Songino Array**	**58.04**	**341**	P	**P**	**11 00 13.1**	**-0.6**
	1.7nm,0.7s,mb4.2,baz=162,slow=6.5,SNR=7.5						
MK31	**Makanchi Array**	**67.99**	**326**	*e*P	**P**	**11 01 19.5**	**-0.1**
MKAR	**Makanchi Array**	**67.99**	**326**	P	**P**	**11 01 19.6**	**0.0**
	5.9nm,0.6s,mb4.6,baz=122,slow=7.9,SNR=66						
AML	**Almaty,Kaz**	**70.67**	**319**	*e*P	**P**	**11 01 37.0**	**+0.7**
	1.5nm,0.6s,mb4.0						
ZALV	**Zalesovo Beam**	**71.26**	**334**	P	**P**	**11 01 37.5**	**-2.1**
	2.7nm,0.7s,mb4.2,baz=130,slow=4.6,SNR=11						
BVAR	**Borovoye Array**	**77.81**	**328**	P	**P**	**11 02 16.4**	**-1.0**
	1.6nm,0.7s,mb3.9,baz=134,slow=6.4,SNR=5.3						
ILAR	**Eielson Array**	**92.63**	**25**	P	**P**	**11 03 29.2**	**-2.1**
	0.4nm,0.8s,mb3.8,baz=288,slow=4.3,SNR=6.1						
TORD	**Torodi Ar. Bea**	**129.13**	**282**	PKP	PKPdf	11 09 28.9	+0.5
	0.9nm,0.7s,baz=95,slow=1.5,SNR=5.6						
LPAZ	**La Paz**	**150.90**	**141**	PKPbc	PKPbc	11 10 15.0	+2.0
LPAZ				PKPab	PKPab	11 10 23.7	+3.2
LPAZ	**La Paz**	**150.90**	**141**	PKPbc	PKPbc	11 10 15.0	+2.0
	0.7nm,0.4s,baz=265,slow=3.1,SNR=6.9						
LPAZ				PKPab	PKPab	11 10 23.7	+3.2
	0.8nm,0.7s,baz=301,slow=7.2,SNR=4.1						

CASC 05 10:58:17.7±3.3,8.78°N×82.97°W,h60km±20km,MD3.7, 1C-2D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**0.23**	**239**	⇓*e*P	Pn	10 58 26.9	-0.5
BRU2	**Volcan**	**0.27**	**86**	*e*P	Pn	10 58 28.7	+1.1
BRU2				*e*S	Sn	10 58 37.0	+2.3
TBS2		**0.30**	**87**	⇓*i*P	Pn	10 58 30.2	+2.4
TBS2				*e*S	Sn	10 58 38.0	+2.9
BRU	**Baru**	**0.40**	**86**	*e*P	Pn	10 58 29.0	+0.3
BRU				*e*S	Sn	10 58 39.4	+2.8
CNI	**Changuinola**	**0.78**	**35**	*e*P	Pn	10 58 32.3	-0.6
CNI				*e*S	Sn	10 58 42.4	-1.6
BUS	**Buena Vista**	**1.10**	**315**	*e*P	Pn	10 58 37.7	+0.6
URSC	**Urasca**	**1.32**	**323**	*e*P	Pn	10 58 40.9	+0.9
URSC				*e*S	Sn	10 58 57.1	+0.4
QCR	**Quepos**	**1.35**	**299**	⇑*e*P	Pn	10 58 40.9	+0.6
LAJ	**Bijagual**	**1.57**	**314**	*e*P	Pn	10 58 48.6	+5.3
LAJ				*e*S	Sn	10 59 13.4	+11
PRS1	**Puriscal**	**1.79**	**312**	*e*P	Pn	10 58 46.7	+0.4
PRS1				*e*S	Sn	10 59 08.1	+0.1
CGA2	**Cerro Gallo 2**	**1.93**	**310**	*e*P	Pn	10 58 49.8	+1.6
CGA2				*e*S	Sn	10 59 11.4	+0.1
JCR	**Jicaral**	**2.37**	**297**	*e*P	Pn	10 58 55.6	+1.4

*IDC **05** 11:20:56.5±3.0,43.89°N×129.56°W,h0km,mb3.4/3, mb1 3.6/7,mb1mx3.5/27,mbtmp3.5/7,ML3.3/4, Error ellipse: s-maj=64.1km s-min=18.1km az=50.0*
*ISCJB **05** 11:20:58.1±1.1,44.18°N±0.06×129.2°W±0.1,h10km, mb3.4/3, Error ellipse: s-maj=12.7km s-min=6.7km az=145.1*
*NEIC **05** 11:20:59.4±1.6,44.14°N×129.30°W,h10km,mb4.0/2, Error ellipse: s-maj=18.7km s-min=9.8km az=62.0*
ISC 05 11:20:58.6±2.6,44.14°N±0.07×129.3°W±0.1,h4km±20km, n36,σ1s08/41,mb3.4/3,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEBO	**Mount Hebo**	**4.10**	**73**	*e*P*n*	**Pn**	**11 22 01.6**	**-0.4**
MPOR	**Mary's Peak**	**4.14**	**83**	P	**Pn**	**11 22 01.6**	**-1.0**
HUMO	**Hull Mountain**	**4.87**	**106**	*e*P*n*	**Pn**	**11 22 11.2**	**-1.5**
HUMO				*e*S*n*	**Sn**	**11 23 07.8**	**-1.6**
NLWA	**Neilton Lookou**	**5.00**	**48**	P	**Pn**	**11 22 12.8**	**-1.5**
RVW	**Rose Valley**	**5.05**	**64**	P	**Pn**	**11 22 14.2**	**-0.9**
OOW	**Octopus West**	**5.06**	**43**	P	**Pn**	**11 22 14.2**	**-1.0**
IRO	**Indian Ridge**	**5.08**	**89**	P	**Pn**	**11 22 15.9**	**+0.4**
OTR	**Olympics--Tyee**	**5.23**	**39**	P	**Pn**	**11 22 17.0**	**-0.6**
OSD	**Olympics--Snow**	**5.36**	**45**	P	**Pn**	**11 22 18.4**	**-0.9**
YBH	**Yreka Blue Hor**	**5.40**	**114**	*e*P*n*	**Pn**	**11 22 18.8**	**-1.1**
	4.0nm,0.9s						
YBH				S*n*	**Sn**	**11 23 23.3**	**+0.7**
YBH				*e*S*n*	**Sn**	**11 23 23.9**	**+1.3**
YBH	**Yreka Blue Hor**	**5.40**	**114**	P*n*	**Pn**	**11 22 18.9**	**-1.0**
	0.4nm,0.3s,baz=308,slow=11,SNR=10						
YBH				S*n*	**Sn**	**11 23 23.3**	**+0.7**
	baz=7.7,slow=22,SNR=2.6						
HOOD	**Mount Hood Mea**	**5.58**	**75**	*e*P*n*	**Pn**	**11 22 22.6**	**+0.4**
	42nm,0.7s						
HOOD				*e*S*n*	**Sn**	**11 23 27.3**	**+0.6**
GNW	**Green Mountain**	**5.67**	**51**	*e*P*n*	**Pn**	**11 22 22.5**	**-1.1**
	8.8nm,0.5s						
LON	**Longmire**	**5.88**	**61**	*e*P*n*	**Pn**	**11 22 25.9**	**-0.5**
	18nm,0.7s						
PGC	**Sidney**	**6.06**	**40**	*e*P*n*	**Pn**	**11 22 27.7**	**-1.1**
	0.7nm,0.3s						
JCW	**Jim Creek**	**6.53**	**49**	*e*P*n*	**Pn**	**11 22 35.1**	**-0.2**
	52nm,0.4s						
CMW	**Cultus Mountai**	**6.56**	**47**	P	**Pn**	**11 22 36.0**	**+0.1**
RPW	**Rockport**	**6.90**	**49**	*e*P*n*	**Pn**	**11 22 40.1**	**-0.4**
	23nm,0.3s						
ETW	**Entiat**	**7.15**	**58**	*e*P*n*	**Pn**	**11 22 44.1**	**+0.2**
	15nm,0.6s						
HAWA	**Hanford**	**7.25**	**69**	*e*P*n*	**Pn**	**11 22 45.5**	**+0.3**
	5.1nm,0.8s						
OD2	**Odessa Site #2**	**8.08**	**63**	*e*P*n*	**Pn**	**11 22 56.3**	**-0.4**
	6.2nm,0.6s						
BBB	**Bella Bella**	**8.09**	**5**	P*n*	**Pn**	**11 22 59.0**	**+2.3**
	0.3nm,0.3s,baz=27,slow=11,SNR=10						
NVAR	**Mina Array Bea**	**10.05**	**121**	P*n*	**Pn**	**11 23 24.7**	**+1.0**
	0.1nm,0.3s,baz=280,slow=14,SNR=7.1						
HLID	**Hailey**	**10.77**	**88**	*e*P*n*	**Pn**	**11 23 34.0**	**+0.5**
	7.2nm,0.9s						
SWMT	**Swartz Lake**	**11.20**	**67**	*e*P*n*	**Pn**	**11 23 41.3**	**+2.0**
	3.2nm,0.7s						
SLMT	**Seeley Lake**	**11.48**	**69**	*e*P*n*	**Pn**	**11 23 45.9**	**+2.7**
	8.2nm,0.9s						
CHMT	**Chamberlain Mo**	**11.59**	**71**	*e*P*n*	**Pn**	**11 23 47.9**	**+3.1**
FLWY	**Flagg Ranch**	**13.37**	**84**	*e*P*n*	**Pn**	**11 24 08.9**	**-0.1**
	10nm,1.1s						
GCMT	**Greycliff**	**14.00**	**76**	*e*P*n*	**Pn**	**11 24 19.1**	**+1.5**
	13nm,0.8s						
RLMT	**Red Lodge**	**14.30**	**79**	*e*P*n*	**Pn**	**11 24 24.6**	**+2.9**
	7.5nm,0.9s						
LAO	**LASA Array**	**16.39**	**73**	P*n*	**Pn**	**11 24 50.0**	**+0.6**
	6.8nm,0.8s						
ANMO	**Albuquerque**	**19.81**	**110**	P	**Pn**	**11 25 31.8**	**+0.2**
	0.1nm,0.3s,baz=317,slow=11,SNR=2.2						
FFC	**Flin Flon**	**20.55**	**49**	*e*P	**P**	**11 25 38.0**	**+0.1**
	8.4nm,0.8s						
ILAR	**Eielson Array**	**22.90**	**341**	P	**P**	**11 26 03.1**	**+0.1**
	0.9nm,0.9s,mb3.2,baz=163,slow=7.8,SNR=8.8						
ULM	**Lac du Bonnet**	**23.38**	**63**	P	**P**	**11 26 08.8**	**+0.6**
	2.8nm,0.6s,mb3.9,baz=270,slow=10,SNR=3.5						
TXAR	**Lajitas Array**	**25.17**	**117**	P	**P**	**11 26 23.9**	**-1.1**
	0.6nm,0.9s,mb3.1,baz=292,slow=6.6,SNR=6.1						

*IDC **05** 11:26:00.6±5.0,10.71°N×84.88°W,h0km,mb3.7/3, mb1 4.1/3,mb1mx3.7/17,mbtmp3.7/3,Error ellipse: s-maj=260.4km s-min=59.5km az=35.0*
*ISCJB **05** 11:26:01.2±0.9,9.91°N±0.04×85.69°W±0.04,h11km±5km, mb3.5/3, Error ellipse: s-maj=6.8km s-min=5.8km az=139.6*
*NEIC **05** 11:26:02.7±1.3,10.96°N×84.64°W,h10km,Error ellipse: s-maj=32.0km s-min=10.2km az=94.0*
NEIC Felt at Nicoya.
*CASC **05** 11:26:02.9±2.1,9.97°N×85.62°W,h9km±6km,MD3.6,ML3.3*
ISC 05 11:26:01.9±1.0,9.93°N±0.05×85.66°W±0.04,h12km±5km, n33,σ0s70/43,mb3.5/3,1C-6D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VCR	**Vista de Mar**	**0.19**	**8**	⇓*i*P	**Pg**	**11 26 07.1**	**+0.9**
A490	**San Lazaro**	**0.39**	**30**	⇓*i*P	**Pg**	**11 26 10.1**	**+0.4**
A490				*i*S	**Sg**	**11 26 15.1**	**+0.2**
JCR	**Jicaral**	**0.54**	**99**	⇓*e*P	**Pg**	**11 26 13.3**	**+0.8**
NY14	**Universidad de**	**0.72**	**10**	⇓*i*P	**Pg**	**11 26 16.3**	**+0.4**
JTS	**JuntasAbangare**	**0.78**	**63**	*e*P*g*	**Pg**	**11 26 16.9**	**-0.1**
JTS	**JuntasAbangare**	**0.78**	**63**	*e*P	**Pg**	**11 26 16.8**	**-0.2**
JTS				*e*S	**Sg**	**11 26 28.4**	**+1.2**
LAPC	**Finca la Perla**	**0.86**	**15**	*i*P	**Pg**	**11 26 17.9**	**-0.5**
LAPC				*i*S	**Sg**	**11 26 29.6**	**-0.1**
LIM1	**Limonal**	**0.86**	**28**	*i*P	**Pg**	**11 26 18.3**	**-0.2**
GPS3	**Bodega del ICE**	**0.86**	**19**	*i*P	**Pg**	**11 26 18.4**	**-0.2**
CUI	**Cuipilapa**	**0.87**	**34**	*i*P	**Pg**	**11 26 18.1**	**-0.6**
CUI				*i*S	**Sg**	**11 26 30.0**	**-0.1**
GPS2	**Hotel Rinc‵‡n**	**0.87**	**20**	*i*P	**Pg**	**11 26 18.2**	**-0.4**
GPS2				*i*S	**Sg**	**11 26 30.2**	**+0.2**
GUAB	**Guayabo de Bag**	**0.88**	**29**	*i*P	**Pg**	**11 26 18.6**	**-0.3**
GUAB				*i*S	**Sg**	**11 26 30.9**	**+0.6**
GPS1	**Guardaparques**	**0.89**	**20**	*i*P	**Pg**	**11 26 18.6**	**-0.4**
GPS1				*i*S	**Sg**	**11 26 30.6**	**-0.2**
BUEV	**Buena Vista**	**0.89**	**16**	*i*P	**Pg**	**11 26 18.7**	**-0.5**
GB1A	**Borinquen Arri**	**0.92**	**16**	*i*P	**Pg**	**11 26 19.3**	**-0.3**
GB1A				*i*S	**Sg**	**11 26 31.8**	**+0.2**
GBS2	**Las Lilas**	**0.92**	**13**	⇓*i*P	**Pg**	**11 26 18.9**	**-0.8**
GBS2				*i*S	**Sg**	**11 26 31.2**	**-0.5**
MESS	**Mesas**	**0.92**	**30**	*i*P	**Pg**	**11 26 19.4**	**-0.3**
CASO	**Castillo**	**1.03**	**61**	*i*P	**Pb**	**11 26 21.3**	**-0.4**
CASO				*i*S	**Sb**	**11 26 36.0**	**+0.7**
CGA2	**Cerro Gallo 2**	**1.18**	**86**	⇑*e*P	**Pn**	**11 26 23.7**	**-0.4**
CGA2				*e*S	**Sb**	**11 26 38.7**	**-0.7**
PRS1	**Puriscal**	**1.33**	**88**	*e*P	**Pn**	**11 26 24.8**	**-1.4**
LAJ	**Bijagual**	**

URLA				*i* S	**Sg**	**11 50 42.4**	**-0.5**
URLA	**Izmir**	**0.73**	**360**	*i* P	**Pg**	**11 50 31.7**	**-1.7**
URLA				*i* S	**Sg**	**11 50 42.4**	**-0.5**
BODT	**Bodrum**	**0.80**	**135**	*e*PG	**Pg**	**11 50 34.0**	**-0.6**
BODT				*e*SG	**Sg**	**11 50 45.4**	**+0.4**
BODT	**Bodrum**	**0.80**	**135**	*e*Pg	**Pg**	**11 50 34.0**	**-0.6**
BODT				*e*Sg	**Sg**	**11 50 45.4**	**+0.4**
BLCB	**Balcova**	**0.83**	**25**	*e*PG	**Pg**	**11 50 35.0**	**-0.4**
BLCB				*e*SG	**Sg**	**11 50 47.2**	**+1.1**
BLCB	**Balcova**	**0.83**	**25**	P	**Pg**	**11 50 34.5**	**-0.8**
BLCB				S	**Sg**	**11 50 45.9**	**-0.2**
BLCB	**Balcova**	**0.83**	**25**	P	**Pg**	**11 50 34.5**	**-0.8**
BLCB	**Balcova**	**0.83**	**25**	*e*Pg	**Pg**	**11 50 35.0**	**-0.3**
BLCB				S	**Sg**	**11 50 45.9**	**-0.2**
BLCB				*e*Sg	**Sg**	**11 50 47.2**	**+1.1**
CHOS	**Chios island**	**0.87**	**330**	P	**Pg**	**11 50 35.6**	**-0.5**
CHOS				S	**Sg**	**11 50 48.7**	**+1.3**
CHOS	**Chios island**	**0.87**	**330**	P	**Pg**	**11 50 35.6**	**-0.5**
CHOS				S	**Sg**	**11 50 48.7**	**+1.3**
BDRM	**Kayabasi**	**0.88**	**130**	*i* P	**Pg**	**11 50 35.2**	**-0.9**
BDRM				*i* S	**Sg**	**11 50 48.7**	**+1.3**
BDRM	**Kayabasi**	**0.88**	**130**	*i* P	**Pg**	**11 50 35.2**	**-0.9**
BDRM				*i* S	**Sg**	**11 50 48.7**	**+1.3**
IZM	**Izmir**	**0.93**	**34**	*e*PG	**Pg**	**11 50 36.8**	**-0.4**
MLSB	**Milas**	**0.99**	**109**	*e*PG	**Pg**	**11 50 37.5**	**-0.8**
MLSB	**Milas**	**0.99**	**109**	*e*Pg	**Pg**	**11 50 37.5**	**-0.8**
AYDN	**Tasoluk**	**1.01**	**88**	*i* P	**Pg**	**11 50 37.4**	**-1.4**
AYDN				*i* S	**Sg**	**11 50 52.8**	**+0.8**
AYDN	**Tasoluk**	**1.01**	**88**	*i* P	**Pg**	**11 50 37.4**	**-1.4**
AYDN				*i* S	**Sg**	**11 50 52.8**	**+0.9**
APE	**Apeiranthos**	**1.02**	**237**	*e*PG	**Pg**	**11 50 38.0**	**-0.9**
APE	**Apeiranthos**	**1.02**	**237**	P	**Pg**	**11 50 38.0**	**-0.9**
APE				S	**Sg**	**11 50 53.0**	**+0.9**
APE	**Apeiranthos**	**1.02**	**237**	P	**Pg**	**11 50 38.0**	**-0.9**
APE				S	**Sg**	**11 50 53.0**	**+0.9**
NIS1	**Nisyros Isl.**	**1.12**	**156**	P	**Pg**	**11 50 40.9**	**+0.1**
NIS1				S	**Sg**	**11 50 57.4**	**+2.0**
NIS1	**Nisyros Isl.**	**1.12**	**156**	P	**Pg**	**11 50 40.9**	**+0.1**
NIS1				S	**Sg**	**11 50 57.4**	**+2.0**
DAT	**Datca**	**1.19**	**139**	*e*PN	**Pn**	**11 50 41.3**	**-1.2**
DAT	**Datca**	**1.19**	**139**	*e*Pn	**Pn**	**11 50 41.3**	**-1.3**
YER	**Yerkesik**	**1.43**	**110**	*e*PN	**Pn**	**11 50 45.7**	**-0.1**
YER	**Yerkesik**	**1.43**	**110**	*e*Pn	**Pn**	**11 50 45.7**	**-0.2**
THR5	**Thira Island,**	**1.57**	**220**	P	**Pn**	**11 50 48.0**	**+0.2**
THR5	**Thira Island,**	**1.57**	**220**	P	**Pn**	**11 50 48.0**	**+0.2**
AKHS	**Akhisar**	**1.57**	**37**	*i* P	**Pn**	**11 50 48.0**	**+0.1**
AKHS				*i* S	**Sn**	**11 51 11.2**	**+2.6**
AKHS	**Akhisar**	**1.57**	**37**	*i* P	**Pn**	**11 50 48.0**	**+0.1**
AKHS				*i* S	**Sn**	**11 51 11.1**	**+2.5**
AKS	**Akhisar**	**1.57**	**37**	*e*PN	**Pn**	**11 50 48.4**	**+0.6**
AKS	**Akhisar**	**1.57**	**37**	*e*Pn	**Pn**	**11 50 48.4**	**+0.5**
PRK	**Paraskevi**	**1.64**	**351**	P	**Pn**	**11 50 47.2**	**-1.6**
PRK				S	**Sn**	**11 51 08.5**	**-1.7**
PRK	**Paraskevi**	**1.64**	**351**	P	**Pn**	**11 50 47.2**	**-1.6**
PRK				S	**Sn**	**11 51 08.5**	**-1.7**
AYVA	**Ayvalik**	**1.68**	**2**	*i* P	**Pb**	**11 50 50.8**	**+0.1**
AYVA				*i* S	**Sg**	**11 51 15.2**	**+1.9**
AYVA	**Ayvalik**	**1.68**	**2**	*i* P	**Pn**	**11 50 50.8**	**+1.4**
TURN	**Turunc**	**1.77**	**115**	*i* P	**Pn**	**11 50 45.8**	**-4.7**
TURN				*i* S	**Sn**	**11 51 11.3**	**-2.1**
KULA	**Kula-Manisa**	**1.85**	**61**	*e*PN	**Pn**	**11 50 51.6**	**-0.1**
KULA	**Kula-Manisa**	**1.85**	**61**	*e*Pn	**Pn**	**11 50 51.6**	**-0.1**
DNZL	**Cakiroluk**	**1.94**	**87**	*i* P	**Pn**	**11 50 52.6**	**-0.3**
DNZL				*i* S	**Sg**	**11 51 23.7**	**+2.0**
DNZL	**Cakiroluk**	**1.94**	**87**	*i* P	**Pn**	**11 50 52.7**	**-0.2**
DEMI	**Demirci**	**2.18**	**49**	*i* P	**Pb**	**11 50 58.7**	**-0.5**
DEMI				*i* S	**Sg**	**11 51 31.1**	**-1.3**
DEMI	**Demirci**	**2.18**	**49**	*i* P	**Pb**	**11 50 58.7**	**-0.6**
EZN	**Ezine**	**2.21**	**354**	*e*PN	**Pn**	**11 50 57.1**	**+0.6**
EZN	**Ezine**	**2.21**	**354**	*e*Pn	**Pn**	**11 50 57.2**	**+0.6**
BALY	**Balya**	**2.25**	**20**	*i* P	**Pn**	**11 50 56.3**	**-0.9**
BALY				*i* S	**Sg**	**11 51 31.2**	**-0.6**
BALY	**Balya**	**2.25**	**20**	*i* P	**Pn**	**11 50 56.3**	**-1.0**
GONE	**Gonen-Balikesi**	**2.56**	**19**	*e*PN	**Pn**	**11 51 02.4**	**+1.0**
GONE	**Gonen-Balikesi**	**2.56**	**19**	*e*Pn	**Pn**	**11 51 02.4**	**+1.0**
GADA	**Gvkgeada**	**2.62**	**348**	*e*PN	**Pn**	**11 51 03.0**	**+0.8**
GADA	**Gvkgeada**	**2.62**	**348**	*e*Pn	**Pn**	**11 51 03.0**	**+0.8**
GELI	**Tayfur-Gelibol**	**2.77**	**358**	*e*PN	**Pn**	**11 51 05.1**	**+0.7**
GELI	**Tayfur-Gelibol**	**2.77**	**358**	*e*Pn	**Pn**	**11 51 05.1**	**+0.8**
KCTX	**Karacabey (Bur**	**2.97**	**27**	*e*PN	**Pn**	**11 51 07.7**	**+0.6**
KCTX	**Karacabey (Bur**	**2.97**	**27**	*e*Pn	**Pn**	**11 51 07.7**	**+0.6**
ULDT	**Uludag**	**3.20**	**37**	*i* P	**Pb**	**11 51 16.3**	**-0.3**
ULDT				*i* S	**Sb**	**11 51 59.1**	**+3.3**

*IDC **05** 12:14:59.3±1.8, 11°.26S×164°.43E, h0km, mb3.8/4, mb1 4.0/6, mb1mx3.8/17, mbtmp3.9/6, ML3.8/1, MS2.8/1, Ms1 2.8/1, ms1mx2.8/19, Error ellipse: s-maj=44.1km s-min=26.4km az=139.0*
*ISCJB **05** 12:15:03.2±4.9, 11°.3S±0°.2×164°.4E±0°.2, h37km±38km, mb3.9/5, Error ellipse: s-maj=33.8km s-min=25.5km az=20.6*
*NEIC **05** 12:15:04.5±1.5, 11°.25S×164°.49E, h35km, mb3.8/2, Error ellipse: s-maj=30.7km s-min=21.5km az=135.0*

ISC 05 12:15:03.4±6.7, 11°.3S±0°.1×164°.4E±0°.1, h26km±48km, n10, σ0§68/13, mb3.9/5, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.77**	**292**	*e*Pn	**Pn**	**12 16 14.6**	**+0.9**
HNR				Sn	**Sn**	**12 17 08.0**	**-0.3**
HNR				*e*Sn	**Sn**	**12 17 08.3**	**0.0**
HNR				LR	LR	12 17 38.2	
HNR	**Honiara**	**4.77**	**292**	Pn	**Pn**	**12 16 13.1**	**-0.6**
	45nm,0.3s,baz=133,slow=8.5,SNR=17						
HNR				Sn	**Sn**	**12 17 08.0**	**-0.3**
	8.2nm,0.3s,baz=105,slow=20,SNR=4.0						
HNR				LR	LR	12 17 38.2	
	comp=Z,120nm,20.5s,baz=115,slow=33						
CTA	**Charters Tower**	**19.54**	**241**	P	**Pn**	**12 19 29.3**	**-1.3**
CTA	**Charters Tower**	**19.54**	**241**	P	**Pn**	**12 19 29.3**	**-1.3**
	0.2nm,0.3s,baz=61,slow=10,SNR=3.5						
CTAO	**Charters Tower**	**19.54**	**241**	*e*P	**Pn**	**12 19 31.7**	**+1.1**
	5.1nm,1.1s						
WRAB	**Tennant Creek**	**30.17**	**250**	*e*P	**P**	**12 21 12.8**	**+1.1**
	1.9nm,0.7s,mb3.9						
ASAR	**Alice Springs**	**31.52**	**243**	P	**P**	**12 21 23.4**	**-0.3**
	1.0nm,0.8s,mb3.7,baz=65,slow=9.5,SNR=11						
FITZ	**Fitzroy Crossi**	**38.06**	**255**	P	**P**	**12 22 20.0**	**-0.2**
	3.4nm,0.6s,mb4.2,baz=83,slow=8.9,SNR=12						
KSRS	**Korea Array**	**59.35**	**327**	P	**P**	**12 25 03.6**	**+0.2**
	0.8nm,0.8s,mb3.8,baz=158,slow=12,SNR=6.5						
ILAR	**Eielson Array**	**84.16**	**19**	P	**P**	**12 27 31.6**	**-0.3**
	0.3nm,0.7s,mb3.5,baz=230,slow=6.2,SNR=8.3						

NEIC 05 13:02:00.6, 63°.09N×151°.70W, h11km, ML3.8(PMR), ML3.3(AEIC), After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPLA	**Purkeypile**	**0.30**	**228**	P	Pg	13 02 06.8	+0.1
PPLA				S	Sg	13 02 10.8	+0.2
TRF	**Thorofare Moun**	**0.73**	**60**	P	Pg	13 02 14.7	-0.1
TRF				S	Sg	13 02 24.7	+0.3
CHUM	**Lake Minchumin**	**0.84**	**341**	P	Pg	13 02 17.4	+0.6
CHUM				S	Sg	13 02 28.3	+0.6
BPAW	**Bear Paw Mtn.**	**1.06**	**17**	P	Pb	13 02 20.7	-0.2
BPAW				S	Sb	13 02 34.6	-0.1
RND	**Reindeer**	**1.33**	**75**	P	Pn	13 02 25.1	+0.1
RND				S	Sb	13 02 42.9	+0.5
MCK	**McKinley**	**1.40**	**62**	P	Pn	13 02 25.9	-0.1
MCK				S	Sn	13 02 44.3	-0.1
PMR	**Palmer**	**1.93**	**140**	*e*P	Pn	13 02 33.5	+0.3
DHY	**Denali Highway**	**1.97**	**89**	P	Pn	13 02 34.6	+0.7
TTA	**Tatalina**	**1.97**	**267**	*e*P	Pn	13 02 33.1	-0.8
TT01	**Tatalina**	**1.98**	**266**	P	Pn	13 02 33.6	-0.3
SML	**Sawmill**	**2.03**	**128**	P	Pn	13 02 34.8	+0.2
RC01	**Rabbit Creek A**	**2.21**	**154**	P	Pn	13 02 37.8	+0.6
COLA	**College**	**2.46**	**42**	P	Pn	13 02 41.1	+0.5
RSO	**Redoubt South**	**2.69**	**191**	Pn	Pn	13 02 43.9	+0.2
RSO				*e*Pg	Pg	13 02 49.5	-2.6
SLKM	**Skilak Lake**	**2.69**	**164**	P	Pn	13 02 45.7	+2.0
SVW2	**Sparrevohn**	**2.71**	**224**	*e*P	Pn	13 02 43.7	-0.3
PAX	**Paxson**	**2.84**	**90**	Pn	Pn	13 02 45.0	-0.8
SEW	**Seward**	**3.19**	**159**	*e*Pn	Pn	13 02 53.4	+2.8
BRLK	**Bradley Lake**	**3.37**	**173**	P	Pn	13 02 53.5	+0.6
DIV	**Divide**	**3.41**	**123**	*e*Pn	Pn	13 02 55.0	+1.4
DOT	**Dot Lake**	**3.48**	**77**	P	Pn	13 02 55.2	+0.5
MENT	**Mentasta**	**3.64**	**89**	*e*P	Pn	13 02 59.1	+2.3
BMRM	**Bremner River**	**3.97**	**119**	P	Pn	13 03 01.9	+0.7
COLD	**Coldfoot**	**4.20**	**8**	P	Pn	13 03 04.9	+0.5
BCA3	**Beaver Creek A**	**4.51**	**86**	P	Pn	13 03 09.3	+0.6
EGAK	**Eagle**	**4.95**	**65**	*e*Pn	Pn	13 03 14.7	0.0
EGAK				*e*Pg	Pg	13 03 31.9	-3.4
EGAK				*e*Sg	Sg	13 04 33.3	-6.0
BM3	**Burnt Mountain**	**5.26**	**31**	P	Pn	13 03 18.8	-0.2
DAWY	**Dawson**	**5.58**	**74**	P	Pn	13 03 23.0	-0.4

*IDC **05** 13:05:39.0±1.4, 35°.67N×26°.23E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.5/21, mbtmp3.7/4, ML3.2/1, Error ellipse: s-maj=53.3km s-min=25.2km az=141.0*
*CSEM **05** 13:05:41.3±0.2, 35°.59N×26°.18E, h15km, MD3.5, Error ellipse: s-maj=4.6km s-min=3.8km az=166.0*
*ATH **05** 13:05:41.2, 35°.61N×26°.18E, h33km±6km, MD3.5/12*
*ISCJB **05** 13:05:41.7±0.5, 35°.58N±0°.02×26°.19E±0°.02, h24km±4km, mb3.7/3, Error ellipse: s-maj=3.9km s-min=3.4km az=173.3*
*NEIC **05** 13:05:41.2, 35°.61N×26°.18E, h33km, MD3.5(ATH), After ATH.*
*THE **05** 13:05:42.1, 35°.62N×26°.16E, h8km±2km, ML3.2/3, Error ellipse: s-maj=2.5km s-min=1.0km az=190.0*
*DDA **05** 13:05:57.9, 36°.25N×27°.57E, h26km±3km, Md3.6*

ISC 05 13:05:42.0±0.6, 35°.60N±0°.02×26°.19E±0°.02, h18km±4km, n103, σ0§94/165, mb3.7/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.48**	**178**	*e*Pb	**Pb**	**13 05 51.8**	**-0.1**
ZKR				*e*Sb	**Sb**	**13 05 59.0**	**+0.3**
ZKR				*e*Sb	**Sb**	**13 05 59.2**	**+0.5**
ZKR	**Zakros**	**0.48**	**178**	*e*PB	**Pb**	**13 05 51.2**	**-0.7**
ZKR				*e*SB	**Sb**	**13 05 59.0**	**+0.3**
ZKR	**Zakros**	**0.48**	**178**	*e*PB	**Pn**	**13 05 51.8**	**-0.1**
ZKR				*e*SB	**Sb**	**13 05 59.2**	**+0.5**
ZKR	**Zakros**	**0.48**	**178**	P	**Pg**	**13 05 51.6**	**-0.1**
ZKR				S	**Sg**	**13 05 59.4**	**+1.2**
ZKR	**Zakros**	**0.48**	**178**	*e*Pb	**Pb**	**13 05 51.8**	**-0.1**
ZKR				*e*Sb	**Sb**	**13 05 59.0**	**+0.3**
NPS	**Neapolis**	**0.58**	**235**	*e*Pn	**Pg**	**13 05 53.5**	**0.0**
NPS				*e*Sn	**Sg**	**13 06 01.4**	**+0.2**
NPS				*e*Sn	**Sg**	**13 06 02.1**	**+0.9**
NPS	**Neapolis**	**0.58**	**235**	*e*PN	**Pg**	**13 05 53.5**	**0.0**
NPS				*e*SN	**Sg**	**13 06 01.4**	**+0.2**
NPS	**Neapolis**	**0.58**	**235**	*e*PN	**Pg**	**13 05 53.7**	**+0.2**
NPS				*e*SN	**Sg**	**13 06 02.1**	**+0.9**
NPS	**Neapolis**	**0.58**	**235**	*e*Pn	**Pg**	**13 05 53.7**	**+0.2**
NPS				*e*Sn	**Sg**	**13 06 02.1**	**+0.9**
KARP	**Karpathos**	**0.79**	**93**	*e*Pn	**Pn**	**13 05 56.1**	**-2.2**
KARP				*e*Sn	**Sn**	**13 06 08.1**	**-1.5**
KARP				*e*Sn	**Sn**	**13 06 09.0**	**-0.6**
KARP	**Karpathos**	**0.79**	**93**	*e*PN	**Pn**	**13 05 56.1**	**-2.2**
KARP				*e*SN	**Sn**	**13 06 08.1**	**-1.5**
KARP	**Karpathos**	**0.79**	**93**	*e*PN	**Pn**	**13 05 56.7**	**-1.6**
KARP				*e*SN	**Sn**	**13 06 09.0**	**-0.6**
KARP	**Karpathos**	**0.79**	**93**	*e*Pn	**Pn**	**13 05 56.7**	**-1.6**
KARP				*e*Sn	**Sn**	**13 06 09.0**	**-0.6**
XRY	**Khrisi**	**0.83**	**210**	*e*Pn	**Pn**	**13 05 58.1**	**-0.6**
XRY	**Khrisi**	**0.83**	**210**	*e*PN	**Pn**	**13 05 58.1**	**-0.6**
XRY	**Khrisi**	**0.83**	**210**	*e*Pn	**Pn**	**13 05 58.1**	**-0.6**
THR1	**Thera Island**	**0.97**	**323**	P	**Pb**	**13 05 59.7**	**-0.6**
	2µm,0.3s						
THR1				S	**Sb**	**13 06 12.6**	**-0.3**
THR1	**Thera Island**	**0.97**	**323**	P	**Pb**	**13 05 59.7**	**-0.6**
	2µm,0.3s						
THR1				S	**Sb**	**13 06 12.6**	**-0.3**
THR6	**Thira Island,**	**0.99**	**320**	P	**Pb**	**13 06 00.2**	**-0.5**
THR6				S	**Sb**	**13 06 13.8**	**+0.3**
THR6	**Thira Island,**	**0.99**	**320**	P	**Pb**	**13 06 00.2**	**-0.5**
THR6				S	**Sb**	**13 06 13.8**	**+0.3**
THR3	**Thira Island,**	**1.03**	**322**	P	**Pb**	**13 06 00.7**	**-0.7**
THR3	**Thira Island,**	**1.03**	**322**	P	**Pb**	**13 06 00.7**	**-0.7**
THR2	**Thira island,**	**1.05**	**324**	P	**Pb**	**13 06 00.9**	**-0.7**
THR2				S	**Sb**	**13 06 14.7**	**-0.3**
THR2	**Thira island,**	**1.05**	**324**	P	**Pb**	**13 06 00.9**	**-0.7**
THR2				S	**Sb**	**13 06 14.7**	**-0.3**
THR5	**Thira Island,**	**1.07**	**320**	P	**Pb**	**13 06 01.3**	**-0.6**
THR5				S	**Sb**	**13 06 15.4**	**-0.2**
THR5	**Thira Island,**	**1.07**	**320**	P	**Pb**	**13 06 01.3**	**-0.6**
THR5				S	**Sb**	**13 06 15.4**	**-0.2**
IDI	**Anoyia**	**1.11**	**254**	*e*Pb	**Pb**	**13 06 01.7**	**-0.9**
IDI				*e*Pn	**Pn**	**13 06 01.9**	**-0.7**
IDI				*e*Sn	**Sn**	**13 06 17.3**	**-0.1**
IDI				*e*Sn	**Sn**	**13 06 17.7**	**+0.3**
IDI	**Anoyia**	**1.11**	**254**	*e*PB	**Pb**	**13 06 01.7**	**-0.9**
IDI				*e*SN	**Sn**	**13 06 17.7**	**+0.3**
IDI	**Anoyia**	**1.11**	**254**	*e*PN	**Pn**	**13 06 01.9**	**-0.7**
IDI				*e*SN	**Sn**	**13 06 17.3**	**-0.1**
IDI	**Anoyia**	**1.11**	**254**	*e*Pn	**Pn**	**13 06 01.9**	**-0.7**
IDI				*e*Sn	**Sn**	**13 06 17.3**	**-0.1**
SIVA	**Sivas**	**1.27**	**243**	*e*Pn	**Pn**	**13 06 05.7**	**+0.9**
SIVA				*e*Sn	**Sn**	**13 06 22.5**	**+1.1**
SIVA	**Sivas**	**1.27**	**243**	*e*PN	**Pn**	**13 06 05.7**	**+0.9**
SIVA				*e*SN	**Sn**	**13 06 22.5**	**+1.1**
SIVA	**Sivas**	**1.27**	**243**	P	**Pn**	**13 06 05.4**	**+0.6**
SIVA				S	**Sb**	**13 06 22.9**	**+1.5**
SIVA	**Sivas**	**1.27**	**243**	P	**Pn**	**13 06 05.4**	**+0.6**
SIVA				S	**Sb**	**13 06 22.9**	**+1.5**
NIS1	**Nisyros Isl.**	**1.28**	**38**	P	**Pn**	**13 06 05.1**	**+0.1**
NIS1				S	**Sb**	**13 06 22.5**	**+0.7**
NIS1	**Nisyros Isl.**	**1.28**	**38**	P	**Pn**	**13 06 05.1**	**+0.1**
NIS1				S	**Sb**	**13 06 22.5**	**+0.7**
APE	**Apeiranthos**	**1.56**	**340**	*e*Pb	**Pb**	**13 06 07.9**	**-2.5**
APE				*e*Pn	**Pn**	**13 06 08.8**	**-0.1**
APE				*e*Sn	**Sn**	**13 06 30.3**	**+1.6**
APE	**Apeiranthos**	**1.56**	**340**	*e*PB	**Pb**	**13 06 07.9**	**-2.5**
APE	**Apeiranthos**	**1.56**	**340**	P	**Pn**	**13 06 08.8**	**-0.1**
APE				S	**Sn**	**13 06 28.3**	**-0.4**
APE	**Apeiranthos**	**1.56**	**340**	*e*Pb	**Pb**	**13 06 07.9**	**-2.5**
APE	**Apeiranthos**	**1.56**	**340**	P	**Pn**	**13 06 08.8**	**-0.1**
APE				S	**Sn**	**13 06 28.3**	**-0.4**
VAM	**Vamos**	**1.64**	**264**	*e*Pb	**Pb**	**13 06 09.2**	**-2.4**
VAM				*e*Pn	**Pn**	**13 06 10.6**	**+0.7**
VAM	**Vamos**	**1.64**	**264**	*e*PB	**Pb**	**13 06 09.2**	**-2.4**
VAM	**Vamos**	**1.64**	**264**	*e*Pb	**Pb**	**13 06 09.2**	**-2.4**
ARG	**Arkhangelos**	**1.69**	**68**	*e*Pn	**Pn**	**13 06 10.3**	**-0.3**
ARG				*e*Sn	**Sn**	**13 06 31.5**	**-0.2**
ARG	**Arkhangelos**	**1.69**	**68**	*e*PN	**Pn**	**13 06 10.3**	**-0.3**
ARG				*e*SN	**Sn**	**13 06 31.5**	**-0.2**
ARG	**Arkhangelos**	**1.69**	**68**	*e*PN	**Pn**	**13 06 10.5**	**-0.1**
ARG	**Arkhangelos**	**1.69**	**68**	P	**Pn**	**13 06 10.5**	**-0.1**
ARG				S	**Sn**	**13 06 31.9**	**+0.2**
ARG	**Arkhangelos**	**1.69**	**68**	P	**Pn**	**13 06 10.5**	**-0.1**
ARG				S	**Sn**	**13 06 31.9**	**+0.2**
BDRM	**Kayabasi**	**1.78**	**34**	*i* P	**Pn**	**13 06 13.5**	**+1.7**
BDRM	**Kayabasi**	**1.78**	**34**	*i* P	**Pn**	**13 06 13.5**	**+1.6**
KARN	**Karanos**	**1.87**	**265**	*e*PN	**Pn**	**13 06 12.8**	**-0.2**
KARN	**Karanos**	**1.87**	**265**	*e*PN	**Pn**	**13 06 12.4**	**-0.6**
KARN	**Karanos**	**1.87**	**265**	P	**Pn**	**13 06 12.4**	**-0.6**
KARN				S	**Sn**	**13 06 35.3**	**-0.9**
KARN	**Karanos**	**1.87**	**265**	P	**Pn**	**13 06 12.4**	**-0.6**
KARN				S	**Sn**	**13 06 35.3**	**-0.9**
GVD	**Gavdhos**	**1.88**	**247**	*e*Pb	**Pb**	**13 06 14.2**	**-1.6**
GVD	**Gavdhos**	**1.88**	**247**	*e*PB	**Pb**	**13 06 14.2**	**-1.6**
GVD	**Gavdhos**	**1.88**	**247**	*e*PB	**Pb**	**13 06 13.6**	**-2.2**
GVD	**Gavdhos**	**1.88**	**247**	*e*Pb	**Pb**	**13 06 13.6**	**-2.2**
GCAM	**G?zelcaml?**	**2.26**	**21**	*i* P	**Pn**	**13 06 24.3**	**+5.9**
GCAM				*i* S	**Sn**	**13 06 55.5**	**+10**
TURN	**Turunc**	**2.33**	**56**	*i* P	**Pn**	**13 06 13.7**	**-5.7**
AYDN	**Tasoluk**	**2.47**	**33**	*i* P	**Pn**	**13 06 25.0**	**+3.7**
AYDN				*i* S	**Sn**	**13 06 58.8**	**+7.9**
KYTH	**Kithira**	**2.65**	**286**	*e*Pn	**Pn**	**13 06 24.4**	**+0.6**
KYTH	**Kithira**	**2.65**	**286**	*e*PN	**Pn**	**13 06 24.4**	**+0.6**
CHOS	**Chios island**	**2.79**	**358**	*e*PN	**Pn**	**13 06 25.3**	**-0.4**
CHOS	**Chios island**	**2.79**	**358**	P	**Pn**	**13 06 26.0**	**+0.3**
CHOS				S	**Sn**	**13 07 00.1**	**+1.2**
CHOS	**Chios island**	**2.79**	**358**	*e*Pn	**Pn**	**13 06 25.3**	**-0.4**
CHOS	**Chios island**	**2.79**	**358**	P	**Pn**	**13 06 26.0**	**+0.3**
CHOS				S	**Sn**	**13 07 00.1**	**+1.2**
AKAS	**Kas**	**2.84**	**76**	*i* P	**Pn**	**13 06 26.6**	**+0.1**
AKAS				*i* S	**Sn**	**13 06 59.7**	**-0.5**
AKAS	**Kas**	**2.84**	**76**	*i* P	**Pn**	**13 06 26.6**	**+0.1**
AKAS				*i* S	**Sn**	**13 06 59.7**	**-0.5**
VLI	**Veliai**	**2.86**	**294**	*e*Pn	**Pn**	**13 06 26.4**	**-0.3**
VLI				*e*Sn	**Sn**	**13 07 00.1**	**-0.6**
VLI				*e*SN	**Sn**	**13 07 00.6**	**-0.1**
VLI	**Veliai**	**2.86**	**294**	*e*PN	**Pn**	**13 06 26.4**	**-0.3**
VLI				*e*SN	**Sn**	**13 07 00.1**	**-0.6**
VLI	**Veliai**	**2.86**	**294**	*e*PN	**Pn**	**13 06 26.4**	**-0.3**
VLY	**Voula,Athens**	**2.96**	**320**	*e*Pn	**Pn**	**13 06 28.3**	**+0.2**
VLY	**Voula,Athens**	**2.96**	**320**	*e*PN	**Pn**	**13 06 28.3**	**+0.2**
VLY	**Voula,Athens**	**2.96**	**320**	*e*Pn	**Pn**	**13 06 28.3**	**+0.2**
DID	**Didima**	**3.05**	**310**	*e*PN	**Pn**	**13 06 30.6**	**+1.3**
DID	**Didima**	**3.05**	**310**	P	**Pn**	**13 06 30.6**	**+1.3**
DID				S	**Sn**	**13 07 05.5**	**+0.2**
DID	**Didima**	**3.05**	**310**	P	**Pn**	**13 06 30.6**	**+1.3**
DID				S	**Sn**	**13 07 05.5**	**+0.2**
DNZL	**Cakiroluk**	**3.10**	**47**	*i* P	**Pn**	**13 06 32.4**	**+2.3**
DNZL	**Cakiroluk**	**3.10**	**47**	*i* P	**Pn**	**13 06 32.4**	**+2.3**
GOLH	**Golhisar**	**3.17**	**58**	*i* P	**Pn**	**13 06 31.9**	**+0.9**
GOLH				*i* S	**Sn**	**13 07 13.8**	**+5.5**
GOLH	**Golhisar**	**3.17**	**58**	*i* P	**Pn**	**13 06 31.9**	**+0.9**
LTK	**Loutraki**	**3.54**	**314**	*e*PN	**Pn**	**13 06 37.0**	**+0.9**
KHAL	**Karahalli**	**3.83**	**43**	*i* P	**Pn**	**13 06 41.4**	**+1.4**
KHAL	**Karahalli**	**3.83**	**43**	*i* P	**Pn**	**13 06 41.4**	**+1.4**
LKR	**Lokris**	**3.98**	**321**	*e*Pn	**Pn**	**13 06 42.5**	**+0.5**
LKR	**Lokris**	**3.98**	**321**	*e*PN	**Pn**	**13 06 42.5**	**+0.5**
RLS	**Riolos of Patr**	**4.52**	**304**	*e*Pn	**Pn**	**13 06 49.7**	**+0.2**
RLS	**Riolos of Patr**	**4.52**	**304**	*e*PN	**Pn**	**13 06 49.7**	**+0.2**
AGG	**Agios Georgios**	**4.60**	**319**	*e*Pn	**Pn**	**13 06 52.2**	**+1.6**
AGG	**Agios Georgios**	**4.60**	**319**	*e*PN	**Pn**	**13 06 52.2**	**+1.6**
BR131	**Keskin Array S**	**7.20**	**53**	*e*P	**Pn**	**13 07 25.4**	**-1.0**
	16nm,0.4s						
BR131	**Keskin Array S**	**7.20**	**53**	*e*P	**Pn**	**13 07 25.4**	**-0.9**
	16nm,0.4s						
EIL	**Elat**	**9.46**	**126**	Pn	**Pn**	**13 07 56.7**	**-0.6**
EIL				Sn	**Sn**	**13 09 36.3**	**-6.8**
EIL	**Elat**	**9.46**	**126**	Pn	**Pn**	**13 07 56.7**	**-0.6**
	0.2nm,0.3s,baz=291,slow=3.8,SNR=5.1						
EIL				Sn	**Sn**	**13 09 36.3**	**-6.8**
	0.8nm,0.3s,baz=299,slow=18,SNR=4.3						
EIL	**Elat**	**9.46**	**126**	Pn	**Pn**	**13 07 56.7**	**-0.6**
TORD	**Torodi Ar. Bea**	**31.42**	**231**	P	**P**	**13 12 02.4**	**+0.2**
	565nm,0.4s,baz=33,slow=9.0,SNR=3.2						
MKAR	**Makanchi Array**	**42.83**	**57**	P	**P**	**13

*BJI **05** 14:04:14.6,0.88N×128.06E,h110km,mB4.8/26,mb4.7/39*
*ISCJB **05** 14:04:23.5±0.4, 1.75N±0.02×127.60E±0.04,h125km±4km, mb4.8/62,Error ellipse: s-maj=6.1km s-min=3.5km az=173.0*
*MOS **05** 14:04:25.0±0.9, 1.73N×127.55E,h143km,mb4.8/19,Error ellipse: s-maj=14.2km s-min=7.1km az=112.4*
*NEIC **05** 14:04:25.9±0.2, 1.69N×127.54E,mb4.8/29,Error ellipse: s-maj=7.8km s-min=4.2km az=64.0*
*IDC **05** 14:04:26.3±0.6, 1.68N×127.55E,h138km±5km,mb4.4/16, mb1 4.5/17,mb1mx4.4/23,mbtmp4.4/17,MS3.3/2, Ms1 3.3/2,ms1mx2.6/25,Error ellipse: s-maj=15.9km s-min=8.3km az=76.0*
*DJA **05** 14:04:27, 1.69N×127.44E,h115km,mb5.3/29*
*MAN **05** 14:05:04, 4.44N×126.06E,h114km,mb5.4,ML4.4,MS4.7*
ISC 05 14:04:24.1±0.4,1.73N±0.02×127.63E±0.04,h114km±3km, h119km±4.5km:pP-P,n200,σ1908/210,mb4.8/62,14C-9D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.98**	**195**	P	**Pn**	**14 04 47.2**	**+1.7**
LBMI	**Labuha**	**2.35**	**183**	P	**Pn**	**14 05 05.0**	**+3.2**
MNI	**Manado**	**2.80**	**264**	P	**Pn**	**14 05 07.7**	**+0.1**
KMSI	**Cibinong**	**3.82**	**253**	P	**Pn**	**14 05 21.2**	**0.0**
NLAI	**Namlea**	**4.96**	**186**	P	**Pn**	**14 05 37.9**	**+1.4**
GSPH	**General Santos**	**5.09**	**328**	↓*eP*	**Pn**	**14 05 36.9**	**-1.3**
GSPH				*i* S	**Sn**	**14 06 32.9**	**-3.0**
MATI	**Mati**	**5.36**	**345**	*eP*	**Pn**	**14 05 43.3**	**+1.4**
MATI				*eS*		14 06 14.7	
AAI	**Ambon**	**5.41**	**174**	P	**Pn**	**14 05 46.0**	**+3.4**
	1.2nm4µm295nm,0.7s						
LUWI	**Luwuk**	**5.58**	**240**	P	**Pn**	**14 05 43.8**	**-1.0**
	10nm1µm,0.6s						
DAV	**Davao City (W)**	**5.69**	**339**	P	**Pn**	**14 05 44.9**	**-1.4**
DAV	**Davao City (W)**	**5.69**	**339**	P	**Pn**	**14 05 45.5**	**-0.9**
	71nm,0.3s,baz=173,slow=5.8,SNR=3.8						
DAV				S	**Sn**	**14 06 50.6**	**+0.3**
	84nm,0.3s,baz=139,slow=20,SNR=3.5						
DAV	**Davao City (W)**	**5.69**	**339**	P	**Pn**	**14 05 49.2**	**+2.9**
	628nm,0.8s						
DMPH	**Davao City--Mi**	**5.72**	**338**	↓*iP*	**Pn**	**14 05 47.4**	**+0.6**
MRSI	**Marisa**	**5.82**	**258**	P	**Pn**	**14 05 47.9**	**-0.2**
	4.2nm10µm1µm,1.1s						
KCP	**Kidapawan**	**5.82**	**334**	↓*iP*	**Pn**	**14 05 48.4**	**+0.2**
KCP				*i* S	**Sn**	**14 06 52.8**	**-0.9**
CTBH	**Cotabato--PC H**	**6.41**	**328**	↑*eP*	**Pn**	**14 05 54.1**	**-2.1**
BUKP	**Musuan**	**6.62**	**337**	*eP*	**Pn**	**14 05 59.4**	**+0.4**
TOLI	**Toli-Toli**	**6.86**	**265**	P	**Pn**	**14 06 01.5**	**-0.7**
	2.4nm10µm559nm,0.5s						
CGP	**Cagayan de Oro**	**7.29**	**337**	↓*eP*	**Pn**	**14 06 07.8**	**-0.3**
PAGZ	**Pagadian**	**7.41**	**325**	*eP*	**Pn**	**14 06 08.5**	**-1.1**
BUTP	**Butuan**	**7.47**	**345**	*eP*	**Pn**	**14 06 12.3**	**+1.8**
KDI	**Kendari**	**7.54**	**222**	P	**Pn**	**14 06 11.2**	**-0.3**
	1.2nm4µm183nm,0.7s						
ZMPH	**Zamboanga City**	**7.60**	**313**	↑*iP*	**Pn**	**14 06 10.8**	**-1.5**
ZMPH				*i* S	**Sn**	**14 07 29.6**	**-7.2**
IPIL	**Ipil**	**7.85**	**320**	*eP*	**Pn**	**14 06 15.4**	**-0.2**
IPIL	**Ipil**	**7.85**	**320**	↓*eP*	**Sn**	**14 07 36.0**	**-6.9**
PCI	**Palu**	**8.21**	**252**	P	**Pn**	**14 06 19.9**	**-0.7**
	1.1nm2µm409nm,0.8s						
SCPH	**Surigao**	**8.28**	**345**	↑*eP*	**Pn**	**14 06 22.3**	**+0.8**
TLE	**Tual**	**8.92**	**145**	P	**Pn**	**14 06 33.9**	**+3.7**
	5µm226nm,0.9s						
BAKI	**Biak**	**8.96**	**109**	P	**Pn**	**14 06 35.1**	**+4.3**
	2µm238nm,0.8s						
TTSI	**Tana Toraja**	**9.13**	**239**	P	**Pn**	**14 06 32.2**	**-0.8**
	8µm813nm,0.6s						
SPSI	**Sidrap Palu**	**9.67**	**234**	P	**Pn**	**14 06 40.1**	**-0.3**
	1µm,0.6s						
MYLDM	**Lahad Datu**	**9.73**	**291**	P	**Pn**	**14 06 42.8**	**+1.6**
MYLDM	**Lahad Datu**	**9.73**	**291**	P	**Pn**	**14 06 41.7**	**+0.5**
	2µm171nm,1.0s						
TSM	**Tawau**	**10.07**	**285**	P	**Pn**	**14 06 44.5**	**-1.3**
GUIM	**Jordan**	**10.16**	**331**	*eP*	**Pn**	**14 06 46.5**	**-0.4**
BKSI	**Bulukumba**	**10.26**	**227**	P	**Pn**	**14 06 49.5**	**+1.2**
	3µm285nm,0.6s						
CNP	**Catarman**	**11.11**	**345**	*eP*	**Pn**	**14 07 00.5**	**+0.8**
SDKM	**Sandakan**	**11.11**	**291**	P	**Pn**	**14 06 60.0**	**+0.3**
MMRI	**Maumere**	**11.61**	**207**	P	**Pn**	**14 07 06.9**	**+0.6**
	99nm,1.2s						
KDM	**Kudat**	**11.93**	**296**	P	**Pn**	**14 07 13.5**	**+2.9**
KKM	**Kota Kinabalu**	**12.16**	**291**	*eP*	**Pn**	**14 07 12.3**	**-1.3**
	48nm,0.8s						
KKM	**Kota Kinabalu**	**12.16**	**291**	P	**Pn**	**14 07 13.6**	**-0.1**
KBKI	**Kotabaru**	**12.49**	**246**	P	**Pn**	**14 07 16.7**	**-1.3**
	948nm105nm,1.0s						
BTM	**Bintulu**	**14.60**	**276**	P	**Pn**	**14 07 44.8**	**-0.5**
KAKA	**Kakadu**	**15.12**	**162**	↑*iP*	**Pn**	**14 07 50.6**	**-1.2**
	82nm,0.6s						
KAKA	**Kakadu**	**15.12**	**162**	*eP*	**Pn**	**14 07 50.5**	**-1.3**
	258nm,0.7s						
KAKA	**Kakadu**	**15.12**	**162**	P	**Pn**	**14 07 50.7**	**-1.1**
SBUM	**Sibu**	**15.41**	**273**	P	**Pn**	**14 07 54.2**	**-1.4**
SBUM	**Sibu**	**15.41**	**273**	P	**Pn**	**14 07 54.1**	**-1.4**
	899nm92nm,1.2s						
KHKI	**Kahang-Kahang**	**15.62**	**230**	P	**Pn**	**14 07 59.5**	**+1.4**
	60nm,1.4s						
STKI	**Sintang**	**16.23**	**264**	P	**Pn**	**14 08 05.7**	**0.0**
	45nm,1.1s						
GMJI	**Gumukmas**	**17.28**	**235**	P	**Pn**	**14 08 20.2**	**+1.7**
KSM	**Kuching**	**17.31**	**269**	*eP*	**Pn**	**14 08 17.1**	**-1.8**
	44nm,0.9s						
KSM	**Kuching**	**17.31**	**269**	P	**Pn**	**14 08 18.4**	**-0.5**
KSM	**Kuching**	**17.31**	**269**	P	**Pn**	**14 08 17.9**	**-1.0**
	580nm58nm,1.0s						
KNA	**Kununurra**	**17.40**	**176**	P	**Pn**	**14 08 19.6**	**-0.3**
	3µm416nm,1.0s						
KRKI	**Karangkates**	**18.04**	**237**	P	**P**	**14 08 29.3**	**+2.7**
SJI	**Sawahan**	**18.40**	**239**	P	**P**	**14 08 32.8**	**+2.3**
	4µm161nm,0.9s						
PWJI	**Pagerwojo**	**18.51**	**238**	P	**P**	**14 08 33.0**	**+1.2**
	92nm,0.9s						
PCJI	**Pacitan**	**19.13**	**239**	P	**P**	**14 08 40.6**	**+2.0**
	189nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.80**	**186**	*eP*	**P**	**14 08 44.5**	**-1.2**
	76nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.80**	**186**	*eP*	**P**	**14 08 44.5**	**-1.2**
FITZ	**Fitzroy Crossi**	**19.80**	**186**	P	**P**	**14 08 44.8**	**-0.9**
	4.5nm,0.3s,baz=21,slow=8.3,SNR=143						
FITZ				LR	LR	14 15 39.9	
	comp=Z,96nm,19.7s,baz=112,slow=34						
FITZ	**Fitzroy Crossi**	**19.80**	**186**	P	**P**	**14 08 44.7**	**-1.0**
GUMO	**Guam**	**20.73**	**55**	P	**P**	**14 08 56.1**	**+0.2**
	50nm,0.6s,baz=198,slow=9.5,SNR=8.2						
COEN	**Coen**	**21.92**	**136**	*eP*	**P**	**14 09 08.1**	**-0.3**
	447nm,1.4s,mb5.6						
WRAB	**Tennant Creek**	**22.51**	**163**	↑*iP*	**P**	**14 09 14.2**	**-0.5**
	151nm,0.6s,mb5.5						
CGJI	**Cibinong**	**23.41**	**249**	P	**P**	**14 09 21.8**	**-1.3**
	93nm,1.1s,mb5.0						
KLSI		**23.75**	**254**	P	**P**	**14 09 25.5**	**-0.7**
	98nm,1.2s,mb5.0						
MYKOM	**Kota Tinggi**	**23.76**	**271**	P	**P**	**14 09 25.9**	**-0.5**
MYKOM	**Kota Tinggi**	**23.76**	**271**	P	**P**	**14 09 26.0**	**-0.4**
	631nm80nm,0.7s,mb5.1						
MBWA	**Marble Bar**	**24.02**	**198**	*eP*	**P**	**14 09 27.4**	**-1.2**
	94nm,1.0s,mb5.1						
MBWA	**Marble Bar**	**24.02**	**198**	P	**P**	**14 09 28.0**	**-0.6**
	96nm,1.0s,mb5.1						
MDSI	**Maura Dua**	**24.23**	**255**	P	**P**	**14 09 29.8**	**-0.8**
	1µm24nm,1.0s,mb4.5						
KGM	**Kluang**	**24.30**	**271**	P	**P**	**14 09 32.0**	**+0.8**
QIZ	**Qiongzhong**	**24.48**	**316**	P	**P**	**14 09 33.9**	**+1.1**
QIZ				S	**S**	**14 13 48.1**	**+3.1**
QIZ				sS	sS	14 14 30.9	+3.0
QIZ				pmax	pmax		
	comp=Z,17nm,1.9s,mb4.0						
QIZ				pmax	pmax		
	comp=Z,290nm,3.9s						
KTGM	**Kuala Trenggan**	**24.70**	**279**	P	**P**	**14 09 36.4**	**+1.5**
ASAR	**Alice Springs**	**25.97**	**167**	P	**P**	**14 09 45.8**	**-0.4**
	comp=Z,32nm,0.5s,mb5.0,baz=348,slow=7.5,SNR=1232						
ASAR				S	**S**	**14 14 03.7**	**-4.8**
	comp=Z,1.8nm,0.9s,baz=344,slow=17,SNR=4.0						
ASAR				ScP	ScP	14 16 38.1	-3.2
	comp=Z,1.8nm,0.8s,baz=344,slow=1.4,SNR=6.5						
ASAR	**Alice Springs**	**25.97**	**167**	P	**P**	**14 09 45.8**	**-0.4**
ASAR				S	**S**	**14 14 03.7**	**-4.8**
IPM	**Ipoh**	**26.70**	**277**	P	**P**	**14 09 54.7**	**+1.7**
CTA	**Charters Tower**	**28.35**	**141**	*eP*	**P**	**14 10 07.7**	**+0.1**
	comp=Z,9.3nm,1.2s,mb4.2						
CTA	**Charters Tower**	**28.35**	**141**	P	**P**	**14 10 08.0**	**+0.4**
	comp=Z,5.7nm,0.7s,mb4.2,baz=311,slow=11,SNR=8.0						
CTA				ScP	ScP	14 16 46.9	-1.7
	comp=Z,0.8nm,0.3s,baz=297,slow=9.0,SNR=4.2						
CTAO	**Charters Tower**	**28.35**	**141**	*eP*	**P**	**14 10 08.0**	**+0.4**
	comp=Z,25nm,1.3s,mb4.6						
CTAO				*e*		14 13 34.7	
CTAO	**Charters Tower**	**28.35**	**141**	*eP*	**P**	**14 10 08.0**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,25nm,1.3s,mb4.6						
PSI	**Prapat**	**28.70**	**273**	P	**P**	**14 10 09.0**	**-1.8**
	comp=Z,8.0nm,0.6s,mb4.5,baz=151,slow=13,SNR=9.1						
PSI				ScP	ScP	14 16 45.5	-4.4
	comp=Z,2.7nm,0.6s,baz=153,slow=6.8,SNR=3.8						
WHN	**Wuhan**	**31.30**	**338**	P	**P**	**14 10 35.5**	**+1.9**
GYA	**Guiyang**	**31.79**	**322**	P	**P**	**14 10 39.0**	**+1.1**
GYA				pP	pP	14 11 04.2	+1.2
GYA				sP	sP	14 11 18.3	+2.2
GYA				PP	PP	14 11 49.3	-2.6
GYA				S	**S**	**14 15 41.4**	**+1.6**
GYA				sS	sS	14 16 24.8	+1.2
GYA				ScS	ScS	14 20 56.7	-1.6
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
GYA				pmax	pmax		
	comp=Z,120nm,4.0s						
FORT	**Forrest**	**32.33**	**179**	↑*iP*	**P**	**14 10 41.5**	**-1.0**
	comp=Z,118nm,0.6s,mb5.8						
FORT	**Forrest**	**32.33**	**179**	↑*eP*	**P**	**14 10 41.4**	**-1.1**
	comp=Z,139nm,0.6s,mb5.9						
CMAR	**Chiang Mai Arr**	**32.67**	**302**	P	**P**	**14 10 45.9**	**+0.2**
	comp=Z,3.0nm,0.9s,mb4.1,baz=115,slow=6.9,SNR=15						
CMAR				pP	pP	14 11 13.8	+3.0
	comp=Z,2.0nm,0.9s,baz=119,slow=7.8,SNR=3.9						
CMAR				ScP	ScP	14 17 01.2	-1.7
	comp=Z,2.0nm,1.0s,baz=168,slow=2.3,SNR=9.3						
CMAR	**Chiang Mai Arr**	**32.67**	**302**	P	**P**	**14 10 45.9**	**+0.2**
CMAR				*PP	pP	14 11 13.9	+3.0
CHTO	**Chiang Mai**	**32.84**	**303**	*eP*	**P**	**14 10 46.6**	**-0.5**
	comp=Z,6.5nm,0.9s,mb4.5						
CHTO	**Chiang Mai**	**32.84**	**303**	*eP*	**P**	**14 10 46.6**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
ENH	**Enshi**	**33.20**	**331**	*eP*	**P**	**14 10 50.0**	**-0.1**
	comp=Z,11nm,0.8s,mb4.7						
KMI	**Kunming**	**33.43**	**316**	P	**P**	**14 10 53.8**	**+1.6**
KMI				pP	pP	14 11 18.7	+1.3
KMI				sP	sP	14 11 31.0	+0.4
KMI				PP	PP	14 12 09.7	-0.4
KMI				S	**S**	**14 16 06.7**	**+1.4**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.4						
KMI				pmax	pmax		
	comp=Z,79nm,3.4s						
KMI				LR	LR		
	comp=N,180nm,14.0s						
KMI				LR	LR		
	comp=E,160nm,11.4s						
KMI				LR	LR		
	comp=Z,150nm,15.4s						
KLBR	**Kellerberrin**	**34.44**	**195**	↑*iP*	**P**	**14 10 59.6**	**-1.2**
	comp=Z,55nm,0.7s,mb5.5						
EIDS	**Eidsvold**	**35.23**	**141**	*eP*	**P**	**14 11 07.5**	**-0.3**
	comp=Z,28nm,1.0s,mb5.0						
KSRS	**Korea Array**	**35.55**	**0**	P	**P**	**14 11 10.7**	**+0.3**
	comp=Z,7.1nm,0.7s,mb4.7,baz=178,slow=9.7,SNR=48						
KSRS				ScP	ScP	14 17 09.4	-3.3
	comp=Z,1.7nm,0.8s,baz=170,slow=3.7,SNR=9.3						
NWAO	**Narrogin (SRO)**	**35.84**	**195**	*eP*	**P**	**14 11 11.8**	**-1.0**
	comp=Z,27nm,0.8s,mb5.2						
NWAO	**Narrogin (SRO)**	**35.84**	**195**	P	**P**	**14 11 12.0**	**-0.8**
	comp=Z,39nm,0.7s,mb5.5,baz=21,slow=8.6,SNR=39						
NWAO	**Narrogin (SRO)**	**35.84**	**195**	*eP*	**P**	**14 11 11.9**	**-0.9**
NWAO				pmax	pmax		
	comp=Z,27nm,0.8s						
STKA	**Stephens Creek**	**35.95**	**160**	↑*iP*	**P**	**14 11 13.9**	**+0.1**
	comp=Z,65nm,1.0s,mb5.5						
STKA	**Stephens Creek**	**35.95**	**160**	↑*iP*	**P**	**14 11 13.8**	**0.0**
	comp=Z,18nm,0.9s,mb5.0						
STKA	**Stephens Creek**	**35.95**	**160**	P	**P**	**14 11 13.9**	**+0.1**
	comp=Z,56nm,0.6s,mb5.6,baz=333,slow=8.1,SNR=68						
STKA				PP	PP	14 12 36.2	-1.7
	comp=Z,14nm,0.9s,baz=311,slow=12,SNR=4.0						
STKA	**Stephens Creek**	**35.95**	**160**	↑*iP*	**P**	**14 11 13.8**	**0.0**
STKA				pmax	pmax		
	comp=Z,18nm,0.9s						
MJAR	**Matsushiro Arr**	**36.00**	**15**	P	**P**	**14 11 13.2**	**-1.0**
	comp=Z,4.6nm,0.7s,mb4.5,baz=193,slow=9.5,SNR=9.5						
MAJO	**Matsushiro**	**36.00**	**15**	*eP*	**P**	**14 11 12.8**	**-1.3**
	comp=Z,14nm,0.7s,mb5.0						
MAJO	**Matsushiro**	**36.00**	**15**	*eP*	**P**	**14 11 12.8**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0						
MAT	**Matsushiro**	**36.00**	**15**	P	**P**	**14 11 12.6**	**-1.6**
XAN	**Xi'an**	**36.59**	**333**	P	**P**	**14 11 19.4**	**+0.1**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
XAN				pmax	pmax		
	comp=Z,31nm,5.3s						
CD2	**Chengdu**	**36.78**	**324**	P	**P**	**14 11 21.8**	**+0.9**
CD2				pP	pP	14 11 44.3	-2.1
CD2				sP	sP	14 11 55.9	-3.6
CD2				PP	PP	14 12 50.1	+3.1
CD2				S	**S**	**14 16 58.3**	**+1.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
ARMA	**Armidale**	**39.31**	**146**	*eP*	**P**	**14 11 42.9**	**+0.7**
ARMA	**Armidale**	**39.31**	**146**	*eP*	**P**	**14 11 43.3**	**+1.1**
	comp=Z,19nm,0.8s,mb5.0						
BJT	**Baijiatuao**	**39.51**	**346**	*eP*	**P**	**14 11 43.4**	**-0.3**
	comp=Z,21nm,0.6s,mb5.2						
BJT	**Baijiatuao**	**39.51**	**346**	*eP*	**P**	**14 11 43.4**	**-0.3**
BJT				pmax	pmax		
	comp=Z,21nm,0.6s						
BJI	**Beijing**	**39.53**	**346**	P	**P**	**14 11 43.5**	**-0.3**
BJI				pP	pP	14 12 06.7	-2.9
BJI				PP	PP	14 13 18.2	+1.3
BJI				S	**S**	**14 17 41.2**	**+3.3**
BJI				SS	SS	14 20 40.8	+3.6
BJI				pmax	pmax		
	comp=Z,39nm,0.6s,mb5.4						
BJI				pmax	pmax		
	comp=Z,39nm,4.5s						
LZH	**Lanzhou**	**40.67**	**330**	*eP*	**P**	**14 11 55.0**	**+1.7**
LZH				pP	pP	14 12 16.0	-3.2
LZH				sP	sP	14 12 31.0	-1.2
LZH				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.2						
LZH				pmax	pmax		
	comp=Z,150nm,4.4s						
HHC	**Hu-ho-hao-te**	**41.57**	**342**	*eP*	**P**	**14 12 01.4**	**+0.8**
HHC				pP	pP	14 12 26.7	+0.1
HHC				sP	sP	14 12 39.7	+0.2
HHC				PP	PP	14 13 42.3	+3.3
HHC				S	**S**	**14 18 10.7**	**+2.6**
HHC				sS	sS	14 18 54.2	+1.1
HHC				ScS	ScS	14 21 50.1	-2.2
HHC				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.9						
HHC				pmax	pmax		
	comp=Z,96nm,4.3s						
HHC				LR	LR		
	comp=N,120nm,17.1s						
HHC				LR	LR		
	comp=E,93nm,13.7s						
HHC				LR	LR		
	comp=Z,90nm,12.4s						
SHL	**Shillong**	**41.79**	**308**	*e*PKP	**P**	**14 12 02.5**	**-0.1**
CAN	**Canberra**	**41.93**	**154**	*eP*	**P**	**14 12 04.8**	**+1.2**
	comp=Z,19nm,0.7s,mb4.9						
CAN	**Canberra**	**41.93**	**154**	*eP*	**P**	**14 12 04.8**	**+1.2**
CAN				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.9						
CN2	**Changchun**	**41.94**	**358**	*eP*	**P**	**14 12 03.6**	**+0.1**
CN2				*eS*	**S**	**14 18 14.4**	**+0.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
TOO	**Toolangi**	**42.46**	**159**	*eP*	**P**	**14 12 08.8**	**+0.9**
MDJ	**Mudanjiang**	**42.74**	**2**	P	**P**	**14 12 10.5**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,63nm,4.6s						
LSA	**Lhasa**	**44.43**	**312**	*eP*	**P**	**14 12 24.3**	**+0.4**
LSA	**Lhasa**	**44.43**	**312**	*eP*	**P**	**14 12 24.7**	**+0.8**
	comp=Z,6.3nm,0.6s,mb4.5						
LSA	**Lhasa**	**44.43**	**312**	*eP*	**P**	**14 12 24.7**	**+0.8**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
GTA	**Gaotai**	**45.26**	**329**	↓↓*P*	**P**	**14 12 30.9**	**+0.6**
GTA				pP	pP	14 12 56.1	-0.6
GTA				sP	sP	14 13 09.0	-0.5
GTA				S	**S**	**14 19 04.2**	**+2.1**
GTA				sS	sS	14 19 54.9	+7.3
GTA				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.4						
GTA				pmax	pmax		
	comp=Z,100nm,9.0s						
TAPN	**Taplejung**	**45.92**	**307**	*eP*	**P**	**14 12 35.9**	**+0.2**
	comp=Z,10nm,0.5s,mb4.8						
ODAN	**Odare**	**45.96**	**307**	*eP*	**P**	**14 12 36.1**	**+0.1**
	comp=Z,16nm,0.6s,mb4.9						
RAMN	**Ramite**	**46.64**	**306**	*eP*	**P**	**14 12 41.7**	**+0.4**
	comp=Z,12nm,0.5s,mb4.8						
YSS	**Yuzh-Sakhalins**	**46.94**	**14**	↑*iP*	**P**	**14 12 43.0**	**-0.3**
JIRN	**Jiri**	**47.27**	**307**	*eP*	**P**	**14 12 46.8**	**+0.6**
	comp=Z,20nm,0.6s,mb5.0						
KLR	**Kul'dur**	**47.46**	**4**	*eP*	**P**	**14 12 42.8**	**-4.4**
KLR				*e*		14 13 14.2	
GUN	**Gumba**	**47.63**	**307**	*eP*	**P**	**14 12 48.7**	**-0.3**
KKN	**Kakani**	**48.06**	**307**	*eP*	**P**	**14 12 52.4**	**+0.1**
DMN	**Daman**	**48.12**	**306**	*eP*	**P**	**14 12 52.3**	**-0.5**
GKN	**Gorkha**	**48.66**	**307**	*eP*	**P**	**14 12 56.5**	**-0.4**
ULN	**Ulaanbaatar**	**49.29**	**342**	*eP*	**P**	**14 13 01.6**	**+0.2**
	comp=Z,20nm,1.0s,mb5.0						
ULN	**Ulaanbaatar**	**49.29**	**342**	*eP*	**P**	**14 13 01.6**	**+0.3**
ULN				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
KOLN	**Koldanda**	**49.40**	**306**	*eP*	**P**	**14 13 02.1**	**-0.5**
	comp=Z,25nm,0.6s,mb5.4						
SONM	**Songino Array**	**49.47**	**341**	P	**P**	**14 13 03.0**	**+0.3**
	comp=Z,5.8nm,0.6s,mb4.7,baz=157,slow=7.7,SNR=16						
SONM				pP	pP	14 13 35.7	+6.3
	comp=Z,6.3nm,0.9s,baz=154,slow=9.1,SNR=5.4						
HYB	**Hyderabad**	**50.65**	**291**	*iP*	**P**	**14 13 12.0**	**-0.2**
ZAK	**Zakamensk**	**52.70**	**341**	*eP*	**P**	**14 13 25.4**	**-1.4**
TLY	**Talaya**	**53.70**	**342**	*eP*	**P**	**14 13 34.6**	**+0.5**
MOY	**Mondy**	**54.56**	**340**	*eP*	**P**	**14 13 41.3**	**+1.0**
WMQ	**Urumqi**	**54.87**	**325**	*eP*	**P**	**14 13 43.7**	**+0.9**
WMQ				pP	pP	14 14 10.2	+0.2
WMQ				sP	sP	14 14 22.9	+0.3
WMQ				PcP	PcP	14 14 44.5	+0.9
WMQ				PP	PP	14 15 49.4	+2.5
WMQ				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.3						
WMQ				pmax	pmax		
	comp=Z,130nm,4.8s						
WMQ				LR	LR		
	comp=N,60nm,21.8s						
WMQ				LR	LR		
	comp=E,55nm,20.8s						
WMQ				LR	LR		
	comp=Z,35nm,21.8s						
MKAR	**Makanchi Array**	**59.70**	**326**	P	**P**	**14 14 16.8**	**+0.1**
	comp=Z,9.6nm,0.6s,mb5.0,baz=122,slow=8.4,SNR=126						
MKAR				pP	pP	14 14 48.1	+3.8
	comp=Z,4.5nm,0.6s,baz=114,slow=8.9,SNR=3.4						
MKAR				ScP	ScP	14 18 49.7	-3.4
	comp=Z,0.5nm,0.7s,baz=115,slow=5.7,SNR=4.3						
MKAR	**Makanchi Array**	**59.70**	**326**	*i P*	**P**	**14 14 13.3**	**-3.4**
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MKAR	**Makanchi Array**	**59.70**	**326**	P	**P**	**14 14 16.8**	**+0.1**
MKAR				*PP	pP	14 14 48.1	+3.8
MK31	**Makanchi Array**	**59.70**	**326**	*eP*	**P**	**14 14 16.6**	**0.0**
KSH	**Kashi**	**60.09**	**316**	*eP*	**P**	**14 14 20.4**	**+0.9**
KSH				*e*pP	pP	14 14 47.0	-0.1
KSH				*e*sP	sP	14 14 59.6	0.0
KSH				*e*PcP	PcP	14 15 05.2	+1.0
KSH				*e*PP	PP	14 16 35.3	+2.0
KSH				*e*ScP	ScP	14 18 54.8	-0.1
KSH				*e*PcS	PcS	14 19 06.2	-0.4
KSH				*e*S	**S**	**14 22 20.8**	**-3.0**
KSH				*e*ScS	ScS	14 23 55.9	-3.4
KSH				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
KSH				pmax	pmax		
	comp=Z,50nm,3.7s						
KSH				LR	LR		
	comp=N,96nm,4.8s						
KSH				LR	LR		
	comp=E,120nm,13.7s						
KSH				LR	LR		
	comp=Z,60nm,3.4s						
YAK	**Yakutsk**	**60.18**	**1**	*eP*	**P**	**14 14 18.9**	**-0.7**
	comp=Z,20nm,0.7s,mb5.3						
YAK	**Yakutsk**	**60.18**	**1**	*eP*	**P**	**14 14 18.4**	**-1.2**
YAK				*e*		14 14 51.6

comp=Z,7.6nm,0.9s,baz=134,slow=8.4,SNR=7.6
BRVK Borovoye 69.55 327 *e*P **P 14 15 19.5 -1.1**
comp=Z,9.3nm,1.0s,mb4.6
BRVK Borovoye 69.55 327 *de*P **P 14 15 19.6 -1.0**
BRVK pmax pmax
comp=Z,13nm,1.4s,mb4.6
ABKAR Akbulak array 74.26 321 *e*P **P 14 15 47.4 -1.4**
comp=Z,1.3nm,0.4s,mb4.0
ARU Arti 77.10 328 *d*iP **P 14 16 02.9 -1.9**
ARU *PP pP 14 16 33.5 -0.2
ARU *e* 14 18 54.1
ARU S S 14 25 43.8 -0.6
ARU SS SS 14 30 43.5 -0.5
ARU pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
MAW Mawson 82.20 200 *e*P **P 14 16 31.1 -1.0**
comp=Z,5.6nm,0.6s,mb4.6
MAW Mawson 82.20 200 *e*P **P 14 16 31.0 -1.1**
comp=Z,3.0nm,1.0s,mb4.1
MAW Mawson 82.20 200 P **P 14 16 31.5 -0.6**
comp=Z,6.8nm,0.6s,mb4.6,baz=71,slow=5.2,SNR=20
MAW Mawson 82.20 200 *e*P **P 14 16 31.0 -1.1**
MAW pmax pmax
comp=Z,3.0nm,1.0s
SBA Scott Base 82.24 172 *e*P **P 14 16 32.1 -0.2**
comp=Z,8.0nm,1.1s,mb4.5
SBA Scott Base 82.24 172 *e*P **P 14 16 32.1 -0.1**
SBA pmax pmax
comp=Z,8.0nm,1.1s,mb4.5
KDAK Kodiak Island 83.10 32 P **P 14 16 36.8 -0.2**
comp=Z,5.4nm,0.6s,mb4.5,baz=270,slow=5.1,SNR=6.4
KDAK Kodiak Island 83.10 32 *i*P **P 14 16 38.0 +1.0**
ILAR Eielson Array 86.52 25 P **P 14 16 52.2 -1.8**
comp=Z,0.4nm,0.8s,baz=269,slow=3.8,SNR=5.2
ILAR PP PP 14 20 13.0 -4.0
comp=Z,0.8nm,1.0s,baz=249,slow=7.0,SNR=7.1
SYO Syowa Base 90.89 201 *e*P **P 14 17 12.7 -1.9**
ARCES ARCESS Array B 92.62 340 P **P 14 17 21.1 -1.6**
comp=Z,2.2nm,0.7s,mb4.6,baz=61,slow=4.9,SNR=9.3
TORD Torodi Ar. Bea 124.32 287 PKP PKPdf 14 23 09.4 -1.4
comp=Z,0.6nm,0.6s,baz=82,slow=1.3,SNR=5.7
CFAA Coronel Fontan 146.72 155 PKPbc PKPbc 14 23 52.4 -1.0
comp=Z,0.8nm,0.4s,baz=215,slow=3.7,SNR=14
CPUP Villa Florida 155.08 169 PKPbc PKPdf 14 24 12.9 +8.3
comp=Z,0.5nm,0.3s,baz=198,slow=6.4,SNR=4.1
CPUP PKPab PKPab 14 24 29.3 0.0
comp=Z,3.2nm,0.7s,baz=189,slow=3.7,SNR=7.6
LPAZ La Paz 158.78 134 PKPab PKPab 14 24 47.2 +1.6
comp=Z,1.6nm,0.8s,baz=174,slow=3.8,SNR=7.2
SIV San Ignacio 163.44 149 PKPab PKPab 14 25 05.6 -0.2
comp=Z,3.4nm,0.9s,baz=215,slow=5.0,SNR=18

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*IDC **05** 14:04:26.8±2.4,51.12N×175.11E,h0km,mb3.7/7, mb1 3.9/7,mb1mx3.7/24,mbtmp3.7/7,Error ellipse: s-maj=74.0km s-min=23.7km az=9.0*
*ISCJB **05** 14:04:29.4±5.0,51.1N±0.3×175.2E±0.1, h29km±31km, mb3.9/9,Error ellipse: s-maj=44.1km s-min=10.9km az=13.2*
*NEIC **05** 14:04:30.1±7.4,51.21N×175.14E,h18km±41km, ML3.5(AEIC),MW3.3(PMR), Error ellipse: s-maj=44.3km s-min=10.3km az=204.0*
ISC 05 14:04:31.6±5.1, 51.3N±0.3×175.2E±0.1, h26km±32km, n12, σ0°66/13, mb3.9/9, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.62**	**335**	*e*P		**Pn**		**14 04 58.1**	**-0.3**
AMKA	**Amchitka**	**2.57**	**86**	P		**Pn**		**14 05 10.8**	**-0.6**
AMKA				S		Sn		14 05 41.1	-0.6
ADK	**Adak**	**5.09**	**80**	*e*Pn		**Pn**		**14 05 47.0**	**+0.9**
ILAR	**Eielson Array**	**23.74**	**41**	P		**P**		**14 09 41.2**	**-0.1**
	0.2nm,0.4s,mb2.9,baz=246,slow=8.8,SNR=6.5								
NVAR	**Mina Array Bea**	**47.28**	**79**	P		**P**		**14 13 03.6**	**+1.2**
	0.5nm,0.8s,mb3.5,baz=299,slow=9.2,SNR=3.0								
KURK	**Kurchatov**	**56.31**	**311**	*e*P		**P**		**14 14 09.1**	**-0.5**
	4.7nm,1.1s,mb4.4								
MKAR	**Makanchi Array**	**57.09**	**305**	P		**P**		**14 14 14.3**	**-0.8**
	9.3nm,0.6s,mb5.0,baz=47,slow=7.2,SNR=128								
BVAR	**Borovoye Array**	**58.47**	**317**	P		**P**		**14 14 25.2**	**+0.4**
	2.0nm,0.6s,mb4.3,baz=52,slow=7.4,SNR=7.7								
TXAR	**Lajitas Array**	**62.37**	**77**	P		**P**		**14 14 51.3**	**-0.4**
	0.3nm,0.6s,mb3.6,baz=307,slow=5.0,SNR=4.8								
NOA	**NORSAR Array B**	**67.31**	**352**	P		**P**		**14 15 24.4**	**+0.9**
	1.2nm,0.8s,mb4.0,baz=11,slow=6.1,SNR=2.7								
AKASG	**Malin Array Be**	**74.38**	**338**	P		**P**		**14 16 06.8**	**+0.2**
	0.3nm,0.3s,mb3.6,baz=22,slow=5.3,SNR=2.8								
BRTR	**Keskin Array B**	**83.36**	**331**	P		**P**		**14 16 55.6**	**-0.4**
	0.5nm,0.6s,mb3.7,baz=16,slow=6.4,SNR=3.6								

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*ATH **05** 14:14:29.4,37.85N×21.05E,h5km,MD3.1/5*
*ISCJB **05** 14:14:30.8±0.7,37.66N±0.04×21.09E±0.06, h10km, Error ellipse: s-maj=8.1km s-min=3.6km az=135.3*
*CSEM **05** 14:14:31.4±0.3,37.73N×21.18E, h2km,ML2.4/3, Error ellipse: s-maj=8.4km s-min=4.5km az=45.0*
*THE **05** 14:14:32.1,37.73N×21.11E, h7km±3km, ML2.4/3, Error ellipse: s-maj=5.2km s-min=1.0km az=234.0*
ISC 05 14:14:31.8±0.6, 37.73N±0.04×21.15E±0.05, h10km, n29, σ1°14/45, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.41**	**38**	*e*PB		**Pg**		**14 14 37.8**	**-2.1**
RLS				*e*SB		**Sg**		**14 14 42.6**	**-2.8**
RLS	**Riolos of Patr**	**0.41**	**38**	*e*Pb		**Pg**		**14 14 37.8**	**-2.1**
RLS				*e*Sb		**Sg**		**14 14 42.6**	**-2.8**
KFL	**Anninata**	**0.47**	**323**	P		**Pg**		**14 14 41.7**	**+0.7**
KFL				S		**Sg**		**14 14 49.0**	**+1.7**
KFL	**Anninata**	**0.47**	**323**	P		**Pg**		**14 14 41.7**	**+0.7**
KFL				S		**Sg**		**14 14 49.0**	**+1.7**
VLS	**Valsamata**	**0.63**	**316**	P		**Pg**		**14 14 43.7**	**-0.2**
VLS				S		**Sg**		**14 14 51.6**	**-0.6**
VLS	**Valsamata**	**0.63**	**316**	P		**Pg**		**14 14 43.7**	**-0.2**
VLS				S		**Sg**		**14 14 51.6**	**-0.6**
ITM	**Ithomi**	**0.83**	**131**	*e*PG		**Pg**		**14 14 47.5**	**-0.2**
ITM				*e*SB		**Sb**		**14 15 01.9**	**+2.5**
ITM	**Ithomi**	**0.83**	**131**	P		**Pg**		**14 14 47.6**	**-0.1**
ITM	**Ithomi**	**0.83**	**131**	*e*Pg		**Pg**		**14 14 47.5**	**-0.2**
ITM				*e*Sb		**Sb**		**14 15 01.9**	**+2.5**
PYL	**PYLOS**	**0.96**	**150**	*e*PG		**Pg**		**14 14 49.6**	**-0.6**
PYL	**PYLOS**	**0.96**	**150**	*e*Pg		**Pg**		**14 14 49.6**	**-0.6**
GUR	**Goura**	**0.97**	**77**	*e*PB		**Pg**		**14 14 48.8**	**-1.6**
GUR	**Goura**	**0.97**	**77**	P		**Pg**		**14 14 51.0**	**+0.6**
GUR	**Goura**	**0.97**	**77**	*e*Pb		**Pg**		**14 14 48.8**	**-1.6**
GUR	**Goura**	**0.97**	**77**	P		**Pg**		**14 14 51.0**	**+0.6**
VLX	**Vlachokerasia**	**1.04**	**110**	*e*PB		**Pg**		**14 14 51.7**	**-0.1**
VLX	**Vlachokerasia**	**1.04**	**110**	*e*Pb		**Pg**		**14 14 51.7**	**-0.1**
LKD2	**Lefkada island**	**1.13**	**340**	P		**Pb**		**14 14 52.2**	**-1.1**
LKD2				S		**Sb**		**14 15 08.6**	**+0.6**
LKD2	**Lefkada island**	**1.13**	**340**	P		**Pb**		**14 14 52.2**	**-1.1**
LKD2				S		**Sb**		**14 15 08.6**	**+0.6**
DSF	**Desfina**	**1.29**	**58**	P		**Pn**		**14 14 56.1**	**+0.3**
DSF				S		**Sn**		**14 15 14.8**	**+1.8**
DSF	**Desfina**	**1.29**	**58**	P		**Pn**		**14 14 56.1**	**+0.3**
DSF				S		**Sn**		**14 15 14.8**	**+1.8**
LTK	**Loutraki**	**1.47**	**78**	*e*PB		**Pb**		**14 14 58.6**	**-0.6**
LTK	**Loutraki**	**1.47**	**78**	*e*Pb		**Pb**		**14 14 58.6**	**-0.6**
AGG	**Agios Georgios**	**1.59**	**35**	P		**Pn**		**14 14 59.6**	**-0.4**
AGG				S		**Sn**		**14 15 21.5**	**+0.9**
AGG	**Agios Georgios**	**1.59**	**35**	P		**Pn**		**14 14 59.6**	**-0.4**
AGG				S		**Sn**		**14 15 21.5**	**+0.9**
DID	**Didima**	**1.68**	**97**	P		**Pn**		**14 15 01.6**	**+0.5**
DID				S		**Sb**		**14 15 24.6**	**+0.8**
DID	**Didima**	**1.68**	**97**	P		**Pn**		**14 15 01.6**	**+0.5**
DID				S		**Sb**		**14 15 24.6**	**+0.8**
KYTH	**Kithira**	**2.09**	**133**	*e*PG		**Pg**		**14 15 10.5**	**-1.4**
KYTH	**Kithira**	**2.09**	**133**	*e*Pg		**Pg**		**14 15 10.5**	**-1.4**

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*IDC **05** 14:14:55.2±1.6,0.43N×124.23E,h0km,mb3.7/3, mb1 3.8/4,mb1mx3.5/19,mbtmp3.7/4,ML3.7/1,Error ellipse: s-maj=154.5km s-min=26.6km az=66.0*
*ISCJB **05** 14:15:04.2±0.5,0.09S±0.05×123.63E±0.04, h75km±8km, mb3.6/3, Error ellipse: s-maj=9.7km s-min=6.4km az=152.1*
*DJA **05** 14:15:05,0.08S×123.67E,h51km,MLv4.4/11*
ISC 05 14:15:05.5±0.5, 0.10S±0.05×123.64E±0.04, h66km±9km, n17, σ0°73/20, mb3.6/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.75**	**27**	P		**Pn**		**14 15 20.5**	**-0.3**
KMSI				S		**Sn**		**14 15 31.4**	**-0.6**
LUWI	**Luwuk**	**1.28**	**223**	P		**Pn**		**14 15 27.4**	**-0.1**
LUWI				S		**Sn**		**14 15 43.2**	**-0.7**
MRSI	**Marisa**	**1.79**	**289**	P		**Pn**		**14 15 30.4**	**-3.9**
MNI	**Manado**	**1.95**	**38**	P		**Pn**		**14 15 37.7**	**+1.3**
APSI	**Ampana**	**2.15**	**248**	P		**Pn**		**14 15 39.8**	**+0.7**
TOLI	**Toli-Toli**	**3.09**	**293**	P		**Pn**		**14 15 52.4**	**+0.4**
TNTI	**Ternate**	**3.83**	**77**	P		**Pn**		**14 16 02.4**	**+0.4**
PCI	**Palu**	**3.88**	**258**	P		**Pn**		**14 16 02.7**	**-0.1**
LBMI	**Labuha**	**3.90**	**98**	P		**Pn**		**14 16 02.7**	**-0.3**
LBMI				S		**Sn**		**14 16 47.3**	**-0.3**
KDI	**Kendari**	**3.97**	**195**	P		**Pn**		**14 16 04.0**	**0.0**
TTSI	**Tana Toraja**	**4.81**	**232**	P		**Pn**		**14 16 15.8**	**+0.3**
SPSI	**Sidrap Palu**	**5.45**	**225**	P		**Pn**		**14 16 23.9**	**-0.4**
	598nm42nm,0.5s								
MYLDM	**Lahad Datu**	**7.33**	**316**	P		**Pn**		**14 16 50.8**	**+0.7**
FITZ	**Fitzroy Crossi**	**18.00**	**174**	P		**Pn**		**14 19 11.7**	**+0.4**
	0.2nm,0.3s,baz=348,slow=20,SNR=5.2								
ASAR	**Alice Springs**	**25.46**	**158**	P		**P**		**14 20 28.4**	**+1.0**
	0.8nm,0.8s,mb3.2,baz=343,slow=12,SNR=7.3								
ASAR				PcP		PcP		14 23 56.4	-1.7
	0.2nm,0.8s,baz=340,slow=2.2,SNR=4.6								
STKA	**Stephens Creek**	**35.88**	**153**	P		**P**		**14 21 58.9**	**-0.4**
	2.1nm,0.6s,mb4.2,baz=331,slow=7.3,SNR=6.5								
MKAR	**Makanchi Array**	**59.03**	**328**	P		**P**		**14 24 56.5**	**-2.0**
	0.2nm,0.4s,mb3.5,baz=133,slow=6.3,SNR=3.5								

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*CSEM **05** 14:18:00.1±1.2,49.95N×18.51E,h1km, Error ellipse: s-maj=18.8km s-min=13.8km az=108.0*
PRU 05 14:18:00.0,49.83N×18.57E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.27**	**272**	*e*P		Pg		14 18 05.4	+0.2
OKC	**Ostrava-Krasne**	**0.27**	**272**	*e*PG		Pg		14 18 05.4	+0.2
OKC				*e*SG		Sg		14 18 09.5	+0.7
	comp=Z,10nm,0.4s								
OKC	**Ostrava-Krasne**	**0.27**	**272**	Pg		Pg		14 18 05.4	+0.2
OKC				Sg		Sg		14 18 09.5	+0.7
	comp=Z,10nm,0.4s								
MORC	**Moravsky Berou**	**0.67**	**266**	*e*Pg		Pg		14 18 13.0	+0.2
MORC				*e*Sg		Sg		14 18 21.4	0.0
VRAC	**Vranov**	**1.39**	**249**	*e*Sg		Sg		14 18 43.8	-0.8
DPC	**Dobruska-Polom**	**1.54**	**291**	*e*PG		Pg		14 18 27.7	-1.8
DPC				*e*SG		Sg		14 18 48.5	-0.9
	comp=Z,3.0nm,0.3s								
DPC	**Dobruska-Polom**	**1.54**	**291**	Pg		Pg		14 18 27.7	-1.8
DPC				Sg		Sg		14 18 48.5	-0.9
	comp=Z,3.0nm,0.3s								
KHC	**Kasperske Hory**	**3.33**	**260**	*e*SG		Sg		14 19 45.7	-1.2
KHC	**Kasperske Hory**	**3.33**	**260**	Sg		Sg		14 19 45.7	-1.2

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*HEL **05** 14:18:32.0,60.92N×29.28E,h0km,ML1.9, Explosion*
*ISCJB **05** 14:18:33.7±0.8,61.03N±0.04×28.80E±0.09, h0km, Error ellipse: s-maj=6.9km s-min=4.7km az=30.5*
*NAO **05** 14:18:33.8±1.9,60.75N×28.78E, ML2.2*
*IDC **05** 14:18:34.9±1.9,60.91N×28.87E, h0km, mb1 3.2/3, mb1mx3.0/23, mbtmp3.2/3, ML2.9/3, Error ellipse: s-maj=16.7km s-min=10.7km az=161.0*
*BER **05** 14:18:34.4±3.6,60.83N×28.82E, h0km±25km, ML2.2(NAO)*
*CSEM **05** 14:18:36.9±0.6,60.93N×28.40E, h1km, ML1.9, Error ellipse: s-maj=12.6km s-min=6.1km az=102.0, Mining explosion.*
*UPP **05** 14:18:36.9,60.73N×28.06E, h0km, ML1.4, Suspected Mining explosion.*
ISC 05 14:18:34.3±0.8, 60.97N±0.04×28.89E±0.09, h0km, n37, σ1°18/55, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**0.79**	**237**	*e*P		**Pg**		**14 18 48.6**	**-0.7**
VJF				*e*SB		**Sb**		**14 19 00.3**	**-1.6**
VJF				*e*RG				14 19 07.7	
VJF	**Virojoki**	**0.79**	**237**	P		**Pg**		**14 18 48.5**	**-0.8**
FIA0	**FINESS Array S**	**1.44**	**290**	Pg		**Pn**		**14 19 00.1**	**-1.5**
	baz=116,slow=16								
FIA0				Lg				14 19 20.8	
	baz=121,slow=37								
FIA0				Rg				14 19 27.5	
	baz=117,slow=37								
FIA0	**FINESS Array S**	**1.44**	**290**	*e*P		**Pn**		**14 19 00.1**	**-1.5**
FIA0				*e*RG				14 19 28.2	
FIA0	**FINESS Array S**	**1.44**	**290**	P		**Pn**		**14 19 00.1**	**-1.5**
FIA0				Lg				14 19 20.8	
	baz=121,slow=29,SNR=25								
FINES	**FINESS Array B**	**1.44**	**290**	Pg		**Pg**		**14 19 00.1**	**-1.8**
	2.1nm,0.3s,baz=113,slow=16,SNR=22								
FINES				Lg				14 19 20.7	
	2.8nm,0.3s,baz=106,slow=29,SNR=15								
FINES				Rg				14 19 27.2	
	44nm,0.7s,baz=115,slow=30,SNR=28								
PVF	**Pernaja**	**1.55**	**255**	*e*P		**Pn**		**14 19 01.4**	**-1.6**
PVF				*e*SN		**Sn**		**14 19 26.0**	**+2.2**
PVF				MSG				14 19 26.0	
	comp=Z,5.4nm,0.1s								
PVF	**Pernaja**	**1.55**	**255**	P		**Pn**		**14 19 01.4**	**-1.6**
KAF	**Kangasniemi**	**1.69**	**314**	*e*P		**Pn**		**14 19 05.2**	**+0.2**
KAF				*e*S		**Sn**		**14 19 27.6**	**+0.4**
KAF				MSG				14 19 27.6	
	comp=Z,11nm,0.4s								
KAF	**Kangasniemi**	**1.69**	**314**	P		**Pn**		**14 19 05.1**	**+0.2**
SUF	**Sumiainen**	**2.18**	**325**	*e*P		**Pn**		**14 19 12.6**	**+0.8**
SUF				*e*SG		**Sg**		**14 19 43.2**	**-1.1**
SUF				MSG				14 19 43.2	
	comp=Z,4.5nm,0.1s								
SUF	**Sumiainen**	**2.18**	**325**	P		**Pn**		**14 19 12.5**	**+0.7**
SUF				Sg		**Sg**		**14 19 43.2**	**-1.1**
	comp=Z,4.5nm,0.1s								
JOF	**Joensuu**	**2.27**	**29**	*e*S		**Sn**		**14 19 40.7**	**-0.8**
JOF				MSG				14 19 40.7	
	comp=Z,4.7nm,0.4s								
KEF	**Keuruu**	**2.27**	**304**	*e*P		**Pn**		**14 19 13.9**	**+1.0**
KEF				*e*SB		**Sb**		**14 19 44.3**	**-0.3**
KEF				MSG				14 19 44.3	
	comp=Z,3.8nm,0.4s								
KEF	**Keuruu**	**2.27**	**304**	P		**Pn**		**14 19 13.9**	**+1.0**
KEF				Sb		**Sb**		**14 19 44.3**	**-0.3**
	comp=Z,3.8nm,0.4s								
MEF	**Metsahovi**	**2.34**	**253**	*e*P		**Pn**		**14 19 14.0**	**+0.1**
MEF				*e*S		**Sn**		**14 19 45.2**	**+1.8**
MEF				MSG				14 19 45.2	
	comp=Z,3.6nm,0.4s								
MEF	**Metsahovi**	**2.34**	**253**	P		**Pn**		**14 19 14.0**	**0.0**
RAF	**Rauma**	**3.47**	**274**	*e*P		**Pn**		**14 19 32.1**	**+2.6**
RAF				*e*SG		**Sg**		**14 20 25.9**	**+0.2**
RAF				MSG				14 20 25.9	
	comp=Z,2.0nm,0.4s								
VAF	**Ylistaro**	**3.59**	**308**	*e*P		**Pn**		**14 19 32.5**	**+1.4**
	baz=121								
VAF				*e*SG		**Sg**		**14 20 29.2**	**-0.4**
VAF				MSG				14 20 29.2	
	comp=Z,3.3nm,0.4s								
VAF	**Ylistaro**	**3.59**	**308**	P		**Pn**		**14 19 32.5**	**+1.4**
VAF				Sg		**Sg**		**14 20 29.2**	**-0.4**
	comp=Z,3.3nm,0.4s								
BURU	**Burvik**	**5.00**	**320**	*e*P		**Pn**		**14 19 50.9**	**+0.5**
BURU				*e*S		**Sn**		**14 20 48.7**	**-0.2**
BURU	**Burvik**	**5.00**	**320**	P		**Pn**		**14 19 50.9**	**+0.4**
BURU				S		**Sn**		**14 20 48.7**	**-0.2**
KALU	**Kalix**	**5.50**	**336**	*e*P		**Pn**		**14 19 59.9**	**+2.6**
KALU	**Kalix**	**5.50**	**336**	P		**Pn**		**14 19 59.8**	**+2.5**
SVAU	**Svanoeiden**	**5.55**	**314**	*e*P		**Pn**		**14 19 58.5**	**+0.5**
SVAU	**Svanoeiden**	**5.55**	**314**	P		**Pn**		**14 19 58.4**	**+0.4**
SJUU	**Sjulsmark**	**5.62**	**327**	*e*P		**Pn**		**14 20 00.4**	**+1.5**
SJUU	**Sjulsmark**	**5.62**	**327**	P		**Pn**		**14 20 00.3**	**+1.4**
LILU	**Lilltraesk**	**5.96**	**320**	*e*P		**Pn**		**14 20 03.9**	**+0.3**
LILU	**Lilltraesk**	**5.96**	**320**	P		**Pn**		**14 20 03.9**	**+0.3**
HFS	**Hagfors**	**7.54**	**270**	Pn		**Pn**		**14 20 24.7**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=80,slow=10,SNR=4.0								
HFS				Sn		**Sn**		**14 21 46.7**	**-4.6**
	comp=Z,0.1nm,0.3s,baz=84,slow=26,SNR=3.2								
HFS				Lg				14 22 28.5	
	comp=Z,0.2nm,0.3s,baz=79,slow=30,SNR=3.2								
HFS	**Hagfors**	**7.54**	**270**	*e*P		**Pn**		**14 20 23.6**	**-1.7**
HFS				*e*S		**Sn**		**14 21 45.4**	**-6.0**
HFS				*e*SG		**Sg**		**14 22 25.7**	**-10**
HFS	**Hagfors**	**7.54**	**270**	Pn		**Pn**		**14 20 23.6**	**-1.7**
	baz=96,slow=12,SNR=5.2								
HFS				S		**Sn**		**14 21 45.3**	**-6.0**
NOA	**NORSAR Array B**	**8.59**	**278**	Pn		**Pn**		**14 20 38.8**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=78,slow=18,SNR=2.7								
NOA				Lg				14 23 06.1	
	comp=Z,0.2nm,0.3s,baz=98,slow=16,SNR=3.6								
ARA0	**ARCESS Array S**	**8.71**	**352**	Pn		**Pn**		**14 20 40.8**	**-0.6**
	baz=176,slow=14								
ARA0	**ARCESS Array S**	**8.71**	**352**	*e*P		**Pn**		**14 20 40.8**	**-0.6**
ARCES	**ARCESS Array B**	**8.71**	**352**	Pn		**Pn**		**14 20 40.5**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=175,slow=12,SNR=12								
ARCES				Sn		**Sn**		**14 22 15.8**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=166,slow=26,SNR=3.2								
ARCES				Lg				14 22 59.7	
	comp=Z,0.2nm,0.3s,baz=168,slow=31,SNR=3.8								

IDC 05 14:32:25.6±2.6,10.44S×123.89E,h0km,mb3.9/2, mb1 3.8/3,mb1mx3.5/15,mbtmp3.8/3,ML3.6/1,Error ellipse: s-maj=425.2km s-min=42.5km az=58.0,Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**16.25**	**145**	Pn		Pn		14 36 15.5	+0.1
	0.2nm,0.3s,baz=322,slow=13,SNR=15								
ASAR				Sn		Sn		14 39 10.1	-6.4
	0.3nm,0.3s,baz=315,slow=24,SNR=12								
MKAR	**Makanchi Array**	**68.00**	**331**	P		P		14 43 26.9	+0.3
	0.5nm,0.5s,baz=140,slow=7.5,SNR=6.5								
ZALV	**Zalesovo Beam**	**72.17**	**337**	P		P		14 43 51.9	-0.1
	0.7nm,0.4s,baz=149,slow=6.7,SNR=2.9								

DJA 05 14:38:01,0.12S×123.87E,h76km,MLv3.9/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.70**	**9**	P		Pn		14 38 18.6	+2.2
KMSI				S		Sn		14 38 30.9	+3.2
LUWI	**Luwuk**	**1.43**	**230**	P		Pn		14 38 25.8	+0.5
LUWI				S		Sn		14 38 42.7	-0.9
MNI	**Manado**	**1.83**	**32**	P		Pn		14 38 30.4	-0.2
APSI	**Ampana**	**2.36**	**251**	P		Pn		14 38 38.7	+1.1
APSI				S		Sn		14 39 07.1	+1.5

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*NIED **05** 14:38:00,37.80N×143.40E, h5km, Mw3.5 Best double couple: M0 2.11000×10^14 NP1:φs=224.00000°,δ73.00000°, λ-137.00000°. NP2:φs=119.00000°,δ49.00000°, λ-22.00000°.*
*JMA **05** 14:38:07.9±0.2,37.75N×143.41E, h24km±4km, M3.9*
*IDC **05** 14:38:10.1±1.7,37.64N×143.30E, h0km, mb3.4/4, mb1 3.6/7,mb1mx3.5/24,mbtmp3.5/7,ML3.2/3,MS3.2/1, Ms1 3.2/1,ms1mx2.3/24, Error ellipse: s-maj=43.5km s-min=24.1km az=154.0*
*ISCJB **05** 14:38:12.2±0.7,37.72N±0.04×143.16E±0.07, h33km, mb3.6/5, Error ellipse: s-maj=8.3km s-min=5.7km az=12.1*
*NEIC **05** 14:38:14.4±1.8,37.48N×143.23E, h35km, mb4.3/1, Error ellipse: s-maj=48.0km s-min=15.1km az=157.0*
ISC 05 14:38:13.8±0.7, 37.75N±0.04×143.14E±0.07, h35km, n24, σ1°31/29, mb3.6/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.58**	**297**	P		**Pn**		**14 38 38.0**	**-1.2**
JIO				*e*S		**Sn**		**14 39 00.8**	**+2.4**
OFUJ	**Ofunato**	**1.76**	**319**	P		**Pn**		**14 38 39.9**	**-1.9**
OFUJ				*e*S		**Sn**		**14 39 03.1**	**+0.2**
JMM	**Marumori**	**1.86**	**274**	P		**Pn**		**14 38 42.2**	**-1.0**
JMM				*e*S		**Sn**		**14 39 07.0**	**+1.6**
JMK	**Ichinoseki**	**1.93**	**309**	P		**Pn**		**14 38 42.8**	**-1.3**
JOM	**Ohasama**	**2.25**	**320**	P		**Pn**		**14 38 47.1**	**-1.4**
JYK	**Kaneyama**	**2.48**	**299**	P		**Pn**		**14 38 51.2**	**-0.4**
JANG	**Nango**	**2.91**	**335**	P		**Pn**		**14 38 56.5**	**-1.0**
JAG	**Ashikaga**	**3.23**	**247**	P		**Pn**		**14 39 02.1**	**+0.1**
BSO1	**Boso 1**	**3.55**	**210**	P		**Pn**		**14 39 05.6**	**-0.8**
BSO1				*e*S		**Sn**		**14 39 48.4**	**+1.2**
JRY	**Ryogami san**	**3.81**	**244**	P		**Pn**		**14 39 10.1**	**+0.1**
JOD2	**Odawara 2**	**4.10**	**234**	P		**Pn**		**14 39 13.9**	**-0.1**
MJAR	**Matsushiro Arr**	**4.12**	**254**	Pn		**Pn**		**14 39 15.4**	**+1.2**
	0.9nm,0.3s,baz=78,slow=14,SNR=8.3								
MAJO	**Matsushiro**	**4.12**	**254**	*e*Pn		**Pn**		**14 39 14.0**	**-0.2**
MAT	**Matsushiro**	**4.12**	**254**	P		**Pn**		**14 39 14.1**	**-0.1**
MAT				S		**Sn**		**14 40 00.3**	**-0.9**
ERM	**Erimo**	**4.26**	**0**	*e*P		**Pn**		**14 39 14.2**	**-1.9**
JHJ	**Hachijo jima 2**	**5.37**	**212**	Pn		**Pn**		**14 39 30.9**	**-0.6**
	7.5nm,0.3s,baz=322,slow=19,SNR=9.9								
JHJ				Sn	

ARU	**Arti**	**67.11 323**	*eP*	**P**	**14 58 05.1**	**+0.9**
	2.9nm,0.7s,mb4.4						
YKA	**Yellowknife Ar**	**74.20 28**	P	**P**	**14 58 45.7**	**-1.5**
	1.0nm,0.7s,mb3.8,baz=275,slow=9.3,SNR=2.8						
KEV	**Kevo**	**75.86 341**	*ep*	**P**	**14 58 56.8**	**+0.2**
ARCES	**ARCESS Array B**	**76.42 341**	P	**P**	**14 59 00.3**	**+0.5**
	1.6nm,0.7s,mb4.0,baz=104,slow=3.9,SNR=9.2						
JOF	**Joensuu**	**77.92 334**	*ep*	**P**	**14 59 08.8**	**+0.4**
	12nm,0.7s,mb5.0						
KAF	**Kangasniemi**	**80.32 335**	*ep*	**P**	**14 59 21.3**	**-0.2**
FINES	**FINESS Array B**	**80.79 334**	P	**P**	**14 59 24.6**	**+0.6**
	2.8nm,0.4s,mb4.5,baz=74,slow=5.5,SNR=21						
NVAR	**Mina Array Bea**	**81.60 52**	P	**P**	**14 59 29.7**	**+0.9**
NVAR	**Mina Array Bea**	**81.60 52**	P	**P**	**14 59 29.7**	**+0.9**
	0.5nm,0.7s,mb3.5,baz=267,slow=5.5,SNR=4.6						
AKASG	**Malin Array Be**	**85.33 324**	P	**P**	**14 59 46.9**	**-0.8**
	0.5nm,0.5s,mb3.9,baz=48,slow=4.1,SNR=3.3						
NOA	**NORSAR Array B**	**86.48 339**	P	**P**	**14 59 53.8**	**+0.6**
	2.9nm,0.7s,mb4.6,baz=47,slow=4.7,SNR=9.8						
BRTR	**Keskin Array B**	**88.48 313**	P	**P**	**15 00 04.0**	**+0.7**
	1.3nm,0.7s,mb4.3,baz=76,slow=5.2,SNR=6.4						

*IDC **05** 14:59:01.9±1.9,3.60S×77.23W,h0km,mb3.5/3,mb1 4.0/5, mb1mx3.8/18,mbtmp3.7/5,ML3.7/2,Error ellipse: s-maj=85.4km s-min=25.6km az=83.0*
*IGQ **05** 14:59:05.0,3.68S×77.82W,h12km±3km,Mb4.4,Ms4.2, Error ellipse: s-maj=11.6km s-min=2.4km az=163.4*
*NEIC **05** 14:59:08.8±1.3,4.03S×77.96W,h51km±15km,Error ellipse: s-maj=78.5km s-min=12.9km az=80.0*
ISC 05 14:59:06.2±1.7,3.67S±0.04×77.1W±0.1,h29km±17km,n43, σ1§03/44,mb3.5/3,4C,Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MACE	**Macas**	**1.76**	**323**	S	**Sn**	**14 59 51.3**	**-4.9**
MACE	**Macas**	**1.76**	**323**	P	**Pn**	**14 59 31.7**	**-3.0**
RIOE	**Riobamba**	**2.42**	**322**	S	**Sn**	**15 00 09.7**	**-2.8**
RIOE	**Riobamba**	**2.42**	**322**	P	**Pn**	**14 59 42.3**	**-1.5**
PATA	**Patacocha**	**2.51**	**329**	⇑S	**Sn**	**15 00 14.7**	**-0.1**
PATA	**Patacocha**	**2.51**	**329**	⇑P	**Pn**	**14 59 44.6**	**-0.5**
ARRY	**Arrayan**	**2.52**	**328**	S	**Sn**	**15 00 13.8**	**-1.2**
ARRY	**Arrayan**	**2.52**	**328**	P	**Pn**	**14 59 44.0**	**-1.2**
BMAS	**Trigal station**	**2.54**	**328**	P	**Pn**	**14 59 45.0**	**-0.4**
BMAS	**Trigal station**	**2.54**	**328**	S	**Sn**	**15 00 15.0**	**-0.4**
ULBA	**Ulba**	**2.55**	**330**	P	**Pn**	**14 59 45.3**	**-0.2**
BULB	**Ulba Tungurahu**	**2.56**	**330**	⇑S	**Sn**	**15 00 15.4**	**-0.5**
BULB	**Ulba Tungurahu**	**2.56**	**330**	⇑P	**Pn**	**14 59 45.4**	**-0.3**
RETU	**Refugio**	**2.56**	**329**	S	**Sn**	**15 00 16.8**	**+0.8**
RETU	**Refugio**	**2.56**	**329**	P	**Pn**	**14 59 45.5**	**-0.3**
BRUN	**Tungurahua Vol**	**2.57**	**330**	P	**Pn**	**14 59 45.5**	**-0.4**
BRUN	**Tungurahua Vol**	**2.57**	**330**	S	**Sn**	**15 00 16.4**	**+0.2**
RUN5	**Runtun**	**2.58**	**330**	S	**Sn**	**15 00 16.4**	**-0.1**
RUN5	**Runtun**	**2.58**	**330**	P	**Pn**	**14 59 45.8**	**-0.3**
BBIL	**Ulba Tungurahu**	**2.59**	**328**	S	**Sn**	**15 00 17.9**	**+1.4**
BBIL	**Ulba Tungurahu**	**2.59**	**328**	P	**Pn**	**14 59 45.9**	**-0.2**
BIL2	**Estacion Bilba**	**2.59**	**328**	S	**Sn**	**15 00 18.3**	**+1.6**
BIL2	**Estacion Bilba**	**2.59**	**328**	P	**Pn**	**14 59 46.2**	**+0.1**
JUI6	**Juive**	**2.60**	**329**	S	**Sn**	**15 00 17.1**	**+0.2**
JUI6	**Juive**	**2.60**	**329**	P	**Pn**	**14 59 45.9**	**-0.4**
IGUA	**Igualata**	**2.64**	**325**	S	**Sn**	**15 00 18.4**	**+0.6**
IGUA	**Igualata**	**2.64**	**325**	P	**Pn**	**14 59 46.5**	**-0.2**
PISA	**Pisayambo**	**2.88**	**334**	P	**Pn**	**14 59 50.3**	**+0.2**
TAMB	**Tambo**	**3.20**	**337**	P	**Pn**	**14 59 55.4**	**+0.8**
COV1	**Cotopaxi Volc**	**3.22**	**338**	P	**Pn**	**14 59 57.5**	**+2.6**
VC1	**Cotopaxi 1**	**3.26**	**337**	P	**Pn**	**14 59 57.1**	**+1.7**
CAMI	**Rancho Maria**	**3.27**	**335**	P	**Pn**	**14 59 58.5**	**+3.0**
PITA	**Cotopaxi Volc**	**3.35**	**337**	P	**Pn**	**14 59 58.0**	**+1.4**
ANTI	**Antisana**	**3.36**	**342**	P	**Pn**	**14 59 57.1**	**+0.3**
ATAH	**Atahualpa**	**3.66**	**200**	Pn	**Pn**	**15 00 02.0**	**+1.1**
	4.6nm,0.3s,baz=20,slow=9.5,SNR=23						
ATAH				Sn	**Sn**	**15 00 44.4**	**+1.2**
	11nm,0.3s,baz=33,slow=7.7,SNR=4.8						
JUA2	**San Juan 2**	**3.73**	**337**	P	**Pn**	**15 00 09.4**	**+7.6**
OTAV	**Otavalo**	**4.10**	**341**	P	**Pn**	**15 00 11.9**	**+5.0**
OTAV	**Otavalo**	**4.10**	**341**	*eP*	**Pn**	**15 00 11.7**	**+4.8**
NNA	**Nana**	**8.27**	**178**	Pn	**Pn**	**15 01 02.4**	**-1.8**
	1.0nm,0.3s,baz=348,slow=20,SNR=2.9						
NNA				Sn	**Sn**	**15 02 36.8**	**+0.1**
	6.4nm,0.3s,baz=276,slow=21,SNR=6.3						
TXAR	**Lajitas Array**	**41.53**	**324**	P	**P**	**15 06 50.1**	**-1.1**
	0.5nm,0.9s,mb3.2,baz=134,slow=11,SNR=4.1						
NVAR	**Mina Array Bea**	**56.59**	**322**	P	**P**	**15 08 45.9**	**-0.5**
	0.6nm,0.6s,mb3.8,baz=130,slow=8.4,SNR=5.6						
ILAR	**Eielson Array**	**84.80**	**336**	P	**P**	**15 11 37.4**	**-0.2**
	0.4nm,0.8s,mb3.6,baz=124,slow=4.1,SNR=5.6						
ZALV	**Zalesovo Beam**	**127.75**	**13**	PKP	PKPdf	15 18 09.8	+1.0
	0.7nm,0.7s,baz=320,slow=3.8,SNR=2.9						

*ISCJB **05** 15:21:17.5±0.4,36.98N±0.03×3.50E±0.04,h10km,Error ellipse: s-maj=4.5km s-min=3.6km az=160.1*
*CRAAG **05** 15:21:17.3,36.76N×3.50E,Ml3.7*
*CSEM **05** 15:21:18.3±0.2,36.81N×3.58E,h10km,ML3.7, Error ellipse: s-maj=6.4km s-min=5.1km az=73.0*
*MDD **05** 15:21:18.8±0.9,36.83N×3.56E,h4km±9km,mb4.3/13, Error ellipse: s-maj=8.6km s-min=6.0km az=25.0,PRIMO*
*NEIC **05** 15:21:21.2,37.00N×3.42E,h0km,MG4.0(MDD),After MDD.*
*SFS **05** 15:21:21.0,36.99N×3.42E,h0km,ML4.0*
ISC 05 15:21:18.8±0.5,36.93N±0.03×3.53E±0.04,h10km,n128, σ1§47/198,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABA	**Alger-Bouzarea**	**0.42**	**252**	P	**Pg**	**15 21 26.4**	**-0.6**
ABA	**Alger-Bouzarea**	**0.42**	**252**	Pg	**Pg**	**15 21 26.4**	**-0.6**
ABA	**Alger-Bouzarea**	**0.42**	**252**	Pg	**Pg**	**15 21 26.4**	**-0.6**
ABA	**Alger-Bouzarea**	**0.42**	**252**	P	**Pg**	**15 21 26.4**	**-0.6**
ADJB	**Djebel Djouab**	**0.78**	**185**	P	**Pg**	**15 21 30.6**	**-3.2**
ADJB	**Djebel Djouab**	**0.78**	**185**	Pg	**Pg**	**15 21 30.6**	**-3.2**
ADJB	**Djebel Djouab**	**0.78**	**185**	Pg	**Pg**	**15 21 30.6**	**-3.2**
ADJB	**Djebel Djouab**	**0.78**	**185**	P	**Pg**	**15 21 30.6**	**-3.2**
EMHD	**Djebel Mahouad**	**0.86**	**213**	P	**Pg**	**15 21 33.7**	**-1.7**
EMHD	**Djebel Mahouad**	**0.86**	**213**	Pg	**Pg**	**15 21 33.7**	**-1.7**
EMHD	**Djebel Mahouad**	**0.86**	**213**	Pg	**Pg**	**15 21 33.7**	**-1.7**
EMHD	**Djebel Mahouad**	**0.86**	**213**	P	**Pg**	**15 21 33.7**	**-1.7**
AKET	**Djebel Ketaf**	**0.93**	**162**	P	**Pg**	**15 21 34.0**	**-2.6**
AKET	**Djebel Ketaf**	**0.93**	**162**	Pg	**Pg**	**15 21 34.0**	**-2.6**
AKET	**Djebel Ketaf**	**0.93**	**162**	Pg	**Pg**	**15 21 34.0**	**-2.6**
AKET	**Djebel Ketaf**	**0.93**	**162**	P	**Pg**	**15 21 34.0**	**-2.6**
SET	**Setif**	**1.67**	**115**	P	**Pg**	**15 21 51.0**	**+0.1**
SET	**Setif**	**1.67**	**115**	Pn	**Pg**	**15 21 51.0**	**+0.1**
SET	**Setif**	**1.67**	**115**	Pn	**Pg**	**15 21 51.0**	**+0.1**
SET	**Setif**	**1.67**	**115**	P	**Pg**	**15 21 51.0**	**+0.1**
EBNR	**Beni Rached**	**1.73**	**249**	P	**Pg**	**15 21 52.3**	**+0.3**
EBNR	**Beni Rached**	**1.73**	**249**	P	**Pg**	**15 21 52.3**	**+0.3**
DFRA	**Djebel Bou Aff**	**1.93**	**101**	P	**Pn**	**15 21 50.5**	**-1.1**
DFRA	**Djebel Bou Aff**	**1.93**	**101**	Pn	**Pn**	**15 21 50.5**	**-1.1**
DFRA	**Djebel Bou Aff**	**1.93**	**101**	Pn	**Pn**	**15 21 50.5**	**-1.1**
DFRA	**Djebel Bou Aff**	**1.93**	**101**	P	**Pn**	**15 21 50.5**	**-1.1**
EANR	**'Ain N'Sour**	**2.19**	**244**	P	**Pg**	**15 22 01.0**	**+0.2**
EANR	**'Ain N'Sour**	**2.19**	**244**	Pn	**Pg**	**15 22 01.0**	**+0.2**
EANR	**'Ain N'Sour**	**2.19**	**244**	Pn	**Pg**	**15 22 01.0**	**+0.2**
EANR	**'Ain N'Sour**	**2.19**	**244**	P	**Pg**	**15 22 01.0**	**+0.2**
ETRT	**Tiaret**	**2.37**	**230**	P	**Pn**	**15 21 57.0**	**-0.7**
ETRT	**Tiaret**	**2.37**	**230**	Pn	**Pn**	**15 21 57.0**	**-0.7**
ETRT	**Tiaret**	**2.37**	**230**	Pn	**Pn**	**15 21 57.0**	**-0.7**
ETRT	**Tiaret**	**2.37**	**230**	P	**Pn**	**15 21 57.0**	**-0.7**
EIBI	**Ibiza**	**2.71**	**321**	Pn	**Pn**	**15 22 03.2**	**+0.9**
EIBI				Sn	**Sn**	**15 22 33.8**	**-1.5**
EIBI	**Ibiza**	**2.71**	**321**	Pn	**Pn**	**15 22 03.2**	**+0.9**
	8.0nm,0.1s,SNR=10.0						
EIBI				Sn	**Sn**	**15 22 33.8**	**-1.5**
	27nm,0.2s,SNR=6.4						
EIBI	**Ibiza**	**2.71**	**321**	Pn	**Pn**	**15 22 03.2**	**+0.9**
	8.0nm,0.1s,SNR=10.0						
EIBI				Sn	**Sn**	**15 22 33.8**	**-1.5**
	27nm,0.2s,SNR=6.4						
EIBI	**Ibiza**	**2.71**	**321**	Pn	**Pn**	**15 22 03.2**	**+0.8**
	8.0nm,0.1s,SNR=10.0						
EIBI				Sn	**Sn**	**15 22 33.8**	**-1.4**
	27nm,0.2s,SNR=6.4						
ETOS	**Mallorca**	**2.89**	**349**	Pn	**Pn**	**15 22 05.8**	**+1.0**
ETOS				Sn	**Sn**	**15 22 38.2**	**-1.3**
ETOS	**Mallorca**	**2.89**	**349**	Pn	**Pn**	**15 22 05.8**	**+1.0**
	4.7nm,0.1s,SNR=48						
ETOS				Sn	**Sn**	**15 22 38.2**	**-1.3**
	7.7nm,0.1s,SNR=5.0						
ETOS	**Mallorca**	**2.89**	**349**	Pn	**Pn**	**15 22 05.8**	**+1.0**
	4.7nm,0.1s,SNR=48						
ETOS				Sn	**Sn**	**15 22 38.2**	**-1.3**
	7.7nm,0.1s,SNR=5.0						
MAHO	**Mahon**	**3.02**	**11**	Sn	**Sn**	**15 22 36.5**	**-6.2**
MAHO	**Mahon**	**3.02**	**11**	Sn	**Sn**	**15 22 36.5**	**-6.2**
MAHO	**Mahon**	**3.02**	**11**	eS	**Sn**	**15 22 36.5**	**-6.2**
CMAH	**Djebel Manchou**	**3.14**	**94**	P	**Pn**	**15 22 07.1**	**-1.2**
CMAH	**Djebel Manchou**	**3.14**	**94**	Pn	**Pn**	**15 22 07.1**	**-1.2**
CMAH	**Djebel Manchou**	**3.14**	**94**	Pn	**Pn**	**15 22 07.1**	**-1.2**
CMAH	**Djebel Manchou**	**3.14**	**94**	P	**Pn**	**15 22 07.1**	**-1.2**
EBEN	**Beniarda**	**3.46**	**302**	Pn	**Pn**	**15 22 12.3**	**-0.3**
EBEN				Sn	**Sn**	**15 22 49.9**	**-3.8**
EBEN	**Beniarda**	**3.46**	**302**	Pn	**Pn**	**15 22 12.3**	**-0.3**
	1.1nm,0.1s,SNR=16						
EBEN				Sn	**Sn**	**15 22 49.9**	**-3.8**
	2.1nm,0.1s,SNR=5.0						
EBEN	**Beniarda**	**3.46**	**302**	Pn	**Pn**	**15 22 12.3**	**-0.3**
	1.1nm,0.1s,SNR=16						
EBEN				Sn	**Sn**	**15 22 49.9**	**-3.8**
	2.1nm,0.1s,SNR=5.0						
EBEN	**Beniarda**	**3.46**	**302**	Pn	**Pn**	**15 22 12.3**	**-0.4**
	1.1nm,0.1s,SNR=16						
EBEN				Sn	**Sn**	**15 22 49.9**	**-3.8**
	2.1nm,0.1s,SNR=5.0						
ETOB	**Tobarra**	**4.37**	**295**	Pn	**Pn**	**15 22 25.9**	**+0.7**
ETOB				Sn	**Sn**	**15 23 14.2**	**-1.9**
ETOB	**Tobarra**	**4.37**	**295**	Pn	**Pn**	**15 22 25.9**	**+0.7**
	3.8nm,0.2s,SNR=14						
ETOB				Sn	**Sn**	**15 23 14.2**	**-1.9**
	2.1nm,0.2s,SNR=5.0					

BOAC eS Sb 15 52 53.8 -4.0
POLP Polilio Island 1.75 315 eP Pn 15 52 45.7 0.0

*IDC **05** 15:59:21.6±12.0, 13˚41N×92˚05W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.7/18, mbtmp3.6/3, ML3.6/1, Error ellipse: s-maj=256.8km s-min=122.0km az=12.0*
*MEX **05** 15:59:34.3±1.0, 14˚11N×93˚26W, h14km±23km, MD4.0*
*NEIC **05** 15:59:34.3, 14˚11N×93˚26W, h14km, MD4.0(MEX), After MEX.*
ISC 05 15:59:32.4±1.3,**14˚24N**±0˚09×**93˚24W**±0˚05,**h10km,n14,** σ1§13/25,**mb3.8/2,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
THIG		**1.15**	**55**	*i* P			**Pb**	**15 59 53.4**	**-1.0**
THIG				*i* S			**Sb**	**16 00 09.1**	**-0.3**
PCIG		**1.46**	**1**	*i* P			**Pn**	**15 59 58.2**	**-0.6**
PCIG				*i* S			**Sn**	**16 00 17.0**	**-0.9**
TGIG		**2.53**	**2**	*i* P			**Pn**	**16 00 15.4**	**+1.9**
TGIG				*i* S			**Sn**	**16 00 45.4**	**+1.0**
SCX	**San Cristobal**	**2.55**	**13**	*i* P			**Pn**	**16 00 14.4**	**+0.6**
SCX				*i* S			**Sn**	**16 00 44.8**	**-0.1**
SCX	**San Cristobal**	**2.55**	**13**	*i* P			**Pn**	**16 00 14.4**	**+0.6**
SCX				*i* S			**Sn**	**16 00 44.8**	**-0.1**
HUIG	**Huatulco**	**3.17**	**299**	*e*P			**Pn**	**16 00 21.9**	**-0.4**
HUIG				*i* S			**Sn**	**16 00 57.9**	**-2.3**
HUIG	**Huatulco**	**3.17**	**299**	*e*P			**Pn**	**16 00 21.9**	**-0.4**
HUIG				*i* S			**Sn**	**16 00 57.9**	**-2.3**
VHO	**Vista Hermosa**	**4.39**	**310**	*i* P			**Pn**	**16 00 40.0**	**+0.9**
VHO				*i* S			**Sn**	**16 01 36.0**	**+5.6**
VHO	**Vista Hermosa**	**4.39**	**310**	*i* P			**Pn**	**16 00 40.0**	**+0.9**
VHO				*i* S			**Sn**	**16 01 36.0**	**+5.6**
PNIG	**Pinotepa**	**5.18**	**295**	*i* P			**Pn**	**16 00 50.1**	**0.0**
PNIG				*i* S			**Sn**	**16 01 43.9**	**-6.0**
PNIG	**Pinotepa**	**5.18**	**295**	*i* P			**Pn**	**16 00 50.1**	**0.0**
PNIG				*i* S			**Sn**	**16 01 50.5**	**+0.6**
TXAR	**Lajitas Array**	**17.86**	**329**	P			**Pn**	**16 03 46.6**	**+5.7**
	0.0nm,0.3s,baz=147,slow=12,SNR=6.7								
NVAR	**Mina Array Bea**	**32.74**	**322**	P			**P**	**16 06 08.2**	**+2.8**
	0.3nm,0.5s,mb3.5,baz=130,slow=9.6,SNR=3.7								
YKA	**Yellowknife Ar**	**50.52**	**347**	P			**P**	**16 08 29.4**	**-1.2**
	1.3nm,0.6s,mb4.0,baz=150,slow=7.3,SNR=3.8								

*BJI **05** 17:06:49.1, 44˚87N×93˚01E, h7km, mB4.6/21, mb4.3/30, ML4.9/6, Ms4.4/25, Ms7 4.1/25*
*ISCJB **05** 17:06:49.2±0.2, 45˚02N±0˚03×93˚01E±0˚03, h10km, mb4.2/40, MS3.7/15, Error ellipse: s-maj=4.0km s-min=2.9km az=29.0*
*IDC **05** 17:06:49.1±0.7, 45˚08N×93˚13E, h0km, mb3.9/14, mb1 4.1/19, mb1mx4.0/26, mbtmp3.9/19, ML3.7/5, MS3.6/13, Ms1 3.6/13, ms1mx3.4/30, Error ellipse: s-maj=18.2km s-min=11.4km az=19.0*
*NEIC **05** 17:06:50.9±0.4, 44˚98N×92˚98E, h10km, mb4.4/20, Error ellipse: s-maj=9.4km s-min=6.0km az=183.0*
*NNC **05** 17:06:51.7±2.3, 44˚61N×92˚50E, h8km±7km, mb4.3, mpv4.4, Error ellipse: s-maj=32.5km s-min=17.0km az=33.0*
*MOS **05** 17:06:53.0±1.9, 45˚07N×92˚93E, h33km, mb4.6/19, Error ellipse: s-maj=9.5km s-min=7.1km az=129.0*
ISC 05 17:06:51.1±0.2,**44˚99N**±0˚02×**93˚00E**±0˚03,**h10km,n140,** σ1§19/156,**mb4.2/40,MS3.7/15,9C-13D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
WMQ	**Urumqi**	**3.97**	**255**		Pn		**Pn**	**17 07 55.0**	**+3.0**
WMQ					Sg		**Sg**	**17 08 55.0**	**-3.7**
WMQ					smax				
	comp=N,4μm,2.0s								
WMQ					smax				
	comp=E,2μm,1.5s								
GTA	**Gaotai**	**7.53**	**135**	⇑Pn			**Pn**	**17 08 39.0**	**-1.9**
MK31	**Makanchi Array**	**7.69**	**287**	⇑Pn			**Pn**	**17 08 43.2**	**+0.2**
	comp=E,9.0nm,0.4s,baz=97,slow=15,SNR=498								
MK31				⇑Sn			**Sn**	**17 10 11.5**	**+1.4**
	comp=E,67nm,0.9s,baz=98,slow=33,SNR=5.5								
MK31				⇓Lg				17 10 52.5	
	comp=E,310nm,1.0s,baz=87,slow=31,SNR=2.7								
MK31	**Makanchi Array**	**7.69**	**287**	*e*Pn			**Pn**	**17 08 42.8**	**-0.2**
MK31				*e*Sn			**Sn**	**17 10 08.1**	**-2.0**
MKAR	**Makanchi Array**	**7.69**	**287**	Pn			**Pn**	**17 08 43.0**	**0.0**
	comp=E,6.9nm,0.3s,baz=100,slow=14,SNR=200								
MKAR				Sn			**Sn**	**17 10 10.4**	**+0.4**
	comp=E,8.2nm,0.3s,baz=86,slow=20,SNR=3.4								
MKAR				Lg				17 10 53.5	
	comp=E,25nm,0.3s,baz=100,slow=30,SNR=5.4								
MKAR				LR		LR		17 11 49.1	
	comp=E,414nm,18.1s,baz=98,slow=39								
MKAR	**Makanchi Array**	**7.69**	**287**	P			**Pn**	**17 08 43.0**	**0.0**
MKAR								17 10 10.4	
MKAR					pmax	pmax			
	comp=Z,7.0nm,0.3s								
MKAR					smax				
	comp=N,8.0nm,0.3s								
MKAR					MLR	MLR			
	comp=Z,414nm,18.1s								
MOY	**Mondy**	**8.54**	**36**	*e*P			**Pn**	**17 09 05.5**	**+11**
MOY				*e*S			**Sn**	**17 10 31.7**	**+0.6**
MOY					pmax	pmax			
	comp=Z,7.0nm,0.8s								
MOY					smax				
	comp=Z,112nm,1.1s								
ZAK	**Zakamensk**	**8.79**	**48**	*e*P			**Pn**	**17 08 58.8**	**+0.7**
ZAK				*e*				17 10 32.7	
ZAK					pmax	pmax			
	comp=Z,44nm,0.5s								
ZAK					smax				
	comp=E,683nm,1.0s								
SONM	**Songino Array**	**9.68**	**68**	Pn			**Pn**	**17 09 07.8**	**-2.5**
	comp=E,0.3nm,0.3s,baz=253,slow=14,SNR=2.8								
SONM				Pg			Pn	17 09 43.7	+33
	comp=E,3.8nm,0.3s,baz=261,slow=17,SNR=11								
SONM				Sn			**Sn**	**17 10 49.1**	**-10**
	comp=E,1.8nm,0.3s,baz=252,slow=18,SNR=2.5								
SONM				Lg				17 11 51.6	
	comp=E,9.0nm,0.3s,baz=273,slow=27,SNR=5.3								
SONM				LR			LR	17 12 52.7	
	comp=E,597nm,18.5s,baz=250,slow=38								
TLY	**Talaya**	**9.75**	**43**	*e*P			**Pn**	**17 09 11.3**	**+0.1**
ULN	**Ulaanbaatar**	**10.12**	**69**	*e*Pn			**Pn**	**17 09 18.3**	**+1.9**
	comp=E,23nm,0.6s								
ULN				*e*Pg			Pn	17 09 52.2	+36
ULN				*e*Sg			Sn	17 12 05.1	+55
ULN	**Ulaanbaatar**	**10.12**	**69**	*e*P			**Pn**	**17 09 18.3**	**+1.9**
ULN					pmax	pmax			
	comp=Z,23nm,0.6s								
ZAA0	**Zalesovo Array**	**10.42**	**332**	*e*Pn			**Pn**	**17 09 19.5**	**-1.0**
ZALV	**Zalesovo Beam**	**10.42**	**332**	Pn			**Pn**	**17 09 20.0**	**-0.4**
ZALV				Pg			Pn	17 09 57.0	+37
ZALV				Sn			**Sn**	**17 11 15.4**	**-1.8**
ZALV				Lg				17 12 18.1	
ZALV	**Zalesovo Beam**	**10.42**	**332**	Pn			**Pn**	**17 09 20.0**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=149,slow=12,SNR=18								
ZALV				Pg			Pn	17 09 57.0	+37
	comp=Z,1.1nm,0.3s,baz=148,slow=14,SNR=7.5								
ZALV				Sn			**Sn**	**17 11 15.4**	**-1.8**
	comp=Z,1.2nm,0.3s,baz=164,slow=24,SNR=2.7								
ZALV				Lg				17 12 18.1	
	comp=Z,2.9nm,0.3s,baz=168,slow=29,SNR=4.5								
ZALV	**Zalesovo Beam**	**10.42**	**332**	P			**Pn**	**17 09 20.0**	**-0.4**
ZALV								17 11 15.4	
ZALV					pmax	pmax			
	comp=Z,1.0nm,0.3s								
ZALV					smax				
	comp=N,1.0nm,0.3s								
KURK	**Kurchatov**	**11.22**	**306**	⇑Pn			**Pn**	**17 09 30.1**	**-1.4**
	comp=N,13nm,0.8s								
KURK				⇑Lg				17 12 49.6	
	comp=N,472nm,1.4s								
KURK	**Kurchatov**	**11.22**	**306**	*e*Pn			**Pn**	**17 09 30.1**	**-1.3**
	comp=N,11nm,1.4s								
KURK				*e*Sn			**Sn**	**17 11 41.1**	**+4.2**
KURK				*e*Sg			Sn	17 12 38.3	+61
KURK	**Kurchatov**	**11.22**	**306**	*e*P			**Pn**	**17 09 30.2**	**-1.2**
KURK				*e*				17 11 41.1	
KURK					pmax	pmax			
	comp=Z,11nm,1.4s								
KURBB	**Kurchatov Arra**	**11.24**	**305**	⇓Pn			**Pn**	**17 09 30.5**	**-1.1**
	comp=Z,2.4nm,0.8s								
KURBB				⇓Lg				17 12 48.0	
	comp=Z,101nm,0.9s								
LZH	**Lanzhou**	**12.12**	**133**	*e*P			**Pn**	**17 09 41.6**	**-2.2**
LZH				pP				17 09 44.3	
LZH				*e*S			**Sn**	**17 11 58.1**	**-0.8**
LZH					pmax	pmax			
	comp=Z,29nm,1.0s								
LZH					pmax	pmax			
	comp=Z,140nm,4.4s								
LZH					LR	LR			
	comp=N,2μm,10.6s								
LZH					LR	LR			
	comp=Z,2μm,11.0s								
TKM2	**Tokmak 2**	**12.71**	**267**	Pn			**Pn**	**17 09 52.4**	**+0.6**
TKM2				Lg				17 13 20.6	
TKM2	**Tokmak 2**	**12.71**	**267**	*e*Pn			**Pn**	**17 09 51.0**	**-0.8**
	comp=Z,23nm,1.0s								
TKM2				*e*Sn			**Sn**	**17 12 08.0**	**-5.3**
TKM2	**Tokmak 2**	**12.71**	**267**	*e*P			**Pn**	**17 09 51.0**	**-0.8**
TKM2				*e*				17 12 08.0	
TKM2					pmax	pmax			
	comp=Z,23nm,1.0s								
AAK	**Ala-Archa**	**13.57**	**267**	*e*Pn			**Pn**	**17 10 01.6**	**-1.9**
	comp=Z,6.3nm,0.6s								
AAK				*e*Sn			**Sn**	**17 12 37.3**	**+3.0**
AAK	**Ala-Archa**	**13.57**	**267**	Pn			**Pn**	**17 10 03.8**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=241,slow=2.0,SNR=4.0								
AAK				Lg				17 14 05.6	
	comp=Z,0.2nm,0.3s,baz=330,slow=20,SNR=2.8								
AAK				LR		LR		17 16 01.8	
	comp=Z,636nm,19.9s,baz=59,slow=40								
AAK	**Ala-Archa**	**13.57**	**267**	*e*P			**Pn**	**17 10 01.6**	**-1.9**
AAK				*e*				17 12 37.3	
AAK					pmax	pmax			
	comp=Z,6.0nm,0.6s								
UCH	**Uchtor**	**13.67**	**265**	*e*Pn			**Pn**	**17 10 04.8**	**-0.2**
	comp=Z,12nm,0.7s								
KSH	**Kashi**	**13.74**	**252**	P			**Pn**	**17 10 12.8**	**+7.0**
KSH				*e*pP				17 10 16.5	
KSH				*e*sP				17 10 20.2	
KSH				*e*PP				17 10 24.7	
KSH				*e*S			**Sn**	**17 12 55.2**	**+17**
KSH				sS				17 13 02.3	
KSH				SS				17 13 11.5	
KSH					pmax	pmax			
	comp=Z,5.0nm,0.8s								
KSH					LR	LR			
	comp=N,410nm,7.8s								
KSH					LR	LR			
	comp=E,450nm,13.4s								
KSH					LR	LR			
	comp=Z,370nm,8.2s								
EKS2	**Erkin-Say**	**14.07**	**267**	*e*Pn			**Pn**	**17 10 10.4**	**+0.1**
	comp=Z,18nm,1.0s								
HHC	**Hu-ho-hao-te**	**14.22**	**100**	*e*P			**Pn**	**17 10 12.6**	**+0.2**
HHC				pP			pP	17 10 15.8	-6.8
HHC				sP			sP	17 10 19.6	-4.3
HHC				PP				17 10 24.1	
HHC				S			**Sn**	**17 12 50.2**	**+0.1**
HHC				sS				17 12 56.5	
HHC				SS				17 13 07.0	
HHC					pmax	pmax			
	comp=Z,21nm,0.8s								
HHC					pmax	pmax			
	comp=Z,160nm,4.3s								
HHC					LR	LR			
	comp=N,700nm,4.4s								
HHC					LR	LR			
	comp=E,650nm,6.4s								
HHC					LR	LR			
	comp=Z,620nm,9.6s								
AML	**Almayashu**	**14.28**	**265**	*e*Pn			**Pn**	**17 10 13.1**	**-0.2**
	comp=Z,8.2nm,0.8s								
KK31	**Karatay Array**	**16.27**	**271**	Pn			**Pn**	**17 10 38.1**	**-1.5**
	comp=Z,4.1nm,0.8s,baz=66,slow=14,SNR=39								
KK31				⇓Lg				17 15 08.7	
	comp=Z,14nm,0.8s								
VOSK	**Vostochnaya**	**16.38**	**306**	⇓Pn			**Pn**	**17 10 39.7**	**-1.3**
	comp=Z,6.9nm,0.8s								
VOSK				⇓Sn			**Sn**	**17 13 44.7**	**+2.2**
	comp=Z,5.7nm,0.9s								
VOSK				⇓Lg				17 15 27.8	
	comp=Z,145nm,1.8s								
CD2	**Chengdu**	**16.40**	**145**	P			**Pn**	**17 10 42.3**	**+1.0**
CD2				pP			pP	17 10 45.5	-1.4
CD2				sP			sP	17 10 49.5	+1.3
CD2				PP				17 10 56.0	
CD2				S			**Sn**	**17 13 43.8**	**+0.6**
CD2				sS			sS	17 13 49.5	-11
CD2					pmax	pmax			
	comp=Z,10.0nm,0.6s								
CD2					pmax	pmax			
	comp=Z,40nm,4.2s								
CD2					LR	LR			
	comp=N,490nm,8.2s								
CD2					LR	LR			
	comp=E,490nm,8.2s								
CD2					LR	LR			
	comp=Z,600nm,7.2s								
XAN	**Xi'an**	**16.42**	**126**	P			**Pn**	**17 10 39.7**	**-1.8**
XAN				pP			pP	17 10 44.7	-2.4
XAN					pmax	pmax			
	comp=Z,2.0nm,1.3s								
XAN					pmax	pmax			
	comp=Z,24nm,3.9s								
XAN					LR	LR			
	comp=N,520nm,9.8s								
XAN					LR	LR			
	comp=E,180nm,9.4s								
XAN					LR	LR			
	comp=Z,110nm,12.0s								
BVA0	**Borovoye Array**	**16.82**	**307**	Pn			**Pn**	**17 10 45.2**	**-1.2**
	comp=Z,1.7nm,0.7s,baz=110,slow=15,SNR=101								
BVA0				⇓Sn			**Sn**	**17 13 54.3**	**+1.1**
	comp=Z,3.3nm,1.4s,baz=107,slow=25,SNR=5.6								
BVA0				⇑Lg				17 15 39.4	
	comp=Z,9.7nm,1.1s								
BVAR	**Borovoye Array**	**16.82**	**307**	Pn			**Pn**	**17 10 45.3**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=106,slow=11,SNR=44								
BVAR				Sn			**Sn**	**17 13 58.3**	**+5.2**
	comp=Z,0.5nm,0.3s,baz=107,slow=24,SNR=3.0								
BVAR				Lg				17 15 44.7	
	comp=Z,0.2nm,0.3s,baz=107,slow=24,SNR=2.5								
BVAR	**Borovoye Array**	**16.82**	**307**	P			**Pn**	**17 10 45.3**	**-1.2**
BVAR								17 13 58.3	
BVAR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
BVAR					smax				
	comp=N,1.0nm,0.3s								
BRVK	**Borovoye**	**16.89**	**307**	*e*Pn			**Pn**	**17 10 46.1**	**-1.2**
	comp=N,13nm,0.8s								
BRVK				*e*S			**Sn**	**17 14 00.3**	**+5.4**
BRVK	**Borovoye**	**16.89**	**307**	*d* iP			**Pn**	**17 10 45.9**	**-1.5**
BRVK					pmax	pmax			
	comp=Z,15nm,1.2s								
ZRNK	**Zerenda**	**17.59**	**305**	⇑Pn			**Pn**	**17 10 55.0**	**-1.1**
	comp=Z,13nm,0.8s								
ZRNK				⇑Sn			**Sn**	**17 14 15.6**	**+3.8**
	comp=Z,11nm,0.9s								
BJI	**Beijing**	**17.77**	**98**	P			**Pn**	**17 10 58.5**	**+0.1**
BJI				S			**Sn**	**17 14 17.0**	**+0.6**
BJI					pmax	pmax			
	comp=Z,6.0nm,0.5s								
BJI					pmax	pmax			
	comp=Z,63nm,3.1s								
BJI					LR	LR			
	comp=N,2μm,9.3s								
BJI					LR	LR			
	comp=E,920nm,8.6s								
BJI					LR	LR			
	comp=Z,83nm,12.7s								
GUN	**Gumba**	**17.96**	**201**	*e*P			**Pn**	**17 11 00.4**	**-0.5**
JIRN	**Jiri**	**18.13**	**200**	*e*P			**Pn**	**17 11 02.5**	**-0.4**
GKN	**Gorkha**	**18.22**	**204**	*e*P			**Pn**	**17 11 03.8**	**-0.2**
	comp=Z,20nm,0.8s								
KKN	**Kakani**	**18.24**	**202**	*e*P			**Pn**	**17 11 04.0**	**-0.2**
	comp=Z,15nm,0.6s								
PKIN	**Phulchoki**	**18.41**	**202**	*e*P			**Pn**	**17 11 06.3**	**0.0**
PKI	**Pulchoki**	**18.41**	**202**	*e*P			**Pn**	**17 11 06.0**	**-0.4**
DMN	**Daman**	**18.46**	**203**	*e*P			**Pn**	**17 11 07.2**	**+0.3**
ODAN	**Odare**	**18.64**	**196**	*e*P			**Pn**	**17 11 09.0**	**-0.2**
	comp=Z,15nm,0.7s								
HIA	**Hailar**	**18.65**	**67**	*e*P			**Pn**	**17 11 10.6**	**+1.4**
	comp=Z,9.1nm,0.8s								
HIA	**Hailar**	**18.65**	**67**	*e*P			**Pn**	**17 11 10.6**	**+1.4**
HIA					pmax	pmax			
	comp=Z,9.0nm,0.8s								
RAMN	**Ramite**	**18.72**	**198**	*e*P			**Pn**	**17 11 10.4**	**+0.3**
	comp=Z,15nm,0.6s								
KOLN	**Koldanda**	**18.75**	**207**	*e*P			**Pn**	**17 11 12.3**	**+1.8**
SHL	**Shillong**	**19.40**	**183**	*ex*			**Pn**	**17 11 18.0**	**-0.3**
ENH	**Enshi**	**19.60**	**133**	*e*P			**Pn**	**17 11 17.3**	**-3.5**
	comp=Z,28nm,1.1s								
KBL	**Kabul**	**21.09**	**249**	*e*P			**P**	**17 11 35.0**	**-0.6**
	comp=Z,14nm,0.9s,mb4.3								
KBL	**Kabul**	**21.09**	**249**	*e*P			**P**	**17 11 35.0**	**-0.6**
KBL					pmax	pmax			
	comp=Z,14nm,0.9s,mb4.3								
KMI	**Kunming**	**21.33**	**155**	P			**P**	**17 11 40.5**	**+2.3**
KMI					pP			17 11 43.1	
KMI					sP		sP	17 11 44.5	+2.1
KMI					PP			17 12 04.2	
KMI					S		**S**	**17 15 32.7**	**-2.3**
KMI					sS		sS	17 15 37.2	-2.4
KMI					SS			17 16 06.7	
KMI					pmax	pmax			
	comp=Z,5.0nm,0.8s,mb3.9								
KMI					LR	LR			
	comp=N,260nm,12.0s,MS4.1								
KMI					LR	LR			
	comp=E,300nm,10.3s,MS4.1								
KMI					LR	LR			
	comp=Z,180nm,11.1s,MS3.7								
GYA	**Guiyang**	**21.51**	**145**	*e*P			**P**	**17 11 41.2**	**+1.1**
GYA					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.3								
WHN	**Wuhan**	**22.11**	**123**	P			**P**	**17 11 45.7**	**-0.8**
WHN					LR	LR			
	comp=N,1μm,14.0s,MS4.7								
WHN					LR	LR			
	comp=E,1μm,14.6s,MS4.7								
WHN					LR	LR			
	comp=Z,2μm,4.8s								
AB31	**Akbulak array**	**22.78**	**293**	P			**P**	**17 11 53.3**	**-0.3**
	comp=Z,12nm,0.9s,mb4.3,baz=85,slow=11,SNR=52								
ABKAR	**Akbulak array**	**22.78**	**293**	*e*P			**P**	**17 11 52.7**	**-0.8**
	comp=Z,12nm,0.9s,mb4.3								
SVE	**Sverdlovsk**	**23.35**	**312**	*e*P			**P**	**17 11 59.1**	**-0.4**
SVE					pmax	pmax			
	comp=Z,17nm,0.8s,mb4.5								
AKTK	**Aktyubinsk**	**24.01**	**296**	P			**P**	**17 12 07.1**	**+1.3**
AKTK					LR	LR		17 21 55.2	
AKTO	**Aktyubinsk**	**24.01**	**296**	P			**P**	**17 12 07.1**	**+1.3**
	comp=Z,3.6nm,0.8s,mb3.9,baz=104,slow=7.3,SNR=6.3								
AKTO					LR	LR		17 21 55.2	
	comp=Z,110nm,21.0s,MS3.3,baz=272,slow=38								
AKTO	**Aktyubinsk**	**24.01**	**296**	P			**P**	**17 12 07.1**	**+1.3**
AKTO					pmax	pmax			
	comp=Z,4.0nm,0.8s,mb3.9								
AKTO					MLR	MLR			
	comp=Z,110nm,21.0s,MS3.3								
ARU	**Arti**	**24.36**	**310**	*e*P			**P**	**17 12 08.6**	**-0.2**
	comp=Z,20nm,0.8s,mb4.6								
ARU	**Arti**	**24.36**	**310**	*d* iP			**P**	**17 12 09.0**	**+0.1**
ARU				*e*PPP				17 12 44.2	
ARU					S		**S**	**17 16 24.6**	**-3.4**
ARU					pmax	pmax			
	comp=Z,28nm,1.2s,mb4.6								
CHTO	**Chiang Mai**	**26.57**	**167**	P			**P**	**17 12 30.9**	**+1.6**
	comp=Z,8.2nm,1.1s,mb4.2								
CHTO	**Chiang Mai**	**26.57**	**167**	P			**P**	**17 12 30.9**	**+1.7**
CHTO					pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.2								
CMAR	**Chiang Mai Arr**	**26.92**	**167**	P			**P**	**17 12 33.0**	**+0.7**
	comp=Z,1.8nm,1.0s,mb3.6,baz=354,slow=8.7,SNR=8.2								
CMAR	**Chiang Mai Arr**	**26.92**	**167**	P			**P**	**17 12 33.1**	**+0.7**
CMAR					pmax	pmax			
	comp=Z,2.0nm,1.0s								
KSRS	**Korea Array**	**27.17**	**94**	P			**P**	**17 12 33.7**	**-0.9**
	comp=Z,1.6nm,1.0s,mb3.5,baz=281,slow=8.3,SNR=8.2								
KSRS					LR	LR		17 22 27.4	
	comp=Z,40nm,18.9s,MS3.0,baz=300,slow=35								
KSRS	**Korea Array**	**27.17**	**94**	P			**P**	**17 12 33.7**	**-0.9**
KSRS					pmax	pmax			
	comp=Z,2.0nm,1.0s,mb3.6								
KSRS					MLR	MLR			
	comp=Z,40nm,18.9s,MS3.0								
YAK	**Yakutsk**	**27.17**	**38**	*e*P			**P**	**17 12 35.3**	**+0.9**
	comp=Z,4.7nm,0.6s,mb4.2								
YAK	**Yakutsk**	**27.17**	**38**	*e*P			**P**	**17 12 35.3**	**+1.0**
YAK					pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.2								
HABR	**Khabarovsk**	**28.77**	**68**	*e*P			**P**	**17 12 53.4**	**+4.6**
HABR								17 13 40.5	
HABR				*e*PPP				17 13 48.8	
HABR					S		**S**	**17 17 39.5**	**+1.4**
HABR					SS		SS	17 19 00.0	-40
HABR				*e*				17 23 36.3	
HABR					pmax	pmax			
	comp=E,12nm,0.7s								
HABR					pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.4								
HABR					pmax	pmax			
	comp=N,7.0nm,0.7s								
HABR					MLR	MLR			
	comp=Z,160nm,13.0s,MS3.8								
QIZ	**Qiongzhong**	**29.44**	**146**	P			**P**	**17 12 55.5**	**+0.6**
QIZ					S		**S**	**17 17 53.3**	**+4.3**
QIZ					pmax	pmax			
	comp=Z,19nm,1.8s,mb4.5								
QIZ					pmax	pmax			
	comp=Z,230nm,4.2s								
TIXI	**Tiksi**	**31.74**	**21**	*e*P			**P**	**17 13 13.6**	**-1.2**
KLMR	**Klimovskoe**	**34.80**	**316**	*e*P			**P**	**17 13 39.6**	**-2.0**
KLMR					pmax	pmax			
	comp=Z,20nm,1.5s,mb4.8								
GNI	**Garni**	**35.45**	**280**	LR			LR	17 30 41.8	
	comp=Z,92nm,19.3s,MS3.5,baz=65,slow=40								
KIV	**Kislovodsk**	**35.45**	**287**	*e*P			**P**	**17 13 44.9**	**-2.4**
KIV					pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.5								
KIV					MLR	MLR			
	comp=Z,121nm,16.0s,MS3.8								
VSR	**Storozhevoye**	**35.79**	**300**	*e*P			**P**	**17 13 51.6**	**+1.4**
VSR					pmax	pmax			
	comp=E,3.0nm,0.4s								
VSR					pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.6

NOA	**NORSAR Array B**	**48.33**	**320**	P	**P**	**17 15 31.8**	**-0.5**
NOA				LR	LR	17 36 31.5	
NOA	**NORSAR Array B**	**48.33**	**320**	P	**P**	**17 15 31.8**	**-0.5**
	comp=Z,1.6nm,0.7s,mb4.1,baz=65,slow=7.4,SNR=6.2						
NOA				LR	LR	17 36 31.5	
	comp=Z,48nm,20.8s,MS3.5,baz=50,slow=37						
NOA	**NORSAR Array B**	**48.33**	**320**	P	**P**	**17 15 31.8**	**-0.5**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,48nm,20.8s						
PSZ	**Piszkesteto**	**48.69**	**301**	P	**P**	**17 15 36.6**	**+1.3**
	comp=Z,2.3nm,0.7s,mb4.3						
PSZ	**Piszkesteto**	**48.69**	**301**	P	**P**	**17 15 36.6**	**+1.3**
PSZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
MORC	**Moravsky Berou**	**49.31**	**304**	*e*P	**P**	**17 15 41.6**	**+1.6**
	comp=Z,7.7nm,1.1s,mb4.7						
MORC	**Moravsky Berou**	**49.31**	**304**	*e*P	**P**	**17 15 41.6**	**+1.6**
MORC				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
CLL	**Collm**	**51.25**	**308**	⇓*i*P	**P**	**17 15 55.1**	**+0.4**
	comp=Z,6.0nm,0.6s,mb4.7						
CLL	**Collm**	**51.25**	**308**	⇓*i*P	**P**	**17 15 55.1**	**+0.4**
CLL				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
CLL	**Collm**	**51.25**	**308**	⇓*i*P	**P**	**17 15 55.1**	**+0.4**
	comp=Z,6.0nm,0.6s,mb4.7						
CLL				*e*pP	pP	17 15 58.0	+0.2
CLL				*e*SS	SS	17 26 54.0	+6.0
CLL				LmV		17 38 00.0	
	comp=Z,100nm,19.4s						
ATD	**Arta Tunnel**	**54.16**	**248**	LR	LR	17 41 51.0	
	comp=Z,51nm,20.8s,MS3.6,baz=9.7,slow=39						
LPG	**La Plagne**	**57.76**	**304**	*e*P	**P**	**17 16 43.7**	**+1.7**
	comp=Z,6.2nm,0.6s,mb4.5						
LPG	**La Plagne**	**57.76**	**304**	*e*P	**P**	**17 16 43.7**	**+1.7**
	comp=Z,3.1nm,0.6s,mb4.5						
LPG	**La Plagne**	**57.76**	**304**	*e*P	**P**	**17 16 43.7**	**+1.7**
LPG				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
LPL	**La Plagne**	**57.76**	**304**	*e*P	**P**	**17 16 44.0**	**+2.0**
	comp=Z,8.1nm,0.6s,mb4.6						
LPL	**La Plagne**	**57.76**	**304**	*e*P	**P**	**17 16 44.0**	**+2.0**
	comp=Z,4.1nm,0.6s,mb4.6						
LPL	**La Plagne**	**57.76**	**304**	*e*P	**P**	**17 16 44.0**	**+2.0**
LPL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
MBDF	**Montbardon**	**58.17**	**303**	*e*P	**P**	**17 16 45.6**	**+0.7**
	comp=Z,13nm,0.7s,mb4.8						
MBDF	**Montbardon**	**58.17**	**303**	*e*P	**P**	**17 16 45.6**	**+0.7**
	comp=Z,6.7nm,0.7s,mb4.8						
MBDF	**Montbardon**	**58.17**	**303**	*e*P	**P**	**17 16 45.6**	**+0.7**
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
COLD	**Coldfoot**	**58.37**	**24**	*e*P	**P**	**17 16 45.5**	**-0.5**
	comp=Z,1.4nm,0.8s,mb4.0						
BPAW	**Bear Paw Mtn.**	**60.25**	**27**	*e*P	**P**	**17 16 58.3**	**-0.7**
	comp=Z,1.7nm,0.8s,mb4.1						
ILAR	**Eielson Array**	**61.05**	**25**	P	**P**	**17 17 03.6**	**-0.8**
	comp=Z,1.0nm,0.6s,mb4.1,baz=313,slow=5.5,SNR=14						
ILAR	**Eielson Array**	**61.05**	**25**	P	**P**	**17 17 03.7**	**-0.8**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KEST	**Kesra**	**61.74**	**293**	P	**P**	**17 17 09.9**	**+0.4**
	comp=Z,0.7nm,0.8s,mb3.9,baz=63,slow=18,SNR=2.6						
KMBO	**Kilima Mbogo**	**67.32**	**244**	LR	LR	17 47 40.4	
	comp=Z,64nm,19.6s,MS3.9,baz=91,slow=36						
ESDC	**Sonseca Array**	**67.56**	**304**	P	**P**	**17 17 48.0**	**+0.5**
	comp=Z,0.2nm,0.4s,mb3.5,baz=48,slow=7.9,SNR=4.8						
YKA	**Yellowknife Ar**	**70.61**	**13**	P	**P**	**17 18 04.1**	**-1.9**
	comp=Z,0.8nm,0.7s,mb3.8,baz=343,slow=6.1,SNR=3.0						
ASAR	**Alice Springs**	**77.85**	**142**	P	**P**	**17 18 48.0**	**-0.7**
	comp=Z,1.1nm,1.0s,mb3.8,baz=334,slow=5.1,SNR=9.8						
ASAR	**Alice Springs**	**77.85**	**142**	P	**P**	**17 18 48.0**	**-0.7**
ASAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
FFC	**Flin Flon**	**79.85**	**9**	*e*P	**P**	**17 19 00.8**	**+1.4**
	comp=Z,1.7nm,0.6s,mb4.2						
FFC	**Flin Flon**	**79.85**	**9**	*i* P	**P**	**17 19 02.2**	**+2.8**
TORD	**Torodi Ar. Bea**	**81.75**	**280**	P	**P**	**17 19 09.3**	**-0.8**
	comp=Z,0.5nm,0.4s,mb3.8,baz=52,slow=4.7,SNR=5.9						
TORD				LR	LR	18 01 04.7	
	comp=Z,36nm,18.9s,MS3.8,baz=100,slow=40						
ULM	**Lac du Bonnet**	**84.83**	**6**	LR	LR	17 56 25.9	
	comp=Z,39nm,18.5s,MS3.8,baz=359,slow=35						
NVAR	**Mina Array Bea**	**92.30**	**24**	P	**P**	**17 20 01.9**	**+0.5**
	comp=Z,0.4nm,0.6s,mb3.9,baz=319,slow=3.6,SNR=4.5						
LPAZ	**La Paz**	**147.27**	**325**	PKPbc	PKPbc	17 26 33.9	-1.0
	comp=Z,1.1nm,1.0s,baz=297,slow=3.4,SNR=3.6						
LPAZ	**La Paz**	**147.27**	**325**	PKP2	PKPbc	17 26 33.9	-1.0
LPAZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
CPUP	**Villa Florida**	**149.78**	**298**	PKPbc	PKPbc	17 26 38.9	-2.4
	comp=Z,0.6nm,0.4s,baz=3.8,slow=9.9,SNR=3.1						
CPUP	**Villa Florida**	**149.78**	**298**	PKHKP	PKPbc	17 26 38.9	-2.3
CPUP				pmax	pmax		
	comp=Z,1.0nm,0.4s						

RSPR 05 17:23:28.9, 18°.17N×64°.03W, h47km±4km**, 3C-2D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.61**	**294**	⇓*e*P		Pn	17 23 40.1	-1.3
TBVI				*e*S		Sn	17 23 49.3	-0.9
TBVI	**Tortola**	**0.61**	**294**	⇓*e*P		Pn	17 23 40.6	-0.7
TBVI				*e*S		Sn	17 23 49.3	-0.9
STVI	**Saint Thomas**	**0.90**	**282**	⇑*i*P		Pn	17 23 44.2	-1.0
STVI	**Saint Thomas**	**0.90**	**282**	⇑*i*P		Pn	17 23 44.2	-1.0
STVI				*e*S		Sn	17 23 56.6	-0.4
SMRT	**St. Maarten**	**0.92**	**97**	*e*S		Sn	17 23 56.8	-0.6
SMRT	**St. Maarten**	**0.92**	**97**	*e*S		Sn	17 23 56.8	-0.6
SABA	**Saba**	**0.93**	**126**	*e*S		Sn	17 23 56.6	-1.1
SABA	**Saba**	**0.93**	**126**	*e*S		Sn	17 23 56.6	-1.1
CBYP	**Canovanas**	**1.74**	**274**	⇑*e*P		Pn	17 23 59.2	+2.6
CBYP	**Canovanas**	**1.74**	**274**	⇑*e*P		Pn	17 23 59.2	+2.6

*ISCJB **05** 17:44:09.0±1.0, 13°.12N±0°.10×144°.0E±0°.2, h143*km±14*km, mb3.6/11, Error ellipse: s-maj=38.5km s-min=16.3km az=176.7*
*NEIC **05** 17:44:10.1±1.0, 13°.11N×143°.99E, h135*km±12*km, mb4.3/2, Error ellipse: s-maj=25.6km s-min=11.2km az=88.0*
*IDC **05** 17:44:10.0±1.0, 13°.11N×144°.03E, h135*km±14*km, mb3.2/9, mb1 3.3/9, mb1mx3.3/21, mbtmp3.2/9, Error ellipse: s-maj=36.1km s-min=18.4km az=83.0*
ISC 05 17:44:10.2±1.1, 13°.10N±0°.10×144°.0E±0°.2, h135km±15km**, n12, σ0946/13, mb3.6/11, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.97**	**60**	P		**Pn**	**17 44 33.3**	**0.0**
	19nm,0.3s,baz=195,slow=8.3,SNR=39							
GUMO				S		**Sn**	**17 44 50.8**	**0.0**
	125nm,0.3s,baz=13,slow=19,SNR=40							
KSRS	**Korea Array**	**28.18**	**332**	P		**P**	**17 49 50.3**	**+0.4**
	0.3nm,0.3s,mb3.5,baz=150,slow=9.8,SNR=4.3							
WRAB	**Tennant Creek**	**34.18**	**196**	*e*P		**P**	**17 50 43.2**	**+0.5**
	3.8nm,0.7s,mb4.2							
ASAR	**Alice Springs**	**37.86**	**195**	P		**P**	**17 51 13.7**	**-0.3**
	0.8nm,0.4s,mb3.7,baz=16,slow=13,SNR=4.1							
CMAR	**Chiang Mai Arr**	**43.60**	**283**	P		**P**	**17 52 01.5**	**+0.2**
	0.5nm,0.5s,mb3.4,baz=78,slow=6.6,SNR=7.2							
STKA	**Stephens Creek**	**44.78**	**183**	P		**P**	**17 52 10.1**	**-0.3**
	4.1nm,1.2s,mb3.9,baz=357,slow=8.2,SNR=3.5							
SONM	**Songino Array**	**46.65**	**326**	P		**P**	**17 52 23.6**	**-1.3**
	0.6nm,0.6s,mb3.4,baz=90,slow=4.3,SNR=3.1							
YAK	**Yakutsk**	**49.93**	**351**	*e*P		**P**	**17 52 50.0**	**+0.2**
	4.4nm,0.6s,mb4.3							
MKAR	**Makanchi Array**	**61.26**	**316**	P		**P**	**17 54 11.6**	**+0.5**
	0.5nm,0.6s,mb3.5,baz=90,slow=8.5,SNR=6.9							
ZALV	**Zalesovo Beam**	**61.53**	**325**	P		**P**	**17 54 12.4**	**-0.3**
	0.2nm,0.3s,mb3.4,baz=132,slow=2.1,SNR=2.9							
ILAR	**Eielson Array**	**69.36**	**25**	P		**P**	**17 55 03.0**	**+0.1**
	0.1nm,0.4s,mb2.9,baz=238,slow=8.2,SNR=2.6							
BVAR	**Borovoye Array**	**69.78**	**322**	P		**P**	**17 55 05.9**	**+0.2**
	0.6nm,0.5s,mb3.6,baz=116,slow=6.8,SNR=4.7							

*IDC **05** 17:14:14.4±1.1, 4°.97S×151°.62E, h0*km*, mb4.1/8, mb1 4.2/9, mb1mx4.0/16, mbtmp4.0/9, ML3.3/1, MS3.1/3, Ms1 3.1/3, ms1mx2.7/17, Error ellipse: s-maj=46.2km s-min=21.0km az=116.0*

*ISCJB **05** 17:17:23.5±3.5, 5°.2S±0°.1×151°.6E±0°.2, h84*km±30*km, mb3.9/11, Error ellipse: s-maj=26.7km s-min=21.0km az=4.3*
*NEIC **05** 17:17:24.8±2.1, 5°.18S×151°.59E, h83*km±19*km, mb3.9/2, Error ellipse: s-maj=20.5km s-min=14.0km az=107.0*
ISC 05 18:17:24.8±3.0, 5°.2S±0°.1×151°.6E±0°.2, h82km±26km**, n25, σ0857/21, mb3.9/11, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.09**	**227**	*e*Pn		**Pn**	**18 18 52.2**	**0.0**
HNR	**Honiara**	**9.25**	**117**	LR		LR	18 22 09.1	
	comp=Z,79nm,18.5s,baz=71,slow=31							
MTSU	**Mount Surprise**	**14.70**	**209**	*e*P		**Pn**	**18 20 53.6**	**+5.1**
	18nm,0.7s							
CTA	**Charters Tower**	**15.69**	**199**	*e*P		**Pn**	**18 21 02.0**	**+1.0**
	2.2nm,0.9s							
CTA	**Charters Tower**	**15.69**	**199**	Pn		**Pn**	**18 21 01.3**	**+0.3**
	0.1nm,0.3s,baz=56,slow=11,SNR=5.1							
CTAO	**Charters Tower**	**15.69**	**199**	*e*Pn		**Pn**	**18 21 01.8**	**+0.8**
	4.0nm,0.9s							
KAKA	**Kakadu**	**20.36**	**247**	*e*P		**P**	**18 21 55.1**	**+0.2**
	11nm,0.6s							
RMQ	**Roma**	**21.33**	**187**	*e*P		**P**	**18 22 04.6**	**-0.6**
	3.9nm,0.7s,mb3.9							
WRAB	**Tennant Creek**	**22.30**	**227**	*e*P		**P**	**18 22 15.0**	**-0.5**
	6.2nm,0.6s,mb4.1							
WRAB				*e*			18 22 25.6	
WB2	**Warramunga Arr**	**22.30**	**227**	*e*P		**P**	**18 22 15.0**	**-0.6**
QLP	**Quilpie**	**22.40**	**198**	*e*P		**P**	**18 22 16.1**	**-0.4**
KNA	**Kununurra**	**24.78**	**243**	*e*P		**P**	**18 22 39.2**	**+0.1**
	16nm,0.9s,mb4.4							
ASAR	**Alice Springs**	**25.07**	**221**	P		**P**	**18 22 41.8**	**+0.1**
	6.8nm,0.8s,mb4.1,baz=56,slow=9.6,SNR=58							
ASAR				ScP		ScP	18 29 59.2	+13
	0.4nm,0.8s,baz=46,slow=3.6,SNR=4.1							
STKA	**Stephens Creek**	**28.15**	**198**	P		**P**	**18 23 10.1**	**+0.8**
	2.0nm,0.9s,mb3.7,baz=21,slow=14,SNR=2.5							
FITZ	**Fitzroy Crossi**	**28.45**	**241**	*e*P		**P**	**18 23 12.2**	**+0.1**
	6.9nm,0.6s,mb4.4							
FITZ	**Fitzroy Crossi**	**28.45**	**241**	P		**P**	**18 23 12.0**	**-0.1**
	2.6nm,0.5s,mb4.0,baz=59,slow=9.9,SNR=14							
MJAR	**Matsushiro Arr**	**43.40**	**344**	LR		LR	18 41 54.4	
	comp=Z,21nm,20.7s,baz=205,slow=34							
SONM	**Songino Array**	**66.06**	**328**	LR		LR	18 56 19.8	
	comp=Z,24nm,18.4s,baz=17,slow=36							
MK31	**Makanchi Array**	**79.88**	**319**	*e*P		**P**	**18 29 25.5**	**+1.0**
MKAR	**Makanchi Array**	**79.88**	**319**	P		**P**	**18 29 24.9**	**+0.4**
	0.7nm,0.9s,mb3.5,baz=92,slow=6.1,SNR=5.4							
ZALV	**Zalesovo Beam**	**80.85**	**327**	P		**P**	**18 29 29.4**	**-0.1**
	0.6nm,0.8s,mb3.6,baz=96,slow=4.3,SNR=3.7							
ILAR	**Eielson Array**	**82.98**	**22**	P		**P**	**18 29 39.5**	**-1.0**
	0.3nm,0.6s,mb3.3,baz=247,slow=5.6,SNR=6.5							
BVAR	**Borovoye Array**	**88.88**	**323**	P		**P**	**18 30 08.9**	**-0.9**
	0.9nm,0.8s,mb3.8,baz=108,slow=4.8,SNR=4.3							
NVAR	**Mina Array Bea**	**93.25**	**52**	P		**P**	**18 30 31.1**	**+0.6**
	0.9nm,0.8s,mb4.2,baz=261,slow=7.2,SNR=5.1							
TORD	**Torodi Ar. Bea**	**149.33**	**287**	PKPbc		PKPbc	18 37 05.1	-0.1
	3.6nm,0.9s,baz=68,slow=2.7,SNR=18							

IDC 05 18:18:35.0±3.1, 2°.35S×100°.23E, h0km**, mb3.4/4, mb1 3.6/4, mb1mx3.4/19, mbtmp3.4/4, Error ellipse: s-maj=132.0km s-min=26.2km az=61.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.72**	**357**	P		P	18 23 16.7	-0.4
	0.5nm,0.6s,baz=185,slow=9.6,SNR=3.4							
ASAR	**Alice Springs**	**38.86**	**126**	P		P	18 26 02.5	+0.2
	0.5nm,0.7s,baz=301,slow=8.4,SNR=7.1							
SONM	**Songino Array**	**50.27**	**5**	P		P	18 27 33.5	+0.4
	0.4nm,0.3s,baz=199,slow=8.5,SNR=2.4							
MKAR	**Makanchi Array**	**51.43**	**344**	P		P	18 27 42.0	+0.2
	0.2nm,0.3s,baz=159,slow=9.0,SNR=8.4							
TXAR	**Lajitas Array**	**144.84**	**38**	PKP		PKPdf	18 38 13.3	-1.4
	0.4nm,0.6s,baz=285,slow=1.8,SNR=6.7							

*ISCJB **05** 18:28:17.7±1.4, 17°.78N±0°.07×65°.66W±0°.03, h8*km±7*km, Error ellipse: s-maj=12.2km s-min=4.5km az=171.4*
*RSPR **05** 18:28:19.2, 17°.86N×65°.70W, h3*km±1*km, MD3.0/13*
*NEIC **05** 18:28:19.2, 17°.86N×65°.70W, h3*km*, MD3.0(RSPR), After RSPR.*
ISC 05 18:28:17.3±1.1, 17°.75N±0°.06×65°.66W±0°.03, h4km±12km**, n29, σ0986/49, 12C-14D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MTP	**Monte Pirata**	**0.36**	**16**	⇓*e*P		**Pg**	**18 28 25.2**	**+0.9**
MTP				*e*S		**Sg**	**18 28 29.6**	**+0.6**
MTP	**Monte Pirata**	**0.36**	**16**	⇓*e*P		**Pg**	**18 28 25.2**	**+0.9**
MTP				*e*S		**Sg**	**18 28 29.6**	**+0.6**
HUMP	**Col San Antoni**	**0.44**	**335**	⇑*i*P		**Pg**	**18 28 25.9**	**+0.2**
HUMP				*e*S		**Sg**	**18 28 31.1**	**-0.2**
HUMP	**Col San Antoni**	**0.44**	**335**	⇑*i*P		**Pg**	**18 28 25.9**	**+0.2**
HUMP				*e*S		**Sg**	**18 28 31.1**	**-0.2**
CBYP	**Canovanas**	**0.56**	**340**	⇑*e*P		**Pg**	**18 28 28.5**	**+0.5**
CBYP				*e*S		**Sg**	**18 28 35.7**	**+0.4**
CBYP	**Canovanas**	**0.56**	**340**	⇑*e*P		**Pg**	**18 28 28.5**	**+0.5**
CBYP				*e*S		**Sg**	**18 28 35.7**	**+0.4**
SJG	**San Juan**	**0.60**	**308**	⇑*i*P		**Pg**	**18 28 28.5**	**-0.2**
SJG	**San Juan**	**0.60**	**308**	⇑*i*P		**Pg**	**18 28 28.5**	**-0.3**
SJG	**San Juan**	**0.60**	**308**	⇑*i*P		**Pg**	**18 28 28.5**	**-0.3**
SJG				*e*S		**Sg**	**18 28 36.1**	**-0.3**
SJG	**San Juan**	**0.60**	**308**	⇑*i*P		**Pg**	**18 28 28.5**	**-0.3**
SJG	**San Juan**	**0.60**	**308**	⇑*i*P		**Pg**	**18 28 28.5**	**-0.2**
SJG				*e*S		**Sg**	**18 28 36.1**	**-0.3**
ICM	**Isla Caja Muer**	**0.84**	**280**	⇓*i*P		**Pg**	**18 28 34.1**	**+0.7**
ICM				*e*S		**Sg**	**18 28 45.4**	**+1.2**
ICM	**Isla Caja Muer**	**0.84**	**280**	⇓*i*P		**Pg**	**18 28 34.6**	**+1.3**
ICM				*e*S		**Sg**	**18 28 45.4**	**+1.2**
STVI	**Saint Thomas**	**0.90**	**48**	⇓*e*P		**Pg**	**18 28 34.5**	**0.0**
STVI				*e*S		**Sg**	**18 28 46.4**	**+0.2**
STVI	**Saint Thomas**	**0.90**	**48**	⇓*e*P		**Pg**	**18 28 34.5**	**0.0**
STVI				*e*S		**Sg**	**18 28 46.4**	**+0.2**
CELP	**Cerrillos**	**0.94**	**291**	⇑*i*P		**Pg**	**18 28 35.1**	**-0.2**
CELP				*e*S		**Sg**	**18 28 49.7**	**+2.2**
CELP	**Cerrillos**	**0.94**	**291**	⇑*i*P		**Pg**	**18 28 35.1**	**-0.2**
OBIP	**Obispado Ponce**	**0.95**	**288**	⇓*e*P		**Pg**	**18 28 35.6**	**0.0**
OBIP	**Obispado Ponce**	**0.95**	**288**	⇓*e*P		**Pg**	**18 28 35.6**	**0.0**
TBVI	**Tortola**	**1.19**	**56**	⇓*i*P		**Pg**	**18 28 39.7**	**-0.5**
TBVI				*e*S		**Sg**	**18 28 54.7**	**-0.9**
TBVI	**Tortola**	**1.19**	**56**	⇓*i*P		**Pg**	**18 28 39.7**	**-0.5**
TBVI				*e*S		**Sg**	**18 28 49.7**	**-6.0**
TBVI				*e*S		**Sg**	**18 28 54.7**	**-0.9**
AOPR	**Arecibo Observ**	**1.20**	**300**	⇓*e*P		**Pg**	**18 28 39.2**	**-1.1**
AOPR				*e*S		**Sg**	**18 28 54.9**	**-1.1**
AOPR	**Arecibo Observ**	**1.20**	**300**	⇓*e*P		**Pg**	**18 28 39.2**	**-1.1**
AOPR				*e*S		**Sg**	**18 28 54.9**	**-1.1**
LRS	**Lares**	**1.25**	**296**	⇓*e*P		**Pg**	**18 28 40.0**	**-1.3**
LRS				*e*S		**Sg**	**18 28 55.9**	**-1.8**
LRS	**Lares**	**1.25**	**296**	⇓*e*P		**Pg**	**18 28 40.2**	**-1.2**
LRS				*e*S		**Sg**	**18 28 55.9**	**-1.8**
CRPR	**Cabo Rojo, PR**	**1.41**	**281**	⇑*e*P		**Pn**	**18 28 44.5**	**+0.8**
CRPR	**Cabo Rojo, PR**	**1.41**	**281**	⇑*e*P		**Pn**	**18 28 44.5**	**+0.8**
AGPR	**Aguadilla, PR**	**1.56**	**298**	⇑*e*P		**Pn**	**18 28 45.4**	**-0.4**
AGPR	**Aguadilla, PR**	**1.56**	**298**	⇑*e*P		**Pn**	**18 28 45.4**	**-0.4**

*CSEM **05** 18:47:00.8±0.3, 39°.55N×23°.88E, h17*km±2*km, ML2.0/5, Error ellipse: s-maj=8.0km s-min=3.8km az=105.0*
*ISCJB **05** 18:47:01.3±0.7, 39°.55N±0°.03×23°.82E±0°.07, h10*km±6*km, Error ellipse: s-maj=9.5km s-min=4.6km az=12.9*
*THE **05** 18:47:01.1, 39°.57N×23°.90E, h7*km±1*km, ML2.0/5, Error ellipse: s-maj=1.3km s-min=0.5km az=120.0*
*ATH **05** 18:47:02.2, 39°.75N×23°.52E, h23*km*, MD3.4/4*
*NEIC **05** 18:47:02.2, 39°.75N×23°.52E, h23*km*, MD3.4(ATH), After ATH.*
ISC 05 18:47:01.0±0.8, 39°.55N±0°.03×23°.89E±0°.07, h19km±5km**, n24, σ0976/40, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.38**	**181**	P		**Pg**	**18 47 08.7**	**-0.2**
AOS				S		**Sg**	**18 47 14.8**	**+0.6**
AOS	**Alonnisos**	**0.38**	**181**	P		**Pg**	**18 47 08.7**	**-0.2**
AOS				S		**Sg**	**18 47 14.8**	**+0.6**
PAIG	**Paliouri**	**0.41**	**337**	P		**Pg**	**18 47 09.0**	**-0.5**
PAIG				S		**Sg**	**18 47 14.4**	**-0.8**
PAIG	**Paliouri**	**0.41**	**337**	P		**Pg**	**18 47 09.0**	**-0.5**
PAIG				S		**Sg**	**18 47 14.4**	**-0.8**
NEO	**Neokhori**	**0.57**	**245**	*e*Pb		**Pb**	**18 47 12.2**	**-0.1**
NEO				*e*Sb		**Sb**	**18 47 19.9**	**-0.2**
NEO	**Neokhori**	**0.57**	**245**	*e*PB		**Pb**	**18 47 12.2**	**-0.1**
NEO				*e*SB		**Sb**	**18 47 19.9**	**-0.2**
NEO	**Neokhori**	**0.57**	**245**	*e*Pb		**Pb**	**18 47 12.2**	**-0.1**
NEO				*e*Sb		**Sb**	**18 47 19.9**	**-0.2**
XOR	**Xorichti**	**0.57**	**251**	P		**Pg**	**18 47 12.0**	**-0.3**
XOR				S		**Sg**	**18 47 20.9**	**+0.9**
XOR	**Xorichti**	**0.57**	**251**	P		**Pg**	**18 47 12.0**	**-0.3**
XOR				S		**Sg**	**18 47 20.9**	**+0.9**
OUR	**Ouranopolis**	**0.79**	**5**	P		**Pb**	**18 47 15.8**	**-0.3**
OUR				S		**Sb**	**18 47 26.4**	**0.0**
OUR	**Ouranopolis**	**0.79**	**5**	P		**Pb**	**18 47 15.8**	**-0.3**
OUR				S		**Sb**	**18 47 26.4**	**0.0**
HORT	**Hortiatis**	**1.21**	**330**	P		**Pn**	**18 47 23.4**	**+0.5**
HORT				S		**Sb**	**18 47 40.2**	**+1.7**
HORT	**Hortiatis**	**1.21**	**330**	P		**Pn**	**18 47 23.4**	**+0.5**
HORT				S		**Sb**	**18 47 40.2**	**+1.7**
LIT	**Litokhoron**	**1.21**	**298**	*e*Pn		**Pn**	**18 47 18.6**	**-4.3**
LIT	**Litokhoron**	**1.21**	**298**	*e*PN		**Pn**	**18 47 18.6**	**-4.3**
LIT	**Litokhoron**	**1.21**	**298**	*e*Pn		**Pn**	**18 47 18.6**	**-4.3**
AGG	**Agios Georgios**	**1.32**	**247**	*e*Pn		**Pn**	**18 47 25.3**	**+0.9**
AGG				*e*Sn		**Sn**	**18 47 40.3**	**-1.2**
AGG	**Agios Georgios**	**1.32**	**247**	*e*PN		**Pn**	**18 47 25.3**	**+0.9**
AGG				*e*SN		**Sn**	**18 47 40.3**	**-1.2**
AGG	**Agios Georgios**	**1.32**	**247**	*e*Pn		**Pn**	**18 47 25.3**	**+0.9**
AGG				*e*Sn		**Sn**	**18 47 40.3**	**-1.2**
THL	**Klokotos Trika**	**1.45**	**271**	*e*PN		**Pn**	**18 47 25.2**	**-1.0**
THL	**Klokotos Trika**	**1.45**	**271**	*e*Pn		**Pn**	**18 47 25.2**	**-1.0**
ALN	**Alexandroupoli**	**2.13**	**50**	*e*Pn		**Pn**	**18 47 40.2**	**+4.6**
ALN	**Alexandroupoli**	**2.13**	**50**	*e*PN		**Pn**	**18 47 40.2**	**+4.6**
ALN	**Alexandroupoli**	**2.13**	**50**	*e*Pn		**Pn**	**18 47 40.2**	**+4.6**

GUC 05 19:30:37.6±0.7, 23°.25S×68°.19W, h174km±27km**, ML4.0, 2C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**1.55**	**309**	⇑*i*P		Pn	19 31 16.1	+6.6
PB04				*i* S		Sn	19 31 45.2	+11
PB04				AML		AML	19 31 47.0	
	comp=N,770nm,0.7s							
MACH	**Maria Elena**	**1.79**	**306**	⇓*i*P		Pn	19 31 13.7	+1.7
MACH				*i* S		Sn	19 31 40.7	+2.3
CEN1	**Los Morros**	**1.86**	**265**	⇓*i*P		Pn	19 31 15.2	+2.5
CEN1				*i* S		Sn	19 31 43.6	+3.9
ANCH	**Antofagasta**	**2.09**	**258**	⇑*i*P		Pn	19 31 13.7	-1.5
ANCH				*i* S		Sn	19 31 42.9	-1.3
TOCH	**Tocopilla**	**2.19**	**301**	*i* S		Sn	19 31 47.5	+1.3
TOCH				AML		AML	19 31 48.8	
	comp=N,1μm,0.2s							
PB01	**Plate Boundary**	**2.50**	**331**	⇓*i*P		Pn	19 31 21.1	+1.1
PB01				*i* S		Sn	19 31 54.3	+1.4
PB01				AML		AML	19 31 58.9	
	comp=E,287nm,0.3s							
HMBC	**Humberston**	**3.35**	**332**	⇓*i*P		Pn	19 31 31.1	+0.8
HMBC				*i* S		Sn	19 32 12.5	+1.1

2.8nm,0.3s,baz=148,slow=13,SNR=34
ILAR Lg 19 50 15.5
8.3nm,0.3s,baz=140,slow=27,SNR=6.1
COLA College 4.44 320 Pn **Pn 19 49 18.5 +1.3**
RSO Redoubt South 5.74 263 *e*Pn **Pn 19 49 35.4 +0.3**
DLBC Dease Lake 6.44 115 *e*Pn **Pn 19 49 45.5 +0.8**
DLBC Dease Lake 6.44 115 Pn **Pn 19 49 46.0 +1.2**
1.3nm,0.3s,baz=293,slow=3.8,SNR=8.2
DLBC Pg **Pg 19 50 06.1 -7.1**
2.9nm,0.3s,baz=304,slow=15,SNR=8.9
DLBC Lg 19 51 32.1
3.5nm,0.3s,baz=180,slow=20,SNR=4.3
DLBC LR LR 19 52 30.9
comp=Z,241nm,18.3s,baz=323,slow=40
DLBC Dease Lake 6.44 115 ⇑Pg **Pg 19 50 04.2 -9.0**
DLBC ⇓Sg **Sg 19 51 33.7 -2.9**
KDAK Kodiak Island 6.92 241 *e*Pn **Pn 19 49 50.0 -1.4**
12nm,0.6s
KDAK Kodiak Island 6.92 241 Pn **Pn 19 49 49.6 -1.8**
4.8nm,0.3s,baz=46,slow=9.2,SNR=24
KDAK Sn **Sn 19 51 06.4 -3.7**
0.5nm,0.3s,baz=108,slow=19,SNR=2.8
SVW2 Sparrevohn 6.94 272 *e*P **Pn 19 49 51.3 -0.2**
TTA Tatalina 7.04 287 *e*P **Pn 19 49 54.8 +1.9**
INK Inuvik 7.45 23 *e*Pn **Pn 19 49 59.0 +0.4**
16nm,0.8s
INK Inuvik 7.45 23 Pn **Pn 19 49 57.5 -1.1**
0.3nm,0.3s,baz=229,slow=14,SNR=2.8
INK Sn **Sn 19 51 21.6 -1.5**
3.8nm,0.3s,baz=94,slow=33,SNR=7.3
INK Lg 19 52 03.1
1.1nm,0.3s,baz=308,slow=19,SNR=3.3
INK LR LR 19 53 23.6
comp=Z,43nm,21.0s,baz=306,slow=42
OHAK Old Harbor 7.58 240 *e*P **Pn 19 49 58.6 -1.7**
NDB Naden 8.85 147 ⇓Pn **Pn 19 50 20.5 +2.6**
FNBB Fort Nelson 9.44 99 ⇑Pn **Pn 19 50 26.1 +0.3**
FNBB ⇑Sg Sn 19 53 07.3 +55
BBB Bella Bella 11.83 137 Pn **Pn 19 50 58.8 +0.2**
0.3nm,0.3s,baz=225,slow=4.3,SNR=2.8
BBB LR LR 19 55 22.5
comp=Z,50nm,18.8s,baz=34,slow=36
YKA Yellowknife Ar 12.47 74 Pn **Pn 19 51 06.7 -0.5**
0.3nm,0.3s,baz=270,slow=13,SNR=7.4
YKA Lg 19 54 40.5
0.1nm,0.3s,baz=278,slow=30,SNR=3.4
WALA Waterton Lakes 19.78 117 *e*P **Pn 19 52 40.3 -1.2**
0.2nm,1.1s
RES Resolute Bay 20.83 33 LR LR 20 01 18.1
comp=Z,42nm,18.3s,MS2.9,baz=78,slow=38
CHMT Chamberlain Mo 21.74 120 *e*P **P 19 53 01.5 +0.3**
2.6nm,1.1s,mb3.6
BMO Blue Mountains 21.84 129 P **P 19 53 02.0 -0.4**
5.5nm,1.5s,mb3.8
EGMT Eagleton 22.37 113 *e*P **P 19 53 08.3 +0.4**
8.8nm,0.8s,mb4.2
YBH Yreka Blue Hor 22.82 142 LR LR 20 00 41.9
comp=Z,34nm,21.6s,MS2.7,baz=342,slow=33
NVAR Mina Array Bea 27.20 138 P **P 19 53 55.3 +1.8**
0.1nm,0.4s,mb2.7,baz=330,slow=8.8,SNR=1.9
TXAR Lajitas Array 40.62 125 LR LR 20 14 18.5
comp=Z,38nm,19.7s,MS3.3,baz=5.0,slow=39
ZALV Zalesovo Beam 59.17 330 P **P 19 58 11.3 +0.9**
ZALV Zalesovo Beam 59.17 330 P **P 19 58 11.3 +0.9**
0.2nm,0.3s,mb3.6,baz=23,slow=4.7,SNR=3.0
BVAR Borovoye Array 62.98 339 P **P 19 58 36.5 +0.3**
0.2nm,0.4s,mb3.6,baz=45,slow=4.3,SNR=3.5
MKAR Makanchi Array 66.41 329 P **P 19 59 00.4 +1.7**
0.2nm,0.7s,mb3.3,baz=26,slow=5.6,SNR=3.1
AKASG Malin Array Be 67.77 7 P **P 19 59 07.0 -0.3**
1.3nm,0.6s,mb4.2,baz=351,slow=6.2,SNR=7.9
ESDC Sonseca Array 73.27 33 P **P 19 59 41.0 0.0**
0.1nm,0.3s,mb3.2,baz=334,slow=4.7,SNR=3.0

*ISCJB **05** 20:01:12.6±1.8, 17°.2N±0°.1×94°.16W±0°.06, h148km±18km, Error ellipse: s-maj=18.3km s-min=8.2km az=14.6*
*NEIC **05** 20:01:12.9, 17°.25N×94°.10W, h167km, MD4.0(MEX), After MEX.*
*MEX **05** 20:01:15.3±0.8, 17°.21N×94°.17W, h136km±17km, MD4.0*
ISC 05 20:01:13.0±1.9, 17°.2N±0°.1×94°.14W±0°.06, h149km±18km, n11, σ0s89/22, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TGIG		**1.05**	**112**	*i* P		**Pn**	**20 01 38.4**	**+0.3**
TGIG				*i* S		**Sn**	**20 01 56.1**	**-1.1**
PCIG		**1.71**	**149**	*i* P		**Pn**	**20 01 45.4**	**+0.6**
PCIG				*i* S		**Sn**	**20 02 09.8**	**+0.7**
HUIG	**Huatulco**	**2.35**	**234**	*i* P		**Pn**	**20 01 51.5**	**-0.7**
HUIG				*i* S		**Sn**	**20 02 24.3**	**+1.8**
HUIG	**Huatulco**	**2.35**	**234**	*i* P		**Pn**	**20 01 51.5**	**-0.7**
HUIG				*i* S		**Sn**	**20 02 19.9**	**-2.6**
OXX	**Oaxaca**	**2.47**	**268**	*i* P		**Pn**	**20 01 54.3**	**+0.6**
OXX				*i* S		**Sn**	**20 02 26.7**	**+1.6**
OXX	**Oaxaca**	**2.47**	**268**	*i* P		**Pn**	**20 01 54.3**	**+0.6**
OXX				*i* S		**Sn**	**20 02 25.7**	**+0.6**
VHO	**Vista Hermosa**	**2.48**	**268**	*i* P		**Pn**	**20 01 54.1**	**+0.2**
VHO				*i* S		**Sn**	**20 02 25.9**	**+0.6**
VHO	**Vista Hermosa**	**2.48**	**268**	*i* P		**Pn**	**20 01 54.1**	**+0.2**
VHO				*i* S		**Sn**	**20 02 24.1**	**-1.2**
TPIG	**Tehuac#an**	**3.31**	**292**	*e*P		**Pn**	**20 02 10.4**	**+6.2**
TPIG				*i* S		**Sn**	**20 02 44.1**	**+0.2**
PNIG	**Pinotepa**	**3.90**	**259**	*i* P		**Pn**	**20 02 11.0**	**-1.0**
PNIG				*i* S		**Sn**	**20 02 57.1**	**-0.5**
PNIG	**Pinotepa**	**3.90**	**259**	*i* P		**Pn**	**20 02 11.0**	**-1.0**
PNIG				*i* S		**Sn**	**20 02 57.1**	**-0.5**

*IDC **05** 20:03:20.1±1.5, 13°.44N×88°.02W, h0km, mb3.5/2, mb1 3.9/4, mb1mx3.6/20, mbtmp3.6/4, ML3.4/2, Error ellipse: s-maj=83.8km s-min=16.4km az=48.0*
*ISCJB **05** 20:03:24.2±0.5, 12°.75N±0°.07×88°.68W±0°.06, h69km±10km, mb3.6/2, Error ellipse: s-maj=14.3km s-min=4.3km az=36.2*
*CASC **05** 20:03:25.1±2.0, 12°.73N×88°.67W, h36km±999km, MD3.9, ML3.9*
ISC 05 20:03:25.5±0.5, 12°.77N±0°.06×88°.65W±0°.05, h61km±11km, n35, σ0s97/42, mb3.6/2, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.75**	**29**	*e*P		**Pn**	**20 03 40.1**	**-0.3**
BLLM	**Bellamira**	**0.78**	**31**	*e*P		**Pn**	**20 03 40.4**	**-0.4**
BLLM				*e*S		**Sn**	**20 03 52.6**	**+0.6**
SNVI	**San Vicente**	**0.86**	**348**	*e*P		**Pn**	**20 03 41.3**	**-0.5**
SNVI				*e*S		**Sn**	**20 03 53.5**	**-0.2**
CNCH	**Conchagua**	**0.94**	**58**	*e*P		**Pn**	**20 03 42.7**	**-0.1**
CNCH				*e*S		**Sn**	**20 03 56.9**	**+1.2**
LBRS	**Las Brisas**	**1.03**	**338**	*e*P		**Pn**	**20 03 43.6**	**-0.4**
SNET	**Serv Nac Est T**	**1.07**	**328**	*e*P		**Pn**	**20 03 43.8**	**-0.7**
SNET				*e*S		**Sn**	**20 03 58.4**	**-0.2**
SNET				AML		AML	20 04 01.4	
comp=Z,3μm,0.3s								
CAHU	**Cacaquatique**	**1.08**	**23**	*e*P		**Pn**	**20 03 45.2**	**+0.5**
BOQS	**Boqueron**	**1.14**	**328**	*e*P		**Pn**	**20 03 45.0**	**-0.4**
SBLS	**San Blas**	**1.42**	**318**	*e*P		**Pn**	**20 03 49.0**	**-0.1**
SBLS				*e*P			20 03 49.1	
RTR	**El Retiro**	**1.48**	**319**	*e*P		**Pn**	**20 03 50.0**	**+0.1**
RBDL	**Robledal**	**1.67**	**323**	*e*P		**Pn**	**20 03 52.8**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.85**	**46**	*e*P		**Pn**	**20 03 55.3**	**+0.3**
CNGN	**Cerro Negro**	**1.93**	**98**	*e*P		**Pn**	**20 03 55.0**	**-0.9**
CNGN				*e*S		**Sn**	**20 04 19.5**	**+0.3**
MOMN	**Momotombo**	**2.09**	**100**	*e*P		**Pn**	**20 03 57.8**	**-0.5**
COPN	**Copaltepe**	**2.10**	**106**	*e*P		**Pn**	**20 03 56.6**	**-1.6**
CSAN		**2.25**	**105**	*e*P		**Pn**	**20 03 59.4**	**-1.0**
XAVN	**Gruta Xavier**	**2.35**	**105**	*e*P		**Pn**	**20 04 01.3**	**-0.5**
TISN	**Laguna Tiscapa**	**2.41**	**105**	*e*P		**Pn**	**20 04 01.9**	**-0.7**
MGAN	**Managua**	**2.43**	**105**	*e*P		**Pn**	**20 04 01.8**	**-1.0**
APON	**Apoyo**	**2.67**	**108**	*e*P		**Pn**	**20 04 07.3**	**+1.2**
NY14	**Universidad de**	**3.71**	**124**	*i* P		**Pn**	**20 04 20.5**	**+0.1**
MESS	**Mesas**	**3.94**	**120**	*i* P		**Pn**	**20 04 22.8**	**-0.7**
CUI	**Cuipilapa**	**4.01**	**121**	*i* P		**Pn**	**20 04 23.8**	**-0.7**
JTS	**JuntasAbangare**	**4.38**	**124**	Pn		**Pn**	**20 04 29.2**	**-0.3**
comp=Z,1.5nm,0.3s,baz=301,slow=19,SNR=12								
JTS				Pg		**Pn**	**20 04 37.6**	**+8.0**
comp=Z,29nm,0.3s,baz=316,slow=13,SNR=42								
JTS				Sn		**Sn**	**20 05 16.1**	**-3.3**
comp=Z,2.3nm,0.3s,baz=302,slow=20,SNR=2.6								
JTS				Lg			20 05 38.6	
comp=Z,7.8nm,0.3s,baz=142,slow=23,SNR=15								
JCR	**Jicaral**	**4.53**	**130**	*e*P		**Pn**	**20 04 31.4**	**-0.1**
CGA2	**Cerro Gallo 2**	**4.93**	**123**	*e*P		**Pn**	**20 04 39.0**	**+1.9**
PRS1	**Puriscal**	**5.08**	**123**	*e*P		**Pn**	**20 04 40.8**	**+1.7**
LAJ	**Bijagual**	**5.30**	**123**	*e*P		**Pn**	**20 04 38.9**	**-3.2**
QCR	**Quepos**	**5.52**	**127**	*e*P		**Pn**	**20 04 46.0**	**+0.9**
URSC	**Urasca**	**5.60**	**121**	*e*P		**Pn**	**20 04 49.1**	**+2.9**
BUS	**Buena Vista**	**5.77**	**123**	*e*P		**Pn**	**20 04 50.5**	**+1.9**
CMIG	**Matias Romero**	**7.40**	**306**	Pn		**Pn**	**20 05 12.8**	**+1.9**
comp=Z,0.7nm,0.3s,baz=137,slow=11,SNR=5.0								
CMIG				Sn		**Sn**	**20 06 33.3**	**0.0**
comp=Z,0.2nm,0.3s,baz=99,slow=6.8,SNR=2.6								
TXAR	**Lajitas Array**	**21.59**	**322**	P		**P**	**20 08 10.4**	**+0.1**
comp=Z,1.1nm,0.8s,mb3.3,baz=141,slow=11,SNR=8.9								
YKA	**Yellowknife Ar**	**53.00**	**345**	P		**P**	**20 12 35.3**	**-0.5**
comp=Z,0.5nm,0.3s,mb4.0,baz=153,slow=7.1,SNR=14								
CMAR	**Chiang Mai Arr**	**148.08**	**346**	PKPbc		PKPbc	20 23 04.8	-0.5
comp=Z,0.7nm,0.7s,baz=341,slow=4.3,SNR=4.8								

*ISCJB **05** 20:14:19.3±0.6, 32°.95N±0°.04×105°.45E±0°.06, h10km, mb3.6/4, Error ellipse: s-maj=7.4km s-min=5.9km az=10.3*
*IDC **05** 20:14:19.4±1.1, 32°.73N×105°.45E, h0km, mb3.6/4, mb1 3.6/6, mb1mx3.4/22, mbtmp3.5/6, ML3.3/2, Error ellipse: s-maj=40.8km s-min=23.3km az=52.0*
*BJI **05** 20:14:20.5, 32°.76N×105°.58E, h12km, ML3.2/10*
ISC 05 20:14:20.9±0.6, 32°.91N±0°.04×105°.49E±0°.06, h10km, n9, σ1s16/18, mb3.6/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.48**	**217**	Pn		**Pn**	**20 15 01.9**	**+0.5**
CD2				Pg		**Pg**	**20 15 03.8**	**-4.7**
CD2				Sn		**Sn**	**20 15 31.8**	**0.0**
CD2				Sg		**Sg**	**20 15 35.5**	**-5.2**
CD2				smax				
comp=N,760nm,0.6s								
CD2				smax				
comp=E,490nm,0.6s								
XAN	**Xi'an**	**3.08**	**68**	Pn		**Pn**	**20 15 10.9**	**+1.3**
XAN				Pg		**Pg**	**20 15 16.8**	**-3.1**
XAN				Sn		**Sn**	**20 15 46.4**	**-0.1**
XAN				Sg		**Sg**	**20 15 55.1**	**-4.7**
XAN				smax				
comp=N,110nm,0.4s								
XAN				smax				
comp=E,44nm,0.6s								
LZH	**Lanzhou**	**3.45**	**337**	Pn		**Pn**	**20 15 18.5**	**+3.8**
LZH				Pg		**Pg**	**20 15 26.3**	**-0.7**
LZH				Sn		**Sn**	**20 15 55.4**	**-0.1**
LZH				Sg		**Sg**	**20 16 10.7**	**-0.9**
LZH				smax				
comp=N,400nm,1.6s								
LZH				smax				
comp=E,140nm,0.6s								
CMAR	**Chiang Mai Arr**	**15.55**	**204**	Pn		**Pn**	**20 17 58.4**	**-1.9**
comp=E,0.0nm,0.3s,baz=4.7,slow=12,SNR=3.3								
KSRS	**Korea Array**	**18.88**	**70**	P		**Pn**	**20 18 42.5**	**+0.7**
comp=E,0.1nm,0.3s,baz=252,slow=9.5,SNR=5.9								
MKAR	**Makanchi Array**	**22.46**	**315**	P		**P**	**20 19 22.4**	**+2.4**
comp=E,0.4nm,0.5s,mb3.1,baz=120,slow=11,SNR=6.2								
FINES	**FINESS Array B**	**56.73**	**326**	P		**P**	**20 24 05.7**	**+1.1**
comp=E,0.9nm,0.5s,mb4.1,baz=93,slow=7.6,SNR=6.6								
ASAR	**Alice Springs**	**62.45**	**151**	P		**P**	**20 24 43.5**	**-0.9**
comp=E,0.4nm,0.8s,mb3.6,baz=334,slow=6.8,SNR=7.3								
NOA	**NORSAR Array B**	**63.78**	**327**	P		**P**	**20 24 52.9**	**+0.2**
comp=E,0.6nm,0.7s,mb3.7,baz=74,slow=4.7,SNR=2.8								

WEL 05 20:16:32.2±0.8, 38°.22S×176°.16E, h165km±5km, ML3.5/17, 1D, Error ellipse: s-maj=8.7km s-min=4.4km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.75**	**94**	⇓PN		Pn	20 16 56.3	-0.3
URZ				SN		Sn	20 17 15.6	+0.3
BKZ	**Black Stump Fm**	**0.98**	**165**	PN		Pn	20 16 58.1	-0.2
BKZ				SN		Sn	20 17 17.9	-0.5
RAHZ	**Arahi**	**1.01**	**134**	PN		Pn	20 16 59.0	+0.6
NMHZ	**Naumai**	**1.02**	**150**	PN		Pn	20 16 59.4	+0.9
MWZ	**Matawai**	**1.08**	**97**	PN		Pn	20 16 59.1	0.0
KNZ	**Kokohu**	**1.43**	**125**	PN		Pn	20 17 02.3	+0.1
CKHZ	**Cape Kidnapper**	**1.61**	**154**	PN		Pn	20 17 03.9	-0.1
CKHZ				SN		Sn	20 17 27.8	-0.8
MHGZ	**Mahia Peninsul**	**1.66**	**125**	PN		Pn	20 17 04.7	+0.3
PUZ	**Puketiti**	**1.66**	**86**	PN		Pn	20 17 04.1	-0.5
KAHZ	**Kahuranaki**	**1.67**	**161**	PN		Pn	20 17 04.4	-0.3
MXZ	**Matakaoa Point**	**1.82**	**70**	PN		Pn	20 17 06.1	-0.2
TSZ	**Takapari Road**	**1.85**	**185**	PN		Pn	20 17 05.2	-1.3
TSZ				SN		Sn	20 17 30.3	-2.8
WPHZ	**Waipukurau**	**1.86**	**173**	SN		Sn	20 17 31.3	-2.1
DVHZ	**Dannevirke**	**2.08**	**180**	PN		Pn	20 17 07.4	-1.8
BFZ	**Birch Farm**	**2.46**	**179**	*e*PN		Pn	20 17 11.3	-2.3
BFZ				SN		Sn	20 17 41.6	-4.1
MRZ	**Mangatainoka R**	**2.48**	**190**	PN		Pn	20 17 11.2	-2.6
MRZ				SN		Sn	20 17 41.7	-4.5
TIWZ	**Tintock**	**2.57**	**185**	PN		Pn	20 17 12.4	-2.4
OGWZ	**Otaki Gorge**	**2.71**	**196**	PN		Pn	20 17 13.9	-2.7
HOWZ	**Holdsworth Sta**	**2.73**	**190**	PN		Pn	20 17 13.7	-3.0
KIW	**Kapiti Island**	**2.81**	**200**	PN		Pn	20 17 14.6	-3.2
TMWZ	**Te Maipa**	**2.90**	**184**	SN		Sn	20 17 50.3	-4.8
MTW	**Mount Morrison**	**2.98**	**190**	PN		Pn	20 17 16.4	-3.5
CAW	**Cannon Point**	**3.01**	**196**	PN		Pn	20 17 17.0	-3.3
PAWZ	**Paruwai Farm**	**3.21**	**190**	SN		Sn	20 17 56.2	-5.9
MSWZ	**Moikau Station**	**3.27**	**192**	PN		Pn	20 17 19.7	-3.8
SNZO	**South Karori**	**3.29**	**200**	PN		Pn	20 17 19.7	-4.0
TCW	**Tory Channel**	**3.33**	**205**	PN		Pn	20 17 20.4	-3.9
PLWZ	**Palliser**	**3.42**	**191**	PN		Pn	20 17 21.5	-3.9
TUWZ	**Tuamarina**	**3.64**	**207**	PN		Pn	20 17 24.1	-4.0
QRZ	**Quartz Range**	**3.83**	**226**	PN		Pn	20 17 25.6	-5.1
THZ	**Tophouse**	**4.34**	**214**	PN		Pn	20 17 32.5	-4.7
THZ				SN		Sn	20 18 21.5	-6.4
KHZ	**Kahutara**	**4.65**	**205**	PN		Pn	20 17 36.7	-4.5
LTZ	**Lake Taylor**	**5.44**	**212**	PN		Pn	20 17 46.3	-5.3
LTZ				SN		Sn	20 18 44.6	-9.2
MQZ	**McQueen's Vall**	**6.09**	**205**	SN		Sn	20 18 58.3	-11

IDC 05 20:27:11.8±2.2, 0°.51N×97°.16E, h0km, mb3.6/4, mb1 3.6/6, mb1mx3.4/21, mbtmp3.5/6, ML3.2/2, Error ellipse: s-maj=51.9km s-min=30.3km az=63.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.88**	**38**	Pn		Pn	20 27 57.6	-1.3
0.8nm,0.3s,baz=196,slow=15,SNR=3.2								
CMAR	**Chiang Mai Arr**	**17.92**	**6**	P		Pn	20 31 22.7	+0.1
0.1nm,0.3s,baz=198,slow=11,SNR=6.6								
ASAR	**Alice Springs**	**43.02**	**126**	P		P	20 35 13.4	+0.1
0.2nm,0.7s,baz=309,slow=8.1,SNR=3.1								
KSRS	**Korea Array**	**46.44**	**34**	P		P	20 35 40.4	0.0
0.6nm,0.4s,baz=218,slow=8.3,SNR=6.3								
MKAR	**Makanchi Array**	**47.90**	**346**	P		P	20 35 52.6	+1.0
0.9nm,0.7s,baz=159,slow=8.0,SNR=8.7								
ZALV	**Zalesovo Beam**	**54.23**	**351**	P		P	20 36 37.6	-1.6
0.3nm,0.3s,baz=152,slow=6.7,SNR=4.1								

*ISCJB **05** 20:36:59.0±1.5, 9°.8S±0°.1×160°.5E±0°.2, h178km±6km, mb4.0/11, Error ellipse: s-maj=41.4km s-min=15.5km az=24.7*
*NEIC **05** 20:36:59.7±1.3, 9°.80S×160°.54E, h169km±8km, mb4.2/7, Error ellipse: s-maj=30.3km s-min=10.7km az=115.0*
*IDC **05** 20:36:59.3±2.2, 9°.91S×160°.65E, h170km±7km, mb3.5/6, mb1 3.6/7, mb1mx3.4/17, mbtmp3.5/7, Error ellipse: s-maj=48.4km s-min=18.7km az=118.0*
ISC 05 20:37:00.1±1.6, 9°.8S±0°.1×160°.5E±0°.2, h173km±7km, n18, σ0s64/20, mb4.0/11, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.70**	**304**	P		**Pn**	**20 37 24.2**	**-0.9**
HNR				*e*Sn		**Sn**	**20 37 44.8**	**+0.6**
HNR	**Honiara**	**0.70**	**304**	P		**Pn**	**20 37 24.2**	**-0.9**
76nm,0.3s,baz=174,slow=4.1,SNR=20								
HNR				S		**Sn**	**20 37 45.0**	**+0.8**
160nm,0.3s,baz=202,slow=18,SNR=26								
CTA	**Charters Tower**	**17.15**	**232**	P		**Pn**	**20 40 50.4**	**+0.7**
0.2nm,0.3s,baz=47,slow=14,SNR=3.8								
CTAO	**Charters Tower**	**17.15**	**232**	*e*P		**Pn**	**20 40 42.9**	**-6.7**
3.2nm,0.5s								
WRAB	**Tennant Creek**	**27.19**	**245**	*e*P		**P**	**20 42 27.6**	**-0.3**
6.8nm,0.9s,mb4.3								
WB2	**Warramunga Arr**	**27.20**	**245**	*e*P		**P**	**20 42 28.0**	**+0.1**
STKA	**Stephens Creek**	**28.10**	**216**	*e*P		**P**	**20 42 34.8**	**-1.0**
0.8nm,1.0s,mb3.4								
STKA	**Stephens Creek**	**28.10**	**216**	P		**P**	**20 42 36.0**	**+0.2**
1.3nm,0.7s,mb3.8,baz=51,slow=13,SNR=3.0								
ASAR	**Alice Springs**	**28.91**	**238**	P		**P**	**20 42 42.2**	**-0.8**
0.8nm,0.5s,mb3.7,baz=65,slow=9.9,SNR=12								
ASAR				pP			20 43 20.7	+1.8
0.4nm,0.7s,baz=76,slow=12,SNR=3.5								
FITZ	**Fitzroy Crossi**	**34.80**	**252**	P		**P**	**20 43 34.6**	**+0.1**
2.6nm,0.5s,mb4.2,baz=64,slow=10,SNR=19								
MBWA	**Marble Bar**	**40.79**	**249**	*e*P		**P**	**20 44 24.9**	**+0.2**
MJAR	**Matsushiro Arr**	**50.67**	**337**	P		**P**	**20 45 42.0**	**+0.1**
0.6nm,0.5s,mb3.5,baz=162,slow=8.4,SNR=4.6								
MAJO	**Matsushiro**	**50.68**	**337**	*e*P		**P**	**20 45 40.7**	**-1.2**
4.2nm,0.6s,mb4.2								
CASY	**Casey**	**65.72**	**200**	P		**P**	**20 47 26.4**	**+0.6**
25nm,1.5s,mb4.8								
ULN	**Ulaanbaatar**	**74.36**	**326**	*e*P		**P**	**20 48 19.7**	**+1.1**
1.5nm,0.6s,mb3.9								
SONM	**Songino Array**	**74.71**	**326**	P		**P**	**20 48 21.3**	**+0.6**
2.4nm,0.7s,mb3.9,baz=116,slow=6.6,SNR=6.8								
YAK	**Yakutsk**	**75.56**	**346**	P		**P**	**20 48 24.7**	**-0.5**
10nm,0.8s,mb4.5								
ILAR	**Eielson Array**	**84.05**	**20**	P		**P**	**20 49 11.2**	**+0.3**
0.2nm,0.5s,mb3.1,baz=239,slow=5.5,SNR=4.1								

IDC 05 20:41:13.5±1.2, 83°.53N×112°.29E, h0km, mb3.5/5, mb1 3.8/5, mb1mx3.4/24, mbtmp3.5/5, MS2.9/2, Ms1 2.9/2, ms1mx2.0/25, Error ellipse: s-maj=38.2km s-min=23.0km az=132.0, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARCES	**ARCESS Array B**	**21.20**	**284**	P		P	20 46 00.2	+0.1
2.5nm,1.0s,baz=19,slow=12,SNR=4.6								
ILAR	**Eielson Array**	**27.31**	**67**	P		P	20 46 59.2	+0.1
0.4nm,1.0s,baz=346,slow=11,SNR=4.6								
ILAR				LR		LR	20 58 15.4	
comp=Z,26nm,19.1s,baz=217,slow=37								
ZALV	**Zalesovo Beam**	**30.58**	**212**	LR		LR	21 00 47.5	
comp=Z,16nm,18.0s,baz=34,slow=38								
SONM	**Songino Array**	**35.88**	**187**	P		P	20 48 14.7	+0.2
0.3nm,0.3s,baz=15,slow=6.0,SNR=2.0								
MKAR	**Makanchi Array**	**37.87**	**214**	P		P	20 48 31.4	-0.1
0.5nm,0.8s,baz=4.3,slow=7.0,SNR=6.3								
TXAR	**Lajitas Array**	**66.17**	**34**	P		P	20 52 02.5	+0.1
0.7nm,0.8s,baz=352,slow=4.6,SNR=4.9								

*ISCJB **05** 21:16:14.8±0.5, 58°.17S±0°.08×21°.9W±0°.2, h10km, mb4.4/11, MS3.7/5, Error ellipse: s-maj=12.4km s-min=11.3km az=31.0*
*IDC **05** 21:16:14.9±0.9, 58°.19S×21°.81W, h0km, mb4.2/6, mb1 4.3/6, mb1mx4.1/14, mbtmp4.2/6, MS3.7/5, Ms1 3.7/5, ms1mx3.3/27, Error ellipse: s-maj=27.3km s-min=23.6km az=9.0*
*NEIC **05** 21:16:20.2±0.4, 58°.18S×21°.84W, h35km, mb4.7/5, Error ellipse: s-maj=11.2km s-min=9.4km az=123.0*
ISC 05 21:16:16.7±0.5, 58°.19S±0°.08×21°.8W±0°.2, h10km, n28, σ0s71/23, mb4.4/11, MS3.7/5, East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.75**	**161**	*e*		**Pn**	**21 19 28.1**	**-3.3**
MAIT	**Maitri**	**18.82**	**145**	*e*P		**Pn**	**21 20 44.2**	**+7.6**
PMSA	**Palmer Station**	**20.86**	**234**	P		**P**	**21 20 58.4**	**0.0**
TRIS	**Tristan da Cun**	**22.04**	**21**	P		**P**	**21 21 10.6**	**-0.6**
QSPA	**South Pole Qui**	**32.05**	**180**	P		**P**	**21 22 43.7**	**+0.8**
3.7nm,0.9s,mb4.2,baz=216,slow=5.6,SNR=30								
PLCA	**Paso Flores**	**35.23**	**278**	*e*P		**P**	**21 23 09.8**	**-1.1**
PLCA				LR		LR	21 37 44.1	
PLCA	**Paso Flores**	**35.23**	**278**	P		**P**	**21 23 09.7**	**-1.3**
1.3nm,0.6s,mb4.1,baz=138,slow=9.1,SNR=2.9								
PLCA				LR		LR	21 37 44.1	
comp=Z,167nm,18.2s,MS3.8,baz=105,slow=37								
MAW	**Mawson**	**36.66**	**140**	LR		LR	21 37 20.0	
comp=Z,115nm,19.7s,MS3.7,baz=74,slow=34								
SUR	**Sutherland**	**38.58**	**67**	P		**P**	**21 23 39.7**	**+0.2**
CPUP	**Villa Florida**	**40.44**	**307**	P		**P**	**21 23 54.7**	**-0.3**
0.8nm,0.3s,mb3.9,baz=132,slow=9.4,SNR=3.6								
CPUP				LR		LR	21 38 11.9	
comp=Z,77nm,20.9s,MS3.5,baz=146,slow=33								
SHEL	**Horse Pasture**	**43.83**	**23**	*e*P		**P**	**21 24 22.9**	**+0.2**
161nm,1.4s,mb5.6								
SBA	**Scott Base**	**44.11**	**183**	*e*P		**P**	**21 24 24.4**	**+0.1**
3.6nm

EVR					*e*SB	**Sg**	**21 23 35.7**	**-1.3**
EVR	**Evrytania**	**1.08**	**119**		*e*Pb	**Pg**	**21 23 21.2**	**-1.7**
EVR					*e*Sb	**Sg**	**21 23 35.7**	**-1.3**
THL	**Klokotos Trika**	**1.11**	**83**		*e*PB	**Pg**	**21 23 21.8**	**-1.6**
THL					*e*SB	**Sg**	**21 23 36.7**	**-1.1**
THL	**Klokotos Trika**	**1.11**	**83**		P	**Pg**	**21 23 21.1**	**-2.3**
THL					S	**Sg**	**21 23 37.5**	**-0.3**
THL	**Klokotos Trika**	**1.11**	**83**		P	**Pg**	**21 23 21.1**	**-2.3**
THL	**Klokotos Trika**	**1.11**	**83**		*e*Pb	**Pg**	**21 23 21.8**	**-1.6**
THL					*e*Sb	**Sg**	**21 23 36.7**	**-1.1**
THL					S	**Sg**	**21 23 37.5**	**-0.3**
KBN	**Korca**	**1.19**	**7**		*e*PN	**Pg**	**21 23 27.6**	**+2.7**
KBN					*i* SN	**Sg**	**21 23 47.9**	**+7.6**
KBN	**Korca**	**1.19**	**7**		*e*Pn	**Pg**	**21 23 27.6**	**+2.7**
KZN	**Kozani**	**1.25**	**46**		*e*Pb	**Pb**	**21 23 25.3**	**-0.5**
KZN					*e*Sb	**Sb**	**21 23 42.2**	**+0.2**
KZN	**Kozani**	**1.25**	**46**		*e*PB	**Pb**	**21 23 25.3**	**-0.5**
KZN					*e*SB	**Sb**	**21 23 42.2**	**+0.2**
KZN	**Kozani**	**1.25**	**46**		P	**Pn**	**21 23 25.4**	**-0.2**
KZN	**Kozani**	**1.25**	**46**		P	**Pn**	**21 23 25.4**	**-0.2**
KZN					*e*Sb	**Sb**	**21 23 42.2**	**+0.2**
VLS	**Valsamata**	**1.27**	**180**		*e*Pg	**Pg**	**21 23 25.0**	**-1.4**
VLS					*e*Sb	**Sb**	**21 23 42.9**	**+0.6**
VLS	**Valsamata**	**1.27**	**180**		*e*PG	**Pg**	**21 23 25.0**	**-1.4**
VLS					*e*SB	**Sb**	**21 23 42.9**	**+0.6**
VLS	**Valsamata**	**1.27**	**180**		P	**Pn**	**21 23 24.4**	**-1.4**
VLS	**Valsamata**	**1.27**	**180**		P	**Pn**	**21 23 24.4**	**-1.4**
VLS	**Valsamata**	**1.27**	**180**		*e*Pg	**Pg**	**21 23 25.0**	**-1.4**
VLS					*e*Sb	**Sb**	**21 23 42.9**	**+0.6**
AGG	**Agios Georgios**	**1.42**	**107**		*e*Pn	**Pn**	**21 23 26.4**	**-1.5**
AGG					*e*Sb	**Sb**	**21 23 46.6**	**-0.1**
AGG	**Agios Georgios**	**1.42**	**107**		*e*PN	**Pn**	**21 23 26.4**	**-1.5**
AGG					*e*SB	**Sb**	**21 23 46.6**	**-0.1**
AGG	**Agios Georgios**	**1.42**	**107**		P	**Pn**	**21 23 26.1**	**-1.8**
AGG					S	**Sn**	**21 23 49.4**	**+2.8**
AGG	**Agios Georgios**	**1.42**	**107**		P	**Pn**	**21 23 26.1**	**-1.8**
AGG	**Agios Georgios**	**1.42**	**107**		*e*Pn	**Pn**	**21 23 26.4**	**-1.5**
AGG					*e*Sb	**Sb**	**21 23 46.6**	**-0.1**
EFP	**Efpalio**	**1.45**	**134**		*e*PB	**Pb**	**21 23 29.0**	**-0.1**
EFP					*e*SB	**Sb**	**21 23 48.1**	**+0.6**
EFP	**Efpalio**	**1.45**	**134**		P	**Pn**	**21 23 28.8**	**+0.5**
EFP					S	**Sn**	**21 23 48.0**	**+0.7**
EFP	**Efpalio**	**1.45**	**134**		P	**Pn**	**21 23 28.8**	**+0.5**
EFP					*e*Sb	**Sb**	**21 23 48.1**	**+0.6**
FNA	**Florina**	**1.47**	**24**		P	**Pn**	**21 23 29.1**	**+0.5**
FNA	**Florina**	**1.47**	**24**		P	**Pn**	**21 23 29.1**	**+0.5**
RLS	**Riolos of Patr**	**1.55**	**153**		*e*Pb	**Pb**	**21 23 30.2**	**-0.6**
RLS	**Riolos of Patr**	**1.55**	**153**		*e*PB	**Pb**	**21 23 30.2**	**-0.6**
RLS	**Riolos of Patr**	**1.55**	**153**		*e*Pb	**Pb**	**21 23 30.2**	**-0.6**
TRIZ	**Trizonia**	**1.58**	**132**		P	**Pn**	**21 23 30.8**	**+0.7**
TRIZ	**Trizonia**	**1.58**	**132**		P	**Pn**	**21 23 30.8**	**+0.7**
LIT	**Litokhoron**	**1.60**	**65**		*e*Pg	**Pn**	**21 23 30.5**	**0.0**
LIT	**Litokhoron**	**1.60**	**65**		*e*PG	**Pn**	**21 23 30.5**	**0.0**
LIT	**Litokhoron**	**1.60**	**65**		P	**Pn**	**21 23 30.9**	**+0.4**
LIT	**Litokhoron**	**1.60**	**65**		*e*Pg	**Pn**	**21 23 30.5**	**0.0**
LIT	**Litokhoron**	**1.60**	**65**		P	**Pn**	**21 23 30.9**	**+0.4**
BIA	**Bitola**	**1.67**	**19**		P	**Pn**	**21 23 32.2**	**+0.8**
BIA					S	**Sg**	**21 23 56.4**	**+0.6**
BIA	**Bitola**	**1.67**	**19**		*e*Pn	**Pg**	**21 23 33.6**	**-0.5**
BIA					*e*Sg	**Sg**	**21 23 58.6**	**+2.8**
BIA	**Bitola**	**1.67**	**19**		P	**Pn**	**21 23 32.2**	**+0.8**
BIA					S	**Sg**	**21 23 56.4**	**+0.6**
DSF	**Desfina**	**1.83**	**124**		P	**Pn**	**21 23 34.8**	**+1.2**
DSF	**Desfina**	**1.83**	**124**		P	**Pn**	**21 23 34.8**	**+1.2**
KRUS	**Krusevo**	**1.99**	**14**		*e*Pn	**Pg**	**21 23 38.2**	**-1.9**
XOR	**Xorichti**	**2.02**	**91**		P	**Pn**	**21 23 36.6**	**+0.5**
XOR	**Xorichti**	**2.02**	**91**		P	**Pn**	**21 23 36.6**	**+0.5**
GUR	**Goura**	**2.04**	**137**		*e*PN	**Pn**	**21 23 37.4**	**+1.0**
GUR	**Goura**	**2.04**	**137**		*e*Pn	**Pn**	**21 23 37.4**	**+1.0**
LKR	**Lokris**	**2.04**	**112**		*e*Pn	**Pn**	**21 23 37.0**	**+0.6**
LKR	**Lokris**	**2.04**	**112**		*e*PN	**Pn**	**21 23 37.0**	**+0.6**
LKR	**Lokris**	**2.04**	**112**		P	**Pn**	**21 23 37.5**	**+1.1**
LKR	**Lokris**	**2.04**	**112**		*e*Pn	**Pn**	**21 23 37.0**	**+0.6**
LKR	**Lokris**	**2.04**	**112**		P	**Pn**	**21 23 37.5**	**+1.1**
NEO	**Neokhori**	**2.05**	**93**		*e*Pn	**Pn**	**21 23 37.0**	**+0.5**
NEO	**Neokhori**	**2.05**	**93**		*e*PN	**Pn**	**21 23 37.0**	**+0.5**
NEO	**Neokhori**	**2.05**	**93**		*e*Pn	**Pn**	**21 23 37.0**	**+0.5**
VAY	**Valandovo**	**2.41**	**38**		*e*Pn	**Pn**	**21 23 43.8**	**+2.3**
ITM	**Ithomi**	**2.50**	**155**		*e*Pn	**Pn**	**21 23 44.6**	**+1.9**
ITM	**Ithomi**	**2.50**	**155**		*e*PN	**Pn**	**21 23 44.6**	**+1.9**
ITM	**Ithomi**	**2.50**	**155**		*e*Pn	**Pn**	**21 23 44.6**	**+1.9**
SOH	**Sokhos**	**2.53**	**56**		*e*Pn	**Pn**	**21 23 44.4**	**+1.3**
SOH	**Sokhos**	**2.53**	**56**		*e*PN	**Pn**	**21 23 44.4**	**+1.3**
SOH	**Sokhos**	**2.53**	**56**		*e*Pn	**Pn**	**21 23 44.4**	**+1.3**
DID	**Didima**	**2.84**	**132**		*e*PN	**Pn**	**21 23 49.0**	**+1.6**
DID	**Didima**	**2.84**	**132**		*e*Pn	**Pn**	**21 23 49.0**	**+1.6**

*IDC **05** 21:25:56.5±2.1, 34.°52N× 135.°50E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.5/25, mbtmp3.5/8, ML3.2/2, MS3.5/3, Ms1 3.5/3, ms1mx2.8/33, Error ellipse: s-maj=56.2km s-min=19.5km az=171.0*

*ISCJB **05** 21:26:00.2±0.3, 34.°87N±0.°02× 135.°43E±0.°03, h25km±3km, mb3.8/10, MS3.9/2, Error ellipse: s-maj=4.1km s-min=3.2km az=31.1*

*NIED **05** 21:26:00, 34.°90N× 135.°40E, h14km, Mw3.8 Best double couple: M₀4.99000×10¹⁴ NP1:φs177.00000°, δ53.00000°, λ85.00000°. NP2:φs5.00000°, δ37.00000°, λ96.00000°.*

*JMA **05** 21:26:00.5, 34.°88N× 135.°45E, h13km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs353.00000°, δ33.00000°, λ64.00000°. NP2: φs202.00000°, δ61.00000°, λ106.00000°. Principal axes: T Plg70.0000°, Azm146.0000°; N Plg14.0000°, Azm14.0000°; P Plg14.0000°, Azm281.0000°;*

JMA Felt III J1.

*NEIC **05** 21:26:02.5±3.6, 34.°85N× 135.°41E, h28km±27km, mb4.2/4 Error ellipse: s-maj=9.9km s-min=8.2km az=220.0*

ISC 05 21:26:00.2±0.3, 34.°87N±0.°02× 135.°44E±0.°02, h12km±2km, n39, σ0§70/55, mb3.8/10, MS3.9/2, 3C-10D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHE	**Heguri**	**0.30**	**138**	⇓P	**Pg**	**21 26 06.6**	**+0.3**
JHE				S	**Sg**	**21 26 11.0**	**+0.7**
JMIK	**Miki**	**0.33**	**258**	⇓P	**Pg**	**21 26 07.4**	**+0.6**
JMIK				S	**Sg**	**21 26 12.2**	**+0.9**
JWT	**Wachi**	**0.41**	**355**	⇑P	**Pg**	**21 26 08.5**	**+0.1**
JWT				S	**Sg**	**21 26 13.7**	**-0.2**
JKS	**Kasai**	**0.50**	**283**	⇓P	**Pg**	**21 26 10.3**	**+0.2**
JKS				S	**Sg**	**21 26 17.1**	**+0.3**
JAJ2	**Tsuna**	**0.65**	**226**	⇓P	**Pg**	**21 26 12.8**	**0.0**
JAJ2				S	**Sg**	**21 26 21.7**	**+0.4**
JWY	**Kouya**	**0.67**	**169**	⇑P	**Pg**	**21 26 13.1**	**-0.1**
JWY				S	**Sg**	**21 26 22.4**	**+0.5**
JKY	**Yasaka**	**0.80**	**340**	⇓P	**Pg**	**21 26 15.5**	**-0.3**
JKY				S	**Sg**	**21 26 26.1**	**-0.2**
JEG	**Eigenji**	**0.82**	**71**	⇓P	**Pg**	**21 26 16.0**	**-0.1**
JEG				S	**Sg**	**21 26 26.7**	**-0.1**
TSUJ	**Tsu 2**	**0.82**	**101**	⇓P	**Pg**	**21 26 15.6**	**-0.5**
TSUJ				S	**Sg**	**21 26 26.6**	**-0.2**
JKN2	**Miekihoku**	**0.93**	**132**	⇓P	**Pg**	**21 26 17.7**	**-0.5**
JKN2				S	**Sg**	**21 26 29.9**	**-0.5**
JKSM	**Kasumi**	**0.96**	**318**	⇓P	**Pg**	**21 26 18.0**	**-0.7**
JKSM				S	**Sg**	**21 26 30.7**	**-0.5**
JWM	**Minabe**	**1.02**	**184**	⇑P	**Pb**	**21 26 19.5**	**-0.4**
JWM				*e*S	**Sg**	**21 26 33.1**	**-0.2**
JAD	**Aida**	**1.05**	**274**	⇓P	**Pb**	**21 26 19.3**	**-1.1**
JAD				S	**Sb**	**21 26 33.2**	**-0.9**
MAJO	**Matsushiro**	**2.80**	**53**	*e*Pn	**Pn**	**21 26 45.9**	**+1.0**
MAJO				*e*Pg	**Pg**	**21 26 54.5**	**+0.6**
MAJO				*e*S	**Sn**	**21 27 27.4**	**+8.9**
MAT	**Matsushiro**	**2.80**	**53**	P	**Pn**	**21 26 45.4**	**+0.6**
MAT				S	**Sn**	**21 27 19.4**	**+0.9**
MJAR	**Matsushiro Arr**	**2.80**	**53**	Pn	**Pn**	**21 26 46.0**	**+1.2**
MJAR	4.4nm,0.3s,baz=238,slow=13,SNR=43			Pg	**Pg**	**21 26 51.1**	**-2.8**
MJAR	17nm,0.3s,baz=237,slow=15,SNR=42			LR	LR	21 28 04.5	
JHJ	comp=Z,231nm,18.8s,baz=240,slow=42 **Hachijo jima 2** 6.8nm,0.3s,baz=266,slow=19,SNR=5.2	**4.01**	**115**	Pn	**Pn**	**21 27 01.9**	**+0.5**
KSRS	**Korea Array** 0.4nm,0.3s,baz=112,slow=14,SNR=9.4	**6.61**	**295**	Pn	**Pn**	**21 27 38.4**	**+1.2**
KSRS	0.3nm,0.3s,baz=116,slow=24,SNR=7.1			Sn	**Sn**	**21 28 53.3**	**+0.9**
ENH	**Enshi**	**22.32**	**265**	P	**P**	**21 30 57.0**	**-0.8**
ULN	**Ulaanbaatar**	**24.79**	**310**	*e*P	**P**	**21 31 21.7**	**-0.2**
	1.0nm,0.5s,mb3.6						
SONM	**Songino Array** 1.9nm,0.8s,mb3.7,baz=101,slow=9.5,SNR=5.8	**25.19**	**310**	P	**P**	**21 31 26.4**	**+0.9**
CHTO	**Chiang Mai**	**36.05**	**253**	P	**P**	**21 33 02.4**	**+0.7**
ZALV	**Zalesovo Beam** 0.3nm,0.3s,mb3.5,baz=112,slow=11,SNR=2.6	**39.88**	**315**	P	**P**	**21 33 34.2**	**+0.6**
ZALV	1.4nm,0.5s,baz=102,slow=2.2,SNR=8.9			PcP	PcP	21 35 37.8	-1.4
MKAR	**Makanchi Array**	**41.21**	**303**	P	**P**	**21 33 44.7**	**0.0**
MKAR	**Makanchi Array** 0.4nm,0.8s,mb3.1,baz=97,slow=9.0,SNR=4.4	**41.21**	**303**	P	**P**	**21 33 44.7**	**0.0**
BVAR	**Borovoye Array** 1.3nm,0.6s,mb4.1,baz=214,slow=36,SNR=3.5	**48.47**	**313**	P	**P**	**21 34 42.0**	**-0.4**
BVAR	0.7nm,0.7s,baz=80,slow=3.5,SNR=4.4			PcP	PcP	21 36 08.3	-0.1
BRVK	**Borovoye**	**48.53**	**313**	P	**P**	**21 34 42.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**53.50**	**192**	*e*P	**P**	**21 35 19.9**	**-0.7**
KBL	**Kabul** 1.0nm,0.4s,mb4.1	**53.63**	**290**	*e*P	**P**	**21 35 21.7**	**+0.1**
ILAR	**Eielson Array** 0.4nm,0.5s,mb3.6,baz=264,slow=5.6,SNR=9.8	**53.88**	**31**	P	**P**	**21 35 22.9**	**0.0**
ILAR	0.3nm,0.5s,baz=149,slow=3.8,SNR=4.5			PcP	PcP	21 36 25.7	-2.6
WRAB	**Tennant Creek** 2.8nm,0.8s,mb4.3	**54.51**	**181**	*e*P	**P**	**21 35 27.3**	**-0.6**
WB2	**Warramunga Arr**	**54.52**	**181**	*e*P	**P**	**21 35 27.2**	**-0.8**
ARU	**Arti** 1.7nm,0.6s,mb4.2	**54.76**	**319**	*e*P	**P**	**21 35 27.5**	**-2.0**
CTAO	**Charters Tower**	**55.61**	**168**	*e*P	**P**	**21 35 35.7**	**-0.2**
RES	**Resolute Bay** comp=Z,44nm,20.8s,MS3.6,baz=173,slow=34	**65.84**	**13**	LR	LR	22 03 47.0	
STKA	**Stephens Creek**	**66.65**	**174**	*e*P	**P**	**21 36 50.3**	**-0.3**
STKA	**Stephens Creek** comp=Z,116nm,20.9s,MS4.1,baz=25,slow=36	**66.65**	**174**	LR	LR	22 05 36.2	
NVAR	**Mina Array Bea**	**80.12**	**50**	P	**P**	**21 38 11.1**	**+0.9**
NVAR	**Mina Array Bea** 0.3nm,0.6s,mb3.4,baz=316,slow=4.1,SNR=3.6	**80.12**	**50**	P	**P**	**21 38 11.1**	**+0.9**

*IDC **05** 21:35:44.2±1.5, 28.°30N× 113.°01W, h0km, mb3.9/3, mb1 4.0/6, mb1mx3.7/26, mbtmp3.7/6, ML3.6/3, MS3.1/4, Ms1 3.1/4, ms1mx2.9/26, Error ellipse: s-maj=24.9km s-min=13.4km az=20.0*

*NEIC **05** 21:35:50.3±2.1, 28.°60N× 112.°71W, h10km, mb4.0/4, Error ellipse: s-maj=29.0km s-min=8.9km az=201.0*

*ISCJB **05** 21:35:52.0±0.8, 28.°93N±0.°06× 112.°56W±0.°04, h10km, mb4.0/4, Error ellipse: s-maj=8.4km s-min=4.5km az=14.1*

ISC 05 21:35:53.0±1.9, 28.°82N±0.°07× 112.°66W±0.°04, h11km±9km, n34, σ1§24/46, mb4.0/4, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUC	**Tucson**	**3.84**	**24**	*e*Pn	**Pn**	**21 36 49.2**	**-2.8**
TUC				*e*Pg	**Pg**	**21 37 05.9**	**-0.6**
TUC				*e*Sg	**Sg**	**21 37 55.4**	**-0.8**
GLA	**Glamis**	**4.61**	**337**	*e*Pn	**Pn**	**21 37 00.7**	**-1.9**
GLA				*e*Sg	**Sg**	**21 38 22.2**	**+1.0**
BAR	**Barrett**	**5.17**	**319**	*e*Pn	**Pn**	**21 37 11.1**	**+0.8**
BAR				*e*Sb	**Sb**	**21 38 26.2**	**+0.7**
PFO	**Pinyon Flat Ob**	**5.78**	**327**	*e*Pn	**Pn**	**21 37 19.2**	**+0.6**
PFO				*e*Sg	**Sg**	**21 38 54.0**	**-4.4**
WUAZ	**Wupatki**	**6.77**	**9**	*e*Pn	**Pn**	**21 37 31.1**	**-1.2**
WUAZ				*e*Sg	**Sg**	**21 39 29.0**	**-1.2**
MNTX	**Cornudas Mount** 3.0nm,0.8s	**6.92**	**64**	*e*Pn	**Pn**	**21 37 34.3**	**0.0**
MNTX				*e*Sn	**Sn**	**21 38 52.7**	**-0.3**
MNTX				*e*Sg	**Sg**	**21 39 36.6**	**+1.6**
LENM	**Lemitar**	**7.21**	**41**	*e*Pn	**Pn**	**21 37 39.6**	**+1.3**
LENM				Sn	**Sn**	**21 39 00.8**	**+0.7**
GSC	**Goldstone**	**7.36**	**332**	*e*Pn	**Pn**	**21 37 42.1**	**+1.7**
GSC				*e*Pg	**Pg**	**21 38 09.9**	**-4.0**
GSC				*e*S	**Sg**	**21 39 49.5**	**+0.3**
TXAR	**Lajitas Array**	**7.88**	**84**	Pn	**Pn**	**21 37 46.7**	**-0.9**
TXAR				Sn	**Sn**	**21 39 18.4**	**+1.6**
TXAR				Lg		21 40 07.8	
TXAR				LR	LR	21 41 23.8	
TXAR	**Lajitas Array** 0.6nm,0.3s,baz=255,slow=13,SNR=30	**7.88**	**84**	Pn	**Pn**	**21 37 46.7**	**-0.9**
TXAR	0.1nm,0.3s,baz=301,slow=17,SNR=3.5			Sn	**Sn**	**21 39 18.4**	**+1.6**
TXAR	0.5nm,0.3s,baz=268,slow=33,SNR=6.6			Lg		21 40 07.8	
TXAR	comp=Z,70nm,21.4s,baz=245,slow=41			LR	LR	21 41 23.8	
ANMO	**Albuquerque** 0.3nm,0.3s,baz=228,slow=12,SNR=4.9	**8.07**	**39**	Pn	**Pn**	**21 37 51.4**	**+1.3**
ANMO	0.6nm,0.3s,baz=124,slow=22,SNR=12			Lg		21 40 16.2	
ANMO	comp=Z,158nm,21.6s,baz=220,slow=41			LR	LR	21 41 40.1	
NVAR	**Mina Array Bea** 0.2nm,0.3s,baz=166,slow=13,SNR=3.2	**10.67**	**335**	Pn	**Pn**	**21 38 25.5**	**-0.3**
NVAR	**Mina Array Bea**	**10.67**	**335**	Pn	**Pn**	**21 38 25.5**	**-0.3**
SDCO	**Great Sand Dun**	**10.72**	**32**	*e*Pn	**Pn**	**21 38 27.5**	**+1.0**
SDCO				*e*Sn	**Sn**	**21 40 22.9**	**-3.7**
HWUT	**Hardware Ranch**	**12.79**	**4**	*e*Pn	**Pn**	**21 38 57.6**	**+2.9**
WMOK	**Wichita Mounta**	**13.19**	**60**	*e*Pn	**Pn**	**21 39 00.1**	**-0.1**
MOD	**Modoc**	**14.46**	**337**	*e*Pn	**Pn**	**21 39 18.8**	**+1.3**
HLID	**Hailey**	**14.78**	**355**	*e*Pn	**Pn**	**21 39 27.7**	**+5.8**
LOHW	**Long Hollow**	**14.86**	**6**	*e*Pn	**Pn**	**21 39 23.5**	**+0.6**
MOOW	**Moose Ponds**	**14.98**	**5**	*e*Pn	**Pn**	**21 39 26.1**	**+1.6**
IMW	**Indian Meadow**	**15.11**	**5**	*e*Pn	**Pn**	**21 39 27.1**	**+0.8**
YBH	**Yreka Blue Hor** comp=Z,80nm,20.6s,baz=155,slow=36	**15.26**	**330**	LR	LR	21 45 11.8	
LNOR	**Lincton Mounta**	**17.59**	**347**	*e*Pn	**Pn**	**21 39 57.2**	**-0.8**
LAO	**LASA Array** 4.1nm,0.7s	**18.54**	**14**	*e*P	**Pn**	**21 40 08.6**	**-1.0**
OD2	**Odessa Site #2**	**19.13**	**347**	*e*Pn	**Pn**	**21 40 15.2**	**-1.7**
EGMT	**Eagleton** 26nm,1.7s	**19.31**	**6**	*e*Pn	**Pn**	**21 40 17.4**	**-1.5**
ECSD	**EROS Data Cent** 4.0nm,0.8s	**19.67**	**37**	*e*P	**Pn**	**21 40 21.6**	**-1.7**
SIUC	**Southern Illin** 27nm,0.8s,mb4.6	**21.47**	**60**	*e*P	**P**	**21 40 45.8**	**+4.3**
HDIL	**Hopedale**	**22.43**	**52**	*e*P	**P**	**21 40 51.6**	**-0.1**
AGMN	**Agassiz Nation**	**23.37**	**29**	*e*P	**P**	**21 41 00.4**	**-1.2**
TKL	**Tuckaleechee C** 9.1nm,0.8s,mb4.4,baz=288,slow=3.3,SNR=9.2	**25.31**	**67**	P	**P**	**21 41 16.1**	**-3.5**
SCHQ	**Schefferville** comp=Z,30nm,18.9s,baz=108,slow=38	**41.85**	**38**	LR	LR	22 02 45.5	
ILAR	**Eielson Array** 0.6nm,0.9s,mb3.2,baz=147,slow=6.0,SNR=6.6	**41.91**	**339**	P	**P**	**21 43 38.5**	**-4.6**
SIV	**San Ignacio** 0.2nm,0.3s,mb3.6,baz=293,slow=9.8,SNR=2.2	**66.85**	**125**	P	**P**	**21 46 38.0**	**-7.3**

*ISCJB **05** 21:35:58.4±1.4, 23.°82N±0.°04× 122.°73E±0.°02, h13km±11km, Error ellipse: s-maj=7.0km s-min=3.2km az=166.4*

*TAP **05** 21:35:58.1, 23.°83N× 122.°83E, h80km±2km, ML3.0, D*

*JMA **05** 21:35:59.6±0.3, 23.°87N× 122.°77E, h16km, M2.6*

ISC 05 21:35:58.5±1.2, 23.84N±0.°05× 122.73E±0.°02, h13km±8km, n26, σ0§76/38, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.67**	**22**	P	**Pg**	**21 36 11.8**	**+0.2**
YOJ				*e*S	**Sg**	**21 36 20.1**	**-0.3**
HATJ	**Hateruma jima**	**1.00**	**78**	P	**Pb**	**21 36 17.4**	**-0.4**
HATJ				*e*S	**Sb**	**21 36 31.0**	**+0.1**
IRIF	**Iriomote-Funau**	**1.03**	**62**	P	**Pb**	**21 36 17.8**	**-0.5**
IRIF				*e*S	**Sb**	**21 36 31.7**	**-0.1**
ENA	**Nanau** baz=308	**1.08**	**303**	P	**Pb**	**21 36 19.1**	**0.0**
ENA	baz=308			*e*S	**Sb**	**21 36 32.8**	**-0.3**
TWC	**Suao** baz=312	**1.11**	**314**	*e*P	**Pb**	**21 36 19.1**	**-0.5**
TWC	baz=312			*e*S	**Sb**	**21 36 32.8**	**-1.2**
ESL	**Shilin** baz=270	**1.19**	**269**	*e*P	**Pn**	**21 36 19.3**	**-1.6**
JKRS	**Kuro-shima**	**1.23**	**71**	P	**Pn**	**21 36 21.5**	**+0.1**
JKRS				*e*S	**Sb**	**21 36 37.8**	**+0.3**
TWE	**Neicheng** baz=311	**1.31**	**312**	*e*P	**Pn**	**21 36 23.4**	**+0.9**
TWE	baz=311			*e*S	**Sb**	**21 36 40.2**	**+0.5**
ENTT	**Nioudou** baz=298	**1.33**	**307**	*e*P	**Pn**	**21 36 23.3**	**+0.5**
WHF	**Hehuan Shan** baz=283	**1.38**	**283**	P	**Pn**	**21 36 22.9**	**-0.5**
NNS	**Nan Shan** baz=295	**1.38**	**296**	*e*P	**Pn**	**21 36 23.3**	**-0.2**
JIJ	**Ishigaki jima**	**1.39**	**68**	P	**Pn**	**21 36 23.7**	**+0.1**
JIJ				*e*S	**Sn**	**21 36 41.1**	**-0.7**
TWF1	**Yuli** baz=249	**1.41**	**250**	P	**Pn**	**21 36 22.7**	**-1.1**
TWF1	baz=249			*e*S	**Sn**	**21 36 41.3**	**-0.9**
NSK	**Sanguang** baz=296	**1.50**	**304**	*e*P	**Pn**	**21 36 25.8**	**+0.6**
YUS	**Yu-Shan** baz=254	**1.67**	**258**	P	**Pn**	**21 36 27.5**	**0.0**
YUS	baz=254			*e*S	**Sn**	**21 36 48.0**	**-0.8**
SMLT	**Sun Moon Lake** baz=273	**1.68**	**272**	*e*P	**Pn**	**21 36 27.3**	**-0.3**
SMLT	baz=273			*e*S	**Sn**	**21 36 49.2**	**+0.2**
ELDTW	**Lidau** baz=245	**1.70**	**248**	P	**Pn**	**21 36 26.5**	**-1.5**
TYC	**Yuchr** baz=273	**1.72**	**272**	*e*P	**Pn**	**21 36 28.0**	**-0.2**
NSTT	**Nanjuang** baz=296	**1.77**	**297**	*e*P	**Pn**	**21 36 29.8**	**+1.0**
ALS	**Alishan** baz=258	**1.80**	**260**	P	**Pn**	**21 36 29.8**	**+0.6**
TWG	**Pinlang** baz=235	**1.83**	**237**	*e*P	**Pn**	**21 36 28.8**	**-0.9**
CHN5	**Tsauling** baz=272	**1.90**	**263**	*e*P	**Pn**	**21 36 31.3**	**+0.7**
CHN5	baz=272			*e*S	**Sn**	**21 36 55.8**	**+1.3**
JTJ	**Tarama**	**1.96**	**66**	P	**Pn**	**21 36 32.4**	**+0.9**
CHN4	**Tsaushan** baz=258	**2.02**	**256**	*e*P	**Pn**	**21 36 33.5**	**+1.1**
WTP	**Ta-pu** baz=255	**2.03**	**253**	*e*P	**Pn**	**21 36 33.8**	**+1.3**
CHN1	**Nanshi** baz=254	**2.13**	**253**	*e*P	**Pn**	**21 36 35.1**	**+1.3**

*IDC **05** 21:38:57.9±0.6, 33.°19N× 92.°22E, h0km, mb4.4/23, mb1 4.4/27, mb1mx4.3/33, mbtmp4.3/27, ML3.6/4, MS3.3/7, Ms1 3.3/7, ms1mx3.0/28, Error ellipse: s-maj=19.7km s-min=13.4km az=31.0*

*ISCJB **05** 21:38:58.4±0.2, 33.°28N±0.°03× 92.°10E±0.°04, h10km, mb4.4/33, MS3.5/7, Error ellipse: s-maj=5.0km s-min=4.1km az=139.5*

*BJI **05** 21:38:59.2, 33.°31N× 92.°11E, h10km, mB4.6/7, mb4.4/15, ML4.2/5, Ms4.2/13, Ms7 3.9/13*

*NEIC **05** 21:39:00.2±0.3, 33.°31N× 92.°08E, h10km, mb4.5/16, Error ellipse: s-maj=7.2km s-min=6.2km az=220.0*

*MOS **05** 21:39:01.0±1.2, 33.°23N× 92.°10E, h33km, mb4.5/23, Error ellipse: s-maj=10.4km s-min=6.5km az=106.0*

ISC 05 21:39:00.5±0.2, 33.°32N±0.°03× 92.°12E±0.°04, h10km, n112, σ1§16/118, mb4.4/33, MS3.5/7, 2C-1D, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.70**	**193**	Pn	**Pn**	**21 39 59.7**	**+2.0**
LSA				Sg	**Sg**	**21 40 50.6**	**-8.7**
LSA	comp=N,150nm,1.0s			smax			
LSA	comp=E,320nm,1.0s			smax			
LSA	**Lhasa**	**3.70**	**193**	*e*Pn	**Pn**	**21 39 59.9**	**+2.3**
LSA				*e*Sg	**Sg**	**21 40 55.1**	**-4.2**
TAPN	**Taplejung** comp=E,11nm,0.4s	**7.06**	**214**	*e*P	**Pn**	**21 40 45.5**	**+1.6**
GUN	**Gumba** comp=E,35nm,0.5s	**7.61**	**227**	*e*P	**Pn**	**21 40 53.8**	**+2.4**
JIRN	**Jiri** comp=E,52nm,0.8s	**7.61**	**224**	*e*P	**Pn**	**21 40 53.4**	**+2.0**
ODAN	**Odare** comp=E,11nm,0.4s	**7.63**	**214**	*e*P	**Pn**	**21 40 51.2**	**-0.4**
SHL	**Shillong**	**7.73**	**182**	*e*PKP	**Pn**	**21 40 51.0**	**-2.0**
SHL				*e*S	**Sn**	**21 42 16.0**	**-4.6**
RAMN	**Ramite** comp=E,83nm,0.8s	**7.94**	**218**	*e*P	**Pn**	**21 40 55.4**	**-0.5**
KKN	**Kakani** comp=E,28nm,0.5s	**8.07**	**229**	*e*P	**Pn**	**21 40 58.2**	**+0.5**
PKI	**Pulchoki** comp=E,32nm,0.5s	**8.14**	**227**	*e*P	**Pn**	**21 40 59.3**	**+0.6**
PKIN	**Phulchoki** comp=E,54nm,0.5s	**8.14**	**227**	*e*P	**Pn**	**21 40 59.6**	**+0.9**
**DM

ZAK	**Zakamensk**	**18.93**	**22**	*e*P		**Pn**	**21 43 22.2**	**+0.2**
ZAK					pmax	pmax		
	comp=Z,7.0nm,1.3s							
KBL	**Kabul**	**19.18**	**280**	*e*Pn		**Pn**	**21 43 23.3**	**-1.8**
	comp=Z,40nm,0.8s							
KBL	**Kabul**	**19.18**	**280**	*e*P		**Pn**	**21 43 23.3**	**-1.8**
KBL					pmax	pmax		
	comp=Z,40nm,0.8s							
KURK	**Kurchatov**	**20.01**	**334**	*e*Pn		**P**	**21 43 33.0**	**-0.1**
	comp=Z,12nm,1.0s							
KURK	**Kurchatov**	**20.01**	**334**	*e*P		**P**	**21 43 33.0**	**-0.2**
KURK					pmax	pmax		
	comp=Z,12nm,1.0s							
TLY	**Talaya**	**20.18**	**21**	*e*Pn		**P**	**21 43 37.4**	**+2.5**
	comp=Z,12nm,1.1s							
TLY	**Talaya**	**20.18**	**21**	*e*P		**P**	**21 43 37.1**	**+2.2**
TLY				*e*S		S	21 47 49.5	+28
TLY					pmax	pmax		
	comp=Z,15nm,1.3s							
TLY					MLR	MLR		
	comp=Z,198nm,20.0s,MS3.5							
BJT	**Baijiatuau**	**20.39**	**64**	*e*P		**P**	**21 43 37.9**	**+0.6**
	comp=Z,10nm,0.7s							
BJT	**Baijiatuau**	**20.39**	**64**	*e*P		**P**	**21 43 37.9**	**+0.6**
BJT					pmax	pmax		
	comp=Z,10.0nm,0.7s							
BJI	**Beijing**	**20.40**	**64**	P		**P**	**21 43 40.3**	**+2.9**
BJI				S		**S**	**21 47 24.4**	**-1.4**
BJI					pmax	pmax		
	comp=Z,6.0nm,0.8s							
BJI					pmax	pmax		
	comp=Z,120nm,5.2s							
BJI					LR	LR		
	comp=N,1μm,12.7s,MS4.5							
BJI					LR	LR		
	comp=E,440nm,12.7s,MS4.5							
BJI					LR	LR		
	comp=Z,160nm,18.9s							
ZAA0	**Zalesovo Array**	**21.27**	**348**	*e*P		**P**	**21 43 45.5**	**-1.2**
ZALV	**Zalesovo Beam**	**21.27**	**348**	P		**P**	**21 43 46.2**	**-0.5**
ZALV				LR		LR	21 53 17.9	
ZALV	**Zalesovo Beam**	**21.27**	**348**	P		**P**	**21 43 46.2**	**-0.5**
	comp=Z,11nm,0.8s,mb4.2,baz=160,slow=9.9,SNR=23							
ZALV					LR	LR	21 53 17.9	
	comp=Z,27nm,19.7s,MS2.6,baz=163,slow=40							
NVS	**Novosibirsk**	**22.41**	**346**	*i* P		**P**	**21 43 57.5**	**-1.4**
NVS					pmax	pmax		
	comp=N,27nm,1.8s							
NVS					pmax	pmax		
	comp=Z,26nm,1.8s,mb4.4							
NVS					pmax	pmax		
	comp=E,8.0nm,1.4s							
BVAR	**Borovoye Array**	**25.10**	**328**	P		**P**	**21 44 24.4**	**-0.7**
	comp=E,2.1nm,0.7s,mb3.8,baz=233,slow=37,SNR=20							
BVAR	**Borovoye Array**	**25.10**	**328**	P		**P**	**21 44 24.4**	**-0.7**
BVAR					pmax	pmax		
	comp=Z,2.0nm,0.7s							
BRVK	**Borovoye**	**25.17**	**328**	*e*P		**P**	**21 44 25.9**	**+0.1**
	comp=Z,13nm,0.9s,mb4.5							
BRVK	**Borovoye**	**25.17**	**328**	*e*P		**P**	**21 44 25.9**	**+0.1**
BRVK					pmax	pmax		
	comp=Z,13nm,0.9s,mb4.5							
HIA	**Hailar**	**25.97**	**44**	*e*P		**P**	**21 44 33.3**	**+0.3**
	comp=Z,13nm,1.4s,mb4.2							
HIA	**Hailar**	**25.97**	**44**	*e*P		**P**	**21 44 33.3**	**+0.3**
HIA					pmax	pmax		
	comp=Z,13nm,1.4s							
KSRS	**Korea Array**	**29.37**	**72**	P		**P**	**21 45 02.6**	**-1.0**
	comp=Z,0.4nm,0.3s,mb3.6,baz=279,slow=10,SNR=6.8							
KSRS					LR	LR	21 57 34.1	
	comp=Z,68nm,21.5s,MS3.2,baz=277,slow=38							
AKTK	**Aktyubinsk**	**30.27**	**315**	P		**P**	**21 45 10.7**	**-0.7**
AKTK					LR	LR	21 59 01.2	
AKTO	**Aktyubinsk**	**30.27**	**315**	P		**P**	**21 45 10.7**	**-0.7**
	comp=Z,3.4nm,0.8s,mb4.1,baz=114,slow=7.7,SNR=12							
AKTO					LR	LR	21 59 01.2	
	comp=Z,127nm,18.8s,MS3.6,baz=287,slow=40							
AKTO	**Aktyubinsk**	**30.27**	**315**	P		**P**	**21 45 10.7**	**-0.7**
AKTO					pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1							
AKTO					MLR	MLR		
	comp=Z,127nm,18.8s,MS3.6							
ARU	**Arti**	**32.62**	**325**	*d i* P		**P**	**21 45 31.5**	**-0.6**
	comp=Z,4.6nm,0.8s,mb4.5							
ARU	**Arti**	**32.62**	**325**	*d i* P		**P**	**21 45 31.1**	**-1.0**
ARU					PPP		21 46 39.8	
ARU					pmax	pmax		
	comp=Z,11nm,1.7s,mb4.5							
ARU					MLR	MLR		
	comp=Z,117nm,17.0s,MS3.6							
YAK	**Yakutsk**	**37.34**	**28**	P		**P**	**21 46 12.4**	**-0.3**
GNI	**Garni**	**38.21**	**294**	P		**P**	**21 46 22.0**	**+1.6**
	comp=Z,5.5nm,0.8s,mb4.3,baz=262,slow=6.1,SNR=4.6							
GNI	**Garni**	**38.21**	**294**	P		**P**	**21 46 22.0**	**+1.6**
GNI					pmax	pmax		
	comp=Z,6.0nm,0.9s							
KIV	**Kislovodsk**	**39.52**	**300**	*e*P		**P**	**21 46 31.7**	**+0.4**
KIV	**Kislovodsk**	**39.52**	**300**	*e*P		**P**	**21 46 31.7**	**+0.4**
YSS	**Yuzh-Sakhalins**	**40.35**	**55**	*e*P		**P**	**21 46 38.2**	**0.0**
ASF	**Jabal al Asfar**	**45.99**	**284**	P		**P**	**21 47 23.2**	**-0.8**
	comp=Z,4.6nm,0.9s,mb4.4,baz=27,slow=3.1,SNR=6.0							
ASF					LR	LR	22 11 52.4	
	comp=Z,46nm,19.6s,MS3.4,baz=261,slow=43							
ASF	**Jabal al Asfar**	**45.99**	**284**	P		**P**	**21 47 23.2**	**-0.8**
ASF					pmax	pmax		
	comp=Z,5.0nm,0.9s							
ASF					MLR	MLR		
	comp=Z,46nm,19.6s							
BR131	**Keskin Array S**	**46.71**	**295**	*e*P		**P**	**21 47 28.1**	**-1.4**
BRTR	**Keskin Array B**	**46.72**	**295**	P		**P**	**21 47 27.8**	**-1.7**
	comp=Z,5.5nm,0.8s,mb4.5,baz=96,slow=7.4,SNR=31							
BRTR	**Keskin Array B**	**46.72**	**295**	P		**P**	**21 47 27.8**	**-1.7**
BRTR					pmax	pmax		
	comp=Z,6.0nm,0.8s							
MMAI	**Mount Meron Ar**	**46.95**	**286**	P		**P**	**21 47 31.9**	**+0.4**
	comp=Z,4.3nm,1.1s,mb4.3,baz=94,slow=11,SNR=5.0							
AKASG	**Malin Array Be**	**48.35**	**311**	P		**P**	**21 47 42.9**	**+0.7**
	comp=Z,1.1nm,0.5s,mb4.2,baz=73,slow=7.7,SNR=5.7							
AKASG	**Malin Array Be**	**48.35**	**311**	P		**P**	**21 47 42.9**	**+0.8**
AKASG					pmax	pmax		
	comp=Z,1.0nm,0.5s							
EIL	**Elat**	**48.37**	**282**	P		**P**	**21 47 44.0**	**+1.5**
	comp=Z,18nm,0.8s,mb5.2,baz=40,slow=4.1,SNR=14							
FINES	**FINESS Array B**	**50.00**	**325**	P		**P**	**21 47 56.1**	**+1.6**
	comp=Z,2.2nm,0.6s,mb4.3,baz=126,slow=9.8,SNR=9.9							
FINES	**FINESS Array B**	**50.00**	**325**	P		**P**	**21 47 56.1**	**+1.6**
FINES					pmax	pmax		
	comp=Z,2.0nm,0.6s							
KEV	**Kevo**	**50.57**	**336**	*e*P		**P**	**21 47 58.5**	**-0.2**
	comp=Z,2.1nm,0.6s,mb4.2							
KEV	**Kevo**	**50.57**	**336**	*e*P		**P**	**21 47 58.5**	**-0.2**
KEV					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2							
ARCES	**ARCESS Array B**	**51.05**	**335**	P		**P**	**21 48 04.0**	**+1.7**
ARCES					PcP	PcP	21 49 19.3	+1.1
ARCES	**ARCESS Array B**	**51.05**	**335**	P		**P**	**21 48 04.0**	**+1.7**
	comp=Z,2.6nm,0.7s,mb4.3,baz=72,slow=7.8,SNR=8.9							
ARCES					PcP	PcP	21 49 19.3	+1.1
	comp=Z,0.6nm,0.6s,baz=94,slow=4.9,SNR=3.8							
ARCES	**ARCESS Array B**	**51.05**	**335**	P		**P**	**21 48 04.0**	**+1.6**
ARCES							21 49 19.3	
ARCES					pmax	pmax		
	comp=Z,3.0nm,0.7s							
MLR	**Muntele Rosu**	**51.20**	**304**	P		**P**	**21 48 04.2**	**+0.3**
	comp=Z,4.4nm,0.8s,mb4.4,baz=114,slow=13,SNR=8.1							
MLR	**Muntele Rosu**	**51.20**	**304**	P		**P**	**21 48 04.2**	**+0.3**
MLR					pmax	pmax		
	comp=Z,4.0nm,0.8s							
PSZ	**Piszkesteto**	**54.80**	**308**	*e*P		**P**	**21 48 28.7**	**-1.7**
HFS	**Hagfors**	**56.12**	**324**	P		**P**	**21 48 39.3**	**-0.4**
	comp=Z,3.0nm,0.8s,mb4.4,baz=101,slow=7.5,SNR=3.8							
HFS	**Hagfors**	**56.12**	**324**	P		**P**	**21 48 39.3**	**-0.4**
HFS					pmax	pmax		
	comp=Z,3.0nm,0.8s							
NOA	**NORSAR Array B**	**57.18**	**325**	P		**P**	**21 48 46.1**	**-1.1**
	comp=Z,2.0nm,0.7s,mb4.2,baz=80,slow=7.1,SNR=9.0							
NOA	**NORSAR Array B**	**57.18**	**325**	P		**P**	**21 48 46.2**	**-1.0**
NOA					pmax	pmax		
	comp=Z,2.0nm,0.7s							
CLL	**Collm**	**58.34**	**314**	*e*pP		pP	21 48 57.0	-1.8
KMBO	**Kilima Mbogo**	**61.89**	**248**	P		**P**	**21 49 20.7**	**+0.3**
WRAB	**Tennant Creek**	**66.55**	**136**	*e*P		**P**	**21 49 51.1**	**+0.3**
	comp=Z,14nm,0.9s,mb5.0							
WRAB	**Tennant Creek**	**66.55**	**136**	*e*P		**P**	**21 49 51.1**	**+0.4**
WRAB					pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0							
WB2	**Warramunga Arr**	**66.55**	**136**	*e*P		**P**	**21 49 49.5**	**-1.3**
ASAR	**Alice Springs**	**69.25**	**139**	P		**P**	**21 50 05.8**	**-1.9**
	comp=Z,9.4nm,0.9s,mb4.7,baz=331,slow=5.9,SNR=50							
ASAR	**Alice Springs**	**69.25**	**139**	P		**P**	**21 50 05.9**	**-1.8**
ASAR					pmax	pmax		
	comp=Z,9.0nm,0.9s							
PPLA	**Purkeypile**	**71.36**	**26**	*e*P		**P**	**21 50 20.5**	**+0.3**
	comp=Z,13nm,1.1s,mb4.8							
ILAR	**Eielson Array**	**71.99**	**23**	P		**P**	**21 50 22.9**	**-1.0**
	comp=Z,3.0nm,0.9s,mb4.2,baz=297,slow=5.4,SNR=18							
ILAR					PP	PP	21 53 04.1	+0.9
	comp=Z,0.4nm,0.8s,baz=303,slow=6.4,SNR=4.8							
ILAR	**Eielson Array**	**71.99**	**23**	P		**P**	**21 50 23.0**	**-0.9**
ILAR							21 53 04.1	
ILAR					pmax	pmax		
	comp=Z,3.0nm,0.9s							
INK	**Inuvik**	**73.15**	**16**	P		**P**	**21 50 32.1**	**+1.4**
	comp=Z,1.6nm,0.3s,mb4.5,baz=340,slow=5.9,SNR=4.1							
INK	**Inuvik**	**73.15**	**16**	P		**P**	**21 50 32.2**	**+1.4**
INK					pmax	pmax		
	comp=Z,2.0nm,0.3s							
EGAK	**Eagle**	**73.78**	**21**	*e*P		**P**	**21 50 34.8**	**+0.3**
	comp=Z,5.6nm,1.0s,mb4.5							
ESDC	**Sonseca Array**	**73.79**	**307**	P		**P**	**21 50 34.2**	**-0.9**
	comp=Z,0.8nm,0.7s,mb3.8,baz=54,slow=6.3,SNR=7.3							
KDAK	**Kodiak Island**	**74.34**	**30**	P		**P**	**21 50 37.4**	**-0.5**
	comp=Z,9.3nm,0.9s,mb4.7,baz=324,slow=7.8,SNR=3.7							
KDAK	**Kodiak Island**	**74.34**	**30**	P		**P**	**21 50 37.4**	**-0.5**
KDAK					pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7							
DAWY	**Dawson**	**74.82**	**21**	*e*P		**P**	**21 50 40.9**	**+0.3**
HYT	**Haines Junctio**	**77.83**	**22**	*e*P		**P**	**21 50 59.1**	**+1.3**
STKA	**Stephens Creek**	**79.89**	**139**	P		**P**	**21 51 07.3**	**-2.0**
	comp=Z,2.6nm,0.7s,mb4.3,baz=302,slow=8.3,SNR=6.6							
YKA	**Yellowknife Ar**	**82.13**	**12**	P		**P**	**21 51 19.6**	**-1.3**
	comp=Z,3.4nm,0.9s,mb4.3,baz=337,slow=4.6,SNR=7.0							
LBTB	**Lobatse**	**85.83**	**237**	*e*P		**P**	**21 51 39.8**	**-0.5**
	comp=Z,10nm,1.0s,mb5.0							
LBTB	**Lobatse**	**85.83**	**237**	*e*P		**P**	**21 51 39.8**	**-0.5**
LBTB					pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.0							
TSUM	**Tsumeb**	**88.15**	**246**	P		**P**	**21 51 51.6**	**-0.1**
SCHQ	**Schefferville**	**90.36**	**348**	P		**P**	**21 52 00.7**	**-1.0**
	comp=Z,3.5nm,0.8s,mb4.7,baz=97,slow=8.5,SNR=4.0							
FFC	**Flin Flon**	**91.48**	**8**	*e*P		**P**	**21 52 08.5**	**+1.7**
	comp=Z,6.7nm,0.9s,mb5.0							
FFC	**Flin Flon**	**91.48**	**8**	*e*P		**P**	**21 52 08.5**	**+1.7**
FFC					pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.0							
SLMT	**Seeley Lake**	**96.57**	**17**	*e*P		**P**	**21 52 32.0**	**+1.7**
CHMT	**Chamberlain Mo**	**96.93**	**17**	*e*P		**P**	**21 52 32.1**	**+0.1**

IDC ***05*** *21:54:02.9± 1.1, 33.˚16N× 92.˚05E, h0km, mb3.7/7, mb1 3.8/10, mb1mx3.7/24, mbtmpg3.7/10, ML3.4/3, Error ellipse: s-maj=36.8km s-min=19.7km az=57.0*

NEIC ***05*** *21:54:04.7± 0.4, 33.˚22N× 92.˚07E, h10km, mb3.6/3, Error ellipse: s-maj=9.0km s-min=5.8km az=78.0*

BJI ***05*** *21:54:10.5, 33.˚35N× 92.˚51E, h8km, ML3.7/2, Ms3.4/1*

ISC 05 21:54:04.2± 2.7, 33.˚25N± 0.˚06× 92.˚1E± 0.˚1, h4km± 20km, n24, σ 0.˚79/25, mb3.6/7, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.63**	**193**	*e*Pn		**Pn**	**21 55 01.1**	**-0.2**
LSA				*e*Sg		**Sg**	**21 56 00.3**	**-0.6**
GUN	**Gumba**	**7.57**	**227**	*e*P		**Pn**	**21 56 00.9**	**+5.7**
RAMN	**Ramite**	**7.89**	**219**	*e*P		**Pn**	**21 56 01.9**	**+2.2**
	11nm,0.5s							
KKN	**Kakani**	**8.03**	**229**	*e*P		**Pn**	**21 56 07.0**	**+5.5**
DMN	**Daman**	**8.26**	**229**	*e*P		**Pn**	**21 56 09.0**	**+4.2**
GKN	**Gorkha**	**8.30**	**233**	*e*P		**Pn**	**21 56 10.9**	**+5.6**
	11nm,0.5s							
KOLN	**Koldanda**	**9.15**	**236**	*e*P		**Pn**	**21 56 20.6**	**+3.6**
MK31	**Makanchi Array**	**15.46**	**334**	*e*Pn		**Pn**	**21 57 43.2**	**+0.3**
MKAR	**Makanchi Array**	**15.46**	**334**	Pn		**Pn**	**21 57 41.7**	**-1.3**
	0.1nm,0.3s,baz=154,slow=14,SNR=4.4							
CMAR	**Chiang Mai Arr**	**15.95**	**156**	Pn		**Pn**	**21 57 49.0**	**-0.6**
	0.0nm,0.3s,baz=337,slow=9.4,SNR=4.9							
SONM	**Songino Array**	**18.12**	**32**	P		**Pn**	**21 58 17.7**	**+1.1**
	0.4nm,0.3s,baz=214,slow=13,SNR=9.3							
ULN	**Ulaanbaatar**	**18.44**	**33**	*e*P		**Pn**	**21 58 21.3**	**+0.7**
	1.9nm,0.8s							
KBL	**Kabul**	**19.20**	**280**	*e*P		**Pn**	**21 58 29.4**	**-0.4**
	7.2nm,0.9s							
KURK	**Kurchatov**	**20.07**	**334**	*e*P		**P**	**21 58 38.5**	**+0.1**
	2.3nm,0.8s							
ZAA0	**Zalesovo Array**	**21.33**	**348**	*e*P		**P**	**21 58 52.0**	**0.0**
ZALV	**Zalesovo Beam**	**21.33**	**348**	P		**P**	**21 58 51.8**	**-0.2**
	2.6nm,0.7s,mb3.7,baz=172,slow=11,SNR=7.4							
BVAR	**Borovoye Array**	**25.16**	**328**	P		**P**	**21 59 29.7**	**-0.6**
	1.0nm,0.7s,mb3.4,baz=119,slow=11,SNR=5.1							
AKTK	**Aktyubinsk**	**30.31**	**315**	P		**P**	**22 00 16.4**	**-0.1**
AKTO	**Aktyubinsk**	**30.31**	**315**	P		**P**	**22 00 16.4**	**-0.1**
	0.4nm,0.5s,mb3.4,baz=88,slow=12,SNR=3.7							
BR131	**Keskin Array S**	**46.74**	**295**	*e*P		**P**	**22 02 34.1**	**-0.3**
BRTR	**Keskin Array B**	**46.74**	**295**	P		**P**	**22 02 33.8**	**-0.7**
	0.9nm,0.8s,mb3.8,baz=72,slow=7.9,SNR=4.5							
ARCES	**ARCESS Array B**	**51.11**	**335**	P		**P**	**22 03 07.3**	**-0.2**
	0.5nm,0.7s,mb3.6,baz=107,slow=8.2,SNR=3.9							
ASAR	**Alice Springs**	**69.20**	**139**	P		**P**	**22 05 11.3**	**-0.8**
	1.9nm,0.8s,mb4.1,baz=330,slow=7.0,SNR=12							
ILAR	**Eielson Array**	**72.05**	**23**	P		**P**	**22 05 29.1**	**+0.1**
	0.6nm,0.8s,mb3.5,baz=311,slow=4.8,SNR=7.7							

ISCJB ***05*** *21:58:47.1± 2.4, 10.˚85N± 0.˚05× 91.˚76E± 0.˚04, h5km± 15km, mb4.6/57, Error ellipse: s-maj=9.4km s-min=6.2km az=30.9*

IDC ***05*** *21:58:48.2± 0.5, 10.˚79N× 91.˚68E, h0km, mb4.4/18, mb1 4.4/20, mb1mx4.4/24, mbtmpg4.4/20, ML4.1/2, MS3.5/1, Ms1 3.7/1, ms1mx2.3/31, Error ellipse: s-maj=19.2km s-min=13.0km az=64.0*

NEIC ***05*** *21:58:49.6± 0.2, 10.˚82N× 91.˚69E, h10km, mb4.8/37, Error ellipse: s-maj=5.1km s-min=4.1km az=48.0*

ISC 05 21:58:50.6± 2.5, 10.˚83N± 0.˚05× 91.˚74E± 0.˚04, h16km± 15km, n125, σ 0.˚79/117, mb4.6/57, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NST	**Nakhon Sawan**	**9.48**	**59**	P		**Pn**	**22 01 05.0**	**-1.6**
	43nm,1.0s							
CMAR	**Chiang Mai Arr**	**10.29**	**42**	Pn		**Pn**	**22 01 17.9**	**+0.1**
	0.7nm,0.3s,baz=240,slow=15,SNR=17							
CMAR				LR		LR	22 06 11.5	
	comp=Z,275nm,19.6s,baz=220,slow=43							
CHG	**Chiang Mai**	**10.55**	**40**	P		Px	22 01 39.0	
	22nm,0.7s							
CHTO	**Chiang Mai**	**10.55**	**40**	*e*Pn		**Pn**	**22 01 21.1**	**-0.2**
	4.4nm,0.6s							
VIS	**Vishakhapatnam**	**10.64**	**311**	*e*PKP		**Pn**	**22 01 21.6**	**-0.8**
VIS				AMb		AMB	22 01 22.9	
	comp=Z,64nm,0.5s							
VIS				*i* S		**Sn**	**22 03 11.1**	**-10**
PSI	**Prapat**	**10.70**	**138**	Pn		**Pn**	**22 01 25.2**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=312,slow=12,SNR=2.8							
BWNR	**Bhubaneshwar**	**11.01**	**329**	*e*PKP		**Pn**	**22 01 21.0**	**-6.4**
BWNR				*e*S		**Sn**	**22 03 16.0**	**-14**
AGT	**Agartala**	**12.99**	**358**	*e*x		**Pn**	**22 01 58.0**	**+3.5**
HYB	**Hyderabad**	**14.36**	**299**	*i* P		**Pn**	**22 02 13.0**	**-0.3**
HYB				*e*			22 02 22.5	
HYB				*e*S		**Sn**	**22 04 53.0**	**+0.6**
LATR	**Latur**	**16.50**	**299**	*e*PKP		**Pn**	**22 02 40.8**	**-0.7**
LATR				AMb		AMB	22 02 46.3	
	comp=Z,48nm,1.8s							
LATR				*ex*		x	22 04 26.7	
AKL	**Akola**	**17.22**	**307**	*e*PKP		**Pn**	**22 02 52.0**	**+1.4**
AKL				AMb		AMB	22 02 55.9	
	comp=Z,52nm,1.4s							
KAD	**Karad**	**18.20**	**293**	*e*PKP		**Pn**	**22 03 03.2**	**+0.5**
KAD				AMb		AMB	22 03 11.7	
	comp=Z,39nm,1.7s							
BHPL	**Bhopal**	**18.41**	**314**	*e*PKP		**Pn**	**22 03 06.4**	**+1.2**
BHPL				AMb		AMB	22 03 34.9	
	comp=Z,87nm,1.7s							
POO	**Poona**	**18.91**	**296**	*e*PKP		**Pn**	**22 03 10.0**	**-1.4**
POO				AMb		AMB	22 03 14.5	
	comp=Z,36nm,1.9s							
QIZ	**Qiongzhong**	**19.28**	**63**	P		**Pn**	**22 03 13.9**	**-2.0**
COCO	**West Island**	**23.43**	**167**	*e*P		**P**	**22 03 58.8**	**-0.6**
	comp=Z,208nm,1.0s,mb5.5							
YHNB	**Yeheng**	**31.31**	**60**	P		**P**	**22 05 11.0**	**+0.7**
AAK	**Ala-Archa**	**35.07**	**338**	*e*P		**P**	**22 05 42.9**	**0.0**
	comp=Z,5.6nm,0.5s,mb4.8							

MK31	**Makanchi Array**	**36.73**	**349**	*e*P		**P**	**22 05 56.7**	**-0.3**
MKAR	**Makanchi Array**	**36.73**	**349**	P		**P**	**22 05 57.9**	**+0.9**
	comp=Z,12nm,0.8s,mb4.8,baz=168,slow=8.5,SNR=19							
SONM	**Songino Array**	**38.89**	**16**	P		**P**	**22 06 16.5**	**+1.3**
	comp=Z,5.2nm,0.9s,mb4.3,baz=210,slow=7.7,SNR=3.7							
KURK	**Kurchatov**	**41.20**	**347**	*e*P		**P**	**22 06 34.9**	**+0.5**
	comp=Z,20nm,1.4s,mb4.6							
KSRS	**Korea Array**	**41.92**	**45**	P		**P**	**22 06 40.9**	**+0.3**
	comp=Z,2.9nm,0.9s,mb3.9,baz=248,slow=9.1,SNR=4.8							
ZALV	**Zalesovo Beam**	**43.36**	**354**	P		**P**	**22 06 52.4**	**+0.5**
ZALV	**Zalesovo Beam**	**43.36**	**354**	P		**P**	**22 06 52.4**	**+0.5**
	comp=Z,6.9nm,0.6s,mb4.6,baz=166,slow=8.5,SNR=8.1							
FITZ	**Fitzroy Crossi**	**44.12**	**130**	*e*P		**P**	**22 06 58.3**	**-0.2**
	comp=Z,19nm,0.9s,mb4.8							
FITZ	**Fitzroy Crossi**	**44.12**	**130**	P		**P**	**22 06 57.8**	**-0.7**
	comp=Z,5.3nm,0.8s,mb4.3,baz=289,slow=6.2,SNR=7.6							
HIA	**Hailar**	**44.82**	**26**	P		**P**	**22 07 05.1**	**+1.3**
BVAR	**Borovoye Array**	**45.45**	**342**	P		**P**	**22 07 08.2**	**-0.5**
	comp=Z,2.2nm,0.8s,mb4.1,baz=136,slow=9.4,SNR=4.1							
ABKAR	**Akbulak array**	**46.52**	**332**	*e*P		**P**	**22 07 17.7**	**+0.5**
	comp=Z,7.2nm,1.0s,mb4.6							
MDJ	**Mudanjiang**	**46.79**	**37**	P		**P**	**22 07 20.4**	**+1.1**
AKTK	**Aktyubinsk**	**48.23**	**332**	P		**P**	**22 07 31.1**	**+0.6**
AKTO	**Aktyubinsk**	**48.23**	**332**	P		**P**	**22 07 31.1**	**+0.6**
	comp=Z,3.6nm,0.7s,mb4.5,baz=113,slow=14,SNR=4.4							
MJAR	**Matsushiro Arr**	**49.03**	**51**	P		**P**	**22 07 39.2**	**+2.2**
	comp=Z,0.9nm,0.5s,mb4.0,baz=209,slow=6.2,SNR=4.2							
NWAO	**Narrogin (SRO)**	**49.85**	**152**	*e*P		**P**	**22 07 42.8**	**-0.4**
WRAB	**Tennant Creek**	**51.91**	**126**	*e*P		**P**	**22 07 58.9**	**0.0**
	comp=Z,12nm,0.4s,mb5.2							
WB2	**Warramunga Arr**	**51.91**	**126**	*e*P		**P**	**22 07 58.8**	**-0.1**
ARU	**Arti**	**52.26**	**337**	*e*P		**P**	**22 07 59.6**	**-1.3**
KIV	**Kislovodsk**	**53.55**	**317**	*e*P		**P**	**22 08 11.9**	**+1.2**
	comp=Z,13nm,0.6s,mb5.0							
ASAR	**Alice Springs**	**53.62**	**130**	P		**P**	**22 08 11.2**	**-0.2**
	comp=Z,3.4nm,0.8s,mb4.4,baz=306,slow=6.9,SNR=23							
MALT	**Malatya**	**54.76**	**309**	*e*P		**P**	**22 08 20.4**	**+0.8**
	comp=Z,7.2nm,0.9s,mb4.7							
KMBO	**Kilima Mbogo**	**55.47**	**261**	*e*P		**P**	**22 08 27.2**	**+2.1**
	comp=Z,4.4nm,1.1s,mb4.4							
YAK	**Yakutsk**	**58.00**	**20**	P		**P**	**22 08 42.6**	**+0.3**
BR131	**Keskin Array S**	**58.72**	**310**	*e*P		**P**	**22 08 47.2**	**-0.5**
	comp=Z,4.5nm,1.0s,mb4.5							
BRTR	**Keskin Array B**	**58.72**	**310**	P		**P**	**22 08 47.0**	**-0.8**
	comp=Z,6.5nm,0.9s,mb4.7,baz=101,slow=6.4,SNR=4.7							
CTAO	**Charters Tower**	**61.82**	**120**	*e*P		**P**	**22 09 08.6**	**-0.7**
	comp=Z,16nm,1.6s,mb4.9							
TIRR	**Tirgusor**	**63.50**	**314**	*e*P		**P**	**22 09 20.1**	**0.0**
	comp=Z,3.9nm,0.7s,mb4.5							
STKA	**Stephens Creek**	**63.85**	**134**	*e*P		**P**	**22 09 22.6**	**+0.1**
	comp=Z,1.4nm,0.6s,mb4.2							
STKA	**Stephens Creek**	**63.85**	**134**	P		**P**	**22 09 22.0**	**-0.5**
	comp=Z,2.2nm,0.6s,mb4.4,baz=301,slow=12,SNR=5.3							
AKASG	**Malin Array Be**	**64.38**	**321**	P		**P**	**22 09 24.9**	**-0.9**
	comp=

comp=Z,7.8nm,0.7s,mb5.0
ESDC Sonseca Array 87.51 310 P **P** **22 11 38.5 +0.6**
comp=Z,0.4nm,0.5s,mb3.9,baz=60,slow=4.1,SNR=6.2
ESLA Sonseca Array 87.51 310 *e*P **P** **22 11 38.0 +0.1**
comp=Z,0.7nm,0.9s,mb3.9
BPAW Bear Paw Mtn. 91.72 23 *e*P **P** **22 11 58.0 +0.9**
comp=Z,4μm,1.2s
DBIC Dimbokro 95.19 278 *e*P **P** **22 12 14.3 +0.1**
NVAR Mina Array Bea 123.53 28 PKP PKPdf 22 17 49.0 +1.3
comp=Z,1.1nm,0.6s,baz=321,slow=2.8,SNR=9.2
TXAR Lajitas Array 137.39 20 PKP PKPdf 22 18 16.2 +2.0
comp=Z,0.3nm,0.5s,baz=124,slow=0.5,SNR=5.7
TXAR Lajitas Array 137.39 20 PKIKP PKPdf 22 18 16.2 +2.0
PLCA Paso Flores 146.36 205 PKPbc PKPbc 22 18 31.8 +0.8
comp=Z,3.0nm,0.7s,baz=200,slow=5.9,SNR=4.7
CPUP Villa Florida 147.00 238 PKPbc PKPbc 22 18 33.2 -0.1
CPUP Villa Florida 147.00 238 PKPbc PKPbc 22 18 33.2 -0.1
comp=Z,3.1nm,0.7s,baz=61,slow=5.8,SNR=9.2
CFAA Coronel Fontan 152.25 219 PKPbc PKPbc 22 18 46.3 +0.1
comp=Z,0.9nm,0.5s,baz=108,slow=2.1,SNR=12
CFAA PKPab PKPab 22 18 56.6 +0.6
comp=Z,0.5nm,0.5s,baz=223,slow=0.9,SNR=5.4
SIV San Ignacio 153.07 256 PKPbc PKPbc 22 18 48.0 -0.5
comp=Z,0.8nm,0.8s,baz=111,slow=8.9,SNR=4.8
SIV PKPab PKPab 22 19 00.8 +0.9
comp=Z,2.6nm,0.8s,baz=119,slow=5.8,SNR=11
SDV Santo Domingo 153.71 318 *e*PKPdf PKPdf 22 18 42.2 +0.1
LPAZ La Paz 159.70 252 PKPab PKPab 22 19 28.1 -0.3
comp=Z,0.9nm,0.7s,baz=76,slow=8.3,SNR=5.8

ISCJB ***05*** *21:59:42.8±0.1, 33.˚19N×0.˚02×92.˚01E±0.˚02, h10km, mb5.0/186, MS4.4/49, Error ellipse: s-maj=3.0km s-min=2.5km az=3.6*
LDG ***05*** *21:59:42.9±0.3, 33.˚31N×91.˚73E, h10km, Mb5.2/35, Ms4.2/9, Error ellipse: s-maj=11.8km s-min=4.4km az=120.0*
IDC ***05*** *21:59:42.7±0.4, 33.˚13N×92.˚07E, h0km, mb4.8/27, mb1 4.9/31, mb1mx4.8/33, mbtmp4.8/31, ML4.0/4, MS4.1/17, Ms1 4.1/17, ms1mx3.9/32, Error ellipse: s-maj=14.9km s-min=10.4km az=43.0*
BJI ***05*** *21:59:44.0, 33.˚16N×92.˚11E, h13km, mB5.0/30, mb4.8/37, ML5.0/3, Ms5.0/54, Ms7 4.8/47*
NEIC ***05*** *21:59:44.2±0.2, 33.˚12N×91.˚97E, h10km, mb5.2/108, MS4.5/4, Error ellipse: s-maj=5.0km s-min=3.6km az=206.0*
MOS ***05*** *21:59:45.8±0.9, 33.˚15N×92.˚02E, h33km, mb5.2/93, MS4.4/33, Error ellipse: s-maj=7.3km s-min=3.7km az=125.8*
GCMT ***05*** *21:59:49.6±0.2, 33.˚13N×92.˚22E, h15km, MW5.0, Moment Tensor Solution. s36,c46; s67,c116; Moment tensor: Scale 10^{16}Nm; M_{rr}=1.93±.14; $M_{t\theta}$=-2.51±.10; $M_{t\phi}$=4.44±.12; $M_{r\theta}$=-1.93±.37; $M_{r\phi}$=1.39±.08; $M_{\theta\phi}$=0.86±.32; Best double couple: M_0=4.60000×10^{16} NP1:ϕ_s=49.00000°, δ60.00000°, λ-27.00000°. NP2:ϕ_s=153.00000°, δ67.00000°, λ-147.00000°. Principal axes: T 4.7500, Plg4.0000°, Azm280.0000°; N -0.2800, Plg50.0000°, Azm184.0000°; P -4.4700, Plg39.0000°, Azm13.0000°; Data Used: II IC IU G CN.*
SZGRF ***05*** *21:59:50.4, 33.˚37N×91.˚65E, h33km, mb5.1, MS4.5, Qinghai, China*
ISC 05 21:59:44.8±0.1, 33.˚18N±0.˚02×91.˚99E±0.˚02, h10km, n552,
σ1s04/579, mb5.0/186, MS4.4/49, 27C-36D, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
LSA	**Lhasa**	**3.54**	**192**	Pg	**Pb**	**22 00 46.9**	**-0.6**
LSA				Sg	**Sg**	**22 01 37.0**	**-1.6**
LSA				smax			
	comp=N,10μm,1.0s						
LSA				smax			
	comp=E,33μm,1.0s						
LSA	**Lhasa**	**3.54**	**192**	*e*Pn	**Pb**	**22 00 45.4**	**-2.1**
LSA				*e*S	**Sg**	**22 01 38.1**	**-0.5**
TAPN	**Taplejung**	**6.89**	**214**	*e*P	**Pn**	**22 01 30.1**	**+4.3**
GUN	**Gumba**	**7.44**	**227**	*e*P	**Pn**	**22 01 36.7**	**+3.3**
	comp=E,312nm,0.8s						
JIRN	**Jiri**	**7.44**	**224**	*e*P	**Pn**	**22 01 36.9**	**+3.5**
	comp=E,107nm,0.5s						
ODAN	**Odare**	**7.46**	**214**	*e*P	**Pn**	**22 01 36.3**	**+2.7**
SHL	**Shillong**	**7.59**	**181**	*ex*	**Pn**	**22 01 36.0**	**+0.6**
SHL				*ex*	**Sn**	**22 03 01.5**	**0.0**
RAMN	**Ramite**	**7.77**	**218**	*e*P	**Pn**	**22 01 39.9**	**+2.0**
	comp=E,307nm,0.7s						
KKN	**Kakani**	**7.90**	**229**	*e*P	**Pn**	**22 01 42.8**	**+3.1**
	comp=E,221nm,0.7s						
PKI	**Pulchoki**	**7.97**	**227**	*e*P	**Pn**	**22 01 43.2**	**+2.5**
	comp=E,94nm,0.4s						
PKIN	**Phulchoki**	**7.98**	**227**	*e*P	**Pn**	**22 01 43.3**	**+2.5**
	comp=E,147nm,0.5s						
DMN	**Daman**	**8.14**	**229**	*e*P	**Pn**	**22 01 46.1**	**+3.2**
	comp=E,214nm,0.7s						
GKN	**Gorkha**	**8.17**	**233**	*e*P	**Pn**	**22 01 45.6**	**+2.2**
	comp=E,128nm,0.5s						
GTA	**Gaotai**	**8.86**	**43**	⇓P	**Pn**	**22 01 53.5**	**+0.7**
GTA				pP		22 01 57.1	
GTA				sP		22 01 59.1	
GTA				S	**Sn**	**22 03 34.4**	**+1.8**
GTA				sS		22 03 38.8	
GTA				pmax	pmax		
	comp=Z,41nm,1.2s						
GTA				pmax	pmax		
	comp=Z,320nm,4.8s						
GTA				LR	LR		
	comp=N,7μm,12.0s						
GTA				LR	LR		
	comp=E,5μm,11.1s						
GTA				LR	LR		
	comp=Z,5μm,9.9s						
KOLN	**Koldanda**	**9.03**	**236**	*e*P	**Pn**	**22 01 58.0**	**+2.8**
	comp=Z,132nm,0.6s						
LZH	**Lanzhou**	**10.18**	**70**	*e*P	**Pn**	**22 02 13.6**	**+2.6**
LZH				pP		22 02 15.5	
LZH				sP		22 02 16.7	
LZH				PP		22 02 21.0	
LZH				S	**Sn**	**22 04 06.0**	**+0.8**
LZH				sS		22 04 13.5	
LZH				SS		22 04 21.2	
LZH				pmax	pmax		
	comp=Z,33nm,1.0s						
LZH				pmax	pmax		
	comp=Z,140nm,4.0s						
LZH				LR	LR		
	comp=N,12μm,9.8s						
LZH				LR	LR		
	comp=Z,15μm,10.6s						
CD2	**Chengdu**	**10.24**	**100**	P	**Pn**	**22 02 13.2**	**+1.5**
CD2				pP		22 02 16.4	
CD2				sP		22 02 19.2	
CD2				PP		22 02 21.5	
CD2				S	**Sn**	**22 04 09.4**	**+2.8**
CD2				sS		22 04 15.0	
CD2				SS		22 04 22.7	
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				pmax	pmax		
	comp=Z,300nm,5.1s						
CD2				LR	LR		
	comp=N,9μm,6.8s						
CD2				LR	LR		
	comp=E,12μm,7.2s						
CD2				LR	LR		
	comp=Z,11μm,8.2s						
WMQ	**Urumqi**	**11.14**	**344**	P	**Pn**	**22 02 26.4**	**+2.3**
WMQ				pP		22 02 29.6	
WMQ				sP		22 02 32.7	
WMQ				PP		22 02 35.0	
WMQ				S	**Sn**	**22 04 31.5**	**+2.8**
WMQ				sS		22 04 36.6	
WMQ				SS		22 04 45.1	
WMQ				pmax	pmax		
	comp=Z,31nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,350nm,4.6s						
WMQ				LR	LR		
	comp=N,5μm,12.2s						
WMQ				LR	LR		
	comp=E,7μm,12.0s						
WMQ				LR	LR		
	comp=Z,6μm,12.3s						
KMI	**Kunming**	**12.35**	**128**	P	**Pn**	**22 02 39.5**	**-1.1**
KMI				pP		22 02 43.0	
KMI				PP		22 02 49.8	
KMI				S	**Sn**	**22 04 59.6**	**+1.3**
KMI				sS		22 05 03.6	
KMI				SS		22 05 15.0	
KMI				pmax	pmax		
	comp=Z,19nm,1.1s						
KMI				pmax	pmax		
	comp=Z,220nm,3.3s						
KMI				LR	LR		
	comp=N,4μm,9.5s						
KMI				LR	LR		
	comp=E,4μm,12.4s						
KMI				LR	LR		
	comp=Z,3μm,8.3s						
XAN	**Xi'an**	**14.14**	**82**	P	**Pn**	**22 03 06.5**	**+1.5**
XAN				S	**Sn**	**22 05 34.2**	**-7.7**
XAN				LR	LR		
	comp=N,2μm,10.1s						
XAN				LR	LR		
	comp=E,1μm,8.3s						
XAN				LR	LR		
	comp=Z,860nm,8.1s						
KSH	**Kashi**	**14.37**	**301**	P	**Pn**	**22 03 12.7**	**+4.5**
KSH				*ep*P	pP	22 03 17.2	-0.9
KSH				*es*P	sP	22 03 21.4	+2.0
KSH				*e*PP		22 03 24.7	
KSH				*e*S	**Sn**	**22 05 54.0**	**+6.4**
KSH				*es*S		22 06 02.4	
KSH				*e*SS		22 06 12.1	
KSH				*e*PcP	PcP	22 08 26.7	+2.2
KSH				pmax	pmax		
	comp=Z,52nm,2.7s						
KSH				LR	LR		
	comp=N,2μm,8.2s						
KSH				LR	LR		
	comp=E,1μm,8.7s						
KSH				LR	LR		
	comp=Z,2μm,7.6s						
GYA	**Guiyang**	**14.38**	**114**	⇑*i*P	**Pn**	**22 03 05.2**	**-3.2**
GYA				S	**Sn**	**22 05 38.9**	**-9.1**
GYA				pmax	pmax		
	comp=Z,90nm,1.0s						
GYA				pmax	pmax		
	comp=Z,180nm,5.6s						
GYA				LR	LR		
	comp=N,2μm,8.4s						
GYA				LR	LR		
	comp=E,2μm,9.0s						
GYA				LR	LR		
	comp=Z,3μm,8.9s						
ENH	**Enshi**	**15.17**	**96**	*e*Pn	**Pn**	**22 03 16.5**	**-2.6**
	comp=Z,73nm,0.9s						
ULHL	**Ulahol**	**15.38**	**311**	P	**Pn**	**22 03 29.9**	**+8.0**
	SNR=11						
MK31	**Makanchi Array**	**15.48**	**334**	⇓*e*Pn	**Pn**	**22 03 21.6**	**-1.4**
MK31	**Makanchi Array**	**15.48**	**334**	*ce*P	**Pn**	**22 03 21.3**	**-1.7**
MK31				pmax	pmax		
	comp=Z,63nm,1.2s						
MKAR	**Makanchi Array**	**15.48**	**334**	Pn	**Pn**	**22 03 22.5**	**-0.5**
MKAR				LR	LR	22 09 26.3	
MKAR	**Makanchi Array**	**15.48**	**334**	Pn	**Pn**	**22 03 22.5**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=142,slow=14,SNR=55						
MKAR				LR	LR	22 09 26.3	
	comp=Z,600nm,20.2s,baz=324,slow=38						
MKAR	**Makanchi Array**	**15.48**	**334**	*i* P	**Pn**	**22 03 22.5**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,22nm,0.9s						
CHTO	**Chiang Mai**	**15.60**	**155**	*e*Pn	**Pn**	**22 03 19.2**	**-5.6**
	comp=Z,23nm,0.9s						
CHTO				*e*S	**Sn**	**22 06 31.1**	**+13**
CHTO	**Chiang Mai**	**15.60**	**155**	*e*P	**Pn**	**22 03 19.2**	**-5.6**
CHTO				pmax	pmax		
	comp=Z,23nm,0.9s						
CHCP	**Chirah Chowk**	**15.65**	**277**	P	**Pn**	**22 03 26.1**	**+0.7**
CMAR	**Chiang Mai Arr**	**15.93**	**155**	Pn	**Pn**	**22 03 26.6**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=67,slow=6.4,SNR=6.2						
CMAR				PcP	PcP	22 08 26.3	-0.7
	comp=Z,0.2nm,0.3s,baz=295,slow=2.0,SNR=6.5						
KZA	**Kyzart**	**15.94**	**309**	P	**Pn**	**22 03 36.6**	**+7.5**
	SNR=27						
BTO	**Baotou**	**16.20**	**58**	*e*P	**Pn**	**22 03 30.0**	**-2.4**
SARP	**Sargodha**	**16.34**	**271**	P	**Pn**	**22 03 35.4**	**+1.1**
KBK	**Karagaybulak**	**16.42**	**310**	P	**Pn**	**22 03 42.4**	**+7.2**
	SNR=46						
UCH	**Uchtor**	**16.50**	**308**	P	**Pn**	**22 03 42.2**	**+6.0**
	SNR=60						
AAK	**Ala-Archa**	**16.70**	**309**	P	**Pn**	**22 03 44.2**	**+5.4**
	comp=Z,258nm,1.1s,SNR=14						
AAK	**Ala-Archa**	**16.70**	**309**	P	**Pn**	**22 03 44.8**	**+6.0**
	SNR=12						
AAK	**Ala-Archa**	**16.70**	**309**	*e*Pn	**Pn**	**22 03 38.5**	**-0.3**
AAK				*e*S	**Sn**	**22 06 55.8**	**+12**
AAK				LR	LR	22 11 12.9	
AAK	**Ala-Archa**	**16.70**	**309**	Pn	**Pn**	**22 03 40.2**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=108,slow=4.7,SNR=29						
AAK				LR	LR	22 11 12.9	
	comp=Z,2μm,21.1s,baz=105,slow=41						
AAK	**Ala-Archa**	**16.70**	**309**	⇑*i*P	**Pn**	**22 03 40.8**	**+2.0**
AAK				pmax	pmax		
	comp=Z,40nm,1.9s						
CHMS	**Chumysh**	**16.71**	**311**	P	**Pn**	**22 03 42.3**	**+3.4**
	SNR=13						
CEP	**Cherat**	**16.77**	**278**	P	**Pn**	**22 03 39.2**	**-0.5**
AML	**Almayashu**	**17.00**	**307**	P	**Pn**	**22 03 45.9**	**+3.4**
	SNR=30						
THW	**Thamme Wali**	**17.00**	**274**	P	**Pn**	**22 03 42.1**	**-0.5**
USP	**Ospenovka**	**17.01**	**311**	P	**Pn**	**22 03 46.2**	**+3.6**
	SNR=16						
EKS2	**Erkin-Say**	**17.18**	**309**	P	**Pn**	**22 03 48.0**	**+3.1**
	SNR=49						
HHC	**Hu-ho-hao-te**	**17.38**	**58**	*e*P	**Pn**	**22 03 48.0**	**+0.7**
HHC				pP	pP	22 03 51.4	-0.1
HHC				sP	sP	22 03 55.0	+2.2
HHC				PP		22 04 02.5	
HHC				S	**Sn**	**22 06 55.5**	**-5.3**
HHC				sS	sS	22 07 03.3	-11
HHC				SS		22 07 19.1	
HHC				pmax	pmax		
	comp=Z,150nm,4.5s						
HHC				LR	LR		
	comp=N,2μm,10.5s						
HHC				LR	LR		
	comp=E,2μm,12.6s						
HHC				LR	LR		
	comp=Z,2μm,13.6s						
SONM	**Songino Array**	**18.23**	**32**	P	**Pn**	**22 03 58.5**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=217,slow=12,SNR=82						
SONM				LR	LR	22 12 15.1	
	comp=Z,264nm,19.4s,baz=220,slow=41						
ULN	**Ulaanbaatar**	**18.56**	**33**	⇓*e*P	**Pn**	**22 04 01.4**	**-0.3**
	comp=Z,48nm,1.1s						
ULN	**Ulaanbaatar**	**18.56**	**33**	⇓*e*P	**Pn**	**22 04 01.5**	**-0.2**
ULN				pmax	pmax		
	comp=Z,48nm,1.1s						
ULN	**Ulaanbaatar**	**18.56**	**33**	P	**Pn**	**22 04 02.1**	**+0.3**
	SNR=35						
ZAK	**Zakamensk**	**19.10**	**23**	⇑*i*P	**Pn**	**22 04 08.1**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,28nm,1.3s						
KBL	**Kabul**	**19.11**	**280**	⇓*e*P	**Pn**	**22 04 08.7**	**+0.1**
	comp=Z,143nm,1.0s						
KBL				*e*S	**Sn**	**22 07 45.7**	**+3.1**
KBL	**Kabul**	**19.11**	**280**	⇓*e*P	**Pn**	**22 04 08.7**	**+0.2**
KBL				*e*S	**Sn**	**22 07 45.7**	**+3.1**
KBL				pmax	pmax		
	comp=Z,143nm,1.0s						
KK31	**Karatay Array**	**19.54**	**307**	*ce*P	**Pn**	**22 04 14.1**	**+0.5**
KK31				pmax	pmax		
	comp=Z,7.0nm,0.4s						
MOY	**Mondy**	**19.60**	**17**	*e*P	**Pn**	**22 04 14.8**	**+0.5**
MOY				pmax	pmax		
	comp=Z,81nm,1.9s						
HYB	**Hyderabad**	**19.82**	**221**	*i* P	**Pn**	**22 04 18.0**	**+0.9**
KURK	**Kurchatov**	**20.09**	**335**	P	**P**	**22 04 18.9**	**+0.6**
	comp=Z,236nm,0.7s,SNR=44						
KURK	**Kurchatov**	**20.09**	**335**	⇓*e*P	**P**	**22 04 18.1**	**-0.3**
	comp=Z,37nm,0.9s						
KURK				*e*S	**S**	**22 08 05.9**	**+2.0**
KURK	**Kurchatov**	**20.09**	**335**	*d* iP	**P**	**22 04 18.2**	**-0.1**
KURK				pmax	pmax		
	comp=Z,61nm,1.2s						
KURK	**Kurchatov**	**20.09**	**335**	P	**P**	**22 04 18.6**	**+0.3**
	SNR=6.6						
TLY	**Talaya**	**20.34**	**21**	Pn	**P**	**22 04 23.4**	**+2.4**
	comp=Z,168nm,1.4s,SNR=8.6						
TLY	**Talaya**	**20.34**	**21**	⇓*e*P	**P**	**22 04 22.2**	**+1.1**
	comp=Z,45nm,1.2s						
TLY				*e*S	**S**	**22 08 19.6**	**+11**
TLY	**Talaya**	**20.34**	**21**	*e*P	**P**	**22 04 23.3**	**+2.3**
TLY				*e*SS		22 08 50.5	
TLY				pmax	pmax		
	comp=Z,55nm,1.3s						
TLY				MLR	MLR		
	comp=Z,1μm,21.0s,MS4.2						
TLY	**Talaya**	**20.34**	**21**	P	**P**	**22 04 23.0**	**+2.0**
	SNR=6.6						
BJT	**Baijiatuau**	**20.54**	**64**	*e*P	**P**	**22 04 23.2**	**0.0**
	comp=Z,20nm,0.9s						
BJT				*e*S	**S**	**22 08 14.4**	**+1.4**
BJT	**Baijiatuau**	**20.54**	**64**	*e*P	**P**	**22 04 23.3**	**0.0**
BJT				*e*S	**S**	**22 08 14.4**	**+1.4**
BJT				pmax	pmax		
	comp=Z,20nm,0.9s						
BJI	**Beijing**	**20.55**	**64**	P	**P**	**22 04 24.1**	**+0.7**
BJI				pP		22 04 27.9	
BJI				sP	sP	22 04 29.1	+1.6
BJI				S	**S**	**22 08 15.4**	**+2.2**
BJI				LR	LR		
	comp=N,8μm,12.9s,MS5.3						
BJI				LR	LR		
	comp=E,2μm,12.9s,MS5.3						
BJI				LR	LR		
	comp=Z,870nm,17.5s,MS4.2						
TIA	**Tai'an**	**20.87**	**75**	P	**P**	**22 04 26.4**	**-0.5**
TIA				S	**S**	**22 08 20.0**	**+0.4**
TIA				LR	LR		
	comp=N,2μm,9.8s						
TIA				LR	LR		
	comp=E,2μm,9.4s						
IRK	**Irkutsk**	**21.02**	**21**	⇓*i*P	**P**	**22 04 30.4**	**+2.0**
IRK				*e*		22 04 49.5	
IRK				pmax	pmax		
	comp=Z,270nm,1.6s,mb5.3						
QIZ	**Qiongzhong**	**21.30**	**127**	P	**P**	**22 04 33.8**	**+2.2**
QIZ				S	**S**	**22 08 25.8**	**-2.4**
QIZ				sS	sS	22 08 31.0	-1.8
QIZ				SS		22 09 00.5	
QIZ				pmax	pmax		
	comp=Z,50nm,1.9s,mb4.5						
QIZ				pmax	pmax		
	comp=Z,2μm,9.4s						
QIZ				LR	LR		
	comp=N,3μm,12.9s,MS4.8						
QIZ				LR	LR		
	comp=E,1μm,13.5s,MS4.8						
QIZ				LR	LR		
	comp=Z,2μm,9.4s						
ZAA0	**Zalesovo Array**	**21.38**	**348**	⇓*i*P	**P**	**22 04 31.8**	**-0.4**
ZAA0				*e*S	**S**	**22 08 29.1**	**-0.2**
ZALV	**Zalesovo Beam**	**21.38**	**348**	P	**P**	**22 04 32.0**	**-0.3**
	comp=Z,31nm,0.9s,mb4.6,baz=158,slow=9.6,SNR=126						
ZALV				LR	LR	22 14 04.4	
	comp=Z,191nm,19.5s,MS3.5,baz=337,slow=40						
ZALV	**Zalesovo Beam**	**21.38**	**348**	P	**P**	**22 04 32.0**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,31nm,0.9s,mb4.6						
ZALV				MLR	MLR		
	comp=Z,191nm,19.5s,MS3.5						
QUE	**Quetta**	**21.51**	**269**	*e*P	**P**	**22 04 35.0**	**+1.2**
QUE				*e*S	**S**	**22 08 28.0**	**-4.3**
NVS	**Novosibirsk**	**22.52**	**347**	⇓*i*P	**P**	**22 04 43.5**	**-0.9**
NVS				*e*S	**S**	**22 08 48.6**	**-2.9**
NVS				pmax	pmax		
	comp=N,104nm,1.6s						
NVS				pmax	pmax		
	comp=E,46nm,1.6s						
NVS				pmax	pmax		
	comp=Z,103nm,1.6s,mb5.0						
NVS				smax			
	comp=N,13nm,1.7s						
NVS				smax			
	comp=E,30nm,1.8s						
QZH	**Quanzhou**	**24.61**	**103**	*e*P	**P**	**22 05 06.5**	**+1.3**
QZH				*e*S	**S**	**22 09 25.0**	**-1.4**
QZH				LR	LR		
	comp=N,3μm,9.2s						
QZH				LR	LR		
	comp=E,2μm,4.4s						
QZH				LR	LR		
	comp=Z,3μm,13.3s,MS4.9						
SSE	**Sheshan**	**24.77**	**87**	P	**P**	**22 05 07.4**	**+0.7**
SSE				S	**S**	**22 09 26.8**	**-2.3**
SSE				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.8						
SSE				pmax	pmax		
	comp=Z,240nm,5.2s						
SSE				LR	LR		
	comp=N,820nm,11.2s,MS4.7						
SSE				LR	LR		
	comp=E,980nm,11.3s,MS4.7						
SSE				LR	LR		
	comp=Z,1μm,12.5s,MS4.7						
BVAR	**Borovoye Array**	**25.17**	**328**	P	**P**	**22 05 10.8**	**+0.8**
	comp=Z,22nm,0.9s,mb4.7,baz=133,slow=11,SNR=81						
BVAR				PcP	PcP	22 08 43.0	-0.7
	comp=Z,1.6nm,0.7s,baz=153,slow=0.3,SNR=3.5						
BVAR	**Borovoye Array**	**25.17**	**328**	P	**P**	**22 05 10.8**	**+0.8**
BVAR						22 08 43.0	
BVAR				pmax	pmax		
	comp=Z,22nm,0.9s						
BRVK	**Borovoye**	**25.24**	**328**	P	**P**	**22 05 11.7**	**+1.0**
	comp=Z,252nm,0.9s,mb5.8,SNR=22						
BRVK	**Borovoye**	**25.24**	**328**	⇓*i*P	**P**	**22 05 11.1**	**+0.5**
	comp=Z,48nm,1.0s,mb5.0						
BRVK				*e*S	**S**	**22 09 36.5**	**+0.5**
BRVK	**Borovoye**	**25.24**	**328**	*d* iP	**P**	**22 05 11.1**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,66nm,1.2s,mb5.0						
BRVK	**Borovoye**	**25.24**	**328**	P	**P**	**22 05 11.8**	**+1.1**
	SNR=30						
HIA	**Hailar**	**26.14**	**44**	*e*P	**P**	**22 05 19.4**	**+0.5**
	comp=Z,13nm,0.9s,mb4.5						
HIA	**Hailar**	**26.14**	**44**	*e*P	**P**	**22 05 19.4**	**+0.5**
HIA				pmax	pmax		
	comp=Z,13nm,0.9s						
SNY	**Shenyang**	**26.39**	**62**	⇓P	**P**	**22 05 18.3**	**-2.9**
SNY				S	**S**	**22 09 44.6**	**-10**
SNY				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.6						
SNY				LR	LR		
	comp=N,990nm,9.1s						
SNY				LR	LR		
	comp=E,1μm,12.1s						
SNY				LR	LR		
	comp=Z,1μm,10.4s,MS4.7						
ABKT	**Ailbek**	**27.87**	**289**	P	**P**	**22 05 36.6**	**+2.0**
	comp=Z,222nm,1.1s,mb5.7,SNR=21						
CN2	**Changchun**	**28.08**	**58**	*e*P	**P**	**22 05 36.3**	**-0.1**
CN2				*e*S	**S**	**22 10 19.3**	**-1.8**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,1μm,12.0s,MS4.7						
CN2				LR	LR		
	comp=E,600nm,12.0s,MS4.7						
CN2				LR	LR		
	comp=Z,400nm,12.0s,MS4.2						
AB31	**Akbulak array**	**28.69**	**314**	*ce*P	**P**	**22 05 42.0**	**+0.2**
AB31				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.0						
ABKAR	**Akbulak array**	**28.69**	**314**	*e*P	**P**	**22 05 42.5**	**+0.7**
	comp=Z,18nm,0.8s,mb4.8						
KSRS	**Korea Array**	**29.51**	**71**	P	**P**	**22 05 47.7**	**-1.5**
	comp=Z,2.9nm,0.9s,mb4.0,baz=275,slow=9.2,SNR=16						
KSRS				PcP	PcP	22 08 53.7	-0.7
	comp=Z,0.4nm,0.4s,baz=281,slow=1.1,SNR=4.2						
KSRS				ScP	ScP	22 12 36.9	+0.6
	comp=Z,0.4nm,0.3s,baz=19,slow=31,SNR=5.2						
KSRS				LR	LR	22 18 19.5	
	comp=Z,432nm,20.4s,MS4.1,baz=273,slow=38						
KSRS	**Korea Array**	**29.51**	**71**	P	**P**	**22 05 47.7**	**-1.5**
KSRS						22 08 53.7	
KSRS						22 12 36.9	
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
KSRS				MLR	MLR		
	comp=Z,432nm,20.4s,MS4.1						
AKTK	**Aktyubinsk**	**30.29**	**315**	P	**P**	**22 05 56.8**	**+0.9**
AKTK				LR	LR	22 19 47.1	

AKTO Aktyubinsk 30.29 315 P **P** **22 05 56.8 +0.9**
comp=Z,14nm,0.8s,mb4.7,baz=107,slow=8.7,SNR=46
AKTO LR LR 22 19 47.1
comp=Z,757nm,18.0s,MS4.4,baz=287,slow=40
AKTO Aktyubinsk 30.29 315 P **P** **22 05 56.8 +0.9**
AKTO pmax pmax
comp=Z,14nm,0.9s,mb4.7
AKTO MLR MLR
comp=Z,757nm,18.0s,MS4.4
PSI Prapat 30.91 166 P **P** **22 06 01.9 +0.2**
comp=Z,11nm,0.8s,mb4.8,baz=290,slow=9.3,SNR=8.4
PSI Prapat 30.91 166 P **P** **22 06 02.0 +0.3**
PSI pmax pmax
comp=Z,11nm,0.8s,mb4.7
MDJ Mudanjiang 31.15 57 P **P** **22 06 05.0 +1.4**
MDJ pP pP 22 06 06.8 +0.1
MDJ sP sP 22 06 09.7 +1.8
MDJ PcP PcP 22 08 59.8 +1.3
MDJ S **S** **22 11 10.8 +1.5**
MDJ ScP ScP 22 12 40.4 -1.1
MDJ PcS PcS 22 12 42.3 -0.2
MDJ ScS ScS 22 16 38.0 -0.6
MDJ pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
MDJ pmax pmax
comp=Z,66nm,6.7s
MDJ LR LR
comp=N,3μm,19.3s
MDJ LR LR
comp=E,340nm,14.1s
MDJ LR LR
comp=Z,370nm,20.2s,MS4.0
SVE Sverdlovsk 31.93 327⇑ *e*P **P** **22 06 11.4 +1.1**
SVE pmax pmax
comp=Z,68nm,0.9s,mb5.5
SVE MLR MLR
comp=Z,950nm,15.0s,MS4.6
CLNS Chul'man 32.64 34 *e*P **P** **22 06 15.4 -1.2**
CLNS *e**PP pP 22 06 24.3 +4.7
CLNS *e* 22 07 23.3
CLNS *e*PPP 22 07 34.6
CLNS *e* 22 08 58.8
CLNS *e*S **S** **22 11 30.9 -1.4**
CLNS pmax pmax
comp=Z,14nm,1.4s,mb4.7
CLNS pmax pmax
comp=N,9,0nm,1.1s
CLNS pmax pmax
comp=E,6.0nm,1.0s
CLNS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
CLNS pmax pmax
comp=N,5.0nm,0.9s
CLNS pmax pmax
comp=E,4.0nm,1.0s
CLNS smax
comp=N,56nm,12.4s
CLNS smax
comp=E,53nm,11.9s
CLNS MLR MLR
comp=E,725nm,11.0s,MS4.7
CLNS MLR MLR
comp=Z,815nm,10.0s,MS4.7
CLNS MLR MLR
comp=N,320nm,11.0s,MS4.7
ARU Arti 32.68 325⇓ *e*P **P** **22 06 17.4 +0.5**
comp=N,20nm,0.8s,mb5.1
ARU Arti 32.68 325 *d i*P **P** **22 06 17.3 +0.4**
ARU *e* 22 07 25.4
ARU *e*PPP 22 07 36.2
ARU 22 08 57.1
ARU S **S** **22 11 33.0 +0.1**
ARU SS SS 22 13 30.8 -22
ARU SSS 22 13 51.6
ARU pmax pmax
comp=Z,38nm,1.2s,mb5.2
ARU MLR MLR
comp=Z,720nm,17.0s,MS4.4
ARU Arti 32.68 325 P **P** **22 06 17.0 +0.1**
comp=Z,164nm,0.8s,mb6.0,SNR=15
KLR Kul'dur 33.49 49 *e*P **P** **22 06 20.0 -4.1**
KLR MLR MLR
comp=Z,2μm,10.0s,MS5.2
SOKR Solikamsk 35.15 329 *d i*P **P** **22 06 39.3 +1.0**
SOKR pmax pmax
comp=Z,60nm,1.2s,mb5.4
SOKR MLR MLR
comp=Z,660nm,17.0s,MS4.5
HABR Khabarovsk 35.48 52 P **P** **22 06 39.6 -1.7**
HABR *SP sP 22 06 53.8 +8.2
HABR 22 09 09.5
HABR *e*S **S** **22 12 12.8 -3.5**
HABR *e**SS sS 22 12 28.9 +7.5
HABR SS SS 22 14 33.9 -17
HABR *e* 22 16 56.7
HABR MLR MLR
comp=Z,443nm,15.0s,MS4.3
MAK Makhachkala 36.00 299 *e*P **P** **22 06 47.7 +1.9**
MAK *i* 22 08 07.1
MAK *e*S **S** **22 12 28.7 +4.3**
MAK *e*SS SS 22 14 46.2 -15
MAK pmax pmax
comp=Z,89nm,1.5s,mb5.5
YAK Yakutsk 37.51 28 *e*P **P** **22 06 58.7 +0.3**
DGRG David-gareji 37.61 296 P **P** **22 07 00.2 +0.6**
UMR Umm Al-Rimmam 37.77 277 *e*P **P** **22 07 01.6 +0.4**
UMR AMb AMB 22 07 08.0
comp=Z,51nm,1.0s,mb5.2
MJAR Matsushiro Arr 37.79 72 P **P** **22 07 01.1 0.0**
comp=Z,1.4nm,0.7s,mb3.8,baz=282,slow=8.4,SNR=5.6
MJAR LR LR 22 23 07.4
comp=Z,296nm,18.9s,MS4.1,baz=285,slow=37
MJAR Matsushiro Arr 37.79 72 P **P** **22 07 01.1 -0.1**
MJAR pmax pmax
comp=Z,1.0nm,0.7s
MJAR MLR MLR
comp=Z,296nm,18.9s
KBD Kabd 37.90 276 *e*P **P** **22 07 02.4 +0.2**
KBD AMb AMB 22 07 06.1
comp=Z,41nm,1.2s,mb5.0
MIB Mutribah 38.01 277 *e*P **P** **22 07 03.6 +0.5**
MIB AMb AMB 22 07 04.8
comp=Z,94nm,1.0s,mb5.5
MTA Mtatsminda 38.03 297 P **P** **22 07 04.0 +0.9**
TBLG Delisi 38.07 297 P **P** **22 07 06.9 +3.4**
TBLG Delisi 38.07 297 P **P** **22 07 06.9 +3.5**
RDF Al-Radifah 38.10 276 *e*P **P** **22 07 04.2 +0.4**
RDF AMb AMB 22 07 05.3
comp=Z,46nm,0.8s,mb5.2
GNI Garni 38.17 294 P **P** **22 07 05.5 +1.1**
comp=Z,11nm,0.7s,mb4.7,baz=86,slow=2.0,SNR=13
GNI LR LR 22 25 29.3
comp=Z,239nm,21.6s,MS4.0,baz=74,slow=40
GNI Garni 38.17 294 *d i*P **P** **22 07 06.3 +1.9**
GNI pmax pmax
comp=Z,68nm,1.2s
GNI Garni 38.17 294 P **P** **22 07 07.7 +3.4**
SNR=11
KEH Kehvi 38.64 298 P **P** **22 07 08.4 +0.2**
ZEI Tsey 38.65 299 *e*P **P** **22 07 10.9 +2.6**
ZEI pmax pmax
comp=Z,15nm,0.7s,mb4.8
ONI Oni 38.99 298 P **P** **22 07 12.0 +0.9**
KIV Kislovodsk 39.50 301 P **P** **22 07 16.9 +1.5**
comp=Z,88nm,0.9s,mb5.5,SNR=5.4
KIV Kislovodsk 39.50 301 *e*P **P** **22 07 16.1 +0.7**
comp=Z,17nm,1.0s,mb4.7
KIV Kislovodsk 39.50 301 *e*P **P** **22 07 16.2 +0.8**
KIV *e* 22 08 47.5
KIV *e*S **S** **22 13 15.3 -2.2**
KIV pmax pmax
comp=Z,15nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,178nm,16.0s,MS4.0
KIV Kislovodsk 39.50 301 P **P** **22 07 16.9 +1.5**
SNR=5.5
VRHR Novokhopersk 40.53 312 *e*P **P** **22 07 23.7 -0.2**
VRHR pmax pmax
comp=N,4.0nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRHR pmax pmax
comp=Z,30nm,0.8s,mb5.0
VORD Divnogorie 41.99 311 *e*P **P** **22 07 35.8 0.0**
VORD pmax pmax
comp=N,6.0nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
VORD pmax pmax
comp=E,70nm,1.2s
VSR Storozhevoye 42.08 312 *e*P **P** **22 07 36.2 -0.4**
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,40nm,0.9s
VSR pmax pmax
comp=Z,30nm,0.9s,mb4.9
VSR MLR MLR
comp=N,140nm,14.0s,MS4.2
VSR MLR MLR
comp=E,170nm,14.0s,MS4.2
VSR MLR MLR
comp=Z,380nm,14.0s,MS4.4
MALT Malatya 43.27 293 *e*P **P** **22 07 47.5 +1.0**
comp=Z,12nm,0.9s,mb4.6
MALT *e*PcP PcP 22 09 36.3 +0.9
MALT Malatya 43.27 293 *e*P **P** **22 07 47.5 +1.0**
MALT *e* 22 09 36.3
MALT pmax pmax
comp=Z,12nm,0.9s,mb4.6
MOS Moscow 43.49 318 *e*P **P** **22 07 47.5 -0.5**
MOS pmax pmax
comp=Z,107nm,1.3s,mb5.4
KLMR Klimovskoe 43.53 326 *e*P **P** **22 07 46.9 -1.3**
KLMR *e* 22 09 30.0
KLMR pmax pmax
comp=Z,79nm,1.4s,mb5.2
KLMR pmax pmax
comp=Z,100nm,13.3s
KLMR MLR MLR
comp=Z,671nm,15.0s,MS4.7
OBN Obninsk 44.01 317 *e*P **P** **22 07 52.7 +0.6**
comp=Z,74nm,1.5s,mb5.2
OBN Obninsk 44.01 317 *d i*P **P** **22 07 51.8 -0.4**
OBN *i* 22 09 36.0
OBN *i*S **S** **22 14 23.2 -0.8**
OBN *i*SS SS 22 17 33.7 -6.9
OBN pmax pmax
comp=Z,95nm,2.5s,mb5.1
OBN MLR MLR
comp=Z,400nm,18.0s,MS4.4
ASF Jabal al Asfar 45.93 285 P **P** **22 08 08.7 +0.9**
comp=Z,15nm,0.9s,mb4.9,baz=300,slow=4.1,SNR=17
ASF Jabal al Asfar 45.93 285 P **P** **22 08 08.7 +0.9**
ASF pmax pmax
comp=Z,15nm,0.9s
BR131 Keskin Array S 46.68 296 *e*P **P** **22 08 14.2 +0.5**
BRTR Keskin Array B 46.68 296 P **P** **22 08 14.1 +0.5**
comp=Z,20nm,0.8s,mb5.1,baz=98,slow=7.6,SNR=101
BRTR Keskin Array B 46.68 296 *i* P **P** **22 08 14.1 +0.5**
BRTR pmax pmax
comp=Z,20nm,0.8s
MMAI Mount Meron Ar 46.90 286 P **P** **22 08 16.8 +1.4**
comp=Z,7.7nm,0.8s,mb4.7,baz=89,slow=12,SNR=8.0
MMAI LR LR 22 31 43.6
comp=Z,196nm,20.4s,MS4.1,baz=60,slow=41
SEY Seymchan 47.63 33⇑ *e*P **P** **22 08 21.3 +0.7**
JOF Joensuu 47.76 327 *e*P **P** **22 08 22.0 +0.3**
JOF pmax pmax
comp=Z,15nm,0.9s,mb5.0
JOF Joensuu 47.76 327 *e*p **P** **22 08 22.0 +0.3**
comp=Z,15nm,0.9s,mb5.0
EIL Elat 48.29 282 P **P** **22 08 27.1 +0.8**
EIL Elat 48.29 282 P **P** **22 08 27.1 +0.8**
comp=Z,49nm,0.8s,mb5.6,baz=51,slow=3.9,SNR=37
AKASG Malin Array Be 48.37 311 P **P** **22 08 26.1 -0.4**
comp=Z,10nm,0.8s,mb4.9,baz=80,slow=6.6,SNR=34
AKASG Malin Array Be 48.37 311 *i* P **P** **22 08 26.2 -0.3**
AKASG pmax pmax
comp=Z,11nm,0.8s
AKBB Malin Array Si 48.37 311 *e*P **P** **22 08 26.1 -0.4**
KIS Kishinev 48.99 306 *e*P **P** **22 08 30.0 -1.4**
KIS *e* 22 10 20.0
KIS MLR MLR
comp=Z,400nm,14.0s,MS4.6
KIS MLR MLR
comp=E,300nm,13.0s
KIS MLR MLR
comp=Z,500nm,14.0s
FINES FINESS Array B 50.05 325 P **P** **22 08 39.5 +0.3**
comp=Z,3.8nm,0.7s,mb4.5,baz=96,slow=7.5,SNR=18
FINES LR LR 22 31 06.6
comp=Z,516nm,18.8s,MS4.6,baz=92,slow=38
FINES FINESS Array B 50.05 325 P **P** **22 08 39.5 +0.3**
FINES pmax pmax
comp=Z,4.0nm,0.7s
FINES MLR MLR
comp=Z,516nm,18.8s
TESR 50.54 306⇓ P **P** **22 08 43.4 +0.2**
TESR 50.54 306⇓ *i*P **P** **22 08 43.4 +0.2**
VRI Vrincioaia 50.59 305⇑ P **P** **22 08 44.8 +1.2**
VRI Vrincioaia 50.59 305⇑ *i*P **P** **22 08 44.8 +1.2**
PLOR Plostina 50.65 305⇑ *i*P **P** **22 08 45.3 +1.3**
KEV Kevo 50.65 336 *e*P **P** **22 08 43.8 +0.1**
comp=Z,18nm,1.2s,mb4.9
KEV Kevo 50.65 336 *e*P **P** **22 08 42.8 -0.9**
KEV pmax pmax
comp=Z,13nm,0.8s,mb4.9
KEV Kevo 50.65 336 *e*p **P** **22 08 42.8 -0.9**
comp=Z,13nm,0.8s,mb4.9
ARCES ARCESS Array B 51.13 336 P **P** **22 08 47.1 -0.2**
comp=Z,8.7nm,0.8s,mb4.8,baz=94,slow=7.8,SNR=33
ARCES PcP PcP 22 10 01.9 -0.9
comp=Z,0.7nm,0.3s,baz=117,slow=5.2,SNR=7.6
ARCES LR LR 22 32 01.0
comp=Z,254nm,18.3s,MS4.3,baz=282,slow=38
ARCES ARCESS Array B 51.13 336 P **P** **22 08 47.1 -0.2**
ARCES 22 10 01.9
ARCES pmax pmax
comp=Z,9.0nm,0.8s
ARCES MLR MLR
comp=Z,254nm,18.3s
MLR Muntele Rosu 51.20 304⇑ P **P** **22 08 49.2 +1.0**
MLR Muntele Rosu 51.20 304⇑ *i*P **P** **22 08 49.2 +1.0**
BURAR Bucovina Array 51.33 307⇑ P **P** **22 08 49.6 +0.5**
BURAR Bucovina Array 51.33 307⇑ *i*P **P** **22 08 49.7 +0.6**
BUR08 Bucovina Ar. S 51.34 307 *e*P **P** **22 08 49.2 0.0**
ARG Arkhangelos 51.75 292 *e*P **P** **22 08 52.3 -0.1**
LVV L'vov 51.77 310 *e*P **P** **22 08 52.1 -0.3**
LVV MLR MLR
comp=N,200nm,18.0s,MS4.5
LVV MLR MLR
comp=E,400nm,18.0s,MS4.5
LVV MLR MLR
comp=Z,400nm,18.0s,MS4.5
SUW Suwalki 51.79 316 *e*P **P** **22 08 52.3 -0.2**
VOIR 51.83 305⇑ P **P** **22 08 53.1 +0.2**
VOIR 51.83 305⇑ *i*P **P** **22 08 53.1 +0.2**
ALN Alexandroupoli 52.10 299 *e*P **P** **22 08 55.0 0.0**
KWP Kalwaria Pacla 52.65 310 *e*P **P** **22 08 59.3 +0.4**
KWP Kalwaria Pacla 52.65 310 *e*P **P** **22 08 59.2 +0.3**
comp=Z,75nm,1.2s,mb5.5
KARP Karpathos 52.69 292 *e*P **P** **22 08 59.5 0.0**
RZN Rozhen 52.88 300 P **P** **22 09 02.0 +1.3**
LIA Limnos Island 52.98 298 *e*P **P** **22 09 01.7 +0.1**
TRPA Tarpa 53.02 308⇑ *i*P **P** **22 09 01.9 +0.2**
UZH Uzhgorod 53.09 309⇑ *e*P **P** **22 09 02.0 -0.2**
UZH *e* 22 09 16.3
DRGR 53.16 307⇓ P **P** **22 09 03.4 +0.7**
DRGR 53.16 307⇓ *i*P **P** **22 09 03.4 +0.7**
MPEP Malo Peshtene 53.19 302 P **P** **22 09 03.0 0.0**
ZKR Zakros 53.56 292 *e*P **P** **22 09 05.7 -0.2**
CRVS Cervenica-Dubn 53.58 309 *e*P **P** **22 09 06.1 +0.3**
comp=Z,11nm,1.6s,mb4.5
CRVS *e* 22 09 56.1
CRVS Cervenica-Dubn 53.58 309 *e*P **P** **22 09 06.1 +0.3**
CRVS pmax pmax
comp=Z,11nm,1.6s,mb4.5
CRVS Cervenica-Dubn 53.58 309 *e*P **P** **22 09 06.1 +0.3**
CRVS *e* 22 09 56.0
NVR Nevrokopi 53.58 300 *e*P **P** **22 09 04.0 -1.9**
STHS Stebnicka Huta 53.63 310 *e*P **P** **22 09 06.7 +0.6**
comp=Z,3.9nm,0.9s,mb4.3
STHS Stebnicka Huta 53.63 310 *e*P **P** **22 09 06.7 +0.6**
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
STHS Stebnicka Huta 53.63 310 *e*P **P** **22 09 06.7 +0.6**
VTS Vitosha 53.74 301 *e*P **P** **22 09 07.8 +0.7**
VTS Vitosha 53.74 301 P **P** **22 09 07.0 -0.1**
NPS Neapolis 53.98 292 *e*P **P** **22 09 09.0 0.0**

NIE Niedzica 54.22 310 *e*P **P** **22 09 11.8 +1.3**
OJC Ojcow 54.40 311 *e*P **P** **22 09 12.3 +0.6**
IDI Anoyia 54.54 292 *e*P **P** **22 09 12.2 -0.8**
NEO Neokhori 54.60 297 *e*P **P** **22 09 12.8 -0.6**
SIVA Sivas 54.69 292 *e*P **P** **22 09 14.3 +0.2**
PSZ Piszkesteto 54.80 308 *e*P **P** **22 09 14.6 -0.1**
PSZ Piszkesteto 54.80 308⇑ *e*P **P** **22 09 15.5 +0.8**
LKR Lokris 54.96 297 *e*P **P** **22 09 14.7 -1.3**
VAM Vamos 55.03 293 *e*P **P** **22 09 16.5 -0.1**
DID Didima 55.12 295 *e*P **P** **22 09 15.9 -1.3**
LTK Loutraki 55.17 296 *e*P **P** **22 09 16.3 -1.2**
KARN Karanos 55.26 293 *e*P **P** **22 09 18.5 +0.3**
GVD Gavdhos 55.30 292 *e*P **P** **22 09 18.2 -0.4**
GVD Gavdhos 55.30 292 *e*P **P** **22 09 17.6 -1.0**
AGG Agios Georgios 55.35 297 *e*P **P** **22 09 17.6 -1.2**
VYHS Vyhne 55.37 309 *e*P **P** **22 09 19.3 +0.5**
comp=Z,12nm,1.5s,mb4.7
VYHS Vyhne 55.37 309 *e*P **P** **22 09 19.3 +0.5**
VYHS pmax pmax
comp=Z,12nm,1.5s,mb4.7
VYHS Vyhne 55.37 309 *e*P **P** **22 09 19.3 +0.5**
THL Klokotos Trika 55.42 298 *e*P **P** **22 09 18.1 -1.3**
BUD Budapest 55.47 308⇓ *e*P **P** **22 09 19.9 +0.3**
OKC Ostrava-Krasne 55.52 311 *e*P **P** **22 09 20.7 +0.8**
OKC MLR MLR
comp=Z,300nm,7.2s
OKC Ostrava-Krasne 55.52 311 *e*P **P** **22 09 20.7 +0.8**
OKC AMS AMS 22 35 20.0
comp=Z,300nm,7.2s
KOLL Kolacno 55.63 309 *e*P **P** **22 09 21.6 +0.9**
KOLL Kolacno 55.63 309 *e*P **P** **22 09 21.6 +0.9**
KYTH Kithira 55.65 294 *e*P **P** **22 09 18.3 -2.8**
GUR Goura 55.66 296 *e*P **P** **22 09 19.8 -1.3**
EVR Evrytania 55.77 297 *e*P **P** **22 09 22.0 +0.2**
VLX Vlachokerasia 55.81 295 *e*P **P** **22 09 20.4 -1.8**
EFP Efpalio 55.84 297 *e*P **P** **22 09 20.2 -2.2**
MORC Moravsky Berou 55.91 311 *e*P **P** **22 09 23.4 +0.7**
MORC Moravsky Berou 55.91 311⇑ *i*P **P** **22 09 23.4 +0.7**
PKSM Moragy 56.03 307⇓ P **P** **22 09 23.6 0.0**
PKSM Moragy 56.03 307⇓ *i*P **P** **22 09 23.6 0.0**
ITM Ithomi 56.21 295 *e*P **P** **22 09 23.1 -2.0**
PYL PYLOS 56.44 295 *e*P **P** **22 09 24.1 -2.6**
KSP Ksiaz 56.46 313 *e*P **P** **22 09 27.0 +0.4**
KSP *e* 22 10 16.9
DPC Dobruska-Polom 56.55 312 *e*P **P** **22 09 28.3 +1.1**
DPC *e* 22 10 16.9
DPC MLR MLR
comp=Z,300nm,13.3s,MS4.6
DPC Dobruska-Polom 56.55 312 *e*P **P** **22 09 28.3 +1.1**
DPC *ex* x 22 10 16.9
DPC AMS AMS 22 36 30.0
comp=Z,300nm,13.3s
ZST Bratislava 56.56 309 *e*P **P** **22 09 28.7 +1.4**
comp=Z,5.6nm,0.8s,mb4.7
ZST Bratislava 56.56 309 *e*P **P** **22 09 28.7 +1.4**
ZST pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
ZST Bratislava 56.56 309 *e*P **P** **22 09 28.7 +1.4**
VRAC Vranov 56.62 311⇑ P **P** **22 09 28.6 +0.9**
VRAC Vranov 56.62 311⇑ *i*P **P** **22 09 28.6 +0.8**
UPC Upice 56.71 312 *e*P **P** **22 09 29.4 +1.0**
UPC Upice 56.71 312 *e*P **P** **22 09 29.4 +1.0**
NOA NORSAR Array B 57.23 325 P **P** **22 09 31.8 -0.1**
comp=Z.8.1nm,0.8s,mb4.8,baz=80,slow=7.2,SNR=24
NOA NORSAR Array B 57.23 325 P **P** **22 09 31.8 -0.1**
NOA pmax pmax
comp=Z,8.0nm,0.8s
NAO01 NORSAR Array S 57.43 325 *e*P **P** **22 09 33.0 -0.3**
CONA Conrad Observa 57.43 309⇓ *i*pP **P** **22 09 33.9 +0.3**
comp=Z,24nm,1.0s,mb5.2,SNR=18
PVCC Panska Ves 57.60 312 *e*P **P** **22 09 35.6 +0.9**
PVCC *e* 22 10 23.5
PVCC MLR MLR
comp=Z,400nm,15.3s,MS4.6
PVCC Panska Ves 57.60 312 *e*P **P** **22 09 35.6 +0.9**
PVCC *ex* x 22 10 23.5
PVCC AMS AMS 22 36 00.0
comp=Z,400nm,15.3s
PRU Pruhonice 57.75 312 *e*P **P** **22 09 36.6 +0.9**
PRU *e* 22 10 23.7
PRU MLR MLR
comp=Z,300nm,14.7s,MS4.5
PRU Pruhonice 57.75 312 *e*P **P** **22 09 36.6 +0.9**
PRU *ex* x 22 10 23.7
PRU AMS AMS 22 39 30.0
comp=Z,300nm,14.7s
BRG Berggiesshubel 57.90 313 *e*P **P** **22 09 37.0 +0.2**
comp=Z,14nm,1.0s,mb5.0
BRG Berggiesshubel 57.90 313 *i* P **P** **22 09 37.0 +0.2**
comp=Z,14nm,1.0s,mb5.0
BRG *i* 22 10 25.8
comp=Z,6.8nm,0.7s
BRG comp=N,294nm,16.4s
BRG comp=E,299nm,11.8s
BRG comp=Z,411nm,13.3s
BRG Berggiesshubel 57.90 313 *i* P **P** **22 09 37.0 +0.2**
BRG *i* 22 10 25.8
BRG pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
BRG MLR MLR
comp=N,176nm,16.4s,MS4.5
BRG MLR MLR
comp=E,179nm,11.8s,MS4.5
BRG MLR MLR
comp=Z,246nm,13.3s,MS4.5
PERS Pernice 58.27 308 *i* P **P** **22 09 39.5 0.0**
SOKA Soboth 58.31 308⇓ *i*pP **P** **22 09 39.8 +0.1**
comp=Z,17nm,1.0s,mb5.0
CLL Collm 58.36 314 *e*P **P** **22 09 40.0 0.0**
comp=Z,25nm,1.6s,mb5.0
CLL *e*L 22 39 05.4
comp=Z,262nm,19.7s
CLL Collm 58.36 314⇓ *i*P **P** **22 09 39.7 -0.3**
comp=Z,25nm,1.7s,mb5.0
CLL *e*S **S** **22 17 44.0 +1.5**
CLL Collm 58.36 314⇓ *i*P **P** **22 09 39.7 -0.3**
CLL *e*S **S** **22 17 44.0 +1.5**
CLL pmax pmax
comp=Z,25nm,1.7s,mb5.0
CLL Collm 58.36 314⇓ *i*P **P** **22 09 39.7 -0.3**
comp=Z,25nm,1.7s,mb5.0
CLL *i* 22 09 55.0
CLL *e*S **S** **22 17 44.0 +1.5**
CLL *e*SS SS 22 21 48.0 +14
CLL LmV 22 39 00.0
comp=Z,300nm,19.6s
MOA Molln 58.49 309⇑ *i*pP **P** **22 09 41.3 +0.3**
comp=Z,11nm,1.1s,mb4.8
BOJS Bojanci 58.50 307 *i* P **P** **22 09 41.0 -0.1**
KHC Kasperske Hory 58.58 311 *e*P **P** **22 09 42.0 +0.5**
KHC *e* 22 10 26.5
KHC MLR MLR
comp=Z,400nm,14.0s,MS4.7
KHC Kasperske Hory 58.58 311 *e*P **P** **22 09 42.0 +0.5**
KHC *ex* x 22 10 26.5
KHC AMS AMS 22 37 40.0
comp=Z,400nm,14.0s
VISS Visnje 58.69 307 *i* P **P** **22 09 42.4 0.0**
TANN Tannenbergstha 58.93 313 *e*P **P** **22 09 44.3 +0.3**
comp=Z,18nm,1.5s,mb4.9
NKC Novy Kostel 58.99 313 *e*P **P** **22 09 44.6 +0.2**
NKC MLR MLR
comp=Z,400nm,14.3s,MS4.7
NKC Novy Kostel 58.99 313 *e*P **P** **22 09 44.6 +0.2**
NKC *ex* x 22 10 41.1
NKC AMS AMS 22 36 50.0
comp=Z,400nm,14.3s
WERD Werda 59.02 313 *e*P **P** **22 09 44.9 +0.3**
comp=Z,12nm,1.2s,mb4.8
WET Wettzell 59.02 311 *e*P **P** **22 09 45.2 +0.6**
comp=Z,19nm,1.5s,mb4.9
WET Wettzell 59.02 311 *e*P **P** **22 09 45.2 +0.6**
WET pmax pmax
comp=Z,19nm,1.5s,mb4.9
GUNZ Gunzen 59.02 313 *e*P **P** **22 09 45.1 +0.5**
comp=Z,17nm,1.1s,mb5.0
JAVS Javornik 59.18 307 *i* P **P** **22 09 46.2 +0.4**
BSEG Bad Segeberg 59.27 317 *e*P **P** **22 09 47.0 +0.8**
comp=Z,17nm,0.9s,mb5.1
MOX Moxa 59.38 313 *e*P **P** **22 09 47.5 +0.4**
comp=Z,42nm,2.0s,mb5.1

MOX
comp=Z,200nm,23.0s
MOX Moxa 59.38 313 *e*P **P 22 09 47.4 +0.3**
comp=Z,19nm,1.4s,mb4.9
MOX Moxa 59.38 313 *e*P **P 22 09 47.5 +0.4**
MOX pmax pmax
comp=Z,42nm,2.0s,mb5.1
MOX MLR MLR
comp=Z,200nm,23.0s,MS4.2
TIP Timpagrande 59.41 299 *e*P **P 22 09 47.0 -0.5**
comp=Z,11nm,1.3s,mb4.7
KAKA Kakadu 59.76 133 *e*P **P 22 09 50.9 +0.8**
comp=Z,12nm,0.6s,mb5.1
CLZ Clausthal 59.80 315 *e*P **P 22 09 50.4 +0.4**
comp=Z,28nm,1.2s,mb5.2
CLZ Clausthal 59.80 315 *e*P **P 22 09 50.4 +0.4**
CLZ pmax pmax
comp=Z,28nm,1.2s,mb5.2
CUC Castrocucco 59.83 300 *e*P **P 22 09 49.2 -1.1**
comp=Z,9.6nm,0.9s,mb4.8
GRA1 Grafenberg Arr 59.90 312 *e*P **P 22 09 51.5 +0.8**
comp=Z,49nm,1.4s,mb5.3
GRA1 LR LR
comp=Z,300nm,18.9s,MS4.5
GRF Grafenberg Arr 59.90 312 *e*P **P 22 09 51.5 +0.8**
comp=Z,49nm,1.4s,mb5.3
GRF *e*L 22 39 49.3
comp=Z,293nm,18.9s
GRF Grafenberg Arr 59.90 312 *e*P **P 22 09 51.5 +0.8**
GRF pmax pmax
comp=Z,49nm,1.4s,mb5.3
GRF MLR MLR
comp=Z,300nm,18.9s,MS4.5
GRF Grafenberg Arr 59.90 312 *e*P **P 22 09 51.5 +0.8**
GRF pmax pmax
comp=Z,49nm,1.4s,mb5.3
GRF MLR MLR
comp=Z,300nm,18.9s,MS4.5
MBWA Marble Bar 60.17 150 *e*P **P 22 09 52.5 -0.3**
comp=Z,42nm,0.7s,mb5.6
FITZ Fitzroy Crossi 60.28 143 *e*P **P 22 09 52.9 -0.6**
comp=Z,15nm,0.8s,mb5.1
FITZ Fitzroy Crossi 60.28 143 P **P 22 09 53.1 -0.4**
comp=Z,7.3nm,0.7s,mb4.8,baz=300,slow=2.6,SNR=6.3
FUR Furstenfeldbru 60.32 310 *e*P **P 22 09 54.4 +0.8**
comp=Z,49nm,1.3s,mb5.4
FUR *e*L 22 38 41.8
comp=Z,276nm,20.3s
FUR Furstenfeldbru 60.32 310 *e*P **P 22 09 54.4 +0.8**
FUR pmax pmax
comp=Z,49nm,1.3s,mb5.4
FUR MLR MLR
comp=Z,300nm,20.3s,MS4.4
WTTA Wattenberg 60.36 309 *i* P **P 22 09 53.7 -0.2**
comp=Z,15nm,1.1s,mb4.9,SNR=7.2
CEL Celeste 60.37 298 *e*P **P 22 09 53.2 -0.8**
comp=Z,37nm,1.1s,mb5.3
WATA Walderalm 60.38 310⇓ *i*P **P 22 09 54.0 0.0**
comp=Z,12nm,1.3s,mb4.8
MOTA Moosalm 60.68 310⇓ *i*P **P 22 09 56.0 -0.1**
comp=Z,9.9nm,1.1s,mb4.8
AQU L'Aquila 60.75 304 *e*P **P 22 09 56.7 +0.1**
comp=Z,26nm,1.3s,mb5.2
AQU L'Aquila 60.75 304 *e*P **P 22 09 56.7 0.0**
AQU pmax pmax
comp=Z,26nm,1.3s,mb5.2
RETA Reutte 60.86 310⇓ *i*P **P 22 09 56.9 -0.4**
comp=Z,10nm,1.1s,mb4.9
FETA Feichten 61.03 309⇑ *i*P **P 22 09 58.2 -0.2**
comp=Z,12nm,1.1s,mb4.9
IBBN Ibbenburen 61.21 316 *e*P **P 22 09 59.9 +0.3**
comp=Z,27nm,1.3s,mb5.2
TNS Taunus Mts 61.45 313 *e*L 22 42 01.5
comp=Z,405nm,18.0s
STU Stuttgart 61.45 312 *e*P **P 22 10 01.2 0.0**
comp=Z,26nm,1.5s,mb5.3
STU Stuttgart 61.45 312 *e*P **P 22 10 01.2 0.0**
comp=Z,29nm,1.4s,mb5.2
STU Stuttgart 61.45 312 *e*P **P 22 10 01.2 0.0**
STU pmax pmax
comp=Z,29nm,1.4s,mb5.2
DAVA Damuels 61.49 310⇑ *i*P **P 22 10 01.6 0.0**
comp=Z,14nm,1.2s,mb5.0
KMBO Kilima Mbogo 61.75 248 *e*P **P 22 10 03.3 -0.4**
comp=Z,14nm,1.4s,mb4.9
KMBO Kilima Mbogo 61.75 248 P **P 22 10 03.5 -0.3**
comp=Z,5.4nm,1.2s,mb4.6,baz=360,slow=24,SNR=5.2
KMBO Kilima Mbogo 61.75 248 *e*P **P 22 10 03.3 -0.4**
KMBO pmax pmax
comp=Z,14nm,1.4s
BUG Bochum--Univer 61.77 315 *e*P **P 22 10 03.9 +0.5**
comp=Z,25nm,1.4s,mb5.2
TUE Stuetta 62.11 309 *e*P **P 22 10 04.5 -1.2**
comp=Z,9.5nm,1.0s,mb4.9
BFO Black Forest 62.13 311 *e*P **P 22 10 05.9 0.0**
comp=Z,22nm,1.3s,mb5.1
BFO Black Forest 62.13 311 *e*P **P 22 10 05.9 0.0**
BFO pmax pmax
comp=Z,22nm,1.3s,mb5.1
CDF Champ du Feu 62.77 312 *e*P **P 22 10 09.0 -1.1**
comp=Z,45nm,1.3s,mb5.1
CDF Champ du Feu 62.77 312 *e*P **P 22 10 09.0 -1.1**
comp=Z,23nm,1.3s,mb5.1
CDF Champ du Feu 62.77 312 *e*P **P 22 10 09.0 -1.1**
CDF pmax pmax
comp=Z,23nm,1.3s,mb5.2
MEM Membach 62.79 314 P **P 22 10 11.2 +1.0**
WLF Walferdange 63.03 313 P **P 22 10 12.8 +1.0**
comp=Z,26nm,1.7s,mb5.1
WLF Walferdange 63.03 313 *e*P **P 22 10 12.7 +0.9**
comp=Z,45nm,1.3s,mb5.4
WLF Walferdange 63.03 313 *e*P **P 22 10 11.9 +0.1**
comp=Z,26nm,1.1s,mb5.3
WLF Walferdange 63.03 313 *e*P **P 22 10 11.9 +0.1**
WLF pmax pmax
comp=Z,26nm,1.1s,mb5.3
HINF Hinteralfeld 63.24 311 *e*P **P 22 10 12.0 -1.3**
comp=Z,72nm,1.7s,mb5.2
HINF Hinteralfeld 63.24 311 *e*P **P 22 10 12.0 -1.3**
comp=Z,36nm,1.7s,mb5.2
HINF Hinteralfeld 63.24 311 *e*P **P 22 10 12.0 -1.3**
HINF pmax pmax
comp=Z,36nm,1.7s,mb5.2
BCLA Clavier 63.28 314 P **P 22 10 13.9 +0.5**
HAU Haudompre 63.49 312 *e*P **P 22 10 13.7 -1.2**
HAU *e*MLR MLR
comp=Z,320nm,22.8s,MS4.1
HAU Haudompre 63.49 312 *e*P **P 22 10 13.7 -1.2**
HAU MLR MLR
comp=Z,320nm,22.8s,MS4.4
GIVF Givet 63.68 314 *e*P **P 22 10 15.3 -0.8**
PGF Pioggiola 63.73 305 *e*P **P 22 10 14.9 -1.7**
comp=Z,24nm,1.0s,mb4.9
PGF Pioggiola 63.73 305 *e*P **P 22 10 14.9 -1.7**
comp=Z,12nm,1.0s,mb4.9
PGF Pioggiola 63.73 305 *e*P **P 22 10 14.9 -1.7**
PGF pmax pmax
comp=Z,12nm,1.0s,mb4.9
DOU Dourbes 63.82 314 P **P 22 10 16.6 -0.4**
BAIF Baives 64.07 314 *e*P **P 22 10 17.8 -0.9**
comp=Z,41nm,1.4s,mb5.0
BAIF Baives 64.07 314 *e*P **P 22 10 17.8 -0.9**
comp=Z,20nm,1.4s,mb5.0
BAIF Baives 64.07 314 *e*P **P 22 10 17.8 -0.9**
BAIF pmax pmax
comp=Z,21nm,1.4s,mb5.0
MEZF Maizieres J'vi 64.12 312 *e*P **P 22 10 18.4 -0.7**
comp=Z,89nm,1.5s,mb5.3
MEZF Maizieres J'vi 64.12 312 *e*P **P 22 10 18.4 -0.7**
comp=Z,89nm,1.5s,mb5.6
LPG La Plagne 64.14 309 *e*P **P 22 10 19.0 -0.3**
comp=Z,103nm,1.5s,mb5.3
LPG La Plagne 64.14 309 *e*P **P 22 10 19.0 -0.3**
comp=Z,52nm,1.5s,mb5.3
LPG La Plagne 64.14 309 *e*P **P 22 10 19.0 -0.3**
LPG pmax pmax
comp=Z,52nm,1.5s,mb5.3
LPL La Plagne 64.15 309 *e*P **P 22 10 18.9 -0.4**
comp=Z,77nm,1.3s,mb5.3
LPL La Plagne 64.15 309 *e*P **P 22 10 18.9 -0.4**
comp=Z,38nm,1.3s,mb5.3
LPL La Plagne 64.15 309 *e*P **P 22 10 18.9 -0.4**
LPL pmax pmax
comp=Z,38nm,1.3s,mb5.3
SBF Sospel 64.30 307 *e*P **P 22 10 19.2 -1.1**
comp=Z,62nm,1.1s,mb5.3
SBF Sospel 64.30 307 *e*P **P 22 10 19.2 -1.1**
comp=Z,31nm,1.1s,mb5.2
SBF Sospel 64.30 307 *e*P **P 22 10 19.2 -1.1**
SBF pmax pmax
comp=Z,31nm,1.1s,mb5.2
MBDF Montbardon 64.42 308 *e*P **P 22 10 19.5 -1.6**
comp=Z,24nm,1.1s,mb4.8
MBDF Montbardon 64.42 308 *e*P **P 22 10 19.5 -1.6**
comp=Z,12nm,1.1s,mb4.8
MBDF Montbardon 64.42 308 *e*P **P 22 10 19.5 -1.6**
MBDF pmax pmax
comp=Z,12nm,1.1s,mb4.8
ORIF Oris-en-Rattie 64.93 309 *e*P **P 22 10 23.1 -1.3**
comp=Z,35nm,1.2s,mb5.0
ORIF *e*MLR MLR
comp=Z,416nm,19.5s,MS4.3
ORIF Oris-en-Rattie 64.93 309 *e*P **P 22 10 23.1 -1.3**
comp=Z,17nm,1.2s,mb5.0
ORIF Oris-en-Rattie 64.93 309 *e*P **P 22 10 23.1 -1.3**
ORIF pmax pmax
comp=Z,17nm,1.2s,mb5.0
LMR La Mourre 65.13 307 *e*P **P 22 10 24.5 -1.2**
comp=Z,85nm,1.5s,mb5.3
LMR La Mourre 65.13 307 *e*P **P 22 10 24.5 -1.2**
comp=Z,42nm,1.5s,mb5.2
LMR La Mourre 65.13 307 *e*P **P 22 10 24.5 -1.2**
LMR pmax pmax
comp=Z,43nm,1.5s,mb5.3
LOR Lormes 65.33 311 *e*P **P 22 10 25.4 -1.6**
comp=Z,17nm,1.1s,mb4.7
LOR *e*MLR MLR
comp=Z,215nm,22.8s,MS4.0
LOR Lormes 65.33 311 *e*P **P 22 10 25.4 -1.6**
comp=Z,8.7nm,1.1s,mb4.7
LOR LR LR
comp=Z,220nm,22.8s,MS4.3
LOR Lormes 65.33 311 *e*P **P 22 10 25.4 -1.6**
LOR pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
LOR MLR MLR
comp=Z,220nm,22.8s,MS4.3
SMRF Simiane la Rot 65.50 308 *e*P **P 22 10 27.3 -0.8**
comp=Z,51nm,1.5s,mb5.0
SMRF Simiane la Rot 65.50 308 *e*P **P 22 10 27.3 -0.8**
comp=Z,51nm,1.5s,mb5.3
SMF Signal de Mont 65.58 311 *e*P **P 22 10 27.3 -1.3**
comp=Z,56nm,1.3s,mb5.1
SMF Signal de Mont 65.58 311 *e*P **P 22 10 27.3 -1.3**
comp=Z,28nm,1.3s,mb5.1
SMF Signal de Mont 65.58 311 *e*P **P 22 10 27.3 -1.3**
SMF pmax pmax
comp=Z,28nm,1.3s,mb5.1
SSF Saint Saulge 65.63 311 *e*P **P 22 10 27.5 -1.4**
comp=Z,33nm,1.2s,mb5.0
SSF Saint Saulge 65.63 311 *e*P **P 22 10 27.5 -1.4**
comp=Z,16nm,1.2s,mb4.9
SSF Saint Saulge 65.63 311 *e*P **P 22 10 27.5 -1.4**
SSF pmax pmax
comp=Z,16nm,1.2s,mb4.9
VIVF Saint-Julien-l 65.75 309 *e*P **P 22 10 28.7 -1.0**
comp=Z,67nm,1.4s,mb5.2
VIVF Saint-Julien-l 65.75 309 *e*P **P 22 10 28.7 -1.0**
comp=Z,33nm,1.4s,mb5.2
VIVF Saint-Julien-l 65.75 309 *e*P **P 22 10 28.7 -1.0**
VIVF pmax pmax
comp=Z,33nm,1.4s,mb5.2
AVF Avril sur Loir 65.83 311 *e*P **P 22 10 29.0 -1.2**
comp=Z,27nm,1.5s,mb5.3
AVF Avril sur Loir 65.83 311 *e*P **P 22 10 29.0 -1.2**
comp=Z,44nm,1.5s,mb5.3
AVF Avril sur Loir 65.83 311 *e*P **P 22 10 29.0 -1.2**
AVF pmax pmax
comp=Z,44nm,1.5s,mb5.3
HYF Humbligny 66.09 312 *e*P **P 22 10 31.0 -0.9**
KEST Kesra 66.17 298 *e*P **P 22 10 32.3 -0.3**
KEST Kesra 66.17 298 P **P 22 10 32.9 +0.3**
comp=Z,4.3nm,1.0s,mb4.5,baz=314,slow=1.8,SNR=14
KEST LR LR 22 43 12.2
comp=Z,52nm,21.9s,MS3.7,baz=347,slow=39
ESK Eskdalemuir 66.20 322 *i* P **P 22 10 33.1 +0.6**
BGF Bois d'Agland 66.25 311 *e*P **P 22 10 31.5 -1.4**
comp=Z,22nm,1.2s,mb4.8
BGF Bois d'Agland 66.25 311 *e*P **P 22 10 31.5 -1.4**
comp=Z,11nm,1.2s,mb4.8
BGF Bois d'Agland 66.25 311 *e*P **P 22 10 31.5 -1.4**
BGF pmax pmax
comp=Z,11nm,1.2s,mb4.8
WRAB Tennant Creek 66.52 136 P **P 22 10 37.0 +2.1**
comp=Z,401nm,1.0s,SNR=14
WRAB Tennant Creek 66.52 136 *e*P **P 22 10 35.1 +0.2**
comp=Z,72nm,1.0s,mb5.7
WRAB Tennant Creek 66.52 136 *e*P **P 22 10 35.1 +0.2**
WRAB pmax pmax
comp=Z,72nm,1.0s,mb5.7
WB2 Warramunga Arr 66.53 136 *e*P **P 22 10 35.0 +0.1**
MBAR Mbarara 66.57 253⇑ *i*P **P 22 10 34.4 -1.1**
LASF Ste Croix 66.60 308 *e*P **P 22 10 34.4 -0.8**
comp=Z,72nm,1.4s,mb5.2
TCF Toulx Ste Croi 66.76 311 *e*P **P 22 10 35.3 -0.9**
comp=Z,86nm,1.4s,mb5.3
TCF Toulx Ste Croi 66.76 311 *e*P **P 22 10 35.3 -0.9**
comp=Z,43nm,1.4s,mb5.3
TCF Toulx Ste Croi 66.76 311 *e*P **P 22 10 35.3 -0.9**
TCF pmax pmax
comp=Z,43nm,1.4s,mb5.3
OPO Ambohidratompo 66.92 227 P **P 22 10 36.4 -1.1**
comp=Z,4.1nm,0.9s,mb4.5,baz=35,slow=7.7,SNR=6.9
LDF La Druitiere 67.25 314 *e*P **P 22 10 37.7 -1.5**
comp=Z,13nm,1.0s,mb4.6
LDF La Druitiere 67.25 314 *e*P **P 22 10 37.7 -1.5**
comp=Z,6.4nm,1.0s,mb4.6
LDF La Druitiere 67.25 314 *e*P **P 22 10 37.7 -1.5**
LDF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
FLN La Foliniere 67.39 314 *e*P **P 22 10 38.6 -1.6**
comp=Z,18nm,1.0s,mb4.7
FLN *e*MLR MLR
comp=Z,378nm,19.2s,MS4.3
FLN La Foliniere 67.39 314 *e*P **P 22 10 38.6 -1.6**
comp=Z,9.1nm,1.0s,mb4.8
FLN LR LR
comp=Z,380nm,19.3s,MS4.6
FLN La Foliniere 67.39 314 *e*P **P 22 10 38.6 -1.6**
FLN pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
FLN MLR MLR
comp=Z,380nm,19.3s,MS4.6
PMG Port Moresby 67.40 119 *e*P **P 22 10 40.8 +0.1**
comp=Z,13nm,0.8s,mb5.0
PMG Port Moresby 67.40 119 *e*P **P 22 10 40.8 +0.1**
PMG pmax pmax
comp=Z,13nm,0.8s
CAF Calviac 67.41 310 *e*P **P 22 10 39.7 -0.7**
comp=Z,49nm,1.4s,mb5.0
CAF Calviac 67.41 310 *e*P **P 22 10 39.7 -0.7**
comp=Z,24nm,1.4s,mb5.0
CAF Calviac 67.41 310 *e*P **P 22 10 39.7 -0.7**
CAF pmax pmax
comp=Z,24nm,1.4s,mb5.0
RJF Les Rejaudoux 67.61 310 *e*P **P 22 10 41.1 -0.5**
RJF *e*MLR MLR
comp=Z,231nm,22.5s,MS4.0
RJF Les Rejaudoux 67.61 310 *e*P **P 22 10 41.1 -0.5**
RJF MLR MLR
comp=Z,230nm,22.5s,MS4.3
GRR Gorron 67.78 314 *e*P **P 22 10 41.1 -1.5**
comp=Z,32nm,1.0s,mb5.0
GRR Gorron 67.78 314 *e*P **P 22 10 41.1 -1.5**
comp=Z,16nm,1.0s,mb5.0
GRR Gorron 67.78 314 *e*P **P 22 10 41.1 -1.5**
GRR pmax pmax
comp=Z,16nm,1.0s,mb5.0
MTLF Montolieu 67.98 308 *e*P **P 22 10 43.0 -1.0**
comp=Z,36nm,1.4s,mb4.9
MTLF Montolieu 67.98 308 *e*P **P 22 10 43.0 -1.0**
comp=Z,18nm,1.4s,mb4.9
MTLF Montolieu 67.98 308 *e*P **P 22 10 43.0 -1.0**
MTLF pmax pmax
comp=Z,18nm,1.4s,mb4.9
MFF Saint Martin d 68.11 312 *e*P **P 22 10 43.4 -1.3**
LFF La Frestale 68.26 310 *e*P **P 22 10 45.0 -0.7**
comp=Z,59nm,1.4s,mb5.1
LFF La Frestale 68.26 310 *e*P **P 22 10 45.0 -0.7**
comp=Z,30nm,1.4s,mb5.1
LFF La Frestale 68.26 310 *e*P **P 22 10 45.0 -0.7**
LFF pmax pmax
comp=Z,29nm,1.4s,mb5.1
CLLI Llivia 68.51 307 P **P 22 10 46.6 -0.7**
CFON Fontmartina 68.52 306 P **P 22 10 46.0 -1.3**
comp=Z,115nm,2.1s,mb5.4
SGMF Saint Gilles 68.86 314 *e*P **P 22 10 48.3 -1.1**
KLBR Kellerberrin 68.86 157 *e*P **P 22 10 50.9 +1.5**
comp=Z,25nm,0.9s,mb5.1
EMIR Miracle 69.06 307 P **P 22 10 50.5 -0.3**
comp=Z,114nm,1.6s,mb5.5
CSOR Sort 69.12 308 P **P 22 10 48.8 -2.3**
comp=Z,96nm,2.3s,mb5.3
ETOS Mallorca 69.13 304 P **P 22 10 48.8 -2.4**
comp=Z,80nm,2.0s,mb5.3
SUMG Summit 69.18 346 *e*P **P 22 10 50.9 0.0**
ASAR Alice Springs 69.22 139 P **P 22 10 52.0 +0.1**
comp=Z,38nm,0.9s,mb5.3,baz=327,slow=6.0,SNR=48
ASAR Alice Springs 69.22 139 P **P 22 10 52.0 +0.2**
ASAR pmax pmax
comp=Z,38nm,0.9s
ROSF Rostrenen 69.25 315 *e*P **P 22 10 49.9 -1.9**
comp=Z,42nm,1.1s,mb5.0
ROSF Rostrenen 69.25 315 *e*P **P 22 10 49.9 -1.9**
comp=Z,21nm,1.1s,mb5.0
ROSF Rostrenen 69.25 315 *e*P **P 22 10 49.9 -1.9**
ROSF pmax pmax
comp=Z,21nm,1.1s,mb5.0
EPF Esparros 69.35 308 *e*P **P 22 10 50.8 -1.8**
comp=Z,54nm,1.8s,mb4.9
EPF Esparros 69.35 308 *e*P **P 22 10 50.8 -1.8**
comp=Z,27nm,1.8s,mb4.9
EPF Esparros 69.35 308 *e*P **P 22 10 50.8 -1.8**
EPF pmax pmax
comp=Z,27nm,1.8s,mb4.9
QUIF Quistinic 69.37 314 *e*P **P 22 10 51.2 -1.4**
comp=Z,101nm,1.5s,mb5.2
QUIF Quistinic 69.37 314 *e*P **P 22 10 51.2 -1.4**
comp=Z,50nm,1.5s,mb5.2
QUIF Quistinic 69.37 314 *e*P **P 22 10 51.2 -1.4**
QUIF pmax pmax
comp=Z,50nm,1.5s,mb5.2
EPOB Poblet 69.61 307 P **P 22 10 53.0 -1.2**
comp=Z,57nm,1.4s,mb5.3
EBIE Bielsa 69.64 308 P **P 22 10 53.9 -0.5**
comp=Z,36nm,1.5s,mb5.1
NWAO Narrogin (SRO) 69.92 158 P **P 22 10 56.4 +0.4**
comp=Z,18nm,0.7s,mb5.1,baz=327,slow=5.8,SNR=11
NWAO Narrogin (SRO) 69.92 158 P **P 22 10 56.4 +0.5**
NWAO pmax pmax
comp=Z,18nm,0.7s
ETSF Etsaut 70.00 309 *e*P **P 22 10 56.0 -0.6**
comp=Z,26nm,1.0s,mb4.8
ETSF Etsaut 70.00 309 *e*P **P 22 10 56.0 -0.6**
comp=Z,13nm,1.0s,mb4.8
ETSF Etsaut 70.00 309 *e*P **P 22 10 56.0 -0.6**
ETSF pmax pmax
comp=Z,13nm,1.0s,mb4.8
TTA Tatalina 70.08 27 *e*P **P 22 10 50.4 -6.3**
ERTA Horta de San J 70.29 306 P **P 22 10 57.5 -0.9**
comp=Z,48nm,1.2s,mb5.3
SJPF Ste Jean 70.34 309 *e*P **P 22 10 58.1 -0.5**
comp=Z,30nm,1.2s,mb4.8
SJPF Ste Jean 70.34 309 *e*P **P 22 10 58.1 -0.5**
comp=Z,15nm,1.2s,mb4.8
SJPF Ste Jean 70.34 309 *e*P **P 22 10 58.1 -0.5**
SJPF pmax pmax
comp=Z,15nm,1.2s,mb4.8
ESAC San Caprasio 70.48 307 P **P 22 10 58.4 -1.1**
comp=Z,98nm,1.5s,mb5.5
BPAW Bear Paw Mtn. 71.22 24 *e*P **P 22 11 03.8 +0.2**
comp=Z,6µm,1.2s
ECRI Cripan 71.41 309 P **P 22 11 06.1 +0.9**
comp=Z,24nm,1.0s,mb5.1
ECRI Cripan 71.41 309 P **P 22 11 06.1 +1.0**
ECRI pmax pmax
comp=Z,24nm,1.0s,mb5.1
PPLA Purkeypile 71.53 26 *e*P **P 22 11 06.0 +0.6**
comp=Z,116nm,1.4s,mb5.6
ELAN Lanestosa 71.71 310 P **P 22 11 07.2 +0.3**
comp=Z,44nm,1.3s,mb5.2
COLA College 71.78 23 *e*P **P 22 11 07.0 +0.1**
comp=Z,26nm,1.0s,mb5.1
COLA College 71.78 23 *e*P **P 22 11 07.1 +0.1**
COLA pmax pmax
comp=Z,26nm,1.0s,mb5.1
ILAR Eielson Array 72.16 23 P **P 22 11 08.9 -0.3**
comp=Z,12nm,0.9s,mb4.8,baz=296,slow=5.1,SNR=97
ILAR PP PP 22 13 49.1 +0.1
comp=Z,1.1nm,0.9s,baz=297,slow=7.2,SNR=4.7
ILAR Eielson Array 72.16 23 P **P 22 11 09.0 -0.2**
ILAR 22 13 49.1
ILAR pmax pmax
comp=Z,12nm,1.0s
ILAR pmax pmax
comp=Z,1.0nm,0.9s
FORT Forrest 72.17 148 *e*P **P 22 11 08.8 -0.9**
comp=Z,36nm,1.0s,mb5.2
ETOB Tobarra 72.65 305 P **P 22 11 12.6 -0.1**
comp=Z,57nm,2.0s,mb5.2
RSO Redoubt South 72.79 28 *e*P **P 22 11 14.6 +1.5**
EMUR La Murta 72.83 304 P **P 22 11 12.5 -1.2**
comp=Z,26nm,1.2s,mb5.0
EVIA Vianos 73.31 305 P **P 22 11 16.6 0.0**
comp=Z,10nm,0.8s,mb4.8
EVIA Vianos 73.31 305 P **P 22 11 16.6 0.0**
EVIA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
GUD Guadarrama 73.44 308 P **P 22 11 17.6 +0.4**
comp=Z,488nm,2.5s,mb6.0
PMR Palmer 73.46 26 *e*P **P 22 11 17.4 +0.4**
EHUE Huescar 73.77 305 P **P 22 11 18.6 -0.7**
comp=Z,39nm,1.8s,mb5.0
EHUE Huescar 73.77 305 P **P 22 11 18.6 -0.7**
EHUE pmax pmax
comp=Z,39nm,1.8s,mb5.0
ESDC Sonseca Array 73.79 307 P **P 22 11 19.2 -0.1**
ESDC LR LR 22 49 08.0
ESDC Sonseca Array 73.79 307 P **P 22 11 19.2 -0.1**
comp=Z,5.4nm,0.8s,mb4.5,baz=52,slow=6.5,SNR=38
ESDC LR LR 22 49 08.0
comp=Z,128nm,20.1s,MS4.2,baz=25,slow=40
ESLA Sonseca Array 73.79 307 *e*P **P 22 11 19.3 0.0**
comp=Z,17nm,1.7s,mb4.7
EGAK Eagle 73.94 21 *e*P **P 22 11 19.7 -0.1**
CTA Charters Tower 74.07 127 *e*P **P 22 11 20.9 -0.2**
comp=Z,6.3nm,0.7s,mb4.7
CTAO Charters Tower 74.07 127 *e*P **P 22 11 21.0 -0.1**
EQES Quesada 74.11 305 P **P 22 11 21.5 +0.3**
comp=Z,166nm,3.0s
EBAN Banos Encina 74.42 305 P **P 22 11 22.8 -0.3**
comp=Z,17nm,1.0s,mb4.9
EBAN Banos Encina 74.42 305 P **P 22 11 22.8 -0.3**
EBAN pmax pmax
comp=Z,17nm,1.0s,mb4.9
EBER Berja 74.43 304 P **P 22 11 22.5 -0.7**
comp=Z,170nm,3.1s
ECAL Calabor 74.47 310 P **P 22 11 22.7 -0.6**
comp=Z,139nm,2.6s,mb5.4
KDAK Kodiak Island 74.51 30 P **P 22 11 23.9 +0.7**
comp=Z,236nm,0.9s,mb6.1,SNR=5.5
KDAK Kodiak Island 74.51 30 P **P 22 11 23.3 +0.1**
KDAK Kodiak Island 74.51 30 *i* P **P 22 11 23.2 0.0**
OHAK Old Harbor 74.56 31 *e*P **P 22 11 23.2 -0.3**
EGUA Guajares 74.93 304 P **P 22 11 25.3 -0.8**
comp=Z,91nm,0.9s,mb5.7
EGUA Guajares 74.93 304 P **P 22 11 25.3 -0.8**
EGUA pmax pmax
comp=Z,91nm,0.9s,mb5.7
EADA Adamuz 74.96 306 P **P 22 11 25.3 -0.9**
comp=Z,39nm,1.8s,mb5.0
DAWY Dawson 74.99 21 *e*P **P 22 11 26.3 +0.5**
EPLA Plasencia 75.00 308 P **P 22 11 25.1 -1.4**
comp=Z,25nm,0.9s,mb5.1
EPLA Plasencia 75.00 308 P **P 22 11 25.1 -1.3**
EPLA pmax pmax
comp=Z,25nm,0.9s,mb5.1
ERON Agron 75.01 304 P **P 22 11 24.7 -1.8**
comp=Z,8.9nm,0.8s,mb4.8
MVO Moncorvo 75.06 309 *e*P **P 22 11 27.4 +0.7**
comp=Z,35nm,1.6s,mb5.0
MVO *e*LR LR 22 42 09.7
comp=Z,147nm,18.0s
MVO Moncorvo 75.06 309 P **P 22 11 26.6 -0.1**
ELOB Lobios 75.36 311 P **P 22 11 29.2 +0.8**
comp=Z,573nm,3.6s
PCAB Cabril 75.42 310 *e*P **P 22 11 29.4 +0.6**
comp=Z,44nm,1.3s,mb5.2
PVRL Vila Real 75.44 310 *e*P **P 22 11 29.3 +0.4**
comp=Z,26nm,1.8s,mb4.9
BMRM Bremner River 75.51 25 *e*P **P 22 11 28.9 0.0**

comp=Z,48nm,1.1s,mb5.3
ECAB El Cabril 75.58 306 P **P** **22 11 29.1 -0.7**
comp=Z,251nm,4.0s
EZAM Zamans 75.61 311 P **P** **22 11 28.9 -1.0**
comp=Z,52nm,1.0s,mb5.4
EZAM Zamans 75.61 311 P **P** **22 11 28.9 -1.0**
EZAM pmax pmax
comp=Z,52nm,1.0s,mb5.4
MTE Manteigas 75.79 309 *e*P **P** **22 11 31.4 +0.5**
comp=Z,36nm,1.1s,mb5.2
MTE *e*LQ 22 37 46.8
MTE *e*LR LR 22 42 27.5
comp=Z,90nm,16.0s
MTE Manteigas 75.79 309 *e*P **P** **22 11 31.2 +0.3**
PVIS Viseu 75.85 309 *e*P **P** **22 11 32.0 +0.7**
comp=Z,30nm,1.5s,mb5.0
EMIJ Mijas 75.91 304 P **P** **22 11 29.6 -2.1**
comp=Z,4.4nm,0.7s,mb4.5
PCBR Castelo Branco 76.04 309 *e*P **P** **22 11 33.0 +0.6**
comp=Z,20nm,1.3s,mb4.9
PMRV Marv??o 76.19 308 *e*P **P** **22 11 33.8 +0.5**
comp=Z,24nm,2.0s,mb4.8
PMRV *e*LQ 22 37 18.8
PMRV *e*LR LR 22 44 10.0
comp=Z,93nm,16.0s
EBAD Badajoz 76.30 307 P **P** **22 11 33.6 -0.3**
comp=Z,63nm,2.2s,mb5.2
EJIF Jimena Fronter 76.44 305 P **P** **22 11 33.9 -0.8**
comp=Z,19nm,1.0s,mb5.0
EJIF Jimena Fronter 76.44 305 P **P** **22 11 33.9 -0.8**
EJIF pmax pmax
comp=Z,19nm,1.0s,mb5.0
ESPR Espera 76.50 305 P **P** **22 11 34.2 -0.8**
comp=Z,33nm,1.5s,mb5.0
EMIN Mina Concepcio 76.58 306 P **P** **22 11 34.9 -0.6**
comp=Z,50nm,1.5s,mb5.2
PBAR Barrancos 76.62 307 *e*P **P** **22 11 36.2 +0.5**
comp=Z,39nm,1.7s,mb5.1
PBAR *e*LQ 22 38 04.6
PBAR *e*LR LR 22 43 57.8
comp=Z,144nm,18.0s
PESTR Estremoz 76.62 308 *e*P **P** **22 11 36.8 +1.1**
comp=Z,16nm,1.9s,mb4.6
PESTR *e*LQ 22 37 40.9
PESTR *e*LR LR 22 44 43.5
comp=Z,105nm,18.0s
PTOM Tomar 76.77 309 *e*P **P** **22 11 37.1 +0.6**
comp=Z,40nm,1.4s,mb5.2
SFS San Fernando 76.94 305 *e*P **P** **22 11 38.0 +0.5**
comp=Z,76nm,0.4s,mb6.0
SFS San Fernando 76.94 305 *e*P **P** **22 11 38.0 +0.4**
SFS pmax pmax
comp=Z,76nm,0.4s,mb6.0
EVO Evora 77.08 308 *e*P **P** **22 11 38.7 +0.4**
comp=Z,62nm,1.1s,mb5.1
EVO *e*MLR MLR
comp=Z,192nm,18.5s,MS4.2
EVO Evora 77.08 308 *e*P **P** **22 11 39.0 +0.7**
comp=Z,36nm,1.5s,mb5.1
PBEJ Beja 77.25 307 *e*P **P** **22 11 39.8 +0.6**
comp=Z,23nm,1.3s,mb4.9
PVAQ Vaqueiros 77.48 306 *e*P **P** **22 11 41.0 +0.4**
comp=Z,41nm,1.8s,mb5.0
PVAQ *e*LQ 22 37 26.9
PVAQ *e*LR LR 22 44 02.5
comp=Z,78nm,16.0s
PCVE Castro Verde 77.58 307 *e*LQ 22 37 59.8
LSZ Lusaka 77.61 242 *e*P **P** **22 11 40.7 -0.7**
comp=Z,12nm,0.9s,mb4.8
LSZ Lusaka 77.61 242 *e*P **P** **22 11 40.7 -0.7**
LSZ pmax pmax
comp=Z,13nm,0.9s,mb4.9
PMAFR Mafra 77.69 308 *e*LR LR 22 44 50.9
comp=Z,117nm,18.0s
PBDV Barranco-do-Ve 77.71 306 *e*P **P** **22 11 42.5 +0.7**
comp=Z,36nm,1.1s,mb5.2
PBDV *e*LR LR 22 44 27.4
comp=Z,79nm,22.0s
MDT Midelt 77.73 301 LR LR 22 49 51.0
comp=Z,86nm,20.6s,MS4.1,baz=226,slow=39
HYT Haines Junctio 78.00 22 *e*P **P** **22 11 44.0 +1.0**
PFVI Vila Bisbo 78.37 307 *e*LR LR 22 43 51.1
comp=Z,127nm,16.0s
SKAG Skagway 79.75 22 P **P** **22 11 54.1 +1.5**
comp=Z,51nm,1.0s,mb5.4
STKA Stephens Creek 79.85 139 *e*P **P** **22 11 52.8 -0.7**
comp=Z,7.1nm,0.8s,mb4.7
STKA Stephens Creek 79.85 139 P **P** **22 11 51.9 -1.6**
comp=Z,10nm,0.9s,mb4.7,baz=305,slow=5.8,SNR=6.3
STKA LR LR 22 52 42.0
comp=Z,189nm,20.2s,MS4.4,baz=210,slow=40
EIDS Eidsvold 80.93 128 *e*P **P** **22 11 59.6 +0.2**
comp=Z,14nm,1.0s,mb4.8
DLBC Dease Lake 82.21 21 *e*P **P** **22 12 06.3 +0.6**
YKA Yellowknife Ar 82.28 12 P **P** **22 12 05.9 -0.2**
YKA Yellowknife Ar 82.28 12 P **P** **22 12 05.9 -0.2**
comp=Z,9.2nm,0.8s,mb4.7,baz=334,slow=5.0,SNR=18
YKA Yellowknife Ar 82.28 12 P **P** **22 12 05.9 -0.2**
YKA pmax pmax
comp=Z,9.0nm,0.8s
LBTB Lobatse 85.66 236 *e*P **P** **22 12 23.5 -0.4**
comp=Z,25nm,0.8s,mb5.5
LBTB Lobatse 85.66 236 *e*P **P** **22 12 23.5 -0.3**
LBTB pmax pmax
comp=Z,25nm,0.8s,mb5.5
FCC Fort Churchill 88.27 3 *e*P **P** **22 12 35.2 -0.8**
SCHQ Schefferville 90.47 348 P **P** **22 12 45.2 -1.2**
comp=Z,7.6nm,0.9s,mb5.0,baz=36,slow=5.3,SNR=6.6
SCHQ LR LR 22 56 32.7
comp=Z,213nm,19.2s,MS4.6,baz=227,slow=38
EDM Edmonton 91.18 15 *e*P **P** **22 12 49.5 -0.3**
FFC Flin Flon 91.63 8 P **P** **22 12 51.6 -0.2**
comp=Z,128nm,0.9s,mb6.2,SNR=9.2
FFC Flin Flon 91.63 8 *e*P **P** **22 12 51.6 -0.2**
comp=Z,16nm,0.9s,mb5.4
FFC Flin Flon 91.63 8 *d*P **P** **22 12 51.7 -0.1**
DBIC Dimbokro 92.09 279 P **P** **22 12 53.7 -1.0**
comp=Z,5.5nm,0.9s,mb4.9,baz=66,slow=0.8,SNR=5.6
DBIC LR LR 22 56 57.8
comp=Z,110nm,19.5s,MS4.3,baz=44,slow=37
DBIC Dimbokro 92.09 279 *e*P **P** **22 12 53.9 -0.8**
JCW Jim Creek 93.49 22 *e*P **P** **22 13 00.8 +0.2**
comp=Z,16nm,1.0s,mb5.4
BSMT Bassoo Peak 95.83 18 *e*P **P** **22 13 12.5 +1.2**
comp=Z,2.5nm,0.9s,mb4.6
QSPA South Pole Qui 122.96 180 *e*PKPdf PKPdf 22 18 39.2 -0.8
OTAV Otavalo 145.56 343 *e*PKPdf PKPdf 22 19 23.9 0.0
SIV San Ignacio 150.25 299 PKPbc PKPbc 22 19 34.5 -2.1
comp=Z,9.3nm,1.0s,baz=91,slow=4.8,SNR=15
CPUP Villa Florida 152.57 276 PKPbc PKPbc 22 19 40.9 -0.8
comp=Z,1.0nm,0.5s,baz=30,slow=8.2,SNR=3.3
CPUP Villa Florida 152.57 276 *e*PKIKP PKPdf 22 19 33.1 -1.7
CPUP 22 19 40.9
ATAH Atahualpa 152.59 339 PKPbc PKPbc 22 19 43.4 +1.2
comp=Z,2.7nm,0.6s,baz=44,slow=7.3,SNR=4.2
LPAZ La Paz 155.40 308 PKPab PKPab 22 20 03.1 -1.3
comp=Z,2.4nm,0.8s,baz=6.0,slow=6.3,SNR=7.0
LPAZ La Paz 155.40 308 PKP2 PKPab 22 20 03.1 -1.3
LPAZ pmax pmax
comp=Z,2.0nm,0.8s
CFAA Coronel Fontan 163.23 270 PKPab PKPab 22 20 36.8 -1.3
comp=Z,0.6nm,0.3s,baz=252,slow=3.2,SNR=38

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*ISCJB **05** 22:41:19.8±0.3,38.27N±0.02×0.99W±0.02, h0km±1km, Error ellipse: s-maj=3.0km s-min=1.7km az=144.0*
*LDG **05** 22:41:21.8±0.1,38.03N×0.77W, h2km, Ml3.4/13, Error ellipse: s-maj=3.0km s-min=1.4km az=140.0*
*SFS **05** 22:41:21.0,38.04N×0.78W, h7km, ML3.4*
*CSEM **05** 22:41:21.2±0.1,38.14N×0.88W, h5km, ML3.8/39, Error ellipse: s-maj=3.5km s-min=1.9km az=142.0*
*INMG **05** 22:41:21.8±1.7,38.05N×0.77W, h12km±3km, ML3.3, Error ellipse: s-maj=3.8km s-min=1.9km az=133.0*
*NEIC **05** 22:41:21.9,38.05N×0.78W, h7km, ML3.5(STR), ML3.4(LDG), MN3.4(MDD), After MDD.*
NEIC Felt [III] at Algorfa, Alicante, Almoradi, Elche, Guardamar del Segura, Orihuela, San Pedro del Pinatar, Santa Pola and Torrevieja.
*MDD **05** 22:41:22.0±0.4,38.05N×0.78W, h7km±2km, mbLg3.4/44, Error ellipse: s-maj=3.9km s-min=2.0km az=133.0, PRIMO SEGURA ALMORADA, ORIHUELA SANTA POLA ELCHE ALICANTE SAN PEDRO DEL PINATAR*
MDD EMS: III ALGORFA TORREVIEJA GUARDAMAR DEL.

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*STR **05** 22:41:31.4±0.3,38.71N×0.64W, h10km, Ml3.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 05 22:41:21.4±0.3,38.16N±0.01×0.88W±0.02,h8km±1km, n430,σ1$23/811,26C-11D,Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMUR	**La Murta**	**0.42**	**222**	P	**Pg**	**22 41 29.9**	**+0.2**
EMUR				Lg		22 41 34.9	
EMUR				Lg		22 41 35.4	
EMUR	**La Murta**	**0.42**	**222**	⇓Pg	**Pg**	**22 41 29.9**	**+0.2**
	323nm,0.3s,SNR=18						
EMUR				Lg		22 41 34.9	
	3μm,0.4s,SNR=5.0						
EMUR	**La Murta**	**0.42**	**222**	⇓Pg	**Pg**	**22 41 29.9**	**+0.2**
	323nm,0.3s,SNR=18						
EMUR				Lg		22 41 34.9	
	3μm,0.4s,SNR=5.0						
EMUR	**La Murta**	**0.42**	**222**	Pg	**Pg**	**22 41 29.9**	**+0.2**
	323nm,0.3s,SNR=18						
CART	**Cartagena**	**0.58**	**189**	⇓*e*P	**Pg**	**22 41 31.9**	**-0.7**
CART				*e*S	**Sg**	**22 41 38.8**	**-1.3**
CART	**Cartagena**	**0.58**	**189**	⇓Pg	**Pg**	**22 41 32.0**	**-0.6**
CART				Lg		22 41 38.1	
CART	**Cartagena**	**0.58**	**189**	⇓Pg	**Pg**	**22 41 32.0**	**-0.6**
CART				Lg		22 41 38.1	
CART	**Cartagena**	**0.58**	**189**	*i* P	**Pg**	**22 41 32.0**	**-0.6**
CART				*e*S	**Sg**	**22 41 38.8**	**-1.3**
ETOB	**Tobarra**	**0.71**	**313**	⇑Pg	**Pg**	**22 41 37.6**	**+2.4**
ETOB				Lg		22 41 49.4	
ETOB				Lg		22 41 49.7	
ETOB	**Tobarra**	**0.71**	**313**	⇑Pg	**Pg**	**22 41 37.6**	**+2.4**
	483nm,0.3s,SNR=18						
ETOB				Lg		22 41 49.7	
	3μm,0.3s,SNR=28						
ETOB	**Tobarra**	**0.71**	**313**	⇑Pg	**Pg**	**22 41 37.6**	**+2.4**
	483nm,0.3s,SNR=18						
ETOB				Lg		22 41 49.7	
	3μm,0.3s,SNR=28						
ETOB	**Tobarra**	**0.71**	**313**	Pg	**Pg**	**22 41 37.6**	**+2.4**
	483nm,0.3s,SNR=18						
ETOB				Lg		22 41 49.4	
EBEN	**Beniarda**	**0.75**	**43**	⇓Pg	**Pg**	**22 41 36.0**	**+0.1**
EBEN				Lg		22 41 45.6	
EBEN				Lg		22 41 46.5	
EBEN	**Beniarda**	**0.75**	**43**	⇓Pg	**Pg**	**22 41 36.0**	**+0.1**
	144nm,0.2s,SNR=18						
EBEN				Lg		22 41 46.5	
	434nm,0.3s,SNR=5.0						
EBEN	**Beniarda**	**0.75**	**43**	⇓Pg	**Pg**	**22 41 36.0**	**+0.1**
	144nm,0.2s,SNR=18						
EBEN				Lg		22 41 46.5	
	434nm,0.3s,SNR=5.0						
EBEN	**Beniarda**	**0.75**	**43**	Pg	**Pg**	**22 41 36.0**	**+0.1**
	144nm,0.2s,SNR=18						
EBEN				Lg		22 41 45.6	
EVIA	**Vianos**	**1.36**	**291**	P	**Pn**	**22 41 47.6**	**+0.9**
EVIA				Pg	**Pg**	**22 41 49.7**	**+2.2**
EVIA				Lg		22 42 08.7	
EVIA	**Vianos**	**1.36**	**291**	⇑Pn	**Pn**	**22 41 47.5**	**+0.8**
	28nm,0.3s,SNR=18						
EVIA				Pg	**Pg**	**22 41 49.7**	**+2.2**
	248nm,0.2s,SNR=474						
EVIA				Lg		22 42 08.7	
	SNR=7.9						
EVIA	**Vianos**	**1.36**	**291**	⇑Pn	**Pn**	**22 41 47.5**	**+0.8**
	28nm,0.3s,SNR=18						
EVIA				Pg	**Pg**	**22 41 49.7**	**+2.2**
	248nm,0.2s,SNR=474						
EVIA				Lg		22 42 08.7	
	SNR=7.9						
EVIA	**Vianos**	**1.36**	**291**	Pn	**Pn**	**22 41 47.5**	**+0.8**
	28nm,0.3s,SNR=18						
EHUE	**Huescar**	**1.39**	**256**	Pg	**Pg**	**22 41 48.0**	**-0.1**
EHUE				Lg		22 42 08.4	
EHUE	**Huescar**	**1.39**	**256**	⇑Pg	**Pg**	**22 41 48.0**	**-0.1**
	78nm,0.2s,SNR=18						
EHUE				Lg		22 42 08.4	
	168nm,0.5s,SNR=7.9						
EHUE	**Huescar**	**1.39**	**256**	⇑Pg	**Pg**	**22 41 48.0**	**-0.1**
	78nm,0.2s,SNR=18						
EHUE				Lg		22 42 08.4	
	168nm,0.5s,SNR=7.9						
EHUE	**Huescar**	**1.39**	**256**	Pg	**Pg**	**22 41 48.0**	**-0.2**
	78nm,0.2s,SNR=18						
ECHE	**Chera**	**1.43**	**357**	P	**Pn**	**22 41 48.3**	**+0.6**
ECHE				Pg	**Pg**	**22 41 50.4**	**+1.5**
ECHE				Lg		22 42 09.6	
ECHE	**Chera**	**1.43**	**357**	Pn	**Pn**	**22 41 48.2**	**+0.5**
	16nm,0.4s,SNR=7.9						
ECHE				Pg	**Pg**	**22 41 50.4**	**+1.5**
	166nm,0.2s,SNR=156						
ECHE				Lg		22 42 09.6	
	250nm,0.3s,SNR=9.2						
ECHE	**Chera**	**1.43**	**357**	Pn	**Pn**	**22 41 48.2**	**+0.5**
	16nm,0.4s,SNR=7.9						
ECHE				Pg	**Pg**	**22 41 50.4**	**+1.5**
	166nm,0.2s,SNR=156						
ECHE				Lg		22 42 09.6	
	250nm,0.3s,SNR=9.2						
ECHE	**Chera**	**1.43**	**357**	Pn	**Pn**	**22 41 48.2**	**+0.5**
	16nm,0.4s,SNR=7.9						
ENIJ	**Nijar**	**1.58**	**222**	P	**Pn**	**22 41 49.1**	**-0.7**
ENIJ				Lg		22 42 08.9	
ENIJ				Lg		22 42 09.0	
ENIJ	**Nijar**	**1.58**	**222**	Pg	**Pn**	**22 41 49.1**	**-0.8**
	96nm,0.2s,SNR=57						
ENIJ				Lg		22 42 08.9	
	239nm,0.5s,SNR=5.5						
ENIJ	**Nijar**	**1.58**	**222**	Pg	**Pn**	**22 41 49.1**	**-0.8**
	96nm,0.2s,SNR=57						
ENIJ				Lg		22 42 08.9	
	239nm,0.5s,SNR=5.5						
EQES	**Quesada**	**1.76**	**259**	P	**Pn**	**22 41 53.8**	**+1.5**
EQES				Pg	**Pg**	**22 41 54.6**	**-0.7**
EQES				Lg		22 42 18.2	
EQES				Lg		22 42 18.5	
EQES	**Quesada**	**1.76**	**259**	Pn	**Pn**	**22 41 53.8**	**+1.5**
	10nm,0.1s,SNR=1075						
EQES				Pg	**Pg**	**22 41 54.6**	**-0.7**
	319nm,0.3s,SNR=9.6						
EQES				Lg		22 42 18.5	
	270nm,0.3s,SNR=7.1						
EQES	**Quesada**	**1.76**	**259**	Pn	**Pn**	**22 41 53.8**	**+1.5**
	10nm,0.1s,SNR=1075						
EQES				Pg	**Pg**	**22 41 54.6**	**-0.7**
	319nm,0.3s,SNR=9.6						
EQES				Lg		22 42 18.5	
	270nm,0.3s,SNR=7.1						
EQES	**Quesada**	**1.76**	**259**	Pn	**Pn**	**22 41 53.8**	**+1.5**
	10.0nm,0.1s,SNR=1000						
EIBI	**Ibiza**	**1.95**	**63**	⇑Pn	**Pn**	**22 41 53.4**	**-1.4**
EIBI				Lg		22 42 16.1	
EIBI				Sn	**Sn**	**22 42 16.4**	**-3.1**
EIBI	**Ibiza**	**1.95**	**63**	⇑Pn	**Pn**	**22 41 53.4**	**-1.5**
	25nm,0.1s,SNR=18						
EIBI				Sn	**Sn**	**22 42 16.4**	**-3.1**
	234nm,0.6s,SNR=5.0						
EIBI	**Ibiza**	**1.95**	**63**	⇑Pn	**Pn**	**22 41 53.4**	**-1.5**
	25nm,0.1s,SNR=18						
EIBI				Sn	**Sn**	**22 42 16.4**	**-3.1**
	234nm,0.6s,SNR=5.0						
EIBI	**Ibiza**	**1.95**	**63**	Pn	**Pn**	**22 41 53.4**	**-1.4**
	25nm,0.1s,SNR=18						
EBER	**Berja**	**2.03**	**232**	⇑Pg	**Pn**	**22 41 55.8**	**-0.2**
EBER				P		22 41 56.3	
EBER				Lg		22 42 21.6	
EBER				Lg		22 42 21.9	
EBER	**Berja**	**2.03**	**232**	⇑Pg	**Pn**	**22 41 55.8**	**-0.2**
	89nm,0.5s,SNR=18						
EBER				Lg		22 42 21.6	
	248nm,0.6s,SNR=5.5						
EBER	**Berja**	**2.03**	**232**	⇑Pg	**Pn**	**22 41 55.8**	**-0.2**
	89nm,0.5s,SNR=18						
EBER				Lg		22 42 21.6	
	248nm,0.6s,SNR=5.5						
EMOS	**Mosqueruela**	**2.23**	**8**	Pn	**Pn**	**22 41 59.1**	**+0.5**
EMOS				P		22 41 59.6	
EMOS				Pg	**Pg**	**22 42 04.8**	**+0.7**
EMOS				Pg	**Pg**	**22 42 05.2**	**+1.1**
EMOS				Sn	**Sn**	**22 42 26.0**	**-0.3**
EMOS				Lg		22 42 34.4	
EMOS				Lg		22 42 34.6	
EMOS	**Mosqueruela**	**2.23**	**8**	Pn	**Pn**	**22 41 59.1**	**+0.5**
	7.7nm,0.2s,SNR=54						
EMOS				Pg	**Pg**	**22 42 04.8**	**+0.7**
	98nm,0.7s,SNR=28						
EMOS				Sn	**Sn**	**22 42 26.0**	**-0.3**
	51nm,0.3s,SNR=8.0						
EMOS				Lg		22 42 34.6	
	319nm,1.0s,SNR=5.0						
EMOS	**Mosqueruela**	**2.23**	**8**	Pn	**Pn**	**22 41 59.1**	**+0.5**
	7.7nm,0.2s,SNR=54						
EMOS	**Mosqueruela**	**2.23**	**8**	P	**Pn**	**22 41 59.6**	**+1.0**
EMOS	**Mosqueruela**	**2.23**	**8**	Pg	**Pg**	**22 42 04.8**	**+0.7**
	98nm,0.7s,SNR=28						
EMOS				Sn	**Sn**	**22 42 26.0**	**-0.3**
	51nm,0.3s,SNR=8.0						
EQUE	**Quentar**	**2.24**	**246**	Pg	**Pn**	**22 42 00.1**	**+1.3**
	50nm,0.3s,SNR=69						
EQUE				Lg		22 42 30.0	
	253nm,1.0s,SNR=5.0						
EQUE	**Quentar**	**2.24**	**246**	Pg	**Pn**	**22 42 00.1**	**+1.3**
	50nm,0.3s,SNR=69						
EQUE				Lg		22 42 30.0	
	253nm,1.0s,SNR=5.0						
EBAN	**Banos Encina**	**2.29**	**271**	⇑Pn	**Pn**	**22 42 00.2**	**+0.7**
EBAN				Pg	**Pg**	**22 42 05.5**	**+0.2**
EBAN				Sn	**Sn**	**22 42 29.4**	**+1.6**
EBAN				Lg		22 42 36.2	
EBAN				Lg		22 42 36.7	
EBAN	**Banos Encina**	**2.29**	**271**	⇑Pn	**Pn**	**22 42 00.2**	**+0.7**
	96nm,0.2s,SNR=18						
EBAN				Pg	**Pg**	**22 42 05.5**	**+0.2**
	52nm,0.2s,SNR=14						
EBAN				Sn	**Sn**	**22 42 29.4**	**+1.6**
	25nm,0.2s,SNR=6.7						
EBAN				Lg		22 42 36.7	
	137nm,0.7s,SNR=7.6						
EBAN	**Banos Encina**	**2.29**	**271**	⇑Pn	**Pn**	**22 42 00.2**	**+0.7**
	96nm,0.2s,SNR=18						
EBAN				Pg	**Pg**	**22 42 05.5**	**+0.2**
	52nm,0.2s,SNR=14						
EBAN				Sn	**Sn**	**22 42 29.4**	**+1.6**
	25nm,0.2s,SNR=6.7						
EBAN				Lg		22 42 36.7	
	137nm,0.7s,SNR=7.6						
EBAN	**Banos Encina**	**2.29**	**271**	Pn	**Pn**	**22 42 00.2**	**+0.7**
	96nm,0.2s,SNR=18						
EBAN	**Banos Encina**	**2.29**	**271**	Pg	**Pg**	**22 42 05.5**	**+0.2**
	52nm,0.2s,SNR=14						
EBAN				Sn	**Sn**	**22 42 29.4**	**+1.6**
	25nm,0.2s,SNR=6.7						
ECOG	**Cogollos-Vega**	**2.30**	**248**	Pg	**Pn**	**22 42 01.7**	**+2.0**
ECOG				Pg	**Pn**	**22 42 02.0**	**+2.3**
ECOG				Lg		22 42 33.3	
ECOG	**Cogollos-Vega**	**2.30**	**248**	Pg	**Pn**	**22 42 01.7**	**+2.0**
	66nm,0.4s,SNR=26						
ECOG				Lg		22 42 33.3	
	338nm,0.8s,SNR=7.0						
ECOG	**Cogollos-Vega**	**2.30**	**248**	Pg	**Pn**	**22 42 01.7**	**+2.0**
	66nm,0.4s,SNR=26						
ECOG				Lg		22 42 33.3	
	338nm,0.8s,SNR=7.0						
ECOG	**Cogollos-Vega**	**2.30**	**248**	Pg	**Pn**	**22 42 02.0**	**+2.3**
EGUA	**Guajares**	**2.51**	**239**	Pg	**Pn**	**22 42 02.8**	**+0.3**
EGUA				Pn	**Pn**	**22 42 02.9**	**+0.4**
EGUA				Sn	**Sn**	**22 42 34.0**	**+0.6**
EGUA				Lg		22 42 42.4	
EGUA				Lg		22 42 43.3	
EGUA	**Guajares**	**2.51**	**239**	Pn	**Pn**	**22 42 02.9**	**+0.4**
	SNR=7.9						
EGUA				Sn	**Sn**	**22 42 34.0**	**+0.6**
	75nm,0.4s,SNR=4.0						
EGUA				Lg		22 42 43.3	
	758nm,0.8s,SNR=7.9						
EGUA	**Guajares**	**2.51**	**239**	Pn	**Pn**	**22 42 02.9**	**+0.4**
	SNR=7.9						
EGUA				Sn	**Sn**	**22 42 34.0**	**+0.6**
	75nm,0.4s,SNR=4.0						
EGUA				Lg		22 42 43.3	
	758nm,0.8s,SNR=7.9						
EGUA	**Guajares**	**2.51**	**239**	Pn	**Pn**	**22 42 02.9**	**+0.4**
	SNR=7.9						
EGUA				Sn	**Sn**	**22 42 34.0**	**+0.7**
	75nm,0.4s,SNR=4.0						
ERON	**Agron**	**2.58**	**245**	Pn	**Pn**	**22 42 02.4**	**-1.2**
ERON				Pg	**Pg**	**22 42 05.5**	**-5.5**
ERON				Pg	**Pg**	**22 42 05.8**	**-5.1**
ERON				Sn	**Sn**	**22 42 35.1**	**-0.1**
ERON				Lg		22 42 45.9	
ERON	**Agron**	**2.58**	**245**	Pn	**Pn**	**22 42 02.4**	**-1.2**
	2.0nm,0.1s,SNR=7.9						
ERON				Pg	**Pg**	**22 42 05.8**	**-5.1**
	28nm,0.4s,SNR=7.9						
ERON				Sn	**Sn**	**22 42 35.1**	**-0.1**
	12nm,0.3s,SNR=7.9						
ERON				Lg		22 42 45.9	
	17nm,0.2s,SNR=7.9						
ERON	**Agron**	**2.58**	**245**	Pn	**Pn**	**22 42 02.4**	**-1.2**
	2.0nm,0.1s,SNR=7.9						
ERON				Pg	**Pg**	**22 42 05.8**	**-5.1**
	28nm,0.4s,SNR=7.9						
ERON				Sn	**Sn**	**22 42 35.1**	**-0.1**
	12nm,0.3s,SNR=7.9						
ERON				Lg		22 42 45.9	
	17nm,0.2s,SNR=7.9						
ERON	**Agron**	**2.58**	**245**	Pn	**Pn**	**22 42 02.4**	**-1.2**
	2.0nm,0.1s,SNR=7.9						
ERON				Sn	**Sn**	**22 42 35.1**	**-0.1**
	12nm,0.3s,SNR=7.9						
ELOJ	**Sierra Loja**	**2.78**	**250**	Pn	**Pn**	**22 42 07.8**	**+1.4**
ELOJ				P		22 42 08.0	
ELOJ				Pg	**Pg**	**22 42 15.5**	**+0.7**
ELOJ				Sn	**Sn**	**22 42 40.0**	**-0.1**
ELOJ				Lg		22 42 46.6	
ELOJ				Lg		22 42 51.5	
ELOJ	**Sierra Loja**	**2.78**	**250**	Pn	**Pn**	**22 42 07.8**	**+1.4**
	7.1nm,0.2s,SNR=20						
ELOJ				Pg	**Pg**	**22 42 15.5**	**+0.7**
	55nm,0.6s,SNR=18						
ELOJ				Sn	**Sn**	**22 42 40.0**	**-0.1**
	14nm,0.3s,SNR=5.0						
ELOJ				Lg		22 42 51.5	
	20nm,0.3s,SNR=4.6						
ELOJ	**Sierra Loja**	**2.78**	**250**	Pn	**Pn**	**22 42 07.8**	**+1.4**
	7.1nm,0.2s,SNR=20						
ELOJ				Pg	**Pg**	**22 42 15.5**	**+0.7**
	55nm,0.6s,SNR=18						
ELOJ				Sn	**Sn**	**22 42 40.0**	**-0.1**
	14nm,0.3s,SNR=5.0						
ELOJ				Lg		22 42 51.5	
	20nm,0.3s,SNR=4.6						
ELOJ	**Sierra Loja**	**2.78**	**250**	Pn	**Pn**	**22 42 07.8**	**+1.5**
	7.1nm,0.2s,SNR=20						
ELOJ	**Sierra Loja**	**2.78**	**250**	Pg	**Pg**	**22 42 15.5**	**+0.7**
	55nm,0.6s,SNR=18						
ELOJ				Sn	**Sn**	**22 42 40.0**	**-0.1**
	14nm,0.3s,SNR=5.0						
ELOJ				Lg		22 42 46.6	
EALB	**Alboran**	**2.80**	**218**	Pn	**Pn**	**22 42 06.2**	**-0.4**
EALB				Pg	**Pg**	**22 42 12.2**	**-3.0**
EALB				Sn	**Sn**	**22 42 37.0**	**-3.6**
EALB	**Alboran**	**2.80**	**218**	Pn	**Pn**	**22 42 06.2**	**-0.4**
	4.7nm,0.2s,SNR=4.0						
EALB				Pg	**Pg**	**22 42 12.2**	**-3.0**
	13nm,0.3s,SNR=7.9						
EALB				Sn	**Sn**	**22 42 37.0**	**-3.6**
	28nm,0.5s,SNR=7.9						
EALB	**Alboran**	**2.80**	**218**	Pn	**Pn**	**22 42 06.2**	**-0.4**
	4.7nm,0.2s,SNR=4.0						
EALB				Pg	**Pg**	**22 42 12.2**	**-3.0**
	13nm,0.3s,SNR=7.9						
EALB				Sn	**Sn**	**22 42 37.0**	**-3.6**
	28nm,0.5s,SNR=7.9						
EALB	**Alboran**	**2.80**	**218**	Pn	**Pn**	**22 42 06.2**	**-0.4**
	4.7nm,0.2s,SNR=4.0						
ETOR	**Torete**	**2.81**	**342**	P	**Pn**	**22 42 07.9**	**+1.2**
ETOR				Pg	**Pg**	**22 42 14.8**	**-0.5**
ETOR				Sn	**Sn**	**22 42 40.8**	**+0.1**

ETOR Sn **Sn** **22 42 40.8 +0.1**
88nm,0.3s,SNR=6.5
ETOR Lg 22 42 52.6
154nm,0.8s,SNR=5.0
ETOR Torete 2.81 342 Pn **Pn** **22 42 07.9 +1.2**
11nm,0.3s,SNR=8.5
ETOR Pg **Pg** **22 42 14.8 -0.5**
203nm,0.6s,SNR=92
ETOR Sn **Sn** **22 42 40.8 +0.1**
88nm,0.3s,SNR=6.5
ETOR Lg 22 42 52.6
154nm,0.8s,SNR=5.0
ETOR Torete 2.81 342 Pn **Pn** **22 42 07.9 +1.3**
11nm,0.3s,SNR=8.5
ESDC Sonseca Array 2.84 303 Pn **Pn** **22 42 07.2 +0.1**
ESDC Pg **Pg** **22 42 16.3 +0.4**
ESDC Sonseca Array 2.84 303 Pn **Pn** **22 42 07.2 +0.1**
5.4nm,0.3s,baz=122,slow=14,SNR=139
ESDC Pg **Pg** **22 42 16.3 +0.4**
132nm,0.3s,baz=122,slow=18,SNR=7.9
ESDC Sonseca Array 2.84 303 Pn **Pn** **22 42 07.2 +0.1**
5.4nm,0.3s,baz=122,slow=14,SNR=139
ESDC Pg **Pg** **22 42 16.3 +0.4**
132nm,0.3s,baz=122,slow=18,SNR=7.9
ESDC Sonseca Array 2.84 303 Pn **Pn** **22 42 07.2 +0.1**
5.4nm,0.3s,slow=14,SNR=139
ESDC Sonseca Array 2.84 303 Pg **Pg** **22 42 16.3 +0.5**
132nm,0.3s,SNR=7.9
ESLA Sonseca Array 2.84 303 *e*Pn **Pn** **22 42 07.7 +0.6**
ESLA *e*Pg **Pg** **22 42 17.4 +1.5**
ESLA *e*S **Sg** **22 42 55.7 +3.0**
ESLA Sonseca Array 2.84 303 *e*Pn **Pn** **22 42 07.7 +0.6**
EADA Adamuz 2.91 271 ⇑Pn **Pn** **22 42 08.2 +0.1**
EADA Pg **Pg** **22 42 16.5 -0.7**
EADA Sn **Sn** **22 42 43.5 +0.3**
EADA Lg 22 42 56.7
EADA Adamuz 2.91 271 ⇑Pn **Pn** **22 42 08.2 +0.1**
21nm,0.2s,SNR=18
EADA Pg **Pg** **22 42 16.5 -0.7**
38nm,0.4s,SNR=10
EADA Sn **Sn** **22 42 43.5 +0.3**
22nm,0.5s,SNR=6.5
EADA Lg 22 42 56.7
98nm,0.4s,SNR=5.0
EADA Adamuz 2.91 271 ⇑Pn **Pn** **22 42 08.2 +0.1**
21nm,0.2s,SNR=18
EADA Pg **Pg** **22 42 16.5 -0.7**
38nm,0.4s,SNR=10
EADA Sn **Sn** **22 42 43.5 +0.3**
22nm,0.5s,SNR=6.5
EADA Lg 22 42 56.7
98nm,0.4s,SNR=5.0
EADA Adamuz 2.91 271 Pn **Pn** **22 42 08.2 +0.1**
21nm,0.2s,SNR=18
ERTA Horta de San J 2.95 18 P **Pn** **22 42 09.2 +0.7**
ERTA Pg **Pg** **22 42 17.1 -0.8**
ERTA Sn **Sn** **22 42 44.4 +0.3**
ERTA Lg 22 42 53.4
ERTA Horta de San J 2.95 18 Pn **Pn** **22 42 09.1 +0.6**
9.4nm,0.2s,SNR=42
ERTA Pg **Pg** **22 42 17.1 -0.8**
34nm,0.4s,SNR=14
ERTA Sn **Sn** **22 42 44.4 +0.3**
102nm,0.6s,SNR=5.0
ERTA Lg 22 42 53.4
110nm,0.7s,SNR=5.0
ERTA Horta de San J 2.95 18 Pn **Pn** **22 42 09.1 +0.6**
9.4nm,0.2s,SNR=42
ERTA Pg **Pg** **22 42 17.1 -0.8**
34nm,0.4s,SNR=14
ERTA Sn **Sn** **22 42 44.4 +0.3**
102nm,0.6s,SNR=5.0
ERTA Lg 22 42 53.4
110nm,0.7s,SNR=5.0
ERTA Horta de San J 2.95 18 Pn **Pn** **22 42 09.1 +0.5**
9.4nm,0.2s,SNR=42
PAB San Pablo 3.04 298 *e*Pn **Pn** **22 42 10.4 +0.6**
PAB *e*Pg **Pg** **22 42 20.5 +0.9**
PAB *e*S **Sg** **22 43 00.4 +1.4**
PAB San Pablo 3.04 298 *e*Pn **Pn** **22 42 10.4 +0.6**
ETOS Mallorca 3.30 60 Pn **Pn** **22 42 12.5 -0.9**
ETOS P 22 42 13.1
ETOS Sn **Sn** **22 42 50.0 -2.9**
ETOS Mallorca 3.30 60 Pn **Pn** **22 42 12.5 -0.9**
11nm,0.3s,SNR=28
ETOS Sn **Sn** **22 42 50.0 -2.9**
17nm,0.4s,SNR=5.0
ETOS Mallorca 3.30 60 Pn **Pn** **22 42 12.5 -0.9**
11nm,0.3s,SNR=28
ETOS Sn **Sn** **22 42 50.0 -2.9**
17nm,0.4s,SNR=5.0
ETOS Mallorca 3.30 60 Pn **Pn** **22 42 12.5 -0.9**
11nm,0.3s,SNR=28
EMIJ Mijas 3.48 244 Pn **Pn** **22 42 15.3 -0.7**
EMIJ P 22 42 17.0
EMIJ Lg 22 43 15.1
EMIJ Mijas 3.48 244 Pn **Pn** **22 42 15.3 -0.7**
4.4nm,0.3s,SNR=17
EMIJ Lg 22 43 15.1
24nm,0.5s,SNR=4.0
EMIJ Mijas 3.48 244 Pn **Pn** **22 42 15.3 -0.7**
4.4nm,0.3s,SNR=17
EMIJ Lg 22 43 15.1
24nm,0.5s,SNR=4.0
EMIJ Mijas 3.48 244 Pn **Pn** **22 42 15.3 -0.6**
4.4nm,0.3s,SNR=17
EMIJ Mijas 3.48 244 P **Pn** **22 42 17.0 +1.1**
EPOB Poblet 3.53 25 Pn **Pn** **22 42 16.4 -0.2**
EPOB P 22 42 16.6
EPOB Pg **Pg** **22 42 27.2 -1.9**
EPOB Sn **Sn** **22 42 56.1 -2.4**
EPOB Lg 22 43 14.9
EPOB Poblet 3.53 25 Pn **Pn** **22 42 16.4 -0.2**
7.3nm,0.2s,SNR=48
EPOB Pg **Pg** **22 42 27.2 -1.9**
7.3nm,0.2s,SNR=23
EPOB Sn **Sn** **22 42 56.1 -2.4**
12nm,0.3s,SNR=7.9
EPOB Lg 22 43 14.9
36nm,0.8s,SNR=5.0
EPOB Poblet 3.53 25 Pn **Pn** **22 42 16.4 -0.2**
7.3nm,0.2s,SNR=48
EPOB Pg **Pg** **22 42 27.2 -1.9**
7.3nm,0.2s,SNR=23
EPOB Sn **Sn** **22 42 56.1 -2.4**
12nm,0.3s,SNR=7.9
EPOB Lg 22 43 14.9
36nm,0.8s,SNR=5.0
EPOB Poblet 3.53 25 P **Pn** **22 42 16.6 0.0**
EPOB Poblet 3.53 25 Pg **Pg** **22 42 27.2 -1.9**
7.3nm,0.2s,SNR=23
GUD Guadarrama 3.55 315 Pn **Pn** **22 42 17.6 +0.8**
GUD Pg **Pg** **22 42 28.9 -0.5**
GUD Sn **Sn** **22 42 59.9 +1.0**
GUD Lg 22 43 16.4
GUD Guadarrama 3.55 315 Pn **Pn** **22 42 17.6 +0.8**
2.0nm,0.2s,SNR=7.9
GUD Pg **Pg** **22 42 28.9 -0.5**
46nm,0.7s,SNR=7.9
GUD Sn **Sn** **22 42 59.9 +1.0**
29nm,0.6s,SNR=7.9
GUD Lg 22 43 16.4
57nm,0.3s,SNR=7.9
GUD Guadarrama 3.55 315 Pn **Pn** **22 42 17.6 +0.8**
2.0nm,0.2s,SNR=7.9
GUD Pg **Pg** **22 42 28.9 -0.5**
46nm,0.7s,SNR=7.9
GUD Sn **Sn** **22 42 59.9 +1.0**
29nm,0.6s,SNR=7.9
GUD Lg 22 43 16.4
57nm,0.3s,SNR=7.9
GUD Guadarrama 3.55 315 Pn **Pn** **22 42 17.6 +0.8**
2.0nm,0.2s,SNR=7.9
ESAC San Caprasio 3.57 5 Pn **Pn** **22 42 19.5 +2.3**
ESAC P 22 42 19.6
ESAC Pg **Pg** **22 42 30.6 +0.7**
ESAC Sn **Sn** **22 43 00.8 +1.3**
ESAC Lg 22 43 16.1
ESAC San Caprasio 3.57 5 Pn **Pn** **22 42 19.5 +2.3**
15nm,0.2s,SNR=14
ESAC Pg **Pg** **22 42 30.6 +0.7**
86nm,0.2s,SNR=26
ESAC Sn **Sn** **22 43 00.8 +1.3**
116nm,0.3s,SNR=4.6
ESAC Lg 22 43 16.1
429nm,0.4s,SNR=5.0
ESAC San Caprasio 3.57 5 Pn **Pn** **22 42 19.5 +2.3**
15nm,0.2s,SNR=14
ESAC Pg **Pg** **22 42 30.6 +0.7**
86nm,0.2s,SNR=26
ESAC Sn **Sn** **22 43 00.8 +1.3**
116nm,0.3s,SNR=4.6
ESAC Lg 22 43 16.1
429nm,0.4s,SNR=5.0
ECAB El Cabril 3.58 270 P **Pn** **22 42 17.3 0.0**
ECAB Pg **Pg** **22 42 29.6 -0.4**
ECAB Sn **Sn** **22 42 58.7 -0.9**
ECAB Lg 22 43 13.7
ECAB El Cabril 3.58 270 ⇑Pn **Pn** **22 42 17.2 0.0**
22nm,0.2s,SNR=18
ECAB Pg **Pg** **22 42 29.6 -0.4**
28nm,0.4s,SNR=10
ECAB Sn **Sn** **22 42 58.7 -0.9**
14nm,0.3s,SNR=5.8
ECAB Lg 22 43 13.7
59nm,0.4s,SNR=6.7
ECAB El Cabril 3.58 270 ⇑Pn **Pn** **22 42 17.2 0.0**
22nm,0.2s,SNR=18
ECAB Pg **Pg** **22 42 29.6 -0.4**
28nm,0.4s,SNR=10
ECAB Sn **Sn** **22 42 58.7 -0.9**
14nm,0.3s,SNR=5.8
ECAB Lg 22 43 13.7
59nm,0.4s,SNR=6.7
ECAB El Cabril 3.58 270 P **Pn** **22 42 17.3 +0.1**
ECAB El Cabril 3.58 270 Pg **Pg** **22 42 29.5 -0.5**
28nm,0.4s,SNR=10
ECAB Sn **Sn** **22 42 58.7 -1.0**
14nm,0.3s,SNR=5.8
LIJA Lijar 3.80 252 Pn **Pn** **22 42 21.0 +0.7**
LIJA Sn **Sn** **22 43 11.5 +6.2**
LIJA Lijar 3.80 252 Pn **Pn** **22 42 21.0 +0.7**
LIJA Sn **Sn** **22 43 11.5 +6.2**
LIJA Lijar 3.80 252 *e*P **Pn** **22 42 21.0 +0.7**
EJIF Jimena Fronter 4.03 246 Pn **Pn** **22 42 24.1 +0.6**
EJIF Pg **Pg** **22 42 36.6 -2.1**
EJIF Jimena Fronter 4.03 246 Pn **Pn** **22 42 24.1 +0.6**
3.3nm,0.4s,SNR=7.9
EJIF Pg **Pg** **22 42 36.6 -2.1**
16nm,0.7s,SNR=7.9
EJIF Jimena Fronter 4.03 246 Pn **Pn** **22 42 24.1 +0.6**
3.3nm,0.4s,SNR=7.9
EJIF Pg **Pg** **22 42 36.6 -2.1**
16nm,0.7s,SNR=7.9
EJIF Jimena Fronter 4.03 246 Pn **Pn** **22 42 24.1 +0.6**
3.3nm,0.4s,SNR=7.9
EJIF Jimena Fronter 4.03 246 Pg **Pg** **22 42 36.6 -2.1**
16nm,0.7s,SNR=7.9
ESPR Espera 4.16 253 Pn **Pn** **22 42 25.9 +0.6**
ESPR Pg **Pg** **22 42 39.1 -2.0**
ESPR Sn **Sn** **22 43 12.7 -1.3**
ESPR Lg 22 43 35.5
ESPR Espera 4.16 253 Pn **Pn** **22 42 25.8 +0.6**
2.6nm,0.2s,SNR=15
ESPR Pg **Pg** **22 42 39.1 -2.0**
19nm,0.6s,SNR=4.0
ESPR Sn **Sn** **22 43 12.7 -1.3**
16nm,0.3s,SNR=9.5
ESPR Lg 22 43 35.5
32nm,0.7s,SNR=4.5
ESPR Espera 4.16 253 Pn **Pn** **22 42 25.8 +0.6**
2.6nm,0.2s,SNR=15
ESPR Pg **Pg** **22 42 39.1 -2.0**
19nm,0.6s,SNR=4.0
ESPR Sn **Sn** **22 43 12.7 -1.3**
16nm,0.3s,SNR=9.5
ESPR Lg 22 43 35.5
32nm,0.7s,SNR=4.5
ESPR Espera 4.16 253 Pn **Pn** **22 42 25.8 +0.6**
2.6nm,0.2s,SNR=15
EMIR Miracle 4.18 25 Pn **Pn** **22 42 26.6 +1.1**
EMIR P 22 42 27.7
EMIR Pg **Pg** **22 42 40.0 -1.5**
EMIR Sn **Sn** **22 43 15.9 +1.3**
EMIR Lg 22 43 31.9
EMIR Miracle 4.18 25 Pn **Pn** **22 42 26.6 +1.1**
3.6nm,0.2s,SNR=11
EMIR Pg **Pg** **22 42 40.0 -1.5**
24nm,0.5s,SNR=9.4
EMIR Sn **Sn** **22 43 15.9 +1.3**
19nm,0.3s,SNR=4.8
EMIR Lg 22 43 31.9
30nm,0.5s,SNR=4.0
EMIR Miracle 4.18 25 Pn **Pn** **22 42 26.6 +1.1**
3.6nm,0.2s,SNR=11
EMIR Pg **Pg** **22 42 40.0 -1.5**
24nm,0.5s,SNR=9.4
EMIR Sn **Sn** **22 43 15.9 +1.3**
19nm,0.3s,SNR=4.8
EMIR Lg 22 43 31.9
30nm,0.5s,SNR=4.0
EMIR Miracle 4.18 25 Pn **Pn** **22 42 26.6 +1.1**
3.6nm,0.2s,SNR=11
EMIR Miracle 4.18 25 Pg **Pg** **22 42 40.0 -1.6**
24nm,0.5s,SNR=9.4
EMIR Sn **Sn** **22 43 15.9 +1.3**
19nm,0.3s,SNR=4.8
CFON Fontmartina 4.41 34 Pn **Pn** **22 42 28.3 -0.4**
CFON P 22 42 28.7
CFON Sn **Sn** **22 43 15.8 -4.4**
CFON Fontmartina 4.41 34 Pn **Pn** **22 42 28.3 -0.4**
6.1nm,0.2s,SNR=13
CFON Sn **Sn** **22 43 15.8 -4.4**
13nm,0.3s,SNR=5.0
CFON Fontmartina 4.41 34 Pn **Pn** **22 42 28.3 -0.4**
6.1nm,0.2s,SNR=13
CFON Sn **Sn** **22 43 15.8 -4.4**
13nm,0.3s,SNR=5.0
CFON Fontmartina 4.41 34 Pn **Pn** **22 42 28.3 -0.4**
6.1nm,0.2s,SNR=13
CFON Fontmartina 4.41 34 P **Pn** **22 42 28.7 0.0**
EPLA Plasencia 4.47 297 Pn **Pn** **22 42 28.8 -0.6**
EPLA Pg **Pg** **22 42 45.0 -2.0**
EPLA Sn **Sn** **22 43 20.9 -0.8**
EPLA Lg 22 43 42.9
EPLA Plasencia 4.47 297 Pn **Pn** **22 42 28.8 -0.6**
4.5nm,0.2s,SNR=22
EPLA Pg **Pg** **22 42 45.0 -2.0**
13nm,0.3s,SNR=12
EPLA Sn **Sn** **22 43 20.9 -0.8**
13nm,0.3s,SNR=4.9
EPLA Lg 22 43 42.9
106nm,0.5s,SNR=13
EPLA Plasencia 4.47 297 Pn **Pn** **22 42 28.8 -0.6**
4.5nm,0.2s,SNR=22
EPLA Pg **Pg** **22 42 45.0 -2.0**
13nm,0.3s,SNR=12
EPLA Sn **Sn** **22 43 20.9 -0.8**
13nm,0.3s,SNR=4.9
EPLA Lg 22 43 42.9
106nm,0.5s,SNR=13
EPLA Plasencia 4.47 297 Pn **Pn** **22 42 28.8 -0.7**
4.5nm,0.2s,SNR=22
CSOR Sort 4.49 19 ⇑Pn **Pn** **22 42 30.5 +0.8**
CSOR Pn **Pn** **22 42 30.6 +0.9**
CSOR Pg **Pg** **22 42 45.5 -1.9**
CSOR Sn **Sn** **22 43 21.9 -0.1**
CSOR Lg 22 43 39.4
CSOR Sort 4.49 19 ⇑Pn **Pn** **22 42 30.5 +0.8**
7.7nm,0.4s,SNR=18
CSOR Pg **Pg** **22 42 45.5 -1.9**
14nm,0.5s,SNR=5.7
CSOR Sn **Sn** **22 43 21.9 -0.1**
12nm,0.4s,SNR=7.9
CSOR Lg 22 43 39.4
65nm,0.7s,SNR=5.0
CSOR Sort 4.49 19 ⇑Pn **Pn** **22 42 30.5 +0.8**
7.7nm,0.4s,SNR=18
CSOR Pg **Pg** **22 42 45.5 -1.9**
14nm,0.5s,SNR=5.7
CSOR Sn **Sn** **22 43 21.9 -0.1**
12nm,0.4s,SNR=7.9
CSOR Lg 22 43 39.4
65nm,0.7s,SNR=5.0
CSOR Sort 4.49 19 Pn **Pn** **22 42 30.5 +0.8**
7.7nm,0.4s,SNR=18
EBIE Bielsa 4.59 10 Pn **Pn** **22 42 33.0 +1.9**
EBIE Pg **Pg** **22 42 48.9 -0.5**
EBIE Lg 22 43 47.4
EBIE Bielsa 4.59 10 Pn **Pn** **22 42 33.0 +1.9**
5.0nm,0.4s,SNR=15
EBIE Pg **Pg** **22 42 48.9 -0.5**
11nm,0.4s,SNR=6.6
EBIE Lg 22 43 47.4
29nm,0.9s,SNR=5.0
EBIE Bielsa 4.59 10 Pn **Pn** **22 42 33.0 +1.9**
5.0nm,0.4s,SNR=15
EMIN Mina Concepcio 4.59 267 Pn **Pn** **22 42 30.7 -0.5**
EMIN Pg **Pg** **22 42 45.8 -3.6**
EMIN Sn **Sn** **22 43 23.3 -1.3**
EMIN Lg 22 43 46.5
EMIN Mina Concepcio 4.59 267 Pn **Pn** **22 42 30.7 -0.5**
3.4nm,0.2s,SNR=29
EMIN Pg **Pg** **22 42 45.8 -3.6**
4.1nm,0.4s,SNR=9.1
EMIN Sn **Sn** **22 43 23.3 -1.3**
4.8nm,0.4s,SNR=7.9
EMIN Lg 22 43 46.5
63nm,0.8s,SNR=6.6
EMIN Mina Concepcio 4.59 267 Pn **Pn** **22 42 30.7 -0.5**
3.4nm,0.2s,SNR=29
EMIN Pg **Pg** **22 42 45.8 -3.6**
4.1nm,0.4s,SNR=9.1
EMIN Sn **Sn** **22 43 23.3 -1.3**
4.8nm,0.4s,SNR=7.9
EMIN Lg 22 43 46.5
63nm,0.8s,SNR=6.6
EMIN Mina Concepcio 4.59 267 Pn **Pn** **22 42 30.7 -0.5**
3.4nm,0.2s,SNR=29
EMIN Sn **Sn** **22 43 23.3 -1.4**
4.8nm,0.4s,SNR=7.9
ECRI Cripan 4.62 345 Pn **Pn** **22 42 34.0 +2.5**
ECRI Pg **Pg** **22 42 50.7 +0.9**
ECRI Lg 22 43 52.8
ECRI Cripan 4.62 345 Pn **Pn** **22 42 34.0 +2.5**
5.5nm,0.2s,SNR=7.9
ECRI Pg **Pg** **22 42 50.7 +0.9**
7.9nm,0.3s,SNR=7.9
ECRI Lg 22 43 52.8
34nm,0.6s,SNR=7.9
ECRI Cripan 4.62 345 Pn **Pn** **22 42 34.0 +2.5**
5.5nm,0.2s,SNR=7.9
ECRI Pg **Pg** **22 42 50.7 +0.9**
7.9nm,0.3s,SNR=7.9
ECRI Lg 22 43 52.8
34nm,0.6s,SNR=7.9
ECRI Cripan 4.62 345 Pn **Pn** **22 42 34.0 +2.5**
5.5nm,0.2s,SNR=7.9
IUNC Unciti 4.62 354 Pn **Pn** **22 42 34.1 +2.6**
9.8nm,0.2s,SNR=7.9
IUNC Pg **Pg** **22 42 50.1 +0.3**
24nm,0.4s,SNR=7.9
IUNC Lg 22 43 47.5
27nm,0.4s,SNR=7.9
IUNC Unciti 4.62 354 Pn **Pn** **22 42 34.1 +2.6**
9.8nm,0.2s,SNR=7.9
IUNC Pg **Pg** **22 42 50.1 +0.3**
24nm,0.4s,SNR=7.9
IUNC Lg 22 43 47.5
27nm,0.4s,SNR=7.9
IUNC Unciti 4.62 354 Pn **Pn** **22 42 34.1 +2.6**
9.8nm,0.2s,SNR=7.9
IEPA Eparoz 4.62 357 Pn **Pn** **22 42 33.7 +2.0**
5.8nm,0.2s,SNR=7.9
IEPA Pg **Pg** **22 42 49.1 -0.9**
52nm,0.6s,SNR=7.9
IEPA Lg 22 43 49.0
40nm,0.4s,SNR=7.9
IEPA Eparoz 4.62 357 Pn **Pn** **22 42 33.7 +2.0**
5.8nm,0.2s,SNR=7.9
IEPA Pg **Pg** **22 42 49.1 -0.9**
52nm,0.6s,SNR=7.9
IEPA Lg 22 43 49.0
40nm,0.4s,SNR=7.9
IEPA Eparoz 4.62 357 Pn **Pn** **22 42 33.7 +2.1**
5.8nm,0.2s,SNR=7.9
EARA Aranguren 4.64 354 Pn **Pn** **22 42 34.2 +2.4**
5.8nm,0.2s,SNR=6.3
EARA Pg **Pg** **22 42 50.3 0.0**
27nm,0.4s,SNR=7.2
EARA Lg 22 43 53.4
43nm,0.7s,SNR=4.0
EARA Aranguren 4.64 354 Pn **Pn** **22 42 34.2 +2.4**
5.8nm,0.2s,SNR=6.3
EARA Pg **Pg** **22 42 50.3 0.0**
27nm,0.4s,SNR=7.2
EARA Lg 22 43 53.4
43nm,0.7s,SNR=4.0
EARA Aranguren 4.64 354 Pn **Pn** **22 42 34.2 +2.4**
5.8nm,0.2s,SNR=6.3
IZUN Zunzarren 4.72 355 Pn **Pn** **22 42 35.5 +2.6**
6.1nm,0.4s,SNR=7.9
IZUN Pg **Pg** **22 42 50.5 -1.2**
16nm,0.5s,SNR=7.9
IZUN Lg 22 43 51.6
25nm,0.5s,SNR=7.9
IZUN Zunzarren 4.72 355 Pn **Pn** **22 42 35.5 +2.6**
6.1nm,0.4s,SNR=7.9
IZUN Pg **Pg** **22 42 50.5 -1.2**
16nm,0.5s,SNR=7.9
IZUN Lg 22 43 51.6
25nm,0.5s,SNR=7.9
IZUN Zunzarren 4.72 355 Pn **Pn** **22 42 35.5 +2.6**
6.1nm,0.4s,SNR=7.9
EORO Oroz-Betelu 4.74 356 Pn **Pn** **22 42 35.4 +2.2**
11nm,0.3s,SNR=7.9
EORO Pg **Pg** **22 42 52.4 +0.2**
18nm,0.3s,SNR=7.9
EORO Sn **Sn** **22 43 27.0 -1.3**
19nm,0.6s,SNR=7.9
EORO Lg 22 43 51.0
61nm,0.8s,SNR=7.9
EORO Oroz-Betelu 4.74 356 Pn **Pn** **22 42 35.4 +2.2**
11nm,0.3s,SNR=7.9
EORO Pg **Pg** **22 42 52.4 +0.2**
18nm,0.3s,SNR=7.9
EORO Sn **Sn** **22 43 27.0 -1.3**
19nm,0.6s,SNR=7.9
EORO Lg 22 43 51.0
61nm,0.8s,SNR=7.9
EORO Oroz-Betelu 4.74 356 Pn **Pn** **22 42 35.4 +2.2**
11nm,0.3s,SNR=7.9
ETSF Etsaut 4.74 3 *e*Pn **Pn** **22 42 34.7 +1.5**
SNR=1.0
ETSF *e*Sn **Sn** **22 43 27.2 -1.2**
ETSF *e*Sg **Sg** **22 43 54.0 +0.3**
67nm,0.9s
ETSF Etsaut 4.74 3 Pn **Pn** **22 42 34.7 +1.5**
ETSF Sn **Sn** **22 43 27.2 -1.2**
ETSF Lg 22 43 54.0
34nm,0.9s
ETSF Etsaut 4.74 3 Pn **Pn** **22 42 34.7 +1.5**
ETSF Sn **Sn** **22 43 27.2 -1.2**
ETSF Lg 22 43 54.0
34nm,0.9s
ETSF Etsaut 4.74 3 *e*Pn **Pn** **22 42 34.7 +1.5**
SNR=1.0
ETSF *e*Sn **Sn** **22 43 27.2 -1.2**
ETSF *e*Sg **Sg** **22 43 54.0 +0.3**
34nm,0.9s
VIEF Viey 4.77 8 P **Pn** **22 42 35.4 +1.8**
VIEF S **Sn** **22 43 28.0 -1.1**
VIEF Viey 4.77 8 P **Pn** **22 42 35.4 +1.8**
VIEF S **Sn** **22 43 28.0 -1.1**
IUSE Utxeti 4.81 354 Pn **Pn** **22 42 37.0 +2.9**
3.3nm,0.2s,SNR=4.0
IUSE Pg **Pg** **22 42 52.8 -0.7**
28nm,0.4s,SNR=4.0
IUSE Utxeti 4.81 354 Pn **Pn** **22 42 37.0 +2.9**
3.3nm,0.2s,SNR=4.0
IUSE Pg **Pg** **22 42 52.8 -0.7**
28nm,0.4s,SNR=4.0
IUSE Utxeti 4.81 354 Pn **Pn** **22 42 37.0 +2.8**
3.3nm,0.2s,SNR=4.0
CLLI Llivia 4.84 26 Pn **Pn** **22 42 35.4 +0.9**
CLLI Pn **Pn** **22 42 36.1 +1.6**
CLLI Sn **Sn** **22 43 29.4 -1.3**
CLLI Llivia 4.84 26 Pn **Pn** **22 42 35.4 +0.9**
3.9nm,0.4s,SNR=13
CLLI Sn **Sn** **22 43 29.4 -1.3**
8.8nm,0.6s,SNR=5.0

CLLI	**Llivia**	**4.84**	**26**	Pn	**Pn**	**22 42 35.4**	**+0.9**
	3.9nm,0.4s,SNR=13						
CLLI				Sn	**Sn**	**22 43 29.4**	**-1.3**
	8.8nm,0.6s,SNR=5.0						
CLLI	**Llivia**	**4.84**	**26**	Pn	**Pn**	**22 42 35.4**	**+0.9**
	3.9nm,0.4s,SNR=13						
CLLI				Sn	**Sn**	**22 43 29.4**	**-1.3**
	8.8nm,0.6s,SNR=5.0						
EBAD	**Badajoz**	**4.85**	**279**	Pn	**Pn**	**22 42 34.4**	**-0.3**
EBAD				Pg	**Pg**	**22 42 52.5**	**-1.9**
EBAD				Sn	**Sn**	**22 43 30.3**	**-0.7**
EBAD				Lg		22 43 56.3	
EBAD	**Badajoz**	**4.85**	**279**	Pn	**Pn**	**22 42 34.4**	**-0.3**
	1.0nm,0.1s,SNR=17						
EBAD				Pg	**Pg**	**22 42 52.5**	**-1.9**
	9.2nm,0.3s,SNR=6.8						
EBAD				Sn	**Sn**	**22 43 30.3**	**-0.7**
	14nm,0.5s,SNR=14						
EBAD				Lg		22 43 56.3	
	47nm,0.5s,SNR=5.4						
EBAD	**Badajoz**	**4.85**	**279**	Pn	**Pn**	**22 42 34.4**	**-0.3**
	1.0nm,0.1s,SNR=17						
EBAD				Pg	**Pg**	**22 42 52.5**	**-1.9**
	9.2nm,0.3s,SNR=6.8						
EBAD				Sn	**Sn**	**22 43 30.3**	**-0.7**
	14nm,0.5s,SNR=14						
EBAD				Lg		22 43 56.3	
	47nm,0.5s,SNR=5.4						
EBAD	**Badajoz**	**4.85**	**279**	Pn	**Pn**	**22 42 34.4**	**-0.3**
	1.0nm,0.1s,SNR=17						
PBAR	**Barrancos**	**4.85**	**272**	*e*Pn	**Pn**	**22 42 34.5**	**-0.2**
PBAR				*e*Sn	**Sn**	**22 43 30.3**	**-0.8**
PBAR				*e*Sg	**Sg**	**22 43 58.7**	**+1.5**
PBAR				A		22 44 06.2	
	29nm,0.4s						
PBAR	**Barrancos**	**4.85**	**272**	Pn	**Pn**	**22 42 34.5**	**-0.2**
PBAR				Sn	**Sn**	**22 43 30.3**	**-0.8**
PBAR				Lg		22 43 58.7	
	29nm,0.4s						
PBAR	**Barrancos**	**4.85**	**272**	Pn	**Pn**	**22 42 34.5**	**-0.2**
PBAR				Sn	**Sn**	**22 43 30.3**	**-0.8**
PBAR				Lg		22 43 58.7	
	29nm,0.4s						
PBAR	**Barrancos**	**4.85**	**272**	*e*Pn	**Pn**	**22 42 34.5**	**-0.2**
PBAR				*e*Sn	**Sn**	**22 43 30.3**	**-0.8**
PBAR				*e*Sg	**Sg**	**22 43 58.7**	**+1.5**
	29nm,0.4s						
LARF	**Larrau**	**4.88**	**359**	P	**Pn**	**22 42 37.5**	**+2.5**
LARF	**Larrau**	**4.88**	**359**	P	**Pn**	**22 42 37.5**	**+2.5**
REYF	**Montagne du Re**	**4.92**	**4**	P	**Pn**	**22 42 37.4**	**+1.7**
REYF	**Montagne du Re**	**4.92**	**4**	P	**Pn**	**22 42 37.4**	**+1.7**
LABF	**Labassere**	**4.94**	**8**	P	**Pn**	**22 42 38.1**	**+2.2**
LABF				S	**Sn**	**22 43 33.1**	**-0.1**
LABF	**Labassere**	**4.94**	**8**	P	**Pn**	**22 42 38.1**	**+2.2**
LABF				S	**Sn**	**22 43 33.1**	**-0.1**
EPF	**Esparros**	**4.96**	**10**	*e*Pg	**Pg**	**22 42 55.2**	**-1.1**
EPF				*e*Sn	**Sn**	**22 43 32.0**	**-1.6**
EPF				*e*Sg	**Sg**	**22 43 59.7**	**-0.8**
	30nm,0.6s,SNR=1.0						
EPF	**Esparros**	**4.96**	**10**	*e*Pn	**Pn**	**22 42 37.2**	**+1.0**
EPF				*e*Pg	**Pg**	**22 42 55.2**	**-1.1**
EPF				*e*Sn	**Sn**	**22 43 32.0**	**-1.6**
EPF				*e*Sg	**Sg**	**22 43 59.7**	**-0.8**
	15nm,0.6s						
EPF	**Esparros**	**4.96**	**10**	Pn	**Pn**	**22 42 37.2**	**+1.0**
EPF				Pg	**Pg**	**22 42 55.2**	**-1.1**
EPF				Sn	**Sn**	**22 43 32.0**	**-1.6**
EPF				Lg		22 43 59.7	
	15nm,0.6s						
EPF	**Esparros**	**4.96**	**10**	*e*Pn	**Pn**	**22 42 37.2**	**+1.0**
	SNR=1.0						
EPF	**Esparros**	**4.96**	**10**	*e*Pg	**Pg**	**22 42 55.2**	**-1.1**
EPF				*e*Sn	**Sn**	**22 43 32.0**	**-1.6**
EPF				*e*Sg	**Sg**	**22 43 59.7**	**-0.8**
	15nm,0.6s,SNR=1.0						
SJPF	**Ste Jean**	**4.96**	**357**	*e*Pn	**Pn**	**22 42 38.1**	**+1.9**
	SNR=1.0						
SJPF				*e*Sn	**Sn**	**22 43 32.2**	**-1.5**
SJPF				*e*Sg	**Sg**	**22 44 00.6**	**0.0**
	29nm,0.6s						
SJPF	**Ste Jean**	**4.96**	**357**	Pn	**Pn**	**22 42 38.1**	**+1.9**
SJPF				Sn	**Sn**	**22 43 32.2**	**-1.5**
SJPF				Lg		22 44 00.6	
	15nm,0.6s						
SJPF	**Ste Jean**	**4.96**	**357**	Pn	**Pn**	**22 42 38.1**	**+1.9**
SJPF				Sn	**Sn**	**22 43 32.2**	**-1.5**
SJPF				Lg		22 44 00.6	
	15nm,0.6s						
SJPF	**Ste Jean**	**4.96**	**357**	*e*Pn	**Pn**	**22 42 38.1**	**+1.9**
	SNR=1.0						
SJPF				*e*Sn	**Sn**	**22 43 32.2**	**-1.5**
SJPF				*e*Sg	**Sg**	**22 44 00.6**	**0.0**
	15nm,0.6s						
ELIZ	**Elizondo**	**5.02**	**355**	Pn	**Pn**	**22 42 39.2**	**+2.1**
ELIZ				Pn	**Pn**	**22 42 39.4**	**+2.3**
ELIZ				Pg	**Pg**	**22 42 57.1**	**-0.6**
ELIZ				Sn	**Sn**	**22 43 37.3**	**+2.0**
ELIZ				Lg		22 44 02.3	
ELIZ	**Elizondo**	**5.02**	**355**	Pn	**Pn**	**22 42 39.2**	**+2.1**
	11nm,0.2s,SNR=31						
ELIZ				Pg	**Pg**	**22 42 57.1**	**-0.6**
	16nm,0.3s,SNR=9.3						
ELIZ				Sn	**Sn**	**22 43 37.3**	**+2.0**
	18nm,0.6s,SNR=8.5						
ELIZ				Lg		22 44 02.3	
	19nm,0.7s,SNR=5.0						
ELIZ	**Elizondo**	**5.02**	**355**	Pn	**Pn**	**22 42 39.2**	**+2.1**
	11nm,0.2s,SNR=31						
ELIZ				Pg	**Pg**	**22 42 57.1**	**-0.6**
	16nm,0.3s,SNR=9.3						
ELIZ				Sn	**Sn**	**22 43 37.3**	**+2.0**
	18nm,0.6s,SNR=8.5						
ELIZ				Lg		22 44 02.3	
	19nm,0.7s,SNR=5.0						
ELIZ	**Elizondo**	**5.02**	**355**	Pn	**Pn**	**22 42 39.2**	**+2.1**
	11nm,0.2s,SNR=31						
MLS	**Moulis**	**5.03**	**17**	P	**Pn**	**22 42 38.8**	**+1.7**
MLS	**Moulis**	**5.03**	**17**	P	**Pn**	**22 42 38.8**	**+1.7**
ORDF	**Ordiarp**	**5.05**	**360**	P	**Pn**	**22 42 39.4**	**+2.0**
ORDF				S	**Sn**	**22 43 35.8**	**-0.2**
ORDF	**Ordiarp**	**5.05**	**360**	P	**Pn**	**22 42 39.4**	**+2.0**
ORDF				S	**Sn**	**22 43 35.8**	**-0.2**
EALK	**Alkurruntz**	**5.08**	**355**	Pn	**Pn**	**22 42 40.0**	**+2.1**
EALK				Pg	**Pg**	**22 42 58.2**	**-0.5**
EALK				Sn	**Sn**	**22 43 37.0**	**+0.3**
EALK				Lg		22 44 03.9	
EALK	**Alkurruntz**	**5.08**	**355**	Pn	**Pn**	**22 42 40.0**	**+2.1**
	7.7nm,0.2s,SNR=30						
EALK				Pg	**Pg**	**22 42 58.2**	**-0.5**
	32nm,0.5s,SNR=5.0						
EALK				Sn	**Sn**	**22 43 37.0**	**+0.3**
	24nm,0.4s,SNR=5.0						
EALK				Lg		22 44 03.9	
	78nm,0.7s,SNR=5.0						
EALK	**Alkurruntz**	**5.08**	**355**	Pn	**Pn**	**22 42 40.0**	**+2.1**
	7.7nm,0.2s,SNR=30						
EALK				Pg	**Pg**	**22 42 58.2**	**-0.5**
	32nm,0.5s,SNR=5.0						
EALK				Sn	**Sn**	**22 43 37.0**	**+0.3**
	24nm,0.4s,SNR=5.0						
EALK				Lg		22 44 03.9	
	78nm,0.7s,SNR=5.0						
EALK	**Alkurruntz**	**5.08**	**355**	Pn	**Pn**	**22 42 40.0**	**+2.2**
	7.7nm,0.2s,SNR=30						
EALK	**Alkurruntz**	**5.08**	**355**	Pg	**Pg**	**22 42 58.2**	**-0.5**
	32nm,0.5s,SNR=5.0						
EALK				Sn	**Sn**	**22 43 37.0**	**+0.3**
	24nm,0.4s,SNR=5.0						
OSSF	**Osses**	**5.10**	**357**	P	**Pn**	**22 42 40.3**	**+2.2**
OSSF				S	**Sn**	**22 43 38.1**	**+0.9**
OSSF	**Osses**	**5.10**	**357**	P	**Pn**	**22 42 40.3**	**+2.2**
OSSF				S	**Sn**	**22 43 38.1**	**+0.9**
EJON	**La Jonquera**	**5.17**	**33**	Pn	**Pn**	**22 42 38.4**	**-0.6**
EJON				Pb	**Pb**	**22 42 47.3**	**-4.7**
EJON				Sn	**Sn**	**22 43 35.6**	**-3.1**
EJON				Lg		22 44 07.7	
EJON	**La Jonquera**	**5.17**	**33**	Pn	**Pn**	**22 42 38.4**	**-0.6**
	0.8nm,0.2s,SNR=4.0						
EJON				Pg	**Pg**	**22 42 47.3**	**-13**
	SNR=7.9						
EJON				Sn	**Sn**	**22 43 35.6**	**-3.1**
	9.0nm,0.7s,SNR=7.9						
EJON				Lg		22 44 07.7	
	16nm,0.7s,SNR=7.9						
EJON	**La Jonquera**	**5.17**	**33**	Pn	**Pn**	**22 42 38.4**	**-0.6**
	0.8nm,0.2s,SNR=4.0						
EJON				Pg	**Pg**	**22 42 47.3**	**-13**
	SNR=7.9						
EJON				Sn	**Sn**	**22 43 35.6**	**-3.1**
	9.0nm,0.7s,SNR=7.9						
EJON				Lg		22 44 07.7	
	16nm,0.7s,SNR=7.9						
EJON	**La Jonquera**	**5.17**	**33**	Pn	**Pn**	**22 42 38.4**	**-0.6**
	0.8nm,0.2s,SNR=4.0						
PMRV	**Marv??o**	**5.24**	**286**	*e*Pn	**Pn**	**22 42 41.3**	**+1.2**
PMRV				*e*Sg	**Sg**	**22 44 09.4**	**-0.3**
PMRV				A		22 44 19.7	
	44nm,0.5s						
PMRV	**Marv??o**	**5.24**	**286**	Pn	**Pn**	**22 42 41.3**	**+1.2**
PMRV				Lg		22 44 09.4	
	44nm,0.5s						
PMRV	**Marv??o**	**5.24**	**286**	Pn	**Pn**	**22 42 41.3**	**+1.2**
PMRV				Lg		22 44 09.4	
	44nm,0.5s						
PMRV	**Marv??o**	**5.24**	**286**	*e*Pn	**Pn**	**22 42 41.3**	**+1.2**
PMRV				*e*Sg	**Sg**	**22 44 09.4**	**-0.3**
	44nm,0.5s						
EGRO	**El Granado**	**5.26**	**265**	Pn	**Pn**	**22 42 39.6**	**-0.8**
EGRO				Sn	**Sn**	**22 43 39.7**	**-1.5**
EGRO				Lg		22 44 12.4	
EGRO	**El Granado**	**5.26**	**265**	Pn	**Pn**	**22 42 39.6**	**-0.8**
	5.9nm,0.3s,SNR=12						
EGRO				Sn	**Sn**	**22 43 39.7**	**-1.5**
	5.5nm,0.3s,SNR=5.0						
EGRO				Lg		22 44 12.4	
	19nm,0.4s,SNR=5.0						
EGRO	**El Granado**	**5.26**	**265**	Pn	**Pn**	**22 42 39.6**	**-0.8**
	5.9nm,0.3s,SNR=12						
EGRO				Sn	**Sn**	**22 43 39.7**	**-1.5**
	5.5nm,0.3s,SNR=5.0						
EGRO				Lg		22 44 12.4	
	19nm,0.4s,SNR=5.0						
EGRO	**El Granado**	**5.26**	**265**	Pn	**Pn**	**22 42 39.6**	**-0.8**
	5.9nm,0.3s,SNR=12						
EGRO				Sn	**Sn**	**22 43 39.7**	**-1.5**
	5.5nm,0.3s,SNR=5.0						
PESTR	**Estremoz**	**5.31**	**280**	*e*Pn	**Pn**	**22 42 40.8**	**-0.2**
PESTR				*e*Sn	**Sn**	**22 43 41.4**	**-0.9**
PESTR				*e*Sg	**Sg**	**22 44 13.0**	**+1.2**
PESTR				A		22 44 21.0	
	31nm,0.4s						
PESTR	**Estremoz**	**5.31**	**280**	Pn	**Pn**	**22 42 40.8**	**-0.2**
PESTR				Sn	**Sn**	**22 43 41.4**	**-0.9**
PESTR				Lg		22 44 13.0	
	31nm,0.4s						
PESTR	**Estremoz**	**5.31**	**280**	Pn	**Pn**	**22 42 40.8**	**-0.2**
PESTR				Sn	**Sn**	**22 43 41.4**	**-0.9**
PESTR				Lg		22 44 13.0	
	31nm,0.4s						
PESTR	**Estremoz**	**5.31**	**280**	*e*Pn	**Pn**	**22 42 40.8**	**-0.2**
PESTR				*e*Sn	**Sn**	**22 43 41.4**	**-0.9**
PESTR				*e*Sg	**Sg**	**22 44 13.0**	**+1.2**
	31nm,0.4s						
PCBR	**Castelo Branco**	**5.40**	**290**	*e*Pn	**Pn**	**22 42 43.8**	**+1.5**
PCBR				*e*Sn	**Sn**	**22 43 44.8**	**+0.1**
PCBR				*e*Sg	**Sg**	**22 44 14.3**	**-0.6**
PCBR				A		22 44 23.7	
	32nm,0.5s						
PCBR	**Castelo Branco**	**5.40**	**290**	Pn	**Pn**	**22 42 43.8**	**+1.5**
PCBR				Sn	**Sn**	**22 43 44.8**	**+0.1**
PCBR				Lg		22 44 14.3	
	16nm,0.5s						
PCBR	**Castelo Branco**	**5.40**	**290**	Pn	**Pn**	**22 42 43.8**	**+1.5**
PCBR				Sn	**Sn**	**22 43 44.8**	**+0.1**
PCBR				Lg		22 44 14.3	
	16nm,0.5s						
PCBR	**Castelo Branco**	**5.40**	**290**	*e*Pn	**Pn**	**22 42 43.8**	**+1.5**
PCBR				*e*Sn	**Sn**	**22 43 44.8**	**+0.1**
PCBR				*e*Sg	**Sg**	**22 44 14.3**	**-0.6**
	32nm,0.5s						
ELAN	**Lanestosa**	**5.42**	**340**	Pn	**Pn**	**22 42 44.4**	**+1.8**
ELAN				Pg	**Pg**	**22 43 03.9**	**-1.4**
ELAN				Sn	**Sn**	**22 43 43.7**	**-1.5**
ELAN				Lg		22 44 18.8	
ELAN	**Lanestosa**	**5.42**	**340**	Pn	**Pn**	**22 42 44.4**	**+1.8**
	3.0nm,0.3s,SNR=24						
ELAN				Pg	**Pg**	**22 43 03.9**	**-1.4**
	23nm,0.9s,SNR=7.2						
ELAN				Sn	**Sn**	**22 43 43.7**	**-1.5**
	8.9nm,0.4s,SNR=5.2						
ELAN				Lg		22 44 18.8	
	58nm,1.0s,SNR=5.0						
ELAN	**Lanestosa**	**5.42**	**340**	Pn	**Pn**	**22 42 44.4**	**+1.8**
	3.0nm,0.3s,SNR=24						
ELAN				Pg	**Pg**	**22 43 03.9**	**-1.4**
	23nm,0.9s,SNR=7.2						
ELAN				Sn	**Sn**	**22 43 43.7**	**-1.5**
	8.9nm,0.4s,SNR=5.2						
ELAN				Lg		22 44 18.8	
	58nm,1.0s,SNR=5.0						
ELAN	**Lanestosa**	**5.42**	**340**	Pn	**Pn**	**22 42 44.4**	**+1.8**
	3.0nm,0.3s,SNR=24						
PVAQ	**Vaqueiros**	**5.46**	**264**	*e*Pn	**Pn**	**22 42 42.4**	**-0.8**
PVAQ				*e*Sn	**Sn**	**22 43 44.5**	**-1.7**
PVAQ				A		22 44 28.3	
	14nm,0.9s						
PVAQ	**Vaqueiros**	**5.46**	**264**	Pn	**Pn**	**22 42 42.4**	**-0.8**
PVAQ				Sn	**Sn**	**22 43 44.5**	**-1.7**
	14nm,0.9s						
PVAQ	**Vaqueiros**	**5.46**	**264**	Pn	**Pn**	**22 42 42.4**	**-0.8**
PVAQ				Sn	**Sn**	**22 43 44.5**	**-1.7**
	14nm,0.9s						
PVAQ	**Vaqueiros**	**5.46**	**264**	*e*Pn	**Pn**	**22 42 42.4**	**-0.8**
PBEJ	**Beja**	**5.51**	**271**	*e*Pn	**Pn**	**22 42 43.5**	**-0.3**
PBEJ				*e*Sn	**Sn**	**22 43 45.9**	**-1.4**
PBEJ				*e*Sg	**Sg**	**22 44 19.4**	**+1.1**
PBEJ				A		22 44 37.8	
	13nm,0.6s						
PBEJ	**Beja**	**5.51**	**271**	Pn	**Pn**	**22 42 43.5**	**-0.3**
PBEJ				Sn	**Sn**	**22 43 45.9**	**-1.4**
PBEJ				Lg		22 44 19.4	
	6.5nm,0.6s						
PBEJ	**Beja**	**5.51**	**271**	Pn	**Pn**	**22 42 43.5**	**-0.3**
PBEJ				Sn	**Sn**	**22 43 45.9**	**-1.4**
PBEJ				Lg		22 44 19.4	
	6.5nm,0.6s						
PBEJ	**Beja**	**5.51**	**271**	*e*Pn	**Pn**	**22 42 43.5**	**-0.3**
PBEJ				*e*Sn	**Sn**	**22 43 45.9**	**-1.4**
PBEJ				*e*Sg	**Sg**	**22 44 19.4**	**+1.1**
	13nm,0.6s						
MVO	**Moncorvo**	**5.61**	**304**	*e*Pn	**Pn**	**22 42 45.8**	**+0.6**
MVO				*e*Sn	**Sn**	**22 43 49.8**	**0.0**
MVO				*e*Sg	**Sg**	**22 44 21.9**	**+0.3**
MVO				A		22 44 32.6	
	64nm,0.6s						
MVO	**Moncorvo**	**5.61**	**304**	⇓Pn	**Pn**	**22 42 45.8**	**+0.6**
MVO				Sn	**Sn**	**22 43 47.5**	**-2.3**
MVO				Lg		22 44 21.9	
MVO	**Moncorvo**	**5.61**	**304**	⇓Pn	**Pn**	**22 42 45.8**	**+0.6**
	7.3nm,0.3s,SNR=18						
MVO				Sn	**Sn**	**22 43 47.5**	**-2.3**
	27nm,0.6s,SNR=6.0						
MVO				Lg		22 44 21.9	
	93nm,0.7s,SNR=5.0						
MVO	**Moncorvo**	**5.61**	**304**	⇓Pn	**Pn**	**22 42 45.8**	**+0.6**
	7.3nm,0.3s,SNR=18						
MVO				Sn	**Sn**	**22 43 47.5**	**-2.3**
	27nm,0.6s,SNR=6.0						
MVO				Lg		22 44 21.9	
	93nm,0.7s,SNR=5.0						
MVO	**Moncorvo**	**5.61**	**304**	Pn	**Pn**	**22 42 45.8**	**+0.6**
	7.3nm,0.3s,SNR=18						
MVO				*e*Sn	**Sn**	**22 43 49.8**	**0.0**
MVO				*e*Sg	**Sg**	**22 44 21.9**	**+0.3**
	64nm,0.6s						
EVO	**Evora**	**5.62**	**276**	*e*Pn	**Pn**	**22 42 46.2**	**+0.9**
EVO	**Evora**	**5.62**	**276**	*e*Pg	**Pg**	**22 43 08.6**	**-0.4**
EVO				*e*Sn	**Sn**	**22 43 50.5**	**+0.5**
EVO				*e*Sg	**Sg**	**22 44 22.9**	**+1.1**
	50nm,0.4s						
EVO	**Evora**	**5.62**	**276**	*e*Pn	**Pn**	**22 42 45.8**	**+0.5**
EVO				*e*Sg	**Sg**	**22 44 23.1**	**+1.3**
EVO	**Evora**	**5.62**	**276**	Pn	**Pn**	**22 42 45.8**	**+0.5**
EVO				Lg		22 44 23.1	
EVO	**Evora**	**5.62**	**276**	Pn	**Pn**	**22 42 45.8**	**+0.5**
EVO				Lg		22 44 23.1	
EVO	**Evora**	**5.62**	**276**	*e*Pn	**Pn**	**22 42 45.8**	**+0.5**
EVO				*e*Sg	**Sg**	**22 44 23.1**	**+1.3**
MTE	**Manteigas**	**5.63**	**295**	*e*Pn	**Pn**	**22 42 46.8**	**+1.4**
MTE				*e*Sn	**Sn**	**22 43 51.8**	**+1.5**
MTE				*e*Sg	**Sg**	**22 44 21.9**	**-0.3**
MTE				A		22 44 30.4	
	52nm,0.7s						
MTE	**Manteigas**	**5.63**	**295**	Pn	**Pn**	**22 42 46.8**	**+1.4**
MTE				Sn	**Sn**	**22 43 51.8**	**+1.5**
MTE				Lg		22 44 21.9	
	26nm,0.7s						
MTE	**Manteigas**	**5.63**	**295**	Pn	**Pn**	**22 42 46.8**	**+1.4**
MTE				Sn	**Sn**	**22 43 51.8**	**+1.5**
MTE				Lg		22 44 21.9	
	26nm,0.7s						
MTE	**Manteigas**	**5.63**	**295**	*e*Pn	**Pn**	**22 42 46.8**	**+1.4**
MTE				*e*Sn	**Sn**	**22 43 51.8**	**+1.5**
MTE				*e*Sg	**Sg**	**22 44 21.9**	**-0.3**
	52nm,0.7s						
PBDV	**Barranco-do-Ve**	**5.66**	**263**	*e*Pn	**Pn**	**22 42 45.3**	**-0.6**
PBDV				*e*Sn	**Sn**	**22 43 49.6**	**-1.5**
PBDV				A		22 44 47.0	
	21nm,0.6s						
PBDV	**Barranco-do-Ve**	**5.66**	**263**	Pn	**Pn**	**22 42 45.3**	**-0.6**
PBDV				Sn	**Sn**	**22 43 49.6**	**-1.5**
	21nm,0.6s						
PBDV	**Barranco-do-Ve**	**5.66**	**263**	Pn	**Pn**	**22 42 45.3**	**-0.6**
PBDV				Sn	**Sn**	**22 43 49.6**	**-1.5**
	21nm,0.6s						
PBDV	**Barranco-do-Ve**	**5.66**	**263**	*e*Pn	**Pn**	**22 42 45.3**	**-0.6**
PBDV				*e*Sn	**Sn**	**22 43 49.6**	**-1.5**
	21nm,0.6s						
PCVE	**Castro Verde**	**5.68**	**267**	*e*Pn	**Pn**	**22 42 45.9**	**-0.3**
PCVE				*e*Sg	**Sg**	**22 44 24.3**	**+0.4**
PCVE				A		22 44 33.3	
	10nm,0.4s						
PCVE	**Castro Verde**	**5.68**	**267**	⇑Pn	**Pn**	**22 42 45.9**	**-0.3**
PCVE				Lg		22 44 24.3	
	10nm,0.4s						
PCVE	**Castro Verde**	**5.68**	**267**	⇑Pn	**Pn**	**22 42 45.9**	**-0.3**
PCVE				Lg		22 44 24.3	
	10nm,0.4s						
MTLF	**Montolieu**	**5.69**	**23**	*e*Pg	**Pg**	**22 43 08.2**	**-2.1**
MTLF				*e*Sn	**Sn**	**22 43 47.5**	**-4.2**
	SNR=1.0						
MTLF				*e*Sg	**Sg**	**22 44 21.5**	**-2.5**
	11nm,0.6s						
MTLF	**Montolieu**	**5.69**	**23**	*e*Pn	**Pn**	**22 42 46.4**	**+0.2**
MTLF				*e*Pg	**Pg**	**22 43 08.2**	**-2.1**
MTLF				*e*Sn	**Sn**	**22 43 47.5**	**-4.2**
MTLF				*e*Sg	**Sg**	**22 44 21.5**	**-2.5**
MTLF	**Montolieu**	**5.69**	**23**	Pn	**Pn**	**22 42 46.4**	**+0.2**
MTLF				Pg	**Pg**	**22 43 08.2**	**-2.1**
MTLF				Sn	**Sn**	**22 43 47.5**	**-4.2**
MTLF				Lg		22 44 21.5	
	5.6nm,0.6s						
MTLF	**Montolieu**	**5.69**	**23**	Pn	**Pn**	**22 42 46.4**	**+0.2**
MTLF				Pg	**Pg**	**22 43 08.2**	**-2.1**
MTLF				Sn	**Sn**	**22 43 47.5**	**-4.2**
MTLF				Lg		22 44 21.5	
	5.6nm,0.6s						
MTLF	**Montolieu**	**5.69**	**23**	*e*Pn	**Pn**	**22 42 46.4**	**+0.2**
MTLF	**Montolieu**	**5.69**	**23**	*e*Pg	**Pg**	**22 43 08.2**	**-2.1**
MTLF				*e*Sg	**Sg**	**22 44 21.5**	**-2.5**
	5.6nm,0.6s						
EVOP	**Sao Brissos**	**5.70**	**276**	*e*Pn	**Pn**	**22 42 46.2**	**-0.2**
EVOP	**Sao Brissos**	**5.70**	**276**	*e*Pg	**Pg**	**22 43 08.6**	**-2.1**
EVOP				*e*Sn	**Sn**	**22 43 50.5**	**-1.6**
EVOP				*e*Sg	**Sg**	**22 44 22.9**	**-1.6**
	25nm,0.4s						
PBRG	**Braganca**	**5.79**	**311**	*e*Pn	**Pn**	**22 42 48.8**	**+1.2**
PBRG				*e*Sn	**Sn**	**22 43 51.9**	**-2.2**
PBRG				*e*Sg	**Sg**	**22 44 26.9**	**-0.3**
PBRG				A		22 44 37.3	
	40nm,0.6s						
PBRG	**Braganca**	**5.79**	**311**	Pn	**Pn**	**22 42 48.8**	**+1.2**
PBRG				Sn	**Sn**	**22 43 51.9**	**-2.2**
PBRG				Lg		22 44 26.9	
	20nm,0.6s						
PBRG	**Braganca**	**5.79**	**311**	Pn	**Pn**	**22 42 48.8**	**+1.2**
PBRG				Sn	**Sn**	**22 43 51.9**	**-2.2**
PBRG				Lg		22 44 26.9	
	20nm,0.6s						
PBRG	**Braganca**	**5.79**	**311**	*e*Pn	**Pn**	**22 42 48.8**	**+1.2**
PBRG				*e*Sg	**Sg**	**22 44 26.9**	**-0.3**
	40nm,0.6s						
ECAL	**Calabor**	**5.87**	**312**	Pn	**Pn**	**22 42 49.4**	**+0.7**
ECAL				Pg	**Pg**	**22 43 12.5**	**-1.3**
ECAL				Sn	**Sn**	**22 43 54.0**	**-2.1**
ECAL				Lg		22 44 31.4	
ECAL	**Calabor**	**5.87**	**312**	Pn	**Pn**	**22 42 49.4**	**+0.7**
	17nm,0.3s,SNR=44						
ECAL				Pg	**Pg**	**22 43 12.5**	**-1.3**
	11nm,0.4s,SNR=29						
ECAL				Sn	**Sn**	**22 43 54.0**	**-2.1**
	34nm,0.7s,SNR=5.6						
ECAL				Lg		22 44 31.3	
	69nm,0.4s,SNR=5.0						
ECAL	**Calabor**	**5.87**	**312**	Pn	**Pn**	**22 42 49.4**	**+0.7**
	17nm,0.3s,SNR=44						
ECAL				Pg	**Pg**	**22 43 12.5**	**-1.3**
	11nm,0.4s,SNR=29						
ECAL				Sn	**Sn**	**22 43 54.0**	**-2.1**
	34nm,0.7s,SNR=5.6						
ECAL				Lg		22 44 31.3	
	69nm,0.4s,SNR=5.0						
ECAL	**Calabor**	**5.87**	**312**	Pn	**Pn**	**22 42 49.4**	**+0.7**
	17nm,0.3s,SNR=44						
PVIS	**Viseu**	**6.00**	**297**	*e*Pn	**Pn**	**22 42 51.2**	**+0.7**
PVIS				*e*Sn	**Sn**	**22 43 57.5**	**-1.8**
PVIS				*e*Sg	**Sg**	**22 44 33.9**	**-0.1**

PVRL Lg 22 44 37.8
11nm,0.7s
PVRL Vila Real 6.12 303 Pn **Pn** **22 42 53.1 +1.0**
PVRL Sn **Sn** **22 44 02.0 -0.3**
PVRL Lg 22 44 37.8
11nm,0.7s
PVRL Vila Real 6.12 303 *e*Pn **Pn** **22 42 53.1 +1.0**
PVRL *e*Sn **Sn** **22 44 02.0 -0.3**
PVRL *e*Sg **Sg** **22 44 37.8 0.0**
22nm,0.7s
ERUA La Rua 6.38 313 Pn **Pn** **22 42 57.0 +1.2**
ERUA Sn **Sn** **22 44 07.1 -1.8**
ERUA Lg 22 44 48.6
ERUA La Rua 6.38 313 Pn **Pn** **22 42 57.0 +1.2**
6.5nm,0.2s,SNR=7.9
ERUA Sn **Sn** **22 44 07.1 -1.8**
6.4nm,0.4s,SNR=7.9
ERUA Lg 22 44 48.6
30nm,0.6s,SNR=7.9
ERUA La Rua 6.38 313 Pn **Pn** **22 42 57.0 +1.2**
6.5nm,0.2s,SNR=7.9
ERUA Sn **Sn** **22 44 07.1 -1.8**
6.4nm,0.4s,SNR=7.9
ERUA Lg 22 44 48.6
30nm,0.6s,SNR=7.9
ERUA La Rua 6.38 313 Pn **Pn** **22 42 57.0 +1.2**
6.5nm,0.2s,SNR=7.9
PFVI Vila Bisbo 6.39 263 Pn **Pn** **22 42 54.9 -0.9**
PFVI Sn **Sn** **22 44 05.0 -4.0**
PFVI Lg 22 44 45.4
PFVI Vila Bisbo 6.39 263 Pn **Pn** **22 42 54.9 -0.9**
5.3nm,0.2s,SNR=11
PFVI Sn **Sn** **22 44 05.0 -4.0**
4.3nm,0.4s,SNR=7.9
PFVI Lg 22 44 45.4
17nm,0.5s,SNR=7.9
PFVI Vila Bisbo 6.39 263 Pn **Pn** **22 42 54.9 -0.9**
5.3nm,0.2s,SNR=7.9
PFVI Sn **Sn** **22 44 05.0 -4.0**
4.3nm,0.4s,SNR=7.9
PFVI Lg 22 44 45.4
17nm,0.5s,SNR=7.9
PFVI Vila Bisbo 6.39 263 Pn **Pn** **22 42 54.9 -0.9**
5.3nm,0.2s,SNR=11
PMAFR Mafra 6.63 279 *e*Pn **Pn** **22 43 00.0 +0.8**
PMAFR *e*Sg **Sg** **22 44 54.8 +0.5**
PMAFR A 22 45 17.9
27nm,0.8s
PMAFR Mafra 6.63 279 Pn **Pn** **22 42 60.0 +0.8**
7.7nm,0.3s,SNR=7.9
PMAFR Sn **Sn** **22 44 10.4 -4.5**
25nm,0.5s,SNR=7.9
PMAFR Lg 22 44 53.5
139nm,0.7s,SNR=7.9
PMAFR Mafra 6.63 279 Pn **Pn** **22 42 60.0 +0.8**
7.7nm,0.3s,SNR=7.9
PMAFR Sn **Sn** **22 44 10.4 -4.5**
25nm,0.5s,SNR=7.9
PMAFR Lg 22 44 53.5
139nm,0.7s,SNR=7.9
PMAFR Mafra 6.63 279 Pn **Pn** **22 43 00.0 +0.8**
7.7nm,0.3s,SNR=7.9
PMAFR *e*Sg **Sg** **22 44 54.8 +0.5**
27nm,0.8s
ELOB Lobios 6.64 306 Pn **Pn** **22 42 59.9 +0.7**
ELOB Sn **Sn** **22 44 10.9 -4.2**
ELOB Lg 22 44 54.7
ELOB Lobios 6.64 306 Pn **Pn** **22 42 59.9 +0.7**
1.8nm,0.1s,SNR=12
ELOB Sn **Sn** **22 44 10.9 -4.2**
12nm,0.5s,SNR=4.6
ELOB Lg 22 44 54.7
57nm,0.8s,SNR=5.0
ELOB Lobios 6.64 306 Pn **Pn** **22 42 59.9 +0.7**
1.8nm,0.1s,SNR=12
ELOB Sn **Sn** **22 44 10.9 -4.2**
12nm,0.5s,SNR=4.6
ELOB Lg 22 44 54.7
57nm,0.8s,SNR=5.0
ELOB Lobios 6.64 306 Pn **Pn** **22 42 59.9 +0.6**
1.8nm,0.1s,SNR=12
LFF La Frestale 6.88 10 *e*Pn **Pn** **22 43 02.8 +0.2**
SNR=1.0
LFF *e*Sn **Sn** **22 44 18.3 -2.8**
12nm,0.5s
LFF La Frestale 6.88 10 Pn **Pn** **22 43 02.8 +0.2**
LFF Sn **Sn** **22 44 18.3 -2.8**
5.8nm,0.5s
LFF La Frestale 6.88 10 Pn **Pn** **22 43 02.8 +0.2**
LFF Sn **Sn** **22 44 18.3 -2.8**
5.8nm,0.5s
LFF La Frestale 6.88 10 *e*Pn **Pn** **22 43 02.8 +0.2**
SNR=1.0
LASF Ste Croix 6.91 30 *e*Pn **Pn** **22 43 02.8 -0.2**
SNR=1.0
LASF *e*Sg **Sg** **22 44 59.9 -3.3**
9.6nm,0.9s
LASF Ste Croix 6.91 30 Pn **Pn** **22 43 02.8 -0.2**
LASF Lg 22 44 59.9
4.8nm,0.9s
LASF Ste Croix 6.91 30 Pn **Pn** **22 43 02.8 -0.2**
LASF Lg 22 44 59.9
4.8nm,0.9s
LASF Ste Croix 6.91 30 *e*Pn **Pn** **22 43 02.8 -0.2**
SNR=1.0
EPON Pontenova 7.02 319 Pn **Pn** **22 43 05.3 +0.8**
EPON Pg **Pg** **22 43 33.2 -2.6**
EPON Sn **Sn** **22 44 17.7 -6.8**
EPON Lg 22 45 09.6
EPON Pontenova 7.02 319 Pn **Pn** **22 43 05.3 +0.8**
3.0nm,0.3s,SNR=7.9
EPON Pg **Pg** **22 43 33.2 -2.6**
8.8nm,0.6s,SNR=7.9
EPON Sn **Sn** **22 44 17.7 -6.8**
2.6nm,0.3s,SNR=7.9
EPON Lg 22 45 09.6
59nm,1.0s,SNR=7.9
EPON Pontenova 7.02 319 Pn **Pn** **22 43 05.3 +0.8**
3.0nm,0.3s,SNR=7.9
EPON Pg **Pg** **22 43 33.2 -2.6**
8.8nm,0.6s,SNR=7.9
EPON Sn **Sn** **22 44 17.7 -6.8**
2.6nm,0.3s,SNR=7.9
EPON Lg 22 45 09.6
59nm,1.0s,SNR=7.9
EPON Pontenova 7.02 319 Pn **Pn** **22 43 05.3 +0.8**
3.0nm,0.3s,SNR=7.9
CAF Calviac 7.11 17 *e*Pn **Pn** **22 43 06.1 +0.3**
SNR=1.0
CAF *e*Sn **Sn** **22 44 24.1 -2.7**
3.6nm,0.3s,SNR=1.0
CAF Calviac 7.11 17 Pn **Pn** **22 43 06.1 +0.3**
CAF Sn **Sn** **22 44 24.1 -2.7**
1.8nm,0.3s
CAF Calviac 7.11 17 Pn **Pn** **22 43 06.1 +0.3**
CAF Sn **Sn** **22 44 24.1 -2.7**
1.8nm,0.3s
CAF Calviac 7.11 17 *e*Pn **Pn** **22 43 06.1 +0.3**
SNR=1.0
EZAM Zamans 7.19 306 Pn **Pn** **22 43 07.2 +0.4**
EZAM Sn **Sn** **22 44 25.7 -3.0**
EZAM Lg 22 45 08.5
EZAM Zamans 7.19 306 Pn **Pn** **22 43 07.2 +0.4**
4.8nm,0.4s,SNR=7.9
EZAM Sn **Sn** **22 44 25.7 -3.0**
12nm,0.4s,SNR=7.9
EZAM Lg 22 45 08.5
73nm,0.9s,SNR=7.9
EZAM Zamans 7.19 306 Pn **Pn** **22 43 07.2 +0.4**
4.8nm,0.4s,SNR=7.9
EZAM Sn **Sn** **22 44 25.7 -3.0**
12nm,0.4s,SNR=7.9
EZAM Lg 22 45 08.5
73nm,0.9s,SNR=7.9
EZAM Zamans 7.19 306 Pn **Pn** **22 43 07.2 +0.4**
4.8nm,0.4s,SNR=7.9
RJF Les Rejaudoux 7.36 13 *e*Pn **Pn** **22 43 09.2 0.0**
SNR=1.0
RJF *e*Sn **Sn** **22 44 29.1 -3.8**
4.2nm,0.4s,SNR=1.0
RJF Les Rejaudoux 7.36 13 Pn **Pn** **22 43 09.2 0.0**
RJF Sn **Sn** **22 44 29.1 -3.8**
2.1nm,0.4s
RJF Les Rejaudoux 7.36 13 Pn **Pn** **22 43 09.2 0.0**
RJF Sn **Sn** **22 44 29.1 -3.8**
2.1nm,0.4s
RJF Les Rejaudoux 7.36 13 *e*Pn **Pn** **22 43 09.2 0.0**
SNR=1.0
STS Santiago 7.51 311 Pn **Pn** **22 43 11.7 +0.5**
STS Lg 22 45 25.4
STS Santiago 7.51 311 Pn **Pn** **22 43 11.7 +0.5**
7.2nm,0.3s,SNR=6.6
STS Lg 22 45 25.4
33nm,0.9s,SNR=5.0
STS Santiago 7.51 311 Pn **Pn** **22 43 11.7 +0.5**
7.2nm,0.3s,SNR=6.6
STS Lg 22 45 25.4
33nm,0.9s,SNR=5.0
STS Santiago 7.51 311 Pn **Pn** **22 43 11.7 +0.5**
7.2nm,0.3s,SNR=6.6
SMRF Simiane la Rot 7.59 38 *e*Sn **Sn** **22 44 33.1 -5.3**
2.8nm,0.5s
SMRF Simiane la Rot 7.59 38 Sn **Sn** **22 44 33.1 -5.3**
2.8nm,0.5s
SMRF Simiane la Rot 7.59 38 Sn **Sn** **22 44 33.1 -5.3**
2.8nm,0.5s
LMR La Mourre 7.63 45 *e*Pn **Pn** **22 43 12.8 -0.1**
SNR=1.0
LMR *e*Sn **Sn** **22 44 33.1 -6.4**
5.1nm,0.5s,SNR=1.0
LMR La Mourre 7.63 45 Pn **Pn** **22 43 12.8 -0.1**
LMR Sn **Sn** **22 44 33.1 -6.4**
2.6nm,0.5s
LMR La Mourre 7.63 45 Pn **Pn** **22 43 12.8 -0.1**
LMR Sn **Sn** **22 44 33.1 -6.4**
2.6nm,0.5s
LMR La Mourre 7.63 45 *e*Pn **Pn** **22 43 12.8 -0.1**
SNR=1.0
EMAZ Mazaricos 7.80 310 Pn **Pn** **22 43 15.6 +0.4**
EMAZ Sn **Sn** **22 44 39.5 -4.2**
EMAZ Lg 22 45 31.6
EMAZ Mazaricos 7.80 310 Pn **Pn** **22 43 15.6 +0.4**
2.1nm,0.3s,SNR=9.9
EMAZ Sn **Sn** **22 44 39.5 -4.2**
2.0nm,0.5s,SNR=5.9
EMAZ Lg 22 45 31.6
13nm,0.6s,SNR=4.6
EMAZ Mazaricos 7.80 310 Pn **Pn** **22 43 15.6 +0.4**
2.1nm,0.3s,SNR=9.9
EMAZ Sn **Sn** **22 44 39.5 -4.2**
2.0nm,0.5s,SNR=5.9
EMAZ Lg 22 45 31.6
13nm,0.6s,SNR=4.6
EMAZ Mazaricos 7.80 310 Pn **Pn** **22 43 15.6 +0.4**
2.1nm,0.3s,SNR=9.9
FRF La Foret Royal 7.85 44 *e*Pn **Pn** **22 43 16.0 +0.1**
SNR=1.0
FRF La Foret Royal 7.85 44 Pn **Pn** **22 43 16.0 +0.1**
FRF La Foret Royal 7.85 44 Pn **Pn** **22 43 16.0 +0.1**
FRF La Foret Royal 7.85 44 *e*Pn **Pn** **22 43 16.0 +0.1**
SNR=1.0
VIVF Saint-Julien-l 7.88 30 *e*Pn **Pn** **22 43 15.4 -0.9**
VIVF *e*Sg **Sg** **22 45 30.4 -3.9**
5.8nm,0.7s
VIVF Saint-Julien-l 7.88 30 Pn **Pn** **22 43 15.4 -0.9**
VIVF Lg 22 45 30.4
2.9nm,0.7s
VIVF Saint-Julien-l 7.88 30 Pn **Pn** **22 43 15.4 -0.9**
VIVF Lg 22 45 30.4
2.9nm,0.7s
VIVF Saint-Julien-l 7.88 30 *e*Pn **Pn** **22 43 15.4 -0.9**
TCF Toulx Ste Croi 8.44 15 *e*Pn **Pn** **22 43 24.4 +0.4**
SNR=1.0
TCF *e*Sn **Sn** **22 44 54.4 -5.0**
4.6nm,0.7s,SNR=1.0
TCF Toulx Ste Croi 8.44 15 Pn **Pn** **22 43 24.4 +0.4**
TCF Sn **Sn** **22 44 54.4 -5.0**
2.3nm,0.7s
TCF Toulx Ste Croi 8.44 15 Pn **Pn** **22 43 24.4 +0.4**
TCF Sn **Sn** **22 44 54.4 -5.0**
2.3nm,0.7s
TCF Toulx Ste Croi 8.44 15 *e*Pn **Pn** **22 43 24.4 +0.4**
SNR=1.0
MFF Saint Martin d 8.46 3 *e*Pn **Pn** **22 43 24.4 +0.2**
SNR=1.0
MFF *e*Sn **Sn** **22 44 56.3 -3.5**
MFF Saint Martin d 8.46 3 Pn **Pn** **22 43 24.4 +0.2**
MFF Sn **Sn** **22 44 56.3 -3.5**
MFF Saint Martin d 8.46 3 Pn **Pn** **22 43 24.4 +0.2**
MFF Sn **Sn** **22 44 56.3 -3.5**
MFF Saint Martin d 8.46 3 *e*Pn **Pn** **22 43 24.4 +0.2**
SNR=1.0
KEST Kesra 8.54 103 *e*Pn **Pn** **22 43 27.0 +1.6**
KEST *e*Sn **Sn** **22 45 00.3 -1.6**
KEST Kesra 8.54 103 *e*Pn **Pn** **22 43 27.0 +1.6**
KEST *e*Sn **Sn** **22 45 00.3 -1.6**
PGF Pioggiola 8.72 57 *e*Pn **Pn** **22 43 28.3 +0.4**
SNR=1.0
PGF Pioggiola 8.72 57 Pn **Pn** **22 43 28.3 +0.4**
PGF Pioggiola 8.72 57 Pn **Pn** **22 43 28.3 +0.4**
PGF Pioggiola 8.72 57 *e*Pn **Pn** **22 43 28.3 +0.4**
SNR=1.0
BGF Bois d'Agland 8.84 17 *e*Pn **Pn** **22 43 29.0 -0.4**
BGF Bois d'Agland 8.84 17 Pn **Pn** **22 43 29.0 -0.4**
BGF Bois d'Agland 8.84 17 Pn **Pn** **22 43 29.0 -0.4**
BGF Bois d'Agland 8.84 17 *e*Pn **Pn** **22 43 29.0 -0.4**
AVF Avril sur Loir 9.18 19 *e*Pn **Pn** **22 43 33.6 -0.4**
AVF Avril sur Loir 9.18 19 Pn **Pn** **22 43 33.6 -0.4**
AVF Avril sur Loir 9.18 19 Pn **Pn** **22 43 33.6 -0.4**
AVF Avril sur Loir 9.18 19 *e*Pn **Pn** **22 43 33.6 -0.4**
SSF Saint Saulge 9.46 19 *e*Pn **Pn** **22 43 37.3 -0.7**
SSF Saint Saulge 9.46 19 Pn **Pn** **22 43 37.3 -0.7**
SSF Saint Saulge 9.46 19 Pn **Pn** **22 43 37.3 -0.7**
SSF Saint Saulge 9.46 19 *e*Pn **Pn** **22 43 37.3 -0.7**
QUIF Quistinic 9.89 351 *e*Pn **Pn** **22 43 45.0 +1.1**
SNR=1.0
QUIF Quistinic 9.89 351 Pn **Pn** **22 43 45.0 +1.1**
QUIF Quistinic 9.89 351 Pn **Pn** **22 43 45.0 +1.1**
QUIF Quistinic 9.89 351 *e*Pn **Pn** **22 43 45.0 +1.1**
SNR=1.0
SGMF Saint Gilles 10.16 354 *e*Pn **Pn** **22 43 47.5 -0.1**
SNR=1.0
SGMF Saint Gilles 10.16 354 Pn **Pn** **22 43 47.5 -0.1**
SGMF Saint Gilles 10.16 354 Pn **Pn** **22 43 47.5 -0.1**
SGMF Saint Gilles 10.16 354 *e*Pn **Pn** **22 43 47.5 -0.1**
SNR=1.0
GRR Gorron 10.22 0 *e*Pn **Pn** **22 43 48.5 +0.1**
SNR=1.0
GRR Gorron 10.22 0 Pn **Pn** **22 43 48.5 +0.1**
GRR Gorron 10.22 0 Pn **Pn** **22 43 48.5 +0.1**
GRR Gorron 10.22 0 *e*Pn **Pn** **22 43 48.5 +0.1**
SNR=1.0
ROSF Rostrenen 10.32 351 *e*Pn **Pn** **22 43 49.0 -0.7**
SNR=1.0
ROSF Rostrenen 10.32 351 Pn **Pn** **22 43 49.0 -0.7**
ROSF Rostrenen 10.32 351 Pn **Pn** **22 43 49.0 -0.7**
ROSF Rostrenen 10.32 351 *e*Pn **Pn** **22 43 49.0 -0.7**
SNR=1.0
LDF La Druitiere 10.45 3 *e*Pn **Pn** **22 43 51.4 0.0**
LDF La Druitiere 10.45 3 *e*Pn **Pn** **22 43 51.4 0.0**
FLN La Foliniere 10.60 1 *e*Pn **Pn** **22 43 53.8 +0.2**
FLN La Foliniere 10.60 1 Pn **Pn** **22 43 53.8 +0.2**
FLN La Foliniere 10.60 1 Pn **Pn** **22 43 53.8 +0.2**
FLN La Foliniere 10.60 1 *e*Pn **Pn** **22 43 53.8 +0.2**

*IDC **05** 22:42:45.6±0.8, 6°.82S×106°.17E, h0km, mb4.3/17, mb1 4.3/17, mb1mx4.3/22, mbtmp4.2/17, MS3.4/4, Ms1 3.4/4, ms1mx3.0/32, Error ellipse: s-maj=36.8km s-min=15.5km az=45.0*
*ISCJB **05** 22:42:48.8±0.3, 6°.81S±0°.06×106°.13E±0°.05, h33km, mb4.3/32, MS3.7/4, Error ellipse: s-maj=9.1km s-min=4.9km az=34.5*
*NEIC **05** 22:42:48.9±2.5, 6°.81S×106°.19E, h21km±18km, mb4.4/16, Error ellipse: s-maj=6.4km s-min=4.4km az=222.0*
*DJA **05** 22:42:53, 7°.25S×106°.18E, h31km, MLv4.7/18*
ISC 05 22:42:50.9±0.3, 6°.83S±0°.06×106°.12E±0°.04, h35km, n77, σ0s75/77, mb4.3/32, MS3.7/4, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
SKJI	**Sukabumi**	**0.46**	**112**	P	**Pn**	**22 43 04.5**	**+3.4**
SKJI				S	**Sn**	**22 43 12.1**	**+4.0**
CGJI	**Cibinong**	**0.48**	**297**	P	**Pn**	**22 43 07.7**	**+6.4**
SBJI	**Serang**	**0.70**	**1**	P	**Pn**	**22 43 13.3**	**+8.9**
CBJI	**Citeko**	**0.83**	**61**	P	**Pn**	**22 43 11.5**	**+5.4**
CBJI				S	**Sn**	**22 43 24.0**	**+6.9**
TNG	**Tangerang**	**0.83**	**39**	P	**Pn**	**22 43 14.8**	**+8.6**
TNG	**Tangerang**	**0.83**	**39**	P	**Pn**	**22 43 14.8**	**+8.6**
RBSI	**Rajabasa**	**1.05**	**339**	P	**Pn**	**22 43 17.3**	**+8.1**
RBSI				S	**Sn**	**22 43 35.4**	**+13**
LEM	**Lembang**	**1.48**	**90**	P	**Pn**	**22 43 20.2**	**+5.1**
LEM				S	**Sn**	**22 43 44.5**	**+11**
BLSI	**Bandar Lampung**	**1.69**	**329**	P	**Pn**	**22 43 26.2**	**+8.2**
CISI	**Cisompet, Garu**	**1.83**	**113**	P	**Pn**	**22 43 20.7**	**+0.8**
CISI				S	**Sn**	**22 43 41.3**	**-0.5**
KLI	**Kotabumi**	**2.32**	**327**	P	**Pn**	**22 43 35.7**	**+9.0**
KLSI		**2.54**	**327**	P	**Pn**	**22 43 38.3**	**+8.6**
LWLI	**Liwa**	**2.73**	**311**	P	**Pn**	**22 43 40.4**	**+8.1**
MDSI	**Maura Dua**	**3.03**	**320**	P	**Pn**	**22 43 44.7**	**+8.3**
MNAI	**Manna**	**3.99**	**308**	P	**Pn**	**22 43 55.4**	**+5.7**
TPI	**Tanjungpandan**	**4.32**	**21**	P	**Pn**	**22 44 02.1**	**+7.9**
UGM	**Wanagama**	**4.50**	**104**	S	**Sn**	**22 44 49.2**	**+1.5**
KSI	**Kapahiang**	**4.72**	**312**	P	**Pn**	**22 44 09.4**	**+10**
	0.9nm266nm,0.9s						
RGRI	**Rengat**	**7.46**	**329**	P	**Pn**	**22 44 48.1**	**+11**
COCO	**West Island**	**10.60**	**239**	*e*Pn	**Pn**	**22 45 20.6**	**+0.2**
PSI	**Prapat**	**11.96**	**323**	LR	LR	22 51 09.2	
	comp=Z,158nm,19.3s,baz=127,slow=42						
MBWA	**Marble Bar**	**19.40**	**139**	*e*P	**Pn**	**22 47 13.0**	**-2.4**
	12nm,1.0s						
FITZ	**Fitzroy Crossi**	**22.08**	**122**	P	**P**	**22 47 41.6**	**-1.5**
	12nm,1.2s,mb4.2						
FITZ				LR	LR	22 56 36.1	
FITZ	**Fitzroy Crossi**	**22.08**	**122**	P	**P**	**22 47 42.7**	**-0.4**
	7.9nm,1.2s,mb4.0,baz=288,slow=16,SNR=3.2						
FITZ				LR	LR	22 56 36.1	
	comp=Z,79nm,18.8s,MS3.2,baz=302,slow=38						
CMAR	**Chiang Mai Arr**	**26.11**	**344**	P	**P**	**22 48 21.5**	**-0.1**
	0.9nm,0.7s,mb3.4,baz=176,slow=9.3,SNR=5.9						
CMAR				LR	LR	23 00 01.3	
	comp=Z,44nm,19.9s,MS3.0,baz=25,slow=40						
CHTO	**Chiang Mai**	**26.45**	**345**	*e*P	**P**	**22 48 24.4**	**-0.3**
	2.6nm,1.0s,mb3.7						
NWAO	**Narrogin (SRO)**	**27.95**	**160**	*e*P	**P**	**22 48 39.1**	**+1.0**
	61nm,1.5s,mb5.0						
NWAO	**Narrogin (SRO)**	**27.95**	**160**	LR	LR	22 58 07.6	
	comp=Z,179nm,21.6s,MS3.6,baz=41,slow=33						
WRAB	**Tennant Creek**	**30.33**	**118**	*e*P	**P**	**22 48 58.5**	**-0.9**
	2.1nm,0.6s,mb4.0						
WB2	**Warramunga Arr**	**30.33**	**118**	*e*P	**P**	**22 48 58.7**	**-0.8**
ASAR	**Alice Springs**	**31.50**	**125**	P	**P**	**22 49 09.1**	**-0.6**
	0.7nm,0.7s,mb3.6,baz=299,slow=8.2,SNR=6.2						
DGAR	**Diego Garcia**	**33.41**	**267**	P	**P**	**22 49 27.0**	**+0.4**
YHNB	**Yeheng**	**34.66**	**25**	P	**P**	**22 49 36.7**	**-0.5**
LSA	**Lhasa**	**39.07**	**339**	*e*P	**P**	**22 50 14.8**	**+0.1**
	2.4nm,0.4s,mb4.3						
NJ2	**Nanjing**	**40.52**	**17**	*e*P	**P**	**22 50 27.2**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.9						
PMG	**Port Moresby**	**40.69**	**96**	P	**P**	**22 50 28.4**	**-0.1**
CTA	**Charters Tower**	**41.07**	**113**	P	**P**	**22 50 31.0**	**-0.5**
	comp=Z,4.2nm,0.9s,mb4.0,baz=286,slow=9.0,SNR=4.0						
STKA	**Stephens Creek**	**41.40**	**132**	*e*P	**P**	**22 50 33.3**	**-0.8**
STKA	**Stephens Creek**	**41.40**	**132**	P	**P**	**22 50 33.2**	**-0.8**
	comp=Z,8nm,0.8s,mb4.0,baz=293,slow=11,SNR=3.0						
BJT	**Baijiatuau**	**47.53**	**10**	P	**P**	**22 51 23.0**	**+0.2**
KSRS	**Korea Array**	**48.53**	**23**	P	**P**	**22 51 29.9**	**-0.7**
	comp=Z,1.1nm,0.8s,mb3.9,baz=220,slow=7.6,SNR=5.9						
KSRS				PcP	PcP	22 52 57.0	+0.8
	comp=Z,2.2nm,1.0s,baz=210,slow=3.7,SNR=9.2						
HNR	**Honiara**	**53.30**	**97**	P	**P**	**22 52 06.7**	**-0.3**
KSH	**Kashi**	**53.89**	**331**	*e*P	**P**	**22 52 10.5**	**-0.3**
KSH				*e*pP	pP	22 52 20.3	-1.1
KSH				*e*sP	sP	22 52 24.3	-1.2
KSH				*e*PcP	PcP	22 53 14.8	-1.3
KSH				*e*PP	PP	22 54 12.6	+0.2
KSH				*e*ScP	ScP	22 57 09.2	-2.4
KSH				*e*PcS	PcS	22 57 12.7	-2.5
KSH				*e*S	**S**	**22 59 42.6**	**-1.1**
KSH				*e*sS	sS	22 59 59.3	-1.8
KSH				*e*ScS	ScS	23 01 53.1	-4.5
KSH				*e*SS	SS	23 03 13.0	-12
KSH				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
KSH				pmax	pmax		
	comp=Z,41nm,5.4s						
KSH				LR	LR		
	comp=N,110nm,7.5s						
KSH				LR	LR		
	comp=E,100nm,9.5s						
KSH				LR	LR		
	comp=Z,93nm,5.4s						
KBL	**Kabul**	**54.03**	**322**	*e*P	**P**	**22 52 10.1**	**-1.9**
	comp=Z,5.4nm,0.7s,mb4.6						
SONM	**Songino Array**	**54.43**	**0**	P	**P**	**22 52 15.1**	**+0.6**
	comp=Z,1.3nm,0.7s,mb4.0,baz=182,slow=8.4,SNR=5.5						
SONM				PcP	PcP	22 53 18.5	+0.6
	comp=Z,4.3nm,0.8s,baz=177,slow=4.2,SNR=14						
ULN	**Ulaanbaatar**	**54.46**	**1**	*e*P	**P**	**22 52 15.4**	**+0.6**
	comp=Z,1.7nm,0.8s,mb4.0						
MDJ	**Mudanjiang**	**55.40**	**20**	P	**P**	**22 52 20.9**	**-0.8**
AAK	**Ala-Archa**	**57.03**	**333**	P	**P**	**22 52 33.4**	**+0.1**
MK31	**Makanchi Array**	**57.43**	**341**	*e*P	**P**	**22 52 36.1**	**-0.1**
MKAR	**Makanchi Array**	**57.43**	**341**	P	**P**	**22 52 36.1**	**0.0**
	comp=Z,1.8nm,0.5s,mb4.4,baz=154,slow=8.2,SNR=35						
MKAR				PcP	PcP	22 53 30.2	+0.6
	comp=Z,0.7nm,0.6s,baz=146,slow=5.6,SNR=2.6						
KURK	**Kurchatov**	**62.05**	**341**	*e*P	**P**	**22 53 07.7**	**-0.1**
	comp=Z,1.0nm,0.4s,mb4.3						
YSS	**Yuzh-Sakhalins**	**62.62**	**27**	P	**P**	**22 53 11.0**	**-0.7**
ZALV	**Zalesovo Beam**	**63.15**	**346**	P	**P**	**22 53 14.6**	**-0.5**
	comp=Z,0.9nm,0.5s,mb4.2,baz=108,slow=4.8,SNR=5.0						
BVAR	**Borovoye Array**	**66.87**	**337**	P	**P**	**22 53 39.4**	**+0.1**
	comp=Z,4.1nm,0.6s,mb4.6,baz=139,slow=7.9,SNR=32						
BRVK	**Borovoye**	**66.94**	**337**	*e*P	**P**	**22 53 39.6**	**-0.1**
	comp=Z,4.0nm,0.8s,mb4.5						
RPZ	**Rata Peaks**	**67.27**	**135**	LR	LR	23 22 42.3	
	comp=Z,1μm,19.1s,MS5.2,baz=28,slow=36						
YAK	**Yakutsk**	**71.04**	**11**	P	**P**	**22 54 05.3**	**+0.4**
ARU	**Arti**	**74.09**	**335**	*e*P	**P**	**22 54 24.2**	**+0.9**
	comp=Z,3.4nm,0.8s,mb4.3						
KIV	**Kislovodsk**	**76.17**	**318**	*e*P	**P**	**22 54 35.5**	**-0.1**
	comp=Z,3.3nm,0.8s,mb4.3						
LSZ	**Lusaka**	**76.63**	**256**	*e*P	**P**	**22 54 39.3**	**+0.5**
	comp=Z,1.2nm,0.6s,mb4.0						
EIL	**Elat**	**77.25**	**302**	P	**P**	**22 54 42.9**	**+0.9**
	comp=Z,4.4nm,0.6s,mb4.6,baz=338,slow=1.3,SNR=5.6						
SBA	**Scott Base**	**77.37**	**169**	P	**P**	**22 54 41.7**	**-0.1**
MMAI	**Mount Meron Ar**	**77.79**	**306**	P	**P**	**22 54 45.9**	**+1.0**
	comp=Z,6.1nm,0.8s,mb4.6,baz=102,slow=7.8,SNR=6.7						
LBTB	**Lobatse**	**78.58**	**246**	*e*P	**P**	**22 54 49.9**	**+0.4**
	comp=Z,14nm,1.4s,mb4.7						
BR131	**Keskin Array S**	**81.07**	**312**	*e*P	**P**	**22 55 02.9**	**+0.2**
	comp=Z,3.7nm,0.7s,mb4.4						
BRTR	**Keskin Array B**	**81.07**	**312**	P	**P**	**22 55 03.1**	**+0.5**
	comp=Z,4.1nm,0.7s,mb4.5,baz=137,slow=7.1,SNR=32						
SUR	**Sutherland**	**82.44**	**238**	P	**P**	**22 55 10.7**	**+0.6**
OBN	**Obninsk**	**84.11**	**327**	*e*P	**P**	**22 55 18.4**	**+0.3**
	comp=Z,10nm,0.7s,mb5.1						
TIRR	**Tirgusor**	**86.05**	**315**	*e*P	**P**	**22 55 28.2**	**+0.1**
AKASG	**Malin Array Be**	**87.02**	**322**	P	**P**	**22 55 31.7**	**-1.0**
	comp=Z,0.2nm,0.3s,mb3.9,baz=80,slow=5.4,SNR=5.2						
MLR	**Muntele Rosu**	**87.98**	**316**	P	**P**	**22 55 38.4**	**+1.0**
	comp=Z,4.6nm,1.0s,mb4.7,baz=165,slow=8.4,SNR=5.9						
FINES	**FINESS Array B**	**91.21**	**332**	P	**P**	**22 55 52.5**	**+0.3**
	comp=Z,1.4nm,0.7s,mb4.4,baz=336,slow=4.2,SNR=4.0						
ARCES	**ARCESS Array B**	**93.07**	**340**	P	**P**	**22 56 00.8**	**+0.1**
ARCES	**ARCESS Array B**	**93.07**	**340**	P	**P**	**22 56 00.8**	**+0.1**
	comp=Z,2.1nm,0.8s,mb4.6,baz=110,slow=5.8,SNR=4.3						
TAOE	**Nuku Hiva Isla**	**112.14**	**102**	*e*LR	LR	23 00 30.8	
	comp=Z,294nm,24.9s						
TXAR	**Lajitas Array**	**144.10**	**48**	PKP	PKPdf	23 02 22.8	-0.9
TXAR	**Lajitas Array**	**144.10**	**48**	PKP	PKPdf	23 02 22.8	-0.9
	comp=Z,1.3nm,0.7s,baz=307,slow=1.0,SNR=11						

*ISCJB **05** 22:49:12.8±0.3, 83°.60N±0°.05×113°.5E±0°.4, h10km, mb4.2/38, MS3.5/21, Error ellipse: s-maj=8.2km s-min=5.4km az=148.7*
*IDC **05** 22:49:12.8±0.6, 83°.64N×114°.20E, h0km, mb3.9/16, mb1 4.2/17, mb1mx4.0/28, mbtmp4.0/17, MS3.5/22, Ms1 3.6/22, ms1mx3.4/33, Error ellipse: s-maj=17.0km s-min=12.2km az=173.0*
*NEIC **05** 22:49:14.8±0.2, 83°.63N×113°.38E, h10km, mb4.4/24, Error ellipse: s-maj=6.4km s-min=4.4km az=147.0*
ISC 05 22:49:14.9±0.3, 83°.61N±0°.05×113°.5E±0°.4, h10km, n77, σ0s88/65, mb4.2/38, MS3.5/21, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
TIXI	**Tiksi**	**12.38**	**157**	Pn	**Pn**	**22 52 10.4**	**-0.3**
KBS	**Kingsbay**	**13.93**	**308**	*e*Pn	**Pn**	**22 52 31.2**	**-0.6**

SPITS	**Spitsbergen Ar**	**14.19**	**303**	Pn		**Pn**	**22 52 34.5**	**-1.0**
	baz=42,slow=11,SNR=3.5								
SPITS				Sn		**Sn**	**22 55 03.0**	**-10**
	baz=283,slow=15,SNR=2.1								
SPITS				LR		LR	22 56 59.1		
	comp=Z,102nm,20.1s,baz=110,slow=33								
KEV	**Kevo**	**20.94**	**284**	*eP*		**P**	**22 53 57.2**	**-0.1**
	4.9nm,0.6s								
RES	**Resolute Bay**	**21.29**	**20**	*eP*		**P**	**22 54 00.9**	**0.0**
	16nm,0.6s,mb4.5								
RES	**Resolute Bay**	**21.29**	**20**	LR		LR	23 01 49.2		
	comp=Z,228nm,20.2s,MS3.6,baz=293,slow=36								
ARCES	**ARCESS Array B**	**21.32**	**285**	P		**P**	**22 54 01.3**	**0.0**
ARCES				S		**S**	**22 57 59.6**	**+2.1**
ARCES	**ARCESS Array B**	**21.32**	**285**	P		**P**	**22 54 01.3**	**0.0**
	4.3nm,0.8s,mb3.9,baz=25,slow=9.6,SNR=13								
ARCES				S		**S**	**22 57 59.6**	**+2.1**
	0.8nm,0.6s,baz=35,slow=24,SNR=7.1								
ARE0	**ARCESS Array S**	**21.32**	**285**	*eP*		**P**	**22 54 04.5**	**+3.2**
JMIC	**Jan Mayen**	**23.17**	**315**	LR		LR	23 01 41.1		
	comp=Z,200nm,20.4s,MS2.5,baz=136,slow=32								
SUMG	**Summit**	**23.40**	**339**	*eP*		**P**	**22 54 23.2**	**-0.2**
	7.5nm,1.0s,mb4.1								
INK	**Inuvik**	**25.01**	**54**	*eP*		**P**	**22 54 38.3**	**0.0**
	9.8nm,0.6s,mb4.5								
INK	**Inuvik**	**25.01**	**54**	P		**P**	**22 54 37.3**	**-0.9**
	3.1nm,0.6s,mb4.0,baz=336,slow=9.0,SNR=5.6								
INK				LR		LR	23 04 14.8		
	comp=Z,90nm,21.0s,MS3.2,baz=250,slow=36								
COLA	**College**	**26.95**	**69**	*eP*		**P**	**22 54 56.6**	**+0.8**
ILAR	**Eielson Array**	**27.15**	**68**	P		**P**	**22 54 56.9**	**-0.7**
	4.9nm,1.3s,mb3.9,baz=342,slow=7.1,SNR=16								
ILAR				LR		LR	23 05 19.9		
	comp=Z,140nm,18.7s,MS3.6,baz=349,slow=36								
EGAK	**Eagle**	**27.73**	**63**	*eP*		**P**	**22 55 10.7**	**+8.0**
	6.6nm,1.0s,mb4.2								
DAWY	**Dawson**	**28.60**	**61**	P		**P**	**22 55 09.6**	**-0.9**
FINES	**FINESS Array B**	**29.09**	**279**	P		**P**	**22 55 14.9**	**0.0**
	3.0nm,0.8s,mb4.0,baz=19,slow=8.9,SNR=5.5								
FINES				LR		LR	23 10 26.7		
	comp=Z,80nm,19.5s,MS3.3,baz=316,slow=44								
ARU	**Arti**	**30.46**	**244**	*eP*		**P**	**22 55 26.0**	**-1.1**
	1.6nm,0.6s,mb3.9								
ZALV	**Zalesovo Beam**	**30.73**	**214**	P		**P**	**22 55 29.8**	**+0.3**
	0.3nm,0.4s,mb3.5,baz=19,slow=4.9,SNR=2.5								
ZALV				PcP		PcP	22 58 26.1	-0.5	
	0.5nm,0.5s,baz=354,slow=2.9,SNR=4.1								
ZALV				LR		LR	23 08 46.8		
	comp=Z,150nm,19.2s,MS3.7,baz=266,slow=38								
NOA	**NORSAR Array B**	**31.08**	**293**	LR		LR	23 10 30.8		
	comp=Z,320nm,18.9s,MS3.0,baz=10.0,slow=41								
YKA	**Yellowknife Ar**	**32.29**	**40**	P		**P**	**22 55 42.5**	**-0.6**
	1.6nm,0.9s,mb3.9,baz=348,slow=8.4,SNR=3.9								
BRVK	**Borovoye**	**32.70**	**230**	*eP*		**P**	**22 55 47.0**	**+0.2**
	8.5nm,1.3s,mb4.5								
BVAR	**Borovoye Array**	**32.72**	**230**	P		**P**	**22 55 47.7**	**+0.7**
	0.5nm,0.5s,mb3.7,baz=24,slow=11,SNR=4.8								
FRB	**Frobisher Bay**	**32.84**	**2**	LR		LR	23 08 14.5		
	comp=Z,108nm,20.0s,MS3.5,baz=13,slow=35								
KDAK	**Kodiak Island**	**33.38**	**76**	LR		LR	23 09 21.0		
	comp=Z,114nm,20.3s,MS3.6,baz=288,slow=36								
KURK	**Kurchatov**	**34.36**	**220**	*eP*		**P**	**22 56 01.2**	**-0.1**
	1.2nm,0.5s,mb4.1								
DLBC	**Dease Lake**	**35.03**	**55**	LR		LR	23 11 47.9		
	comp=Z,91nm,18.0s,MS3.6,baz=303,slow=39								
SONM	**Songino Array**	**35.98**	**188**	P		**P**	**22 56 14.9**	**-0.3**
	1.1nm,1.0s,mb3.8,baz=324,slow=7.3,SNR=4.7								
FCC	**Fort Churchill**	**37.22**	**24**	P		**P**	**22 56 26.1**	**+0.5**
MK31	**Makanchi Array**	**38.02**	**215**	*eP*		**P**	**22 56 32.1**	**-0.4**
MKAR	**Makanchi Array**	**38.02**	**215**	P		**P**	**22 56 32.2**	**-0.3**
MKAR				PcP		PcP	22 58 46.4	-1.2	
MKAR				LR		LR	23 13 18.8		
MKAR	**Makanchi Array**	**38.02**	**215**	P		**P**	**22 56 32.2**	**-0.3**
	2.0nm,0.8s,mb3.9,baz=4.6,slow=6.9,SNR=16								
MKAR				PcP		PcP	22 58 46.4	-1.2	
	0.3nm,0.8s,baz=324,slow=3.7,SNR=3.8								
MKAR				LR		LR	23 13 18.8		
	comp=Z,115nm,19.9s,MS3.7,baz=357,slow=38								
AKASG	**Malin Array Be**	**39.29**	**272**	P		**P**	**22 56 42.6**	**-0.5**
	0.3nm,0.4s,mb3.4,baz=13,slow=8.8,SNR=3.4								
AKBB	**Malin Array Si**	**39.29**	**272**	P		**P**	**22 56 41.1**	**-2.0**
BBB	**Bella Bella**	**41.39**	**55**	LR		LR	23 15 02.6		
	comp=Z,64nm,19.6s,MS3.5,baz=147,slow=38								
MORC	**Moravsky Berou**	**41.49**	**283**	*eP*		**P**	**22 57 00.9**	**-0.5**
	3.4nm,1.0s,mb3.9								
SCHQ	**Schefferville**	**41.78**	**0**	LR		LR	23 13 35.0		
	comp=Z,89nm,20.6s,MS3.6,baz=2.4,slow=35								
VRAC	**Vranov**	**42.06**	**284**	P		**P**	**22 57 05.1**	**-0.9**
	0.7nm,0.4s,mb3.7,baz=37,slow=7.7,SNR=4.1								
PSZ	**Piszkesteto**	**43.07**	**281**	P		**P**	**22 57 14.6**	**+0.3**
KIV	**Kislovodsk**	**44.45**	**257**	*eP*		**P**	**22 57 24.8**	**-0.6**
	2.8nm,0.6s,mb4.2								
ULM	**Lac du Bonnet**	**45.64**	**26**	LR		LR	23 14 30.8		
	comp=Z,77nm,21.4s,MS3.6,baz=60,slow=33								
WALA	**Waterton Lakes**	**45.69**	**43**	*eP*		**P**	**22 57 35.3**	**+0.2**
	0.1nm,0.7s								
NEW	**Newport**	**46.23**	**46**	*eP*		**P**	**22 57 39.5**	**+0.1**
KSRS	**Korea Array**	**46.52**	**164**	LR		LR	23 18 28.1		
	comp=Z,32nm,19.5s,MS3.3,baz=165,slow=38								
BOZ	**Bozeman (W)**	**49.25**	**41**	*eP*		**P**	**22 58 03.6**	**+0.7**
	7.6nm,1.4s,mb4.5								
AQU	**L'Aquila**	**49.28**	**286**	*eP*		**P**	**22 58 02.7**	**-0.5**
	6.9nm,0.9s,mb4.7								
BMO	**Blue Mountains**	**49.60**	**46**	*eP*		**P**	**22 58 06.3**	**+0.7**
	12nm,1.8s,mb4.6								
BRTR	**Keskin Array B**	**49.63**	**265**	P		**P**	**22 58 07.0**	**+1.1**
	0.8nm,0.5s,mb4.0,baz=7.7,slow=5.1,SNR=5.8								
BRTR				LR		LR	23 22 04.8		
	comp=Z,38nm,18.6s,MS3.4,baz=44,slow=40								
MCMT	**McKenzie Canyo**	**49.97**	**42**	*eP*		**P**	**22 58 08.1**	**-0.3**
	1.0nm,0.9s,mb3.9								
HLID	**Hailey**	**51.11**	**44**	P		**P**	**22 58 17.2**	**+0.2**
KBL	**Kabul**	**51.18**	**228**	*eP*		**P**	**22 58 18.4**	**+0.7**
	11nm,1.4s,mb4.6								
RSSD	**Black Hills**	**51.29**	**34**	*eP*		**P**	**22 58 18.8**	**+0.4**
	5.3nm,1.0s,mb4.4								
SADO	**Sadowa**	**51.72**	**11**	LR		LR	23 19 56.9		
	comp=Z,122nm,19.3s,MS4.0,baz=7.4,slow=36								
YBH	**Yreka Blue Hor**	**52.24**	**52**	LR		LR	23 22 29.8		
	comp=Z,70nm,18.2s,MS3.7,baz=335,slow=38								
HWUT	**Hardware Ranch**	**53.27**	**41**	*eP*		**P**	**22 58 33.7**	**+0.6**
	6.5nm,1.0s,mb4.5								
M13A	**Montello**	**53.32**	**44**	*eP*		**P**	**22 58 33.2**	**-0.3**
	7.0nm,1.1s,mb4.5								
ESDC	**Sonseca Array**	**53.70**	**302**	P		**P**	**22 58 37.0**	**+0.7**
ESDC	**Sonseca Array**	**53.70**	**302**	P		**P**	**22 58 37.0**	**+0.7**
	2.0nm,0.9s,mb4.0,baz=8.2,slow=7.4,SNR=13								
ESLA	**Sonseca Array**	**53.70**	**302**	*eP*		**P**	**22 58 36.6**	**+0.3**
	3.7nm,1.4s,mb4.1								
PAB	**San Pablo**	**53.87**	**302**	*eP*		**P**	**22 58 37.5**	**0.0**
	6.7nm,1.1s,mb4.5								
MMAI	**Mount Meron Ar**	**56.06**	**262**	LR		LR	23 29 00.1		
	comp=Z,42nm,19.7s,MS3.5,baz=120,slow=42								
KEST	**Kesra**	**56.26**	**288**	*eP*		**P**	**22 58 55.6**	**+0.8**
KEST	**Kesra**	**56.26**	**288**	P		**P**	**22 58 56.0**	**+1.2**
	3.1nm,1.0s,mb4.3,baz=124,slow=1.2,SNR=11								
PV01	**Paradox Valley**	**56.94**	**39**	*eP*		**P**	**22 58 59.0**	**-0.7**
	985nm,1.1s								
SDCO	**Great Sand Dun**	**57.54**	**36**	*eP*		**P**	**22 59 05.1**	**+1.2**
	5.6nm,1.3s,mb4.4								
MVCO	**Mesa Verde**	**57.87**	**39**	*eP*		**P**	**22 59 08.2**	**+2.1**
	11nm,1.1s,mb4.8								
ANMO	**Albuquerque**	**60.25**	**37**	*eP*		**P**	**22 59 21.9**	**-0.9**
	7.7nm,1.4s,mb4.5								
TKL	**Tuckaleechee C**	**60.69**	**16**	LR		LR	23 26 04.1		
	comp=Z,106nm,18.6s,MS4.0,baz=47,slow=36								
WMOK	**Wichita Mounta**	**60.94**	**30**	*eP*		**P**	**22 59 28.5**	**+1.0**
CNNC	**Cliffs of the**	**61.26**	**11**	*eP*		**P**	**22 59 26.8**	**-2.8**
MNTX	**Cornudas Mount**	**63.56**	**37**	*eP*		**P**	**22 59 44.8**	**-0.2**
	1.9nm,1.0s,mb4.1								
CHTO	**Chiang Mai**	**65.09**	**195**	P		**P**	**22 59 56.0**	**+0.9**
CMAR	**Chiang Mai Arr**	**65.44**	**195**	P		**P**	**22 59 57.2**	**-0.3**
	0.9nm,0.6s,mb4.0,baz=353,slow=6.4,SNR=5.1								
CMAR				LR		LR	23 30 29.5		
	comp=Z,48nm,18.4s,MS3.7,baz=200,slow=38								
TXAR	**Lajitas Array**	**66.02**	**35**	P		**P**	**22 59 59.0**	**-2.1**
	2.4nm,1.0s,mb4.2,baz=359,slow=5.0,SNR=10								
DBIC	**Dimbokro**	**86.46**	**299**	P		**P**	**23 01 59.4**	**+2.1**
MAW	**Mawson**	**152.95**	**221**	PKPbc		PKPbc	23 09 09.5	-0.5	
	1.3nm,0.7s,baz=40,slow=7.6,SNR=3.9								

*IDC **05** 23:05:21.9±0.4,27.˚53S×176.˚25W,h0km,mb4.7/16, mb1 4.9/18,mb1mx4.9/19,mbtmp4.7/18,ML4.4/1,MS4.5/14, Ms1 4.5/14,ms1mx4.3/20,Error ellipse: s-maj=19.3km s-min=14.0km az=160.0*

*BJI **05** 23:05:24.8,27.˚17S×175.˚65W,h30km,mB5.7/16, mb5.2/26,Ms5.3/10,Ms7 4.9/11*

*ISCJB **05** 23:05:25.7±0.2,27.˚41S±0.˚05×176.˚32W±0.˚04,h30km, mb5.1/62,MS4.6/21,Error ellipse: s-maj=7.6km s-min=4.3km az=154.4*

*NEIC **05** 23:05:27.9±0.9,27.˚34S×176.˚32W,h36km±7km,mb5.2/41, Error ellipse: s-maj=5.8km s-min=4.0km az=143.0*

*MOS **05** 23:05:27.0±1.0,27.˚20S×176.˚34W,h33km,mb5.4/18, Error ellipse: s-maj=12.0km s-min=10.0km az=68.3*

*GCMT **05** 23:05:27.2±0.2,27.˚32S×175.˚85W,h13km,MW5.2, Moment Tensor Solution. s50,c74; s77,c132; Moment tensor: Scale 10^16Nm; Mrr6.56±.21; Mθθ0.50±.16; Mφφ-7.06±.16; Mrθ0.78±.41; Mrφ-0.98±.12; Mθφ1.18±.35; Best double couple: M0 7.00000×10^16 NP1:φs181.00000°, δ40.00000°,λ81.00000°. NP2:φs13.00000°,δ51.00000°, λ97.00000°. Principal axes: T 6.7400, Plg82.0000°, Azm325.0000°; N 0.5700, Plg6.0000°, Azm188.0000°; P -7.3000, Plg5.0000°, Azm98.0000°; Data Used: II IU IC G CN.*

*BGS **05** 23:05:32.4±2.7,27.˚34S×176.˚32W,h33km,mb5.2(NEIC)*

ISC 05 23:05:25.8±2.5,27.˚42S±0.˚05×176.˚26W±0.˚04, h20km±17km,h31km±1.5km:pP-P,n633,σ0s59/448, mb5.1/62,MS4.6/21,168C-142D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**10.97**	**330**	Pn		**Pn**	**23 08 04.0**	**+2.3**
	532nm,1.6s,SNR=5.5							
MSVF	**Nonsavu**	**10.97**	**330**	*e*Pn		**Pn**	**23 08 01.1**	**-0.6**
	241nm,1.4s							
MSVF	**Nonsavu**	**10.97**	**330**	Pn		**Pn**	**23 08 03.8**	**+2.1**
	307nm,1.2s,SNR=5.5							
OUZ	**Omahuta**	**11.64**	**226**	*e*Pn		**Pn**	**23 08 12.6**	**+1.8**
	235nm,1.5s							
URZ	**Urewera**	**12.16**	**206**	Sn		**Sn**	**23 10 26.7**	**-6.0**
	11nm,0.7s							
URZ	**Urewera**	**12.16**	**206**	Pn		**Pn**	**23 08 14.0**	**-3.8**
	1.1nm,0.3s,baz=230,slow=22,SNR=8.2							
URZ				Sn		**Sn**	**23 10 26.7**	**-6.0**
	3.5nm,0.3s,baz=177,slow=22,SNR=12							
AFI	**Afiamalu**	**14.08**	**18**	Pn		**Pn**	**23 08 37.1**	**-7.0**
	4.8nm,0.3s,baz=227,slow=14,SNR=5.5							
AFI				Sn		**Sn**	**23 11 02.0**	**-18**
	4.2nm,0.3s,baz=51,slow=23,SNR=4.3							
SNZO	**South Karori**	**15.72**	**206**	*e*P		**Pn**	**23 09 11.0**	**+4.9**
	71nm,0.8s							
RAR	**Rarotonga**	**16.24**	**71**	Pn		**Pn**	**23 09 03.2**	**-10**
	2.9nm,0.3s,baz=238,slow=5.0,SNR=7.1							
RAR				Sn		Sn	23 11 49.1	-23	
	1.7nm,0.3s,baz=78,slow=20,SNR=2.8							
DZM	**Mont Dzumac**	**16.58**	**285**	*e*P		**Pn**	**23 09 21.6**	**+4.4**
	306nm,1.2s							
DZM				*e*LR		LR	23 13 10.5		
	5μm,28.3s							
NOUC	**Port Laguerre**	**16.69**	**285**	*e*P		**Pn**	**23 09 25.3**	**+6.7**
KHZ	**Kahutara**	**17.12**	**206**	*e*P		**Pn**	**23 09 22.9**	**-0.9**
	136nm,0.8s							
RPZ	**Rata Peaks**	**19.22**	**209**	S		**Sn**	**23 13 08.0**	**-16**
RPZ	**Rata Peaks**	**19.22**	**209**	P		**Pn**	**23 09 45.7**	**-3.9**
	1.0nm,0.3s,baz=123,slow=6.3,SNR=5.6							
RPZ				S		**Sn**	**23 13 08.0**	**-16**
	0.2nm,0.3s,baz=36,slow=16,SNR=3.5							
FUNA	**Funafuti**	**19.27**	**346**	*e*P		**Pn**	**23 09 48.4**	**-1.9**
PPT	**Papeete**	**26.48**	**74**	*e*LQ			23 16 05.4	
	2μm,23.0s							
PPT				*e*LR		LR	23 17 17.8		
	4μm,27.5s,baz=243							
PPT	**Papeete**	**26.48**	**74**	LR		LR	23 20 01.1		
	comp=Z,1μm,18.6s,MS4.5,baz=247,slow=33								
ARMA	**Armidale**	**28.21**	**256**	*e*P		**P**	**23 11 18.7**	**+1.4**
ARMA	**Armidale**	**28.21**	**256**	*e*P		**P**	**23 11 18.4**	**+1.1**
	25nm,1.1s,mb4.8							
HNR	**Honiara**	**28.70**	**304**	LR		LR	23 21 32.4		
	comp=Z,754nm,18.1s,MS4.3,baz=139,slow=34								
EIDS	**Eidsvold**	**29.28**	**266**	*e*P		**P**	**23 11 27.1**	**+0.3**
CNB	**Canberra Magne**	**30.27**	**246**	*e*P		**P**	**23 11 36.4**	**+0.9**
MCQ	**Macquarie Isla**	**32.56**	**207**	*e*P		**P**	**23 11 59.1**	**+3.7**
TOO	**Toolangi**	**33.61**	**243**	*e*P		**P**	**23 12 04.0**	**-0.8**
CTA	**Charters Tower**	**34.98**	**274**	*e*P		**P**	**23 12 17.6**	**+0.8**
	14nm,0.6s,mb5.1							
CTA	**Charters Tower**	**34.98**	**274**	P		**P**	**23 12 16.1**	**-0.7**
	21nm,0.8s,mb5.1,baz=103,slow=11,SNR=21							
CTAO	**Charters Tower**	**34.98**	**274**	*e*P		**P**	**23 12 17.3**	**+0.5**
	22nm,0.8s,mb5.1							
CTAO	**Charters Tower**	**34.98**	**274**	*e*P		**P**	**23 12 17.3**	**+0.5**
CTAO				pmax		pmax		
	comp=Z,22nm,0.8s,mb5.1							
STKA	**Stephens Creek**	**36.73**	**253**	*e*P		**P**	**23 12 31.5**	**-0.2**
	comp=Z,13nm,0.9s,mb4.8							
STKA	**Stephens Creek**	**36.73**	**253**	*e*P		**P**	**23 12 32.2**	**+0.4**
	comp=Z,5.1nm,1.0s,mb4.3							
STKA	**Stephens Creek**	**36.73**	**253**	P		**P**	**23 12 31.5**	**-0.2**
	comp=Z,10nm,1.0s,mb4.6,baz=97,slow=9.7,SNR=9.1							
STKA				LR		LR	23 26 54.0		
	comp=Z,1μm,19.4s,MS4.7,baz=88,slow=35								
RKT	**Rikitea**	**37.46**	**93**	*e*S		**S**	**23 18 22.3**	**-3.5**
	comp=Z,275nm,25.5s								
RKT				*e*LR		LR	23 22 29.4		
	comp=Z,2μm,28.2s								
TAOE	**Nuku Hiva Isla**	**38.77**	**68**	*e*LR		LR	23 22 57.8		
	comp=Z,1μm,27.0s								
PMG	**Port Moresby**	**38.85**	**290**	*e*P		**P**	**23 12 48.8**	**-1.0**
COEN	**Coen**	**40.06**	**281**	*e*P		**P**	**23 12 58.2**	**-1.7**
	comp=Z,165nm,1.1s,mb5.7								
ASAR	**Alice Springs**	**44.88**	**263**	P		**P**	**23 13 38.1**	**-1.0**
	comp=Z,4.4nm,0.7s,mb4.4,baz=118,slow=7.4,SNR=18								
ASAR				S		**S**	**23 20 15.8**	**-0.3**
	comp=Z,0.6nm,0.9s,baz=116,slow=13,SNR=3.3								
WB2	**Warramunga Arr**	**45.60**	**268**	*e*P		**P**	**23 13 43.9**	**-0.9**
WRAB	**Tennant Creek**	**45.60**	**268**	*e*P		**P**	**23 13 43.4**	**-1.5**
	comp=Z,28nm,1.1s,mb5.1								
WRAB	**Tennant Creek**	**45.60**	**268**	*e*P		**P**	**23 13 43.4**	**-1.5**
WRAB				pmax		pmax		
	comp=Z,28nm,1.1s,mb5.1								
WRAB	**Tennant Creek**	**45.60**	**268**	P		**P**	**23 13 44.9**	**0.0**
	comp=Z,99nm,0.8s,mb5.8,SNR=5.4								
FORT	**Forrest**	**48.35**	**252**	*e*P		**P**	**23 14 05.4**	**-0.8**
	comp=Z,54nm,0.9s,mb5.6								
FORT	**Forrest**	**48.35**	**252**	*e*P		**P**	**23 14 05.9**	**-0.3**
	comp=Z,69nm,0.9s,mb5.7								
KAKA	**Kakadu**	**50.02**	**276**	*e*P		**P**	**23 14 17.9**	**-1.3**
	comp=Z,12nm,0.4s,mb5.3								
KAKA	**Kakadu**	**50.02**	**276**	*e*P		**P**	**23 14 18.3**	**-0.9**
	comp=Z,41nm,0.5s,mb5.7								
KAKA				*e*PcP		PcP	23 15 40.1	+1.1	
SBA	**Scott Base**	**51.12**	**185**	*e*P		**P**	**23 14 29.9**	**+3.3**
	comp=Z,41nm,1.0s,mb5.3								
SBA	**Scott Base**	**51.12**	**185**	*e*P		**P**	**23 14 29.9**	**+3.3**
SBA				pmax		pmax		
	comp=Z,41nm,1.0s,mb5.3								
FITZ	**Fitzroy Crossi**	**53.97**	**267**	*e*P		**P**	**23 14 48.5**	**-0.1**
	comp=Z,13nm,0.9s,mb4.9								
FITZ	**Fitzroy Crossi**	**53.97**	**267**	*e*P		**P**	**23 14 48.9**	**+0.3**
	comp=Z,7.3nm,0.8s,mb4.7								
MIDW	**Midway**	**55.32**	**359**	*e*P		**P**	**23 14 56.2**	**-1.9**
GUMO	**Guam**	**55.52**	**312**	P		**P**	**23 14 59.3**	**-0.5**
MBWA	**Marble Bar**	**58.13**	**261**	P		**P**	**23 15 17.9**	**-0.4**
CASY	**Casey**	**58.48**	**207**	*e*P		**P**	**23 15 20.5**	**+0.4**
	comp=Z,73nm,1.1s,mb5.6								
QSPA	**South Pole Qui**	**62.68**	**180**	*e*P		**P**	**23 15 50.0**	**+1.4**
	comp=Z,106nm,1.0s,mb5.9								
QSPA				*e*PcP		PcP	23 16 27.7	+0.6	
QSPA	**South Pole Qui**	**62.68**	**180**	LR		LR	23 37 24.4		
	comp=Z,21nm,21.5s,MS4.3,baz=44,slow=31								
PMSA	**Palmer Station**	**74.35**	**156**	*e*P		**P**	**23 17 02.4**	**+0.8**
MAW	**Mawson**	**75.62**	**200**	*e*P		**P**	**23 17 10.5**	**+1.6**
	comp=Z,27nm,1.8s,mb4.9								
MAW	**Mawson**	**75.62**	**200**	P		**P**	**23 17 08.6**	**-0.3**
	comp=Z,19nm,0.9s,mb5.0,baz=122,slow=7.4,SNR=25								
MAW				LR		LR	23 50 14.4		
	comp=Z,510nm,18.4s,MS4.9,baz=120,slow=36								
MAW	**Mawson**	**75.62**	**200**	*e*P		**P**	**23 17 10.5**	**+1.6**
MAW				pmax		pmax		
	comp=Z,27nm,1.8s								
MJAR	**Matsushiro Arr**	**76.70**	**324**	P		**P**	**23 17 15.3**	**-0.1**
	comp=Z,3.9nm,0.8s,mb4.4,baz=161,slow=6.1,SNR=10								
MAJO	**Matsushiro**	**76.70**	**324**	*e*P		**P**	**23 17 15.5**	**+0.1**
MAT	**Matsushiro**	**76.70**	**324**	P		**P**	**23 17 13.6**	**-1.8**
MAT				S		S	23 27 00.0	-1.2	
USHA	**Ushuaia**	**77.52**	**146**	LR		LR	23 44 17.7		
	comp=Z,453nm,20.0s,MS4.8,baz=166,slow=30								
ERM	**Erimo**	**78.60**	**330**	*e*P		**P**	**23 17 25.5**	**-0.3**
	comp=Z,45nm,1.4s,mb5.2								
ERM	**Erimo**	**78.60**	**330**	*e*P		**P**	**23 17 25.5**	**-0.3**
ERM				pmax		pmax		
	comp=Z,45nm,1.4s,mb5.2								
YUK	**Yuzh-Kuril'sk**	**79.11**	**333**	*e*P		**P**	**23 17 27.0**	**-1.6**
YUK				MLR		MLR		
	comp=N,280nm,22.0s								
YUK				MLR		MLR		
	comp=Z,250nm,22.0s,MS4.5								
SYO	**Syowa Base**	**80.35**	**192**	↓*e*P		**P**	**23 17 34.0**	**-1.1**
SYO	**Syowa Base**	**80.35**	**192**	↓*e*P		**P**	**23 17 37.4**	**+2.3**
BLG	**Laguna Peak**	**81.73**	**45**	↓P		**P**	**23 17 43.0**	**+0.1**
	baz=82								
VNA1	**Neumayer--Stat**	**81.84**	**176**	*e*P		**P**	**23 17 40.7**	**-2.3**
VNA1				*e*			23 17 51.2		
MAIT	**Maitri**	**81.92**	**183**	*e*P		**P**	**23 17 42.0**	**-1.5**
NVL	**N'lazarevskaya**	**81.92**	**183**	*e*P		**P**	**23 17 43.3**	**-0.2**
NVL				pmax		pmax		
	comp=Z,21nm,1.1s,mb5.0								
SAO	**San Andreas Ge**	**82.05**	**42**	*e*P		**P**	**23 17 44.0**	**-0.5**
MWC	**Mount Wilson**	**82.43**	**45**	*e*P		**P**	**23 17 46.7**	**+0.1**
	comp=Z,24nm,1.4s,mb4.9								
MWC	**Mount Wilson**	**82.43**	**45**	*e*P		**P**	**23 17 46.7**	**+0.1**
MWC				pmax		pmax		
	comp=Z,24nm,1.4s,mb4.9								
ARVC	**Arvin**	**82.54**	**44**	↑P		**P**	**23 17 47.3**	**+0.1**
	baz=83								
MURC	**Murrieta**	**82.58**	**46**	↑P		**P**	**23 17 47.0**	**-0.4**
	baz=83								
MONP	**Monument Peak**	**82.63**	**47**	↓P		**P**	**23 17 47.9**	**+0.1**
	baz=83								
BFSC	**Mount Baldy Ra**	**82.69**	**45**	↑P		**P**	**23 17 47.8**	**-0.2**
	baz=83								
DVTC	**Desert V Tower**	**82.70**	**48**	↓P		**P**	**23 17 47.8**	**-0.2**
	baz=83								
YSS	**Yuzh-Sakhalins**	**82.76**	**333**	*e*P		**P**	**23 17 48.6**	**+0.6**
	comp=Z,22nm,0.7s,mb5.3								
YSS	**Yuzh-Sakhalins**	**82.76**	**333**	*e*P		**P**	**23 17 50.0**	**+2.0**
YSS				*e*		pP	23 17 58.0	+3.3	
YSS				*e**SP		sP	23 18 06.0	+8.9	
YSS				*e*S		S	23 28 10.0	+5.3	
YSS				*e*PS			23 28 56.0		
VES	**Vestal, Richgr**	**82.85**	**43**	↓P		**P**	**23 17 48.5**	**-0.2**
	baz=83,SNR=5.3								
EDW2	**Edwards Air Fo**	**82.90**	**45**	↓P		**P**	**23 17 48.8**	**-0.3**
	baz=83,SNR=7.3								
PET	**Petropavlovsk**	**83.03**	**345**	*e*P		sP	23 18 00.3	+1.9	
PET				pmax		pmax			
	comp=Z,200nm,11.6s								
PET				MLR		MLR			
	comp=Z,200nm,16.0s,MS4.6								
PFO	**Pinyon Flat Ob**	**

baz=86
217A **Green Valley** 85.72 51 ⇑P P 23 18 03.8 +0.4
baz=86,SNR=23
X14A **Yava** 85.92 48 ⇓P P 23 18 05.1 +0.7
baz=86
Y15A **Casa Rosa Ranc** 85.98 48 ⇑P P 23 18 05.1 +0.4
baz=86,SNR=15
V13A **Grand Canyon W** 86.05 46 ⇓P P 23 18 05.5 +0.5
baz=86,SNR=5.5
TUC **Tucson** 86.06 51 eP P 23 18 05.6 +0.5
U12A **Valley of Fire** 86.06 45 ⇑P P 23 18 05.3 +0.3
baz=86
318A **Bisbee** 86.10 52 ⇑P P 23 18 05.4 +0.1
baz=86,SNR=16
R10A **Warm Springs** 86.13 43 ⇑P P 23 18 05.4 +0.1
baz=86,SNR=6.3
T12A **Moapa** 86.13 45 ⇑P P 23 18 05.7 +0.4
baz=86
MOD **Modoc** 86.17 38 eP P 23 18 05.6 +0.2
comp=Z,24nm,1.4s,mb5.2
Z16A **Peralta Trail,** 86.22 49 ⇓P P 23 18 06.1 +0.2
baz=86,SNR=6.0
117A **Oracle** 86.24 50 ⇑P P 23 18 06.1 +0.1
baz=86,SNR=15
W14A **Seligman** 86.24 47 ⇓P P 23 18 06.2 +0.2
baz=86,SNR=13
218A **Dragoon** 86.37 51 ⇓P P 23 18 06.9 +0.2
baz=86
Q10A **Clear Creek Ra** 86.41 43 ⇑P P 23 18 07.3 +0.6
baz=87
V14A **Boquillas Ranc** 86.48 47 ⇑P P 23 18 07.2 +0.1
baz=87,SNR=9.7
Y16A **Circle Bar Ran** 86.51 49 ⇑P P 23 18 07.4 +0.2
baz=87,SNR=29
319A **Douglas** 86.56 52 ⇓P P 23 18 07.9 +0.3
baz=87,SNR=13
S12A **Delamar Landin** 86.59 44 ⇑P P 23 18 08.3 +0.7
baz=87,SNR=11
R11A **Troy Canyon, C** 86.60 43 ⇑P P 23 18 07.2 -0.4
baz=87,SNR=7.1
W15A **Williams** 86.76 48 ⇑P P 23 18 08.8 +0.3
baz=87
T13A **Saint George** 86.82 45 ⇑P P 23 18 09.2 +0.5
baz=87,SNR=5.3
Y17A **Roosevelt** 86.82 49 ⇑P P 23 18 09.1 +0.3
baz=87
Z17A **San Carlos Hig** 86.84 50 ⇑P P 23 18 09.6 +0.6
baz=87
X16A **Lo Mia Camp, P** 86.85 49 ⇓P P 23 18 09.7 +0.8
baz=87,SNR=9.9
Q11A **Duckwater** 86.87 43 ⇑P P 23 18 08.9 0.0
baz=87
P10A **Eureka** 86.88 42 ⇓P P 23 18 08.7 -0.3
baz=87
U14A **Mt Trumbull** 86.91 46 ⇓P P 23 18 09.7 +0.5
baz=87,SNR=12
MDJ **Mudanjiang** 87.06 325 P P 23 18 09.8 +0.1
MDJ pP pP 23 18 17.2 +0.8
MDJ sP sP 23 18 24.4 +5.6
MDJ PP PP 23 21 31.9 -1.8
MDJ S S 23 28 44.5 -3.0
MDJ SS SS 23 34 30.6 -1.1
MDJ pmax pmax
comp=Z,9.0nm,1.4s,mb4.8
MDJ pmax pmax
comp=Z,97nm,4.2s
MDJ **Mudanjiang** 87.06 325 eP P 23 18 10.1 +0.4
320A **Kipp Ranch, An** 87.07 52 ⇓P P 23 18 10.6 +0.5
baz=87,SNR=11
KDAK **Kodiak Island** 87.17 12 eP P 23 18 08.8 -1.1
R12A **Pony Springs,** 87.19 44 ⇓P P 23 18 10.9 +0.4
baz=87
S13A **Holt Ranch, En** 87.19 45 ⇑P P 23 18 10.7 +0.1
baz=87
W16A **Flagstaff** 87.19 48 ⇓P P 23 18 11.0 +0.4
baz=87
V15A **Kaibab Nationa** 87.20 47 ⇑P P 23 18 10.9 +0.3
baz=87,SNR=5.4
HABR **Khabarovsk** 87.21 330 eP P 23 18 10.7 +0.4
HABR e*SP sP 23 18 23.3 +3.8
HABR eS S 23 28 32.5 -16
HABR 23 28 52.4
HABR pmax pmax
comp=N,39nm,0.9s
HABR pmax pmax
comp=Z,117nm,2.4s,mb5.7
HABR pmax pmax
comp=E,36nm,1.2s
HABR MLR MLR
comp=Z,112nm,16.0s,MS4.4
X17A **Forest Lakes** 87.23 49 ⇑P P 23 18 11.3 +0.5
baz=87
P11A **Circle Ranch,** 87.26 42 ⇓P P 23 18 10.8 0.0
baz=87
O10A **Cortez Mining,** 87.28 41 ⇓P P 23 18 10.8 -0.1
baz=88
119A **Ashpeak Ranch,** 87.34 51 ⇑P P 23 18 11.7 +0.3
baz=88,SNR=7.6
T14A **Hurricane** 87.36 46 ⇓P P 23 18 11.6 +0.2
baz=88
220A **Playas Peak, P** 87.39 52 ⇑P P 23 18 12.2 +0.5
baz=88,SNR=14
WVOR **Wild Horse Val** 87.45 39 eP P 23 18 11.1 -0.6
comp=Z,8.5nm,1.1s,mb4.9
WVOR **Wild Horse Val** 87.45 39 eP P 23 18 11.1 -0.6
WVOR pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
CCUT **Cedar City** 87.48 45 eP P 23 18 13.0 +1.1
comp=Z,32nm,1.7s,mb5.3
U15A **North Rim** 87.49 47 ⇑P P 23 18 12.7 +0.7
baz=88,SNR=16
R13A **O'Grain Ranch,** 87.49 44 ⇑P P 23 18 12.4 +0.4
baz=88
Q12A **Willow Creek R** 87.49 43 ⇑P P 23 18 11.8 -0.2
baz=88,SNR=6.9
WUAZ **Wupatki** 87.54 48 eP P 23 18 13.1 +0.8
N10A **Dunphy** 87.55 41 ⇓P P 23 18 11.8 -0.4
baz=88
Z19A **T-Link Ranch,** 87.67 50 ⇑P P 23 18 13.0 +0.1
baz=88
120A **U Bar Ranch, L** 87.68 51 ⇓P P 23 18 13.3 +0.3
baz=88
O11A **Cowboy Ranch,** 87.68 42 ⇓P P 23 18 12.9 +0.1
baz=88,SNR=9.9
E03A **Lebam** 87.69 33 ⇑P P 23 18 13.1 +0.4
baz=88
P12A **McGill** 87.72 43 ⇑P P 23 18 13.1 0.0
baz=88,SNR=7.0
W17A **Winslow** 87.72 48 ⇓P P 23 18 13.5 +0.4
baz=88
S14A **Cedar City** 87.73 45 ⇑P P 23 18 13.8 +0.6
baz=88
VIPM **Ingram Point** 87.77 36 P P 23 18 12.8 -0.3
T15A **Red Dirt Ranch** 87.78 46 ⇓P P 23 18 13.7 +0.3
baz=88
WHN **Wuhan** 87.80 306 ⇓P P 23 18 15.0 +1.4
WHN sP sP 23 18 27.4 +4.6
WHN S S 23 28 45.9 -9.4
WHN LR LR
comp=Z,1μm,22.8s,MS5.2
X18A **Snowflake** 87.91 49 ⇓P P 23 18 14.4 +0.4
baz=88
Q13A **Wheeler Ranch,** 87.94 44 ⇑P P 23 18 14.1 0.0
baz=88
221A **Mesquite Ranch** 87.97 52 ⇑P P 23 18 14.9 +0.5
baz=88
V17A **Tonalea, Kykot** 87.99 48 ⇓P P 23 18 14.7 +0.3
baz=88,SNR=17
Z20A **Nine Sixteen R** 88.03 51 ⇑P P 23 18 15.6 +0.9
baz=88,SNR=11
M10A **I.L. Ranch, Tu** 88.05 40 ⇑P P 23 18 14.8 +0.2
baz=88,SNR=5.5
Y19A **Nutrioso** 88.05 50 ⇓P P 23 18 15.5 +0.7
baz=88,SNR=10
N11A **Elko Archery C** 88.07 41 ⇓P P 23 18 14.7 +0.1
baz=88
I07A **Izee** 88.07 37 ⇑P P 23 18 14.4 -0.2
baz=88,SNR=6.2
U16A **Tuba City** 88.07 47 ⇓P P 23 18 15.3 +0.5
baz=88,SNR=8.4
S15A **Panguitch** 88.19 45 ⇑P P 23 18 16.3 +1.0
baz=88
P13A **Bates Ranch, G** 88.25 43 ⇑P P 23 18 15.4 -0.1
baz=88,SNR=6.6
G06A **Carlson Farm,** 88.25 36 ⇓P P 23 18 15.0 -0.4
baz=88,SNR=5.2
121A **Cookes Peak, D** 88.26 52 ⇑P P 23 18 16.2 +0.4
baz=88
T16A **Glen Canyon Da** 88.33 46 ⇑P P 23 18 16.2 +0.2
baz=88
Q14A **Sevier Lake (B** 88.41 44 ⇑P P 23 18 16.5 +0.1
baz=89,SNR=12
M11A **Holland Ranch,** 88.42 41 ⇑P P 23 18 16.2 -0.2
baz=89
L10A **Juniper Basin** 88.44 40 ⇑P P 23 18 16.0 -0.4
baz=89,SNR=6.9
N12A **Clover Valley,** 88.50 42 ⇓P P 23 18 16.6 -0.1
baz=89
N12A **Clover Valley,** 88.50 42 eP P 23 18 16.3 -0.4
comp=Z,8.1nm,1.0s,mb4.9
222A **Williams Famil** 88.50 53 ⇑P P 23 18 17.1 +0.1
baz=89
Y20A **Horse Springs,** 88.62 50 ⇓P P 23 18 18.0 +0.6
baz=89,SNR=14
W19A **Sanders** 88.63 49 ⇑P P 23 18 17.9 +0.5
baz=89
O13A **Hicks Ranch, I** 88.68 43 ⇓P P 23 18 17.4 -0.2
baz=89
LON **Longmire** 88.69 34 eP P 23 18 17.3 -0.1
S16A **Weppner Ranch,** 88.71 46 ⇑P P 23 18 17.6 -0.2
baz=89
CN2 **Changchun** 88.72 322 eP P 23 18 26.2 +8.6
GNW **Green Mountain** 88.76 33 eP P 23 18 17.4 -0.4
comp=Z,10.0nm,1.1s,mb5.1
Z21A **St. Cloud Mine** 88.77 51 ⇑P P 23 18 18.7 +0.5
baz=89,SNR=6.1
T17A **Navajo Res., N** 88.79 47 ⇑P P 23 18 18.7 +0.5
baz=89
MSU **Marysvale** 88.81 45 eP P 23 18 18.9 +0.7
X20A **Quemado** 88.90 50 ⇓P P 23 18 19.6 +0.8
baz=89,SNR=14
122A **Conniff Cattle** 88.90 52 ⇓P P 23 18 19.1 +0.3
baz=89
D05A **Enumclaw** 88.91 34 ⇓P P 23 18 18.8 +0.4
baz=89
P14A **Drum Mountains** 88.91 44 ⇑P P 23 18 19.0 +0.4
baz=89
L11A **Cat Creek Ranc** 88.91 40 ⇑P P 23 18 18.4 -0.1
baz=89,SNR=5.8
223A **Chaparral, Ant** 88.92 53 ⇑P P 23 18 19.2 +0.2
baz=89
M12A **Wells** 88.92 41 ⇓P P 23 18 18.8 +0.1
baz=89
Q15A **Fillmore** 88.98 44 ⇓P P 23 18 18.9 -0.1
baz=89
N13A **Wendover, West** 89.00 42 ⇑P P 23 18 18.8 -0.2
baz=89
N13A **Wendover, West** 89.00 42 eP P 23 18 19.5 +0.5
comp=Z,18nm,1.0s,mb5.4
U18A **Rough Rock, Ch** 89.06 48 ⇓P P 23 18 19.6 +0.1
baz=89,SNR=5.4
F07A **Phinny Hill Vi** 89.06 36 ⇓P P 23 18 19.2 0.0
baz=89
R16A **Teasdale** 89.11 45 ⇑P P 23 18 20.2 +0.6
baz=89
S17A **Black Ridge (B** 89.16 46 ⇓P P 23 18 20.3 +0.4
baz=89
Y21A **Point of Rocks** 89.16 51 ⇑P P 23 18 20.7 +0.7
baz=89,SNR=17
G08A **Pilot Rock** 89.17 36 ⇑P P 23 18 19.5 -0.2
baz=89,SNR=11
NAC **Naches** 89.17 35 P P 23 18 20.0 +0.3
V19A **Window Rock** 89.20 49 ⇑P P 23 18 20.2 +0.1
baz=89
PGC **Sidney** 89.23 32 eP P 23 18 20.5 +0.6
W20A **Ramah** 89.23 49 ⇓P P 23 18 21.0 +0.7
baz=89,SNR=8.5
Z22A **Elephant Butte** 89.24 52 ⇑P P 23 18 20.1 -0.2
baz=89,SNR=8.0
KLR **Kul'dur** 89.25 329 eP P 23 18 16.7 -3.3
626A **Big Bend Ranch** 89.26 56 ⇑P P 23 18 20.5 -0.1
baz=89,SNR=12
324A **Moseley Ranch,** 89.29 54 ⇑P P 23 18 20.4 -0.3
baz=90,SNR=9.5
L12A **House Creek Ra** 89.32 41 ⇓P P 23 18 20.4 -0.2
baz=90
M13A **Montello** 89.33 42 eP P 23 18 20.3 -0.3
comp=Z,6.7nm,0.9s,mb5.0
X21A **Alamocita Cree** 89.33 50 ⇓P P 23 18 21.0 +0.2
baz=90,SNR=18
P15A **Leamington** 89.38 44 ⇑P P 23 18 21.1 +0.2
baz=90
123A **Bell Site, Whi** 89.39 52 ⇓P P 23 18 21.0 -0.1
baz=90
U19A **Dine' College,** 89.42 48 ⇑P P 23 18 21.4 +0.3
baz=90,SNR=9.3
TXAR **Lajitas Array** 89.49 56 P P 23 18 21.2 -0.4
comp=Z,5.5nm,1.0s,mb4.9,baz=212,slow=6.9,SNR=42
TXAR LR LR 23 52 50.2
comp=Z,214nm,18.3s,MS4.6,baz=260,slow=32
MNTX **Cornudas Mount** 89.50 54 eP P 23 18 21.1 -0.5
comp=Z,11nm,1.4s,mb5.0
E07A **Sunnyside** 89.55 35 ⇓P P 23 18 21.9 +0.5
baz=90
526A **Mary Lane Ranc** 89.56 56 ⇓P P 23 18 21.5 -0.5
baz=90,SNR=16
RSW **Rattlesnake Hi** 89.57 35 eP P 23 18 22.2 +0.6
TBM **Table Mountain** 89.58 34 P P 23 18 21.9 +0.3
HAWA **Hanford** 89.60 35 eP P 23 18 22.1 +0.3
N14A **Grayback Hills** 89.60 43 ⇑P P 23 18 21.7 -0.2
baz=90
224A **Cornudas Mount** 89.61 53 ⇑P P 23 18 22.0 -0.1
baz=90,SNR=9.7
Y22A **Socorro** 89.61 51 ⇓P P 23 18 22.0 -0.1
baz=90
325A **Bean Ranch, Si** 89.62 54 ⇓P P 23 18 21.7 -0.5
baz=90,SNR=8.2
JCW **Jim Creek** 89.63 33 eP P 23 18 21.9 +0.1
V20A **Brimhall** 89.64 49 ⇓P P 23 18 22.2 0.0
baz=90
MFID **Camas Ranch** 89.66 39 ⇓P P 23 18 21.6 -0.5
baz=90
R17A **Hanksville Air** 89.68 46 ⇓P P 23 18 22.4 +0.1
baz=90,SNR=6.1
Q16A **Castle Valley** 89.68 45 ⇑P P 23 18 22.3 0.0
baz=90
O15A **The Old Anders** 89.69 43 ⇓P P 23 18 22.3 0.0
baz=90
S18A **Hurst Farm, Bl** 89.72 47 ⇑P P 23 18 22.0 -0.4
baz=90
LENM **Lemitar** 89.73 51 eP P 23 18 22.4 -0.3
LAZ **Ladron** 89.75 51 eP P 23 18 23.4 +0.7
comp=Z,11nm,1.2s,mb5.1
Z23A **Rita Site, Whi** 89.75 52 ⇓P P 23 18 22.3 -0.5
baz=90
627A **Terlingua Ranc** 89.76 56 ⇓P P 23 18 22.4 -0.5
baz=90,SNR=12
CFAA **Coronel Fontan** 89.76 126 P P 23 18 21.3 -1.8
comp=Z,0.6nm,0.8s,mb4.0,baz=253,slow=4.3,SNR=5.4
CFAA LR LR 23 53 28.4
comp=Z,64nm,18.1s,MS4.1,baz=261,slow=32
BMO **Blue Mountains** 89.76 38 eP P 23 18 22.4 -0.2
W21A **San Fidel** 89.80 50 ⇑P P 23 18 23.0 +0.1
baz=90
T19A **Beclabito** 89.85 48 ⇑P P 23 18 23.0 -0.1
baz=90
TMUT **Trail Mountain** 89.88 45 eP P 23 18 23.2 0.0
M14A **Sheep Mountain** 89.91 42 ⇑P P 23 18 23.0 -0.3
baz=90
E08A **Dider Farm, El** 89.91 36 ⇓P P 23 18 22.8 -0.4
baz=90
L13A **Double Diamond** 89.91 41 ⇓P P 23 18 22.6 -0.7
baz=90
U20A **Newcomb** 89.93 48 ⇓P P 23 18 23.6 +0.1
baz=90
426A **McDonald Obser** 89.93 55 ⇑P P 23 18 23.0 -0.7
baz=90,SNR=11
527A **Woodward Ranch** 89.96 56 ⇑P P 23 18 23.2 -0.6
baz=90,SNR=6.3
BNM **Barren Site** 89.96 51 eP P 23 18 23.9 +0.1
comp=Z,21nm,1.6s,mb5.2
124A **Stringfield Ra** 89.99 53 ⇓P P 23 18 23.8 -0.1
baz=90,SNR=5.5
RPW **Rockport** 90.01 33 eP P 23 18 23.6 +0.1
ETW **Entiat** 90.01 34 eP P 23 18 24.0 +0.4
LPM **Los Pinos Moun** 90.05 51 eP P 23 18 24.9 +0.7
A05A **Maple Falls** 90.11 32 ⇓P P 23 18 24.0 -0.1
baz=90
225A **Deer Hill, Car** 90.12 54 ⇓P P 23 18 24.3 -0.3
baz=90
628A **Black Gap, Mar** 90.14 57 ⇓P P 23 18 24.5 -0.3
baz=90,SNR=13
R18A **Canyonlands Na** 90.18 46 ⇓P P 23 18 24.3 -0.3
baz=90,SNR=12
V21A **Milan** 90.19 49 ⇑P P 23 18 24.9 +0.1
baz=90
SRU **San Rafael** 90.20 45 eP P 23 18 25.0 +0.2
WTV **Waterville** 90.26 34 P P 23 18 24.9 +0.1
P17A **Butcher Ranch,** 90.28 45 ⇓P P 23 18 25.2 +0.1
baz=90
I12A **Atlanta** 90.29 39 ⇓P P 23 18 25.0 0.0
baz=90,SNR=13
S19A **Harvey Farm, M** 90.30 47 ⇑P P 23 18 25.3 0.0
baz=90
326A **Caldwell Ranch** 90.31 55 ⇓P P 23 18 26.2 +0.8
baz=90
W22A **Albuquerque** 90.31 50 ⇑P P 23 18 25.5 +0.2
baz=90
NLW **Nelson Butte** 90.33 34 P P 23 18 25.1 0.0
D08A **Wollman Farm,** 90.36 35 ⇓P P 23 18 25.2 0.0
baz=90,SNR=9.5
CMIG **Matias Romero** 90.36 71 P P 23 18 25.4 -0.5
comp=Z,6.4nm,1.1s,mb4.8,baz=195,slow=3.5,SNR=5.0
Z24A **Sheeppen Canyo** 90.40 52 ⇑P P 23 18 25.5 -0.2
baz=91,SNR=5.9
E09A **Wood Farm, Sta** 90.40 36 ⇓P P 23 18 25.0 -0.4
baz=91,SNR=10
MVCO **Mesa Verde** 90.41 48 eP P 23 18 26.3 +0.5
M15A **Larsen Ranch,** 90.42 42 ⇓P P 23 18 25.1 -0.6
baz=91
Q18A **Rafter H Ranch** 90.45 45 ⇑P P 23 18 25.8 0.0
baz=91
427A **Hayter Ranch,** 90.48 55 ⇑P P 23 18 25.9 -0.3
baz=91,SNR=12
X23A **Hourglass Bar** 90.50 51 ⇓P P 23 18 26.2 -0.1
baz=91
DAU **Daniels Canyon** 90.51 44 eP P 23 18 26.9 +0.8
ANMO **Albuquerque** 90.52 50 eP P 23 18 26.4 +0.1
U21A **Nageezi** 90.53 49 ⇑P P 23 18 26.4 +0.1
baz=91,SNR=16
F10A **Beach Ranch, E** 90.53 37 ⇑P P 23 18 25.3 -0.8
baz=91,SNR=12
R19A **Curley Farm, L** 90.53 46 ⇑P P 23 18 26.1 -0.2
baz=91
125A **Gardner Draw,** 90.54 53 ⇑P P 23 18 25.8 -0.6
baz=91,SNR=7.2
HLID **Hailey** 90.55 40 eP P 23 18 26.8 +0.5
528A **Cox Ranch, San** 90.57 56 ⇓P P 23 18 25.9 -0.7
baz=91,SNR=11
J13A **Cove Ranch, Pi** 90.59 40 ⇑P P 23 18 26.4 0.0
baz=91,SNR=6.3
226A **Malaga, Loving** 90.61 54 ⇓P P 23 18 26.4 -0.4
baz=91
K14A **Jones Ranch, D** 90.64 41 ⇓P P 23 18 26.9 +0.2
baz=91
Y24A **Capitan** 90.67 52 ⇑P P 23 18 26.7 -0.4
baz=91,SNR=17
P18A **Preston Nutter** 90.68 45 ⇑P P 23 18 27.0 +0.1
baz=91
N16A **Rees Ranch, Co** 90.69 43 ⇓P P 23 18 26.8 -0.1
baz=91
OD2 **Odessa Site #2** 90.69 35 P P 23 18 26.8 +0.1
O17A **Robinson Place** 90.71 44 ⇓P P 23 18 27.0 0.0
baz=91
V22A **San Miguel Ran** 90.75 49 ⇓P P 23 18 27.8 +0.5
baz=91
L15A **Malad City** 90.78 42 ⇑P P 23 18 27.0 -0.3
baz=91,SNR=5.1
PV04 **Paradox Valley** 90.82 46 eP P 23 18 28.0 +0.3
Z25A **Roswell** 90.83 53 ⇑P P 23 18 27.8 0.0
baz=91,SNR=9.0
W23A **Werner Place,** 90.85 50 ⇑P P 23 18 27.8 -0.1
baz=91
S20A **Disappointment** 90.86 47 ⇑P P 23 18 27.8 0.0
baz=91
PV01 **Paradox Valley** 90.89 47 eP P 23 18 27.3 -0.7
comp=Z,931nm,1.0s
H12A **Diamond D Ranc** 90.92 39 ⇑P P 23 18 27.5 -0.4
baz=91,SNR=15
J14A **Carey** 90.92 40 ⇑P P 23 18 28.2 +0.2
baz=91,SNR=8.7
T21A **Navajo Lake** 90.93 48 ⇓P P 23 18 28.3 +0.1
baz=91
I13A **Wildhorse Cree** 90.94 40 ⇓P P 23 18 28.3 +0.2
baz=91
428A **Kincaid Ranch,** 90.94 56 ⇓P P 23 18 28.2 -0.2
baz=91,SNR=5.6
126A **Clayton Basin,** 90.98 53 ⇑P P 23 18 27.9 -0.7
baz=91
B08A **Colville Reser** 91.02 34 ⇓P P 23 18 27.8 -0.5
baz=91
HWUT **Hardware Ranch** 91.03 43 eP P 23 18 28.2 -0.4
comp=Z,2.8nm,0.9s,mb4.6
R20A **Redvale** 91.05 47 ⇑P P 23 18 28.3 -0.3
baz=91
N17A **Moffit Pass** 91.09 44 ⇓P P 23 18 29.3 +0.5
baz=91
V23A **Ortiz Mt. (NFS** 91.14 50 ⇑P P 23 18 29.6 +0.4
baz=91,SNR=5.0
Y25A **Mesa, Roswell** 91.19 52 ⇓P P 23 18 28.8 -0.6
baz=91,SNR=12
328A **Wristen Ranch,** 91.19 55 ⇓P P 23 18 28.8 -0.7
baz=91
ENH **Enshi** 91.20 304 eP P 23 18 30.6 +1.0
comp=Z,168nm,1.2s,mb6.2
Z26A **Caprock** 91.34 53 ⇓P P 23 18 29.7 -0.5
baz=92,SNR=6.5
L16A **Fish Haven** 91.36 42 ⇓P P 23 18 29.3 -0.7
baz=92
T22A **Edith** 91.36 49 ⇑P P 23 18 29.8 -0.4
baz=92
PMR **Palmer** 91.37 13 eP P 23 18 29.4 -0.2
W24A **Lazy 6 Ranch,** 91.39 51 ⇑P P 23 18 29.9 -0.5
baz=92,SNR=9.8
F12A **Elk City** 91.45 38 ⇑P P 23 18 29.9 -0.5
baz=92,SNR=19
127A **Arkansas Junct** 91.47 54 ⇓P P 23 18 30.1 -0.7
baz=92
TTA **Tatalina** 91.47 9 eP P 23 18 29.6 -0.4
P19A **Cripple Cowboy** 91.48 45 ⇑P P 23 18 30.1 -0.6
baz=92
Q20A **Ridgley Place,** 91.53 46 ⇓P P 23 18 30.8 -0.1
baz=92,SNR=5.6
X25A **Clemmons Ranch** 91.53 52 ⇓P P 23 18 30.2 -0.9
baz=92
J15A **Blackfoot** 91.59 41 ⇓P P 23 18 31.0 -0.1
baz=92
G13A **Cobalt** 91.60 39 ⇓P P 23 18 30.6 -0.5
baz=92,SNR=9.7
R21A **Cimarron** 91.69 47 ⇑P P 23 18 31.7 0.0
baz=92,SNR=7.2
L17A **Cokeville** 91.74 43 ⇓P P 23 18 31.1 -0.7
baz=92
K16A **Soda Springs** 91.75 42 ⇑P P 23 18 31.5 -0.3
baz=92
V24A **Rampart Ranch,** 91.76 50 ⇑P P 23 18 32.0 -0.1
baz=92,SNR=5.6
O19A **Miners Draw (B** 91.77 45 ⇑P P 23 18 31.5 -0.5
baz=92
P20A **De Beque** 91.78 46 ⇑P P 23 18 31.4 -0.7
baz=92
Y26A **Elida** 91.80 52 ⇑P P 23 18 32.0 -0.3
baz=92
N18A **Larsen Ranch,** 91.82 44 ⇑P P 23 18 31.9 -0.3
baz=92
BJT **Baijiatuau** 91.88 315 eP P 23 18 32.4 -0.1
comp=Z,40nm,1.5s,mb5.5
BJT **Baijiatuau** 91.88 315 eP P 23 18 32.4 -0.1
BJT pmax pmax
comp=Z,40nm,1.5s
BJI **Beijing** 91.89 315 P P 23 18 33.2 +0.6
BJI pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
BJI LR LR
comp=N,430nm,10.7s,MS5.2
BJI LR LR
comp=E,170nm,10.4s,MS5.2
J16A **Bone** 92.00 41 ⇑P P 23 18 33.1 +0.2
baz=92
AHID **Auburn Hatcher** 92.00 42 eP P 23 18 33.2 +0.2
NEW **Newport** 92.07 35 eP P 23 18 32.4 -0.8
G14A **Jackson** 92.13 39 ⇓P P 23 18 33.5 0.0
baz=92
R22A **Saguache, Gunn** 92.13 48 ⇓P P 23 18 33.8 +0.1
baz=92
X26A **CR and CF Fran** 92.14 52 ⇑P P 23 18 33.7 -0.1
baz=92
RRI2 **Red Ridge** 92.21 41 eP P 23 18 34.5 +0.6
D12A **Red Ives Fores** 92.22 37 ⇑P P 23 18 33.8 -0.1
baz=92
MCMT **McKenzie Canyo** 92.22 40 eP P 23 18 34.2 +0.3
comp=E,4.7nm,1.0s,mb4.8
Y27A **Causey** 92.25 53 ⇓P P 23 18 34.0 -0.4

baz=92
Q22A Crested Butte, 92.38 47 ⇓P **P 23 18 34.9 0.0**
baz=92
E13A Victor 92.46 38 ⇑P **P 23 18 34.3 -0.7**
baz=93
REDW Red Top Meadow 92.50 42 *e*P **P 23 18 35.6 +0.3**
SMCO Snowmass 92.51 47 *e*P **P 23 18 35.9 +0.5**
SMCO *e*pP pP 23 18 46.0 +3.8
TPAW Teton Pass 92.51 41 *e*P **P 23 18 35.8 +0.4**
C12B Naegeli Ranch, 92.57 36 ⇓P **P 23 18 35.3 -0.2**
baz=93
MSTX Muleshoe 92.57 53 ⇓P **P 23 18 35.3 -0.5**
baz=93
J17A Brown Place, J 92.58 42 ⇑P **P 23 18 35.9 +0.3**
baz=93
L19A Farson 92.66 43 ⇑P **P 23 18 35.8 -0.3**
baz=93
DLMT Dillon 92.68 39 *e*P **P 23 18 36.4 +0.3**
SDCO Great Sand Dun 92.69 49 *e*P **P 23 18 35.5 -0.8**
comp=E,5.8nm,1.2s,mb4.9
SDCO *e* 23 18 46.2
U25A Circle Dot Ran 92.71 50 ⇑P **P 23 18 35.9 -0.6**
baz=93
D13A Huson 92.72 37 ⇑P **P 23 18 36.3 +0.1**
baz=93
NNA Nana 92.74 105 LR LR 23 55 40.0
comp=E,108nm,18.1s,MS4.3,baz=316,slow=33
IMW Indian Meadow 92.76 41 *e*P **P 23 18 37.1 +0.6**
MOOW Moose Ponds 92.79 41 *e*P **P 23 18 36.2 -0.4**
comp=E,9.2nm,1.3s,mb5.0
LOHW Long Hollow 92.79 41 *e*P **P 23 18 36.0 -0.6**
comp=E,16nm,1.4s,mb5.3
E14A Clinton 92.83 38 ⇑P **P 23 18 36.6 -0.1**
baz=93
S24A Houchin Ranch, 92.83 49 ⇓P **P 23 18 36.7 -0.3**
baz=93
MSO Missoula 92.83 38 *e*P **P 23 18 36.5 -0.2**
BW06 Boulder Array 92.92 43 *e*P **P 23 18 36.9 -0.4**
W27A Bowe Ranch, En 92.93 52 ⇓P **P 23 18 37.1 -0.4**
baz=93
JCT Junction City 92.95 57 *e*P **P 23 18 36.8 -0.9**
FLWY Flagg Ranch 93.01 41 *e*P **P 23 18 38.4 +0.8**
M20A Sweetwater, Wa 93.03 44 ⇑P **P 23 18 38.0 +0.2**
baz=93
N21A Black Mountain 93.04 45 ⇑P **P 23 18 38.0 +0.2**
baz=93
R24A Sanders Place, 93.22 48 ⇓P **P 23 18 38.4 -0.3**
baz=93
D14A Greenough 93.22 37 ⇓P **P 23 18 38.3 -0.2**
baz=93
CHMT Chamberlain Mo 93.26 38 *e*P **P 23 18 37.8 -0.9**
E15A Deer Lodge 93.30 38 ⇓P **P 23 18 39.1 +0.2**
baz=94
S25A Robets Cordova 93.36 49 ⇑P **P 23 18 39.2 -0.2**
baz=94
BOZ Bozeman (W) 93.40 39 *e*P **P 23 18 39.1 -0.2**
SEY Seymchan 93.44 346 ⇓*e*P **P 23 18 39.0 -0.1**
F16A Kennard Place, 93.48 39 ⇑P **P 23 18 39.7 0.0**
baz=94
K20A Yellowstone Ra 93.60 43 ⇓P **P 23 18 40.2 -0.2**
baz=94
M21A Separation Pea 93.61 45 ⇑P **P 23 18 39.8 -0.7**
baz=94
ATAH Atahualpa 93.68 100 LR LR 23 54 12.7
comp=E,659nm,18.6s,MS5.1,baz=61,slow=31
RWWY Rawlins 93.75 45 *e*P **P 23 18 40.9 -0.2**
RWWY *e*pP pP 23 18 51.1 +3.3
DLBC Dease Lake 93.79 22 P **P 23 18 41.1 +0.3**
comp=E,1.2nm,0.3s,mb4.8,baz=173,slow=14,SNR=3.7
KMI Kunming 93.86 296 P **P 23 18 43.8 +1.8**
KMI pP pP 23 18 53.7 +4.9
KMI sP sP 23 18 57.2 +6.0
KMI PP PP 23 22 32.3 +4.2
KMI SKS 23 29 13.0
KMI S S 23 29 48.1 -2.9
KMI sS sS 23 30 04.6 +2.4
KMI SS SS 23 36 11.7 +1.0
KMI pmax pmax
comp=Z,16nm,2.0s,mb5.1
KMI pmax pmax
comp=Z,180nm,3.3s
KMI LR LR
comp=N,630nm,14.0s,MS5.5
KMI LR LR
comp=E,1μm,14.2s,MS5.5
KMI LR LR
comp=Z,230nm,16.4s,MS4.7
CMAR Chiang Mai Arr 93.88 289 P **P 23 18 43.2 +1.0**
comp=Z,3.9nm,0.9s,mb4.8,baz=139,slow=3.3,SNR=12
CHTO Chiang Mai 94.04 289 *e*P **P 23 18 44.5 +1.6**
F17A Fitzpatrick Pl 94.10 40 ⇑P **P 23 18 43.1 +0.6**
baz=94
WALA Waterton Lakes 94.22 36 *e*P **P 23 18 42.2 -0.8**
D16A Dana Ranch, Ca 94.26 38 ⇓P **P 23 18 43.1 -0.2**
baz=94
E17A Martinsdale 94.31 39 ⇑P **P 23 18 44.0 +0.4**
baz=94
G18A Lazy EL Ranch, 94.39 41 ⇑P **P 23 18 44.1 +0.1**
baz=94
A14A Double T Ranch 94.42 36 ⇑P **P 23 18 44.5 +0.5**
baz=95
RLMT Red Lodge 94.44 41 *e*P **P 23 18 44.8 +0.6**
COLA College 94.61 12 *e*P **P 23 18 43.9 -0.6**
F18A Big Timber 94.64 40 ⇑P **P 23 18 45.2 +0.2**
baz=95
ILAR Eielson Array 94.69 12 P **P 23 18 43.7 -1.1**
comp=Z,2.0nm,0.8s,mb4.6,baz=221,slow=5.6,SNR=22
ILAR LR LR 23 59 10.9
comp=Z,86nm,20.1s,MS4.2,baz=256,slow=34
A15A Johnson Ranch, 94.79 36 ⇑P **P 23 18 45.5 -0.1**
baz=95
D17A Six Diamond Ra 94.81 39 ⇑P **P 23 18 46.0 +0.2**
baz=95
E18A Harlowton 94.90 39 ⇓P **P 23 18 46.3 0.0**
baz=95
HHC Hu-ho-hao-te 95.28 314 *e*P **P 23 18 49.1 +1.0**
HHC pP pP 23 18 59.7 +4.8
HHC sP sP 23 19 03.8 +6.5
HHC PP PP 23 22 40.1 +1.3
HHC SKS 23 29 20.5
HHC S S 23 29 59.2 -3.5
HHC sS sS 23 30 16.7 +2.8
HHC SS SS 23 36 29.1 -1.3
HHC pmax pmax
comp=Z,14nm,1.1s,mb5.3
HHC pmax pmax
comp=Z,100nm,4.8s
HHC LR LR
comp=N,190nm,12.7s,MS5.0
HHC LR LR
comp=E,230nm,12.8s,MS5.0
HHC LR LR
comp=Z,210nm,15.9s,MS4.7
CD2 Chengdu 95.81 302 P **P 23 18 52.8 +2.0**
CD2 pmax pmax
comp=Z,20nm,0.8s,mb5.6
CD2 pmax pmax
comp=Z,260nm,5.7s
RSSD Black Hills 97.03 44 *e*P **P 23 18 55.4 -0.6**
LPAZ La Paz 97.93 113 P **P 23 19 01.5 +0.7**
comp=Z,1.1nm,1.0s,mb4.4,baz=252,slow=6.4,SNR=3.6
LPAZ LR LR 23 56 48.5
comp=Z,114nm,18.9s,MS4.4,baz=296,slow=32
LZH Lanzhou 98.18 306 *e*P **P 23 19 04.2 +2.8**
LZH pP pP 23 19 14.0 +5.8
LZH pmax pmax
comp=Z,13nm,1.0s,mb5.4
SONM Songino Array 101.96 318 P Pdif 23 19 18.9 +0.7
comp=Z,0.6nm,0.7s,baz=131,slow=5.9,SNR=2.9
SONM PKKPbc PKKPbc 23 35 23.0 -0.7
comp=Z,0.2nm,0.3s,baz=251,slow=4.5,SNR=3.9
GTA Gaotai 102.52 308 *e*P Pdif 23 19 22.2 +1.6
GTA pP 23 19 32.8
GTA sP 23 19 36.9
GTA pmax pmax
comp=Z,3.0nm,1.1s
WMQ Urumqi 112.57 309 *e*PKP PKiKP 23 23 59.6 -0.9
ZAA0 Zalesovo Array 116.80 319 *e*PKPdf PKPdf 23 24 06.4 -1.9
ZALV Zalesovo Beam 116.80 319 PKP PKPdf 23 24 06.8 -1.5
comp=Z,1.9nm,0.8s,baz=122,slow=1.9,SNR=9.9
MK31 Makanchi Array 117.00 311 *e*PKPdf PKPdf 23 24 07.8 -1.2
MKAR Makanchi Array 117.00 311 PKP PKPdf 23 24 07.9 -1.0
comp=Z,2.0nm,0.9s,baz=49,slow=3.7,SNR=14
MKAR PKKPbc PKKPbc 23 34 38.1 +3.1
comp=Z,0.8nm,1.0s,baz=272,slow=3.5,SNR=3.7
KURK Kurchatov 120.06 315 *e*PKPdf PKPdf 23 24 13.5 -1.1
KURK Kurchatov 120.06 315 *i*PKIKP PKPdf 23 24 13.0 -1.7
UCH Uchtor 121.61 305 *e*PKPdf PKPdf 23 24 18.4 +0.5
AAK Ala-Archa 121.69 305 *e*PKPdf PKPdf 23 24 17.9 -0.2
KBL Kabul 124.41 295 *e*PKPdf PKPdf 23 24 23.5 -0.1
BVAR Borovoye Array 125.30 317 PKP PKPdf 23 24 24.1 -0.5
comp=Z,3.9nm,0.9s,baz=95,slow=3.6,SNR=20
BRVK Borovoye 125.36 317 *e*PKPdf PKPdf 23 24 24.3 -0.5
BRVK Borovoye 125.36 317 *d*iPKIKP PKPdf 23 24 23.7 -1.1
ARU Arti 131.71 323 *e*PKPdf PKPdf 23 24 36.2 -0.5
ARU Arti 131.71 323 *i* PKIKP PKPdf 23 24 36.8 0.0
ARU 23 26 53.6
ARCES ARCESS Array B 135.98 349 PKP PKPdf 23 24 43.8 -0.6
comp=Z,7.3nm,0.8s,baz=357,slow=2.4,SNR=19
ARE0 ARCESS Array S 135.98 349 *e*PKPdf PKPdf 23 24 43.5 -0.9
KMBO Kilima Mbogo 137.06 234 PKP PKPdf 23 24 47.0 -1.2
comp=Z,0.7nm,0.8s,baz=357,slow=24,SNR=3.2
KMBO Kilima Mbogo 137.06 234 *c i*PKIKP PKPdf 23 24 48.4 +0.2
KMBO pmax pmax
comp=Z,1.0nm,0.8s
KLMR Klimovskoe 138.80 334 *e*PKIKP PKPdf 23 24 48.0 -1.9
KLMR *e* 23 27 39.8
KLMR pmax pmax
comp=Z,27nm,2.3s
FINES FINESS Array B 142.82 342 PKhKP PKPpre 23 24 49.9
comp=Z,5.1nm,1.0s,baz=38,slow=3.4,SNR=7.7
FINES PKP PKPdf 23 24 58.1 +1.0
comp=Z,5.2nm,0.8s,baz=107,slow=6.4,SNR=7.3
VRHR Novokhopersk 142.93 320 *e*PKIKP PKPdf 23 24 56.6 -1.0
VRHR pmax pmax
comp=N,9.0nm,1.0s
VRHR pmax pmax
comp=E,20nm,1.0s
VRHR pmax pmax
comp=Z,10.0nm,1.0s
DGRG David-gareji 143.27 303 P PKPdf 23 24 55.4 -3.1
OBN Obninsk 143.52 328 *e*PKIKP PKPdf 23 24 55.9 -2.6
OBN *e* 23 28 14.5
OBN pmax pmax
comp=Z,7.0nm,1.3s
MTA Mtatsminda 143.66 304 P PKPdf 23 24 56.5 -2.7
TBLG Delisi 143.70 304 PKIKP PKPdf 23 24 57.9 -1.4
TBLG Delisi 143.70 304 P PKPdf 23 24 57.9 -1.3
GNI Garni 143.94 301 *e*PKIKP PKPdf 23 24 58.6 -1.1
ZEI Tsey 144.11 306 *e*PKIKP PKPdf 23 25 00.7 +0.7
ZEI pmax pmax
comp=Z,10.0nm,0.5s
GOR Gori 144.11 305 P PKPdf 23 24 58.8 -1.2
GOF Gofitskoye 144.16 310 *e*PKIKP PKiKP 23 25 10.4 +6.9
GOF pmax pmax
comp=Z,20nm,1.0s
KEH Kehvi 144.18 305 P PKPdf 23 24 56.9 -3.2
VSR Storozhevoye 144.26 321 *e*PKIKP PKPdf 23 24 57.2 -2.7
VSR pmax pmax
comp=E,10.0nm,1.3s
VSR pmax pmax
comp=Z,10.0nm,1.3s
VSR pmax pmax
comp=N,8.0nm,0.6s
ONI Oni 144.47 306 P PKPdf 23 24 59.3 -1.3
KIV Kislovodsk 144.69 308 *e*PKPdf PKPdf 23 25 00.1 -0.9
KIV Kislovodsk 144.69 308 *i* PKIKP PKPdf 23 24 59.9 -1.0
KIV pmax pmax
comp=Z,9.0nm,1.2s
HAKT HAKKARI 145.03 297 *i* P PKPbc 23 24 59.9 -1.2
KARS Kars 145.12 302 *e*P PKPbc 23 25 01.1 -0.3
AGRB Hanur-Agry 145.35 301 *e*P PKPbc 23 25 02.0 -0.1
NB2 NORSAR Subarra 146.00 353 PKP PKPdf 23 25 02.2 -0.4
baz=9.7,slow=3.0
NB2 NORSAR Subarra 146.00 353 PKPab PKPdf 23 25 02.2 -0.4
NB2 NORSAR Subarra 146.00 353 PKP2 PKPdf 23 25 02.2 -0.4
NOA NORSAR Array B 146.00 353 PKPbc PKPbc 23 25 02.5 -0.9
comp=Z,10nm,0.8s,baz=16,slow=4.6,SNR=33
DBOC Borcka 146.03 304 *i* P PKPdf 23 25 04.3 +0.9
BCA Borcka 146.04 304 *e*P PKPdf 23 25 04.0 +0.7
DDEM Demirkent 146.06 303 *i* P PKPdf 23 25 05.0 +1.6
NAO01 NORSAR Array S 146.23 354 *e*PKPdf PKPdf 23 25 03.7 +0.6
ERZM Erzurum 146.53 302 *i* P PKPdf 23 25 03.6 -0.6
EZM Erzurum 146.54 302 *e*P PKPdf 23 25 06.1 +1.8
SOC Sochi 146.87 309 *e*PKIKP PKPdf 23 25 04.2 -0.5
SOC *e* 23 28 28.3
SOC *e*SSS 23 52 59.2
SOC pmax pmax
comp=Z,22nm,0.8s
KONO Kongsberg 147.53 354 *e*PKPdf PKPdf 23 25 05.0 -0.2
MICGM Minsk 147.69 333 *e* PKPdf 23 25 07.0 +1.3
MNK Minsk 147.71 334 *e*PKP2 PKPdf 23 25 07.0 +1.3
NACGM Naroch 147.82 335 *e* PKPdf 23 25 05.0 -0.9
GUMT Gumushane 147.84 303 *e*P PKPbc 23 25 10.2 +0.9
ANN Anapa 148.01 312 *i* PKP2 PKPbc 23 25 09.7 0.0
ANN pmax pmax
comp=Z,53nm,1.3s
KELT Kelkit 148.08 303 *i* P PKPbc 23 25 10.2 +0.2
EZC Erzincan 148.09 302 *e*P PKPbc 23 25 11.0 +1.0
PTK Pertek 148.22 300 *e*P PKPbc 23 25 09.2 -1.2
SVRC Sivrice-ELAZID 148.38 299 *e*P PKPbc 23 25 11.1 +0.2
KEMA Kemaliye 148.84 301 *i* P PKPdf 23 25 06.3 -1.7
MALT Malatya 149.07 299 *e*PKPdf PKPdf 23 25 09.1 +0.6
KAC Achnashellach 149.26 10 *e*P PKPbc 23 25 11.5 -0.9
KPL Plockton 149.36 10⇑*e*P PKPbc 23 25 11.8 -0.8
MCD Coleburn Disti 149.45 7⇑*e*P PKPbc 23 25 11.8 -1.1
MDO Dochfour 149.45 9⇑*e*P PKPbc 23 25 11.9 -1.0
AKASG Malin Array Be 149.74 327 PKPbc PKPbc 23 25 12.4 -1.5
comp=Z,12nm,1.0s,baz=46,slow=2.5,SNR=15
AKBB Malin Array Si 149.74 327 *e*PKPdf PKPdf 23 25 09.2 +0.1
MME1 Meikle Cairn 149.74 7⇑*e*P PKPbc 23 25 12.4 -1.2
ERBA Erbaa 149.80 305 *i* P PKPdf 23 25 05.5 -4.1
SVSK Karacayir 149.82 303 *e*P PKPdf 23 25 10.2 +0.6
SUW Suwalki 149.82 337 *e*PKP PKPbc 23 25 13.4 -0.5
SUW Suwalki 149.82 337 *e*PKHKP PKPdf 23 25 09.9 +0.8
SIM Simferopol' 150.12 314 *e*PKP2 PKPbc 23 25 15.4 +0.4
SIM pmax pmax
comp=Z,28nm,0.9s
EAB Aberfoyle 150.67 9⇑*e*P PKPbc 23 25 14.8 -1.1
EBH Black Hill 150.72 8⇑*e*P PKPbc 23 25 15.1 -0.9
EAU Auchinoon 151.12 8⇑*e*P PKPbc 23 25 16.4 -0.6
ESY Stoneypath 151.15 7⇑*e*P PKPbc 23 25 16.1 -1.0
EBL Broad Law 151.24 8⇑*e*P PKPbc 23 25 16.3 -0.9
ECK Cauldkaine Hil 151.81 8⇑*e*P PKPbc 23 25 17.4 -1.2
GULE Gulek 152.10 298 *i* P PKPdf 23 25 06.7 -6.5
MMAI Mount Meron Ar 152.14 289 PKPbc PKPbc 23 25 20.5 +0.4
comp=Z,5.2nm,0.8s,baz=5.2,slow=10.0,SNR=4.2
MMAI PKPab PKPab 23 25 30.3 +0.5
comp=Z,19nm,0.9s,baz=49,slow=2.5,SNR=5.4
XAL Allendale 152.24 7 *e*P PKPbc 23 25 18.5 -1.1
KIS Kishinev 152.25 321 *e*PKIKP PKPbc 23 25 18.0 -1.8
KIS *e* 23 25 28.0
GKP Gorka Klasztor 152.30 342 *e*PKP PKPbc 23 25 19.6 -0.1
BR131 Keskin Array S 152.36 304 *e*PKPdf PKPdf 23 25 14.5 +1.0
BRTR Keskin Array B 152.36 304 PKP PKPdf 23 25 12.8 -0.7
comp=Z,0.3nm,0.5s,baz=168,slow=25,SNR=3.6
BRTR PKPbc PKPbc 23 25 19.9 -0.4
comp=Z,2.2nm,1.0s,baz=48,slow=1.8,SNR=12
BRTR PKPab PKPab 23 25 31.4 +1.0
comp=Z,4.8nm,0.8s,baz=113,slow=4.3,SNR=18
BRTR PP PP 23 29 02.5 -0.5
comp=Z,0.5nm,0.7s,baz=63,slow=6.6,SNR=4.2
BRTR Keskin Array B 152.36 304 PKIKP PKPdf 23 25 12.8 -0.7
BRTR 23 25 20.0
BRTR 23 29 02.5
LVV L'vov 152.75 331 *e*PKIKP PKPbc 23 25 19.9 -1.0
BSEG Bad Segeberg 153.07 351 *e*PKPbc PKPbc 23 25 21.1 -0.3
KWP Kalwaria Pacla 153.46 332⇑P PKPbc 23 25 23.1 +0.7
KWP Kalwaria Pacla 153.46 332⇑*i*P PKPbc 23 25 23.1 +0.7
CSS Prodhromos 153.66 294 *e*PKPdf PKPdf 23 25 15.5 -0.1
CSS *e*PKPab PKPab 23 25 35.6 -0.5
TESR 153.73 323 ⇓P PKPab 23 25 33.6 -2.4
TESR 153.73 323 ⇓*i*P PKPab 23 25 33.6 -2.4
BUR08 Bucovina Ar. S 153.75 326 *e*PKPdf PKPdf 23 25 15.2 0.0
BUR08 *e*PKPab PKPab 23 25 35.1 -0.9
BURAR Bucovina Array 153.76 326 ⇓P PKPbc 23 25 23.6 +0.5
BURAR Bucovina Array 153.76 326 ⇓*i*P PKPbc 23 25 23.6 +0.5
TIRR Tirgusor 153.92 317⇑P PKPab 23 25 44.0 +7.1
TIRR Tirgusor 153.92 317⇑*i*P PKPab 23 25 44.0 +7.2
VRI Vrincioaia 154.09 321⇑P PKPab 23 25 33.4 -4.1
VRI Vrincioaia 154.09 321⇑*i*P PKPab 23 25 33.4 -4.1
OJC Ojcow 154.13 336 *e*PKPdf PKPdf 23 25 14.8 -0.9
OJC *e*PKPbc PKPbc 23 25 23.5 -0.3
PLOR Plostina 154.14 321 ⇓*i*P PKPab 23 25 41.3 +3.6
STHS Stebnicka Huta 154.23 333 *e*PKP PKPdf 23 25 16.1 +0.2
STHS *e* 23 25 25.0
STHS Stebnicka Huta 154.23 333 *e*PKP PKPdf 23 25 16.1 +0.2
STHS *e* 23 25 25.0
UZH Uzhgorod 154.40 331 *e*PKIKP PKPdf 23 25 17.3 +1.2
UZH *e* 23 25 19.0
UZH *e* 23 25 25.9
UZH *e* 23 25 34.3
CRVS Cervenica-Dubn 154.54 332 *e*PKP PKPdf 23 25 16.0 -0.3
CRVS *e* 23 25 28.2
CRVS Cervenica-Dubn 154.54 332 *e*PKP PKPdf 23 25 16.0 -0.3
CRVS *e* 23 25 28.2
NIE Niedzica 154.59 334 *e*PKPdf PKPdf 23 25 16.6 +0.2
KSP Ksiaz 154.73 341 *e*PKIKP PKPdf 23 25 15.8 -0.7
KSP *e* 23 25 25.1
CLZ Clausthal 155.10 350 *e*PKPbc PKPdf 23 25 25.6 +8.6
UPC Upice 155.11 341 *e*PKIKP PKPdf 23 25 26.6 +10
UPC *e* 23 25 42.0
UPC Upice 155.11 341⇑*e*PKP PKPdf 23 25 26.6 +10
UPC *e*PKPAB PKPab 23 25 42.0 +0.3
CLL Collm 155.13 346 *e*PKP PKPdf 23 25 16.0 -1.1
CLL *i* PKP PKPdf 23 25 25.7 +8.6
CLL Collm 155.13 346 *e*PKIKP PKPdf 23 25 16.0 -1.1
CLL *i* 23 25 25.7
CLL pmax pmax
comp=Z,3.0nm,1.1s
CLL pmax pmax
comp=Z,23nm,1.6s
CLL Collm 155.13 346 *e*PKPdf PKPdf 23 25 16.0 -1.1
comp=Z,3.0nm,1.1s
CLL *i* PKPdiff PKPdf 23 25 25.7 +8.6
comp=Z,23nm,1.6s
CLL *i* 23 25 35.3
CLL *e*PKPab PKPab 23 25 41.0 -0.7
comp=Z,12nm,1.3s
CLL L 00 43 00.0
comp=Z,100nm,18.1s
DPC Dobruska-Polom 155.16 341 *e*PKIKP PKPdf 23 25 26.4 +9.3
DPC *e* 23 25 40.8
DPC Dobruska-Polom 155.16 341⇑*e*PKP PKPdf 23 25 26.4 +9.3
DPC *e*PKPAB PKPab 23 25 40.8 -1.1
MORC Moravsky Berou 155.28 338⇑P PKPdf 23 25 26.4 +9.0
MORC Moravsky Berou 155.28 338⇑*i*P PKPdf 23 25 26.4 +9.1
BRG Berggiesshubel 155.32 344 *e*PKP PKPdf 23 25 17.1 -0.3
comp=Z,29nm,1.7s
BRG *e* 23 25 36.3
comp=Z,9.7nm,0.9s
BRG Berggiesshubel 155.32 344 *e*PKIKP PKPdf 23 25 17.0 -0.3
BRG pmax pmax
comp=Z,17nm,1.7s
DRGR 155.56 327 ⇓P PKPdf 23 25 22.4 +4.6
DRGR 155.56 327 ⇓*i*P PKPdf 23 25 22.4 +4.6
VYHS Vyhne 155.91 335 *e*PKP PKPdf 23 25 17.5 -0.7
VYHS *e* 23 25 38.2
VYHS Vyhne 155.91 335 *e*PKP PKPdf 23 25 17.5 -0.7
VYHS *e* 23 25 38.1
PSZ Piszkesteto 155.96 333⇑P PKPab 23 25 37.6 -7.8
PSZ Piszkesteto 155.96 333⇑*i*P PKPab 23 25 37.6 -7.8
PSZ Piszkesteto 155.96 333 ⇓*e*PKP PKPdf 23 25 18.1 -0.2
PRU Pruhonice 155.99 343 *e*PKP2 PKPab 23 25 46.4 +1.0
PRU Pruhonice 155.99 343 *e*PKPAB PKPab 23 25 46.4 +1.0
VRAC Vranov 156.00 339⇑P PKPab 23 25 46.2 +0.7
VRAC Vranov 156.00 339⇑*i*P PKPab 23 25 46.2 +0.7
KOLL Kolacno 156.00 336 *e*P PKPab 23 25 33.7 -12
KOLL Kolacno 156.00 336 *e* PKPab 23 25 33.7 -12
GOLH Golhisar 156.15 301 *i* P PKPab 23 25 43.3 -3.3
NKC Novy Kostel 156.26 346 *e*pPKP PKPab 23 25 56.7 +10
NKC *ex* x 23 29 53.4
BUD Budapest 156.66 333⇓*e*PKP PKPdf 23 25 18.8 -0.4
BZS Buzias 156.93 327 ⇓P PKPdf 23 25 18.8 -0.8
BZS Buzias 156.93 327 ⇓*i*P PKPdf 23 25 18.8 -0.8
KHC Kasperske Hory 157.02 343 *e*PKIKP PKPdf 23 25 19.0 -0.3
KHC *e* 23 25 29.8
KHC *e* 23 29 33.1
KHC Kasperske Hory 157.02 343 *e*PKPDF PKPdf 23 25 19.3 -0.3
KHC *e*pPKP pPKPdf 23 25 29.8 +3.2
KHC *e*PKPAB PKPab 23 25 50.0 +0.1
KHC *e*PP PP 23 29 33.1 +5.2
MPEP Malo Peshtene 157.31 320 *e*P PKPab 23 25 55.0 +3.6
LIC Lamto 157.34 157 *e*P PKPdf 23 25 17.7 -3.5
comp=Z,46nm,1.1s
LIC Lamto 157.34 157 *e*PKP2 PKPab 23 25 51.2 -1.0
comp=Z,38nm,1.1s
BAIF Baives 157.39 359 *e*PKP2 PKPab 23 25 50.8 -0.6
comp=Z,13nm,1.0s
KIC Kosan Boka 157.56 157 *e*P PKPdf 23 25 20.9 -0.5
comp=Z,56nm,1.1s
TIC Toumodi 157.73 156 *e*P PKPdf 23 25 21.1 -0.6
comp=Z,28nm,0.9s
DBIC Dimbokro 157.81 157 PKP PKPdf 23 25 21.2 -0.5
comp=Z,6.8nm,1.0s,baz=118,slow=6.5,SNR=4.2
DBIC PKPab PKPab 23 25 54.2 0.0
comp=Z,7.3nm,1.0s,baz=225,slow=6.0,SNR=3.7
PKSM Moragy 157.84 332⇑P PKPdf 23 25 20.2 -0.5
PKSM Moragy 157.84 332⇑*i*P PKPdf 23 25 20.3 -0.5
VTS Vitosha 158.09 319 ⇓*i*P PKPab 23 25 55.9 +1.1
VTS Vitosha 158.09 319 *e*P PKPab 23 25 54.9 +0.1
MMB Musomiste 158.36 316 *e*P PKPab 23 25 56.0 0.0
FLN La Foliniere 158.44 8 *e*PKP2 PKPab 23 25 55.0 -1.0
comp=Z,66nm,1.3s
SGMF Saint Gilles 158.63 12 *e*PKP2 PKPab 23 25 55.5 -1.3
comp=Z,61nm,1.4s
LDF La Druitiere 158.65 7 *e*PKP2 PKPab 23 25 55.7 -1.2
comp=Z,9.1nm,0.9s
GRR Gorron 158.76 8 *e*PKP2 PKPab 23 25 56.5 -0.9
comp=Z,50nm,1.3s
CDF Champ du Feu 158.86 353 *e*PKP2 PKPab 23 25 57.1 -0.7
MEZF Maizieres J'vi 158.92 358 *e*PKP2 PKPab 23 25 57.5 -0.6
comp=Z,55nm,1.4s
HAU Haudompre 159.34 355 *e*PKP2 PKPab 23 25 59.4 -0.5
HINF Hinteralfeld 159.49 354 *e*PKP2 PKPab 23 25 59.7 -0.9
FETA Feichten 159.67 346 ⇓*i*PKPdf PKPdf 23 25 22.0 -0.9
comp=Z,6.4nm,1.2s
SSF Saint Saulge 160.39 0 *e*PKP2 PKPab 23 26 03.7 -0.8
comp=Z,36nm,1.4s
MFF Saint Martin d 160.61 8 *e*PKP2 PKPab 23 26 04.5 -1.0
comp=Z,29nm,1.0s
AVF Avril sur Loir 160.66 1 *e*PKP2 PKPab 23 26 04.6 -1.1
comp=Z,20nm,1.2s
SMF Signal de Mont 160.81 360 *e*PKP2 PKPab 23 26 05.5 -0.8
comp=Z,52nm,1.3s
BGF Bois d'Agland 160.88 2 *e*PKP2 PKPab 23 26 05.7 -1.0
LPG La Plagne 161.79 353 *e*PKP2 PKPab 23 26 11.0 +0.3
comp=Z,26nm,1.3s
RJF Les Rejaudoux 162.06 5 *e*PKP2 PKPab 23 26 10.5 -1.4
LFF La Frestale 162.35 7 *e*PKP2 PKPab 23 26 12.2 -0.9
comp=Z,24nm,1.0s
CAF Calviac 162.47 4 *e*PKP2 PKPab 23 26 12.8 -0.9
SMRF Simiane la Rot 163.41 355 *e*PKP2 PKPab 23 26 17.6 -0.2
comp=Z,22nm,1.2s
EVO Evora 165.18 39 *e*PKIKP PKPdf 23 25 28.7 0.0
comp=Z,20nm,1.1s
PAB San Pablo 166.16 27 *e*PKPdf PKPdf 23 25 29.7 +0.2
ESDC Sonseca Array 166.20 26 PKP PKPdf 23 25 30.3 +0.8
comp=Z,0.9nm,0.8s,baz=346,slow=3.0,SNR=8.3
ESDC PKPab PKPab 23 26 29.7 -0.6
comp=Z,1.6nm,0.8s,baz=326,slow=4.5,SNR=7.5
KEST Kesra 170.43 331 PKP PKPdf 23 25 33.8 +1.3
comp=Z,0.6nm,0.8s,baz=304,slow=8.3,SNR=2.9
KEST PKPab PKPab 23 26 49.5 +0.4
comp=Z,1.0nm,0.9s,baz=352,slow=7.1,SNR=2.4

BJI ***05*** *23:08:23.8, 40.31N×78.24E, h26km, ML2.8/6*
ISC 05 23:08:36.0±1.8, 40.52N±0.09×77.5E±0.2, h10km, n9,
σ1s03/11, 2C, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.52**	**229**	Pg	**Pg**	**Pg**	**23 09 05.3**	**+0.1**
KSH				Sg	**Sg**	**Sg**	**23 09 34.4**	**+9.5**
KSH				smax				
	comp=N,110nm,0.4s							
KSH				smax				
	comp=E,110nm,0.5s							
ULHL	**Ulahol** SNR=8.6	**1.95**	**332**	P	**Pn**		**23 09 08.7**	**-0.5**
KZA	**Kyzart** SNR=20	**2.28**	**314**	P	**Pn**		**23 09 14.9**	**+1.2**
UCH	**Uchtor** SNR=16	**2.80**	**309**	P	**Pn**		**23 09 20.6**	**-0.3**
KBK	**Karagaybulak** SNR=10	**2.85**	**319**	P	**Pn**		**23 09 25.4**	**+3.9**
CHMS	**Chumysh** SNR=5.4	**3.20**	**322**	P	**Pn**		**23 09 31.3**	**+5.0**
AML	**Almayashu** SNR=6.8	**3.26**	**301**	P	**Pn**		**23 09 27.4**	**+0.2**
USP	**Ospenovka**	**3.52**	**322**	P	**Pn**		**23 09 36.6**	**+5.8**

SNR=32
KK31 **Karatay Array** 5.80 299 ⇑Pn Pg 23 10 24.6 -2.5
comp=E,0.5nm,0.5s,baz=116,slow=16,SNR=6.6
KK31 ⇑Sn Sg 23 11 42.6 +0.5
comp=E,2.1nm,0.7s,baz=122,slow=26,SNR=4.1

*IDC **05** 23:18:21.4±0.7, 47°.60S×75°.50W, h0km, mb4.3/4, mb1 4.3/7, mb1mx4.3/13, mbtmp4.2/7, ML3.7/3, MS3.5/4, Ms1 3.6/4, ms1mx3.4/15, Error ellipse: s-maj=32.8km s-min=16.7km az=103.0*
*ISCJB **05** 23:18:24.6±0.4, 47°.68S±0°.05×75°.3W±0°.2, h33km, mb4.5/16, Error ellipse: s-maj=15.0km s-min=7.3km az=13.2*
*NEIC **05** 23:18:27.5±1.4, 47°.69S×75°.37W, h45km±13km, mb4.5/13, Error ellipse: s-maj=19.7km s-min=6.4km az=91.0*
ISC 05 23:18:26.8±2.1, 47°.68S±0°.06×75°.5W±0°.3, h36km±20km, n43, σ0°.71/36, mb4.5/16, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**7.78**	**29**	*e*Pn	**Pn**	**23 20 16.7**	**-0.8**
PLCA				*e*Sn	**Sn**	**23 21 44.1**	**-0.1**
PLCA				Lg		23 22 24.8	
PLCA				LR	LR	23 23 26.1	
PLCA	**Paso Flores**	**7.78**	**29**	Pn	**Pn**	**23 20 16.4**	**-1.0**
	0.3nm,0.3s,baz=203,slow=13,SNR=8.1						
PLCA				Lg		23 22 24.8	
	0.2nm,0.3s,baz=317,slow=22,SNR=3.0						
PLCA				LR	LR	23 23 26.1	
	comp=Z,524nm,20.7s,baz=11,slow=39						
USHA	**Ushuaia**	**8.40**	**151**	Pn	**Pn**	**23 20 25.1**	**-0.8**
USHA				Lg		23 22 57.4	
USHA				LR	LR	23 23 48.9	
USHA	**Ushuaia**	**8.40**	**151**	Pn	**Pn**	**23 20 25.1**	**-0.8**
	0.9nm,0.3s,baz=312,slow=12,SNR=26						
USHA				Lg		23 22 57.4	
	0.3nm,0.3s,baz=331,slow=2.6,SNR=2.5						
USHA				LR	LR	23 23 48.9	
	comp=Z,438nm,19.1s,baz=112,slow=39						
TRQA	**Tornquist**	**13.76**	**51**	*e*Pn	**Pn**	**23 21 41.1**	**+1.8**
	5.1nm,0.6s						
CFAA	**Coronel Fontan**	**16.97**	**22**	Pn	**Pn**	**23 22 21.3**	**0.0**
CFAA				LR	LR	23 29 17.5	
CFAA	**Coronel Fontan**	**16.97**	**22**	Pn	**Pn**	**23 22 21.3**	**0.0**
	0.1nm,0.3s,baz=198,slow=10,SNR=15						
CFAA				LR	LR	23 29 17.5	
	comp=Z,38nm,20.7s,baz=201,slow=39						
LCO	**Las Campanas**	**19.00**	**13**	*e*P	**Pn**	**23 22 46.1**	**-0.1**
	8.7nm,0.7s						
CPUP	**Villa Florida**	**25.63**	**40**	*e*P	**P**	**23 23 52.3**	**-0.6**
	26nm,0.8s,mb4.8						
CPUP				LR	LR	23 34 56.7	
CPUP	**Villa Florida**	**25.63**	**40**	P	**P**	**23 23 52.5**	**-0.3**
	5.9nm,0.8s,mb4.2,baz=198,slow=8.2,SNR=14						
CPUP				LR	LR	23 34 56.7	
	comp=Z,310nm,18.9s,baz=176,slow=39						
LPAZ	**La Paz**	**31.88**	**13**	*e*P	**P**	**23 24 49.6**	**+1.1**
	10nm,1.4s,mb4.5						
LPAZ	**La Paz**	**31.88**	**13**	P	**P**	**23 24 55.2**	**+6.7**
	2.4nm,0.9s,mb4.0,baz=143,slow=7.5,SNR=8.9						
QSPA	**South Pole Qui**	**42.57**	**180**	*e*P	**P**	**23 26 20.1**	**+1.6**
QSPA	**South Pole Qui**	**42.57**	**180**	P	**P**	**23 26 19.8**	**+1.3**
	10nm,1.0s,mb4.5,baz=154,slow=2.9,SNR=23						
OTAV	**Otavalo**	**47.79**	**356**	*e*P	**P**	**23 27 00.7**	**+0.1**
	17nm,1.5s,mb4.9						
SBA	**Scott Base**	**49.19**	**194**	*e*P	**P**	**23 27 10.6**	**0.0**
	1.8nm,0.7s,mb4.2						
ROSC	**El Rosal**	**52.32**	**1**	P	**P**	**23 27 36.0**	**+1.1**
RCBR	**Riachuelo**	**53.64**	**52**	P	**P**	**23 27 44.0**	**-0.8**
MAW	**Mawson**	**60.83**	**163**	P	**P**	**23 28 35.0**	**+0.3**
	0.6nm,0.3s,mb4.3,baz=222,slow=8.4,SNR=5.2						
CASY	**Casey**	**66.28**	**183**	*e*P	**P**	**23 29 10.3**	**-0.4**
	5.8nm,0.6s,mb4.8						
TEIG	**Tepich**	**68.56**	**347**	*e*P	**P**	**23 29 26.7**	**+1.0**
BBSR	**BB Station**	**80.27**	**9**	*e*P	**P**	**23 30 33.0**	**-0.5**
	70nm,0.9s,mb5.6						
TXAR	**Lajitas Array**	**80.75**	**335**	P	**P**	**23 30 36.2**	**+0.1**
	1.7nm,1.0s,mb3.9,baz=151,slow=8.5,SNR=10						
JCT	**Junction City**	**80.82**	**339**	*e*P	**P**	**23 30 36.7**	**+0.3**
	16nm,1.3s,mb4.8						
LRAL	**Lakeview Retre**	**81.01**	**350**	*e*P	**P**	**23 30 38.7**	**+1.3**
	4.6nm,0.8s,mb4.5						
LRAL				*e*		23 30 45.1	
GOGA	**Godfrey**	**81.04**	**353**	*e*P	**P**	**23 30 37.2**	**-0.4**
	10nm,0.9s,mb4.8						
GOGA				*e*	pP	23 30 45.3	-3.5
SWET	**Sewanee**	**83.05**	**351**	*e*P	**P**	**23 30 47.4**	**-0.6**
MIAR	**Mount Ida**	**83.45**	**345**	*e*P	**P**	**23 30 49.8**	**-0.3**
MNTX	**Cornudas Mount**	**83.47**	**335**	*e*P	**P**	**23 30 49.3**	**-1.0**
	3.5nm,1.6s,mb4.1						
WVT	**Waverly**	**84.17**	**350**	*e*P	**P**	**23 30 52.9**	**-0.8**
WMOK	**Wichita Mounta**	**84.67**	**341**	*e*P	**P**	**23 30 56.4**	**+0.1**
	2.2nm,1.1s,mb4.2						
WMOK				*e*	pP	23 31 04.3	-3.3
SIUC	**Southern Illin**	**85.90**	**349**	P	**P**	**23 31 01.7**	**-0.7**
ANMO	**Albuquerque**	**86.82**	**335**	*e*P	**P**	**23 31 07.2**	**+0.2**
	2.3nm,0.9s,mb4.4						
SDCO	**Great Sand Dun**	**89.18**	**337**	*e*P	**P**	**23 31 17.9**	**-0.3**
HWUT	**Hardware Ranch**	**94.49**	**334**	*e*P	**P**	**23 31 42.7**	**+0.1**
	1.6nm,0.5s,mb4.7						
ILAR	**Eielson Array**	**125.02**	**330**	PKP	PKPdf	23 37 21.5	-0.2
	0.8nm,0.8s,baz=178,slow=3.8,SNR=7.4						
BRTR	**Keskin Array B**	**129.76**	**71**	PKP	PKPdf	23 37 32.0	+0.4
	0.4nm,0.6s,baz=242,slow=2.7,SNR=4.1						
CMAR	**Chiang Mai Arr**	**150.50**	**169**	PKPbc	PKPbc	23 38 14.7	+0.1
	2.3nm,0.8s,baz=188,slow=3.5,SNR=7.1						
CMAR				PKPab	PKPab	23 38 22.4	+1.2
	0.9nm,0.5s,baz=220,slow=3.5,SNR=3.4						
MJAR	**Matsushiro Arr**	**152.87**	**258**	PKPbc	PKPbc	23 38 19.6	0.0
	1.5nm,0.6s,baz=158,slow=3.0,SNR=5.4						
KSRS	**Korea Array**	**160.06**	**248**	PKPab	PKPab	23 39 02.9	+1.2
	1.0nm,0.5s,baz=134,slow=4.5,SNR=6.7						
MKAR	**Makanchi Array**	**164.85**	**85**	PKP	PKPdf	23 38 24.4	-1.6
	1.4nm,1.1s,baz=146,slow=2.8,SNR=5.9						
MKAR				PKPab	PKPab	23 39 23.6	+1.1
	0.1nm,0.6s,baz=268,slow=4.3,SNR=2.4						
ZALV	**Zalesovo Beam**	**166.06**	**56**	PKP	PKPdf	23 38 24.6	-2.2
	0.4nm,0.5s,baz=340,slow=1.7,SNR=4.1						
SONM	**Songino Array**	**178.75**	**278**	PKP	PKPdf	23 38 31.2	-1.4
	0.4nm,0.7s,baz=20,slow=4.7,SNR=3.9						

DJA 05 23:29:37, 0°.84S×119°.76E, h36km, MLv3.5/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**0.10**	**130**	P	Pn	23 29 43.7	+0.5
PCI				S	Sn	23 29 49.8	+2.4
TTSI	**Tana Toraja**	**2.19**	**178**	P	Pn	23 30 12.1	+1.1
TTSI				S	Sn	23 30 38.4	+1.5
MRSI	**Marisa**	**2.54**	**59**	P	Pn	23 30 15.5	-0.3
LUWI	**Luwuk**	**3.02**	**94**	P	Pn	23 30 23.7	+1.4
SPSI	**Sidrap Palu**	**3.10**	**180**	P	Pn	23 30 17.2	-6.3
SPSI				S	Sn	23 31 01.6	+2.2
BNSI	**Bone**	**3.55**	**174**	P	Pn	23 30 30.8	+1.1
BNSI				S	Sn	23 31 12.9	+2.4

*CSEM **05** 23:36:01.6±0.2, 42°.44N×7°.02W, h8km, ML1.3, Error ellipse: s-maj=4.8km s-min=3.1km az=72.0*
MDD 05 23:36:02.4±0.6, 42°.43N×6°.99W, h0km, mbLg1.4/5, 2C, Error ellipse: s-maj=5.5km s-min=3.9km az=66.0, PRIMO, Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ECAL	**Calabor**	**0.52**	**159**	⇑Pg	Pg	23 36 12.2	-0.2
	0.8nm,0.1s,SNR=18						
ECAL				Lg		23 36 19.0	
	3.5nm,0.1s,SNR=15						
ECAL	**Calabor**	**0.52**	**159**	⇑Pg	Pg	23 36 12.2	-0.2
	0.8nm,0.1s,SNR=18						
ECAL				Lg		23 36 19.0	
	3.5nm,0.1s,SNR=15						
ECAL	**Calabor**	**0.52**	**159**	Pg	Pg	23 36 12.2	-0.2
	0.8nm,0.1s,SNR=18						
ECAL				Lg		23 36 19.0	
	3.5nm,0.1s,SNR=15						
PBRG	**Braganca**	**0.65**	**163**	*e*Sg	Sg	23 36 22.5	-0.8
PBRG				A		23 36 22.9	
	4.1nm,0.2s						
PBRG	**Braganca**	**0.65**	**163**	Lg		23 36 22.5	
	2.0nm,0.2s						
PBRG	**Braganca**	**0.65**	**163**	Lg		23 36 22.5	
	2.0nm,0.2s						
PBRG	**Braganca**	**0.65**	**163**	*e*Sg	Sg	23 36 22.5	-0.8
	4.1nm,0.2s						
EPON	**Pontenova**	**0.91**	**353**	Pg	Pg	23 36 19.3	-0.5
	0.3nm,0.1s,SNR=7.9						
EPON				Lg		23 36 31.0	
	0.7nm,0.1s,SNR=7.9

	baz=72								
X15A	**Humboldt**	71.85	322	⇑P		P	23 50 03.5	+0.3	
	baz=72								
V17A	**Tonalea, Kykot**	71.88	323	⇓P		P	23 50 03.9	+0.6	
	baz=72								
W16A	**Flagstaff**	71.90	323	⇑P		P	23 50 04.3	+0.9	
	baz=72								
U18A	**Rough Rock, Ch**	71.97	325	⇓P		P	23 50 04.5	+0.6	
	baz=72								
ECSD	**EROS Data Cent**	72.09	338	*e*P		P	23 50 02.8	-1.6	
	comp=N,7.8nm,1.3s,mb4.3								
WUAZ	**Wupatki**	72.12	323	*e*P		P	23 50 04.1	-0.6	
	comp=N,3.0nm,0.8s,mb4.1								
S20A	**Disappointment**	72.26	327	⇓P		P	23 50 06.2	+0.7	
	baz=72								
R21A	**Cimarron**	72.27	327	⇑P		P	23 50 06.2	+0.6	
	baz=72								
U16A	**Tuba City**	72.44	324	⇓P		P	23 50 07.0	+0.3	
	baz=73								
R20A	**Redvale**	72.54	327	⇓P		P	23 50 07.8	+0.6	
	baz=73								
S19A	**Harvey Farm, M**	72.59	326	⇑P		P	23 50 08.1	+0.7	
	baz=73								
V15A	**Kaibab Nationa**	72.78	323	⇑P		P	23 50 09.3	+0.7	
	baz=73								
X13A	**Yucca**	72.84	321	⇑P		P	23 50 09.4	+0.3	
	baz=73								
W14A	**Seligman**	72.86	322	⇓P		P	23 50 09.7	+0.6	
	baz=73								
S18A	**Hurst Farm, Bl**	72.99	325	⇑P		P	23 50 10.5	+0.6	
	baz=73								
BC3	**Big Chuckawall**	73.15	319	⇑P		P	23 50 11.1	+0.2	
	baz=73								
V14A	**Boquillas Ranc**	73.17	322	⇑P		P	23 50 11.6	+0.6	
	baz=73								
O22A	**Kremmling**	73.18	329	⇑P		P	23 50 10.8	-0.1	
	baz=74								
W13A	**Hualapai Mount**	73.23	321	⇓P		P	23 50 11.9	+0.6	
	baz=74								
U15A	**North Rim**	73.29	323	⇑P		P	23 50 11.8	+0.2	
	baz=74								
R18A	**Canyonlands Na**	73.46	326	⇑P		P	23 50 12.8	+0.2	
	baz=74								
N23A	**Red Feather La**	73.48	330	⇓P		P	23 50 13.4	+0.7	
	baz=74								
Q19A	**Hogan Spring (**	73.57	327	⇓P		P	23 50 13.5	+0.3	
	baz=74								
U14A	**Mt Trumbull**	73.78	323	⇑P		P	23 50 15.2	+0.8	
	baz=74								
V13A	**Grand Canyon W**	73.83	322	⇑P		P	23 50 15.6	+0.9	
	baz=74								
R17A	**Hanksville Air**	73.91	325	⇓P		P	23 50 15.4	+0.2	
	baz=74,SNR=5.6								
P19A	**Cripple Cowboy**	73.95	327	⇑P		P	23 50 16.0	+0.6	
	baz=74,SNR=12								
GMRC	**Granite Mounta**	74.05	320	⇑P		P	23 50 16.9	+0.8	
	baz=74								
R16A	**Teasdale**	74.22	325	⇑P		P	23 50 17.3	+0.3	
	baz=74								
SRU	**San Rafael**	74.33	326	*e*P		P	23 50 17.9	+0.3	
	comp=N,6.9nm,0.7s,mb4.5								
SBA	**Scott Base**	74.41	190	*e*P		P	23 50 16.3	-1.3	
Q16A	**Castle Valley**	74.52	326	⇓P		P	23 50 19.8	+1.0	
	baz=75								
N20A	**Spence Gulch,**	74.52	329	⇑P		P	23 50 19.6	+0.9	
	baz=75								
O19A	**Miners Draw (B**	74.53	328	⇑P		P	23 50 19.2	+0.5	
	baz=75								
U12A	**Valley of Fire**	74.55	322	⇓P		P	23 50 19.8	+0.8	
	baz=75								
P18A	**Preston Nutter**	74.58	327	⇓P		P	23 50 19.9	+0.8	
	baz=75,SNR=9.0								
T13A	**Saint George**	74.61	323	⇓P		P	23 50 19.8	+0.5	
	baz=75								
CCUT	**Cedar City**	74.69	323	*e*P		P	23 50 21.1	+1.3	
	comp=N,5.0nm,0.8s,mb4.2								
MSU	**Marysvale**	74.75	325	*e*P		P	23 50 20.9	+0.8	
L21A	**Rawlins**	74.98	330	⇑P		P	23 50 21.1	-0.2	
	baz=75								
M20A	**Sweetwater, Wa**	75.00	329	⇑P		P	23 50 21.5	+0.1	
	baz=75								
N19A	**John Jarvie Ra**	75.01	328	⇑P		P	23 50 21.6	+0.1	
	baz=75								
O17A	**Robinson Place**	75.25	327	⇑P		P	23 50 23.6	+0.7	
	baz=76								
RSSD	**Black Hills**	75.25	333	*e*P		P	23 50 22.6	-0.1	
	comp=N,1.2nm,0.6s,mb3.7								
L20A	**Wamsutter**	75.47	329	⇑P		P	23 50 24.3	+0.2	
	baz=76								
R13A	**O'Grain Ranch,**	75.48	323	⇑P		P	23 50 25.1	+0.9	
	baz=76								
T11A	**Corn Creek, Al**	75.51	322	⇓P		P	23 50 25.0	+0.5	
	baz=76								
Q14A	**Sevier Lake (B**	75.69	324	⇑P		P	23 50 26.2	+0.9	
	baz=76								
N17A	**Moffit Pass**	75.86	327	⇑P		P	23 50 27.1	+0.7	
	baz=76,SNR=5.3								
FURC	**Furnace Creek,**	75.92	320	⇑P		P	23 50 27.2	+0.4	
	baz=76								
R12A	**Pony Springs,**	75.94	323	⇓P		P	23 50 27.5	+0.7	
	baz=76								
K20A	**Yellowstone Ra**	75.98	330	⇓P		P	23 50 26.2	-0.8	
	baz=76								
SUR	**Sutherland**	76.01	119	*e*P		P	23 50 28.3	+0.7	
MPMC	**Manual Prospec**	76.01	320	⇓P		P	23 50 27.3	0.0	
	baz=76								
P14A	**Drum Mountains**	76.01	325	⇑P		P	23 50 27.6	+0.4	
	baz=76								
L18A	**Fontenelle, Gr**	76.22	328	⇓P		P	23 50 28.6	+0.3	
	baz=76								
ISA	**Isabella**	76.33	319	⇑P		P	23 50 29.2	+0.1	
	baz=77								
ISA	**Isabella**	76.33	319	*e*P		P	23 50 28.3	-0.8	
	comp=N,2.2nm,0.6s,mb4.0								
K19A	**Absolon Red Bu**	76.34	330	⇓P		P	23 50 28.7	-0.3	
	baz=77								
P13A	**Bates Ranch, G**	76.42	324	⇓P		P	23 50 29.6	+0.1	
	baz=77								
R11A	**Troy Canyon, C**	76.50	323	⇓P		P	23 50 30.5	+0.5	
	baz=77								
Q12A	**Willow Creek R**	76.56	323	⇑P		P	23 50 31.0	+0.7	
	baz=77								
HWUT	**Hardware Ranch**	76.73	327	*e*P		P	23 50 30.4	-0.8	
	comp=N,2.5nm,0.6s,mb4.0								
K18A	**Toltan Ranch,**	76.76	329	⇑P		P	23 50 31.9	+0.5	
	baz=77								
S10A	**Tonopah Range,**	76.77	322	⇓P		P	23 50 32.1	+0.6	
	baz=77								
R10A	**Warm Springs**	76.86	322	⇓P		P	23 50 32.5	+0.5	
	baz=77								
P12A	**McGill**	76.92	324	⇑P		P	23 50 33.0	+0.7	
	baz=77								
J18A	**Kendall Valley**	77.19	329	⇓P		P	23 50 33.4	-0.3	
	baz=78,SNR=6.1								
K17A	**Gardner Place,**	77.27	328	⇑P		P	23 50 34.7	+0.5	
	baz=78								
Q10A	**Clear Creek Ra**	77.28	322	⇑P		P	23 50 34.9	+0.5	
	baz=78								
L15A	**Malad City**	77.43	327	⇓P		P	23 50 35.0	-0.2	
	baz=78								
I18A	**Diamond G Ranc**	77.47	330	⇓P		P	23 50 35.8	+0.6	
	baz=78								
M14A	**Sheep Mountain**	77.55	326	⇓P		P	23 50 35.7	-0.1	
	baz=78								
ULM	**Lac du Bonnet**	77.61	341	P		P	23 50 33.4	-2.6	
	comp=N,8.0nm,0.6s,mb4.5,baz=147,slow=5.7,SNR=7.0								
K16A	**Soda Springs**	77.65	328	⇓P		P	23 50 37.3	+1.0	
	baz=78								
TSUM	**Tsumeb**	77.68	106	*e*P		P	23 50 36.7	-0.5	
	comp=N,2.6nm,0.8s,mb3.9								
LOHW	**Long Hollow**	77.77	329	*e*P		P	23 50 37.0	0.0	
	comp=N,11nm,1.6s,mb4.2								
SCHQ	**Schefferville**	77.81	360	P		P	23 50 34.9	-2.0	
	comp=N,5.5nm,0.8s,mb4.2,baz=187,slow=5.0,SNR=8.9								
L14A	**Malta**	77.89	326	⇑P		P	23 50 37.4	-0.2	
	baz=78								
NVAR	**Mina Array Bea**	78.09	321	P		P	23 50 38.6	-0.3	
	comp=N,0.5nm,0.3s,mb3.6,baz=158,slow=7.3,SNR=3.6								
IMW	**Indian Meadow**	78.14	329	*e*P		P	23 50 39.5	+0.5	
	comp=N,3.3nm,0.8s,mb4.0								
L13A	**Double Diamond**	78.28	326	⇓P		P	23 50 40.0	+0.2	
	baz=78								
M12A	**Wells**	78.30	325	⇓P		P	23 50 40.7	+0.7	
	baz=79								
J15A	**Blackfoot**	78.49	328	⇓P		P	23 50 41.1	+0.2	
	baz=79								
G18A	**Lazy EL Ranch,**	78.59	331	⇑P		P	23 50 41.5	+0.1	
	baz=79								
M11A	**Holland Ranch,**	78.78	325	⇓P		P	23 50 42.9	+0.3	
	baz=79								
J14A	**Carey**	78.97	327	⇑P		P	23 50 44.0	+0.4	
	baz=79								
F18A	**Big Timber**	79.11	331	⇓P		P	23 50 44.0	-0.2	
	baz=79								
L11A	**Cat Creek Ranc**	79.28	325	⇑P		P	23 50 45.6	+0.4	
	baz=80								
J13A	**Cove Ranch, Pi**	79.35	327	⇓P		P	23 50 45.8	+0.2	
	baz=80								
F17A	**Fitzpatrick Pl**	79.54	331	⇑P		P	23 50 47.0	+0.4	
	baz=80								
PAHR	**Pah Rah Range**	79.58	321	*e*P		P	23 50 47.6	+0.7	
	comp=N,8.3nm,0.9s,mb4.4								
HLID	**Hailey**	79.59	327	*e*P		P	23 50 47.3	+0.4	
	comp=N,4.5nm,0.8s,mb4.2								
L10A	**Juniper Basin**	79.59	325	⇑P		P	23 50 47.2	+0.2	
	baz=80								
I13A	**Wildhorse Cree**	79.70	327	⇓P		P	23 50 47.7	+0.2	
	baz=80								
E18A	**Harlowton**	79.71	331	⇑P		P	23 50 47.7	+0.2	
	baz=80								
MCMT	**McKenzie Canyo**	79.75	329	*e*P		P	23 50 47.9	+0.1	
	comp=N,3.9nm,1.2s,mb3.9								
G15A	**Dillon**	79.83	329	⇓P		P	23 50 48.8	+0.6	
	baz=80								
H14A	**Leadore**	79.84	328	⇓P		P	23 50 48.9	+0.7	
	baz=80								
DLMT	**Dillon**	80.03	329	*e*P		P	23 50 49.6	+0.4	
	comp=N,8.8nm,1.5s,mb4.2								
E17A	**Martinsdale**	80.05	331	⇓P		P	23 50 49.5	+0.2	
	baz=80,SNR=5.1								
I12A	**Atlanta**	80.12	327	⇑P		P	23 50 49.9	+0.2	
	baz=80								
MFID	**Camas Ranch**	80.20	326	⇓P		P	23 50 50.4	+0.3	
	baz=80								
D17A	**Six Diamond Ra**	80.50	331	⇑P		P	23 50 51.5	-0.2	
	baz=81,SNR=6.4								
H12A	**Diamond D Ranc**	80.52	327	⇓P		P	23 50 52.2	+0.3	
	baz=81								
G13A	**Cobalt**	80.61	328	⇓P		P	23 50 53.0	+0.7	
	baz=81,SNR=21								
EGMT	**Eagleton**	80.77	332	*e*P		P	23 50 52.6	-0.5	
	comp=N,6.5nm,0.9s,mb4.3								
D16A	**Dana Ranch, Ca**	80.79	331	⇓P		P	23 50 53.8	+0.6	
	baz=81,SNR=10								
C17A	**Wharram Farm,**	80.90	332	⇓P		P	23 50 53.2	-0.7	
	baz=81								
B18A	**Beardsley Farm**	81.06	333	⇓P		P	23 50 54.3	-0.4	
	baz=81,SNR=6.5								
F13A	**Darby**	81.17	329	⇑P		P	23 50 55.5	+0.2	
	baz=81,SNR=11								
C16A	**Fuhringer Ranc**	81.46	331	⇓P		P	23 50 56.3	-0.4	
	baz=82								
A18A	**Metzger Ranch,**	81.50	333	⇓P		P	23 50 56.2	-0.8	
	baz=82								
E13A	**Victor**	81.57	329	⇑P		P	23 50 57.8	+0.5	
	baz=82								
F12A	**Elk City**	81.59	328	⇓P		P	23 50 57.8	+0.3	
	baz=82								
C15A	**Salmond Ranch,**	81.83	331	⇓P		P	23 50 58.5	-0.2	
	baz=82,SNR=10								
A17A	**Triple J Farms**	81.88	333	⇓P		P	23 50 58.6	-0.3	
	baz=82								
D13A	**Huson**	82.17	329	⇓P		P	23 50 59.7	-0.8	
	baz=82								
B15A	**Bradely Ranch,**	82.21	331	⇓P		P	23 50 59.7	-1.0	
	baz=82								
E12A	**Beaver Dam Sad**	82.21	328	⇓P		P	23 51 00.5	-0.3	
	baz=82								
K05A	**Summer Lake**	82.43	323	⇑P		P	23 51 01.8	-0.2	
	baz=83								
LBTB	**Lobatse**	82.52	114	*e*P		P	23 51 02.9	0.0	
	comp=N,4.5nm,0.8s,mb4.2								
D12A	**Red Ives Fores**	82.57	329	⇑P		P	23 51 02.4	-0.2	
	baz=83								
I07A	**Izee**	82.58	325	⇓P		P	23 51 02.9	+0.2	
	baz=83								
C13A	**Hot Springs**	82.66	330	⇑P		P	23 51 02.7	-0.3	
	baz=83								
F10A	**Beach Ranch, E**	82.71	327	⇑P		P	23 51 03.2	-0.1	
	baz=83								
WALA	**Waterton Lakes**	83.36	331	*e*P		P	23 51 05.2	-1.4	
A13A	**Flathead Natio**	83.50	331	⇑P		P	23 51 07.5	+0.2	
	baz=84								
NEW	**Newport**	84.27	329	*e*P		P	23 51 09.0	-2.2	
FCC	**Fort Churchill**	84.82	346	*e*P		P	23 51 12.8	-0.9	
	comp=N,0.2nm,0.6s,mb3.0								
ESDC	**Sonseca Array**	85.78	44	P		P	23 51 18.9	-0.1	
	comp=N,2.0nm,0.9s,mb3.9,baz=241,slow=4.7,SNR=11								
ESLA	**Sonseca Array**	85.78	44	P		P	23 51 19.5	+0.6	
LSZ	**Lusaka**	88.54	106	*e*P		P	23 51 34.9	+2.1	
	comp=N,8.8nm,1.1s,mb4.6								
KEST	**Kesra**	92.85	52	P		P	23 51 52.5	+0.1	
	comp=N,1.0nm,0.9s,mb3.9,baz=195,slow=3.7,SNR=4.1								
YKA	**Yellowknife Ar**	93.52	340	P		P	23 51 53.6	-1.1	
	comp=N,2.5nm,0.5s,mb4.6,baz=135,slow=4.6,SNR=31								
WRAB	**Tennant Creek**	132.33	207	*e*PKPdf		PKPdf	23 57 54.0	+0.6	
BVAR	**Borovoye Array**	136.13	36	PKP		PKPdf	23 57 58.1	-1.4	
	comp=N,0.6nm,0.8s,baz=116,slow=3.4,SNR=3.7								
ZALV	**Zalesovo Beam**	142.70	28	PKP		PKPdf	23 58 07.1	-4.4	
ZALV	**Zalesovo Beam**	142.70	28	PKhKP		PKPpre	23 58 07.1		
	comp=N,2.2nm,0.5s,baz=306,slow=3.6,SNR=14								
KSH	**Kashi**	144.65	54	PKP		PKPdf	23 58 13.9	-1.4	
KSH				*es*PKP			23 59 13.1		
KSH				*e*PKS			00 01 49.0		
KSH				*e*SKS		SKSdf	00 05 07.6	-1.3	
KSH				AMB		AMB			
	comp=Z,130nm,4.7s								
MK31	**Makanchi Array**	145.88	39	*e*PKPdf		PKPdf	23 58 16.4	-0.8	
MKAR	**Makanchi Array**	145.88	39	PKPbc		PKPbc	23 58 16.9	-1.2	
	comp=Z,7.2nm,0.6s,baz=301,slow=3.5,SNR=60								
WMQ	**Urumqi**	150.70	40	*e*PKPbc		PKPdf	23 58 24.1	-1.1	
SONM	**Songino Array**	154.92	11	PKP		PKPdf	23 58 30.8	-0.4	
	comp=Z,0.4nm,0.6s,baz=321,slow=2.0,SNR=4.3								
HHC	**Hu-ho-hao-te**	162.45	4	*e*PKP		PKPdf	23 58 37.8	-2.5	
HHC				pPKP		pPKPdf	23 59 20.1	-4.6	
HHC				PKPab		PKPab	23 59 28.5	-0.3	
HHC				sPKP			23 59 37.2		
HHC				PKS			00 02 10.0		
HHC				PP		PP	00 03 13.8	+1.2	
HHC				SKS		SKSdf	00 05 24.6	-4.7	
HHC				SKKS		SKKSac	00 09 44.1	-1.1	
HHC				SS		SS	00 23 19.2	-0.2	
HHC				AMB		AMB			
	comp=Z,370nm,4.9s								
LZH	**Lanzhou**	164.91	30	*e*PKP		PKPdf	23 58 42.0	-0.7	
LZH				pPKP		pPKPdf	23 59 25.1	-2.1	
LZH				PKPab		PKPab	23 59 40.0	+0.2	
LZH				sPKP			23 59 41.5		
CD2	**Chengdu**	168.69	46	PKP		PKPdf	23 58 44.1	-1.7	
KMI	**Kunming**	170.30	77	PKP		PKPdf	23 58 45.9	-1.0	

ISCJB ***05*** *23:55:05.8±0.2,32.74N±0.02×105.62E±0.02,h10km, mb4.6/80,MS4.2/9,Error ellipse: s-maj=3.3km s-min=2.7km az=174.0*

IDC ***05*** *23:55:06.4±0.5,32.79N×105.59E,h0km,mb4.4/22, mb1 4.5/25,mb1mx4.4/28,mbtmp4.4/25,ML4.1/3,MS3.6/4, Ms1 3.7/4,ms1mx3.2/22,Error ellipse: s-maj=16.8km s-min=13.3km az=45.0*

BJI ***05*** *23:55:06.2,32.75N×105.62E,h10km,mB4.7/11,mb4.5/15, ML4.7/24,Ms4.2/24,Ms7 3.9/22*

NEIC ***05*** *23:55:08.1±0.1,32.77N×105.53E,h10km,mb4.8/45,Error ellipse: s-maj=3.6km s-min=3.2km az=208.0*

MOS ***05*** *23:55:09.4±0.7,32.78N×105.61E,h33km,mb4.9/52, MS4.1/8,Error ellipse: s-maj=7.4km s-min=4.5km az=116.6*

ISC 05 23:55:07.9±0.1, 32.74N±0.02×105.57E±0.02, h10km, n279, σ0.94/298, mb4.6/80, MS4.2/9, 34C-5D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	2.39	221	Pn	Pn	Pn	23 55 47.7	+0.6
CD2				Pg	Pg	Pg	23 55 51.0	-2.8
CD2				Sn	Sn	Sn	23 56 17.4	+0.9
CD2				Sg	Sg	Sg	23 56 23.2	-1.6
CD2				smax				
	comp=N,21μm,1.0s							
CD2				smax				
	comp=E,11μm,0.8s							
XAN	**Xi'an**	3.09	64	Pn	Pn	Pn	23 55 58.1	+1.4
XAN				Pg	Pg	Pg	23 56 04.2	-2.8
XAN				Sn	Sn	Sn	23 56 37.2	+3.6
XAN				Sg	Sg	Sg	23 56 45.6	-1.4
XAN				smax				
	comp=N,4μm,0.5s							
XAN				smax				
	comp=E,2μm,0.7s							
XAN				LR	LR			
	comp=N,1μm,4.3s							
XAN				LR	LR			
	comp=E,1μm,5.8s							
XAN				LR	LR			
	comp=Z,1μm,6.2s							
LZH	**Lanzhou**	3.63	337	Pn	Pn	Pn	23 56 06.2	+2.1
LZH				Pg	Pg	Pg	23 56 15.1	-2.3
LZH				Sn	Sn	Sn	23 56 44.8	-2.1
LZH				Sg	Sg	Sg	23 56 59.3	-5.1
LZH				smax				
	comp=N,6μm,1.2s							
LZH				smax				
	comp=E,4μm,0.8s							
LZH				LR	LR			
	comp=E,7μm,4.6s							
LZH				LR	LR			
	comp=Z,9μm,5.8s							
ENH	**Enshi**	4.16	125	*e*Pn	Pn	Pn	23 56 13.3	+2.0
ENH				*e*Pg	Pg	Pg	23 56 25.1	-2.4
ENH				*e*Sg	Sg	Sg	23 57 22.3	+0.9
GYA	**Guiyang**	6.34	171	Pn	Pn	Pn	23 56 42.3	+0.9
GYA				Pg	Pg	Pg	23 57 03.0	-6.3
GYA				Sn	Sn	Sn	23 57 52.3	-1.5
GYA				Sg	Sg	Sg	23 58 25.1	-6.2
GYA				smax				
	comp=N,420nm,1.0s							
GYA				smax				
	comp=E,660nm,1.0s							
GYA				LR	LR			
	comp=N,1μm,4.4s							
GYA				LR	LR			
	comp=E,2μm,4.4s							
GYA				LR	LR			
	comp=Z,2μm,4.7s							
WHN	**Wuhan**	7.80	104	Pn	Pn	Pn	23 57 01.2	-0.2
WHN				Sn	Sn	Sn	23 58 27.9	-1.9
WHN				LR	LR			
	comp=E,4μm,5.8s							
WHN				LR	LR			
	comp=Z,3μm,4.2s							
GTA	**Gaotai**	8.12	327	⇑P	Pn	Pn	23 57 05.6	-0.2
GTA				pP			23 57 09.1	
GTA				sP			23 57 10.7	
GTA				S	Sn	Sn	23 58 39.3	+1.7
GTA				sS			23 58 44.4	
GTA				pmax	pmax			
	comp=Z,29nm,1.1s							
GTA				pmax	pmax			
	comp=Z,100nm,5.7s							
GTA				LR	LR			
	comp=N,790nm,9.3s							
GTA				LR	LR			
	comp=E,760nm,9.0s							
GTA				LR	LR			
	comp=Z,560nm,9.0s							
BTO	**Baotou**	8.62	23	*e*P	Pn	Pn	23 57 11.8	-0.9
HHC	**Hu-ho-hao-te**	9.41	29	*e*P	Pn	Pn	23 57 21.6	-1.8
HHC				pP			23 57 24.7	
HHC				sP			23 57 27.7	
HHC				PP			23 57 29.8	
HHC				S	Sn	Sn	23 59 05.7	-3.5
HHC				pmax	pmax			
	comp=Z,15nm,0.8s							
HHC				pmax	pmax			
	comp=Z,120nm,4.2s							
HHC				LR	LR			
	comp=N,570nm,4.9s							
HHC				LR	LR			
	comp=E,780nm,4.8s							
HHC				LR	LR			
	comp=Z,640nm,6.6s							
TIA	**Tai'an**	10.14	67	P	Pn	Pn	23 57 35.0	+1.4
TIA				LR	LR			
	comp=N,290nm,5.1s							
TIA				LR	LR			
	comp=E,390nm,4.5s							
BJT	**Baijiatuau**	11.20	47	*e*Pn	Pn	Pn	23 57 48.4	+0.3
	comp=E,19nm,0.4s							
BJT	**Baijiatuau**	11.20	47	*e*P	Pn	Pn	23 57 48.4	+0.4
BJT				pmax	pmax			
	comp=Z,19nm,0.4s							
BJI	**Beijing**	11.22	47	P	Pn	Pn	23 57 47.9	-0.4
BJI				pmax	pmax			
	comp=Z,12nm,0.5s							
BJI				pmax	pmax			
	comp=Z,77nm,3.5s							
BJI				LR	LR			
	comp=N,860nm,8.6s							
BJI				LR	LR			
	comp=E,570nm,8.4s							
BJI				LR	LR			
	comp=Z,310nm,17.9s							
NJ2	**Nanjing**	11.25	90	*e*P	Pn	Pn	23 57 49.1	+0.4
NJ2				PP			23 58 00.0	
NJ2				S	Sn	Sn	23 59 53.5	-1.1
NJ2				pmax	pmax			
	comp=Z,330nm,5.7s							
NJ2				LR	LR			
	comp=N,470nm,14.0s							
NJ2				LR	LR			
	comp=E,480nm,14.0s							
NJ2				LR	LR			
	comp=Z,320nm,14.2s							
LSA	**Lhasa**	12.71	260	P	Pn	Pn	23 58 10.3	+1.6
LSA	**Lhasa**	12.71	260	*e*P	Pn	Pn	23 58 09.5	+0.8
SHL	**Shillong**	13.93	243	*e*PKP	Pn	Pn	23 58 24.0	-1.3
DL2	**Dalian**	14.40	60	P	Pn	Pn	23 58 36.7	+5.0
DL2				pmax	pmax			
	comp=Z,20nm,0.5s							
DL2				LR	LR			
	comp=N,220nm,12.9s							
DL2				LR	LR			
	comp=E,250nm,14.3s							
DL2				LR	LR			
	comp=Z,480nm,15.5s							
SONM	**Songino Array**	15.09	2	Pn	Pn	Pn	23 58 39.6	-1.4
SONM				Lg			00 02 53.0	
SONM				LR	LR		00 04 53.3	
SONM	**Songino Array**	15.09	2	Pn	Pn	Pn	23 58 39.6	-1.4
	comp=Z,0.5nm,0.3s,baz=186,slow=14,SNR=24							
SONM				Lg			00 02 53.0	
	comp=Z,0.1nm,0.3s,baz=172,slow=23,SNR=2.4							
SONM				LR	LR		00 04 53.3	
	comp=

JIRN Jiri 17.50 258 *e*P **Pn 23 59 11.3 -0.7**
comp=Z,47nm,0.9s
GUN Gumba 17.66 259 *e*P **Pn 23 59 14.0 -0.1**
comp=Z,94nm,0.9s
ZAK Zakamensk 17.70 355 *e*P **Pn 23 59 11.9 -2.5**
ZAK pmax pmax
comp=Z,4.0nm,1.4s
WMQ Urumqi 17.83 313 *e*P **Pn 23 59 14.5 -1.5**
WMQ pP pP 23 59 24.5 +5.0
WMQ sP sP 23 59 28.5 +7.7
WMQ pmax pmax
comp=Z,12nm,0.9s
WMQ pmax pmax
comp=Z,130nm,4.4s
WMQ Urumqi 17.83 313 sPKP **Pn 23 59 28.5 +13**
INCN Inchon 17.86 69 *e*P **Pn 23 59 17.0 +0.5**
comp=Z,56nm,1.4s
PKI Pulchoki 18.17 259 *e*P **Pn 23 59 19.2 -1.2**
comp=Z,44nm,0.8s
PKIN Phulchoki 18.18 259 *e*P **Pn 23 59 19.3 -1.2**
comp=Z,54nm,0.6s
KKN Kakani 18.20 260 *e*P **Pn 23 59 19.5 -1.2**
comp=Z,38nm,0.6s
DMN Daman 18.41 259 *e*P **Pn 23 59 21.5 -1.8**
comp=Z,70nm,1.0s
GKN Gorkha 18.66 261 *e*P **Pn 23 59 24.7 -1.6**
comp=Z,32nm,0.6s
KSRS Korea Array 18.87 69 P **Pn 23 59 29.4 +0.5**
comp=Z,1.5nm,0.3s,baz=253,slow=10,SNR=113
KSRS LR LR 00 07 15.3
comp=Z,209nm,19.3s,baz=80,slow=39
TLY Talaya 18.98 356 *e*P **Pn 23 59 29.2 -0.7**
comp=Z,2.5nm,0.6s
TLY Talaya 18.98 356 *e*P **Pn 23 59 30.0 +0.1**
TLY pmax pmax
comp=Z,7.0nm,1.2s
KOLN Koldanda 19.61 261 *e*P **Pn 23 59 34.4 -3.3**
comp=Z,28nm,0.8s
HIA Hailar 19.61 29 *e*P **Pn 23 59 36.0 -1.6**
comp=Z,33nm,0.9s
HIA Hailar 19.61 29 *e*P **Pn 23 59 36.0 -1.6**
HIA pmax pmax
comp=Z,33nm,0.9s
MDJ Mudanjiang 22.10 51 *e*P **P 00 00 05.7 +2.6**
comp=Z,70nm,1.6s,mb4.8
MK31 Makanchi Array 22.63 315 *e*P **P 00 00 09.0 +0.2**
MKAR Makanchi Array 22.63 315 P **P 00 00 08.9 +0.1**
comp=Z,8.0nm,0.8s,mb4.2,baz=108,slow=12,SNR=26
MKAR Makanchi Array 22.63 315 *i* P **P 00 00 08.8 0.0**
MKAR pmax pmax
comp=Z,8.0nm,0.8s
KSH Kashi 24.77 294 P **P 00 00 33.8 +4.1**
KSH *e*pP 00 00 43.0
KSH *es*P sP 00 00 47.2 +13
KSH *e*PP 00 01 11.6
KSH *e*PcP PcP 00 04 09.1 +2.9
KSH *e*S **S 00 04 53.0 +1.0**
KSH *es*S sS 00 05 08.3 +11
KSH *e*SS 00 05 52.4
KSH *e*ScP ScP 00 07 44.1 -1.1
KSH *e*PcS PcS 00 07 48.3 +2.1
KSH pmax pmax
comp=Z,2.0nm,0.7s,mb3.8
KSH pmax pmax
comp=Z,61nm,3.6s
KSH LR LR
comp=N,120nm,6.1s
KSH LR LR
comp=E,96nm,5.2s
KSH LR LR
comp=Z,120nm,5.8s
ULHL Ulahoi 25.02 301 P **P 00 00 34.6 +2.6**
SNR=6.2
KLR Kul'dur 25.54 42 *e*P **P 00 00 33.2 -3.4**
KLR pmax pmax
comp=E,97nm,1.6s
KLR pmax pmax
comp=Z,90nm,1.6s,mb5.0
KLR MLR MLR
comp=E,500nm,12.5s
KLR MLR MLR
comp=Z,900nm,12.5s,MS4.5
ZALV Zalesovo Beam 25.84 331 P **P 00 00 39.4 +0.2**
comp=Z,3.5nm,0.5s,mb4.1,baz=135,slow=8.5,SNR=17
ZALV Zalesovo Beam 25.84 331 P **P 00 00 39.4 +0.2**
ZALV pmax pmax
comp=Z,4.0nm,0.5s,mb4.2
KBK Karagaybulak 26.05 301 P **P 00 00 43.4 +2.1**
SNR=15
UCH Uchtor 26.28 300 P **P 00 00 45.5 +2.1**
SNR=18
UCH Uchtor 26.28 300 *e*P **P 00 00 45.6 +2.3**
comp=Z,17nm,1.2s,mb4.5
AAK Ala-Archa 26.37 301 *e*P **P 00 00 49.5 +5.3**
AAK Ala-Archa 26.37 301 P **P 00 00 44.3 +0.1**
comp=Z,1.6nm,0.3s,mb4.0,baz=192,slow=6.6,SNR=2.3
AAK Ala-Archa 26.37 301 P **P 00 00 44.3 +0.1**
AAK pmax pmax
comp=Z,2.0nm,0.4s,mb4.0
USP Ospenovka 26.50 302 P **P 00 00 47.3 +1.9**
SNR=12
KURK Kurchatov 26.73 320 *e*P **P 00 00 47.2 -0.1**
comp=Z,35nm,1.5s,mb4.7
KURK Kurchatov 26.73 320 *ce*P **P 00 00 47.2 -0.2**
KURK pmax pmax
comp=Z,20nm,1.2s,mb4.5
AML Almayashu 26.86 300 P **P 00 00 50.8 +2.2**
SNR=7.0
EKS2 Erkin-Say 26.89 301 *e*P **P 00 00 49.0 +0.1**
comp=Z,3.6nm,1.0s,mb3.9
MAJO Matsushiro 27.04 73 *e*P **P 00 00 50.8 +0.4**
MJAR Matsushiro Arr 27.05 73 P **P 00 00 50.2 -0.2**
comp=Z,3.8nm,0.7s,mb4.0,baz=278,slow=11,SNR=7.6
MJAR Matsushiro Arr 27.05 73 P **P 00 00 50.2 -0.2**
MJAR pmax pmax
comp=Z,4.0nm,0.7s
HABR Khabarovsk 27.12 46 *e*P **P 00 00 49.6 -1.3**
HABR *e**SP sP 00 01 02.7 +7.5
HABR *e* 00 01 32.5
HABR *e* 00 04 09.8
HABR S **S 00 05 26.0 -3.1**
HABR *e**SS sS 00 05 41.8 +7.7
HABR SS 00 06 34.4
HABR *e* 00 11 38.6
HABR pmax pmax
comp=Z,67nm,2.4s,mb4.8
HABR pmax pmax
comp=N,49nm,2.3s
HABR pmax pmax
comp=E,32nm,1.0s
HABR MLR MLR
comp=Z,160nm,15.0s,MS3.7
KBL Kabul 30.36 284 *e*P **P 00 01 20.5 +0.6**
comp=Z,3.0nm,0.6s,mb4.2
KBL Kabul 30.36 284 *e*P **P 00 01 20.5 +0.6**
KBL pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
PSI Prapat 30.43 193 P **P 00 01 21.5 +0.8**
comp=Z,4.0nm,0.4s,mb4.5,baz=347,slow=7.2,SNR=4.7
PSI Prapat 30.43 193 P **P 00 01 21.5 +0.9**
PSI pmax pmax
comp=Z,4.0nm,0.4s,mb4.5
YSS Yuzh-Sakhalins 31.56 52 *e*P **P 00 01 31.2 +0.9**
BVAR Borovoye Array 32.32 319 P **P 00 01 37.3 +0.4**
comp=Z,2.7nm,0.8s,mb4.1,baz=118,slow=9.3,SNR=13
BVAR PcP PcP 00 04 24.7 0.0
comp=Z,1.2nm,0.6s,baz=134,slow=2.5,SNR=4.7
BVAR ScP ScP 00 08 08.9 +0.5
comp=Z,0.7nm,0.7s,baz=129,slow=2.1,SNR=4.5
BRVK Borovoye 32.39 319 *e*P **P 00 01 38.1 +0.5**
comp=Z,21nm,1.8s,mb4.7
BRVK Borovoye 32.39 319 *c i*P **P 00 01 37.7 +0.1**
BRVK pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
YAK Yakutsk 33.13 21 *e*P **P 00 01 44.2 +0.3**
comp=Z,43nm,0.7s,mb5.5
YAK Yakutsk 33.13 21 *e*P **P 00 01 44.1 +0.2**
YAK *e**PP pP 00 01 54.6 +7.6
YAK *e* 00 02 49.5
YAK *e* 00 04 29.1
YAK *e*S **S 00 06 58.2 -4.8**
YAK *e* 00 12 12.8
YAK pmax pmax
comp=Z,33nm,0.9s,mb5.3
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=Z,18nm,0.9s,mb5.0
YAK smax
comp=E,72nm,16.6s
YAK MLR MLR
comp=Z,165nm,14.0s,MS3.9
YAK MLR MLR
comp=N,90nm,12.0s,MS3.8
YAK MLR MLR
comp=E,90nm,14.0s,MS3.8
SVE Sverdlovsk 38.95 322 ‖ *e*P **P 00 02 33.5 -0.3**
SVE pmax pmax
comp=Z,22nm,1.2s,mb4.8
AKTK Aktyubinsk 38.96 311 P **P 00 02 34.5 +0.5**
AKTO Aktyubinsk 38.96 311 P **P 00 02 34.5 +0.5**
comp=Z,2.1nm,0.6s,mb4.0,baz=106,slow=22,SNR=7.2
ARU Arti 39.93 321 *e*P **P 00 02 42.0 0.0**
comp=Z,24nm,1.2s,mb4.8
ARU Arti 39.93 321 *c i*P **P 00 02 42.1 +0.2**
ARU *e* 00 04 12.1
ARU *e* 00 04 46.1
ARU S **S 00 08 46.0 -0.8**
ARU SS SS 00 11 36.0 -7.1
ARU pmax pmax
comp=Z,25nm,1.2s,mb4.8
TIXI Tiksi 40.91 11 *e*P **P 00 02 49.6 -0.2**
comp=Z,16nm,0.6s,mb4.8
TIXI Tiksi 40.91 11 *e*P **P 00 02 49.6 -0.3**
TIXI pmax pmax
comp=Z,16nm,0.6s,mb4.8
SEY Seymchan 42.05 30 ‖ *e*P **P 00 02 59.2 -0.2**
GNI Garni 48.66 297 *e*P **P 00 03 52.2 +0.2**
MIB Mutribah 49.32 283 *e*P **P 00 03 56.9 -0.4**
MIB AMb AMB 00 04 01.4
comp=Z,23nm,1.3s,mb5.0
VRHR Novokhopersk 49.37 312 *e*P **P 00 03 56.5 -0.8**
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,7.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
RDF Al-Radifah 49.44 282 *e*P **P 00 03 58.1 -0.1**
RDF AMb AMB 00 04 00.9
comp=Z,24nm,0.7s,mb5.3
KIV Kislovodsk 49.48 302 *e*P **P 00 03 59.4 +1.1**
comp=Z,6.2nm,0.9s,mb4.6
KIV Kislovodsk 49.48 302 *e*P **P 00 03 59.3 +1.0**
KIV pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
KLMR Klimovskoe 50.44 325 *e*P **P 00 04 04.2 -1.2**
KLMR pmax pmax
comp=Z,59nm,1.5s,mb5.4
VORD Divnogorie 50.84 312 *e*P **P 00 04 08.4 -0.2**
VORD pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VSR Storozhevoye 50.90 312 *e*P **P 00 04 08.5 -0.5**
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VSR pmax pmax
comp=N,5.0nm,0.5s
OBN Obninsk 52.11 317 ‖ *e*P **P 00 04 17.9 -0.1**
OBN *e* 00 06 19.1
OBN pmax pmax
comp=Z,26nm,1.7s,mb4.9
MALT Malatya 53.85 296 *e*P **P 00 04 32.1 +1.0**
comp=Z,2.8nm,0.7s,mb4.3
MALT Malatya 53.85 296 *e*P **P 00 04 32.1 +1.0**
MALT pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
FITZ Fitzroy Crossi 54.08 156 *e*P **P 00 04 32.1 -0.7**
JOF Joensuu 54.32 327 *e*P **P 00 04 33.6 -0.5**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
JOF Joensuu 54.32 327 *ep* **P 00 04 33.6 -0.5**
comp=Z,1.9nm,0.4s,mb4.4
MBWA Marble Bar 55.28 164 P **P 00 04 42.1 +0.6**
KEV Kevo 55.75 336 *e*P **P 00 04 44.0 -0.4**
comp=Z,4.0nm,0.5s,mb4.7
KEV Kevo 55.75 336 *e*P **P 00 04 44.0 -0.3**
KEV pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
KEV Kevo 55.75 336 *ep* **P 00 04 43.9 -0.4**
comp=Z,0.5nm,0.4s,mb3.9
ARCES ARCESS Array B 56.28 335 P **P 00 04 48.1 -0.1**
comp=Z,2.3nm,0.6s,mb4.4,baz=80,slow=9.1,SNR=27
ARCES ARCESS Array B 56.28 335 P **P 00 04 48.1 -0.1**
ARCES pmax pmax
comp=Z,2.0nm,0.6s
ARE0 ARCESS Array S 56.28 335 *e*P **P 00 04 48.6 +0.4**
KAF Kangasniemi 56.71 326 *e*P **P 00 04 50.3 -1.0**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KAF Kangasniemi 56.71 326 *ep* **P 00 04 50.3 -1.0**
comp=Z,1.6nm,0.4s,mb4.5
FINES FINESS Array B 56.91 326 P **P 00 04 52.5 -0.2**
comp=Z,9.9nm,0.5s,mb5.1,baz=91,slow=7.5,SNR=100
FINES FINESS Array B 56.91 326 P **P 00 04 52.5 -0.2**
FINES pmax pmax
comp=Z,10.0nm,0.5s
BR131 Keskin Array S 57.03 299 *e*P **P 00 04 54.1 +0.2**
BRTR Keskin Array B 57.03 299 P **P 00 04 53.8 -0.1**
comp=Z,1.6nm,0.8s,mb4.1,baz=100,slow=6.6,SNR=10
BRTR Keskin Array B 57.03 299 *ce*P **P 00 04 53.7 -0.2**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 57.18 313 P **P 00 04 54.5 -0.4**
AKASG Malin Array Be 57.18 313 P **P 00 04 54.5 -0.4**
comp=Z,5.3nm,0.5s,mb4.8,baz=68,slow=6.6,SNR=13
AKASG Malin Array Be 57.18 313 *ce*P **P 00 04 54.5 -0.4**
AKASG pmax pmax
comp=Z,5.0nm,0.5s
PMG Port Moresby 57.69 129 P **P 00 04 58.9 +0.1**
WRAB Tennant Creek 59.17 148 *e*P **P 00 05 08.5 -0.5**
comp=Z,14nm,0.7s,mb5.1
WRAB Tennant Creek 59.17 148 *e*P **P 00 05 08.5 -0.5**
WRAB pmax pmax
comp=Z,14nm,0.7s,mb5.1
WB2 Warramunga Arr 59.18 148 *e*P **P 00 05 09.0 -0.1**
CFR Carcaliu 59.32 307 ⇑P **P 00 05 10.1 +0.2**
TIRR Tirgusor 59.34 306 *e*P **P 00 05 09.9 -0.2**
comp=Z,3.5nm,0.6s,mb4.6
TIRR Tirgusor 59.34 306 *e*P **P 00 05 09.9 -0.2**
TIRR pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
TESR 59.92 308 ‖ P **P 00 05 14.1 +0.1**
VRI Vrincioaia 60.06 308 ⇑P **P 00 05 15.9 +0.9**
BURAR Bucovina Array 60.53 310 ⇑P **P 00 05 18.2 0.0**
BUR08 Bucovina Ar. S 60.53 310 *e*P **P 00 05 18.5 +0.3**
BUR08 *e*PcP PcP 00 05 59.1 -3.6
MLR Muntele Rosu 60.70 307 ⇑P **P 00 05 20.5 +1.1**
VOIR 61.32 308 ⇑P **P 00 05 23.9 +0.4**
KWP Kalwaria Pacla 61.51 313 *e*P **P 00 05 25.4 +0.7**
KWP Kalwaria Pacla 61.51 313 *e*P **P 00 05 25.0 +0.3**
comp=Z,24nm,0.8s,mb5.4
KWP Kalwaria Pacla 61.51 313 *e*P **P 00 05 25.0 +0.2**
KWP pmax pmax
comp=Z,24nm,0.8s,mb5.4
ASAR Alice Springs 62.27 151 P **P 00 05 30.3 +0.2**
comp=Z,4.6nm,0.6s,mb4.8,baz=332,slow=6.9,SNR=50
ASAR Alice Springs 62.27 151 P **P 00 05 30.3 +0.2**
ASAR pmax pmax
comp=Z,5.0nm,0.6s
DRGR 62.41 310 ⇑P **P 00 05 31.6 +0.6**
STHS Stebnicka Huta 62.48 313 *e*P **P 00 05 32.0 +0.7**
comp=Z,2.6nm,0.7s,mb4.5
STHS Stebnicka Huta 62.48 313 *e*P **P 00 05 32.0 +0.7**
STHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
STHS Stebnicka Huta 62.48 313 *e*P **P 00 05 32.0 +0.7**
NIE Niedzica 63.05 313 *e*P **P 00 05 36.2 +1.1**
OJC Ojcow 63.10 314 *e*P **P 00 05 35.6 +0.2**
BZS Buzias 63.53 309 ⇑P **P 00 05 38.5 +0.1**
VTS Vitosha 63.53 305 ⇑P **P 00 05 39.1 +0.7**
PSZ Piszkesteto 63.83 312 *e*P **P 00 05 40.3 0.0**
comp=Z,9.6nm,1.2s,mb4.7
PSZ Piszkesteto 63.83 312 *e*P **P 00 05 40.3 0.0**
PSZ pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
NOA NORSAR Array B 63.95 327 P **P 00 05 39.9 -1.0**
NOA NORSAR Array B 63.95 327 P **P 00 05 39.9 -1.0**
comp=Z,7.7nm,0.8s,mb4.8,baz=71,slow=6.7,SNR=26
NOA NORSAR Array B 63.95 327 P **P 00 05 39.9 -1.0**
NOA pmax pmax
comp=Z,8.0nm,0.8s
NAO01 NORSAR Array S 64.17 327 P **P 00 05 40.9 -1.4**
OKC Ostrava-Krasne 64.23 314 *e*P **P 00 05 43.5 +0.6**
OKC MLR MLR
comp=Z,200nm,14.2s,MS4.5
OKC Ostrava-Krasne 64.23 314 *e*P **P 00 05 43.5 +0.6**
OKC AMS AMS 00 47 20.0
comp=Z,200nm,14.2s
VYHS Vyhne 64.29 313 *e*P **P 00 05 44.0 +0.7**
comp=Z,7.5nm,1.5s,mb4.5
VYHS Vyhne 64.29 313 *e*P **P 00 05 44.0 +0.7**
VYHS pmax pmax
comp=Z,8.0nm,1.5s,mb4.5
VYHS Vyhne 64.29 313 *e*P **P 00 05 44.0 +0.7**
KOLL Kolacno 64.53 313 *e*P **P 00 05 45.4 +0.6**
KOLL Kolacno 64.53 313 *e*P **P 00 05 45.4 +0.6**
MORC Moravsky Berou 64.62 314 *e*P **P 00 05 45.6 +0.1**
comp=Z,21nm,1.6s,mb4.9
MORC Moravsky Berou 64.62 314 *e*P **P 00 05 45.6 +0.2**
MORC pmax pmax
comp=Z,21nm,1.6s,mb4.9
TTA Tatalina 65.03 30 *e*P **P 00 05 48.0 +0.1**
DPC Dobruska-Polom 65.14 315 *e*P **P 00 05 49.5 +0.7**
DPC Dobruska-Polom 65.14 315 *e*P **P 00 05 49.5 +0.7**
DPC AMS AMS 00 47 30.0
PKSM Moragy 65.25 310 ‖ P **P 00 05 49.9 +0.3**
UPC Upice 65.26 315 *e*P **P 00 05 50.8 +1.2**
UPC Upice 65.26 315 *e*P **P 00 05 50.8 +1.2**
VRAC Vranov 65.36 314 ⇑P **P 00 05 50.3 0.0**
TREC Trest 66.04 314 *e*P **P 00 05 55.5 +0.8**
TREC MLR MLR
comp=Z,100nm,10.9s,MS4.3
TREC Trest 66.04 314 *e*P **P 00 05 55.5 +0.8**
TREC AMS AMS 00 48 10.0
comp=Z,100nm,10.9s
PVCC Panska Ves 66.11 316 AMS AMS 00 48 30.0
comp=Z,300nm,17.4s
PRU Pruhonice 66.33 315 *e*P **P 00 05 57.4 +0.9**
PRU MLR MLR
comp=Z,200nm,17.2s,MS4.4
PRU Pruhonice 66.33 315 *e*P **P 00 05 57.4 +0.9**
PRU AMS AMS 00 45 40.0
comp=Z,200nm,17.2s
BRG Berggiesshubel 66.34 316 *e*P **P 00 05 56.3 -0.2**
comp=Z,3.0nm,0.7s,mb4.4
BRG Berggiesshubel 66.34 316 *e*P **P 00 05 56.3 -0.3**
BRG pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
CONA Conrad Observa 66.34 313 ⇑ *i*pP **P 00 05 57.2 +0.6**
comp=Z,6.3nm,1.2s,mb4.5
CLL Collm 66.71 317 *e*P **P 00 05 59.0 +0.1**
CLL Collm 66.71 317 *e*P **P 00 05 59.0 +0.1**
comp=Z,12nm,1.3s,mb4.8
KHC Kasperske Hory 67.25 315 *e*P **P 00 06 02.5 +0.1**
KHC MLR MLR
comp=Z,300nm,14.5s,MS4.7
KHC Kasperske Hory 67.25 315 *e*P **P 00 06 02.5 +0.1**
KHC AMS AMS 00 48 40.0
comp=Z,300nm,14.5s
MOA Molln 67.36 313 ⇑ *i*P **P 00 06 03.5 +0.4**
comp=Z,4.7nm,0.9s,mb4.5
COLA College 67.41 26 *e*P **P 00 06 03.4 +0.2**
comp=Z,11nm,0.8s,mb4.9
COLA College 67.41 26 *e*P **P 00 06 03.4 +0.3**
COLA pmax pmax
comp=Z,11nm,0.8s,mb4.9
NKC Novy Kostel 67.47 316 *e*P **P 00 06 04.2 +0.4**
NKC MLR MLR
comp=Z,200nm,13.3s,MS4.5
NKC Novy Kostel 67.47 316 *e*P **P 00 06 04.2 +0.4**
NKC AMS AMS 00 49 40.0
comp=Z,200nm,13.3s
ILAR Eielson Array 67.82 26 P **P 00 06 04.7 -1.0**
comp=Z,4.7nm,1.2s,mb4.4,baz=291,slow=5.6,SNR=24
ILAR LR LR 00 38 18.1
comp=Z,60nm,20.0s,MS3.8,baz=337,slow=38
ILAR Eielson Array 67.82 26 P **P 00 06 04.7 -1.0**
ILAR pmax pmax
comp=Z,5.0nm,1.2s
ILAR MLR MLR
comp=Z,60nm,20.0s
OHAK Old Harbor 68.71 35 *e*P **P 00 06 11.7 +0.2**
comp=Z,74nm,1.8s,mb5.3
KDAK Kodiak Island 68.78 34 P **P 00 06 11.9 0.0**
comp=Z,7.7nm,0.6s,mb4.8,baz=298,slow=3.8,SNR=10
KDAK Kodiak Island 68.78 34 *i* P **P 00 06 11.7 -0.2**
TIP Timpagrande 69.37 304 *e*P **P 00 06 15.8 -0.1**
MOTA Moosalm 69.51 314 ⇑ *i*P **P 00 06 16.3 -0.3**
comp=Z,4.6nm,0.9s,mb4.4
INK Inuvik 70.20 20 *e*P **P 00 06 20.6 +0.2**
comp=Z,16nm,1.2s,mb4.8
INK Inuvik 70.20 20 *e*P **P 00 06 20.6 +0.2**
INK pmax pmax
comp=Z,16nm,1.2s
AQU L'Aquila 70.26 308 *e*P **P 00 06 21.1 -0.3**
comp=Z,4.3nm,0.5s,mb4.6
AQU L'Aquila 70.26 308 *e*P **P 00 06 21.1 -0.2**
AQU pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
BMRM Bremner River 70.70 29 *e*P **P 00 06 24.0 +0.3**
comp=Z,22nm,1.0s,mb5.0
DAWY Dawson 70.94 25 *e*P **P 00 06 25.1 +0.1**
CDF Champ du Feu 71.31 316 ⇑ *i*P **P 00 06 27.5 -0.1**
comp=Z,23nm,1.3s,mb4.7
CDF Champ du Feu 71.31 316 ⇑ *i*P **P 00 06 27.5 -0.1**
comp=Z,12nm,1.3s,mb4.7
CDF Champ du Feu 71.31 316 ⇑ *i*P **P 00 06 27.5 -0.1**
CDF pmax pmax
comp=Z,12nm,1.3s,mb4.7
WLF Walferdange 71.36 317 *e*P **P 00 06 28.1 +0.3**
comp=Z,47nm,1.6s,mb5.2
WLF Walferdange 71.36 317 *e*P **P 00 06 28.1 +0.2**
WLF pmax pmax
comp=Z,47nm,1.6s,mb5.2
HINF Hinteralfeld 71.84 315 *e*P **P 00 06 30.3 -0.5**
GIVF Givet 71.90 318 *e*P **P 00 06 31.1 0.0**
BAIF Baives 72.27 318 *e*P **P 00 06 32.1 -1.2**
KMBO Kilima Mbogo 72.50 257 *e*P **P 00 06 37.2 +2.0**
comp=Z,5.1nm,0.8s,mb4.5
KMBO Kilima Mbogo 72.50 257 P **P 00 06 36.6 +1.4**
comp=Z,4.0nm,0.8s,mb4.4,baz=183,slow=23,SNR=13
KMBO Kilima Mbogo 72.50 257 P **P 00 06 36.6 +1.4**
KMBO pmax pmax
comp=Z,4.0nm,0.8s
MEZF Maizieres J'vi 72.56 317 *e*P **P 00 06 34.8 -0.3**
comp=Z,6.2nm,0.7s,mb4.3
MEZF Maizieres J'vi 72.56 317 *e*P **P 00 06 34.8 -0.3**
comp=Z,6.2nm,0.7s,mb4.7
STKA Stephens Creek 72.72 148 *e*P **P 00 06 36.5 +0.4**
STKA Stephens Creek 72.72 148 P **P 00 06 36.3 +0.2**
comp=Z,3.9nm,0.9s,mb4.3,baz=309,slow=8.3,SNR=4.8
CABF La Chapelle 72.89 315 *e*P **P 00 06 36.5 -0.6**
LPG La Plagne 73.03 313 ⇑ *i*P **P 00 06 38.6 +0.7**
comp=Z,19nm,0.8s,mb4.8
LPG La Plagne 73.03 313 ⇑ *i*P **P 00 06 38.6 +0.7**
comp=Z,9.6nm,0.8s,mb4.8
LPG La Plagne 73.03 313 ⇑ *i*P **P 00 06 38.6 +0.7**
LPG pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
LPL La Plagne 73.04 313 ⇑ *i*P **P 00 06 38.5 +0.5**
comp=Z,10.0nm,0.6s,mb4.6
LPL La Plagne 73.04 313 ⇑ *i*P **P 00 06 38.5 +0.5**
comp=Z,5.0nm,0.6s,mb4.6
LPL La Plagne 73.04 313 ⇑ *i*P **P 00 06 38.5 +0.5**
LPL pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
PGF Pioggiola 73.06 310 *e*P **P 00 06 38.4 +0.3**
MBDF Montbardon 73.40 313 *e*P **P 00 06 39.8 -0.3**
SBF Sospel 73.41 312 *e*P **P 00 06 40.1 -0.1**
HYT Haines Junctio 73.60 27 *e*P **P 00 06 42.0 +1.0**
ORIF Oris-en-Rattie 73.86 313 ⇑ *i*P **P 00 06 42.8 0.0**
comp=Z,6.1nm,0.7s,mb4.4
ORIF Oris-en-Rattie 73.86 313 ⇑ *i*P **P 00 06 42.8 0.0**
comp=Z,3.0nm,0.6s,mb4.4
ORIF Oris-en-Rattie 73.86 313 ⇑ *i*P **P 00 06 42.8 0.0**
ORIF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
LOR Lormes 73.88 316 *e*P **P 00 06 42.5 -0.4**
comp=Z,9.5nm,1.1s,mb4.4

LOR	**Lormes**	**73.88**	**316**	*e*P		**P**	**00 06 42.5**	**-0.4**
	comp=Z,4.8nm,1.0s,mb4.4							
LOR	**Lormes**	**73.88**	**316**	*e*P		**P**	**00 06 42.5**	**-0.4**
LOR				pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.4							
FRF	**La Foret Royal**	**74.06**	**312**	*e*P		**P**	**00 06 44.0**	**0.0**
SSF	**Saint Saulge**	**74.19**	**316**	*e*P		**P**	**00 06 44.2**	**-0.5**
SMF	**Signal de Mont**	**74.21**	**315**	*e*P		**P**	**00 06 44.5**	**-0.3**
	comp=Z,20nm,1.2s,mb4.6							
SMF	**Signal de Mont**	**74.21**	**315**	*e*P		**P**	**00 06 44.5**	**-0.3**
	comp=Z,10nm,1.2s,mb4.6							
SMF	**Signal de Mont**	**74.21**	**315**	*e*P		**P**	**00 06 44.5**	**-0.3**
SMF				pmax	pmax			
	comp=Z,10.0nm,1.2s,mb4.6							
LMR	**La Mourre**	**74.26**	**312**	⇑ *i*P		**P**	**00 06 45.3**	**+0.1**
	comp=Z,10nm,0.7s,mb4.5							
LMR	**La Mourre**	**74.26**	**312**	⇑ *i*P		**P**	**00 06 45.3**	**+0.1**
	comp=Z,5.1nm,0.7s,mb4.6							
LMR	**La Mourre**	**74.26**	**312**	⇑ *i*P		**P**	**00 06 45.3**	**+0.1**
LMR				pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.5							
VSL	**Villasalto**	**74.30**	**307**	P		**P**	**00 06 45.9**	**+0.4**
AVF	**Avril sur Loir**	**74.42**	**316**	*e*P		**P**	**00 06 45.7**	**-0.4**
	comp=Z,21nm,1.3s,mb4.6							
AVF	**Avril sur Loir**	**74.42**	**316**	*e*P		**P**	**00 06 45.7**	**-0.4**
	comp=Z,11nm,1.3s,mb4.6							
AVF	**Avril sur Loir**	**74.42**	**316**	*e*P		**P**	**00 06 45.7**	**-0.4**
AVF				pmax	pmax			
	comp=Z,11nm,1.3s,mb4.6							
SMRF	**Simiane la Rot**	**74.52**	**312**	*e*P		**P**	**00 06 45.7**	**-1.0**
VIVF	**Saint-Julien-l**	**74.63**	**314**	*e*P		**P**	**00 06 47.0**	**-0.3**
	comp=Z,13nm,1.3s,mb4.4							
VIVF	**Saint-Julien-l**	**74.63**	**314**	*e*P		**P**	**00 06 47.0**	**-0.3**
	comp=Z,6.7nm,1.3s,mb4.4							
VIVF	**Saint-Julien-l**	**74.63**	**314**	*e*P		**P**	**00 06 47.0**	**-0.3**
VIVF				pmax	pmax			
	comp=Z,7.0nm,1.3s,mb4.4							
BGF	**Bois d'Agland**	**74.84**	**316**	*e*P		**P**	**00 06 48.3**	**-0.2**
	comp=Z,26nm,1.3s,mb4.7							
BGF	**Bois d'Agland**	**74.84**	**316**	*e*P		**P**	**00 06 48.3**	**-0.2**
	comp=Z,13nm,1.3s,mb4.7							
BGF	**Bois d'Agland**	**74.84**	**316**	*e*P		**P**	**00 06 48.3**	**-0.2**
BGF				pmax	pmax			
	comp=Z,13nm,1.3s,mb4.7							
SKAG	**Skagway**	**75.31**	**27**	*e*P		**P**	**00 06 52.3**	**+1.3**
	comp=Z,14nm,0.7s,mb5.0							
TCF	**Toulx Ste Croi**	**75.36**	**316**	*e*P		**P**	**00 06 51.4**	**-0.1**
	comp=Z,33nm,1.5s,mb4.7							
TCF	**Toulx Ste Croi**	**75.36**	**316**	*e*P		**P**	**00 06 51.4**	**-0.1**
	comp=Z,16nm,1.5s,mb4.7							
TCF	**Toulx Ste Croi**	**75.36**	**316**	*e*P		**P**	**00 06 51.4**	**-0.1**
TCF				pmax	pmax			
	comp=Z,16nm,1.5s,mb4.7							
LASF	**Ste Croix**	**75.53**	**313**	*e*P		**P**	**00 06 53.0**	**+0.5**
	comp=Z,12nm,1.0s,mb4.5							
FLN	**La Foliniere**	**75.56**	**319**	*e*P		**P**	**00 06 52.4**	**-0.2**
GRR	**Gorron**	**75.97**	**319**	*e*P		**P**	**00 06 54.7**	**-0.3**
KEST	**Kesra**	**76.19**	**304**	P		**P**	**00 06 57.4**	**+1.0**
	comp=Z,1.5nm,1.1s,mb3.8,baz=347,slow=4.4,SNR=4.4							
RJF	**Les Rejaudoux**	**76.29**	**315**	*e*P		**P**	**00 06 56.5**	**-0.3**
MFF	**Saint Martin d**	**76.56**	**317**	*e*P		**P**	**00 06 58.4**	**+0.1**
MTLF	**Montolieu**	**76.93**	**313**	*e*P		**P**	**00 07 00.4**	**-0.1**
SGMF	**Saint Gilles**	**76.99**	**319**	*e*P		**P**	**00 07 00.3**	**-0.4**
ETSF	**Etsaut**	**78.87**	**314**	*e*P		**P**	**00 07 11.7**	**+0.4**
YKA	**Yellowknife Ar**	**79.76**	**18**	P		**P**	**00 07 15.6**	**-0.2**
	comp=Z,3.7nm,0.8s,mb4.4,baz=326,slow=4.9,SNR=13							
YKA	**Yellowknife Ar**	**79.76**	**18**	P		**P**	**00 07 15.6**	**-0.2**
YKA				pmax	pmax			
	comp=Z,4.0nm,0.8s							
ESDC	**Sonseca Array**	**82.83**	**313**	P		**P**	**00 07 32.3**	**-0.2**
	comp=Z,0.5nm,0.7s,mb3.7,baz=44,slow=5.6,SNR=5.2							
FCC	**Fort Churchill**	**87.37**	**10**	*e*P		**P**	**00 07 56.0**	**+1.0**
FFC	**Flin Flon**	**89.71**	**16**	*e*P		**P**	**00 08 06.3**	**+0.2**
	comp=Z,6.5nm,0.9s,mb5.0							
FFC	**Flin Flon**	**89.71**	**16**	*i* P		**P**	**00 08 06.5**	**+0.4**
SCHQ	**Schefferville**	**92.54**	**356**	P		**P**	**00 08 19.1**	**0.0**
	comp=Z,2.7nm,0.8s,mb4.8,baz=65,slow=16,SNR=3.8							
SLMT	**Seeley Lake**	**92.97**	**25**	*e*P		**P**	**00 08 21.3**	**0.0**
LBTB	**Lobatse**	**95.35**	**244**	*e*P		**P**	**00 08 32.0**	**-0.6**
NVAR	**Mina Array Bea**	**98.28**	**33**	P		**P**	**00 08 47.5**	**+1.8**
	comp=Z,0.5nm,0.5s,mb4.3,baz=259,slow=0.9,SNR=4.7							
TSUM	**Tsumeb**	**98.51**	**253**	*e*P		**P**	**00 08 46.5**	**-0.4**
OTAV	**Otavalo**	**146.98**	**7**	*e*PKPdf		PKPdf	00 14 50.6	+1.1
OTAV				PKPbc		PKPbc	00 14 52.3	+0.9
LPAZ	**La Paz**	**162.65**	**339**	PKP		PKPdf	00 15 12.6	+2.0
	comp=Z,1.3nm,0.9s,baz=329,slow=3.0,SNR=3.9							
LPAZ	**La Paz**	**162.65**	**339**	PKIKP		PKPdf	00 15 12.6	+1.9
LPAZ				pmax	pmax			
	comp=Z,1.0nm,1.0s							

*THE **05** 23:59:12.7, 38.05N×20.21E, h0km±2km, ML2.5/3, Error ellipse: s-maj=4.1km s-min=2.0km az=230.0*
*CSEM **05** 23:59:13.6±0.6, 38.10N×20.29E, h2km, MD3.6, Error ellipse: s-maj=11.3km s-min=6.9km az=64.0*
*ISCJB **05** 23:59:14.4±0.9, 38.08N±0.04×20.30E±0.06, h10km, Error ellipse: s-maj=7.2km s-min=4.7km az=149.8*
*ATH **05** 23:59:14.9, 38.04N×20.40E, h8km±2km, MD3.6/11*
*NEIC **05** 23:59:14.9, 38.04N×20.40E, h8km, MD3.6(ATH), After ATH.*
ISC 05 23:59:12.6±1.2, 38.04N±0.04×20.22E±0.06, h1km±6km, n49, σ1§33/77, 2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.33**	**64**	⇓ *i*Pg	**Pg**	**23 59 18.8**	**-0.1**
VLS				*e*Sg	**Sg**	**23 59 23.1**	**0.0**
VLS	**Valsamata**	**0.33**	**64**	⇓ *i*PG	**Sg**	**23 59 18.8**	**-0.1**
VLS				*e*SG	**Sg**	**23 59 23.1**	**0.0**
VLS	**Valsamata**	**0.33**	**64**	P	**Pg**	**23 59 18.8**	**-0.1**
VLS				S	**Sg**	**23 59 23.0**	**-0.1**
VLS	**Valsamata**	**0.33**	**64**	P	**Pg**	**23 59 18.8**	**-0.1**
VLS				*e*Sg	**Sg**	**23 59 23.1**	**0.0**
KFL	**Anninata**	**0.46**	**81**	P	**Pg**	**23 59 21.4**	**0.0**
KFL				S	**Sg**	**23 59 27.6**	**+0.3**
KFL	**Anninata**	**0.46**	**81**	P	**Pg**	**23 59 21.4**	**0.0**
KFL				S	**Sg**	**23 59 27.6**	**+0.3**
LKD2	**Lefkada island**	**0.83**	**25**	P	**Pg**	**23 59 27.2**	**-1.3**
LKD2				S	**Sg**	**23 59 41.2**	**+2.0**
LKD2	**Lefkada island**	**0.83**	**25**	P	**Pg**	**23 59 27.2**	**-1.3**
LKD2				S	**Sg**	**23 59 41.2**	**+2.0**
RLS	**Riolos of Patr**	**0.99**	**88**	*e*Pb	**Pb**	**23 59 31.0**	**-1.5**
RLS				*e*Sb	**Sb**	**23 59 42.9**	**-3.1**
RLS	**Riolos of Patr**	**0.99**	**88**	*e*PB	**Pb**	**23 59 31.0**	**-1.5**
RLS				*e*SB	**Sb**	**23 59 42.9**	**-3.1**
RLS	**Riolos of Patr**	**0.99**	**88**	*e*Pb	**Pb**	**23 59 31.0**	**-1.5**
RLS				*e*Sb	**Sb**	**23 59 42.9**	**-3.1**
UPR	**University Cam**	**1.26**	**78**	*e*PN	**Pg**	**23 59 36.0**	**-0.8**
UPR				*e*SB	**Sb**	**23 59 50.8**	**-3.1**
UPR	**University Cam**	**1.26**	**78**	P	**Pg**	**23 59 36.0**	**-0.8**
UPR	**University Cam**	**1.26**	**78**	P	**Pg**	**23 59 36.0**	**-0.8**
UPR				*e*Sb	**Sb**	**23 59 50.8**	**-3.1**
EFP	**Efpalio**	**1.39**	**73**	*e*PN	**Pn**	**23 59 37.9**	**-1.2**
EFP				*e*SB	**Sb**	**23 59 55.5**	**-2.0**
EFP	**Efpalio**	**1.39**	**73**	P	**Pn**	**23 59 37.9**	**-1.2**
EFP				S	**Sg**	**23 59 59.2**	**+2.0**
EFP	**Efpalio**	**1.39**	**73**	P	**Pn**	**23 59 37.9**	**-1.2**
EFP				*e*Sb	**Sb**	**23 59 55.5**	**-2.0**
EFP				S	**Sg**	**23 59 59.2**	**+2.0**
LAKA	**Lakka**	**1.40**	**81**	P	**Pn**	**23 59 38.0**	**-1.3**
LAKA				S	**Sg**	**23 59 59.3**	**+1.6**
LAKA	**Lakka**	**1.40**	**81**	P	**Pn**	**23 59 38.0**	**-1.3**
LAKA				S	**Sg**	**23 59 59.3**	**+1.6**
IGT	**Igoumenitsa**	**1.50**	**3**	P	**Pn**	**23 59 39.3**	**-1.3**
IGT				S	**Sb**	**00 00 00.6**	**0.0**
IGT	**Igoumenitsa**	**1.50**	**3**	P	**Pn**	**23 59 39.3**	**-1.3**
IGT				S	**Sb**	**00 00 00.6**	**0.0**
TRIZ	**Trizonia**	**1.50**	**77**	P	**Pn**	**23 59 39.3**	**-1.3**
TRIZ				S	**Sb**	**00 00 02.6**	**+1.9**
TRIZ	**Trizonia**	**1.50**	**77**	P	**Pn**	**23 59 39.3**	**-1.3**
TRIZ				S	**Sb**	**00 00 02.6**	**+1.9**
EVR	**Evrytania**	**1.53**	**54**	*e*Pb	**Pb**	**23 59 41.8**	**+0.1**
EVR	**Evrytania**	**1.53**	**54**	*e*PB	**Pb**	**23 59 41.8**	**+0.1**
EVR	**Evrytania**	**1.53**	**54**	*e*Pb	**Pb**	**23 59 41.8**	**+0.1**
ITM	**Ithomi**	**1.60**	**122**	*e*Pg	**Pg**	**23 59 42.5**	**-0.9**
ITM				*e*Sb	**Sb**	**00 00 02.9**	**-0.9**
ITM	**Ithomi**	**1.60**	**122**	*e*PG	**Pg**	**23 59 42.5**	**-0.9**
ITM				*e*SB	**Sb**	**00 00 02.9**	**-0.9**
ITM	**Ithomi**	**1.60**	**122**	*e*Sb	**Sb**	**00 00 02.9**	**-0.9**
ITM	**Ithomi**	**1.60**	**122**	*e*Pg	**Pg**	**23 59 42.5**	**-0.9**
PYL	**PYLOS**	**1.67**	**133**	*e*PB	**Pb**	**23 59 44.5**	**+0.5**
PYL	**PYLOS**	**1.67**	**133**	*e*Pb	**Pb**	**23 59 44.5**	**+0.5**
GUR	**Goura**	**1.68**	**93**	*e*PG	**Pg**	**23 59 43.1**	**-1.8**
GUR				*e*SB	**Sb**	**00 00 04.9**	**-1.1**
GUR	**Goura**	**1.68**	**93**	P	**Pn**	**23 59 43.0**	**-0.1**
GUR				S	**Sn**	**00 00 06.4**	**+1.1**
GUR	**Goura**	**1.68**	**93**	P	**Pn**	**23 59 43.0**	**-0.1**
GUR				S	**Sn**	**00 00 06.4**	**+1.1**
VLX	**Vlachokerasia**	**1.84**	**111**	*e*PN	**Pn**	**23 59 47.2**	**+1.9**
VLX	**Vlachokerasia**	**1.84**	**111**	*e*Pn	**Pn**	**23 59 47.2**	**+1.9**
DSF	**Desfina**	**1.86**	**78**	P	**Pn**	**23 59 46.3**	**+0.8**
DSF	**Desfina**	**1.86**	**78**	P	**Pn**	**23 59 46.3**	**+0.8**
AGG	**Agios Georgios**	**1.93**	**59**	P	**Pn**	**23 59 47.4**	**+0.9**
AGG	**Agios Georgios**	**1.93**	**59**	P	**Pn**	**23 59 47.4**	**+0.9**
THL	**Klokotos Trika**	**2.07**	**42**	P	**Pn**	**23 59 48.9**	**+0.4**
THL	**Klokotos Trika**	**2.07**	**42**	P	**Pn**	**23 59 48.9**	**+0.4**
DID	**Didima**	**2.45**	**102**	*e*PN	**Pn**	**23 59 55.3**	**+1.6**
DID	**Didima**	**2.45**	**102**	*e*Pn	**Pn**	**23 59 55.3**	**+1.6**
VLI	**Veliai**	**2.54**	**120**	*e*Pn	**Pn**	**23 59 57.1**	**+2.2**
VLI	**Veliai**	**2.54**	**120**	*e*PN	**Pn**	**23 59 57.1**	**+2.2**
VLI	**Veliai**	**2.54**	**120**	*e*Pn	**Pn**	**23 59 57.1**	**+2.2**
KYTH	**Kithira**	**2.85**	**127**	*e*PN	**Pn**	**00 00 01.4**	**+2.2**

*CSEM **06** 00:16:33.4, 12.17N×43.52E, h9km, ML3.8, After DHMR*
DHMR 06 00:16:33.4±1.4, 12.17N×43.52E, h10km±11km, ML3.8, 1C-2D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRBA	**At Turbah**	**1.20**	**29**	⇑ *e*P	Pb	00 16 56.1	-0.2
TRBA				*i* S	Sb	00 17 13.0	+1.0
TRBA				AML	AML	00 17 14.9	
	comp=N,2μm,0.4s						
UDYN	**Al 'Udayn**	**1.83**	**14**	⇓ *i*P	Pn	00 17 06.6	+1.5
UDYN				*i* S	Sn	00 17 30.9	+2.5
UDYN				AML	AML	00 17 41.3	
	comp=E,2μm,0.5s						
UDYN	**Al 'Udayn**	**1.83**	**14**	⇓ *i*P	Pn	00 17 06.6	+1.5
UDYN				*i* S	Sn	00 17 30.9	+2.5
	comp=E,881nm,0.5s						
DHBB	**Dhamar BB**	**2.53**	**19**	*i* P	Pn	00 17 17.4	+2.8
DHBB				*i* S	Sn	00 17 51.9	+6.3
DHBB	**Dhamar BB**	**2.53**	**19**	*i* P	Pn	00 17 17.4	+2.8
DHBB				*i* S	Sn	00 17 51.9	+6.4
BDHA	**Al Bayda'**	**2.68**	**48**	*i* P	Pn	00 17 18.8	+2.1
BDHA				*i* S	Sn	00 17 56.1	+6.9
BDHA				AML	AML	00 18 03.2	
	comp=N,492nm,0.6s						
BDHA	**Al Bayda'**	**2.68**	**48**	*i* P	Pn	00 17 18.8	+2.1
BDHA				*i* S	Sn	00 17 56.1	+6.8
	comp=N,246nm,0.6s						
HAJJ	**Hajjah**	**3.50**	**1**	*i* P	Pn	00 17 30.8	+2.7
HAJJ				*i* S	Sn	00 18 15.8	+6.2
HAJJ				AML	AML	00 18 30.0	
	comp=N,435nm,0.6s						
HAJJ	**Hajjah**	**3.50**	**1**	*i* P	Pn	00 17 30.8	+2.8
HAJJ				*i* S	Sn	00 18 15.8	+6.2
	comp=N,217nm,0.6s						

*NEIC **06** 00:19:52.3, 34.71N×26.45E, h59km, MD3.6(ATH), After ATH.*
*ATH **06** 00:19:52.3, 34.71N×26.45E, h59km±4km, MD3.6/9*
*CSEM **06** 00:19:52.3, 34.71N×26.45E, h59km, MD3.6, After ATH*
ISC 06 00:19:53.2±1.8, 34.7N±0.2×26.46E±0.08, h52km±25km, n29, σ0§28/41, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.49**	**336**	*e*P	**Pn**	**00 20 04.5**	**+0.1**
ZKR				*e*S	**Sn**	**00 20 12.4**	**-0.1**
ZKR	**Zakros**	**0.49**	**336**	*e*P	**Pn**	**00 20 04.5**	**+0.1**
ZKR				*e*S	**Sn**	**00 20 12.4**	**-0.1**
ZKR	**Zakros**	**0.49**	**336**	*e*P	**Pn**	**00 20 04.5**	**+0.1**
ZKR				*e*S	**Sn**	**00 20 12.4**	**-0.1**
NPS	**Neapolis**	**0.91**	**311**	*e*P	**Pn**	**00 20 09.2**	**-0.6**
NPS				*e*S	**Sn**	**00 20 22.1**	**+0.1**
NPS	**Neapolis**	**0.91**	**311**	*e*P	**Pn**	**00 20 09.2**	**-0.6**
NPS				*e*S	**Sn**	**00 20 22.1**	**+0.1**
NPS	**Neapolis**	**0.91**	**311**	*e*P	**Pn**	**00 20 09.2**	**-0.6**
NPS				*e*S	**Sn**	**00 20 22.1**	**+0.1**
KARP	**Karpathos**	**1.05**	**33**	*e*P	**Pn**	**00 20 11.8**	**+0.1**
KARP				*e*S	**Sn**	**00 20 25.4**	**+0.1**
KARP	**Karpathos**	**1.05**	**33**	*e*P	**Pn**	**00 20 11.8**	**+0.1**
KARP				*e*S	**Sn**	**00 20 25.4**	**+0.1**
KARP	**Karpathos**	**1.05**	**33**	*e*P	**Pn**	**00 20 11.8**	**+0.1**
KARP				*e*S	**Sn**	**00 20 25.4**	**+0.1**
SIVA	**Sivas**	**1.40**	**285**	*e*P	**Pn**	**00 20 16.5**	**+0.2**
SIVA	**Sivas**	**1.40**	**285**	*e*P	**Pn**	**00 20 16.5**	**+0.2**
SIVA	**Sivas**	**1.40**	**285**	*e*P	**Pn**	**00 20 16.5**	**+0.2**
IDI	**Anoyia**	**1.43**	**296**	*e*P	**Pn**	**00 20 17.2**	**+0.5**
IDI				*e*S	**Sn**	**00 20 34.6**	**+0.2**
IDI	**Anoyia**	**1.43**	**296**	*e*P	**Pn**	**00 20 17.2**	**+0.5**
IDI				*e*S	**Sn**	**00 20 34.6**	**+0.2**
IDI	**Anoyia**	**1.43**	**296**	*e*P	**Pn**	**00 20 17.2**	**+0.5**
IDI				*e*S	**Sn**	**00 20 34.6**	**+0.2**
VAM	**Vamos**	**1.99**	**292**	*e*P	**Pn**	**00 20 24.4**	**-0.1**
VAM	**Vamos**	**1.99**	**292**	*e*P	**Pn**	**00 20 24.4**	**-0.1**
VAM	**Vamos**	**1.99**	**292**	*e*P	**Pn**	**00 20 24.4**	**-0.1**
ARG	**Arkhangelos**	**2.06**	**41**	*e*P	**Pn**	**00 20 25.4**	**0.0**
ARG	**Arkhangelos**	**2.06**	**41**	*e*P	**Pn**	**00 20 25.4**	**0.0**
ARG	**Arkhangelos**	**2.06**	**41**	*e*P	**Pn**	**00 20 25.4**	**0.0**
KARN	**Karanos**	**2.21**	**290**	*e*P	**Pn**	**00 20 27.3**	**-0.1**
KARN	**Karanos**	**2.21**	**290**	*e*P	**Pn**	**00 20 27.3**	**-0.1**
KYTH	**Kithira**	**3.22**	**301**	*e*P	**Pn**	**00 20 41.5**	**+0.2**
KYTH	**Kithira**	**3.22**	**301**	*e*P	**Pn**	**00 20 41.5**	**+0.2**
KYTH	**Kithira**	**3.22**	**301**	*e*P	**Pn**	**00 20 41.5**	**+0.2**
VLI	**Veliai**	**3.52**	**307**	*e*P	**Pn**	**00 20 44.8**	**-0.6**
VLI	**Veliai**	**3.52**	**307**	*e*P	**Pn**	**00 20 44.8**	**-0.6**
VLI	**Veliai**	**3.52**	**307**	*e*P	**Pn**	**00 20 44.8**	**-0.6**

*ISK **06** 00:21:45.9, 36.95N×28.12E, h6km, MD2.8*
*DDA **06** 00:21:45.5, 36.94N×28.08E, h7km±1km, Md2.5*
CSEM 06 00:21:44.8±0.3, 36.88N×28.22E, h2km, MD2.8, Error ellipse: s-maj=6.6km s-min=4.9km az=167.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.26**	**11**	*e*PG	Pg	00 21 50.6	+0.9
YER				*e*SG	Sg	00 21 54.7	+1.6
YER	**Yerkesik**	**0.26**	**11**	*e*Pg	Pg	00 21 50.7	+1.0
YER				*e*Sg	Sg	00 21 54.7	+1.7
TURN	**Turunc**	**0.31**	**92**	*i* P	Pg	00 21 50.2	-0.5
TURN				*i* S	Sg	00 21 53.4	-1.2
TURN	**Turunc**	**0.31**	**92**	*i* P	Pg	00 21 50.2	-0.5
TURN				*i* S	Sg	00 21 53.4	-1.2
DAT	**Datca**	**0.54**	**254**	*e*PG	Pg	00 21 55.7	+0.6
DAT				*e*SG	Sg	00 22 03.1	+0.9
DAT	**Datca**	**0.54**	**254**	*e*Pg	Pg	00 21 55.7	+0.6
DAT				*e*Sg	Sg	00 22 03.1	+1.0
MLSB	**Milas**	**0.54**	**319**	*e*PG	Pg	00 21 55.5	+0.3
MLSB				*e*SG	Sg	00 22 01.1	-1.2
MLSB	**Milas**	**0.54**	**319**	*e*Pg	Pg	00 21 55.5	+0.3
MLSB				*e*Sg	Sg	00 22 01.1	-1.2
BDRM	**Kayabasi**	**0.65**	**286**	*i* P	Pg	00 21 55.8	-1.4
BDRM				*i* S	Sg	00 22 04.6	-1.0
BDRM	**Kayabasi**	**0.65**	**286**	*i* P	Pg	00 21 55.8	-1.4
BDRM				*i* S	Sg	00 22 04.6	-1.1
BODT	**Bodrum**	**0.75**	**284**	*e*PG	Pg	00 21 59.2	0.0
BODT	**Bodrum**	**0.75**	**284**	*e*Pg	Pg	00 21 59.2	0.0
AYDN	**Tasoluk**	**0.82**	**341**	*i* P	Pg	00 21 59.9	-0.7
AYDN				*i* S	Sg	00 22 09.7	-1.5
AYDN	**Tasoluk**	**0.82**	**341**	*i* P	Pg	00 21 59.9	-0.7
AYDN				*i* S	Sg	00 22 09.7	-1.5
KULA	**Kula-Manisa**	**1.66**	**12**	*e*PN	Pn	00 22 15.7	+0.7
KULA	**Kula-Manisa**	**1.66**	**12**	*e*Pn	Pn	00 22 15.7	+0.7
BLCB	**Balcova**	**1.77**	**328**	*e*PN	Pn	00 22 16.5	+0.1
BLCB	**Balcova**	**1.77**	**328**	*e*Pn	Pn	00 22 16.5	+0.1

MAN 06 00:40:22, 17.62N×120.61E, h13km, mb4.6, ML3.5, MS3.5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**0.10**	**75**	*e*P	Pg	00 40 25.4	+0.5
ABRA				*e*S	Sg	00 40 30.8	+3.7
APYP	**Conner**	**0.65**	**68**	*e*P	Pg	00 40 35.2	+0.6
CVP	**Callao Caves**	**1.16**	**86**	⇑ *i*P	Pb	00 40 41.9	-2.0
CVP				*i* S	Sb	00 40 43.1	-16
CAUP	**Cauayan**	**1.34**	**120**	*e*P	Pn	00 40 46.1	-0.3

*ISCJB **06** 00:47:03.3±0.4, 31.07N±0.04×49.95E±0.04, h10km, Error ellipse: s-maj=6.5km s-min=3.5km az=140.2*
*KISR **06** 00:47:05.1±0.8, 30.89N×50.06E, h34km±291km, ML2.9*
*TEH **06** 00:47:07.4, 31.05N×49.90E, h34km*
ISC 06 00:47:04.5±0.4, 31.04N±0.04×49.97E±0.04, h10km, n23, σ0§97/31, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGAR	**Gharneh**	**2.23**	**52**	*e*Pn	**Pn**	**00 47 42.7**	**+1.1**
IGAR				*e*		00 47 44.1	
	comp=Z,1μm,0.0s						
UMR	**Umm Al-Rimmam**	**2.45**	**233**	*e*P	**Pn**	**00 47 44.5**	**0.0**
MIB	**Mutribah**	**2.58**	**242**	*e*P	**Pn**	**00 47 46.5**	**+0.1**
MIB				*e*S	**Sn**	**00 48 18.2**	**+0.4**
MIB				AML	AML	00 48 23.1	
	comp=Z,44nm,0.5s						
IKLH	**Kolahrood**	**2.65**	**31**	*e*Pn	**Pn**	**00 47 48.2**	**+0.8**
IKLH				*e*Sn	**Sn**	**00 48 18.4**	**-1.2**
IKLH				*e*		00 48 31.9	
	comp=Z,887nm,0.2s						
KBD	**Kabd**	**2.71**	**227**	*e*P	**Pn**	**00 47 48.3**	**+0.2**
KBD				*e*S	**Sn**	**00 48 20.5**	**-0.5**
KBD				AML	AML	00 48 22.8	
	comp=Z,32nm,0.3s						
IZEF	**Zefreh**	**2.73**	**47**	*e*Pn	**Pn**	**00 47 49.3**	**+0.9**
IZEF				*e*		00 47 54.6	
	comp=Z,559nm,0.1s						
QRN	**Al-Qurain**	**2.90**	**218**	*e*P	**Pn**	**00 47 50.4**	**-0.3**
QRN				*e*S	**Sn**	**00 48 24.0**	**-1.7**
QRN				AML	AML	00 48 26.5	
	comp=Z,50nm,0.3s						
RDF	**Al-Radifah**	**2.97**	**226**	*e*P	**Pn**	**00 47 51.9**	**+0.2**
ISRV	**Sarvestan**	**3.18**	**120**	*e*Pn	**Pn**	**00 47 56.3**	**+1.7**
ISRV				*e*		00 48 54.9	
	comp=Z,282nm,0.1s						
ISAD	**Sadrabad**	**3.29**	**74**	*e*Pn	**Pn**	**00 47 57.2**	**+1.0**
ISAD				*e*Sn	**Sn**	**00 48 33.6**	**-1.8**
ISAD				*e*		00 48 39.8	
	comp=Z,546nm,0.2s						
IKOM	**Komasi**	**3.75**	**327**	*e*Pn	**Pn**	**00 48 02.3**	**-0.2**
IKOM	**Komasi**	**3.75**	**327**	*e*	**Pg**	**00 48 18.3**	**+1.8**
	comp=Z,269nm,0.1s						
ISFB	**Sefidab**	**3.82**	**29**	*e*Pn	**Pn**	**00 48 03.7**	**+0.3**
ISFB				*e*Sn	**Sn**	**00 48 45.4**	**-3.0**
ISFB				*e*		00 48 50.5	
	comp=Z,288nm,0.1s						
ICHK	**Chekchek**	**3.97**	**71**	*e*	**Sn**	**00 48 57.1**	**+5.0**
	comp=Z,272nm,0.2s						
ICHK				*e*Pn	**Pn**	**00 48 06.3**	**+0.8**
IMEH	**Mehriz**	**3.99**	**84**	*e*Sn	**Sn**	**00 48 50.8**	**-1.9**
IMEH				*e*Pn	**Pn**	**00 48 06.7**	**+0.9**
IMEH				*e*		00 48 55.2	
	comp=Z,178nm,0.2s						
IRAZ	**Razeghan**	**4.36**	**360**	*e*Pn	**Pn**	**00 48 10.9**	**+0.1**
IRAZ				*e*		00 49 09.5	
	comp=Z,163nm,0.3s						
IGHG	**Ghaleghazi**	**4.36**	**320**	*e*Pn	**Pn**	**00 48 09.5**	**-1.3**
IGHG				*e*		00 49 52.9	
	comp=Z,207nm,0.3s						
IVIS	**Veis**	**4.36**	**324**	*e*Pn	**Pn**	**00 48 10.4**	**-0.4**
IVIS				*e*		00 49 11.0	

comp=E,170nm,0.9s
GTA Gaotai 8.11 326 *e*P **Pn 01 01 37.5 +0.2**
GTA pP 01 01 41.5
GTA S **Sn 01 03 11.4 +2.4**
GTA pmax pmax
comp=Z,11nm,0.7s
GTA LR LR
comp=N,190nm,6.6s
GTA LR LR
comp=E,160nm,6.9s
GTA LR LR
comp=Z,100nm,9.6s
HHC Hu-ho-hao-te 9.38 29 *e*P **Pn 01 01 53.3 -1.4**
HHC S **Sn 01 03 39.3 -0.9**
HHC pmax pmax
comp=Z,10.0nm,1.0s
HHC pmax pmax
comp=Z,100nm,4.0s
HHC LR LR
comp=N,150nm,7.5s
HHC LR LR
comp=E,310nm,5.1s
HHC LR LR
comp=Z,220nm,8.6s
SONM Songino Array 15.07 2 Pn **Pn 01 03 11.7 -0.7**
comp=Z,0.2nm,0.3s,baz=183,slow=13,SNR=4.5
CHTO Chiang Mai 15.12 205 *e*P **Pn 01 03 13.3 +0.2**
comp=Z,8.5nm,1.5s
CMAR Chiang Mai Arr 15.45 204 Pn **Pn 01 03 17.6 +0.1**
comp=Z,0.4nm,0.3s,baz=17,slow=9.6,SNR=3.9
KSRS Korea Array 18.85 69 Pn **Pn 01 04 01.4 +1.2**
comp=Z,0.4nm,0.3s,baz=254,slow=10,SNR=37
KSRS LR LR 01 11 47.8
comp=Z,37nm,20.6s,baz=295,slow=39
CN2 Changchun 19.04 49 *e*P **Pn 01 04 05.0 +2.6**
HIA Hailar 19.59 29 *e*P **Pn 01 04 07.8 -1.1**
comp=Z,8.3nm,0.9s
MK31 Makanchi Array 22.62 315 P **P 01 04 40.5 +0.1**
MKAR Makanchi Array 22.62 315 P **P 01 04 41.1 +0.8**
comp=Z,0.9nm,0.5s,mb3.5,baz=128,slow=9.8,SNR=9.3
ZALV Zalesovo Beam 25.83 331 P **P 01 05 10.5 -0.2**
comp=Z,0.7nm,0.6s,mb3.4,baz=144,slow=10,SNR=4.9
AAK Ala-Archa 26.37 301 *e*P **P 01 05 15.9 +0.1**
KURK Kurchatov 26.73 320 *e*P **P 01 05 19.1 +0.1**
comp=Z,5.1nm,1.1s,mb4.0
AML Almayashu 26.86 300 *e*P **P 01 05 22.0 +1.7**
comp=Z,2.3nm,0.8s,mb3.8
EKS2 Erkin-Say 26.90 301 P **P 01 05 20.6 +0.1**
MAJO Matsushiro 27.02 73 *e*P **P 01 05 22.8 +1.0**
MJAR Matsushiro Arr 27.03 73 P **P 01 05 22.4 +0.6**
comp=Z,0.5nm,0.3s,mb3.5,baz=268,slow=8.5,SNR=4.6
KBL Kabul 30.37 284 *e*P **P 01 05 52.3 +0.7**
BVAR Borovoye Array 32.31 319 P **P 01 06 08.5 +0.1**
comp=Z,0.3nm,0.5s,mb3.4,baz=119,slow=14,SNR=4.0
BVAR ScP ScP 01 12 41.5 +1.5
comp=Z,1.0nm,0.5s,baz=103,slow=6.4,SNR=6.0
BRVK Borovoye 32.39 319 *e*P **P 01 06 09.5 +0.4**
comp=Z,0.8nm,0.6s,mb3.7
AKTK Aktyubinsk 38.96 311 P **P 01 07 06.0 +0.5**
AKTO Aktyubinsk 38.96 311 P **P 01 07 06.0 +0.5**
comp=Z,0.5nm,0.4s,mb3.6,baz=111,slow=8.6,SNR=2.4
ARU Arti 39.92 321 *e*P **P 01 07 13.7 +0.2**
KIV Kislovodsk 49.48 302 *e*P **P 01 08 29.6 -0.3**
MALT Malatya 53.86 296 *e*P **P 01 09 02.9 +0.2**
JOF Joensuu 54.31 327 *e*p **P 01 09 03.8 -1.8**
comp=Z,0.5nm,0.4s,mb3.8
KAF Kangasniemi 56.70 326 *e*p **P 01 09 21.6 -1.2**
comp=Z,0.4nm,0.4s,mb3.8
FINES FINESS Array B 56.90 326 P **P 01 09 24.1 -0.2**
comp=Z,2.7nm,0.5s,mb4.5,baz=91,slow=7.5,SNR=19
BRTR Keskin Array B 57.03 299 P **P 01 09 25.4 -0.1**
comp=Z,0.3nm,0.6s,mb3.5,baz=82,slow=6.6,SNR=3.0
AKASG Malin Array Be 57.18 313 P **P 01 09 25.8 -0.6**
comp=Z,0.3nm,0.3s,mb3.8,baz=68,slow=6.7,SNR=4.4
AKBB Malin Array Si 57.18 313 P **P 01 09 26.3 -0.1**
AKBB Malin Array Si 57.18 313 P **P 01 09 26.3 -0.1**
CSS Prodhromos 58.79 294 *e*P **P 01 09 36.8 -1.2**
WRAB Tennant Creek 59.18 148 *e*P **P 01 09 40.8 +0.1**
WB2 Warramunga Arr 59.19 148 *e*P **P 01 09 40.7 0.0**
ASAR Alice Springs 62.28 151 P **P 01 10 02.0 +0.2**
comp=Z,1.5nm,0.8s,mb4.2,baz=338,slow=7.2,SNR=14
NOA NORSAR Array B 63.94 327 P **P 01 10 11.2 -1.2**
comp=Z,1.6nm,0.6s,mb4.2,baz=72,slow=6.8,SNR=8.8
ILAR Eielson Array 67.80 26 P **P 01 10 36.0 -1.2**
comp=Z,0.4nm,0.8s,mb3.5,baz=286,slow=6.5,SNR=5.0
LPG La Plagne 73.03 313 *e*P **P 01 11 10.3 +0.8**
comp=Z,6.2nm,0.8s,mb4.3
LPL La Plagne 73.03 313 *e*P **P 01 11 10.2 +0.7**
comp=Z,2.1nm,0.4s,mb4.1
YKA Yellowknife Ar 79.74 18 P **P 01 11 46.6 -0.7**
YKA Yellowknife Ar 79.74 18 P **P 01 11 46.6 -0.7**
comp=Z,0.6nm,0.6s,mb3.7,baz=324,slow=5.0,SNR=3.6
ESDC Sonseca Array 82.83 313 P **P 01 12 04.5 +0.4**
comp=Z,0.4nm,0.6s,mb3.6,baz=49,slow=5.0,SNR=2.3

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*ISCJB **06** 01:01:49.3± 1.4, 83.˚56N± 0.˚03× 114.˚6E± 0.˚2, h4km± 8km, mb4.5/117,MS3.8/38,Error ellipse: s-maj=5.5km s-min=3.1km az=150.8*

*MOS **06** 01:01:50.1± 1.0, 83.˚50N× 114.˚54E, h10km, mb4.7/55,Error ellipse: s-maj=43.0km s-min=6.6km az=90.0*

*IDC **06** 01:01:50.2± 0.5, 83.˚54N× 114.˚56E, h0km, mb4.2/20, mb1 4.3/20, mb1mx4.3/26, mbtmp4.2/20, MS3.8/21, Ms1 3.8/21, ms1mx3.6/31, Error ellipse: s-maj=17.0km s-min=11.4km az=141.0*

*GCMT **06** 01:01:51.6± 0.3, 83.˚56N× 114.˚82E, h12km, MW4.9, Moment Tensor Solution. s18,c18; s72,c109; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.38±.07; $M_{\theta\theta}$1.05±.07; $M_{\phi\phi}$1.34±.07; $M_{r\theta}$-0.25±.32; $M_{\theta\phi}$-1.00±.06; $M_{\phi r}$-0.53±.31; Best double couple: M_o2.40000×10^{16} NP1:ϕ_s128.00000°, δ43.00000°,λ-107.00000°. NP2:ϕ_s330.00000°, δ49.00000°,λ-75.00000°. Principal axes: T 2.2200, Plg3.0000°, Azm50.0000°; N 0.2900, Plg11.0000°, Azm141.0000°; P -2.5000, Plg78.0000°, Azm305.0000°; Data Used: II IU G IC CN.*

*NEIC **06** 01:01:52.2± 0.2, 83.˚53N× 114.˚28E, h10km, mb4.7/77 Error ellipse: s-maj=5.6km s-min=2.8km az=160.0*

*BJI **06** 01:01:53.1, 83.˚03N× 114.˚22E, h10km, mB5.0/22, mb4.6/28, Ms4.5/16, Ms7 4.2/16*

ISC 06 01:01:52.2±1.6, **83.˚56N**±0.˚03× **114.˚3E**±0.˚2, **h10**km±9km, **h17**km±2.4km**:pP-P, n433,** s0**974**/440, **mb4.5**/117, **MS3.8**/38, **161C-94D, North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**12.30**	**158**	*e*P	**Pn**	**01 04 48.7**	**+1.7**
SPITS	**Spitsbergen Ar**	**14.30**	**304**	Pn	**Pn**	**01 05 10.1**	**-4.1**
	baz=18,slow=13,SNR=3.7						
SPITS				LR	LR	01 09 46.2	
	comp=Z,190nm,19.1s,baz=25,slow=33						
DAG	**Danmarks Havn**	**18.35**	**328**	⇓*e*P	**Pn**	**01 06 04.7**	**-1.5**
DAG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DAG	**Danmarks Havn**	**18.35**	**328**	⇓*i*P	**Pn**	**01 06 04.7**	**-1.5**
	comp=Z,3.7nm,0.8s						
KEV	**Kevo**	**21.04**	**284**	*e*P	**P**	**01 06 34.4**	**-1.3**
	comp=Z,12nm,0.9s,mb4.2						
KEV				*e*S	**S**	**01 10 22.7**	**-6.8**
KEV	**Kevo**	**21.04**	**284**	*e*P	**P**	**01 06 34.4**	**-1.3**
KEV				*e*S	**S**	**01 10 22.7**	**-6.8**
KEV				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.2						
RES	**Resolute Bay**	**21.30**	**21**	LR	LR	01 14 17.5	
	comp=Z,331nm,19.5s,MS3.7,baz=279,slow=35						
ARCES	**ARCESS Array B**	**21.42**	**286**	P	**P**	**01 06 39.2**	**-0.5**
ARCES	comp=Z,7.5nm,0.8s,mb4.1,baz=12,slow=12,SNR=17			S	**S**	**01 10 29.8**	**-7.0**
	comp=Z,0.6nm,0.6s,baz=33,slow=15,SNR=2.9						
ARCES				LR	LR	01 15 32.3	
	comp=Z,174nm,19.3s,MS3.5,baz=199,slow=38						
ARCES	**ARCESS Array B**	**21.42**	**286**	P	**P**	**01 06 39.2**	**-0.5**
ARCES				S	**S**	**01 10 29.8**	**-7.1**
ARCES	comp=Z,8.0nm,0.8s			pmax	pmax		
ARCES				smax			
	comp=N,1.0nm,0.6s						
ARE0	**ARCESS Array S**	**21.42**	**286**	*e*P	**P**	**01 06 39.9**	**+0.2**
YAK	**Yakutsk**	**21.94**	**160**	*e*P	**P**	**01 06 42.7**	**-2.7**
YAK				*e**PP		01 06 50.2	
YAK				*e*S	**S**	**01 10 43.6**	**-3.6**
YAK				*e*SS		01 11 15.4	
YAK				*e*SSS		01 11 30.8	
YAK				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.5						
YAK				pmax	pmax		
	comp=N,11nm,1.4s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.3s						
YAK				smax			
	comp=E,159nm,12.6s						
YAK				MLR	MLR		
	comp=Z,308nm,24.0s,MS3.6						
YAK				MLR	MLR		
	comp=N,204nm,21.0s,MS3.7						
YAK				MLR	MLR		
	comp=E,240nm,18.0s,MS3.7						
APA	**Apatity**	**22.43**	**277**	⇑*e*P	**P**	**01 06 49.0**	**-1.5**
APA				*e*S	**S**	**01 10 54.0**	**-2.5**
APA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.2						
SEY	**Seymchan**	**22.45**	**132**	⇑*i*P	**P**	**01 06 51.5**	**+0.7**
JMIC	**Jan Mayen**	**23.27**	**316**	LR	LR	01 14 16.6	
	comp=Z,47nm,20.0s,MS2.9,baz=31,slow=32						
SUMG	**Summit**	**23.48**	**340**	*e*P	**P**	**01 07 01.6**	**0.0**
	comp=Z,143nm,2.3s,mb5.0						
INK	**Inuvik**	**24.97**	**55**	*e*P	**P**	**01 07 15.0**	**-0.3**
	comp=Z,12nm,0.6s,mb4.6						
INK	**Inuvik**	**24.97**	**55**	P	**P**	**01 07 14.5**	**-0.7**
	comp=Z,9.4nm,0.9s,mb4.3,baz=345,slow=12,SNR=10						
INK				S	**S**	**01 11 44.7**	**+6.4**
	comp=Z,2.9nm,0.5s,baz=342,slow=17,SNR=4.6						
INK				LR	LR	01 16 29.8	
	comp=Z,168nm,21.9s,MS3.5,baz=162,slow=35						
INK	**Inuvik**	**24.97**	**55**	P	**P**	**01 07 14.5**	**-0.7**
INK				S	**S**	**01 11 44.7**	**+6.3**
INK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
INK				smax			
	comp=N,3.0nm,0.5s						
INK				MLR	MLR		
	comp=Z,169nm,21.9s						
COLA	**College**	**26.88**	**69**	*e*P	**P**	**01 07 32.6**	**0.0**
	comp=Z,16nm,1.1s,mb4.5						
COLA	**College**	**26.88**	**69**	*e*P	**P**	**01 07 32.6**	**0.0**
COLA				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.5						
ILAR	**Eielson Array**	**27.09**	**68**	P	**P**	**01 07 34.9**	**+0.5**
	comp=Z,7.4nm,1.2s,mb4.1,baz=344,slow=8.0,SNR=22						
ILAR				LR	LR	01 17 37.3	
	comp=Z,270nm,21.4s,MS3.8,baz=166,slow=35						
ILAR	**Eielson Array**	**27.09**	**68**	P	**P**	**01 07 34.9**	**+0.5**
ILAR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ILAR				MLR	MLR		
	comp=Z,271nm,21.4s						
BPAW	**Bear Paw Mtn.**	**27.30**	**73**	*e*P	**P**	**01 07 36.7**	**+0.3**
	comp=Z,19nm,1.4s,mb4.4						
EGAK	**Eagle**	**27.67**	**63**	*e*P	**P**	**01 07 40.5**	**+0.9**
	comp=Z,8.6nm,1.0s,mb4.3						
TTA	**Tatalina**	**27.89**	**78**	*e*P	**P**	**01 07 42.6**	**+1.0**
KLMR	**Klimovskoe**	**28.25**	**266**	*e*P	**P**	**01 07 42.4**	**-2.5**
KLMR				*e*S	**S**	**01 12 30.9**	**+0.6**
KLMR				pmax	pmax		
	comp=Z,21nm,1.6s,mb4.5						
DAWY	**Dawson**	**28.54**	**62**	*e*P	**P**	**01 07 47.6**	**+0.2**
FINES	**FINESS Array B**	**29.19**	**280**	P	**P**	**01 07 52.2**	**-1.0**
FINES	**FINESS Array B**	**29.19**	**280**	P	**P**	**01 07 52.2**	**-1.0**
	comp=Z,2.5nm,0.8s,mb4.0,baz=15,slow=7.9,SNR=5.2						
FINES	**FINESS Array B**	**29.19**	**280**	P	**P**	**01 07 52.2**	**-1.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARU	**Arti**	**30.52**	**245**	*c* *i*P	**P**	**01 08 04.6**	**-0.4**
ARU				*e*		01 08 59.6	
ARU				S	**S**	**01 13 07.1**	**+1.2**
ARU				SS	SS	01 14 39.6	-36
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.2						
ARU				MLR	MLR		
	comp=Z,762nm,19.0s,MS4.4						
ZALV	**Zalesovo Beam**	**30.74**	**215**	P	**P**	**01 08 06.4**	**-0.6**
	comp=Z,0.6nm,0.4s,mb3.8,baz=358,slow=10,SNR=5.6						
ZALV				PcP	PcP		
	comp=Z,2.2nm,0.9s,baz=11,slow=3.7,SNR=5.5						
ZALV				LR	LR	01 21 24.0	
	comp=Z,270nm,19.0s,MS3.9,baz=257,slow=38						
ZALV	**Zalesovo Beam**	**30.74**	**215**	P	**P**	**01 08 06.4**	**-0.6**
ZALV						01 11 03.4	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
ZALV				MLR	MLR		
	comp=Z,270nm,19.0s,MS3.9						
NOA	**NORSAR Array B**	**31.18**	**294**	LR	LR	01 20 39.2	
	comp=Z,56nm,18.2s,MS3.3,baz=10.0,slow=36						
HYT	**Haines Junctio**	**31.91**	**62**	*e*P	**P**	**01 08 18.6**	**+1.4**
TLY	**Talaya**	**32.16**	**193**	*e*P	**P**	**01 08 18.7**	**-0.7**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.9s,mb4.2						
TLY				MLR	MLR		
	comp=Z,81nm,15.0s,MS3.5						
MOY	**Mondy**	**32.24**	**196**	*e*P	**P**	**01 08 21.0**	**+0.8**
MOY				pmax	pmax		
	comp=Z,20nm,1.9s,mb4.6						
YKA	**Yellowknife Ar**	**32.27**	**41**	P	**P**	**01 08 18.2**	**-2.2**
	comp=Z,2.1nm,0.8s,mb4.0,baz=350,slow=8.3,SNR=5.1						
YKA				PcP	PcP	01 11 07.3	-0.7
	comp=Z,0.5nm,0.8s,baz=14,slow=2.8,SNR=3.6						
YKA	**Yellowknife Ar**	**32.27**	**41**	P	**P**	**01 08 18.2**	**-2.1**
YKA						01 11 07.3	
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRVK	**Borovoye**	**32.73**	**231**	*e*P	**P**	**01 08 24.5**	**0.0**
	comp=Z,9.1nm,1.0s,mb4.7						
BRVK	**Borovoye**	**32.73**	**231**	*e*P	**P**	**01 08 24.5**	**0.0**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
BVAR	**Borovoye Array**	**32.76**	**231**	P	**P**	**01 08 24.7**	**0.0**
	comp=Z,2.7nm,0.9s,mb4.2,baz=22,slow=8.1,SNR=13						
BVAR				PcP	PcP	01 11 09.4	-0.1
	comp=Z,1.5nm,0.7s,baz=322,slow=4.4,SNR=5.1						
BVAR	**Borovoye Array**	**32.76**	**231**	P	**P**	**01 08 24.7**	**0.0**
BVAR						01 11 09.4	
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZAK	**Zakamensk**	**33.47**	**193**	*e*P	**P**	**01 08 39.1**	**+8.2**
OHAK	**Old Harbor**	**33.78**	**78**	*e*P	**P**	**01 08 33.1**	**-0.5**
	comp=Z,16nm,1.0s,mb4.9						
OHAK				*e*pP	pP	01 08 40.5	+3.9
OBN	**Obninsk**	**34.21**	**267**	P	**P**	**01 08 37.0**	**-0.3**
OBN				*e**PP	pP	01 08 39.2	-1.1
OBN				S	**S**	**01 14 08.0**	**+4.6**
OBN				pmax	pmax		
	comp=Z,14nm,1.7s,mb4.6						
OBN				MLR	MLR		
	comp=Z,200nm,22.0s,MS3.8						
KURK	**Kurchatov**	**34.38**	**221**	*e*P	**P**	**01 08 38.4**	**-0.5**
	comp=Z,4.5nm,0.7s,mb4.5						
KURK	**Kurchatov**	**34.38**	**221**	⇑*e*P	**P**	**01 08 38.5**	**-0.4**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
DLBC	**Dease Lake**	**34.98**	**56**	*e*P	**P**	**01 08 44.6**	**+0.6**
SONM	**Songino Array**	**35.95**	**189**	P	**P**	**01 08 53.0**	**+0.7**
	comp=Z,4.3nm,1.2s,mb4.3,baz=351,slow=7.7,SNR=9.7						
SONM				PcP	PcP	01 11 18.7	-0.1
	comp=Z,1.5nm,0.8s,baz=325,slow=1.8,SNR=5.5						
SONM				LR	LR	01 23 37.1	
	comp=Z,78nm,20.5s,MS3.5,baz=3.8,slow=36						
SONM	**Songino Array**	**35.95**	**189**	P	**P**	**01 08 53.0**	**+0.7**
SONM						01 11 18.7	
SONM				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM				MLR	MLR		
	comp=Z,78nm,20.5s						
ATKA	**Atka Island**	**36.37**	**100**	*e*P	**P**	**01 08 58.7**	**+2.8**
	comp=Z,37nm,1.0s,mb5.3						
AKTK	**Aktyubinsk**	**36.49**	**243**	P	**P**	**01 08 56.5**	**-0.5**
AKTK				PcP	PcP	01 11 19.8	-0.6
AKTO	**Aktyubinsk**	**36.49**	**243**	P	**P**	**01 08 56.5**	**-0.5**
	comp=Z,1.3nm,0.6s,mb4.1,baz=9.9,slow=7.8,SNR=5.2						
AKTO				PcP	PcP	01 11 19.8	-0.6
	comp=Z,2.1nm,0.9s,baz=5.7,slow=10,SNR=2.5						
AKTO	**Aktyubinsk**	**36.49**	**243**	P	**P**	**01 08 56.5**	**-0.5**
AKTO						01 11 19.8	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
VSR	**Storozhevoye**	**37.75**	**263**	*e*P	**P**	**01 09 06.9**	**-0.8**
VSR				pmax	pmax		
	comp=N,3.0nm,0.7s						
VSR				pmax	pmax		
	comp=E,2.0nm,0.7s						
VSR				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
VSR				MLR	MLR		
	comp=N,110nm,18.0s,MS4.2						
VSR				MLR	MLR		
	comp=E,330nm,18.0s,MS4.2						
VSR				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.0						
VORD	**Divnogorie**	**37.98**	**263**	*e*P	**P**	**01 09 08.6**	**-1.0**
VORD				pmax	pmax		
	comp=N,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,9.0nm,0.6s						
VORD				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
MK31	**Makanchi Array**	**38.03**	**216**	*e*P	**P**	**01 09 09.2**	**-0.9**
MKAR	**Makanchi Array**	**38.03**	**216**	P	**P**	**01 09 09.0**	**-1.1**
	comp=Z,5.2nm,0.8s,mb4.3,baz=3.2,slow=6.6,SNR=26						
MKAR				PcP	PcP	01 11 24.3	-0.8
	comp=Z,1.5nm,0.9s,baz=45,slow=4.7,SNR=3.7						
MKAR				LR	LR	01 25 56.0	
	comp=Z,260nm,19.1s,MS4.1,baz=355,slow=38						
MKAR	**Makanchi Array**	**38.03**	**216**	P	**P**	**01 09 09.0**	**-1.1**
MKAR						01 11 24.3	
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR				MLR	MLR		
	comp=Z,260nm,19.1s						
MDJ	**Mudanjiang**	**39.35**	**163**	P	**P**	**01 09 20.4**	**-0.8**
MDJ				sP	sP	01 09 24.5	-0.9
MDJ				S	**S**	**01 15 19.7**	**-2.2**
MDJ				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,73nm,3.8s						
MDJ				LR	LR		
	comp=N,64nm,24.9s,MS3.7						
MDJ				LR	LR		
	comp=E,130nm,23.6s,MS3.7						
MDJ				LR	LR		
	comp=Z,78nm,22.3s,MS3.5						
AKASG	**Malin Array Be**	**39.38**	**273**	P	**P**	**01 09 20.3**	**-1.0**
AKASG				LR	LR	01 27 19.8	
AKASG	**Malin Array Be**	**39.38**	**273**	P	**P**	**01 09 20.3**	**-1.0**
	comp=Z,1.3nm,0.6s,mb3.8,baz=11,slow=8.9,SNR=4.6						
AKASG				LR	LR	01 27 19.8	
	comp=Z,201nm,21.8s,MS3.9,baz=10.0,slow=39						
AKASG	**Malin Array Be**	**39.38**	**273**	*c* *e*P	**P**	**01 09 19.8**	**-1.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CN2	**Changchun**	**40.05**	**167**	*e*P	**P**	**01 09 25.3**	**-1.7**
CLL	**Collm**	**40.57**	**289**	*e*P	**P**	**01 09 32.0**	**+0.8**
CLL	**Collm**	**40.57**	**289**	*e*P	**P**	**01 09 32.0**	**+0.8**
CLL				LmV		01 25 00.0	
	comp=Z,100nm,21.8s						
WMQ	**Urumqi**	**40.66**	**210**	P	**P**	**01 09 33.6**	**+1.6**
WMQ				pP	pP	01 09 38.1	+3.1
WMQ				sP	sP	01 09 40.6	+4.4
WMQ				PP	PP	01 11 11.0	+5.6
WMQ				PcP	PcP	01 11 35.7	+2.2
WMQ				ScP	ScP	01 15 22.7	+0.3
WMQ				S	**S**	**01 15 43.1**	**+1.6**
WMQ				ScS	ScS	01 19 36.6	-0.2
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.3						
WMQ				pmax	pmax		
	comp=Z,140nm,4.8s						
WMQ				LR	LR		
	comp=N,360nm,24.0s,MS4.3						
WMQ				LR	LR		
	comp=E,270nm,20.5s,MS4.3						
WMQ				LR	LR		
	comp=Z,380nm,21.0s,MS4.2						
KWP	**Kalwaria Pacla**	**41.17**	**279**	*e*P	**P**	**01 09 36.1**	**-0.1**
KWP	**Kalwaria Pacla**	**41.17**	**279**	⇓P	**P**	**01 09 37.1**	**+1.0**
KWP	**Kalwaria Pacla**	**41.17**	**279**	⇓*i*P	**P**	**01 09 37.1**	**+1.0**
MORC	**Moravsky Berou**	**41.59**	**284**	*e*P	**P**	**01 09 39.9**	**+0.2**
	comp=Z,2.0nm,0.8s,mb3.8						
MORC	**Moravsky Berou**	**41.59**	**284**	*e*P	**P**	**01 09 39.9**	**+0.3**
MORC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
SCHQ	**Schefferville**	**41.83**	**1**	P	**P**	**01 09 41.5**	**0.0**
	comp=Z,2.4nm,0.7s,mb3.9,baz=7.1,slow=8.1,SNR=3.6						
SCHQ				LR	LR	01 27 09.3	
	comp=Z,104nm,19.2s,MS3.7,baz=244,slow=36						
TKM2	**Tokmak 2**	**42.36**	**223**	*e*P	**P**	**01 09 46.9**	**+0.9**
	comp=Z,17nm,1.3s,mb4.5						
TKM2	**Tokmak 2**	**42.36**	**223**	*e*P	**P**	**01 09 46.9**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.5						
KHC	**Kasperske Hory**	**42.66**	**288**	*e*P	**P**	**01 09 46.0**	**-2.4**
KHC	**Kasperske Hory**	**42.66**	**288**	*e*P	**P**	**01 09 46.0**	**-2.4**
AAK	**Ala-Archa**	**42.73**	**224**	*e*P	**P**	**01 09 48.6**	**-0.4**
	comp=Z,7.9nm,0.9s,mb4.4						
AAK	**Ala-Archa**	**42.73**	**224**	P	**P**	**01 09 50.0**	**+1.0**
	comp=Z,1.5nm,0.3s,mb4.2,baz=236,slow=7.3,SNR=6.1						
AAK				LR	LR	01 28 59.0	
	comp=Z,116nm,21.8s,MS3.7,baz=13,slow=38						
AAK	**Ala-Archa**	**42.73**	**224**	*de*P	**P**	**01 09 50.0**	**+1.0**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.0						
EKS2	**Erkin-Say**	**42.76**	**225**	*e*P	**P**	**01 09 48.6**	**-0.7**
	comp=Z,12nm,1.4s,mb4.4						
HHC	**Hu-ho-hao-te**	**42.87**	**183**	*e*P	**P**	**01 09 51.2**	**+1.1**
HHC				pP	pP	01 09 55.7	+2.6
HHC				sP	sP	01 09 58.4	+4.1
HHC				PP	PP	01 11 33.2	+3.9
HHC				PcP	PcP	01 11 42.3	+1.5
HHC				S	**S**	**01 16 13.7**	**-0.5**
HHC				sS	sS	01 16 20.8	+1.6
HHC				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
HHC				pmax	pmax		
	comp=Z,100nm,7.6s						
HHC				LR	LR		
	comp=N,140nm,14.3s,MS4.4						
HHC				LR	LR		
	comp=E,330nm,16.6s,MS4.4						
HHC				LR	LR		
	comp=Z,170nm,19.0s,MS4.0						
BURAR	**Bucovina Array**	**42.88**	**276**	⇓P	**P**	**01 09 52.2**	**+2.1**
BURAR	**Bucovina Array**	**42.88**	**276**	⇓*i*P	**P**	**01 09 52.2**	**+2.1**
AML	**Almayashu**	**43.30**	**225**	*e*P	**P**	**01 09 55.3**	**+1.7**
	comp=Z,29nm,1.5s,mb4.8						
BJI	**Beijing**	**43.67**	**178**	P	**P**	**01 09 52.4**	**-4.2**
BJI				S	**S**	**01 16 24.6**	**-1.4**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
BJI				pmax	pmax		
	comp=Z,160nm,4.6s						
BJI				LR	LR		
	comp=N,140nm,17.8s,MS4.2						
BJI				LR	LR		
	comp=E,250nm,17.4s,MS4.2						
BJI				LR	LR		
	comp=Z,74nm,26.8s						
TESR		**43.80**	**274**	⇓P	**P**	**01 09 57.2**	**-0.4**
TESR		**43.80**	**274**	⇓*i*P	**P**	**01 09 57.2**	**-0.4**
DRGR		**43.97**	**278**	⇓P	**P**	**01 09 59.6**	**+0.7**
**DRGR

comp=Z,90nm,17.5s,MS3.8
HINF Hinteralfeld 44.67 294 ⇑*iP* **P 01 10 05.0 +0.5**
KBA Koelnbreinsper 44.71 288 ⇓*ipP* **P 01 10 06.2 +1.3**
comp=Z,13nm,1.4s,mb4.6
GRR Gorron 44.88 301 ⇑*iP* **P 01 10 07.2 +1.0**
comp=Z,112nm,1.8s,mb5.1
GRR Gorron 44.88 301 ⇑*iP* **P 01 10 07.2 +1.0**
comp=Z,56nm,1.8s,mb5.1
GRR Gorron 44.88 301 ⇑*iP* **P 01 10 07.2 +1.0**
GRR pmax pmax
comp=Z,56nm,1.8s,mb5.1
SGMF Saint Gilles 45.17 303 ⇑*iP* **P 01 10 08.5 0.0**
comp=Z,42nm,1.3s,mb4.8
SGMF Saint Gilles 45.17 303 ⇑*iP* **P 01 10 08.5 0.0**
comp=Z,21nm,1.3s,mb4.8
SGMF Saint Gilles 45.17 303 ⇑*iP* **P 01 10 08.5 0.0**
SGMF pmax pmax
comp=Z,21nm,1.3s,mb4.8
BZS Buzias 45.25 279 ⇓*iP* **P 01 10 09.4 +0.2**
BZS Buzias 45.25 279 ⇓*iP* **P 01 10 09.4 +0.2**
LOR Lormes 45.52 297 ⇑*iP* **P 01 10 10.0 -1.3**
comp=Z,26nm,1.3s,mb4.7
LOR *e*MLR MLR
comp=Z,147nm,20.2s,MS3.6
LOR Lormes 45.52 297 ⇑*iP* **P 01 10 10.0 -1.3**
comp=Z,13nm,1.3s,mb4.7
LOR LR LR
comp=Z,150nm,20.3s,MS3.9
LOR Lormes 45.52 297 ⇑*iP* **P 01 10 10.0 -1.3**
LOR pmax pmax
comp=Z,13nm,1.3s,mb4.7
LOR MLR MLR
comp=Z,150nm,20.3s,MS3.9
QUIF Quistinic 45.56 303 ⇑*iP* **P 01 10 11.6 0.0**
comp=Z,39nm,1.2s,mb4.9
QUIF Quistinic 45.56 303 ⇑*iP* **P 01 10 11.6 0.0**
comp=Z,19nm,1.2s,mb4.9
QUIF Quistinic 45.56 303 ⇑*iP* **P 01 10 11.6 0.0**
QUIF pmax pmax
comp=Z,19nm,1.2s,mb4.9
ZEI Tsey 45.56 256 *eP* **P 01 10 12.1 +0.4**
ZEI pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
ULM Lac du Bonnet 45.64 27 LR LR 01 28 10.8
comp=Z,179nm,21.6s,MS4.0,baz=229,slow=35
WALA Waterton Lakes 45.66 43 *eP* **P 01 10 12.1 -0.2**
comp=Z,0.3nm,1.1s
KSH Kashi 45.72 222 *eP* **P 01 10 17.0 +4.1**
KSH *ep*P pP 01 10 20.7 +4.7
KSH *es*P sP 01 10 24.0 +6.8
KSH *ePcP* PcP 01 11 54.1 +3.5
KSH *ePP* PP 01 12 05.1 +5.4
KSH *eScP* ScP 01 15 45.4 +2.4
KSH *ePcS* PcS 01 15 47.2 +2.5
KSH *eS* **S 01 17 01.6 +5.9**
KSH *esS* sS 01 17 08.5 +7.8
KSH *eScS* ScS 01 20 09.6 +1.1
KSH *eSS* SS 01 20 17.7 -1.8
KSH pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
KSH LR LR
comp=N,150nm,9.3s
KSH LR LR
comp=E,280nm,14.1s
KSH LR LR
comp=Z,130nm,11.2s,MS4.1
A13A Flathead Natio 45.75 44 ⇑P **P 01 10 12.6 -0.4**
baz=46
SSF Saint Saulge 45.76 297 ⇑*iP* **P 01 10 13.1 -0.1**
comp=Z,13nm,1.1s,mb4.4
SSF Saint Saulge 45.76 297 ⇑*iP* **P 01 10 13.1 -0.1**
comp=Z,6.3nm,1.1s,mb4.5
SSF Saint Saulge 45.76 297 ⇑*iP* **P 01 10 13.1 -0.1**
SSF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
A14A Double T Ranch 45.78 43 ⇓P **P 01 10 12.3 -1.1**
baz=46
A15A Johnson Ranch, 45.83 42 ⇑P **P 01 10 12.9 -0.9**
baz=46
B08A Colville Reser 45.92 48 ⇓P **P 01 10 13.9 -0.5**
baz=46
CABF La Chapelle 45.94 294 ⇑*iP* **P 01 10 16.1 +1.5**
A16A West Butte Ran 45.95 41 ⇓P **P 01 10 13.5 -1.2**
baz=46
A17A Triple J Farms 46.02 40 ⇓P **P 01 10 13.9 -1.3**
baz=46
AVF Avril sur Loir 46.04 297 ⇑*iP* **P 01 10 15.6 +0.2**
comp=Z,16nm,1.5s,mb4.4
AVF Avril sur Loir 46.04 297 ⇑*iP* **P 01 10 15.6 +0.2**
comp=Z,7.8nm,1.5s,mb4.4
AVF Avril sur Loir 46.04 297 ⇑*iP* **P 01 10 15.6 +0.2**
AVF pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
SMF Signal de Mont 46.14 296 ⇑*iP* **P 01 10 16.0 -0.2**
NEW Newport 46.19 46 *eP* **P 01 10 16.8 +0.2**
comp=Z,32nm,1.9s,mb4.9
NEW Newport 46.19 46 *eP* **P 01 10 16.8 +0.2**
NEW pmax pmax
comp=Z,32nm,1.9s
B13A Whitefish 46.30 44 ⇑P **P 01 10 16.8 -0.6**
baz=46
BGF Bois d'Agland 46.32 297 ⇑*iP* **P 01 10 17.8 +0.2**
comp=Z,52nm,1.6s,mb4.9
BGF Bois d'Agland 46.32 297 ⇑*iP* **P 01 10 17.8 +0.2**
comp=Z,26nm,1.5s,mb4.9
BGF Bois d'Agland 46.32 297 ⇑*iP* **P 01 10 17.8 +0.2**
BGF pmax pmax
comp=Z,26nm,1.5s,mb4.9
KSRS Korea Array 46.45 165 PP PP 01 12 06.6 -0.8
comp=Z,0.3nm,0.3s,baz=353,slow=9.1,SNR=4.5
KSRS LR LR 01 29 29.6
comp=Z,51nm,18.5s,MS3.5,baz=186,slow=36
B16A M & M Farms, S 46.47 41 ⇑P **P 01 10 17.7 -1.0**
baz=46
B15A Bradely Ranch, 46.51 42 ⇓P **P 01 10 18.0 -1.0**
baz=46
MFF Saint Martin d 46.58 300 ⇑*iP* **P 01 10 20.0 +0.4**
comp=Z,44nm,1.5s,mb4.9
MFF Saint Martin d 46.58 300 ⇑*iP* **P 01 10 20.0 +0.4**
comp=Z,22nm,1.5s,mb4.9
MFF Saint Martin d 46.58 300 ⇑*iP* **P 01 10 20.0 +0.4**
MFF pmax pmax
comp=Z,22nm,1.5s,mb4.9
B18A Beardsley Farm 46.63 40 ⇑P **P 01 10 18.9 -1.1**
baz=46
TCF Toulx Ste Croi 46.65 298 ⇑*iP* **P 01 10 20.2 0.0**
comp=Z,24nm,1.5s,mb4.6
TCF Toulx Ste Croi 46.65 298 ⇑*iP* **P 01 10 20.2 0.0**
comp=Z,12nm,1.5s,mb4.6
TCF Toulx Ste Croi 46.65 298 ⇑*iP* **P 01 10 20.2 0.0**
TCF pmax pmax
comp=Z,12nm,1.5s,mb4.6
B17A L&G Farms, Che 46.66 41 ⇓P **P 01 10 19.2 -1.1**
baz=46
C11A Tepee Creek (N 46.69 46 ⇑P **P 01 10 19.6 -0.9**
baz=46
D05A Enumclaw 46.85 51 ⇓P **P 01 10 21.3 -0.5**
baz=47
C12B Naegeli Ranch, 46.88 45 ⇑P **P 01 10 21.3 -0.7**
baz=47
JTMT Jette 46.94 44 *eP* **P 01 10 22.7 +0.3**
C14A Swan Lake 46.96 43 ⇓P **P 01 10 21.7 -0.9**
baz=47
LPL La Plagne 46.96 294 *eP* **P 01 10 23.6 +1.0**
LPG La Plagne 46.97 293 ⇑*iP* **P 01 10 24.2 +1.5**
comp=Z,12nm,1.2s,mb4.4
LPG La Plagne 46.97 293 ⇑*iP* **P 01 10 24.2 +1.5**
comp=Z,6.2nm,1.2s,mb4.4
LPG La Plagne 46.97 293 ⇑*iP* **P 01 10 24.2 +1.5**
LPG pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
C13A Hot Springs 46.98 44 ⇓P **P 01 10 22.6 -0.1**
baz=47
EGMT Eagleton 47.00 40 ⇓P **P 01 10 22.0 -0.9**
baz=47
C15A Salmond Ranch, 47.04 42 ⇓P **P 01 10 22.3 -0.9**
baz=47
LON Longmire 47.30 51 *eP* **P 01 10 26.3 +1.1**
comp=Z,13nm,1.4s,mb4.7
LON Longmire 47.30 51 *eP* **P 01 10 26.3 +1.0**
LON pmax pmax
comp=Z,13nm,1.4s,mb4.7
E03A Lebam 47.35 53 ⇑P **P 01 10 24.9 -0.7**
baz=47
SLMT Seeley Lake 47.50 43 *eP* **P 01 10 26.8 -0.1**
D12A Red Ives Fores 47.54 45 ⇓P **P 01 10 26.4 -0.8**
baz=47
D13A Huson 47.57 44 ⇑P **P 01 10 26.4 -1.0**
baz=47
ORIF Oris-en-Rattie 47.64 294 *eP* **P 01 10 27.4 -0.5**
ORIF *e*MLR MLR
comp=Z,102nm,20.8s,MS3.5
D14A Greenough 47.66 43 ⇑P **P 01 10 27.5 -0.5**
baz=48
LZH Lanzhou 47.73 191 *eP* **P 01 10 29.0 +0.3**
LZH pP pP 01 10 34.0 +2.2
LZH sP sP 01 10 37.0 +4.0
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,50nm,4.3s
LZH LR LR
comp=E,290nm,11.8s
LZH LR LR
comp=Z,440nm,12.3s,MS4.6
MBDF Montbardon 47.73 293 *eP* **P 01 10 29.8 +1.1**
MJAR Matsushiro Arr 47.77 154 P **P 01 10 27.2 -1.8**
comp=Z,0.5nm,0.3s,mb4.0,baz=357,slow=6.8,SNR=6.1
MJAR Matsushiro Arr 47.77 154 P **P 01 10 27.3 -1.7**
MJAR pmax pmax
comp=Z,1.0nm,0.4s
D17A Six Diamond Ra 47.80 41 ⇓P **P 01 10 28.0 -1.2**
baz=48
VIVF Saint-Julien-l 47.82 295 ⇑*iP* **P 01 10 29.5 +0.2**
CHMT Chamberlain Mo 47.84 43 *eP* **P 01 10 29.0 -0.5**
comp=Z,2.3nm,1.0s,mb4.2
D16A Dana Ranch, Ca 47.86 41 ⇓P **P 01 10 29.2 -0.4**
baz=48
MSO Missoula 47.87 44 *eP* **P 01 10 28.8 -1.0**
comp=Z,2.8nm,0.8s,mb4.3
E12A Beaver Dam Sad 48.16 45 ⇑P **P 01 10 30.5 -1.4**
baz=48
E13A Victor 48.24 44 ⇓P **P 01 10 32.3 -0.2**
baz=48
E15A Deer Lodge 48.38 43 ⇓P **P 01 10 33.0 -0.6**
baz=48
E18A Harlowton 48.44 40 ⇓P **P 01 10 33.2 -0.8**
baz=48
F10A Beach Ranch, E 48.46 47 ⇑P **P 01 10 33.7 -0.6**
baz=48
E17A Martinsdale 48.47 41 ⇑P **P 01 10 33.8 -0.5**
baz=48
LAO LASA Array 48.58 37 *eP* **P 01 10 35.7 +0.6**
comp=Z,21nm,1.1s,mb5.1
LASF Ste Croix 48.68 296 ⇑*iP* **P 01 10 36.9 +1.0**
comp=Z,21nm,1.3s,mb4.7
G04A Mulino 48.77 52 ⇑P **P 01 10 36.3 -0.4**
baz=49
F12A Elk City 48.84 45 ⇑P **P 01 10 36.8 -0.4**
baz=49,SNR=14
F13A Darby 48.88 44 ⇑P **P 01 10 37.2 -0.2**
baz=49
G06A Carlson Farm, 48.91 50 ⇓P **P 01 10 37.6 -0.1**
baz=49
LRM Limekiln Ridge 48.99 42 *eP* **P 01 10 38.1 -0.2**
G08A Pilot Rock 48.99 49 ⇑P **P 01 10 38.5 +0.2**
baz=49,SNR=8.9
F17A Fitzpatrick Pl 49.04 41 ⇓P **P 01 10 38.4 -0.3**
baz=49
F18A Big Timber 49.11 40 ⇑P **P 01 10 39.3 0.0**
baz=49
BOZ Bozeman (W) 49.23 42 ⇑P **P 01 10 39.6 -0.5**
baz=49
BOZ Bozeman (W) 49.23 42 *eP* **P 01 10 39.5 -0.7**
comp=Z,6.6nm,1.0s,mb4.6
BOZ Bozeman (W) 49.23 42 *eP* **P 01 10 39.5 -0.6**
BOZ pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
GCMT Greycliff 49.23 40 *eP* **P 01 10 40.2 0.0**
comp=Z,8.6nm,1.2s,mb4.7
AQU L'Aquila 49.38 286 *eP* **P 01 10 41.9 +0.6**
comp=Z,34nm,1.6s,mb5.1
AQU L'Aquila 49.38 286 *eP* **P 01 10 41.9 +0.6**
AQU pmax pmax
comp=Z,34nm,1.6s,mb5.1
DLMT Dillon 49.44 43 *eP* **P 01 10 42.2 +0.5**
comp=Z,8.9nm,1.4s,mb4.6
G12A Big Creek, Yel 49.45 45 ⇓P **P 01 10 41.5 -0.4**
baz=49
BMO Blue Mountains 49.57 47 *eP* **P 01 10 43.2 +0.5**
comp=Z,4.6nm,0.9s,mb4.5
MTLF Montolieu 49.57 297 ⇑*iP* **P 01 10 43.4 +0.6**
G13A Cobalt 49.58 44 ⇑P **P 01 10 42.8 0.0**
baz=49,SNR=7.1
G17A Pierce Place, 49.62 41 ⇓P **P 01 10 43.3 +0.2**
baz=49
G15A Dillon 49.64 43 ⇑P **P 01 10 42.9 -0.4**
baz=49
G18A Lazy EL Ranch, 49.71 40 ⇑P **P 01 10 43.4 -0.5**
baz=50
BR131 Keskin Array S 49.72 266 *eP* **P 01 10 43.7 -0.2**
comp=Z,1.0nm,0.6s,mb4.0
BRTR Keskin Array B 49.72 266 P **P 01 10 43.9 -0.1**
comp=Z,2.1nm,1.0s,mb4.1,baz=353,slow=4.6,SNR=7.5
BRTR PP PP 01 12 40.2 +2.1
comp=Z,1.4nm,1.1s,baz=4.3,slow=5.0,SNR=4.0
BRTR LR LR 01 34 51.7
comp=Z,73nm,18.7s,MS3.7,baz=37,slow=40
BRTR Keskin Array B 49.72 266 *ceP* **P 01 10 44.9 +1.0**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
MCMT McKenzie Canyo 49.95 43 *eP* **P 01 10 44.5 -1.1**
comp=Z,2.0nm,1.1s,mb4.1
EPF Esparros 50.06 299 ⇑*iP* **P 01 10 46.5 0.0**
comp=Z,13nm,1.3s,mb4.5
EPF Esparros 50.06 299 ⇑*iP* **P 01 10 46.5 0.0**
comp=Z,6.4nm,1.3s,mb4.5
EPF Esparros 50.06 299 ⇑*iP* **P 01 10 46.5 0.0**
EPF pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
H12A Diamond D Ranc 50.07 45 ⇑P **P 01 10 46.4 -0.2**
baz=50
H13A Challis 50.10 44 ⇓P **P 01 10 46.2 -0.6**
baz=50
H14A Leadore 50.12 43 ⇓P **P 01 10 46.9 0.0**
baz=50
I07A Izee 50.15 49 ⇓P **P 01 10 47.0 -0.2**
baz=50
H15A Lima 50.17 43 ⇑P **P 01 10 47.1 -0.3**
baz=50
H16A Russell Place, 50.19 42 ⇓P **P 01 10 47.5 0.0**
baz=50
H17A Grant Village 50.55 41 ⇓P **P 01 10 50.9 +0.7**
baz=50
I13A Wildhorse Cree 50.76 44 ⇑P **P 01 10 51.7 -0.1**
baz=51,SNR=14
I12A Atlanta 50.80 45 ⇑P **P 01 10 51.2 -0.8**
baz=51
FLWY Flagg Ranch 50.85 41 *eP* **P 01 10 54.4 +2.0**
comp=Z,119nm,2.5s,mb5.4
J08A Circle Bar Ran 50.95 48 ⇓P **P 01 10 53.6 +0.3**
baz=51
I16A Newdale 51.00 42 ⇓P **P 01 10 53.9 +0.3**
baz=51
HLID Hailey 51.08 45 *eP* **P 01 10 59.5 +5.3**
comp=Z,20nm,2.5s,mb4.6
MFID Camas Ranch 51.12 46 ⇑P **P 01 10 54.4 -0.1**
baz=51
MOOW Moose Ponds 51.18 41 *eP* **P 01 10 55.7 +0.7**
comp=Z,10.0nm,1.4s,mb4.5
KBL Kabul 51.22 229 *eP* **P 01 10 54.3 -1.0**
comp=Z,14nm,1.2s,mb4.8
KBL Kabul 51.22 229 *eP* **P 01 10 54.3 -1.0**
KBL pmax pmax
comp=Z,14nm,1.2s,mb4.8
RSSD Black Hills 51.28 35 *eP* **P 01 10 55.7 0.0**
comp=Z,12nm,1.1s,mb4.7
RSSD Black Hills 51.28 35 *eP* **P 01 10 55.7 0.0**
RSSD pmax pmax
comp=Z,12nm,1.1s,mb4.7
I18A Diamond G Ranc 51.30 40 ⇑P **P 01 10 56.0 +0.2**
baz=51
HUMO Hull Mountain 51.31 53 *eP* **P 01 10 56.9 +1.0**
comp=Z,47nm,2.1s,mb5.0
HUMO *ep*P pP 01 11 04.3 +5.3
LOHW Long Hollow 51.33 41 *eP* **P 01 10 57.2 +1.2**
comp=Z,9.8nm,1.7s,mb4.5
K05A Summer Lake 51.37 51 ⇑P **P 01 10 57.0 +0.6**
baz=51
J14A Carey 51.39 44 ⇑P **P 01 10 56.7 +0.2**
baz=51
J15A Blackfoot 51.40 43 ⇑P **P 01 10 56.7 +0.1**
baz=51
TPAW Teton Pass 51.42 41 *eP* **P 01 10 58.3 +1.5**
comp=Z,9.3nm,1.2s,mb4.6
REDW Red Top Meadow 51.56 41 *eP* **P 01 10 59.0 +1.2**
comp=Z,13nm,1.6s,mb4.6
REDW *ep*P pP 01 11 06.3 +5.5
NJ2 Nanjing 51.66 175 *eP* **P 01 10 56.9 -1.8**
NJ2 pmax pmax
comp=Z,50nm,0.8s,mb5.5
WVOR Wild Horse Val 51.86 49 *eP* **P 01 11 00.5 +0.4**
comp=Z,6.4nm,1.1s,mb4.5
WVOR Wild Horse Val 51.86 49 *eP* **P 01 11 00.5 +0.5**
WVOR pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
TIP Timpagrande 52.15 283 *eP* **P 01 11 01.8 -0.5**
comp=Z,10nm,1.1s,mb4.7
K14A Jones Ranch, D 52.19 44 ⇓P **P 01 11 02.7 +0.2**
baz=52
YBH Yreka Blue Hor 52.20 53 LR LR 01 34 52.0
comp=Z,115nm,18.9s,MS3.9,baz=340,slow=38
K19A Absolon Red Bu 52.24 40 ⇑P **P 01 11 02.7 -0.2**
baz=52
MOD Modoc 52.24 50 *eP* **P 01 11 04.4 +1.5**
comp=Z,14nm,1.4s,mb4.7
BW06 Boulder Array 52.24 40 *eP* **P 01 11 04.8 +1.9**
comp=Z,5.5nm,1.4s,mb4.3
K18A Toltan Ranch, 52.34 41 ⇑P **P 01 11 03.5 -0.1**
baz=52
L15A Malad City 52.79 43 ⇑P **P 01 11 07.1 +0.1**
baz=53
CD2 Chengdu 52.90 191 P **P 01 11 08.1 +0.2**
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,200nm,4.9s
HVU Hansel Valley 52.98 43 *eP* **P 01 11 09.5 +1.1**
comp=Z,7.0nm,1.1s,mb4.5
HVU Hansel Valley 52.98 43 *eP* **P 01 11 09.5 +1.1**
HVU pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
M11A Holland Ranch, 53.09 46 ⇑P **P 01 11 09.9 +0.7**
baz=53
M12A Wells 53.18 45 ⇑P **P 01 11 10.5 +0.7**
baz=53
L22A Ellis Ranch, M 53.20 37 ⇓P **P 01 11 09.6 -0.4**
baz=53
L21A Rawlins 53.20 38 ⇑P **P 01 11 09.9 -0.1**
baz=53
M14A Sheep Mountain 53.21 44 ⇑P **P 01 11 10.6 +0.5**
baz=53
HWUT Hardware Ranch 53.25 42 *eP* **P 01 11 09.4 -0.9**
comp=Z,12nm,1.2s,mb4.7
M13A Montello 53.29 45 ⇑P **P 01 11 11.4 +0.8**
baz=53
M13A Montello 53.29 45 *eP* **P 01 11 11.6 +1.0**
comp=Z,15nm,1.3s,mb4.8
WDC Whiskeytown Da 53.36 53 *eP* **P 01 11 10.9 -0.2**
comp=Z,5.3nm,1.0s,mb4.4
WDC Whiskeytown Da 53.36 53 *eP* **P 01 11 10.9 -0.3**
WDC pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
RWWY Rawlins 53.48 38 *eP* **P 01 11 11.4 -0.6**
comp=Z,15nm,1.0s,mb4.9
M21A Separation Pea 53.55 38 ⇑P **P 01 11 12.0 -0.6**
baz=53
M20A Sweetwater, Wa 53.61 39 ⇑P **P 01 11 12.6 -0.4**
baz=53
ESDC Sonseca Array 53.81 303 P **P 01 11 14.5 0.0**
comp=Z,4.0nm,1.0s,mb4.3,baz=2.2,slow=8.4,SNR=24
ESLA Sonseca Array 53.81 303 *eP* **P 01 11 14.6 +0.1**
comp=Z,3.3nm,1.2s,mb4.1
PAB San Pablo 53.97 303 *eP* **P 01 11 15.9 +0.3**
comp=Z,14nm,1.1s,mb4.8
PAB San Pablo 53.97 303 *eP* **P 01 11 16.0 +0.3**
PAB pmax pmax
comp=Z,14nm,1.1s,mb4.8
N20A Spence Gulch, 54.26 39 ⇑P **P 01 11 17.3 -0.5**
baz=54
O12A Currie 54.33 45 ⇑P **P 01 11 18.4 +0.1**
baz=54
N23A Red Feather La 54.36 37 ⇓P **P 01 11 18.1 -0.4**
baz=54
O11A Cowboy Ranch, 54.39 46 ⇑P **P 01 11 19.1 +0.4**
baz=54
DAU Daniels Canyon 54.46 42 *eP* **P 01 11 19.8 +0.6**
DUG Dugway 54.56 44 *eP* **P 01 11 19.4 -0.6**
comp=Z,7.9nm,1.3s,mb4.6
DUG Dugway 54.56 44 *eP* **P 01 11 19.4 -0.5**
DUG pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
O19A Miners Draw (B 54.73 40 ⇑P **P 01 11 20.5 -0.7**
baz=54
MPU Maple Canyon 54.83 42 *eP* **P 01 11 22.0 +0.2**
comp=Z,20nm,1.5s,mb4.9
NLU North Lily Min 54.85 43 *eP* **P 01 11 23.9 +1.8**
comp=Z,9.3nm,1.1s,mb4.7
WCN Washoe City 54.87 50 ⇓P **P 01 11 22.3 +0.1**
baz=55
O20A White River Ci 54.96 39 ⇑P **P 01 11 22.7 -0.1**
baz=55
O22A Kremmling 55.05 38 ⇑P **P 01 11 23.6 +0.1**
baz=55,SNR=12
P12A McGill 55.11 46 ⇑P **P 01 11 23.6 -0.3**
baz=55
P13A Bates Ranch, G 55.20 45 ⇓P **P 01 11 24.0 -0.5**
baz=55
P18A Preston Nutter 55.31 41 ⇓P **P 01 11 25.7 +0.2**
baz=55
EVO Evora 55.32 306 ⇑*iP* **P 01 11 25.4 0.0**
comp=Z,34nm,1.4s,mb4.9
EVO *e*MLR MLR
comp=Z,82nm,17.5s,MS3.6
P17A Butcher Ranch, 55.43 42 ⇑P **P 01 11 25.7 -0.5**
baz=55
ISCO Idaho Springs 55.47 37 *eP* **P 01 11 26.9 +0.4**
comp=Z,3.6nm,0.9s,mb4.4
ISCO Idaho Springs 55.47 37 *eP* **P 01 11 26.9 +0.3**
ISCO pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
P22A Eagle 55.60 38 ⇑P **P 01 11 26.9 -0.6**
baz=55
Q11A Duckwater 55.67 46 ⇑P **P 01 11 28.0 0.0**
baz=56
Q13A Wheeler Ranch, 55.69 45 ⇑P **P 01 11 28.5 +0.3**
baz=56
Q14A Sevier Lake (B 55.72 44 ⇑P **P 01 11 28.7 +0.4**
baz=56,SNR=9.8
SRU San Rafael 55.81 42 *eP* **P 01 11 28.7 -0.3**
comp=Z,17nm,0.4s,mb5.4
P25A Willow Gulch B 55.86 36 ⇓P **P 01 11 29.2 -0.1**
baz=56
NVAR Mina Array Bea 55.86 49 P **P 01 11 29.8 +0.5**
comp=Z,0.7nm,0.7s,mb3.8,baz=9.5,slow=4.9,SNR=6.3
NVAR PcP PcP 01 12 28.7 +0.7
comp=Z,0.6nm,0.8s,baz=21,slow=5.8,SNR=2.6
P23A Jefferson 55.88 37 ⇓P **P 01 11 30.1 +0.6**
baz=56
Q16A Castle Valley 55.95 42 ⇑P **P 01 11 30.1 +0.2**
baz=56,SNR=5.6
SMCO Snowmass 56.00 38 *eP* **P 01 11 31.2 +0.9**
comp=Z,9.8nm,1.1s,mb4.8
MMAI Mount Meron Ar 56.15 263 LR LR 01 35 59.5
comp=Z,73nm,21.4s,MS3.7,baz=250,slow=36
R11A Troy Canyon, C 56.17 46 ⇓P **P 01 11 31.2 -0.3**
baz=56,SNR=8.6
R10A Warm Springs 56.17 47 ⇑P **P 01 11 31.8 +0.2**
baz=56
MSU Marysvale 56.28 43 *eP* **P 01 11 33.0 +0.7**
Q21A Lamborn Mesa, 56.30 39 ⇑P **P 01 11 32.5 +0.1**
baz=56
Q22A Crested Butte, 56.32 38 ⇑P **P 01 11 32.8 +0.2**
baz=56
Q24A Divide 56.34 37 ⇓P **P 01 11 32.7 0.0**
baz=56,SNR=12
Q23A Hartsel 56.35 37 ⇑P **P 01 11 32.3 -0.6**
baz=56
KEST Kesra 56.36 289 *eP* **P 01 11 33.4 +0.5**
KEST Kesra 56.36 289 P **P 01 11 33.4 +0.4**
comp=Z,5.5nm,0.9s,mb4.6,baz=333,slow=6.8,SNR=18
Q25A Bedland, Calha 56.45 36 ⇓P **P 01 11 33.2 -0.3**
baz=56
R13A O'Grain Ranch, 56.47 45 ⇓P **P 01 11 33.4 -0.3**
baz=56
R17A Hanksville Air 56.48 42 ⇓P **P 01 11 33.0 -0.8**
baz=56
S10A Tonopah Range, 56.51 47 ⇑P **P 01 11 33.5 -0.5**
baz=56
R16A Teasdale 56.56 43 ⇑P **P 01 11 34.5 +0.2**
baz=56
PV04 Paradox Valley 56.64 40 *eP* **P 01 11 37.2 +2.3**
R19A Curley Farm, L 56.72 40 ⇓P **P 01 11 35.7 +0.2**

	baz=56								
R21A	**Cimarron**	**56.76**	**39**	⇓P		**P**	**01 11 36.2**	**+0.4**
	baz=57								
S11A	**Rachel**	**56.85**	**47**	⇓P		**P**	**01 11 37.0**	**+0.6**
	baz=57								
R20A	**Redvale**	**56.88**	**40**	⇓P		**P**	**01 11 36.7**	**+0.1**
	baz=57								
PV01	**Paradox Valley**	**56.92**	**40**	*e*P		**P**	**01 11 37.0**	**+0.1**
	comp=Z,1μm,1.1s								
S14A	**Cedar City**	**56.95**	**44**	⇑P		**P**	**01 11 37.4**	**+0.3**
	baz=57								
R22A	**Saguache, Gunn**	**56.96**	**38**	⇓P		**P**	**01 11 37.2**	**0.0**
	baz=57								
S12A	**Delamar Landin**	**56.96**	**46**	⇑P		**P**	**01 11 37.0**	**-0.2**
	baz=57								
R24A	**Sanders Place,**	**57.07**	**37**	⇑P		**P**	**01 11 37.2**	**-0.7**
	baz=57								
S13A	**Holt Ranch, En**	**57.07**	**45**	⇓P		**P**	**01 11 38.5**	**+0.5**
	baz=57								
S16A	**Weppner Ranch,**	**57.11**	**43**	⇑P		**P**	**01 11 38.4**	**+0.1**
	baz=57								
CCUT	**Cedar City**	**57.14**	**44**	*e*P		**P**	**01 11 39.4**	**+1.0**
	comp=Z,5.3nm,1.3s,mb4.4								
S20A	**Disappointment**	**57.24**	**40**	⇓P		**P**	**01 11 39.1**	**-0.1**
	baz=57,SNR=7.1								
S17A	**Black Ridge (B**	**57.25**	**42**	⇓P		**P**	**01 11 38.9**	**-0.4**
	baz=57								
S18A	**Hurst Farm, Bl**	**57.26**	**41**	⇓P		**P**	**01 11 39.4**	**0.0**
	baz=57								
S19A	**Harvey Farm, M**	**57.27**	**40**	⇑P		**P**	**01 11 39.2**	**-0.1**
	baz=57								
GYA	**Guiyang**	**57.27**	**188**	*e*P		**P**	**01 11 41.0**	**+1.5**
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s,mb4.8								
T11A	**Corn Creek, Al**	**57.30**	**46**	⇓P		**P**	**01 11 39.5**	**-0.1**
	baz=57								
S22A	**4UR Ranch, Cre**	**57.43**	**38**	⇑P		**P**	**01 11 40.9**	**+0.4**
	baz=57,SNR=16								
SDCO	**Great Sand Dun**	**57.52**	**37**	*e*P		**P**	**01 11 41.0**	**-0.2**
	comp=Z,12nm,1.4s,mb4.7								
T13A	**Saint George**	**57.62**	**45**	⇑P		**P**	**01 11 41.9**	**0.0**
	baz=57								
T14A	**Hurricane**	**57.65**	**44**	⇑P		**P**	**01 11 42.0**	**0.0**
	baz=58								
S25A	**Robets Cordova**	**57.68**	**36**	⇓P		**P**	**01 11 41.9**	**-0.4**
	baz=58								
T15A	**Red Dirt Ranch**	**57.74**	**44**	⇑P		**P**	**01 11 42.9**	**+0.2**
	baz=58								
T18A	**Mexican Hat**	**57.82**	**41**	⇑P		**P**	**01 11 43.0**	**-0.2**
	baz=58								
MVCO	**Mesa Verde**	**57.85**	**40**	*e*P		**P**	**01 11 44.5**	**+1.0**
FURC	**Furnace Creek,**	**57.93**	**48**	⇑P		**P**	**01 11 44.6**	**+0.6**
	baz=58								
T21A	**Navajo Lake**	**58.13**	**39**	⇓P		**P**	**01 11 46.2**	**+0.7**
	baz=58								
T22A	**Edith**	**58.16**	**38**	⇑P		**P**	**01 11 45.8**	**+0.2**
	baz=58,SNR=5.3								
T19A	**Beclabito**	**58.19**	**40**	⇓P		**P**	**01 11 45.2**	**-0.6**
	baz=58								
U14A	**Mt Trumbull**	**58.28**	**44**	⇓P		**P**	**01 11 47.1**	**+0.6**
	baz=58								
MPMC	**Manual Prospec**	**58.28**	**48**	⇑P		**P**	**01 11 47.2**	**+0.7**
	baz=58,SNR=5.1								
U15A	**North Rim**	**58.34**	**44**	⇓P		**P**	**01 11 47.1**	**+0.2**
	baz=58								
U20A	**Newcomb**	**58.67**	**40**	⇑P		**P**	**01 11 49.3**	**0.0**
	baz=58								
KMI	**Kunming**	**58.68**	**192**	P		**P**	**01 11 51.6**	**+2.2**
KMI				pP		pP	01 11 54.3	+1.8
KMI				sP		sP	01 11 55.6	+1.9
KMI				PP		PP	01 14 02.7	+3.8
KMI				S		**S**	**01 19 53.4**	**-0.2**
KMI				sS		sS	01 19 58.4	-0.4
KMI				pmax		pmax			
	comp=Z,10.0nm,1.1s,mb4.8								
KMI				pmax		pmax			
	comp=Z,260nm,4.2s								
KMI				LR		LR			
	comp=N,360nm,20.7s,MS4.6								
KMI				LR		LR			
	comp=E,240nm,18.2s,MS4.6								
KMI				LR		LR			
	comp=Z,140nm,17.4s,MS4.1								
U16A	**Tuba City**	**58.71**	**42**	⇓P		**P**	**01 11 49.8**	**+0.3**
	baz=58								
U22A	**Llaves**	**58.79**	**38**	⇓P		**P**	**01 11 50.6**	**+0.6**
	baz=59								
U23A	**El Rito**	**58.89**	**38**	⇑P		**P**	**01 11 50.7**	**0.0**
	baz=59								
V15A	**Kaibab Nationa**	**58.95**	**43**	⇑P		**P**	**01 11 51.7**	**+0.5**
	baz=59								
U26A	**Atchley Ranch,**	**58.98**	**35**	⇓P		**P**	**01 11 50.8**	**-0.6**
	baz=59								
V14A	**Boquillas Ranc**	**59.06**	**44**	⇑P		**P**	**01 11 52.0**	**0.0**
	baz=59								
GSC	**Goldstone**	**59.09**	**48**	⇓P		**P**	**01 11 51.8**	**-0.4**
	baz=59								
V22A	**San Miguel Ran**	**59.25**	**39**	⇑P		**P**	**01 11 53.6**	**+0.3**
	baz=59								
V20A	**Brimhall**	**59.25**	**40**	⇑P		**P**	**01 11 52.5**	**-0.7**
	baz=59								
V17A	**Tonalea, Kykot**	**59.26**	**42**	⇓P		**P**	**01 11 53.5**	**+0.3**
	baz=59,SNR=12								
WUAZ	**Wupatki**	**59.31**	**43**	⇓P		**P**	**01 11 53.3**	**-0.4**
	baz=59								
WUAZ	**Wupatki**	**59.31**	**43**	*e*P		**P**	**01 11 56.1**	**+2.4**
	comp=Z,8.7nm,1.5s,mb4.6								
EDW2	**Edwards Air Fo**	**59.41**	**49**	⇑P		**P**	**01 11 54.9**	**+0.5**
	baz=59								
V23A	**Ortiz Mt. (NFS**	**59.47**	**38**	⇑P		**P**	**01 11 54.6**	**-0.2**
	baz=59								
V25A	**Rancho No Teng**	**59.48**	**36**	⇓P		**P**	**01 11 53.7**	**-1.1**
	baz=59,SNR=6.5								
W14A	**Seligman**	**59.48**	**44**	⇓P		**P**	**01 11 55.4**	**+0.5**
	baz=59								
V24A	**Rampart Ranch,**	**59.55**	**37**	⇓P		**P**	**01 11 55.0**	**-0.4**
	baz=59								
V26A	**Tequesquite Ra**	**59.58**	**36**	⇑P		**P**	**01 11 55.0**	**-0.6**
	baz=59								
GMRC	**Granite Mounta**	**59.70**	**47**	⇑P		**P**	**01 11 56.9**	**+0.5**
	baz=60								
W16A	**Flagstaff**	**59.72**	**43**	⇑P		**P**	**01 11 56.8**	**+0.3**
	baz=60								
X13A	**Yucca**	**60.04**	**45**	⇑P		**P**	**01 11 58.5**	**-0.2**
	baz=60								
W24A	**Lazy 6 Ranch,**	**60.05**	**37**	⇑P		**P**	**01 11 58.7**	**-0.1**
	baz=60								
W25A	**X Bar L Ranch,**	**60.11**	**36**	⇑P		**P**	**01 11 59.0**	**-0.1**
	baz=60								
ANMO	**Albuquerque**	**60.24**	**38**	*e*P		**P**	**01 11 59.6**	**-0.4**
	comp=Z,12nm,1.4s,mb4.7								
ANMO	**Albuquerque**	**60.24**	**38**	*e*P		**P**	**01 11 59.6**	**-0.5**
ANMO				pmax		pmax			
	comp=Z,12nm,1.4s								
X20A	**Quemado**	**60.50**	**40**	⇓P		**P**	**01 12 02.5**	**+0.7**
	baz=60								
X19A	**St. Johns**	**60.55**	**41**	⇑P		**P**	**01 12 02.7**	**+0.5**
	baz=60								
X23A	**Hourglass Bar**	**60.62**	**38**	⇓P		**P**	**01 12 03.2**	**+0.5**
	baz=60								
X21A	**Alamocita Cree**	**60.65**	**39**	⇑P		**P**	**01 12 03.4**	**+0.6**
	baz=60								
LAZ	**Ladron**	**60.73**	**39**	*e*P		**P**	**01 12 03.6**	**+0.1**
	comp=Z,3.5nm,1.3s,mb4.3								
Y15A	**Casa Rosa Ranc**	**60.79**	**44**	⇓P		**P**	**01 12 04.3**	**+0.4**
	baz=61								
Y16A	**Circle Bar Ran**	**60.93**	**43**	⇑P		**P**	**01 12 05.3**	**+0.5**
	baz=61								
WMOK	**Wichita Mounta**	**60.94**	**31**	*e*P		**P**	**01 12 03.8**	**-1.1**
	comp=Z,12nm,1.4s,mb4.8								
WMOK	**Wichita Mounta**	**60.94**	**31**	*e*P		**P**	**01 12 03.8**	**-1.1**
WMOK				pmax		pmax			
	comp=Z,12nm,1.4s,mb4.8								
BNM	**Barren Site**	**61.02**	**38**	*e*P		**P**	**01 12 05.0**	**-0.4**
	comp=Z,8.0nm,1.5s,mb4.6								
Y19A	**Nutrioso**	**61.02**	**41**	⇑P		**P**	**01 12 05.9**	**+0.5**
	baz=61								
Y21A	**Point of Rocks**	**61.09**	**39**	⇑P		**P**	**01 12 06.3**	**+0.4**
	baz=61								
Y20A	**Horse Springs,**	**61.14**	**40**	⇑P		**P**	**01 12 06.9**	**+0.7**
	baz=61								
Y17A	**Roosevelt**	**61.16**	**42**	⇓P		**P**	**01 12 07.2**	**+0.9**
	baz=61								
Y22A	**Socorro**	**61.21**	**39**	⇑P		**P**	**01 12 07.2**	**+0.5**
	baz=61								
Z25A	**Roswell**	**62.02**	**37**	⇓P		**P**	**01 12 12.5**	**+0.3**
	baz=62								
Z26A	**Caprock**	**62.08**	**36**	⇑P		**P**	**01 12 12.7**	**+0.2**
	baz=62								
Z27A	**Tatum**	**62.08**	**35**	⇑P		**P**	**01 12 12.9**	**+0.3**
	baz=62								
118A	**Homack Ranch,**	**62.28**	**42**	⇑P		**P**	**01 12 14.1**	**+0.1**
	baz=62								
117A	**Oracle**	**62.29**	**42**	⇑P		**P**	**01 12 13.8**	**-0.2**
	baz=62								
124A	**Stringfield Ra**	**62.54**	**37**	⇑P		**P**	**01 12 15.8**	**+0.1**
	baz=62								
125A	**Gardner Draw,**	**62.64**	**37**	⇓P		**P**	**01 12 16.2**	**-0.1**
	baz=62								
220A	**Playas Peak, P**	**63.12**	**40**	⇓P		**P**	**01 12 19.6**	**+0.1**
	baz=63								
224A	**Cornudas Mount**	**63.16**	**38**	⇓P		**P**	**01 12 19.6**	**-0.2**
	baz=63								
318A	**Bisbee**	**63.47**	**42**	⇑P		**P**	**01 12 22.4**	**+0.5**
	baz=63								
MNTX	**Cornudas Mount**	**63.54**	**37**	*e*P		**P**	**01 12 22.2**	**-0.1**
	comp=Z,5.5nm,1.2s,mb4.5								
324A	**Moseley Ranch,**	**63.79**	**38**	⇓P		**P**	**01 12 24.3**	**+0.3**
	baz=64								
325A	**Bean Ranch, Si**	**63.90**	**37**	⇓P		**P**	**01 12 25.0**	**+0.3**
	baz=64								
326A	**Caldwell Ranch**	**64.02**	**36**	⇓P		**P**	**01 12 25.6**	**+0.1**
	baz=64								
328A	**Wristen Ranch,**	**64.03**	**35**	⇑P		**P**	**01 12 25.8**	**+0.2**
	baz=64								
427A	**Hayter Ranch,**	**64.52**	**36**	⇑P		**P**	**01 12 28.9**	**+0.1**
	baz=64								
426A	**McDonald Obser**	**64.66**	**36**	⇑P		**P**	**01 12 29.5**	**-0.2**
	baz=64,SNR=11								
428A	**Kincaid Ranch,**	**64.69**	**35**	⇓P		**P**	**01 12 30.4**	**+0.6**
	baz=64,SNR=5.2								
JCT	**Junction City**	**65.12**	**32**	*e*P		**P**	**01 12 32.4**	**-0.2**
	comp=Z,11nm,1.0s,mb4.8								
JCT	**Junction City**	**65.12**	**32**	*e*P		**P**	**01 12 32.4**	**-0.2**
JCT				pmax		pmax			
	comp=Z,11nm,1.0s,mb4.8								
527A	**Woodward Ranch**	**65.21**	**36**	⇑P		**P**	**01 12 32.7**	**-0.6**
	baz=65								
528A	**Cox Ranch, San**	**65.25**	**35**	⇓P		**P**	**01 12 33.0**	**-0.5**
	baz=65,SNR=7.5								
526A	**Mary Lane Ranc**	**65.26**	**36**	⇑P		**P**	**01 12 33.5**	**-0.1**
	baz=65								
CMAR	**Chiang Mai Arr**	**65.42**	**196**	P		**P**	**01 12 33.4**	**-1.4**
	comp=Z,2.6nm,0.9s,mb4.3,baz=349,slow=9.1,SNR=8.1								
CMAR				LR		LR	01 42 45.6		
	comp=Z,123nm,18.8s,MS4.1,baz=118,slow=38								
CMAR	**Chiang Mai Arr**	**65.42**	**196**	P		**P**	**01 12 33.4**	**-1.3**
CMAR				pmax		pmax			
	comp=Z,3.0nm,0.9s								
CMAR				MLR		MLR			
	comp=Z,123nm,18.8s								
626A	**Big Bend Ranch**	**65.76**	**36**	⇑P		**P**	**01 12 36.7**	**-0.1**
	baz=66								
627A	**Terlingua Ranc**	**65.91**	**36**	⇓P		**P**	**01 12 37.6**	**-0.2**
	baz=66,SNR=6.8								
628A	**Black Gap, Mar**	**65.91**	**35**	⇓P		**P**	**01 12 37.5**	**-0.3**
	baz=66								
TXAR	**Lajitas Array**	**66.01**	**36**	P		**P**	**01 12 37.6**	**-0.9**
	comp=Z,4.6nm,1.0s,mb4.5,baz=12,slow=6.8,SNR=19								
TXAR				LR		LR	01 41 54.6		
	comp=Z,161nm,18.7s,MS4.3,baz=185,slow=36								
TXAR	**Lajitas Array**	**66.01**	**36**	P		**P**	**01 12 37.6**	**-0.8**
TXAR				pmax		pmax			
	comp=Z,5.0nm,1.0s								
TXAR				MLR		MLR			
	comp=Z,161nm,18.7s								
DBIC	**Dimbokro**	**86.56**	**300**	*e*P		**P**	**01 14 34.7**	**-0.5**
	comp=Z,5.3nm,0.9s,mb4.8								
DBIC	**Dimbokro**	**86.56**	**300**	*e*P		**P**	**01 14 34.7**	**-0.5**
DBIC				pmax		pmax			
	comp=Z,5.0nm,0.9s								
LIC	**Lamto**	**87.02**	**300**	⇑*i*P		**P**	**01 14 37.4**	**-0.1**
	comp=Z,17nm,0.9s,mb5.0								
LIC	**Lamto**	**87.02**	**300**	⇑*i*P		**P**	**01 14 37.4**	**-0.1**
	comp=Z,8.5nm,0.9s,mb5.0								
KMBO	**Kilima Mbogo**	**89.67**	**257**	LR		LR	01 59 41.6		
	comp=Z,77nm,19.6s,MS4.1,baz=90,slow=39								
MAW	**Mawson**	**152.97**	**221**	PKPbc		PKPbc	01 21 46.1	-1.4	
	comp=Z,6.5nm,1.0s,baz=342,slow=4.4,SNR=8.4								
MAW	**Mawson**	**152.97**	**221**	PKIKP		PKPbc	01 21 46.1	-1.4	
MAW				pmax		pmax			
	comp=Z,7.0nm,1.0s								

*ISK **06** 01:22:19.9,37°.93N×38°.01E,h11km,MD3.1*
*ISCJB **06** 01:22:20.3±0.5,37°.89N±0°.02×38°.00E±0°.04,h3km±5km, Error ellipse: s-maj=5.0km s-min=3.6km az=30.6*
*CSEM **06** 01:22:20.7±0.1,37°.90N×38°.04E,h12km,MD3.2, Error ellipse: s-maj=3.5km s-min=2.9km az=127.0*
*DDA **06** 01:22:20.7,37°.90N×38°.03E,h17km±1km,Md3.2*

ISC 06 01:22:20.9±0.5,37°.89N±0°.02×38°.00E±0°.04,h7km±4km, n44,σ0s87/59,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKCD	**Akcadag**	**0.41**	**351**	*i* P	**Pg**	**01 22 28.8**	**0.0**
AKCD				*i* S	**Sg**	**01 22 34.6**	**+0.5**
AKCD	**Akcadag**	**0.41**	**351**	*i* P	**Pg**	**01 22 28.8**	**0.0**
AKCD				*i* S	**Sg**	**01 22 34.6**	**+0.4**
ATAB	**Bozova**	**0.48**	**151**	*i* P	**Pg**	**01 22 30.4**	**+0.2**
ATAB				*i* S	**Sg**	**01 22 37.3**	**+0.8**
ATAB	**Bozova**	**0.48**	**151**	*i* P	**Pg**	**01 22 30.4**	**+0.2**
ATAB				*i* S	**Sg**	**01 22 37.3**	**+0.8**
MYA	**Malataya**	**0.55**	**38**	*e*PG	**Pg**	**01 22 31.1**	**-0.4**
MYA				*e*SG	**Sg**	**01 22 39.0**	**+0.4**
MYA	**Malataya**	**0.55**	**38**	*e*Pg	**Pg**	**01 22 31.1**	**-0.4**
MYA				*e*Sg	**Sg**	**01 22 39.0**	**+0.4**
GZT	**Gaziantep**	**0.64**	**213**	*i* P	**Pg**	**01 22 33.0**	**-0.2**
GZT				*i* S	**Sg**	**01 22 40.1**	**-1.3**
URFA	**Urfa**	**0.79**	**124**	*e*PG	**Pg**	**01 22 35.8**	**-0.3**
URFA	**Urfa**	**0.79**	**124**	*e*Pg	**Pg**	**01 22 35.8**	**-0.3**
GAZ	**Gaziantep**	**0.95**	**221**	*e*PG	**Pg**	**01 22 39.6**	**+0.4**
GAZ	**Gaziantep**	**0.95**	**221**	*e*Pg	**Pg**	**01 22 39.6**	**+0.4**
KMRS	**Kahramanmaras**	**0.95**	**246**	*e*PG	**Pg**	**01 22 39.1**	**-0.1**
KMRS	**Kahramanmaras**	**0.95**	**246**	*e*Pg	**Pg**	**01 22 39.1**	**-0.1**
ELZG	**Elazig**	**0.98**	**52**	*i* P	**Pg**	**01 22 39.4**	**-0.4**
ELZG				*i* S	**Sg**	**01 22 53.8**	**+1.2**
ELZG	**Elazig**	**0.98**	**52**	*i* P	**Pg**	**01 22 39.4**	**-0.4**
ELZG				*i* S	**Sg**	**01 22 53.8**	**+1.3**
DARE	**Darende-Malaty**	**1.07**	**352**	*e*PG	**Pg**	**01 22 35.1**	**-6.3**
DARE				*e*SG	**Sg**	**01 22 45.3**	**-10**
SVRC	**Sivrice-ELAZID**	**1.14**	**64**	*e*PN	**Pn**	**01 22 41.2**	**-2.0**
SVRC	**Sivrice-ELAZID**	**1.14**	**64**	*e*Pn	**Pn**	**01 22 41.2**	**-2.0**
SARI	**SarD1z-Kayseri**	**1.29**	**308**	*e*PN	**Pn**	**01 22 45.3**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.29**	**308**	*e*Pn	**Pn**	**01 22 45.3**	**0.0**
KUZU	**Kuzuini**	**1.34**	**214**	*i* P	**Pn**	**01 22 46.2**	**+0.3**
KUZU				*i* S	**Sb**	**01 23 05.3**	**+1.7**
KUZU	**Kuzuini**	**1.34**	**214**	*i* P	**Pn**	**01 22 46.2**	**+0.3**
KEMA	**Kemaliye**	**1.43**	**16**	*i* P	**Pn**	**01 22 46.7**	**-0.4**
KEMA				*i* S	**Sn**	**01 23 07.4**	**+1.2**
KEMA	**Kemaliye**	**1.43**	**16**	*i* P	**Pn**	**01 22 46.7**	**-0.5**
PTK	**Pertek**	**1.48**	**47**	*e*PN	**Pn**	**01 22 46.0**	**-1.9**
PTK	**Pertek**	**1.48**	**47**	*e*Pn	**Pn**	**01 22 46.0**	**-1.9**
PINB	**Pinarbasi**	**1.48**	**302**	*i* P	**Pn**	**01 22 47.9**	**0.0**
PINB				*i* S	**Sn**	**01 23 08.2**	**+0.7**
PINB	**Pinarbasi**	**1.48**	**302**	*i* P	**Pn**	**01 22 47.9**	**0.0**
DIYA	**Diyarbakir**	**1.68**	**88**	*i* P	**Pn**	**01 22 53.4**	**+2.8**
DIYA				*i* S	**Sn**	**01 23 17.1**	**+4.8**
KOZT	**Kozan**	**1.77**	**257**	*e*PN	**Pn**	**01 22 51.6**	**-0.3**
EZC	**Erzincan**	**2.14**	**29**	*e*PN	**Pn**	**01 22 55.3**	**-1.6**
SVSK	**Karacayir**	**2.17**	**339**	*e*PN	**Pn**	**01 22 57.0**	**-0.3**
SVSK	**Karacayir**	**2.17**	**339**	*e*Pn	**Pn**	**01 22 57.0**	**-0.3**
BINT	**Bingol**	**2.19**	**63**	*e*PN	**Pn**	**01 22 57.5**	**-0.1**
BINT	**Bingol**	**2.19**	**63**	*e*Pn	**Pn**	**01 22 57.5**	**-0.1**
MARD	**Mardin**	**2.28**	**104**	*i* P	**Pn**	**01 22 58.9**	**+0.1**
MARD				*i* S	**Sn**	**01 23 33.1**	**+5.9**
HTY	**Hatay**	**2.31**	**221**	*e*PN	**Pn**	**01 22 58.9**	**-0.4**
HTY	**Hatay**	**2.31**	**221**	*e*Pn	**Pn**	**01 22 58.9**	**-0.4**
KARA	**Karaisali**	**2.42**	**256**	*e*PN	**Pn**	**01 23 00.8**	**0.0**
KARA	**Karaisali**	**2.42**	**256**	*e*Pn	**Pn**	**01 23 00.9**	**+0.1**
RSDY	**Resadiye-TOKAT**	**2.56**	**348**	*e*PN	**Pn**	**01 23 02.4**	**-0.3**
RSDY	**Resadiye-TOKAT**	**2.56**	**348**	*e*Pn	**Pn**	**01 23 02.4**	**-0.3**
YOZ	**Yozgat**	**2.73**	**311**	*e*PN	**Pn**	**01 23 05.4**	**+0.4**
YOZ	**Yozgat**	**2.73**	**311**	*e*Pn	**Pn**	**01 23 05.4**	**+0.4**

*ISCJB **06** 02:02:43.2±0.6,24°.24S±0°.04×67°.03W±0°.06,h159km±6km, mb3.9/20, Error ellipse: s-maj=9.8km s-min=6.6km az=154.5*
*NEIC **06** 02:02:43.9±0.7,24°.27S×67°.05W,h153km±7km,mb4.0/14, Error ellipse: s-maj=9.9km s-min=6.7km az=85.0*

*IDC **06** 02:02:43.9±1.7,24°.22S×66°.97W,h156km±16km,mb3.8/7, mb1 4.0/11,mb1mx3.9/16,mbtmp3.8/11, Error ellipse: s-maj=22.4km s-min=12.9km az=84.0*
*GUC **06** 02:02:46.6±0.6,23°.98S×67°.38W,h195km±47km,ML4.8*

ISC 06 02:02:44.0±0.6,24°.24S±0°.04×66°.99W±0°.06,h151km±5km, n41,σ0s99/45,mb3.9/20,4C,Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB04	**Plate Boundary**	**3.02**	**310**	⇑*i*P	**Pn**	**02 03 38.0**	**+6.3**
PB04				*e*S	**Sn**	**02 04 17.2**	**+8.6**
PB04				AML	AML	02 04 21.8	
	comp=N,1μm,0.9s						
CEN1	**Los Morros**	**3.06**	**285**	⇑*e*P	**Pn**	**02 03 35.2**	**+3.0**
CEN1				*i* S	**Sn**	**02 04 10.8**	**+1.4**
CEN1				AML	AML	02 04 12.2	
	comp=N,999nm,0.7s						
MACH	**Maria Elena**	**3.26**	**308**	*e*P	**Pn**	**02 03 35.9**	**+1.1**
MACH				*e*S	**Sn**	**02 04 13.3**	**-0.6**
MECH	**Mejillones**	**3.37**	**289**	⇑*i*P	**Pn**	**02 03 36.9**	**+0.8**
MECH				*i* S	**Sn**	**02 04 15.0**	**-1.5**
MECH				AML	AML	02 04 22.1	
	comp=E,2μm,0.9s						
PB01	**Plate Boundary**	**3.93**	**324**	⇑*i*P	**Pn**	**02 03 44.1**	**+0.7**
PB01				*i* S	**Sn**	**02 04 28.1**	**-1.4**
PB01				AML	AML	02 04 28.8	
	comp=E,760nm,0.1s						
LCO	**Las Campanas**	**5.80**	**214**	*e*Pn	**Pn**	**02 04 06.0**	**-2.1**
	comp=E,70nm,0.4s						
LCO				*e*Sn	**Sn**	**02 05 03.3**	**-10**
CFAA	**Coronel Fontan**	**7.42**	**188**	P	**Pn**	**02 04 29.1**	**-0.5**
	comp=E,0.2nm,0.3s,baz=356,slow=14,SNR=17						
CFAA				S	**Sn**	**02 05 47.3**	**-5.3**
	comp=E,0.3nm,0.3s,baz=93,slow=18,SNR=7.3						
LPAZ	**La Paz**	**7.98**	**352**	P	**Pn**	**02 04 38.6**	**+1.4**
	comp=E,7.9nm,0.3s,baz=151,slow=9.0,SNR=204						
LPAZ				S	**Sn**	**02 06 05.2**	**-1.0**
	baz=339,slow=18,SNR=3.8						
CPUP	**Villa Florida**	**8.99**	**105**	P	**Pn**	**02 04 50.7**	**+0.1**
	comp=E,0.3nm,0.3s,baz=274,slow=14,SNR=9.9						
SIV	**San Ignacio**	**9.91**	**35**	P	**Pn**	**02 05 03.0**	**+0.1**
	comp=E,2.5nm,0.3s,baz=221,slow=14,SNR=118						
SIV				S	**Sn**	**02 06 43.6**	**-9.0**
	comp=E,0.1nm,0.3s,baz=230,slow=17,SNR=4.0						
TRQA	**Tornquist**	**14.42**	**164**	*e*Pn	**Pn**	**02 06 02.5**	**+1.4**
	comp=E,7.8nm,0.6s						
PLCA	**Paso Flores**	**16.72**	**189**	P	**Pn**	**02 06 28.7**	**-0.6**
	comp=E,0.3nm,0.3s,baz=5.8,slow=13,SNR=6.8						
CAM4	**Nova Friburgo**	**22.51**	**90**	*e*P	**P**	**02 07 29.9**	**-1.4**
CAM4				*i*		02 07 32.0	
CAM4				*i*		02 07 37.6	
CAM4				*i*		02 07 50.0	
CAM4				*i*		02 07 52.6	
CAM4				*i*		02 08 04.4	
CAM4				*i*		02 08 04.4	
JCT	**Junction City**	**62.85**	**328**	*e*P	**P**	**02 12 52.7**	**-1.1**
	comp=E,4.3nm,0.8s,mb4.3						
TXAR	**Lajitas Array**	**63.87**	**324**	P	**P**	**02 12 59.8**	**-0.8**
	comp=E,0.8nm,0.8s,mb3.6,baz=142,slow=6.5,SNR=5.5						
QSPA	**South Pole Qui**	**65.97**	**180**	P	**P**	**02 13 13.9**	**+0.4**
	comp=E,5.8nm,0.5s,mb4.6,baz=168,slow=10,SNR=29						
MNTX	**Cornudas Mount**	**66.64**	**325**	*e*P	**P**	**02 13 17.0**	**-1.4**
	comp=E,1.5nm,0.8s,mb3.9						
DBIC	**Dimbokro**	**67.87**	**71**	*e*P	**P**	**02 13 26.1**	**-0.4**
DBIC	**Dimbokro**	**67.87**	**71**	P	**P**	**02 13 24.8**	**-1.7**
	comp=E,2.6nm,0.9s,mb4.0,baz=227,slow=7.8,SNR=6.6						
ANMO	**Albuquerque**	**69.75**	**326**	*e*P	**P**	**02 13 38.0**	**+0.3**
	comp=E,1.9nm,0.8s,mb3.9						
SDCO	**Great Sand Dun**	**71.49**	**329**	*e*P	**P**	**02 13 48.5**	**+0.4**
	comp=E,0.9nm,0.8s,mb3.5						
CCUT	**Cedar City**	**75.35**	**324**	*e*P	**P**	**02 14 12.3**	**+1.5**
	comp=E,5.0nm,0.9s,mb4.1						
DUG	**Dugway**	**77.00**	**326**

RPN	**Rapa Nui**	**32.30**	**43**	LR	LR		02 35 02.1	
	comp=Z,383nm,20.5s,MS4.1,baz=34,slow=31							
QSPA	**South Pole Qui**	**36.06**	**180**	P	**P**		**02 25 40.4**	**+1.7**
	17nm,1.0s,mb4.9,baz=85,slow=6.2,SNR=29							
PPT	**Papeete**	**38.53**	**335**	eLR	LR		02 36 28.7	
	954nm,25.5s,baz=170							
PPT	**Papeete**	**38.53**	**335**	LR	LR		02 37 52.5	
	comp=Z,420nm,19.2s,MS4.3,baz=174,slow=30							
PLCA	**Paso Flores**	**43.23**	**99**	LR	LR		02 39 39.1	
	comp=Z,527nm,19.8s,MS4.4,baz=279,slow=29							
TAOE	**Nuku Hiva Isla**	**45.44**	**351**	eS	**S**		**02 33 36.6**	**-1.4**
	94nm,24.4s							
TAOE				eLR	LR		02 39 35.2	
	940nm,25.4s							
DZM	**Mont Dzumac**	**54.91**	**281**	eLR	LR		02 44 14.2	
	437nm,28.3s							
MAW	**Mawson**	**57.99**	**187**	eP	**P**		**02 28 28.8**	**-1.1**
	1.6nm,0.9s,mb4.0							
MAW				LR	LR		02 49 59.6	
MAW	**Mawson**	**57.99**	**187**	P	**P**		**02 28 28.9**	**-0.9**
	5.3nm,0.8s,mb4.6,baz=194,slow=5.4,SNR=10							
MAW				LR	LR		02 49 59.6	
	comp=Z,254nm,20.4s,MS4.3,baz=132,slow=32							
CPUP	**Villa Florida**	**61.15**	**96**	P	**P**		**02 28 49.6**	**-2.6**
	0.2nm,0.3s,mb3.7,baz=230,slow=7.9,SNR=3.0							
CPUP				LR	LR		02 50 35.3	
	comp=Z,223nm,21.9s,MS4.3,baz=201,slow=31							
STKA	**Stephens Creek**	**62.00**	**254**	P	**P**		**02 28 58.5**	**+0.7**
	6.6nm,0.9s,mb4.8,baz=136,slow=7.6,SNR=8.0							
STKA				LR	LR		02 50 55.5	
	comp=Z,214nm,18.8s,MS4.3,baz=199,slow=31							
LPAZ	**La Paz**	**62.57**	**80**	eP	**P**		**02 29 01.7**	**-0.2**
	1.9nm,0.8s,mb4.3							
LPAZ	**La Paz**	**62.57**	**80**	P	**P**		**02 29 01.8**	**-0.1**
	1.8nm,0.8s,mb4.3,baz=206,slow=4.3,SNR=8.4							
FORT	**Forrest**	**70.28**	**245**	eP	**P**		**02 29 51.1**	**0.0**
	39nm,0.9s,mb5.3							
OTAV	**Otavalo**	**70.51**	**60**	eP	**P**		**02 29 52.7**	**+0.1**
ASAR	**Alice Springs**	**72.64**	**254**	P	**P**		**02 30 04.6**	**-0.8**
	7.1nm,0.9s,mb4.6,baz=138,slow=6.1,SNR=43							
WRAB	**Tennant Creek**	**75.32**	**256**	eP	**P**		**02 30 20.1**	**-1.0**
	8.1nm,0.8s,mb4.7							
BCIP	**Isla Barro Col**	**77.51**	**55**	eP	**P**		**02 30 33.4**	**-0.1**
	99nm,1.2s,mb5.6							
TXAR	**Lajitas Array**	**87.02**	**26**	P	**P**		**02 31 22.9**	**0.0**
	1.9nm,0.6s,mb4.5,baz=194,slow=8.1,SNR=21							
TXAR				LR	LR		03 02 30.5	
	comp=Z,115nm,18.2s,MS4.3,baz=180,slow=30							
TUC	**Tucson**	**88.29**	**19**	eP	**P**		**02 31 29.8**	**+0.9**
	2.3nm,0.8s,mb4.5							
MNTX	**Cornudas Mount**	**88.86**	**24**	eP	**P**		**02 31 31.4**	**-0.1**
	3.2nm,1.1s,mb4.6							
JCT	**Junction City**	**89.15**	**29**	eP	**P**		**02 31 33.4**	**+0.4**
	9.9nm,0.9s,mb5.1							
ANMO	**Albuquerque**	**91.73**	**22**	eP	**P**		**02 31 45.2**	**+0.3**
	5.1nm,1.2s,mb4.7							
ANMO	**Albuquerque**	**91.73**	**22**	LR	LR		03 02 20.9	
	comp=Z,649nm,21.1s,MS5.0,baz=210,slow=29							
AMTX	**Amarillo**	**92.81**	**26**	eP	**P**		**02 31 49.8**	**-0.1**
	5.6nm,0.8s,mb5.0							
CCUT	**Cedar City**	**92.94**	**16**	eP	**P**		**02 31 52.1**	**+1.8**
	1.6nm,0.8s,mb4.5							
WMOK	**Wichita Mounta**	**93.44**	**28**	eP	**P**		**02 31 52.9**	**+0.1**
	1.8nm,0.9s,mb4.5							
DIB	**Dawson Inlet,**	**106.95**	**1**	T			04 32 23.6	
	SNR=8.4							
ILAR	**Eielson Array**	**119.00**	**354**	PKP	PKPdf		02 37 24.6	-0.4
	1.9nm,0.7s,baz=198,slow=2.2,SNR=33							
CMAR	**Chiang Mai Arr**	**126.50**	**249**	PKP	PKPdf		02 37 40.7	-0.2
	0.8nm,0.3s,baz=167,slow=4.5,SNR=2.9							
EVO	**Evora**	**140.33**	**90**⇑	i/PKIKP	PKPdf		02 38 05.2	-1.0
	15nm,1.3s							
EVO				eMLR	MLR			
	comp=Z,89nm,23.0s,MS4.2							
SONM	**Songino Array**	**142.76**	**286**	PKhKP	PKPpre		02 38 06.3	
	comp=Z,1.3nm,0.6s,baz=125,slow=1.3,SNR=8.7							
ESDC	**Sonseca Array**	**143.46**	**92**	PKP	PKPdf		02 38 09.7	-2.0
	comp=Z,0.3nm,0.6s,baz=222,slow=3.2,SNR=3.6							
SJPF	**Ste Jean**	**147.21**	**90**	ePKP1	PKPbc		02 38 20.4	+0.1
	comp=Z,23nm,1.1s							
ETSF	**Etsaut**	**147.47**	**91**	ePKP1	PKPbc		02 38 21.1	0.0
	comp=Z,12nm,1.0s							
QUIF	**Quistinic**	**148.72**	**81**	ePKP1	PKPbc		02 38 23.3	-0.9
	comp=Z,22nm,0.9s							
ROSF	**Rostrenen**	**148.86**	**80**	ePKP1	PKPbc		02 38 23.7	-0.8
SGMF	**Saint Gilles**	**149.24**	**81**	ePKP1	PKPbc		02 38 24.5	-1.0
	comp=Z,57nm,1.4s							
MFF	**Saint Martin d**	**149.80**	**85**	ePKP1	PKPbc		02 38 26.3	-0.6
	comp=Z,11nm,0.9s							
RJF	**Les Rejaudoux**	**150.08**	**88**	ePKP1	PKPbc		02 38 27.0	-0.7
	comp=Z,19nm,1.1s							
RJF				eMLR	MLR			
	comp=Z,102nm,22.2s,MS4.3							
CAF	**Calviac**	**150.19**	**90**	ePKP1	PKPbc		02 38 27.5	-0.4
	comp=Z,19nm,1.1s							
GRR	**Gorron**	**150.29**	**81**	ePKP1	PKPbc		02 38 27.1	-0.9
	comp=Z,9.2nm,0.8s							
FLN	**La Foliniere**	**150.69**	**81**	ePKP1	PKPbc		02 38 28.6	-0.4
	comp=Z,4.6nm,0.6s							
FLN				eMLR	MLR			
	comp=Z,81nm,20.2s,MS4.2							
LDF	**La Druitiere**	**150.82**	**82**	ePKP1	PKPbc		02 38 28.2	-1.1
	comp=Z,4.7nm,0.8s							
TCF	**Toulx Ste Croi**	**151.02**	**87**	ePKP1	PKPbc		02 38 29.0	-0.8
	comp=Z,33nm,1.5s							
BGF	**Bois d'Agland**	**151.54**	**87**	ePKP1	PKPbc		02 38 30.3	-0.7
	comp=Z,17nm,1.0s							
SMRF	**Simiane la Rot**	**151.72**	**94**	ePKP1	PKPbc		02 38 31.3	-0.2
	comp=Z,12nm,1.0s							
ESK	**Eskdalemuir**	**151.76**	**67**	ePKPbc	PKPbc		02 38 30.8	-0.5
ORIF	**Oris-en-Rattie**	**152.43**	**93**	ePKP1	PKPbc		02 38 33.3	+0.2
ORIF				eMLR	MLR			
	comp=Z,113nm,22.2s,MS4.3							
LOR	**Lormes**	**152.50**	**87**	ePKP1	PKPbc		02 38 32.4	-0.8
LOR				eMLR	MLR			
	comp=Z,83nm,21.8s,MS4.2							
MK31	**Makanchi Array**	**156.25**	**267**	ePKPab	PKPab		02 38 59.1	-0.5
MKAR	**Makanchi Array**	**156.25**	**267**	PKPbc	PKPdf		02 38 40.1	+8.6
	comp=Z,0.8nm,0.9s,baz=123,slow=2.4,SNR=4.8							
MKAR				PKPab	PKPab		02 38 59.4	-0.3
	comp=Z,2.5nm,0.8s,baz=128,slow=5.4,SNR=12							
ZALV	**Zalesovo Beam**	**157.65**	**285**	PKPab	PKPab		02 39 05.4	-0.1
	comp=Z,2.5nm,0.6s,baz=119,slow=2.7,SNR=9.2							
ARCES	**ARCESS Array B**	**161.81**	**24**	PKPab	PKPab		02 39 21.9	-1.2
	comp=Z,2.2nm,0.9s,baz=336,slow=2.0,SNR=9.1							
BRTR	**Keskin Array B**	**163.19**	**144**	PKP	PKPdf		02 38 39.0	-0.6
	comp=Z,0.5nm,0.8s,baz=282,slow=1.3,SNR=3.9							

*ISCJB **06** 02:19:53.4±1.2,37°.93S±0°.08×176°.15E±0°.09, h236km±10km, Error ellipse: s-maj=14.3km s-min=11.0km az=148.7*
*NEIC **06** 02:19:56.6,37°.77S×176°.16E,h195km,MG4.1(WEL), After WEL.*
*WEL **06** 02:19:57.0±0.4,37°.81S×176°.19E,h196km±3km,ML4.1/19, Error ellipse: s-maj=2.5km s-min=2.5km az=0.0*

ISC 06 02:19:54.3±1.2,**37°.93S**±0°.08×**176°.16E**±0°.09,**h231**km±9km, **n92**,σ0°**71**/96,**4D**,**North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARZ	**Mount Tarawera**	**0.41**	**138**	PN	**Pn**	**02 20 24.3**	**-0.3**
PRRZ	**Plateau Road**	**0.59**	**162**	PN	**Pn**	**02 20 24.7**	**-0.4**
URZ	**Urewera**	**0.82**	**114**	PN	**Pn**	**02 20 25.0**	**-1.2**
URZ				SN	**S**	**02 20 46.5**	**-4.6**
URZ	**Urewera**	**0.82**	**114**	P	**Pn**	**02 20 24.8**	**-1.4**
MKAZ	**Moumakai**	**1.14**	**316**	PN	**Pn**	**02 20 26.9**	**-1.2**
MWZ	**Matawai**	**1.15**	**111**	PN	**Pn**	**02 20 27.4**	**-0.7**
MWZ				SN	**S**	**02 20 50.6**	**-4.0**
MWZ	**Matawai**	**1.15**	**111**	P	**Pn**	**02 20 27.5**	**-0.6**
RAHZ	**Arahi**	**1.22**	**144**	⇓PN	**Pn**	**02 20 29.0**	**+0.4**
RAHZ				SN	**S**	**02 20 53.5**	**-2.1**
BKZ	**Black Stump Fm**	**1.26**	**168**	PN	**Pn**	**02 20 28.8**	**0.0**
BKZ	**Black Stump Fm**	**1.26**	**168**	P	**Pn**	**02 20 28.9**	**+0.1**
WTVZ	**West Tongariro**	**1.26**	**201**	PN	**Pn**	**02 20 29.4**	**+0.5**
NMHZ	**Naumai**	**1.27**	**157**	PN	**Pn**	**02 20 29.9**	**+0.9**
NMHZ				SN	**S**	**02 20 54.2**	**-2.0**
TWVZ	**Taurewa**	**1.27**	**206**	PN	**Pn**	**02 20 29.6**	**+0.6**
NGZ	**Ngauruhoe**	**1.32**	**199**	PN	**Pn**	**02 20 29.8**	**+0.5**
NGZ	**Ngauruhoe**	**1.32**	**199**	P	**Pn**	**02 20 29.8**	**+0.5**
WPVZ	**Whakapapa**	**1.36**	**201**	PN	**Pn**	**02 20 30.1**	**+0.5**
TUVZ	**Tukino**	**1.39**	**196**	PN	**Pn**	**02 20 30.5**	**+0.6**
TUVZ	**Tukino**	**1.39**	**196**	P	**Pn**	**02 20 30.5**	**+0.7**
FWVZ	**Far West T-bar**	**1.41**	**200**	PN	**Pn**	**02 20 30.6**	**+0.7**
FWVZ	**Far West T-bar**	**1.41**	**200**	P	**Pn**	**02 20 30.6**	**+0.7**
DRZ	**Dome Shelter**	**1.42**	**199**	PN	**Pn**	**02 20 30.9**	**+0.8**
DRZ	**Dome Shelter**	**1.42**	**199**	P	**Pn**	**02 20 31.3**	**+1.3**
WNVZ	**Wahianoa**	**1.46**	**197**	PN	**Pn**	**02 20 31.0**	**+0.6**
WNVZ	**Wahianoa**	**1.46**	**197**	P	**Pn**	**02 20 31.0**	**+0.6**
PKVZ	**Pokaka**	**1.50**	**205**	PN	**Pn**	**02 20 31.2**	**+0.6**
MOVZ	**Moawhango**	**1.51**	**192**	PN	**Pn**	**02 20 30.9**	**+0.2**
MOVZ	**Moawhango**	**1.51**	**192**	P	**Pn**	**02 20 30.9**	**+0.2**
MTVZ	**Mangateitei**	**1.55**	**200**	PN	**Pn**	**02 20 31.5**	**+0.5**
MCHZ	**McNeill Hill**	**1.57**	**165**	PN	**Pn**	**02 20 32.1**	**+0.9**
KNZ	**Kokohu**	**1.61**	**133**	PN	**Pn**	**02 20 32.0**	**+0.4**
KNZ	**Kokohu**	**1.61**	**133**	P	**Pn**	**02 20 32.0**	**+0.4**
VRZ	**Vera Road**	**1.62**	**222**	PN	**Pn**	**02 20 32.7**	**+1.1**
VRZ	**Vera Road**	**1.62**	**222**	P	**Pn**	**02 20 32.7**	**+1.0**
PUZ	**Puketiti**	**1.66**	**95**	PN	**Pn**	**02 20 31.3**	**-0.8**
PRGZ	**Paritu Road**	**1.68**	**127**	⇓PN	**Pn**	**02 20 32.6**	**+0.5**
CNGZ	**Carnagh Statio**	**1.71**	**110**	PN	**Pn**	**02 20 32.8**	**+0.4**
MXZ	**Matakaoa Point**	**1.74**	**78**	PN	**Pn**	**02 20 32.0**	**-0.7**
MHGZ	**Mahia Peninsul**	**1.83**	**132**	PN	**Pn**	**02 20 34.4**	**+0.9**
CKHZ	**Cape Kidnapper**	**1.87**	**158**	PN	**Pn**	**02 20 34.8**	**+1.0**
KAHZ	**Kahuranaki**	**1.94**	**163**	⇓PN	**Pn**	**02 20 35.6**	**+1.1**
PNHZ	**Pukenui**	**1.98**	**179**	PN	**Pn**	**02 20 35.3**	**+0.4**
WAZ	**Wanganui**	**2.04**	**206**	PN	**Pn**	**02 20 36.4**	**+1.0**
WAZ	**Wanganui**	**2.04**	**206**	P	**Pn**	**02 20 36.6**	**+1.2**
TSZ	**Takapari Road**	**2.13**	**184**	⇓PN	**Pn**	**02 20 36.7**	**+0.4**
TSZ	**Takapari Road**	**2.13**	**184**	P	**Pn**	**02 20 36.7**	**+0.4**
WPHZ	**Waipukurau**	**2.14**	**174**	PN	**Pn**	**02 20 37.0**	**+0.6**
PXZ	**Pawanui**	**2.17**	**166**	PN	**Pn**	**02 20 37.3**	**+0.7**
PRHZ	**Porangahau**	**2.36**	**171**	PN	**Pn**	**02 20 39.4**	**+0.8**
DVHZ	**Dannevirke**	**2.37**	**180**	PN	**Pn**	**02 20 38.9**	**+0.3**
POWZ	**Post Office Ro**	**2.48**	**187**	PN	**Pn**	**02 20 40.1**	**+0.3**
BFZ	**Birch Farm**	**2.75**	**179**	PN	**Pn**	**02 20 42.8**	**+0.1**
BFZ	**Birch Farm**	**2.75**	**179**	P	**Pn**	**02 20 42.8**	**+0.1**
MRZ	**Mangatainoka R**	**2.76**	**189**	PN	**Pn**	**02 20 42.8**	**-0.1**
MRZ	**Mangatainoka R**	**2.76**	**189**	P	**Pn**	**02 20 42.8**	**-0.1**
TIWZ	**Tintock**	**2.85**	**184**	PN	**Pn**	**02 20 44.0**	**+0.2**
OGWZ	**Otaki Gorge**	**2.98**	**195**	PN	**Pn**	**02 20 45.4**	**+0.1**
HOWZ	**Holdsworth Sta**	**3.00**	**189**	PN	**Pn**	**02 20 45.3**	**-0.2**
KIW	**Kapiti Island**	**3.08**	**198**	PN	**Pn**	**02 20 46.0**	**-0.4**
KIW	**Kapiti Island**	**3.08**	**198**	P	**Pn**	**02 20 46.0**	**-0.4**
TMWZ	**Te Maipa**	**3.18**	**184**	PN	**Pn**	**02 20 47.6**	**+0.1**
MTW	**Mount Morrison**	**3.26**	**189**	PN	**Pn**	**02 20 48.0**	**-0.5**
MTW	**Mount Morrison**	**3.26**	**189**	P	**Pn**	**02 20 48.0**	**-0.4**
CAW	**Cannon Point**	**3.28**	**195**	PN	**Pn**	**02 20 48.1**	**-0.5**
CAW	**Cannon Point**	**3.28**	**195**	P	**Pn**	**02 20 48.4**	**-0.3**
DUWZ	**D'Urville Isla**	**3.35**	**210**	PN	**Pn**	**02 20 49.3**	**-0.1**
TRWZ	**Traveller**	**3.48**	**186**	PN	**Pn**	**02 20 50.9**	**0.0**
PAWZ	**Paruwai Farm**	**3.49**	**189**	PN	**Pn**	**02 20 50.8**	**-0.3**
WEL	**Wellington**	**3.52**	**197**	PN	**Pn**	**02 20 51.2**	**-0.2**
MSWZ	**Moikau Station**	**3.55**	**191**	PN	**Pn**	**02 20 51.2**	**-0.5**
SNZO	**South Karori**	**3.56**	**198**	PN	**Pn**	**02 20 51.4**	**-0.5**
SNZO	**South Karori**	**3.56**	**198**	P	**Pn**	**02 20 51.4**	**-0.4**
TCW	**Tory Channel**	**3.58**	**203**	PN	**Pn**	**02 20 51.9**	**-0.3**
TCW	**Tory Channel**	**3.58**	**203**	P	**Pn**	**02 20 51.9**	**-0.3**
BHW	**Baring Head**	**3.61**	**196**	PN	**Pn**	**02 20 51.8**	**-0.7**
BHW	**Baring Head**	**3.61**	**196**	P	**Pn**	**02 20 51.8**	**-0.7**
PLWZ	**Palliser**	**3.70**	**191**	PN	**Pn**	**02 20 52.9**	**-0.6**
TUWZ	**Tuamarina**	**3.89**	**205**	PN	**Pn**	**02 20 55.4**	**-0.4**
NNZ	**Nelson**	**3.92**	**212**	ePN	**Pn**	**02 20 55.1**	**-1.1**
QRZ	**Quartz Range**	**4.03**	**223**	PN	**Pn**	**02 20 57.1**	**-0.4**
QRZ	**Quartz Range**	**4.03**	**223**	P	**Pn**	**02 20 57.1**	**-0.4**
BSWZ	**Blackbirch Sta**	**4.17**	**204**	PN	**Pn**	**02 20 59.3**	**+0.1**
BSWZ	**Blackbirch Sta**	**4.17**	**204**	P	**Pn**	**02 20 59.3**	**+0.2**
THZ	**Tophouse**	**4.57**	**212**	PN	**Pn**	**02 21 04.1**	**0.0**
THZ	**Tophouse**	**4.57**	**212**	P	**Pn**	**02 21 04.1**	**0.0**
KHZ	**Kahutara**	**4.91**	**203**	PN	**Pn**	**02 21 07.8**	**-0.4**
KHZ	**Kahutara**	**4.91**	**203**	P	**Pn**	**02 21 07.8**	**-0.4**
DSZ	**Denniston Nort**	**5.08**	**220**	P	**Pn**	**02 21 10.1**	**-0.2**
LTZ	**Lake Taylor**	**5.68**	**210**	PN	**Pn**	**02 21 17.2**	**-0.7**
LTZ	**Lake Taylor**	**5.68**	**210**	P	**Pn**	**02 21 17.2**	**-0.7**
MQZ	**McQueen's Vall**	**6.35**	**204**	ePN	**Pn**	**02 21 24.7**	**-1.7**
ODZ	**Otahua Downs**	**8.22**	**208**	ePN	**Pn**	**02 21 49.3**	**-0.9**
ODZ	**Otahua Downs**	**8.22**	**208**	P	**Pn**	**02 21 50.5**	**+0.3**

*ISCJB **06** 02:27:35.8±0.6,36°.95N±0°.03×29°.18E±0°.03,h1km±6km, Error ellipse: s-maj=5.9km s-min=4.5km az=175.0*
*DDA **06** 02:27:35.9,36°.96N×29°.20E,h4km,Md3.1*
*CSEM **06** 02:27:36.1±0.2,36°.96N×29°.20E,h8km,MD3.0*
*ISK **06** 02:27:36.1,37°.00N×29°.18E,h8km,MD3.0*

ISC 06 02:27:36.4±0.6,**36°.95N**±0°.04×**29°.19E**±0°.03,**h7**km±5km, **n34**,σ0°**76**/52,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**51**	ePG	**Pg**	**02 27 42.4**	**-0.3**
GLHS				eSG	**Sg**	**02 27 47.2**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.32**	**51**	ePg	**Pg**	**02 27 42.4**	**-0.4**
GLHS				eSg	**Sg**	**02 27 47.2**	**+0.2**
GOLH	**Golhisar**	**0.41**	**46**	i P	**Pg**	**02 27 42.9**	**-1.5**
GOLH				i S	**Sg**	**02 27 49.9**	**0.0**
GOLH	**Golhisar**	**0.41**	**46**	i P	**Pg**	**02 27 42.9**	**-1.6**
GOLH				i S	**Sg**	**02 27 49.9**	**0.0**
TURN	**Turunc**	**0.47**	**261**	i P	**Pg**	**02 27 50.3**	**+4.7**
TURN				i S	**Sg**	**02 28 02.6**	**+11**
TURN	**Turunc**	**0.47**	**261**	i P	**Pg**	**02 27 50.3**	**+4.7**
ELL	**Elmali**	**0.61**	**109**	ePG	**Pg**	**02 27 48.3**	**0.0**
ELL				eSG	**Sg**	**02 27 58.4**	**+2.1**
ELL	**Elmali**	**0.61**	**109**	ePg	**Pg**	**02 27 48.3**	**0.0**
ELL				eSg	**Sg**	**02 27 58.4**	**+2.1**
DNZL	**Cakiroluk**	**0.74**	**351**	i P	**Pg**	**02 27 50.2**	**-0.6**
DNZL				i S	**Sg**	**02 28 01.9**	**+1.5**
DNZL	**Cakiroluk**	**0.74**	**351**	i P	**Pg**	**02 27 50.2**	**-0.6**
DNZL				i S	**Sg**	**02 28 02.0**	**+1.5**
YER	**Yerkesik**	**0.74**	**284**	ePG	**Pg**	**02 27 50.5**	**-0.3**
YER				eSG	**Sg**	**02 28 01.1**	**+0.7**
YER	**Yerkesik**	**0.74**	**284**	ePg	**Pg**	**02 27 50.5**	**-0.3**
YER				eSg	**Sg**	**02 28 01.1**	**+0.6**
AKAS	**Kas**	**0.79**	**155**	i P	**Pg**	**02 27 51.3**	**-0.3**
AKAS				i S	**Sg**	**02 28 09.1**	**+7.1**
AKAS	**Kas**	**0.79**	**155**	i P	**Pg**	**02 27 51.3**	**-0.4**
DENT	**Denizli**	**0.81**	**351**	ePG	**Pg**	**02 27 51.1**	**-0.9**
DENT	**Denizli**	**0.81**	**351**	ePg	**Pg**	**02 27 51.1**	**-0.9**
MLSB	**Milas**	**1.18**	**287**	ePN	**Pn**	**02 27 58.6**	**-0.6**
MLSB	**Milas**	**1.18**	**287**	ePn	**Pn**	**02 27 58.6**	**-0.7**
BCK	**Bucak**	**1.23**	**65**	ePN	**Pn**	**02 27 59.8**	**-0.2**
BCK	**Bucak**	**1.23**	**65**	ePn	**Pn**	**02 27 59.8**	**-0.2**
AYDN	**Tasoluk**	**1.26**	**305**	i P	**Pn**	**02 27 59.3**	**-1.0**
AYDN				i S	**Sb**	**02 28 17.6**	**+0.7**
AYDN	**Tasoluk**	**1.26**	**305**	i P	**Pn**	**02 27 59.3**	**-1.1**
AYDN				i S	**Sb**	**02 28 17.6**	**+0.7**
DAT	**Datca**	**1.31**	**261**	ePN	**Pn**	**02 28 01.4**	**+0.3**
DAT	**Datca**	**1.31**	**261**	ePn	**Pn**	**02 28 01.4**	**+0.3**
KHL	**Karahalli**	**1.39**	**11**	ePN	**Pn**	**02 28 01.8**	**-0.5**
KHL	**Karahalli**	**1.39**	**11**	ePn	**Pn**	**02 28 01.8**	**-0.5**
BDRM	**Kayabasi**	**1.40**	**275**	i P	**Pn**	**02 28 02.2**	**-0.1**
BDRM				i S	**Sb**	**02 28 21.3**	**+0.5**
BDRM	**Kayabasi**	**1.40**	**275**	i P	**Pn**	**02 28 02.2**	**-0.1**
BDRM				i S	**Sb**	**02 28 21.3**	**+0.4**
KHAL	**Karahalli**	**1.44**	**10**	i P	**Pn**	**02 28 03.1**	**+0.3**
KHAL				i S	**Sn**	**02 28 22.7**	**+0.8**
KHAL	**Karahalli**	**1.44**	**10**	i P	**Pn**	**02 28 03.1**	**+0.3**
KHAL				i S	**Sn**	**02 28 22.7**	**+0.8**
BODT	**Bodrum**	**1.50**	**275**	ePN	**Pn**	**02 28 03.9**	**+0.1**
BODT	**Bodrum**	**1.50**	**275**	ePn	**Pn**	**02 28 03.9**	**+0.1**
KULA	**Kula-Manisa**	**1.61**	**345**	ePN	**Pn**	**02 28 04.9**	**-0.4**
KULA	**Kula-Manisa**	**1.61**	**345**	ePn	**Pn**	**02 28 04.9**	**-0.4**

*ISCJB **06** 02:37:55.4±0.4,32°.70N±0°.04×105°.68E±0°.05,h10km, mb3.7/8,Error ellipse: s-maj=6.4km s-min=4.5km az=36.3*
*IDC **06** 02:37:56.7±1.2,32°.54N×105°.34E,h0km,mb3.7/7, mb1 3.7/9,mb1mx3.6/21,mbtmp3.7/9,ML3.6/2,MS2.6/1, Ms1 2.6/1,ms1mx1.9/23,Error ellipse: s-maj=41.6km s-min=23.2km az=43.0*
*NEIC **06** 02:37:57.4±0.6,32°.62N×105°.64E,h10km,mb3.9/1,Error ellipse: s-maj=21.3km s-min=7.9km az=224.0*
*BJI **06** 02:37:57.2±32°.73N×105°.57E,h10km,mB4.3/1,mb4.1/4, ML3.7/13,Ms3.8/4,Ms7 3.5/5*

ISC 06 02:37:57.7±0.4,**32°.68N**±0°.03×**105°.61E**±0°.04,**h10**km,**n18**, σ1§**42**/32,**mb3.7/8**,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.37**	**222**	Pn	**Pn**	**02 38 37.0**	**+0.4**
CD2				Pg	**Pg**	**02 38 41.0**	**-2.1**
CD2				Sn	**Sn**	**02 39 06.0**	**+0.4**
CD2				Sg	**Sg**	**02 39 12.2**	**-1.5**
CD2				smax			
	comp=N,2μm,0.7s						
CD2				smax			
	comp=E,2μm,0.6s						
XAN	**Xi'an**	**3.09**	**63**	Pn	**Pn**	**02 38 49.0**	**+2.5**
XAN				Pg	**Pg**	**02 38 55.1**	**-1.8**
XAN				Sn	**Sn**	**02 39 30.1**	**+6.6**
XAN				Sg	**Sg**	**02 39 37.3**	**+0.4**
XAN				smax			
	comp=N,390nm,0.7s						
XAN				smax			
	comp=E,130nm,0.6s						
LZH	**Lanzhou**	**3.70**	**337**	Pn	**Pn**	**02 38 56.9**	**+2.0**
LZH				Pg	**Pg**	**02 39 06.6**	**-2.0**
LZH				Sn	**Sn**	**02 39 30.2**	**-8.3**
LZH				Sg	**Sg**	**02 39 49.8**	**-6.7**
LZH				smax			
	comp=N,250nm,0.5s						
LZH				smax			
	comp=E,430nm,0.6s						
LZH				LR	LR		
	comp=N,620nm,4.9s						
LZH				LR	LR		
	comp=Z,850nm,5.8s						
ENH	**Enshi**	**4.09**	**125**	ePg	**Pg**	**02 39 14.1**	**-2.0**
ENH				eSg	**Sg**	**02 40 05.8**	**-3.4**
GYA	**Guiyang**	**6.27**	**171**	Pn	**Pn**	**02 39 32.1**	**+1.9**
GYA				Pg	**Pg**	**02 39 53.5**	**-4.3**
GYA				Sn	**Sn**	**02 40 44.4**	**+2.5**
GYA				Sg	**Sg**	**02 41 16.3**	**-2.7**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,90nm,0.8s						
GTA	**Gaotai**	**8.19**	**327**	eP	**Pn**	**02 39 56.9**	**+0.3**
GTA				pP		02 40 01.0	
GTA				sP		02 40 03.7	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**9.45**	**29**	eP	**Pn**	**02 40 12.3**	**-1.5**
HHC				sP		02 40 18.7	
HHC				PP		02 40 21.9	
HHC				S	**Sn**	**02 41 58.4**	**-1.7**
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				LR	LR		
	comp=N,180nm,4.6s						
HHC				LR	LR		
	comp=E,200nm,4.2s						
HHC				LR	LR		
	comp=Z,170nm,5.7s						
SONM	**Songino Array**	**15.15**	**2**	Pn	**Pn**	**02 41 32.5**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=186,slow=13,SNR=3.4						
KSRS	**Korea Array**	**18.87**	**69**	P	**Pn**	**02 42 21.8**	**+3.2**
	comp=Z,0.2nm,0.3s,baz=250,slow=10,SNR=4.7						
KSRS				LR	LR	02 49 12.2	
	com

MTP	**Monte Pirata**	**0.25**	**24**⇑	*e*P		Pg	02 56 53.6	+0.6
MTP				*e*S		Sg	02 56 58.2	+1.9
HUMP	**Col San Antoni**	**0.33**	**326**⇑	*e*P		Pg	02 56 54.2	-0.3
HUMP				*e*S		Sg	02 56 59.5	+0.7
HUMP	**Col San Antoni**	**0.33**	**326**⇑	*e*P		Pg	02 56 54.2	-0.3
HUMP				*e*S		Sg	02 56 59.5	+0.7
CBYP	**Canovanas**	**0.44**	**335**⇓	*e*P		Pg	02 56 57.2	+0.5
CBYP				*e*S		Sg	02 57 04.0	+1.5
CBYP	**Canovanas**	**0.44**	**335**⇓	*e*P		Pg	02 56 57.2	+0.5
CBYP				*e*S		Sg	02 57 04.0	+1.5
STVI	**Saint Thomas**	**0.82**	**54**⇑	*e*P		Pg	02 57 03.0	-0.9
STVI				*e*S		Sg	02 57 14.2	-0.5
STVI	**Saint Thomas**	**0.82**	**54**⇑	*e*P		Pg	02 57 03.3	-0.7
STVI				*e*S		Sg	02 57 14.2	-0.5
ICM	**Isla Caja Muer**	**0.82**	**272**	*e*S		Sg	02 57 14.9	+0.2
ICM	**Isla Caja Muer**	**0.82**	**272**	*e*S		Sg	02 57 14.9	+0.2

NIED ***06*** *03:10:00, 32˚.30N×131˚.20E, h77km, Mw3.8 Best double couple: M0 5.54000×10^14 NP1:φs 152.00000°, δ61.00000°, λ131.00000°. NP2:φs 271.00000°, δ49.00000°, λ40.00000°.*
ISCJB ***06*** *03:10:26.5±0.5, 32˚.30N±0˚.07×131˚.26E±0˚.06, h92km±4km, mb3.8/10, Error ellipse: s-maj=11.9km s-min=8.0km az=151.1*
NEIC ***06*** *03:10:27.9±0.7, 32˚.29N×131˚.09E, mb3.7/2, Error ellipse: s-maj=15.7km s-min=9.1km az=171.0*
JMA ***06*** *03:10:28.1±0.1, 32˚.28N×131˚.15E, h83km±1km, M3.6*
JMA Felt I J1.
IDC ***06*** *03:10:29.3±3.1, 32˚.32N×131˚.12E, h101km±28km, mb3.6/8, mb1 3.6/10, mb1mx3.4/25, mbtmp3.5/10, Error ellipse: s-maj=25.5km s-min=20.6km az=39.0*
ISC 06 03:10:27.7±0.5, 32˚.29N±0˚.07×131˚.21E±0˚.07, h86km±4km, n19, σ0§94/24, mb3.8/10, 3C, Kyushu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JTSN	**Tsuno**	**0.26**	**99**	⇑P			**Pn**	**03 10 40.6**	**+0.2**
JTSN							**Sn**	**03 10 50.2**	**+0.4**
JTZ	**Takazaki**	**0.40**	**195**	⇑P			**Pn**	**03 10 41.0**	**-0.3**
JTZ							**Sn**	**03 10 50.2**	**-1.1**
JIU2	**Izumi 2**	**0.42**	**308**	⇑P			**Pn**	**03 10 41.4**	**0.0**
JIU2							**Sn**	**03 10 51.3**	**-0.3**
JTN	**Tanegashima 3**	**1.64**	**187**	P			**Pn**	**03 10 55.3**	**+0.3**
KSRS	**Korea Array**	**5.82**	**333**	P			**Pn**	**03 11 53.0**	**+1.7**
	0.8nm,0.3s,baz=150,slow=15,SNR=6.1								
MAJO	**Matsushiro**	**7.17**	**52**	*e*Pn			**Pn**	**03 12 11.3**	**+1.5**
MAT	**Matsushiro**	**7.17**	**52**	P			**Pn**	**03 12 11.2**	**+1.3**
MAT							**Sn**	**03 13 28.0**	**-1.8**
MJAR	**Matsushiro Arr**	**7.18**	**52**	P			**Pn**	**03 12 10.9**	**+1.1**
	2.6nm,0.3s,baz=242,slow=14,SNR=6.2								
MJAR							**Sn**	**03 13 28.0**	**-1.8**
	0.3nm,0.3s,baz=287,slow=19,SNR=2.8								
ULN	**Ulaanbaatar**	**24.02**	**317**	*e*P			**P**	**03 15 35.2**	**+0.8**
	3.2nm,0.8s,mb3.7								
SONM	**Songino Array**	**24.38**	**317**	P			**P**	**03 15 37.8**	**+0.1**
	1.6nm,0.7s,mb3.5,baz=131,slow=10,SNR=9.1								
MK31	**Makanchi Array**	**39.76**	**306**	*e*P			**P**	**03 17 51.3**	**-0.6**
MKAR	**Makanchi Array**	**39.76**	**306**	P			**P**	**03 17 51.6**	**-0.3**
	1.3nm,0.5s,mb4.0,baz=95,slow=10.0,SNR=8.2								
KURK	**Kurchatov**	**42.48**	**312**	*e*P			**P**	**03 18 13.2**	**-0.9**
	0.9nm,0.8s,mb3.5								
BVAR	**Borovoye Array**	**47.69**	**315**	P			**P**	**03 18 55.1**	**-0.2**
	1.0nm,0.5s,mb4.0,baz=105,slow=9.3,SNR=3.7								
BVAR					pP		pP	03 19 16.2	0.0
	0.9nm,0.6s,baz=76,slow=12,SNR=2.5								
ASAR	**Alice Springs**	**55.70**	**177**	P			**P**	**03 19 55.6**	**+0.5**
	0.4nm,0.6s,mb3.6,baz=12,slow=14,SNR=7.6								
KDAK	**Kodiak Island**	**56.15**	**39**	P			**P**	**03 19 58.8**	**+0.8**
	1.4nm,0.4s,mb4.3,baz=299,slow=13,SNR=5.5								
ILAR	**Eielson Array**	**57.90**	**30**	P			**P**	**03 20 10.9**	**+0.6**
	0.1nm,0.8s,mb2.9,baz=279,slow=6.3,SNR=4.9								
ILAR					pP		pP	03 20 32.8	+0.9
	0.2nm,0.6s,baz=291,slow=7.4,SNR=3.0								
FINES	**FINESS Array B**	**68.90**	**330**	P			**P**	**03 21 21.6**	**-1.3**
	1.6nm,0.3s,mb4.3,baz=71,slow=5.5,SNR=14								
AKASG	**Malin Array Be**	**72.64**	**319**	P			**P**	**03 21 44.7**	**-1.0**
	0.5nm,0.3s,mb3.8,baz=56,slow=6.4,SNR=2.4								

IDC 06 03:21:57.2±1.3, 83˚.43N×114˚.27E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.4/22, mbtmp3.4/5, Error ellipse: s-maj=45.0km s-min=24.1km az=160.0, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARCES	**ARCESS Array B**	**21.45**	**286**	P			P	03 26 48.4	+2.0
	1.2nm,0.7s,baz=31,slow=11,SNR=4.0								
ILAR	**Eielson Array**	**27.14**	**68**	P			P	03 27 42.9	+1.5
	0.2nm,0.8s,baz=348,slow=8.4,SNR=4.3								
MKAR	**Makanchi Array**	**37.92**	**216**	P			P	03 29 15.3	-0.2
	0.5nm,0.7s,baz=19,slow=9.2,SNR=3.9								
KEST	**Kesra**	**56.40**	**289**	P			P	03 31 39.3	-0.5
	0.7nm,0.9s,baz=260,slow=6.1,SNR=1.9								
TXAR	**Lajitas Array**	**66.12**	**36**	P			P	03 32 44.8	-1.0
	0.4nm,0.9s,baz=358,slow=4.5,SNR=4.7								

NEIC ***06*** *03:37:05.7, 17˚.45N×95˚.80W, h134km, MD3.8(MEX), After MEX.*
MEX 06 03:37:05.7±0.8, 17˚.45N×95˚.80W, h134km±15km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OXX	**Oaxaca**	**0.95**	**248**	*e*P			Pn	03 37 27.4	-1.1
OXX				*i* S			Sn	03 37 44.0	-1.7
OXX	**Oaxaca**	**0.95**	**248**	*e*P			Pn	03 37 27.4	-1.1
OXX				*i* S			Sn	03 37 44.0	-1.7
VHO	**Vista Hermosa**	**0.96**	**247**	*i* P			Pn	03 37 28.1	-0.5
VHO				*i* S			Sn	03 37 43.9	-2.0
VHO	**Vista Hermosa**	**0.96**	**247**	*i* P			Pn	03 37 28.1	-0.5
VHO				*i* S			Sn	03 37 43.9	-2.0
HUIG	**Huatulco**	**1.69**	**190**	*i* P			Pn	03 37 35.2	-1.1
HUIG				*i* S			Sn	03 37 57.0	-2.7
HUIG	**Huatulco**	**1.69**	**190**	*i* P			Pn	03 37 35.2	-1.1
HUIG				*i* S			Sn	03 37 57.0	-2.7
TPIG	**Tehuac#an**	**1.77**	**303**	*e*P			Pn	03 37 35.4	-1.8
TPIG				*i* S			Sn	03 37 58.5	-2.7
PNIG	**Pinotepa**	**2.46**	**245**	*i* P			Pn	03 37 43.5	-2.0
PNIG				*i* S			Sn	03 38 13.9	-2.2
PNIG	**Pinotepa**	**2.46**	**245**	*i* P			Pn	03 37 43.5	-2.0
PNIG				*i* S			Sn	03 38 13.9	-2.2
TGIG		**2.65**	**104**	*i* P			Pn	03 37 45.6	-2.4
TGIG				*i* S			Sn	03 38 17.9	-2.5
PCIG		**3.02**	**125**	*e*P			Pn	03 37 59.0	+6.3
PCIG				*i* S			Sn	03 38 27.6	-1.5

ISCJB ***06*** *03:42:26.0±0.2, 32˚.64N±0˚.02×105˚.50E±0˚.03, h10km, mb4.6/64, MS3.7/2, Error ellipse: s-maj=3.3km s-min=3.2km az=139.2*
IDC ***06*** *03:42:25.4±0.5, 32˚.66N×105˚.65E, h0km, mb4.4/17, mb1 4.5/19, mb1mx4.5/21, mbtmp4.4/19, ML4.1/2, MS3.1/2, Ms1 3.1/2, ms1mx2.6/30, Error ellipse: s-maj=23.5km s-min=11.6km az=63.0*
BJI ***06*** *03:42:26.9, 32˚.65N×105˚.57E, h16km, mB4.7/19, mb4.6/28, ML4.5/21, Ms4.2/34, Ms7 3.9/30*
MOS ***06*** *03:42:29.1±0.8, 32˚.66N×105˚.58E, h33km, mb4.8/38, Error ellipse: s-maj=10.3km s-min=5.3km az=112.1*
NEIC ***06*** *03:42:31.2±1.5, 32˚.66N×105˚.53E, h34km±11km, mb4.7/36, Error ellipse: s-maj=5.7km s-min=4.1km az=57.0*
ISC 06 03:42:27.7±0.2, 32˚.64N±0˚.02×105˚.57E±0˚.02, h10km, n214, σ1§10/234, mb4.6/64, MS3.7/2, 21C-12D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.31**	**222**	Pn			**Pn**	**03 43 06.8**	**+1.0**
CD2				Pg			**Pg**	**03 43 10.0**	**-2.0**
CD2				Sn			**Sn**	**03 43 36.4**	**+2.1**
CD2				Sg			**Sg**	**03 43 41.4**	**-0.6**
CD2				smax					
	comp=N,9μm,0.8s								
CD2				smax					
	comp=E,6μm,0.5s								
XAN	**Xi'an**	**3.14**	**63**	Pg			**Pg**	**03 43 25.7**	**-2.1**
XAN				Sn			**Sn**	**03 43 56.4**	**+1.8**
XAN				Sg			**Sg**	**03 44 04.1**	**-4.3**
XAN				smax					
	comp=N,2μm,0.7s								
XAN				smax					
	comp=E,2μm,0.8s								
LZH	**Lanzhou**	**3.72**	**338**	Pn			**Pn**	**03 43 26.9**	**+1.7**
LZH				Sg			**Sg**	**03 44 21.1**	**-6.1**
LZH				smax					
	comp=N,3μm,1.1s								
LZH				smax					
	comp=E,4μm,1.2s								
LZH				LR		LR			
	comp=E,5μm,4.1s								
LZH				LR		LR			
	comp=Z,6μm,5.5s								
ENH	**Enshi**	**4.10**	**124**	*e*Pn			**Pn**	**03 43 32.4**	**+2.0**
ENH				*e*Pg			**Pg**	**03 43 42.7**	**-3.5**
ENH				*e*Sg			**Sg**	**03 44 38.7**	**-0.6**
GYA	**Guiyang**	**6.23**	**171**	⇑*i*Pn			**Pn**	**03 44 00.4**	**+0.7**
GYA				Pg			**Pg**	**03 44 21.3**	**-5.8**
GYA				Sn			**Sn**	**03 45 13.2**	**+2.1**
GYA				Sg			**Sg**	**03 45 45.3**	**-2.5**
GYA				smax					
	comp=N,370nm,0.8s								
GYA				smax					
	comp=E,720nm,0.8s								
WHN	**Wuhan**	**7.78**	**103**	⇑Pn			**Pn**	**03 44 22.0**	**+1.1**
WHN				Sn			**Sn**	**03 45 47.3**	**-1.8**
WHN				LR		LR			
	comp=E,3μm,3.8s								
WHN				LR		LR			
	comp=Z,3μm,4.6s								
KMI	**Kunming**	**7.89**	**199**	P			**Pn**	**03 44 23.4**	**+0.9**
KMI				S			**Sn**	**03 45 49.1**	**-2.7**
KMI				smax					
	comp=N,74nm,1.0s								
KMI				smax					
	comp=E,56nm,1.5s								
KMI				LR		LR			
	comp=N,630nm,5.7s								
KMI				LR		LR			
	comp=E,900nm,11.4s								
GTA	**Gaotai**	**8.20**	**327**	⇑P			**Pn**	**03 44 27.8**	**+1.1**
GTA				pP				03 44 30.5	
GTA				sP				03 44 33.6	
GTA				S			**Sn**	**03 46 01.4**	**+1.9**
GTA				sS				03 46 06.2	
GTA				pmax		pmax			
	comp=Z,23nm,0.7s								
GTA				pmax		pmax			
	comp=Z,40nm,4.2s								
GTA				LR		LR			
	comp=N,940nm,8.4s								
GTA				LR		LR			
	comp=E,930nm,10.8s								
GTA				LR		LR			
	comp=Z,940nm,9.5s								
HHC	**Hu-ho-hao-te**	**9.50**	**29**	*e*P			**Pn**	**03 44 41.8**	**-2.7**
HHC				pP				03 44 45.1	
HHC				sP				03 44 48.4	
HHC				S			**Sn**	**03 46 30.5**	**-0.8**
HHC				sS				03 46 33.2	
HHC				pmax		pmax			
	comp=Z,21nm,0.8s								
HHC				pmax		pmax			
	comp=Z,130nm,3.9s								
HHC				LR		LR			
	comp=N,570nm,5.7s								
HHC				LR		LR			
	comp=E,780nm,6.2s								
HHC				LR		LR			
	comp=Z,460nm,6.4s								
HHC	**Hu-ho-hao-te**	**9.50**	**29**	*e*P			**Pn**	**03 44 43.3**	**-1.2**
HHC				*e*S			**Sn**	**03 46 27.1**	**-4.2**
HHC				pmax		pmax			
	comp=Z,19nm,0.8s								
HHC				pmax		pmax			
	comp=Z,100nm,3.9s								
HHC				LR		LR			
	comp=N,430nm,3.9s								
HHC				LR		LR			
	comp=E,780nm,6.1s								
HHC				LR		LR			
	comp=Z,480nm,7.1s								
TIA	**Tai'an**	**10.19**	**66**	P			**Pn**	**03 44 58.0**	**+4.0**
TIA				LR		LR			
	comp=N,310nm,4.9s								
TIA				LR		LR			
	comp=E,470nm,4.6s								
NJ2	**Nanjing**	**11.26**	**89**	*e*P			**Pn**	**03 45 12.1**	**+3.5**
NJ2				pP				03 45 15.4	
NJ2				PP				03 45 18.5	
NJ2				sP				03 45 22.0	
NJ2				S			**Sn**	**03 47 18.0**	**+3.5**
NJ2				sS				03 47 23.0	
NJ2				pmax		pmax			
	comp=Z,20nm,0.9s								
NJ2				pmax		pmax			
	comp=Z,110nm,3.5s								
NJ2				LR		LR			
	comp=N,120nm,11.1s								
NJ2				LR		LR			
	comp=E,70nm,10.9s								
NJ2				LR		LR			
	comp=Z,70nm,11.1s								
BJI	**Beijing**	**11.29**	**46**	P			**Pn**	**03 45 07.0**	**-2.1**
BJI				pmax		pmax			
	comp=Z,5.0nm,0.7s								
BJI				LR		LR			
	comp=N,860nm,8.2s								
BJI				LR		LR			
	comp=E,510nm,7.8s								
LSA	**Lhasa**	**12.69**	**260**	P			**Pn**	**03 45 29.8**	**+1.6**
SHL	**Shillong**	**13.88**	**243**	*e*PKP			**Pn**	**03 45 42.0**	**-2.4**
QIZ	**Qiongzhong**	**14.09**	**163**	P			**Pn**	**03 45 48.4**	**+1.1**
QIZ				S			**Sn**	**03 48 27.2**	**+3.4**
QIZ				LR		LR			
	comp=Z,87nm,13.8s								
CHTO	**Chiang Mai**	**15.00**	**205**	*e*P			**Pn**	**03 46 02.5**	**+2.7**
	comp=Z,7.0nm,0.7s								
CHTO	**Chiang Mai**	**15.00**	**205**	*e*P			**Pn**	**03 46 02.5**	**+2.7**
CHTO				pmax		pmax			
	comp=Z,7.0nm,0.7s								
SONM	**Songino Array**	**15.19**	**2**	Pn			**Pn**	**03 46 00.8**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=192,slow=15,SNR=9.8								
SONM	**Songino Array**	**15.19**	**2**	P			**Pn**	**03 46 00.8**	**-1.3**
SONM	**Songino Array**	**15.19**	**2**	P			**Pn**	**03 46 00.9**	**-1.2**
ULN	**Ulaanbaatar**	**15.25**	**4**	*e*P			**Pn**	**03 46 05.0**	**+2.0**
	comp=Z,7.8nm,1.0s								
ULN	**Ulaanbaatar**	**15.25**	**4**	*e*P			**Pn**	**03 46 05.0**	**+2.1**
ULN				pmax		pmax			
	comp=Z,8.0nm,1.0s								
CMAR	**Chiang Mai Arr**	**15.33**	**204**	Pn			**Pn**	**03 46 03.2**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=13,slow=13,SNR=3.7								
CMAR	**Chiang Mai Arr**	**15.33**	**204**	P			**Pn**	**03 46 03.2**	**-0.9**
CMAR				pmax		pmax			
	comp=Z,1.0nm,0.3s								
YHNB	**Yeheng**	**15.98**	**116**	*e*Pn			**Pn**	**03 46 19.1**	**+6.5**
	comp=Z,48nm,0.8s								
SSLB	**Suanglung**	**16.16**	**119**	*e*Pn			**Pn**	**03 46 17.6**	**+2.6**
	comp=Z,30nm,0.8s								
TAPN	**Taplejung**	**16.34**	**256**	*e*P			**Pn**	**03 46 16.6**	**-0.6**
	comp=Z,65nm,0.9s								
ODAN	**Odare**	**16.80**	**255**	*e*P			**Pn**	**03 46 21.4**	**-1.6**
	comp=Z,29nm,0.5s								
RAMN	**Ramite**	**17.40**	**256**	*e*P			**Pn**	**03 46 29.1**	**-1.5**
	comp=Z,95nm,1.0s								
JIRN	**Jiri**	**17.47**	**259**	*e*P			**Pn**	**03 46 31.9**	**+0.4**
GUN	**Gumba**	**17.64**	**260**	*e*P			**Pn**	**03 46 33.6**	**0.0**
	comp=Z,43nm,0.6s								
ZAK	**Zakamensk**	**17.81**	**355**	*e*P			**Pn**	**03 46 37.1**	**+1.6**
ZAK				pmax		pmax			
	comp=Z,2.0nm,1.2s								
WMQ	**Urumqi**	**17.90**	**314**	*e*P			**Pn**	**03 46 35.9**	**-0.7**
WMQ				pP		pP		03 46 39.5	-0.6
WMQ				sP		sP		03 46 42.9	+1.5
WMQ				PP				03 46 50.7	
WMQ				*e*S			**Sn**	**03 49 51.9**	**-4.2**
WMQ				SS				03 50 14.4	
WMQ				PcP		PcP		03 51 13.7	+1.1
WMQ				ScP		ScP		03 54 47.1	-0.8
WMQ				pmax		pmax			
	comp=Z,14nm,0.8s								
WMQ				pmax		pmax			
	comp=Z,110nm,4.0s								
WMQ				LR		LR			
	comp=N,340nm,17.0s								
WMQ				LR		LR			
	comp=E,140nm,16.0s								
WMQ				LR		LR			
	comp=Z,120nm,17.0s								
PKI	**Pulchoki**	**18.15**	**259**	*e*P			**Pn**	**03 46 38.7**	**-1.2**
	comp=Z,36nm,0.6s								
KKN	**Kakani**	**18.18**	**260**	*e*P			**Pn**	**03 46 39.2**	**-1.0**
	comp=Z,56nm,0.8s								
DMN	**Daman**	**18.39**	**260**	*e*P			**Pn**	**03 46 42.1**	**-0.7**
	comp=Z,61nm,0.9s								
GKN	**Gorkha**	**18.64**	**261**	*e*P			**Pn**	**03 46 45.2**	**-0.7**
	comp=Z,44nm,0.8s								
KSRS	**Korea Array**	**18.91**	**69**	P			**Pn**	**03 46 49.6**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=256,slow=10,SNR=25								
KSRS						LR	LR	03 55 02.3	
	comp=Z,47nm,19.1s,baz=156,slow=40								
CN2	**Changchun**	**19.14**	**49**	*e*P			**Pn**	**03 46 53.3**	**+1.6**
CN2				*e*S			**Sn**	**03 50 23.5**	**-2.6**
CN2				pmax		pmax			
	comp=Z,20nm,0.4s								
CN2				pmax		pmax			
	comp=Z,200nm,5.0s								
CN2				LR		LR			
	comp=N,400nm,16.0s								
CN2				LR		LR			
	comp=E,400nm,16.0s								
CN2				LR		LR			
	comp=Z,300nm,18.0s								
KOLN	**Koldanda**	**19.59**	**261**	*e*P			**Pn**	**03 46 54.5**	**-2.7**
	comp=Z,23nm,0.6s								
MDJ	**Mudanjiang**	**22.17**	**50**	P			**P**	**03 47 23.6**	**-0.1**
MDJ				pP				03 47 26.5	
MDJ				S			**S**	**03 51 28.7**	**+0.9**
MDJ				pmax		pmax			
	comp=Z,12nm,1.2s,mb4.2								
MDJ				pmax		pmax			
	comp=Z,62nm,6.2s								
MK31	**Makanchi Array**	**22.70**	**315**	*e*P			**P**	**03 47 29.9**	**+0.6**
MKAR	**Makanchi Array**	**22.70**	**315**	P			**P**	**03 47 29.2**	**-0.1**
	comp=Z,8.9nm,0.8s,mb4.3,baz=125,slow=12,SNR=24								
MKAR	**Makanchi Array**	**22.70**	**315**	*ce*P			**P**	**03 47 31.3**	**+2.0**
MKAR				pmax		pmax			
	comp=Z,9.0nm,0.8s								
KSH	**Kashi**	**24.81**	**294**	P			**P**	**03 47 53.7**	**+3.8**
KSH				*ep*P				03 47 58.1	
KSH				*es*P		sP		03 48 00.6	+6.4
KSH				*ep*PP				03 48 31.1	
KSH				*ep*PcP		PcP		03 51 29.5	+3.4
KSH				*e*S		S		**03 52 14.6**	**+2.2**
KSH				*es*S		sS		03 52 21.4	+4.0
KSH				*e*SS				03 53 13.2	
KSH				*e*ScP		ScP		03 55 07.0	+1.9
KSH				*ep*PcS		PcS		03 55 09.2	+3.1
KSH				pmax		pmax			
	comp=Z,14nm,2.0s,mb4.2								
KSH				LR		LR			
	comp=N,150nm,9.5s								
KSH				LR		LR			
	comp=E,130nm,9.2s								
KSH				LR		LR			
	comp=Z,99nm,6.0s								
ULHL	**Ulahol**	**25.07**	**301**	P			**P**	**03 47 54.7**	**+2.4**
	SNR=9.1								
KLR	**Kul'dur**	**25.62**	**42**	*e*P			**P**	**03 47 54.0**	**-3.1**
TKM2	**Tokmak 2**	**25.69**	**302**	P			**P**	**03 47 59.3**	**+1.5**
	SNR=6.5								
KZA	**Kyzart**	**25.76**	**300**	P			**P**	**03 48 00.8**	**+2.3**
	SNR=8.6								
ZAA0	**Zalesovo Array**	**25.93**	**331**	*e*P			**P**	**03 47 59.8**	**0.0**
ZALV	**Zalesovo Beam**	**25.93**	**331**	P			**P**	**03 47 59.6**	**-0.3**
	comp=Z,3.9nm,0.5s,mb4.2,baz=132,slow=9.4,SNR=12								
ZALV	**Zalesovo Beam**	**25.93**	**331**	P			**P**	**03 47 59.6**	**-0.2**
ZALV				pmax		pmax			
	comp=Z,4.0nm,0.5s,mb4.2								
UCH	**Uchtor**	**26.33**	**300**	P			**P**	**03 48 05.8**	**+2.2**
	SNR=6.3								
AAK	**Ala-Archa**	**26.42**	**301**⇓	*e*P			**P**	**03 48 06.4**	**+2.0**
KURK	**Kurchatov**	**26.81**	**320**	*e*P			**P**	**03 48 07.5**	**-0.3**
	comp=Z,5.4nm,0.7s,mb4.2								
KURK	**Kurchatov**	**26.81**	**320**	*ce*P			**P**	**03 48 07.7**	**-0.2**
KURK				pmax		pmax			
	comp=Z,22nm,2.5s,mb4.2								
AML	**Almayashu**	**26.91**	**300**	P			**P**	**03 48 10.1**	**+1.3**
	SNR=6.2								
EKS2	**Erkin-Say**	**26.95**	**301**	*e*P			**P**	**03 48 09.6**	**+0.4**
	comp=Z,1.9nm,0.7s,mb3.7								
PSI	**Prapat**	**30.33**	**193**	P			**P**	**03 48 40.2**	**+0.6**
PSI	**Prapat**	**30.33**	**193**	P			**P**	**03 48 40.2**	**+0.7**
	comp=Z,6.3nm,0.5s,mb4.6,baz=336,slow=8.3,SNR=6.1								
PSI	**Prapat**	**30.33**	**193**	P			**P**	**03 48 40.2**	**+0.7**
PSI				pmax		pmax			
	comp=Z,6.0nm,0.5s,mb4.6								
BVAR	**Borovoye Array**	**32.40**	**319**	P			**P**	**03 48 57.7**	**+0.3**
	comp=Z,1.4nm,0.6s,mb4.0,baz=117,slow=9.0,SNR=6.1								
BVAR						PcP	PcP	03 51 43.0	-1.6
	comp=Z,1.8nm,0.6s,baz=143,slow=3.2,SNR=5.7								
BVAR				LR		LR	LR	04 02 06.5	
	comp=Z,39nm,21.2s,MS3.1,baz=29,slow=36								
BVAR	**Borovoye Array**	**32.40**	**319**	P			**P**	**03 48 57.7**	**+0.3**
BVAR								03 51 43.0	
BVAR				pmax		pmax			
	comp=Z,1.0nm,0.6s								
BVAR				MLR		MLR			
	comp=Z,39nm,21.2s								
BRVK	**Borovoye**	**32.47**	**319**	*e*P			**P**	**03 48 58.1**	**+0.1**
	comp=Z,2.7nm,0.6s,mb4.2								
BRVK	**Borovoye**	**32.47**	**319**⇓	*e*P			**P**	**03 48 58.4**	**+0.4**
BRVK				pmax		pmax			
	comp=Z,5.0nm,1.2s,mb4.2								
YAK	**Yakutsk**	**33.23**	**21**	*e*P			**P**	**03 49 07.6**	**+3.0**
YAK				pmax		pmax			
	comp=Z,17nm,0.9s,mb5.0								
ARU	**Arti**	**40.01**	**321**	*e*P			**P**	**03 50 02.9**	**+0.5**
	comp=Z,16nm,1.2s,mb4.6								
ARU	**Arti**	**40.01**	**321**	*d i*P			**P**	**03 50 02.9**	**+0.5**
ARU				*e*				03 51 34.4	
ARU				S			**S**	**03 56 07.7**	**0.0**
ARU				SS			SS	03 58 58.0	-6.5
ARU				pmax		pmax			
	comp=Z,16nm,1.2s,mb4.6								
TIXI	**Tiksi**	**41.01**	**11**	*e*P			**P**	**03 50 10.0

comp=Z,2.0nm,0.4s,mb4.4
JOF Joensuu 54.40 327 *ep* **P** 03 51 53.3 -1.2
comp=Z,2.1nm,0.4s,mb4.4
KEV Kevo 55.84 336 *eP* **P** 03 52 03.8 -1.0
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KEV Kevo 55.84 336 *ep* **P** 03 52 03.8 -1.0
comp=Z,1.1nm,0.4s,mb4.2
ARCES ARCESS Array B 56.38 335 P **P** 03 52 08.3 -0.3
ARCES PcP PcP 03 53 05.5 -0.2
ARCES ARCESS Array B 56.38 335 P **P** 03 52 08.3 -0.3
comp=Z,2.4nm,0.5s,mb4.5,baz=84,slow=8.3,SNR=45
ARCES PcP PcP 03 53 05.5 -0.2
comp=Z,1.7nm,0.8s,baz=90,slow=5.4,SNR=6.2
ARCES ARCESS Array B 56.38 335 P **P** 03 52 08.3 -0.3
ARCES 03 53 05.5
ARCES pmax pmax
comp=Z,2.0nm,0.5s
ARE0 ARCESS Array S 56.38 335 *eP* **P** 03 52 08.1 -0.5
KAF Kangasniemi 56.79 326 *eP* **P** 03 52 10.5 -1.2
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
KAF Kangasniemi 56.79 326 *ep* **P** 03 52 10.5 -1.2
comp=Z,2.0nm,0.4s,mb4.5
FINES FINESS Array B 56.99 326 P **P** 03 52 13.0 -0.1
comp=Z,8.2nm,0.5s,mb5.0,baz=88,slow=7.2,SNR=54
FINES FINESS Array B 56.99 326 P **P** 03 52 13.0 -0.1
FINES pmax pmax
comp=Z,8.0nm,0.5s
BR131 Keskin Array S 57.07 299 *eP* **P** 03 52 14.2 +0.1
comp=Z,1.6nm,0.6s,mb4.2
BRTR Keskin Array B 57.07 299 P **P** 03 52 13.6 -0.4
comp=Z,1.6nm,0.7s,mb4.2,baz=88,slow=7.1,SNR=10.0
BRTR PcP PcP 03 53 09.1 +0.1
comp=Z,0.8nm,0.8s,baz=106,slow=5.1,SNR=2.8
BRTR Keskin Array B 57.07 299 *ceP* **P** 03 52 14.1 0.0
BRTR pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 57.25 313 P **P** 03 52 14.3 -0.8
comp=Z,3.8nm,0.3s,mb4.9,baz=67,slow=7.4,SNR=13
AKASG Malin Array Be 57.25 313 *i* P **P** 03 52 14.6 -0.5
AKASG pmax pmax
comp=Z,4.0nm,0.3s
AKBB Malin Array Si 57.25 313 *eP* **P** 03 52 13.9 -1.2
COEN Coen 58.65 136 *eP* **P** 03 52 25.4 +0.1
comp=Z,33nm,0.7s,mb5.5
WRAB Tennant Creek 59.08 148 *eP* **P** 03 52 28.1 -0.1
comp=Z,11nm,0.8s,mb5.0
WRAB Tennant Creek 59.08 148 *eP* **P** 03 52 28.1 -0.1
WRAB pmax pmax
comp=Z,11nm,0.8s,mb4.9
WB2 Warramunga Arr 59.09 148 *eP* **P** 03 52 28.4 +0.1
TESR 59.99 308 ⇓P **P** 03 52 32.9 -1.4
TESR 59.99 308 ⇓*i*P **P** 03 52 32.9 -1.3
VRI Vrincioaia 60.12 308 ⇓P **P** 03 52 36.1 +0.9
VRI Vrincioaia 60.12 308 ⇓*i*P **P** 03 52 36.1 +0.9
PLOR Plostina 60.18 308 ⇑P **P** 03 52 36.3 +0.7
PLOR Plostina 60.18 308 ⇑*i*P **P** 03 52 36.3 +0.7
BURAR Bucovina Array 60.60 310 ⇓P **P** 03 52 38.8 +0.4
BURAR Bucovina Array 60.60 310 ⇓*i*P **P** 03 52 38.8 +0.4
BUR08 Bucovina Ar. S 60.60 310 *eP* **P** 03 52 38.1 -0.3
MLR Muntele Rosu 60.76 308 ⇓P **P** 03 52 40.3 +0.7
MLR Muntele Rosu 60.76 308 ⇓*i*P **P** 03 52 40.3 +0.7
VOIR 61.38 308 ⇑P **P** 03 52 43.9 +0.1
VOIR 61.38 308 ⇑*i*P **P** 03 52 43.9 +0.2
KWP Kalwaria Pacla 61.57 313 *eP* **P** 03 52 45.4 +0.4
comp=Z,28nm,0.8s,mb5.4
KWP Kalwaria Pacla 61.57 313 ⇑P **P** 03 52 45.6 +0.6
KWP Kalwaria Pacla 61.57 313 ⇑*i*P **P** 03 52 45.6 +0.6
UZH Uzhgorod 62.15 312 *eP* **P** 03 52 48.7 -0.2
ASAR Alice Springs 62.18 151 P **P** 03 52 49.5 +0.2
comp=Z,3.6nm,0.6s,mb4.7,baz=336,slow=7.2,SNR=39
ASAR PcP PcP 03 53 28.5 -0.8
comp=Z,1.2nm,0.7s,baz=334,slow=6.5,SNR=2.9
ASAR S **S** **04 01 15.2 +0.3**
comp=Z,0.8nm,0.4s,baz=76,slow=8.1,SNR=18
ASAR Alice Springs 62.18 151 P **P** 03 52 49.5 +0.2
ASAR 03 53 28.5
ASAR S **S** **04 01 15.2 +0.3**
ASAR pmax pmax
comp=Z,4.0nm,0.6s
ASAR smax
comp=N,1.0nm,0.4s
NIE Niedzica 63.12 313 *eP* **P** 03 52 56.0 +0.6
OJC Ojcow 63.17 314 *eP* **P** 03 52 55.6 -0.1
NB2 NORSAR Subarra 64.04 327 P **P** 03 53 00.2 -1.0
comp=Z,6.4nm,0.6s,mb4.8,baz=72,slow=6.9
NOA NORSAR Array B 64.04 327 P **P** 03 52 59.7 -1.5
NOA NORSAR Array B 64.04 327 P **P** 03 52 59.7 -1.5
comp=Z,5.9nm,0.6s,mb4.8,baz=71,slow=6.8,SNR=21
NOA NORSAR Array B 64.04 327 P **P** 03 52 59.7 -1.5
NOA pmax pmax
comp=Z,6.0nm,0.6s
NAO01 NORSAR Array S 64.26 327 *eP* **P** 03 53 01.6 -1.1
comp=Z,2.9nm,0.4s,mb4.7
VYHS Vyhne 64.35 313 *eP* **P** 03 53 03.9 +0.4
comp=Z,6.7nm,1.5s,mb4.5
VYHS Vyhne 64.35 313 *eP* **P** 03 53 03.9 +0.4
VYHS pmax pmax
comp=Z,7.0nm,1.5s,mb4.5
VYHS Vyhne 64.35 313 *eP* **P** 03 53 03.9 +0.4
TTA Tatalina 65.12 30 *eP* **P** 03 53 08.3 +0.1
PKSM Moragy 65.31 310 ⇑P **P** 03 53 09.7 -0.1
PKSM Moragy 65.31 310 ⇑*i*P **P** 03 53 09.7 -0.1
VRAC Vranov 65.43 314 ⇑P **P** 03 53 05.2 -5.3
VRAC Vranov 65.43 314 ⇑*i*P **P** 03 53 05.2 -5.3
FORT Forrest 66.57 159 *eP* **P** 03 53 17.1 -0.8
comp=Z,13nm,0.6s,mb5.1
PPLA Purkeypile 66.72 29 *eP* **P** 03 53 19.1 +0.5
comp=Z,9.6nm,0.6s,mb5.0
CLL Collm 66.78 317 *eP* **P** 03 53 18.0 -1.2
CLL Collm 66.78 317 *eP* **P** 03 53 18.0 -1.2
PERS Pernice 67.39 312 *i* P **P** 03 53 23.1 -0.1
COLA College 67.51 26 *eP* **P** 03 53 23.9 +0.4
comp=Z,6.2nm,0.6s,mb4.8
COLA College 67.51 26 *eP* **P** 03 53 23.9 +0.4
COLA pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
VISS Visnje 67.91 311 *i* P **P** 03 53 27.8 +1.4
ILAR Eielson Array 67.92 26 P **P** 03 53 25.0 -1.1
comp=Z,1.2nm,0.5s,mb4.2,baz=294,slow=4.2,SNR=24
ILAR PP PP 03 55 57.0 +1.6
comp=Z,0.4nm,0.8s,baz=295,slow=6.8,SNR=4.1
ILAR Eielson Array 67.92 26 P **P** 03 53 25.0 -1.1
ILAR 03 55 57.0
ILAR pmax pmax
comp=Z,1.0nm,0.5s
PMR Palmer 68.60 30 *eP* **P** 03 53 29.8 -0.6
comp=Z,9.7nm,0.6s,mb4.9
PMR Palmer 68.60 30 *eP* **P** 03 53 29.8 -0.6
PMR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
OHAK Old Harbor 68.80 35 *eP* **P** 03 53 31.9 +0.1
comp=Z,7.7nm,0.7s,mb4.7
KDAK Kodiak Island 68.87 34 *i* P **P** 03 53 32.2 0.0
WTTA Wattenberg 69.29 313 ⇑*i*P **P** 03 53 35.6 +0.6
comp=Z,5.0nm,0.7s,mb4.6
TIP Timpagrande 69.43 304 *eP* **P** 03 53 35.6 -0.4
comp=Z,8.2nm,0.9s,mb4.7
MOTA Moosalm 69.58 314 ⇑*i*P **P** 03 53 36.0 -0.7
comp=Z,2.2nm,0.5s,mb4.3
FETA Feichten 69.95 313 ⇓*i*P **P** 03 53 38.7 -0.4
comp=Z,7.1nm,0.9s,mb4.6
EGAK Eagle 69.99 25 *eP* **P** 03 53 39.0 0.0
comp=Z,2.1nm,0.8s,mb4.1
INK Inuvik 70.30 20 *eP* **P** 03 53 40.7 -0.1
comp=Z,6.0nm,0.8s,mb4.6
INK Inuvik 70.30 20 *eP* **P** 03 53 40.7 -0.1
INK pmax pmax
comp=Z,6.0nm,0.8s
DAWY Dawson 71.03 25 *eP* **P** 03 53 44.6 -0.7
TUE Stuetta 71.05 313 *eP* **P** 03 53 45.1 -0.7
comp=Z,4.2nm,0.8s,mb4.4
CDF Champ du Feu 71.38 316 *eP* **P** 03 53 47.6 -0.2
comp=Z,9.1nm,0.9s,mb4.4
CDF Champ du Feu 71.38 316 *eP* **P** 03 53 47.6 -0.2
comp=Z,4.6nm,0.9s,mb4.4
CDF Champ du Feu 71.38 316 *eP* **P** 03 53 47.6 -0.2
CDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KMBO Kilima Mbogo 72.47 257 *eP* **P** 03 53 55.3 +0.4
comp=Z,3.6nm,0.9s,mb4.3
KMBO Kilima Mbogo 72.47 257 P **P** 03 53 55.4 +0.6
comp=Z,2.8nm,0.8s,mb4.3,baz=0.5,slow=24,SNR=7.3
KMBO Kilima Mbogo 72.47 257 P **P** 03 53 55.4 +0.6
KMBO pmax pmax
comp=Z,3.0nm,0.8s
STKA Stephens Creek 72.64 148 P **P** 03 53 55.2 -0.2
STKA Stephens Creek 72.64 148 P **P** 03 53 55.2 -0.2
comp=Z,2.7nm,0.7s,mb4.3,baz=333,slow=9.0,SNR=3.3
CABF La Chapelle 72.96 315 *eP* **P** 03 53 57.2 0.0
LPG La Plagne 73.10 313 *eP* **P** 03 53 58.7 +0.6
comp=Z,35nm,0.9s,mb5.0
LPG La Plagne 73.10 313 *eP* **P** 03 53 58.7 +0.6
comp=Z,18nm,0.9s,mb5.0
LPG La Plagne 73.10 313 *eP* **P** 03 53 58.7 +0.6
LPG pmax pmax
comp=Z,18nm,0.9s,mb5.0
LPL La Plagne 73.11 313 *eP* **P** 03 53 58.6 +0.5
comp=Z,34nm,0.9s,mb5.0
LPL La Plagne 73.11 313 *eP* **P** 03 53 58.6 +0.5
comp=Z,17nm,0.9s,mb5.0
LPL La Plagne 73.11 313 *eP* **P** 03 53 58.6 +0.5
LPL pmax pmax
comp=Z,17nm,0.9s,mb5.0
PGF Pioggiola 73.12 310 *eP* **P** 03 53 57.9 -0.4
MBDF Montbardon 73.47 313 *eP* **P** 03 54 00.0 -0.3
comp=Z,7.9nm,0.8s,mb4.4
MBDF Montbardon 73.47 313 *eP* **P** 03 54 00.0 -0.3
comp=Z,4.0nm,0.8s,mb4.4
MBDF Montbardon 73.47 313 *eP* **P** 03 54 00.0 -0.3
MBDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
SBF Sospel 73.48 312 *eP* **P** 03 53 59.7 -0.7
HYT Haines Junctio 73.70 27 *eP* **P** 03 54 02.3 +1.0
ORIF Oris-en-Rattie 73.93 313 *eP* **P** 03 54 03.0 0.0
comp=Z,20nm,1.0s,mb4.7
ORIF Oris-en-Rattie 73.93 313 *eP* **P** 03 54 03.0 0.0
comp=Z,10nm,1.0s,mb4.7
ORIF Oris-en-Rattie 73.93 313 *eP* **P** 03 54 03.0 0.0
ORIF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
SSF Saint Saulge 74.26 316 *eP* **P** 03 54 04.3 -0.6
SMF Signal de Mont 74.28 316 *eP* **P** 03 54 04.6 -0.4
comp=Z,17nm,1.0s,mb4.6
SMF Signal de Mont 74.28 316 *eP* **P** 03 54 04.6 -0.4
comp=Z,8.4nm,1.0s,mb4.6
SMF Signal de Mont 74.28 316 *eP* **P** 03 54 04.6 -0.4
SMF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
LMR La Mourre 74.33 312 *eP* **P** 03 54 05.0 -0.4
AVF Avril sur Loir 74.49 316 *eP* **P** 03 54 05.9 -0.4
VIVF Saint-Julien-l 74.70 314 *eP* **P** 03 54 07.2 -0.3
comp=Z,6.2nm,0.7s,mb4.3
VIVF Saint-Julien-l 74.70 314 *eP* **P** 03 54 07.2 -0.3
comp=Z,3.1nm,0.7s,mb4.3
VIVF Saint-Julien-l 74.70 314 *eP* **P** 03 54 07.2 -0.3
VIVF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
SKAG Skagway 75.41 27 *eP* **P** 03 54 12.5 +1.2
comp=Z,10nm,0.9s,mb4.8
TCF Toulx Ste Croi 75.43 316 *eP* **P** 03 54 11.5 -0.2
LASF Ste Croix 75.60 313 *eP* **P** 03 54 12.9 +0.2
GRR Gorron 76.05 319 *eP* **P** 03 54 14.9 -0.3
comp=Z,16nm,0.9s,mb4.6
GRR Gorron 76.05 319 *eP* **P** 03 54 14.9 -0.3
comp=Z,7.9nm,0.9s,mb4.6
GRR Gorron 76.05 319 *eP* **P** 03 54 14.9 -0.3
GRR pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KEST Kesra 76.25 304 P **P** 03 54 16.0 -0.6
comp=Z,1.3nm,0.9s,mb3.9,baz=32,slow=9.5,SNR=4.9
RJF Les Rejaudoux 76.36 315 *eP* **P** 03 54 16.6 -0.4
MFF Saint Martin d 76.63 317 *eP* **P** 03 54 18.6 +0.1
SJPF Ste Jean 79.22 314 *eP* **P** 03 54 32.4 -0.6
YKA Yellowknife Ar 79.86 18 P **P** 03 54 35.6 -0.4
comp=Z,2.2nm,0.7s,mb4.2,baz=327,slow=5.3,SNR=15
ESDC Sonseca Array 82.90 313 P **P** 03 54 52.6 0.0
comp=Z,0.7nm,0.6s,mb3.9,baz=43,slow=5.3,SNR=6.6
FFC Flin Flon 89.81 16 *eP* **P** 03 55 26.1 -0.2
comp=Z,3.4nm,0.7s,mb4.8
FFC Flin Flon 89.81 16 *i* P **P** 03 55 27.1 +0.8
SCHQ Schefferville 92.64 356 P **P** 03 55 38.8 -0.6
comp=Z,2.5nm,0.8s,mb4.7,baz=329,slow=5.9,SNR=3.9
TXAR Lajitas Array 112.41 27 PKiKP PKiKP 04 01 03.9 -0.4
comp=Z,0.3nm,0.5s,baz=0.0,slow=1.4,SNR=6.9
TXAR Lajitas Array 112.41 27 *i* PKiKP PKiKP 04 01 03.9 -0.4
OTAV Otavalo 147.08 7 *e*PKPbc PKPab 04 02 14.3 +1.3
LPAZ La Paz 162.75 339 PKP PKPdf 04 02 30.8 +0.3
comp=Z,1.3nm,0.8s,baz=352,slow=4.7,SNR=4.9
LPAZ La Paz 162.75 339 PKIKP PKPdf 04 02 30.8 +0.2
LPAZ pmax pmax
comp=Z,1.0nm,0.8s

*ISCJB **06** 03:51:51.5±0.8, 51.48N±0.04×16.10E±0.04, h0km, Error ellipse: s-maj=6.4km s-min=3.2km az=13.5*
*CSEM **06** 03:51:52.8±0.7, 51.48N×16.11E, h1km, ML2.9/5, Error ellipse: s-maj=12.6km s-min=6.5km az=1.0*
*PRU **06** 03:51:53.8, 51.45N×16.16E, h0km*
*WAR **06** 03:51:54.4, 51.47N×16.10E, ML2.3, Mining Induced*
ISC 06 03:51:52.8±0.8, 51.50N±0.04×16.12E±0.04, h0km, n30, σ0.9 94/50, 1D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.66**	**170**	*e*Pg	**Pg**	**03 52 06.1**	**+0.7**
KSP				*e*Sg	**Sg**	**03 52 14.7**	**+0.7**
KSP	**Ksiaz**	**0.66**	**170**	*i* Pg	**Pg**	**03 52 06.1**	**+0.6**
KSP				*e*Sg	**Sg**	**03 52 14.7**	**+0.7**
KSP	**Ksiaz**	**0.66**	**170**	⇓*i*Pg	**Pg**	**03 52 06.1**	**+0.6**
KSP				*e*Sg	**Sg**	**03 52 14.7**	**+0.7**
UPC	**Upice**	**0.99**	**184**	*e*PG	**Pg**	**03 52 12.2**	**+0.4**
UPC	**Upice**	**0.99**	**184**	Pg	**Pg**	**03 52 12.2**	**+0.4**
DPC	**Dobruska-Polom**	**1.16**	**174**	*e*PG	**Pg**	**03 52 14.9**	**0.0**
DPC				*e*SG	**Sg**	**03 52 29.4**	**-0.4**
comp=Z,12nm,0.3s							
DPC	**Dobruska-Polom**	**1.16**	**174**	Pg	**Pg**	**03 52 14.9**	**0.0**
DPC				Sg	**Sg**	**03 52 29.4**	**-0.4**
comp=Z,12nm,0.3s							
PVCC	**Panska Ves**	**1.38**	**226**	*e*PG	**Pg**	**03 52 19.3**	**+0.2**
PVCC	**Panska Ves**	**1.38**	**226**	Pg	**Pg**	**03 52 19.3**	**+0.2**
BRG	**Berggiesshubel**	**1.50**	**246**	SG	**Sg**	**03 52 41.7**	**+0.6**
comp=Z,25nm,0.4s							
PRU	**Pruhonice**	**1.81**	**214**	*e*PN	**Pn**	**03 52 26.2**	**+1.0**
PRU				*e*PG	**Pg**	**03 52 27.4**	**-0.1**
PRU				*e*SG	**Sg**	**03 52 51.2**	**+0.3**
comp=Z,12nm,0.3s							
PRU	**Pruhonice**	**1.81**	**214**	Pn	**Pn**	**03 52 26.2**	**+1.0**
MORC	**Moravsky Berou**	**1.95**	**152**	*e*Sg	**Sg**	**03 52 50.9**	**-4.3**
CLL	**Collm**	**1.96**	**266**	*i* Pn	**Pn**	**03 52 27.3**	**+0.1**
CLL				*i* Pg	**Pg**	**03 52 29.4**	**-0.9**
CLL				*i*		03 52 30.9	
CLL				*e*Sn	**Sn**	**03 52 51.0**	**-1.5**
CLL				*e*Sg	**Sg**	**03 52 56.0**	**+0.3**
comp=Z,10.0nm,0.4s							
OKC	**Ostrava-Krasne**	**2.10**	**141**	*e*PG	**Pg**	**03 52 33.1**	**+0.1**
OKC				*e*SG	**Sg**	**03 52 58.9**	**-1.4**
comp=Z,12nm,0.6s							
OKC	**Ostrava-Krasne**	**2.10**	**141**	Pg	**Pg**	**03 52 33.1**	**+0.1**
OKC				Sg	**Sg**	**03 52 58.9**	**-1.4**
comp=Z,12nm,0.6s							
VRAC	**Vranov**	**2.21**	**172**	*e*Pn	**Pn**	**03 52 31.3**	**+0.6**
NKC	**Novy Kostel**	**2.65**	**243**	*e*PN	**Pn**	**03 52 37.4**	**+0.8**
NKC				*e*PG	**Pg**	**03 52 43.1**	**-0.4**
NKC				*e*SG	**Sg**	**03 53 18.7**	**+0.9**
comp=Z,10nm,0.3s							
NKC	**Novy Kostel**	**2.65**	**243**	Pn	**Pn**	**03 52 37.4**	**+0.8**
NKC	**Novy Kostel**	**2.65**	**243**	Pg	**Pg**	**03 52 43.1**	**-0.4**
NKC				Sg	**Sg**	**03 53 18.7**	**+0.9**
comp=Z,10nm,0.3s							
OJC	**Ojcow**	**2.66**	**117**	*e*Pg	**Pg**	**03 52 45.0**	**+1.3**
OJC				*e*Sg	**Sg**	**03 53 19.4**	**+1.3**
OJC	**Ojcow**	**2.66**	**117**	*e*Pg	**Pg**	**03 52 45.0**	**+1.3**
KHC	**Kasperske Hory**	**2.87**	**215**	*e*PN	**Pn**	**03 52 40.3**	**+0.5**
KHC				*e*PG	**Pg**	**03 52 45.7**	**-2.1**
KHC				*e*SN	**Sn**	**03 53 14.2**	**-0.8**
KHC				*e*SG	**Sg**	**03 53 24.6**	**-0.4**
comp=Z,2.8nm,0.4s							
KHC	**Kasperske Hory**	**2.87**	**215**	Pn	**Pn**	**03 52 40.3**	**+0.5**
MOX	**Moxa**	**2.97**	**255**	*e*PG	**Pg**	**03 52 49.4**	**-0.2**
MOX				*e*SG	**Sg**	**03 53 29.2**	**+1.2**
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*Pn	**Pn**	**03 52 52.1**	**-1.5**
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*PN	**Pn**	**03 52 52.1**	**-1.5**
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*Pn	**Pn**	**03 52 52.1**	**-1.5**
BOJS	**Bojanci**	**6.03**	**186**	*i* P	**Pn**	**03 53 20.5**	**-2.5**
BOJS	**Bojanci**	**6.03**	**186**	*i* P	**Pn**	**03 53 20.5**	**-2.5**

*ISCJB **06** 04:00:52.7±0.9, 31.41N±0.06×104.79E±0.07, h10km, mb3.4/2, Error ellipse: s-maj=11.2km s-min=6.3km az=135.2*
*IDC **06** 04:00:54.8±1.7, 31.39N×104.79E, h0km, mb3.4/2, mb1 3.5/3, mb1mx3.2/20, mbtmp3.4/3, MS2.5/1, Ms1 2.5/1, ms1mx2.0/22, Error ellipse: s-maj=49.6km s-min=32.3km az=46.0*
*BJI **06** 04:00:55.9, 31.73N×104.21E, h14km, ML3.4/7*
ISC 06 04:00:54.8±0.8, 31.48N±0.06×104.68E±0.08, h10km, n7, σ1.9 13/10, mb3.4/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.97**	**235**	Pg	**Pg**	**04 01 12.3**	**-1.2**
CD2				Sg	**Sg**	**04 01 26.2**	**+0.1**
CD2				smax			
comp=N,1μm,0.6s							
CD2				smax			
comp=E,970nm,0.4s							
XAN	**Xi'an**	**4.39**	**53**	Pg	**Pg**	**04 02 18.1**	**-0.9**
XAN				Sg	**Sg**	**04 03 11.0**	**-4.9**
XAN				smax			
comp=N,75nm,0.8s							
XAN				smax			
comp=E,20nm,0.6s							
LZH	**Lanzhou**	**4.65**	**352**	Pg	**Pg**	**04 02 22.5**	**-1.4**
LZH				Sg	**Sb**	**04 03 13.1**	**+0.6**
LZH				smax			
comp=N,37nm,1.1s							
LZH				smax			
comp=E,53nm,1.0s							
LZH				LR	LR		
comp=N,110nm,5.2s							
LZH				LR	LR		
comp=Z,130nm,6.6s							
CMAR	**Chiang Mai Arr**	**13.96**	**203**	Pn	**Pn**	**04 04 19.8**	**+7.0**
comp=Z,0.1nm,0.3s,baz=9.9,slow=9.0,SNR=5.6							
KSRS	**Korea Array**	**20.05**	**66**	P	**P**	**04 05 28.6**	**+0.6**
baz=267,slow=10,SNR=2.8							
KSRS				LR	LR	04 12 42.5	
comp=Z,14nm,20.2s,baz=125,slow=36							
MKAR	**Makanchi Array**	**23.03**	**318**	P	**P**	**04 06 02.7**	**+2.8**
comp=Z,0.6nm,0.9s,mb3.0,baz=104,slow=12,SNR=3.8							
ASAR	**Alice Springs**	**61.55**	**149**	P	**P**	**04 11 12.9**	**+0.7**
comp=Z,0.7nm,0.8s,mb3.9,baz=340,slow=6.2,SNR=5.3							

*NEIC **06** 04:02:01.0, 37.73S×176.84E, h5km, ML3.9(WEL), After WEL.*
NEIC Felt at Kawerau and Matata.
WEL 06 04:02:01.8±0.1, 37.80S×176.83E, h5km, ML3.9/12, 2C-2D, Error ellipse: s-maj=0.9km s-min=0.8km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPRZ	**Ohinepanea**	**0.22**	**258**	⇓PG	Pg	04 02 06.5	+0.4
OPRZ				SG	Sg	04 02 09.5	+0.5
MARZ	**Manawahe**	**0.22**	**213**	PG	Pg	04 02 06.7	+0.5
MARZ				SG	Sg	04 02 10.0	+0.8
MARZ	**Manawahe**	**0.22**	**213**	P	Pg	04 02 06.7	+0.5
MARZ				S	Sg	04 02 10.5	+1.4
WIZ	**White Island**	**0.40**	**47**	PG	Pg	04 02 09.9	+0.5
WIZ	**White Island**	**0.40**	**47**	P	Pg	04 02 10.1	+0.7
LIRZ	**Lichensteins R**	**0.41**	**239**	PG	Pg	04 02 10.3	+0.7
LIRZ				SG	Sg	04 02 16.4	+1.5
LIRZ	**Lichensteins R**	**0.41**	**239**	P	Pg	04 02 10.4	+0.8
MKRZ	**Makatiti**	**0.44**	**220**	PG	Pg	04 02 11.4	+1.0
TGRZ	**Tauranga**	**0.45**	**278**	⇑PG	Pg	04 02 11.0	+0.4
OMRZ	**Omania**	**0.47**	**229**	PG	Pg	04 02 11.2	+0.2
TARZ	**Mount Tarawera**	**0.50**	**210**	PG	Pg	04 02 12.4	+0.9
KARZ	**Kaharoa**	**0.51**	**244**	⇓PG	Pg	04 02 12.2	+0.6
KARZ	**Kaharoa**	**0.51**	**244**	P	Pg	04 02 12.3	+0.6
URZ	**Urewera**	**0.51**	**154**	⇑PG	Pg	04 02 11.7	0.0
URZ				SG	Sg	04 02 18.8	+0.5
URZ	**Urewera**	**0.51**	**154**	P	Pg	04 02 11.7	0.0
RRRZ	**Republican Roa**	**0.59**	**204**	PG	Pg	04 02 13.6	+0.3
MYRZ	**Mayor Island**	**0.69**	**318**	P*	Pb	04 02 14.8	-1.6
HRRZ	**Handcock Road**	**0.73**	**216**	P*	Pb	04 02 16.4	-0.7
MWZ	**Matawai**	**0.77**	**134**	P*	Pb	04 02 16.5	-1.2
MWZ	**Matawai**	**0.77**	**134**	P	Pg	04 02 16.3	-0.3
PRRZ	**Plateau Road**	**0.78**	**206**	P*	Pb	04 02 16.8	-1.1
TOZ	**Tahuroa Road**	**1.05**	**273**	P*	Pb	04 02 20.2	-2.3
RAHZ	**Arahi**	**1.14**	**170**	P*	Pb	04 02 22.5	-1.4
PUZ	**Puketiti**	**1.16**	**104**	P*	Pb	04 02 23.5	-0.9
MXZ	**Matakaoa Point**	**1.20**	**79**	P*	Pb	04 02 23.4	-1.6
MXZ	**Matakaoa Point**	**1.20**	**79**	P	Pg	04 02 23.5	-1.3
CNGZ	**Carnagh Statio**	**1.29**	**123**	P*	Pb	04 02 27.0	+0.5
NMHZ	**Naumai**	**1.30**	**181**	P*	Pb	04 02 25.4	-1.3
KUZ	**Kuaotunu**	**1.37**	**320**	*e*PN	Pn	04 02 24.5	-3.1
KUZ	**Kuaotunu**	**1.37**	**320**	P	Pn	04 02 24.5	-3.1
KNZ	**Kokohu**	**1.39**	**152**	PN	Pn	04 02 27.7	-0.1
PRGZ	**Paritu Road**	**1.40**	**144**	*e*PN	Pn	04 02 27.8	-0.2
MKAZ	**Moumakai**	**1.49**	**297**	PN	Pn	04 02 26.4	-2.8
MKAZ	**Moumakai**	**1.49**	**297**	P	Pn	04 02 26.6	-2.6
HIZ	**Hauiti**	**1.71**	**245**	P	Pn	04 02 33.3	+1.0
CKHZ	**Cape Kidnapper**	**1.87**	**174**	PN	Pn	04 02 33.6	-0.8
KAHZ	**Kahuranaki**	**1.99**	**179**	PN	Pn	04 02 35.8	-0.4
PNHZ	**Pukenui**	**2.17**	**193**	PN	Pn	04 02 38.3	-0.2
PRHZ	**Porangahau**	**2.47**	**183**	PN	Pn	04 02 41.4	-1.3
WCZ	**Waipu Caves**	**2.72**	**312**	PN	Pn	04 02 43.9	-2.3
BFZ	**Birch Farm**	**2.91**	**189**	PN	Pn	04 02 46.7	-2.1

*TIR **06** 04:02:00.4±1.2, 40.08N×18.99E, h0km*
*ATH **06** 04:02:01.3, 39.61N×20.40E, h5km, MD3.6/5*
*CSEM **06** 04:02:06.7±0.3, 39.42N×20.57E, h2km, ML2.4/8, Error ellipse: s-maj=6.8km s-min=4.7km az=64.0*
*THE **06** 04:02:07.0, 39.41N×20.53E, h0km±2km, ML2.4/8, Error ellipse: s-maj=2.9km s-min=0.9km az=259.0*
*ISCJB **06** 04:02:07.6±0.4, 39.41N±0.02×20.49E±0.03, h10km, Error ellipse: s-maj=3.9km s-min=2.7km az=156.9*
*SKO **06** 04:02:11.0, 39.55N×20.77E, h0km*
ISC 06 04:02:07.5±0.5, 39.42N±0.02×20.53E±0.04, h3km±5km, n47, σ1.9 27/83, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.19**	**308**	P	**Pg**	**04 02 10.3**	**-0.9**
IGT				S	**Sg**	**04 02 14.4**	**+0.7**
IGT	**Igoumenitsa**	**0.19**	**308**	P	**Pg**	**04 02 10.3**	**-0.9**
IGT				S	**Sg**	**04 02 14.4**	**+0.7**
SRN	**Sarande**	**0.62**	**319**	*e*PG	**Pg**	**04 02 19.4**	**+0.1**
SRN				*i* SG	**Sg**	**04 02 35.1**	**+7.7**
SRN	**Sarande**	**0.62**	**319**	*e*Pg	**Pg**	**04 02 19.4**	**+0.1**
SRN=90							
SRN				*i* Sg	**Sg**	**04 02 35.1**	**+7.8**
SRN=90							
LKD2	**Lefkada island**	**0.63**	**171**	P	**Pg**	**04 02 17.7**	**-1.9**
LKD2				S	**Sg**	**04 02 28.1**	**+0.3**
LKD2	**Lefkada island**	**0.63**	**171**	P	**Pg**	**04 02 17.7**	**-1.9**
LKD2				S	**Sg**	**04 02 28.1**	**+0.3**
KEK	**Kerkira**	**0.64**	**298**	P	**Pg**	**04 02 19.3**	**-0.4**
KEK				S	**Sg**	**04 02 28.9**	**+0.9**
KEK	**Kerkira**	**0.64**	**298**	P	**Pg**	**04 02

KFL	**Anninata**	**1.32**	**171**	P	**Pg**	**04 02 32.7**	**0.0**
KFL				S	**Sg**	**04 02 51.7**	**+1.9**
AGG	**Agios Georgios**	**1.45**	**105**	*e*PB	**Pn**	**04 02 31.9**	**-2.7**
AGG				*e*SB	**Sb**	**04 02 54.1**	**+0.1**
AGG	**Agios Georgios**	**1.45**	**105**	P	**Pn**	**04 02 31.2**	**-3.4**
AGG				S	**Sg**	**04 02 56.5**	**+2.4**
AGG	**Agios Georgios**	**1.45**	**105**	P	**Pn**	**04 02 31.2**	**-3.4**
AGG	**Agios Georgios**	**1.45**	**105**	*e*Pb	**Pn**	**04 02 31.9**	**-2.7**
AGG				*e*Sb	**Sb**	**04 02 54.1**	**+0.1**
AGG				S	**Sg**	**04 02 56.5**	**+2.4**
EFP	**Efpalio**	**1.46**	**132**	*e*PB	**Pn**	**04 02 33.1**	**-1.6**
EFP	**Efpalio**	**1.46**	**132**	P	**Pn**	**04 02 33.6**	**-1.1**
EFP				S	**Sg**	**04 02 54.2**	**-0.1**
EFP	**Efpalio**	**1.46**	**132**	*e*Pb	**Pn**	**04 02 33.1**	**-1.6**
EFP	**Efpalio**	**1.46**	**132**	P	**Pn**	**04 02 33.6**	**-1.1**
EFP				S	**Sg**	**04 02 54.2**	**-0.1**
FNA	**Florina**	**1.51**	**25**	P	**Pn**	**04 02 35.5**	**+0.1**
FNA				S	**Sn**	**04 02 56.4**	**+0.8**
FNA	**Florina**	**1.51**	**25**	P	**Pn**	**04 02 35.5**	**+0.1**
FNA				S	**Sn**	**04 02 56.4**	**+0.8**
TRIZ	**Trizonia**	**1.60**	**131**	P	**Pn**	**04 02 36.7**	**+0.1**
TRIZ				S	**Sn**	**04 02 59.1**	**+1.4**
TRIZ	**Trizonia**	**1.60**	**131**	P	**Pn**	**04 02 36.7**	**+0.1**
TRIZ				S	**Sn**	**04 02 59.1**	**+1.4**
LAKA	**Lakka**	**1.63**	**136**	P	**Pn**	**04 02 36.8**	**-0.2**
LAKA				S	**Sn**	**04 02 58.9**	**+0.4**
LAKA	**Lakka**	**1.63**	**136**	P	**Pn**	**04 02 36.8**	**-0.2**
LAKA				S	**Sn**	**04 02 58.9**	**+0.4**
LIT	**Litokhoron**	**1.66**	**65**	*e*PG	**Pn**	**04 02 32.8**	**-4.6**
LIT				*e*SB	**Sb**	**04 02 56.9**	**-3.0**
LIT	**Litokhoron**	**1.66**	**65**	P	**Pn**	**04 02 36.0**	**-1.4**
LIT				S	**Sn**	**04 02 59.4**	**+0.2**
LIT	**Litokhoron**	**1.66**	**65**	P	**Pn**	**04 02 36.0**	**-1.4**
LIT				*e*Sb	**Sb**	**04 02 56.9**	**-3.0**
LIT				S	**Sn**	**04 02 59.4**	**+0.2**
BIA	**Bitola**	**1.71**	**21**	*e*Pn	**Pn**	**04 02 38.9**	**+0.8**
BIA				*e*Sg	**Sg**	**04 02 58.8**	**-3.7**
DSF	**Desfina**	**1.85**	**122**	P	**Pn**	**04 02 40.6**	**+0.5**
DSF	**Desfina**	**1.85**	**122**	P	**Pn**	**04 02 40.6**	**+0.5**
KRUS	**Krusevo**	**2.03**	**16**	*e*Pn	**Pn**	**04 02 44.1**	**+1.6**
KRUS				*e*Sg	**Sg**	**04 03 10.5**	**-2.1**
GUR	**Goura**	**2.05**	**136**	*e*PN	**Pn**	**04 02 42.2**	**-0.6**
GUR	**Goura**	**2.05**	**136**	*e*Pn	**Pn**	**04 02 42.2**	**-0.6**
XOR	**Xorichti**	**2.06**	**91**	P	**Pn**	**04 02 42.2**	**-0.8**
XOR	**Xorichti**	**2.06**	**91**	P	**Pn**	**04 02 42.2**	**-0.8**
VAY	**Valandovo**	**2.46**	**39**	*e*Pn	**Pn**	**04 02 49.4**	**+1.0**

IDC ***06*** *04:16:59.4±1.1, 4°.81S×133°.63E, h0km, mb3.7/4, mb1 4.1/7, mb1mx3.9/16, mbtmp4.0/7, ML4.4/3, MS3.8/6, Ms1 3.8/6, ms1mx3.3/25, Error ellipse: s-maj=51.2km s-min=23.3km az=72.0*

ISCJB ***06*** *04:17:03.5±1.5, 5°.01S±0°.06×133°.74E±0°.09, h48km±15km, mb3.8/5, MS3.8/6, Error ellipse: s-maj=15.8km s-min=6.9km az=152.7*

DJA ***06*** *04:17:05, 4°.80S×133°.74E, h75km, mb4.9/8*

NEIC ***06*** *04:17:08.1±4.9, 5°.08S×133°.43E, h70km±50km, mb4.2/2, Error ellipse: s-maj=41.1km s-min=18.9km az=216.0*

ISC 06 04:17:05.0±1.3, **4°.93S**±0°.07×**133°.80E**±0°.09, **h44**km±15km, **n28**, σ0**s99**/28, **mb3.8**/5, **MS3.8**/6, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**1.27**	**236**	P	**Pn**	**04 17 28.5**	**+2.2**
TLE				S	**Sn**	**04 17 46.7**	**+4.6**
BNDI	**Bandanaira**	**3.90**	**276**	P	**Pn**	**04 18 02.3**	**-0.1**
BNDI				S	**Sn**	**04 18 47.2**	**+0.2**
AAI	**Ambon**	**5.72**	**282**	P	**Pn**	**04 18 26.7**	**-0.8**
	1.2nm6μm264nm,0.9s						
NLAI	**Namlea**	**6.89**	**284**	P	**Pn**	**04 18 43.5**	**0.0**
	0.3nm2μm85nm,0.7s						
LBMI	**Labuha**	**7.60**	**304**	P	**Pn**	**04 18 52.5**	**-0.7**
	0.3nm2μm80nm,1.2s						
KAKA	**Kakadu**	**7.84**	**190**	*e*Pn	**Pn**	**04 18 58.0**	**+1.4**
	88nm,0.5s						
KAKA				*e*Sn	**Sn**	**04 20 23.8**	**-0.4**
KAKA	**Kakadu**	**7.84**	**190**	P	**Pn**	**04 18 58.6**	**+2.0**
	1μm71nm,0.5s						
KNA	**Kununurra**	**11.83**	**204**	P	**Pn**	**04 19 51.9**	**+0.7**
	4μm609nm,1.0s						
COEN	**Coen**	**12.88**	**135**	*e*Pn	**Pn**	**04 20 05.0**	**-0.5**
COEN	**Coen**	**12.88**	**135**	P	**Pn**	**04 20 05.4**	**-0.1**
	45nm,1.4s						
WRAB	**Tennant Creek**	**14.92**	**178**	*e*Pn	**Pn**	**04 20 31.1**	**-2.0**
	8.7nm,0.4s						
WB2	**Warramunga Arr**	**14.93**	**178**	*e*Pn	**Pn**	**04 20 31.8**	**-1.5**
FITZ	**Fitzroy Crossi**	**15.33**	**211**	Pn	**Pn**	**04 20 35.5**	**-3.0**
	1.6nm,0.3s,baz=53,slow=13,SNR=90						
FITZ				Sn	**Sn**	**04 23 19.3**	**-8.0**
	2.6nm,0.3s,baz=203,slow=14,SNR=8.8						
FITZ	**Fitzroy Crossi**	**15.33**	**211**	P	**Pn**	**04 20 37.8**	**-0.6**
ASAR	**Alice Springs**	**18.63**	**180**	P	**Pn**	**04 21 20.1**	**+0.5**
	2.0nm,0.3s,baz=3.2,slow=11,SNR=34						
ASAR				S	**S**	**04 24 39.0**	**-9.2**
	0.3nm,0.3s,baz=2.0,slow=29,SNR=4.7						
CTA	**Charters Tower**	**19.34**	**142**	P	**Pn**	**04 21 29.6**	**+1.4**
	0.4nm,0.3s,baz=309,slow=6.5,SNR=2.8						
CTAO	**Charters Tower**	**19.34**	**142**	*e*P	**Pn**	**04 21 29.4**	**+1.2**
	15nm,1.1s						
GUMO	**Guam**	**21.43**	**31**	LR	LR	04 30 24.6	
	comp=Z,119nm,18.8s,MS3.3,baz=268,slow=38						
STKA	**Stephens Creek**	**27.78**	**166**	LR	LR	04 35 03.7	
	comp=Z,292nm,20.6s,MS3.9,baz=189,slow=39						
MJAR	**Matsushiro Arr**	**41.46**	**5**	LR	LR	04 41 24.3	
	comp=Z,106nm,18.9s,MS3.7,baz=160,slow=35						
KSRS	**Korea Array**	**42.52**	**353**	LR	LR	04 41 55.2	
	comp=Z,50nm,19.1s,MS3.4,baz=259,slow=35						
MKAR	**Makanchi Array**	**68.65**	**325**	P	**P**	**04 28 04.3**	**+0.6**
MKAR	**Makanchi Array**	**68.65**	**325**	P	**P**	**04 28 04.3**	**+0.6**
	1.0nm,0.6s,mb4.0,baz=119,slow=6.2,SNR=6.8						
ZALV	**Zalesovo Beam**	**71.48**	**332**	P	**P**	**04 28 20.4**	**-0.5**
	0.4nm,0.4s,mb3.7,baz=112,slow=6.4,SNR=2.5						
KURK	**Kurchatov**	**72.80**	**327**	*e*P	**P**	**04 28 29.3**	**+0.4**
	2.3nm,0.8s,mb4.2						
MAW	**Mawson**	**78.25**	**202**	LR	LR	04 59 51.7	
	comp=Z,155nm,18.9s,MS4.4,baz=277,slow=33						
BVAR	**Borovoye Array**	**78.39**	**327**	P	**P**	**04 29 01.0**	**+0.1**
	0.4nm,0.5s,mb3.6,baz=121,slow=7.2,SNR=2.7						
ILAR	**Eielson Array**	**89.89**	**25**	P	**P**	**04 29 59.0**	**+0.1**
	0.1nm,0.5s,mb3.4,baz=247,slow=4.6,SNR=3.4						
ILAR				LR	LR	05 14 24.5	
	comp=Z,34nm,18.1s,MS3.8,baz=21,slow=38						

CASC 06 04:39:18.1±2.6, **9°.36N**×**82°.72W**, **h13**km±14km, **MD3.8, 5C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.56**	**178**	*e*P	Pg	04 39 29.8	+0.7
BRU2				*e*S	Sg	04 39 38.1	+1.6
TBS2		**0.56**	**174**	*e*P	Pg	04 39 28.0	-1.1
TBS2				*e*S	Sg	04 39 35.6	-1.1
ACR	**Cerro Adams**	**0.83**	**213**↓	*e*P	Pg	04 39 34.0	-0.2
BUS	**Buena Vista**	**1.05**	**281**↑	*e*P	Pb	04 39 37.7	-0.4
URSC	**Urasca**	**1.15**	**294**↑	*e*P	Pb	04 39 38.8	-1.1
URSC				*e*S	Sb	04 39 54.0	-0.7
QCR	**Quepos**	**1.43**	**273**↑	*e*P	Pn	04 39 43.3	-0.5
QCR				*e*S	Sn	04 40 01.5	-1.0
LAJ	**Bijagual**	**1.48**	**290**	*e*P	Pn	04 39 50.3	+5.9
LAJ				*e*S	Sn	04 40 14.1	+11
PRS1	**Puriscal**	**1.69**	**292**↑	*e*P	Pn	04 39 47.9	+0.6
PRS1				*e*S	Sn	04 40 10.5	+1.5
CGA2	**Cerro Gallo 2**	**1.85**	**291**↑	*e*P	Pn	04 39 50.3	+0.9
CGA2				*e*S	Sn	04 40 14.5	+1.8
JCR	**Jicaral**	**2.41**	**282**	*e*P	Pn	04 39 58.6	+1.3

ISCJB ***06*** *04:47:04.8±0.2, 32°.81N±0°.02×105°.66E±0°.03, h10km, mb4.3/42, MS3.5/7, Error ellipse: s-maj=3.7km s-min=3.3km az=138.0*

BJI ***06*** *04:47:05.5, 32°.78N×105°.60E, h10km, mB4.5/14, mb4.4/22, ML4.4/24, Ms4.3/28, Ms7 3.9/21*

IDC ***06*** *04:47:05.9±0.8, 32°.86N×105°.48E, h0km, mb4.2/13, mb1 4.3/16, mb1mx4.1/26, mbtmp4.2/16, ML4.1/3, MS3.4/6, Ms1 3.4/6, ms1mx3.0/29, Error ellipse: s-maj=22.7km s-min=16.0km az=34.0*

NEIC ***06*** *04:47:07.7±0.3, 32°.83N×105°.41E, h10km, mb4.5/20, Error ellipse: s-maj=8.4km s-min=6.3km az=213.0*

MOS ***06*** *04:47:08.7±1.1, 32°.85N×105°.51E, h33km, mb4.5/33, Error ellipse: s-maj=11.4km s-min=6.7km az=113.4*

ISC 06 04:47:07.2±0.2, **32°.80N**±0°.02×**105°.56E**±0°.03, **h10**km, **n129**, σ1**s23**/148, **mb4.3**/42, **MS3.4**/7, **3C-1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.43**	**220**↑	*i*Pn	**Pn**	**04 47 46.8**	**-0.1**
CD2				Pg	**Pg**	**04 47 50.5**	**-3.2**
CD2				Sn	**Sn**	**04 48 18.9**	**+2.3**
CD2				Sg	**Sg**	**04 48 22.3**	**-2.9**
CD2				*s*max			
	comp=N,9μm,0.9s						
CD2				*s*max			
	comp=E,8μm,0.8s						
XAN	**Xi'an**	**3.07**	**65**	Pn	**Pn**	**04 47 56.7**	**+0.9**
XAN				Pg	**Pg**	**04 48 01.8**	**-4.3**
XAN				Sn	**Sn**	**04 48 29.3**	**-3.3**
XAN				Sg	**Sg**	**04 48 41.9**	**-4.0**
XAN				*s*max			
	comp=N,2μm,0.7s						
XAN				*s*max			
	comp=E,1μm,0.8s						
LZH	**Lanzhou**	**3.57**	**337**	Pn	**Pn**	**04 48 04.5**	**+1.9**
LZH				Pg	**Pg**	**04 48 11.5**	**-4.1**
LZH				Sn	**Sn**	**04 48 43.5**	**-1.4**
LZH				Sg	**Sg**	**04 48 56.9**	**-5.0**
LZH				*s*max			
	comp=N,3μm,0.9s						
LZH				*s*max			
	comp=E,4μm,1.0s						
LZH				LR	LR		
	comp=N,4μm,5.4s						
LZH				LR	LR		
	comp=Z,5μm,6.1s						
ENH	**Enshi**	**4.20**	**126**	*e*Pn	**Pn**	**04 48 13.3**	**+2.1**
ENH				*e*Pg	**Pg**	**04 48 23.3**	**-4.3**
ENH				*e*Sg	**Sg**	**04 49 18.4**	**-3.5**
GYA	**Guiyang**	**6.39**	**171**↑	*i*Pn	**Pn**	**04 48 41.6**	**+0.2**
GYA				Sn	**Sn**	**04 49 53.0**	**-1.4**
GYA				Sg	**Sg**	**04 50 23.4**	**-9.0**
GYA				*s*max			
	comp=N,790nm,0.8s						
GYA				*s*max			
	comp=E,330nm,0.9s						
WHN	**Wuhan**	**7.82**	**104**	Pn	**Pn**	**04 48 59.9**	**-1.2**
WHN				Sn	**Sn**	**04 50 26.6**	**-3.1**
WHN				LR	LR		
	comp=E,4μm,3.9s						
WHN				LR	LR		
	comp=Z,2μm,4.0s						
KMI	**Kunming**	**8.04**	**199**	P	**Pn**	**04 49 06.6**	**+2.6**
KMI				S	**Sn**	**04 50 29.3**	**-5.6**
KMI				*s*max			
	comp=N,57nm,1.3s						
KMI				*s*max			
	comp=E,59nm,2.2s						
GTA	**Gaotai**	**8.07**	**326**	P	**Pn**	**04 49 04.1**	**-0.3**
GTA				pP		04 49 06.7	
GTA				sP		04 49 09.4	
GTA				S	**Sn**	**04 50 38.4**	**+2.8**
GTA				sS		04 50 43.1	
GTA				*p*max	*p*max		
	comp=Z,37nm,0.7s						
GTA				LR	LR		
	comp=N,470nm,10.5s						
GTA				LR	LR		
	comp=E,350nm,8.1s						
GTA				LR	LR		
	comp=Z,460nm,11.3s						
BTO	**Baotou**	**8.57**	**23**	*e*P	**Pn**	**04 49 11.8**	**+0.5**
BTO				LR	LR		
	comp=N,290nm,6.1s						
BTO				LR	LR		
	comp=E,290nm,8.2s						
HHC	**Hu-ho-hao-te**	**9.37**	**29**	*e*P	**Pn**	**04 49 20.9**	**-1.3**
HHC				pP		04 49 23.9	
HHC				sP		04 49 27.1	
HHC				S	**Sn**	**04 51 06.2**	**-1.3**
HHC				*p*max	*p*max		
	comp=Z,14nm,0.8s						
HHC				*p*max	*p*max		
	comp=Z,120nm,3.8s						
HHC				LR	LR		
	comp=N,570nm,3.9s						
HHC				LR	LR		
	comp=E,1μm,5.7s						
HHC				LR	LR		
	comp=Z,630nm,8.2s						
TIA	**Tai'an**	**10.13**	**67**	P	**Pn**	**04 49 34.7**	**+2.0**
TIA				LR	LR		
	comp=N,290nm,5.1s						
TIA				LR	LR		
	comp=E,350nm,5.7s						
BJT	**Baijiatuau**	**11.18**	**47**	*e*Pn	**Pn**	**04 49 47.0**	**0.0**
	comp=E,17nm,0.6s						
BJT	**Baijiatuau**	**11.18**	**47**	*e*P	**Pn**	**04 49 47.0**	**+0.1**
BJT				*p*max	*p*max		
	comp=Z,17nm,0.6s						
BJI	**Beijing**	**11.19**	**47**	P	**Pn**	**04 49 46.8**	**-0.4**
BJI				*p*max	*p*max		
	comp=Z,10.0nm,0.5s						
BJI				LR	LR		
	comp=N,460nm,11.2s						
BJI				LR	LR		
	comp=E,490nm,9.6s						
BJI				LR	LR		
	comp=Z,150nm,15.9s						
NJ2	**Nanjing**	**11.26**	**90**	*e*P	**Pn**	**04 49 40.1**	**-8.1**
NJ2				pP		04 49 43.4	
NJ2				PP		04 49 46.5	
NJ2				sP		04 49 50.1	
NJ2				S	**Sn**	**04 51 38.0**	**-16**
NJ2				sS		04 51 43.0	
NJ2				*p*max	*p*max		
	comp=Z,10.0nm,0.5s						
NJ2				*p*max	*p*max		
	comp=Z,10.0nm,3.5s						
NJ2				LR	LR		
	comp=N,80nm,10.9s						
NJ2				LR	LR		
	comp=E,1μm,13.0s						
NJ2				LR	LR		
	comp=Z,70nm,11.0s						
LSA	**Lhasa**	**12.71**	**260**	P	**Pn**	**04 50 03.4**	**-4.6**
QIZ	**Qiongzhong**	**14.24**	**163**	P	**Pn**	**04 50 27.7**	**-1.2**
QIZ				S	**Sn**	**04 53 07.7**	**+0.7**
QIZ				LR	LR		
	comp=Z,130nm,16.8s						
SONM	**Songino Array**	**15.03**	**2**	Pn	**Pn**	**04 50 39.0**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=185,slow=14,SNR=12						
SONM				Lg		04 55 00.6	
	comp=Z,0.2nm,0.3s,baz=188,slow=30,SNR=3.6						
ULN	**Ulaanbaatar**	**15.09**	**4**	*e*Pn	**Pn**	**04 50 41.5**	**+1.1**
	comp=Z,11nm,0.9s						
ULN	**Ulaanbaatar**	**15.09**	**4**	*e*P	**Pn**	**04 50 41.5**	**+1.1**
ULN				*p*max	*p*max		
	comp=Z,11nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.47**	**204**	Pn	**Pn**	**04 50 46.0**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=21,slow=12,SNR=3.9						
SSLB	**Suanglung**	**16.25**	**120**	*e*Pn	**Pn**	**04 50 58.7**	**+3.2**
TAPN	**Taplejung**	**16.37**	**255**	*e*P	**Pn**	**04 50 58.4**	**+1.3**
	comp=Z,56nm,0.9s						
ODAN	**Odare**	**16.83**	**254**	*e*P	**Pn**	**04 51 02.0**	**-1.0**
	comp=Z,39nm,0.6s						
RAMN	**Ramite**	**17.43**	**255**	*e*P	**Pn**	**04 51 09.8**	**-0.7**
	comp=Z,47nm,0.8s						
JIRN	**Jiri**	**17.50**	**258**	*e*P	**Pn**	**04 51 12.4**	**+1.1**
ZAK	**Zakamensk**	**17.65**	**355**	*e*P	**Pn**	**04 51 13.3**	**+0.3**
ZAK				*p*max	*p*max		
	comp=Z,3.0nm,1.0s						
GUN	**Gumba**	**17.66**	**259**	*e*P	**Pn**	**04 51 14.5**	**+1.2**
	comp=Z,53nm,0.8s						
PKI	**Pulchoki**	**18.17**	**259**	*e*P	**Pn**	**04 51 19.7**	**0.0**
	comp=Z,28nm,0.6s						
KKN	**Kakani**	**18.20**	**259**	*e*P	**Pn**	**04 51 20.4**	**+0.4**
	comp=Z,32nm,0.7s						
DMN	**Daman**	**18.41**	**259**	*e*P	**Pn**	**04 51 22.5**	**0.0**
	comp=Z,60nm,1.1s						
GKN	**Gorkha**	**18.66**	**261**	*e*P	**Pn**	**04 51 25.8**	**+0.2**
	comp=Z,40nm,0.7s						
KSRS	**Korea Array**	**18.86**	**69**	P	**Pn**	**04 51 28.4**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=254,slow=10,SNR=49						
KSRS				LR	LR	04 58 28.1	
	comp=Z,51nm,21.9s,baz=278,slow=36						
CN2	**Changchun**	**19.04**	**49**	*e*P	**Pn**	**04 51 30.8**	**+0.7**
CN2				*p*max	*p*max		
	comp=Z,10.0nm,0.6s						
KOLN	**Koldanda**	**19.60**	**261**	*e*P	**Pn**	**04 51 34.8**	**-2.2**
	comp=Z,19nm,0.6s						
MDJ	**Mudanjiang**	**22.07**	**51**	P	**P**	**04 52 00.6**	**-1.6**
MDJ				*p*max	*p*max		
	comp=Z,7.0nm,1.3s,mb3.9						
MDJ				*p*max	*p*max		
	comp=Z,68nm,5.3s						
MK31	**Makanchi Array**	**22.58**	**315**	*e*P	**P**	**04 52 07.8**	**+0.2**
MKAR	**Makanchi Array**	**22.58**	**315**	P	**P**	**04 52 07.2**	**-0.4**
	comp=Z,5.2nm,0.7s,mb4.1,baz=116,slow=11,SNR=28						
MKAR				LR	LR	05 01 54.1	
	comp=Z,141nm,18.4s,MS3.4,baz=172,slow=40						
MKAR	**Makanchi Array**	**22.58**	**315**	P	**P**	**04 52 07.2**	**-0.4**
MKAR				*p*max	*p*max		
	comp=Z,5.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,141nm,18.4s						
KSH	**Kashi**	**24.74**	**294**	*e*P	**P**	**04 52 31.7**	**+3.0**
KSH				*ep*P		04 52 35.6	
KSH				*es*P	sP	04 52 38.7	+5.7
KSH				*e*PP		04 53 09.0	
KSH				*e*PcP	PcP	04 56 07.7	+2.3
KSH				*e*S	**S**	**04 56 52.9**	**+2.1**
KSH				*es*S	sS	04 56 59.6	+3.8
KSH				*e*SS		04 57 51.3	
KSH				*e*ScP	ScP	04 59 45.1	+0.7
KSH				*e*PcS	PcS	04 59 47.1	+1.7
KSH				*p*max	*p*max		
	comp=Z,1.0nm,0.7s,mb3.5						
KSH				*p*max	*p*max		
	comp=Z,68nm,3.5s						
KSH				LR	LR		
	comp=N,370nm,18.5s						
KSH				LR	LR		
	comp=E,140nm,10.3s						
KSH				LR	LR		
	comp=Z,260nm,14.9s,MS3.9						
KLR	**Kul'dur**	**25.51**	**42**	*e*P	**P**	**04 52 32.3**	**-3.3**
TKM2	**Tokmak 2**	**25.60**	**302**	*e*P	**P**	**04 52 37.1**	**+0.5**
	comp=Z,5.2nm,0.6s,mb4.2						
TKM2	**Tokmak 2**	**25.60**	**302**	*e*P	**P**	**04 52 37.1**	**+0.6**
TKM2				*p*max	*p*max		
	comp=Z,5.0nm,0.6s,mb4.2						
ZAA0	**Zalesovo Array**	**25.79**	**331**	*e*P	**P**	**04 52 39.4**	**+1.3**
ZALV	**Zalesovo Beam**	**25.79**	**331**	P	**P**	**04 52 37.2**	**-0.8**
ZALV				LR	LR	05 03 14.7	
ZALV	**Zalesovo Beam**	**25.79**	**331**	P	**P**	**04 52 37.2**	**-0.8**
	comp=Z,1.8nm,0.4s,mb4.0,baz=146,slow=11,SNR=8.6						
ZALV				LR	LR	05 03 14.7	
	comp=Z,47nm,19.6s,MS3.0,baz=309,slow=38						
AAK	**Ala-Archa**	**26.33**	**301**	P	**P**	**04 52 44.7**	**+1.6**
	comp=Z,1.4nm,0.3s,mb4.0,baz=203,slow=10,SNR=3.4						
AAK				LR	LR	05 05 09.5	
	comp=Z,162nm,18.0s,MS3.6,baz=94,slow=41						
AAK	**Ala-Archa**	**26.33**	**301**	P	**P**	**04 52 44.7**	**+1.5**
AAK				*p*max	*p*max		
	comp=Z,1.0nm,0.3s,mb3.8						
AAK				MLR	MLR		
	comp=Z,162nm,18.0s,MS3.6						
KURK	**Kurchatov**	**26.68**	**320**	*e*P	**P**	**04 52 45.9**	**-0.3**
	comp=Z,3.6nm,0.6s,mb4.1						
KURK	**Kurchatov**	**26.68**	**320**	*e*P	**P**	**04 52 45.9**	**-0.3**
KURK				*p*max	*p*max		
	comp=Z,4.0nm,0.6s,mb4.1						
EKS2	**Erkin-Say**	**26.86**	**301**	*e*P	**P**	**04 52 48.7**	**+0.8**
	comp=Z,2.8nm,0.7s,mb3.9						
MJAR	**Matsushiro Arr**	**27.04**	**73**	P	**P**	**04 52 51.4**	**+1.8**
	comp=Z,2.1nm,0.8s,mb3.7,baz=270,slow=9.1,SNR=7.1						
MJAR	**Matsushiro Arr**	**27.04**	**73**	P	**P**	**04 52 51.4**	**+1.8**
MJAR				*p*max	*p*max		
	comp=Z,2.0nm,0.8s						
KBL	**Kabul**	**30.34**	**283**	*e*P	**P**	**04 53 18.9**	**-0.1**
	comp=Z,4.3nm,0.5s,mb4.4						
KBL	**Kabul**	**30.34**	**283**	*e*P	**P**	**04 53 18.9**	**-0.1**
KBL				*p*max	*p*max		
	comp=Z,4.0nm,0.5s,mb4.4						
BVAR	**Borovoye Array**	**32.27**	**319**	P	**P**	**04 53 35.2**	**-0.6**
	comp=Z,0.9nm,0.5s,mb3.8,baz=110,slow=11,SNR=4.2						
BVAR	**Borovoye Array**	**32.27**	**319**	P	**P**	**04 53 35.2**	**-0.6**
BVAR				*p*max	*p*max		
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**32.34**	**319**↑	*e*P	**P**	**04 53 35.6**	**-0.8**
BRVK				*p*max	*p*max		
	comp=Z,7.0nm,2.5s,mb4.0						
AKTO	**Aktyubinsk**	**38.92**	**311**	LR	LR	05 11 48.2	
	comp=Z,82nm,20.8s,MS3.5,baz=22,slow=38						
ARU	**Arti**	**39.88**	**321**	*e*P	**P**	**04 54 40.9**	**0.0**
	comp=Z,4.7nm,0.4s,mb4.6						
ARU	**Arti**	**39.88**	**321**	*d i*P	**P**	**04 54 40.7**	**-0.1**
ARU				S	**S**	**05 00 39.6**	**-5.8**
ARU				SS	SS	05 03 27.2	-14
ARU				*p*max	*p*max		
	comp=Z,8.0nm,1.0s,mb4.4						
MIB	**Mutribah**	**49.30**	**283**	*e*P	**P**	**04 55 54.9**	**-1.5**
MIB				AMb	AMB	04 55 58.8	
	comp=Z,23nm,0.8s,mb5.3						
KIV	**Kislovodsk**	**49.44**	**302**	*e*P	**P**	**04 55 59.2**	**+1.9**
KIV				*p*max	*p*max		
	comp=Z,6.0nm,0.8s,mb4.7						
KIV				MLR	MLR		
	comp=Z,23nm,17.0s,MS3.2						
NAY	**Al-Naaiem**	**49.56**	**282**	*e*P	**P**	**04 55 57.4**	**-1.1**
NAY				AMb	AMB	04 56 00.8	
	comp=Z,25nm,0.7s,mb5.4						
KLMR	**Klimovskoe**	**50.39**	**325**	P	**P**	**04 56 03.2**	**-1.1**
KLMR				*p*max	*p*max		
	comp=Z,20nm,1.9s,mb4.8						
VSR	**Storozhevoye**	**50.85**	**312**	*e*P	**P**	**04 56 09.1**	**+1.2**
VSR				*p*max	*p*max		
	comp=E,10.0nm,0.7s						
VSR				*p*max	*p*max		
	comp=Z,8.0nm,0.7s,mb4.8						
VSR				*p*max	*p*max		
	comp=N,2.0nm,0.3s						
MALT	**Malatya**	**53.82**	**296**	*e*P	**P**	**04 56 29.9**	**-0.2**
	comp=N,1.4nm,0.4s,mb4.2						
MALT	**Malatya**	**53.82**	**296**	*e*P	**P**	**04 56 29.9**	**-0.2**

comp=Z,2.0nm,0.4s
NOA NORSAR Array B 63.90 327 P **P** **04 57 38.7 -1.1**
NOA LR LR 05 28 20.0
NOA NORSAR Array B 63.90 327 P **P** **04 57 38.7 -1.1**
comp=Z,1.9nm,0.6s,mb4.3,baz=70,slow=6.5,SNR=8.5
NOA LR LR 05 28 20.0
comp=Z,24nm,18.0s,MS3.4,baz=45,slow=39
NOA NORSAR Array B 63.90 327 P **P** **04 57 38.7 -1.1**
NOA pmax pmax
comp=Z,2.0nm,0.6s
NOA MLR MLR
comp=Z,24nm,18.0s
MORC Moravsky Berou 64.57 314 *e*P **P** **04 57 44.0 -0.4**
comp=Z,3.1nm,1.0s,mb4.3
MORC Moravsky Berou 64.57 314 *e*P **P** **04 57 44.1 -0.3**
MORC pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
PPLA Purkeypile 66.59 29 *e*P **P** **04 57 58.8 +1.5**
comp=Z,5.8nm,0.6s,mb4.8
CLL Collm 66.67 317 *e*P **P** **04 58 00.0 +2.1**
CLL Collm 66.67 317 *e*(P) **P** **04 58 00.0 +2.1**
COLA College 67.37 26 *e*P **P** **04 58 05.0 +2.9**
comp=Z,5.4nm,0.9s,mb4.6
COLA College 67.37 26 *e*P **P** **04 58 05.0 +2.8**
COLA pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
ILAR Eielson Array 67.78 26 P **P** **04 58 04.8 +0.1**
comp=Z,0.8nm,0.6s,mb4.0,baz=293,slow=5.5,SNR=14
ILAR Eielson Array 67.78 26 P **P** **04 58 04.8 +0.1**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
PMR Palmer 68.46 30 *e*P **P** **04 58 09.8 +0.7**
comp=Z,5.1nm,0.8s,mb4.6
PMR Palmer 68.46 30 *e*P **P** **04 58 09.8 +0.7**
PMR pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
OHAK Old Harbor 68.67 35 *e*P **P** **04 58 11.9 +1.4**
comp=Z,4.2nm,0.6s,mb4.5
KDAK Kodiak Island 68.75 34 *i* P **P** **04 58 15.8 +4.9**
EGAK Eagle 69.85 25 *e*P **P** **04 58 18.6 +0.9**
comp=Z,1.6nm,0.8s,mb4.0
INK Inuvik 70.15 20 *e*P **P** **04 58 20.3 +0.9**
comp=Z,2.5nm,0.6s,mb4.3
INK Inuvik 70.15 20 *e*P **P** **04 58 20.3 +0.9**
INK pmax pmax
comp=Z,3.0nm,0.6s
LPG La Plagne 72.99 313 *e*P **P** **04 58 36.1 -0.9**
comp=Z,11nm,0.6s,mb4.7
LPG La Plagne 72.99 313 *e*P **P** **04 58 36.1 -0.9**
comp=Z,5.6nm,0.6s,mb4.7
LPG La Plagne 72.99 313 *e*P **P** **04 58 36.1 -0.9**
LPG pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
LPL La Plagne 72.99 313 *e*P **P** **04 58 36.0 -1.0**
comp=Z,8.7nm,0.5s,mb4.6
LPL La Plagne 72.99 313 *e*P **P** **04 58 36.0 -1.0**
comp=Z,4.3nm,0.5s,mb4.6
LPL La Plagne 72.99 313 *e*P **P** **04 58 36.0 -1.0**
LPL pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
PGF Pioggiola 73.01 310 *e*P **P** **04 58 35.8 -1.4**
comp=Z,38nm,1.1s,mb5.0
PGF Pioggiola 73.01 310 *e*P **P** **04 58 35.8 -1.4**
comp=Z,19nm,1.1s,mb4.9
PGF Pioggiola 73.01 310 *e*P **P** **04 58 35.8 -1.4**
PGF pmax pmax
comp=Z,19nm,1.1s,mb4.9
MBDF Montbardon 73.36 313 *e*P **P** **04 58 37.5 -1.7**
ORIF Oris-en-Rattie 73.81 313 *e*P **P** **04 58 40.2 -1.6**
comp=Z,1.1nm,0.9s,mb4.5
ORIF Oris-en-Rattie 73.81 313 *e*P **P** **04 58 40.2 -1.6**
comp=Z,5.6nm,0.9s,mb4.5
ORIF Oris-en-Rattie 73.81 313 *e*P **P** **04 58 40.2 -1.6**
ORIF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
SMF Signal de Mont 74.16 315 *e*P **P** **04 58 42.5 -1.3**
comp=Z,4.3nm,0.6s,mb4.3
SMF Signal de Mont 74.16 315 *e*P **P** **04 58 42.5 -1.3**
comp=Z,2.2nm,0.6s,mb4.3
SMF Signal de Mont 74.16 315 *e*P **P** **04 58 42.5 -1.3**
SMF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
YKA Yellowknife Ar 79.71 18 P **P** **04 59 14.5 -0.3**
YKA Yellowknife Ar 79.71 18 P **P** **04 59 14.5 -0.3**
comp=Z,1.4nm,0.6s,mb4.0,baz=325,slow=5.1,SNR=12
YKA Yellowknife Ar 79.71 18 P **P** **04 59 14.5 -0.3**
YKA pmax pmax
comp=Z,1.0nm,0.6s
OTAV Otavalo 146.93 7 *e*PKPbc PKPbc 05 06 52.6 +2.1

IGQ 06 04:53:19.3,1.40S×78.01W,h9km±2km,Mb4.0,Ms3.8, 15C-18D,Error ellipse: s-maj=1.0km s-min=0.7km az=15.5,Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULBA	**Ulba**	**0.40**	**263**	⇓P	Pg	04 53 27.8	+0.6
BRUN	**Tungurahua Vol**	**0.41**	**267**	⇓S	Sg	04 53 34.2	+1.6
BRUN	**Tungurahua Vol**	**0.41**	**267**	⇓P	Pg	04 53 28.1	+0.9
BULB	**Ulba Tungurahu**	**0.41**	**264**	⇓P	Pg	04 53 27.9	+0.6
RUN5	**Runtun**	**0.42**	**267**	⇓P	Pg	04 53 28.0	+0.6
PATA	**Patacocha**	**0.44**	**256**	⇑P	Pg	04 53 28.5	+0.6
RETU	**Refugio**	**0.44**	**263**	⇓P	Pg	04 53 28.5	+0.5
ARRY	**Arrayan**	**0.46**	**256**	⇓P	Pg	04 53 28.5	+0.2
JUI6	**Juive**	**0.46**	**267**	⇓P	Pg	04 53 28.5	+0.1
BBIL	**Ulba Tungurahu**	**0.48**	**264**	⇓P	Pg	04 53 29.1	+0.4
BBIL	**Ulba Tungurahu**	**0.48**	**264**	⇓S	Sg	04 53 35.4	+0.3
BMAS	**Trigal station**	**0.48**	**257**	⇓S	Sg	04 53 35.4	+0.3
BMAS	**Trigal station**	**0.48**	**257**	⇓P	Pg	04 53 28.9	+0.2
BIL2	**Estacion Bilba**	**0.50**	**263**	⇓P	Pg	04 53 29.2	+0.2
PISA	**Pisayambo**	**0.51**	**312**	⇑P	Pg	04 53 30.2	+1.0
IGUA	**Igualata**	**0.64**	**262**	⇓P	Pg	04 53 32.2	+0.6
RIOE	**Riobamba**	**0.72**	**240**	⇓P	Pg	04 53 32.9	-0.2
RIOE	**Riobamba**	**0.72**	**240**	⇓S	Sg	04 53 41.7	-0.8
TAMB	**Tambo**	**0.79**	**333**	⇑P	Pg	04 53 35.2	+0.8
COV1	**Cotopaxi Volc**	**0.80**	**335**	S	Sg	04 53 47.9	+2.6
COV1	**Cotopaxi Volc**	**0.80**	**335**	P	Pg	04 53 36.4	+1.6
MOV1	**Cotopaxi Vol s**	**0.81**	**327**	P	Pg	04 53 36.0	+1.2
VC1	**Cotopaxi 1**	**0.85**	**332**	⇑P	Pg	04 53 36.4	+0.7
CAMI	**Rancho Maria**	**0.87**	**325**	P	Pg	04 53 36.9	+0.7
MACE	**Macas**	**0.87**	**193**	⇑P	Pg	04 53 36.1	-0.1
MACE	**Macas**	**0.87**	**193**	⇑S	Sg	04 53 48.0	+0.5
NAS2	**Nasa**	**0.88**	**328**	P	Pg	04 53 37.0	+0.8
ANTI	**Antisana**	**0.95**	**351**	⇑P	Pg	04 53 37.8	+0.1
JUA2	**San Juan 2**	**1.32**	**333**	⇑S	Sb	04 54 03.0	+1.6
JUA2	**San Juan 2**	**1.32**	**333**	⇑P	Pn	04 53 45.1	+1.1
CHAR	**Charly**	**1.34**	**14**	P	Pn	04 53 44.9	+0.5
CHAR	**Charly**	**1.34**	**14**	S	Sb	04 54 03.7	+1.6
LAV3	**Lava3-Reventad**	**1.34**	**16**	⇓S	Sb	04 54 03.5	+1.4
LAV3	**Lava3-Reventad**	**1.34**	**16**	⇓P	Pn	04 53 44.9	+0.5
GGP	**Refugio Guagua**	**1.35**	**334**	⇑P	Pn	04 53 45.7	+1.3
TERV	**Terraza Guagua**	**1.35**	**334**	⇑S	Sb	04 54 04.0	+1.7
TERV	**Terraza Guagua**	**1.35**	**334**	⇑P	Pn	04 53 45.8	+1.3
CONE	**Cono NE Rev Vo**	**1.37**	**15**	⇑S	Sb	04 54 03.9	+1.2
CONE	**Cono NE Rev Vo**	**1.37**	**15**	⇑P	Pn	04 53 45.0	+0.4
PINO	**Pino**	**1.37**	**334**	S	Sb	04 54 05.3	+2.5
PINO	**Pino**	**1.37**	**334**	P	Pn	04 53 46.0	+1.3
YANA	**Yana**	**1.39**	**336**	S	Sb	04 54 04.6	+1.2
YANA	**Yana**	**1.39**	**336**	P	Pn	04 53 46.2	+1.2
CAYA	**Cayambe**	**1.46**	**1**	⇓P	Pn	04 53 46.9	+1.0
COTA	**Cotacachi**	**1.75**	**349**	P	Pn	04 53 52.4	+2.5
GOLV	**Golondrinas**	**1.95**	**325**	P	Pn	04 53 56.5	+3.7

GUC 06 05:07:47.7±0.7,20.78S×69.32W,h115km±5km,ML3.9,4C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.30**	**210**	⇑*e*P	Pn	05 08 04.7	+0.6
PB01				*i* S	Sn	05 08 16.9	+0.5
PB01				AML	AML	05 08 17.7	
	comp=E,10μm,0.2s						
HMBC	**Humberston**	**0.73**	**313**	⇑*i*P	Pn	05 08 07.7	+0.9
HMBC				*i* S	Sn	05 08 22.3	+1.2
HMBC				AML	AML	05 08 23.7	
	comp=N,3μm,0.4s						
PSGC	**Pisagua**	**1.39**	**327**	⇑*i*P	Pn	05 08 14.1	+0.5
PSGC				*i* S	Sn	05 08 34.3	+1.0
PSGC				AML	AML	05 08 35.4	
	comp=E,958nm,0.3s						
MACH	**Maria Elena**	**1.47**	**196**	*e*P	Pn	05 08 15.6	+1.2
MACH				*e*S	Sn	05 08 36.4	+1.6
MNMC	**Miaee Miae**	**1.66**	**351**	⇑*i*P	Pn	05 08 17.5	+0.8
MNMC				*i* S	Sn	05 08 40.7	+1.9
MNMC				AML	AML	05 08 41.9	
	comp=E,2μm,0.2s						

DDA ***06*** *05:08:12.8,37.91N×31.15E,h7km±3km,Md3.7*
ISCJB ***06*** *05:08:16.8±0.3,37.92N±0.02×30.99E±0.03,h10km, Error ellipse: s-maj=2.9km s-min=2.7km az=16.8*
CSEM ***06*** *05:08:16.5±0.1,37.91N×30.98E,h2km,ML3.5,Error ellipse: s-maj=2.8km s-min=2.6km az=94.0*
ISK ***06*** *05:08:16.1,37.90N×30.98E,h8km,ML3.5*
ISC 06 05:08:17.1±0.5,37.91N±0.02×30.98E±0.03,h7km±4km, n115,σ0.85/144,1C-5D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCK	**Bucak**	**0.55**	**215**	PG	**Pg**	**05 08 26.6**	**-1.0**
BCK				*e*SG	**Sg**	**05 08 34.8**	**0.0**
BCK	**Bucak**	**0.55**	**215**	*i* Pg	**Pg**	**05 08 26.7**	**-1.0**
BCK				*e*Sg	**Sg**	**05 08 34.8**	**0.0**
SHUT	**Suhut-Afyon**	**0.72**	**332**	PG	**Pg**	**05 08 30.8**	**-0.2**
SHUT				*e*SG	**Sg**	**05 08 41.2**	**+0.7**
SHUT	**Suhut-Afyon**	**0.72**	**332**	*i* Pg	**Pg**	**05 08 30.8**	**-0.2**
SHUT				*e*Sg	**Sg**	**05 08 41.2**	**+0.7**
BOLV	**Bolvadin**	**0.81**	**358**	⇓*i*P	**Pg**	**05 08 31.5**	**-1.1**
BOLV				*i* S	**Sg**	**05 08 44.5**	**+1.5**
BOLV	**Bolvadin**	**0.81**	**358**	*i* P	**Pg**	**05 08 31.5**	**-1.1**
BOLV				*i* S	**Sg**	**05 08 44.5**	**+1.5**
KORT	**Korkueli**	**1.04**	**209**	⇑*i*P	**Pg**	**05 08 35.9**	**-1.2**
KORT				*i* S	**Sg**	**05 08 52.1**	**+1.5**
KORT	**Korkueli**	**1.04**	**209**	*i* P	**Pg**	**05 08 35.9**	**-1.2**
KORT				*i* S	**Sg**	**05 08 52.1**	**+1.5**
ANTB	**Antalya**	**1.04**	**195**	*e*PG	**Pg**	**05 08 36.8**	**-0.3**
ANTB	**Antalya**	**1.04**	**195**	*e*Pg	**Pg**	**05 08 36.8**	**-0.3**
KONT	**Konya--Tatoy**	**1.09**	**88**	*e*PN	**Pn**	**05 08 37.2**	**-1.6**
KONT	**Konya--Tatoy**	**1.09**	**88**	*e*Pn	**Pn**	**05 08 37.2**	**-1.6**
LADK	**Ladik-KONYA**	**1.13**	**75**	*e*PN	**Pn**	**05 08 37.8**	**-1.6**
LADK				*e*SN	**Sn**	**05 08 54.3**	**-0.8**
LADK	**Ladik-KONYA**	**1.13**	**75**	*e*Pn	**Pn**	**05 08 37.8**	**-1.5**
LADK				*e*Sn	**Sn**	**05 08 54.3**	**-0.8**
KIZT	**Kizilcal**	**1.20**	**36**	*e*PN	**Pn**	**05 08 39.7**	**-0.5**
KIZT	**Kizilcal**	**1.20**	**36**	*e*Pn	**Pn**	**05 08 39.7**	**-0.6**
KHL	**Karahalli**	**1.22**	**290**	*e*PN	**Pn**	**05 08 40.0**	**-0.6**
KHL				*e*SN	**Sn**	**05 08 57.5**	**+0.1**
KHL	**Karahalli**	**1.22**	**290**	*e*Pn	**Pn**	**05 08 40.0**	**-0.6**
KHL				*e*Sn	**Sn**	**05 08 57.5**	**+0.1**
KHAL	**Karahalli**	**1.26**	**292**	⇓*i*P	**Pg**	**05 08 39.0**	**-2.3**
KHAL				*i* S	**Sg**	**05 08 58.9**	**+1.2**
KHAL	**Karahalli**	**1.26**	**292**	*i* P	**Pg**	**05 08 39.0**	**-2.3**
KHAL				*i* S	**Sg**	**05 08 58.9**	**+1.2**
GOLH	**Golhisar**	**1.32**	**240**	⇓*i*P	**Pg**	**05 08 40.0**	**-1.9**
GOLH				*i* S	**Sg**	**05 08 59.5**	**+0.1**
GOLH	**Golhisar**	**1.32**	**240**	*i* P	**Pn**	**05 08 40.0**	**-1.9**
GOLH				*i* S	**Sg**	**05 08 59.5**	**+0.1**
ALT	**Altintas**	**1.33**	**329**	*e*PN	**Pn**	**05 08 40.9**	**-1.2**
ALT	**Altintas**	**1.33**	**329**	*e*Pn	**Pn**	**05 08 40.9**	**-1.2**
GLHS	**Glhisar (BURDU**	**1.40**	**238**	*e*PN	**Pn**	**05 08 42.8**	**-0.3**
GLHS	**Glhisar (BURDU**	**1.40**	**238**	*e*Pn	**Pn**	**05 08 42.8**	**-0.3**
ELL	**Elmali**	**1.44**	**217**	*e*PN	**Pn**	**05 08 43.6**	**-0.1**
ELL	**Elmali**	**1.44**	**217**	*e*Pn	**Pn**	**05 08 43.6**	**-0.1**
HDMB	**Hadim**	**1.52**	**128**	*e*PN	**Pn**	**05 08 44.6**	**-0.1**
HDMB	**Hadim**	**1.52**	**128**	*e*Pn	**Pn**	**05 08 44.6**	**-0.2**
DNZL	**Cakiroluk**	**1.55**	**262**	⇓*i*P	**Pn**	**05 08 44.6**	**-0.5**
DNZL				*i* S	**Sn**	**05 09 06.4**	**+0.9**
DNZL	**Cakiroluk**	**1.55**	**262**	*i* P	**Pn**	**05 08 44.6**	**-0.5**
DNZL				*i* S	**Sn**	**05 09 06.4**	**+0.9**
DENT	**Denizli**	**1.55**	**265**	*e*PN	**Pn**	**05 08 45.1**	**-0.1**
DENT	**Denizli**	**1.55**	**265**	*e*Pn	**Pn**	**05 08 45.1**	**-0.1**
SVRH	**Sivrihisar-ESK**	**1.59**	**15**	*e*PN	**Pn**	**05 08 45.1**	**-0.6**
SVRH	**Sivrihisar-ESK**	**1.59**	**15**	*e*Pn	**Pn**	**05 08 45.1**	**-0.6**
ESKT	**Eskisehir**	**1.61**	**356**	*e*PN	**Pn**	**05 08 45.1**	**-0.8**
ESKT	**Eskisehir**	**1.61**	**356**	*e*P	**Pn**	**05 08 43.7**	**-2.2**
ESKT				*e*S	**Sn**	**05 09 06.5**	**-0.4**
ESKT	**Eskisehir**	**1.61**	**356**	*e*Pn	**Pn**	**05 08 45.1**	**-0.8**
SEYT	**Eskypehyr**	**1.61**	**356**	*e*P	**Pn**	**05 08 43.7**	**-2.2**
SEYT				*e*S	**Sn**	**05 09 06.6**	**-0.4**
GDZ	**Gediz**	**1.66**	**315**	*e*P	**Pn**	**05 08 44.2**	**-2.5**
GDZ				*e*S	**Sn**	**05 09 06.8**	**-1.6**
GDZ	**Gediz**	**1.66**	**315**	*e*P	**Pn**	**05 08 44.2**	**-2.5**
GDZ				*e*S	**Sn**	**05 09 06.8**	**-1.5**
KULA	**Kula-Manisa**	**1.93**	**289**	*e*PN	**Pn**	**05 08 49.6**	**-0.7**
KULA	**Kula-Manisa**	**1.93**	**289**	*e*Pn	**Pn**	**05 08 49.6**	**-0.7**
GAZI	**Gazipasa**	**1.98**	**147**	*e*P	**Pn**	**05 08 52.8**	**+1.7**
GAZI				*e*S	**Sn**	**05 09 21.4**	**+5.2**
GAZI	**Gazipasa**	**1.98**	**147**	*e*P	**Pn**	**05 08 52.8**	**+1.7**
GAZI				*e*S	**Sn**	**05 09 21.4**	**+5.2**
AKAS	**Kas**	**2.01**	**214**	*e*P	**Pn**	**05 08 51.8**	**+0.4**
AKAS				*e*S	**Sn**	**05 09 22.4**	**+5.6**
AKAS	**Kas**	**2.01**	**214**	*e*P	**Pn**	**05 08 51.8**	**+0.4**
SULT	**Sultanhani-AKS**	**2.02**	**81**	*e*PN	**Pn**	**05 08 52.0**	**+0.4**
SULT	**Sultanhani-AKS**	**2.02**	**81**	*e*Pn	**Pn**	**05 08 52.0**	**+0.4**
DEMI	**Demirci**	**2.11**	**303**	⇓*i*P	**Pn**	**05 08 52.0**	**-0.8**
DEMI				*i* S	**Sn**	**05 09 19.3**	**0.0**
DEMI	**Demirci**	**2.11**	**303**	*i* P	**Pn**	**05 08 52.0**	**-0.8**
DEMI				*i* S	**Sn**	**05 09 19.3**	**0.0**
YER	**Yerkesik**	**2.28**	**251**	*e*PN	**Pn**	**05 08 55.9**	**+0.7**
YER	**Yerkesik**	**2.28**	**251**	*e*Pn	**Pn**	**05 08 55.9**	**+0.7**
LOD	**Lodumlu**	**2.41**	**35**	*e*PN	**Pn**	**05 08 57.3**	**+0.3**
LOD	**Lodumlu**	**2.41**	**35**	*e*Pn	**Pn**	**05 08 57.3**	**+0.3**
GPA	**Golpazari**	**2.43**	**348**	*e*PN	**Pn**	**05 08 57.4**	**+0.1**
GPA	**Golpazari**	**2.43**	**348**	*e*Pn	**Pn**	**05 08 57.4**	**+0.2**
CAVI	**Cavuskoy**	**2.45**	**339**	*e*PN	**Pn**	**05 08 58.0**	**+0.5**
CAVI	**Cavuskoy**	**2.45**	**339**	*e*Pn	**Pn**	**05 08 58.0**	**+0.4**
AYDN	**Tasoluk**	**2.47**	**265**	*e*P	**Pn**	**05 08 57.2**	**-0.6**
AYDN				*e*S	**Sn**	**05 09 35.0**	**+6.7**
AYDN	**Tasoluk**	**2.47**	**265**	*e*P	**Pn**	**05 08 57.2**	**-0.6**
GULT	**Gulveren**	**2.54**	**352**	*e*PN	**Pn**	**05 08 59.4**	**+0.6**
GULT	**Gulveren**	**2.54**	**352**	*e*Pn	**Pn**	**05 08 59.4**	**+0.6**
MDU	**Mudurnu**	**2.56**	**4**	*e*PN	**Pn**	**05 08 59.8**	**+0.9**
MDU	**Mudurnu**	**2.56**	**4**	*e*Pn	**Pn**	**05 08 59.8**	**+0.8**
AKS	**Akhisar**	**2.67**	**292**	*e*PN	**Pn**	**05 09 00.8**	**+0.2**
AKS	**Akhisar**	**2.67**	**292**	*e*Pn	**Pn**	**05 09 00.8**	**+0.2**
ADVT	**Abdulvahap**	**2.70**	**339**	*e*PN	**Pn**	**05 09 01.2**	**+0.3**
ADVT	**Abdulvahap**	**2.70**	**339**	*e*Pn	**Pn**	**05 09 01.2**	**+0.3**
IKL	**Isikli**	**2.73**	**127**	*e*PN	**Pn**	**05 09 01.7**	**+0.3**
IKL	**Isikli**	**2.73**	**127**	*e*Pn	**Pn**	**05 09 01.7**	**+0.3**
GEMT	**Gemlik**	**2.88**	**332**	*e*PN	**Pn**	**05 09 03.5**	**+0.1**
GEMT	**Gemlik**	**2.88**	**332**	*e*Pn	**Pn**	**05 09 03.5**	**+0.1**
YLV	**Yalova**	**2.93**	**335**	*e*PN	**Pn**	**05 09 04.8**	**+0.7**
YLV	**Yalova**	**2.93**	**335**	*e*Pn	**Pn**	**05 09 04.8**	**+0.7**
BDRM	**Kayabasi**	**2.94**	**254**	*e*P	**Pn**	**05 09 05.3**	**+1.0**
BDRM				*e*S	**Sn**	**05 09 46.6**	**+6.8**
BDRM	**Kayabasi**	**2.94**	**254**	*e*P	**Pn**	**05 09 05.3**	**+1.1**
DAT	**Datca**	**2.96**	**248**	*e*PN	**Pn**	**05 09 04.9**	**+0.4**
DAT	**Datca**	**2.96**	**248**	*e*Pn	**Pn**	**05 09 04.9**	**+0.4**
IZM	**Izmir**	**2.97**	**281**	*e*PN	**Pn**	**05 09 05.2**	**+0.4**
BALB	**Balikesir**	**2.98**	**306**	*e*PN	**Pn**	**05 09 05.4**	**+0.6**
BALB	**Balikesir**	**2.98**	**306**	*e*Pn	**Pn**	**05 09 05.4**	**+0.6**
BODT	**Bodrum**	**3.04**	**255**	*e*PN	**Pn**	**05 09 05.5**	**-0.2**
BODT	**Bodrum**	**3.04**	**255**	*e*Pn	**Pn**	**05 09 05.5**	**-0.2**
HRT	**Hereke**	**3.08**	**341**	*e*PN	**Pn**	**05 09 06.8**	**+0.6**
HRT	**Hereke**	**3.08**	**341**	*e*Pn	**Pn**	**05 09 06.8**	**+0.6**
KCTX	**Karacabey (Bur**	**3.11**	**320**	*e*PN	**Pn**	**05 09 06.8**	**+0.1**
KCTX	**Karacabey (Bur**	**3.11**	**320**	*e*Pn	**Pn**	**05 09 06.8**	**+0.2**
BLCB	**Balcova**	**3.14**	**280**	*e*PN	**Pn**	**05 09 07.2**	**+0.2**
BLCB	**Balcova**	**3.14**	**280**	*e*Pn	**Pn**	**05 09 07.2**	**+0.2**
LEF	**Lefka**	**3.18**	**151**	*e*PN	**Pn**	**05 09 07.7**	**+0.1**
LEF	**Lefka**	**3.18**	**151**	*e*Pn	**Pn**	**05 09 07.7**	**+0.1**
KARA	**Karaisali**	**3.30**	**100**	*e*PN	**Pn**	**05 09 09.5**	**+0.3**
KARA	**Karaisali**	**3.30**	**100**	*e*Pn	**Pn**	**05 09 09.5**	**+0.3**
LFK	**Lefkose**	**3.33**	**141**	*e*PN	**Pn**	**05 09 10.0**	**+0.3**
LFK	**Lefkose**	**3.33**	**141**	*e*Pn	**Pn**	**05 09 10.0**	**+0.3**
GONE	**Gonen-Balikesi**	**3.34**	**311**	*e*PN	**Pn**	**05 09 10.3**	**+0.5**
GONE	**Gonen-Balikesi**	**3.34**	**311**	*e*Pn	**Pn**	**05 09 10.3**	**+0.6**
SILT	**Sile**	**3.40**	**343**	*e*PN	**Pn**	**05 09 10.4**	**-0.1**
SILT	**Sile**	**3.40**	**343**	*e*Pn	**Pn**	**05 09 10.4**	**-0.1**
ISK	**Istanbul-Kandi**	**3.48**	**335**	*e*PN	**Pn**	**05 09 12.3**	**+0.6**
ISK	**Istanbul-Kandi**	**3.48**	**335**	*e*Pn	**Pn**	**05 09 12.3**	**+0.6**
EREN	**Erenkoy**	**3.49**	**132**	*e*PN	**Pn**	**05 09 12.5**	**+0.6**
EREN	**Erenkoy**	**3.49**	**132**	*e*Pn	**Pn**	**05 09 12.5**	**+0.6**
SAFT	**Safranbolu**	**3.57**	**21**	*e*PN	**Pn**	**05 09 14.1**	**+1.2**
SAFT	**Safranbolu**	**3.57**	**21**	*e*Pn	**Pn**	**05 09 14.1**	**+1.1**
CORM	**Corum**	**3.63**	**50**	*e*PN	**Pn**	**05 09 14.4**	**+0.7**
CORM	**Corum**	**3.63**	**50**	*e*Pn	**Pn**	**05 09 14.4**	**+0.7**
KLYT	**Kilyos**	**3.66**	**336**	*e*PN	**Pn**	**05 09 14.6**	**+0.5**
KLYT	**Kilyos**	**3.66**	**336**	*e*Pn	**Pn**	**05 09 14.6**	**+0.5**
CTKS	**Kestanelik-??a**	**3.83**	**331**	*e*PN	**Pn**	**05 09 17.4**	**+0.8**
CTKS	**Kestanelik-??a**	**3.83**	**331**	*e*Pn	**Pn**	**05 09 17.4**	**+0.9**
KOZT	**Kozan**	**3.87**	**95**	*e*PN	**Pn**	**05 09 17.6**	**+0.6**
KOZT	**Kozan**	**3.87**	**95**	*e*Pn	**Pn**	**05 09 17.6**	**+0.6**

PRE 06 05:16:00.6±0.9,26.42S×27.61E,h2km,ML3.5,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.55**	**204**	*e*P	**Pg**	05 16 11.2	+0.1
PRYS				*e*S	**Sg**	05 16 18.7	+0.5
PRYS				AML	AML	05 16 25.7	
	comp=Z,818nm,0.6s						
ERPM	**east rand prop**	**0.57**	**82**	*e*P	**Pg**	05 16 12.2	+0.6
ERPM				*e*S	**Sg**	05 16 20.2	+1.1
ERPM				AML	AML	05 16 21.9	
	comp=Z,743nm,0.3s						
BFSD	**Buffelsfontein**	**0.86**	**239**	*e*P	**Pg**	05 16 17.3	+0.2
BFSD				*e*S	**Sg**	05 16 28.9	+0.8
BFSD				AML	AML	05 16 35.2	
	comp=Z,664nm,0.2s						
KSR	**Koster**	**0.86**	**312**	*e*P	**Pg**	05 16 17.2	+0.2
KSR				*e*S	**Sg**	05 16 28.8	+0.7
KSR				AML	AML	05 16 33.2	
	comp=Z,702nm,0.2s						
MOAB	**Moab Khotsong**	**0.92**	**232**	*e*P	**Pg**	05 16 18.8	+0.6
MOAB				*e*S	**Sg**	05 16 30.9	+0.8
MOAB				AML	AML	05 16 31.2	
	comp=Z,820nm,0.5s						
SLR	**Silverton**	**0.92**	**42**	*e*P	**Pg**	05 16 18.2	+0.1
SLR				*e*S	**Sg**	05 16 30.4	+0.4
SLR				AML	AML	05 16 41.4	
	comp=Z,462nm,0.5s						
TAUL	**Tau Lekoa**	**1.06**	**237**	*e*P	**Pg**	05 16 21.4	+0.5
TAUL				*e*S	**Sg**	05 16 35.4	+0.7
TAUL				AML	AML	05 16 39.4	
	comp=Z,657nm,0.5s						
SEK	**Senekal**	**1.89**	**180**	*e*P	**Pn**	05 16 34.8	+0.9
SEK				*e*S	**Sn**	05 16 59.2	+0.9
SEK				AML	AML	05 17 03.0	
	comp=Z,404nm,0.3s						
SWZ	**Schweizer**	**2.17**	**249**	*e*P	**Pn**	05 16 38.2	+0.5
SWZ				*e*S	**Sn**	05 17 05.7	+0.5
SWZ				AML	AML	05 17 09.7	
	comp=Z,946nm,0.5s						
LBTB	**Lobatse**	**2.29**	**307**	*e*P	**Pn**	05 16 40.4	+1.0
LBTB				*e*S	**Sn**	05 17 09.1	+0.8
LBTB				AML	AML	05 17 13.9	
	comp=Z,666nm,0.5s						
BOSA	**Boshof**	**3.02**	**223**	*e*P	**Pn**	05 16 50.4	+0.9
BOSA				*e*S	**Sn**	05 17 25.7	-0.5
BOSA				AML	AML	05 17 38.4	
	comp=Z,114nm,0.3s						
POGA	**Pongola**	**3.70**	**106**	*e*P	**Pn**	05 17 00.7	+1.9
POGA				*e*S	**Sn**	05 17 43.7	+0.8
POGA				AML	AML	05 18 00.9	
	comp=Z,296nm,0.4s						
MOPA	**Mopani**	**4.50**	**51**	*e*P	**Pn**	05 17 10.1	+0.4
MOPA				*e*S	**Sn**	05 18 01.5	-1.1
MOPA				AML	AML	05 18 32.2	
	comp=Z,344nm,0.7s						
MSNA	**Messina**	**4.62**	**29**	*e*P	**Pn**	05 17 10.9	-0.5
MSNA				*e*S	**Sn**	05 18 02.1	-3.6
MSNA				AML	AML	05 18 34.9	
	comp=Z,53nm,0.9s						
PKA	**Prieska**	**5.37**	**232**	*e*P	**Pn**	05 17 22.4	+0.7

Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.96**	**221**	P	Pn	06 18 09.9	-2.3
	0.1nm,0.3s,baz=355,slow=11,SNR=2.4						
FITZ				S	Sn	06 21 38.3	-19
	0.1nm,0.3s,baz=248,slow=18,SNR=2.4						
ASAR	**Alice Springs**	**20.96**	**194**	P	P	06 18 21.6	+0.3
	1.5nm,0.6s,baz=30,slow=9.5,SNR=14						
ASAR				Lg		06 24 43.2	
	2.7nm,1.1s,baz=8.7,slow=32,SNR=3.7						
ILAR	**Eielson Array**	**86.06**	**24**	P	P	06 26 18.9	-0.1
	1.5nm,0.6s,baz=262,slow=4.5,SNR=32						
LPAZ	**La Paz**	**146.58**	**126**	PKPbc	PKPbc	06 33 21.5	+0.4
	0.3nm,0.5s,baz=142,slow=9.1,SNR=3.5						

RSPR 06 06:25:50.5, 18.47N×69.04W, h101km±18km, MD3.7/3, 1C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRPR	**Cabo Rojo, PR**	**1.89**	**104**	⇓*e*P	Pn	06 26 21.4	-0.3
HUMP	**Col San Antoni**	**3.05**	**96**	*e*S	Sn	06 27 12.3	-0.5
MTP	**Monte Pirata**	**3.34**	**96**	⇑*e*P	Pn	06 26 41.9	+1.1
MTP	**Monte Pirata**	**3.34**	**96**	*e*S	Sn	06 27 20.2	+0.7

*TRN **06** 06:41:22.1, 19.36N×64.73W, h3km*
*NEIC **06** 06:41:23.2, 19.27N×64.43W, h124km, MD3.5(RSPR), After RSPR.*

RSPR 06 06:41:23.2, 19.27N×64.43W, h124km±15km, MD3.5/3, 2C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.87**	**192**	*e*S	Sn	06 42 00.3	-0.2
TBVI	**Tortola**	**0.87**	**192**	*e*S	Sn	06 42 00.3	-0.2
STVI	**Saint Thomas**	**1.04**	**209**	⇑*e*P	Pn	06 41 46.0	-0.1
STVI				*e*S	Sn	06 42 02.8	-0.6
STVI	**Saint Thomas**	**1.04**	**209**	⇑*e*P	Pn	06 41 46.0	-0.1
STVI				*e*S	Sn	06 42 02.8	-0.6
MTP	**Monte Pirata**	**1.58**	**223**	⇓*e*P	Pn	06 41 52.2	+0.3
MTP				*e*S	Sn	06 42 14.1	+0.3
MTP	**Monte Pirata**	**1.58**	**223**	⇓*e*P	Pn	06 41 52.2	+0.3
MTP				*e*S	Sn	06 42 14.1	+0.3
CBYP	**Canovanas**	**1.68**	**234**	⇓*e*P	Pn	06 41 52.3	-0.8
CBYP	**Canovanas**	**1.68**	**234**	⇓*e*P	Pn	06 41 52.3	-0.8
HUMP	**Col San Antoni**	**1.76**	**230**	⇓*e*P	Pn	06 41 53.3	-0.7
HUMP	**Col San Antoni**	**1.76**	**230**	⇓*e*P	Pn	06 41 53.3	-0.7

*ISCJB **06** 06:55:42.8±1.0, 20.7S±0.2×178.4W±0.1, h593km±13km, mb3.7/6, Error ellipse: s-maj=29.6km s-min=13.2km az=144.6*
*IDC **06** 06:55:42.7±1.8, 20.65S×178.51W, h572km±21km, mb3.2/6, mb1 3.6/8, mb1mx3.3/16, mbtmp3.3/8, Error ellipse: s-maj=33.2km s-min=14.3km az=147.0*
*NEIC **06** 06:55:44.0±1.1, 20.76S×178.47W, h598km±12km, Error ellipse: s-maj=30.0km s-min=15.7km az=149.0*

ISC 06 06:55:44.0±1.1, 20.8S±0.2×178.5W±0.2, h591km±13km, n18, σ1s04/13, mb3.8/6, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.49**	**312**	*e*P	**P**	**06 57 13.7**	**+1.3**
AFI	**Afiamalu**	**9.36**	**44**	P	**P**	**06 57 54.9**	**-1.5**
	2.7nm,0.3s,baz=315,slow=18,SNR=5.0						
AFI				S	**S**	**06 59 39.0**	**-5.9**
	1.4nm,0.3s,baz=61,slow=19,SNR=2.7						
URZ	**Urewera**	**17.82**	**191**	P	**P**	**06 59 18.1**	**-0.1**
	1.7nm,0.3s,baz=0.9,slow=9.6,SNR=8.5						
CTA	**Charters Tower**	**33.03**	**265**	P	**P**	**07 01 32.2**	**+0.1**
CTA	**Charters Tower**	**33.03**	**265**	P	**P**	**07 01 32.2**	**+0.1**
	1.8nm,0.4s,mb4.1,baz=90,slow=11,SNR=4.2						
CTAO	**Charters Tower**	**33.03**	**265**	P	**P**	**07 01 31.2**	**-0.9**
ASAR	**Alice Springs**	**44.03**	**257**	P	**P**	**07 03 00.5**	**-0.2**
	2.4nm,0.6s,mb3.9,baz=92,slow=7.4,SNR=43						
ASAR				PcP	PcP	07 04 32.9	0.0
	0.5nm,0.7s,baz=106,slow=3.1,SNR=4.2						
WRAB	**Tennant Creek**	**44.12**	**262**	*e*P	**P**	**07 03 00.7**	**-0.7**
NVAR	**Mina Array Bea**	**81.54**	**44**	P	**P**	**07 07 01.9**	**+1.1**
	0.7nm,0.6s,mb3.4,baz=224,slow=7.0,SNR=7.2						
TXAR	**Lajitas Array**	**87.58**	**57**	P	**P**	**07 07 32.3**	**+1.9**
	0.7nm,0.8s,mb3.4,baz=227,slow=6.3,SNR=8.8						
ILAR	**Eielson Array**	**88.70**	**13**	P	**P**	**07 07 33.4**	**-1.3**
	1.9nm,1.0s,mb3.9,baz=221,slow=5.5,SNR=16						
CMAR	**Chiang Mai Arr**	**89.80**	**290**	P	**P**	**07 07 41.1**	**+0.1**
	0.6nm,0.4s,mb3.7,baz=138,slow=2.5,SNR=4.0						
BVAR	**Borovoye Array**	**119.02**	**320**	PKP	PKPdf	07 13 24.4	-1.6
	1.0nm,0.3s,baz=134,slow=2.5,SNR=6.1						
ARCES	**ARCESS Array B**	**129.13**	**349**	PKP	PKPdf	07 13 44.5	-0.4
	1.1nm,0.6s,baz=17,slow=1.3,SNR=9.9						
AKASG	**Malin Array Be**	**143.06**	**331**	PKhKP	PKPpre	07 14 07.8	
	3.3nm,0.4s,baz=43,slow=4.4,SNR=22						
BRTR	**Keskin Array B**	**146.71**	**312**	PKPbc	PKPbc	07 14 19.9	-0.7
	1.1nm,0.6s,baz=118,slow=2.8,SNR=5.8						
MMAI	**Mount Meron Ar**	**147.58**	**299**	PKPbc	PKPbc	07 14 23.4	+0.3
	2.1nm,0.4s,baz=65,slow=4.7,SNR=3.7						
CLL	**Collm**	**148.25**	**346**	⇓*i*PKPbc	PKPbc	07 14 23.5	-0.6
	comp=Z,6.0nm,0.8s						

*NEIC **06** 07:05:59.9, 39.24S×175.21E, h140km, MG4.2(WEL), After WEL.*

WEL 06 07:06:00.2±0.2, 39.25S×175.21E, h136km±1km, ML4.1/23, 14C-3D, Error ellipse: s-maj=1.0km s-min=1.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKVZ	**Pokaka**	**0.11**	**113**	⇑PN	Pn	07 06 18.5	-0.2
PKVZ				SN	Sn	07 06 31.9	-0.7
MTVZ	**Mangateitei**	**0.24**	**125**	⇑PN	Pn	07 06 18.8	-0.1
TWVZ	**Taurewa**	**0.25**	**45**	⇑PN	Pn	07 06 18.8	-0.2
TWVZ				SN	Sn	07 06 32.0	-1.0
TWVZ	**Taurewa**	**0.25**	**45**	P	Pn	07 06 18.8	-0.1
WPVZ	**Whakapapa**	**0.26**	**81**	⇑PN	Pn	07 06 18.9	0.0
FWVZ	**Far West T-bar**	**0.26**	**92**	⇑PN	Pn	07 06 19.0	+0.1
FWVZ	**Far West T-bar**	**0.26**	**92**	P	Pn	07 06 19.1	+0.2
TRVZ	**Turoa**	**0.26**	**101**	PN	Pn	07 06 19.1	+0.1
TRVZ				SN	Sn	07 06 32.3	-0.8
DRZ	**Dome Shelter**	**0.27**	**96**	PN	Pn	07 06 19.2	+0.2
DRZ	**Dome Shelter**	**0.27**	**96**	P	Pn	07 06 19.3	+0.3
WNVZ	**Wahianoa**	**0.31**	**105**	PN	Pn	07 06 19.3	+0.2
WNVZ	**Wahianoa**	**0.31**	**105**	P	Pn	07 06 19.3	+0.2
NGZ	**Ngauruhoe**	**0.31**	**77**	PN	Pn	07 06 19.1	0.0
NGZ				SN	Sn	07 06 32.6	-0.8
NGZ	**Ngauruhoe**	**0.31**	**77**	P	Pn	07 06 19.1	0.0
NGZ				S	Sn	07 06 32.6	-0.8
WTVZ	**West Tongariro**	**0.32**	**66**	PN	Pn	07 06 19.0	-0.1
TUVZ	**Tukino**	**0.34**	**94**	PN	Pn	07 06 19.4	+0.2
TUVZ	**Tukino**	**0.34**	**94**	P	Pn	07 06 19.4	+0.2
OTVZ	**Oturere**	**0.36**	**77**	PN	Pn	07 06 19.3	0.0
KRVZ	**Karewarewa**	**0.36**	**66**	PN	Pn	07 06 19.1	-0.2
VRZ	**Vera Road**	**0.38**	**289**	PN	Pn	07 06 19.1	-0.3
VRZ	**Vera Road**	**0.38**	**289**	P	Pn	07 06 18.8	-0.6
MOVZ	**Moawhango**	**0.45**	**111**	PN	Pn	07 06 19.5	-0.2
MOVZ	**Moawhango**	**0.45**	**111**	P	Pn	07 06 19.5	-0.2
KATZ	**Kakaramea**	**0.46**	**54**	PN	Pn	07 06 19.6	-0.2
KATZ	**Kakaramea**	**0.46**	**54**	P	Pn	07 06 19.6	-0.2
KATZ				S	Sn	07 06 34.5	0.0
WAZ	**Wanganui**	**0.54**	**199**	PN	Pn	07 06 20.4	+0.2
WAZ	**Wanganui**	**0.54**	**199**	P	Pn	07 06 20.3	+0.1
RITZ	**Rihia Road**	**0.57**	**62**	PN	Pn	07 06 20.2	-0.1
RITZ	**Rihia Road**	**0.57**	**62**	P	Pn	07 06 20.5	+0.1
RATZ	**Rangitukua**	**0.58**	**49**	PN	Pn	07 06 20.2	-0.3
RATZ	**Rangitukua**	**0.58**	**49**	P	Pn	07 06 20.2	-0.2
RAEZ	**Rainy Point**	**0.64**	**266**	PN	Pn	07 06 21.0	+0.2
RAEZ	**Rainy Point**	**0.64**	**266**	P	Pn	07 06 21.0	+0.2
WATZ	**Wairara**	**0.67**	**37**	PN	Pn	07 06 21.1	0.0
MHEZ	**Mangahewa**	**0.71**	**284**	PN	Pn	07 06 21.4	0.0
HATZ	**Hinemaiaia**	**0.77**	**63**	PN	Pn	07 06 21.1	-0.7
HATZ	**Hinemaiaia**	**0.77**	**63**	P	Pn	07 06 21.1	-0.7
HIZ	**Hauiti**	**0.78**	**339**	PN	Pn	07 06 21.5	-0.4
HIZ	**Hauiti**	**0.78**	**339**	P	Pn	07 06 21.5	-0.4
DREZ	**Durham Road**	**0.79**	**274**	PN	Pn	07 06 21.8	0.0
WHTZ	**Whakaora**	**0.82**	**45**	PN	Pn	07 06 22.2	0.0
DFE	**Dawson Falls**	**0.87**	**264**	PN	Pn	07 06 22.6	+0.1
DFE	**Dawson Falls**	**0.87**	**264**	P	Pn	07 06 22.6	+0.1
NEZ	**North Egmont**	**0.87**	**268**	⇓PN	Pn	07 06 22.8	+0.3
PKE	**Pukeiti**	**0.95**	**273**	PN	Pn	07 06 23.1	-0.2
TSZ	**Takapari Road**	**0.99**	**145**	⇑PN	Pn	07 06 23.8	+0.2
TSZ	**Takapari Road**	**0.99**	**145**	P	Pn	07 06 23.8	+0.2
BKZ	**Black Stump Fm**	**1.00**	**86**	⇓PN	Pn	07 06 23.3	-0.3
NRZ	**Ngariki Road**	**1.00**	**264**	PN	Pn	07 06 23.4	-0.2
NRZ	**Ngariki Road**	**1.00**	**264**	P	Pn	07 06 23.4	-0.2
PNHZ	**Pukenui**	**1.01**	**131**	PN	Pn	07 06 23.9	+0.1
ALRZ	**Allen Road**	**1.11**	**53**	PN	Pn	07 06 24.1	-0.6
MCHZ	**McNeill Hill**	**1.17**	**100**	PN	Pn	07 06 26.0	+0.8
PRRZ	**Plateau Road**	**1.19**	**51**	PN	Pn	07 06 24.8	-0.7
POWZ	**Post Office Ro**	**1.22**	**160**	PN	Pn	07 06 25.5	-0.2
NMHZ	**Naumai**	**1.25**	**84**	PN	Pn	07 06 26.6	+0.6
WPHZ	**Waipukurau**	**1.25**	**131**	PN	Pn	07 06 26.2	+0.1
DVHZ	**Dannevirke**	**1.28**	**145**	PN	Pn	07 06 26.2	-0.2
RRRZ	**Republican Roa**	**1.36**	**49**	PN	Pn	07 06 26.7	-0.5
RRRZ	**Republican Roa**	**1.36**	**49**	P	Pn	07 06 26.7	-0.6
KAHZ	**Kahuranaki**	**1.40**	**114**	PN	Pn	07 06 27.9	+0.3
MRZ	**Mangatainoka R**	**1.44**	**169**	⇑PN	Pn	07 06 27.6	-0.5
PXZ	**Pawanui**	**1.49**	**122**	PN	Pn	07 06 28.6	-0.1
RAHZ	**Arahi**	**1.49**	**78**	PN	Pn	07 06 28.8	+0.1
PRHZ	**Porangahau**	**1.50**	**133**	PN	Pn	07 06 28.7	+0.1
CKHZ	**Cape Kidnapper**	**1.50**	**106**	PN	Pn	07 06 29.0	+0.3
OGWZ	**Otaki Gorge**	**1.57**	**181**	⇑PN	Pn	07 06 29.2	-0.3
TIWZ	**Tintock**	**1.61**	**162**	⇑PN	Pn	07 06 29.5	-0.4
KIW	**Kapiti Island**	**1.63**	**188**	⇑PN	Pn	07 06 29.4	-0.7
KIW	**Kapiti Island**	**1.63**	**188**	P	Pn	07 06 29.4	-0.8
BFZ	**Birch Farm**	**1.64**	**151**	PN	Pn	07 06 29.7	-0.5
BFZ	**Birch Farm**	**1.64**	**151**	P	Pn	07 06 29.7	-0.5
HOWZ	**Holdsworth Sta**	**1.67**	**172**	⇑PN	Pn	07 06 30.0	-0.6
URZ	**Urewera**	**1.78**	**57**	⇓PN	Pn	07 06 30.8	-1.2
URZ	**Urewera**	**1.78**	**57**	P	Pn	07 06 30.8	-1.1
DUWZ	**D'Urville Isla**	**1.84**	**212**	PN	Pn	07 06 31.7	-0.9
CAW	**Cannon Point**	**1.86**	**183**	⇑PN	Pn	07 06 32.1	-0.7
CAW	**Cannon Point**	**1.86**	**183**	P	Pn	07 06 32.1	-0.7
MTW	**Mount Morrison**	**1.92**	**174**	⇑PN	Pn	07 06 32.6	-1.0
MTW	**Mount Morrison**	**1.92**	**174**	P	Pn	07 06 32.6	-1.0
KNZ	**Kokohu**	**1.93**	**84**	PN	Pn	07 06 33.1	-0.6
KNZ	**Kokohu**	**1.93**	**84**	P	Pn	07 06 33.1	-0.5
TMWZ	**Te Maipa**	**1.93**	**165**	PN	Pn	07 06 32.9	-0.7
MWZ	**Matawai**	**2.02**	**64**	PN	Pn	07 06 33.9	-0.9
MWZ	**Matawai**	**2.02**	**64**	P	Pn	07 06 33.9	-0.9
WEL	**Wellington**	**2.06**	**189**	PN	Pn	07 06 34.3	-1.0
WEL	**Wellington**	**2.06**	**189**	P	Pn	07 06 34.3	-1.0
TCW	**Tory Channel**	**2.09**	**200**	PN	Pn	07 06 34.7	-0.9
TCW	**Tory Channel**	**2.09**	**200**	P	Pn	07 06 34.7	-0.9
MHGZ	**Mahia Peninsul**	**2.09**	**88**	PN	Pn	07 06 35.3	-0.3
SNZO	**South Karori**	**2.10**	**191**	PN	Pn	07 06 34.6	-1.1
SNZO	**South Karori**	**2.10**	**191**	P	Pn	07 06 34.6	-1.0
PRGZ	**Paritu Road**	**2.10**	**82**	PN	Pn	07 06 35.3	-0.4
PAWZ	**Paruwai Farm**	**2.14**	**176**	PN	Pn	07 06 35.0	-1.1
PAWZ	**Paruwai Farm**	**2.14**	**176**	P	Pn	07 06 35.0	-1.2
MSWZ	**Moikau Station**	**2.17**	**179**	PN	Pn	07 06 35.4	-1.1
MSWZ	**Moikau Station**	**2.17**	**179**	P	Pn	07 06 35.4	-1.1
BHW	**Baring Head**	**2.17**	**187**	⇑PN	Pn	07 06 35.5	-1.1
BHW	**Baring Head**	**2.17**	**187**	P	Pn	07 06 35.5	-1.1
TRWZ	**Traveller**	**2.18**	**171**	PN	Pn	07 06 35.6	-1.1
PLWZ	**Palliser**	**2.32**	**179**	PN	Pn	07 06 37.0	-1.4
TUWZ	**Tuamarina**	**2.39**	**204**	PN	Pn	07 06 37.7	-1.5
NNZ	**Nelson**	**2.42**	**215**	PN	Pn	07 06 38.2	-1.4
NNZ	**Nelson**	**2.42**	**215**	P	Pn	07 06 38.2	-1.4
CNGZ	**Carnagh Statio**	**2.46**	**73**	PN	Pn	07 06 39.7	-0.4
QRZ	**Quartz Range**	**2.59**	**232**	PN	Pn	07 06 39.9	-2.0
QRZ	**Quartz Range**	**2.59**	**232**	P	Pn	07 06 39.9	-1.9
CMWZ	**Cape Campbell**	**2.61**	**197**	PN	Pn	07 06 41.4	-0.7
PUZ	**Puketiti**	**2.66**	**65**	PN	Pn	07 06 40.9	-1.7
PUZ	**Puketiti**	**2.66**	**65**	P	Pn	07 06 40.9	-1.7
BSWZ	**Blackbirch Sta**	**2.67**	**202**	PN	Pn	07 06 41.5	-1.3
BSWZ	**Blackbirch Sta**	**2.67**	**202**	P	Pn	07 06 41.5	-1.2
MXZ	**Matakaoa Point**	**2.95**	**56**	PN	Pn	07 06 45.4	-1.0
MXZ	**Matakaoa Point**	**2.95**	**56**	P	Pn	07 06 45.4	-1.1
THZ	**Tophouse**	**3.07**	**214**	PN	Pn	07 06 46.0	-1.8
THZ	**Tophouse**	**3.07**	**214**	P	Pn	07 06 46.0	-1.9
KHZ	**Kahutara**	**3.41**	**201**	PN	Pn	07 06 50.7	-1.7
KHZ	**Kahutara**	**3.41**	**201**	P	Pn	07 06 50.7	-1.6
DSZ	**Denniston Nort**	**3.60**	**225**	PN	Pn	07 06 52.5	-2.4
DSZ	**Denniston Nort**	**3.60**	**225**	P	Pn	07 06 52.5	-2.4
LTZ	**Lake Taylor**	**4.17**	**211**	PN	Pn	07 06 59.4	-2.9
LTZ	**Lake Taylor**	**4.17**	**211**	P	Pn	07 06 59.4	-3.0
CRLZ	**Canterbury Las**	**4.74**	**203**	PN	Pn	07 07 06.4	-3.5
CRLZ	**Canterbury Las**	**4.74**	**203**	P	Pn	07 07 06.4	-3.5
MQZ	**McQueen's Vall**	**4.85**	**203**	PN	Pn	07 07 07.6	-3.8
MQZ	**McQueen's Vall**	**4.85**	**203**	P	Pn	07 07 07.6	-3.8
RPZ	**Rata Peaks**	**5.45**	**214**	PN	Pn	07 07 16.6	-2.7
RPZ	**Rata Peaks**	**5.45**	**214**	P	Pn	07 07 16.6	-2.7
ODZ	**Otahua Downs**	**6.71**	**209**	PN	Pn	07 07 32.8	-3.5
ODZ	**Otahua Downs**	**6.71**	**209**	P	Pn	07 07 32.8	-3.5
WKZ	**Wanaka**	**7.23**	**218**	SN	Sn	07 08 54.4	-10
TUZ	**Tuapeka**	**7.87**	**210**	PN	Pn	07 07 49.0	-2.7
TUZ	**Tuapeka**	**7.87**	**210**	P	Pn	07 07 49.0	-2.7
WHZ	**Wether Hill Ro**	**8.53**	**217**	SN	Sn	07 09 24.9	-10

*MOS **06** 07:08:23.3±1.1, 52.88N×107.07E, h12km, mb4.2/1, Error ellipse: s-maj=46.6km s-min=16.6km az=49.5*

BYKL 06 07:08:23.1±0.2, 52.87N×107.00E, h10km±5km, 6C-3D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZRHB	**Zarechye**	**0.33**	**164**	⇑*i*Pg	Pg	07 08 29.2	-0.4
ZRHB				*i* Sg	Sg	07 08 34.0	0.0
ZRHB				Pmax			
	322nm,0.2s						
ZRHB				Smax			
	2μm,1.3s						
TRG	**Tyrgan**	**0.41**	**255**	⇑*i*Pg	Pg	07 08 30.9	-0.2
TRG				*e*		07 08 34.3	
TRG				*i* Sg	Sg	07 08 37.3	+0.7
TRG				Pmax			
	68nm,0.2s						
TRG				Smax			
	622nm,0.3s						
KAB	**Kabansk**	**0.85**	**195**	*e*Pg	Pg	07 08 38.2	-1.2
KAB				*e*		07 08 43.0	
KAB				*e*Sg	Sg	07 08 49.9	-0.5
KAB				*e*		07 08 53.7	
KAB				max			
	306nm,0.3s						
KAB				max			
	1μm,0.6s						
OGRR	**Ongureny**	**0.85**	**25**	⇑*i*Pg	Pg	07 08 38.7	-0.8
OGRR				*e*Pb	Pb	07 08 42.0	0.0
OGRR				*e*		07 08 42.4	
OGRR				*e*Sg	Sg	07 08 49.6	-1.0
OGRR				max			
	48nm,0.2s						
OGRR				Smax			
	229nm,0.3s						
UUDB	**Ulan-Yde**	**1.08**	**158**	⇑*i*Pg	Pg	07 08 41.9	-2.0
UUDB				*i* Sg	Sg	07 08 55.6	-2.4
UUDB				*e*Sb	Sb	07 08 59.3	+1.2
UUDB				Pmax			
	86nm,0.8s						
UUDB				max			
	265nm,1.1s						
MXMB	**Maximikha**	**1.12**	**69**	*e*Pg	Pg	07 08 43.8	-0.9
MXMB				*e*		07 08 58.7	
MXMB				*i* Sg	Sg	07 08 59.6	+0.3
MXMB				*e*		07 09 08.7	
MXMB				Pmax			
	106nm,0.1s						
MXMB				Smax			
	837nm,0.7s						
LSTR	**Listvyanka**	**1.67**	**234**	*e*PN	Pn	07 08 53.6	+1.3
LSTR				*e*		07 09 15.0	
LSTR				pmax	pmax		
	comp=Z,56nm,0.6s						
LSTR				smax			
	comp=E,302nm,1.3s						
LSTR	**Listvyanka**	**1.67**	**234**	⇓*i*Pn	Pn	07 08 52.9	+0.6
LSTR				*e*Pg	Pg	07 08 52.9	-2.1
LSTR				*i* Sg	Sg	07 09 15.3	-1.3
LSTR				Pmax			
	comp=E,51nm,0.6s						
LSTR				Smax			
	comp=E,224nm,0.4s						
IRK	**Irkutsk**	**1.78**	**250**	*e*PN	Pn	07 08 55.3	+1.4
IRK				*e*		07 09 18.0	
IRK				pmax	pmax		
	comp=Z,111nm,0.2s						
IRK				smax			
	comp=N,850nm,0.4s						
IRK	**Irkutsk**	**1.78**	**250**	Pg	Pg	07 08 53.9	-3.3
IRK				*e*Sg	Sg	07 09 18.0	-2.3
IRK				Pmax			
	comp=N,110nm,0.2s						
IRK				Smax			
	comp=N,741nm,0.4s						
SYVR	**Suvo**	**1.97**	**65**	⇓*i*Pn	Pn	07 08 56.1	-0.3
SYVR				⇑*i*Pg	Pg	07 08 57.9	-2.9
SYVR				*e*		07 09 02.6	
SYVR				*e*		07 09 20.5	
SYVR				*e*Sg	Sg	07 09 24.5	-1.8
SYVR				max			
	comp=N,23nm,0.3s						
SYVR				Smax			
	comp=N,70nm,0.4s						
TLY	**Talaya**	**2.38**	**241**	*e*PN	Pn	07 09 02.8	+0.7
TLY				*e*		07 09 05.9	
TLY				*e*S	Sn	07 09 32.8	+1.5
TLY				*e*		07 09 37.0	
TLY				pmax	pmax		
	comp=Z,17nm,0.3s						
TLY				smax			
	comp=E,163nm,1.0s						
TLY	**Talaya**	**2.38**	**241**	*e*Pn	Pn	07 09 03.2	+1.1
TLY				*e*Pg	Pg	07 09 05.3	-3.4
TLY				*e*		07 09 09.7	
TLY				*e*		07 09 33.1	
TLY				*e*Sg	Sg	07 09 37.0	-2.5
TLY				max			
	comp=E,17nm,0.3s						
TLY				Smax			
	comp=E,162nm,0.9s						
YLYR	**Ulyunkhan**	**3.18**	**49**	⇓*i*Pn	Pn	07 09 13.3	+0.2
YLYR				*e*Pg	Pg	07 09 19.0	-5.0
YLYR				*e*PgPg		07 09 22.7	
YLYR				*e*Sg	Sg	07 10 00.4	-4.7
YLYR				*e*SgSg		07 10 03.5	
YLYR				max			
	comp=E,7.0nm,0.4s						
YLYR				max			
	comp=E,46nm,1.3s						
NIZ	**Nizh Angarsk**	**3.27**	**26**	*e*PN	Pn	07 09 15.8	+1.5
NIZ				*e*		07 09 22.2	
NIZ				*e*S	Sn	07 09 53.4	+0.2
NIZ				*e*		07 10 02.4	
NIZ				pmax	pmax		
	comp=Z,28nm,0.4s						
NIZ				smax			
	comp=N,74nm,0.5s						
NIZ	**Nizh Angarsk**	**3.27**	**26**	⇑*i*Pn	Pn	07 09 15.6	+1.3
NIZ				*e*Pg	Pg	07 09 20.5	-5.2
NIZ				*e*Sn	Sn	07 09 51.4	-1.8
NIZ				*e*Sg	Sg	07 10 03.0	-5.0
NIZ				Pmax			
	comp=N,28nm,0.3s						
NIZ				Smax			
	comp=N,176nm,0.1s						
ZAK	**Zakamensk**	**3.40**	**224**	*e*Pg	Pg	07 09 25.0	-3.2
ZAK				*e*Sg	Sg	07 10 09.9	-2.4
ZAK				Pmax			
	comp=N,4.0nm,0.6s						
ZAK				Smax			
	comp=N,30nm,0.7s						
MOY	**Mondy**	**3.88**	**254**	*e*PN	Pn	07 09 25.6	+2.9
MOY				*e*		07 09 33.8	
MOY				*e*S	Sn	07 10 11.9	+3.6
MOY				*e*		07 10 21.6	
MOY				pmax	pmax		
	comp=Z,139nm,0.2s						
MOY				smax			
	comp=Z,887nm,0.4s						
MOY	**Mondy**	**3.88**	**254**	*e*Pn	Pn	07 09 25.0	+2.3
MOY				*e*Pg	Pg	07 09 32.1	-5.3
MOY				*e*		07 10 12.6	
MOY				*e*Sg	Sg	07 10 22.0	-5.7
MOY				*e*SgSg		07 10 24.6	
MOY				*e*		07 10 29.8	
MOY				Pmax			
	comp=Z,18nm,0.8s						
MOY				max			
	comp=Z,96nm,1.3s						
KMO	**Kumora**	**3.90**	**37**	*e*PN	Pg	07 09 31.4	-6.2
KMO				*e*S	Sn	07 10 05.7	-2.9
KMO	**Kumora**	**3.90**	**37**	*e*Pn	Pn	07 09 23.4	+0.5
KMO				*e*Pg	Pg	07 09 32.0	-5.6
KMO				*e*		07 09 44.7	
KMO				*e*		07 10 10.8	
KMO				*i* Sg	Sg	07 10 22.6	-5.5
KMO				Pmax			
	comp=Z,24nm,0.4s						
KMO				Smax			
	comp=Z,75nm,1.0s						
CIT	**Chita**	**4.10**	**99**	*e*Sg	Sg	07 10 30.7	-3.9
CIT				Smax			
	comp=Z,183nm,0.6s						
ORL	**Orlik**	**4.39**	**269**	*e*PN

mpv4.8,Error ellipse: s-maj=30.2km s-min=21.3km az=6.0
*TEH **06** 08:27:00.0,36°47′N×70°53′E,h200km*
ISC 06 08:26:51.4±0.3,**36°48′N**±0′02×**70°39′E**±0′03,**h195**km×3km,
h209km×1.9km:**pP-P,n173,**σ1⁵**20**/206,**mb4.3**/42,**15C-10D,**
Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.22**	**210**	*e*Pn		**Pn**	**08 27 33.7**	**+1.8**
KBL				*e*Sn		**Sn**	**08 28 04.8**	**+1.5**
CEP	**Cherat**	**2.93**	**154**	⇓P		**Pn**	**08 27 42.6**	**+2.7**
CEP				S		**Sn**	**08 28 20.0**	**+2.2**
CHCP	**Chirah Chowk**	**3.67**	**139**	⇑P		**Pn**	**08 27 52.7**	**+3.8**
SRNI	**Srinagar**	**4.36**	**122**	*ex*	x		08 28 12.3	
SRNI				*ex*	x		08 28 42.7	
SARP	**Sargodha**	**4.92**	**157**	P		**Pn**	**08 28 06.0**	**+1.3**
JMU	**Jammu**	**5.29**	**134**	*ex*	x		08 28 25.0	
JMU				*e*S		**Sn**	**08 29 04.5**	**-6.2**
KSH	**Kashi**	**5.35**	**54**	⇑*i*P		**Pn**	**08 28 07.0**	**-3.1**
KSH				S		**Sn**	**08 29 01.1**	**-11**
KSH	comp=N,410nm,0.4s			smax				
KSH	comp=E,350nm,0.4s			smax				
THN	**Thein Dam**	**5.97**	**131**	*e*PKP		**Pn**	**08 28 18.6**	**+0.4**
THN				*e*S		**Sn**	**08 29 24.2**	**-2.6**
AML	**Almayashu**	**6.20**	**23**	P		**Pn**	**08 28 22.3**	**+1.3**
	SNR=808							
AML	**Almayashu**	**6.20**	**23**	*e*Pn		**Pn**	**08 28 22.4**	**+1.4**
AML	comp=E,414nm,0.5s			*e*Sn		**Sn**	**08 29 30.6**	**-1.4**
UCH	**Uchtor**	**6.57**	**28**	P		**Pn**	**08 28 27.4**	**+1.6**
	SNR=256							
UCH	**Uchtor**	**6.57**	**28**	*e*Pn		**Pn**	**08 28 27.3**	**+1.4**
UCH				*e*Sn		**Sn**	**08 29 39.6**	**-1.0**
KK31	**Karatay Array**	**6.62**	**1**	⇓P		**Pn**	**08 28 26.8**	**+0.4**
KK31	comp=E,23nm,0.3s,baz=177,slow=12,SNR=486			⇑S		**Sn**	**08 29 39.0**	**-2.7**
	comp=E,56nm,0.3s,baz=183,slow=25,SNR=7.7							
KK31	**Karatay Array**	**6.62**	**1**	*ce*PN		**Pn**	**08 28 26.7**	**+0.3**
KK31	comp=Z,41nm,0.2s			pmax	pmax			
EKS2	**Erkin-Say**	**6.71**	**22**	P		**Pn**	**08 28 29.0**	**+1.4**
	SNR=57							
EKS2	**Erkin-Say**	**6.71**	**22**	*e*Pn		**Pn**	**08 28 28.9**	**+1.3**
EKS2	comp=Z,36nm,0.4s			*e*Sn		**Sn**	**08 29 42.0**	**-1.8**
KZA	**Kyzart**	**6.74**	**33**	P		**Pn**	**08 28 29.5**	**+1.4**
	SNR=15							
AAK	**Ala-Archa**	**6.92**	**26**	P		**Pn**	**08 28 31.8**	**+1.5**
	SNR=32							
AAK	**Ala-Archa**	**6.92**	**26**	*e*Pn		**Pn**	**08 28 31.8**	**+1.5**
AAK				*e*Sn		**Sn**	**08 29 39.0**	**-10**
AAK	**Ala-Archa**	**6.92**	**26**	P		**Pn**	**08 28 31.6**	**+1.3**
AAK	comp=Z,0.4nm,0.3s,baz=188,slow=4,SNR=36			S		**Sn**	**08 29 47.5**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=357,slow=22,SNR=5.4							
AAK	**Ala-Archa**	**6.92**	**26**	*d i*PN		**Pn**	**08 28 31.8**	**+1.5**
AAK	comp=Z,13nm,0.5s			pmax	pmax			
KBK	**Karagaybulak**	**7.10**	**28**	P		**Pn**	**08 28 34.6**	**+1.8**
	SNR=18							
BHK	**Bhakra**	**7.11**	**133**	*e*PKP		**Pn**	**08 28 29.0**	**-4.0**
BHK				*e*S		**Sn**	**08 29 45.4**	**-8.2**
CHMS	**Chumysh**	**7.33**	**26**	P		**Pn**	**08 28 36.8**	**+1.1**
	SNR=9.8							
ULHL	**Ulahol**	**7.33**	**36**	P		**Pn**	**08 28 36.6**	**+0.9**
	SNR=27							
SDNR	**Sundarnagar**	**7.39**	**130**	*e*PKP		**Pn**	**08 28 35.9**	**-0.7**
SDNR				*e*S		**Sn**	**08 29 54.5**	**-5.6**
USP	**Ospenovka**	**7.48**	**24**	P		**Pn**	**08 28 38.3**	**+0.6**
	SNR=15							
TKM2	**Tokmak 2**	**7.58**	**30**	⇑P		**Pn**	**08 28 40.4**	**+1.4**
TKM2	comp=Z,38nm,0.5s			⇑S		**Sn**	**08 30 01.6**	**-3.0**
	comp=Z,128nm,0.7s							
TKM2	**Tokmak 2**	**7.58**	**30**	P		**Pn**	**08 28 40.2**	**+1.2**
	SNR=78							
TKM2	**Tokmak 2**	**7.58**	**30**	*e*Pn		**Pn**	**08 28 40.1**	**+1.1**
TKM2	**Tokmak 2**	**7.58**	**30**	*i* Pn		**Pn**	**08 28 40.3**	**+1.3**
TKM2	comp=Z,38nm,0.5s			pmax	pmax			
SMLA	**Simla**	**7.77**	**131**	*i* P		**Pn**	**08 28 40.7**	**-0.8**
SMLA				*i* S		**Sn**	**08 30 03.8**	**-5.3**
SMLA	comp=E,7μm,0.3s			⇓			08 30 08.3	
SMLA	comp=N,7μm,0.4s						08 30 08.4	
KLP	**Kalpa**	**8.18**	**125**	*e*PKP		**Pn**	**08 28 45.4**	**-1.5**
KLP				*e*S		**Sn**	**08 30 13.6**	**-5.4**
IMYA	**Miami**	**8.29**	**272**	*e*P		**Pn**	**08 28 46.3**	**-2.1**
KKR	**Kurukshetra**	**8.44**	**139**	*e*PKP		**Pn**	**08 28 50.4**	**0.0**
ISRO	**Mashad**	**8.80**	**272**	*e*P		**Pn**	**08 28 49.8**	**-5.2**
IMOG	**Moghan**	**8.93**	**271**	*e*P		**Pn**	**08 28 55.9**	**-0.7**
IPAY	**Payeh**	**9.18**	**273**	*e*P		**Pn**	**08 28 58.3**	**-1.6**
IAKL	**Akhelmad**	**9.36**	**274**	*e*P		**Pn**	**08 29 00.6**	**-1.7**
KHET	**Khetri**	**9.55**	**150**	*e*PKP		**Pn**	**08 29 03.9**	**-1.0**
KHET				*e*S		**Sn**	**08 30 43.5**	**-8.1**
KHET				AML	AML		08 30 47.5	
KHET	comp=N,284nm,0.5s			AML	AML		08 30 49.8	
	comp=E,506nm,0.4s							
JOSI	**Joshimath**	**9.67**	**125**	*e*PKP		**Pn**	**08 29 07.2**	**+0.8**
JOSI				*e*S		**Sn**	**08 30 46.7**	**-7.7**
JOSI	comp=N,774nm,1.0s			AML	AML		08 30 58.0	
JOSI	comp=E,700nm,0.8s			AML	AML		08 31 00.5	
NDI	**New Delhi**	**9.67**	**142**	*e*PKP		**Pn**	**08 29 04.0**	**-2.4**
NDI				*e*S		**Sn**	**08 30 43.5**	**-11**
KUDL	**Kundal**	**9.78**	**146**	*ex*		**Pn**	**08 29 03.6**	**-4.2**
KUDL				*e*S		**Sn**	**08 30 48.3**	**-8.8**
KUDL	comp=E,238nm,0.4s			AML	AML		08 30 52.2	
KUDL	comp=N,253nm,0.5s			AML	AML		08 30 52.8	
ISFR	**Sfrayin**	**9.96**	**277**	*e*P		**Pn**	**08 29 08.3**	**-1.7**
SONA	**Sohna**	**9.97**	**144**	*ex*		**Pn**	**08 29 08.0**	**-2.2**
SONA				*e*S		**Sn**	**08 30 52.2**	**-9.3**
SONA	comp=N,337nm,0.5s			AML	AML		08 30 56.9	
SONA	comp=E,404nm,0.4s			AML	AML		08 30 57.5	
AJM	**Ajmer**	**10.61**	**159**	*e*PKP		**Pn**	**08 29 17.9**	**-0.7**
AJM				*e*S		**Sn**	**08 31 07.8**	**-9.1**
AJM	comp=N,101nm,0.3s			AML	AML		08 31 44.5	
AJM	comp=E,165nm,0.5s			AML	AML		08 31 45.8	
PTH	**Pithoragarh**	**10.76**	**127**	*e*PKP		**Pn**	**08 29 20.2**	**-0.3**
PTH				*ex*	x		08 31 13.8	
AGRA	**Agra**	**11.23**	**143**	*e*S		**Sn**	**08 31 22.6**	**-9.1**
AGRA				AML	AML		08 31 25.0	
AGRA	comp=E,410nm,0.6s			AML	AML		08 31 28.0	
MK31	**Makanchi Array**	**13.60**	**37**	⇓P		**Pn**	**08 29 57.0**	**+0.6**
	comp=N,26nm,0.8s,baz=230,slow=9.9,SNR=134							
MK31	**Makanchi Array**	**13.60**	**37**	*e*Pn		**Pn**	**08 29 56.8**	**+0.5**
MK31	**Makanchi Array**	**13.60**	**37**	*ce*P		**Pn**	**08 29 56.9**	**+0.6**
MK31	comp=Z,11nm,0.4s			pmax	pmax			
MKAR	**Makanchi Array**	**13.60**	**37**	P		**Pn**	**08 29 56.5**	**+0.2**
	comp=Z,1.3nm,0.3s,baz=220,slow=15,SNR=68							
MKAR	**Makanchi Array**	**13.60**	**37**	P		**Pn**	**08 29 56.5**	**+0.2**
MKAR	comp=Z,1.0nm,0.3s			pmax	pmax			
KOLN	**Koldanda**	**14.16**	**124**	*e*P		**Pn**	**08 30 03.2**	**-0.2**
	comp=Z,64nm,0.3s							
BHPL	**Bhopal**	**14.53**	**153**	*e*PKP		**Pn**	**08 30 08.2**	**+0.2**
BHPL				*ex*	x		08 32 38.7	
BHPL	comp=N,62nm,0.6s			AML	AML		08 32 50.4	
BHPL	comp=E,50nm,0.5s			AML	AML		08 32 50.9	
GKN	**Gorkha**	**14.71**	**121**	*e*P		**Pn**	**08 30 10.3**	**0.0**
AB31	**Akbulak array**	**14.87**	**332**	P		**Pn**	**08 30 11.1**	**-0.9**
	comp=E,12nm,0.3s,baz=166,slow=12,SNR=702							
AB31	**Akbulak array**	**14.87**	**332**	*ce*P		**Pn**	**08 30 11.0**	**-0.9**
AB31				*i* S		**Sn**	**08 32 52.8**	**-5.3**
AB31	comp=Z,27nm,0.3s			pmax	pmax			
AB31	comp=Z,12nm,0.6s			smax				
ABKAR	**Akbulak array**	**14.87**	**332**	*e*Pn		**Pn**	**08 30 11.1**	**-0.8**
	comp=Z,26nm,0.3s							
WMQ	**Urumqi**	**15.12**	**56**	*e*P		**Pn**	**08 30 15.0**	**0.0**
WMQ				sP		sP	08 31 07.8	-4.4
WMQ	comp=Z,23nm,0.6s			pmax	pmax			
WMQ	comp=Z,110nm,4.2s			pmax	pmax			
DMN	**Daman**	**15.28**	**121**	*e*P		**Pn**	**08 30 17.8**	**+0.6**
	comp=Z,237nm,0.7s							
KKN	**Kakani**	**15.29**	**120**	*e*P		**Pn**	**08 30 17.7**	**+0.4**
	comp=Z,289nm,0.6s							
KURBB	**Kurchatov Arra**	**15.31**	**20**	⇑P		**Pn**	**08 30 16.2**	**-1.0**
	comp=Z,2.5nm,0.6s							
KURK	**Kurchatov**	**15.41**	**20**	*e*P		**Pn**	**08 30 17.5**	**-1.0**
	comp=Z,18nm,0.9s							
KURK	**Kurchatov**	**15.41**	**20**	*d i*P		**Pn**	**08 30 18.2**	**-0.4**
KURK	comp=Z,28nm,1.2s			pmax	pmax			
PKIN	**Phulchoki**	**15.50**	**121**	*e*P		**Pn**	**08 30 20.3**	**+0.4**
	comp=Z,380nm,0.5s							
PKI	**Pulchoki**	**15.52**	**121**	*e*P		**Pn**	**08 30 20.3**	**+0.2**
	comp=Z,585nm,0.6s							
GUN	**Gumba**	**15.64**	**119**	*e*P		**Pn**	**08 30 22.0**	**+0.4**
JIRN	**Jiri**	**16.01**	**119**	*e*P		**Pn**	**08 30 26.9**	**+0.9**
	comp=Z,662nm,0.6s							
VOSK	**Vostochnaya**	**16.25**	**1**	⇑P		**Pn**	**08 30 28.4**	**-0.3**
	comp=Z,13nm,0.6s							
ZRNK	**Zerenda**	**16.50**	**357**	⇑P		**Pn**	**08 30 32.0**	**+0.4**
	comp=Z,17nm,0.5s							
BVA0	**Borovoye Array**	**16.54**	**0**	⇓P		**Pn**	**08 30 32.8**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=176,slow=9.7,SNR=86							
BVA0				⇑S		**S**	**08 33 30.4**	**-3.7**
	comp=Z,0.6nm,0.5s,baz=165,slow=20,SNR=6.6							
BVAR	**Borovoye Array**	**16.54**	**0**	P		**Pn**	**08 30 32.4**	**+0.2**
	comp=Z,5.8nm,0.3s,baz=172,slow=12,SNR=60							
BVAR	baz=34,slow=19,SNR=1.1			S		**S**	**08 33 27.9**	**-6.2**
BVAR	**Borovoye Array**	**16.54**	**0**	P		**Pn**	**08 30 32.4**	**+0.2**
BVAR				S		**S**	**08 33 27.9**	**-6.2**
BVAR	comp=Z,6.0nm,0.3s			pmax	pmax			
AKTK	**Aktyubinsk**	**16.56**	**331**	P		**Pn**	**08 30 32.5**	**+0.2**
AKTK				pP		pP	08 31 06.3	+3.2
AKTK				S		**S**	**08 33 30.9**	**-3.5**
AKTO	**Aktyubinsk**	**16.56**	**331**	P		**Pn**	**08 30 32.5**	**+0.2**
	comp=Z,3.6nm,0.3s,baz=142,slow=10,SNR=172							
AKTO				pP		pP	08 31 06.3	+3.2
	comp=Z,1.3nm,0.3s,baz=141,slow=10,SNR=2.4							
AKTO				S		**S**	**08 33 30.9**	**-3.5**
	comp=Z,0.6nm,0.3s,baz=150,slow=10.0,SNR=2.0							
AKTO	**Aktyubinsk**	**16.56**	**331**	P		**Pn**	**08 30 32.5**	**+0.2**
AKTO				S		**S**	**08 33 30.9**	**-3.5**
AKTO	comp=Z,4.0nm,0.3s			pmax	pmax			
AKTO	comp=N,1.0nm,0.3s			smax				
BRVK	**Borovoye**	**16.58**	**360**	*e*P		**Pn**	**08 30 32.2**	**-0.4**
	comp=N,31nm,0.7s							
BRVK	**Borovoye**	**16.58**	**360**	*e*P		**Pn**	**08 30 32.2**	**-0.4**
BRVK				pmax	pmax			
	comp=Z,31nm,0.7s							
RAMN	**Ramite**	**16.73**	**120**	*e*P		**Pn**	**08 30 34.9**	**+0.2**
	comp=Z,317nm,0.6s							
TAPN	**Taplejung**	**17.28**	**117**	*e*P		**Pn**	**08 30 42.2**	**+1.1**
	comp=Z,164nm,0.6s							
ODAN	**Odare**	**17.34**	**119**	*e*P		**Pn**	**08 30 42.7**	**+0.8**
	comp=Z,238nm,0.7s							
POO	**Poona**	**18.14**	**169**	*e*PKP		**P**	**08 30 47.4**	**-1.6**
LSA	**Lhasa**	**18.65**	**105**	P		**P**	**08 30 55.3**	**+0.8**
LSA				S		**S**	**08 34 17.1**	**+0.5**
LSA	comp=E,20nm,3.3s			LR	LR			
LSA	comp=Z,4μm,3.8s			LR	LR			
LSA	**Lhasa**	**18.65**	**105**	*e*P		**P**	**08 30 55.6**	**+1.0**
	comp=Z,24nm,0.7s							
LSA	**Lhasa**	**18.65**	**105**	*e*P		**P**	**08 30 55.6**	**+1.1**
LSA	comp=Z,23nm,0.7s			pmax	pmax			
LATR	**Latur**	**18.80**	**162**	*e*S		**S**	**08 34 18.8**	**-0.9**
DGRG	**David-gareji**	**20.04**	**292**	P		**P**	**08 31 10.6**	**+1.2**
ZAA0	**Zalesovo Array**	**20.14**	**25**	*e*P		**P**	**08 31 09.5**	**-0.8**
ZALV	**Zalesovo Beam**	**20.14**	**25**	P		**P**	**08 31 10.9**	**+0.6**
	comp=Z,25nm,0.3s,baz=216,slow=12,SNR=44							
ZALV				S		**S**	**08 34 43.4**	**-2.0**
	comp=Z,2.6nm,0.6s,baz=206,slow=20,SNR=3.4							
ZALV	**Zalesovo Beam**	**20.14**	**25**	P		**P**	**08 31 10.9**	**+0.6**
ZALV				S		**S**	**08 34 43.4**	**-2.0**
ZALV	comp=Z,25nm,0.3s			pmax	pmax			
ZALV	comp=N,3.0nm,0.6s			smax				
HYB	**Hyderabad**	**20.32**	**157**	*i* P		**P**	**08 31 13.5**	**+1.0**
HYB				*es*P		sP	08 32 13.0	+3.2
HYB				*e*			08 34 55.0	
GNI	**Garni**	**20.43**	**288**	*e*P		**P**	**08 31 16.1**	**+2.5**
	comp=N,26nm,1.0s							
GNI	**Garni**	**20.43**	**288**	P		**P**	**08 31 15.9**	**+2.4**
	comp=N,11nm,0.5s,baz=27,slow=4.5,SNR=9.9							
GNI	**Garni**	**20.43**	**288**	*c i*P		**P**	**08 31 16.3**	**+2.8**
GNI	comp=Z,39nm,1.3s			pmax	pmax			
ZEI	**Tsey**	**21.30**	**295**	*e*P		**P**	**08 31 23.0**	**+0.3**
ZEI	comp=Z,12nm,0.5s,mb4.7			pmax	pmax			
SHL	**Shillong**	**21.35**	**115**	*e*PKP		**P**	**08 31 22.0**	**-1.4**
SVE	**Sverdlovsk**	**21.38**	**345**	⇓*e*P		**P**	**08 31 23.8**	**+0.4**
SVE	comp=Z,36nm,1.2s,mb4.8			pmax	pmax			
ARU	**Arti**	**21.50**	**342**	*e*P		**P**	**08 31 25.3**	**+0.7**
	comp=Z,91nm,1.3s,mb5.1							
ARU	**Arti**	**21.50**	**342**	*d i*P		**P**	**08 31 25.0**	**+0.4**
ARU				*e*			08 31 55.4	
ARU				S		**S**	**08 35 11.1**	**+1.4**
ARU	comp=Z,69nm,1.2s,mb5.1			pmax	pmax			
KIV	**Kislovodsk**	**22.36**	**298**	*e*P		**P**	**08 31 35.7**	**+2.6**
KIV	comp=Z,9.0nm,0.8s,mb4.3			pmax	pmax			
KIV	comp=Z,18nm,12.0s			MLR	MLR			
GTA	**Gaotai**	**23.35**	**74**	*e*P		**P**	**08 31 45.6**	**+3.5**
GTA				pP			08 32 24.7	
GTA				sP		sP	08 32 47.7	+5.3
GTA				S		**S**	**08 35 44.0**	**+3.9**
GTA				SS			08 36 56.5	
GTA	comp=Z,5.0nm,0.6s,mb4.2			pmax	pmax			
GTA	comp=N,280nm,16.1s			LR	LR			
GTA	comp=E,330nm,12.5s			LR	LR			
GTA	comp=Z,110nm,11.0s			LR	LR			
ORY	**Orie**	**25.09**	**35**	⇓*i*P		**P**	**08 32 00.5**	**+2.7**
ANN	**Anapa**	**26.21**	**299**	*e*P		**P**	**08 32 08.0**	**0.0**
ANN	comp=Z,42nm,1.2s,mb4.9			pmax	pmax			
LZH	**Lanzhou**	**26.90**	**81**	*e*P		**P**	**08 32 14.2**	**0.0**
LZH				pP		pP	08 32 55.5	+1.8
LZH				sP		sP	08 33 19.0	+2.7
LZH	comp=Z,13nm,1.0s,mb4.5			pmax	pmax			
LZH	comp=Z,50nm,4.3s			LR	LR			
LZH	comp=N,410nm,11.8s			LR	LR			
LZH	comp=Z,430nm,12.8s			LR	LR			
ZAK	**Zakamensk**	**27.38**	**49**	*e*P		**P**	**08 32 20.0**	**+1.7**
ZAK				*e*			08 33 04.6	
CD2	**Chengdu**	**28.23**	**92**	P		**P**	**08 32 25.8**	**-0.3**
SONM	**Songino Array**	**28.75**	**55**	P		**P**	**08 32 32.3**	**+1.8**
	comp=Z,1.7nm,0.5s,mb3.9,baz=259,slow=9.3,SNR=8.0							
SONM	**Songino Array**	**28.75**	**55**	P		**P**	**08 32 32.3**	**+1.8**
SONM	comp=Z,2.0nm,0.5s			pmax	pmax			
BR131	**Keskin Array S**	**28.97**	**288**	*e*P		**P**	**08 32 33.8**	**+1.3**
BRTR	**Keskin Array B**	**28.97**	**288**	P		**P**	**08 32 33.3**	**+0.7**
BRTR				pP		pP	08 33 13.8	+1.5
BRTR	**Keskin Array B**	**28.97**	**288**	P		**P**	**08 32 33.3**	**+0.8**
	comp=Z,1.6nm,0.6s,mb3.8,baz=101,slow=9.5,SNR=9.7							
BRTR				pP		pP	08 33 13.8	+1.5
	comp=Z,1.2nm,0.7s,baz=102,slow=8.7,SNR=3.6							
BRTR	**Keskin Array B**	**28.97**	**288**	*i* P		**P**	**08 32 34.0**	**+1.5**
BRTR				pmax	pmax			
	comp=Z,2.0nm,0.6s							
OBN	**Obninsk**	**29.63**	**320**	*ce*P		**P**	**08 32 38.7**	**+0.5**
OBN				*PP		pP	08 33 23.0	+5.0
OBN							08 33 44.0	
OBN	comp=Z,18nm,1.2s,mb4.6			pmax	pmax			
KMI	**Kunming**	**29.87**	**103**	P		**P**	**08 32 40.7**	**0.0**
KMI				pP		pP	08 33 22.8	+2.3
KMI				sP		sP	08 33 46.1	+3.1
KMI				S		**S**	**08 37 21.5**	**-1.8**
KMI				sS		sS	08 38 34.5	+0.3
KMI	comp=Z,9.0nm,0.8s,mb4.5			pmax	pmax			
KMI	comp=Z,130nm,4.0s			LR	LR			
KMI	comp=N,230nm,13.3s			LR	LR			
KMI	comp=E,290nm,12.6s			LR	LR			
KMI	comp=Z,190nm,13.0s			LR	LR			
CMAR	**Chiang Mai Arr**	**30.88**	**118**	P		**P**	**08 32 50.4**	**+0.8**
	comp=Z,3.1nm,0.5s,mb4.2,baz=299,slow=8.0,SNR=12							
CMAR	**Chiang Mai Arr**	**30.88**	**118**	P		**P**	**08 32 50.4**	**+0.8**
CMAR	comp=Z,3.0nm,0.5s			pmax	pmax			
KLMR	**Klimovskoe**	**31.26**	**331**	*e*P		**P**	**08 32 51.4**	**-1.0**
KLMR				*e*			08 34 01.3	
KLMR	comp=Z,31nm,1.4s,mb4.8			pmax	pmax			
HHC	**Hu-ho-hao-te**	**32.23**	**69**	*e*P		**P**	**08 33 00.3**	**-0.9**
HHC				pP		pP	08 33 42.4	+1.1
HHC				sP		sP	08 34 06.1	+2.4
HHC				PP		PP	08 34 14.3	-3.8
HHC				S		**S**	**08 37 55.5**	**-4.2**
HHC	comp=Z,10.0nm,0.9s,mb4.3			pmax	pmax			
HHC	comp=Z,90nm,4.4s			pmax	pmax			
HHC	comp=N,140nm,12.7s			LR	LR			
HHC	comp=E,180nm,14.7s			LR	LR			
HHC	comp=Z,130nm,15.8s			LR	LR			
GYA	**Guiyang**	**32.35**	**98**	*e*P		**P**	**08 33 02.7**	**+0.3**
GYA				pP		pP	08 33 43.0	+0.5
GYA				sP		sP	08 34 07.8	+2.9
GYA				PP		PP	08 34 18.2	-1.4
GYA				PcP		PcP	08 35 46.0	+0.7
GYA				S		**S**	**08 37 58.9**	**-3.0**
GYA				ScP		ScP	08 39 09.8	-0.7
GYA				ScS		ScS	08 43 07.5	-2.7
GYA	comp=Z,10.0nm,0.8s,mb4.4			pmax	pmax			
AKASG	**Malin Array Be**	**32.57**	**309**	P		**P**	**08 33 04.0**	**0.0**
	comp=Z,3.2nm,0.5s,mb4.1,baz=80,slow=7.2,SNR=12							
AKASG				pP		pP	08 33 46.4	+2.2
	comp=Z,1.8nm,0.6s,baz=81,slow=8.4,SNR=3.1							
AKASG				sP		sP	08 34 10.4	+3.8
	comp=Z,2.1nm,0.7s,baz=79,slow=8.1,SNR=2.9							
AKASG	**Malin Array Be**	**32.57**	**309**	P		**P**	**08 33 04.1**	**+0.1**
AKASG				*PP		pP	08 33 46.4	+2.3
AKASG				*SP		sP	08 34 10.4	+3.8
AKASG	comp=Z,3.0nm,0.5s			pmax	pmax			
JOF	**Joensuu**	**35.64**	**330**	*e*P		**P**	**08 33 30.2**	**0.0**
JOF	comp=Z,10.0nm,0.3s,mb4.8			pmax	pmax			
JOF	**Joensuu**	**35.64**	**330**	*ep*		**P**	**08 33 30.2**	**0.0**
	comp=Z,9.5nm,0.3s,mb4.8							
BJI	**Beijing**	**35.83**	**70**	P		**P**	**08 33 28.0**	**-4.1**
BJI				pP		pP	08 34 12.0	-0.8
BJI				sP		sP	08 34 35.4	+0.3
BJI	comp=Z,5.0nm,0.6s,mb4.2			pmax	pmax			
FINES	**FINESS Array B**	**37.23**	**326**	P		**P**	**08 33 43.8**	**+0.2**
	comp=Z,13nm,0.7s,mb4.5,baz=107,slow=10,SNR=32							
FINES				pP		pP	08 34 26.9	+2.4
	comp=Z,1.7nm,0.4s,baz=109,slow=9.0,SNR=2.3							
FINES	**FINESS Array B**	**37.23**	**326**	P		**P**	**08 33 43.8**	**+0.2**
FINES				*PP		pP	08 34 26.9	+2.4
FINES	comp=Z,13nm,0.7s			pmax	pmax			
KAF	**Kangasniemi**	**37.38**	**327**	*e*P		**P**	**08 33 44.0**	**-0.9**
KAF	comp=Z,1.0nm,0.4s,mb3.7			pmax	pmax			
KAF	**Kangasniemi**	**37.38**	**327**	*ep*		**P**	**08 33 44.0**	**-0.9**
	comp=Z,1.3nm,0.4s,mb3.8							
NJ2	**Nanjing**	**39.97**	**82**	*e*P		**P**	**08 34 07.4**	**+0.5**
NJ2	comp=Z,20nm,0.5s,mb4.8			pmax	pmax			
KEV	**Kevo**	**40.64**	**338**	*e*P		**P**	**08 34 12.0**	**+0.2**
	comp=Z,12nm,0.8s,mb4.4							
KEV	**Kevo**	**40.64**	**338**	*e*P		**P**	**08 34 12.0**	**+0.2**
KEV	comp=Z,12nm,0.8s,mb4.4			pmax	pmax			
KEV	**Kevo**	**40.64**	**338**	*ep*		**P**	**08 34 10.5**	**-1.3**
	comp=Z,3.6nm,0.3s,mb4.3							
ARCES	**ARCESS Array B**	**40.98**	**338**	P		**P**	**08 34 15.2**	**+0.6**
ARCES				pP		pP	08 34 57.4	+1.3
ARCES	**ARCESS Array B**	**40.98**	**338**	P		**P**	**08 34 15.2**	**+0.6**
	comp=Z,25nm,0.8s,mb4.7,baz=113,slow=8.3,SNR=98							
ARCES				pP		pP	08 34 57.4	+1.3
	comp=Z,4.1nm,0.8s,baz=113,slow=8.3,SNR=3.0							
ARCES	**ARCESS Array B**	**40.98**	**338**	P		**P**	**08 34 15.2**	**+0.6**
ARCES				*PP		pP	08 34 57.4	+1.3
ARCES	comp=Z,25nm,0.8s			pmax	pmax			
ARE0	**ARCESS Array S**	**40.98**	**338**	*e*P		**P**	**08 34 15.4**	**+0.8**
CN2	**Changchun**	**42.06**	**62**	*e*P		**P**	**08 34 21.7**	**-2.0**
CN2				*ep*P		pP	08 35 06.7	+1.3
CN2				*e*S		**S**	**08 40 23.5**	**-4.5**
CN2	comp=Z,10.0nm,0.6s,mb4.4			pmax	pmax			
CN2	comp=Z,200nm,3.0s			pmax	pmax			
BRG	**Berggiesshubel**	**42.25**	**308**	*e*(P)		**P**	**08 34 25.6**	**+0.5**
	comp=Z,9.0nm,1.3s,mb4.0							
BRG				*e*			08 35 13.8	
	comp=Z,4.8nm,1.0s							
CLL	**Collm**	**42.82**	**309**	*e*P		**P**	**08 34 28.0**	**-1.7**
CLL	**Collm**	**42.82**	**309**	*e*P		**P**	**08 34 29.0**	**-0.7**
CLL				*e*PcP		PcP	08 36 17.0	-0.1
NOA	**NORSAR Array B**	**44.10**	**323**	P		**P**	**08 34 39.3**	**-0.5**
NOA				pP		pP	08 35 24.9	+3.0
NOA	**NORSAR Array B

ESDC pP pP 08 37 03.9 +2.9
comp=Z,0.2nm,0.3s,baz=57,slow=7.0,SNR=1.7
SUMG Summit 60.92 341 *e*P **P** 08 36 44.5 +1.5
comp=Z,7.2nm,0.9s,mb4.3
SUMG Summit 60.92 341 *i* P **P** 08 36 44.1 +1.1
comp=Z,7.8nm,0.9s,mb4.3
TORD Torodi Ar. Bea 65.22 268 P **P** 08 37 10.1 -2.1
comp=Z,2.5nm,0.6s,mb4.0,baz=49,slow=5.3,SNR=22
TORD pP pP 08 37 59.7 +2.1
comp=Z,0.7nm,0.5s,baz=46,slow=5.9,SNR=2.2
KIC Kosan Boka 74.29 266 *e*P **P** 08 38 06.2 -1.4
comp=Z,19nm,1.2s,mb4.6
TIC Toumodi 74.35 267 *e*P **P** 08 38 10.5 +2.6
comp=Z,4.4nm,0.2s,mb4.7
TIC Toumodi 74.35 267 *e*P **P** 08 38 10.5 +2.6
TIC pmax pmax
comp=Z,4.0nm,0.2s,mb4.7
LIC Lamto 74.60 266 *e*P **P** 08 38 07.8 -1.5
comp=Z,16nm,1.1s,mb4.6
COLA College 74.64 16 *e*P **P** 08 38 08.9 +0.2
comp=Z,3.9nm,0.8s,mb4.1
COLA College 74.64 16 *e*P **P** 08 38 08.9 +0.2
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
ILAR Eielson Array 74.93 16 P **P** 08 38 09.6 -0.8
comp=Z,1.6nm,0.9s,mb3.6,baz=321,slow=5.1,SNR=20
ILAR pP pP 08 39 00.6 +3.6
comp=Z,1.0nm,1.1s,baz=327,slow=6.5,SNR=2.4
ILAR sP sP 08 39 24.9 +7.1
comp=Z,0.9nm,1.0s,baz=324,slow=5.6,SNR=2.9
ILAR Eielson Array 74.93 16 P **P** 08 38 09.6 -0.8
ILAR *PP pP 08 39 00.6 +3.6
ILAR *SP sP 08 39 24.9 +7.1
ILAR pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 81.29 2 P **P** 08 38 45.3 -0.1
comp=Z,2.0nm,0.7s,mb3.9,baz=344,slow=5.5,SNR=6.8
YKA pP pP 08 39 36.3 +3.6
comp=Z,1.0nm,0.5s,baz=352,slow=5.4,SNR=4.2
YKA Yellowknife Ar 81.29 2 P **P** 08 38 45.3 0.0
YKA *PP pP 08 39 36.3 +3.7
YKA pmax pmax
comp=Z,2.0nm,0.7s
SCHQ Schefferville 81.92 337 P **P** 08 38 48.4 -0.4
SCHQ Schefferville 81.92 337 P **P** 08 38 48.4 -0.4
comp=Z,2.8nm,0.8s,mb3.9,baz=36,slow=8.7,SNR=3.5
ASAR Alice Springs 84.65 124 P **P** 08 39 01.7 -1.4
comp=Z,1.1nm,0.8s,mb3.6,baz=309,slow=5.0,SNR=12
CPUP Villa Florida 134.72 268 PKP PKPdf 08 45 45.4 -1.4
comp=Z,0.3nm,0.4s,baz=101,slow=7.6,SNR=3.4
PLCA Paso Flores 149.35 250 PKPbc PKPbc 08 46 17.1 +0.3
comp=Z,2.7nm,0.9s,baz=84,slow=11,SNR=3.7
PLCA Paso Flores 149.35 250 PKP2 PKPbc 08 46 17.1 +0.3
PLCA pmax pmax
comp=Z,3.0nm,0.9s

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*DJA **06** 08:38:29,9.˚63S×158.˚62E,h16km,mb5.3/16*
*IDC **06** 08:38:30.7±0.5,8.˚89S×157.˚87E,h0km,mb4.6/13, mb1 4.7/15,mb1mx4.7/16,mbtmp4.6/15,ML4.4/2,MS4.3/12, Ms1 4.3/12,ms1mx4.2/15,Error ellipse: s-maj=18.1km s-min=16.4km az=18.0*
*BJI **06** 08:38:32.6,8.˚24S×157.˚99E,h6km,mB5.2/22,mb5.0/39, Ms5.0/22,Ms7 4.6/25*
*NEIC **06** 08:38:32.6±0.2,8.˚91S×157.˚85E,h10km,mb5.1/36,Error ellipse: s-maj=6.6km s-min=4.4km az=148.0*
*MOS **06** 08:38:34.9±1.3,8.˚82S×157.˚69E,h33km,mb5.4/23, MS4.2/4,Error ellipse: s-maj=10.0km s-min=8.2km az=46.2*
*GCMT **06** 08:38:34.9±0.2,9.˚09S×157.˚86E,h18km,MW5.2,Moment Tensor Solution. s47,c68; s72,c107; Moment tensor: Scale 10¹⁶Nm; Mrr5.38±.22; Mθθ-3.59±.16; Mϕϕ-1.80±.15; Mrθ 1.45±.35; Mθϕ3.14±.12; Mϕr-3.21±.37; Best double couple: Mo6.70000×10¹⁶ NP1:ϕ₁292.00000°,δ33.00000°, λ64.00000°. NP2:ϕ₂142.00000°,δ61.00000°,λ106.00000°. Principal axes: T 6.6100, Plg70.0000°, Azm86.0000°; N 0.1500, Plg14.0000°, Azm314.0000°; P -6.7700, Plg15.0000°, Azm221.0000°; Data Used: II IU G IC CN.*
*ISCJB **06** 08:38:35.1±0.2,8.˚88S±0.˚04×157.˚74E±0.˚03,h33km, mb5.0/76,MS4.4/26 Error ellipse: s-maj=6.5km s-min=3.9km az=167.8*
ISC 06 08:38:36.9±0.2,8.˚91S±0.˚04×157.˚80E±0.˚03,h35km, (h9km±3.7km:pP-P),n368,σ0.˚79/336,mb5.0/76,MS4.4/26, 83C-87D,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.18**	**104**	*e*Pn		**Pn**		**08 39 05.5**	**-5.1**
HNR				*e*Sn		**Sn**		**08 39 36.8**	**+0.3**
HNR	**Honiara**	**2.18**	**104**	Pn		**Pn**		**08 39 05.6**	**-5.1**
	171nm,0.3s,baz=228,slow=2.3,SNR=41								
HNR				Sn		**Sn**		**08 39 37.1**	**+0.6**
	1μm,0.3s,baz=148,slow=15,SNR=6.3								
PMG	**Port Moresby**	**10.52**	**266**	*e*Pn		**Pn**		**08 41 05.3**	**+0.1**
PMG	**Port Moresby**	**10.52**	**266**	*i* P		**Pn**		**08 41 07.9**	**+2.6**
PMG				pmax	pmax				
	comp=Z,45nm,1.2s								
PMG	**Port Moresby**	**10.52**	**266**	P		**Pn**		**08 41 09.6**	**+4.3**
	comp=Z,1μmcomp=Z,81nm,1.3s								
COEN	**Coen**	**15.19**	**249**	*e*Pn		**Pn**		**08 42 09.4**	**+0.5**
	comp=Z,1μm,1.5s								
COEN	**Coen**	**15.19**	**249**	P		**Pn**		**08 42 08.7**	**-0.1**
	comp=Z,6μmcomp=Z,279nm,1.6s								
DZM	**Mont Dzumac**	**15.50**	**149**	*e*P		**Pn**		**08 42 07.2**	**-5.7**
	comp=Z,134nm,1.8s								
DZM				*e*LR		LR		08 45 37.4	
	comp=Z,752nm,20.2s								
CTA	**Charters Tower**	**15.75**	**224**	*e*P		**Pn**		**08 42 12.6**	**-3.6**
	comp=Z,29nm,1.5s								
CTA	**Charters Tower**	**15.75**	**224**	Pn		**Pn**		**08 42 14.3**	**-1.9**
CTA				Sn		**Sn**		**08 45 00.5**	**-9.2**
CTA	**Charters Tower**	**15.75**	**224**	Pn		**Pn**		**08 42 14.3**	**-1.9**
	comp=Z,0.9nm,0.3s,baz=47,slow=14,SNR=11								
CTA				Sn		**Sn**		**08 45 00.5**	**-9.2**
	comp=Z,0.3nm,0.3s,baz=325,slow=21,SNR=1.4								
CTAO	**Charters Tower**	**15.75**	**224**	*e*Pn		**Pn**		**08 42 13.8**	**-2.4**
	comp=Z,181nm,1.6s								
CTAO	**Charters Tower**	**15.75**	**224**	*e*P		**Pn**		**08 42 13.8**	**-2.4**
CTAO				pmax	pmax				
	comp=Z,181nm,1.6s								
EIDS	**Eidsvold**	**17.58**	**201**	*e*Pn		**Pn**		**08 42 38.0**	**-1.1**
	comp=Z,71nm,1.1s								
MSVF	**Nonsavu**	**21.55**	**116**	*e*P		**P**		**08 43 21.8**	**-1.6**
	comp=Z,133nm,1.4s,mb5.2								
ARMA	**Armidale**	**22.17**	**194**	*e*P		**P**		**08 43 30.2**	**+0.4**
ARMA				*e*S		**S**		**08 47 35.5**	**+3.3**
ARMA	**Armidale**	**22.17**	**194**	*e*P		**P**		**08 43 30.1**	**+0.3**
	comp=Z,26nm,1.0s,mb4.6								
BAKI	**Biak**	**22.91**	**288**	P		**P**		**08 43 40.3**	**+2.3**
	comp=Z,999nmcomp=Z,86nm,1.1s,mb5.1								
WRAB	**Tennant Creek**	**25.18**	**242**	P		**P**		**08 43 59.6**	**+0.3**
	comp=Z,230nm,0.8s,mb5.8,SNR=9.4								
WRAB	**Tennant Creek**	**25.18**	**242**	*e*P		**P**		**08 43 58.6**	**-0.6**
	comp=Z,34nm,0.9s,mb4.9								
WRAB	**Tennant Creek**	**25.18**	**242**	*e*P		**P**		**08 43 58.6**	**-0.7**
WRAB				pmax	pmax				
	comp=Z,34nm,0.9s,mb4.9								
WB2	**Warramunga Arr**	**25.18**	**242**	*e*P		**P**		**08 43 59.0**	**-0.3**
KAKA	**Kakadu**	**25.19**	**259**	*e*P		**P**		**08 43 58.7**	**-0.7**
	comp=Z,38nm,0.9s,mb4.9								
KAKA	**Kakadu**	**25.19**	**259**	*e*P		**P**		**08 43 58.8**	**-0.6**
	comp=Z,137nm,1.0s,mb5.4								
KAKA	**Kakadu**	**25.19**	**259**	P		**P**		**08 43 58.9**	**-0.5**
	comp=Z,455nmcomp=Z,64nm,1.0s,mb5.1								
GUMO	**Guam**	**25.77**	**330**	LR		LR		08 52 19.7	
	comp=Z,343nm,20.7s,MS3.9,baz=320,slow=32								
ASAR	**Alice Springs**	**27.16**	**234**	P		**P**		**08 44 15.5**	**-1.7**
	comp=Z,7.2nm,0.9s,mb4.2,baz=65,slow=9.4,SNR=36								
STKA	**Stephens Creek**	**27.37**	**211**	⇑*i*P		**P**		**08 44 20.9**	**+2.0**
	comp=Z,24nm,0.7s,mb4.8								
STKA	**Stephens Creek**	**27.37**	**211**	*e*P		**P**		**08 44 20.1**	**+1.2**
	comp=Z,6.4nm,0.8s,mb4.2								
STKA	**Stephens Creek**	**27.37**	**211**	P		**P**		**08 44 18.7**	**-0.2**
	comp=Z,29nm,0.7s,mb4.9,baz=24,slow=11,SNR=39								
STKA				LR		LR		08 54 31.1	
	comp=Z,2μm,18.7s,MS4.6,baz=33,slow=35								
CNB	**Canberra Magne**	**27.39**	**195**	*e*P		**P**		**08 44 22.5**	**+3.4**
KNA	**Kununurra**	**29.15**	**254**	P		**P**		**08 44 33.1**	**-1.8**
	comp=Z,746nmcomp=Z,64nm,0.9s,mb5.3								
TOO	**Toolangi**	**30.63**	**199**	*e*P		**P**		**08 44 48.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**32.53**	**250**	*e*P		**P**		**08 45 03.9**	**-0.9**
	comp=Z,9.9nm,0.6s,mb4.9								
FITZ				*e*S		**S**		**08 50 17.5**	**-0.5**
FITZ	**Fitzroy Crossi**	**32.53**	**250**	P		**P**		**08 45 03.6**	**-1.2**
	comp=Z,44nm,2.9s,mb4.9								
URZ	**Urewera**	**34.01**	**152**	LR		LR		08 55 53.6	
	comp=Z,465nm,21.7s,MS4.2,baz=229,slow=31								
PCI	**Palu**	**38.62**	**280**	P		**P**		**08 46 01.3**	**+4.2**
	comp=Z,813nmcomp=Z,80nm,1.0s,mb5.4								
IGBI	**Denpasar**	**42.13**	**267**	P		**P**		**08 46 28.3**	**+2.1**
	comp=Z,94nm,1.3s,mb5.3								
RAR	**Rarotonga**	**42.62**	**112**	P		**P**		**08 46 28.9**	**-1.2**
	comp=Z,19nm,0.8s,mb4.9,baz=240,slow=9.0,SNR=4.4								
JAGI	**Jajag, Banyuwa**	**43.13**	**267**	P		**P**		**08 46 35.1**	**+0.7**
	comp=Z,90nm,0.8s,mb5.6								
SBUM	**Sibu**	**46.81**	**282**	P		**P**		**08 47 04.4**	**+0.8**
	comp=Z,396nmcomp=Z,15nm,2.0s,mb4.6								
KSM	**Kuching**	**48.43**	**280**	*e*P		**P**		**08 47 16.3**	**+0.1**
	comp=Z,16nm,0.9s,mb5.0								
KSM	**Kuching**	**48.43**	**280**	P		**P**		**08 47 16.8**	**+0.5**
	comp=Z,19nm,1.1s,mb5.0								
YHNB	**Yeheng**	**48.74**	**314**	*e*P		**P**		**08 47 18.1**	**-0.2**
	comp=Z,37nm,0.8s,mb5.5								
MJAR	**Matsushiro Arr**	**48.81**	**339**	P		**P**		**08 47 17.4**	**-1.4**
	comp=Z,2.7nm,0.8s,mb4.3,baz=161,slow=7.7,SNR=4.6								
MJAR				LR		LR		09 05 47.7	
	comp=Z,307nm,18.4s,MS4.3,baz=150,slow=34								
MAT	**Matsushiro**	**48.82**	**339**	P		**P**		**08 47 16.9**	**-1.8**
MAT				S		**S**		**08 54 23.0**	**+3.3**
LEM	**Lembang**	**49.73**	**269**	P		**P**		**08 47 28.0**	**+1.8**
	comp=Z,84nm,1.1s,mb5.7								
CGJI	**Cibinong**	**51.65**	**269**	P		**P**		**08 47 38.9**	**-1.8**
	comp=Z,3μmcomp=Z,72nm,1.1s,mb5.5								
PPT	**Papeete**	**51.80**	**105**	*e*S		**S**		**08 55 04.5**	**+2.6**
	comp=Z,157nm,27.2s								
PPT				*e*LQ				09 00 18.8	
	comp=Z,542nm,25.2s								
PPT				*e*LR		LR		09 02 34.0	
	comp=Z,700nm,22.8s,baz=272								
PPT	**Papeete**	**51.80**	**105**	LR		LR		09 04 39.4	
	comp=Z,417nm,18.7s,MS4.5,baz=290,slow=30								
MDSI	**Maura Dua**	**53.40**	**271**	P		**P**		**08 47 55.8**	**+2.1**
	comp=Z,18nm,2.2s,mb4.6								
YUK	**Yuzh-Kuril'sk**	**53.79**	**349**	*e*P		**P**		**08 47 54.0**	**-1.9**
KSRS	**Korea Array**	**53.94**	**331**	P		**P**		**08 47 56.9**	**-0.2**
	comp=Z,5.5nm,1.1s,mb4.4,baz=144,slow=8.4,SNR=21								
KSRS				LR		LR		09 09 41.5	
	comp=Z,194nm,19.6s,MS4.2,baz=130,slow=35								
QIZ	**Qiongzhong**	**54.82**	**301**	P		**P**		**08 48 03.8**	**-0.1**
QIZ				pP		pP		08 48 07.0	-7.4
QIZ				sP		sP		08 48 08.3	-10
QIZ				S		**S**		**08 55 48.0**	**+5.2**
QIZ				sS		sS		08 55 51.4	-8.9
QIZ				LR		LR			
	comp=Z,260nm,25.7s,MS4.2								
NJ2	**Nanjing**	**55.16**	**319**	*e*P		**P**		**08 48 07.6**	**+1.5**
NJ2				pmax	pmax				
	comp=Z,30nm,0.6s,mb5.5								
SDSI	**Sungai Dareh**	**56.66**	**275**	P		**P**		**08 48 16.9**	**-0.3**
	comp=Z,1μmcomp=Z,39nm,1.4s,mb5.3								
WHN	**Wuhan**	**57.24**	**315**	P		**P**		**08 48 21.5**	**+0.5**
WHN				S		**S**		**08 56 21.1**	**+6.4**
WHN				LR		LR			
	comp=Z,1μm,21.6s,MS4.9								
MNSI	**Mandailing Nat**	**58.79**	**276**	P		**P**		**08 48 33.1**	**+0.9**
MDJ	**Mudanjiang**	**59.05**	**337**	P		**P**		**08 48 33.2**	**-0.2**
MDJ				sP		sP		08 48 37.1	-11
MDJ				S		**S**		**08 56 40.7**	**+2.8**
MDJ				pmax	pmax				
	comp=Z,16nm,1.6s,mb4.8								
MDJ				pmax	pmax				
	comp=Z,69nm,6.4s								
MDJ				LR		LR			
	comp=N,220nm,21.2s,MS4.3								
MDJ				LR		LR			
	comp=E,140nm,21.2s,MS4.3								
MDJ				LR		LR			
	comp=Z,83nm,33.3s								
MDJ	**Mudanjiang**	**59.05**	**337**	*e*P		**P**		**08 48 33.2**	**-0.2**
SNY	**Shenyang**	**59.44**	**331**	⇑P		**P**		**08 48 27.6**	**-8.5**
SNY				pmax	pmax				
	comp=Z,10.0nm,0.5s,mb5.1								
HABR	**Khabarovsk**	**60.55**	**343**	*e*P		**P**		**08 48 41.0**	**-2.6**
HABR				*e*S		**S**		**08 56 58.1**	**+1.1**
HABR				*e*SS		sS		08 57 02.8	-12
HABR				*e*				08 58 31.8	
HABR				*e*SS		SS		09 00 57.2	+1.3
HABR				MLR		MLR			
	comp=Z,153nm,19.0s,MS4.2								
ENH	**Enshi**	**60.57**	**312**	*e*P		**P**		**08 48 43.8**	**-0.3**
	comp=Z,43nm,1.2s,mb5.5								
GYA	**Guiyang**	**60.82**	**307**	P		**P**		**08 48 47.8**	**+1.9**
GYA				PP		PP		08 51 03.4	+3.1
GYA				ScP		ScP		08 53 31.0	+2.6
GYA				S		**S**		**08 57 04.3**	**+3.1**
GYA				SS		SS		09 01 05.0	+4.2
GYA				pmax	pmax				
	comp=Z,20nm,1.0s,mb5.2								
GYA				pmax	pmax				
	comp=Z,130nm,5.6s								
GYA				LR		LR			
	comp=N,630nm,18.7s,MS4.9								
GYA				LR		LR			
	comp=E,520nm,19.0s,MS4.9								
GYA				LR		LR			
	comp=Z,740nm,18.0s,MS4.9								
TAOE	**Nuku Hiva Isla**	**61.24**	**95**	*e*LR		LR		09 06 53.0	
	comp=Z,490nm,22.6s,baz=269								
PET	**Petropavlovsk**	**61.69**	**1**	*e*P		**P**		**08 48 50.2**	**-1.0**
PET	**Petropavlovsk**	**61.69**	**1**	⇑*i*P		**P**		**08 48 50.0**	**-1.2**
PET				*e*S		**S**		**08 57 07.6**	**-3.7**
PET				*e*SS		SS		09 01 16.2	+2.6
PET				pmax	pmax				
	comp=Z,61nm,1.0s,mb5.7								
PET				pmax	pmax				
	comp=Z,100nm,15.4s								
PET				MLR		MLR			
	comp=Z,200nm,17.0s,MS4.3								
BJI	**Beijing**	**62.06**	**325**	P		**P**		**08 48 53.5**	**-0.5**
BJI				S		**S**		**08 57 21.1**	**+4.6**
BJI				pmax	pmax				
	comp=Z,6.0nm,0.6s,mb4.9								
BJI				pmax	pmax				
	comp=Z,110nm,6.7s								
BJI				LR		LR			
	comp=N,240nm,13.3s,MS4.6								
BJI				LR		LR			
	comp=E,130nm,13.6s,MS4.6								
BJI				LR		LR			
	comp=Z,160nm,17.1s,MS4.2								
KLR	**Kul'dur**	**62.24**	**341**	*e*P		**P**		**08 48 50.4**	**-4.6**
KLR				pmax	pmax				
	comp=Z,24nm,1.4s,mb5.1								
KMI	**Kunming**	**63.38**	**304**	P		**P**		**08 49 05.0**	**+1.9**
KMI				pP		pP		08 49 08.4	-5.5
KMI				sP		sP		08 49 10.2	-7.8
KMI				PcP		PcP		08 49 41.8	+1.9
KMI				PP		PP		08 51 27.3	+4.4
KMI				S		**S**		**08 57 36.5**	**+2.9**
KMI				sS		sS		08 57 41.4	-10
KMI				SS		SS		09 01 45.2	+4.1
KMI				pmax	pmax				
	comp=Z,19nm,1.0s,mb5.2								
KMI				pmax	pmax				
	comp=Z,150nm,3.1s								
KMI				LR		LR			
	comp=N,350nm,16.5s,MS4.7								
KMI				LR		LR			
	comp=E,270nm,17.0s,MS4.7								
KMI				LR		LR			
	comp=Z,320nm,16.5s,MS4.6								
CMAR	**Chiang Mai Arr**	**64.11**	**295**	P		**P**		**08 49 09.2**	**+1.1**
	comp=Z,6.3nm,0.8s,mb4.7,baz=109,slow=4.8,SNR=10								
CMAR				LR		LR		09 15 45.5	
	comp=Z,78nm,19.5s,MS3.9,baz=118,slow=35								
CHTO	**Chiang Mai**	**64.23**	**296**	*e*P		**P**		**08 49 09.5**	**+0.7**
CD2	**Chengdu**	**65.16**	**310**	P		**P**		**08 49 16.5**	**+1.8**
CD2				pmax	pmax				
	comp=Z,10.0nm,0.5s,mb5.1								
CD2				pmax	pmax				
	comp=Z,380nm,4.1s								
RKT	**Rikitea**	**65.66**	**111**	*e*LR		LR		09 08 59.0	
	comp=Z,362nm,26.0s								
LZH	**Lanzhou**	**67.62**	**315**	*e*P		**P**		**08 49 30.5**	**+0.2**
LZH				pP		pP		08 49 35.0	-6.1
LZH				sP		sP		08 49 37.0	-8.2
LZH				pmax	pmax				
	comp=Z,32nm,1.0s,mb5.3								
LZH				pmax	pmax				
	comp=Z,190nm,4.0s								
LZH				LR		LR			
	comp=N,2μm,16.7s								
LZH				LR		LR			
	comp=Z,3μm,17.4s,MS5.6								
SBA	**Scott Base**	**69.08**	**178**	*e*P		**P**		**08 49 44.5**	**+5.8**
	comp=Z,56nm,2.0s,mb5.1								
SBA	**Scott Base**	**69.08**	**178**	*e*P		**P**		**08 49 44.5**	**+5.7**
SBA				pmax	pmax				
	comp=Z,56nm,2.0s,mb5.2								
CLNS	**Chul'man**	**70.89**	**342**	*e*P		**P**		**08 49 48.1**	**-2.0**
CLNS				pmax	pmax				
	comp=Z,24nm,1.0s,mb5.1								
CLNS				pmax	pmax				
	comp=E,11nm,1.0s								
CLNS				pmax	pmax				
	comp=N,14nm,1.3s								
SEY	**Seymchan**	**71.75**	**357**	*c i*P		**P**		**08 49 54.2**	**-0.9**
MIR	**Mirnyy**	**71.98**	**202**	*e*P		**P**		**08 49 56.0**	**-0.6**
MIR				pmax	pmax				
	comp=Z,34nm,1.4s,mb5.1								
GTA	**Gaotai**	**72.03**	**316**	*e*P		**P**		**08 49 58.5**	**+1.1**
GTA				pP		pP		08 50 01.5	-6.8
GTA				sP		sP		08 50 04.6	-7.7
GTA				PP		PP		08 52 42.2	+4.4
GTA				S		S		08 59 20.4	+3.7
GTA				sS		sS		08 59 25.4	-9.3
GTA				pmax	pmax				
	comp=Z,7.0nm,1.1s,mb4.5								
GTA				pmax	pmax				
	comp=Z,150nm,5.1s								
GTA				LR		LR			
	comp=N,140nm,19.9s,MS4.5								
GTA				LR		LR			
	comp=E,220nm,19.0s,MS4.5								
GTA				LR		LR			
	comp=Z,160nm,19.9s,MS4.3								
ULN	**Ulaanbaatar**	**72.11**	**327**	*e*P		**P**		**08 49 58.0**	**+0.4**
SONM	**Songino Array**	**72.44**	**326**	P		**P**		**08 50 00.1**	**+0.5**
	comp=Z,7.0nm,0.9s,mb4.6,baz=131,slow=6.1,SNR=12								
SONM				LR		LR		09 21 00.1	
	comp=Z,169nm,18.4s,MS4.3,baz=247,slow=35								
SHL	**Shillong**	**72.65**	**300**	*e*PKP		**P**		**08 50 02.5**	**+1.1**
YAK	**Yakutsk**	**74.03**	**347**	*c i*P		**P**		**08 50 08.0**	**-0.7**
YAK				*e**PP		pP		08 50 17.7	-1.9
YAK				*e*				08 50 23.2	
YAK				*e*S		S		08 59 37.8	-0.7
YAK				*e*				09 00 17.6	
YAK				pmax	pmax				
	comp=Z,34nm,0.9s,mb5.3								
YAK				pmax	pmax				
	comp=N,10.0nm,1.0s								
YAK				pmax	pmax				
	comp=E,3.0nm,1.4s								
YAK				smax					
	comp=E,114nm,3.4s								
YAK				smax					
	comp=N,122nm,3.1s								
YAK				MLR		MLR			
	comp=Z,160nm,24.0s,MS4.2								
YAK				MLR		MLR			
	comp=E,102nm,24.0s,MS4.3								
YAK				MLR		MLR			
	comp=N,136nm,20.0s,MS4.3								
ZAK	**Zakamensk**	**75.58**	**327**	*e*P		**P**		**08 50 16.5**	**-1.4**
ZAK				pmax	pmax				
	comp=Z,3.0nm,1.9s								
TLY	**Talaya**	**76.12**	**329**	*e*P		**P**		**08 50 20.4**	**-0.6**
TLY				*e*S		S		09 00 02.2	0.0
TLY				*e*SS		SS		09 05 02.5	+6.2
TLY				pmax	pmax				
	comp=Z,5.0nm,1.0s,mb4.4								
TLY				MLR		MLR			
	comp=Z,98nm,17.0s,MS4.2								
OHAK	**Old Harbor**	**77.05**	**25**	*e*P		**P**		**08 50 25.4**	**-0.7**
SVW2	**Sparrevohn**	**78.74**	**21**	*e*P		**P**		**08 50 35.6**	**+0.2**
	comp=Z,23nm,1.0s,mb5.1								
TTA	**Tatalina**	**79.85**	**20**	*e*P		**P**		**08 50 40.3**	**-1.1**
QSPA	**South Pole Qui**	**81.08**	**180**	*e*P		**P**		**08 50 46.9**	**-1.0**
	comp=Z,16nm,1.2s,mb4.8								
PMR	**Palmer**	**81.44**	**23**	*e*P		**P**		**08 50 48.6**	**-1.4**
	comp=Z,50nm,1.6s,mb5.2								
PMR	**Palmer**	**81.44**	**23**	*e*P		**P**		**08 50 48.6**	**-1.4**
PMR				pmax	pmax				
	comp=Z,50nm,1.6s,mb5.2								
WMQ	**Urumqi**	**82.11**	**317**	P		**P**		**08 50 54.4**	**+0.5**
WMQ				pP		pP		08 50 59.2	-5.8
WMQ				sP		sP		08 51 01.4	-7.6
WMQ				PP		PP		08 54 04.4	+1.9
WMQ				*e*S		S		09 01 07.3	+1.0
WMQ				SKS				09 01 10.0	
WMQ				SS		SS		09 06 29.9	+3.3
WMQ				pmax	pmax				
	comp=Z,16nm,1.4s,mb4.8								
WMQ				pmax	pmax				
	comp=Z,190nm,6.0s								
WMQ				LR		LR			
	comp=N,120nm,22.5s								
WMQ				LR		LR			
	comp=Z,170nm,22.5s,MS4.4								
TIXI	**Tiksi**	**82.64**	**351**	*e*P		**P**		**08 50 55.5**	**-0.6**
TIXI	**Tiksi**	**82.64**	**351**	*e*P		**P**		**08 50 54.4**	**-1.7**
TIXI				pmax	pmax				
	comp=Z,29nm,1.6s,mb5.1								
MCK	**McKinley**	**82.81**	**21**	*e*P		**P**		**08 50 55.8**	**-1.3**
	comp=Z,10μm,0.6s								
MAW	**Mawson**	**83.71**	**203**	*e*P		**P**		**08 51 01.4**	**-0.5**
	comp=Z,9.5nm,1.5s,mb4.7								
MAW	**Mawson**	**83.71**	**203**	P		**P**		**08 51 01.4**	**-0.4**
	comp=Z,6.0nm,1.0s,mb4.7,baz=79,slow=4.8,SNR=8.2								
MAW				LR		LR		09 27 54.0	
	comp=Z,179nm,18.6s,MS4.5,baz=96,slow=35								
MAW	**Mawson**	**83.71**	**203**	*e*P		**P**		**08 51 01.4**	**-0.4**
MAW				pmax	pmax				
	comp=Z,9.0nm,1.5s								
COLA	**College**	**83.87**	**

comp=Z,28nm,1.7s,mb5.3
KSH **Kashi** 89.36 310 *e*P P 08 51 31.5 +1.5
KSH *e*pP pP 08 51 36.3 -4.8
KSH *e*sP sP 08 51 37.5 -7.6
KSH *e*PP PP 08 55 07.1 +5.7
KSH *e*SKS 09 01 59.8
KSH *e*S S 09 02 21.6 +3.9
KSH *es*S sS 09 02 29.8 -6.3
KSH pmax pmax
comp=Z,4.0nm,0.5s,mb5.0
KSH pmax pmax
comp=Z,120nm,2.7s,mb5.8
KSH LR LR
comp=N,180nm,14.5s,MS4.8
KSH LR LR
comp=E,130nm,10.4s,MS4.8
KSH LR LR
comp=Z,150nm,6.3s
SCI San Clemente I 89.51 57 ⇑P P 08 51 30.3 -0.6
baz=90
RCTC Rector, Farmer 89.59 53 ⇑P P 08 51 30.3 -0.9
baz=90
VES Vestal, Richgr 89.62 54 ⇓P P 08 51 31.0 -0.3
baz=90
K05A Summer Lake 89.65 47 ⇑P P 08 51 31.6 +0.3
baz=90
OSI Osito Adit 89.68 55 ⇓P P 08 51 31.2 -0.4
baz=90
ARVC Arvin 89.69 55 ⇑P P 08 51 31.7 0.0
baz=90,SNR=5.3
CIS Catalina Islan 89.71 56 ⇑P P 08 51 31.4 -0.4
baz=90,SNR=6.4
WCN Washoe City 89.78 50 ⇑P P 08 51 32.5 +0.5
baz=90
FMP Fort Macarthur 89.86 56 ⇑P P 08 51 32.6 +0.2
baz=90
WAKR Walker 89.87 51 *e*P P 08 51 32.8 +0.4
D05A Enumclaw 89.88 42 ⇓P P 08 51 32.3 +0.1
baz=90
MOD Modoc 89.91 48 *e*P P 08 51 32.5 0.0
DECC Green Verdugo 89.93 55 ⇑P P 08 51 32.5 -0.3
baz=90
PASC Pasadena Art C 90.03 56 *e*P P 08 51 33.8 +0.5
comp=Z,133nm,1.3s,mb6.1
KURK Kurchatov 90.05 321 *e*P P 08 51 31.5 -1.4
comp=Z,12nm,1.4s,mb5.0
KURK Kurchatov 90.05 321 *c i*P P 08 51 31.5 -1.4
KURK pmax pmax
comp=Z,12nm,1.5s,mb5.0
ISA Isabella 90.08 54 ⇓P P 08 51 33.4 0.0
baz=90,SNR=10
ISA Isabella 90.08 54 *e*P P 08 51 33.4 0.0
comp=Z,7.2nm,0.9s,mb5.0
ISA Isabella 90.08 54 *e*P P 08 51 33.4 0.0
ISA pmax pmax
comp=Z,7.0nm,0.9s,mb5.0
MWC Mount Wilson 90.14 56 *e*P P 08 51 34.0 +0.2
comp=Z,31nm,1.0s,mb5.6
MWC Mount Wilson 90.14 56 *e*P P 08 51 34.0 +0.2
MWC pmax pmax
comp=Z,31nm,1.0s,mb5.6
PAHR Pah Rah Range 90.14 50 *e*P P 08 51 34.4 +0.7
MLAC Mammoth Lakes 90.16 52 ⇓P P 08 51 34.6 +0.8
baz=90
EDW2 Edwards Air Fo 90.32 55 ⇓P P 08 51 34.9 +0.3
baz=90,SNR=16
MTUM Tungsten Hills 90.32 52 *e*P P 08 51 35.1 +0.6
BFSC Mount Baldy Ra 90.47 56 ⇑P P 08 51 35.1 -0.3
baz=90,SNR=12
INK Inuvik 90.53 20 *e*P P 08 51 34.5 -0.3
comp=Z,22nm,1.3s,mb5.3
INK Inuvik 90.53 20 *e*P P 08 51 34.5 -0.3
INK pmax pmax
comp=Z,22nm,1.3s
TIN Tinemaha 90.53 53 ⇑P P 08 51 35.9 +0.4
baz=90
CWC Cottonwood Cre 90.53 53 ⇓P P 08 51 35.6 +0.1
baz=90,SNR=9.6
LRMC Laurel Mountai 90.67 54 ⇓P P 08 51 36.8 +0.6
baz=91
109C Camp Elliot, M 90.69 57 ⇓P P 08 51 36.4 0.0
baz=91
NVAR Mina Array Bea 90.73 51 P P 08 51 36.6 +0.2
comp=Z,21nm,1.0s,mb5.4,baz=244,slow=6.1,SNR=86
MURC Murrieta 90.73 56 ⇓P P 08 51 36.5 -0.1
baz=91
I07A Izee 90.92 46 ⇑P P 08 51 37.0 -0.1
baz=91
MPMC Manual Prospec 90.93 54 ⇓P P 08 51 37.6 +0.2
baz=91,SNR=18
UCH Uchtor 90.99 312 *e*P P 08 51 37.4 -0.1
comp=Z,1μm,1.2s
BAR Barrett 91.01 57 *e*P P 08 51 38.4 +0.5
AAK Ala-Archa 91.08 313 *e*P P 08 51 37.1 -0.8
AAK pmax pmax
comp=Z,3.0nm,1.6s,mb4.4
BBRC Big Bear Solar 91.08 56 ⇓P P 08 51 38.2 0.0
baz=91
RRX Edison Barstow 91.12 55 ⇓P P 08 51 38.1 -0.2
baz=91
GRAC Grapevine Rang 91.19 53 ⇓P P 08 51 38.9 +0.3
baz=91
WVOR Wild Horse Val 91.22 47 *e*P P 08 51 38.2 -0.4
comp=Z,81nm,2.0s,mb5.7
MONP Monument Peak 91.26 57 ⇑P P 08 51 39.4 +0.4
baz=91,SNR=6.8
PFO Pinyon Flat Ob 91.35 56 ⇑P P 08 51 39.7 +0.2
baz=91
GSC Goldstone 91.35 55 ⇓P P 08 51 39.5 +0.1
baz=91,SNR=7.2
GSC Goldstone 91.35 55 *e*P P 08 51 39.5 +0.1
comp=Z,21nm,1.4s,mb5.3
GSC Goldstone 91.35 55 *e*P P 08 51 39.5 +0.1
GSC pmax pmax
comp=Z,21nm,1.4s,mb5.3
DVTC Desert V Tower 91.48 57 ⇑P P 08 51 40.2 +0.1
baz=92
FURC Furnace Creek, 91.51 53 ⇓P P 08 51 40.0 -0.1
baz=92,SNR=19
J08A Circle Bar Ran 91.52 46 ⇓P P 08 51 39.8 -0.2
baz=92
G08A Pilot Rock 91.54 45 ⇓P P 08 51 39.4 -0.6
baz=92
AML Almayashu 91.57 312 *e*P P 08 51 40.4 +0.1
HEC Hector,Ludlow 91.66 55 ⇓P P 08 51 40.6 -0.2
baz=92,SNR=5.7
SWSC Sam W. Stewart 91.78 57 ⇑P P 08 51 41.3 -0.1
baz=92
BELC Belle Mtn. Jos 91.79 56 ⇓P P 08 51 41.4 0.0
baz=92,SNR=11
SHOC Shoshone 91.87 54 ⇓P P 08 51 41.5 -0.3
baz=92
B08A Colville Reser 91.88 41 ⇑P P 08 51 40.1 -1.4
baz=92
D08A Wollman Farm, 91.90 43 ⇑P P 08 51 40.8 -0.8
baz=92
U10A Ash Meadows, A 91.92 54 ⇑P P 08 51 42.2 +0.2
baz=92,SNR=13
S10A Tonopah Range, 91.96 52 ⇓P P 08 51 42.6 +0.4
baz=92
TUQ Turquoise Moun 92.08 55 ⇑P P 08 51 42.8 +0.1
baz=92,SNR=9.0
OD2 Odessa Site #2 92.10 42 *e*P P 08 51 42.0 -0.6
BC3 Big Chuckawall 92.18 56 ⇓P P 08 51 43.4 +0.1
baz=92
GMRC Granite Mounta 92.19 55 ⇑P P 08 51 43.4 +0.1
baz=92,SNR=12
R10A Warm Springs 92.25 52 ⇑P P 08 51 43.9 +0.4
baz=92,SNR=12
Q10A Clear Creek Ra 92.26 51 ⇓P P 08 51 43.8 +0.3
baz=92,SNR=23
E09A Wood Farm, Sta 92.32 43 ⇑P P 08 51 43.0 -0.6
baz=92
O10A Cortez Mining, 92.43 50 ⇑P P 08 51 44.2 -0.1
baz=92
IRM Iron Mountain 92.51 56 ⇑P P 08 51 44.9 +0.1
baz=92,SNR=10
V11A Goodsprings 92.54 54 ⇑P P 08 51 45.1 +0.2
baz=92,SNR=9.0
S11A Rachel 92.58 52 ⇓P P 08 51 45.1 +0.1
baz=93,SNR=7.3
M10A I.L. Ranch, Tu 92.60 49 ⇓P P 08 51 45.4 +0.3
baz=93
GLA Glamis 92.60 57 ⇑P P 08 51 45.6 +0.3
baz=93
BMO Blue Mountains 92.61 45 *e*P P 08 51 44.6 -0.4
comp=Z,5.8nm,1.0s,mb5.0
BMO Blue Mountains 92.61 45 *e*P P 08 51 44.6 -0.4
BMO pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
U11A Corn Creek 92.67 54 ⇓P P 08 51 45.8 +0.3
baz=93
112A Yuma 92.73 58 ⇑P P 08 51 45.8 -0.1
baz=93
L10A Juniper Basin 92.74 48 ⇓P P 08 51 45.8 +0.1
baz=93,SNR=14
R11A Troy Canyon, C 92.82 52 ⇑P P 08 51 46.4 +0.3
baz=93,SNR=25
Q11A Duckwater 92.84 51 ⇑P P 08 51 46.8 +0.6
baz=93,SNR=39
F10A Beach Ranch, E 92.86 44 ⇑P P 08 51 45.4 -0.6
baz=93
P11A Circle Ranch, 92.88 51 ⇓P P 08 51 46.5 +0.2
baz=93,SNR=7.2
W12A Cal Nev Ari 92.91 55 ⇓P P 08 51 46.5 -0.1
baz=93
V12A Nelson 92.99 54 ⇑P P 08 51 47.1 +0.2
baz=93
O11A Cowboy Ranch, 93.04 50 ⇑P P 08 51 47.6 +0.5
baz=93,SNR=8.0
N11A Elko Archery C 93.09 49 ⇓P P 08 51 47.6 +0.3
baz=93
M11A Holland Ranch, 93.14 49 ⇓P P 08 51 48.1 +0.6
baz=93,SNR=8.4
T12A Moapa 93.25 54 ⇑P P 08 51 48.3 +0.2
baz=93
S12A Delamar Landin 93.28 53 ⇑P P 08 51 48.8 +0.6
baz=93,SNR=8.5
L11A Cat Creek Ranc 93.28 48 ⇓P P 08 51 48.5 +0.4
baz=93,SNR=19
U12A Valley of Fire 93.35 54 ⇑P P 08 51 48.3 -0.3
baz=93
MFID Camas Ranch 93.43 47 ⇑P P 08 51 48.5 -0.2
baz=93
Q12A Willow Creek R 93.51 51 ⇑P P 08 51 49.8 +0.5
baz=94,SNR=25
P12A McGill 93.51 51 ⇓P P 08 51 49.9 +0.6
baz=94,SNR=24
Y13A Salome 93.54 56 ⇓P P 08 51 49.9 +0.3
baz=94
R12A Pony Springs, 93.57 52 ⇓P P 08 51 50.1 +0.6
baz=94,SNR=30
Z13A Yuma Proving G 93.60 57 ⇓P P 08 51 50.5 +0.7
baz=94
N12A Clover Valley, 93.62 49 ⇓P P 08 51 50.1 +0.4
baz=94,SNR=11
X13A Yucca 93.65 56 ⇑P P 08 51 50.1 +0.1
baz=94
W13A Hualapai Mount 93.68 55 ⇑P P 08 51 50.4 +0.2
baz=94,SNR=5.8
V13A Grand Canyon W 93.71 54 ⇑P P 08 51 50.3 +0.1
baz=94,SNR=8.8
O12A Currie 93.75 50 ⇓P P 08 51 50.5 +0.2
baz=94,SNR=16
M12A Wells 93.79 49 ⇓P P 08 51 50.6 +0.1
baz=94,SNR=5.6
L12A House Creek Ra 93.82 48 ⇑P P 08 51 50.8 +0.2
baz=94,SNR=16
T13A Saint George 93.94 53 ⇑P P 08 51 51.8 +0.5
baz=94,SNR=12
I12A Atlanta 93.98 46 ⇓P P 08 51 51.0 -0.3
baz=94,SNR=9.1
R13A O'Grain Ranch, 94.05 52 ⇑P P 08 51 52.3 +0.5
baz=94,SNR=12
S13A Holt Ranch, En 94.05 53 ⇓P P 08 51 52.3 +0.5
baz=94,SNR=15
Q13A Wheeler Ranch, 94.12 51 ⇑P P 08 51 52.5 +0.4
baz=94,SNR=19
114A Black Gap (USA 94.18 58 ⇑P P 08 51 52.3 -0.2
baz=94
F12A Elk City 94.18 45 ⇑P P 08 51 51.6 -0.6
baz=94
P13A Bates Ranch, G 94.19 51 ⇓P P 08 51 52.7 +0.3
baz=94,SNR=22
N13A Wendover, West 94.24 49 ⇓P P 08 51 53.0 +0.4
baz=94
H12A Diamond D Ranc 94.29 46 ⇑P P 08 51 52.3 -0.4
baz=94
D12A Red Ives Fores 94.30 43 ⇑P P 08 51 51.7 -1.0
baz=94,SNR=5.9
O13A Hicks Ranch, I 94.31 50 ⇑P P 08 51 53.4 +0.4
baz=94,SNR=5.0
W14A Seligman 94.35 55 ⇓P P 08 51 53.6 +0.3
baz=94
V14A Boquillas Ranc 94.39 55 ⇓P P 08 51 53.6 +0.2
baz=94
ARUT Antelope Range 94.41 53 *e*P P 08 51 53.6 +0.2
ARUT pmax pmax
comp=Z,13nm,1.3s,mb5.2
U14A Mt Trumbull 94.43 54 ⇑P P 08 51 54.1 +0.5
baz=94,SNR=6.2
CCUT Cedar City 94.44 53 *e*P P 08 51 54.9 +1.3
comp=Z,6.3nm,1.1s,mb5.0
HLID Hailey 94.47 47 ⇓P P 08 51 53.6 +0.1
baz=94
HLID Hailey 94.47 47 *e*P P 08 51 53.8 +0.3
comp=Z,12nm,1.3s,mb5.2
L13A Double Diamond 94.61 48 ⇑P P 08 51 54.6 +0.4
baz=95
J13A Cove Ranch, Pi 94.61 47 ⇑P P 08 51 54.2 0.0
baz=95,SNR=7.6
S14A Cedar City 94.62 53 ⇓P P 08 51 54.3 -0.1
baz=95
Q14A Sevier Lake (B 94.70 51 ⇓P P 08 51 55.0 +0.2
baz=95,SNR=15
H13A Challis 94.72 46 ⇓P P 08 51 54.2 -0.5
baz=95,SNR=8.5
I13A Wildhorse Cree 94.73 46 ⇓P P 08 51 54.7 0.0
baz=95,SNR=14
G13A Cobalt 94.80 45 ⇓P P 08 51 54.7 -0.4
baz=95
F13A Darby 94.83 45 ⇓P P 08 51 53.6 -1.6
baz=95
P14A Drum Mountains 94.94 51 ⇓P P 08 51 56.0 +0.2
baz=95,SNR=11
X15A Humboldt 94.94 56 ⇑P P 08 51 55.9 -0.1
baz=95
M14A Sheep Mountain 94.97 49 ⇓P P 08 51 55.9 -0.1
baz=95,SNR=7.4
N14A Grayback Hills 95.01 50 ⇑P P 08 51 56.0 -0.1
baz=95,SNR=11
L14A Malta 95.12 48 ⇑P P 08 51 56.7 +0.1
baz=95,SNR=10
U15A North Rim 95.14 54 ⇓P P 08 51 57.4 +0.6
baz=95
T15A Red Dirt Ranch 95.14 53 ⇑P P 08 51 57.7 +0.9
baz=95
K14A Jones Ranch, D 95.23 48 ⇑P P 08 51 57.2 +0.1
baz=95,SNR=11
H14A Leadore 95.35 46 ⇓P P 08 51 57.9 +0.3
baz=95
Q15A Fillmore 95.39 52 ⇓P P 08 51 58.1 +0.2
baz=95
HVU Hansel Valley 95.43 49 *e*P P 08 51 58.7 +0.7
BVAR Borovoye Array 95.49 323 P P 08 51 55.8 -2.2
comp=Z,1.2nm,0.6s,mb4.5,baz=90,slow=5.9,SNR=8.6
MSU Marysvale 95.49 52 *e*P P 08 51 59.8 +1.4
P15A Leamington 95.54 51 ⇓P P 08 51 58.6 0.0
baz=96
BRVK Borovoye 95.56 323 *e*P P 08 51 56.2 -2.1
BRVK pmax pmax
comp=Z,7.0nm,1.3s,mb4.9
M15A Larsen Ranch, 95.64 49 ⇓P P 08 51 58.7 -0.3
baz=96,SNR=9.0
K15A Arbon 95.72 48 ⇓P P 08 51 59.3 0.0
baz=96
NLU North Lily Min 95.74 51 *e*P P 08 51 59.8 +0.3
comp=Z,9.4nm,1.0s,mb5.2
MCMT McKenzie Canyo 95.74 46 *e*P P 08 51 58.7 -0.7
comp=Z,1.4nm,1.1s,mb4.3
L15A Malad City 95.75 49 ⇑P P 08 51 59.4 0.0
baz=96
H15A Lima 95.86 46 ⇓P P 08 51 59.8 -0.1
baz=96,SNR=10
DLMT Dillon 95.98 45 *e*P P 08 52 00.2 -0.2
comp=Z,8.0nm,1.3s,mb5.0
R16A Teasdale 96.00 52 ⇓P P 08 52 01.7 +0.9
baz=96
P16A Fountain Green 96.02 51 ⇓P P 08 52 01.0 +0.3
baz=96
G15A Dillon 96.04 45 ⇑P P 08 52 00.3 -0.4
baz=96
E15A Deer Lodge 96.07 44 ⇓P P 08 51 59.8 -1.0
baz=96
O16A Springville 96.20 50 ⇑P P 08 52 01.8 +0.2
baz=96
V17A Tonalea, Kykot 96.25 55 ⇓P P 08 52 03.1 +1.2
baz=96
JLU Jordanelle 96.29 50 *e*P P 08 52 02.2 +0.3
comp=Z,12nm,1.1s,mb5.2
A15A Johnson Ranch, 96.29 42 ⇓P P 08 51 01.7 -0.1
baz=96
HWUT Hardware Ranch 96.31 49 *e*P P 08 52 01.8 -0.2
N16A Rees Ranch, Co 96.33 50 ⇑P P 08 52 02.6 +0.4
baz=96
TMUT Trail Mountain 96.33 51 *e*P P 08 52 02.8 +0.6
EDM Edmonton 96.37 37 *e*P P 08 52 00.8 -1.2
J16A Bone 96.46 47 ⇑P P 08 52 02.9 +0.2
baz=96
G16A Moss Hill, Enn 96.52 45 ⇓P P 08 52 02.4 -0.5
baz=96
118A Homack Ranch, 96.60 58 ⇑P P 08 52 03.4 -0.2
baz=97
I16A Newdale 96.61 47 ⇓P P 08 52 03.3 0.0
baz=97
R17A Hanksville Air 96.62 52 ⇓P P 08 52 04.5 +1.0
baz=97
BOZ Bozeman (W) 96.69 45 ⇑P P 08 52 03.3 -0.3
baz=97
BOZ Bozeman (W) 96.69 45 *e*P P 08 52 03.3 -0.3
YKA Yellowknife Ar 96.72 28 P P 08 52 02.5 -0.8
comp=Z,2.3nm,0.9s,mb4.6,baz=256,slow=4.4,SNR=8.7
O17A Robinson Place 96.79 50 ⇑P P 08 52 04.8 +0.5
baz=97
H16A Russell Place, 96.86 46 ⇓P P 08 52 04.5 +0.1
baz=97
IMW Indian Meadow 97.01 47 *e*P P 08 52 05.7 +0.6
REDW Red Top Meadow 97.02 47 *e*P P 08 52 05.9 +0.8
SNOW Snow King Moun 97.10 47 *e*P P 08 52 06.6 +1.1
P18A Preston Nutter 97.11 51 ⇑P P 08 52 05.8 +0.1
baz=97
MOOW Moose Ponds 97.13 47 *e*P P 08 52 05.0 -0.7
R18A Canyonlands Na 97.26 52 ⇑P P 08 52 06.3 -0.1
baz=97
O18A Roosevelt 97.35 50 ⇑P P 08 52 07.3 +0.5
baz=97
F17A Fitzpatrick Pl 97.39 45 ⇑P P 08 52 06.6 -0.2
baz=97
N18A Larsen Ranch, 97.67 50 ⇓P P 08 52 07.9 -0.3
baz=98
I18A Diamond G Ranc 97.80 47 ⇑P P 08 52 08.6 -0.1
baz=98
Z20A Nine Sixteen R 97.80 58 ⇓P P 08 52 09.0 0.0
baz=98
BW06 Boulder Array 97.91 48 *e*P P 08 52 08.8 -0.5
L19A Farson 98.00 49 ⇑P P 08 52 09.9 +0.3
baz=98
O19A Miners Draw (B 98.03 50 ⇑P P 08 52 09.8 0.0
baz=98
P19A Cripple Cowboy 98.08 51 ⇑P P 08 52 10.6 +0.6
baz=98
K19A Absolon Red Bu 98.43 48 ⇑P P 08 52 11.2 -0.4
baz=98
P20A De Beque 98.52 51 ⇓P P 08 52 12.1 0.0
baz=98
Q20A Ridgley Place, 98.55 52 ⇓P P 08 52 12.2 0.0
baz=98
O20A White River Ci 98.69 51 ⇓P P 08 52 12.4 -0.3
baz=99
N20A Spence Gulch, 98.72 50 ⇓P P 08 52 12.8 -0.1
baz=99
L20A Wamsutter 98.75 49 ⇓P P 08 52 12.7 -0.3
baz=99
K20A Yellowstone Ra 98.79 48 ⇓P P 08 52 12.5 -0.6
baz=99
Z22A Elephant Butte 99.18 58 ⇓P P 08 52 14.6 -0.5
baz=99
N21A Black Mountain 99.28 50 ⇓P P 08 52 14.9 -0.5
baz=99
Q22A Crested Butte, 99.63 52 ⇑P Pdif 08 52 17.2 +0.6
baz=100
R22A Saguache, Gunn 99.71 53 ⇓P Pdif 08 52 18.1 +1.1
baz=100
N23A Red Feather La 100.48 50 ⇓P Pdif 08 52 20.9 +0.4
baz=100
TXAR Lajitas Array 101.71 62 P Pdif 08 52 27.2 +1.3
comp=Z,0.4nm,0.8s,baz=228,slow=6.3,SNR=5.4
ARCES ARCESS Array B 112.20 344 PKIKP PKiKP 08 57 07.6 -0.7
comp=Z,1.2nm,0.9s,baz=86,slow=5.0,SNR=3.7
AKASG Malin Array Be 120.70 325 PKP PKPdf 08 57 24.3 -0.8
comp=Z,0.9nm,0.5s,baz=52,slow=2.8,SNR=3.2
BRTR Keskin Array B 121.72 311 PKP PKPdf 08 57 26.8 -0.6
comp=Z,0.6nm,0.9s,baz=101,slow=1.5,SNR=3.2
NOA NORSAR Array B 122.40 341 PKP PKPdf 08 57 27.2 -0.9
comp=Z,2.4nm,0.9s,baz=38,slow=2.0,SNR=3.5
KOLS Kolonicke sedl 125.49 325 *e*PKP PKPdf 08 57 35.0 +0.6
KOLS Kolonicke sedl 125.49 325 *e*PKP PKPdf 08 57 35.0 +0.6
VYHS Vyhne 127.64 327 *e*PKP PKPdf 08 57 38.6 +0.1
VYHS Vyhne 127.64 327 *e*PKP PKPdf 08 57 38.6 +0.1
LPAZ La Paz 128.11 119 PKP PKPdf 08 57 41.0 +0.7
comp=Z,2.1nm,0.7s,baz=349,slow=2.2,SNR=9.0
LPAZ La Paz 128.11 119 *e*PKIKP PKPdf 08 57 40.7 +0.4
BRG Berggiesshubel 128.65 331 *e*PKPdf PKPdf 08 57 39.9 -0.4
BRG Berggiesshubel 128.65 331 *e*PKP PKPdf 08 57 40.4 0.0
comp=Z,15nm,1.4s
BRG Berggiesshubel 128.65 331 *e*PKIKP PKPdf 08 57 40.4 +0.1
BRG pmax pmax
comp=Z,9.0nm,1.4s
CLL Collm 128.80 332 *e*PKP PKPdf 08 57 40.0 -0.6
CLL Collm 128.80 332 *e*PKPdf PKPdf 08 57 40.0 -0.6
CLL *e*SS SS 09 17 02.0 -0.1
CLL LmV 09 54 00.0
comp=Z,100nm,19.0s
CLZ Clausthal 129.59 334 *e*PKPdf PKPdf 08 57 42.1 0.0
TANN Tannenbergstha 129.66 332 *e*PKPdf PKPdf 08 57 42.0 -0.3
WERD Werda 129.71 332 *e*PKPdf PKPdf 08 57 42.1 -0.3
GUNZ Gunzen 129.75 332 *e*PKPdf PKPdf 08 57 42.3 -0.2
MOX Moxa 129.89 332 *e*PKP PKPdf 08 57 43.8 +1.1
MOX Moxa 129.89 332 *e*PKPdf PKPdf 08 57 42.3 -0.4
SOKA Soboth 130.79 327 ⇓ *i*PKiKP PKiKP 08 57 44.5 -1.0
comp=Z,9.2nm,1.4s
TNS Taunus Mts 131.60 334 *e*PKPdf PKPdf 08 57 46.0 0.0
BFO Black Forest 133.04 332 *e*PKPdf PKPdf 08 57 48.4 -0.3
DAVA Damuels 133.05 330 ⇓ *i*PKiKP PKiKP 08 57 49.8 -0.1
comp=Z,3.1nm,0.8s
MVO Moncorvo 145.18 340 *e*PKP PKPdf 08 58 10.0 -1.1
ESDC Sonseca Array 145.30 335 PKPbc PKPbc 08 58 10.3 -0.8
comp=Z,0.3nm,0.3s,baz=24,slow=3.8,SNR=13
PVRL Vila Real 145.31 341 *e*PKP PKPdf 08 58 11.3 0.0
PVIS Viseu 145.87 340 *e*PKP PKPdf 08 58 12.9 +0.6
MTE Manteigas 146.03 340 *e*PKP PKPdf 08 58 13.7 +1.1
MTE Manteigas 146.03 340 *e*PKPdf PKPdf 08 58 12.6 0.0
PCBR Castelo Branco 146.51 339 *e*PKP PKPab 08 58 15.8 +0.1
PMRV Marv??o 146.84 339 *e*PKP PKPbc 08 58 15.7 -0.1
PCVE Castro Verde 148.67 338 *e*PKP PKPbc 08 58 21.5 +0.7
PVAQ Vaqueiros 148.75 337 *e*PKP PKPbc 08 58 21.0 0.0
PBDV Barranco-do-Ve 148.97 338 *e*PKP PKPbc 08 58 21.5 -0.1
TORD Torodi Ar. Bea 156.18 282 PKP PKPdf 08 58 27.9 -0.8
comp=Z,0.5nm,0.8s,baz=270,slow=1.4,SNR=3.6
TORD PKPab PKPab 08 58 55.9 -0.7
comp=Z,2.8nm,1.0s,baz=61,slow=2.2,SNR=5.3

WEL 06 08:43:42.6±0.5, 36.84S×177.01E, h236km±3km, ML4.1/14,
Error ellipse: s-maj=4.6km s-min=3.6km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.26**	**125**	PN	Pn		08 44 17.6	-0.2
MXZ				SN	S		08 44 44.9	-0.5
URZ	**Urewera**	**1.42**	**177**	PN	Pn		08 44 19.0	+0.1
URZ				SN	S		08 44 47.6	0.0
MWZ	**Matawai**	**1.55**	**165**	PN	Pn		08 44 20.2	+0.3
MWZ				SN	S		08 44 49.4	0.0
PUZ	**Puketiti**	**1.58**	**141**	PN	Pn		08 44 20.2	0.0
PRRZ	**Plateau Road**	**1.73**	**196**	PN	Pn		08 44 22.2	+0.8
CNGZ	**Carnagh Statio**	**1.90**	**150**	PN	Pn		08 44 23.5	+0.6
RAHZ	**Arahi**	**2.08**	**178**	PN	Pn		08 44 25.0	+0.4
PRGZ	**Paritu Road**	**2.19**	**162**	PN	Pn		08 44 25.9	+0.2
KNZ	**Kokohu**	**2.24**	**167**	PN	Pn		08 44 26.1	-0.1
NMHZ	**Naumai**	**2.26**	**184**	PN	Pn		08 44 27.1	+0.7
BKZ	**Black Stump Fm**	**2.36**	**190**	PN	Pn		08 44 27.0	-0.4
MHGZ	**Mahia Peninsul**	**2.42**	**163**	PN	Pn		08 44 28.1	+0.2
NGZ	**Ngauruhoe**	**2.58**	**205**	PN	Pn		08 44 30.5	+0.8
MCHZ	**McNeill Hill**	**2.61**	**185**	PN	Pn		08 44 30.2	+0.2
WPVZ	**Whakapapa**	**2.63**	**206**	PN	Pn		08 44 30.5	+0.4
TUVZ	**Tukino**	**2.65**	**203**	PN	Pn		08 44 30.8	+0.4

FWVZ	Far West T-bar	2.67	205	PN	Pn	08 44 30.8	+0.2
WNVZ	Wahianoa	2.72	204	PN	Pn	08 44 31.4	+0.2
PKVZ	Pokaka	2.78	208	PN	Pn	08 44 32.2	+0.5
CKHZ	Cape Kidnapper	2.82	179	PN	Pn	08 44 31.7	-0.4
MTVZ	Mangateitei	2.82	205	PN	Pn	08 44 32.5	+0.3
KAHZ	Kahuranaki	2.95	182	PN	Pn	08 44 33.4	-0.3
PNHZ	Pukenui	3.14	191	PN	Pn	08 44 34.6	-1.1
PXZ	Pawanui	3.19	182	PN	Pn	08 44 35.2	-1.0
PXZ				SN	S	08 45 17.5	-1.2
WPHZ	Waipukurau	3.25	188	PN	Pn	08 44 36.0	-1.0
TSZ	Takapari Road	3.32	194	PN	Pn	08 44 36.6	-1.2
WAZ	Wanganui	3.32	208	PN	Pn	08 44 37.6	-0.2
PRHZ	Porangahau	3.44	185	PN	Pn	08 44 38.0	-1.1
DVHZ	Dannevirke	3.52	191	PN	Pn	08 44 38.6	-1.4
POWZ	Post Office Ro	3.68	195	PN	Pn	08 44 40.4	-1.5
BFZ	Birch Farm	3.88	189	PN	Pn	08 44 42.5	-1.8
MRZ	Mangatainoka R	3.98	196	PN	Pn	08 44 43.5	-1.9
TIWZ	Tintock	4.03	192	PN	Pn	08 44 44.3	-1.7
HOWZ	Holdsworth Sta	4.22	196	PN	Pn	08 44 46.1	-2.2
OGWZ	Otaki Gorge	4.22	199	PN	Pn	08 44 46.2	-2.2
KIW	Kapiti Island	4.34	202	PN	Pn	08 44 47.5	-2.2
TMWZ	Te Maipa	4.35	191	PN	Pn	08 44 48.0	-1.9
MTW	Mount Morrison	4.47	195	PN	Pn	08 44 48.8	-2.6
CAW	Cannon Point	4.52	199	PN	Pn	08 44 49.5	-2.5
DUWZ	D'Urville Isla	4.63	210	PN	Pn	08 44 51.0	-2.4
TRWZ	Traveller	4.67	192	PN	Pn	08 44 51.8	-2.0
PAWZ	Paruwai Farm	4.70	195	PN	Pn	08 44 51.7	-2.5
MSWZ	Moikau Station	4.77	196	PN	Pn	08 44 52.5	-2.5
SNZO	South Karori	4.81	201	PN	Pn	08 44 52.5	-3.1
TCW	Tory Channel	4.86	205	PN	Pn	08 44 53.6	-2.5
PLWZ	Palliser	4.92	196	PN	Pn	08 44 54.0	-2.8
TUWZ	Tuamarina	5.17	207	PN	Pn	08 44 57.2	-2.7
QRZ	Quartz Range	5.30	220	PN	Pn	08 44 58.5	-3.1
BSWZ	Blackbirch Sta	5.44	206	PN	Pn	08 45 01.2	-2.2
THZ	Tophouse	5.86	212	PN	Pn	08 45 05.2	-3.3
KHZ	Kahutara	6.18	205	PN	Pn	08 45 09.7	-3.0
LTZ	Lake Taylor	6.97	210	PN	Pn	08 45 18.8	-3.8
WVZ	Waitaha Valley	7.87	216	PN	Pn	08 45 30.1	-4.0
FOZ	Fox Glacier	8.74	218	PN	Pn	08 45 39.4	-5.8
ODZ	Otahua Downs	9.50	208	PN	Pn	08 45 51.7	-3.2
JCZ	Jackson Bay	9.57	218	PN	Pn	08 45 51.2	-4.6

*BJI **06** 08:51:21.8, 13°.00N×88°.60W, h71km, mB5.3/3, Ms4.6/1, Ms7 4.3/2*

*ISCJB **06** 08:51:22.5±0.3, 13°.01N±0°.04×88°.66W±0°.03, h71km±2km, mb4.5/75, Error ellipse: s-maj=7.2km s-min=2.5km az=32.7*

*IDC **06** 08:51:22.9±0.7, 13°.17N×88°.44W, h64km±5km, mb4.1/12, mb1 4.3/14, mb1mx4.1/23, mbtmp4.1/14, MS3.7/12, Ms1 3.7/12, ms1mx3.5/25, Error ellipse: s-maj=23.4km s-min=9.0km az=48.0*

*NEIC **06** 08:51:23.3±0.3, 12°.96N×88°.57W, mb4.6/70, MD5.1(SNET), Error ellipse: s-maj=7.1km s-min=4.1km az=28.0*

NEIC Felt [III] at San Salvador.

*CASC **06** 08:51:23.2±5.5, 12°.98N×88°.68W, h65km±42km, MD4.7, ML4.8, mb4.6(NEIC)*

ISC 06 08:51:23.8±0.2, 13°.06N±0°.04×88°.63W±0°.03, h63km±2km, h71km±1.6km:pP-P, n458, σ0°.79/451, mb4.5/75, 130C-148D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
VSM	San Miguel	0.50	43	⇓	*i*P	Pn	08 51 36.7	+0.6
BLLM	Bellamira	0.54	45	⇓	*i*P	Pn	08 51 36.8	+0.4
AIES	Las Flores	0.57	314		*e*P	Pn	08 51 35.7	-1.1
AIES					*e*S	Sn	08 51 45.3	-1.0
AIES				AML		AML	08 51 50.8	
	comp=Z,65μm,0.4s							
SNVI	San Vicente	0.59	339	⇓	*i*P	Pn	08 51 36.8	-0.2
LFRS	El Faro	0.70	323	⇓	*i*P	Pn	08 51 37.6	-0.7
LBRS	Las Brisas	0.79	329	⇓	*i*P	Pn	08 51 39.1	-0.2
CNCH	Conchagua	0.80	74	⇓	*i*P	Pn	08 51 39.7	+0.2
CNCH					*e*S	Sn	08 51 53.1	+2.1
CAHU	Cacacuatique	0.81	30		*e*P	Pn	08 51 40.6	+0.9
CAHU				⇓	*i*P		08 51 40.7	
SNET	Serv Nac Est T	0.86	317	⇓	*e*P	Pn	08 51 39.3	-0.8
SNET					*e*S	Sn	08 51 51.8	-0.5
SNET				AML		AML	08 51 53.0	
	comp=Z,112μm,0.3s							
BQQS	Boqueron	0.92	317	⇑	*i*P	Pn	08 51 40.6	-0.4
SBLS	San Blas	1.24	309		*e*P	Pn	08 51 44.7	-0.5
SONS	Sonsonate	1.26	303		*e*P	Pn	08 51 44.1	-1.3
SONS					*e*S	Sn	08 51 59.9	-1.6
SONS				AML		AML	08 52 03.9	
	comp=Z,27μm,0.3s							
RTR	El Retiro	1.29	310		*e*P	Pn	08 51 45.6	-0.3
MTO2	Montecristo 2	1.51	332	⇓	*i*P	Pn	08 51 49.0	+0.3
CRIN	San Cristobal	1.58	103		*e*P	Pn	08 51 49.8	+0.2
CRIN					*e*S	Sn	08 52 10.1	+1.0
TGUH	Tegucigalpa,Un	1.65	53		*e*Pn	Pn	08 51 51.9	+1.3
TGUH	Tegucigalpa,Un	1.65	53	⇓	*i*P	Pn	08 51 51.8	+1.2
LEON	Leon	1.81	111		*e*P	Pn	08 51 52.1	-0.7
TELN	Telica	1.81	104		*e*P	Pn	08 51 52.6	-0.2
CNGN	Cerro Negro	1.96	106		*e*P	Pn	08 51 54.3	-0.5
MOMN	Momotombo	2.14	107		*e*P	Pn	08 51 57.1	-0.1
COPN	Copaltepe	2.17	114		*e*P	Pn	08 51 56.8	-0.9
CSAN		2.32	112		*e*P	Pn	08 52 00.1	+0.3
XAVN	Gruta Xavier	2.42	112		*e*P	Pn	08 52 01.0	-0.5
TISN	Laguna Tiscapa	2.48	111		*e*P	Pn	08 52 01.0	-0.8
MGAN	Managua	2.49	111		*e*P	Pn	08 52 01.4	-0.7
MGAN					*e*S	Sn	08 52 31.1	-0.3
MGAN				AML		AML	08 52 33.0	
	comp=N,2μm,0.4s							
WILN	Americas 2	2.54	110		*e*P	Pn	08 52 02.8	0.0
WILN					*e*S	Sn	08 52 31.7	-0.9
APON	Apoyo	2.75	114		*e*P	Pn	08 52 06.2	+0.7
SSN	San Juan del S	3.23	123		*e*P	Pn	08 52 12.3	+0.2
CONN	Concepcion	3.29	117		*e*P	Pn	08 52 13.9	+0.9
JTS	JuntasAbangare	4.53	127		*e*Pn	Pn	08 52 30.2	+0.3
JTS	JuntasAbangare	4.53	127	P		Pn	08 52 29.7	-0.3
	comp=N,5.0nm,0.3s,baz=307,slow=23,SNR=28							
JTS				S		Sn	08 53 19.6	-1.8
	comp=N,14nm,0.3s,baz=306,slow=20,SNR=3.5							
JCR	Jicaral	4.70	132		*e*P	Pn	08 52 32.6	+0.4
CGA2	Cerro Gallo 2	5.08	126		*e*P	Pn	08 52 39.0	+1.6
PRS1	Puriscal	5.22	125		*e*P	Pn	08 52 41.5	+2.1
SCX	San Cristobal	5.33	314		*e*P	Pn	08 52 40.5	-0.3
SCX					*i*S	Sn	08 53 39.5	-1.3
LAJ	Bijagual	5.44	125		*e*P	Pn	08 52 40.5	-2.0
QCR	Quepos	5.68	129		*e*P	Pn	08 52 46.2	+0.6
URSC	Urasca	5.73	123		*e*P	Pn	08 52 47.9	+1.4
BUS	Buena Vista	5.91	126		*e*P	Pn	08 52 51.2	+2.3
ACR	Cerro Adams	6.92	129		*e*P	Pn	08 53 04.1	+1.4
TEIG	Tepich	7.13	3		*e*Pn	Pn	08 53 08.2	+2.6
BRU2	Volcan	7.21	125		*e*P	Pn	08 53 08.1	+1.4
CMIG	Matias Romero	7.25	304		*i*P	Pn	08 53 06.2	-1.0
CMIG					*i*S	Sn	08 53 23.5	-4.6
CMIG					S	Sn	08 54 27.8	-0.3
CMIG	Matias Romero	7.25	304	P		Pn	08 53 08.2	+1.0
	comp=N,5.6nm,0.3s,baz=103,slow=8.0,SNR=63							
CMIG				S		Sn	08 54 27.8	-0.3
	comp=N,19nm,0.3s,baz=25,slow=12,SNR=9.7							
HUIG	Huatulco	7.73	291		*i*P	Pn	08 53 12.2	-1.5
HUIG					*i*S	Sn	08 54 38.3	-1.6
OXX	Oaxaca	8.78	298		*e*P	Pn	08 53 30.7	+2.6
OXX					*i*S	Sn	08 55 06.3	+0.6
VHO	Vista Hermosa	8.79	298		*i*P	Pn	08 53 28.3	+0.1
VHO					*i*S	Sn	08 55 03.4	-2.4
BCIP	Isla Barro Col	9.45	113		*e*Pn	Pn	08 53 36.2	-1.1
PNIG	Pinotepa	9.77	291		*e*P	Pn	08 53 44.3	+2.6
PNIG					*i*S	Sn	08 55 35.1	+5.3
MTDJ	Mount Denham	11.85	63		*e*Pn	Pn	08 54 10.0	-0.1
ROSC	El Rosal	16.30	119		*e*Pn	Pn	08 55 06.3	-2.5
DWPF	Disney	16.41	23		*e*Pn	Pn	08 55 10.1	0.0
	comp=N,27nm,0.8s							
SDV	Santo Domingo	18.14	101		*e*Pn	Pn	08 55 28.8	-2.8
	comp=N,20nm,0.9s							
VBMS	Vicksburg	19.15	355		*e*Pn	Pn	08 55 44.4	+0.9
	comp=N,107nm,0.8s							
NATX	Nacogdoches	19.42	344		*e*Pn	Pn	08 55 49.0	+2.3
	comp=N,82nm,0.9s							
LRAL	Lakeview Retre	19.94	4		*e*Pn	Pn	08 55 53.0	+0.2
	comp=N,115nm,0.8s							
JCT	Junction City	20.18	331		*e*P	P	08 55 53.4	+0.1
	comp=N,16nm,0.8s							
GOGA	Godfrey	20.80	12		*e*P	P	08 56 01.1	+1.2
	comp=N,25nm,0.6s							
628A	Black Gap, Mar	21.03	323	⇑	P	P	08 56 03.1	+0.6
	baz=21,SNR=30							
627A	Terlingua Ranc	21.30	322	⇑	P	P	08 56 05.9	+0.5
	baz=22,SNR=44							
TXAR	Lajitas Array	21.38	322		P	P	08 56 06.9	+0.6
	comp=N,8.4nm,0.6s,mb4.2,baz=146,slow=9.7,SNR=71							
TXAR					PcP	PcP	09 00 07.9	-0.2
	comp=N,0.7nm,0.7s,baz=113,slow=2.6,SNR=6.9							
TXAR					pPcP		09 00 25.9	
	comp=N,1.0nm,0.8s,baz=165,slow=5.9,SNR=6.1							
TXAR					LR	LR	09 05 30.1	
	comp=N,65nm,21.0s,baz=185,slow=40							
528A	Cox Ranch, San	21.48	325	⇓	P	P	08 56 07.6	+0.3
	baz=22,SNR=9.6							
626A	Big Bend Ranch	21.82	321	⇓	P	P	08 56 10.8	-0.2
	baz=22,SNR=18							
428A	Kincaid Ranch,	21.85	326	⇑	P	P	08 56 11.1	-0.1
	baz=22							
MIAR	Mount Ida	21.86	349		*e*P	P	08 56 12.1	+0.9
	comp=N,27nm,1.0s,mb4.6							
UALR	University of	21.88	352		*e*P	P	08 56 12.1	+0.6
	comp=N,31nm,0.8s,mb4.8							
527A	Woodward Ranch	21.94	323	⇓	P	P	08 56 11.9	-0.3
	baz=22,SNR=17							
526A	Mary Lane Ranc	22.16	322	⇓	P	P	08 56 14.5	0.0
	baz=22,SNR=10							
JSC	Jenkinsville	22.16	16		*e*P	P	08 56 15.1	+0.6
JSC					*e*pP		08 56 31.1	
SWET	Sewanee	22.19	6		*e*P	P	08 56 14.9	0.0
427A	Hayter Ranch,	22.34	325	⇑	P	P	08 56 16.3	-0.2
	baz=23,SNR=9.9							
328A	Wristen Ranch,	22.43	327	⇓	P	P	08 56 17.4	0.0
	baz=23,SNR=37							
HBAR	Harrisburg	22.47	356		*e*P	P	08 56 18.7	+0.9
ATAH	Atahualpa	22.49	153		LR	LR	09 03 51.6	
	comp=N,147nm,19.3s,baz=338,slow=33							
426A	McDonald Obser	22.57	323	⇓	P	P	08 56 19.2	+0.3
	baz=23,SNR=17							
CPCT	Cooper Cave	22.60	9		*e*P	P	08 56 19.7	+0.6
CPCT					*e*pP		08 56 35.9	
MTP	Monte Pirata	22.77	74		*e*P	P	08 56 18.4	-2.8
TKL	Tuckaleechee C	22.92	10		*e*P	P	08 56 22.3	-0.2
TKL					*e*pP		08 56 40.1	
TKL	Tuckaleechee C	22.92	10	P		P	08 56 22.1	-0.4
	comp=N,14nm,0.7s,mb4.5,baz=183,slow=10,SNR=28							
TKL					LR	LR	09 05 32.9	
	comp=N,92nm,21.7s,baz=234,slow=37							
WVT	Waverly	22.98	2		*e*P	P	08 56 22.2	-0.9
	comp=N,7.4nm,1.0s,mb4.1							
326A	Caldwell Ranch	23.02	325	⇑	P	P	08 56 22.1	-1.5
	baz=23,SNR=13							
227A	Bennet, Jal	23.17	327	⇓	P	P	08 56 24.3	-0.8
	baz=23,SNR=7.5							
UTMT	University of	23.18	360		*e*P	P	08 56 23.9	-1.3
425A	Indio Mountain	23.22	322	⇓	P	P	08 56 24.2	-1.4
	baz=24,SNR=8.0							
WMOK	Wichita Mounta	23.46	339		*e*P	P	08 56 27.3	-0.5
	comp=N,9.9nm,0.8s,mb4.3							
PARMO	Parma	23.52	358		*e*P	P	08 56 27.1	-1.2
325A	Bean Ranch, Si	23.63	323	⇑	P	P	08 56 28.3	-1.1
	baz=24,SNR=13							
226A	Malaga, Loving	23.65	326	⇓	P	P	08 56 28.9	-0.7
	baz=24,SNR=9.8							
PCRV	Puerto La Cruz	23.67	94	P		P	08 56 28.1	-1.8
	comp=N,6.7nm,0.6s,mb4.3,baz=217,slow=3.1,SNR=6.2							
PCRV					LR	LR	09 06 17.7	
	comp=N,106nm,21.6s,baz=19,slow=38							
127A	Arkansas Junct	23.73	328	⇑	P	P	08 56 29.0	-1.3
	baz=24,SNR=14							
324A	Moseley Ranch,	23.98	322	⇑	P	P	08 56 31.4	-1.2
	baz=24,SNR=21							
126A	Clayton Basin,	24.05	327	⇓	P	P	08 56 32.0	-1.2
	baz=24,SNR=7.6							
225A	Deer Hill, Car	24.09	325	⇓	P	P	08 56 32.9	-0.7
	baz=24,SNR=22							
MNTX	Cornudas Mount	24.11	323		*e*P	P	08 56 33.0	-0.7
	comp=N,13nm,1.1s,mb4.3							
Z27A	Tatum	24.16	329	⇓	P	P	08 56 32.4	-1.8
	baz=24,SNR=31							
125A	Gardner Draw,	24.41	326	⇓	P	P	08 56 35.8	-0.6
	baz=25,SNR=17							
224A	Cornudas Mount	24.46	323	⇓	P	P	08 56 36.2	-0.8
	baz=25,SNR=30							
MSTX	Muleshoe	24.47	331	⇓	P	P	08 56 35.8	-1.2
	baz=25,SNR=25							
Z26A	Caprock	24.52	328	⇑	P	P	08 56 36.5	-1.0
	baz=25,SNR=12							
SIUC	Southern Illin	24.56	359		*e*P	P	08 56 36.7	-1.0
	comp=N,24nm,0.9s,mb4.7							
SIUC					*e*pP		08 56 55.7	
Y27A	Causey	24.59	330	⇑	P	P	08 56 36.9	-1.2
	baz=25,SNR=30							
AMTX	Amarillo	24.73	334		*e*P	P	08 56 39.5	+0.1
	comp=N,87nm,1.6s,mb5.0							
124A	Stringfield Ra	24.88	325	⇓	P	P	08 56 40.1	-0.7
	baz=25							
Z25A	Roswell	24.91	327	⇓	P	P	08 56 40.5	-0.5
	baz=25,SNR=18							
Y26A	Elida	24.95	329	⇓	P	P	08 56 40.6	-0.8
	baz=25,SNR=5.5							
WCI	Wyandotte Cave	25.15	4		*e*P	P	08 56 42.3	-0.8
	comp=N,14nm,0.6s,mb4.7							
X27A	F and S Farms,	25.18	331	⇑	P	P	08 56 42.6	-0.8
	baz=25,SNR=7.1							
Z24A	Sheeppen Canyo	25.30	326	⇑	P	P	08 56 44.5	-0.1
	baz=26,SNR=28							
Y25A	Mesa, Roswell	25.39	328	⇑	P	P	08 56 44.9	-0.6
	baz=26,SNR=33							
222A	Williams Famil	25.42	321	⇑	P	P	08 56 45.1	-0.7
	baz=26							
X26A	CR and CF Fran	25.44	330	⇓	P	P	08 56 45.0	-0.9
	baz=26,SNR=12							
W27A	Bowe Ranch, En	25.50	332	⇑	P	P	08 56 45.8	-0.6
	baz=26,SNR=20							
OLIL	Olney	25.57	1		*e*P	P	08 56 46.4	-0.5
	comp=N,27nm,1.4s,mb4.6							
Z23A	Rita Site, Whi	25.74	324	⇓	P	P	08 56 48.2	-0.3
	baz=26,SNR=7.2							
Y24A	Capitan	25.79	326	⇓	P	P	08 56 49.2	+0.1
	baz=26,SNR=16							
320A	Kipp Ranch, An	25.81	318	⇓	P	P	08 56 49.7	+0.5
	baz=26							
X25A	Clemmons Ranch	25.85	328	⇓	P	P	08 56 49.5	-0.1
	baz=26,SNR=12							
W26A	Owens Ranch, T	25.86	331	⇑	P	P	08 56 49.5	-0.1
	baz=26							
121A	Cookes Peak, D	26.14	321	⇓	P	P	08 56 52.5	+0.3
	baz=26,SNR=6.2							
Z22A	Elephant Butte	26.15	323	⇑	P	P	08 56 52.5	+0.2
	baz=26,SNR=5.9							
220A	Playas Peak, P	26.18	319	⇑	P	P	08 56 52.8	+0.3
	baz=26,SNR=5.2							
W25A	X Bar L Ranch,	26.30	330	⇑	P	P	08 56 53.8	+0.2
	baz=26,SNR=16							
V26A	Tequesquite Ra	26.44	331	⇑	P	P	08 56 54.8	-0.1
	baz=27,SNR=30							
BNM	Barren Site	26.61	325		*e*P	P	08 56 56.8	+0.4
	comp=N,2.9nm,0.6s,mb4.0							
Y22A	Socorro	26.65	324	⇓	P	P	08 56 57.1	+0.3
	baz=27,SNR=11							
120A	U Bar Ranch, L	26.67	320	⇑	P	P	08 56 57.3	+0.3
	baz=27							
W24A	Lazy 6 Ranch,	26.77	328	⇓	P	P	08 56 58.1	+0.3
	baz=27,SNR=13							
LENM	Lemitar	26.82	325		*e*P	P	08 56 59.8	+1.5
318A	Bisbee	26.84	316	⇓	P	P	08 56 59.1	+0.5
	baz=27							
V25A	Rancho No Teng	26.87	330	⇑	P	P	08 56 58.9	+0.2
	baz=27,SNR=22							
KSU1	Kansas State U	26.88	346		*e*P	P	08 56 58.1	-0.7
	comp=N,12nm,0.7s,mb4.5							
U26A	Atchley Ranch,	26.91	332	⇓	P	P	08 56 59.4	+0.3
	baz=27,SNR=15							
Z20A	Nine Sixteen R	27.03	321	⇓	P	P	08 57 00.6	+0.4
	baz=27							
LAZ	Ladron	27.08	325		*e*P	P	08 57 01.7	+1.0
	comp=N,1.8nm,0.6s,mb3.8							
V24A	Rampart Ranch,	27.10	329	⇓	P	P	08 57 01.0	+0.2
	baz=27,SNR=12							
Y21A	Point of Rocks	27.11	323	⇓	P	P	08 57 01.2	+0.4
	baz=27,SNR=9.4							
W23A	Werner Place,	27.11	327	⇓	P	P	08 57 01.4	+0.5
	baz=27,SNR=10							
ANMO	Albuquerque	27.12	327		*e*P	P	08 57 01.6	+0.6
	comp=N,10nm,1.5s,mb4.1							
ANMO	Albuquerque	27.12	327	P		P	08 57 01.3	+0.3
	comp=N,1.6nm,0.6s,mb3.8,baz=124,slow=10.0,SNR=9.0							
ANMO					PcP	PcP	09 00 19.4	-1.1
	comp=N,1.1nm,0.5s,baz=96,slow=4.4,SNR=5.5							
ANMO					pPcP		09 00 36.2	
	comp=N,0.7nm,0.5s,baz=119,slow=4.8,SNR=4.1							
U25A	Circle Dot Ran	27.22	331	⇓	P	P	08 57 02.2	+0.3
	baz=28,SNR=10							
Y20A	Horse Springs,	27.45	322	⇓	P	P	08 57 04.4	+0.5
	baz=28,SNR=5.6							
CBKS	Cedar Bluff	27.48	341		*e*P	P	08 57 03.9	-0.2
	comp=N,39nm,1.4s,mb4.8							
X21A	Alamocita Cree	27.48	324	⇑	P	P	08 57 04.5	+0.3
	baz=28,SNR=6.1							
V23A	Ortiz Mt. (NFS	27.58	328	⇓	P	P	08 57 05.6	+0.5
	baz=28,SNR=6.3							
U24A	Moreno Valley	27.65	330	⇓	P	P	08 57 06.1	+0.5
	baz=28							
T25A	Trinidad	27.83	332	⇓	P	P	08 57 07.7	+0.4
	baz=28,SNR=13							
X20A	Quemado	27.96	323	⇓	P	P	08 57 09.5	+1.0
	baz=28							
Y19A	Nutrioso	28.01	321	⇓	P	P	08 57 09.9	+1.0
	baz=28							
U23A	El Rito	28.04	329	⇑	P	P	08 57 09.5	+0.4
	baz=28,SNR=19							
117A	Oracle	28.04	317	⇑	P	P	08 57 09.4	+0.1
	baz=28							
V22A	San Miguel Ran	28.09	327	⇑	P	P	08 57 10.0	+0.4
	baz=28							
216A	Three Points,	28.18	316	⇓	P	P	08 57 11.0	+0.5
	baz=28							
SDMD	Soldier's Deli	28.24	20		*e*P	P	08 57 10.6	-0.3
	comp=N,10nm,0.7s,mb4.6							
S25A	Robets Cordova	28.27	333	⇓	P	P	08 57 11.7	+0.4
	baz=28,SNR=13							
W20A	Ramah	28.38	324	⇓	P	P	08 57 13.0	+0.8
	baz=29							
U22A	Llaves	28.41	328	⇓	P	P	08 57 12.8	+0.3
	baz=29,SNR=7.7							
T23A	Casias Ranch,	28.51	330	⇓	P	P	08 57 13.8	+0.4
	baz=29,SNR=5.5							
S24A	Houchin Ranch,	28.61	332	⇓	P	P	08 57 14.7	+0.4
	baz=29							
116A	Eloy	28.68	316	⇑	P	P	08 57 15.3	+0.3
	baz=29							
SDCO	Great Sand Dun	28.82	331		*e*P	P	08 57 17.1	+0.9
	comp=N,4.2nm,0.9s,mb4.2							
SDCO					*e*PcP	PcP	09 00 23.9	-0.7
V20A	Brimhall	28.85	325	⇓	P	P	08 57 16.6	+0.3
	baz=29							
U21A	Nageezi	28.87	327	⇓	P	P	08 57 17.1	+0.6
	baz=29,SNR=5.5							
T22A	Edith	28.93	329	⇑	P	P	08 57 17.4	+0.4
	baz=29							
S23A	Nye Farm, Mont	29.03	331	⇑	P	P	08 57 18.5	+0.6
	baz=29							
R24A	Sanders Place,	29.04	333	⇑	P	P	08 57 18.5	+0.5
	baz=29,SNR=8.2							
214A	Organ Pipe Nat	29.08	314	⇑	P	P	08 57 18.7	+0.2
	baz=29							
T21A	Navajo Lake	29.23	328	⇓	P	P	08 57 20.7	+1.0
	baz=30							
Q25A	Bedland, Calha	29.23	335	⇓	P	P	08 57 19.9	+0.2
	baz=30,SNR=7.3							
U20A	Newcomb	29.30	326	⇓	P	P	08 57 21.6	+1.2
	baz=30							
S22A	4UR Ranch, Cre	29.46	330	⇓	P	P	08 57 22.4	+0.6
	baz=30							
114A	Black Gap (USA	29.59	315	⇑	P	P	08 57 23.3	+0.3
	baz=30							
Q24A	Divide	29.66	333	⇑	P	P	08 57 24.1	+0.6
	baz=30							
X16A	Lo Mia Camp, P	29.67	320	⇑	P	P	08 57 24.0	+0.3
	baz=30,SNR=6.8							
P25A	Willow Gulch B	29.71	335	⇑	P	P	08 57 24.4	+0.5
	baz=30							
JFWS	Jewell Farm	29.78	358		*e*P	P	08 57 23.4	-1.2
	comp=N,9.9nm,0.9s,mb4.5							
R22A	Saguache, Gunn	29.80	330	⇑	P	P	08 57 25.5	+0.7
	baz=30							
MVCO	Mesa Verde	29.90	327		*e*P	P	08 57 26.3	+0.6
	comp=N,88nm,2.5s,mb5.0							
MVCO					*e*PcP	PcP	09 00 27.3	-0.1
T19A	Beclabito	29.91	326

baz=32
N22A **Wattenberg Ran** 31.75 334 ⇑P P 08 57 42.8 +0.9
baz=32,SNR=9.1
PHWY **Pilot Hill** 31.75 336 eP P 08 57 42.4 +0.5
comp=N,18nm,1.5s,mb4.7
BC3 **Big Chuckawall** 31.88 315 ⇑P P 08 57 43.7 +0.5
baz=32
R17A **Hanksville Air** 31.98 326 ⇓P P 08 57 44.3 +0.3
baz=32,SNR=10
S16A **Weppner Ranch,** 31.98 324 ⇓P P 08 57 44.4 +0.4
baz=32
O20A **White River Ci** 32.02 331 ⇑P P 08 57 44.9 +0.6
baz=32,SNR=12
U14A **Mt Trumbull** 32.04 321 ⇑P P 08 57 45.3 +0.7
baz=32
Q18A **Rafter H Ranch** 32.17 328 ⇑P P 08 57 46.1 +0.4
baz=32
N21A **Black Mountain** 32.18 332 ⇓P P 08 57 46.3 +0.6
baz=32,SNR=11
V13A **Grand Canyon W** 32.19 319 ⇑P P 08 57 45.8 0.0
baz=32
BAR **Barrett** 32.22 312 eP P 08 57 45.9 -0.3
R16A **Teasdale** 32.31 325 ⇑P P 08 57 47.0 +0.1
baz=32,SNR=5.7
SRU **San Rafael** 32.38 327 eP P 08 57 48.4 +0.9
comp=N,4.1nm,0.6s,mb4.4
S15A **Panguitch** 32.39 323 ⇓P P 08 57 48.0 +0.4
baz=33,SNR=6.7
T14A **Hurricane** 32.40 322 ⇑P P 08 57 48.4 +0.7
baz=33
N20A **Spence Gulch,** 32.58 332 ⇓P P 08 57 49.6 +0.4
baz=33,SNR=16
Q16A **Castle Valley** 32.59 326 ⇓P P 08 57 49.9 +0.6
baz=33
P18A **Preston Nutter** 32.62 328 ⇓P P 08 57 50.1 +0.6
baz=33,SNR=7.7
V12A **Nelson** 32.67 318 ⇑P P 08 57 50.7 +0.6
baz=33
R15A **Junction** 32.70 324 ⇓P P 08 57 50.4 +0.1
baz=33
L22A **Ellis Ranch, M** 32.76 335 ⇓P P 08 57 50.8 +0.1
baz=33,SNR=5.4
P17A **Butcher Ranch,** 32.76 327 ⇓P P 08 57 50.9 +0.1
baz=33,SNR=7.8
M21A **Separation Pea** 32.80 334 ⇑P P 08 57 51.4 +0.3
baz=33,SNR=7.9
RWWY **Rawlins** 32.80 334 eP P 08 57 51.6 +0.5
comp=N,16nm,0.6s,mb5.1
MSU **Marysvale** 32.85 325 eP P 08 57 52.0 +0.3
comp=N,2.0nm,0.8s,mb4.1
T13A **Saint George** 32.88 321 ⇓P P 08 57 52.5 +0.7
baz=33
CCUT **Cedar City** 32.89 322 eP P 08 57 53.3 +1.3
comp=N,43nm,2.8s,mb4.9
CCUT epP pP 08 58 10.0 +2.5
S14A **Cedar City** 32.91 323 ⇓P P 08 57 53.0 +0.8
baz=33
COWI **Conover** 32.93 359 eP P 08 57 50.5 -1.8
comp=N,8.1nm,0.6s,mb4.8
O18A **Roosevelt** 32.98 329 ⇑P P 08 57 53.2 +0.5
baz=33,SNR=13
N19A **John Jarvie Ra** 33.05 331 ⇓P P 08 57 53.2 -0.2
baz=33
M20A **Sweetwater, Wa** 33.07 333 ⇓P P 08 57 53.9 +0.4
baz=33
L21A **Rawlins** 33.09 334 ⇑P P 08 57 53.9 +0.2
baz=33,SNR=22
S13A **Holt Ranch, En** 33.21 322 ⇓P P 08 57 55.4 +0.6
baz=33,SNR=7.2
O17A **Robinson Place** 33.29 328 ⇑P P 08 57 55.7 +0.2
baz=34,SNR=8.7
Q15A **Fillmore** 33.31 325 ⇑P P 08 57 56.3 +0.7
baz=34
P16A **Fountain Green** 33.35 327 ⇑P P 08 57 56.5 +0.5
baz=34
N18A **Larsen Ranch,** 33.35 330 ⇓P P 08 57 56.5 +0.5
baz=34,SNR=9.0
L20A **Wamsutter** 33.55 333 ⇓P P 08 57 57.5 -0.2
baz=34,SNR=6.2
MPU **Maple Canyon** 33.63 327 eP P 08 57 58.6 +0.2
comp=N,11nm,1.3s,mb4.6
P15A **Leamington** 33.65 326 ⇑P P 08 57 59.0 +0.4
baz=34
RSSD **Black Hills** 33.66 340 eP P 08 57 59.3 +0.7
comp=N,5.9nm,0.7s,mb4.6
R13A **O'Grain Ranch,** 33.67 323 ⇑P P 08 57 58.9 +0.2
baz=34
O16A **Springville** 33.70 328 ⇑P P 08 57 58.8 -0.2
baz=34,SNR=8.3
DAU **Daniels Canyon** 33.72 328 eP P 08 57 59.2 0.0
Q14A **Sevier Lake (B** 33.80 324 ⇑P P 08 58 00.1 +0.2
baz=34,SNR=6.7
S12A **Delamar Landin** 33.83 321 ⇓P P 08 58 00.8 +0.6
baz=34
M18A **Lyman** 33.89 330 ⇑P P 08 58 00.9 +0.2
baz=34
N17A **Moffit Pass** 33.90 329 ⇑P P 08 58 01.2 +0.5
baz=34
K20A **Yellowstone Ra** 34.08 334 ⇑P P 08 58 02.4 +0.2
baz=34,SNR=12
L19A **Farson** 34.08 332 ⇑P P 08 58 02.4 +0.1
baz=34
P14A **Drum Mountains** 34.10 325 ⇑P P 08 58 02.8 +0.3
baz=34
R12A **Pony Springs,** 34.14 322 ⇑P P 08 58 03.8 +0.9
baz=34
Q13A **Wheeler Ranch,** 34.21 324 ⇑P P 08 58 04.1 +0.6
baz=34,SNR=8.4
M17A **Scullys Gap (B** 34.22 330 ⇑P P 08 58 03.2 -0.2
baz=34
L18A **Fontenelle, Gr** 34.26 331 ⇑P P 08 58 04.2 +0.3
baz=34,SNR=9.4
DUG **Dugway** 34.39 326 eP P 08 58 05.4 +0.4
comp=N,3.1nm,0.9s,mb4.2
S11A **Rachel** 34.41 320 ⇓P P 08 58 05.9 +0.7
baz=35,SNR=5.2
K19A **Absolon Red Bu** 34.43 333 ⇓P P 08 58 05.2 -0.1
baz=35,SNR=10
P13A **Bates Ranch, G** 34.54 324 ⇓P P 08 58 06.6 +0.3
baz=35,SNR=14
BW06 **Boulder Array** 34.70 332 eP P 08 58 07.4 -0.2
comp=N,9.8nm,1.5s,mb4.5
R11A **Troy Canyon, C** 34.75 321 ⇓P P 08 58 08.4 +0.3
baz=35
HWUT **Hardware Ranch** 34.76 329 eP P 08 58 08.1 -0.1
comp=N,5.5nm,0.6s,mb4.7
HWUT ePcP PcP 09 00 39.9 -0.7
L17A **Cokeville** 34.79 330 ⇓P P 08 58 08.2 -0.3
baz=35,SNR=10
K18A **Toltan Ranch,** 34.82 332 ⇑P P 08 58 08.8 +0.2
baz=35,SNR=14
EYMN **Ely** 34.86 357 eP P 08 58 07.0 -1.9
comp=N,5.3nm,0.6s,mb4.7
SPUT **South Promonto** 34.99 328 eP P 08 58 09.8 -0.3
comp=N,4.0nm,0.9s,mb4.3
L16A **Fish Haven** 35.00 330 ⇑P P 08 58 10.1 -0.1
baz=35
N14A **Grayback Hills** 35.05 327 ⇑P P 08 58 11.1 +0.4
baz=35,SNR=5.8
ISA **Isabella** 35.06 315 ePcP PcP 09 00 41.5 -0.1
P12A **McGill** 35.07 323 ⇑P P 08 58 11.3 +0.4
baz=35
M15A **Larsen Ranch,** 35.10 328 ⇓P P 08 58 10.7 -0.4
baz=35,SNR=6.5
Q11A **Duckwater** 35.10 322 ⇑P P 08 58 12.0 +0.8
baz=35
S10A **Tonopah Range,** 35.11 320 ⇓P P 08 58 11.8 +0.5
baz=35
R10A **Warm Springs** 35.15 321 ⇑P P 08 58 13.0 +1.4
baz=35
J18A **Kendall Valley** 35.26 332 ⇑P P 08 58 12.6 +0.2
baz=36,SNR=24
K17A **Gardner Place,** 35.31 331 ⇑P P 08 58 12.7 -0.2
baz=36,SNR=14
AHID **Auburn Hatcher** 35.41 331 eP P 08 58 13.8 0.0
comp=N,8.4nm,0.6s,mb4.8
L15A **Malad City** 35.47 329 ⇑P P 08 58 14.1 -0.1
baz=36,SNR=15
O12A **Currie** 35.51 325 ⇑P P 08 58 14.9 +0.3
baz=36
LPAZ **La Paz** 35.51 145 P P 08 58 14.8 0.0
LPAZ LR LR 09 11 27.4
LPAZ **La Paz** 35.51 145 P P 08 58 14.8 0.0
comp=N,1.2nm,0.6s,mb4.0,baz=318,slow=6.1,SNR=5.5
LPAZ LR LR 09 11 27.4
comp=N,106nm,20.2s,baz=61,slow=34
Q10A **Clear Creek Ra** 35.54 321 ⇑P P 08 58 15.8 +0.8
baz=36,SNR=5.3
I18A **Diamond G Ranc** 35.55 333 ⇓P P 08 58 15.4 +0.4
baz=36,SNR=24
VES **Vestal, Richgr** 35.57 315 ⇓P P 08 58 15.7 +0.5
baz=36
M14A **Sheep Mountain** 35.60 327 ⇓P P 08 58 15.5 +0.1
baz=36,SNR=8.3
AGMN **Agassiz Nation** 35.64 352 eP P 08 58 14.0 -1.6
comp=N,13nm,0.7s,mb5.0
J17A **Brwn Place, J** 35.69 332 ⇑P P 08 58 16.6 +0.4
baz=36,SNR=16
REDW **Red Top Meadow** 35.76 332 eP P 08 58 16.9 +0.2
comp=N,23nm,0.6s,mb5.3
SNOW **Snow King Moun** 35.79 332 eP P 08 58 17.2 +0.3
comp=N,30nm,0.6s,mb5.4
LOHW **Long Hollow** 35.84 332 eP P 08 58 17.4 +0.1
comp=N,7.1nm,0.8s,mb4.7
TPAW **Teton Pass** 35.90 332 eP P 08 58 18.4 +0.5
comp=N,11nm,0.6s,mb5.0
L14A **Malta** 35.92 328 ⇓P P 08 58 18.3 +0.1
baz=36,SNR=14
O11A **Cowboy Ranch,** 35.94 324 ⇓P P 08 58 18.5 +0.2
baz=36
RRI2 **Red Ridge** 35.96 331 eP P 08 58 19.0 +0.5
comp=N,8.2nm,0.8s,mb4.7
MOOW **Moose Ponds** 36.01 332 eP P 08 58 19.0 +0.2
comp=N,7.2nm,0.8s,mb4.7
J16A **Bone** 36.04 331 ⇓P P 08 58 19.3 +0.1
baz=36,SNR=8.8
K15A **Arbon** 36.04 329 ⇓P P 08 58 19.0 -0.2
baz=36,SNR=14
I17A **Pilgrim Ck.** 36.06 333 ⇓P P 08 58 19.9 +0.6
baz=36
N12A **Clover Valley,** 36.06 325 ⇑P P 08 58 19.8 +0.4
baz=36,SNR=8.8
IMW **Indian Meadow** 36.21 332 eP P 08 58 20.5 0.0
comp=N,6.4nm,0.6s,mb4.7
FLWY **Flagg Ranch** 36.25 333 eP P 08 58 21.3 +0.4
comp=N,7.8nm,0.6s,mb4.8
K14A **Jones Ranch, D** 36.26 329 ⇑P P 08 58 20.7 -0.3
baz=36,SNR=25
M12A **Wells** 36.38 326 ⇓P P 08 58 22.1 +0.1
baz=37
N11A **Elko Archery C** 36.43 324 ⇑P P 08 58 23.2 +0.7
baz=37,SNR=6.4
H17A **Grant Village** 36.44 333 ⇓P P 08 58 23.1 +0.5
baz=37
I16A **Newdale** 36.44 332 ⇓P P 08 58 22.7 +0.1
baz=37
RLMT **Red Lodge** 36.47 335 eP P 08 58 22.5 -0.2
comp=N,16nm,0.7s,mb5.0
NVAR **Mina Array Bea** 36.49 319 P P 08 58 23.7 +0.6
NVAR PcP PcP 09 00 45.5 -0.3
NVAR pPcP 09 01 03.0
NVAR ScP ScP 09 04 27.7 +0.6
NVAR **Mina Array Bea** 36.49 319 P P 08 58 23.7 +0.6
comp=N,3.5nm,0.7s,mb4.4,baz=131,slow=7.4,SNR=37
NVAR PcP PcP 09 00 45.5 -0.3
comp=N,4.1nm,0.6s,baz=129,slow=3.6,SNR=21
NVAR pPcP 09 01 03.0
comp=N,2.6nm,0.7s,baz=130,slow=4.1,SNR=8.5
NVAR ScP ScP 09 04 27.7 +0.6
comp=N,0.3nm,0.6s,baz=161,slow=5.7,SNR=3.0
LKWY **Lake** 36.50 334 eP P 08 58 24.5 +1.5
comp=N,8.9nm,0.6s,mb4.9
J15A **Blackfoot** 36.53 330 ⇓P P 08 58 23.5 +0.2
baz=37,SNR=10
YFT **Old Faithful** 36.60 333 eP P 08 58 24.5 +0.7
comp=N,9.9nm,0.7s,mb4.8
LAO **LASA Array** 36.65 340 eP P 08 58 23.5 -0.8
comp=N,7.3nm,0.6s,mb4.7
G18A **Lazy EL Ranch,** 36.75 335 ⇑P P 08 58 25.1 -0.1
baz=37,SNR=45
YMR **Madison River** 36.83 333 eP P 08 58 26.3 +0.5
comp=N,17nm,0.9s,mb4.9
M11A **Holland Ranch,** 36.87 325 ⇑P P 08 58 26.6 +0.4
baz=37
H16A **Russell Place,** 36.98 333 ⇑P P 08 58 27.8 +0.7
baz=37,SNR=12
GCMT **Greycliff** 37.18 335 eP P 08 58 28.3 -0.4
G17A **Pierce Place,** 37.24 334 ⇑P P 08 58 30.7 +1.4
baz=38,SNR=18
F18A **Big Timber** 37.29 335 ⇓P P 08 58 29.5 -0.2
baz=38,SNR=28
L11A **Cat Creek Ranc** 37.35 326 ⇓P P 08 58 29.6 -0.7
baz=38
J13A **Cove Ranch, Pi** 37.38 329 ⇓P P 08 58 30.3 -0.2
baz=38
H15A **Lima** 37.55 332 ⇓P P 08 58 32.4 +0.5
baz=38,SNR=21
ULM **Lac du Bonnet** 37.56 352 eP P 08 58 29.6 -2.3
comp=N,10nm,0.6s,mb4.7
ULM epP pP 08 58 46.2 -1.3
ULM **Lac du Bonnet** 37.56 352 P P 08 58 29.5 -2.4
comp=N,12nm,0.6s,mb4.8,baz=168,slow=10,SNR=12
ULM pP pP 08 58 46.2 -1.3
comp=N,8.1nm,0.8s,baz=168,slow=7.8,SNR=4.1
ULM LR LR 09 15 10.3
comp=N,131nm,21.9s,baz=51,slow=38
HLID **Hailey** 37.62 329 ⇓P P 08 58 32.3 -0.2
baz=38
HLID **Hailey** 37.62 329 eP P 08 58 32.4 -0.2
comp=N,2.3nm,0.6s,mb4.1
HLID ePcP PcP 09 00 48.2 -0.9
G16A **Moss Hill, Enn** 37.63 333 ⇓P P 08 58 33.3 +0.6
baz=38,SNR=21
F17A **Fitzpatrick Pl** 37.68 335 ⇓P P 08 58 33.6 +0.6
baz=38,SNR=18
I13A **Wildhorse Cree** 37.73 329 ⇓P P 08 58 33.5 0.0
baz=38,SNR=7.8
MCMT **McKenzie Canyo** 37.80 332 eP P 08 58 35.0 +1.0
BOZ **Bozeman (W)** 37.88 333 ⇑P P 08 58 34.7 -0.1
baz=38
BOZ **Bozeman (W)** 37.88 333 eP P 08 58 34.6 -0.2
comp=N,7.6nm,0.8s,mb4.5
H14A **Leadore** 37.89 331 ⇓P P 08 58 35.1 +0.3
baz=38,SNR=23
G15A **Dillon** 37.89 332 ⇑P P 08 58 34.9 0.0
baz=38,SNR=16
E18A **Harlowton** 37.91 336 ⇓P P 08 58 34.7 -0.2
baz=38,SNR=10
F16A **Kennard Place,** 37.99 334 ⇓P P 08 58 36.0 +0.3
baz=38,SNR=21
DLMT **Dillon** 38.09 332 eP P 08 58 36.9 +0.4
comp=N,14nm,1.2s,mb4.6
I12A **Atlanta** 38.16 328 ⇑P P 08 58 37.1 0.0
baz=38,SNR=9.7
E17A **Martinsdale** 38.20 335 ⇓P P 08 58 37.3 -0.1
baz=38,SNR=11
H13A **Challis** 38.27 330 ⇑P P 08 58 38.2 +0.2
baz=38,SNR=17
D18A **Linhart Farms,** 38.38 337 ⇑P P 08 58 39.1 +0.2
baz=39,SNR=27
LRM **Limekiln Ridge** 38.38 333 eP P 08 58 39.1 +0.2
G14A **Jackson** 38.40 331 ⇓P P 08 58 39.1 0.0
baz=39,SNR=6.6
H12A **Diamond D Ranc** 38.56 330 ⇑P P 08 58 40.0 -0.4
baz=39,SNR=8.0
E16A **East Helena** 38.60 334 ⇓P P 08 58 40.4 -0.4
baz=39,SNR=8.7
G13A **Cobalt** 38.65 331 ⇓P P 08 58 40.8 -0.4
baz=39,SNR=7.7
D17A **Six Diamond Ra** 38.69 336 ⇓P P 08 58 41.2 -0.3
baz=39,SNR=36
F14A **Wisdom** 38.79 332 ⇓P P 08 58 42.0 -0.3
baz=39
HRY **Holter Researc** 38.81 334 eP P 08 58 42.4 -0.1
E15A **Deer Lodge** 38.93 333 ⇓P P 08 58 43.4 -0.1
baz=39,SNR=17
D16A **Dana Ranch, Ca** 38.95 335 ⇑P P 08 58 43.6 0.0
baz=39,SNR=18
EGMT **Eaton** 39.05 337 ⇓P P 08 58 44.0 -0.4
baz=39
EGMT **Eagleton** 39.05 337 eP P 08 58 44.3 -0.1
comp=N,39nm,0.6s,mb5.3
OHCM **Honcut** 39.05 318 eP P 08 58 39.3 -5.3
C17A **Wharram Farm,** 39.11 336 ⇑P P 08 58 44.7 -0.3
baz=39,SNR=20
WVOR **Wild Horse Val** 39.14 324 eP P 08 58 44.7 -0.6
comp=N,4.6nm,0.7s,mb4.3
F13A **Darby** 39.21 331 ⇑P P 08 58 45.3 -0.6
baz=39,SNR=12
E14A **Clinton** 39.30 333 ⇑P P 08 58 46.3 -0.3
baz=40,SNR=8.6
B18A **Beardsley Farm** 39.37 338 ⇓P P 08 58 46.9 -0.2
baz=40,SNR=15
CHMT **Chamberlain Mo** 39.58 333 eP P 08 58 48.7 -0.2
F12A **Elk City** 39.63 331 ⇑P P 08 58 48.9 -0.5
baz=40,SNR=25
E13A **Victor** 39.64 332 ⇑P P 08 58 48.6 -0.8
baz=40,SNR=14
J08A **Circle Bar Ran** 39.64 325 ⇓P P 08 58 49.1 -0.3
baz=40,SNR=9.2
C16A **Fuhringer Ranc** 39.64 335 ⇑P P 08 58 49.1 -0.3
baz=40,SNR=18
B17A **L&G Farms, Che** 39.66 337 ⇓P P 08 58 49.0 -0.6
baz=40,SNR=5.6
D14A **Greenough** 39.82 333 ⇓P P 08 58 50.1 -0.8
baz=40,SNR=8.2
MSO **Missoula** 39.82 333 eP P 08 58 50.3 -0.6
comp=N,4.3nm,0.8s,mb4.2
A18A **Metzger Ranch,** 39.83 338 ⇑P P 08 58 50.5 -0.5
baz=40,SNR=34
SLMT **Seeley Lake** 39.94 333 eP P 08 58 51.3 -0.5
C15A **Salmond Ranch,** 39.97 335 ⇑P P 08 58 52.6 +0.4
baz=40
BMO **Blue Mountains** 40.01 328 eP P 08 58 51.0 -1.5
comp=N,1.3nm,0.7s,mb3.8
B16A **M & M Farms, S** 40.12 336 ⇓P P 08 58 52.9 -0.5
baz=40
A17A **Triple J Farms** 40.16 337 ⇑P P 08 58 53.2 -0.5
baz=40,SNR=27
D13A **Huson** 40.25 333 ⇓P P 08 58 53.7 -0.8
baz=40
B15A **Bradely Ranch,** 40.38 335 ⇓P P 08 58 55.0 -0.5
baz=41,SNR=6.9
WDC **Whiskeytown Da** 40.41 319 ePcP PcP 09 00 56.8 -1.2
A16A **West Butte Ran** 40.51 337 ⇑P P 08 58 56.2 -0.4
baz=41
D12A **Red Ives Fores** 40.62 332 ⇑P P 08 58 56.5 -1.1
baz=41,SNR=8.6
I07A **Izee** 40.68 325 ⇓P P 08 58 57.2 -0.8
baz=41
C13A **Hot Springs** 40.74 333 ⇑P P 08 58 58.0 -0.5
baz=41
F10A **Beach Ranch, E** 40.75 329 ⇓P P 08 58 57.5 -1.1
baz=41,SNR=8.1
A15A **Johnson Ranch,** 40.98 336 ⇑P P 08 59 00.2 -0.2
baz=41,SNR=45
B13A **Whitefish** 41.23 334 ⇓P P 08 59 02.0 -0.5
baz=41
A14A **Double T Ranch** 41.25 335 ⇓P P 08 59 02.2 -0.5
baz=42,SNR=40
KHMM **Horse Mountain** 41.33 319 eP P 08 59 04.2 +0.7
comp=N,6.2nm,0.8s,mb4.3
WALA **Waterton Lakes** 41.52 335 eP P 08 59 04.6 -0.3
comp=N,0.2nm,0.8s
E09A **Wood Farm, Sta** 41.58 329 ⇓P P 08 59 04.4 -1.0
baz=42
A13A **Flathead Natio** 41.63 334 ⇑P P 08 59 05.3 -0.5
baz=42
B12A **Libby** 41.79 333 ⇑P P 08 59 06.8 -0.3
baz=42
A12A **Yaak River Ran** 42.16 333 ⇓P P 08 59 10.0 -0.1
baz=42
NEW **Newport** 42.33 332 eP P 08 59 10.4 -1.1
comp=N,2.8nm,0.8s,mb3.9
D08A **Wollman Farm,** 42.34 329 ⇑P P 08 59 11.0 -0.6
baz=43
C09A **Chrisman Ranch** 42.54 330 ⇓P P 08 59 12.8 -0.4
baz=43
H04A **Detroit Lake** 42.55 324 ⇓P P 08 59 12.0 -1.4
baz=43
FFC **Flin Flon** 42.87 349 eP P 08 59 14.8 -1.0
comp=N,10nm,0.5s,mb4.8
B08A **Colville Reser** 43.44 330 ⇑P P 08 59 19.1 -1.4
baz=44
RPW **Rockport** 44.57 329 eP P 08 59 28.1 -1.5
B06A **Marblemount** 44.60 329 ⇑P P 08 59 28.7 -1.1
baz=45,SNR=5.6
JCW **Jim Creek** 44.62 328 eP P 08 59 28.3 -1.6
EDM **Edmonton** 44.63 339 eP P 08 59 28.7 -1.3
SCHQ **Schefferville** 45.04 18 P P 08 59 30.8 -2.3
SCHQ PcP PcP 09 01 10.1 -3.0
SCHQ LR LR 09 19 04.7
SCHQ **Schefferville** 45.04 18 P P 08 59 30.8 -2.3
comp=N,8.3nm,0.7s,mb4.7,baz=216,slow=5.5,SNR=12
SCHQ PcP PcP 09 01 10.1 -3.0
comp=N,2.8nm,0.6s,baz=238,slow=12,SNR=4.0
SCHQ LR LR 09 19 04.7
comp=N,116nm,18.0s,baz=123,slow=37
PGC **Sidney** 45.69 328 eP P 08 59 37.9 -0.5
comp=N,0.5nm,0.8s,mb3.5
CPUP **Villa Florida** 49.59 142 P P 09 00 06.4 -2.6
comp=N,1.4nm,0.6s,mb4.2,baz=315,slow=11,SNR=7.8
CPUP pP pP 09 00 24.4 -0.7
comp=N,2.1nm,0.7s,baz=316,slow=7.6,SNR=3.8
CPUP LR LR 09 23 26.2
comp=N,158nm,20.7s,baz=0.3,slow=39
YKA **Yellowknife Ar** 52.73 345 P P 09 00 30.1 -1.8
comp=N,12nm,0.7s,mb4.9,baz=139,slow=7.9,SNR=48
DLBC **Dease Lake** 54.87 335 eP P 09 00 47.4 -0.2
TAOE **Nuku Hiva Isla** 55.61 250 eLR LR 09 16 55.6
comp=N,142nm,26.6s
RKT **Rikitea** 57.88 232 eLR LR 09 18 31.1
comp=N,175nm,28.0s
RKT eT 10 02 58.9
comp=N,3.4nm,0.2s
HYT **Haines Junctio** 59.35 335 eP P 09 01 19.1 -0.1
DAWY **Dawson** 61.79 337 eP P 09 01 33.8 -2.0
INK **Inuvik** 62.28 343 eP P 09 01 37.7 -1.3
EGAK **Eagle** 62.81 338 eP P 09 01 40.4 -2.2
comp=N,1.7nm,0.5s,mb4.4
PMOR **Pomariorio Ree** 64.95 246 eT 10 12 11.7
comp=N,4.0nm,0.2s
ILAR **Eielson Array** 65.00 336 P P 09 01 54.7 -2.3
comp=N,3.9nm,0.6s,mb4.6,baz=170,slow=5.0,SNR=99
ILAR pP pP 09 02 12.6 -1.3
comp=N,1.5nm,0.9s,baz=138,slow=4.5,SNR=3.3
OHAK **Old Harbor** 65.46 327 eP P 09 02 04.1 +4.0
OHAK LR LR
comp=Z,200nm,18.0s
PPT **Papeete** 67.42 245 eLR LR 09 22 27.7
comp=Z,189nm,28.0s
PPT **Papeete** 67.42 245 LR LR 09 25 56.5
comp=Z,103nm,21.1s,baz=5.1,slow=31
TTA **Tatalina** 68.22 333 eP P 09 02 13.9 -3.6
TBI **Tubuai** 69.64 239 eT 10 17 44.5
comp=Z,5.3nm,0.3s
RAR **Rarotonga** 77.70 245 LR LR 09 30 51.5
comp=Z,166nm,20.8s,baz=156,slow=30
NOA **NORSAR Array B** 83.39 29 LR LR 09 38 05.6
comp=Z,30nm,21.8s,baz=65,slow=34
ARCES **ARCESS Array B** 85.98 19 P P 09 03 54.8 -2.2
comp=Z,0.6nm,0.7s,mb3.9,baz=289,slow=3.7,SNR=5.0
TORD **Torodi Ar. Bea** 87.40 77 P P 09 04 00.9 -4.0
comp=Z,0.2nm,0.5s,mb3.6,baz=275,slow=7.1,SNR=2.3
FINES **FINESS Array B** 89.93 26 LR LR 09 47 15.2
comp=Z,87nm,19.3s,baz=356,slow=37
BOSA **Boshof** 116.99 116 PKP PKPdf 09 10 00.7 -1.5
comp=Z,2.3nm,0.7s,baz=186,slow=1.2,SNR=8.3
SONM **Songino Array** 117.92 349 PKP PKPdf 09 10 01.3 -2.1
comp=Z,0.4nm,0.5s,baz=64,slow=3.7,SNR=2.9
SONM pPKP pPKPdf 09 10 21.4 -0.4
comp=Z,0.3nm,0.3s,baz=355,slow=3.0,SNR=2.2
KSRS **Korea Array** 119.14 327 PKP PKPdf 09 10 04.2 -2.0
comp=Z,1.7nm,0.6s,baz=8.6,slow=2.0,SNR=12
KSRS pPKP pPKPdf 09 10 22.7 -1.7
comp=Z,1.4nm,0.6s,baz=358,slow=1.6,SNR=4.4
MKAR **Makanchi Array** 119.87 7 PKP PKPdf 09 10 03.7 -3.5
comp=Z,0.2nm,0.2s,baz=353,slow=3.3,SNR=2.0
MKAR pPKP pPKPdf 09 10 23.7 -1.8
comp=Z,0.2nm,0.2s,baz=41,slow=4.6,SNR=1.3
MAW **Mawson** 122.38 167 PKP PKPdf 09 10 12.2 +0.8
comp=Z,0.7nm,0.3s,baz=176,slow=5.7,SNR=3.8
MAW pPKP pPKPdf 09 10 28.3 -1.4
comp=Z,1.5nm,0.6s,baz=220,slow=10,SNR=2.4
HHC **Hu-ho-hao-te** 123.20 342 ePKP PKPdf 09 10 10.2 -3.6
HHC PP PP 09 11 54.2 +1.1
HHC PKS 09 13 45.1
HHC SKS SKSdf 09 17 10.0 -11
HHC SKKS SKKSac 09 18 36.2 -12
HHC SS SS 09 28 28.0 -4.9
HHC AMB AMB
comp=Z,150nm,7.6s
HHC LR LR
comp=Z,62nm,17.8s
WMQ **Urumqi** 123.30 3 ePKP PKPdf 09 10 11.7 -2.2
WMQ LR LR
comp=N,85nm,26.0s
WMQ LR LR
comp=Z,76nm,21.6s
LZH **Lanzhou** 129.72 347 ePKP PKPdf 09 10 26.0 -0.5
ASAR **Alice Springs** 138.42 249 PKhKP PKPpre 09 10 33.9
comp=Z,0.4nm,0.6s,baz=96,slow=3.1,SNR=5.4
ASAR PKP PKPdf 09 10 42.6 -0.5

comp=Z,0.9nm,0.7s,baz=95,slow=1.8,SNR=12
KMI Kunming 140.46 344 PKP PKPdf 09 10 42.4 -4.4
CMAR Chiang Mai Arr 147.81 346 PKP PKPdf 09 10 57.1 -2.5
comp=Z,2.8nm,0.8s,baz=344,slow=3.1,SNR=9.9

MAN 06 08:58:18,8.53N×125.46E,h22km,mb4.2,ML3.0,MS2.7, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.46**	**20**	*e*P	Pb	08 58 29.0	+1.5
BUTP				*e*S	Sb	08 58 38.9	+5.1
BUKP	**Musuan**	**0.76**	**211**	*e*P	Pb	08 58 33.3	+0.7
BUKP				*e*S	Sb	08 58 42.2	-0.4
CGP	**Cagayan de Oro**	**0.77**	**264**	⇑*i*P	Pb	08 58 34.1	+1.5
CGP				*i* S	Sb	08 58 47.5	+4.9
SCPH	**Surigao**	**1.24**	**1**	*e*P	Pn	08 58 37.8	-2.2
SCPH				*e*S	Sn	08 58 58.3	+2.2
TBP	**Tagbilaran**	**1.96**	**306**	*e*P	Pn	08 58 50.8	+0.9
TBP				*e*S	Sn	08 59 15.6	+1.8

*CSEM **06** 08:59:12.8±0.2, 37.25N×28.24E, h12km, MD2.9, Error ellipse: s-maj=5.8km s-min=3.6km az=51.0*
*DDA **06** 08:59:12.4, 37.39N×27.63E, h7km±5km, Md2.7*
ISK 06 08:59:12.0, 37.30N×28.25E, h6km, MD2.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.17**	**172**	*e*PG	Pg	08 59 15.9	+0.6
YER				*e*SG	Sg	08 59 18.7	+1.1
YER	**Yerkesik**	**0.17**	**172**	*e*Pg	Pg	08 59 15.9	+0.6
YER				*e*Sg	Sg	08 59 18.7	+1.1
MLSB	**Milas**	**0.38**	**270**	*e*PG	Pg	08 59 19.8	+0.4
MLSB				*e*SG	Sg	08 59 25.7	+1.3
MLSB	**Milas**	**0.38**	**270**	*e*Pg	Pg	08 59 19.8	+0.4
MLSB				*e*Sg	Sg	08 59 25.7	+1.3
AYDN	**Tasoluk**	**0.47**	**321**	*i* P	Pg	08 59 22.9	+1.9
AYDN				*i* S	Sg	08 59 29.7	+2.5
AYDN	**Tasoluk**	**0.47**	**321**	*i* P	Pg	08 59 22.9	+1.9
AYDN				*i* S	Sg	08 59 29.7	+2.5
BDRM	**Kayabasi**	**0.69**	**250**	*i* P	Pg	08 59 19.6	-5.6
BDRM				*i* S	Sg	08 59 34.5	+0.4
BODT	**Bodrum**	**0.79**	**253**	*e*PG	Pg	08 59 28.1	+0.9
BODT	**Bodrum**	**0.79**	**253**	*e*Pg	Pg	08 59 28.1	+0.9

*ISK **06** 09:00:10.8, 37.24N×28.19E, h13km, MD3.0*
*ISCJB **06** 09:00:11.0±0.5, 37.23N±0.04×28.21E±0.04, h11km±5km, Error ellipse: s-maj=7.8km s-min=4.6km az=32.0*
*DDA **06** 09:00:11.2, 37.23N×28.20E, h7km±4km, Md2.6*
*CSEM **06** 09:00:11.3±0.1, 37.23N×28.21E, h12km, MD3.0, Error ellipse: s-maj=2.6km s-min=1.8km az=18.0*
ISC 06 09:00:11.4±0.6, 37.23N±0.05×28.21E±0.04, h12km±6km, n22, σ0965/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.11**	**147**	*e*PG	**Pg**	**09 00 14.3**	**-0.1**
YER				*e*SG	**Sg**	**09 00 17.1**	**+0.5**
YER	**Yerkesik**	**0.11**	**147**	*e*Pg	**Pg**	**09 00 14.3**	**-0.1**
YER				*e*Sg	**Sg**	**09 00 17.1**	**+0.6**
MLSB	**Milas**	**0.35**	**281**	*e*PG	**Pg**	**09 00 18.3**	**-0.2**
MLSB				*e*SG	**Sg**	**09 00 23.3**	**+0.1**
MLSB	**Milas**	**0.35**	**281**	*e*Pg	**Pg**	**09 00 18.3**	**-0.2**
MLSB				*e*Sg	**Sg**	**09 00 23.3**	**0.0**
TURN	**Turunc**	**0.47**	**138**	*i* P	**Pg**	**09 00 19.9**	**-0.8**
TURN				*i* S	**Sg**	**09 00 27.8**	**+0.8**
TURN	**Turunc**	**0.47**	**138**	*i* P	**Pg**	**09 00 20.0**	**-0.7**
TURN				*i* S	**Sg**	**09 00 27.8**	**+0.8**
AYDN	**Tasoluk**	**0.51**	**329**	*i* P	**Pg**	**09 00 21.2**	**-0.2**
AYDN				*i* S	**Sg**	**09 00 28.3**	**+0.1**
AYDN	**Tasoluk**	**0.51**	**329**	*i* P	**Pg**	**09 00 21.2**	**-0.2**
AYDN				*i* S	**Sg**	**09 00 28.3**	**+0.1**
BDRM	**Kayabasi**	**0.63**	**256**	*i* P	**Pg**	**09 00 23.1**	**-0.7**
BDRM				*i* S	**Sg**	**09 00 32.8**	**+0.7**
BDRM	**Kayabasi**	**0.63**	**256**	*i* P	**Pg**	**09 00 23.1**	**-0.6**
BDRM				*i* S	**Sg**	**09 00 32.8**	**+0.7**
DAT	**Datca**	**0.71**	**226**	*e*PG	**Pg**	**09 00 25.3**	**+0.1**
DAT	**Datca**	**0.71**	**226**	*e*Pg	**Pg**	**09 00 25.3**	**+0.1**
BODT	**Bodrum**	**0.74**	**257**	*e*PG	**Pg**	**09 00 24.7**	**-1.0**
BODT	**Bodrum**	**0.74**	**257**	*e*Pg	**Pg**	**09 00 24.7**	**-1.0**
GCAM	**G?zelcaml?**	**0.91**	**302**	*i* P	**Pb**	**09 00 25.5**	**-3.6**
GCAM				*i* S	**Sb**	**09 00 42.5**	**+1.4**
GCAM	**G?zelcaml?**	**0.91**	**302**	*i* P	**Pb**	**09 00 25.5**	**-3.6**
GCAM				*i* S	**Sb**	**09 00 42.5**	**+1.3**
GLHS	**Glhisar (BURDU**	**1.03**	**94**	*e*PG	**Pg**	**09 00 31.4**	**+0.1**
GLHS	**Glhisar (BURDU**	**1.03**	**94**	*e*Pg	**Pg**	**09 00 31.4**	**+0.1**
KULA	**Kula-Manisa**	**1.33**	**15**	*e*PN	**Pn**	**09 00 35.9**	**0.0**
KULA	**Kula-Manisa**	**1.33**	**15**	*e*Pn	**Pn**	**09 00 35.9**	**0.0**
ELL	**Elmali**	**1.44**	**109**	*e*PN	**Pn**	**09 00 37.2**	**-0.1**
ELL	**Elmali**	**1.44**	**109**	*e*Pn	**Pn**	**09 00 37.2**	**-0.1**

*IDC **06** 09:09:26.5±1.9, 23.22S×179.80W, h517km±22km, mb3.5/7, mb1 3.8/9, mb1mx3.5/18, mbtmp3.6/9, Error ellipse: s-maj=25.1km s-min=15.1km az=145.0*
*ISCJB **06** 09:09:28.5±1.1, 23.27S±0.07×180.0W±0.1, h553km±15km, mb4.3/17, Error ellipse: s-maj=16.2km s-min=11.2km az=176.9*
*NEIC **06** 09:09:28.8±0.9, 23.33S×179.88W, h548km±11km, mb4.5/5, Error ellipse: s-maj=14.8km s-min=11.7km az=130.0*
ISC 06 09:09:28.8±1.1, 23.36S±0.07×179.9W±0.1, h544km±14km, n34, σ0959/34, mb4.3/17, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.92**	**341**	*e*Pn	**P**	**09 11 06.4**	**-0.2**
AFI	**Afiamalu**	**12.14**	**41**	P	**P**	**09 12 04.0**	**-4.9**
	2.7nm,0.3s,baz=293,slow=18,SNR=4.4						
URZ	**Urewera**	**15.07**	**189**	P	**P**	**09 12 38.7**	**-0.2**
	4.1nm,0.3s,baz=25,slow=0.7,SNR=16						
URZ				S	**S**	**09 15 14.6**	**-0.8**
	0.4nm,0.3s,baz=338,slow=21,SNR=1.7						
QRZ	**Quartz Range**	**18.55**	**198**	PN	**P**	**09 13 13.4**	**+1.6**
NNZ	**Nelson**	**18.68**	**196**	*e*PN	**P**	**09 13 12.9**	**-0.1**
THZ	**Tophouse**	**19.32**	**196**	PN	**P**	**09 13 18.7**	**0.0**
DSZ	**Denniston Nort**	**19.61**	**199**	PN	**P**	**09 13 21.0**	**-0.3**
RPZ	**Rata Peaks**	**21.63**	**198**	P	**P**	**09 13 39.9**	**+0.3**
	7.9nm,0.6s,mb4.5,baz=324,slow=31,SNR=7.2						
EIDS	**Eidsvold**	**26.50**	**260**	*e*P	**P**	**09 14 23.6**	**+0.4**
EIDS	**Eidsvold**	**26.50**	**260**	*e*P	**P**	**09 14 23.3**	**+0.1**
	8.6nm,0.9s,mb4.4						
CMSA	**Cobar Meteorol**	**31.52**	**247**	*e*P	**P**	**09 15 07.3**	**+0.7**
CTA	**Charters Tower**	**31.58**	**269**	*e*P	**P**	**09 15 07.8**	**+0.5**
	21nm,0.3s,mb5.1						
CTA	**Charters Tower**	**31.58**	**269**	P	**P**	**09 15 07.7**	**+0.4**
	28nm,0.4s,mb5.2,baz=94,slow=11,SNR=66						
CTAO	**Charters Tower**	**31.58**	**269**	*e*P	**P**	**09 15 07.9**	**+0.6**
	30nm,0.5s,mb5.1						
QLP	**Quilpie**	**32.62**	**257**	*e*P	**P**	**09 15 16.5**	**+0.5**
MTSU	**Mount Surprise**	**33.82**	**272**	*e*P	**P**	**09 15 26.5**	**+0.2**
	27nm,0.7s,mb4.9						
STKA	**Stephens Creek**	**35.02**	**247**	*e*P	**P**	**09 15 36.9**	**+0.7**
	3.9nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**35.02**	**247**	P	**P**	**09 15 37.2**	**+1.1**
STKA	**Stephens Creek**	**35.02**	**247**	P	**P**	**09 15 37.2**	**+1.1**
	5.6nm,0.6s,mb4.3,baz=96,slow=8.5,SNR=11						
COEN	**Coen**	**36.14**	**278**	*e*P	**P**	**09 15 46.1**	**+0.5**
	17nm,0.6s,mb4.8						
ASAR	**Alice Springs**	**42.23**	**260**	P	**P**	**09 16 34.4**	**-0.2**
	7.5nm,0.6s,mb4.4,baz=94,slow=7.8,SNR=87						
ASAR				ScP	ScP	09 21 17.8	+2.9
	0.8nm,0.9s,baz=98,slow=4.2,SNR=5.5						
WRAB	**Tennant Creek**	**42.54**	**266**	*e*P	**P**	**09 16 36.2**	**-0.9**
	11nm,0.8s,mb4.4						
KAKA	**Kakadu**	**46.37**	**275**	*e*P	**P**	**09 17 05.6**	**-1.0**
	8.2nm,0.3s,mb4.7						
KAKA	**Kakadu**	**46.37**	**275**	*e*P	**P**	**09 17 05.3**	**-1.3**
FORT	**Forrest**	**46.60**	**249**	*e*P	**P**	**09 17 07.8**	**-0.4**
	21nm,0.6s,mb4.8						
KNA	**Kununurra**	**48.77**	**269**	*e*P	**P**	**09 17 24.4**	**-0.2**
	14nm,0.9s,mb4.5						
FITZ	**Fitzroy Crossi**	**50.98**	**265**	*e*P	**P**	**09 17 40.8**	**0.0**
	8.4nm,0.4s,mb4.4						
KLBR	**Kellerberrin**	**55.30**	**247**	*e*P	**P**	**09 18 11.0**	**-0.3**
	8.2nm,0.6s,mb4.1						
MBWA	**Marble Bar**	**55.57**	**260**	*e*P	**P**	**09 18 12.7**	**-0.7**
MBWA	**Marble Bar**	**55.57**	**260**	*e*P	**P**	**09 18 12.7**	**-0.7**
	6.7nm,0.5s,mb4.1						
NVAR	**Mina Array Bea**	**84.29**	**44**	P	**P**	**09 21 03.5**	**0.0**
	1.3nm,1.0s,mb3.4,baz=226,slow=7.2,SNR=6.6						
TXAR	**Lajitas Array**	**90.06**	**58**	P	**P**	**09 21 31.4**	**+0.5**
	0.7nm,0.7s,mb3.6,baz=207,slow=6.9,SNR=13						
ILAR	**Eielson Array**	**91.48**	**14**	P	**P**	**09 21 36.3**	**-0.4**
	0.1nm,0.5s,mb3.0,baz=209,slow=6.0,SNR=5.0						
BRTR	**Keskin Array B**	**147.34**	**308**	PKPbc	PKPbc	09 28 10.2	-1.4
	0.4nm,0.7s,baz=117,slow=5.0,SNR=2.5						

WEL 06 09:40:23.4±0.2, 38.86S×178.09E, h29km±1km, ML3.7/9, 1C-1D, Error ellipse: s-maj=2.5km s-min=1.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRGZ	**Paritu Road**	**0.18**	**247**	P*	Pb	09 40 28.3	-1.0
PRGZ				S*	Sb	09 40 33.6	+0.4
MHGZ	**Mahia Peninsul**	**0.33**	**206**	P*	Pb	09 40 31.2	0.0
MHGZ				S*	Sb	09 40 37.5	+1.0
KNZ	**Kokohu**	**0.36**	**243**	P*	Pb	09 40 31.1	-0.7
KNZ				S*	Sb	09 40 37.8	+0.4
CNGZ	**Carnagh Statio**	**0.38**	**14**	P*	Pb	09 40 32.6	+0.7
MWZ	**Matawai**	**0.68**	**320**	⇑P*	Pb	09 40 36.5	-0.3
MWZ				S*	Sb	09 40 47.1	+1.2
RAHZ	**Arahi**	**0.79**	**265**	⇓PN	Pn	09 40 38.2	-0.4
PUZ	**Puketiti**	**0.79**	**10**	PN	Pn	09 40 38.1	-0.5
URZ	**Urewera**	**0.97**	**307**	PN	Pn	09 40 40.8	-0.3
NMHZ	**Naumai**	**1.03**	**256**	PN	Pn	09 40 41.7	-0.2
CKHZ	**Cape Kidnapper**	**1.12**	**224**	PN	Pn	09 40 42.1	-1.1
MCHZ	**McNeill Hill**	**1.23**	**241**	PN	Pn	09 40 44.4	-0.3
MXZ	**Matakaoa Point**	**1.30**	**8**	PN	Pn	09 40 45.3	-0.4
KAHZ	**Kahuranaki**	**1.33**	**225**	PN	Pn	09 40 45.3	-0.8
PXZ	**Pawanui**	**1.51**	**219**	PN	Pn	09 40 46.5	-2.0
OPRZ	**Ohinepanea**	**1.57**	**309**	*e*PN	Pn	09 40 48.8	-0.6
WPHZ	**Waipukurau**	**1.75**	**226**	PN	Pn	09 40 50.4	-1.5
TSZ	**Takapari Road**	**2.04**	**233**	PN	Pn	09 40 54.0	-1.8
DVHZ	**Dannevirke**	**2.07**	**225**	PN	Pn	09 40 54.3	-1.9
BFZ	**Birch Farm**	**2.31**	**217**	PN	Pn	09 40 57.1	-2.4
MRZ	**Mangatainoka R**	**2.65**	**226**	PN	Pn	09 41 01.4	-2.8
TMWZ	**Te Maipa**	**2.81**	**216**	PN	Pn	09 41 03.5	-2.9
MTW	**Mount Morrison**	**3.04**	**220**	PN	Pn	09 41 06.2	-3.4
CAW	**Cannon Point**	**3.23**	**225**	*e*PN	Pn	09 41 09.4	-2.8
THZ	**Tophouse**	**4.91**	**232**	*e*PN	Pn	09 41 31.4	-3.8
MQZ	**McQueen's Vall**	**6.34**	**218**	SN	Sn	09 42 57.0	-9.4

*NEIC **06** 10:22:14.1, 32.31S×71.46W, h3km, MD3.5(GUC), After GUC.*
GUC 06 10:22:14.1±0.6, 32.31S×71.46W, h3km±13km, MD3.5, ML2.4, 3C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.43**	**355**	⇑*i*P	Pg	10 22 22.6	+0.3
CHNG				*i* S	Sg	10 22 29.3	+1.6
CHNG				AML	AML	10 22 29.7	
	comp=E,506nm,0.3s						
JACH	**Jahuel**	**0.82**	**117**	⇑*i*P	Pg	10 22 31.0	+1.2
JACH				*i* S	Sg	10 22 43.0	+2.5
JACH	**Jahuel**	**0.82**	**117**	⇑*i*P	Pg	10 22 31.0	+1.2
JACH				*i* S	Sg	10 22 43.0	+2.5
CLCH	**Cerro Calan**	**1.33**	**145**	⇓*i*P	Pn	10 22 38.6	-1.0
CLCH				*i* S	Sg	10 22 56.7	-0.2
CLCH				AML	AML	10 22 58.6	
	comp=N,179nm,0.7s						
TACH	**Talagante**	**1.41**	**162**	⇓*i*P	Pn	10 22 39.7	-0.9
TACH				*i* S	Sg	10 22 59.4	0.0
TACH	**Talagante**	**1.41**	**162**	⇓*i*P	Pn	10 22 39.7	-0.9
TACH				*i* S	Sg	10 22 59.4	0.0
FCH	**Farellones**	**1.41**	**136**	*e*P	Pn	10 22 40.1	-0.7
FCH	**Farellones**	**1.41**	**136**	*e*P	Pn	10 22 40.1	-0.7
CHCH	**Chadas Angostu**	**1.76**	**158**	*i* S	Sn	10 23 08.8	+0.5
LCO	**Las Campanas**	**3.35**	**11**	*e*Pn	Pn	10 23 08.7	+1.3
LCO				*e*Sn	Sn	10 23 44.4	-3.2

*ISCJB **06** 10:32:42.3±2.3, 21.95S±0.1×176.2W±0.1, h40km±24km, mb4.0/9, Error ellipse: s-maj=23.1km s-min=13.2km az=42.1*
*IDC **06** 10:32:45.0±3.5, 21.89S×176.11W, h52km±33km, mb3.7/8, mb1 4.0/11, mb1mx3.8/20, mbtmp3.8/11, ML4.1/2, Error ellipse: s-maj=32.7km s-min=17.5km az=142.0*
*NEIC **06** 10:32:52.0±1.6, 22.21S×175.95W, h125km±15km, mb4.5/3, Error ellipse: s-maj=15.3km s-min=11.7km az=246.0*
ISC 06 10:32:45.0±1.8, 21.95S±0.1×176.2W±0.1, h51km±19km, n17, σ0869/19, mb4.0/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.86**	**306**	*e*Pn	**Pn**	**10 34 35.5**	**+12**
	53nm,1.1s						
AFI	**Afiamalu**	**8.97**	**28**	P	**Pn**	**10 34 51.9**	**-0.1**
AFI				S	**Sn**	**10 36 24.8**	**-6.9**
AFI	**Afiamalu**	**8.97**	**28**	P	**Pn**	**10 34 51.9**	**-0.1**
	1.1nm,0.3s,baz=180,slow=12,SNR=2.6						
AFI				S	**Sn**	**10 36 24.8**	**-6.9**
	2.0nm,0.3s,baz=272,slow=20,SNR=2.0						
RAR	**Rarotonga**	**15.25**	**90**	P	**Pn**	**10 36 17.6**	**+0.5**
	1.6nm,0.3s,baz=216,slow=12,SNR=7.6						
RAR				S	**Sn**	**10 38 52.1**	**-13**
	1.4nm,0.3s,baz=69,slow=17,SNR=1.9						
URZ	**Urewera**	**17.30**	**198**	P	**Pn**	**10 36 42.1**	**-0.8**
	0.4nm,0.3s,baz=252,slow=9.6,SNR=2.8						
URZ				S	**Sn**	**10 39 40.3**	**-14**
	0.4nm,0.3s,baz=90,slow=11,SNR=1.8						
RPZ	**Rata Peaks**	**24.20**	**203**	P	**P**	**10 37 56.9**	**+0.2**
	4.7nm,0.7s,mb4.0,baz=346,slow=4.2,SNR=3.7						
CTA	**Charters Tower**	**35.09**	**266**	P	**P**	**10 39 35.1**	**+1.6**
	5.2nm,0.6s,mb4.7,baz=110,slow=11,SNR=12						
CTAO	**Charters Tower**	**35.09**	**266**	*e*P	**P**	**10 39 34.9**	**+1.4**
	4.6nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**38.77**	**246**	P	**P**	**10 40 03.8**	**-0.8**
	1.9nm,0.7s,mb3.9,baz=92,slow=14,SNR=3.0						
ASAR	**Alice Springs**	**45.90**	**258**	P	**P**	**10 41 02.8**	**+0.1**
	0.7nm,0.5s,mb3.9,baz=97,slow=8.1,SNR=6.7						
ASAR				PcP	PcP	10 42 39.9	+0.7
	0.6nm,0.7s,baz=106,slow=6.8,SNR=3.7						
WRAB	**Tennant Creek**	**46.12**	**263**	*e*P	**P**	**10 41 05.2**	**+0.6**
	1.4nm,0.6s,mb4.1						
MJAR	**Matsushiro Arr**	**72.36**	**323**	P	**P**	**10 44 04.7**	**-0.8**
	1.0nm,0.5s,mb4.0,baz=166,slow=6.2,SNR=3.7						
NVAR	**Mina Array Bea**	**80.88**	**42**	P	**P**	**10 44 53.1**	**-0.5**
	0.7nm,0.9s,mb3.6,baz=215,slow=6.0,SNR=3.9						
TXAR	**Lajitas Array**	**86.37**	**57**	P	**P**	**10 45 22.6**	**+0.7**
	0.9nm,0.8s,mb4.0,baz=214,slow=7.3,SNR=12						
ILAR	**Eielson Array**	**89.31**	**12**	P	**P**	**10 45 34.6**	**-0.5**
	0.1nm,0.4s,mb3.5,baz=228,slow=5.4,SNR=5.6						
AKASG	**Malin Array Be**	**145.07**	**332**	PKPbc	PKPbc	10 52 15.3	-0.6
	0.8nm,0.3s,baz=42,slow=4.1,SNR=9.7						
BRTR	**Keskin Array B**	**149.06**	**312**	PKPbc	PKPbc	10 52 27.4	-0.2
	0.9nm,0.8s,baz=116,slow=5.6,SNR=4.1						

IDC 06 10:34:48.1±7.6, 5.12S×147.98E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.4/15, mbtmp3.8/3, Error ellipse: s-maj=282.2km s-min=35.1km az=102.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**22.89**	**215**	P	P	10 39 53.5	0.0
	1.1nm,0.5s,baz=42,slow=8.6,SNR=17						
MKAR	**Makanchi Array**	**77.45**	**320**	P	P	10 46 46.2	+0.8
	0.2nm,0.3s,baz=104,slow=6.1,SNR=2.3						
ZALV	**Zalesovo Beam**	**78.80**	**327**	P	P	10 46 52.2	-0.5
	0.5nm,0.3s,baz=125,slow=4.2,SNR=1.9						
TORD	**Torodi Ar. Bea**	**145.81**	**286**	PKPbc	PKPbc	10 54 29.5	-0.9
	0.6nm,0.5s,baz=71,slow=3.9,SNR=6.8						

GUC 06 10:35:37.5±0.7, 21.44S×67.64W, h200km, ML3.8, 3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.77**	**283**	⇓*i*P	Pn	10 36 15.5	+1.8
PB01				*i* S	Sn	10 36 44.1	+2.4
PB01				AML	AML	10 36 45.3	
	comp=N,477nm,0.4s						
PB04	**Plate Boundary**	**1.91**	**244**	*e*P	Pn	10 36 23.4	+8.4
PB04				*i* S	Sn	10 36 57.1	+13
PB04				AML	AML	10 36 59.8	
	comp=E,256nm,0.2s						
HMBC	**Humberston**	**2.40**	**298**	⇓*i*P	Pn	10 36 21.8	+1.5
HMBC				*i* S	Sn	10 36 55.4	+1.8
HMBC				AML	AML	10 36 56.5	
	comp=N,506nm,0.3s						
MNMC	**Miæe Miæ**	**2.94**	**321**	⇓*i*P	Pn	10 36 28.7	+2.2
MNMC				*i* S	Sn	10 37 07.2	+2.4
MNMC				AML	AML	10 37 10.6	
	comp=N,145nm,0.2s						
CEN1	**Los Morros**	**3.06**	**230**	*e*P	Pn	10 36 32.0	+4.2
CEN1				*i* S	Sn	10 37 14.1	+6.8
CEN1				AML	AML	10 37 16.9	
	comp=N,40nm,0.2s						

*IDC **06** 10:48:17.6±3.1, 54.05N×87.17E, h0km, mb1 3.3/2, mb1mx3.1/24, mbtmp3.3/2, ML3.2/2, Error ellipse: s-maj=27.7km s-min=15.5km az=55.0*
ISC 06 10:48:18.7±2.9, 54.2N±0.1×86.9E±0.2, h10km, n5, σ1919/9, 4C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.25**	**259**	Pg	**Pg**	**10 48 41.5**	**-1.1**
	6.8nm,0.3s,baz=84,slow=16,SNR=42						
ZALV				Lg		10 49 02.2	
	4.0nm,0.3s,baz=77,slow=27,SNR=17						
ZALV				Rg		10 49 16.8	
	9.6nm,0.7s,baz=288,slow=25,SNR=4.4						
KURK	**Kurchatov**	**6.14**	**239**	⇑Pn	**Pn**	**10 49 49.2**	**-0.2**
	2.3nm,0.8s						
KURK				⇑Sn	**Sn**	**10 51 04.2**	**+4.5**
	1.9nm,0.6s						
KURK				⇑Lg		10 51 36.1	
	5.1nm,0.7s						
KURBB	**Kurchatov Arra**	**6.25**	**238**	⇑Pn	**Pn**	**10 49 51.7**	**+0.8**
	0.3nm,0.5s,baz=58,slow=14						
KURBB				⇓Sn	**Sn**	**10 51 03.5**	**+1.3**
	1.5nm,0.6s,baz=50,slow=22						
KURBB				⇓Lg		10 51 44.0	
	2.7nm,0.8s,baz=61,slow=30						
MKAR	**Makanchi Array**	**7.97**	**203**	Pn	**Pn**	**10 50 13.8**	**-0.8**
	0.2nm,0.3s,baz=23,slow=12,SNR=4.1						
MKAR				Sn	**Sn**	**10 51 44.4**	**-0.4**
	0.2nm,0.3s,baz=19,slow=28,SNR=5.8						
MKAR				Lg		10 52 30.3	
	0.1nm,0.3s,baz=27,slow=25,SNR=3.8						
BVAR	**Borovoye Array**	**9.88**	**270**	Pn	**Pn**	**10 50 43.6**	**+3.0**
	0.4nm,0.3s,baz=48,slow=25,SNR=2.7						
BVAR				Sn	**Sn**	**10 52 30.3**	**-1.1**
	0.3nm,0.3s,baz=74,slow=30,SNR=2.8						

*NNC **06** 10:55:13.2±3.8, 43.82N×85.47E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=28.7km s-min=19.6km az=134.0*
*ISCJB **06** 10:55:20.7±1.0, 44.13N±0.08×84.16E±0.10, h10km, Error ellipse: s-maj=12.5km s-min=8.1km az=35.9*
*NEIC **06** 10:55:20.1±3.7, 43.82N×84.16E, h10km, Error ellipse: s-maj=54.4km s-min=14.2km az=19.0*
*IDC **06** 10:55:20.1±3.9, 44.05N×84.27E, h0km, mb1 3.2/4, mb1mx3.1/25, mbtmp3.2/4, ML3.1/4, Error ellipse: s-maj=56.7km s-min=28.9km az=42.0*
*BJI **06** 10:55:21.7, 44.18N×84.60E, h10km, ML2.9/7*
ISC 06 10:55:23.3±1.0, 44.16N±0.08×84.30E±0.09, h10km, n12, σ1915/15, 5C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.47**	**97**	Pn	**Pn**	**10 56 02.3**	**-1.3**
WMQ				Sg	**Sn**	**10 56 28.4**	**-5.4**
WMQ				smax			
	comp=N,60nm,0.5s						
WMQ				smax			
	comp=E,30nm,0.6s						
MK31	**Makanchi Array**	**2.99**	**332**	Pn	**Pn**	**10 56 11.6**	**+0.9**
	comp=E,2.8nm,0.4s,baz=141,slow=17,SNR=82						
MK31				⇑Sn	**Sg**	**10 56 58.1**	**-1.2**
	comp=E,5.1nm,0.3s,baz=141,slow=29,SNR=11						
MK31	**Makanchi Array**	**2.99**	**332**	ePn	**Pn**	**10 56 11.6**	**+0.9**
MK31				*e*Sg	**Sg**	**10 56 57.9**	**-1.4**
MKAR	**Makanchi Array**	**2.99**	**332**	Pn	**Pn**	**10 56 11.3**	**+0.7**
	comp=E,0.6nm,0.3s,baz=151,slow=14,SNR=9.7						
MKAR				Pg	**Pg**	**10 56 17.2**	**-3.3**
	comp=E,3.4nm,0.3s,baz=141,slow=18,SNR=30						
MKAR				Lg		10 56 57.9	
	comp=E,12nm,0.3s,baz=146,slow=29,SNR=17						
MKAR				Rg		10 57 05.8	
	comp=E,13nm,0.3s,baz=144,slow=31,SNR=9.1						
TKM2	**Tokmak 2**	**6.45**	**262**	⇓Pg	**Pg**	**10 57 26.5**	**-0.2**
	comp=E,0.7nm,0.4s						
TKM2				⇑Lg		10 59 00.9	
	comp=E,1.8nm,0.3s						
AAK	**Ala-Archa**	**7.30**	**261**	Lg		10 59 20.7	
	comp=E,0.4nm,0.3s,baz=184,slow=14,SNR=1.4						
**KURBB

KAB	**Kabansk**	**0.89**	**197**	⇑	*i*PG		**Pg**	**11 32 00.9**	**+0.2**
KAB					*i*			11 32 11.7	
KAB						pmax	pmax		
	comp=Z,200nm,0.2s								
KAB						smax			
	comp=N,3μm,0.3s								
KAB	**Kabansk**	**0.89**	**197**	⇑	*i*Pg		**Pg**	**11 32 00.2**	**-0.5**
KAB					*e*Pb		**Pb**	**11 32 01.5**	**+0.4**
KAB					*e*Sg		**Sg**	**11 32 11.1**	**-1.2**
KAB					*e*Sb		**Sb**	**11 32 13.9**	**+0.9**
KAB						Pmax			
	comp=N,131nm,0.2s								
KAB						Smax			
	comp=N,3μm,0.5s								
MXMB	**Maximikha**	**1.07**	**70**		*e*Pg		**Pg**	**11 32 05.1**	**+1.0**
MXMB					*e*			11 32 09.6	
MXMB					*e*Sg		**Sg**	**11 32 19.7**	**+1.7**
MXMB					*e*			11 32 30.2	
MXMB						Pmax			
	comp=N,174nm,0.4s								
MXMB						Smax			
	comp=N,999nm,0.9s								
UUDB	**Ulan-Yde**	**1.10**	**161**	⇓	*i*Pg		**Pg**	**11 32 03.5**	**-1.1**
	comp=N,23nm,0.6s								
UUDB				⇑	*i*Pg		**Pg**	**11 32 03.5**	**-1.1**
	comp=N,37nm,0.6s								
UUDB				⇑	*i*Pg		**Pg**	**11 32 03.5**	**-1.1**
	comp=N,117nm,0.6s								
UUDB					*i* Sg		**Sg**	**11 32 17.3**	**-1.6**
UUDB					*e*Sb		**Sb**	**11 32 20.3**	**+1.3**
UUDB						Pmax			
	comp=N,145nm,0.7s								
UUDB						max			
	comp=N,630nm,1.0s								
LSTR	**Listvyanka**	**1.72**	**234**		*e*PN		**Pn**	**11 32 14.2**	**+0.7**
LSTR					*e*			11 32 36.6	
LSTR						pmax	pmax		
	comp=Z,116nm,0.6s								
LSTR						smax			
	comp=E,641nm,1.4s								
LSTR	**Listvyanka**	**1.72**	**234**	⇓	*i*Pg		**Pn**	**11 32 14.2**	**+0.7**
LSTR					*i* Sg		**Sg**	**11 32 36.9**	**-1.9**
LSTR					*e*Sb		**Sb**	**11 32 38.0**	**+1.2**
LSTR						Pmax			
	comp=E,118nm,0.8s								
LSTR						max			
	comp=E,639nm,1.4s								
IRK	**Irkutsk**	**1.83**	**250**		*e*PN		**Pn**	**11 32 16.7**	**+1.7**
IRK					*e*			11 32 39.5	
IRK						pmax	pmax		
	comp=Z,146nm,0.1s								
IRK						smax			
	comp=N,2μm,0.5s								
IRK	**Irkutsk**	**1.83**	**250**		*e*Pg		**Pg**	**11 32 15.7**	**-2.9**
IRK					*e*			11 32 31.0	
IRK					*e*Sg		**Sg**	**11 32 39.8**	**-2.6**
IRK						Pmax			
	comp=N,77nm,0.1s								
IRK						Smax			
	comp=N,2μm,0.4s								
SYVR	**Suvo**	**1.91**	**66**		*e*Pn		**Pn**	**11 32 18.0**	**+1.9**
SYVR				⇑	*i*Pg		**Pg**	**11 32 19.4**	**-0.7**
SYVR					*e*Sg		**Sg**	**11 32 46.2**	**+1.3**
SYVR						Pmax			
	comp=N,18nm,0.4s								
SYVR						Smax			
	comp=N,136nm,2.3s								
TLY	**Talaya**	**2.44**	**241**		*e*PN		**Pn**	**11 32 24.5**	**+1.2**
TLY					*e*			11 32 27.7	
TLY					*e*S		**Sn**	**11 32 54.4**	**+1.3**
TLY					*e*			11 32 58.5	
TLY						pmax	pmax		
	comp=Z,27nm,0.3s								
TLY						smax			
	comp=N,386nm,1.0s								
TLY	**Talaya**	**2.44**	**241**		*e*Pn		**Pn**	**11 32 24.5**	**+1.2**
TLY					*e*Pg		**Pg**	**11 32 26.7**	**-3.5**
TLY					*e*Sn		**Sn**	**11 32 53.6**	**+0.5**
TLY					*e*Sg		**Sg**	**11 32 58.4**	**-3.3**
TLY					*e*			11 33 17.4	
TLY						Pmax			
	comp=N,25nm,0.5s								
TLY						max			
	comp=N,380nm,1.0s								
YLYR	**Ulyunkhan**	**3.12**	**49**	⇓	*i*Pn		**Pn**	**11 32 34.8**	**+2.1**
YLYR				⇑	*i*Pg		**Pg**	**11 32 40.5**	**-2.8**
YLYR					*e*			11 32 44.6	
YLYR					*e*Sg		**Sg**	**11 33 21.3**	**-2.4**
YLYR						max			
	comp=N,13nm,0.8s								
YLYR						Smax			
	comp=N,67nm,1.4s								
NIZ	**Nizh Angarsk**	**3.22**	**26**		*e*PN		**Pn**	**11 32 37.0**	**+3.0**
NIZ					*e*			11 32 43.4	
NIZ					*e*S		**Sn**	**11 33 14.6**	**+2.2**
NIZ					*e*			11 33 24.4	
NIZ						pmax	pmax		
	comp=Z,31nm,0.7s								
NIZ						smax			
	comp=N,133nm,1.2s								
NIZ	**Nizh Angarsk**	**3.22**	**26**	⇑	*i*Pn		**Pn**	**11 32 37.2**	**+3.2**
NIZ					*e*Pg		**Pg**	**11 32 41.7**	**-3.4**
NIZ					*e*Sn		**Sn**	**11 33 15.6**	**+3.2**
NIZ					*e*Sg		**Sg**	**11 33 24.6**	**-2.2**
NIZ						Pmax			
	comp=N,31nm,0.8s								
NIZ						Smax			
	comp=N,133nm,1.3s								
ZAK	**Zakamensk**	**3.46**	**225**		*e*Pn		**Pn**	**11 32 39.2**	**+1.9**
ZAK					*e*Pg		**Pg**	**11 32 45.7**	**-4.0**
ZAK					*e*Sg		**Sg**	**11 33 30.9**	**-3.6**
ZAK						Pmax			
	comp=N,8.0nm,0.8s								
ZAK						Smax			
	comp=N,69nm,1.0s								
KMO	**Kumora**	**3.84**	**37**		*e*Pg		**Pg**	**11 32 53.5**	**-3.5**
KMO					*e*			11 33 10.8	
KMO					*e*Sg		**Sg**	**11 33 44.7**	**-2.0**
KMO					*e*			11 33 53.9	
KMO						Pmax			
	comp=N,17nm,1.2s								
KMO						max			
	comp=N,131nm,1.1s								
MOY	**Mondy**	**3.93**	**254**		*e*PN		**Pn**	**11 32 47.2**	**+3.3**
MOY					*e*			11 32 55.3	
MOY					*e*			11 33 43.4	
MOY						pmax	pmax		
	comp=Z,45nm,0.9s								
MOY						smax			
	comp=E,217nm,0.8s								
MOY	**Mondy**	**3.93**	**254**		*e*Pn		**Pn**	**11 32 47.2**	**+3.3**
MOY					*e*Pg		**Pg**	**11 32 53.0**	**-5.8**
MOY					*e*			11 33 33.7	
MOY					*e*Sg		**Sg**	**11 33 43.5**	**-6.2**
MOY					*e*SgSg			11 33 46.2	
MOY						Pmax			
	comp=E,45nm,0.9s								
MOY						max			
	comp=E,223nm,1.2s								
CIT	**Chita**	**4.06**	**100**		*e*		**Pg**	**11 33 08.3**	**+7.1**
CIT					*e*Sg		**Sg**	**11 33 51.2**	**-2.6**
CIT					*e*			11 34 03.2	
CIT						max			
	comp=E,197nm,1.2s								
YOA	**Uoyan**	**4.22**	**38**		*e*Sg		**Sg**	**11 33 57.4**	**-1.5**
YOA						Smax			
	comp=E,315nm,2.1s								
ORL	**Orlik**	**4.43**	**268**		*e*PN		**Pn**	**11 32 52.9**	**+2.2**
ORL					*e*			11 33 03.0	
ORL					*e*			11 33 59.8	
ORL						pmax	pmax		
	comp=Z,14nm,0.6s								
ORL						smax			
	comp=N,145nm,0.7s								
UKT	**Uakit**	**4.64**	**53**		*e*Pn		**Pn**	**11 32 55.7**	**+2.2**
UKT					*e*Pg		**Pg**	**11 33 08.4**	**-3.9**
UKT					*i* Sg		**Sg**	**11 34 11.5**	**-0.8**
UKT					*e*			11 34 22.5	
UKT						Pmax			
	comp=N,9.0nm,0.8s								
UKT						max			
	comp=N,53nm,1.8s								
SONM	**Songino Array**	**5.09**	**185**		Pn		**Pn**	**11 33 14.0**	**-7.0**
	comp=N,1.8nm,0.3s,baz=359,slow=17,SNR=8.1								
SONM					Sn		**Sg**	**11 34 19.9**	**-7.1**
	comp=N,11nm,0.3s,baz=0.2,slow=29,SNR=30								
SONM	**Songino Array**	**5.09**	**185**		PN		**Pg**	**11 33 14.0**	**-7.0**
SONM								11 34 19.9	
SONM						pmax	pmax		
	comp=Z,2.0nm,0.3s								
SONM						smax			
	comp=N,11nm,0.3s								
NLYR	**Nelyaty**	**6.16**	**51**		*e*Pg		**Pg**	**11 33 36.0**	**-5.3**
NLYR					*e*			11 33 52.0	
NLYR					*e*Sg		**Sg**	**11 34 57.2**	**-3.8**
NLYR						max			
	comp=N,12nm,3.6s								
NLYR						Smax			
	comp=N,79nm,1.4s								
TDJR	**Todzha**	**6.70**	**270**		*e*Pg		**Pg**	**11 33 43.5**	**-8.1**
TDJR					*e*			11 33 50.0	
TDJR					*e*Sg		**Sg**	**11 35 10.4**	**-7.9**
CRS	**Chara**	**7.59**	**54**		*e*		**Pg**	**11 34 20.3**	**+12**
CRS					*e*			11 34 39.2	
CRS					*e*Sg		**Sg**	**11 35 41.6**	**-5.3**
CRS						Smax			
	comp=N,42nm,1.4s								
TUP	**Tupik**	**7.80**	**74**		*e*		**Sb**	**11 35 44.0**	**+12**
TUP					*e*Sg		Sx	11 35 48.8	
ZALV	**Zalesovo Beam**	**13.30**	**283**		Lg			11 38 37.8	
	comp=N,1.3nm,0.3s,baz=67,slow=31,SNR=5.8								
MKAR	**Makanchi Array**	**17.06**	**259**		Pn		**Pn**	**11 35 45.7**	**+3.7**
	comp=N,0.2nm,0.3s,baz=69,slow=8.0,SNR=2.1								
BVAR	**Borovoye Array**	**21.95**	**285**		P		**P**	**11 36 44.4**	**+7.5**
	comp=N,0.5nm,0.5s,baz=70,slow=13,SNR=3.0								
BVAR	**Borovoye Array**	**21.95**	**285**		P		**P**	**11 36 44.4**	**+7.5**
BVAR						pmax	pmax		
	comp=Z,1.0nm,0.5s								

*ISCJB **06** 11:31:52.6±0.5, 55.˚15S±0.˚07×29.˚9W±0.˚1, h10km, mb4.2/13, MS3.9/9, Error ellipse: s-maj=12.2km s-min=9.8km az=145.3*

*IDC **06** 11:31:53.3±0.6, 55.˚12S×29.˚90W, h0km, mb4.3/10, mb1 4.3/11, mb1mx4.3/17, mbtmp4.3/11, ML5.2/1, MS3.9/10, Ms1 3.9/10, ms1mx3.8/14, Error ellipse: s-maj=19.5km s-min=17.2km az=18.0*

*NEIC **06** 11:31:54.7±0.3, 55.˚12S×29.˚92W, h10km, mb4.4/1, Error ellipse: s-maj=11.4km s-min=9.2km az=175.0*

ISC 06 11:31:54.5±0.5, 55.˚18S±0.˚07×29.˚9W±0.˚1, h10km, n45, σ0s79/20, mb4.2/13, MS3.9/9, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**18.20**	**157**	*e*	**Pn**	**11 36 06.8**	**0.0**
VNA1				*e*		11 36 14.4	
VNA1				*e*		11 36 17.4	
VNA3	**Neumayer Olymp**	**18.34**	**159**	*e*	**Pn**	**11 36 08.6**	**0.0**
VNA3				*e*		11 36 13.2	
VNA3				*e*		11 36 15.7	
PMSA	**Palmer Station**	**19.33**	**227**	P	**Pn**	**11 36 20.5**	**0.0**
	0.7nm,0.3s,baz=64,slow=6.4,SNR=2.1						
PMSA				LR	LR	11 42 14.7	
	comp=Z,342nm,21.3s,baz=66,slow=32						
USHA	**Ushuaia**	**21.90**	**255**	P	**P**	**11 36 47.4**	**0.0**
	22nm,0.8s,mb4.6,baz=77,slow=12,SNR=6.0						
USHA				LR	LR	11 42 48.5	
	comp=Z,306nm,18.3s,MS3.8,baz=85,slow=30						
MAIT	**Maitri**	**23.82**	**147**	*e*P	**P**	**11 37 05.7**	**-1.4**
QSPA	**South Pole Qui**	**35.07**	**180**	P	**P**	**11 38 48.3**	**+1.4**
QSPA	**South Pole Qui**	**35.07**	**180**	P	**P**	**11 38 48.3**	**+1.4**
	14nm,0.9s,mb4.9,baz=188,slow=4.0,SNR=46						
CPUP	**Villa Florida**	**35.08**	**314**	P	**P**	**11 38 46.9**	**-0.6**
CPUP				LR	LR	11 51 20.4	
CPUP	**Villa Florida**	**35.08**	**314**	P	**P**	**11 38 46.9**	**-0.6**
	1.2nm,0.6s,mb4.0,baz=138,slow=11,SNR=4.0						
CPUP				LR	LR	11 51 20.4	
	comp=Z,128nm,19.2s,MS3.7,baz=156,slow=33						
CFAA	**Coronel Fontan**	**35.78**	**295**	P	**P**	**11 38 50.2**	**-3.3**
	0.3nm,0.6s,mb3.4,baz=180,slow=5.0,SNR=4.8						
MAW	**Mawson**	**41.77**	**145**	P	**P**	**11 39 42.7**	**-0.6**
	1.9nm,0.5s,mb4.0,baz=254,slow=9.1,SNR=4.3						
SIV	**San Ignacio**	**45.86**	**316**	P	**P**	**11 40 16.3**	**-0.4**
	1.1nm,0.7s,mb3.9,baz=158,slow=9.4,SNR=6.8						
SIV				PcP	PcP	11 41 56.6	+2.7
	0.9nm,0.8s,baz=196,slow=7.4,SNR=3.1						
BOSA	**Boshof**	**47.30**	**79**	P	**P**	**11 40 27.6**	**-0.3**
	0.8nm,0.4s,mb4.0,baz=215,slow=7.2,SNR=2.8						
BOSA				LR	LR	11 56 19.6	
	comp=Z,36nm,19.9s,MS3.3,baz=360,slow=31						
LPAZ	**La Paz**	**48.61**	**308**	P	**P**	**11 40 38.9**	**+0.8**
	6.3nm,0.6s,mb4.8,baz=174,slow=6.0,SNR=20						
LPAZ				LR	LR	11 58 20.9	
	comp=Z,58nm,19.8s,MS3.6,baz=180,slow=33						
LBTB	**Lobatse**	**50.28**	**77**	P	**P**	**11 40 51.9**	**+1.0**
	2.7nm,0.6s,mb4.5,baz=228,slow=12,SNR=3.7						
TSUM	**Tsumeb**	**50.66**	**64**	P	**P**	**11 40 54.3**	**+0.5**
	1.3nm,0.9s,mb3.9,baz=98,slow=16,SNR=3.5						
DBIC	**Dimbokro**	**65.07**	**28**	P	**P**	**11 42 34.6**	**-0.4**
	1.4nm,0.5s,mb4.2,baz=195,slow=16,SNR=3.1						
DBIC				LR	LR	12 03 50.1	
	comp=Z,89nm,20.4s,MS4.0,baz=94,slow=30						
OTAV	**Otavalo**	**67.88**	**306**	P	**P**	**11 42 53.9**	**+0.9**
	1.5nm,0.5s,mb4.3						
TORD	**Torodi Ar. Bea**	**73.11**	**32**	P	**P**	**11 43 24.6**	**-0.2**
TORD				LR	LR	12 08 38.5	
TORD	**Torodi Ar. Bea**	**73.11**	**32**	P	**P**	**11 43 24.6**	**-0.2**
	1.6nm,0.6s,mb4.1,baz=202,slow=6.8,SNR=10						
TORD				LR	LR	12 08 38.5	
	comp=Z,124nm,20.1s,MS4.2,baz=190,slow=30						
STKA	**Stephens Creek**	**92.99**	**173**	LR	LR	12 23 15.1	
	comp=Z,163nm,19.3s,MS4.5,baz=206,slow=33						
KEST	**Kesra**	**96.61**	**31**	LR	LR	12 23 48.9	
	comp=Z,54nm,19.6s,MS4.0,baz=241,slow=32						
ESDC	**Sonseca Array**	**97.06**	**20**	LR	LR	12 24 31.4	
	comp=Z,84nm,18.7s,MS4.2,baz=175,slow=33						
NVAR	**Mina Array Bea**	**119.62**	**295**	PKP	PKPdf	11 50 46.8	+3.1
	0.2nm,0.5s,baz=170,slow=2.6,SNR=3.3						
TARA	**Tarawa**	**123.20**	**208**	*e*PKPdf	PKPdf	11 50 46.9	-4.5
FINES	**FINESS Array B**	**124.36**	**29**	PKP	PKPdf	11 50 52.3	+0.3
	0.5nm,0.3s,baz=191,slow=14,SNR=2.4						
CMAR	**Chiang Mai Arr**	**126.83**	**113**	PKP	PKPdf	11 50 59.2	+1.0
	1.3nm,0.8s,baz=248,slow=4.4,SNR=6.4						
AKTK	**Aktyubinsk**	**128.07**	**54**	PKP	PKPdf	11 51 01.6	+2.1
AKTO	**Aktyubinsk**	**128.07**	**54**	PKP	PKPdf	11 51 01.6	+2.1
	0.5nm,0.3s,baz=239,slow=3.9,SNR=3.4						
ABKAR	**Akbulak array**	**128.17**	**56**	*e*PKPdf	PKPdf	11 50 60.0	+0.2
ARCES	**ARCESS Array B**	**130.72**	**22**	PKP	PKPdf	11 51 02.6	-1.4
	2.8nm,0.9s,baz=28,slow=2.9,SNR=6.7						
YKA	**Yellowknife Ar**	**134.49**	**320**	PKP	PKPdf	11 51 11.3	0.0
	0.6nm,0.6s,baz=128,slow=2.4,SNR=3.2						
BVAR	**Borovoye Array**	**135.63**	**58**	PKP	PKPdf	11 51 13.7	0.0
	0.5nm,0.5s,baz=222,slow=1.9,SNR=3.9						
MKAR	**Makanchi Array**	**138.09**	**72**	PKP	PKPdf	11 51 18.3	-0.2
	0.2nm,0.2s,baz=218,slow=1.6,SNR=2.5						
ZALV	**Zalesovo Beam**	**143.39**	**64**	PKhKP	PKPpre	11 51 24.7	
	1.0nm,0.6s,baz=258,slow=2.1,SNR=4.0						
DAWY	**Dawson**	**145.06**	**314**	*e*PKPbc	PKPbc	11 51 29.6	-0.3
ILAR	**Eielson Array**	**148.38**	**313**	PKPbc	PKPbc	11 51 39.0	-0.5
	6.3nm,0.7s,baz=119,slow=1.7,SNR=58						
MCK	**McKinley**	**149.02**	**311**	*e*PKPbc	PKPbc	11 51 41.7	+0.6
KDAK	**Kodiak Island**	**149.03**	**299**	*e*PKPbc	PKPbc	11 51 41.7	+0.4
OHAK	**Old Harbor**	**149.19**	**297**	*e*PKPbc	PKPbc	11 51 42.0	+0.3
BPAW	**Bear Paw Mtn.**	**149.98**	**311**	*e*PKPbc	PKPbc	11 51 43.4	0.0
PPLA	**Purkeypile**	**150.27**	**309**	*e*PKPbc	PKPbc	11 51 44.5	+0.3
TTA	**Tatalina**	**152.00**	**308**	*e*PKPbc	PKPbc	11 51 49.8	+1.6
SONM	**Songino Array**	**152.23**	**87**	PKPbc	PKPbc	11 51 49.3	+0.1
	2.6nm,0.7s,baz=207,slow=2.3,SNR=12						
KSRS	**Korea Array**	**156.75**	**131**	PKPab	PKPab	11 52 18.8	0.0
	0.8nm,0.7s,baz=224,slow=4.6,SNR=4.2						

*ISCJB **06** 11:49:08.4±0.6, 23.˚94N±0.˚02×122.˚82E±0.˚02, h8km±4km, Error ellipse: s-maj=3.8km s-min=2.6km az=166.4*

*NEIC **06** 11:49:09.7±4.2, 23.˚93N×122.˚67E, h10km, MG3.0(JMA), Error ellipse: s-maj=39.7km s-min=14.8km az=85.0*

*JMA **06** 11:49:09.4±0.1, 24.˚01N×122.˚78E, h32km±4km, M3.0*

*TAP **06** 11:49:10.3, 24.˚04N×122.˚89E, h41km±1km, ML3.6, D*

ISC 06 11:49:08.8±0.5, 23.˚96N±0.˚02×122.˚82E±0.˚02, h9km±3km, n53, σ0s94/89, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.53**	**19**	P	**Pg**	**11 49 19.6**	**+0.6**
YOJ				*e*S	**Sg**	**11 49 26.8**	**+0.8**
HATJ	**Hateruma jima**	**0.90**	**84**	P	**Pg**	**11 49 26.4**	**+0.2**
HATJ				*e*S	**Sg**	**11 49 38.7**	**+0.8**
IRIF	**Iriomote-Funau**	**0.91**	**66**	P	**Pg**	**11 49 26.0**	**-0.3**
IRIF				*e*S	**Sg**	**11 49 38.5**	**+0.4**
ENA	**Nanau**	**1.09**	**295**	P	**Pg**	**11 49 29.9**	**+0.1**
	baz=289						
ENA				S	**Sg**	**11 49 44.4**	**+0.4**
	baz=289						
TWC	**Suao**	**1.10**	**306**	*i* P	**Pg**	**11 49 29.7**	**-0.2**
	baz=300						
TWC				*e*S	**Sg**	**11 49 42.9**	**-1.3**
	baz=300						
JKRS	**Kuro-shima**	**1.12**	**75**	P	**Pg**	**11 49 29.7**	**-0.6**
JKRS				*e*S	**Sg**	**11 49 44.6**	**-0.2**
TWD	**Chiawan**	**1.13**	**276**	*e*P	**Pb**	**11 49 30.4**	**-0.1**
	baz=271						
NACB	**Ninganchiao**	**1.14**	**281**	*e*Pg	**Pg**	**11 49 30.1**	**-0.6**
ILA	**Ilan**	**1.27**	**310**	P	**Pn**	**11 49 33.4**	**+0.7**
	baz=316						
ILA				S	**Sb**	**11 49 50.0**	**+0.7**
	baz=316						
JIJ	**Ishigaki jima**	**1.27**	**71**	P	**Pn**	**11 49 31.7**	**-1.0**
JIJ				*e*S	**Sb**	**11 49 48.4**	**-1.0**
ESL	**Shilin**	**1.28**	**264**	*e*P	**Pn**	**11 49 31.9**	**-1.0**
	baz=260						
TWB1	**Santiao Chiao**	**1.29**	**324**	P	**Pn**	**11 49 31.9**	**-1.1**
	baz=331						
TWB1				*e*S	**Sb**	**11 49 50.0**	**0.0**
	baz=331						
TWE	**Neicheng**	**1.30**	**306**	*i* P	**Pn**	**11 49 33.4**	**+0.2**
	baz=300						
TWE				S	**Sb**	**11 49 49.9**	**-0.3**
	baz=300						
ENTT	**Nioudou**	**1.33**	**301**	P	**Pn**	**11 49 34.1**	**+0.6**
	baz=295						
ENTT				*e*S	**Sb**	**11 49 51.1**	**0.0**
	baz=295						
NNS	**Nan Shan**	**1.41**	**290**	P	**Pn**	**11 49 35.1**	**+0.5**
	baz=285						
NNS				S	**Sn**	**11 49 53.7**	**+0.4**
	baz=285						
WHF	**Hehuan Shan**	**1.44**	**278**	*e*P	**Pn**	**11 49 34.9**	**-0.1**
	baz=273						
WHF				*e*S	**Sn**	**11 49 53.7**	**-0.3**
	baz=273						
EHY	**Hungye**	**1.45**	**252**	*e*P	**Pn**	**11 49 34.7**	**-0.4**
	baz=249						
EHY				*e*S	**Sn**	**11 49 53.4**	**-0.8**
	baz=249						
NWF	**Wu-fen Shan**	**1.46**	**320**	*i* P	**Pn**	**11 49 34.9**	**-0.4**
	baz=314						
NWF				S	**Sn**	**11 49 52.7**	**-1.8**
	baz=314						
YHNB	**Yeheng**	**1.50**	**298**	*e*Pg	**Pg**	**11 49 36.3**	**-1.2**
NSK	**Sanguang**	**1.51**	**298**	P	**Pn**	**11 49 36.6**	**+0.5**
	baz=293						
NSK				*e*S	**Sn**	**11 49 56.2**	**+0.2**
	baz=293						
TWA	**Mucha**	**1.52**	**312**	*e*P	**Pn**	**11 49 36.3**	**+0.1**
	baz=307						
TWA				S	**Sn**	**11 49 55.7**	**-0.3**
	baz=307						
TWF1	**Yuli**	**1.52**	**247**	*e*P	**Pn**	**11 49 36.7**	**+0.5**
	baz=236						
TWF1				*e*S	**Sn**	**11 49 56.0**	**-0.2**
	baz=236						
TWT	**Tachien**	**1.53**	**281**	*e*P	**Pn**	**11 49 36.2**	**-0.1**
	baz=267						
TATO	**Taipei**	**1.58**	**310**	*e*Pg	**Pg**	**11 49 38.1**	**-1.0**
CHKT	**Chengkung**	**1.59**	**238**	*e*P	**Pn**	**11 49 36.2**	**-0.9**
	baz=226						
CHKT				*e*S	**Sn**	**11 49 54.9**	**-2.8**
	baz=226						
TWS1	**Kuangyinshan**	**1.71**	**312**	*e*P	**Pn**	**11 49 40.0**	**+1.2**
	baz=307						
SSLB	**Suanglung**	**1.72**	**265**	*e*Pg	**Pg**	**11 49 39.2**	**-2.6**
TWY	**Chenhua**	**1.72**	**320**	*e*P	**Pn**	**11 49 38.3**	**-0.6**
	baz=315						
TWY				*e*S	**Sn**	**11 50 00.2**	**-0.8**
	baz=315						
SMLT	**Sun Moon Lake**	**1.76**	**268**	*e*P	**Pn**	**11 49 40.4**	**+0.9**
	baz=264						
SMLT				*e*S	**Sn**	**11 50 02.1**	**0.0**
	baz=264						
YUS	**Yu-Shan**	**1.78**	**255**	P	**Pn**	**11 49 40.3**	**+0.6**
	baz=252						
YUS				*e*S	**Sn**	**11 50 02.4**	**0.0**
	baz=252						
NSTT	**Nanjuang**	**1.79**	**292**	*e*P	**Pn**	**11 49 40.9**	**+1.1**
	baz=288						
TYC	**Yuchr**	**1.80**	**269**	*e*P	**Pn**	**11 49 40.3**	**+0.3**
	baz=264						
TYC				*e*S	**Sn**	**11 50 03.4**	**+0.4**
	baz=264						
ELDTW	**Lidau**	**1.83**	**246**	*e*P	**Pn**	**11 49 40.8**	**+0.4**
	baz=233						
ELDTW				*e*S	**Sn**	**11 50 01.8**	**-1.8**
	baz=233						
JTJ	**Tarama**	**1.84**	**68**	P	**Pn**	**11 49 40.4**	**-0.2**
JTJ				*e*S	**Sn**	**11 50 03.5**	**-0.6**
ALS	**Alishan**	**1.90**	**257**	*e*P	**Pn**	**11 49 42.1**	**+0.7**
	baz=253						
ALS				*e*S	**Sn**	**11 50 05.8**	**+0.3**
	baz=253						
TWQ1	**Liyutan**	**1.91**	**282**	*e*P	**Pn**	**11 49 42.6**	**+1.1**
	baz=278						
TTN	**Taitung**	**1.95**	**232**	*e*P	**Pn**	**11 49 42.2**	**+0.1**
	baz=224						
TWG	**Pinlang**	**1.97**	**235**	*e*Pn	**Pn**	**11 49 41.4**	**-0.9**
TWG	**Pinlang**	**1.97**	**235**	P	**Pn**	**11 49 41.9**	**-0.4**
	baz=226						
TWG				*e*S	**Sn**	**11 50 05.6**	**-1.5**
	baz=226						
CHN5	**Tsauling**	**2.00**	**260**	*e*P	**Pn**	**11 49 44.5**	**+1.8**
	baz=249						
CHN5				*e*S	**Sn**	**11 50 07.8**	**-0.1**
	baz=249						
STYT	**Tauyuan**	**2.06**	**248**	*e*S	**Sn**	**11 50 09.0**	**-0.3**
	baz=238						
CHN4	**Tsaushan**	**2.13**	**254**	*e*P	**Pn**	**11 49 47.2**	**+2.7**
	baz=243						
CHN4				*e*S	**Sn**	**11 50 12.5**	**+1.3**
	baz=243						

*NEIC **06** 12:01:11.8±0.3,32.79N×105.63E,h10km,mb4.5/10,Error ellipse: s-maj=7.0km s-min=5.5km az=52.0*
*BJI **06** 12:01:11.1,32.76N×105.66E,h16km,mB4.6/10,mb4.5/16, ML4.0/18,Ms4.0/9,Ms7 3.7/10*
*MOS **06** 12:01:13.2±1.1,32.82N×105.64E,h33km,mb4.5/20,Error ellipse: s-maj=11.7km s-min=7.7km az=101.1*

ISC 06 12:01:11.4±0.2,32.77N±0.03×105.60E±0.03,h10km,n87, σ1§14/102,mb4.3/30,MS3.7/2,1C-1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.43**	**221**	Pn	**Pn**	**12 01 51.3**	**+0.1**
CD2				Pg	**Pg**	**12 01 54.6**	**-3.4**
CD2				Sn	**Sn**	**12 02 21.4**	**+0.5**
CD2				Sg	**Sg**	**12 02 26.5**	**-3.0**
CD2				smax			
	comp=N,8μm,1.1s						
CD2				smax			
	comp=E,4μm,0.9s						
XAN	**Xi'an**	**3.05**	**65**	Pg	**Pg**	**12 02 07.1**	**-2.8**
XAN				Sg	**Sg**	**12 02 47.6**	**-1.9**
XAN				smax			
	comp=N,700nm,0.6s						
XAN				smax			
	comp=E,430nm,0.8s						
LZH	**Lanzhou**	**3.61**	**337**	Pn	**Pn**	**12 02 09.5**	**+2.1**
LZH				Pg	**Pg**	**12 02 18.0**	**-2.6**
LZH				Sn	**Sn**	**12 02 48.5**	**-1.6**
LZH				Sg	**Sg**	**12 03 03.0**	**-4.4**
LZH				smax			
	comp=N,1μm,0.6s						
LZH				smax			
	comp=E,2μm,0.7s						
ENH	**Enshi**	**4.15**	**126**	*e*Pn	**Pn**	**12 02 15.5**	**+0.7**
ENH				*e*Sg	**Sg**	**12 03 25.3**	**+0.6**
GYA	**Guiyang**	**6.36**	**171**	Pn	**Pn**	**12 02 45.5**	**+0.3**
GYA				Pg	**Pg**	**12 03 06.7**	**-6.5**
GYA				Sn	**Sn**	**12 03 56.6**	**-1.3**
GYA				Sg	**Sg**	**12 04 20.7**	**-15**
GYA				smax			
	comp=N,210nm,1.0s						
GYA				smax			
	comp=E,140nm,1.0s						
WHN	**Wuhan**	**7.78**	**104**	Pn	**Pn**	**12 03 05.2**	**+0.5**
WHN				Sn	**Sn**	**12 04 31.4**	**-1.5**
WHN				LR	LR		
	comp=Z,2μm,4.7s						
KMI	**Kunming**	**8.02**	**199**	P	**Pn**	**12 03 13.6**	**+5.6**
KMI				smax			
	comp=N,42nm,1.2s						
KMI				smax			
	comp=E,21nm,1.6s						
GTA	**Gaotai**	**8.11**	**326**	P	**Pn**	**12 03 09.3**	**+0.1**
GTA				pP		12 03 12.2	
GTA				S	**Sn**	**12 04 38.3**	**-2.6**
GTA				pmax	pmax		
	comp=Z,24nm,0.7s						
GTA				LR	LR		
	comp=N,170nm,6.2s						
GTA				LR	LR		
	comp=E,200nm,7.8s						
GTA				LR	LR		
	comp=Z,150nm,7.7s						
BTO	**Baotou**	**8.59**	**23**	*e*P	**Pn**	**12 03 10.6**	**-5.1**
BJT	**Baijiatuau**	**11.17**	**47**	*e*Pn	**Pn**	**12 03 51.9**	**+0.9**
	comp=Z,6.0nm,0.6s						
BJT	**Baijiatuau**	**11.17**	**47**	*e*P	**Pn**	**12 03 51.9**	**+0.8**
BJT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BJI	**Beijing**	**11.18**	**47**	P	**Pn**	**12 03 52.1**	**+0.8**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BJI				LR	LR		
	comp=N,260nm,9.0s						
BJI				LR	LR		
	comp=E,180nm,9.7s						
BJI				LR	LR		
	comp=Z,92nm,17.1s						
SHL	**Shillong**	**13.96**	**243**	*e*PKP	**Pn**	**12 04 28.2**	**-1.1**
SONM	**Songino Array**	**15.06**	**2**	Pn	**Pn**	**12 04 44.5**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=189,slow=15,SNR=7.2						
SONM				Lg		12 09 07.7	
	comp=Z,0.2nm,0.3s,baz=182,slow=28,SNR=3.3						
SONM				LR	LR	12 10 58.5	
	comp=Z,83nm,18.7s,baz=253,slow=39						
ULN	**Ulaanbaatar**	**15.12**	**4**	*e*Pn	**Pn**	**12 04 45.7**	**+0.8**
	comp=Z,2.5nm,0.9s						
ULN	**Ulaanbaatar**	**15.12**	**4**	*e*P	**Pn**	**12 04 45.7**	**+0.8**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.46**	**204**	Pn	**Pn**	**12 04 50.9**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=11,slow=10,SNR=5.2						
TAPN	**Taplejung**	**16.40**	**255**	*e*P	**Pn**	**12 05 02.5**	**+0.8**
ODAN	**Odare**	**16.86**	**254**	*e*P	**Pn**	**12 05 06.9**	**-0.6**
RAMN	**Ramite**	**17.46**	**256**	*e*P	**Pn**	**12 05 13.9**	**-1.2**
	comp=Z,30nm,0.9s						
PKI	**Pulchoki**	**18.20**	**259**	*e*P	**Pn**	**12 05 24.0**	**-0.3**
	comp=Z,14nm,0.6s						
PKIN	**Phulchoki**	**18.21**	**259**	*e*P	**Pn**	**12 05 23.3**	**-1.1**
KKN	**Kakani**	**18.23**	**260**	*e*P	**Pn**	**12 05 25.1**	**+0.5**
GKN	**Gorkha**	**18.69**	**261**	*e*P	**Pn**	**12 05 29.3**	**-0.9**
	comp=Z,22nm,0.8s						
KSRS	**Korea Array**	**18.84**	**69**	P	**Pn**	**12 05 33.5**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=255,slow=10,SNR=22						
KSRS				LR	LR	12 13 29.5	
	comp=Z,53nm,18.0s,baz=154,slow=39						
TLY	**Talaya**	**18.95**	**356**	*e*P	**Pn**	**12 05 33.4**	**+0.2**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CN2	**Changchun**	**19.03**	**49**	*e*P	**Pn**	**12 05 36.4**	**+2.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
MDJ	**Mudanjiang**	**22.06**	**51**	P	**P**	**12 06 05.2**	**-1.1**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,47nm,8.3s						
MK31	**Makanchi Array**	**22.63**	**315**	*e*P	**P**	**12 06 12.4**	**+0.1**
MKAR	**Makanchi Array**	**22.63**	**315**	P	**P**	**12 06 12.3**	**0.0**
	comp=Z,2.1nm,0.4s,mb3.9,baz=116,slow=12,SNR=29						
VLA	**Vladivostok**	**23.08**	**56**	*e*P	**P**	**12 06 18.1**	**+1.0**
VLA				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.3						
KSH	**Kashi**	**24.78**	**294**	*e*P	**P**	**12 06 37.6**	**+4.2**
KSH				*ep*P		12 06 46.3	
KSH				*es*P	sP	12 06 50.9	+13
KSH				*e*PP		12 07 16.1	
KSH				*e*PcP	PcP	12 10 11.7	+1.9
KSH				*e*S	**S**	**12 10 57.9**	**+2.2**
KSH				*es*S	sS	12 11 13.1	+12
KSH				*e*SS		12 11 59.1	
KSH				*e*ScP	ScP	12 13 46.8	-1.9
KSH				PcS	PcS	12 13 50.6	+0.8
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
KSH				pmax	pmax		
	comp=Z,66nm,3.5s						
KSH				LR	LR		
	comp=N,56nm,6.6s						
KSH				LR	LR		
	comp=E,78nm,5.7s						
KSH				LR	LR		
	comp=Z,76nm,7.0s						
KLR	**Kul'dur**	**25.50**	**42**	*e*P	**P**	**12 06 37.0**	**-2.8**
KLR				pmax	pmax		
	comp=E,32nm,1.2s						
KLR				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.5						
KLR				MLR	MLR		
	comp=Z,500nm,11.0s,MS4.3						
TKM2	**Tokmak 2**	**25.65**	**302**	*e*P	**P**	**12 06 42.6**	**+1.4**
	comp=Z,4.5nm,0.8s,mb4.0						
TKM2	**Tokmak 2**	**25.65**	**302**	*e*P	**P**	**12 06 42.6**	**+1.4**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
ZAA0	**Zalesovo Array**	**25.83**	**331**	*e*P	**P**	**12 06 43.0**	**+0.4**
ZALV	**Zalesovo Beam**	**25.83**	**331**	P	**P**	**12 06 42.8**	**+0.1**
	comp=Z,1.3nm,0.3s,mb3.9,baz=145,slow=11,SNR=8.5						
ZALV	**Zalesovo Beam**	**25.83**	**331**	P	**P**	**12 06 42.8**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
UCH	**Uchtor**	**26.29**	**300**	*e*P	**P**	**12 06 49.0**	**+2.0**
	comp=Z,8.7nm,1.1s,mb4.2						
AAK	**Ala-Archa**	**26.38**	**301**	*e*P	**P**	**12 06 50.3**	**+2.5**
KURK	**Kurchatov**	**26.73**	**320**	*e*P	**P**	**12 06 51.8**	**+1.0**
	comp=Z,7.8nm,1.1s,mb4.2						
KURK	**Kurchatov**	**26.73**	**320**	*e*P	**P**	**12 06 50.9**	**0.0**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.2						
MJAR	**Matsushiro Arr**	**27.01**	**73**	P	**P**	**12 06 53.4**	**-0.2**
MJAR	**Matsushiro Arr**	**27.01**	**73**	P	**P**	**12 06 53.4**	**-0.2**
	comp=Z,2.0nm,1.0s,mb3.6,baz=270,slow=8.5,SNR=3.8						
MJAR	**Matsushiro Arr**	**27.01**	**73**	P	**P**	**12 06 53.4**	**-0.2**
MJAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BVAR	**Borovoye Array**	**32.32**	**319**	P	**P**	**12 07 40.9**	**+0.5**
	comp=Z,0.8nm,0.4s,mb3.9,baz=106,slow=11,SNR=5.8						
BVAR	**Borovoye Array**	**32.32**	**319**	P	**P**	**12 07 40.9**	**+0.5**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRVK	**Borovoye**	**32.39**	**319**	*e*P	**P**	**12 07 41.2**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
ABKAR	**Akbulak array**	**37.55**	**310**	*e*P	**P**	**12 08 25.9**	**+0.3**
	comp=Z,3.3nm,0.8s,mb4.1						
ARU	**Arti**	**39.92**	**321**	*e*P	**P**	**12 08 46.0**	**+0.5**
	comp=Z,12nm,1.0s,mb4.6						
ARU	**Arti**	**39.92**	**321**	*d*P	**P**	**12 08 46.0**	**+0.6**
ARU				S	**S**	**12 14 50.8**	**+0.5**
ARU				SS	SS	12 17 41.0	-5.6
ARU				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
KIV	**Kislovodsk**	**49.48**	**302**	*e*P	**P**	**12 10 03.1**	**+1.2**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
KIV				MLR	MLR		
	comp=Z,19nm,18.0s,MS3.1						
KLMR	**Klimovskoe**	**50.44**	**325**	P	**P**	**12 10 08.1**	**-0.7**
KLMR				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.1						
VSR	**Storozhevoye**	**50.90**	**312**	*e*P	**P**	**12 10 12.1**	**-0.4**
VSR				pmax	pmax		
	comp=N,2.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,4.0nm,0.4s						
VSR				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.9						
JOF	**Joensuu**	**54.31**	**327**	*e*P	**P**	**12 10 37.1**	**-0.5**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
JOF	**Joensuu**	**54.31**	**327**	*ep*	**P**	**12 10 37.1**	**-0.5**
	comp=Z,1.2nm,0.3s,mb4.3						
KEV	**Kevo**	**55.74**	**336**	*e*P	**P**	**12 10 46.1**	**-1.7**
KEV	**Kevo**	**55.74**	**336**	*ep*	**P**	**12 10 46.1**	**-1.7**
	comp=Z,0.4nm,0.4s,mb3.8						
ARCES	**ARCESS Array B**	**56.27**	**335**	P	**P**	**12 10 51.0**	**-0.6**
	comp=Z,1.3nm,0.7s,mb4.0,baz=87,slow=9.8,SNR=6.6						
ARCES	**ARCESS Array B**	**56.27**	**335**	P	**P**	**12 10 51.0**	**-0.6**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KAF	**Kangasniemi**	**56.70**	**326**	*e*P	**P**	**12 10 51.6**	**-3.2**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KAF	**Kangasniemi**	**56.70**	**326**	*ep*	**P**	**12 10 51.6**	**-3.2**
	comp=Z,1.2nm,0.4s,mb4.3						
FINES	**FINESS Array B**	**56.90**	**326**	P	**P**	**12 10 56.1**	**-0.1**
FINES	**FINESS Array B**	**56.90**	**326**	P	**P**	**12 10 56.1**	**-0.1**
	comp=Z,4.2nm,0.4s,mb4.8,baz=93,slow=7.8,SNR=28						
FINES	**FINESS Array B**	**56.90**	**326**	P	**P**	**12 10 56.1**	**-0.1**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BRTR	**Keskin Array B**	**57.04**	**299**	P	**P**	**12 10 57.1**	**-0.4**
	comp=Z,0.9nm,0.6s,mb4.0,baz=99,slow=6.4,SNR=6.0						
BRTR	**Keskin Array B**	**57.04**	**299**	*ce*P	**P**	**12 10 57.5**	**0.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WB2	**Warramunga Arr**	**59.19**	**148**	*e*P	**P**	**12 11 12.7**	**+0.1**
BUR08	**Bucovina Ar. S**	**60.54**	**310**	*e*P	**P**	**12 11 13.2**	**-8.5**
ASAR	**Alice Springs**	**62.28**	**151**	P	**P**	**12 11 33.9**	**+0.2**
	comp=Z,1.7nm,0.6s,mb4.4,baz=337,slow=7.0,SNR=33						
ASAR	**Alice Springs**	**62.28**	**151**	P	**P**	**12 11 33.9**	**+0.2**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**63.95**	**327**	P	**P**	**12 11 43.4**	**-0.9**
NOA	**NORSAR Array B**	**63.95**	**327**	P	**P**	**12 11 43.4**	**-0.9**
	comp=Z,3.9nm,0.8s,mb4.5,baz=70,slow=6.6,SNR=8.7						
NOA	**NORSAR Array B**	**63.95**	**327**	P	**P**	**12 11 43.4**	**-0.9**
NOA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
COLA	**College**	**67.38**	**26**	*e*P	**P**	**12 12 07.1**	**+0.7**
	comp=Z,8.9nm,1.1s,mb4.7						
COLA	**College**	**67.38**	**26**	*e*P	**P**	**12 12 07.1**	**+0.7**
COLA				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
ILAR	**Eielson Array**	**67.79**	**26**	P	**P**	**12 12 08.5**	**-0.5**
	comp=Z,1.5nm,1.0s,mb4.0,baz=293,slow=5.4,SNR=16						
ILAR	**Eielson Array**	**67.79**	**26**	P	**P**	**12 12 08.5**	**-0.5**
ILAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PMR	**Palmer**	**68.47**	**30**	*e*P	**P**	**12 12 13.1**	**-0.3**
	comp=Z,10nm,1.1s,mb4.8						
PMR	**Palmer**	**68.47**	**30**	*e*P	**P**	**12 12 13.1**	**-0.3**
PMR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	**12 12 42.4**	**+0.9**
	comp=Z,21nm,0.8s,mb4.8						
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	**12 12 42.4**	**+0.9**
	comp=Z,10nm,0.8s,mb4.8						
LPG	**La Plagne**	**73.03**	**313**	*e*P	**P**	**12 12 42.4**	**+0.9**
LPG				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
LPL	**La Plagne**	**73.04**	**313**	*e*P	**P**	**12 12 42.3**	**+0.8**
	comp=Z,6.2nm,0.5s,mb4.5						
LPL	**La Plagne**	**73.04**	**313**	*e*P	**P**	**12 12 42.3**	**+0.8**
	comp=Z,3.1nm,0.5s,mb4.5						
LPL	**La Plagne**	**73.04**	**313**	*e*P	**P**	**12 12 42.3**	**+0.8**
LPL				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
VIVF	**Saint-Julien-l**	**74.63**	**314**	*e*P	**P**	**12 12 51.8**	**+1.0**

*ISCJB **06** 12:19:09.7±0.6,58.95S±0.1×25.2W±0.2,h10km,mb4.2/9, MS3.6/5,Error ellipse: s-maj=18.7km s-min=11.3km az=138.4*
*IDC **06** 12:19:11.1±0.7,58.67S×25.18W,h0km,mb4.1/7, mb1 4.2/7,mb1mx4.0/15,mbtmp4.0/7,MS3.6/6,Ms1 3.6/6, ms1mx3.4/16,Error ellipse: s-maj=25.7km s-min=18.9km az=12.0*
*NEIC **06** 12:19:16.2±0.4,58.65S×25.20W,h35km,mb4.7/1,Error ellipse: s-maj=16.7km s-min=11.8km az=197.0*

ISC 06 12:19:11.6±0.6,58.9S±0.1×25.2W±0.2,h10km,n30, σ0§80/18,mb4.2/9,MS3.6/5,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.74**	**156**	*e*P	**Pn**	**12 22 25.9**	**-0.2**
VNA3	**Neumayer Olymp**	**13.93**	**159**	*e*P	**Pn**	**12 22 28.4**	**-0.3**
VNA3				*e*S	**Sn**	**12 24 48.9**	**-14**
PMSA	**Palmer Station**	**18.98**	**236**	LR	LR	12 29 41.6	
	comp=Z,266nm,21.7s,baz=245,slow=33						
QSPA	**South Pole Qui**	**31.33**	**180**	P	**P**	**12 25 35.6**	**+4.2**
QSPA	**South Pole Qui**	**31.33**	**180**	P	**P**	**12 25 35.6**	**+4.2**
	3.9nm,0.7s,mb4.3,baz=198,slow=4.6,SNR=12						
PLCA	**Paso Flores**	**33.61**	**282**	P	**P**	**12 25 52.6**	**+0.9**
	4.3nm,1.1s,mb4.3,baz=130,slow=7.9,SNR=3.5						
MAW	**Mawson**	**37.23**	**141**	LR	LR	12 41 08.2	
	comp=Z,130nm,20.2s,MS3.7,baz=96,slow=35						
CPUP	**Villa Florida**	**39.51**	**311**	LR	LR	12 41 29.2	
	comp=Z,84nm,21.8s,MS3.5,baz=69,slow=34						
CFAA	**Coronel Fontan**	**39.69**	**294**	P	**P**	**12 26 44.0**	**+0.3**
CFAA	**Coronel Fontan**	**39.69**	**294**	P	**P**	**12 26 44.0**	**+0.3**
	0.1nm,0.4s,baz=169,slow=6.8,SNR=2.3						
BOSA	**Boshof**	**45.77**	**71**	P	**P**	**12 27 33.5**	**+0.4**
	1.3nm,0.6s,mb4.0,baz=191,slow=5.5,SNR=3.3						
BOSA				LR	LR	12 41 56.1	
	comp=Z,89nm,18.1s,MS3.8,baz=68,slow=30						
LBTB	**Lobatse**	**48.94**	**69**	P	**P**	**12 27 57.5**	**-0.3**
LBTB	**Lobatse**	**48.94**	**69**	P	**P**	**12 27 57.5**	**-0.2**
	0.6nm,0.4s,mb3.9,baz=191,slow=10,SNR=2.2						
SIV	**San Ignacio**	**50.32**	**313**	P	**P**	**12 28 06.6**	**-1.6**
	0.3nm,0.4s,mb3.7,baz=149,slow=12,SNR=4.9						
LPAZ	**La Paz**	**52.90**	**305**	P	**P**	**12 28 28.4**	**+0.8**
	1.5nm,0.6s,mb4.1,baz=204,slow=4.1,SNR=8.3						
LPAZ				PcP	PcP	12 29 38.4	+1.8
	0.8nm,0.5s,baz=105,slow=1.6,SNR=3.3						
NNA	**Nana**	**60.55**	**298**	P	**P**	**12 29 18.4**	**-3.6**
	3.3nm,0.5s,mb4.7						
ROSC	**El Rosal**	**74.54**	**309**	*e*P	**P**	**12 30 49.8**	**-0.6**
TORD	**Torodi Ar. Bea**	**75.08**	**27**	P	**P**	**12 30 53.7**	**+0.4**
TORD				LR	LR	12 59 08.6	
TORD	**Torodi Ar. Bea**	**75.08**	**27**	P	**P**	**12 30 53.7**	**+0.4**
	1.3nm,0.3s,mb4.3,baz=201,slow=6.3,SNR=22						
TORD				LR	LR	12 59 08.6	
	comp=Z,48nm,18.3s,MS3.8,baz=170,slow=32						
ASAR	**Alice Springs**	**95.93**	**161**	P	**P**	**12 32 38.9**	**+0.4**
	0.6nm,0.9s,mb4.0,baz=172,slow=4.6,SNR=4.6						
KEST	**Kesra**	**98.59**	**28**	LR	LR	13 14 55.6	
	comp=Z,10nm,18.1s,MS3.4,baz=204,slow=34						
NVAR	**Mina Array Bea**	**123.44**	**290**	PKP	PKPdf	12 38 10.2	+2.1
	0.6nm,0.7s,baz=133,slow=3.4,SNR=6.0						
WVOR	**Wild Horse Val**	**126.70**	**293**	*e*PKPdf	PKPdf	12 38 14.3	+0.1
YKA	**Yellowknife Ar**	**138.99**	**315**	PKP	PKPdf	12 38 36.6	0.0
	1.6nm,0.6s,baz=128,slow=2.3,SNR=5.2						
INK	**Inuvik**	**148.67**	**317**	PKPbc	PKPbc	12 38 57.6	+0.5
	9.6nm,0.9s,baz=49,slow=2.6,SNR=11						
DAWY	**Dawson**	**149.45**	**308**	*e*PKPbc	PKPbc	12 38 59.9	+0.6
SONM	**Songino Array**	**149.75**	**90**	PKPbc	PKPbc	12 39 01.1	+0.6
	1.0nm,0.5s,baz=235,slow=3.3,SNR=6.0						
EGAK	**Eagle**	**150.42**	**309**	*e*PKPbc	PKPbc	12 39 02.2	+0.7
EGAK				*e*PKPab	PKPab	12 39 07.3	-0.9
EGAK				*ep*PKPdf	pPKPab	12 39 11.6	+0.1
MENT	**Mentasta**	**150.86**	**304**	*e*PKPbc	PKPbc	12 39 04.3	+1.6
ILAR	**Eielson Array**	**152.76**	**307**	PKPbc	PKPbc	12 39 07.9	+1.0
	7.2nm,1.0s,baz=133,slow=1.3,SNR=41						

*BNS **06** 12:26:04.8±0.8,51.45N×16.95E,h5km,ML4.1*
*ISCJB **06** 12:26:08.1±0.2,51.53N±0.01×16.13E±0.02,h0km, mb3.9/18,Error ellipse: s-maj=2.0km s-min=1.5km az=5.9*
*MOS **06** 12:26:09.1±1.3,51.61N×16.11E,h10km,mb4.2/12,Error ellipse: s-maj=6.4km s-min=3.8km az=82.4*
*CSEM **06** 12:26:09.8±0.1,51.56N×16.15E,h2km,mb4.1/11, ML4.4/12,Ms4.0,Error ellipse: s-maj=2.7km s-min=2.1km az=173.0*
*NEIC **06** 12:26:10.2±0.3,51.60N×16.09E,h5km,ML3.8(CLL), ML3.5(BRA),Error ellipse: s-maj=6.0km s-min=4.5km az=170.0*
*IDC **06** 12:26:10.5±0.6,51.49N×16.03E,h0km,mb3.8/9, mb1 3.9/16,mb1mx3.8/26,mbtmp3.8/16,ML3.5/7,Error ellipse: s-maj=10.3km s-min=6.8km az=83.0*
*STR **06** 12:26:10.2±0.9,51.42N×15.97E,h2km,Ml4.2,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*IPEC **06** 12:26:10.2±0.3,51.54N×16.39E,h0km,ML3.7/3,Error ellipse: s-maj=3.6km s-min=1.9km az=90.0*
*LDG **06** 12:26:10.8±0.1,51.45N×16.05E,h1km,Ml4.4/10,Error ellipse: s-maj=3.6km s-min=2.1km az=2.0,Suspected Mining induced.*
*WAR **06** 12:26:11.3,51.51N×16.13E,ML3.5,Mining Induced*
*PRU **06** 12:26:11.6,51.49N×16.12E,h0km*
*BGR **06** 12:26:11.3±0.6,51.60N×16.12E,h1km,ML4.3/11,Error ellipse: s-maj=6.7km s-min=5.6km az=147.0*
*VIE **06** 12:26:13.2±0.4,51.23N×16.16E,h0km,mb3.4/10,ML3.7/9, Ms4.0/2,Error ellipse: s-maj=2.7km s-min=2.0km az=179.0*
61 km WNW of Wroclaw

ISC 06 12:26:10.0±0.2,51.54N±0.01×16.14E±0.02,h0km,n296, σ1§18/416,mb3.9/18,23C-15D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.70**	**172**	*e*Pg	**Pg**	**12 26 24.0**	**+0.5**
KSP				*e*Sg	**Sg**	**12 26 33.1**	**+0.5**
KSP	**Ksiaz**	**0.70**	**172**	⇓*i*P	**Pg**	**12 26 23.7**	**+0.2**
KSP				*e*		12 26 32.6	
KSP	**Ksiaz**	**0.70**	**172**	*i* Pg	**Pg**	**12 26 23.7**	**+0.2**
KSP				*e*Sg	**Sg**	**12 26 32.6**	**0.0**
KSP				*e*L		12 26 37.8	
KSP	**Ksiaz**	**0.70**	**172**	*e*Pg	**Pg**	**12 26 23.7**	**+0.2**
	baz=4.7						
KSP				*e*S	**Sg**	**12 26 32.6**	**0.0**
KSP				*e*Sg	**Sg**	**12 26 32.9**	**+0.3**
	baz=4.7						
UPC	**Upice**	**1.04**	**185**	*e*P	**Pg**	**12 26 30.2**	**+0.4**
UPC	**Upice**	**1.04**	**185**	*e*PG	**Pg**	**12 26 30.2**	**+0.4**
UPC	**Upice**	**1.04**	**185**	Pg	**Pg**	**12 26 30.2**	**+0.4**
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*P	**Pg**	**12 26 32.7**	**-0.2**
DPC				*e*		12 26 48.6	
DPC				smax			
	comp=N,967nm,0.8s						
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*PG	**Pg**	**12 26 32.7**	**-0.2**
DPC				*e*SG	**Sg**	**12 26 48.6**	**+0.2**
	comp=Z,966nm,0.8s						
DPC	**Dobruska-Polom**	**1.20**	**174**	Pg	**Pg**	**12 26 32.7**	**-0.2**
DPC				Sg	**Sg**	**12 26 48.6**	**+0.2**
	comp=Z,966nm,0.8s						
PVCC	**Panska Ves**	**1.42**	**225**	*e*P	**Pg**	**12 26 37.1**	**-0.1**
PVCC				MLR	MLR		
	comp=Z,2μm,20.8s						
PVCC	**Panska Ves**	**1.42**	**225**	*e*PG	**Pg**	**12 26 37.1**	**-0.1**
PVCC	**Panska Ves**	**1.42**	**225**	Pg	**Pg**	**12 26 37.1**	**-0.1**
BRG	**Berggiesshubel**	**1.54**	**245**	*e*Pn	**Pn**	**12 26 38.0**	**-0.6**
BRG				*e*Sg	**Sg**	**12 27 00.0**	**+0.7**
BRG	**Berggiesshubel**	**1.54**	**245**	PN	**Pn**	**12 26 38.4**	**-0.2**
BRG				PG	**Pg**	**12 26 39.7**	**+0.3**
BRG				SG	**Sg**	**12 26 59.9**	**+0.6**
	comp=Z,1μm,1.1s						
BRG	**Berggiesshubel**	**1.54**	**245**	P	**Pn**	**12 26 38.4**	**-0.2**
BRG						12 26 59.9	
BRG				smax			
	comp=Z,720nm,1.1s						
BRG	**Berggiesshubel**	**1.54**	**245**	Pn	**Pn**	**12 26 38.0**	**-0.6**
BRG	**Berggiesshubel**	**1.54**	**245**	P	**Pn**	**12 26 38.4**	**-0.2**
BRG				Sg	**Sg**	**12 27 00.0**	**+0.7**
RUE	**Ruedersdorf**	**1.74**	**304**	*e*

OKC ePG Pg 12 26 50.3 -0.5
OKC eSG Sg 12 27 17.7 -0.6
comp=Z,851nm,0.8s
OKC Ostrava-Krasne 2.13 142 Pn Pn 12 26 46.3 -0.5
VRAC Vranov 2.25 172 Pn Pn 12 26 48.7 +0.3
comp=Z,7.2nm,0.3s,baz=349,slow=16,SNR=34
VRAC Lg 12 27 19.2
comp=Z,27nm,0.3s,baz=40,slow=19,SNR=8.1
VRAC Vranov 2.25 172 ⇓P Pn 12 26 49.6 +1.1
VRAC Vranov 2.25 172 ⇓*i*P Pn 12 26 49.6 +1.1
VRAC Vranov 2.25 172 *e*Pn Pn 12 26 49.2 +0.7
baz=357
VRAC Vranov 2.25 172 P Pn 12 26 49.6 +1.1
VRAC eSg Sg 12 27 19.9 -2.4
comp=Z,295nm,0.4s,baz=357
TREC Trest 2.29 191 *e*PN Pn 12 26 49.4 +0.5
TREC ePG Pg 12 26 52.6 -1.2
TREC Trest 2.29 191 Pn Pn 12 26 49.4 +0.5
KRUC Moravsky 2.49 176 *e*Pn Pn 12 26 51.8 +0.1
baz=360
KRUC eSg Sg 12 27 27.6 -2.2
comp=Z,403nm,0.8s,baz=360
TANN Tannenbergstha 2.58 246 *e*Pn Pn 12 26 53.0 -0.1
TANN eSg Sg 12 27 32.4 -0.6
TANN Tannenbergstha 2.58 246 Pn Pn 12 26 53.0 0.0
TANN Sg Sg 12 27 32.4 -0.6
WERD Werda 2.66 247 *e*Pn Pn 12 26 53.9 -0.1
WERD eSg Sg 12 27 35.8 +0.4
WERD Werda 2.66 247 Pn Pn 12 26 53.9 -0.1
WERD Sg Sg 12 27 35.8 +0.4
OJC Ojcow 2.67 118 *e*Pn Pn 12 26 52.6 -1.6
OJC ePg Pg 12 27 00.7 -0.4
OJC eSn Sn 12 27 24.8 -2.3
OJC eSg Sg 12 27 36.0 +0.4
OJC Ojcow 2.67 118 *e*P Pn 12 26 52.6 -1.6
OJC e 12 27 24.8
OJC Ojcow 2.67 118 *e*P Pn 12 26 52.6 -1.6
OJC Ojcow 2.67 118 ePg Pg 12 27 00.7 -0.4
OJC eS Sn 12 27 24.8 -2.3
OJC eSg Sg 12 27 36.0 +0.4
NKC Novy Kostel 2.68 242 *e*P Pn 12 26 54.8 +0.5
NKC Novy Kostel 2.68 242 *e*PN Pn 12 26 54.8 +0.5
NKC ePG Pg 12 27 01.9 +0.6
NKC eSG Sg 12 27 37.1 +1.0
comp=Z,604nm,0.4s
NKC Novy Kostel 2.68 242 Pn Pn 12 26 54.8 +0.5
GUNZ Gunzen 2.68 245 *e*Pn Pn 12 26 54.8 +0.4
GUNZ eSg Sg 12 27 36.3 +0.2
GUNZ Gunzen 2.68 245 Pn Pn 12 26 54.8 +0.4
GUNZ Sg Sg 12 27 36.3 +0.2
NEUB Neuenburg 2.76 265 eSg Sg 12 27 39.4 +0.9
NEUB Neuenburg 2.76 265 Sg Sg 12 27 39.4 +0.9
MROB Rosenbuehl-Arz 2.91 241 ⇓*i*Pn Pn 12 26 57.5 +0.1
MROB Rosenbuehl-Arz 2.91 241 Pn Pn 12 26 57.5 +0.1
KHC Kasperske Hory 2.92 215 *e*Pn Pn 12 26 57.2 -0.4
KHC eSg Sg 12 27 41.5 -2.2
KHC Kasperske Hory 2.92 215 *e*P Pn 12 26 57.5 -0.1
KHC e 12 27 32.9
KHC smax
comp=N,162nm,0.5s
KHC Kasperske Hory 2.92 215 *e*PN Pn 12 26 57.5 -0.1
KHC ePG Pg 12 27 04.0 -1.9
KHC eSN Sn 12 27 32.9 -0.4
KHC eSG Sg 12 27 43.0 -0.7
comp=Z,162nm,0.5s
KHC Kasperske Hory 2.92 215 Pn Pn 12 26 57.5 -0.1
KHC Kasperske Hory 2.92 215 Pg Pg 12 27 04.0 -1.9
KHC Sn Sn 12 27 32.9 -0.4
KHC Sg Sg 12 27 43.0 -0.7
comp=Z,162nm,0.5s
MOX Moxa 2.99 254 *e*PN Pn 12 26 59.0 +0.4
MOX *i* Pg Pg 12 27 07.3 0.0
MOX *i* SG Sg 12 27 47.2 +1.2
MOX Moxa 2.99 254 *e*Pn Pn 12 26 58.8 +0.2
MOX *i* Pg Pg 12 27 07.3 0.0
MOX eSg Sg 12 27 47.3 +1.2
MOX Moxa 2.99 254 Pn Pn 12 26 58.8 +0.2
LIKS Likavka 3.13 142 eSN Sn 12 27 36.6 -2.1
LIKS Likavka 3.13 142 eSn Sn 12 27 36.7 -2.0
WET Wettzell 3.18 222 *e*Pn Pn 12 27 01.4 +0.2
WET eSg Sg 12 27 51.2 -1.0
WET Wettzell 3.18 222 Pn Pn 12 27 01.4 +0.2
WET Sg Sg 12 27 51.2 -0.9
MODS Modra-Piesok 3.25 167 *e*P Pn 12 27 03.7 +1.5
MODS e 12 27 12.2
MODS eSg Sg 12 27 54.9 +0.4
MODS Modra-Piesok 3.25 167 *e* Pn 12 27 03.7 +1.5
MODS e 12 27 12.2
MODS Modra-Piesok 3.25 167 eSG Sg 12 27 54.9 +0.4
MODS Modra-Piesok 3.25 167 *e*P Pn 12 27 03.7 +1.5
MODS eSg Sg 12 27 54.9 +0.4
KOLL Kolacno 3.30 153 *e*P Pg 12 27 14.3 +1.0
KOLL eSg Sg 12 27 55.4 -0.6
KOLL Kolacno 3.30 153 *e* Pg 12 27 14.3 +1.0
KOLL Kolacno 3.30 153 eSG Sg 12 27 55.4 -0.6
ZST Bratislava 3.41 169 *e*Pn Pn 12 27 02.4 -1.9
ZST e 12 27 15.3
ZST eSg Sg 12 27 58.7 -0.6
ZST Bratislava 3.41 169 *e*PN Pn 12 27 02.4 -1.9
ZST e 12 27 15.3
ZST Bratislava 3.41 169 eSG Sg 12 27 58.7 -0.6
ZST Bratislava 3.41 169 *e*P Pn 12 27 02.4 -1.9
ZST eSg Sg 12 27 58.7 -0.6
NIE Niedzica 3.41 127 *e*P Pg 12 27 17.8 +2.5
NIE eS Sg 12 28 01.0 +1.6
VYHS Vyhne 3.51 149 *e*Pn Pn 12 27 05.3 -0.4
VYHS e 12 27 18.4
VYHS eSg Sg 12 28 03.8 +1.1
VYHS Vyhne 3.51 149 *e*PN Pn 12 27 05.3 -0.4
VYHS e 12 27 18.4
VYHS Vyhne 3.51 149 eSG Sg 12 28 03.8 +1.1
VYHS Vyhne 3.51 149 *e*P Pn 12 27 05.3 -0.4
VYHS eSg Sg 12 28 03.8 +1.1
CLZ Clausthal 3.60 277 *e*Pn Pn 12 27 07.7 +0.7
CLZ eSg Sg 12 28 05.0 -0.6
CLZ Clausthal 3.60 277 Pn Pn 12 27 07.7 +0.7
CLZ Sg Sg 12 28 05.0 -0.7
CONA Conrad Observa 3.62 183 ⇓*i*Pn Pn 12 27 07.2 -0.1
SNR=21
CONA ⇑*i*Sg Sg 12 28 02.2 -4.0
comp=Z,247nm,0.5s
CONA Conrad Observa 3.62 183 Pn Pn 12 27 07.2 -0.1
SNR=21
CONA Sg Sg 12 28 02.2 -4.0
comp=Z,247nm,0.5s
GRA1 Grafenberg Arr 3.64 241 Pn Pn 12 27 08.1 +0.6
GRA1 Sg Sg 12 28 07.2 +0.4
GRF Grafenberg Arr 3.64 241 *e*Pn Pn 12 27 08.1 +0.6
GRF eSg Sg 12 28 07.2 +0.4
BSD Bornholm Skovb 3.66 349 *i* P Pn 12 27 06.5 -1.2
BSD *i* S Sn 12 27 46.9 -4.6
BSD Bornholm Skovb 3.66 349 *i* P Pn 12 27 06.5 -1.2
BSD *i* S Sn 12 27 46.9 -4.6
BSD eLG 12 28 17.0
MOA Molln 3.89 199 ⇓*i*Pn Pn 12 27 11.1 +0.2
SNR=34
MOA ⇑*i*Sg Sg 12 28 13.1 -1.8
comp=Z,325nm,0.6s
MOA Molln 3.89 199 Pn Pn 12 27 11.1 +0.1
SNR=34
MOA Sg Sg 12 28 13.1 -1.8
comp=Z,325nm,0.6s
STHS Stebnicka Huta 3.89 121 *e*Pn Pn 12 27 10.7 -0.3
STHS *e* 12 27 25.7
STHS eSg Sg 12 28 19.7 +4.8
STHS Stebnicka Huta 3.89 121 *e*PN Pn 12 27 10.7 -0.3
STHS *e* 12 27 25.6
STHS Stebnicka Huta 3.89 121 eSG Sg 12 28 19.7 +4.8
STHS Stebnicka Huta 3.89 121 *e*P Pn 12 27 10.7 -0.3
HROE Hohe Rhon--Fla 3.91 257 ⇓*i*Pn Pn 12 27 11.5 +0.3
HROE Hohe Rhon--Fla 3.91 257 Pn Pn 12 27 11.5 +0.3
ARSA Arzberg 4.31 186 ⇓*i*Pn Pn 12 27 16.4 -0.4
SNR=10
ARSA ⇑*i*Sg Sg 12 28 25.9 -2.6
comp=Z,193nm,0.8s
ARSA Arzberg 4.31 186 Pn Pn 12 27 16.4 -0.4
SNR=10
ARSA Sg Sg 12 28 25.9 -2.6
comp=Z,193nm,0.8s
CRVS Cervenica-Dubn 4.32 126 *e*Pn Pn 12 27 17.1 +0.3
CRVS *e* 12 27 34.1
CRVS *e*Sg Sg 12 28 29.8 +1.2
CRVS Cervenica-Dubn 4.32 126 *e*SG Sg 12 28 29.8 +1.2
CRVS Cervenica-Dubn 4.32 126 *e*P Pn 12 27 17.1 +0.3
CRVS *e*Sg Sg 12 28 29.8 +1.2
PSZ Piszkesteto 4.37 145 ⇑P Pn 12 27 19.1 +1.6
PSZ Piszkesteto 4.37 145 ⇑*i*P Pn 12 27 19.1 +1.6
PSZ Piszkesteto 4.37 145 *e*Pn Pn 12 27 17.6 +0.1
PSZ Piszkesteto 4.37 145 *e*P Pn 12 27 17.6 +0.1
BGLD Berchtesgaden 4.39 209 ⇑*i*Pn Pn 12 27 18.6 +0.8
BGLD Berchtesgaden 4.39 209 Pn Pn 12 27 18.6 +0.8
PKSG 4.40 160 ⇑*e*P Pn 12 27 18.4 +0.4
KWP Kalwaria Pacla 4.60 112 *e*Pg Pg 12 27 34.6 -3.5
KWP eSg Sg 12 28 45.1 +7.5
KWP Kalwaria Pacla 4.60 112 ⇑P Pg 12 27 35.1 -2.9
KWP Kalwaria Pacla 4.60 112 ⇑*i*P Pg 12 27 35.2 -2.9
KWP Kalwaria Pacla 4.60 112 *e*Pg Pg 12 27 34.6 -3.5
KOLS Kolonicke sedl 4.72 121 *e*Pn Pn 12 27 22.9 +0.5
KOLS e 12 27 43.7
KOLS e 12 28 44.8
KOLS Kolonicke sedl 4.72 121 *e*PN Pn 12 27 22.9 +0.5
KOLS e 12 27 43.7
KOLS e 12 28 44.8
KOLS Kolonicke sedl 4.72 121 *e*P Pn 12 27 22.9 +0.5
UZH Uzhgorod 4.92 124 *e*P Pn 12 27 27.0 +2.0
UZH *e*S Sn 12 28 24.1 +1.5
UZH smax
comp=N,90nm,1.0s
UZH smax
comp=E,140nm,1.0s
UZH smax
comp=Z,120nm,1.0s
UZH Uzhgorod 4.92 124 *e*P Pn 12 27 27.0 +2.0
UZH *e*S Sn 12 28 24.1 +1.5
SUW Suwalki 4.94 57 *e*Pn Pn 12 27 25.1 -0.2
SUW Suwalki 4.94 57 *e*Pn Pn 12 27 25.1 -0.3
TNS Taunus Mts 5.05 258 *e*Pn Pn 12 27 27.2 +0.3
TNS Taunus Mts 5.05 258 Pn Pn 12 27 27.2 +0.4
TOD Tromm 5.06 250 P Pn 12 27 26.7 -0.3
TOD S Sg 12 28 52.9 +0.4
TOD Tromm 5.06 250 P Pn 12 27 26.7 -0.3
TOD S Sn 12 28 26.0 -0.1
WTTA Wattenberg 5.19 216 ⇓*i*Pn Pn 12 27 29.3 +0.5
WTTA ⇓*i*Sg Sg 12 28 57.3 +0.6
comp=Z,98nm,0.6s
WTTA Wattenberg 5.19 216 Pn Pn 12 27 29.3 +0.4
WTTA Sg Sg 12 28 57.3 +0.6
comp=Z,98nm,0.6s
STU Stuttgart 5.25 241 *e*Pn Pn 12 27 28.5 -1.2
comp=Z,36nm,0.6s
STU Stuttgart 5.25 241 *e*P Pn 12 27 28.5 -1.2
STU pmax pmax
comp=Z,36nm,0.6s
STU Stuttgart 5.25 241 *e*P Pn 12 27 28.5 -1.2
comp=Z,36nm,0.6s
LVV L'vov 5.30 106 *e*P Pn 12 27 30.2 -0.2
LVV *e*S Sn 12 28 31.8 -0.3
LVV MLR MLR
comp=Z,400nm,18.0s
LVV MLR MLR
comp=N,200nm,14.0s
LVV MLR MLR
comp=E,300nm,17.0s
LVV L'vov 5.30 106 *e*P Pn 12 27 30.2 -0.2
comp=E,400nm,18.0s
LVV *e*S Sn 12 28 31.8 -0.3
comp=E,200nm,14.0s
MOTA Moosalm 5.33 220 ⇑*i*Pn Pn 12 27 30.8 +0.1
SNR=7.0
MOTA ⇓*i*Sg Sg 12 29 02.7 +1.5
comp=E,124nm,0.7s
MOTA Moosalm 5.33 220 Pn Pn 12 27 30.8 0.0
SNR=7.0
MOTA Sg Sg 12 29 02.7 +1.6
comp=E,124nm,0.7s
ABTA Abfaltersbach 5.36 208 ⇑*i*Pn Pn 12 27 30.9 -0.1
SNR=12
ABTA ⇓*i*Sg Sg 12 29 01.0 -0.9
comp=E,113nm,0.7s
ABTA Abfaltersbach 5.36 208 Pn Pn 12 27 30.9 -0.2
SNR=12
ABTA Sg Sg 12 29 01.0 -0.9
comp=E,113nm,0.7s
KOE Koeppel 5.43 261 *e*Pn Pn 12 27 32.5 +0.4
KOE *e*Sn Sn 12 28 38.0 +2.8
comp=E,66nm,0.7s
KOE Koeppel 5.43 261 Pn Pn 12 27 32.5 +0.4
VXJU Vaexsjoe 5.44 353 P Pn 12 27 31.8 -0.4
HOBG Hohbusch 5.56 268 *e*Pn Pn 12 27 34.4 +0.5
HOBG Hohbusch 5.56 268 Pn Pn 12 27 34.4 +0.5
LJU Ljubljana 5.60 192 *e*Pn Pn 12 27 36.0 +1.5
LJU Ljubljana 5.60 192 *e*P Pn 12 27 36.0 +1.5
OSKU Oskarshamn 5.67 360 P Pn 12 27 34.7 -0.6
ABH Alteburg 5.71 256 P Pn 12 27 36.7 +0.8
ABH S Sg 12 29 13.1 -0.1
ABH Alteburg 5.71 256 P Pn 12 27 36.7 +0.8
VOY Vojsko 5.71 196 *e*Pn Pn 12 27 36.6 +0.6
VOY *e* 12 27 58.5
VOY *e*Sn Sg 12 29 10.1 -3.2
VOY *e* 12 29 14.5
VOY *e* 12 29 18.3
VOY *e* 12 29 21.2
VOY Vojsko 5.71 196 *e*Pn Pn 12 27 36.6 +0.6
BGG Burgeitz 5.73 260 *e*Pn Pn 12 27 35.7 -0.6
BGG Burgeitz 5.73 260 Pn Pn 12 27 35.7 -0.6
FETA Feichten 5.74 220 ⇑*i*Pn Pn 12 27 36.3 -0.1
SNR=9.2
FETA ⇑*i*Sg Sg 12 29 15.0 +0.6
comp=E,53nm,0.9s
FETA Feichten 5.74 220 Pn Pn 12 27 36.3 -0.1
SNR=9.2
FETA Sg Sg 12 29 15.0 +0.6
comp=E,53nm,0.9s
BYXU Byxelkrok 5.78 5 P Pn 12 27 37.2 +0.2
WTSB Winterswijk 5.82 278 *e*P Pn 12 27 38.4 +0.9
comp=E,13nm,0.4s
WTSB Winterswijk 5.82 278 *e*S Sg 12 29 16.1 -0.7
WTSB Winterswijk 5.82 278 *e*P Pn 12 27 38.4 +1.0
comp=E,13nm,0.4s
RHK3 Tenkes 5.83 165 ⇑*e*P Pn 12 27 39.0 +1.4
SPAK Spaichingen-Ko 5.87 237 P Pn 12 27 36.3 -1.9
ASPU Aespoe 5.90 2 P Pn 12 27 38.8 +0.3
LANF Langenberg 5.93 248 P Pn 12 27 36.3 -2.6
LANF S Sn 12 28 49.1 +1.6
LANF Langenberg 5.93 248 P Pn 12 27 38.9 0.0
LANF S Sg 12 29 19.9 -0.4
LANF Langenberg 5.93 248 P Pn 12 27 38.9 0.0
LANF S Sn 12 28 49.1 +1.6
STB Steinbach 5.94 264 *e*Pn Pn 12 27 38.5 -0.6
STB Steinbach 5.94 264 Pn Pn 12 27 38.5 -0.6
RUP Ruppelstein 6.07 256 P Pn 12 27 41.6 +0.8
RUP Ruppelstein 6.07 256 P Pn 12 27 41.6 +0.8
VSTU Vaestervik 6.14 2 P Pn 12 27 41.9 +0.1
KLL Kalltalsperre 6.26 266 *e*Pn Pn 12 27 42.5 -1.0
KLL Kalltalsperre 6.26 266 Pn Pn 12 27 42.5 -1.0
DAVOX Davos/Dischmat 6.29 223 Pn Pn 12 27 44.9 +1.0
comp=E,2.0nm,0.3s,baz=23,slow=10,SNR=8.7
DAVOX Sn Sn 12 28 59.1 +2.7
comp=E,1.1nm,0.3s,baz=18,slow=20,SNR=2.1
DAVOX Lg 12 29 27.3
comp=E,3.0nm,0.3s,baz=215,slow=21,SNR=3.7
DAVOX Davos/Dischmat 6.29 223 P Pn 12 27 44.9 +1.0
DAVOX 12 28 59.1
DAVOX Davos/Dischmat 6.29 223 P Pn 12 27 44.9 +1.0
DRGR 6.41 135 ⇑P Pn 12 27 43.1 -2.5
DRGR 6.41 135 ⇑*i*P Pn 12 27 43.1 -2.5
DRGR 6.41 135 P Pn 12 27 43.1 -2.5
FELD Feldberg im Sc 6.42 238 P Pn 12 27 45.0 -0.8
FELD S Sg 12 29 35.0 -1.2
FELD Feldberg im Sc 6.42 238 P Pn 12 27 45.0 -0.8
CDF Champ du Feu 6.52 245 *e*Pn Pn 12 27 45.5 -1.6
CDF *e*Sg Sg 12 29 31.8 -7.4
comp=E,227nm,1.0s
CDF Champ du Feu 6.52 245 *e*P Pn 12 27 45.5 -1.6
ECH Echery 6.69 244 P Pn 12 27 46.2 -3.2
ECH Echery 6.69 244 P Pn 12 27 50.6 +1.2
ECH Echery 6.69 244 P Pn 12 27 50.6 +1.2
MOF Molkenrain 6.91 241 P Pn 12 27 49.8 -2.6
MOF Molkenrain 6.91 241 P Pn 12 27 52.0 -0.4
MOF S Sg 12 29 50.3 -1.5
MOF Molkenrain 6.91 241 P Pn 12 27 52.0 -0.4
BCLA Clavier 6.94 265 PN Pn 12 27 53.4 +0.7
BUR08 Bucovina Ar. S 7.06 120 *e*Pn Pn 12 27 55.4 +0.9
BUR08 *e*Sn Sn 12 29 13.8 -1.6
BUR08 Bucovina Ar. S 7.06 120 *e*Pn Pn 12 27 55.4 +0.9
BUR08 *e*Sn Sn 12 29 13.8 -1.6
HINF Hinteralfeld 7.08 242 *e*Pn Pn 12 27 52.5 -2.3
HINF *e*Sg Sg 12 29 50.1 -7.3
comp=E,92nm,0.8s
HINF Hinteralfeld 7.08 242 *e*P Pn 12 27 52.5 -2.3
BURAR Bucovina Array 7.09 120 ⇑P Pn 12 27 56.4 +1.5
BURAR Bucovina Array 7.09 120 ⇑*i*P Pn 12 27 56.4 +1.5
BURAR Bucovina Array 7.09 120 ⇑P Pn 12 27 56.4 +1.5
HAU Haudompre 7.26 245 *e*Pn Pn 12 27 55.7 -1.5
HAU *e*Sg Sg 12 29 54.5 -8.5
comp=E,112nm,0.8s
HAU Haudompre 7.26 245 *e*P Pn 12 27 55.7 -1.5
RFYF Reffroy 7.46 251 *e*Pn Pn 12 27 57.1 -2.8
baz=73
DOU Dourbes 7.46 263 PN Pn 12 28 00.9 +0.9
MICGM Minsk 7.67 63 *e* Pg 12 28 32.0 -4.9
ESKU Eskilstuna 7.71 1 P Pn 12 28 03.4 0.0
SFTF Sexfontaines 7.91 249 *e*Pn Pn 12 28 02.7 -3.5
CABF La Chapelle 8.24 237 *e*Sg Sg 12 30 25.4 -8.9
comp=E,296nm,1.4s
AKASG Malin Array Be 8.28 91 Pn Pn 12 28 09.7 -1.5
comp=E,4.4nm,0.3s,baz=280,slow=12,SNR=15
AKASG Sn Sn 12 29 40.1 -5.1
comp=E,4.9nm,0.3s,baz=269,slow=26,SNR=6.1
AKASG Lg 12 30 34.2
comp=E,1.6nm,0.3s,baz=275,slow=26,SNR=4.7
AKASG Malin Array Be 8.28 91 P Pn 12 28 09.7 -1.5
AKASG 12 29 40.1
AKASG pmax pmax
comp=Z,4.0nm,0.3s
AKASG smax
comp=N,5.0nm,0.3s
AKASG Malin Array Be 8.28 91 P Pn 12 28 09.7 -1.5
comp=N,4.0nm,0.3s
AKBB Malin Array Si 8.28 91 *e*Pn Pn 12 28 09.8 -1.4
AKBB Malin Array Si 8.28 91 *e*P Pn 12 28 09.8 -1.4
VOIR 8.50 132 ⇑P Pn 12 28 15.3 +1.1
VOIR 8.50 132 ⇑*i*P Pn 12 28 15.3 +1.1
VOIR 8.50 132 P Pn 12 28 15.3 +1.1
LPL La Plagne 8.67 230 *e*P Pn 12 28 19.2 +2.6
LPL *e*Sg Sg 12 30 40.5 -7.8
comp=N,36nm,1.0s
LPL La Plagne 8.67 230 *e*P Pn 12 28 19.2 +2.6
LPL *e*Sg Sg 12 30 40.5 -7.8
comp=N,36nm,1.0s
LPL La Plagne 8.67 230 *e*Pn Pn 12 28 13.6 -3.0
LPL eSg Sg 12 30 40.5 -7.8
LPG La Plagne 8.68 230 *e*P Pn 12 28 19.1 +2.4
LPG eSg Sg 12 30 39.8 -8.7
comp=N,227nm,1.5s
LPG La Plagne 8.68 230 *e*P Pn 12 28 19.1 +2.4
HFS Hagfors 8.72 352 Pn Pn 12 28 16.6 -0.6
comp=N,0.4nm,0.3s,baz=155,slow=18,SNR=6.4
HFS Sn Sn 12 29 51.2 -5.0
comp=N,1.3nm,0.3s,baz=174,slow=28,SNR=6.9
HFS Lg 12 30 46.5
comp=N,0.4nm,0.3s,baz=179,slow=32,SNR=3.2
HFS Hagfors 8.72 352 P Pn 12 28 16.6 -0.6
comp=N,1.0nm,0.3s
SBF Sospel 9.66 221 *e*P Pn 12 28 32.3 +2.2
SBF Sospel 9.66 221 *e*P Pn 12 28 32.3 +2.2
NOA NORSAR Array B 9.90 346 Pn Pn 12 28 31.3 -2.1
comp=N,0.3nm,0.3s,baz=161,slow=12,SNR=3.0
NOA Sn Sn 12 30 19.8 -5.4
comp=N,0.5nm,0.3s,baz=159,slow=18,SNR=3.0
NOA Lg 12 31 24.7
comp=N,0.8nm,0.3s,baz=332,slow=16,SNR=3.3
NOA NORSAR Array B 9.90 346 P Pn 12 28 31.3 -2.1
comp=N,1.0nm,0.3s
FINES FINESS Array B 11.33 25 Pn Pn 12 28 50.9 -2.0
comp=N,0.7nm,0.3s,baz=197,slow=6.0,SNR=12
FINES Sn Sn 12 30 52.2 -7.8
comp=N,1.3nm,0.3s,baz=214,slow=21,SNR=5.4
FINES Lg 12 32 07.4
comp=N,0.7nm,0.3s,baz=213,slow=25,SNR=2.3
FINES FINESS Array B 11.33 25 P Pn 12 28 50.9 -2.0
FINES 12 30 52.2
FINES pmax pmax
comp=Z,1.0nm,0.3s
FINES smax
comp=N,1.0nm,0.3s
FINES FINESS Array B 11.33 25 P Pn 12 28 50.9 -2.0
comp=N,1.0nm,0.3s
KAF Kangasniemi 11.95 24 *e*P Pn 12 28 59.5 -1.9
KAF pmax pmax
comp=Z,2.0nm,0.3s
KAF Kangasniemi 11.95 24 *e*p Pn 12 28 59.5 -1.9
comp=Z,1.6nm,0.3s
KAF Kangasniemi 11.95 24 *e*P Pn 12 28 59.5 -1.9
comp=Z,2.0nm,0.3s
EKA Eskdalemuir Ar 12.11 296 Pn Pn 12 28 59.6 -4.0
comp=Z,0.4nm,0.3s,baz=107,slow=15,SNR=5.9
EKA Sn Sn 12 31 09.5 -10
comp=Z,0.3nm,0.3s,baz=103,slow=25,SNR=3.8
OBN Obninsk 12.71 66 ⇓*e*P Pn 12 29 08.6 -3.2
OBN eS Sn 12 31 35.5 +1.6
OBN pmax pmax
comp=Z,11nm,1.2s
JOF Joensuu 14.01 30 *e*P Pn 12 29 25.5 -3.9
JOF pmax pmax
comp=Z,2.0nm,0.3s
JOF Joensuu 14.01 30 *e*p Pn 12 29 25.5 -3.9
comp=Z,1.7nm,0.3s
VSR Storozhevoye 14.38 82 *e*P Pn 12 29 30.3 -4.2
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,4.0nm,0.4s
VSR pmax pmax
comp=Z,5.0nm,0.4s
VORD Divnogorie 14.50 83 *e*P Pn 12 29 42.8 +6.6
VORD pmax pmax
comp=N,9.0nm,0.5s
VORD pmax pmax
comp=E,9.0nm,0.5s
VORD pmax pmax
comp=Z,5.0nm,0.5s
VORD Divnogorie 14.50 83 *e*P Pn 12 29 42.8 +6.6
VRHR Novokhopersk 15.92 82 *e*P Pn 12 29 49.6 -5.5
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s
KLMR Klimovskoe 15.92 45 *e*P Pn 12 29 47.2 -7.9
KLMR pmax pmax
comp=Z,23nm,1.6s
KEST Kesra 16.54 200 Pn Pn 12 30 05.5 +2.3
comp=Z,0.0nm,0.3s,baz=359,slow=4.0,SNR=5.8
BRTR Keskin Array B 16.96 127 Pn Pn 12 30 10.3 +1.8
comp=Z,0.1nm,0.3s,baz=314,slow=12,SNR=3.1
BRTR Keskin Array B 16.96 127 P Pn 12 30 10.3 +1.9
APA Apatity 18.18 21 ⇓*e*P Pn 12 30 24.5 +1.0
APA pmax pmax
comp=Z,18nm,1.2s
APA MLR MLR
comp=Z,200nm,24.0s
APA Apatity 18.18 21 *e*P Pn 12 30 24.5 +1.0
comp=Z,200nm,24.0s
ESDC Sonseca Array 18.33 238 P Pn 12 30 27.4 +1.9
comp=Z,0.0nm,0.3s,baz=50,slow=9.9,SNR=6.2
ESDC Sonseca Array 18.33 238 P Pn 12 30 27.4 +1.9
ARCES ARCESS Array B 18.59 10 P Pn 12 30 25.0 -3.4
comp=Z,0.6nm,0.3s,baz=193,slow=13,SNR=19
ARCES ARCESS Array B 18.59 10 P Pn 12 30 25.0 -3.4
ARCES pmax pmax
comp=Z,1.0nm,0.3s
KEV Kevo 18.98 12 *e*P Pn 12 30 30.0 -3.1
KEV pmax pmax
comp=Z,2.0nm,0.3s
KEV Kevo 18.98 12 *e*p Pn 12 30 30.0 -3.1
comp=Z,1.6nm,0.3s
KEV Kevo 18.98 12 *e*P Pn 12 30 30.0 -3.1
comp=Z,2.0nm,0.3s
ARU Arti 25.11 62 *e*P P 12 31 35.9 -0.1
comp=Z,14nm,1.2s,mb4.5
ARU Arti 25.11 62 *d*iP P 12 31 35.6 -0.5
ARU 12 32 08.9
ARU S S 12 36 03.7 +2.3
ARU SS 12 36 49.7
ARU pmax pmax
comp=Z,13nm,1.7s,mb4.4
ARU Arti 25.11 62 *e*P P 12 31 35.9 -0.2

	comp=Z,13nm,1.2s,mb4.5								
AKTK	**Aktyubinsk**	**26.13**	**76**	P		**P**	**12 31 44.8**	**-0.6**
AKTK	**Aktyubinsk**	**26.13**	**76**	P		**P**	**12 31 44.8**	**-0.6**
	comp=Z,1.0nm,0.3s,mb3.9								
AKTO	**Aktyubinsk**	**26.13**	**76**	P		**P**	**12 31 44.8**	**-0.6**
	comp=Z,1.1nm,0.3s,mb3.9,baz=280,slow=8.3,SNR=6.0								
AKTO	**Aktyubinsk**	**26.13**	**76**	P		**P**	**12 31 44.8**	**-0.6**
AKTO				pmax	pmax				
	comp=Z,1.0nm,0.3s,mb3.9								
SVE	**Sverdlovsk**	**26.20**	**61**	*e*P		**P**	**12 31 46.7**	**+0.8**
SVE				pmax	pmax				
	comp=Z,19nm,1.5s,mb4.5								
SVE	**Sverdlovsk**	**26.20**	**61**	*e*P		**P**	**12 31 46.7**	**+0.8**
	comp=Z,19nm,1.5s,mb4.5								
BRVK	**Borovoye**	**32.49**	**66**	*e*P		**P**	**12 32 40.0**	**-1.9**
BRVK				pmax	pmax				
	comp=Z,4.0nm,1.3s,mb4.2								
BRVK	**Borovoye**	**32.49**	**66**	*e*P		**P**	**12 32 40.0**	**-1.9**
	comp=Z,4.0nm,1.3s,mb4.2								
BVAR	**Borovoye Array**	**32.56**	**66**	P		**P**	**12 32 43.3**	**+0.9**
	comp=Z,1.0nm,0.5s,mb4.0,baz=274,slow=6.8,SNR=7.4								
BVAR	**Borovoye Array**	**32.56**	**66**	P		**P**	**12 32 43.3**	**+0.8**
BVAR				pmax	pmax				
	comp=Z,1.0nm,0.5s								
BVAR	**Borovoye Array**	**32.56**	**66**	P		**P**	**12 32 43.3**	**+0.8**
	comp=Z,1.0nm,0.5s,mb4.0								
KURK	**Kurchatov**	**38.16**	**66**	*e*P		**P**	**12 33 29.3**	**-1.3**
KURK				pmax	pmax				
	comp=Z,3.0nm,1.2s,mb3.9								
KURK	**Kurchatov**	**38.16**	**66**	*e*P		**P**	**12 33 29.3**	**-1.3**
	comp=Z,3.0nm,1.2s,mb3.9								
AAK	**Ala-Archa**	**39.75**	**79**	*e*P		**P**	**12 33 42.3**	**-1.8**
AAK				pmax	pmax				
	comp=Z,2.0nm,1.3s,mb3.6								
AAK	**Ala-Archa**	**39.75**	**79**	*e*P		**P**	**12 33 42.3**	**-1.8**
	comp=Z,2.0nm,1.3s,mb3.6								
TORD	**Torodi Ar. Bea**	**40.03**	**202**	P		**P**	**12 33 46.4**	**-0.3**
	comp=Z,3.3nm,1.1s,mb3.9,baz=360,slow=8.7,SNR=9.3								
ZALV	**Zalesovo Beam**	**40.17**	**59**	P		**P**	**12 33 47.5**	**+0.1**
	comp=Z,0.8nm,0.4s,mb3.7,baz=294,slow=7.1,SNR=3.8								
ZALV	**Zalesovo Beam**	**40.17**	**59**	P		**P**	**12 33 47.5**	**+0.1**
ZALV				pmax	pmax				
	comp=Z,1.0nm,0.4s,mb3.8								
MKAR	**Makanchi Array**	**42.19**	**69**	P		**P**	**12 34 05.0**	**+0.9**
	comp=Z,0.4nm,0.5s,mb3.4,baz=302,slow=7.0,SNR=6.7								
KSH	**Kashi**	**42.46**	**82**	*e*P		**P**	**12 34 08.3**	**+1.9**
KSH				*e*pP			12 34 12.6		
KSH				*e*sP			12 34 15.2		
KSH				*e*PP	PP		12 35 50.4	+5.9	
KSH				*e*PcP	PcP		12 35 58.8	-0.5	
KSH				*e*ScP	ScP		12 39 48.1	-2.9	
KSH				*e*PcS	PcS		12 39 50.2	-1.0	
KSH				*e*S	**S**		**12 40 32.7**	**+3.6**	
KSH				*e*sS			12 40 40.1		
KSH				*e*SS	SS		12 43 38.4	+0.7	
KSH				*e*ScS	ScS		12 44 06.2	-3.0	
KSH				pmax	pmax				
	comp=Z,2.0nm,0.9s,mb3.9								
KSH				pmax	pmax				
	comp=Z,47nm,3.2s								
KSH				LR	LR				
	comp=N,71nm,8.6s								
KSH				LR	LR				
	comp=E,57nm,6.0s								
KSH				LR	LR				
	comp=Z,71nm,6.7s								
TLY	**Talaya**	**51.09**	**53**	*e*P		**P**	**12 35 15.7**	**+1.9**
TLY				pmax	pmax				
	comp=Z,7.0nm,1.8s,mb4.3								
TLY	**Talaya**	**51.09**	**53**	*e*P		**P**	**12 35 15.7**	**+1.9**
	comp=Z,7.0nm,1.8s,mb4.3								
SONM	**Songino Array**	**54.88**	**55**	P		**P**	**12 35 43.3**	**+1.4**
	comp=Z,0.8nm,0.8s,mb3.8,baz=280,slow=8.8,SNR=7.4								
SONM	**Songino Array**	**54.88**	**55**	P		**P**	**12 35 43.3**	**+1.4**
SONM				pmax	pmax				
	comp=Z,1.0nm,0.8s								
SONM	**Songino Array**	**54.88**	**55**	P		**P**	**12 35 43.3**	**+1.4**
	comp=Z,1.0nm,0.8s,mb3.9								
YKA	**Yellowknife Ar**	**59.84**	**336**	P		**P**	**12 36 17.2**	**+0.6**
	comp=Z,0.8nm,0.7s,mb3.9,baz=34,slow=6.7,SNR=3.6								
YKA	**Yellowknife Ar**	**59.84**	**336**	P		**P**	**12 36 17.2**	**+0.6**
YKA				pmax	pmax				
	comp=Z,1.0nm,0.7s								
YKA	**Yellowknife Ar**	**59.84**	**336**	P		**P**	**12 36 17.2**	**+0.6**
	comp=Z,1.0nm,0.7s,mb4.0								
ILAR	**Eielson Array**	**63.28**	**352**	P		**P**	**12 36 38.7**	**-1.1**
	comp=Z,0.2nm,0.8s,mb8.3,baz=15,slow=3.7,SNR=4.5								
ILAR	**Eielson Array**	**63.28**	**352**	P		**P**	**12 36 38.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**71.33**	**84**	P		**P**	**12 37 32.7**	**+1.2**
	comp=Z,0.3nm,0.4s,mb3.8,baz=270,slow=5.3,SNR=3.6								
TXAR	**Lajitas Array**	**83.71**	**310**	P		**P**	**12 38 41.6**	**+0.9**
	comp=Z,1.1nm,1.2s,mb4.0,baz=83,slow=4.3,SNR=6.2								
TXAR	**Lajitas Array**	**83.71**	**310**	P		**P**	**12 38 41.6**	**+1.0**
TXAR				pmax	pmax				
	comp=Z,1.0nm,1.2s								

*ISCJB **06** 12:30:03.1±0.6,24°.19S±0°.04×67°.11W±0°.06,h154km±7km, mb3.8/12,Error ellipse: s-maj=9.8km s-min=5.8km az=166.9*
*NEIC **06** 12:30:03.9±0.7,24°.20S×67°.09W,h151km±7km,mb4.1/6, Error ellipse: s-maj=10.5km s-min=7.9km az=81.0*
*IDC **06** 12:30:04.0±1.6,24°.18S×67°.07W,h154km±14km,mb3.5/5, mb1 3.8/9,mb1mx3.7/16,mbtmp3.6/9,Error ellipse: s-maj=20.7km s-min=12.5km az=86.0*
*GUC **06** 12:30:06.7±0.8,23°.89S×67°.44W,h200km,ML5.0*

ISC 06 12:30:04.0±0.6,24°.19S±0°.04×67°.08W±0°.06,h147km±6km, n36,σ1§00/41,mb3.8/12,6C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB04	**Plate Boundary**	**2.92**	**310**	⇑*i*	P	**Pn**	**12 30 57.4**	**+7.1**
CEN1	**Los Morros**	**2.96**	**285**	⇓*i*	P	**Pn**	**12 30 53.8**	**+3.1**
CEN1				*i*	S	**Sn**	**12 31 27.4**	**+0.5**
CEN1					AML	AML	12 31 29.9	
	comp=N,1µm,0.3s							
ANCH	**Antofagasta**	**3.09**	**279**	⇑*e*	P	**Pn**	**12 30 51.6**	**-0.7**
ANCH				*i*	S	**Sn**	**12 31 28.0**	**-1.6**
ANCH	**Antofagasta**	**3.09**	**279**	⇑*e*	P	**Pn**	**12 30 51.6**	**-0.7**
ANCH				*i*	S	**Sn**	**12 31 28.0**	**-1.6**
MECH	**Mejillones**	**3.27**	**289**	⇑*i*	P	**Pn**	**12 30 56.7**	**+2.0**
MECH				*i*	S	**Sn**	**12 31 34.2**	**+0.3**
MECH					AML	AML	12 31 41.4	
	comp=E,3µm,0.7s							
PB01	**Plate Boundary**	**3.84**	**324**	⇑*i*	P	**Pn**	**12 31 03.2**	**+1.1**
PB01				*i*	S	**Sn**	**12 31 46.3**	**-0.8**
PB01					AML	AML	12 31 49.0	
	comp=N,2µm,0.4s							
HMBC	**Humberston**	**4.68**	**326**	⇑*e*	P	**Pn**	**12 31 12.7**	**-0.5**
HMBC				*e*	S	**Sn**	**12 32 03.7**	**-3.3**
LCO	**Las Campanas**	**5.79**	**213**	*e*	Pn	**Pn**	**12 31 27.1**	**-0.8**
	comp=N,95nm,0.6s							
LCO				*e*	Sn	**Sn**	**12 32 23.7**	**-10**
CFAA	**Coronel Fontan**	**7.46**	**188**	P		**Pn**	**12 31 50.3**	**+0.2**
CFAA				S		**Sn**	**12 33 13.1**	**-0.3**
CFAA	**Coronel Fontan**	**7.46**	**188**	P		**Pn**	**12 31 50.3**	**+0.2**
	comp=N,0.1nm,0.3s,baz=9.6,slow=10,SNR=12							
CFAA				S		**Sn**	**12 33 13.1**	**-0.3**
	comp=N,0.3nm,0.3s,baz=244,slow=18,SNR=11							
LPAZ	**La Paz**	**7.92**	**353**	P		**Pn**	**12 31 58.1**	**+1.7**
	comp=N,7.0nm,0.3s,baz=154,slow=5.7,SNR=258							
LPAZ				S		**Sn**	**12 33 24.4**	**-0.4**
	comp=N,0.2nm,0.3s,baz=11,slow=22,SNR=4.4							
CPUP	**Villa Florida**	**9.08**	**106**	P		**Pn**	**12 32 11.9**	**+0.1**
	comp=N,0.4nm,0.3s,baz=273,slow=12,SNR=11							
SIV	**San Ignacio**	**9.92**	**36**	P		**Pn**	**12 32 22.6**	**-0.4**
	comp=N,2.6nm,0.3s,baz=218,slow=14,SNR=31							
SIV				S		**Sn**	**12 33 58.8**	**-14**
	baz=242,slow=17,SNR=2.4							
TRQA	**Tornquist**	**14.49**	**164**	*e*	Pn	**Pn**	**12 33 22.4**	**+0.2**
	comp=N,7.1nm,0.6s							
PLCA	**Paso Flores**	**16.75**	**189**	P		**Pn**	**12 33 50.4**	**+0.4**
	comp=N,0.2nm,0.3s,baz=5.3,slow=11,SNR=4.6							
VNA3	**Neumayer Olymp**	**57.00**	**161**	*e*		**P**	**12 39 31.6**	**-2.3**
VNA1	**Neumayer--Stat**	**57.20**	**160**	*e*Pdiff		**P**	**12 39 37.2**	**+1.9**
TXAR	**Lajitas Array**	**63.78**	**325**	P		**P**	**12 40 19.7**	**-0.8**
	comp=N,0.7nm,0.8s,mb3.5,baz=152,slow=7.8,SNR=7.3							
ANMO	**Albuquerque**	**69.66**	**326**	*e*P		**P**	**12 40 56.8**	**-0.8**
	comp=N,3.0nm,0.9s,mb4.0							
SDCO	**Great Sand Dun**	**71.41**	**329**	*e*P		**P**	**12 41 08.4**	**+0.3**
	comp=N,1.1nm,0.8s,mb3.6							
SDCO				*e*PcP	PcP		12 41 27.0	+0.1
WUAZ	**Wupatki**	**72.68**	**323**	*e*P		**P**	**12 41 16.3**	**+0.5**
	comp=N,3.1nm,0.9s,mb4.0							
SMCO	**Snowmass**	**73.25**	**329**	*e*P		**P**	**12 41 19.4**	**+0.4**
	comp=N,3.0nm,1.0s,mb4.0							
CCUT	**Cedar City**	**75.26**	**324**	*e*P		**P**	**12 41 31.7**	**+1.0**
	comp=N,5.0nm,0.9s,mb4.1							
TORD	**Torodi Ar. Bea**	**76.71**	**69**	P		**P**	**12 41 38.3**	**-1.1**
	comp=N,3.1nm,0.7s,mb4.1,baz=254,slow=5.4,SNR=17							
NVAR	**Mina Array Bea**	**78.64**	**321**	P		**P**	**12 41 49.7**	**+0.1**
NVAR	**Mina Array Bea**	**78.64**	**321**	P		**P**	**12 41 49.7**	**+0.1**
	comp=N,0.7nm,0.7s,mb3.4,baz=150,slow=5.6,SNR=7.8							
HLID	**Hailey**	**80.20**	**327**	*e*P		**P**	**12 41 58.3**	**+0.4**
	comp=N,5.8nm,1.1s,mb4.1							
BOSA	**Boshof**	**80.72**	**117**	P		**P**	**12 42 00.6**	**-0.6**
	comp=N,1.2nm,0.5s,mb3.8,baz=285,slow=4.9,SNR=6.3							
MAW	**Mawson**	**81.28**	**163**	P		**P**	**12 42 03.3**	**-0.2**
	comp=N,1.0nm,0.6s,mb3.6,baz=155,slow=6.4,SNR=3.7							
ESDC	**Sonseca Array**	**86.58**	**44**	P		**P**	**12 42 30.6**	**-0.1**
	comp=N,0.2nm,0.3s,mb3.5,baz=229,slow=4.0,SNR=2.5							
KWP	**Kalwaria Pacla**	**107.90**	**43**	*e*PKPdf		PKiKP	12 48 15.3	+1.5
ASAR	**Alice Springs**	**128.25**	**205**	PKP		PKPdf	12 48 51.9	-1.7
	comp=N,0.8nm,0.7s,baz=139,slow=1.7,SNR=11							
ZALV	**Zalesovo Beam**	**143.59**	**28**	PKP		PKPdf	12 49 18.2	-2.8
ZALV	**Zalesovo Beam**	**143.59**	**28**	PKP		PKPdf	12 49 18.2	-2.8
	comp=N,1.4nm,0.5s,baz=293,slow=2.8,SNR=5.4							
MK31	**Makanchi Array**	**146.72**	**40**	*e*PKPdf		PKPdf	12 49 26.1	-0.5
MKAR	**Makanchi Array**	**146.72**	**40**	PKPbc		PKPbc	12 49 26.2	-2.3
	comp=N,1.6nm,0.6s,baz=359,slow=1.7,SNR=16							

WEL 06 12:38:15.9±0.1,43°.00S×171°.45E,h5km,ML3.5/16,3C, Error ellipse: s-maj=1.0km s-min=0.8km az=0.0,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WVZ	**Waitaha Valley**	**0.53**	**261**	⇑	PG	Pg	12 38 26.7	+0.6
WVZ					SG	Sg	12 38 33.5	+0.6
LTZ	**Lake Taylor**	**0.64**	**71**	⇑	P*	Pb	12 38 28.5	-1.1
LTZ					SG	Sg	12 38 36.9	+0.3
RPZ	**Rata Peaks**	**0.78**	**201**	⇑	P*	Pb	12 38 31.3	-0.6
CRLZ	**Canterbury Las**	**1.04**	**125**		P*	Pb	12 38 35.6	-0.8
MQZ	**McQueen's Vall**	**1.13**	**129**		P*	Pb	12 38 36.7	-1.3
DSZ	**Denniston Nort**	**1.27**	**12**		P*	Pb	12 38 39.3	-1.1
FOZ	**Fox Glacier**	**1.40**	**245**		P*	Pb	12 38 40.5	-2.2
THZ	**Tophouse**	**1.64**	**42**		PN	Pn	12 38 44.8	-0.5
KHZ	**Kahutara**	**1.65**	**70**		PN	Pn	12 38 44.9	-0.7
LBZ	**Lake Benmore**	**1.67**	**213**		PN	Pn	12 38 45.2	-0.5
ODZ	**Otahua Downs**	**2.13**	**195**		PN	Pn	12 38 51.0	-1.2
BSWZ	**Blackbirch Sta**	**2.21**	**55**		PN	Pn	12 38 53.8	+0.6
JCZ	**Jackson Bay**	**2.23**	**240**		PN	Pn	12 38 53.2	-0.3
NNZ	**Nelson**	**2.29**	**40**		PN	Pn	12 38 54.1	-0.1
QRZ	**Quartz Range**	**2.31**	**21**		PN	Pn	12 38 54.6	0.0
TUWZ	**Tuamarina**	**2.43**	**51**		PN	Pn	12 38 56.0	-0.2
WKZ	**Wanaka**	**2.54**	**223**		PN	Pn	12 38 56.9	-0.8
EAZ	**Earnscleugh**	**2.71**	**214**		PN	Pn	12 38 58.9	-1.3
TCW	**Tory Channel**	**2.76**	**51**		PN	Pn	12 39 01.3	+0.5
DUWZ	**D'Urville Isla**	**2.87**	**41**		PN	Pn	12 39 03.2	+1.0
TUZ	**Tuapeka**	**3.23**	**203**		PN	Pn	12 39 06.0	-1.3
CAW	**Cannon Point**	**3.29**	**56**		PN	Pn	12 39 06.5	-1.6
MLZ	**Mavora Lakes**	**3.33**	**224**		PN	Pn	12 39 17.8	+9.2
KIW	**Kapiti Island**	**3.35**	**52**		PN	Pn	12 39 07.9	-1.0
WHZ	**Wether Hill Ro**	**3.83**	**220**		PN	Pn	12 39 14.2	-1.4
SYZ	**Scrubby Hill**	**3.91**	**204**		PN	Pn	12 39 15.4	-1.1
VRZ	**Vera Road**	**4.61**	**34**		PN	Pn	12 39 26.9	+0.8

*NNC **06** 12:40:47.5±7.8,38°.71N×70°.58E,h183km±123km,mb2.7, mpv3.6,Error ellipse: s-maj=92.2km s-min=34.5km az=16.0*

ISC 06 12:40:50.4±2.5,39°.0N±0°.2×70°.3E±0°.1,h35km,n12, σ0§68/15,3C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AML	**Almayashu**	**4.10**	**38**	P		**Pn**	**12 41 50.5**	**0.0**
SNR=27								
KK31	**Karatay Array**	**4.14**	**3**	P		**Pn**	**12 41 52.8**	**+1.7**
1.9nm,0.3s,baz=182,slow=14,SNR=13								
KK31				⇓	S	**Sn**	**12 42 46.7**	**+8.6**
13nm,0.5s,baz=178,slow=29,SNR=6.8								
EKS2	**Erkin-Say**	**4.55**	**35**	P		**Pn**	**12 41 56.8**	**+0.1**
SNR=17								
UCH	**Uchtor**	**4.59**	**43**	P		**Pn**	**12 41 57.5**	**+0.3**
SNR=24								
KZA	**Kyzart**	**4.91**	**49**	P		**Pn**	**12 42 01.7**	**+0.1**
SNR=20								
KBK	**Karagaybulak**	**5.12**	**42**	P		**Pn**	**12 42 04.4**	**-0.1**
SNR=12								
CHMS	**Chumysh**	**5.27**	**39**	P		**Pn**	**12 42 06.7**	**+0.1**
SNR=12								
USP	**Ospenovka**	**5.36**	**35**	P		**Pn**	**12 42 06.6**	**-1.1**
SNR=19								
ULHL	**Ulahol**	**5.61**	**52**	P		**Pn**	**12 42 10.8**	**-0.4**
SNR=8.8								
TKM2	**Tokmak 2**	**5.65**	**44**	⇑	P	**Pn**	**12 42 10.6**	**-1.1**
4.7nm,0.3s								
TKM2				⇑	S	**Sn**	**12 43 15.7**	**+0.3**
6.5nm,0.7s								
TKM2	**Tokmak 2**	**5.65**	**44**	P		**Pn**	**12 42 11.8**	**+0.1**
SNR=5.3								
AB31	**Akbulak array**	**12.67**	**328**	⇑	P	**Pn**	**12 43 48.3**	**+0.4**
1.3nm,0.6s,baz=186,slow=12,SNR=27								
AB31				⇓	S	**Sn**	**12 46 06.7**	**-0.8**
1.3nm,0.5s,baz=153,slow=23,SNR=9.0								

*ISCJB **06** 12:46:19.0±0.5,38°.87N±0°.02×23°.51E±0°.03,h8km±4km, Error ellipse: s-maj=4.2km s-min=3.0km az=11.2*
*THE **06** 12:46:19.5,38°.88N×23°.50E,h11km±1km,ML2.3/10,Error ellipse: s-maj=1.4km s-min=0.7km az=267.0*
*NEIC **06** 12:46:19.8,38°.84N×23°.43E,h5km,ML2.7(ATH),After ATH.*
*CSEM **06** 12:46:19.3±0.1,38°.87N×23°.52E,h15km,ML2.7, Error ellipse: s-maj=3.3km s-min=2.3km az=91.0*
*ATH **06** 12:46:19.8,38°.84N×23°.43E,h5km±2km,MD3.0/11,ML2.7*

ISC 06 12:46:19.4±0.5,38°.87N±0°.02×23°.53E±0°.03,h13km±3km, n59,σ0§82/103,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AOS	**Alonnisos**	**0.41**	**42**	P		**Pg**	**12 46 27.1**	**-0.4**
AOS	**Alonnisos**	**0.41**	**42**	P		**Pg**	**12 46 27.3**	**-0.2**
AOS				S		**Sg**	**12 46 33.6**	**+0.7**
AOS	**Alonnisos**	**0.41**	**42**	P		**Pg**	**12 46 27.3**	**-0.2**
AOS				S		**Sg**	**12 46 33.6**	**+0.7**
ATAL	**Atalanti**	**0.43**	**246**	P		**Pg**	**12 46 26.9**	**-1.0**
ATAL				S		**Sg**	**12 46 33.7**	**-0.1**
ATAL	**Atalanti**	**0.43**	**246**	P		**Pg**	**12 46 26.9**	**-1.0**
ATAL				S		**Sg**	**12 46 33.7**	**-0.1**
LKR	**Lokris**	**0.47**	**242**	*e*Pb		**Pg**	**12 46 27.9**	**-0.7**
LKR				*e*Sb		**Sg**	**12 46 33.4**	**-1.4**
LKR	**Lokris**	**0.47**	**242**	*e*PB		**Pg**	**12 46 27.9**	**-0.7**
LKR				*e*SB		**Sg**	**12 46 33.4**	**-1.4**
LKR	**Lokris**	**0.47**	**242**	P		**Pg**	**12 46 28.0**	**-0.6**
LKR				S		**Sg**	**12 46 34.3**	**-0.5**
LKR	**Lokris**	**0.47**	**242**	P		**Pg**	**12 46 28.0**	**-0.6**
LKR				*e*Sb		**Sg**	**12 46 33.4**	**-1.4**
LKR				S		**Sg**	**12 46 34.3**	**-0.5**
NEO	**Neokhori**	**0.49**	**332**	*e*Pg		**Pg**	**12 46 29.3**	**+0.2**
NEO				*e*Sb		**Sg**	**12 46 36.5**	**+0.8**
NEO	**Neokhori**	**0.49**	**332**	*e*PG		**Pg**	**12 46 29.3**	**+0.2**
NEO				*e*SB		**Sg**	**12 46 36.5**	**+0.8**
NEO	**Neokhori**	**0.49**	**332**	*e*Pg		**Pg**	**12 46 29.3**	**+0.2**
NEO				*e*Sb		**Sg**	**12 46 36.5**	**+0.8**
XOR	**Xorichti**	**0.56**	**332**	P		**Pg**	**12 46 30.4**	**+0.1**
XOR	**Xorichti**	**0.56**	**332**	P		**Pg**	**12 46 30.2**	**-0.1**
XOR				S		**Sg**	**12 46 38.4**	**+0.7**
XOR	**Xorichti**	**0.56**	**332**	P		**Pg**	**12 46 30.2**	**-0.1**
XOR				S		**Sg**	**12 46 38.4**	**+0.7**
PTL	**Penteli**	**0.86**	**162**	*e*Pb		**Pb**	**12 46 35.3**	**-0.9**
PTL				*e*Sb		**Sb**	**12 46 47.9**	**+0.3**
PTL	**Penteli**	**0.86**	**162**	*e*PB		**Pb**	**12 46 35.3**	**-0.9**
PTL				*e*SB		**Sb**	**12 46 47.9**	**+0.3**
PTL	**Penteli**	**0.86**	**162**	*e*Pb		**Pb**	**12 46 35.3**	**-0.9**
PTL				*e*Sb		**Sb**	**12 46 47.9**	**+0.3**
DSF	**Desfina**	**0.91**	**240**	P		**Pg**	**12 46 35.4**	**-1.5**
DSF				S		**Sg**	**12 46 48.9**	**+0.1**
DSF	**Desfina**	**0.91**	**240**	P		**Pg**	**12 46 35.4**	**-1.5**
DSF				S		**Sg**	**12 46 48.9**	**+0.1**
ATH	**Athens Observa**	**0.91**	**171**	*e*Pb		**Pb**	**12 46 37.5**	**+0.5**
ATH	**Athens Observa**	**0.91**	**171**	*e*PB		**Pb**	**12 46 37.5**	**+0.5**
ATH	**Athens Observa**	**0.91**	**171**	*e*Pb		**Pb**	**12 46 37.5**	**+0.5**
AGG	**Agios Georgios**	**0.95**	**280**	P		**Pb**	**12 46 39.2**	**+1.6**
AGG	**Agios Georgios**	**0.95**	**280**	P		**Pb**	**12 46 36.5**	**-1.1**
AGG				S		**Sg**	**12 46 50.5**	**+0.5**
AGG	**Agios Georgios**	**0.95**	**280**	P		**Pb**	**12 46 36.5**	**-1.1**
AGG				S		**Sg**	**12 46 50.5**	**+0.5**
LTK	**Loutraki**	**0.95**	**208**	*e*PB		**Pb**	**12 46 37.2**	**-0.6**
LTK				*e*SB		**Sb**	**12 46 49.9**	**-0.4**
LTK	**Loutraki**	**0.95**	**208**	P		**Pb**	**12 46 38.4**	**+0.6**
LTK				S		**Sg**	**12 46 52.0**	**+1.8**
LTK	**Loutraki**	**0.95**	**208**	*e*Pb		**Pb**	**12 46 37.2**	**-0.6**
LTK	**Loutraki**	**0.95**	**208**	P		**Pb**	**12 46 38.4**	**+0.6**
LTK				*e*Sb		**Sb**	**12 46 49.9**	**-0.4**
LTK				S		**Sg**	**12 46 52.0**	**+1.8**
VLY	**Voula,Athens**	**1.04**	**168**	*e*Pb		**Pb**	**12 46 38.4**	**-0.8**
VLY				*e*Sb		**Sb**	**12 46 53.9**	**+1.2**
VLY	**Voula,Athens**	**1.04**	**168**	*e*PB		**Pb**	**12 46 38.4**	**-0.8**
VLY				*e*SB		**Sb**	**12 46 53.9**	**+1.2**
VLY	**Voula,Athens**	**1.04**	**168**	*e*Pb		**Pb**	**12 46 38.4**	**-0.8**
VLY				*e*Sb		**Sb**	**12 46 53.9**	**+1.2**
PAIG	**Paliouri**	**1.06**	**6**	P		**Pb**	**12 46 39.8**	**+0.2**
PAIG	**Paliouri**	**1.06**	**6**	P		**Pb**	**12 46 39.3**	**-0.3**
PAIG				S		**Sb**	**12 46 54.1**	**+0.7**
PAIG	**Paliouri**	**1.06**	**6**	P		**Pb**	**12 46 39.3**	**-0.3**
PAIG				S		**Sb**	**12 46 54.1**	**+0.7**
NAIG	**Nisos Aigina**	**1.11**	**182**	*e*Pn		**Pn**	**12 46 40.3**	**-0.3**
NAIG	**Nisos Aigina**	**1.11**	**182**	*e*PN		**Pn**	**12 46 40.3**	**-0.3**
NAIG	**Nisos Aigina**	**1.11**	**182**	*e*Pn		**Pn**	**12 46 40.3**	**-0.3**
TRIZ	**Trizonia**	**1.25**	**247**	P		**Pn**	**12 46 41.5**	**-1.0**
TRIZ				S		**Sb**	**12 46 58.9**	**+0.2**
TRIZ	**Trizonia**	**1.25**	**247**	P		**Pn**	**12 46 41.5**	**-1.0**
TRIZ				S		**Sb**	**12 46 58.9**	**+0.2**
EVR	**Evrytania**	**1.34**	**272**	*e*Pb		**Pb**	**12 46 43.8**	**-0.6**
EVR	**Evrytania**	**1.34**	**272**	*e*PB		**Pb**	**12 46 43.8**	**-0.6**
EVR	**Evrytania**	**1.34**	**272**	*e*Pb		**Pb**	**12 46 43.8**	**-0.6**
THL	**Klokotos Trika**	**1.36**	**301**	*e*PB		**Pb**	**12 46 44.8**	**0.0**
THL				*e*SB		**Sb**	**12 47 03.7**	**+1.6**
THL	**Klokotos Trika**	**1.36**	**301**	P		**Pn**	**12 46 44.4**	**+0.3**
THL				S		**Sn**	**12 47 03.0**	**+0.9**
THL	**Klokotos Trika**	**1.36**	**301**	P		**Pn**	**12 46 44.4**	**+0.3**
THL	**Klokotos Trika**	**1.36**	**301**	*e*Pb		**Pb**	**12 46 44.8**	**0.0**
THL				S		**Sn**	**12 47 03.0**	**+0.9**
THL				*e*Sb		**Sb**	**12 47 03.7**	**+1.6**
DID	**Didima**	**1.38**	**190**	*e*PN		**Pn**	**12 46 44.3**	**0.0**
DID				*e*SB		**Sb**	**12 47 04.3**	**+1.7**
DID	**Didima**	**1.38**	**190**	P		**Pn**	**12 46 44.4**	**+0.1**
DID				S		**Sn**	**12 47 02.5**	**0.0**
DID	**Didima**	**1.38**	**190**	*e*Pn		**Pn**	**12 46 44.3**	**0.0**
DID				S		**Sn**	**12 47 02.5**	**0.0**
DID				*e*Sb		**Sb**	**12 47 04.3**	**+1.7**
LIT	**Litokhoron**	**1.47**	**327**	P		**Pn**	**12 46 45.1**	**-0.4**
LIT	**Litokhoron**	**1.47**	**327**	P		**Pn**	**12 46 44.4**	**-1.1**
LIT				S		**Sn**	**12 47 03.6**	**-1.

comp=N,390nm,0.8s
KSH smax
comp=E,280nm,0.8s
THN Thein Dam 6.14 127 *e*PKP **Pn 13 29 13.7 -0.3**
THN *ex* x 13 30 23.8
AML Almayashu 6.51 25 P **Pn 13 29 19.5 +0.6**
SNR=78
AML Almayashu 6.51 25 *e*P **Pn 13 29 19.2 +0.3**
comp=E,158nm,0.4s
KK31 Karatay Array 6.81 4 P **Pn 13 29 22.4 -0.5**
comp=E,3.9nm,0.3s,baz=184,slow=13,SNR=39
KK31 ⇓S **Sn 13 30 34.1 -5.2**
comp=E,11nm,0.3s,baz=186,slow=24,SNR=8.0
UCH Uchtor 6.90 30 P **Pn 13 29 24.8 +0.7**
SNR=97
EKS2 Erkin-Say 7.01 24 P **Pn 13 29 26.1 +0.6**
SNR=22
EKS2 Erkin-Say 7.01 24 *e*Pn **Pn 13 29 26.0 +0.4**
EKS2 S **Sn 13 30 31.4 -13**
KZA Kyzart 7.09 34 P **Pn 13 29 27.1 +0.5**
SNR=30
AAK Ala-Archa 7.24 28 P **Pn 13 29 29.4 +0.8**
SNR=18
AAK Ala-Archa 7.24 28 *e*P **Pn 13 29 29.2 +0.6**
AAK S **Sn 13 30 49.0 -0.6**
AAK Ala-Archa 7.24 28 P **Pn 13 29 29.2 +0.6**
comp=E,10nm,0.3s,baz=180,slow=5.4,SNR=26
AAK S **Sn 13 30 49.0 -0.6**
comp=E,8.1nm,0.3s,baz=97,slow=23,SNR=16
BHK Bhakra 7.26 130 *e*PKP **Pn 13 29 26.0 -3.0**
KBK Karagaybulak 7.44 30 P **Pn 13 29 32.2 +1.0**
SNR=20
SDNR Sundarnagar 7.55 127 *e*PKP **Pn 13 29 31.5 -1.4**
SDNR *ex* x 13 30 54.5
CHMS Chumysh 7.65 28 P **Pn 13 29 34.2 +0.1**
SNR=53
ULHL Ulahol 7.69 38 P **Pn 13 29 35.2 +0.7**
SNR=12
USP Ospenovka 7.79 25 P **Pn 13 29 35.8 -0.2**
SNR=46
TKM2 Tokmak 2 7.92 32 ⇑P **Pn 13 29 38.0 +0.4**
comp=E,21nm,0.6s
TKM2 ⇑S **Sn 13 31 05.5 -0.5**
comp=E,33nm,1.0s
TKM2 Tokmak 2 7.92 32 P **Pn 13 29 38.1 +0.4**
SNR=51
TKM2 Tokmak 2 7.92 32 *e*PN **Pn 13 29 37.8 +0.1**
SMLA Simla 7.92 129 *i* P **Pn 13 29 37.1 -0.7**
SMLA *i* S **Sn 13 31 01.5 -4.7**
SMLA *i* S **Sn 13 31 02.1 -4.1**
SMLA ⇓ 13 31 05.5
comp=N,2μm,0.2s
SMLA ⇓ 13 31 05.5
comp=E,1μm,0.3s
KLP Kalpa 8.38 122 *e*PKP **Pn 13 29 44.9 +1.0**
KLP *e*S **Sn 13 31 11.7 -5.5**
KLP AML AML 13 31 29.9
comp=N,169nm,0.6s
KLP AML AML 13 31 30.8
comp=E,137nm,0.6s
KHET Khetri 9.59 147 *e*PKP **Pn 13 29 58.7 -1.2**
KHET *e*S **Sn 13 31 39.3 -7.0**
NDI New Delhi 9.76 139 *e*PKP **Pn 13 30 01.0 -1.3**
NDI *e*S **Sn 13 31 42.0 -8.5**
KUDL Kundal 9.84 144 *e*PKP **Pn 13 30 01.3 -1.9**
KUDL *e*S **Sn 13 31 43.9 -8.4**
JOSI Joshimath 9.87 123 *e*PKP **Pn 13 30 03.0 -0.6**
JOSI *e*S **Sn 13 31 46.0 -6.9**
JOSI AML AML 13 32 11.4
comp=E,194nm,0.8s
JOSI AML AML 13 32 11.7
comp=N,162nm,0.7s
AYAN Aya Nagar 9.88 140 *e*PKP **Pn 13 30 03.3 -0.4**
SONA Sohna 10.04 141 *e*PKP **Pn 13 30 05.8 -0.2**
SONA *e*S **Sn 13 31 50.4 -6.9**
SONA AML AML 13 31 56.4
comp=E,105nm,0.3s
SONA AML AML 13 31 56.8
comp=N,41nm,0.4s
MK31 Makanchi Array 13.96 38 ⇓P **Pn 13 30 56.2 -0.3**
comp=N,6.7nm,0.8s,baz=217,slow=11,SNR=17
MK31 Makanchi Array 13.96 38 *e*P **Pn 13 30 56.1 -0.4**
MKAR Makanchi Array 13.96 38 P **Pn 13 30 56.4 -0.2**
comp=N,0.3nm,0.3s,baz=227,slow=14,SNR=16
MKAR S **Sn 13 33 38.2 +7.0**
comp=N,0.1nm,0.3s,baz=224,slow=18,SNR=2.3
KOLN Koldanda 14.36 122 *e*P **Pn 13 31 00.8 -0.9**
comp=N,28nm,0.3s
AB31 Akbulak array 14.87 334 ⇓P **Pn 13 31 06.9 -0.8**
comp=N,13nm,0.4s,baz=156,slow=13,SNR=369
ABKAR Akbulak array 14.87 334 *e*P **Pn 13 31 06.4 -1.4**
comp=N,29nm,0.4s
ABKAR *e*S **Sn 13 33 38.8 -14**
GKN Gorkha 14.93 119 *e*P **Pn 13 31 08.2 -0.6**
comp=N,86nm,0.4s
DMN Daman 15.50 120 *e*P **Pn 13 31 15.4 -0.4**
comp=N,35nm,0.4s
KKN Kakani 15.52 119 *e*P **Pn 13 31 15.6 -0.4**
comp=N,126nm,0.6s
KURBB Kurchatov Arra 15.60 21 ⇑P **Pn 13 31 15.1 -1.7**
comp=N,2.9nm,0.9s
KURK Kurchatov 15.71 21 ⇓P **Pn 13 31 16.0 -2.1**
comp=N,12nm,1.0s
KURK Kurchatov 15.71 21 P **Pn 13 31 15.2 -3.0**
comp=N,0.2nm,0.3s,baz=209,slow=11,SNR=29
KURK Kurchatov 15.71 21 *e*P **Pn 13 31 16.2 -1.9**
PKIN Phulchoki 15.73 119 *e*P **Pn 13 31 18.4 -0.2**
comp=N,48nm,0.4s
PKI Pulchoki 15.74 119 *e*P **Pn 13 31 18.4 -0.3**
GUN Gumba 15.87 117 *e*P **Pn 13 31 21.4 +1.0**
comp=N,80nm,0.4s
JIRN Jiri 16.24 117 *e*P **Pn 13 31 26.5 +1.6**
comp=N,101nm,0.3s
VOSK Vostochnaya 16.44 2 ⇑P **Pn 13 31 26.0 -1.0**
comp=N,6.8nm,0.7s
AKTK Aktyubinsk 16.55 332 P **Pn 13 31 28.4 +0.1**
AKTK S **S 13 34 23.2 -8.9**
AKTO Aktyubinsk 16.55 332 P **Pn 13 31 28.4 +0.1**
comp=N,1.2nm,0.3s,baz=139,slow=18,SNR=18
AKTO S **S 13 34 23.2 -8.9**
comp=N,0.7nm,0.3s,baz=233,slow=20,SNR=8.0
AKTO Aktyubinsk 16.55 332 P **Pn 13 31 28.4 +0.1**
AKTO S **S 13 34 23.2 -9.0**
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO smax
comp=N,1.0nm,0.3s
ZRNK Zerenda 16.66 358 ⇑P **Pn 13 31 28.9 -0.8**
comp=N,7.9nm,0.7s
BVA0 Borovoye Array 16.73 1 ⇓P **Pn 13 31 30.9 +0.3**
comp=N,1.2nm,0.6s,baz=170,slow=11,SNR=5.4
BVAR Borovoye Array 16.73 1 P **Pn 13 31 29.9 -0.6**
comp=N,2.5nm,0.3s,baz=170,slow=12,SNR=21
BVAR S **S 13 34 36.5 +0.2**
comp=N,0.4nm,0.3s,baz=186,slow=23,SNR=3.3
BVAR Borovoye Array 16.73 1 P **Pn 13 31 29.9 -0.6**
BVAR S **S 13 34 36.5 +0.2**
BVAR pmax pmax
comp=Z,3.0nm,0.3s
BRVK Borovoye 16.76 1 *e*P **Pn 13 31 30.1 -0.8**
comp=Z,14nm,0.8s
BRVK Borovoye 16.76 1 *e*P **Pn 13 31 30.1 -0.8**
BRVK pmax pmax
comp=Z,14nm,0.8s
RAMN Ramite 16.96 119 *e*P **Pn 13 31 33.4 -0.1**
comp=Z,68nm,0.6s
TAPN Taplejung 17.52 116 *e*P **Pn 13 31 41.4 +1.2**
comp=Z,92nm,0.6s
ODAN Odare 17.57 117 *e*P **Pn 13 31 41.8 +0.9**
comp=Z,30nm,0.4s
GNI Garni 20.14 289 P **P 13 32 07.5 0.0**
comp=Z,7.0nm,0.4s,baz=180,slow=10,SNR=3.9
GNI Garni 20.14 289 P **P 13 32 07.5 +0.1**
GNI pmax pmax
comp=Z,7.0nm,0.4s
ZAA0 Zalesovo Array 20.46 26 *e*P **P 13 32 11.9 +1.2**
ZALV Zalesovo Beam 20.46 26 P **P 13 32 11.9 +1.3**
comp=Z,14nm,0.5s,baz=222,slow=10,SNR=68
ZALV S **S 13 35 51.8 +0.9**
comp=Z,0.3nm,0.3s,baz=206,slow=19,SNR=2.1
ZALV Zalesovo Beam 20.46 26 P **P 13 32 12.0 +1.3**
ZALV S **S 13 35 51.8 +0.9**
ZALV pmax pmax
comp=Z,15nm,0.5s
NVS Novosibirsk 20.68 22 *i* P **P 13 32 14.5 +1.5**
ARU Arti 21.56 343 *e*P **P 13 32 24.0 +1.7**
comp=Z,5.8nm,0.9s,mb4.0
ARU Arti 21.56 343 P **P 13 32 25.2 +2.9**
GTA Gaotai 23.74 73 *e*P **P 13 32 48.4 +5.0**
GTA pmax pmax
comp=Z,3.0nm,1.2s,mb3.7
BRTR Keskin Array B 28.68 288 P **P 13 33 26.9 -0.8**
comp=Z,0.4nm,0.6s,mb3.3,baz=88,slow=7.6,SNR=2.4
SONM Songino Array 29.15 55 P **P 13 33 35.1 +3.3**
comp=Z,1.3nm,0.8s,mb3.7,baz=271,slow=7.7,SNR=7.8
SONM Songino Array 29.15 55 P **P 13 33 35.1 +3.3**
SONM pmax pmax
comp=Z,1.0nm,0.8s
FINES FINESS Array B 37.18 327 P **P 13 34 41.4 +0.3**
comp=Z,1.1nm,0.7s,mb3.6,baz=107,slow=18,SNR=2.3
FINES FINESS Array B 37.18 327 P **P 13 34 41.4 +0.3**
FINES pmax pmax
comp=Z,1.0nm,0.7s
ARCES ARCESS Array B 41.01 338 P **P 13 35 13.9 +1.1**
comp=Z,1.1nm,0.5s,mb3.8,baz=108,slow=7.8,SNR=12
ARCES ARCESS Array B 41.01 338 P **P 13 35 13.9 +1.1**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
NOA NORSAR Array B 44.03 323 P **P 13 35 37.8 +0.6**
comp=Z,0.3nm,0.4s,mb3.2,baz=106,slow=9.3,SNR=2.7
TORD Torodi Ar. Bea 64.86 268 P **P 13 38 07.2 -1.0**
TORD Torodi Ar. Bea 64.86 268 P **P 13 38 07.2 -1.0**
comp=Z,0.2nm,0.4s,mb3.3,baz=51,slow=6.4,SNR=5.3
ILAR Eielson Array 75.20 15 P **P 13 39 11.3 +0.9**
comp=Z,0.4nm,0.8s,mb3.1,baz=315,slow=3.7,SNR=7.7
ASAR Alice Springs 84.84 124 P **P 13 40 02.5 -0.2**
comp=Z,0.3nm,0.5s,mb3.2,baz=314,slow=4.5,SNR=6.3

*IDC **06** 13:59:20.0±1.3,58.7°S×25.2°E,h0km,mb3.7/1, mb1 3.9/1,mb1mx3.6/12,mbtmp3.7/1,Error ellipse: s-maj=64.8km s-min=43.4km az=174.0*
NEIC 06 13:59:25.4±0.8,58.65S×25.21W,h35km,mb3.8/1,Error ellipse: s-maj=49.1km s-min=31.7km az=186.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
LPAZ	**La Paz**	**52.75**	**305**	*e*P		P	14 08 37.3	+0.7
	0.8nm,0.7s							
LPAZ	**La Paz**	**52.75**	**305**	P		P	14 08 37.0	+0.4
	0.7nm,0.7s,baz=163,slow=11,SNR=4.0							
TORD	**Torodi Ar. Bea**	**74.84**	**27**	P		P	14 11 02.5	+0.6
	2.5nm,0.8s,baz=195,slow=6.6,SNR=16							
NVAR	**Mina Array Bea**	**123.35**	**290**	PKP		PKPdf	14 18 19.0	+1.3
	0.8nm,0.8s,baz=157,slow=2.5,SNR=5.5							
INK	**Inuvik**	**148.47**	**318**	PKPbc		PKPbc	14 19 06.5	0.0
INK	**Inuvik**	**148.47**	**318**	PKPbc		PKPbc	14 19 06.5	0.0
	6.6nm,0.8s,baz=128,slow=7.4,SNR=6.8							
SONM	**Songino Array**	**149.75**	**89**	PKPbc		PKPbc	14 19 10.2	-0.1
	6.4nm,1.2s,baz=216,slow=2.7,SNR=9.6							
EGAK	**Eagle**	**150.25**	**309**	*e*PKPbc		PKPbc	14 19 09.6	-1.3
ILAR	**Eielson Array**	**152.60**	**308**	PKPbc		PKPbc	14 19 16.4	0.0
	4.7nm,1.0s,baz=133,slow=1.8,SNR=33							
KDAK	**Kodiak Island**	**152.85**	**291**	PKPbc		PKPbc	14 19 17.3	+0.1
KDAK	**Kodiak Island**	**152.85**	**291**	PKPbc		PKPbc	14 19 17.3	+0.1
	3.6nm,0.7s,baz=138,slow=2.8,SNR=4.8							
MCK	**McKinley**	**153.20**	**305**	*e*PKPbc		PKPbc	14 19 18.5	+0.8

*ISCJB **06** 14:04:42.1±0.8,51.7N±0.1×175.79W±0.07,h62km±7km, mb3.8/12,Error ellipse: s-maj=20.1km s-min=5.6km az=166.5*
*NEIC **06** 14:04:43.0±0.5,51.61N×175.82W,mb4.0/2,ML3.8(AEIC), Error ellipse: s-maj=12.8km s-min=5.4km az=164.0*
*IDC **06** 14:04:43.3±0.8,51.94N×175.84W,h56km±8km,mb3.5/10, mb1 3.7/12,mb1mx3.5/26,mbtmp3.5/12,MS2.6/1, Ms1 2.6/1,ms1mx2.4/23,Error ellipse: s-maj=24.4km s-min=15.6km az=170.0*
ISC 06 14:04:43.6±0.8,51.7N±0.1×175.79W±0.07,h59km±7km, h58km±1.3km:pP-P,n40,σ1s14/40,mb3.8/12,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
GSTR	**Great Sitkin T**	**0.45**	**338**	*e*P		**Pn**	**14 04 53.9**	**-1.0**
ATKA	**Atka Island**	**1.11**	**62**	P		**Pn**	**14 05 01.3**	**-1.8**
ATKA				S		**Sn**	**14 05 17.9**	**+0.4**
AMKA	**Amchitka**	**3.08**	**266**	P		**Pn**	**14 05 28.5**	**-1.2**
AMKA				S		**Sn**	**14 06 07.1**	**+1.7**
NIKO	**Nikolski**	**4.45**	**70**	P		**Pn**	**14 05 47.6**	**-0.7**
UNV	**Unalaska Valle**	**6.04**	**65**	P		**Pn**	**14 06 10.2**	**0.0**
SMY	**Shemya**	**6.31**	**284**	*e*P		**Pn**	**14 06 12.6**	**-1.2**
SPIA	**Saint Paul Isl**	**6.38**	**28**	P		**Pn**	**14 06 16.6**	**+1.7**
AKGG	**Akutan Green G**	**6.43**	**64**	P		**Pn**	**14 06 15.9**	**+0.3**
AKUT	**Akutan**	**6.54**	**64**	P		**Pn**	**14 06 19.2**	**+2.2**
FX1	**Attu Island--F**	**6.89**	**284**	P		**Pn**	**14 06 22.6**	**+0.8**
OHAK	**Old Harbor**	**14.18**	**58**	*e*P		**Pn**	**14 07 57.4**	**-3.7**
	6.0nm,0.3s							
KDAK	**Kodiak Island**	**14.68**	**56**	*e*P		**Pn**	**14 08 07.8**	**+0.1**
KDAK				S		**Sn**	**14 10 56.6**	**+7.7**
KDAK	**Kodiak Island**	**14.68**	**56**	P		**Pn**	**14 08 05.6**	**-2.1**
	2.7nm,0.3s,baz=271,slow=6.6,SNR=19							
KDAK				S		**Sn**	**14 10 56.6**	**+7.7**
	0.3nm,0.3s,baz=3.5,slow=19,SNR=2.9							
TTA	**Tatalina**	**15.44**	**36**	*e*P		**Pn**	**14 08 22.9**	**+5.5**
	11nm,1.5s							
RC01	**Rabbit Creek A**	**17.11**	**47**	*e*P		**Pn**	**14 08 39.4**	**+1.1**
BPAW	**Bear Paw Mtn.**	**17.96**	**37**	*e*P		**Pn**	**14 08 50.7**	**+1.9**
	3μm,0.9s							
MCK	**McKinley**	**18.56**	**39**	*e*P		**Pn**	**14 08 56.4**	**+0.4**
COLA	**College**	**19.53**	**37**	*e*P		**Pn**	**14 09 06.8**	**-0.8**
ILAR	**Eielson Array**	**19.84**	**38**	P		**Pn**	**14 09 08.0**	**-3.2**
	0.8nm,0.3s,baz=218,slow=11,SNR=38							
EGAK	**Eagle**	**22.09**	**40**	*e*P		**P**	**14 09 32.8**	**-0.6**
	3.4nm,0.4s,mb4.1							
DAWY	**Dawson**	**22.60**	**43**	*e*P		**P**	**14 09 39.0**	**+0.2**
MDJ	**Mudanjiang**	**36.37**	**281**	P		**P**	**14 11 43.0**	**+1.3**
MDJ				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.2							
MDJ				pmax	pmax			
	comp=Z,42nm,5.3s							
MDJ				LR	LR			
	comp=N,9.0nm,20.2s							
MDJ				LR	LR			
	comp=E,15nm,19.2s							
MDJ				LR	LR			
	comp=Z,29nm,17.6s							
HLID	**Hailey**	**41.04**	**76**	*e*P		**P**	**14 12 20.4**	**-0.4**
KSRS	**Korea Array**	**41.51**	**273**	P		**P**	**14 12 25.6**	**+0.8**
	comp=Z,0.8nm,0.5s,mb3.6,baz=54,slow=8.3,SNR=6.0							
KSRS				LR	LR		14 27 19.1	
	comp=Z,8.0nm,19.3s,baz=74,slow=33							
NVAR	**Mina Array Bea**	**41.65**	**85**	P		**P**	**14 12 26.8**	**+0.9**
	comp=Z,0.1nm,0.3s,mb3.0,baz=289,slow=9.4,SNR=2.3							
NVAR				pP	pP		14 12 41.3	+0.4
	comp=Z,0.3nm,0.4s,baz=294,slow=8.5,SNR=3.4							
BW06	**Boulder Array**	**44.42**	**74**	*e*P		**P**	**14 12 48.0**	**-0.2**
SONM	**Songino Array**	**48.18**	**298**	P		**P**	**14 13 17.5**	**-0.1**
	comp=Z,0.2nm,0.4s,mb3.5,baz=34,slow=10,SNR=2.3							
SONM				PcP	PcP		14 14 44.5	+0.4
	comp=Z,0.6nm,0.6s,baz=55,slow=2.6,SNR=3.6							
TXAR	**Lajitas Array**	**56.75**	**84**	P		**P**	**14 14 21.3**	**+0.1**
TXAR				pP	pP		14 14 35.9	-1.0
TXAR	**Lajitas Array**	**56.75**	**84**	P		**P**	**14 14 21.3**	**+0.1**
	comp=Z,0.2nm,0.4s,mb3.5,baz=280,slow=5.6,SNR=4.4							
TXAR				pP	pP		14 14 35.9	-1.0
	comp=Z,0.3nm,0.5s,baz=302,slow=5.6,SNR=3.7							
ARCES	**ARCESS Array B**	**58.09**	**351**	P		**P**	**14 14 26.5**	**-3.6**
	comp=Z,1.4nm,1.0s,mb3.9,baz=30,slow=6.2,SNR=2.7							
MKAR	**Makanchi Array**	**61.30**	**310**	P		**P**	**14 14 51.0**	**-1.5**
MKAR	**Makanchi Array**	**61.30**	**310**	P		**P**	**14 14 51.0**	**-1.5**
	comp=Z,0.4nm,0.3s,mb4.0,baz=49,slow=7.1,SNR=9.2							
BVAR	**Borovoye Array**	**61.85**	**321**	P		**P**	**14 14 54.5**	**-1.6**
	comp=Z,0.6nm,0.4s,mb4.0,baz=49,slow=8.6,SNR=3.5							
CMAR	**Chiang Mai Arr**	**72.84**	**278**	P		**P**	**14 16 06.8**	**+0.8**
	comp=Z,1.2nm,0.7s,mb3.9,baz=26,slow=8.3,SNR=7.3							
FITZ	**Fitzroy Crossi**	**86.15**	**234**	P		**P**	**14 17 17.6**	**-0.5**
	comp=Z,2.5nm,1.0s,mb4.4,baz=356,slow=9.6							
ASAR	**Alice Springs**	**87.01**	**225**	P		**P**	**14 17 22.2**	**0.0**
	comp=Z,0.7nm,0.7s,mb4.0,baz=30,slow=5.6,SNR=9.9							
ASAR				pP	pP		14 17 38.6	-0.2
	comp=Z,0.7nm,1.0s,baz=32,slow=4.9,SNR=2.5							
TORD	**Torodi Ar. Bea**	**115.41**	**3**	PKP		PKPdf	14 23 18.4	-0.4
	comp=Z,0.3nm,0.5s,baz=342,slow=2.2,SNR=5.1							
MAW	**Mawson**	**147.88**	**219**	PKPbc		PKPbc	14 24 20.2	-0.2
	comp=Z,1.2nm,0.7s,baz=27,slow=2.3,SNR=3.7							
BOSA	**Boshof**	**152.09**	**318**	*e*PKPbc		PKPbc	14 24 32.1	+0.2
BOSA	**Boshof**	**152.09**	**318**	PKPbc		PKPbc	14 24 32.0	+0.2
	comp=Z,3.5nm,0.6s,baz=65,slow=2.6,SNR=11							

*CSEM **06** 14:05:22.0,38.88N×28.90W,h8km,ML3.8,After PDA*
PDA 06 14:05:22.0±0.9,38.88N×28.90W,h8km±9km,MD3.7, ML3.8,Error ellipse: s-maj=10.3km s-min=4.5km az=74.0,Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
PCED	**Cedros**	**0.30**	**148**	*i* P		Pg	14 05 27.1	-0.8
PCED				*e*S		Sg	14 05 31.5	-0.4
CALA	**Caldeira**	**0.34**	**152**	*i* P		Pg	14 05 27.9	-0.8
HOR	**Horta**	**0.41**	**149**	*i* P		Pg	14 05 28.8	-1.3
HOR				*e*S		Sg	14 05 34.5	-1.0
PICO	**Pico**	**0.54**	**135**	*e*P		Pg	14 05 31.1	-1.2
PICO	**Pico**	**0.54**	**135**	*e*P		Pg	14 05 31.1	-1.2
ROSA	**Rosais**	**0.54**	**107**	*e*P		Pg	14 05 31.0	-1.5
ROSA	**Rosais**	**0.54**	**107**	*e*P		Pg	14 05 31.0	-1.5
PMAN	**Manadas**	**0.68**	**111**	*e*P		Pg	14 05 33.0	-2.2
PMAN				*e*S		Sg	14 05 41.6	-2.5
PMAN				A			14 05 48.1	
	3μm,0.3s							
PMAN	**Manadas**	**0.68**	**111**	*e*P		Pg	14 05 33.0	-2.2
PMAN				*e*S		Sg	14 05 41.6	-2.5
PID	**Ribeirinha**	**0.76**	**125**	*e*P		Pg	14 05 34.0	-2.5
PID	**Ribeirinha**	**0.76**	**125**	*e*P		Pg	14 05 34.0	-2.5
ADH	**Angra Heroismo**	**1.32**	**99**	*e*P		Pn	14 05 42.4	-4.3
ADH				*e*S		Sb	14 05 56.9	-7.3
ADH				A			14 06 00.8	
	436nm,0.3s							
ADH	**Angra Heroismo**	**1.32**	**99**	*e*P		Pn	14 05 42.4	-4.3
ADH				*e*S		Sb	14 05 56.9	-7.3
PSET	**Sete Cidades**	**2.72**	**112**	*e*P		Pn	14 06 01.7	-4.2
PSET				*e*S		Sn	14 06 30.6	-8.3
PSET				A			14 06 39.0	
	28nm,0.2s							
PSET	**Sete Cidades**	**2.72**	**112**	*e*P		Pn	14 06 01.7	-4.2
PSET				*e*S		Sn	14 06 30.6	-8.3
PDA	**Ponta Delgada**	**2.79**	**113**	*e*P		Pn	14 06 03.0	-3.9
PSMA	**Santa Maria**	**3.53**	**121**	*e*P		Pn	14 06 12.8	-4.3
PSMA				*e*S		Sn	14 06 50.9	-8.0
PSMA				A			14 06 54.2	
	48nm,0.2s							
PSMN	**Pico do Norte,**	**3.57**	**121**	*e*P		Pn	14 06 13.3	-4.3
PSMN				*e*S		Sn	14 06 51.2	-8.7
PSMN	**Pico do Norte,**	**3.57**	**121**	*e*P		Pn	14 06 13.3	-4.3
PSMN				*e*S		Sn	14 06 51.2	-8.7

*IDC **06** 14:05:31.3±3.0,6.35N×126.78E,h110km±28km,mb3.3/5, mb1 3.5/5,mb1mx3.2/20,mbtmp3.3/5,Error ellipse: s-maj=59.5km s-min=17.2km az=75.0*
*NEIC **06** 14:05:33.0±1.6,6.29N×126.39E,h133km±16km,mb4.7/1, Error ellipse: s-maj=59.7km s-min=11.5km az=74.0*
*MAN **06** 14:05:32,6.55N×126.37E,h141km,mb4.7,ML3.6,MS3.5*
*DJA **06** 14:05:36,6.15N×126.61E,h119km,mb4.7/7*
ISC 06 14:05:33.1±0.5,6.35N±0.04×126.43E±0.09,h130km±5km, n28,σ1s16/37,mb3.8/7,2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
MATI	**Mati**	**0.62**	**344**	*e*P		**Pn**	**14 05 53.6**	**+0.8**
MATI				*e*S		**Sn**	**14 06 09.7**	**+1.8**
DAV	**Davao City (W)**	**1.11**	**310**	*e*Pn		**Pn**	**14 05 57.2**	**+0.2**
DAV				*e*S		**Sn**	**14 06 14.4**	**-0.8**
DAV				S		**Sn**	**14 06 16.2**	**+0.9**
DAV	**Davao City (W)**	**1.11**	**310**	P		**Pn**	**14 05 57.3**	**+0.2**
	105nm,0.3s,baz=187,slow=12,SNR=8.3							
DAV				S		**Sn**	**14 06 16.2**	**+0.9**
	186nm,0.3s,baz=107,slow=19,SNR=35							
DMPH	**Davao City--Mi**	**1.17**	**309**	*e*P		**Pn**	**14 06 04.6**	**+6.9**
KCP	**Kidapawan**	**1.49**	**296**	*i* P		**Pn**	**14 05 59.8**	**-1.2**
KCP				*i* S		**Sn**	**14 06 21.3**	**-1.0**
GSPH	**General Santos**	**1.50**	**260**	*e*P		**Pn**	**14 05 59.0**	**-2.2**
GSPH				*e*S		**Sn**	**14 06 19.1**	**-3.4**
BUKP	**Musuan**	**2.04**	**318**	*e*P		**Pn**	**14 06 07.3**	**-0.3**
SGSI	**Sangihe**	**2.79**	**199**	P		**Pn**	**14 06 17.5**	**+0.5**
SGSI				S		**Sn**	**14 06 52.4**	**+1.5**
PAGZ	**Pagadian**	**3.38**	**296**	*e*P		**Pn**	**14 06 23.5**	**-1.1**
SCPH	**Surigao**	**3.54**	**345**	*e*P		**Pn**	**14 06 24.1**	**-2.7**
MNI	**Manado**	**5.12**	**198**	P		**Pn**	**14 06 48.3**	**+0.4**
TNTI	**Ternate**	**5.62**	**170**	P		**Pn**	**14 06 54.7**	**+0.2**
	0.5nm3μm122nm,1.3s							
TNTI				S		**Sn**	**14 07 58.1**	**+0.1**
	0.5nm3μm122nm,1.3s							
KMSI	**Cibinong**	**6.23**	**203**	P		**Pn**	**14 07 03.4**	**+0.6**
	0.6nm218nm,0.8s							
LBMI	**Labuha**	**7.02**	**171**	P		**Pn**	**14 07 13.6**	**+0.2**
	0.3nm45nm,0.6s							
LBMI				S		**Sn**	**14 08 30.6**	**-1.2**
	0.3nm45nm,0.6s							
MRSI	**Marisa**	**7.36**	**218**	P		**Pn**	**14 07 19.2**	**+1.3**
	0.3nm771nm47nm,0.7s							
LUWI	**Luwuk**	**8.20**	**207**	P		**Pn**	**14 07 30.3**	**+1.0**
	76nm,1.2s							
NLAI	**Namlea**	**9.54**	**176**	P		**Pn**	**14 07 46.0**	**-1.4**
	2μm72nm,0.9s							
TTSI	**Tana Toraja**	**11.43**	**215**	P		**Pn**	**14 08 14.0**	**+1.5**
KAKA	**Kakadu**	**19.85**	**163**	*e*P		**P**	**14 09 53.3**	**-0.8**
FITZ	**Fitzroy Crossi**	**24.30**	**182**	P		**P**	**14 10 38.6**	**-0.1**
	3.0nm,0.7s,mb3.9,baz=155,slow=10							
WRAB	**Tennant Creek**	**27.25**	**164**	*e*P		**P**	**14 11 04.8**	**-0.5**
WB2	**Warramunga Arr**	**27.26**	**164**	P		**P**	**14 11 02.8**	**-2.6**
ASAR	**Alice Springs**	**30.71**	**166**	P		**P**	**14 11 35.5**	**-0.4**
	0.2nm,0.3s,mb3.3,baz=345,slow=7.0,SNR=16							
BJT	**Baijiatuao**	**34.77**	**346**	*e*P		**P**	**14 12 11.7**	**+0.6**
	6.6nm,0.4s,mb4.6							
BJI	**Beijing**	**34.79**	**346**	P		**P**	**14 12 11.7**	**+0.5**
BJI				pmax	pmax			
	comp=Z,15nm,0.7s,mb4.7							
SONM	**Songino Array**	**44.74**	**341**	P		**P**	**14 13 34.8**	**+1.4**
	comp=Z,0.2nm,0.4s,mb3.1,baz=140,slow=7.0,SNR=2.6							
MKAR	**Makanchi Array**	**55.26**	**324**	P		**P**	**14 14 54.8**	**+2.0**
	comp=Z,0.5nm,0.6s,mb3.4,baz=104,slow=6.1,SNR=5.6							
ILAR	**Eielson Array**	**82.88**	**26**	P		**P**	**14 17 42.4**	**-0.6**
	comp=Z,0.3nm,0.5s,mb3.2,baz=252,slow=5.7,SNR=7.7							

MAN 06 14:24:54,11.79N×124.26E,h30km,mb4.3,ML3.1,MS3.0, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
OCLP	**Ormoc**	**0.81**	**155**	*e*P		Pn	14 25 09.8	+0.4
OCLP				*e*S		Sb	14 25 21.5	+1.3
CNP	**Catarman**	**0.82**	**29**	*e*P		Pn	14 25 09.6	+0.1
CNP

AOS	**Alonnisos**	**0.40**	**173**	P	**Pg**	**14 32 52.9**	**-0.1**
AOS				S	**Sg**	**14 32 59.3**	**+0.9**
AOS	**Alonnisos**	**0.40**	**173**	P	**Pg**	**14 32 52.4**	**-0.6**
AOS				S	**Sg**	**14 32 59.3**	**+0.9**
XOR	**Xorichti**	**0.52**	**247**	P	**Pg**	**14 32 55.8**	**+0.6**
XOR	**Xorichti**	**0.52**	**247**	P	**Pg**	**14 32 55.8**	**+0.6**
XOR				S	**Sg**	**14 33 05.3**	**+3.1**
XOR	**Xorichti**	**0.52**	**247**	P	**Pg**	**14 32 55.8**	**+0.6**
XOR				S	**Sg**	**14 33 05.3**	**+3.1**
NEO	**Neokhori**	**0.53**	**240**	*e*Pn	**Pg**	**14 32 55.6**	**+0.3**
NEO				*e*Sn	**Sg**	**14 33 04.5**	**+2.2**
NEO	**Neokhori**	**0.53**	**240**	*e*PN	**Pg**	**14 32 55.6**	**+0.3**
NEO				*e*SN	**Sg**	**14 33 04.5**	**+2.2**
NEO	**Neokhori**	**0.53**	**240**	*e*Pn	**Pg**	**14 32 55.6**	**+0.3**
OUR	**Ouranopolis**	**0.78**	**10**	P	**Pg**	**14 32 58.4**	**-1.6**
OUR	**Ouranopolis**	**0.78**	**10**	P	**Pg**	**14 32 58.8**	**-1.2**
OUR				S	**Sg**	**14 33 10.3**	**+0.1**
OUR	**Ouranopolis**	**0.78**	**10**	P	**Pg**	**14 32 58.8**	**-1.2**
OUR				S	**Sg**	**14 33 10.3**	**+0.1**
ATAL	**Atalanti**	**1.07**	**215**	P	**Pb**	**14 33 04.7**	**-0.7**
ATAL	**Atalanti**	**1.07**	**215**	P	**Pb**	**14 33 04.7**	**-0.7**
LIA	**Limnos Island**	**1.10**	**72**	*e*Pn	**Pn**	**14 33 04.1**	**-2.1**
LIA				*e*Sn	**Sn**	**14 33 20.0**	**-1.3**
LIA	**Limnos Island**	**1.10**	**72**	*e*PN	**Pn**	**14 33 04.1**	**-2.1**
LIA				*e*SN	**Sn**	**14 33 20.0**	**-1.3**
LIA	**Limnos Island**	**1.10**	**72**	P	**Pb**	**14 33 04.0**	**-2.0**
LIA				S	**Sb**	**14 33 19.2**	**-1.1**
LIA	**Limnos Island**	**1.10**	**72**	P	**Pb**	**14 33 04.0**	**-2.0**
LIA				S	**Sb**	**14 33 19.2**	**-1.1**
LIA				*e*Sn	**Sn**	**14 33 20.0**	**-1.3**
LKR	**Lokris**	**1.12**	**215**	*e*Pn	**Pb**	**14 33 05.3**	**-0.8**
LKR	**Lokris**	**1.12**	**215**	*e*PN	**Pb**	**14 33 05.3**	**-0.8**
LKR	**Lokris**	**1.12**	**215**	P	**Pb**	**14 33 05.3**	**-0.8**
LKR				S	**Sb**	**14 33 21.3**	**+0.7**
LKR	**Lokris**	**1.12**	**215**	P	**Pb**	**14 33 05.3**	**-0.8**
LKR				S	**Sb**	**14 33 21.3**	**+0.7**
LIT	**Litokhoron**	**1.15**	**298**	*e*Pb	**Pb**	**14 33 04.8**	**-1.9**
LIT				*e*Sn	**Sb**	**14 33 21.8**	**+0.2**
LIT	**Litokhoron**	**1.15**	**298**	*e*PB	**Pb**	**14 33 04.8**	**-1.9**
LIT				*e*SN	**Sb**	**14 33 21.8**	**+0.2**
LIT	**Litokhoron**	**1.15**	**298**	P	**Pb**	**14 33 05.0**	**-1.7**
LIT				S	**Sb**	**14 33 21.8**	**+0.2**
LIT	**Litokhoron**	**1.15**	**298**	P	**Pb**	**14 33 05.0**	**-1.7**
LIT				S	**Sb**	**14 33 21.8**	**+0.2**
HORT	**Hortiatis**	**1.16**	**332**	P	**Pb**	**14 33 05.8**	**-1.2**
HORT	**Hortiatis**	**1.16**	**332**	P	**Pb**	**14 33 06.2**	**-0.8**
HORT				S	**Sb**	**14 33 22.7**	**+0.7**
HORT	**Hortiatis**	**1.16**	**332**	P	**Pb**	**14 33 06.2**	**-0.8**
HORT				S	**Sb**	**14 33 22.7**	**+0.7**
THE	**Thessaloniki**	**1.25**	**329**	P	**Pn**	**14 33 07.8**	**-0.3**
THE	**Thessaloniki**	**1.25**	**329**	P	**Pn**	**14 33 07.9**	**-0.2**
THE				S	**Sb**	**14 33 24.4**	**+0.1**
THE	**Thessaloniki**	**1.25**	**329**	P	**Pn**	**14 33 07.8**	**-0.3**
THE				S	**Sb**	**14 33 24.4**	**+0.1**
AGG	**Agios Georgios**	**1.27**	**245**	*e*Pn	**Pn**	**14 33 08.1**	**-0.4**
AGG	**Agios Georgios**	**1.27**	**245**	*e*PN	**Pn**	**14 33 08.1**	**-0.4**
AGG	**Agios Georgios**	**1.27**	**245**	P	**Pn**	**14 33 07.9**	**-0.6**
AGG				S	**Sb**	**14 33 26.6**	**+1.5**
AGG	**Agios Georgios**	**1.27**	**245**	*e*Pn	**Pn**	**14 33 08.1**	**-0.4**
AGG				S	**Sb**	**14 33 26.6**	**+1.5**
SOH	**Sokhos**	**1.30**	**344**	*e*Pn	**Pn**	**14 33 08.1**	**-0.8**
SOH	**Sokhos**	**1.30**	**344**	*e*PN	**Pn**	**14 33 08.1**	**-0.8**
SOH	**Sokhos**	**1.30**	**344**	P	**Pn**	**14 33 08.1**	**-0.8**
SOH				S	**Sb**	**14 33 27.2**	**+1.3**
SOH	**Sokhos**	**1.30**	**344**	P	**Pn**	**14 33 08.1**	**-0.8**
SOH				S	**Sb**	**14 33 27.2**	**+1.3**
THL	**Klokotos Trika**	**1.39**	**270**	*e*PN	**Pn**	**14 33 09.6**	**-0.7**
THL	**Klokotos Trika**	**1.39**	**270**	P	**Pn**	**14 33 09.5**	**-0.6**
THL	**Klokotos Trika**	**1.39**	**270**	P	**Pn**	**14 33 09.5**	**-0.6**
PTL	**Penteli**	**1.52**	**178**	*e*Pn	**Pn**	**14 33 10.9**	**-1.0**
PTL	**Penteli**	**1.52**	**178**	*e*PN	**Pn**	**14 33 10.9**	**-1.0**
PTL	**Penteli**	**1.52**	**178**	*e*Pn	**Pn**	**14 33 10.9**	**-1.0**
KAVA	**Kavala**	**1.52**	**20**	P	**Pn**	**14 33 09.8**	**-2.1**
KAVA				S	**Sn**	**14 33 31.4**	**-0.2**
KAVA	**Kavala**	**1.52**	**20**	P	**Pn**	**14 33 09.8**	**-2.1**
KAVA				S	**Sn**	**14 33 31.4**	**-0.2**
DSF	**Desfina**	**1.53**	**221**	P	**Pn**	**14 33 11.0**	**-1.0**
DSF	**Desfina**	**1.53**	**221**	P	**Pn**	**14 33 11.0**	**-1.0**
SRS	**Serrai**	**1.56**	**354**	P	**Pn**	**14 33 10.9**	**-1.5**
SRS	**Serrai**	**1.56**	**354**	P	**Pn**	**14 33 11.1**	**-1.3**
SRS	**Serrai**	**1.56**	**354**	P	**Pn**	**14 33 11.1**	**-1.3**
ATH	**Athens Observa**	**1.60**	**183**	*e*Pn	**Pn**	**14 33 12.0**	**-0.9**
ATH				*e*Sn	**Sn**	**14 33 32.6**	**-0.8**
ATH	**Athens Observa**	**1.60**	**183**	*e*PN	**Pn**	**14 33 12.0**	**-0.9**
ATH				*e*SN	**Sn**	**14 33 32.6**	**-0.8**
ATH	**Athens Observa**	**1.60**	**183**	*e*Pn	**Pn**	**14 33 12.0**	**-0.9**
ATH				*e*Sn	**Sn**	**14 33 32.6**	**-0.8**
ATHU	**Athens Univers**	**1.60**	**181**	P	**Pn**	**14 33 12.7**	**-0.3**
ATHU	**Athens Univers**	**1.60**	**181**	P	**Pn**	**14 33 12.7**	**-0.3**
SIGR	**SIGRI**	**1.62**	**102**	P	**Pn**	**14 33 14.2**	**+0.9**
SIGR	**SIGRI**	**1.62**	**102**	P	**Pn**	**14 33 14.2**	**+0.9**
LTK	**Loutraki**	**1.68**	**203**	P	**Pn**	**14 33 13.2**	**-0.9**
LTK	**Loutraki**	**1.68**	**203**	P	**Pn**	**14 33 13.2**	**-0.9**
EVR	**Evrytania**	**1.69**	**248**	*e*Pn	**Pn**	**14 33 13.9**	**-0.3**
EVR	**Evrytania**	**1.69**	**248**	*e*PN	**Pn**	**14 33 13.9**	**-0.3**
EVR	**Evrytania**	**1.69**	**248**	*e*Pn	**Pn**	**14 33 13.9**	**-0.3**
VLY	**Voula,Athens**	**1.71**	**181**	*e*Pb	**Pb**	**14 33 13.6**	**-2.8**
VLY				*e*Sn	**Sn**	**14 33 35.6**	**-0.7**
VLY	**Voula,Athens**	**1.71**	**181**	*e*PB	**Pb**	**14 33 13.6**	**-2.8**
VLY				*e*SN	**Sn**	**14 33 35.6**	**-0.7**
VLY	**Voula,Athens**	**1.71**	**181**	*e*Pb	**Pb**	**14 33 13.6**	**-2.8**
VLY				*e*Sn	**Sn**	**14 33 35.6**	**-0.7**
GADA	**Gvkgeada**	**1.72**	**68**	*e*PN	**Pn**	**14 33 16.1**	**+1.5**
GADA				*e*SN	**Sn**	**14 33 37.1**	**+0.7**
GADA	**Gvkgeada**	**1.72**	**68**	*e*Pn	**Pn**	**14 33 16.1**	**+1.5**
GADA				*e*Sn	**Sn**	**14 33 38.2**	**+1.7**
KZN	**Kozani**	**1.73**	**296**	*e*Pn	**Pn**	**14 33 14.8**	**0.0**
KZN	**Kozani**	**1.73**	**296**	*e*PN	**Pn**	**14 33 14.8**	**0.0**
KZN	**Kozani**	**1.73**	**296**	P	**Pn**	**14 33 14.6**	**-0.2**
KZN	**Kozani**	**1.73**	**296**	*e*Pn	**Pn**	**14 33 14.8**	**0.0**
KNT	**Kendrikon**	**1.74**	**337**	P	**Pn**	**14 33 15.3**	**+0.4**
KNT	**Kendrikon**	**1.74**	**337**	P	**Pn**	**14 33 15.3**	**+0.4**
GRG	**Griva**	**1.76**	**322**	P	**Pn**	**14 33 14.8**	**-0.3**
GRG	**Griva**	**1.76**	**322**	P	**Pn**	**14 33 15.2**	**+0.1**
GRG	**Griva**	**1.76**	**322**	P	**Pn**	**14 33 14.8**	**-0.3**
KALE	**Kalithea**	**1.76**	**228**	P	**Pn**	**14 33 14.9**	**-0.2**
KALE	**Kalithea**	**1.76**	**228**	P	**Pn**	**14 33 14.9**	**-0.2**
NVR	**Nevrokopi**	**1.78**	**1**	*e*Pn	**Pn**	**14 33 14.2**	**-1.2**
NVR	**Nevrokopi**	**1.78**	**1**	*e*PN	**Pn**	**14 33 14.2**	**-1.2**
NVR	**Nevrokopi**	**1.78**	**1**	*e*Pn	**Pn**	**14 33 14.2**	**-1.2**
TRIZ	**Trizonia**	**1.81**	**229**	P	**Pn**	**14 33 15.4**	**-0.5**
TRIZ	**Trizonia**	**1.81**	**229**	P	**Pn**	**14 33 15.4**	**-0.5**
NAIG	**Nisos Aigina**	**1.83**	**188**	*e*Pn	**Pn**	**14 33 15.2**	**-0.9**
NAIG	**Nisos Aigina**	**1.83**	**188**	*e*PN	**Pn**	**14 33 15.2**	**-0.9**
NAIG	**Nisos Aigina**	**1.83**	**188**	*e*Pn	**Pn**	**14 33 15.2**	**-0.9**
EFP	**Efpalio**	**1.87**	**233**	P	**Pn**	**14 33 17.1**	**+0.3**
EFP	**Efpalio**	**1.87**	**233**	P	**Pn**	**14 33 17.1**	**+0.3**
PRK	**Paraskevi**	**1.93**	**99**	P	**Pn**	**14 33 19.6**	**+2.1**
PRK	**Paraskevi**	**1.93**	**99**	P	**Pn**	**14 33 16.1**	**-1.4**
PRK	**Paraskevi**	**1.93**	**99**	P	**Pn**	**14 33 16.1**	**-1.4**
LAKA	**Lakka**	**1.95**	**228**	P	**Pn**	**14 33 18.1**	**+0.3**
LAKA	**Lakka**	**1.95**	**228**	P	**Pn**	**14 33 18.1**	**+0.3**
EZN	**Ezine**	**1.95**	**82**	*e*PN	**Pn**	**14 33 19.1**	**+1.2**
EZN	**Ezine**	**1.95**	**82**	*e*Pn	**Pn**	**14 33 19.1**	**+1.3**
EZN				*e*Sn	**Sn**	**14 33 45.0**	**+2.8**
VAY	**Valandovo**	**1.99**	**332**	*e*Pn	**Pn**	**14 33 18.9**	**+0.6**
VAY				*e*Sg	**Sg**	**14 33 47.8**	**-1.2**
VAY				*e*Lg		14 33 49.6	
	comp=N,188nm,0.6s						
VAY				*e*Lg		14 33 50.6	
	comp=E,416nm,0.9s						
GUR	**Goura**	**2.00**	**216**	P	**Pn**	**14 33 18.1**	**-0.3**
GUR	**Goura**	**2.00**	**216**	P	**Pn**	**14 33 18.1**	**-0.3**
MMB	**Musomiste**	**2.02**	**358**	*i* P	**Pn**	**14 33 17.2**	**-1.5**
MMB	**Musomiste**	**2.02**	**358**	*i* P	**Pn**	**14 33 17.2**	**-1.5**
CHOS	**Chios island**	**2.11**	**123**	*e*PN	**Pn**	**14 33 19.0**	**-1.0**
CHOS	**Chios island**	**2.11**	**123**	P	**Pn**	**14 33 19.0**	**-1.0**
CHOS				S	**Sn**	**14 33 46.0**	**0.0**
CHOS	**Chios island**	**2.11**	**123**	P	**Pn**	**14 33 19.0**	**-1.0**
CHOS				S	**Sn**	**14 33 46.0**	**0.0**
DID	**Didima**	**2.11**	**193**	P	**Pn**	**14 33 19.0**	**-1.0**
DID	**Didima**	**2.11**	**193**	P	**Pn**	**14 33 19.0**	**-1.0**
ENEZ	**Enez**	**2.14**	**56**	*e*PN	**Pn**	**14 33 22.9**	**+2.6**
ENEZ	**Enez**	**2.14**	**56**	*e*Pn	**Pn**	**14 33 21.8**	**+1.4**
ALN	**Alexandroupoli**	**2.16**	**51**	*e*Pn	**Pn**	**14 33 19.2**	**-1.5**
ALN	**Alexandroupoli**	**2.16**	**51**	*e*PN	**Pn**	**14 33 19.2**	**-1.5**
ALN	**Alexandroupoli**	**2.16**	**51**	P	**Pn**	**14 33 18.6**	**-2.1**
ALN				S	**Sn**	**14 33 46.6**	**-0.8**
ALN	**Alexandroupoli**	**2.16**	**51**	P	**Pn**	**14 33 18.6**	**-2.1**
ALN	**Alexandroupoli**	**2.16**	**51**	*e*Pn	**Pn**	**14 33 19.2**	**-1.5**
ALN				S	**Sn**	**14 33 46.6**	**-0.8**
GELI	**Tayfur-Gelibol**	**2.21**	**67**	*e*PN	**Pn**	**14 33 22.3**	**+1.0**
GELI	**Tayfur-Gelibol**	**2.21**	**67**	*e*Pn	**Pn**	**14 33 22.3**	**+1.0**
RZN	**Rozhen**	**2.23**	**18**	*i* P	**Pn**	**14 33 20.5**	**-1.1**
RZN	**Rozhen**	**2.23**	**18**	*i* P	**Pn**	**14 33 20.5**	**-1.1**
FNA	**Florina**	**2.23**	**304**	P	**Pn**	**14 33 21.5**	**-0.1**
FNA	**Florina**	**2.23**	**304**	P	**Pn**	**14 33 21.7**	**+0.1**
FNA	**Florina**	**2.23**	**304**	P	**Pn**	**14 33 21.5**	**-0.1**
AYVA	**Ayvalik**	**2.24**	**96**	*i* P	**Pb**	**14 33 26.6**	**+1.2**
AYVA				*i* S	**Sg**	**14 34 04.9**	**+7.9**
NEST	**Nestorio**	**2.29**	**293**	P	**Pn**	**14 33 23.0**	**+0.6**
NEST				S	**Sn**	**14 33 52.8**	**+2.4**
NEST	**Nestorio**	**2.29**	**293**	P	**Pn**	**14 33 23.0**	**+0.6**
NEST				S	**Sn**	**14 33 52.8**	**+2.4**
ERIK	**Erikli-Kesan**	**2.34**	**61**	*e*PN	**Pn**	**14 33 24.9**	**+1.7**
ERIK	**Erikli-Kesan**	**2.34**	**61**	*e*Pn	**Pn**	**14 33 24.9**	**+1.7**
KKB	**Krupnik**	**2.36**	**347**	*i* P	**Pn**	**14 33 22.6**	**-0.8**
KKB				*i* Pg	**Pg**	**14 33 28.7**	**-1.6**
KKB	**Krupnik**	**2.36**	**347**	*i* P	**Pn**	**14 33 22.6**	**-0.8**
RLS	**Riolos of Patr**	**2.38**	**231**	P	**Pn**	**14 33 27.2**	**+3.6**
BIA	**Bitola**	**2.39**	**308**	*e*PN	**Pn**	**14 33 25.3**	**+1.4**
LPK	**Lapseki**	**2.40**	**70**	*e*PN	**Pn**	**14 33 24.9**	**+0.9**
LPK	**Lapseki**	**2.40**	**70**	*e*Pn	**Pn**	**14 33 24.9**	**+0.9**
KDZ	**Kurdzhali**	**2.41**	**30**	*i* P	**Pn**	**14 33 21.7**	**-2.4**
KDZ	**Kurdzhali**	**2.41**	**30**	*i* P	**Pn**	**14 33 21.7**	**-2.4**
KRUS	**Krusevo**	**2.66**	**313**	*e*Pn	**Pn**	**14 33 27.6**	**+0.1**
IGT	**Igoumenitsa**	**2.69**	**270**	P	**Pn**	**14 33 32.1**	**+4.1**
ITM	**Ithomi**	**2.81**	**212**	*e*Pn	**Pn**	**14 33 29.4**	**-0.2**
ITM	**Ithomi**	**2.81**	**212**	*e*PN	**Pn**	**14 33 29.4**	**-0.2**
ITM	**Ithomi**	**2.81**	**212**	P	**Pn**	**14 33 30.2**	**+0.6**
ITM	**Ithomi**	**2.81**	**212**	*e*Pn	**Pn**	**14 33 29.4**	**-0.2**
ITM	**Ithomi**	**2.81**	**212**	P	**Pn**	**14 33 30.2**	**+0.6**
RKY	**Sarkoy-Tekirda**	**2.81**	**66**	*e*PN	**Pn**	**14 33 31.9**	**+2.3**
RKY	**Sarkoy-Tekirda**	**2.81**	**66**	*e*Pn	**Pn**	**14 33 31.9**	**+2.3**
APE	**Apeiranthos**	**2.84**	**151**	*e*Pn	**Pn**	**14 33 30.7**	**+0.7**
APE	**Apeiranthos**	**2.84**	**151**	*e*PN	**Pn**	**14 33 30.7**	**+0.7**
APE	**Apeiranthos**	**2.84**	**151**	P	**Pn**	**14 33 28.9**	**-1.1**
APE	**Apeiranthos**	**2.84**	**151**	⇑*i*P	**Pn**	**14 33 28.5**	**-1.5**
APE	**Apeiranthos**	**2.84**	**151**	P	**Pn**	**14 33 28.9**	**-1.1**
APE	**Apeiranthos**	**2.84**	**151**	*e*Pn	**Pn**	**14 33 30.7**	**+0.7**
VLS	**Valsamata**	**2.88**	**242**	*e*Pn	**Pn**	**14 33 31.5**	**+1.0**
VLS	**Valsamata**	**2.88**	**242**	*e*PN	**Pn**	**14 33 31.5**	**+1.0**
VLS	**Valsamata**	**2.88**	**242**	*e*Pn	**Pn**	**14 33 31.5**	**+1.0**
MFT	**Murefte**	**2.92**	**64**	*e*PN	**Pn**	**14 33 33.6**	**+2.4**
MFT	**Murefte**	**2.92**	**64**	*e*Pn	**Pn**	**14 33 33.6**	**+2.5**
VLI	**Veliai**	**2.93**	**194**	*e*Pn	**Pn**	**14 33 31.0**	**-0.3**
VLI	**Veliai**	**2.93**	**194**	*e*PN	**Pn**	**14 33 31.0**	**-0.3**
VLI	**Veliai**	**2.93**	**194**	*e*Pn	**Pn**	**14 33 31.0**	**-0.3**
IZM	**Izmir**	**2.93**	**112**	*e*PN	**Pn**	**14 33 34.6**	**+3.3**
GONE	**Gonen-Balikesi**	**3.02**	**80**	*e*PN	**Pn**	**14 33 34.6**	**+2.1**
GONE	**Gonen-Balikesi**	**3.02**	**80**	*e*Pn	**Pn**	**14 33 34.6**	**+2.1**
VTS	**Vitosha**	**3.05**	**352**	⇑P	**Pn**	**14 33 30.1**	**-2.8**
VTS	**Vitosha**	**3.05**	**352**	⇑*i*P	**Pn**	**14 33 30.1**	**-2.9**
VTS	**Vitosha**	**3.05**	**352**	*i* P	**Pn**	**14 33 33.0**	**0.0**
VTS	**Vitosha**	**3.05**	**352**	*i* P	**Pn**	**14 33 33.0**	**0.0**
BALB	**Balikesir**	**3.14**	**87**	*e*PN	**Pn**	**14 33 37.2**	**+3.0**
BALB	**Balikesir**	**3.14**	**87**	*e*Pn	**Pn**	**14 33 37.2**	**+3.0**
EDRB	**Edirne**	**3.18**	**43**	*e*PN	**Pn**	**14 33 36.5**	**+1.8**
EDRB	**Edirne**	**3.18**	**43**	*e*Pn	**Pn**	**14 33 36.5**	**+1.8**
KYTH	**Kithira**	**3.34**	**191**	*e*Pn	**Pn**	**14 33 36.6**	**-0.3**
KYTH	**Kithira**	**3.34**	**191**	*e*PN	**Pn**	**14 33 36.6**	**-0.3**
KYTH	**Kithira**	**3.34**	**191**	*e*Pn	**Pn**	**14 33 36.6**	**-0.3**
BARS	**Barje**	**3.58**	**336**	⇑*i*Pn	**Pn**	**14 33 40.1**	**-0.1**
MPEP	**Malo Peshtene**	**3.78**	**359**	*i* P	**Pn**	**14 33 43.1**	**+0.1**
IDI	**Anoyia**	**4.36**	**168**	P	**Pn**	**14 33 54.6**	**+3.7**
DIVS	**Divibare**	**5.35**	**329**	*e*Pn	**Pn**	**14 34 08.8**	**+4.3**
VOIR		**5.93**	**8**	⇓P	**Pn**	**14 34 12.6**	**0.0**
VOIR		**5.93**	**8**	⇓*i*P	**Pn**	**14 34 12.6**	**+0.1**
VOIR		**5.93**	**8**	⇓*i*P	**Pn**	**14 34 12.6**	**+0.1**
MLR	**Muntele Rosu**	**6.12**	**14**	⇑P	**Pn**	**14 34 16.2**	**+1.1**
MLR	**Muntele Rosu**	**6.12**	**14**	⇑*i*P	**Pn**	**14 34 16.2**	**+1.1**
MLR	**Muntele Rosu**	**6.12**	**14**	⇑P	**Pn**	**14 34 16.2**	**+1.1**
DOPR	**Dopca**	**6.50**	**10**	⇓*i*P	**Pn**	**14 34 20.6**	**+0.3**
DOPR	**Dopca**	**6.50**	**10**	⇓*i*P	**Pn**	**14 34 20.6**	**+0.3**
PLOR	**Plostina**	**6.62**	**17**	⇓*i*P	**Pn**	**14 34 23.7**	**+1.8**
VRI	**Vrincioaia**	**6.65**	**18**	⇑P	**Pn**	**14 34 24.1**	**+1.7**
VRI	**Vrincioaia**	**6.65**	**18**	⇑*i*P	**Pn**	**14 34 24.0**	**+1.7**
VRI	**Vrincioaia**	**6.65**	**18**	⇑P	**Pn**	**14 34 24.0**	**+1.7**
BURAR	**Bucovina Array**	**8.11**	**7**	⇑P	**Pn**	**14 34 40.8**	**-1.5**
BURAR	**Bucovina Array**	**8.11**	**7**	⇑*i*P	**Pn**	**14 34 40.8**	**-1.5**
BURAR	**Bucovina Array**	**8.11**	**7**	⇑P	**Pn**	**14 34 40.8**	**-1.5**
MALT	**Malatya**	**11.45**	**92**	⇑*i*P	**Pn**	**14 35 36.5**	**+8.3**

*ISCJB **06** 14:45:34.9±0.4, 58.°64S±0.°08×25.°1W±0.°1, h10km, mb4.9/17, MS4.3/10, Error ellipse: s-maj=12.4km s-min=10.3km az=23.8*

*IDC **06** 14:45:34.8±0.5, 58.°65S×25.°16W, h0km, mb4.6/10, mb1 4.7/10, mb1mx4.6/14, mbtmp4.6/10, MS4.3/11, Ms1 4.3/11, ms1mx4.2/15, Error ellipse: s-maj=20.0km s-min=15.5km az=34.0*

*NEIC **06** 14:45:35.2±4.5, 58.°67S×25.°11W, h2km±26km, mb5.4/7, Error ellipse: s-maj=9.5km s-min=7.2km az=182.0*

*BJI **06** 14:45:36.9, 58.°70S×25.°10W, h9km*

*GCMT **06** 14:45:42.3±0.3, 59.°04S×24.°60W, h30km, MW5.0, Moment Tensor Solution. s50,c65; s54,c73; Moment tensor: Scale 10^16Nm; Mrr3.69±.19; Mθθ0.45±.16; Mφφ-4.14±.13; Mrθ0.49±.28; Mrφ0.09±.12; Mθφ-0.08±.18; Best double couple: M0 4.00000×10^16 NP1:δ7.00000°, δ45.00000°, λ102.00000°. NP2:δ171.00000°, δ46.00000°, λ78.00000°. Principal axes: T 3.7600, Plg82.0000°, Azm3.0000°; N 0.3800, Plg8.0000°, Azm179.0000°; P -4.1400, Plg1.0000°, Azm269.0000°; Data Used: II IU IC G CN.*

ISC 06 14:45:36.4±0.4, 58.°75S±0.°07×25.°1W±0.°1, h10km, n83, σ0.°80/28, mb4.9/17, MS4.3/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
VNA1	**Neumayer--Stat**	**13.87**	**156**	*e*P	**Pn**		**14 48 50.0**	**-2.6**
VNA3	**Neumayer Olymp**	**14.06**	**159**	*e*P	**Pn**		**14 48 51.5**	**-3.8**
VNA3				*e*S	**Sn**		**14 51 11.5**	**-20**
PMSA	**Palmer Station**	**19.11**	**235**	P	**Pn**		**14 50 05.2**	**+5.3**
	1.2nm,0.3s,baz=90,slow=6.6,SNR=4.9							
PMSA				LR	LR		14 56 32.7	
	comp=Z,1μm,18.0s,baz=75,slow=34							
MAIT	**Maitri**	**19.38**	**143**	*e*P	**Pn**		**14 50 03.4**	**+0.4**
USHA	**Ushuaia**	**23.72**	**261**	P	**P**		**14 50 49.1**	**+0.8**
	12nm,0.9s,mb4.3,baz=97,slow=13,SNR=2.6							
QSPA	**South Pole Qui**	**31.49**	**180**	*e*P	**P**		**14 51 59.1**	**+1.4**
	31nm,1.3s,mb5.0							
QSPA	**South Pole Qui**	**31.49**	**180**	P	**P**		**14 51 59.4**	**+1.7**
	6.3nm,0.7s,mb4.6,baz=207,slow=2.0,SNR=70							
PLCA	**Paso Flores**	**33.62**	**282**	*e*P	**P**		**14 52 16.6**	**0.0**
PLCA				LR	LR		15 05 45.2	
PLCA	**Paso Flores**	**33.62**	**282**	P	**P**		**14 52 16.8**	**+0.1**
	7.7nm,0.9s,mb4.6,baz=177,slow=6.3,SNR=6.0							
PLCA				LR	LR		15 05 45.2	
	comp=Z,510nm,21.0s,MS4.2,baz=4.4,slow=36							
MAW	**Mawson**	**37.33**	**141**	P	**P**		**14 52 49.1**	**+0.8**
	4.9nm,0.8s,mb4.4,baz=239,slow=8.6,SNR=7.9							
MAW				PcP	PcP		14 55 08.6	+1.6
	1.1nm,0.5s,baz=284,slow=5.5,SNR=3.7							
MAW				LR	LR		15 06 27.2	
	comp=Z,647nm,19.8s,MS4.4,baz=248,slow=34							
CPUP	**Villa Florida**	**39.44**	**311**	*e*P	**P**		**14 53 05.1**	**-1.3**
CPUP				LR	LR		15 07 58.5	
CPUP	**Villa Florida**	**39.44**	**311**	P	**P**		**14 53 04.7**	**-1.7**
	1.3nm,0.4s,mb4.0,baz=132,slow=8.6,SNR=4.8							
CPUP				LR	LR		15 07 58.5	
	comp=Z,361nm,21.1s,MS4.2,baz=141,slow=34							
CFAA	**Coronel Fontan**	**39.67**	**294**	P	**P**		**14 53 07.9**	**-0.4**
	0.2nm,0.3s,baz=137,slow=6.0,SNR=6.2							
CFAA				PcP	PcP		14 55 15.2	+0.3
	0.3nm,0.5s,baz=158,slow=5.8,SNR=3.8							
LCO	**Las Campanas**	**43.00**	**293**	P	**P**		**14 53 35.6**	**-0.1**
BOSA	**Boshof**	**45.67**	**71**	P	**P**		**14 53 56.9**	**-0.2**
	11nm,0.7s,mb4.9,baz=204,slow=6.8,SNR=17							
BOSA				LR	LR		15 08 47.1	
	comp=Z,276nm,19.6s,MS4.2,baz=209,slow=30							
LBTB	**Lobatse**	**48.84**	**69**	*e*P	**P**		**14 54 21.7**	**-0.1**
	24nm,1.3s,mb5.1							
TSUM	**Tsumeb**	**50.14**	**57**	*e*P	**P**		**14 54 32.2**	**+0.5**
	24nm,1.3s,mb5.1							
LPAZ	**La Paz**	**52.84**	**305**	*e*P	**P**		**14 54 51.9**	**-0.1**
LPAZ	**La Paz**	**52.84**	**305**	P	**P**		**14 54 51.9**	**-0.1**
	3.2nm,0.6s,mb4.5,baz=138,slow=5.2,SNR=19							

LSZ	**Lusaka**	**58.40**	**65**	*e*P	**P**		**14 55 31.6**	**-0.3**
	6.3nm,0.7s,mb4.8								
LIC	**Lamto**	**66.75**	**22**	*e*P	**P**		**14 56 27.5**	**-0.2**
	156nm,1.5s,mb5.8								
KIC	**Kosan Boka**	**66.94**	**22**	*e*P	**P**		**14 56 29.0**	**+0.1**
	149nm,1.5s,mb5.8								
TIC	**Toumodi**	**67.16**	**22**	*e*P	**P**		**14 56 30.1**	**-0.2**
	15nm,0.2s,mb5.6								
DBIC	**Dimbokro**	**67.22**	**22**	P	**P**		**14 56 31.2**	**+0.6**
	13nm,0.9s,mb5.0,baz=169,slow=7.6,SNR=12								
DBIC				LR	LR		15 19 48.3		
	comp=Z,101nm,18.7s,MS4.1,baz=160,slow=31								
ROSC	**El Rosal**	**74.48**	**308**	LR	LR		15 29 57.4		
	comp=Z,148nm,20.7s,MS4.3,baz=20,slow=36								
TORD	**Torodi Ar. Bea**	**74.91**	**27**	P	**P**		**14 57 17.4**	**+0.2**
	20nm,0.7s,mb5.2,baz=201,slow=6.3,SNR=155								
TORD				LR	LR		15 24 46.8		
	comp=Z,177nm,18.5s,MS4.4,baz=140,slow=31	

ULHL	**Ulahol**	**6.08**	**257**	P		**Pn**	**15 32 30.1**	**+0.8**
	SNR=9.3							
KZA	**Kyzart**	**6.84**	**258**	P		**Pn**	**15 32 39.8**	**+0.2**
	SNR=13							
USP	**Ospenovka**	**7.10**	**268**	P		**Pn**	**15 32 43.0**	**-0.2**
	SNR=5.2							
UCH	**Uchtor**	**7.31**	**260**	P		**Pn**	**15 32 46.1**	**0.0**
	SNR=5.6							
UCH	**Uchtor**	**7.31**	**260**	*e*P		**Pn**	**15 32 45.5**	**-0.6**
KSH	**Kashi**	**7.58**	**237**	*e*P		**Pn**	**15 32 55.1**	**+5.3**
KSH				*e*pP			15 32 59.3	
KSH				*e*sP			15 33 02.6	
KSH				*e*S		**Sn**	**15 34 27.3**	**+12**
KSH				*e*sS			15 34 33.2	
EKS2	**Erkin-Say**	**7.73**	**264**	P		**Pn**	**15 32 51.5**	**-0.4**
	SNR=5.5							
EKS2	**Erkin-Say**	**7.73**	**264**	P		**Pn**	**15 32 51.4**	**-0.5**
	comp=N,2.5nm,0.7s							
KURBB	**Kurchatov Arra**	**7.76**	**332**	⇓Pn		**Pn**	**15 32 52.8**	**+0.6**
	comp=N,0.1nm,0.3s							
KURBB				⇑Sn		**Sn**	**15 34 21.0**	**+1.1**
	comp=N,2.2nm,0.6s							
KURBB				⇓Lg			15 35 11.3	
	comp=N,7.9nm,0.6s							
KURK	**Kurchatov**	**7.81**	**333**	⇑Pn		**Pn**	**15 32 53.8**	**+0.9**
	comp=N,1.3nm,0.5s							
KURK				⇑Sn		**Sn**	**15 34 22.4**	**+1.3**
	comp=N,7.2nm,0.5s							
KURK				⇓Lg			15 35 10.7	
	comp=N,25nm,0.8s							
KURK	**Kurchatov**	**7.81**	**333**	*e*P		**Pn**	**15 32 53.0**	**+0.2**
KK31	**Karatay Array**	**10.01**	**270**	⇑Pn		**Pn**	**15 33 18.2**	**-4.9**
	comp=N,0.2nm,0.4s,baz=80,slow=11,SNR=9.9							
KK31				⇓Lg			15 36 03.3	
	comp=N,4.7nm,0.7s,baz=72,slow=25,SNR=5.1							
ZAA0	**Zalesovo Array**	**10.06**	**2**	Pn		**Pn**	**15 33 23.5**	**-0.2**
ZALV	**Zalesovo Beam**	**10.06**	**2**	Pn		**Pn**	**15 33 22.6**	**-1.1**
	comp=N,0.6nm,0.3s,baz=180,slow=12,SNR=6.0							
ZALV				Sn		**Sn**	**15 35 16.0**	**-0.4**
	comp=N,0.7nm,0.3s,baz=178,slow=23,SNR=5.5							
ZALV				Lg			15 36 25.6	
	comp=N,0.4nm,0.3s,baz=181,slow=29,SNR=2.8							
VOSK	**Vostochnaya**	**12.46**	**320**	⇓Pn		**Pn**	**15 33 57.8**	**+1.3**
	comp=N,0.7nm,0.5s							
VOSK				⇓Sn		**Sn**	**15 36 13.7**	**-1.5**
	comp=N,0.9nm,0.5s							
VOSK				⇑Lg			15 37 32.8	
	comp=N,6.1nm,0.8s							
BVA0	**Borovoye Array**	**12.93**	**320**	⇓Lg			15 37 47.7	
	comp=N,1.0nm,1.0s,baz=132,slow=24,SNR=4.0							
BVAR	**Borovoye Array**	**12.93**	**320**	Pn		**Pn**	**15 34 02.1**	**-0.8**
	comp=N,0.1nm,0.3s,baz=123,slow=15,SNR=2.2							
BVAR				Lg			15 37 55.6	
	comp=N,0.3nm,0.3s,baz=132,slow=29,SNR=4.3							
ZRNK	**Zerenda**	**13.55**	**317**	⇑Pn		**Pn**	**15 34 09.5**	**-1.8**
	comp=N,0.7nm,0.5s							
ZRNK				⇓Sn		**Sn**	**15 36 40.1**	**-1.6**
	comp=N,2.6nm,0.6s							
ZRNK				⇑Lg			15 38 05.2	
	comp=N,5.6nm,1.0s							
SONM	**Songino Array**	**15.91**	**68**	Pn		**Pn**	**15 34 42.7**	**-0.5**
	comp=N,0.1nm,0.3s,baz=264,slow=9.7,SNR=4.0							

*BJI **06** 16:21:03.4,6°.41S×131°.05E,h35km,mB5.1/5,mb4.5/11, Ms4.5/1*
*ISCJB **06** 16:21:15.0±0.5,6°.19S±0°.04×130°.82E±0°.07,h117km±5km, mb4.5/19,Error ellipse: s-maj=12.4km s-min=5.6km az=157.7*
*NEIC **06** 16:21:15.2±2.1,6°.16S×130°.61E,h96km±22km,mb4.5/5, Error ellipse: s-maj=22.8km s-min=10.8km az=48.0*
*IDC **06** 16:21:16.3±5.4,6°.14S×130°.66E,h109km±53km,mb3.8/8, mb1 4.0/10,mb1mx3.9/15,mbtmp3.9/10,MS3.5/1, Ms1 3.4/1,ms1mx2.3/19,Error ellipse: s-maj=39.5km s-min=18.3km az=61.0*
*DJA **06** 16:21:17,6°.13S×130°.68E,h113km,MLv4.5/6*
ISC 06 16:21:16.1±0.5,**6°.20S**±0°.05×**130°.83E**±0°.07,**h108**km±5km, **n50**,σ0**89**/54,**mb4.5**/19,**1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.90**	**331**	P	**Pn**	**16 21 47.9**	**+0.2**
BNDI				S	**Sn**	**16 22 11.6**	**-0.3**
TLE	**Tual**	**1.98**	**74**	P	**Pn**	**16 21 49.1**	**+0.4**
TLE				S	**Sn**	**16 22 22.8**	**+9.2**
AAI	**Ambon**	**3.62**	**313**	P	**Pn**	**16 22 10.7**	**+0.4**
NLAI	**Namlea**	**4.74**	**308**	P	**Pn**	**16 22 26.3**	**+1.0**
KAKA	**Kakadu**	**6.66**	**166**	*e*P	**Pn**	**16 22 51.4**	**-0.1**
	83nm,0.3s						
KAKA	**Kakadu**	**6.66**	**166**	P	**Pn**	**16 22 52.2**	**+0.8**
	8μm112nm,0.6s						
BAKI	**Biak**	**7.25**	**47**	P	**Pn**	**16 22 58.5**	**-0.8**
KNA	**Kununurra**	**9.71**	**192**	P	**Pn**	**16 23 33.7**	**+0.9**
	2μm118nm,0.6s						
FITZ	**Fitzroy Crossi**	**12.87**	**203**	P	**Pn**	**16 24 13.1**	**-1.9**
	0.6nm,0.3s,baz=44,slow=11,SNR=47						
FITZ				S	**Sn**	**16 26 26.5**	**-10**
	4.8nm,0.3s,baz=56,slow=15,SNR=10.0						
WRAB	**Tennant Creek**	**14.07**	**166**	*e*P	**Pn**	**16 24 28.6**	**-2.1**
	35nm,1.5s						
WRAB				*e*S	**Sn**	**16 26 52.7**	**-13**
WB2	**Warramunga Arr**	**14.09**	**166**	*e*P	**Pn**	**16 24 29.3**	**-1.5**
COEN	**Coen**	**14.39**	**123**	*e*P	**Pn**	**16 24 34.1**	**-0.7**
COEN	**Coen**	**14.39**	**123**	P	**Pn**	**16 24 39.8**	**+5.0**
ASAR	**Alice Springs**	**17.62**	**171**	P	**Pn**	**16 25 16.2**	**+1.5**
	1.9nm,0.3s,baz=349,slow=11,SNR=125						
ASAR				S	**S**	**16 28 24.7**	**-6.6**
	1.1nm,0.3s,baz=358,slow=25,SNR=6.4						
CTA	**Charters Tower**	**20.37**	**134**	P	**P**	**16 25 46.5**	**+2.2**
CTA	**Charters Tower**	**20.37**	**134**	P	**P**	**16 25 46.5**	**+2.2**
	8.4nm,0.7s,baz=301,slow=11,SNR=12						
CTAO	**Charters Tower**	**20.37**	**134**	*e*P	**P**	**16 25 46.0**	**+1.8**
PVCP	**Virac**	**20.75**	**341**	⇑*e*P	**P**	**16 25 48.6**	**+0.2**
STKA	**Stephens Creek**	**27.46**	**160**	P	**P**	**16 26 53.4**	**+1.4**
	2.5nm,0.4s,mb4.1,baz=336,slow=7.0,SNR=12						
STKA				LR	LR	16 39 54.8	
	comp=Z,94nm,19.0s,baz=24,slow=41						
CMAR	**Chiang Mai Arr**	**39.86**	**309**	P	**P**	**16 28 39.0**	**-0.4**
	1.3nm,0.5s,mb4.0,baz=141,slow=7.5,SNR=9.0						
KSRS	**Korea Array**	**43.51**	**357**	P	**P**	**16 29 08.1**	**-0.7**
	0.9nm,0.5s,mb3.8,baz=173,slow=8.3,SNR=7.7						
LSA	**Lhasa**	**52.20**	**315**	*e*P	**P**	**16 30 15.0**	**-1.0**
	7.5nm,0.6s,mb4.9						
ODAN	**Odare**	**53.36**	**310**	*e*P	**P**	**16 30 24.4**	**-0.3**
	24nm,0.7s,mb5.3						
TAPN	**Taplejung**	**53.38**	**311**	*e*P	**P**	**16 30 24.7**	**-0.1**
	25nm,0.5s,mb5.5						
GTA	**Gaotai**	**53.68**	**330**	*e*P	**P**	**16 30 26.8**	**+0.1**
GTA				pP	pP	16 30 33.7	-19
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
RAMN	**Ramite**	**54.01**	**310**	*e*P	**P**	**16 30 29.5**	**+0.1**
	comp=Z,62nm,0.6s						
JIRN	**Jiri**	**54.69**	**310**	*e*P	**P**	**16 30 34.2**	**-0.1**
GUN	**Gumba**	**55.05**	**310**	*e*P	**P**	**16 30 37.0**	**+0.1**
	comp=Z,62nm,0.6s						
PKI	**Pulchoki**	**55.24**	**310**	*e*P	**P**	**16 30 37.7**	**-0.6**
	comp=Z,13nm,0.6s,mb5.2						
KKN	**Kakani**	**55.45**	**310**	*e*P	**P**	**16 30 39.5**	**-0.3**
	comp=Z,20nm,0.5s,mb5.4						
DMN	**Daman**	**55.49**	**310**	*e*P	**P**	**16 30 40.0**	**-0.1**
GKN	**Gorkha**	**56.05**	**310**	*e*P	**P**	**16 30 43.8**	**-0.2**
	comp=Z,42nm,0.5s						
KOLN	**Koldanda**	**56.73**	**309**	*e*P	**P**	**16 30 48.9**	**0.0**
	comp=Z,23nm,0.6s,mb5.4						
ULN	**Ulaanbaatar**	**57.77**	**341**	*e*P	**P**	**16 30 55.9**	**+0.1**
	comp=Z,2.3nm,0.3s,mb4.7						
SONM	**Songino Array**	**57.95**	**341**	P	**P**	**16 30 56.7**	**-0.4**
	comp=Z,0.9nm,0.5s,mb4.1,baz=159,slow=6.9,SNR=7.3						
KSH	**Kashi**	**67.99**	**317**	P	**P**	**16 32 04.8**	**+1.1**
KSH				*e*pP	pP	16 32 14.8	-16
KSH				*e*sP	sP	16 32 19.0	-23
KSH				*e*PcP	PcP	16 32 31.5	+2.2
KSH				*e*PP	PP	16 34 36.4	+1.2
KSH				*e*ScP		16 36 31.2	
KSH				*e*PcS		16 36 34.9	
KSH				*e*S	S	16 40 59.4	+4.9
KSH				*e*sS	sS	16 41 16.1	-25
KSH				*e*ScS	ScS	16 41 57.3	+4.4
KSH				*e*SS	SS	16 45 22.1	+3.2
KSH				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
KSH				pmax	pmax		
	comp=Z,82nm,4.1s						
KSH				LR	LR		
	comp=N,31nm,4.4s						
KSH				LR	LR		
	comp=E,42nm,5.8s						
KSH				LR	LR		
	comp=Z,68nm,3.7s						
MK31	**Makanchi Array**	**68.01**	**326**	*e*P	**P**	**16 32 03.5**	**-0.2**
MKAR	**Makanchi Array**	**68.01**	**326**	P	**P**	**16 32 03.8**	**+0.1**
	comp=Z,4.4nm,0.5s,mb4.6,baz=121,slow=8.0,SNR=77						
KZA	**Kyzart**	**69.71**	**319**	P	**P**	**16 32 15.8**	**+1.5**
	SNR=9.3						
UCH	**Uchtor**	**70.26**	**319**	P	**P**	**16 32 19.3**	**+1.6**
	SNR=7.4						
UCH	**Uchtor**	**70.26**	**319**	*e*P	**P**	**16 32 19.1**	**+1.4**
	comp=Z,5.6nm,1.0s,mb4.3						
AML	**Almayashu**	**70.75**	**319**	P	**P**	**16 32 21.9**	**+1.2**
	SNR=7.1						
AML	**Almayashu**	**70.75**	**319**	*e*P	**P**	**16 32 21.6**	**+0.9**
	comp=Z,9.0nm,1.1s,mb4.5						
USP	**Ospenovka**	**70.77**	**320**	P	**P**	**16 32 21.2**	**+0.4**
	SNR=6.1						
EKS2	**Erkin-Say**	**70.94**	**319**	P	**P**	**16 32 22.6**	**+0.8**
	SNR=5.2						
EKS2	**Erkin-Say**	**70.94**	**319**	*e*P	**P**	**16 32 22.2**	**+0.4**
	comp=Z,2.0nm,0.8s,mb4.0						
ZALV	**Zalesovo Beam**	**71.24**	**333**	P	**P**	**16 32 21.8**	**-1.5**
	comp=Z,0.9nm,0.3s,mb4.0,baz=124,slow=5.1,SNR=8.4						
KURK	**Kurchatov**	**72.27**	**328**	*e*P	**P**	**16 32 28.8**	**-0.8**
BVAR	**Borovoye Array**	**77.83**	**327**	P	**P**	**16 33 00.5**	**-1.0**
	comp=Z,0.9nm,0.5s,mb3.8,baz=141,slow=7.6,SNR=7.9						
TORD	**Torodi Ar. Bea**	**129.46**	**282**	PKP	PKPdf	16 40 12.3	-0.8
	comp=Z,0.4nm,0.7s,baz=77,slow=1.8,SNR=2.9						

*ISCJB **06** 17:19:03.5±1.1,35°.83N±0°.07×27°.95E±0°.09,h7km±7km, Error ellipse: s-maj=16.4km s-min=4.8km az=44.3*
*NEIC **06** 17:19:03.9,36°.13N×27°.62E,h12km,MD3.1(ATH),After ATH.*
*ATH **06** 17:19:03.9,36°.13N×27°.62E,h12km±9km,MD3.1/4*
*CSEM **06** 17:19:03.6±0.5,35°.80N×27°.90E,h8km,MD3.1,Error ellipse: s-maj=17.8km s-min=5.7km az=135.0*
*DDA **06** 17:19:04.7,35°.84N×27°.99E,h6km,Md3.0*
ISC 06 17:19:04.5±1.1,**35°.84N**±0°.08×**27°.91E**±0°.09,**h10**km±7km, **n20**,σ0**69**/36,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.42**	**25**	*e*Pg	**Pg**	**17 19 11.9**	**-0.8**
ARG				*e*Sb	**Sg**	**17 19 18.8**	**+0.5**
ARG	**Arkhangelos**	**0.42**	**25**	*e*PG	**Pg**	**17 19 11.9**	**-0.8**
ARG				*e*SB	**Sg**	**17 19 18.8**	**+0.5**
ARG	**Arkhangelos**	**0.42**	**25**	*e*Pg	**Pg**	**17 19 11.9**	**-0.8**
ARG				*e*Sb	**Sg**	**17 19 18.8**	**+0.5**
KARP	**Karpathos**	**0.68**	**245**	*e*Pb	**Pb**	**17 19 17.2**	**-1.2**
KARP				*e*Sb	**Sg**	**17 19 26.9**	**+0.5**
KARP	**Karpathos**	**0.68**	**245**	*e*PB	**Pb**	**17 19 17.2**	**-1.2**
KARP				*e*SB	**Sg**	**17 19 26.9**	**+0.5**
KARP	**Karpathos**	**0.68**	**245**	*e*Pb	**Pb**	**17 19 17.2**	**-1.2**
KARP				*e*Sb	**Sg**	**17 19 26.9**	**+0.5**
TURN	**Turunc**	**1.18**	**28**	*i* P	**Pn**	**17 19 22.1**	**-4.9**
TURN				*i* S	**Sn**	**17 19 38.0**	**-5.1**
TURN	**Turunc**	**1.18**	**28**	*i* P	**Pn**	**17 19 22.1**	**-4.9**
TURN				*i* S	**Sn**	**17 19 38.0**	**-5.1**
BDRM	**Kayabasi**	**1.28**	**343**	*i* P	**Pn**	**17 19 28.2**	**-0.3**
BDRM				*i* S	**Sn**	**17 19 45.3**	**-0.5**
BDRM	**Kayabasi**	**1.28**	**343**	*i* P	**Pn**	**17 19 28.2**	**-0.3**
BDRM				*i* S	**Sn**	**17 19 45.3**	**-0.5**
ZKR	**Zakros**	**1.56**	**243**	*e*Pg	**Pn**	**17 19 31.7**	**-0.6**
ZKR				*e*Sb	**Sn**	**17 19 53.8**	**+1.3**
ZKR	**Zakros**	**1.56**	**243**	*e*PG	**Pn**	**17 19 31.7**	**-0.6**
ZKR				*e*SB	**Sn**	**17 19 53.8**	**+1.3**
ZKR	**Zakros**	**1.56**	**243**	*e*Pg	**Pn**	**17 19 31.7**	**-0.6**
ZKR				*e*Sb	**Sn**	**17 19 53.8**	**+1.3**
GOLH	**Golhisar**	**1.93**	**43**	*i* P	**Pn**	**17 19 37.3**	**-0.1**
GOLH				*i* S	**Sg**	**17 20 06.4**	**-0.1**
GOLH	**Golhisar**	**1.93**	**43**	*i* P	**Pn**	**17 19 37.3**	**-0.1**
GOLH				*i* S	**Sg**	**17 20 06.4**	**-0.1**
DNZL	**Cakiroluk**	**2.06**	**26**	*i* P	**Pn**	**17 19 40.2**	**+1.0**
DNZL				*i* S	**Sg**	**17 20 11.3**	**+0.5**
DNZL	**Cakiroluk**	**2.06**	**26**	*i* P	**Pn**	**17 19 40.2**	**+1.0**
IDI	**Anoyia**	**2.52**	**258**	*e*Pn	**Pn**	**17 19 45.3**	**-0.2**
IDI	**Anoyia**	**2.52**	**258**	*e*PN	**Pn**	**17 19 45.3**	**-0.2**
IDI	**Anoyia**	**2.52**	**258**	*e*Pn	**Pn**	**17 19 45.3**	**-0.2**

*NEIC **06** 17:39:04.4,16°.80N×100°.17W,h5km,MD3.7(MEX),After MEX.*
MEX 06 17:39:04.3±0.5,**16°.80N**×**100°.18W**,**h2**km±5km,**MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.26**	**340**	*i* P	Pg	17 39 09.0	-0.3
CAIG				*i* S	Sg	17 39 13.2	+0.5
CAIG	**El Cayaco**	**0.26**	**340**	*i* P	Pg	17 39 09.0	-0.3
CAIG				*i* S	Sg	17 39 13.2	+0.5
ACX	**Acapulco**	**0.31**	**78**	*i* P	Pg	17 39 09.1	-1.2
ACX				*i* S	Sg	17 39 12.7	-1.6
ACX	**Acapulco**	**0.31**	**78**	*i* P	Pg	17 39 09.1	-1.2
ACX				*i* S	Sg	17 39 12.7	-1.6
MEIG	**Mezcala**	**1.24**	**25**	*i* P	Pg	17 39 24.5	-3.5
MEIG				*i* S	Sg	17 39 40.5	-3.6
ZIIG	**Zihuatanejo**	**1.47**	**303**	*e*P	Pn	17 39 28.9	-2.9
ZIIG				*i* S	Sb	17 39 46.2	-5.3
ZIIG	**Zihuatanejo**	**1.47**	**303**	*e*P	Pn	17 39 28.9	-2.9
ZIIG				*i* S	Sb	17 39 46.2	-5.3
PNIG	**Pinotepa**	**2.01**	**101**	*e*P	Pn	17 39 36.4	-2.8
PNIG				*i* S	Sn	17 39 57.4	-7.5
PNIG	**Pinotepa**	**2.01**	**101**	*e*P	Pn	17 39 36.4	-2.8
PNIG				*i* S	Sn	17 40 00.1	-4.7
UTMO	**Huajuapan**	**2.48**	**65**	*i* P	Pn	17 39 43.4	-2.3
UTMO				*i* S	Sn	17 40 13.0	-3.7
MZVM		**2.54**	**21**	*e*P	Pn	17 39 48.9	+2.4
MZVM				*i* S	Sn	17 40 18.1	+0.1
PPM	**Popocatepetl**	**2.69**	**33**	*i* P	Pn	17 39 52.1	+3.5
PPM				*i* S	Sn	17 40 22.2	+0.4
PPM	**Popocatepetl**	**2.69**	**33**	*i* P	Pn	17 39 52.1	+3.5
PPM				*i* S	Sn	17 40 22.2	+0.4

*ISCJB **06** 18:30:20.8±1.2,18°.6N±0°.2×68°.92W±0°.07,h116km±15km, Error ellipse: s-maj=36.8km s-min=6.2km az=14.2*
*RSPR **06** 18:30:21.9,18°.58N×68°.92W,h110km,2km,MD3.9/7*
*NEIC **06** 18:30:21.9,18°.58N×68°.92W,h110km,MD3.9(RSPR), After RSPR.*
ISC 06 18:30:21.8±1.3,**18°.6N**±0°.2×**68°.92W**±0°.07,**h111**km±19km, **n18**,σ0**36**/26,**8C-6D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMN1	**Samana, DR**	**0.67**	**330**	⇓*e*P	**Pn**	**18 30 39.3**	**-0.7**
SMN1				*e*S	**Sn**	**18 30 54.0**	**+0.3**
SMN1	**Samana, DR**	**0.67**	**330**	⇓*e*P	**Pn**	**18 30 39.3**	**-0.7**
SMN1				*e*S	**Sn**	**18 30 54.0**	**+0.3**
AGPR	**Aguadilla, PR**	**1.72**	**94**	⇑*e*P	**Pn**	**18 30 50.8**	**-0.5**
AGPR				*e*S	**Sn**	**18 31 13.5**	**-0.3**
AGPR	**Aguadilla, PR**	**1.72**	**94**	⇑*e*P	**Pn**	**18 30 50.8**	**-0.5**
AGPR				*e*S	**Sn**	**18 31 13.5**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.82**	**109**	⇑*e*P	**Pn**	**18 30 52.3**	**-0.1**
CRPR				*e*S	**Sn**	**18 31 15.6**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.82**	**109**	⇑*e*P	**Pn**	**18 30 52.3**	**-0.1**
CRPR				*e*S	**Sn**	**18 31 15.6**	**-0.4**
AOPR	**Arecibo Observ**	**2.07**	**97**	*e*S	**Sn**	**18 31 21.9**	**+0.3**
AOPR	**Arecibo Observ**	**2.07**	**97**	*e*S	**Sn**	**18 31 21.9**	**+0.3**
SDDR	**Presa de Saban**	**2.28**	**280**	⇓*e*P	**Pn**	**18 30 58.2**	**-0.1**
SDDR				*e*S	**Sn**	**18 31 26.6**	**+0.3**
SDDR	**Presa de Saban**	**2.28**	**280**	⇓*e*P	**Pn**	**18 30 58.2**	**-0.1**
SDDR				*e*S	**Sn**	**18 31 26.6**	**+0.3**
CELP	**Cerrillos**	**2.28**	**103**	*e*S	**Sn**	**18 31 27.0**	**+0.5**
CELP	**Cerrillos**	**2.28**	**103**	*e*S	**Sn**	**18 31 27.1**	**+0.6**
CBYP	**Canovanas**	**2.92**	**96**	⇓*e*P	**Pn**	**18 31 07.0**	**+0.2**
CBYP	**Canovanas**	**2.92**	**96**	⇓*e*P	**Pn**	**18 31 07.0**	**+0.2**
HUMP	**Col San Antoni**	**2.95**	**99**	⇑*e*P	**Pn**	**18 31 07.3**	**+0.2**
HUMP	**Col San Antoni**	**2.95**	**99**	⇑*e*P	**Pn**	**18 31 07.3**	**+0.2**
MTP	**Monte Pirata**	**3.24**	**98**	⇑*e*P	**Pn**	**18 31 11.0**	**+0.1**
MTP	**Monte Pirata**	**3.24**	**98**	⇑*e*P	**Pn**	**18 31 11.1**	**+0.2**

*DDA **06** 18:31:19.8,35°.78N×27°.98E,h2km,2km,Md3.1*
*CSEM **06** 18:31:21.9±0.6,35°.77N×27°.92E,h8km,MD3.1,Error ellipse: s-maj=17.1km s-min=8.2km az=145.0*
*NEIC **06** 18:31:22.6,36°.06N×27°.70E,h12km,MD3.1(ATH),After ATH.*
*ATH **06** 18:31:22.6,36°.06N×27°.70E,h12km±3km,MD3.1/5*
ISC 06 18:31:22.2±0.9,**35°.80N**±0°.05×**27°.92E**±0°.05,**h5**km±7km, **n31**,σ1**00**/47,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.45**	**21**	*e*Pb	**Pg**	**18 31 30.3**	**-0.6**
ARG	**Arkhangelos**	**0.45**	**21**	*e*PB	**Pg**	**18 31 30.2**	**-0.7**
ARG	**Arkhangelos**	**0.45**	**21**	*e*Pb	**Pg**	**18 31 30.3**	**-0.6**
KARP	**Karpathos**	**0.67**	**248**	*e*Pb	**Pg**	**18 31 34.9**	**-0.1**
KARP				*e*Sb	**Sg**	**18 31 45.1**	**+1.4**
KARP	**Karpathos**	**0.67**	**248**	*e*PB	**Pg**	**18 31 34.9**	**-0.1**
KARP				*e*SB	**Sg**	**18 31 45.1**	**+1.4**
KARP	**Karpathos**	**0.67**	**248**	*e*Pb	**Pg**	**18 31 34.9**	**-0.1**
KARP				*e*Sb	**Sg**	**18 31 45.1**	**+1.4**
BDRM	**Kayabasi**	**1.32**	**343**	*e*P	**Pn**	**18 31 46.3**	**-1.1**
BDRM				*e*S	**Sg**	**18 32 04.2**	**-0.6**
BDRM	**Kayabasi**	**1.32**	**343**	*e*P	**Pn**	**18 31 46.3**	**-1.1**
BDRM				*e*S	**Sg**	**18 32 04.2**	**-0.6**
AKAS	**Kas**	**1.43**	**72**	*e*P	**Pn**	**18 31 46.7**	**-2.2**
AKAS				*e*S	**Sb**	**18 32 08.3**	**+0.3**
AKAS	**Kas**	**1.43**	**72**	*e*P	**Pn**	**18 31 46.7**	**-2.2**
AKAS				*e*S	**Sb**	**18 32 08.3**	**+0.4**
ZKR	**Zakros**	**1.55**	**244**	*e*Pg	**Pg**	**18 31 51.1**	**-0.8**
ZKR				*e*Sb	**Sb**	**18 32 12.6**	**+1.2**
ZKR	**Zakros**	**1.55**	**244**	*e*PG	**Pg**	**18 31 51.1**	**-0.8**
ZKR				*e*SB	**Sb**	**18 32 12.6**	**+1.2**
ZKR	**Zakros**	**1.55**	**244**	*e*Pg	**Pg**	**18 31 51.1**	**-0.8**
ZKR				*e*Sb	**Sb**	**18 32 12.6**	**+1.2**
AYDN	**Tasoluk**	**1.86**	**359**	*e*P	**Pn**	**18 31 54.6**	**-0.2**
AYDN				*e*S	**Sn**	**18 32 19.7**	**+1.0**
AYDN	**Tasoluk**	**1.86**	**359**	*e*P	**Pn**	**18 31 54.6**	**-0.2**
AYDN				*e*S	**Sn**	**18 32 19.7**	**+1.0**
GOLH	**Golhisar**	**1.95**	**42**	*e*P	**Pn**	**18 31 56.0**	**0.0**
GOLH				*e*S	**Sg**	**18 32 26.5**	**+1.6**
GOLH	**Golhisar**	**1.95**	**42**	*e*P	**Pn**	**18 31 56.0**	**0.0**
GOLH				*e*S	**Sg**	**18 32 26.5**	**+1.6**
DNZL	**Cakiroluk**	**2.09**	**25**	*e*P	**Pb**	**18 32 00.8**	**+0.1**
DNZL				*e*S	**Sb**	**18 32 28.1**	**+1.1**
DNZL	**Cakiroluk**	**2.09**	**25**	*e*P	**Pb**	**18 32 00.8**	**+0.1**
DNZL				*e*S	**Sb**	**18 32 28.1**	**+1.1**
APE	**Apeiranthos**	**2.31**	**304**	*e*Pn	**Pn**	**18 31 59.0**	**-2.0**
APE	**Apeiranthos**	**2.31**	**304**	*e*PN	**Pn**	**18 31 59.0**	**-2.0**
APE	**Apeiranthos**	**2.31**	**304**	*e*Pn	**Pn**	**18 31 59.0**	**-2.0**
IDI	**Anoyia**	**2.53**	**259**	*e*Pb	**Pn**	**18 32 03.8**	**-0.1**
IDI	**Anoyia**	**2.53**	**259**	*e*PB	**Pn**	**18 32 03.8**	**-0.1**
IDI	**Anoyia**	**2.53**	**259**	*e*Pb	**Pn**	**18 32 03.8**	**-0.1**
SIVA	**Sivas**	**2.66**	**254**	*e*Pn	**Pn**	**18 32 06.6**	**+0.9**
SIVA	**Sivas**	**2.66**	**254**	*e*PN	**Pn**	**18 32 06.6**	**+0.9**
SIVA	**Sivas**	**2.66**	**254**	*e*Pn	**Pn**	**18 32 06.6**	**+0.9**
KYTH	**Kithira**	**3.99**	**278**	*e*Pn	**Pn**	**18 32 23.6**	**-0.4**
KYTH	**Kithira**	**3.99**	**278**	*e*PN	**Pn**	**18 32 23.6**	**-0.4**
KYTH	**Kithira**	**3.99**	**278**	*e*Pn	**Pn**	**18 32 23.6**	**-0.4**

MAN 06 19:02:05,7°.49N×125°.96E,h32km,mb4.3,ML3.2,MS3.0, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMPH	**Davao City--Mi**	**0.60**	**228**	*e*P	Pb	19 02 18.3	+1.1
MATI	**Mati**	**0.61**	**151**	*e*P	Pb	19 02 18.2	+0.9
MATI				*e*S	Sb	19 02 23.9	-1.9
BUKP	**Musuan**	**0.97**	**294**	*e*P	Pn	19 02 23.0	+0.6
BUKP				*e*S	Sn	19 02 34.2	-0.8

*ISCJB **06** 19:12:19.6±0.3,42°.29N±0°.01×43°

PYA				*e*Sg	**Sg**	19 13 21.0	+0.4		
KIV	**Kislovodsk**	**1.91**	**332**↓	*e*PN	**Pg**	19 12 55.8	-1.4		
KIV				*i* S	**Sg**	19 13 21.7	-0.3		
KIV	**Kislovodsk**	**1.91**	**332**	*e*Pn	**Pg**	19 12 55.8	-1.4		
KIV				*i* Sg	**Sg**	19 13 21.7	-0.3		
DIGO	**Kars**	**1.91**	**193**	*e*P	**Pg**	19 12 55.6	-1.7		
DIGO				*e*S	**Sg**	19 13 22.1	0.0		
DIGO	**Kars**	**1.91**	**193**	*e*P	**Pg**	19 12 55.6	-1.7		
DIGO				*e*S	**Sg**	19 13 22.1	0.0		
BEYR	**Belyy Ugol+**	**1.92**	**335**↑	*e*PN	**Pn**	19 12 55.9	-1.5		
BEYR				*e*S	**Sg**	19 13 21.8	-0.4		
BEYR	**Belyy Ugol+**	**1.92**	**335**	*e*Pn	**Pg**	19 12 55.9	-1.5		
BEYR				*e*Sg	**Sg**	19 13 21.8	-0.4		
DBOC	**Borcka**	**1.94**	**242**	*e*P	**Pg**	19 12 57.4	-0.5		
DBOC				*e*S	**Sg**	19 13 24.5	+1.4		
DBOC	**Borcka**	**1.94**	**242**	*e*P	**Pg**	19 12 57.4	-0.5		
DBOC				*e*S	**Sn**	19 13 24.5	+6.0		
DOMR	**Dombai**	**1.99**	**301**	*e*PN	**Pn**	19 12 55.0	+0.5		
DOMR	**Dombai**	**1.99**	**301**	*e*Pn	**Pn**	19 12 55.0	+0.5		
DBAD	**Bademkaya**	**2.11**	**234**	*e*P	**Pg**	19 12 60.0	-1.0		
DBAD				*e*S	**Sg**	19 13 28.6	+0.3		
DBAD	**Bademkaya**	**2.11**	**234**	*e*P	**Pg**	19 13 00.0	-1.0		
DBAD				*e*S	**Sg**	19 13 28.6	+0.3		
UNCR	**Uncukul**	**2.15**	**77**	PN	**Pg**	19 12 59.0	-2.8		
UNCR				*e*S	**Sg**	19 13 28.0	-1.6		
UNCR				pmax	pmax				
	comp=Z,30nm,0.6s								
UNCR	**Uncukul**	**2.15**	**77**	Pn	**Pg**	19 12 59.0	-2.8		
	comp=Z,30nm,0.6s								
UNCR				*e*Sb	**Sg**	19 13 28.0	-1.6		
DDEM	**Demirkent**	**2.15**	**231**	*e*P	**Pg**	19 13 01.4	-0.5		
DDEM				*e*S	**Sg**	19 13 30.2	+0.4		
DDEM	**Demirkent**	**2.15**	**231**	*e*P	**Pg**	19 13 01.4	-0.5		
DDEM				*e*S	**Sg**	19 13 30.2	+0.4		

GUC 06 19:25:26.0±0.7, 19.73S×68.85W, h1km±7km, ML3.7, 4C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNMC	**Miæe Miæ**	**0.92**	**310**↑	*i*P	Pg	19 25 42.9	-0.8
MNMC				*i* S	Sg	19 25 55.6	-0.1
MNMC				AML	AML	19 26 00.6	
	comp=N,4µm,0.7s						
HMBC	**Humberston**	**1.12**	**241**↑	*i*P	Pg	19 25 45.6	-1.9
HMBC				*i* S	Sg	19 26 00.8	-1.2
HMBC				AML	AML	19 26 03.5	
	comp=N,8µm,0.5s						
PSGC	**Pisagua**	**1.21**	**276**↑	*i*P	Pg	19 25 47.2	-2.0
PSGC				*i* S	Sg	19 26 03.5	-1.3
PSGC				AML	AML	19 26 04.9	
	comp=N,1µm,0.5s						
PB01	**Plate Boundary**	**1.44**	**205**↓	*i*P	Pn	19 25 51.4	-1.8
PB01				*e*S	Sg	19 26 10.3	-1.9
CEN1	**Los Morros**	**3.85**	**199**↑	*e*P	Pn	19 26 31.2	+4.7
CEN1				*e*S	Sn	19 27 21.0	+8.7

IDC 06 19:33:11.5±1.8, 59.04S×24.68W, h0km, mb7.0/1, mb1 7.0/1, mb1mx4.1/13, mbtmp7.0/1, Error ellipse: s-maj=100.9km s-min=68.2km az=128.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**75.07**	**27**	P	P	19 44 54.9	+0.1
	0.5nm,0.3s,baz=201,slow=6.2,SNR=25						
SONM	**Songino Array**	**149.48**	**90**	PKPbc	PKPbc	19 53 01.2	-0.2
	0.5nm,0.5s,baz=208,slow=2.8,SNR=2.0						
ILAR	**Eielson Array**	**153.06**	**307**	PKPbc	PKPbc	19 53 09.2	0.0
	1.3nm,0.8s,baz=144,slow=2.9,SNR=14						

*IDC **06** 19:36:45.3±1.5, 12.26N×88.12W, h0km, mb4.0/5, mb1 4.1/7, mb1mx3.8/22, mbtmp3.9/7, ML3.4/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/25, Error ellipse: s-maj=40.3km s-min=24.8km az=41.0*
*CASC **06** 19:36:47.5±3.6, 12.08N×88.38W, h8km±20km, MD3.9, ML3.2, mb4.4(NEIC)*
*ISCJB **06** 19:36:48.5±0.8, 12.00N±0.08×88.29W±0.07, h52km±8km, mb4.2/8, Error ellipse: s-maj=16.4km s-min=4.7km az=40.9*
*NEIC **06** 19:36:51.5±1.4, 12.16N×88.17W, h53km±13km, mb4.4/3, Error ellipse: s-maj=22.4km s-min=13.6km az=223.0*

ISC 06 19:36:50.2±0.8, 12.08N±0.07×88.21W±0.07, h47km±8km, n33, σ1º01/37, mb4.2/8, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**1.24**	**17**	*e*P	**Pn**	19 37 11.2	+0.1
VSM	**San Miguel**	**1.34**	**357**	*e*P	**Pn**	19 37 12.6	+0.1
BLLM	**Bellamira**	**1.35**	**359**	*e*P	**Pn**	19 37 12.3	-0.4
CNGN	**Cerro Negro**	**1.53**	**74**	*e*P	**Pn**	19 37 15.6	+0.5
CNGN				*e*S	**Sn**	19 37 42.6	+8.7
CNGN				AML	AML	19 37 45.5	
	comp=N,306nm,0.4s						
COPN	**Copaltepe**	**1.58**	**86**	*e*P	**Pn**	19 37 15.6	-0.2
SNVI	**San Vicente**	**1.64**	**338**	*e*P	**Pn**	19 37 15.3	-1.3
SNVI				*e*S	**Sn**	19 37 36.9	+0.4
MOMN	**Momotombo**	**1.66**	**79**	*e*P	**Pn**	19 37 16.2	-0.7
CAHU	**Cacacuatique**	**1.68**	**360**	*e*P	**Pn**	19 37 17.6	+0.5
LFRS	**El Faro**	**1.74**	**332**	*e*P	**Pn**	19 37 17.0	-1.0
LFRS				*e*S	**Sn**	19 37 40.1	+1.1
CSAN		**1.75**	**87**	*e*P	**Pn**	19 37 17.8	-0.3
BOQS	**Boqueron**	**1.95**	**328**	*e*P	**Pn**	19 37 20.2	-0.6
BOQS				*e*S	**Sn**	19 37 44.2	+0.1
TGUH	**Tegucigalpa,Un**	**2.16**	**25**	*e*P	**Pn**	19 37 24.7	+0.9
SBLS	**San Blas**	**2.22**	**322**	*e*P	**Pn**	19 37 24.3	-0.3
SNJE	**San Jose**	**2.24**	**323**	*e*P	**Pn**	19 37 24.5	-0.3
SNJE				*e*S	**Sn**	19 37 50.6	-0.6
JTS	**JuntasAbangare**	**3.66**	**119**	Pn	**Pn**	19 37 45.3	+1.0
	comp=N,2.7nm,0.3s,baz=307,slow=17,SNR=6.2						
JTS				Sn	**Sn**	19 38 24.2	-2.0
	comp=N,2.5nm,0.3s,baz=249,slow=19,SNR=3.9						
JTS				LR	LR	19 39 22.3	
	comp=N,130nm,21.3s,baz=275,slow=43						
CGA2	**Cerro Gallo 2**	**4.21**	**119**	*e*P	**Pn**	19 37 58.0	+6.1
LAJ	**Bijagual**	**4.58**	**118**	*e*P	**Pn**	19 37 55.2	-1.7
QCR	**Quepos**	**4.77**	**123**	*e*P	**Pn**	19 38 00.6	+1.0
URSC	**Urasca**	**4.89**	**117**	*e*P	**Pn**	19 38 04.4	+3.2
BUS	**Buena Vista**	**5.04**	**119**	*e*P	**Pn**	19 38 05.5	+2.1
ACR	**Cerro Adams**	**6.02**	**124**	*e*P	**Pn**	19 38 11.8	-4.9
CMIG	**Matias Romero**	**8.16**	**308**	Pn	**Pn**	19 38 46.1	+0.1
	comp=N,0.5nm,0.3s,baz=63,slow=9.2,SNR=5.9						
CMIG				Sn	**Sn**	19 40 16.9	0.0
	comp=N,0.2nm,0.3s,baz=3.3,slow=17,SNR=2.2						
JCT	**Junction City**	**21.23**	**331**	*e*P	**P**	19 41 32.9	+0.7
	comp=N,5.1nm,0.4s,mb4.2						
ATAH	**Atahualpa**	**21.44**	**152**	LR	LR	19 47 47.1	
	comp=N,35nm,18.4s,baz=111,slow=31						
TXAR	**Lajitas Array**	**22.40**	**322**	P	**P**	19 41 46.4	+1.6
	comp=N,1.6nm,0.6s,mb3.6,baz=146,slow=12,SNR=22						
MIAR	**Mount Ida**	**22.89**	**349**	*e*P	**P**	19 41 50.5	+0.6
	comp=N,9.5nm,0.7s,mb4.3						
TKL	**Tuckaleechee C**	**23.81**	**9**	P	**P**	19 42 00.1	+1.2
	comp=N,5.7nm,0.8s,mb4.1,baz=191,slow=11,SNR=4.6						
AGMN	**Agassiz Nation**	**36.66**	**351**	*e*P	**P**	19 43 50.1	-2.2
	comp=N,5.1nm,0.3s,mb4.8						
ULM	**Lac du Bonnet**	**38.57**	**352**	P	**P**	19 44 07.2	-1.3
	comp=N,6.4nm,0.6s,mb4.5,baz=165,slow=8.0,SNR=4.6						
SCHQ	**Schefferville**	**45.84**	**17**	P	**P**	19 45 06.8	-0.7
	comp=N,3.1nm,0.6s,mb4.4,baz=229,slow=6.8,SNR=5.3						
ILAR	**Eielson Array**	**66.06**	**336**	P	**P**	19 47 32.1	+0.2
	comp=N,0.4nm,1.0s,mb3.4,baz=116,slow=6.5,SNR=4.5						
FITZ	**Fitzroy Crossi**	**146.81**	**255**	PKPbc	PKPbc	19 56 30.5	+2.3
	comp=N,2.5nm,0.9s,baz=0.0,slow=3.0,SNR=3.2						
CMAR	**Chiang Mai Arr**	**148.84**	**347**	PKPbc	PKPbc	19 56 33.2	-0.4
	comp=N,1.1nm,0.8s,baz=341,slow=4.1,SNR=6.2						

IDC 06 19:52:44.2±1.7, 4.00S×142.71E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.7/15, mbtmp3.9/4, Error ellipse: s-maj=76.9km s-min=26.3km az=116.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**21.32**	**203**	P	P	19 57 32.6	-0.2
	0.8nm,0.7s,baz=29,slow=8.1,SNR=11						
FITZ	**Fitzroy Crossi**	**21.81**	**229**	P	P	19 57 38.3	+0.2
	2.1nm,0.5s,baz=45,slow=12,SNR=12						
BVAR	**Borovoye Array**	**82.66**	**325**	P	P	20 05 09.7	+0.1
	0.6nm,0.5s,baz=90,slow=5.9,SNR=4.4						
ILAR	**Eielson Array**	**85.37**	**24**	P	P	20 05 23.1	0.0
	1.2nm,0.6s,baz=260,slow=4.6,SNR=25						

*ISCJB **06** 20:01:19.5±0.9, 34.80N±0.10×83.01E±0.2, h10km, mb4.0/11, MS2.7/2, Error ellipse: s-maj=22.0km s-min=14.1km az=174.1*
*IDC **06** 20:01:19.1±1.0, 34.69N×83.01E, h0km, mb3.8/6, mb1 3.9/10, mb1mx3.6/26, mbtmp3.8/10, ML3.3/4, MS2.8/2, Ms1 2.8/2, ms1mx2.3/29, Error ellipse: s-maj=37.4km s-min=19.3km az=66.0*
*NEIC **06** 20:01:21.0±1.0, 34.63N×82.78E, h10km, mb3.9/1, Error ellipse: s-maj=25.4km s-min=16.0km az=82.0*
*BJI **06** 20:01:32.7, 35.74N×81.94E, h13km, ML4.0/6, Ms3.6/1*

ISC 06 20:01:21.4±0.9, 34.73N±0.10×83.0E±0.2, h10km, n27, σ1º35/25, mb4.0/11, MS2.7/2, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**7.39**	**312**	Pn	**Pn**	20 03 03.7	-5.6
KSH				Sn	Sx	20 04 11.5	
KSH				smax			
	comp=N,160nm,0.9s						
KSH				smax			
	comp=E,150nm,1.0s						
UCH	**Uchtor**	**10.03**	**321**	*e*P	**Pn**	20 03 39.6	-5.8
	comp=E,11nm,0.8s						
AAK	**Ala-Archa**	**10.34**	**322**	Pn	**Pn**	20 03 49.9	+0.3
	comp=E,0.7nm,0.3s,baz=181,slow=3.7,SNR=2.7						
AAK				Sn	Sx	20 05 38.4	
	comp=E,0.6nm,0.3s,baz=282,slow=9.3,SNR=1.9						
EKS2	**Erkin-Say**	**10.72**	**320**	*e*P	**Pn**	20 03 49.2	-5.8
MKAR	**Makanchi Array**	**12.07**	**358**	Pn	**Pn**	20 04 13.4	+0.1
	comp=E,0.4nm,0.3s,baz=177,slow=13,SNR=16						
MKAR				Sn	Sx	20 06 19.1	
	comp=E,0.3nm,0.3s,baz=186,slow=22,SNR=3.7						
KURK	**Kurchatov**	**16.30**	**350**	Pn	**Pn**	20 05 05.9	-4.3
	comp=E,0.0nm,0.3s,baz=174,slow=12,SNR=7.4						
ZAA0	**Zalesovo Array**	**19.26**	**3**	*e*P	**Pn**	20 05 48.7	+1.9
ZALV	**Zalesovo Beam**	**19.26**	**3**	P	**Pn**	20 05 46.7	-0.1
	comp=E,0.1nm,0.3s,baz=196,slow=10,SNR=7.1						
BVAR	**Borovoye Array**	**20.38**	**358**	P	**P**	20 05 56.4	-1.7
	comp=E,1.0nm,0.7s,baz=126,slow=7.3,SNR=4.7						
ABKAR	**Akbulak array**	**22.36**	**318**	*e*P	**P**	20 06 16.0	-3.3
	comp=E,4.3nm,1.0s,mb3.8						
AKTK	**Aktyubinsk**	**24.04**	**318**	P	**P**	20 06 35.1	-1.2
AKTO	**Aktyubinsk**	**24.04**	**318**	P	**P**	20 06 35.1	-1.3
	comp=E,1.6nm,0.7s,mb3.5,baz=105,slow=8.8,SNR=6.9						
GNI	**Garni**	**30.72**	**292**	LR	LR	20 21 17.1	
	comp=E,15nm,19.4s,MS2.7,baz=255,slow=39						
KSRS	**Korea Array**	**36.12**	**71**	LR	LR	20 25 01.8	
	comp=E,16nm,20.8s,MS2.8,baz=90,slow=39						
JOF	**Joensuu**	**42.46**	**328**	*ep*	**P**	20 09 14.8	-1.3
	comp=E,2.1nm,0.7s,mb3.9						
FINES	**FINESS Array B**	**44.51**	**325**	P	**P**	20 09 32.8	+0.1
	comp=E,2.7nm,0.7s,mb4.2,baz=111,slow=10,SNR=9.7						
KAF	**Kangasniemi**	**44.53**	**326**	*ep*	**P**	20 09 25.2	-7.6
	comp=E,0.9nm,0.7s,mb3.7						
NOA	**NORSAR Array B**	**51.65**	**324**	P	**P**	20 10 27.2	-0.7
	comp=E,1.3nm,0.7s,mb4.0,baz=87,slow=7.5,SNR=6.2						
HINF	**Hinteralfeld**	**56.53**	**308**	*e*P	**P**	20 11 05.6	+1.9
LPG	**La Plagne**	**57.29**	**306**	*e*P	**P**	20 11 10.8	+1.7
	comp=E,4.9nm,0.7s,mb4.3						
LPL	**La Plagne**	**57.29**	**306**	*e*P	**P**	20 11 10.7	+1.6
BGF	**Bois d'Agland**	**59.52**	**308**	*e*P	**P**	20 11 26.9	+2.2
	comp=E,7.4nm,0.8s,mb4.4						
TCF	**Toulx Ste Croi**	**60.02**	**308**	*e*P	**P**	20 11 30.4	+2.2
ASAR	**Alice Springs**	**75.50**	**133**	P	**P**	20 13 05.2	-0.7
	comp=E,1.4nm,1.1s,mb3.8,baz=38,slow=4.4,SNR=5.0						
TORD	**Torodi Ar. Bea**	**75.58**	**276**	P	**P**	20 13 06.7	0.0
	comp=E,1.4nm,1.1s,mb3.8,baz=38,slow=4.4,SNR=5.0						
BOSA	**Boshof**	**83.34**	**228**	P	**P**	20 13 47.7	-0.8
BOSA	**Boshof**	**83.34**	**228**	P	**P**	20 13 47.7	-0.8
	comp=E,1.1nm,0.6s,mb4.1,baz=55,slow=4.5,SNR=2.5						

*CSEM **06** 20:15:29.6±0.4, 33.00N×34.91E, h5km, ML2.8, Error ellipse: s-maj=8.9km s-min=3.1km az=95.0*

GRAL 06 20:15:32.6±0.3, 33.03N×35.01E, h13km±66km, MD2.8, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATL	**Matarih**	**0.53**	**30**	*e*P	Pg	20 15 42.2	-0.8
MATL	**Matarih**	**0.53**	**30**	*e*P	Pg	20 15 42.2	-0.8
RCY	**Rachaya**	**0.81**	**56**	*e*P	Pg	20 15 47.2	-1.2
RCY				*e*S	Sg	20 15 58.2	-0.8
RCY	**Rachaya**	**0.81**	**56**	*e*P	Pg	20 15 47.2	-1.2
RCY				*e*S	Sg	20 15 58.2	-0.9
BHL	**Bhannes**	**1.02**	**31**	*e*P	Pb	20 15 50.5	-1.7
BHL				*e*S	Sb	20 16 03.5	-2.0
BHL	**Bhannes**	**1.02**	**31**	*e*P	Pb	20 15 50.5	-1.6
BHL				*e*S	Sb	20 16 03.5	-2.0
HWQ	**Hawqa**	**1.47**	**32**	*e*P	Pn	20 15 57.7	-1.0
HWQ	**Hawqa**	**1.47**	**32**	*e*P	Pn	20 15 57.7	-1.0

*ISCJB **06** 20:32:48.6±0.8, 5.2S±0.1×68.4E±0.1, h10km, mb3.9/14, MS3.7/3, Error ellipse: s-maj=23.0km s-min=16.3km az=144.0*
*IDC **06** 20:32:49.1±0.9, 5.27S×68.43E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.8/20, mbtmp3.9/10, MS3.7/3, Ms1 3.6/3, ms1mx3.1/23, Error ellipse: s-maj=29.0km s-min=21.3km az=147.0*
*NEIC **06** 20:32:50.6±0.5, 5.26S×68.43E, h10km, mb4.2/2, Error ellipse: s-maj=15.7km s-min=11.8km az=143.0*

ISC 06 20:32:50.6±0.8, 5.3S±0.1×68.4E±0.1, h10km, n20, σ0º51/16, mb3.9/14, MS3.7/3, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**38.21**	**51**	P	**P**	20 40 10.8	-0.2
	0.8nm,0.8s,mb3.5,baz=246,slow=7.1,SNR=5.0						
CMAR				LR	LR	20 53 45.3	
	comp=Z,42nm,18.2s,MS3.3,baz=63,slow=33						
BOSA	**Boshof**	**47.01**	**235**	P	**P**	20 41 22.7	+0.3
BOSA				LR	LR	20 57 51.1	
BOSA	**Boshof**	**47.01**	**235**	P	**P**	20 41 22.7	+0.3
	2.6nm,0.7s,mb4.3,baz=106,slow=8.5,SNR=6.1						
BOSA				LR	LR	20 57 51.1	
	comp=Z,109nm,20.2s,MS3.8,baz=206,slow=32						
GTA	**Gaotai**	**53.06**	**30**	*e*P	**P**	20 42 08.6	+0.5
GTA				pP	pP	20 42 13.3	+2.0
GTA				sP	sP	20 42 16.5	+4.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1						
MKAR	**Makanchi Array**	**53.27**	**12**	P	**P**	20 42 09.3	-0.2
	comp=Z,1.2nm,0.7s,mb3.9,baz=193,slow=8.7,SNR=4.8						
ABKAR	**Akbulak array**	**54.80**	**353**	*e*P	**P**	20 42 20.8	+0.1
	comp=Z,1.4nm,0.8s,mb4.0						
BRTR	**Keskin Array B**	**55.06**	**328**	P	**P**	20 42 22.2	-0.5
	comp=Z,0.6nm,0.9s,mb3.6,baz=78,slow=5.7,SNR=3.8						
KURK	**Kurchatov**	**56.44**	**8**	*e*P	**P**	20 42 32.2	-0.2
	comp=Z,5.7nm,1.2s,mb4.5						
BVAR	**Borovoye Array**	**58.09**	**1**	P	**P**	20 42 44.3	+0.3
	comp=Z,0.4nm,0.7s,mb3.6,baz=178,slow=5.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**60.58**	**11**	P	**P**	20 43 00.7	-0.5
	comp=Z,1.7nm,0.6s,mb4.3,baz=207,slow=7.0,SNR=11						
MAW	**Mawson**	**62.35**	**182**	LR	LR	21 03 56.0	
	comp=Z,83nm,21.4s,MS3.9,baz=188,slow=30						
SONM	**Songino Array**	**62.51**	**28**	P	**P**	20 43 15.4	+1.0
	comp=Z,3.3nm,1.0s,mb4.4,baz=221,slow=6.7,SNR=16						
AKASG	**Malin Array Be**	**65.15**	**334**	P	**P**	20 43 31.3	-0.4
	comp=Z,0.2nm,0.2s,mb3.7,baz=126,slow=6.3,SNR=2.8						
ASAR	**Alice Springs**	**65.45**	**114**	P	**P**	20 43 33.9	-0.4
	comp=Z,0.5nm,0.8s,mb3.6,baz=288,slow=8.0,SNR=4.7						
TORD	**Torodi Ar. Bea**	**68.75**	**286**	P	**P**	20 43 56.3	+0.9
	comp=Z,0.6nm,0.9s,mb3.5,baz=151,slow=6.8,SNR=3.7						
DBIC	**Dimbokro**	**74.11**	**278**	P	**P**	20 44 27.2	-0.7
DBIC	**Dimbokro**	**74.11**	**278**	P	**P**	20 44 27.2	-0.7
	comp=Z,1.6nm,0.8s,mb4.0,baz=94,slow=13,SNR=3.5						
NVAR	**Mina Array Bea**	**146.42**	**10**	PKPbc	PKPbc	20 52 33.6	+1.2
	comp=Z,0.9nm,0.6s,baz=24,slow=1.7,SNR=8.5						
TXAR	**Lajitas Array**	**154.92**	**344**	PKPbc	PKPbc	20 52 53.1	-0.1
TXAR				PKPab	PKPab	20 53 08.3	0.0
TXAR	**Lajitas Array**	**154.92**	**344**	PKPbc	PKPbc	20 52 53.1	-0.1
	comp=Z,0.1nm,0.4s,baz=140,slow=4.7,SNR=2.5						
TXAR				PKPab	PKPab	20 53 08.3	0.0
	comp=Z,0.5nm,0.8s,baz=40,slow=2.1,SNR=3.4						

*IDC **06** 20:35:16.3±9.9, 35.29N×81.02E, h0km, mb3.1/1, mb1 3.3/3, mb1mx3.1/24, mbtmp3.3/3, ML3.2/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/11, Error ellipse: s-maj=141.7km s-min=57.7km az=54.0*
*NEIC **06** 20:35:24.4±2.9, 35.80N×81.48E, h10km, mb3.5/1, Error ellipse: s-maj=41.0km s-min=14.8km az=182.0*
*BJI **06** 20:35:24.5, 35.89N×81.59E, h15km, ML3.6/6, Ms3.5/1*

ISC 06 20:35:20.4±2.0, 35.4N±0.1×81.6E±0.1, h10km, n8, σ1º00/9, mb3.3/2, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**6.09**	**314**	Pn	**Pn**	20 36 51.2	+0.8
KSH				Sn	**Sn**	20 38 01.0	+0.9
KSH				smax			
	comp=N,50nm,0.8s						
KSH				smax			
	comp=E,110nm,1.1s						
UCH	**Uchtor**	**8.79**	**323**	*e*P	**Pn**	20 37 26.9	-0.5
	comp=E,4.7nm,0.8s						
AML	**Almayashu**	**9.14**	**320**	*e*P	**Pn**	20 37 31.2	-0.9
	comp=E,112nm,1.4s						
MKAR	**Makanchi Array**	**11.39**	**2**	Pn	**Pn**	20 38 01.9	-1.1
	comp=E,0.2nm,0.3s,baz=173,slow=12,SNR=8.5						
MKAR				Sn	**Sn**	20 40 10.6	+0.3
	comp=E,0.2nm,0.3s,baz=182,slow=25,SNR=4.5						
ZALV	**Zalesovo Beam**	**18.68**	**6**	P	**Pn**	20 39 38.0	-0.7
	comp=E,0.1nm,0.3s,baz=182,slow=12,SNR=2.7						
ABKAR	**Akbulak array**	**21.08**	**318**	P	**P**	20 40 04.6	-0.1
	comp=E,2.1nm,0.9s,mb3.5						
SONM	**Songino Array**	**22.18**	**48**	P	**P**	20 40 19.0	+2.5
	comp=E,0.5nm,0.7s,mb3.0,baz=233,slow=9.1,SNR=4.1						
KSRS	**Korea Array**	**37.02**	**73**	LR	LR	20 59 08.7	
	comp=E,41nm,21.3s,baz=234,slow=38						

MAN 06 20:39:07.14.12N×121.21E, h3km, mb4.6, ML3.4, MS3.3, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.26**	**265**↑	*e*P	Pg	20 39 14.1	+2.0
TGY				*i* S	Sg	20 39 20.5	+5.1
PGP	**Puerto Galera**	**0.66**	**202**↓	*e*P	Pg	20 39 20.4	+0.7
BOAC	**Boac**	**0.91**	**137**	*e*P	Pg	20 39 24.6	+0.2
POLP	**Polilio Island**	**0.93**	**50**	*e*P	Pg	20 39 25.2	+0.3
LUBP	**Lubang**	**1.01**	**248**	*e*P	Pg	20 39 26.8	+0.4
GQP	**Guinayangan**	**1.22**	**100**↓	*e*P	Pg	20 39 31.5	+1.0
GQP				*e*S	Sg	20 39 46.6	+0.2
PCPH	**Palayan**	**1.43**	**356**	*e*P	Pn	20 39 33.6	-0.3
PCPH				*i* S	Sb	20 39 53.5	+0.4
AUQP	**San Andres**	**1.64**	**119**	*e*P	Pn	20 39 38.9	+2.2
BALP	**Baler**	**1.65**	**13**	*e*P	Pn	20 39 37.5	+0.6
BUSP	**Coron**	**2.32**	**205**	*e*P	Pn	20 39 46.5	+0.3
CAUP	**Cauayan**	**2.87**	**12**	*e*P	Pn	20 39 56.0	+2.3
PVCP	**Virac**	**2.91**	**100**	*e*P	Pn	20 39 55.9	+1.6
PALP	**Palanan**	**3.15**	**22**	*e*P	Pn	20 40 04.0	+6.5
APYP	**Conner**	**3.72**	**1**	*e*P	Pn	20 40 10.2	+4.8

*ISK **06** 21:06:29.9, 35.80N×36.39E, h13km, MD3.4*
*ISCJB **06** 21:06:30.5±0.8, 35.81N±0.02×36.38E±0.04, h11km±6km, Error ellipse: s-maj=6.1km s-min=4.0km az=1.7*
*CSEM **06** 21:06:31.1±0.2, 35.85N×36.40E, h10km, MD3.4, Error ellipse: s-maj=4.7km s-min=3.8km az=105.0*
*DDA **06** 21:06:33.0, 36.00N×36.32E, h35km, Md3.3*
*GRAL **06** 21:06:35.4±0.3, 35.60N×36.34E, h0km±10km, MD3.4*

ISC 06 21:06:30.5±0.8, 35.81N±0.03×36.39E±0.04, h8km±5km, n50, σ0º97/72, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HTY	**Hatay**	**0.37**	**327**	*e*PG	**Pg**	21 06 38.1	+0.4
HTY				*e*SG	**Sg**	21 06 43.4	+0.7
HTY	**Hatay**	**0.37**	**327**	*e*Pg	**Pg**	21 06 38.1	+0.4
HTY				*e*Sg	**Sg**	21 06 43.4	+0.8
COBT	**Iskenderun**	**0.72**	**351**	*i* P	**Pg**	21 06 43.8	-0.5
COBT				*i* S	**Sg**	21 06 52.4	-1.2
COBT	**Iskenderun**	**0.72**	**351**	*

ATAL				S		Sg	21 08 08.4	-0.4
ATAL	**Atalanti**	**0.22**	**180**	P		Pg	21 08 05.1	-0.3
ATAL				S		Sg	21 08 08.4	-0.4
LKR	**Lokris**	**0.27**	**184**	*e*Pb		Pg	21 08 05.7	-0.4
LKR				*e*Sb		Sg	21 08 10.8	+0.9
LKR	**Lokris**	**0.27**	**184**	*e*PB		Pg	21 08 05.7	-0.4
LKR				*e*SB		Sg	21 08 10.8	+0.9
LKR	**Lokris**	**0.27**	**184**	P		Pg	21 08 05.7	-0.4
LKR				S		Sg	21 08 10.1	+0.2
LKR	**Lokris**	**0.27**	**184**	P		Pg	21 08 05.7	-0.4
LKR				S		Sg	21 08 10.1	+0.2
LKR				*e*Sb		Sg	21 08 10.8	+0.9
NEO	**Neokhori**	**0.42**	**22**	*e*Pb		Pg	21 08 09.1	+0.2
NEO				*e*Sb		Sg	21 08 15.1	+0.5
NEO	**Neokhori**	**0.42**	**22**	*e*PB		Pg	21 08 09.1	+0.2
NEO				*e*SB		Sg	21 08 15.1	+0.5
NEO	**Neokhori**	**0.42**	**22**	*e*Pb		Pg	21 08 09.1	+0.2
NEO				*e*Sb		Sg	21 08 15.1	+0.5
XOR	**Xorichti**	**0.47**	**16**	P		Pg	21 08 10.0	+0.2
XOR				S		Sg	21 08 16.8	+0.7
XOR	**Xorichti**	**0.47**	**16**	P		Pg	21 08 10.0	+0.2
XOR				S		Sg	21 08 16.8	+0.7
AGG	**Agios Georgios**	**0.55**	**281**	P		Pg	21 08 10.8	-0.5
AGG				S		Sg	21 08 18.7	+0.1
AGG	**Agios Georgios**	**0.55**	**281**	P		Pg	21 08 10.8	-0.5
AGG				S		Sg	21 08 18.7	+0.1
DSF	**Desfina**	**0.64**	**218**	P		Pg	21 08 11.8	-1.1
DSF				S		Sg	21 08 21.6	+0.3
DSF	**Desfina**	**0.64**	**218**	P		Pg	21 08 11.8	-1.1
DSF				S		Sg	21 08 21.6	+0.3
AOS	**Alonnisos**	**0.72**	**69**	P		Pg	21 08 13.9	-0.5
AOS				S		Sg	21 08 23.9	0.0
AOS	**Alonnisos**	**0.72**	**69**	P		Pg	21 08 13.9	-0.5
AOS				S		Sg	21 08 23.9	0.0
KALE	**Kalithea**	**0.87**	**233**	P		Pg	21 08 16.4	-0.9
KALE				S		Sg	21 08 29.3	+0.7
KALE	**Kalithea**	**0.87**	**233**	P		Pg	21 08 16.4	-0.9
KALE				S		Sg	21 08 29.3	+0.7
LTK	**Loutraki**	**0.89**	**183**	*e*PB		Pb	21 08 17.1	-0.7
LTK				*e*SN		Sn	21 08 30.0	-1.3
LTK	**Loutraki**	**0.89**	**183**	P		Pb	21 08 16.8	-1.0
LTK				S		Sg	21 08 30.4	+0.9
LTK	**Loutraki**	**0.89**	**183**	P		Pb	21 08 16.8	-1.0
LTK	**Loutraki**	**0.89**	**183**	*e*Pb		Pb	21 08 17.1	-0.7
LTK				*e*Sn		Sn	21 08 30.0	-1.3
LTK				S		Sg	21 08 30.4	+0.9
TRIZ	**Trizonia**	**0.92**	**234**	P		Pb	21 08 17.5	-0.8
TRIZ				S		Sb	21 08 30.4	0.0
TRIZ	**Trizonia**	**0.92**	**234**	P		Pb	21 08 17.5	-0.8
TRIZ				S		Sb	21 08 30.4	0.0
EFP	**Efpalio**	**1.00**	**241**	*e*PN		Pb	21 08 19.6	0.0
EFP				*e*SN		Sn	21 08 33.4	-0.6
EFP	**Efpalio**	**1.00**	**241**	P		Pb	21 08 19.6	0.0
EFP				S		Sb	21 08 33.8	+1.2
EFP	**Efpalio**	**1.00**	**241**	P		Pb	21 08 19.6	0.0
EFP				*e*Sn		Sn	21 08 33.4	-0.6
EFP				S		Sb	21 08 33.8	+1.2
THL	**Klokotos Trika**	**1.01**	**310**	*e*PB		Pb	21 08 19.1	-0.8
THL				*e*SN		Sn	21 08 34.5	+0.1
THL	**Klokotos Trika**	**1.01**	**310**	*e*Pb		Pb	21 08 19.1	-0.8
THL				*e*Sn		Sn	21 08 34.5	+0.1
PTL	**Penteli**	**1.09**	**142**	*e*Pn		Pn	21 08 21.7	+0.3
PTL				*e*Sn		Sn	21 08 35.4	-0.8
PTL	**Penteli**	**1.09**	**142**	*e*PN		Pn	21 08 21.7	+0.3
PTL				*e*SN		Sn	21 08 35.4	-0.8
PTL	**Penteli**	**1.09**	**142**	*e*Pn		Pn	21 08 21.7	+0.3
PTL				*e*Sn		Sn	21 08 35.4	-0.8
GUR	**Goura**	**1.11**	**209**	*e*PN		Pb	21 08 22.2	+0.5
GUR	**Goura**	**1.11**	**209**	P		Pb	21 08 20.9	-0.6
GUR				S		Sb	21 08 37.4	+1.5
GUR	**Goura**	**1.11**	**209**	P		Pb	21 08 20.9	-0.6
GUR	**Goura**	**1.11**	**209**	*e*Pn		Pn	21 08 22.3	+0.6
GUR				S		Sb	21 08 37.4	+1.5
VLY	**Voula,Athens**	**1.22**	**150**	*e*Pn		Pn	21 08 24.2	+1.0
VLY	**Voula,Athens**	**1.22**	**150**	*e*PN		Pn	21 08 24.2	+1.0
VLY	**Voula,Athens**	**1.22**	**150**	*e*Pn		Pn	21 08 24.2	+1.0
DID	**Didima**	**1.42**	**173**	*e*PB		Pb	21 08 26.4	-0.3
DID	**Didima**	**1.42**	**173**	P		Pn	21 08 26.5	+0.6
DID				S		Sn	21 08 45.2	+0.9
DID	**Didima**	**1.42**	**173**	P		Pn	21 08 26.5	+0.6
DID				S		Sn	21 08 45.2	+0.9

*ISCJB **06** 21:08:11.3±2.1, 3.°02S±0.°07×140.°71E±0.°09, h36km±22km, mb4.1/12, Error ellipse: s-maj=16.2km s-min=9.2km az=28.5*

*IDC **06** 21:08:11.2±1.5, 2.°33S×140.°14E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.7/13, mbtmp3.7/6, MS3.3/2, Ms1 3.3/2, ms1mx2.9/21, Error ellipse: s-maj=51.1km s-min=29.4km az=92.0*

*NEIC **06** 21:08:13.2±0.4, 3.°01S×140.°68E, h35km, mb4.4/5, Error ellipse: s-maj=10.2km s-min=7.3km az=90.0*

ISC 06 21:08:14.3±1.5, 3.°03S±0.°07×140.°72E±0.°08, h47km±17km, n24, σ0°82/24, mb4.1/12, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**9.00**	**135**	*e*P	**Pn**	**21 10 21.6**	**-0.1**
KAKA	**Kakadu**	**12.63**	**220**	*e*Pn	**Pn**	**21 11 10.9**	**-0.5**
	44nm,0.7s						
KAKA				*e*Sn	**Sn**	**21 13 31.1**	**+0.3**
GUMO	**Guam**	**17.02**	**14**	Pn	**Pn**	**21 12 08.8**	**-0.3**
CTA	**Charters Tower**	**17.79**	**163**	LR	LR	21 19 42.2	
	comp=Z,142nm,21.3s,baz=164,slow=37						
WRAB	**Tennant Creek**	**17.91**	**200**	*e*Pn	**Pn**	**21 12 20.4**	**+0.3**
	3.4nm,0.6s						
WB2	**Warramunga Arr**	**17.92**	**200**	*e*Pn	**Pn**	**21 12 23.5**	**+3.3**
WB2				*e*Sn	**Sn**	**21 15 38.8**	**-0.4**
HNR	**Honiara**	**20.13**	**109**	*e*P	**P**	**21 12 44.7**	**+0.1**
	18nm,0.4s						
ASAR	**Alice Springs**	**21.55**	**197**	P	**P**	**21 13 07.9**	**+8.1**
	1.5nm,0.7s,mb3.5,baz=26,slow=10,SNR=16						
MBWA	**Marble Bar**	**27.24**	**227**	*e*P	**P**	**21 13 54.4**	**+0.2**
	11nm,0.9s,mb4.4						
NACB	**Ninganchiao**	**32.83**	**326**	*e*P	**P**	**21 14 44.8**	**+1.2**
NWAO	**Narrogin (SRO)**	**36.99**	**214**	*e*P	**P**	**21 15 19.5**	**+0.1**
	32nm,1.4s,mb5.0						
KSRS	**Korea Array**	**42.00**	**345**	LR	LR	21 31 48.6	
	comp=Z,22nm,18.5s,baz=167,slow=34						
COCO	**West Island**	**44.38**	**256**	*e*P	**P**	**21 16 20.6**	**0.0**
	139nm,1.0s						
ENH	**Enshi**	**44.57**	**320**	*e*P	**P**	**21 16 22.2**	**+0.3**
	22nm,1.7s,mb4.7						
CMAR	**Chiang Mai Arr**	**46.34**	**299**	P	**P**	**21 16 31.9**	**-4.1**
	1.5nm,1.0s,mb3.9,baz=214,slow=30,SNR=6.2						
BJT	**Baijiatuan**	**48.40**	**335**	*e*P	**P**	**21 16 50.9**	**-0.8**
YSS	**Yuzh-Sakhalins**	**49.80**	**2**	P	**P**	**21 17 02.5**	**+0.2**
LSA	**Lhasa**	**57.48**	**308**	*e*P	**P**	**21 17 59.7**	**+0.8**
	1.2nm,0.4s,mb4.3						
CASY	**Casey**	**66.59**	**193**	*e*P	**P**	**21 18 58.5**	**-0.9**
	42nm,1.7s,mb5.2						
MKAR	**Makanchi Array**	**71.28**	**322**	P	**P**	**21 19 27.4**	**-1.4**
	1.1nm,0.8s,mb3.9,baz=98,slow=8.6,SNR=7.7						
ZALV	**Zalesovo Beam**	**73.23**	**329**	P	**P**	**21 19 38.8**	**-1.5**
	0.3nm,0.5s,mb3.5,baz=123,slow=5.3,SNR=2.5						
EKS2	**Erkin-Say**	**75.34**	**315**	*e*P	**P**	**21 19 53.2**	**+0.3**
	7.4nm,1.9s,mb4.3						
BVAR	**Borovoye Array**	**80.73**	**325**	P	**P**	**21 20 22.3**	**-0.2**
	0.6nm,0.7s,mb3.7,baz=152,slow=6.6,SNR=4.6						
ILAR	**Eielson Array**	**85.30**	**24**	P	**P**	**21 20 47.4**	**+1.5**
	0.2nm,0.7s,mb3.4,baz=264,slow=5.3,SNR=3.0						

*NIED **06** 21:12:00, 35.°50N×141.°00E, h35km, Mw4.5 Best double couple: M0 5.74000×10^15 NP1:φs178.00000°, δ84.00000°, λ-78.00000°. NP2:φs295.00000°, δ13.00000°, λ-153.00000°.*

*IDC **06** 21:12:48.8±0.6, 35.°53N×140.°81E, h0km, mb4.1/17, mb1 4.2/18, mb1mx4.1/25, mbtmp4.1/18, ML4.0/1, MS3.6/15, Ms1 3.6/15, ms1mx3.3/43, Error ellipse: s-maj=19.4km s-min=14.4km az=97.0*

*MOS **06** 21:12:51.0±1.2, 35.°54N×141.°04E, h33km, mb4.5/24, Error ellipse: s-maj=11.3km s-min=7.3km az=116.7*

*JMA **06** 21:12:52.7±0.1, 35.°54N×141.°02E, h42km±1km, M4.3 JMA Felt II J1.*

*ISCJB **06** 21:12:52.5±0.5, 35.°51N±0.°03×141.°00E±0.°05, h48km±3km, mb4.3/38, MS3.6/18, Error ellipse: s-maj=6.8km s-min=4.7km az=175.1*

*BJI **06** 21:12:53.3, 35.°66N×140.°05E, h6km, mB4.5/6, mb4.3/11, Ms3.6/4, Ms7 3.7/5*

*NEIC **06** 21:12:53.3±1.2, 35.°49N×140.°90E, h36km±10km, mb4.5/14, MW4.4(NIED), Error ellipse: s-maj=7.8km s-min=6.4km az=110.0*

NEIC Recorded [2 JMA] in Chiba and [1 JMA] in Ibaraki.

ISC 06 21:12:53.0±0.6, 35.°52N±0.°03×141.°02E±0.°05, h35km±4km, n115, σ1°02/117, mb4.3/38, MS3.6/18, 3C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.23**	**325**	||P	**Pb**	**21 13 00.2**	**+0.1**
CHOJ				S	**Sb**	**21 13 05.5**	**+0.6**
JCN	**Nagara**	**0.68**	**262**	||P	**Pn**	**21 13 06.9**	**+0.9**
JCN				S	**Sn**	**21 13 15.8**	**+0.4**
KTR	**Katsuura**	**0.68**	**237**	P	**Pn**	**21 13 06.1**	**-0.1**
BSO4	**Boso 4**	**0.77**	**227**	||P	**Pn**	**21 13 07.3**	**0.0**
BSO3	**Boso 3**	**0.83**	**210**	||P	**Pn**	**21 13 07.9**	**-0.3**
BSO3				*e*S	**Sn**	**21 13 19.6**	**+0.5**
BSO1	**Boso 1**	**0.86**	**182**	P	**Pn**	**21 13 08.5**	**-0.2**
BSO1				S	**Sn**	**21 13 20.5**	**+0.5**
JYT	**Yasato**	**0.97**	**317**	P	**Pn**	**21 13 10.1**	**-0.1**
JHO	**Hitachi**	**1.15**	**342**	||P	**Pn**	**21 13 12.4**	**-0.2**
MAJO	**Matsushiro**	**2.50**	**295**	*i*P	**Pn**	**21 13 33.1**	**+2.0**
MAJO				Sn	**Sn**	**21 14 00.7**	**+0.4**
MAT	**Matsushiro**	**2.50**	**295**	P	**Pn**	**21 13 32.9**	**+1.8**
MAT				S	**Sn**	**21 14 00.0**	**-0.3**
JHJ	**Hachijo jima 2**	**2.60**	**203**	Pn	**Pn**	**21 13 32.1**	**-0.5**
	65nm,0.3s,baz=213,slow=22,SNR=38						
JHJ				Sn	**Sn**	**21 14 03.0**	**+0.1**
	424nm,0.3s,baz=282,slow=23,SNR=16						
ERM	**Erimo**	**6.70**	**14**	*e*Pn	**Pn**	**21 14 28.7**	**-0.1**
	28nm,0.8s						
ERM				*e*Sn	**Sn**	**21 15 40.8**	**-3.1**
ERM	**Erimo**	**6.70**	**14**	*e*P	**Pn**	**21 14 28.7**	**-0.1**
ERM				*e*		21 15 40.8	
ERM				pmax	pmax		
	comp=Z,28nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**9.28**	**22**	*i*P	**Pn**	**21 15 01.9**	**-2.4**
YUK				*i*S	**Sn**	**21 16 40.9**	**-6.5**
YUK				pmax	pmax		
	comp=Z,30nm,0.5s						
YUK				pmax	pmax		
	comp=E,60nm,0.3s						
YUK				pmax	pmax		
	comp=Z,150nm,0.3s						
YUK				pmax	pmax		
	comp=N,40nm,0.1s						
YUK				smax			
	comp=N,220nm,0.6s						
YUK				smax			
	comp=E,130nm,0.6s						
YUK				smax			
	comp=N,70nm,0.7s						
YUK				smax			
	comp=E,170nm,0.7s						
YUK				MLR	MLR		
	comp=Z,90nm,16.5s						
KSRS	**Korea Array**	**10.72**	**284**	Pn	**Pn**	**21 15 27.7**	**+3.7**
	comp=Z,0.7nm,0.3s,baz=102,slow=14,SNR=27						
KSRS				LR	LR	21 19 35.3	
	comp=Z,462nm,20.5s,baz=153,slow=38						
YSS	**Yuzh-Sakhalins**	**11.50**	**6**	*e*P	**Pn**	**21 15 33.5**	**-1.1**
YHNB	**Yeheng**	**20.11**	**243**	P	**P**	**21 17 23.0**	**-0.7**
BJI	**Beijing**	**20.13**	**290**	P	**P**	**21 17 20.4**	**-3.4**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,100nm,9.8s						
BJI				LR	LR		
	comp=N,130nm,23.1s,MS3.4						
BJI				LR	LR		
	comp=E,130nm,23.1s,MS3.4						
BJI				LR	LR		
	comp=Z,150nm,25.8s,MS3.2						
BJT	**Baijiatuan**	**20.13**	**290**	*e*P	**P**	**21 17 22.5**	**-1.4**
	comp=Z,13nm,0.6s						
BJT	**Baijiatuan**	**20.13**	**290**	*e*P	**P**	**21 17 22.5**	**-1.4**
BJT				pmax	pmax		
	comp=Z,13nm,0.6s						
NACB	**Ninganchiao**	**20.25**	**241**	*e*P	**P**	**21 17 24.5**	**-0.8**
TWG	**Pinlang**	**21.48**	**239**	P	**P**	**21 17 37.5**	**-1.1**
PET	**Petropavlovsk**	**21.48**	**30**	P	**P**	**21 17 37.5**	**-0.8**
GUMO	**Guam**	**22.11**	**170**	P	**P**	**21 17 44.7**	**-0.6**
GUMO	**Guam**	**22.11**	**170**	LR	LR	21 25 35.8	
	comp=Z,24nm,20.1s,MS2.6,baz=106,slow=35						
WHN	**Wuhan**	**22.87**	**265**	P	**P**	**21 17 51.5**	**-1.9**
WHN				S	**S**	**21 21 52.3**	**-8.4**
WHN				LR	LR		
	comp=Z,770nm,13.8s,MS4.3						
ENH	**Enshi**	**26.92**	**268**	*e*P	**P**	**21 18 29.2**	**-1.8**
	comp=Z,8.5nm,0.5s,mb4.5						
ULN	**Ulaanbaatar**	**27.97**	**307**	P	**P**	**21 18 39.7**	**-0.5**
SONM	**Songino Array**	**28.40**	**306**	P	**P**	**21 18 43.8**	**-0.1**
	comp=Z,1.1nm,0.5s,mb3.7,baz=104,slow=9.0,SNR=4.6						
SONM				LR	LR	21 30 10.2	
	comp=Z,87nm,20.8s,MS3.3,baz=349,slow=37						
TLY	**Talaya**	**31.11**	**313**	P	**P**	**21 19 06.9**	**-1.0**
GTA	**Gaotai**	**32.73**	**289**	*e*P	**P**	**21 19 22.4**	**+0.1**
GTA				pP	pP	21 19 27.6	-4.8
GTA				sP	sP	21 19 30.5	-6.1
GTA				S	**S**	**21 24 36.1**	**-0.5**
GTA				sS	sS	21 24 46.1	-7.0
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
GTA				LR	LR		
	comp=N,160nm,20.5s,MS3.9						
GTA				LR	LR		
	comp=E,200nm,19.3s,MS3.9						
GTA				LR	LR		
	comp=Z,160nm,18.7s,MS3.8						
CHTO	**Chiang Mai**	**40.63**	**257**	P	**P**	**21 20 29.0**	**-0.7**
CMAR	**Chiang Mai Arr**	**40.82**	**257**	P	**P**	**21 20 30.6**	**-0.8**
CMAR				LR	LR	21 38 22.6	
CMAR	**Chiang Mai Arr**	**40.82**	**257**	P	**P**	**21 20 30.6**	**-0.8**
	comp=Z,0.4nm,0.5s,mb3.4,baz=46,slow=6.1,SNR=5.0						
CMAR				LR	LR	21 38 22.6	
	comp=Z,78nm,19.1s,MS3.6,baz=127,slow=38						
LSA	**Lhasa**	**42.05**	**277**	*e*P	**P**	**21 20 40.8**	**-0.5**
	comp=Z,7.9nm,1.1s,mb4.3						
LSA	**Lhasa**	**42.05**	**277**	*e*P	**P**	**21 20 40.8**	**-0.5**
LSA				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.3						
ZAA0	**Zalesovo Array**	**42.71**	**314**	*e*P	**P**	**21 20 45.5**	**-0.8**
ZALV	**Zalesovo Beam**	**42.71**	**314**	P	**P**	**21 20 46.3**	**-0.1**
	comp=Z,3.0nm,0.5s,mb4.3,baz=96,slow=7.0,SNR=15						
ZALV				LR	LR	21 37 40.3	
	comp=Z,25nm,19.6s,MS3.1,baz=67,slow=35						
NVS	**Novosibirsk**	**43.67**	**315**	*e*P	**P**	**21 20 53.7**	**-0.4**
MK31	**Makanchi Array**	**44.67**	**303**	*e*P	**P**	**21 21 02.4**	**+0.2**
MKAR	**Makanchi Array**	**44.67**	**303**	P	**P**	**21 21 02.6**	**+0.5**
	comp=Z,1.4nm,0.5s,mb4.1,baz=84,slow=9.5,SNR=29						
MKAR				LR	LR	21 40 25.2	
	comp=Z,60nm,19.3s,MS3.5,baz=354,slow=37						
KAPI	**Kappang**	**45.00**	**211**	P	**P**	**21 21 03.8**	**-1.3**
	comp=Z,16nm,1.1s,mb4.7,baz=275,slow=12,SNR=3.3						
PMG	**Port Moresby**	**45.06**	**171**	P	**P**	**21 21 04.8**	**-0.7**
ODAN	**Odare**	**46.20**	**275**	*e*P	**P**	**21 21 14.1**	**-0.5**
	comp=Z,5.1nm,0.4s,mb4.8						
KURK	**Kurchatov**	**46.63**	**309**	*e*P	**P**	**21 21 17.1**	**-0.5**
	comp=Z,8.2nm,0.8s,mb4.7						
KURK	**Kurchatov**	**46.63**	**309**	*e*P	**P**	**21 21 17.2**	**-0.4**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
RAMN	**Ramite**	**46.81**	**275**	*e*P	**P**	**21 21 18.8**	**-0.6**
	comp=Z,40nm,1.0s,mb5.3						
PKI	**Pulchoki**	**47.52**	**277**	*e*P	**P**	**21 21 25.6**	**+0.7**
PKIN	**Phulchoki**	**47.53**	**277**	*e*P	**P**	**21 21 25.6**	**+0.6**
	comp=Z,15nm,0.9s,mb5.0						
KKN	**Kakani**	**47.54**	**277**	*e*P	**P**	**21 21 26.7**	**+1.7**
DMN	**Daman**	**47.75**	**277**	*e*P	**P**	**21 21 27.2**	**+0.5**
KULM	**Kulim**	**47.79**	**241**	*e*P	**P**	**21 21 25.8**	**-1.3**
GKN	**Gorkha**	**47.97**	**278**	*e*P	**P**	**21 21 29.2**	**+0.8**
KDAK	**Kodiak Island**	**48.44**	**41**	P	**P**	**21 21 33.5**	**+1.8**
	comp=Z,3.0nm,0.7s,mb4.4,baz=252,slow=6.4,SNR=2.9						
KDAK	**Kodiak Island**	**48.44**	**41**	P	**P**	**21 21 33.5**	**+1.9**
KDAK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KOLN	**Koldanda**	**48.90**	**278**	*e*P	**P**	**21 21 35.4**	**-0.2**
AAK	**Ala-Archa**	**50.94**	**299**	*e*P	**P**	**21 21 53.0**	**+2.1**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
ILAR	**Eielson Array**	**50.95**	**32**	P	**P**	**21 21 52.2**	**+1.7**
	comp=Z,1.3nm,0.7s,mb4.0,baz=265,slow=6.0,SNR=17						
ILAR	**Eielson Array**	**50.95**	**32**	P	**P**	**21 21 52.2**	**+1.7**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
UCH	**Uchtor**	**51.04**	**299**	*e*P	**P**	**21 21 51.7**	**+0.2**
	comp=Z,1.7nm,0.7s,mb4.1						
BVAR	**Borovoye Array**	**51.36**	**313**	P	**P**	**21 21 54.3**	**+0.4**
	comp=Z,1.7nm,0.4s,mb4.3,baz=115,slow=9.5,SNR=12						
BVAR	**Borovoye Array**	**51.36**	**313**	P	**P**	**21 21 54.3**	**+0.4**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BRVK	**Borovoye**	**51.42**	**313**	*e*P	**P**	**21 21 53.8**	**-0.5**
	comp=Z,2.0nm,0.5s,mb4.3						
BRVK	**Borovoye**	**51.42**	**313**	*e*P	**P**	**21 21 54.4**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
EKS2	**Erkin-Say**	**51.44**	**300**	*e*P	**P**	**21 21 54.6**	**0.0**
	comp=Z,1.7nm,0.7s,mb4.1						
AML	**Almayashu**	**51.65**	**299**	*e*P	**P**	**21 21 57.2**	**+1.0**
	comp=Z,8.9nm,0.6s,mb4.9						
WRAB	**Tennant Creek**	**55.51**	**188**	*e*P	**P**	**21 22 25.1**	**+0.6**
	comp=Z,8.6nm,1.0s,mb4.7						
WRAB	**Tennant Creek**	**55.51**	**188**	*e*P	**P**	**21 22 25.1**	**+0.6**
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
WB2	**Warramunga Arr**	**55.52**	**188**	*e*P	**P**	**21 22 24.7**	**+0.1**
INK	**Inuvik**	**55.88**	**27**	P	**P**	**21 22 25.3**	**-1.4**
ARU	**Arti**	**57.29**	**319**	*e*P	**P**	**21 22 36.7**	**-0.2**
	comp=Z,3.9nm,0.6s,mb4.6						
ARU	**Arti**	**57.29**	**319**	*c i*P	**P**	**21 22 37.0**	**+0.1**
ARU				*e*		21 24 42.9	
ARU				S	**S**	**21 30 32.2**	**+1.8**
ARU				SS	SS	21 34 20.9	+1.5
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
KBL	**Kabul**	**57.67**	**292**	*e*P	**P**	**21 22 39.5**	**-0.4**
	comp=Z,1.4nm,0.5s,mb4.2						
KBL	**Kabul**	**57.67**	**292**	*e*P	**P**	**21 22 39.5**	**-0.4**
KBL				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
ABKAR	**Akbulak array**	**58.68**	**311**	*e*P	**P**	**21 22 45.3**	**-1.5**
	comp=Z,2.6nm,0.5s,mb4.5						
ASAR	**Alice Springs**	**59.25**	**188**	P	**P**	**21 22 52.6**	**+1.8**
	comp=Z,0.9nm,0.7s,mb3.9,baz=15,slow=14,SNR=10						
ASAR	**Alice Springs**	**59.25**	**188**	P	**P**	**21 22 52.6**	**+1.8**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KEV	**Kevo**	**64.74**	**339**	*e*P	**P**	**21 23 24.5**	**-2.8**
KEV	**Kevo**	**64.74**	**339**	*e*p	**P**	**21 23 24.5**	**-2.8**
	comp=Z,0.3nm,0.3s,mb3.8						
ARCES	**ARCESS Array B**	**65.30**	**340**	P	**P**	**21 23 31.6**	**+0.8**
	comp=Z,0.5nm,0.4s,mb3.9,baz=59,slow=8.3,SNR=14						
ARCES	**ARCESS Array B**	**65.30**	**340**	P	**P**	**21 23 31.6**	**+0.7**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
STKA	**Stephens Creek**	**67.04**	**179**	*e*P	**P**	**21 23 41.5**	**-0.9**
	comp=Z,1.0nm,1.0s,mb3.8						
STKA	**Stephens Creek**	**67.04**	**179**	P	**P**	**21 23 43.6**	**+1.2**
	comp=Z,2.2nm,0.8s,mb4.2,baz=123,slow=7.0,SNR=3.8						
JOF	**Joensuu**	**67.15**	**332**	*e*P	**P**	**21 23 43.0**	**+0.2**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
JOF	**Joensuu**	**67.15**	**332**	*e*p	**P**	**21 23 43.0**	**+0.2**
	comp=Z,1.9nm,0.4s,mb4.5						
OBN	**Obninsk**	**69.12**	**323**	P	**P**	**21 23 59.0**	**+3.7**
OBN				*e*	pP	21 24 12.2	+6.1
OBN				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
KAF	**Kangasniemi**	**69.51**	**333**	*e*P	**P**	**21 23 57.8**	**+0.2**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
KAF	**Kangasniemi**	**69.51**	**333**	*e*p	**P**	**21 23 57.8**	**+0.2**
	comp=Z,1.3nm,0.4s,mb4.2						
FINES	**FINESS Array B**	**70.00**	**332**	P	**P**	**21 24 01.3**	**+0.6**
	comp=Z,1.3nm,0.4s,mb4.2,baz=51,slow=6.4,SNR=26						
FINES				LR	LR	21 55 03.9	
	comp=Z,44nm,19.6s,MS3.7,baz=90,slow=36						
FINES	**FINESS Array B**	**70.00**	**332**	P	**P**	**21 24 01.3**	**+0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES				MLR	MLR		
	comp=Z,44nm,19.6s						
KIV	**Kislovodsk**	**71.66**	**311**	*e*P	**P**	**21 24 10.4**	**-0.7**
	comp=Z,6.4nm,0.8s,mb4.6						
KIV	**Kislovodsk**	**71.66**	**311**	*e*P	**P**	**21 24 13.2**	**+2.2**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
KIV				MLR	MLR		
	comp=Z,27nm,18.0s,MS3.6						
GNI	**Garni**	**72.36**	**307**	LR	LR	21 58 28.5

Ms1 3.5/4,ms1mx3.2/27,Error ellipse: s-maj=17.8km s-min=9.3km az=46.0

ISC 06 22:03:11.8±0.2,**14°17'S**±0'04×**72°39'W**±0'04,**h94**km, **h94**km×2.4km:**pP-P,n580,**σ0.68/538,**mb4.8**/140, **143C-157D,Central Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**4.39**	**299**	*e*Pn	**Pn**	**22 04 11.8**	**-4.4**
NNA				*e*Sn	**Sn**	**22 04 59.6**	**-6.6**
NNA	**Nana**	**4.39**	**299**	P	**Pn**	**22 04 12.0**	**-4.2**
	255nm,0.3s,baz=123,slow=9.2,SNR=59						
NNA				S	**Sn**	**22 05 00.8**	**-5.3**
	258nm,0.3s,baz=230,slow=17,SNR=9.9						
LPAZ	**La Paz**	**5.08**	**115**	*e*Pn	**Pn**	**22 04 28.1**	**+2.5**
LPAZ				*e*Sn	**Sn**	**22 05 27.9**	**+4.8**
LPAZ	**La Paz**	**5.08**	**115**	P	**Pn**	**22 04 28.2**	**+2.6**
	60nm,0.3s,baz=296,slow=9.7,SNR=1139						
LPAZ				S	**Sn**	**22 05 26.9**	**+3.9**
	baz=210,slow=24,SNR=12						
LPAZ				LR	LR	22 06 36.6	
	comp=Z,203nm,19.4s,baz=97,slow=40						
ATAH	**Atahualpa**	**8.82**	**322**	P	**Pn**	**22 05 11.3**	**-5.2**
	4.7nm,0.3s,baz=138,slow=6.4,SNR=23						
ATAH				S	**Sn**	**22 06 49.1**	**-5.0**
	2.7nm,0.3s,baz=186,slow=19,SNR=2.1						
SIV	**San Ignacio**	**11.59**	**100**	P	**Pn**	**22 05 51.9**	**-2.3**
	4.4nm,0.3s,baz=288,slow=12,SNR=50						
LCO	**Las Campanas**	**14.91**	**172**	*e*Pn	**Pn**	**22 06 36.1**	**-1.4**
OTAV	**Otavalo**	**15.33**	**339**	*e*Pn	**Pn**	**22 06 43.1**	**+0.1**
	44nm,1.3s						
CFAA	**Coronel Fontan**	**17.88**	**167**	P	**Pn**	**22 07 13.5**	**-0.8**
CFAA	**Coronel Fontan**	**17.88**	**167**	P	**Pn**	**22 07 13.5**	**-0.8**
	0.7nm,0.3s,baz=343,slow=10,SNR=31						
ROSC	**El Rosal**	**18.96**	**356**	*e*Pn	**Pn**	**22 07 30.2**	**+2.8**
ROSC	**El Rosal**	**18.96**	**356**	P	**Pn**	**22 07 29.5**	**+2.2**
	2.7nm,0.3s,baz=107,slow=14,SNR=8.6						
CPUP	**Villa Florida**	**18.96**	**132**	*e*P	**Pn**	**22 07 25.3**	**-2.1**
	174nm,0.8s						
CPUP				LR	LR	22 16 35.0	
CPUP	**Villa Florida**	**18.96**	**132**	P	**Pn**	**22 07 25.2**	**-2.1**
	2.9nm,0.3s,baz=290,slow=11,SNR=83						
CPUP				LR	LR	22 16 35.0	
	comp=Z,91nm,20.9s,baz=303,slow=42						
PAYG	**Puerto Ayora**	**21.79**	**307**	P	**P**	**22 07 54.5**	**-1.8**
SDV	**Santo Domingo**	**23.02**	**6**	P	**P**	**22 08 09.1**	**+0.1**
PCRV	**Puerto La Cruz**	**25.55**	**19**	LR	LR	22 19 36.4	
	comp=Z,248nm,19.1s,baz=190,slow=39						
TRQA	**Tornquist**	**25.70**	**160**	*e*P	**P**	**22 08 31.2**	**-1.9**
	43nm,1.4s,mb4.7						
PLCA	**Paso Flores**	**26.54**	**176**	*e*P	**P**	**22 08 40.6**	**-0.1**
	19nm,0.9s,mb4.6						
PLCA	**Paso Flores**	**26.54**	**176**	P	**P**	**22 08 40.3**	**-0.4**
	14nm,0.8s,mb4.6,baz=349,slow=11,SNR=19						
RPN	**Rapa Nui**	**36.28**	**243**	P	**P**	**22 10 05.5**	**-0.9**
CMIG	**Matias Romero**	**37.88**	**324**	P	**P**	**22 10 19.4**	**-0.4**
	5.3nm,0.8s,mb4.4,baz=103,slow=4.8,SNR=8.8						
CMIG				pP	pP	22 10 41.6	0.0
	5.2nm,0.8s,baz=330,slow=2.9,SNR=3.6						
USHA	**Ushuaia**	**40.72**	**176**	P	**P**	**22 10 43.3**	**+0.2**
	7.7nm,0.6s,mb4.7,baz=6.2,slow=5.6,SNR=8.5						
DWPF	**Disney**	**42.83**	**349**	*e*P	**P**	**22 11 00.1**	**-0.5**
NHSC	**New Hope**	**47.52**	**352**	*e*P	**P**	**22 11 37.4**	**-0.2**
	35nm,1.0s,mb5.2						
GOGA	**Godfrey**	**48.37**	**348**	*e*P	**P**	**22 11 43.5**	**-0.7**
	12nm,1.1s,mb4.7						
LRAL	**Lakeview Retre**	**48.83**	**344**	*e*P	**P**	**22 11 46.4**	**-1.2**
	9.3nm,1.1s,mb4.6						
JSC	**Jenkinsville**	**48.83**	**351**	*e*P	**P**	**22 11 46.9**	**-0.8**
TKL	**Tuckaleechee C**	**50.61**	**349**	*e*P	**P**	**22 11 59.2**	**-1.9**
SWET	**Sewanee**	**50.64**	**346**	*e*P	**P**	**22 12 00.3**	**-1.1**
WVT	**Waverly**	**51.98**	**345**	*e*P	**P**	**22 12 08.7**	**-2.6**
	9.8nm,0.7s,mb5.0						
UALR	**University of**	**52.05**	**340**	*e*P	**P**	**22 12 11.3**	**-0.7**
	18nm,0.9s,mb5.1						
628A	**Black Gap, Mar**	**52.16**	**327**	⇓P	**P**	**22 12 12.5**	**-0.3**
	baz=52,SNR=19						
MIAR	**Mount Ida**	**52.27**	**338**	*e*P	**P**	**22 12 13.0**	**-0.6**
	21nm,0.9s,mb5.2						
627A	**Terlingua Ranc**	**52.40**	**326**	⇓P	**P**	**22 12 13.6**	**-1.0**
	baz=52,SNR=16						
TXAR	**Lajitas Array**	**52.46**	**326**	P	**P**	**22 12 14.3**	**-0.7**
	7.8nm,0.8s,mb4.8,baz=149,slow=8.7,SNR=63						
528A	**Cox Ranch, San**	**52.63**	**327**	⇑P	**P**	**22 12 15.8**	**-0.6**
	baz=53						
626A	**Big Bend Ranch**	**52.88**	**326**	⇓P	**P**	**22 12 18.0**	**-0.1**
	baz=53,SNR=44						
428A	**Kincaid Ranch,**	**53.03**	**328**	⇑P	**P**	**22 12 18.6**	**-0.6**
	baz=53						
427A	**Hayter Ranch,**	**53.50**	**327**	⇑P	**P**	**22 12 21.7**	**-1.0**
	baz=54,SNR=5.4						
WCI	**Wyandotte Cave**	**53.61**	**347**	*e*P	**P**	**22 12 21.2**	**-2.1**
	27nm,1.1s,mb5.2						
328A	**Wristen Ranch,**	**53.62**	**328**	⇑P	**P**	**22 12 22.3**	**-1.2**
	baz=54,SNR=7.4						
426A	**McDonald Obser**	**53.69**	**326**	⇑P	**P**	**22 12 23.3**	**-0.8**
	baz=54,SNR=9.8						
SIUC	**Southern Illin**	**53.83**	**344**	*e*P	**P**	**22 12 23.9**	**-1.1**
	49nm,0.8s,mb5.6						
326A	**Caldwell Ranch**	**54.17**	**327**	⇓P	**P**	**22 12 26.2**	**-1.4**
	baz=54,SNR=6.2						
227A	**Bennet, Jal**	**54.37**	**328**	⇓P	**P**	**22 12 28.7**	**-0.2**
	baz=54						
FVM	**French Village**	**54.42**	**343**	*e*P	**P**	**22 12 27.1**	**-2.1**
	26nm,0.9s,mb5.3						
WMOK	**Wichita Mounta**	**54.49**	**334**	*e*P	**P**	**22 12 29.4**	**-0.4**
	7.3nm,0.9s,mb4.7						
OLIL	**Olney**	**54.51**	**345**	*e*P	**P**	**22 12 27.4**	**-2.4**
	10nm,0.8s,mb4.9						
325A	**Bean Ranch, Si**	**54.74**	**326**	⇓P	**P**	**22 12 30.9**	**-0.8**
	baz=55,SNR=13						
226A	**Malaga, Loving**	**54.82**	**327**	⇓P	**P**	**22 12 32.1**	**-0.1**
	baz=55						
127A	**Arkansas Junct**	**54.93**	**329**	⇑P	**P**	**22 12 31.9**	**-1.1**
	baz=55						
324A	**Moseley Ranch,**	**55.08**	**326**	⇓P	**P**	**22 12 32.5**	**-1.6**
	baz=55,SNR=8.5						
MNTX	**Cornudas Mount**	**55.22**	**326**	*e*P	**P**	**22 12 33.7**	**-1.4**
	8.0nm,1.1s,mb4.7						
225A	**Deer Hill, Car**	**55.24**	**327**	⇓P	**P**	**22 12 34.4**	**-0.9**
	baz=55,SNR=11						
126A	**Clayton Basin,**	**55.24**	**328**	⇑P	**P**	**22 12 34.8**	**-0.5**
	baz=55						
Z27A	**Tatum**	**55.37**	**329**	⇓P	**P**	**22 12 34.9**	**-1.3**
	baz=56,SNR=12						
125A	**Gardner Draw,**	**55.58**	**327**	⇑P	**P**	**22 12 36.7**	**-1.0**
	baz=56,SNR=7.1						
224A	**Cornudas Mount**	**55.59**	**326**	⇑P	**P**	**22 12 36.5**	**-1.3**
	baz=56,SNR=18						
MSTX	**Muleshoe**	**55.68**	**330**	⇓P	**P**	**22 12 37.9**	**-0.5**
	baz=56						
Z26A	**Caprock**	**55.72**	**328**	⇓P	**P**	**22 12 38.2**	**-0.4**
	baz=56,SNR=9.2						
Y27A	**Causey**	**55.80**	**330**	⇓P	**P**	**22 12 37.7**	**-1.5**
	baz=56,SNR=11						
124A	**Stringfield Ra**	**56.03**	**327**	⇑P	**P**	**22 12 40.2**	**-0.8**
	baz=56,SNR=12						
Z25A	**Roswell**	**56.10**	**328**	⇑P	**P**	**22 12 40.1**	**-1.3**
	baz=56,SNR=9.7						
BINY	**Binghamton**	**56.16**	**357**	*e*P	**P**	**22 12 42.0**	**+0.4**
	22nm,0.9s,mb5.2						
222A	**Williams Famil**	**56.47**	**325**	⇑P	**P**	**22 12 44.0**	**-0.1**
	baz=57,SNR=8.2						
Z24A	**Sheeppen Canyo**	**56.48**	**327**	⇑P	**P**	**22 12 43.1**	**-1.0**
	baz=57,SNR=24						
Y25A	**Mesa, Roswell**	**56.59**	**328**	⇑P	**P**	**22 12 43.9**	**-1.1**
	baz=57,SNR=6.6						
X26A	**CR and CF Fran**	**56.65**	**330**	⇑P	**P**	**22 12 43.9**	**-1.4**
	baz=57,SNR=7.1						
W27A	**Bowe Ranch, En**	**56.70**	**330**	⇑P	**P**	**22 12 45.0**	**-0.7**
	baz=57						
320A	**Kipp Ranch, An**	**56.71**	**323**	⇑P	**P**	**22 12 45.1**	**-0.7**
	baz=57,SNR=11						
221A	**Mesquite Ranch**	**56.78**	**325**	⇓P	**P**	**22 12 46.7**	**+0.5**
	baz=57						
Z23A	**Rita Site, Whi**	**56.88**	**327**	⇓P	**P**	**22 12 46.8**	**-0.1**
	baz=57						
X25A	**Clemmons Ranch**	**57.06**	**329**	⇓P	**P**	**22 12 46.9**	**-1.3**
	baz=57						
220A	**Playas Peak, P**	**57.12**	**324**	⇓P	**P**	**22 12 48.4**	**-0.3**
	baz=57,SNR=23						
121A	**Cookes Peak, D**	**57.17**	**325**	⇓P	**P**	**22 12 48.9**	**-0.1**
	baz=57,SNR=15						
319A	**Douglas**	**57.17**	**323**	⇑P	**P**	**22 12 49.0**	**-0.1**
	baz=57,SNR=13						
Z22A	**Elephant Butte**	**57.27**	**326**	⇓P	**P**	**22 12 49.6**	**0.0**
	baz=57,SNR=12						
KSU1	**Kansas State U**	**57.43**	**338**	*e*P	**P**	**22 12 49.7**	**-1.0**
W25A	**X Bar L Ranch,**	**57.51**	**329**	⇓P	**P**	**22 12 50.2**	**-1.1**
	baz=58,SNR=8.1						
318A	**Bisbee**	**57.64**	**322**	⇓P	**P**	**22 12 52.1**	**-0.2**
	baz=58,SNR=20						
V26A	**Tequesquite Ra**	**57.64**	**330**	⇓P	**P**	**22 12 51.4**	**-0.8**
	baz=58,SNR=12						
120A	**U Bar Ranch, L**	**57.66**	**324**	⇓P	**P**	**22 12 52.1**	**-0.4**
	baz=58,SNR=7.3						
Z21A	**St. Cloud Mine**	**57.69**	**326**	⇓P	**P**	**22 12 53.2**	**+0.6**
	baz=58						
BNM	**Barren Site**	**57.77**	**327**	*e*P	**P**	**22 12 53.2**	**0.0**
	4.2nm,1.1s,mb4.4						
BNM				*e*PcP	PcP	22 13 45.4	+0.4
Y22A	**Socorro**	**57.79**	**327**	⇓P	**P**	**22 12 53.8**	**+0.5**
	baz=58						
LPM	**Los Pinos Moun**	**57.90**	**327**	*e*P	**P**	**22 12 54.5**	**+0.4**
W24A	**Lazy 6 Ranch,**	**57.97**	**329**	⇑P	**P**	**22 12 53.6**	**-1.0**
	baz=58						
218A	**Dragoon**	**58.05**	**323**	⇓P	**P**	**22 12 55.2**	**-0.1**
	baz=58,SNR=7.9						
Z20A	**Nine Sixteen R**	**58.06**	**325**	⇓P	**P**	**22 12 55.1**	**-0.1**
	baz=58,SNR=16						
V25A	**Rancho No Teng**	**58.08**	**330**	⇓P	**P**	**22 12 54.5**	**-0.8**
	baz=58,SNR=12						
Y21A	**Point of Rocks**	**58.22**	**326**	⇓P	**P**	**22 12 56.6**	**+0.2**
	baz=58,SNR=25						
LAZ	**Ladron**	**58.24**	**327**	*e*P	**P**	**22 12 56.4**	**0.0**
	7.2nm,1.0s,mb4.7						
LAZ				PcP	PcP	22 13 47.6	+0.8
ANMO	**Albuquerque**	**58.30**	**328**	*e*P	**P**	**22 12 57.0**	**+0.1**
	5.0nm,0.9s,mb4.5						
ANMO	**Albuquerque**	**58.30**	**328**	P	**P**	**22 12 56.1**	**-0.8**
	3.3nm,0.8s,mb4.4,baz=143,slow=9.0,SNR=10						
ANMO				pP	pP	22 13 18.5	-1.6
	2.7nm,0.9s,baz=149,slow=6.8,SNR=3.8						
V24A	**Rampart Ranch,**	**58.31**	**329**	⇑P	**P**	**22 12 56.2**	**-0.7**
	baz=58						
217A	**Green Valley**	**58.37**	**322**	⇑P	**P**	**22 12 57.1**	**-0.4**
	baz=58,SNR=5.6						
CBKS	**Cedar Bluff**	**58.37**	**336**	*e*P	**P**	**22 12 57.2**	**0.0**
	42nm,1.2s,mb5.3						
U25A	**Circle Dot Ran**	**58.42**	**330**	⇑P	**P**	**22 12 56.9**	**-0.8**
	baz=59,SNR=9.8						
118A	**Homack Ranch,**	**58.49**	**323**	⇓P	**P**	**22 12 58.0**	**-0.3**
	baz=59						
Y20A	**Horse Springs,**	**58.53**	**326**	⇓P	**P**	**22 12 58.5**	**-0.1**
	baz=59						
Z19A	**T-Link Ranch,**	**58.57**	**324**	⇑P	**P**	**22 12 59.0**	**+0.3**
	baz=59						
W22A	**Albuquerque**	**58.61**	**328**	⇑P	**P**	**22 12 59.2**	**+0.2**
	baz=59						
X21A	**Alamocita Cree**	**58.62**	**326**	⇑P	**P**	**22 12 59.6**	**+0.5**
	baz=59,SNR=19						
FRNY	**Flat Rock**	**58.73**	**359**	*e*P	**P**	**22 12 59.8**	**+0.1**
	20nm,1.1s,mb5.1						
TUC	**Tucson**	**58.73**	**323**	*e*P	**P**	**22 12 59.5**	**-0.4**
	190nm,1.5s,mb5.9						
TUC				*e*pP	pP	22 13 26.8	+3.6
U24A	**Moreno Valley**	**58.85**	**330**	⇓P	**P**	**22 13 00.5**	**-0.2**
	baz=59						
117A	**Oracle**	**58.89**	**323**	⇑P	**P**	**22 13 00.7**	**-0.3**
	baz=59,SNR=10						
T25A	**Trinidad**	**59.02**	**331**	⇑P	**P**	**22 13 01.3**	**-0.5**
	baz=59,SNR=7.1						
Y19A	**Nutrioso**	**59.05**	**325**	⇑P	**P**	**22 13 02.2**	**0.0**
	baz=59,SNR=17						
X20A	**Quemado**	**59.07**	**326**	⇑P	**P**	**22 13 02.6**	**+0.3**
	baz=59,SNR=5.5						
U23A	**El Rito**	**59.24**	**329**	⇑P	**P**	**22 13 03.5**	**+0.1**
	baz=59,SNR=5.8						
V22A	**San Miguel Ran**	**59.28**	**328**	⇓P	**P**	**22 13 03.9**	**+0.2**
	baz=59,SNR=9.6						
X19A	**St. Johns**	**59.42**	**325**	⇑P	**P**	**22 13 05.2**	**+0.6**
	baz=60						
W20A	**Ramah**	**59.51**	**326**	⇓P	**P**	**22 13 05.5**	**+0.2**
	baz=60						
V21A	**Milan**	**59.57**	**328**	⇓P	**P**	**22 13 05.6**	**-0.1**
	baz=60						
U22A	**Llaves**	**59.61**	**329**	⇓P	**P**	**22 13 06.4**	**+0.5**
	baz=60,SNR=5.8						
214A	**Organ Pipe Nat**	**59.70**	**321**	⇓P	**P**	**22 13 06.6**	**0.0**
	baz=60,SNR=10						
T23A	**Casias Ranch,**	**59.72**	**330**	⇓P	**P**	**22 13 07.2**	**+0.5**
	baz=60						
Y17A	**Roosevelt**	**59.76**	**324**	⇑P	**P**	**22 13 07.1**	**+0.1**
	baz=60,SNR=5.4						
S24A	**Houchin Ranch,**	**59.80**	**331**	⇓P	**P**	**22 13 07.7**	**+0.5**
	baz=60,SNR=9.1						
X18A	**Snowflake**	**59.86**	**325**	⇑P	**P**	**22 13 08.0**	**+0.3**
	baz=60,SNR=6.0						
W19A	**Sanders**	**59.98**	**326**	⇓P	**P**	**22 13 08.5**	**0.0**
	baz=60,SNR=8.4						
V20A	**Brihall**	**60.01**	**327**	⇓P	**P**	**22 13 08.8**	**+0.2**
	baz=60						
SDCO	**Great Sand Dun**	**60.02**	**330**	*e*P	**P**	**22 13 08.8**	**+0.1**
	23nm,1.0s,mb5.2						
U21A	**Nageezi**	**60.06**	**328**	⇑P	**P**	**22 13 09.3**	**+0.3**
	baz=60,SNR=12						
T22A	**Edith**	**60.13**	**329**	⇓P	**P**	**22 13 10.0**	**+0.5**
	baz=60						
W18A	**Petrified Fore**	**60.18**	**326**	⇓P	**P**	**22 13 10.1**	**+0.2**
	baz=60						
R24A	**Sanders Place,**	**60.23**	**331**	⇓P	**P**	**22 13 10.2**	**+0.1**
	baz=60						
V19A	**Window Rock**	**60.25**	**326**	⇑P	**P**	**22 13 10.2**	**-0.1**
	baz=60						
Y16A	**Circle Bar Ran**	**60.26**	**323**	⇓P	**P**	**22 13 10.6**	**+0.2**
	baz=60,SNR=13						
114A	**Black Gap (USA**	**60.30**	**321**	⇓P	**P**	**22 13 10.7**	**0.0**
	baz=60,SNR=7.4						
T21A	**Najo Lake**	**60.43**	**328**	⇑P	**P**	**22 13 11.7**	**+0.1**
	baz=61						
U20A	**Newcomb**	**60.47**	**327**	⇓P	**P**	**22 13 11.6**	**-0.2**
	baz=61,SNR=6.1						
X16A	**Lo Mia Camp, P**	**60.62**	**324**	⇓P	**P**	**22 13 13.0**	**+0.1**
	baz=61,SNR=21						
S22A	**4UR Ranch, Cre**	**60.67**	**330**	⇓P	**P**	**22 13 13.4**	**+0.3**
	baz=61,SNR=9.8						
U19A	**Dine' College,**	**60.77**	**327**	⇓P	**P**	**22 13 13.6**	**-0.2**
	baz=61						
Y15A	**Casa Rosa Ranc**	**60.81**	**323**	⇓P	**P**	**22 13 13.9**	**-0.3**
	baz=61,SNR=14						
P25A	**Willow Gulch B**	**60.83**	**333**	⇓P	**P**	**22 13 14.3**	**+0.1**
	baz=61						
Q24A	**Divide**	**60.83**	**332**	⇓P	**P**	**22 13 14.1**	**-0.1**
	baz=61,SNR=6.2						
113A	**Mohawk Valley,**	**60.84**	**321**	⇑P	**P**	**22 13 14.3**	**-0.1**
	baz=61,SNR=6.3						
R22A	**Saguache, Gunn**	**61.01**	**330**	⇓P	**P**	**22 13 15.7**	**+0.3**
	baz=61,SNR=5.8						
Z13A	**Yuma Proving G**	**61.07**	**321**	⇓P	**P**	**22 13 16.0**	**0.0**
	baz=61,SNR=8.3						
T19A	**Beclabito**	**61.08**	**327**	⇓P	**P**	**22 13 15.6**	**-0.3**
	baz=61,SNR=8.3						
MVCO	**Mesa Verde**	**61.09**	**328**	*e*P	**P**	**22 13 16.3**	**+0.3**
	32nm,1.4s,mb5.2						
Q23A	**Hartsel**	**61.10**	**331**	⇑P	**P**	**22 13 16.3**	**+0.2**
	baz=61						
X15A	**Humboldt**	**61.13**	**323**	⇑P	**P**	**22 13 16.6**	**+0.2**
	baz=61,SNR=6.8						
V17A	**Tonalea, Kykot**	**61.13**	**325**	⇑P	**P**	**22 13 16.4**	**+0.1**
	baz=61,SNR=38						
W16A	**Flagstaff**	**61.16**	**324**	⇓P	**P**	**22 13 16.8**	**+0.3**
	baz=61						
P24A	**Kohler Place,**	**61.17**	**332**	⇓P	**P**	**22 13 16.9**	**+0.4**
	baz=61						
Y14A	**Wickenburg**	**61.20**	**322**	⇓P	**P**	**22 13 16.7**	**-0.1**
	baz=61,SNR=6.5						
U18A	**Rough Rock, Ch**	**61.22**	**326**	⇓P	**P**	**22 13 16.9**	**0.0**
	baz=61,SNR=5.2						
O25A	**Wiggins**	**61.30**	**333**	⇑P	**P**	**22 13 17.8**	**+0.5**
	baz=62						
WUAZ	**Wupatki**	**61.38**	**325**	*e*P	**P**	**22 13 18.8**	**+0.8**
	45nm,1.3s,mb5.3						
P23A	**Jefferson**	**61.48**	**331**	⇑P	**P**	**22 13 19.5**	**+0.9**
	baz=62,SNR=6.5						
R21A	**Cimarron**	**61.51**	**329**	⇑P	**P**	**22 13 18.8**	**+0.1**
	baz=62						
ECSD	**EROS Data Cent**	**61.56**	**341**	*e*P	**P**	**22 13 17.6**	**-1.4**
	13nm,1.0s,mb4.9						
Q22A	**Crested Butte,**	**61.58**	**330**	⇑P	**P**	**22 13 19.6**	**+0.3**
	baz=62						
Y13A	**Salome**	**61.60**	**322**	⇓P	**P**	**22 13 19.9**	**+0.4**
	baz=62						
W15A	**Williams**	**61.64**	**324**	⇓P	**P**	**22 13 19.8**	**0.0**
	baz=62						
U16A	**Tuba City**	**61.70**	**325**	⇑P	**P**	**22 13 20.2**	**+0.1**
	baz=62						
ISCO	**Idaho Springs**	**61.72**	**332**	*e*P	**P**	**22 13 20.6**	**+0.4**
	12nm,1.0s,mb4.9						
O24A	**Longmont**	**61.73**	**332**	⇑P	**P**	**22 13 20.6**	**+0.3**
	baz=62						
T18A	**Mexican Hat**	**61.76**	**327**	⇓P	**P**	**22 13 20.3**	**-0.2**
	baz=62,SNR=14						
R20A	**Redvale**	**61.78**	**329**	⇑P	**P**	**22 13 21.0**	**+0.4**
	baz=62,SNR=11						
S19A	**Harvey Farm, M**	**61.83**	**328**	⇑P	**P**	**22 13 20.9**	**0.0**
	baz=62,SNR=13						
PV01	**Paradox Valley**	**61.84**	**329**	*e*P	**P**	**22 13 20.7**	**-0.3**
SMCO	**Snowmass**	**61.86**	**330**	*e*P	**P**	**22 13 22.1**	**+0.9**
	16nm,1.0s,mb5.0						
N25A	**Grover**	**61.86**	**334**	⇑P	**P**	**22 13 21.1**	**0.0**
	baz=62						
Q21A	**Lamborn Mesa,**	**61.88**	**330**	⇓P	**P**	**22 13 21.2**	**-0.1**
	baz=62						
V15A	**Kaibab Nationa**	**62.05**	**324**	⇓P	**P**	**22 13 23.1**	**+0.7**
	baz=62,SNR=6.1						
P22A	**Eagle**	**62.09**	**331**	⇑P	**P**	**22 13 23.4**	**+0.7**
	baz=62						
W14A	**Seligman**	**62.14**	**323**	⇓P	**P**	**22 13 23.7**	**+0.6**
	baz=62,SNR=6.0						
X13A	**Yucca**	**62.14**	**322**	⇓P	**P**	**22 13 23.3**	**+0.2**
	baz=62,SNR=5.2						
T17A	**Navajo Res., N**	**62.15**	**326**	⇑P	**P**	**22 13 23.6**	**+0.5**
	baz=62,SNR=6.2						
O23A	**Lake Granby, G**	**62.19**	**332**	⇓P	**P**	**22 13 23.8**	**+0.5**
	baz=62,SNR=6.4						
SWSC	**Sam W. Stewart**	**62.22**	**320**	⇓P	**P**	**22 13 23.6**	**-0.1**
	baz=62						
N24A	**Carr**	**62.22**	**333**	⇓P	**P**	**22 13 24.1**	**+0.6**
	baz=62						
DVTC	**Desert V Tower**	**62.22**	**319**	⇑P	**P**	**22 13 24.1**	**+0.4**
	baz=62						
S18A	**Hurst Farm, Bl**	**62.23**	**327**	⇓P	**P**	**22 13 23.6**	**-0.1**
	baz=62,SNR=10						
PV10	**Paradox Valley**	**62.26**	**328**	*e*P	**P**	**22 13 23.2**	**-0.6**
	60nm,0.7s,mb5.7						
R19A	**Curley Farm, L**	**62.31**	**328**	⇓P	**P**	**22 13 24.1**	**0.0**
	baz=62						
Q20A	**Ridgley Place,**	**62.33**	**329**	⇑P	**P**	**22 13 24.1**	**-0.2**
	baz=62						
O22A	**Kremmling**	**62.44**	**331**	⇓P	**P**	**22 13 25.3**	**+0.3**
	baz=63,SNR=14						
V14A	**Boquillas Ranc**	**62.45**	**324**	⇑P	**P**	**22 13 25.6**	**+0.5**
	baz=63,SNR=6.8						
BC3	**Big Chuckawall**	**62.48**	**321**	⇓P	**P**	**22 13 25.1**	**-0.3**
	baz=63						
T16A	**Glen Canyon Da**	**62.52**	**326**	⇓P	**P**	**22 13 25.8**	**+0.2**
	baz=63						
W13A	**Hualapai Mount**	**62.52**	**323**	⇓P	**P**	**22 13 26.1**	**+0.5**
	baz=63,SNR=6.5						
U15A	**North Rim**	**62.55**	**325**	⇓P	**P**	**22 13 26.4**	**+0.6**
	baz=63,SNR=11						
MONP	**Monument Peak**	**62.58**	**319**	⇓P	**P**	**22 13 26.5**	**+0.4**
	baz=63						
S17A	**Black Ridge (B**	**62.62**	**327**	⇑P	**P**	**22 13 26.3**	**0.0**
	baz=63						
IRM	**Iron Mountain**	**62.64**	**321**	⇓P	**P**	**22 13 26.7**	**+0.2**
	baz=63,SNR=6.1						
R18A	**Canyonlands Na**	**62.70**	**328**	⇑P	**P**	**22 13 27.1**	**+0.4**
	baz=63,SNR=7.8						
N23A	**Red Feather La**	**62.75**	**332**	⇑P	**P**	**22 13 27.0**	**-0.1**
	baz=63,SNR=6.2						
P20A	**De Beque**	**62.80**	**330**	⇓P	**P**	**22 13 27.6**	**+0.2**
	baz=63						
Q19A	**Hogan Spring (**	**62.81**	**329**	⇑P	**P**	**22 13 27.8**	**+0.3**
	baz=63						
PHWY	**Pilot Hill**	**62.86**	**333**	*e*P	**P**	**22 13 28.1**	**+0.4**
	7.1nm,0.8s,mb4.7						
PHWY				*e*pP	pP	22 13 52.0	+0.7
N22A	**Wattenberg Ran**	**62.91**	**332**	⇓P	**P**	**22 13 28.7**	**+0.7**
	baz=63						
O21A	**Pagoda**	**62.91**	**331**	⇑P	**P**	**22 13 28.6**	**+0.5**
	baz=63						
109C	**Camp Elliot, M**	**63.01**	**319**	⇓P	**P**	**22 13 29.1**	**+0.1**
	baz=63						
U14A	**Mt Trumbull**	**63.05**	**324**	⇓P	**P**	**22 13 29.6**	**+0.5**

DAU	Daniels Canyon	64.92	328	eP		P	22 13 42.4	+1.0
Q14A	Sevier Lake (B	64.94	326	⇓P		P	22 13 41.7	+0.3
	baz=65,SNR=13							
NLU	North Lily Min	65.00	328	eP		P	22 13 43.3	+1.5
	8.2nm,1.0s,mb4.5							
M18A	Lyman	65.10	330	⇓P		P	22 13 42.0	-0.4
	baz=65							
N17A	Moffit Pass	65.11	329	⇑P		P	22 13 42.8	+0.3
	baz=65,SNR=20							
JLU	Jordanelle	65.16	328	eP		P	22 13 43.7	+0.8
	16nm,1.1s,mb4.8							
K20A	Yellowstone Ra	65.24	332	⇑P		P	22 13 42.6	-0.7
	baz=65,SNR=7.7							
P14A	Drum Mountains	65.26	327	⇑P		P	22 13 44.1	+0.6
	baz=65,SNR=13							
L19A	Farson	65.28	331	⇑P		P	22 13 43.6	0.0
	baz=65,SNR=13							
MPMC	Manual Prospec	65.33	321	⇓P		P	22 13 44.0	-0.1
	baz=65,SNR=6.4							
N16A	Rees Ranch, Co	65.37	329	⇓P		P	22 13 44.5	+0.3
	baz=66							
M17A	Scullys Gap (B	65.42	330	⇑P		P	22 13 44.1	-0.4
	baz=66,SNR=13							
O15A	The Old Anders	65.45	328	⇓P		P	22 13 45.6	+0.9
	baz=66							
AGMN	Agassiz Nation	65.46	343	eP		P	22 13 43.3	-1.3
	11nm,0.8s,mb4.7							
L18A	Fontenelle, Gr	65.46	330	⇓P		P	22 13 44.8	0.0
	baz=66							
DUG	Dugway	65.56	327	eP		P	22 13 46.1	+0.6
	21nm,1.0s,mb4.9							
K19A	Absolon Red Bu	65.60	332	⇓P		P	22 13 45.2	-0.4
	baz=66,SNR=15							
P13A	Bates Ranch, G	65.67	326	⇓P		P	22 13 46.6	+0.4
	baz=66,SNR=9.5							
ISA	Isabella	65.67	320	⇓P		P	22 13 46.4	+0.1
	baz=66,SNR=5.7							
ISA	Isabella	65.67	320	eP		P	22 13 46.0	-0.3
R11A	Troy Canyon, C	65.76	324	⇓P		P	22 13 47.3	+0.6
	baz=66,SNR=17							
Q12A	Willow Creek R	65.82	325	⇑P		P	22 13 47.5	+0.4
	baz=66,SNR=6.2							
BW06	Boulder Array	65.88	331	eP		P	22 13 47.2	-0.2
	12nm,1.3s,mb4.5							
N15A	Stansbury Isla	65.92	328	⇓P		P	22 13 47.9	+0.1
	baz=66							
HWUT	Hardware Ranch	65.97	329	eP		P	22 13 47.4	-0.7
	12nm,0.9s,mb4.7							
L17A	Cokeville	66.00	330	⇓P		P	22 13 47.3	-0.9
	baz=66							
K18A	Toltan Ranch,	66.01	331	⇓P		P	22 13 48.7	+0.4
	baz=66							
S10A	Tonopah Range,	66.05	323	⇓P		P	22 13 49.0	+0.4
	baz=66,SNR=15							
R10A	Warm Springs	66.13	324	⇓P		P	22 13 50.3	+1.2
	baz=66,SNR=7.6							
O13A	Hicks Ranch, I	66.14	327	⇓P		P	22 13 49.3	+0.2
	baz=66							
Q11A	Duckwater	66.14	325	⇑P		P	22 13 49.7	+0.5
	baz=66,SNR=8.1							
SPUT	South Promonto	66.19	328	eP		P	22 13 50.0	+0.6
	15nm,1.3s,mb4.7							
BGU	Big Grassy Mou	66.21	328	eP		P	22 13 49.5	-0.1
	11nm,1.2s,mb4.6							
L16A	Fish Haven	66.21	330	⇑P		P	22 13 49.9	+0.3
	baz=66							
N14A	Grayback Hills	66.24	328	⇓P		P	22 13 50.1	+0.4
	baz=66							
M15A	Larsen Ranch,	66.31	329	⇓P		P	22 13 49.6	-0.6
	baz=66,SNR=5.2							
SMMC	Simmler	66.40	319	⇓P		P	22 13 50.6	-0.3
	baz=66							
J18A	Kendall Valley	66.44	331	⇑P		P	22 13 50.3	-0.7
	baz=67,SNR=20							
K17A	Gardner Place,	66.52	330	⇑P		P	22 13 51.5	0.0
	baz=67							
Q10A	Clear Creek Ra	66.55	324	⇑P		P	22 13 52.3	+0.4
	baz=67							
O12A	Currie	66.64	326	⇑P		P	22 13 52.7	+0.3
	baz=67,SNR=10							
L15A	Malad City	66.67	329	⇓P		P	22 13 52.1	-0.4
	baz=67,SNR=10							
P11A	Circle Ranch,	66.69	325	⇑P		P	22 13 53.2	+0.5
	baz=67							
HVU	Hansel Valley	66.70	329	eP		P	22 13 52.9	+0.2
	12nm,0.9s,mb4.7							
I18A	Diamond G Ranc	66.73	332	⇑P		P	22 13 52.4	-0.4
	baz=67,SNR=18							
N13A	Wendover, West	66.77	327	⇓P		P	22 13 53.3	+0.1
	baz=67							
M14A	Sheep Mountain	66.79	328	⇓P		P	22 13 53.2	-0.1
	baz=67,SNR=15							
J17A	Brown Place, J	66.88	331	⇓P		P	22 13 54.0	+0.2
	baz=67							
K16A	Soda Springs	66.90	330	⇑P		P	22 13 54.4	+0.5
	baz=67							
REDW	Red Top Meadow	66.95	331	eP		P	22 13 54.7	+0.5
	36nm,1.6s,mb5.0							
LOHW	Long Hollow	67.02	331	eP		P	22 13 55.1	+0.4
	8.9nm,0.9s,mb4.6							
O11A	Cowboy Ranch,	67.04	326	⇑P		P	22 13 55.0	+0.1
	baz=67							
TPAW	Teton Pass	67.09	331	eP		P	22 13 55.7	+0.5
	7.5nm,0.9s,mb4.5							
M13A	Montello	67.11	327	⇓P		P	22 13 55.1	-0.3
	baz=67							
L14A	Malta	67.13	328	⇑P		P	22 13 55.2	-0.2
	baz=67,SNR=7.6							
P10A	Eureka	67.13	325	⇑P		P	22 13 55.9	+0.3
	baz=67							
RRI2	Red Ridge	67.16	331	eP		P	22 13 55.6	+0.1
	36nm,0.9s,mb5.2							
MOOW	Moose Ponds	67.19	331	eP		P	22 13 56.0	+0.3
	9.7nm,1.1s,mb4.5							
ULM	Lac du Bonnet	67.24	344	P		P	22 13 54.8	-1.1
	5.9nm,0.7s,mb4.5,baz=221,slow=0.4,SNR=4.6							
J16A	Bone	67.24	330	⇓P		P	22 13 56.2	+0.1
	baz=67,SNR=8.9							
I17A	Pilgrim Ck.	67.25	331	⇓P		P	22 13 56.9	+0.8
	baz=67							
K15A	Arbon	67.25	329	⇑P		P	22 13 56.2	+0.1
	baz=67							
DCID1	Drake Creek	67.28	331	eP		P	22 13 57.6	+1.3
	57nm,0.6s,mb5.6							
NVAR	Mina Array Bea	67.39	323	P		P	22 13 57.1	0.0
	2.1nm,0.9s,mb4.0,baz=146,slow=7.2,SNR=9.7							
IMW	Indian Meadow	67.40	331	eP		P	22 13 56.7	-0.3
	7.9nm,0.7s,mb4.7							
FLWY	Flagg Ranch	67.43	331	eP		P	22 13 58.2	+0.9
	36nm,0.9s,mb5.2							
K14A	Jones Ranch, D	67.47	329	⇑P		P	22 13 57.6	+0.1
	baz=68							
L13A	Double Diamond	67.53	328	⇑P		P	22 13 57.9	0.0
	baz=68,SNR=5.7							
N11A	Elko Archery C	67.56	326	⇑P		P	22 13 58.0	-0.2
	baz=68							
RLMT	Red Lodge	67.58	333	eP		P	22 13 58.3	0.0
O10A	Cortez Mining,	67.62	325	⇑P		P	22 13 58.5	0.0
	baz=68							
I16A	Newdale	67.64	331	⇓P		P	22 13 59.0	+0.4
	baz=68							
LKWY	Lake	67.66	332	eP		P	22 14 01.1	+2.4
	24nm,0.8s,mb5.1							
J15A	Blackfoot	67.73	330	⇑P		P	22 13 59.7	+0.5
	baz=68,SNR=5.2							
G18A	Lazy EL Ranch,	67.87	333	⇑P		P	22 13 59.9	-0.1
	baz=68,SNR=28							
N10A	Dunphy	67.92	326	⇑P		P	22 14 00.1	-0.4
	baz=68							
M11A	Holland Ranch,	68.03	327	⇑P		P	22 14 01.5	+0.4
	baz=68,SNR=6.6							
BMN	Battle Mountai	68.11	325	eP		P	22 14 01.1	-0.5
	10nm,0.5s,mb4.9							
BMN				epP		pP	22 14 29.8	+4.3
L12A	House Creek Ra	68.12	328	⇑P		P	22 14 02.0	+0.4
	baz=68,SNR=5.8							
H16A	Russell Place,	68.16	332	⇓P		P	22 14 02.4	+0.6
	baz=68,SNR=13							
I15A	Monteview	68.21	330	⇑P		P	22 14 02.8	+0.6
	baz=68							
J14A	Carey	68.21	329	⇑P		P	22 14 02.9	+0.7
	baz=68,SNR=22							
GCMT	Greycliff	68.28	333	eP		P	22 14 02.4	-0.2
	18nm,1.1s,mb4.8							
F18A	Big Timber	68.39	333	⇑P		P	22 14 03.4	+0.1
	baz=69,SNR=35							
G17A	Pierce Place,	68.40	332	⇑P		P	22 14 04.1	+0.8
	baz=69							
M10A	I.L. Ranch, Tu	68.49	326	⇓P		P	22 14 04.4	+0.4
	baz=69							
L11A	Cat Creek Ranc	68.52	327	⇑P		P	22 14 04.5	+0.3
	baz=69,SNR=11							
J13A	Cove Ranch, Pi	68.59	329	⇓P		P	22 14 04.5	-0.1
	baz=69,SNR=7.0							
H15A	Lima	68.74	331	⇑P		P	22 14 06.2	+0.8
	baz=69,SNR=7.0							
F17A	Fitzpatrick Pl	68.81	333	⇑P		P	22 14 06.1	+0.2
	baz=69,SNR=8.0							
G16A	Moss Hill, Enn	68.81	332	⇑P		P	22 14 05.7	-0.2
	baz=69,SNR=7.5							
WCN	Washoe City	68.81	323	⇑P		P	22 14 06.8	+0.7
	baz=69							
HLID	Hailey	68.83	329	eP		P	22 14 06.5	+0.5
	5.9nm,0.9s,mb4.4							
HLID				epP		pP	22 14 29.4	-0.5
L10A	Juniper Basin	68.84	327	⇑P		P	22 14 06.2	+0.1
	baz=69,SNR=5.3							
PAHR	Pah Rah Range	68.86	323	eP		P	22 14 07.6	+1.3
	19nm,0.9s,mb4.9							
SCHQ	Schefferville	68.93	4	eP		P	22 14 07.4	+1.0
I13A	Wildhorse Cree	68.94	329	⇑P		P	22 14 07.3	+0.6
	baz=69							
E18A	Harlowton	69.00	334	⇓P		P	22 14 06.9	-0.1
	baz=69,SNR=16							
MCMT	McKenzie Canyo	69.00	331	eP		P	22 14 07.5	+0.5
	4.5nm,0.9s,mb4.3							
BOZ	Bozeman (W)	69.05	332	eP		P	22 14 07.6	+0.3
	7.9nm,0.9s,mb4.5							
G15A	Dillon	69.08	331	⇑P		P	22 14 07.8	+0.3
	baz=69							
H14A	Leadore	69.09	330	⇑P		P	22 14 08.1	+0.5
	baz=69,SNR=15							
F16A	Kennard Place,	69.15	332	⇓P		P	22 14 08.1	+0.1
	baz=69							
DLMT	Dillon	69.28	331	eP		P	22 14 09.3	+0.6
	11nm,1.1s,mb4.6							
E17A	Martinsdale	69.33	333	⇑P		P	22 14 09.2	+0.1
	baz=70,SNR=16							
I12A	Atlanta	69.36	329	⇑P		P	22 14 09.9	+0.5
	baz=70,SNR=7.9							
D18A	Linhart Farms,	69.44	334	⇓P		P	22 14 09.8	0.0
	baz=70							
MFID	Camas Ranch	69.44	328	⇑P		P	22 14 10.1	+0.3
	baz=70,SNR=21							
LRM	Limekiln Ridge	69.56	332	eP		P	22 14 11.0	+0.6
G14A	Jackson	69.60	331	⇓P		P	22 14 10.8	0.0
	baz=70							
E16A	East Helena	69.75	333	⇑P		P	22 14 11.6	0.0
	baz=70,SNR=5.6							
H12A	Diamond D Ranc	69.77	329	⇑P		P	22 14 12.1	+0.3
	baz=70,SNR=9.3							
D17A	Six Diamond Ra	69.79	334	⇑P		P	22 14 11.7	-0.1
	baz=70,SNR=22							
G13A	Galt	69.86	330	⇑P		P	22 14 12.6	+0.2
	baz=70,SNR=16							
HRY	Holter Researc	69.95	333	eP		P	22 14 13.5	+0.7
D16A	Dana Ranch, Ca	70.07	333	⇑P		P	22 14 13.8	+0.2
	baz=70,SNR=17							
EGMT	Eagleton	70.07	335	eP		P	22 14 13.8	+0.2
	17nm,0.8s,mb4.9							
E15A	Deer Lodge	70.10	332	⇑P		P	22 14 13.6	-0.2
	baz=70,SNR=5.9							
C17A	Wharram Farm,	70.19	334	⇓P		P	22 14 13.8	-0.5
	baz=70,SNR=5.1							
WVOR	Wild Horse Val	70.25	326	eP		P	22 14 14.5	-0.3
	10nm,1.4s,mb4.5							
B18A	Beardsley Farm	70.37	335	⇓P		P	22 14 15.0	-0.4
	baz=70,SNR=12							
F13A	Darby	70.41	331	⇓P		P	22 14 15.5	-0.2
	baz=71,SNR=14							
E14A	Clinton	70.48	331	⇓P		P	22 14 16.4	+0.3
	baz=71,SNR=8.5							
DBIC	Dimbokro	70.63	78	eP		P	22 14 16.7	-1.0
DBIC	Dimbokro	70.63	78	P		P	22 14 16.9	-0.8
	6.3nm,0.8s,mb4.5,baz=312,slow=2.6,SNR=6.0							
B17A	L&G Farms, Che	70.72	334	⇓P		P	22 14 17.1	-0.5
	baz=71							
CHMT	Chamberlain Mo	70.74	332	eP		P	22 14 18.1	+0.4
C16A	Fuhringer Ranc	70.74	333	⇓P		P	22 14 17.7	0.0
	baz=71,SNR=12							
J08A	Circle Bar Ran	70.79	327	⇓P		P	22 14 18.0	-0.1
	baz=71							
A18A	Metzger Ranch,	70.81	335	⇓P		P	22 14 17.5	-0.5
	baz=71,SNR=15							
E13A	Victor	70.83	331	⇓P		P	22 14 18.4	+0.2
	baz=71,SNR=10							
MOD	Modoc	70.83	324	eP		P	22 14 19.1	+0.8
	15nm,0.9s,mb4.8							
F12A	Elk City	70.83	330	⇓P		P	22 14 17.9	-0.4
	baz=71,SNR=7.5							
D14A	Greenough	70.98	332	⇓P		P	22 14 19.3	+0.2
	baz=71,SNR=6.8							
MSO	Missoula	71.00	332	eP		P	22 14 20.1	+0.9
	11nm,1.1s,mb4.6							
SLMT	Seeley Lake	71.10	332	eP		P	22 14 20.6	+0.7
C15A	Salmond Ranch,	71.10	333	⇑P		P	22 14 20.2	+0.4
	baz=71,SNR=15							
A17A	Triple J Farms	71.18	335	⇓P		P	22 14 20.2	-0.1
	baz=71,SNR=24							
BMO	Blue Mountains	71.21	328	eP		P	22 14 19.4	-1.1
	3.6nm,0.8s,mb4.2							
D13A	Huson	71.43	331	⇓P		P	22 14 22.1	+0.3
	baz=72,SNR=9.9							
B15A	Bradely Ranch,	71.49	333	⇓P		P	22 14 21.5	-0.6
	baz=72,SNR=8.9							
SWMT	Swartz Lake	71.53	332	eP		P	22 14 23.2	+0.8
A16A	West Butte Ran	71.56	334	⇑P		P	22 14 22.6	0.0
	baz=72,SNR=6.5							
K05A	Summer Lake	71.69	325	⇑P		P	22 14 24.5	+1.0
	baz=72,SNR=5.1							
YBMT	Yellow Bay	71.79	332	eP		P	22 14 25.1	+1.0
I07A	Izee	71.83	327	⇑P		P	22 14 24.9	+0.6
	baz=72,SNR=12							
JTMT	Jette	71.83	332	eP		P	22 14 25.1	+0.9
A15A	Johnson Ranch,	72.07	334	⇓P		P	22 14 25.3	-0.4
	baz=72							
YBH	Yreka Blue Hor	72.10	323	eP		P	22 14 25.1	-0.9
	4.8nm,1.0s,mb4.3							
YBH	Yreka Blue Hor	72.10	323	P		P	22 14 24.7	-1.2
	2.0nm,0.5s,mb4.2,baz=110,slow=3.3,SNR=10							
YBH				LR		LR	22 48 32.5	
	comp=Z,38nm,19.5s,baz=166,slow=38							
BSMT	Bassoo Peak	72.14	332	eP		P	22 14 27.1	+1.1
C12B	Naegeli Ranch,	72.35	331	⇑P		P	22 14 27.4	0.0
	baz=72							
A14A	Double T Ranch	72.36	333	⇓P		P	22 14 26.9	-0.5
	baz=72,SNR=7.2							
G08A	Pilot Rock	72.36	328	⇓P		P	22 14 27.7	+0.2
	baz=72,SNR=5.2							
B13A	Whitefish	72.38	332	⇓P		P	22 14 27.4	0.0
	baz=72							
WALA	Waterton Lakes	72.64	333	eP		P	22 14 29.5	+0.5
	0.4nm,0.8s							
E09A	Wood Farm, Sta	72.79	329	⇑P		P	22 14 29.8	-0.2
	baz=73							
FFC	Flin Flon	72.92	343	eP		P	22 14 29.7	-0.8
G06A	Carlson Farm,	73.20	327	⇑P		P	22 14 32.6	+0.2
	baz=73							
HAWA	Hanford	73.40	328	eP		P	22 14 34.6	+1.0
	11nm,0.9s,mb4.7							
NEW	Newport	73.52	331	eP		P	22 14 34.0	-0.2
	8.4nm,1.2s,mb4.3							
H04A	Detroit Lake	73.68	326	⇓P		P	22 14 35.2	0.0
	baz=74							
OD2	Odessa Site #2	73.68	330	eP		P	22 14 35.8	+0.6
OD2				epP		pP	22 14 59.3	+0.1
E07A	Sunnyside	73.68	328	⇓P		P	22 14 35.1	-0.1
	baz=74							
C09A	Chrisman Ranch	73.75	330	⇓P		P	22 14 35.8	+0.2
	baz=74							
F04A	Amboy	74.61	327	⇑P		P	22 14 40.8	+0.2
	baz=75							
ETW	Entiat	74.63	329	eP		P	22 14 41.8	+1.2
B08A	Colville Reser	74.64	330	⇑P		P	22 14 40.7	0.0
	baz=75,SNR=5.1							
FCC	Fort Churchill	74.71	349	eP		P	22 14 40.5	-0.4
LON	Longmire	74.81	328	eP		P	22 14 42.1	+0.3
	6.7nm,1.2s,mb4.2							
MAIT	Maitri	74.96	160	eP		P	22 14 43.8	+1.5
D05A	Enumclaw	75.19	328	⇑P		P	22 14 43.9	0.0
	baz=75							
F03A	Seaside	75.22	326	⇑P		P	22 14 44.3	+0.1
	baz=75							
EDM	Edmonton	75.55	336	eP		P	22 14 44.8	-1.1
E03A	Lebam	75.61	327	⇑P		P	22 14 46.9	+0.5
	baz=76							
RPW	Rockport	75.78	329	eP		P	22 14 47.4	+0.1
B06A	Marblemount	75.81	329	⇓P		P	22 14 46.6	-0.8
	baz=76							
JCW	Jim Creek	75.82	329	eP		P	22 14 47.5	0.0
QSPA	South Pole Qui	75.97	180	eP		P	22 14 48.5	+0.5
	4.1nm,0.6s,mb4.3							
NLWA	Neilton Lookou	76.31	327	eP		P	22 14 51.7	+1.4
A05A	Maple Falls	76.43	329	⇓P		P	22 14 51.0	0.0
	baz=77							
TORD	Torodi Ar. Bea	78.72	73	P		P	22 15 03.8	-0.7
	18nm,0.8s,mb4.9,baz=257,slow=5.3,SNR=81							
TORD				pP		pP	22 15 26.6	-2.2
	11nm,1.0s,baz=258,slow=6.2,SNR=5.6							
EVO	Evora	80.12	46	eP		P	22 15 10.5	-1.1
	15nm,1.1s,mb4.4							
EVO				eMLR		MLR		
	comp=Z,52nm,22.0s							
MDT	Midelt	80.18	53	P		P	22 15 13.0	+1.0
	comp=Z,2.8nm,0.9s,mb4.1,baz=246,slow=7.0,SNR=6.1							
MDT				pP		pP	22 15 36.2	-0.2
	comp=Z,3.1nm,0.8s,baz=313,slow=4.7,SNR=3.8							
EMIN	Mina Concepcio	80.73	47	P		P	22 15 15.6	+0.7
	comp=Z,9.2nm,1.6s,mb4.4							
EBAD	Badajoz	80.92	46	P		P	22 15 15.6	-0.2
	comp=Z,3.8nm,0.8s,mb4.3							
ESPR	Espera	80.93	48	P		P	22 15 17.1	+1.2
	comp=Z,4.9nm,1.1s,mb4.2							
EJIF	Jimena Fronter	81.03	49	P		P	22 15 18.4	+1.8
	comp=Z,7.5nm,0.9s,mb4.5							
ECAB	El Cabril	81.76	47	P		P	22 15 18.2	-2.1
	comp=Z,4.3nm,1.2s,mb4.2							
EPLA	Plasencia	82.14	45	P		P	22 15 22.2	0.0
	comp=Z,6.2nm,1.0s,mb4.4							
ELOJ	Sierra Loja	82.28	49	P		P	22 15 24.6	+1.6
	comp=Z,7.6nm,0.7s,mb4.6							
SBA	Scott Base	82.29	191	eP		P	22 15 22.7	+0.2
	comp=Z,2.0nm,0.7s,mb4.1							
EADA	Adamuz	82.40	48	P		P	22 15 24.5	+0.9
	comp=Z,7.4nm,1.4s,mb4.3							
ECAL	Calabor	82.53	44	P		P	22 15 22.1	-2.1
	comp=Z,6.9nm,1.0s,mb4.4							
EBAN	Banos Encina	82.96	48	P		P	22 15 28.2	+1.7
	comp=Z,5.5nm,0.9s,mb4.4							
YKA	Yellowknife Ar	83.06	342	P		P	22 15 25.3	-1.2
	comp=Z,7.2nm,0.9s,mb4.5,baz=135,slow=5.5,SNR=13							
EBER	Berja	83.11	49	P		P	22 15 27.5	+0.2
	comp=Z,13nm,1.1s,mb4.7							
PAB	San Pablo	83.13	46	eP		P	22 15 28.1	+0.7
	comp=Z,15nm,1.1s,mb4.7							
EQES	Quesada	83.33	48	P		P	22 15 28.9	+0.4
	comp=Z,11nm,1.1s,mb4.6							
ESDC	Sonseca Array	83.45	46	P		P	22 15 30.0	+1.0
	comp=Z,9.1nm,0.9s,mb4.6							
ESDC	Sonseca Array	83.45	46	P		P	22 15 29.9	+0.8
	comp=Z,6.8nm,0.8s,mb4.5,baz=252,slow=5.2,SNR=35							
ESDC				pP		pP	22 15 53.0	-0.6
	comp=Z,5.3nm,1.0s,baz=249,slow=5.2,SNR=5.9							
ESLA	Sonseca Array	83.45	46	eP		P	22 15 29.5	+0.4
EHUE	Huescar	83.69	49	P		P	22 15 30.5	+0.2
	comp=Z,8.9nm,0.8s,mb4.7							
GUD	Guadarrama	83.72	46	P		P	22 15 30.9	+0.5
	comp=Z,4.5nm,0.8s,mb4.3							
EVIA	Vianos	84.08	48	P		P	22 15 33.4	+1.1
	comp=Z,19nm,0.8s,mb5.0							
ETOB	Tobarra	84.77	48	P		P	22 15 36.7	+0.9
	comp=Z,12nm,0.8s,mb4.9							
TSUM	Tsumeb	85.91	109	eP		P	22 15 42.7	+0.8
TSUM	Tsumeb	85.91	109	P		P	22 15 42.9	+1.0
	comp=Z,3.7nm,0.7s,mb4.4,baz=241,slow=4.4,SNR=11							
TSUM				pP		pP	22 16 07.9	+1.2
	comp=Z,3.4nm,0.7s,baz=245,slow=6.2,SNR=3.3							
DLBC	Dease Lake	85.97	334	eP		P	22 15 41.0	-0.3
DLBC	Dease Lake	85.97	334	P		P	22 15 40.9	-0.4
	comp=Z,4.2nm,0.7s,mb4.5,baz=180,slow=2.8,SNR=11							
SJPF	Ste Jean	86.72	44	eP		P	22 15 45.4	+0.1
ETSF	Etsaut	87.08	45	eP		P	22 15 47.3	+0.2
EPF	Esparros	87.75	45	eP		P	22 15 50.1	-0.2
	comp=Z,11nm,1.2s,mb4.5							
EPF	Esparros	87.75	45	eP		P	22 15 50.1	-0.2
	comp=Z,5.3nm,1.2s,mb4.5							
BORG	Borgarnes	87.79	20	eP		P	22 15 50.7	+0.7
LFF	La Frestale	88.72	43	eP		P	22 15 54.2	-0.6
	comp=Z,25nm,1.1s,mb4.9							
LFF	La Frestale	88.72	43	eP		P	22 15 54.2	-0.6
	comp=Z,13nm,1.1s,mb4.9							
MFF	Saint Martin d	88.75	41	eP		P	22 15 54.2	-0.7
	comp=Z,26nm,1.3s,mb4.8							
MFF	Saint Martin d	88.75	41	eP		P	22 15 54.2	-0.7
	comp=Z,13nm,1.3s,mb4.8							
SKAG	Skagway	88.84	333	eP		P	22 15 56.5	+1.5
MTLF	Montolieu	89.14	45	eP		P	22 15 56.1	-0.7
	comp=Z,19nm,1.4s,mb4.6							
MTLF	Montolieu	89.14	45	eP		P	22 15 56.1	-0.7
	comp=Z,14nm,1.4s,mb4.6							
RJF	Les Rejaudoux	89.36	43	eP		P	22 15 57.1	-0.7
	comp=Z,9.6nm,1.0s,mb4.5							
RJF				eMLR		MLR		
	comp=Z,45nm,22.2s							

INK	Inuvik	92.80	341	*e*P	P	22 16 12.4	-0.8		
INK	Inuvik	92.80	341	P	P	22 16 12.4	-0.9		
	comp=Z,1.1nm,0.3s,mb4.6,baz=46,slow=4.9,SNR=4.5								
CABF	La Chapelle	92.80	43	*e*P	P	22 16 12.0	-1.7		
	comp=Z,58nm,1.7s,mb5.3								
CABF	La Chapelle	92.80	43	*e*P	P	22 16 12.0	-1.7		
	comp=Z,29nm,1.7s,mb5.3								
SBF	Sospel	92.90	46	*e*P	P	22 16 13.4	-0.9		
LPL	La Plagne	92.90	44	*e*P	P	22 16 14.6	+0.4		
	comp=Z,17nm,1.1s,mb5.0								
LPL	La Plagne	92.90	44	*e*P	P	22 16 14.6	+0.4		
	comp=Z,8.4nm,1.1s,mb5.0								
LPG	La Plagne	92.91	44	*e*P	P	22 16 14.9	+0.6		
	comp=Z,14nm,1.0s,mb4.9								
LPG	La Plagne	92.91	44	*e*P	P	22 16 14.9	+0.6		
	comp=Z,7.0nm,1.0s,mb5.0								
PGF	Pioggiola	93.63	47	*e*P	P	22 16 17.1	-0.6		
HINF	Hinteralfeld	93.66	42	*e*P	P	22 16 16.5	-1.2		
CDF	Champ du Feu	94.10	41	*e*P	P	22 16 18.9	-0.8		
	comp=Z,9.1nm,1.1s,mb4.7								
CDF	Champ du Feu	94.10	41	*e*P	P	22 16 18.9	-0.8		
	comp=Z,4.6nm,1.1s,mb4.7								
BUG	Bochum--Univer	94.96	38	*e*P	P	22 16 23.7	+0.2		
	comp=Z,10.0nm,0.8s,mb5.3								
TNS	Taunus Mts	95.34	40	*e*P	P	22 16 25.4	+0.1		
	comp=Z,14nm,1.3s,mb5.2								
DAVOX	Davos/Dischmat	95.35	43	P	P	22 16 25.6	+0.1		
	comp=Z,4.5nm,0.9s,mb4.9,baz=251,slow=7.7,SNR=8.1								
IBBN	Ibbenburen	95.49	37	*e*P	P	22 16 26.4	+0.5		
	comp=Z,14nm,0.8s,mb5.4								
ILAR	Eielson Array	96.03	336	P	P	22 16 26.7	-1.4		
	comp=Z,0.7nm,0.9s,mb4.1,baz=143,slow=2.8,SNR=6.8								
ILAR				PP	PP	22 20 17.2	-4.7		
	comp=Z,0.6nm,0.9s,baz=113,slow=8.1,SNR=5.9								
CLZ	Clausthal	96.93	38	*e*P	P	22 16 33.2	+0.7		
	comp=Z,11nm,1.1s,mb5.2								
GRA1	Grafenberg Arr	96.94	41	*e*P	P	22 16 33.5	+0.9		
	comp=Z,16nm,1.4s,mb5.3								
GRF	Grafenberg Arr	96.94	41	*e*P	P	22 16 33.5	+0.9		
	comp=Z,16nm,1.4s,mb5.3								
BSEG	Bad Segeberg	97.40	36	*e*P	P	22 16 35.2	+0.6		
	comp=Z,23nm,1.5s,mb5.4								
MOX	Moxa	97.41	40	*e*P	P	22 16 35.4	+0.7		
	comp=Z,28nm,2.1s,mb5.3								
PPLA	Purkeypile	97.67	333	P	P	22 16 35.4	-0.2		
	comp=Z,9.4nm,1.2s,mb5.2								
GUNZ	Gunzen	97.79	40	*e*P	P	22 16 36.7	+0.3		
	comp=Z,15nm,1.8s,mb5.2								
WERD	Werda	97.79	40	*e*P	P	22 16 37.2	+0.8		
	comp=Z,16nm,1.8s,mb5.2								
WET	Wettzell	97.87	41	*e*P	P	22 16 37.4	+0.6		
	comp=Z,10.0nm,1.5s,mb5.1								
TANN	Tannenbergstha	97.88	40	*e*P	P	22 16 37.9	+1.1		
	comp=Z,10.0nm,1.4s,mb5.2								
KHC	Kasperske Hory	98.32	41	*e*PDIFF	P	22 16 39.1	+0.3		
CLL	Collm	98.41	39	*e*P	P	22 16 39.8	+0.6		
	comp=Z,4.0nm,0.7s,mb5.1								
CLL	Collm	98.41	39	↓*i*P	P	22 16 39.7	+0.5		
	comp=Z,4.0nm,0.8s,mb5.0								
CLL	Collm	98.41	39	↓*i*P	P	22 16 39.7	+0.5		
	comp=Z,4.0nm,0.8s,mb5.0								
BRG	Berggiesshubel	98.90	40	*e*P	P	22 16 42.0	+0.6		
	comp=Z,9.0nm,1.3s,mb5.1								
BRG	Berggiesshubel	98.90	40	*e*P	P	22 16 42.2	+0.9		
	comp=Z,9.5nm,1.3s,mb5.2								
NOA	NORSAR Array B	99.46	29	P	Pdif	22 16 42.7	-1.3		
NOA	NORSAR Array B	99.46	29	P	Pdif	22 16 42.7	-1.3		
	comp=Z,2.3nm,1.0s,baz=256,slow=4.5,SNR=3.2								
TREC	Trest	99.58	42	*e*PDIFF	Pdif	22 16 45.4	+1.0		
DPC	Dobruska-Polom	100.29	41	*e*PDIFF	Pdif	22 16 49.0	+1.4		
VYHS	Vyhne	101.63	43	*e*Pdif	Pdif	22 16 54.2	+0.6		
VYHS	Vyhne	101.63	43	PDIF	Pdif	22 16 54.2	+0.6		
CRVS	Cervenica-Dubn	103.40	43	*e*Pdif	Pdif	22 17 02.0	+0.5		
CRVS	Cervenica-Dubn	103.40	43	PDIF	Pdif	22 17 02.0	+0.5		
BRTR	Keskin Array B	111.60	53	PKiKP	PKiKP	22 21 36.2	+0.6		
	comp=Z,1.2nm,0.9s,baz=197,slow=3.9,SNR=5.2								
STKA	Stephens Creek	123.50	215	PKP	PKPdf	22 21 59.0	+0.2		
	comp=Z,1.5nm,0.6s,baz=300,slow=14,SNR=4.4								
AKTK	Aktyubinsk	126.41	37	PKP	PKPdf	22 22 04.1	+0.4		
AKTO	Aktyubinsk	126.41	37	PKP	PKPdf	22 22 04.1	+0.4		
	comp=Z,5.1nm,0.8s,baz=304,slow=1.7,SNR=27								
ABKAR	Akbulak array	128.04	38	*e*PKPdf	PKPdf	22 22 07.4	+0.6		
BVAR	Borovoye Array	131.59	29	PKP	PKPdf	22 22 14.2	+0.8		
	comp=Z,3.4nm,0.9s,baz=273,slow=2.5,SNR=23								
ASAR	Alice Springs	134.14	215	PKP	PKPdf	22 22 19.0	-0.2		
	comp=Z,0.9nm,0.5s,baz=121,slow=1.7,SNR=13								
ZAA0	Zalesovo Array	136.63	19	*e*PKPdf	PKPdf	22 22 23.1	+0.3		
ZALV	Zalesovo Beam	136.63	19	PKhKP	PKPpre	22 22 16.3			
	comp=Z,0.6nm,0.4s,baz=319,slow=4.3,SNR=4.4								
ZALV				PKP	PKPdf	22 22 23.6	+0.7		
	comp=Z,18nm,0.8s,baz=301,slow=2.7,SNR=70								
WRAB	Tennant Creek	136.77	219	*e*PKPdf	PKPdf	22 22 24.5	+0.3		
KURK	Kurchatov	136.88	26	PKP	PKPdf	22 22 24.4	+1.0		
KURK				pPKP	pPKPdf	22 22 48.9	-0.5		
KURK	Kurchatov	136.88	26	PKP	PKPdf	22 22 24.4	+1.0		
	comp=Z,4.4nm,0.8s,baz=308,slow=2.9,SNR=15								
KURK				pPKP	pPKPdf	22 22 48.9	-0.5		
	comp=Z,1.5nm,0.8s,baz=307,slow=2.5,SNR=3.1								
EKS2	Erkin-Say	139.67	39	*e*PKPdf	PKPdf	22 22 29.5	+0.7		
AML	Almayashu	139.92	39	*e*PKPdf	PKPdf	22 22 30.1	+0.8		
AAK	Ala-Archa	140.12	38	PKP	PKPdf	22 22 31.9	+2.2		
AAK	Ala-Archa	140.12	38	PKP	PKPdf	22 22 31.9	+2.2		
	comp=Z,2.0nm,0.4s,baz=249,slow=3.4,SNR=5.2								
UCH	Uchtor	140.37	39	*e*PKPdf	PKPdf	22 22 31.8	+1.7		
MKAR	Makanchi Array	141.43	28	PKhKP	PKPpre	22 22 28.1			
	comp=Z,2.5nm,0.8s,baz=340,slow=3.2,SNR=14								
KSH	Kashi	142.81	41	*e*PKP	PKPdf	22 22 33.2	-1.4		
KSH				*es*PKP		22 23 10.6			
KSH				*e*PKS		22 26 08.0			
KSH				*e*SKS	SKSdf	22 29 32.2	-3.8		
KSH				AMB	AMB				
	comp=Z,54nm,4.4s								
KSH				LR	LR				
	comp=N,55nm,6.0s								
KSH				LR	LR				
	comp=E,62nm,4.8s								
KSH				LR	LR				
	comp=Z,190nm,6.8s								
MDJ	Mudanjiang	144.12	332	PKP	PKPdf	22 22 36.2	-0.5		
MAJO	Matsushiro	144.38	314	*e*PKPdf	PKPdf	22 22 35.0	-2.4		
MAT	Matsushiro	144.38	314	PKP	PKPdf	22 22 34.8	-2.6		
WMQ	Urumqi	146.12	26	*e*PKPbc	PKPbc	22 22 39.8	-1.4		
ULN	Ulaanbaatar	146.41	0	*e*PKPdf	PKPdf	22 22 41.3	+0.8		
SONM	Songino Array	146.44	1	PKPbc	PKPbc	22 22 42.2	+0.2		
	comp=Z,11nm,0.8s,baz=336,slow=1.7,SNR=50								
CN2	Changchun	146.54	336	*e*PKPbc	PKPbc	22 22 40.2	-2.3		
SDNR	Sundarnagar	147.49	53	*e*PKP	PKPab	22 22 47.0	-0.7		
KSRS	Korea Array	150.31	325	PKP	PKPdf	22 22 48.0	+0.8		
	comp=Z,14nm,1.0s,baz=60,slow=0.8,SNR=21								
KSRS				PKPbc	PKPbc	22 22 52.2	-0.2		
	comp=Z,14nm,1.0s,baz=18,slow=1.4,SNR=44								
BJI	Beijing	153.02	344	P	PKPbc	22 22 58.0	-0.6		
BJI				pmax	pmax				
	comp=Z,11nm,0.7s								
HHC	Hu-ho-hao-te	153.14	352	*e*PKPbc	PKPdf	22 22 49.9	-1.5		
HHC				PKPab	PKPab	22 23 11.2	+0.6		
HHC				pPKP	pPKPdf	22 23 16.4	-1.0		
HHC				sPKP		22 23 27.2			
HHC				PKS		22 26 22.9			
HHC				PP	PP	22 26 44.9	+1.7		
HHC				SKS	SKSdf	22 29 45.0	-5.1		
HHC				SKKS	SKKSac	22 33 22.9	-2.9		
HHC				SS	SS	22 46 08.9	+0.6		
HHC				AMB	AMB				
	comp=Z,47nm,6.9s								
HHC				LR	LR				
	comp=N,440nm,15.5s								
HHC				LR	LR				
	comp=E,200nm,15.5s								
HHC				LR	LR				
	comp=Z,260nm,14.4s								
GTA	Gaotai	154.06	13	PKPbc	PKPdf	22 22 54.4	+1.7		
GTA				pPKP	pPKPdf	22 23 17.7	-1.0		
GTA				sPKP		22 23 26.7			
GTA				SKKS	SKKSac	22 33 35.2	+4.4		
GTA				AMB	AMB				
	comp=Z,100nm,5.7s								
LZH	Lanzhou	157.99	7	*e*PKP	PKPdf	22 22 56.0	-2.0		
LZH				pPKP	pPKPdf	22 23 23.2	-0.9		
LZH				PKPab	PKPab	22 23 31.2	-0.3		
LZH				sPKP		22 23 34.2			
LZH				LR	LR				
	comp=E,1μm,16.0s								
LZH				LR	LR				
	comp=Z,2μm,18.0s								
LSA	Lhasa	158.67	41	*e*PKPdf	PKPdf	22 22 59.0	0.0		
NJ2	Nanjing	159.20	331	*e*PKP	PKPdf	22 22 58.1	-1.5		
WHN	Wuhan	162.38	339	PKPbc	PKPab	22 23 49.3	-1.5		
GYA	Guiyang	167.77	2	*e*PKP	PKPdf	22 23 05.9	-1.9		
GYA				pPKP	pPKPdf	22 23 33.0	-0.9		
GYA				sPKP		22 23 41.8			
GYA				PKPab	PKPab	22 24 16.0	+1.5		
GYA				PKS		22 26 38.4			
GYA				PP	PP	22 28 05.8	+4.0		
GYA				SKKS	SKKSac	22 34 41.2	-0.8		
GYA				SS	SS	22 48 43.0	+1.3		
GYA				AMB	AMB				
	comp=Z,120nm,8.4s								
GYA				LR	LR				
	comp=N,120nm,22.7s								
GYA				LR	LR				
	comp=E,110nm,23.0s								
GYA				LR	LR				
	comp=Z,140nm,22.0s								
KMI	Kunming	168.37	20	PKP	PKPdf	22 23 07.4	-0.8		
CMAR	Chiang Mai Arr	171.11	60	PKP	PKPdf	22 23 09.2	-0.8		
	comp=Z,2.3nm,1.1s,baz=280,slow=3.5,SNR=5.4								

KRSC 06 22:19:04.3±0.4, 53.98N×161.30E, h20km±15km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	Mys Kozlova	0.63	23	*i* P	Pb	22 19 15.4	-1.2
MKZ				*e*S	Sb	22 19 22.9	-2.1
KII	Karymskiy	1.09	274	*e*P	Pn	22 19 25.0	+0.6
KII				*e*S	Sb	22 19 39.5	+1.2
SPN	Mys Shipunski	1.17	221	P	Pn	22 19 23.9	-1.5
SPN				*e*S	Sb	22 19 38.2	-2.2
NLC	Nalytchevo	1.42	236	P	Pn	22 19 28.4	-0.5
NLC				*e*S	Sn	22 19 45.7	-1.3
AVH	Avacha	1.69	246	*e*P	Pn	22 19 33.3	+0.7
AVH				*e*S	Sn	22 19 54.0	+0.5
PET	Petropavlovsk	1.85	240	P	Pn	22 19 35.0	+0.2
PET				*e*S	Sn	22 19 56.9	-0.6
BZGR	Bezymyannyi-Gr	2.00	350	S	Sn	22 20 03.5	+2.3
GNL	Ganaly	2.01	263	*e*P	Pn	22 19 38.9	+1.9
GNL				*e*S	Sn	22 20 03.8	+2.3
KPT	Kopyto	2.08	343	P	Pn	22 19 39.8	+1.7
KPT				S	Sn	22 20 04.9	+1.5
KLY	Klyuchi	2.37	351	S	Sn	22 20 12.0	+1.6
KBTR	Krutoberegovo	2.40	21	*e*P	Pn	22 19 42.0	-0.3
KBTR				S	Sn	22 20 09.9	-1.2
SRDR	Sredinnyy	2.51	339	P	Pn	22 19 45.2	+1.3

IDC 06 22:27:01.1±2.2, 58.63S×25.51W, h0km, mb4.0/2, mb1 4.0/2, mb1mx3.7/14, mbtmp4.0/2, Error ellipse: s-maj=91.3km s-min=46.7km az=161.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	52.61	305	P	P	22 36 17.1	+0.6
	0.7nm,0.6s,baz=198,slow=5.8,SNR=5.2						
TORD	Torodi Ar. Bea	74.89	27	P	P	22 38 43.5	+0.1
	0.8nm,0.4s,baz=201,slow=6.1,SNR=28						
INK	Inuvik	148.35	318	PKPbc	PKPbc	22 46 47.3	-0.2
	2.1nm,0.4s,baz=86,slow=7.7,SNR=5.4						
ILAR	Eielson Array	152.47	308	PKPbc	PKPbc	22 46 57.1	-0.3
	1.6nm,0.8s,baz=96,slow=2.7,SNR=18						
KDAK	Kodiak Island	152.70	291	PKPbc	PKPbc	22 46 58.1	0.0
	2.3nm,0.5s,baz=167,slow=3.9,SNR=6.5						

NIED ***06*** *22:38:00, 36.40N×141.80E, h23km, Mw4.1 Best double couple: Mo1.62000×10^15 NP1:φs27.00000°, δ66.00000°, λ100.00000°. NP2:φs183.00000°, δ26.00000°, λ68.00000°.*
IDC ***06*** *22:38:48.4±1.4, 36.37N×141.88E, h0km, mb4.1/12, mb1 4.1/13, mb1mx4.0/25, mbtmp4.1/13, ML4.0/1, MS3.3/1, Ms1 3.3/1, ms1mx2.9/39, Error ellipse: s-maj=32.3km s-min=26.6km az=137.0*
JMA ***06*** *22:38:50.7±0.2, 36.36N×141.85E, h81km±4km, M3.8*
BJI ***06*** *22:38:51.7, 35.60N×141.60E, h55km, mb4.5/4*
NEIC ***06*** *22:38:52.7±2.4, 35.62N×141.65E, h56km±17km, mb4.3/5, Error ellipse: s-maj=21.5km s-min=13.2km az=119.0*

ISC 06 22:38:50.0±2.2, 36.33N±0.04×141.92E±0.07, h14km±13km, n37, σ0.93/42, mb4.1/19, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	1.07	234	P	Pb	22 39 10.5	+0.3
CHOJ				S	Sb	22 39 25.8	+1.8
JHO	Hitachi	1.12	285	P	Pb	22 39 10.3	-0.9
JHO				S	Sb	22 39 25.8	+0.1
ONAJ	Iwakimizuishiy	1.18	311	P	Pn	22 39 11.2	-0.9
ONAJ				*e*S	Sb	22 39 27.5	+0.1
JFK	Kawauchi	1.33	321	P	Pn	22 39 14.1	-0.1
JFK				*e*S	Sn	22 39 31.0	-0.6
JFT	Otama	1.73	313	P	Pn	22 39 19.9	+0.2
JMM	Marumori	1.77	330	P	Pn	22 39 20.0	-0.3
MAJO	Matsushiro	3.00	275	*e*Pn	Pn	22 39 37.7	+0.6
MAT	Matsushiro	3.00	275	P	Pn	22 39 38.4	+1.3
MAT				S	Sn	22 40 13.8	+0.9
JHJ	Hachijo jima 2	3.66	209	Pn	Pn	22 39 46.1	-0.1
	29nm,0.3s,baz=262,slow=18,SNR=9.2						
JHJ				Sn	Sn	22 40 27.1	-2.0
	31nm,0.3s,baz=86,slow=22,SNR=6.8						
KSRS	Korea Array	11.27	280	Pn	Pn	22 41 34.5	+3.9
	0.2nm,0.3s,baz=93,slow=14,SNR=9.0						
KSRS				LR	LR	22 45 54.5	
	comp=Z,144nm,18.4s,baz=342,slow=38						
INCN	Inchon	12.29	280	Pn	Pn	22 41 43.8	-0.8
BJT	Baijiatuan	20.55	288	*e*P	P	22 43 26.3	-1.8
TATO	Taipei	20.86	243	*e*P	P	22 43 24.4	-7.1
YULB	Yu-li	21.99	240	*e*P	P	22 43 36.0	-7.8
	12nm,0.5s,mb4.6						
TWG	Pinlang	22.52	239	*e*P	P	22 43 42.7	-6.7
ENH	Enshi	27.69	267	*e*P	P	22 44 32.2	-5.5
	6.2nm,0.6s,mb4.4						
ULN	Ulaanbaatar	28.09	305	*e*P	P	22 44 40.5	-0.6
	2.1nm,0.4s,mb4.1						
SONM	Songino Array	28.52	305	P	P	22 44 45.5	+0.6
	5.7nm,0.8s,mb4.3,baz=102,slow=1.1,SNR=27						
BUKP	Musuan	32.23	213	*e*P	P	22 45 10.7	-7.2
GTA	Gaotai	33.16	288	*e*P	P	22 45 26.4	+0.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
CHTO	Chiang Mai	41.52	257	*e*P	P	22 46 30.8	-6.3
	comp=Z,4.8nm,0.9s,mb4.1						
CMAR	Chiang Mai Arr	41.72	256	P	P	22 46 39.5	+0.8
	comp=Z,1.3nm,0.4s,mb3.9,baz=53,slow=5.6,SNR=6.5						
LSA	Lhasa	42.68	276	*e*P	P	22 46 43.8	-2.6
	comp=Z,2.7nm,0.7s,mb4.1						
ZAA0	Zalesovo Array	42.69	313	*e*P	P	22 46 45.2	-0.9
ZALV	Zalesovo Beam	42.69	313	P	P	22 46 46.2	+0.1
	comp=Z,3.2nm,0.8s,mb4.1,baz=91,slow=6.4,SNR=12						
MKAR	Makanchi Array	44.84	303	P	P	22 47 03.6	+0.1
	comp=Z,1.5nm,0.7s,mb3.9,baz=94,slow=8.6,SNR=4.5						
KURK	Kurchatov	46.69	309	P	P	22 47 18.7	+0.7
	comp=Z,2.7nm,0.6s,mb4.3,baz=84,slow=8.6,SNR=3.9						
ILAR	Eielson Array	49.87	32	P	P	22 47 43.7	+1.3
	comp=Z,0.3nm,0.8s,mb3.4,baz=280,slow=6.0,SNR=2.6						
BVAR	Borovoye Array	51.34	313	P	P	22 47 54.1	+0.4
	comp=Z,1.0nm,0.7s,mb3.9,baz=97,slow=5.8,SNR=6.6						
AML	Almayashu	51.90	299	*e*P	P	22 47 56.4	-1.6
	comp=Z,7.5nm,1.0s,mb4.6						
AKTK	Aktyubinsk	59.45	312	P	P	22 48 52.5	+0.4
AKTO	Aktyubinsk	59.45	312	P	P	22 48 52.5	+0.4
	comp=Z,1.9nm,0.9s,mb4.1,baz=63,slow=10,SNR=5.4						
FINES	FINESS Array B	69.62	333	P	P	22 49 59.1	+0.7
	comp=Z,2.7nm,1.0s,mb4.1,baz=46,slow=11,SNR=5.3						
NOA	NORSAR Array B	74.99	338	P	P	22 50 30.8	+0.3
	comp=Z,1.4nm,0.8s,mb3.9,baz=39,slow=5.7,SNR=5.1						
AKASG	Malin Array Be	75.10	323	P	P	22 50 31.1	-0.2
	comp=Z,3.0nm,0.8s,mb4.3,baz=46,slow=7.0,SNR=9.0						
BRTR	Keskin Array B	79.62	312	P	P	22 50 58.0	+1.2
	comp=Z,0.4nm,0.5s,mb3.6,baz=234,slow=5.9,SNR=4.5						
LPAZ	La Paz	146.69	61	PKPbc	PKPbc	22 58 32.4	+0.6
	comp=Z,0.3nm,0.5s,baz=329,slow=5.9,SNR=2.6						

IDC ***06*** *22:40:59.0±0.4, 8.07S×117.62E, h0km, mb5.2/20, mb1 5.2/20, mb1mx5.1/23, mbtmp5.2/20, ML5.9/1, MS5.5/25, Ms1 5.5/25, ms1mx5.4/31, Error ellipse: s-maj=16.5km s-min=8.4km az=63.0*
BJI ***06*** *22:40:59.7, 8.10S×117.70E, h10km, mB5.7/42, mb5.2/52, Ms5.7/69, Ms7 5.4/59*
ISCJB ***06*** *22:41:00.1±0.1, 8.18S±0.02×117.74E±0.02, h13km, mb5.6/124, MS5.5/209, Error ellipse: s-maj=2.8km s-min=2.3km az=19.2*
MOS ***06*** *22:41:03.1±1.6, 8.10S×117.69E, h33km, mb5.7/48, MS5.4/58, Error ellipse: s-maj=8.2km s-min=5.7km az=115.2*
NEIC ***06*** *22:41:03.7±1.6, 8.13S×117.67E, h31km±11km, mb5.8/51, MS5.5/165, MW5.9, MW5.7, Error ellipse: s-maj=6.2km s-min=4.1km az=55.0, Moment Tensor Solution. s62 Moment tensor: Scale 10^17Nm; Mrr0.35; Mθθ-4.89; Mφφ4.54; Mrθ-1.63; Mθφ-1.11; Mφr-0.31; Best double couple: Mo5.10000×10^17 NP1:φs130.00000°, δ78.00000°, λ-170.00000°. NP2:φs37.00000°, δ80.00000°, λ-13.00000°. Principal axes: T 4.6700, Plg1.0000°, Azm83.0000°; N 0.8100, Plg74.0000°, Azm179.0000°; P -5.4900, Plg15.0000°, Azm353.0000°;*
NEIC Felt [VII] at Pekat; [IV] at Dompu and Sumbawa Besar; [III] at Bima. Felt [IV] at Denpasar, Bali and at Mataram, Lombok. Felt at Kuta, Bali.
DJA ***06*** *22:41:03, 8.29S×117.73E, h10km, Mw6.3/55*
GCMT ***06*** *22:41:06.5±0.1, 8.14S×117.73E, h27km, MW5.9, Moment Tensor Solution. s82,c158; s62,c90; Moment tensor: Scale 10^17Nm; Mrr0.10±.08; Mθθ-9.14±.08; Mφφ9.05±.09; Mrθ-2.94±.18; Mθφ-1.93±.07; Mφr-0.85±.17; Best double couple: Mo9.80000×10^17 NP1:φs130.00000°, δ76.00000°, λ-171.00000°. NP2:φs38.00000°, δ81.00000°, λ-14.00000°. Principal axes: T 9.3000, Plg4.0000°, Azm85.0000°; N 0.9000, Plg73.0000°, Azm187.0000°; P -10.2000, Plg16.0000°, Azm354.0000°; Data Used: II IU IC G CN. Surface waves: sta= 93, comp=201, per= 50.*

ISC 06 22:41:02.0±0.1, 8.15S±0.02×117.77E±0.02, h14km, h14km±1.3km: pP-P, n657, σ1.9 34/508, mb5.6/124, MS5.5/209, 31C-47D, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHKI	Kahang-Kahang	2.15	264	P	Pn	22 41 35.8	-1.6
KHKI				S	Sn	22 42 09.2	+5.3
SRBI	Singaraja	2.53	271	P	Pn	22 41 41.4	-1.3
SRBI				S	Sn	22 42 16.7	+3.4
DNP	Denpasar	2.58	258	P	Pn	22 41 43.2	-0.2
IGBI	Denpasar	2.68	255	P	Pn	22 41 43.8	-0.9
WSI	Waingapu	2.92	121	P	Pn	22 41 49.1	+1.1
NBBI	Negara	3.12	266	P	Pn	22 41 49.4	-1.4
NBBI				S	Sn	22 42 31.8	+3.8
BKSI	Bulukumba	3.66	40	P	Pn	22 41 57.8	-0.4
KAPI	Kappang	3.69	32	Pn	Pn	22 41 57.1	-1.5
	22μm,0.3s						
KAPI	Kappang	3.69	32	Pn	Pn	22 41 56.9	-1.7
	984nm,0.3s,baz=212,slow=4.8,SNR=884						
KAPI				Sn	Sn	22 42 38.7	-3.2
	364nm,0.3s,baz=161,slow=18,SNR=6.1						
KAPI				LR	LR	22 43 40.0	
	comp=Z,94μm,18.1s,baz=224,slow=44						
KMMI	Kalianget	3.92	286	P	Pn	22 42 02.4	+0.6
GMJI	Gumukmas	4.28	268	P	Pn	22 42 06.2	-0.6
MMRI	Maumere	4.45	97	P	Pn	22 42 09.2	+0.1
SPSI	Sidrap Palu	4.61	26	P	Pn	22 42 12.3	+1.0
KBKI	Kotabaru	5.07	342	P	Pn	22 42 16.5	-1.2
	23nm4μm,1.2s						
KRKI	Karangkates	5.26	270	P	Pn	22 42 20.5	+0.2
BBSI	Bau Bau	5.45	61	P	Pn	22 42 26.0	+3.1
	5.7nm2μm,1.2s						
TTSI	Tana Toraja	5.47	22	P	Pn	22 42 24.1	+1.0
	13nm2μm,1.1s						
PWJI	Pagerwojo	5.91	271	P	Pn	22 42 28.6	-0.5
	23nm4μm,0.8s						
SJI	Sawahan	5.96	274	P	Pn	22 42 30.3	+0.5
	17nm3μm,1.0s						
NGJI	Ngawi	6.30	277	P	Pn	22 42 35.4	+0.9
	54nm2μm,0.9s						
KDI	Kendari	6.37	49	P	Pn	22 42 38.5	+3.0
	2.6nm6μm372nm,1.0s						
PCJI	Pacitan	6.52	269	P	Pn	22 42 38.2	+0.6
	3μm,1.3s						
UGM	Wanagama	7.18	271	P	Pn	22 42 47.0	+0.4
	23nm3μm,0.9s						
SMRI	Semarang	7.34	278	P	Pn	22 42 48.6	-0.3
	29nm2μm,1.0s						
YOGI	Y

KAKA eS Sn 22 47 15.7 -7.1
KAKA Kakadu 15.12 109 ePn Pn 22 44 33.4 -2.0
3µm,1.2s
KAKA eSn Sn 22 47 22.1 -0.7
KAKA Kakadu 15.12 109 P Pn 22 44 33.7 -1.7
6µm759nm,1.0s
MNAI Manna 15.20 283 P Pn 22 44 37.2 +0.9
888nm,1.1s
KSI Kapahiang 15.74 286 P Pn 22 44 45.0 +1.6
1µm,1.5s
CTBH Cotabato--PC H 16.58 23⇑ iP Pn 22 44 57.3 +3.1
BATP Bataraza 16.83 0 eP Pn 22 45 00.9 +3.5
PAGZ Pagadian 16.85 20 eP Pn 22 45 01.9 +4.3
DMPH Davao City--Mi 16.99 27 eP Pn 22 45 02.9 +3.5
DAV Davao City (W) 17.01 27 ePn Pn 22 45 00.4 +0.8
DAV P 22 45 04.0
DAV Sn Sn 22 48 09.6 +1.0
DAV LR LR 22 52 15.3
DAV Davao City (W) 17.01 27 P Pn 22 45 04.0 +4.3
36nm,0.3s,baz=204,slow=14,SNR=6.6
DAV LR LR 22 52 15.3
comp=Z,19µm,20.3s,baz=160,slow=40
DAV Davao City (W) 17.01 27 Pn Pn 22 45 06.5 +6.9
SNR=18
MYKOM Kota Tinggi 17.03 305 P Pn 22 45 01.1 +1.1
RGRI Rengat 17.22 296 P Pn 22 45 06.3 +4.0
762nm,1.7s
KRJI Kerinci 17.31 289 P Pn 22 45 06.0 +2.5
3µm,1.3s
KGM Kluang 17.59 304 P Pn 22 45 08.1 +1.1
SDSI Sungai Dareh 17.79 293 P Pn 22 45 10.3 +0.9
595nm,1.9s
CGP Cagayan de Oro 17.88 23⇓ eP Pn 22 45 14.6 +4.1
BKNI Bangkinang 18.68 296 P Pn 22 45 22.2 +1.9
1µm,1.9s
PDSI Padang 18.68 292 P Pn 22 45 21.5 +1.2
509nm,1.7s
TBP Tagbilaran 18.73 19 eP Pn 22 45 21.7 +0.7
PPI Padang Panjang 18.92 293 P Pn 22 45 24.8 +1.6
964nm,1.4s
CUYO Cuyo Island 19.15 10 eP sP 22 45 37.1 +6.3
GUIM Jordan 19.26 15 eP Pn 22 45 29.8 +2.5
ENPP El Nido 19.30 5 eP Pn 22 45 29.4 +1.6
LLP Lapu-Lapu 19.36 19 eP Pn 22 45 28.2 -0.2
BAKI Biak 19.53 70 P Pn 22 45 31.9 +1.3
3µm,1.4s
FRIM Kepong 19.68 304 P Pn 22 45 33.4 +1.0
SISI Saibi 19.80 289 P Pn 22 45 34.1 +0.3
5µm308nm,1.3s
KTGM Kuala Trenggan 19.81 312 P Pn 22 45 35.5 +1.7
WRAB Tennant Creek 19.88 128⇑ eP Pn 22 45 34.0 -0.7
905nm,1.3s
WRAB eS Sn 22 49 12.6 -5.4
WRAB Tennant Creek 19.88 128⇑ eP Pn 22 45 34.0 -0.6
WRAB eS Sn 22 49 12.6 -5.4
WRAB pmax pmax
comp=Z,905nm,1.3s
WRAB Tennant Creek 19.88 128 P Pn 22 45 32.0 -2.6
comp=Z,1µm,0.9s,SNR=29
WB2 Warramunga Arr 19.88 128⇑ eP Pn 22 45 34.0 -0.7
WB2 eS Sn 22 49 13.6 -4.6
MNSI Mandailing Nat 20.19 295 P P 22 45 38.8 +2.3
comp=Z,367nm,1.6s
OTRP Odiongan 20.81 12 eP P 22 45 50.7 +7.5
IPM Ipoh 20.89 306 P P 22 45 46.8 +2.7
COCO West Island 20.99 257 eP P 22 45 42.4 -2.7
comp=Z,563nm,1.3s
COCO eS S 22 49 31.9 -6.9
COCO LR LR
comp=Z,13µm,21.0s,MS5.3
COCO West Island 20.99 257 eP P 22 45 42.4 -2.7
COCO eS S 22 49 31.9 -6.9
COCO pmax pmax
comp=Z,563nm,1.3s
COCO MLR MLR
comp=Z,13µm,21.0s,MS5.3
KULM Kulim 21.67 307⇓ eP P 22 45 52.3 -0.2
comp=Z,224nm,0.9s,mb5.6
KULM eS S 22 49 49.2 -3.1
KULM Kulim 21.67 307 P P 22 45 54.5 +2.0
PSI Prapat 21.71 299 P P 22 45 53.2 +0.2
comp=Z,165nm,1.1s,mb5.4,baz=136,slow=6.3,SNR=24
PSI S S 22 49 50.4 -2.8
comp=Z,2.8nm,0.4s,baz=169,slow=5.2,SNR=2.1
PSI Prapat 21.71 299 P P 22 45 53.2 +0.2
PSI S S 22 49 50.4 -2.7
PSI pmax pmax
comp=Z,165nm,1.1s,mb5.4
PSI smax
comp=N,3.0nm,0.4s
ASAR Alice Springs 21.84 137 P P 22 45 54.2 -0.1
comp=N,109nm,0.6s,mb5.5,baz=310,slow=9.7,SNR=160
ASAR S S 22 50 00.2 +4.7
comp=N,28nm,0.8s,baz=315,slow=23,SNR=4.6
ASAR Alice Springs 21.84 137 P P 22 45 54.2 -0.1
ASAR S S 22 50 00.2 +4.7
ASAR pmax pmax
comp=Z,109nm,0.6s
ASAR smax
comp=N,28nm,0.8s
LUBP Lubang 21.88 6 eP P 22 46 02.9 +8.2
TGY Tagaytay City 22.33 8 P P 22 46 00.9 +1.5
comp=N,111nm,0.3s,mb5.7,baz=269,slow=4.3,SNR=7.0
TGY LR LR 22 57 19.1
comp=N,22nm,18.1s,baz=299,slow=44
TGY Tagaytay City 22.33 8 P P 22 46 00.9 +1.4
TGY pmax pmax
comp=Z,111nm,0.3s
TGY MLR MLR
comp=Z,22nm,18.1s
TSI Tuntungan 22.38 300 P P 22 46 01.7 +1.6
PVCP Virac 22.52 16 eP P 22 46 04.2 +2.8
KLBR Kellerberrin 23.32 180 eP P 22 46 08.6 -1.3
comp=Z,98nm,0.4s,mb5.6
KLBR eS S 22 50 22.1 +0.2
TPTI 23.45 298 P P 22 46 10.2 -1.3
comp=Z,7µmcomp=Z,384nm,1.8s,mb5.5
BALP Baler 24.03 9 eP P 22 46 20.0 +3.3
BOLP Bolinao 24.46 5 eP P 22 46 25.0 +4.4
FORT Forrest 24.48 158 eP P 22 46 20.5 -0.3
comp=Z,473nm,0.7s,mb6.0
FORT eS S 22 51 01.6 +21
FORT Forrest 24.48 158⇓ eP P 22 46 20.8 0.0
comp=Z,580nm,0.8s,mb6.1
FORT eS S 22 50 41.5 +0.7
BCPH Baguio City Da 24.53 7⇓ eP P 22 46 21.8 +0.5
NWAO Narrogin (SRO) 24.66 181 eP P 22 46 22.3 0.0
comp=Z,323nm,1.0s,mb5.8
NWAO eS S 22 50 46.9 +3.3
NWAO LR LR
comp=Z,9µm,19.0s,MS5.3
NWAO Narrogin (SRO) 24.66 181 P P 22 46 22.4 0.0
comp=Z,54nm,0.7s,mb5.2,baz=356,slow=10.0,SNR=22
NWAO S S 22 50 48.5 +5.0
comp=Z,60nm,0.7s,baz=252,slow=20,SNR=2.6
NWAO LR LR 22 55 23.6
comp=Z,7µm,21.0s,MS5.2,baz=337,slow=35
NWAO Narrogin (SRO) 24.66 181 P P 22 46 22.4 +0.1
NWAO S S 22 50 48.5 +4.9
NWAO pmax pmax
comp=Z,54nm,0.7s
NWAO smax
comp=N,60nm,0.7s
NWAO MLR MLR
comp=Z,7µm,21.0s
NWAO Narrogin (SRO) 24.66 181 P P 22 46 31.0 +8.7
SNR=10
CAUP Cauayan 25.25 9 eP P 22 46 31.6 +3.8
COEN Coen 25.58 105⇑ eP P 22 46 30.6 -0.3
COEN Coen 25.58 105 P P 22 46 31.1 +0.2
comp=Z,2µm,1.2s,mb6.4
QIZ Qiongzhong 28.11 344 P P 22 46 53.8 +0.2
QIZ pP pP 22 46 56.9 -1.0
QIZ sP sP 22 46 58.4 -1.2
QIZ S S 22 51 38.8 +0.4
QIZ sS sS 22 51 46.1 +0.6
QIZ pmax pmax
comp=Z,46nm,1.9s,mb4.8
QIZ pmax pmax
comp=Z,1µm,4.0s
QIZ LR LR
comp=N,8µm,14.8s
QIZ LR LR
comp=Z,8µm,14.8s,MS5.4
QIZ Qiongzhong 28.11 344 eP P 22 46 53.9 +0.2
comp=Z,87nm,1.3s,mb5.2
QIZ eS S 22 51 37.4 -1.0
QIZ LR LR
comp=Z,7µm,20.0s,MS5.2
PMG Port Moresby 29.07 95 P P 22 47 03.4 +1.1
CTA Charters Tower 30.01 116⇑ iP P 22 47 11.0 +0.5
comp=Z,40nm,0.8s,mb5.2
CTA eS S 22 52 08.2 -0.2
CTA Charters Tower 30.01 116 P P 22 47 10.8 +0.3
CTA LR LR 23 01 06.4
CTA Charters Tower 30.01 116 P P 22 47 10.8 +0.3
comp=Z,42nm,0.8s,mb5.2,baz=289,slow=10,SNR=21
CTA LR LR 23 01 06.4
comp=Z,30µm,19.6s,MS5.9,baz=291,slow=40
CTA Charters Tower 30.01 116 P P 22 47 10.8 +0.3
CTA pmax pmax
comp=Z,42nm,0.8s
CTA MLR MLR
comp=Z,30µm,19.6s
CTAO Charters Tower 30.01 116⇑ eP P 22 47 11.2 +0.7
comp=Z,147nm,1.2s,mb5.6
CTAO eS S 22 52 15.2 +6.8
CTAO LR LR
comp=Z,28µm,20.0s,MS5.9
CTAO Charters Tower 30.01 116⇑ eP P 22 47 11.2 +0.7
CTAO eS S 22 52 15.2 +6.8
CTAO pmax pmax
comp=Z,147nm,1.2s,mb5.6
CTAO MLR MLR
comp=Z,28µm,20.0s,MS5.9
BDT Bhumibol Dam 31.32 324 P P 22 47 21.5 -0.6
comp=Z,40nm,1.0s,mb5.2
CM31 Chiang Mai Arr 32.31 325 eP P 22 47 28.8 -2.0
CM31 eS S 22 52 42.1 -2.2
CM31 LR LR
comp=Z,11µm,19.0s,MS5.6
CM31 Chiang Mai Arr 32.31 325 eP P 22 47 28.6 -2.3
comp=Z,89nm,1.0s,mb5.5
CMAR Chiang Mai Arr 32.31 325 P P 22 47 31.1 +0.2
comp=Z,20nm,0.6s,mb5.1,baz=153,slow=6.9,SNR=40
CMAR LR LR 23 00 47.9
comp=Z,13µm,19.3s,MS5.6,baz=333,slow=37
CMAR Chiang Mai Arr 32.31 325 P P 22 47 31.1 +0.3
CMAR pmax pmax
comp=Z,20nm,0.6s
CMAR MLR MLR
comp=Z,13µm,19.3s
NACB Ninganchiao 32.34 7 eP P 22 47 29.5 -1.5
NACB eS S 22 52 45.2 +0.6
STKA Stephens Creek 32.38 140 eP P 22 47 30.9 -0.4
comp=Z,80nm,0.8s,mb5.6
STKA eS S 22 52 42.6 -2.6
STKA Stephens Creek 32.38 140 eP P 22 47 31.5 +0.2
comp=Z,18nm,0.8s,mb5.0
STKA PcP PcP 22 50 23.1 +4.2
STKA eS S 22 52 46.1 +0.8
STKA Stephens Creek 32.38 140 P P 22 47 31.8 +0.5
comp=Z,53nm,0.5s,mb5.6,baz=317,slow=9.5,SNR=83
STKA LR LR 23 02 59.0
comp=Z,9µm,18.7s,MS5.5,baz=306,slow=41
CHG Chiang Mai 32.60 325⇓ P P 22 47 33.6 +0.3
CHTO Chiang Mai 32.60 325⇓ eP P 22 47 33.3 0.0
comp=Z,289nm,1.9s,mb5.9
CHTO PP PP 22 48 46.0 -1.1
CHTO eS S 22 52 47.7 -1.1
CHTO LR LR
comp=Z,11µm,20.0s,MS5.5
CHTO Chiang Mai 32.60 325⇓ eP P 22 47 33.3 0.0
CHTO 22 48 46.0
CHTO eS S 22 52 47.7 -1.1
CHTO pmax pmax
comp=Z,289nm,1.9s,mb5.9
CHTO MLR MLR
comp=Z,11µm,20.0s,MS5.5
CHTO Chiang Mai 32.60 325 P P 22 47 34.6 +1.3
SNR=19
YHNB Yeheng 32.81 6 eP P 22 47 34.9 -0.2
YHNB eS S 22 52 52.6 +0.7
YHNB LR LR
comp=Z,5µm,19.0s,MS5.3
QZH Quanzhou 32.90 1 P P 22 47 33.0 -2.9
QZH S S 22 52 52.4 -1.0
QZH LR LR
comp=N,10µm,16.6s,MS5.6
QZH LR LR
comp=E,5µm,18.0s,MS5.6
QZH LR LR
comp=Z,10µm,16.5s,MS5.6
CHRT Chiangrai 33.00 328 PG P 22 47 36.0 -0.8
comp=Z,1µm,1.1s,mb6.7
TATO Taipei 33.12 6 eP P 22 47 37.5 -0.4
TATO eS S 22 52 57.9 +1.1
TATO LR LR
comp=Z,4µm,20.0s,MS5.1
GUMO Guam 34.50 51 eP P 22 47 49.8 -0.2
GUMO eS S 22 53 20.9 +2.5
GUMO LR LR
comp=Z,3µm,20.0s,MS5.1
GUMO Guam 34.50 51 LR LR 23 01 40.1
comp=Z,3µm,20.8s,MS5.0,baz=222,slow=36
GYA Guiyang 36.05 343⇑ iP P 22 48 03.9 +0.7
GYA PP PP 22 49 27.8 +2.5
GYA S S 22 53 41.8 -0.2
GYA ScP ScP 22 54 15.4 -0.2
GYA pmax pmax
comp=Z,60nm,1.0s,mb5.5
GYA pmax pmax
comp=Z,530nm,5.8s
GYA LR LR
comp=N,5µm,18.4s,MS5.5
GYA LR LR
comp=E,6µm,19.0s,MS5.5
GYA LR LR
comp=Z,8µm,18.4s,MS5.5
EIDS Eidsvold 36.05 122 eP P 22 48 05.5 +2.2
comp=Z,172nm,1.9s,mb5.7
KMI Kunming 36.17 337 P P 22 48 06.2 +2.0
KMI pP pP 22 48 09.3 +0.8
KMI sP sP 22 48 10.6 +0.4
KMI PP PP 22 49 30.3 +3.7
KMI PcP PcP 22 50 31.7 +1.9
KMI S S 22 53 45.6 +1.8
KMI sS sS 22 53 51.3 +0.4
KMI SS SS 22 56 10.0 -12
KMI ScS ScS 22 58 19.7 -2.2
KMI pmax pmax
comp=Z,570nm,3.9s
KMI LR LR
comp=N,11µm,11.5s,MS5.9
KMI LR LR
comp=E,10µm,14.5s,MS5.9
KMI LR LR
comp=Z,11µm,15.4s,MS5.8
TOO Toolangi 38.57 144 eP P 22 48 25.9 +1.4
TOO eS S 22 54 25.5 +5.3
WHN Wuhan 38.61 355 P P 22 48 24.7 -0.1
WHN PP PP 22 49 54.8 +1.4
WHN S S 22 54 16.8 -4.0
WHN LR LR
comp=N,8µm,14.4s,MS5.8
WHN LR LR
comp=E,6µm,11.4s,MS5.8
WHN LR LR
comp=Z,9µm,18.8s
ARMA Armidale 38.64 130 eP P 22 48 27.4 +2.3
ARMA eS S 22 54 24.3 +2.9
ARMA Armidale 38.64 130⇑ eP P 22 48 27.8 +2.6
comp=Z,185nm,1.3s,mb5.7
ENH Enshi 39.02 349⇓ eP P 22 48 27.9 -0.4
comp=Z,100nm,0.9s,mb5.5
ENH S S 22 54 26.8 -0.2
ENH LR LR
comp=Z,5µm,20.0s,MS5.4
SSE Sheshan 39.16 5 P P 22 48 29.6 +0.2
SSE sP sP 22 48 34.0 -1.5
SSE S S 22 54 32.3 +3.3
SSE sS sS 22 54 37.8 +1.6
SSE ScS ScS 22 58 38.2 -0.4
SSE pmax pmax
comp=Z,39nm,0.9s,mb5.1
SSE pmax pmax
comp=Z,240nm,4.7s
SSE LR LR
comp=N,3µm,16.6s,MS5.3
SSE LR LR
comp=E,2µm,16.4s,MS5.3
SSE LR LR
comp=Z,3µm,17.2s,MS5.1
CNB Canberra Magne 39.58 138 eP P 22 48 34.1 +1.1
CNB eS S 22 54 51.6 +16
NJ2 Nanjing 39.99 1 eP P 22 48 36.8 +0.5
NJ2 pP pP 22 48 41.3 +0.7
NJ2 sP sP 22 48 43.8 +1.4
NJ2 PP PP 22 50 13.1 +4.7
NJ2 S S 22 54 42.0 +0.5
NJ2 sS sS 22 54 50.0 +1.4
NJ2 pmax pmax
comp=Z,30nm,0.9s,mb5.0
NJ2 pmax pmax
comp=Z,950nm,5.9s
NJ2 LR LR
comp=N,4µm,20.8s
NJ2 LR LR
comp=E,4µm,15.0s
NJ2 LR LR
comp=Z,2µm,17.6s,MS5.0
RIV Riverview 39.99 135 eP P 22 48 38.4 +2.0
IMP Imphal 40.14 325 ePKP P 22 48 37.0 -0.7
AGT Agartala 41.04 322 i x P 22 48 41.0 -4.2
AGT i x x 22 49 24.0
CD2 Chengdu 41.09 342 P P 22 48 45.7 +0.2
CD2 pP pP 22 48 50.2 +0.4
CD2 sP sP 22 48 52.7 +1.2
CD2 PP PP 22 50 24.2 +3.7
CD2 PcS PcS 22 54 35.1 -1.0
CD2 S S 22 54 58.2 +0.2
CD2 sS sS 22 55 06.0 +0.8
CD2 SS SS 22 57 56.8 -4.1
CD2 ScS ScS 22 58 47.5 -2.6
CD2 pmax pmax
comp=Z,60nm,1.0s,mb5.2
CD2 pmax pmax
comp=Z,1µm,7.2s
CD2 LR LR
comp=N,9µm,16.8s,MS5.9
CD2 LR LR
comp=E,11µm,15.3s,MS5.9
CD2 LR LR
comp=Z,8µm,19.6s,MS5.6
HNR Honiara 41.69 95 P P 22 48 51.0 +0.3
comp=Z,218nm,0.8s,mb5.8,baz=223,slow=3.5,SNR=8.0
HNR LR LR 23 07 25.1
comp=Z,4µm,20.6s,MS5.3,baz=263,slow=38
HNR Honiara 41.69 95 P P 22 48 51.0 +0.3
HNR pmax pmax
comp=Z,219nm,0.8s,mb5.8
HNR MLR MLR
comp=Z,4µm,20.7s,MS5.3
SHL Shillong 41.92 324 ePKP P 22 48 52.0 -0.4
SHL ex x 22 55 11.0
CAL Calcutta 41.97 317 ePKP P 22 48 58.3 +5.4
CAL eS S 22 55 15.9 +4.6
VIS Vishakhapatnam 42.64 307 ePKP P 22 48 58.3 0.0
XAN Xi'an 42.79 349 P P 22 48 58.2 -1.1
XAN S S 22 55 20.9 -2.1
XAN pmax pmax
comp=Z,220nm,9.6s
XAN LR LR
comp=N,4µm,17.0s,MS5.4
XAN LR LR
comp=E,2µm,20.2s,MS5.4
XAN LR LR
comp=Z,2µm,17.1s,MS5.1
MOO Moorlands 42.86 148 eP P 22 49 01.9 +2.1
MOO eS S 22 55 39.9 +16
TIA Tai'an 44.13 359 P P 22 49 09.3 -0.8
TIA S S 22 55 39.2 -3.3
TIA LR LR
comp=N,3µm,19.2s,MS5.5
TIA LR LR
comp=E,3µm,14.5s,MS5.5
DGAR Diego Garcia 44.89 268 PFAKE 22 49 30.0 +13
DGAR LR LR
comp=Z,5µm,19.0s,MS5.5
LSA Lhasa 45.52 327 P P 22 49 19.6 -1.7
LSA LR LR
comp=N,4µm,2.6s
LSA LR LR
comp=Z,1µm,7.7s
LSA Lhasa 45.52 327⇓ eP P 22 49 22.3 +1.1
comp=Z,564nm,1.5s,mb6.3
LSA eS S 22 56 02.8 -0.1
LSA LR LR
comp=Z,8µm,19.0s,MS5.7
LSA Lhasa 45.52 327⇓ eP P 22 49 22.3 +1.0
LSA eS S 22 56 02.8 -0.2
LSA pmax pmax
comp=Z,565nm,1.5s,mb6.3
LSA MLR MLR
comp=Z,8µm,19.0s,MS5.7
ODAN Odare 45.59 321 eP P 22 49 22.0 +0.1
comp=Z,721nm,1.0s,mb6.5
TAPN Taplejung 45.75 322 eP P 22 49 23.7 +0.6
comp=Z,1µm,1.1s,mb6.8
TIY Taiyuan 45.89 354 eP P 22 49 21.8 -2.3
TIY S S 22 56 03.7 -4.4
TIY ScS ScS 22 59 12.5 -7.4
TIY SS SS 22 59 18.6 -15
TIY pmax pmax
comp=Z,480nm,7.3s
TIY LR LR
comp=N,4µm,13.6s,MS5.5
TIY LR LR
comp=E,780nm,12.8s,MS5.5
TIY LR LR
comp=Z,4µm,15.3s,MS5.5
LZH Lanzhou 45.91 344 ⇑P P 22 49 24.8 +0.6
LZH pP pP 22 49 26.7 -1.9
LZH S S 22 56 08.2 -0.2
LZH sS sS 22 56 16.0 +0.4
LZH SS SS 22 59 25.9 -7.6
LZH pmax pmax
comp=Z,91nm,1.6s,mb5.5
LZH pmax pmax
comp=Z,280nm,4.0s
LZH LR LR
comp=N,8µm,14.5s
LZH LR LR
comp=Z,11µm,16.1s,MS5.9
INCN Inchon 46.15 10⇓ eP P 22 49 26.3 +0.2
INCN eS S 22 56 12.3 +0.6
INCN LR LR
comp=Z,2µm,21.0s,MS5.1
RAMN Ramite 46.16 320 eP P 22 49 26.5 +0.1
comp=Z,903nm,1.2s,mb6.6
HYB Hyderabad 46.34 303 i P P 22 49 32.0 +4.1
HYB eS S 22 56 10.0 -5.1
HYB LR LR 23 08 20.0
comp=Z,8.5nm,20.0s
KSRS Korea Array 46.35 11 P P 22 49 27.6 -0.1
comp=Z,30nm,1.0s,mb5.2,baz=190,slow=8.8,SNR=54
KSRS LR LR 23 10 32.5
comp=Z,3µm,20.0s,MS5.2,baz=330,slow=38
KSRS Korea Array 46.35 11 P P 22 49 27.6 -0.1
KSRS pmax pmax
comp=Z,30nm,1.0s,mb5.2
KSRS MLR MLR
comp=Z,3µm,20.0s,MS5.2
JIRN Jiri 46.91 321 eP P 22 49 32.5 +0.2
comp=Z,992nm,1.1s,mb6.7
DL2 Dalian 46.95 4 P P 22 49 31.3 -1.1
DL2 S S 22 56 17.3 -5.9
DL2 pmax pmax
comp=Z,40nm,1.3s,mb5.2
DL2 pmax pmax
comp=Z,580nm,6.9s
DL2 LR LR
comp=N,2µm,16.2s
DL2 LR LR
comp=Z,2µm,20.2s,MS5.0
GUN Gumba 47.28 320 eP P 22 49 35.9 +0.7
comp=Z,1µm,1.2s,mb6.8
PKI Pulchoki 47.35 320 eP P 22 49 35.8 +0.1
comp=Z,571nm,1.4s,mb6.3
PKIN Phulchoki 47.36 320 eP P 22 49 35.6 -0.2
DMN Daman 47.57 320 eP P 22 49 37.4 0.0
comp=Z,569nm,1.2s,mb6.5
KKN Kakani 47.58 320 eP P 22 49 37.4 -0.1
comp=Z,631nm,1.4s,mb6.5
NGP Nagpur 47.89 308 ex P 22 49 36.9 -3.2

BJT	**Baijiatuau**	**47.95**	**358**⇓	*e*P		**P**	**22 49 39.8**	**-0.3**
	comp=Z,315nm,1.4s,mb6.2								
BJT				*e*S		**S**	**22 56 37.0**	**-0.3**
BJT				LR		LR			
	comp=Z,3μm,20.0s,MS5.3								
BJT	**Baijiatuau**	**47.95**	**358**⇓	*e*P		**P**	**22 49 39.8**	**-0.3**
BJT				*e*S		**S**	**22 56 37.0**	**-0.4**
BJT				pmax		pmax			
	comp=Z,315nm,1.4s								
BJT				MLR		MLR			
	comp=Z,3μm,20.0s								
BJI	**Beijing**	**47.97**	**358**	P		**P**	**22 49 39.7**	**-0.6**
BJI				PP		PP	22 51 34.0	+1.5
BJI				S		**S**	**22 56 34.0**	**-3.7**
BJI				pmax		pmax			
	comp=Z,28nm,1.2s,mb5.2								
BJI				pmax		pmax			
	comp=Z,650nm,7.1s								
BJI				LR		LR			
	comp=N,3μm,22.2s,MS5.5								
BJI				LR		LR			
	comp=E,5μm,18.5s,MS5.5								
BJI				LR		LR			
	comp=Z,2μm,24.7s								
GKN	**Gorkha**	**48.14**	**320**	*e*P		**P**	**22 49 41.8**	**0.0**	
	comp=Z,364nm,1.0s,mb6.4								
MAJO	**Matsushiro**	**48.42**	**22**⇓	*e*P		**P**	**22 49 42.5**	**-1.4**	
	comp=Z,60nm,1.1s,mb5.5								
MAJO				*e*S		**S**	**22 56 45.3**	**+1.0**	
MAJO				LR		LR			
	comp=Z,3μm,22.0s,MS5.2								
MAJO	**Matsushiro**	**48.42**	**22**⇓	*e*P		**P**	**22 49 42.5**	**-1.4**	
MAJO				*e*S		**S**	**22 56 45.3**	**+1.1**	
MAJO				pmax		pmax			
	comp=Z,60nm,1.1s,mb5.5								
MAJO				MLR		MLR			
	comp=Z,3μm,22.0s,MS5.2								
MAT	**Matsushiro**	**48.42**	**22**	P		**P**	**22 49 41.8**	**-2.1**	
MAT				S		**S**	**22 56 29.0**	**-15**	
LATR	**Latur**	**48.48**	**303**	*ex*		**P**	**22 49 40.3**	**-4.3**	
NOUC	**Port Laguerre**	**48.65**	**112**	*e*P		**P**	**22 49 46.8**	**+0.9**	
KOLN	**Koldanda**	**48.66**	**318**	*e*P		**P**	**22 49 45.5**	**-0.3**	
	comp=Z,160nm,0.7s,mb6.2								
DZM	**Mont Dzumac**	**48.78**	**112**	*e*P		**P**	**22 49 47.2**	**+0.3**	
	comp=Z,171nm,1.1s,mb6.0								
DZM				*e*S		**S**	**22 56 47.7**	**-2.1**	
	comp=Z,4μm,28.1s								
DZM				*e*LR		LR	23 03 45.0		
	comp=Z,11μm,23.1s								
DZM	**Mont Dzumac**	**48.78**	**112**	*e*P		**P**	**22 49 47.6**	**+0.7**	
BTO	**Baotou**	**49.03**	**352**	*e*P		**P**	**22 49 46.9**	**-1.6**	
HHC	**Hu-ho-hao-te**	**49.09**	**354**	*e*P		**P**	**22 49 48.5**	**-0.4**	
HHC				pP		pP	22 49 52.7	-0.6	
HHC				sP		sP	22 49 55.9	+0.9	
HHC				PcP		PcP	22 51 12.2	-0.2	
HHC				PP		PP	22 51 42.4	-0.3	
HHC				PcS		PcS	22 55 06.4	-2.3	
HHC				S		**S**	**22 56 51.4**	**-2.1**	
HHC				sS		sS	22 57 02.1	+1.4	
HHC				ScS		ScS	22 59 36.6	-4.2	
HHC				SS		SS	23 00 20.0	-4.9	
HHC				pmax		pmax			
	comp=Z,26nm,1.0s,mb5.2								
HHC				pmax		pmax			
	comp=Z,650nm,3.8s								
HHC				LR		LR			
	comp=N,3μm,18.3s,MS5.5								
HHC				LR		LR			
	comp=E,3μm,14.2s,MS5.5								
HHC				LR		LR			
	comp=Z,3μm,18.1s,MS5.4								
AKL	**Akola**	**49.26**	**306**	*ex*		x	22 49 57.8		
KAD	**Karad**	**49.95**	**301**	*e*PKP		**P**	**22 49 55.8**	**-0.1**	
SNY	**Shenyang**	**50.02**	**6**	⇓P		**P**	**22 49 54.4**	**-1.6**	
SNY				S		**S**	**22 57 03.0**	**-3.4**	
SNY				pmax		pmax			
	comp=Z,14nm,0.7s,mb5.1								
SNY				pmax		pmax			
	comp=Z,470nm,7.3s								
SNY				LR		LR			
	comp=N,2μm,23.5s								
SNY				LR		LR			
	comp=E,1μm,18.2s								
SNY				LR		LR			
	comp=Z,3μm,18.4s								
GTA	**Gaotai**	**50.16**	**342**	⇓P		**P**	**22 49 57.8**	**+0.7**	
GTA				pP		pP	22 50 01.8	+0.3	
GTA				sP		sP	22 50 04.4	+1.2	
GTA				S		**S**	**22 57 04.4**	**-4.2**	
GTA				pmax		pmax			
	comp=Z,20nm,1.4s,mb5.0								
GTA				LR		LR			
	comp=N,4μm,23.5s,MS5.6								
GTA				LR		LR			
	comp=E,5μm,24.3s,MS5.6								
GTA				LR		LR			
	comp=Z,3μm,28.0s,MS5.1								
BHPL	**Bhopal**	**50.30**	**309**	*e*PKP		**P**	**22 49 57.9**	**-0.5**	
POO	**Poona**	**50.79**	**302**	*ex*		x	22 50 06.0		
PTH	**Pithoragarh**	**52.06**	**318**	*e*PKP		**P**	**22 50 10.3**	**-1.3**	
AGRA	**Agra**	**52.20**	**314**	*e*PKP		**P**	**22 50 11.0**	**-1.6**	
VLA	**Vladivostok**	**52.62**	**13***c*	*i*P		**P**	**22 50 16.0**	**+0.5**	
VLA				pmax		pmax			
	comp=Z,92nm,1.1s,mb5.6								
JOSI	**Joshimath**	**53.14**	**318**	*e*PKP		**P**	**22 50 17.9**	**-1.7**	
JOSI				AMb		AMB	22 50 25.8		
	comp=Z,173nm,1.1s,mb5.9								
SONA	**Sohna**	**53.41**	**314**	*e*PKP		**P**	**22 50 18.1**	**-3.5**	
AYAN	**Aya Nagar**	**53.52**	**315**	*e*PKP		**P**	**22 50 20.1**	**-2.4**	
NDI	**New Delhi**	**53.58**	**315**	*ex*		x	22 50 14.2		
MDJ	**Mudanjiang**	**53.59**	**10**	P		**P**	**22 50 22.0**	**-0.6**	
MDJ				pP		pP	22 50 24.8	-2.3	
MDJ				PP		PP	22 52 20.2	-3.3	
MDJ				S		**S**	**22 57 53.7**	**-1.9**	
MDJ				SS		SS	23 01 35.4	-1.0	
MDJ				pmax		pmax			
	comp=Z,53nm,0.9s,mb5.5								
MDJ				pmax		pmax			
	comp=Z,590nm,5.6s								
MDJ				LR		LR			
	comp=N,2μm,41.4s								
MDJ				LR		LR			
	comp=E,2μm,32.6s								
MDJ				LR		LR			
	comp=Z,2μm,34.5s								
MDJ	**Mudanjiang**	**53.59**	**10**⇓	*e*P		**P**	**22 50 22.1**	**-0.5**	
	comp=Z,103nm,0.9s,mb5.8								
MDJ				*e*PcP		PcP	22 51 28.7	-0.4	
MDJ				*e*S		**S**	**22 57 56.1**	**+0.6**	
MDJ				LR		LR			
	comp=Z,2μm,19.0s,MS5.3								
KUDL	**Kundal**	**53.77**	**314**	*e*PKP		**P**	**22 50 21.7**	**-2.6**	
AJM	**Ajmer**	**54.18**	**311**	*ex*		x	22 50 30.7		
KHET	**Khetri**	**54.23**	**313**	*e*PKP		**P**	**22 50 25.6**	**-2.0**	
KKR	**Kurukshetra**	**54.62**	**316**	*e*PKP		**P**	**22 50 29.3**	**-1.2**	
KKR				AMb		AMB	22 50 43.8		
	comp=Z,112nm,0.7s,mb6.0								
KLP	**Kalpa**	**54.63**	**318**	*e*PKP		**P**	**22 50 29.7**	**-0.7**	
ERM	**Erimo**	**55.07**	**23**	*e*P		**P**	**22 50 30.3**	**-3.1**	
	comp=Z,52nm,1.0s,mb5.5								
ERM				*e*S		**S**	**22 58 16.3**	**+0.8**	
ERM				LR		LR			
	comp=Z,3μm,22.0s,MS5.3								
ERM	**Erimo**	**55.07**	**23**	*e*P		**P**	**22 50 30.3**	**-3.1**	
ERM				*e*S		**S**	**22 58 16.3**	**+0.8**	
ERM				pmax		pmax			
	comp=Z,52nm,1.0s,mb5.5								
ERM				MLR		MLR			
	comp=Z,3μm,22.0s,MS5.3								
WAKE	**Wake Island**	**55.34**	**60**	*e*P		**P**	**22 50 34.3**	**-1.5**	
WAKE				*e*S		**S**	**22 58 19.8**	**-0.2**	
WAKE				LR		LR			
	comp=Z,2μm,21.0s,MS5.2								
SDNR	**Sundarnagar**	**55.46**	**317**	*ex*		**P**	**22 50 40.0**	**+3.5**	
ULN	**Ulaanbaatar**	**56.57**	**351**⇓	*e*P		**P**	**22 50 44.0**	**-0.1**	
	comp=Z,301nm,1.5s,mb6.1								
ULN				*e*PP		PP	22 52 50.5	+0.3	
ULN				*e*S		**S**	**22 58 29.3**	**-6.1**	
ULN				LR		LR			
	comp=Z,5μm,19.0s,MS5.6								
ULN	**Ulaanbaatar**	**56.57**	**351**⇓	*e*P		**P**	**22 50 44.0**	**-0.1**	
ULN				*e*			22 52 50.5		
ULN				*e*S		**S**	**22 58 29.3**	**-6.1**	
ULN				pmax		pmax			
	comp=Z,301nm,1.5s,mb6.1								
ULN				MLR		MLR			
	comp=Z,5μm,19.0s,MS5.6								
ULN	**Ulaanbaatar**	**56.57**	**351**⇓	*e*P		**P**	**22 50 44.3**	**+0.2**	
	SNR=110								
SONM	**Songino Array**	**56.64**	**351**	P		**P**	**22 50 44.4**	**-0.2**	
SONM				⇑*e*			23 20 48.2		
SONM	**Songino Array**	**56.64**	**351**	P		**P**	**22 50 44.4**	**-0.2**	
	comp=Z,44nm,1.0s,mb5.5,baz=168,slow=8.7,SNR=78								
SONM				PKP2bc			23 20 48.2		
	comp=Z,1.4nm,1.0s,baz=319,slow=2.6,SNR=3.9								
MCQ	**Macquarie Isla**	**56.70**	**153**	*e*P		**P**	**22 50 44.7**	**-0.3**	
THN	**Thein Dam**	**56.87**	**317**	*e*PKP		**P**	**22 50 43.6**	**-2.9**	
HIA	**Hailar**	**57.20**	**2**⇓	*e*P		**P**	**22 50 47.5**	**-0.9**	
	comp=Z,74nm,1.2s,mb5.6								
HIA				*e*PP		PP	22 52 56.5	+0.8	
HIA				*e*S		**S**	**22 58 42.4**	**-1.2**	
HIA				LR		LR			
	comp=Z,4μm,19.0s,MS5.6								
HIA	**Hailar**	**57.20**	**2**⇓	*e*P		**P**	**22 50 47.5**	**-1.0**	
HIA				*e*			22 52 56.5		
HIA				*e*S		**S**	**22 58 42.4**	**-1.2**	
HIA				pmax		pmax			
	comp=Z,75nm,1.2s								
HIA				MLR		MLR			
	comp=Z,4μm,19.0s								
OUZ	**Omahuta**	**57.58**	**127**	*e*P		**P**	**22 50 52.8**	**+1.2**	
	comp=Z,331nm,1.7s,mb6.1								
YUK	**Yuzh-Kuril'sk**	**57.83**	**24**⇑	*i*P		**P**	**22 50 57.0**	**+3.9**	
YUK				*i*			22 51 42.6		
YUK				*i*			22 53 05.5		
YUK				*i*	S	**S**	**22 58 54.7**	**+2.5**	
YUK				*i*			23 00 41.2		
YUK				pmax		pmax			
	comp=Z,300nm,2.0s,mb6.0								
YUK				pmax		pmax			
	comp=Z,160nm,1.2s,mb5.9								
YUK				pmax		pmax			
	comp=N,50nm,0.6s								
YUK				pmax		pmax			
	comp=E,30nm,0.6s								
YUK				smax					
	comp=N,280nm,9.6s								
YUK				smax					
	comp=E,320nm,9.6s								
YUK				MLR		MLR			
	comp=N,1μm,24.5s,MS5.0								
YUK				MLR		MLR			
	comp=E,900nm,24.5s,MS5.0								
YUK				MLR		MLR			
	comp=Z,2μm,24.5s,MS5.0								
RPZ	**Rata Peaks**	**58.26**	**137**⇑	*e*P		**P**	**22 50 56.5**	**+0.4**	
RPZ	**Rata Peaks**	**58.26**	**137**	P		**P**	**22 50 57.0**	**+0.9**	
	comp=Z,152nm,0.8s,mb6.1,baz=28,slow=3.2,SNR=28								
CASY	**Casey**	**58.26**	**183**	*e*P		**P**	**22 50 54.8**	**-0.9**	
CASY	**Casey**	**58.26**	**183**	*e*P		**P**	**22 50 55.2**	**-0.5**	
	comp=Z,46nm,1.0s,mb5.5								
CASY				*e*S		**S**	**22 58 56.1**	**-1.0**	
CASY				LR		LR			
	comp=Z,6μm,19.0s,MS5.7								
HABR	**Khabarovsk**	**58.40**	**13**	*e*P		**P**	**22 50 55.5**	**-1.5**	
HABR							22 51 44.5		
HABR				*e*			22 53 03.8		
HABR				*e*S		**S**	**22 58 58.5**	**-0.9**	
HABR				*e**SS		sS	22 59 03.3	-3.5	
HABR				*e*			23 00 43.6		
HABR				*e*SS		SS	23 02 50.5	-1.5	
HABR				MLR		MLR			
	comp=Z,1μm,19.0s,MS5.0								
KLR	**Kul'dur**	**58.44**	**11**	*e*P		**P**	**22 50 52.0**	**-5.2**	
KLR				*e*S		**S**	**22 58 53.5**	**-6.3**	
KLR				pmax		pmax			
	comp=Z,200nm,2.4s,mb5.7								
WMQ	**Urumqi**	**58.47**	**335**	P		**P**	**22 50 57.3**	**-0.2**	
WMQ				pP		pP	22 51 01.9	-0.1	
WMQ				sP		sP	22 51 04.3	+0.6	
WMQ				PcP		PcP	22 51 47.8	-0.3	
WMQ				PP		PP	22 53 08.3	+1.2	
WMQ				ScP		ScP	22 55 46.2	-2.1	
WMQ				S		**S**	**22 58 58.0**	**-2.5**	
WMQ				sS		sS	22 59 05.6	-2.2	
WMQ				ScS		ScS	23 00 42.9	-4.1	
WMQ				SS		SS	23 02 51.7	-1.5	
WMQ				pmax		pmax			
	comp=Z,160nm,1.2s,mb5.9								
WMQ				pmax		pmax			
	comp=Z,1μm,4.0s								
WMQ				LR		LR			
	comp=N,6μm,28.2s								
WMQ				LR		LR			
	comp=E,6μm,22.8s								
WMQ				LR		LR			
	comp=Z,5μm,28.0s,MS5.4								
ODZ	**Otahua Downs**	**58.47**	**138**	*e*P		**P**	**22 50 57.9**	**+0.3**	
	comp=Z,608nm,1.6s,mb6.4								
ODZ				*e*PP		PP	22 53 07.7	+0.6	
YSS	**Yuzh-Sakhalins**	**59.19**	**20**	*e*P		**P**	**22 51 02.2**	**-0.3**	
	comp=Z,61nm,0.9s,mb5.6								
YSS				*e*S		**S**	**22 59 09.9**	**+0.1**	
YSS				LR		LR			
	comp=Z,649nm,21.0s,MS4.7								
YSS	**Yuzh-Sakhalins**	**59.19**	**20**	*e*P		**P**	**22 51 02.0**	**-0.5**	
YSS				*e*			22 51 12.2		
YSS				*e**SP		sP	22 51 15.0	+6.3	
YSS				*e*			22 53 15.0		
YSS				*e*S		**S**	**22 59 06.0**	**-3.8**	
YSS				*e*PS			22 59 19.0		
YSS				*e*SS		SS	23 03 04.0	-0.5	
YSS				pmax		pmax			
	comp=Z,500nm,4.0s								
YSS				MLR		MLR			
	comp=N,2μm,21.0s								
YSS				MLR		MLR			
	comp=Z,2μm,21.0s,MS5.2								
MSVF	**Nonsavu**	**59.31**	**106**	P		**P**	**22 51 07.0**	**+3.1**	
	comp=Z,486nm,1.6s,mb6.3,SNR=5.4								
MSVF	**Nonsavu**	**59.31**	**106**	*e*P		**P**	**22 51 05.2**	**+1.3**	
	comp=Z,203nm,1.4s,mb6.0								
MSVF				*e*S		**S**	**22 59 15.1**	**+2.7**	
MSVF				LR		LR			
	comp=Z,3μm,20.0s,MS5.4								
MSVF	**Nonsavu**	**59.31**	**106**	P		**P**	**22 51 07.0**	**+3.1**	
	comp=Z,486nm,1.6s,mb6.3,SNR=5.4								
KHZ	**Kahutara**	**59.53**	**135**	*e*P		**P**	**22 51 05.4**	**+0.3**	
	comp=Z,369nm,1.5s,mb6.2								
KHZ				*e*			22 51 14.3		
ZAK	**Zakamensk**	**59.63**	**349**	*e*P		**P**	**22 51 05.0**	**-0.5**	
ZAK				pmax		pmax			
	comp=Z,32nm,1.5s,mb5.1								
SNZO	**South Karori**	**60.03**	**133**	*e*P		**P**	**22 51 09.3**	**+0.8**	
	comp=Z,271nm,1.2s,mb6.2								
SNZO				S		**S**	**22 59 26.2**	**+5.2**	
SNZO				LR		LR			
	comp=Z,5μm,19.0s,MS5.7								
CIT	**Chita**	**60.04**	**357**	*e*P		**P**	**22 51 08.7**	**+0.5**	
MIR	**Mirnyy**	**60.73**	**191**⇓	*i*P		**P**	**22 51 13.6**	**+0.8**	
MIR				*i*			22 52 01.0		
MIR				*i*			22 53 24.0		
MIR				*e*S		**S**	**22 59 28.0**	**-1.1**	
MIR				pmax		pmax			
	comp=Z,65nm,1.2s,mb5.6								
MIR				pmax		pmax			
	comp=Z,505nm,3.0s								
MIR				pmax		pmax			
	comp=N,500nm,5.0s								
MIR				smax					
	comp=N,1μm,14.0s								
MIR				smax					
	comp=E,1μm,8.0s								
TLY	**Talaya**	**60.82**	**350**	P		**P**	**22 51 13.4**	**-0.2**	
	comp=E,383nm,1.6s,mb6.3,SNR=27								
TLY	**Talaya**	**60.82**	**350**⇓	*e*P		**P**	**22 51 13.1**	**-0.4**	
	comp=E,134nm,1.3s,mb5.9								
TLY				*e*S		**S**	**22 59 26.1**	**-4.3**	
TLY				LR		LR			
	comp=Z,4μm,20.0s,MS5.6								
TLY	**Talaya**	**60.82**	**350**	*e*P		**P**	**22 51 06.7**	**-6.9**	
TLY				*e*			22 51 13.6		
TLY				*e*S		**S**	**22 59 30.9**	**+0.4**	
TLY				*e*			22 59 44.0		
TLY				MLR		MLR			
	comp=Z,4μm,16.0s,MS5.6								
URZ	**Urewera**	**61.04**	**129**	*e*P		**P**	**22 51 15.9**	**+0.5**	
URZ	**Urewera**	**61.04**	**129**	P		**P**	**22 51 15.7**	**+0.2**	
	comp=Z,56nm,0.8s,mb5.7,baz=70,slow=1.6,SNR=13								
KSH	**Kashi**	**61.20**	**324**⇓	*i*P		**P**	**22 51 14.9**	**-1.6**	
KSH				pP		pP	22 51 19.3	-1.6	
KSH				sP		sP	22 51 22.1	-0.5	
KSH				*e*PcP		PcP	22 51 58.6	-0.5	
KSH				PP		PP	22 53 31.2	-0.3	
KSH				*e*ScP		ScP	22 55 58.2	-2.3	
KSH				*e*PcS		PcS	22 55 59.9	-1.9	
KSH				S		**S**	**22 59 30.1**	**-5.8**	
KSH				*e*ScS		ScS	23 01 02.1	-5.5	
KSH				*e*SS		SS	23 03 30.2	-6.2	
KSH				pmax		pmax			
	comp=Z,130nm,5.5s								
KSH				LR		LR			
	comp=N,4μm,18.4s,MS5.7								
KSH				LR		LR			
	comp=E,3μm,15.3s,MS5.7								
KSH				LR		LR			
	comp=Z,3μm,14.9s,MS5.5								
IRK	**Irkutsk**	**61.26**	**351**⇑	*i*P		**P**	**22 51 16.4**	**-0.1**	
IRK				*e*			22 53 29.5		
IRK				pmax		pmax			
	comp=Z,206nm,2.0s,mb5.9								
MOY	**Mondy**	**61.30**	**348**	*e*P		**P**	**22 51 17.1**	**+0.2**	
MOY				pmax		pmax			
	comp=Z,207nm,2.4s,mb5.8								
QUE	**Quetta**	**61.89**	**310**	*e*P		**P**	**22 51 19.0**	**-2.3**	
QUE				*e*S		**S**	**22 59 48.0**	**+3.0**	
MSEY	**Mahe Island**	**61.95**	**269**	*e*P		**P**	**22 51 18.9**	**-3.2**	
MSEY				*e*S		**S**	**22 59 44.2**	**-2.1**	
MSEY				LR		LR			
	comp=Z,4μm,19.0s,MS5.6								
KBL	**Kabul**	**62.63**	**316**	*e*P		**P**	**22 51 23.3**	**-2.9**	
	comp=Z,33nm,0.8s,mb5.5								
KBL				*e*PP		PP	22 53 40.9	-3.3	
KBL				*e*ScP		ScP	22 56 03.7	-3.3	
KBL				*e*S		**S**	**22 59 49.5**	**-4.7**	
KBL	**Kabul**	**62.63**	**316**	*e*P		**P**	**22 51 23.3**	**-2.9**	
KBL				*e*			22 53 40.9		
KBL				*e*S		**S**	**22 59 49.5**	**-4.7**	
KBL				pmax		pmax			
	comp=Z,33nm,0.8s,mb5.5								
ULHL	**Ulahol**	**62.87**	**326**	P		**P**	**22 51 27.8**	**+0.2**	
	SNR=7.1								
MK31	**Makanchi Array**	**63.15**	**333**⇓	*e*P		**P**	**22 51 28.5**	**-0.8**	
MK31				*e*S		**S**	**22 59 54.0**	**-6.1**	
MKAR	**Makanchi Array**	**63.15**	**333**	P		**P**	**22 51 29.1**	**-0.3**	
MKAR				S		**S**	**23 00 01.8**	**+1.6**	
MKAR				⇑*e*			23 20 42.6		
MKAR				LR		LR	23 24 01.5		
MKAR	**Makanchi Array**	**63.15**	**333**	P		**P**	**22 51 29.1**	**-0.3**	
	comp=Z,16nm,0.5s,mb5.4,baz=152,slow=6.7,SNR=85								
MKAR				S		**S**	**23 00 01.8**	**+1.6**	
	baz=154,slow=7.7								
MKAR				PKP2bc			23 20 42.6		
	comp=Z,3.0nm,1.1s,baz=302,slow=2.3,SNR=5.9								
MKAR				LR		LR	23 24 01.5		
	comp=Z,3μm,19.6s,MS5.5,baz=140,slow=41								
MKAR	**Makanchi Array**	**63.15**	**333**	P		**P**	**22 51 29.1**	**-0.3**	
MKAR				S		**S**	**23 00 01.8**	**+1.6**	
MKAR				pmax		pmax			
	comp=Z,17nm,0.5s								
KZA	**Kyzart**	**63.30**	**326**	P		**P**	**22 51 30.4**	**-0.1**	
	SNR=23								
UCH	**Uchtor**	**63.81**	**325**	P		**P**	**22 51 33.6**	**-0.3**	
	SNR=19								
UCH	**Uchtor**	**63.81**	**325**⇓	*e*P		**P**	**22 51 33.9**	**0.0**	
	comp=Z,202nm,1.8s,mb5.8								
UCH				*e*S		**S**	**23 00 07.7**	**-1.0**	
UCH				LR		LR			
	comp=Z,4μm,20.0s,MS5.6								
KBK	**Karagaybulak**	**63.86**	**326**	P		**P**	**22 51 34.1**	**0.0**	
	SNR=21								
AAK	**Ala-Archa**	**64.09**	**326**	P		**P**	**22 51 35.2**	**-0.5**	
	comp=Z,414nm,1.2s,mb6.3,SNR=16								
AAK	**Ala-Archa**	**64.09**	**326**⇓	*e*P		**P**	**22 51 35.6**	**0.0**	
	comp=Z,112nm,1.2s,mb5.8								
AAK				*e*S		**S**	**23 00 11.8**	**-0.2**	
AAK				LR		LR			
	comp=Z,4μm,19.0s,MS5.6								
AAK	**Ala-Archa**	**64.09**	**326**⇓	*e*P		**P**	**22 51 35.6**	**-0.1**	
AAK				*e*S		**S**	**23 00 11.8**	**-0.3**	
AAK				pmax		pmax			
	comp=Z,112nm,1.2s,mb5.8								
AAK				MLR		MLR			
	comp=Z,4μm,19.0s,MS5.6								
AML	**Almayashu**	**64.22**	**325**	P		**P**	**22 51 37.2**	**+0.7**	
	SNR=13								
AML	**Almayashu**	**64.22**	**325**⇓	*e*P		**P**	**22 51 36.3**	**-0.2**	
	comp=Z,178nm,1.4s,mb5.9								
AML				*e*PP		PP	22 53 56.9	-1.0	
AML				*e*S		**S**	**23 00 13.8**	**+0.2**	
AML				LR		LR			
	comp=Z,2μm,19.0s,MS5.4								
USP	**Ospenovka**	**64.51**	**326**	P		**P**	**22 51 37.5**	**-0.9**	
	SNR=24								
EKS2	**Erkin-Say**	**64.51**	**325**	P		**P**	**22 51 38.2**	**-0.3**	
	SNR=24								
EKS2	**Erkin-Say**	**64.51**	**325**⇓	*e*P		**P**	**22 51 37.9**	**-0.5**	
	comp=Z,61nm,1.0s,mb5.6								
EKS2				*e*PP		PP	22 53 54.6	-6.0	
EKS2				*e*S		**S**	**23 00 17.1**	**-0.2**	
EKS2				LR		LR			
	comp=Z,3μm,21.0s,MS5.5								
CLNS	**Chul'man**	**65.02**	**4**	*e*P		**P**	**22 51 40.4**	**-1.0**	
CLNS				*e**PP		pP	22 51 57.8	+12	
CLNS				*e*			22 52 07.8		
CLNS				*e*			22 54 03.1		
CLNS				*e*S		S	23 00 19.7	-3.3	
CLNS				*e*SSS			23 07 21.9		
CLNS				pmax		pmax			
	comp=Z,61nm,1.1s,mb5.5								
CLNS				pmax		pmax			
	comp=N,36nm,1.1s								
CLNS				pmax		pmax			
	comp=E,39nm,1.1s								
CLNS				pmax		pmax			
	comp=N,9.0nm,1.2s								
CLNS				pmax		pmax			
	comp=Z,11nm,0.9s,mb4.9								
CLNS				pmax		pmax			
	comp=E,11nm,1.0s								
CLNS				smax					
	comp=N,179nm,9.0s								
CLNS				smax					
	comp=E,295nm,10.4s								
SKR	**Severo-Kuril's**	**67.34**	**25**	*e*P		**P**	**22 52 03.5**	**+7.0**	
SKR				*e*			22 54 30.0		
SKR				*e*PPP			22 56 00.0		
SKR				*e*S		S	23 00 57.0	+5.6	
SKR				*e*			23 01 55.0		
SKR				*e*

ZALV Zalesovo Beam 67.82 340 P **P** **22 51 57.4 -2.0**
comp=Z,14nm,0.5s,mb5.2,baz=139,slow=4.5,SNR=38
ZALV PKP2bc 23 20 24.9
comp=Z,1.1nm,0.6s,baz=316,slow=4.1,SNR=4.2
ZALV Zalesovo Beam 67.82 340 P **P** **22 51 57.4 -2.0**
ZALV pmax pmax
comp=Z,14nm,0.5s,mb5.2
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ABPO Ambohimpanom 69.04 253 *e*P **P** **22 52 06.8 -1.1**
comp=Z,52nm,1.2s,mb5.3
ABPO *e*S S 23 01 11.0 -2.1
ABPO LR LR
comp=Z,3μm,19.0s,MS5.6
ABPO Ambohimpanom 69.04 253 *e*P **P** **22 52 06.8 -1.1**
ABPO *e*S S 23 01 11.0 -2.0
ABPO pmax pmax
comp=Z,52nm,1.2s,mb5.3
ABPO MLR MLR
comp=Z,3μm,19.0s,MS5.6
NVS Novosibirsk 69.09 339 *e*P **P** **22 52 05.1 -2.2**
NVS pmax pmax
comp=N,129nm,2.4s
NVS pmax pmax
comp=E,118nm,2.4s
NVS pmax pmax
comp=Z,322nm,2.4s,mb5.8
AFI Afiamalu 69.19 102 *e*P **P** **22 52 08.4 -0.4**
AFI *e*S S 23 01 15.2 +0.3
AFI LR LR
comp=Z,2μm,22.0s,MS5.4
MAW Mawson 69.62 200 *e*P **P** **22 52 10.4 -0.1**
comp=Z,60nm,1.1s,mb5.4
MAW Mawson 69.62 200 P **P** **22 52 10.9 +0.4**
comp=Z,32nm,0.8s,mb5.3,baz=62,slow=7.4,SNR=41
MAW LR LR 23 16 28.8
comp=Z,5μm,21.9s,MS5.7,baz=55,slow=31
MAW Mawson 69.62 200 P **P** **22 52 10.9 +0.4**
MAW pmax pmax
comp=Z,32nm,0.9s
MAW MLR MLR
comp=Z,5μm,21.9s
PET Petropavlovsk 70.13 25 *e*P **P** **22 52 15.1 +1.3**
comp=Z,147nm,1.7s,mb5.6
PET *e*S S 23 01 25.8 +1.3
PET LR LR
comp=Z,1μm,20.0s,MS5.2
PET Petropavlovsk 70.13 25 *e*P **P** **22 52 15.1 +1.3**
PET *e*S S 23 01 21.3 -3.2
PET *e*SS SS 23 05 48.0 -6.7
PET pmax pmax
comp=Z,300nm,16.2s
YAK Yakutsk 70.58 6⇓ *e*P **P** **22 52 15.4 -1.0**
comp=Z,107nm,0.8s,mb5.8
YAK *e*PP PP 22 54 52.0 -0.9
YAK *e*S S 23 01 30.4 +1.1
YAK LR LR
comp=Z,2μm,19.0s,MS5.4
YAK Yakutsk 70.58 6 *e*P **P** **22 52 14.7 -1.7**
YAK *e**PP pP 22 52 26.8 +5.9
YAK *e* 22 52 36.0
YAK *e*S S 23 01 25.9 -3.5
YAK *e* 23 02 17.3
YAK pmax pmax
comp=Z,46nm,0.7s,mb5.5
YAK pmax pmax
comp=N,37nm,1.2s
YAK pmax pmax
comp=E,14nm,1.3s
YAK smax
comp=N,760nm,6.3s
YAK smax
comp=E,324nm,4.1s
YAK MLR MLR
comp=E,1μm,19.0s,MS5.3
YAK MLR MLR
comp=Z,1μm,26.0s
YAK MLR MLR
comp=N,1μm,19.0s,MS5.3
ABKT Ailbek 71.98 314 P **P** **22 52 26.3 +0.9**
comp=N,195nm,1.1s,mb6.0,SNR=6.8
VAN Vannovskaya 71.99 314*c* *e*P **P** **22 52 24.8 -0.7**
MIDW Midway 72.25 57 *e*P **P** **22 52 27.3 +0.1**
MIDW *e*S S 23 01 51.0 +1.0
MIDW LR LR
comp=Z,1μm,21.0s,MS5.1
BVAR Borovoye Array 72.98 332 P **P** **22 52 29.0 -2.0**
comp=Z,6.6nm,0.7s,mb4.7,baz=139,slow=7.0,SNR=23
BVAR Borovoye Array 72.98 332 P **P** **22 52 29.0 -2.0**
BVAR pmax pmax
comp=Z,7.0nm,0.7s
BRVK Borovoye 73.05 332⇓ *e*P **P** **22 52 30.4 -1.0**
comp=Z,89nm,1.2s,mb5.6
BRVK *e*PP PP 22 55 12.1 -2.2
BRVK *e*S S 23 01 55.8 -2.4
BRVK LR LR
comp=Z,4μm,20.0s,MS5.7
BRVK Borovoye 73.05 332*c i*P **P** **22 52 29.0 -2.4**
BRVK pmax pmax
comp=Z,59nm,1.1s,mb5.4
SBA Scott Base 74.02 170 *e*P **P** **22 52 37.6 +0.7**
comp=Z,37nm,0.9s,mb5.3
SBA *e*S S 23 02 08.4 -0.2
SBA LR LR
comp=Z,3μm,20.0s,MS5.6
SBA Scott Base 74.02 170 *e*P **P** **22 52 37.6 +0.8**
SBA *e*S S 23 02 08.4 -0.2
SBA pmax pmax
comp=Z,37nm,0.9s,mb5.3
SBA MLR MLR
comp=Z,3μm,20.0s,MS5.6
SEY Seymchan 75.67 16 *e*P **P** **22 52 45.6 -0.9**
SEY Seymchan 75.67 16 *e*P **P** **22 52 45.5 -1.0**
JOHN Johnston Islan 76.01 71 *e*P **P** **22 52 49.2 -0.2**
JOHN *e*S S 23 02 34.4 +1.6
JOHN LR LR
comp=Z,2μm,20.0s,MS5.5
ABKAR Akbulak array 76.17 325⇓ *e*P **P** **22 52 48.4 -1.2**
comp=Z,59nm,0.8s,mb5.6
ABKAR *e* 22 52 59.4
ABKAR *e*PP PP 22 55 39.7 -1.2
ATD Arta Tunnel 77.03 284 LR LR 23 24 54.2
comp=Z,2μm,19.5s,MS5.4,baz=91,slow=34
SMY Shemya 77.17 31 *e*P **P** **22 52 55.7 +0.5**
comp=Z,133nm,1.0s,mb5.8
SMY Shemya 77.17 31 *e*P **P** **22 52 55.7 +0.5**
SMY pmax pmax
comp=Z,133nm,1.0s,mb5.8
AKTK Aktyubinsk 77.84 326 P **P** **22 52 58.5 -0.5**
AKTK LR LR 23 35 24.5
AKTO Aktyubinsk 77.84 326 P **P** **22 52 58.5 -0.5**
comp=Z,8.9nm,0.7s,mb4.8,baz=110,slow=5.4,SNR=24
AKTO LR LR 23 35 24.5
comp=Z,2μm,18.3s,MS5.6,baz=134,slow=42
AKTO Aktyubinsk 77.84 326 P **P** **22 52 58.5 -0.5**
AKTO pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
AKTO MLR MLR
comp=Z,2μm,18.3s,MS5.6
SYO Syowa Base 78.20 201⇓ *e*P **P** **22 52 59.0 -1.7**
SYO Syowa Base 78.20 201⇓ *i*P **P** **22 53 03.0 +2.3**
SVE Sverdlovsk 79.76 332 *e*P **P** **22 53 11.7 +2.3**
SVE *e*S S 23 03 10.2 -1.5
SVE *e*SS SS 23 08 22.3 +1.4
SVE pmax pmax
comp=Z,51nm,1.5s,mb5.2
SVE MLR MLR
comp=Z,4μm,24.0s,MS5.7
TIXI Tiksi 79.97 4 *e*P **P** **22 53 08.2 -2.0**
TIXI *e*S S 23 03 14.4 +1.1
TIXI LR LR
comp=Z,3μm,19.0s,MS5.6
TIXI Tiksi 79.97 4 *e*P **P** **22 53 08.2 -2.1**
TIXI *e*S S 23 03 07.9 -5.5
TIXI pmax pmax
comp=Z,25nm,1.2s,mb5.0
KMBO Kilima Mbogo 80.45 270 P **P** **22 53 12.8 -1.4**
comp=Z,16nm,1.1s,mb4.9,baz=45,slow=8.7,SNR=22
KMBO LR LR 23 24 04.7
comp=Z,3μm,21.1s,MS5.6,baz=97,slow=32
KMBO Kilima Mbogo 80.45 270 *e*P **P** **22 53 12.7 -1.5**
KMBO *e* 22 56 20.0
KMBO *e*S S 23 03 18.4 -2.4
KMBO MLR MLR
comp=Z,3μm,21.0s

KMBO Kilima Mbogo 80.45 270 P **P** **22 53 13.4 -0.7**
SNR=20
ARU Arti 80.53 331⇑ *e*P **P** **22 53 11.4 -2.2**
comp=Z,39nm,1.3s,mb5.2
ARU *e*PP PP 22 56 13.7 -3.5
ARU *e*S S 23 03 17.3 -2.5
ARU LR LR
comp=Z,4μm,20.0s,MS5.8
ARU Arti 80.53 331*c i*P **P** **22 53 11.2 -2.4**
ARU *e* 22 56 12.5
ARU S S 23 03 19.0 -0.8
ARU SS SS 23 08 24.6 -7.8
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.5
FURI Furi 80.59 280 *e*PN **P** **22 53 15.0 +0.2**
FURI *e*PN **P** **22 53 15.0 +0.2**
FURI *e*S pP 22 53 23.8 +4.3
MAK Makhachkala 81.38 316*c i*P **P** **22 53 21.7 +3.2**
MAK *e* 22 53 32.1
MAK *e* 22 56 24.6
MAK *e*PPP 22 58 20.3
MAK *e*S S 23 03 23.7 -5.6
MAK pmax pmax
comp=Z,82nm,2.5s,mb5.2
QSPA South Pole Qui 81.84 180 *e*P **P** **22 53 20.6 +0.3**
comp=Z,157nm,1.3s,mb5.8
QSPA *e*S S 23 03 32.0 -0.8
QSPA LR LR
comp=Z,4μm,19.0s,MS5.8
QSPA South Pole Qui 81.84 180 LR LR 23 28 02.8
comp=Z,3μm,19.9s,MS5.7,baz=147,slow=34
DGRG David-gareji 82.40 314 P **P** **22 53 25.0 +1.2**
DGRG S S 23 03 31.2 -8.6
GNI Garni 82.47 312 *e*P **P** **22 53 23.5 -0.7**
GNI LR LR
comp=Z,2μm,21.0s,MS5.5
GNI Garni 82.47 312 LR LR 23 34 01.0
comp=Z,2μm,21.5s,MS5.5,baz=260,slow=39
GNI Garni 82.47 312 *e*P **P** **22 53 24.7 +0.5**
GNI pmax pmax
comp=Z,15nm,1.4s
MTA Mtatsminda 82.89 314 P **P** **22 53 27.3 +0.9**
MTA S S 23 03 37.0 -7.8
SOKR Solikamsk 82.92 333*d i*P **P** **22 53 27.6 +1.5**
SOKR 22 56 37.4
SOKR S S 23 03 35.7 -8.6
SOKR SS SS 23 09 01.2 -6.6
SOKR pmax pmax
comp=Z,20nm,1.2s,mb5.0
TBLG Delisi 82.94 314 P **P** **22 53 28.8 +2.2**
TBLG Delisi 82.94 314 P **P** **22 53 28.8 +2.2**
GOR Gori 83.46 314 P **P** **22 53 30.9 +1.5**
KEH Kehvi 83.68 314 P **P** **22 53 33.0 +2.5**
ZEI Tsey 83.84 315 *e*P **P** **22 53 31.7 +0.4**
ZEI *e*S S 23 03 53.8 -0.6
ZEI pmax pmax
comp=Z,54nm,1.4s,mb5.5
ONI Oni 84.11 314 P **P** **22 53 35.6 +3.0**
ONI S S 23 03 48.7 -8.4
KIV Kislovodsk 85.03 316⇓ *e*P **P** **22 53 36.1 -1.1**
comp=Z,29nm,1.2s,mb5.3
KIV LR LR
comp=Z,2μm,21.0s,MS5.4
KIV Kislovodsk 85.03 316 *e*P **P** **22 53 37.4 +0.1**
KIV *e* 22 56 56.2
KIV *e* 23 04 01.3
KIV pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
KIV MLR MLR
comp=Z,2μm,19.0s,MS5.4
GOF Gofitskoye 85.10 317 *e*P sP 22 53 55.3 +11
GOF pmax pmax
comp=Z,70nm,1.3s,mb5.6
XMAS Kiritimati 85.13 87 PFAKE
XMAS LR LR 22 53 50.0 +12
comp=Z,2μm,21.0s,MS5.5
MALT Malatya 86.72 309 *e*P **P** **22 53 44.1 -1.7**
MALT LR LR
comp=Z,1μm,19.0s,MS5.4
MALT Malatya 86.72 309⇑ *i*P **P** **22 53 49.1 +3.3**
MBAR Mbarara 86.97 270*c i*P **P** **22 53 44.9 -2.7**
SOC Sochi 87.01 315 *e*P **P** **22 53 44.4 -2.7**
SOC *e**SP sP 22 53 52.4 -1.0
SOC *e* 22 57 08.7
SOC *e*S S 23 04 11.5 -14
SOC *e*SS SS 23 10 08.5 -0.3
SOC pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
SOC MLR MLR
comp=Z,2μm,21.0s,MS5.6
LSZ Lusaka 87.48 255⇑ *e*P **P** **22 53 48.2 -1.8**
LSZ PP PP 22 57 13.8 -1.0
LSZ *e*S S 23 04 29.9 -1.4
LSZ LR LR
comp=Z,3μm,21.0s,MS5.7
LSZ Lusaka 87.48 255 P **P** **22 53 49.1 -0.9**
SNR=17
NVL N'lazarevskaya 87.55 199⇓ *i*P **P** **22 53 48.8 -0.4**
NVL *e*S S 23 04 10.5 -19
NVL pmax pmax
comp=Z,48nm,0.9s,mb5.7
NVL MLR MLR
comp=Z,3μm,17.0s,MS5.8
MAIT Maitri 87.58 199 *e*P **P** **22 53 50.0 +0.7**
KIP Kipapa 87.61 68 *e*P **P** **22 53 48.3 -2.2**
KIP *e*S S 23 04 29.7 -2.6
KIP LR LR
comp=Z,2μm,21.0s,MS5.4
VRHR Novokhopersk 87.69 322 *e*P **P** **22 53 49.8 -0.4**
VRHR pmax pmax
comp=E,80nm,1.1s
VRHR pmax pmax
comp=Z,60nm,1.1s,mb5.7
VRHR pmax pmax
comp=N,20nm,0.6s
MMAI Mount Meron Ar 88.04 304 P **P** **22 53 51.1 -1.2**
comp=N,4.6nm,0.7s,mb4.8,baz=75,slow=7.0,SNR=4.9
MMAI LR LR 23 35 28.0
comp=N,4μm,19.6s,MS5.8,baz=115,slow=37
BOSA Boshof 88.34 241 P **P** **22 53 52.0 -1.8**
BOSA LR LR 23 28 58.5
BOSA Boshof 88.34 241 P **P** **22 53 52.0 -1.8**
comp=N,12nm,1.0s,mb5.1,baz=92,slow=3.4,SNR=12
BOSA LR LR 23 28 58.5
comp=N,4μm,18.9s,MS5.8,baz=103,slow=33
BOSA Boshof 88.34 241 P **P** **22 53 52.0 -1.9**
BOSA pmax pmax
comp=Z,12nm,1.0s,mb5.1
BOSA MLR MLR
comp=Z,4μm,18.9s,MS5.8
LBTB Lobatse 88.56 245 *e*P **P** **22 53 54.1 -0.8**
LBTB *e*S S 23 04 40.0 -1.3
LBTB LR LR
comp=Z,2μm,19.0s,MS5.6
LBTB Lobatse 88.56 245 LR LR 23 29 27.1
comp=Z,2μm,18.3s,MS5.6,baz=108,slow=33
ANN Anapa 88.89 315 *e*P **P** **22 54 00.6 +4.6**
ANN *e* 22 57 23.3
ANN *e*PPP 22 59 20.8
ANN *e* 23 04 32.7
ANN pmax pmax
comp=Z,79nm,1.6s,mb5.8
VORD Divnogorie 89.08 322 *e*P **P** **22 53 56.1 -0.7**
VORD *e* 22 57 22.3
VORD *e*S S 23 04 42.6 -2.5
VORD pmax pmax
comp=N,40nm,1.0s
VORD pmax pmax
comp=Z,20nm,1.0s,mb5.4
VORD pmax pmax
comp=E,20nm,0.5s
VORD pmax pmax
comp=Z,150nm,3.4s
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,30nm,0.7s
VORD smax
comp=N,80nm,2.6s
VORD smax
comp=E,120nm,2.6s
VORD smax
comp=Z,40nm,2.6s
VORD MLR MLR
comp=N,3μm,22.0s,MS5.6

VORD MLR MLR
comp=E,1μm,22.0s,MS5.6
VORD MLR MLR
comp=Z,2μm,22.0s,MS5.4
VSR Storozhevoye 89.22 322 *e*P **P** **22 53 56.9 -0.5**
VSR *e* 22 57 22.6
VSR *e*S S 23 04 43.1 -3.2
VSR *e*SS SS 23 10 38.5 -2.2
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,40nm,1.1s
VSR pmax pmax
comp=Z,30nm,1.1s,mb5.5
VSR pmax pmax
comp=E,90nm,3.4s
VSR pmax pmax
comp=Z,160nm,3.4s
VSR pmax pmax
comp=N,9.0nm,0.9s
VSR smax
comp=N,60nm,2.7s
VSR smax
comp=E,80nm,2.7s
VSR smax
comp=Z,50nm,2.7s
VSR MLR MLR
comp=N,2μm,20.0s,MS5.5
VSR MLR MLR
comp=E,770nm,20.0s,MS5.5
VSR MLR MLR
comp=Z,1μm,20.0s,MS5.3
POHA Pohakuloa 89.64 70 PFAKE 22 54 10.0 +10
POHA LR LR
comp=Z,1μm,20.0s,MS5.3
PPT Papeete 90.09 108 *e*S S 23 04 49.9 -5.9
comp=Z,2μm,27.5s
PPT *e*LQ 23 19 05.7
comp=Z,15μm,44.5s
PPT *e*LR LR 23 22 53.9
comp=Z,4μm,29.2s
PPT Papeete 90.09 108 LR LR 23 34 28.4
comp=Z,1μm,18.6s,MS5.3,baz=254,slow=36
TIAR Tiarei 90.31 108 *e*P **P** **22 54 01.2 -2.1**
comp=Z,94nm,0.9s,mb6.1
BR131 Keskin Array S 90.66 310 *e*P **P** **22 54 03.2 -1.2**
comp=Z,3.4nm,0.9s,mb4.7
BR131 *e*S S 23 04 58.7 -1.5
BR131 LR LR
comp=Z,1μm,20.0s,MS5.4
BRTR Keskin Array B 90.66 310 P **P** **22 54 01.8 -2.7**
BRTR ⇑ *e*P pP 22 54 06.2 -2.9
BRTR LR LR 23 40 21.2
BRTR Keskin Array B 90.66 310 P **P** **22 54 01.8 -2.7**
comp=Z,1.6nm,0.9s,mb4.4,baz=116,slow=4.4,SNR=6.3
BRTR LR LR 23 40 21.2
comp=Z,2μm,20.9s,MS5.4,baz=100,slow=39
BRTR Keskin Array B 90.66 310*c e*P **P** **22 54 06.1 +1.7**
SIM Simferopol' 91.23 315 *e*P **P** **22 54 09.0 +2.1**
SIM *e*S S 23 05 00.0 -5.1
SIM pmax pmax
comp=Z,600nm,15.4s
KLMR Klimovskoe 91.38 331 P **P** **22 54 05.2 -2.1**
KLMR *e* 22 57 39.7
KLMR *e*SP SP 23 06 12.0 -2.1
KLMR *e*PS PS 23 06 12.3 -4.0
KLMR pmax pmax
comp=Z,21nm,1.6s,mb5.2
KLMR MLR MLR
comp=Z,2μm,20.0s,MS5.5
SUR Sutherland 91.51 237 *e*P **P** **22 54 07.6 -1.0**
SUR LR LR
comp=Z,4μm,20.0s,MS5.8
SUR Sutherland 91.51 237 LR LR 23 29 06.3
comp=Z,3μm,20.4s,MS5.8,baz=110,slow=32
OBN Obninsk 91.62 325⇓ *e*P **P** **22 54 07.7 -0.8**
OBN *e*S S 23 05 07.2 -1.0
OBN LR LR
comp=Z,3μm,20.0s,MS5.8
OBN Obninsk 91.62 325 P **P** **22 54 09.0 +0.5**
OBN *e* 22 54 17.6
OBN *e*PPP 22 59 52.5
OBN *e* 23 04 39.4
OBN *e*SS SS 23 11 13.7 -1.4
OBN pmax pmax
comp=Z,16nm,1.4s,mb5.2
SDPT Sand Point 91.98 34 *e*P **P** **22 54 11.3 +1.2**
PMOR Pomariorio Ree 92.07 105 *e*P **P** **22 54 08.7 -2.8**
comp=Z,134nm,1.1s,mb6.2
VAH Vaihoa 92.29 106 *e*P **P** **22 54 09.6 -2.9**
comp=Z,144nm,1.2s,mb6.2
KIS Kishinev 95.18 317 *e*PP PP 22 58 16.0 +0.9
KIS LRM 23 42 56.0
comp=Z,1μm,20.0s
KIS Kishinev 95.18 317 *e*P **P** **22 54 34.0 +8.9**
KIS *e* 22 58 16.0
AKASG Malin Array Be 95.32 320 P **P** **22 54 22.6 -3.1**
comp=Z,0.8nm,0.6s,baz=69,slow=5.7,SNR=2.8
AKASG PP PP 22 58 21.1 +5.1
comp=Z,0.9nm,0.5s,baz=84,slow=5.1,SNR=7.6
AKASG LR LR 23 42 42.9
comp=Z,2μm,20.4s,MS5.6,baz=105,slow=39
AKASG Malin Array Be 95.32 320 P **P** **22 54 22.6 -3.0**
AKASG 22 58 21.1
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG MLR MLR
comp=Z,2μm,20.4s
APA Apatity 95.32 337⇓ *e*P **P** **22 54 32.0 +6.7**
APA *e* 23 04 51.0
APA *i* SP SP 23 06 51.0 -6.3
SVW2 Sparrevohn 95.45 29 *e*P **P** **22 54 24.1 -1.9**
comp=Z,8.8nm,0.7s,mb5.3
SVW2 LR LR
comp=Z,900nm,22.0s,MS5.2
TTA Tatalina 95.47 27 *e*P **P** **22 54 27.7 +1.6**
JOF Joensuu 95.58 333 *e*P pP 22 54 36.5 +5.3
JOF pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
JOF Joensuu 95.58 333 *e*p pP 22 54 36.5 +5.3
comp=Z,1.7nm,0.8s
MICGM Minsk 96.50 324 *e* pP 22 54 39.0 +3.4
VRI Vrincioaia 96.50 315⇓ *i*P pP 22 54 42.0 +6.2
MNK Minsk 96.53 324 *e*P pP 22 54 39.0 +3.3
TESR 96.61 316⇓ *i*P pP 22 54 42.0 +5.7
KDAK Kodiak Island 96.64 33 PFAKE 22 54 40.0 +8.5
KDAK LR LR
comp=Z,1μm,22.0s,MS5.4
RSO Redoubt South 96.77 30 *e*P **P** **22 54 32.0 0.0**
TSUM Tsumeb 96.86 250 *e*P **P** **22 54 32.9 -0.5**
comp=Z,9.6nm,0.9s,mb5.2
TSUM LR LR
comp=Z,2μm,20.0s,MS5.7
MLR Muntele Rosu 97.02 315⇓ *i*P pP 22 54 45.0 +6.8
NACGM Naroch 97.17 324 *e*PP PP 22 58 28.0 -2.2
PPLA Purkeypile 97.21 27 P **P** **22 54 35.3 +1.4**
comp=Z,4.6nm,1.1s,mb4.8
BURAR Bucovina Array 97.67 317⇑ *i*P **P** **22 54 40.4 +4.0**
BUR08 Bucovina Ar. S 97.69 317 *e*P **P** **22 54 36.7 +0.2**
KAF Kangasniemi 97.83 332 *e*P sP 22 54 51.5 +8.4
KAF pmax pmax
comp=Z,2.0nm,0.9s,mb4.7
KAF Kangasniemi 97.83 332 *e*p sP 22 54 51.5 +8.4
comp=Z,1.9nm,0.9s
KEV Kevo 97.85 339 *e*P **P** **22 54 32.9 -3.8**
KEV *e*S S 23 06 02.3 +0.1
KEV LR LR
comp=Z,3μm,21.0s,MS5.8
KEV Kevo 97.85 339 *e*p sP 22 54 50.9 +7.9
comp=Z,0.3nm,0.3s
FINES FINESS Array B 97.91 331 P **P** **22 54 33.8 -3.3**
comp=Z,1.5nm,0.7s,mb4.6,baz=92,slow=10,SNR=4.2
FINES PKPPKP 23 19 29.3
comp=Z,1.2nm,0.8s,baz=1.7,slow=6.3,SNR=4.9
FINES LR LR 23 44 46.7
comp=Z,3μm,21.9s,MS5.8,baz=97,slow=39
ARCES ARCESS Array B 98.37 339 LR LR 23 46 17.9
comp=Z,3μm,19.9s,MS5.8,baz=174,slow=40
COLA College 99.19 26 PFAKE 22 54 50.0 +7.2
COLA LR LR
comp=Z,703nm,22.0s,MS5.1
KWP Kalwaria Pacla 99.43 319 *e*P **P** **22 54 43.5 -0.7**
comp=Z,10nm,1.1s,mb5.3
KWP LR LR
comp=Z,2μm,19.0s,MS5.6
KWP Kalwaria Pacla 99.43 319 *e*P **P** **22 54 43.5 -0.7**

KWP pmax pmax
comp=Z,11nm,1.1s,mb5.3
KWP MLR MLR
comp=Z,2µm,19.0s,MS5.6
ILAR Eielson Array 99.60 26 P **P** 22 54 48.1 +3.5
comp=Z,0.6nm,0.9s,baz=270,slow=4.5,SNR=2.4
ILAR PP PP 22 58 43.0 -5.5
comp=Z,1.3nm,1.1s,baz=272,slow=5.4,SNR=3.9
ILAR PKKPbc PKKPbc 23 11 11.3 +2.2
comp=Z,1.6nm,1.0s,baz=119,slow=2.0,SNR=4.4
UZH Uzhgorod 99.67 318 *e*P Pdif 22 54 46.4 +1.2
UZH *e* 22 58 48.2
UZH *e* 23 05 20.4
UZH *e*S S 23 06 13.8 -4.6
UZH *e*SS SS 23 13 00.8 -9.0
KOLS Kolonicke sedl 99.69 318 *e*Pdif Pdif 22 54 46.7 +1.4
KOLS *e* 22 54 56.5
KOLS *e*PP PP 22 58 54.3 +4.6
KOLS *e*SS SS 23 13 08.2 -1.8
KOLS LR LR
comp=Z,1µm,21.7s,MS5.3
KOLS Kolonicke sedl 99.69 318 *e*P Pdif 22 54 46.7 +1.4
KOLS *e* 22 54 56.5
KOLS *e* 22 58 54.3
KOLS *e*SS SS 23 13 08.2 -1.8
KOLS Kolonicke sedl 99.69 318 PDIF Pdif 22 54 46.7 +1.4
KOLS *e* 22 54 56.5
KOLS *e*PP PP 22 58 54.3 +4.6
KOLS *e*SS SS 23 13 08.2 -1.8
BJO Bjornoya 100.10 344 AMS AMS 23 48 03.5
comp=Z,2µm,26.5s,MS5.5
CRVS Cervenica-Dubn 100.23 318 *e*Pdif Pdif 22 54 50.1 +2.4
CRVS *e* 22 54 59.0
CRVS *e* 22 58 47.1
CRVS *e*SS SS 23 13 29.5 +12
CRVS LR LR
comp=Z,1µm,21.0s,MS5.3
CRVS Cervenica-Dubn 100.23 318 *e*P Pdif 22 54 50.1 +2.4
CRVS *e*SS SS 23 13 29.5 +12
CRVS Cervenica-Dubn 100.23 318 PDIF Pdif 22 54 50.1 +2.4
CRVS *e* 22 54 59.0
CRVS *e*PP PP 22 58 47.1 -6.7
CRVS *e*SS SS 23 13 29.5 +12
STHS Stebnicka Huta 100.38 319 *e*Pdif Pdif 22 54 53.9 +5.5
STHS Stebnicka Huta 100.38 319 PDIF Pdif 22 54 53.8 +5.4
TAOE Nuku Hiva Isla 100.56 101 *e*LR LR 23 27 45.4
comp=Z,2µm,25.5s
TRO Tromso 100.67 339 *e*PP PP 22 59 00.2 +3.7
TRO *e*SKS 23 05 23.7
TRO *e*SS SS 23 13 29.1 +6.6
TRO AMS AMS 23 47 00.7
comp=Z,2µm,16.5s,MS5.8
KECS Kecovo 100.87 318 *e*Pdif Pdif 22 54 53.3 +2.7
KECS *e*PP PP 22 59 04.2 +5.5
KECS Kecovo 100.87 318 PDIF Pdif 22 54 53.3 +2.7
KECS *e*PP PP 22 59 04.2 +5.5
KBS Kingsbay 100.97 349 *e*PP PP 22 59 04.7 +6.1
KBS AMS AMS 23 48 10.7
comp=Z,2µm,21.2s,MS5.6
KBS Kingsbay 100.97 349 PFAKE 22 55 00.0 +9.0
KBS LR LR
comp=Z,2µm,21.0s,MS5.7
TIR Tirane 101.25 311 PFAKE 22 55 00.0 +7.7
TIR LR LR
comp=Z,1µm,20.0s,MS5.5
PSZ Piszkesteto 101.27 317 PFAKE 22 55 00.0 +7.7
PSZ LR LR
comp=Z,912nm,20.0s,MS5.3
PSZ Piszkesteto 101.27 317 *e*PP PP 22 58 56.6 -5.1
VYHS Vyhne 101.97 318 *e*Pdif Pdif 22 55 00.3 +4.9
VYHS *e*PP PP 22 59 11.3 +4.4
VYHS *e*S Sdif 23 06 29.4 -8.0
VYHS *e*SS SS 23 13 41.9 +0.2
VYHS LR LR
comp=Z,1µm,20.8s,MS5.4
VYHS Vyhne 101.97 318 *e*P Pdif 22 55 00.3 +4.9
VYHS *e* 22 59 11.3
VYHS *e*S Sdif 23 06 29.4 -8.0
VYHS *e*SS SS 23 13 41.9 +0.2
VYHS Vyhne 101.97 318 PDIF Pdif 22 55 00.3 +4.9
VYHS *e*PP PP 22 59 11.3 +4.4
VYHS SDIF Sdif 23 06 29.4 -8.0
VYHS *e*SS SS 23 13 41.9 +0.2
EGAK Eagle 102.05 25 PFAKE 22 55 10.0 +14
EGAK LR LR
comp=Z,1µm,20.0s,MS5.3
OKC Ostrava-Krasne 102.38 319 *e*PP PP 22 59 10.6 +0.6
OKC AMS AMS 23 49 00.0
comp=Z,1µm,17.4s
RKT Rikitea 102.44 116 *e*LQ 23 24 17.3
comp=Z,5µm,35.8s
RKT *e*LR LR 23 28 37.7
comp=Z,3µm,23.5s
DPC Dobruska-Polom 103.53 320 *e*PP PP 22 59 19.6 +1.0
DPC AMS AMS 23 43 30.0
comp=Z,2µm,20.0s
TIP Timpagrande 103.62 308 PFAKE 22 55 10.0 +7.2
TIP LR LR
comp=Z,2µm,21.0s,MS5.6
UPC Upice 103.72 320 *e*PP PP 22 59 25.9 +5.9
CONA Conrad Observa 103.98 317 ⇑ *i*PKiKP PP 22 59 23.8 +1.8
comp=Z,28nm,1.5s
BSD Bornholm Skovb 103.99 325 *i* P PP 22 59 37.4 +16
BSD *e* 23 08 28.2
TREC Trest 104.14 319 AMS AMS 23 41 50.0
comp=Z,2µm,25.8s
CEL Celeste 104.31 307 PFAKE 22 55 20.0 +14
CEL LR LR
comp=Z,1µm,20.0s,MS5.4
BOJS Bojanci 104.54 315 *i* PP PP 22 59 36.2 +10
SOKA Soboth 104.62 316 ⇑ *i*pPKiKP PP 22 59 30.9 +4.1
comp=Z,12nm,1.4s
PVCC Panska Ves 104.64 320 *es*PKP PP 22 59 36.3 +10
PVCC AMS AMS 23 48 30.0
comp=Z,2µm,20.8s
PRU Pruhonice 104.70 319 *e*PP PP 22 59 28.7 +1.4
PRU *e*SKS 23 05 46.4
PRU AMS AMS 23 44 00.0
comp=Z,2µm,20.4s
PRA Prague 104.76 320 PP PP 22 59 30.0 +2.3
PRA AMS AMS 23 45 00.0
VISS Visnje 104.81 315 *i* PP PP 22 59 35.7 +7.5
RUE Ruedersdorf 104.94 322 *e*PP PP 22 59 26.1 -2.8
BRG Berggiesshubel 105.00 320 *e*PP PP 22 59 27.4 -2.1
BRG Berggiesshubel 105.00 320 *e* PKiKP 22 59 32.2 +8.4
comp=Z,27nm,1.6s
BRG *e* 22 59 44.7
comp=Z,9.0nm,1.2s
BRG *e* 23 14 22.0
BRG
comp=N,2µm,18.9s
BRG
comp=E,2µm,24.6s
BRG
comp=Z,2µm,21.4s
NB2 NORSAR Subarra 105.09 331 PP PP 22 59 32.5 +2.7
baz=79,slow=7.4
NB2 NORSAR Subarra 105.09 331 PP PP 22 59 32.5 +2.7
NOA NORSAR Array B 105.09 331 PP PP 22 59 37.1 +7.3
comp=Z,3.4nm,0.9s,baz=80,slow=7.5,SNR=3.7
NAO01 NORSAR Array S 105.28 331 PFAKE 22 59 30.0 +6.0
NAO01 LR LR
comp=Z,3µm,20.0s,MS5.8
COP Copenhagen 105.33 326 *i* P PP 22 59 34.7 +3.0
COP *e* 23 08 29.5
JAVS Javornik 105.34 315 *i* PP PP 22 59 36.1 +3.9
KHC Kasperske Hory 105.40 319 *e*PKiKP PKiKP 22 59 24.2 -0.3
KHC Kasperske Hory 105.40 319 *e*PKP PKiKP 22 59 25.2 +0.7
KHC *e*SKS SKSac 23 05 46.1 -4.5
KHC AMS AMS 23 45 10.0
comp=Z,2µm,23.5s
WDD Wield Dalam 105.45 305 PFAKE 22 59 40.0 +15
WDD LR LR
comp=Z,1µm,20.0s,MS5.4
CLL Collm 105.55 321 *e*PP PP 22 59 30.8 -2.7
CLL *e*SS SS 23 14 29.9 -0.7
CLL Collm 105.55 321 *e*PP PP 22 59 34.0 +0.5
comp=Z,40nm,2.1s
CLL *e*PPlp 22 59 44.0
comp=Z,100nm,11.6s
CLL *e*SKSac SKSac 23 05 44.0 -7.2
CLL *e*Sdif Sdif 23 07 02.0 -5.2
CLL *e*SP SP 23 08 50.0 +2.7
CLL *e*PKKPab PKKPab 23 11 04.0 -2.3
CLL *e*SS SS 23 14 23.0 -7.6
CLL *e*SSS 23 18 24.0
CLL *e*SSSS 23 21 57.0
CLL LmV 23 49 00.0
comp=Z,1µm,20.2s
TRI Trieste 105.56 315 PFAKE 22 59 40.0 +15
TRI LR LR
comp=Z,1µm,22.0s,MS5.5
WET Wettzell 105.86 319 *e*PP PP 22 59 32.1 -3.8
TANN Tannenbergstha 105.99 320 *e*PP PP 22 59 34.6 -2.2
TANN *e*SS SS 23 14 35.2 -1.5
NKC Novy Kostel 106.02 320 *e*PP PP 22 59 35.2 -1.8
NKC AMS AMS 23 44 50.0
comp=Z,2µm,21.1s
AQU L'Aquila 106.06 312 PFAKE 22 59 40.0 +14
AQU LR LR
comp=Z,2µm,21.0s,MS5.6
KONO Kongsberg 106.15 330 *e*PP PP 22 59 39.0 +1.4
KONO AMS AMS 23 49 38.9
comp=Z,2µm,21.3s,MS5.6
KONO Kongsberg 106.15 330 PFAKE 22 59 40.0 +14
KONO LR LR
comp=Z,2µm,20.0s,MS5.8
PTCN Pitcairn Islan 106.20 119 PFAKE 22 59 40.0 +13
PTCN LR LR
comp=Z,3µm,19.0s,MS5.8
MOX Moxa 106.50 320 *e*PKP PP 22 59 39.5 -1.0
comp=Z,26nm,2.0s
MOX
comp=Z,1µm,20.0s
MOX Moxa 106.50 320 *e*PP PP 22 59 37.8 -2.7
MOX *e*SS SS 23 14 42.1 -1.5
BSEG Bad Segeberg 106.81 324 *e*PP PP 22 59 41.6 -1.1
BSEG *e*SS SS 23 14 47.9 +0.3
GRF Grafenberg Arr 106.87 319 *e*PP PP 22 59 39.8 -3.5
GRF *e*PS PS 23 09 11.4 +7.9
GRF *e*SS SS 23 14 46.7 -2.0
GRF *e*L 23 48 41.0
comp=Z,2µm,21.7s
MUD Monsted U'grnd 107.00 327 *i* P PP 22 59 59.5 +15
FUR Furstenfeldbru 107.02 318 *e*PP PP 22 59 40.5 -4.0
FUR *e*SS SS 23 14 45.2 -5.7
CLZ Clausthal 107.10 322 *e*PP PP 22 59 42.8 -2.1
PMSA Palmer Station 107.27 179 PFAKE 22 59 40.0 +12
PMSA LR LR
comp=Z,3µm,19.0s,MS5.8
FOO Floro 107.85 332 *e*PP PP 22 59 48.5 -1.6
FOO AMS AMS 23 47 32.2
comp=Z,2µm,24.0s,MS5.7
BER Bergen 108.05 331 *e*PP PP 22 59 51.3 -0.2
BER AMS AMS 23 51 07.7
comp=Z,2µm,24.4s,MS5.7
STU Stuttgart 108.31 319 *e*PP PP 22 59 50.6 -3.3
STU *e*SS SS 23 15 03.2 -5.1
TUE Stuetta 108.54 316 PFAKE 22 59 40.0 +10
TUE LR LR
comp=Z,2µm,22.0s,MS5.6
TNS Taunus Mts 108.56 320 *e*PP PP 22 59 53.2 -2.4
TNS *e*PS PS 23 09 24.1 +3.3
IBBN Ibbenburen 108.61 322 *e*PP PP 22 59 54.0 -1.9
BFO Black Forest 108.95 318 *e*PP PP 22 59 55.6 -2.9
BFO *e*PS PS 23 09 24.1 -0.7
BFO Black Forest 108.95 318 PFAKE 22 59 40.0 +8.8
BFO LR LR
comp=Z,1µm,21.0s,MS5.4
JMIC Jan Mayen 108.97 344 *e*PP PP 22 59 57.2 -0.7
JMIC AMS AMS 23 49 42.3
comp=Z,1µm,28.4s,MS5.3
BUG Bochum--Univer 109.08 322 *e*PP PP 22 59 57.4 -1.9
BUG *e*PS PS 23 09 26.2 +0.3
VSL Villasalto 109.32 309 *e*PKiKP PKiKP 22 59 31.4 -0.8
VSL LR LR
comp=Z,721nm,21.0s,MS5.2
WLF Walferdange 110.12 320 PFAKE 22 59 40.0 +6.7
WLF LR LR
comp=Z,1µm,19.0s,MS5.6
LPG La Plagne 110.48 316 *e*P Pdif 22 55 32.9 -0.4
comp=Z,17nm,1.5s
LPL La Plagne 110.49 316 *e*P Pdif 22 55 32.9 -0.4
comp=Z,26nm,1.8s
YKA Yellowknife Ar 113.91 24 PKiKP PKiKP 22 59 40.4 +0.2
comp=Z,1.1nm,0.8s,baz=308,slow=3.1,SNR=3.2
YKA Yellowknife Ar 113.91 24 *i* PKIKP PKiKP 22 59 40.4 +0.2
YKA pmax pmax
comp=Z,1.0nm,0.8s
ESK Eskdalemuir 114.00 328 PFAKE 22 59 50.0 +9.5
ESK LR LR
comp=Z,2µm,19.0s,MS5.7
NLWA Neilton Lookou 115.02 41 PFAKE 22 59 50.0 +7.3
NLWA LR LR
comp=Z,861nm,21.0s,MS5.3
JCW Jim Creek 116.03 40 PKPdf PKPdf 22 59 43.1 -1.6
COR Corvallis 116.15 44 PFAKE 23 00 00.0 +15
COR LR LR
comp=Z,319nm,22.0s,MS4.9
BORG Borgarnes 116.63 342 PFAKE 23 00 00.0 +15
BORG LR LR
comp=Z,1µm,20.0s,MS5.6
HUMO Hull Mountain 116.90 46 PFAKE 23 00 00.0 +13
HUMO LR LR
comp=Z,1µm,21.0s,MS5.5
USHA Ushuaia 117.04 176 PKP PKPdf 22 59 45.4 -1.1
comp=Z,7.5nm,0.9s,baz=56,slow=3.6
TORD Torodi Ar. Bea 117.11 281 PKP PKPdf 22 59 44.5 -3.2
comp=Z,3.2nm,0.7s,baz=47,slow=1.8,SNR=11
TORD PKKPbc PKKPbc 23 10 14.2 +2.1
comp=Z,1.3nm,0.9s,baz=293,slow=3.5,SNR=4.4
YBH Yreka Blue Hor 117.29 47 PKP PKPdf 22 59 42.5 -4.8
YBH LR LR
comp=Z,987nm,21.0s,MS5.4
YBH Yreka Blue Hor 117.29 47 PKhKP PKPpre 22 59 42.5
comp=Z,0.4nm,0.4s,baz=182,slow=3.7,SNR=2.4
HOPS Hopland 117.66 50 PFAKE 23 00 00.0 +12
HOPS LR LR
comp=Z,1µm,22.0s,MS5.5
WDC Whiskeytown Da 117.69 48 PFAKE 23 00 00.0 +12
WDC LR LR
comp=Z,1µm,21.0s,MS5.4
MCCM Marconi Confer 117.99 51 PFAKE 23 00 00.0 +11
MCCM LR LR
comp=Z,1µm,20.0s,MS5.5
HAWA Hanford 118.15 41 PFAKE 23 00 00.0 +11
HAWA LR LR
comp=Z,643nm,20.0s,MS5.2
MOD Modoc 118.98 46 *e*PKPdf PKPdf 22 59 50.3 -0.3
MOD LR LR
comp=Z,1µm,20.0s,MS5.5
NEW Newport 119.03 39 PFAKE 23 00 00.0 +10
NEW LR LR
comp=Z,941nm,22.0s,MS5.4
SHEL Horse Pasture 119.17 247 PFAKE 23 00 00.0 +8.4
SHEL LR LR
comp=Z,2µm,19.0s,MS5.8
SAO San Andreas Ge 119.40 52 PFAKE 23 00 00.0 +8.5
SAO LR LR
comp=Z,924nm,22.0s,MS5.4
ESDC Sonseca Array 119.43 311 PKP PKPdf 22 59 49.4 -2.1
ESDC PKKPbc PKKPbc 23 10 12.0 +7.7
ESDC Sonseca Array 119.43 311 PKP PKPdf 22 59 49.4 -2.1
comp=Z,0.1nm,0.4s,baz=27,slow=3.0,SNR=3.9
ESDC PKKPbc PKKPbc 23 10 12.0 +7.7
comp=Z,0.6nm,0.8s,baz=297,slow=3.0,SNR=4.0
ESLA Sonseca Array 119.43 311 PFAKE 23 00 00.0 +8.5
ESLA LR LR
comp=Z,5µm,19.0s,MS6.1
PAB San Pablo 119.75 311 PFAKE 23 00 00.0 +7.9
PAB LR LR
comp=Z,1µm,22.0s,MS5.5
CMB Columbia Colle 119.93 51 PFAKE 23 00 00.0 +7.5
CMB LR LR
comp=Z,1µm,22.0s,MS5.4
WVOR Wild Horse Val 120.02 45 *e*PKPdf PKPdf 22 59 51.7 -0.8
WVOR LR LR
comp=Z,1µm,22.0s,MS5.4
BMO Blue Mountains 120.14 42 PFAKE 23 00 00.0 +7.3
BMO LR LR
comp=Z,546nm,20.0s,MS5.2
BSMT Bassoo Peak 120.63 38 *e*PKPdf PKPdf 22 59 52.8 -0.8
WALA Waterton Lakes 120.66 37 PKPdf PKPdf 22 59 52.9 -0.7
SWMT Swartz Lake 121.26 39 PKPdf PKPdf 22 59 54.9 +0.1
NVAR Mina Array Bea 121.41 50 PKP PKPdf 22 59 53.2 -2.1
comp=Z,1.8nm,0.7s,baz=288,slow=1.3,SNR=8.2
NVAR PKKPbc PKKPbc 23 10 01.7 +4.9
comp=Z,1.6nm,0.8s,baz=129,slow=4.2,SNR=6.3
MSO Missoula 121.58 39 *e*PKPdf PKPdf 22 59 54.8 -0.5
MSO LR LR
comp=Z,458nm,19.0s,MS5.1
BMN Battle Mountai 121.64 47 PFAKE 23 00 10.0 +14
BMN LR LR
comp=Z,788nm,21.0s,MS5.3
MTE Manteigas 121.87 313 PFAKE 23 00 10.0 +14
MTE LR LR
comp=Z,1µm,20.0s,MS5.5
SFS San Fernando 121.96 308 PFAKE 23 00 10.0 +14
SFS LR LR
comp=Z,2µm,20.0s,MS5.7
CHMT Chamberlain Mo 121.97 39 *e*PKPdf PKPdf 22 59 54.3 -1.9
DAC Darwin (Calif) 122.53 52 PFAKE 23 00 10.0 +12
DAC LR LR
comp=Z,1µm,21.0s,MS5.5
HLID Hailey 122.55 43 *e*PKPdf PKPdf 22 59 57.0 -0.4
HLID LR LR
comp=Z,1µm,21.0s,MS5.5
KIC Kosan Boka 122.98 272 *e*PKP1 PKPdf 22 59 56.6 -2.5
comp=Z,27nm,1.0s
DLMT Dillon 123.03 40 *e*PKPdf PKPdf 22 59 57.5 -0.8
DBIC Dimbokro 123.12 273 PKP PKPdf 22 59 56.2 -3.1
comp=Z,4.4nm,0.7s,baz=54,slow=3.2,SNR=8.1
DBIC Dimbokro 123.12 273 *e*PKIKP PKPdf 22 59 57.4 -1.9
LIC Lamto 123.25 272 *e*PKP1 PKPdf 22 59 56.8 -2.8
comp=Z,54nm,1.2s
LIC Lamto 123.25 272 *e*PKIKP PKPdf 22 59 57.2 -2.4
comp=Z,22nm,0.8s
TIC Toumodi 123.28 273 *e*PKP1 PKPdf 22 59 57.7 -1.9
comp=Z,40nm,1.1s
GSC Goldstone 123.40 53 *e*PKPdf PKPdf 22 59 59.0 -0.2
BOZ Bozeman (W) 123.53 40 *e*PKPdf PKPdf 22 59 58.5 -0.6
BOZ LR LR
comp=Z,796nm,21.0s,MS5.3
EGMT Eagleton 123.59 36 *e*PKPdf PKPdf 22 59 58.7 -0.5
EGMT LR LR
comp=Z,1µm,20.0s,MS5.5
FFC Flin Flon 123.80 27 PFAKE 23 00 10.0 +11
FFC LR LR
comp=Z,864nm,22.0s,MS5.4
PFO Pinyon Flat Ob 124.10 55 *e*PKPdf PKPdf 23 00 00.1 -0.6
PFO LR LR
comp=Z,2µm,20.0s,MS5.7
BGU Big Grassy Mou 124.48 45 *e*PKPdf PKPdf 23 00 00.2 -1.0
GCMT Greycliff 124.69 39 *e*PKPdf PKPdf 23 00 00.9 -0.5
LKWY Lake 124.78 40 PFAKE 23 00 10.0 +8.4
LKWY LR LR
comp=Z,1µm,19.0s,MS5.7
DUG Dugway 124.90 46 *e*PKPdf PKPdf 23 00 02.5 +0.5
DUG LR LR
comp=Z,901nm,20.0s,MS5.4
MOOW Moose Ponds 124.91 41 *e*PKPdf PKPdf 23 00 01.2 -0.7
REDW Red Top Meadow 125.01 42 *e*PKPdf PKPdf 23 00 01.6 -0.5
SNOW Snow King Moun 125.03 42 *e*PKPdf PKPdf 23 00 01.6 -0.5
LOHW Long Hollow 125.06 42 *e*PKPdf PKPdf 23 00 02.1 -0.1
LOHW *e*PP PP 23 01 50.6 -0.3
AHID Auburn Hatcher 125.09 43 PFAKE 23 00 10.0 +7.7
AHID LR LR
comp=Z,1µm,20.0s,MS5.5
HWUT Hardware Ranch 125.24 44 PFAKE 23 00 10.0 +7.4
HWUT LR LR
comp=Z,1µm,21.0s,MS5.5
RLMT Red Lodge 125.25 39 PFAKE 23 00 10.0 +7.5
RLMT LR LR
comp=Z,946nm,20.0s,MS5.5
MSU Marysvale 125.95 48 *e*PKPdf PKPdf 23 00 04.7 +0.6
BW06 Boulder Array 126.12 42 PFAKE 23 00 20.0 +16
BW06 LR LR
comp=Z,905nm,19.0s,MS5.5
LAO LASA Array 126.33 36 *e*PKPdf PKPdf 23 00 03.1 -1.4
LAO LR LR
comp=Z,11110µm,22.0s
TMUT Trail Mountain 126.38 47 *e*PKPdf PKPdf 23 00 06.1 +1.3
SRU San Rafael 126.94 47 *e*PKPdf PKPdf 23 00 05.7 -0.2
WUAZ Wupatki 127.58 51 *e*PKPdf PKPdf 23 00 07.5 +0.3
WUAZ LR LR
comp=Z,1µm,20.0s,MS5.6
RWWY Rawlins 128.16 42 *e*PKPdf PKPdf 23 00 08.4 +0.2
RSSD Black Hills 128.99 38 *e*PKPdf PKPdf 23 00 09.1 -0.5
RSSD PP PP 23 02 15.0 -1.7
RSSD LR LR
comp=Z,322nm,20.0s,MS5.0
TUC Tucson 129.04 55 *e*PKPdf PKPdf 23 00 09.8 -0.4
TUC LR LR
comp=Z,748nm,20.0s,MS5.4
MVCO Mesa Verde 129.14 48 PFAKE 23 00 20.0 +10
MVCO LR LR
comp=Z,911nm,20.0s,MS5.5
ULM Lac du Bonnet 129.58 27 PFAKE 23 00 20.0 +9.4
ULM LR LR
comp=Z,2µm,22.0s,MS5.8
ULM Lac du Bonnet 129.58 27 SKP 23 03 44.0
comp=Z,3.2nm,0.6s,baz=330,slow=5.3,SNR=3.2
ISCO Idaho Springs 130.10 44 PFAKE 23 00 20.0 +8.1
ISCO LR LR
comp=Z,957nm,22.0s,MS5.5
PLCA Paso Flores 130.76 172 PKP PKPdf 23 00 11.7 -1.5
PLCA SKPbc SKPbc 23 03 35.9 -1.0
PLCA LR LR
comp=Z,2µm,19.0s,MS5.9
PLCA Paso Flores 130.76 172 PKP PKPdf 23 00 11.7 -1.5
comp=Z,3.4nm,1.0s,baz=5.3,slow=10,SNR=5.5
PLCA SKPbc SKPbc 23 03 35.9 -1.0
comp=Z,17nm,1.2s,baz=154,slow=3.3,SNR=4.4
AGMN Agassiz Nation 130.94 29 PFAKE 23 00 20.0 +6.8
AGMN LR LR
comp=Z,1µm,21.0s,MS5.5
SDCO Great Sand Dun 131.10 46 PFAKE 23 00 30.0 +16
SDCO LR LR
comp=Z,1µm,21.0s,MS5.5
ANMO Albuquerque 131.53 50 *e*PKPdf PKPdf 23 00 15.4 +0.6
ANMO LR LR
comp=Z,1µm,20.0s,MS5.5
BNM Barren Site 131.71 51 *e*PKPdf PKPdf 23 00 16.1 +0.9
BNM *e*PP PP 23 02 36.9 +2.0
OGNE Ogallala 131.92 41 PFAKE 23 00 30.0 +15
OGNE LR LR
comp=Z,1µm,20.0s,MS5.6
EYMN Ely 133.23 27 PFAKE 23 00 30.0 +12
EYMN LR LR
comp=Z,1µm,22.0s,MS5.6
SCHQ Schefferville 133.30 4 PKP PKPdf 23 00 16.6 -0.9
SCHQ LR LR
comp=Z,2µm,22.0s,MS5.9
SCHQ Schefferville 133.30 4 PKP PKPdf 23 00 16.6 -0.9
comp=Z,2.6nm,0.7s,baz=318,slow=4.7,SNR=4.2
ECSD EROS Data Cent 133.57 34 *e*PKPdf PKPdf 23 00 17.9 -0.4
ECSD LR LR
comp=Z,1µm,21.0s,MS5.6
MNTX Cornudas Mount 133.58 54 *e*PKPdf PKPdf 23 00 18.2 -0.6
MNTX LR LR
comp=Z,699nm,21.0s,MS5.3
TRQA Tornquist 134.03 180 PFAKE 23 00 30.0 +11
TRQA LR LR
comp=Z,2µm,20.0s,MS5.8
CBKS Cedar Bluff 134.55 42 PFAKE 23 00 30.0 +10
CBKS LR LR
comp=Z,1µm,22.0s,MS5.5
AMTX Amarillo 135.13 48 PFAKE 23 00 30.0 +8.4
AMTX LR LR
comp=Z,1µm,20.0s,MS5.7
COWI Conover 135.68 27 PFAKE 23 00 30.0 +7.8
COWI LR LR
comp=Z,1µm,20.0s,MS5.7
TXAR Lajitas Array 135.79 56 PKP PKPdf 23 00 22.0 -1.0
TXAR SKPbc SKPbc 23 03 54.4 +0.1
TXAR Lajitas Array 135.79 56 PKhKP PKPpre 23 00 11.8
comp=Z,0.3nm,0.6s,baz=272,slow=4.1,SNR=5.0
TXAR PKP PKPdf 23 00 22.0 -1.0
comp=Z,1.1nm,0.8s,baz=291,slow=2.5,SNR=9.3
TXAR SKPbc SKPbc 23 03 54.4 +0.1
baz=253,slow=2.7
KSU1 Kansas State U 136.41 40 PKPdf PKPdf 23 00 22.4 -1.4
KSU1 LR LR
comp=Z,1µm,22.0s,MS5.7
SCIA State Center 136.66 34 PFAKE 23 00 40.0 +16
SCIA LR LR
comp=Z,2µm,21.0s,MS5.7
WMOK Wichita Mounta 137.30 46 PFAKE 23 00 40.0 +14
WMOK LR LR
comp=Z,1µm,21.0s,MS5.6
JFWS Jewell Farm 137.53 31 PFAKE 23 00 40.0 +14
JFWS LR LR
comp=Z,941nm,20.0s,MS5.5

JCT	**Junction City**	**138.46**	**53**	*e*PKPdf	PKPdf	23 00 27.4	-0.5		
JCT				LR	LR				
	comp=Z,1µm,20.0s,MS5.6								
HDIL	**Hopedale**	**139.73**	**32**	PFAKE		23 00 40.0	+10		
HDIL				LR	LR				
	comp=Z,1µm,22.0s,MS5.6								
CFAA	**Coronel Fontan**	**140.06**	**172**	PKP	PKPdf	23 00 29.6	-1.2		
	comp=Z,0.9nm,0.7s,baz=177,slow=1.6,SNR=8.1								
MIAR	**Mount Ida**	**141.03**	**43**	PFAKE		23 00 40.0	+7.6		
MIAR				LR	LR				
	comp=Z,2µm,19.0s,MS5.8								
AAM	**Ann Arbor**	**141.09**	**26**	PFAKE		23 00 40.0	+7.7		
AAM				LR	LR				
	comp=Z,2µm,22.0s,MS5.7								
KVTX	**Kingsville**	**141.17**	**56**	PFAKE		23 00 40.0	+7.1		
KVTX				LR	LR				
	comp=Z,1µm,19.0s,MS5.6								
OLIL	**Olney**	**141.67**	**33**	*e*PKPdf	PKPdf	23 00 33.8	+0.3		
NATX	**Nacogdoches**	**141.78**	**48**	PFAKE		23 00 40.0	+6.2		
NATX				LR	LR				
	comp=Z,1µm,20.0s,MS5.6								
HKT	**Hockley**	**141.78**	**51**	PFAKE		23 00 40.0	+6.1		
HKT				LR	LR				
	comp=Z,329nm,20.0s,MS5.1								
LONY	**Lake Ozonia**	**142.12**	**14**	PFAKE		23 00 40.0	+6.0		
LONY				LR	LR				
	comp=Z,2µm,22.0s,MS5.7								
LCO	**Las Campanas**	**142.16**	**168**	*e*PKPdf	PKPdf	23 00 29.5	-5.2		
PKME	**Peaks-Kenny Pk**	**142.52**	**8**	PFAKE		23 00 50.0	+15		
PKME				LR	LR				
	comp=Z,1µm,20.0s,MS5.7								
ERPA	**Erie**	**142.71**	**22**	PFAKE		23 00 50.0	+15		
ERPA				LR	LR				
	comp=Z,1µm,20.0s,MS5.7								
NCB	**Newcomb**	**142.81**	**14**	PFAKE		23 00 50.0	+15		
NCB				LR	LR				
	comp=Z,1µm,20.0s,MS5.7								
WCI	**Wyandotte Cave**	**143.01**	**32**	*e*PKPdf	PKPdf	23 00 34.5	-1.3		
WCI				LR	LR				
	comp=Z,197nm,21.0s,MS4.8								
LBNH	**Lisbon**	**143.07**	**12**	PFAKE		23 00 50.0	+14		
LBNH				LR	LR				
	comp=Z,1µm,22.0s,MS5.6								
WVT	**Waverly**	**143.66**	**36**	*e*PKPdf	PKPdf	23 00 31.7	-5.3		
WVT				LR	LR				
	comp=Z,1µm,20.0s,MS5.6								
BINY	**Binghamton**	**143.98**	**17**	PFAKE		23 00 50.0	+13		
BINY				LR	LR				
	comp=Z,1µm,22.0s,MS5.6								
CAM4	**Nova Friburgo**	**144.07**	**212**	*e*P	PKPdf	23 00 35.5	-2.7		
CAM4				*i*		23 00 38.5			
CAM4				*i*		23 00 41.5			
CAM4				*i*		23 00 43.6			
CAM4				*i*		23 00 46.2			
CAM4				*i*		23 00 50.5			
CAM4				*i*		23 00 58.9			
CAM4				*i*		23 01 03.9			
VBMS	**Vicksburg**	**144.46**	**44**	*e*PKPdf	PKPdf	23 00 37.2	-1.4		
VBMS				LR	LR				
	comp=Z,1µm,22.0s,MS5.6								
MCWV	**Mont Chateau**	**144.88**	**24**	*e*PKPdf	PKPdf	23 00 36.9	-2.2		
MCWV				LR	LR				
	comp=Z,1µm,22.0s,MS5.7								
LVIG	**Laguna Verde**	**144.96**	**67**	*i* P	PKPdf	23 00 39.6	-0.2		
VHO	**Vista Hermosa**	**145.24**	**72**	*e*P	PKPbc	23 00 37.0	-3.0		
CPUP	**Villa Florida**	**145.40**	**188**	PKPbc	PKPbc	23 00 39.5	-0.7		
	comp=Z,9.2nm,0.6s,baz=155,slow=2.6,SNR=33								
CPUP	**Villa Florida**	**145.40**	**188**	PKIKP	PKPdf	23 00 39.6	-0.8		
CPUP				pmax	pmax				
	comp=Z,9.0nm,0.6s								
SWET	**Sewanee**	**145.40**	**35**	*e*PKPbc	PKPbc	23 00 37.9	-2.1		
CPCT	**Cooper Cave**	**146.02**	**34**	*e*PKP	PKPdf	23 00 40.8	-0.4		
HUIG	**Huatulco**	**146.04**	**74**	*e*P	PKPdf	23 00 40.0	-1.7		
LRAL	**Lakeview Retre**	**146.26**	**39**	*e*PKPdf	PKPdf	23 00 40.1	-1.5		
LRAL				LR	LR				
	comp=Z,1µm,20.0s,MS5.8								
TKL	**Tuckaleechee C**	**146.27**	**33**	*e*PKPdf	PKPdf	23 00 40.7	-0.9		
BLA	**Blacksburg**	**146.69**	**27**	*e*PKPdf	PKPdf	23 00 42.1	-0.1		
BLA				LR	LR				
	comp=Z,2µm,20.0s,MS5.8								
CBN	**Corbin**	**147.10**	**22**	PKPdf	PKPdf	23 00 41.3	-1.6		
CBN				LR	LR				
	comp=Z,1µm,20.0s,MS5.8								
BRAL	**Brewton**	**147.53**	**42**	*e*PKPdf	PKPdf	23 00 43.5	-0.3		
BRAL				LR	LR				
	comp=Z,2µm,21.0s,MS5.8								
GOGA	**Godfrey**	**148.11**	**35**	*e*PKPdf	PKPdf	23 00 44.8	+0.1		
GOGA				*e*PKPbc	PKPbc	23 00 47.2	-0.7		
GOGA				*e*PKPab	PKPab	23 00 51.1	+0.4		
GOGA				LR	LR				
	comp=Z,2µm,20.0s,MS5.8								
JSC	**Jenkinsville**	**148.64**	**31**	*e*PKPdf	PKPdf	23 00 45.4	-0.1		
JSC				*e*PKPbc	PKPbc	23 00 49.0	-0.2		
JSC				*e*PKPab	PKPab	23 00 52.9	+0.2		
CNNC	**Cliffs of the**	**149.46**	**26**	*e*PKPdf	PKPdf	23 00 47.0	+0.2		
CNNC				LR	LR				
	comp=Z,2µm,22.0s,MS5.8								
NHSC	**New Hope**	**150.12**	**31**	PFAKE		23 01 00.0	+12		
NHSC				LR	LR				
	comp=Z,2µm,20.0s,MS5.8								
RCBR	**Riachuelo**	**150.29**	**243**	*e*PKPdf	PKPdf	23 00 47.7	-1.1		
RCBR				*e*PKPab	PKPab	23 00 59.5	-0.6		
DWPF	**Disney**	**153.12**	**40**	PFAKE		23 01 00.0	+7.4		
DWPF				LR	LR				
	comp=Z,381nm,20.0s,MS5.2								
TGUH	**Tegucigalpa,Un**	**154.75**	**74**	PFAKE		23 01 10.0	+15		
TGUH				LR	LR				
	comp=Z,808nm,20.0s,MS5.5								
LPAZ	**La Paz**	**155.03**	**166**	PKP	PKPdf	23 00 55.8	+0.1		
	comp=Z,3.3nm,0.9s,baz=128,slow=1.9,SNR=9.3								
LPAZ				PKPab	PKPab	23 01 21.6	+2.0		
	comp=Z,12nm,0.8s,baz=24,slow=1.9,SNR=9.6								
SIV	**San Ignacio**	**155.99**	**183**	PKP	PKPdf	23 00 56.0	-0.9		
	comp=Z,5.1nm,1.0s,baz=88,slow=0.7,SNR=11								
SIV				PKPab	PKPab	23 01 22.7	-1.1		
	comp=Z,6.5nm,0.7s,baz=155,slow=6.5,SNR=10.0								
SIV				PP	PP	23 05 07.0	+7.9		
	comp=Z,10nm,1.2s,baz=207,slow=5.7,SNR=4.2								
ATAH	**Atahualpa**	**157.86**	**133**	PKP	PKPdf	23 01 00.8	+1.3		
	comp=Z,4.6nm,0.8s,baz=113,slow=18,SNR=3.1								
OTAV	**Otavalo**	**162.03**	**115**	*e*PKPdf	PKPdf	23 01 06.0	+1.8		
ROSC	**El Rosal**	**167.54**	**104**	PKP	PKPdf	23 01 10.0	+1.1		
	comp=Z,5.2nm,0.4s,baz=104,slow=23,SNR=3.8								

ISCJB ***06*** *22:41:34.0±0.7, 40.75N±0.05×78.42E±0.04, h10km, mb4.4/3, Error ellipse: s-maj=7.2km s-min=4.4km az=7.7*
BJI ***06*** *22:41:36.1, 40.85N×78.78E, h7km, ML3.4/8*
NEIC ***06*** *22:41:36.7±0.6, 40.58N×78.77E, h10km, Error ellipse: s-maj=8.8km s-min=8.4km az=169.0*
IDC ***06*** *22:41:41.6±3.0, 41.00N×79.08E, h0km, mb3.4/1, mb1 3.4/6, mb1mx3.2/27, mbtmp3.4/6, ML3.1/5, Error ellipse: s-maj=32.5km s-min=21.5km az=165.0*
NNC ***06*** *22:41:48.3±2.5, 41.33N×79.31E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=21.4km s-min=16.2km az=174.0*

ISC 06 22:41:36.6±0.7, 40.73N±0.05×78.48E±0.04, h10km, n31, σ1§40/44, mb4.4/3, 6C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**2.26**	**313**	P	**Pn**	**22 42 19.2**	**+5.2**
	SNR=48						
KSH	**Kashi**	**2.27**	**238**	⇓*i*Pn	**Pg**	**22 42 25.9**	**+5.8**
KSH				Sn	**Sg**	**22 43 02.9**	**+13**
KSH				smax			
	comp=N,160nm,1.0s						
KSH				smax			
	comp=E,250nm,0.5s						
KNDC	**Almaty**	**2.73**	**336**	⇑Pn	**Pg**	**22 42 31.3**	**+2.4**
	comp=E,30nm,0.5s						
KNDC				⇓Sn	**Sg**	**22 43 03.6**	**-0.6**
	comp=E,286nm,0.8s						
KZA	**Kyzart**	**2.77**	**300**	P	**Pg**	**22 42 29.7**	**0.0**
	SNR=32						
KBK	**Karagaybulak**	**3.27**	**307**	P	**Pg**	**22 42 38.3**	**-0.9**
	SNR=16						
UCH	**Uchtor**	**3.33**	**298**	P	**Pg**	**22 42 39.6**	**-0.8**
	SNR=32						
UCH	**Uchtor**	**3.33**	**298**	*e*Pn	**Pn**	**22 42 34.1**	**+5.4**
UCH				*e*Pg	**Pg**	**22 42 41.2**	**+0.8**
UCH				*e*S	**Sg**	**22 43 22.1**	**-1.4**
AAK	**Ala-Archa**	**3.54**	**304**	P	**Pg**	**22 42 43.3**	**-1.0**
	SNR=6.8						
AAK	**Ala-Archa**	**3.54**	**304**	*e*Pn	**Pn**	**22 42 35.9**	**+4.4**
AAK				Pg	**Pg**	**22 42 43.5**	**-0.8**
AAK				*e*S	**Sg**	**22 43 30.4**	**+0.3**
AAK	**Ala-Archa**	**3.54**	**304**	Pn	**Pg**	**22 42 43.3**	**-1.0**
	comp=E,4.2nm,0.3s,baz=126,slow=10,SNR=11						
AAK				Sn	**Sg**	**22 43 30.0**	**-0.1**
	comp=E,2.6nm,0.3s,baz=279,slow=20,SNR=10						
CHMS	**Chumysh**	**3.59**	**310**	P	**Pg**	**22 42 43.7**	**-1.6**
	SNR=14						
AML	**Almayashu**	**3.86**	**293**	P	**Pg**	**22 42 49.7**	**-0.7**
	SNR=8.9						
AML	**Almayashu**	**3.86**	**293**	*e*Pn	**Pn**	**22 42 40.7**	**+4.8**
AML				*e*Pg	**Pg**	**22 42 49.7**	**-0.7**
AML				*e*Sg	**Sg**	**22 43 42.5**	**+2.1**
USP	**Ospenovka**	**3.90**	**312**	P	**Pg**	**22 42 49.0**	**-2.3**
	SNR=8.5						
EKS2	**Erkin-Say**	**4.01**	**300**	P	**Pg**	**22 42 52.3**	**-1.1**
	SNR=8.4						
EKS2	**Erkin-Say**	**4.01**	**300**	*e*Pn	**Pn**	**22 42 41.4**	**+3.4**
EKS2				*e*Pg	**Pg**	**22 42 52.4**	**-1.0**
EKS2				*e*Sg	**Sg**	**22 43 45.9**	**+0.6**
KK31	**Karatay Array**	**6.39**	**294**	⇑Pn	**Pb**	**22 43 28.8**	**+0.9**
	comp=E,1.4nm,0.5s,baz=110,slow=16,SNR=7.8						
KK31				⇑Sn	**Sb**	**22 44 50.9**	**+6.5**
	comp=E,3.2nm,0.6s,baz=104,slow=26,SNR=4.1						
MK31	**Makanchi Array**	**6.66**	**23**	⇑Pn	**Pn**	**22 43 16.4**	**+2.0**
	comp=E,0.3nm,0.3s,baz=202,slow=14,SNR=5.0						
MK31				⇑Lg		22 44 57.0	
	comp=E,7.2nm,0.8s,baz=206,slow=29,SNR=4.1						
MK31	**Makanchi Array**	**6.66**	**23**	*e*Pn	**Pn**	**22 43 14.9**	**+0.6**
MK31				Sn	**Sn**	**22 44 30.3**	**0.0**
MKAR	**Makanchi Array**	**6.66**	**23**	Pn	**Pn**	**22 43 16.1**	**+1.7**
	comp=E,1.0nm,0.3s,baz=208,slow=14,SNR=52						
MKAR				Sn	**Sn**	**22 44 27.8**	**-2.5**
	comp=E,0.5nm,0.3s,baz=201,slow=20,SNR=3.0						
MKAR				Lg		22 44 58.8	
	comp=E,1.0nm,0.3s,baz=204,slow=28,SNR=4.6						
KBL	**Kabul**	**9.70**	**233**	*e*Pn	**Pn**	**22 43 57.0**	**+0.8**
KBL				Sn	**Sn**	**22 45 38.8**	**-6.4**
KURBB	**Kurchatov Arra**	**9.89**	**0**	⇓Lg		22 46 45.9	
	comp=E,3.1nm,0.8s						
KURK	**Kurchatov**	**9.99**	**1**	⇑Lg		22 46 48.5	
	comp=E,18nm,1.0s						
KURK	**Kurchatov**	**9.99**	**1**	*e*Pn	**Pn**	**22 44 01.4**	**+1.4**
KURK				Lg		22 46 46.6	
KURK	**Kurchatov**	**9.99**	**1**	Pn	**Pn**	**22 44 01.1**	**+1.1**
	comp=E,0.0nm,0.3s,baz=186,slow=12,SNR=3.0						
KURK				Lg		22 46 46.6	
	comp=E,0.1nm,0.3s,baz=180,slow=28,SNR=5.8						
BVAR	**Borovoye Array**	**13.47**	**339**	Pn	**Pn**	**22 44 50.8**	**+3.1**
	comp=E,0.2nm,0.3s,baz=144,slow=18,SNR=3.6						
BRVK	**Borovoye**	**13.53**	**338**	*e*Pn	**Pn**	**22 44 52.0**	**+3.6**
ZALV	**Zalesovo Beam**	**13.89**	**16**	Pn	**Pn**	**22 44 52.6**	**-0.8**
	comp=E,0.1nm,0.3s,baz=195,slow=12,SNR=5.4						
SONM	**Songino Array**	**21.14**	**61**	P	**P**	**22 46 22.3**	**+0.8**
	comp=E,1.2nm,0.6s,mb3.4,baz=263,slow=11,SNR=6.1						
BJT	**Baijiatuau**	**28.58**	**79**	*e*P	**P**	**22 47 31.2**	**-1.5**
	comp=E,6.7nm,0.3s,mb4.8						
PALK	**Pallekele**	**33.38**	**176**	*e*P	**P**	**22 48 13.1**	**-2.0**
	comp=E,9.7nm,0.7s,mb4.8						

IDC 06 22:52:04.9±4.7, 31.26S×178.25W, h0km, mb3.6/1, mb1 3.8/1, mb1mx3.4/13, mbtmp3.6/1, MS3.5/1, Ms1 3.5/1, ms1mx3.0/21, Error ellipse: s-maj=260.8km s-min=68.3km az=158.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.96**	**207**	LR	LR	22 57 06.3	
	comp=Z,276nm,18.0s,baz=11,slow=38						
ASAR	**Alice Springs**	**42.86**	**268**	P	P	23 00 05.0	0.0
	0.4nm,0.4s,baz=110,slow=7.7,SNR=2.6						
FINES	**FINESS Array B**	**145.88**	**339**	PKPbc	PKPbc	23 11 44.6	-0.9
	1.0nm,0.7s,baz=62,slow=3.6,SNR=7.1						
MMAI	**Mount Meron Ar**	**151.52**	**282**	PKPbc	PKPbc	23 12 01.0	-0.1
	0.4nm,0.3s,baz=84,slow=5.1,SNR=5.0						

CASC 06 23:03:10.7±1.3, 13.17N×89.67W, h33km±3km, MD3.5, 1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	**0.66**	**4**	*e*P	Pn	23 03 23.7	0.0
SBLS				*e*S	Sb	23 03 34.2	+1.3
SNET	**Serv Nac Est T**	**0.66**	**40**	*e*P	Pn	23 03 23.9	+0.1
SNET				*e*S	Sb	23 03 33.8	+0.8
BOQS	**Boqueron**	**0.67**	**34**	*e*P	Pn	23 03 23.6	-0.3
BOQS				*e*S	Sb	23 03 34.5	+1.3
SNJE	**San Jose**	**0.69**	**5**	*e*P	Pn	23 03 24.4	+0.2
RTR	**El Retiro**	**0.72**	**2**	*e*P	Pn	23 03 25.4	+0.8
RTR				*e*S	Sn	23 03 35.9	+1.5
LFRS	**El Faro**	**0.74**	**53**	*i*P	Pn	23 03 24.6	-0.2
LFU	**La Fuente**	**0.79**	**43**	*e*P	Pn	23 03 25.4	0.0
LBRS	**Las Brisas**	**0.83**	**47**	*e*P	Pn	23 03 26.0	0.0
RBDL	**Robledal**	**0.93**	**359**	*e*P	Pn	23 03 27.0	-0.5
RBDL				*e*S	Sn	23 03 41.5	+1.8
MTO2	**Montecristo 2**	**1.25**	**14**	*e*P	Pn	23 03 31.1	-0.9
IXG	**Ixpaco**	**1.25**	**323**	*e*P	Pn	23 03 32.4	+0.4
IXG				*e*S	Sn	23 03 48.6	+0.9
BLLM	**Bellamira**	**1.42**	**79**	*e*P	Pn	23 03 33.9	-0.2
BLLM				*e*S	Sn	23 03 52.5	+0.8
CAHU	**Cacacuatique**	**1.54**	**67**	*e*P	Pn	23 03 35.1	-0.6
NBG	**Las Nubes**	**1.55**	**335**	*e*P	Pn	23 03 37.1	+1.1
FUG	**Fuego 3**	**1.71**	**318**	*e*P	Pn	23 03 39.0	+0.9
FUG				*e*S	Sn	23 03 59.7	+0.9
CNCH	**Conchagua**	**1.79**	**87**	*e*P	Pn	23 03 38.9	-0.4
CNCH				*e*S	Sn	23 04 02.8	+2.0
FG6		**1.81**	**320**	*e*P	Pn	23 03 40.2	+0.6
FG6				*e*S	Sn	23 04 02.2	+0.8
MRL	**Marmol**	**1.88**	**359**	*e*P	Pn	23 03 41.0	+0.5
TP2	**Tecpan 2**	**2.07**	**321**	*e*P	Pn	23 03 44.7	+1.6
TP2				*e*S	Sn	23 04 09.3	+1.5

BJI ***06*** *23:06:57.4, 8.56S×118.09E, h9km, mB4.9/1, mb4.7/7*
IDC ***06*** *23:07:00.7±0.5, 8.18S×117.70E, h0km, mb4.6/15, mb1 4.7/16, mb1mx4.5/23, mbtmp4.6/16, ML5.1/1, MS4.1/1, Ms1 4.1/1, ms1mx3.2/25, Error ellipse: s-maj=19.9km s-min=11.0km az=61.0*
ISCJB ***06*** *23:07:04.4±0.6, 8.17S±0.03×117.76E±0.03, h36km±5km, mb4.7/38, Error ellipse: s-maj=5.9km s-min=5.2km az=31.7*
NEIC ***06*** *23:07:05.4±2.3, 8.19S×117.73E, h30km±16km, mb4.7/18, Error ellipse: s-maj=9.7km s-min=4.7km az=66.0*
NEIC Felt [II] at Bima.
DJA ***06*** *23:07:05, 8.08S×117.60E, h10km, MLv5.0/13*

ISC 06 23:07:05.2±1.4, 8.20S±0.03×117.74E±0.03, h27km±10km, n90, σ1§09/90, mb4.7/38, 2C, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHKI	**Kahang-Kahang**	**2.12**	**265**	P	**Pn**	**23 07 37.9**	**-1.1**
SRBI	**Singaraja**	**2.51**	**272**	P	**Pn**	**23 07 43.8**	**-0.5**
DNP	**Denpasar**	**2.55**	**259**	P	**Pn**	**23 07 45.5**	**+0.6**
IGBI	**Denpasar**	**2.64**	**256**	P	**Pn**	**23 07 45.8**	**-0.4**
WSI	**Waingapu**	**2.92**	**120**	P	**Pn**	**23 07 51.4**	**+1.5**
NBBI	**Negara**	**3.10**	**267**	P	**Pn**	**23 07 51.7**	**-0.7**
BKSI	**Bulukumba**	**3.71**	**40**	P	**Pn**	**23 08 00.4**	**-0.4**
KAPI	**Kappang**	**3.74**	**32**	Pn	**Pn**	**23 07 59.8**	**-1.5**
	156nm,0.3s,baz=212,slow=4.6,SNR=684						
KAPI				Sn	**Sn**	**23 08 42.1**	**-2.3**
	124nm,0.3s,baz=42,slow=23,SNR=352						
KAPI				LR	LR	23 09 27.4	
	comp=Z,2µm,18.7s,baz=82,slow=39						
GMJI	**Gumukmas**	**4.26**	**269**	P	**Pn**	**23 08 07.6**	**-0.8**
MMRI	**Maumere**	**4.47**	**96**	P	**Pn**	**23 08 19.4**	**+8.1**
SPSI	**Sidrap Palu**	**4.66**	**26**	P	**Pn**	**23 08 15.9**	**+2.0**
TTSI	**Tana Toraja**	**5.52**	**22**	P	**Pn**	**23 08 26.3**	**+0.6**
	1.3nm5µm184nm,0.4s						
PWJI	**Pagerwojo**	**5.88**	**271**	P	**Pn**	**23 08 33.2**	**+2.4**
	1.0nm154nm,0.9s						
SJI	**Sawahan**	**5.94**	**274**	P	**Pn**	**23 08 32.4**	**+0.9**
NGJI	**Ngawi**	**6.28**	**277**	P	**Pb**	**23 08 46.7**	**-7.2**
MBWA	**Marble Bar**	**13.03**	**172**	*e*Pn	**Pn**	**23 10 08.4**	**-0.3**
	21nm,0.6s						
KKM	**Kota Kinabalu**	**14.23**	**354**	*e*Pn	**Pn**	**23 10 26.2**	**+1.1**
KAKA	**Kakadu**	**15.13**	**108**	*e*P	**Pn**	**23 10 35.4**	**-1.9**
	15nm,0.4s						
KAKA	**Kakadu**	**15.13**	**108**	*e*Pn	**Pn**	**23 10 36.3**	**-1.0**
	53nm,0.5s						
KAKA				*e*Sn	**Sn**	**23 13 24.3**	**+0.1**
WRAB	**Tennant Creek**	**19.86**	**128**	*e*P	**Pn**	**23 11 34.2**	**-2.0**
	21nm,0.7s						
WRAB				*e*S	**Sn**	**23 15 19.0**	**+0.1**
WB2	**Warramunga Arr**	**19.87**	**128**	*e*P	**Pn**	**23 11 34.0**	**-2.3**
WB2				*e*S	**Sn**	**23 15 19.2**	**+0.1**
PSI	**Prapat**	**21.72**	**299**	P	**P**	**23 11 53.9**	**-0.8**
	12nm,0.8s,mb4.4,baz=143,slow=8.2,SNR=7.2						
ASAR	**Alice Springs**	**21.83**	**137**	P	**P**	**23 11 56.1**	**+0.5**
	44nm,0.7s,mb5.0,baz=310,slow=9.1,SNR=99						
ASAR				S	**S**	**23 15 56.8**	**+1.0**
	1.3nm,0.8s,baz=309,slow=22,SNR=3.7						
KLBR	**Kellerberrin**	**23.28**	**180**	*e*P	**P**	**23 12 10.0**	**-1.0**
	19nm,0.8s,mb4.6						
KLBR				*e*S	**S**	**23 16 22.0**	**+0.5**
FORT	**Forrest**	**24.45**	**158**	*e*P	**P**	**23 12 21.8**	**-0.1**
	48nm,0.6s,mb5.1						
FORT	**Forrest**	**24.45**	**158**	*e*P	**P**	**23 12 22.2**	**+0.2**
	71nm,0.8s,mb5.2						
NWAO	**Narrogin (SRO)**	**24.61**	**181**	*e*P	**P**	**23 12 23.5**	**+0.1**
NWAO	**Narrogin (SRO)**	**24.61**	**181**	P	**P**	**23 12 23.2**	**-0.2**
	32nm,0.8s,mb4.9,baz=2.0,slow=9.5,SNR=18						
COEN	**Coen**	**25.59**	**105**	*e*P	**P**	**23 12 32.6**	**+0.1**
	192nm,0.6s,mb5.8						
CTA	**Charters Tower**	**30.01**	**116**	*e*P	**P**	**23 13 12.7**	**+0.7**
	5.7nm,0.8s,mb4.3						
CTA	**Charters Tower**	**30.01**	**116**	P	**P**	**23 13 12.4**	**+0.4**
	11nm,1.0s,mb4.6,baz=277,slow=12,SNR=5.8						
CTAO	**Charters Tower**	**30.01**	**116**	*e*P	**P**	**23 13 12.3**	**+0.3**
	7.0nm,0.8s,mb4.4						
CMAR	**Chiang Mai Arr**	**32.34**	**325**	P	**P**	**23 13 34.2**	**+1.8**
	4.1nm,0.6s,mb4.5,baz=151,slow=6.8,SNR=16						
STKA	**Stephens Creek**	**32.36**	**140**	⇑*i*P	**P**	**23 13 33.2**	**+0.6**
	12nm,0.5s,mb5.0						
STKA	**Stephens Creek**	**32.36**	**140**	*e*P	**P**	**23 13 33.3**	**+0.7**
STKA	**Stephens Creek**	**32.36**	**140**	P	**P**	**23 13 33.2**	**+0.6**
	16nm,0.5s,mb5.1,baz=315,slow=9.3,SNR=43						
CHTO	**Chiang Mai**	**32.62**	**326**	*e*P	**P**	**23 13 35.4**	**+0.4**
	3.5nm,0.6s,mb4.5						
YHNB	**Yeheng**	**32.86**	**6**	P	**P**	**23 13 38.0**	**+1.0**
TOO	**Toolangi**	**38.55**	**144**	*e*P	**P**	**23 14 27.8**	**+2.1**
ARMA	**Armidale**	**38.63**	**130**	*e*P	**P**	**23 14 29.1**	**+2.6**
LSA	**Lhasa**	**45.54**	**327**	*e*P	**P**	**23 15 24.2**	**+1.4**
	4.7nm,0.6s,mb4.6						
ODAN	**Odare**	**45.62**	**321**	*e*P	**P**	**23 15 24.3**	**+0.8**
	37nm,0.8s,mb5.4						
TAPN	**Taplejung**	**45.77**	**322**	*e*P	**P**	**23 15 25.9**	**+1.2**
LZH	**Lanzhou**	**45.95**	**344**	*e*P	**P**	**23 15 23.2**	**-2.8**
LZH				pP	pP	23 15 28.0	-6.1
LZH				sP	sP	23 15 30.1	-7.2
LZH				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
LZH				pmax	pmax		
	comp=Z,110nm,5.3s						
RAMN	**Ramite**	**46.18**	**320**	*e*P	**P**	**23 15 28.8**	**+0.9**
	comp=Z,37nm,0.9s,mb5.3						
KSRS	**Korea Array**	**46.40**	**11**	P	**P**	**23 15 29.9**	**+0.4**
	comp=Z,5.0nm,0.9s,mb4.4,baz=191,slow=8.4,SNR=20						
JIRN	**Jiri**	**46.93**	**321**	*e*P	**P**	**23 15 33.9**	**0.0**
GUN	**Gumba**	**47.30**	**321**	*e*P	**P**	**23 15 37.4**	**+0.6**
PKI	**Pulchoki**	**47.37**	**320**	*e*P	**P**	**23 15 37.4**	**+0.2**
DMN	**Daman**	**47.59**	**320**	*e*P	**P**	**23 15 39.4**	**+0.4**
	comp=Z,38nm,1.0s,mb5.4						
KKN	**Kakani**	**47.60**	**320**	*e*P	**P**	**23 15 39.3**	**+0.2**
	comp=Z,17nm,0.8s,mb5.2						
BJT	**Baijiatuau**	**47.99**	**358**	*e*P	**P**	**23 15 41.9**	**+0.1**
GKN	**Gorkha**	**48.16**	**320**	*e*P	**P**	**23 15 42.7**	**-0.7**
	comp=Z,32nm,1.0s,mb5.3						
GTA	**Gaotai**	**50.20**	**342**	*e*P	**P**	**23 16 00.5**	**+1.7**
GTA				pP	pP	23 16 04.0	-3.0
GTA				sP	sP	23 16 06.7	-3.5
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
MDJ	**Mudanjiang**	**53.64**	**10**	*e*P	**P**	**23 16 24.1**	**-0.3**
	comp=Z,9.6nm,0.6s,mb4.9		

LPAZ	**La Paz**	**52.73**	**305**	*e*P		**P**	**23 21 14.8**	**+0.3**
	2.0nm,0.8s,mb4.1								
LPAZ					*e*PcP	PcP	23 22 24.4	+0.3
LPAZ	**La Paz**	**52.73**	**305**	P		**P**	**23 21 15.2**	**+0.7**
	1.5nm,0.7s,mb4.0,baz=134,slow=4.9,SNR=9.4								
LPAZ					PcP	PcP	23 22 25.1	+1.1
	0.6nm,0.5s,baz=207,slow=4.5,SNR=3.3								
LSZ	**Lusaka**	**58.38**	**65**	*e*P		**P**	**23 21 54.8**	**-0.3**
ABPO	**Ambohimpanom**	**64.82**	**85**	*e*P		**P**	**23 22 38.2**	**-0.4**
TORD	**Torodi Ar. Bea**	**74.81**	**27**	P		**P**	**23 23 40.3**	**+0.4**
	1.2nm,0.4s,mb4.2,baz=201,slow=6.1,SNR=42								
YKA	**Yellowknife A**	**138.78**	**315**	PKP		PKPdf	23 31 23.9	-0.5
	1.4nm,0.8s,baz=144,slow=1.6,SNR=3.5								
SONM	**Songino Array**	**149.74**	**89**	PKPbc		PKPbc	23 31 48.6	0.0
	1.4nm,0.6s,baz=208,slow=2.9,SNR=9.5								
ILAR	**Eielson Array**	**152.59**	**308**	PKPbc		PKPbc	23 31 55.2	+0.6
	3.2nm,0.8s,baz=147,slow=3.2,SNR=42								

IDC ***06*** *23:17:16.9±1.5,8.06S×117.73E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.6/20, mbtmp4.0/5, ML4.3/1, Error ellipse: s-maj=42.9km s-min=22.1km az=69.0*

NEIC ***06*** *23:17:21.6±0.5,8.08S×117.75E, h35km, mb4.0/3, Error ellipse: s-maj=12.9km s-min=7.4km az=67.0*

ISC 06 23:17:18.5±5.8, 8.08S±0.07×117.79E±0.10, h12km±39km, n14, σ0s59/16, mb4.0/5, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**3.62**	**33**	*e*Pn	**Pn**	**23 18 14.9**	**+0.4**
KAPI				*e*Sn	**Sn**	**23 18 56.9**	**-0.3**
KAPI	**Kappang**	**3.62**	**33**	Pn	**Pn**	**23 18 14.9**	**+0.4**
	24nm,0.3s,baz=220,slow=3.1,SNR=211						
KAPI				Sn	**Sn**	**23 18 57.4**	**+0.2**
	24nm,0.3s,baz=226,slow=23,SNR=30						
FITZ	**Fitzroy Crossi**	**12.55**	**143**	Sn	**Sn**	**23 22 30.6**	**-6.4**
	0.1nm,0.3s,baz=180,slow=20,SNR=4.0						
MBWA	**Marble Bar**	**13.13**	**172**	*e*Pn	**Pn**	**23 20 25.4**	**+0.3**
WRAB	**Tennant Creek**	**19.90**	**128**	*e*P	**Pn**	**23 21 50.8**	**-0.9**
	3.6nm,0.8s						
WB2	**Warramunga Arr**	**19.91**	**128**	*e*P	**Pn**	**23 21 51.0**	**-0.8**
KULM	**Kulim**	**21.65**	**307**	*e*P	**P**	**23 22 08.5**	**-0.6**
ASAR	**Alice Springs**	**21.88**	**137**	P	**P**	**23 22 12.8**	**+1.3**
	2.3nm,0.7s,mb3.7,baz=308,slow=8.9,SNR=19						
NWAO	**Narrogin (SRO)**	**24.73**	**181**	*e*P	**P**	**23 22 39.8**	**0.0**
	25nm,1.0s,mb4.7						
CTAO	**Charters Tower**	**30.02**	**116**	*e*P	**P**	**23 23 27.4**	**-0.1**
STKA	**Stephens Creek**	**32.42**	**140**	*e*P	**P**	**23 23 48.5**	**0.0**
	2.5nm,1.4s,mb3.9						
STKA	**Stephens Creek**	**32.42**	**140**	P	**P**	**23 23 48.7**	**+0.2**
	1.3nm,0.5s,mb4.0,baz=326,slow=11,SNR=3.4						
SONM	**Songino Array**	**56.58**	**351**	P	**P**	**23 27 01.5**	**+0.5**
	0.9nm,0.7s,mb3.9,baz=172,slow=9.4,SNR=5.7						
MKAR	**Makanchi Array**	**63.10**	**333**	P	**P**	**23 27 45.8**	**-0.1**
	0.6nm,1.0s,mb3.7,baz=147,slow=7.2,SNR=5.1						

ISCJB ***06*** *23:28:26.3±0.7,47.58N±0.05×81.6E±0.1, h10km, Error ellipse: s-maj=10.4km s-min=5.7km az=158.9*

NEIC ***06*** *23:28:28.6±0.6,47.47N×81.62E, h10km, mb3.1/1, Error ellipse: s-maj=11.1km s-min=6.5km az=64.0*

IDC ***06*** *23:28:28.1±1.1,47.56N×81.74E, h0km, mb1 3.1/2, mb1mx2.9/24, mbtmp3.1/2, ML3.1/2, Error ellipse: s-maj=15.7km s-min=7.7km az=58.0*

ISC 06 23:28:28.1±0.6, 47.55N±0.04×81.66E±0.10, h10km, n7, σ1s12/12, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**0.87**	**150**	*e*P	**Pg**	**23 28 44.4**	**-0.4**
MK31				*e*S	**Sg**	**23 28 56.1**	**+0.1**
MKAR	**Makanchi Array**	**0.87**	**150**	Pg	**Pg**	**23 28 44.4**	**-0.4**
	14nm,0.3s,baz=332,slow=16,SNR=635						
MKAR				Lg		23 28 56.9	
	31nm,0.3s,baz=333,slow=27,SNR=30						
KURK	**Kurchatov**	**3.75**	**329**	*e*Pn	**Pn**	**23 29 27.0**	**+1.1**
KURK				*e*S	**Sn**	**23 30 21.9**	**+12**
ZALV	**Zalesovo Beam**	**6.71**	**16**	Pn	**Pn**	**23 30 08.4**	**+1.8**
	0.4nm,0.3s,baz=199,slow=12,SNR=6.2						
ZALV				Pg	**Pg**	**23 30 34.1**	**-2.4**
	0.4nm,0.3s,baz=206,slow=13,SNR=4.0						
ZALV				Sn	**Sn**	**23 31 22.8**	**-0.2**
	0.5nm,0.3s,baz=208,slow=22,SNR=3.6						
ZALV				Lg		23 31 59.2	
	1.0nm,0.3s,baz=197,slow=28,SNR=15						
AML	**Almayashu**	**7.83**	**229**	*e*Pn	**Pn**	**23 30 22.6**	**+0.6**
BVAR	**Borovoye Array**	**9.06**	**311**	Pn	**Pn**	**23 30 39.7**	**+1.0**
	0.2nm,0.3s,baz=108,slow=14,SNR=4.1						
BVAR				Sn	**Sn**	**23 32 19.0**	**-1.7**
	0.3nm,0.3s,baz=116,slow=24,SNR=7.5						
BVAR				Lg		23 33 09.3	
	0.4nm,0.3s,baz=132,slow=26,SNR=5.6						
KBL	**Kabul**	**16.08**	**221**	P	**Pn**	**23 32 13.5**	**-0.6**
	1.9nm,1.2s						

ISCJB ***06*** *23:33:27.9±1.8,8.17S±0.04×117.74E±0.04, h25km±16km, mb3.4/5, Error ellipse: s-maj=7.4km s-min=6.7km az=173.8*

IDC ***06*** *23:33:27.3±1.4,8.05S×117.79E, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.5/20, mbtmp3.5/5, ML3.0/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/21, Error ellipse: s-maj=41.2km s-min=23.4km az=66.0*

DJA ***06*** *23:33:29, 8.12S×117.65E, h13km, MLv4.4/12*

NEIC ***06*** *23:33:31.6±0.5,8.11S×117.80E, h35km, mb3.5/2, Error ellipse: s-maj=18.0km s-min=7.1km az=66.0*

ISC 06 23:33:29.2±2.6, 8.15S±0.04×117.71E±0.04, h18km±18km, n31, σ0s99/37, mb3.4/5, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHKI	**Kahang-Kahang**	**2.09**	**264**	P	**Pn**	**23 34 03.4**	**0.0**
SRBI	**Singaraja**	**2.48**	**271**	P	**Pn**	**23 34 08.6**	**-0.1**
DNP	**Denpasar**	**2.53**	**258**	P	**Pn**	**23 34 14.5**	**+5.1**
IGBI	**Denpasar**	**2.62**	**255**	P	**Pn**	**23 34 10.6**	**-0.1**
WSI	**Waingapu**	**2.97**	**121**	P	**Pn**	**23 34 18.2**	**+2.8**
NBBI	**Negara**	**3.07**	**266**	P	**Pn**	**23 34 16.2**	**-0.6**
BKSI	**Bulukumba**	**3.69**	**41**	P	**Pn**	**23 34 25.5**	**+0.1**
KAPI	**Kappang**	**3.72**	**33**	*e*Pn	**Pn**	**23 34 24.9**	**-0.8**
KAPI				Sn	**Sn**	**23 35 06.9**	**-2.2**
KAPI				*e*Sn	**Sn**	**23 35 07.6**	**-1.5**
KAPI				LR	LR	23 36 03.3	
KAPI	**Kappang**	**3.72**	**33**	Pn	**Pn**	**23 34 24.8**	**-0.9**
	99nm,0.3s,baz=221,slow=3.5,SNR=589						
KAPI				Sn	**Sn**	**23 35 06.9**	**-2.2**
	30nm,0.3s,baz=227,slow=22,SNR=8.9						
KAPI				LR	LR	23 36 03.3	
	comp=Z,615nm,19.4s,baz=156,slow=43						
KMMI	**Kalianget**	**3.87**	**286**	P	**Pn**	**23 34 27.8**	**-0.1**
GMJI	**Gumukmas**	**4.23**	**268**	P	**Pn**	**23 34 31.7**	**-1.1**
MMRI	**Maumere**	**4.50**	**96**	P	**Pn**	**23 34 36.9**	**+0.3**
SPSI	**Sidrap Palu**	**4.63**	**26**	P	**Pn**	**23 34 39.4**	**+1.0**
TTSI	**Tana Toraja**	**5.49**	**23**	P	**Pn**	**23 34 51.6**	**+1.5**
	2um68nm,0.4s						
PWJI	**Pagerwojo**	**5.85**	**271**	P	**Pn**	**23 34 54.8**	**-0.3**
	0.4nm41nm,1.4s						
SJI	**Sawahan**	**5.90**	**274**	P	**Pn**	**23 34 56.6**	**+0.8**
FITZ	**Fitzroy Crossi**	**12.54**	**143**	*e*Pn	**Pn**	**23 36 27.1**	**+0.2**
FITZ				*e*Sn	**Sn**	**23 38 45.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**12.54**	**143**	Pn	**Pn**	**23 36 27.1**	**+0.2**
	0.1nm,0.3s,baz=326,slow=3.6,SNR=1.8						
FITZ				Sn	**Sn**	**23 38 42.5**	**-3.7**
	0.3nm,0.3s,baz=204,slow=20,SNR=4.1						
MBWA	**Marble Bar**	**13.08**	**172**	*e*Pn	**Pn**	**23 36 33.6**	**-0.6**
MBWA				*e*Sn	**Sn**	**23 38 47.2**	**-12**
KKM	**Kota Kinabalu**	**14.18**	**354**	Pn	**Pn**	**23 36 48.1**	**-1.2**
WRAB	**Tennant Creek**	**19.92**	**128**	*e*P	**Pn**	**23 38 00.3**	**-1.5**
	1.8nm,0.5s						
WB2	**Warramunga Arr**	**19.92**	**128**	*e*P	**Pn**	**23 37 59.9**	**-2.0**
ASAR	**Alice Springs**	**21.88**	**137**	P	**P**	**23 38 22.4**	**+1.0**
	1.7nm,0.6s,mb3.7,baz=309,slow=8.8,SNR=19						
CTAO	**Charters Tower**	**30.06**	**116**	P	**P**	**23 39 38.0**	**+0.4**
STKA	**Stephens Creek**	**32.41**	**140**	*e*P	**P**	**23 39 58.7**	**+0.5**
	0.3nm,0.6s,mb3.3						
BJT	**Baijiatuan**	**47.95**	**358**	*e*P	**P**	**23 42 05.8**	**-0.9**
SONM	**Songino Array**	**56.63**	**351**	P	**P**	**23 43 11.9**	**+0.8**
	0.4nm,0.6s,mb3.6,baz=178,slow=6.6,SNR=3.2						
MKAR	**Makanchi Array**	**63.13**	**333**	P	**P**	**23 43 55.9**	**+0.1**
	0.1nm,0.4s,mb3.3,baz=152,slow=7.5,SNR=3.4						
UCH	**Uchtor**	**63.78**	**325**	P	**P**	**23 44 01.3**	**+1.0**
EKS2	**Erkin-Say**	**64.48**	**325**	P	**P**	**23 44 05.4**	**+0.6**
BVAR	**Borovoye Array**	**72.95**	**332**	P	**P**	**23 44 58.8**	**+1.4**
	0.1nm,0.3s,mb3.2,baz=116,slow=9.8,SNR=2.7						

ISCJB ***06*** *23:37:40.4±0.8,52.21N±0.1×175.53W±0.09, h10km, mb3.9/7, Error ellipse: s-maj=16.7km s-min=7.3km az=171.4*

NEIC ***06*** *23:37:40.2,52.11N×175.46W, h5km, mb3.9/2, ML3.6(AEIC), After AEIC.*

IDC ***06*** *23:37:40.6±1.1,52.15N×175.78W, h0km, mb3.8/5, mb1 4.0/7, mb1mx3.7/25, mbtmp3.8/7, ML3.8/2, Error ellipse: s-maj=36.7km s-min=21.2km az=178.0*

ISC 06 23:37:42.0±0.8, 52.1N±0.1×175.46W±0.09, h10km, n17, σ1s17/18, mb3.9/7, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**0.80**	**79**	P	**Pg**	**23 37 55.7**	**-1.6**
ATKA				S	**Sg**	**23 38 06.8**	**-0.9**
AMKA	**Amchitka**	**3.33**	**260**	P	**Pn**	**23 38 33.7**	**-0.2**
NIKO	**Nikolski**	**4.14**	**75**	P	**Pn**	**23 38 44.5**	**-0.7**
UNV	**Unalaska Valle**	**5.71**	**68**	P	**Pn**	**23 39 08.1**	**+1.4**
SPIA	**Saint Paul Isl**	**5.96**	**28**	P	**Pn**	**23 39 10.4**	**+0.3**
KDAK	**Kodiak Island**	**14.31**	**57**	Pn	**Pn**	**23 41 07.5**	**+3.1**
	0.4nm,0.3s,baz=278,slow=7.6,SNR=3.4						
TTA	**Tatalina**	**15.03**	**36**	Pn	**Pn**	**23 41 14.8**	**+0.8**
	9.6nm,1.4s						
BPAW	**Bear Paw Mtn.**	**17.55**	**37**	*e*Pn	**Pn**	**23 41 47.3**	**+1.0**
	4.5nm,0.8s						
ILAR	**Eielson Array**	**19.43**	**38**	P	**Pn**	**23 42 06.9**	**-2.2**
	0.2nm,0.3s,baz=230,slow=8.8,SNR=13						
EGAK	**Eagle**	**21.68**	**41**	*e*P	**P**	**23 42 32.4**	**0.0**
	4.8nm,0.7s,mb4.0						
DAWY	**Dawson**	**22.19**	**43**	*e*P	**P**	**23 42 37.9**	**0.0**
YBH	**Yreka Blue Hor**	**36.74**	**85**	P	**P**	**23 44 54.3**	**+5.1**
	0.8nm,0.5s,mb3.8,baz=274,slow=8.4,SNR=3.6						
NVAR	**Mina Array Bea**	**41.42**	**86**	P	**P**	**23 45 31.1**	**+2.7**
	1.5nm,0.8s,mb3.7,baz=292,slow=8.6,SNR=5.7						
TXAR	**Lajitas Array**	**56.51**	**84**	P	**P**	**23 47 25.0**	**+0.9**
	0.5nm,0.4s,mb3.9,baz=298,slow=4.3,SNR=12						
MKAR	**Makanchi Array**	**61.22**	**310**	P	**P**	**23 47 55.6**	**-1.0**
	1.1nm,0.9s,mb4.0,baz=58,slow=4.6,SNR=5.1						
BVAR	**Borovoye Array**	**61.69**	**321**	P	**P**	**23 47 58.8**	**-0.9**
	1.4nm,0.7s,mb4.2,baz=52,slow=5.8,SNR=12						
ASAR	**Alice Springs**	**87.41**	**225**	P	**P**	**23 50 29.1**	**-0.1**
	0.4nm,0.7s,mb3.8,baz=23,slow=5.0,SNR=3.7						

NEIC ***06*** *23:47:49.7,35.74N×28.13E, h12km, MD3.3(ATH), After ATH.*

ATH ***06*** *23:47:49.7,35.74N×28.13E, h12km, MD3.3/6*

ISK ***06*** *23:47:52.3,35.76N×27.75E, h13km, MD3.2*

CSEM ***06*** *23:47:52.5±0.3,35.80N×27.94E, h2km, MD3.3, Error ellipse: s-maj=8.9km s-min=5.0km az=141.0*

DDA ***06*** *23:48:01.7,36.09N×27.80E, h7km, Md3.2*

ISC 06 23:47:52.3±0.8, 35.79N±0.04×27.99E±0.05, h1km±5km, n46, σ0s99/67, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.44**	**15**	*e*Pb	**Pg**	**23 47 59.1**	**-1.7**
ARG	**Arkhangelos**	**0.44**	**15**	*e*PB	**Pg**	**23 47 59.1**	**-1.7**
ARG	**Arkhangelos**	**0.44**	**15**	*e*Pb	**Pg**	**23 47 59.1**	**-1.7**
KARP	**Karpathos**	**0.71**	**250**	*e*Pg	**Pg**	**23 48 05.0**	**-1.0**
KARP				*e*Sb	**Sg**	**23 48 16.5**	**+1.3**
KARP	**Karpathos**	**0.71**	**250**	*e*PG	**Pg**	**23 48 05.0**	**-1.0**
KARP				*e*SB	**Sg**	**23 48 16.5**	**+1.3**
KARP	**Karpathos**	**0.71**	**250**	*e*Pg	**Pg**	**23 48 05.0**	**-1.0**
KARP				*e*Sb	**Sg**	**23 48 16.5**	**+1.3**
DAT	**Datca**	**0.99**	**341**	*e*PG	**Pg**	**23 48 11.7**	**+0.2**
DAT				*e*SG	**Sg**	**23 48 25.4**	**+1.1**
DAT	**Datca**	**0.99**	**341**	*e*Pg	**Pg**	**23 48 11.7**	**+0.3**
DAT				*e*Sg	**Sg**	**23 48 25.4**	**+1.1**
TURN	**Turunc**	**1.19**	**25**	*i* P	**Pn**	**23 48 11.6**	**-4.5**
TURN				*i* S	**Sn**	**23 48 26.3**	**-6.7**
TURN	**Turunc**	**1.19**	**25**	*i* P	**Pn**	**23 48 11.6**	**-4.5**
BDRM	**Kayabasi**	**1.35**	**341**	*i* P	**Pg**	**23 48 17.7**	**-0.5**
BDRM				*i* S	**Sg**	**23 48 35.2**	**-0.4**
BDRM	**Kayabasi**	**1.35**	**341**	*i* P	**Pg**	**23 48 17.7**	**-0.5**
BDRM				*i* S	**Sg**	**23 48 35.2**	**-0.4**
YER	**Yerkesik**	**1.36**	**10**	*e*PN	**Pn**	**23 48 18.3**	**-0.2**
YER	**Yerkesik**	**1.36**	**10**	*e*Pn	**Pn**	**23 48 18.3**	**-0.2**
BODT	**Bodrum**	**1.38**	**337**	*e*PN	**Pn**	**23 48 17.2**	**-1.5**
BODT				*e*SN	**Sn**	**23 48 35.7**	**-1.9**
BODT	**Bodrum**	**1.38**	**337**	*e*Pn	**Pn**	**23 48 17.2**	**-1.5**
BODT				*e*Sn	**Sn**	**23 48 35.7**	**-1.9**
AKAS	**Kas**	**1.39**	**71**	*i* P	**Pn**	**23 48 17.7**	**-1.1**
AKAS				*i* S	**Sg**	**23 48 48.0**	**+11**
AKAS	**Kas**	**1.39**	**71**	*i* P	**Pn**	**23 48 17.7**	**-1.1**
MLSB	**Milas**	**1.51**	**354**	*e*PN	**Pn**	**23 48 20.1**	**-0.4**
MLSB	**Milas**	**1.51**	**354**	*e*Pn	**Pn**	**23 48 20.1**	**-0.4**
ZKR	**Zakros**	**1.59**	**246**	*e*Pb	**Pb**	**23 48 21.1**	**-1.4**
ZKR				*e*Sb	**Sb**	**23 48 44.2**	**+1.1**
ZKR	**Zakros**	**1.59**	**246**	*e*PB	**Pb**	**23 48 21.1**	**-1.4**
ZKR				*e*SB	**Sb**	**23 48 44.2**	**+1.1**
ZKR	**Zakros**	**1.59**	**246**	*e*Pb	**Pb**	**23 48 21.1**	**-1.4**
ZKR				*e*Sb	**Sb**	**23 48 44.2**	**+1.1**
ELL	**Elmali**	**1.83**	**58**	*e*PN	**Pg**	**23 48 27.3**	**-0.1**
ELL	**Elmali**	**1.83**	**58**	*e*Pn	**Pg**	**23 48 27.3**	**0.0**
GLHS	**Glhisar (BURDU**	**1.83**	**41**	*e*PN	**Pn**	**23 48 26.2**	**+1.3**
GLHS	**Glhisar (BURDU**	**1.83**	**41**	*e*Pn	**Pn**	**23 48 26.2**	**+1.3**
AYDN	**Tasoluk**	**1.87**	**357**	*i* P	**Pn**	**23 48 25.7**	**+0.3**
AYDN				*i* S	**Sn**	**23 48 49.7**	**0.0**
AYDN	**Tasoluk**	**1.87**	**357**	*i* P	**Pn**	**23 48 25.7**	**+0.3**
AYDN				*i* S	**Sn**	**23 48 49.7**	**0.0**
GOLH	**Golhisar**	**1.92**	**41**	*i* P	**Pn**	**23 48 27.0**	**+0.8**
GOLH	**Golhisar**	**1.92**	**41**	*i* P	**Pn**	**23 48 27.0**	**+0.8**
NPS	**Neapolis**	**2.00**	**256**	*e*Pn	**Pn**	**23 48 26.3**	**-1.0**
NPS	**Neapolis**	**2.00**	**256**	*e*PN	**Pn**	**23 48 26.3**	**-1.0**
NPS	**Neapolis**	**2.00**	**256**	*e*Pn	**Pn**	**23 48 26.3**	**-1.0**
DNZL	**Cakiroluk**	**2.08**	**24**	*i* P	**Pg**	**23 48 32.1**	**-0.1**
DNZL				*i* S	**Sg**	**23 49 00.7**	**+1.5**
DNZL	**Cakiroluk**	**2.08**	**24**	*i* P	**Pg**	**23 48 32.1**	**-0.1**
DNZL				*i* S	**Sg**	**23 49 00.7**	**+1.5**
DENT	**Denizli**	**2.13**	**23**	*e*PN	**Pn**	**23 48 30.3**	**+1.2**
DENT	**Denizli**	**2.13**	**23**	*e*Pn	**Pn**	**23 48 30.3**	**+1.2**
APE	**Apeiranthos**	**2.36**	**304**	*e*Pn	**Pn**	**23 48 32.3**	**+0.2**
APE	**Apeiranthos**	**2.36**	**304**	*e*PN	**Pn**	**23 48 32.3**	**+0.2**
APE	**Apeiranthos**	**2.36**	**304**	*e*Pn	**Pn**	**23 48 32.3**	**+0.2**
IDI	**Anoyia**	**2.57**	**260**	*e*Pn	**Pn**	**23 48 35.1**	**0.0**
IDI				*e*Sn	**Sn**	**23 49 08.1**	**+1.1**
IDI	**Anoyia**	**2.57**	**260**	*e*PN	**Pn**	**23 48 35.1**	**0.0**
IDI				*e*SN	**Sn**	**23 49 08.1**	**+1.1**
IDI	**Anoyia**	**2.57**	**260**	*e*Pn	**Pn**	**23 48 35.1**	**0.0**
IDI				*e*Sn	**Sn**	**23 49 08.1**	**+1.1**
KULA	**Kula-Manisa**	**2.77**	**11**	*e*PN	**Pn**	**23 48 38.8**	**+1.0**
KULA	**Kula-Manisa**	**2.77**	**11**	*e*Pn	**Pn**	**23 48 38.8**	**+0.9**

IDC ***07*** *00:04:13.7±4.0,28.22N×130.22E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.5/22, mbtmp3.8/5, ML2.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/42, Error ellipse: s-maj=87.9km s-min=50.3km az=3.0*

JMA ***07*** *00:04:23.8±0.2,29.05N×130.05E, h74km±4km, M3.3*

ISCJB ***07*** *00:04:24.5±0.7,29.04N±0.05×130.2E±0.1, h59km±7km, mb3.7/4, Error ellipse: s-maj=17.4km s-min=5.4km az=20.6*

ISC 07 00:04:25.3±0.7, 29.05N±0.05×130.2E±0.1, h49km±8km, n13, σ0s88/19, mb3.7/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**0.75**	**193**	P	**Pn**	**00 04 39.5**	**-0.2**
JZK				*e*S	**Sn**	**00 04 51.7**	**+1.6**
JAM	**Amami Oshima**	**0.80**	**218**	P	**Pn**	**00 04 39.3**	**-1.1**
JAM				*e*S	**Sn**	**00 04 50.4**	**-1.0**
JNN	**Nakanoshima**	**0.83**	**342**	P	**Pn**	**00 04 40.1**	**-0.7**
JNN				*e*S	**Sn**	**00 04 52.5**	**+0.4**
JKC	**Kuchinoerabu**	**1.41**	**1**	P	**Pn**	**00 04 48.2**	**-0.4**
JTK	**Tokunoshima**	**1.65**	**221**	P	**Pn**	**00 04 51.5**	**-0.4**
JTK				*e*S	**Sn**	**00 05 13.8**	**+1.9**
JTN	**Tanegashima 3**	**1.75**	**24**	P	**Pn**	**00 04 52.7**	**-0.6**
JTN				*e*S	**Sn**	**00 05 15.3**	**+0.9**
JOW	**Kunigami**	**2.77**	**218**	P	**Pn**	**00 05 06.3**	**-0.9**
JIH	**Iheya**	**2.79**	**225**	P	**Pn**	**00 05 07.0**	**-0.5**
JIH				*e*S	**Sn**	**00 05 40.4**	**+0.4**
KSRS	**Korea Array**	**8.59**	**348**	Pn	**Pn**	**00 06 30.6**	**+3.6**
	0.1nm,0.3s,baz=168,slow=14,SNR=4.8						
KSRS				LR	LR	00 10 09.4	
	comp=Z,161nm,18.7s,baz=315,slow=38						
SONM	**Songino Array**	**26.26**	**322**	P	**P**	**00 09 56.1**	**+0.3**
	0.7nm,0.8s,mb3.3,baz=139,slow=9.6,SNR=3.2						
BVAR	**Borovoye Array**	**49.37**	**317**	P	**P**	**00 13 10.4**	**+0.7**
	1.6nm,0.6s,mb4.2,baz=92,slow=9.1,SNR=7.8						
ILAR	**Eielson Array**	**61.15**	**29**	P	**P**	**00 14 34.4**	**+0.1**
	0.2nm,0.6s,mb3.4,baz=265,slow=6.7,SNR=4.1						
FINES	**FINESS Array B**	**71.27**	**331**	P	**P**	**00 15 38.4**	**-0.7**
	0.9nm,0.7s,mb3.8,baz=65,slow=6.6,SNR=5.9						

IDC ***07*** *00:05:49.8±0.5, 10.78S×161.15E, h0km, mb4.6/22, mb1 4.7/23, mb1mx4.7/24, mbtmp4.6/23, ML4.3/1, MS4.5/12, Ms1 4.5/12, ms1mx4.2/27, Error ellipse: s-maj=18.6km s-min=14.7km az=112.0*

GCMT ***07*** *00:05:54.0±0.2, 10.93S×161.13E, h14km, MW5.2, Moment Tensor Solution. s40,c50; s73,c106; Moment tensor: Scale 10^16Nm; Mrr6.55±.31; Mθθ-2.40±.22; Mφφ-4.15±.22; Mrθ3.41±.56; Mrφ2.85±.16; Mθφ-2.40±.49; Best double couple: M0 7.60000×10^16 NP1:φs332.00000°, δ30.00000°, λ106.00000°. NP2:φs134.00000°, δ62.00000°, λ81.00000°. Principal axes: T 7.8700, Plg72.0000°, Azm24.0000°; N -0.4700, Plg8.0000°, Azm138.0000°; P -7.4000, Plg16.0000°, Azm230.0000°; Data Used: II IU G CN IC.*

MOS ***07*** *00:05:55.9±1.0, 10.25S×160.95E, h33km, mb5.3/34, MS4.7/7 Error ellipse: s-maj=13.4km s-min=10.1km az=102.7*

BJI ***07*** *00:05:56.8, 10.17S×160.93E, h38km, mB5.3/27, mb4.9/40, Ms5.1/26, Ms7 4.7/28*

ISCJB ***07*** *00:05:56.1±1.0, 10.77S±0.04×160.93E±0.03, h48km±8km, mb5.0/90, MS4.6/27, Error ellipse: s-maj=7.1km s-min=5.7km az=177.3*

NEIC ***07*** *00:05:56.2±1.1, 10.73S×161.02E, h37km±9km, mb5.2/52, Error ellipse: s-maj=7.4km s-min=5.7km az=144.0*

ISC 07 00:05:56.9±1.0, 10.74S±0.04×160.98E±0.03, h40km±8km, h51km±2.7km: pP-P, n423, σ0s71/351, mb5.0/89, MS4.6/27, 94C-88D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.65**	**322**	*e*Pn	**Pn**	**00 06 23.3**	**-0.1**
HNR				*e*S	**Sn**	**00 06 45.2**	**+1.8**
DZM	**Mont Dzumac**	**12.42**	**156**	*e*P	**Pn**	**00 08 50.8**	**-0.4**
	114nm,1.5s						
DZM				*e*LR	LR	00 11 29.0	
	1µm,22.2s						
CTA	**Charters Tower**	**16.96**	**235**	*e*P	**Pn**	**00 09 50.5**	**-0.7**
	18nm,0.9s						
CTA	**Charters Tower**	**16.96**	**235**	P	**Pn**	**00 09 50.6**	**-0.6**
	0.7nm,0.3s,baz=68,slow=15,SNR=8.5						
CTA				LR	LR	00 15 20.1	
	comp=Z,2µm,20.3s,baz=59,slow=33						
CTAO	**Charters Tower**	**16.96**	**235**	*e*Pn	**Pn**	**00 09 51.6**	**+0.4**
	340nm,1.9s						
CTAO	**Charters Tower**	**16.96**	**235**	*e*P	**Pn**	**00 09 51.6**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,340nm,1.9s						
EIDS	**Eidsvold**	**17.32**	**212**	*e*Pn	**Pn**	**00 09 54.9**	**-0.7**
	comp=Z,53nm,1.3s						
COEN	**Coen**	**17.69**	**258**	*e*P	**Pn**	**00 09 59.4**	**-0.9**
	comp=Z,769nm,1.5s						
MSVF	**Nonsavu**	**17.94**	**115**	P	**Pn**	**00 10 03.0**	**-0.3**
	comp=Z,451nm,1.3s,SNR=6.8						
MSVF	**Nonsavu**	**17.94**	**115**	*e*Pn	**Pn**	**00 10 01.3**	**-2.0**
	comp=Z,333nm,1.7s						
MSVF	**Nonsavu**	**17.94**	**115**	P	**Pn**	**00 10 03.0**	**-0.3**
	comp=Z,372nm,1

comp=Z,54nm,1.5s,mb5.5
RKT Rikitea 62.08 110 *e*LR LR 00 34 42.4
comp=Z,609nm,26.8s
CN2 Changchun 63.17 332 *e*P **P** **00 16 19.1 -1.6**
CN2 *e*pP pP 00 16 32.2 -0.4
CN2 *e*S **S** **00 24 44.7 -4.5**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
CN2 pmax pmax
comp=Z,200nm,8.0s
CN2 LR LR
comp=N,500nm,19.0s,MS4.8
CN2 LR LR
comp=E,400nm,19.0s,MS4.8
CN2 LR LR
comp=Z,500nm,20.0s,MS4.7
PSI Prapat 63.20 279 P **P** **00 16 21.4 -0.2**
comp=Z,1.5nm,0.3s,mb4.6,baz=189,slow=10,SNR=4.7
HABR Khabarovsk 63.26 341 *e*P **P** **00 16 19.4 -1.8**
HABR **PP pP 00 16 35.7 +2.6
HABR *e* 00 16 55.6
HABR *e*S **S** **00 24 47.2 -2.9**
HABR *e*SS sS 00 25 14.8 +4.9
HABR *e* 00 26 06.2
HABR *e*SS SS 00 28 54.9 -2.5
HABR MLR MLR
comp=Z,178nm,20.0s,MS4.2
PETK Petropavlovsk- 63.65 358 LR LR 00 39 57.0
comp=Z,250nm,21.2s,MS4.4,baz=59,slow=32
GYA Guiyang 64.42 306 *i*P **P** **00 16 27.0 -2.3**
GYA pP pP 00 16 41.8 +0.5
GYA sP sP 00 16 49.3 +3.4
GYA PcP PcP 00 17 01.8 -1.7
GYA PP PP 00 18 51.2 -0.3
GYA ScP 00 20 59.7
GYA S **S** **00 24 57.8 -7.6**
GYA sS sS 00 25 16.0 -9.2
GYA SKS 00 26 11.6
GYA SS SS 00 29 08.5 -7.8
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,140nm,5.2s
GYA LR LR
comp=N,850nm,19.4s,MS5.0
GYA LR LR
comp=E,620nm,19.8s,MS5.0
GYA LR LR
comp=Z,790nm,18.4s,MS4.9
KLR Kul'dur 65.02 339 *e*P **P** **00 16 28.8 -3.9**
KLR pmax pmax
comp=E,34nm,1.6s
KLR pmax pmax
comp=Z,50nm,1.6s,mb5.3
BJI Beijing 65.38 323 P **P** **00 16 30.3 -5.0**
BJI pP pP 00 16 46.6 -0.6
BJI sP sP 00 16 52.6 +0.7
BJI S S 00 25 11.2 -5.5
BJI SS SS 00 29 24.9 -5.8
BJI pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
BJI pmax pmax
comp=Z,180nm,8.4s
BJI LR LR
comp=N,290nm,19.7s,MS4.7
BJI LR LR
comp=E,310nm,18.8s,MS4.7
BJI LR LR
comp=Z,270nm,19.8s,MS4.5
XAN Xi'an 66.51 314 P **P** **00 16 42.6 -0.1**
XAN pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
XAN pmax pmax
comp=Z,35nm,3.2s
KMI Kunming 67.00 303 P **P** **00 16 47.5 +1.5**
KMI pP pP 00 16 57.2 -0.8
KMI sP sP 00 17 03.5 +0.8
KMI PP PP 00 19 12.3 -1.8
KMI S S 00 25 30.2 -6.8
KMI SS SS 00 29 48.3 -8.2
KMI pmax pmax
comp=Z,34nm,1.2s,mb5.2
KMI pmax pmax
comp=Z,290nm,3.5s
KMI LR LR
comp=N,260nm,24.1s,MS4.5
KMI LR LR
comp=E,230nm,21.9s,MS4.5
KMI LR LR
comp=Z,280nm,30.7s
SBA Scott Base 67.17 179 *e*P **P** **00 16 47.1 +0.9**
comp=Z,29nm,1.6s,mb5.1
SBA Scott Base 67.17 179 *e*P **P** **00 16 47.1 +0.9**
SBA pmax pmax
comp=Z,29nm,1.6s,mb5.1
CM31 Chiang Mai Arr 67.72 295 *e*P **P** **00 16 51.4 +0.8**
comp=Z,14nm,0.8s,mb5.1
CMAR Chiang Mai Arr 67.72 295 P **P** **00 16 52.0 +1.3**
comp=Z,12nm,0.9s,mb4.9,baz=118,slow=4.5,SNR=39
CMAR LR LR 00 47 18.4
comp=Z,97nm,18.9s,MS4.0,baz=125,slow=37
CHTO Chiang Mai 67.85 295 *e*P **P** **00 16 52.4 +0.9**
comp=Z,43nm,1.4s,mb5.3
CHTO Chiang Mai 67.85 295 *e*P **P** **00 16 52.4 +0.9**
CHTO pmax pmax
comp=Z,43nm,1.4s,mb5.3
CD2 Chengdu 68.74 309 P **P** **00 16 57.6 +0.8**
CD2 pP pP 00 17 10.6 +1.7
CD2 sP sP 00 17 15.9 +2.4
CD2 PP PP 00 19 30.5 +1.4
CD2 S S 00 25 53.1 -4.5
CD2 sS sS 00 26 15.0 -2.6
CD2 pmax pmax
comp=Z,20nm,1.2s,mb4.9
CD2 pmax pmax
comp=Z,290nm,4.0s
HIA Hailar 69.87 333 *e*P **P** **00 17 03.5 +0.1**
LZH Lanzhou 71.13 314 *e*P **P** **00 17 13.7 +2.3**
LZH pP pP 00 17 20.0 -3.5
LZH sP sP 00 17 26.0 -2.2
LZH S S 00 26 27.0 +1.6
LZH *e*SS SS 00 30 58.1 -1.8
LZH pmax pmax
comp=Z,53nm,1.4s,mb5.3
LZH pmax pmax
comp=Z,180nm,5.1s
LZH LR LR
comp=N,670nm,17.0s
LZH LR LR
comp=Z,880nm,17.8s,MS5.1
MIR Mirnyy 71.51 203 *e*P **P** **00 17 13.0 -0.2**
MIR *e* 00 17 28.0
MIR pmax pmax
comp=Z,24nm,1.4s,mb4.9
SPIA Saint Paul Isl 71.71 16 *e*P **P** **00 17 12.1 -2.3**
comp=Z,46nm,0.5s,mb5.7
CLNS Chul'man 73.63 340 *e*P **P** **00 17 26.0 +0.2**
CLNS pmax pmax
comp=Z,21nm,1.2s,mb4.9
CLNS pmax pmax
comp=N,11nm,1.2s
CLNS pmax pmax
comp=E,4.0nm,1.0s
SEY Seymchan 73.75 356 *e*P **P** **00 17 25.8 -0.6**
ULN Ulaanbaatar 75.36 326 *e*P **P** **00 17 36.5 +0.4**
comp=E,68nm,1.5s,mb5.4
ULN Ulaanbaatar 75.36 326 *e*P **P** **00 17 36.5 +0.4**
ULN pmax pmax
comp=Z,68nm,1.5s,mb5.4
GTA Gaotai 75.52 315 *e*P **P** **00 17 38.6 +1.4**
GTA pP pP 00 17 54.4 +5.0
GTA S S 00 27 17.7 +2.7
GTA pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
GTA pmax pmax
comp=Z,330nm,6.8s
GTA LR LR
comp=N,220nm,15.8s,MS4.6
GTA LR LR
comp=E,160nm,17.0s,MS4.6
GTA LR LR
comp=Z,270nm,15.8s,MS4.7
SONM Songino Array 75.71 325 P **P** **00 17 38.6 +0.5**
comp=Z,11nm,0.8s,mb4.8,baz=138,slow=5.0,SNR=56
SONM LR LR 00 49 17.9

comp=Z,357nm,18.8s,MS4.7,baz=208,slow=34
YAK Yakutsk 76.55 345 *e*P **P** **00 17 40.8 -1.7**
YAK *e*PP pP 00 17 51.0 -3.7
YAK *e* 00 17 58.0
YAK *e* 00 20 32.6
YAK *e*S S 00 27 24.1 -1.3
YAK *e* 00 27 55.2
YAK pmax pmax
comp=Z,40nm,1.4s,mb5.2
YAK pmax pmax
comp=E,6.0nm,1.5s
YAK pmax pmax
comp=N,12nm,1.0s
YAK pmax pmax
comp=Z,9.0nm,0.3s,mb5.2
YAK pmax pmax
comp=N,2.0nm,0.2s
YAK pmax pmax
comp=E,1.0nm,0.2s
YAK smax
comp=N,133nm,3.5s
YAK smax
comp=E,84nm,3.0s
YAK MLR MLR
comp=Z,187nm,15.0s,MS4.5
YAK MLR MLR
comp=E,114nm,14.0s,MS4.5
YAK MLR MLR
comp=N,151nm,15.0s,MS4.5
OHAK Old Harbor 77.42 24 *e*P **P** **00 17 47.9 +0.4**
comp=N,40nm,1.2s,mb5.2
KDAK Kodiak Island 78.08 23 *e*P **P** **00 17 50.7 -0.5**
comp=N,35nm,1.0s,mb5.2
KDAK Kodiak Island 78.08 23 P **P** **00 17 50.8 -0.4**
comp=N,13nm,1.0s,mb4.8,baz=140,slow=2.1,SNR=7.6
KDAK Kodiak Island 78.08 23 *e*P **P** **00 17 50.7 -0.5**
KDAK pmax pmax
comp=Z,35nm,1.0s,mb5.2
LSA Lhasa 78.26 303 *e*P **P** **00 17 53.7 +0.9**
comp=Z,21nm,1.4s,mb4.9
LSA Lhasa 78.26 303 *e*P **P** **00 17 53.7 +0.8**
LSA pmax pmax
comp=Z,21nm,1.4s,mb4.9
ZAK Zakamensk 78.82 327 *e*P **P** **00 17 53.3 -2.1**
ZAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
QSPA South Pole Qui 79.26 180 P **P** **00 17 58.1 +0.6**
comp=Z,2.1nm,0.8s,mb4.1,baz=82,slow=1.6,SNR=6.7
TLY Talaya 79.32 328 *e*P **P** **00 17 58.0 -0.2**
comp=Z,15nm,1.0s,mb4.9
TLY Talaya 79.32 328 *e*P **P** **00 17 58.0 -0.2**
TLY pmax pmax
comp=Z,15nm,1.0s,mb4.9
RSO Redoubt South 79.87 21 *e*P **P** **00 18 00.8 -0.1**
TAPN Taplejung 80.39 300 *e*P **P** **00 18 04.9 +0.4**
ODAN Odare 80.52 300 *e*P **P** **00 18 05.5 +0.3**
comp=Z,111nm,1.5s,mb5.6
TTA Tatalina 80.55 18 *e*P **P** **00 18 03.3 -1.3**
RAMN Ramite 81.22 300 *e*P **P** **00 18 09.3 +0.3**
JIRN Jiri 81.77 300 *e*P **P** **00 18 12.5 +0.6**
PMR Palmer 81.94 22 *e*P **P** **00 18 12.7 +0.7**
comp=Z,18nm,1.1s,mb4.9
PMR Palmer 81.94 22 *e*P **P** **00 18 12.7 +0.7**
PMR pmax pmax
comp=Z,18nm,1.1s,mb4.9
GUN Gumba 82.11 300 *e*P **P** **00 18 14.3 +0.7**
comp=Z,55nm,1.1s,mb5.4
PKI Pulchoki 82.41 300 *e*P **P** **00 18 15.7 +0.5**
KKN Kakani 82.58 300 *e*P **P** **00 18 16.1 0.0**
DMN Daman 82.68 300 *e*P **P** **00 18 17.3 +0.7**
comp=Z,108nm,1.2s,mb5.8
GKN Gorkha 83.19 300 *e*P **P** **00 18 19.2 -0.1**
comp=Z,89nm,1.1s,mb5.7
MAW Mawson 83.23 202 P **P** **00 18 18.4 -0.4**
comp=Z,2.2nm,0.8s,mb4.2,baz=71,slow=8.3,SNR=4.5
MAW LR LR 00 51 53.3
comp=Z,141nm,20.4s,MS4.3,baz=169,slow=33
BMRM Bremner River 83.26 24 *e*P **P** **00 18 18.9 0.0**
comp=Z,36nm,1.2s,mb5.3
KOLN Koldanda 84.01 300 *e*P **P** **00 18 23.6 +0.1**
comp=Z,34nm,0.9s,mb5.5
COLA College 84.51 20 *e*P **P** **00 18 23.7 -1.5**
comp=Z,29nm,1.1s,mb5.3
COLA College 84.51 20 *e*P **P** **00 18 23.7 -1.5**
COLA pmax pmax
comp=Z,29nm,1.1s,mb5.3
ILAR Eielson Array 84.76 20 P **P** **00 18 25.1 -1.4**
comp=Z,1.2nm,0.8s,mb4.1,baz=249,slow=4.7,SNR=16
TIXI Tiksi 84.95 350 *e*P **P** **00 18 26.5 -0.8**
TIXI pmax pmax
comp=Z,20nm,1.6s,mb5.0
DIB Dawson Inlet, 84.98 34 T 01 51 39.0
SNR=14
WMQ Urumqi 85.59 316 *e*P **P** **00 18 28.9 -2.2**
WMQ pP pP 00 18 42.2 -1.3
WMQ sP sP 00 18 47.4 -0.6
WMQ pmax pmax
comp=Z,12nm,0.9s,mb5.1
WMQ pmax pmax
comp=Z,180nm,6.4s
WMQ LR LR
comp=N,280nm,20.9s,MS4.6
WMQ LR LR
comp=E,130nm,24.6s,MS4.6
WMQ LR LR
comp=Z,180nm,20.8s,MS4.5
HYT Haines Junctio 86.08 26 *e*P **P** **00 18 32.7 -0.4**
EGAK Eagle 86.75 21 *e*P **P** **00 18 36.5 +0.2**
comp=Z,63nm,1.4s,mb5.7
WDC Whiskeytown Da 86.84 48 *e*P **P** **00 18 37.4 +0.1**
comp=Z,15nm,1.3s,mb5.0
WDC Whiskeytown Da 86.84 48 *e*P **P** **00 18 37.4 +0.1**
WDC pmax pmax
comp=Z,15nm,1.3s,mb5.1
DAWY Dawson 87.00 22 *e*P **P** **00 18 36.5 -1.1**
YBH Yreka Blue Hor 87.06 47 *e*P **P** **00 18 38.7 +0.4**
comp=Z,28nm,1.6s,mb5.2
YBH Yreka Blue Hor 87.06 47 P **P** **00 18 38.2 -0.1**
comp=Z,4.1nm,0.8s,mb4.7,baz=165,slow=3.3,SNR=11
YBH Yreka Blue Hor 87.06 47 *e*P **P** **00 18 38.7 +0.4**
YBH pmax pmax
comp=Z,28nm,1.6s
HUMO Hull Mountain 87.14 46 *e*P **P** **00 18 39.1 +0.4**
comp=Z,13nm,1.1s,mb5.1
SCI San Clemente I 87.91 56 ⇓P **P** **00 18 42.1 -0.6**
baz=88
E03A Lebam 87.91 42 ⇓P **P** **00 18 42.8 +0.5**
baz=88
OSI Osito Adit 88.17 54 ⇑P **P** **00 18 43.9 +0.1**
baz=88
RCTC Rector, Farmer 88.18 53 ⇓P **P** **00 18 43.2 -0.6**
baz=88
VES Vestal, Richgr 88.19 53 ⇑P **P** **00 18 44.3 +0.4**
baz=89
G04A Mulino 88.23 43 ⇑P **P** **00 18 43.6 -0.3**
baz=88
H04A Detroit Lake 88.28 44 ⇑P **P** **00 18 43.4 -0.7**
baz=89
DECC Green Verdugo 88.39 55 ⇓P **P** **00 18 44.6 -0.3**
baz=89
DLBC Dease Lake 88.40 29 P **P** **00 18 43.5 -0.9**
comp=Z,1.1nm,0.3s,mb4.6,baz=185,slow=11,SNR=2.7
F04A Amboy 88.49 43 ⇑P **P** **00 18 43.6 -1.4**
baz=89
WCN Washoe City 88.55 50 ⇓P **P** **00 18 45.5 0.0**
baz=89
MWC Mount Wilson 88.61 55 *e*P **P** **00 18 46.6 +0.7**
comp=Z,75nm,1.6s,mb5.8
MWC Mount Wilson 88.61 55 *e*P **P** **00 18 46.6 +0.7**
MWC pmax pmax
comp=Z,75nm,1.6s,mb5.8
ISA Isabella 88.62 53 ⇓P **P** **00 18 45.6 -0.4**
baz=89,SNR=6.9
ISA Isabella 88.62 53 *e*P **P** **00 18 46.0 +0.1**
comp=Z,31nm,1.5s,mb5.4
ISA Isabella 88.62 53 *e*P **P** **00 18 46.0 0.0**
ISA pmax pmax
comp=Z,31nm,1.5s,mb5.4
K05A Summer Lake 88.63 46 ⇓P **P** **00 18 45.8 0.0**
baz=89
EDW2 Edwards Air Fo 88.82 54 ⇓P **P** **00 18 46.3 -0.6**
baz=89,SNR=6.5
MOD Modoc 88.83 47 *e*P **P** **00 18 47.3 +0.5**
comp=Z,9.3nm,0.5s,mb5.4
BFSC Mount Baldy Ra 88.93 55 ⇑P **P** **00 18 47.0 -0.4**
baz=89,SNR=6.2
PAHR Pah Rah Range 88.93 49 *e*P **P** **00 18 47.8 +0.5**

comp=Z,42nm,1.6s,mb5.5
109C Camp Elliot, M 89.07 56 ⇓P **P** **00 18 47.9 -0.2**
baz=90
CWC Cottonwood Cre 89.12 53 ⇓P **P** **00 18 48.7 +0.4**
baz=90
LON Longmire 89.13 42 *e*P **P** **00 18 48.7 +0.6**
comp=Z,20nm,1.8s,mb5.2
LON Longmire 89.13 42 *e*P **P** **00 18 48.7 +0.6**
LON pmax pmax
comp=Z,20nm,1.8s,mb5.2
D05A Enumclaw 89.14 42 ⇑P **P** **00 18 47.6 -0.5**
baz=89
MURC Murrieta 89.15 56 ⇑P **P** **00 18 47.7 -0.8**
baz=90
TIN Tinemaha 89.15 52 ⇑P **P** **00 18 48.6 +0.1**
baz=90
LRMC Laurel Mountai 89.20 54 ⇑P **P** **00 18 48.5 -0.1**
baz=90,SNR=5.7
BAR Barrett 89.37 57 *e*P **P** **00 18 50.2 +0.6**
comp=Z,26nm,1.4s,mb5.4
NVAR Mina Array Bea 89.43 51 P **P** **00 18 49.7 0.0**
NVAR Mina Array Bea 89.43 51 P **P** **00 18 49.7 0.0**
comp=Z,4.0nm,0.7s,mb4.8,baz=237,slow=4.8,SNR=22
G06A Carlson Farm, 89.49 44 ⇑P **P** **00 18 50.0 +0.1**
baz=90
MPMC Manual Prospec 89.49 53 ⇓P **P** **00 18 49.9 -0.1**
baz=90,SNR=12
BBRC Big Bear Solar 89.53 55 ⇓P **P** **00 18 49.8 -0.5**
baz=90
RRX Edison Barstow 89.61 55 ⇓P **P** **00 18 49.9 -0.7**
baz=90
MONP Monument Peak 89.63 57 ⇑P **P** **00 18 50.7 0.0**
baz=90,SNR=7.1
PFO Pinyon Flat Ob 89.76 56 ⇓P **P** **00 18 50.9 -0.5**
baz=90
PFO Pinyon Flat Ob 89.76 56 *e*P **P** **00 18 51.6 +0.2**
comp=Z,30nm,1.6s,mb5.4
PFO Pinyon Flat Ob 89.76 56 *e*P **P** **00 18 51.6 +0.2**
PFO pmax pmax
comp=Z,30nm,1.6s,mb5.4
GRAC Grapevine Rang 89.81 52 ⇑P **P** **00 18 51.6 +0.1**
baz=90
DVTC Desert V Tower 89.84 57 ⇓P **P** **00 18 51.6 -0.1**
baz=90
GSC Goldstone 89.86 54 ⇓P **P** **00 18 51.6 -0.2**
baz=90,SNR=5.1
GSC Goldstone 89.86 54 *e*P **P** **00 18 50.7 -1.1**
comp=Z,9.5nm,1.4s,mb4.9
GSC Goldstone 89.86 54 *e*P **P** **00 18 50.7 -1.1**
GSC pmax pmax
comp=Z,10.0nm,1.4s,mb5.0
I07A Izee 89.97 45 ⇑P **P** **00 18 51.7 -0.4**
baz=90
FURC Furnace Creek, 90.08 53 ⇑P **P** **00 18 52.8 0.0**
baz=90,SNR=10.0
MK31 Makanchi Array 90.12 318 *e*P **P** **00 18 53.1 +0.4**
MKAR Makanchi Array 90.12 318 P **P** **00 18 52.2 -0.5**
comp=Z,2.2nm,0.5s,mb4.8,baz=93,slow=5.5,SNR=30
MKAR Makanchi Array 90.12 318 *ce*P **P** **00 18 52.4 -0.3**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
HEC Hector,Ludlow 90.13 55 ⇓P **P** **00 18 52.8 -0.2**
baz=90
F07A Phinny Hill Vi 90.15 43 ⇑P **P** **00 18 53.1 +0.3**
baz=90
SWSC Sam W. Stewart 90.15 57 ⇓P **P** **00 18 53.3 +0.1**
baz=90
WVOR Wild Horse Val 90.16 47 *e*P **P** **00 18 52.7 -0.3**
comp=Z,45nm,1.4s,mb5.6
WVOR Wild Horse Val 90.16 47 *e*P **P** **00 18 52.7 -0.3**
WVOR pmax pmax
comp=Z,45nm,1.4s,mb5.6
BELC Belle Mtn. Jos 90.22 56 ⇑P **P** **00 18 53.9 +0.4**
baz=91,SNR=10.0
E07A Sunnyside 90.37 43 ⇑P **P** **00 18 53.7 -0.2**
baz=91
SHOC Shoshone 90.41 54 ⇓P **P** **00 18 54.7 +0.4**
baz=91
U10A Ash Meadows, A 90.49 53 ⇑P **P** **00 18 54.7 0.0**
baz=91,SNR=6.9
J08A Circle Bar Ran 90.51 46 ⇑P **P** **00 18 54.2 -0.4**
baz=91
HAWA Hanford 90.54 43 *e*P **P** **00 18 55.5 +0.8**
comp=Z,47nm,1.9s,mb5.5
BC3 Big Chuckawall 90.59 56 ⇓P **P** **00 18 54.9 -0.3**
baz=91,SNR=7.2
TUQ Turquoise Moun 90.59 54 ⇓P **P** **00 18 55.0 -0.2**
baz=91,SNR=8.2
ZAA0 Zalesovo Array 90.60 325 *e*P **P** **00 18 53.2 -1.6**
ZALV Zalesovo Beam 90.60 325 P **P** **00 18 53.1 -1.7**
comp=Z,3.3nm,0.8s,mb4.7,baz=104,slow=6.3,SNR=14
S10A Tonopah Range, 90.62 52 ⇓P **P** **00 18 55.2 0.0**
baz=91,SNR=28
G08A Pilot Rock 90.65 44 ⇑P **P** **00 18 54.7 -0.5**
baz=91
GMRC Granite Mounta 90.66 55 ⇓P **P** **00 18 54.9 -0.6**
baz=91,SNR=8.0
BMN Battle Mountai 90.72 49 *e*P **P** **00 18 56.2 +0.5**
comp=Z,20nm,1.3s,mb5.3
BMN Battle Mountai 90.72 49 *e*P **P** **00 18 56.2 +0.5**
BMN pmax pmax
comp=Z,20nm,1.3s,mb5.3
E08A Dider Farm, El 90.88 43 ⇓P **P** **00 18 55.8 -0.5**
baz=91
R10A Warm Springs 90.93 51 ⇑P **P** **00 18 56.4 -0.3**
baz=91,SNR=7.9
IRM Iron Mountain 90.94 56 ⇑P **P** **00 18 56.6 -0.2**
baz=91,SNR=9.2
GLA Glamis 90.97 57 ⇓P **P** **00 18 57.0 0.0**
baz=91
GLA Glamis 90.97 57 *e*P **P** **00 18 56.8 -0.2**
comp=Z,6.0nm,0.8s,mb5.0
GLA Glamis 90.97 57 *e*P **P** **00 18 56.8 -0.2**
GLA pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
Q10A Clear Creek Ra 90.97 51 ⇑P **P** **00 18 56.6 -0.3**
baz=91
112A Yuma 91.07 57 ⇑P **P** **00 18 57.4 0.0**
baz=92
V11A Goodsprings 91.07 54 ⇑P **P** **00 18 57.5 +0.1**
baz=91,SNR=6.8
D08A Wollman Farm, 91.12 42 ⇑P **P** **00 18 57.0 -0.3**
baz=91
INK Inuvik 91.16 20 P **P** **00 18 54.8 -2.3**
comp=Z,1.2nm,0.3s,mb4.7,baz=180,slow=7.4,SNR=3.9
B08A Colville Reser 91.18 41 ⇑P **P** **00 18 56.9 -0.7**
baz=91
S11A Rachel 91.21 52 ⇑P **P** **00 18 58.0 0.0**
baz=92
O10A Cortez Mining, 91.22 49 ⇓P **P** **00 18 58.0 0.0**
baz=92
U11A Corn Creek 91.23 53 ⇓P **P** **00 18 58.4 +0.2**
baz=92
N10A Dunphy 91.31 49 ⇓P **P** **00 18 58.7 +0.3**
baz=92
OD2 Odessa Site #2 91.34 42 *e*P **P** **00 18 58.2 -0.2**
W12A Cal Nev Ari 91.41 54 ⇑P **P** **00 18 58.9 -0.1**
baz=92
M10A I.L. Ranch, Tu 91.47 48 ⇑P **P** **00 18 59.4 +0.3**
baz=92
R11A Troy Canyon, C 91.49 51 ⇓P **P** **00 18 59.5 +0.2**
baz=92,SNR=19
NEE2 Needles Airpor 91.50 55 ⇓P **P** **00 18 59.2 -0.2**
baz=92
E09A Wood Farm, Sta 91.50 43 ⇑P **P** **00 18 58.9 -0.2**
baz=92
V12A Nelson 91.51 54 ⇑P **P** **00 18 59.6 +0.1**
baz=92
T11A Corn Creek, Al 91.54 53 ⇓P **P** **00 18 59.6 +0.1**
baz=92,SNR=15
Q11A Duckwater 91.54 51 ⇑P **P** **00 18 59.7 +0.2**
baz=92
P11A Circle Ranch, 91.62 50 ⇓P **P** **00 19 00.4 +0.5**
baz=92
L10A Juniper Basin 91.64 48 ⇑P **P** **00 18 59.8 -0.1**
baz=92,SNR=7.5
BMO Blue Mountains 91.68 45 *e*P **P** **00 18 60.0 0.0**
comp=Z,16nm,1.4s,mb5.2
BMO Blue Mountains 91.68 45 *e*P **P** **00 19 00.0 0.0**
BMO pmax pmax
comp=Z,16nm,1.4s,mb5.2
C09A Chrisman Ranch 91.73 42 ⇓P **P** **00 19 00.8 +0.6**
baz=92
NVS Novosibirsk 91.74 326 *i*P **P** **00 18 59.4 -0.6**
113A Mohawk Valley, 91.78 57 ⇑P **P** **00 19 00.5 -0.3**
baz=92
O11A Cowboy Ranch, 91.82 50 ⇓P **P** **00 19 01.7 +0.9**
baz=92,SNR=12

T12A	Moapa	91.82	53	⇓P		P	00 19 01.1	+0.2
	baz=92							
S12A	Delamar Landin	91.90	52	⇓P		P	00 19 01.7	+0.4
	baz=92,SNR=5.4							
U12A	Valley of Fire	91.90	53	⇓P		P	00 19 01.8	+0.6
	baz=92							
Y13A	Salome	91.94	56	⇓P		P	00 19 00.9	-0.6
	baz=92							
Z13A	Yuma Proving G	91.96	57	⇑P		P	00 19 02.1	+0.5
	baz=92							
F10A	Beach Ranch, E	91.99	44	⇓P		P	00 19 01.9	+0.4
	baz=92							
M11A	Holland Ranch,	92.00	48	⇑P		P	00 19 02.4	+0.9
	baz=92							
X13A	Yucca	92.10	55	⇑P		P	00 19 03.2	+1.0
	baz=92							
W13A	Hualapai Mount	92.15	55	⇑P		P	00 19 02.9	+0.5
	baz=92							
L11A	Cat Creek Ranc	92.18	48	⇑P		P	00 19 03.3	+0.9
	baz=92,SNR=13							
Q12A	Willow Creek R	92.21	51	⇑P		P	00 19 03.0	+0.4
	baz=93							
V13A	Grand Canyon W	92.22	54	⇓P		P	00 19 02.4	-0.3
	baz=93							
R12A	Pony Springs,	92.24	52	⇑P		P	00 19 03.5	+0.8
	baz=93,SNR=7.6							
P12A	McGill	92.24	50	⇑P		P	00 19 03.0	+0.3
	baz=93							
MFID	Camas Ranch	92.40	46	⇓P		P	00 19 03.5	+0.1
	baz=93,SNR=11							
214A	Organ Pipe Nat	92.42	58	⇓P		P	00 19 04.3	+0.5
	baz=93							
N12A	Clover Valley,	92.43	49	⇓P		P	00 19 04.3	+0.7
	baz=93,SNR=5.3							
114A	Black Gap (USA	92.51	57	⇑P		P	00 19 04.2	+0.1
	baz=93							
T13A	Saint George	92.52	53	⇑P		P	00 19 04.5	+0.4
	baz=93,SNR=8.0							
O12A	Currie	92.53	50	⇑P		P	00 19 04.3	+0.3
	baz=93							
Z14A	Wintersburg	92.58	57	⇑P		P	00 19 04.5	+0.1
	baz=93							
NEW	Newport	92.59	41	*e*P		P	00 19 03.6	-0.5
	comp=Z,17nm,1.3s,mb5.3							
NEW	Newport	92.59	41	*e*P		P	00 19 03.6	-0.5
NEW				pmax		pmax		
	comp=Z,17nm,1.3s							
M12A	Wells	92.64	48	⇓P		P	00 19 04.6	+0.1
	baz=93							
S13A	Holt Ranch, En	92.67	52	⇓P		P	00 19 04.9	+0.2
	baz=93,SNR=8.4							
R13A	O'Grain Ranch,	92.70	52	⇑P		P	00 19 05.9	+1.0
	baz=93							
L12A	House Creek Ra	92.72	48	⇓P		P	00 19 05.7	+0.8
	baz=93,SNR=6.4							
Q13A	Wheeler Ranch,	92.81	51	⇑P		P	00 19 05.2	-0.2
	baz=93,SNR=5.6							
W14A	Seligman	92.82	55	⇓P		P	00 19 05.6	+0.1
	baz=93							
X14A	Yava	92.83	56	⇓P		P	00 19 06.0	+0.4
	baz=93							
V14A	Boquillas Ranc	92.88	54	⇓P		P	00 19 06.0	+0.2
	baz=93							
P13A	Bates Ranch, G	92.92	51	⇑P		P	00 19 06.2	+0.4
	baz=93,SNR=11							
KSH	Kashi	92.94	310	*e*P		P	00 19 08.8	+2.9
KSH				*e*PP		PP	00 22 55.3	+6.2
KSH				*e*SKS			00 29 36.3	
KSH				*e*S		S	00 30 07.4	-1.6
KSH				*e*SS		SS	00 36 26.6	+2.7
KSH				pmax		pmax		
	comp=Z,2.0nm,0.3s,mb5.0							
KSH				LR		LR		
	comp=N,510nm,20.5s							
KSH				LR		LR		
	comp=E,230nm,13.0s							
KSH				LR		LR		
	comp=Z,81nm,7.1s							
I12A	Atlanta	92.97	46	⇑P		P	00 19 06.1	+0.1
	baz=93,SNR=12							
U14A	Mt Trumbull	92.97	54	⇑P		P	00 19 06.5	+0.3
	baz=93,SNR=6.4							
ARUT	Antelope Range	93.03	52	*e*P		P	00 19 07.0	+0.5
	comp=Z,16nm,1.3s,mb5.3							
ARUT	Antelope Range	93.03	52	*e*P		P	00 19 07.0	+0.6
ARUT				pmax		pmax		
	comp=Z,16nm,1.3s,mb5.3							
115A	Sonoran Desert	93.05	57	⇓P		P	00 19 06.5	-0.1
	baz=93							
CCUT	Cedar City	93.05	53	*e*P		P	00 19 07.5	+1.0
	comp=Z,16nm,1.4s,mb5.3							
N13A	Wendover, West	93.05	49	⇑P		P	00 19 06.4	-0.1
	baz=93							
C11A	Tepee Creek (N	93.06	42	⇑P		P	00 19 06.1	-0.2
	baz=93							
O13A	Hicks Ranch, I	93.08	50	⇑P		P	00 19 06.6	0.0
	baz=93							
G12A	Big Creek, Yel	93.11	45	⇓P		P	00 19 06.4	-0.2
	baz=93							
T14A	Hurricane	93.17	53	⇓P		P	00 19 07.0	-0.1
	baz=94							
M13A	Montello	93.18	49	⇑P		P	00 19 07.0	0.0
	baz=94							
Z15A	Gila River Ind	93.21	57	⇑P		P	00 19 07.3	-0.1
	baz=94							
F12A	Elk City	93.29	44	⇑P		P	00 19 06.9	-0.6
	baz=94							
H12A	Diamond D Ranc	93.32	45	⇑P		P	00 19 07.6	0.0
	baz=94							
X15A	Humboldt	93.37	56	⇑P		P	00 19 08.2	+0.1
	baz=94							
Q14A	Sevier Lake (B	93.39	51	⇑P		P	00 19 08.0	0.0
	baz=94							
KURK	Kurchatov	93.43	321	*e*P		P	00 19 06.7	-1.3
	comp=Z,6.1nm,0.9s,mb5.0							
KURK	Kurchatov	93.43	321	*c i*P		P	00 19 05.8	-2.2
KURK				pmax		pmax		
	comp=Z,10.0nm,1.2s,mb5.1							
HLID	Hailey	93.44	46	*e*P		P	00 19 08.8	+0.6
	comp=Z,19nm,1.3s,mb5.4							
HLID				*e*PP		PP	00 22 57.5	+4.6
R14A	James Farms, M	93.45	52	⇑P		P	00 19 08.6	+0.2
	baz=94							
W15A	Williams	93.47	55	⇑P		P	00 19 08.6	+0.1
	baz=94							
D12A	Red Ives Fores	93.49	43	⇑P		P	00 19 07.5	-0.8
	baz=94							
J13A	Cove Ranch, Pi	93.57	47	⇓P		P	00 19 09.1	+0.3
	baz=94,SNR=6.9							
P14A	Drum Mountains	93.66	51	⇓P		P	00 19 09.3	0.0
	baz=94							
V15A	Kaibab Nationa	93.66	54	⇓P		P	00 19 09.0	-0.4
	baz=94							
U15A	North Rim	93.68	54	⇓P		P	00 19 09.6	+0.2
	baz=94							
I13A	Wildhorse Cree	93.72	46	⇑P		P	00 19 09.5	+0.1
	baz=94,SNR=18							
H13A	Challis	93.75	46	⇑P		P	00 19 09.2	-0.4
	baz=94							
N14A	Grayback Hills	93.81	49	⇓P		P	00 19 10.1	+0.2
	baz=94							
M14A	Sheep Mountain	93.81	49	⇓P		P	00 19 10.6	+0.7
	baz=94							
G13A	Cobalt	93.86	45	⇓P		P	00 19 10.1	0.0
	baz=94,SNR=16							
Y16A	Circle Bar Ran	93.88	56	⇓P		P	00 19 10.0	-0.4
	baz=94							
F13A	Darby	93.93	44	⇓P		P	00 19 10.2	-0.1
	baz=94,SNR=13							
DUG	Dugway	93.97	50	*e*P		P	00 19 10.9	+0.2
	comp=Z,9.5nm,1.5s,mb5.0							
DUG	Dugway	93.97	50	*e*P		P	00 19 10.9	+0.2
DUG				pmax		pmax		
	comp=Z,9.0nm,1.5s,mb5.0							
L14A	Malta	93.99	48	⇓P		P	00 19 11.4	+0.7
	baz=94							
BSMT	Bassoo Peak	94.03	42	*e*P		P	00 19 11.2	+0.5
J14A	Carey	94.03	47	⇓P		P	00 19 11.7	+0.8
	baz=94							
217A	Green Valley	94.06	59	⇓P		P	00 19 12.3	+1.0
	baz=94							
K14A	Jones Ranch, D	94.13	48	⇓P		P	00 19 11.3	-0.1
	baz=94							
C13A	Hot Springs	94.14	42	⇓P		P	00 19 11.5	+0.2
	baz=94							
MSU	Marysvale	94.14	52	*e*P		P	00 19 12.8	+1.2
MSU				*e*pP		pP	00 19 29.3	+5.4
E13A	Victor	94.16	44	⇑P		P	00 19 11.4	0.0
	baz=94							
TUC	Tucson	94.17	58	*e*P		P	00 19 12.8	+0.9
	comp=Z,17nm,1.9s,mb5.1							
TUC	Tucson	94.17	58	*e*P		P	00 19 12.8	+1.0
TUC				pmax		pmax		
	comp=Z,17nm,1.9s,mb5.2							
117A	Oracle	94.26	58	⇓P		P	00 19 12.1	-0.1
	baz=95							
N15A	Stansbury Isla	94.31	49	⇑P		P	00 19 12.1	-0.1
	baz=95							
Y17A	Roosevelt	94.36	57	⇓P		P	00 19 11.7	-1.0
	baz=95							
H14A	Leadore	94.38	46	⇑P		P	00 19 12.2	-0.3
	baz=95,SNR=5.8							
G14A	Jackson	94.43	45	⇓P		P	00 19 12.4	-0.2
	baz=95							
M15A	Larsen Ranch,	94.47	49	⇑P		P	00 19 12.8	-0.1
	baz=95							
UCH	Uchtor	94.53	312	P		P	00 19 13.8	+0.6
AAK	Ala-Archa	94.62	312	*e*P		P	00 19 14.9	+1.3
R16A	Teasdale	94.64	52	⇓P		P	00 19 14.7	+0.8
	baz=95							
318A	Bisbee	94.69	59	⇑P		P	00 19 14.2	0.0
	baz=95							
D14A	Greenough	94.74	43	⇓P		P	00 19 13.8	-0.2
	baz=95							
MCMT	McKenzie Canyo	94.78	45	*e*P		P	00 19 14.6	+0.3
	comp=Z,3.7nm,1.5s,mb4.6							
WALA	Waterton Lakes	94.83	41	*e*P		P	00 19 15.1	+0.7
	comp=Z,0.4nm,1.3s							
CHMT	Chamberlain Mo	94.88	43	*e*P		P	00 19 14.4	-0.3
H15A	Lima	94.89	46	⇓P		P	00 19 14.9	+0.1
	baz=95,SNR=8.5							
118A	Homack Ranch,	94.91	58	⇓P		P	00 19 15.4	+0.2
	baz=95							
DLMT	Dillon	95.05	45	*e*P		P	00 19 16.5	+0.9
	comp=Z,11nm,1.3s,mb5.1							
G15A	Dillon	95.09	45	⇓P		P	00 19 16.0	+0.3
	baz=95,SNR=7.2							
A14A	Double T Ranch	95.14	41	⇓P		P	00 19 16.1	+0.3
	baz=95							
EKS2	Erkin-Say	95.14	312	*e*P		P	00 19 15.9	-0.1
E15A	Deer Lodge	95.20	44	⇓P		P	00 19 16.4	+0.2
	baz=96							
R17A	Hanksville Air	95.26	52	⇑P		P	00 19 17.4	+0.7
	baz=96							
319A	Douglas	95.28	59	⇑P		P	00 19 16.9	-0.1
	baz=96							
C15A	Salmond Ranch,	95.46	43	⇑P		P	00 19 17.5	+0.2
	baz=96							
O17A	Robinson Place	95.53	50	⇓P		P	00 19 18.5	+0.6
	baz=96							
G16A	Moss Hill, Enn	95.58	45	⇑P		P	00 19 18.9	+0.9
	baz=96							
I16A	Newdale	95.58	47	⇑P		P	00 19 18.6	+0.6
	baz=96							
A15A	Johnson Ranch,	95.58	41	⇓P		P	00 19 17.7	-0.2
	baz=96							
Y19A	Nutrioso	95.71	57	⇑P		P	00 19 18.6	-0.3
	baz=96							
F16A	Kennard Place,	95.79	45	⇑P		P	00 19 19.1	+0.2
	baz=96							
E16A	East Helena	95.88	44	⇑P		P	00 19 19.3	0.0
	baz=96							
H16A	Russell Place,	95.88	46	⇓P		P	00 19 19.5	+0.2
	baz=96							
R18A	Canyonlands Na	95.89	52	⇓P		P	00 19 20.1	+0.5
	baz=96							
IMW	Indian Meadow	95.97	47	*e*P		P	00 19 20.5	+0.7
	comp=Z,8.4nm,1.5s,mb5.0							
220A	Playas Peak, P	96.00	59	⇓P		P	00 19 19.9	-0.3
	baz=96							
120A	U Bar Ranch, L	96.01	58	⇓P		P	00 19 20.2	-0.1
	baz=96							
C16A	Fuhringer Ranc	96.04	43	⇑P		P	00 19 20.4	+0.5
	baz=96							
D16A	Dana Ranch, Ca	96.05	43	⇓P		P	00 19 20.1	+0.1
	baz=96							
X20A	Quemado	96.42	56	⇓P		P	00 19 21.9	-0.1
	baz=97							
Y20A	Horse Springs,	96.43	57	⇑P		P	00 19 22.0	0.0
	baz=97							
E17A	Martinsdale	96.43	44	⇑P		P	00 19 22.1	+0.4
	baz=97							
F17A	Fitzpatrick Pl	96.48	45	⇑P		P	00 19 22.2	+0.2
	baz=97							
D17A	Six Diamond Ra	96.65	43	⇑P		P	00 19 22.6	-0.2
	baz=97							
C17A	Wharram Farm,	96.67	43	⇓P		P	00 19 22.7	-0.2
	baz=97							
YKA	Yellowknife Ar	96.86	28	P		P	00 19 20.8	-2.5
	comp=Z,0.8nm,0.7s,mb4.3,baz=262,slow=4.2,SNR=3.4							
YKA	Yellowknife Ar	96.86	28	P		P	00 19 20.8	-2.6
A17A	Triple J Farms	96.90	42	⇓P		P	00 19 23.5	-0.3
	baz=97							
X21A	Alamocita Cree	96.99	56	⇓P		P	00 19 24.1	-0.5
	baz=97							
Y21A	Point of Rocks	97.02	57	⇓P		P	00 19 24.7	-0.1
	baz=97							
E18A	Harlowton	97.09	44	⇑P		P	00 19 24.6	-0.2
	baz=97							
F18A	Big Timber	97.13	45	⇑P		P	00 19 25.1	+0.1
	baz=97							
RLMT	Red Lodge	97.34	46	*e*P		P	00 19 27.0	+1.1
	comp=Z,11nm,1.4s,mb5.1							
EGMT	Eagleton	97.39	43	*e*P		P	00 19 26.5	+0.4
	comp=Z,14nm,1.3s,mb5.2							
BVAR	Borovoye Array	98.84	322	P		P	00 19 30.8	-1.6
	comp=Z,1.5nm,0.8s,mb4.6,baz=90,slow=2.9,SNR=10.0							
BRVK	Borovoye	98.91	322	*e*P		P	00 19 31.8	-1.0
BRVK				pmax		pmax		
	comp=Z,7.0nm,1.7s,mb4.9							
TXAR	Lajitas Array	99.80	62	P		Pdif	00 19 36.5	-0.4
	comp=Z,0.3nm,0.7s,baz=230,slow=2.6,SNR=3.5							
TXAR				PP		PP	00 23 38.5	-4.0
	comp=Z,2.0nm,1.2s,baz=239,slow=8.6,SNR=9.1							
ARCES	ARCESS Array B	114.82	344	PKP		PKiKP	00 24 31.2	-1.4
	comp=Z,1.9nm,0.9s,baz=72,slow=4.0,SNR=4.0							
KIV	Kislovodsk	117.68	314	*e*PKPdf		PKPdf	00 24 38.9	+0.1
KIV	Kislovodsk	117.68	314	*e*PKIKP		PKPdf	00 24 38.9	+0.1
OBN	Obninsk	118.08	328	*i*PKIKP		PKPdf	00 24 39.0	-0.2
OBN				*e*			00 25 52.2	
OBN				pmax		pmax		
	comp=Z,11nm,1.7s							
LBTB	Lobatse	123.84	230	*e*PKPdf		PKPdf	00 24 52.2	+0.9
AKASG	Malin Array Be	123.99	325	PKP		PKPdf	00 24 50.2	-0.5
	comp=Z,1.3nm,0.5s,baz=60,slow=1.6,SNR=8.8							
BRTR	Keskin Array B	125.28	311	PKP		PKPdf	00 24 52.9	-0.7
	comp=Z,1.8nm,1.0s,baz=93,slow=3.0,SNR=7.3							
BRTR	Keskin Array B	125.28	311	*c i*PKIKP		PKPdf	00 24 52.5	-1.1
BRTR				pmax		pmax		
	comp=Z,2.0nm,1.0s							
LSZ	Lusaka	126.58	242	*e*PKPdf		PKPdf	00 24 56.1	-0.6
KWP	Kalwaria Pacla	128.14	327	*e*PKPdf		PKPdf	00 24 59.6	+0.8
KOLS	Kolonicke sedl	128.76	326	*e*PKP		PKPdf	00 25 00.5	+0.6
KOLS				*e*			00 28 22.4	
KOLS	Kolonicke sedl	128.76	326	*e*PKP		PKPdf	00 25 00.5	+0.6
KOLS				*e*			00 28 22.4	
CRVS	Cervenica-Dubn	129.22	326	*e*PKP		PKPdf	00 25 01.4	+0.6
CRVS				*e*			00 28 23.0	
CRVS	Cervenica-Dubn	129.22	326	*e*PKP		PKPdf	00 25 01.4	+0.6
CRVS				*e*			00 28 23.0	
KECS	Kecovo	129.99	326	*e*		SKPdf	00 28 24.7	-10
OKC	Ostrava-Krasne	130.40	329	*e*PKIKP		PKPdf	00 25 03.3	+0.3
OKC				MLR		MLR		
	comp=Z,200nm,19.7s,MS4.8							
OKC	Ostrava-Krasne	130.40	329	*e*PKPdf		PKPdf	00 25 03.3	+0.3
OKC				*e*SKP			00 28 27.0	
OKC				AMS		AMS	01 22 40.0	
	comp=Z,200nm,19.7s							
PSZ	Piszkesteto	130.64	326	*e*PKPdf		PKPdf	00 25 04.4	+0.9
VYHS	Vyhne	130.87	327	*e*PKP		PKPdf	00 25 04.2	+0.3
VYHS				*e*			00 28 29.2	
VYHS	Vyhne	130.87	327	*e*PKP		PKPdf	00 25 04.2	+0.3
VYHS				*e*			00 28 29.2	
DPC	Dobruska-Polom	130.97	331	*e*PKIKP		PKPdf	00 25 04.6	+0.5
DPC				MLR		MLR		
	comp=Z,200nm,21.6s,MS4.8							
DPC	Dobruska-Polom	130.97	331	*e*PKPdf		PKPdf	00 25 04.6	+0.5
DPC				*e*SKP			00 28 29.6	
DPC				AMS		AMS	01 22 20.0	
	comp=Z,200nm,21.6s							
UPC	Upice	131.02	331	*e*SKP		SKPbc	00 28 29.3	+3.8
KOLL	Kolacno	131.05	328	*e*		SKPbc	00 28 30.5	+4.8
PVCC	Panska Ves	131.68	332	*e*PKIKP		PKPdf	00 25 06.0	+0.6
PVCC				MLR		MLR		
	comp=Z,300nm,20.6s,MS5.0							
PVCC	Panska Ves	131.68	332	*e*PKPdf		PKPdf	00 25 06.0	+0.6
PVCC				*e*SKP			00 28 33.0	
PVCC				AMS		AMS	01 24 10.0	
	comp=Z,300nm,20.6s							
BRG	Berggiesshubel	131.73	332	*e*P		PKPdf	00 25 06.4	+0.9
	comp=Z,7.3nm,1.5s							
BRG	Berggiesshubel	131.73	332	*e*P		SKPbc	00 28 31.0	+2.9
	comp=Z,20nm,1.5s							
BRG	Berggiesshubel	131.73	332	*e*PKIKP		PKPdf	00 25 06.4	+0.9
BRG				pmax		pmax		
	comp=Z,4.0nm,1.5s							
CLL	Collm	131.84	333	*e*PP		PP	00 27 24.0	-2.0
CLL				*e*PKSbc			00 28 32.0	
	comp=Z,22nm,1.5s							
ZST	Bratislava	131.97	328	*e*PKP		PKPdf	00 25 09.2	+3.2
ZST	Bratislava	131.97	328	*e*PKP		PKPdf	00 25 09.2	+3.2
PRU	Pruhonice	132.07	331	*e*SKP		SKPbc	00 28 33.6	+4.3
PRU				AMS		AMS	01 24 30.0	
	comp=Z,300nm,16.2s							
TREC	Trest	132.08	330	AMS		AMS	01 24 20.0	
	comp=Z,300nm,19.6s							
CONA	Conrad Observa	132.78	328	⇑*i*PKIKP		PKiKP	00 25 08.7	0.0
	comp=Z,5.0nm,1.7s							
NKC	Novy Kostel	132.86	333	*e*SKP		SKPbc	00 28 24.5	-7.6
NKC				AMS		AMS	01 25 00.0	
	comp=Z,200nm,18.7s							
KHC	Kasperske Hory	133.11	331	*e*PKIKP		PKPdf	00 25 06.7	-1.5
KHC				MLR		MLR		
	comp=Z,300nm,19.8s,MS5.0							
KHC	Kasperske Hory	133.11	331	*e*PKPdf		PKPdf	00 25 06.7	-1.5
KHC				*e*SKP			00 28 31.0	
KHC				AMS		AMS	01 26 10.0	
	comp=Z,300nm,19.8s							
WLF	Walferdange	135.94	337	*e*PKPdf		PKPdf	00 25 14.1	+0.7
AQU	L'Aquila	137.66	324	*e*PKPdf		PKPdf	00 25 17.3	+0.4
FLN	La Foliniere	139.05	341	*e*PKIKP		PKPdf	00 25 17.0	-2.2
	comp=Z,18nm,1.2s							
LDF	La Druitiere	139.09	341	*e*PKIKP		PKPdf	00 25 17.9	-1.4
	comp=Z,2.4nm,0.7s							
SSF	Saint Saulge	139.09	336	*e*PKIKP		PKPdf	00 25 18.3	-1.0
	comp=Z,12nm,1.2s							
MFF	Saint Martin d	140.83	339	*e*PKIKP		PKPdf	00 25 20.5	-2.0
RJF	Les Rejaudoux	141.32	337	*e*PKIKP		PKPdf	00 25 22.1	-1.3
VSL	Villasalto	141.83	323	*e*PKIKP		PKPdf	00 25 25.7	+1.1
LFF	La Frestale	141.92	337	*e*PKIKP		PKPdf	00 25 22.8	-1.7
MTLF	Montolieu	142.65	334	*e*PKIKP		PKPdf	00 25 22.6	-3.3
	comp=Z,8.7nm,1.1s							
ETSF	Etsaut	144.15	337	*e*PKIKP		PKPdf	00 25 26.7	-1.8
	comp=Z,33nm,1.3s							
KEST	Kesra	144.21	319	*e*PKPdf		PKPdf	00 25 27.0	-1.9
KEST	Kesra	144.21	319	PKP		PKPdf	00 25 25.9	-3.0
	comp=Z,3.4nm,1.1s,baz=84,slow=4.8,SNR=9.2							
CMAH	Djebel Manchou	144.87	322	P		PKPdf	00 25 28.2	-1.8
CKFL	Kef-Lekhel	145.44	322	P		PKPdf	00 25 30.6	-0.4
CASM	Ain Smara	145.68	322	P		PKPdf	00 25 31.0	-0.4
DFRA	Djebel Bou Aff	145.85	323	P		PKPdf	00 25 32.3	+0.6
SET	Setif	146.37	323	P		PKPab	00 25 36.0	+1.3
AKET	Djebel Ketaf	147.36	324	P		PKPab	00 25 38.4	-0.2
ADJB	Djebel Djouab	147.54	325	P		PKPab	00 25 37.8	-1.4
ESDC	Sonseca Array	148.23	338	PKPbc		PKPbc	00 25 37.2	-1.7
	comp=Z,1.1nm,0.9s,baz=26,slow=3.1,SNR=9.4							
ESDC				PP		PP	00 29 08.0	+1.6
	comp=Z,0.1nm,0.3s,baz=28,slow=5.8,SNR=4.6							
ESLA	Sonseca Array	148.23	338	*e*PKPdf		PKPdf	00 25 36.6	+1.1
PAB	San Pablo	148.48	338	*e*PKPdf		PKPdf	00 25 36.5	+0.5
PVIS	Viseu	148.57	344	*e*PKP		PKPab	00 25 42.9	-0.3
MTE	Manteigas	148.76	343	*e*PKP		PKPbc	00 25 42.0	+1.8
PMRV	Marv??o	149.61	342	*e*PKP		PKPbc	00 25 43.4	+1.0
PTOM	Tomar	149.73	344	*e*PKP		PKPbc	00 25 42.6	-0.1
EVO	Evora	150.62	342	*e*PKP1		PKPbc	00 25 42.1	-2.8
	comp=Z,41nm,1.4s							
PBAR	Barrancos	150.65	341	*e*PKP		PKPbc	00 25 44.9	0.0
PBEJ	Beja	151.04	342	*e*PKP		PKPab	00 25 51.0	-2.4
TORD	Torodi Ar. Bea	159.60	279	PKP		PKPdf	00 25 50.0	-2.3
	comp=Z,2.9nm,1.2s,baz=91,slow=0.1,SNR=7.6							
DBIC	Dimbokro	165.43	255	*e*PKPdf		PKPdf	00 25 57.3	-0.8
LIC	Lamto	165.46	253	*e*PKIKP		PKPdf	00 25 52.8	-5.3

NEIC ***07*** *00:10:57.1,52°.15N×175°.51W,h8km,ML3.0(AEIC),After AEIC.*
ISCJB ***07*** *00:10:58.2±2.1,52°.3N±0°.2×175°.4W±0°.2,h10km,mb3.7/3, Error ellipse: s-maj=36.9km s-min=11.4km az=18.5*
IDC ***07*** *00:10:59.3±2.7,52°.45N×175°.59W,h0km,mb3.5/2, mb1 3.7/4,mb1mx3.4/26,mbtmp3.5/4,ML3.5/2,Error ellipse: s-maj=69.5km s-min=31.4km az=4.0*
ISC 07 00:11:00.2±2.1,52°.2N±0°.3×175°.4W±0°.2,h10km,n7, σ1§17/8,mb3.7/3,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATKA	Atka Island	0.71	92	P	Pg	00 11 13.0	-0.9
ATKA				S	Sg	00 11 23.2	0.0
KDAK	Kodiak Island	14.16	58	Pn	Pn	00 14 19.5	-1.1
	0.1nm,0.3s,baz=262,slow=15,SNR=2.5						
ILAR	Eielson Array	19.24	38	P	Pn	00 15 25.4	+0.1
	0.1nm,0.3s,baz=234,slow=7.7,SNR=6.5						
EGAK	Eagle	21.50	41	*e*P	P	00 15 50.3	+1.6
	2.8nm,0.7s,mb3.8						
TXAR	L

FINES	**FINESS Array B**	126.19	28	PKP	PKPdf	00 33 27.8	-0.3		
	1.5nm,0.8s,baz=211,slow=1.6,SNR=4.4								
ABKAR	**Akbulak array**	127.89	56	*e*PKPdf	PKPdf	00 33 31.3	-0.4		
ARCES	**ARCESS Array B**	132.98	22	PKP	PKPdf	00 33 39.8	-1.0		
	0.9nm,0.7s,baz=270,slow=1.2,SNR=5.1								
BVAR	**Borovoye Array**	135.18	59	PKP	PKPdf	00 33 44.4	-1.0		
	0.6nm,0.5s,baz=185,slow=2.6,SNR=5.6								
YKA	**Yellowknife Ar**	138.93	315	PKP	PKPdf	00 33 51.8	-0.2		
	1.9nm,0.7s,baz=131,slow=2.2,SNR=5.3								
ZALV	**Zalesovo Beam**	142.42	66	PKhKP	PKPpre	00 33 55.0			
	0.7nm,0.6s,baz=197,slow=4.7,SNR=3.6								
INK	**Inuvik**	148.60	317	PKPbc	PKPbc	00 34 11.7	-0.9		
	9.0nm,0.9s,baz=165,slow=7.2,SNR=8.2								
SONM	**Songino Array**	149.62	89	PKPbc	PKPbc	00 34 15.7	0.0		
	4.3nm,0.7s,baz=230,slow=3.5,SNR=21								
KSRS	**Korea Array**	152.41	128	PKPbc	PKPbc	00 34 21.3	-1.2		
	0.5nm,0.3s,baz=215,slow=1.3,SNR=4.4								
ILAR	**Eielson Array**	152.74	307	PKPbc	PKPbc	00 34 22.1	-0.3		
	5.1nm,0.9s,baz=116,slow=2.1,SNR=41								
KDAK	**Kodiak Island**	152.99	291	PKPbc	PKPbc	00 34 22.7	-0.5		
	2.3nm,0.5s,baz=157,slow=0.9,SNR=4.9								

*ISCJB **07** 00:18:04.0±0.6,29°.37S±0°.04×69°.10W±0°.04,h87km±5km, mb4.8/85, Error ellipse: s-maj=7.2km s-min=5.1km az=139.6*

*NEIC **07** 00:18:06.1±0.4,29°.35S×69°.18W,h93km±3km,mb4.9/72, MD4.4(SJA), Error ellipse: s-maj=5.2km s-min=3.9km az=65.0*

NEIC Felt [III] at Huaco, Jachal and Vinchina.

*GUC **07** 00:18:06.8±1.1,29°.67S×69°.17W,h95km±75km, ML4.7*

*BJI **07** 00:18:07.0,29°.40S×69°.20W,h93km, mB5.0/6*

*IDC **07** 00:18:08.6±0.5,29°.46S×69°.30W,h117km±4km,mb4.6/16, mb1 4.6/17,mb1mx4.5/19,mbtmp4.5/17, Error ellipse: s-maj=18.1km s-min=7.7km az=70.0*

ISC 07 00:18:05.5±0.5,29°.39S±0°.04×69°.13W±0°.04,h86km±4km, h116km±2.2km;pP-P,n589,σ0°65/548,mb4.8/85, 190C-176D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**1.43**	**285**	*e*Pn	**Pn**	**00 18 31.0**	**+0.9**
LCO				*e*Sn	**Sn**	**00 18 49.0**	**+0.3**
TLL	**Tololo Astrono**	**1.65**	**242**↑	*i*P	**Pn**	**00 18 33.9**	**+1.0**
TLL				*i* S	**Sn**	**00 18 54.1**	**+0.3**
TLL	**Tololo Astrono**	**1.65**	**242**↑	*i*P	**Pn**	**00 18 33.9**	**+1.0**
TLL				*i* S	**Sn**	**00 18 54.1**	**+0.3**
TLL				AML	AML	00 18 56.3	
	comp=E,9µm,0.7s						
OVCH	**Ovalle**	**2.17**	**236**↑	*i*P	**Pn**	**00 18 39.1**	**-0.6**
OVCH				*i* S	**Sn**	**00 19 04.0**	**-1.9**
OVCH	**Ovalle**	**2.17**	**236**↑	*i*P	**Pn**	**00 18 39.1**	**-0.6**
OVCH				*i* S	**Sn**	**00 19 04.0**	**-1.9**
OVCH				AML	AML	00 19 08.0	
	comp=N,7µm,0.6s						
CFAA	**Coronel Fontan**	**2.33**	**161**	P	**Pn**	**00 18 46.0**	**+4.0**
	comp=N,9.7nm,0.3s,baz=335,slow=12,SNR=441						
CFAA				S	**Sn**	**00 19 14.7**	**+4.7**
	comp=N,42nm,0.3s,baz=38,slow=19,SNR=30						
CHNG	**Los Chungos**	**3.21**	**219**	*e*P	**Pn**	**00 18 51.4**	**-2.4**
CHNG				*e*S	**Sn**	**00 19 26.8**	**-4.3**
JACH	**Jahuel**	**3.51**	**201**	P	**Pn**	**00 18 59.1**	**+1.3**
JACH	**Jahuel**	**3.51**	**201**	*e*P	**Pn**	**00 18 59.1**	**+1.3**
ROCH	**El Roble**	**3.91**	**204**↑	*e*P	**Pn**	**00 19 02.4**	**-0.8**
ROCH				*e*S	**Sn**	**00 19 44.4**	**-3.7**
ROCH				AML	AML	00 20 17.1	
	comp=N,1µm,0.7s						
FCH	**Farellones**	**4.04**	**194**↑	*e*P	**Pn**	**00 19 12.1**	**+7.1**
FCH				*i* S	**Sn**	**00 19 42.8**	**-8.5**
CLCH	**Cerro Calan**	**4.17**	**196**	*e*P	**Pn**	**00 19 06.3**	**-0.4**
CLCH				*e*S	**Sn**	**00 19 50.2**	**-4.0**
TACH	**Talagante**	**4.52**	**200**	*e*P	**Pn**	**00 19 10.4**	**-1.1**
TACH	**Talagante**	**4.52**	**200**	*e*P	**Pn**	**00 19 10.4**	**-1.1**
TRQA	**Tornquist**	**10.49**	**147**	*e*Pn	**Pn**	**00 20 34.5**	**+1.7**
TRQA				*e*Sn	**Sn**	**00 22 28.7**	**+0.3**
CPUP	**Villa Florida**	**10.88**	**77**	P	**Pn**	**00 20 39.2**	**+1.0**
CPUP	**Villa Florida**	**10.88**	**77**	P	**Pn**	**00 20 39.2**	**+1.0**
	comp=N,9.3nm,0.3s,baz=240,slow=12,SNR=46						
PLCA	**Paso Flores**	**11.37**	**185**	*e*Pn	**Pn**	**00 20 46.5**	**+1.7**
PLCA	**Paso Flores**	**11.37**	**185**	P	**Pn**	**00 20 46.1**	**+1.3**
	comp=N,0.2nm,0.3s,baz=352,slow=8.4,SNR=2.8						
LPAZ	**La Paz**	**13.08**	**4**	*e*Pn	**Pn**	**00 21 08.3**	**+0.5**
LPAZ	**La Paz**	**13.08**	**4**	P	**Pn**	**00 21 06.9**	**-1.0**
	comp=N,0.9nm,0.3s,baz=189,slow=7.6,SNR=45						
SIV	**San Ignacio**	**15.26**	**31**	P	**Pn**	**00 21 35.4**	**-0.8**
	comp=N,0.4nm,0.3s,baz=222,slow=11,SNR=30						
CAM4	**Nova Friburgo**	**24.87**	**80**↑	*i*P	**P**	**00 23 22.1**	**+1.9**
CAM4				*i*		00 23 24.1	
CAM4				*i*		00 23 27.4	
CAM4				*i*		00 23 32.3	
CAM4				*i*		00 23 41.7	
CAM4				*i*		00 23 45.3	
CAM4				*i*		00 23 48.1	
CAM4				*i*		00 24 01.1	
CAM4	**Nova Friburgo**	**24.87**	**80**↑	*i*P	**P**	**00 23 21.8**	**+1.6**
CAM4				*i*		00 23 24.0	
CAM4				*i*		00 23 26.7	
CAM4				*i*		00 23 40.1	
CAM4				*i*		00 23 45.0	
CAM4				*i*		00 23 48.2	
CAM4				*i*		00 23 51.2	
CAM4				*i*		00 24 00.9	
USHA	**Ushuaia**	**25.43**	**179**	P	**P**	**00 23 24.2**	**-0.7**
	comp=N,25nm,1.0s,mb4.6,baz=353,slow=7.0,SNR=4.8						
OTAV	**Otavalo**	**30.78**	**342**	*e*P	**P**	**00 24 13.3**	**+0.4**
	comp=N,9.5nm,1.1s,mb4.4						
ROSC	**El Rosal**	**34.42**	**351**	*e*P	**P**	**00 24 44.9**	**+0.2**
ROSC	**El Rosal**	**34.42**	**351**	P	**P**	**00 24 44.9**	**+0.2**
	comp=N,10nm,0.6s,mb4.8,baz=106,slow=22,SNR=6.0						
RPN	**Rapa Nui**	**35.37**	**264**	*e*P	**P**	**00 24 52.0**	**-0.9**
	comp=N,932nm,1.8s						
SDV	**Santo Domingo**	**38.08**	**358**	*e*P	**P**	**00 25 14.9**	**-1.0**
	comp=N,29nm,1.1s,mb5.0						
BCIP	**Isla Barro Col**	**39.70**	**343**	*e*P	**P**	**00 25 28.6**	**-0.9**
	comp=N,23nm,0.8s,mb5.0						
JTS	**JuntasAbangare**	**42.30**	**337**	*e*P	**P**	**00 25 50.4**	**-0.4**
	comp=N,7.1nm,0.6s,mb4.6						
TGUH	**Tegucigalpa,Un**	**46.61**	**335**	*e*P	**P**	**00 26 25.2**	**+0.1**
	comp=N,34nm,0.8s,mb5.1						
CELP	**Cerrillos**	**47.25**	**3**	*e*P	**P**	**00 26 29.1**	**-1.0**
SJG	**San Juan**	**47.31**	**4**	P	**P**	**00 26 28.6**	**-2.0**
CBYP	**Canovanas**	**47.49**	**4**	*e*P	**P**	**00 26 30.6**	**-1.2**
TEIG	**Tepich**	**52.67**	**337**	*e*P	**P**	**00 27 10.3**	**-0.7**
	comp=N,76nm,0.7s,mb5.8						
DWPF	**Disney**	**58.38**	**347**	*e*P	**P**	**00 27 50.6**	**-1.2**
	comp=N,14nm,0.8s,mb5.0						
QSPA	**South Pole Qui**	**60.83**	**180**	P	**P**	**00 28 08.4**	**+0.3**
	comp=N,13nm,0.8s,mb5.0,baz=156,slow=2.6,SNR=29						
QSPA				pP	pP	00 28 37.2	+7.3
	comp=N,7.1nm,0.8s,baz=147,slow=3.7,SNR=5.3						
QSPA				sP	sP	00 28 51.0	+12
	comp=N,12nm,1.0s,baz=152,slow=3.0,SNR=4.9						
NHSC	**New Hope**	**63.03**	**350**	*e*P	**P**	**00 28 23.3**	**0.0**
	comp=N,55nm,1.1s,mb5.4						
GOGA	**Godfrey**	**63.92**	**347**	*e*P	**P**	**00 28 27.6**	**-1.5**
	comp=N,21nm,1.4s,mb4.8						
CPCT	**Cooper Cave**	**66.11**	**346**	*e*P	**P**	**00 28 42.5**	**-0.8**
TKL	**Tuckaleechee C**	**66.16**	**347**	*e*P	**P**	**00 28 41.9**	**-1.7**
SWET	**Sewanee**	**66.19**	**345**	*e*P	**P**	**00 28 42.7**	**-1.1**
JCT	**Junction City**	**66.33**	**331**	*e*P	**P**	**00 28 44.6**	**-0.2**
	comp=N,72nm,1.5s,mb5.3						
628A	**Black Gap, Mar**	**66.83**	**328**	⇓P	**P**	**00 28 48.1**	**0.0**
	baz=67,SNR=18						
627A	**Terlingua Ranc**	**67.03**	**328**	⇓P	**P**	**00 28 49.0**	**-0.3**
	baz=67,SNR=12						
TXAR	**Lajitas Array**	**67.06**	**327**	P	**P**	**00 28 49.1**	**-0.4**
TXAR				pP	pP	00 29 16.6	+5.0
TXAR	**Lajitas Array**	**67.06**	**327**	P	**P**	**00 28 49.1**	**-0.4**
	comp=N,2.7nm,0.7s,mb4.2,baz=152,slow=8.2,SNR=42						
TXAR				pP	pP	00 29 16.6	+5.0
	comp=N,1.5nm,0.8s,baz=151,slow=8.6,SNR=4.2						
JSRW	**J. Sargeant Re**	**67.24**	**352**	*e*P	**P**	**00 28 50.5**	**+0.1**
528A	**Cox Ranch, San**	**67.36**	**329**	⇑P	**P**	**00 28 51.0**	**-0.4**
	baz=68,SNR=21						
626A	**Big Bend Ranch**	**67.47**	**327**	⇑P	**P**	**00 28 52.3**	**+0.2**
	baz=68,SNR=28						
WVT	**Waverly**	**67.51**	**344**	*e*P	**P**	**00 28 50.8**	**-1.4**
	comp=N,39nm,0.7s,mb5.3						
MIAR	**Mount Ida**	**67.66**	**338**	*e*P	**P**	**00 28 52.4**	**-0.7**
	comp=N,18nm,1.1s,mb4.8						
428A	**Kincaid Ranch,**	**67.79**	**329**	⇓P	**P**	**00 28 54.1**	**0.0**
	baz=68,SNR=9.7						
526A	**Mary Lane Ranc**	**67.87**	**328**	⇑P	**P**	**00 28 55.1**	**+0.5**
	baz=68						
GNAR	**Gosnell**	**67.92**	**342**	*e*P	**P**	**00 28 54.0**	**-0.8**
	comp=N,922nm,1.2s						
SBA	**Scott Base**	**68.07**	**191**	*e*P	**P**	**00 28 55.3**	**0.0**
	comp=N,2.1nm,0.8s,mb4.0						
427A	**Hayter Ranch,**	**68.22**	**329**	⇑P	**P**	**00 28 56.7**	**-0.1**
	baz=68,SNR=7.2						
426A	**McDonald Obser**	**68.35**	**328**	⇑P	**P**	**00 28 57.2**	**-0.4**
	baz=69,SNR=20						
328A	**Wristen Ranch,**	**68.40**	**329**	⇓P	**P**	**00 28 57.3**	**-0.6**
	baz=69,SNR=9.8						
PARMO	**Parma**	**68.50**	**342**	*e*P	**P**	**00 28 58.1**	**-0.4**
SDMD	**Soldier's Deli**	**68.83**	**354**	*e*P	**P**	**00 29 00.8**	**+0.4**
	comp=N,19nm,0.9s,mb4.9						
326A	**Caldwell Ranch**	**68.88**	**328**	⇓P	**P**	**00 29 00.5**	**-0.4**
	baz=69,SNR=7.0						
425A	**Indio Mountain**	**68.90**	**327**	⇓P	**P**	**00 29 00.5**	**-0.5**
	baz=69						
227A	**Bennet, Jal**	**69.15**	**329**	⇓P	**P**	**00 29 02.6**	**0.0**
	baz=69						
WCI	**Wyandotte Cave**	**69.16**	**346**	*e*P	**P**	**00 29 00.9**	**-1.5**
	comp=N,12nm,0.9s,mb4.7						
SYO	**Syowa Base**	**69.23**	**159**↑	*e*P	**P**	**00 29 01.0**	**-1.6**
SIUC	**Southern Illin**	**69.36**	**343**	*e*P	**P**	**00 29 02.5**	**-1.2**
	comp=N,35nm,0.6s,mb5.4						
MVL	**Millersville**	**69.36**	**354**	*e*P	**P**	**00 29 04.1**	**+0.5**
	comp=N,23nm,1.0s,mb5.0						
325A	**Bean Ranch, Si**	**69.38**	**328**	⇑P	**P**	**00 29 03.2**	**-0.8**
	baz=70,SNR=22						
226A	**Malaga, Loving**	**69.56**	**329**	⇑P	**P**	**00 29 05.2**	**+0.1**
	baz=70,SNR=17						
WMOK	**Wichita Mounta**	**69.66**	**334**	*e*P	**P**	**00 29 04.6**	**-1.0**
	comp=N,11nm,1.2s,mb4.6						
324A	**Moseley Ranch,**	**69.68**	**327**	⇑P	**P**	**00 29 04.3**	**-1.5**
	baz=70,SNR=13						
127A	**Arkansas Junct**	**69.75**	**330**	⇑P	**P**	**00 29 05.5**	**-0.7**
	baz=70						
GDL2	**Guadalupe Moun**	**69.80**	**329**	*e*P	**P**	**00 29 06.8**	**+0.3**
MNTX	**Cornudas Mount**	**69.85**	**328**	*e*P	**P**	**00 29 05.2**	**-1.6**
	comp=N,10nm,1.1s,mb4.6						
FVM	**French Village**	**69.93**	**342**	*e*P	**P**	**00 29 06.2**	**-1.0**
	comp=N,60nm,0.7s,mb5.5						
225A	**Deer Hill, Car**	**69.93**	**328**	⇓P	**P**	**00 29 06.8**	**-0.6**
	baz=70,SNR=11						
126A	**Clayton Basin,**	**70.02**	**329**	⇑P	**P**	**00 29 07.5**	**-0.4**
	baz=70,SNR=7.2						
OLIL	**Olney**	**70.05**	**344**	*e*P	**P**	**00 29 06.2**	**-1.7**
	comp=N,24nm,0.9s,mb5.0						
BLO	**Bloomington**	**70.11**	**346**	*e*P	**P**	**00 29 05.9**	**-2.4**
	comp=N,22nm,0.6s,mb5.2						
224A	**Cornudas Mount**	**70.23**	**328**	⇓P	**P**	**00 29 08.2**	**-0.9**
	baz=70,SNR=10						
Z27A	**Tatum**	**70.23**	**330**	⇑P	**P**	**00 29 08.3**	**-0.9**
	baz=70,SNR=11						
125A	**Gardner Draw,**	**70.31**	**329**	⇓P	**P**	**00 29 08.8**	**-0.9**
	baz=70,SNR=14						
Z26A	**Caprock**	**70.53**	**329**	⇓P	**P**	**00 29 10.5**	**-0.5**
	baz=71,SNR=33						
223A	**Chaparral, Ant**	**70.59**	**327**	⇑P	**P**	**00 29 11.6**	**+0.2**
	baz=71						
MSTX	**Muleshoe**	**70.60**	**331**	⇓P	**P**	**00 29 10.6**	**-0.8**
	baz=71,SNR=20						
Y27A	**Causey**	**70.69**	**330**	⇑P	**P**	**00 29 10.8**	**-1.1**
	baz=71,SNR=8.6						
124A	**Stringfield Ra**	**70.71**	**328**	⇑P	**P**	**00 29 11.8**	**-0.3**
	baz=71,SNR=23						
Z25A	**Roswell**	**70.86**	**329**	⇓P	**P**	**00 29 12.3**	**-0.7**
	baz=71,SNR=12						
LIC	**Lamto**	**70.95**	**71**	*e*P	**P**	**00 29 14.3**	**+0.3**
	comp=N,53nm,0.9s,mb5.4						
LIC	**Lamto**	**70.95**	**71**	*e*P	**P**	**00 29 14.4**	**+0.4**
	comp=N,38nm,0.9s,mb4.9						
LIC	**Lamto**	**70.95**	**71**	*e*P	**P**	**00 29 14.4**	**+0.4**
	comp=N,19nm,0.9s,mb4.9						
222A	**Williams Famil**	**71.00**	**326**	⇑P	**P**	**00 29 14.3**	**+0.4**
	baz=71						
Y26A	**Elida**	**71.01**	**330**	⇑P	**P**	**00 29 13.7**	**-0.2**
	baz=71						
123A	**Bell Site, Whi**	**71.04**	**327**	⇓P	**P**	**00 29 14.6**	**+0.5**
	baz=71						
320A	**Kipp Ranch, An**	**71.08**	**325**	⇓P	**P**	**00 29 14.8**	**+0.4**
	baz=71						
TIC	**Tounodi**	**71.19**	**71**	*e*P	**P**	**00 29 15.7**	**+0.2**
	comp=N,24nm,0.8s,mb5.1						
Z24A	**Sheeppen Canyo**	**71.20**	**328**	⇑P	**P**	**00 29 14.7**	**-0.3**
	baz=71,SNR=16						
221A	**Mesquite Ranch**	**71.25**	**326**	⇓P	**P**	**00 29 16.3**	**+0.9**
	baz=72						
KIC	**Kosan Boka**	**71.27**	**71**	*e*P	**P**	**00 29 16.5**	**+0.6**
	comp=N,50nm,0.8s,mb5.4						
X27A	**F and S Farms,**	**71.31**	**331**	⇓P	**P**	**00 29 15.1**	**-0.6**
	baz=72						
DBIC	**Dimbokro**	**71.34**	**71**	*e*P	**P**	**00 29 17.1**	**+0.7**
	comp=N,18nm,0.6s,mb5.1						
DBIC	**Dimbokro**	**71.34**	**71**	P	**P**	**00 29 17.1**	**+0.7**
	comp=N,16nm,0.7s,mb5.0,baz=210,slow=6.5,SNR=34						
Y25A	**Mesa, Roswell**	**71.39**	**329**	⇓P	**P**	**00 29 15.5**	**-0.7**
	baz=72,SNR=5.9						
122A	**Conniff Cattle**	**71.44**	**327**	⇓P	**P**	**00 29 17.3**	**+0.8**
	baz=72						
319A	**Douglas**	**71.49**	**324**	⇑P	**P**	**00 29 17.3**	**+0.5**
	baz=72,SNR=14						
BINY	**Binghamton**	**71.52**	**355**	*e*P	**P**	**00 29 16.9**	**+0.1**
	comp=N,22nm,1.1s,mb4.9						
220A	**Playas Peak, P**	**71.53**	**325**	⇑P	**P**	**00 29 17.3**	**+0.2**
	baz=72,SNR=20						
X26A	**CR and CF Fran**	**71.54**	**330**	⇓P	**P**	**00 29 16.8**	**-0.2**
	baz=72,SNR=19						
Z23A	**Rita Site, Whi**	**71.54**	**328**	⇑P	**P**	**00 29 17.6**	**+0.5**
	baz=72,SNR=10.0						
W27A	**Bowe Ranch, En**	**71.66**	**331**	⇓P	**P**	**00 29 17.2**	**-0.5**
	baz=72,SNR=7.2						
121A	**Cookes Peak, D**	**71.68**	**326**	⇓P	**P**	**00 29 18.5**	**+0.6**
	baz=72,SNR=6.1						
Y24A	**Capitan**	**71.73**	**329**	⇑P	**P**	**00 29 17.8**	**-0.4**
	baz=72						
Z22A	**Elephant Butte**	**71.88**	**327**	⇓P	**P**	**00 29 19.5**	**+0.4**
	baz=72,SNR=18						
TRY	**Troy**	**71.89**	**356**	*e*P	**P**	**00 29 19.7**	**+0.7**
X25A	**Clemmons Ranch**	**71.89**	**330**	⇑P	**P**	**00 29 18.6**	**-0.5**
	baz=72						
318A	**Bisbee**	**71.90**	**324**	⇑P	**P**	**00 29 19.5**	**+0.2**
	baz=72,SNR=18						
W26A	**Owens Ranch, T**	**71.98**	**331**	⇓P	**P**	**00 29 19.6**	**-0.1**
	baz=72,SNR=11						
120A	**U Bar Ranch, L**	**72.11**	**326**	⇓P	**P**	**00 29 21.0**	**+0.5**
	baz=72,SNR=14						
Z21A	**St. Cloud Mine**	**72.26**	**327**	⇑P	**P**	**00 29 21.9**	**+0.5**
	baz=72,SNR=5.9						
X24A	**Lazy VL Ranch,**	**72.27**	**329**	⇓P	**P**	**00 29 21.2**	**-0.2**
	baz=72						
218A	**Dragoon**	**72.35**	**324**	⇓P	**P**	**00 29 22.3**	**+0.3**
	baz=73,SNR=19						
W25A	**X Bar L Ranch,**	**72.39**	**330**	⇑P	**P**	**00 29 21.7**	**-0.4**
	baz=73,SNR=15						
Y22A	**Socorro**	**72.44**	**328**	⇓P	**P**	**00 29 22.8**	**+0.3**
	baz=73,SNR=6.2						
BNM	**Barren Site**	**72.46**	**328**	*e*P	**P**	**00 29 23.1**	**+0.5**
	comp=N,5.1nm,1.0s,mb4.3						
Z20A	**Nine Sixteen R**	**72.55**	**326**	⇑P	**P**	**00 29 23.7**	**+0.6**
	baz=73,SNR=16						
V26A	**Tequesquite Ra**	**72.59**	**331**	⇑P	**P**	**00 29 22.8**	**-0.5**
	baz=73,SNR=6.1						
217A	**Green Valley**	**72.59**	**324**	⇑P	**P**	**00 29 23.5**	**+0.1**
	baz=73,SNR=22						
LPM	**Los Pinos Moun**	**72.60**	**328**	*e*P	**P**	**00 29 24.1**	**+0.7**
119A	**Ashpeak Ranch,**	**72.61**	**325**	⇓P	**P**	**00 29 24.3**	**+0.8**
	baz=73						
LENM	**Lemitar**	**72.64**	**328**	*e*P	**P**	**00 29 23.1**	**-0.5**
W24A	**Lazy 6 Ranch,**	**72.79**	**330**	⇓P	**P**	**00 29 24.2**	**-0.3**
	baz=73,SNR=9.2						
HNH	**Hanover**	**72.80**	**358**	*e*P	**P**	**00 29 24.3**	**-0.1**
KSU1	**Kansas State U**	**72.80**	**338**	*e*P	**P**	**00 29 23.4**	**-1.1**
	comp=N,9.7nm,0.5s,mb4.9						
Y21A	**Point of Rocks**	**72.83**	**327**	⇓P	**P**	**00 29 25.7**	**+0.9**
	baz=73,SNR=14						
118A	**Homack Ranch,**	**72.85**	**325**	⇓P	**P**	**00 29 24.9**	**0.0**
	baz=73,SNR=6.1						
LAZ	**Ladron**	**72.91**	**328**	*e*P	**P**	**00 29 25.5**	**+0.3**
	comp=N,7.7nm,1.2s,mb4.4						
X22A	**Bernardo**	**72.93**	**328**	⇓P	**P**	**00 29 26.4**	**+1.0**
	baz=73						
V25A	**Rancho No Teng**	**72.98**	**330**	⇓P	**P**	**00 29 25.4**	**-0.2**
	baz=73,SNR=11						
TUC	**Tucson**	**73.00**	**324**	*e*P	**P**	**00 29 25.8**	**0.0**
	comp=N,13nm,1.3s,mb4.6						
Z19A	**T-Link Ranch,**	**73.02**	**326**	⇑P	**P**	**00 29 26.3**	**+0.4**
	baz=73						
ANMO	**Albuquerque**	**73.05**	**329**	*e*P	**P**	**00 29 26.3**	**+0.2**
	comp=N,17nm,1.3s,mb4.7						
U26A	**Atchley Ranch,**	**73.08**	**331**	⇑P	**P**	**00 29 25.9**	**-0.3**
	baz=73,SNR=8.7						
W23A	**Werner Place,**	**73.08**	**329**	⇑P	**P**	**00 29 26.6**	**+0.4**
	baz=73,SNR=12						
Y20A	**Horse Springs,**	**73.09**	**327**	⇑P	**P**	**00 29 26.8**	**+0.5**
	baz=73,SNR=20						
216A	**Three Points,**	**73.10**	**323**	⇑P	**P**	**00 29 26.5**	**+0.1**
	baz=73,SNR=5.3						
V24A	**Rampart Ranch,**	**73.17**	**330**	⇓P	**P**	**00 29 26.7**	**0.0**
	baz=73,SNR=5.8						
117A	**Oracle**	**73.18**	**324**	⇓P	**P**	**00 29 26.8**	**0.0**
	baz=73,SNR=12						
Z18A	**Geronimo**	**73.24**	**325**	⇓P	**P**	**00 29 27.1**	**-0.1**
	baz=74						
X21A	**Alamocita Cree**	**73.25**	**327**	⇓P	**P**	**00 29 27.8**	**+0.6**
	baz=74,SNR=18						
W22A	**Albuquerque**	**73.33**	**328**	⇑P	**P**	**00 29 28.5**	**+0.7**
	baz=74						
U25A	**Circle Dot Ran**	**73.36**	**331**	⇑P	**P**	**00 29 27.9**	**0.0**
	baz=74,SNR=9.0						
Y19A	**Nutrioso**	**73.55**	**326**	⇑P	**P**	**00 29 29.9**	**+0.9**
	baz=74,SNR=28						
V23A	**Ortiz Mt. (NFS**	**73.59**	**329**	⇓P	**P**	**00 29 30.0**	**+0.8**
	baz=74						
CBKS	**Cedar Bluff**	**73.62**	**336**	*e*P	**P**	**00 29 28.9**	**-0.5**
	comp=N,23nm,0.8s,mb5.0						
Z17A	**San Carlos Hig**	**73.62**	**325**	⇑P	**P**	**00 29 29.5**	**+0.1**
	baz=74						
X20A	**Quemado**	**73.66**	**327**	⇑P	**P**	**00 29 30.2**	**+0.6**
	baz=74						
116A	**Eloy**	**73.67**	**323**	⇓P	**P**	**00 29 29.9**	**+0.1**
	baz=74						
W21A	**San Fidel**	**73.73**	**328**	⇓P	**P**	**00 29 31.1**	**+1.0**
	baz=74,SNR=10.0						
U24A	**Moreno Valley**	**73.75**	**330**	⇓P	**P**	**00 29 31.0**	**+0.9**
	baz=74						
214A	**Organ Pipe Nat**	**73.78**	**322**	⇓P	**P**	**00 29 31.0**	**+0.6**
	baz=74,SNR=23						
X19A	**St. Johns**	**73.95**	**326**	⇓P	**P**	**00 29 31.8**	**+0.4**
	baz=74,SNR=5.3						
FRNY	**Flat Rock**	**73.98**	**357**	*e*P	**P**	**00 29 31.0**	**-0.3**
	comp=N,18nm,0.9s,mb4.8						
T25A	**Trinidad**	**73.99**	**331**	⇓P	**P**	**00 29 32.3**	**+0.7**
	baz=74,SNR=14						
V22A	**San Miguel Ran**	**74.05**	**329**	⇑P	**P**	**00 29 32.9**	**+1.0**
	baz=74,SNR=22						
115A	**Sonoran Desert**	**74.05**	**323**	⇑P	**P**	**00 29 32.8**	**+0.8**
	baz=74						
U23A	**El Rito**	**74.08**	**330**	⇑P	**P**	**00 29 32.9**	**+0.9**
	baz=74						
Y17A	**Roosevelt**	**74.13**	**325**	⇑P	**P**	**00 29 32.9**	**+0.5**
	baz=74,SNR=39						
W20A	**Ramah**	**74.14**	**327**	⇓P	**P**	**00 29 33.0**	**+0.6**
	baz=74,SNR=9.4						
Z16A	**Peralta Trail,**	**74.14**	**324**	⇑P	**P**	**00 29 32.9**	**+0.4**
	baz=74						
V21A	**Milan**	**74.29**	**328**	⇓P	**P**	**00 29 34.1**	**+0.8**
	baz=74						
PKME	**Peaks-Kenny Pk**	**74.30**	**360**	*e*P	**P**	**00 29 33.3**	**+0.2**
X18A	**Snowflake**	**74.35**	**326**	⇑P	**P**	**00 29 34.4**	**+0.7**
	baz=75,SNR=6.0						
U22A	**Llaves**	**74.41**	**329**	⇓P	**P**	**00 29 35.1**	**+1.1**
	baz=75						
114A	**Black Gap (USA**	**74.44**	**323**	⇓P	**P**	**00 29 34.5**	**+0.3**
	baz=75,S

baz=76,SNR=14
X13A Yucca 76.36 323 ⇓P P 00 29 45.4 +0.1
baz=77,SNR=16
R21A Cimarron 76.37 330 ⇓P P 00 29 45.8 +0.6
baz=77,SNR=9.5
O25A Wiggins 76.41 333 ⇓P P 00 29 45.9 +0.6
baz=77
T18A Mexican Hat 76.42 328 ⇑P P 00 29 45.5 +0.1
baz=77,SNR=22
BAR Barrett 76.44 320 eP P 00 29 46.1 +0.4
comp=N,22nm,1.0s,mb4.8
W14A Seligman 76.46 324 ⇑P P 00 29 46.2 +0.5
baz=77,SNR=12
MONP Monument Peak 76.46 321 ⇑P P 00 29 46.2 +0.4
baz=77
V15A Kaibab Nationa 76.48 325 ⇑P P 00 29 46.7 +0.8
baz=77,SNR=30
P23A Jefferson 76.48 332 ⇓P P 00 29 46.6 +0.9
baz=77
Q22A Crested Butte, 76.50 331 ⇓P P 00 29 46.7 +0.8
baz=77,SNR=6.9
BC3 Big Chuckawall 76.51 322 ⇓P P 00 29 46.0 0.0
baz=77,SNR=14
S19A Harvey Farm, M 76.57 328 ⇓P P 00 29 46.6 +0.3
baz=77,SNR=23
R20A Redvale 76.59 329 ⇑P P 00 29 47.2 +0.8
baz=77,SNR=14
PV01 Paradox Valley 76.63 329 eP P 00 29 47.2 +0.5
comp=N,1μm,1.2s
IRM Iron Mountain 76.73 322 ⇑P P 00 29 47.3 0.0
baz=77,SNR=9.8
T17A Navajo Res., N 76.75 327 ⇓P P 00 29 48.2 +0.9
baz=77,SNR=11
ISCO Idaho Springs 76.75 332 eP P 00 29 46.2 -1.1
Q21A Lamborn Mesa, 76.77 330 ⇓P P 00 29 48.0 +0.6
baz=77
W13A Hualapai Mount 76.78 324 ⇑P P 00 29 48.2 +0.7
baz=77
SMCO Snowmass 76.80 331 eP P 00 29 48.5 +1.0
comp=N,19nm,0.9s,mb4.8
V14A Boquillas Ranc 76.80 324 ⇓P P 00 29 48.4 +0.8
baz=77,SNR=23
MAW Mawson 76.86 163 P P 00 29 47.7 0.0
comp=N,11nm,1.0s,mb4.6,baz=226,slow=7.5,SNR=13
S18A Hurst Farm, Bl 76.92 328 ⇓P P 00 29 48.9 +0.7
baz=77,SNR=50
PV04 Paradox Valley 77.00 329 eP P 00 29 49.3 +0.6
ECSD EROS Data Cent 77.01 340 eP P 00 29 47.6 -1.0
comp=N,33nm,0.9s,mb5.1
U15A North Rim 77.02 326 ⇓P P 00 29 49.5 +0.7
baz=77,SNR=27
PFO Pinyon Flat Ob 77.02 321 ⇓P P 00 29 49.3 +0.4
baz=77
PV10 Paradox Valley 77.04 329 eP P 00 29 48.5 -0.5
comp=N,232nm,0.8s,mb6.0
P22A Eagle 77.05 331 ⇓P P 00 29 49.6 +0.6
baz=77
BELC Belle Mtn. Jos 77.06 322 ⇑P P 00 29 49.4 +0.3
baz=77
T16A Glen Canyon Da 77.07 326 ⇓P P 00 29 49.7 +0.6
baz=77
R19A Curley Farm, L 77.07 329 ⇓P P 00 29 49.1 0.0
baz=77,SNR=9.3
Q20A Ridgley Place, 77.18 330 ⇑P P 00 29 49.7 0.0
baz=77
O23A Lake Granby, G 77.22 332 ⇓P P 00 29 50.3 +0.5
baz=78,SNR=10
S17A Black Ridge (B 77.26 327 ⇑P P 00 29 50.7 +0.5
baz=78
N24A Carr 77.32 333 ⇑P P 00 29 51.2 +0.8
baz=78
V13A Grand Canyon W 77.42 324 ⇑P P 00 29 51.4 +0.3
baz=78
MURC Murrieta 77.42 320 ⇓P P 00 29 51.5 +0.3
baz=78
O22A Kremmling 77.44 332 ⇓P P 00 29 51.3 +0.2
baz=78,SNR=9.8
R18A Canyonlands Na 77.44 328 ⇓P P 00 29 51.2 0.0
baz=78,SNR=7.3
U14A Mt Trumbull 77.45 325 ⇑P P 00 29 51.6 +0.3
baz=78,SNR=26
W12A Cal Nev Ari 77.45 323 ⇑P P 00 29 51.2 -0.1
baz=78
GMRC Granite Mounta 77.47 322 ⇑P P 00 29 51.7 +0.3
baz=78,SNR=12
T15A Red Dirt Ranch 77.53 326 ⇓P P 00 29 52.3 +0.6
baz=78,SNR=8.1
Q19A Hogan Spring (77.61 329 ⇓P P 00 29 52.4 +0.3
baz=78
P20A De Beque 77.68 330 ⇑P P 00 29 52.8 +0.4
baz=78,SNR=6.5
S16A Weppner Ranch, 77.70 327 ⇑P P 00 29 52.5 -0.1
baz=78,SNR=9.1
SCI San Clemente I 77.72 319 ⇓P P 00 29 52.7 -0.2
baz=78
V12A Nelson 77.77 323 ⇑P P 00 29 53.1 0.0
baz=78,SNR=14
N23A Red Feather La 77.81 332 ⇑P P 00 29 53.4 +0.3
baz=78,SNR=8.3
R17A Hanksville Air 77.84 328 ⇓P P 00 29 53.5 +0.2
baz=78
HEC Hector,Ludlow 77.87 322 ⇑P P 00 29 54.0 +0.3
baz=78
O21A Pagoda 77.87 331 ⇑P P 00 29 54.0 +0.5
baz=78
T14A Hurricane 77.91 325 ⇓P P 00 29 54.2 +0.4
baz=78
N22A Wattenberg Ran 77.94 332 ⇓P P 00 29 54.6 +0.7
baz=78,SNR=7.6
PHWY Pilot Hill 77.96 333 eP P 00 29 54.1 +0.2
comp=N,12nm,1.0s,mb4.6
S15A Panguitch 78.03 326 ⇓P P 00 29 55.0 +0.5
baz=78
P19A Cripple Cowboy 78.04 330 ⇑P P 00 29 54.8 +0.3
baz=78,SNR=23
TSUM Tsumeb 78.06 105 eP P 00 29 56.0 +0.8
comp=N,11nm,0.8s,mb4.6
TSUM Tsumeb 78.06 105 P P 00 29 56.4 +1.2
comp=N,14nm,1.0s,mb4.6,baz=253,slow=6.9,SNR=11
R16A Teasdale 78.10 327 ⇑P P 00 29 55.0 +0.2
baz=78,SNR=8.1
TUQ Turquoise Moun 78.11 323 ⇑P P 00 29 55.1 +0.1
baz=78,SNR=6.6
FMP Fort Macarthur 78.12 320 ⇓P P 00 29 55.1 0.0
baz=78
Q18A Rafter H Ranch 78.13 329 ⇑P P 00 29 55.1 +0.1
baz=78,SNR=8.0
O20A White River Ci 78.13 330 ⇑P P 00 29 55.3 +0.3
baz=78,SNR=7.2
U12A Valley of Fire 78.15 324 ⇓P P 00 29 55.2 +0.1
baz=78,SNR=5.4
BFSC Mount Baldy Ra 78.15 321 ⇑P P 00 29 55.0 -0.3
baz=78,SNR=5.3
V11A Goodsprings 78.16 323 ⇓P P 00 29 55.3 +0.1
baz=78,SNR=5.8
RRX Edison Barstow 78.27 321 ⇑P P 00 29 56.3 +0.4
baz=78
T13A Saint George 78.28 325 ⇓P P 00 29 56.4 +0.5
baz=78,SNR=10
SRU San Rafael 78.31 328 eP P 00 29 56.1 +0.1
comp=N,15nm,0.8s,mb4.8
N21A Black Mountain 78.34 331 ⇑P P 00 29 56.8 +0.6
baz=79
R15A Junction 78.42 327 ⇑P P 00 29 56.9 +0.4
baz=79
CCUT Cedar City 78.43 326 eP P 00 29 57.2 +0.5
comp=N,25nm,0.9s,mb4.9
Q16A Castle Valley 78.46 328 ⇑P P 00 29 57.1 +0.3
baz=79,SNR=7.8
GSC Goldstone 78.48 322 ⇓P P 00 29 57.2 +0.2
baz=79,SNR=5.3
GSC Goldstone 78.48 322 eP P 00 29 57.6 +0.6
comp=N,11nm,1.1s,mb4.5
S14A Cedar City 78.49 326 ⇓P P 00 29 57.8 +0.8
baz=79
M22A Cedar Creek Ra 78.50 332 ⇑P P 00 29 57.3 +0.4
baz=79
DECC Green Verdugo 78.53 320 ⇑P P 00 29 57.6 +0.3
baz=79
U11A Corn Creek 78.58 324 ⇓P P 00 29 58.1 +0.6
baz=79
P18A Preston Nutter 78.61 329 ⇓P P 00 29 57.9 +0.3
baz=79,SNR=18
MSU Marysvale 78.61 327 eP P 00 29 58.1 +0.5
ARUT Antelope Range 78.65 326 eP P 00 29 58.6 +0.7
comp=N,16nm,0.8s,mb4.9
SHOC Shoshone 78.65 323 ⇓P P 00 29 58.1 +0.1
baz=79
O19A Miners Draw (B 78.65 330 ⇑P P 00 29 57.8 0.0
baz=79,SNR=6.9
S13A Holt Ranch, En 78.70 325 ⇑P P 00 29 58.7 +0.5
baz=79,SNR=16
P17A Butcher Ranch, 78.70 328 ⇑P P 00 29 58.1 0.0
baz=79,SNR=9.7
N20A Spence Gulch, 78.72 331 ⇑P P 00 29 58.3 +0.1
baz=79,SNR=6.8
TMUT Trail Mountain 78.78 328 eP P 00 29 59.2 +0.7
comp=N,13nm,1.2s,mb4.7
EDW2 Edwards Air Fo 78.81 321 ⇓P P 00 29 58.5 -0.4
baz=79,SNR=6.6
R14A James Farms, M 78.84 326 ⇓P P 00 29 59.7 +0.8
baz=79
L22A Ellis Ranch, M 78.96 333 ⇓P P 00 30 00.2 +0.7
baz=79
M21A Separation Pea 78.99 332 ⇓P P 00 29 59.6 0.0
baz=79,SNR=12
RWWY Rawlins 78.99 332 eP P 00 29 59.9 +0.3
comp=N,25nm,0.8s,mb5.1
O18A Roosevelt 79.02 329 ⇓P P 00 30 00.3 +0.5
baz=79
OSI Osito Adit 79.02 320 ⇑P P 00 30 00.1 +0.1
baz=79
U10A Ash Meadows, A 79.07 323 ⇓P P 00 30 00.5 +0.2
baz=79,SNR=6.3
BSC Santa Cruz Isl 79.08 319 ⇑P P 00 30 00.3 0.0
baz=79
LRMC Laurel Mountai 79.09 321 ⇓P P 00 30 00.7 +0.3
baz=79
Q15A Fillmore 79.09 327 ⇓P P 00 30 00.7 +0.5
baz=79
T11A Corn Creek, Al 79.12 324 ⇑P P 00 30 01.0 +0.5
baz=79,SNR=28
N19A John Jarvie Ra 79.16 330 ⇑P P 00 30 00.5 -0.1
baz=79,SNR=9.8
S12A Delamar Landin 79.21 325 ⇑P P 00 30 01.8 +0.8
baz=79
R13A O'Grain Ranch, 79.22 326 ⇑P P 00 30 01.7 +0.7
baz=79,SNR=7.9
M20A Sweetwater, Wa 79.23 331 ⇑P P 00 30 01.1 +0.1
baz=80,SNR=5.7
P16A Fountain Green 79.24 328 ⇓P P 00 30 01.4 +0.4
baz=80
L21A Rawlins 79.29 332 ⇑P P 00 30 01.4 +0.1
baz=80
O17A Robinson Place 79.29 329 ⇓P P 00 30 01.7 +0.4
baz=80,SNR=16
FURC Furnace Creek, 79.39 323 ⇑P P 00 30 02.2 +0.3
baz=80,SNR=6.1
MPMC Manual Prospec 79.42 322 ⇑P P 00 30 02.0 -0.1
baz=80,SNR=7.3
N18A Larsen Ranch, 79.45 330 ⇑P P 00 30 02.1 0.0
baz=80
P15A Leamington 79.50 327 ⇑P P 00 30 02.7 +0.3
baz=80,SNR=5.2
Q14A Sevier Lake (B 79.51 326 ⇑P P 00 30 03.0 +0.5
baz=80,SNR=15
MPU Maple Canyon 79.55 328 eP P 00 30 03.3 +0.6
comp=N,13nm,1.0s,mb4.7
R12A Pony Springs, 79.65 325 ⇑P P 00 30 03.8 +0.5
baz=80,SNR=9.4
ISA Isabella 79.66 321 ⇑P P 00 30 03.9 +0.5
baz=80,SNR=8.5
ISA Isabella 79.66 321 eP P 00 30 02.8 -0.6
comp=N,22nm,2.0s,mb4.6
M19A Rock Springs 79.66 331 ⇑P P 00 30 03.3 +0.1
baz=80
DAU Daniels Canyon 79.70 329 eP P 00 30 04.2 +0.7
S11A Rachel 79.70 324 ⇑P P 00 30 03.6 0.0
baz=80
NLU North Lily Min 79.71 328 eP P 00 30 04.2 +0.6
comp=N,18nm,1.5s,mb4.7
L20A Wamsutter 79.72 331 ⇓P P 00 30 03.6 0.0
baz=80,SNR=8.9
RSSD Black Hills 79.82 335 eP P 00 30 04.0 -0.1
Q13A Wheeler Ranch, 79.84 326 ⇓P P 00 30 04.7 +0.4
baz=80,SNR=18
P14A Drum Mountains 79.89 327 ⇓P P 00 30 05.1 +0.5
baz=80,SNR=8.0
N17A Moffit Pass 79.93 329 ⇑P P 00 30 05.0 +0.3
baz=80,SNR=7.3
JLU Jornanelle 79.94 329 eP P 00 30 05.3 +0.5
comp=N,6.3nm,0.8s,mb4.5
BOSA Boshof 79.98 117 eP P 00 30 05.7 +0.1
BOSA Boshof 79.98 117 P P 00 30 05.3 -0.3
comp=N,9.0nm,0.5s,mb4.8,baz=252,slow=5.2,SNR=31
M18A Lyman 79.99 330 ⇑P P 00 30 05.0 0.0
baz=80
GRAC Grapevine Rang 80.06 323 ⇑P P 00 30 05.7 +0.1
baz=80
VES Vestal, Richgr 80.12 321 ⇑P P 00 30 06.2 +0.2
baz=80
R11A Troy Canyon, C 80.15 325 ⇑P P 00 30 06.5 +0.4
baz=80,SNR=21
N16A Rees Ranch, Co 80.16 329 ⇑P P 00 30 06.0 0.0
baz=80
L19A Farson 80.23 331 ⇓P P 00 30 06.5 +0.1
baz=80,SNR=17
P13A Bates Ranch, G 80.23 326 ⇑P P 00 30 06.6 +0.2
baz=80,SNR=12
DUG Dugway 80.24 328 eP P 00 30 06.6 +0.1
comp=N,20nm,1.4s,mb4.7
K20A Yellowstone Ra 80.26 332 ⇓P P 00 30 06.1 -0.4
baz=80,SNR=10
TORD Torodi Ar. Bea 80.28 69 P P 00 30 07.4 +0.2
comp=N,22nm,0.7s,mb5.1,baz=261,slow=5.0,SNR=88
TORD pP pP 00 30 37.8 +7.8
comp=N,9.6nm,0.8s,baz=248,slow=5.0,SNR=6.3
M17A Scullys Gap (B 80.29 330 ⇓P P 00 30 06.2 -0.5
baz=80
Q12A Willow Creek R 80.31 326 ⇑P P 00 30 07.0 +0.1
baz=80
S10A Tonopah Range, 80.34 324 ⇓P P 00 30 07.0 -0.1
baz=81,SNR=11
L18A Fontenelle, Gr 80.38 330 ⇓P P 00 30 07.0 -0.2
baz=81,SNR=6.4
R10A Warm Springs 80.47 324 ⇓P P 00 30 08.2 +0.5
baz=81,SNR=12
RCTC Rector, Farmer 80.55 321 ⇑P P 00 30 08.5 +0.2
baz=81
Q11A Duckwater 80.57 325 ⇓P P 00 30 08.3 0.0
baz=81,SNR=11
K19A Absolon Red Bu 80.61 332 ⇓P P 00 30 07.9 -0.5
baz=81,SNR=12
N15A Stansbury Isla 80.66 328 ⇑P P 00 30 08.2 -0.5
baz=81,SNR=9.2
P12A McGill 80.68 326 ⇑P P 00 30 08.5 -0.3
baz=81
HWUT Hardware Ranch 80.79 329 eP P 00 30 09.0 -0.3
Q10A Clear Creek Ra 80.93 324 ⇑P P 00 30 10.5 +0.3
baz=81,SNR=5.6
N14A Grayback Hills 80.93 328 ⇑P P 00 30 09.9 -0.3
baz=81,SNR=6.8
MTUM Tungsten Hills 80.95 322 eP P 00 30 10.8 +0.5
MTUM epP pP 00 30 40.0 +6.8
SPUT South Promonto 80.95 328 eP P 00 30 09.5 -0.8
comp=N,18nm,1.4s,mb4.7
K18A Toltan Ranch, 80.96 331 ⇓P P 00 30 10.4 +0.2
baz=81,SNR=14
AGMN Agassiz Nation 80.97 342 eP P 00 30 08.8 -1.3
comp=N,17nm,0.8s,mb4.9
L16A Fish Haven 81.06 329 ⇓P P 00 30 10.3 -0.5
baz=81,SNR=6.2
M15A Larsen Ranch, 81.08 329 ⇓P P 00 30 10.3 -0.6
baz=81,SNR=14
P11A Circle Ranch, 81.16 325 ⇓P P 00 30 11.5 +0.1
baz=81
O12A Currie 81.22 326 ⇑P P 00 30 11.9 +0.2
baz=81
J18A Kendall Valley 81.42 331 ⇑P P 00 30 12.4 -0.3
baz=82
K17A Gardner Place, 81.43 330 ⇑P P 00 30 12.4 -0.3
baz=82
L15A Malad City 81.48 329 ⇑P P 00 30 12.7 -0.3
baz=82
M14A Sheep Mountain 81.52 328 ⇑P P 00 30 13.0 -0.2
baz=82
O11A Cowboy Ranch, 81.56 326 ⇓P P 00 30 13.6 +0.2
baz=82
P10A Eureka 81.56 325 ⇓P P 00 30 13.7 +0.1
baz=82
NVAR Mina Array Bea 81.61 323 P P 00 30 14.0 +0.2
comp=N,5.5nm,0.8s,mb4.4,baz=156,slow=6.5,SNR=23
I18A Diamond G Ranc 81.73 331 ⇑P P 00 30 14.3 0.0
baz=82,SNR=12
K16A Soda Springs 81.79 330 ⇓P P 00 30 14.7 +0.1
baz=82,SNR=15
J17A Brown Place, J 81.84 331 ⇑P P 00 30 14.9 0.0
baz=82
L14A Malta 81.89 328 ⇓P P 00 30 14.7 -0.5
baz=82,SNR=5.7
REDW Red Top Meadow 81.90 331 eP P 00 30 15.1 0.0
LBTB Lobatse 81.95 114 P P 00 30 16.2 +0.1
comp=N,8.0nm,0.4s,mb4.9,baz=251,slow=5.3,SNR=39
TPAW Teton Pass 82.04 331 eP P 00 30 16.1 +0.1
K15A Arbon 82.09 329 ⇓P P 00 30 16.2 +0.1
baz=82
J16A Bone 82.15 330 ⇑P P 00 30 16.7 +0.2
baz=82
MOOW Moose Ponds 82.16 331 eP P 00 30 16.4 -0.2
M12A Wells 82.19 327 ⇓P P 00 30 16.4 -0.3
baz=82
I17A Pilgrim Ck. 82.23 331 ⇑P P 00 30 17.2 +0.3
baz=82
L13A Double Diamond 82.26 328 ⇓P P 00 30 17.0 0.0
baz=82,SNR=6.9
WAKR Walker 82.27 322 eP P 00 30 17.8 +0.5
IMW Indian Meadow 82.37 331 eP P 00 30 17.5 -0.1
FLWY Flagg Ranch 82.42 331 eP P 00 30 18.4 +0.5
CMB Columbia Colle 82.43 322 eP P 00 30 17.7 -0.4
I16A Newdale 82.58 331 ⇓P P 00 30 18.7 0.0
baz=83,SNR=6.7
J15A Blackfoot 82.61 330 ⇑P P 00 30 18.9 0.0
baz=83
H17A Grant Village 82.62 331 ⇓P P 00 30 19.2 +0.3
baz=83
M11A Holland Ranch, 82.62 327 ⇓P P 00 30 18.8 -0.1
baz=83,SNR=10.0
RLMT Red Lodge 82.68 333 eP P 00 30 19.1 -0.1
ULM Lac du Bonnet 82.77 343 P P 00 30 18.2 -1.3
ULM Lac du Bonnet 82.77 343 P P 00 30 18.2 -1.3
comp=N,14nm,0.8s,mb4.8,baz=177,slow=2.5,SNR=8.7
YFT Old Faithful 82.77 331 eP P 00 30 21.6 +1.9
L12A House Creek Ra 82.80 327 ⇓P P 00 30 19.7 -0.2
baz=83,SNR=8.3
LAO LASA Array 82.82 335 eP P 00 30 18.9 -1.0
comp=N,24nm,1.0s,mb5.0
G18A Lazy EL Ranch, 82.95 333 ⇓P P 00 30 20.2 -0.4
baz=83,SNR=18
WCN Washoe City 83.02 323 ⇓P P 00 30 21.1 0.0
baz=83
J14A Carey 83.03 329 ⇑P P 00 30 21.0 -0.1
baz=83
M10A I.L. Ranch, Tu 83.05 326 ⇓P P 00 30 20.9 -0.3
baz=83
H16A Russell Place, 83.15 331 ⇓P P 00 30 21.9 +0.3
baz=83,SNR=5.5
L11A Cat Creek Ranc 83.17 327 ⇓P P 00 30 21.6 -0.1
baz=83,SNR=10
J13A Cove Ranch, Pi 83.39 329 ⇑P P 00 30 22.9 0.0
baz=84,SNR=11
G17A Pierce Place, 83.44 332 ⇑P P 00 30 23.1 0.0
baz=84
L10A Juniper Basin 83.44 327 ⇑P P 00 30 22.9 -0.3
baz=84
F18A Big Timber 83.50 333 ⇓P P 00 30 22.9 -0.5
baz=84,SNR=29
HLID Hailey 83.62 329 eP P 00 30 24.1 0.0
comp=N,9.1nm,1.0s,mb4.6
H15A Lima 83.67 330 ⇑P P 00 30 24.4 +0.1
baz=84
I13A Wildhorse Cree 83.77 329 ⇓P P 00 30 25.0 +0.2
baz=84,SNR=16
G16A Moss Hill, Enn 83.81 331 ⇑P P 00 30 25.2 +0.2
baz=84
F17A Fitzpatrick Pl 83.88 332 ⇑P P 00 30 25.2 -0.2
baz=84,SNR=7.5
SCHQ Schefferville 83.90 1 eP P 00 30 24.2 -1.0
SCHQ Schefferville 83.90 1 P P 00 30 24.2 -1.1
comp=N,8.4nm,0.8s,mb4.6,baz=171,slow=4.5,SNR=14
MCMT McKenzie Canyo 83.93 330 eP P 00 30 27.1 +1.5
comp=N,11nm,1.3s,mb4.5
H14A Leadore 83.99 330 ⇑P P 00 30 26.0 +0.1
baz=84,SNR=8.9
G15A Dillon 84.05 331 ⇑P P 00 30 25.8 -0.4
baz=84,SNR=8.4
BOZ Bozeman (W) 84.07 332 eP P 00 30 25.7 -0.6
E18A Harlowton 84.12 333 ⇓P P 00 30 26.1 -0.5
baz=84,SNR=5.6
I12A Atlanta 84.13 328 ⇑P P 00 30 26.5 -0.2
baz=84,SNR=10.0
MFID Camas Ranch 84.16 328 ⇓P P 00 30 26.6 -0.3
baz=84,SNR=5.6
F16A Kennard Place, 84.18 332 ⇑P P 00 30 26.4 -0.5
baz=84
DLMT Dillon 84.25 331 eP P 00 30 27.4 +0.2
H13A Challis 84.34 329 ⇑P P 00 30 27.5 -0.2
baz=85
E17A Martinsdale 84.41 332 ⇓P P 00 30 27.6 -0.4
baz=85,SNR=8.2
G14A Jackson 84.52 330 ⇓P P 00 30 28.5 -0.1
baz=85
LRM Limekiln Ridge 84.55 331 eP P 00 30 29.0 +0.2
D18A Linhart Farms, 84.59 333 ⇓P P 00 30 28.4 -0.5
baz=85,SNR=6.3
H12A Diamond D Ranc 84.59 329 ⇑P P 00 30 28.8 -0.2
baz=85,SNR=7.8
CASY Casey 84.63 180 eP P 00 30 29.2 +0.1
comp=N,28nm,1.0s,mb5.1
G13A Cobalt 84.74 330 ⇓P P 00 30 29.6 -0.2
baz=85,SNR=21
E16A East Helena 84.80 332 ⇓P P 00 30 30.0 0.0
baz=85,SNR=8.6
D17A Six Diamond Ra 84.91 333 ⇑P P 00 30 30.1 -0.4
baz=85,SNR=22
F14A Wisdom 84.94 331 ⇑P P 00 30 30.8 +0.2
baz=85,SNR=6.2
HRY Holter Researc 85.01 332 eP P 00 30 31.2 +0.2
E15A Deer Lodge 85.11 331 ⇑P P 00 30 31.2 -0.4
baz=85
D16A Dana Ranch, Ca 85.15 332 ⇑P P 00 30 31.8 0.0
baz=85,SNR=24
MOD Modoc 85.21 324 eP P 00 30 32.3 +0.2
EGMT Eagleton 85.25 334 eP P 00 30 31.5 -0.7
G12A Big Creek, Yel 85.25 329 ⇑P P 00 30 32.0 -0.3
baz=86
C17A Wharram Farm, 85.33 333 ⇑P P 00 30 31.6 -1.0
baz=86,SNR=8.5
F13A Darby 85.33 330 ⇓P P 00 30 32.3 -0.3
baz=86,SNR=17
J08A Circle Bar Ran 85.37 326 ⇓P P 00 30 32.8 -0.2
baz=86,SNR=16
WDC Whiskeytown Da 85.42 322 eP P 00 30 31.6 -1.7
comp=N,6.1nm,1.1s,mb4.4
E14A Clinton 85.47 331 ⇓P P 00 30 33.4 +0.1
baz=86
B18A Beardsley Farm 85.57 334 ⇓P P 00 30 33.0 -0.8
baz=86,SNR=14
F12A Elk City 85.71 330 ⇑P P 00 30 34.0 -0.5
baz=86
CHMT Chamberlain Mo 85.76 331 eP P 00 30 34.5 -0.3
E13A Victor 85.78 331 ⇑P P 00 30 34.4 -0.4
baz=86,SNR=9.0
C16A Fuhringer Ranc 85.85 333 ⇑P P 00 30 34.7 -0.5
baz=86,SNR=12
B17A L&G Farms, Che 85.88 334 ⇑P P 00 30 34.1 -1.2
baz=86,SNR=5.3
BMO Blue Mountains 85.94 328 eP P 00 30 35.3 -0.5
D14A Greenough 86.00 331 ⇑P P 00 30 35.5 -0.4
baz=86,SNR=7.8
A18A Metzger Ranch, 86.03 334 ⇓P P 00 30 34.9 -1.1
baz=86,SNR=7.6
K05A Summer Lake 86.11 325 ⇓P P 00 30 36.8 +0.2
baz=86,SNR=14
SLMT Seeley Lake 86.12 331 eP P 00 30 36.4 -0.1
C15A Salmond Ranch, 86.18 332 ⇓P P 00 30 36.5 -0.3
baz=86,SNR=9.6
B16A M & M Farms, S 86.33 333 ⇑P P 00 30 36.4 -1.1
baz=87
YBH Yreka Blue Hor 86.33 323 eP P 00 30 35.9 -1.8
comp=N,5.0nm,1.1s,mb4.4
E12A Beaver Dam Sad 86.36 330 ⇓P P 00 30 36.5 -1.3
baz=87
A17A Triple J Farms 86.37 334 ⇓P P 00 30 36.9 -0.8
baz=87,SNR=24
D13A Huson 86.41 331 ⇓P P 00 30 37.7 -0.3
baz=87
I07A Izee 86.41 326 ⇑P P 00 30 37.9 -0.1
baz=87,SNR=14
SWMT Swartz Lake 86.54 331 eP P 00 30 38.5 -0.1
B15A Bradely Ranch, 86.59 333 ⇓P P 00 30 38.0 -0.8
baz=87
C14A Swan Lake 86.64 332 ⇓P P 00 30 38.7 -0.3
baz=87

F10A	**Beach Ranch, E**	**86.76**	**329**	⇑P		**P**	**00 30 39.4**	**-0.3**
	baz=87								
YBMT	**Yellow Bay**	**86.83**	**332**	*e*P		**P**	**00 30 39.9**	**-0.1**
JTMT	**Jette**	**86.85**	**331**	*e*P		**P**	**00 30 39.6**	**-0.5**
G08A	**Pilot Rock**	**87.05**	**327**	⇑P		**P**	**00 30 40.4**	**-0.7**
	baz=87,SNR=6.8								
HUMO	**Hull Mountain**	**87.08**	**323**	*e*P		**P**	**00 30 40.4**	**-1.0**
BSMT	**Bassoo Peak**	**87.14**	**331**	*e*P		**P**	**00 30 41.4**	**-0.1**
C12B	**Naegeli Ranch,**	**87.32**	**331**	⇑P		**P**	**00 30 41.7**	**-0.7**
	baz=88,SNR=7.3								
B13A	**Whitefish**	**87.42**	**332**	⇓P		**P**	**00 30 42.1**	**-0.7**
	baz=88								
A14A	**Double T Ranch**	**87.46**	**333**	⇓P		**P**	**00 30 42.0**	**-1.0**
	baz=88,SNR=8.1								
WALA	**Waterton Lakes**	**87.73**	**332**	*e*P		**P**	**00 30 43.8**	**-0.5**
	comp=N,1.1nm,1.2s,mb3.8								
C11A	**Tepee Creek (N**	**87.76**	**330**	⇑P		**P**	**00 30 44.1**	**-0.3**
	baz=88								
G06A	**Carleton Farm,**	**87.81**	**326**	⇑P		**P**	**00 30 44.4**	**-0.3**
	baz=88								
A13A	**Flathead Natio**	**87.83**	**332**	⇑P		**P**	**00 30 44.4**	**-0.3**
	baz=88								
B12A	**Libby**	**87.96**	**331**	⇓P		**P**	**00 30 44.8**	**-0.6**
	baz=88								
HAWA	**Hanford**	**88.13**	**328**	*e*P		**P**	**00 30 46.2**	**-0.1**
H04A	**Detroit Lake**	**88.17**	**325**	⇑P		**P**	**00 30 45.6**	**-0.8**
	baz=88								
D08A	**Wollman Farm,**	**88.35**	**329**	⇓P		**P**	**00 30 46.4**	**-0.8**
	baz=89								
EVO	**Evora**	**88.42**	**43**	*e*P		**P**	**00 30 44.9**	**-2.9**
	comp=N,13nm,1.1s,mb4.6								
OD2	**Odessa Site #2**	**88.50**	**329**	*e*P		**P**	**00 30 47.6**	**-0.4**
C09A	**Chrisman Ranch**	**88.61**	**329**	⇓P		**P**	**00 30 47.7**	**-0.8**
	baz=89								
G04A	**Mulino**	**88.69**	**325**	⇑P		**P**	**00 30 48.4**	**-0.5**
	baz=89								
LSZ	**Lusaka**	**88.82**	**107**	*e*P		**P**	**00 30 50.4**	**0.0**
	comp=N,12nm,1.2s,mb4.8								
F04A	**Amboy**	**89.18**	**326**	⇓P		**P**	**00 30 50.4**	**-0.8**
	baz=89								
ETW	**Entiat**	**89.40**	**328**	*e*P		**P**	**00 30 51.9**	**-0.2**
LON	**Longmire**	**89.47**	**327**	*e*P		**P**	**00 30 51.6**	**-0.9**
B08A	**Colville Reser**	**89.50**	**329**	⇑P		**P**	**00 30 51.9**	**-0.8**
	baz=90								
F03A	**Seaside**	**89.74**	**325**	⇑P		**P**	**00 30 52.9**	**-0.9**
	baz=90								
D05A	**Enumclaw**	**89.87**	**327**	⇓P		**P**	**00 30 53.4**	**-1.0**
	baz=90								
E03A	**Lebam**	**90.17**	**326**	⇑P		**P**	**00 30 55.3**	**-0.5**
	baz=90								
FCC	**Fort Churchill**	**90.25**	**347**	*e*P		**P**	**00 30 55.3**	**-0.6**
JCW	**Jim Creek**	**90.56**	**328**	*e*P		**P**	**00 30 56.4**	**-1.2**
B06A	**Marblemount**	**90.59**	**328**	⇓P		**P**	**00 30 56.7**	**-1.0**
	baz=91								
EDM	**Edmonton**	**90.81**	**335**	*e*P		**P**	**00 30 57.0**	**-1.7**
ESDC	**Sonseca Array**	**91.58**	**44**	P		**P**	**00 31 02.5**	**-0.1**
	comp=N,1.1nm,0.8s,mb4.2,baz=244,slow=4.2,SNR=6.7								
ETSF	**Etsaut**	**95.56**	**43**	*e*P		**P**	**00 31 19.0**	**-1.8**
	comp=N,30nm,1.5s,mb5.2								
ETSF	**Etsaut**	**95.56**	**43**	*e*P		**P**	**00 31 19.0**	**-1.8**
	comp=N,15nm,1.5s,mb5.2								
EPF	**Esparros**	**96.18**	**44**	*e*P		**P**	**00 31 20.0**	**-3.6**
	comp=N,10.0nm,1.1s,mb4.9								
EPF	**Esparros**	**96.18**	**44**	*e*P		**P**	**00 31 20.0**	**-3.6**
	comp=N,5.0nm,1.1s,mb4.9								
MTLF	**Montolieu**	**97.49**	**44**	*e*P		**P**	**00 31 27.3**	**-2.2**
	comp=N,40nm,1.8s,mb5.2								
MTLF	**Montolieu**	**97.49**	**44**	*e*P		**P**	**00 31 27.3**	**-2.2**
	comp=N,20nm,1.8s,mb5.2								
MFF	**Saint Martin d**	**97.92**	**41**	*e*P		**P**	**00 31 31.4**	**0.0**
	comp=N,38nm,1.4s,mb5.4								
MFF	**Saint Martin d**	**97.92**	**41**	*e*P		**P**	**00 31 31.4**	**0.0**
	comp=N,19nm,1.4s,mb5.4								
YKA	**Yellowknife Ar**	**98.53**	**340**	P		**P**	**00 31 32.0**	**-1.7**
YKA	**Yellowknife Ar**	**98.53**	**340**	P		**P**	**00 31 32.0**	**-1.7**
	comp=N,2.3nm,0.8s,mb4.8,baz=137,slow=3.8,SNR=5.1								
TCF	**Toulx Ste Croi**	**99.10**	**42**	*e*P		**P**	**00 31 36.2**	**-0.5**
SMF	**Signal de Mont**	**100.24**	**42**	*e*P	Pdif	Pdif	00 31 41.2	-0.8
	comp=N,8.9nm,0.9s								
SMF	**Signal de Mont**	**100.24**	**42**	*e*P	Pdif	Pdif	00 31 41.2	-0.8
	comp=N,4.4nm,0.9s								
SSF	**Saint Saulge**	**100.27**	**42**	*e*P	Pdif	Pdif	00 31 41.7	-0.4
LOR	**Lormes**	**100.58**	**41**	*e*P	Pdif	Pdif	00 31 43.1	-0.4
DLBC	**Dease Lake**	**101.07**	**332**	*e*Pdif	Pdif	Pdif	00 31 45.0	-0.7
DLBC	**Dease Lake**	**101.07**	**332**	P	Pdif	Pdif	00 31 44.6	-1.1
	comp=N,1.8nm,0.7s,baz=176,slow=9.5,SNR=4.6								
LPL	**La Plagne**	**101.38**	**44**	*e*P	Pdif	Pdif	00 31 48.2	+1.1
	comp=N,6.7nm,1.0s								
LPL	**La Plagne**	**101.38**	**44**	*e*P	Pdif	Pdif	00 31 48.2	+1.1
	comp=N,3.3nm,1.0s								
LPG	**La Plagne**	**101.38**	**44**	*e*P	Pdif	Pdif	00 31 48.5	+1.4
	comp=N,9.5nm,1.1s								
LPG	**La Plagne**	**101.38**	**44**	*e*P	Pdif	Pdif	00 31 48.5	+1.4
	comp=N,4.8nm,1.1s								
CABF	**La Chapelle**	**101.55**	**43**	*e*P	Pdif	Pdif	00 31 47.4	-0.4
KMBO	**Kilima Mbogo**	**103.68**	**99**	*e*Pdif	Pdif	Pdif	00 31 57.9	+0.6
BRTR	**Keskin Array B**	**117.36**	**58**	PKP	PKPdf	PKPdf	00 36 40.2	-0.7
	comp=N,0.6nm,0.7s,baz=325,slow=7.0,SNR=4.6								
ARCES	**ARCESS Array B**	**118.81**	**24**	PKP	PKPdf	PKPdf	00 36 41.8	-0.9
	comp=N,1.3nm,0.9s,baz=235,slow=3.2,SNR=4.2								
ASAR	**Alice Springs**	**122.78**	**205**	PKP	PKPdf	PKPdf	00 36 50.1	-1.8
	comp=N,1.3nm,0.7s,baz=146,slow=1.8,SNR=9.5								
ASAR					PKKPbc	PKKPbc	00 46 44.0	-0.6
	comp=N,0.9nm,0.8s,baz=352,slow=6.0,SNR=4.8								
WRAB	**Tennant Creek**	**125.98**	**208**	*e*PKPdf	PKPdf	PKPdf	00 36 56.5	-1.6
ABKAR	**Akbulak array**	**136.83**	**48**	*e*PKPdf	PKPdf	PKPdf	00 37 16.4	-1.2
PETK	**Petropavlovsk-**	**138.55**	**318**	PKP	PKPdf	PKPdf	00 37 19.1	-1.5
	comp=N,5.8nm,0.9s,baz=128,slow=4.0,SNR=5.2								
BVAR	**Borovoye Array**	**142.19**	**40**	PKPKP	PKPpre		00 37 22.9		
	comp=N,0.6nm,0.3s,baz=290,slow=1.4,SNR=9.4								
KBL	**Kabul**	**144.33**	**71**	*e*PKPdf	PKPdf	PKPdf	00 37 28.4	-3.3
YAK	**Yakutsk**	**145.09**	**345**	*e*PKPdf	PKPdf	PKPdf	00 37 31.0	-1.1
EKS2	**Erkin-Say**	**147.48**	**56**	P	PKPbc	PKPbc	00 37 40.3	+0.9
	SNR=19								
EKS2	**Erkin-Say**	**147.48**	**56**	*e*PKPdf	PKPdf	PKPdf	00 37 37.5	+0.7
AML	**Almayashu**	**147.52**	**57**	P	PKPbc	PKPbc	00 37 40.6	+1.0
	SNR=9.5								
AML	**Almayashu**	**147.52**	**57**	*e*PKPdf	PKPdf	PKPdf	00 37 37.8	+0.9
KURK	**Kurchatov**	**147.79**	**40**	*e*PKPdf	PKPdf	PKPdf	00 37 36.9	-0.1
USP	**Ospenovka**	**147.86**	**55**	P	PKPdf	PKPdf	00 37 38.0	+0.7
	SNR=19								
AAK	**Ala-Archa**	**148.00**	**56**	P	PKPbc	PKPbc	00 37 41.7	+0.9
	SNR=12								
AAK	**Ala-Archa**	**148.00**	**56**	PKPbc	PKPbc	PKPbc	00 37 41.6	+0.8
	comp=N,19nm,0.6s,baz=207,slow=2.6,SNR=30								
AAK					pPKPbc	pPKPbc	00 38 12.3	+7.6
	comp=N,5.8nm,0.8s,baz=323,slow=2.1,SNR=1.4								
UCH	**Uchtor**	**148.10**	**56**	P	PKPbc	PKPbc	00 37 42.4	+1.3
	SNR=40								
UCH	**Uchtor**	**148.10**	**56**	*e*PKPdf	PKPdf	PKPdf	00 37 39.1	+1.3
UCH				*e*PKPbc	PKPbc	PKPbc	00 37 42.3	+1.3
CHMS	**Chumysh**	**148.10**	**55**	P	PKPbc	PKPbc	00 37 41.5	+0.5
	SNR=13								
KBK	**Karagaybulak**	**148.32**	**56**	P	PKPbc	PKPbc	00 37 42.5	+0.9
	SNR=9.0								
TKM2	**Tokmak 2**	**148.72**	**55**	P	PKPbc	PKPbc	00 37 43.1	+0.4
	SNR=23								
TKM2	**Tokmak 2**	**148.72**	**55**	*e*PKPdf	PKPdf	PKPdf	00 37 40.0	+1.2
TKM2				*e*PKPbc	PKPbc	PKPbc	00 37 43.2	+0.5
TKM2				*e*PKPbc	PKPab	PKPbc	00 37 47.5	+0.8
ZAA0	**Zalesovo Array**	**149.01**	**30**	*e*PKPdf	PKPdf	PKPdf	00 37 38.5	-0.3
ZAA0				*e*PKPbc	PKPbc	PKPbc	00 37 42.7	-0.3
ZAA0				*e*PKPab	PKPab	PKPbc	00 37 47.8	+0.4
ZALV	**Zalesovo Beam**	**149.01**	**30**	PKP	PKPdf	PKPdf	00 37 38.4	-0.5
	comp=N,19nm,0.3s,baz=276,slow=2.3,SNR=37								
ZALV					PKPbc	PKPbc	00 37 42.5	-0.5
	comp=N,20nm,0.3s,baz=301,slow=2.9,SNR=99								
ZALV					pPKPbc	pPKPab	00 38 13.6	+2.7
	comp=N,4.2nm,0.6s,baz=312,slow=3.3,SNR=1.9								
ULHL	**Ulahol**	**149.35**	**56**	P	PKPbc	PKPbc	00 37 45.3	+1.0
	SNR=24								
KSH	**Kashi**	**149.67**	**61**	*e*PKPbc	PKPbc	PKPbc	00 37 44.8	-0.3
KSH				*ep*PKP	pPKPbc	pPKPbc	00 38 11.0	+1.9
KSH				*es*PKP			00 38 22.0	
KSH				*e*PKS			00 41 19.1	
KSH				*e*SKS	SKSdf		00 44 42.6	+2.0
KSH				AMB	AMB			
	comp=Z,91nm,8.3s								
KSH				LR	LR			
	comp=N,35nm,12.3s								
KSH				LR	LR			
	comp=E,38nm,4.4s								
KSH				LR	LR			
	comp=Z,37nm,3.8s								
PSI	**Prapat**	**151.22**	**155**	PKPbc	PKPbc	PKPbc	00 37 48.2	-1.4
PSI	**Prapat**	**151.22**	**155**	PKPbc	PKPbc	PKPbc	00 37 48.2	-1.4
	comp=Z,11nm,0.7s,baz=249,slow=3.3,SNR=8.8								
MK31	**Makanchi Array**	**151.80**	**44**	*e*PKPdf	PKPdf	PKPdf	00 37 43.1	-0.3
MK31				*e*PKPbc	PKPbc	PKPbc	00 37 49.5	-0.4
MK31				*e*PKPab	PKPab	PKPab	00 37 59.2	0.0
MKAR	**Makanchi Array**	**151.80**	**44**	PKPbc	PKPbc	PKPbc	00 37 49.3	-0.6
	comp=Z,15nm,0.9s,baz=312,slow=2.2,SNR=55								
MKAR					PKPab	PKPab	00 37 59.8	+0.6
	comp=Z,12nm,0.7s,baz=297,slow=4.2,SNR=21								
WMQ	**Urumqi**	**156.58**	**46**	*e*PKP	PKPdf	PKPdf	00 37 49.2	-1.0
WMQ				LR	LR			
	comp=N,110nm,23.0s								
WMQ				LR	LR			
	comp=Z,140nm,21.2s								
SONM	**Songino Array**	**161.26**	**9**	PKP	PKPdf	PKPdf	00 37 55.1	-0.5
	comp=Z,0.5nm,0.3s,baz=339,slow=2.1,SNR=6.1								
SONM					PKPab	PKPab	00 38 39.3	-0.4
	comp=Z,2.0nm,0.8s,baz=324,slow=4.0,SNR=8.2								
CN2	**Changchun**	**161.50**	**325**	*e*PKP	PKPdf	PKPdf	00 37 53.8	-2.2
KSRS	**Korea Array**	**163.67**	**304**	PKP	PKPdf	PKPdf	00 37 57.5	-0.8
	comp=Z,1.2nm,0.4s,baz=150,slow=1.1,SNR=12								
KSRS					PKPab	PKPab	00 38 50.5	-0.2
	comp=Z,0.9nm,0.7s,baz=46,slow=3.6,SNR=4.0								
BJI	**Beijing**	**168.52**	**339**	PKP	PKPdf	PKPdf	00 38 01.6	-0.5
LZH	**Lanzhou**	**171.08**	**40**	*e*PKP	PKPdf	PKPdf	00 38 03.0	-0.7
LZH				pPKP	pPKPdf	pPKPdf	00 38 28.7	+0.7
LZH				sPKP			00 38 41.0	
LZH				PKPab	PKPab	PKPab	00 39 25.0	+1.6
KMI	**Kunming**	**171.61**	**119**	PKP	PKPdf	PKPdf	00 38 02.6	-1.7
KMI				sPKP			00 38 39.3	
KMI				LR	LR			
	comp=Z,39nm,24.9s								
CD2	**Chengdu**	**173.66**	**74**	PKP	PKPdf	PKPdf	00 38 03.6	-1.4
GYA	**Guiyang**	**175.27**	**127**	*e*PKP	PKPdf	PKPdf	00 38 03.8	-1.9
GYA				sPKP			00 38 41.2	
GYA				PKPab	PKPab	PKPab	00 39 43.0	+0.7
GYA				PKS			00 41 34.9	
GYA				PP	PP	PP	00 43 36.0	+1.2
GYA				AMB	AMB			
	comp=Z,110nm,8.2s								

IDC 07 00:46:19.2±2.7, 8.05S×117.86E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.6/21, mbtmpg3.8/4, ML3.1/1, MS3.7/1, Ms1 3.7/1, ms1mx2.8/24, Error ellipse: s-maj=199.4km s-min=24.3km az=58.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.54**	**144**	Pn	Pn	00 49 20.1	+1.1
	0.1nm,0.3s,baz=315,slow=13,SNR=3.1						
FITZ				Sn	Sn	00 51 33.3	-6.1
	0.2nm,0.3s,baz=273,slow=13,SNR=4.7						
ASAR	**Alice Springs**	**21.86**	**137**	P	P	00 51 13.2	-0.4
	1.4nm,0.5s,baz=312,slow=9.0,SNR=16						
NWAO	**Narrogin (SRO)**	**24.76**	**181**	LR	LR	01 00 56.7	
	comp=Z,204nm,21.7s,baz=334,slow=35						
SONM	**Songino Array**	**56.56**	**351**	P	P	00 56 03.7	+0.3
	0.7nm,0.7s,baz=170,slow=8.0,SNR=4.3						
MKAR	**Makanchi Array**	**63.10**	**333**	P	P	00 56 48.5	0.0
	1.0nm,0.7s,baz=140,slow=7.5,SNR=5.4						

*IDC **07** 01:05:49.8±1.2, 39.36N×21.60E, h0km, mb3.7/7, mb1 3.8/12, mb1mx3.7/29, mbtmpg3.7/12, ML3.5/3, Error ellipse: s-maj=25.1km s-min=14.6km az=131.0*

*ATH **07** 01:05:50.9, 39.32N×21.46E, h24km±1km, MD3.4/17, ML3.2*

*CSEM **07** 01:05:50.8±0.1, 39.33N×21.51E, h2km, ML3.4/12, Error ellipse: s-maj=2.9km s-min=2.3km az=63.0*

*ISCJB **07** 01:05:50.7±0.5, 39.36N±0.01×21.46E±0.02, h8km±3km, mb3.7/7, Error ellipse: s-maj=2.5km s-min=1.9km az=152.6*

*SKO **07** 01:05:50.1, 39.24N×21.45E, h5km*

*TIR **07** 01:05:50.8, 39.19N×21.46E, h0km, ML4.2*

*NEIC **07** 01:05:50.9, 39.32N±21.46E, h24km, ML3.3(ATH), After ATH.*

*THE **07** 01:05:51.3, 39.36N±21.47E, h3km±1km, ML3.4/12, Error ellipse: s-maj=1.4km s-min=0.7km az=233.0*

ISC 07 01:05:51.8±0.3, 39.34N±0.01×21.50E±0.02, h8km±2km, n267, σ1§23/339, mb3.7/7, 20C-14D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THL	**Klokotos Trika**	**0.46**	**61**	*e*PB	**Pg**	**01 06 00.9**	**+0.2**
THL				*e*SB	**Sg**	**01 06 08.9**	**+2.1**
THL	**Klokotos Trika**	**0.46**	**61**	P	**Pg**	**01 06 00.9**	**+0.2**
THL				S	**Sg**	**01 06 08.4**	**+1.6**
THL	**Klokotos Trika**	**0.46**	**61**	P	**Pg**	**01 06 00.9**	**+0.2**
EVR	**Evrytania**	**0.49**	**150**	*e*Pb	**Pg**	**01 06 00.3**	**-1.0**
EVR				*e*Sb	**Sg**	**01 06 07.6**	**-0.2**
EVR	**Evrytania**	**0.49**	**150**	*e*PB	**Pg**	**01 06 00.3**	**-1.0**
EVR				*e*SB	**Sg**	**01 06 07.6**	**-0.2**
EVR	**Evrytania**	**0.49**	**150**	*e*Pb	**Pg**	**01 06 00.3**	**-1.0**
EVR				*e*Sb	**Sg**	**01 06 07.6**	**-0.2**
JAN	**Janina**	**0.59**	**302**	*e*Pn	**Pg**	**01 06 02.2**	**-1.0**
JAN				*e*Sn	**Sg**	**01 06 11.0**	**+0.1**
JAN	**Janina**	**0.59**	**302**	*e*Pn	**Pg**	**01 06 02.2**	**-1.0**
JAN				*e*SN	**Sg**	**01 06 11.0**	**+0.1**
JAN	**Janina**	**0.59**	**302**	*e*Pn	**Pg**	**01 06 02.2**	**-1.0**
AGG	**Agios Georgios**	**0.72**	**116**	*e*Pn	**Pg**	**01 06 05.4**	**-0.4**
AGG				*e*Sn	**Sg**	**01 06 16.8**	**+1.6**
AGG	**Agios Georgios**	**0.72**	**116**	*e*PN	**Pg**	**01 06 05.4**	**-0.4**
AGG				*e*SN	**Sg**	**01 06 16.8**	**+1.6**
AGG	**Agios Georgios**	**0.72**	**116**	P	**Pg**	**01 06 05.1**	**-0.7**
AGG				S	**Sg**	**01 06 16.7**	**+1.5**
AGG	**Agios Georgios**	**0.72**	**116**	P	**Pg**	**01 06 05.1**	**-0.7**
AGG	**Agios Georgios**	**0.72**	**116**	*e*Pn	**Pg**	**01 06 05.4**	**-0.4**
LKD2	**Lefkada island**	**0.85**	**230**	P	**Pg**	**01 06 06.9**	**-1.4**
LKD2				S	**Sg**	**01 06 20.0**	**+0.6**
LKD2	**Lefkada island**	**0.85**	**230**	P	**Pg**	**01 06 06.9**	**-1.4**
LKD2				S	**Sg**	**01 06 20.0**	**+0.6**
IGT	**Igoumenitsa**	**0.92**	**282**	P	**Pg**	**01 06 07.6**	**-1.9**
IGT	**Igoumenitsa**	**0.92**	**282**	P	**Pg**	**01 06 07.7**	**-1.8**
IGT				S	**Sg**	**01 06 21.9**	**+0.5**
IGT	**Igoumenitsa**	**0.92**	**282**	P	**Pg**	**01 06 07.7**	**-1.8**
IGT				S	**Sg**	**01 06 21.9**	**+0.5**
EFP	**Efpalio**	**0.97**	**161**	*e*PN	**Pg**	**01 06 09.5**	**-1.0**
EFP				*e*SN	**Sg**	**01 06 22.2**	**-0.9**
EFP	**Efpalio**	**0.97**	**161**	P	**Pg**	**01 06 09.0**	**-1.5**
EFP				S	**Sg**	**01 06 24.8**	**+1.7**
EFP	**Efpalio**	**0.97**	**161**	P	**Pg**	**01 06 09.5**	**-1.5**
EFP	**Efpalio**	**0.97**	**161**	*e*Pn	**Pg**	**01 06 09.5**	**-1.0**
EFP				*e*Sn	**Sg**	**01 06 22.3**	**-0.8**
KZN	**Kozani**	**0.98**	**12**	P	**Pg**	**01 06 09.6**	**-1.2**
KZN	**Kozani**	**0.98**	**12**	P	**Pg**	**01 06 09.5**	**-1.3**
KZN				S	**Sg**	**01 06 24.3**	**+0.7**
KZN	**Kozani**	**0.98**	**12**	P	**Pg**	**01 06 09.6**	**-1.2**
KZN				S	**Sg**	**01 06 24.3**	**+0.7**
TRIZ	**Trizonia**	**1.08**	**155**	P	**Pg**	**01 06 10.7**	**-1.8**
TRIZ				S	**Sg**	**01 06 28.3**	**+1.8**
TRIZ	**Trizonia**	**1.08**	**155**	P	**Pg**	**01 06 10.7**	**-1.8**
KALE	**Kalithea**	**1.08**	**152**	P	**Pg**	**01 06 10.9**	**-1.6**
KALE				S	**Sg**	**01 06 28.5**	**+2.0**
KALE	**Kalithea**	**1.08**	**152**	P	**Pg**	**01 06 10.9**	**-1.6**
LIT	**Litokhoron**	**1.08**	**45**	*e*Pb	**Pg**	**01 06 11.3**	**-1.2**
LIT	**Litokhoron**	**1.08**	**45**	*e*PB	**Pg**	**01 06 11.3**	**-1.2**
LIT	**Litokhoron**	**1.08**	**45**	P	**Pg**	**01 06 10.5**	**-2.0**
LIT				S	**Sg**	**01 06 27.2**	**+0.7**
LIT	**Litokhoron**	**1.08**	**45**	P	**Pg**	**01 06 10.5**	**-2.0**
LIT	**Litokhoron**	**1.08**	**45**	*e*Pb	**Pg**	**01 06 11.3**	**-1.2**
LIT				S	**Sg**	**01 06 27.2**	**+0.7**
UPR	**University Cam**	**1.08**	**168**	*e*PN	**Pg**	**01 06 11.5**	**-1.1**
UPR	**University Cam**	**1.08**	**168**	P	**Pg**	**01 06 12.3**	**-0.3**
UPR	**University Cam**	**1.08**	**168**	*e*Pn	**Pg**	**01 06 11.5**	**-1.1**
UPR	**University Cam**	**1.08**	**168**	P	**Pg**	**01 06 12.3**	**-0.3**
NEST	**Nestorio**	**1.12**	**342**	P	**Pg**	**01 06 12.4**	**-1.0**
NEST				S	**Sg**	**01 06 28.3**	**+0.3**
NEST	**Nestorio**	**1.12**	**342**	P	**Pg**	**01 06 12.4**	**-1.0**
NEST				S	**Sg**	**01 06 28.3**	**+0.3**
LAKA	**Lakka**	**1.17**	**161**	P	**Pb**	**01 06 13.3**	**-0.9**
LAKA	**Lakka**	**1.17**	**161**	P	**Pb**	**01 06 13.3**	**-0.9**
DSF	**Desfina**	**1.23**	**139**	P	**Pn**	**01 06 13.3**	**-2.0**
DSF	**Desfina**	**1.23**	**139**	P	**Pn**	**01 06 13.3**	**-2.0**
SRN	**Sarande**	**1.27**	**295**	*e*PN	**Pn**	**01 06 14.0**	**-1.9**
SRN				*i* PN	**Sn**	**01 06 35.2**	**+2.0**
RLS	**Riolos of Patr**	**1.28**	**181**	*e*Pn	**Pn**	**01 06 15.4**	**-0.7**
RLS	**Riolos of Patr**	**1.28**	**181**	*e*PN	**Pn**	**01 06 15.4**	**-0.7**
RLS	**Riolos of Patr**	**1.28**	**181**	*e*Pn	**Pn**	**01 06 15.4**	**-0.7**
XOR	**Xorichti**	**1.32**	**88**	P	**Pn**	**01 06 15.6**	**-0.9**
XOR	**Xorichti**	**1.32**	**88**	P	**Pn**	**01 06 15.8**	**-0.7**
XOR				S	**Sb**	**01 06 34.8**	**+1.0**
XOR	**Xorichti**	**1.32**	**88**	P	**Pn**	**01 06 15.6**	**-0.9**
XOR				S	**Sb**	**01 06 34.8**	**+1.0**
NEO	**Neokhori**	**1.34**	**91**	*e*Pn	**Pn**	**01 06 16.3**	**-0.6**
NEO	**Neokhori**	**1.34**	**91**	*e*PN	**Pn**	**01 06 16.2**	**-0.7**
NEO	**Neokhori**	**1.34**	**91**	*e*Pn	**Pn**	**01 06 16.3**	**-0.6**
KFL	**Anninata**	**1.35**	**204**	P	**Pn**	**01 06 15.6**	**-1.4**
KFL	**Anninata**	**1.35**	**204**	P	**Pn**	**01 06 15.6**	**-1.4**
ATAL	**Atalanti**	**1.36**	**118**	P	**Pn**	**01 06 17.1**	**+0.1**
ATAL	**Atalanti**	**1.36**	**118**	P	**Pn**	**01 06 17.1**	**+0.1**
KEK	**Kerkira**	**1.36**	**286**	*e*Pn	**Pn**	**01 06 16.5**	**-0.6**
KEK	**Kerkira**	**1.36**	**286**	*e*PN	**Pn**	**01 06 16.5**	**-0.6**
KEK	**Kerkira**	**1.36**	**286**	P	**Pn**	**01 06 16.0**	**-1.1**
KEK	**Kerkira**	**1.36**	**286**	*e*Pn	**Pn**	**01 06 16.5**	**-0.6**
KEK				S	**Sb**	**01 06 35.4**	**+0.3**
LKR	**Lokris**	**1.36**	**120**	*e*Pn	**Pn**	**01 06 17.2**	**+0.1**
LKR	**Lokris**	**1.36**	**120**	*e*PN	**Pn**	**01 06 17.2**	**+0.1**
LKR	**Lokris**	**1.36**	**120**	P	**Pn**	**01 06 16.8**	**-0.3**
LKR	**Lokris**	**1.36**	**120**	P	**Pn**	**01 06 16.8**	**-0.3**
LKR	**Lokris**	**1.36**	**120**	*e*Pn	**Pn**	**01 06 17.2**	**+0.1**
VLS	**Valsamata**	**1.36**	**212**	*e*Pn	**Pn**	**01 06 15.5**	**-1.6**
VLS	**Valsamata**	**1.36**	**212**	*e*PN	**Pn**	**01 06 15.5**	**-1.6**
VLS	**Valsamata**	**1.36**	**212**	P	**Pn**	**01 06 14.8**	**-2.3**
VLS	**Valsamata**	**1.36**	**212**	P	**Pn**	**01 06 14.8**	**-2.3**
VLS	**Valsamata**	**1.36**	**212**	*e*Pn	**Pn**	**01 06 15.5**	**-1.6**
KBN	**Korca**	**1.39**	**337**	*e*PN	**Pn**	**01 06 18.0**	**+0.5**
KBN				*i* PN	**Sg**	**01 06 40.3**	**+3.8**
KBN	**Korca**	**1.39**	**337**	*i* Pn	**Sg**	**01 06 40.3**	**+3.8**
FNA	**Florina**	**1.44**	**356**	P	**Pn**	**01 06 17.9**	**-0.3**
FNA	**Florina**	**1.44**	**356**	P	**Pn**	**01 06 17.7**	**-0.5**
FNA				S	**Sn**	**01 06 38.1**	**+0.8**
FNA	**Florina**	**1.44**	**356**	P	**Pn**	**01 06 17.7**	**-0.5**
FNA				S	**Sn**	**01 06 38.1**	**+0.8**
GUR	**Goura**	**1.55**	**154**	*e*PN	**Pn**	**01 06 19.0**	**-0.8**
GUR	**Goura**	**1.55**	**154**	P	**Pn**	**01 06 19.5**	**-0.3**
GUR				S	**Sn**	**01 06 41.7**	**+1.6**
GUR	**Goura**	**1.55**	**154**	*e*Pn	**Pn**	**01 06 19.0**	**-0.8**
GUR	**Goura**	**1.55**	**154**	P	**Pn**	**

ALN	Alexandroupoli	3.82	65	P	Pn	01 06 50.1	-0.8
BAI	Bari	3.95	298	*e*Pn	Pn	01 06 54.6	+1.9
SG1	Sgolgore (BA)	3.98	294	*e*Pn	Pn	01 06 53.8	+0.6
SG1				*e*Sn	Sn	01 07 39.7	-0.4
KARN	Karanos	4.38	153	P	Pn	01 07 00.9	+2.2
CUC	Castrocucco	4.43	280	*e*P	Pn	01 07 01.1	+1.8
CUC	Castrocucco	4.43	280	*e*P	Pn	01 07 01.1	+1.8
BOLS	Boljevac	4.49	4	*e*Pn	Pn	01 06 59.9	-0.3
CEL	Celeste	4.51	258	*e*Pn	Pn	01 06 59.6	-0.8
CEL	Celeste	4.51	258	*e*Pn	Pn	01 06 59.6	-0.8
STON	Ston	4.54	322	*i* Pn	Pn	01 07 01.4	+0.5
STON				Sn	Sn	01 07 51.1	-2.7
STON	Ston	4.54	322	*i* Pn	Pn	01 07 01.3	+0.4
STON				Sn	Sn	01 07 51.1	-2.7
BBLS	Lazići	4.78	342	⇓*i*Pn	Pn	01 07 06.6	+2.5
MS1	Monte Sant'Ang	4.84	301	*e*Pn	Pn	01 07 06.2	+1.2
MS1				*e*Sn	Sn	01 08 00.0	-1.3
IDI	Anoyia	4.87	145	*e*Pn	Pn	01 07 02.4	-3.0
IDI				*e*S	Sn	01 08 04.2	+2.3
IDI	Anoyia	4.87	145	*e*Pn	Pn	01 07 02.4	-3.0
IDI				*e*S	Sn	01 08 04.2	+2.3
DIVS	Divibare	4.88	347	P	Pn	01 07 06.0	+0.5
DIVS	Divibare	4.88	347	P	Pn	01 07 06.0	+0.5
DIVS	Divibare	4.88	347	⇑*i*Pn	Pn	01 07 06.4	+0.9
VAE	Valguarnera	5.87	254	Pn	Pn	01 07 19.1	0.0
VAE				Sn	Sn	01 08 20.7	-5.8
VAE	Valguarnera 0.6nm,0.3s,baz=59,slow=18,SNR=4.9	5.87	254	Pn	Pn	01 07 19.1	0.0
VAE				Sn	Sn	01 08 20.7	-5.8
	0.4nm,0.3s,baz=290,slow=20,SNR=3.3						
VAE	Valguarnera	5.87	254	Pn	Pn	01 07 19.1	+0.1
GZR	Gura Zlata	6.12	9	⇑*i*P	Pn	01 07 22.5	0.0
GZR	Gura Zlata	6.12	9	⇑*i*P	Pn	01 07 22.5	0.0
BZS	Buzias	6.27	1	⇓P	Pn	01 07 25.3	+0.7
BZS	Buzias	6.27	1	⇓*i*P	Pn	01 07 25.3	+0.7
BZS	Buzias	6.27	1	⇓P	Pn	01 07 25.3	+0.7
VOIR		6.63	22	⇑P	Pn	01 07 30.1	+0.5
VOIR		6.63	22	⇑*i*Pn	Pn	01 07 30.1	+0.6
VOIR		6.63	22	⇑P	Pn	01 07 30.1	+0.6
AQU	L'Aquila 13nm,0.9s	6.83	299	*e*Pn	Pn	01 07 22.1	-10
MLR	Muntele Rosu	6.97	27	⇓P	Pn	01 07 34.4	+0.2
MLR	Muntele Rosu 0.2nm,0.3s,baz=144,slow=15,SNR=16	6.97	27	Pn	Pn	01 07 33.6	-0.6
MLR	Muntele Rosu	6.97	27	⇓*i*P	Pn	01 07 34.4	+0.2
MLR	Muntele Rosu	6.97	27	⇓P	Pn	01 07 34.4	+0.2
PKSM	Moragy	7.18	344	⇓P	Pn	01 07 36.7	-0.4
PKSM	Moragy	7.18	344	⇓*i*P	Pn	01 07 36.7	-0.3
PKSM	Moragy	7.18	344	⇓P	Pn	01 07 36.7	-0.3
NVLJ	Novalja	7.18	319	Sn	Sn	01 08 56.1	-2.6
TIRR	Tirgusor	7.26	43	⇑P	Pn	01 07 34.0	-4.2
TIRR	Tirgusor	7.26	43	⇑*i*P	Pn	01 07 34.0	-4.2
PLOR	Plostina	7.53	29	⇑*i*P	Pn	01 07 40.9	-1.0
VRI	Vrincioaia	7.57	29	⇑P	Pn	01 07 41.4	-1.1
VRI	Vrincioaia	7.57	29	⇑*i*P	Pn	01 07 41.4	-1.1
VRI	Vrincioaia	7.57	29	⇑*i*P	Pn	01 07 41.4	-1.1
PKS9	Tamasi	7.61	343	⇓*e*P	Pn	01 07 44.0	+1.0
PSZ	Piszkesteto	8.65	353	⇑P	Pn	01 07 58.0	+0.8
PSZ	Piszkesteto	8.65	353	⇑*i*P	Pn	01 07 58.0	+0.8
PSZ	Piszkesteto	8.65	353	⇑*e*P	Pn	01 07 58.0	+0.8
PSZ	Piszkesteto	8.65	353	⇑*e*P	Pn	01 07 58.0	+0.8
SOKA	Soboth	8.72	329	⇑*i*Pn	Pn	01 07 58.6	+0.4
SOKA				⇑*i*Sn	Sn	01 09 33.8	-2.9
SOKA	Soboth	8.72	329	Pn	Pn	01 07 58.6	+0.4
OBKA	Obir	8.79	327	⇓*i*Pn	Pn	01 07 59.2	+0.1
OBKA				⇓*i*Sn	Sn	01 09 34.0	-4.2
OBKA	Obir	8.79	327	Pn	Pn	01 07 59.2	+0.1
KECS	Kecovo	9.17	356	*e*Pn	Pn	01 08 06.5	+2.2
KECS				*e*Sn	Sn	01 09 43.2	-4.4
KECS	Kecovo	9.17	356	*e*PN	Pn	01 08 06.5	+2.2
KECS				*e*SN	Sn	01 09 43.2	-4.4
VYHS	Vyhne	9.35	349	*e*Pn	Pn	01 08 08.4	+1.7
VYHS				*e*Sn	Sn	01 09 48.7	-3.3
VYHS				*e*		01 09 56.6	
VYHS	Vyhne	9.35	349	*e*PN	Pn	01 08 08.4	+1.7
VYHS				*e*SN	Sn	01 09 48.7	-3.3
VYHS				*e*		01 09 56.6	
VYHS	Vyhne	9.35	349	*e*Pn	Pn	01 08 08.4	+1.7
KEST	Kesra	10.30	253	*e*Pn	Pn	01 08 22.4	+2.6
KEST	Kesra 0.1nm,0.3s,baz=46,slow=2.0,SNR=7.0	10.30	253	Pn	Pn	01 08 21.2	+1.3
VRAC	Vranov 2.8nm,0.3s,baz=189,slow=12,SNR=5.0	10.56	342	Pn	Pn	01 08 24.0	+0.6
VRAC	Vranov	10.56	342	Pn	Pn	01 08 24.0	+0.6
KHC	Kasperske Hory	11.30	333	*e*P	Pn	01 08 37.0	+3.4
LPG	La Plagne 1.4nm,0.5s	12.50	304	*e*P	Pn	01 08 50.4	+0.5
LPG	La Plagne 0.7nm,0.5s	12.50	304	*e*P	Pn	01 08 50.4	+0.5
LPG	La Plagne 0.7nm,0.5s	12.50	304	*e*P	Pn	01 08 50.4	+0.5
LPL	La Plagne	12.52	304	*e*P	Pn	01 08 50.4	+0.2
LPL	La Plagne	12.52	304	*e*P	Pn	01 08 50.4	+0.2
HINF	Hinteralfeld 3.8nm,0.7s	13.56	313	*e*P	Pn	01 09 04.3	-0.1
HINF	Hinteralfeld 1.9nm,0.6s	13.56	313	*e*P	Pn	01 09 04.3	-0.1
HINF	Hinteralfeld 1.9nm,0.6s	13.56	313	*e*P	Pn	01 09 04.3	-0.1
HAU	Haudompre	13.95	313	*e*P	Pn	01 09 09.4	-0.3
HAU	Haudompre	13.95	313	*e*P	Pn	01 09 09.4	-0.3
ESDC	Sonseca Array 0.1nm,0.3s,baz=76,slow=10,SNR=7.6	19.63	279	P	Pn	01 10 21.4	-0.7
ESDC	Sonseca Array	19.63	279	P	Pn	01 10 21.4	-0.7
HFS	Hagfors 1.6nm,0.7s,mb3.5,baz=158,slow=12,SNR=4.3	21.38	349	P	P	01 10 38.4	-1.1
HFS	Hagfors	21.38	349	P	P	01 10 38.4	-1.2
FINES	FINESS Array B 1.7nm,0.8s,mb3.5,baz=176,slow=11,SNR=4.3	22.31	6	P	P	01 10 47.1	-2.3
FINES	FINESS Array B	22.31	6	P	P	01 10 47.1	-2.3
NB2	NORSAR Subarra 1.6nm,0.7s,mb3.6,SNR=6.6	22.64	347	P	P	01 10 51.5	-1.5
NOA	NORSAR Array B 1.3nm,0.7s,mb3.5,baz=157,slow=9.0,SNR=6.3	22.64	347	P	P	01 10 51.5	-1.4
NOA	NORSAR Array B	22.64	347	P	P	01 10 51.5	-1.5
ARCES	ARCESS Array B 1.3nm,1.0s,mb3.6,baz=184,slow=13,SNR=3.0	30.33	3	P	P	01 12 01.9	-1.6
ARCES	ARCESS Array B	30.33	3	P	P	01 12 01.9	-1.5
TORD	Torodi Ar. Bea 2.3nm,0.6s,mb4.2,baz=30,slow=9.1,SNR=33	31.41	219	P	P	01 12 12.9	-0.5
MKAR	Makanchi Array	44.05	60	P	P	01 13 58.7	-1.3
MKAR	Makanchi Array 0.4nm,0.5s,mb3.4,baz=275,slow=8.0,SNR=4.1	44.05	60	P	P	01 13 58.7	-1.3
ZALV	Zalesovo Beam	44.35	49	P	P	01 14 01.2	-1.0
ZALV	Zalesovo Beam 1.4nm,0.4s,mb4.0,baz=281,slow=8.9,SNR=7.5	44.35	49	P	P	01 14 01.2	-1.1

ISCJB ***07*** *01:10:55.8±2.8, 19.1N±0.1×145.7E±0.2, h152km±29km, mb3.9/16, Error ellipse: s-maj=31.3km s-min=20.7km az=156.2*

NEIC ***07*** *01:10:55.4±2.4, 19.12N×145.77E, h135km±26km, mb4.0/2, Error ellipse: s-maj=24.0km s-min=20.4km az=54.0*

IDC ***07*** *01:10:57.3±4.6, 19.04N×145.70E, h154km±52km, mb3.7/11, mb1 3.9/12, mb1mx3.7/23, mbtmp3.7/12, Error ellipse: s-maj=43.6km s-min=21.9km az=29.0*

ISC 07 01:10:56.8±2.6, 19.1N±0.1×145.7E±0.2, h148km±28km, n20, σ0.88/22, mb3.9/16, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	5.54	189	*e*Pn	Pn	01 12 16.1	-1.3
GUMO				*e*S	Sn	01 13 21.2	+0.8
GUMO	Guam 3.7nm,0.3s,baz=87,slow=19,SNR=2.1	5.54	189	P	Pn	01 12 18.7	+1.3
GUMO				S	Sn	01 13 19.2	-1.2
	5.9nm,0.3s,baz=0.0,slow=20,SNR=2.0						
KSRS	Korea Array 1.4nm,0.6s,mb3.7,baz=142,slow=9.0,SNR=8.3	24.02	323	P	P	01 15 58.1	+0.1
WRAB	Tennant Creek 5.1nm,0.8s,mb4.2	40.37	197	*e*P	P	01 18 20.8	+0.6
SONM	Songino Array 0.7nm,0.6s,mb3.5,baz=139,slow=10,SNR=4.9	42.86	321	P	P	01 18 41.3	+1.0
ZALV	Zalesovo Beam 0.5nm,0.3s,mb3.8,baz=124,slow=4.5,SNR=3.8	57.73	322	P	P	01 20 31.8	-0.1
ILAR	Eielson Array 0.6nm,0.5s,mb3.7,baz=255,slow=5.4,SNR=7.9	63.27	26	P	P	01 21 08.5	-0.8
BVAR	Borovoye Array 1.1nm,0.4s,mb4.0,baz=98,slow=7.8,SNR=9.5	66.20	320	P	P	01 21 28.9	+0.4
ABKAR	Akbulak array 0.7nm,0.4s,mb3.7	73.08	317	P	P	01 22 10.7	0.0
YKA	Yellowknife Ar	77.62	28	P	P	01 22 37.0	+0.6
YKA	Yellowknife Ar 2.7nm,0.7s,mb4.0,baz=287,slow=6.0,SNR=4.9	77.62	28	P	P	01 22 37.0	+0.6
KEV	Kevo 0.6nm,0.4s,mb3.6	81.57	342	*ep*	P	01 22 52.3	-5.3
ARCES	ARCESS Array B	82.13	342	P	P	01 23 01.1	+0.6
	2.9nm,0.6s,mb4.1,baz=60,slow=7.6,SNR=15						
NVAR	Mina Array Bea 2.6nm,0.7s,mb4.1,baz=259,slow=5.9,SNR=16	82.86	52	P	P	01 23 06.7	+1.8
JOF	Joensuu 1.5nm,0.3s,mb4.2	83.68	335	*ep*	P	01 23 07.6	-1.0
KAF	Kangasniemi 0.4nm,0.3s,mb3.6	86.07	336	*ep*	P	01 23 11.3	-9.3
FINES	FINESS Array B 1.6nm,0.4s,mb4.2,baz=74,slow=4.4,SNR=32	86.54	335	P	P	01 23 21.9	-1.0
HFS	Hagfors	92.03	338	P	P	01 23 47.6	-1.1
	2.6nm,1.1s,mb4.2,baz=97,slow=6.0,SNR=4.8						
TXAR	Lajitas Array	97.58	56	P	P	01 24 13.8	-0.9
TXAR	Lajitas Array 0.7nm,0.9s,mb4.1,baz=270,slow=5.4,SNR=4.1	97.58	56	P	P	01 24 13.8	-0.9

ISCJB ***07*** *01:11:44.8±0.7, 39.43N±0.03×33.03E±0.04, h6km±5km, Error ellipse: s-maj=6.0km s-min=4.4km az=136.8*

DDA ***07*** *01:11:44.6, 39.44N×33.05E, h10km±1km, Md3.0*

ISK ***07*** *01:11:44.4, 39.46N×33.05E, h5km, MD3.1*

CSEM ***07*** *01:11:44.7±0.1, 39.44N×33.05E, h5km, MD3.0, Error ellipse: s-maj=2.9km s-min=2.4km az=133.0*

ISC 07 01:11:45.2±0.6, 39.44N±0.03×33.05E±0.04, h9km±5km, n35, σ0.68/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBAL	Bala	0.12	30	*i* P	Pg	01 11 48.0	0.0
BBAL				*i* S	Sg	01 11 49.9	0.0
BBAL	Bala	0.12	30	*i* P	Pg	01 11 48.0	0.0
BBAL				*i* S	Sg	01 11 49.9	0.0
LOD	Lodumlu	0.50	334	*e*PG	Pg	01 11 53.8	-1.1
LOD				*e*SG	Sg	01 12 01.3	-0.2
LOD	Lodumlu	0.50	334	*e*Pg	Pg	01 11 53.8	-1.1
LOD				*e*Sg	Sg	01 12 01.3	-0.2
CDAG	Cicekdag	1.04	79	*i* P	Pg	01 12 04.8	-0.5
CDAG				*i* S	Sg	01 12 19.0	+0.2
CDAG	Cicekdag	1.04	79	*i* P	Pg	01 12 04.8	-0.5
CDAG				*i* S	Sg	01 12 19.0	+0.2
KIZT	Kizilcal	1.07	239	*e*PG	Pg	01 12 05.2	-0.5
KIZT				*e*SG	Sg	01 12 20.6	+1.1
KIZT	Kizilcal	1.07	239	*e*Pg	Pg	01 12 05.2	-0.5
KIZT				*e*Sg	Sg	01 12 20.6	+1.1
ELDT	Eldivan	1.09	15	*i* P	Pg	01 12 05.9	-0.2
ELDT				*i* S	Sg	01 12 20.9	+0.7
ELDT	Eldivan	1.09	15	*i* P	Pg	01 12 05.9	-0.2
ELDT				*i* S	Sg	01 12 21.0	+0.7
SVRH	Sivrihisar-ESK	1.18	271	*e*PN	Pn	01 12 07.5	-0.4
SVRH	Sivrihisar-ESK	1.18	271	*e*Pn	Pn	01 12 07.5	-0.4
CANT	Cankiri	1.24	21	*e*PN	Pn	01 12 08.6	-0.2
SULT	Sultanhani-AKS	1.29	163	*e*PN	Pn	01 12 09.7	+0.3
SULT	Sultanhani-AKS	1.29	163	*e*Pn	Pn	01 12 09.7	+0.3
LADK	Ladik-KONYA	1.35	203	*e*PN	Pn	01 12 09.7	-0.5
LADK	Ladik-KONYA	1.35	203	*e*Pn	Pn	01 12 09.7	-0.5
SGKT	Sivrigoynuk	1.36	326	*i* P	Pn	01 12 10.0	-0.4
SGKT				*i* S	Sb	01 12 29.6	+1.2
SGKT	Sivrigoynuk	1.36	326	*i* P	Pn	01 12 10.0	-0.4
SGKT				*i* S	Sb	01 12 29.6	+1.2
CORM	Corum	1.43	58	*e*PN	Pn	01 12 11.2	-0.1
CORM	Corum	1.43	58	*e*Pn	Pn	01 12 11.2	-0.1
KONT	Konya--Tatoy	1.59	200	*e*PN	Pn	01 12 14.0	+0.5
KONT	Konya--Tatoy	1.59	200	*e*Pn	Pn	01 12 14.0	+0.5
ESKT	Eskisehir	1.70	273	*e*PN	Pn	01 12 15.5	+0.5
ESKT	Eskisehir	1.70	273	*i* P	Pn	01 12 14.7	-0.3
ESKT				*i* S	Sn	01 12 34.1	-2.8
ESKT	Eskisehir	1.70	273	*e*Pn	Pn	01 12 15.5	+0.4
SEYT	Eskypehyr	1.70	273	*i* P	Pn	01 12 14.7	-0.4
MDU	Mudurnu	1.74	307	*e*PN	Pn	01 12 15.7	+0.1
MDU	Mudurnu	1.74	307	*e*Pn	Pn	01 12 15.7	+0.1
SAFT	Safranbolu	1.82	351	*e*PN	Pn	01 12 16.9	+0.2
SAFT	Safranbolu	1.82	351	*e*Pn	Pn	01 12 16.9	+0.2
GULT	Gulveren	2.18	298	*e*PN	Pn	01 12 22.3	+0.6
GULT	Gulveren	2.18	298	*e*Pn	Pn	01 12 22.3	+0.6
ALT	Altintas	2.31	261	*e*PN	Pn	01 12 24.1	+0.6
ALT	Altintas	2.31	261	*e*Pn	Pn	01 12 24.1	+0.6

DJA 07 01:19:21.7 72S×117.66E, h11km, MLv3.8/3, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHKI	Kahang-Kahang	2.13	252	P	Pn	01 19 55.6	-0.9
KHKI				S	Sn	01 20 25.6	+2.6
SRBI	Singaraja	2.45	261	P	Pn	01 20 00.9	-0.1
SRBI				S	Sn	01 20 32.5	+1.6
BKSI	Bulukumba	3.42	46	P	Pn	01 20 15.7	+1.5
BKSI				S	Sn	01 20 54.7	0.0
SPSI	Sidrap Palu	4.28	29	P	Pn	01 20 25.7	-0.4

IDC ***07*** *01:23:15.9±2.2, 52.22N×176.61W, h0km, mb3.8/3, mb1 4.0/5, mb1mx3.6/26, mbtmp3.7/5, ML3.8/1, MS3.6/2, Ms1 3.5/2, ms1mx3.1/27, Error ellipse: s-maj=59.5km s-min=28.4km az=11.0*

NEIC 07 01:23:20.2, 52.18N×175.47W, h14km, ML3.6(AEIC), After AEIC., Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	Great Sitkin T	0.37	257	*e*Pg	Pg	01 23 23.6	-4.2
GSTR				*e*Sg	Sg	01 23 28.2	-4.6
ATKA	Atka Island	0.79	88	P	Pg	01 23 35.2	-0.3
ATKA				S	Sg	01 23 46.2	+0.4
NIKO	Nikolski	4.12	76	P	Pn	01 24 23.4	+0.8
AKUT	Akutan 45nm,0.9s	6.16	68	*e*Pn	Pn	01 24 53.4	+2.8
KDAK	Kodiak Island 0.4nm,0.3s,baz=256,slow=8.9,SNR=5.6	14.25	58	Pn	Pn	01 26 46.5	+5.2
ILAR	Eielson Array 0.2nm,0.3s,baz=230,slow=8.8,SNR=11	19.33	38	P	Pn	01 27 46.5	+0.7
DLBC	Dease Lake comp=Z,77nm,18.4s,baz=271,slow=37	26.19	58	LR	LR	01 39 57.5	
NVAR	Mina Array Bea	41.42	86	P	P	01 31 11.0	+5.1
NVAR	Mina Array Bea 1.4nm,0.8s,baz=302,slow=6.7,SNR=4.4	41.42	86	P	P	01 31 11.0	+5.1
ULM	Lac du Bonnet comp=Z,84nm,18.4s,baz=287,slow=36	47.51	59	LR	LR	01 52 26.4	
TXAR	Lajitas Array 1.0nm,0.7s,baz=304,slow=5.0,SNR=12	56.50	84	P	P	01 33 03.7	+2.0
BVAR	Borovoye Array 0.4nm,0.5s,baz=46,slow=8.3,SNR=3.1	61.59	321	P	P	01 33 31.5	-5.1

IDC 07 01:29:54.8±1.8, 7.51S×119.23E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.8/20, mbtmp3.9/6, ML3.7/1, Error ellipse: s-maj=185.4km s-min=18.1km az=60.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi 0.3nm,0.3s,baz=334,slow=13,SNR=8.6	12.24	150	Pn	Pn	01 32 49.9	-0.6
FITZ				Sn	Sn	01 35 07.7	-0.1
	0.2nm,0.3s,baz=272,slow=6.7,SNR=4.1						
ASAR	Alice Springs 6.0nm,0.6s,baz=308,slow=8.6,SNR=68	21.36	140	P	P	01 34 45.1	+1.3
STKA	Stephens Creek 2.8nm,0.5s,baz=329,slow=9.5,SNR=9.1	31.97	142	P	P	01 36 22.1	-0.5
SONM	Songino Array 0.5nm,0.5s,baz=170,slow=8.8,SNR=3.9	56.26	350	P	P	01 39 35.9	-1.0
MKAR	Makanchi Array 0.7nm,0.7s,baz=120,slow=8.5,SNR=5.0	63.24	332	P	P	01 40 25.8	+0.7
ZALV	Zalesovo Beam 0.3nm,0.4s,baz=147,slow=3.4,SNR=3.0	67.74	339	P	P	01 40 54.3	+0.3

TRN ***07*** *01:45:55.0, 17.92N×62.83W, h69km, MD3.4*

ISCJB ***07*** *01:45:55.3±1.0, 17.96N±0.10×62.84W±0.05, h75km±8km, Error ellipse: s-maj=17.6km s-min=5.5km az=22.3*

NEIC ***07*** *01:45:55.9±1.3, 17.96N×62.79W, h72km±18km, MD3.6(RSPR), Error ellipse: s-maj=27.0km s-min=10.3km az=199.0*

RSPR ***07*** *01:45:57.3, 18.32N×62.84W, h63km±4km, MD3.6/4*

ISC 07 01:45:56.1±1.0, 18.0N±0.1×62.83W±0.05, h71km±9km, n19, σ0.63/33, 10C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMRT	St. Maarten	0.25	289	⇑*e*P	Pn	01 46 07.2	+0.2
SMRT				*e*S	Sn	01 46 15.8	+0.7
SMRT	St. Maarten	0.25	289	⇑*e*P	Pn	01 46 07.2	+0.2
SMRT				*e*S	Sn	01 46 15.8	+0.7
SKI	Saint Kitts	0.64	172	*e*P	Pn	01 46 10.2	-0.3
SKI				*e*S	Sn	01 46 20.6	-0.4
SKI	Saint Kitts	0.64	172	*e*P	Pn	01 46 10.2	-0.3
SKI				*e*S	Sn	01 46 20.6	-0.4
ANWB	Willy Bob	1.04	107	*e*Pn	Pn	01 46 14.5	-0.6
ANWB				*e*S	Sn	01 46 29.5	+0.2
TBVI	Tortola	1.76	285	*e*S	Sn	01 46 44.0	-2.1
TBVI	Tortola	1.76	285	*e*S	Sn	01 46 44.4	-1.7
STVI	Saint Thomas	2.06	281	⇑*e*P	Pn	01 46 28.4	-0.1
STVI				*e*S	Sn	01 46 52.2	-1.1
STVI	Saint Thomas	2.06	281	⇑*e*P	Pn	01 46 28.4	-0.1
STVI				*e*S	Sn	01 46 52.2	-1.1
LZG	Guadaloupe-1	2.08	151	*e*P	Pn	01 46 29.4	+0.6
BCG	Bois Riant Cap	2.20	148	*e*P	Pn	01 46 30.1	-0.4
MTP	Monte Pirata	2.60	273	⇑*e*P	Pn	01 46 36.0	+0.1
MTP	Monte Pirata	2.60	273	*e*Pn	Pn	01 46 35.8	-0.1
MTP				*e*Sn	Sn	01 47 06.6	+0.2
MTP	Monte Pirata	2.60	273	⇑*e*P	Pn	01 46 36.0	+0.1
MTP				*e*S	Sn	01 47 06.8	+0.5
HUMP	Col San Antoni	2.88	274	⇑*e*P	Pn	01 46 40.0	+0.3
HUMP				*e*S	Sn	01 47 13.2	-0.1
HUMP	Col San Antoni	2.88	274	⇑*e*P	Pn	01 46 40.0	+0.3
HUMP				*e*S	Sn	01 47 13.2	-0.1
CBYP	Canovanas	2.90	276	⇑*e*P	Pn	01 46 40.5	+0.6
CBYP				*e*S	Sn	01 47 14.2	+0.5
CBYP	Canovanas	2.90	276	⇑*e*P	Pn	01 46 40.5	+0.6
CBYP				*e*S	Sn	01 47 14.2	+0.5
SJG	San Juan	3.16	273	*e*Pn	Pn	01 46 44.1	+0.5
SJG				*e*S	Sn	01 47 20.9	+0.7

ISCJB ***07*** *02:00:20.4±1.6, 36.94N±0.06×28.07E±0.06, h29km±17km, Error ellipse: s-maj=10.3km s-min=6.9km az=19.6*

CSEM ***07*** *02:00:20.3±0.4, 36.95N×28.05E, h30km, MD2.9*

ISK ***07*** *02:00:21.6, 37.02N×27.97E, h20km, MD2.9*

DDA ***07*** *02:00:22.5, 37.02N×27.96E, h7km±2km, Md2.7*

ISC 07 02:00:20.5±1.0, 36.95N±0.06×28.06E±0.05, h27km±9km, n14, σ0.90/24, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	Yerkesik	0.26	43	*e*PG	Pb	02 00 28.4	+1.2
YER				*e*SG	Sb	02 00 33.0	+1.3
YER	Yerkesik	0.26	43	*e*Pg	Pb	02 00 28.4	+1.2
YER				*e*Sg	Sb	02 00 33.0	+1.3
MLSB	Milas	0.42	327	*e*PG	Pb	02 00 28.9	-0.6
MLSB				*e*SG	Sb	02 00 34.3	-1.3
MLSB	Milas	0.42	327	*e*Pg	Pb	02 00 28.9	-0.6
MLSB				*e*Sg	Sb	02 00 34.3	-1.3
TURN	Turunc	0.44	99	*i* P	Pb	02 00 29.3	-0.5
TURN				*i* S	Sb	02 00 34.7	-1.5
TURN	Turunc	0.44	99	*i* P	Pb	02 00 29.3	-0.5
TURN				*i* S	Sb	02 00 34.7	-1.5
DAT	Datca	0.45	241	*e*PG	Pb	02 00 31.1	+1.1
DAT	Datca	0.45	241	*e*Pg	Pb	02 00 31.1	+1.2
BDRM	Kayabasi	0.51	284	*i* P	Pb	02 00 30.8	-0.1
BDRM				*i* S	Sb	02 00 38.1	+0.1
BDRM	Kayabasi	0.51	284	*i* P	Pb	02 00 30.8	-0.2
BDRM				*i* S	Sb	02 00 38.2	+0.2
BODT	Bodrum	0.61	281	*e*PG	Pb	02 00 32.1	-0.6
BODT	Bodrum	0.61	281	*e*Pg	Pb	02 00 32.1	-0.6
AYDN	Tasoluk	0.73	349	*i* P	Pn	02 00 35.6	+0.6
AYDN				*i* S	Sb	02 00 44.1	-0.1
AYDN	Tasoluk	0.73	349	*i* P	Pn	02 00 35.6	+0.6
AYDN				*i* S	Sb	02 00 44.1	-0.1

NEIC 07 02:18:07.5, 52.11N×175.46W, h4km, ML4.1(PMR), ML3.5(AEIC), After AEIC., Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	Great Sitkin T	0.37	269	*e*Pg	Pg	02 18 16.1	+1.5
GSTR				*e*S	Sg	02 18 21.1	+1.7
ATKA	Atka Island	0.79	82	P	Pg	02 18 23.4	+0.9
ATKA				S	Sg	02 18 34.2	+1.6
AMKA	Amchitka	3.34	259	P	Pn	02 19 01.0	+0.8
NIKO	Nikolski	4.

LENM **Lemitar** 8.17 24 *e*Pn Pn 02 20 11.7 -1.8
CLNB **Carlsbad** 8.26 46 *e*Pn Pn 02 20 16.6 +1.8
2µm,0.2s
BNM **Barren Site** 8.28 26 *e*Pn Pn 02 20 13.1 -2.0
889nm,1.8s
LAZ **Ladron** 8.32 22 *e*Pn Pn 02 20 14.3 -1.3
33nm,1.5s
LAZ S Sn 02 21 42.5 -7.2
PFO **Pinyon Flat Ob** 8.36 326 *e*Pn Pn 02 20 16.9 +0.8
LPM **Los Pinos Moun** 8.43 25 *e*Pn Pn 02 20 19.7 +2.7
WUAZ **Wupatki** 8.78 358 *e*Pn Pn 02 20 21.2 -0.6
CPRX **Cap Rock** 8.78 43 *e*Pn Pn 02 20 24.0 +2.1
18nm,0.9s
ANMO **Albuquerque** 9.06 24 *e*Pn Pn 02 20 26.7 +1.1
ANMO Lg 02 23 05.5
ANMO LR LR 02 23 29.8
ANMO **Albuquerque** 9.06 24 Pn Pn 02 20 23.2 -2.4
0.4nm,0.3s,baz=207,slow=12,SNR=20
ANMO Lg 02 23 05.5
1.0nm,0.3s,baz=300,slow=13,SNR=6.1
ANMO LR LR 02 23 29.8
comp=Z,7µm,20.6s,baz=45,slow=35
SFJM **Santa Fe** 9.53 129 *e*P Px 02 21 01.6
SFJM **Santa Fe** 9.53 129 *i* S Sn 02 22 22.7 +3.2
MWC **Mount Wilson** 9.68 322 Pn Pn 02 20 35.6 +1.5
GSC **Goldstone** 9.92 331 *e*Pn Pn 02 20 37.0 -0.5
OSI **Osito Adit** 10.33 321 *e*Pn Pn 02 20 44.6 +1.5
JCT **Junction City** 10.47 66 *e*Pn Pn 02 20 46.0 +0.8
LNIG **Linares** 10.49 97 *i* P Pn 02 20 45.6 +0.2
LNIG *i* S Sn 02 22 43.0 -0.1
MVCO **Mesa Verde** 10.66 11 *e*Pn Pn 02 20 48.3 +0.7
MMIG **Aquila** 10.93 139 *e*P Pn 02 20 52.3 +0.9
MMIG *i* S Sn 02 22 55.6 +1.7
CCUT **Cedar City** 10.99 350 *e*Pn Pn 02 20 52.4 +0.3
39nm,1.1s
ISA **Isabella** 11.00 326 *e*Pn Pn 02 20 52.5 +0.2
ARUT **Antelope Range** 11.23 350 *e*Pn Pn 02 20 56.6 +1.1
21nm,0.9s
AMTX **Amarillo** 11.37 42 *e*Pn Pn 02 20 58.6 +1.2
PV01 **Paradox Valley** 11.55 9 *e*Pn Pn 02 21 00.2 +0.4
2µm,1.2s
PV04 **Paradox Valley** 11.76 8 *e*Pn Pn 02 21 04.0 +1.3
MSU **Marysvale** 11.80 355 *e*Pn Pn 02 21 05.2 +2.0
MSU *e*S Sn 02 23 15.8 +0.8
SDCO **Great Sand Dun** 11.91 21 *e*Pn Pn 02 21 07.1 +2.3
SRU **San Rafael** 12.36 1 *e*Pn Pn 02 21 11.4 +0.6
MTUM **Tungsten Hills** 12.41 331 *e*Pn Pn 02 21 12.7 +1.1
TMUT **Trail Mountain** 12.54 359 *e*Pn Pn 02 21 15.1 +1.8
ZIIG **Zihuatanejo** 12.61 134 *e*P Pn 02 21 14.6 +0.1
ZIIG *i* S Sn 02 23 34.4 -0.6
ZIIG **Zihuatanejo** 12.61 134 *e*P Pn 02 21 14.6 +0.1
ZIIG *i* S Sn 02 23 36.4 +1.4
SMCO **Snowmass** 12.86 14 *e*Pn Pn 02 21 18.6 +0.9
WMOK **Wichita Mounta** 13.15 50 *e*Pn Pn 02 21 21.1 -0.6
NVAR **Mina Array Bea** 13.22 334 Pn Pn 02 21 22.5 -0.1
0.1nm,0.3s,baz=156,slow=11,SNR=29
NLU **North Lily Min** 13.23 356 *e*Pn Pn 02 21 24.2 +1.4
MPU **Maple Canyon** 13.27 358 *e*Pn Pn 02 21 24.9 +1.6
SAO **San Andreas Ge** 13.41 321 *e*Pn Pn 02 21 27.9 +2.7
DUG **Dugway** 13.53 354 *e*Pn Pn 02 21 28.3 +1.5
MEIG **Mezcala** 13.64 128 *e*P Pn 02 21 28.4 -0.1
DAU **Daniels Canyon** 13.66 359 *e*Pn Pn 02 21 27.9 -0.7
PPM **Popocatepetl** 13.66 121 *e*P Pn 02 21 29.1 +0.4
PPM *i* S Sn 02 24 00.4 -0.2
PPM **Popocatepetl** 13.66 121 *e*P Pn 02 21 29.1 +0.4
PPM *i* S Sn 02 24 01.4 +0.8
HKT **Hockley** 13.68 73 *e*Pn Pn 02 21 28.6 -0.4
34nm,1.3s
WAKR **Walker** 13.75 331 *e*Pn Pn 02 21 31.0 +1.2
ISCO **Idaho Springs** 13.78 17 *e*Pn Pn 02 21 31.8 +1.6
CAIG **El Cayaco** 13.80 132 *e*P Pn 02 21 26.9 -3.7
CAIG *i* S Sn 02 24 12.4 +8.3
CAIG **El Cayaco** 13.80 132 *e*P Pn 02 21 30.9 +0.3
CAIG *i* S Sn 02 24 04.4 +0.3
CMB **Columbia Colle** 13.81 327 *e*Pn Pn 02 21 30.1 -0.6
JLU **Jordanelle** 13.85 358 *e*Pn Pn 02 21 32.4 +1.2
NOQ **North Oquirrh** 13.93 356 *e*Pn Pn 02 21 34.1 +1.8
CTU **Camp Tracy** 13.95 357 *e*Pn Pn 02 21 34.0 +1.4
ACX **Acapulco** 14.20 131 *e*P Pn 02 21 37.0 +0.9
ACX **Acapulco** 14.20 131 *e*P Pn 02 21 37.0 +0.9
BGU **Big Grassy Mou** 14.27 354 *e*Pn Pn 02 21 37.7 +0.8
229nm,2.0s
SPUT **South Promonto** 14.60 355 *e*Pn Pn 02 21 42.8 +1.3
BMN **Battle Mountai** 14.64 341 *e*Pn Pn 02 21 42.3 +0.3
PAHR **Pah Rah Range** 14.74 334 *e*Pn Pn 02 21 44.4 +1.0
HWUT **Hardware Ranch** 14.86 358 *e*Pn Pn 02 21 45.4 +0.5
137nm,1.6s
TPIG **Tehuac#an** 15.01 121 *e*P Pn 02 21 53.9 +6.8
LVIG **Laguna Verde** 15.05 115 *e*P Pn 02 21 47.0 -0.7
LVIG *i* S Sn 02 24 33.0 -1.4
LVIG **Laguna Verde** 15.05 115 *e*P Pn 02 21 47.0 -0.7
LVIG *i* S Sn 02 24 33.0 -1.4
NATX **Nacogdoches** 15.06 67 *e*Pn Pn 02 21 46.4 -1.4
42nm,0.9s
HVU **Hansel Valley** 15.10 355 *e*Pn Pn 02 21 49.2 +1.0
37nm,1.1s
PHWY **Pilot Hill** 15.23 16 *e*Pn Pn 02 21 51.0 +1.0
68nm,1.6s
RWWY **Rawlins** 15.24 11 *e*Pn Pn 02 21 49.9 -0.2
49nm,1.4s
CBKS **Cedar Bluff** 15.28 35 *e*Pn Pn 02 21 52.8 +2.2
74nm,1.3s
OHCM **Honcut** 15.36 328 *e*Pn Pn 02 21 52.8 +1.1
HOPS **Hopland** 15.91 323 *e*Pn Pn 02 22 01.5 +2.7
115nm,1.9s
OGNE **Ogallala** 15.98 25 *e*Pn Pn 02 22 03.7 +3.9
139nm,1.3s
REDW **Red Top Meadow** 16.60 0 *e*Pn Pn 02 22 08.2 +0.5
90nm,1.8s
KCPM **Cahto Peak** 16.68 324 *e*Pn Pn 02 22 09.3 +0.5
56nm,1.4s
SNOW **Snow King Moun** 16.70 0 *e*Pn Pn 02 22 08.6 -0.3
36nm,1.2s
TPAW **Teton Pass** 16.73 360 *e*Pn Pn 02 22 11.5 +2.2
136nm,1.8s
DCID1 **Drake Creek** 16.84 359 *e*Pn Pn 02 22 11.6 +1.0
MIAR **Mount Ida** 16.84 58 *e*Pn Pn 02 22 09.4 -1.4
31nm,1.2s
WDC **Whiskeytown Da** 16.84 328 *e*Pn Pn 02 22 10.3 -0.4
68nm,1.8s
LOHW **Long Hollow** 16.86 1 *e*Pn Pn 02 22 10.8 0.0
66nm,1.7s
WVOR **Wild Horse Val** 16.89 340 *e*Pn Pn 02 22 10.9 -0.5
50nm,1.4s
MOD **Modoc** 16.99 335 *e*Pn Pn 02 22 12.7 +0.1
165nm,1.9s
MOOW **Moose Ponds** 16.99 0 *e*Pn Pn 02 22 12.8 +0.3
148nm,1.9s
HLID **Hailey** 17.04 351 *e*Pn Pn 02 22 13.9 +0.8
13nm,1.0s
IMW **Indian Meadow** 17.14 360 *e*Pn Pn 02 22 14.8 +0.4
268nm,2.0s
KSU1 **Kansas State U** 17.21 41 *e*Pn Pn 02 22 15.7 +0.4
41nm,0.9s
FLWY **Flagg Ranch** 17.32 1 *e*Pn Pn 02 22 17.2 +0.4
267nm,1.7s
KHMM **Horse Mountain** 17.64 326 *e*P Pn 02 22 23.1 +2.3
28nm,1.0s
YFT **Old Faithful** 17.69 0 *e*Pn Pn 02 22 17.1 -4.2
90nm,0.8s
CMIG **Matias Romero** 17.69 120 P Pn 02 22 21.6 +0.1
0.3nm,0.3s,baz=307,slow=9.3,SNR=23
YBH **Yreka Blue Hor** 17.83 330 *e*P Pn 02 22 22.4 -0.6
49nm,2.2s
YBH **Yreka Blue Hor** 17.83 330 P Pn 02 22 20.6 -2.4
0.2nm,0.3s,baz=120,slow=8.8,SNR=5.6
YBH LR LR 02 28 49.8
comp=Z,3µm,20.6s,baz=326,slow=36
UALR **University of** 17.87 59 *e*Pn Pn 02 22 22.2 -1.3
30nm,1.0s
YMR **Madison River** 17.91 360 *e*Pn Pn 02 22 18.4 -5.6
100nm,0.6s
MCMT **McKenzie Canyo** 18.13 356 *e*P Pn 02 22 27.6 +0.9
47nm,1.9s
RSSD **Black Hills** 18.23 16 *e*P Pn 02 22 27.3 -0.6
59nm,1.5s
RLMT **Red Lodge** 18.41 4 *e*P Pn 02 22 28.0 -2.1
459nm,2.5s
VBMS **Vicksburg** 18.59 68 *e*P Pn 02 22 31.9 -0.6
79nm,1.0s
DLMT **Dillon** 18.65 356 *e*P Pn 02 22 33.2 +0.1
52nm,1.5s
BMO **Blue Mountains** 18.80 346 *e*P Pn 02 22 33.5 -1.4
30nm,1.4s
BOZ **Bozeman (W)** 18.89 358 *e*P Pn 02 22 35.7 -0.3
62nm,1.8s
GCMT **Greycliff** 19.06 3 *e*P Pn 02 22 36.3 -1.7
6.0nm,0.5s
LRM **Limekiln Ridge** 19.10 357 *e*P Pn 02 22 37.7 -0.8
KEBM **Edson Butte** 19.47 329 *e*Pn Pn 02 22 42.3 -0.6
278nm,2.2s
HRY **Holter Researc** 19.96 358 *e*P Pn 02 22 47.0 -1.8
LNOR **Lincton Mounta** 19.99 345 *e*P Pn 02 22 46.5 -2.6
MSO **Missoula** 20.21 354 *e*P P 02 22 49.1 -0.7
21nm,1.2s
MSO LR LR
comp=Z,3µm,19.0s,MS4.7
CHMT **Chamberlain Mo** 20.24 355 *e*P P 02 22 49.4 -0.7
LAO **LASA Array** 20.27 9 *e*P P 02 22 49.6 -0.9
comp=Z,297nm,1.8s
LAO LR LR
comp=Z,4µm,21.0s,MS4.8
COR **Corvallis** 20.42 334 PFAKE 02 23 00.0 +7.9
COR LR LR
comp=Z,2µm,20.0s,MS4.5
HOOD **Mount Hood Mea** 20.45 338 *e*P P 02 22 52.9 +0.5
comp=Z,30nm,1.0s
ECSD **EROS Data Cent** 20.56 31 *e*P P 02 22 53.6 -0.1
comp=Z,65nm,1.6s
ECSD LR LR
comp=Z,567nm,20.0s,MS3.9
SLMT **Seeley Lake** 20.58 355 *e*P P 02 22 52.8 -1.0
FVM **French Village** 20.60 52 *e*P P 02 22 53.5 -0.6
comp=Z,42nm,1.0s
HAWA **Hanford** 20.79 343 *e*P P 02 22 54.0 -2.0
comp=Z,114nm,2.1s
HAWA LR LR
comp=Z,3µm,19.0s,MS4.7
SWMT **Swartz Lake** 20.89 354 *e*P P 02 22 55.8 -1.4
SCIA **State Center** 21.00 39 *e*P P 02 22 59.0 +0.6
comp=Z,120nm,1.5s,mb5.0
SCIA LR LR
comp=Z,3µm,19.0s,MS4.7
SLM **Saint Louis** 21.04 50 *e*P P 02 22 58.7 -0.1
comp=Z,49nm,1.5s,mb4.6
JTMT **Jette** 21.15 354 *e*P P 02 22 59.0 -1.0
YBMT **Yellow Bay** 21.24 354 *e*P P 02 23 00.0 -0.9
EGMT **Eagleton** 21.29 2 *e*P P 02 23 00.2 -1.2
comp=Z,66nm,1.3s,mb4.8
EGMT LR LR
comp=Z,3µm,22.0s,MS4.6
BSMT **Bassoo Peak** 21.31 353 *e*P P 02 23 01.1 -0.6
BRAL **Brewton** 21.33 73 *e*P P 02 23 01.7 -0.4
comp=Z,170nm,1.3s,mb5.2
BRAL LR LR
comp=Z,2µm,22.0s,MS4.4
SIUC **Southern Illin** 21.34 54 *e*P P 02 23 03.1 +1.0
comp=Z,79nm,1.3s,mb4.9
OD2 **Odessa Site #2** 21.52 345 *e*P P 02 23 01.2 -2.8
LRAL **Lakeview Retre** 21.66 67 *e*P P 02 23 05.3 -0.4
comp=Z,47nm,1.1s,mb4.8
LRAL LR LR
comp=Z,4µm,22.0s,MS4.8
TEIG **Tepich** 21.75 102 *e*P P 02 23 06.6 -0.1
comp=Z,85nm,1.1s,mb5.1
TEIG LR LR
comp=Z,3µm,19.0s,MS4.7
LON **Longmire** 21.77 340 *e*P P 02 23 05.3 -1.3
comp=Z,48nm,1.1s,mb4.8
WVT **Waverly** 21.79 59 *e*P P 02 23 06.2 -0.7
comp=Z,72nm,1.3s,mb4.9
WVT LR LR
comp=Z,12µm,20.0s,MS5.3
NEW **Newport** 22.04 349 *e*P P 02 23 07.3 -2.2
NEW LR LR
comp=Z,3µm,20.0s,MS4.8
ETW **Entiat** 22.12 343 *e*P P 02 23 08.3 -2.0
WALA **Waterton Lakes** 22.42 355 *e*P P 02 23 13.0 -0.5
comp=Z,3.7nm,2.3s,mb3.4
OLIL **Olney** 22.57 52 *e*P P 02 23 15.8 +0.5
HDIL **Hopedale** 22.62 47 *e*P P 02 23 16.7 +1.0
comp=Z,91nm,1.1s,mb5.1
HDIL LR LR
comp=Z,3µm,21.0s,MS4.8
SWET **Sewanee** 23.00 62 *e*P P 02 23 20.6 +0.7
NLWA **Neilton Lookou** 23.01 337 *e*P P 02 23 18.0 -1.8
comp=Z,107nm,1.9s,mb5.0
NLWA LR LR
comp=Z,7µm,19.0s,MS5.1
JCW **Jim Creek** 23.10 341 *e*P P 02 23 21.0 +0.3
JFWS **Jewell Farm** 23.34 41 *e*P P 02 23 25.7 +2.3
comp=Z,28nm,1.0s,mb4.7
JFWS LR LR
comp=Z,4µm,20.0s,MS4.9
WCI **Wyandotte Cave** 23.67 55 *e*P P 02 23 27.3 +0.6
comp=Z,32nm,1.1s,mb4.7
WCI LR LR
comp=Z,9µm,19.0s,MS5.3
BLO **Bloomington** 23.87 53 *e*P P 02 23 37.2 +8.7
comp=Z,50nm,1.2s,mb4.8
CPCT **Cooper Cave** 24.18 62 *e*P P 02 23 31.3 -0.1
AGMN **Agassiz Nation** 24.55 25 *e*P P 02 23 34.1 -0.4
comp=Z,37nm,1.1s,mb4.8
AGMN LR LR
comp=Z,2µm,19.0s,MS4.7
GOGA **Godfrey** 24.65 68 *e*P P 02 23 35.1 -0.6
comp=Z,29nm,1.2s,mb4.7
GOGA LR LR
comp=Z,4µm,20.0s,MS4.9
TKL **Tuckaleechee C** 24.82 62 *e*P P 02 23 36.9 -0.3
TKL **Tuckaleechee C** 24.82 62 P P 02 23 34.6 -2.6
comp=Z,13nm,1.0s,mb4.4,baz=230,slow=8.9,SNR=10
TKL LR LR 02 34 16.4
comp=Z,4µm,18.4s,MS5.0,baz=248,slow=39
TGUH **Tegucigalpa,Un** 25.45 115 *e*P P 02 23 47.0 +3.9
comp=Z,43nm,1.1s,mb4.9
TGUH LR LR
comp=Z,5µm,21.0s,MS5.0
COWI **Conover** 25.96 36 PFAKE 02 24 00.0 +13
COWI LR LR
comp=Z,563nm,21.0s,MS4.1
EYMN **Ely** 26.09 31 PFAKE 02 24 00.0 +11
EYMN LR LR
comp=Z,308nm,21.0s,MS3.8
ULM **Lac du Bonnet** 26.18 22 *e*P P 02 23 46.4 -3.0
comp=Z,31nm,1.4s,mb4.7
ULM LR LR
comp=Z,1µm,20.0s,MS4.4
ULM **Lac du Bonnet** 26.18 22 P P 02 23 46.7 -2.7
comp=Z,4.3nm,0.6s,mb4.1,baz=200,slow=7.9,SNR=4.6
DWPF **Disney** 26.20 80 PFAKE 02 24 00.0 +10
DWPF LR LR
comp=Z,2µm,22.0s,MS4.6
EDM **Edmonton** 26.53 357 *e*P P 02 23 51.3 -1.3
AAM **Ann Arbor** 27.17 48 PFAKE 02 24 10.0 +12
AAM LR LR
comp=Z,7µm,20.0s,MS5.2
NHSC **New Hope** 27.35 69 PFAKE 02 24 10.0 +10
NHSC LR LR
comp=Z,3µm,22.0s,MS4.8
GLMI **Grayling** 27.78 43 PFAKE 02 24 20.0 +16
GLMI LR LR
comp=Z,3µm,22.0s,MS4.9
BLA **Blacksburg** 27.81 60 PFAKE 02 24 20.0 +16
BLA LR LR
comp=Z,6µm,21.0s,MS5.1
BBB **Bella Bella** 28.53 338 LR LR 02 35 18.4
comp=Z,3µm,21.1s,MS4.8,baz=345,slow=36
FFC **Flin Flon** 28.74 11 PFAKE 02 24 20.0 +7.7
FFC LR LR
comp=Z,1µm,19.0s,MS4.5
MCWV **Mont Chateau** 28.89 56 PFAKE 02 24 30.0 +16
MCWV LR LR
comp=Z,5µm,21.0s,MS5.1
JTS **JuntasAbangare** 29.47 119 PFAKE 02 24 30.0 +11
JTS LR LR
comp=Z,2µm,19.0s,MS4.8
JTS **JuntasAbangare** 29.47 119 LR LR 02 36 00.9
comp=Z,2µm,18.1s,MS4.8,baz=314,slow=36
CNNC **Cliffs of the** 29.47 65 PFAKE 02 24 30.0 +11
CNNC LR LR
comp=Z,7µm,20.0s,MS5.3
ERPA **Erie** 29.59 51 PFAKE 02 24 30.0 +10
ERPA LR LR
comp=Z,4µm,19.0s,MS5.1
CBN **Corbin** 30.39 59 PFAKE 02 24 40.0 +13
CBN LR LR
comp=Z,8µm,20.0s,MS5.4
SADO **Sadowa** 31.20 46 LR LR 02 37 32.6
comp=Z,4µm,19.1s,MS5.1,baz=250,slow=37
MTDJ **Mount Denham** 31.93 98 PFAKE 02 24 50.0 +9.1
MTDJ LR LR
comp=Z,2µm,20.0s,MS4.8
BINY **Binghamton** 32.43 53 PFAKE 02 25 00.0 +15
BINY LR LR
comp=Z,8µm,20.0s,MS5.4
GTBY **Guantanamo Bay** 33.51 94 PFAKE 02 25 10.0 +15
GTBY LR LR
comp=Z,2µm,21.0s,MS4.8
PAYG **Puerto Ayora** 33.73 141 PFAKE 02 25 10.0 +13
PAYG LR LR
comp=Z,615nm,19.0s,MS4.3
LONY **Lake Ozonia** 34.16 49 PFAKE 02 25 10.0 +10
LONY LR LR
comp=Z,2µm,19.0s,MS4.8
NCB **Newcomb** 34.20 50 PFAKE 02 25 10.0 +10
NCB LR LR
comp=Z,8µm,19.0s,MS5.5
BCIP **Isla Barro Col** 34.21 115 PFAKE 02 25 10.0 +9.2
BCIP LR LR
comp=Z,2µm,19.0s,MS4.8
DLBC **Dease Lake** 34.42 342 *e*P P 02 25 01.0 -1.2
DLBC **Dease Lake** 34.42 342 P P 02 25 00.9 -1.2
comp=Z,3.0nm,0.9s,mb4.2,baz=142,slow=11,SNR=6.6
YKA **Yellowknife Ar** 35.85 357 P P 02 25 11.3 -3.2
comp=Z,1.3nm,0.7s,mb4.0,baz=180,slow=8.6,SNR=4.7
LBNH **Lisbon** 35.86 51 PFAKE 02 25 30.0 +15
LBNH LR LR
comp=Z,5µm,20.0s,MS5.3
GRTK **Grand Turk** 36.59 89 PFAKE 02 25 30.0 +8.7
GRTK LR LR
comp=Z,2µm,21.0s,MS4.8
SDDR **Presa de Saban** 37.22 93 PFAKE 02 25 40.0 +13
SDDR LR LR
comp=Z,1µm,20.0s,MS4.7
PKME **Peaks-Kenny Pk** 37.94 50 PFAKE 02 25 40.0 +7.5
PKME LR LR
comp=Z,4µm,21.0s,MS5.2
BBSR **BB Station** 40.38 71 PFAKE 02 26 00.0 +7.0
BBSR LR LR
comp=Z,1µm,19.0s,MS4.8
OTAV **Otavalo** 40.86 125 PFAKE 02 26 10.0 +13
OTAV LR LR
comp=Z,681nm,21.0s,MS4.5
ROSC **El Rosal** 41.14 115 LR LR 02 45 13.9
comp=Z,1µm,18.1s,MS4.8,baz=201,slow=39
POHA **Pohakuloa** 41.40 270 PFAKE 02 26 10.0 +8.4
POHA LR LR
comp=Z,2µm,20.0s,MS5.0
DAWY **Dawson** 41.63 342 *e*P P 02 26 00.6 -2.3
SDV **Santo Domingo** 42.04 107 PFAKE 02 26 20.0 +13
SDV LR LR
comp=Z,573nm,20.0s,MS4.5
SJG **San Juan** 42.10 92 PFAKE 02 26 20.0 +13
SJG LR LR
comp=Z,1µm,22.0s,MS4.7
SCHQ **Schefferville** 42.58 37 P P 02 26 12.7 +1.9
comp=Z,13nm,1.0s,mb4.6
SCHQ LR LR 02 44 02.0
SCHQ **Schefferville** 42.58 37 P P 02 26 07.9 -2.8
comp=Z,3.6nm,0.9s,mb4.1,baz=246,slow=18,SNR=2.5
SCHQ LR LR 02 44 02.0
comp=Z,2µm,18.3s,MS5.1,baz=248,slow=36
KDAK **Kodiak Island** 42.63 328 P P 02 26 09.3 -1.9
KDAK LR LR 02 41 09.4
KDAK **Kodiak Island** 42.63 328 P P 02 26 09.3 -1.9
comp=Z,5.1nm,0.6s,mb4.4,baz=185,slow=2.7,SNR=12
KDAK LR LR 02 41 09.4
comp=Z,1µm,19.1s,MS4.7,baz=131,slow=32
EGAK **Eagle** 42.67 341 PFAKE 02 26 20.0 +8.6
EGAK LR LR
comp=Z,1µm,19.0s,MS4.8
KIP **Kipapa** 43.12 273 PFAKE 02 26 30.0 +14
KIP LR LR
comp=Z,2µm,20.0s,MS4.9
INK **Inuvik** 43.76 348 P P 02 26 16.9 -3.3
comp=Z,2.5nm,0.7s,mb4.0,baz=115,slow=15,SNR=3.7
ILAR **Eielson Array** 44.41 339 P P 02 26 23.1 -2.2
comp=Z,1.5nm,0.7s,mb3.9,baz=147,slow=6.8,SNR=32
ILAR LR LR 02 46 56.8
comp=Z,1µm,18.8s,MS4.8,baz=147,slow=39
COLA **College** 44.78 339 PFAKE 02 26 40.0 +12
COLA LR LR
comp=Z,944nm,21.0s,MS4.7
TAOE **Nuku Hiva Isla** 45.33 223 *e*LQ 02 37 19.9
comp=Z,4µm,27.1s
TAOE *e*LR LR 02 39 08.7
comp=Z,2µm,25.0s,baz=44
ANWB **Willy Bob** 46.16 91 PFAKE 02 26 50.0 +10
ANWB LR LR
comp=Z,1µm,22.0s,MS4.7
TTA **Tatalina** 46.63 334 *e*P P 02 26 40.3 -2.7
comp=Z,4.8nm,1.0s,mb4.4
GRGR **Grenville** 48.39 98 PFAKE 02 27 10.0 +13
GRGR LR LR
comp=Z,1µm,21.0s,MS4.8
BBGH **Gun Hill** 49.84 95 PFAKE 02 27 20.0 +12
BBGH LR LR
comp=Z,3µm,22.0s,MS5.2
NNA **Nana** 50.77 135 PFAKE 02 27 30.0 +15
NNA LR LR
comp=Z,390nm,20.0s,MS4.4
XMAS **Kiritimati** 50.88 249 PFAKE 02 27 30.0 +14
XMAS LR LR
comp=Z,2µm,22.0s,MS5.1
RKT **Rikitea** 54.73 207 *e*LR LR 02 43 44.0
comp=Z,377nm,22.5s
JOHN **Johnston Islan** 54.93 272 PFAKE 02 28 00.0 +14
JOHN LR LR
comp=Z,2µm,22.0s,MS5.1
PPT **Papeete** 57.84 225 *e*S S 02 36 06.3 -0.3
comp=Z,834nm,28.0s
PPT *e*LQ 02 42 39.0
comp=Z,1µm,23.5s
PPT *e*LR LR 02 45 09.0
comp=Z,2µm,24.0s,baz=32
PPT **Papeete** 57.84 225 LR LR 02 47 35.2
comp=Z,729nm,19.8s,MS4.8,baz=38,slow=30
MIDW **Midway** 58.27 288 PFAKE 02 28 20.0 +10
MIDW LR LR
comp=Z,1µm,20.0s,MS4.9
LPAZ **La Paz** 59.63 131 PFAKE 02 28 30.0 +11
LPAZ LR LR
comp=Z,596nm,21.0s,MS4.7
LPAZ **La Paz** 59.63 131 LR LR 02 52 45.1
comp=Z,469nm,21.3s,MS4.6,baz=136,slow=35
BORG **Borgarnes** 66.01 28 PFAKE 02 29 10.0 +8.8
BORG LR LR
comp=Z,654nm,20.0s,MS4.8
PET **Petropavlovsk** 69.36 320 PFAKE 02 29 30.0 +7.4
PET LR LR
comp=Z,457nm,21.0s,MS4.7
KBS **Kingsbay** 69.82 10 PFAKE 02 29 40.0 +15
KBS LR LR
comp=Z,963nm,19.0s,MS5.1
SPITS **Spitsbergen Ar** 70.98 10 LR LR 03 01 26.6
comp=Z,1µm,19.8s,MS5.2,baz=305,slow=37
AFI **Afiamalu** 71.56 243 PFAKE 02 29 50.0 +13
AFI LR LR
comp=Z,1µm,19.0s,MS5.2
TIXI **Tiksi** 73.64 343 PFAKE 02 30 00.0 +12
TIXI LR LR
comp=Z,448nm,21.0s,MS4.7
CPUP **Villa Florida** 73.80 131 P P 02 29 47.4 -2.3
CPUP LR LR 03 01 16.9
CPUP **Villa Florida** 73.80 131 P P 02 29 47.4 -2.3
comp=Z,1.5nm,0.5s,mb4.2,baz=311,slow=6.6,SNR=9.1
CPUP LR LR 03 01 16.9
comp=Z,247nm,20.6s,MS4.5,baz=56,slow=35
WAKE **Wake Island** 75.03 284 PFAKE 02 30 10.0 +13
WAKE LR LR
comp=Z,689nm,19.0s,MS5.0
FUNA **Funafuti** 76.20 253 PFAKE 02 30 10.0 +6.2
FUNA LR LR
comp=Z,4µm,19.0s,MS5.8
PLCA **Paso Flores** 76.88 150 P P 02 30 06.5 -0.5
comp=Z,4.9nm,0.9s,mb4.4,baz=8.1,slow=9.0,SNR=3.3
PLCA LR LR 02 57 12.9
comp=Z,922nm,20.3s,MS5.1,baz=142,slow=30
TARA **Tarawa** 77.02 265 PFAKE 02 30 20.0 +11
TARA LR LR
comp=Z,7.0nm,21.0s
ESK **Eskdalemuir** 77.80 34 PFAKE 02 30 20.0 +7.8
ESK LR LR
comp=Z,799nm,19.0s,MS5.1
ARCES **ARCESS Array B** 79.01 14 LR LR 03 04 25.7
comp=Z,1µm,21.8s,MS5.1,baz=148,slow=35
KEV **Kevo** 79.16 14 PFAKE 02 30 30.0 +11

KEV					LR	LR			
	comp=Z,574nm,20.0s,MS4.9								
YAK	**Yakutsk**	**79.19**	**335**		PFAKE		02 30 30.0	+10	
YAK					LR	LR			
	comp=Z,337nm,20.0s,MS4.7								
RCBR	**Riachuelo**	**79.36**	**102**		PFAKE		02 30 30.0	+8.5	
RCBR					LR	LR			
	comp=Z,711nm,21.0s,MS5.0								
NOA	**NORSAR Array B**	**80.85**	**25**		LR	LR	03 06 39.4		
	comp=Z,550nm,20.6s,MS4.9,baz=320,slow=36								
KONO	**Kongsberg**	**81.11**	**26**		PFAKE		02 30 40.0	+10	
KONO					LR	LR			
	comp=Z,1μm,20.0s,MS5.2								
YSS	**Yuzh-Sakhalins**	**81.16**	**318**		PFAKE		02 30 40.0	+9.4	
YSS					LR	LR			
	comp=Z,86nm,20.0s,MS4.1								
MSVF	**Nonsavu**	**81.84**	**246**		PFAKE		02 30 40.0	+5.4	
MSVF					LR	LR			
	comp=Z,2μm,19.0s,MS5.4								
MTE	**Manteigas**	**82.50**	**49**		PFAKE		02 30 50.0	+12	
MTE					LR	LR			
	comp=Z,858nm,20.0s,MS5.1								
FLN	**La Foliniere**	**82.62**	**39**	*eP*	**P**		**02 30 40.3**	**+2.0**	
ERM	**Erimo**	**83.36**	**314**		PFAKE		02 30 50.0	+7.7	
ERM					LR	LR			
	comp=Z,582nm,21.0s,MS4.9								
BAIF	**Baives**	**84.43**	**36**	*eP*	**P**		**02 30 49.3**	**+1.7**	
	comp=Z,26nm,1.3s,mb4.9								
BAIF	**Baives**	**84.43**	**36**	*eP*	**P**		**02 30 49.3**	**+1.7**	
	comp=Z,13nm,1.3s,mb4.9								
PAB	**San Pablo**	**85.06**	**48**		PFAKE		02 31 00.0	+9.0	
PAB					LR	LR			
	comp=Z,1μm,20.0s,MS5.2								
ESDC	**Sonseca Array**	**85.25**	**48**		P	**P**	**02 30 51.9**	**0.0**	
ESDC					LR	LR	03 07 25.6		
ESDC	**Sonseca Array**	**85.25**	**48**		P	**P**	**02 30 51.9**	**0.0**	
	comp=Z,0.4nm,0.7s,mb3.6,baz=319,slow=5.2,SNR=4.1								
ESDC					LR	LR	03 07 25.6		
	comp=Z,766nm,19.3s,MS5.1,baz=320,slow=35								
ESLA	**Sonseca Array**	**85.25**	**48**		PFAKE		02 31 00.0	+8.1	
ESLA					LR	LR			
	comp=Z,5μm,19.0s,MS5.9								
SFS	**San Fernando**	**85.33**	**51**		PFAKE		02 31 00.0	+7.6	
SFS					LR	LR			
	comp=Z,2μm,20.0s,MS5.5								
TCF	**Toulx Ste Croi**	**85.50**	**40**	*eP*	**P**		**02 30 54.7**	**+1.7**	
	comp=Z,15nm,1.1s,mb4.8								
TCF	**Toulx Ste Croi**	**85.50**	**40**	*eP*	**P**		**02 30 54.7**	**+1.7**	
	comp=Z,7.5nm,1.1s,mb4.8								
FINES	**FINESS Array B**	**85.53**	**19**		LR	LR	03 09 33.5		
	comp=Z,1μm,18.1s,MS5.3,baz=317,slow=36								
WLF	**Walferdange**	**85.68**	**35**		PFAKE		02 31 00.0	+6.1	
WLF					LR	LR			
	comp=Z,1μm,19.0s,MS5.4								
SSF	**Saint Saulge**	**85.79**	**39**	*eP*	**P**		**02 30 55.4**	**+0.9**	
	comp=Z,34nm,1.5s,mb5.1								
SSF	**Saint Saulge**	**85.79**	**39**	*eP*	**P**		**02 30 55.4**	**+0.9**	
	comp=Z,17nm,1.5s,mb5.1								
LOR	**Lormes**	**85.87**	**38**	*eP*	**P**		**02 30 55.8**	**+1.0**	
BFO	**Black Forest**	**87.63**	**36**		PFAKE		02 31 10.0	+6.5	
BFO					LR	LR			
	comp=Z,2μm,20.0s,MS5.4								
CLL	**Collm**	**88.01**	**31**	*e*S	S		02 41 51.0	+2.3	
CLL				*e*SS	SS		02 47 37.0	+1.7	
CLL				*e*SSSS			02 54 24.0		
NKC	**Novy Kostel**	**88.47**	**32**	*e*S	S		02 42 02.0	+8.9	
NKC				*e*SS	SS		02 47 47.5	+5.5	
NKC				AMS	AMS		03 10 20.0		
	comp=Z,1μm,20.0s								
BRG	**Berggiesshubel**	**88.74**	**31**	*e*(S)	S		02 42 02.0	+6.3	
BRG				*e*			02 47 17.0		
BRG									
	comp=N,277nm,17.5s								
BRG									
	comp=E,648nm,17.7s								
BRG									
	comp=Z,1μm,16.3s								
PVCC	**Panska Ves**	**89.27**	**31**	*e*S	S		02 42 06.4	+5.7	
PVCC				AMS	AMS		03 13 40.0		
	comp=Z,900nm,14.8s								
TUE	**Stuetta**	**89.34**	**37**		PFAKE		02 31 20.0	+8.4	
TUE					LR	LR			
	comp=Z,2μm,20.0s,MS5.4								
MAJO	**Matsushiro**	**89.50**	**311**		PFAKE		02 31 20.0	+7.5	
MAJO					LR	LR			
	comp=Z,457nm,20.0s,MS4.9								
PRU	**Pruhonice**	**89.63**	**32**	*e*S	S		02 42 08.6	+4.6	
PRU				*e*SS	SS		02 47 59.3	+0.5	
PRU				AMS	AMS		03 14 20.0		
	comp=Z,1μm,16.1s								
KHC	**Kasperske Hory**	**89.75**	**33**	AMS	AMS		03 10 20.0		
	comp=Z,1μm,17.8s								
MDJ	**Mudanjiang**	**90.07**	**322**		P	**P**	**02 31 12.1**	**-2.9**	
MDJ					pP	pP	02 31 15.5	-2.9	
MDJ					S	S	02 42 04.7	-3.7	
MDJ					pmax	pmax			
	comp=Z,5.0nm,0.5s,mb5.1								
MDJ					pmax	pmax			
	comp=Z,48nm,3.1s								
MDJ					LR	LR			
	comp=N,370nm,44.4s								
MDJ					LR	LR			
	comp=E,210nm,51.8s								
MDJ					LR	LR			
	comp=Z,140nm,20.9s								
MDJ	**Mudanjiang**	**90.07**	**322**		PFAKE		02 31 30.0	+15	
MDJ					LR	LR			
	comp=Z,243nm,20.0s,MS4.6								
DPC	**Dobruska-Polom**	**90.20**	**31**	*e*S	S		02 42 12.4	+3.1	
DPC				*e*SS	SS		02 48 04.9	-2.2	
DPC				AMS	AMS		03 10 30.0		
	comp=Z,900nm,18.1s								
JHJ	**Hachijo jima 2**	**90.27**	**308**		LR	LR	03 12 38.9		
	comp=Z,147nm,18.2s,MS4.5,baz=234,slow=36								
TREC	**Trest**	**90.55**	**32**	*e*S	S		02 42 22.8	+10	
TREC				*e*SS	SS		02 48 17.1	+4.9	
TREC				AMS	AMS		03 13 00.0		
	comp=Z,1μm,16.9s								
OKC	**Ostrava-Krasne**	**91.39**	**30**	*e*S	S		02 42 24.4	+4.2	
OKC				AMS	AMS		03 15 00.0		
	comp=Z,900nm,20.0s								
HIA	**Hailar**	**91.91**	**330**		PFAKE		02 31 30.0	+6.5	
HIA					LR	LR			
	comp=Z,396nm,19.0s,MS4.9								
TRI	**Trieste**	**92.16**	**35**		PFAKE		02 31 40.0	+15	
TRI					LR	LR			
	comp=Z,1μm,19.0s,MS5.3								
CN2	**Changchun**	**92.87**	**323**	*eP*	**P**		**02 31 25.1**	**-2.9**	
HNR	**Honiara**	**93.39**	**261**		PFAKE		02 31 40.0	+9.1	
HNR					LR	LR			
	comp=Z,1μm,22.0s,MS5.3								
DZM	**Mont Dzumac**	**93.47**	**247**	*e*LR	LR		03 01 37.6		
	comp=Z,1μm,27.8s								
KWP	**Kalwaria Pacla**	**93.53**	**28**		PFAKE		02 31 40.0	+9.1	
KWP					LR	LR			
	comp=Z,616nm,20.0s,MS5.1								
PSZ	**Piszkesteto**	**93.58**	**31**		PFAKE		02 31 40.0	+8.8	
PSZ					LR	LR			
	comp=Z,1μm,20.0s,MS5.3								
VSL	**Villasalto**	**93.78**	**42**		PFAKE		02 31 40.0	+7.7	
VSL					LR	LR			
	comp=Z,477nm,19.0s,MS5.0								
OBN	**Obninsk**	**93.86**	**18**		PFAKE		02 31 40.0	+7.7	
OBN					LR	LR			
	comp=Z,1μm,19.0s,MS5.5								
AQU	**L'Aquila**	**94.23**	**38**		PFAKE		02 31 40.0	+5.7	
AQU					LR	LR			
	comp=Z,1μm,19.0s,MS5.5								
AKASG	**Malin Array Be**	**95.25**	**24**		LR	LR	03 17 39.2		
	comp=Z,778nm,18.9s,MS5.2,baz=320,slow=38								
KSRS	**Korea Array**	**95.58**	**317**		LR	LR	03 11 58.7		
	comp=Z,151nm,21.2s,MS4.4,baz=292,slow=34								
KEST	**Kesra**	**96.14**	**45**		LR	LR	03 13 04.4		
	comp=Z,384nm,20.3s,MS4.9,baz=278,slow=34								
TLY	**Talaya**	**96.23**	**339**		PFAKE		02 31 50.0	+6.8	
TLY					LR	LR			
	comp=Z,383nm,19.0s,MS4.9								
GUMO	**Guam**	**96.25**	**289**		PFAKE		02 31 50.0	+6.0	
GUMO					LR	LR			
	comp=Z,866nm,21.0s,MS5.2								
INCN	**Inchon**	**96.35**	**318**		PFAKE		02 31 50.0	+5.9	
INCN					LR	LR			
	comp=Z,277nm,21.0s,MS4.7								
SNZO	**South Karori**	**96.46**	**227**		PFAKE		02 31 50.0	+5.7	
SNZO					LR	LR			
	comp=Z,718nm,19.0s,MS5.2								
ARU	**Arti**	**96.70**	**6**		PFAKE		02 32 00.0	+15	
ARU					LR	LR			
	comp=Z,784nm,21.0s,MS5.2								
CUC	**Castrocucco**	**97.17**	**38**		PFAKE		02 32 00.0	+12	
CUC					LR	LR			
	comp=Z,651nm,20.0s,MS5.1								
TIP	**Timpagrande**	**98.26**	**38**		PFAKE		02 32 00.0	+7.3	
TIP					LR	LR			
	comp=Z,1μm,19.0s,MS5.3								
ULN	**Ulaanbaatar**	**98.28**	**335**		PFAKE		02 32 00.0	+7.4	
ULN					LR	LR			
	comp=Z,263nm,19.0s,MS4.8								
TIR	**Tirane**	**98.38**	**35**		PFAKE		02 32 00.0	+6.8	
TIR					LR	LR			
	comp=Z,974nm,22.0s,MS5.2								
CEL	**Celeste**	**98.41**	**40**		PFAKE		02 32 00.0	+6.6	
CEL					LR	LR			
	comp=Z,434nm,21.0s,MS4.9								
ZALV	**Zalesovo Beam**	**98.52**	**351**		LR	LR	03 19 28.0		
	comp=Z,290nm,21.2s,MS4.8,baz=34,slow=37								
SONM	**Songino Array**	**98.55**	**336**		P	**P**	**02 31 52.9**	**-0.9**	
	comp=Z,0.9nm,0.8s,mb4.3,baz=28,slow=6.5,SNR=2.7								
SONM					LR	LR	03 23 34.1		
	comp=Z,427nm,19.0s,MS5.0,baz=30,slow=40								
WDD	**Wield Dalam**	**99.24**	**42**		PFAKE		02 32 10.0	+13	
WDD					LR	LR			
	comp=Z,681nm,19.0s,MS5.2								
BJT	**Baijiatuau**	**100.43**	**325**		PFAKE		02 32 10.0	+7.8	
BJT					LR	LR			
	comp=Z,275nm,20.0s,MS4.8								
BRVK	**Borovoye**	**100.55**	**359**		PFAKE		02 32 10.0	+7.3	
BRVK					LR	LR			
	comp=Z,635nm,20.0s,MS5.1								
DBIC	**Dimbokro**	**101.21**	**77**		PFAKE		02 32 20.0	+14	
DBIC					LR	LR			
	comp=Z,718nm,20.0s,MS5.2								
KURK	**Kurchatov**	**102.44**	**354**		PFAKE		02 32 20.0	+8.9	
KURK					LR	LR			
	comp=Z,589nm,20.0s,MS5.1								
PMG	**Port Moresby**	**104.75**	**267**		PFAKE		02 32 30.0	+8.6	
PMG					LR	LR			
	comp=Z,726nm,20.0s,MS5.2								
KIV	**Kislovodsk**	**105.63**	**19**		PFAKE		02 36 50.0	+12	
KIV					LR	LR			
	comp=Z,793nm,20.0s,MS5.3								
BR131	**Keskin Array S**	**106.11**	**28**		PFAKE		02 36 50.0	+10	
BR131					LR	LR			
	comp=Z,518nm,20.0s,MS5.1								
WMQ	**Urumqi**	**107.75**	**346**	*e*Pdif	Pdif		02 32 34.7	0.0	
WMQ				PP	PP		02 37 06.7	+4.7	
WMQ				S	Sdif		02 44 37.5	-2.1	
WMQ				SS	SS		02 52 16.7	+4.3	
WMQ				AMB	AMB				
	comp=Z,120nm,4.6s								
WMQ					LR	LR			
	comp=N,340nm,24.6s,MS5.0								
WMQ					LR	LR			
	comp=E,330nm,22.1s,MS5.0								
WMQ					LR	LR			
	comp=Z,320nm,22.1s,MS4.8								
YHNB	**Yeheng**	**108.17**	**311**		PFAKE		02 36 50.0	+6.3	
YHNB					LR	LR			
	comp=Z,291nm,19.0s,MS4.9								
LZH	**Lanzhou**	**109.44**	**331**	*e*Pdif	Pdif		02 32 42.0	-0.2	
LZH					LR	LR			
	comp=N,200nm,17.2s								
LZH					LR	LR			
	comp=Z,490nm,18.6s,MS5.1								
GNI	**Garni**	**109.72**	**20**		PFAKE		02 37 00.0	+14	
GNI					LR	LR			
	comp=Z,440nm,20.0s,MS5.0								
CTAO	**Charters Tower**	**109.82**	**257**		PFAKE		02 37 00.0	+13	
CTAO					LR	LR			
	comp=Z,588nm,19.0s,MS5.2								
TKM2	**Tokmak 2**	**110.44**	**355**		PFAKE		02 37 00.0	+12	
TKM2					LR	LR			
	comp=Z,702nm,20.0s,MS5.2								
AAK	**Ala-Archa**	**110.81**	**356**		PFAKE		02 37 00.0	+12	
AAK					LR	LR			
	comp=Z,632nm,21.0s,MS5.2								
EKS2	**Erkin-Say**	**110.83**	**356**		PFAKE		02 37 00.0	+12	
EKS2					LR	LR			
	comp=Z,665nm,22.0s,MS5.2								
UCH	**Uchtor**	**111.21**	**356**		PFAKE		02 37 00.0	+11	
UCH					LR	LR			
	comp=Z,567nm,21.0s,MS5.1								
AML	**Almayashu**	**111.36**	**356**		PFAKE		02 37 00.0	+11	
AML					LR	LR			
	comp=Z,561nm,20.0s,MS5.2								
ENH	**Enshi**	**111.39**	**323**		PFAKE		02 37 00.0	+10	
ENH					LR	LR			
	comp=Z,215nm,19.0s,MS4.8								
CD2	**Chengdu**	**113.80**	**328**		PKP	PKiKP	02 36 48.2	-6.0	
SBA	**Scott Base**	**114.31**	**193**		PFAKE		02 37 00.0	+6.3	
SBA					LR	LR			
	comp=Z,427nm,19.0s,MS5.1								
DAV	**Davao City (W)**	**115.79**	**293**		PFAKE		02 37 10.0	+12	
DAV					LR	LR			
	comp=Z,574nm,21.0s,MS5.2								
GYA	**Guiyang**	**115.92**	**323**	*e*Pdif	Pdif		02 33 08.7	-2.3	
GYA				PKP	PKPdf		02 36 56.0	-2.4	
GYA				PP	PP		02 38 02.6	+1.4	
GYA				AMB	AMB				
	comp=Z,90nm,7.6s								
QSPA	**South Pole Qui**	**116.58**	**180**		PFAKE		02 37 10.0	+12	
QSPA					LR	LR			
	comp=Z,497nm,20.0s,MS5.1								
KMI	**Kunming**	**119.07**	**325**		PKP	PKPdf	02 37 02.4	-2.1	
KMI					sPKP		02 37 06.6		
KMI					PP	PP	02 38 25.4	+2.3	
KMI					SS	SS	02 54 41.4	-1.8	
KMI					AMB	AMB			
	comp=Z,270nm,3.8s								
KMI					LR	LR			
	comp=N,290nm,27.2s,MS5.0								
KMI					LR	LR			
	comp=E,380nm,24.5s,MS5.0								
KMI					LR	LR			
	comp=Z,390nm,18.3s								
QIZ	**Qiongzhong**	**119.72**	**315**		PKP	PKPdf	02 37 01.1	-4.8	
QIZ					PP	PP	02 38 23.5	-4.5	
QIZ					SS	SS	02 54 52.4	+0.1	
QIZ					LR	LR			
	comp=Z,230nm,33.2s,MS4.6								
NIL	**Nilore**	**119.83**	**356**		PFAKE		02 37 20.0	+14	
NIL					LR	LR			
	comp=Z,99nm,21.0s,MS4.4								
LSA	**Lhasa**	**120.04**	**338**		PFAKE		02 37 20.0	+14	
LSA					LR	LR			
	comp=Z,399nm,21.0s,MS5.0								
WRAB	**Tennant Creek**	**120.22**	**262**		PFAKE		02 37 20.0	+13	
WRAB					LR	LR			
	comp=Z,734nm,19.0s,MS5.3								
ASAR	**Alice Springs**	**121.81**	**258**		PKP	PKPdf	02 37 07.3	-2.4	
	comp=Z,0.3nm,0.8s,baz=76,slow=3.8,SNR=2.6								
CHTO	**Chiang Mai**	**126.25**	**324**		PFAKE		02 37 30.0	+12	
CHTO					LR	LR			
	comp=Z,318nm,21.0s,MS5.0								
KSM	**Kuching**	**131.37**	**299**		PFAKE		02 37 40.0	+12	
KSM					LR	LR			
	comp=Z,981nm,19.0s,MS5.5								
TSUM	**Tsumeb**	**132.27**	**92**		PFAKE		02 37 40.0	+10	
TSUM					LR	LR			
	comp=Z,597nm,19.0s,MS5.3								
CASY	**Casey**	**132.85**	**201**		PFAKE		02 37 40.0	+11	
CASY					LR	LR			
	comp=Z,595nm,20.0s,MS5.3								
MBWA	**Marble Bar**	**133.60**	**266**		PFAKE		02 37 40.0	+7.7	
MBWA					LR	LR			
	comp=Z,887nm,21.0s,MS5.5								
MBAR	**Mbarara**	**134.93**	**61**		PFAKE		02 37 50.0	+15	
MBAR					LR	LR			
	comp=Z,458nm,22.0s,MS5.2								
KULM	**Kulim**	**135.87**	**311**		PFAKE		02 37 50.0	+13	
KULM					LR	LR			
	comp=Z,195nm,22.0s,MS4.8								
MAW	**Mawson**	**138.93**	**176**		PFAKE		02 37 50.0	+9.3	
MAW					LR	LR			
	comp=Z,340nm,19.0s,MS5.1								
KMBO	**Kilima Mbogo**	**140.23**	**55**		PFAKE		02 38 00.0	+15	
KMBO					LR	LR			
	comp=Z,515nm,19.0s,MS5.3								
LSZ	**Lusaka**	**140.34**	**82**		PFAKE		02 38 00.0	+15	
LSZ					LR	LR			
	comp=Z,461nm,20.0s,MS5.2								
LBTB	**Lobatse**	**140.99**	**97**		PFAKE		02 38 00.0	+14	
LBTB					LR	LR			
	comp=Z,528nm,19.0s,MS5.3								
BOSA	**Boshof**	**141.31**	**103**		PFAKE		02 38 00.0	+14	
BOSA					LR	LR			
	comp=Z,464nm,20.0s,MS5.2								
MSEY	**Mahe Island**	**154.52**	**33**		PFAKE		02 38 20.0	+12	
MSEY					LR	LR			
	comp=Z,563nm,21.0s,MS5.4								
ABPO	**Ambohimpanom**	**158.49**	**74**		PFAKE		02 38 20.0	+6.8	
ABPO					LR	LR			
	comp=Z,505nm,20.0s,MS5.3								

CSEM ***07*** *02:26:22.8±0.2,36°.98N×29°.22E,h5km,MD3.0*
DDA ***07*** *02:26:22.5,36°.97N×29°.21E,h7km±3km,Md3.0*
ISK ***07*** *02:26:22.7,37°.01N×29°.21E,h8km,MD3.0*
ISCJB ***07*** *02:26:23.1±0.5,36°.97N±0°.04×29°.22E±0°.03,h10km,Error ellipse: s-maj=5.1km s-min=3.6km az=179.3*

ISC 07 02:26:23.0±0.6,36°.96N±0°.03×29°.19E±0°.03,h5km±6km, n32,σ0°74/47,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
GLHS	**Glhisar (BURDU**	**0.31**	**52**	*e*PG	**Pg**		**02 26 28.4**	**-0.7**
GLHS				*e*SG	**Sg**		**02 26 33.5**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.31**	**52**	*e*Pg	**Pg**		**02 26 28.4**	**-0.7**
GLHS				*e*Sg	**Sg**		**02 26 33.6**	**+0.4**
GOLH	**Golhisar**	**0.40**	**47**	*i* P	**Pg**		**02 26 29.4**	**-1.4**
GOLH				*i* S	**Sg**		**02 26 36.4**	**+0.3**
GOLH	**Golhisar**	**0.40**	**47**	*i* P	**Pg**		**02 26 29.4**	**-1.4**
GOLH				*i* S	**Sg**		**02 26 36.4**	**+0.3**
TURN	**Turunc**	**0.48**	**259**	*i* P	**Pg**		**02 26 38.2**	**+5.9**
TURN				*i* S	**Sg**		**02 26 49.2**	**+11**
ELL	**Elmali**	**0.61**	**110**	*e*PG	**Pg**		**02 26 34.8**	**0.0**
ELL				*e*SG	**Sg**		**02 26 44.2**	**+1.5**
ELL	**Elmali**	**0.61**	**110**	*e*Pg	**Pg**		**02 26 34.8**	**0.0**
ELL				*e*Sg	**Sg**		**02 26 44.2**	**+1.5**
DNZL	**Cakiroluk**	**0.73**	**351**	*i* P	**Pg**		**02 26 36.4**	**-0.8**
DNZL				*i* S	**Sg**		**02 26 47.6**	**+0.9**
DNZL	**Cakiroluk**	**0.73**	**351**	*i* P	**Pg**		**02 26 36.4**	**-0.8**
DNZL				*i* S	**Sg**		**02 26 47.7**	**+1.0**
YER	**Yerkesik**	**0.75**	**284**	*e*PG	**Pg**		**02 26 37.9**	**+0.5**
YER	**Yerkesik**	**0.75**	**284**	*e*Pg	**Pg**		**02 26 37.9**	**+0.5**
AKAS	**Kas**	**0.80**	**155**	*i* P	**Pg**		**02 26 38.0**	**-0.4**
AKAS				*i* S	**Sg**		**02 26 54.0**	**+5.3**
AKAS	**Kas**	**0.80**	**155**	*i* P	**Pg**		**02 26 38.0**	**-0.4**
DENT	**Denizli**	**0.80**	**351**	*e*PG	**Pg**		**02 26 37.4**	**-1.0**
DENT	**Denizli**	**0.80**	**351**	*e*Pg	**Pg**		**02 26 37.4**	**-1.0**
MLSB	**Milas**	**1.18**	**287**	*e*PN	**Pn**		**02 26 45.8**	**-0.3**
MLSB	**Milas**	**1.18**	**287**	*e*Pn	**Pn**		**02 26 45.8**	**-0.3**
BCK	**Bucak**	**1.22**	**66**	*e*PN	**Pn**		**02 26 45.7**	**-1.0**
BCK	**Bucak**	**1.22**	**66**	*e*Pn	**Pn**		**02 26 45.7**	**-1.0**
AYDN	**Tasoluk**	**1.26**	**304**	*i* P	**Pg**		**02 26 47.5**	**+0.4**
AYDN				*i* S	**Sg**		**02 27 03.6**	**+0.2**
DAT	**Datca**	**1.32**	**260**	*e*PN	**Pn**		**02 26 48.4**	**+0.4**
DAT	**Datca**	**1.32**	**260**	*e*Pn	**Pn**		**02 26 48.4**	**+0.4**
KHL	**Karahalli**	**1.38**	**11**	*e*PN	**Pn**		**02 26 48.2**	**-0.7**
KHL	**Karahalli**	**1.38**	**11**	*e*Pn	**Pn**		**02 26 48.2**	**-0.7**
BDRM	**Kayabasi**	**1.40**	**275**	*i* P	**Pn**		**02 26 50.1**	**+0.9**
BDRM				*i* S	**Sb**		**02 27 07.2**	**-0.6**
BDRM	**Kayabasi**	**1.40**	**275**	*i* P	**Pn**		**02 26 50.1**	**+0.9**
BDRM				*i* S	**Sb**		**02 27 07.2**	**-0.6**
KHAL	**Karahalli**	**1.43**	**9**	*i* P	**Pn**		**02 26 49.7**	**+0.2**
KHAL				*i* S	**Sb**		**02 27 09.7**	**+1.2**
KHAL	**Karahalli**	**1.43**	**9**	*i* P	**Pn**		**02 26 49.7**	**+0.2**
KHAL				*i* S	**Sb**		**02 27 09.7**	**+1.2**
BODT	**Bodrum**	**1.51**	**274**	*e*PN	**Pn**		**02 26 51.0**	**+0.4**
BODT	**Bodrum**	**1.51**	**274**	*e*Pn	**Pn**		**02 26 51.1**	**+0.4**
KULA	**Kula-Manisa**	**1.61**	**345**	*e*PN	**Pn**		**02 26 51.6**	**-0.4**
KULA	**Kula-Manisa**	**1.61**	**345**	*e*Pn	**Pn**		**02 26 51.6**	**-0.4**

IDC 07 02:26:46.2±1.7,4.75S×152°.80E,h0km,mb4.2/5, mb1 4.4/5,mb1mx3.9/16,mbtmp4.2/5,Error ellipse: s-maj=62.2km s-min=26.6km az=127.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
ASAR	**Alice Springs**	**26.18**	**222**	P	P		02 32 23.3	+0.7
	0.7nm,0.3s,baz=56,slow=9.1,SNR=9.3							
FITZ	**Fitzroy Crossi**	**29.68**	**241**	P	P		02 32 53.4	-0.6
	6.0nm,0.7s,baz=83,slow=8.7,SNR=16							
CMAR	**Chiang Mai Arr**	**57.86**	**295**	P	P		02 36 40.7	+0.5
	3.5nm,0.8s,baz=112,slow=4.9,SNR=8.8							
ILAR	**Eielson Array**	**82.12**	**22**	P	P		02 39 08.7	+0.3
	1.2nm,0.8s,baz=250,slow=5.3,SNR=13							
DIB	**Dawson Inlet,**	**84.71**	**36**	T			04 12 54.0	
BVAR	**Borovoye Array**	**89.20**	**323**	P	P		02 39 43.3	-0.6
	0.7nm,0.5s,baz=94,slow=5.8,SNR=3.3							
TORD	**Torodi Ar. Bea**	**150.29**	**288**	PKPbc	PKPbc		02 46 39.9	-0.6
	1.7nm,0.7s,baz=58,slow=1.9,SNR=24							
TORD				PKPab	PKPab		02 46 46.1	-0.5
	2.2nm,0.6s,baz=72,slow=3.3,SNR=24							

IDC ***07*** *02:35:04.8±5.3,25°.85N×110°.97W,h0km,mb3.0/1, mb1 3.6/3,mb1mx3.4/22,mbtmp3.1/3,ML3.4/2,Error ellipse: s-maj=78.5km s-min=22.3km az=177.0*
ISCJB ***07*** *02:35:09.7±1.6,26°.8N±0°.1×111°.05W±0°.05,h10km,Error ellipse: s-maj=16.4km s-min=6.6km az=4.5*
MEX ***07*** *02:35:11.7±0.4,26°.66N×

YER	**Yerkesik**	**0.77**	**281**	*e*PG	**Pg**	**02 39 45.7**	**-0.1**
YER	**Yerkesik**	**0.77**	**281**	*e*Pg	**Pg**	**02 39 45.7**	**-0.1**
AKAS	**Kas**	**0.81**	**158**	*i* P	**Pg**	**02 39 45.4**	**-1.1**
AKAS				*i* S	**Sg**	**02 40 01.7**	**+4.7**
AKAS	**Kas**	**0.81**	**158**	*i* P	**Pg**	**02 39 45.4**	**-1.1**
AYDN	**Tasoluk**	**1.27**	**302**	*i* P	**Pn**	**02 39 54.0**	**-0.9**
AYDN				*i* S	**Sb**	**02 40 11.8**	**+0.3**
AYDN	**Tasoluk**	**1.27**	**302**	*i* P	**Pn**	**02 39 54.0**	**-0.9**
AYDN				*i* S	**Sb**	**02 40 11.8**	**+0.3**
DAT	**Datca**	**1.35**	**260**	*e*PN	**Pn**	**02 39 55.9**	**-0.1**
DAT	**Datca**	**1.35**	**260**	*e*Pn	**Pn**	**02 39 55.9**	**-0.1**
KHAL	**Karahalli**	**1.40**	**8**	*i* P	**Pn**	**02 39 57.1**	**+0.4**
KHAL				*i* S	**Sb**	**02 40 16.6**	**+1.4**
KHAL	**Karahalli**	**1.40**	**8**	*i* P	**Pn**	**02 39 57.1**	**+0.4**
KHAL				*i* S	**Sb**	**02 40 16.5**	**+1.3**
BDRM	**Kayabasi**	**1.43**	**274**	*i* P	**Pn**	**02 39 55.8**	**-1.3**
BDRM				*i* S	**Sn**	**02 40 16.7**	**+0.6**
BDRM	**Kayabasi**	**1.43**	**274**	*i* P	**Pn**	**02 39 55.8**	**-1.3**
BDRM				*i* S	**Sn**	**02 40 16.7**	**+0.6**
KULA	**Kula-Manisa**	**1.59**	**344**	*e*PN	**Pn**	**02 39 58.9**	**-0.4**
KULA	**Kula-Manisa**	**1.59**	**344**	*e*Pn	**Pn**	**02 39 58.9**	**-0.4**

KISR ***07*** *02:40:17.9±0.8,30.˚12N×50.˚25E, h0km±106km, ML2.7*
ISCJB ***07*** *02:40:19.0±0.4,30.˚28N±0.˚05×50.˚46E±0.˚03, h10km, Error ellipse: s-maj=7.1km s-min=3.7km az=169.4*
TEH ***07*** *02:40:20.2,30.˚14N×50.˚30E, h28km*

ISC 07 02:40:20.4±2.2,30.˚29N±0.˚06×50.˚44E±0.˚06, h11km±17km, n16, σ0°73/23, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPAR	**Pars**	**2.31**	**100**	*e*Pn	**Pn**	**02 40 57.8**	**-0.5**
IPAR				*e*Sg	**Sg**	**02 41 35.5**	**+1.1**
IPAR				*e*		02 41 45.1	
	comp=Z,813nm,0.3s						
ISRV	**Sarvestan**	**2.49**	**111**	*e*Pn	**Pn**	**02 40 59.9**	**-1.0**
ISRV				*e*Sg	**Sg**	**02 41 40.6**	**+0.2**
ISRV				*e*		02 41 54.5	
	comp=Z,2μm,0.2s						
IGAR	**Gharneh**	**2.52**	**33**	*e*	**Pn**	**02 41 05.3**	**+4.0**
	comp=Z,1μm,0.1s						
IGAR				*e*Pn	**Pn**	**02 41 01.7**	**+0.4**
KBD	**Kabd**	**2.63**	**246**	*e*P	**Pn**	**02 41 02.4**	**-0.4**
KBD				*e*S	**Sn**	**02 41 35.5**	**+0.7**
KBD				AML	AML	02 41 37.8	
	comp=Z,21nm,0.3s						
QRN	**Al-Qurain**	**2.68**	**236**	*e*P	**Pn**	**02 41 02.8**	**-0.7**
MIB	**Mutribah**	**2.73**	**261**	*e*P	**Pn**	**02 41 03.6**	**-0.5**
MIB				*e*S	**Sn**	**02 41 38.8**	**+1.5**
MIB				AML	AML	02 41 48.0	
	comp=Z,55nm,0.6s						
RDF	**Al-Radifah**	**2.86**	**242**	*e*P	**Pn**	**02 41 05.2**	**-0.7**
RDF				*e*S	**Sn**	**02 41 40.5**	**+0.1**
RDF				AML	AML	02 41 41.8	
	comp=Z,31nm,0.6s						
IZEF	**Zefreh**	**3.06**	**31**	*e*	**Pn**	**02 41 11.3**	**+2.6**
	comp=Z,453nm,0.1s						
IZEF				*e*Pn	**Pn**	**02 41 09.3**	**+0.6**
IKLH	**Kolahrood**	**3.18**	**17**	*e*Pn	**Pn**	**02 41 10.6**	**+0.3**
IKLH				*e*		02 42 09.2	
	comp=Z,556nm,0.3s						
ISAD	**Sadrabad**	**3.22**	**59**	*e*Pn	**Pn**	**02 41 11.4**	**+0.5**
ISAD				*e*		02 42 04.0	
	comp=Z,678nm,0.3s						
IMEH	**Mehriz**	**3.75**	**72**	*e*Pn	**Pn**	**02 41 18.0**	**-0.3**
IMEH				*e*		02 41 24.8	
	comp=Z,186nm,0.1s						
ICHK	**Chekchek**	**3.92**	**59**	*e*Pn	**Pn**	**02 41 20.6**	**+0.1**
ICHK				*e*		02 41 26.3	
	comp=Z,305nm,0.1s						
IBAF	**Bafgh**	**4.59**	**72**	*e*Pn	**Pn**	**02 41 29.4**	**-0.4**
IBAF				*e*		02 41 45.9	
	comp=Z,84nm,0.1s						
IRAZ	**Razeghan**	**5.12**	**355**	*e*Pn	**Pn**	**02 41 36.2**	**-0.9**
IDMV	**Damavand**	**5.45**	**14**	*e*Pn	**Pn**	**02 41 41.2**	**-0.3**
IDMV				*e*		02 41 45.2	
	comp=Z,90nm,0.1s						
IFIR	**Firoozkooh**	**5.69**	**19**	*e*Pn	**Pn**	**02 41 44.6**	**-0.2**
IFIR				*e*		02 41 50.4	
	comp=Z,179nm,0.2s						

CASC 07 02:42:05.6±2.2,8.˚94N×83.˚85W, h0km±6km, MD4.1, 1C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QCR	**Quepos**	**0.57**	**327**	*i* P	Pg	02 42 17.7	+1.2
BUS	**Buena Vista**	**0.61**	**9**	*e*P	Pg	02 42 18.9	+1.5
ACR	**Cerro Adams**	**0.74**	**113**	*e*P	Pg	02 42 21.2	+1.5
URSC	**Urasca**	**0.89**	**5**	*e*P	Pg	02 42 23.4	+0.8
LAJ	**Bijagual**	**0.95**	**344**	*e*P	Pg	02 42 25.7	+1.8
PRS1	**Puriscal**	**1.13**	**336**	*e*P	Pg	02 42 25.8	-1.4
BRU2	**Volcan**	**1.16**	**97**	*e*P	Pg	02 42 28.6	+0.7
BRU2				*e*S	Sg	02 42 46.0	+3.1
CGA2	**Cerro Gallo 2**	**1.22**	**331**	*e*P	Sg	02 42 28.6	-0.5
CGA2				*e*S	Sg	02 42 46.5	+1.5
JCR	**Jicaral**	**1.53**	**306**	*e*P	Pn	02 42 34.8	+0.6
VCR	**Vista de Mar**	**2.11**	**304**	*e*P	Pn	02 42 41.7	-0.5
CUI	**Cuipilapa**	**2.14**	**323**	*i* P	Pn	02 42 42.4	-0.1
CUI				*i* S	Sn	02 43 12.4	+2.6
LIM1	**Limonal**	**2.22**	**322**	*i* P	Pn	02 42 41.4	-2.3

NEIC ***07*** *02:54:09.8,52.˚16N×175.˚47W, h6km, mb4.2/9, ML4.4(PMR), ML3.8(AEIC), After AEIC.*
ISCJB ***07*** *02:54:10.3±0.8,52.˚30N±0.˚09×175.˚58W±0.˚06, h15km±8km, mb4.1/18, Error ellipse: s-maj=15.5km s-min=4.8km az=163.7*
IDC ***07*** *02:54:17.0±8.2,52.˚33N×175.˚69W, h54km±74km, mb3.6/7, mb1 3.9/9, mb1mx3.6/27, mbtmp3.6/9, ML4.0/2, Error ellipse: s-maj=41.4km s-min=20.9km az=8.0*

ISC 07 02:54:10.6±0.9,52.˚25N±0.˚09×175.˚55W±0.˚06, h2km±7km, n36, σ1°24/37, mb4.1/18, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.35**	**243**	*e*Pg	**Pg**	**02 54 18.3**	**+0.9**
GSTR				*e*S	**Sg**	**02 54 23.6**	**+1.6**
ADK	**Adak**	**0.79**	**243**	P	**Pg**	**02 54 25.4**	**-0.4**
ADK				S	**Sg**	**02 54 35.8**	**-0.3**
ATKA	**Atka Island**	**0.83**	**93**	P	**Pg**	**02 54 25.2**	**-1.4**
ATKA				S	**Sg**	**02 54 36.5**	**-0.9**
AMKA	**Amchitka**	**3.31**	**257**	P	**Pn**	**02 55 02.1**	**-1.4**
NIKO	**Nikolski**	**4.14**	**77**	*e*Pn	**Pn**	**02 55 15.5**	**+0.7**
UNV	**Unalaska Valle**	**5.69**	**70**	P	**Pn**	**02 55 36.1**	**+0.1**
SPIA	**Saint Paul Isl**	**5.81**	**30**	P	**Pn**	**02 55 36.5**	**-1.2**
AKUT	**Akutan**	**6.17**	**68**	*e*Pn	**Pn**	**02 55 46.6**	**+3.9**
	83nm,0.9s						
KDAK	**Kodiak Island**	**14.25**	**58**	*e*Pn	**Pn**	**02 57 33.6**	**+0.4**
	15nm,1.0s						
KDAK	**Kodiak Island**	**14.25**	**58**	P	**Pn**	**02 57 35.3**	**+2.1**
	0.5nm,0.3s,baz=302,slow=9.5,SNR=6.6						
TTA	**Tatalina**	**14.89**	**37**	*e*Pn	**Pn**	**02 57 41.7**	**-0.2**
	16nm,1.2s						
COLA	**College**	**18.98**	**38**	*e*P	**Pn**	**02 58 35.5**	**+1.9**
	7.5nm,0.8s						
ILAR	**Eielson Array**	**19.30**	**38**	P	**Pn**	**02 58 37.2**	**-0.3**
ILAR	**Eielson Array**	**19.30**	**38**	P	**Pn**	**02 58 37.2**	**-0.3**
	0.2nm,0.3s,baz=239,slow=9.1,SNR=25						
EGAK	**Eagle**	**21.56**	**41**	*e*P	**P**	**02 59 01.8**	**+0.8**
	24nm,0.9s,mb4.6						
DAWY	**Dawson**	**22.08**	**44**	*e*P	**P**	**02 59 08.4**	**+1.8**
INK	**Inuvik**	**25.58**	**35**	P	**P**	**02 59 40.6**	**-0.1**
	4.1nm,0.8s,mb4.0,baz=267,slow=9.6,SNR=3.7						
MDJ	**Mudanjiang**	**36.41**	**280**	P	**P**	**03 01 14.2**	**-2.1**
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,53nm,5.4s						
WVOR	**Wild Horse Val**	**38.86**	**81**	*e*P	**P**	**03 01 36.4**	**-0.6**
	comp=Z,5.6nm,0.9s,mb4.3						
MSO	**Missoula**	**39.27**	**73**	*e*P	**P**	**03 01 41.1**	**+0.6**
	comp=Z,1.4nm,0.8s,mb3.7						
CN2	**Changchun**	**39.35**	**282**	*e*P	**P**	**03 01 41.1**	**0.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
MCMT	**McKenzie Canyo**	**40.99**	**75**	*e*P	**P**	**03 01 52.8**	**-1.9**
	comp=Z,0.6nm,0.5s,mb3.5						
NVAR	**Mina Array Bea**	**41.46**	**86**	P	**P**	**03 01 60.0**	**+1.4**
	comp=Z,0.7nm,0.6s,mb3.5,baz=301,slow=7.0,SNR=7.8						
KSRS	**Korea Array**	**41.63**	**272**	P	**P**	**03 01 59.4**	**-0.7**
	comp=Z,0.5nm,0.3s,mb3.5,baz=55,slow=7.6,SNR=2.4						
DUG	**Dugway**	**43.72**	**80**	*e*P	**P**	**03 02 16.6**	**-0.3**
GSC	**Goldstone**	**44.39**	**88**	*e*P	**P**	**03 02 22.8**	**+0.5**
	comp=Z,4.8nm,0.8s,mb4.3						
WUAZ	**Wupatki**	**47.58**	**84**	*e*P	**P**	**03 02 49.8**	**+2.2**
	comp=Z,4.6nm,0.8s,mb4.6						
LAZ	**Ladron**	**50.90**	**82**	*e*P	**P**	**03 03 15.5**	**+2.4**
	comp=Z,1.9nm,1.0s,mb4.0						
MNTX	**Cornudas Mount**	**53.83**	**83**	*e*P	**P**	**03 03 34.1**	**-0.7**
	comp=Z,2.4nm,0.9s,mb4.1						
TXAR	**Lajitas Array**	**56.54**	**84**	P	**P**	**03 03 53.5**	**-0.8**
	comp=Z,1.0nm,0.6s,mb4.0,baz=307,slow=5.3,SNR=13						
MKAR	**Makanchi Array**	**61.05**	**310**	P	**P**	**03 04 22.9**	**-2.5**
	comp=Z,0.3nm,0.2s,mb4.0,baz=64,slow=6.6,SNR=2.5						
BVAR	**Borovoye Array**	**61.50**	**321**	P	**P**	**03 04 27.4**	**-1.0**
	comp=Z,1.1nm,0.6s,mb4.2,baz=67,slow=5.0,SNR=6.1						
GYA	**Guiyang**	**62.22**	**278**	*e*P	**P**	**03 04 36.0**	**+2.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.0						
ASAR	**Alice Springs**	**87.52**	**225**	P	**P**	**03 06 58.8**	**-0.9**
	comp=Z,1.0nm,0.6s,mb4.3,baz=19,slow=5.9,SNR=2.8						
QSPA	**South Pole Qui**	**142.01**	**180**	PKhKP	PKPpre	03 13 37.2	
	comp=Z,1.6nm,0.8s,baz=260,slow=2.2,SNR=6.1						
MAW	**Mawson**	**148.42**	**219**	PKPbc	PKPbc	03 13 55.0	-2.2
	comp=Z,2.5nm,0.7s,baz=202,slow=5.4,SNR=3.9						

ISCJB ***07*** *02:58:01.3±1.4,6.˚41S±0.˚10×128.˚0E±0.˚2, h395km±15km, mb3.7/4, Error ellipse: s-maj=27.0km s-min=12.5km az=157.8*
NEIC ***07*** *02:58:02.5±1.7,6.˚40S×127.˚92E, h391km±18km, mb4.4/4, Error ellipse: s-maj=26.9km s-min=17.4km az=82.0*
IDC ***07*** *02:58:05.3±4.3,6.˚39S×128.˚35E, h411km±41km, mb3.2/3, mb1 3.4/4, mb1mx2.9/18, mbtmp3.3/4, Error ellipse: s-maj=74.8km s-min=17.5km az=77.0*

ISC 07 02:58:03.9±1.5,6.˚44S±0.˚10×128.˚1E±0.˚2, h411km±21km, n15, σ0°94/16, mb3.7/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**7.57**	**146**	*e*Pn	**P**	**02 59 54.2**	**-0.1**
	356nm,0.7s						
KAKA				*e*S	**S**	**03 01 19.5**	**-5.1**
FITZ	**Fitzroy Crossi**	**11.83**	**191**	*e*Pn	**P**	**03 00 41.3**	**-0.1**
	12nm,0.5s						
WRAB	**Tennant Creek**	**14.73**	**156**	*e*Pn	**P**	**03 01 14.1**	**+1.1**
	8.2nm,0.6s						
WRAB				*e*S	**S**	**03 03 48.9**	**-0.7**
WB2	**Warramunga Arr**	**14.74**	**156**	*e*Pn	**P**	**03 01 13.6**	**+0.4**
WB2				*e*S	**S**	**03 03 48.0**	**-1.8**
MBWA	**Marble Bar**	**16.72**	**208**	*e*P	**P**	**03 01 33.4**	**-1.0**
	10nm,0.6s						
ASAR	**Alice Springs**	**18.02**	**162**	P	**P**	**03 01 49.2**	**+1.1**
	2.1nm,0.3s,baz=346,slow=12,SNR=85						
ASAR				S	**S**	**03 04 54.5**	**+0.9**
	0.4nm,0.3s,baz=350,slow=22,SNR=20						
STKA	**Stephens Creek**	**28.28**	**155**	*e*P	**P**	**03 03 20.4**	**-1.3**
STKA	**Stephens Creek**	**28.28**	**155**	P	**P**	**03 03 23.2**	**+1.5**
	1.2nm,0.5s,mb3.5,baz=314,slow=13,SNR=4.2						
NACB	**Ninganchiao**	**31.08**	**348**	*e*P	**P**	**03 03 45.9**	**-0.3**
	14nm,0.6s,mb4.5						
QSPA	**South Pole Qui**	**83.53**	**180**	P	**P**	**03 09 47.6**	**+1.1**
QSPA	**South Pole Qui**	**83.53**	**180**	P	**P**	**03 09 47.6**	**+1.1**
	1.1nm,0.7s,mb3.7,baz=307,slow=2.5,SNR=7.6						
ILAR	**Eielson Array**	**93.66**	**25**	P	**P**	**03 10 33.7**	**-0.8**
	0.2nm,0.7s,mb3.3,baz=258,slow=4.5,SNR=3.3						
TORD	**Terodi Ar. Bea**	**126.83**	**282**	PKP	PKPdf	03 16 21.7	+1.1
	0.5nm,0.7s,baz=43,slow=1.9,SNR=3.5						
CPUP	**Villa Florida**	**147.01**	**171**	PKPbc	PKPbc	03 17 01.9	+2.0
	0.3nm,0.3s,baz=236,slow=7.3,SNR=4.4						
LPAZ	**La Paz**	**152.30**	**145**	PKPbc	PKPbc	03 17 16.3	+3.4
	0.6nm,0.4s,baz=90,slow=4.0,SNR=8.6						

IDC ***07*** *03:02:59.1±1.5,42.˚48N×142.˚49E, h0km, mb3.7/9, mb1 3.9/10, mb1mx3.7/23, mbtmp3.7/10, ML3.1/1, Error ellipse: s-maj=39.0km s-min=23.2km az=171.0*
ISCJB ***07*** *03:03:04.1±0.5,42.˚01N±0.˚05×142.˚56E±0.˚04, h67km±3km, mb3.6/10, Error ellipse: s-maj=7.8km s-min=5.4km az=165.2*
NEIC ***07*** *03:03:04.7,42.˚01N×142.˚60E, h62km, MG3.3(JMA), After JMA.*
JMA ***07*** *03:03:04.6±0.2,42.˚01N×142.˚60E, h61km±2km, M3.3 Broadband fault plane solution: P waves. NP1: φs150.00000°, δ7.00000°, λ54.00000°. NP2:φs6.00000°, δ84.00000°, λ94.00000°. Principal axes: T Plg51.0000°, Azm281.0000°; N Plg4.0000°, Azm186.0000°; P Plg39.0000°, Azm92.0000°;*

ISC 07 03:03:04.9±0.5,41.˚99N±0.˚05×142.˚55E±0.˚04, h61km±4km, n27, σ0°68/37, mb3.7/10, 4C-6D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.32**	**27**	↑P	**Pn**	**03 03 14.7**	**-0.5**
JNBK				*e*S	**Sn**	**03 03 22.5**	**-0.2**
ERM	**Erimo**	**0.45**	**87**	*e*Pn	**Pn**	**03 03 16.2**	**-0.2**
ERM				*e*S	**Sn**	**03 03 25.4**	**+0.7**
JEM	**Erimo**	**0.45**	**87**	↑P	**Pn**	**03 03 16.2**	**-0.2**
JEM				*e*S	**Sn**	**03 03 24.6**	**-0.1**
JBT2	**Biratori 2**	**0.80**	**350**	↓P	**Pn**	**03 03 19.9**	**-0.4**
JBT2				*e*S	**Sn**	**03 03 31.5**	**-0.2**
JCH	**Churui**	**0.86**	**44**	↑P	**Pn**	**03 03 20.6**	**-0.6**
JCH				*e*S	**Sn**	**03 03 32.7**	**-0.5**
JKB	**Kayabe**	**1.14**	**265**	↓P	**Pn**	**03 03 24.7**	**0.0**
JKB				*e*S	**Sn**	**03 03 39.5**	**0.0**
JFR	**Furan**	**1.17**	**1**	P	**Pn**	**03 03 25.0**	**-0.1**
JEW	**Eniwo**	**1.18**	**316**	↓P	**Pn**	**03 03 25.2**	**0.0**
JEW				*e*S	**Sn**	**03 03 41.2**	**+0.8**
JNB	**Noboribetsu**	**1.22**	**293**	↓P	**Pn**	**03 03 25.1**	**-0.7**
JNB				*e*S	**Sn**	**03 03 41.2**	**-0.3**
JOT	**Ohata**	**1.28**	**242**	↓P	**Pn**	**03 03 26.7**	**+0.1**
JOT				*e*S	**Sn**	**03 03 43.2**	**+0.3**
JOB	**Onbets**	**1.31**	**46**	↑P	**Pn**	**03 03 27.4**	**+0.4**
JAB	**Ashibetsu**	**1.53**	**351**	P	**Pn**	**03 03 30.4**	**+0.5**
JAB				*e*S	**Sn**	**03 03 50.5**	**+1.7**
JAR	**Ashorobuto**	**1.58**	**34**	↓P	**Pn**	**03 03 30.4**	**-0.2**
MJAR	**Matsushiro Arr**	**6.40**	**213**	Pn	**Pn**	**03 04 40.1**	**+3.6**
	0.3nm,0.3s,baz=22,slow=14,SNR=3.8						
SONM	**Songino Array**	**26.09**	**295**	P	**P**	**03 08 32.8**	**+0.1**
	0.5nm,0.5s,mb3.3,baz=84,slow=7.2,SNR=4.2						
ZALV	**Zalesovo Beam**	**39.39**	**308**	P	**P**	**03 10 26.9**	**-1.4**
ZALV	**Zalesovo Beam**	**39.39**	**308**	P	**P**	**03 10 26.9**	**-1.4**
	2.0nm,0.6s,mb4.0,baz=94,slow=8.0,SNR=6.9						
MKAR	**Makanchi Array**	**42.41**	**298**	P	**P**	**03 10 52.9**	**-0.3**
MKAR	**Makanchi Array**	**42.41**	**298**	P	**P**	**03 10 52.9**	**-0.3**
	0.4nm,0.3s,mb3.5,baz=181,slow=10,SNR=5.3						
ILAR	**Eielson Array**	**44.88**	**35**	P	**P**	**03 11 12.6**	**-0.3**
	0.3nm,0.5s,mb3.4,baz=252,slow=5.3,SNR=7.7						
BVAR	**Borovoye Array**	**48.00**	**309**	P	**P**	**03 11 37.4**	**0.0**
	1.0nm,0.5s,mb4.1,baz=69,slow=8.1,SNR=4.9						
TKM2	**Tokmak 2**	**48.19**	**295**	*e*P	**P**	**03 11 39.6**	**+0.5**
	3.0nm,0.7s,mb4.4						
FINES	**FINESS Array B**	**64.86**	**332**	P	**P**	**03 13 35.8**	**-1.3**
	1.5nm,0.6s,mb4.2,baz=60,slow=7.7,SNR=6.2						
NOA	**NORSAR Array B**	**69.96**	**337**	P	**P**	**03 14 08.8**	**-0.5**
NOA	**NORSAR Array B**	**69.96**	**337**	P	**P**	**03 14 08.8**	**-0.5**
	0.8nm,0.8s,mb3.7,baz=38,slow=5.7,SNR=3.7						
NVAR	**Mina Array Bea**	**71.36**	**55**	P	**P**	**03 14 19.7**	**+1.4**
	0.3nm,0.6s,mb3.4,baz=292,slow=4.8,SNR=3.3						
TXAR	**Lajitas Array**	**86.42**	**53**	P	**P**	**03 15 42.0**	**+1.2**
	0.1nm,0.6s,mb3.2,baz=286,slow=3.7,SNR=3.0						

IDC ***07*** *03:16:58.7±4.9,3.˚84S×101.˚65E, h0km, mb4.0/4, mb1 4.0/5, mb1mx3.6/22, mbtmp3.9/5, ML3.3/1, Error ellipse: s-maj=210.0km s-min=21.3km az=56.0*
ISCJB ***07*** *03:17:00.7±1.2,3.˚5S±0.˚1×101.˚5E±0.˚1, h10km, mb3.9/4, Error ellipse: s-maj=23.4km s-min=7.4km az=41.0*
DJA ***07*** *03:17:06,3.˚30S×101.˚78E, h61km, MLv4.2/6*

ISC 07 03:17:02.5±1.1,3.˚4S±0.˚1×101.˚6E±0.˚1, h10km, n13, σ0°90/13, mb3.9/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.03**	**102**	P	**Pg**	**03 17 25.3**	**+3.0**
KSI				S	**Sg**	**03 17 35.4**	**-0.3**
MNAI	**Manna**	**1.64**	**124**	P	**Pn**	**03 17 31.6**	**+0.1**
SDSI	**Sungai Dareh**	**2.50**	**356**	P	**Pn**	**03 17 42.1**	**-1.2**
MDSI	**Maura Dua**	**2.79**	**112**	P	**Pn**	**03 17 46.7**	**-0.5**
LWLI	**Liwa**	**2.92**	**122**	P	**Pn**	**03 17 49.1**	**0.0**
KLSI		**3.37**	**112**	P	**Pn**	**03 17 55.1**	**-0.2**
KASI	**Kota Agung**	**3.56**	**126**	P	**Pn**	**03 17 57.1**	**-0.8**
PSI	**Prapat**	**6.75**	**337**	Pn	**Pn**	**03 18 41.4**	**-0.3**
	0.5nm,0.3s,baz=192,slow=9.3,SNR=4.6						
FITZ	**Fitzroy Crossi**	**27.70**	**123**	P	**P**	**03 22 46.2**	**-4.9**
	2.9nm,0.9s,mb3.9,baz=297,slow=9.0,SNR=2.8						
ASAR	**Alice Springs**	**37.13**	**126**	P	**P**	**03 24 08.7**	**-4.9**
	0.6nm,0.3s,mb3.9,baz=299,slow=7.3,SNR=4.9						
SONM	**Songino Array**	**51.24**	**4**	P	**P**	**03 26 07.5**	**+1.2**
	0.5nm,0.5s,mb3.8,baz=190,slow=7.8,SNR=4.3						
ZALV	**Zalesovo Beam**	**58.88**	**349**	P	**P**	**03 27 02.2**	**+0.8**
	0.6nm,0.3s,mb4.0,baz=150,slow=7.0,SNR=3.3						
TXAR	**Lajitas Array**	**144.83**	**40**	PKPbc	PKPdf	03 36 38.0	-2.5
	0.4nm,0.5s,baz=285,slow=0.5,SNR=11						

NNC 07 03:17:02.2±15.0,39.˚14N×71.˚02E, h0km, mb3.6, mpv3.4, 1C-2D, Error ellipse: s-maj=123.4km s-min=73.8km az=6.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**3.97**	**355**	Pn	Pn	03 18 03.0	-1.3
	2.2nm,0.3s,baz=168,slow=9.7,SNR=33						
KK31				↓Sn	Sn	03 18 52.7	+1.0
	53nm,0.4s,baz=168,slow=35,SNR=28						
TKM2	**Tokmak 2**	**5.12**	**41**	↓Pn	Pn	03 18 22.5	+2.4
	2.2nm,0.4s						
TKM2				↑Sn	Sn	03 19 23.9	+4.0
	5.0nm,0.8s						
AB31	**Akbulak array**	**12.84**	**326**	P	Pn	03 19 59.8	-6.0
	0.3nm,0.5s,baz=129,slow=15,SNR=8.7						

IDC ***07*** *03:21:15.5±7.4,52.˚12N×177.˚59W, h0km, mb3.4/3, mb1 4.0/4, mb1mx3.5/26, mbtmp3.7/4, ML4.0/1, MS3.4/1, Ms1 3.4/1, ms1mx2.8/21, Error ellipse: s-maj=141.9km s-min=60.9km az=100.0*
ISCJB ***07*** *03:21:24.2±0.6,52.˚34N±0.˚1×175.˚53W±0.˚08, h10km, mb3.4/2, Error ellipse: s-maj=16.0km s-min=4.9km az=161.9*
NEIC ***07*** *03:21:24.1,52.˚10N×175.˚47W, h3km, ML3.5(AEIC), After AEIC.*

ISC 07 03:21:25.4±0.6,52.˚1N±0.˚1×175.˚50W±0.˚07, h10km, n14, σ0°88/15, mb3.4/2, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.35**	**263**	*e*Pg	**Pg**	**03 21 32.9**	**+0.6**
ADK	**Adak**	**0.78**	**251**	*e*Pg	**Pg**	**03 21 39.6**	**-0.8**
ADK				*e*S	**Sg**	**03 21 50.2**	**-0.3**
ATKA	**Atka Island**	**0.80**	**85**	P	**Pg**	**03 21 39.6**	**-1.3**
ATKA				S	**Sg**	**03 21 50.9**	**-0.5**
AMKA	**Amchitka**	**3.32**	**259**	P	**Pn**	**03 22 17.1**	**-0.3**
NIKO	**Nikolski**	**4.14**	**76**	P	**Pn**	**03 22 29.1**	**+0.5**
UNV	**Unalaska Valle**	**5.70**	**69**	P	**Pn**	**03 22 49.1**	**-0.8**
SPIA	**Saint Paul Isl**	**5.90**	**29**	P	**Pn**	**03 22 52.7**	**0.0**
AKUT	**Akutan**	**6.18**	**67**	*e*Pn	**Pn**	**03 22 57.8**	**+1.2**
KDAK	**Kodiak Island**	**14.29**	**58**	Pn	**Pn**	**03 24 53.7**	**+6.2**
KDAK	**Kodiak Island**	**14.29**	**58**	Pn	**Pn**	**03 24 53.7**	**+6.3**
	0.6nm,0.3s,baz=233,slow=5.8,SNR=6.7						
ILAR	**Eielson Array**	**19.37**	**38**	P	**Pn**	**03 25 51.0**	**-1.0**
	0.9nm,0.5s,baz=235,slow=8.6,SNR=17						
INK	**Inuvik**	**25.66**	**35**	LR	LR	03 37 45.7	
	comp=Z,82nm,19.1s,baz=250,slow=38						
NVAR	**Mina Array Bea**	**41.44**	**86**	P	**P**	**03 29 13.3**	**+1.4**
	0.3nm,0.7s,mb3.0,baz=288,slow=7.2,SNR=2.8						
TXAR	**Lajitas Array**	**56.52**	**84**	P	**P**	**03 31 09.1**	**+1.4**
	0.8nm,0.8s,mb3.8,baz=308,slow=4.7,SNR=8.6						

ISCJB ***07*** *03:28:38.3±0.3,36.˚46N±0.˚03×27.˚72E±0.˚03, h89km±5km, Error ellipse: s-maj=4.9km s-min=3.9km az=136.9*
ATH ***07*** *03:28:38.8,36.˚49N×27.˚69E, h89

KHL	Karahalli	2.34	38	ePN	Pn	03 29 16.5	+0.5
KHL	Karahalli	2.34	38	ePn	Pn	03 29 16.5	+0.6
AKS	Akhisar	2.40	2	ePN	Pn	03 29 16.4	-0.3
AKS	Akhisar	2.40	2	ePn	Pn	03 29 16.4	-0.3
ANTB	Antalya	2.40	79	ePN	Pn	03 29 17.1	+0.3
ANTB	Antalya	2.40	79	ePn	Pn	03 29 17.1	+0.3
BCK	Bucak	2.50	66	ePN	Pn	03 29 19.1	+0.9
BCK	Bucak	2.50	66	ePn	Pn	03 29 19.1	+0.9
IDI	Anoyia	2.58	243	ePn	Pn	03 29 19.4	+0.2
IDI				eS	Sn	03 29 49.1	-0.5
IDI	Anoyia	2.58	243	eP	Pn	03 29 19.3	+0.1
IDI				eS	Sn	03 29 49.8	+0.2
IDI	Anoyia	2.58	243	eP	Pn	03 29 19.3	+0.1
IDI				eS	Sn	03 29 49.8	+0.2
SIVA	Sivas	2.77	239	eP	Pn	03 29 22.1	+0.3
SIVA	Sivas	2.77	239	eP	Pn	03 29 22.1	+0.3
SIVA	Sivas	2.77	239	eP	Pn	03 29 22.1	+0.3
SHUT	Suhut-Afyon	3.06	47	ePN	Pn	03 29 27.4	+1.7
SHUT	Suhut-Afyon	3.06	47	ePn	Pn	03 29 27.4	+1.7
ALT	Altintas	3.20	36	ePN	Pn	03 29 28.5	+1.0
ALT	Altintas	3.20	36	ePn	Pn	03 29 28.5	+1.0
GVD	Gavdhos	3.37	242	ePn	Pn	03 29 31.2	+1.3
GVD				eS	Sn	03 30 04.0	-4.9
GVD	Gavdhos	3.37	242	ePn	Pn	03 29 31.2	+1.3
GVD				eS	Sn	03 30 04.0	-4.9
KYTH	Kithira	3.78	268	eP	Pn	03 29 36.6	+1.2
KYTH	Kithira	3.78	268	eP	Pn	03 29 36.6	+1.2
KYTH	Kithira	3.78	268	eP	Pn	03 29 36.6	+1.2
VLI	Veliai	3.85	275	eP	Pn	03 29 37.8	+1.4
VLI	Veliai	3.85	275	eP	Pn	03 29 37.8	+1.4
VLI	Veliai	3.85	275	eP	Pn	03 29 37.8	+1.4
SLUM	baz=206	5.39	203	P	Pn	03 29 56.6	-0.8
SLUM		5.39	203	P	Pn	03 29 56.7	-0.7
HMAT	Matruh	5.40	186	P	Pn	03 29 57.0	-0.5
HMAT	baz=187			S	Sn	03 30 52.8	-5.5
HMAT	Matruh	5.40	186	P	Pn	03 29 57.0	-0.5
HNAT	Natroun	7.25	160	P	Pn	03 30 22.0	-0.9
HNAT	baz=159 Natroun	7.25	160	P	Pn	03 30 22.0	-0.8
KOT	Kottamia	7.39	151	P	Pn	03 30 24.0	-0.7
KOT	baz=150 Kottamia	7.39	151	P	Pn	03 30 24.0	-0.7
AMAG	Maghara	7.41	140	P	Pn	03 30 24.1	-0.9
AMAG	baz=138 Maghara	7.41	140	P	Pn	03 30 24.1	-0.9
SWA2	baz=197	7.46	195	P	Pn	03 30 24.9	-0.8
SWA2	comp=E,20µm,0.3s,logA/T=4.8,baz=197			AMP		03 31 00.0	
SWA2	baz=197			S	Sn	03 31 42.5	-6.3
SWA2		7.46	195	P	Pn	03 30 24.9	-0.8
HHAG	Hagoal baz=148	7.48	149	P	Pn	03 30 26.0	+0.1
HHAG	Hagoal	7.48	149	P	Pn	03 30 26.0	+0.1
HSAF	As Saff baz=152	7.56	154	P	Pn	03 30 26.6	-0.5
HSAF	As Saff	7.56	154	P	Pn	03 30 26.6	-0.5
GLL	Jalalah baz=152	7.66	153	P	Pn	03 30 28.0	-0.4
GLL	Jalalah	7.66	153	P	Pn	03 30 28.0	-0.4
AWBH	baz=172	8.20	173	P	Pn	03 30 34.4	-1.3
AWBH		8.20	173	P	Pn	03 30 34.4	-1.4
ZNM	baz=146	8.31	147	P	Pn	03 30 37.1	-0.1
ZNM		8.31	147	P	Pn	03 30 37.1	-0.2
GRB	Gharib baz=150	9.24	151	P	Pn	03 30 50.0	0.0
GRB	Gharib	9.24	151	P	Pn	03 30 50.0	0.0
HFRF	Wahat Farafira baz=176	9.32	177	P	Pn	03 30 49.5	-1.5
HFRF	Wahat Farafira	9.32	177	P	Pn	03 30 49.5	-1.6
HKAT	Jabal Katrina baz=143	9.54	144	P	Pn	03 30 53.5	-0.6
HKAT	Jabal Katrina	9.54	144	P	Pn	03 30 53.5	-0.6

*IDC **07** 03:46:17.9±0.6,8.°10S×117.°76E,h0km, mb4.5/13, mb1 4.6/14,mb1mx4.4/24,mbtmp4.5/14,ML3.8/1,MS3.9/10, Ms1 3.9/10,ms1mx3.6/26,Error ellipse: s-maj=24.2km s-min=11.5km az=71.0*

*ISCJB **07** 03:46:20.6±0.9,8.°17S±0.°03×117.°80E±0.°02,h30km±7km, mb4.9/43,MS3.9/9,Error ellipse: s-maj=5.5km s-min=3.7km az=6.0*

*NEIC **07** 03:46:22.7±2.0,8.°17S×117.°81E,h33km±15km,mb5.0/17, Error ellipse: s-maj=9.9km s-min=4.5km az=56.0*

NEIC Felt [III] at Pekat.

*DJA **07** 03:46:23,8.°29S×117.°59E,h10km,mb5.0/25*

ISC 07 03:46:21.8±0.9,8.°21S±0.°03×117.°81E±0.°02,h25km±7km, h35km±2.4km:pP-P,n115,σ1°09/125,mb4.9/43,MS3.9/9,1C, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHKI	Kahang-Kahang	2.19	266	P	Pn	03 46 54.6	-1.9
KHKI				S	Sn	03 47 23.5	+0.7
SRBI	Singaraja	2.58	273	P	Pn	03 47 00.0	-1.9
SRBI				S	Sn	03 47 33.5	+1.1
DNP	Denpasar	2.62	260	P	Pn	03 47 02.1	-0.3
IGBI	Denpasar	2.71	257	P	Pn	03 47 03.2	-0.5
IGBI				S	Sn	03 47 35.7	+0.1
WSI	Waingapu	2.85	121	P	Pn	03 47 11.9	+6.2
NBBI	Negara	3.16	267	P	Pn	03 47 09.0	-1.0
BYJI	Banyuwangi	3.42	270	P	Pn	03 47 13.7	+0.2
BYJI				S	Sn	03 47 53.5	+0.2
JAGI	Jajag, Banyuwa	3.63	266	P	Pn	03 47 14.9	-1.5
JAGI				S	Sn	03 47 58.5	0.0
BKSI	Bulukumba	3.68	39	P	Pn	03 47 16.3	-0.7
BKSI				S	Sb	03 48 11.5	+1.3
KMMI	Kalianget	3.98	287	P	Pn	03 47 20.7	-0.6
KMMI				S	Sn	03 48 06.9	-0.3
GMJI	Gumukmas	4.32	269	P	Pn	03 47 24.7	-1.2
MMRI	Maumere	4.40	96	P	Pn	03 47 28.1	+1.1
SPSI	Sidrap Palu	4.65	25	P	Pb	03 47 41.1	-1.5
KBAI	Kotabaru	5.15	341	P	Pn	03 47 38.4	+1.1
KRKI	Karangkates	5.31	270	P	Pn	03 47 40.4	+0.9
TTSI	Tana Toraja	5.51	21	P	Pn	03 47 47.0	+4.8
PWJI	Pagerwojo 1.0nm263nm,1.1s	5.95	271	P	Pn	03 47 47.4	-0.9
SJI	Sawahan 1.1nm4µm232nm,0.8s	6.01	274	P	Pn	03 47 48.6	-0.5
NGJI	Ngawi 1.3nm7µm174nm,0.8s	6.35	277	P	Pn	03 47 58.0	+4.2
PCJI	Pacitan 336nm,1.4s	6.57	270	P	Pn	03 47 57.3	+0.5
SMRI	Semarang 1.1nm221nm,0.7s	7.40	278	P	Pn	03 48 07.0	-1.2
PCI	Palu	7.53	16	P	Px	03 48 20.4	
BJII	Banjamegara 0.5nm115nm,1.3s	8.08	276	P	Pn	03 48 17.2	-0.3
CISI	Cisompet, Garu 148nm,0.9s	9.93	273	P	Pn	03 48 43.2	+0.3
STKI	Sintang 61nm,0.7s	10.37	322	P	Pn	03 48 47.6	-1.4
CBJI	Citeko 302nm,0.8s	11.02	279	P	Pn	03 48 59.6	+1.7
SBUM	Sibu 1µm24nm,1.1s	11.97	332	P	Pn	03 49 11.2	+0.3
KSM	Kuching 56nm,1.1s	12.19	322	P	Pn	03 49 16.6	+2.7
FITZ	Fitzroy Crossi 32nm,0.7s	12.43	143	eP	Pn	03 49 17.8	+0.6
FITZ				eS	Sn	03 51 26.5	-8.5
FITZ	Fitzroy Crossi	12.43	143	ePn	Pn	03 49 17.8	+0.5
FITZ				Sn	Sn	03 51 33.0	-2.0
FITZ	Fitzroy Crossi 0.4nm,0.3s,baz=336,slow=4.7,SNR=12	12.43	143	Pn	Pn	03 49 17.6	+0.4
FITZ				Sn	Sn	03 51 33.0	-2.0
FITZ	0.8nm,0.3s,baz=178,slow=16,SNR=4.3 Fitzroy Crossi 67nm,1.0s	12.43	143	P	Pn	03 49 26.2	+9.0
MBWA	Marble Bar	13.00	172	ePn	Pn	03 49 25.2	+0.2
MBWA				eS	Sn	03 51 38.6	-10
KNA	Kununurra 144nm,0.9s	13.07	126	P	Pn	03 49 26.7	+0.8
MYLDM	Lahad Datu 47nm,1.2s	13.32	3	P	Pn	03 49 37.7	+8.3
KLSI		13.46	284	P	Pn	03 49 37.9	+6.6
KASI	Kota Agung	13.49	281	P	Pn	03 49 40.3	+8.6
MDSI	Maura Dua 33nm,1.3s	14.04	284	P	Pn	03 49 42.5	+3.2
KKM	Kota Kinabalu 7.2nm,0.3s	14.25	354	ePn	Pn	03 49 42.6	+0.5
KAKA	Kakadu 47nm,0.8s	15.06	108	eP	Pn	03 49 51.1	-2.0
KAKA	Kakadu 160nm,0.8s	15.06	108	ePn	Pn	03 49 52.2	-0.9
KAKA				eSn	Sn	03 52 30.2	-9.0
KAKA	Kakadu 743nm98nm,0.8s	15.06	108	P	Pn	03 50 00.7	+7.6
KSI	Kapahiang 6µm131nm,1.0s	15.80	286	P	Pn	03 50 05.5	+2.8
DAV	Davao City (W) comp=Z,460nm,19.2s,baz=137,slow=40	17.04	27	LR	LR	03 57 42.0	
MYKOM	Kota Tinggi 45nm,1.6s	17.11	305	P	Pn	03 50 21.3	+2.0
SDSI	Sungai Dareh 1µm45nm,2.1s	17.85	293	P	Pn	03 50 30.2	+1.6
PPI	Padang Panjang 84nm,1.3s	18.99	293	P	Pn	03 50 43.5	+1.1
BAKI	Biak 3µm179nm,1.5s	19.51	70	P	Pn	03 50 54.6	+5.9
WRAB	Tennant Creek 54nm,0.9s	19.80	128	eP	Pn	03 50 50.9	-1.3
WRAB				eS	Sn	03 54 29.8	-4.3
WB2	Warramunga Arr	19.81	128	eP	Pn	03 50 50.7	-1.5
WB2				eS	Sn	03 54 31.8	-2.4
IPM	Ipoh 37nm,1.1s	20.96	306	P	P	03 51 07.4	+4.3
KULM	Kulim 38nm,1.1s,mb4.7	21.75	308	eP	P	03 51 13.1	+1.5
KULM	Kulim 40nm,1.5s,mb4.6	21.75	308	P	P	03 51 15.9	+4.3
ASAR	Alice Springs 39nm,0.9s,mb4.8,baz=324,slow=10,SNR=30	21.77	137	P	P	03 51 12.6	+0.9
ASAR	1.3nm,0.8s,baz=308,slow=23,SNR=4.2			S	S	03 55 14.1	+2.7
PSI	Prapat 33nm,1.1s,mb4.7,baz=162,slow=18,SNR=12	21.78	299	P	P	03 51 10.7	-1.3
KLBR	Kellerberrin 63nm,1.4s,mb4.9	23.26	180	eP	P	03 51 28.3	+0.8
KLBR				eS	S	03 55 37.2	-0.9
TPTI	66nm,1.3s,mb4.9	23.52	298	P	P	03 51 28.7	-1.7
FORT	Forrest 39nm,0.9s,mb4.9	24.41	158	eP	P	03 51 38.9	+0.6
FORT	Forrest 45nm,0.8s,mb5.0	24.41	158	eP	P	03 51 39.4	+1.2
NWAO	Narrogin (SRO)	24.60	181	eP	P	03 51 40.2	+0.2
NWAO				S	S	03 56 11.1	+11
NWAO	Narrogin (SRO) 13nm,0.9s,mb4.5,baz=12,slow=6.7,SNR=4.8	24.60	181	P	P	03 51 41.2	+1.3
NWAO	10nm,1.1s,baz=58,slow=15,SNR=2.1			S	S	03 56 05.6	+5.9
COEN	Coen 250nm,1.0s,mb5.7	25.52	105	eP	P	03 51 49.1	+0.5
COEN	Coen	25.52	105	P	P	03 51 49.9	+1.3
CTA	Charters Tower 11nm,0.8s,mb4.6	29.94	116	eP	P	03 52 29.6	+1.5
CTA	Charters Tower comp=Z,419nm,19.1s,MS4.1,baz=85,slow=40	29.94	116	P	P	03 52 28.4	+0.3
CTA				LR	LR	04 06 12.6	
CTA	Charters Tower 15nm,0.8s,mb4.7,baz=285,slow=12,SNR=13	29.94	116	P	P	03 52 28.4	+0.3
CTA	comp=Z,419nm,19.1s,MS4.1,baz=85,slow=40			LR	LR	04 06 12.6	
CTAO	Charters Tower	29.94	116	eP	P	03 52 28.5	+0.4
STKA	Stephens Creek 5.9nm,0.6s,mb4.6	32.30	140	eP	P	03 52 50.0	+1.2
STKA	Stephens Creek	32.30	140	eP	P	03 52 49.9	+1.0
STKA				PP	PP	03 54 00.2	-1.9
STKA				LR	LR	04 08 42.6	
STKA	Stephens Creek 9.9nm,0.8s,mb4.7,baz=325,slow=7.1,SNR=13	32.30	140	P	P	03 52 50.1	+1.3
STKA	comp=Z,216nm,20.9s,MS3.8,baz=176,slow=42			LR	LR	04 08 42.6	
CMAR	Chiang Mai Arr 5.8nm,0.8s,mb4.4,baz=149,slow=6.0,SNR=13	32.39	325	P	P	03 52 48.7	-0.9
CMAR	comp=Z,243nm,19.1s,MS3.9,baz=188,slow=41			LR	LR	04 08 29.4	
TOO	Toolangi	38.49	144	eP	P	03 53 44.7	+2.7
LSA	Lhasa 10nm,0.4s,mb5.1	45.59	327	eP	P	03 54 39.9	-0.1
ODAN	Odare 77nm,0.8s,mb5.7	45.67	321	eP	P	03 54 41.6	+0.9
TAPN	Taplejung 73nm,0.9s,mb5.6	45.82	322	eP	P	03 54 42.5	+0.7
LZH	Lanzhou	45.98	344	eP	P	03 54 51.5	+8.6
LZH				pP	pP	03 55 03.0	+12
LZH				sP	sP	03 55 07.0	+13
LZH	comp=Z,13nm,1.0s,mb4.8			pmax	pmax		
JHJ	Hachijo jima 2 comp=Z,112nm,21.3s,MS3.8,baz=245,slow=33	46.11	26	LR	LR	04 11 55.0	
RAMN	Ramite comp=Z,22nm,0.5s,mb5.3	46.23	320	eP	P	03 54 45.5	+0.4
KSRS	Korea Array comp=Z,4.1nm,1.0s,mb4.3,baz=187,slow=8.5,SNR=15	46.40	11	P	P	03 54 46.4	+0.1
KSRS				LR	LR	04 16 02.5	
JIRN	comp=Z,84nm,21.2s,MS3.7,baz=66,slow=39 Jiri comp=Z,59nm,0.7s,mb5.6	46.99	321	eP	P	03 54 51.6	+0.6
GUN	Gumba comp=Z,65nm,0.7s,mb5.6	47.36	320	eP	P	03 54 53.8	-0.1
PKI	Pulchoki comp=Z,22nm,0.7s,mb5.2	47.42	320	eP	P	03 54 53.9	-0.5
DMN	Daman comp=Z,45nm,0.9s,mb5.5	47.64	320	eP	P	03 54 55.6	-0.5
KKN	Kakani comp=Z,29nm,0.7s,mb5.4	47.66	320	eP	P	03 54 55.8	-0.4
BJT	Baijiatuan comp=Z,11nm,1.1s,mb4.8	48.01	358	eP	P	03 54 58.1	-0.6
BJI	Beijing	48.03	358	P	P	03 55 06.6	+7.7
BJI	comp=Z,11nm,1.1s,mb4.8			pmax	pmax		
GKN	Gorkha comp=Z,44nm,0.9s,mb5.5	48.22	320	eP	P	03 54 58.9	-1.6
MJAR	Matsushiro Arr comp=Z,1.3nm,0.7s,mb4.1,baz=201,slow=8.5,SNR=3.2	48.47	22	P	P	03 55 01.9	-0.4
MJAR				LR	LR	04 16 38.2	
KOLN	comp=Z,54nm,18.6s,MS3.6,baz=215,slow=38 Koldanda comp=Z,34nm,0.7s,mb5.5	48.73	318	eP	P	03 55 04.4	-0.1
GTA	Gaotai	50.24	342	eP	P	03 55 24.2	+8.4
GTA				pP	pP	03 55 35.3	+12
GTA				sP	sP	03 55 40.4	+14
GTA	comp=Z,8.0nm,0.7s,mb4.9			pmax	pmax		
MDJ	Mudanjiang comp=Z,11nm,0.8s,mb4.8	53.65	10	eP	P	03 55 40.7	-0.4
ULN	Ulaanbaatar comp=Z,7.0nm,1.0s,mb4.7	56.64	351	eP	P	03 56 03.0	+0.3
ULN				e	pP	03 56 11.6	+1.1
SONM	Songino Array comp=Z,6.9nm,0.8s,mb4.7,baz=172,slow=7.0,SNR=35	56.71	351	P	P	03 56 03.2	+0.1
RPZ	Rata Peaks comp=Z,40nm,1.0s,mb5.4	58.18	137	eP	P	03 56 15.0	+1.3
MK31	Makanchi Array	63.23	333	eP	P	03 56 47.9	0.0
MKAR	Makanchi Array	63.23	333	P	P	03 56 47.2	-0.8
MKAR	Makanchi Array comp=Z,3.2nm,0.8s,mb4.5,baz=134,slow=6.9,SNR=14	63.23	333	P	P	03 56 47.2	-0.8
TKM2	Tokmak 2 comp=Z,22nm,1.4s,mb5.0	63.75	327	eP	P	03 56 50.7	-0.8
UCH	Uchtor comp=Z,18nm,1.4s,mb4.9	63.89	325	eP	P	03 56 54.7	+2.3
AML	Almayashu comp=Z,25nm,1.1s,mb5.2	64.29	325	eP	P	03 56 54.4	-0.7
EKS2	Erkin-Say comp=Z,16nm,1.1s,mb5.0	64.59	325	eP	P	03 56 56.0	-0.9
KURK	Kurchatov comp=Z,19nm,1.3s,mb5.0	67.78	334	eP	P	03 57 17.2	-0.1
ZALV	Zalesovo Beam comp=Z,3.4nm,0.8s,mb4.4,baz=127,slow=3.9,SNR=10	67.89	340	P	P	03 57 16.4	-1.6
MAW	Mawson comp=Z,4.9nm,0.9s,mb4.4	69.58	200	eP	P	03 57 29.3	+1.0
MAW	Mawson comp=Z,4.6nm,0.7s,mb4.5,baz=44,slow=7.6,SNR=10	69.58	200	P	P	03 57 29.0	+0.7
BVAR	Borovoye Array comp=Z,0.6nm,0.4s,mb3.8,baz=142,slow=7.3,SNR=3.6	73.06	332	P	P	03 57 48.4	-1.1
BRVK	Borovoye comp=Z,8.9nm,1.0s,mb4.7	73.12	332	eP	P	03 57 50.2	+0.3
ABKAR	Akbulak array comp=Z,7.1nm,0.6s,mb4.8	76.25	325	eP	P	03 58 07.3	-0.8
ABKAR				e	pP	03 58 16.6	+0.3
SYO	Syowa Base	78.16	201⇑	eP	P	03 58 18.0	-0.5
MAIT	Maitri	87.53	199	eP	P	03 59 08.1	+1.0
MMAI	Mount Meron Ar comp=Z,77nm,20.3s,MS4.1,baz=195,slow=37	88.11	304	LR	LR	04 40 18.4	
BOSA	Boshof comp=Z,176nm,20.2s,MS4.5,baz=175,slow=31	88.35	241	LR	LR	04 31 25.5	
FINES	FINESS Array B comp=Z,48nm,20.2s,MS4.0,baz=316,slow=40	97.98	331	LR	LR	04 50 42.6	
TXAR	Lajitas Array	135.78	56	PKP			
CPUP	comp=Z,0.2nm,0.8s,baz=205,slow=1.9,SNR=3.1 Villa Florida comp=Z,2.2nm,0.6s,baz=157,slow=2.7,SNR=8.8	145.34	188	PKPbc	PKPbc	04 05 57.5	-0.5

*NEIC **07** 03:52:30.9,17.°18N×96.°77W,h56km,MD3.5(MEX),After MEX.*

MEX 07 03:52:31.1±1.1,17.°17N×96.°76W,h55km±6km,MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OXX	Oaxaca	0.10	161	iP	Pn	03 52 38.2	-1.3
OXX				iS	Sn	03 52 45.0	-0.5
OXX	Oaxaca	0.10	161	iP	Pn	03 52 38.2	-1.3
OXX				iS	Sn	03 52 44.7	-0.8
VHO	Vista Hermosa	0.10	168	iP	Pn	03 52 37.4	-2.1
VHO				iS	Sn	03 52 44.0	-1.5
VHO	Vista Hermosa	0.10	168	iP	Pn	03 52 37.7	-1.9
VHO				iS	Sn	03 52 44.0	-1.5
UTMO	Huajuapan	1.19	303	iP	Pn	03 52 50.9	-0.7
UTMO				iS	Sn	03 53 04.5	-2.3
TPIG	Tehuac#an	1.37	335	iP	Pn	03 52 52.4	-1.5
TPIG				iS	Sn	03 53 09.9	-1.1
PNIG	Pinotepa	1.53	240	iP	Pn	03 52 54.8	-1.2
PNIG				iS	Sn	03 53 13.3	-1.5
PNIG	Pinotepa	1.53	240	iP	Pn	03 52 54.8	-1.2
PNIG				iS	Sn	03 53 12.4	-2.4
HUIG	Huatulco	1.53	156	iP	Pn	03 52 55.2	-0.9
HUIG				iS	Sn	03 53 12.2	-2.7
HUIG	Huatulco	1.53	156	iP	Pn	03 52 55.2	-0.9
HUIG				iS	Sn	03 53 12.2	-2.7
CMIG	Matias Romero	1.79	92	eP	Pn	03 52 55.1	-4.6
CMIG				iS	Sn	03 53 20.6	-0.7
CMIG	Matias Romero	1.79	92	eP	Pn	03 52 57.7	-1.9
CMIG				iS	Sn	03 53 19.8	-1.5
PPM	Popocatepetl	2.59	317	eP	Pn	03 53 10.0	-0.6
PPM				iS	Sn	03 53 39.9	-1.0
CAIG	El Cayaco	3.36	268	iP	Pn	03 53 17.8	-3.3
CAIG				iS	Sn	03 53 50.7	-9.1
CAIG	El Cayaco	3.36	268	iP	Pn	03 53 18.7	-2.4
TEIG	Tepich	8.59	68	ePn	Pn	03 54 31.0	-1.8
TEIG				eS	Sn	03 55 59.3	-9.0

*ISCJB **07** 04:09:18.7±0.5,17.°70S±0.°04×69.°33W±0.°07,h162km±6km, mb4.0/3,Error ellipse: s-maj=10.8km s-min=6.3km az=5.3*

*NEIC **07** 04:09:18.3±0.8,17.°84S×69.°40W,h149km±9km, MG4.0(GUC),Error ellipse: s-maj=14.7km s-min=11.2km az=65.0*

*GUC **07** 04:09:20.4±0.3,17.°92S×69.°49W,h175km±3km,ML4.0*

*IDC **07** 04:09:20.4±4.0,17.°64S×69.°18W,h157km±22km,mb3.9/3, mb1 3.7/4,mb1mx3.4/15,mbtmp3.7/4,Error ellipse: s-maj=54.1km s-min=28.8km az=46.0*

ISC 07 04:09:19.6±0.5,17.°69S±0.°04×69.°35W±0.°07,h156km±6km, n16,σ0°90/25,mb4.0/3,2C-3D,Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNMC	Miæe Miæ	1.46	189⇓	iP	Pn	04 09 50.4	+1.2
MNMC				iS	Sn	04 10 13.1	+1.1
MNMC	comp=N,1µm,0.3s			AML	AML	04 10 17.6	
LPAZ	La Paz	1.81	40	ePn	Pn	04 09 53.5	+0.4
LPAZ				S	Sn	04 10 17.9	-0.7
LPAZ	La Paz comp=N,197nm,0.3s,baz=233,slow=5.9	1.81	40	P	Pn	04 09 53.5	+0.4
LPAZ	comp=N,4.7nm,0.3s,baz=300,slow=16,SNR=2.7			S	Sn	04 10 17.9	-0.7
PSGC	Pisagua	2.04	201⇓	iP	Pn	04 09 55.7	+0.1
PSGC				eS	Sn	04 10 22.5	-0.8
PSGC	comp=N,1µm,0.3s			AML	AML	04 10 23.1	
HMBC	Humberston	2.63	191	eP	Pn	04 10 02.7	+0.1
HMBC				eS	Sn	04 10 35.1	-0.9
PB01	Plate Boundary	3.34	182⇓	iP	Pn	04 10 12.0	+0.4
PB01				eS	Sn	04 10 50.7	-1.2
PB01	comp=N,337nm,0.3s			AML	AML	04 10 53.8	
PB04	Plate Boundary	4.56	182	eP	Pn	04 10 28.6	+1.3
PB04				iS	Sn	04 11 21.1	+1.0
MECH	Mejillones	5.49	191⇑	eP	Pn	04 10 39.4	-0.2
MECH				eS	Sn	04 11 40.6	-1.6
CEN1	Los Morros	5.73	188⇑	iP	Pn	04 10 44.6	+1.8
ANCH	Antofagasta	6.05	189	P	Pn	04 10 43.1	-3.9
ANCH	Antofagasta	6.05	189	iP	Pn	04 10 43.1	-3.9
NNA	Nana comp=N,18nm,0.3s	9.20	307	ePn	Pn	04 11 28.6	-0.3
NNA				eS	Sn	04 13 10.8	-0.4
CPUP	Villa Florida comp=N,0.6nm,0.3s,baz=312,slow=8.1,SNR=4.8	14.07	130	P	Pn	04 12 31.0	-1.2
DBIC	Dimbokro comp=N,1.9nm,0.7s,mb3.9,baz=223,slow=5.2,SNR=4.7	68.10	75	P	P	04 20 02.8	-0.3
ULM	Lac du Bonnet comp=N,2.8nm,0.4s,mb4.4,baz=154,slow=4.9,SNR=3.5	71.57	342	P	P	04 20 24.1	+0.6
TORD	Torodi Ar. Bea comp=N,1.2nm,0.5s,mb3.8,baz=261,slow=5.3,SNR=40	76.50	71	P	P	04 20 52.8	0.0

*NEIC **07** 04:13:28.6,52.°10N×175.°46W,h4km,ML3.6(AEIC),After AEIC.*

*IDC **07** 04:13:28.7±1.1,52.°10N×175.°68W,h0km,mb3.8/5, mb1 4.0/7,mb1mx3.7/26,mbtmp3.8/7,ML4.2/2,MS3.5/1, Ms1 3.5/1,ms1mx2.8/30,Error ellipse: s-maj=37.5km s-min=21.2km az=177.0*

*ISCJB **07** 04:13:29.4±1.1,52.°2N±0.°2×175.°54W±0.°08,h15km±12km, mb3.8/5,Error ellipse: s-maj=29.9km s-min=6.0km az=168.1*

ISC 07 04:13:29.9±0.8,52.°1N±0.°2×175.°47W±0.°06,h8km±6km,n14, σ0°93/16,mb3.8/5,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	Great Sitkin T	0.36	273	ePg	Pg	04 13 37.3	+0.3
GSTR				eS	Sg	04 13 42.8	+1.0
ADK	Adak	0.78	256	ePg	Pg	04 13 44.5	-0.4
ADK				eS	Sg	04 13 54.5	-0.4
ATKA	Atka Island	0.80	81	P	Pg	04 13 44.2	-0.9
ATKA				S	Sg	04 13 55.6	+0.1
AMKA	Amchitka	3.33	260	P	Pn	04 14 21.5	-0.7
AKUT	Akutan 74nm,1.0s	6.19	67	ePn	Pn	04 15 08.8	+7.3
KDAK	Kodiak Island	14.30	57	Pn	Pn	04 16 55.7	+3.3
KDAK	Kodiak Island 0.8nm,0.3s,baz=299,slow=12,SNR=8.3	14.30	57	Pn	Pn	04 16 55.7	+3.3

GSTR					*e*S		**Sg**	**04 21 13.1**	**+0.9**
ADK	**Adak**	**0.79**	**252**		*e*Pg		**Pg**	**04 21 15.1**	**-0.3**
ADK					*e*S		**Sg**	**04 21 24.5**	**-1.2**
ATKA	**Atka Island**	**0.79**	**84**		P		**Pg**	**04 21 15.2**	**-0.3**
ATKA					S		**Sg**	**04 21 26.1**	**+0.3**
AMKA	**Amchitka**	**3.33**	**259**		P		**Pn**	**04 21 52.4**	**+0.2**
UNV	**Unalaska Valle**	**5.69**	**69**		P		**Pn**	**04 22 23.8**	**-0.7**
SPIA	**Saint Paul Isl**	**5.89**	**29**		P		**Pn**	**04 22 27.3**	**-0.1**
KDAK	**Kodiak Island**	**14.28**	**58**		Pn		**Pn**	**04 24 26.0**	**+4.0**
	0.3nm,0.3s,baz=295,slow=8.8,SNR=4.0								
ILAR	**Eielson Array**	**19.37**	**38**		P		**Pn**	**04 25 25.9**	**-0.7**
	0.1nm,0.3s,baz=233,slow=8.0,SNR=14								
ILAR					LR		LR	04 33 48.1	
	comp=Z,79nm,18.0s,baz=299,slow=39								
NVAR	**Mina Array Bea**	**41.42**	**86**		P		**P**	**04 28 51.2**	**+4.8**
	0.7nm,0.7s,mb3.4,baz=311,slow=8.7,SNR=6.0								
TXAR	**Lajitas Array**	**56.51**	**84**		P		**P**	**04 30 43.4**	**+1.1**
	0.5nm,0.7s,mb3.7,baz=304,slow=6.3,SNR=4.4								

NEIC ***07*** *04:33:53.0,52.°08N×175.°45W,h5km,ML4.1(PMR), ML3.8(AEIC), After AEIC.*

ISCJB ***07*** *04:33:53.4±1.0,52.°30N±0.°09×175.°54W±0.°07,h14km±8km, mb3.9/6,MS3.2/4, Error ellipse: s-maj=15.6km s-min=6.5km az=164.9*

IDC ***07*** *04:33:53.9±1.3,52.°29N×175.°79W,h0km, mb3.8/5, mb1 4.0/7,mb1mx3.7/26,mbtmp3.7/7,ML3.8/2,MS3.2/4, Ms1 3.2/4,ms1mx2.9/27, Error ellipse: s-maj=40.6km s-min=22.7km az=180.0*

ISC 07 04:33:54.0±0.9,52.°2N±0.°1×175.°50W±0.°07,h7km±9km,n19, σ0§85/18,mb3.9/6,MS3.2/4,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.37**	**249**	*e*Pg	**Pg**	**04 34 01.7**	**+0.5**
GSTR				*e*S	**Sg**	**04 34 07.7**	**+1.7**
ATKA	**Atka Island**	**0.80**	**91**	P	**Pg**	**04 34 08.8**	**-0.5**
ATKA				S	**Sg**	**04 34 19.9**	**+0.2**
ADK	**Adak**	**0.81**	**245**	*e*Pg	**Pg**	**04 34 08.3**	**-1.2**
ADK				*e*S	**Sg**	**04 34 19.4**	**-0.6**
AMKA	**Amchitka**	**3.34**	**257**	P	**Pn**	**04 34 45.6**	**-0.9**
SPIA	**Saint Paul Isl**	**5.82**	**29**	P	**Pn**	**04 35 21.0**	**+0.4**
KDAK	**Kodiak Island**	**14.24**	**58**	Pn	**Pn**	**04 37 19.4**	**+3.6**
	0.2nm,0.3s,baz=255,slow=6.3,SNR=2.5						
ILAR	**Eielson Array**	**19.30**	**38**	P	**Pn**	**04 38 19.1**	**-1.0**
	0.2nm,0.3s,baz=233,slow=10,SNR=24						
INK	**Inuvik**	**25.59**	**35**	LR	LR	04 49 51.2	
	comp=Z,71nm,18.7s,MS3.2,baz=234,slow=37						
DLBC	**Dease Lake**	**26.17**	**58**	LR	LR	04 49 00.5	
	comp=Z,31nm,18.8s,MS2.9,baz=304,slow=34						
MDJ	**Mudanjiang**	**36.45**	**280**	P	**P**	**04 40 58.8**	**-0.3**
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,8.0nm,2.8s,mb4.2						
NVAR	**Mina Array Bea**	**41.43**	**86**	P	**P**	**04 41 45.2**	**+4.3**
NVAR	**Mina Array Bea**	**41.43**	**86**	P	**P**	**04 41 45.2**	**+4.3**
	comp=Z,1.3nm,0.8s,mb3.6,baz=294,slow=7.2,SNR=9.9						
KSRS	**Korea Array**	**41.67**	**272**	LR	LR	04 58 12.5	
	comp=Z,20nm,18.9s,MS3.0,baz=53,slow=35						
SONM	**Songino Array**	**48.09**	**298**	LR	LR	05 03 33.2	
	comp=Z,51nm,18.6s,MS3.5,baz=53,slow=37						
TXAR	**Lajitas Array**	**56.51**	**84**	P	**P**	**04 43 37.4**	**+0.7**
TXAR	**Lajitas Array**	**56.51**	**84**	P	**P**	**04 43 37.4**	**+0.7**
	comp=Z,0.5nm,0.6s,mb3.7,baz=301,slow=4.9,SNR=7.5						
MKAR	**Makanchi Array**	**61.09**	**310**	P	**P**	**04 44 08.7**	**+0.4**
	comp=Z,0.3nm,0.2s,mb4.0,baz=48,slow=8.6,SNR=3.5						
BVAR	**Borovoye Array**	**61.54**	**321**	P	**P**	**04 44 11.2**	**0.0**
	comp=Z,1.0nm,0.5s,mb4.2,baz=58,slow=8.7,SNR=4.9						
ASAR	**Alice Springs**	**87.52**	**225**	P	**P**	**04 46 42.5**	**+0.3**
	comp=Z,0.3nm,0.7s,mb3.7,baz=23,slow=4.5,SNR=3.2						

BJI ***07*** *05:26:45.6,52.°10N×175.°50W,h6km,mB4.9/4,mb4.6/9, Ms4.7/3,Ms7 4.4/3*

NEIC ***07*** *05:26:46.7,52.°10N×175.°46W,h6km,mb4.4/6, ML4.2(PMR),ML3.8(AEIC), After AEIC.*

ISCJB ***07*** *05:26:47.3±0.4,52.°20N±0.°09×175.°56W±0.°06,h10km, mb4.2/15,MS3.5/4, Error ellipse: s-maj=13.3km s-min=4.4km az=163.8*

IDC ***07*** *05:26:47.3±1.1,52.°27N×175.°68W,h0km,mb3.9/6, mb1 4.1/8,mb1mx3.8/27,mbtmp3.9/8,ML3.3/2,MS3.6/5, Ms1 3.6/5,ms1mx3.1/31, Error ellipse: s-maj=34.3km s-min=21.0km az=172.0*

ISC 07 05:26:49.3±0.5,52.°1N±0.°1×175.°60W±0.°07,h10km,n38, σ1§45/37,mb4.2/15,MS3.5/4,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.28**	**262**	*e*Pn	**Pg**	**05 26 55.4**	**+0.4**
ADK	**Adak**	**0.71**	**250**	P	**Pg**	**05 27 01.9**	**-1.1**
ADK				S	**Sg**	**05 27 13.4**	**+1.0**
ATKA	**Atka Island**	**0.87**	**85**	P	**Pg**	**05 27 02.0**	**-4.0**
ATKA				S	**Sg**	**05 27 13.2**	**-4.1**
AMKA	**Amchitka**	**3.26**	**259**	P	**Pn**	**05 27 39.8**	**-0.5**
NIKO	**Nikolski**	**4.20**	**76**	*e*Pn	**Pn**	**05 27 52.2**	**-1.2**
UNV	**Unalaska Valle**	**5.76**	**69**	P	**Pn**	**05 28 13.3**	**-1.4**
SPIA	**Saint Paul Isl**	**5.93**	**29**	P	**Pn**	**05 28 13.9**	**-3.2**
AKUT	**Akutan**	**6.25**	**67**	*e*Pn	**Pn**	**05 28 25.7**	**+4.3**
	42nm,0.7s						
OHAK	**Old Harbor**	**13.85**	**60**	*e*Pn	**Pn**	**05 30 04.3**	**-1.1**
	40nm,1.8s						
KDAK	**Kodiak Island**	**14.34**	**58**	*e*Pn	**Pn**	**05 30 16.2**	**+4.1**
KDAK	**Kodiak Island**	**14.34**	**58**	Pn	**Pn**	**05 30 11.9**	**-0.2**
	0.2nm,0.3s,baz=3.5,slow=18,SNR=3.1						
TTA	**Tatalina**	**15.01**	**36**	*e*Pn	**Pn**	**05 30 23.4**	**+2.2**
RSO	**Redoubt South**	**15.11**	**48**	*e*Pn	**Pn**	**05 30 27.0**	**+4.5**
SLKM	**Skilak Lake**	**16.29**	**49**	*e*Pn	**Pn**	**05 30 41.0**	**+3.1**
COLA	**College**	**19.10**	**37**	*e*P	**Pn**	**05 31 14.0**	**+1.5**
	5.8nm,0.9s						
ILAR	**Eielson Array**	**19.41**	**38**	P	**Pn**	**05 31 12.9**	**-3.5**
	0.0nm,0.3s,baz=241,slow=10,SNR=19						
ILAR				LR	LR	05 39 17.0	
	comp=Z,235nm,18.7s,baz=262,slow=39						
MENT	**Mentasta**	**20.01**	**45**	*e*P	**P**	**05 31 23.2**	**+1.5**
EGAK	**Eagle**	**21.67**	**41**	*e*P	**P**	**05 31 38.9**	**-0.8**
	26nm,0.9s,mb4.7						
DAWY	**Dawson**	**22.19**	**43**	*e*P	**P**	**05 31 45.6**	**+0.4**
INK	**Inuvik**	**25.70**	**35**	P	**P**	**05 32 16.9**	**-2.2**
	4.2nm,0.9s,mb4.0,baz=225,slow=8.6,SNR=5.0						
INK				LR	LR	05 43 15.1	
	comp=Z,160nm,18.4s,MS3.6,baz=242,slow=39						
BBB	**Bella Bella**	**28.73**	**71**	LR	LR	05 42 50.5	
	comp=Z,55nm,19.2s,MS3.2,baz=559,slow=34						
MDJ	**Mudanjiang**	**36.40**	**280**	P	**P**	**05 33 50.6**	**-3.0**
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,10.0nm,2.8s,mb4.2						
YBH	**Yreka Blue Hor**	**36.82**	**85**	P	**P**	**05 33 59.9**	**+2.7**
	comp=Z,1.1nm,0.8s,mb3.8,baz=323,slow=10,SNR=4.8						
CN2	**Changchun**	**39.35**	**282**	*e*P	**P**	**05 34 17.9**	**-0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
NVAR	**Mina Array Bea**	**41.50**	**86**	P	**P**	**05 34 37.9**	**+1.6**
	comp=Z,1.5nm,0.9s,mb3.6,baz=298,slow=8.1,SNR=7.4						
KSRS	**Korea Array**	**41.60**	**272**	LR	LR	05 48 53.3	
	comp=Z,58nm,20.1s,MS3.5,baz=289,slow=32						
DUG	**Dugway**	**43.77**	**80**	*e*P	**P**	**05 34 58.0**	**+3.3**
	comp=Z,4.3nm,1.3s,mb4.0						
BW06	**Boulder Array**	**44.19**	**75**	*e*P	**P**	**05 35 00.1**	**+2.0**
	comp=Z,43nm,3.0s						
GSC	**Goldstone**	**44.42**	**88**	*e*P	**P**	**05 35 01.8**	**+1.8**
	comp=Z,3.5nm,0.8s,mb4.1						
GLA	**Glamis**	**47.14**	**89**	*e*P	**P**	**05 35 19.6**	**-1.9**
	comp=Z,4.1nm,0.7s,mb4.5						
PV01	**Paradox Valley**	**47.63**	**79**	*e*P	**P**	**05 35 25.5**	**+0.2**
	comp=Z,224nm,1.0s						
SONM	**Songino Array**	**48.07**	**298**	LR	LR	05 55 46.8	
	comp=Z,105nm,20.0s,MS3.8,baz=55,slow=36						
TXAR	**Lajitas Array**	**56.59**	**84**	P	**P**	**05 36 31.3**	**-0.7**
	comp=Z,0.7nm,0.8s,mb3.8,baz=305,slow=5.7,SNR=11						
MKAR	**Makanchi Array**	**61.10**	**310**	P	**P**	**05 37 02.6**	**-0.6**
	comp=Z,0.3nm,0.3s,mb4.0,baz=64,slow=5.6,SNR=5.6						
BVAR	**Borovoye Array**	**61.57**	**321**	P	**P**	**05 37 05.4**	**-0.9**
	comp=Z,1.2nm,0.7s,mb4.1,baz=58,slow=14,SNR=4.9						
GYA	**Guiyang**	**62.20**	**278**	*e*P	**P**	**05 37 11.7**	**+0.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
KMI	**Kunming**	**65.57**	**280**	P	**P**	**05 37 33.7**	**+0.6**
KMI				pP	pP	05 37 38.1	+1.8
KMI				sP	sP	05 37 40.1	+2.6
KMI				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.8						
ASAR	**Alice Springs**	**87.41**	**225**	P	**P**	**05 39 35.9**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.9,baz=27,slow=6.3,SNR=4.2						

ISCJB ***07*** *05:35:15.7±0.6,36.°85N±0.°06×71.°3E±0.°1,h108km±14km, Error ellipse: s-maj=15.5km s-min=6.2km az=31.4*

NEIC ***07*** *05:35:16.7±0.7,36.°82N×71.°38E,h103km±16km,mb4.0/4, Error ellipse: s-maj=17.3km s-min=9.5km az=114.0*

NNC ***07*** *05:35:16.9±6.3,37.°25N×70.°88E,h11km±34km,mb4.2, mpv4.2,Error ellipse: s-maj=44.6km s-min=37.9km az=173.0*

IDC ***07*** *05:35:17.7±8.4,36.°82N×71.°46E,h108km±59km,mb3.7/1, mb1 3.8/5,mb1mx3.3/26,mbtmp3.8/5,MS2.8/2,Ms1 2.9/2, ms1mx2.3/34,Error ellipse: s-maj=73.4km s-min=51.3km az=163.0*

ISC 07 05:35:16.9±0.6,36.°80N±0.°06×71.°4E±0.°1,h104km±12km, n31,σ0§91/38,3C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.96**	**221**	*e*Pn	**Pn**	**05 36 02.2**	**0.0**
KBL				*e*Sn	**Sn**	**05 36 37.5**	**+0.4**
NIL	**Nilore**	**3.49**	**154**	*e*Pn	**Pn**	**05 36 09.2**	**-0.2**
KSH	**Kashi**	**4.51**	**52**	*i*Pn	**Pn**	**05 36 20.8**	**-2.2**
KSH				Sn	**Sn**	**05 37 08.3**	**-6.1**
KSH				smax			
	comp=N,100nm,0.5s						
KSH				smax			
	comp=E,81nm,0.6s						
AML	**Almayashu**	**5.61**	**18**	P	**Pn**	**05 36 38.0**	**+0.1**
	SNR=18						
AML	**Almayashu**	**5.61**	**18**	*e*Pn	**Pn**	**05 36 37.9**	**0.0**
	comp=E,34nm,0.5s						
AML				*e*Sn	**Sn**	**05 37 40.4**	**-0.6**
UCH	**Uchtor**	**5.93**	**23**	P	**Pn**	**05 36 42.9**	**+0.7**
	SNR=23						
UCH	**Uchtor**	**5.93**	**23**	*e*Pn	**Pn**	**05 36 42.5**	**+0.3**
UCH				*e*Sn	**Sn**	**05 37 49.3**	**+0.5**
KZA	**Kyzart**	**6.05**	**28**	P	**Pn**	**05 36 44.5**	**+0.6**
	SNR=22						
EKS2	**Erkin-Say**	**6.13**	**17**	P	**Pn**	**05 36 45.3**	**+0.4**
	SNR=18						
AAK	**Ala-Archa**	**6.29**	**21**	P	**Pn**	**05 36 47.9**	**+0.8**
	SNR=8.7						
AAK	**Ala-Archa**	**6.29**	**21**	*e*P	**Pn**	**05 36 47.7**	**+0.6**
	comp=E,30nm,1.1s						
AAK	**Ala-Archa**	**6.29**	**21**	P	**Pn**	**05 36 48.0**	**+0.8**
	comp=E,5.5nm,0.3s,baz=186,slow=6.3,SNR=24						
AAK				S	**Sn**	**05 37 58.5**	**+0.9**
	comp=E,0.9nm,0.3s,baz=328,slow=21,SNR=8.5						
KK31	**Karatay Array**	**6.33**	**354**	Pn	**Pn**	**05 36 45.0**	**-2.7**
	comp=E,9.2nm,0.5s,baz=179,slow=13,SNR=72						
KK31				⇓Sn	**Sn**	**05 37 52.2**	**-6.2**
	comp=E,4.9nm,0.5s,baz=182,slow=23,SNR=4.1						
KK31				⇓Lg		05 38 22.0	
	comp=E,7.4nm,0.5s,baz=178,slow=31,SNR=4.5						
ULHL	**Ulahol**	**6.60**	**33**	P	**Pn**	**05 36 51.7**	**+0.4**
	SNR=5.4						
CHMS	**Chumysh**	**6.71**	**22**	P	**Pn**	**05 36 52.9**	**+0.2**
	SNR=20						
USP	**Ospenovka**	**6.88**	**19**	P	**Pn**	**05 36 54.6**	**-0.5**
	SNR=15						
TKM2	**Tokmak 2**	**6.91**	**27**	⇑Pn	**Pn**	**05 36 55.7**	**+0.2**
	comp=E,21nm,0.9s						
TKM2				⇑Sn	**Sn**	**05 38 12.5**	**-0.1**
	comp=E,4.5nm,0.8s						
TKM2				⇑Lg		05 38 50.5	
	comp=E,4.6nm,0.8s						
TKM2	**Tokmak 2**	**6.91**	**27**	P	**Pn**	**05 36 56.1**	**+0.6**
	SNR=21						
MK31	**Makanchi Array**	**12.86**	**36**	*e*Pn	**Pn**	**05 38 15.8**	**+0.1**
MKAR	**Makanchi Array**	**12.86**	**36**	P	**Pn**	**05 38 15.4**	**-0.2**
	comp=E,0.4nm,0.3s,baz=223,slow=14,SNR=9.9						
KURK	**Kurchatov**	**14.85**	**18**	*e*P	**Pn**	**05 38 44.2**	**+2.9**
	comp=E,1.2nm,0.6s						
AB31	**Akbulak array**	**14.98**	**330**	P	**Pn**	**05 38 37.6**	**-5.4**
	comp=E,0.5nm,0.4s,baz=170,slow=11,SNR=22						
ABKAR	**Akbulak array**	**14.98**	**330**	*e*Pn	**Pn**	**05 38 37.7**	**-5.3**
	comp=E,1.0nm,0.4s						
BVAR	**Borovoye Array**	**16.24**	**358**	P	**Pn**	**05 38 55.9**	**-2.8**
	comp=E,0.4nm,0.3s,baz=172,slow=11,SNR=6.9						
AKTK	**Aktyubinsk**	**16.68**	**329**	P	**Pn**	**05 39 04.4**	**+0.2**
AKTK				S	**S**	**05 41 57.8**	**-16**
AKTO	**Aktyubinsk**	**16.68**	**329**	P	**Pn**	**05 39 04.4**	**+0.2**
	comp=E,0.7nm,0.3s,baz=137,slow=9.7,SNR=14						
AKTO				S	**S**	**05 41 57.8**	**-16**
	comp=E,0.1nm,0.3s,baz=217,slow=9.8,SNR=5.0						
ZALV	**Zalesovo Beam**	**19.51**	**24**	P	**P**	**05 39 35.7**	**0.0**
ZALV	**Zalesovo Beam**	**19.51**	**24**	P	**P**	**05 39 35.7**	**0.0**
	comp=E,1.5nm,0.3s,baz=219,slow=12,SNR=12						
ARCES	**ARCESS Array B**	**40.99**	**337**	P	**P**	**05 42 49.5**	**+0.4**
	comp=E,2.2nm,0.9s,baz=113,slow=9.3,SNR=5.2						
NOA	**NORSAR Array B**	**44.33**	**323**	LR	LR	06 02 11.3	
	comp=E,12nm,19.8s,baz=5.0,slow=36						
TGY	**Tagaytay City**	**49.48**	**104**	LR	LR	06 07 46.8	
	comp=E,11nm,21.9s,baz=186,slow=39						

BJI ***07*** *05:39:18.3,21.°68N×143.°32E,h248km,mB4.5/11, mb4.3/19*

MOS ***07*** *05:39:23.5±0.8,21.°96N×142.°86E,h261km,mb4.4/10, Error ellipse: s-maj=17.3km s-min=7.4km az=105.3*

ISCJB ***07*** *05:39:23.2±0.7,21.°97N±0.°04×142.°86E±0.°06, h252km±5km,mb4.2/47, Error ellipse: s-maj=9.3km s-min=6.1km az=170.6*

IDC ***07*** *05:39:25.8±2.9,22.°02N×142.°86E,h266km±27km, mb3.8/20,mb1 3.9/22,mb1mx3.8/30,mbtmp3.8/22,Error ellipse: s-maj=15.2km s-min=12.2km az=97.0*

NEIC ***07*** *05:39:25.0±1.0,21.°96N×142.°82E,h259km±10km, mb4.2/15,Error ellipse: s-maj=7.8km s-min=5.3km az=89.0*

JMA ***07*** *05:39:25.1±0.2,22.°32N×143.°76E,h273km,M4.7*

ISC 07 05:39:24.3±0.6,21.°99N±0.°04×142.°87E±0.°06,h248km±5km, h255km±3.5km:pP-P,n107,σ0§91/115,mb4.2/47,2C-2D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**4.67**	**352**	P	**Pn**	**05 40 36.6**	**+0.7**
JHHJ				*e*S	**S**	**05 41 32.2**	**-0.8**
CBIJ	**Chichi jima**	**5.12**	**353**	P	**Pn**	**05 40 41.1**	**-0.4**
CBIJ				*e*S	**S**	**05 41 40.6**	**-2.5**
GUMO	**Guam**	**8.57**	**167**	*e*Pn	**Pn**	**05 41 24.3**	**-0.5**
JHJ	**Hachijo jima 2**	**11.42**	**347**	P	**Pn**	**05 42 00.7**	**0.0**
	7.0nm,0.3s,baz=78,slow=20,SNR=4.1						
BSO1	**Boso 1**	**12.73**	**353**	P	**Pn**	**05 42 16.0**	**-0.8**
BSO3	**Boso 3**	**12.93**	**351**	P	**Pn**	**05 42 17.8**	**-1.6**
BSO3				*e*S	**S**	**05 44 36.5**	**-6.6**
JIE	**Ise**	**13.49**	**338**	P	**Pn**	**05 42 27.7**	**+1.4**
JOD2	**Odawara 2**	**13.64**	**347**	P	**Pn**	**05 42 28.5**	**+0.5**
JNY	**Yasuok**	**14.03**	**343**	P	**Pn**	**05 42 33.0**	**+0.3**
JTO	**Tosashimizu**	**14.03**	**323**	P	**Pn**	**05 42 37.4**	**+4.6**
JAO	**Obara**	**14.11**	**341**	P	**Pn**	**05 42 34.4**	**+0.6**
JHU	**Hanno**	**14.17**	**348**	P	**Pn**	**05 42 34.5**	**+0.1**
JEG	**Eigenji**	**14.28**	**338**	P	**Pn**	**05 42 37.3**	**+1.5**
JRY	**Ryogami san**	**14.40**	**347**	P	**Pn**	**05 42 38.1**	**+0.8**
JAG	**Ashikaga**	**14.69**	**349**	P	**Pn**	**05 42 40.1**	**-0.7**
JAG				*e*S	**S**	**05 45 11.4**	**-12**
MJAR	**Matsushiro Arr**	**15.06**	**345**	P	**Pn**	**05 42 45.5**	**+0.3**
	2.8nm,0.3s,baz=176,slow=11,SNR=10						
MAJO	**Matsushiro**	**15.06**	**345**	*e*P	**Pn**	**05 42 45.4**	**+0.2**
MAT	**Matsushiro**	**15.06**	**345**	P	**Pn**	**05 42 45.4**	**+0.2**
MAT				S	**S**	**05 45 28.2**	**-3.1**
MAT	**Matsushiro**	**15.06**	**345**	P	**Pn**	**05 42 45.2**	**0.0**
JHS	**Saijyo**	**15.53**	**329**	P	**Pn**	**05 42 52.5**	**+1.7**
ERM	**Erimo**	**19.97**	**1**	*e*P	**P**	**05 43 38.0**	**0.0**
	25nm,1.0s						
ERM	**Erimo**	**19.97**	**1**	*e*P	**P**	**05 43 38.0**	**0.0**
ERM				pmax	pmax		
	comp=Z,25nm,1.0s						
KSRS	**Korea Array**	**20.11**	**323**	P	**P**	**05 43 39.1**	**-0.4**
	comp=Z,22nm,0.6s,baz=146,slow=8.7,SNR=72						
VLA	**Vladivostok**	**22.97**	**339**	*i*P	**P**	**05 44 09.4**	**+2.2**
VLA				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.0						
NJ2	**Nanjing**	**23.58**	**300**	*e*P	**P**	**05 44 13.7**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
MDJ	**Mudanjiang**	**25.08**	**337**	P	**P**	**05 44 27.1**	**+0.8**
MDJ				pP	pP	05 45 13.1	-0.1
MDJ				S	**S**	**05 48 34.8**	**+3.0**
MDJ				sS	sS	05 49 58.2	-0.7
MDJ				ScP	ScP	05 51 09.9	+1.1
MDJ				PcS	PcS	05 51 34.5	+0.6
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,22nm,4.1s						
HABR	**Khabarovsk**	**27.16**	**349**	*e*P	**P**	**05 44 44.3**	**-0.4**
HABR						05 47 55.8	
HABR				S	**S**	**05 49 01.7**	**-2.7**
HABR				pmax	pmax		
	comp=N,12nm,0.8s						
HABR				pmax	pmax		
	comp=E,37nm,1.1s						
HABR				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.0						
HABR				MLR	MLR		
	comp=Z,62nm,14.0s						
KLR	**Kul'dur**	**28.59**	**345**	*e*P	**P**	**05 44 53.2**	**-4.2**
KKM	**Kota Kinabalu**	**30.25**	**242**	*e*P	**P**	**05 45 11.3**	**-1.1**
	comp=Z,4.7nm,0.4s,mb4.5						
HHC	**Hu-ho-hao-te**	**32.42**	**313**	*e*P	**P**	**05 45 31.7**	**+0.5**
HHC				pP	pP	05 46 22.7	+2.0
HHC				sP	sP	05 46 51.2	+1.8
HHC				PcP	PcP	05 48 13.5	+1.3
HHC				*e*S	**S**	**05 50 25.7**	**-1.2**
HHC				sS	sS	05 51 54.7	-1.1
HHC				PcS	PcS	05 51 58.1	+0.7
HHC				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.6						
HHC				pmax	pmax		
	comp=Z,86nm,4.0s						
COEN	**Coen**	**35.72**	**179**	*e*P	**P**	**05 45 59.7**	**0.0**
	comp=Z,27nm,0.8s,mb4.8						
CD2	**Chengdu**	**35.98**	**293**	P	**P**	**05 46 02.6**	**+0.8**
LZH	**Lanzhou**	**36.65**	**301**	*e*P	**P**	**05 46 07.5**	**+0.1**
LZH				pP	pP	05 47 01.0	+3.3
LZH				sP	sP	05 47 26.5	+0.3
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.4						
KMI	**Kunming**	**36.83**	**283**	P	**P**	**05 46 08.8**	**-0.2**
KMI				pP	pP	05 46 59.3	-0.1
KMI				sP	sP	05 47 28.6	+0.7
KMI				PP	PP	05 47 42.4	+3.8
KMI				S	**S**	**05 51 33.9**	**-0.7**
KMI				sS	sS	05 53 04.3	-0.4
KMI				SS	SS	05 54 19.6	-7.7
KMI				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.3						
KMI				pmax	pmax		
	comp=Z,120nm,6.0s						
KMI				LR	LR		
	comp=N,190nm,20.4s						
KMI				LR	LR		
	comp=E,160nm,15.4s						
KMI				LR	LR		
	comp=Z,120nm,16.2s						
ULN	**Ulaanbaatar**	**38.56**	**321**	*e*P	**P**	**05 46 23.8**	**+0.7**
	comp=Z,2.9nm,0.6s,mb4.0						
ULN	**Ulaanbaatar**	**38.56**	**321**	*e*P	**P**	**05 46 23.8**	**+0.7**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
SONM	**Songino Array**	**38.93**	**320**	P	**P**	**05 46 26.7**	**+0.5**
	comp=Z,3.0nm,0.4s,mb4.1,baz=129,slow=7.3,SNR=23						
SEY	**Seymchan**	**41.43**	**7**	*e*P	**P**	**05 46 47.0**	**+0.6**
ZAK	**Zakamensk**	**41.94**	**322**	*e*P	**P**	**05 46 50.8**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
TLY	**Talaya**	**42.36**	**324**	*e*P	**P**	**05 46 54.8**	**+0.7**
	comp=Z,2.6nm,0.4s,mb4.0						
TLY	**Talaya**	**42.36**	**324**	*e*P	**P**	**05 46 54.8**	**+0.7**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.1						
WRAB	**Tennant Creek**	**42.49**	**192**	*e*P	**P**	**05 46 55.2**	**-0.3**
	comp=Z,4.5nm,0.6s,mb4.1						
WRAB	**Tennant Creek**	**42.49**	**192**	*e*P	**P**	**05 46 55.2**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
WB2	**Warramunga Arr**	**42.50**	**192**	*e*P	**P**	**05 46 54.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**43.27**	**204**	*e*P	**P**	**05 47 01.7**	**0.0**
	comp=Z,12nm,1.0s,mb4.3						
FITZ	**Fitzroy Crossi**	**43.27**	**204**	P	**P**	**05 47 01.8**	**+0.1**
	comp=Z,1.7nm,0.3s,mb3.9,baz=6.0,slow=3.6,SNR=16						
ASAR	**Alice Springs**	**46.21**	**191**	P	**P**	**05 47 24.2**	**-0.5**
	comp=Z,0.9nm,0.7s,mb3.2,baz=12,slow=8.3,SNR=8.6						
MBWA

AKTO	**Aktyubinsk**	**70.16**	**317**	P		**P**	**05 50 09.3**	**-0.6**
	comp=Z,1.2nm,0.6s,mb3.7,baz=57,slow=9.6,SNR=4.4							
YKA	**Yellowknife Ar**	**76.33**	**28**	P		**P**	**05 50 45.3**	**-0.4**
	comp=Z,2.3nm,0.6s,mb4.0,baz=292,slow=6.0,SNR=11							
KEV	**Kevo**	**77.99**	**341**	*e*P		**P**	**05 50 53.4**	**-1.4**
KEV				pmax	pmax			
	comp=Z,1.0nm,0.3s,mb3.9							
KEV	**Kevo**	**77.99**	**341**	*e*p		**P**	**05 50 53.4**	**-1.4**
	comp=Z,0.6nm,0.3s,mb3.7							
ARCES	**ARCESS Array B**	**78.56**	**341**	P		**P**	**05 50 57.6**	**-0.2**
	comp=Z,4.2nm,0.7s,mb4.2,baz=77,slow=8.5,SNR=18							
YBH	**Yreka Blue Hor**	**78.85**	**50**	P		**P**	**05 51 00.3**	**+0.2**
	comp=Z,1.1nm,0.6s,mb3.7,baz=63,slow=2.3,SNR=3.8							
JOF	**Joensuu**	**79.93**	**334**	*e*P		**P**	**05 51 01.4**	**-4.0**
JOF				pmax	pmax			
	comp=Z,4.0nm,0.3s,mb4.5							
JOF	**Joensuu**	**79.93**	**334**	*e*p		**P**	**05 51 01.4**	**-4.0**
	comp=Z,3.5nm,0.3s,mb4.5							
VSR	**Storozhevoye**	**81.31**	**322**	*e*P		**P**	**05 51 12.5**	**-0.5**
VSR				pmax	pmax			
	comp=N,9.0nm,0.5s							
VSR				pmax	pmax			
	comp=E,6.0nm,0.5s							
VSR				pmax	pmax			
	comp=Z,9.0nm,0.5s,mb4.7							
BSMT	**Bassoo Peak**	**81.86**	**42**	*e*P		**P**	**05 51 17.1**	**+1.1**
KIV	**Kislovodsk**	**82.02**	**314**	*e*P		**P**	**05 51 18.6**	**+1.8**
KIV				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.2							
KAF	**Kangasniemi**	**82.34**	**335**	*e*P		**P**	**05 51 12.3**	**-5.8**
KAF				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.0							
KAF	**Kangasniemi**	**82.34**	**335**	*e*p		**P**	**05 51 12.3**	**-5.8**
	comp=Z,3.0nm,0.7s,mb4.0							
FINES	**FINESS Array B**	**82.80**	**334**	P		**P**	**05 51 19.2**	**-1.2**
	comp=Z,8.5nm,0.4s,mb4.8,baz=64,slow=5.2,SNR=34							
SLMT	**Seeley Lake**	**82.91**	**42**	*e*P		**P**	**05 51 21.2**	**-0.1**
NVAR	**Mina Array Bea**	**83.19**	**51**	P		**P**	**05 51 23.7**	**+0.7**
NVAR				pP		pP	05 52 30.6	+8.4
NVAR	**Mina Array Bea**	**83.19**	**51**	P		**P**	**05 51 23.7**	**+0.7**
	comp=Z,1.7nm,0.7s,mb3.9,baz=268,slow=5.3,SNR=18							
NVAR				pP		pP	05 52 30.6	+8.4
	comp=Z,0.2nm,0.3s,baz=278,slow=4.5,SNR=4.0							
LRM	**Limekiln Ridge**	**84.17**	**43**	*e*P		**P**	**05 51 28.1**	**+0.3**
HRY	**Holter Researc**	**84.17**	**42**	*e*P		**P**	**05 51 28.0**	**+0.3**
DLMT	**Dillon**	**84.27**	**43**	*e*P		**P**	**05 51 28.5**	**+0.2**
FFC	**Flin Flon**	**85.73**	**32**	*i* P		**P**	**05 51 35.7**	**+0.4**
DUG	**Dugway**	**86.36**	**48**	*e*P		**P**	**05 51 39.2**	**+0.5**
RLMT	**Red Lodge**	**86.48**	**42**	*e*P		**P**	**05 51 40.5**	**+1.3**
	comp=Z,1.6nm,0.8s,mb3.8							
AKASG	**Malin Array Be**	**87.10**	**324**	P		**P**	**05 51 40.0**	**-2.1**
AKASG	**Malin Array Be**	**87.10**	**324**	P		**P**	**05 51 40.0**	**-2.1**
	comp=Z,0.7nm,0.4s,mb3.8,baz=49,slow=5.1,SNR=4.9							
AKASG	**Malin Array Be**	**87.10**	**324**	*ce*P		**P**	**05 51 39.7**	**-2.3**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
HFS	**Hagfors**	**88.35**	**337**	P		**P**	**05 51 45.6**	**-2.1**
	comp=Z,2.1nm,0.5s,mb4.2,baz=94,slow=4.5,SNR=13							
NOA	**NORSAR Array B**	**88.57**	**339**	P		**P**	**05 51 47.4**	**-1.4**
	comp=Z,1.2nm,0.7s,mb3.9,baz=46,slow=5.6,SNR=6.0							
BRTR	**Keskin Array B**	**89.93**	**313**	P		**P**	**05 51 54.1**	**-1.4**
	comp=Z,1.1nm,0.7s,mb3.8,baz=69,slow=4.1,SNR=5.1							
BRTR	**Keskin Array B**	**89.93**	**313**	*ce*P		**P**	**05 51 54.5**	**-1.1**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
TORD	**Torodi Ar. Bea**	**128.34**	**309**	PKP		PKPdf	05 58 00.3	-1.8
	comp=Z,0.3nm,0.7s,baz=57,slow=1.1,SNR=4.9							
LPAZ	**La Paz**	**150.20**	**84**	PKPbc	PKPbc		05 58 47.5	+0.9
	comp=Z,2.0nm,0.5s,baz=285,slow=1.9,SNR=22							

BJI ***07*** *05:48:54.0,52.2ºN 175.5ºW,h10km,mB4.9/10, mb4.6/14,Ms4.6/10,Ms7 4.3/10*

ISCJB ***07*** *05:48:55.6±0.2,52.2ºN±0.05ºx175.5ºW±0.0ºx03,h10km, mb4.3/58,MS4.1/32,Error ellipse: s-maj=6.9km s-min=2.7km az=168.3*

NEIC ***07*** *05:48:56.6±0.3,52.1ºN 175.5ºW,h10km,mb4.4/35, ML4.7(PMR),ML4.1(AEIC),Error ellipse: s-maj=11.4km s-min=5.0km az=167.0*

MOS ***07*** *05:48:58.4±1.5,52.1ºN 175.5ºW,h33km,mb4.5/23, Error ellipse: s-maj=12.1km s-min=9.8km az=53.2*

IDC ***07*** *05:49:04.5±6.5,52.3ºN 175.4ºW,h65km±58km,mb3.6/13, mb1 3.9/15,mb1mx3.7/28,mbtmp3.7/15,ML4.3/2,MS4.1/26, Ms1 4.1/26,ms1mx3.9/43,Error ellipse: s-maj=30.3km s-min=15.3km az=9.0*

ISC 07 05:48:57.3±0.2,52º21'N±0º05'x175º52'W±0º03',h10km, (h13km±1.0km:pP-P),n283,s0.95/276,mb4.3/58,MS4.1/32, 91C-72D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.35**	**251**	*e*Pg		**Pg**	**05 49 02.9**	**-1.3**
GSTR				*e*Sg		**Sg**	**05 49 10.4**	**+1.5**
ADK	**Adak**	**0.79**	**246**	P		**Pg**	**05 49 10.8**	**-1.7**
ADK				*e*Sg		**Sg**	**05 49 20.9**	**-1.8**
ADK				S		**Sg**	**05 49 21.6**	**-1.1**
ATKA	**Atka Island**	**0.82**	**90**	P		**Pg**	**05 49 10.3**	**-2.8**
ATKA				S		**Sg**	**05 49 21.0**	**-2.8**
AMKA	**Amchitka**	**3.32**	**258**	P		**Pn**	**05 49 48.3**	**-0.9**
NIKO	**Nikolski**	**4.14**	**77**	*e*Pn		**Pn**	**05 50 00.6**	**+0.1**
UNV	**Unalaska Valle**	**5.69**	**70**	P		**Pn**	**05 50 21.9**	**+0.1**
SPIA	**Saint Paul Isl**	**5.84**	**29**	P		**Pn**	**05 50 22.6**	**-1.3**
AKUT	**Akutan**	**6.17**	**68**	*e*Pn		**Pn**	**05 50 29.8**	**+1.4**
	169nm,0.8s							
AKUT				*e*Sn		**Sn**	**05 51 44.9**	**+5.9**
SMY	**Shemya**	**6.36**	**279**	Pn		**Pn**	**05 50 30.1**	**-1.0**
	51nm,0.8s							
SMY	**Shemya**	**6.36**	**279**	P		**Pn**	**05 50 30.1**	**-1.0**
SMY				pmax	pmax			
	comp=Z,51nm,0.8s							
FALS	**False Pass**	**7.69**	**65**	*e*Pn		**Pn**	**05 50 47.1**	**-2.1**
	comp=Z,98nm,0.9s							
SDPT	**Sand Point**	**9.45**	**65**	*e*Pn		**Pn**	**05 51 14.5**	**+1.2**
	comp=Z,65nm,0.9s							
OHAK	**Old Harbor**	**13.77**	**60**	*e*Pn		**Pn**	**05 52 12.4**	**0.0**
	comp=Z,7.5nm,0.4s							
KDAK	**Kodiak Island**	**14.26**	**58**	*e*Pn		**Pn**	**05 52 18.8**	**-0.3**
	comp=Z,23nm,0.8s							
KDAK	**Kodiak Island**	**14.26**	**58**	P		**Pn**	**05 52 20.3**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=256,slow=8.5,SNR=10							
KDAK	**Kodiak Island**	**14.26**	**58**	*i* P		**Pn**	**05 52 22.6**	**+3.5**
TTA	**Tatalina**	**14.92**	**36**	*e*Pn		**Pn**	**05 52 29.5**	**+1.5**
	comp=Z,16nm,1.0s							
TTA	**Tatalina**	**14.92**	**36**	*e*P		**Pn**	**05 52 29.5**	**+1.5**
TTA				pmax	pmax			
	comp=Z,16nm,1.0s							
RSO	**Redoubt South**	**15.02**	**48**	Pn		**Pn**	**05 52 26.9**	**-2.5**
COLA	**College**	**19.01**	**38**	*e*P		**Pn**	**05 53 18.1**	**-1.4**
	comp=Z,16nm,0.9s							
COLA	**College**	**19.01**	**38**	*e*P		**Pn**	**05 53 18.2**	**-1.4**
COLA				pmax	pmax			
	comp=Z,16nm,0.9s							
ILAR	**Eielson Array**	**19.33**	**38**	P		**Pn**	**05 53 21.1**	**-2.3**
	comp=Z,0.7nm,0.3s,baz=238,slow=8.4,SNR=47							
ILAR				LR		LR	06 01 25.2	
	comp=Z,989nm,18.8s,baz=251,slow=39							
ILAR	**Eielson Array**	**19.33**	**38**	P		**Pn**	**05 53 21.1**	**-2.3**
ILAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ILAR				MLR	MLR			
	comp=Z,989nm,18.8s							
MENT	**Mentasta**	**19.92**	**45**	*e*P		**Pn**	**05 53 27.2**	**-3.3**
SEY	**Seymchan**	**20.05**	**315**	*e*P		**P**	**05 53 31.3**	**+1.1**
EGAK	**Eagle**	**21.59**	**41**	*e*P		**P**	**05 53 46.7**	**-0.1**
	comp=Z,53nm,1.0s,mb4.9							
DAWY	**Dawson**	**22.11**	**44**	*e*P		**P**	**05 53 52.9**	**+0.5**
INK	**Inuvik**	**25.61**	**35**	*e*P		**P**	**05 54 26.7**	**+0.4**
	comp=Z,12nm,1.0s,mb4.4							
INK	**Inuvik**	**25.61**	**35**	P		**P**	**05 54 24.6**	**-1.8**
	comp=Z,4.4nm,0.6s,mb4.1,baz=289,slow=11,SNR=4.9							
INK				LR		LR	06 05 14.6	
	comp=Z,480nm,20.0s,MS4.0,baz=57,slow=38							
INK	**Inuvik**	**25.61**	**35**	P		**P**	**05 54 24.6**	**-1.8**
INK				pmax	pmax			
	comp=Z,4.0nm,0.6s							
INK				MLR	MLR			
	comp=Z,480nm,20.0s							
DLBC	**Dease Lake**	**26.20**	**58**	LR		LR	06 04 56.4	
	comp=Z,194nm,19.9s,MS3.6,baz=111,slow=37							
BBB	**Bella Bella**	**28.66**	**71**	LR		LR	06 04 38.8	
	comp=Z,224nm,18.6s,MS3.8,baz=122,slow=33							
YKA	**Yellowknife Ar**	**33.18**	**48**	P		**P**	**05 55 34.1**	**+0.5**
	comp=Z,0.9nm,0.7s,mb3.8,baz=283,slow=8.7,SNR=3.6							
YKA				PcP		PcP	05 58 15.1	-0.9
	comp=Z,1.1nm,0.7s,baz=283,slow=3.2,SNR=4.4							
B08A	**Colville Reser**	**35.34**	**73**	⇓P		**P**	**05 55 52.7**	**+0.2**
	baz=35							
H04A	**Detroit Lake**	**35.46**	**81**	⇑P		**P**	**05 55 53.3**	**-0.2**
	baz=35							
OD2	**Odessa Site #2**	**36.18**	**74**	*e*P		**P**	**05 55 58.1**	**-1.6**
	comp=Z,4.3nm,0.8s,mb4.4							
MDJ	**Mudanjiang**	**36.43**	**280**	P		**P**	**05 56 00.4**	**-1.5**
MDJ				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.3							
MDJ				pmax	pmax			
	comp=Z,36nm,3.2s							
MDJ	**Mudanjiang**	**36.43**	**280**	P		**P**	**05 56 01.0**	**-0.9**
MDJ				pP		pP	05 56 04.1	-0.9
MDJ				sP		sP	05 56 05.5	-0.7
MDJ				PP		PP	05 57 23.8	-0.8
MDJ				S		**S**	**06 01 43.4**	**+0.1**
MDJ				ScP		ScP	06 02 11.7	-0.4
MDJ				pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.5							
MDJ				LR		LR		
	comp=N,240nm,21.6s							
MDJ				LR		LR		
	comp=E,160nm,34.8s							
MDJ				LR		LR		
	comp=Z,480nm,20.0s,MS4.3							
EDM	**Edmonton**	**36.63**	**63**	*e*P		**P**	**05 56 02.3**	**-1.2**
NEW	**Newport**	**36.69**	**72**	*e*P		**P**	**05 56 02.2**	**-1.8**
	comp=Z,5.3nm,0.9s,mb4.4							
NEW	**Newport**	**36.69**	**72**	*e*P		**P**	**05 56 02.2**	**-1.8**
NEW				pmax	pmax			
	comp=Z,5.0nm,0.9s							
YBH	**Yreka Blue Hor**	**36.76**	**85**	P		**P**	**05 56 05.5**	**+0.8**
	comp=Z,0.6nm,0.6s,mb3.6,baz=354,slow=13,SNR=2.9							
YBH				LR		LR	06 09 21.7	
	comp=Z,207nm,19.1s,MS3.9,baz=305,slow=33							
JHJ	**Hachijo jima 2**	**37.27**	**257**	LR		LR	06 09 31.6	
	comp=Z,124nm,19.7s,MS3.7,baz=218,slow=33							
K05A	**Summer Lake**	**37.31**	**82**	⇑P		**P**	**05 56 10.0**	**+0.6**
	baz=37							
I07A	**Izee**	**37.41**	**80**	⇓P		**P**	**05 56 10.2**	**0.0**
	baz=37							
F10A	**Beach Ranch, E**	**37.77**	**76**	⇑P		**P**	**05 56 14.0**	**+0.7**
	baz=38							
C12B	**Naegeli Ranch,**	**37.93**	**72**	⇑P		**P**	**05 56 15.0**	**+0.5**
	baz=38							
A13A	**Flathead Natio**	**37.94**	**70**	⇑P		**P**	**05 56 15.7**	**+1.0**
	baz=38							
MOD	**Modoc**	**38.14**	**83**	*e*P		**P**	**05 56 17.6**	**+1.2**
	comp=Z,5.1nm,0.8s,mb4.3							
WALA	**Waterton Lakes**	**38.17**	**69**	*e*P		**P**	**05 56 15.1**	**-1.5**
	comp=Z,0.1nm,0.9s							
WALA				*e*PcP		PcP	05 58 28.4	-2.6
B13A	**Whitefish**	**38.19**	**71**	⇓P		**P**	**05 56 16.5**	**-0.2**
	baz=38							
BSMT	**Bassoo Peak**	**38.26**	**72**	*e*P		**P**	**05 56 15.8**	**-1.5**
	comp=Z,4.6nm,0.9s,mb4.2							
D12A	**Red Ives Fores**	**38.33**	**73**	⇑P		**P**	**05 56 18.3**	**+0.3**
	baz=38							
J08A	**Circle Bar Ran**	**38.43**	**80**	⇓P		**P**	**05 56 17.8**	**-1.0**
	baz=38							
C13A	**Hot Springs**	**38.47**	**72**	⇓P		**P**	**05 56 18.6**	**-0.5**
	baz=38							
A14A	**Double T Ranch**	**38.50**	**69**	⇑P		**P**	**05 56 18.5**	**-0.8**
	baz=38,SNR=6.5							
D13A	**Huson**	**38.83**	**72**	⇑P		**P**	**05 56 22.0**	**-0.2**
	baz=39							
A15A	**Johnson Ranch,**	**38.89**	**69**	⇑P		**P**	**05 56 22.3**	**-0.3**
	baz=39							
C14A	**Swan Lake**	**38.91**	**71**	⇑P		**P**	**05 56 22.1**	**-0.7**
	baz=39							
F12A	**Elk City**	**39.06**	**75**	⇓P		**P**	**05 56 23.4**	**-0.7**
	baz=39,SNR=7.3							
MSO	**Missoula**	**39.27**	**73**	*e*P		**P**	**05 56 24.2**	**-1.7**
	comp=Z,3.1nm,0.9s,mb4.0							
B15A	**Bradely Ranch,**	**39.32**	**70**	⇑P		**P**	**05 56 24.9**	**-1.3**
	baz=39							
SLMT	**Seeley Lake**	**39.32**	**72**	*e*P		**P**	**05 56 25.4**	**-0.9**
	comp=Z,4.9nm,1.0s,mb4.2							
E13A	**Victor**	**39.33**	**73**	⇑P		**P**	**05 56 25.7**	**-0.6**
	baz=39							
CN2	**Changchun**	**39.38**	**282**	*e*P		**P**	**05 56 24.1**	**-2.7**
CN2				*es*P		sP	05 56 31.2	+0.1
CN2				*eS*		**S**	**06 02 23.8**	**-4.1**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s,mb4.7							
CN2				pmax	pmax			
	comp=Z,200nm,4.0s							
CN2				LR		LR		
	comp=N,400nm,19.0s,MS4.4							
CN2				LR		LR		
	comp=E,400nm,19.0s,MS4.4							
CN2				LR		LR		
	comp=Z,400nm,20.0s,MS4.2							
D14A	**Greenough**	**39.40**	**72**	⇓P		**P**	**05 56 26.0**	**-0.9**
	baz=39							
C15A	**Salmond Ranch,**	**39.56**	**71**	⇓P		**P**	**05 56 27.7**	**-0.6**
	baz=40							
F13A	**Darby**	**39.59**	**74**	⇓P		**P**	**05 56 28.2**	**-0.3**
	baz=40							
E14A	**Clinton**	**39.75**	**73**	⇑P		**P**	**05 56 29.4**	**-0.5**
	baz=40							
H12A	**Diamond D Ranc**	**39.95**	**76**	⇓P		**P**	**05 56 30.9**	**-0.6**
	baz=40							
G13A	**Cobalt**	**40.02**	**75**	⇓P		**P**	**05 56 32.0**	**-0.1**
	baz=40							
C16A	**Fuhringer Ranc**	**40.05**	**70**	⇓P		**P**	**05 56 32.5**	**+0.2**
	baz=40							
A17A	**Triple J Farms**	**40.07**	**68**	⇓P		**P**	**05 56 32.5**	**0.0**
	baz=40							
I12A	**Atlanta**	**40.20**	**77**	⇓P		**P**	**05 56 34.4**	**+0.8**
	baz=40							
E15A	**Deer Lodge**	**40.25**	**72**	⇓P		**P**	**05 56 34.0**	**+0.1**
	baz=40							
HRY	**Holter Researc**	**40.57**	**72**	*e*P		**P**	**05 56 35.1**	**-1.5**
	comp=Z,3.4nm,0.7s,mb4.1							
C17A	**Wharram Farm,**	**40.71**	**70**	⇓P		**P**	**05 56 37.7**	**-0.1**
	baz=41							
L11A	**Cat Creek Ranc**	**40.76**	**80**	⇑P		**P**	**05 56 37.6**	**-0.6**
	baz=41,SNR=6.5							
HLID	**Hailey**	**40.76**	**77**	*e*P		**P**	**05 56 37.0**	**-1.2**
	comp=Z,3.1nm,0.9s,mb3.9							
H14A	**Leadore**	**40.80**	**75**	⇑P		**P**	**05 56 38.6**	**0.0**
	baz=41							
MCMT	**McKenzie Canyo**	**40.99**	**75**	*e*P		**P**	**05 56 37.6**	**-2.5**
	comp=Z,1.4nm,0.6s,mb3.8							
D17A	**Six Diamond Ra**	**41.00**	**70**	⇓P		**P**	**05 56 41.1**	**+0.9**
	baz=41							
G15A	**Dillon**	**41.02**	**74**	⇑P		**P**	**05 56 40.5**	**+0.2**
	baz=41							
H15A	**Lima**	**41.23**	**75**	⇑P		**P**	**05 56 42.6**	**+0.5**
	baz=41							
BOZ	**Bozeman (W)**	**41.26**	**73**	*e*P		**P**	**05 56 41.5**	**-0.8**
	comp=Z,3.0nm,0.7s,mb4.0							
BOZ	**Bozeman (W)**	**41.26**	**73**	*e*P		**P**	**05 56 41.5**	**-0.8**
BOZ				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.0							
G16A	**Moss Hill, Enn**	**41.39**	**73**	⇓P		**P**	**05 56 44.1**	**+0.7**
	baz=41							
NVAR	**Mina Array Bea**	**41.45**	**86**	P		**P**	**05 56 45.4**	**+1.4**
	comp=Z,2.6nm,0.7s,mb4.0,baz=296,slow=7.5,SNR=17							
D18A	**Linhart Farms,**	**41.49**	**70**	⇓P		**P**	**05 56 45.1**	**+0.9**
	baz=42							
KSRS	**Korea Array**	**41.65**	**272**	P		**P**	**05 56 48.4**	**+2.7**
	comp=Z,0.3nm,0.3s,mb3.4,baz=66,slow=7.6,SNR=4.8							
KSRS				LR		LR	06 12 45.1	
	comp=Z,181nm,20.1s,MS3.9,baz=62,slow=34							
F17A	**Fitzpatrick Pl**	**41.69**	**72**	⇑P		**P**	**05 56 46.0**	**+0.2**
	baz=42							
N12A	**Clover Valley,**	**41.96**	**81**	⇓P		**P**	**05 56 48.2**	**+0.1**
	baz=42,SNR=6.7							
M13A	**Montello**	**42.19**	**80**	⇓P		**P**	**05 56 49.5**	**-0.5**
	baz=42							
L14A	**Malta**	**42.35**	**78**	⇓P		**P**	**05 56 52.5**	**+1.2**
	baz=42							
O12A	**Currie**	**42.49**	**81**	⇓P		**P**	**05 56 52.4**	**-0.1**
	baz=42							
VES	**Vestal, Richgr**	**42.62**	**90**	⇑P		**P**	**05 56 53.8**	**+0.3**
	baz=42							
IMW	**Indian Meadow**	**42.65**	**75**	*e*P		**P**	**05 56 50.4**	**-3.2**
	comp=Z,2.0nm,0.9s,mb3.9							
R10A	**Warm Springs**	**42.76**	**85**	⇑P		**P**	**05 56 54.0**	**-0.7**
	baz=43							
Q11A	**Duckwater**	**42.81**	**84**	⇑P		**P**	**05 56 54.2**	**-0.9**
	baz=43							
S10A	**Tonopah Range,**	**42.81**	**85**	⇑P		**P**	**05 56 54.0**	**-1.1**
	baz=43							
P12A	**McGill**	**42.88**	**82**	⇑P		**P**	**05 56 55.4**	**-0.2**
	baz=43							
N14A	**Grayback Hills**	**43.09**	**80**	⇑P		**P**	**05 56 56.3**	**-1.0**
	baz=43							
BGU	**Big Grassy Mou**	**43.14**	**79**	*e*P		**P**	**05 56 58.9**	**+1.3**
	comp=Z,4.8nm,1.0s,mb4.2							
SBC	**Santa Barbara**	**43.15**	**92**	⇑P		**P**	**05 56 57.6**	**-0.3**
	baz=43							
R11A	**Troy Canyon, C**	**43.16**	**84**	⇑P		**P**	**05 56 56.6**	**-1.3**
	baz=43							
P13A	**Bates Ranch, G**	**43.44**	**82**	⇑P		**P**	**05 56 59.5**	**-0.6**
	baz=43							
MPMC	**Manual Prospec**	**43.45**	**88**	⇑P		**P**	**05 57 00.2**	**-0.1**
	baz=43							
N15A	**Stansbury Isla**	**43.47**	**79**	⇓P		**P**	**05 56 59.9**	**-0.5**
	baz=43							
DUG	**Dugway**	**43.71**	**80**	*e*P		**P**	**05 57 00.5**	**-1.9**
	comp=Z,12nm,1.0s,mb4.6							
DUG	**Dugway**	**43.71**	**80**	*e*P		**P**	**05 57 00.5**	**-1.8**
DUG				pmax	pmax			
	comp=Z,12nm,1.0s,mb4.6							
LAO	**LASA Array**	**43.83**	**68**	*e*P		**P**	**05 57 04.1**	**+0.9**
	comp=Z,11nm,1.3s,mb4.4							
K18A	**Toltan Ranch,**	**43.91**	**75**	⇑P		**P**	**05 57 03.7**	**-0.2**
	baz=44							
P14A	**Drum Mountains**	**43.93**	**81**	⇓P		**P**	**05 57 04.0**	**-0.1**
	baz=44							
S12A	**Delamar Landin**	**44.08**	**84**	⇓P		**P**	**05 57 05.0**	**-0.3**
	baz=44,SNR=6.0							
T11A	**Corn Creek, Al**	**44.09**	**85**	⇓P		**P**	**05 57 05.0**	**-0.4**
	baz=44,SNR=5.6							
Q14A	**Sevier Lake (B**	**44.17**	**82**	⇑P		**P**	**05 57 06.1**	**0.0**
	baz=44							
R13A	**O'Grain Ranch,**	**44.26**	**83**	⇓P		**P**	**05 57 06.4**	**-0.3**
	baz=44							
SHOC	**Shoshone**	**44.30**	**87**	⇓P		**P**	**05 57 06.7**	**-0.4**
	baz=44							
L18A	**Fontenelle, Gr**	**44.34**	**76**	⇑P		**P**	**05 57 07.2**	**-0.1**
	baz=44							
GSC	**Goldstone**	**44.37**	**88**	⇑P		**P**	**05 57 07.0**	**-0.6**
	baz=44							
GSC	**Goldstone**	**44.37**	**88**	*e*P		**P**	**05 57 07.4**	**-0.2**
	comp=Z,6.8nm,0.7s,mb4.5							
GSC	**Goldstone**	**44.37**	**88**	*e*P		**P**	**05 57 07.4**	**-0.3**
GSC				pmax	pmax			
	comp=Z,7.0nm,0.7s,mb4.5							
K19A	**Absolon Red Bu**	**44.51**	**75**	⇑P		**P**	**05 57 08.6**	**-0.2**
	baz=44							
BFSC	**Mount Baldy Ra**	**44.55**	**90**	⇑P		**P**	**05 57 08.7**	**-0.5**
	baz=44							
S13A	**Holt Ranch, En**	**44.70**	**84**	⇑P		**P**	**05 57 10.2**	**-0.1**
	baz=45							
Q15A	**Fillmore**	**44.71**	**81**	⇑P		**P**	**05 57 10.5**	**+0.2**
	baz=45							
ARUT	**Antelope Range**	**44.83**	**83**	*e*P		**P**	**05 57 08.7**	**-2.6**
	comp=Z,6.2nm,1.1s,mb4.3							
ARUT	**Antelope Range**	**44.83**	**83**	*e*P		**P**	**05 57 08.7**	**-2.6**
ARUT				pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.3							
CCUT	**Cedar City**	**45.03**	**83**	*e*P		**P**	**05 57 12.6**	**-0.3**
	comp=Z,9.1nm,1.5s,mb4.4							
T13A	**Saint George**	**45.03**	**84**	⇑P		**P**	**05 57 13.1**	**+0.1**
	baz=45,SNR=6.2							
MSU	**Marysvale**	**45.14**	**82**	*e*P		**P**	**05 57 13.7**	**-0.1**
	comp=Z,4.0nm,0.9s,mb4.2							
MSU	**Marysvale**	**45.14**	**82**	*e*P		**P**	**05 57 13.7**	**-0.1**
MSU				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.2							
TMUT	**Trail Mountain**	**45.24**	**80**	P		**P**	**05 57 17.2**	**+2.7**
	comp=Z,9.7nm,0.9s,mb4.6							
T14A	**Hurricane**	**45.51**	**84**	⇓P		**P**	**05 57 16.8**	**0.0**
	baz=45							
R16A	**Teasdale**	**45.71**	**81**	⇑P		**P**	**05 57 18.9**	**+0.6**
	baz=46							
SRU	**San Rafael**	**45.77**	**80**	*e*P		**P**	**05 57 21.5**	**+2.8**
	comp=Z,8.4nm,0.8s,mb4.7							
SRU	**San Rafael**	**45.77**	**80**	*e*P		**P**	**05 57 21.5**	**+2.8**
SRU				pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.7							
O19A	**Miners Draw (B**	**45.88**	**78**

SONM pmax pmax
comp=Z,1.0nm,0.5s
SONM MLR MLR
comp=Z,432nm,18.9s
Q22A Crested Butte, 48.11 78 ⇑P **P 05 57 37.8 +0.8**
baz=48
MVCO Mesa Verde 48.21 80 P **P 05 57 39.2 +1.3**
comp=Z,2.9nm,0.6s,mb4.5
X16A Lo Mia Camp, P 48.25 85 ⇓P **P 05 57 39.2 +1.0**
baz=48
ZAK Zakamensk 48.26 302 *e*P **P 05 57 38.1 +0.1**
ZAK pmax pmax
comp=Z,3.0nm,1.3s,mb4.2
Q24A Divide 49.10 76 ⇑P **P 05 57 45.6 +1.0**
baz=49
U21A Nageezi 49.23 81 ⇓P **P 05 57 46.0 +0.3**
baz=49,SNR=8.8
T22A Edith 49.30 79 ⇑P **P 05 57 46.9 +0.7**
baz=49
W20A Ramah 49.58 82 ⇑P **P 05 57 49.0 +0.6**
baz=50
SDCO Great Sand Dun 49.67 78 *e*P **P 05 57 48.6 -0.4**
comp=Z,5.4nm,1.1s,mb4.5
SPITS Spitsbergen Ar 49.67 357 LR LR 06 17 54.5
comp=Z,191nm,20.0s,MS4.1,baz=0,0,slow=35
U22A Llaves 49.75 80 ⇑P **P 05 57 50.5 +0.8**
baz=50
Y19A Nutrioso 49.90 84 ⇑P **P 05 57 51.2 +0.4**
baz=50
117A Oracle 49.93 87 ⇓P **P 05 57 51.6 +0.6**
baz=50
X20A Quemado 49.97 83 ⇑P **P 05 57 52.0 +0.7**
baz=50
V22A San Miguel Ran 50.02 81 ⇓P **P 05 57 53.0 +1.3**
baz=50
TUC Tucson 50.09 87 *e*P **P 05 57 51.8 -0.4**
comp=Z,4.0nm,0.9s,mb4.5
TUC Tucson 50.09 87 *e*P **P 05 57 51.8 -0.4**
TUC pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
U23A El Rito 50.19 80 ⇓P **P 05 57 53.0 +0.1**
baz=50,SNR=11
118A Homack Ranch, 50.36 86 ⇓P **P 05 57 54.8 +0.5**
baz=50
217A Green Valley 50.43 87 ⇓P **P 05 57 55.2 +0.3**
baz=50
X21A Alamocita Cree 50.47 83 ⇓P **P 05 57 55.9 +0.7**
baz=50,SNR=8.1
V23A Ortiz Mt. (NFS 50.58 80 ⇓P **P 05 57 56.6 +0.7**
baz=50
T25A Trinidad 50.73 78 ⇓P **P 05 57 57.9 +0.9**
baz=51
Z20A Nine Sixteen R 50.88 84 ⇑P **P 05 57 59.1 +0.9**
baz=51
LAZ Ladron 50.90 82 *e*P **P 05 57 59.3 +0.9**
comp=Z,2.9nm,1.0s,mb4.2
ANMO Albuquerque 50.94 81 *e*P **P 05 58 01.3 +2.7**
comp=Z,2.9nm,1.1s,mb4.1
ANMO Albuquerque 50.94 81 *e*P **P 05 58 01.3 +2.6**
ANMO pmax pmax
comp=Z,3.0nm,1.1s
318A Bisbee 51.17 87 ⇑P **P 05 58 01.1 +0.7**
baz=51
U25A Circle Dot Ran 51.22 78 ⇑P **P 05 58 01.7 +1.0**
baz=51
Y22A Socorro 51.31 82 ⇓P **P 05 58 02.8 +1.3**
baz=51
BNM Barren Site 51.38 82 *e*P **P 05 58 03.4 +1.4**
comp=Z,5.2nm,1.0s,mb4.4
W24A Lazy 6 Ranch, 51.40 80 ⇓P **P 05 58 03.4 +1.3**
baz=51
V25A Rancho No Teng 51.46 79 ⇑P **P 05 58 04.0 +1.5**
baz=51
U26A Atchley Ranch, 51.62 78 ⇓P **P 05 58 04.7 +1.0**
baz=52
220A Playas Peak, P 51.75 85 ⇓P **P 05 58 05.4 +0.6**
baz=52
121A Cookes Peak, D 51.77 84 ⇑P **P 05 58 06.0 +1.0**
baz=52
Z22A Elephant Butte 51.78 83 ⇑P **P 05 58 05.4 +0.4**
baz=52
W25A X Bar L Ranch, 51.97 79 ⇓P **P 05 58 07.2 +0.8**
baz=52
V26A Tequesquite Ra 51.99 78 ⇓P **P 05 58 07.4 +0.9**
baz=52
Y24A Capitan 52.26 81 ⇓P **P 05 58 08.5 0.0**
baz=52,SNR=7.9
Z24A Sheeppen Canyo 52.70 82 ⇑P **P 05 58 12.3 +0.5**
baz=53
Y25A Mesa, Roswell 52.71 81 ⇓P **P 05 58 12.2 +0.3**
baz=53
124A Stringfield Ra 53.08 83 ⇑P **P 05 58 14.7 +0.1**
baz=53
Z25A Roswell 53.13 81 ⇑P **P 05 58 15.5 +0.5**
baz=53
224A Cornudas Mount 53.47 83 ⇓P **P 05 58 17.5 -0.1**
baz=53
Z26A Caprock 53.59 81 ⇓P **P 05 58 18.4 0.0**
baz=54
125A Gardner Draw, 53.60 82 ⇑P **P 05 58 18.3 -0.1**
baz=54
Y27A Causey 53.66 80 ⇓P **P 05 58 18.8 -0.1**
baz=54
MNTX Cornudas Mount 53.82 83 *e*P **P 05 58 19.2 -0.9**
comp=Z,6.4nm,1.1s,mb4.5
MSTX Muleshoe 53.84 79 ⇓P **P 05 58 20.8 +0.6**
baz=54
225A Deer Hill, Car 53.88 83 ⇑P **P 05 58 20.8 +0.3**
baz=54
324A Moseley Ranch, 53.94 84 ⇑P **P 05 58 21.2 +0.3**
baz=54
Z27A Tatum 54.02 80 ⇓P **P 05 58 21.2 -0.3**
baz=54
325A Bean Ranch, Si 54.30 83 ⇑P **P 05 58 22.8 -0.8**
baz=54
226A Malaga, Loving 54.35 82 ⇑P **P 05 58 23.6 -0.4**
baz=54
425A Indio Mountain 54.70 84 ⇓P **P 05 58 26.2 -0.3**
baz=54
ZALV Zalesovo Beam 54.92 315 P **P 05 58 28.2 +0.5**
comp=Z,0.9nm,0.6s,mb4.0,baz=26,slow=7.1,SNR=3.8
ZALV LR LR 06 25 04.2
comp=Z,86nm,18.5s,MS3.9,baz=170,slow=39
ZALV Zalesovo Beam 54.92 315 P **P 05 58 28.2 +0.5**
ZALV pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
ZALV MLR MLR
comp=Z,86nm,18.5s,MS3.9
326A Caldwell Ranch 54.94 83 ⇑P **P 05 58 27.4 -0.9**
baz=55
426A McDonald Obser 55.37 83 ⇓P **P 05 58 30.7 -0.7**
baz=55
328A Wristen Ranch, 55.61 82 ⇑P **P 05 58 32.2 -0.9**
baz=56
427A Hayter Ranch, 55.62 83 ⇑P **P 05 58 32.0 -1.1**
baz=56
WMOK Wichita Mounta 55.71 76 *e*P **P 05 58 32.0 -1.8**
comp=Z,1.8nm,0.7s,mb4.2
WMOK Wichita Mounta 55.71 76 *e*P **P 05 58 32.0 -1.8**
WMOK pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
526A Mary Lane Ranc 55.76 84 ⇑P **P 05 58 32.8 -1.3**
baz=56
626A Big Bend Ranch 56.09 84 ⇓P **P 05 58 35.2 -1.3**
baz=56
428A Kincaid Ranch, 56.15 82 ⇑P **P 05 58 36.3 -0.6**
baz=56
528A Cox Ranch, San 56.48 83 ⇓P **P 05 58 38.7 -0.6**
baz=56
TXAR Lajitas Array 56.53 84 P **P 05 58 38.3 -1.4**
comp=Z,1.0nm,0.6s,mb4.0,baz=300,slow=4.3,SNR=18
TXAR LR LR 06 23 48.8
comp=Z,115nm,18.0s,MS4.0,baz=50,slow=37
TXAR Lajitas Array 56.53 84 P **P 05 58 38.3 -1.4**
TXAR pmax pmax
comp=Z,1.0nm,0.6s
TXAR MLR MLR
comp=Z,115nm,18.0s
627A Terlingua Ranc 56.62 84 ⇑P **P 05 58 39.5 -0.8**
baz=57
JMIC Jan Mayen 56.76 5 LR LR 06 24 57.6
comp=Z,91nm,19.6s,MS3.9,baz=353,slow=38
628A Black Gap, Mar 56.90 83 ⇑P **P 05 58 41.5 -0.8**
baz=57
LZH Lanzhou 57.09 288 *e*P **P 05 58 40.5 -3.0**
LZH pmax pmax
comp=Z,20nm,1.5s,mb4.9
LZH pmax pmax
comp=Z,85nm,4.3s
JCT Junction City 58.07 80 *e*P **P 05 58 51.9 +1.3**
comp=Z,2.9nm,0.3s,mb4.8
JCT Junction City 58.07 80 *e*P **P 05 58 51.9 +1.3**
JCT pmax pmax
comp=Z,3.0nm,0.3s,mb4.8
SCHQ Schefferville 58.08 40 LR LR 06 24 49.8
comp=Z,471nm,18.8s,MS4.6,baz=6.9,slow=37
MIAR Mount Ida 58.93 73 *e*P **P 05 58 55.0 -1.5**
comp=Z,13nm,1.3s,mb4.8
MIAR Mount Ida 58.93 73 *e*P **P 05 58 55.0 -1.5**
MIAR pmax pmax
comp=Z,13nm,1.3s,mb4.8
KURK Kurchatov 59.90 315 *ce*P **P 05 59 03.9 +1.0**
KURK pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
KURK MLR MLR
comp=Z,102nm,15.0s,MS4.1
MKAR Makanchi Array 61.09 310 P **P 05 59 10.2 -1.0**
comp=Z,1.7nm,0.9s,mb4.2,baz=54,slow=6.2,SNR=8.5
MKAR LR LR 06 27 41.0
comp=Z,140nm,18.6s,MS4.1,baz=7.8,slow=38
MKAR Makanchi Array 61.09 310 P **P 05 59 10.2 -0.9**
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR MLR MLR
comp=Z,140nm,18.6s
BVAR Borovoye Array 61.55 321 P **P 05 59 13.7 -0.4**
comp=Z,2.6nm,0.7s,mb4.5,baz=44,slow=6.6,SNR=8.2
BVAR Borovoye Array 61.55 321 P **P 05 59 13.7 -0.4**
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 61.56 321 ⇑*e*P **P 05 59 15.5 +1.3**
BRVK pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
BRVK MLR MLR
comp=Z,484nm,20.0s,MS4.7
GYA Guiyang 62.24 278 *e*P **P 05 59 20.5 +1.3**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
ARU Arti 62.94 330 *ci*P **P 05 59 24.3 +0.9**
ARU *e* 06 01 38.9
ARU S **S 06 07 54.3 +1.4**
ARU SS SS 06 11 57.4 +0.2
ARU pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
ARU MLR MLR
comp=Z,166nm,20.0s,MS4.2
FINES FINESS Array B 65.40 349 LR LR 06 32 42.9
comp=Z,116nm,18.5s,MS4.1,baz=103,slow=40
KMI Kunming 65.61 280 P **P 05 59 42.3 +0.9**
KMI pP pP 05 59 46.2 +1.6
KMI sP sP 05 59 47.4 +1.6
KMI PP PP 06 02 08.4 +3.0
KMI S S 06 08 25.5 -1.3
KMI SS SS 06 12 40.5 +0.3
KMI pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KMI pmax pmax
comp=Z,120nm,3.5s
KMI LR LR
comp=N,420nm,20.4s
KMI LR LR
comp=E,290nm,25.7s
KMI LR LR
comp=Z,220nm,25.0s,MS4.3
NOA NORSAR Array B 66.97 356 P **P 05 59 49.0 -0.6**
comp=Z,0.6nm,0.8s,mb3.7,baz=6.3,slow=4.0,SNR=2.5
NOA LR LR 06 27 38.3
comp=Z,59nm,22.0s,MS3.8,baz=5.0,slow=35
AAK Ala-Archa 67.87 312 LR LR 06 31 55.2
comp=Z,160nm,18.7s,MS4.3,baz=28,slow=38
AAK Ala-Archa 67.87 312 ⇑*e*P **P 05 59 57.0 +1.5**
AAK pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
AAK MLR MLR
comp=Z,81nm,20.0s,MS4.0
AKTO Aktyubinsk 68.15 326 LR LR 06 32 46.0
comp=Z,152nm,18.9s,MS4.2,baz=200,slow=38
KSH Kashi 69.61 308 *e*P **P 06 00 11.1 +4.7**
KSH epP pP 06 00 15.6 +5.9
KSH esP sP 06 00 19.3 +8.4
KSH *e*PcP PcP 06 00 33.5 +4.1
KSH *e*PP PP 06 02 48.0 +8.2
KSH *e*S S 06 09 19.8 +5.4
KSH *es*S sS 06 09 27.6 +7.8
KSH *e*SKS 06 10 07.5
KSH *e*ScS ScS 06 10 09.0 +1.1
KSH pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KSH pmax pmax
comp=Z,34nm,2.9s,mb4.8
KSH LR LR
comp=N,52nm,6.1s
KSH LR LR
comp=E,55nm,6.4s
KSH LR LR
comp=Z,45nm,5.0s
CMAR Chiang Mai Arr 72.93 278 LR LR 06 35 11.6
comp=Z,83nm,18.4s,MS4.0,baz=253,slow=38
AKASG Malin Array Be 75.35 344 P **P 06 00 39.4 -1.1**
comp=Z,0.3nm,0.3s,mb3.7,baz=11,slow=4.8,SNR=3.5
AKASG LR LR 06 41 54.4
comp=Z,146nm,18.4s,MS4.3,baz=15,slow=42
CTA Charters Tower 79.32 216 LR LR 06 31 43.8
comp=Z,80nm,21.5s,MS4.0,baz=230,slow=32
BRTR Keskin Array B 84.99 338 LR LR 06 45 47.5
comp=Z,71nm,18.5s,MS4.1,baz=280,slow=40
ASAR Alice Springs 87.49 225 P **P 06 01 44.2 -0.7**
comp=Z,1.5nm,0.8s,mb4.3,baz=28,slow=4.9,SNR=7.6
ASAR Alice Springs 87.49 225 P **P 06 01 44.2 -0.7**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
ESDC Sonseca Array 88.20 7 LR LR 06 40 11.0
comp=Z,55nm,18.7s,MS4.0,baz=15,slow=35
MMAI Mount Meron Ar 90.92 334 LR LR 06 52 41.7
comp=Z,94nm,18.6s,MS4.3,baz=15,slow=42
STKA Stephens Creek 91.75 215 LR LR 06 38 47.9
comp=Z,158nm,20.1s,MS4.5,baz=23,slow=32

IDC ***07*** *05:52:49.8±1.7, 52.05N×177.73W, h0km, mb3.6/5, mb1 4.0/6, mb1mx3.6/27, mbtmp3.8/6, ML4.0/1, Error ellipse: s-maj=60.6km s-min=28.2km az=139.0*
NEIC ***07*** *05:52:58.7, 52.10N×175.46W, h5km, ML3.5(AEIC), ML3.5(PMR), After AEIC.*
ISCJB ***07*** *05:52:59.3±0.6, 52.2N±0.1×175.53W±0.08, h10km, mb3.7/3, Error ellipse: s-maj=19.0km s-min=5.4km az=164.0*

ISC 07 05:53:00.4±0.6, 52.1N±0.2×175.50W±0.09, h10km, n13, σ1§12/15, mb3.7/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**0.76**	**254**	P	**Pg**	**05 53 14.1**	**-1.0**
ADK				S	**Sg**	**05 53 25.2**	**+0.2**
ATKA	**Atka Island**	**0.81**	**82**	P	**Pg**	**05 53 14.5**	**-1.5**
ATKA				S	**Sg**	**05 53 25.3**	**-1.2**
AMKA	**Amchitka**	**3.31**	**260**	P	**Pn**	**05 53 51.4**	**-0.7**
NIKO	**Nikolski**	**4.15**	**75**	Pn	**Pn**	**05 54 05.0**	**+1.3**
KDAK	**Kodiak Island**	**14.31**	**58**	Pn	**Pn**	**05 56 26.8**	**+4.0**
KDAK	**Kodiak Island**	**14.31**	**58**	Pn	**Pn**	**05 56 26.8**	**+4.1**
	0.6nm,0.3s,baz=5.7,slow=10,SNR=6.8						
ILAR	**Eielson Array**	**19.41**	**38**	P	**Pn**	**05 57 26.9**	**-0.4**
	0.8nm,0.6s,baz=232,slow=8.3,SNR=8.2						
EGAK	**Eagle**	**21.66**	**41**	*e*S	**P**	**05 57 50.5**	**-0.1**
DAWY	**Dawson**	**22.18**	**43**	*e*S	**P**	**05 57 57.0**	**+0.9**
INK	**Inuvik**	**25.69**	**35**	P	**P**	**05 58 29.4**	**-0.7**
	2.3nm,0.9s,mb3.7,baz=266,slow=5.3,SNR=2.5						
NVAR	**Mina Array Bea**	**41.44**	**86**	P	**P**	**06 00 49.4**	**+2.5**
NVAR	**Mina Array Bea**	**41.44**	**86**	P	**P**	**06 00 49.4**	**+2.5**
	1.0nm,0.7s,mb3.5,baz=294,slow=8.0,SNR=6.2						
TXAR	**Lajitas Array**	**56.52**	**84**	P	**P**	**06 02 43.9**	**+1.3**
	0.9nm,0.7s,mb3.9,baz=299,slow=4.6,SNR=8.1						

JMA 07 05:54:20.5±0.1, 26.33N×129.63E, h44km, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**1.31**	**293**	P	Pn	05 54 43.1	+0.7
JOW				S	Sn	05 54 58.0	-0.7
JMZ	**Minamidaito 2**	**1.52**	**109**	P	Pn	05 54 45.8	+0.6
JMZ				S	Sn	05 55 03.1	-0.6
JTK	**Tokunoshima**	**1.57**	**337**	P	Pn	05 54 46.8	+0.9
JTK				S	Sn	05 55 04.7	-0.4
JIH	**Iheya**	**1.65**	**296**	P	Pn	05 54 48.0	+1.1
JIH				S	Sn	05 55 06.7	-0.2
JJT2	**Tamagusuku 2**	**1.70**	**264**	P	Pn	05 54 48.8	+1.1
JJT2				S	Sn	05 55 09.5	+1.3
NAH1	**Naha**	**1.75**	**266**	P	Pn	05 54 49.3	+1.0
NAH1				S	Sn	05 55 10.2	+0.8
JZK	**Kikaishima**	**2.00**	**9**	P	Pn	05 54 53.5	+1.7
JZK				S	Sn	05 55 17.1	+1.5
JAM	**Amami Oshima**	**2.07**	**359**	P	Pn	05 54 53.5	+0.7
JAM				S	Sn	05 55 16.3	-1.1
JAGN	**Aguni-jima**	**2.16**	**277**	P	Pn	05 54 55.1	+1.2
JAGN				S	Sn	05 55 19.6	+0.2
JKE	**Kume jima 2**	**2.55**	**271**	P	Pn	05 54 59.6	+0.2
JKE				*e*S	Sn	05 55 27.9	-1.3

CASC 07 05:59:12.2±1.5, 12.50N×87.73W, h75km±12km, MD3.6, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.70**	**73**	*e*P	Pn	05 59 27.8	+0.4
CRIN				*e*S	Sn	05 59 39.6	+0.8
CNCH	**Conchagua**	**0.78**	**353**	*e*P	Pn	05 59 28.6	+0.2
CNCH				*e*S	Sn	05 59 40.7	+0.4
BLLM	**Bellamira**	**1.06**	**332**	*e*P	Pn	05 59 32.1	+0.4
BLLM				*e*S	Sn	05 59 46.8	+0.5
VSM	**San Miguel**	**1.06**	**330**	*e*P	Pn	05 59 32.0	+0.3
COPN	**Copaltepe**	**1.16**	**106**	*e*P	Pn	05 59 32.6	-0.3
COPN				*e*S	Sn	05 59 48.0	-0.4
MOMN	**Momotombo**	**1.17**	**94**	*e*P	Pn	05 59 33.5	+0.4
MOMN				*e*S	Sn	05 59 49.5	+0.8
CSAN		**1.32**	**104**	*e*P	Pn	05 59 35.2	+0.2
CSAN				*e*S	Sn	05 59 51.9	-0.2
CAHU	**Cacacuatique**	**1.35**	**340**	*e*P	Pn	05 59 36.0	+0.7
CAHU				*e*S	Sn	05 59 54.5	+1.8
XAVN	**Gruta Xavier**	**1.42**	**104**	*e*P	Pn	05 59 36.4	+0.1
XAVN				*e*S	Sn	05 59 55.1	+0.7
LFRS	**El Faro**	**1.71**	**311**	*e*P	Pn	05 59 40.7	+0.6

NEIC ***07*** *06:01:08.9, 52.09N×175.45W, h5km, mb3.9/6, ML4.4(PMR), ML3.8(AEIC), After AEIC.*
IDC ***07*** *06:01:08.6±2.2, 52.06N×175.80W, h0km, mb4.0/5, mb1 4.3/6, mb1mx3.8/26, mbtmp4.1/6, ML4.2/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/41, Error ellipse: s-maj=57.2km s-min=28.7km az=17.0*
ISCJB ***07*** *06:01:09.0±0.4, 52.32N±0.08×175.55W±0.07, h10km, mb4.0/12, MS3.2/2, Error ellipse: s-maj=11.6km s-min=4.9km az=163.2*

ISC 07 06:01:10.5±0.5, 52.22N±0.09×175.53W±0.06, h10km, n27, σ1§36/29, mb4.0/12, MS3.2/2, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**0.79**	**245**	P	**Pg**	**06 01 24.5**	**-1.2**
ADK				S	**Sg**	**06 01 35.4**	**-0.7**
ATKA	**Atka Island**	**0.82**	**91**	P	**Pg**	**06 01 24.7**	**-1.5**
ATKA				S	**Sg**	**06 01 35.6**	**-1.2**
AMKA	**Amchitka**	**3.32**	**257**	P	**Pn**	**06 02 02.0**	**-0.4**
NIKO	**Nikolski**	**4.14**	**77**	P	**Pn**	**06 02 12.7**	**-0.9**
UNV	**Unalaska Valle**	**5.68**	**70**	P	**Pn**	**06 02 35.8**	**+1.0**
SPIA	**Saint Paul Isl**	**5.83**	**30**	P	**Pn**	**06 02 36.6**	**-0.3**
AKUT	**Akutan**	**6.17**	**68**	*e*Pn	**Pn**	**06 02 46.0**	**+4.4**
	76nm,0.9s						
SVW2	**Sparrevohn**	**14.06**	**43**	*e*P	**Pn**	**06 04 24.0**	**-5.4**
KDAK	**Kodiak Island**	**14.26**	**58**	Pn	**Pn**	**06 04 35.7**	**+3.6**
KDAK				P		06 04 39.8	
KDAK	**Kodiak Island**	**14.26**	**58**	Pn	**Pn**	**06 04 35.7**	**+3.6**
	1.0nm,0.3s,baz=136,slow=16,SNR=7.9						
TT01	**Tatalina**	**14.89**	**36**	P	**Pn**	**06 04 38.5**	**-2.3**
TTA	**Tatalina**	**14.91**	**36**	*e*P	**Pn**	**06 04 38.6**	**-2.4**
IM3	**Indian Mountai**	**17.61**	**30**	P	**Pn**	**06 05 09.9**	**-5.6**
INK	**Inuvik**	**25.60**	**35**	P	**P**	**06 06 40.5**	**+1.1**
	3.3nm,0.7s,mb4.0,baz=274,slow=5.6,SNR=5.1						
INK				LR	LR	06 18 12.2	
	comp=Z,101nm,19.3s,MS3.4,baz=262,slow=40						
YBH	**Yreka Blue Hor**	**36.76**	**85**	P	**P**	**06 08 19.6**	**+1.8**
	0.5nm,0.3s,mb3.8,baz=270,slow=9.1,SNR=2.8						
YBH				LR	LR	06 22 10.6	
	comp=Z,32nm,18.8s,MS3.1,baz=82,slow=34						
BSMT	**Bassoo Peak**	**38.25**	**72**	*e*P	**P**	**06 08 30.2**	**-0.2**
	2.1nm,0.9s,mb3.9						
CN2	**Changchun**	**39.38**	**282**	*e*P	**P**	**06 08 39.4**	**-0.5**
MCMT	**McKenzie Canyo**	**40.99**	**75**	P	**P**	**06 08 56.5**	**+3.3**
	1.0nm,0.5s,mb3.7						
BOZ	**Bozeman (W)**	**41.26**	**73**	*e*P	**P**	**06 08 54.7**	**-0.7**
	1.0nm,0.6s,mb3.6						
NVAR	**Mina Array Bea**	**41.45**	**86**	P	**P**	**06 08 59.2**	**+2.2**
NVAR	**Mina Array Bea**	**41.45**	**86**	P	**P**	**06 08 59.2**	**+2.2**
	1.5nm,0.7s,mb3.7,baz=298,slow=7.4,SNR=14						
WUAZ	**Wupatki**	**47.56**	**84**	*e*P	**P**	**06 09 48.7**	**+2.8**
	1.9nm,0.6s,mb4.3						
SDCO	**Great Sand Dun**	**49.67**	**78**	P	**P**	**06 10 08.4**	**+6.2**
	1.8nm,1.0s,mb4.1						
MNTX	**Cornudas Mount**	**53.82**	**83**	*e*P	**P**	**06 10 33.3**	**+0.1**
	2.7nm,1.0s,mb4.1						
TXAR	**Lajitas Array**	**56.53**	**84**	P	**P**	**06 10 52.9**	**+0.1**
	0.9nm,0.5s,mb4.1,baz=297,slow=6.0,SNR=11						
BVAR	**Borovoye Array**	**61.53**	**321**	P	**P**	**06 11 27.4**	**+0.2**
	1.3nm,0.7s,mb4.2,baz=53,slow=5.6,SNR=4.9						
GYA	**Guiyang**	**62.24**	**278**	*e*P	**P**	**06 11 34.2**	**+1.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						

BJI ***07*** *06:03:25.7, 14.89N×120.71E, h156km, mB4.7/26, mb4.7/39*
ISCJB ***07*** *06:03:28.0±0.2, 15.08N±0.02×120.61E±0.04, h162km±2km, mb4.8/101, Error ellipse: s-maj=5.9km s-min=3.5km az=165.9*
MAN ***07*** *06:03:27, 15.09N×120.35E, h140km*
NEIC ***07*** *06:03:28.5±0.4, 15.06N×120.68E, h155km±3km, mb4.8/29, Error ellipse: s-maj=6.6km s-min=4.0km az=82.0*
MOS ***07*** *06:03:28.2±0.9, 15.06N×120.62E, h165km, mb4.7/31, Error ellipse: s-maj=16.2km s-min=5.8km az=126.1*
IDC ***07*** *06:03:29.1±0.5, 15.02N×120.64E, h161km±4km, mb4.3/22, mb1 4.3/22, mb1mx4.2/27, mbtmp4.3/22, Error ellipse: s-maj=15.9km s-min=8.4km az=67.0*
DJA ***07*** *06:03:31, 15.40N×120.81E, h201km, mb4.7/16*

ISC 07 06:03:29.0±0.2, 15.09N±0.02×120.58E±0.04, h154km±2km, h149km±4.2km: pP-P, n240, σ1§05/243, mb4.8/100, 18C-12D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCPH	**Palayan**	**0.68**	**47**	⇑*e*P	**Pn**	**06 03 50.6**	**-1.2**
PCPH				*e*S	**Sn**	**06 04 09.8**	**+0.6**
SCZP	**Santa Cruz**	**0.94**	**317**	*e*P	**Pn**	**06 03 51.3**	**-2.3**
TGY	**Tagaytay City**	**1.04**	**161**	P	**Pn**	**06 03 54.7**	**+0.2**
	664nm,0.3s,baz=264,slow=0.9,SNR=44						
TGY				S	**Sn**	**06 04 14.7**	**+0.7**
	1μm,0.3s,baz=261,slow=19,SNR=32						
TGY	**Tagaytay City**	**1.04**	**161**	⇑*e*P	**Pn**	**06 03 54.8**	**+0.3**
TGY				*e*S	**Sn**	**06 04 15.4**	**+1.4**
BALP	**Baler**	**1.16**	**56**	*e*P	**Pn**	**06 03 56.2**	**+0.7**
BCPH	**Baguio City Da**	**1.28**	**0**	⇑/P	**Pn**	**06 03 55.3**	**-1.3**
BCPH				/ S	**Sn**	**06 04 16.4**	**-1.5**
LQP	**Lukban**	**1.35**	**136**	⇑*e*P	**Pn**	**06 03 58.1**	**+0.8**
POLP	**Polilio Island**	**1.36**	**105**	*e*P	**Pn**	**06 03 58.3**	**+0.8**
LUBP	**Lubang**	**1.39**	**193**	*e*P	**Pn**	**06 03 56.1**	**-1.6**
BOLP	**Bolinao**	**1.43**	**334**	*e*P	**Pn**	**06 03 56.6**	**-1.6**
PGP	**Puerto Galera**	**1.62**	**167**	⇑/P	**Pn**	**06 03 59.4**	**-0.8**
BOAC	**Boac**	**2.03**	**143**	*e*P	**Pn**	**06 04 06.0**	**+1.2**
GQP	**Guinayangan**	**2.16**	**123**	⇓*e*P	**Pn**	**06 04 07.3**	**+1.1**
GQP				*e*S	**Sn**	**06 04 35.4**	**+0.6**
CAUP	**Cauayan**	**2.20**	**33**	*e*P	**Pn**	**06 04 07.4**	**+0.8**
ABRA	**Dolores**	**2.55**	**3**	*e*P	**Pn**	**06 04 09.5**	**-1.4**
PALP	**Palanan**	**2.65**	**42**	*e*P	**Pn**	**06 04 13.2**	**+1.2**
SIPP	**Brgy, Tapao**	**2.82**	**358**	⇓/P	**Pn**	**06 04 14.1**	**-0.1**
SIPP	**Brgy, Tapao**	**2.82**	**358**	*e*S	**Pn**	**06 04 17.2**	**+3.0**
APYP	**Conner**	**2.83**	**13**	*e*P	**Pn**	**06 04 14.3**	**-0.1**
CVP	**Callao Caves**	**2.86**	**24**	⇑*e*P	**Pn**	**06 04 14.3**	**-0.4**
OTRP	**Odiongan**	**3.05**	**153**	*e*P	**Pn**	**06 04 18.1**	**+0.9**
BUSP	**Coron**	**3.09**	**187**	*e*P	**Pn**	**06 04 16.0**	**-1.7**
PIP	**Pasuquin**	**3.22**	**1**	⇓/P	**Pn**	**06 04 19.5**	**+0.3**
PVCP	**Virac**	**3.77**	**113**	*e*P	**Pn**	**06 04 28.1**	**+1.7**
ENPP	**El Nido**	**4.02**	**196**	*e*P	**Pn**	**06 04 29.0**	**-0.7**

CUYO Cuyo Island 4.24 174 *e*P **Pn** **06 04 31.4 -1.1**
GUIM Jordan 4.85 156 *e*P **Pn** **06 04 42.6 +2.0**
TWG Pinlang 7.70 3 *e*Pn **Pn** **06 05 16.5 -1.9**
141nm,0.5s
TPUB Ta-pu 8.17 0 *e*Pn **Pn** **06 05 24.6 +0.1**
88nm,0.6s
YULB Yu-li 8.29 5 *e*Pn **Pn** **06 05 25.8 -0.3**
92nm,0.6s
SSLB Suanglung 8.66 2 *e*Pn **Pn** **06 05 31.0 -0.1**
103nm,0.8s
NACB Ninganchiao 9.09 6 *e*Pn **Pn** **06 05 36.1 -0.7**
55nm,0.4s
YHNB Yeheng 9.56 4 *e*Pn **Pn** **06 05 42.9 -0.1**
93nm,0.6s
TATO Taipei 9.87 5 *e*Pn **Pn** **06 05 47.5 +0.3**
KKM Kota Kinabalu 9.96 206 *e*Pn **Pn** **06 05 48.1 -0.4**
35nm,0.9s
KKM Kota Kinabalu 9.96 206 P **Pn** **06 05 50.4 +1.9**
47nm,1.2s
QZH Quanzhou 9.98 350⇑ *i*P **Pn** **06 05 47.7 -0.9**
QZH pmax pmax
comp=Z,180nm,0.8s
MYLDM Lahad Datu 10.06 192 P **Pn** **06 05 54.2 +4.4**
comp=Z,2µmcomp=Z,224nm,1.1s
QIZ Qiongzhong 10.99 292 P **Pn** **06 05 57.9 -4.0**
QIZ S **Sn** **06 08 04.8 +1.2**
QIZ pmax pmax
comp=Z,280nm,3.2s
MNI Manado 14.20 162 P Px 06 07 28.3
MRSI Marisa 14.58 175 P **Pn** **06 06 52.2 +4.1**
comp=Z,3µmcomp=Z,86nm,0.9s
SBUM Sibu 15.03 214 P **Pn** **06 06 55.6 +2.0**
comp=Z,28nm,0.7s
SMKI Samarinda 15.79 192 P Px 06 07 31.3
LUWI Luwuk 16.18 172 P **Pn** **06 07 12.2 +4.4**
comp=Z,2µmcomp=Z,174nm,1.1s
KSM Kuching 16.91 218 P **Pn** **06 07 26.8 +10**
comp=Z,689nmcomp=Z,69nm,0.8s
NJ2 Nanjing 16.96 355 *e*P **Pn** **06 07 17.8 +0.7**
NJ2 sP sP 06 07 57.2 -5.2
NJ2 pmax pmax
comp=Z,70nm,1.2s
GYA Guiyang 17.22 313 P **Pn** **06 07 20.6 +0.3**
GYA PP 06 07 40.9
GYA sP sP 06 08 02.4 -3.0
GYA S **S** **06 10 27.6 -3.3**
GYA SS 06 10 59.4
GYA PcP PcP 06 11 54.8 +0.2
GYA pmax pmax
comp=Z,20nm,0.7s
GYA pmax pmax
comp=Z,140nm,4.0s
TTSI Tana Toraja 18.03 182 P **P** **06 07 30.8 +2.4**
comp=Z,44nm,1.0s
SPSI Sidrap Palu 18.95 182 P Px 06 08 43.1
KDI Kendari 19.03 174 P **P** **06 07 40.7 +1.4**
comp=Z,121nm,0.9s
KMI Kunming 19.48 304 P **P** **06 07 46.6 +2.5**
KMI PP 06 08 10.8
KMI sP sP 06 08 31.0 +0.7
KMI S **S** **06 11 14.5 -1.5**
KMI SS 06 11 52.8
KMI pmax pmax
comp=Z,12nm,1.3s
KMI pmax pmax
comp=Z,150nm,5.5s
KMI LR LR
comp=N,260nm,12.2s
KMI LR LR
comp=E,190nm,12.9s
KMI LR LR
comp=Z,170nm,12.7s
CM31 Chiang Mai Arr 20.98 282 *e*P **P** **06 08 01.1 +0.9**
CMAR Chiang Mai Arr 20.98 282 P **P** **06 08 00.7 +0.5**
comp=Z,27nm,0.7s,baz=99,slow=8.0,SNR=84
CHTO Chiang Mai 21.02 283 *e*P **P** **06 08 00.8 +0.1**
comp=Z,9.9nm,0.8s,mb4.2
CHTO Chiang Mai 21.02 283 *e*P **P** **06 08 00.8 +0.2**
CHTO pmax pmax
comp=Z,10.0nm,0.8s,mb4.2
XAN Xi'an 21.61 333 P **P** **06 08 06.3 -0.4**
XAN pP 06 08 34.9
XAN sP sP 06 08 51.6 -1.9
XAN S **S** **06 11 56.4 0.0**
XAN sS sS 06 12 43.3 -0.3
XAN pmax pmax
comp=Z,3.0nm,0.7s,mb3.8
XAN pmax pmax
comp=Z,11nm,4.0s
XAN LR LR
comp=N,210nm,16.9s
XAN LR LR
comp=E,100nm,18.1s
XAN LR LR
comp=Z,130nm,18.1s
IPM Ipoh 21.94 243 P **P** **06 08 11.4 +1.0**
comp=Z,35nm,1.2s,mb4.7
CD2 Chengdu 22.04 318 P **P** **06 08 11.7 +0.5**
CD2 pP 06 08 39.6
CD2 PP 06 08 45.7
CD2 sP sP 06 08 56.7 -1.4
CD2 S **S** **06 12 01.9 -1.6**
CD2 SS 06 12 54.6
CD2 pmax pmax
comp=Z,80nm,0.8s,mb5.2
CD2 pmax pmax
comp=Z,240nm,5.5s
CD2 LR LR
comp=Z,490nm,14.7s
KSRS Korea Array 23.21 15 P **P** **06 08 22.4 +0.2**
comp=Z,25nm,0.8s,mb4.7,baz=196,slow=11,SNR=119
PSI Prapat 24.59 242 P **P** **06 08 35.0 -0.1**
comp=Z,41nm,0.7s,mb5.1,baz=45,slow=6.7,SNR=33
MNSI Mandailing Nat 25.14 238 P **P** **06 08 41.8 +1.8**
comp=Z,78nm,1.0s,mb5.2
BJI Beijing 25.15 352 P **P** **06 08 40.7 +0.9**
BJI S **S** **06 12 56.8 +3.5**
BJI pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
BJI pmax pmax
comp=Z,56nm,4.0s
BJI LR LR
comp=N,410nm,20.5s
BJI LR LR
comp=E,140nm,18.6s
BJI LR LR
comp=Z,280nm,18.6s
KLSI 25.16 220 P **P** **06 08 40.2 +0.1**
comp=Z,77nm,0.9s,mb5.2
MDSI Maura Dua 25.34 221 P **P** **06 08 42.2 +0.4**
comp=Z,20nm,1.7s,mb4.4
LZH Lanzhou 25.71 327 *e*P **P** **06 08 43.5 -1.4**
LZH pP pP 06 09 16.5 -0.4
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.5
LZH pmax pmax
comp=Z,59nm,5.1s
LZH LR LR
comp=N,230nm,12.3s
LZH LR LR
comp=Z,360nm,14.3s
HHC Hu-ho-hao-te 26.84 345 *e*P **P** **06 08 56.4 +1.4**
HHC pP pP 06 09 29.4 +2.3
HHC sP sP 06 09 48.8 +3.8
HHC S **S** **06 13 20.0 +0.1**
HHC sS sS 06 14 18.2 +1.3
HHC SS SS 06 14 48.7 -31
HHC PcS PcS 06 15 54.5 -0.5
HHC pmax pmax
comp=Z,15nm,0.8s,mb4.7
HHC pmax pmax
comp=Z,110nm,3.9s
CN2 Changchun 28.91 7 *e*P **P** **06 09 13.1 -0.3**
CN2 *e*S **S** **06 13 53.2 +0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
CN2 pmax pmax
comp=Z,200nm,4.0s
KAKA Kakadu 30.02 156 *e*P **P** **06 09 21.8 -1.6**
comp=Z,20nm,1.3s,mb4.7
KAKA Kakadu 30.02 156 *e*P **P** **06 09 21.7 -1.7**
KAKA Kakadu 30.02 156 P **P** **06 09 22.5 -0.9**
comp=Z,22nm,1.2s,mb4.8
GTA Gaotai 30.31 327 *e*P **P** **06 09 28.1 +2.3**
GTA pP pP 06 09 57.8 -0.5
GTA sP sP 06 10 14.7 -1.4
GTA PcP PcP 06 12 23.4 +1.1
GTA S **S** **06 14 17.4 +3.0**
GTA ScP ScP 06 15 51.9 +1.5
GTA pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
GTA pmax pmax
comp=Z,91nm,5.9s
GTA LR LR
comp=N,280nm,18.4s
GTA LR LR
comp=E,370nm,15.5s
MDJ Mudanjiang 30.41 13 P **P** **06 09 27.1 +0.5**
MDJ pP pP 06 09 57.1 -2.0
MDJ sP sP 06 10 13.5 -3.4
MDJ S **S** **06 14 19.3 +3.5**
MDJ sS sS 06 15 12.4 -0.7
MDJ ScP ScP 06 15 51.3 +0.7
MDJ PcS PcS 06 16 06.3 +0.2
MDJ pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
MDJ LR LR
comp=N,140nm,14.8s
MDJ LR LR
comp=E,76nm,20.0s
MDJ LR LR
comp=Z,130nm,16.9s
TAPN Taplejung 32.87 297 *e*P **P** **06 09 48.7 +0.3**
comp=Z,28nm,0.7s,mb5.1
ODAN Odare 33.03 296 *e*P **P** **06 09 49.9 +0.1**
comp=Z,70nm,0.9s,mb5.4
FITZ Fitzroy Crossi 33.36 171 *e*P **P** **06 09 51.0 -1.6**
comp=Z,6.9nm,0.6s,mb4.6
FITZ Fitzroy Crossi 33.36 171 P **P** **06 09 51.0 -1.6**
comp=Z,26nm,2.1s,mb4.6
RAMN Ramite 33.73 296 *e*P **P** **06 09 56.3 +0.4**
comp=Z,47nm,0.7s,mb5.3
JIRN Jiri 34.26 297 *e*P **P** **06 10 00.9 +0.5**
comp=Z,63nm,0.5s,mb5.6
GUN Gumba 34.59 297 *e*P **P** **06 10 03.7 +0.5**
comp=Z,55nm,0.5s,mb5.5
SONM Songino Array 34.70 343 P **P** **06 10 04.1 +0.2**
comp=Z,2.1nm,0.7s,mb3.9,baz=165,slow=9.4,SNR=8.6
SONM PcP PcP 06 12 34.5 +0.2
comp=Z,0.7nm,0.5s,baz=160,slow=3.7,SNR=3.6
PKI Pulchoki 34.91 297 *e*P **P** **06 10 05.7 -0.3**
comp=Z,43nm,0.7s,mb5.2
KKN Kakani 35.07 297 *e*P **P** **06 10 07.1 -0.3**
comp=Z,43nm,0.9s,mb5.1
DMN Daman 35.18 297 *e*P **P** **06 10 08.2 -0.1**
comp=Z,75nm,0.9s,mb5.3
KLR Kul'dur 35.25 13 *e*P **P** **06 10 05.3 -3.3**
GKN Gorkha 35.67 297 *e*P **P** **06 10 11.8 -0.7**
comp=Z,83nm,1.0s,mb5.3
MBWA Marble Bar 36.03 181 P **P** **06 10 14.8 -0.7**
comp=Z,27nm,2.3s,mb4.5
COEN Coen 36.51 141 P **P** **06 10 19.2 -0.5**
KOLN Koldanda 36.52 296 *e*P **P** **06 10 19.5 -0.2**
comp=Z,33nm,0.8s,mb5.0
WRAB Tennant Creek 37.35 158 P **P** **06 10 25.2 -1.5**
comp=Z,96nm,0.9s,mb5.4,SNR=5.3
WRAB Tennant Creek 37.35 158 P **P** **06 10 25.3 -1.4**
WB2 Warramunga Arr 37.35 158 *e*P **P** **06 10 24.9 -1.8**
TLY Talaya 38.94 343 *e*P **P** **06 10 40.5 +0.9**
comp=Z,66nm,2.2s,mb4.9
TLY Talaya 38.94 343 *e*P **P** **06 10 40.8 +1.1**
TLY pmax pmax
comp=Z,11nm,1.1s,mb4.4
MOY Mondy 39.72 341 *e*P **P** **06 10 47.1 +1.0**
WMQ Urumqi 40.03 322 *e*P **P** **06 10 50.2 +1.3**
WMQ pP pP 06 11 21.4 -1.1
WMQ sP sP 06 11 37.6 -2.4
WMQ PP PP 06 12 28.3 +4.2
WMQ PcP PcP 06 12 53.2 +2.4
WMQ pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
WMQ pmax pmax
comp=Z,120nm,4.2s
WMQ LR LR
comp=N,260nm,20.0s
WMQ LR LR
comp=E,270nm,22.3s
WMQ LR LR
comp=Z,280nm,21.0s
JOSI Joshimath 40.58 299 *e*PKP **P** **06 10 53.2 -0.3**
ASAR Alice Springs 40.66 161 P **P** **06 10 53.1 -1.1**
comp=Z,9.7nm,0.6s,mb4.6,baz=340,slow=6.9,SNR=98
ASAR S **S** **06 16 49.7 -3.0**
comp=Z,2.0nm,0.8s,baz=353,slow=21,SNR=8.8
BHPL Bhopal 41.44 288 *e*PKP **P** **06 11 00.6 -0.1**
BHPL AMb AMB 06 11 01.2
BHPL *ex* x 06 17 38.3
comp=Z,34nm,0.6s,mb5.1
AKL Akola 41.74 284 *e*PKP **P** **06 11 00.4 -2.7**
AKL AMb AMB 06 11 23.4
comp=Z,44nm,1.1s,mb5.0
KLP Kalpa 41.89 301 *e*PKP **P** **06 11 04.7 +0.4**
KLP AMb AMB 06 11 05.5
comp=Z,41nm,0.5s,mb5.3
AYAN Aya Nagar 42.27 296 *e*PKP **P** **06 11 05.3 -2.1**
AYAN AMb AMB 06 11 06.6
comp=Z,17nm,0.8s,mb4.7
SONA Sohna 42.27 295 *e*PKP **P** **06 11 05.5 -1.9**
SONA AMb AMB 06 11 06.2
comp=Z,76nm,0.4s,mb5.6
KUDL Kundal 42.77 295 *e*PKP **P** **06 11 09.0 -2.5**
KUDL AMb AMB 06 11 10.1
comp=Z,23nm,0.6s,mb5.0
CTA Charters Tower 43.12 143 P **P** **06 11 13.7 -0.6**
comp=Z,3.0nm,0.6s,mb4.1,baz=329,slow=11,SNR=4.9
KHET Khetri 43.36 295 *e*PKP **P** **06 11 15.1 -1.0**
KHET AMb AMB 06 11 19.3
comp=Z,10nm,0.8s,mb4.5
AJM Ajmer 44.20 293 *e*PKP **P** **06 11 22.6 -0.4**
AJM AMb AMB 06 11 23.2
comp=Z,22nm,0.5s,mb5.1
MK31 Makanchi Array 44.85 323 *e*P **P** **06 11 28.4 +0.6**
MK31 Makanchi Array 44.85 323 *ce*P **P** **06 11 27.9 +0.2**
MK31 pmax pmax
comp=Z,4.0nm,0.4s,mb4.4
MKAR Makanchi Array 44.85 323 P **P** **06 11 28.2 +0.5**
comp=Z,8.1nm,0.8s,mb4.4,baz=108,slow=12,SNR=42
MKAR PcP PcP 06 13 06.2 -0.6
comp=Z,3.3nm,0.6s,baz=113,slow=3.7,SNR=8.3
KSH Kashi 45.90 311⇓ *i*P **P** **06 11 38.4 +2.3**
KSH *e*pP pP 06 12 11.2 +0.6
KSH *e*sP sP 06 12 26.3 -1.5
KSH *e*PcP PcP 06 13 14.1 +3.5
KSH *e*PP PP 06 13 27.9 +1.3
KSH *e*ScP ScP 06 16 52.4 +3.1
KSH *e*PcS PcS 06 17 07.2 +2.1
KSH *e*S **S** **06 18 11.3 +2.5**
KSH pmax pmax
comp=Z,9.0nm,1.1s,mb4.3
KSH pmax pmax
comp=Z,46nm,8.0s
KSH LR LR
comp=N,690nm,21.2s
KSH LR LR
comp=Z,190nm,13.6s
FORT Forrest 46.17 171 *e*P **P** **06 11 36.6 -1.6**
comp=Z,9.4nm,0.5s,mb4.7
KLBR Kellerberrin 46.49 183 *e*P **P** **06 11 39.4 -1.3**
comp=Z,62nm,1.9s,mb4.9
ULHL Ulahol 46.66 314 P **P** **06 11 43.4 +1.4**
SNR=26
KZA Kyzart 47.29 314 P **P** **06 11 48.9 +2.0**
SNR=29
TKM2 Tokmak 2 47.36 315 P **P** **06 11 48.5 +1.1**
SNR=10
TKM2 Tokmak 2 47.36 315 *e*P **P** **06 11 48.2 +0.9**
comp=Z,8.1nm,0.8s,mb4.4
TKM2 *e*PcP PcP 06 13 15.8 +0.1
TKM2 Tokmak 2 47.36 315 *e*P **P** **06 11 48.2 +0.8**
TKM2 *e* 06 13 15.8
TKM2 pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
KBK Karagaybulak 47.70 315 P **P** **06 11 51.7 +1.6**
SNR=9.6
ZAA0 Zalesovo Array 47.78 332 *e*P **P** **06 11 50.1 -0.3**
ZALV Zalesovo Beam 47.78 332 P **P** **06 11 50.2 -0.2**
comp=Z,7.2nm,0.5s,mb4.5,baz=126,slow=6.5,SNR=16
UCH Uchtor 47.85 314 P **P** **06 11 53.3 +2.0**
SNR=41
UCH Uchtor 47.85 314 *e*P **P** **06 11 52.6 +1.4**
comp=Z,26nm,0.9s,mb4.9
UCH *e*PcP PcP 06 13 18.6 +1.1
UCH Uchtor 47.85 314 *e*P **P** **06 11 52.6 +1.4**
UCH *e* 06 13 18.6
UCH pmax pmax
comp=Z,26nm,0.9s,mb4.9
AAK Ala-Archa 48.01 314 *e*P **P** **06 11 53.4 +1.0**
comp=Z,8.5nm,0.8s,mb4.4
AAK Ala-Archa 48.01 314⇓ *e*P **P** **06 11 53.5 +1.1**
AAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.0
USP Ospenovka 48.23 315 P **P** **06 11 54.9 +0.8**
SNR=7.8
AML Almayashu 48.39 313 *e*P **P** **06 11 56.9 +1.5**
comp=Z,18nm,0.9s,mb4.7
AML Almayashu 48.39 313 *e*P **P** **06 11 56.9 +1.5**
AML pmax pmax
comp=Z,18nm,0.9s,mb4.7
EKS2 Erkin-Say 48.52 314 P **P** **06 11 57.6 +1.3**
SNR=8.9
EKS2 Erkin-Say 48.52 314 *e*P **P** **06 11 56.9 +0.6**
comp=Z,12nm,0.8s,mb4.6
EKS2 Erkin-Say 48.52 314 *e*P **P** **06 11 56.9 +0.6**
EKS2 pmax pmax
comp=Z,12nm,0.8s,mb4.6
KURK Kurchatov 48.98 326 *e*P **P** **06 12 00.2 +0.6**
comp=Z,44nm,0.8s,mb5.1
KURK Kurchatov 48.98 326 *d i*P **P** **06 12 00.1 +0.4**
KBL Kabul 50.06 303 *e*P **P** **06 12 08.6 +0.4**
comp=Z,18nm,0.9s,mb4.7
KBL Kabul 50.06 303 *e*P **P** **06 12 08.6 +0.5**
KBL pmax pmax
comp=Z,18nm,0.9s,mb4.7
STKA Stephens Creek 50.86 157 *e*P **P** **06 12 13.1 -1.0**
comp=Z,11nm,0.5s,mb4.7
STKA Stephens Creek 50.86 157 *e*P **P** **06 12 13.1 -1.0**
comp=Z,2.4nm,0.6s,mb4.0
STKA Stephens Creek 50.86 157 P **P** **06 12 13.1 -1.0**
comp=Z,16nm,0.6s,mb4.8,baz=331,slow=7.2,SNR=40
STKA Stephens Creek 50.86 157 *e*P **P** **06 12 13.1 -1.0**
STKA pmax pmax
comp=Z,2.0nm,0.6s
KK31 Karatay Array 50.93 314 *ce*P **P** **06 12 14.7 +0.2**
KK31 pmax pmax
comp=Z,7.0nm,0.5s,mb4.5
ARMA Armidale 54.23 147 *e*P **P** **06 12 39.5 +0.6**
BVA0 Borovoye Array 54.57 325 *i*P **P** **06 12 40.8 -0.2**
BVAR Borovoye Array 54.57 325 P **P** **06 12 41.6 +0.5**
comp=Z,4.6nm,0.8s,mb4.2,baz=119,slow=9.3,SNR=13
BVAR PcP PcP 06 13 41.8 -0.4
comp=Z,3.4nm,0.6s,baz=132,slow=5.3,SNR=7.0
BRVK Borovoye 54.64 325 *e*P **P** **06 12 41.9 +0.3**
comp=Z,14nm,0.9s,mb4.7
BRVK Borovoye 54.64 325 *e*P **P** **06 12 41.9 +0.3**
BRVK pmax pmax
comp=Z,14nm,0.9s,mb4.7
CNB Canberra Magne 57.08 152⇓ *i*P **P** **06 12 58.8 -0.3**
TOO Toolangi 57.38 157 *e*P **P** **06 13 00.7 -0.5**
ABKT Ailbek 59.23 305 P **P** **06 13 15.0 +0.8**
comp=Z,186nm,0.9s,mb5.9,SNR=7.0
AB31 Akbulak array 59.62 319 *ce*P **P** **06 13 16.5 -0.1**
AB31 pmax pmax
comp=Z,2.0nm,0.2s,mb4.6
ABKAR Akbulak array 59.62 319 *e*P **P** **06 13 16.8 +0.2**
comp=Z,6.6nm,0.5s,mb4.7
AKTK Aktyubinsk 61.08 320 P **P** **06 13 26.6 0.0**
AKTO Aktyubinsk 61.08 320 P **P** **06 13 26.6 0.0**
comp=Z,4.7nm,0.5s,mb4.6,baz=96,slow=9.2,SNR=15
SVE Sverdlovsk 61.18 327 *e*P **P** **06 13 27.4 +0.4**
SVE pmax pmax
comp=Z,21nm,0.9s,mb5.0
ARU Arti 62.17 326 *e*P **P** **06 13 32.9 -0.8**
comp=Z,11nm,0.6s,mb4.9
ARU Arti 62.17 326 *d i*P **P** **06 13 33.1 -0.6**
ARU *e* 06 15 47.9
ARU PPP 06 17 19.9
ARU S **S** **06 21 48.5 +1.8**
ARU SS SS 06 25 49.5 -2.7
ARU pmax pmax
comp=Z,14nm,1.0s,mb4.8
RDF Al-Radifah 68.18 295 *e*P **P** **06 14 12.1 -0.9**
RDF AMb AMB 06 14 12.9
comp=Z,61nm,0.6s,mb5.5
MIB Mutribah 68.28 296 *e*P **P** **06 14 12.7 -0.9**
MIB AMb AMB 06 14 13.4
comp=Z,74nm,0.6s,mb5.6
AKUT Akutan 68.33 37 *e*P **P** **06 14 13.4 0.0**
comp=Z,63nm,0.3s,mb5.8
NAY Al-Naaiem 68.42 296 *e*P **P** **06 14 13.4 -1.0**
NAY AMb AMB 06 14 14.2
comp=Z,32nm,0.6s,mb5.2
GNI Garni 69.68 308 *i*P **P** **06 14 21.7 -0.3**
GNI pmax pmax
comp=Z,29nm,1.5s
ZEI Tsey 70.19 310 *e*P **P** **06 14 24.5 -0.6**
ZEI pmax pmax
comp=Z,22nm,0.6s,mb5.1
KIV Kislovodsk 71.02 312 P **P** **06 14 30.7 +0.6**
comp=Z,476nm,0.6s,SNR=5.8
KIV Kislovodsk 71.02 312 *e*P **P** **06 14 30.6 +0.5**
comp=Z,53nm,0.7s,mb5.4
KIV Kislovodsk 71.02 312 *e*P **P** **06 14 30.4 +0.3**
KIV pmax pmax
comp=Z,46nm,0.7s,mb5.3
VRHR Novokhopersk 71.49 319 *e*P **P** **06 14 32.2 -0.6**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.7s
VRHR pmax pmax
comp=Z,50nm,0.7s,mb5.3
VORD Divnogorie 72.96 319 *e*P **P** **06 14 41.2 -0.3**
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,6.0nm,0.5s
VORD pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
VSR Storozhevoye 73.03 319 *e*P **P** **06 14 41.3 -0.6**
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,10.0nm,0.7s
VSR pmax pmax
comp=Z,20nm,0.7s,mb5.0
SOC Sochi 73.19 311 *e*P **P** **06 14 41.1 -1.9**
SOC *e* 06 17 23.8
SOC *e*S S 06 23 54.7 -3.8
SOC *e**SS sS 06 25 00.3 -3.2
SOC *e*SS SS 06 28 39.9 -3.0
SOC pmax pmax
comp=Z,33nm,0.6s,mb5.2
OBN Obninsk 74.36 324⇑ *i*P **P** **06 14 49.3 -0.3**
OBN *e* 06 17 35.6
OBN pmax pmax
comp=Z,17nm,0.4s,mb5.1
ANN Anapa 74.71 313 *e*P **P** **06 14 50.8 -1.0**
ANN pmax pmax
comp=Z,46nm,1.1s,mb5.0
MALT Malatya 74.72 306 *e*P **P** **06 14 53.2 +1.1**
comp=Z,8.2nm,0.8s,mb4.4
MALT Malatya 74.72 306 *e*P **P** **06 14 53.2 +1.2**
MALT pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
MALT Malatya 74.72 306⇑ *i*P **P** **06 14 53.3 +1.3**
APA Apatity 75.10 337⇑ *i*P **P** **06 14 53.0 -0.6**
APA pmax pmax
comp=Z,14nm,0.8s,mb4.6
JOF Joensuu 76.37 332 *e*P **P** **06 14 59.3 -1.6**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.1
JOF Joensuu 76.37 332 *ep* **P** **06 14 59.3 -1.6**
comp=Z,2.1nm,0.4s,mb4.1
SIM Simferopol' 77.03 313 P **P** **06 15 04.8 -0.2**
SIM pmax pmax
comp=Z,22nm,0.8s,mb4.8
KEV Kevo 77.20 339 *e*P **P** **06 15 04.5 -0.9**
KEV pmax pmax
comp=Z,2.0nm,0.3s,mb4.2
KEV Kevo 77.20 339 *ep* **P** **06 15 04.5 -0.9**
comp=Z,2.4nm,0.3s,mb4.3
ILAR Eielson Array 77.56 26 P **P** **06 15 05.3 -2.2**
comp=Z,0.7nm,0.8s,baz=254,slow=5.7,SNR=9.9
ARCES ARCESS Array B 77.75 339 P **P** **06 15 08.6 +0.1**
comp=Z,9.7nm,0.5s,mb4.7,baz=85,slow=7.5,SNR=99
ARE0 ARCESS Array S 77.75 339 *e*P **P** **06 15 08.2 -0.3**
MMAI Mount Meron Ar 77.96 301 P **P** **06 15 11.4 +1.0**

comp=Z,4.5nm,0.7s,mb4.2,baz=65,slow=2.9,SNR=4.5
BR131 Keskin Array S 78.20 308 *e*P **P 06 15 11.5 -0.1**
BRTR Keskin Array B 78.20 308 P **P 06 15 10.8 -0.8**
comp=Z,2.3nm,0.6s,mb4.0,baz=132,slow=4.3,SNR=11
BRTR Keskin Array B 78.20 308 *ce*P **P 06 15 11.3 -0.3**
BRTR pmax pmax
comp=Z,2.0nm,0.6s
SPITS Spitsbergen Ar 78.21 348 P **P 06 15 11.5 +0.5**
comp=Z,22nm,0.7s,mb4.9,baz=99,slow=12,SNR=25
KAF Kangasniemi 78.78 331 *e*P **P 06 15 12.4 -1.9**
KAF pmax pmax
comp=Z,7.0nm,0.3s,mb4.8
KAF Kangasniemi 78.78 331 *ep* **P 06 15 12.4 -1.9**
comp=Z,7.4nm,0.3s,mb4.8
FINES FINESS Array B 79.02 331 P **P 06 15 15.2 -0.5**
comp=Z,16nm,0.5s,mb4.9,baz=54,slow=5.7,SNR=112
AKASG Malin Array Be 79.33 320 P **P 06 15 16.4 -1.1**
comp=Z,7.2nm,0.8s,mb4.4,baz=66,slow=5.2,SNR=20
AKBB Malin Array Si 79.33 320 *e*P **P 06 15 16.2 -1.4**
EGAK Eagle 79.96 26 *e*P **P 06 15 21.0 +0.3**
comp=Z,3.0nm,0.9s,mb3.9
INK Inuvik 81.85 21 P **P 06 15 30.5 -0.1**
comp=Z,2.0nm,0.8s,mb3.8,baz=256,slow=4.2,SNR=2.2
VRI Vrincioaia 81.97 315 ⇓*e*P **P 06 15 32.7 +1.0**
VRI Vrincioaia 81.97 315 ⇓*i*P **P 06 15 32.7 +1.0**
SUW Suwalki 82.22 324 *e*P **P 06 15 32.0 -0.7**
SUW Suwalki 82.22 324 *e*P **P 06 15 32.0 -0.8**
BURAR Bucovina Array 82.56 317 ⇑P **P 06 15 35.0 +0.3**
BURAR Bucovina Array 82.56 317 ⇑*i*P **P 06 15 35.0 +0.3**
BUR08 Bucovina Ar. S 82.57 317 *e*P **P 06 15 34.8 0.0**
MLR Muntele Rosu 82.59 315 ⇓P **P 06 15 35.4 +0.5**
MLR Muntele Rosu 82.59 315 ⇓*i*P **P 06 15 35.4 +0.5**
KWP Kalwaria Pacla 83.65 320 *e*P **P 06 15 40.1 -0.1**
comp=Z,62nm,0.5s,mb5.6
KWP Kalwaria Pacla 83.65 320 *e*P **P 06 15 40.1 -0.2**
KWP pmax pmax
comp=Z,62nm,0.5s,mb5.6
KMBO Kilima Mbogo 83.85 267 *e*P **P 06 15 43.0 +1.0**
comp=Z,7.1nm,0.9s,mb4.4
KMBO Kilima Mbogo 83.85 267 P **P 06 15 43.0 +1.1**
comp=Z,4.5nm,0.7s,mb4.3,baz=178,slow=24,SNR=13
KMBO Kilima Mbogo 83.85 267 *e*P **P 06 15 43.0 +1.0**
KMBO pmax pmax
comp=Z,7.0nm,0.9s
KOLS Kolonicke sedl 84.12 319 *e*P **P 06 15 44.8 +2.2**
comp=Z,6.0nm,1.1s,mb4.2
KOLS Kolonicke sedl 84.12 319 *e*P **P 06 15 44.8 +2.2**
KOLS pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
KOLS Kolonicke sedl 84.12 319 *e*P **P 06 15 44.8 +2.2**
CRVS Cervenica-Dubn 84.64 319 *e*P **P 06 15 45.7 +0.4**
comp=Z,18nm,1.0s,mb4.7
CRVS Cervenica-Dubn 84.64 319 *e*P **P 06 15 45.7 +0.4**
CRVS pmax pmax
comp=Z,18nm,1.0s,mb4.8
CRVS Cervenica-Dubn 84.64 319 *e*P **P 06 15 45.7 +0.4**
NIE Niedzica 85.21 320 *e*P **P 06 15 49.0 +0.9**
OJC Ojcow 85.28 321 *e*P **P 06 15 48.2 -0.3**
KECS Kecovo 85.38 319 *e*P **P 06 15 48.8 -0.2**
KECS Kecovo 85.38 319 *e*P **P 06 15 48.8 -0.2**
NOA NORSAR Array B 85.98 333 P **P 06 15 50.8 -0.9**
comp=Z,14nm,0.9s,mb4.7,baz=68,slow=5.0,SNR=34
VYHS Vyhne 86.42 319 *e*P **P 06 15 54.4 +0.3**
comp=Z,8.9nm,1.8s,mb4.2
VYHS Vyhne 86.42 319 *e*P **P 06 15 54.4 +0.3**
VYHS pmax pmax
comp=Z,9.0nm,1.8s,mb4.2
VYHS Vyhne 86.42 319 *e*P **P 06 15 54.4 +0.3**
KSP Ksiaz 87.19 322 *e*P **P 06 15 57.1 -0.7**
BRG Berggiesshubel 88.57 323 *e*(P) **P 06 16 04.0 -0.3**
comp=Z,3.8nm,0.8s,mb4.4
BRG Berggiesshubel 88.57 323 *e*P **P 06 16 04.0 -0.3**
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
MOA Molln 89.52 320 ⇑*i*PcP PcP 06 16 08.9 -1.1
comp=Z,5.2nm,0.7s
SUMG Summit 91.44 354 *e*P **P 06 16 18.0 +0.7**
comp=Z,5.5nm,0.9s,mb4.6
SUMG Summit 91.44 354 *e*P **P 06 16 18.0 +0.8**
SUMG pmax pmax
comp=Z,6.0nm,0.9s
YKA Yellowknife Ar 91.54 22 P **P 06 16 18.1 +0.3**
comp=Z,1.1nm,0.6s,mb4.1,baz=308,slow=4.3,SNR=6.7
FETA Feichten 92.05 320 ⇑*i*PcP PcP 06 16 20.5 -0.8
comp=Z,6.3nm,0.9s
TORD Torodi Ar. Bea 113.33 292 PKPdf PKiKP 06 21 48.2 -1.2
TORD PP PP 06 22 33.3 -8.7
TORD Torodi Ar. Bea 113.33 292 PKiKP PKiKP 06 21 48.2 -1.2
comp=Z,1.1nm,0.7s,baz=52,slow=2.7,SNR=8.7
TORD PP PP 06 22 33.3 -8.7
comp=Z,1.7nm,0.9s,baz=56,slow=7.2,SNR=8.8
TXAR Lajitas Array 118.56 44 PKP PKPdf 06 21 59.5 +0.3
comp=Z,0.4nm,0.6s,baz=248,slow=0.4,SNR=9.8
DBIC Dimbokro 121.77 288 PKP PKPdf 06 22 04.1 -1.5
comp=Z,4.0nm,0.6s,baz=30,slow=3.3,SNR=8.4
KIC Kosan Boka 121.78 287 *e*PKIKP PKPdf 06 22 05.1 -0.6
comp=Z,11nm,0.5s
TIC Toumodi 121.93 288 *e*PKIKP PKPdf 06 22 05.3 -0.7
comp=Z,19nm,0.2s
LIC Lamto 122.09 287 *e*PKIKP PKPdf 06 22 05.6 -0.7
comp=Z,19nm,0.6s
MTP Monte Pirata 146.47 11 *e*PKPbc PKPbc 06 22 52.5 -0.3
PLCA Paso Flores 152.68 161 PKPbc PKPbc 06 23 07.0 -0.6
comp=Z,4.0nm,1.0s,baz=222,slow=11,SNR=3.5
CPUP Villa Florida 168.65 190 PKPab PKPab 06 24 27.2 -1.3
comp=Z,0.7nm,0.6s,baz=90,slow=2.0,SNR=3.9

*ISCJB **07** 06:23:36.8±0.5, 38.81N±0.03×26.85E±0.03, h0km±7km, Error ellipse: s-maj=5.2km s-min=3.3km az=44.2*
*DDA **07** 06:23:36.5, 38.79N×26.81E, h20km±3km, Md2.8*
*CSEM **07** 06:23:37.2±0.1, 38.80N×26.85E, h5km, MD2.8, Error ellipse: s-maj=3.5km s-min=2.6km az=49.0*
*THE **07** 06:23:37.2, 38.80N×26.79E, h8km±9km, ML2.3/3, Error ellipse: s-maj=9.9km s-min=0.7km az=98.0*
*ISK **07** 06:23:37.4, 38.80N×26.91E, h7km, MD2.8*
ISC 07 06:23:37.4±0.4, 38.80N±0.02×26.84E±0.03, h7km±5km, n39, σ0.976/60, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BLCB	**Balcova**	**0.45**	**160**	*e*PG		**Pg**	**06 23 46.1**	**+0.1**
BLCB				*e*SG		**Sg**	**06 23 52.6**	**+0.7**
BLCB	**Balcova**	**0.45**	**160**	P		**Pg**	**06 23 46.3**	**+0.3**
BLCB				S		**Sg**	**06 23 52.6**	**+0.8**
BLCB	**Balcova**	**0.45**	**160**	*e*Pg		**Pg**	**06 23 46.1**	**+0.1**
BLCB				S		**Sg**	**06 23 52.6**	**+0.8**
AYVA	**Ayvalik**	**0.52**	**347**	*i*P		**Pg**	**06 23 46.8**	**-0.7**
AYVA				*i*S		**Sg**	**06 23 54.7**	**+0.4**
AYVA	**Ayvalik**	**0.52**	**347**	*i*P		**Pg**	**06 23 46.8**	**-0.6**
AYVA				*i*S		**Sg**	**06 23 54.7**	**+0.5**
KDAG	**Bornova**	**0.52**	**140**	*i*P		**Pg**	**06 23 46.7**	**-0.7**
KDAG				*i*S		**Sg**	**06 23 54.5**	**+0.3**
KDAG	**Bornova**	**0.52**	**140**	*i*P		**Pg**	**06 23 46.7**	**-0.7**
KDAG				*i*S		**Sg**	**06 23 54.5**	**+0.3**
IZM	**Izmir**	**0.52**	**141**	*e*PG		**Pg**	**06 23 47.4**	**0.0**
IZM				*e*SG		**Sg**	**06 23 55.0**	**+0.7**
IZM	**Izmir**	**0.52**	**141**	*e*Pg		**Pg**	**06 23 47.4**	**-0.1**
IZM				*e*Sg		**Sg**	**06 23 55.0**	**+0.7**
PRK	**Paraskevi**	**0.63**	**315**	P		**Pg**	**06 23 49.0**	**-0.5**
PRK				S		**Sg**	**06 23 57.6**	**-0.1**
PRK	**Paraskevi**	**0.63**	**315**	P		**Pg**	**06 23 49.0**	**-0.5**
PRK				S		**Sg**	**06 23 57.6**	**-0.1**
CHOS	**Chios island**	**0.74**	**236**	P		**Pg**	**06 23 51.3**	**-0.4**
CHOS				S		**Sg**	**06 24 01.2**	**-0.2**
CHOS	**Chios island**	**0.74**	**236**	P		**Pg**	**06 23 51.3**	**-0.4**
CHOS				S		**Sg**	**06 24 01.2**	**-0.2**
AKS	**Akhisar**	**0.76**	**84**	*e*PG		**Pg**	**06 23 52.0**	**-0.1**
AKS	**Akhisar**	**0.76**	**84**	*e*Pg		**Pg**	**06 23 52.0**	**0.0**
AKHS	**Akhisar**	**0.76**	**84**	*i*P		**Pg**	**06 23 52.5**	**+0.5**
AKHS				*i*S		**Sg**	**06 24 01.1**	**-0.8**
AKHS	**Akhisar**	**0.76**	**84**	*i*P		**Pg**	**06 23 52.5**	**+0.5**
AKHS				*i*S		**Sg**	**06 24 01.1**	**-0.8**
SIGR	**SIGRI**	**0.87**	**298**	P		**Pg**	**06 23 53.4**	**-0.8**
SIGR				S		**Sg**	**06 24 05.1**	**-0.4**
SIGR	**SIGRI**	**0.87**	**298**	P		**Pg**	**06 23 53.4**	**-0.8**
SIGR				S		**Sg**	**06 24 05.1**	**-0.4**
EZN	**Ezine**	**1.10**	**339**	*e*PN		**Pn**	**06 23 59.3**	**+0.1**
EZN	**Ezine**	**1.10**	**339**	*e*Pn		**Pn**	**06 23 59.3**	**+0.1**
BALY	**Balya**	**1.11**	**32**	*i*P		**Pg**	**06 23 58.2**	**-0.6**
BALY				*i*S		**Sg**	**06 24 14.8**	**+1.6**
BALY	**Balya**	**1.11**	**32**	*i*P		**Pg**	**06 23 58.2**	**-0.6**
BALY				*i*S		**Sg**	**06 24 14.8**	**+1.6**
BALB	**Balikesir**	**1.16**	**44**	*e*PN		**Pn**	**06 23 59.0**	**-1.1**
BALB	**Balikesir**	**1.16**	**44**	*e*Pn		**Pn**	**06 23 59.0**	**-1.0**
GONE	**Gonen-Balikesi**	**1.40**	**27**	*e*PN		**Pn**	**06 24 03.3**	**-0.1**
GONE	**Gonen-Balikesi**	**1.40**	**27**	*e*Pn		**Pn**	**06 24 03.3**	**0.0**
KULA	**Kula-Manisa**	**1.45**	**101**	*e*PN		**Pn**	**06 24 03.9**	**-0.1**
KULA	**Kula-Manisa**	**1.45**	**101**	*e*Pn		**Pn**	**06 24 03.9**	**-0.1**
DEMI	**Demirci**	**1.48**	**80**	*i*P		**Pn**	**06 24 03.8**	**-0.6**
DEMI				*i*S		**Sn**	**06 24 22.2**	**-1.8**
DEMI	**Demirci**	**1.48**	**80**	*i*P		**Pn**	**06 24 03.8**	**-0.6**
DEMI				*i*S		**Sn**	**06 24 22.2**	**-1.8**
GADA	**Gvkgeada**	**1.57**	**332**	*e*PN		**Pn**	**06 24 07.1**	**+1.5**
GADA	**Gvkgeada**	**1.57**	**332**	*e*Pn		**Pn**	**06 24 07.1**	**+1.5**
GELI	**Tayfur-Gelibol**	**1.62**	**350**	*e*PN		**Pn**	**06 24 07.6**	**+1.2**
GELI	**Tayfur-Gelibol**	**1.62**	**350**	*e*Pn		**Pn**	**06 24 07.6**	**+1.3**
BODT	**Bodrum**	**1.78**	**168**	*e*PN		**Pn**	**06 24 09.1**	**+0.6**
BODT	**Bodrum**	**1.78**	**168**	*e*Pn		**Pn**	**06 24 09.1**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.90**	**8**	*e*PN		**Pn**	**06 24 11.2**	**+1.0**
RKY	**Sarkoy-Tekirda**	**1.90**	**8**	*e*Pn		**Pn**	**06 24 11.2**	**+1.0**

*SZGRF **07** 06:27:58.4, 19.24S×176.25W, h33km, Fiji Islands region*
*IDC **07** 06:29:00.4±1.8, 17.79S×178.68W, h537km, 21km, mb3.7/14, mb1 3.8/15, mb1mx3.7/22, mbtmp3.7/15, Error ellipse: s-maj=18.2km s-min=11.5km az=132.0*
*NEIC **07** 06:29:02.3±0.7, 17.80S×178.73W, h559km±7km, mb4.0/15, Error ellipse: s-maj=15.2km s-min=7.9km az=143.0*
*ISCJB **07** 06:29:03.5±1.0, 17.75S±0.1×178.94W±0.10, h581km±12km, mb4.1/30, Error ellipse: s-maj=20.0km s-min=9.4km az=142.7*
ISC 07 06:29:04.3±1.0, 17.75S±0.1×178.91W±0.10, h576km±11km, n100, σ0.966/49, mb4.1/30, 5C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MSVF	**Nonsavu**	**2.90**	**268**	*e*P		**P**	**06 30 20.9**	**0.0**
AFI	**Afiamalu**	**7.81**	**63**	P		**P**	**06 30 55.3**	**-5.8**
AFI	**Afiamalu**	**7.81**	**63**	P		**P**	**06 30 55.3**	**-5.8**
	11nm,0.3s,baz=98,slow=1.0,SNR=18							
URZ	**Urewera**	**20.82**	**189**	P		**P**	**06 33 01.6**	**-4.7**
	6.4nm,0.3s,baz=343,slow=2.6,SNR=13							
URZ				S		**S**	**06 36 15.2**	**-6.6**
	8.6nm,1.1s,baz=221,slow=20,SNR=2.1							
RPZ	**Rata Peaks**	**27.33**	**196**	P		**P**	**06 34 02.2**	**-1.8**
RPZ	**Rata Peaks**	**27.33**	**196**	P		**P**	**06 34 02.2**	**-1.8**
	7.2nm,0.7s,mb4.4,baz=10,slow=15,SNR=7.1							
EIDS	**Eidsvold**	**28.91**	**249**	*e*P		**P**	**06 34 18.0**	**0.0**
	6.5nm,0.8s,mb4.3							
ARMA	**Armidale**	**29.66**	**239**	*e*P		**P**	**06 34 25.2**	**+0.8**
ARMA	**Armidale**	**29.66**	**239**	*e*P		**P**	**06 34 25.2**	**+0.8**
	10nm,0.7s,mb4.6							
CTA	**Charters Tower**	**33.02**	**260**	P		**P**	**06 34 53.2**	**0.0**
CTA	**Charters Tower**	**33.02**	**260**	P		**P**	**06 34 53.2**	**+0.1**
	3.9nm,0.7s,mb4.1,baz=112,slow=11,SNR=2.9							
CNB	**Canberra Magne**	**33.21**	**232**	*e*P		**P**	**06 34 55.5**	**+1.0**
CMSA	**Cobar Meteorol**	**34.86**	**240**	*e*P		**P**	**06 35 08.7**	**+0.3**
COEN	**Coen**	**36.63**	**270**	*e*P		**P**	**06 35 21.6**	**-1.6**
	350nm,1.6s							
TOO	**Toolangi**	**36.96**	**230**	*e*P		**P**	**06 35 26.2**	**+0.6**
STKA	**Stephens Creek**	**38.34**	**241**	*e*P		**P**	**06 35 37.7**	**+0.8**
	6.6nm,0.6s,mb4.3							
STKA	**Stephens Creek**	**38.34**	**241**	*e*P		**P**	**06 35 37.3**	**+0.4**
STKA				*ep*P			06 37 08.6	
STKA	**Stephens Creek**	**38.34**	**241**	*e*P		**P**	**06 35 37.5**	**+0.6**
	13nm,0.8s,mb4.5,baz=85,slow=9.2,SNR=22							
BBOO	**Buckleboo**	**43.11**	**241**	*e*P		**P**	**06 36 15.0**	**+0.2**
	18nm,0.8s,mb4.7							
WRAB	**Tennant Creek**	**44.20**	**259**	*e*P		**P**	**06 36 23.7**	**+0.3**
	4.1nm,0.7s,mb4.1							
ASAR	**Alice Springs**	**44.40**	**254**	P		**P**	**06 36 25.1**	**+0.3**
	26nm,0.6s,mb4.9,baz=86,slow=8.1,SNR=282							
ASAR				S		**S**	**06 42 17.9**	**-0.6**
	1.2nm,0.9s,baz=85,slow=16,SNR=5.9							
FORT	**Forrest**	**49.69**	**244**	*e*P		**P**	**06 37 03.7**	**-0.7**
	15nm,0.6s,mb4.6							
FITZ	**Fitzroy Crossi**	**52.60**	**260**	P		**P**	**06 37 24.9**	**-0.8**
	2.9nm,0.8s,mb3.7,baz=135,slow=8.6,SNR=3.8							
MJAR	**Matsushiro Arr**	**67.42**	**324**	P		**P**	**06 39 03.4**	**+0.1**
	4.5nm,0.5s,mb4.1,baz=162,slow=6.4,SNR=11							
MAT	**Matsushiro**	**67.42**	**324**	P		**P**	**06 39 03.3**	**0.0**
QSPA	**South Pole Qui**	**72.40**	**180**	*e*P		**P**	**06 39 32.2**	**+0.1**
	13nm,1.0s,mb4.4							
KSRS	**Korea Array**	**74.20**	**319**	P		**P**	**06 39 44.5**	**+1.4**
	0.8nm,0.5s,mb3.5,baz=130,slow=6.9,SNR=5.7							
CMB	**Columbia Colle**	**77.98**	**44**	*e*P		**P**	**06 40 03.6**	**-0.3**
	1.8nm,0.7s,mb3.6							
ISA	**Isabella**	**77.99**	**46**	*e*P		**P**	**06 40 03.7**	**-0.3**
	4.5nm,0.9s,mb3.9							
KDAK	**Kodiak Island**	**78.27**	**14**	P		**P**	**06 40 04.7**	**-0.2**
KDAK	**Kodiak Island**	**78.27**	**14**	P		**P**	**06 40 04.7**	**-0.2**
	7.4nm,0.7s,mb4.2,baz=177,slow=7.3,SNR=11							
NVAR	**Mina Array Bea**	**79.57**	**44**	P		**P**	**06 40 12.6**	**+0.3**
NVAR	**Mina Array Bea**	**79.57**	**44**	P		**P**	**06 40 12.6**	**+0.3**
	3.9nm,0.8s,mb3.8,baz=223,slow=8.8,SNR=32							
MOD	**Modoc**	**80.20**	**40**	*e*P		**P**	**06 40 15.6**	**+0.1**
	5.1nm,0.7s,mb4.0							
TUC	**Tucson**	**81.92**	**53**	*e*P		**P**	**06 40 25.2**	**+0.6**
	2.9nm,1.3s,mb3.6							
BMRM	**Bremner River**	**83.05**	**16**	*e*P		**P**	**06 40 28.8**	**-0.7**
	4.5nm,0.7s,mb4.1							
MAW	**Mawson**	**83.94**	**200**	P		**P**	**06 40 34.3**	**+0.3**
	3.2nm,0.5s,mb4.1,baz=137,slow=8.0,SNR=5.0							
HLID	**Hailey**	**84.75**	**41**	*e*P		**P**	**06 40 38.8**	**+0.4**
	3.0nm,0.9s,mb3.9							
ILAR	**Eielson Array**	**85.75**	**13**	P		**P**	**06 40 41.1**	**-1.5**
	1.8nm,0.4s,mb4.0,baz=223,slow=5.1,SNR=54							
DLBC	**Dease Lake**	**85.79**	**23**	P		**P**	**06 40 42.8**	**-0.2**
	1.3nm,0.5s,mb3.8,baz=226,slow=17,SNR=5.4							
TXAR	**Lajitas Array**	**86.26**	**58**	P		**P**	**06 40 46.0**	**0.0**
TXAR	**Lajitas Array**	**86.26**	**58**	P		**P**	**06 40 46.0**	**0.0**
	2.3nm,0.8s,mb3.9,baz=217,slow=6.2,SNR=34							
ANMO	**Albuquerque**	**86.31**	**52**	*e*P		**P**	**06 40 45.7**	**-0.4**
	3.0nm,1.3s,mb3.8							
BSMT	**Bassoo Peak**	**86.70**	**37**	*e*P		**P**	**06 40 47.1**	**-0.4**
	2.4nm,0.8s,mb4.0							
REDW	**Red Top Meadow**	**86.92**	**43**	*e*P		**P**	**06 40 49.2**	**+0.5**
	2.7nm,1.0s,mb3.9							
REDW				*ep*P		pP	06 42 45.8	-7.5
SNOW	**Snow King Moun**	**87.03**	**43**	*e*P		**P**	**06 40 49.7**	**+0.5**
	3.2nm,0.9s,mb4.0							
IMW	**Indian Meadow**	**87.12**	**42**	*e*P		**P**	**06 40 50.3**	**+0.7**
	4.5nm,0.8s,mb4.2							
BVAR	**Borovoye Array**	**116.35**	**321**	PKP		PKPdf	06 46 42.1	-0.7
	0.6nm,0.3s,baz=91,slow=2.9,SNR=4.3							
ARCES	**ARCESS Array B**	**125.98**	**350**	PKP		PKPdf	06 47 00.1	-0.7
	2.3nm,0.8s,baz=36,slow=2.3,SNR=3.6							
FINES	**FINESS Array B**	**132.82**	**344**	SKPbc		SKPbc	06 49 50.2	+2.1
	2.3nm,0.8s,baz=42,slow=3.1,SNR=4.7							
BSEG	**Bad Segeberg**	**143.09**	**351**	*e*PKPbc		PKPdf	06 47 31.0	-2.0
BSEG	**Bad Segeberg**	**143.09**	**351**	*e*PKPbc		PKPdf	06 47 31.0	-2.0
BUR08	**Bucovina Ar. S**	**144.15**	**332**	*e*PKPdf		PKPdf	06 47 36.0	+1.0
BR131	**Keskin Array S**	**144.27**	**315**	*e*PKPdf		PKPdf	06 47 35.7	+0.2
BRTR	**Keskin Array B**	**144.27**	**315**	PKP		PKPdf	06 47 35.9	+0.4
	3.3nm,0.8s,baz=94,slow=2.7,SNR=14							
NRDL	**Niedersach Rie**	**144.52**	**350**	*e*PKPbc		PKPdf	06 47 34.7	-0.8
CLZ	**Clausthal**	**145.11**	**350**	*e*PKPbc		PKPbc	06 47 37.9	+0.4
CLZ	**Clausthal**	**145.11**	**350**	*e*PKPbc		PKPbc	06 47 37.9	+0.4
CLL	**Collm**	**145.11**	**347**	*e*PKPbc		PKPbc	06 47 37.7	+0.2
CLL	**Collm**	**145.11**	**347**	⇑*i*P		PKPdf	06 47 37.6	+1.0
CLL	**Collm**	**145.11**	**347**	⇑*i*PKPbc		PKPbc	06 47 37.6	+0.1
	comp=Z,11nm,0.6s							
UPC	**Upice**	**145.11**	**343**	*e*PKP		PKPdf	06 47 38.3	+1.7
DPC	**Dobruska-Polom**	**145.17**	**343**	*e*PKP		PKPdf	06 47 38.5	+1.8
BRG	**Berggiesshubel**	**145.31**	**346**	*e*PKPbc		PKPbc	06 47 38.4	+0.3
BRG	**Berggiesshubel**	**145.31**	**346**	*e*P		PKPdf	06 47 38.2	+1.3
	comp=Z,10nm,1.2s							
PVCC	**Panska Ves**	**145.47**	**345**	*e*PKP		PKPdf	06 47 39.2	+2.0
MMAI	**Mount Meron Ar**	**145.61**	**303**	PKPbc		PKPbc	06 47 40.6	+1.0
	comp=Z,3.7nm,0.5s,baz=79,slow=5.2,SNR=4.2							
PRU	**Pruhonice**	**145.98**	**344**	*e*PKP		PKPab	06 47 43.5	+1.4
TANN	**Tannenbergstha**	**146.07**	**347**	*e*PKPbc		PKPbc	06 47 40.7	+0.4
WERD	**Werda**	**146.07**	**347**	*e*PKPbc		PKPbc	06 47 40.6	+0.3
GUNZ	**Gunzen**	**146.15**	**347**	*e*PKPbc		PKPbc	06 47 41.0	+0.5
GUNZ				*e*PKPab		PKPab	06 47 43.2	+0.5
TNS	**Taunus Mts**	**146.98**	**351**	*e*PKPab		PKPab	06 47 46.0	-0.1
TNS	**Taunus Mts**	**146.98**	**351**	*e*PKPab		PKPab	06 47 46.0	-0.1
KHC	**Kasperske Hory**	**147.01**	**345**	*e*PKPbc		PKPbc	06 47 43.5	+0.6
KHC				*e*PKPab		PKPab	06 47 47.0	+0.8
KHC	**Kasperske Hory**	**147.01**	**345**	*e*PKP		PKPbc	06 47 43.3	+0.4
KHC				*ex*		x	06 47 47.3	
GRA1	**Grafenberg Arr**	**147.01**	**348**	*e*PKPab		PKPab	06 47 46.7	+0.5
GRF	**Grafenberg Arr**	**147.01**	**348**	*e*PKPab		PKPab	06 47 46.7	+0.5
WET	**Wettzell**	**147.17**	**346**	*e*PKPab		PKPab	06 47 47.5	+0.6
WET	**Wettzell**	**147.17**	**346**	*e*PKPab		PKPab	06 47 47.4	+0.5
GEC2	**GERESS Array S**	**147.25**	**345**	*e*PKPbc		PKPbc	06 47 43.8	+0.3
GEC2	**GERESS Array S**	**147.25**	**345**	*e*PKPbc		PKPbc	06 47 43.8	+0.3
CONA	**Conrad Observa**	**147.47**	**341**	⇑*i*PKPbc		PKPbc	06 47 44.4	+0.2
	comp=Z,5.2nm,0.7s							
GIVF	**Givet**	**147.49**	**356**	*e*PKP1		PKPbc	06 47 44.3	+0.2
	comp=Z,9.5nm,0.5s							
BAIF	**Baives**	**147.58**	**356**	*e*PKP1		PKPbc	06 47 44.7	+0.4
CDF	**Champ du Feu**	**148.91**	**352**	*e*PKP1		PKPbc	06 47 48.0	+0.3
	comp=Z,4.7nm,0.5s							
LDF	**La Druitiere**	**149.13**	**2**	*e*PKP1		PKPbc	06 47 47.8	-0.4
MYKA	**Terra Mystica**	**149.30**	**343**	⇓*i*PKPbc		PKPbc	06 47 48.0	-0.7
	comp=Z,4.5nm,0.5s							
GRR	**Gorron**	**149.31**	**3**	*e*PKP1		PKPbc	06 47 48.6	0.0
	comp=Z,8.6nm,0.5s							
HAU	**Haudompre**	**149.43**	**353**	*e*PKP1		PKPbc	06 47 49.1	+0.2
	comp=Z,3.8nm,0.4s							
ABTA	**Abfaltersbach**	**149.49**	**344**	⇑*i*PKPbc		PKPbc	06 47 48.3	-0.8
	comp=Z,6.9nm,0.7s							
HINF	**Hinteralfeld**	**149.55**	**352**	*e*PKP1		PKPbc	06 47 49.2	0.0
FETA	**Feichten**	**149.66**	**347**	⇑*i*PKiKP		PKiKP	06 47 49.7	-0.5
	comp=Z,4.6nm,0.8s							
LOR	**Lormes**	**150.38**	**356**	*e*PKP1		PKPbc	06 47 51.4	+0.2
	comp=Z,7.6nm,0.4s							
SSF	**Saint Saulge**	**150.61**	**357**	*e*PKP1		PKPbc	06 47 52.0	+0.3
	comp=Z,6.5nm,0.5s							
CABF	**La Chapelle**	**150.83**	**353**	*e*PKP1		PKPbc	06 47 52.9	+0.6
	comp=Z,13nm,0.9s							
AVF	**Avril sur Loir**	**150.89**	**357**	*e*PKP1		PKPbc	06 47 52.1	-0.3
	comp=Z,3.3nm,0.6s							
MFF	**Saint Martin d**	**151.12**	**2**	*e*PKP1		PKPbc	06 47 52.8	-0.1
	comp=Z,3.9nm,0.4s							
EVO	**Evora**	**157.73**	**19**	*e*PKIKP		PKPdf	06 47 55.3	-0.4
	comp=Z,9.0nm,0.9s							
TORD	**Torodi Ar. Bea**	**175.48**	**187**	PKP		PKPdf	06 48 08.3	-1.2
TORD				PKPab		PKPab	06 49 50.2	-0.5
TORD	**Torodi Ar. Bea**	**175.48**	**187**	PKP		PKPdf	06 48 08.4	-1.2
	comp=Z,135nm,0.3s,baz=202,slow=2.3,SNR=2.4							
TORD				PKPab		PKPab	06 49 50.2	-0.5
	comp=Z,0.7nm,0.7s,baz=178,slow=3.5,SNR=3.7							

*IDC **07** 06:58:32.8±7.6, 52.48N×177.96W, h0km, mb3.2/3, mb1 3.7/4, mb1mx3.4/25, mbtmp3.4/4, ML3.7/1, MS2.9/1, Ms1 3.0/1, ms1mx2.6/8, Error ellipse: s-maj=144.5km s-min=64.0km az=101.0*
*ISCJB **07** 06:58:40.4±0.9, 52.3N±0.1×175.52W±0.09, h10km, mb3.1/2, Error ellipse: s-maj=20.6km s-min=5.7km az=165.6*
*NEIC **07** 06:58:40.6, 52.10N×175.46W, h5km, ML3.0(AEIC), After AEIC.*
ISC 07 06:58:41.1±0.8, 52.2N±0.2×175.48W±0.08, h10km, n8, σ0.972/10, mb3.1/2, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
GSTR	**Great Sitkin T**	**0.37**	**255**	*e*Pg		**Pg**	**06 58 49.2**	**+0.7**
ATKA	**Atka Island**	**0.79**	**89**	P		**Pg**	**06 58 56.0**	**-0.3**
ATKA				S		**S

PICO	**Pico**	**3.09**	**290**	*e*P	Pn	07 16 40.1	-4.3
PICO				*e*S	Sn	07 17 13.6	-8.0
PCAN	**Candelaria**	**3.12**	**289**	*e*P	Pn	07 16 40.4	-4.4
PCAN				*e*S	Sn	07 17 14.3	-8.2
PCAN				A		07 17 15.1	
	16nm,0.3s						
PCAN	**Candelaria**	**3.12**	**289**	*e*P	Pn	07 16 40.4	-4.4
PCAN				*e*S	Sn	07 17 14.3	-8.2
CALA	**Caldeira**	**3.32**	**290**	*e*P	Pn	07 16 43.2	-4.3
CALA				*e*S	Sn	07 17 19.2	-8.1
CALA	**Caldeira**	**3.32**	**290**	*e*P	Pn	07 16 43.2	-4.3
CALA				*e*S	Sn	07 17 19.2	-8.1

IDC 07 07:17:15.2±8.2, 52°.42N×178°.26W, h0km, mb3.3/3, mb1 3.8/4, mb1mx3.4/26, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=152.7km s-min=65.3km az=98.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**15.59**	**60**	Pn	Pn	07 20 54.7	-1.3
	0.3nm,0.3s,baz=243,slow=6.8,SNR=2.6						
ILAR	**Eielson Array**	**20.23**	**40**	P	P	07 21 51.9	+0.4
	0.8nm,0.5s,baz=230,slow=8.8,SNR=9.4						
NVAR	**Mina Array Bea**	**43.10**	**84**	P	P	07 25 18.5	+1.7
	0.6nm,0.7s,baz=294,slow=7.7,SNR=5.9						
TXAR	**Lajitas Array**	**58.17**	**82**	P	P	07 27 09.2	-1.5
	0.2nm,0.7s,baz=310,slow=5.6,SNR=2.6						

*IDC **07** 07:24:11.6±7.3, 52°.10N×175°.46W, h0km, mb3.3/2, mb1 3.7/4, mb1mx3.4/26, mbtmp3.4/3, ML3.1/2, Error ellipse: s-maj=137.0km s-min=62.8km az=104.0*

NEIC 07 07:24:14.3, 52°.10N×175°.46W, h5km, ML3.0(AEIC), **After AEIC., Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.37**	**269**	*e*Pg	Pg	07 24 17.6	-3.7
ATKA	**Atka Island**	**0.79**	**82**	P	Pg	07 24 30.3	+1.0
ATKA				S	Sg	07 24 41.0	+1.5
KDAK	**Kodiak Island**	**14.29**	**58**	Pn	Pn	07 27 38.4	+1.4
	0.1nm,0.3s,baz=154,slow=18,SNR=2.0						
ILAR	**Eielson Array**	**19.39**	**38**	P	Pn	07 28 37.5	-4.3
	0.0nm,0.3s,baz=240,slow=9.0,SNR=5.2						
EGAK	**Eagle**	**21.64**	**41**	*e*P	P	07 29 03.9	-1.2
	3.9nm,0.8s						
DAWY	**Dawson**	**22.16**	**43**	*e*P	P	07 29 12.8	+2.2
NVAR	**Mina Array Bea**	**41.41**	**86**	P	P	07 32 06.0	+4.6
	0.3nm,0.8s,baz=276,slow=11,SNR=3.5						
TXAR	**Lajitas Array**	**56.50**	**84**	P	P	07 34 00.6	+3.3
	0.3nm,0.6s,baz=332,slow=7.2,SNR=4.8						

*IDC **07** 07:27:39.2±2.5, 53°.46N×167°.55W, h10km±14km, mb4.5/31, mb1 4.6/32, mb1mx4.6/35, mbtmp4.5/32, ML3.9/1, MS4.3/13, Ms1 4.3/13, ms1mx4.1/32, Error ellipse: s-maj=15.8km s-min=9.9km az=177.0*

*ISCJB **07** 07:27:40.8±0.5, 53°.50N±0°.02×167°.43W±0°.02, h32km±3km, mb5.0/253, MS4.5/36, Error ellipse: s-maj=4.1km s-min=2.2km az=4.5*

*BJI **07** 07:27:40.7, 53°.89N×166°.77W, h45km, mB5.0/23, mb4.8/34, Ms4.9/27, Ms7 4.6/24*

*MOS **07** 07:27:41.2±1.0, 53°.53N×167°.39W, h33km, mb5.2/80, MS4.5/15, Error ellipse: s-maj=7.3km s-min=5.3km az=78.1*

*GCMT **07** 07:27:41.7±0.2, 53°.24N×167°.28W, h17km, MW5.2, Moment Tensor Solution. s63,c92; s82,c139; Moment tensor: Scale 10^{16}Nm; M_{rr}=6.40±.20; $M_{\theta\theta}$=0.22±.16; $M_{\phi\phi}$=6.62±.14; $M_{r\theta}$=0.74±.41; $M_{r\phi}$=1.31±.11; $M_{\theta\phi}$=0.17±.31; Best double couple: M_o=6.70000×10^{16} NP1:ϕ_s198.00000°, δ45.00000°, λ-80.00000°. NP2:ϕ_s3.00000°, δ46.00000°, λ-100.00000°. Principal axes: T 6.8600, Plg0.0000°, Azm100.0000°; N -0.3700, Plg7.0000°, Azm10.0000°; P -6.5000, Plg83.0000°, Azm192.0000°; Data Used: II IU IC CN G.*

*NEIC **07** 07:27:42.4±0.7, 53°.49N×167°.47W, h32km±4km, mb5.1/178, ML5.3(AEIC) Error ellipse: s-maj=4.6km s-min=2.6km az=180.0*

NEIC Felt at Dutch Harbor.

*DJA **07** 07:27:47, 53°.29N×169°.00W, h30km, mb5.5/14*

ISC 07 07:27:41.8±0.5, 53°.49N±0°.02×167°.45W±0°.02, h26km±3km, **h47**km±2.7km**:pP-P, n928,σ0s74/917, mb5.0/253, MS4.5/36, 205C-188D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**0.29**	**253**	P	**Pb**	**07 27 47.5**	**-1.3**
OKFG				S	**Sb**	**07 27 53.9**	**+0.4**
UNV	**Unalaska Valle**	**0.67**	**58**	P	**Pb**	**07 27 52.4**	**-2.4**
UNV				S	**Sb**	**07 28 03.3**	**-0.3**
NIKO	**Nikolski**	**0.99**	**239**	P	**Pn**	**07 27 57.8**	**-2.2**
NIKO				S	**Sb**	**07 28 12.0**	**-0.9**
AKLV	**Akutan Long Va**	**1.11**	**52**	P	**Pn**	**07 27 59.8**	**-1.8**
AKLV				S	**Sn**	**07 28 15.8**	**-0.2**
AKGG	**Akutan Green G**	**1.11**	**50**	P	**Pn**	**07 28 00.4**	**-1.3**
AKUT	**Akutan**	**1.18**	**56**	P	**Pn**	**07 28 01.2**	**-1.4**
AKUT				S	**Sn**	**07 28 18.3**	**+0.4**
FALS	**False Pass**	**2.74**	**58**	P	**Pn**	**07 28 23.4**	**-0.5**
SPIA	**Saint Paul Isl**	**4.02**	**338**	P	**Pn**	**07 28 44.7**	**+3.1**
ATKA	**Atka Island**	**4.29**	**255**	P	**Pn**	**07 28 45.8**	**+0.5**
SDPT	**Sand Point**	**4.48**	**63**	P	**Pn**	**07 28 47.7**	**-0.1**
GSTR	**Great Sitkin T**	**5.41**	**258**	*e*Pn	**Pn**	**07 29 05.8**	**+5.1**
ADK	**Adak**	**5.84**	**258**	P	**Pn**	**07 29 08.5**	**+1.8**
ADK	**Adak**	**5.84**	**258**	P	**Pn**	**07 29 08.4**	**+1.8**
CHGN	**Chignik**	**5.92**	**58**	*e*Pn	**Pn**	**07 29 08.8**	**+1.1**
AMKA	**Amchitka**	**8.37**	**261**	P	**Pn**	**07 29 42.7**	**+1.4**
OHAK	**Old Harbor**	**8.89**	**59**	P	**Pn**	**07 29 47.0**	**-1.3**
KDAK	**Kodiak Island**	**9.44**	**57**	Pn	**Pn**	**07 29 54.0**	**-1.8**
	585nm,0.9s,SNR=44						
KDAK	**Kodiak Island**	**9.44**	**57**	P	**Pn**	**07 29 54.6**	**-1.2**
KDAK	**Kodiak Island**	**9.44**	**57**	Pn	**Pn**	**07 29 54.8**	**-1.1**
	9.8nm,0.3s,baz=245,slow=6.7,SNR=96						
KDAK				Sn	**Sn**	**07 31 36.8**	**-4.1**
	baz=18,slow=18,SNR=3.0						
KDAK				LR	LR	07 34 13.5	
	comp=Z,3μm,18.1s,baz=248,slow=42						
KDAK	**Kodiak Island**	**9.44**	**57**	*i* P	**Pn**	**07 29 54.4**	**-1.4**
SVW2	**Sparrevohn**	**9.95**	**35**	*e*P	**Pn**	**07 30 04.5**	**+1.6**
GAMB	**Gambell**	**10.54**	**350**	*e*Pn	**Pn**	**07 30 12.2**	**+1.2**
GAMB				*e*Sn	**Sn**	**07 32 10.1**	**+2.0**
RSO	**Redoubt South**	**10.61**	**43**	*e*Pn	**Pn**	**07 30 15.2**	**+3.3**
SMY	**Shemya**	**11.12**	**273**	*e*Pn	**Pn**	**07 30 19.5**	**+0.6**
TTA	**Tatalina**	**11.20**	**28**	*e*P	**Pn**	**07 30 22.9**	**+3.0**
SLKM	**Skilak Lake**	**11.70**	**46**	*e*Pn	**Pn**	**07 30 27.8**	**+1.0**
PMR	**Palmer**	**12.71**	**43**	*e*P	**Pn**	**07 30 44.2**	**+3.6**
	10nm,0.6s						
PMR	**Palmer**	**12.71**	**43**	*e*P	**Pn**	**07 30 44.2**	**+3.6**
PMR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MID	**Middleton Isla**	**13.06**	**55**	*e*P	**Pn**	**07 30 42.8**	**-2.6**
	comp=Z,116nm,0.9s						
MID	**Middleton Isla**	**13.06**	**55**	*e*P	**Pn**	**07 30 42.8**	**-2.6**
MID				pmax	pmax		
	comp=Z,116nm,0.9s						
EYAK	**Cordova Ski Ar**	**13.72**	**50**	*e*Pn	**Pn**	**07 30 52.2**	**-2.2**
BMRM	**Bremner River**	**14.40**	**50**	*e*Pn	**Pn**	**07 31 01.4**	**-2.2**
	comp=Z,113nm,1.0s						
BMRM				*e*Sn	**Sn**	**07 33 37.7**	**-4.4**
COLA	**College**	**15.11**	**33**	*e*Pn	**Pn**	**07 31 13.2**	**0.0**
	comp=Z,132nm,1.1s						
COLA				*e*Sn	**Sn**	**07 33 59.6**	**+0.3**
COLA	**College**	**15.11**	**33**	*e*P	**Pn**	**07 31 13.2**	**+0.1**
COLA				*e*		07 33 59.7	
COLA				pmax	pmax		
	comp=Z,132nm,1.1s						
ILAR	**Eielson Array**	**15.37**	**35**	Pn	**Pn**	**07 31 15.8**	**-0.8**
ILAR				LR	LR	07 37 38.7	
ILAR				ScP	ScP	07 39 52.0	+0.6
ILAR	**Eielson Array**	**15.37**	**35**	Pn	**Pn**	**07 31 15.8**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=233,slow=11,SNR=18						
ILAR				LR	LR	07 37 38.7	
	comp=Z,2μm,18.7s,baz=240,slow=39						
ILAR				ScP	ScP	07 39 52.0	+0.6
	comp=Z,0.0nm,0.3s,baz=259,slow=3.7,SNR=4.9						
ILAR				P3KPbc		08 06 49.9	
	baz=26,slow=4.2,SNR=5.1						
MENT	**Mentasta**	**15.58**	**43**	*e*P	**Pn**	**07 31 22.9**	**+3.6**
	comp=Z,1.2nm,0.5s						
EGAK	**Eagle**	**17.43**	**39**	*e*Pn	**Pn**	**07 31 43.0**	**+0.2**
	comp=Z,68nm,1.0s						
HYT	**Haines Junctio**	**17.69**	**54**	*e*P	**Pn**	**07 31 47.4**	**+1.4**
DAWY	**Dawson**	**17.82**	**43**	*e*P	**Pn**	**07 31 48.5**	**+1.0**
SIT	**Sitka**	**18.54**	**66**	*e*P	**Pn**	**07 31 56.4**	**-0.1**
	comp=Z,156nm,1.7s						
SIT	**Sitka**	**18.54**	**66**	*e*P	**Pn**	**07 31 56.4**	**-0.1**
SIT				pmax	pmax		
	comp=Z,156nm,1.7s						
SKAG	**Skagway**	**18.59**	**58**	*e*P	**Pn**	**07 31 57.8**	**+0.9**
	comp=Z,164nm,1.2s						
CRAG	**Craig**	**19.92**	**70**	*e*P	**Pn**	**07 32 13.3**	**+0.3**
	comp=Z,102nm,1.2s						
PET	**Petropavlovsk**	**20.18**	**282**	P	**P**	**07 32 15.0**	**+1.0**
	comp=Z,148nm,1.2s						
PET				*e*S	**S**	**07 36 07.4**	**+8.4**
PET	**Petropavlovsk**	**20.18**	**282**	*e*P	**P**	**07 32 19.4**	**+5.4**
PET				*e*S	**S**	**07 36 00.9**	**+1.9**
PET				pmax	pmax		
	comp=Z,600nm,7.9s						
PET				pmax	pmax		
	comp=Z,1μm,7.5s						
PET				pmax	pmax		
	comp=Z,123nm,1.2s						
PET				MLR	MLR		
	comp=Z,800nm,13.0s,MS4.3						
PET				MLR	MLR		
	comp=Z,800nm,20.0s						
DIB	**Dawson Inlet,**	**20.76**	**77**	T		07 53 36.4	
	SNR=155						
DLBC	**Dease Lake**	**21.32**	**62**	*e*P	**P**	**07 32 28.2**	**+2.0**
DLBC	**Dease Lake**	**21.32**	**62**	P	**P**	**07 32 28.0**	**+1.7**
	comp=Z,70nm,1.1s,mb4.9,baz=265,slow=9.8,SNR=23						
DLBC				ScP	ScP	07 40 06.3	+1.9
	comp=Z,1.3nm,0.8s,baz=280,slow=6.1,SNR=2.0						
DLBC				LR	LR	07 41 28.8	
	comp=Z,628nm,18.6s,MS4.0,baz=283,slow=39						
INK	**Inuvik**	**21.77**	**34**	*e*P	**P**	**07 32 28.6**	**-2.4**
	comp=Z,76nm,0.9s,mb5.1						
INK	**Inuvik**	**21.77**	**34**	P	**P**	**07 32 29.8**	**-1.2**
	comp=Z,40nm,0.9s,mb4.8,baz=247,slow=10.0,SNR=18						
INK				PcP	PcP	07 36 31.9	+1.6
	comp=Z,11nm,0.9s,baz=153,slow=2.6,SNR=3.9						
INK				LR	LR	07 41 06.5	
	comp=Z,701nm,21.6s,MS4.0,baz=232,slow=37						
INK	**Inuvik**	**21.77**	**34**	*e*P	**P**	**07 32 28.6**	**-2.4**
INK				pmax	pmax		
	comp=Z,76nm,0.9s						
SKR	**Severo-Kuril's**	**22.41**	**278**	*e*P	pP	07 32 48.0	+2.8
SKR				*e*		07 33 14.0	
SKR				pmax	pmax		
	comp=Z,600nm,6.0s						
SKR				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.2						
SKR				MLR	MLR		
	comp=Z,900nm,16.0s,MS4.3						
SKR				MLR	MLR		
	comp=N,900nm,18.0s,MS4.4						
SKR				MLR	MLR		
	comp=E,900nm,18.0s,MS4.4						
SEY	**Seymchan**	**22.79**	**310**	*d* iP	**P**	**07 32 43.1**	**+1.1**
BBB	**Bella Bella**	**23.60**	**77**	P	**P**	**07 32 51.9**	**+1.5**
	comp=E,8.1nm,1.0s,mb4.1,baz=96,slow=9.7,SNR=3.8						
NLWA	**Neilton Lookou**	**28.06**	**85**	*e*P	**P**	**07 33 32.7**	**+1.9**
	comp=E,20nm,1.0s,mb4.7						
A05A	**Maple Falls**	**28.37**	**80**	⇓P	**P**	**07 33 33.4**	**-0.1**
	baz=28						
YKA	**Yellowknife Ar**	**28.63**	**51**	P	**P**	**07 33 35.3**	**-0.3**
YKA				PcP	PcP	07 36 45.9	+0.2
YKA				ScP	ScP	07 40 28.1	+3.2
YKA	**Yellowknife Ar**	**28.63**	**51**	P	**P**	**07 33 35.3**	**-0.3**
	comp=E,37nm,1.1s,mb5.0,baz=274,slow=8.7,SNR=66						
YKA				PcP	PcP	07 36 45.9	+0.1
	comp=E,6.1nm,0.9s,baz=278,slow=2.2,SNR=6.1						
YKA				ScP	ScP	07 40 28.1	+3.2
	comp=E,1.1nm,0.8s,baz=260,slow=1.8,SNR=3.7						
YKA	**Yellowknife Ar**	**28.63**	**51**	P	**P**	**07 33 35.3**	**-0.3**
YKA				*e*P	**P**	07 36 45.9	
E03A	**Lebam**	**28.66**	**86**	⇓P	**P**	**07 33 37.1**	**+1.0**
	baz=28						
JCW	**Jim Creek**	**28.83**	**82**	*e*P	**P**	**07 33 38.8**	**+1.3**
JCW				*e*PcP	PcP	07 36 48.6	+2.1
B06A	**Marblemount**	**28.94**	**81**	⇑P	**P**	**07 33 38.7**	**+0.1**
	baz=29						
B06A				⇓S	**S**	**07 38 29.5**	**+2.0**
	baz=29						
F03A	**Seaside**	**28.98**	**87**	⇑P	**P**	**07 33 38.8**	**-0.1**
	baz=29						
D05A	**Enumclaw**	**29.28**	**84**	⇓P	**P**	**07 33 41.5**	**-0.1**
	baz=29,SNR=9.2						
D05A				⇓S	**S**	**07 38 36.1**	**+3.4**
	baz=29						
LON	**Longmire**	**29.60**	**84**	*e*P	**P**	**07 33 46.1**	**+1.7**
	comp=E,11nm,1.0s,mb4.5						
LON	**Longmire**	**29.60**	**84**	*e*P	**P**	**07 33 46.1**	**+1.7**
LON				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
F04A	**Amboy**	**29.66**	**86**	⇓P	**P**	**07 33 45.6**	**+0.6**
	baz=30						
COR	**Corvallis**	**29.85**	**89**	*e*P	**P**	**07 33 51.2**	**+4.6**
	comp=Z,44nm,1.2s,mb5.1						
COR	**Corvallis**	**29.85**	**89**	*e*P	**P**	**07 33 51.2**	**+4.6**
COR				pmax	pmax		
	comp=Z,44nm,1.2s,mb5.1						
G04A	**Mulino**	**30.01**	**88**	⇓P	**P**	**07 33 48.3**	**+0.3**
	baz=30						
ETW	**Entiat**	**30.06**	**82**	*e*P	**P**	**07 33 48.6**	**+0.2**
KEBM	**Edson Butte**	**30.20**	**93**	*e*P	**P**	**07 33 51.1**	**+1.3**
	comp=Z,124nm,1.2s,mb5.5						
B08A	**Colville Reser**	**30.29**	**80**	⇑P	**P**	**07 33 50.8**	**+0.4**
	baz=30,SNR=28						
HOOD	**Mount Hood Mea**	**30.44**	**87**	*e*P	**P**	**07 33 53.0**	**+1.1**
	comp=E,58nm,1.4s,mb5.1						
H04A	**Detroit Lake**	**30.46**	**88**	⇑P	**P**	**07 33 52.6**	**+0.6**
	baz=30,SNR=23						
E07A	**Sunnyside**	**30.86**	**83**	⇑P	**P**	**07 33 56.0**	**+0.5**
	baz=31						
G06A	**Carlson Farm,**	**31.09**	**86**	⇓P	**P**	**07 33 57.8**	**+0.2**
	baz=31,SNR=7.2						
RSW	**Ranakee Hi**	**31.10**	**83**	*e*P	**P**	**07 33 59.1**	**+1.4**
OD2	**Odessa Site #2**	**31.12**	**81**	*e*P	**P**	**07 33 58.4**	**+0.5**
HAWA	**Hanford**	**31.14**	**83**	*e*P	**P**	**07 33 58.8**	**+0.8**
	comp=Z,24nm,1.0s,mb5.0						
F07A	**Phinny Hill Vi**	**31.16**	**85**	⇓P	**P**	**07 33 58.7**	**+0.5**
	baz=31,SNR=8.9						
D08A	**Wollman Farm,**	**31.16**	**82**	⇓P	**P**	**07 33 58.1**	**-0.1**
	baz=31,SNR=11						
C09A	**Chrisman Ranch**	**31.18**	**80**	⇑P	**P**	**07 33 58.4**	**+0.1**
	baz=31						
HUMO	**Hull Mountain**	**31.18**	**92**	*e*P	**P**	**07 33 59.7**	**+1.3**
	comp=Z,28nm,1.3s,mb4.9						
E08A	**Dider Farm, El**	**31.37**	**83**	⇓P	**P**	**07 34 00.3**	**+0.3**
	baz=31						
VIPM	**Ingram Point**	**31.50**	**87**	P	**P**	**07 34 02.3**	**+1.1**
NEW	**Newport**	**31.63**	**79**	*e*P	**P**	**07 34 02.5**	**+0.2**
	comp=Z,46nm,1.1s,mb5.2						
NEW	**Newport**	**31.63**	**79**	*e*P	**P**	**07 34 02.5**	**+0.2**
NEW				pmax	pmax		
	comp=Z,47nm,1.1s						
EDM	**Edmonton**	**31.64**	**68**	*e*P	**P**	**07 34 02.6**	**+0.3**
KHMM	**Horse Mountain**	**31.77**	**95**	*e*P	**P**	**07 34 05.5**	**+2.0**
	comp=Z,70nm,1.0s,mb5.5						
YBH	**Yreka Blue Hor**	**31.85**	**93**	*e*P	**P**	**07 34 05.6**	**+1.3**
	comp=Z,28nm,0.9s,mb5.1						
YBH	**Yreka Blue Hor**	**31.85**	**93**	P	**P**	**07 34 05.9**	**+1.6**
	comp=Z,27nm,0.9s,mb5.1,baz=325,slow=3.2,SNR=24						
YBH				PcP	PcP	07 36 54.9	+0.4
	comp=Z,1.0nm,0.6s,baz=20,slow=2.2,SNR=4.0						
YBH				LR	LR	07 43 59.8	
	comp=Z,353nm,19.0s,MS4.1,baz=287,slow=31						
YBH	**Yreka Blue Hor**	**31.85**	**93**	*e*P	**P**	**07 34 05.6**	**+1.3**
YBH				pmax	pmax		
	comp=Z,28nm,0.9s						
E09A	**Wood Farm, Sta**	**31.90**	**82**	⇓P	**P**	**07 34 04.6**	**-0.1**
	baz=32,SNR=10						
G08A	**Pilot Rock**	**32.06**	**85**	⇓P	**P**	**07 34 06.2**	**+0.1**
	baz=32,SNR=11						
LNOR	**Lincton Mounta**	**32.15**	**83**	*e*P	**P**	**07 34 08.2**	**+1.3**
A12A	**Yaak River Ran**	**32.17**	**77**	⇑P	**P**	**07 34 07.7**	**+0.7**
	baz=32,SNR=33						
K05A	**Summer Lake**	**32.34**	**90**	⇑P	**P**	**07 34 10.1**	**+1.5**
	baz=32,SNR=26						
TIXI	**Tiksi**	**32.38**	**328**	*e*PcP	PcP	07 36 54.9	-0.6
TIXI	**Tiksi**	**32.38**	**328**	*e*P	**P**	**07 34 09.2**	**+0.5**
TIXI				*e*		07 35 12.0	
TIXI				*e*S	**S**	**07 39 15.7**	**-5.2**
TIXI				pmax	pmax		
	comp=Z,27nm,1.9s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,1μm,15.0s,MS4.7						
I07A	**Izee**	**32.40**	**87**	⇑P	**P**	**07 34 09.7**	**+0.6**
	baz=32,SNR=33						
B12A	**Libby**	**32.43**	**77**	⇑P	**P**	**07 34 08.7**	**-0.6**
	baz=32						
KCPM	**Cahto Peak**	**32.60**	**97**	*e*P	**P**	**07 34 12.0**	**+1.0**
	comp=Z,35nm,1.1s,mb5.2						
WDC	**Whiskeytown Da**	**32.66**	**95**	*e*P	**P**	**07 34 12.1**	**+0.7**
	comp=Z,25nm,1.0s,mb5.1						
WDC	**Whiskeytown Da**	**32.66**	**95**	*e*P	**P**	**07 34 12.1**	**+0.7**
WDC				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
F10A	**Beach Ranch, E**	**32.72**	**83**	⇑P	**P**	**07 34 11.9**	**0.0**
	baz=32,SNR=20						
C12B	**Naegeli Ranch,**	**32.87**	**79**	⇓P	**P**	**07 34 13.4**	**+0.2**
	baz=33,SNR=19						
A13A	**Flathead Natio**	**32.89**	**76**	⇑P	**P**	**07 34 13.4**	**+0.1**
	baz=33,SNR=24						
WALA	**Waterton Lakes**	**33.12**	**76**	*e*P	**P**	**07 34 16.0**	**+0.6**
	comp=Z,2.7nm,1.4s,mb4.0						
WALA				*e*ScP	ScP	07 40 53.1	+13
B13A	**Whitefish**	**33.13**	**77**	⇑P	**P**	**07 34 15.5**	**+0.1**
	baz=33,SNR=26						
MOD	**Modoc**	**33.19**	**91**	*e*P	**P**	**07 34 17.1**	**+1.1**
	comp=Z,128nm,1.7s,mb5.6						
BSMT	**Bassoo Peak**	**33.20**	**78**	*e*P	**P**	**07 34 16.4**	**+0.4**
BSMT				*e*PcP	PcP	07 37 01.4	+3.3
LBCM	**Butte Creek Ri**	**33.21**	**93**	P	**P**	**07 34 17.1**	**+0.9**
D12A	**Red Ives Fores**	**33.27**	**80**	⇑P	**P**	**07 34 16.3**	**-0.4**
	baz=33						
BMO	**Blue Mountains**	**33.28**	**84**	*e*P	**P**	**07 34 17.4**	**+0.7**
	comp=Z,22nm,1.5s,mb4.9						
YAK	**Yakutsk**	**33.32**	**310**	*e*P	**P**	**07 34 25.0**	**+8.1**
	comp=Z,85nm,1.1s,mb5.6						
YAK	**Yakutsk**	**33.32**	**310**	*e*P	**P**	**07 34 18.5**	**+1.6**
YAK				*e**PP	pP	07 34 26.7	+2.0
YAK				*e*		07 35 31.2	
YAK				*e*PPP		07 35 43.0	
YAK				*e*		07 37 05.3	
YAK				*e*S	**S**	**07 39 42.0**	**+6.4**
YAK				*e*SS	SS	07 41 40.9	-18
YAK				*e*SSS		07 42 08.1	
YAK				*e*		07 44 41.1	
YAK				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.5						
YAK				pmax	pmax		
	comp=E,50nm,1.4s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.6s						
YAK				pmax	pmax		
	comp=Z,21nm,0.4s,mb5.4						
YAK				pmax	pmax		
	comp=N,9.0nm,0.5s						
YAK				pmax	pmax		
	comp=E,19nm,0.9s						
YAK				smax			
	comp=E,3.0nm,0.3s						
YAK				smax			
	comp=N,9.0nm,0.6s						
YAK				MLR	MLR		
	comp=Z,748nm,17.0s,MS4.5						
YAK				MLR	MLR		
	comp=N,493nm,17.0s,MS4.5						
YAK				MLR	MLR		
	comp=E,594nm,18.0s,MS4.5						
HOPS	**Hopland**	**33.35**	**98**	*e*P	**P**	**07 34 18.9**	**+1.5**
	comp=E,87nm,1.1s,mb5.6						
BLMT	**Blacktail Moun**	**33.37**	**77**	*e*P	**P**	**07 34 18.3**	**+0.8**
C13A	**Hot Springs**	**33.41**	**78**	⇑P	**P**	**07 34 18.2**	**+0.3**
	baz=33,SNR=55						
J08A	**Circle Bar Ran**	**33.42**	**87**	⇑P	**P**	**07 34 18.5**	**+0.5**
	baz=33,SNR=32						
A14A	**Double T Ranch**	**33.44**	**75**	⇓P	**P**	**07 34 18.4**	**+0.2**
	baz=33,SNR=74						
JTMT	**Jette**	**33.54**	**78**	*e*P	**P**	**07 34 19.4**	**+0.4**
YBMT	**Yellow Bay**	**33.64**	**77**	*e*P	**P**	**07 34 20.4**	**+0.5**
D13A	**Huson**	**33.77**	**79**	⇓P	**P**	**07 34 20.6**	**-0.4**
	baz=34,SNR=16						
SWMT	**Swartz Lake**	**33.83**	**78**	*e*P	**P**	**07 34 22.0**	**+0.4**
A15A	**Johnson Ranch,**	**33.84**	**75**	⇓P	**P**	**07 34 21.3**	**-0.3**
	baz=34,SNR=42						
C14A	**Swan Lake**	**33.85**	**77**	⇑P	**P**	**07 34 21.5**	**-0.1**
	baz=34						
WVOR	**Wild Horse Val**	**33.86**	**89**	P	**P**	**07 34 23.0**	**+1.1**
F12A	**Elk City**	**34.01**	**82**	⇓P	**P**	**07 34 23.1**	**0.0**
	baz=34,SNR=51						
OHCM	**Honcut**	**34.07**	**96**	*e*P	**P**	**07 34 24.1**	**+0.3**
MSO	**Missoula**	**34.21**	**79**	*e*P	**P**	**07 34 24.9**	**+0.1**
	comp=E,16nm,1.0s,mb4.9						
MSO				*e*PcP	PcP	07 37 00.7	-0.3
SLMT	**Seeley Lake**	**34.26**	**78**	*e*P	**P**	**07 34 25.6**	**+0.3**
B15A	**Bradely Ranch,**	**34.26**	**76**	⇑P	**P**	**07 34 24.9**	**-0.4**
	baz=34,SNR=55						
E13A	**Victor**	**34.27**	**80**	⇑P	**P**	**07 34 25.2**	**-0.2**
	baz=34,SNR=16						
D14A	**Greenough**	**34.34**	**78**	⇓P	**P**	**07 34 25.6**	**-0.3**
	baz=34,SNR=44						
C15A	**Salmond Ranch,**	**34.51**	**77**	⇓P	**P**	**07 34 27.9**	**+0.5**
	baz=34,SNR=120						
A16A	**West Butte Ran**	**34.51**	**74**	⇓P	**P**	**07 34 26.9

DLMT eScP ScP 07 41 01.7 +12
SAO San Andreas Ge 35.79 99 *e*P **P 07 34 41.0 +2.4**
comp=Z,20nm,1.0s,mb5.0
SAO **San Andreas Ge 35.79 99** *e*P **P 07 34 41.0 +2.4**
SAO pmax pmax
comp=Z,20nm,1.0s,mb5.0
WAKR Walker 35.83 95 *e*P **P 07 34 39.7 +0.8**
B18A Beardsley Farm 35.83 74 ⇓P **P 07 34 38.7 -0.1**
baz=36,SNR=37
BMN Battle Mountai 35.92 91 *e*P **P 07 34 40.2 +0.6**
comp=Z,29nm,1.0s,mb5.2
BMN Battle Mountai 35.92 91 *e*P **P 07 34 40.3 +0.6**
BMN pmax pmax
comp=Z,29nm,1.0s,mb5.2
MCMT McKenzie Canyo 35.94 81 P **P 07 34 39.8 +0.1**
D17A Six Diamond Ra 35.94 77 ⇑P **P 07 34 39.7 -0.1**
baz=36,SNR=50
G15A Dillon 35.96 81 ⇑P **P 07 34 39.7 -0.2**
baz=36,SNR=38
J13A Cove Ranch, Pi 35.96 84 ⇑P **P 07 34 40.2 +0.2**
baz=36,SNR=42
EGMT Eagleton 36.03 75 *e*P **P 07 34 39.5 -1.0**
comp=Z,108nm,1.0s,mb5.7
F16A Kennard Place, 36.13 79 ⇑P **P 07 34 41.1 -0.3**
baz=36,SNR=12
M11A Holland Ranch, 36.16 88 ⇑P **P 07 34 42.4 +0.7**
baz=36,SNR=35
N10A Dunphy 36.17 90 ⇑P **P 07 34 42.4 +0.6**
baz=36
H15A Lima 36.17 81 ⇓P **P 07 34 41.7 -0.1**
baz=36,SNR=21
L12A House Creek Ra 36.20 87 ⇓P **P 07 34 42.4 +0.4**
baz=36,SNR=28
BOZ Bozeman (W) 36.20 79 *e*P **P 07 34 42.1 +0.1**
comp=Z,34nm,1.3s,mb5.1
BOZ Bozeman (W) 36.20 79 *e*P **P 07 34 42.1 +0.1**
BOZ pmax pmax
comp=Z,34nm,1.3s,mb5.1
E17A Martinsdale 36.21 78 ⇑P **P 07 34 42.3 +0.3**
baz=36,SNR=47
G16A Moss Hill, Enn 36.33 80 ⇓P **P 07 34 42.8 -0.3**
baz=36,SNR=43
J14A Carey 36.40 84 ⇓P **P 07 34 44.3 +0.6**
baz=36,SNR=13
D18A Linhart Farms, 36.44 76 ⇑P **P 07 34 44.5 +0.6**
baz=36,SNR=102
O10A Cortez Mining, 36.44 90 ⇓P **P 07 34 44.8 +0.7**
baz=36,SNR=14
NVAR Mina Array Bea 36.55 94 P **P 07 34 44.9 -0.2**
comp=Z,6.1nm,1.0s,mb4.4,baz=301,slow=7.8,SNR=30
NVAR PcP PcP 07 37 08.4 +0.3
comp=Z,1.4nm,0.8s,baz=222,slow=29,SNR=5.9
N11A Elko Archery C 36.57 89 ⇑P **P 07 34 45.7 +0.5**
baz=36,SNR=16
I15A Monteview 36.62 82 ⇓P **P 07 34 46.0 +0.4**
baz=36,SNR=19
F17A Fitzpatrick Pl 36.63 78 ⇑P **P 07 34 45.6 0.0**
baz=36,SNR=47
M12A Wells 36.70 87 ⇑P **P 07 34 46.8 +0.5**
baz=36,SNR=35
E18A Harlowton 36.70 77 ⇑P **P 07 34 46.9 +0.7**
baz=36,SNR=57
MLAC Mammoth Lakes 36.76 96 ⇓P **P 07 34 47.9 +1.1**
baz=37
L13A Double Diamond 36.87 86 ⇑P **P 07 34 48.1 +0.4**
baz=37
G17A Pierce Place, 36.90 79 ⇑P **P 07 34 48.1 +0.1**
baz=37,SNR=21
H16A Russell Place, 36.95 80 ⇓P **P 07 34 48.5 +0.1**
baz=37,SNR=39
N12A Clover Valley, 36.97 88 ⇑P **P 07 34 49.1 +0.5**
baz=37,SNR=55
J15A Blackfoot 36.99 83 ⇓P **P 07 34 49.5 +0.7**
baz=37,SNR=27
O11A Cowboy Ranch, 37.05 90 ⇓P **P 07 34 49.8 +0.6**
baz=37
K14A Jones Ranch, D 37.06 85 ⇑P **P 07 34 49.4 +0.1**
baz=37,SNR=11
MTUM Tungsten Hills 37.10 96 *e*P **P 07 34 50.6 +0.8**
YMR Madison River 37.14 80 *e*P **P 07 34 50.6 +0.6**
comp=Z,90nm,1.2s,mb5.5
FFC Flin Flon 37.15 61 *e*P **P 07 34 50.3 +0.3**
comp=Z,35nm,1.2s,mb5.1
FFC Flin Flon 37.15 61 *i* P **P 07 34 51.3 +1.3**
M13A Montello 37.18 87 ⇑P **P 07 34 50.7 +0.4**
baz=37,SNR=37
F18A Big Timber 37.18 78 ⇑P **P 07 34 50.4 0.0**
baz=37,SNR=25
KLR Kul'dur 37.19 289 *e*P **P 07 34 52.8 +2.4**
GCMT Greycliff 37.27 78 *e*P **P 07 34 51.5 +0.4**
comp=Z,13nm,0.9s,mb4.8
YNR Norris Junctio 37.28 80 *e*P **P 07 34 51.5 +0.3**
comp=Z,95nm,1.1s,mb5.5
I16A Newdale 37.28 82 ⇓P **P 07 34 51.7 +0.5**
baz=37,SNR=20
L14A Malta 37.32 85 ⇑P **P 07 34 52.0 +0.4**
baz=37,SNR=26
YFT Old Faithful 37.34 80 *e*P **P 07 34 53.1 +1.5**
comp=Z,60nm,1.2s,mb5.3
P11A Circle Ranch, 37.35 91 ⇑P **P 07 34 51.8 0.0**
baz=37
K15A Arbon 37.36 84 ⇑P **P 07 34 52.4 +0.5**
baz=37,SNR=41
CLNS Chul'man 37.37 303 *e*P **P 07 34 56.1 +4.3**
CLNS *e**PP pP 07 35 06.3 +6.7
CLNS *e* 07 36 20.6
CLNS *e*PPP 07 36 37.6
CLNS *e* 07 37 09.9
CLNS *e*S **S 07 40 41.1 +3.3**
CLNS *e* 07 45 01.1
CLNS pmax pmax
comp=Z,14nm,0.9s,mb4.8
CLNS pmax pmax
comp=E,9.0nm,1.0s
CLNS pmax pmax
comp=N,16nm,0.9s
CLNS pmax pmax
comp=N,11nm,0.9s
CLNS pmax pmax
comp=E,10.0nm,1.0s
CLNS pmax pmax
comp=Z,10.0nm,1.1s,mb4.6
CLNS smax
comp=E,98nm,13.5s
CLNS smax
comp=N,36nm,12.8s
CLNS MLR MLR
comp=E,2µm,13.0s,MS5.1
CLNS MLR MLR
comp=Z,417nm,14.0s,MS4.4
CLNS MLR MLR
comp=N,543nm,14.0s,MS5.1
RCTC Rector, Farmer 37.40 98 ⇓P **P 07 34 52.7 +0.4**
baz=37,SNR=12
Q10A Clear Creek Ra 37.43 92 ⇓P **P 07 34 53.1 +0.6**
baz=37,SNR=38
N13A Wendover, West 37.46 88 ⇑P **P 07 34 53.2 +0.4**
baz=37,SNR=14
TIN Tinemaha 37.50 96 ⇑P **P 07 34 53.3 +0.2**
baz=37
O12A Currie 37.51 89 ⇓P **P 07 34 53.3 +0.2**
baz=37,SNR=75
H17A Grant Village 37.52 80 ⇓P **P 07 34 54.6 +1.4**
baz=37,SNR=38
LKWY Lake 37.53 80 *e*P **P 07 34 54.4 +1.1**
comp=N,42nm,0.9s,mb5.2
LKWY Lake 37.53 80 *e*P **P 07 34 54.4 +1.1**
LKWY pmax pmax
comp=Z,42nm,0.9s,mb5.2
J16A Bone 37.55 83 ⇑P **P 07 34 54.3 +0.8**
baz=37,SNR=31
M14A Sheep Mountain 37.58 86 ⇓P **P 07 34 53.9 +0.2**
baz=37,SNR=26
IMW Indian Meadow 37.59 81 *e*P **P 07 34 54.3 +0.4**
comp=Z,28nm,0.9s,mb5.0
G18A Lazy EL Ranch, 37.59 78 ⇓P **P 07 34 53.6 -0.3**
baz=37,SNR=12
DCID1 Drake Creek 37.62 82 *e*P **P 07 34 55.1 +1.0**
comp=Z,26nm,0.9s,mb5.0
FLWY Flagg Ranch 37.63 81 *e*P **P 07 34 55.1 +1.0**
comp=Z,39nm,1.0s,mb5.1
SMMC Simmler 37.64 99 ⇑P **P 07 34 54.7 +0.4**
baz=38
HVU Hansel Valley 37.75 85 *e*P **P 07 34 55.9 +0.7**
comp=Z,16nm,0.8s,mb4.8
HVU Hansel Valley 37.75 85 *e*P **P 07 34 55.9 +0.7**
HVU pmax pmax
comp=Z,16nm,0.8s,mb4.8
I17A Pilgrim Ck. 37.79 81 ⇓P **P 07 34 56.3 +0.8**
baz=38
MOOW Moose Ponds 37.79 81 *e*P **P 07 34 55.8 +0.2**
comp=Z,20nm,1.2s,mb4.7
VES Vestal, Richgr 37.81 98 ⇓P **P 07 34 55.6 -0.2**
baz=38,SNR=21
TPAW Teton Pass 37.82 82 *e*P **P 07 34 56.8 +1.0**
comp=Z,31nm,1.3s,mb4.9
K16A Soda Springs 37.83 83 ⇓P **P 07 34 56.8 +1.0**
baz=38,SNR=26
R10A Warm Springs 37.84 93 ⇓P **P 07 34 56.3 +0.3**
baz=38,SNR=33
L15A Malad City 37.85 85 ⇑P **P 07 34 55.8 -0.3**
baz=38,SNR=28
Q11A Duckwater 37.86 91 ⇓P **P 07 34 56.5 +0.3**
baz=38,SNR=50
RLMT Red Lodge 37.88 78 *e*P **P 07 34 56.7 +0.5**
comp=Z,80nm,1.1s,mb5.4
S10A Tonopah Range, 37.90 93 ⇓P **P 07 34 56.8 +0.3**
baz=38,SNR=41
P12A McGill 37.91 90 ⇑P **P 07 34 56.9 +0.3**
baz=38
SNOW Snow King Moun 37.95 82 *e*P **P 07 34 58.0 +1.1**
comp=Z,17nm,1.0s,mb4.7
REDW Red Top Meadow 37.95 82 *e*P **P 07 34 57.9 +1.0**
comp=Z,37nm,1.3s,mb5.0
LOHW Long Hollow 37.95 81 *e*P **P 07 34 57.2 +0.3**
comp=Z,15nm,1.1s,mb4.6
CWC Cottonwood Cre 38.00 96 ⇑P **P 07 34 57.6 +0.2**
baz=38
J17A Brown Place, J 38.04 82 ⇓P **P 07 34 57.9 +0.3**
baz=38,SNR=12
O13A Hicks Ranch, I 38.05 88 ⇓P **P 07 34 57.4 -0.3**
baz=38
GRAC Grapevine Rang 38.05 95 ⇑P **P 07 34 58.5 +0.7**
baz=38,SNR=30
N14A Grayback Hills 38.07 87 ⇓P **P 07 34 58.0 +0.1**
baz=38,SNR=44
BGU Big Grassy Mou 38.12 87 *e*P **P 07 34 58.5 +0.2**
comp=Z,29nm,1.2s,mb4.9
M15A Larsen Ranch, 38.14 86 ⇓P **P 07 34 58.5 0.0**
baz=38,SNR=12
AHID Auburn Hatcher 38.16 83 *e*P **P 07 34 59.4 +0.7**
comp=Z,39nm,1.1s,mb5.0
R11A Troy Canyon, C 38.23 92 ⇑P **P 07 34 59.4 +0.1**
baz=38,SNR=68
Q12A Willow Creek R 38.23 90 ⇓P **P 07 34 59.7 +0.4**
baz=38,SNR=33
K17A Gardner Place, 38.27 83 ⇓P **P 07 34 59.7 +0.1**
baz=38,SNR=14
ISA Isabella 38.30 98 ⇑P **P 07 34 59.6 -0.3**
baz=38,SNR=22
ISA Isabella 38.30 98 *e*P **P 07 34 60.0 +0.1**
comp=Z,42nm,1.3s,mb5.0
ISA Isabella 38.30 98 *e*P **P 07 35 00.0 +0.1**
ISA pmax pmax
comp=Z,42nm,1.3s,mb5.0
I18A Diamond G Ranc 38.37 81 ⇑P **P 07 35 00.8 +0.4**
baz=38,SNR=9.2
L16A Fish Haven 38.41 84 ⇑P **P 07 35 00.9 +0.1**
baz=38,SNR=22
N15A Stansbury Isla 38.45 86 ⇑P **P 07 35 01.1 0.0**
baz=38,SNR=16
P13A Bates Ranch, G 38.45 89 ⇓P **P 07 35 01.3 +0.1**
baz=38,SNR=55
ARVC Arvin 38.46 99 ⇑P **P 07 35 01.2 0.0**
baz=38
J18A Kendall Valley 38.53 82 ⇓P **P 07 35 01.8 +0.1**
baz=38,SNR=20
HWUT Hardware Ranch 38.58 85 *e*P **P 07 35 02.2 +0.1**
comp=Z,26nm,1.3s,mb4.8
HWUT *e*PcP PcP 07 37 16.0 +1.8
S11A Rachel 38.59 93 ⇑P **P 07 35 02.4 +0.1**
baz=38
MPMC Manual Prospec 38.61 96 ⇓P **P 07 35 02.8 +0.3**
baz=38,SNR=28
L17A Cokeville 38.69 84 ⇑P **P 07 35 03.0 -0.1**
baz=38,SNR=10
DUG Dugway 38.70 87 *e*P **P 07 35 03.2 0.0**
comp=Z,80nm,1.1s,mb5.4
DUG Dugway 38.70 87 *e*P **P 07 35 03.2 -0.1**
DUG pmax pmax
comp=Z,80nm,1.1s,mb5.4
FURC Furnace Creek, 38.71 95 ⇓P **P 07 35 03.5 +0.1**
baz=39,SNR=42
Q13A Wheeler Ranch, 38.77 90 ⇓P **P 07 35 04.0 +0.1**
baz=39,SNR=41
LAO LASA Array 38.77 74 *e*P **P 07 35 04.7 +1.0**
comp=Z,38nm,1.1s,mb5.0
R12A Pony Springs, 38.82 91 ⇑P **P 07 35 04.1 -0.2**
baz=39,SNR=57
NOQ North Oquirrh 38.83 86 *e*P **P 07 35 04.5 +0.1**
comp=Z,32nm,1.0s,mb5.0
K18A Toltan Ranch, 38.86 82 ⇓P **P 07 35 04.9 +0.3**
baz=39,SNR=45
OSI Osito Adit 38.88 99 ⇓P **P 07 35 04.4 -0.3**
baz=39
OSI Osito Adit 38.88 99 *e*P **P 07 35 06.1 +1.3**
comp=Z,14nm,0.4s,mb5.0
LRMC Laurel Mountai 38.89 97 ⇑P **P 07 35 04.7 -0.1**
baz=39
P14A Drum Mountains 38.93 88 ⇓P **P 07 35 05.3 +0.1**
baz=39,SNR=30
CTU Camp Tracy 39.03 86 *e*P **P 07 35 06.5 +0.5**
comp=Z,35nm,1.3s,mb4.9
U10A Ash Meadows, A 39.06 95 ⇑P **P 07 35 06.5 +0.2**
baz=39
BW06 Boulder Array 39.07 82 *e*P **P 07 35 06.1 -0.2**
comp=Z,46nm,1.1s,mb5.1
N16A Rees Ranch, Co 39.09 85 ⇑P **P 07 35 06.4 -0.1**
baz=39
EDW2 Edwards Air Fo 39.12 98 ⇑P **P 07 35 06.9 +0.1**
baz=39
S12A Delamar Landin 39.15 92 ⇓P **P 07 35 07.4 +0.4**
baz=39,SNR=40
Q14A Sevier Lake (B 39.19 89 ⇑P **P 07 35 07.5 +0.1**
baz=39,SNR=54
M17A Scullys Gap (B 39.19 84 ⇓P **P 07 35 07.0 -0.3**
baz=39,SNR=23
JLU Jordanelle 39.26 86 *e*P **P 07 35 08.3 +0.4**
comp=Z,40nm,1.2s,mb5.0
L18A Fontenelle, Gr 39.29 83 ⇑P **P 07 35 07.9 -0.2**
baz=39,SNR=22
NLU North Lily Min 39.30 87 *e*P **P 07 35 08.8 +0.6**
comp=Z,20nm,1.0s,mb4.8
NLU *e*ScP ScP 07 41 10.0 +7.1
R13A O'Grain Ranch, 39.30 91 ⇑P **P 07 35 08.3 0.0**
baz=39,SNR=26
FCC Fort Churchill 39.33 52 *e*P **P 07 35 08.3 0.0**
comp=Z,2.5nm,0.9s,mb3.9
DECC Green Verdugo 39.36 99 ⇑P **P 07 35 08.3 -0.5**
baz=39
P15A Leamington 39.42 88 ⇑P **P 07 35 09.2 -0.1**
baz=39,SNR=36
N17A Moffit Pass 39.42 85 ⇑P **P 07 35 09.0 -0.2**
baz=39,SNR=13
SHOC Shoshone 39.44 95 ⇑P **P 07 35 09.3 -0.2**
baz=39
K19A Absolon Red Bu 39.46 81 ⇓P **P 07 35 08.9 -0.6**
baz=39,SNR=29
O16A Springville 39.48 86 ⇓P **P 07 35 09.8 0.0**
baz=39,SNR=34
DAU Daniels Canyon 39.50 86 *e*P **P 07 35 10.8 +1.0**
PASC Pasadena Art C 39.50 99 *e*P **P 07 35 12.9 +2.9**
comp=Z,117nm,1.3s,mb5.5
MPU Maple Canyon 39.52 87 *e*P **P 07 35 10.4 +0.4**
comp=Z,22nm,1.0s,mb4.8
GSC Goldstone 39.54 97 ⇓P **P 07 35 10.1 -0.2**
baz=39,SNR=29
GSC Goldstone 39.54 97 *e*P **P 07 35 10.7 +0.4**
comp=Z,52nm,1.2s,mb5.1
GSC Goldstone 39.54 97 *e*P **P 07 35 10.7 +0.5**
GSC pmax pmax
comp=Z,52nm,1.2s,mb5.1
MWC Mount Wilson 39.54 99 *e*P **P 07 35 12.0 +1.7**
comp=Z,71nm,1.4s,mb5.2
MWC Mount Wilson 39.54 99 *e*P **P 07 35 12.0 +1.7**
MWC pmax pmax
comp=Z,71nm,1.4s,mb5.2
M18A Lyman 39.58 84 ⇑P **P 07 35 10.0 -0.5**
baz=39,SNR=16
L19A Farson 39.59 82 ⇓P **P 07 35 10.4 -0.2**
baz=39,SNR=34
U11A Corn Creek 39.62 94 ⇑P **P 07 35 11.1 +0.2**
baz=40
RRX Edison Barstow 39.71 97 ⇑P **P 07 35 11.7 0.0**
baz=40
Q15A Fillmore 39.72 89 ⇓P **P 07 35 11.8 0.0**
baz=40,SNR=21
S13A Holt Ranch, En 39.76 91 ⇑P **P 07 35 12.1 0.0**
baz=40,SNR=75
P16A Fountain Green 39.76 87 ⇑P **P 07 35 12.4 +0.3**
baz=40,SNR=14
BFSC Mount Baldy Ra 39.77 98 ⇑P **P 07 35 12.0 -0.2**
baz=40,SNR=18
R14A James Farms, M 39.79 90 ⇓P **P 07 35 12.3 0.0**
baz=40,SNR=9.1
K20A Yellowstone Ra 39.85 81 ⇑P **P 07 35 11.9 -0.9**
baz=40,SNR=40
ARUT Antelope Range 39.87 91 *e*P **P 07 35 13.2 +0.2**
comp=Z,31nm,1.1s,mb5.0
ARUT Antelope Range 39.87 91 *e*P **P 07 35 13.3 +0.3**
ARUT pmax pmax
comp=Z,31nm,1.1s,mb5.0
O17A Robinson Place 39.94 86 ⇑P **P 07 35 13.9 +0.3**
baz=40,SNR=25
TUQ Turquoise Moun 39.97 96 ⇓P **P 07 35 14.0 +0.2**
baz=40,SNR=15
V11A Goodsprings 39.99 95 ⇓P **P 07 35 14.2 +0.2**
baz=40,SNR=14
S14A Cedar City 40.05 91 ⇓P **P 07 35 14.5 -0.1**
baz=40,SNR=19
M19A Rock Springs 40.07 83 ⇑P **P 07 35 14.0 -0.7**
baz=40
CCUT Cedar City 40.08 91 *e*P **P 07 35 13.1 -1.6**
comp=Z,37nm,1.2s,mb5.0
N18A Larsen Ranch, 40.09 84 ⇓P **P 07 35 14.0 -0.8**
baz=40
T13A Saint George 40.10 92 ⇑P **P 07 35 15.3 +0.3**
baz=40,SNR=45
U12A Valley of Fire 40.12 93 ⇑P **P 07 35 15.3 +0.2**
baz=40,SNR=14
SCI San Clemente I 40.13 101 ⇓P **P 07 35 15.9 +0.7**
baz=40
HEC Hector,Ludlow 40.14 97 ⇑P **P 07 35 15.4 +0.1**
baz=40,SNR=15
MSU Marysvale 40.16 89 *e*P **P 07 35 15.9 +0.5**
BBRC Big Bear Solar 40.19 98 ⇑P **P 07 35 15.6 0.0**
baz=40,SNR=12
TMUT Trail Mountain 40.23 87 *e*P **P 07 35 16.8 +0.9**
comp=Z,40nm,0.9s,mb5.2
L20A Wamsutter 40.25 82 ⇓P **P 07 35 15.4 -0.7**
baz=40,SNR=20
R15A Junction 40.29 89 ⇓P **P 07 35 16.9 +0.4**
baz=40,SNR=13
O18A Roosevelt 40.33 85 ⇓P **P 07 35 17.2 +0.4**
baz=40,SNR=38
P17A Butcher Ranch, 40.40 87 ⇑P **P 07 35 17.5 +0.1**
baz=40,SNR=31
V12A Nelson 40.41 94 ⇑P **P 07 35 17.7 +0.2**
baz=40,SNR=17
N19A John Jarvie Ra 40.44 84 ⇓P **P 07 35 17.0 -0.7**
baz=40,SNR=12
MURC Murrieta 40.49 99 ⇑P **P 07 35 18.2 +0.1**
baz=40
Q16A Castle Valley 40.50 88 ⇓P **P 07 35 18.5 +0.3**
baz=40,SNR=47
T14A Hurricane 40.57 91 ⇓P **P 07 35 19.1 +0.4**
baz=40,SNR=13
GMRC Granite Mounta 40.58 96 ⇓P **P 07 35 19.0 +0.1**
baz=40,SNR=21
S15A Panguitch 40.59 90 ⇑P **P 07 35 19.3 +0.3**
baz=40,SNR=29
P18A Preston Nutter 40.59 86 ⇑P **P 07 35 19.2 +0.3**
baz=40,SNR=50
M20A Sweetwater, Wa 40.65 82 ⇓P **P 07 35 19.4 0.0**
baz=40,SNR=13
W12A Cal Nev Ari 40.69 95 ⇓P **P 07 35 19.9 +0.1**
baz=40
R16A Teasdale 40.72 89 ⇑P **P 07 35 21.0 +0.9**
baz=40,SNR=96
SRU San Rafael 40.76 87 *e*P **P 07 35 20.9 +0.5**
comp=Z,73nm,1.3s,mb5.2
SRU San Rafael 40.76 87 *e*P **P 07 35 20.9 +0.6**
SRU pmax pmax
comp=Z,73nm,1.3s,mb5.2
O19A Miners Draw (B 40.84 84 ⇓P **P 07 35 20.7 -0.3**
baz=41,SNR=33
V13A Grand Canyon W 40.84 93 ⇓P **P 07 35 21.3 +0.3**
baz=41,SNR=31
L21A Rawlins 40.85 81 ⇓P **P 07 35 20.6 -0.4**
baz=41,SNR=55
MAJO Matsushiro 40.90 268 *e*P **P 07 35 22.3 +0.7**
comp=Z,9.3nm,0.7s,mb4.5
MAJO Matsushiro 40.90 268 *e*P **P 07 35 22.3 +0.8**
MAJO pmax pmax
comp=Z,9.0nm,0.7s,mb4.5
MJAR Matsushiro Arr 40.90 268 P **P 07 35 21.3 -0.2**
comp=Z,4.6nm,0.8s,mb4.2,baz=46,slow=6.9,SNR=6.2
MJAR PcP PcP 07 37 21.9 +0.2
comp=Z,2.3nm,0.7s,baz=271,slow=1.6,SNR=4.4
MAT Matsushiro 40.90 268 P **P 07 35 20.2 -1.3**
MAT S **S 07 41 32.0 +0.7**
BELC Belle Mtn. Jos 40.92 97 ⇑P **P 07 35 21.2 -0.5**
baz=41,SNR=18
PFO Pinyon Flat Ob 40.92 98 ⇑P **P 07 35 21.4 -0.4**
baz=41,SNR=10
PFO Pinyon Flat Ob 40.92 98 *e*P **P 07 35 21.8 +0.1**
comp=Z,28nm,1.2s,mb4.8
PFO Pinyon Flat Ob 40.92 98 *e*P **P 07 35 21.8 +0.1**
PFO pmax pmax
comp=Z,28nm,1.2s,mb4.8
U14A Mt Trumbull 40.94 92 ⇑P **P 07 35 22.1 +0.3**
baz=41,SNR=58
MDJ Mudanjiang 40.95 284 P **P 07 35 21.6 -0.3**
MDJ pP pP 07 35 34.7 +5.0
MDJ sP sP 07 35 40.8 +7.9
MDJ ScP ScP 07 41 06.3 -3.0
MDJ PcS PcS 07 41 12.1 -0.4
MDJ S **S 07 41 29.7 -2.2**
MDJ sS sS 07 41 52.6 +7.7
MDJ pmax pmax
comp=Z,4.0nm,0.4s,mb4.4
MDJ LR LR
comp=N,410nm,28.5s,MS4.2
MDJ LR LR
comp=E,240nm,26.8s,MS4.2
MDJ LR LR
comp=Z,430nm,24.7s,MS4.2
Q18A Rafter H Ranch 41.00 87 ⇑P **P 07 35 22.2 -0.1**
baz=41,SNR=59
T15A Red Dirt Ranch 41.01 91 ⇓P **P 07 35 22.9 +0.5**
baz=41,SNR=34
N20A Spence Gulch, 41.02 83 ⇓P **P 07 35 22.2 -0.2**
baz=41,SNR=28
S16A Weppner Ranch, 41.02 89 ⇑P **P 07 35 23.0 +0.5**
baz=41,SNR=69
109C Camp Elliot, M 41.05 99 ⇓P **P 07 35 22.2 -0.6**
baz=41
M21A Separation Pea 41.07 82 ⇑P **P 07 35 22.1 -0.8**
baz=41,SNR=13
R17A Hanksville Air 41.09 88 ⇓P **P 07 35 23.0 -0.1**
baz=41,SNR=46
RWWY Rawlins 41.11 81 *e*P **P 07 35 23.5 +0.3**
comp=Z,63nm,1.2s,mb5.1
IRM Iron Mountain 41.31 96 ⇑P **P 07 35 24.7 -0.2**
baz=41,SNR=24
P19A Cripple Cowboy 41.34 85 ⇑P **P 07 35 25.0 -0.2**
baz=41,SNR=45
L22A Ellis Ranch, M 41.36 80 ⇑P **P 07 35 24.7 -0.5**
baz=41
W13A Hualapai Mount 41.41 94 ⇑P **P 07 35 25.8 0.0**
baz=41,SNR=46
MONP Monument Peak 41.45 99 ⇑P **P 07 35 26.0 -0.1**
baz=41,SNR=12
BAR Barrett 41.45 99 *e*P **P 07 35 27.0 +0.9**
comp=Z,47nm,1.2s,mb5.0
U15A North Rim 41.46 91 ⇑P **P 07 35 26.4 +0.2**
baz=41,SNR=55
O20A White River Ci 41.47 84 ⇑P **P 07 35 25.7 -0.5**
baz=41,SNR=48
BC3 Big Chuckawall 41.48 97 ⇑P **P 07 35 25.9 -0.4**
baz=41,SNR=10
N21A Black Mountain 41.50 83 ⇑P **P 07 35 25.7 -0.7**
baz=41,SNR=16
RSSD Black Hills 41.51 76 *e*P **P 07 35 26.0 -0.4**
comp=Z,35nm,1.3s,mb4.8
RSSD *e*PcP PcP 07 37 23.3 -0.2
RSSD Black Hills 41.51 76 *e*P **P 07 35 26.0 -0.4**
RSSD *e* 07 37 23.3
RSSD pmax pmax
comp=Z,35nm,1.3s,mb4.8
V14A Boquillas Ranc 41.51 93 ⇑P **P 07 35 26.6 +0.1**
baz=41,SNR=38

S17A	**Black Ridge (B**	41.55	89	⇑P		P	07 35 26.7	-0.2		
	baz=41,SNR=53									
T16A	**Glen Canyon Da**	41.56	90	⇓P		P	07 35 26.3	-0.7		
	baz=41,SNR=13									
R18A	**Canyonlands Na**	41.60	87	⇓P		P	07 35 26.4	-0.9		
	baz=41,SNR=34									
M22A	**Cedar Creek Ra**	41.65	81	⇓P		P	07 35 27.0	-0.6		
	baz=41,SNR=21									
P20A	**De Beque**	41.78	85	⇓P		P	07 35 27.9	-0.8		
	baz=42,SNR=14									
SWSC	**Sam W. Stewart**	41.78	98	⇓P		P	07 35 28.3	-0.5		
	baz=42,SNR=8.0									
X13A	**Yucca**	41.79	95	⇓P		P	07 35 28.6	-0.3		
	baz=42,SNR=21									
DVTC	**Desert V Tower**	41.80	99	⇓P		P	07 35 28.4	-0.6		
	baz=42									
W14A	**Seligman**	41.81	93	⇑P		P	07 35 28.9	-0.2		
	baz=42,SNR=35									
O21A	**Pagoda**	41.87	83	⇓P		P	07 35 28.7	-0.8		
	baz=42,SNR=13									
V15A	**Kaibab Nationa**	41.94	92	⇑P		P	07 35 30.5	+0.4		
	baz=42,SNR=95									
T17A	**Navajo Res., N**	41.97	90	⇑P		P	07 35 29.8	-0.6		
	baz=42,SNR=31									
S18A	**Hurst Farm, Bl**	42.00	88	⇓P		P	07 35 29.9	-0.6		
	baz=42,SNR=51									
R19A	**Curley Farm, L**	42.04	87	⇓P		P	07 35 29.9	-0.9		
	baz=42,SNR=52									
N22A	**Wattenberg Ran**	42.11	82	⇓P		P	07 35 30.8	-0.6		
	baz=42,SNR=27									
PV04	**Paradox Valley**	42.19	87	eP		P	07 35 31.7	-0.4		
Q20A	**Ridgley Place,**	42.19	85	⇑P		P	07 35 31.3	-0.8		
	baz=42,SNR=46									
GLA	**Glamis**	42.28	97	⇑P		P	07 35 32.6	-0.3		
	baz=42,SNR=18									
GLA	**Glamis**	42.28	97	eP		P	07 35 33.6	+0.8		
	comp=Z,43nm,1.0s,mb5.0									
GLA	**Glamis**	42.28	97	eP		P	07 35 33.6	+0.7		
GLA					pmax	pmax				
	comp=Z,43nm,1.0s,mb5.0									
W15A	**Williams**	42.32	93	⇑P		P	07 35 33.4	+0.2		
	baz=42,SNR=17									
U16A	**Tuba City**	42.35	91	⇑P		P	07 35 33.2	-0.2		
	baz=42,SNR=47									
N23A	**Red Feather La**	42.35	81	⇑P		P	07 35 33.1	-0.3		
	baz=42,SNR=28									
PHWY	**Pilot Hill**	42.38	81	eP		P	07 35 32.8	-0.8		
	comp=Z,16nm,1.3s,mb4.5									
T18A	**Mexican Hat**	42.43	89	⇑P		P	07 35 33.3	-0.8		
	baz=42,SNR=76									
X14A	**Yava**	42.44	94	⇓P		P	07 35 34.3	+0.1		
	baz=42,SNR=32									
O22A	**Kremmling**	42.45	83	⇓P		P	07 35 33.7	-0.5		
	baz=42,SNR=41									
S19A	**Harvey Farm, M**	42.47	87	⇑P		P	07 35 33.7	-0.7		
	baz=42,SNR=42									
PV01	**Paradox Valley**	42.56	87	eP		P	07 35 34.7	-0.4		
	comp=Z,4μm,1.0s									
ULM	**Lac du Bonnet**	42.60	64	eP		P	07 35 34.7	-0.6		
	comp=Z,38nm,1.0s,mb5.1									
ULM	**Lac du Bonnet**	42.60	64	P		P	07 35 35.9	+0.6		
	comp=Z,26nm,0.9s,mb5.0,baz=305,slow=8.2,SNR=17									
ULM					LR	LR	07 54 47.9			
	comp=Z,430nm,18.2s,MS4.4,baz=201,slow=38									
WUAZ	**Wupatki**	42.62	92	eP		P	07 35 35.9	+0.3		
	comp=Z,134nm,1.5s,mb5.5									
R20A	**Redvale**	42.63	86	⇓P		P	07 35 35.2	-0.5		
	baz=42,SNR=38									
P22A	**Eagle**	42.69	84	⇑P		P	07 35 35.6	-0.5		
	baz=42,SNR=7.0									
Q21A	**Lamborn Mesa,**	42.69	85	⇑P		P	07 35 35.8	-0.4		
	baz=42,SNR=16									
Y14A	**Wickenburg**	42.74	95	⇓P		P	07 35 36.5	-0.1		
	baz=43									
112A	**Yuma**	42.79	98	⇑P		P	07 35 36.8	-0.2		
	baz=43									
O23A	**Lake Granby, G**	42.80	82	⇑P		P	07 35 36.9	-0.1		
	baz=43,SNR=32									
X15A	**Humboldt**	42.82	93	⇑P		P	07 35 37.2	0.0		
	baz=43,SNR=33									
W16A	**Flagstaff**	42.82	92	⇓P		P	07 35 37.8	+0.5		
	baz=43,SNR=41									
SMCO	**Snowmass**	42.83	84	eP		P	07 35 37.0	-0.2		
	comp=Z,20nm,1.0s,mb4.8									
Z13A	**Yuma Proving G**	42.87	96	⇑P		P	07 35 37.3	-0.3		
	baz=43,SNR=45									
V17A	**Tonalea, Kykot**	42.90	91	⇓P		P	07 35 38.0	+0.1		
	baz=43									
U18A	**Rough Rock, Ch**	42.91	89	⇓P		P	07 35 37.7	-0.3		
	baz=43,SNR=20									
R21A	**Cimarron**	43.01	86	⇑P		P	07 35 38.6	-0.2		
	baz=43,SNR=42									
N24A	**Carr**	43.02	81	⇓P		P	07 35 38.5	-0.3		
	baz=43,SNR=12									
Q22A	**Crested Butte,**	43.07	84	⇑P		P	07 35 38.9	-0.4		
	baz=43,SNR=24									
113A	**Mohawk Valley,**	43.11	97	⇓P		P	07 35 38.9	-0.7		
	baz=43,SNR=23									
Y15A	**Casa Rosa Ranc**	43.13	94	⇓P		P	07 35 39.8	0.0		
	baz=43,SNR=30									
Z14A	**Wintersburg**	43.17	95	⇓P		P	07 35 40.0	-0.1		
	baz=43									
MVCO	**Mesa Verde**	43.21	88	eP		P	07 35 39.8	-0.6		
	comp=Z,22nm,1.1s,mb4.8									
ISCO	**Idaho Springs**	43.24	83	eP		P	07 35 40.3	-0.2		
	comp=Z,9.3nm,1.0s,mb4.5									
ISCO	**Idaho Springs**	43.24	83	eP		P	07 35 40.3	-0.3		
ISCO					pmax	pmax				
	comp=Z,9.0nm,1.0s,mb4.5									
W17A	**Winslow**	43.32	92	⇑P		P	07 35 41.3	0.0		
	baz=43									
X16A	**Lo Mia Camp, P**	43.34	93	⇑P		P	07 35 41.8	+0.4		
	baz=43,SNR=42									
O24A	**Longmont**	43.35	82	⇑P		P	07 35 41.9	+0.4		
	baz=43									
V18A	**Ganado**	43.35	90	⇓P		P	07 35 41.4	-0.2		
	baz=43,SNR=40									
P23A	**Jefferson**	43.38	83	⇓P		P	07 35 42.0	+0.3		
	baz=43,SNR=24									
U19A	**Dine' College,**	43.40	89	⇓P		P	07 35 41.2	-0.6		
	baz=43,SNR=36									
N25A	**Grover**	43.50	80	⇓P		P	07 35 42.7	0.0		
	baz=43									
R22A	**Saguache, Gunn**	43.58	85	⇑P		P	07 35 43.6	+0.3		
	baz=43,SNR=48									
114A	**Black Gap (USA**	43.64	96	⇑P		P	07 35 43.7	-0.3		
	baz=44,SNR=15									
Q23A	**Hartsel**	43.68	84	⇓P		P	07 35 43.9	-0.3		
	baz=44,SNR=17									
Y16A	**Circle Bar Ran**	43.69	93	⇑P		P	07 35 44.5	+0.2		
	baz=44,SNR=45									
Z15A	**Gila River Ind**	43.70	95	⇑P		P	07 35 44.3	0.0		
	baz=44									
AGMN	**Agassiz Nation**	43.70	66	eP		P	07 35 43.1	-1.1		
	comp=Z,46nm,1.0s,mb5.2									
U20A	**Newcomb**	43.75	88	⇓P		P	07 35 44.9	+0.2		
	baz=44									
X17A	**Forest Lakes**	43.77	92	⇑P		P	07 35 45.3	+0.3		
	baz=44									
CN2	**Changchun**	43.83	286	eP		P	07 35 46.1	+0.8		
P24A	**Kohler Place,**	43.84	82	⇓P		P	07 35 45.5	+0.1		
	baz=44									
S22A	**4UR Ranch, Cre**	43.85	86	⇑P		P	07 35 45.5	0.0		
	baz=44,SNR=35									
W18A	**Petrified Fore**	43.88	91	⇑P		P	07 35 45.7	-0.1		
	baz=44,SNR=14									
O25A	**Wiggins**	43.92	81	⇑P		P	07 35 46.0	-0.1		
	baz=44,SNR=16									
T21A	**Navajo Lake**	43.93	87	⇓P		P	07 35 46.4	+0.2		
	baz=44									
Q24A	**Divide**	44.05	83	⇑P		P	07 35 47.1	0.0		
	baz=44									
W19A	**Sanders**	44.09	90	⇓P		P	07 35 47.6	+0.1		
	baz=44									
Z16A	**Peralta Trail,**	44.09	94	⇓P		P	07 35 47.1	-0.5		
	baz=44,SNR=25									
X18A	**Snowflake**	44.15	92	⇑P		P	07 35 48.3	+0.3		
	baz=44,SNR=38									
V20A	**Brimhall**	44.17	89	⇑P		P	07 35 47.9	-0.2		
	baz=44,SNR=33									
Y17A	**Roosevelt**	44.20	93	⇑P		P	07 35 48.2	-0.1		
	baz=44,SNR=34									
U21A	**Nageezi**	44.23	88	⇑P		P	07 35 48.5	-0.1		
	baz=44,SNR=108									
214A	**Organ Pipe Nat**	44.25	97	⇑P		P	07 35 48.4	-0.4		
	baz=44,SNR=39									
P25A	**Willow Gulch B**	44.28	82	⇑P		P	07 35 49.1	+0.1		
	baz=44,SNR=25									
T22A	**Edith**	44.29	87	⇑P		P	07 35 49.4	+0.3		
	baz=44,SNR=48									
116A	**Eloy**	44.48	95	⇑P		P	07 35 50.6	0.0		
	baz=44,SNR=11									
R24A	**Sanders Place,**	44.55	84	⇓P		P	07 35 51.1	0.0		
	baz=44,SNR=19									
W20A	**Ramah**	44.61	90	⇓P		P	07 35 51.5	-0.1		
	baz=44,SNR=40									
X19A	**St. Johns**	44.62	91	⇓P		P	07 35 52.1	+0.4		
	baz=44,SNR=53									
Q25A	**Bedland, Calha**	44.62	82	⇓P		P	07 35 51.4	-0.3		
	baz=44,SNR=10.0									
OGNE	**Ogallala**	44.62	79	eP		P	07 35 51.8	+0.2		
	comp=Z,55nm,0.9s,mb5.4									
SDCO	**Great Sand Dun**	44.64	85	eP		P	07 35 46.4	-5.4		
	comp=Z,43nm,1.4s,mb5.1									
V21A	**Milan**	44.66	88	⇑P		P	07 35 51.8	-0.2		
	baz=44,SNR=11									
Z17A	**San Carlos Hig**	44.70	93	⇓P		P	07 35 52.6	+0.2		
	baz=44,SNR=16									
U22A	**Llaves**	44.74	87	⇑P		P	07 35 52.6	-0.1		
	baz=45,SNR=36									
T23A	**Casias Ranch,**	44.79	86	⇓P		P	07 35 53.2	+0.2		
	baz=45,SNR=13									
S24A	**Houchin Ranch,**	44.88	85	⇓P		P	07 35 54.0	+0.2		
	baz=45,SNR=65									
Y19A	**Nutrioso**	44.96	92	⇑P		P	07 35 55.1	+0.7		
	baz=45,SNR=29									
X20A	**Quemado**	45.01	90	⇑P		P	07 35 55.2	+0.4		
	baz=45,SNR=48									
216A	**Three Points,**	45.02	95	⇑P		P	07 35 54.7	-0.3		
	baz=45									
V22A	**San Miguel Ran**	45.02	88	⇓P		P	07 35 54.5	-0.4		
	baz=45									
117A	**Oracle**	45.05	94	⇑P		P	07 35 55.3	+0.2		
	baz=45,SNR=44									
Z18A	**Geronimo**	45.10	93	⇑P		P	07 35 55.6	0.0		
	baz=45,SNR=9.7									
W21A	**San Fidel**	45.12	89	⇑P		P	07 35 55.2	-0.6		
	baz=45,SNR=11									
U23A	**El Rito**	45.17	87	⇓P		P	07 35 56.2	+0.1		
	baz=45,SNR=61									
TUC	**Tucson**	45.20	94	eP		P	07 35 55.3	-1.1		
	comp=Z,35nm,1.1s,mb5.1									
TUC	**Tucson**	45.20	94	eP		P	07 35 55.3	-1.1		
TUC					pmax	pmax				
	comp=Z,35nm,1.1s,mb5.1									
Z19A	**T-Link Ranch,**	45.42	92	⇓P		P	07 35 58.6	+0.6		
	baz=45									
118A	**Homack Ranch,**	45.46	93	⇓P		P	07 35 58.4	0.0		
	baz=45									
X21A	**Alamocita Cree**	45.50	90	⇑P		P	07 35 59.3	+0.5		
	baz=45,SNR=113									
Y20A	**Horse Springs,**	45.52	91	⇑P		P	07 35 59.3	+0.4		
	baz=45,SNR=50									
217A	**Green Valley**	45.57	95	⇑P		P	07 35 58.9	-0.3		
	baz=45,SNR=31									
V23A	**Ortiz Mt. (NFS**	45.57	87	⇓P		P	07 35 59.6	+0.3		
	baz=45,SNR=33									
W22A	**Albuquerque**	45.62	88	⇓P		P	07 35 59.8	+0.1		
	baz=45,SNR=10									
U24A	**Moreno Valley**	45.66	86	⇑P		P	07 36 00.1	+0.2		
	baz=46									
T25A	**Tridad**	45.69	84	⇓P		P	07 36 00.2	0.0		
	baz=46,SNR=33									
119A	**Ashpeak Ranch,**	45.77	93	⇓P		P	07 36 00.8	0.0		
	baz=46,SNR=40									
Y21A	**Point of Rocks**	45.87	90	⇑P		P	07 36 02.1	+0.4		
	baz=46,SNR=34									
218A	**Dragoon**	45.88	94	⇓P		P	07 36 01.9	+0.1		
	baz=46,SNR=32									
LAZ	**Ladron**	45.92	89	eP		P	07 36 02.6	+0.5		
	comp=Z,26nm,1.2s,mb5.0									
X22A	**Bernardo**	45.92	89	⇓P		P	07 36 02.9	+0.8		
	baz=46,SNR=15									
Z20A	**Nine Sixteen R**	45.95	92	⇑P		P	07 36 02.4	+0.1		
	baz=46,SNR=37									
ANMO	**Albuquerque**	45.95	88	eP		P	07 36 01.9	-0.3		
	comp=Z,23nm,1.2s,mb5.0									
ANMO					eP	cP	P	cP	07 37 43.9	+5.1
ANMO	**Albuquerque**	45.95	88	P		P	07 36 01.8	-0.4		
	comp=Z,28nm,1.3s,mb5.0,baz=320,slow=10,SNR=18									
ANMO						PcP		PcP	07 37 39.5	+0.7
	comp=Z,7.6nm,0.8s,baz=304,slow=2.3,SNR=11									
ANMO						ScP		ScP	07 41 30.8	+1.0
	comp=Z,1.1nm,0.9s,baz=285,slow=5.9,SNR=2.5									
ANMO	**Albuquerque**	45.95	88	eP		P	07 36 01.9	-0.3		
ANMO				e			07 37 43.9			
ANMO						pmax		pmax		
	comp=Z,23nm,1.2s									
W23A	**Werner Place,**	45.99	88	⇓P		P	07 36 02.4	-0.2		
	baz=46,SNR=19									
ECSD	**EROS Data Cent**	46.01	72	eP		P	07 36 01.0	-1.6		
	comp=Z,28nm,1.1s,mb5.1									
V24A	**Rampart Ranch,**	46.13	87	⇓P		P	07 36 03.6	-0.1		
	baz=46,SNR=44									
LENM	**Lemitar**	46.18	89	eP		P	07 36 04.8	+0.8		
U25A	**Circle Dot Ran**	46.19	85	⇑P		P	07 36 03.7	-0.4		
	baz=46,SNR=38									
Y22D	**IRIS PASSCAL I**	46.27	90	⇑P		P	07 36 05.6	+0.8		
	baz=46,SNR=16									
EYMN	**Ely**	46.28	64	eP		P	07 36 04.2	-0.5		
	comp=Z,40nm,0.9s,mb5.3									
LPM	**Los Pinos Moun**	46.28	89	eP		P	07 36 05.5	+0.6		
318A	**Bisbee**	46.30	95	⇑P		P	07 36 05.0	0.0		
	baz=46,SNR=34									
120A	**U Bar Ranch, L**	46.32	92	⇑P		P	07 36 05.5	+0.2		
	baz=46,SNR=27									
Y22A	**Socorro**	46.34	90	⇑P		P	07 36 05.9	+0.5		
	baz=46,SNR=76									
Z21A	**St. Cloud Mine**	46.36	91	⇓P		P	07 36 06.1	+0.6		
	baz=46,SNR=16									
X23A	**Hourglass Bar**	46.36	88	⇑P		P	07 36 05.3	-0.3		
	baz=46									
BNM	**Barren Site**	46.40	89	eP		P	07 36 06.0	+0.2		
	comp=Z,52nm,1.2s,mb5.3									
W24A	**Lazy 6 Ranch,**	46.40	87	⇓P		P	07 36 05.9	+0.1		
	baz=46,SNR=40									
KSRS	**Korea Array**	46.42	277	P		P	07 36 05.5	-0.5		
	comp=Z,1.3nm,0.7s,mb4.0,baz=62,slow=6.1,SNR=7.5									
KSRS						PcP		PcP	07 37 40.9	+0.5
	comp=Z,9.0nm,0.7s,baz=61,slow=3.8,SNR=22									
V25A	**Rancho No Teng**	46.44	86	⇓P		P	07 36 06.0	-0.2		
	baz=46,SNR=26									
U26A	**Atchley Ranch,**	46.59	85	⇑P		P	07 36 06.9	-0.3		
	baz=46,SNR=30									
319A	**Douglas**	46.77	94	⇑P		P	07 36 08.5	-0.2		
	baz=47,SNR=13									
Z22A	**Elephant Butte**	46.82	90	⇑P		P	07 36 09.3	+0.2		
	baz=47,SNR=39									
X24A	**Lazy VL Ranch,**	46.82	88	⇓P		P	07 36 09.0	-0.1		
	baz=47									
121A	**Cookes Peak, D**	46.84	92	⇑P		P	07 36 09.3	+0.1		
	baz=47,SNR=40									
220A	**Playas Peak, P**	46.84	93	⇓P		P	07 36 09.0	-0.3		
	baz=47,SNR=52									
W25A	**X Bar L Ranch,**	46.96	86	⇑P		P	07 36 09.9	-0.3		
	baz=47,SNR=48									
V26A	**Tequesquite Ra**	46.97	85	⇑P		P	07 36 09.8	-0.4		
	baz=47,SNR=53									
122A	**Conniff Cattle**	47.19	91	⇑P		P	07 36 12.6	+0.6		
	baz=47									
221A	**Mesquite Ranch**	47.21	92	⇑P		P	07 36 12.1	-0.1		
	baz=47,SNR=15									
320A	**Kipp Ranch, An**	47.24	94	⇓P		P	07 36 12.4	0.0		
	baz=47,SNR=43									
Z23A	**Rita Site, Whi**	47.25	90	⇑P		P	07 36 12.7	+0.2		
	baz=47									
Y24A	**Capitan**	47.27	89	⇑P		P	07 36 12.4	-0.1		
	baz=47,SNR=35									
X25A	**Clemmons Ranch**	47.31	87	⇑P		P	07 36 13.0	+0.1		
	baz=47									
CBKS	**Cedar Bluff**	47.34	79	eP		P	07 36 13.0	-0.2		
	comp=Z,105nm,1.0s,mb5.7									
W26A	**Owens Ranch, T**	47.46	86	⇓P		P	07 36 13.8	-0.3		
	baz=47,SNR=8.4									
222A	**Williams Famil**	47.55	92	⇓P		P	07 36 14.9	+0.1		
	baz=47									
123A	**Bell Site, Whi**	47.67	90	⇑P		P	07 36 15.8	0.0		
	baz=48,SNR=10									
Y25A	**Mesa, Roswell**	47.71	88	⇓P		P	07 36 15.5	-0.6		
	baz=48,SNR=43									
Z24A	**Sheeppen Canyo**	47.72	89	⇑P		P	07 36 16.1	-0.1		
	baz=48,SNR=39									
X26A	**CR and CF Fran**	47.80	87	⇑P		P	07 36 16.2	-0.6		
	baz=48,SNR=18									
W27A	**Bowe Ranch, En**	47.90	86	⇓P		P	07 36 16.7	-0.8		
	baz=48									
223A	**Chaparral, Ant**	48.02	91	⇑P		P	07 36 18.2	-0.3		
	baz=48									
124A	**Stringfield Ra**	48.11	90	⇑P		P	07 36 18.8	-0.4		
	baz=48,SNR=43									
Z25A	**Roswell**	48.15	89	⇑P		P	07 36 19.0	-0.4		
	baz=48									
Y26A	**Elida**	48.23	87	⇓P		P	07 36 19.9	-0.1		
	baz=48									
DAG	**Danmarks Havn**	48.50	9	⇓iP		P	07 36 21.2	-0.4		
DAG					pmax	pmax				
	comp=Z,9.0nm,0.8s,mb4.8									
DAG	**Danmarks Havn**	48.50	9	⇓iP		P	07 36 21.2	-0.4		
	comp=Z,9.0nm,0.8s,mb4.8									
224A	**Cornudas Mount**	48.51	90	⇑P		P	07 36 21.9	-0.3		
	baz=48,SNR=57									
SPITS	**Spitsbergen Ar**	48.57	359		PcP	PcP	07 37 46.8	-0.6		
	comp=Z,8.0nm,0.9s,baz=57,slow=7.2,SNR=3.2									
Z26A	**Caprock**	48.59	88	⇑P		P	07 36 22.4	-0.5		
	baz=48,SNR=25									
125A	**Gardner Draw,**	48.62	89	⇑P		P	07 36 22.8	-0.3		
	baz=48,SNR=24									
Y27A	**Causey**	48.65	87	⇓P		P	07 36 22.6	-0.7		
	baz=48,SNR=25									
COWI	**Conover**	48.69	65	eP		P	07 36 22.9	-0.6		
	comp=Z,33nm,1.0s,mb5.3									
MSTX	**Muleshoe**	48.83	86	⇓P		P	07 36 23.7	-1.0		
	baz=49,SNR=17									
AMTX	**Amarillo**	48.84	85	eP		P	07 36 25.0	+0.2		
	comp=Z,29nm,1.0s,mb5.3									
MNTX	**Cornudas Mount**	48.86	91	eP		P	07 36 24.2	-0.8		
	comp=Z,42nm,1.2s,mb5.3									
225A	**Deer Hill, Car**	48.91	90	⇓P		P	07 36 25.1	-0.2		
	baz=49,SNR=38									
KSU1	**Kansas State U**	48.98	77	eP		P	07 36 25.1	-0.7		
	comp=Z,29nm,1.0s,mb5.3									
324A	**Moseley Ranch,**	48.98	91	⇑P		P	07 36 25.3	-0.6		
	baz=49,SNR=19									
126A	**Clayton Basin,**	49.01	89	⇓P		P	07 36 25.3	-0.8		
	baz=49,SNR=29									
Z27A	**Tatum**	49.02	87	⇓P		P	07 36 25.2	-0.9		
	baz=49,SNR=24									
SCIA	**State Center**	49.10	72	eP		P	07 36 26.5	-0.2		
	comp=Z,28nm,1.0s,mb5.2									
GDL2	**Guadalupe Moun**	49.12	89	eP		P	07 36 26.9	0.0		
325A	**Bean Ranch, Si**	49.34	91	⇓P		P	07 36 28.3	-0.3		
	baz=49,SNR=86									
SUMG	**Summit**	49.36	18	eP		P	07 36 28.9	+0.7		
	comp=Z,38nm,0.9s,mb5.4									
SUMG	**Summit**	49.36	18	⇓iP		P	07 36 28.8	+0.6		
	comp=Z,24nm,0.8s,mb5.3									
CLNB	**Carlsbad**	49.36	89	eP		P	07 36 29.1	+0.3		
	comp=Z,1.1nm,0.2s,mb4.5									
CLNB					eP	cP	P	cP	07 37 50.1	-0.9
226A	**Malaga, Loving**	49.37	89	⇑P		P	07 36 28.3	-0.5		
	baz=49,SNR=37									
127A	**Arkansas Junct**	49.38	88	⇑P		P	07 36 28.0	-0.9		
	baz=49,SNR=9.4									
425A	**Indio Mountain**	49.75	91	⇓P		P	07 36 31.6	-0.1		
	baz=50,SNR=82									
227A	**Bennet, Jal**	49.89	89	⇓P		P	07 36 32.0	-0.8		
	baz=50									
326A	**Caldwell Ranch**	49.97	90	⇑P		P	07 36 33.3	-0.2		
	baz=50,SNR=29									
JFWS	**Jewell Farm**	50.11	69	eP		P	07 36 33.0	-1.4		
	comp=Z,37nm,1.0s,mb5.4									
JFWS	**Jewell Farm**	50.11	69	eP		P	07 36 33.0	-1.4		
JFWS					pmax	pmax				
	comp=Z,37nm,1.0s,mb5.4									
426A	**McDonald Obser**	50.41	90	⇑P		P	07 36 36.4	-0.3		
	baz=50,SNR=33									
TLY	**Talaya**	50.61	306	eP		P	07 36 40.7	+2.7		
	comp=Z,31nm,1.2s,mb5.1									
TLY	**Talaya**	50.61	306	eP		P	07

comp=Z,410nm,16.5s,MS4.6
SCHQ Schefferville 53.82 45 *e*P **P 07 37 01.0 -0.8**
comp=Z,60nm,1.1s,mb5.4
SCHQ Schefferville 53.82 45 P **P 07 37 01.1 -0.7**
comp=Z,33nm,0.9s,mb5.2,baz=326,slow=7.2,SNR=26
SCO Scoresbysund 53.86 14 *i* P **P 07 37 06.5 +4.6**
SCO Scoresbysund 53.86 14 *i* P **P 07 37 06.5 +4.6**
MIAR Mount Ida 53.87 79 *e*P **P 07 37 01.3 -1.2**
comp=Z,38nm,1.0s,mb5.3
MIAR Mount Ida 53.87 79 *e*P **P 07 37 01.3 -1.1**
MIAR pmax pmax
comp=Z,39nm,1.0s,mb5.3
OLIL Olney 54.12 72 *e*P **P 07 37 02.9 -1.3**
comp=Z,28nm,0.8s,mb5.2
AAM Ann Arbor 54.15 65 *e*P **P 07 37 04.1 -0.3**
SIUC Southern Illin 54.19 73 *e*P **P 07 37 03.5 -1.2**
comp=Z,26nm,0.9s,mb5.2
UALR University of 54.43 78 *e*P **P 07 37 05.0 -1.5**
comp=Z,13nm,1.0s,mb4.8
PARMO Parma 54.61 75 *e*P **P 07 37 06.2 -1.7**
GUMO Guam 54.66 242 P **P 07 37 05.6 -2.7**
comp=Z,51nm,0.7s,mb5.7,baz=138,slow=12,SNR=4.2
BLO Bloomington 54.71 70 *e*P **P 07 37 06.7 -1.8**
comp=Z,33nm,0.9s,mb5.4
BLO Bloomington 54.71 70 *e*P **P 07 37 06.7 -1.8**
BLO pmax pmax
comp=Z,33nm,0.9s,mb5.4
NATX Nacogdoches 55.21 82 *e*P **P 07 37 12.3 +0.1**
comp=Z,60nm,1.1s,mb5.5
UTMT University of 55.35 74 *e*P **P 07 37 12.1 -1.0**
comp=Z,77nm,1.0s,mb5.7
WCI Wyandotte Cave 55.49 71 *e*P **P 07 37 12.2 -1.9**
comp=Z,21nm,1.0s,mb5.1
WCI Wyandotte Cave 55.49 71 *e*P **P 07 37 12.2 -2.0**
WCI pmax pmax
comp=Z,21nm,1.0s,mb5.1
NJ2 Nanjing 55.53 279 *e*P **P 07 37 18.6 +4.1**
NJ2 pP pP 07 37 31.9 +9.3
NJ2 sP sP 07 37 36.5 +11
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
NJ2 pmax pmax
comp=Z,250nm,7.6s
NJ2 LR LR
comp=N,140nm,19.5s,MS4.3
NJ2 LR LR
comp=E,270nm,24.1s,MS4.3
NJ2 LR LR
comp=Z,240nm,15.2s
HKT Hockley 55.82 85 *e*P **P 07 37 15.6 -0.9**
comp=Z,53nm,1.4s,mb5.4
HKT Hockley 55.82 85 *e*P **P 07 37 15.6 -1.0**
HKT pmax pmax
comp=Z,53nm,1.4s,mb5.4
WVT Waverly 56.09 74 *e*P **P 07 37 16.4 -2.1**
comp=Z,23nm,1.1s,mb5.1
WVT Waverly 56.09 74 *e*P **P 07 37 16.4 -2.1**
WVT pmax pmax
comp=Z,23nm,1.1s,mb5.1
ERPA Erie 56.26 63 *e*P **P 07 37 20.5 +0.9**
comp=Z,115nm,1.4s,mb5.7
ALLY Alegheny Colle 56.50 64 *e*P **P 07 37 21.3 0.0**
comp=Z,100nm,0.9s,mb5.8
KEV Kevo 56.61 354 *e*P **P 07 37 21.6 -0.1**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
KEV Kevo 56.61 354 *e*p **P 07 37 21.6 -0.1**
comp=Z,0.6nm,0.4s,mb4.0
ARCES ARCESS Array B 56.92 355 P **P 07 37 25.4 +1.5**
comp=Z,3.9nm,0.9s,mb4.4,baz=6.7,slow=7.2,SNR=6.6
ARCES PcP PcP 07 38 19.9 +0.9
comp=Z,9.9nm,0.9s,baz=356,slow=8.8,SNR=5.6
LONY Lake Ozonia 57.32 58 *e*P **P 07 37 26.2 -0.9**
comp=Z,96nm,1.1s,mb5.7
VBMS Vicksburg 57.32 79 *e*P **P 07 37 27.0 -0.2**
comp=Z,58nm,1.0s,mb5.6
ZALV Zalesovo Beam 57.37 318 P **P 07 37 27.6 +0.4**
comp=Z,1.2nm,0.4s,mb4.3,baz=46,slow=4.3,SNR=4.4
ZALV PcP PcP 07 38 20.9 -0.1
comp=Z,5.4nm,0.9s,baz=46,slow=4.5,SNR=5.2
FRNY Flat Rock 57.67 57 *e*P **P 07 37 28.3 -1.2**
comp=Z,70nm,0.9s,mb5.7
SWET Sewanee 57.83 73 *e*P **P 07 37 29.4 -1.4**
NCB Newcomb 57.96 58 *e*P **P 07 37 31.2 -0.3**
comp=Z,94nm,1.1s,mb5.7
MCWV Mont Chateau 58.06 65 *e*P **P 07 37 31.5 -0.9**
comp=Z,48nm,0.8s,mb5.6
BINY Binghamton 58.31 61 *e*P **P 07 37 34.0 -0.1**
comp=Z,96nm,1.0s,mb5.8
CPCT Cooper Cave 58.46 72 *e*P **P 07 37 33.9 -1.4**
MDV Middlebury 58.47 58 *e*P **P 07 37 35.0 -0.2**
ACCN Adirondack Com 58.66 58 *e*P **P 07 37 36.4 -0.1**
comp=Z,142nm,1.1s,mb5.9
TKL Tuckaleechee C 58.74 71 *e*P **P 07 37 35.2 -1.9**
LRAL Lakeview Retre 58.78 76 *e*P **P 07 37 35.1 -2.4**
comp=Z,7.3nm,0.8s,mb4.8
LBNH Lisbon 58.92 57 *e*P **P 07 37 37.9 -0.4**
comp=Z,94nm,1.1s,mb5.7
HNH Hanover 59.13 57 *e*P **P 07 37 42.0 +2.3**
TRY Troy 59.13 59 *e*P **P 07 37 40.6 +0.9**
BLA Blacksburg 59.50 68 *e*P **P 07 37 41.0 -1.3**
comp=Z,55nm,0.9s,mb5.6
MVL Millersville 59.70 63 *e*P **P 07 37 43.5 -0.2**
comp=Z,31nm,0.9s,mb5.3
VWCC Virginia Weste 59.72 67 *e*P **P 07 37 43.8 -0.1**
SDMD Soldier's Deli 59.86 64 *e*P **P 07 37 45.0 +0.1**
comp=Z,48nm,1.0s,mb5.5
BRAL Brewton 60.22 77 *e*P **P 07 37 45.7 -1.7**
comp=Z,53nm,0.8s,mb5.5
PAL Palisades 60.25 60 *e*P **P 07 37 48.5 +1.0**
comp=Z,104nm,1.0s,mb5.8
CBN Corbin 60.45 65 *e*P **P 07 37 49.3 +0.5**
comp=Z,48nm,1.3s,mb5.4
YLE Yale 60.53 60 *e*P **P 07 37 49.3 -0.1**
GOGA Godfrey 60.54 73 *e*P **P 07 37 46.9 -2.6**
comp=Z,11nm,0.9s,mb5.0
GOGA Godfrey 60.54 73 *e*P **P 07 37 46.9 -2.7**
GOGA pmax pmax
comp=Z,11nm,0.9s,mb5.0
JSRW J. Sargeant Re 60.54 66 *e*P **P 07 37 49.0 -0.5**
GTA Gaotai 60.99 298 *e*P **P 07 37 52.1 -0.5**
GTA pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
GTA LR LR
comp=N,360nm,16.1s,MS4.9
GTA LR LR
comp=E,560nm,16.4s,MS4.9
GTA LR LR
comp=Z,640nm,18.4s,MS4.8
JSC Jenkinsville 61.15 71 *e*P **P 07 37 52.2 -1.6**
SOKR Solikamsk 61.82 336 *c i*P **P 07 37 57.9 +0.1**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
SOKR MLR MLR
comp=Z,590nm,17.0s,MS4.8
KURK Kurchatov 62.30 319 *e*P **P 07 38 01.0 -0.1**
comp=Z,13nm,1.2s,mb4.9
KURK Kurchatov 62.30 319 *d i*P **P 07 38 00.5 -0.7**
KURK pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
NHSC New Hope 62.63 71 *e*P **P 07 38 03.1 -0.5**
comp=Z,105nm,1.0s,mb5.9
JOF Joensuu 63.00 350 *e*P **P 07 38 05.8 +0.1**
JOF pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
JOF Joensuu 63.00 350 *e*p **P 07 38 05.8 +0.1**
comp=Z,0.8nm,0.4s,mb4.2
SVE Sverdlovsk 63.23 333‖ *e*P **P 07 38 07.8 +0.5**
SVE *e*S **S 07 46 33.3 -3.6**
SVE pmax pmax
comp=Z,24nm,1.0s,mb5.3
SVE MLR MLR
comp=Z,619nm,17.0s,MS4.8
BVAR Borovoye Array 63.45 325 P **P 07 38 08.9 +0.1**
comp=Z,3.1nm,0.7s,mb4.5,baz=53,slow=6.1,SNR=14
BVAR PKPPKP 08 07 08.1
comp=Z,1.2nm,0.9s,baz=241,slow=4.9,SNR=4.8
BRVK Borovoye 63.46 325 *e*P **P 07 38 09.3 +0.4**
WMQ Urumqi 63.74 309 P **P 07 38 12.4 +1.5**
WMQ pP pP 07 38 28.6 +9.5
WMQ PcP PcP 07 38 47.9 +1.1
WMQ PP PP 07 40 34.6 +3.9
WMQ *e*S **S 07 46 40.6 -3.0**
WMQ ScS ScS 07 47 56.6 -5.7
WMQ SS SS 07 50 50.7 -0.2
WMQ pmax pmax
comp=Z,11nm,0.9s,mb4.9
WMQ pmax pmax
comp=Z,210nm,5.2s
WMQ LR LR
comp=N,430nm,20.4s,MS4.8
WMQ LR LR
comp=E,470nm,23.6s,MS4.8
WMQ LR LR
comp=Z,350nm,18.7s,MS4.6
MK31 Makanchi Array 63.87 314 *e*P **P 07 38 10.7 -1.0**
MKAR Makanchi Array 63.87 314 P **P 07 38 10.6 -1.1**
MKAR LR LR 08 06 50.4
MKAR P'P' 08 07 08.5
MKAR Makanchi Array 63.87 314 P **P 07 38 10.6 -1.1**
comp=Z,2.1nm,0.8s,mb4.2,baz=50,slow=6.5,SNR=12
MKAR LR LR 08 06 50.4
comp=Z,470nm,19.1s,MS4.7,baz=20,slow=37
MKAR PKPPKP 08 07 08.5
comp=Z,0.3nm,0.2s,baz=239,slow=4.0,SNR=3.6
MKAR Makanchi Array 63.87 314 *i*P **P 07 38 10.6 -1.1**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
KLMR Klimovskoe 63.99 346 *e*P **P 07 38 10.7 -1.5**
KLMR pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
ARU Arti 64.14 334 *e*P **P 07 38 13.5 +0.2**
ARU Arti 64.14 334 *d i*P **P 07 38 13.3 0.0**
ARU 07 38 49.3
ARU S **S 07 46 48.1 0.0**
ARU pmax pmax
comp=Z,14nm,1.0s,mb5.0
KAF Kangasniemi 64.23 353 *e*P **P 07 38 10.1 -3.7**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
KAF Kangasniemi 64.23 353 *e*p **P 07 38 10.1 -3.7**
comp=Z,0.7nm,0.3s,mb4.2
FINES FINESS Array B 64.91 353 P **P 07 38 17.8 -0.5**
comp=Z,7.1nm,0.9s,mb4.7,baz=33,slow=7.7,SNR=8.6
CD2 Chengdu 65.12 289 P **P 07 38 21.3 +1.2**
CD2 pP pP 07 38 37.6 +9.3
CD2 sP sP 07 38 44.5 +13
CD2 PP PP 07 40 46.8 +3.6
CD2 S S 07 46 57.1 -3.9
CD2 sS sS 07 47 24.8 +10
CD2 SS SS 07 51 11.7 -1.3
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
CD2 pmax pmax
comp=Z,240nm,6.5s
NOA NORSAR Array B 65.81 1 P **P 07 38 22.8 -1.3**
comp=Z,1.9nm,1.0s,mb4.1,baz=358,slow=6.1,SNR=2.2
NOA LR LR 08 08 39.0
comp=Z,150nm,20.2s,MS4.2,baz=345,slow=37
TAOE Nuku Hiva Isla 66.29 150 *e*S S 07 47 20.1 +4.7
comp=Z,364nm,27.0s
TAOE *e*LR LR 07 57 49.4
comp=Z,267nm,22.8s
GYA Guiyang 66.81 283 P **P 07 38 32.0 +1.0**
GYA pP pP 07 38 47.8 +8.5
GYA sP sP 07 38 53.4 +11
GYA PP PP 07 41 01.7 +3.7
GYA ScP 07 42 58.0
GYA S S 07 47 18.2 -3.5
GYA SKS 07 48 20.4
GYA SS SS 07 51 38.3 -1.1
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,140nm,5.2s
GYA LR LR
comp=N,750nm,19.9s,MS5.0
GYA LR LR
comp=E,520nm,20.4s,MS5.0
GYA LR LR
comp=Z,890nm,18.8s,MS5.0
TEIG Tepich 67.61 86 *e*P **P 07 38 35.6 -0.5**
AKTK Aktyubinsk 69.61 331 P **P 07 38 48.2 0.0**
AKTO Aktyubinsk 69.61 331 P **P 07 38 48.2 0.0**
comp=Z,4.2nm,0.9s,mb4.4,baz=29,slow=4.6,SNR=13
OBN Obninsk 69.96 346‖ *e*P **P 07 38 54.4 +4.2**
OBN *e* 07 41 22.5
OBN *e*S S 07 47 57.5 -0.8
OBN pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
ABKAR Akbulak array 70.08 329 *e*P **P 07 38 50.4 -0.7**
comp=Z,0.6nm,0.3s,mb4.0
KMI Kunming 70.10 285 P **P 07 38 52.9 +1.3**
KMI pP pP 07 39 07.5 +7.6
KMI sP sP 07 39 13.3 +10
KMI PP PP 07 41 30.0 +3.5
KMI S S 07 47 57.5 -3.4
KMI sS sS 07 48 22.7 +8.2
KMI SS SS 07 52 29.3 -0.9
KMI pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
KMI pmax pmax
comp=Z,230nm,3.4s
KMI LR LR
comp=N,290nm,16.1s,MS4.7
KMI LR LR
comp=E,220nm,17.0s,MS4.7
KMI LR LR
comp=Z,210nm,17.9s,MS4.4
AAK Ala-Archa 70.50 316 P **P 07 38 53.3 -0.5**
comp=Z,1.6nm,0.3s,mb4.4,baz=305,slow=16,SNR=4.6
AAK Ala-Archa 70.50 316‖ *e*P **P 07 38 54.0 +0.2**
AAK pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
QIZ Qiongzhong 70.63 276 P **P 07 38 54.0 -0.9**
QIZ pP pP 07 39 08.8 +5.6
QIZ sP sP 07 39 14.9 +8.6
QIZ S S 07 48 05.1 -2.1
QIZ sS sS 07 48 24.1 +3.2
QIZ pmax pmax
comp=Z,40nm,1.6s,mb5.1
QIZ LR LR
comp=N,150nm,33.9s
ESK Eskdalemuir 70.78 9 *i*P **P 07 38 57.6 +2.3**
PPT Papeete 72.43 162 *e*S S 07 48 30.0 +2.5
comp=N,199nm,26.0s
PPT *e*LQ 07 57 36.0
comp=N,632nm,27.2s
PPT *e*LR LR 08 01 04.6
comp=N,244nm,21.2s
PPT Papeete 72.43 162 LR LR 08 03 47.8
comp=N,272nm,19.9s,MS4.5,baz=352,slow=30
KSH Kashi 72.46 313 P **P 07 39 08.6 +2.9**
KSH *e*PcP PcP 07 39 28.6 +5.2
KSH *e*PP PP 07 41 49.6 +3.3
KSH *e*S S 07 48 26.0 -1.8
KSH *e*SKS 07 49 06.6
KSH *e*ScS ScS 07 49 09.3 -1.2
KSH pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KSH pmax pmax
comp=Z,60nm,4.3s
KSH LR LR
comp=N,370nm,15.3s,MS5.0
KSH LR LR
comp=E,570nm,18.5s,MS5.0
KSH LR LR
comp=Z,130nm,8.2s
TGUH Tegucigalpa,Un 72.99 89 *e*P **P 07 39 09.1 -0.1**
AKASG Malin Array Be 75.23 349 P **P 07 39 20.6 -1.2**
comp=Z,10nm,0.9s,mb4.8,baz=13,slow=5.9,SNR=13
AKASG LR LR 08 16 46.8
comp=Z,474nm,19.9s,MS4.8,baz=25,slow=39
AKBB Malin Array Si 75.23 349 P **P 07 39 17.4 -4.3**
CLL Collm 75.57 360 *e*P **P 07 39 23.0 -0.6**
CLL Collm 75.57 360 *e*P **P 07 39 23.0 -0.6**
CLL L 08 14 00.0
comp=Z,200nm,20.2s
KSP Ksiaz 75.99 358 *e*P **P 07 39 25.6 -0.4**
BRG Berggiesshubel 76.00 359 *e*P **P 07 39 26.2 +0.1**
comp=Z,5.3nm,1.0s,mb4.4
BRG *e* 07 39 31.6
comp=Z,10nm,1.1s
BRG Berggiesshubel 76.00 359 *e*P **P 07 39 26.2 +0.1**
BRG *e* 07 39 31.6
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
MOX Moxa 76.23 1 *e*P **P 07 39 27.1 -0.3**
comp=Z,6.0nm,0.7s,mb4.6
MOX Moxa 76.23 1 *e*P **P 07 39 27.1 -0.3**
MOX pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
UPC Upice 76.33 358 *e*P **P 07 39 32.5 +4.5**
UPC Upice 76.33 358 *e*P **P 07 39 32.5 +4.5**
PVCC Panska Ves 76.34 359 *e*P **P 07 39 33.6 +5.6**
PVCC MLR MLR
comp=Z,200nm,24.3s,MS4.3
PVCC Panska Ves 76.34 359 *e*P **P 07 39 33.6 +5.6**
PVCC AMS AMS 08 20 40.0
comp=Z,200nm,24.3s
MYLDM Lahad Datu 76.38 260 P **P 07 39 30.7 +1.9**
comp=Z,50nm,1.6s,mb5.2
DPC Dobruska-Polom 76.48 358 *e*P **P 07 39 29.2 +0.4**
DPC *e**PP pP 07 39 34.0 -3.2
DPC MLR MLR
comp=Z,300nm,17.8s,MS4.7
DPC Dobruska-Polom 76.48 358 *e*P **P 07 39 29.2 +0.4**
DPC *ex* x 07 39 34.0
DPC AMS AMS 08 22 50.0
comp=Z,300nm,17.8s
NKC Novy Kostel 76.65 0 *e*P **P 07 39 29.7 -0.1**
NKC MLR MLR
comp=Z,200nm,16.4s,MS4.5
NKC Novy Kostel 76.65 0 *e*P **P 07 39 29.7 -0.1**
NKC AMS AMS 08 21 10.0
comp=Z,200nm,16.4s
TAPN Taplejung 76.69 298 *e*P **P 07 39 31.1 +0.7**
comp=Z,12nm,0.7s,mb4.9
PRU Pruhonice 76.88 359 AMS AMS 08 21 20.0
comp=Z,200nm,22.1s
OKC Ostrava-Krasne 76.94 356 *e*P **P 07 39 31.4 0.0**
OKC MLR MLR
comp=Z,300nm,15.6s,MS4.7
OKC Ostrava-Krasne 76.94 356 *e*P **P 07 39 31.4 0.0**
OKC AMS AMS 08 21 40.0
comp=Z,300nm,15.6s
MORC Moravsky Berou 77.02 357 *e*P **P 07 39 31.3 -0.5**
comp=Z,6.0nm,1.0s,mb4.5
MORC Moravsky Berou 77.02 357 *e*P **P 07 39 31.3 -0.6**
MORC pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
KKM Kota Kinabalu 77.04 263 *e*P **P 07 39 32.5 0.0**
comp=Z,80nm,1.4s,mb5.5
KKM Kota Kinabalu 77.04 263 P **P 07 39 32.6 +0.1**
comp=Z,710nmcomp=Z,48nm,1.3s,mb5.3
GUN Gumba 77.19 300 *e*P **P 07 39 34.0 +0.8**
comp=Z,22nm,0.5s,mb5.3
STHS Stebnicka Huta 77.20 354 *e*P **P 07 39 33.6 +0.7**
comp=Z,6.9nm,0.9s,mb4.6
STHS Stebnicka Huta 77.20 354 *e*P **P 07 39 33.6 +0.7**
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
STHS Stebnicka Huta 77.20 354 *e*P **P 07 39 33.6 +0.7**
CHTO Chiang Mai 77.21 284 *e*P **P 07 39 33.7 +0.3**
JIRN Jiri 77.23 299 *e*P **P 07 39 33.7 +0.3**
CMAR Chiang Mai Arr 77.49 284 P **P 07 39 34.8 -0.2**
comp=Z,6.0nm,0.8s,mb4.6,baz=24,slow=6.0,SNR=20
TREC Trest 77.56 358 AMS AMS 08 23 40.0
comp=Z,300nm,15.3s
RAMN Ramite 77.59 299 *e*P **P 07 39 35.3 -0.2**
comp=Z,14nm,0.6s,mb5.1
KKN Kakani 77.60 300 *e*P **P 07 39 36.1 +0.6**
comp=Z,15nm,0.6s,mb5.1
KOLS Kolonicke sedl 77.62 353 *e*P **P 07 39 35.0 -0.2**
comp=Z,85nm,3.4s
KOLS Kolonicke sedl 77.62 353 *e*P **P 07 39 35.0 -0.2**
KOLS pmax pmax
comp=Z,85nm,3.4s
KOLS Kolonicke sedl 77.62 353 *e*P **P 07 39 35.0 -0.2**
CRVS Cervenica-Dubn 77.70 354 *e*P **P 07 39 35.4 -0.3**
comp=Z,37nm,2.4s,mb4.9
CRVS Cervenica-Dubn 77.70 354 *e*P **P 07 39 35.4 -0.3**
CRVS pmax pmax
comp=Z,37nm,2.4s,mb4.9
CRVS Cervenica-Dubn 77.70 354 *e*P **P 07 39 35.4 -0.3**
PKI Pulchoki 77.71 300 *e*P **P 07 39 36.6 +0.5**
PKIN Phulchoki 77.71 300 *e*P **P 07 39 36.5 +0.4**
comp=Z,19nm,0.7s,mb5.1
KHC Kasperske Hory 77.75 359 *e*P **P 07 39 35.8 -0.2**
comp=Z,9.4nm,1.1s,mb4.6
KHC Kasperske Hory 77.75 359 *e*P **P 07 39 35.9 -0.1**
KHC *e**PP pP 07 39 41.8 -2.5
KHC MLR MLR
comp=Z,200nm,20.8s,MS4.4
KHC Kasperske Hory 77.75 359 *e*P **P 07 39 35.9 -0.1**
KHC *ex* x 07 39 41.8
KHC AMS AMS 08 19 00.0
comp=Z,200nm,20.8s
GKN Gorkha 77.76 301 *e*P **P 07 39 36.7 +0.3**
comp=Z,13nm,0.6s,mb5.0
DMN Daman 77.84 300 *e*P **P 07 39 37.4 +0.6**
comp=Z,9.4nm,0.4s,mb5.0
GRR Gorron 77.86 9 *e*P **P 07 39 36.0 -0.6**
comp=Z,24nm,0.9s,mb4.8
GRR Gorron 77.86 9 *e*P **P 07 39 36.0 -0.6**
comp=Z,12nm,0.9s,mb4.8
GRR Gorron 77.86 9 *e*P **P 07 39 36.0 -0.6**
GRR pmax pmax
comp=Z,12nm,0.9s,mb4.8
VYHS Vyhne 78.25 356 *e*P **P 07 39 38.4 -0.3**
comp=Z,6.3nm,1.3s,mb4.4
VYHS Vyhne 78.25 356 *e*P **P 07 39 38.4 -0.3**
VYHS pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
VYHS Vyhne 78.25 356 *e*P **P 07 39 38.4 -0.3**
SDDR Presa de Saban 78.55 74 *e*P **P 07 39 40.5 -0.4**
DZM Mont Dzumac 78.57 205 *e*P **P 07 39 44.8 +4.1**
comp=Z,56nm,1.4s,mb5.3
DZM *e*LR LR 08 03 48.9
comp=Z,455nm,24.4s
ZST Bratislava 78.61 357 *e*P **P 07 39 41.1 +0.3**
ZST Bratislava 78.61 357 *e*P **P 07 39 41.1 +0.3**
BUR08 Bucovina Ar. S 78.67 351 *e*P **P 07 39 40.8 -0.2**
CONA Conrad Observa 78.92 358‖ *i*P **P 07 39 42.6 +0.1**
comp=Z,10nm,0.9s,mb4.8
LUWI Luwuk 78.93 253 P **P 07 39 42.3 -0.7**
comp=Z,121nm,1.2s,mb5.7
COEN Coen 79.31 229 *e*P **P 07 39 43.6 -1.3**
comp=Z,440nm,1.7s,mb6.1
LOR Lormes 79.34 6 *e*P **P 07 39 44.4 -0.4**
comp=Z,33nm,1.2s,mb4.8
LOR *e*MLR MLR
comp=Z,290nm,21.2s,MS4.3
LOR Lormes 79.34 6 *e*P **P 07 39 44.4 -0.4**
comp=Z,17nm,1.2s,mb4.8
LOR LR LR
comp=Z,290nm,21.3s,MS4.6
LOR Lormes 79.34 6 *e*P **P 07 39 44.4 -0.4**
LOR pmax pmax
comp=Z,17nm,1.2s,mb4.8
LOR MLR MLR
comp=Z,290nm,21.3s,MS4.6
SSF Saint Saulge 79.53 6 *e*P **P 07 39 45.6 -0.2**
comp=Z,17nm,0.9s,mb4.7
SSF Saint Saulge 79.53 6 *e*P **P 07 39 45.6 -0.2**
comp=Z,8.4nm,0.9s,mb4.7
SSF Saint Saulge 79.53 6 *e*P **P 07 39 45.6 -0.2**
SSF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
KIV Kislovodsk 79.55 338 *e*P **P 07 39 46.4 +0.4**
comp=Z,20nm,0.9s,mb5.0
KIV Kislovodsk 79.55 338 *e*P **P 07 39 46.4 +0.4**
KIV pmax pmax
comp=Z,20nm,0.9s,mb5.0
KBL Kabul 79.61 316 *e*P **P 07 39 45.8 -0.7**
MFF Saint Martin d 79.70 9 *e*P **P 07 39 46.5 -0.2**
comp=Z,52nm,1.0s,mb5.1
MFF Saint Martin d 79.70 9 *e*P **P 07 39 46.5 -0.2**
comp=Z,26nm,1.0s,mb5.1
MFF Saint Martin d 79.70 9 *e*P **P 07 39 46.5 -0.2**
MFF pmax pmax
comp=Z,26nm,1.0s,mb5.1
AVF Avril sur Loir 79.79 6 *e*P **P 07 39 46.9 -0.3**
KBA Koelnbreinige 79.80 359‖ *i*P **P 07 39 47.8 +0.5**
comp=Z,26nm,1.1s,mb5.1
FETA Feichten 79.85 1‖ *i*P **P 07 39 47.6 0.0**
comp=Z,18nm,1.0s,mb4.9
SMF Signal de Mont 79.96 6 *e*P **P 07 39 47.7 -0.5**
comp=Z,25nm,1.0s,mb4.8
SMF Signal de Mont 79.96 6 *e*P **P 07 39 47.7 -0.5**
comp=Z,12nm,1.0s,mb4.8
SMF Signal de Mont 79.96 6 *e*P **P 07 39 47.7 -0.5**
SMF pmax pmax
comp=Z,12nm,1.0s,mb4.8
BGF Bois d'Agland 79.98 7 *e*P **P 07 39 48.0 -0.3**
comp=Z,40nm,1.3s,mb4.9
BGF Bois d'Agland 79.98 7 *e*P **P 07 39 48.0 -0.3**

comp=Z,20nm,1.3s,mb4.9
BGF Bois d'Agland 79.98 7 *e*P **P 07 39 48.0 -0.3**
BGF pmax pmax
comp=Z,20nm,1.3s,mb4.9
CABF La Chapelle 80.12 5 *e*P **P 07 39 49.2 +0.2**
comp=Z,32nm,1.0s,mb4.9
CABF La Chapelle 80.12 5 *e*P **P 07 39 49.2 +0.2**
comp=Z,16nm,1.0s,mb4.9
CABF La Chapelle 80.12 5 *e*P **P 07 39 49.2 +0.2**
CABF pmax pmax
comp=Z,16nm,1.0s,mb4.9
ABTA Abfaltersbach 80.14 0⇓ *i*P **P 07 39 48.7 -0.4**
comp=Z,20nm,1.2s,mb4.9
SOKA Soboth 80.18 358⇓ *i*P **P 07 39 49.6 +0.2**
comp=Z,17nm,1.3s,mb4.8
TCF Toulx Ste Croi 80.20 7 *e*P **P 07 39 47.8 -1.7**
comp=Z,13nm,0.9s,mb4.5
TCF Toulx Ste Croi 80.20 7 *e*P **P 07 39 47.8 -1.7**
comp=Z,6.7nm,0.9s,mb4.6
TCF Toulx Ste Croi 80.20 7 *e*P **P 07 39 47.8 -1.7**
TCF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
PERS Pernice 80.22 358 *i*P **P 07 39 49.5 -0.1**
PERS *i* pP 07 39 55.6 -2.4
TUE Stuetta 80.37 2 *e*P **P 07 39 50.6 +0.2**
comp=Z,23nm,1.6s,mb4.8
ZEI Tsey 80.40 337 *e*P **P 07 39 49.4 -1.2**
ZEI pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
PCI Palu 80.51 255 P **P 07 39 50.3 -1.2**
comp=Z,1µmcomp=Z,73nm,1.3s,mb5.5
JAVS Javornik 80.98 359 *i*P **P 07 39 56.5 +2.8**
RJF Les Rejaudoux 81.13 8 *e*P **P 07 39 54.2 -0.2**
RJF *e*MLR MLR
comp=Z,304nm,18.5s,MS4.4
RJF Les Rejaudoux 81.13 8 *e*P **P 07 39 54.2 -0.2**
comp=Z,8.1nm,0.9s,mb4.7
RJF LR LR
comp=Z,300nm,18.5s,MS4.7
RJF Les Rejaudoux 81.13 8 *e*P **P 07 39 54.2 -0.2**
RJF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
RJF MLR MLR
comp=Z,300nm,18.5s,MS4.7
LPL La Plagne 81.24 4 *e*P **P 07 39 55.2 +0.2**
comp=Z,7.0nm,0.8s,mb4.4
LPL La Plagne 81.24 4 *e*P **P 07 39 55.2 +0.2**
comp=Z,3.5nm,0.8s,mb4.3
LPL La Plagne 81.24 4 *e*P **P 07 39 55.2 +0.2**
LPL pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
LPG La Plagne 81.26 4 *e*P **P 07 39 54.9 -0.2**
comp=Z,20nm,1.1s,mb4.7
LPG La Plagne 81.26 4 *e*P **P 07 39 54.9 -0.2**
comp=Z,10.0nm,1.1s,mb4.7
LPG La Plagne 81.26 4 *e*P **P 07 39 54.9 -0.2**
LPG pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
BOJS Bojanci 81.35 358 *i*P **P 07 39 54.8 -0.8**
BOJS *i* 07 40 00.7
LFF La Frestale 81.42 8 *e*P **P 07 39 56.1 +0.1**
comp=Z,19nm,0.8s,mb4.8
LFF La Frestale 81.42 8 *e*P **P 07 39 56.1 +0.1**
comp=Z,9.4nm,0.8s,mb4.8
LFF La Frestale 81.42 8 *e*P **P 07 39 56.1 +0.1**
LFF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CAF Calviac 81.55 8 *e*P **P 07 39 56.8 +0.1**
comp=Z,19nm,0.9s,mb4.7
CAF Calviac 81.55 8 *e*P **P 07 39 56.8 +0.1**
comp=Z,9.4nm,0.9s,mb4.7
CAF Calviac 81.55 8 *e*P **P 07 39 56.8 +0.1**
CAF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
AOPR Arecibo Observ 81.63 71 *e*P **P 07 39 57.2 -0.3**
VIVF Saint-Julien-l 81.80 6 *e*P **P 07 39 58.2 +0.2**
comp=Z,8.5nm,0.8s,mb4.5
VIVF Saint-Julien-l 81.80 6 *e*P **P 07 39 58.2 +0.2**
comp=Z,3.3nm,0.8s,mb4.4
VIVF Saint-Julien-l 81.80 6 *e*P **P 07 39 58.2 +0.2**
VIVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ORIF Oris-en-Rattie 81.80 5 *e*P **P 07 39 57.6 -0.4**
ORIF *e*MLR MLR
comp=Z,216nm,22.0s,MS4.2
CELP Cerrillos 81.95 71 *e*P **P 07 39 59.0 -0.2**
OBIP Obispado Ponce 81.96 71 *e*P **P 07 40 04.1 +4.8**
MBDF Montbardon 82.03 4 *e*P **P 07 39 59.1 -0.1**
comp=Z,54nm,1.0s,mb5.1
MBDF Montbardon 82.03 4 *e*P **P 07 39 59.1 -0.1**
comp=Z,27nm,1.0s,mb5.1
MBDF Montbardon 82.03 4 *e*P **P 07 39 59.1 -0.1**
MBDF pmax pmax
comp=Z,27nm,1.0s,mb5.1
SJG San Juan 82.16 70 *e*P **P 07 39 59.3 -1.0**
TTSI Tana Toraja 82.25 254 P **P 07 40 01.4 +0.6**
comp=Z,796nmcomp=Z,44nm,1.0s,mb5.3
SBUM Sibu 82.28 264 P **P 07 40 01.9 +0.9**
comp=Z,676nmcomp=Z,24nm,1.4s,mb4.9
MTP Monte Pirata 82.51 70 *e*P **P 07 40 01.3 -0.8**
comp=Z,38nm,0.9s,mb5.4
LASF Ste Croix 82.52 6 *e*P **P 07 40 02.2 +0.4**
comp=Z,16nm,1.0s,mb4.7
SMRF Simiane la Rot 82.72 5 *e*P **P 07 40 02.6 -0.2**
comp=Z,24nm,1.0s,mb4.9
SMRF Simiane la Rot 82.72 5 *e*P **P 07 40 02.6 -0.2**
comp=Z,24nm,1.0s,mb5.2
SBF Sospel 82.92 4 *e*P **P 07 40 03.7 -0.2**
comp=Z,59nm,0.9s,mb5.3
SBF Sospel 82.92 4 *e*P **P 07 40 03.7 -0.2**
comp=Z,30nm,0.9s,mb5.3
SBF Sospel 82.92 4 *e*P **P 07 40 03.7 -0.2**
SBF pmax pmax
comp=Z,30nm,0.9s,mb5.3
SPSI Sidrap Palu 83.03 254 P **P 07 40 00.8 -4.0**
comp=Z,2µmcomp=Z,72nm,0.9s,mb5.7
SJPF Ste Jean 83.05 10 *e*P **P 07 40 03.9 -0.6**
comp=Z,18nm,1.0s,mb4.8
SJPF Ste Jean 83.05 10 *e*P **P 07 40 03.9 -0.6**
comp=Z,8.9nm,1.0s,mb4.8
SJPF Ste Jean 83.05 10 *e*P **P 07 40 03.9 -0.6**
SJPF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
MTLF Montolieu 83.14 8 *e*P **P 07 40 04.1 -0.9**
comp=Z,21nm,1.0s,mb4.8
MTLF Montolieu 83.14 8 *e*P **P 07 40 04.1 -0.9**
comp=Z,11nm,1.0s,mb4.8
MTLF Montolieu 83.14 8 *e*P **P 07 40 04.1 -0.9**
MTLF pmax pmax
comp=Z,11nm,1.0s,mb4.8
FRF La Foret Royal 83.19 4 *e*P **P 07 40 05.5 +0.2**
comp=Z,14nm,0.7s,mb4.8
FRF La Foret Royal 83.19 4 *e*P **P 07 40 05.5 +0.2**
comp=Z,7.3nm,0.7s,mb4.8
FRF La Foret Royal 83.19 4 *e*P **P 07 40 05.5 +0.2**
FRF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
EPF Esparros 83.28 9 *e*P **P 07 40 05.3 -0.5**
comp=Z,17nm,1.0s,mb4.7
EPF Esparros 83.28 9 *e*P **P 07 40 05.3 -0.5**
comp=Z,8.3nm,1.0s,mb4.7
EPF Esparros 83.28 9 *e*P **P 07 40 05.3 -0.5**
EPF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
ETSF Etsaut 83.33 10 *e*P **P 07 40 06.6 +0.6**
comp=Z,16nm,0.7s,mb4.8
ETSF Etsaut 83.33 10 *e*P **P 07 40 06.6 +0.6**
comp=Z,8.1nm,0.7s,mb4.9
ETSF Etsaut 83.33 10 *e*P **P 07 40 06.6 +0.6**
ETSF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
KAKA Kakadu 83.38 238 *e*P **P 07 40 04.5 -2.0**
comp=Z,46nm,1.1s,mb5.4
KAKA Kakadu 83.38 238 *e*P **P 07 40 05.5 -1.0**
comp=Z,57nm,0.9s,mb5.6
KAKA Kakadu 83.38 238 P **P 07 40 05.1 -1.4**
comp=Z,331nmcomp=Z,37nm,1.0s,mb5.3
LMR La Mourre 83.41 4 *e*P **P 07 40 06.0 -0.4**
comp=Z,23nm,1.2s,mb4.8
LMR La Mourre 83.41 4 *e*P **P 07 40 06.0 -0.4**
comp=Z,12nm,1.2s,mb4.8
LMR La Mourre 83.41 4 *e*P **P 07 40 06.0 -0.4**
LMR pmax pmax
comp=Z,12nm,1.2s,mb4.8
CTA Charters Tower 83.44 223 *e*P **P 07 40 05.8 -0.9**
comp=Z,9.5nm,1.2s,mb4.7
CTAO Charters Tower 83.44 223 *e*P **P 07 40 05.8 -0.8**
comp=Z,92nm,1.8s,mb5.5
PCAB Cabril 83.53 15 *e*P **P 07 40 11.9 +4.8**
comp=Z,32nm,1.7s,mb5.2
BKSI Bulukumba 83.93 253 P **P 07 40 09.1 -0.3**
comp=Z,64nm,1.2s,mb5.6
KSM Kuching 84.20 265 *e*P **P 07 40 11.1 +0.2**
comp=Z,151nm,1.5s,mb5.9
MVO Moncorvo 84.22 15 *e*P **P 07 40 10.8 +0.2**
comp=Z,25nm,2.5s,mb4.9
MVO *e*LR LR 08 12 11.1
comp=Z,212nm,22.0s
PGF Pioggiola 84.29 3 *e*P **P 07 40 11.1 +0.2**
comp=Z,72nm,1.2s,mb5.4
PGF Pioggiola 84.29 3 *e*P **P 07 40 11.1 +0.2**
comp=Z,36nm,1.2s,mb5.4
PGF Pioggiola 84.29 3 *e*P **P 07 40 11.1 +0.2**
PGF pmax pmax
comp=Z,36nm,1.2s,mb5.4
PVIS Viseu 84.52 15 *e*P **P 07 40 16.9 +4.8**
comp=Z,25nm,2.3s,mb4.9
STKI Sintang 84.63 263 P **P 07 40 14.5 +1.5**
comp=Z,54nm,1.0s,mb5.6
MTE Manteigas 84.89 15 *e*LR LR 08 12 33.6
comp=Z,197nm,22.0s
BR131 Keskin Array S 85.38 344 *e*P **P 07 40 16.6 +0.1**
comp=Z,8.3nm,0.9s,mb4.9
BRTR Keskin Array B 85.38 344 P **P 07 40 17.0 +0.5**
comp=Z,5.6nm,0.8s,mb4.8,baz=46,slow=3.6,SNR=17
BRTR LR LR 08 24 43.6
comp=Z,78nm,19.3s,MS4.1,baz=17,slow=40
BRTR Keskin Array B 85.38 344 *ce*P **P 07 40 17.0 +0.5**
BRTR pmax pmax
comp=Z,6.0nm,0.8s
PMRV Marv??o 85.86 15 *e*LR LR 08 13 08.6
comp=Z,189nm,20.0s
PMAFR Mafra 86.01 17 *e*LR LR 08 12 36.4
comp=Z,245nm,20.0s
ESDC Sonseca Array 86.11 13 P **P 07 40 19.7 -0.4**
ESDC Sonseca Array 86.11 13 P **P 07 40 19.7 -0.4**
comp=Z,1.6nm,0.6s,mb4.4,baz=350,slow=4.2,SNR=12
PESTR Estremoz 86.38 16 *e*LR LR 08 13 58.4
comp=Z,154nm,20.0s
CUC Castrocucco 86.84 357 *e*P **P 07 40 20.7 -3.0**
comp=Z,7.9nm,0.9s,mb4.9
KULM Kulim 86.92 275 P **P 07 40 24.1 -0.3**
comp=Z,38nm,1.2s,mb5.5
PBAR Barrancos 87.14 15 *e*LR LR 08 14 36.0
comp=Z,201nm,20.0s
IPM Ipoh 87.34 274 P **P 07 40 25.8 -0.7**
comp=Z,40nm,1.3s,mb5.5
PCVE Castro Verde 87.51 16 *e*LR LR 08 13 51.3
comp=Z,191nm,20.0s
PVAQ Vaqueiros 87.78 16 *e*LR LR 08 14 02.8
comp=Z,200nm,20.0s
PFVI Vila Bisbo 87.86 17 *e*LR LR 08 13 01.8
comp=Z,159nm,20.0s
PBDV Barranco-do-Ve 87.91 16 *e*LR LR 08 13 52.0
comp=Z,195nm,18.0s
ROSC El Rosal 87.99 85 P **P 07 40 30.2 +0.6**
comp=Z,2.7nm,0.4s,mb4.8,baz=270,slow=20,SNR=3.7
WRAB Tennant Creek 88.60 233 *e*P **P 07 40 30.7 -1.5**
comp=Z,38nm,1.1s,mb5.6
WB2 Warramunga Arr 88.61 233 *e*P **P 07 40 30.8 -1.4**
OTAV Otavalo 89.21 91 *e*P **P 07 40 35.3 0.0**
comp=Z,21nm,0.9s,mb5.5
ARMA Armidale 90.80 214 *e*P **P 07 40 42.5 +0.3**
KEST Kesra 91.10 3 *e*P **P 07 40 43.6 -0.2**
KEST Kesra 91.10 3 P **P 07 40 43.6 -0.2**
comp=Z,0.9nm,0.7s,mb4.2,baz=296,slow=5.4,SNR=3.8
FITZ Fitzroy Crossi 91.42 241 *e*P **P 07 40 44.3 -1.1**
comp=Z,29nm,1.0s,mb5.6
FITZ Fitzroy Crossi 91.42 241 *e*P **P 07 40 44.9 -0.4**
comp=Z,10nm,1.0s,mb5.1
FITZ Fitzroy Crossi 91.42 241 P **P 07 40 45.0 -0.4**
comp=Z,9.8nm,0.6s,mb5.3,baz=36,slow=6.0,SNR=7.8
FITZ Fitzroy Crossi 91.42 241 P **P 07 40 44.2 -1.2**
MMAI Mount Meron Ar 91.59 341 LR LR 08 30 45.2
comp=Z,100nm,20.5s,MS4.2,baz=10.0,slow=41
ASAR Alice Springs 92.01 232 P **P 07 40 47.1 -0.8**
comp=Z,7.8nm,1.0s,mb5.0,baz=40,slow=4.7,SNR=35
STKA Stephens Creek 95.81 222 *e*P **P 07 41 05.0 -0.2**
comp=Z,3.7nm,1.5s,mb4.6
STKA Stephens Creek 95.81 222 P **P 07 41 05.0 -0.3**
comp=Z,27nm,0.7s,mb4.8,baz=63,slow=4.5,SNR=4.1
PALK Palmkele 96.88 292 *i*P **P 07 41 11.6 +0.9**
SIV San Ignacio 112.43 87 PKiKP PKiKP 07 46 15.6 +0.3
comp=Z,0.4nm,0.7s,baz=270,slow=3.0,SNR=3.8
TORD Torodi Ar. Bea 112.98 11 PKiKP PKiKP 07 46 15.4 -1.1
comp=Z,1.2nm,0.6s,baz=352,slow=2.4,SNR=11
TORD PKKPbc PKKPbc 07 56 59.8 -1.2
comp=Z,0.5nm,0.6s,baz=174,slow=4.5,SNR=3.5
DBIC Dimbokro 118.28 20 PKP PKPdf 07 46 25.7 -1.1
comp=Z,5.5nm,0.9s,baz=0.0,slow=8.1,SNR=3.7
KMBO Kilima Mbogo 123.94 330 PKP PKPdf 07 46 38.5 +0.9
comp=Z,7.0nm,0.9s,baz=180,slow=24,SNR=15
KMBO Kilima Mbogo 123.94 330 *e*PKIKP PKPdf 07 46 38.2 +0.6
PLCA Paso Flores 125.15 113 PKP PKPdf 07 46 38.2 -0.8
comp=Z,4.8nm,0.9s,baz=320,slow=5.7,SNR=4.9
QSPA South Pole Qui 143.26 180 *e*PKPdf PKPdf 07 47 06.9 -4.7
TSUM Tsumeb 145.55 352 *e*PKPdf PKPdf 07 47 17.1 -0.3
TSUM Tsumeb 145.55 352 PKPbc PKPbc 07 47 17.6 0.0
comp=Z,26nm,0.8s,baz=4.8,slow=4.4,SNR=24
LBTB Lobatse 149.92 336 *e*PKPbc PKPbc 07 47 29.5 +0.1
LBTB *e*PKPab PKPab 07 47 34.9 0.0
MAW Mawson 152.48 220 *e*P PKPdf 07 47 33.1 +6.1
comp=Z,25nm,1.1s
MAW Mawson 152.48 220 PKPbc PKPbc 07 47 33.5 -0.5
comp=Z,8.8nm,0.8s,baz=110,slow=4.1,SNR=12
MAW Mawson 152.48 220 *e*PKIKP PKPbc 07 47 33.4 -0.6
MAW *e* 07 47 44.5
BOSA Boshof 153.44 334 PKP PKPdf 07 47 30.1 +0.5
comp=Z,4.6nm,0.9s,baz=130,slow=21,SNR=3.8
BOSA PKPbc PKPbc 07 47 37.5 +0.2
comp=Z,27nm,1.2s,baz=354,slow=2.7,SNR=8.7
BOSA Boshof 153.44 334 *e*PKIKP PKPdf 07 47 29.3 -0.4
BOSA *e* 07 47 35.0

*IDC **07** 07:31:14.4±6.0,51.°07N×177.°17W,h0km,mb4.1/4, mb1 4.5/5,mb1mx3.9/27,mbtmp4.2/5,ML4.3/1,MS4.0/3, Ms1 4.0/3,ms1mx3.6/27,Error ellipse: s-maj=107.4km s-min=51.0km az=83.0*
*NEIC **07** 07:31:22.4,52.°10N×175.°46W,h6km,ML3.6(AEIC),After AEIC.*
*ISCJB **07** 07:31:23.1±1.1,52.°2N±0.°2×175.°46W±0.°09,h13km±9km, mb4.0/3,MS4.0/3,Error ellipse: s-maj=27.3km s-min=7.1km az=166.1*
ISC 07 07:31:23.5±0.8,52.°1N±0.°2×175.°43W±0.°07,h6km±8km,n11, σ0s59/11,mb4.0/3,MS4.0/3,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.39**	**268**	*e*Pg	**Pg**	**07 31 30.8**	**-0.1**
GSTR				*e*Sg	**Sg**	**07 31 36.7**	**+0.7**
ATKA	**Atka Island**	**0.77**	**82**	P	**Pg**	**07 31 37.5**	**-0.7**
ATKA				S	**Sg**	**07 31 48.9**	**+0.7**
ADK	**Adak**	**0.81**	**254**	P	**Pg**	**07 31 37.9**	**-1.0**
ADK				S	**Sg**	**07 31 49.5**	**+0.2**
KDAK	**Kodiak Island**	**14.27**	**58**	Pn	**Pn**	**07 34 52.9**	**+7.1**
	1.2nm,0.3s,baz=308,slow=17,SNR=5.3						
ILAR	**Eielson Array**	**19.37**	**38**	P	**Pn**	**07 35 49.9**	**-0.7**
	4.2nm,0.7s,baz=236,slow=10.0,SNR=14						
INK	**Inuvik**	**25.66**	**35**	P	**P**	**07 36 53.9**	**+0.2**
	15nm,1.0s,mb4.5,baz=268,slow=11,SNR=5.2						
MJAR	**Matsushiro Arr**	**35.96**	**263**	LR	LR	07 50 50.7	
	comp=Z,353nm,19.6s,MS4.1,baz=80,slow=34						
NVAR	**Mina Array Bea**	**41.40**	**86**	P	**P**	**07 39 10.8**	**+0.5**
	1.1nm,0.9s,mb3.5,baz=305,slow=8.7,SNR=4.6						
GUMO	**Guam**	**49.82**	**234**	LR	LR	07 55 32.5	
	comp=Z,117nm,21.3s,MS3.9,baz=67,slow=30						
TXAR	**Lajitas Array**	**56.48**	**84**	P	**P**	**07 41 06.2**	**+0.1**
	0.8nm,0.5s,mb4.0,baz=301,slow=5.3,SNR=5.1						
KEST	**Kesra**	**92.43**	**356**	LR	LR	08 29 56.3	
	comp=Z,47nm,18.8s,MS4.0,baz=318,slow=38						

*IDC **07** 07:38:44.0±7.4,51.°92N×176.°58W,h0km,mb3.2/2, mb1 3.7/4,mb1mx3.4/26,mbtmp3.3/4,ML3.5/1,Error ellipse: s-maj=139.9km s-min=59.0km az=100.0*
*NEIC **07** 07:38:48.5,52.°10N×175.°46W,h6km,ML3.2(AEIC),After AEIC.*
*ISCJB **07** 07:38:49.2±0.9,52.°0N±0.°2×175.°44W±0.°06,h10km, mb3.2/2,Error ellipse: s-maj=23.9km s-min=4.8km az=174.2*
ISC 07 07:38:49.7±0.9,52.°0N±0.°2×175.°45W±0.°06,h10km,n7, σ0s96/10,mb3.2/2,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.36**	**266**	*e*Pg	**Pg**	**07 40 17.4**	**+0.5**
GSTR				*e*Sg	**Sg**	**07 40 23.9**	**+2.5**
ADK	**Adak**	**0.78**	**253**	P	**Pg**	**07 40 24.2**	**-0.7**
ADK				S	**Sg**	**07 40 35.5**	**+0.4**
ATKA	**Atka Island**	**0.80**	**84**	P	**Pg**	**07 40 24.2**	**-1.0**
ATKA				S	**Sg**	**07 40 35.3**	**-0.2**
AMKA	**Amchitka**	**3.33**	**259**	P	**Pn**	**07 41 01.7**	**-1.0**
NIKO	**Nikolski**	**4.13**	**75**	P	**Pn**	**07 41 13.5**	**-0.3**
UNV	**Unalaska Valle**	**5.69**	**69**	P	**Pn**	**07 41 37.0**	**+1.8**
SPIA	**Saint Paul Isl**	**5.91**	**29**	P	**Pn**	**07 41 36.3**	**-1.8**
AKUT	**Akutan**	**6.18**	**67**	*e*P	**Pn**	**07 41 46.0**	**+4.1**
SMY	**Shemya**	**6.40**	**280**	*e*Pn	**Pn**	**07 41 42.0**	**-3.0**
	51nm,0.6s						
FALS	**False Pass**	**7.70**	**64**	*e*Pn	**Pn**	**07 42 01.9**	**-0.9**
SVW2	**Sparrevohn**	**14.12**	**43**	*e*P	**Pn**	**07 43 38.6**	**+8.2**
	44nm,1.4s						
KDAK	**Kodiak Island**	**14.29**	**58**	Pn	**Pn**	**07 43 34.4**	**+1.6**
KDAK				Sn	**Sn**	**07 46 13.1**	**+1.6**
KDAK	**Kodiak Island**	**14.29**	**58**	Pn	**Pn**	**07 43 34.4**	**+1.6**
	2.2nm,0.3s,baz=265,slow=9.8,SNR=13						
KDAK				Sn	**Sn**	**07 46 13.1**	**+1.6**
	baz=151,slow=19,SNR=1.7						
TTA	**Tatalina**	**14.98**	**36**	*e*P	**Pn**	**07 43 46.7**	**+4.6**
	20nm,1.0s						
RSO	**Redoubt South**	**15.06**	**47**	*e*Pn	**Pn**	**07 43 44.3**	**+1.0**
COLA	**College**	**19.06**	**37**	*e*P	**Pn**	**07 44 31.4**	**-2.2**
	17nm,1.0s						
ILAR	**Eielson Array**	**19.38**	**38**	P	**Pn**	**07 44 34.5**	**-2.9**
	0.5nm,0.3s,baz=244,slow=11,SNR=24						
ILAR				LR	LR	07 52 37.4	
	comp=Z,573nm,18.1s,baz=90,slow=39						
MENT	**Mentasta**	**19.96**	**45**	P	**Pn**	**07 44 44.2**	**-0.2**
EGAK	**Eagle**	**21.63**	**41**	*e*P	**P**	**07 45 00.6**	**-0.2**
	51nm,1.1s,mb4.9						
DAWY	**Dawson**	**22.15**	**43**	*e*P	**P**	**07 45 07.0**	**+0.6**
INK	**Inuvik**	**25.67**	**35**	P	**P**	**07 45 39.8**	**-0.6**
	3.1nm,0.5s,mb4.1,baz=224,slow=11,SNR=9.0						
INK				LR	LR	07 55 23.1	
	comp=Z,225nm,18.9s,MS3.7,baz=72,slow=36						
BBB	**Bella Bella**	**28.66**	**71**	LR	LR	07 56 01.9	
	comp=Z,172nm,19.9s,MS3.7,baz=100,slow=33						
YKA	**Yellowknife Ar**	**33.21**	**48**	P	**P**	**07 46 47.9**	**+0.4**
YKA	**Yellowknife Ar**	**33.21**	**48**	P	**P**	**07 46 47.9**	**+0.4**
	1.0nm,0.7s,mb3.8,baz=282,slow=9.3,SNR=3.4						
D05A	**Enumclaw**	**34.32**	**77**	⇓P	**P**	**07 46 56.8**	**-0.4**
	baz=34						
F04A	**Amboy**	**34.67**	**79**	⇑P	**P**	**07 47 00.6**	**+0.3**
	baz=35						
G04A	**Mulino**	**35.00**	**80**	⇑P	**P**	**07 47 03.1**	**0.0**
	baz=35						
B08A	**Colville Reser**	**35.34**	**73**	⇑P	**P**	**07 47 06.7**	**+0.6**
	baz=35						
H04A	**Detroit Lake**	**35.45**	**80**	⇑P	**P**	**07 47 07.1**	**0.0**
	baz=35,SNR=6.8						
MJAR	**Matsushiro Arr**	**35.93**	**263**	P	**P**	**07 47 09.9**	**-1.4**
MJAR				LR	LR	07 59 21.2	
MJAR	**Matsushiro Arr**	**35.93**	**263**	P	**P**	**07 47 09.9**	**-1.4**
	1.9nm,0.8s,mb4.0,baz=53,slow=6.1,SNR=4.3						
MJAR				LR	LR	07 59 21.2	
	comp=Z,165nm,19.8s,MS3.8,baz=60,slow=32						
MDJ	**Mudanjiang**	**36.48**	**281**	P	**P**	**07 47 15.7**	**-0.1**
MDJ				S	**S**	**07 52 59.6**	**+1.5**
MDJ				ScP	ScP	07 53 27.2	+0.6
MDJ				ScS	ScS	07 57 33.8	+1.0
MDJ				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
MDJ				pmax	pmax		
	comp=Z,18nm,3.3s						
MDJ				LR	LR		
	comp=N,220nm,16.6s,MS4.1						
MDJ				LR	LR		
	comp=E,140nm,16.2s,MS4.1						
MDJ				LR	LR		
	comp=Z,230nm,14.6s,MS4.1						
YBH	**Yreka Blue Hor**	**36.75**	**85**	P	**P**	**07 47 23.0**	**+4.9**
	comp=Z,4.7nm,0.9s,mb4.3,baz=280,slow=5.3,SNR=15						
K05A	**Summer Lake**	**37.30**	**82**	⇓P	**P**	**07 47 22.7**	**-0.1**
	baz=37						
I07A	**Izee**	**37.40**	**80**	⇓P	**P**	**07 47 23.7**	**0.0**
	baz=37						
WDC	**Whiskeytown Da**	**37.52**	**86**	*e*P	**P**	**07 47 23.6**	**-1.1**
	comp=Z,6.6nm,1.0s,mb4.3						
F10A	**Beach Ranch, E**	**37.77**	**76**	⇑P	**P**	**07 47 27.4**	**+0.6**
	baz=38						
MOD	**Modoc**	**38.12**	**83**	*e*P	**P**	**07 47 29.2**	**-0.7**
	comp=Z,5.6nm,0.7s,mb4.4						
BSMT	**Bassoo Peak**	**38.26**	**72**	*e*P	**P**	**07 47 30.8**	**-0.1**
	comp=Z,4.5nm,0.7s,mb4.3						
D12A	**Red Ives Fores**	**38.33**	**73**	⇑P	**P**	**07 47 31.5**	**0.0**
	baz=38						
J08A	**Circle Bar Ran**	**38.42**	**80**	⇓P	**P**	**07 47 32.2**	**-0.1**
	baz=38						
C13A	**Hot Springs**	**38.47**	**72**	⇑P	**P**	**07 47 32.1**	**-0.6**
	baz=38						
A14A	**Double T Ranch**	**38.50**	**69**	⇓P	**P**	**07 47 32.8**	**-0.2**
	baz=38						
D13A	**Huson**	**38.83**	**72**	⇓P	**P**	**07 47 36.1**	**+0.4**
	baz=39						
A15A	**Johnson Ranch,**	**38.90**	**69**	⇑P	**P**	**07 47 36.2**	**0.0**
	baz=39						
C14A	**Swan Lake**	**38.91**	**71**	⇓P	**P**	**07 47 36.8**	**+0.5**
	baz=39						
F12A	**Elk City**	**39.06**	**75**	⇓P	**P**	**07 47 37.8**	**+0.1**
	baz=39						
B15A	**Bradely Ranch,**	**39.32**	**70**	⇑P	**P**	**07 47 39.5**	**-0.4**
	baz=39						
E13A	**Victor**	**39.33**	**73**	⇓P	**P**	**07 47 40.3**	**+0.5**
	baz=39						
D14A	**Greenough**	**39.40**	**72**	⇓P	**P**	**07 47 40.0**	**-0.5**
	baz=39						
A16A	**West Butte Ran**	**39.56**	**68**	⇓P	**P**	**07 47 42.0**	**+0.2**
	baz=40						
C15A	**Salmond Ranch,**	**39.57**	**70**	⇓P	**P**	**07 47 41.0**	**-0.9**
	baz=40,SNR=8.3						
F13A	**Darby**	**39.59**	**74**	⇑P	**P**	**07 47 41.8**	**-0.2**
	baz=40						
E14A	**Clinton**	**39.75**	**73**	⇓P	**P**	**07 47 43.3**	**-0.2**
	baz=40						
MFID	**Camas Ranch**	**39.99**	**78**	⇑P	**P**	**07 47 45.6**	**+0.2**
	baz=40						
WCN	**Washoe City**	**40.00**	**86**	⇑P	**P**	**07 47 45.5**	**0.0**
	baz=40						
G13A	**Cobalt**	**40.02**	**75**	⇓P	**P**	**07 47 46.5**	**+0.8**
	baz=40						
A17A	**Triple J Farms**	**40.08**	**68**	⇑P	**P**	**07 47 44.3**	**-1.8**
	baz=40,SNR=8.1						

I12A	**Atlanta** baz=40	40.20	77	⇓P	P	07 47 46.1	-1.0
E15A	**Deer Lodge** baz=40	40.25	72	⇓P	P	07 47 47.1	-0.4
I13A	**Wildhorse Cree** baz=41	40.74	76	⇑P	P	07 47 52.0	+0.4
L11A	**Cat Creek Ranc** baz=41,SNR=6.6	40.74	80	⇑P	P	07 47 50.8	-0.9
H14A	**Leadore** baz=41	40.80	75	⇓P	P	07 47 52.5	+0.4
J13A	**Cove Ranch, Pi** baz=41	40.99	77	⇑P	P	07 47 53.7	-0.1
D17A	**Six Diamond Ra** baz=41	41.01	70	⇓P	P	07 47 54.2	+0.4
M11A	**Holland Ranch,** baz=41	41.15	81	⇑P	P	07 47 54.9	-0.1
F16A	**Kennard Place,** baz=41	41.19	73	⇑P	P	07 47 55.0	-0.3
L12A	**House Creek Ra** baz=41	41.20	79	⇓P	P	07 47 55.4	0.0
E17A	**Martinsdale** baz=41	41.27	71	⇓P	P	07 47 56.2	+0.3
G16A	**Moss Hill, Enn** baz=41	41.39	73	⇓P	P	07 47 56.5	-0.5
NVAR	**Mina Array Bea** comp=Z,4.0nm,0.7s,mb4.2,baz=296,slow=7.1,SNR=16	41.43	86	P	P	07 47 58.1	+0.8
NVAR	comp=Z,0.7nm,0.8s,baz=306,slow=3.0,SNR=2.5			PcP	PcP	07 49 57.8	+2.6
NVAR	comp=Z,0.4nm,0.9s,baz=305,slow=3.2,SNR=2.9			ScP	ScP	07 53 44.4	-1.3
D18A	**Linhart Farms,** baz=42	41.50	70	⇓P	P	07 47 58.8	+0.9
N11A	**Elko Archery C** baz=42	41.55	81	⇓P	P	07 47 59.0	+0.7
KSRS	**Korea Array** comp=Z,1.1nm,0.7s,mb3.6,baz=55,slow=8.4,SNR=7.0	41.68	272	P	P	07 47 59.3	-0.1
F17A	**Fitzpatrick Pl** baz=42	41.69	72	⇑P	P	07 48 00.0	+0.6
E18A	**Harlowton** baz=42	41.77	71	⇑P	P	07 48 00.3	+0.3
N12A	**Clover Valley,** baz=42,SNR=7.6	41.95	81	⇑P	P	07 48 01.7	+0.1
G17A	**Pierce Place,** baz=42	41.96	73	⇓P	P	07 48 02.1	+0.4
H16A	**Russell Place,** baz=42	42.01	74	⇑P	P	07 48 02.0	0.0
O11A	**Cowboy Ranch,** baz=42	42.01	82	⇑P	P	07 48 02.1	0.0
M13A	**Montello** baz=42	42.18	80	⇓P	P	07 48 04.1	+0.7
L14A	**Malta** baz=42	42.34	78	⇑P	P	07 48 05.9	+1.1
Q10A	**Clear Creek Ra** baz=42	42.35	84	⇓P	P	07 48 05.3	+0.4
O12A	**Currie** baz=42,SNR=8.3	42.48	81	⇓P	P	07 48 05.6	-0.3
H17A	**Grant Village** baz=42	42.58	74	⇑P	P	07 48 06.9	+0.2
M14A	**Sheep Mountain** baz=42	42.59	79	⇑P	P	07 48 07.0	+0.2
J16A	**Bone** baz=43	42.60	76	⇓P	P	07 48 07.5	+0.6
R10A	**Warm Springs** baz=43,SNR=5.3	42.74	85	⇑P	P	07 48 06.6	-1.5
S10A	**Tonopah Range,** baz=43,SNR=7.4	42.79	85	⇓P	P	07 48 07.1	-1.4
Q11A	**Duckwater** baz=43,SNR=5.9	42.80	84	⇑P	P	07 48 07.9	-0.7
P12A	**McGill** baz=43	42.87	82	⇑P	P	07 48 09.3	+0.3
N14A	**Grayback Hills** baz=43	43.08	80	⇑P	P	07 48 10.6	-0.2
R11A	**Troy Canyon, C** baz=43,SNR=6.5	43.15	84	⇓P	P	07 48 10.7	-0.7
Q12A	**Willow Creek R** baz=43	43.18	83	⇑P	P	07 48 12.1	+0.5
P13A	**Bates Ranch, G** baz=43	43.42	82	⇓P	P	07 48 13.6	0.0
MPMC	**Manual Prospec** baz=43	43.43	88	⇑P	P	07 48 13.6	-0.1
L16A	**Fish Haven** baz=43	43.44	77	⇑P	P	07 48 14.2	+0.5
N15A	**Stansbury Isla** baz=43	43.46	79	⇑P	P	07 48 14.0	+0.2
S11A	**Rachel** baz=43	43.49	85	⇓P	P	07 48 14.4	+0.3
FURC	**Furnace Creek,** baz=44	43.55	87	⇓P	P	07 48 13.4	-1.3
Q13A	**Wheeler Ranch,** baz=44,SNR=7.2	43.73	82	⇑P	P	07 48 15.6	-0.5
R12A	**Pony Springs,** baz=44	43.76	83	⇓P	P	07 48 17.0	+0.7
K18A	**Toltan Ranch,** baz=44	43.91	75	⇓P	P	07 48 17.8	+0.4
U10A	**Ash Meadows, A** baz=44	43.91	87	⇑P	P	07 48 17.3	-0.3
P14A	**Drum Mountains** baz=44	43.91	81	⇑P	P	07 48 17.9	+0.3
S12A	**Delamar Landin** baz=44	44.06	84	⇓P	P	07 48 18.9	+0.2
Q14A	**Sevier Lake (B** baz=44,SNR=7.2	44.16	82	⇑P	P	07 48 19.1	-0.5
R13A	**O'Grain Ranch,** baz=44	44.24	83	⇑P	P	07 48 20.7	+0.5
GSC	**Goldstone** baz=44	44.35	88	⇓P	P	07 48 20.7	-0.4
O16A	**Springville** baz=44	44.49	79	⇓P	P	07 48 22.7	+0.5
K19A	**Absolon Red Bu** baz=44	44.51	74	⇓P	P	07 48 21.8	-0.5
BFSC	**Mount Baldy Ra** baz=44	44.52	90	⇑P	P	07 48 21.6	-0.8
L19A	**Farson** baz=45	44.63	76	⇓P	P	07 48 24.0	+0.7
S13A	**Holt Ranch, En** baz=45,SNR=8.5	44.69	84	⇓P	P	07 48 23.3	-0.4
Q15A	**Fillmore** baz=45	44.70	81	⇓P	P	07 48 24.5	+0.7
V11A	**Goodsprings** baz=45	44.84	87	⇓P	P	07 48 25.1	+0.1
T13A	**Saint George** baz=45,SNR=6.2	45.02	84	⇓P	P	07 48 26.0	-0.3
MURC	**Murrieta** baz=45	45.23	90	⇑P	P	07 48 28.7	+0.5
GMRC	**Granite Mounta** baz=45	45.40	88	⇓P	P	07 48 30.3	+0.8
R16A	**Teasdale** baz=46	45.70	81	⇑P	P	07 48 32.5	+0.8
V13A	**Grand Canyon W** baz=46	45.73	86	⇑P	P	07 48 32.2	+0.2
U14A	**Mt Trumbull** baz=46	45.85	84	⇓P	P	07 48 32.5	-0.5
O19A	**Miners Draw (B** baz=46	45.87	77	⇑P	P	07 48 32.7	-0.4
L21A	**Rawlins** baz=46	45.90	75	⇓P	P	07 48 33.2	-0.1
T15A	**Red Dirt Ranch** baz=46	45.95	83	⇑P	P	07 48 33.8	0.0
S16A	**Weppner Ranch,** baz=46	45.98	82	⇑P	P	07 48 34.3	+0.3
Q18A	**Rafter H Ranch** baz=46	46.00	79	⇓P	P	07 48 33.7	-0.5
R17A	**Hanksville Air** baz=46	46.08	81	⇓P	P	07 48 35.0	+0.2
W13A	**Hualapai Mount** baz=46	46.28	86	⇓P	P	07 48 36.0	-0.4
U15A	**North Rim** baz=46,SNR=8.1	46.39	84	⇑P	P	07 48 36.7	-0.6
V14A	**Boquillas Ranc** baz=46	46.41	85	⇑P	P	07 48 37.4	0.0
O20A	**White River Ci** baz=46	46.50	77	⇑P	P	07 48 37.6	-0.5
S17A	**Black Ridge (B** baz=46	46.52	81	⇑P	P	07 48 38.2	-0.1
N21A	**Black Mountain** baz=46	46.55	76	⇑P	P	07 48 39.1	+0.7
R18A	**Canyonlands Na** baz=46	46.60	80	⇑P	P	07 48 39.4	+0.6
X13A	**Yucca** baz=46	46.65	87	⇓P	P	07 48 39.5	+0.2
W14A	**Seligman** baz=47	46.70	86	⇑P	P	07 48 39.8	+0.1
V15A	**Kaibab Nationa** baz=47	46.86	84	⇑P	P	07 48 40.5	-0.5
T17A	**Navajo Res., N** baz=47	46.93	82	⇓P	P	07 48 41.2	-0.2
S18A	**Hurst Farm, Bl** baz=47	46.98	81	⇓P	P	07 48 41.9	+0.1
R19A	**Curley Farm, L** baz=47	47.04	80	⇓P	P	07 48 42.6	+0.2
N22A	**Wattenberg Ran** baz=47	47.16	75	⇓P	P	07 48 43.5	+0.3
U16A	**Tuba City** baz=47	47.29	83	⇓P	P	07 48 44.6	+0.3
X14A	**Yava** baz=47	47.31	86	⇓P	P	07 48 44.2	-0.3
T18A	**Mexican Hat** baz=47,SNR=8.4	47.41	81	⇓P	P	07 48 44.1	-1.1
S19A	**Harvey Farm, M** baz=47	47.47	80	⇓P	P	07 48 45.6	0.0
O22A	**Kremmling** baz=47	47.50	76	⇑P	P	07 48 46.6	+0.8
ULM	**Lac du Bonnet** comp=Z,187nm,19.5s,MS4.1,baz=28,slow=37	47.54	59	LR	LR	08 09 34.4	
Y14A	**Wickenburg** baz=48	47.59	87	⇑P	P	07 48 47.1	+0.4
R20A	**Redvale** baz=48	47.64	79	⇓P	P	07 48 47.6	+0.6
Z13A	**Yuma Proving G** baz=48	47.69	88	⇓P	P	07 48 47.4	0.0
X15A	**Humboldt** baz=48	47.70	86	⇓P	P	07 48 47.8	+0.3
V17A	**Tonalea, Kykot** baz=48	47.83	84	⇑P	P	07 48 49.5	+0.9
O23A	**Lake Granby, G** baz=48	47.84	75	⇓P	P	07 48 49.0	+0.4
SONM	**Songino Array** comp=Z,2.0nm,1.1s,mb4.0,baz=57,slow=5.3,SNR=4.6	48.14	298	P	P	07 48 50.3	-0.4
X16A	**Lo Mia Camp, P** baz=48	48.23	85	⇑P	P	07 48 51.9	+0.2
V18A	**Ganado** baz=48	48.30	83	⇓P	P	07 48 53.1	+1.0
U19A	**Dine' College,** baz=48	48.36	82	⇓P	P	07 48 52.9	+0.3
P23A	**Jefferson** baz=48	48.42	76	⇓P	P	07 48 53.8	+0.8
Y16A	**Circle Bar Ran** baz=48	48.57	86	⇑P	P	07 48 54.1	-0.1
R22A	**Saguache, Gunn** baz=48	48.60	78	⇓P	P	07 48 54.4	+0.1
W18A	**Petrified Fore** baz=49	48.81	83	⇑P	P	07 48 56.7	+0.6
S22A	**4UR Ranch, Cre** baz=49	48.86	79	⇑P	P	07 48 57.6	+1.1
T21A	**Navajo Lake** baz=49	48.93	80	⇑P	P	07 48 57.2	+0.2
214A	**Organ Pipe Nat** baz=49	49.06	89	⇓P	P	07 48 57.7	-0.3
Y17A	**Roosevelt** baz=49	49.09	86	⇓P	P	07 48 58.4	+0.2
U21A	**Nageezi** baz=49	49.22	81	⇓P	P	07 48 59.5	+0.3
T22A	**Edith** baz=49	49.29	79	⇑P	P	07 48 59.9	+0.1
P25A	**Willow Gulch B** baz=49	49.33	75	⇓P	P	07 49 00.7	+0.7
X19A	**St. Johns** baz=50	49.55	84	⇑P	P	07 49 02.4	+0.7
W20A	**Ramah** baz=50	49.56	82	⇑P	P	07 49 01.8	0.0
Z17A	**San Carlos Hig** baz=50	49.58	86	⇓P	P	07 49 02.0	0.0
U22A	**Llaves** baz=50	49.74	80	⇑P	P	07 49 03.0	-0.2
Y19A	**Nutrioso** baz=50	49.89	84	⇓P	P	07 49 05.0	+0.7
117A	**Oracle** baz=50	49.91	87	⇑P	P	07 49 04.4	-0.2
X20A	**Quemado** baz=50	49.96	83	⇑P	P	07 49 05.2	+0.3
V22A	**San Miguel Ran** baz=50	50.01	80	⇓P	P	07 49 05.8	+0.6
TUC	**Tucson** comp=Z,5.4nm,1.0s,mb4.5	50.06	87	*e*P	P	07 49 04.5	-1.2
U23A	**El Rito** baz=50,SNR=7.1	50.17	80	⇓P	P	07 49 05.5	-1.0
118A	**Homack Ranch,** baz=50	50.34	86	⇓P	P	07 49 08.0	+0.2
217A	**Green Valley** baz=50	50.41	87	⇑P	P	07 49 08.6	+0.3
X21A	**Alamocita Cree** baz=50	50.46	83	⇓P	P	07 49 09.1	+0.5
Y20A	**Horse Springs,** baz=50	50.46	83	⇓P	P	07 49 09.0	+0.3
V23A	**Ortiz Mt. (NFS** baz=50	50.57	80	⇓P	P	07 49 09.8	+0.3
119A	**Ashpeak Ranch,** baz=51	50.66	85	⇑P	P	07 49 10.2	0.0
T25A	**Trinidad** baz=51	50.72	78	⇓P	P	07 49 11.1	+0.6
218A	**Dragoon** baz=51	50.75	87	⇓P	P	07 49 10.7	-0.2
Z20A	**Nine Sixteen R** baz=51	50.86	84	⇑P	P	07 49 12.5	+0.8
LAZ	**Ladron** comp=Z,1.5nm,0.6s,mb4.1	50.88	82	*e*P	P	07 49 14.0	+2.2
X22A	**Bernardo** baz=50	50.89	82	⇑P	P	07 49 13.0	+1.1
ANMO	**Albuquerque** comp=Z,0.2nm,0.3s,mb3.5,baz=327,slow=8.6,SNR=3.0	50.93	81	P	P	07 49 11.6	-0.5
W23A	**Werner Place,** baz=51	50.98	81	⇑P	P	07 49 12.8	+0.3
V24A	**Rampart Ranch,** baz=51	51.13	80	⇓P	P	07 49 13.4	-0.3
318A	**Bisbee** baz=51	51.15	87	⇑P	P	07 49 14.2	+0.3
U25A	**Circle Dot Ran** baz=51	51.21	78	⇓P	P	07 49 13.5	-0.7
Y22A	**Socorro** baz=51	51.30	82	⇑P	P	07 49 14.9	-0.1
W24A	**Lazy 6 Ranch,** baz=51	51.39	80	⇓P	P	07 49 16.0	+0.3
V25A	**Rancho No Teng** baz=51	51.45	79	⇑P	P	07 49 16.1	0.0
U26A	**Atchley Ranch,** baz=52	51.61	78	⇓P	P	07 49 17.1	-0.2
220A	**Playas Peak, P** baz=52	51.73	85	⇓P	P	07 49 17.7	-0.5
121A	**Cookes Peak, D** baz=52	51.76	84	⇓P	P	07 49 17.6	-0.8
Z22A	**Elephant Butte** baz=52	51.76	83	⇑P	P	07 49 18.3	-0.1
W25A	**X Bar L Ranch,** baz=52	51.96	79	⇓P	P	07 49 19.7	-0.3
V26A	**Tequesquite Ra** baz=52	51.98	78	⇓P	P	07 49 20.1	0.0
320A	**Kipp Ranch, An** baz=52	52.12	86	⇑P	P	07 49 21.0	-0.1
Y24A	**Capitan** baz=52,SNR=5.6	52.24	81	⇓P	P	07 49 22.1	0.0
Z24A	**Sheeppen Canyo** baz=53	52.69	82	⇓P	P	07 49 25.5	+0.2
Y25A	**Mesa, Roswell** baz=53	52.70	81	⇑P	P	07 49 25.3	-0.1
124A	**Stringfield Ra** baz=53	53.07	82	⇑P	P	07 49 28.5	+0.4
Z25A	**Roswell** baz=53	53.12	81	⇓P	P	07 49 29.1	+0.5
224A	**Cornudas Mount** baz=53	53.45	83	⇓P	P	07 49 30.2	-0.8
Z26A	**Caprock** baz=54	53.58	81	⇓P	P	07 49 32.1	+0.2
125A	**Gardner Draw,** baz=54	53.58	82	⇑P	P	07 49 32.2	+0.3
Y27A	**Causey** baz=54,SNR=7.4	53.65	80	⇑P	P	07 49 32.5	+0.1
MNTX	**Cornudas Mount** comp=Z,5.3nm,0.9s,mb4.5	53.80	83	*e*P	P	07 49 31.0	-2.5
MSTX	**Muleshoe** baz=54	53.83	79	⇓P	P	07 49 33.7	0.0
225A	**Deer Hill, Car** baz=54	53.86	83	⇑P	P	07 49 33.7	-0.2
324A	**Moseley Ranch,** baz=54	53.92	84	⇑P	P	07 49 33.9	-0.5
Z27A	**Tatum** baz=54	54.01	80	⇑P	P	07 49 34.9	-0.2
325A	**Bean Ranch, Si** baz=54	54.28	83	⇓P	P	07 49 36.3	-0.8
226A	**Malaga, Loving** baz=54	54.33	82	⇑P	P	07 49 37.2	-0.2
425A	**Indio Mountain** baz=55	54.68	84	⇑P	P	07 49 39.4	-0.5
326A	**Caldwell Ranch** baz=55	54.93	83	⇑P	P	07 49 41.5	-0.2
426A	**McDonald Obser** baz=55	55.35	83	⇑P	P	07 49 44.3	-0.5
328A	**Wristen Ranch,** baz=56	55.60	82	⇑P	P	07 49 46.6	+0.1
427A	**Hayter Ranch,** baz=56	55.61	83	⇑P	P	07 49 46.7	0.0
526A	**Mary Lane Ranc** baz=56	55.74	84	⇑P	P	07 49 47.6	0.0
626A	**Big Bend Ranch** baz=56	56.07	84	⇑P	P	07 49 49.8	-0.2
428A	**Kincaid Ranch,** baz=56,SNR=5.5	56.13	82	⇓P	P	07 49 49.7	-0.7
528A	**Cox Ranch, San** baz=56	56.47	83	⇓P	P	07 49 52.7	-0.1
TXAR	**Lajitas Array** comp=Z,1.6nm,0.5s,mb4.3,baz=304,slow=4.7,SNR=14	56.51	84	P	P	07 49 52.6	-0.6
627A	**Terlingua Ranc** baz=56	56.60	84	⇓P	P	07 49 53.3	-0.5
628A	**Black Gap, Mar** baz=57	56.88	83	⇓P	P	07 49 54.9	-0.9
MKAR	**Makanchi Array** comp=Z,1.9nm,0.9s,mb4.2,baz=56,slow=7.4,SNR=8.2	61.16	310	P	P	07 50 23.8	-1.4
BVAR	**Borovoye Array** comp=Z,3.8nm,0.7s,mb4.6,baz=52,slow=8.3,SNR=12	61.63	321	P	P	07 50 27.1	-1.1
KMI	**Kunming**	65.65	280	P	P	07 50 56.9	+1.7
KMI				pP	pP	07 50 59.1	+2.6
KMI	comp=Z,8.0nm,0.8s,mb4.8			pmax	pmax		
NOA	**NORSAR Array B** comp=Z,1.2nm,1.0s,mb3.9,baz=349,slow=3.1,SNR=2.6	67.06	356	P	P	07 51 03.6	-0.1
KSH	**Kashi**	69.68	309	*e*P	P	07 51 24.0	+3.5
KSH				*e*pP	pP	07 51 30.2	+8.4
KSH				*e*sP	sP	07 51 33.3	+11
KSH				*e*PcP	PcP	07 51 46.1	+2.8
KSH				*e*PP	PP	07 54 01.1	+7.1
KSH				*e*ScP		07 55 48.3	
KSH				*e*PcS		07 55 50.8	
KSH				*e*S	S	08 00 33.9	+4.4
KSH				*e*sS	sS	08 00 42.8	+11
KSH				*e*SKS		08 01 20.2	
KSH				*e*ScS	ScS	08 01 22.4	-0.3
KSH	comp=Z,1.0nm,0.7s,mb3.9			pmax	pmax		
KSH	comp=Z,22nm,2.7s,mb4.6			pmax	pmax		
KSH	comp=N,66nm,7.4s			LR	LR		
KSH	comp=E,44nm,5.2s			LR	LR		
KSH	comp=Z,52nm,5.2s			LR	LR		
RAR	**Rarotonga** comp=Z,142nm,21.0s,MS4.2,baz=172,slow=30	74.30	165	LR	LR	08 17 33.9	
ASAR	**Alice Springs** comp=Z,1.0nm,0.6s,mb4.2,baz=33,slow=5.1,SNR=11	87.45	225	P	P	07 52 57.6	-0.7
QSPA	**South Pole Qui** comp=Z,1.3nm,0.7s,baz=304,slow=2.3,SNR=7.8	141.88	180	PKhKP	PKPpre	07 59 35.8	
MAW	**Mawson** comp=Z,1.0nm,0.4s,baz=205,slow=4.9,SNR=3.8	148.34	218	PKPbc	PKPbc	07 59 54.8	-1.1

*ISCJB **07** 07:44:24.3±0.6,24.01S±0.04×66.94W±0.06,h175km±5km, mb4.1/20,Error ellipse: s-maj=9.5km s-min=6.6km az=162.6*

*NEIC **07** 07:44:24.9±0.7,24.02S×66.97W,h165km±8km,mb4.2/15, Error ellipse: s-maj=11.1km s-min=8.7km az=89.0*

*IDC **07** 07:44:25.5±1.7,24.02S×66.90W,h176km±15km,mb3.7/5, mb1 3.8/9,mb1mx3.6/16,mbtmp3.6/9,Error ellipse: s-maj=21.2km s-min=15.0km az=72.0*

*GUC **07** 07:44:27.1±0.4,23.60S×67.25W,h220km,ML4.9*

ISC 07 07:44:25.1±0.6,24.00S±0.04×66.92W±0.06,h166km±5km, n44,σ1s11/50,mb4.1/20,3C,Salta Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
PB04	**Plate Boundary**	2.93	306	⇑*i*P		Pn	07 45 19.8	+7.5
PB04				*i* S		Sn	07 45 59.2	+10
PB04	comp=E,1μm,0.3s			AML		AML	07 46 02.9	
CEN1	**Los Morros**	3.07	281	*e*P		Pn	07 45 14.7	+0.7
CEN1				*i* S		Sn	07 45 53.4	+1.5
CEN1	comp=N,1μm,0.7s			AML		AML	07 45 55.8	
ANCH	**Antofagasta**	3.21	275	P		Pn	07 45 14.7	-1.1
ANCH				S		Sn	07 45 52.0	-3.1
ANCH	**Antofagasta** comp=E,2μm,0.5s	3.21	275	AML		AML	07 45 54.3	
MECH	**Mejillones**	3.36	285	⇑*i*P		Pn	07 45 19.5	+1.9
MECH				*i* S		Sn	07 45 59.1	+0.7
MECH	comp=N,1μm,0.3s			AML		AML	07 46 01.7	
HMBC	**Humberston**	4.62	323	⇑*i*P		Pn	07 45 33.8	-0.1
HMBC				*e*S		Sn	07 46 25.1	-2.4
HMBC	comp=E,729nm,0.3s			AML		AML	07 46 27.3	
PSGC	**Pisagua**	5.30	325	*e*P		Pn	07 45 41.8	-0.9
PSGC				*i* S		Sn	07 46 39.8	-3.8
MNMC	**Miæe Miæ**	5.45	332	*e*P		Pn	07 45 45.5	+0.8
MNMC				*i* S		Sn	07 46 46.5	-0.7
LCO	**Las Campanas**	6.03	213	*e*Pn		Pn	07 45 50.7	-1.6
CFAA	**Coronel Fontan** comp=E,0.2nm,0.3s,baz=14,slow=12,SNR=38	7.66	188	P		Pn	07 46 13.5	-0.4
CFAA	comp=E,1.3nm,0.3s,baz=252,slow=21,SNR=17			S		Sn	07 47 34.9	-4.8
LPAZ	**La Paz**	7.76	351	*e*Pn		Pn	07 46 17.5	+2.2
LPAZ				*e*Sn		Sn	07 47 42.0	-0.3
LPAZ	**La Paz** comp=E,1.6nm,0.3s,baz=149,slow=8.2,SNR=72	7.76	351	P		Pn	07 46 17.5	+2.2
LPAZ	comp=E,0.7nm,0.3s,baz=29,slow=21,SNR=8.0			S		Sn	07 47 42.9	+0.6
LPAZ	**La Paz**	7.76	351	*e*P		Pn	07 46 17.5	+2.2
CPUP	**Villa Florida**	8.99	107	P		Pn	07 46 32.2	+0.6
CPUP	**Villa Florida** comp=E,0.3nm,0.3s,baz=266,slow=11,SNR=6.5	8.99	107	P		Pn	07 46 32.2	+0.6
SIV	**San Ignacio** comp=E,1.0nm,0.3s,baz=241,slow=8.5,SNR=25	9.68	36	P		Pn	07 46 40.6	-0.1
TRQA	**Tornquist**	14.63	164	*e*Pn		Pn	07 47 43.8	-0.3
PLCA	**Paso Flores** comp=E,2.6nm,0.9s	16.96	189	*e*P		Pn	07 48 13.0	+0.6
PLCA	**Paso Flores** comp=E,0.2nm,0.3s,baz=58,slow=13,SNR=2.9	16.96	189	P		Pn	07 48 12.5	+0.1
RCBR	**Riachuelo** comp=E,45nm,1.4s,mb4.9	34.86	64	*e*P		P	07 51 01.1	+0.4
SWET	**Sewanee**	61.59	342	*e*P		P	07 54 23.7	-1.1
JCT	**Junction City** comp=E,4.6nm,0.7s,mb4.4	62.69	328	*e*P		P	07 54 31.8	-0.4
WVT	**Waverly** comp=E,8.4nm,0.7s,mb4.7	62.99	341	*e*P		P	07 54 32.1	-2.0
TXAR	**Lajitas Array** comp=E,0.7nm,0.7s,mb3.6,baz=153,slow=7.8,SNR=9.0	63.72	324	P		P	07 54 38.9	-0.2
DBIC	**Dimbokro** comp=E,1.1nm,0.3s,mb4.0,baz=216,slow=8.7,SNR=3.4	67.73	71	P		P	07 55 05.5	+0.4
ANMO	**Albuquerque** comp=E,3.0nm,0.9s,mb4.0	69.59	326	*e*P		P	07 55 16.7	+0.5
JFWS	**Jewell Farm** comp=E,9.6nm,0.6s,mb4.7	69.97	342	*e*P		P	07 55 16.2	-2.1
SDCO	**Great Sand Dun** comp=E,2.7nm,1.0s,mb3.9	71.33	329	*e*P		P	07 55 26.9	+0.3
WUAZ	**Wupatki** comp=E,4.3nm,0.9s,mb4.2	72.63	323	*e*P		P	07 55 35.6	+1.2
ECSD	**EROS Data Cent** comp=E,5.9nm,1.1s,mb4.2	72.71	338	*e*P		P	07 55 33.4	-1.3
SMCO	**Snowmass** comp=E,2.5nm,0.8s,mb4.0	73.17	328	*e*P		P	07 55 38.5	+1.0
SRU	**San Rafael** comp=E,3.4nm,0.8s,mb4.0	74.87	326	*e*P		P	07 55 47.8	+0.4
CCUT	**Cedar City** comp=E,4.6nm,0.9s,mb4.1	75.20	323	*e*P		P	07 55 50.6	+1.3
MSU	**Marysvale**	75.27	325	*e*P		P	07 55 50.9	+1.2
TORD	**Torodi Ar. Bea** comp=E,1.1nm,0.6s,mb3.7,baz=263,slow=6.2,SNR=10	76.50	69	P		P	07 55 55.9	-1.3
HWUT	**Hardware Ranch** comp=E,5.7nm,1.4s,mb4.0	77.27	327	*e*P		P	07 56 01.2	+0.3
ULM	**Lac du Bonnet** comp=E,3.8nm,0.6s,mb4.2,baz=158,slow=8.7,SNR=3.4	78.25	341	P		P	07 56 05.0	-1.1
NVAR	**Mina Array Bea** comp=E,0.6nm,0.7s,mb3.4,baz=150,slow=5.3,SNR=6.0	78.59	321	P		P	07 56 08.8	+0.6
PAHR	**Pah Rah Range** comp=E,5.3nm,0.9s,mb4.2	80.07	322	*e*P		P	07 56 17.1	+0.9
HLID	**Hailey** comp=E,3.4nm,0.8s,mb4.0	80.13	327	*e*P		P	07 56 17.6	+1.1
YKA	**Yellowknife Ar** comp=E,0.9nm,0.5s,mb4.1,baz=132,slow=4.7,SNR=11	94.15	340	P		P	07 57 23.3	-1.0
ASAR	**Alice Springs** comp=E,0.2nm,0.4s,baz=132,slow=1.4,SNR=4.0	128.48	205	PKP		PKPdf	08 03 10.8	-2.0
ZALV	**Zalesovo Beam** comp=E,1.6nm,0.6s,baz=298,slow=4.4,SNR=5.9	143.36	28	PKP		PKPdf	08 03 36.5	-2.7

MKAR Makanchi Array 146.48 40 PKPbc PKPbc 08 03 45.1 -1.4
comp=E,1.5nm,0.6s,baz=292,slow=4.1,SNR=13

CASC 07 07:53:44.8±3.3, 10.63N×86.15W, h0km±11km, MD3.6, ML2.7, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.61**	**88**	*i*	P		Pg	07 53 58.0	+1.5
NY14					*i* S		Sg	07 54 09.9	+5.6
GBS3	**Finca Las lm˜¡**	**0.70**	**77**	*i*	P		Pg	07 53 59.1	+0.8
GBS3					*i* S		Sg	07 54 10.6	+3.2
VCR	**Vista de Mar**	**0.71**	**134**	*e*	P		Pg	07 53 59.3	+0.9
GBS2	**Las Lilas**	**0.72**	**73**	*i*	P		Pg	07 53 59.4	+0.8
LAPC	**Finca la Perla**	**0.72**	**79**	*i*	P		Pg	07 53 59.2	+0.6
LAPC					*i* S		Sg	07 54 11.2	+3.2
SSN	**San Juan del S**	**0.73**	**23**	*e*	P		Pg	07 54 00.4	+1.6
BUEV	**Buena Vista**	**0.75**	**77**	*i*	P		Pg	07 53 59.8	+0.6
GB1A	**Borinquen Arri**	**0.76**	**75**	*i*	P		Pg	07 54 00.1	+0.7
GPS3	**Bodega del ICE**	**0.78**	**80**	*i*	P		Pg	07 54 00.4	+0.5
GPS2	**Hotel Rinc˜‡n**	**0.80**	**81**	*i*	P		Pg	07 54 00.6	+0.5
GPS2					*i* S		Sg	07 54 13.5	+3.1
GPS1	**Guardaparques**	**0.80**	**79**	*i*	P		Pg	07 54 00.6	+0.4
LIM1	**Limonal**	**0.89**	**85**	*i*	P		Pg	07 54 02.0	+0.2
GUAB	**Guayabo de Bag**	**0.91**	**85**	*i*	P		Pg	07 54 02.5	+0.3
COLC	**Colonia**	**0.93**	**87**	*i*	P		Pg	07 54 02.9	+0.2
COLC					*i* S		Sg	07 54 16.9	+2.1
MESS	**Mesas**	**0.95**	**83**	*i*	P		Pg	07 54 03.1	+0.1
CUI	**Cuipilapa**	**0.97**	**88**	*i*	P		Pg	07 54 03.4	0.0
CUI					*i* S		Sg	07 54 17.5	+1.5
CONN	**Concepcion**	**1.07**	**29**	*e*	P		Pg	07 54 06.5	+1.2
JCR	**Jicaral**	**1.28**	**127**	*e*	P		Pg	07 54 07.6	-1.8
APON	**Apoyo**	**1.29**	**4**	*e*	P		Pg	07 54 09.9	+0.5
CRUN	**El Crucero**	**1.36**	**354**	*e*	P		Pg	07 54 11.2	+0.4
TISN	**Laguna Tiscapa**	**1.51**	**356**	*e*	P		Pn	07 54 12.3	-0.8
XAVN	**Gruta Xavier**	**1.52**	**354**	*e*	P		Pn	07 54 12.4	-0.9
WILN	**Americas 2**	**1.53**	**359**	*e*	P		Pn	07 54 12.8	-0.6
WILN				*e*	S		Sb	07 54 36.5	+2.6
CSAN		**1.57**	**350**	*e*	P		Pn	07 54 13.0	-1.0
COPN	**Copaltepe**	**1.60**	**344**	*e*	P		Pn	07 54 13.0	-1.4
CGA2	**Cerro Gallo 2**	**1.77**	**110**	*e*	P		Pn	07 54 16.4	-0.2
MOMN	**Momotombo**	**1.81**	**348**	*e*	P		Pn	07 54 16.7	-0.6
PRS1	**Puriscal**	**1.92**	**109**	*e*	P		Pn	07 54 17.8	-1.0
LEON	**Leon**	**1.92**	**338**	*e*	P		Pn	07 54 18.6	-0.2
LAJ	**Bijagual**	**2.14**	**111**	*e*	P		Pn	07 54 17.6	-4.1
URSC	**Urasca**	**2.46**	**108**	*e*	P		Pn	07 54 26.5	+0.2
BUS	**Buena Vista**	**2.58**	**114**	*e*	P		Pn	07 54 35.4	+7.5

IDC ***07*** *08:15:32.7±0.5, 32.˚11N×104.˚74E, h0km, mb5.0/27, mb1 5.0/30, mb1mx5.0/31, mbtmp4.9/30, ML4.5/3, MS4.2/12, Ms1 4.2/12, ms1mx3.9/31, Error ellipse: s-maj=13.9km s-min=12.0km az=46.0*

ISCJB ***07*** *08:15:34.3±0.1, 32.˚08N±0.˚02×104.˚57E±0.˚02, h17km, mb5.1/231, MS4.6/44, Error ellipse: s-maj=2.9km s-min=2.4km az=175.5*

BJI ***07*** *08:15:34.1, 32.˚12N×104.˚73E, h15km, mB5.0/25, mb5.0/37, ML5.1/22, Ms5.0/58, Ms7 4.8/47*

NEIC ***07*** *08:15:34.8±0.1, 32.˚14N×104.˚64E, h10km, mb5.1/143, Error ellipse: s-maj=3.2km s-min=2.4km az=208.0*

NEIC Felt at Chengdu.

SZGRF ***07*** *08:15:35.2, 32.˚00N×104.˚41E, h33km, mb5.4, MS5.0, Sichuan, China*

MOS ***07*** *08:15:36.3±0.8, 32.˚11N×104.˚67E, h33km, mb5.4/100, MS4.6/31, Error ellipse: s-maj=6.5km s-min=3.6km az=118.6*

GCMT ***07*** *08:15:38.7±0.3, 32.˚02N×104.˚75E, h21km, MW4.9, Moment Tensor Solution. s31,c42; s56,c87; Moment tensor: Scale 10¹⁶Nm; Mrr3.21±.18; Mθθ-2.00±.12; Mϕϕ-1.21±.12; Mrθ-0.15±.20; Mθϕ-1.57±.07; Mϕr-0.10±.24; Best double couple: M₀3.20000×10¹⁶ NP1:ϕ₀52.00000°, δ43.00000°, λ90.00000°. NP2:ϕ₀232.00000°, δ47.00000°, λ90.00000°. Principal axes: T 3.2200, Plg88.0000°, Azm150.0000°; N 0.0100, Plg0.0000°, Azm52.0000°; P -3.2300, Plg2.0000°, Azm322.0000°; Data Used: ll IU G CN IC.*

ISC 07 08:15:34.7±0.7, 32.˚11N±0.˚02×104.˚63E±0.˚02, h9km±4km, h17km±.8km; pP-P, n734, σ0±81/720, mb5.1/231, MS4.6/44, 116C-70D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.41**	**212**	⇑*i*	Pg		**Pg**	**08 16 02.1**	**+0.4**
CD2						Sg	**Sg**	**08 16 22.4**	**+2.4**
CD2						smax			
	comp=N,116µm,0.7s								
CD2						smax			
	comp=E,99µm,0.8s								
LZH	**Lanzhou**	**4.02**	**351**		Pn		**Pn**	**08 16 39.1**	**+2.7**
LZH					Sn		**Sn**	**08 17 25.0**	**+1.4**
LZH					Sg		**Sg**	**08 17 42.1**	**-1.7**
LZH					LR		LR		
	comp=E,35µm,6.8s								
LZH					LR		LR		
	comp=Z,38µm,9.8s								
XAN	**Xi'an**	**4.08**	**61**		Pn		**Pn**	**08 16 37.5**	**+0.2**
XAN					Pg		**Pg**	**08 16 50.3**	**-2.6**
XAN					Sn		**Sn**	**08 17 29.4**	**+4.2**
XAN					Sg		**Sg**	**08 17 45.4**	**-0.3**
XAN					smax				
	comp=N,5µm,0.7s								
XAN					smax				
	comp=E,3µm,0.9s								
XAN					LR		LR		
	comp=N,6µm,8.3s								
XAN					LR		LR		
	comp=E,4µm,8.3s								
XAN					LR		LR		
	comp=Z,5µm,9.0s								
ENH	**Enshi**	**4.54**	**113**	*e*	Pn		**Pn**	**08 16 46.0**	**+2.4**
ENH				*e*	Sg		**Sg**	**08 17 55.7**	**-4.9**
GYA	**Guiyang**	**5.90**	**162**		Pn		**Pn**	**08 17 03.1**	**+0.8**
GYA					Sn		**Sn**	**08 18 07.8**	**-2.3**
GYA					Sg		**Sg**	**08 18 38.9**	**-5.3**
GYA					smax				
	comp=N,3µm,1.0s								
GYA					smax				
	comp=E,2µm,0.7s								
GYA					LR		LR		
	comp=N,5µm,12.0s								
GYA					LR		LR		
	comp=E,5µm,9.6s								
GYA					LR		LR		
	comp=Z,8µm,12.8s								
KMI	**Kunming**	**7.16**	**194**		Pn		**Pn**	**08 17 20.4**	**+0.9**
KMI					Sn		**Sn**	**08 18 42.9**	**+1.9**
KMI					smax				
	comp=N,260nm,1.1s								
KMI					smax				
	comp=E,260nm,1.3s								
KMI					LR		LR		
	comp=N,4µm,9.4s								
KMI					LR		LR		
	comp=E,8µm,9.1s								
KMI					LR		LR		
	comp=Z,6µm,12.1s								
GTA	**Gaotai**	**8.27**	**333**	⇓	P		**Pn**	**08 17 36.0**	**+1.2**
GTA					pP			08 17 39.1	
GTA					sP			08 17 41.8	
GTA					S		**Sn**	**08 19 10.3**	**+2.0**
GTA					pmax	pmax			
	comp=Z,18nm,0.8s								
GTA					pmax	pmax			
	comp=Z,84nm,4.5s								
GTA					LR	LR			
	comp=N,9µm,9.6s								
GTA					LR	LR			
	comp=E,3µm,12.2s								
GTA					LR	LR			
	comp=Z,8µm,10.7s								
TIY	**Taiyuan**	**8.50**	**47**		P		**Pn**	**08 17 42.4**	**+4.5**
TIY					smax				
	comp=N,1µm,1.0s								
TIY					smax				
	comp=E,1µm,0.9s								
BTO	**Baotou**	**9.52**	**26**	*e*	P		**Pn**	**08 17 51.8**	**-0.2**
BTO					S		**Sn**	**08 19 39.3**	**+0.2**
BTO					LR		LR		
	comp=N,3µm,10.3s								
BTO					LR		LR		
	comp=E,2µm,10.3s								
HHC	**Hu-ho-hao-te**	**10.35**	**31**	*e*	P		**Pn**	**08 18 00.3**	**-3.0**
HHC				*e*	S		**Sn**	**08 19 55.8**	**-3.6**
HHC					SS			08 20 08.7	
HHC					pmax	pmax			
	comp=Z,69nm,0.6s								
HHC					pmax	pmax			
	comp=Z,190nm,3.6s								
HHC					LR	LR			
	comp=N,3µm,6.8s								
HHC					LR	LR			
	comp=E,6µm,5.9s								
HHC					LR	LR			
	comp=Z,6µm,10.1s								
TIA	**Tai'an**	**11.12**	**65**		P		**Pn**	**08 18 13.8**	**-0.1**
TIA					S		**Sn**	**08 20 28.3**	**+10**
TIA					LR		LR		
	comp=N,4µm,9.3s								
TIA					LR		LR		
	comp=E,4µm,9.0s								
LSA	**Lhasa**	**11.83**	**262**		P		**Pn**	**08 18 24.0**	**+0.4**
LSA	**Lhasa**	**11.83**	**262**	*e*	Pn		**Pn**	**08 18 24.9**	**+1.4**
	comp=E,20nm,0.6s								
LSA	**Lhasa**	**11.83**	**262**	*e*	P		**Pn**	**08 18 24.9**	**+1.3**
LSA					pmax	pmax			
	comp=Z,19nm,0.6s								
GZH	**Guangzhou**	**11.85**	**137**		P		**Pn**	**08 18 19.7**	**-4.1**
GZH					S		**Sn**	**08 20 30.3**	**-5.9**
GZH					LR		LR		
	comp=N,5µm,10.7s								
GZH					LR		LR		
	comp=E,4µm,12.3s								
IMP	**Imphal**	**11.91**	**235**	*e*	PKP		**Pn**	**08 18 23.0**	**-1.7**
NJ2	**Nanjing**	**12.06**	**87**	*e*	P		**Pn**	**08 18 29.6**	**+2.8**
NJ2					pP			08 18 33.0	
NJ2					sP			08 18 36.0	
NJ2					PP			08 18 39.7	
NJ2					S		**Sn**	**08 20 43.5**	**+2.1**
NJ2					sS			08 20 48.0	
NJ2					pmax	pmax			
	comp=Z,30nm,0.8s								
NJ2					pmax	pmax			
	comp=Z,350nm,6.7s								
NJ2					LR	LR			
	comp=N,3µm,19.0s								
NJ2					LR	LR			
	comp=E,2µm,17.6s								
NJ2					LR	LR			
	comp=Z,3µm,16.8s								
BJT	**Baijiatuao**	**12.21**	**47**	*e*	Pn		**Pn**	**08 18 29.3**	**+0.5**
	comp=Z,28nm,0.6s								
BJT	**Baijiatuau**	**12.21**	**47**	*e*	P		**Pn**	**08 18 29.3**	**+0.5**
BJT					pmax	pmax			
	comp=Z,28nm,0.6s								
BJI	**Beijing**	**12.23**	**46**		P		**Pn**	**08 18 28.7**	**-0.3**
BJI					pmax	pmax			
	comp=Z,7.0nm,0.7s								
BJI					pmax	pmax			
	comp=Z,320nm,9.5s								
BJI					LR	LR			
	comp=N,3µm,11.4s								
BJI					LR	LR			
	comp=E,4µm,9.0s								
BJI					LR	LR			
	comp=Z,1µm,18.3s								
SHL	**Shillong**	**12.93**	**243**	⇓*i*	P		**Pn**	**08 18 39.0**	**+0.3**
QIZ	**Qiongzhong**	**13.84**	**159**		P		**Pn**	**08 18 52.1**	**+1.0**
QIZ					PP			08 19 03.7	
QIZ					S		**Sn**	**08 21 27.5**	**+2.4**
QIZ					SS			08 21 43.0	
QIZ					pmax	pmax			
	comp=Z,64nm,2.3s								
QIZ					pmax	pmax			
	comp=Z,290nm,3.4s								
QIZ					LR	LR			
	comp=N,6µm,11.5s								
QIZ					LR	LR			
	comp=Z,8µm,11.5s								
QIZ	**Qiongzhong**	**13.84**	**159**	*e*	Pn		**Pn**	**08 18 51.5**	**+0.4**
QIZ				*e*	Sn		**Sn**	**08 21 15.2**	**-10**
SSE	**Sheshan**	**14.15**	**90**		P		**Pn**	**08 18 50.6**	**-4.6**
SSE					S		**Sn**	**08 21 28.9**	**-3.5**
SSE					pmax	pmax			
	comp=Z,43nm,0.6s								
SSE					pmax	pmax			
	comp=Z,140nm,4.3s								
SSE					LR	LR			
	comp=N,2µm,9.3s								
SSE					LR	LR			
	comp=E,3µm,9.3s								
SSE					LR	LR			
	comp=Z,4µm,13.4s								
QZH	**Quanzhou**	**14.19**	**117**		P		**Pn**	**08 18 59.0**	**+3.2**
QZH					S		**Sn**	**08 21 41.0**	**+7.6**
QZH					LR	LR			
	comp=N,7µm,8.6s								
QZH					LR	LR			
	comp=E,10µm,8.0s								
QZH					LR	LR			
	comp=Z,16µm,9.8s								
CHTO	**Chiang Mai**	**14.20**	**203**	*e*	Pn		**Pn**	**08 18 57.7**	**+1.8**
CM31	**Chiang Mai Arr**	**14.53**	**202**	*e*	Pn		**Pn**	**08 19 02.5**	**+2.0**
	comp=Z,43nm,0.7s								
CMAR	**Chiang Mai Arr**	**14.53**	**202**		Pn		**Pn**	**08 19 02.0**	**+1.5**
	comp=Z,0.9nm,0.3s,baz=191,slow=30,SNR=18								
CMAR					Lg			08 23 33.3	
	comp=Z,0.2nm,0.3s,baz=3.6,slow=30,SNR=4.8								
CMAR					LR		LR	08 24 29.3	
	comp=Z,233nm,18.8s,baz=20,slow=37								
DL2	**Dalian**	**15.40**	**59**		P		**Pn**	**08 19 13.6**	**+1.5**
DL2					S		**Sn**	**08 22 08.1**	**+5.3**
DL2					pmax	pmax			
	comp=Z,20nm,0.7s								
DL2					pmax	pmax			
	comp=Z,180nm,8.6s								
DL2					LR	LR			
	comp=N,870nm,13.5s								
DL2					LR	LR			
	comp=E,920nm,14.9s								
DL2					LR	LR			
	comp=Z,1µm,16.7s								
TAPN	**Taplejung**	**15.45**	**256**	*e*	P		**Pn**	**08 19 12.0**	**-0.8**
	comp=Z,175nm,1.1s								
SONM	**Songino Array**	**15.76**	**4**		Pn		**Pn**	**08 19 17.2**	**+0.4**
SONM					Lg			08 23 54.5	
SONM					LR		LR	08 25 49.4	
SONM	**Songino Array**	**15.76**	**4**		Pn		**Pn**	**08 19 17.2**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=186,slow=11,SNR=56								
SONM					Lg			08 23 54.5	
	comp=Z,0.4nm,0.3s,baz=196,slow=26,SNR=3.7								
SONM					LR		LR	08 25 49.4	
	comp=Z,3µm,20.2s,baz=186,slow=39								
SONM					P3KPbc			08 54 52.4	
	comp=Z,0.2nm,0.3s,baz=321,slow=2.1,SNR=3.7								
ULN	**Ulaanbaatar**	**15.84**	**6**	*e*	Pn		**Pn**	**08 19 18.2**	**+0.4**
	comp=Z,166nm,1.8s								
ULN	**Ulaanbaatar**	**15.84**	**6**	*e*	P		**Pn**	**08 19 18.2**	**+0.4**
ULN					pmax	pmax			
	comp=Z,166nm,1.8s								
ODAN	**Odare**	**15.90**	**255**	*e*	P		**Pn**	**08 19 16.9**	**-1.7**
	comp=Z,105nm,0.6s								
YHNB	**Yeheng**	**16.48**	**113**	*e*	Pn		**Pn**	**08 19 26.9**	**+0.8**
	comp=Z,46nm,0.8s								
RAMN	**Ramite**	**16.51**	**256**	*e*	P		**Pn**	**08 19 25.1**	**-1.4**
	comp=Z,130nm,0.6s								
JIRN	**Jiri**	**16.60**	**259**	*e*	P		**Pn**	**08 19 26.4**	**-1.2**
	comp=Z,72nm,0.6s								
SSLB	**Suanglung**	**16.62**	**116**	*e*	Pn		**Pn**	**08 19 28.5**	**+0.6**
	comp=Z,47nm,0.8s								
GUN	**Gumba**	**16.77**	**260**	*e*	P		**Pn**	**08 19 28.5**	**-1.3**
	comp=Z,206nm,1.0s								
NACB	**Ninganchiao**	**16.91**	**114**	*e*	P		**Pn**	**08 19 34.1**	**+2.5**
	comp=Z,58nm,1.0s								
TWG	**Pinlang**	**17.26**	**118**	*e*	Pn		**Pn**	**08 19 36.8**	**+0.8**
	comp=Z,28nm,0.7s								
PKI	**Pulchoki**	**17.28**	**260**	*e*	P		**Pn**	**08 19 34.9**	**-1.3**
	comp=Z,165nm,0.7s								
PKIN	**Phulchoki**	**17.29**	**260**	*e*	P		**Pn**	**08 19 35.3**	**-1.0**
	comp=Z,195nm,0.7s								
KKN	**Kakani**	**17.31**	**261**	*e*	P		**Pn**	**08 19 34.8**	**-1.8**
	comp=Z,136nm,0.8s								
DMN	**Daman**	**17.52**	**260**	*e*	P		**Pn**	**08 19 37.9**	**-1.3**
	comp=Z,138nm,0.8s								
WMQ	**Urumqi**	**17.71**	**316**		P		**Pn**	**08 19 43.2**	**+1.7**
WMQ					pP		pP	08 19 46.8	+2.0
WMQ					sP		sP	08 19 50.2	+4.2
WMQ					PP			08 19 58.0	
WMQ					S		**Sn**	**08 22 58.2**	**-0.6**
WMQ					sS		sS	08 23 04.9	-5.2
WMQ					SS			08 23 21.7	
WMQ					PcP		PcP	08 24 21.0	+1.5
WMQ					ScP		ScP	08 27 54.4	-0.4
WMQ					pmax	pmax			
	comp=Z,59nm,0.9s								
WMQ					pmax	pmax			
	comp=Z,650nm,4.1s								
WMQ					LR	LR			
	comp=N,5µm,9.6s								
WMQ					LR	LR			
	comp=E,4µm,10.9s								
WMQ					LR	LR			
	comp=Z,6µm,11.0s								
GKN	**Gorkha**	**17.79**	**262**	*e*	P		**Pn**	**08 19 41.1**	**-1.4**
	comp=Z,181nm,0.7s								
SNY	**Shenyang**	**17.95**	**52**	⇑	P		**Pn**	**08 19 44.2**	**-0.2**
SNY					S		**Sn**	**08 23 02.6**	**-1.9**
SNY					pmax	pmax			
	comp=Z,9.0nm,0.8s								
SNY					pmax	pmax			
	comp=Z,420nm,8.4s								
SNY					LR	LR			
	comp=N,830nm,10.2s								
SNY					LR	LR			
	comp=E,1µm,15.0s								
SNY					LR	LR			
	comp=Z,1µm,14.7s								
ZAK	**Zakamensk**	**18.28**	**357**	⇑*i*	P		**Pn**	**08 19 48.9**	**+0.5**
ZAK					pmax	pmax			
	comp=Z,27nm,1.2s								
KOLN	**Koldanda**	**18.73**	**262**	*e*	P		**Pn**	**08 19 52.2**	**-1.9**
	comp=Z,173nm,0.8s								
TLY	**Talaya**	**19.57**	**358**	*e*	P		**Pn**	**08 20 02.6**	**-1.3**
	comp=Z,24nm,0.8s								
TLY	**Talaya**	**19.57**	**358**	*e*	P		**Pn**	**08 20 04.9**	**+0.9**
TLY				*e*	S		**Sn**	**08 23 46.2**	**+2.6**
TLY					pmax	pmax			
	comp=Z,30nm,0.9s								
TLY					MLR	MLR			
	comp=Z,819nm,12.0s								
MOY	**Mondy**	**19.72**	**353**	*e*	P		**Pn**	**08 20 06.1**	**+0.3**
MOY					pmax	pmax			
	comp=Z,132nm,2.9s								
KSRS	**Korea Array**	**19.84**	**68**		P		**Pn**	**08 20 05.2**	**-2.2**
	comp=Z,1.9nm,0.3s,baz=255,slow=10.0,SNR=109								
KSRS					Lg			08 26 10.9	
	comp=Z,0.1nm,0.3s,baz=256,slow=21,SNR=4.0								
KSRS					LR		LR	08 27 36.4	
	comp=Z,238nm,21.7s,baz=260,slow=37								
CN2	**Changchun**	**20.08**	**49**	*e*	P		**P**	**08 20 09.2**	**+0.9**
CN2					pmax	pmax			
	comp=Z,60nm,0.7s								
CN2					pmax	pmax			
	comp=Z,200nm,3.0s								
CN2					LR	LR			
	comp=N,1µm,10.0s,MS4.6								
CN2					LR	LR			
	comp=E,1µm,10.0s,MS4.6								
CN2					LR	LR			
	comp=Z,900nm,10.0s,MS4.4								
IRK	**Irkutsk**	**20.12**	**359**	*e*	P		**P**	**08 20 09.0**	**+0.3**
HIA	**Hailar**	**20.55**	**29**	*e*	P		**P**	**08 20 14.6**	**+1.2**
	comp=Z,37nm,0.6s								
HIA	**Hailar**	**20.55**	**29**	*e*	P		**P**	**08 20 14.6**	**+1.2**
HIA					pmax	pmax			
	comp=Z,37nm,0.6s								
BWNR	**Bhubaneshwar**	**20.55**	**240**	*ex*			**P**	**08 20 09.0**	**-4.6**
CIT	**Chita**	**20.94**	**16**	*e*	P		**P**	**08 20 19.3**	**+1.7**
CIT					pmax	pmax			
	comp=Z,188nm,2.4s								
PTH	**Pithoragarh**	**21.11**	**269**	*e*	PKP		**P**	**08 20 19.3**	**-0.4**
PTH				*ex*			x	08 23 13.2	
JOSI	**Joshimath**	**21.47**	**273**	*e*	PKP		**P**	**08 20 23.9**	**+0.5**
KLP	**Kalpa**	**22.41**	**276**	*e*	PKP		**P**	**08 20 34.3**	**+0.7**
KLP					AMb		AMB	08 20 37.8	
	comp=Z,52nm,0.9s,mb5.0								
KLP				*ex*			x	08 24 28.5	
MK31	**Makanchi Array**	**22.54**	**317**	*e*	P		**P**	**08 20 35.5**	**+0.7**
MKAR	**Makanchi Array**	**22.54**	**317**		P		**P**	**08 20 35.4**	**+0.7**
	comp=Z,22nm,0.8s,mb4.7,baz=112,slow=12,SNR=125								
MKAR					PcP		PcP	08 24 28.9	+0.6
	comp=Z,8.6nm,1.0s,baz=140,slow=3.2,SNR=4.4								
MKAR					LR		LR	08 30 16.7	
	comp=Z,2µm,18.5s,MS4.6,baz=164,slow=39								
MKAR	**Makanchi Array**	**22.54**	**317**		P		**P**	**08 20 35.4**	**+0.7**
MKAR								08 24 28.9	
MKAR					pmax	pmax			
	comp=Z,22nm,0.8s								
MKAR					MLR	MLR			
	comp=Z,2µm,18.5s								
MDJ	**Mudanjiang**	**23.11**	**50**		P		**P**	**08 20 40.0**	**-0.9**
MDJ					pP			08 20 42.9	
MDJ					S		**S**	**08 24 51.3**	**-0.8**
MDJ					sS		sS	08 24 56.2	-0.3
MDJ					ScP		ScP	08 28 07.1	-0.6
MDJ					PcS		PcS	08 28 08.5	0.0
MDJ					pmax	pmax			
	comp=Z,33nm,1.9s,mb4.4								
MDJ					pmax	pmax			
	comp=Z,230nm,5.2s								
MDJ					LR	LR			
	comp=N,860nm,13.5s,MS4.4								
MDJ					LR	LR			
	comp=E,540nm,15.9s,MS4.4								
MDJ					LR	LR			
	comp=Z,890nm,13.8s,MS4.4								
MDJ	**Mudanjiang**	**23.11**	**50**	*e*	P		**P**	**08 20 40.9**	**0.0**
	comp=Z,44nm,1.1s,mb4.8								
SDNR	**Sundarnagar**	**23.50**	**276**	*e*	PKP		**P**	**08 20 44.5**	**-0.6**
ORY	**Orie**	**23.86**	**346**	⇓*i*	P		**P**	**08 20 49.2**	**+1.0**
ORY				*e*				08 21 22.0	
ORY				*e*				08 24 31.1	
NDI	**New Delhi**	**23.87**	**269**	*e*	PKP		**P**	**08 20 47.0**	**-1.5**
NDI					ePKP			08 20 50.3	
NDI					AMb		AMB	08 20 56.1	
	comp=Z,78nm,1.1s,mb5.1								
VIS	**Vishakhapatnam**	**23.99**	**238**	*ex*			x	08 20 47.0	
VIS					AMb		AMB	08 20 49.1	
	comp=Z,40nm,0.7s,mb4.9								
AYAN	**Aya Nagar**	**24.00**	**269**	*e*	PKP		**P**	**08 20 50.0**	**+0.3**
AYAN					AMb		AMB	08 20 51.3	
	comp=Z,54nm,0.6s,mb5.1								
KSH	**Kashi**	**24.32**	**296**	⇑*i*	P		**P**	**08 20 56.7**	**+4.1**
KSH				*e*	pP			08 21 00.5	
KSH				*e*	sP		sP	08 21 03.9	+7.6
KSH				*e*	PP			08 21 32.9	
KSH				*e*	PcP		PcP	08 24 34.9	+2.7
KSH					S		**S**	**08 25 15.4**	**+3.6**
KSH					sS		sS	08 25 22.0	+5.8
KSH				*e*	SS			08 26 11.8	
KSH				*e*	ScP		ScP	08 28 11.3	+0.3
KSH				*e*	PcS		PcS	08 28 12.9	+0.9
KSH				*e*	ScS		ScS	08 31 57.5	-0.9
KSH					pmax	pmax			
	comp=Z,13nm,0.3s,mb4.8								
KSH					pmax	pmax			
	comp=Z,200nm,2.9s,mb5.0								
KSH					LR	LR			
	comp=N,970nm,10.7s,MS4.7								
KSH					LR	LR			
	comp=E,1µm,13.8s,MS4.7								
KSH					LR	LR			
	comp=Z,1µm,10.8s,M

TKM2 pmax pmax
comp=Z,25nm,0.8s,mb4.8
KZA Kyzart 25.35 301 P **P** **08 21 00.0 -2.0**
SNR=7.6
BHPL Bhopal 25.61 257 *e*PKP **P** **08 21 03.7 -0.7**
BHPL AMb AMB 08 21 09.9
comp=Z,90nm,1.5s,mb5.1
KBK Karagaybulak 25.71 303 P **P** **08 21 07.4 +2.3**
SNR=16
UCH Uchtor 25.92 302 P **P** **08 21 09.5 +2.4**
SNR=58
UCH Uchtor 25.92 302 *e*P **P** **08 21 09.4 +2.3**
comp=Z,40nm,1.0s,mb4.9
ZAA0 Zalesovo Array 26.02 333 *e*P **P** **08 21 08.1 +0.2**
ZALV Zalesovo Beam 26.02 333 P **P** **08 21 08.2 +0.3**
ZALV PcP PcP 08 24 33.1 -2.6
ZALV LR LR 08 31 59.7
ZALV *e* 08 53 58.3
ZALV Zalesovo Beam 26.02 333 P **P** **08 21 08.2 +0.3**
comp=Z,100nm,0.7s,mb5.4,baz=131,slow=9.8,SNR=268
ZALV PcP PcP 08 24 33.1 -2.6
comp=Z,3.9nm,0.7s,baz=132,slow=2.1,SNR=3.5
ZALV LR LR 08 31 59.7
comp=Z,320nm,18.7s,MS3.9,baz=277,slow=38
ZALV P3KPbc 08 53 58.3
comp=Z,0.4nm,0.3s,baz=309,slow=5.0,SNR=3.5
AAK Ala-Archa 26.03 302 *e*P **P** **08 21 09.6 +1.5**
comp=Z,18nm,0.8s,mb4.7
AAK Ala-Archa 26.03 302 P **P** **08 21 09.6 +1.5**
comp=Z,8.8nm,0.6s,mb4.4,baz=88,slow=3.3,SNR=14
AAK LR LR 08 33 30.5
comp=Z,1μm,18.7s,MS4.5,baz=206,slow=41
AAK Ala-Archa 26.03 302 P **P** **08 21 09.6 +1.5**
AAK pmax pmax
comp=Z,9.0nm,0.6s,mb4.5
AAK MLR MLR
comp=Z,1μm,18.7s,MS4.5
USP Ospenovka 26.18 304 P **P** **08 21 10.5 +1.1**
SNR=34
AML Almayashu 26.50 301 P **P** **08 21 14.3 +2.0**
SNR=6.4
AML Almayashu 26.50 301 *e*P **P** **08 21 14.1 +1.8**
comp=Z,20nm,0.8s,mb4.7
KLR Kul'dur 26.54 42 *e*P **P** **08 21 08.8 -3.8**
KLR *e*S **S** **08 25 42.0 -4.9**
KLR MLR MLR
comp=N,2μm,12.0s,MS4.9
KLR MLR MLR
comp=E,2μm,12.0s,MS4.9
KLR MLR MLR
comp=Z,5μm,12.0s,MS5.2
EKS2 Erkin-Say 26.55 302 P **P** **08 21 14.2 +1.4**
SNR=8.5
EKS2 Erkin-Say 26.55 302 *e*P **P** **08 21 12.7 -0.1**
comp=Z,15nm,1.1s,mb4.4
AJM Ajmer 26.70 266 *e*PKP **P** **08 21 14.5 +0.2**
KURK Kurchatov 26.73 322 P **P** **08 21 14.3 0.0**
comp=Z,222nm,0.9s,mb5.7,SNR=36
KURK Kurchatov 26.73 322 *e*P **P** **08 21 14.4 +0.2**
comp=Z,29nm,0.8s,mb4.9
KURK Kurchatov 26.73 322*c i*P **P** **08 21 14.5 +0.2**
KURK pmax pmax
comp=Z,47nm,1.2s,mb4.9
KURK MLR MLR
comp=Z,1μm,15.0s,MS4.5
AKL Akola 27.14 252 *ex* **P** **08 21 15.1 -3.2**
AKL AMb AMB 08 21 22.9
comp=Z,42nm,0.0s
HYB Hyderabad 27.74 244 *i*P **P** **08 21 26.0 +2.3**
MAJO Matsushiro 27.99 72 *e*P **P** **08 21 24.0 -1.8**
comp=Z,16nm,0.6s,mb4.8
MAJO Matsushiro 27.99 72 *e*P **P** **08 21 24.0 -1.8**
MAJO pmax pmax
comp=Z,16nm,0.6s,mb4.8
MAT Matsushiro 27.99 72 P **P** **08 21 23.8 -2.0**
MJAR Matsushiro Arr 27.99 72 P **P** **08 21 24.6 -1.3**
comp=Z,11nm,0.7s,mb4.6,baz=276,slow=10,SNR=17
MJAR PcP PcP 08 24 40.4 -0.4
comp=Z,2.4nm,0.8s,baz=318,slow=1.7,SNR=5.1
MJAR LR LR 08 33 34.3
comp=Z,197nm,18.4s,MS3.7,baz=280,slow=39
MJAR Matsushiro Arr 27.99 72 P **P** **08 21 24.6 -1.2**
MJAR 08 24 40.4
MJAR pmax pmax
comp=Z,11nm,0.7s
MJAR MLR MLR
comp=Z,197nm,18.4s
KKM Kota Kinabalu 28.10 155 *e*P **P** **08 21 26.8 -0.1**
comp=Z,46nm,1.0s,mb5.1
HABR Khabarovsk 28.13 46 *e*P **P** **08 21 25.5 -1.4**
HABR *e* 08 22 12.2
HABR *e* 08 24 37.9
HABR *e*S **S** **08 26 11.8 -0.3**
HABR *e*SS 08 27 28.4
HABR *e* 08 32 11.5
HABR pmax pmax
comp=Z,66nm,2.2s,mb4.9
HABR pmax pmax
comp=N,16nm,1.8s
HABR pmax pmax
comp=E,52nm,2.2s
HABR MLR MLR
comp=Z,410nm,12.0s,MS4.2
CLNS Chul'man 28.42 24 *e*P **P** **08 21 30.1 +0.7**
CLNS *e**PP pP 08 21 42.3 +10
CLNS *e* 08 22 21.8
CLNS *e* 08 24 38.1
CLNS *e*S **S** **08 26 11.8 -4.6**
CLNS *e*SS 08 27 57.2
CLNS pmax pmax
comp=Z,13nm,0.8s,mb4.6
CLNS pmax pmax
comp=E,7.0nm,0.9s
CLNS pmax pmax
comp=N,8.0nm,1.0s
CLNS pmax pmax
comp=N,8.0nm,0.9s
CLNS pmax pmax
comp=E,9.0nm,0.9s
CLNS pmax pmax
comp=Z,8.0nm,0.9s,mb4.3
CLNS smax
comp=N,75nm,12.8s
CLNS smax
comp=E,138nm,15.2s
CLNS MLR MLR
comp=N,1μm,12.0s,MS4.8
CLNS MLR MLR
comp=E,1μm,12.0s,MS4.8
CLNS MLR MLR
comp=Z,2μm,12.0s,MS4.8
KK31 Karatay Array 28.99 302 *i*P **P** **08 21 34.8 +0.2**
KK31 pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
JHJ Hachijo jima 2 29.54 78 LR LR 08 34 16.7
comp=Z,294nm,19.7s,MS3.9,baz=247,slow=38
PSI Prapat 29.64 192 P **P** **08 21 41.0 +0.4**
comp=Z,30nm,0.7s,mb5.2,baz=345,slow=9.1,SNR=11
PSI PcP PcP 08 24 45.0 -0.1
comp=Z,13nm,0.8s,baz=236,slow=6.0,SNR=3.7
PSI LR LR 08 34 46.9
comp=Z,636nm,21.8s,MS4.2,baz=351,slow=39
PSI Prapat 29.64 192 P **P** **08 21 41.0 +0.4**
PSI 08 24 45.1
PSI pmax pmax
comp=Z,30nm,0.7s,mb5.1
PSI MLR MLR
comp=Z,636nm,21.8s,MS4.2
JASL Jaisalmer 29.73 269 *e*PKP **P** **08 21 41.3 -0.1**
KBL Kabul 29.75 284 *e*P **P** **08 21 43.0 +1.6**
comp=Z,41nm,0.9s,mb5.2
KBL Kabul 29.75 284 *e*P **P** **08 21 43.0 +1.6**
KBL pmax pmax
comp=Z,41nm,0.9s,mb5.2
KSM Kuching 30.94 169 *e*P **P** **08 21 52.0 -0.1**
comp=Z,17nm,0.9s,mb4.9
BVA0 Borovoye Array 32.29 320 *i*P **P** **08 22 04.0 +0.3**
BVAR Borovoye Array 32.29 320 P **P** **08 22 04.2 +0.6**
comp=Z,7.7nm,0.8s,mb4.6,baz=113,slow=10,SNR=35
BVAR PcP PcP 08 24 50.8 -0.7
comp=Z,8.4nm,0.8s,baz=130,slow=4.6,SNR=10
BVAR Borovoye Array 32.29 320 P **P** **08 22 04.2 +0.6**
BVAR 08 24 50.8
BVAR pmax pmax
comp=Z,8.0nm,0.8s
BRVK Borovoye 32.37 320 P **P** **08 22 05.8 +1.5**
comp=Z,97nm,1.0s,mb5.6,SNR=6.0
BRVK Borovoye 32.37 320*e i*P **P** **08 22 04.8 +0.6**
comp=Z,11nm,0.8s,mb4.7
BRVK Borovoye 32.37 320*c i*P **P** **08 22 04.9 +0.6**
BRVK pmax pmax
comp=Z,11nm,0.7s,mb4.8
BRVK MLR MLR
comp=Z,898nm,16.0s,MS4.6
YAK Yakutsk 34.01 21 *e*P **P** **08 22 18.4 -0.1**
comp=Z,92nm,0.8s,mb5.8
YAK Yakutsk 34.01 21 *e*P **P** **08 22 18.2 -0.3**
YAK *e* 08 23 29.6
YAK *e*PPP 08 23 44.4
YAK *e* 08 24 55.6
YAK *e*S **S** **08 27 43.2 -0.4**
YAK *e* 08 32 42.8
YAK pmax pmax
comp=Z,64nm,0.8s,mb5.6
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK pmax pmax
comp=E,10.0nm,1.3s
YAK pmax pmax
comp=Z,7.0nm,0.3s,mb5.1
YAK pmax pmax
comp=N,6.0nm,0.4s
YAK pmax pmax
comp=E,11nm,0.6s
YAK smax
comp=N,4.0nm,0.3s
YAK smax
comp=E,3.0nm,0.4s
YAK MLR MLR
comp=Z,705nm,10.0s,MS4.7
YAK MLR MLR
comp=E,525nm,10.0s
YAK MLR MLR
comp=N,278nm,8.0s
YUK Yuzh-Kuril'sk 34.23 58 *e*P **P** **08 22 21.3 +0.6**
YUK MLR MLR
comp=N,370nm,20.0s,MS4.3
YUK MLR MLR
comp=E,420nm,20.0s,MS4.3
YUK MLR MLR
comp=Z,330nm,20.0s,MS4.1
AB31 Akbulak array 37.35 311 *i*P **P** **08 22 47.9 +0.5**
AB31 pmax pmax
comp=Z,13nm,0.5s,mb5.0
ABKAR Akbulak array 37.35 311 *e*P **P** **08 22 48.1 +0.7**
comp=Z,38nm,0.8s,mb5.3
ABKT Ailbek 38.22 292 P **P** **08 22 56.6 +1.7**
comp=Z,379nm,0.8s,mb6.2,SNR=20
AKTK Aktyubinsk 38.79 312 P **P** **08 23 00.2 +0.7**
AKTK LR LR 08 41 22.7
AKTO Aktyubinsk 38.79 312 P **P** **08 23 00.2 +0.7**
comp=Z,18nm,0.7s,mb4.9,baz=96,slow=8.6,SNR=67
AKTO LR LR 08 41 22.7
comp=Z,11nm,20.9s,baz=322,slow=40
SVE Sverdlovsk 38.97 323⇓ *e*P **P** **08 23 01.7 +0.8**
SVE pmax pmax
comp=Z,66nm,0.9s,mb5.4
SVE MLR MLR
comp=Z,886nm,19.0s,MS4.6
ARU Arti 39.92 321 *e*P **P** **08 23 09.4 +0.6**
comp=Z,73nm,0.8s,mb5.5
ARU Arti 39.92 321 *e*P **P** **08 23 09.4 +0.5**
ARU pmax pmax
comp=Z,73nm,0.8s,mb5.5
ARU Arti 39.92 321 P **P** **08 23 09.5 +0.6**
comp=Z,571nm,0.8s,mb6.3,SNR=8.1
TIXI Tiksi 41.68 11 *e*P **P** **08 23 22.3 -0.9**
comp=Z,30nm,0.6s,mb5.1
TIXI Tiksi 41.68 11 *e*P **P** **08 23 22.3 -0.9**
TIXI pmax pmax
comp=Z,34nm,0.7s,mb5.1
TIXI MLR MLR
comp=Z,2μm,15.0s,MS5.0
SOKR Solikamsk 41.82 326*c i*P **P** **08 23 25.1 +0.7**
SOKR pmax pmax
comp=Z,100nm,0.9s,mb5.5
SOKR MLR MLR
comp=Z,310nm,23.0s,MS4.1
SEY Seymchan 42.99 30⇑ *e*P **P** **08 23 33.8 -0.2**
GNI Garni 48.24 297 *e*P **P** **08 24 19.3 +3.5**
comp=Z,13nm,0.9s,mb5.0
GNI Garni 48.24 297 *e*P **P** **08 24 19.3 +3.5**
GNI pmax pmax
comp=Z,13nm,0.9s
ZEI Tsey 48.44 301 *e*P **P** **08 24 17.4 +0.1**
ZEI pmax pmax
comp=Z,30nm,1.0s,mb5.3
KBD Kabd 48.59 282 *e*P **P** **08 24 18.3 -0.4**
KBD AMb AMB 08 24 19.8
comp=Z,29nm,1.0s,mb5.3
MIB Mutribah 48.69 283 *e*P **P** **08 24 19.2 -0.3**
MIB AMb AMB 08 24 21.0
comp=Z,78nm,0.9s,mb5.8
RDF Al-Radifah 48.79 282 *e*P **P** **08 24 19.9 -0.3**
RDF AMb AMB 08 24 21.7
comp=Z,82nm,0.9s,mb5.8
KIV Kislovodsk 49.15 303 *e*P **P** **08 24 23.7 +0.9**
comp=Z,66nm,1.0s,mb5.6
KIV Kislovodsk 49.15 303 *e*P **P** **08 24 23.2 +0.5**
KIV pmax pmax
comp=Z,63nm,1.0s,mb5.6
KIV MLR MLR
comp=Z,551nm,17.0s,MS4.6
VRHR Novokhopersk 49.20 312 *e*P **P** **08 24 21.2 -1.8**
KLMR Klimovskoe 50.50 325*c i*P **P** **08 24 32.6 -0.2**
KLMR *e*S **S** **08 31 51.4 +4.9**
KLMR pmax pmax
comp=Z,106nm,1.3s,mb5.6
KLMR pmax pmax
comp=Z,13nm,3.8s
VSR Storozhevoye 50.74 312 *e*P **P** **08 24 34.3 -0.4**
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,50nm,0.9s
VSR pmax pmax
comp=Z,50nm,0.9s,mb5.4
VSR MLR MLR
comp=N,320nm,13.0s,MS4.6
VSR MLR MLR
comp=E,260nm,13.0s,MS4.6
VSR MLR MLR
comp=Z,460nm,13.0s,MS4.7
MOS Moscow 51.41 318 *e*P **P** **08 24 39.2 -0.5**
MOS *e* 08 26 39.1
MOS *e*PPP 08 27 42.6
MOS *e*S **S** **08 32 05.2 +5.9**
MOS pmax pmax
comp=Z,100nm,0.9s,mb5.8
MOS pmax pmax
comp=Z,108nm,0.9s,mb5.8
KAKA Kakadu 51.91 145 *e*P **P** **08 24 42.3 -1.6**
comp=Z,18nm,0.8s,mb5.0
KAKA Kakadu 51.91 145 *e*P **P** **08 24 40.4 -3.5**
OBN Obninsk 52.04 317⇑ *e*P **P** **08 24 44.3 -0.1**
OBN *e* 08 26 42.6
OBN *e*S **S** **08 32 10.2 +2.2**
OBN *e*SS SS 08 35 37.5 -7.2
OBN pmax pmax
comp=Z,50nm,1.2s,mb5.3
OBN MLR MLR
comp=Z,700nm,22.0s,MS4.7
SMY Shemya 53.06 45 *e*P **P** **08 24 52.1 +0.1**
comp=Z,47nm,0.8s,mb5.5
SMY Shemya 53.06 45 *e*P **P** **08 24 52.1 +0.1**
SMY pmax pmax
comp=Z,47nm,0.8s,mb5.5
MALT Malatya 53.42 296 *e*P **P** **08 24 56.0 +1.1**
comp=Z,8.8nm,0.8s,mb4.7
MALT Malatya 53.42 296⇑ *i*P **P** **08 24 56.1 +1.2**
APA Apatity 53.61 333⇑ *i*P **P** **08 24 55.5 -0.3**
APA pmax pmax
comp=Z,16nm,1.0s,mb4.9
APA MLR MLR
comp=Z,1μm,14.0s,MS5.0
FITZ Fitzroy Crossi 53.83 155⇑ *i*P **P** **08 24 57.3 -0.7**
comp=Z,41nm,0.9s,mb5.4
FITZ Fitzroy Crossi 53.83 155 *e*P **P** **08 24 57.4 -0.6**
comp=Z,24nm,0.9s,mb5.1
JOF Joensuu 54.42 327 *e*P **P** **08 24 59.8 -2.0**
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
JOF Joensuu 54.42 327 *ep* **P** **08 24 59.8 -2.0**
comp=Z,2.6nm,0.5s,mb4.4
MBWA Marble Bar 54.90 163 *e*P **P** **08 25 05.0 -0.7**
comp=Z,28nm,0.9s,mb5.3
SIM Simferopol' 55.01 305 *e*P **P** **08 25 06.3 -0.1**
SIM *e* 08 25 12.0
SIM pmax pmax
comp=Z,53nm,0.8s,mb5.6
SIM MLR MLR
comp=Z,317nm,20.6s,MS4.4
KEV Kevo 56.00 336 *e*P **P** **08 25 12.8 -0.3**
comp=Z,23nm,0.6s,mb5.4
KEV Kevo 56.00 336 *e*P **P** **08 25 11.7 -1.4**
KEV pmax pmax
comp=Z,6.0nm,0.4s,mb5.0
KEV Kevo 56.00 336 *ep* **P** **08 25 11.7 -1.4**
comp=Z,6.1nm,0.4s,mb5.0
ARCES ARCESS Array B 56.53 336 P **P** **08 25 16.6 -0.3**
comp=Z,24nm,0.9s,mb5.2,baz=83,slow=8.1,SNR=51
ARCES ARCESS Array B 56.53 336 P **P** **08 25 16.7 -0.2**
ARCES pmax pmax
comp=Z,24nm,0.9s
ARE0 ARCESS Array S 56.53 336 *e*P **P** **08 25 16.8 -0.1**
BR131 Keskin Array S 56.64 299 *e*P **P** **08 25 18.0 -0.1**
comp=Z,5.8nm,0.7s,mb4.7
BRTR Keskin Array B 56.64 299 P **P** **08 25 18.1 -0.1**
comp=Z,7.0nm,0.7s,mb4.8,baz=101,slow=6.7,SNR=34
BRTR Keskin Array B 56.64 299*c e*P **P** **08 25 18.1 -0.1**
BRTR pmax pmax
comp=Z,7.0nm,0.7s
KAF Kangasniemi 56.80 327 *e*P **P** **08 25 17.5 -1.4**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
KAF Kangasniemi 56.80 327 *ep* **P** **08 25 17.5 -1.4**
comp=Z,2.7nm,0.4s,mb4.6
FINES FINESS Array B 56.99 326 P **P** **08 25 19.9 -0.3**
FINES FINESS Array B 56.99 326 P **P** **08 25 19.9 -0.3**
comp=Z,29nm,0.7s,mb5.4,baz=87,slow=8.4,SNR=66
FINES FINESS Array B 56.99 326 P **P** **08 25 19.9 -0.4**
FINES pmax pmax
comp=Z,29nm,0.7s
AKASG Malin Array Be 57.03 313 P **P** **08 25 20.2 -0.5**
comp=Z,23nm,0.7s,mb5.3,baz=70,slow=6.5,SNR=45
AKASG Malin Array Be 57.03 313 P **P** **08 25 20.2 -0.5**
AKASG pmax pmax
comp=Z,23nm,0.7s
AKBB Malin Array Si 57.03 313 *e*P **P** **08 25 20.1 -0.6**
MMAI Mount Meron Ar 57.34 291 P **P** **08 25 23.6 +0.3**
comp=Z,13nm,0.8s,mb5.0,baz=66,slow=8.4,SNR=9.4
NACGM Naroch 57.66 318 *e* **P** **08 25 22.0 -3.1**
PMG Port Moresby 57.91 128⇑ *e*P **P** **08 25 26.2 -1.2**
PMG pmax pmax
comp=Z,25nm,0.8s
TLCR 58.60 307 ⇓ P **P** **08 25 31.9 0.0**
TLCR 58.60 307 ⇓ *i*P **P** **08 25 31.9 0.0**
COEN Coen 58.83 135 *e*P **P** **08 25 33.2 -0.5**
comp=Z,243nm,0.8s,mb6.3
WRAB Tennant Creek 59.06 147 P **P** **08 25 34.6 -0.6**
comp=Z,444nm,0.7s,SNR=32
WRAB Tennant Creek 59.06 147 *e*P **P** **08 25 34.7 -0.5**
comp=Z,45nm,0.7s,mb5.6
WRAB Tennant Creek 59.06 147 *e*P **P** **08 25 34.7 -0.5**
WRAB pmax pmax
comp=Z,45nm,0.7s,mb5.6
TIRR Tirgusor 59.07 306 *e*P **P** **08 25 34.9 -0.2**
comp=Z,22nm,0.9s,mb5.2
TIRR Tirgusor 59.07 306 ⇓ P **P** **08 25 35.0 -0.2**
TIRR Tirgusor 59.07 306 ⇓ *i*P **P** **08 25 35.0 -0.2**
TESR 59.70 309 ⇓ P **P** **08 25 39.6 +0.1**
TESR 59.70 309 ⇓ *i*P **P** **08 25 39.6 +0.2**
VRI Vrincioaia 59.82 308 ⇓ P **P** **08 25 41.2 +0.9**
VRI Vrincioaia 59.82 308 ⇓ *i*P **P** **08 25 41.2 +0.9**
PLOR Plostina 59.88 308⇑ P **P** **08 25 41.4 +0.7**
PLOR Plostina 59.88 308⇑ *i*P **P** **08 25 41.4 +0.7**
SUW Suwalki 59.90 318 *e*P **P** **08 25 40.7 0.0**
SUW Suwalki 59.90 318 *e*P **P** **08 25 40.5 -0.2**
SUW *e*PcP PcP 08 26 26.7 -0.3
BURAR Bucovina Array 60.33 310 ⇓ P **P** **08 25 44.2 +0.4**
BURAR Bucovina Array 60.33 310 ⇓ *i*P **P** **08 25 44.2 +0.4**
BUR08 Bucovina Ar. S 60.34 310 *e*P **P** **08 25 43.9 +0.1**
MLR Muntele Rosu 60.46 308⇑ P **P** **08 25 45.2 +0.5**
MLR Muntele Rosu 60.46 308⇑ *i*P **P** **08 25 45.2 +0.5**
LVV L'vov 60.48 313 *e*P **P** **08 25 44.4 -0.3**
LVV MLR MLR
comp=Z,300nm,16.0s,MS4.5
LVV MLR MLR
comp=E,300nm,17.0s
DOPR Dopca 60.69 308⇑ *i*P **P** **08 25 47.3 +1.0**
VOIR 61.08 308 ⇓ P **P** **08 25 49.0 +0.1**
VOIR 61.08 308 ⇓ *i*P **P** **08 25 49.0 +0.1**
KWP Kalwaria Pacla 61.35 313 *e*P **P** **08 25 51.2 +0.5**
KWP Kalwaria Pacla 61.35 313 *e*P **P** **08 25 51.1 +0.4**
comp=E,120nm,0.9s,mb6.0
KWP Kalwaria Pacla 61.35 313⇑ *i*P **P** **08 25 51.2 +0.5**
KOLS Kolonicke sedl 61.83 312 *e*P **P** **08 25 54.0 +0.1**
comp=E,10nm,0.9s,mb5.0
KOLS Kolonicke sedl 61.83 312 *e*P **P** **08 25 54.0 +0.1**
KOLS pmax pmax
comp=Z,11nm,0.9s,mb5.0
KOLS Kolonicke sedl 61.83 312 *e*P **P** **08 25 54.0 +0.1**
TRPA Tarpa 61.91 311⇑ *i*P **P** **08 25 54.7 +0.2**
UZH Uzhgorod 61.91 312⇑ *i*P **P** **08 25 54.4 -0.1**
ASAR Alice Springs 62.12 150 P **P** **08 25 55.9 -0.2**
comp=Z,12nm,0.8s,mb5.1,baz=338,slow=7.3,SNR=92
ASAR Alice Springs 62.12 150 P **P** **08 25 55.9 -0.2**
ASAR pmax pmax
comp=Z,12nm,0.8s
DRGR 62.21 310⇑ P **P** **08 25 57.3 +0.8**
DRGR 62.21 310⇑ *i*P **P** **08 25 57.3 +0.8**
STHS Stebnicka Huta 62.33 313 *e*P **P** **08 25 57.6 +0.3**
STHS Stebnicka Huta 62.33 313 *e*P **P** **08 25 57.6 +0.3**
CRVS Cervenica-Dubn 62.35 312 *e*P **P** **08 25 57.1 -0.3**
comp=Z,4.2nm,0.9s,mb4.6
CRVS Cervenica-Dubn 62.35 312 *e*P **P** **08 25 57.1 -0.3**
CRVS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
CRVS Cervenica-Dubn 62.35 312 *e*P **P** **08 25 57.1 -0.3**
GZR Gura Zlata 62.61 308 ⇓ P **P** **08 25 59.9 +0.6**
GZR Gura Zlata 62.61 308 ⇓ *i*P **P** **08 25 59.9 +0.7**
NIE Niedzica 62.91 313 *e*P **P** **08 26 02.3 +1.2**
OJC Ojcow 62.97 314 *e*P **P** **08 26 01.6 +0.1**
KECS Kecovo 63.10 312 *e*P **P** **08 26 02.8 +0.4**
comp=Z,6.2nm,0.8s,mb4.8
KECS Kecovo 63.10 312 *eP* **P** **08 26 02.8 +0.4**
KECS pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
KECS Kecovo 63.10 312 *e*P **P** **08 26 02.8 +0.4**
VTS Vitosha 63.25 305⇑ P **P** **08 26 03.8 +0.3**
VTS Vitosha 63.25 305⇑ *i*P **P** **08 26 03.8 +0.3**
BZS Buzias 63.31 309⇑ P **P** **08 26 03.7 -0.1**
BZS Buzias 63.31 309⇑ *i*P **P** **08 26 03.7 -0.2**
PSZ Piszkesteto 63.66 312*e*P **P** **08 26 06.6 +0.5**
NOA NORSAR Array B 64.06 327 P **P** **08 26 07.4 -1.2**
comp=Z,14nm,0.8s,mb5.1,baz=70,slow=6.6,SNR=38
NOA PP PP 08 28 29.2 +0.2
comp=Z,2.2nm,0.8s,baz=67,slow=8.3,SNR=3.9
NOA LR LR 08 55 26.4
comp=Z,79nm,19.8s,MS3.9,baz=65,slow=37
NOA NORSAR Array B 64.06 327 P **P** **08 26 07.4 -1.1**
NOA 08 28 29.2
NOA pmax pmax
comp=Z,14nm,0.8s
NOA MLR MLR
comp=Z,79nm,19.8s
OKC Ostrava-Krasne 64.10 314 *e*P **P** **08 26 09.6 +0.6**
OKC MLR MLR
comp=Z,700nm,17.5s,MS4.9
OKC Ostrava-Krasne 64.10 314 *e*P **P** **08 26 09.6 +0.6**
OKC AMS AMS 08 55 10.0
comp=Z,700nm,17.5s
VYHS Vyhne 64.13 312 *e*P **P** **08 26 09.8 +0.6**
comp=Z,12nm,1.0s,mb4.9
VYHS Vyhne 64.13 312 *e*P **P** **08 26 09.8 +0.6**
VYHS pmax pmax
comp=Z,12nm,1.0s,mb4.9
VYHS Vyhne 64.13 312 *e*P **P** **08 26 09.8 +0.6**
NAO01 NORSAR Array S 64.28 327 *e*P **P** **08 26 08.8 -1.1**
comp=Z,4.9nm,0.5s,mb4.8
MORC Moravsky Berou 64.49 314 *e*P **P** **08 26 11.8 +0.2**
comp=Z,21nm,0.9s,mb5.2
MORC Moravsky Berou 64.49 314 ⇓ *i*P **P** **08 26 11.8 +0.2**
KLBR Kellerberrin 64.56 168 *e*P **P** **08 26 12.0 -0.1**
comp=Z,15nm,0.5s,mb5.3
KSP Ksiaz 64.87 316 *e*P **P** **08 26 14.1 +0.1**

KSP MLR MLR
comp=Z,2µm,20.2s,MS5.2
DPC Dobruska-Polom 65.03 315 *eP* **P 08 26 15.8 +0.7**
DPC MLR MLR
comp=Z,800nm,19.3s,MS4.9
DPC Dobruska-Polom 65.03 315 *eP* **P 08 26 15.8 +0.7**
DPC AMS AMS 08 55 50.0
comp=Z,800nm,19.3s
PKSM Moragy 65.05 310 ⇑*iP* **P 08 26 15.2 -0.1**
PKSM Moragy 65.05 310 ⇑*iP* **P 08 26 15.2 -0.1**
UPC Upice 65.16 315 *eP* **P 08 26 16.7 +0.8**
UPC Upice 65.16 315 *eP* **P 08 26 16.7 +0.8**
VRAC Vranov 65.23 314 ⇑*iP* **P 08 26 16.9 +0.4**
VRAC Vranov 65.23 314 ⇑*iP* **P 08 26 16.9 +0.5**
IVA Berane 65.43 306 ⇑*iP* **P 08 26 18.2 +0.4**
IVA Berane 65.43 306 ⇑*iP* **P 08 26 18.2 +0.4**
CTA Charters Tower 65.44 137 ⇑*iP* **P 08 26 17.5 -0.5**
comp=Z,9.7nm,0.6s,mb5.0
CTAO Charters Tower 65.44 137 *eP* **P 08 26 17.5 -0.5**
comp=Z,14nm,0.8s,mb5.0
CTAO Charters Tower 65.44 137 *eP* **P 08 26 17.5 -0.5**
CTAO pmax pmax
comp=Z,14nm,0.8s,mb5.0
PVY Plav 65.48 306 ⇑*iP* **P 08 26 17.9 -0.2**
PVY Plav 65.48 306 ⇑*iP* **P 08 26 18.0 -0.2**
PLE Pljevlja 65.60 307 ⇑*iP* **P 08 26 19.5 +0.6**
PLE Pljevlja 65.60 307 ⇑*iP* **P 08 26 19.6 +0.7**
RUE Ruedersdorf 65.75 318 *eP* **P 08 26 19.9 +0.2**
comp=Z,36nm,0.9s,mb5.4
TREC Trest 65.91 314 *eP* **P 08 26 21.7 +0.9**
TREC MLR MLR
comp=Z,700nm,17.4s,MS4.9
TREC Trest 65.91 314 *eP* **P 08 26 21.7 +0.9**
TREC AMS AMS 08 56 20.0
comp=Z,700nm,17.4s
TTA Tatalina 65.97 30 *eP* **P 08 26 20.6 -0.3**
comp=Z,20nm,0.8s,mb5.2
TTA Tatalina 65.97 30 *eP* **P 08 26 20.6 -0.3**
TTA pmax pmax
comp=Z,20nm,0.8s,mb5.2
UPM Unac-Piva 65.98 307 ⇑*iP* **P 08 26 20.4 -0.9**
UPM Unac-Piva 65.98 307 ⇑*iP* **P 08 26 20.5 -0.9**
PVCC Panska Ves 66.01 316 *eP* **P 08 26 21.9 +0.5**
PVCC MLR MLR
comp=Z,600nm,18.4s,MS4.8
PVCC Panska Ves 66.01 316 *eP* **P 08 26 21.9 +0.5**
PVCC AMS AMS 08 56 20.0
comp=Z,600nm,18.4s
TTG Podgorica 66.03 306 ⇑*iP* **P 08 26 20.7 -1.0**
NKY Niksic 66.06 307 ⇑*iP* **P 08 26 20.4 -1.5**
NKY Niksic 66.06 307 ⇑*iP* **P 08 26 20.5 -1.4**
CONA Conrad Observa 66.19 313 ⇓*ipP* pP 08 26 23.1 -2.4
comp=Z,15nm,0.8s,SNR=11
ULC Ulcinj 66.21 306 *eP* **P 08 26 22.0 -0.9**
ULC Ulcinj 66.21 306 *eP* **P 08 26 22.1 -0.8**
PRU Pruhonice 66.23 315 *eP* **P 08 26 23.9 +1.1**
PRU MLR MLR
comp=Z,800nm,19.1s,MS4.9
PRU Pruhonice 66.23 315 *eP* **P 08 26 23.9 +1.1**
PRU AMS AMS 08 56 30.0
comp=Z,800nm,19.1s
BRG Berggiesshubel 66.25 316 *eP* **P 08 26 23.0 +0.1**
comp=Z,20nm,0.9s,mb5.2
BRG Berggiesshubel 66.25 316 *i* P **P 08 26 22.8 -0.1**
comp=Z,20nm,0.9s,mb5.2
BRG
comp=N,172nm,16.0s
BRG
comp=E,409nm,16.1s
BRG
comp=Z,610nm,19.0s
BRG Berggiesshubel 66.25 316 *i* P **P 08 26 22.8 -0.1**
BRG pmax pmax
comp=Z,12nm,0.9s,mb4.9
BRG MLR MLR
comp=N,103nm,16.0s,MS4.5
BRG MLR MLR
comp=E,245nm,16.1s,MS4.5
BRG MLR MLR
comp=Z,365nm,19.0s,MS4.6
BUM Brajici-Budva 66.33 306 ⇑*iP* **P 08 26 23.2 -0.4**
BUM Brajici-Budva 66.33 306 ⇑*iP* **P 08 26 23.2 -0.4**
BRY Bratogost 66.34 307 ⇑*iP* **P 08 26 22.4 -1.3**
FORT Forrest 66.37 158 *eP* **P 08 26 17.6 -6.2**
comp=Z,23nm,0.8s,mb5.3
HCY Herceg Novi 66.55 306 ⇑*iP* **P 08 26 24.3 -0.7**
HCY Herceg Novi 66.55 306 ⇑*iP* **P 08 26 24.4 -0.6**
CLL Collm 66.63 317 *eP* **P 08 26 25.2 -0.2**
comp=Z,15nm,0.8s,mb5.1
CLL Collm 66.63 317 ⇑*iP* **P 08 26 25.2 -0.2**
comp=Z,16nm,0.8s,mb5.1
CLL Collm 66.63 317 ⇑*iP* **P 08 26 25.2 -0.2**
CLL pmax pmax
comp=Z,16nm,0.8s,mb5.1
CLL Collm 66.63 317 ⇑*iP* **P 08 26 25.2 -0.2**
comp=Z,16nm,0.8s,mb5.1
CLL LmV 08 57 00.0
comp=Z,200nm,20.5s
ARSA Arzberg 66.66 312 ⇑*iP* **P 08 26 25.5 -0.1**
comp=Z,11nm,0.7s,mb5.0
BSEG Bad Segeberg 67.12 320 *eP* **P 08 26 29.1 +0.7**
comp=Z,37nm,1.0s,mb5.4
KHC Kasperske Hory 67.13 315 *eP* **P 08 26 28.7 +0.1**
comp=Z,4.6nm,0.8s,mb4.6
KHC Kasperske Hory 67.13 315 *eP* **P 08 26 28.7 +0.1**
KHC pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
KHC Kasperske Hory 67.13 315 *eP* **P 08 26 29.1 +0.5**
KHC AMS AMS 08 57 00.0
comp=Z,800nm,18.6s
PERS Pernice 67.15 312 *i* P **P 08 26 28.6 -0.2**
GEC2 GERESS Array S 67.17 314 *eP* **P 08 26 29.2 +0.3**
comp=Z,17nm,1.0s,mb5.0
GEC2 GERESS Array S 67.17 314 *eP* **P 08 26 29.2 +0.3**
GEC2 pmax pmax
comp=Z,17nm,1.0s,mb5.0
SOKA Soboth 67.19 312 ⇓*iP* **P 08 26 29.0 -0.1**
comp=Z,26nm,0.9s,mb5.3
MOA Molln 67.21 313 ⇑*iP* **P 08 26 29.4 +0.3**
comp=Z,19nm,0.9s,mb5.1,SNR=8.2
TANN Tannenbergstha 67.30 316 *eP* **P 08 26 29.8 +0.2**
comp=Z,15nm,0.9s,mb5.0
WERD Werda 67.37 316 *eP* **P 08 26 30.2 +0.1**
comp=Z,14nm,0.9s,mb5.0
NKC Novy Kostel 67.38 316 *eP* **P 08 26 30.8 +0.7**
NKC MLR MLR
comp=Z,700nm,18.4s,MS4.9
NKC Novy Kostel 67.38 316 *eP* **P 08 26 30.8 +0.7**
NKC AMS AMS 08 57 20.0
comp=Z,700nm,18.4s
GUNZ Gunzen 67.39 316 *eP* **P 08 26 30.5 +0.3**
comp=Z,23nm,0.9s,mb5.2
BOJS Bojanci 67.51 310 *i* P **P 08 26 31.3 +0.2**
CHGN Chignik 67.55 37 *eP* **P 08 26 29.5 -1.6**
WET Wettzell 67.55 315 *eP* **P 08 26 31.3 0.0**
comp=Z,12nm,0.9s,mb4.9
WET Wettzell 67.55 315 *eP* **P 08 26 31.3 0.0**
WET pmax pmax
comp=Z,12nm,0.9s,mb4.9
OBKA Obir 67.56 312 ⇑*iP* **P 08 26 31.3 -0.1**
comp=Z,13nm,0.9s,mb5.0
MOX Moxa 67.70 317 *eP* **P 08 26 32.1 -0.1**
comp=Z,19nm,1.1s,mb5.0
MOX
comp=Z,300nm,20.0s
MOX Moxa 67.70 317 *eP* **P 08 26 32.3 +0.1**
comp=Z,11nm,1.0s,mb4.8
MOX Moxa 67.70 317 *eP* **P 08 26 32.1 -0.1**
MOX pmax pmax
comp=Z,19nm,1.1s,mb5.0
MOX MLR MLR
comp=Z,300nm,20.0s,MS4.5
LJU Ljubljana 67.76 311 *i* P **P 08 26 25.9 -6.7**
LJU *i* 08 26 32.1
NRDL Niedersach Rie 67.81 319 *eP* **P 08 26 32.5 -0.4**
comp=Z,28nm,0.9s,mb5.3
CLZ Clausthal 67.93 318 *eP* **P 08 26 34.1 +0.5**
comp=Z,39nm,0.9s,mb5.4
CLZ Clausthal 67.93 318 *eP* **P 08 26 34.1 +0.5**
CLZ pmax pmax
comp=Z,39nm,0.9s,mb5.4
MYKA Terra Mystica 68.09 312 ⇑*iP* **P 08 26 34.3 -0.4**
comp=Z,5.9nm,0.9s,mb4.6
KBA Koelnbreinsper 68.09 313 ⇑*iP* **P 08 26 34.8 0.0**
comp=Z,17nm,0.8s,mb5.1,SNR=11
JAVS Javornik 68.12 311 *i* P **P 08 26 31.0 -3.9**
VOY Vojsko 68.17 311 *eP* **P 08 26 34.2 -1.0**
VOY *e* 08 26 43.3
GRA1 Grafenberg Arr 68.32 316 *eP* **P 08 26 36.7 +0.6**
comp=Z,50nm,0.9s,mb5.5
GRA1 LR LR
comp=Z,900nm,18.7s,MS5.0
GRF Grafenberg Arr 68.32 316 *eP* **P 08 26 36.7 +0.6**
comp=Z,50nm,0.9s,mb5.5
GRF *eL* 08 58 10.8
comp=Z,937nm,18.7s
GRF Grafenberg Arr 68.32 316 *eP* **P 08 26 36.7 +0.6**
GRF pmax pmax
comp=Z,50nm,0.9s,mb5.5
GRF MLR MLR
comp=Z,900nm,18.7s,MS5.0
COLA College 68.33 26 *eP* **P 08 26 35.4 -0.5**
comp=Z,34nm,0.8s,mb5.4
COLA College 68.33 26 *eP* **P 08 26 35.4 -0.5**
COLA pmax pmax
comp=Z,34nm,0.8s,mb5.4
RSO Redoubt South 68.43 31 *eP* **P 08 26 36.8 +0.3**
ILAR Eielson Array 68.74 26 P **P 08 26 36.9 -1.6**
comp=Z,5.0nm,0.8s,mb4.5,baz=294,slow=4.0,SNR=70
ILAR PP PP 08 29 06.8 -2.9
comp=Z,1.6nm,1.0s,baz=294,slow=8.8,SNR=3.7
ILAR Eielson Array 68.74 26 P **P 08 26 36.9 -1.5**
ILAR 08 29 06.8
ILAR pmax pmax
comp=Z,5.0nm,0.8s
ILAR pmax pmax
comp=Z,2.0nm,1.0s
ABTA Abfaltersbach 68.75 312 ⇑*iP* **P 08 26 37.9 -0.9**
comp=Z,8.9nm,0.7s,mb4.8,SNR=5.3
FUR Furstenfeldbru 68.92 314 *eP* **P 08 26 40.6 +0.7**
comp=Z,84nm,1.0s,mb5.6
TIP Timpagrande 69.07 304 *eP* **P 08 26 40.5 -0.4**
comp=Z,19nm,0.6s,mb5.2
WTTA Wattenberg 69.08 313 ⇓*iP* **P 08 26 40.6 -0.2**
comp=Z,24nm,0.7s,mb5.2
WATA Walderalm 69.08 313 ⇑*iP* **P 08 26 40.6 -0.3**
comp=Z,30nm,1.1s,mb5.1
IBBN Ibbenburen 69.20 319 *eP* **P 08 26 41.7 +0.2**
comp=Z,19nm,0.5s,mb5.3
MOTA Moosalm 69.37 314 ⇑*iP* **P 08 26 42.4 -0.3**
comp=Z,19nm,0.8s,mb5.1,SNR=7.9
CUC Castrocucco 69.39 305 *eP* **P 08 26 42.0 -0.9**
comp=Z,19nm,0.8s,mb5.1
PMR Palmer 69.45 29 *eP* **P 08 26 41.8 -1.1**
comp=Z,33nm,0.6s,mb5.4
PMR Palmer 69.45 29 *eP* **P 08 26 41.8 -1.1**
PMR pmax pmax
comp=Z,33nm,0.6s,mb5.4
RETA Reutte 69.52 314 ⇑*iP* **P 08 26 43.3 -0.3**
comp=Z,7.5nm,0.6s,mb4.8,SNR=5.7
OHAK Old Harbor 69.68 35 *eP* **P 08 26 44.0 -0.4**
comp=Z,41nm,0.7s,mb5.5
TNS Taunus Mts 69.72 317 *eP* **P 08 26 44.9 +0.1**
comp=Z,18nm,0.8s,mb5.0
TNS Taunus Mts 69.72 317 *eP* **P 08 26 44.9 +0.1**
TNS pmax pmax
comp=Z,18nm,0.8s,mb5.0
FETA Feichten 69.74 313 *i* P **P 08 26 44.8 -0.2**
comp=Z,33nm,1.0s,mb5.2,SNR=22
KDAK Kodiak Island 69.75 34 P **P 08 26 44.9 +0.1**
comp=Z,336nm,0.7s,mb6.4,SNR=12
KDAK Kodiak Island 69.75 34 *eP* **P 08 26 44.2 -0.6**
comp=Z,35nm,0.8s,mb5.3
KDAK Kodiak Island 69.75 34 P **P 08 26 44.4 -0.5**
comp=Z,39nm,0.7s,mb5.4,baz=309,slow=3.6,SNR=48
KDAK Kodiak Island 69.75 34 *i* P **P 08 26 44.1 -0.7**
BUG Bochum--Univer 69.85 319 *eP* **P 08 26 45.8 +0.2**
comp=Z,25nm,0.9s,mb5.1
STU Stuttgart 69.91 315 *eP* **P 08 26 46.0 0.0**
comp=Z,32nm,1.2s,mb5.1
AQU L'Aquila 70.03 308 *eP* **P 08 26 47.2 +0.4**
comp=Z,31nm,0.8s,mb5.3
AQU L'Aquila 70.03 308 ⇓*iP* **P 08 26 47.6 +0.8**
AQU L'Aquila 70.03 308 ⇓*iP* **P 08 26 47.6 +0.8**
CEL Celeste 70.07 303 *eP* **P 08 26 46.8 -0.4**
comp=Z,50nm,0.8s,mb5.5
DAVA Damuels 70.15 314 ⇑*iP* **P 08 26 47.1 -0.4**
comp=Z,9.4nm,0.8s,mb4.8
SPAK Spaichingen-Ko 70.45 315 *eP* **P 08 26 49.3 0.0**
BFO Black Forest 70.62 315 *eP* **P 08 26 50.2 -0.2**
comp=Z,16nm,1.0s,mb4.9
BFO Black Forest 70.62 315 *eP* **P 08 26 50.2 -0.2**
BFO pmax pmax
comp=Z,16nm,1.0s,mb4.9
RUP Ruppelstein 70.75 317 *eP* **P 08 26 51.3 +0.2**
EGAK Eagle 70.80 24 *eP* **P 08 26 49.9 -1.2**
comp=Z,11nm,0.7s,mb4.9
TUE Stuetta 70.84 313 *eP* **P 08 26 51.4 -0.3**
comp=Z,29nm,0.7s,mb5.3
MENT Mentasta 70.90 27 *eP* **P 08 26 51.2 -0.6**
MEM Membach 70.94 318 P **P 08 26 52.4 +0.1**
comp=Z,8.4nm,1.3s,mb4.5
FELD Feldberg im Sc 71.02 315 *eP* **P 08 26 51.9 -0.9**
INK Inuvik 71.06 20 *eP* **P 08 26 52.1 -0.6**
comp=Z,29nm,0.7s,mb5.3
INK Inuvik 71.06 20 P **P 08 26 52.1 -0.6**
comp=Z,29nm,0.7s,mb5.3,baz=327,slow=7.3,SNR=48
INK Inuvik 71.06 20 P **P 08 26 52.1 -0.6**
INK pmax pmax
comp=Z,29nm,0.7s
DIV Divide 71.07 29 *eP* **P 08 26 52.7 -0.2**
comp=Z,28nm,0.9s,mb5.2
CDF Champ du Feu 71.21 316 *eP* **P 08 26 53.5 -0.4**
comp=Z,42nm,0.9s,mb5.1
CDF Champ du Feu 71.21 316 *eP* **P 08 26 53.5 -0.4**
comp=Z,21nm,0.9s,mb5.1
CDF Champ du Feu 71.21 316 *eP* **P 08 26 53.5 -0.4**
CDF pmax pmax
comp=Z,21nm,0.9s,mb5.1
WLF Walferdange 71.29 317 P **P 08 26 55.4 +1.0**
comp=Z,42nm,1.1s,mb5.3
WLF Walferdange 71.29 317 *eP* **P 08 26 55.2 +0.8**
comp=Z,64nm,0.9s,mb5.5
WLF Walferdange 71.29 317 *eP* **P 08 26 55.1 +0.7**
comp=Z,61nm,0.9s,mb5.5
WLF Walferdange 71.29 317 *eP* **P 08 26 55.1 +0.7**
WLF pmax pmax
comp=Z,61nm,0.9s,mb5.5
ECH Echery 71.37 316 *eP* **P 08 26 54.5 -0.4**
BCLA Clavier 71.42 318 P **P 08 26 55.5 +0.3**
BBS Basel-Blauen 71.51 315 *eP* **P 08 26 53.9 -1.8**
MOF Molkenrain 71.56 315 *eP* **P 08 26 55.5 -0.5**
KMBO Kilima Mbogo 71.58 257 *eP* **P 08 26 57.5 +0.8**
comp=Z,22nm,1.1s,mb5.0
KMBO Kilima Mbogo 71.58 257 P **P 08 26 57.4 +0.7**
comp=Z,16nm,0.9s,mb4.9,baz=180,slow=24,SNR=28
KMBO Kilima Mbogo 71.58 257 *eP* **P 08 26 57.5 +0.8**
KMBO pmax pmax
comp=Z,22nm,1.1s
BMRM Bremner River 71.64 29 *eP* **P 08 26 56.2 0.0**
comp=Z,423nm,0.6s,mb6.5
HINF Hinteralfeld 71.74 315 *eP* **P 08 26 56.4 -0.7**
comp=Z,33nm,0.9s,mb5.0
HINF Hinteralfeld 71.74 315 *eP* **P 08 26 56.4 -0.7**
comp=Z,16nm,0.9s,mb5.0
HINF Hinteralfeld 71.74 315 *eP* **P 08 26 56.4 -0.7**
HINF pmax pmax
comp=Z,16nm,0.9s,mb5.0
DAWY Dawson 71.84 25 *eP* **P 08 26 56.6 -0.8**
GIVF Givet 71.85 318 *eP* **P 08 26 57.4 -0.3**
comp=Z,48nm,0.8s,mb5.2
GIVF Givet 71.85 318 *eP* **P 08 26 57.4 -0.3**
comp=Z,24nm,0.8s,mb5.2
GIVF Givet 71.85 318 *eP* **P 08 26 57.4 -0.3**
GIVF pmax pmax
comp=Z,24nm,0.8s,mb5.2
HAU Haudompre 71.95 316 *eP* **P 08 26 57.7 -0.7**
comp=Z,20nm,0.8s,mb4.8
HAU *eMLR* MLR
comp=Z,670nm,20.8s,MS4.6
HAU Haudompre 71.95 316 *eP* **P 08 26 57.7 -0.7**
comp=Z,10nm,0.8s,mb4.8
HAU LR LR
comp=Z,670nm,20.8s,MS4.9
HAU Haudompre 71.95 316 *eP* **P 08 26 57.7 -0.7**
HAU pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
HAU MLR MLR
comp=Z,670nm,20.8s,MS4.9
SNF Seneffe 71.96 319 P **P 08 26 58.3 0.0**
comp=Z,9.9nm,1.1s,mb4.7
LOMF Lomont 71.97 315 *eP* **P 08 26 58.2 -0.3**
DOU Dourbes 71.98 318 P **P 08 26 58.8 +0.3**
comp=Z,8.1nm,1.0s,mb4.6
BAIF Baives 72.21 318 *eP* **P 08 26 59.7 -0.2**
comp=Z,39nm,0.8s,mb5.1
BAIF Baives 72.21 318 *eP* **P 08 26 59.7 -0.2**
comp=Z,20nm,0.8s,mb5.1
BAIF Baives 72.21 318 *eP* **P 08 26 59.7 -0.2**
BAIF pmax pmax
comp=Z,20nm,0.8s,mb5.1
EIDS Eidsvold 72.33 137 *eP* **P 08 27 00.8 0.0**
comp=Z,20nm,0.8s,mb5.1
SUMG Summit 72.54 349 *eP* **P 08 27 00.5 -1.0**
comp=Z,20nm,0.9s,mb5.0
SUMG Summit 72.54 349 ⇑*iP* **P 08 27 01.3 -0.2**
comp=Z,15nm,0.8s,mb5.0
STKA Stephens Creek 72.61 148 ⇑*iP* **P 08 27 01.6 -0.8**
comp=Z,6.8nm,0.5s,mb4.8
STKA Stephens Creek 72.61 148 P **P 08 27 01.8 -0.6**
STKA Stephens Creek 72.61 148 P **P 08 27 01.8 -0.6**
comp=Z,13nm,0.7s,mb5.0,baz=325,slow=5.8,SNR=17
CABF La Chapelle 72.77 314 *eP* **P 08 27 02.7 -0.6**
comp=Z,28nm,0.8s,mb5.0
CABF La Chapelle 72.77 314 *eP* **P 08 27 02.7 -0.6**
comp=Z,14nm,0.8s,mb5.0
CABF La Chapelle 72.77 314 *eP* **P 08 27 02.7 -0.6**
CABF pmax pmax
comp=Z,14nm,0.8s,mb4.9
PGF Pioggiola 72.85 310 *eP* **P 08 27 03.8 -0.1**
comp=Z,129nm,0.9s,mb5.5
PGF Pioggiola 72.85 310 *eP* **P 08 27 03.8 -0.1**
comp=Z,64nm,0.9s,mb5.6
PGF Pioggiola 72.85 310 *eP* **P 08 27 03.8 -0.1**
PGF pmax pmax
comp=Z,65nm,0.9s,mb5.6
LPG La Plagne 72.89 313 *eP* **P 08 27 04.4 +0.3**
comp=Z,144nm,0.7s,mb5.7
LPG La Plagne 72.89 313 *eP* **P 08 27 04.4 +0.3**
comp=Z,72nm,0.7s,mb5.7
LPG La Plagne 72.89 313 *eP* **P 08 27 04.4 +0.3**
LPG pmax pmax
comp=Z,72nm,0.7s,mb5.7
LPL La Plagne 72.89 313 *eP* **P 08 27 04.3 +0.2**
comp=Z,119nm,0.6s,mb5.7
LPL La Plagne 72.89 313 *eP* **P 08 27 04.3 +0.2**
comp=Z,60nm,0.6s,mb5.7
LPL La Plagne 72.89 313 *eP* **P 08 27 04.3 +0.2**
LPL pmax pmax
comp=Z,60nm,0.6s,mb5.7
SAOF Saorge 73.11 312 *eP* **P 08 27 05.3 -0.1**
MENF Mencas 73.12 319 *eP* **P 08 27 05.2 -0.1**
SBF Sospel 73.24 311 *eP* **P 08 27 05.6 -0.6**
comp=Z,92nm,0.7s,mb5.5
SBF Sospel 73.24 311 *eP* **P 08 27 05.6 -0.6**
comp=Z,46nm,0.7s,mb5.5
SBF Sospel 73.24 311 *eP* **P 08 27 05.6 -0.6**
SBF pmax pmax
comp=Z,46nm,0.7s,mb5.5
MBDF Montbardon 73.25 312 *eP* **P 08 27 05.2 -1.0**
comp=Z,33nm,0.7s,mb5.0
MBDF Montbardon 73.25 312 *eP* **P 08 27 05.2 -1.0**
comp=Z,16nm,0.7s,mb5.1
MBDF Montbardon 73.25 312 *eP* **P 08 27 05.2 -1.0**
MBDF pmax pmax
comp=Z,16nm,0.7s,mb5.1
LUCF Luceram 73.28 312 *eP* **P 08 27 06.3 -0.1**
TOUF Mont Tournerai 73.29 312 *eP* **P 08 27 06.5 +0.1**
MVIF Mont Vial 73.41 312 *eP* **P 08 27 07.0 -0.1**
ORIF Oris-en-Rattie 73.71 313 *eP* **P 08 27 08.6 -0.3**
comp=Z,54nm,0.8s,mb5.2
ORIF *eMLR* MLR
comp=Z,744nm,18.2s,MS4.7
ORIF Oris-en-Rattie 73.71 313 *eP* **P 08 27 08.6 -0.3**
comp=Z,27nm,0.8s,mb5.2
ORIF Oris-en-Rattie 73.71 313 *eP* **P 08 27 08.6 -0.3**
ORIF pmax pmax
comp=Z,27nm,0.8s,mb5.2
LOR Lormes 73.78 316 *eP* **P 08 27 08.2 -1.1**
comp=Z,19nm,0.8s,mb4.8,baz=51
LOR *eMLR* MLR
comp=Z,534nm,20.5s,MS4.5
LOR Lormes 73.78 316 *eP* **P 08 27 08.2 -1.1**
comp=Z,9.4nm,0.8s,mb4.8
LOR LR LR
comp=Z,530nm,20.5s,MS4.8
LOR Lormes 73.78 316 *eP* **P 08 27 08.2 -1.1**
LOR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LOR MLR MLR
comp=Z,530nm,20.5s,MS4.8
FRF La Foret Royal 73.89 311 *eP* **P 08 27 09.2 -0.8**
comp=Z,15nm,0.6s,mb4.8
FRF La Foret Royal 73.89 311 *eP* **P 08 27 09.2 -0.8**
comp=Z,7.5nm,0.6s,mb4.8
FRF La Foret Royal 73.89 311 *eP* **P 08 27 09.2 -0.8**
FRF pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
VSL Villasalto 74.04 307 *eP* **P 08 27 10.8 -0.2**
comp=Z,5.8nm,0.8s,mb4.6
LMR La Mourre 74.09 311 *eP* **P 08 27 10.5 -0.6**
comp=Z,46nm,0.8s,mb5.2
LMR La Mourre 74.09 311 *eP* **P 08 27 10.5 -0.6**
comp=Z,23nm,0.8s,mb5.2
LMR La Mourre 74.09 311 *eP* **P 08 27 10.5 -0.6**
LMR pmax pmax
comp=Z,23nm,0.8s,mb5.2
SSF Saint Saulge 74.09 316 *eP* **P 08 27 10.2 -0.9**
comp=Z,22nm,0.8s,mb4.8
SSF Saint Saulge 74.09 316 *eP* **P 08 27 10.2 -0.9**
comp=Z,11nm,0.8s,mb4.8
SSF Saint Saulge 74.09 316 *eP* **P 08 27 10.2 -0.9**
SSF pmax pmax
comp=Z,11nm,0.8s,mb4.8
SMF Signal de Mont 74.10 315 *eP* **P 08 27 10.5 -0.7**
comp=Z,71nm,0.8s,mb5.3
SMF Signal de Mont 74.10 315 *eP* **P 08 27 10.5 -0.7**
comp=Z,36nm,0.8s,mb5.3
SMF Signal de Mont 74.10 315 *eP* **P 08 27 10.5 -0.7**
SMF pmax pmax
comp=Z,36nm,0.8s,mb5.3
AVF Avril sur Loir 74.32 316 *eP* **P 08 27 11.7 -0.7**
comp=Z,61nm,0.9s,mb5.2
AVF Avril sur Loir 74.32 316 *eP* **P 08 27 11.7 -0.7**
comp=Z,30nm,0.9s,mb5.2
AVF Avril sur Loir 74.32 316 *eP* **P 08 27 11.7 -0.7**
AVF pmax pmax
comp=Z,31nm,0.9s,mb5.2
SMRF Simiane la Rot 74.36 312 *eP* **P 08 27 12.5 -0.2**
comp=Z,21nm,1.1s,mb4.7
SMRF Simiane la Rot 74.36 312 *eP* **P 08 27 12.5 -0.2**
comp=Z,21nm,1.1s,mb5.0
VIVF Saint-Julien-l 74.49 313 *eP* **P 08 27 12.9 -0.6**
comp=Z,40nm,0.8s,mb5.1
VIVF Saint-Julien-l 74.49 313 *eP* **P 08 27 12.9 -0.6**
comp=Z,20nm,0.8s,mb5.1
VIVF Saint-Julien-l 74.49 313 *eP* **P 08 27 12.9 -0.6**
VIVF pmax pmax
comp=Z,20nm,0.8s,mb5.1
HYF Humbligny 74.50 316 *eP* **P 08 27 13.2 -0.3**
PLDF La Plantade 74.57 315 *eP* **P 08 27 13.7 -0.2**
BGF Bois d'Agland 74.74 316 *eP* **P 08 27 14.1 -0.8**
comp=Z,20nm,0.9s,mb4.7
BGF Bois d'Agland 74.74 316 *eP* **P 08 27 14.1 -0.8**
comp=Z,10nm,0.9s,mb4.8
BGF Bois d'Agland 74.74 316 *eP* **P 08 27 14.1 -0.8**
BGF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
AGO Saint Agoulin 74.83 315 *eP* **P 08 27 15.7 +0.3**
PYM Petit Puy Mans 75.05 315 *eP* **P 08 27 16.9 +0.2**
LBL Lubilhac 75.17 314 *eP* **P 08 27 18.0 +0.6**
TCF Toulx Ste Croi 75.25 316 *eP* **P 08 27 17.5 -0.4**
comp=Z,35nm,0.8s,mb5.0
TCF Toulx Ste Croi 75.25 316 *eP* **P 08 27 17.5 -0.4**
comp=Z,18nm,0.8s,mb5.0
TCF Toulx Ste Croi 75.25 316 *eP* **P 08 27 17.5 -0.4**
TCF pmax pmax
comp=Z,18nm,0.8s,mb5.0
LASF Ste Croix 75.39 313 *eP* **P 08 27 18.4 -0.3**
comp=Z,45nm,0.8s,mb5.2
LDF La Druitiere 75.40 318 *eP* **P 08 27 17.9 -0.7**
comp=Z,24nm,0.8s,mb4.9
LDF La Druitiere 75.40 318 *eP* **P 08 27 17.9 -0.7**
comp=Z,12nm,0.8s,mb4.9
LDF La Druitiere 75.40 318 *eP* **P 08 27 17.9 -0.7**
LDF pmax pmax
comp=Z,12nm,0.8s,mb4.9
FLN La Foliniere 75.51 319 *eP* **P 08 27 18.7 -0.6**
comp=Z,66nm,1.1s,mb5.2
FLN *eMLR* MLR

comp=Z,274nm,22.0s,MS4.2
FLN La Foliniere 75.51 319 *e*P P **08 27 18.7 -0.6**
comp=Z,33nm,1.1s,mb5.2
FLN LR LR
comp=Z,270nm,22.0s,MS4.5
FLN La Foliniere 75.51 319 *e*P P **08 27 18.7 -0.6**
FLN pmax pmax
comp=Z,33nm,1.1s,mb5.2
FLN MLR MLR
comp=Z,270nm,22.0s,MS4.5
KEST Kesra 75.88 303 *e*P P **08 27 21.6 0.0**
KEST Kesra 75.88 303 P P **08 27 21.6 -0.1**
comp=Z,4.0nm,0.9s,mb4.3,baz=354,slow=5.8,SNR=10
GRR Gorron 75.92 319 *e*P P **08 27 21.1 -0.5**
comp=Z,86nm,0.8s,mb5.4
GRR Gorron 75.92 319 *e*P P **08 27 21.1 -0.5**
comp=Z,43nm,0.8s,mb5.4
GRR Gorron 75.92 319 *e*P P **08 27 21.1 -0.5**
GRR pmax pmax
comp=Z,43nm,0.8s,mb5.4
CAF Calviac 76.05 314 *e*P P **08 27 22.4 0.0**
comp=Z,41nm,0.9s,mb5.1
CAF Calviac 76.05 314 *e*P P **08 27 22.4 0.0**
comp=Z,20nm,0.9s,mb5.0
CAF Calviac 76.05 314 *e*P P **08 27 22.4 0.0**
CAF pmax pmax
comp=Z,20nm,0.9s,mb5.0
RJF Les Rejaudoux 76.18 315 *e*P P **08 27 23.2 0.0**
comp=Z,37nm,0.9s,mb5.0
RJF *e*MLR MLR
comp=Z,423nm,19.5s,MS4.5
RJF Les Rejaudoux 76.18 315 *e*P P **08 27 23.2 0.0**
comp=Z,18nm,0.9s,mb5.0
RJF LR LR
comp=Z,420nm,19.5s,MS4.8
RJF Les Rejaudoux 76.18 315 *e*P P **08 27 23.2 0.0**
RJF pmax pmax
comp=Z,18nm,0.9s,mb5.0
RJF MLR MLR
comp=Z,420nm,19.5s,MS4.8
SKAG Skagway 76.24 27 *e*P P **08 27 23.6 +0.3**
comp=Z,52nm,0.8s,mb5.5
MFF Saint Martin d 76.48 317 *e*P P **08 27 24.5 -0.3**
comp=Z,51nm,0.9s,mb5.1
MFF Saint Martin d 76.48 317 *e*P P **08 27 24.5 -0.3**
comp=Z,25nm,0.9s,mb5.2
MFF Saint Martin d 76.48 317 *e*P P **08 27 24.5 -0.3**
MFF pmax pmax
comp=Z,25nm,0.9s,mb5.1
ARMA Armidale 76.50 139 *e*P P **08 27 25.7 +0.7**
MTLF Montolieu 76.78 313 *e*P P **08 27 26.3 -0.3**
comp=Z,23nm,0.9s,mb4.8
MTLF Montolieu 76.78 313 *e*P P **08 27 26.3 -0.3**
comp=Z,12nm,0.9s,mb4.8
MTLF Montolieu 76.78 313 *e*P P **08 27 26.3 -0.3**
MTLF pmax pmax
comp=Z,12nm,0.9s,mb4.8
LFF La Frestale 76.84 315 *e*P P **08 27 27.0 +0.1**
comp=Z,44nm,0.8s,mb5.1
LFF La Frestale 76.84 315 *e*P P **08 27 27.0 +0.1**
comp=Z,22nm,0.8s,mb5.1
LFF La Frestale 76.84 315 *e*P P **08 27 27.0 +0.1**
LFF pmax pmax
comp=Z,22nm,0.8s,mb5.1
SGMF Saint Gilles 76.95 319 *e*P P **08 27 27.3 -0.2**
comp=Z,84nm,0.9s,mb5.3
SGMF Saint Gilles 76.95 319 *e*P P **08 27 27.3 -0.2**
comp=Z,42nm,0.9s,mb5.4
SGMF Saint Gilles 76.95 319 *e*P P **08 27 27.3 -0.2**
SGMF pmax pmax
comp=Z,42nm,0.9s,mb5.4
ROSF Rostrenen 77.30 319 *e*P P **08 27 29.2 -0.2**
comp=Z,57nm,1.0s,mb5.2
ROSF Rostrenen 77.30 319 *e*P P **08 27 29.2 -0.2**
comp=Z,28nm,1.0s,mb5.2
ROSF Rostrenen 77.30 319 *e*P P **08 27 29.2 -0.2**
ROSF pmax pmax
comp=Z,29nm,1.0s,mb5.2
VALF Valcebollere 77.40 312 *e*P P **08 27 30.5 +0.4**
QUIF Quistinic 77.47 319 *e*P P **08 27 29.9 -0.5**
comp=Z,170nm,1.6s,mb5.4
QUIF Quistinic 77.47 319 *e*P P **08 27 29.9 -0.5**
comp=Z,85nm,1.6s,mb5.4
QUIF Quistinic 77.47 319 *e*P P **08 27 29.9 -0.5**
QUIF pmax pmax
comp=Z,85nm,1.6s,mb5.4
MLS Moulis 77.68 313 *e*P P **08 27 31.3 -0.4**
EPF Esparros 78.11 313 *e*P P **08 27 33.1 -1.0**
comp=Z,12nm,0.8s,mb4.6
EPF Esparros 78.11 313 *e*P P **08 27 33.1 -1.0**
comp=Z,6.2nm,0.8s,mb4.6
EPF Esparros 78.11 313 *e*P P **08 27 33.1 -1.0**
EPF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
VIEF Viey 78.39 313 *e*P P **08 27 36.2 +0.6**
ETSF Etsaut 78.73 314 *e*P P **08 27 37.7 +0.2**
comp=Z,27nm,0.8s,mb4.9
ETSF Etsaut 78.73 314 *e*P P **08 27 37.7 +0.2**
comp=Z,14nm,0.8s,mb4.9
ETSF Etsaut 78.73 314 *e*P P **08 27 37.7 +0.2**
ETSF pmax pmax
comp=Z,14nm,0.8s,mb4.9
DLBC Dease Lake 78.95 26 *e*P P **08 27 38.6 +0.3**
DLBC Dease Lake 78.95 26 P P **08 27 38.0 -0.4**
comp=Z,7.4nm,0.8s,mb4.7,baz=301,slow=6.1,SNR=19
SJPF Ste Jean 79.02 314 *e*P P **08 27 39.6 +0.5**
comp=Z,27nm,0.7s,mb5.0
SJPF Ste Jean 79.02 314 *e*P P **08 27 39.6 +0.5**
comp=Z,14nm,0.7s,mb5.0
SJPF Ste Jean 79.02 314 *e*P P **08 27 39.6 +0.5**
SJPF pmax pmax
comp=Z,14nm,0.7s,mb5.0
TOO Toolangi 79.11 148 *e*P P **08 27 39.4 0.0**
CNB Canberra Magne 79.13 144 *e*P P **08 27 39.4 -0.1**
YKA Yellowknife Ar 80.60 17 P P **08 27 46.8 -0.5**
YKA PKKPbc PKKPbc 08 46 24.8 -3.2
YKA Yellowknife Ar 80.60 17 P P **08 27 46.8 -0.5**
comp=Z,22nm,0.7s,mb5.2,baz=328,slow=5.2,SNR=94
YKA PKKPbc PKKPbc 08 46 24.7 -3.2
comp=Z,1.3nm,0.5s,baz=161,slow=2.0,SNR=17
YKA Yellowknife Ar 80.60 17 P P **08 27 46.8 -0.5**
YKA 08 46 24.7
YKA pmax pmax
comp=Z,22nm,0.7s
ESDC Sonseca Array 82.68 312 P P **08 27 58.7 0.0**
ESDC LR LR 09 07 31.6
ESDC Sonseca Array 82.68 312 P P **08 27 58.7 0.0**
comp=Z,4.2nm,0.6s,mb4.6,baz=43,slow=5.3,SNR=21
ESDC LR LR 09 07 31.6
comp=Z,162nm,20.7s,MS4.4,baz=30,slow=38
ESLA Sonseca Array 82.68 312 *e*P P **08 27 59.0 +0.3**
comp=Z,2.0nm,0.9s,mb4.2
PAB San Pablo 82.99 313 *e*P P **08 28 00.1 -0.3**
comp=Z,7.9nm,1.0s,mb4.7
PAB San Pablo 82.99 313 *e*P P **08 28 00.1 -0.2**
PAB pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
PBRG Braganca 83.11 315 *e*P P **08 28 01.1 +0.2**
comp=Z,23nm,1.5s,mb5.0
MVO Moncorvo 83.67 315 *e*P P **08 28 04.3 +0.5**
comp=Z,29nm,0.9s,mb5.4
PCAB Cabril 83.92 316 *e*P P **08 28 05.8 +0.7**
comp=Z,28nm,1.0s,mb5.3
PVRL Vila Real 84.01 315 *e*P P **08 28 05.9 +0.4**
comp=Z,15nm,1.1s,mb5.0
BBB Bella Bella 84.23 30 P P **08 28 05.8 -0.6**
comp=Z,5.3nm,0.8s,mb4.8,baz=258,slow=7.0,SNR=3.9
MTE Manteigas 84.44 315 *e*P P **08 28 08.3 +0.5**
comp=Z,30nm,1.0s,mb5.4
MTE *e*LR LR 09 06 43.3
comp=Z,164nm,20.0s
MTE Manteigas 84.44 315 *e*P P **08 28 08.3 +0.6**
comp=Z,13nm,0.8s,mb5.1
PVIS Viseu 84.46 315 *e*P P **08 28 08.5 +0.7**
comp=Z,24nm,1.4s,mb5.1
PCBR Castelo Branco 84.75 314 *e*P P **08 28 09.7 +0.4**
comp=Z,14nm,1.3s,mb4.9
PMRV Marv??o 84.94 314 *e*P P **08 28 10.6 +0.3**
comp=Z,32nm,1.3s,mb5.3
PMRV *e*LR LR 09 06 49.6
comp=Z,157nm,18.0s
PESTR Estremoz 85.41 314 *e*LR LR 09 06 30.8
comp=Z,200nm,20.0s
PBAR Barrancos 85.49 313 *e*P P **08 28 13.3 +0.2**
comp=Z,23nm,1.4s,mb5.1
PBAR *e*LR LR 09 07 38.9
comp=Z,217nm,18.0s

EVO Evora 85.88 313 ⇑/P P **08 28 15.6 +0.6**
comp=Z,16nm,0.8s,mb5.0
EVO *e*MLR MLR
comp=Z,247nm,22.8s,MS4.2
PBEJ Beja 86.10 313 *e*P P **08 28 16.6 +0.5**
comp=Z,13nm,1.1s,mb5.1
PMAFR Mafra 86.39 314 *e*LR LR 09 07 33.7
comp=Z,120nm,20.0s
PVAQ Vaqueiros 86.39 312 *e*LR LR 09 08 08.3
comp=Z,227nm,20.0s
PCVE Castro Verde 86.45 313 *e*P P **08 28 18.1 +0.3**
comp=Z,34nm,1.6s,mb5.3
PBDV Barranco-do-Ve 86.62 312 *e*LR LR 09 07 46.1
comp=Z,215nm,20.0s
PTEO Sao Teotonio 86.93 313 *e*P P **08 28 20.2 0.0**
comp=Z,33nm,1.2s,mb5.4
LSZ Lusaka 86.94 250 *e*P P **08 28 20.8 +0.3**
comp=Z,25nm,1.0s,mb5.4
LSZ Lusaka 86.94 250 *e*P P **08 28 20.8 +0.4**
LSZ pmax pmax
comp=Z,25nm,1.0s,mb5.4
PFVI Vila Bisbo 87.25 313 *e*LR LR 09 08 35.8
comp=Z,217nm,20.0s
EDM Edmonton 88.83 22 *e*P P **08 28 29.0 0.0**
EDM *e*pP pP 08 28 33.9 +2.0
A05A Maple Falls 89.15 29 ⇑P P **08 28 30.1 -0.4**
baz=89
NLWA Neilton Lookou 89.65 31 *e*P P **08 28 32.6 -0.3**
comp=Z,20nm,1.4s,mb5.3
B06A Marblemount 89.77 29 ⇓P P **08 28 33.2 -0.2**
baz=89
JCW Jim Creek 89.84 29 *e*P P **08 28 33.7 -0.1**
comp=Z,16nm,0.8s,mb5.4
JCW *e*pP pP 08 28 39.2 +2.4
PNT Penticton 89.88 27 P P **08 28 34.1 +0.2**
E03A Lebam 90.44 31 ⇑P P **08 28 37.1 +0.5**
baz=90
RMW Rattlesnake Mo 90.48 29 P P **08 28 37.9 +1.1**
FFC Flin Flon 90.53 15 P P **08 28 36.8 -0.1**
comp=Z,102nm,0.9s,mb6.2,SNR=7.8
FFC Flin Flon 90.53 15 *e*P P **08 28 35.7 -1.2**
comp=Z,14nm,0.9s,mb5.3
FFC *e*pP pP 08 28 41.2 +1.4
FFC Flin Flon 90.53 15 *e*P P **08 28 35.7 -1.2**
FFC *e**PP pP 08 28 41.2 +1.4
FFC pmax pmax
comp=Z,15nm,0.9s,mb5.3
WRW Wenatchee Ridg 90.54 29 P P **08 28 37.6 +0.6**
NLW Nelson Butte 90.58 28 P P **08 28 37.6 +0.4**
D05A Enumclaw 90.61 30 ⇓P P **08 28 37.9 +0.5**
baz=90
B08A Colville Reser 90.76 28 ⇑P P **08 28 38.4 +0.3**
baz=90
F03A Seaside 90.92 31 ⇓P P **08 28 39.6 +0.8**
baz=91
FMW Mount Fremont 90.95 30 P P **08 28 39.5 +0.6**
ETW Entiat 90.97 29 *e*P P **08 28 39.3 +0.2**
comp=Z,20nm,0.8s,mb5.5
ETW *e*pP pP 08 28 44.3 +2.3
LON Longmire 91.03 30 *e*P P **08 28 39.6 +0.2**
comp=Z,7.3nm,1.1s,mb4.9
LON Longmire 91.03 30 *e*P P **08 28 39.6 +0.2**
LON pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
TDL Tradedollar La 91.17 30 P P **08 28 40.9 +0.9**
F04A Amboy 91.42 31 ⇑P P **08 28 41.4 +0.3**
baz=91
C09A Chrisman Ranch 91.63 27 ⇓P P **08 28 42.6 +0.5**
baz=91
A12A Yaak River Ran 91.68 25 ⇑P P **08 28 42.8 +0.5**
baz=91
NEW Newport 91.69 26 *e*P P **08 28 42.8 +0.4**
NEW *e*pP pP 08 28 47.7 +2.4
OD2 Odessa Site #2 91.79 28 *e*P P **08 28 42.8 0.0**
comp=Z,9.3nm,0.9s,mb5.1
MXC Moxie City 91.81 29 P P **08 28 44.0 +1.0**
G04A Mulino 91.96 31 ⇓P P **08 28 44.3 +0.6**
baz=92,SNR=10
D08A Wollman Farm, 91.98 28 ⇑P P **08 28 44.2 +0.5**
baz=92
E07A Sunnyside 92.00 29 ⇓P P **08 28 44.5 +0.6**
baz=92
B12A Libby 92.09 25 ⇑P P **08 28 44.3 +0.1**
baz=92
A13A Flathead Natio 92.12 25 ⇓P P **08 28 44.8 +0.5**
baz=92
WALA Waterton Lakes 92.19 24 *e*P P **08 28 44.9 +0.2**
comp=Z,0.3nm,1.0s,mb3.6
HOOD Mount Hood Mea 92.23 31 *e*P P **08 28 45.6 +0.7**
comp=Z,16nm,0.8s,mb5.4
HAWA Hanford 92.27 29 *e*P P **08 28 45.6 +0.5**
comp=Z,8.9nm,0.9s,mb5.1
VFP Flag Point 92.31 31 P P **08 28 46.1 +0.8**
C11A Tepee Creek (N 92.37 26 ⇑P P **08 28 46.0 +0.5**
baz=92
E08A Dider Farm, El 92.38 29 ⇓P P **08 28 46.3 +0.7**
baz=92
A14A Double T Ranch 92.43 24 ⇑P P **08 28 46.4 +0.6**
baz=92
H04A Detroit Lake 92.50 31 ⇑P P **08 28 46.3 +0.1**
baz=92,SNR=6.7
F07A Phinny Hill Vi 92.50 29 ⇑P P **08 28 46.4 +0.2**
baz=92
B13A Whitefish 92.57 25 ⇓P P **08 28 47.2 +0.7**
baz=92,SNR=9.8
A15A Johnson Ranch, 92.66 24 ⇓P P **08 28 46.1 -0.8**
baz=92
E09A Wood Farm, Sta 92.73 28 ⇓P P **08 28 46.9 -0.3**
baz=92
G06A Carlson Farm, 92.73 30 ⇓P P **08 28 47.5 +0.2**
baz=92
C12B Naegeli Ranch, 92.77 26 ⇓P P **08 28 48.0 +0.6**
baz=92,SNR=10.0
BSMT Bassoo Peak 92.90 25 P P **08 28 48.9 +0.9**
A16A West Butte Ran 93.07 23 ⇓P P **08 28 48.2 -0.5**
baz=93
SCHQ Schefferville 93.10 355 P P **08 28 48.0 -0.8**
SCHQ LR LR 09 14 27.0
SCHQ Schefferville 93.10 355 P P **08 28 48.0 -0.8**
comp=Z,8.6nm,0.7s,mb5.3,baz=24,slow=5.5,SNR=7.6
SCHQ LR LR 09 14 27.0
comp=Z,144nm,18.1s,MS4.5,baz=12,slow=38
C13A Hot Springs 93.12 25 ⇓P P **08 28 49.5 +0.5**
baz=93,SNR=16
YBMT Yellow Bay 93.17 25 *e*P P **08 28 49.6 +0.4**
comp=Z,6.1nm,0.8s,mb5.1
JTMT Jette 93.17 25 *e*P P **08 28 49.8 +0.6**
comp=Z,6.2nm,0.8s,mb5.1
LNOR Lincton Mounta 93.20 28 *e*P P **08 28 50.2 +0.8**
comp=Z,5.7nm,1.0s,mb5.0
LNOR Lincton Mounta 93.20 28 *e*P P **08 28 50.2 +0.8**
LNOR pmax pmax
comp=Z,6.0nm,1.0s,mb5.0
B15A Bradely Ranch, 93.29 24 ⇓P P **08 28 49.1 -0.6**
baz=93,SNR=5.7
C14A Swan Lake 93.34 25 ⇓P P **08 28 50.6 +0.5**
baz=93
D12A Red Ives Fores 93.36 26 ⇓P P **08 28 50.0 -0.1**
baz=93,SNR=8.1
A17A Triple J Farms 93.37 22 ⇓P P **08 28 49.8 -0.4**
baz=93,SNR=18
G08A Pilot Rock 93.39 29 ⇑P P **08 28 50.6 +0.3**
baz=93
SWMT Swartz Lake 93.47 25 *e*P P **08 28 50.8 +0.1**
comp=Z,3.4nm,0.8s,mb4.8
B16A M & M Farms, S 93.50 23 ⇑P P **08 28 50.4 -0.4**
baz=93,SNR=9.3
F10A Beech Ranch, E 93.54 28 ⇓P P **08 28 51.3 +0.4**
baz=93,SNR=11
D13A Huson 93.66 26 ⇓P P **08 28 51.4 -0.1**
baz=93,SNR=7.3
A18A Metzger Ranch, 93.66 22 ⇓P P **08 28 50.9 -0.5**
baz=93,SNR=20
C15A Salmond Ranch, 93.74 24 ⇑P P **08 28 51.7 -0.1**
baz=93,SNR=14
TORD Torodi Ar. Bea 93.76 288 P P **08 28 51.5 -1.1**
comp=Z,3.1nm,0.9s,mb4.7,baz=46,slow=4.6,SNR=15
TORD PP PP 08 32 35.4 -2.2
comp=Z,1.3nm,1.0s,baz=62,slow=7.0,SNR=4.3
HUMO Hull Mountain 93.77 33 *e*P P **08 28 51.8 -0.3**
comp=Z,16nm,1.6s,mb5.2
E12A Beaver Dam Sad 93.81 27 ⇓P P **08 28 51.8 -0.4**
baz=94
SLMT Seeley Lake 93.88 25 *e*P P **08 28 52.5 -0.1**
comp=Z,12nm,0.9s,mb5.3
C16A Fuhringer Ranc 94.01 24 ⇓P P **08 28 52.6 -0.5**
baz=94,SNR=11

D14A Greenough 94.01 25 ⇑P P **08 28 52.8 -0.3**
baz=94,SNR=8.4
MSO Missoula 94.07 25 *e*P P **08 28 53.5 +0.1**
comp=Z,3.7nm,0.8s,mb4.9
I07A Izee 94.14 30 ⇓P P **08 28 54.2 +0.5**
baz=94,SNR=7.1
B18A Beardsley Farm 94.14 22 ⇑P P **08 28 53.1 -0.6**
baz=94
CHMT Chamberlain Mo 94.25 25 *e*P P **08 28 54.0 -0.2**
comp=Z,1.7nm,0.7s,mb4.6
E13A Victor 94.31 26 ⇑P P **08 28 53.9 -0.6**
baz=94,SNR=15
BMO Blue Mountains 94.43 28 *e*P P **08 28 55.7 +0.6**
comp=Z,2.5nm,0.8s,mb4.7
EGMT Eagleton 94.48 22 *e*P P **08 28 55.3 +0.1**
comp=Z,13nm,0.9s,mb5.4
F12A Elk City 94.48 27 ⇑P P **08 28 54.5 -0.9**
baz=94,SNR=7.6
C17A Wharram Farm, 94.49 23 ⇓P P **08 28 54.6 -0.7**
baz=94,SNR=7.5
E14A Clinton 94.58 25 ⇓P P **08 28 55.4 -0.3**
baz=94,SNR=6.4
K05A Summer Lake 94.62 32 ⇓P P **08 28 55.4 -0.6**
baz=94
D16A Dana Ranch, Ca 94.75 24 ⇑P P **08 28 56.2 -0.3**
baz=94,SNR=8.7
F13A Darby 94.81 26 ⇓P P **08 28 56.3 -0.5**
baz=94
E15A Deer Lodge 94.88 25 ⇑P P **08 28 57.0 -0.1**
baz=94
HRY Holter Researc 94.92 24 *e*P P **08 28 57.4 +0.1**
comp=Z,5.5nm,0.7s,mb5.1
D17A Six Diamond Ra 94.93 23 ⇓P P **08 28 57.1 -0.2**
baz=95,SNR=5.8
E16A East Helena 95.13 24 ⇑P P **08 28 58.4 +0.1**
baz=95,SNR=7.7
F14A Wisdom 95.14 26 ⇓P P **08 28 58.1 -0.2**
baz=95
J08A Circle Bar Ran 95.17 30 ⇑P P **08 28 58.4 0.0**
baz=95,SNR=5.9
D18A Linhart Farms, 95.19 23 ⇑P P **08 28 57.8 -0.7**
baz=95
G13A Cobalt 95.43 27 ⇑P P **08 28 59.4 -0.2**
baz=95
LRM Limekiln Ridge 95.47 25 *e*P P **08 28 60.0 +0.1**
comp=Z,12nm,0.8s,mb5.4
E17A Martinsdale 95.47 24 ⇑P P **08 28 59.6 -0.3**
baz=95
MOD Modoc 95.54 32 *e*P P **08 29 00.9 +0.7**
comp=Z,3.6nm,1.0s,mb4.8
H12A Diamond D Ranc 95.65 27 ⇑P P **08 29 00.0 -0.6**
baz=95
E18A Harlowton 95.70 23 ⇑P P **08 29 01.0 +0.2**
baz=95,SNR=5.8
F16A Kennard Place, 95.80 25 ⇑P P **08 29 00.9 -0.4**
baz=95
DLMT Dillon 95.81 25 *e*P P **08 29 01.5 +0.1**
comp=Z,3.3nm,0.8s,mb4.8
WVOR Wild Horse Val 95.84 31 *e*P P **08 29 02.4 +0.8**
comp=Z,2.6nm,0.8s,mb4.7
WVOR Wild Horse Val 95.84 31 *e*P P **08 29 02.4 +0.8**
WVOR pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
H13A Challis 95.87 27 ⇑P P **08 29 00.9 -0.8**
baz=96
BOZ Bozeman (W) 95.91 25 *e*P P **08 29 02.1 +0.3**
comp=Z,2.5nm,0.8s,mb4.7
BOZ Bozeman (W) 95.91 25 *e*P P **08 29 02.1 +0.3**
BOZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
G15A Dillon 96.02 25 ⇑P P **08 29 02.2 -0.2**
baz=96,SNR=8.9
F17A Fitzpatrick Pl 96.03 24 ⇑P P **08 29 02.4 0.0**
baz=96,SNR=12
H14A Leadore 96.16 26 ⇓P P **08 29 02.8 -0.2**
baz=96
I12A Atlanta 96.17 28 ⇓P P **08 29 03.3 +0.2**
baz=96,SNR=7.4
MCMT McKenzie Canyo 96.17 26 *e*P P **08 29 03.5 +0.5**
comp=Z,1.0nm,0.6s,mb4.4
G16A Moss Hill, Enn 96.21 25 ⇑P P **08 29 03.1 -0.1**
baz=96
F18A Big Timber 96.35 23 ⇓P P **08 29 03.9 +0.1**
baz=96,SNR=12
H15A Lima 96.43 26 ⇑P P **08 29 03.8 -0.4**
baz=96
GCMT Greycliff 96.47 23 *e*P P **08 29 04.3 0.0**
comp=Z,2.9nm,0.8s,mb4.8
I13A Wildhorse Cree 96.47 27 ⇓P P **08 29 04.0 -0.4**
baz=96
G17A Pierce Place, 96.51 24 ⇑P P **08 29 04.4 -0.2**
baz=96
BOSA Boshof 96.57 240 P P **08 29 03.2 -1.8**
BOSA Boshof 96.57 240 P P **08 29 03.2 -1.8**
comp=Z,4.2nm,0.9s,mb4.9,baz=117,slow=4.5,SNR=3.2
BOSA Boshof 96.57 240 P P **08 29 03.2 -1.8**
BOSA pmax pmax
comp=Z,4.0nm,0.9s,mb4.8
HLID Hailey 96.65 27 *e*P P **08 29 05.7 +0.4**
comp=Z,2.0nm,0.8s,mb4.6
H16A Russell Place, 96.86 25 ⇓P P **08 29 06.4 +0.2**
baz=96
J13A Cove Ranch, Pi 96.89 27 ⇑P P **08 29 06.7 +0.4**
baz=96,SNR=6.4
I15A Monteview 97.02 26 ⇑P P **08 29 07.2 +0.3**
baz=97
L10A Juniper Basin 97.06 30 ⇓P P **08 29 07.1 -0.1**
baz=97
RLMT Red Lodge 97.19 23 *e*P P **08 29 07.8 +0.2**
comp=Z,2.4nm,0.6s,mb4.8
L11A Cat Creek Ranc 97.28 29 ⇓P P **08 29 08.2 +0.1**
baz=97
IMW Indian Meadow 97.67 25 *e*P P **08 29 10.8 +0.9**
comp=Z,3.5nm,0.8s,mb4.9
MOOW Moose Ponds 97.87 25 P P **08 29 10.9 +0.1**
comp=Z,1.2nm,0.8s,mb4.5
NVAR Mina Array Bea 99.24 33 P P **08 29 16.8 -0.2**
NVAR PP PP 08 33 08.3 -10
NVAR PKKPbc PKKPbc 08 45 40.0 -1.1
NVAR Mina Array Bea 99.24 33 P P **08 29 16.8 -0.2**
comp=Z,0.4nm,0.8s,mb4.0,baz=260,slow=3.3,SNR=3.7
NVAR PP PP 08 33 08.3 -10
comp=Z,0.6nm,0.8s,baz=294,slow=5.8,SNR=4.2
NVAR PKKPbc PKKPbc 08 45 40.0 -1.1
comp=Z,0.6nm,0.8s,baz=126,slow=4.4,SNR=4.7
HWUT Hardware Ranch 99.42 27 *e*P P **08 29 17.7 0.0**
comp=Z,2.1nm,0.7s,mb4.8
RSSD Black Hills 99.75 21 *e*P Pdif 08 29 19.6 +0.5
comp=Z,4.9nm,0.8s
RSSD Black Hills 99.75 21 *e*P Pdif 08 29 19.6 +0.5
RSSD pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
SMCO Snowmass 103.24 25 *e*P Pdif 08 29 35.5 +0.9
comp=Z,1.8nm,0.8s
X22A Bernardo 107.36 27 ⇓PKiKP PKiKP 08 34 02.2 +0.3
baz=107
117A Oracle 107.51 31 ⇓PKiKP PKiKP 08 34 02.3 +0.2
baz=107
118A Homack Ranch, 107.78 30 ⇓PKiKP PKiKP 08 34 02.6 -0.1
baz=107
Y22A Socorro 107.88 27 ⇓PKiKP PKiKP 08 34 02.6 -0.2
baz=108
W27A Bowe Ranch, En 108.29 24 ⇑PKiKP PKiKP 08 34 02.6 -0.9
baz=108
Z22A Elephant Butte 108.48 28 ⇑PKiKP PKiKP 08 34 03.5 -0.5
baz=108
Y25A Mesa, Roswell 108.75 25 ⇑PKiKP PKiKP 08 34 03.9 -0.6
baz=108
Z24A Sheeppen Canyo 109.03 26 ⇑PKiKP PKiKP 08 34 05.0 0.0
baz=109
Z25A Roswell 109.31 26 ⇑PKiKP PKiKP 08 34 04.9 -0.6
baz=109
Z27A Tatum 109.83 25 ⇑PKiKP PKiKP 08 34 06.0 -0.5
baz=110
226A Malaga, Loving 110.63 26 ⇑PKiKP PKiKP 08 34 07.5 -0.5
baz=110
325A Bean Ranch, Si 110.92 27 ⇑PKiKP PKiKP 08 34 07.9 -0.8
baz=111
425A Indio Mountain 111.44 27 ⇓PKiKP PKiKP 08 34 09.1 -0.5
baz=111
426A McDonald Obser 111.91 26 ⇓PKiKP PKiKP 08 34 09.7 -0.8
baz=112
427A Hayter Ranch, 111.98 26 ⇑PKiKP PKiKP 08 34 10.1 -0.5
baz=112
428A Kincaid Ranch, 112.36 25 ⇑PKiKP PKiKP 08 34 11.1 -0.3
baz=112
526A Mary Lane Ranc 112.43 27 ⇓PKiKP PKiKP 08 34 10.2 -1.3
baz=112

528A	**Cox Ranch, San** baz=112	**112.83**	**26**	⇓PKiKP	PKiKP	08 34 11.7	-0.6
626A	**Big Bend Ranch** baz=112	**112.87**	**27**	⇓PKiKP	PKiKP	08 34 11.6	-0.8
627A	**Terlingua Ranc** baz=113	**113.24**	**26**	⇑PKiKP	PKiKP	08 34 12.5	-0.6
TXAR	**Lajitas Array**	**113.24**	**27**	PKPdf	PKiKP	08 34 12.8	-0.2
TXAR				PP	PP	08 35 02.0	+0.1
TXAR				PKKPbc	PKKPbc	08 44 58.2	+0.1
TXAR	**Lajitas Array** comp=Z,0.6nm,0.5s,baz=219,slow=1.1,SNR=9.7	**113.24**	**27**	PKiKP	PKiKP	08 34 12.8	-0.2
TXAR	comp=Z,1.2nm,0.8s,baz=335,slow=7.5,SNR=7.7			PP	PP	08 35 02.0	+0.1
TXAR	comp=Z,0.6nm,0.9s,baz=160,slow=4.0,SNR=4.7			PKKPbc	PKKPbc	08 44 58.2	+0.1
TXAR	**Lajitas Array**	**113.24**	**27**	*i* PKiKP	PKiKP	08 34 12.9	-0.2
TXAR						08 35 02.0	
TXAR	comp=Z,1.0nm,0.5s			pmax	pmax		
TXAR	comp=Z,1.0nm,0.8s			pmax	pmax		
JCT	**Junction City**	**113.58**	**23**	*e*PKPdf	PKiKP	08 34 13.1	-0.7
NVL	**N'lazarevskaya**	**120.85**	**203**	*e*PKiKP	PKPdf	08 34 24.8	-1.5
NVL	comp=Z,10.0nm,0.6s			pmax	pmax		
MAIT	**Maitri**	**120.89**	**203**	*e*PKPab	PKPdf	08 34 25.6	-0.7
QSPA	**South Pole Qui**	**121.88**	**180**	*e*PKPdf	PKPdf	08 34 27.1	-1.0
VNA1	**Neumayer--Stat**	**127.50**	**203**	*e*	PKPdf	08 34 38.1	-0.9
VNA1				*e*		08 34 41.4	
ROSC	**El Rosal**	**143.23**	**358**	*e*PKPdf	PKPdf	08 35 08.1	-2.0
ROSC	**El Rosal** comp=Z,18nm,0.8s,baz=101,slow=6.7,SNR=14	**143.23**	**358**	PKP	PKPdf	08 35 08.2	-1.8
OTAV	**Otavalo**	**147.70**	**6**	*e*PKPdf	PKPdf	08 35 18.4	+0.7
OTAV				*e*PKPbc	PKPbc	08 35 21.1	+0.7
CAM4	**Nova Friburgo**	**149.36**	**280**	⇑*i*P	PKPdf	08 35 23.8	+3.8
CAM4				*i*		08 35 23.9	
CAM4				*i*		08 35 26.3	
CAM4				*i*		08 35 28.2	
LPAZ	**La Paz** comp=Z,3.7nm,0.9s,baz=69,slow=2.5,SNR=17	**162.93**	**336**	PKP	PKPdf	08 35 38.3	+0.4
LPAZ	**La Paz**	**162.93**	**336**	*e*PKiKP	PKPdf	08 35 38.0	+0.1
CPUP	**Villa Florida** comp=Z,2.5nm,0.9s,baz=32,slow=4.7,SNR=4.1	**163.24**	**285**	PKP	PKPdf	08 35 36.6	-1.3
CPUP	**Villa Florida** comp=Z,3.0nm,0.9s	**163.24**	**285**	PKiKP	PKPdf	08 35 36.7	-1.3
CPUP				pmax	pmax		

*ISCJB **07** 08:51:28.6±0.5,52°.25N±0°.09×175°.55W±0°.07,h10km, mb3.9/6,Error ellipse: s-maj=13.6km s-min=4.9km az=162.0*
*NEIC **07** 08:51:28.1,52°.10N×175°.46W,h5km,mb4.2/1, ML3.7(AEIC),After AEIC.*
*IDC **07** 08:51:29.1±1.1,52°.23N×175°.58W,h0km,mb3.7/5, mb1 4.0/6,mb1mx3.7/25,mbtmp3.7/6,ML4.0/1,Error ellipse: s-maj=39.9km s-min=23.7km az=4.0*

ISC 07 08:51:29.8±0.6,52°.1N±0°.1×175°.51W±0°.07,h10km,n17, σ1°24/19,mb3.9/6,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.34**	**266**	*e*Pg	**Pg**	**08 51 36.5**	**0.0**
ADK	**Adak**	**0.76**	**252**	P	**Pg**	**08 51 43.4**	**-1.1**
ADK				S	**Sg**	**08 51 54.7**	**+0.2**
ATKA	**Atka Island**	**0.81**	**84**	P	**Pg**	**08 51 43.6**	**-1.9**
ATKA				S	**Sg**	**08 51 55.3**	**-0.8**
AMKA	**Amchitka**	**3.31**	**259**	P	**Pn**	**08 52 20.2**	**-1.4**
NIKO	**Nikolski**	**4.15**	**76**	P	**Pn**	**08 52 33.5**	**+0.3**
SPIA	**Saint Paul Isl**	**5.92**	**29**	P	**Pn**	**08 52 56.3**	**-1.1**
KDAK	**Kodiak Island** 0.6nm,0.3s,baz=318,slow=9.9,SNR=8.6	**14.30**	**58**	Pn	**Pn**	**08 54 55.3**	**+3.2**
RSO	**Redoubt South**	**15.07**	**47**	*e*Pn	**Pn**	**08 55 06.1**	**+3.5**
ILAR	**Eielson Array** 0.2nm,0.3s,baz=231,slow=9.0,SNR=17	**19.39**	**38**	P	**Pn**	**08 55 54.2**	**-2.4**
EGAK	**Eagle** 11nm,1.0s,mb4.2	**21.65**	**41**	*e*P	**P**	**08 56 20.0**	**0.0**
DAWY	**Dawson**	**22.16**	**43**	*e*P	**P**	**08 56 26.3**	**+0.8**
NVAR	**Mina Array Bea**	**41.45**	**86**	P	**P**	**08 59 18.5**	**+2.1**
NVAR	**Mina Array Bea** 0.7nm,0.8s,mb3.3,baz=298,slow=8.1,SNR=5.1	**41.45**	**86**	P	**P**	**08 59 18.5**	**+2.1**
TXAR	**Lajitas Array** 0.8nm,0.7s,mb3.9,baz=306,slow=4.2,SNR=6.7	**56.53**	**84**	P	**P**	**09 01 13.1**	**+0.9**
MKAR	**Makanchi Array** 0.3nm,0.2s,mb4.0,baz=44,slow=8.6,SNR=3.1	**61.15**	**310**	P	**P**	**09 01 44.2**	**+0.1**
BVAR	**Borovoye Array** 1.1nm,0.6s,mb4.2,baz=72,slow=9.4,SNR=4.5	**61.62**	**321**	P	**P**	**09 01 48.1**	**+1.0**
ASAR	**Alice Springs** 0.2nm,0.5s,mb3.6,baz=30,slow=5.8,SNR=3.3	**87.44**	**225**	P	**P**	**09 04 17.9**	**+0.7**

*IDC **07** 08:55:55.9±2.0,52°.45N×176°.10W,h0km,mb3.5/3, mb1 3.9/5,mb1mx3.5/26,mbtmp3.6/5,ML3.5/2,Error ellipse: s-maj=78.6km s-min=31.2km az=144.0*
*NEIC **07** 08:55:56.8,52°.10N×175°.46W,h5km,ML3.4(AEIC),After AEIC.*
*ISCJB **07** 08:55:57.4±1.6,52°.1N±0°.2×175°.5W±0°.1,h13km±11km, mb3.5/3,Error ellipse: s-maj=35.0km s-min=6.5km az=166.0*

ISC 07 08:55:57.4±1.2,52°.0N±0°.1×175°.43W±0°.06,h2km±8km,n11, σ0°83/14,mb3.5/3,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.41**	**291**	*e*Pg	**Pg**	**08 56 05.3**	**0.0**
GSTR				*e*Sg	**Sg**	**08 56 10.6**	**-0.1**
ADK	**Adak**	**0.78**	**266**	P	**Pg**	**08 56 12.2**	**-0.1**
ADK				S	**Sg**	**08 56 23.2**	**+0.8**
ATKA	**Atka Island**	**0.80**	**71**	P	**Pg**	**08 56 12.5**	**-0.3**
ATKA				S	**Sg**	**08 56 22.9**	**-0.2**
AMKA	**Amchitka**	**3.33**	**262**	P	**Pn**	**08 56 48.9**	**-1.4**
KDAK	**Kodiak Island** 0.1nm,0.3s,baz=225,slow=4.3,SNR=2.3	**14.35**	**57**	Pn	**Pn**	**08 59 22.2**	**+0.9**
ILAR	**Eielson Array** 0.1nm,0.3s,baz=235,slow=7.2,SNR=13	**19.49**	**38**	P	**Pn**	**09 00 22.4**	**-4.1**
EGAK	**Eagle**	**21.74**	**41**	*e*P	**P**	**09 00 48.7**	**-0.9**
DAWY	**Dawson**	**22.25**	**43**	*e*P	**P**	**09 00 55.7**	**+0.6**
NVAR	**Mina Array Bea** 0.4nm,0.6s,mb3.2,baz=310,slow=7.0,SNR=3.0	**41.41**	**86**	P	**P**	**09 03 48.1**	**+3.2**
TXAR	**Lajitas Array** 0.4nm,0.6s,mb3.6,baz=297,slow=2.8,SNR=5.7	**56.50**	**84**	P	**P**	**09 05 41.0**	**+0.3**
ASAR	**Alice Springs** 0.4nm,0.7s,mb3.8,baz=19,slow=5.9,SNR=3.2	**87.35**	**225**	P	**P**	**09 08 45.2**	**-0.3**

*IDC **07** 08:59:43.5±1.4,35°.39N×141°.14E,h0km,mb3.6/3, mb1 3.7/5,mb1mx3.5/24,mbtmp3.5/5,ML3.5/2,MS3.0/3, Ms1 3.0/3,ms1mx2.5/34,Error ellipse: s-maj=34.0km s-min=22.3km az=107.0*
*ISCJB **07** 08:59:47.2±0.8,35°.48N±0°.04×141°.02E±0°.07,h39km±7km, mb3.6/3,MS3.0/2,Error ellipse: s-maj=9.9km s-min=6.5km az=5.0*
*JMA **07** 08:59:47.5±0.1,35°.52N×141°.00E,h39km±1km,M3.2*
*NEIC **07** 08:59:47.6,35°.53N×141°.00E,h40km,MG3.2(JMA),After JMA.*

ISC 07 08:59:47.9±0.9,35°.46N±0°.04×141°.00E±0°.07,h31km±4km, n19,σ0°63/24,mb3.6/3,MS3.0/2,4D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.27**	**334**	⇓P	**Pb**	**08 59 54.8**	**-0.2**
CHOJ				S	**Sb**	**08 59 59.8**	**0.0**
KTR	**Katsuura**	**0.64**	**241**	*e*S	**Sb**	**09 00 09.5**	**+0.1**
JCN	**Nagara**	**0.66**	**267**	⇓P	**Pb**	**09 00 01.3**	**+0.4**
JCN				S	**Sb**	**09 00 09.2**	**-0.5**
BSO4	**Boso 4**	**0.72**	**229**	⇓P	**Pn**	**09 00 01.8**	**-0.1**
BSO3	**Boso 3**	**0.77**	**212**	⇓P	**Pn**	**09 00 02.4**	**-0.2**
BSO3				*e*S	**Sb**	**09 00 13.3**	**+0.3**
BSO1	**Boso 1**	**0.81**	**181**	P	**Pn**	**09 00 02.8**	**-0.3**
JYT	**Yasato**	**1.01**	**320**	P	**Pn**	**09 00 05.0**	**-0.9**
JIM2	**Oshima 3**	**1.49**	**241**	P	**Pn**	**09 00 11.1**	**-1.4**
JIM2				S	**Sn**	**09 00 31.4**	**+0.6**
JOD2	**Odawara 2**	**1.58**	**263**	P	**Pn**	**09 00 14.0**	**+0.3**
JOD2				S	**Sn**	**09 00 33.4**	**+0.3**
JAG	**Ashikaga**	**1.58**	**308**	P	**Pn**	**09 00 13.3**	**-0.5**
MJAR	**Matsushiro Arr** 7.3nm,0.3s,baz=97,slow=14,SNR=17	**2.51**	**296**	Pn	**Pn**	**09 00 27.2**	**+0.7**
MAJO	**Matsushiro**	**2.51**	**296**	*e*Pn	**Pn**	**09 00 27.3**	**+0.8**
MAT	**Matsushiro**	**2.51**	**296**	P	**Pn**	**09 00 27.7**	**+1.2**
MAT				S	**Sn**	**09 00 54.8**	**-1.3**
JHJ	**Hachijo jima 2**	**2.54**	**204**	Pn	**Pn**	**09 00 27.1**	**+0.1**
	24nm,0.3s,baz=45,slow=7.8,SNR=11						
JHJ				Sn	**Sn**	**09 00 56.6**	**-0.3**
	75nm,0.3s,baz=100,slow=23,SNR=12						
KSRS	**Korea Array** comp=Z,38nm,21.8s,baz=341,slow=34	**10.72**	**285**	LR	LR	09 05 55.2	
GUMO	**Guam** comp=Z,30nm,19.3s,MS2.7,baz=122,slow=31	**22.05**	**170**	LR	LR	09 11 11.1	
MKAR	**Makanchi Array** 0.4nm,0.2s,mb3.6,baz=87,slow=8.9,SNR=3.1	**44.69**	**303**	P	**P**	**09 07 58.7**	**+0.9**
MKAR	comp=Z,37nm,19.3s,MS3.3,baz=184,slow=38			LR	LR	09 28 13.1	
ILAR	**Eielson Array** 0.5nm,0.6s,mb3.6,baz=265,slow=5.9,SNR=10	**51.00**	**32**	P	**P**	**09 08 46.8**	**+0.4**
ASAR	**Alice Springs** 0.3nm,0.8s,mb3.4,baz=0.0,slow=8.3,SNR=3.0	**59.19**	**188**	P	**P**	**09 09 45.3**	**-0.5**

*LDG **07** 09:03:14.6±0.3,42°.94N×1°.33W,h2km,Md2.2/2,Ml2.5/1, Error ellipse: s-maj=5.1km s-min=2.2km az=51.0*
*CSEM **07** 09:03:14.3±0.4,42°.94N×1°.32W,h10km,ML2.5/1,Error ellipse: s-maj=7.5km s-min=3.1km az=47.0*
*NEIC **07** 09:03:14.6,42°.94N×1°.33W,h2km,ML2.5(LDG), ML2.2(STR),After LDG.*
*STR **07** 09:03:15.2±0.6,42°.98N×1°.30W,h2km,Ml2.2,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 07 09:03:14.3±2.1,42°.95N±0°.07×1°.3W±0°.1,h10km,n12, σ0°33/24,Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJPF	**Ste Jean**	**0.18**	**25**	*e*Pg	**Pg**	**09 03 18.4**	**+0.2**
SJPF				*e*Sg	**Sg**	**09 03 20.5**	**-0.2**
	69nm,0.2s						
SJPF	**Ste Jean**	**0.18**	**25**	*e*Pg	**Pg**	**09 03 18.4**	**+0.2**
SJPF				*e*Sg	**Sg**	**09 03 20.5**	**-0.2**
	34nm,0.2s						
OSSF	**Osses**	**0.31**	**9**	Pg	**Pg**	**09 03 20.7**	**+0.2**
OSSF				Sg	**Sg**	**09 03 24.1**	**-0.5**
OSSF	**Osses**	**0.31**	**9**	Pg	**Pg**	**09 03 20.7**	**+0.2**
OSSF				Sg	**Sg**	**09 03 24.1**	**-0.5**
ORDF	**Ordiarp**	**0.39**	**48**	Pg	**Pg**	**09 03 22.4**	**+0.4**
ORDF				Sg	**Sg**	**09 03 27.5**	**+0.4**
ORDF	**Ordiarp**	**0.39**	**48**	Pg	**Pg**	**09 03 22.4**	**+0.4**
ORDF				Sg	**Sg**	**09 03 27.5**	**+0.4**
ETSF	**Etsaut**	**0.57**	**95**	*e*Pg	**Pg**	**09 03 25.4**	**+0.1**
ETSF				*e*Sg	**Sg**	**09 03 32.7**	**-0.1**
	14nm,0.2s						
ETSF	**Etsaut**	**0.57**	**95**	*e*Pg	**Pg**	**09 03 25.4**	**+0.1**
ETSF				*e*Sg	**Sg**	**09 03 32.7**	**-0.1**
	7.2nm,0.2s						
REYF	**Montagne du Re**	**0.70**	**80**	Pg	**Pg**	**09 03 27.9**	**+0.1**
REYF				Sg	**Sg**	**09 03 37.0**	**+0.1**
REYF	**Montagne du Re**	**0.70**	**80**	Pg	**Pg**	**09 03 27.9**	**+0.1**
REYF				Sg	**Sg**	**09 03 37.0**	**+0.1**
EPF	**Esparros**	**1.23**	**86**	*e*Pg	**Pg**	**09 03 37.2**	**-0.7**
EPF				*e*Sg	**Sg**	**09 03 53.6**	**-0.2**
	9.0nm,0.2s						
EPF	**Esparros**	**1.23**	**86**	*e*Pg	**Pg**	**09 03 37.2**	**-0.7**
EPF				*e*Sg	**Sg**	**09 03 53.6**	**-0.2**
	4.5nm,0.2s						

*ISK **07** 09:04:01.2,39°.46N×30°.31E,h9km,MD2.7*
*DDA **07** 09:04:02.2,39°.27N×30°.55E,h3km±1km,Md2.8*
*ISCJB **07** 09:04:03.0±0.7,39°.33N±0°.07×30°.48E±0°.07,h10km,Error ellipse: s-maj=11.3km s-min=4.5km az=142.3*
*CSEM **07** 09:04:03.3±0.3,39°.27N×30°.49E,h2km,MD2.8,Error ellipse: s-maj=9.2km s-min=5.2km az=156.0*

ISC 07 09:04:03.7±0.8,39°.26N±0°.05×30°.52E±0°.05,h6km±12km, n16,σ0°96/25,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESKT	**Eskisehir**	**0.36**	**45**	*e*PG	**Pg**	**09 04 09.8**	**-0.9**
ESKT				*e*SG	**Sg**	**09 04 16.4**	**+0.8**
ESKT	**Eskisehir**	**0.36**	**45**	*i* P	**Pg**	**09 04 08.9**	**-1.8**
ESKT				*i* S	**Sg**	**09 04 14.8**	**-0.7**
ESKT	**Eskisehir**	**0.36**	**45**	*e*Pg	**Pg**	**09 04 09.8**	**-1.0**
ESKT				*e*Sg	**Sg**	**09 04 16.4**	**+0.9**
SEYT	**Eskypehyr**	**0.36**	**45**	*i* P	**Pg**	**09 04 08.9**	**-1.9**
SEYT				*i* S	**Sg**	**09 04 14.8**	**-0.7**
ALT	**Altintas**	**0.38**	**237**	*e*PG	**Pg**	**09 04 09.9**	**-1.1**
ALT				*e*SG	**Sg**	**09 04 16.4**	**+0.4**
ALT	**Altintas**	**0.38**	**237**	*e*PG	**Pg**	**09 04 09.9**	**-1.2**
ALT				*e*Sg	**Sg**	**09 04 16.4**	**+0.4**
SVRH	**Sivrihisar-ESK**	**0.80**	**77**	*e*PG	**Pg**	**09 04 19.6**	**+0.5**
SVRH	**Sivrihisar-ESK**	**0.80**	**77**	*e*Pg	**Pg**	**09 04 19.6**	**+0.5**
KIZT	**Kizilcal**	**1.13**	**109**	*e*PN	**Pn**	**09 04 26.8**	**+0.8**
KIZT	**Kizilcal**	**1.13**	**109**	*e*Pn	**Pn**	**09 04 26.8**	**+0.7**
GULT	**Gulveren**	**1.17**	**360**	*e*PG	**Pg**	**09 04 20.5**	**-5.6**
MDU	**Mudurnu**	**1.31**	**24**	*e*PN	**Pb**	**09 04 25.0**	**-3.8**
MDU	**Mudurnu**	**1.31**	**24**	*e*Pn	**Pb**	**09 04 25.0**	**-3.8**
ULDT	**Uludag**	**1.38**	**310**	*i* P	**Pn**	**09 04 28.8**	**-0.8**
ULDT				*i* S	**Sg**	**09 04 48.9**	**+0.8**
ULDT	**Uludag**	**1.38**	**310**	*i* P	**Pn**	**09 04 28.8**	**-0.7**
ULDT				*i* S	**Sg**	**09 04 48.9**	**+0.8**
SGKT	**Sivrigoynuk**	**1.76**	**42**	*i* P	**Pg**	**09 04 38.8**	**+1.3**
SGKT				*i* S	**Sg**	**09 04 59.9**	**-0.6**

*NEIC **07** 09:08:25.9,52°.10N×175°.46W,h5km,ML3.9(AEIC),After AEIC.*
*ISCJB **07** 09:08:27.2±0.6,52°.3N±0°.1×175°.6W±0°.1,h10km,mb3.7/8, Error ellipse: s-maj=20.8km s-min=5.9km az=149.1*
*IDC **07** 09:08:28.4±1.1,52°.42N×175°.63W,h0km,mb3.7/8, mb1 3.9/10,mb1mx3.8/26,mbtmp3.7/10,ML4.0/2,Error ellipse: s-maj=34.8km s-min=20.1km az=178.0*

ISC 07 09:08:28.9±0.6,52°.2N±0°.1×175°.7W±0°.1,h10km,n16, σ1°39/17,mb3.7/8,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.27**	**248**	*e*Pg	**Pg**	**09 08 34.2**	**-0.3**
ADK	**Adak**	**0.71**	**244**	*e*Pg	**Pg**	**09 08 41.2**	**-1.5**
ADK				*e*Sg	**Sg**	**09 08 52.1**	**+0.1**
NIKO	**Nikolski**	**4.21**	**77**	Pn	**Pn**	**09 09 31.1**	**-2.0**
SVW2	**Sparrevohn** 4.3nm,0.4s	**14.13**	**43**	*e*P	**Pn**	**09 11 51.9**	**+3.0**
KDAK	**Kodiak Island** 0.7nm,0.3s,baz=252,slow=6.0,SNR=8.7	**14.33**	**58**	Pn	**Pn**	**09 11 51.9**	**+0.2**
ILAR	**Eielson Array**	**19.38**	**38**	P	**Pn**	**09 12 52.9**	**-2.7**
ILAR	**Eielson Array** 0.2nm,0.3s,baz=230,slow=7.5,SNR=18	**19.38**	**38**	P	**Pn**	**09 12 52.9**	**-2.7**
INK	**Inuvik** 0.7nm,0.2s,mb3.8,baz=207,slow=20,SNR=2.7	**25.66**	**35**	P	**P**	**09 13 56.8**	**-1.6**
NVAR	**Mina Array Bea**	**41.52**	**86**	P	**P**	**09 16 18.5**	**+2.4**
NVAR	**Mina Array Bea** 0.7nm,0.8s,mb3.4,baz=294,slow=7.7,SNR=6.8	**41.52**	**86**	P	**P**	**09 16 18.5**	**+2.4**
TXAR	**Lajitas Array** 0.3nm,0.5s,mb3.6,baz=298,slow=5.6,SNR=9.5	**56.61**	**84**	P	**P**	**09 18 11.4**	**-0.5**
KURK	**Kurchatov** 0.5nm,0.6s,mb3.7,baz=40,slow=7.0,SNR=3.5	**59.85**	**315**	P	**P**	**09 18 34.4**	**+0.2**
MKAR	**Makanchi Array** 0.1nm,0.3s,mb3.5,baz=46,slow=10,SNR=3.2	**61.04**	**310**	P	**P**	**09 18 42.5**	**+0.2**
BVAR	**Borovoye Array** 0.7nm,0.4s,mb4.1,baz=102,slow=6.1,SNR=3.7	**61.51**	**321**	P	**P**	**09 18 45.6**	**+0.2**
BRTR	**Keskin Array B** 0.6nm,0.9s,mb3.7,baz=354,slow=12,SNR=2.5	**84.97**	**338**	P	**P**	**09 21 05.6**	**+1.5**
ASAR	**Alice Springs** 0.3nm,0.6s,mb3.7,baz=32,slow=4.9,SNR=5.2	**87.43**	**225**	P	**P**	**09 21 18.1**	**+1.9**

*ISCJB **07** 09:08:36.2±0.9,52°.34N±0°.05×175°.51W±0°.04,h6km±6km, mb4.4/86,MS3.8/6,Error ellipse: s-maj=8.2km s-min=3.9km az=171.2*
*IDC **07** 09:08:36.8±0.6,52°.39N×175°.44W,h0km,mb4.2/22, mb1 4.3/23,mb1mx4.3/30,mbtmp4.2/23,ML4.7/1,MS3.6/2, Ms1 3.6/2,ms1mx3.1/14,Error ellipse: s-maj=20.4km s-min=12.3km az=176.0*
*NEIC **07** 09:08:38.6±0.3,52°.32N×175°.58W,h10km,mb4.5/61, Error ellipse: s-maj=9.1km s-min=4.7km az=171.0*
*BJI **07** 09:08:43.5,53°.12N×176°.19W,h10km,mB5.0/10, mb4.7/14,Ms4.3/6,Ms7 4.0/7*

ISC 07 09:08:37.6±1.0,52°.32N±0°.05×175°.52W±0°.04,h4km±6km, h13km±1.4km:pP-P,n411,σ0°79/413,mb4.4/86,MS3.8/6, 132C-136D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**0.84**	**239**	*e*Pg	**Pg**	**09 08 52.7**	**-1.0**
ADK				*e*Sg	**Sg**	**09 09 03.6**	**-1.0**
NIKO	**Nikolski**	**4.11**	**78**	*e*Pn	**Pn**	**09 09 42.4**	**+1.2**
SPIA	**Saint Paul Isl**	**5.75**	**30**	*e*Pn	**Pn**	**09 10 04.4**	**+0.8**
AKGG	**Akutan Green G**	**6.02**	**68**	P	**Pn**	**09 10 08.3**	**+1.0**
AKUT	**Akutan**	**6.13**	**69**	*e*Pn	**Pn**	**09 10 06.4**	**-2.5**
SMY	**Shemya**	**6.35**	**278**	*e*Pn	**Pn**	**09 10 13.0**	**+1.2**
FALS	**False Pass** 228nm,1.2s	**7.64**	**66**	*e*Pn	**Pn**	**09 10 29.6**	**+0.1**
SDPT	**Sand Point** 65nm,0.8s	**9.40**	**65**	Pn	**Pn**	**09 10 55.6**	**+2.0**
OHAK	**Old Harbor**	**13.71**	**60**	*e*Pn	**Pn**	**09 11 52.8**	**+0.3**
KDAK	**Kodiak Island**	**14.20**	**58**	*e*Pn	**Pn**	**09 11 56.5**	**-2.7**
KDAK				Sn	**Sn**	**09 14 36.0**	**-1.1**
KDAK	**Kodiak Island** 3.5nm,0.3s,baz=247,slow=6.6,SNR=24	**14.20**	**58**	Pn	**Pn**	**09 12 03.7**	**+4.5**
KDAK	baz=226,slow=19,SNR=1.3			Sn	**Sn**	**09 14 36.0**	**-1.1**
TTA	**Tatalina**	**14.83**	**37**	*e*Pn	**Pn**	**09 12 08.9**	**+1.1**
RSO	**Redoubt South**	**14.95**	**48**	*e*Pn	**Pn**	**09 12 07.3**	**-2.0**
PMR	**Palmer** 18nm,1.1s	**17.01**	**47**	*e*P	**Pn**	**09 12 38.0**	**+2.0**
DIV	**Divide** 16nm,1.0s	**18.40**	**50**	*e*Pn	**Pn**	**09 12 55.1**	**+1.9**
COLA	**College** 20nm,0.9s	**18.92**	**38**	*e*P	**Pn**	**09 13 01.0**	**+1.5**
ILAR	**Eielson Array** 1.0nm,0.3s,baz=242,slow=9.8,SNR=36	**19.24**	**39**	P	**Pn**	**09 13 02.0**	**-1.3**
ILAR	**Eielson Array**	**19.24**	**39**	P	**Pn**	**09 13 02.0**	**-1.3**
MENT	**Mentasta**	**19.84**	**45**	*e*P	**Pn**	**09 13 09.7**	**-0.9**
EGAK	**Eagle** 55nm,0.8s,mb5.0	**21.50**	**41**	*e*P	**P**	**09 13 28.2**	**+1.2**
DAWY	**Dawson**	**22.02**	**44**	*e*P	**P**	**09 13 25.3**	**-7.3**
HYT	**Haines Junctio**	**22.31**	**53**	*e*P	**P**	**09 13 34.8**	**-0.9**
INK	**Inuvik** 18nm,0.9s,mb4.6	**25.52**	**35**	*e*P	**P**	**09 14 07.8**	**+1.1**
INK	**Inuvik** 14nm,0.8s,mb4.5,baz=234,slow=11,SNR=11	**25.52**	**35**	P	**P**	**09 14 06.2**	**-0.5**
DLBC	**Dease Lake** 1.6nm,1.0s,mb3.5,baz=294,slow=14,SNR=2.5	**26.14**	**58**	P	**P**	**09 14 11.5**	**-0.9**
YKA	**Yellowknife Ar**	**33.10**	**48**	P	**P**	**09 15 12.0**	**-2.1**
YKA				PcP	PcP	09 17 55.8	-1.2
YKA	**Yellowknife Ar** 1.5nm,0.7s,mb4.0,baz=283,slow=9.0,SNR=7.1	**33.10**	**48**	P	**P**	**09 15 12.0**	**-2.1**
YKA	0.4nm,0.4s,baz=281,slow=3.0,SNR=9.3			PcP	PcP	09 17 55.8	-1.2
A05A	**Maple Falls** baz=33	**33.40**	**74**	⇓P	**P**	**09 15 17.6**	**+0.8**
E03A	**Lebam** baz=33	**33.66**	**79**	⇑P	**P**	**09 15 20.3**	**+1.2**
F03A	**Seaside** baz=34	**33.97**	**80**	⇑P	**P**	**09 15 23.0**	**+1.2**
D05A	**Enumclaw** baz=34	**34.30**	**77**	⇓P	**P**	**09 15 25.6**	**+1.0**
LON	**Longmire** 3.7nm,0.8s,mb4.4	**34.62**	**77**	*e*P	**P**	**09 15 27.8**	**+0.4**
F04A	**Amboy** baz=34	**34.66**	**79**	⇑P	**P**	**09 15 28.7**	**+0.9**
G04A	**Mulino** baz=35	**34.99**	**80**	⇓P	**P**	**09 15 31.6**	**+1.0**
ETW	**Entiat**	**35.08**	**75**	*e*P	**P**	**09 15 34.3**	**+2.9**
B08A	**Colville Reser** baz=35	**35.31**	**73**	⇓P	**P**	**09 15 33.5**	**+0.1**
H04A	**Detroit Lake** baz=35	**35.44**	**81**	⇑P	**P**	**09 15 35.0**	**+0.5**
MJAR	**Matsushiro Arr**	**35.93**	**263**	P	**P**	**09 15 38.9**	**+0.1**
MJAR	**Matsushiro Arr** 2.3nm,0.7s,mb4.2,baz=49,slow=7.5,SNR=8.2	**35.93**	**263**	P	**P**	**09 15 38.9**	**+0.1**
MAJO	**Matsushiro** 16nm,1.2s,mb4.8	**35.93**	**263**	*e*P	**P**	**09 15 38.9**	**+0.1**
MAT	**Matsushiro**	**35.93**	**263**	P	**P**	**09 15 38.3**	**-0.5**
MAT				*e*S	**S**	**09 21 18.0**	**+0.5**
HUMO	**Hull Mountain** 6.2nm,1.1s,mb4.5	**36.11**	**84**	*e*P	**P**	**09 15 42.6**	**+2.3**
OD2	**Odessa Site #2** 4.2nm,0.7s,mb4.5	**36.15**	**75**	*e*P	**P**	**09 15 40.5**	**-0.1**
HAWA	**Hanford** 8.4nm,0.9s,mb4.7	**36.16**	**77**	*e*P	**P**	**09 15 41.2**	**+0.5**
D08A	**Wollman Farm,** baz=36	**36.19**	**75**	⇓P	**P**	**09 15 41.4**	**+0.5**
MDJ	**Mudanjiang**	**36.41**	**280**	P	**P**	**09 15 44.6**	**+1.7**
MDJ				pP	pP	09 15 47.7	+3.5
MDJ				S	**S**	**09 21 25.3**	**+0.6**
MDJ				sS	sS	09 21 30.7	+3.8
MDJ				ScP	ScP	09 21 56.2	+2.3
MDJ				PcS	PcS	09 21 57.3	+2.8
MDJ	comp=Z,4.0nm,0.7s,mb4.5			pmax	pmax		
MDJ	comp=Z,51nm,2.9s,mb5.0			pmax	pmax		
MDJ	comp=N,67nm,19.8s,MS3.8			LR	LR		
MDJ	comp=E,160nm,22.1s,MS3.8			LR	LR		
MDJ	comp=Z,230nm,19.0s,MS4.0			LR	LR		
VIPM	**Ingram Point**	**36.48**	**80**	P	**P**	**09 15 48.2**	**+4.8**
EDM	**Edmonton**	**36.58**	**63**	*e*P	**P**	**09 15

F13A **Darby** 39.56 74 ⇑P P 09 16 09.2 -0.2
baz=39
CHMT **Chamberlain Mo** 39.60 72 eP P 09 16 09.8 0.0
E14A **Clinton** 39.72 73 ⇑P P 09 16 09.9 -0.8
baz=39,SNR=5.7
B16A **M & M Farms, S** 39.72 69 ⇑P P 09 16 10.2 -0.6
baz=39
H12A **Diamond D Ranc** 39.92 76 ⇑P P 09 16 12.0 -0.4
baz=40
MFID **Camas Ranch** 39.97 78 ⇓P P 09 16 12.6 -0.3
baz=40
G13A **Cobalt** 39.99 75 ⇑P P 09 16 12.6 -0.5
baz=40
WCN **Washoe City** 40.01 86 ⇓P P 09 16 13.4 +0.2
baz=40
C16A **Fuhringer Ranc** 40.01 70 ⇓P P 09 16 12.1 -1.0
baz=40,SNR=7.2
A17A **Triple J Farms** 40.03 68 ⇓P P 09 16 12.3 -1.0
baz=40,SNR=8.4
F14A **Wisdom** 40.11 74 ⇓P P 09 16 13.8 -0.3
baz=40
I12A **Atlanta** 40.18 77 ⇓P P 09 16 14.3 -0.2
baz=40
E15A **Deer Lodge** 40.21 72 ⇓P P 09 16 14.3 -0.6
baz=40
H13A **Challis** 40.27 76 ⇑P P 09 16 14.8 -0.6
baz=40
B17A **L&G Farms, Che** 40.30 69 ⇓P P 09 16 14.4 -1.2
baz=40
L10A **Juniper Basin** 40.35 80 ⇓P P 09 16 15.6 -0.5
baz=40
CMB **Columbia Colle** 40.41 88 eP P 09 16 09.5 -7.1
comp=Z,5.5nm,1.0s,mb4.2
D16A **Dana Ranch, Ca** 40.53 71 ⇓P P 09 16 16.1 -1.4
baz=40
HRY **Holter Researc** 40.53 72 eP P 09 16 17.2 -0.3
M10A **I.L. Ranch, Tu** 40.64 81 ⇓P P 09 16 18.8 +0.4
baz=40,SNR=8.4
C17A **Wharram Farm,** 40.67 70 ⇑P P 09 16 17.3 -1.3
baz=40
WAKR **Walker** 40.70 87 eP P 09 16 19.6 +0.7
I13A **Wildhorse Cree** 40.72 77 ⇓P P 09 16 18.6 -0.4
baz=40
E16A **East Helena** 40.72 72 ⇑P P 09 16 18.2 -0.8
baz=40
L11A **Cat Creek Ranc** 40.73 80 ⇓P P 09 16 19.1 -0.1
baz=40,SNR=8.8
HLID **Hailey** 40.74 77 eP P 09 16 19.4 +0.2
comp=Z,3.0nm,0.8s,mb4.0
H14A **Leadore** 40.77 75 ⇓P P 09 16 18.9 -0.6
baz=40
DLMT **Dillon** 40.81 74 ePcP PcP 09 18 20.7 0.0
B18A **Beardsley Farm** 40.84 68 ⇑P P 09 16 18.8 -1.1
baz=40
BMN **Battle Mountai** 40.87 83 eP P 09 16 21.2 +0.8
comp=Z,5.9nm,0.8s,mb4.3
MCMT **McKenzie Canyo** 40.96 75 eP P 09 16 20.8 -0.2
comp=Z,1.7nm,0.5s,mb3.9
D17A **Six Diamond Ra** 40.96 70 ⇓P P 09 16 19.5 -1.5
baz=41
J13A **Cove Ranch, Pi** 40.98 77 ⇑P P 09 16 20.2 -1.0
baz=41
G15A **Dillon** 40.99 74 ⇓P P 09 16 20.1 -1.1
baz=41
EGMT **Eagleton** 41.04 69 eP P 09 16 21.7 0.0
comp=Z,6.6nm,0.7s,mb4.4
M11A **Holland Ranch,** 41.14 81 ⇑P P 09 16 21.9 -0.7
baz=41
F16A **Kennard Place,** 41.15 73 ⇑P P 09 16 21.6 -1.1
baz=41
L12A **House Creek Ra** 41.19 79 ⇑P P 09 16 22.8 -0.2
baz=41
H15A **Lima** 41.20 75 ⇑P P 09 16 22.3 -0.7
baz=41
BOZ **Bozeman (W)** 41.23 73 eP P 09 16 23.1 -0.1
comp=Z,3.6nm,0.9s,mb4.0
E17A **Martinsdale** 41.23 71 ⇑P P 09 16 22.5 -0.7
baz=41
G16A **Moss Hill, Enn** 41.35 74 ⇓P P 09 16 23.6 -0.7
baz=41
NVAR **Mina Array Bea** 41.44 86 P P 09 16 25.0 0.0
NVAR **Mina Array Bea** 41.44 86 P P 09 16 25.0 0.0
comp=Z,2.6nm,1.0s,mb3.8,baz=293,slow=7.2,SNR=12
D18A **Linhart Farms,** 41.45 70 ⇓P P 09 16 24.2 -0.8
baz=41
N11A **Elko Archery C** 41.54 81 ⇑P P 09 16 25.2 -0.7
baz=41
KSRS **Korea Array** 41.65 272 P P 09 16 27.9 +1.2
comp=Z,1.7nm,0.7s,mb3.8,baz=57,slow=8.5,SNR=8.4
F17A **Fitzpatrick Pl** 41.65 72 ⇑P P 09 16 25.9 -0.8
baz=41
M12A **Wells** 41.68 80 ⇓P P 09 16 27.1 +0.1
baz=41
E18A **Harlowton** 41.73 71 ⇓P P 09 16 27.1 -0.2
baz=41,SNR=5.8
L13A **Double Diamond** 41.87 79 ⇓P P 09 16 28.9 +0.3
baz=42
G17A **Pierce Place,** 41.93 73 ⇓P P 09 16 28.4 -0.6
baz=42
N12A **Clover Valley,** 41.95 81 ⇑P P 09 16 30.4 +1.3
baz=42,SNR=7.7
H16A **Russell Place,** 41.98 74 ⇓P P 09 16 29.0 -0.4
baz=42
O11A **Cowboy Ranch,** 42.01 82 ⇓P P 09 16 29.9 +0.2
baz=42
J15A **Blackfoot** 42.02 76 ⇓P P 09 16 29.9 +0.2
baz=42
YMR **Madison River** 42.16 74 eP P 09 16 30.9 0.0
comp=Z,6.5nm,0.8s,mb4.3
M13A **Montello** 42.17 80 ⇑P P 09 16 30.8 -0.1
baz=42
F18A **Big Timber** 42.20 71 ⇓P P 09 16 30.7 -0.5
baz=42
GCMT **Greycliff** 42.30 72 eP P 09 16 32.4 +0.4
comp=Z,3.5nm,1.2s,mb3.9
P11A **Circle Ranch,** 42.30 83 ⇑P P 09 16 32.5 +0.4
baz=42
I16A **Newdale** 42.30 75 ⇑P P 09 16 31.8 -0.2
baz=42
L14A **Malta** 42.33 78 ⇓P P 09 16 32.4 +0.2
baz=42
Q10A **Clear Creek Ra** 42.36 84 ⇑P P 09 16 33.2 +0.7
baz=42
K15A **Arbon** 42.37 77 ⇓P P 09 16 33.0 +0.4
baz=42
N13A **Wendover, West** 42.45 80 ⇑P P 09 16 34.1 +0.9
baz=42
O12A **Currie** 42.48 81 ⇓P P 09 16 34.7 +1.2
baz=42,SNR=10
H17A **Grant Village** 42.55 74 ⇓P P 09 16 34.5 +0.5
baz=42
M14A **Sheep Mountain** 42.58 79 ⇓P P 09 16 34.8 +0.4
baz=42
VES **Vestal, Richgr** 42.62 90 ⇑P P 09 16 35.3 +0.6
baz=42
IMW **Indian Meadow** 42.62 75 eP P 09 16 35.2 +0.6
comp=Z,3.8nm,1.0s,mb4.1
FLWY **Flagg Ranch** 42.65 74 eP P 09 16 35.3 +0.5
comp=Z,8.7nm,1.3s,mb4.2
R10A **Warm Springs** 42.75 85 ⇓P P 09 16 35.7 0.0
baz=42
HVU **Hansel Valley** 42.76 78 eP P 09 16 36.0 +0.2
comp=Z,5.6nm,0.8s,mb4.3
Q11A **Duckwater** 42.80 84 ⇑P P 09 16 36.4 +0.3
baz=43
S10A **Tonopah Range,** 42.80 85 ⇓P P 09 16 36.7 +0.5
baz=43
TPAW **Teton Pass** 42.84 75 eP P 09 16 37.3 +0.9
comp=Z,3.7nm,1.0s,mb4.1
K16A **Soda Springs** 42.85 76 ⇓P P 09 16 36.8 +0.3
baz=43
P12A **McGill** 42.87 82 ⇑P P 09 16 36.6 0.0
baz=43
RLMT **Red Lodge** 42.90 72 eP P 09 16 37.2 +0.3
comp=Z,13nm,1.4s,mb4.5
SNOW **Snow King Moun** 42.98 75 eP P 09 16 37.8 +0.2
comp=Z,12nm,1.6s,mb4.4
REDW **Red Top Meadow** 42.98 75 eP P 09 16 40.6 +3.1
comp=Z,9.1nm,1.5s,mb4.3
N14A **Grayback Hills** 43.07 80 ⇑P P 09 16 37.1 -1.1
baz=43,SNR=8.4
ISA **Isabella** 43.11 89 ⇓P P 09 16 38.8 +0.1
baz=43
ISA **Isabella** 43.11 89 eP P 09 16 38.6 -0.1
comp=Z,5.4nm,0.9s,mb4.3
BGU **Big Grassy Mou** 43.12 80 eP P 09 16 41.4 +2.7
comp=Z,6.6nm,1.0s,mb4.3
R11A **Troy Canyon, C** 43.15 84 ⇑P P 09 16 39.2 +0.2
baz=43
Q12A **Willow Creek R** 43.18 83 ⇑P P 09 16 39.4 +0.1
baz=43
I18A **Diamond G Ranc** 43.39 74 ⇑P P 09 16 40.7 -0.1
baz=43
P13A **Bates Ranch, G** 43.42 82 ⇓P P 09 16 41.5 +0.3
baz=43
L16A **Fish Haven** 43.42 77 ⇓P P 09 16 41.3 +0.1
baz=43
MPMC **Manual Prospec** 43.45 88 ⇑P P 09 16 42.0 +0.5
baz=43
S11A **Rachel** 43.50 85 ⇓P P 09 16 41.9 +0.1
baz=43
J18A **Kendall Valley** 43.56 75 ⇓P P 09 16 41.9 -0.4
baz=43
FURC **Furnace Creek,** 43.57 87 ⇓P P 09 16 42.6 +0.2
baz=43
HWUT **Hardware Ranch** 43.59 78 eP P 09 16 42.3 -0.2
comp=Z,3.5nm,0.9s,mb4.1
DUG **Dugway** 43.69 80 eP P 09 16 43.6 +0.3
comp=Z,15nm,1.0s,mb4.7
L17A **Cokeville** 43.71 77 ⇑P P 09 16 43.3 -0.2
baz=43
Q13A **Wheeler Ranch,** 43.73 82 ⇑P P 09 16 43.7 +0.1
baz=44
R12A **Pony Springs,** 43.76 84 ⇓P P 09 16 44.1 +0.2
baz=44
K18A **Toltan Ranch,** 43.88 76 ⇑P P 09 16 44.3 -0.6
baz=44
P14A **Drum Mountains** 43.91 81 ⇓P P 09 16 45.0 -0.1
baz=44,SNR=8.7
U10A **Ash Meadows, A** 43.93 87 ⇑P P 09 16 45.9 +0.6
baz=44
S12A **Delamar Landin** 44.07 85 ⇑P P 09 16 46.5 +0.1
baz=44
T11A **Corn Creek, Al** 44.08 85 ⇑P P 09 16 46.7 +0.2
baz=44
BW06 **Boulder Array** 44.09 75 eP P 09 16 46.3 -0.2
comp=Z,6.6nm,1.0s,mb4.3
Q14A **Sevier Lake (B** 44.16 82 ⇑P P 09 16 47.5 +0.5
baz=44
R13A **O'Grain Ranch,** 44.24 83 ⇑P P 09 16 48.2 +0.4
baz=44
JLU **Jeanelle** 44.27 79 eP P 09 16 50.7 +2.7
comp=Z,5.2nm,1.0s,mb4.2
NLU **North Lily Min** 44.29 80 eP P 09 16 51.0 +2.9
comp=Z,9.6nm,0.9s,mb4.5
SHOC **Shoshone** 44.30 87 ⇓P P 09 16 48.5 +0.3
baz=44
L18A **Fontenelle, Gr** 44.31 76 ⇑P P 09 16 48.1 -0.2
baz=44
MWC **Mount Wilson** 44.32 91 eP P 09 16 48.8 +0.4
comp=Z,22nm,1.3s,mb4.7
GSC **Goldstone** 44.37 89 ⇑P P 09 16 48.5 -0.3
baz=44
GSC **Goldstone** 44.37 89 eP P 09 16 49.4 +0.6
comp=Z,12nm,0.8s,mb4.7
O16A **Springville** 44.48 79 ⇑P P 09 16 49.2 -0.4
baz=44
K19A **Absolon Red Bu** 44.48 75 ⇑P P 09 16 48.6 -1.0
baz=44
DAU **Daniels Canyon** 44.50 79 eP P 09 16 52.5 +2.7
MPU **Maple Canyon** 44.52 80 eP P 09 16 51.4 +1.5
comp=Z,6.7nm,0.9s,mb4.5
BFSC **Mount Baldy Ra** 44.55 90 ⇑P P 09 16 50.9 +0.6
baz=44
L19A **Farson** 44.61 76 ⇑P P 09 16 50.3 -0.3
baz=44
S13A **Holt Ranch, En** 44.69 84 ⇓P P 09 16 51.2 -0.2
baz=44,SNR=10
Q15A **Fillmore** 44.70 81 ⇑P P 09 16 51.2 -0.2
baz=44,SNR=8.7
ARUT **Antelope Range** 44.82 83 eP P 09 16 52.7 +0.3
comp=Z,11nm,1.0s,mb4.7
K20A **Yellowstone Ra** 44.88 74 ⇑P P 09 16 51.9 -0.9
baz=45
O17A **Robinson Place** 44.94 79 ⇑P P 09 16 53.3 -0.1
baz=45
CCUT **Cedar City** 45.02 84 eP P 09 16 57.0 +3.0
comp=Z,3.3nm,0.9s,mb4.2
U12A **Valley of Fire** 45.02 86 ⇑P P 09 16 54.1 +0.1
baz=45
T13A **Saint George** 45.02 85 ⇓P P 09 16 54.2 +0.2
baz=45
MSU **Marysvale** 45.12 82 eP P 09 16 57.4 +2.6
TMUT **Trail Mountain** 45.22 80 eP P 09 16 56.2 +0.6
comp=Z,13nm,0.9s,mb4.8
R15A **Junction** 45.26 82 ⇑P P 09 16 56.1 +0.2
baz=45
V12A **Nelson** 45.29 87 ⇓P P 09 16 56.3 +0.2
baz=45
GMRC **Granite Mounta** 45.42 88 ⇓P P 09 16 57.2 0.0
baz=45
Q16A **Castle Valley** 45.48 81 ⇑P P 09 16 58.1 +0.5
baz=45
T14A **Hurricane** 45.50 84 ⇑P P 09 16 57.9 +0.1
baz=45
S15A **Panguitch** 45.54 83 ⇓P P 09 16 58.6 +0.5
baz=45
P18A **Preston Nutter** 45.59 79 ⇓P P 09 16 59.0 +0.4
baz=45
R16A **Teasdale** 45.69 81 ⇓P P 09 16 59.4 +0.1
baz=46,SNR=7.0
PFO **Pinyon Flat Ob** 45.71 90 ⇑P P 09 17 00.0 +0.5
baz=46
V13A **Grand Canyon W** 45.74 86 ⇓P P 09 17 00.5 +0.8
baz=46
SRU **San Rafael** 45.75 80 eP P 09 17 00.8 +1.0
comp=Z,11nm,0.9s,mb4.8
O19A **Mirs Draw (B** 45.85 78 ⇑P P 09 17 00.3 -0.2
baz=46
U14A **Mt Trumbull** 45.86 85 ⇑P P 09 17 01.1 +0.5
baz=46
L21A **Rawlins** 45.87 75 ⇓P P 09 16 59.9 -0.8
baz=46
S16A **Weppner Ranch,** 45.98 82 ⇑P P 09 17 01.7 +0.1
baz=46
Q18A **Rafter H Ranch** 45.99 80 ⇑P P 09 17 01.4 -0.3
baz=46
N20A **Spence Gulch,** 46.03 76 ⇓P P 09 17 01.8 -0.2
baz=46
R17A **Hanksville Air** 46.07 81 ⇓P P 09 17 02.4 0.0
baz=46
M21A **Separation Pea** 46.09 75 ⇓P P 09 17 02.0 -0.5
baz=46
RWWY **Rawlins** 46.13 75 eP P 09 17 03.1 +0.3
comp=Z,6.9nm,1.1s,mb4.5
IRM **Iron Mountain** 46.14 88 ⇓P P 09 17 02.9 0.0
baz=46
MONP **Monument Peak** 46.22 91 ⇓P P 09 17 03.6 0.0
baz=46
W13A **Hualapai Mount** 46.29 87 ⇑P P 09 17 04.2 +0.1
baz=46
P19A **Cripple Cowboy** 46.35 78 ⇓P P 09 17 04.4 -0.1
baz=46
U15A **North Rim** 46.39 84 ⇑P P 09 17 05.2 +0.3
baz=46
V14A **Boquillas Ranc** 46.42 85 ⇑P P 09 17 05.3 +0.3
baz=46
O20A **White River Ci** 46.48 77 ⇑P P 09 17 05.5 0.0
baz=46
S17A **Black Ridge (B** 46.52 82 ⇓P P 09 17 05.4 -0.4
baz=46
N21A **Black Mountain** 46.52 76 ⇓P P 09 17 05.4 -0.4
baz=46
R18A **Canyonlands Na** 46.59 80 ⇑P P 09 17 06.4 0.0
baz=46
X13A **Yucca** 46.66 87 ⇑P P 09 17 06.7 -0.3
baz=46
W14A **Seligman** 46.71 86 ⇑P P 09 17 07.3 -0.1
baz=46
P20A **De Beque** 46.79 78 ⇑P P 09 17 07.2 -0.7
baz=46
V15A **Kaibab Nationa** 46.87 85 ⇓P P 09 17 08.7 +0.1
baz=47,SNR=11
T17A **Navajo Res., N** 46.93 82 ⇓P P 09 17 09.1 0.0
baz=47
S18A **Hurst Farm, Bl** 46.97 81 ⇓P P 09 17 09.7 +0.3
baz=47
R19A **Curley Farm, L** 47.03 80 ⇓P P 09 17 09.6 -0.3
baz=47
GLA **Glamis** 47.09 89 ePcP PcP 09 18 38.0 -4.3
N22A **Wattenberg Ran** 47.13 75 ⇓P P 09 17 10.0 -0.6
baz=47
PV04 **Paradox Valley** 47.18 80 eP P 09 17 10.8 -0.2
Q20A **Ridgley Place,** 47.19 79 ⇑P P 09 17 10.6 -0.4
baz=47
W15A **Williams** 47.23 85 ⇓P P 09 17 12.2 +0.8
baz=47
U16A **Tuba City** 47.29 83 ⇑P P 09 17 11.8 -0.1
baz=47
X14A **Yava** 47.32 86 ⇓P P 09 17 12.5 +0.3
baz=47
N23A **Red Feather La** 47.38 75 ⇑P P 09 17 12.1 -0.4
baz=47
T18A **Mexican Hat** 47.41 81 ⇑P P 09 17 12.2 -0.6
baz=47,SNR=10
S19A **Harvey Farm, M** 47.46 80 ⇓P P 09 17 13.1 -0.1
baz=47
O22A **Kremmling** 47.48 76 ⇑P P 09 17 13.0 -0.3
baz=47
PV01 **Paradox Valley** 47.55 80 eP P 09 17 13.5 -0.3
comp=Z,996nm,0.8s
WUAZ **Wupatki** 47.55 84 eP P 09 17 13.8 -0.1
comp=Z,14nm,1.0s,mb5.0
Y14A **Wickenburg** 47.61 87 ⇑P P 09 17 14.4 0.0
baz=47
R20A **Redvale** 47.63 79 ⇑P P 09 17 13.9 -0.7
baz=47
Z13A **Yuma Proving G** 47.71 88 ⇓P P 09 17 15.0 -0.2
baz=48
X15A **Humboldt** 47.71 86 ⇓P P 09 17 15.2 0.0
baz=48
W16A **Flagstaff** 47.74 85 ⇑P P 09 17 15.6 +0.2
baz=48
O23A **Lake Granby, G** 47.82 76 ⇑P P 09 17 15.7 -0.2
baz=48
V17A **Tonalea, Kykot** 47.84 84 ⇑P P 09 17 16.2 +0.1
baz=48
SMCO **Snowmass** 47.84 77 eP P 09 17 16.6 +0.5
comp=Z,1.9nm,0.6s,mb4.3
U18A **Rough Rock, Ch** 47.88 82 ⇑P P 09 17 16.2 -0.3
baz=48
113A **Mohawk Valley,** 47.94 89 ⇓P P 09 17 17.0 +0.1
baz=48
Y15A **Casa Rosa Ranc** 48.01 87 ⇓P P 09 17 17.7 +0.2
baz=48
R21A **Cimarron** 48.01 79 ⇓P P 09 17 17.0 -0.4
baz=48
SONM **Songino Array** 48.03 298 P P 09 17 17.4 -0.1
comp=Z,0.6nm,0.6s,mb3.8,baz=23,slow=8.0,SNR=4.4
Q22A **Crested Butte,** 48.08 78 ⇑P P 09 17 17.4 -0.6
baz=48
MVCO **Mesa Verde** 48.19 80 eP P 09 17 18.3 -0.6
comp=Z,6.6nm,0.9s,mb4.7
X16A **Lo Mia Camp, P** 48.24 85 ⇓P P 09 17 19.1 -0.2
baz=48
V18A **Ganado** 48.30 83 ⇑P P 09 17 19.3 -0.5
baz=48
U19A **Dine' College,** 48.36 82 ⇑P P 09 17 19.8 -0.4
baz=48
P23A **Jefferson** 48.40 76 ⇑P P 09 17 20.0 -0.4
baz=48
114A **Black Gap (USA** 48.49 88 ⇑P P 09 17 21.1 -0.1
baz=48
R22A **Saguache, Gunn** 48.58 78 ⇓P P 09 17 21.8 -0.1
baz=48
Y16A **Circle Bar Ran** 48.58 86 ⇓P P 09 17 22.4 +0.4
baz=48
S22A **4UR Ranch, Cre** 48.85 79 ⇑P P 09 17 24.4 +0.4
baz=49
T21A **Navajo Lake** 48.92 80 ⇓P P 09 17 25.0 +0.5
baz=49
W19A **Sanders** 49.03 83 ⇑P P 09 17 25.9 +0.5
baz=49
214A **Organ Pipe Nat** 49.08 89 ⇓P P 09 17 26.0 +0.2
baz=49
X18A **Snowflake** 49.08 84 ⇓P P 09 17 26.0 +0.2
baz=49
Y17A **Roosevelt** 49.10 86 ⇓P P 09 17 25.9 0.0
baz=49
U21A **Nageezi** 49.21 81 ⇓P P 09 17 27.1 +0.4
baz=49,SNR=7.7
P25A **Willow Gulch B** 49.30 75 ⇑P P 09 17 27.5 +0.2
baz=49
HHC **Hu-ho-hao-te** 49.37 287 eP P 09 17 31.2 +3.3
HHC pP pP 09 17 35.9 +6.7
HHC sP sP 09 17 38.2 +8.5
HHC PP PP 09 19 24.7 +3.1
HHC PcS PcS 09 22 49.5 +2.8
HHC eS S **09 24 33.9 -1.0**
HHC sS sS 09 24 42.0 +4.8
HHC ScS ScS 09 27 19.1 -1.2
HHC SS SS 09 28 02.3 -3.7
HHC pmax pmax
comp=Z,12nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,140nm,3.9s
HHC LR LR
comp=N,150nm,16.9s,MS4.2
HHC LR LR
comp=E,100nm,14.1s,MS4.2
HHC LR LR
comp=Z,130nm,15.9s,MS4.0
X19A **St. Johns** 49.55 84 ⇑P P 09 17 29.8 +0.5
baz=49
W20A **Ramah** 49.56 83 ⇑P P 09 17 30.0 +0.5
baz=49
R24A **Sanders Place,** 49.57 77 ⇓P P 09 17 29.7 +0.2
baz=49
Z17A **San Carlos Hig** 49.59 86 ⇓P P 09 17 30.4 +0.7
baz=49
Q25A **Bedland, Calha** 49.64 76 ⇓P P 09 17 30.2 +0.2
baz=49
SDCO **Great Sand Dun** 49.65 78 eP P 09 17 30.7 +0.6
comp=Z,2.2nm,0.8s,mb4.2
U22A **Llaves** 49.73 80 ⇓P P 09 17 31.1 +0.4
baz=50
T23A **Casias Ranch,** 49.79 79 ⇓P P 09 17 31.0 -0.2
baz=50
S24A **Houchin Ranch,** 49.89 78 ⇑P P 09 17 31.9 0.0
baz=50
Y19A **Nutrioso** 49.89 84 ⇑P P 09 17 32.4 +0.5
baz=50
117A **Oracle** 49.93 87 ⇓P P 09 17 32.7 +0.5
baz=50
X20A **Quemado** 49.96 83 ⇑P P 09 17 32.6 +0.2
baz=50
V22A **San Miguel Ran** 50.01 81 ⇑P P 09 17 32.5 -0.3
baz=50
Z18A **Geronimo** 50.01 86 ⇑P P 09 17 33.0 +0.2
baz=50
TUC **Tucson** 50.08 87 eP P 09 17 33.1 -0.3
comp=Z,15nm,1.5s,mb4.8
U23A **El Rito** 50.16 80 ⇑P P 09 17 34.0 0.0
baz=50,SNR=6.6
S25A **Robets Cordova** 50.34 77 ⇑P P 09 17 34.6 -0.7
baz=50
118A **Homack Ranch,** 50.35 86 ⇑P P 09 17 35.7 +0.2
baz=50
217A **Green Valley** 50.43 87 ⇑P P 09 17 36.6 +0.5
baz=50
X21A **Alamocita Cree** 50.46 83 ⇓P P 09 17 36.0 -0.2
baz=50,SNR=7.7
Y20A **Horse Springs,** 50.46 84 ⇓P P 09 17 36.6 +0.3
baz=50
V23A **Ortiz Mt. (NFS** 50.56 80 ⇑P P 09 17 37.3 +0.3
baz=50
U24A **Moreno Valley** 50.66 79 ⇑P P 09 17 37.6 -0.1
baz=50
119A **Ashpeak Ranch,** 50.67 85 ⇓P P 09 17 37.8 -0.1
baz=50
T25A **Trinidad** 50.70 78 ⇑P P 09 17 38.0 -0.1
baz=50
218A **Dragoon** 50.76 87 ⇓P P 09 17 38.8 +0.2
baz=51
NJ2 **Nanjing** 50.80 274 eP P 09 17 44.0 +5.2
NJ2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
Y21A **Point of Rocks** 50.82 83 ⇑P P 09 17 39.0 +0.1
baz=51
Z20A **Nine Sixteen R** 50.87 85 ⇑P P 09 17 39.1 -0.2
baz=51
LAZ **Ladron** 50.88 82 eP P 09 17 40.3 +0.9
comp=Z,5.1nm,1.0s,mb4.4
X22A **Bernardo** 50.89 82 ⇓P P 09 17 39.2 -0.2
baz=51
ANMO **Albuquerque** 50.92 81 eP P 09 17 40.5 +0.8
comp=Z,8.2nm,1.3s,mb4.5
ANMO ePcP PcP 09 18 58.7 +2.7
ANMO **Albuquerque** 50.92 81 P P **09 17 39.1 -0.6**
comp=Z,1.6nm,0.9s,mb3.9,baz=322,slow=5.3,SNR=5.6
ANMO PcP PcP 09 18 56.0 -0.1
comp=Z,2.5nm,1.0s,baz=269,slow=2.5,SNR=2.7
W23A **Werner Place,** 50.97 81 ⇓P P 09 17 40.5 +0.4
baz=51

V24A	Rampart Ranch, baz=51	51.12	80	⇓P		P	09 17 41.1	-0.1
318A	Bisbee baz=51	51.17	87	⇑P		P	09 17 42.3	+0.7
U25A	Circle Dot Ran baz=51	51.19	78	⇓P		P	09 17 41.9	+0.2
120A	U Bar Ranch, L baz=51	51.23	85	⇓P		P	09 17 42.5	+0.4
Y22A	Socorro baz=51	51.30	83	⇓P		P	09 17 43.4	+0.8
X23A	Hourglass Bar baz=51	51.34	81	⇓P		P	09 17 43.4	+0.6
BNM	Barren Site comp=Z,9.3nm,1.1s,mb4.6	51.36	82	*e*P		P	09 17 43.8	+0.8
W24A	Lazy 6 Ranch, baz=51	51.38	80	⇑P		P	09 17 43.6	+0.4
V25A	Rancho No Teng baz=51,SNR=5.5	51.44	79	⇑P		P	09 17 43.2	-0.4
U26A	Atchley Ranch, baz=51	51.59	78	⇑P		P	09 17 44.7	-0.1
220A	Playas Peak, P baz=52,SNR=8.2	51.74	86	⇑P		P	09 17 45.6	-0.3
121A	Cookes Peak, D baz=52	51.76	84	⇓P		P	09 17 46.2	+0.1
SUMG	Summit comp=Z,9.6nm,1.0s,mb4.7	51.88	15	*e*P		P	09 17 48.2	+1.8
SUMG	Summit comp=Z,6.1nm,0.9s,mb4.5	51.88	15	*i* P		P	09 17 47.8	+1.4
W25A	X Bar L Ranch, baz=52	51.95	80	⇓P		P	09 17 47.3	-0.1
V26A	Tequesquite Ra baz=52	51.97	79	⇑P		P	09 17 47.8	+0.2
122A	Conniff Cattle baz=52	52.12	84	⇓P		P	09 17 49.7	+1.0
320A	Kipp Ranch, An baz=52	52.13	86	⇓P		P	09 17 49.1	+0.2
Y24A	Capitan baz=52	52.24	81	⇓P		P	09 17 49.5	-0.1
W26A	Owens Ranch, T baz=52	52.46	79	⇓P		P	09 17 52.2	+1.0
Z24A	Sheeppen Canyo baz=52	52.69	82	⇓P		P	09 17 52.2	-0.7
Y25A	Mesa, Roswell baz=52	52.69	81	⇓P		P	09 17 52.0	-0.9
X26A	CR and CF Fran baz=52	52.80	80	⇑P		P	09 17 53.1	-0.6
124A	Stringfield Ra baz=53	53.07	83	⇑P		P	09 17 54.8	-0.9
Z25A	Roswell baz=53	53.12	82	⇓P		P	09 17 55.5	-0.6
224A	Cornudas Mount baz=53	53.46	83	⇓P		P	09 17 58.0	-0.6
Z26A	Caprock baz=53	53.57	81	⇑P		P	09 17 58.7	-0.8
125A	Gardner Draw, baz=53	53.58	82	⇓P		P	09 17 58.9	-0.6
Y27A	Causey baz=53,SNR=6.0	53.64	80	⇓P		P	09 17 59.1	-0.8
MNTX	Cornudas Mount comp=Z,7.9nm,0.9s,mb4.6	53.80	83	*e*P		P	09 18 01.0	-0.2
MSTX	Muleshoe baz=54	53.82	80	⇑P		P	09 18 00.3	-0.9
225A	Deer Hill, Car baz=54	53.86	83	⇓P		P	09 18 00.5	-1.0
324A	Moseley Ranch, baz=54	53.92	84	⇓P		P	09 18 00.9	-1.1
Z27A	Tatum baz=54	54.00	80	⇓P		P	09 18 01.3	-1.3
GDL2	Guadalupe Moun	54.08	82	*e*P		P	09 18 03.1	0.0
325A	Bean Ranch, Si baz=54	54.28	83	⇑P		P	09 18 03.8	-0.9
226A	Malaga, Loving baz=54	54.33	82	⇑P		P	09 18 04.2	-0.8
127A	Arkansas Junct baz=54	54.36	81	⇓P		P	09 18 04.8	-0.4
425A	Indio Mountain baz=54	54.69	84	⇑P		P	09 18 07.1	-0.5
ZALV	Zalesovo Beam comp=Z,1.4nm,0.3s,mb4.4,baz=341,slow=8.3,SNR=3.5	54.84	315	P		P	09 18 08.2	-0.1
ZALV	comp=Z,39nm,18.4s,MS3.5,baz=70,slow=39			LR		LR	09 44 36.2	
426A	McDonald Obser baz=55	55.35	83	⇓P		P	09 18 11.4	-1.0
328A	Wristen Ranch, baz=55	55.59	82	⇓P		P	09 18 13.1	-1.0
427A	Hayter Ranch, baz=55	55.61	83	⇓P		P	09 18 13.2	-1.0
WMOK	Wichita Mounta comp=Z,4.7nm,0.8s,mb4.6	55.69	76	*e*P		P	09 18 17.9	+3.2
526A	Mary Lane Ranc baz=56	55.74	84	⇓P		P	09 18 14.3	-0.9
626A	Big Bend Ranch baz=56,SNR=7.7	56.08	84	⇑P		P	09 18 16.2	-1.4
428A	Kincaid Ranch, baz=56,SNR=7.4	56.13	82	⇑P		P	09 18 16.9	-1.1
528A	Cox Ranch, San baz=56	56.47	83	⇑P		P	09 18 19.3	-1.1
TXAR	Lajitas Array	56.52	84	P		P	09 18 19.9	-0.9
TXAR	Lajitas Array comp=Z,3.4nm,0.8s,mb4.4,baz=300,slow=5.4,SNR=24	56.52	84	P		P	09 18 19.9	-0.9
627A	Terlingua Ranc baz=56	56.60	84	⇓P		P	09 18 20.5	-0.9
628A	Black Gap, Mar baz=57	56.88	83	⇑P		P	09 18 22.5	-0.9
ARCES	ARCESS Array B comp=Z,2.1nm,0.7s,mb4.3,baz=10,slow=7.4,SNR=4.1	57.49	351	P		P	09 18 24.7	-2.4
JCT	Junction City comp=Z,6.7nm,0.8s,mb4.7	58.05	80	*e*P		P	09 18 30.0	-1.6
MIAR	Mount Ida comp=Z,7.4nm,0.8s,mb4.8	58.90	73	*e*P		P	09 18 36.2	-1.3
KURK	Kurchatov comp=Z,4.2nm,0.9s,mb4.5,baz=39,slow=6.7,SNR=14	59.82	315	P		P	09 18 44.6	+1.0
WMQ	Urumqi	60.51	304	*e*P		P	09 18 52.1	+3.6
WMQ				pP		pP	09 18 56.7	+6.9
WMQ				sP		sP	09 18 59.1	+8.8
WMQ				PcP		PcP	09 19 36.7	+3.7
WMQ				PP		PP	09 21 07.3	+6.0
WMQ	comp=Z,18nm,0.8s,mb5.2			pmax		pmax		
WMQ	comp=Z,87nm,4.1s			pmax		pmax		
WMQ	comp=N,140nm,20.0s			LR		LR		
WMQ	comp=Z,83nm,22.1s,MS3.8			LR		LR		
CD2	Chengdu	60.75	284	P		P	09 18 53.7	+3.4
CD2	comp=Z,10.0nm,0.7s,mb5.0			pmax		pmax		
CD2	comp=Z,130nm,4.3s			pmax		pmax		
MK31	Makanchi Array	61.02	310	*e*P		P	09 18 51.8	-0.1
MKAR	Makanchi Array	61.02	310	P		P	09 18 51.8	0.0
MKAR	Makanchi Array comp=Z,1.0nm,0.6s,mb4.1,baz=57,slow=7.5,SNR=11	61.02	310	P		P	09 18 51.8	-0.1
BVAR	Borovoye Array	61.46	321	P		P	09 18 54.0	-0.7
BVAR	Borovoye Array comp=Z,3.2nm,0.7s,mb4.6,baz=54,slow=7.5,SNR=12	61.46	321	P		P	09 18 54.0	-0.7
GYA	Guiyang	62.23	278	*e*P		P	09 19 04.7	+4.4
GYA	comp=Z,10.0nm,1.0s,mb4.9			pmax		pmax		
TKL	Tuckaleechee C	63.71	65	*e*P		P	09 19 08.6	-1.4
FINES	FINESS Array B comp=Z,3.5nm,0.8s,mb4.4,baz=256,slow=1.6,SNR=5.9	65.28	349	P		P	09 19 19.1	-0.8
KMI	Kunming	65.59	280	P		P	09 19 27.4	+5.0
KMI				pP		pP	09 19 30.5	+6.7
KMI				sP		sP	09 19 31.7	+7.4
KMI	comp=Z,8.0nm,0.5s,mb5.0			pmax		pmax		
KMI	comp=Z,210nm,3.8s			pmax		pmax		
QIZ	Qiongzhong	65.81	270	P		P	09 19 21.3	-2.6
QIZ				S		S	09 28 14.4	+3.2
QIZ	comp=Z,37nm,24.6s,MS3.5			LR		LR		
NOA	NORSAR Array B comp=Z,2.2nm,0.8s,mb4.2,baz=1.7,slow=6.2,SNR=6.2	66.86	356	P		P	09 19 30.1	+0.1
ABKAR	Akbulak array comp=Z,0.6nm,0.3s,mb4.1	68.38	325	*e*P		P	09 19 41.3	+1.4
CMAR	Chiang Mai Arr comp=Z,0.8nm,0.3s,mb4.1,baz=27,slow=8.1,SNR=4.9	72.92	278	P		P	09 20 08.7	+0.8
AKASG	Malin Array Be comp=Z,0.9nm,0.5s,mb4.0,baz=16,slow=5.5,SNR=4.1	75.24	344	P		P	09 20 20.9	-0.1
BRG	Berggiesshubel comp=Z,1.8nm,0.6s,mb4.2	76.87	354	*e*(P)		P	09 20 29.2	-1.1
BRTR	Keskin Array B	84.89	338	P		P	09 21 13.6	+0.2
BRTR	Keskin Array B comp=Z,1.1nm,0.8s,mb4.0,baz=75,slow=5.2,SNR=4.2	84.89	338	P		P	09 21 13.6	+0.2
ASAR	Alice Springs	87.57	225	P		P	09 21 25.6	-1.0
ASAR	Alice Springs comp=Z,1.9nm,0.7s,mb4.5,baz=26,slow=5.2,SNR=23	87.57	225	P		P	09 21 25.6	-1.0
MMAI	Mount Meron Ar comp=Z,28nm,18.1s,MS3.7,baz=155,slow=39	90.82	334	LR		LR	10 08 14.8	
STKA	Stephens Creek comp=Z,2.9nm,0.9s,mb4.6,baz=350,slow=8.5,SNR=4.0	91.85	215	P		P	09 21 45.6	-0.8
MAW	Mawson comp=Z,1.4nm,0.3s,baz=203,slow=2.0,SNR=6.4	148.48	219	PKPbc		PKPbc	09 28 25.1	+1.2

NEIC ***07*** *09:16:51.8, 52˚.10N×175˚.46W, h6km, mb3.9/1, ML3.3(AEIC), After AEIC.*
ISCJB ***07*** *09:16:52.6±0.8, 52˚.0N±0˚.2×175˚.45W±0˚.08, h25km±7km, mb3.4/4, Error ellipse: s-maj=29.2km s-min=6.3km az=170.1*
IDC ***07*** *09:16:53.6±1.7, 51˚.84N×174˚.84W, h0km, mb3.3/3, mb1 3.7/5, mb1mx3.5/26, mbtmp3.4/5, ML3.5/2, Error ellipse: s-maj=75.5km s-min=28.3km az=144.0*

ISC 07 09:16:52.3±1.1, 51˚.9N±0˚.1×175˚.41W±0˚.06, h10km±7km, n11, σ1§09/14, mb3.4/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GSTR	Great Sitkin T	0.43	291	*e*Pg		Pg	09 17 00.2	-0.4
GSTR				*e*Sg		Sg	09 17 06.5	+0.3
ADK	Adak	0.79	266	P		Pg	09 17 07.0	-0.4
ADK				S		Sg	09 17 18.2	+0.4
ATKA	Atka Island	0.79	70	P		Pg	09 17 07.3	-0.3
ATKA				S		Sg	09 17 18.1	+0.2
AMKA	Amchitka	3.34	262	P		Pn	09 17 44.5	0.0
KDAK	Kodiak Island 0.2nm,0.3s,baz=166,slow=20,SNR=2.8	14.35	57	Pn		Pn	09 20 17.0	+1.8
ILAR	Eielson Array 0.1nm,0.3s,baz=232,slow=8.0,SNR=7.2	19.49	38	P		Pn	09 21 19.7	-0.6
EGAK	Eagle 4.3nm,0.8s,mb3.9	21.74	41	*e*P		P	09 21 43.7	+0.2
DLBC	Dease Lake	26.28	58	*e*P		P	09 22 24.9	-2.5
NVAR	Mina Array Bea 0.1nm,0.3s,mb2.9,baz=270,slow=9.0,SNR=2.4	41.40	86	P		P	09 24 37.0	-1.5
TXAR	Lajitas Array 0.1nm,0.7s,mb3.0,baz=316,slow=3.8,SNR=2.6	56.49	84	P		P	09 26 36.4	+2.0
ASAR	Alice Springs 0.6nm,1.0s,mb3.8,baz=10,slow=5.7,SNR=3.0	87.36	225	P		P	09 29 43.2	+3.9

ISCJB ***07*** *09:24:52.1±0.6, 43˚.14N±0˚.05×136˚.5E±0˚.1, h358km±10km, mb3.3/6, Error ellipse: s-maj=13.0km s-min=7.3km az=17.5*
JMA ***07*** *09:24:53.5±0.6, 43˚.28N×136˚.51E, h341km, M3.1*
IDC ***07*** *09:24:59.0±2.9, 42˚.56N×136˚.04E, h455km±60km, mb3.0/6, mb1 3.1/9, mb1mx2.9/26, mbtmp3.0/9, Error ellipse: s-maj=48.4km s-min=19.0km az=10.0*

ISC 07 09:24:52.8±0.6, 43˚.20N±0˚.07×136˚.4E±0˚.1, h342km±11km, n36, σ1§00/49, mb3.2/6, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JOSM	Okushiri--Mats	2.51	115	P		Pn	09 25 47.5	+0.3
JOSM	Okushiri--Mats	2.51	115	P		Pn	09 25 47.6	+0.4
JSH	Shimam	2.71	101	P		Pn	09 25 49.1	+0.2
JKB	Kayabe	3.64	110	P		Pn	09 25 58.9	+1.3
JKB				*e*S		S	09 26 58.0	+8.2
JKB	Kayabe	3.64	110	P		Pn	09 25 58.6	+1.0
JOT	Ohata	3.88	116	P		Pn	09 26 00.9	+0.9
JOT				*e*S		S	09 27 00.9	+6.8
JOT	Ohata	3.88	116	P		Pn	09 26 00.8	+0.8
JFR	Furan	4.50	88	P		Pn	09 26 07.3	+0.8
JFR				*e*S		S	09 27 05.0	-1.1
JKK2	Kamakawa 2	4.64	79	P		Pn	09 26 08.8	+0.8
JKK2				*e*S		S	09 27 08.0	-0.7
JANG	Nango	4.73	125	P		Pn	09 26 09.2	+0.1
JANG				*e*S		S	09 27 10.0	-0.7
JNBK	Urakawa-nobuka	4.74	99	P		Pn	09 26 09.9	+0.7
JNBK				*e*S		S	09 27 09.5	-1.3
JRG	Rokugo	4.94	139	P		Pn	09 26 12.2	+0.8
JCH	Churui	5.12	94	P		Pn	09 26 12.4	-0.9
JCH				*e*S		S	09 27 13.8	-4.6
JCH	Churui	5.12	94	P		Pn	09 26 12.7	-0.6
JCH				*e*S		S	09 27 14.3	-4.1
JTKR	Abashiri--Toko	5.48	79	P		Pn	09 26 17.9	+0.6
JTKR	Abashiri--Toko	5.48	79	P		Pn	09 26 18.0	+0.7
JMK	Ichinoseki	5.57	138	P		Pn	09 26 18.6	+0.1
JMK	Ichinoseki	5.57	138	P		Pn	09 26 20.1	+1.6
JMM	Marumori	6.28	147	P		Pn	09 26 26.6	+0.1
MJAR	Matsushiro Arr 0.7nm,0.3s,baz=348,slow=16,SNR=6.8	6.79	168	P		Pn	09 26 37.3	+4.7
NEM2	Nemuro 2	6.80	85	P		Pn	09 26 31.1	-1.4
NEM2				*e*S		S	09 27 46.6	-6.9
NEM2	Nemuro 2	6.80	85	P		Pn	09 26 31.6	-0.9
NEM2				*e*S		S	09 27 47.2	-6.3
JKG	Kaga	6.91	181	P		Pn	09 26 32.7	-1.3
JRY	Ryogami san	7.42	164	P		Pn	09 26 42.2	+2.2
JRY	Ryogami san	7.42	164	P		Pn	09 26 42.1	+2.1
JOD2	Odawara 2	8.19	165	P		Pn	09 26 49.8	+0.7
JOD2				*e*S		S	09 28 20.5	-3.4
KSRS	Korea Array 0.2nm,0.3s,baz=46,slow=10,SNR=4.8	8.67	231	P		Pn	09 26 55.1	+0.4
BSO1	Boso 1	9.24	156	P		Pn	09 27 01.1	-0.5
BSO1				*e*S		S	09 28 41.7	-5.3
JHJ	Hachijo jima 2 7.9nm,0.3s,baz=323,slow=20,SNR=6.4	10.40	164	P		Pn	09 27 15.4	-0.1
JHJ	1.6nm,0.3s,baz=73,slow=19,SNR=2.5			S		S	09 29 06.2	-6.6
SONM	Songino Array 0.4nm,0.4s,mb3.0,baz=97,slow=7.6,SNR=4.8	21.48	293	P		P	09 29 13.8	-0.8
ZALV	Zalesovo Beam 1.2nm,0.4s,mb3.5,baz=82,slow=8.7,SNR=4.1	35.06	306	P		P	09 31 12.1	-2.0
ILAR	Eielson Array 0.5nm,0.5s,mb2.9,baz=281,slow=7.7,SNR=9.0	46.49	35	P		P	09 32 47.9	+1.5
ARCES	ARCESS Array B 1.9nm,0.8s,mb3.5,baz=54,slow=8.1,SNR=2.9	56.86	337	P		P	09 34 01.5	-0.7
YKA	Yellowknife Ar	60.41	30	P		P	09 34 27.8	+1.3
YKA	Yellowknife Ar 0.4nm,0.7s,mb3.0,baz=311,slow=6.7,SNR=3.5	60.41	30	P		P	09 34 27.8	+1.3
FINES	FINESS Array B 1.5nm,0.6s,mb3.7,baz=46,slow=6.0,SNR=3.2	61.58	329	P		P	09 34 33.6	-0.7

ISCJB ***07*** *09:45:27.3±0.6, 52˚.35N±0˚.09×175˚.54W±0˚.07, h10km, mb4.0/14, MS4.0/2, Error ellipse: s-maj=12.4km s-min=6.0km az=169.1*
NEIC ***07*** *09:45:28.8, 52˚.10N×175˚.46W, h14km, mb4.1/3, ML3.7(AEIC), After AEIC.*
IDC ***07*** *09:45:29.1±0.9, 52˚.38N×176˚.09W, h0km, mb4.0/11, mb1 4.2/12, mb1mx4.0/28, mbtmp4.0/12, ML4.7/1, MS4.0/2, Ms1 4.0/2, ms1mx3.0/33, Error ellipse: s-maj=28.9km s-min=16.8km az=177.0*

ISC 07 09:45:28.7±0.6, 52˚.2N±0˚.1×175˚.49W±0˚.07, h10km, n29, σ1§57/29, mb4.0/14, MS4.0/2, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ATKA	Atka Island	0.79	89	P		Pg	09 45 43.5	-0.5
ATKA				S		Sg	09 45 54.4	+0.1
ADK	Adak	0.81	247	*e*Sg		Pg	09 45 40.2	-4.0
ADK				P			09 45 43.9	
ADK				S		Sg	09 45 54.6	-0.1
NIKO	Nikolski	4.12	77	*e*Pn		Pn	09 46 31.4	-0.2
AKUT	Akutan 51nm,1.2s	6.16	68	*e*Pn		Pn	09 46 54.9	-4.7
KDAK	Kodiak Island 2.0nm,0.3s,baz=274,slow=7.4,SNR=8.9	14.25	58	Pn		Pn	09 48 58.4	+8.2
TTA	Tatalina 10nm,1.0s	14.92	36	*e*P		Pn	09 48 58.2	-1.1
RSO	Redoubt South	15.01	48	*e*Pn		Pn	09 48 55.8	-4.8
COLA	College	19.00	37	*e*P		Pn	09 49 43.5	-7.3
ILAR	Eielson Array 0.9nm,0.3s,baz=233,slow=8.3,SNR=29	19.32	38	P		Pn	09 49 57.6	+3.0
MENT	Mentasta	19.91	45	*e*P		Pn	09 49 54.2	-7.5
INK	Inuvik	25.61	35	*e*P		P	09 50 54.4	-3.3
INK				P			09 51 00.9	
INK	Inuvik 6.6nm,0.6s,mb4.3,baz=252,slow=12,SNR=11	25.61	35	P		P	09 51 00.9	+3.3
YKA	Yellowknife Ar	33.16	48	P		P	09 52 07.2	+2.4
YKA				PcP		PcP	09 54 46.6	-0.7
YKA	Yellowknife Ar 0.7nm,0.7s,mb3.7,baz=285,slow=8.3,SNR=4.4	33.16	48	P		P	09 52 07.2	+2.4
YKA	0.4nm,0.5s,baz=285,slow=3.2,SNR=4.4			PcP		PcP	09 54 46.6	-0.7
LON	Longmire	34.62	77	*e*P		P	09 52 14.2	-3.4
HAWA	Hanford 3.0nm,0.7s,mb4.3	36.16	76	P		P	09 52 29.4	-1.5
YBH	Yreka Blue Hor 1.7nm,0.8s,mb3.9,baz=257,slow=7.6,SNR=5.6	36.74	85	P		P	09 52 42.2	+6.3
BSMT	Bassoo Peak 2.4nm,0.8s,mb4.0	38.24	72	*e*P		P	09 52 43.3	-5.2
NVAR	Mina Array Bea 1.8nm,0.7s,mb3.8,baz=291,slow=7.3,SNR=6.1	41.42	86	P		P	09 53 21.1	+6.1
KSRS	Korea Array 0.9nm,0.8s,mb3.4,baz=54,slow=9.2,SNR=5.1	41.67	272	P		P	09 53 14.3	-2.9
ANMO	Albuquerque 0.4nm,0.4s,mb3.7,baz=306,slow=11,SNR=3.6	50.92	81	P		P	09 54 34.5	+4.6
ZALV	Zalesovo Beam comp=Z,39nm,18.5s,MS3.5,baz=91,slow=39	54.94	315	LR		LR	10 21 07.5	
TXAR	Lajitas Array 1.1nm,0.6s,mb4.0,baz=291,slow=7.8,SNR=5.5	56.51	84	P		P	09 55 13.9	+3.0
ARCES	ARCESS Array B 1.7nm,0.7s,mb4.2,baz=7.8,slow=9.8,SNR=4.8	57.61	351	P		P	09 55 17.8	-0.3
MKAR	Makanchi Array 0.3nm,0.3s,mb3.9,baz=57,slow=9.4,SNR=6.3	61.11	310	P		P	09 55 43.1	+0.5
BVAR	Borovoye Array 2.5nm,0.7s,mb4.5,baz=55,slow=6.8,SNR=11	61.57	321	P		P	09 55 45.7	+0.1
ASAR	Alice Springs	87.50	225	P		P	09 58 19.3	+2.9
ASAR	Alice Springs 1.0nm,0.6s,mb4.2,baz=23,slow=5.0,SNR=13	87.50	225	P		P	09 58 19.3	+2.9
RPZ	Rata Peaks comp=Z,199nm,20.1s,MS4.6,baz=18,slow=32	96.24	190	LR		LR	10 37 20.2	

NIED ***07*** *09:54:00, 47˚.10N×153˚.20E, h35km, Mw4.3 Best double couple: Mo2.96000×10^15 NP1:ϕ=220.00000°, δ74.00000°, λ153.00000°. NP2:ϕs318.00000°, δ64.00000°, λ18.00000°.*
SKHL ***07*** *09:54:31.4±0.7, 46˚.11N×153˚.93E, h115km±31km, mb5.1/4, msh5.7/4*
IDC ***07*** *09:54:32.3±0.8, 47˚.00N×152˚.99E, h0km, mb4.0/15, mb1 4.3/15, mb1mx4.2/24, mbtmp4.1/15, Error ellipse: s-maj=25.2km s-min=15.8km az=155.0*
JMA ***07*** *09:54:34.8±0.6, 47˚.10N×153˚.24E, h30km, M4.8*
NEIC ***07*** *09:54:37.7±2.9, 47˚.09N×153˚.01E, h33km±21km, mb4.6/1, Error ellipse: s-maj=16.2km s-min=7.9km az=143.0*
ISCJB ***07*** *09:54:38.1±0.9, 46˚.78N±0˚.07×153˚.02E±0˚.08, h64km±8km, mb4.2/18, Error ellipse: s-maj=13.2km s-min=6.2km az=142.4*
MOS ***07*** *09:54:39.4±1.2, 46˚.83N×153˚.06E, h76km, mb4.5/11, Error ellipse: s-maj=13.1km s-min=9.5km az=50.2*

ISC 07 09:54:39.4±0.7, 46˚.81N±0˚.06×153˚.10E±0˚.08, h57km±7km, n76, σ1§32/99, mb4.2/18, 3C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.97	249	*e*PN		Pn	09 55 37.5	-0.2
KUR				*e*S		Sn	09 56 24.3	+1.4
KUR	comp=Z,160nm,0.3s			pmax		pmax		
KUR	comp=N,550nm,0.5s			smax				
KUR	comp=E,300nm,0.5s			smax				
KUR	Kuril'sk	3.97	249	*e*P		Pn	09 55 37.5	-0.2
KUR				AMB		AMB	09 55 41.2	
KUR	comp=E,160nm,0.3s			*e*S		Sn	09 56 24.3	+1.4
KUR	comp=E,550nm,0.5s			A			09 56 44.0	
KUR	comp=E,300nm,0.5s			A			09 56 44.0	
SKR	Severo-Kuril's	4.36	26	*e*PN		Pn	09 55 46.4	+3.3
SKR				*e*S		Sn	09 56 31.5	-1.1
SKR	comp=Z,30nm,0.5s			pmax		pmax		
SKR	comp=N,40nm,0.3s			pmax		pmax		
SKR	comp=N,60nm,0.4s			smax				
SKR	comp=E,190nm,0.4s			smax				
SKR	Severo-Kuril's	4.36	26	*e*P		Pn	09 55 46.4	+3.3
SKR				AMB		AMB	09 55 48.0	
SKR	comp=E,40nm,0.3s			AMB		AMB	09 55 48.0	
SKR	comp=E,30nm,0.5s			*e*S		Sn	09 56 31.5	-1.1
SKR	comp=E,60nm,0.4s			A			09 56 44.3	
SKR	comp=E,190nm,0.4s			A			09 56 44.3	
SKR	comp=E,40nm,0.5s			A			09 56 44.3	
YUK	Yuzh-Kuril'sk	5.80	244	*d* iPN		Pn	09 56 03.7	+1.0
YUK				*i* S		Sn	09 57 08.2	+0.4
YUK	comp=N,60nm,0.2s			pmax		pmax		
YUK	comp=E,60nm,0.2s			pmax		pmax		
YUK	comp=E,230nm,0.2s			smax				
YUK	comp=N,370nm,0.7s			smax				
YUK	comp=E,540nm,0.7s			smax				
YUK	comp=N,940nm,1.6s			smax				
YUK	comp=E,320nm,0.7s			smax				
YUK	Yuzh-Kuril'sk	5.80	244	⇓ *i* P		Pn	09 56 03.7	+1.0
YUK				AMB		AMB	09 56 05.0	
YUK	comp=E,430nm,0.2s			*i* S		Sn	09 57 08.2	+0.4
YUK				A			09 57 32.6	
YUK	comp=E,370nm,0.7s			A			09 57 32.6	
YUK	comp=E,540nm,0.7s			A			09 57 32.6	
NEM2	Nemuro 2	6.24	239	P		Pn	09 56 07.0	-1.8
NEM2				*e*S		Sn	09 57 15.2	-3.5
JRA	Rausu	6.31	246	P		Pn	09 56 10.9	+1.2
JNK	Nakash	6.74	244	P		Pn	09 56 15.7	+0.1
JNK				*e*S		Sn	09 57 31.2	+0.3
JTKR	Abashiri--Toko	7.06	250	P		Pn	09 56 21.3	+1.3
JAK	Akkeshi	7.08	240	P		Pn	09 56 18.4	-1.8
JAK				*e*S		Sn	09 57 35.5	-3.7
YSS	Yuzh-Sakhalins	7.09	275	⇑ ePN		Pn	09 56 22.6	+2.2
YSS				*e*S		Sn	09 57 40.0	+0.5
YSS	comp=E,20nm,0.6s			smax				
YSS	comp=Z,300nm,16.0s			MLR		MLR		
YSS	Yuzh-Sakhalins	7.09	275	⇑ *e*P		Pn	09 56 22.6	+2.2
YSS				*e*S		Sn	09 57 40.0	+0.5
YSS	comp=Z,20nm,0.6s			A			09 57 43.7	
YSS	comp=Z,300nm,16.0s			AMS		AMS	09 58 55.0	
PET	Petropavlovsk	7.18	28	*e*Pn		Pn	09 56 16.0	-5.7
PET	Petropavlovsk	7.18	28	*e*Pn		Pn	09 56 21.5	-0.1
PET				*e*S		Sn	09 57 35.8	-5.9
PET	comp=N,68nm,0.6s			smax				
JMP	Maruseppu	7.40	251	P		Pn	09 56 26.1	+1.4
JAR	Ashorobuto	7.48	245	P		Pn	09 56 26.3	+0.6
JAR				*e*S		Sn	09 57 49.8	+0.7
JOB	Onbets	7.65	243	P		Pn	09 56 27.7	-0.4
JOB				*e*S		Sn	09 57 50.4	-2.9
ASAJ	Asahikawa	7.86	254	P		Pn	09 56 33.4	+2.5
JKK2	Kamakawa 2	7.86	252	P		Pn	09 56 32.8	+1.9
TYV	Tymovskoe	7.99	304	*e*P		Pn	09 56 31.8	-0.9
TYV	comp=N,9.0nm,0.8s			AMB		AMB	09 56 34.0	
TYV	comp=N,11nm,0.8s			AMB		AMB	09 56 34.0	
JCH	Churui	8.10	242	P		Pn	09 56 33.0	-1.2
JCH				*e*S		Sn	09 57 59.9	-4.4

JKB	**Kayabe**	**9.94**	**245**	P		**Pn**	**09 56 57.4**	**-2.0**
JKB				*e*S		**Sn**	**09 58 42.3**	**-7.0**
JYM2	**Yakumo 2**	**10.23**	**247**	P		**Pn**	**09 57 02.1**	**-1.3**
JTM	**Tenmabayashi**	**10.57**	**240**	P		**Pn**	**09 57 04.7**	**-3.3**
JTM				*e*S		**Sn**	**09 58 54.9**	**-10**
JANG	**Nango**	**10.57**	**237**	P		**Pn**	**09 57 03.7**	**-4.3**
JANG				*e*S		**Sn**	**09 58 54.0**	**-11**
JOSM	**Okushiri--Mats**	**10.82**	**249**	P		**Pn**	**09 57 09.9**	**-1.5**
OFUJ	**Ofunato**	**11.38**	**231**	*e*S		**Sn**	**09 59 14.5**	**-10**
JRG	**Rokugo**	**11.73**	**235**	P		**Pn**	**09 57 20.7**	**-3.2**
JRG				*e*S		**Sn**	**09 59 23.8**	**-9.3**
HABR	**Khabarovsk**	**12.29**	**284**	PN		**Pn**	**09 57 35.3**	**+3.9**
HABR				S		**Sn**	**09 59 50.4**	**+3.8**
KLR	**Kul'dur**	**14.49**	**287**	*e*P		**Pn**	**09 58 02.8**	**+1.8**
MAJO	**Matsushiro**	**15.11**	**233**	*e*P		**Pn**	**09 58 14.9**	**+5.7**
MAT	**Matsushiro**	**15.11**	**233**	P		**Pn**	**09 58 14.7**	**+5.5**
MJAR	**Matsushiro Arr**	**15.11**	**233**	Pn		**Pn**	**09 58 10.0**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=12,slow=14,SNR=3.9							
KSRS	**Korea Array**	**20.80**	**252**	P		**P**	**09 59 16.9**	**+1.1**
	comp=Z,1.8nm,0.5s,baz=59,slow=10.0,SNR=12							
KSRS	**Korea Array**	**20.80**	**252**	P		**P**	**09 59 16.9**	**+1.1**
KSRS				pmax		pmax		
	comp=Z,2.0nm,0.5s							
SONM	**Songino Array**	**31.30**	**289**	P		**P**	**10 00 53.9**	**+0.1**
	comp=Z,0.5nm,0.7s,mb3.5,baz=33,slow=8.6,SNR=3.1							
SONM	**Songino Array**	**31.30**	**289**	P		**P**	**10 00 53.9**	**+0.1**
SONM				pmax		pmax		
	comp=Z,1.0nm,0.7s							
ILAR	**Eielson Array**	**36.51**	**39**	P		**P**	**10 01 38.4**	**-0.3**
	comp=Z,0.7nm,0.6s,mb3.7,baz=262,slow=8.0,SNR=19							
ILAR	**Eielson Array**	**36.51**	**39**	P		**P**	**10 01 38.4**	**-0.3**
ILAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
INK	**Inuvik**	**41.61**	**32**	P		**P**	**10 02 21.5**	**+0.3**
	comp=Z,2.2nm,0.2s,mb4.3,baz=304,slow=7.4,SNR=3.7							
INK	**Inuvik**	**41.61**	**32**	P		**P**	**10 02 21.5**	**+0.3**
INK				pmax		pmax		
	comp=Z,2.0nm,0.3s							
MKAR	**Makanchi Array**	**46.91**	**297**	P		**P**	**10 03 02.5**	**-1.3**
MKAR				PcP		PcP	10 04 35.3	-0.3
MKAR	**Makanchi Array**	**46.91**	**297**	P		**P**	**10 03 02.5**	**-1.3**
	comp=Z,0.6nm,0.4s,mb3.9,baz=66,slow=9.4,SNR=4.9							
MKAR				PcP		PcP	10 04 35.3	-0.3
	comp=Z,0.3nm,0.2s,baz=42,slow=3.1,SNR=3.4							
MKAR	**Makanchi Array**	**46.91**	**297**	*e*P		**P**	**10 03 03.5**	**-0.3**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.4s							
KURK	**Kurchatov**	**47.32**	**304**	*i* P		**P**	**10 03 05.3**	**-1.7**
KURK				pmax		pmax		
	comp=Z,2.0nm,0.9s,mb4.0							
BVAR	**Borovoye Array**	**50.81**	**309**	P		**P**	**10 03 34.3**	**+0.7**
	comp=Z,0.5nm,0.3s,mb3.9,baz=59,slow=14,SNR=3.2							
BVAR				PcP		PcP	10 04 49.2	-0.5
	comp=Z,0.7nm,0.4s,baz=77,slow=3.3,SNR=3.3							
BVAR	**Borovoye Array**	**50.81**	**309**	P		**P**	**10 03 34.3**	**+0.7**
BVAR							10 04 49.2	
BVAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
YKA	**Yellowknife Ar**	**50.89**	**37**	P		**P**	**10 03 34.4**	**+0.4**
	comp=Z,1.0nm,0.5s,mb4.0,baz=297,slow=6.9,SNR=8.1							
YKA	**Yellowknife Ar**	**50.89**	**37**	P		**P**	**10 03 34.4**	**+0.4**
YKA				pmax		pmax		
	comp=Z,1.0nm,0.5s							
CMAR	**Chiang Mai Arr**	**52.37**	**256**	P		**P**	**10 03 46.5**	**+0.9**
	comp=Z,2.0nm,0.7s,mb4.2,baz=32,slow=7.5,SNR=6.2							
CMAR	**Chiang Mai Arr**	**52.37**	**256**	P		**P**	**10 03 46.6**	**+0.9**
CMAR				pmax		pmax		
	comp=Z,2.0nm,0.7s							
SUMG	**Summit**	**60.65**	**4**	*i* P		**P**	**10 04 43.3**	**-0.4**
	comp=Z,7.1nm,0.9s,mb4.8							
NVAR	**Mina Array Bea**	**62.42**	**62**	P		**P**	**10 04 57.5**	**+1.3**
	comp=Z,0.4nm,0.4s,mb3.9,baz=301,slow=8.2,SNR=5.4							
FINES	**FINESS Array B**	**63.98**	**335**	P		**P**	**10 05 05.2**	**-1.0**
	comp=Z,2.2nm,0.4s,mb4.5,baz=45,slow=8.4,SNR=8.5							
FINES	**FINESS Array B**	**63.98**	**335**	P		**P**	**10 05 05.2**	**-1.0**
FINES				pmax		pmax		
	comp=Z,2.0nm,0.4s							
OBN	**Obninsk**	**65.26**	**326**↑	*e*P		**P**	**10 05 10.4**	**-4.2**
OBN				*e*S		S	10 13 39.8	-14
OBN				pmax		pmax		
	comp=Z,8.0nm,0.4s,mb5.1							
SRU	**San Rafael**	**66.60**	**57**	*e*P		**P**	**10 05 24.5**	**+1.0**
	comp=Z,2.7nm,0.5s,mb4.5							
SRU	**San Rafael**	**66.60**	**57**	*e*P		**P**	**10 05 24.5**	**+1.0**
SRU				pmax		pmax		
	comp=Z,3.0nm,0.5s,mb4.6							
NOA	**NORSAR Array B**	**68.17**	**341**	P		**P**	**10 05 31.9**	**-1.1**
NOA	**NORSAR Array B**	**68.17**	**341**	P		**P**	**10 05 31.9**	**-1.1**
	comp=Z,2.9nm,0.7s,mb4.4,baz=28,slow=6.3,SNR=12							
NOA	**NORSAR Array B**	**68.17**	**341**	P		**P**	**10 05 31.9**	**-1.1**
NOA				pmax		pmax		
	comp=Z,3.0nm,0.7s							
AKASG	**Malin Array Be**	**71.50**	**326**	P		**P**	**10 05 52.0**	**-1.5**
	comp=Z,2.4nm,0.3s,mb4.6,baz=35,slow=6.4,SNR=9.5							
AKASG	**Malin Array Be**	**71.50**	**326**	*e*P		**P**	**10 05 52.0**	**-1.6**
AKASG				pmax		pmax		
	comp=Z,2.0nm,0.3s							
ASAR	**Alice Springs**	**72.26**	**198**	P		**P**	**10 05 59.8**	**+1.5**
	comp=Z,0.6nm,0.6s,mb3.7,baz=9.7,slow=5.7,SNR=11							
ASAR	**Alice Springs**	**72.26**	**198**	*e*P		**P**	**10 05 59.8**	**+1.5**
ASAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
BUR08	**Bucovina Ar. S**	**75.52**	**327**	*e*P		**P**	**10 06 16.8**	**-0.5**
TXAR	**Lajitas Array**	**77.47**	**61**	P		**P**	**10 06 29.1**	**+0.5**
	comp=Z,1.0nm,0.5s,mb4.0,baz=297,slow=4.6,SNR=34							
TXAR	**Lajitas Array**	**77.47**	**61**	P		**P**	**10 06 29.1**	**+0.4**
TXAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
BRTR	**Keskin Array B**	**78.34**	**317**	P		**P**	**10 06 33.3**	**0.0**
	comp=Z,1.5nm,0.9s,mb3.9,baz=64,slow=2.9,SNR=5.6							
BRTR	**Keskin Array B**	**78.34**	**317**	*e*P		**P**	**10 06 33.3**	**0.0**
BRTR				pmax		pmax		
	comp=Z,2.0nm,0.9s							

PRE 07 09:58:58.4±61.0, 22°14S×32°35E, h5km, ML3.6, Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MOPA	**Mopani**	**1.62**	**213**	*e*P		Pn	09 59 28.8	+1.1
MOPA				*e*S		Sn	10 00 05.1	+16
MOPA				AML		AML	10 00 11.6	
	comp=Z,1μm,0.2s							
SLR	**Silverton**	**5.16**	**225**	*e*S		Sn	10 01 28.9	+13
SLR				AML		AML	10 02 08.9	
	comp=Z,101nm,0.6s							
POGA	**Pongola**	**5.25**	**187**	*e*P		Pn	10 00 15.5	-2.0
POGA				*e*S		Sn	10 01 26.6	+8.2
POGA				AML		AML	10 02 14.9	
	comp=Z,61nm,0.6s							
KSR	**Koster**	**6.20**	**232**	*e*S		Sn	10 01 53.7	+12
KSR				AML		AML	10 02 50.7	
	comp=Z,73nm,0.6s							
PRYS	**Parys**	**6.58**	**223**	*e*P		Pn	10 00 36.1	+0.3
PRYS				*e*S		Sn	10 02 02.6	+11
PRYS				AML		AML	10 03 07.8	
	comp=Z,39nm,0.5s							
LBTB	**Lobatse**	**6.82**	**244**	*e*P		Pn	10 00 38.2	-0.9
LBTB				*e*S		Sn	10 02 05.8	+8.6
LBTB				AML		AML	10 03 05.2	
	comp=Z,52nm,0.5s							
BOSA	**Boshof**	**9.09**	**223**	*e*		Pn	10 01 09.9	-0.4
BOSA				*e*P			10 01 10.4	
BOSA				*e*S		Sn	10 03 03.0	+10
BOSA				AML		AML	10 04 15.4	
	comp=Z,13nm,0.5s							
PKA	**Prieska**	**11.43**	**227**	*e*P		Pn	10 01 42.6	+0.3
UPI	**Upington**	**11.79**	**236**	*e*P		Pn	10 01 47.6	+0.3
UPI				*e*S		Sn	10 04 06.2	+6.9
UPI				AML		AML	10 05 26.2	
	comp=Z,14nm,0.7s							

*ISCJB **07** 10:11:60.0±1.1, 52°18N±0°05×175°61W±0°04, h7km±6km, mb4.5/103, MS4.3/38, Error ellipse: s-maj=8.4km s-min=3.6km az=2.9*

*NEIC **07** 10:12:03.0±0.3, 52°27N×175°73W, h10km, mb4.6/75, ML5.1(PMR), Error ellipse: s-maj=9.8km s-min=5.0km az=176.0*

*BJI **07** 10:12:03.1, 52°60N×176°22W, h8km, mB4.8/13, mb4.6/21, Ms4.6/14, Ms7 4.4/15*

*MOS **07** 10:12:04.5±1.0, 52°27N×175°68W, h33km, mb4.8/42, Error ellipse: s-maj=10.8km s-min=8.6km az=45.8*

*GCMT **07** 10:12:04.2±0.3, 52°19N×175°53W, h12km, MW5.0, Moment Tensor Solution. s15,c16; s66,c92; Moment tensor: Scale 10^{16}Nm; M_{rr}=0.47±.12; $M_{\theta\theta}$=1.69±.12; $M_{\phi\phi}$=-1.23±.11; $M_{r\theta}$=0.22±.31; $M_{r\phi}$=-2.46±.09; $M_{\theta\phi}$=-2.65±.33; Best double couple: M_o3.90000×10^{16} NP1:φ79.00000°, δ48.00000°, λ-172.00000°. NP2:φ343.00000°, δ84.00000°, λ-42.00000°. Principal axes: T 3.7400, Plg23.0000°, Azm38.0000°; N 0.3400, Plg47.0000°, Azm156.0000°; P -4.0900, Plg33.0000°, Azm292.0000°; Data Used: II IC IU G CN.*

*IDC **07** 10:12:04.7±3.4, 52°28N×175°60W, h21km±20km, mb4.1/21, mb1 4.3/23, mb1mx4.2/32, mbtmp4.1/23, ML4.4/2, MS4.3/30, Ms1 4.3/30, ms1mx4.1/42 Error ellipse: s-maj=20.9km s-min=11.5km az=176.0*

ISC 07 10:12:01.8±1.3, 52°15N±0°05×175°60W±0°04, h7km±7km, h11km±2.2km: pP-P, n501, σ0s89/491, mb4.5/103, MS4.3/38, 144C-139D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ATKA	**Atka Island**	**0.87**	**86**	*e*Pg		**Pg**	**10 12 16.1**	**-2.4**
AMKA	**Amchitka**	**3.26**	**258**	*e*P		**Pn**	**10 12 52.4**	**-0.9**
NIKO	**Nikolski**	**4.20**	**76**	P		**Pn**	**10 13 05.0**	**-1.2**
UNV	**Unalaska Valle**	**5.75**	**69**	P		**Pn**	**10 13 27.3**	**-0.2**
SPIA	**Saint Paul Isl**	**5.92**	**30**	*e*Pn		**Pn**	**10 13 27.7**	**-2.1**
AKGG	**Akutan Green G**	**6.13**	**67**	P		**Pn**	**10 13 29.5**	**-3.3**
AKLV	**Akutan Long Va**	**6.14**	**67**	P		**Pn**	**10 13 32.1**	**-0.8**
AKUT	**Akutan**	**6.24**	**68**	*e*Pn		**Pn**	**10 13 36.6**	**+2.4**
AKUT				*e*Sn		**Sn**	**10 14 46.6**	**+0.9**
SMY	**Shemya**	**6.33**	**279**	*e*Pn		**Pn**	**10 13 33.8**	**-1.6**
SMY				*e*P			10 13 39.1	
FALS	**False Pass**	**7.76**	**65**	*e*Pn		**Pn**	**10 13 55.2**	**+0.2**
SDPT	**Sand Point**	**9.51**	**64**	*e*Pn		**Pn**	**10 14 21.6**	**+2.5**
CHGN	**Chignik**	**10.88**	**61**	*e*Pn		**Pn**	**10 14 40.6**	**+2.8**
OHAK	**Old Harbor**	**13.84**	**60**	*e*Pn		**Pn**	**10 15 18.2**	**0.0**
SVW2	**Sparrevohn**	**14.14**	**43**	*e*P		**Pn**	**10 15 22.8**	**+0.5**
	7.7nm,0.6s							
KDAK	**Kodiak Island**	**14.33**	**58**	*e*Pn		**Pn**	**10 15 27.1**	**+2.2**
KDAK	**Kodiak Island**	**14.33**	**58**	Pn		**Pn**	**10 15 24.7**	**-0.2**
	1.7nm,0.3s,baz=247,slow=5.3,SNR=27							
KDAK				LR		LR	10 21 38.9	
	comp=Z,4μm,18.1s,baz=246,slow=40							
KDAK	**Kodiak Island**	**14.33**	**58**	*i* P		**Pn**	**10 15 26.8**	**+1.9**
TTA	**Tatalina**	**15.00**	**36**	*e*Pn		**Pn**	**10 15 34.0**	**+0.1**
RSO	**Redoubt South**	**15.10**	**48**	*e*Pn		**Pn**	**10 15 37.1**	**+1.9**
PMR	**Palmer**	**17.16**	**46**	*e*P		**Pn**	**10 16 03.8**	**+2.1**
	22nm,1.0s							
PMR				*e*P			10 16 06.9	
PMR	**Palmer**	**17.16**	**46**	*e*P		**Pn**	**10 16 03.8**	**+2.0**
PMR				pmax		pmax		
	comp=Z,22nm,1.0s							
COLA	**College**	**19.08**	**37**	*e*P		**Pn**	**10 16 24.4**	**-0.9**
	comp=Z,25nm,0.9s							
COLA	**College**	**19.08**	**37**	*e*P		**Pn**	**10 16 24.4**	**-1.0**
COLA				pmax		pmax		
	comp=Z,25nm,0.9s							
ILAR	**Eielson Array**	**19.40**	**38**	P		**Pn**	**10 16 26.3**	**-2.9**
	comp=Z,0.5nm,0.3s,baz=241,slow=9.8,SNR=65							
ILAR				ScP		ScP	10 24 21.6	-3.6
	comp=Z,0.0nm,0.3s,baz=269,slow=3.8,SNR=4.0							
ILAR				LR		LR	10 24 40.1	
	comp=Z,2μm,18.2s,baz=244,slow=39							
MENT	**Mentasta**	**20.00**	**45**	*e*P		**Pn**	**10 16 36.8**	**+0.5**
SEY	**Seymchan**	**20.05**	**315**↓	*e*P		**P**	**10 16 36.5**	**+1.3**
EGAK	**Eagle**	**21.66**	**41**	*e*P		**P**	**10 16 52.6**	**0.0**
	comp=Z,63nm,0.8s,mb5.1							
DAWY	**Dawson**	**22.18**	**43**	*e*P		**P**	**10 16 58.5**	**+0.4**
HYT	**Haines Junctio**	**22.45**	**52**	*e*P		**P**	**10 17 01.5**	**+0.4**
INK	**Inuvik**	**25.68**	**35**	*e*P		**P**	**10 17 31.4**	**-0.6**
	comp=Z,25nm,1.0s,mb4.7							
INK	**Inuvik**	**25.68**	**35**	P		**P**	**10 17 31.6**	**-0.4**
	comp=Z,12nm,0.8s,mb4.5,baz=252,slow=12,SNR=17							
INK				LR		LR	10 28 29.2	
	comp=Z,1μm,18.5s,MS4.4,baz=230,slow=38							
INK	**Inuvik**	**25.68**	**35**	*e*P		**P**	**10 17 31.4**	**-0.6**
INK				pmax		pmax		
	comp=Z,25nm,1.0s							
DLBC	**Dease Lake**	**26.27**	**58**	P		**P**	**10 17 38.9**	**+1.5**
	comp=Z,1.2nm,0.9s,mb3.4,baz=190,slow=9.5,SNR=2.5							
DLBC				LR		LR	10 27 03.8	
	comp=Z,405nm,21.1s,MS3.9,baz=275,slow=34							
BBB	**Bella Bella**	**28.72**	**71**	LR		LR	10 28 04.4	
	comp=Z,319nm,18.4s,MS4.0,baz=94,slow=34							
NLWA	**Neilton Lookou**	**33.16**	**77**	*e*P		**P**	**10 18 41.9**	**+3.4**
	comp=Z,38nm,1.8s,mb5.0							
YKA	**Yellowknife Ar**	**33.25**	**48**	P		**P**	**10 18 39.2**	**0.0**
YKA				PcP		PcP	10 21 19.6	-1.6
YKA	**Yellowknife Ar**	**33.25**	**48**	P		**P**	**10 18 39.2**	**+0.1**
	comp=Z,1.0nm,0.7s,mb3.9,baz=284,slow=7.7,SNR=4.1							
YKA				PcP		PcP	10 21 19.6	-1.6
	comp=Z,1.0nm,0.7s,baz=285,slow=3.1,SNR=6.7							
YKA	**Yellowknife Ar**	**33.25**	**48**	P		**P**	**10 18 39.2**	**0.0**
YKA							10 21 19.6	
E03A	**Lebam**	**33.74**	**78**	↑P		**P**	**10 18 44.0**	**+0.3**
	baz=34							
D05A	**Enumclaw**	**34.38**	**76**	↓P		**P**	**10 18 49.4**	**+0.2**
	baz=34,SNR=5.2							
LON	**Longmire**	**34.70**	**77**	*e*P		**P**	**10 18 55.0**	**+3.0**
	comp=Z,4.7nm,0.8s,mb4.5							
LON	**Longmire**	**34.70**	**77**	*e*P		**P**	**10 18 55.0**	**+3.0**
LON				pmax		pmax		
	comp=Z,5.0nm,0.8s,mb4.5							
F04A	**Amboy**	**34.74**	**79**	↑P		**P**	**10 18 52.4**	**+0.1**
	baz=35							
ETW	**Entiat**	**35.17**	**75**	*e*P		**P**	**10 18 58.8**	**+2.8**
B08A	**Colville Reser**	**35.41**	**73**	↓P		**P**	**10 18 58.2**	**+0.1**
	baz=35,SNR=6.7							
H04A	**Detroit Lake**	**35.52**	**80**	↓P		**P**	**10 18 59.4**	**+0.4**
	baz=36							
MJAR	**Matsushiro Arr**	**35.86**	**263**	P		**P**	**10 19 02.5**	**+0.4**
	comp=Z,3.7nm,0.8s,mb4.3,baz=51,slow=8.0,SNR=9.5							
MJAR	**Matsushiro Arr**	**35.86**	**263**	P		**P**	**10 19 02.5**	**+0.4**
MJAR				pmax		pmax		
	comp=Z,4.0nm,0.8s							
MAJO	**Matsushiro**	**35.86**	**263**	*e*P		**P**	**10 19 01.8**	**-0.3**
	comp=Z,14nm,1.0s,mb4.9							
MAJO	**Matsushiro**	**35.86**	**263**	*e*P		**P**	**10 19 01.8**	**-0.3**
MAJO				pmax		pmax		
	comp=Z,14nm,1.0s,mb4.8							
MAT	**Matsushiro**	**35.86**	**263**	P		**P**	**10 19 02.3**	**+0.2**
MAT				S		**S**	**10 24 40.0**	**0.0**
G06A	**Carlson Farm,**	**36.17**	**79**	↓P		**P**	**10 19 05.3**	**+0.7**
	baz=36							
RSW	**Rattlesnake Hi**	**36.21**	**76**	*e*P		**P**	**10 19 07.6**	**+2.7**
OD2	**Odessa Site #2**	**36.24**	**74**	*e*P		**P**	**10 19 06.5**	**+1.3**
HAWA	**Hanford**	**36.24**	**76**	*e*P		**P**	**10 19 07.7**	**+2.5**
	comp=Z,11nm,0.8s,mb4.8							
D08A	**Wollman Farm,**	**36.28**	**75**	↑P		**P**	**10 19 05.6**	**+0.1**
	baz=36							
C09A	**Chrisman Ranch**	**36.30**	**73**	↑P		**P**	**10 19 05.9**	**+0.2**
	baz=36							
MDJ	**Mudanjiang**	**36.40**	**280**	P		**P**	**10 19 06.2**	**-0.4**
MDJ				pP		pP	10 19 09.3	+0.6
MDJ				sP		sP	10 19 10.6	+1.1
MDJ				PP		PP	10 20 28.5	-0.6
MDJ				S		**S**	**10 24 46.8**	**-1.2**
MDJ				sS		sS	10 24 52.0	+0.5
MDJ				ScP		ScP	10 25 18.0	+0.7
MDJ				PcS		PcS	10 25 19.3	+1.0
MDJ				pmax		pmax		
	comp=Z,2.0nm,0.4s,mb4.4							
MDJ				LR		LR		
	comp=N,170nm,17.2s							
MDJ				LR		LR		
	comp=E,390nm,23.2s							
MDJ				LR		LR		
	comp=Z,660nm,19.3s,MS4.4							
KHMM	**Horse Mountain**	**36.69**	**87**	*e*P		**P**	**10 19 13.3**	**+4.2**
	comp=Z,13nm,1.1s,mb4.7							
EDM	**Edmonton**	**36.70**	**63**	*e*P		**P**	**10 19 08.4**	**-0.6**
NEW	**Newport**	**36.75**	**72**	*e*P		**P**	**10 19 09.6**	**0.0**
	comp=Z,7.0nm,0.8s,mb4.5							
NEW	**Newport**	**36.75**	**72**	*e*P		**P**	**10 19 09.6**	**0.0**
NEW				pmax		pmax		
	comp=Z,7.0nm,0.8s							
YBH	**Yreka Blue Hor**	**36.82**	**85**	*e*P		**P**	**10 19 12.0**	**+1.8**
	comp=Z,6.1nm,1.0s,mb4.4							
YBH	**Yreka Blue Hor**	**36.82**	**85**	P		**P**	**10 19 12.2**	**+2.0**
	comp=Z,6.1nm,1.0s,mb4.4,baz=297,slow=4.9,SNR=8.5							
YBH				LR		LR	10 32 17.9	
	comp=Z,413nm,18.1s,MS4.3,baz=302,slow=33							
YBH	**Yreka Blue Hor**	**36.82**	**85**	*e*P		**P**	**10 19 12.0**	**+1.8**
YBH				pmax		pmax		
	comp=Z,6.0nm,1.0s							
E09A	**Wood Farm, Sta**	**37.01**	**75**	↓P		**P**	**10 19 11.5**	**-0.3**
	baz=37							
G08A	**Pilot Rock**	**37.15**	**78**	↓P		**P**	**10 19 13.0**	**0.0**
	baz=37							
A12A	**Yaak River Ran**	**37.29**	**70**	↑P		**P**	**10 19 13.6**	**-0.5**
	baz=37							
K05A	**Summer Lake**	**37.37**	**82**	↓P		**P**	**10 19 15.0**	**+0.1**
	baz=37,SNR=6.3							
C11A	**Tepee Creek (N**	**37.47**	**72**	↑P		**P**	**10 19 14.9**	**-0.7**
	baz=37							
I07A	**Izee**	**37.47**	**80**	↑P		**P**	**10 19 16.5**	**+0.8**
	baz=37,SNR=15							
WDC	**Whiskeytown Da**	**37.59**	**86**	*e*P		**P**	**10 19 17.5**	**+0.7**
	comp=Z,7.6nm,1.1s,mb4.3							
WDC	**Whiskeytown Da**	**37.59**	**86**	*e*P		**P**	**10 19 17.5**	**+0.7**
WDC				pmax		pmax		
	comp=Z,8.0nm,1.1s,mb4.4							
F10A	**Beach Ranch, E**	**37.83**	**76**	↑P		**P**	**10 19 17.8**	**-0.9**
	baz=38							
A13A	**Flathead Natio**	**38.01**	**70**	↓P		**P**	**10 19 19.1**	**-1.1**
	baz=38							
MOD	**Modoc**	**38.20**	**83**	*e*P		**P**	**10 19 23.0**	**+1.2**
	comp=Z,11nm,1.1s,mb4.5							
WALA	**Waterton Lakes**	**38.24**	**69**	*e*P		**P**	**10 19 21.4**	**-0.7**
	comp=Z,0.2nm,0.9s							
B13A	**Whitefish**	**38.25**	**71**	↓P		**P**	**10 19 21.1**	**-1.1**
	baz=38							
BSMT	**Bassoo Peak**	**38.32**	**72**	*e*P		**P**	**10 19 22.8**	**0.0**
BMO	**Blue Mountains**	**38.38**	**77**	*e*P		**P**	**10 19 24.8**	**+1.5**
	comp=Z,5.8nm,1.4s,mb4.1							
D12A	**Red Ives Fores**	**38.39**	**73**	↓P		**P**	**10 19 22.7**	**-0.7**
	baz=38							
J08A	**Circle Bar Ran**	**38.49**	**80**	↑P		**P**	**10 19 24.5**	**+0.2**
	baz=38							
BLMT	**Blacktail Moun**	**38.49**	**71**	*e*P		**P**	**10 19 24.2**	**-0.1**
C13A	**Hot Springs**	**38.53**	**72**	↓P		**P**	**10 19 23.4**	**-1.2**
	baz=38,SNR=15							
A14A	**Double T Ranch**	**38.56**	**69**	↑P		**P**	**10 19 23.4**	**-1.4**
	baz=38,SNR=16							
E12A	**Beaver Dam Sad**	**38.59**	**74**	↓P		**P**	**10 19 25.2**	**0.0**
	baz=38							
JTMT	**Jette**	**38.67**	**71**	*e*P		**P**	**10 19 25.7**	**-0.1**
YBMT	**Yellow Bay**	**38.77**	**71**	*e*P		**P**	**10 19 27.3**	**+0.7**
D13A	**Huson**	**38.90**	**72**	↑P		**P**	**10 19 26.6**	**-1.1**
	baz=39							
WVOR	**Wild Horse Val**	**38.91**	**81**	*e*P		**P**	**10 19 28.1**	**+0.3**
	comp=Z,12nm,0.9s,mb4.6							
WVOR	**Wild Horse Val**	**38.91**	**81**	*e*P		**P**	**10 19 28.1**	**+0.3**
WVOR				pmax		pmax		
	comp=Z,12nm,0.9s,mb4.6							
A15A	**Johnson Ranch,**	**38.96**	**69**	↓P		**P**	**10 19 27.1**	**-1.1**
	baz=39							
C14A	**Swan Lake**	**38.97**	**71**	↓P		**P**	**10 19 27.1**	**-1.1**
	baz=39							
OHCM	**Honcut**	**38.99**	**87**	*e*P		**P**	**10 19 23.1**	**-5.5**
F12A	**Elk City**	**39.12**	**75**	↓P		**P**	**10 19 28.8**	**-0.8**
	baz=39,SNR=9.3							
MSO	**Missoula**	**39.34**	**72**	*e*P		**P**	**10 19 30.9**	**-0.5**
	comp=Z,5.1nm,0.8s,mb4.3							
CN2	**Changchun**	**39.34**	**282**	*e*P		**P**	**10 19 31.2**	**-0.3**
B15A	**Bradely Ranch,**	**39.38**	**70**	↑P		**P**	**10 19 30.1**	**-1.7**
	baz=39							
SLMT	**Seeley Lake**	**39.39**	**72**	*e*P		**P**	**10 19 31.3**	**-0.5**
E13A	**Victor**	**39.39**	**73**	↓P		**P**	**10 19 30.6**	**-1.2**
	baz=39,SNR=6.7							
D14A	**Greenough**	**39.46**	**72**	↓P		**P**	**10 19 31.3**	**-1.1**
	baz=39,SNR=22							
C15A	**Salmond Ranch,**	**39.63**	**70**	↑P		**P**	**10 19 32.6**	**-1.2**
	baz=40,SNR=18							
F13A	**Darby**	**39.65**	**74**	↓P		**P**	**10 19 34.1**	**+0.1**
	baz=40,SNR=6.9							
CHMT	**Chamberlain Mo**	**39.70**	**72**	*e*P		**P**	**10 19 34.1**	**-0.3**
E14A	**Clinton**	**39.82**	**73**	↓P		**P**	**10 19 34.9**	**-0.5**

M12A **Wells** 41.76 80 ⇓P P 10 19 51.4 0.0
baz=42,SNR=7.1
E18A **Harlowton** 41.83 71 ⇑P P 10 19 51.0 -1.0
baz=42
L13A **Double Diamond** 41.95 79 ⇑P P 10 19 52.6 -0.4
baz=42,SNR=12
MTUM **Tungsten Hills** 42.02 87 eP P 10 19 55.2 +1.7
N12A **Clover Valley,** 42.02 81 ⇑P P 10 19 53.3 -0.3
baz=42,SNR=13
H16A **Russell Place,** 42.07 74 ⇓P P 10 19 53.8 -0.2
baz=42
O11A **Cowboy Ranch,** 42.08 82 ⇑P P 10 19 54.7 +0.6
baz=42
M13A **Montello** 42.25 80 ⇓P P 10 19 54.9 -0.5
baz=42,SNR=12
YMR **Madison River** 42.26 74 eP P 10 19 56.2 +0.8
comp=Z,8.0nm,0.7s,mb4.5
F18A **Big Timber** 42.30 71 ⇑P P 10 19 55.1 -0.7
baz=42
GCMT **Greycliff** 42.40 71 eP P 10 20 00.6 +4.0
comp=Z,2.6nm,0.9s,mb3.9
L14A **Malta** 42.41 78 ⇓P P 10 19 56.6 -0.2
baz=42,SNR=7.9
Q10A **Clear Creek Ra** 42.42 84 ⇓P P 10 19 56.5 -0.4
baz=42,SNR=28
K15A **Arbon** 42.46 77 ⇑P P 10 19 56.8 -0.4
baz=42
N13A **Wendover, West** 42.52 80 ⇑P P 10 19 57.4 -0.3
baz=42,SNR=6.4
O12A **Currie** 42.55 81 ⇑P P 10 19 58.0 +0.1
baz=42,SNR=26
H17A **Grant Village** 42.64 74 ⇑P P 10 19 58.9 +0.3
baz=42,SNR=5.7
M14A **Sheep Mountain** 42.66 79 ⇓P P 10 19 59.2 +0.4
baz=43,SNR=8.0
VES **Vestal, Richgr** 42.66 89 ⇑P P 10 19 58.9 -0.1
baz=43
J16A **Bone** 42.67 76 ⇑P P 10 19 58.7 -0.1
baz=43
IMW **Indian Meadow** 42.71 74 eP P 10 20 00.7 +1.5
comp=Z,7.4nm,1.1s,mb4.3
G18A **Lazy EL Ranch,** 42.72 72 ⇑P P 10 19 58.5 -0.7
baz=43
FLWY **Flagg Ranch** 42.74 74 eP P 10 20 02.7 +3.2
comp=Z,6.4nm,0.9s,mb4.3
R10A **Warm Springs** 42.82 85 ⇑P P 10 19 59.3 -0.8
baz=43,SNR=14
HVU **Hansel Valley** 42.84 78 eP P 10 20 02.8 +2.5
comp=Z,6.9nm,0.9s,mb4.4
HVU **Hansel Valley** 42.84 78 eP P 10 20 02.8 +2.5
HVU pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
Q11A **Duckwater** 42.87 84 ⇓P P 10 20 00.3 -0.2
baz=43,SNR=9.7
S10A **Tonopah Range,** 42.87 85 ⇓P P 10 20 01.2 +0.7
baz=43,SNR=24
MOOW **Moose Ponds** 42.91 74 eP P 10 20 04.1 +3.3
comp=Z,3.3nm,1.3s,mb3.9
TPAW **Teton Pass** 42.94 75 eP P 10 20 02.4 +1.4
comp=Z,3.8nm,0.9s,mb4.1
P12A **McGill** 42.94 82 ⇓P P 10 20 01.1 0.0
baz=43
L15A **Malad City** 42.94 78 ⇑P P 10 20 00.6 -0.5
baz=43
RLMT **Red Lodge** 43.00 72 eP P 10 20 02.8 +1.3
comp=Z,11nm,0.9s,mb4.6
SNOW **Snow King Moun** 43.07 75 eP P 10 20 06.3 +4.2
comp=Z,8.5nm,1.3s,mb4.3
REDW **Red Top Meadow** 43.07 75 eP P 10 20 05.0 +2.9
comp=Z,11nm,1.4s,mb4.4
LOHW **Long Hollow** 43.07 75 eP P 10 20 05.3 +3.2
comp=Z,16nm,1.9s,mb4.4
N14A **Grayback Hills** 43.15 79 ⇓P P 10 20 01.9 -0.8
baz=43
ISA **Isabella** 43.16 89 ⇓P P 10 20 02.6 -0.3
baz=43,SNR=7.0
ISA **Isabella** 43.16 89 eP P 10 20 03.3 +0.4
comp=Z,16nm,1.2s,mb4.6
ISA **Isabella** 43.16 89 eP P 10 20 03.3 +0.4
ISA pmax pmax
comp=Z,16nm,1.2s,mb4.6
BGU **Big Grassy Mou** 43.20 79 eP P 10 20 05.8 +2.7
comp=Z,6.3nm,0.9s,mb4.3
R11A **Troy Canyon, C** 43.22 84 ⇑P P 10 20 03.4 +0.1
baz=43,SNR=29
Q12A **Willow Creek R** 43.25 83 ⇓P P 10 20 04.1 +0.5
baz=43,SNR=12
P13A **Bates Ranch, G** 43.49 82 ⇑P P 10 20 05.7 +0.1
baz=43,SNR=18
MPMC **Manual Prospec** 43.51 88 ⇑P P 10 20 05.9 +0.2
baz=44
L16A **Fish Haven** 43.51 77 ⇓P P 10 20 06.3 +0.6
baz=43,SNR=8.2
S11A **Rachel** 43.56 85 ⇓P P 10 20 06.5 +0.3
baz=44
FURC **Furnace Creek,** 43.63 87 ⇓P P 10 20 06.9 +0.2
baz=44
J18A **Kendall Valley** 43.65 75 ⇑P P 10 20 06.1 -0.7
baz=44
HWUT **Hardware Ranch** 43.67 78 eP P 10 20 09.9 +2.9
comp=Z,5.6nm,0.9s,mb4.3
DUG **Dugway** 43.77 80 eP P 10 20 09.0 +1.2
comp=Z,24nm,1.2s,mb4.8
DUG **Dugway** 43.77 80 eP P 10 20 09.0 +1.2
DUG pmax pmax
comp=Z,24nm,1.2s,mb4.8
L17A **Cokeville** 43.79 77 ⇓P P 10 20 07.7 -0.3
baz=44
Q13A **Wheeler Ranch,** 43.80 82 ⇓P P 10 20 09.0 +1.0
baz=44,SNR=16
R12A **Pony Springs,** 43.83 83 ⇑P P 10 20 09.1 +0.8
baz=44,SNR=14
LAO **LASA Array** 43.89 68 eP P 10 20 08.1 -0.6
comp=Z,8.0nm,0.9s,mb4.5
EDW2 **Edwards Air Fo** 43.97 90 ⇑P P 10 20 09.1 -0.3
baz=44
K18A **Toltan Ranch,** 43.97 75 ⇓P P 10 20 08.9 -0.5
baz=44
P14A **Drum Mountains** 43.98 81 ⇓P P 10 20 10.0 +0.5
baz=44,SNR=11
U10A **Ash Meadows, A** 43.99 87 ⇑P P 10 20 08.6 -1.0
baz=44
S12A **Delamar Landin** 44.14 84 ⇑P P 10 20 11.2 +0.4
baz=44,SNR=14
BW06 **Boulder Array** 44.19 75 eP P 10 20 10.3 -0.8
comp=Z,8.4nm,0.9s,mb4.5
Q14A **Sevier Lake (B** 44.23 82 ⇑P P 10 20 11.6 +0.1
baz=44,SNR=22
R13A **O'Grain Ranch,** 44.31 83 ⇑P P 10 20 12.2 0.0
baz=44,SNR=12
SHOC **Shoshone** 44.35 87 ⇑P P 10 20 12.6 0.0
baz=44
MWC **Mount Wilson** 44.36 90 eP P 10 20 13.4 +0.8
comp=Z,24nm,1.1s,mb4.8
MWC **Mount Wilson** 44.36 90 eP P 10 20 13.4 +0.8
MWC pmax pmax
comp=Z,24nm,1.1s,mb4.8
NLU **North Lily Min** 44.36 80 eP P 10 20 15.6 +3.0
comp=Z,9.0nm,0.9s,mb4.5
GSC **Goldstone** 44.42 88 ⇓P P 10 20 13.5 +0.4
baz=44
GSC **Goldstone** 44.42 88 eP P 10 20 13.3 +0.3
comp=Z,50nm,14.4s,mb5.0
GSC **Goldstone** 44.42 88 eP P 10 20 13.3 +0.2
GSC pmax pmax
comp=Z,50nm,14.4s,mb5.0
O16A **Springville** 44.56 79 ⇓P P 10 20 13.8 -0.3
baz=44
K19A **Absolon Red Bu** 44.57 74 ⇓P P 10 20 14.1 -0.1
baz=44,SNR=14
DAU **Daniels Canyon** 44.58 79 eP P 10 20 17.5 +3.3
MPU **Maple Canyon** 44.59 79 eP P 10 20 17.5 +3.2
comp=Z,6.4nm,0.9s,mb4.5
BFSC **Mount Baldy Ra** 44.60 90 ⇑P P 10 20 15.0 +0.4
baz=45,SNR=5.7
L19A **Farson** 44.70 76 ⇑P P 10 20 14.8 -0.4
baz=45
S13A **Holt Ranch, En** 44.76 84 ⇓P P 10 20 16.4 +0.7
baz=45,SNR=14
Q15A **Fillmore** 44.77 81 ⇑P P 10 20 15.4 -0.4
baz=45
TUQ **Turquoise Moun** 44.88 87 ⇑P P 10 20 16.6 -0.1
baz=45,SNR=6.5
ARUT **Antelope Range** 44.88 83 eP P 10 20 18.4 +1.6
comp=Z,5.6nm,0.8s,mb4.5
ARUT **Antelope Range** 44.88 83 eP P 10 20 18.4 +1.7
ARUT pmax pmax
comp=Z,6.0nm,0.8s,mb4.5

V11A **Goodsprings** 44.92 87 ⇓P P 10 20 16.8 -0.3
baz=45
K20A **Yellowstone Ra** 44.97 74 ⇑P P 10 20 16.4 -0.9
baz=45
BBRC **Big Bear Solar** 45.04 89 ⇑P P 10 20 17.6 -0.4
baz=45
S14A **Cedar City** 45.07 83 ⇓P P 10 20 17.7 -0.5
baz=45
U12A **Valley of Fire** 45.08 85 ⇓P P 10 20 18.1 -0.2
baz=45,SNR=11
CCUT **Cedar City** 45.08 83 eP P 10 20 20.1 +1.8
comp=Z,19nm,1.6s,mb4.7
T13A **Saint George** 45.09 84 ⇑P P 10 20 18.4 0.0
baz=45,SNR=23
N18A **Larsen Ranch,** 45.19 77 ⇑P P 10 20 18.6 -0.5
baz=45
MSU **Marysvale** 45.20 81 eP P 10 20 21.0 +1.8
TMUT **Trail Mountain** 45.30 80 eP P 10 20 22.2 +2.2
comp=Z,18nm,0.9s,mb4.9
MURC **Murrieta** 45.31 90 ⇑P P 10 20 20.1 0.0
baz=45
R15A **Junction** 45.33 82 ⇑P P 10 20 19.9 -0.4
baz=45
V12A **Nelson** 45.35 86 ⇓P P 10 20 19.8 -0.6
baz=45
P17A **Butcher Ranch,** 45.47 79 ⇓P P 10 20 20.3 -1.1
baz=45
GMRC **Granite Mounta** 45.47 88 ⇓P P 10 20 21.4 0.0
baz=45
Q16A **Castle Valley** 45.55 80 ⇓P P 10 20 22.2 +0.2
baz=46,SNR=10
T14A **Hurricane** 45.57 84 ⇓P P 10 20 21.6 -0.6
baz=46
S15A **Panguitch** 45.61 82 ⇓P P 10 20 22.5 0.0
baz=46
P18A **Preston Nutter** 45.67 79 ⇑P P 10 20 24.0 +1.0
baz=46,SNR=11
PFO **Pinyon Flat Ob** 45.76 90 ⇑P P 10 20 23.5 -0.2
baz=46
R16A **Teasdale** 45.77 81 ⇑P P 10 20 24.2 +0.5
baz=46,SNR=24
M20A **Sweetwater, Wa** 45.77 75 ⇓P P 10 20 23.0 -0.7
baz=46
BELC **Belle Mtn. Jos** 45.78 89 ⇑P P 10 20 23.7 -0.2
baz=46
V13A **Grand Canyon W** 45.80 86 ⇑P P 10 20 23.8 -0.2
baz=46,SNR=13
SRU **San Rafael** 45.83 80 eP P 10 20 25.3 +1.1
comp=Z,12nm,0.9s,mb4.8
SRU **San Rafael** 45.83 80 eP P 10 20 25.3 +1.1
SRU pmax pmax
comp=Z,12nm,0.9s,mb4.8
U14A **Mt Trumbull** 45.92 84 ⇑P P 10 20 25.5 +0.5
baz=46,SNR=6.9
O19A **Miners Draw (B** 45.94 77 ⇓P P 10 20 24.8 -0.3
baz=46,SNR=11
L21A **Rawlins** 45.97 74 ⇓P P 10 20 25.0 -0.2
baz=46,SNR=7.9
T15A **Red Dirt Ranch** 46.02 83 ⇓P P 10 20 25.3 -0.5
baz=46,SNR=12
S16A **Weppner Ranch,** 46.05 82 ⇑P P 10 20 26.1 +0.1
baz=46,SNR=13
Q18A **Rafter H Ranch** 46.07 79 ⇑P P 10 20 26.3 +0.2
baz=46,SNR=17
N20A **Spence Gulch,** 46.12 76 ⇑P P 10 20 27.6 +1.1
baz=46,SNR=7.4
R17A **Hanksville Air** 46.15 81 ⇓P P 10 20 27.1 +0.3
baz=46,SNR=11
M21A **Separation Pea** 46.19 75 ⇑P P 10 20 26.4 -0.6
baz=46
IRM **Iron Mountain** 46.20 88 ⇑P P 10 20 27.0 -0.2
baz=46
RWWY **Rawlins** 46.23 75 eP P 10 20 30.1 +2.8
comp=Z,6.1nm,0.8s,mb4.6
BAR **Barrett** 46.26 91 eP P 10 20 30.0 +2.3
comp=Z,6.8nm,0.9s,mb4.6
MONP **Monument Peak** 46.27 91 ⇓P P 10 20 27.8 +0.1
baz=46
BC3 **Big Chuckawall** 46.35 89 ⇑P P 10 20 28.2 -0.2
baz=46
W13A **Hualapai Mount** 46.35 86 ⇓P P 10 20 28.3 0.0
baz=46
P19A **Cripple Cowboy** 46.43 78 ⇑P P 10 20 29.2 +0.3
baz=46,SNR=16
U15A **North Rim** 46.46 84 ⇓P P 10 20 29.6 +0.4
baz=46,SNR=25
L22A **Ellis Ranch, M** 46.48 74 ⇑P P 10 20 28.6 -0.7
baz=46
V14A **Boquillas Ranc** 46.48 85 ⇓P P 10 20 29.3 -0.1
baz=46,SNR=12
O20A **White River Ci** 46.57 77 ⇓P P 10 20 30.1 +0.1
baz=46,SNR=13
T16A **Glen Canyon Da** 46.58 83 ⇑P P 10 20 30.0 -0.1
baz=46
S17A **Black Ridge (B** 46.59 81 ⇑P P 10 20 30.3 +0.1
baz=46,SNR=22
N21A **Black Mountain** 46.61 76 ⇓P P 10 20 30.8 +0.4
baz=46,SNR=6.5
DVTC **Desert V Tower** 46.62 90 ⇓P P 10 20 30.6 +0.1
baz=47
RSSD **Black Hills** 46.63 70 eP P 10 20 32.5 +2.0
comp=Z,3.5nm,0.9s,mb4.3
RSSD **Black Hills** 46.63 70 eP P 10 20 32.5 +2.1
RSSD pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
R18A **Canyonlands Na** 46.67 80 ⇓P P 10 20 30.9 0.0
baz=47,SNR=8.7
X13A **Yucca** 46.72 87 ⇑P P 10 20 31.3 0.0
baz=47
M22A **Cedar Creek Ra** 46.77 75 ⇓P P 10 20 30.8 -0.7
baz=47
W14A **Seligman** 46.77 86 ⇓P P 10 20 31.1 -0.6
baz=47,SNR=8.7
P20A **De Beque** 46.87 78 ⇑P P 10 20 32.1 -0.3
baz=47
V15A **Kaibab Nationa** 46.93 84 ⇑P P 10 20 32.8 -0.1
baz=47,SNR=26
O21A **Pagoda** 46.98 76 ⇑P P 10 20 32.6 -0.7
baz=47
T17A **Navajo Res., N** 47.00 82 ⇓P P 10 20 33.0 -0.4
baz=47
S18A **Hurst Farm, Bl** 47.05 81 ⇓P P 10 20 33.6 -0.2
baz=47,SNR=27
R19A **Curley Farm, L** 47.11 80 ⇑P P 10 20 34.9 +0.7
baz=47,SNR=12
BJI **Beijing** 47.14 283 P P 10 20 33.9 -0.6
BJI S S 10 27 14.8 -12
BJI pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
BJI LR LR
comp=N,510nm,21.1s,MS4.5
BJI LR LR
comp=E,120nm,19.5s,MS4.5
BJI LR LR
comp=Z,460nm,23.9s,MS4.4
GLA **Glamis** 47.14 89 ⇑P P 10 20 34.8 +0.2
baz=47
GLA **Glamis** 47.14 89 eP P 10 20 35.1 +0.6
comp=Z,13nm,1.0s,mb4.8
GLA **Glamis** 47.14 89 eP P 10 20 35.1 +0.5
GLA pmax pmax
comp=Z,13nm,1.0s,mb4.8
N22A **Wattenberg Ran** 47.22 75 ⇑P P 10 20 35.0 -0.1
baz=47
PV04 **Paradox Valley** 47.26 79 eP P 10 20 38.1 +2.6
Q20A **Ridgley Place,** 47.27 78 ⇑P P 10 20 35.5 0.0
baz=47
W15A **Williams** 47.29 85 ⇑P P 10 20 36.2 +0.4
baz=47,SNR=5.2
TLY **Talaya** 47.31 303 eP P 10 20 35.7 0.0
TLY eS S 10 27 38.4 +9.2
TLY pmax pmax
comp=Z,17nm,2.3s,mb4.6
TLY MLR MLR
comp=Z,358nm,21.0s,MS4.3
X14A **Yava** 47.38 86 ⇑P P 10 20 36.4 0.0
baz=47,SNR=18
N23A **Red Feather La** 47.47 75 ⇑P P 10 20 37.2 +0.2
baz=47
T18A **Mexican Hat** 47.48 81 ⇑P P 10 20 37.2 +0.1
baz=47,SNR=24
S19A **Harvey Farm, M** 47.53 80 ⇑P P 10 20 37.6 0.0
baz=48,SNR=15
O22A **Kremmling** 47.56 76 ⇓P P 10 20 37.4 -0.4
baz=48
ULM **Lac du Bonnet** 47.59 59 LR LR 10 41 08.6
comp=Z,434nm,18.8s,MS4.5,baz=308,slow=37
WUAZ **Wupatki** 47.62 84 eP P 10 20 38.7 +0.4
comp=Z,15nm,1.0s,mb5.0
PV01 **Paradox Valley** 47.63 79 eP P 10 20 37.4 -1.0
comp=Z,3μm,1.2s
Y14A **Wickenburg** 47.67 87 ⇑P P 10 20 38.9 +0.2
baz=48,SNR=9.6
R20A **Redvale** 47.71 79 ⇑P P 10 20 39.5 +0.5
baz=48,SNR=9.6
Z13A **Yuma Proving G** 47.76 88 ⇓P P 10 20 38.9 -0.5
baz=48,SNR=10
X15A **Humboldt** 47.77 86 ⇑P P 10 20 39.7 +0.2
baz=48,SNR=11
W16A **Flagstaff** 47.80 85 ⇓P P 10 20 39.7 0.0
baz=48,SNR=10
V17A **Tonalea, Kykot** 47.91 83 ⇓P P 10 20 40.3 -0.2
baz=48,SNR=14
O23A **Lake Granby, G** 47.91 75 ⇓P P 10 20 40.5 +0.1
baz=48,SNR=8.4
SMCO **Snowmass** 47.93 77 eP P 10 20 42.9 +2.3
comp=Z,2.4nm,0.8s,mb4.3
U18A **Rough Rock, Ch** 47.95 82 ⇑P P 10 20 40.3 -0.5
baz=48
113A **Mohawk Valley,** 47.99 89 ⇓P P 10 20 40.7 -0.5
baz=48,SNR=5.2
SONM **Songino Array** 48.06 298 P P 10 20 41.2 -0.3
comp=Z,1.1nm,0.8s,mb4.0,baz=61,slow=9.2,SNR=4.5
SONM LR LR 10 41 42.5
comp=Z,700nm,18.9s,MS4.7,baz=54,slow=37
SONM **Songino Array** 48.06 298 P P 10 20 41.2 -0.3
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM MLR MLR
comp=Z,700nm,18.9s
Y15A **Casa Rosa Ranc** 48.07 86 ⇓P P 10 20 42.1 +0.3
baz=48
R21A **Cimarron** 48.10 78 ⇓P P 10 20 41.9 0.0
baz=48
Q22A **Crested Butte,** 48.17 77 ⇑P P 10 20 42.2 -0.3
baz=48,SNR=8.6
ZAK **Zakamensk** 48.24 302 eP P 10 20 39.8 -3.1
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb4.1
MVCO **Mesa Verde** 48.27 80 eP P 10 20 44.8 +1.5
comp=Z,17nm,1.3s,mb4.9
X16A **Lo Mia Camp, P** 48.31 85 ⇓P P 10 20 44.0 +0.4
baz=48,SNR=8.5
ISCO **Idaho Springs** 48.35 76 eP P 10 20 46.9 +3.0
comp=Z,6.8nm,1.4s,mb4.5
ISCO eP pP 10 20 47.9 +1.9
ISCO **Idaho Springs** 48.35 76 eP P 10 20 46.9 +3.0
ISCO pmax pmax
comp=Z,7.0nm,1.4s,mb4.5
V18A **Ganado** 48.37 83 ⇓P P 10 20 43.8 -0.3
baz=48
U19A **Dine' College,** 48.43 82 ⇑P P 10 20 43.9 -0.7
baz=48
114A **Black Gap (USA** 48.54 88 ⇓P P 10 20 45.7 +0.3
baz=48
Y16A **Circle Bar Ran** 48.64 86 ⇓P P 10 20 47.0 +0.8
baz=49,SNR=7.7
R22A **Saguache, Gunn** 48.66 78 ⇓P P 10 20 46.9 +0.6
baz=49,SNR=9.8
X17A **Forest Lakes** 48.75 85 ⇓P P 10 20 47.2 +0.2
baz=49
Q23A **Hartsel** 48.79 77 ⇓P P 10 20 47.0 -0.3
baz=49
S22A **4UR Ranch, Cre** 48.93 79 ⇑P P 10 20 48.1 -0.2
baz=49,SNR=16
T21A **Navajo Lake** 48.99 80 ⇓P P 10 20 48.8 -0.1
baz=49
Z16A **Peralta Trail,** 49.04 86 ⇓P P 10 20 49.1 -0.2
baz=49
214A **Organ Pipe Nat** 49.13 89 ⇓P P 10 20 49.8 -0.2
baz=49,SNR=7.0
X18A **Snowflake** 49.15 84 ⇑P P 10 20 49.7 -0.3
baz=49
Q24A **Divide** 49.16 76 ⇑P P 10 20 49.3 -0.8
baz=49
Y17A **Roosevelt** 49.16 85 ⇓P P 10 20 50.0 -0.2
baz=49,SNR=8.9
V20A **Brimhall** 49.21 82 ⇓P P 10 20 50.1 -0.4
baz=49
U21A **Nageezi** 49.29 80 ⇓P P 10 20 51.2 +0.1
baz=49,SNR=16
T22A **Edith** 49.36 79 ⇓P P 10 20 52.0 +0.3
baz=49,SNR=17
HHC **Hu-ho-hao-te** 49.37 287 eP P 10 20 52.3 +0.6
HHC pP pP 10 20 56.6 +2.7
HHC sP sP 10 20 59.5 +4.8
HHC PP PP 10 22 45.4 0.0
HHC PcS PcS 10 26 11.3 +0.7
HHC eS S 10 27 55.8 -2.7
HHC sS sS 10 28 03.1 +1.0
HHC SS SS 10 31 21.5 -8.2
HHC pmax pmax
comp=Z,12nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,110nm,4.4s
HHC LR LR
comp=N,320nm,12.3s,MS4.5
HHC LR LR
comp=E,190nm,16.9s,MS4.5
HHC LR LR
comp=Z,280nm,12.3s,MS4.5
P25A **Willow Gulch B** 49.39 75 ⇓P P 10 20 51.6 -0.3
baz=49,SNR=6.3
X19A **St. Johns** 49.62 84 ⇓P P 10 20 54.1 +0.4
baz=50,SNR=5.5
W20A **Ramah** 49.64 82 ⇓P P 10 20 53.9 +0.1
baz=50
R24A **Sanders Place,** 49.65 77 ⇑P P 10 20 54.0 +0.1
baz=50
Z17A **San Carlos Hig** 49.66 86 ⇓P P 10 20 54.2 +0.2
baz=50
SPITS **Spitsbergen Ar** 49.73 357 P P 10 20 55.3 +1.4
comp=Z,10nm,0.8s,mb4.9,baz=67,slow=21,SNR=3.8
SPITS LR LR 10 40 59.4
comp=Z,284nm,20.5s,MS4.3,baz=10.0,slow=35
Q25A **Bedland, Calha** 49.73 76 ⇑P P 10 20 54.1 -0.3
baz=50,SNR=7.7
SDCO **Great Sand Dun** 49.73 78 eP P 10 20 56.9 +2.4
comp=Z,7.9nm,1.0s,mb4.7
GUMO **Guam** 49.76 234 LR LR 10 39 25.9
comp=Z,174nm,21.1s,MS4.0,baz=88,slow=33
U22A **Ibapes** 49.81 80 ⇑P P 10 20 54.8 -0.3
baz=50,SNR=9.9
T23A **Casias Ranch,** 49.87 79 ⇑P P 10 20 55.0 -0.6
baz=50,SNR=9.7
Y19A **Nutrioso** 49.96 84 ⇑P P 10 20 56.0 -0.2
baz=50
S24A **Houchin Ranch,** 49.97 78 ⇓P P 10 20 56.4 +0.1
baz=50,SNR=10
117A **Oracle** 49.98 86 ⇑P P 10 20 56.5 0.0
baz=50,SNR=10
X20A **Quemado** 50.03 83 ⇓P P 10 20 56.3 -0.5
baz=50
Z18A **Geronimo** 50.07 85 ⇑P P 10 20 56.7 -0.4
baz=50
V22A **San Miguel Ran** 50.08 80 ⇑P P 10 20 57.2 +0.1
baz=50
TUC **Tucson** 50.14 87 eP P 10 20 57.4 -0.2
comp=Z,29nm,1.4s,mb5.1
TUC **Tucson** 50.14 87 eP P 10 20 57.4 -0.2
TUC pmax pmax
comp=Z,29nm,1.4s,mb5.1
U23A **El Rito** 50.24 80 ⇑P P 10 20 58.0 -0.3
baz=50,SNR=34
118A **Homack Ranch,** 50.41 86 ⇓P P 10 20 59.7 0.0
baz=50
217A **Green Valley** 50.48 87 ⇑P P 10 21 00.3 0.0
baz=50
X21A **Alamocita Cree** 50.53 82 ⇑P P 10 21 01.2 +0.6
baz=50,SNR=16
Y20A **Horse Springs,** 50.53 83 ⇓P P 10 21 00.5 -0.1
baz=50,SNR=7.2
V23A **Ortiz Mt. (NFS** 50.63 80 ⇑P P 10 21 01.5 +0.2
baz=51,SNR=13
119A **Ashpeak Ranch,** 50.73 85 ⇓P P 10 21 02.0 -0.2
baz=51,SNR=5.2
U24A **Moreno Valley** 50.74 79 ⇑P P 10 21 02.9 +0.8
baz=51,SNR=7.7
NJ2 **Nanjing** 50.76 274 eP P 10 21 04.3 +1.9
NJ2 pP pP 10 21 08.7 +4.2
NJ2 sP sP 10 21 11.3 +6.0
NJ2 PP PP 10 22 59.9 +1.7
NJ2 S S 10 28 17.5 -0.6
NJ2 sS sS 10 28 25.0 +3.4
NJ2 pmax pmax

comp=Z,10.0nm,0.5s,mb5.0
NJ2 pmax pmax
comp=Z,310nm,3.9s
NJ2 LR LR
comp=N,320nm,24.7s
NJ2 LR LR
comp=E,310nm,19.2s
NJ2 LR LR
comp=Z,370nm,26.2s,MS4.3
T25A Trinidad 50.78 78 ⇓P **P 10 21 02.5 0.0**
baz=51,SNR=15
218A Dragoon 50.82 86 ⇓P **P 10 21 03.2 +0.3**
baz=51,SNR=7.0
Y21A Point of Rocks 50.89 83 ⇑P **P 10 21 04.2 +0.9**
baz=51,SNR=6.1
Z20A Nine Sixteen R 50.94 84 ⇓P **P 10 21 04.2 +0.5**
baz=51,SNR=6.6
LAZ Ladron 50.95 82 *e*P **P 10 21 04.7 +1.0**
comp=Z,9.4nm,1.2s,mb4.6
X22A Bernardo 50.96 82 ⇓P **P 10 21 04.0 +0.2**
baz=51
ANMO Albuquerque 51.00 81 *e*P **P 10 21 06.0 +1.9**
comp=Z,13nm,1.4s,mb4.7
ANMO Albuquerque 51.00 81 P **P 10 21 04.9 +0.8**
comp=Z,3.9nm,1.0s,mb4.3,baz=318,slow=7.7,SNR=9.6
ANMO LR LR 10 41 53.1
comp=Z,232nm,18.6s,MS4.2,baz=96,slow=35
W23A Werner Place, 51.04 81 ⇓P **P 10 21 05.0 +0.6**
baz=51,SNR=6.6
ECSD EROS Data Cent 51.11 66 *e*P **P 10 21 03.5 -1.3**
comp=Z,22nm,2.0s,mb4.8
ECSD *e*P pP 10 21 03.7 -3.3
V24A Rampart Ranch, 51.20 79 ⇓P **P 10 21 06.0 +0.4**
baz=51,SNR=18
LENM Lemitar 51.21 82 *e*P **P 10 21 08.8 +3.1**
318A Bisbee 51.23 87 ⇓P **P 10 21 06.2 +0.4**
baz=51,SNR=8.6
U25A Circle Dot Ran 51.27 78 ⇓P **P 10 21 06.2 0.0**
baz=51,SNR=13
120A U Bar Ranch, L 51.30 85 ⇑P **P 10 21 06.3 -0.1**
baz=51,SNR=7.8
BNM Barren Site 51.43 82 *e*P **P 10 21 08.2 +0.8**
comp=Z,13nm,1.2s,mb4.7
W24A Lazy 6 Ranch, 51.46 80 ⇓P **P 10 21 07.4 -0.2**
baz=51,SNR=11
V25A Rancho No Teng 51.52 79 ⇓P **P 10 21 07.8 -0.2**
baz=51,SNR=16
U26A Atchley Ranch, 51.68 78 ⇑P **P 10 21 08.4 -0.8**
baz=52,SNR=8.7
319A Douglas 51.70 86 ⇓P **P 10 21 08.9 -0.5**
baz=52
220A Playas Peak, P 51.80 85 ⇓P **P 10 21 09.8 -0.4**
baz=52,SNR=12
121A Cookes Peak, D 51.83 84 ⇑P **P 10 21 09.6 -0.7**
baz=52
Z22A Elephant Butte 51.84 83 ⇑P **P 10 21 10.2 -0.2**
baz=52,SNR=5.5
W25A X Bar L Ranch, 52.03 79 ⇓P **P 10 21 11.6 -0.2**
baz=52
V26A Tequesquite Ra 52.05 78 ⇑P **P 10 21 11.2 -0.7**
baz=52,SNR=13
SUMG Summit 52.05 15 *e*P **P 10 21 11.9 +0.4**
comp=Z,11nm,1.1s,mb4.7
SUMG Summit 52.05 15 *i* P **P 10 21 11.5 0.0**
comp=Z,4.7nm,0.9s,mb4.4
122A Conniff Cattle 52.19 84 ⇓P **P 10 21 12.7 -0.4**
baz=52
320A Kipp Ranch, An 52.20 86 ⇑P **P 10 21 12.7 -0.4**
baz=52,SNR=13
Y24A Capitan 52.31 81 ⇑P **P 10 21 13.0 -0.9**
baz=52,SNR=32
X25A Clemmons Ranch 52.37 80 ⇑P **P 10 21 14.2 -0.2**
baz=52
Z24A Sheeppen Canyo 52.76 82 ⇓P **P 10 21 16.6 -0.6**
baz=53,SNR=12
Y25A Mesa, Roswell 52.77 81 ⇓P **P 10 21 16.6 -0.7**
baz=53,SNR=19
X26A CR and CF Fran 52.88 80 ⇑P **P 10 21 17.4 -0.7**
baz=53,SNR=7.3
W27A Bowe Ranch, En 52.98 79 ⇑P **P 10 21 18.3 -0.6**
baz=53
124A Stringfield Ra 53.14 82 ⇑P **P 10 21 19.4 -0.6**
baz=53
Z25A Roswell 53.19 81 ⇑P **P 10 21 19.9 -0.5**
baz=53,SNR=6.5
X27A F and S Farms, 53.24 79 ⇑P **P 10 21 19.8 -1.0**
baz=53
Y26A Elida 53.29 80 ⇑P **P 10 21 20.1 -1.1**
baz=53
224A Cornudas Mount 53.53 83 ⇓P **P 10 21 22.2 -0.7**
baz=54,SNR=8.7
Z26A Caprock 53.64 81 ⇓P **P 10 21 23.0 -0.8**
baz=54,SNR=11
125A Gardner Draw, 53.65 82 ⇑P **P 10 21 23.0 -0.9**
baz=54,SNR=7.1
Y27A Causey 53.72 80 ⇓P **P 10 21 23.5 -0.8**
baz=54,SNR=14
MNTX Cornudas Mount 53.87 83 *e*P **P 10 21 25.4 -0.1**
comp=Z,9.8nm,1.0s,mb4.7
MSTX Muleshoe 53.90 79 ⇓P **P 10 21 25.3 -0.3**
baz=54,SNR=20
225A Deer Hill, Car 53.93 82 ⇑P **P 10 21 25.3 -0.6**
baz=54,SNR=7.5
324A Moseley Ranch, 53.99 84 ⇑P **P 10 21 26.0 -0.3**
baz=54
Z27A Tatum 54.08 80 ⇑P **P 10 21 25.5 -1.4**
baz=54,SNR=6.1
GDL2 Guadalupe Moun 54.15 82 *e*P **P 10 21 28.9 +1.4**
325A Bean Ranch, Si 54.35 83 ⇑P **P 10 21 28.1 -0.8**
baz=54,SNR=19
226A Malaga, Loving 54.40 82 ⇓P **P 10 21 28.3 -1.0**
baz=54,SNR=6.4
425A Indio Mountain 54.75 84 ⇓P **P 10 21 31.3 -0.6**
baz=55,SNR=13
ZALV Zalesovo Beam 54.92 315 P **P 10 21 33.4 +0.6**
comp=Z,0.7nm,0.5s,mb4.0,baz=90,slow=4.3,SNR=3.5
ZALV LR LR 10 46 34.8
comp=Z,182nm,18.4s,MS4.2,baz=237,slow=38
ZALV Zalesovo Beam 54.92 315 P **P 10 21 33.4 +0.6**
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
ZALV MLR MLR
comp=Z,182nm,18.4s,MS4.2
326A Caldwell Ranch 55.00 83 ⇑P **P 10 21 32.6 -1.1**
baz=55
SSLB Suanglung 55.37 265 *e*P **P 10 21 35.6 -0.9**
comp=Z,24nm,0.8s,mb5.3
426A McDonald Obser 55.42 83 ⇑P **P 10 21 35.9 -0.8**
baz=55,SNR=11
328A Wristen Ranch, 55.66 82 ⇓P **P 10 21 37.7 -0.8**
baz=56,SNR=7.2
427A Hayter Ranch, 55.68 83 ⇑P **P 10 21 37.8 -0.7**
baz=56
WMOK Wichita Mounta 55.77 76 *e*P **P 10 21 39.8 +0.6**
comp=Z,4.7nm,0.8s,mb4.6
WMOK Wichita Mounta 55.77 76 *e*P **P 10 21 39.8 +0.6**
WMOK pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
526A Mary Lane Ranc 55.81 84 ⇑P **P 10 21 39.0 -0.6**
baz=56,SNR=8.5
626A Big Bend Ranch 56.14 84 ⇓P **P 10 21 41.2 -0.7**
baz=56,SNR=20
428A Kincaid Ranch, 56.20 82 ⇓P **P 10 21 41.6 -0.7**
baz=56,SNR=6.7
528A Cox Ranch, San 56.54 83 ⇑P **P 10 21 43.8 -1.0**
baz=56
TXAR Lajitas Array 56.58 84 P **P 10 21 44.4 -0.7**
comp=Z,7.2nm,0.8s,mb4.7,baz=296,slow=4.9,SNR=26
TXAR LR LR 10 44 40.0
comp=Z,188nm,18.0s,MS4.2,baz=5.0,slow=35
627A Terlingua Ranc 56.67 84 ⇓P **P 10 21 45.0 -0.7**
baz=57,SNR=6.5
JMIC Jan Mayen 56.82 5 LR LR 10 47 53.0
comp=Z,145nm,20.6s,MS4.1,baz=345,slow=38
ARCES ARCESS Array B 57.65 351 P **P 10 21 52.4 +0.4**
comp=Z,2.9nm,0.7s,mb4.4,baz=15,slow=10.0,SNR=4.1
ARCES ARCESS Array B 57.65 351 P **P 10 21 52.4 +0.4**
ARCES pmax pmax
comp=Z,3.0nm,0.7s
JCT Junction City 58.13 80 *e*P **P 10 21 56.6 +0.6**
comp=Z,17nm,1.3s,mb4.9
JCT Junction City 58.13 80 *e*P **P 10 21 56.6 +0.6**
JCT pmax pmax
comp=Z,17nm,1.3s,mb4.9
SCHQ Schefferville 58.15 40 LR LR 10 47 55.9
comp=Z,719nm,18.9s,MS4.8,baz=84,slow=37
FVM French Village 58.42 68 *e*P **P 10 21 57.9 0.0**
comp=Z,7.7nm,0.7s,mb4.8
FVM *e*P pP 10 21 58.5 -1.6
FVM French Village 58.42 68 *e*P **P 10 21 57.9 0.0**
FVM pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
MIAR Mount Ida 58.99 73 *e*P **P 10 22 00.3 -1.7**
comp=Z,9.0nm,0.8s,mb4.8
MIAR Mount Ida 58.99 73 *e*P **P 10 22 00.3 -1.7**
MIAR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KURK Kurchatov 59.90 315 *e*P **P 10 22 08.3 +0.4**
comp=Z,4.1nm,0.7s,mb4.6
KURK Kurchatov 59.90 315⇑ *e*P **P 10 22 08.3 +0.3**
KURK pmax pmax
comp=Z,12nm,1.7s,mb4.7
KURK MLR MLR
comp=Z,284nm,17.0s,MS4.5
WMQ Urumqi 60.57 304 *e*P **P 10 22 14.1 +1.5**
WMQ pP pP 10 22 18.7 +3.9
WMQ sP sP 10 22 21.1 +5.5
WMQ PcP PcP 10 22 58.7 +1.6
WMQ PP PP 10 24 29.3 +3.7
WMQ pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
WMQ pmax pmax
comp=Z,130nm,4.7s
WMQ LR LR
comp=N,500nm,20.0s,MS4.7
WMQ LR LR
comp=E,310nm,23.6s,MS4.7
WMQ LR LR
comp=Z,410nm,20.4s,MS4.6
CD2 Chengdu 60.74 284 P **P 10 22 14.0 0.0**
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
CD2 pmax pmax
comp=Z,120nm,4.5s
MK31 Makanchi Array 61.09 310 *e*P **P 10 22 15.9 -0.2**
MKAR Makanchi Array 61.09 310 P **P 10 22 15.9 -0.2**
comp=Z,2.9nm,0.8s,mb4.5,baz=52,slow=5.8,SNR=17
MKAR LR LR 10 49 07.7
comp=Z,208nm,20.6s,MS4.3,baz=23,slow=36
MKAR Makanchi Array 61.09 310 P **P 10 22 15.9 -0.2**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR MLR MLR
comp=Z,208nm,20.6s
WVT Waverly 61.20 67 *e*P **P 10 22 18.4 +1.3**
comp=Z,3.2nm,0.8s,mb4.5
WVT Waverly 61.20 67 *e*P **P 10 22 18.4 +1.3**
WVT pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
BVAR Borovoye Array 61.56 321 P **P 10 22 19.3 +0.1**
comp=Z,4.8nm,0.7s,mb4.7,baz=59,slow=6.9,SNR=21
BVAR Borovoye Array 61.56 321 P **P 10 22 19.3 +0.1**
BVAR pmax pmax
comp=Z,5.0nm,0.7s
BRVK Borovoye 61.57 321 *e*P **P 10 22 19.9 +0.6**
comp=Z,4.1nm,0.8s,mb4.6
BRVK Borovoye 61.57 321 *e*P **P 10 22 19.9 +0.6**
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
BORG Borgarnes 61.75 12 LR LR 10 53 38.7
comp=Z,144nm,18.1s,MS4.2,baz=203,slow=40
GYA Guiyang 62.20 278 *e*P **P 10 22 25.0 +1.1**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
ARU Arti 62.97 330 *d i*P **P 10 22 28.1 -0.5**
ARU S **S 10 30 57.4 -1.2**
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.8
ARU MLR MLR
comp=Z,225nm,19.0s,MS4.4
LRAL Lakeview Retre 63.90 69 *e*P **P 10 22 33.0 -2.1**
comp=Z,9.3nm,1.4s,mb4.6
FINES FINESS Array B 65.44 349 P **P 10 22 45.3 +0.5**
FINES LR LR 10 55 38.8
FINES FINESS Array B 65.44 349 P **P 10 22 45.3 +0.6**
comp=Z,1.9nm,0.7s,mb4.2,baz=322,slow=4.3,SNR=3.3
FINES LR LR 10 55 38.8
comp=Z,131nm,18.5s,MS4.2,baz=359,slow=40
FINES FINESS Array B 65.44 349 P **P 10 22 45.3 +0.6**
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES MLR MLR
comp=Z,131nm,18.5s
KMI Kunming 65.57 280 P **P 10 22 48.4 +2.3**
KMI pP pP 10 22 52.8 +4.5
KMI sP sP 10 22 54.4 +5.3
KMI PP PP 10 25 13.2 +3.1
KMI S S 10 31 30.0 -1.7
KMI sS sS 10 31 38.1 +2.8
KMI SS SS 10 35 43.6 -1.3
KMI pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
KMI pmax pmax
comp=Z,84nm,3.1s
KMI LR LR
comp=N,380nm,18.8s,MS4.6
KMI LR LR
comp=E,150nm,22.4s,MS4.6
KMI LR LR
comp=Z,210nm,20.0s,MS4.3
DAV Davao City (W) 65.61 249 LR LR 10 46 03.0
comp=Z,167nm,20.4s,MS4.2,baz=251,slow=31
GOGA Godfrey 65.64 67 *e*P **P 10 22 46.8 +0.3**
comp=Z,9.2nm,1.1s,mb4.7
GOGA Godfrey 65.64 67 *e*P **P 10 22 46.8 +0.3**
GOGA pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
QIZ Qiongzhong 65.76 270 P **P 10 22 47.8 +0.4**
QIZ S S 10 31 39.9 +5.8
QIZ LR LR
comp=Z,82nm,24.5s,MS3.8
NOA NORSAR Array B 67.03 356 P **P 10 22 54.1 -0.8**
comp=Z,2.2nm,1.0s,mb4.2,baz=3.4,slow=6.1,SNR=3.1
NOA LR LR 10 50 43.8
comp=Z,80nm,21.8s,MS3.9,baz=10.0,slow=35
AAK Ala-Archa 67.87 311 LR LR 10 57 30.0
comp=Z,189nm,18.0s,MS4.4,baz=23,slow=40
AKTK Aktyubinsk 68.17 326 P **P 10 23 02.5 +0.1**
AKTK LR LR 10 55 42.9
AKTO Aktyubinsk 68.17 326 P **P 10 23 02.5 +0.2**
comp=Z,1.0nm,0.4s,mb4.2,baz=36,slow=8.6,SNR=4.6
AKTO LR LR 10 55 42.9
comp=Z,218nm,18.4s,MS4.4,baz=188,slow=38
AKTO Aktyubinsk 68.17 326 P **P 10 23 02.5 +0.2**
AKTO pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
AKTO MLR MLR
comp=Z,218nm,18.4s,MS4.4
EKS2 Erkin-Say 68.18 312 *e*P **P 10 23 02.9 +0.5**
comp=Z,3.2nm,0.8s,mb4.4
KSH Kashi 69.60 308 *e*P **P 10 23 14.7 +3.3**
KSH *ep*P pP 10 23 19.7 +6.1
KSH *es*P sP 10 23 21.8 +7.4
KSH *e*PcP PcP 10 23 37.6 +3.2
KSH *e*S S 10 32 22.1 +2.4
KSH *es*S sS 10 32 30.5 +7.2
KSH *e*ScS ScS 10 33 12.6 -0.6
KSH *e*SS SS 10 36 52.1 +5.5
KSH pmax pmax
comp=Z,12nm,1.5s,mb4.6
KSH LR LR
comp=N,42nm,5.3s
KSH LR LR
comp=E,46nm,4.3s
KSH LR LR
comp=Z,26nm,4.2s
CMAR Chiang Mai Arr 72.89 278 P **P 10 23 32.1 +0.6**
comp=Z,0.9nm,0.4s,mb4.0,baz=17,slow=8.1,SNR=4.1
CMAR LR LR 10 59 05.1
comp=Z,117nm,18.2s,MS4.2,baz=269,slow=39
CMAR Chiang Mai Arr 72.89 278 P **P 10 23 32.2 +0.6**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CMAR MLR MLR
comp=Z,117nm,18.2s
AKASG Malin Array Be 75.39 344 LR LR 11 04 59.8
comp=Z,190nm,18.1s,MS4.4,baz=5.0,slow=42
BRTR Keskin Array B 85.02 338 P **P 10 24 37.0 -0.8**
comp=Z,0.8nm,0.8s,mb3.9,baz=39,slow=10,SNR=3.7
BRTR LR LR 11 08 53.9
comp=Z,108nm,19.5s,MS4.2,baz=275,slow=40
BRTR Keskin Array B 85.02 338 *i* P **P 10 24 37.0 -0.8**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 87.42 225 P **P 10 24 50.0 +0.4**
comp=Z,3.1nm,0.8s,mb4.6,baz=33,slow=4.8,SNR=19
ASAR Alice Springs 87.42 225 P **P 10 24 50.0 +0.4**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
ESDC Sonseca Array 88.26 6 LR LR 11 04 57.8
comp=Z,101nm,20.9s,MS4.2,baz=0.0,slow=36
MMAI Mount Meron Ar 90.95 334 LR LR 11 15 29.5
comp=Z,92nm,18.3s,MS4.2,baz=310,slow=42
STKA Stephens Creek 91.68 215 LR LR 11 02 28.1
comp=Z,257nm,21.2s,MS4.6,baz=26,slow=33
MDT Midelt 95.03 8 LR LR 11 07 35.4
comp=Z,53nm,18.4s,MS4.0,baz=347,slow=35
PLCA Paso Flores 129.31 108 PKP PKPdf 10 31 12.4 +2.2
comp=Z,3.9nm,1.0s,baz=260,slow=13,SNR=3.3
PLCA Paso Flores 129.31 108 PKIKP PKPdf 10 31 12.4 +2.2
PLCA pmax pmax
comp=Z,4.0nm,1.0s
QSPA South Pole Qui 141.91 180 PKhKP PKPpre 10 31 28.0
comp=Z,1.2nm,0.6s,baz=170,slow=6.1,SNR=9.3
MAW Mawson 148.32 218 PKPbc PKPbc 10 31 49.3 +2.0
comp=Z,3.7nm,0.7s,baz=66,slow=2.8,SNR=5.8
MAW Mawson 148.32 218 PKP2 PKPbc 10 31 49.3 +2.0
MAW pmax pmax
comp=Z,4.0nm,0.7s

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*ISCJB **07** 10:24:45.1±0.5,30°.34S±0°.04×179°.98E±0°.05,h437km±6km, mb4.5/57, Error ellipse: s-maj=7.5km s-min=5.7km az=146.1*
*NEIC **07** 10:24:46.5±0.7,30°.30S×179°.99E,h448km±8km,mb4.7/35, Error ellipse: s-maj=10.6km s-min=7.7km az=145.0*
*BJI **07** 10:24:46.6,29°.87S×179°.83E,h430km, mB5.1/7,mb4.9/16*
*IDC **07** 10:24:46.2±1.1,30°.02S×179°.92E,h442km±10km, mb3.9/17,mb1 4.1/18,mb1mx4.1/18,mbtmp4.0/18,Error ellipse: s-maj=12.6km s-min=9.4km az=155.0*
ISC 07 10:24:46.2±0.5,30°.33S×0°.04×179°.95W±0°.05, h436km±6km,h420km±3.7km;pP-P,n431,σ0s87/375, mb4.5/55,82C-88D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUZ	**Omahuta**	**7.30**	**226**	P	**P**	**10 26 37.6**	**+3.9**
OUZ	**Omahuta**	**7.30**	**226**	PN	**P**	**10 26 38.3**	**+4.6**
KUZ	**Kuaotunu**	**7.35**	**208**	P	**P**	**10 26 38.5**	**+4.3**
KUZ	**Kuaotunu**	**7.35**	**208**	PN	**P**	**10 26 38.4**	**+4.2**
MXZ	**Matakaoa Point**	**7.36**	**191**	P	**P**	**10 26 34.2**	**-0.1**
MXZ				S	**S**	**10 28 00.9**	**-2.0**
MXZ	**Matakaoa Point**	**7.36**	**191**	PN	**P**	**10 26 34.2**	**-0.1**
MXZ				SN	**S**	**10 28 02.0**	**-0.9**
WCZ	**Waipu Caves**	**7.36**	**219**	P	**P**	**10 26 38.7**	**+4.3**
WCZ	**Waipu Caves**	**7.36**	**219**	PN	**P**	**10 26 38.9**	**+4.6**
WIZ	**White Island**	**7.56**	**198**	P	**P**	**10 26 40.0**	**+3.5**
WIZ	**White Island**	**7.56**	**198**	PN	**P**	**10 26 39.0**	**+2.5**
PUZ	**Puketiti**	**7.86**	**190**	P	**P**	**10 26 39.2**	**-0.6**
PUZ	**Puketiti**	**7.86**	**190**	PN	**P**	**10 26 39.2**	**-0.6**
PUZ				SN	**S**	**10 28 11.3**	**-1.6**
MKAZ	**Moumakai**	**7.89**	**210**	P	**P**	**10 26 44.2**	**+4.1**
MKAZ	**Moumakai**	**7.89**	**210**	PN	**P**	**10 26 44.7**	**+4.7**
TGRZ	**Tauranga**	**8.02**	**202**	PN	**P**	**10 26 44.4**	**+2.9**
OPRZ	**Ohinepanea**	**8.04**	**200**	PN	**P**	**10 26 44.4**	**+2.8**
MARZ	**Manawahe**	**8.13**	**199**	P	**P**	**10 26 46.0**	**+3.3**
MARZ	**Manawahe**	**8.13**	**199**	PN	**P**	**10 26 46.0**	**+3.3**
LIRZ	**Lichensteins R**	**8.23**	**201**	P	**P**	**10 26 46.7**	**+2.9**
LIRZ	**Lichensteins R**	**8.23**	**201**	PN	**P**	**10 26 46.7**	**+2.9**
MWZ	**Matawai**	**8.25**	**194**	P	**P**	**10 26 43.5**	**-0.5**
MWZ				S	**S**	**10 28 21.4**	**+0.7**
MWZ	**Matawai**	**8.25**	**194**	PN	**P**	**10 26 43.5**	**-0.5**
MWZ				SN	**S**	**10 28 18.4**	**-2.4**
CNGZ	**Carnagh Statio**	**8.27**	**190**	PN	**P**	**10 26 44.2**	**0.0**
URZ	**Urewera**	**8.27**	**196**	*e*P	**P**	**10 26 43.6**	**-0.7**
URZ				*e*S	**S**	**10 28 16.5**	**-4.7**
URZ	**Urewera** 519nm,0.3s,baz=332,slow=2.8,SNR=204	**8.27**	**196**	P	**P**	**10 26 43.1**	**-1.1**
URZ	123nm,0.3s,baz=75,slow=21,SNR=14			S	**S**	**10 28 22.6**	**+1.4**
URZ	**Urewera**	**8.27**	**196**	PN	**P**	**10 26 43.6**	**-0.7**
URZ				SN	**S**	**10 28 23.0**	**+1.8**
KARZ	**Kaharoa**	**8.29**	**201**	PN	**P**	**10 26 46.4**	**+1.9**
OMRZ	**Omania**	**8.33**	**200**	PN	**P**	**10 26 46.9**	**+2.0**
TARZ	**Mount Tarawera**	**8.41**	**199**	PN	**P**	**10 26 49.7**	**+3.9**
UTU	**Utuhina**	**8.45**	**201**	P	**P**	**10 26 49.6**	**+3.4**
UTU	**Utuhina**	**8.45**	**201**	PN	**P**	**10 26 49.6**	**+3.4**
RRRZ	**Republican Roa**	**8.51**	**199**	PN	**P**	**10 26 48.2**	**+1.4**
HRRZ	**Handcock Road**	**8.62**	**200**	PN	**P**	**10 26 49.4**	**+1.3**
PRRZ	**Plateau Road**	**8.69**	**199**	PN	**P**	**10 26 49.2**	**+0.5**
PRGZ	**Paritu Road**	**8.76**	**191**	PN	**P**	**10 26 51.3**	**+1.8**
ALRZ	**Allen Road**	**8.76**	**199**	PN	**P**	**10 26 50.2**	**+0.6**
KNZ	**Kokohu**	**8.89**	**192**	P	**P**	**10 26 50.9**	**0.0**
KNZ	**Kokohu**	**8.89**	**192**	PN	**P**	**10 26 50.9**	**-0.1**
RAHZ	**Arahi**	**8.91**	**195**	PN	**P**	**10 26 51.5**	**+0.3**
WHTZ	**Whakaora**	**8.97**	**201**	PN	**P**	**10 26 56.3**	**+4.4**
MHGZ	**Mahia Peninsul**	**8.98**	**191**	PN	**P**	**10 26 53.4**	**+1.5**
WATZ	**Wairara**	**9.08**	**202**	PN	**P**	**10 26 55.5**	**+2.4**
HATZ	**Hinemaiaia**	**9.14**	**200**	PN	**P**	**10 26 55.3**	**+1.6**
NMHZ	**Naumai**	**9.14**	**196**	PN	**P**	**10 26 53.8**	**0.0**
RATZ	**Rangitukua**	**9.22**	**201**	PN	**P**	**10 26 55.3**	**+0.7**
HIZ	**Hauiti**	**9.22**	**206**	P	**P**	**10 26 58.2**	**+3.6**
HIZ	**Hauiti**	**9.22**	**206**	PN	**P**	**10 26 58.2**	**+3.6**
BKZ	**Black Stump Fm**	**9.29**	**197**	PN	**P**	**10 26 54.3**	**-1.0**
KATZ	**Kakaramea**	**9.34**	**201**	PN	**P**	**10 26 57.3**	**+1.4**
KRVZ	**Karewarewa**	**9.46**	**201**	PN	**P**	**10 26 58.0**	**+0.8**
MCHZ	**McNeill Hill**	**9.50**	**196**	PN	**P**	**10 26 56.9**	**-0.8**
WTVZ	**West Tongariro**	**9.50**	**202**	P	**P**	**10 26 57.9**	**+0.2**
WTVZ	**West Tongariro**	**9.50**	**202**	PN	**P**	**10 26 57.9**	**+0.2**
TWVZ	**Taurewa**	**9.51**	**202**	P	**P**	**10 26 57.9**	**+0.1**
TWVZ	**Taurewa**	**9.51**	**202**	PN	**P**	**10 26 57.9**	**+0.1**
OTVZ	**Oturere**	**9.52**	**201**	PN	**P**	**10 26 57.8**	**-0.1**
NGZ	**Ngauruhoe**	**9.55**	**201**	P	**P**	**10 26 58.4**	**+0.2**
NGZ	**Ngauruhoe**	**9.55**	**201**	PN	**P**	**10 26 58.9**	**+0.7**
WPVZ	**Whakapapa**	**9.60**	**201**	PN	**P**	**10 26 58.9**	**+0.1**
CKHZ	**Cape Kidnapper**	**9.62**	**194**	PN	**P**	**10 27 00.4**	**+1.4**
TUVZ	**Tukino**	**9.62**	**201**	PN	**P**	**10 27 00.3**	**+1.3**
FWVZ	**Far West T-bar**	**9.64**	**201**	P	**P**	**10 26 58.9**	**-0.3**
FWVZ	**Far West T-bar**	**9.64**	**201**	PN	**P**	**10 26 58.9**	**-0.3**
TRVZ	**Turoa**	**9.68**	**201**	PN	**P**	**10 27 00.9**	**+1.3**
WNVZ	**Wahianoa**	**9.69**	**201**	PN	**P**	**10 26 59.2**	**-0.6**
PKVZ	**Pokaka**	**9.74**	**202**	PN	**P**	**10 27 01.0**	**+0.7**
MTVZ	**Mangateitei**	**9.78**	**201**	PN	**P**	**10 27 02.2**	**+1.4**
KAHZ	**Kahuranaki**	**9.79**	**195**	PN	**P**	**10 27 00.5**	**-0.4**
PXZ	**Pawanui**	**10.02**	**194**	PN	**P**	**10 27 02.1**	**-1.2**
PNHZ	**Pukenui**	**10.07**	**197**	PN	**P**	**10 27 02.1**	**-1.8**
WPHZ	**Waipukurau**	**10.15**	**196**	PN	**P**	**10 27 04.8**	**0.0**
TSZ	**Takapari Road**	**10.27**	**198**	P	**P**	**10 27 04.1**	**-1.9**
TSZ	**Takapari Road**	**10.27**	**198**	PN	**P**	**10 27 04.1**	**-1.9**
WAZ	**Wanganui**	**10.28**	**202**	P	**P**	**10 27 06.2**	**0.0**
WAZ	**Wanganui**	**10.28**	**202**	PN	**P**	**10 27 06.2**	**+0.1**
NRZ	**Ngariki Road**	**10.29**	**208**	P	**P**	**10 27 10.8**	**+4.4**
PRHZ	**Porangahau**	**10.30**	**195**	PN	**P**	**10 27 05.6**	**-0.8**
BFZ	**Birch Farm**	**10.78**	**196**	P	**P**	**10 27 10.5**	**-1.2**
BFZ	**Birch Farm**	**10.78**	**196**	PN	**P**	**10 27 12.0**	**+0.3**
MRZ	**Mangatainoka R**	**10.93**	**198**	P	**P**	**10 27 11.5**	**-1.8**
MRZ	**Mangatainoka R**	**10.93**	**198**	PN	**P**	**10 27 12.0**	**-1.4**
HOWZ	**Holdsworth Sta**	**11.17**	**198**	PN	**P**	**10 27 14.7**	**-1.2**
OGWZ	**Otaki Gorge**	**11.19**	**199**	PN	**P**	**10 27 15.4**	**-0.7**
KIW	**Kapiti Island**	**11.31**	**200**	P	**P**	**10 27 16.4**	**-1.0**
KIW	**Kapiti Island**	**11.31**	**200**	PN	**P**	**10 27 16.4**	**-1.0**
DUWZ	**D'Urville Isla**	**11.57**	**204**	*e*PN	**P**	**10 27 19.4**	**-1.0**
TRWZ	**Traveller**	**11.60**	**197**	PN	**P**	**10 27 20.7**	**+0.1**
SNZO	**South Karori**	**11.78**	**200**	P	**P**	**10 27 21.3**	**-1.3**
SNZO	**South Karori**	**11.78**	**200**	PN	**P**	**10 27 21.8**	**-0.8**
TCW	**Tory Channel**	**11.82**	**202**	P	**P**	**10 27 21.9**	**-1.2**
PLWZ	**Palliser**	**11.87**	**198**	PN	**P**	**10 27 23.3**	**-0.3**
NNZ	**Nelson**	**12.13**	**205**	P	**P**	**10 27 24.9**	**-1.6**
BSWZ	**Blackbirch Sta**	**12.40**	**202**	P	**P**	**10 27 28.8**	**-0.6**
MSVF	**Nonsavu** 112nm,0.6s	**12.68**	**351**	*e*P	**P**	**10 27 30.9**	**-1.8**
THZ	**Tophouse**	**12.78**	**205**	P	**P**	**10 27 32.6**	**-0.9**
THZ	**Tophouse**	**12.78**	**205**	PN	**P**	**10 27 32.6**	**-0.9**
KHZ	**Kahutara**	**13.15**	**202**	P	**P**	**10 27 37.2**	**-0.3**
DSZ	**Denniston Nort**	**13.19**	**208**	P	**P**	**10 27 37.7**	**-0.3**
DSZ	**Denniston Nort**	**13.19**	**208**	PN	**P**	**10 27 37.7**	**-0.3**
LTZ	**Lake Taylor**	**13.90**	**205**	P	**P**	**10 27 43.8**	**-1.8**
LTZ	**Lake Taylor**	**13.90**	**205**	PN	**P**	**10 27 43.8**	**-1.8**
BAYA	**Yate Dam**	**14.34**	**302**	*e*P	**P**	**10 27 51.0**	**+0.3**
DZM	**Mont Dzumac** 636nm,1.4s	**14.72**	**301**	*e*P	**P**	**10 27 55.4**	**+0.7**
DZM	**Mont Dzumac**	**14.72**	**301**	*e*P	**P**	**10 27 52.1**	**-2.6**
DZM				*e*S	**S**	**10 30 33.8**	**+3.3**
WVZ	**Waitaha Valley**	**14.74**	**208**	*e*PN	**P**	**10 27 52.4**	**-2.3**

NOUC **Port Laguerre** 14.80 300 *e*P P 10 27 54.9 -0.7
RPZ **Rata Peaks** 15.15 206 *e*P P 10 27 58.4 -0.7
37nm,0.6s
RPZ **Rata Peaks** 15.15 206 P P 10 27 57.0 -2.0
4.8nm,0.3s,baz=351,slow=1.2,SNR=37
RPZ S S 10 30 37.7 -0.8
2.4nm,0.3s,baz=307,slow=10.0,SNR=4.6
FOZ **Fox Glacier** 15.57 209 *e*PN P 10 28 01.5 -2.0
JCZ **Jackson Bay** 16.38 210 PN P 10 28 09.4 -2.7
ODZ **Otahua Downs** 16.45 204 *e*P P 10 28 12.5 -0.4
72nm,0.7s
ODZ **Otahua Downs** 16.45 204 PN P 10 28 11.2 -1.6
AFI **Afiamalu** 18.00 27 P P 10 28 28.0 -1.5
17nm,0.3s,baz=244,slow=2.7,SNR=29
AFI S S 10 31 27.9 -5.6
6.6nm,0.3s,baz=66,slow=17,SNR=4.2
RAR **Rarotonga** 20.29 68 P P 10 28 50.2 -0.9
27nm,0.8s,baz=254,slow=7.6,SNR=3.7
ARMA **Armidale** 24.50 263 *e*P P 10 29 30.9 +1.9
ARMA *e* 10 30 11.1
ARMA **Armidale** 24.50 263 *e*P P 10 29 31.4 +2.3
14nm,0.8s,mb4.4
EIDS **Eidsvold** 26.05 274 *e*P P 10 29 43.0 +0.1
9.2nm,0.7s,mb4.3
CNB **Canberra Magne** 26.21 251 *e*P P 10 29 46.4 +2.3
CNB *e* 10 30 41.5
MOO **Moorlands** 28.91 236 *e*P P 10 30 11.1 +3.3
TOO **Toolangi** 29.45 246 *e*P P 10 30 13.9 +1.3
TOO *e* 10 31 12.8
PAE **Paea** 30.37 72 *e*P P 10 30 19.2 -1.7
14nm,1.0s,mb4.3
PPT **Papeete** 30.42 72 *e*P P 10 30 20.1 -1.2
58nm,1.1s,mb4.8
PPT **Papeete** 30.42 72 P P 10 30 20.9 -0.4
40nm,0.6s,mb4.9,baz=214,slow=3.5,SNR=8.5
TIAR **Tiarei** 30.62 72 *e*P P 10 30 21.7 -1.3
277nm,0.7s,mb5.7
CTA **Charters Tower** 32.13 281 *e*P P 10 30 36.1 +0.1
13nm,0.4s,mb4.6
CTA *e* 10 31 01.3
CTA **Charters Tower** 32.13 281 P P 10 30 34.9 -1.1
CTA **Charters Tower** 32.13 281 P P 10 30 34.9 -1.1
14nm,0.4s,mb4.7,baz=102,slow=11,SNR=29
CTAO **Charters Tower** 32.13 281 *e*P P 10 30 36.1 +0.1
20nm,0.5s,mb4.7
STKA **Stephens Creek** 32.85 257 *e*P P 10 30 42.9 +0.8
22nm,0.8s,mb4.5
STKA *e* 10 31 23.6
STKA **Stephens Creek** 32.85 257 *e*P P 10 30 43.1 +1.0
5.5nm,0.8s,mb3.9
STKA **Stephens Creek** 32.85 257 P P 10 30 43.0 +0.9
30nm,0.8s,mb4.7,baz=97,slow=11,SNR=49
ASAR **Alice Springs** 41.43 268 P P 10 31 51.9 -1.3
ASAR ScP ScP 10 36 48.0 -1.2
ASAR S **S** 10 37 32.7 -2.9
ASAR **Alice Springs** 41.43 268 P P 10 31 51.9 -1.3
9.6nm,0.5s,mb4.4,baz=103,slow=6.6,SNR=238
ASAR ScP ScP 10 36 48.0 -1.2
2.8nm,0.9s,baz=115,slow=4.9,SNR=7.4
ASAR S S 10 37 32.7 -2.9
1.6nm,0.9s,baz=101,slow=15,SNR=4.9
ASAR PKiKP PKiKP 10 40 44.8 -2.5
0.2nm,0.5s,baz=100,slow=1.7,SNR=4.7
WB2 **Warramunga Arr** 42.40 273 *e*P P 10 31 59.6 -1.4
WRAB **Tennant Creek** 42.41 273 *e*P P 10 31 59.4 -1.6
21nm,0.4s,mb4.8
FORT **Forrest** 44.44 256 *e*P P 10 32 15.1 -1.6
33nm,0.6s,mb4.8
FORT **Forrest** 44.44 256 *e*P P 10 32 15.5 -1.2
46nm,0.8s,mb4.9
KAKA **Kakadu** 47.27 281 *e*P P 10 32 29.1 -10
7.0nm,0.6s,mb4.2
KAKA **Kakadu** 47.27 281 *e*P P 10 32 37.1 -1.5
SBA **Scott Base** 47.99 184 *e*P P 10 32 46.6 +3.4
17nm,1.0s,mb4.3
FITZ **Fitzroy Crossi** 50.68 271 *e*P P 10 33 03.3 -0.8
11nm,0.6s,mb4.2
FITZ **Fitzroy Crossi** 50.68 271 *e*P P 10 33 03.5 -0.6
KLBR **Kellerberrin** 52.78 252 *e*P P 10 33 17.5 -1.7
23nm,1.0s,mb4.4
QSPA **South Pole Qui** 59.78 180 P P 10 34 09.5 +2.4
27nm,0.7s,mb4.8,baz=22,slow=2.0,SNR=58
MAW **Mawson** 71.77 201 P P 10 35 23.3 +0.6
1.4nm,0.4s,mb3.8,baz=148,slow=4.4,SNR=6.3
SYO **Syowa Base** 76.79 194 *e*P P 10 35 49.2 -1.9
MJAR **Matsushiro Arr** 77.24 327 P P 10 35 51.7 -2.3
MJAR **Matsushiro Arr** 77.24 327 P P 10 35 51.7 -2.3
0.9nm,0.6s,mb3.6,baz=164,slow=7.0,SNR=4.0
VNA1 **Neumayer--Stat** 79.13 177 *e*P P 10 36 02.1 -1.7
VNA1 *e* 10 37 51.8
KSRS **Korea Array** 83.22 321 P P 10 36 24.1 -1.3
1.9nm,0.8s,mb3.9,baz=140,slow=5.6,SNR=8.4
KSRS pP pP 10 38 08.8 +5.6
0.3nm,0.3s,baz=130,slow=5.1,SNR=3.4
QIZ **Qiongzhong** 83.45 296 P P 10 36 26.8 -0.2
QIZ pmax pmax
comp=Z,42nm,1.6s,mb4.9
PLCA **Paso Flores** 83.78 134 P P 10 36 29.9 +1.5
comp=Z,4.5nm,0.8s,mb4.2,baz=3.2,slow=18,SNR=5.5
NJ2 **Nanjing** 84.93 312 *e*P P 10 36 35.2 +1.2
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
CIS **Catalina Islan** 86.03 47 ⇓P P 10 36 39.1 -0.3
baz=86
FMP **Fort Macarthur** 86.30 47 ⇑P P 10 36 40.4 -0.2
baz=86
OSI **Osito Adit** 86.61 46 ⇓P P 10 36 42.2 +0.2
baz=87
MWC **Mount Wilson** 86.78 47 *e*P P 10 36 42.8 -0.1
comp=Z,9.8nm,0.6s,mb4.7
ARVC **Arvin** 86.88 46 ⇑P P 10 36 43.2 -0.1
baz=87
MURC **Murrieta** 86.92 48 ⇓P P 10 36 43.9 +0.3
baz=87
MONP **Monument Peak** 86.98 49 ⇑P P 10 36 44.2 +0.4
baz=87,SNR=15
BFSC **Mount Baldy Ra** 87.04 47 ⇓P P 10 36 43.8 -0.3
baz=87,SNR=6.3
DVTC **Desert V Tower** 87.04 49 ⇓P P 10 36 44.6 +0.5
baz=87,SNR=5.1
VES **Vestal, Richgr** 87.18 45 ⇑P P 10 36 44.5 -0.3
baz=87
EDW2 **Edwards Air Fo** 87.24 47 ⇓P P 10 36 44.9 -0.2
baz=87,SNR=9.0
PFO **Pinyon Flat Ob** 87.41 48 ⇓P P 10 36 46.3 +0.4
baz=88
SWSC **Sam W. Stewart** 87.42 49 ⇑P P 10 36 46.2 +0.2
baz=88
ISA **Isabella** 87.44 46 ⇑P P 10 36 46.0 0.0
baz=88,SNR=16
ISA **Isabella** 87.44 46 *e*P P 10 36 46.0 0.0
comp=Z,11nm,0.8s,mb4.6
BBRC **Big Bear Solar** 87.52 48 ⇑P P 10 36 46.6 +0.2
baz=88
MDJ **Mudanjiang** 87.63 327 P P 10 36 47.4 +0.8
MDJ pmax pmax
comp=Z,22nm,2.4s,mb4.5
LRMC **Laurel Mountai** 87.81 46 ⇓P P 10 36 47.8 +0.1
baz=88
CMB **Columbia Colle** 87.85 43 *e*P P 10 36 47.3 -0.5
comp=Z,7.5nm,0.7s,mb4.5
KHMM **Horse Mountain** 87.88 39 *e*P P 10 36 48.4 +0.5
comp=Z,54nm,1.9s,mb5.0
BELC **Belle Mtn. Jos** 87.95 48 ⇓P P 10 36 48.8 +0.4
baz=88,SNR=13
112A **Yuma** 87.97 50 ⇓P P 10 36 49.2 +0.7
baz=88
BC3 **Big Chuckawall** 88.09 49 ⇑P P 10 36 49.6 +0.6
baz=88,SNR=9.0
GLA **Glamis** 88.12 50 ⇓P P 10 36 49.9 +0.6
baz=88,SNR=11
GLA **Glamis** 88.12 50 *e*P P 10 36 50.2 +1.0
comp=Z,33nm,0.8s,mb5.1
CWC **Cottonwood Cre** 88.19 45 ⇑P P 10 36 49.7 +0.2
baz=88
GSC **Goldstone** 88.26 47 ⇑P P 10 36 49.8 0.0
baz=88,SNR=8.0
GSC **Goldstone** 88.26 47 *e*P P 10 36 49.8 0.0
comp=Z,9.0nm,0.8s,mb4.5
HEC **Hector,Ludlow** 88.26 48 ⇑P P 10 36 49.9 0.0
baz=88,SNR=8.3
MPMC **Manual Prospec** 88.31 46 ⇓P P 10 36 49.8 -0.2
baz=88,SNR=8.6
WDC **Whiskeytown Da** 88.33 40 *e*P P 10 36 49.7 -0.3
comp=Z,7.5nm,1.0s,mb4.4
MTUM **Tungsten Hills** 88.49 44 *e*P P 10 36 50.8 0.0
TIN **Tinemaha** 88.50 45 ⇓P P 10 36 51.1 +0.2
baz=89
MLAC **Mammoth Lakes** 88.50 44 ⇓P P 10 36 51.1 +0.2
baz=89
IRM **Iron Mountain** 88.60 49 ⇓P P 10 36 51.7 +0.3
baz=89,SNR=15
113A **Mohawk Valley,** 88.65 50 ⇓P P 10 36 51.9 +0.2
baz=89,SNR=15
GMRC **Granite Mounta** 88.66 48 ⇓P P 10 36 51.7 +0.1
baz=89,SNR=7.0
WAKR **Walker** 88.72 43 *e*P P 10 36 51.8 0.0
214A **Organ Pipe Nat** 88.80 52 ⇑P P 10 36 53.0 +0.6
baz=89,SNR=8.6
TUQ **Turquoise Moun** 88.90 47 ⇓P P 10 36 53.0 +0.2
baz=89
FURC **Furnace Creek,** 88.96 46 ⇓P P 10 36 53.3 +0.2
baz=89
Z13A **Yuma Proving G** 88.99 50 ⇓P P 10 36 53.7 +0.4
baz=89,SNR=30
YBH **Yreka Blue Hor** 89.03 39 *e*P P 10 36 53.2 0.0
comp=Z,5.2nm,0.8s,mb4.3
YBH **Yreka Blue Hor** 89.03 39 P P 10 36 53.5 +0.3
comp=Z,4.2nm,0.7s,mb4.3,baz=175,slow=1.5,SNR=17
WCN **Washoe City** 89.05 42 ⇑P P 10 36 53.2 -0.2
baz=89,SNR=6.0
CN2 **Changchun** 89.08 324 *e*P P 10 36 54.5 +1.1
114A **Black Gap (USA** 89.23 51 ⇑P P 10 36 54.7 +0.3
baz=89,SNR=6.7
U10A **Ash Meadows, A** 89.26 46 ⇑P P 10 36 54.7 +0.3
baz=89
NEE2 **Needles Airpor** 89.32 48 ⇓P P 10 36 55.1 +0.4
baz=90
NVAR **Mina Array Bea** 89.34 44 P P 10 36 54.4 -0.4
comp=Z,4.2nm,0.7s,mb4.2,baz=220,slow=7.5,SNR=39
V11A **Goodsprings** 89.46 47 ⇓P P 10 36 55.7 +0.2
baz=90
HUMO **Hull Mountain** 89.49 38 *e*P P 10 36 55.6 +0.2
comp=Z,37nm,1.6s,mb4.9
Z14A **Wintersburg** 89.56 50 ⇑P P 10 36 56.3 +0.4
baz=90,SNR=6.8
X13A **Yucca** 89.72 49 ⇓P P 10 36 56.7 +0.1
baz=90,SNR=6.5
216A **Three Points,** 89.75 52 ⇓P P 10 36 57.4 +0.6
baz=90,SNR=13
V12A **Nelson** 89.76 48 ⇑P P 10 36 56.9 +0.1
baz=90,SNR=5.4
U11A **Corn Creek** 89.86 47 ⇓P P 10 36 57.7 +0.5
baz=90
Y14A **Wickenburg** 89.87 50 ⇑P P 10 36 57.3 0.0
baz=90,SNR=11
116A **Eloy** 89.91 52 ⇑P P 10 36 58.1 +0.5
baz=90,SNR=11
W13A **Hualapai Mount** 90.00 49 ⇓P P 10 36 58.2 +0.3
baz=90
Z15A **Gila River Ind** 90.04 51 ⇓P P 10 36 58.6 +0.5
baz=90
S10A **Tonopah Range,** 90.05 45 ⇑P P 10 36 57.7 -0.3
baz=90,SNR=22
217A **Green Valley** 90.06 53 ⇑P P 10 36 59.1 +0.8
baz=90,SNR=16
GYA **Guiyang** 90.06 301 *e*P P 10 36 58.7 +0.3
GYA pP pP 10 38 36.9 -0.9
GYA sP sP 10 39 19.4 -3.1
GYA PP PP 10 40 41.2 +1.7
GYA SKS 10 46 48.5
GYA S S 10 47 15.2 +1.3
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
X14A **Yava** 90.26 50 ⇑P P 10 36 59.6 +0.4
baz=90,SNR=11
Y15A **Casa Rosa Ranc** 90.32 50 ⇓P P 10 36 59.8 +0.3
baz=90,SNR=5.8
TUC **Tucson** 90.39 52 *e*P P 10 37 00.7 +0.9
comp=Z,12nm,0.6s,mb4.9
S11A **Rachel** 90.39 46 ⇑P P 10 36 59.6 -0.1
baz=91,SNR=6.9
V13A **Grand Canyon W** 90.39 48 ⇑P P 10 36 59.7 -0.1
baz=91,SNR=11
U12A **Valley of Fire** 90.40 47 ⇑P P 10 36 60.0 +0.2
baz=91,SNR=8.0
318A **Bisbee** 90.43 53 ⇓P P 10 37 00.9 +0.9
baz=91,SNR=17
R10A **Warm Springs** 90.46 45 ⇑P P 10 37 00.0 +0.1
baz=91,SNR=7.0
MOD **Modoc** 90.47 40 *e*P P 10 36 59.5 -0.4
comp=Z,14nm,0.6s,mb5.0
117A **Oracle** 90.58 52 ⇓P P 10 37 01.4 +0.7
baz=91,SNR=9.2
W14A **Seligman** 90.59 49 ⇑P P 10 37 01.1 +0.4
baz=91,SNR=11
CFAA **Coronel Fontan** 90.62 128 P P 10 37 01.8 +0.7
comp=Z,0.8nm,0.7s,mb3.6,baz=260,slow=4.3,SNR=11
K05A **Summer Lake** 90.69 39 ⇑P P 10 37 00.9 0.0
baz=91,SNR=13
218A **Dragoon** 90.70 53 ⇓P P 10 37 01.9 +0.6
baz=91,SNR=19
X15A **Humboldt** 90.71 50 ⇓P P 10 37 01.7 +0.5
baz=91,SNR=5.7
Q10A **Clear Creek Ra** 90.74 44 ⇓P P 10 37 00.8 -0.4
baz=91,SNR=9.9
V14A **Boquillas Ranc** 90.83 49 ⇓P P 10 37 02.1 +0.3
baz=91,SNR=15
Y16A **Circle Bar Ran** 90.85 51 ⇑P P 10 37 02.5 +0.7
baz=91,SNR=12
319A **Douglas** 90.89 54 ⇓P P 10 37 02.8 +0.7
baz=91,SNR=5.0
S12A **Delamar Landin** 90.93 46 ⇑P P 10 37 02.6 +0.5
baz=91
R11A **Troy Canyon, C** 90.94 45 ⇑P P 10 37 01.8 -0.3
baz=91
118A **Homack Ranch,** 91.14 52 ⇑P P 10 37 04.0 +0.8
baz=91
T13A **Saint George** 91.16 47 ⇓P P 10 37 03.6 +0.4
baz=91
Y17A **Roosevelt** 91.17 51 ⇑P P 10 37 04.0 +0.7
baz=91,SNR=7.0
Z17A **San Carlos Hig** 91.18 52 ⇑P P 10 37 04.4 +0.9
baz=91
X16A **Lo Mia Camp, P** 91.19 50 ⇑P P 10 37 04.1 +0.6
baz=91,SNR=14
Q11A **Duckwater** 91.20 45 ⇑P P 10 37 02.9 -0.5
baz=91,SNR=8.8
U14A **Mt Trumbull** 91.25 48 ⇓P P 10 37 04.0 +0.3
baz=91,SNR=11
H04A **Detroit Lake** 91.32 37 ⇓P P 10 37 03.0 -0.7
baz=92
R12A **Pony Springs,** 91.52 46 ⇑P P 10 37 04.8 -0.1
baz=92,SNR=12
S13A **Holt Ranch, En** 91.53 47 ⇑P P 10 37 05.1 +0.1
baz=92,SNR=9.4
W16A **Flagstaff** 91.53 50 ⇑P P 10 37 05.4 +0.4
baz=92,SNR=5.8
V15A **Kaibab Nationa** 91.55 49 ⇓P P 10 37 05.6 +0.5
baz=92,SNR=8.4
X17A **Forest Lakes** 91.57 51 ⇓P P 10 37 05.9 +0.7
baz=92,SNR=9.5
119A **Ashpeak Ranch,** 91.67 53 ⇓P P 10 37 06.0 +0.3
baz=92
BJI **Beijing** 91.70 316 P P 10 37 06.8 +1.1
BJI pP pP 10 38 42.8 -2.4
BJI sP sP 10 39 26.4 -3.4
BJI pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
220A **Playas Peak, P** 91.72 54 ⇑P P 10 37 06.2 +0.2
baz=92
WVOR **Wild Horse Val** 91.75 41 *e*P P 10 37 05.4 -0.4
comp=Z,4.5nm,1.0s,mb4.3
CMAR **Chiang Mai Arr** 91.79 290 pP pP 10 38 53.8 +7.7
comp=Z,0.7nm,0.4s,baz=130,slow=1.9,SNR=1.6
CCUT **Cedar City** 91.83 47 *e*P P 10 37 06.6 +0.3
comp=Z,2.8nm,0.8s,mb4.2
Q12A **Willow Creek R** 91.83 45 ⇓P P 10 37 06.0 -0.2
baz=92,SNR=7.5
R13A **O'Grain Ranch,** 91.83 46 ⇑P P 10 37 06.5 +0.2
baz=92,SNR=5.6
U15A **North Rim** 91.83 48 ⇓P P 10 37 07.0 +0.7
baz=92,SNR=20
WUAZ **Wupatki** 91.89 49 *e*P P 10 37 07.0 +0.4
comp=Z,4.7nm,0.8s,mb4.5
E03A **Lebam** 91.90 35 ⇓P P 10 37 06.1 -0.3
baz=92
120A **U Bar Ranch, L** 92.01 53 ⇓P P 10 37 07.8 +0.6
baz=92,SNR=5.3
P12A **McGill** 92.05 45 ⇓P P 10 37 07.2 -0.1
baz=92
F04A **Amboy** 92.06 36 ⇓P P 10 37 06.6 -0.5
baz=92
T15A **Red Dirt Ranch** 92.13 48 ⇓P P 10 37 07.6 -0.1
baz=92,SNR=5.9
X18A **Snowflake** 92.25 51 ⇓P P 10 37 08.7 +0.3
baz=92
Q13A **Wheeler Ranch,** 92.27 45 ⇑P P 10 37 07.9 -0.4
baz=92,SNR=6.2
KMI **Kunming** 92.30 298 P P P 10 37 09.9 +1.1
KMI pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
V17A **Tonalea, Kykot** 92.33 50 ⇓P P 10 37 08.8 +0.1
baz=92,SNR=7.3
I07A **Izee** 92.35 39 ⇓P P 10 37 08.2 -0.3
baz=92,SNR=12
M10A **I.L. Ranch, Tu** 92.36 42 ⇓P P 10 37 08.3 -0.3
baz=93,SNR=7.4
Z20A **Nine Sixteen R** 92.36 53 ⇓P P 10 37 09.5 +0.6
baz=92
Y19A **Nutrioso** 92.39 52 ⇑P P 10 37 09.8 +0.8
baz=93
U16A **Tuba City** 92.42 49 ⇓P P 10 37 09.4 +0.3
baz=93
J08A **Circle Bar Ran** 92.44 40 ⇑P P 10 37 08.5 -0.4
baz=93,SNR=8.3
G06A **Carlson Farm,** 92.51 37 ⇓P P 10 37 08.6 -0.7
baz=93,SNR=5.9
S15A **Panguitch** 92.53 47 ⇓P P 10 37 10.4 +0.9
baz=93,SNR=5.9
P13A **Bates Ranch, G** 92.58 45 ⇑P P 10 37 09.4 -0.4
baz=93,SNR=5.7
121A **Cookes Peak, D** 92.59 54 ⇓P P 10 37 10.3 +0.4
baz=93
Q14A **Sevier Lake (B** 92.75 46 ⇓P P 10 37 10.5 0.0
baz=93,SNR=11
L10A **Juniper Basin** 92.75 42 ⇑P P 10 37 10.1 -0.4
baz=93,SNR=10
R15A **Junction** 92.91 47 ⇑P P 10 37 11.7 +0.4
baz=93
V18A **Ganado** 92.95 50 ⇑P P 10 37 11.5 -0.1
baz=93,SNR=5.8
T17A **Navajo Res., N** 93.13 49 ⇓P P 10 37 12.7 +0.4
baz=93
MSU **Marysvale** 93.15 47 *e*P P 10 37 13.0 +0.7
comp=Z,2.4nm,1.0s,mb4.1
X20A **Quemado** 93.24 52 ⇑P P 10 37 13.4 +0.5
baz=93
Q15A **Fillmore** 93.32 46 ⇓P P 10 37 13.5 +0.4
baz=94
U18A **Rough Rock, Ch** 93.40 49 ⇓P P 10 37 13.2 -0.4
baz=94
G08A **Pilot Rock** 93.43 38 ⇑P P 10 37 13.0 -0.5
baz=94,SNR=5.9
Y21A **Point of Rocks** 93.50 52 ⇓P P 10 37 14.8 +0.7
baz=94,SNR=5.1
626A **Big Bend Ranch** 93.55 58 ⇑P P 10 37 14.4 0.0
baz=94
Z22A **Elephant Butte** 93.57 53 ⇓P P 10 37 14.5 +0.1
baz=94
W20A **Ramah** 93.57 51 ⇓P P 10 37 14.5 +0.1
baz=94,SNR=6.7
425A **Indio Mountain** 93.60 56 ⇓P P 10 37 14.5 -0.2
baz=94
324A **Moseley Ranch,** 93.61 56 ⇑P P 10 37 14.3 -0.4
baz=94
X21A **Alamocita Cree** 93.67 52 ⇓P P 10 37 15.2 +0.4
baz=94
P15A **Leamington** 93.72 46 ⇑P P 10 37 14.9 -0.1
baz=94
U19A **Dine' College,** 93.77 50 ⇓P P 10 37 15.3 +0.1
baz=94
TXAR **Lajitas Array** 93.78 58 P P 10 37 14.9 -0.5
comp=Z,0.6nm,0.8s,mb3.7,baz=215,slow=6.1,SNR=7.1
T18A **Mexican Hat** 93.82 49 ⇑P P 10 37 15.4 -0.1
baz=94,SNR=7.5
HAWA **Hanford** 93.85 37 *e*P P 10 37 14.9 -0.4
comp=Z,3.5nm,0.7s,mb4.5
526A **Mary Lane Ranc** 93.86 57 ⇓P P 10 37 15.5 -0.3
baz=94
MFID **Camas Ranch** 93.96 41 ⇑P P 10 37 15.6 -0.4
baz=94
Q16A **Castle Valley** 94.03 47 ⇓P P 10 37 17.1 +0.7
baz=94
627A **Terlingua Ranc** 94.04 58 ⇑P P 10 37 16.4 -0.3
baz=94
BMO **Blue Mountains** 94.05 39 *e*P P 10 37 15.6 -0.7
comp=Z,17nm,2.2s,mb4.7
TMUT **Trail Mountain** 94.22 46 *e*P P 10 37 17.5 +0.3
comp=Z,6.6nm,0.6s,mb4.8
426A **McDonald Obser** 94.23 57 ⇓P P 10 37 16.7 -0.8
baz=94
M14A **Sheep Mountain** 94.23 44 ⇓P P 10 37 16.7 -0.5
baz=94,SNR=6.6
R18A **Canyonlands Na** 94.53 48 ⇑P P 10 37 18.2 -0.5
baz=95
SRU **San Rafael** 94.55 47 *e*P P 10 37 18.3 -0.4
comp=Z,3.0nm,0.6s,mb4.5
O16A **Springville** 94.58 46 ⇑P P 10 37 18.5 -0.3
baz=95
I12A **Atlanta** 94.59 41 ⇑P P 10 37 18.4 -0.4
baz=95,SNR=6.4
D08A **Wollman Farm,** 94.61 37 ⇓P P 10 37 18.3 -0.5
baz=95
CD2 **Chengdu** 94.63 303 P P P 10 37 21.5 +2.2
CD2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
CD2 pmax pmax
comp=Z,100nm,4.8s
S19A **Harvey Farm, M** 94.65 49 ⇑P P 10 37 18.6 -0.6
baz=95
HVU **Hansel Valley** 94.74 44 *e*P P 10 37 19.4 -0.1
comp=Z,7.4nm,0.6s,mb4.9
M15A **Larsen Ranch,** 94.75 44 ⇑P P 10 37 19.4 -0.1
baz=95
427A **Hayter Ranch,** 94.78 57 ⇓P P 10 37 19.4 -0.6
baz=95
F10A **Beach Ranch, E** 94.80 38 ⇑P P 10 37 18.7 -1.0
baz=95,SNR=5.9
125A **Gardner Draw,** 94.86 55 ⇑P P 10 37 19.7 -0.6
baz=95
ANMO **Albuquerque** 94.86 52 P P 10 37 20.3 +0.1
comp=Z,0.3nm,0.3s,mb3.8,baz=236,slow=4.9,SNR=4.7
HLID **Hailey** 94.86 42 *e*P P 10 37 19.9 -0.1
comp=Z,1.6nm,0.8s,mb4.1
U21A **Nageezi** 94.87 50 ⇓P P 10 37 20.1 -0.2
baz=95
R19A **Curley Farm, L** 94.88 48 ⇑P P 10 37 19.9 -0.3
baz=95
J13A **Cove Ranch, Pi** 94.90 42 ⇑P P 10 37 19.7 -0.6
baz=95,SNR=6.2
K14A **Jones Ranch, D** 94.96 43 ⇓P P 10 37 20.4 -0.2
baz=95
HHC **Hu-ho-hao-te** 94.98 315 *e*P P 10 37 23.2 +2.5
HHC pP pP 10 38 58.9 -1.5
HHC sP sP 10 39 40.1 -4.9
HHC PP PP 10 41 21.2 +3.8
HHC SKS 10 47 17.4
HHC *e*S S 10 47 59.1 +2.7
HHC sS sS 10 50 48.6 -7.0
HHC pmax pmax
comp=Z,12nm,0.7s,mb5.0
HHC pmax pmax
comp=Z,77nm,4.7s
Y24A **Capitan** 95.00 54 ⇑P P 10 37 20.6 -0.3
baz=95
O17A **Robinson Place** 95.05 46 ⇓P P 10 37 21.0 +0.1
baz=95
Z25A **Roswell** 95.15 54 ⇑P P 10 37 21.2 -0.4
baz=95
H12A **Diamond D Ranc** 95.22 41 ⇓P P 10 37 20.9 -0.7
baz=95,SNR=7.8
PV01 **Paradox Valley** 95.24 49 *e*P P 10 37 21.5 -0.4
B08A **Colville Reser** 95.25 36 ⇓P P 10 37 20.0 -1.6
baz=95
N17A **Moffit Pass** 95.42 45 ⇓P P 10 37 22.4 -0.3
baz=96
K15A **Arbon** 95.43 43 ⇑P P 10 37 22.1 -0.6
baz=96,SNR=5.1
Y25A **Mesa, Roswell** 95.52 54 ⇓P P 10 37 22.8 -0.4
baz=96
O18A **Roosevelt** 95.54 46 ⇑P P 10 37 22.9 -0.3
baz=96
Z26A **Capr ock** 95.67 55 ⇑P P 10 37 23.3 -0.6
baz=96
L16A **Fish Haven** 95.69 44 ⇓P P 10 37 23.4 -0.4
baz=96
P19A **Cripple Cowboy** 95.82 47 ⇓P P 10 37 24.1 -0.4
baz=96
J15A **Blackfoot** 95.91 43 ⇑P P 10 37 24.7 -0.1
baz=96,SNR=5.9
R21A **Cimarron** 96.03 49 ⇓P P 10 37 25.7 +0.2
baz=96

L17A	Cokeville baz=96	96.07	44	⇑P		P		10 37 25.7	+0.2
K16A	Soda Springs baz=96	96.07	43	⇑P		P		10 37 25.4	-0.1
H14A	Leadore baz=96	96.10	41	⇑P		P		10 37 25.5	-0.2
N18A	Larsen Ranch, baz=96	96.16	46	⇑P		P		10 37 25.1	-0.8
F13A	Darby baz=96	96.27	40	⇓P		P		10 37 25.4	-1.0
E13A	Victor baz=97	96.75	39	⇓P		P		10 37 28.2	-0.3
TPAW	Teton Pass comp=Z,7.6nm,1.6s,mb4.6	96.84	43	*e*P		P		10 37 29.4	+0.4
K18A	Toltan Ranch, baz=97	96.89	44	⇓P		P		10 37 28.9	-0.3
J17A	Brown Place, J baz=97	96.91	43	⇓P		P		10 37 29.1	-0.2
G15A	Dillon baz=97,SNR=6.3	96.93	41	⇑P		P		10 37 29.3	-0.1
SNOW	Snow King Moun comp=Z,2.4nm,0.8s,mb4.4	96.94	43	*e*P		P		10 37 29.6	+0.1
N20A	Spence Gulch, baz=97	96.96	47	⇑P		P		10 37 29.3	-0.3
L19A	Farson baz=97	97.00	45	⇑P		P		10 37 29.4	-0.3
LOHW	Long Hollow	97.11	43	*e*P		P		10 37 29.8	-0.4
J18A	Kendall Valley baz=97,SNR=8.5	97.23	44	⇑P		P		10 37 30.0	-0.7
G16A	Moss Hill, Enn baz=98	97.36	41	⇑P		P		10 37 30.9	-0.3
H16A	Russell Place, baz=98	97.37	42	⇑P		P		10 37 31.3	-0.1
L20A	Wamsutter baz=98	97.57	46	⇑P		P		10 37 32.0	-0.2
BOZ	Bozeman (W) comp=Z,17nm,2.3s,mb4.9	97.70	41	*e*P		P		10 37 33.5	+0.7
ILAR	Eielson Array	98.25	14	P	Pdif			10 37 33.0	-2.5
ILAR				pP	pP			10 39 20.3	+5.6
ILAR	Eielson Array comp=Z,0.5nm,0.6s,baz=233,slow=6.1,SNR=8.0	98.25	14	P	Pdif			10 37 33.0	-2.5
ILAR				pP	pP			10 39 20.3	+5.6
ILAR	comp=Z,0.4nm,0.9s,baz=204,slow=5.8,SNR=3.6			PKiKP	PKiKP			10 42 03.1	-1.4
ILAR	comp=Z,0.3nm,0.5s,baz=301,slow=2.9,SNR=7.9			PKKPbc	PKKPbc			10 54 02.9	-3.7
LPAZ	La Paz comp=Z,0.2nm,0.5s,baz=24,slow=3.2,SNR=4.6	99.70	115	P	Pdif			10 37 44.4	+2.4
SONM	Songino Array comp=Z,0.8nm,0.7s,baz=203,slow=7.8,SNR=4.7	101.97	319	PKKPbc	PKKPbc			10 53 55.5	+0.2
YKA	Yellowknife Ar comp=Z,0.8nm,0.5s,baz=264,slow=3.8,SNR=5.9	106.11	26	PKPdf	PKiKP			10 42 16.7	-2.2
YKA	Yellowknife Ar comp=Z,0.4nm,0.5s,baz=219,slow=1.7,SNR=8.6	106.11	26	PKiKP	PKiKP			10 42 16.7	-2.2
WMQ	Urumqi	111.87	309	*e*PKP	PKiKP			10 42 31.2	+0.9
MK31	Makanchi Array	116.44	311	*e*PKPdf	PKPdf			10 42 36.9	-2.1
MKAR	Makanchi Array MKAR	116.44	311	PKP	PKPdf			10 42 36.7	-2.3
				PKKPbc	PKKPbc			10 53 09.1	-0.1
MKAR	Makanchi Array comp=Z,1.0nm,0.4s,baz=209,slow=1.4,SNR=10	116.44	311	PKP	PKPdf			10 42 36.7	-2.3
MKAR				PKKPbc	PKKPbc			10 53 09.1	-0.1
BOSA	Boshof comp=Z,1.5nm,0.5s,baz=271,slow=3.9,SNR=13	116.64	205	PKP	PKPdf			10 42 38.9	-1.2
ZALV	Zalesovo Beam comp=Z,1.7nm,0.5s,baz=136,slow=22,SNR=5.0	116.87	319	PKP	PKPdf			10 42 37.2	-2.3
KURK	Kurchatov	119.79	314	*e*PKPdf	PKPdf			10 42 42.5	-2.8
UCH	Uchtor	120.56	304	*e*PKPdf	PKPdf			10 42 45.7	-1.4
AML	Almayashu	121.13	304	*e*PKPdf	PKPdf			10 42 47.3	-0.8
KBL	Kabul	122.65	294	*e*PKPdf	PKPdf			10 42 50.6	-0.7
PKME	Peaks-Kenny Pk	124.83	54	*e*PKPdf	PKPdf			10 42 54.1	-1.1
BVAR	Borovoye Array comp=Z,3.0nm,0.5s,baz=87,slow=2.6,SNR=18	125.18	316	PKP	PKPdf			10 42 53.8	-1.7
BVAR				SKP				10 45 47.8	
SCHQ	Schefferville comp=Z,2.3nm,0.7s,baz=288,slow=4.5,SNR=4.5	127.31	42	PKP	PKPdf			10 42 59.0	-0.6
SPITS	Spitsbergen Ar comp=Z,7.4nm,0.6s,baz=339,slow=4.8,SNR=9.3	131.51	356	PKP	PKPdf			10 43 05.5	-1.4
AKTK	Aktyubinsk	132.81	312	PKP	PKPdf			10 43 08.6	-1.5
AKTK				SKPbc	SKPbc			10 45 54.5	-1.6
AKTO	Aktyubinsk comp=Z,2.0nm,0.5s,baz=96,slow=2.8,SNR=7.4	132.81	312	PKP	PKPdf			10 43 08.6	-1.5
AKTO	comp=Z,1.5nm,0.5s,baz=349,slow=5.2,SNR=4.0			SKPbc	SKPbc			10 45 54.5	-1.6
KEV	Kevo comp=Z,0.7nm,0.4s	137.67	346	*ep*	PKPdf			10 43 16.0	-2.6
ARCES	ARCESS Array B	138.16	347	PKP	PKPdf			10 43 18.5	-1.0
ARCES				SKP				10 46 09.4	
ARCES	ARCESS Array B comp=Z,1.2nm,0.4s,baz=86,slow=1.8,SNR=19	138.16	347	PKPbc	PKPpre			10 43 07.8	
ARCES				PKP	PKPdf			10 43 18.5	-1.1
ARCES	comp=Z,4.8nm,0.6s,baz=61,slow=0.6,SNR=11			SKP				10 46 09.4	
JOF	Joensuu comp=Z,2.2nm,0.6s,baz=27,slow=1.0,SNR=4.6	141.72	337	*ep*	PKPdf			10 43 19.1	-7.0
KAF	Kangasniemi comp=Z,1.9nm,0.4s	143.91	339	*ep*	PKPdf			10 43 25.5	-4.5
FINES	FINESS Array B comp=Z,35nm,0.5s,baz=58,slow=3.7,SNR=201	144.49	339	PKP	PKPdf			10 43 28.5	-2.5
FINES				SKP				10 46 22.1	
MALT	Malatya comp=Z,2.4nm,0.5s,baz=59,slow=1.0,SNR=3.7	147.50	295	*e*PKPdf	PKPdf			10 43 39.6	+2.7
NOA	NORSAR Array B	148.41	350	PKPbc	PKPbc			10 43 39.7	-2.0
NOA	NORSAR Array B comp=Z,8.9nm,0.5s,baz=15,slow=4.2,SNR=44	148.41	350	PKPbc	PKPbc			10 43 39.7	-2.0
NA001	NORSAR Array S	148.64	350	*e*PKPdf	PKPdf			10 43 40.4	+2.4
HFS	Hagfors comp=Z,8.5nm,0.5s,baz=118,slow=2.2,SNR=32	148.82	347	PKPbc	PKPbc			10 43 40.3	-2.4
MMAI	Mount Meron Ar comp=Z,6.8nm,0.5s,baz=91,slow=4.3,SNR=7.5	149.88	284	PKPbc	PKPbc			10 43 44.3	-1.9
AKASG	Malin Array Be comp=Z,11nm,0.6s,baz=53,slow=2.8,SNR=30	150.21	321	PKPbc	PKPbc			10 43 44.5	-1.9
AKASG	comp=Z,2.2nm,0.6s,baz=58,slow=2.1,SNR=5.0			PKPab	PKPab			10 43 51.1	-3.3
AKASG	comp=Z,0.9nm,0.5s,baz=54,slow=3.1,SNR=7.2			pPKPbc	pPKPbc			10 45 32.8	+1.7
AKBB	Malin Array Si	150.21	321	*e*PKPdf	PKPdf			10 43 41.2	+0.4
AKBB				*e*PKPbc	PKPbc			10 43 44.8	-1.7
AKBB				*e*PKPab	PKPab			10 43 55.4	+1.0
BR131	Keskin Array S	151.09	298	*e*PKPbc	PKPbc			10 43 47.1	-1.7
BRTR	Keskin Array B comp=Z,3.2nm,0.6s,baz=140,slow=5.5,SNR=15	151.09	298	PKPbc	PKPbc			10 43 47.1	-1.7
BRTR				PKPab	PKPab			10 43 54.2	-4.3
BRTR	comp=Z,2.4nm,0.9s,baz=163,slow=6.4,SNR=6.0			pPKPbc	pPKPbc			10 45 37.6	+4.1
EKA	Eskdalemuir Ar comp=Z,0.7nm,0.5s,baz=344,slow=3.2,SNR=4.6	154.91	4	PKPbc	PKPdf			10 43 53.5	+6.0
EKA				PKPab	PKPab			10 44 11.6	-2.5
LIC	Lamto comp=Z,15nm,0.5s	155.55	168	*e*PKIKP	PKPdf			10 43 48.8	-0.9
LIC	Lamto comp=Z,8.5nm,0.5s	155.55	168	*e*PKP2	PKPab			10 44 17.9	0.0
LIC	Lamto	155.55	168	*e*PKPdf	PKPdf			10 43 48.8	-0.9
LIC				*e*PKPab	PKPab			10 44 17.9	0.0
KIC	Kosan Boka comp=Z,17nm,0.8s	155.73	168	*e*PKIKP	PKPdf			10 43 48.8	-1.1
TIC	Toumodi comp=Z,5.3nm,0.3s	155.96	168	*e*PKIKP	PKPdf			10 43 49.3	-0.9
DBIC	Dimbokro comp=Z,3.5nm,0.6s,baz=93,slow=2.8,SNR=8.7	156.01	168	PKP	PKPdf			10 43 49.6	-0.7
DBIC	comp=Z,2.0nm,0.5s,baz=185,slow=6.3,SNR=4.4			PKPab	PKPab			10 44 20.8	+0.9
BAIF	Baives comp=Z,2.1nm,0.5s	160.05	352	*e*PKP2	PKPab			10 44 34.3	-2.2
CDF	Champ du Feu comp=Z,3.5nm,0.6s	161.12	345	*e*PKP2	PKPab			10 44 39.1	-2.2
MEZF	Maizieres J'vi comp=Z,9.1nm,0.5s	161.46	350	*e*PKP2	PKPab			10 44 40.7	-2.1
HAU	Haudompre comp=Z,5.5nm,0.5s	161.70	346	*e*PKP2	PKPab			10 44 41.5	-2.4
TORD	Torodi Ar. Bea comp=Z,0.8nm,0.6s,baz=137,slow=0.1,SNR=6.5	162.83	185	PKP	PKPdf			10 43 56.6	-1.3
TORD				PKPab	PKPab			10 44 48.2	-1.4
LOR	comp=Z,3.6nm,0.6s,baz=171,slow=3.7,SNR=17 Lormes	162.84	351	*e*PKP2	PKPab			10 44 47.2	-1.6
SSF	comp=Z,5.1nm,0.7s Saint Saulge	163.08	352	*e*PKP2	PKPab			10 44 47.7	-2.2
CABF	comp=Z,11nm,0.6s La Chapelle	163.08	346	*e*PKP2	PKPab			10 44 48.0	-2.0
AVF	Avril sur Loir comp=Z,8.5nm,0.6s	163.37	352	*e*PKP2	PKPab			10 44 48.7	-2.5
SMF	Signal de Mont comp=Z,15nm,0.7s	163.45	351	*e*PKP2	PKPab			10 44 49.3	-2.3
MFF	Saint Martin d	163.75	0	*e*PKP2	PKPab			10 44 50.5	-2.4
LPL	La Plagne comp=Z,2.6nm,0.5s	163.96	343	*e*PKP2	PKPab			10 44 52.6	-1.3
LPG	La Plagne comp=Z,4.7nm,0.5s	163.97	343	*e*PKP2	PKPab			10 44 52.9	-1.0
TCF	Toulx Ste Croi	163.98	355	*e*PKP2	PKPab			10 44 52.3	-1.6
ORIF	Oris-en-Rattie	164.73	344	*e*PKP2	PKPab			10 44 55.8	-1.5
RJF	Les Rejaudoux	165.01	356	*e*PKP2	PKPab			10 44 56.9	-1.6
CAF	Calviac	165.35	354	*e*PKP2	PKPab			10 44 58.0	-2.0
LFF	La Frestale	165.41	358	*e*PKP2	PKPab			10 44 59.1	-1.1
MTLF	Montolieu	166.90	353	*e*PKP2	PKPab			10 45 04.9	-2.0
ETSF	Etsaut comp=Z,4.4nm,0.6s	167.45	2	*e*PKP2	PKPab			10 45 07.9	-1.4
EVO	Evora comp=Z,18nm,1.2s	169.46	37	*e*PKP2	PKPab			10 45 15.1	-3.4
ESDC	Sonseca Array comp=Z,0.8nm,0.6s,baz=4.8,slow=3.6,SNR=4.3	170.12	18	PKP	PKPdf			10 44 01.8	-0.9
KEST	Kesra comp=Z,0.6nm,0.6s,baz=287,slow=8.4,SNR=3.5	170.53	307	PKP	PKPdf			10 44 01.5	-1.6

NEIC ***07*** *10:26:04.6, 14.82N×93.87W, h20km, MD4.1(MEX), After MEX.*

MEX 07 10:26:04.6±0.7, 14.81N×93.87W, h21km±36km, MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
PCIG		1.09	35	*i* P	Pn		10 26 21.1	-3.5
PCIG				*i* S	Sb		10 26 33.7	-4.7
THIG		1.55	86	*e*P	Pn		10 26 28.3	-2.7
THIG				*i* S	Sn		10 26 46.4	-4.1
TGIG		2.08	20	*i* P	Pn		10 26 36.3	-2.0
TGIG				*i* S	Sn		10 27 00.6	-3.0
SCX	San Cristobal	2.25	32	*e*P	Pn		10 26 39.0	-1.6
SCX				*i* S	Sn		10 27 05.7	-2.0
SCX	San Cristobal	2.25	32	*e*P	Pn		10 26 39.0	-1.6
SCX				*i* S	Sn		10 27 05.7	-2.0
HUIG	Huatulco	2.36	294	*i* P	Pn		10 26 40.2	-2.0
HUIG				*i* S	Sn		10 27 06.4	-4.1
HUIG	Huatulco	2.36	294	*i* P	Pn		10 26 40.2	-2.0
HUIG				*i* S	Sn		10 27 06.4	-4.1
CMIG	Matias Romero	2.47	337	*i* P	Pn		10 26 40.4	-3.2
CMIG				*i* S	Sn		10 27 10.0	-3.1
CMIG	Matias Romero	2.47	337	*e*P	Pn		10 26 41.5	-2.1
CMIG				*i* S	Sn		10 27 10.0	-3.1
VHO	Vista Hermosa	3.56	310	*i* P	Pn		10 26 56.1	-2.5
VHO				*i* S	Sn		10 27 38.7	-1.2
VHO	Vista Hermosa	3.56	310	*i* P	Pn		10 26 56.1	-2.5
VHO				*i* S	Sn		10 27 38.0	-2.0
PNIG	Pinotepa	4.39	291	*i* P	Pn		10 27 08.4	-1.7
PNIG				*i* S	Sn		10 27 57.1	-3.6
PNIG	Pinotepa	4.39	291	*i* P	Pn		10 27 08.4	-1.7
PNIG				*i* S	Sn		10 27 57.1	-3.6
UTMO	Huajuapan	4.82	309	*e*P	Pn		10 27 14.2	-1.8
UTMO				*i* S	Sn		10 28 08.9	-2.4

IDC 07 11:07:02.3±7.9, 52.32N×178.76W, h0km, mb2.8/3, mb1 3.5/4, mb1mx3.3/26, mbtmp3.1/4, ML3.8/1, Error ellipse: s-maj=151.9km s-min=63.6km az=100.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KDAK	Kodiak Island	15.91	60	Pn	Pn		11 10 46.7	-0.5
	0.4nm,0.3s,baz=269,slow=10,SNR=4.6							
ILAR	Eielson Array	20.50	40	P	P		11 11 41.3	-0.2
	0.2nm,0.5s,baz=231,slow=8.8,SNR=6.0							
NVAR	Mina Array Bea	43.42	84	P	P		11 15 06.6	+0.1
	0.2nm,0.6s,baz=321,slow=8.4,SNR=2.4							
TXAR	Lajitas Array	58.49	82	P	P		11 17 00.3	+0.2
	0.1nm,0.3s,baz=311,slow=8.2,SNR=3.0							

ISCJB ***07*** *11:17:00.0±0.8, 52.30N±0.05×175.61W±0.03, h15km±5km, mb4.4/86, MS4.0/25, Error ellipse: s-maj=7.7km s-min=3.4km az=172.0*

BJI ***07*** *11:17:00.8, 52.13N×176.51W, h10km, mB4.7/6, mb4.5/12, Ms4.5/7, Ms7 4.1/8*

NEIC ***07*** *11:17:01.3±1.4, 52.32N×175.74W, h12km±9km, mb4.5/63, ML4.9(PMR), ML4.6(AEIC), Error ellipse: s-maj=11.0km s-min=5.8km az=168.0*

MOS ***07*** *11:17:02.6±1.5, 52.39N×175.72W, h33km, mb4.7/32, Error ellipse: s-maj=11.3km s-min=8.6km az=137.2*

IDC ***07*** *11:17:02.5±3.3, 52.27N×175.62W, h24km±20km, mb4.0/20, mb1 4.2/22, mb1mx4.1/32, mbtmp4.0/22, ML4.6/2, MS4.0/20, Ms1 4.0/20, ms1mx3.9/28, Error ellipse: s-maj=20.8km s-min=11.6km az=173.0*

ISC 07 11:17:01.7±0.7, 52.26N±0.05×175.63W±0.04, h17km±4km, n445, σ0.83/435, mb4.4/86, MS4.0/25, 126C-133D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
GSTR	Great Sitkin T	0.31	238	*e*Pg	Pg		11 17 07.7	-0.6
GSTR				*e*Sg	Sg		11 17 13.6	+0.8
ATKA	Atka Island	0.89	93	P	Pb		11 17 14.4	-4.3
ATKA				S	Sb		11 17 25.7	-4.5
AMKA	Amchitka	3.27	256	P	Pn		11 17 51.6	-0.5
AMKA				S	Sn		11 18 32.4	+1.9
NIKO	Nikolski	4.19	78	P	Pn		11 18 04.0	-0.8
UNV	Unalaska Valle	5.73	70	P	Pn		11 18 24.8	-1.2
SPIA	Saint Paul Isl	5.83	30	P	Pn		11 18 26.5	-0.8
AKGG	Akutan Green G	6.11	68	P	Pn		11 18 29.3	-1.9
AKLV	Akutan Long Va	6.12	68	P	Pn		11 18 30.4	-0.9
AKUT	Akutan	6.22	69	P	Pn		11 18 32.4	-0.2
SMY	Shemya	6.29	278	*e*Pn	Pn		11 18 32.3	-1.4
FALS	False Pass	7.73	66	P	Pn		11 18 52.9	-0.5
SDPT	Sand Point	9.48	65	*e*Pn	Pn		11 19 19.1	+1.6
CHGN	Chignik	10.84	61	*e*Pn	Pn		11 19 38.1	+2.1
OHAK	Old Harbor	13.80	60	*e*Pn	Pn		11 20 18.3	+1.9
SVW2	Sparrevohn 12nm,0.8s	14.08	43	*e*P	Pn		11 20 22.8	+2.7
KDAK	Kodiak Island	14.29	58	*e*Pn	Pn		11 20 25.3	+2.2
KDAK				*e*Sn	Sn		11 23 03.1	+2.1
KDAK	Kodiak Island 3.0nm,0.3s,baz=260,slow=7.3,SNR=21	14.29	58	Pn	Pn		11 20 23.6	+0.5
KDAK	Kodiak Island	14.29	58	*i* P	Pn		11 20 25.0	+1.9
TTA	Tatalina	14.92	37	*e*Pn	Pn		11 20 31.6	0.0
RSO	Redoubt South	15.04	48	*e*Pn	Pn		11 20 35.6	+2.4
PMR	Palmer 19nm,1.1s	17.10	47	*e*Pn	Pn		11 21 00.1	+0.5
PMR	Palmer	17.10	47	*e*P	Pn		11 21 00.1	+0.5
PMR				pmax	pmax			
	comp=Z,19nm,1.1s							
COLA	College comp=Z,16nm,0.9s	19.01	38	*e*P	Pn		11 21 21.9	-1.2
COLA	College	19.01	38	*e*P	Pn		11 21 21.9	-1.2
COLA				pmax	pmax			
	comp=Z,16nm,0.9s							
ILAR	Eielson Array comp=Z,0.7nm,0.3s,baz=244,slow=9.6,SNR=44	19.33	39	P	Pn		11 21 24.3	-2.6
ILAR				ScP	ScP		11 29 21.3	-0.9
	comp=Z,0.0nm,0.3s,baz=292,slow=3.4,SNR=4.8							
ILAR				LR	LR		11 29 28.7	
	comp=Z,813nm,18.8s,baz=247,slow=39							
MENT	Mentasta	19.93	45	*e*P	Pn		11 21 34.2	+0.1
SEY	Seymchan	19.96	315	*e*P	Pn		11 21 35.4	+0.9
EGAK	Eagle comp=Z,202nm,1.6s,mb5.3	21.59	41	*e*P	P		11 21 50.8	+0.4
DAWY	Dawson	22.11	44	*e*P	P		11 21 56.0	+0.1
HYT	Haines Junctio	22.40	53	*e*P	P		11 22 02.1	+3.1
INK	Inuvik comp=Z,58nm,1.5s,mb4.9	25.61	35	*e*P	P		11 22 29.7	0.0
INK	Inuvik comp=Z,12nm,1.1s,mb4.3,baz=253,slow=6.8,SNR=13	25.61	35	P	P		11 22 29.8	+0.1
INK				LR	LR		11 33 18.3	
	comp=Z,400nm,19.9s,MS3.9,baz=231,slow=38							
INK	Inuvik	25.61	35	*e*P	P		11 22 29.7	0.0
INK				pmax	pmax			
	comp=Z,58nm,1.5s							
DLBC	Dease Lake comp=Z,0.7nm,0.5s,mb3.5,baz=236,slow=8.7,SNR=2.5	26.23	58	P	P		11 22 35.5	0.0
DLBC				LR	LR		11 33 22.6	
	comp=Z,135nm,19.8s,MS3.5,baz=266,slow=37							
NLWA	Neilton Lookou comp=Z,7.7nm,1.0s,mb4.6	33.15	77	*e*P	P		11 23 38.8	+1.9
YKA	Yellowknife Ar comp=Z,0.4nm,0.5s,mb3.6,baz=283,slow=9.3,SNR=4.6	33.19	48	P	P		11 23 36.2	-0.9
YKA				PcP	PcP		11 26 18.2	-1.1
	comp=Z,0.4nm,0.5s,baz=288,slow=3.2,SNR=4.6							

GNW	Green Mountain comp=Z,2.7nm,0.7s,mb4.3	33.70	77	*e*P		P		11 23 43.8	+2.2
E03A	Lebam baz=34	33.74	79	⇓P		P		11 23 43.0	+0.9
RPW	Rockport	34.07	74	*e*P		P		11 23 49.6	+4.7
LON	Longmire comp=Z,3.2nm,0.7s,mb4.4	34.70	77	*e*P		P		11 23 53.4	+3.0
LON	Longmire	34.70	77	*e*P		P		11 23 53.4	+3.1
LON				pmax	pmax				
	comp=Z,3.0nm,0.7s,mb4.3								
F04A	Amboy baz=35	34.73	79	⇓P		P		11 23 50.8	+0.1
ETW	Entiat	35.16	75	*e*P		P		11 23 55.7	+1.4
B08A	Colville Reser baz=35	35.40	73	⇓P		P		11 23 56.2	-0.1
H04A	Detroit Lake baz=35,SNR=7.2	35.52	81	⇓P		P		11 23 58.0	+0.5
MJAR	Matsushiro Arr	35.86	263	P		P		11 24 00.4	0.0
MJAR				LR	LR			11 36 11.7	
MJAR	Matsushiro Arr comp=Z,2.6nm,0.8s,mb4.2,baz=53,slow=7.2,SNR=8.8	35.86	263	P		P		11 24 00.4	0.0
MJAR				LR	LR			11 36 11.7	
	comp=Z,228nm,21.2s,MS3.9,baz=75,slow=32								
MAJO	Matsushiro comp=Z,11nm,0.9s,mb4.8	35.86	263	*e*P		P		11 24 00.8	+0.4
MAJO	Matsushiro	35.86	263	*e*P		P		11 24 00.8	+0.4
MAJO				pmax	pmax				
	comp=Z,11nm,0.9s,mb4.8								
MAT	Matsushiro	35.86	263	P		P		11 24 00.9	+0.5
MAT				S		S		11 29 36.0	-1.3
HUMO	Hull Mountain comp=Z,30nm,2.1s,mb4.8	36.18	84	*e*P		P		11 24 08.0	+4.9
HAWA	Hanford comp=Z,8.7nm,0.8s,mb4.7	36.24	76	*e*P		P		11 24 06.1	+2.5
MDJ	Mudanjiang	36.36	280	P		P		11 24 03.7	-0.9
MDJ				PP	PP			11 25 25.6	-1.6
MDJ				S		S		11 29 47.2	+2.3
MDJ				ScP	ScP			11 30 15.5	+1.2
MDJ				ScS	ScS			11 34 22.0	+1.7
MDJ				pmax	pmax				
	comp=Z,2.0nm,0.5s,mb4.3								
MDJ				pmax	pmax				
	comp=Z,53nm,6.5s								
MDJ				LR	LR				
	comp=N,110nm,15.4s,MS4.1								
MDJ				LR	LR				
	comp=E,250nm,20.4s,MS4.1								
MDJ				LR	LR				
	comp=Z,340nm,20.1s,MS4.1								
EDM	Edmonton	36.66	63	*e*P		P		11 24 06.7	-0.4
KHMM	Horse Mountain comp=Z,12nm,0.9s,mb4.7	36.70	87	*e*P		P		11 24 13.5	+5.9
NEW	Newport	36.74	72	*e*P		P		11 24 07.2	-0.6
NEW	Newport comp=Z,6.1nm,0.6s,mb4.6	36.74	72	*e*P		P		11 24 07.2	-0.6
NEW				pmax	pmax				
	comp=Z,6.0nm,0.6s								
YBH	Yreka Blue Hor comp=Z,5.6nm,0.9s,mb4.4	36.83	85	*e*P		P		11 24 11.0	+2.3
YBH	Yreka Blue Hor comp=Z,5.3nm,0.8s,mb4.4,baz=311,slow=5.8,SNR=6.1	36.83	85	P		P		11 24 08.4	-0.3
YBH	Yreka Blue Hor	36.83	85	P		P		11 24 08.4	-0.3
YBH				pmax	pmax				
	comp=Z,5.0nm,0.8s								
K05A	Summer Lake baz=37,SNR=6.9	37.37	82	⇑P		P		11 24 13.8	+0.5
I07A	Izee baz=37,SNR=5.6	37.47	80	⇑P		P		11 24 14.2	+0.2
WDC	Whiskeytown Da comp=Z,8.0nm,1.0s,mb4.4	37.60	86	*e*P		P		11 24 18.4	+3.2
WDC	Whiskeytown Da	37.60	86	*e*P		P		11 24 18.5	+3.2
WDC				pmax	pmax				
	comp=Z,8.0nm,1.0s,mb4.4								
F10A	Beach Ranch, E baz=38	37.83	76	⇑P		P		11 24 16.8	-0.3
C12B	Naegeli Ranch, baz=38	37.98	72	⇓P		P		11 24 18.1	-0.2
A13A	Flathead Natio baz=38	37.99	70	⇓P		P		11 24 17.8	-0.6
MOD	Modoc comp=Z,8.2nm,0.7s,mb4.6	38.20	83	*e*P		P		11 24 20.8	+0.5
WALA	Waterton Lakes comp=Z,0.2nm,0.9s	38.22	69	*e*P		P		11 24 19.7	-0.7
B13A	Whitefish baz=38	38.23	71	⇓P		P		11 24 19.9	-0.6
BSMT	Bassoo Peak	38.31	72	*e*P		P		11 24 20.7	-0.4
BMO	Blue Mountains comp=Z,2.6nm,0.8s,mb4.0	38.37	77	*e*P		P		11 24 24.4	+2.7
D12A	Red Ives Fores baz=38	38.38	73	⇑P		P		11 24 20.9	-0.8
J08A	Circle Bar Ran baz=38	38.49	80	⇑P		P		11 24 22.6	-0.1
C13A	Hot Springs baz=38	38.52	72	⇓P		P		11 24 21.9	-1.0
A14A	Double T Ranch

baz=41
L11A **Cat Creek Ranc** 40.81 80 ⇓P P 11 24 42.4 +0.4
baz=41,SNR=12
HLID **Hailey** 40.82 77 eP P 11 24 41.7 -0.4
comp=Z,5.8nm,0.9s,mb4.2
H14A **Leadore** 40.85 75 ⇓P P 11 24 41.8 -0.6
baz=41
B18A **Beardsley Farm** 40.92 68 ⇓P P 11 24 41.9 -0.9
baz=41
BMN **Battle Mountai** 40.95 83 eP P 11 24 45.0 +1.9
comp=Z,9.0nm,0.6s,mb4.6
BMN **Battle Mountai** 40.95 83 eP P 11 24 45.0 +1.8
BMN pmax pmax
comp=Z,9.0nm,0.6s,mb4.6
MCMT **McKenzie Canyo** 41.04 75 eP P 11 24 42.9 -1.0
comp=Z,2.6nm,0.5s,mb4.1
D17A **Six Diamond Ra** 41.05 70 ⇑P P 11 24 43.8 -0.2
baz=41
J13A **Cove Ranch, Pi** 41.05 77 ⇓P P 11 24 44.1 +0.1
baz=41,SNR=6.9
G15A **Dillon** 41.07 74 ⇑P P 11 24 43.3 -0.8
baz=41
EGMT **Eagleton** 41.13 69 eP P 11 24 43.2 -1.3
comp=Z,7.9nm,0.9s,mb4.3
M11A **Holland Ranch,** 41.22 81 ⇓P P 11 24 45.2 -0.2
baz=41
F16A **Kennard Place,** 41.24 73 ⇓P P 11 24 45.1 -0.4
baz=41
L12A **House Creek Ra** 41.27 79 ⇓P P 11 24 45.8 0.0
baz=41,SNR=7.7
H15A **Lima** 41.28 75 ⇑P P 11 24 45.5 -0.3
baz=41
BOZ **Bozeman (W)** 41.31 73 eP P 11 24 45.0 -1.1
comp=Z,3.3nm,0.8s,mb4.0
BOZ **Bozeman (W)** 41.31 73 eP P 11 24 45.0 -1.1
BOZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
E17A **Martinsdale** 41.32 71 ⇓P P 11 24 46.1 0.0
baz=41
G16A **Moss Hill, Enn** 41.44 73 ⇓P P 11 24 46.4 -0.7
baz=41
NVAR **Mina Array Bea** 41.51 86 P P 11 24 47.5 -0.3
comp=Z,6.2nm,0.7s,mb4.3,baz=295,slow=7.2,SNR=16
NVAR ScP ScP 11 30 32.4 -1.8
comp=Z,2.7nm,1.3s,baz=234,slow=5.0,SNR=3.6
KSRS **Korea Array** 41.58 272 P P 11 24 48.9 +0.5
comp=Z,2.8nm,0.8s,mb3.9,baz=57,slow=7.9,SNR=14
KSRS LR LR 11 41 56.4
comp=Z,97nm,18.7s,MS3.7,baz=70,slow=36
KSRS **Korea Array** 41.58 272 P P 11 24 48.9 +0.5
KSRS pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
KSRS MLR MLR
comp=Z,97nm,18.7s,MS3.7
M12A **Wells** 41.76 80 ⇓P P 11 24 50.2 +0.4
baz=42
E18A **Harlowton** 41.81 71 ⇓P P 11 24 50.0 -0.2
baz=42
L13A **Double Diamond** 41.95 79 ⇓P P 11 24 52.1 +0.7
baz=42,SNR=7.6
G17A **Pierce Place,** 42.01 73 ⇓P P 11 24 52.2 +0.4
baz=42
N12A **Clover Valley,** 42.02 81 ⇓P P 11 24 52.4 +0.4
baz=42,SNR=8.4
MTUM **Tungsten Hills** 42.03 87 eP P 11 24 55.5 +3.4
H16A **Russell Place,** 42.06 74 ⇑P P 11 24 52.0 -0.2
baz=42
M13A **Montello** 42.25 80 ⇓P P 11 24 54.2 +0.4
baz=42
L14A **Malta** 42.41 78 ⇑P P 11 24 54.8 -0.3
baz=42,SNR=7.1
Q10A **Clear Creek Ra** 42.43 84 ⇑P P 11 24 55.7 +0.4
baz=42,SNR=12
K15A **Arbon** 42.45 77 ⇑P P 11 24 55.4 0.0
baz=42
O12A **Currie** 42.55 81 ⇓P P 11 24 55.9 -0.5
baz=42,SNR=7.9
H17A **Grant Village** 42.63 74 ⇑P P 11 24 57.0 +0.1
baz=42
M14A **Sheep Mountain** 42.66 79 ⇓P P 11 24 57.8 +0.6
baz=42
J16A **Bone** 42.66 76 ⇓P P 11 24 57.3 +0.2
baz=42
VES **Vestal, Richgr** 42.68 90 ⇓P P 11 24 57.6 +0.1
baz=42
IMW **Indian Meadow** 42.70 75 eP P 11 25 00.2 +2.8
comp=Z,5.6nm,1.0s,mb4.2
G18A **Lazy EL Ranch,** 42.70 72 ⇓P P 11 24 57.7 +0.2
baz=43
FLWY **Flagg Ranch** 42.73 74 eP P 11 24 58.3 +0.5
comp=Z,13nm,1.4s,mb4.5
R10A **Warm Springs** 42.82 85 ⇓P P 11 24 58.3 -0.2
baz=43
HVU **Hansel Valley** 42.84 78 eP P 11 24 59.1 +0.5
comp=Z,6.3nm,0.7s,mb4.5
HVU **Hansel Valley** 42.84 78 eP P 11 24 59.1 +0.5
HVU pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
Q11A **Duckwater** 42.87 84 ⇑P P 11 24 58.5 -0.4
baz=43,SNR=17
S10A **Tonopah Range,** 42.88 85 ⇑P P 11 24 58.7 -0.2
baz=43,SNR=21
MOOW **Moose Ponds** 42.90 75 eP P 11 25 00.7 +1.6
CWC **Cottonwood Cre** 42.91 88 ⇓P P 11 24 59.9 +0.6
baz=43
K16A **Soda Springs** 42.93 76 ⇓P P 11 24 59.6 +0.3
baz=43
P12A **McGill** 42.94 82 ⇑P P 11 24 59.5 +0.1
baz=43
RLMT **Red Lodge** 42.99 72 eP P 11 24 59.2 -0.5
comp=Z,5.6nm,0.8s,mb4.3
REDW **Red Top Meadow** 43.06 75 eP P 11 25 00.4 0.0
comp=Z,6.6nm,1.1s,mb4.3
LOHW **Long Hollow** 43.06 75 eP P 11 25 02.0 +1.6
comp=Z,1.9nm,1.0s,mb3.8
O13A **Hicks Ranch, I** 43.10 81 ⇑P P 11 25 01.0 +0.3
baz=43,SNR=6.1
N14A **Grayback Hills** 43.14 80 ⇑P P 11 25 00.9 -0.2
baz=43
ISA **Isabella** 43.17 89 ⇓P P 11 25 01.3 -0.1
baz=43
ISA **Isabella** 43.17 89 eP P 11 25 01.1 -0.3
comp=Z,5.8nm,1.0s,mb4.3
ISA **Isabella** 43.17 89 eP P 11 25 01.1 -0.3
ISA pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
BGU **Big Grassy Mou** 43.19 79 eP P 11 25 03.3 +1.8
comp=Z,5.1nm,0.9s,mb4.2
R11A **Troy Canyon, C** 43.23 84 ⇑P P 11 25 01.8 0.0
baz=43,SNR=23
Q12A **Willow Creek R** 43.26 83 ⇑P P 11 25 02.2 +0.2
baz=43
AHID **Auburn Hatcher** 43.26 76 eP P 11 25 05.3 +3.3
comp=Z,4.7nm,0.9s,mb4.2
P13A **Bates Ranch, G** 43.49 82 ⇓P P 11 25 03.5 -0.4
baz=43
L16A **Fish Haven** 43.50 77 ⇓P P 11 25 03.3 -0.7
baz=43,SNR=7.2
MPMC **Manual Prospec** 43.52 88 ⇑P P 11 25 04.1 -0.1
baz=43,SNR=5.2
S11A **Rachel** 43.57 85 ⇑P P 11 25 04.7 +0.1
baz=43
J18A **Kendall Valley** 43.64 75 ⇑P P 11 25 05.2 +0.1
baz=44
FURC **Furnace Creek,** 43.64 87 ⇓P P 11 25 05.6 +0.4
baz=44
HWUT **Hardware Ranch** 43.67 78 eP P 11 25 06.6 +1.3
comp=Z,3.9nm,0.8s,mb4.2
DUG **Dugway** 43.77 80 eP P 11 25 06.1 0.0
comp=Z,16nm,1.0s,mb4.7
DUG **Dugway** 43.77 80 eP P 11 25 06.1 0.0
DUG pmax pmax
comp=Z,16nm,1.0s,mb4.7
L17A **Cokeville** 43.79 77 ⇓P P 11 25 06.0 -0.3
baz=44
Q13A **Wheeler Ranch,** 43.80 82 ⇓P P 11 25 05.7 -0.7
baz=44,SNR=8.6
R12A **Pony Springs,** 43.84 83 ⇓P P 11 25 06.3 -0.4
baz=44,SNR=6.7
LAO **LASA Array** 43.87 68 eP P 11 25 07.4 +0.5
comp=Z,7.7nm,0.9s,mb4.4
K18A **Toltan Ranch,** 43.96 75 ⇑P P 11 25 07.1 -0.6
baz=44
P14A **Drum Mountains** 43.98 81 ⇑P P 11 25 08.2 +0.3
baz=44,SNR=5.9
EDW2 **Edwards Air Fo** 43.99 90 ⇓P P 11 25 07.8 -0.1
baz=44
U10A **Ash Meadows, A** 44.00 87 ⇑P P 11 25 08.3 +0.3
baz=44
S12A **Delamar Landin** 44.14 84 ⇑P P 11 25 09.6 +0.4
baz=44,SNR=6.4
BW06 **Boulder Array** 44.17 75 eP P 11 25 08.3 -1.1
comp=Z,7.6nm,1.0s,mb4.4
Q14A **Sevier Lake (B** 44.23 82 ⇓P P 11 25 10.3 +0.4
baz=44,SNR=9.1
M17A **Sculls Gap (B** 44.29 77 ⇓P P 11 25 10.5 +0.2
baz=44
R13A **O'Grain Ranch,** 44.32 83 ⇑P P 11 25 10.5 0.0
baz=44
JLU **Jordanelle** 44.34 79 eP P 11 25 11.2 +0.5
comp=Z,10nm,1.3s,mb4.4
NLU **North Lily Min** 44.36 80 eP P 11 25 13.8 +2.8
comp=Z,7.8nm,0.8s,mb4.5
SHOC **Shoshone** 44.37 87 ⇓P P 11 25 11.2 +0.2
baz=44
MWC **Mount Wilson** 44.38 91 eP P 11 25 14.6 +3.5
comp=Z,36nm,1.6s,mb4.8
MWC **Mount Wilson** 44.38 91 eP P 11 25 14.6 +3.5
MWC pmax pmax
comp=Z,36nm,1.6s,mb4.8
L18A **Fontenelle, Gr** 44.39 76 ⇑P P 11 25 10.7 -0.4
baz=44
GSC **Goldstone** 44.44 88 ⇑P P 11 25 11.3 -0.3
baz=44,SNR=13
GSC **Goldstone** 44.44 88 eP P 11 25 11.2 -0.4
comp=Z,11nm,0.8s,mb4.7
GSC **Goldstone** 44.44 88 eP P 11 25 11.2 -0.4
GSC pmax pmax
comp=Z,11nm,0.8s,mb4.6
O16A **Springville** 44.55 79 ⇑P P 11 25 12.2 -0.3
baz=44
K19A **Absolon Red Bu** 44.56 74 ⇓P P 11 25 11.4 -1.1
baz=44
DAU **Daniels Canyon** 44.58 79 eP P 11 25 15.0 +2.4
MPU **Maple Canyon** 44.59 79 eP P 11 25 14.4 +1.7
comp=Z,6.7nm,0.9s,mb4.5
BFSC **Mount Baldy Ra** 44.62 90 ⇓P P 11 25 13.5 +0.5
baz=44,SNR=5.0
M18A **Lyman** 44.67 77 ⇑P P 11 25 13.8 +0.4
baz=44
L19A **Farson** 44.69 76 ⇓P P 11 25 13.3 -0.2
baz=45
S13A **Holt Ranch, En** 44.77 84 ⇓P P 11 25 14.3 +0.1
baz=45,SNR=6.0
Q15A **Fillmore** 44.77 81 ⇓P P 11 25 14.2 0.0
baz=45
ARUT **Antelope Range** 44.89 83 eP P 11 25 20.4 +5.2
comp=Z,8.0nm,0.9s,mb4.5
ARUT **Antelope Range** 44.89 83 eP P 11 25 20.4 +5.2
ARUT pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
V11A **Goodsprings** 44.93 87 ⇓P P 11 25 15.8 +0.3
baz=45
K20A **Yellowstone Ra** 44.96 74 ⇓P P 11 25 15.0 -0.6
baz=45
O17A **Robinson Place** 45.02 79 ⇓P P 11 25 16.9 +0.7
baz=45
HEC **Hector,Ludlow** 45.04 89 ⇓P P 11 25 16.6 +0.2
baz=45
BBRC **Big Bear Solar** 45.06 90 ⇓P P 11 25 16.8 +0.3
baz=45
CCUT **Cedar City** 45.09 83 eP P 11 25 18.7 +1.9
comp=Z,34nm,2.0s,mb4.8
U12A **Valley of Fire** 45.09 85 ⇑P P 11 25 16.8 0.0
baz=45
T13A **Saint George** 45.10 84 ⇓P P 11 25 16.9 +0.1
baz=45,SNR=5.8
M19A **Rock Springs** 45.17 76 ⇓P P 11 25 17.7 +0.4
baz=45
N18A **Larsen Ranch,** 45.18 77 ⇑P P 11 25 17.9 +0.4
baz=45
MSU **Marysvale** 45.20 82 eP P 11 25 18.2 +0.6
TMUT **Trail Mountain** 45.30 80 eP P 11 25 21.7 +3.3
comp=Z,12nm,0.9s,mb4.7
R15A **Junction** 45.33 82 ⇑P P 11 25 18.6 -0.1
baz=45
V12A **Nelson** 45.36 86 ⇑P P 11 25 19.1 +0.2
baz=45
P17A **Butcher Ranch,** 45.47 79 ⇑P P 11 25 19.5 -0.3
baz=45
GMRC **Granite Mounta** 45.49 88 ⇓P P 11 25 20.1 +0.2
baz=45
N19A **John Jarvie Ra** 45.53 77 ⇑P P 11 25 20.7 +0.6
baz=45
T14A **Hurricane** 45.57 84 ⇓P P 11 25 21.0 +0.5
baz=45
S15A **Panguitch** 45.62 83 ⇓P P 11 25 21.1 +0.2
baz=46
P18A **Preston Nutter** 45.67 79 ⇓P P 11 25 21.7 +0.4
baz=46
R16A **Teasdale** 45.77 81 ⇑P P 11 25 22.5 +0.4
baz=46,SNR=7.1
PFO **Pinyon Flat Ob** 45.78 90 ⇓P P 11 25 21.7 -0.5
baz=46
BELC **Belle Mtn. Jos** 45.80 89 ⇑P P 11 25 22.0 -0.4
baz=46
V13A **Grand Canyon W** 45.81 86 ⇑P P 11 25 22.8 +0.4
baz=46
SRU **San Rafael** 45.83 80 eP P 11 25 23.1 +0.5
comp=Z,12nm,0.9s,mb4.8
SRU **San Rafael** 45.83 80 eP P 11 25 23.1 +0.5
SRU pmax pmax
comp=Z,12nm,0.9s,mb4.8
O19A **Miners Draw (B** 45.93 78 ⇑P P 11 25 22.9 -0.4
baz=46,SNR=9.9
U14A **Mt Trumbull** 45.93 84 ⇑P P 11 25 23.3 -0.1
baz=46
L21A **Rawlins** 45.95 75 ⇓P P 11 25 22.3 -1.2
baz=46
T15A **Red Dirt Ranch** 46.03 83 ⇓P P 11 25 24.1 0.0
baz=46
S16A **Weppner Ranch,** 46.06 82 ⇓P P 11 25 24.4 +0.1
baz=46
Q18A **Rafter H Ranch** 46.07 79 ⇑P P 11 25 24.2 -0.3
baz=46,SNR=7.6
N20A **Spence Gulch,** 46.11 76 ⇓P P 11 25 24.0 -0.8
baz=46
R17A **Hanksville Air** 46.15 81 ⇑P P 11 25 24.5 -0.6
baz=46
M21A **Separation Pea** 46.17 75 ⇓P P 11 25 24.4 -0.9
baz=46
IRM **Iron Mountain** 46.21 88 ⇑P P 11 25 25.4 -0.2
baz=46
RWWY **Rawlins** 46.22 75 eP P 11 25 25.3 -0.3
comp=Z,5.6nm,0.9s,mb4.5
MONP **Monument Peak** 46.29 91 ⇑P P 11 25 26.2 -0.1
baz=46
W13A **Huapai Mount** 46.36 86 ⇑P P 11 25 26.3 -0.6
baz=46
BC3 **Big Chuckawall** 46.37 89 ⇑P P 11 25 26.6 -0.3
baz=46
P19A **Cripple Cowboy** 46.43 78 ⇑P P 11 25 26.9 -0.4
baz=46,SNR=11
U15A **North Rim** 46.47 84 ⇑P P 11 25 28.1 +0.5
baz=46,SNR=18
V14A **Boquillas Ranc** 46.49 85 ⇓P P 11 25 27.7 -0.1
baz=46
O20A **White River Ci** 46.56 77 ⇓P P 11 25 28.2 -0.1
baz=46
S17A **Black Ridge (B** 46.59 81 ⇓P P 11 25 28.8 +0.2
baz=46,SNR=8.0
DVTC **Desert V Tower** 46.64 91 ⇑P P 11 25 28.7 -0.3
baz=46
R18A **Canyonlands Na** 46.67 80 ⇑P P 11 25 28.6 -0.6
baz=46
X13A **Yucca** 46.73 87 ⇓P P 11 25 29.3 -0.4
baz=47
W14A **Seligman** 46.78 86 ⇑P P 11 25 30.1 0.0
baz=47
P20A **De Beque** 46.87 78 ⇑P P 11 25 30.2 -0.5
baz=47
V15A **Kaibab Nationa** 46.94 84 ⇑P P 11 25 31.1 -0.3
baz=47,SNR=10.0
O21A **Pagoda** 46.97 77 ⇓P P 11 25 30.6 -0.9
baz=47
T17A **Navajo Res., N** 47.01 82 ⇓P P 11 25 31.7 -0.2
baz=47,SNR=5.5
S18A **Hurst Farm, Bl** 47.05 81 ⇓P P 11 25 32.0 -0.2
baz=47,SNR=13
BJI **Beijing** 47.10 283 P P 11 25 31.5 -1.0
BJI pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
BJI LR LR
comp=N,260nm,17.8s,MS4.2
BJI LR LR
comp=E,92nm,19.5s,MS4.2
BJI LR LR
comp=Z,210nm,19.2s,MS4.1
R19A **Curley Farm, L** 47.11 80 ⇑P P 11 25 31.5 -1.1
baz=47
GLA **Glamis** 47.16 89 ⇓P P 11 25 32.3 -0.7
baz=47
PV04 **Paradox Valley** 47.26 79 eP P 11 25 34.0 +0.2
Q20A **Ridgley Place,** 47.27 78 ⇓P P 11 25 33.7 -0.2
baz=47
W15A **Williams** 47.30 85 ⇓P P 11 25 34.6 +0.4
baz=47
X14A **Yava** 47.39 86 ⇑P P 11 25 34.9 0.0
baz=47,SNR=5.7
N23A **Red Feather La** 47.46 75 ⇑P P 11 25 34.9 -0.4
baz=47
T18A **Mexican Hat** 47.48 81 ⇓P P 11 25 35.1 -0.5
baz=47,SNR=8.0
S19A **Harvey Farm, M** 47.53 80 ⇑P P 11 25 36.0 0.0
baz=47,SNR=10.0
ULM **Lac du Bonnet** 47.55 59 LR LR 11 46 06.6
comp=Z,349nm,18.1s,MS4.4,baz=309,slow=37
WUAZ **Wupatki** 47.63 84 eP P 11 25 36.8 +0.1
comp=Z,8.8nm,0.7s,mb4.9
PV01 **Paradox Valley** 47.63 79 eP P 11 25 35.9 -0.8
comp=Z,893nm,0.8s
Y14A **Wickenburg** 47.68 87 ⇓P P 11 25 37.1 -0.1
baz=48,SNR=5.6
R20A **Redvale** 47.71 79 ⇓P P 11 25 37.0 -0.3
baz=48
Z13A **Yuma Proving G** 47.78 88 ⇑P P 11 25 37.1 -0.8
baz=48
X15A **Humboldt** 47.78 86 ⇓P P 11 25 37.6 -0.3
baz=48
W16A **Flagstaff** 47.81 85 ⇑P P 11 25 38.4 +0.3
baz=48
O23A **Lake Granby, G** 47.90 75 ⇓P P 11 25 38.3 -0.5
baz=48
V17A **Tonalea, Kykot** 47.91 84 ⇓P P 11 25 39.3 +0.3
baz=48
SMCO **Snowmass** 47.92 77 eP P 11 25 41.3 +2.4
comp=Z,3.4nm,0.6s,mb4.5
U18A **Rough Rock, Ch** 47.95 82 ⇑P P 11 25 39.3 +0.1
baz=48
SONM **Songino Array** 48.00 298 P P 11 25 39.7 +0.3
comp=Z,0.3nm,0.6s,mb3.5,baz=77,slow=7.6,SNR=2.1
SONM LR LR 11 46 40.4
comp=Z,289nm,19.3s,MS4.3,baz=54,slow=37
113A **Mohawk Valley,** 48.00 89 ⇑P P 11 25 39.8 +0.1
baz=48
Y15A **Casa Rosa Ranc** 48.08 86 ⇓P P 11 25 40.5 +0.3
baz=48
R21A **Cimarron** 48.09 78 ⇑P P 11 25 40.2 0.0
baz=48
ZAK **Zakamensk** 48.17 302 eP P 11 25 41.9 +1.2
ZAK pmax pmax
comp=Z,2.0nm,1.4s,mb4.0
MVCO **Mesa Verde** 48.27 80 eP P 11 25 44.5 +2.9
comp=Z,5.6nm,0.6s,mb4.8
X16A **Lo Mia Camp, P** 48.32 85 ⇓P P 11 25 41.8 -0.2
baz=48
ISCO **Idaho Springs** 48.34 76 eP P 11 25 45.8 +3.7
comp=Z,2.1nm,0.6s,mb4.3
ISCO **Idaho Springs** 48.34 76 eP P 11 25 45.8 +3.6
ISCO pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
U19A **Dine' College,** 48.44 82 ⇓P P 11 25 42.6 -0.3
baz=48,SNR=6.6
P23A **Jefferson** 48.48 76 ⇑P P 11 25 43.3 0.0
baz=48
114A **Black Gap (USA** 48.56 88 ⇓P P 11 25 44.3 +0.4
baz=48
Y16A **Circle Bar Ran** 48.66 86 ⇓P P 11 25 45.3 +0.7
baz=48
R22A **Saguache, Gunn** 48.66 78 ⇓P P 11 25 45.0 +0.3
baz=48
X17A **Forest Lakes** 48.76 85 ⇑P P 11 25 45.8 +0.4
baz=49
S22A **4UR Ranch, Cre** 48.93 79 ⇑P P 11 25 47.4 +0.7
baz=49
214A **Organ Pipe Nat** 49.15 89 ⇑P P 11 25 48.3 -0.1
baz=49
X18A **Snowflake** 49.15 84 ⇑P P 11 25 49.0 +0.5
baz=49
Y17A **Roosevelt** 49.17 86 ⇑P P 11 25 48.4 -0.2
baz=49
V20A **Brimhall** 49.21 82 ⇓P P 11 25 48.9 -0.1
baz=49
U21A **Nageezi** 49.29 81 ⇓P P 11 25 49.6 +0.2
baz=49,SNR=6.9
T22A **Edith** 49.36 79 ⇑P P 11 25 50.0 0.0
baz=49
P25A **Willow Gulch B** 49.38 75 ⇑P P 11 25 49.9 -0.2
baz=49
SPITS **Spitsbergen Ar** 49.62 357 P P 11 25 52.4 +0.9
comp=Z,14nm,1.0s,mb5.0,baz=357,slow=16,SNR=6.1
SPITS **Spitsbergen Ar** 49.62 357 P P 11 25 52.4 +0.9
SPITS pmax pmax
comp=Z,14nm,1.0s
X19A **St. Johns** 49.63 84 ⇓P P 11 25 52.6 +0.5
baz=50
W20A **Ramah** 49.64 82 ⇓P P 11 25 52.5 +0.3
baz=50
R24A **Sanders Place,** 49.65 77 ⇑P P 11 25 51.9 -0.3
baz=50
Z17A **San Carlos Hig** 49.67 86 ⇓P P 11 25 52.8 +0.4
baz=50
SDCO **Great Sand Dun** 49.73 78 eP P 11 25 54.6 +1.8
comp=Z,3.4nm,0.8s,mb4.4
GUMO **Guam** 49.81 234 LR LR 11 44 44.2
comp=Z,93nm,18.8s,MS3.8,baz=110,slow=33
U22A **Llaves** 49.81 80 ⇑P P 11 25 53.2 -0.2
baz=50
T23A **Casias Ranch,** 49.87 79 ⇓P P 11 25 54.1 +0.2
baz=50
Y19A **Nutrioso** 49.97 84 ⇑P P 11 25 53.9 -0.7
baz=50
S24A **Houchin Ranch,** 49.97 78 ⇑P P 11 25 54.4 -0.3
baz=50
117A **Oracle** 50.00 87 ⇓P P 11 25 54.6 -0.3
baz=50
X20A **Quemado** 50.03 83 ⇑P P 11 25 55.3 +0.1
baz=50,SNR=6.7
V22A **San Miguel Ran** 50.08 80 ⇓P P 11 25 55.3 -0.2
baz=50
TUC **Tucson** 50.15 87 eP P 11 25 55.2 -0.8
comp=Z,9.0nm,1.1s,mb4.7
TUC **Tucson** 50.15 87 eP P 11 25 55.2 -0.9
TUC pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
U23A **El Rito** 50.24 80 ⇓P P 11 25 56.6 -0.1
baz=50,SNR=15
118A **Homack Ranch,** 50.42 86 ⇑P P 11 25 58.3 +0.2
baz=50
217A **Green Valley** 50.50 87 ⇑P P 11 25 59.0 +0.2
baz=50
X21A **Alamocita Cree** 50.53 83 ⇑P P 11 25 59.3 +0.3
baz=50,SNR=11
Y20A **Horse Springs,** 50.53 83 ⇑P P 11 25 60.0 +1.0
baz=50
V23A **Ortiz Mt. (NFS** 50.63 80 ⇓P P 11 25 59.2 -0.5
baz=50
119A **Ashpeak Ranch,** 50.74 85 ⇑P P 11 26 00.3 -0.3
baz=51
T25A **Trinidad** 50.78 78 ⇓P P 11 26 00.5 -0.3
baz=51
218A **Dragoon** 50.83 87 ⇑P P 11 26 01.2 0.0
baz=51
Y21A **Point of Rocks** 50.90 83 ⇑P P 11 26 01.9 +0.2
baz=51
Z20A **Nine Sixteen R** 50.94 84 ⇓P P 11 26 02.0 -0.1
baz=51
LAZ **Ladron** 50.95 82 eP P 11 26 02.4 +0.2
comp=Z,3.3nm,0.8s,mb4.3
ANMO **Albuquerque** 51.00 81 eP P 11 26 04.0 +1.5
ANMO **Albuquerque** 51.00 81 P P 11 26 03.3 +0.8
comp=Z,0.6nm,0.5s,mb3.8,baz=339,slow=5.0,SNR=3.8
ANMO **Albuquerque** 51.00 81 P P 11 26 03.3 +0.8
ANMO pmax pmax
comp=Z,1.0nm,0.5s
W23A **Werner Place,** 51.05 81 ⇓P P 11 26 02.9 0.0
baz=51
V24A **Rampart Ranch,** 51.20 80 ⇓P P 11 26 04.0 0.0
baz=51
318A **Bisbee** 51.24 87 ⇓P P 11 26 04.4 +0.1
baz=51
U25A **Circle Dot Ran** 51.27 78 ⇓P P 11 26 04.5 0.0
baz=51
120A **U Bar Ranch, L** 51.31 85 ⇓P P 11 26 05.1 +0.3

baz=51
Y22A Socorro 51.38 82 ⇑P P 11 26 05.5 +0.2
baz=51
BNM Barren Site 51.44 82 *e*P P 11 26 09.0 +3.3
comp=Z,17nm,1.5s,mb4.8
W24A Lazy 6 Ranch, 51.46 80 ⇓P P 11 26 05.7 -0.2
baz=51
V25A Rancho No Teng 51.52 79 ⇓P P 11 26 05.7 -0.6
baz=51
U26A Atchley Ranch, 51.67 78 ⇓P P 11 26 07.2 -0.3
baz=52
319A Douglas 51.72 87 ⇓P P 11 26 07.7 -0.2
baz=52
220A Playas Peak, P 51.81 85 ⇓P P 11 26 08.8 +0.2
baz=52
121A Cookes Peak, D 51.83 84 ⇓P P 11 26 08.7 -0.1
baz=52
Z22A Elephant Butte 51.84 83 ⇑P P 11 26 08.5 -0.3
baz=52
X24A Lazy VL Ranch, 51.88 81 ⇑P P 11 26 09.0 -0.1
baz=52
W25A X Bar L Ranch, 52.03 79 ⇓P P 11 26 09.7 -0.5
baz=52
V26A Tequesquite Ra 52.05 78 ⇓P P 11 26 10.1 -0.3
baz=52
320A Kipp Ranch, An 52.21 86 ⇑P P 11 26 11.6 +0.1
baz=52
Z23A Rita Site, Whi 52.28 83 ⇓P P 11 26 11.9 -0.1
baz=52
Y24A Capitan 52.31 81 ⇑P P 11 26 12.4 +0.1
baz=52,SNR=12
X25A Clemmons Ranch 52.37 80 ⇑P P 11 26 13.4 +0.7
baz=52
222A Williams Famil 52.55 84 ⇑P P 11 26 14.5 +0.4
baz=52
Z24A Sheeppen Canyo 52.76 82 ⇓P P 11 26 15.7 +0.1
baz=53
Y25A Mesa, Roswell 52.77 81 ⇓P P 11 26 15.5 -0.2
baz=53
124A Stringfield Ra 53.14 82 ⇓P P 11 26 18.4 0.0
baz=53
Z25A Roswell 53.19 81 ⇑P P 11 26 18.4 -0.4
baz=53
224A Cornudas Mount 53.53 83 ⇑P P 11 26 21.3 0.0
baz=53
Z26A Caprock 53.65 81 ⇑P P 11 26 22.2 +0.1
baz=54
125A Gardner Draw, 53.66 82 ⇑P P 11 26 22.1 -0.1
baz=54
Y27A Causey 53.72 80 ⇑P P 11 26 22.0 -0.7
baz=54
MNTX Cornudas Mount 53.88 83 *e*P P 11 26 23.4 -0.5
comp=Z,5.7nm,0.8s,mb4.5
MSTX Muleshoe 53.90 79 ⇑P P 11 26 24.0 0.0
baz=54
AMTX Amarillo 53.93 78 *e*P P 11 26 28.5 +4.3
comp=Z,5.1nm,0.7s,mb4.6
225A Deer Hill, Car 53.94 83 ⇑P P 11 26 24.6 +0.4
baz=54
324A Moseley Ranch, 54.00 84 ⇓P P 11 26 24.5 -0.2
baz=54
Z27A Tatum 54.08 80 ⇓P P 11 26 24.4 -0.9
baz=54
GDL2 Guadalupe Moun 54.15 82 *e*P P 11 26 29.6 +3.8
325A Bean Ranch, Si 54.36 83 ⇓P P 11 26 27.2 -0.2
baz=54
226A Malaga, Loving 54.41 82 ⇑P P 11 26 27.7 0.0
baz=54
425A Indio Mountain 54.76 84 ⇑P P 11 26 30.2 -0.1
baz=55
ZALV Zalesovo Beam 54.83 315 P P 11 26 31.6 +1.1
ZALV LR LR 11 53 07.1
ZALV Zalesovo Beam 54.83 315 P P 11 26 31.6 +1.1
comp=Z,0.4nm,0.3s,mb3.9,baz=25,slow=7.2,SNR=2.5
ZALV LR LR 11 53 07.1
comp=Z,71nm,18.4s,MS3.8,baz=56,slow=40
326A Caldwell Ranch 55.00 83 ⇑P P 11 26 31.7 -0.4
baz=55
SSLB Suanglung 55.36 265 *e*P P 11 26 33.9 -0.8
comp=Z,28nm,1.0s,mb5.2
426A McDonald Obser 55.43 83 ⇑P P 11 26 34.8 -0.3
baz=55
328A Wristen Ranch, 55.67 82 ⇑P P 11 26 36.5 -0.4
baz=56
427A Hayter Ranch, 55.68 83 ⇑P P 11 26 36.6 -0.3
baz=56
WMOK Wichita Mounta 55.77 76 *e*P P 11 26 39.6 +2.1
comp=Z,3.0nm,0.8s,mb4.4
WMOK Wichita Mounta 55.77 76 *e*P P 11 26 39.6 +2.1
WMOK pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
526A Mary Lane Ranc 55.82 84 ⇑P P 11 26 37.5 -0.4
baz=56
626A Big Bend Ranch 56.15 84 ⇑P P 11 26 39.7 -0.7
baz=56,SNR=9.8
428A Kincaid Ranch, 56.20 82 ⇓P P 11 26 40.2 -0.5
baz=56,SNR=12
528A Cox Ranch, San 56.54 83 ⇑P P 11 26 42.5 -0.6
baz=56
TXAR Lajitas Array 56.59 84 P P 11 26 42.4 -1.1
comp=Z,2.1nm,0.6s,mb4.4,baz=297,slow=4.8,SNR=28
TXAR LR LR 11 50 13.8
comp=Z,113nm,18.3s,MS4.0,baz=5.0,slow=35
627A Terlingua Banc 56.68 84 ⇓P P 11 26 43.5 -0.5
baz=56
ARCES ARCESS Array B 57.54 351 P P 11 26 49.4 -0.2
ARCES ARCESS Array B 57.54 351 P P 11 26 49.4 -0.1
comp=Z,3.1nm,0.8s,mb4.4,baz=10,slow=7.4,SNR=4.0
ARCES ARCESS Array B 57.54 351 P P 11 26 49.4 -0.2
ARCES pmax pmax
comp=Z,3.0nm,0.8s
SCHQ Schefferville 58.08 40 LR LR 11 53 02.3
comp=Z,494nm,18.1s,MS4.7,baz=170,slow=37
MIAR Mount Ida 58.98 73 *e*P P 11 26 58.4 -1.7
comp=Z,5.7nm,0.7s,mb4.7
MIAR Mount Ida 58.98 73 *e*P P 11 26 58.4 -1.8
MIAR pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
KURK Kurchatov 59.81 315 *e*P P 11 27 06.7 +1.0
comp=Z,3.2nm,0.5s,mb4.6
KURK Kurchatov 59.81 315 P P 11 27 05.7 0.0
comp=Z,2.4nm,0.7s,mb4.3,baz=44,slow=6.7,SNR=8.3
KURK Kurchatov 59.81 315 P P 11 27 05.7 0.0
KURK pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
MK31 Makanchi Array 61.00 310 *e*P P 11 27 13.3 -0.5
MKAR Makanchi Array 61.00 310 P P 11 27 11.9 -2.0
comp=Z,1.7nm,0.9s,mb4.2,baz=30,slow=6.0,SNR=8.5
MKAR LR LR 11 55 35.7
comp=Z,82nm,18.8s,MS3.9,baz=191,slow=38
MKAR Makanchi Array 61.00 310 P P 11 27 11.9 -2.0
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR MLR MLR
comp=Z,82nm,18.8s
BVAR Borovoye Array 61.46 321 P P 11 27 16.5 -0.4
comp=Z,3.1nm,0.7s,mb4.5,baz=60,slow=8.8,SNR=13
BVAR Borovoye Array 61.46 321 P P 11 27 16.5 -0.4
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 61.48 321⇑ *e*P P 11 27 18.4 +1.4
BRVK pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
BRVK MLR MLR
comp=Z,236nm,18.0s,MS4.4
GYA Guiyang 62.17 278 *e*P P 11 27 23.0 +1.0
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
ARU Arti 62.86 330*c* *i*P P 11 27 30.7 +4.5
ARU 11 29 43.7
ARU PPP 11 31 17.6
ARU S S 11 36 05.7 +11
ARU pmax pmax
comp=Z,6.0nm,1.2s,mb4.6
ARU MLR MLR
comp=Z,170nm,20.0s,MS4.2
FINES FINESS Array B 65.33 349 LR LR 12 00 37.7
comp=Z,81nm,18.2s,MS4.0,baz=341,slow=40
KMI Kunming 65.53 280 P P 11 27 45.0 +0.8
KMI pP pP 11 27 46.4 -3.2
KMI PP PP 11 30 11.0 +2.8
KMI S S 11 36 29.0 +0.5
KMI pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KMI pmax pmax
comp=Z,72nm,3.3s
KMI LR LR
comp=N,260nm,21.5s,MS4.4
KMI LR LR
comp=E,140nm,23.2s,MS4.4
KMI LR LR
comp=Z,150nm,23.2s,MS4.1
QIZ Qiongzhong 65.75 270 P P 11 27 42.8 -2.8
QIZ S S 11 36 28.3 -2.9
QIZ LR LR
comp=Z,51nm,28.5s,MS3.6
NOA NORSAR Array B 66.92 356 P P 11 27 52.0 -0.5
comp=Z,1.1nm,0.8s,mb3.9,baz=2.2,slow=6.2,SNR=2.9
NOA LR LR 11 54 47.8
comp=Z,56nm,21.6s,MS3.8,baz=15,slow=34
ABKAR Akbulak array 68.39 324 *e*P P 11 28 04.0 +2.0
comp=Z,0.4nm,0.2s,mb4.1
OBN Obninsk 69.71 341⇓ *e*P P 11 28 15.4 +5.3
OBN *e*S S 11 37 37.7 +20
OBN pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
PMOR Pomariorio Ree 71.17 152 *e*T 12 45 30.1
comp=Z,14nm,0.3s
CMAR Chiang Mai Arr 72.86 278 P P 11 28 28.3 -1.3
comp=Z,1.3nm,0.7s,mb4.0,baz=214,slow=31,SNR=4.5
CMAR LR LR 12 03 34.8
comp=Z,51nm,18.7s,MS3.8,baz=166,slow=38
CMAR Chiang Mai Arr 72.86 278 P P 11 28 28.3 -1.4
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR MLR MLR
comp=Z,51nm,18.7s
PPT Papeete 73.14 154 *e*LR LR 11 50 13.6
comp=Z,76nm,22.5s
PPT *e*T 12 48 01.4
comp=Z,25nm,0.2s
PPT Papeete 73.14 154 LR LR 11 55 00.9
comp=Z,105nm,18.2s,MS4.2,baz=345,slow=31
PAE Paea 73.22 154 *e*T 12 48 02.0
comp=Z,3.2nm,0.3s
AKASG Malin Array Be 75.28 344 LR LR 12 05 22.6
comp=Z,126nm,19.0s,MS4.2,baz=10.0,slow=38
DZM Mont Dzumac 75.65 197 *e*LR LR 11 51 25.4
comp=Z,219nm,25.2s
TBI Tubuai 78.69 156 *e*T 12 54 54.4
comp=Z,8.5nm,0.3s
RKT Rikitea 83.03 143 *e*T 13 00 14.1
comp=Z,3.0nm,0.3s
BRTR Keskin Array B 84.92 338 LR LR 12 13 51.0
comp=Z,50nm,18.9s,MS3.9,baz=102,slow=40
ASAR Alice Springs 87.48 225 P P 11 29 47.8 -0.4
comp=Z,1.6nm,0.8s,mb4.3,baz=28,slow=5.1,SNR=23
ASAR Alice Springs 87.48 225 P P 11 29 47.8 -0.4
ASAR pmax pmax
comp=Z,2.0nm,0.8s
ESDC Sonseca Array 88.16 6 LR LR 12 07 23.0
comp=Z,49nm,20.9s,MS3.9,baz=260,slow=34
STKA Stephens Creek 91.76 215 P P 11 30 08.9 +0.9
comp=Z,3.0nm,0.9s,mb4.6,baz=44,slow=5.8,SNR=3.7
STKA LR LR 12 06 52.8
comp=Z,182nm,21.8s,MS4.5,baz=204,slow=33
QSPA South Pole Qui 142.02 180 PKhKP PKPpre 11 36 27.9
comp=Z,1.9nm,0.7s,baz=44,slow=3.4,SNR=5.2
MAW Mawson 148.39 219 PKPbc PKPbc 11 36 44.6 -1.1
comp=Z,3.1nm,0.8s,baz=298,slow=7.0,SNR=5.2
MAW Mawson 148.39 219 PKP2 PKPbc 11 36 44.6 -1.1
MAW pmax pmax
comp=Z,3.0nm,0.8s
NOA NORSAR Array B 82.78 338 P P 11 37 16.1 +0.6
0.6nm,0.5s,mb3.6,baz=48,slow=4.7,SNR=3.6

*NEIC **07** 11:20:44.3, 18.71N×69.08W, h146km, MD3.8(RSPR), After RSPR.*
RSPR 07 11:20:44.3, 18.71N×69.08W, h146km±1km, MD3.8/15, 13C-4D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMN1	**Samana, DR**	**0.51**	**338**	*e*P	Pn	11 21 04.9	-0.3
SMN1				*e*S	Sn	11 21 21.2	0.0
IMO	**Isla Mona**	**1.26**	**118**	*e*P	Pn	11 21 11.2	+0.1
IMO				*e*S	Sn	11 21 31.6	0.0
AGPR	**Aguadilla, PR**	**1.88**	**97**	*e*P	Pn	11 21 18.0	+0.2
AGPR				*e*S	Sn	11 21 43.4	-0.1
LSP	**Las Mesas**	**1.96**	**106**	*e*P	Pn	11 21 19.0	+0.2
LSP				*e*S	Sn	11 21 46.0	+0.8
CRPR	**Cabo Rojo, PR**	**2.00**	**110**	*e*P	Pn	11 21 18.1	-1.1
CRPR				*e*S	Sn	11 21 46.6	+0.7
SDDR	**Presa de Saban**	**2.11**	**278**	*e*P	Pn	11 21 20.8	+0.3
SDDR				*e*S	Sn	11 21 48.3	0.0
AOPR	**Arecibo Observ**	**2.23**	**99**	*e*P	Pn	11 21 21.8	-0.2
AOPR				*e*S	Sn	11 21 50.0	-0.9
OBIP	**Obispado Ponce**	**2.44**	**106**	*e*P	Pn	11 21 24.6	+0.1
OBIP				*e*S	Sn	11 21 56.3	+0.9
CELP	**Cerrillos**	**2.46**	**105**	*e*P	Pn	11 21 25.0	+0.3
CELP				*e*S	Sn	11 21 55.9	+0.1
ICM	**Isla Caja Muer**	**2.56**	**108**	*e*P	Pn	11 21 25.4	-0.6
ICM				*e*S	Sn	11 21 58.2	+0.1
SJG	**San Juan**	**2.84**	**102**	*e*P	Pn	11 21 29.9	+0.4
SJG	**San Juan**	**2.84**	**102**	*e*P	Pn	11 21 29.3	-0.2
SJG				*e*S	Sn	11 22 04.9	+0.5
CBYP	**Canovanas**	**3.09**	**98**	*e*P	Pn	11 21 32.6	-0.1
CBYP				*e*S	Sn	11 22 08.3	-1.7
HUMP	**Col San Antoni**	**3.12**	**100**	*e*P	Pn	11 21 32.3	-0.7
HUMP				*e*S	Sn	11 22 08.6	-2.1
GRTK	**Grand Turk**	**3.39**	**326**	*e*P	Pn	11 21 35.1	-1.4
GRTK				*e*S	Sn	11 22 16.6	-0.3
MTP	**Monte Pirata**	**3.40**	**100**	*e*P	Pn	11 21 35.9	-0.8
MTP				*e*S	Sn	11 22 17.4	+0.2
STVI	**Saint Thomas**	**3.93**	**95**	*e*P	Pn	11 21 43.1	-0.4
STVI				*e*S	Sn	11 22 27.5	-2.0

*NIED **07** 11:24:00, 27.90N×142.10E, h44km, Mw4.2 Best double couple: M0 1.89000×10^15 NP1:ϕs 349.00000°, δ71.00000°, λ-107.00000°. NP2:ϕs 213.00000°, δ26.00000°, λ-50.00000°.*
*ISCJB **07** 11:24:55.8±3.0, 27.8N±0.2×141.9E±0.2, h56km±22km, mb3.8/11, Error ellipse: s-maj=35.3km s-min=26.1km az=176.4*
*IDC **07** 11:24:58.3±3.8, 27.88N×141.84E, h60km±31km, mb3.5/10, mb1 3.7/12, mb1mx3.5/22, mbtmp3.6/12, ML3.6/2, Error ellipse: s-maj=36.7km s-min=24.4km az=86.0*
*NEIC **07** 11:24:59.2, 27.87N×142.14E, h53km, MG4.2(JMA), After JMA.*
ISC 07 11:24:58.8±2.5, 27.9N±0.2×141.9E±0.2, h66km±17km, n19, σ0s58/19, mb3.7/11, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**5.52**	**342**	P	**Pn**	**11 26 17.8**	**-0.6**
	2.6nm,0.3s,baz=39,slow=20,SNR=4.9						
JHJ				S	**Sn**	**11 27 15.4**	**-5.1**
	6.1nm,0.3s,baz=205,slow=23,SNR=2.6						
MJAR	**Matsushiro Arr**	**9.17**	**341**	P	**Pn**	**11 27 08.5**	**+0.1**
	1.1nm,0.3s,baz=162,slow=6.9,SNR=9.5						
MAJO	**Matsushiro**	**9.18**	**341**	*e*Pn	**Pn**	**11 27 08.8**	**+0.5**
MAT	**Matsushiro**	**9.18**	**341**	P	**Pn**	**11 27 08.5**	**+0.1**
KSRS	**Korea Array**	**15.11**	**313**	P	**Pn**	**11 28 32.4**	**+4.0**
	0.2nm,0.3s,baz=127,slow=10,SNR=4.7						
SONM	**Songino Array**	**33.95**	**316**	P	**P**	**11 31 35.3**	**-0.4**
	0.4nm,0.4s,mb3.6,baz=122,slow=9.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**48.71**	**319**	PcP	PcP	11 35 01.8	+1.2
	1.1nm,0.5s,baz=100,slow=3.7,SNR=4.6						
MKAR	**Makanchi Array**	**49.75**	**309**	P	**P**	**11 33 43.8**	**-0.7**
MKAR				PcP	PcP	11 35 05.5	+0.9
MKAR	**Makanchi Array**	**49.75**	**309**	P	**P**	**11 33 43.8**	**-0.7**
	0.2nm,0.3s,mb3.5,baz=91,slow=12,SNR=2.8						
MKAR				PcP	PcP	11 35 05.5	+0.9
	0.5nm,0.6s,baz=82,slow=6.4,SNR=5.2						
ASAR	**Alice Springs**	**51.81**	**189**	P	**P**	**11 34 00.2**	**+0.1**
ASAR	**Alice Springs**	**51.81**	**189**	P	**P**	**11 34 00.2**	**+0.1**
	0.2nm,0.9s,mb3.2,baz=22,slow=12,SNR=3.3						
ILAR	**Eielson Array**	**57.18**	**29**	P	**P**	**11 34 37.8**	**-0.7**
	0.1nm,0.6s,mb3.0,baz=270,slow=7.0,SNR=2.9						
BVAR	**Borovoye Array**	**57.27**	**317**	P	**P**	**11 34 38.8**	**-0.7**
	1.3nm,0.5s,mb4.2,baz=88,slow=8.1,SNR=6.3						
YKA	**Yellowknife Ar**	**71.60**	**28**	P	**P**	**11 36 12.8**	**-0.1**
	0.8nm,0.8s,mb3.6,baz=294,slow=6.7,SNR=3.1						
ARCES	**ARCESS Array B**	**72.71**	**341**	P	**P**	**11 36 20.1**	**+0.8**
	1.2nm,0.8s,mb3.8,baz=96,slow=8.7,SNR=4.1						
JOF	**Joensuu**	**74.25**	**334**	*ep*	**P**	**11 36 28.3**	**-0.2**
	1.0nm,0.4s,mb3.9						
FINES	**FINESS Array B**	**77.12**	**334**	P	**P**	**11 36 45.9**	**+1.0**
	3.4nm,0.6s,mb4.3,baz=73,slow=5.0,SNR=12						
AKASG	**Malin Array Be**	**81.81**	**324**	P	**P**	**11 37 10.6**	**0.0**
	0.5nm,0.4s,mb3.7,baz=53,slow=4.8,SNR=5.7						

IDC 07 11:32:10.9±7.5, 52.36N×174.59W, h0km, mb3.3/2, mb1 3.8/4, mb1mx3.4/26, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=139.9km s-min=56.9km az=100.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**13.70**	**58**	P	Pn	11 35 26.4	+0.2
	0.1nm,0.3s,baz=203,slow=22,SNR=2.2						
ILAR	**Eielson Array**	**18.86**	**38**	P	Pn	11 36 32.7	+0.1
	0.1nm,0.3s,baz=228,slow=8.7,SNR=13						
NVAR	**Mina Array Bea**	**40.87**	**87**	P	P	11 39 55.5	+1.2
	0.4nm,0.8s,baz=289,slow=8.2,SNR=3.3						
TXAR	**Lajitas Array**	**55.95**	**85**	P	P	11 41 49.9	-0.8
	0.2nm,0.5s,baz=305,slow=5.2,SNR=5.7						

*NEIC **07** 11:39:00.7, 18.27N×94.63W, h7km, MD4.2(MEX), After MEX.*
MEX 07 11:39:00.7±0.8, 18.27N×94.63W, h8km±8km, MD4.2, Bay of Campeche

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGIG		**2.07**	**136**	*i* P	Pn	11 39 33.0	-2.7
TGIG				*i* S	Sn	11 39 57.4	-4.2
LVIG	**Laguna Verde**	**2.23**	**311**	*i* P	Pn	11 39 34.5	-3.5
LVIG				*i* S	Sn	11 40 01.5	-4.1
LVIG	**Laguna Verde**	**2.23**	**311**	*i* P	Pn	11 39 34.5	-3.5
LVIG				*i* S	Sn	11 40 01.5	-4.1
OXX	**Oaxaca**	**2.32**	**240**	*i* P	Pn	11 39 37.0	-2.3
OXX				*i* S	Sn	11 40 03.1	-4.9
OXX	**Oaxaca**	**2.32**	**240**	*i* P	Pn	11 39 37.0	-2.3
OXX				*i* S	Sn	11 40 03.1	-4.9
VHO	**Vista Hermosa**	**2.34**	**240**	*i* P	Pn	11 39 37.3	-2.2
VHO				*i* S	Sn	11 40 03.9	-4.4
VHO	**Vista Hermosa**	**2.34**	**240**	*i* P	Pn	11 39 37.3	-2.2
VHO				*i* S	Sn	11 40 03.9	-4.4
SCX	**San Cristobal**	**2.44**	**128**	*e*P	Pn	11 39 37.2	-3.6
SCX				*i* S	Sn	11 40 06.8	-4.1
SCX	**San Cristobal**	**2.44**	**128**	*e*P	Pn	11 39 37.2	-3.6
SCX				*i* S	Sn	11 40 06.8	-4.1
TPIG	**Tehuac#an**	**2.60**	**274**	*e*P	Pn	11 39 40.0	-3.1
TPIG				*i* S	Sn	11 40 11.2	-3.7
HUIG	**Huatulco**	**2.87**	**210**	*i* P	Pn	11 39 42.8	-3.9
HUIG				*i* S	Sn	11 40 17.7	-3.7
HUIG	**Huatulco**	**2.87**	**210**	*i* P	Pn	11 39 42.8	-3.9
HUIG				*i* S	Sn	11 40 17.7	-3.7
PCIG		**2.89**	**152**	*i* P	Pn	11 39 43.8	-3.3
PCIG				*i* S	Sn	11 40 18.8	-3.2
UTMO	**Huajuapan**	**3.05**	**262**	*i* P	Pn	11 39 47.0	-2.3
UTMO				*i* S	Sn	11 40 23.0	-3.1
PNIG	**Pinotepa**	**3.83**	**241**	*i* P	Pn	11 39 57.4	-2.6
PNIG				*i* S	Sn	11 40 43.1	-2.1
PNIG	**Pinotepa**	**3.83**	**241**	*i* P	Pn	11 39 57.4	-2.6
PNIG				*i* S	Sn	11 40 43.1	-2.1
PPM	**Popocatepetl**	**3.87**	**282**	*i* P	Pn	11 39 59.5	-1.1
PPM				*i* S	Sn	11 40 45.1	-1.2
PPM	**Popocatepetl**	**3.87**	**282**	*i* P	Pn	11 39 59.5	-1.1
PPM				*i* S	Sn	11 40 45.1	-1.2
IIO	**Organos**	**4.09**	**289**	*i* P	Pn	11 40 01.2	-2.4
IIO				*i* S	Sn	11 40 47.7	-4.0
IIO	**Organos**	**4.09**	**289**	*i* P	Pn	11 40 01.2	-2.4
IIO				*i* S	Sn	11 40 47.7	-4.0
MZVM		**4.46**	**283**	*e*P	Pn	11 40 04.2	-4.4
MZVM				*i* S	Sn	11 40 55.3	-5.3
ACX	**Acapulco**	**5.18**	**255**	*i* P	Pn	11 40 18.2	-0.4
ACX				*i* S	Sn	11 41 15.6	-3.0
ACX	**Acapulco**	**5.18**	**255**	*i* P	Pn	11 40 18.2	-0.4
ACX				*i* S	Sn	11 41 15.6	-3.0
CAIG	**El Cayaco**	**5.51**	**258**	*e*P	Pn	11 40 22.6	-0.5
CAIG				*i* S	Sn	11 41 23.4	-3.4
CAIG	**El Cayaco**	**5.51**	**258**	*e*P	Pn	11 40 22.6	-0.5
CAIG				*i* S	Sn	11 41 23.4	-3.4
ZIIG	**Zihuatanejo**	**6.54**	**265**	*i* P	Pn	11 40 37.6	+0.3
ZIIG				*i* S	Sn	11 41 49.9	-2.3
ZIIG	**Zihuatanejo**	**6.54**	**265**	*i* P	Pn	11 40 37.6	+0.3
ZIIG				*i* S	Sn	11 41 49.9	-2.3

*NEIC **07** 11:51:06.9, 52.10N×175.46W, h5km, ML3.3(AEIC), After AEIC.*
*IDC **07** 11:51:08.0±2.3, 52.23N×175.86W, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/26, mbtmp3.8/5, ML3.9/1, Error ellipse: s-maj=57.8km s-min=29.5km az=20.0*
*ISCJB **07** 11:51:08.2±0.8, 52.2N±0.1×175.49W±0.0, h10km, mb4.0/6, Error ellipse: s-maj=16.3km s-min=7.8km az=174.9*
ISC 07 11:51:09.7±0.8, 52.2N±0.1×175.48W±0.0, h10km, n18, σ1s35/19, mb4.0/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.37**	**257**	*e*Pg	**Pg**	**11 51 15.5**	**-1.5**
ATKA	**Atka Island**	**0.79**	**88**	P	**Pg**	**11 51 22.4**	**-2.5**
ATKA				S	**Sg**	**11 51 33.6**	**-1.6**
AKUT	**Akutan**	**6.16**	**68**	*e*Pn	**Pn**	**11 52 40.9**	**+0.3**
	72nm,1.0s						
FALS	**False Pass**	**7.67**	**65**	*e*Pn	**Pn**	**11 53 01.6**	**+0.2**
	22nm,0.8s						
KDAK	**Kodiak Island**	**14.25**	**58**	Pn	**Pn**	**11 54 39.9**	**+8.6**
	0.8nm,0.3s,baz=153,slow=7.5,SNR=7.4						
COLA	**College**	**19.01**	**37**	*e*P	**Pn**	**11 55 31.4**	**-0.6**
	4.8nm,0.9s						
ILAR	**Eielson Array**	**19.33**	**38**	P	**Pn**	**11 55 34.8**	**-1.0**
	0.2nm,0.3s,baz=242,slow=9.6,SNR=15						
MENT	**Mentasta**	**19.92**	**45**	*e*P	**Pn**	**11 55 41.6**	**-1.3**
EGAK	**Eagle**	**21.59**	**41**	*e*P	**P**	**11 55 59.9**	**+0.7**
	14mm,0.8s,mb4.4						
DAWY	**Dawson**	**22.11**	**43**	*e*P	**P**	**11 56 05.3**	**+0.6**
INK	**Inuvik**	**25.62**	**35**	P	**P**	**11 56 40.2**	**+1.4**
INK	**Inuvik**	**25.62**	**35**	P	**P**	**11 56 40.2**	**+1.4**
	2.7nm,0.8s,mb3.8,baz=252,slow=9.6,SNR=3.6						
NVAR	**Mina Array Bea**	**41.42**	**86**	P	**P**	**11 58 58.2**	**+2.1**
NVAR	**Mina Array Bea**	**41.42**	**86**	P	**P**	**11 58 58.2**	**+2.1**
	0.9nm,0.8s,mb3.4,baz=290,slow=5.9,SNR=7.4						
DUG	**Dugway**	**43.69**	**80**	*e*P	**P**	**11 59 17.9**	**+3.4**
	4.6nm,1.3s,mb4.0						
PV01	**Paradox Valley**	**47.55**	**79**	*e*P	**P**	**11 59 46.5**	**+1.5**
	114nm,0.6s						
TXAR	**Lajitas Array**	**56.50**	**84**	P	**P**	**12 00 53.1**	**+1.3**
	1.0nm,0.8s,mb3.9,baz=294,slow=5.4,SNR=14						
BVAR	**Borovoye Array**	**61.59**	**321**	P	**P**	**12 01 25.3**	**-1.4**
	0.8nm,0.5s,mb4.1,baz=54,slow=7.3,SNR=3.6						

*NEIC **07** 11:52:16.6, 52.10N×175.46W, h5km, ML3.2(AEIC), After AEIC.*
*ISCJB **07** 11:52:17.9±0.7, 52.2N±0.2×175.48W±0.0, h10km, mb3.7/4, Error ellipse: s-maj=24.4km s-min=6.8km az=172.1*
*IDC **07** 11:52:19.1±1.2, 52.18N×175.49W, h0km, mb3.8/4, mb1 4.0/6, mb1mx3.6/26, mbtmp3.8/6, ML3.9/2, MS3.6/1, Ms1 3.6/1, ms1mx2.7/37, Error ellipse: s-maj=39.8km s-min=24.5km az=170.0*
ISC 07 11:52:19.2±0.7, 52.1N±0.2×175.45W±0.0, h10km, n13, σ1s59/13, mb3.7/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.38**	**266**	*e*Pg	**Pg**	**11 52 25.1**	**-1.5**
ATKA	**Atka Island**	**0.78**	**84**	P	**Pg**	**11 52 32.8**	**-1.4**
ATKA				S	**Sg**	**11 52 43.1**	**-1.2**
AMKA	**Amchitka**	**3.35**	**259**	P	**Pn**	**11 53 10.0**	**-1.6**
KDAK	**Kodiak Island**	**14.27**	**58**	Pn	**Pn**	**11 55 43.7**	**+2.6**
KDAK	**Kodiak Island**	**14.27**	**58**	Pn	**Pn**	**11 55 43.7**	**+2.6**
	0.3nm,0.3s,baz=241,slow=10,SNR=1.8						
ILAR	**Eielson Array**	**19.36**	**38**	P	**Pn**	**11 56 43.9**	**-1.8**
	0.2nm,0.3s,baz=231,slow=8.0,SNR=7.4						
NVAR	**Mina Array Bea**	**41.41**	**86**	P	**P**	**12 00 07.7**	**+2.2**
NVAR	**Mina Array Bea**	**41.41**	**86**	P	**P**	**12 00 07.7**	**+2.2**
	0.8nm,0.7s,mb3.4,baz=289,slow=7.9,SNR=6.1						
PV01	**Paradox Valley**	**47.54**	**79**	*e*P	**P**	**12 00 54.0**	**-0.6**
TXAR	**Lajitas Array**	**56.49**	**84**	P	**P**	**12 02 02.8**	**+1.4**
	0.6nm,0.5s,mb3.9,baz=299,slow=5.2,SNR=8.0						
BVAR	**Borovoye Array**	**61.64**	**321**	P	**P**	**12 02 38.1**	**+1.4**
	0.6nm,0.5s,mb4.0,baz=41,slow=4.6,SNR=3.3						

ASAR	**Alice Springs**	**87.47**	**225**	P		**P**	**12 05 08.2**	**+1.4**
	0.2nm,0.6s,mb3.5,baz=29,slow=4.8,SNR=6.2							
ATAH	**Atahualpa**	**99.92**	**89**	LR		LR	12 46 10.6	
	comp=Z,26nm,19.8s,baz=185,slow=32							

*DDA **07** 11:57:35.2, 40°.59N×39°.95E, h7km±2km, Md2.5*
*ISCJB **07** 11:57:36.7±0.9, 40°.60N±0°.04×39°.89E±0°.06, h15km±6km, Error ellipse: s-maj=9.1km s-min=5.5km az=38.2*
*CSEM **07** 11:57:36.1±0.2, 40°.57N×39°.94E, h12km, MD2.5, Error ellipse: s-maj=5.0km s-min=3.3km az=139.0*
*ISK **07** 11:57:36.0, 40°.62N×39°.80E, h28km, MD2.5*

ISC 07 11:57:36.5±1.1, **40°.58N**±0°.05×**39°.9E**±0°.1, **h13**km±13km, **n14**, σ0**953**/24, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMT	**Gumushane**	**0.36**	**250**	*e*PG	**Pg**	**11 57 44.1**	**+0.3**
GUMT				*e*SG	**Sg**	**11 57 48.9**	**+0.3**
GUMT	**Gumushane**	**0.36**	**250**	*e*Pg	**Pg**	**11 57 44.1**	**+0.3**
GUMT				*e*Sg	**Sg**	**11 57 48.9**	**+0.3**
MACK	**Trabzon**	**0.38**	**342**	*i* P	**Pg**	**11 57 44.0**	**-0.1**
MACK				*i* S	**Sg**	**11 57 48.6**	**-0.7**
MACK	**Trabzon**	**0.38**	**342**	*i* P	**Pg**	**11 57 44.0**	**-0.2**
MACK				*i* S	**Sg**	**11 57 48.6**	**-0.7**
KTUT	**Trabzon**	**0.42**	**344**	*e*PG	**Pg**	**11 57 45.0**	**+0.1**
KTUT				*e*SG	**Sg**	**11 57 51.4**	**+0.8**
KTUT	**Trabzon**	**0.42**	**344**	*e*Pg	**Pg**	**11 57 45.0**	**+0.1**
KTUT				*e*Sg	**Sg**	**11 57 51.4**	**+0.8**
KELT	**Kelkit**	**0.67**	**230**	*i* P	**Pg**	**11 57 48.8**	**-0.8**
KELT				*i* S	**Sg**	**11 57 58.6**	**+0.3**
KELT	**Kelkit**	**0.67**	**230**	*i* P	**Pg**	**11 57 48.8**	**-0.7**
KELT				*i* S	**Sg**	**11 57 58.6**	**+0.2**
SUSE	**Susehri**	**1.37**	**255**	*i* P	**Pn**	**11 58 01.2**	**-0.1**
SUSE	**Susehri**	**1.37**	**255**	*i* P	**Pn**	**11 58 01.2**	**0.0**
DDEM	**Demirkent**	**1.42**	**77**	*i* P	**Pn**	**11 58 02.0**	**0.0**
DDEM				*i* S	**Sn**	**11 58 21.4**	**+0.8**
DDEM	**Demirkent**	**1.42**	**77**	*i* P	**Pn**	**11 58 02.0**	**0.0**
DDEM				*i* S	**Sn**	**11 58 21.4**	**+0.8**
BCA	**Borcka**	**1.55**	**56**	*e*PN	**Pn**	**11 58 02.9**	**-0.9**
BCA	**Borcka**	**1.55**	**56**	*e*Pn	**Pn**	**11 58 02.9**	**-0.9**

*NEIC **07** 12:02:07.3, 52°.10N×175°.46W, h9km, mb3.9/2, ML3.3(AEIC), After AEIC.*
*IDC **07** 12:02:07.6±1.7, 52°.06N×175°.81W, h0km, mb3.6/4, mb1 3.9/6, mb1mx3.6/27, mbtmp3.6/6, ML3.9/2, MS3.4/4, Ms1 3.4/4, ms1mx2.7/37, Error ellipse: s-maj=59.0km s-min=28.9km az=138.0*
*ISCJB **07** 12:02:08.1±1.5, 52°.1N±0°.1×175°.49W±0°.09, h12km±12km, mb3.6/5, MS3.3/3, Error ellipse: s-maj=23.9km s-min=9.0km az=170.9*

ISC 07 12:02:08.3±1.2, **52°.1N**±0°.1×**175°.48W**±0°.08, **h2**km±9km, **n17**, σ1**911**/16, **mb3.6**/5, **MS3.3**/3, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.36**	**266**	*e*Pg	**Pg**	**12 02 15.7**	**+0.5**
ATKA	**Atka Island**	**0.80**	**83**	P	**Pg**	**12 02 23.0**	**-0.6**
ATKA				S	**Sg**	**12 02 34.0**	**+0.2**
AMKA	**Amchitka**	**3.33**	**259**	Pn	**Pn**	**12 03 02.3**	**+1.0**
SMY	**Shemya**	**6.41**	**280**	Pn	**Pn**	**12 03 42.0**	**-1.6**
KDAK	**Kodiak Island**	**14.29**	**58**	Pn	**Pn**	**12 05 35.8**	**+4.4**
	0.4nm,0.3s,baz=138,slow=23,SNR=3.9						
COLA	**College**	**19.06**	**37**	*e*P	**Pn**	**12 06 32.5**	**+0.2**
	2.4nm,0.8s						
ILAR	**Eielson Array**	**19.38**	**38**	P	**Pn**	**12 06 35.5**	**-0.5**
	0.2nm,0.3s,baz=235,slow=7.5,SNR=12						
ILAR				LR	LR	12 14 46.3	
	comp=Z,98nm,18.7s,baz=295,slow=39						
MENT	**Mentasta**	**19.97**	**45**	P	**Pn**	**12 06 41.3**	**-1.8**
EGAK	**Eagle**	**21.64**	**41**	*e*P	**P**	**12 06 59.5**	**0.0**
	9.6nm,0.9s,mb4.2						
DAWY	**Dawson**	**22.15**	**43**	*e*P	**P**	**12 07 06.6**	**+1.6**
INK	**Inuvik**	**25.67**	**35**	P	**P**	**12 07 40.4**	**+1.3**
INK				LR	LR	12 18 36.4	
INK	**Inuvik**	**25.67**	**35**	P	**P**	**12 07 40.4**	**+1.3**
	1.5nm,0.7s,mb3.6,baz=266,slow=13,SNR=4.6						
INK				LR	LR	12 18 36.4	
	comp=Z,76nm,19.2s,MS3.2,baz=232,slow=38						
DLBC	**Dease Lake**	**26.22**	**58**	LR	LR	12 17 00.8	
	comp=Z,44nm,19.7s,MS3.0,baz=287,slow=34						
NVAR	**Mina Array Bea**	**41.42**	**86**	P	**P**	**12 09 59.1**	**+3.1**
	0.3nm,0.6s,mb3.1,baz=265,slow=11,SNR=3.4						
TXAR	**Lajitas Array**	**56.51**	**84**	P	**P**	**12 11 51.1**	**-0.7**
	0.3nm,0.6s,mb3.5,baz=306,slow=6.1,SNR=5.7						
SADO	**Sadowa**	**59.73**	**55**	LR	LR	12 38 07.4	
	comp=Z,44nm,18.9s,MS3.6,baz=59,slow=36						
ASAR	**Alice Springs**	**87.45**	**225**	P	**P**	**12 14 56.3**	**-0.8**
	0.2nm,0.7s,mb3.5,baz=31,slow=5.2,SNR=4.4						

*IDC **07** 12:23:28.8±7.4, 52°.42N×178°.06W, h0km, mb3.4/4, mb1 3.9/5, mb1mx3.5/27, mbtmp3.6/5, ML4.1/1, Error ellipse: s-maj=139.1km s-min=62.3km az=99.0*
*ISCJB **07** 12:23:38.6±0.7, 52°.3N±0°.1×175°.51W±0°.09, h10km, mb3.4/3, Error ellipse: s-maj=15.9km s-min=7.4km az=169.6*
*NEIC **07** 12:23:38.5, 52°.21N×175°.48W, h7km, ML3.4(AEIC), After AEIC.*

ISC 07 12:23:39.7±0.9, **52°.1N**±0°.2×**175°.47W**±0°.08, **h10**km, **n11**, σ1**922**/12, **mb3.4**/3, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.36**	**262**	*e*Pg	**Pg**	**12 23 47.0**	**+0.1**
ATKA	**Atka Island**	**0.79**	**85**	P	**Pg**	**12 23 54.1**	**-0.9**
ATKA				S	**Sg**	**12 24 05.1**	**-0.1**
AMKA	**Amchitka**	**3.34**	**259**	P	**Pn**	**12 24 31.2**	**-0.7**
SPIA	**Saint Paul Isl**	**5.88**	**29**	P	**Pn**	**12 25 06.2**	**-0.7**
KDAK	**Kodiak Island**	**14.27**	**58**	Pn	**Pn**	**12 27 07.3**	**+5.8**
	0.7nm,0.3s,baz=200,slow=3.6,SNR=8.1						
ILAR	**Eielson Array**	**19.36**	**38**	P	**Pn**	**12 28 03.5**	**-2.7**
	0.5nm,0.5s,baz=240,slow=10.0,SNR=18						
EGAK	**Eagle**	**21.61**	**41**	*e*P	**P**	**12 28 29.5**	**0.0**
DAWY	**Dawson**	**22.13**	**43**	*e*P	**P**	**12 28 36.9**	**+1.9**
DLBC	**Dease Lake**	**26.20**	**58**	P	**P**	**12 29 16.9**	**+2.7**
	1.1nm,0.7s,mb3.5,baz=16,slow=9.6,SNR=4.3						
NVAR	**Mina Array Bea**	**41.42**	**86**	P	**P**	**12 31 30.9**	**+4.8**
	0.4nm,0.7s,mb3.2,baz=301,slow=7.7,SNR=3.9						
TXAR	**Lajitas Array**	**56.51**	**84**	P	**P**	**12 33 22.1**	**+0.2**
	0.3nm,0.6s,mb3.5,baz=311,slow=7.1,SNR=3.8						

*IDC **07** 12:26:59.0±0.7, 11°.52N×59°.88W, h0km, mb3.9/13, mb1 4.1/15, mb1mx4.0/27, mbtmp4.0/15, ML4.4/1, MS4.5/2, Ms1 4.5/2, ms1mx3.1/27, Error ellipse: s-maj=17.8km s-min=16.0km az=38.0*
*TRN **07** 12:27:03.8, 11°.60N×59°.90W, h48km, MD3.8*
*ISCJB **07** 12:27:04.8±0.5, 11°.59N±0°.02×60°.00W±0°.04, h69km±4km, mb3.9/17, Error ellipse: s-maj=7.0km s-min=3.1km az=11.0*
*NEIC **07** 12:27:04.4, 11°.59N×59°.95W, h55km, MD3.8(TRN), After TRN.*
*FUNV **07** 12:27:06.9, 11°.41N×59°.93W, h50km, MW4.2*

ISC 07 12:27:05.5±0.5, **11°.58N**±0°.02×**59°.96W**±0°.04, **h52**km±5km, **n101**, σ1**900**/149, **mb4.0**/17, **MS4.5**/2, **13C-4D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOSP	**Speyside**	**0.63**	**244**	*e*P	**Pn**	**12 27 18.0**	**-0.4**
TOSP				*e*S	**Sn**	**12 27 29.6**	**+1.9**
BOT	**Bacolet**	**0.85**	**241**	*e*P	**Pn**	**12 27 21.9**	**+0.6**
BOT				*e*S	**Sn**	**12 27 34.6**	**+1.8**
BOT	**Bacolet**	**0.85**	**241**	*e*P	**Pn**	**12 27 21.9**	**+0.6**
BOT				*e*S	**Sn**	**12 27 34.6**	**+1.8**
TPR	**Prospect**	**0.89**	**244**	*e*P	**Pn**	**12 27 22.6**	**+0.8**
TPR				*e*S	**Sn**	**12 27 35.6**	**+1.8**
TPR	**Prospect**	**0.89**	**244**	*e*P	**Pn**	**12 27 22.6**	**+0.8**
TPR				*e*S	**Sn**	**12 27 35.6**	**+1.8**
TBH	**Brigand Hill**	**1.54**	**225**	*e*P	**Pn**	**12 27 32.3**	**+1.8**
TBH				*e*S	**Sn**	**12 27 50.4**	**+0.9**
TBH	**Brigand Hill**	**1.54**	**225**	*e*P	**Pn**	**12 27 30.2**	**-0.4**
TBH				*e*S	**Sn**	**12 27 50.4**	**+0.9**
TRN	**Trinidad (W)**	**1.69**	**237**↑	*e*P	**Pn**	**12 27 32.5**	**-0.1**
TRN	**Trinidad (W)**	**1.69**	**237**↑	*e*P	**Pn**	**12 27 32.5**	**-0.1**
GRCU	**Cariacou**	**1.71**	**301**↑	*e*P	**Pn**	**12 27 32.3**	**-0.6**
GRCU				*e*S	**Sn**	**12 27 54.0**	**+0.3**
GRCU	**Cariacou**	**1.71**	**301**↑	*e*P	**Pn**	**12 27 32.3**	**-0.6**
GRCU				*e*S	**Sn**	**12 27 54.0**	**+0.3**
GRIC	**Isle de Caille**	**1.74**	**294**↑	*i*P	**Pn**	**12 27 33.5**	**+0.1**
GRIC				*e*S	**Sn**	**12 27 55.1**	**+0.7**
GRGR	**Grenville**	**1.75**	**289**	*e*Pn	**Pn**	**12 27 33.1**	**-0.3**
GRW	**Mount Saint Ca**	**1.77**	**289**	*e*P	**Pn**	**12 27 34.6**	**+1.0**
GRW				*e*S	**Sn**	**12 27 56.5**	**+1.5**
GRW	**Mount Saint Ca**	**1.77**	**289**	*e*P	**Pn**	**12 27 34.6**	**+1.0**
GRW				*e*S	**Sn**	**12 27 56.5**	**+1.5**
GRHS	**Sauteurs**	**1.77**	**291**↑	*i*P	**Pn**	**12 27 34.2**	**+0.5**
GRHS				*e*S	**Sn**	**12 27 56.4**	**+1.3**
GRHS	**Sauteurs**	**1.77**	**291**↑	*i*P	**Pn**	**12 27 34.2**	**+0.5**
GRHS				*e*S	**Sn**	**12 27 56.4**	**+1.3**
GRSS	**Sisters**	**1.77**	**294**↓	*i*P	**Pn**	**12 27 33.8**	**+0.1**
GRSS				*e*S	**Sn**	**12 27 55.8**	**+0.7**
GRSS	**Sisters**	**1.77**	**294**↓	*i*P	**Pn**	**12 27 33.8**	**+0.1**
GRSS				*e*S	**Sn**	**12 27 55.8**	**+0.7**
TPP	**Pointe-a-Pierr**	**1.93**	**230**	*e*P	**Pn**	**12 27 37.4**	**+1.5**
TPP	**Pointe-a-Pierr**	**1.93**	**230**	*e*P	**Pn**	**12 27 37.4**	**+1.5**
TCE	**Chacachacare**	**1.97**	**244**	*e*P	**Pn**	**12 27 36.8**	**+0.4**
TCE				*e*S	**Sn**	**12 27 59.4**	**-0.5**
TCE	**Chacachacare**	**1.97**	**244**	*e*P	**Pn**	**12 27 36.8**	**+0.4**
TCE				*e*S	**Sn**	**12 28 01.1**	**+1.2**
FCV	**Fort Charlotte**	**2.01**	**321**↑	*e*P	**Pn**	**12 27 37.3**	**+0.3**
FCV	**Fort Charlotte**	**2.01**	**321**↑	*e*P	**Pn**	**12 27 37.3**	**+0.3**
SVB	**Belmont**	**2.11**	**323**	*e*P	**Pn**	**12 27 37.4**	**-0.9**
SVB				*e*S	**Sn**	**12 28 04.3**	**+1.0**
SVB	**Belmont**	**2.11**	**323**	*e*P	**Pn**	**12 27 37.4**	**-0.9**
SVB				*e*S	**Sn**	**12 28 04.3**	**+1.0**
SSV	**Crater Summit**	**2.12**	**325**	*e*P	**Pn**	**12 27 37.9**	**-0.6**
SSV				*e*S	**Sn**	**12 28 04.9**	**+1.3**
SSV	**Crater Summit**	**2.12**	**325**	*e*P	**Pn**	**12 27 37.9**	**-0.6**
SSV				*e*S	**Sn**	**12 28 04.9**	**-1.3**
MCLT	**Moule a Chique**	**2.33**	**336**	*e*P	**Pn**	**12 27 40.6**	**-0.8**
MCLT				*e*S	**Sn**	**12 28 08.1**	**-0.6**
MCLT	**Moule a Chique**	**2.33**	**336**	*e*P	**Pn**	**12 27 40.6**	**-0.8**
MCLT				*e*S	**Sn**	**12 28 08.1**	**-0.6**
GUIV	**Guiria**	**2.41**	**248**	*e*P	**Pn**	**12 27 43.2**	**+0.8**
GUIV				*e*S	**Sn**	**12 28 09.9**	**-0.8**
SLDE	**Delcer**	**2.46**	**334**	*e*P	**Pn**	**12 27 43.1**	**-0.1**
SLDE				*e*S	**Sn**	**12 28 12.1**	**+0.1**
SLDE	**Delcer**	**2.46**	**334**	*e*P	**Pn**	**12 27 43.1**	**-0.1**
SLDE				*e*S	**Sn**	**12 28 12.1**	**+0.1**
SLPE	**Piton Saint Es**	**2.47**	**336**	*e*P	**Pn**	**12 27 43.1**	**-0.2**
SLPE				*e*S	**Sn**	**12 28 12.3**	**+0.1**
SLPE	**Piton Saint Es**	**2.47**	**336**	*e*P	**Pn**	**12 27 43.1**	**-0.2**
SLPE				*e*S	**Sn**	**12 28 12.3**	**+0.1**
SLB	**Belfond**	**2.47**	**335**↓	*e*P	**Pn**	**12 27 43.5**	**+0.1**
SLB				*e*S	**Sn**	**12 28 12.7**	**+0.3**
SLB	**Belfond**	**2.47**	**335**↑	*i*P	**Pn**	**12 27 43.9**	**+0.5**
SLB				*e*S	**Sn**	**12 28 12.7**	**+0.3**
SLW	**Petit Monier**	**2.61**	**339**	*e*P	**Pn**	**12 27 45.0**	**-0.3**
SLW				*e*S	**Sn**	**12 28 15.6**	**-0.1**
SLW	**Petit Monier**	**2.61**	**339**	*e*P	**Pn**	**12 27 44.4**	**-0.9**
SLW	**Petit Monier**	**2.61**	**339**	*e*P	**Pn**	**12 27 45.0**	**-0.3**
SLW				*e*S	**Sn**	**12 28 15.6**	**-0.1**
MVM	**Montagne Vaucl**	**3.10**	**343**↓	*e*P	**Pn**	**12 27 51.1**	**-0.8**
BIM	**Bigot**	**3.12**	**340**	*e*P	**Pn**	**12 27 51.4**	**-0.7**
BIM				*e*S	**Sn**	**12 28 26.9**	**-1.3**
ITEV	**Isla Los Testi**	**3.12**	**266**	*e*P	**Pn**	**12 27 52.2**	**0.0**
ITEV				*e*S	**Sn**	**12 28 27.0**	**-1.3**
GUNV	**Guanoco**	**3.25**	**245**	*e*P	**Pn**	**12 27 54.9**	**+0.8**
GUNV				*e*S	**Sn**	**12 28 28.3**	**-3.2**
CRUV	**Carupano**	**3.34**	**255**	*e*P	**Pn**	**12 27 55.0**	**-0.2**
CRUV				*e*S	**Sn**	**12 28 30.3**	**-3.4**
FDF	**Fort de France**	**3.34**	**340**↑	*e*P	**Pn**	**12 27 54.8**	**-0.5**
FDF			↑	*e*S	**Sn**	**12 28 33.1**	**-0.7**
DSHT	**Scott's Head**	**3.87**	**339**	*e*P	**Pn**	**12 28 04.0**	**+1.5**
DSHT	**Scott's Head**	**3.87**	**339**	*e*P	**Pn**	**12 28 03.0**	**+0.5**
DSTT	**Stowe**	**3.88**	**340**	*e*P	**Pn**	**12 28 03.9**	**+1.3**
DSTT	**Stowe**	**3.88**	**340**	*e*P	**Pn**	**12 28 03.1**	**+0.5**
DFBT	**Forest Bistro**	**3.89**	**340**	*e*P	**Pn**	**12 28 05.0**	**+2.2**
DFBT				*e*S	**Sn**	**12 28 45.2**	**-1.9**
DFBT	**Forest Bistro**	**3.89**	**340**	*e*P	**Pn**	**12 28 03.1**	**+0.4**
DFBT				*e*S	**Sn**	**12 28 45.2**	**-1.9**
RIOV	**Rio Grande**	**3.94**	**208**	*e*P	**Pn**	**12 28 02.4**	**-1.1**
RIOV				*e*S	**Sn**	**12 28 42.5**	**-5.9**
DLPL	**La Plaine**	**3.94**	**342**	*e*P	**Pn**	**12 28 03.3**	**-0.2**
DLPL				*e*S	**Sn**	**12 28 46.7**	**-1.7**
MDN	**Morne-Daniel**	**3.97**	**340**	*e*P	**Pn**	**12 28 05.1**	**+1.2**
MDN	**Morne-Daniel**	**3.97**	**340**	*e*P	**Pn**	**12 28 05.1**	**+1.2**
DWS	**Wesley**	**4.18**	**342**	*e*P	**Pn**	**12 28 07.5**	**+0.7**
DWS	**Wesley**	**4.18**	**342**	*e*P	**Pn**	**12 28 07.5**	**+0.7**
ORIV	**Oritupano**	**4.21**	**234**	*e*P	**Pn**	**12 28 06.7**	**-0.5**
ORIV				*e*S	**Sn**	**12 28 50.6**	**-4.5**
MGG	**Marie-Galante**	**4.51**	**343**	*e*P	**Pn**	**12 28 02.8**	**-0.5**
IBAV	**Isla La Blanqu**	**4.53**	**274**	*e*P	**Pn**	**12 28 11.7**	**+0.1**
TBG	**Guadaloupe-3**	**4.55**	**339**	*e*P	**Pn**	**12 28 12.4**	**+0.5**
SCG	**Saint Claude**	**4.73**	**339**	*e*P	**Pn**	**12 28 15.1**	**+0.8**
BCG	**Bois Riant Cap**	**4.76**	**340**	*e*P	**Pn**	**12 28 15.2**	**+0.4**
PCRV	**Puerto La Cruz**	**4.80**	**254**	Pn	**Pn**	**12 28 15.2**	**-0.1**
	17nm,0.3s,baz=48,slow=4.3,SNR=39						
PCRV				Sn	**Sn**	**12 29 08.9**	**-0.8**
	4.5nm,0.3s,baz=152,slow=21,SNR=7.0						
PCRV	**Puerto La Cruz**	**4.80**	**254**	*e*P	**Pn**	**12 28 14.6**	**-0.7**
PCRV				*e*S	**Sn**	**12 29 04.1**	**-5.5**
LZG	**Guadaloupe-1**	**4.87**	**339**	*e*P	**Pn**	**12 28 16.4**	**+0.2**
GURV	**El Guri**	**4.89**	**219**↑	*e*P	**Pn**	**12 28 15.0**	**-1.5**
SEG	**Port Louis**	**5.03**	**343**	*e*P	**Pn**	**12 28 18.3**	**-0.1**
PRGV	**PARIAGUAN**	**5.40**	**239**	*e*P	**Pn**	**12 28 22.1**	**-1.4**
PRGV				*e*S	**Sn**	**12 29 18.5**	**-5.8**
LUEV	**Luepa**	**5.89**	**195**	*e*P	**Pn**	**12 28 27.1**	**-3.1**
CUPV	**Cœpira**	**5.92**	**256**	*e*P	**Pn**	**12 28 29.9**	**-0.8**
CUPV				*e*S	**Sn**	**12 29 31.0**	**-6.3**
MERV	**Las Mercedes**	**6.65**	**250**	*e*P	**Pn**	**12 28 38.9**	**-1.8**
MERV				*e*S	**Sn**	**12 29 48.7**	**-6.5**
CAOV	**Caicara del Or**	**7.57**	**237**	*e*P	**Pn**	**12 28 51.6**	**-1.7**
CAOV				*e*S	**Sn**	**12 30 08.2**	**-9.5**
TURV	**Turiamo**	**7.82**	**263**	*e*P	**Pn**	**12 28 56.2**	**-0.5**
BAUV	**El Baul**	**8.38**	**253**	*e*P	**Pn**	**12 29 03.1**	**-1.2**
MTP	**Monte Pirata**	**8.44**	**321**	*e*Pn	**Pn**	**12 29 04.7**	**-0.6**
	50nm,0.5s						
SJG	**San Juan**	**8.83**	**318**	Pn	**Pn**	**12 29 11.1**	**+0.6**
	9.1nm,0.3s,baz=338,slow=21,SNR=5.3						
SIQV	**Siquisique**	**9.71**	**266**	*e*P	**Pn**	**12 29 21.7**	**-0.9**
CURV	**Curarigua**	**9.95**	**262**	*e*P	**Pn**	**12 29 24.3**	**-1.6**
ATAH	**Atahualpa**	**26.11**	**225**	P	**P**	**12 32 36.8**	**+2.0**
	4.5nm,1.0s,mb4.0,baz=349,slow=6.9,SNR=2.0						
SIV	**San Ignacio**	**27.41**	**182**	P	**P**	**12 32 46.1**	**-0.3**
	0.4nm,0.4s,mb3.3,baz=311,slow=11,SNR=3.4						
SIV				S	**S**	**12 37 36.8**	**+14**
	0.6nm,0.4s,baz=300,slow=20,SNR=4.3						
CPUP	**Villa Florida**	**37.77**	**176**	P	**P**	**12 34 15.6**	**-1.1**
	0.3nm,0.3s,mb3.5,baz=356,slow=9.9,SNR=2.4						
TXAR	**Lajitas Array**	**44.30**	**300**	P	**P**	**12 35 10.1**	**-0.3**
TXAR				PcP	PcP	12 36 56.9	+2.7
TXAR	**Lajitas Array**	**44.30**	**300**	P	**P**	**12 35 10.1**	**-0.4**
	0.4nm,0.6s,mb3.3,baz=102,slow=10.0,SNR=7.6						
TXAR				PcP	PcP	12 36 56.9	+2.7
	0.2nm,0.4s,baz=147,slow=5.1,SNR=7.4						
ECSD	**EROS Data Cent**	**44.99**	**322**	*e*Pn	**P**	**12 35 15.1**	**-0.6**
	3.4nm,0.6s,mb4.3						
MNTX	**Cornudas Mount**	**46.33**	**303**	*e*P	**P**	**12 35 25.8**	**-0.8**
	1.5nm,0.8s,mb4.0						
AGMN	**Agassiz Nation**	**47.28**	**328**	*e*P	**P**	**12 35 33.2**	**-0.4**
	5.6nm,0.6s,mb4.7						
ULM	**Lac du Bonnet**	**48.52**	**330**	P	**P**	**12 35 43.0**	**-0.2**
	4.6nm,0.6s,mb4.7,baz=135,slow=6.1,SNR=4.6						
DBIC	**Dimbokro**	**54.56**	**90**	P	**P**	**12 36 28.8**	**-0.1**
	2.1nm,0.7s,mb4.3,baz=252,slow=10.0,SNR=4.6						
ESDC	**Sonseca Array**	**56.65**	**50**	P	**P**	**12 36 45.4**	**+1.8**
	0.2nm,0.4s,mb3.5,baz=267,slow=7.7,SNR=5.8						
NVAR	**Mina Array Bea**	**58.18**	**308**	P	**P**	**12 36 55.6**	**+1.3**
	0.2nm,0.6s,mb3.3,baz=96,slow=6.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	**60.11**	**81**	P	**P**	**12 37 08.0**	**-0.2**
	2.9nm,0.7s,mb4.5,baz=280,slow=6.0,SNR=18						
YKA	**Yellowknife Ar**	**63.91**	**335**	P	**P**	**12 37 34.4**	**+1.7**
	0.6nm,0.4s,mb4.0,baz=107,slow=7.5,SNR=5.1						
DLBC	**Dease Lake**	**69.80**	**328**	LR	LR	13 06 52.5	
	comp=Z,446nm,19.1s,MS4.7,baz=120,slow=34						
INK	**Inuvik**	**73.25**	**338**	P	**P**	**12 38 30.6**	**-0.3**
	4.0nm,1.1s,mb4.3,baz=122,slow=11,SNR=3.4						
PMSA	**Palmer Station**	**76.19**	**182**	LR	LR	13 17 19.4	
	comp=Z,155nm,19.1s,MS4.3,baz=17,slow=40						
ILAR	**Eielson Array**	**78.31**	**334**	P	**P**	**12 39 01.1**	**+1.2**
	0.3nm,0.5s,mb3.5,baz=94,slow=4.5,SNR=7.2						
KDAK	**Kodiak Island**	**81.70**	**327**	P	**P**	**12 39 21.0**	**+2.7**
	2.2nm,0.6s,mb4.3,baz=131,slow=9.3,SNR=3.4						
BRTR	**Keskin Array B**	**85.44**	**51**	P	**P**	**12 39 39.0**	**+1.2**
	1.5nm,0.7s,mb4.2,baz=257,slow=4.8,SNR=7.5						

*ATH **07** 12:28:16.7, 37°.88N×21°.44E, h22km±2km, MD3.3/13*

*NEIC **07** 12:28:16.7, 37°.88N×21°.44E, h22km, MD3.3(ATH), After ATH.*
*CSEM **07** 12:28:16.7±0.2, 37°.86N×21°.43E, h10km, MD3.3, Error ellipse: s-maj=4.9km s-min=4.5km az=36.0*
*ISCJB **07** 12:28:17.6±0.4, 37°.90N±0°.03×21°.43E±0°.03, h28km±4km, Error ellipse: s-maj=5.1km s-min=3.8km az=8.0*
*THE **07** 12:28:17.6, 37°.89N×21°.44E, h0km±2km, ML2.3/8, Error ellipse: s-maj=2.8km s-min=0.8km az=210.0*

ISC 07 12:28:17.6±0.4, **37°.89N**±0°.03×**21°.43E**±0°.03, **h26**km±4km, **n60**, σ1**913**/102, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.17**	**10**	*e*Pb	**Pb**	**12 28 22.0**	**-1.0**
RLS				*e*Sb	**Sb**	**12 28 26.0**	**-0.6**
RLS	**Riolos of Patr**	**0.17**	**10**	*e*PB	**Pb**	**12 28 22.0**	**-1.0**
RLS				*e*SB	**Sb**	**12 28 26.0**	**-0.6**
RLS	**Riolos of Patr**	**0.17**	**10**	*e*Pb	**Pb**	**12 28 22.0**	**-1.0**
RLS				*e*Sb	**Sb**	**12 28 26.0**	**-0.6**
UPR	**University Cam**	**0.48**	**36**	*e*PB	**Pb**	**12 28 27.0**	**-0.6**
UPR				*e*SB	**Sb**	**12 28 33.4**	**-0.9**
UPR	**University Cam**	**0.48**	**36**	P	**Pb**	**12 28 27.8**	**+0.2**
UPR				S	**Sb**	**12 28 34.4**	**+0.1**
UPR	**University Cam**	**0.48**	**36**	*e*Pb	**Pb**	**12 28 27.0**	**-0.6**
UPR	**University Cam**	**0.48**	**36**	P	**Pb**	**12 28 27.8**	**+0.2**
UPR				*e*Sb	**Sb**	**12 28 33.4**	**-0.9**
UPR				S	**Sb**	**12 28 34.4**	**+0.1**
KFL	**Anninata**	**0.55**	**293**	P	**Pb**	**12 28 28.2**	**-0.5**
KFL				S	**Sb**	**12 28 37.5**	**+1.3**
KFL	**Anninata**	**0.55**	**293**	P	**Pb**	**12 28 28.2**	**-0.5**
KFL				S	**Sb**	**12 28 37.5**	**+1.3**
LAKA	**Lakka**	**0.56**	**51**	P	**Pb**	**12 28 27.7**	**-1.1**
LAKA				S	**Sb**	**12 28 36.3**	**-0.1**
LAKA	**Lakka**	**0.56**	**51**	P	**Pb**	**12 28 27.7**	**-1.1**
LAKA				S	**Sb**	**12 28 36.3**	**-0.1**
EFP	**Efpalio**	**0.65**	**35**	*e*PN	**Pn**	**12 28 29.5**	**-1.7**
EFP				*e*SN	**Sn**	**12 28 39.0**	**-1.6**
EFP	**Efpalio**	**0.65**	**35**	P	**Pb**	**12 28 29.6**	**-0.8**
EFP				S	**Sb**	**12 28 40.0**	**+0.9**
EFP	**Efpalio**	**0.65**	**35**	P	**Pb**	**12 28 29.6**	**-0.8**
EFP				*e*Sn	**Sn**	**12 28 39.0**	**-1.6**
EFP				S	**Sb**	**12 28 40.0**	**+0.9**
TRIZ	**Trizonia**	**0.69**	**47**	P	**Pb**	**12 28 30.0**	**-1.1**
TRIZ				S	**Sb**	**12 28 41.5**	**+1.2**
TRIZ	**Tr

MAT	**Matsushiro**	**4.02**	**258**	P		**Pn**	**12 30 32.5**	**+2.2**
MAT				S		**Sn**	**12 31 20.4**	**+3.7**
ERM	**Erimo**	**4.54**	**1**	*e*Pn		**Pn**	**12 30 37.9**	**+0.6**
JHJ	**Hachijo jima 2**	**5.12**	**213**	Pn		**Pn**	**12 30 43.8**	**-1.6**
	5.9nm,0.3s,baz=45,slow=20,SNR=11							
JHJ				Sn		**Sn**	**12 31 38.6**	**-5.2**
	18nm,0.3s,baz=86,slow=22,SNR=7.3							
ASAJ	**Asahikawa**	**6.65**	**357**	Pn		**Pn**	**12 31 06.9**	**+0.6**
	0.9nm,0.3s,baz=220,slow=13,SNR=14							
ASAJ				Sn		**Sn**	**12 32 20.1**	**-1.3**
	0.7nm,0.3s,baz=242,slow=32,SNR=5.2							
KSRS	**Korea Array**	**12.06**	**275**	Pn		**Pn**	**12 32 23.9**	**+3.4**
	0.1nm,0.3s,baz=89,slow=14,SNR=6.2							
SONM	**Songino Array**	**28.66**	**303**	P		**P**	**12 35 27.4**	**+2.3**
	0.8nm,0.6s,mb3.6,baz=113,slow=11,SNR=4.9							
KMI	**Kunming**	**36.35**	**262**	P		**P**	**12 36 31.3**	**-1.2**
KMI				pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.7							
ZALV	**Zalesovo Beam**	**42.61**	**312**	P		**P**	**12 37 25.7**	**+1.4**
	comp=Z,0.8nm,0.4s,mb3.8,baz=69,slow=8.1,SNR=4.9							
MKAR	**Makanchi Array**	**45.02**	**302**	P		**P**	**12 37 44.1**	**+0.3**
	comp=Z,0.6nm,0.7s,mb3.5,baz=82,slow=8.7,SNR=5.3							
KURK	**Kurchatov**	**46.72**	**308**	P		**P**	**12 37 58.5**	**+1.4**
	comp=Z,1.0nm,0.4s,mb4.1,baz=83,slow=8.2,SNR=8.7							

*BEO **07** 12:30:52.7±1.7, 39.˚14N×24.˚00E, h4km±8km, ML3.4/3*
*ISCJB **07** 12:30:57.8±0.6, 39.˚58N±0.˚02×23.˚91E±0.˚03, h9km±4km, Error ellipse: s-maj=3.9km s-min=2.4km az=19.6*
*CSEM **07** 12:30:58.6±0.1, 39.˚59N×23.˚89E, h10km, ML3.4/13, Error ellipse: s-maj=3.7km s-min=2.2km az=104.0*
*NEIC **07** 12:30:59.5, 39.˚60N×23.˚85E, h5km, ML3.5(ATH), After ATH.*
*ATH **07** 12:30:59.3, 39.˚56N×23.˚82E, h34km±3km, MD3.4/19, ML3.4*
*THE **07** 12:30:59.2, 39.˚57N×23.˚92E, h13km±1km, ML3.4/13, Error ellipse: s-maj=1.3km s-min=0.7km az=294.0*
*SOF **07** 12:31:00.1, 39.˚76N×23.˚99E, h19km, MD3.2*
*SKO **07** 12:31:03.6, 39.˚71N×23.˚48E, h20km*

ISC 07 12:30:58.6±0.5, 39.˚57N±0.˚02×23.˚89E±0.˚03, h10km±3km, n190, σ1°04/228, 6C-14D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AOS	**Alonnisos**	**0.40**	**181**	P		**Pg**	**12 31 07.1**	**+0.7**
AOS	**Alonnisos**	**0.40**	**181**	P		**Pg**	**12 31 07.6**	**+1.2**
AOS	**Alonnisos**	**0.40**	**181**	P		**Pg**	**12 31 07.1**	**+0.7**
PAIG	**Paliouri**	**0.40**	**336**	P		**Pg**	**12 31 06.4**	**0.0**
PAIG	**Paliouri**	**0.40**	**336**	P		**Pg**	**12 31 06.8**	**+0.4**
PAIG				S		**Sg**	**12 31 12.6**	**+0.9**
PAIG	**Paliouri**	**0.40**	**336**	P		**Pg**	**12 31 06.8**	**+0.4**
PAIG				S		**Sg**	**12 31 12.6**	**+0.9**
XOR	**Xorichti**	**0.58**	**250**	P		**Pg**	**12 31 10.6**	**+0.8**
XOR	**Xorichti**	**0.58**	**250**	P		**Pg**	**12 31 10.7**	**+0.9**
XOR				S		**Sg**	**12 31 20.1**	**+2.7**
XOR	**Xorichti**	**0.58**	**250**	P		**Pg**	**12 31 10.6**	**+0.8**
XOR				S		**Sg**	**12 31 20.1**	**+2.7**
OUR	**Ouranopolis**	**0.77**	**5**	P		**Pg**	**12 31 12.8**	**-0.7**
OUR	**Ouranopolis**	**0.77**	**5**	P		**Pg**	**12 31 13.2**	**-0.3**
OUR				S		**Sg**	**12 31 24.8**	**+1.2**
OUR	**Ouranopolis**	**0.77**	**5**	P		**Pg**	**12 31 13.2**	**-0.3**
OUR				S		**Sg**	**12 31 24.8**	**+1.2**
LIA	**Limnos Island**	**1.05**	**71**	P		**Pg**	**12 31 19.0**	**+0.2**
LIA	**Limnos Island**	**1.05**	**71**	P		**Pg**	**12 31 18.4**	**-0.4**
LIA				S		**Sg**	**12 31 32.2**	**-0.3**
LIA	**Limnos Island**	**1.05**	**71**	P		**Pg**	**12 31 19.0**	**+0.2**
LIA				S		**Sg**	**12 31 32.2**	**-0.3**
ATAL	**Atalanti**	**1.10**	**218**	P		**Pb**	**12 31 19.6**	**-0.2**
ATAL				S		**Sg**	**12 31 34.6**	**+0.5**
ATAL	**Atalanti**	**1.10**	**218**	P		**Pb**	**12 31 19.6**	**-0.2**
ATAL				S		**Sg**	**12 31 34.6**	**+0.5**
LKR	**Lokris**	**1.15**	**217**	P		**Pb**	**12 31 19.8**	**-0.7**
LKR	**Lokris**	**1.15**	**217**	*e*PN		**Pn**	**12 31 20.1**	**-0.6**
LKR	**Lokris**	**1.15**	**217**	P		**Pb**	**12 31 20.0**	**-0.5**
LKR	**Lokris**	**1.15**	**217**	P		**Pb**	**12 31 20.0**	**-0.5**
HORT	**Hortiatis**	**1.20**	**330**	P		**Pb**	**12 31 20.1**	**-1.2**
HORT	**Hortiatis**	**1.20**	**330**	P		**Pb**	**12 31 20.4**	**-0.9**
HORT				S		**Sb**	**12 31 36.2**	**-0.6**
HORT	**Hortiatis**	**1.20**	**330**	P		**Pb**	**12 31 20.4**	**-0.9**
HORT				S		**Sb**	**12 31 36.2**	**-0.6**
LIT	**Litokhoron**	**1.20**	**297**	P		**Pb**	**12 31 19.2**	**-2.3**
LIT	**Litokhoron**	**1.20**	**297**	P		**Pb**	**12 31 19.4**	**-2.1**
LIT	**Litokhoron**	**1.20**	**297**	P		**Pb**	**12 31 19.4**	**-2.1**
THE	**Thessaloniki**	**1.28**	**327**	P		**Pn**	**12 31 22.2**	**-0.3**
THE	**Thessaloniki**	**1.28**	**327**	P		**Pn**	**12 31 22.2**	**-0.3**
THE				S		**Sb**	**12 31 40.5**	**+1.2**
THE	**Thessaloniki**	**1.28**	**327**	P		**Pn**	**12 31 22.2**	**-0.3**
THE				S		**Sb**	**12 31 40.5**	**+1.2**
SOH	**Sokhos**	**1.32**	**342**	P		**Pn**	**12 31 22.3**	**-0.8**
SOH	**Sokhos**	**1.32**	**342**	P		**Pn**	**12 31 22.6**	**-0.5**
SOH				S		**Sb**	**12 31 41.4**	**+1.0**
SOH	**Sokhos**	**1.32**	**342**	P		**Pn**	**12 31 22.6**	**-0.5**
SOH				S		**Sb**	**12 31 41.4**	**+1.0**
AGG	**Agios Georgios**	**1.33**	**246**	P		**Pn**	**12 31 22.7**	**-0.4**
AGG	**Agios Georgios**	**1.33**	**246**	P		**Pn**	**12 31 22.6**	**-0.5**
AGG				S		**Sb**	**12 31 41.1**	**+0.5**
AGG	**Agios Georgios**	**1.33**	**246**	P		**Pn**	**12 31 22.7**	**-0.4**
AGG				S		**Sb**	**12 31 41.1**	**+0.5**
THL	**Klokotos Trika**	**1.45**	**271**	*e*PN		**Pn**	**12 31 24.2**	**-0.6**
THL	**Klokotos Trika**	**1.45**	**271**	P		**Pn**	**12 31 24.2**	**-0.6**
THL	**Klokotos Trika**	**1.45**	**271**	*e*Pn		**Pn**	**12 31 24.3**	**-0.5**
KAVA	**Kavala**	**1.51**	**18**	P		**Pn**	**12 31 24.2**	**-1.4**
KAVA				S		**Sn**	**12 31 44.9**	**-0.4**
KAVA	**Kavala**	**1.51**	**18**	P		**Pn**	**12 31 24.2**	**-1.4**
KAVA				S		**Sn**	**12 31 44.9**	**-0.4**
PTL	**Penteli**	**1.52**	**181**	P		**Pn**	**12 31 25.3**	**-0.4**
PTL	**Penteli**	**1.52**	**181**	*e*PN		**Pn**	**12 31 25.4**	**-0.3**
PTL				*e*SN		**Sn**	**12 31 44.6**	**-0.9**
PTL	**Penteli**	**1.52**	**181**	*e*Pn		**Pn**	**12 31 25.4**	**-0.3**
PTL				*e*Sn		**Sn**	**12 31 44.6**	**-0.9**
SIGR	**SIGRI**	**1.56**	**102**	P		**Pn**	**12 31 29.6**	**+3.2**
SRS	**Serrai**	**1.57**	**352**	P		**Pn**	**12 31 25.4**	**-1.1**
SRS	**Serrai**	**1.57**	**352**	P		**Pn**	**12 31 25.6**	**-0.9**
SRS	**Serrai**	**1.57**	**352**	P		**Pn**	**12 31 25.6**	**-0.9**
DSF	**Desfina**	**1.57**	**223**	P		**Pn**	**12 31 25.8**	**-0.7**
DSF				S		**Sn**	**12 31 46.2**	**-0.6**
DSF	**Desfina**	**1.57**	**223**	P		**Pn**	**12 31 25.8**	**-0.7**
DSF				S		**Sn**	**12 31 46.2**	**-0.6**
ATH	**Athens Observa**	**1.60**	**185**	P		**Pn**	**12 31 28.0**	**+1.1**
ATH	**Athens Observa**	**1.60**	**185**	*e*PN		**Pn**	**12 31 26.8**	**-0.1**
ATH	**Athens Observa**	**1.60**	**185**	*e*Pn		**Pn**	**12 31 26.8**	**-0.1**
ATH	**Athens Observa**	**1.60**	**185**	P		**Pn**	**12 31 28.0**	**+1.1**
ATHU	**Athens Univers**	**1.60**	**183**	P		**Pn**	**12 31 27.3**	**+0.4**
ATHU	**Athens Univers**	**1.60**	**183**	P		**Pn**	**12 31 27.3**	**+0.4**
LTK	**Loutraki**	**1.70**	**205**	*e*PN		**Pn**	**12 31 28.0**	**-0.3**
LTK	**Loutraki**	**1.70**	**205**	*e*Pn		**Pn**	**12 31 28.0**	**-0.3**
VLY	**Voula,Athens**	**1.71**	**183**	P		**Pn**	**12 31 28.0**	**-0.5**
VLY	**Voula,Athens**	**1.71**	**183**	*e*PN		**Pn**	**12 31 28.2**	**-0.3**
VLY	**Voula,Athens**	**1.71**	**183**	*e*Pn		**Pn**	**12 31 28.2**	**-0.3**
EVR	**Evrytania**	**1.74**	**249**	P		**Pn**	**12 31 31.2**	**+2.3**
EVR	**Evrytania**	**1.74**	**249**	*e*PB		**Pb**	**12 31 28.9**	**-1.7**
EVR	**Evrytania**	**1.74**	**249**	*e*Pb		**Pb**	**12 31 28.9**	**-1.7**
EVR	**Evrytania**	**1.74**	**249**	P		**Pn**	**12 31 31.2**	**+2.3**
KNT	**Kendrikon**	**1.77**	**335**	P		**Pn**	**12 31 29.2**	**0.0**
KNT				S		**Sn**	**12 31 53.3**	**+1.6**
KNT	**Kendrikon**	**1.77**	**335**	P		**Pn**	**12 31 29.2**	**0.0**
KNT				S		**Sn**	**12 31 53.3**	**+1.6**
NVR	**Nevrokopi**	**1.78**	**359**	P		**Pn**	**12 31 28.4**	**-1.0**
NVR	**Nevrokopi**	**1.78**	**359**	P		**Pn**	**12 31 28.4**	**-1.0**
KZN	**Kozani**	**1.79**	**295**	P		**Pn**	**12 31 29.1**	**-0.4**
KZN	**Kozani**	**1.79**	**295**	*e*PN		**Pn**	**12 31 29.3**	**-0.2**
KZN				*e*SN		**Sn**	**12 31 51.0**	**-1.3**
KZN	**Kozani**	**1.79**	**295**	P		**Pn**	**12 31 29.3**	**-0.2**
KZN	**Kozani**	**1.79**	**295**	P		**Pn**	**12 31 29.3**	**-0.2**
KZN				*e*Sn		**Sn**	**12 31 51.0**	**-1.3**
GRG	**Griva**	**1.80**	**321**	P		**Pn**	**12 31 29.6**	**0.0**
GRG	**Griva**	**1.80**	**321**	P		**Pn**	**12 31 29.7**	**+0.1**
GRG	**Griva**	**1.80**	**321**	P		**Pn**	**12 31 29.6**	**0.0**
KALE	**Kalithea**	**1.80**	**230**	P		**Pn**	**12 31 29.6**	**0.0**
KALE	**Kalithea**	**1.80**	**230**	P		**Pn**	**12 31 29.6**	**0.0**
NAIG	**Nisos Aigina**	**1.83**	**190**	*e*Pn		**Pn**	**12 31 29.7**	**-0.4**
NAIG	**Nisos Aigina**	**1.83**	**190**	*e*PN		**Pn**	**12 31 29.7**	**-0.4**
NAIG	**Nisos Aigina**	**1.83**	**190**	*e*Pn		**Pn**	**12 31 29.7**	**-0.4**
TRIZ	**Trizonia**	**1.85**	**230**	P		**Pn**	**12 31 30.4**	**0.0**
TRIZ	**Trizonia**	**1.85**	**230**	P		**Pn**	**12 31 30.4**	**0.0**
PRK	**Paraskevi**	**1.87**	**99**	P		**Pn**	**12 31 34.5**	**+3.8**
PRK	**Paraskevi**	**1.87**	**99**	*e*PN		**Pn**	**12 31 31.8**	**+1.1**
PRK	**Paraskevi**	**1.87**	**99**	P		**Pn**	**12 31 32.5**	**+1.8**
PRK	**Paraskevi**	**1.87**	**99**	*e*Pn		**Pn**	**12 31 31.8**	**+1.1**
EFP	**Efpalio**	**1.92**	**234**	*e*PB		**Pb**	**12 31 31.5**	**-2.2**
EFP	**Efpalio**	**1.92**	**234**	P		**Pn**	**12 31 31.6**	**+0.3**
EFP	**Efpalio**	**1.92**	**234**	P		**Pn**	**12 31 31.6**	**+0.3**
VAY	**Valandovo**	**2.02**	**331**	*e*Pg		**Pg**	**12 31 36.4**	**-1.0**
VAY				*e*Sn		**Sn**	**12 32 03.7**	**+5.7**
VAY	**Valandovo**	**2.02**	**331**	*e*Pg		**Pg**	**12 31 36.0**	**-1.4**
VAY				*e*Sg		**Sg**	**12 31 59.1**	**-4.5**
VAY	**Valandovo**	**2.02**	**331**	*e*Pg		**Pg**	**12 31 36.4**	**-1.0**
MMB	**Musomiste**	**2.02**	**357**	P		**Pn**	**12 31 31.5**	**-1.3**
MMB				Pg		**Pg**	**12 31 36.6**	**-0.8**
MMB	**Musomiste**	**2.02**	**357**	P		**Pn**	**12 31 31.5**	**-1.3**
GUR	**Goura**	**2.03**	**217**	*e*PN		**Pn**	**12 31 32.9**	**+0.1**
GUR				*e*SN		**Sn**	**12 31 57.7**	**-0.4**
GUR	**Goura**	**2.03**	**217**	P		**Pn**	**12 31 32.9**	**+0.1**
GUR	**Goura**	**2.03**	**217**	P		**Pn**	**12 31 32.9**	**+0.1**
GUR				*e*Sn		**Sn**	**12 31 57.7**	**-0.4**
DID	**Didima**	**2.12**	**194**	*e*PN		**Pn**	**12 31 33.7**	**-0.4**
DID	**Didima**	**2.12**	**194**	P		**Pn**	**12 31 33.7**	**-0.4**
DID	**Didima**	**2.12**	**194**	P		**Pn**	**12 31 33.7**	**-0.4**
ALN	**Alexandroupoli**	**2.12**	**50**	P		**Pn**	**12 31 34.3**	**+0.2**
ALN	**Alexandroupoli**	**2.12**	**50**	P		**Pn**	**12 31 33.7**	**-0.4**
ALN				S		**Sn**	**12 32 00.6**	**+0.2**
ALN	**Alexandroupoli**	**2.12**	**50**	P		**Pn**	**12 31 33.7**	**-0.4**
ALN				S		**Sn**	**12 32 00.6**	**+0.2**
RZN	**Rozhen**	**2.21**	**16**	P		**Pn**	**12 31 34.9**	**-0.4**
RZN	**Rozhen**	**2.21**	**16**	P		**Pn**	**12 31 34.9**	**-0.4**
FNA	**Florina**	**2.28**	**303**	P		**Pn**	**12 31 36.2**	**0.0**
FNA	**Florina**	**2.28**	**303**	P		**Pn**	**12 31 36.4**	**+0.2**
FNA	**Florina**	**2.28**	**303**	P		**Pn**	**12 31 36.2**	**0.0**
NEST	**Nestorio**	**2.34**	**292**	P		**Pn**	**12 31 37.5**	**+0.4**
NEST	**Nestorio**	**2.34**	**292**	P		**Pn**	**12 31 37.5**	**+0.4**
JAN	**Janina**	**2.35**	**273**	*e*Pb		**Pb**	**12 31 38.7**	**-2.3**
JAN				P			12 31 41.9	
JAN	**Janina**	**2.35**	**273**	*e*PB		**Pb**	**12 31 38.7**	**-2.3**
JAN	**Janina**	**2.35**	**273**	*e*Pb		**Pb**	**12 31 38.7**	**-2.3**
KKB	**Krupnik**	**2.38**	**345**	P		**Pn**	**12 31 37.1**	**-0.5**
KKB	**Krupnik**	**2.38**	**345**	P		**Pn**	**12 31 37.1**	**-0.5**
KDZ	**Kurdzhali**	**2.38**	**29**	P		**Pn**	**12 31 36.0**	**-1.7**
KDZ	**Kurdzhali**	**2.38**	**29**	P		**Pn**	**12 31 36.0**	**-1.7**
RLS	**Riolos of Patr**	**2.42**	**232**	*e*Pb		**Pb**	**12 31 39.5**	**-2.7**
RLS				P			12 31 42.9	
RLS	**Riolos of Patr**	**2.42**	**232**	*e*PB		**Pb**	**12 31 39.5**	**-2.7**
RLS	**Riolos of Patr**	**2.42**	**232**	*e*Pb		**Pb**	**12 31 39.5**	**-2.7**
VLX	**Vlachokerasia**	**2.49**	**209**	*e*PN		**Pn**	**12 31 39.8**	**+0.6**
VLX				*e*SN		**Sn**	**12 32 09.2**	**-0.4**
VLX	**Vlachokerasia**	**2.49**	**209**	P		**Pn**	**12 31 39.7**	**+0.5**
VLX	**Vlachokerasia**	**2.49**	**209**	P		**Pn**	**12 31 39.7**	**+0.5**
VLX				*e*Sn		**Sn**	**12 32 09.2**	**-0.4**
KRUS	**Krusevo**	**2.70**	**313**	*e*Pn		**Pn**	**12 31 42.3**	**+0.3**
APE	**Apeiranthos**	**2.81**	**152**	P		**Pn**	**12 31 47.8**	**+4.3**
ITM	**Ithomi**	**2.84**	**214**	P		**Pn**	**12 31 46.0**	**+2.1**
ITM	**Ithomi**	**2.84**	**214**	*e*PN		**Pn**	**12 31 45.2**	**+1.3**
ITM	**Ithomi**	**2.84**	**214**	*e*Pn		**Pn**	**12 31 45.2**	**+1.3**
ITM	**Ithomi**	**2.84**	**214**	P		**Pn**	**12 31 46.0**	**+2.1**
VLS	**Valsamata**	**2.92**	**243**	*e*Pb		**Pb**	**12 31 47.0**	**-3.8**
VLS	**Valsamata**	**2.92**	**243**	*e*PB		**Pb**	**12 31 47.0**	**-3.8**
VLS	**Valsamata**	**2.92**	**243**	*e*Pb		**Pb**	**12 31 47.0**	**-3.8**
VLI	**Veliai**	**2.94**	**195**	P		**Pn**	**12 31 45.9**	**+0.5**
VLI	**Veliai**	**2.94**	**195**	*e*PN		**Pn**	**12 31 45.1**	**-0.3**
VLI	**Veliai**	**2.94**	**195**	*e*Pn		**Pn**	**12 31 45.1**	**-0.3**
VLI	**Veliai**	**2.94**	**195**	P		**Pn**	**12 31 45.9**	**+0.5**
PGB	**Panagyurishte**	**2.99**	**4**	P		**Pn**	**12 31 45.6**	**-0.4**
PGB				Pg		**Pg**	**12 31 53.8**	**-2.1**
PGB	**Panagyurishte**	**2.99**	**4**	P		**Pn**	**12 31 45.6**	**-0.4**
VTS	**Vitosha**	**3.07**	**351**	*e*Pn		**Pn**	**12 31 47.4**	**+0.3**
VTS	**Vitosha**	**3.07**	**351**	P		**Pn**	**12 31 47.5**	**+0.4**
VTS	**Vitosha**	**3.07**	**351**	P		**Pn**	**12 31 47.6**	**+0.5**
VTS	**Vitosha**	**3.07**	**351**	*i*P		**Pn**	**12 31 47.3**	**+0.2**
VTS	**Vitosha**	**3.07**	**351**	P		**Pn**	**12 31 47.1**	**0.0**
VTS	**Vitosha**	**3.07**	**351**	P		**Pn**	**12 31 47.1**	**0.0**
VTS	**Vitosha**	**3.07**	**351**	*e*Pn		**Pn**	**12 31 47.4**	**+0.3**
PYL	**PYLOS**	**3.16**	**213**	*e*PN		**Pn**	**12 31 50.0**	**+1.7**
PYL	**PYLOS**	**3.16**	**213**	*e*Pn		**Pn**	**12 31 50.0**	**+1.7**
KEK	**Kerkira**	**3.16**	**274**	P		**Pn**	**12 31 51.3**	**+2.9**
KEK	**Kerkira**	**3.16**	**274**	*e*PN		**Pn**	**12 31 49.8**	**+1.4**
KEK	**Kerkira**	**3.16**	**274**	*e*Pn		**Pn**	**12 31 49.8**	**+1.4**
KYTH	**Kithira**	**3.35**	**192**	*e*Pn		**Pn**	**12 31 51.0**	**0.0**
KYTH	**Kithira**	**3.35**	**192**	*e*PN		**Pn**	**12 31 51.0**	**0.0**
KYTH	**Kithira**	**3.35**	**192**	*e*Pn		**Pn**	**12 31 51.0**	**0.0**
JMB	**Yambol**	**3.54**	**34**	P		**Pn**	**12 31 53.1**	**-0.5**
JMB	**Yambol**	**3.54**	**34**	P		**Pn**	**12 31 53.1**	**-0.5**
BARS	**Barje**	**3.60**	**335**	⇓*i*Pn		**Pn**	**12 31 54.8**	**+0.3**
BARS	**Barje**	**3.60**	**335**	⇓*i*Pn		**Pn**	**12 31 54.8**	**+0.3**
MPEP	**Malo Peshtene**	**3.79**	**358**	P		**Pn**	**12 31 57.5**	**+0.5**
ZAPS	**Zavoj**	**3.82**	**346**	*i*Pn		**Pn**	**12 31 58.5**	**+1.0**
SZH	**Strazhica**	**4.00**	**22**	P		**Pn**	**12 31 59.9**	**-0.1**
SZH	**Strazhica**	**4.00**	**22**	P		**Pn**	**12 31 59.9**	**-0.1**
IDI	**Anoyia**	**4.34**	**169**	P		**Pn**	**12 32 08.4**	**+3.7**
DIVS	**Divibare**	**5.38**	**329**	*e*Pn		**Pn**	**12 32 18.8**	**-0.1**
DIVS	**Divibare**	**5.38**	**329**	*e*Pn		**Pn**	**12 32 18.8**	**-0.1**
TIP	**Timpagrande**	**5.54**	**268**	P		**Pn**	**12 32 23.5**	**+2.4**
GZR	**Gura Zlata**	**5.88**	**352**	⇑P		**Pn**	**12 32 25.5**	**-0.2**
GZR	**Gura Zlata**	**5.88**	**352**	⇑*i*P		**Pn**	**12 32 25.5**	**-0.2**
GZR	**Gura Zlata**	**5.88**	**352**	⇑P		**Pn**	**12 32 25.5**	**-0.2**
VOIR		**5.93**	**8**	⇑P		**Pn**	**12 32 26.8**	**+0.4**
VOIR		**5.93**	**8**	⇑*i*P		**Pn**	**12 32 26.8**	**+0.4**
VOIR		**5.93**	**8**	⇑P		**Pn**	**12 32 26.8**	**+0.4**
MLR	**Muntele Rosu**	**6.11**	**14**	⇓P		**Pn**	**12 32 29.6**	**+0.6**
MLR	**Muntele Rosu**	**6.11**	**14**	⇓*i*P		**Pn**	**12 32 29.5**	**+0.6**
MLR	**Muntele Rosu**	**6.11**	**14**	⇓P		**Pn**	**12 32 29.5**	**+0.6**
CUC	**Castrocucco**	**6.23**	**276**	*e*Pn		**Pn**	**12 32 32.0**	**+1.4**
	6.0nm,0.5s							
CUC	**Castrocucco**	**6.23**	**276**	*e*Pn		**Pn**	**12 32 32.0**	**+1.4**
	6.0nm,0.5s							
CEL	**Celeste**	**6.37**	**261**	P		**Pn**	**12 32 34.3**	**+1.8**
CEL	**Celeste**	**6.37**	**261**	P		**Pn**	**12 32 34.3**	**+1.8**
PLOR	**Plostina**	**6.60**	**17**	⇓*i*P		**Pn**	**12 32 37.9**	**+2.3**
PLOR	**Plostina**	**6.60**	**17**	⇓*i*P		**Pn**	**12 32 37.9**	**+2.3**
VRI	**Vrincioaia**	**6.63**	**17**	⇓P		**Pn**	**12 32 37.3**	**+1.2**
VRI	**Vrincioaia**	**6.63**	**17**	⇓*i*P		**Pn**	**12 32 38.2**	**+2.1**
VRI	**Vrincioaia**	**6.63**	**17**	⇓P		**Pn**	**12 32 37.3**	**+1.2**
BURAR	**Bucovina Array**	**8.10**	**6**	⇓P		**Pn**	**12 32 56.9**	**+0.7**
BURAR	**Bucovina Array**	**8.10**	**6**	⇓*i*P		**Pn**	**12 32 56.9**	**+0.7**
BURAR	**Bucovina Array**	**8.10**	**6**	⇓P		**Pn**	**12 32 56.9**	**+0.7**
BUR08	**Bucovina Ar. S**	**8.13**	**6**	*e*Pn		**Pn**	**12 32 56.9**	**+0.3**
BUR08	**Bucovina Ar. S**	**8.13**	**6**	*e*Pn		**Pn**	**12 32 56.9**	**+0.3**

KRSC 07 12:44:07.9±0.2, 53.˚25N×160.˚35E, h60km±59km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.25**	**232**	*e*P		Pn	12 44 18.6	+1.0
SPN				*i* S		Sn	12 44 25.4	+0.8
NLC	**Nalytchevo**	**0.61**	**263**	P		Pn	12 44 21.9	+0.9
NLC				*i* S		Sn	12 44 31.3	+0.7
KII	**Karymskiy**	**0.95**	**326**	*e*P		Pn	12 44 26.4	+1.1
KII				*i* S		Sn	12 44 38.9	+0.8
AVH	**Avacha**	**0.97**	**272**	*e*P		Pn	12 44 26.8	+1.3
AVH				*i* S		Sn	12 44 39.8	+1.3
PET	**Petropavlovsk**	**1.05**	**258**	*e*P		Pn	12 44 27.3	+0.8
PET				*i* S		Sn	12 44 40.8	+0.5
GNL	**Ganaly**	**1.51**	**288**	*e*P		Pn	12 44 33.8	+1.2
GNL				*i* S		Sn	12 44 53.4	+2.2
MKZ	**Mys Kozlova**	**1.54**	**31**	*e*P		Pn	12 44 34.4	+1.3
MKZ				*i* S		Sn	12 44 53.1	+1.0
KBTR	**Krutoberegovo**	**3.29**	**25**	*e*P		Pn	12 45 00.0	+3.1

*BJI **07** 12:49:29.1, 52.˚65N×175.˚42W, h11km, mB4.9/11, mb4.7/18, Ms4.9/14, Ms7 4.5/16*
*ISCJB **07** 12:49:31.2±0.7, 52.˚29N±0.˚04×175.˚66W±0.˚03, h13km±4km, mb4.6/102, MS4.5/29, Error ellipse: s-maj=7.1km s-min=3.2km az=177.8*
*NEIC **07** 12:49:33.1±1.1, 52.˚28N×175.˚81W, h15km±7km, mb4.7/67, ML4.9(PMR), ML4.5(AEIC), Error ellipse: s-maj=7.8km s-min=4.4km az=174.0*
*MOS **07** 12:49:33.8±1.2, 52.˚24N×175.˚77W, h33km, mb4.9/46, Error ellipse: s-maj=9.2km s-min=8.0km az=81.5*
*GCMT **07** 12:49:34.4±0.3, 52.˚27N×175.˚54W, h12km, MW5.0, Moment Tensor Solution. s29,c37; s69,c110; Moment tensor: Scale 10^16 Nm; Mrr 0.27±.10; Mθθ 2.23±.10; Mφφ -2.50±.07; Mrθ 0.78±.26; Mθφ -1.72±.08; Mφr -2.68±.22; Best double couple: M0 4.00000×10^16 NP1: ϕs 65.00000°, δ 46.00000°, λ 179.00000°. NP2: ϕs 156.00000°, δ 89.00000°, λ 44.00000°. Principal axes: T 3.7200, Plg30.0000°, Azm29.0000°; N 0.6000, Plg46.0000°, Azm157.0000°; P -4.3200, Plg28.0000°, Azm281.0000°; Data Used: II IU IC G CN.*
*IDC **07** 12:49:35.2±2.8, 52.˚26N×175.˚56W, h35km±21km, mb4.2/21, mb1 4.3/23, mb1mx4.2/31, mbtmp4.2/23, ML4.7/2, MS4.4/14, Ms1 4.4/14, ms1mx4.2/24 Error ellipse: s-maj=19.6km s-min=11.9km az=177.0*

ISC 07 12:49:32.7±0.8, 52.˚25N±0.˚04×175.˚66W±0.˚03, h12km±4km, h15km±2.8km: pP-P, n481, σ0.˚83/470, mb4.6/102, MS4.5/29, 132C-134D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.29**	**238**	*e*Pg		**Pg**	**12 49 38.5**	**-0.1**
GSTR				*e*Sg		**Sg**	**12 49 43.6**	**+1.1**
ATKA	**Atka Island**	**0.90**	**92**	P		**Pg**	**12 49 44.7**	**-5.4**
ATKA				S		**Sg**	**12 49 55.6**	**-6.3**
AMKA	**Amchitka**	**3.24**	**256**	P		**Pn**	**12 50 22.3**	**-1.1**
AMKA				S		**Sn**	**12 51 03.7**	**+1.8**
NIKO	**Nikolski**	**4.21**	**77**	P		**Pn**	**12 50 34.5**	**-2.2**
UNV	**Unalaska Valle**	**5.75**	**70**	P		**Pn**	**12 50 56.3**	**-1.6**
SPIA	**Saint Paul Isl**	**5.85**	**30**	P		**Pn**	**12 50 59.5**	**+0.3**
AKGG	**Akutan Green G**	**6.13**	**68**	P		**Pn**	**12 50 59.6**	**-3.4**
AKUT	**Akutan**	**6.24**	**68**	P		**Pn**	**12 51 03.1**	**-1.4**
SMY	**Shemya**	**6.27**	**

G08A Pilot Rock 37.17 78 ⇓P P 12 56 43.3 0.0
baz=37
K05A Summer Lake 37.39 82 ⇓P P 12 56 45.0 -0.1
baz=37,SNR=7.1
C11A Tepee Creek (N 37.47 72 ⇓P P 12 56 45.5 -0.3
baz=37
I07A Izee 37.49 80 ⇑P P 12 56 45.8 -0.2
baz=37,SNR=12
WDC Whiskeytown Da 37.62 86 eP P 12 56 49.3 +2.2
comp=Z,28nm,1.8s,mb4.7
WDC Whiskeytown Da 37.62 86 eP P 12 56 49.3 +2.2
WDC pmax pmax
comp=Z,28nm,1.8s,mb4.7
F10A Beach Ranch, E 37.85 76 ⇓P P 12 56 49.1 +0.1
baz=38
C12B Naegeli Ranch, 38.00 72 ⇑P P 12 56 49.9 -0.3
baz=38
A13A Flathead Natio 38.01 70 ⇑P P 12 56 50.0 -0.3
baz=38
MOD Modoc 38.22 83 eP P 12 56 54.1 +1.9
comp=Z,108nm,2.5s,mb5.1
B13A Whitefish 38.25 71 ⇓P P 12 56 52.3 -0.1
baz=38
BSMT Bassoo Peak 38.33 72 eP P 12 56 51.8 -1.2
BMO Blue Mountains 38.39 77 eP P 12 56 54.5 +0.9
comp=Z,5.9nm,1.3s,mb4.2
D12A Red Ives Fores 38.40 73 ⇑P P 12 56 53.2 -0.5
baz=38
BLMT Blacktail Moun 38.49 71 eP P 12 56 54.6 +0.2
J08A Circle Bar Ran 38.51 80 ⇓P P 12 56 53.6 -0.9
baz=38
C13A Hot Springs 38.54 72 ⇑P P 12 56 54.2 -0.5
baz=38,SNR=9.5
A14A Double T Ranch 38.56 69 ⇑P P 12 56 54.5 -0.5
baz=38,SNR=12
E12A Beaver Dam Sad 38.60 74 ⇑P P 12 56 54.8 -0.5
baz=38
JTMT Jette 38.67 71 eP P 12 56 57.1 +1.2
YBMT Yellow Bay 38.77 71 eP P 12 56 57.9 +1.1
D13A Huson 38.90 72 ⇑P P 12 56 56.7 -1.2
baz=39
WVOR Wild Horse Val 38.93 81 eP P 12 56 57.6 -0.6
comp=Z,7.1nm,0.8s,mb4.5
WVOR Wild Horse Val 38.93 81 eP P 12 56 57.6 -0.5
WVOR pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
A15A Johnson Ranch, 38.96 69 ⇓P P 12 56 57.3 -1.0
baz=39,SNR=5.6
C14A Swan Lake 38.98 71 ⇑P P 12 56 57.0 -1.4
baz=39
OHCM Honcut 39.02 87 eP P 12 56 59.8 +0.8
F12A Elk City 39.13 75 ⇑P P 12 56 59.0 -0.8
baz=39,SNR=7.3
CN2 Changchun 39.29 282 eP P 12 57 00.8 -0.3
MSO Missoula 39.34 73 eP P 12 57 02.4 +0.9
comp=Z,9.1nm,1.2s,mb4.4
B15A Bradely Ranch, 39.39 70 ⇓P P 12 57 00.5 -1.4
baz=39,SNR=9.3
SLMT Seeley Lake 39.39 72 eP P 12 57 02.2 +0.2
E13A Victor 39.40 73 ⇑P P 12 57 01.3 -0.7
baz=39
D14A Greenough 39.47 72 ⇓P P 12 57 00.4 -2.2
baz=39,SNR=13
A16A West Butte Ran 39.62 68 ⇑P P 12 57 02.3 -1.6
baz=40
C15A Salmond Ranch, 39.63 71 ⇓P P 12 57 02.0 -1.9
baz=40,SNR=28
F13A Darby 39.66 74 ⇑P P 12 57 03.1 -1.1
baz=40
CHMT Chamberlain Mo 39.70 72 eP P 12 57 05.2 +0.6
E14A Clinton 39.82 73 ⇓P P 12 57 04.7 -0.9
baz=40
B16A M & M Farms, S 39.83 69 ⇓P P 12 57 04.3 -1.2
baz=40
H12A Diamond D Ranc 40.02 76 ⇓P P 12 57 06.4 -0.8
baz=40
MFID Camas Ranch 40.07 78 ⇑P P 12 57 07.2 -0.4
baz=40
PAHR Pah Rah Range 40.08 85 eP P 12 57 09.1 +1.4
comp=Z,126nm,2.2s,mb5.3
G13A Cobalt 40.10 75 ⇑P P 12 57 07.1 -0.7
baz=40
WCN Washoe City 40.10 86 ⇓P P 12 57 07.5 -0.4
baz=40,SNR=8.5
C16A Fuhringer Ranc 40.12 70 ⇓P P 12 57 07.4 -0.5
baz=40,SNR=12
A17A Triple J Farms 40.14 68 ⇓P P 12 57 06.9 -1.2
baz=40,SNR=12
I12A Atlanta 40.28 77 ⇑P P 12 57 09.1 -0.3
baz=40,SNR=9.9
E15A Deer Lodge 40.32 72 ⇓P P 12 57 09.5 -0.1
baz=40
H13A Challis 40.37 76 ⇓P P 12 57 09.7 -0.5
baz=40
B17A L&G Farms, Che 40.41 69 ⇑P P 12 57 09.5 -0.9
baz=40,SNR=6.3
L10A Juniper Basin 40.45 80 ⇓P P 12 57 10.2 -0.6
baz=40
CMB Columbia Colle 40.50 88 eP P 12 57 11.7 +0.4
comp=Z,26nm,1.5s,mb4.7
CMB Columbia Colle 40.50 88 eP P 12 57 11.7 +0.5
CMB pmax pmax
comp=Z,26nm,1.5s,mb4.7
D16A Dana Ranch, Ca 40.63 71 ⇑P P 12 57 11.8 -0.4
baz=40
HRY Holter Researc 40.64 71 eP P 12 57 13.0 +0.7
LRM Limekiln Ridge 40.75 73 eP P 12 57 13.3 0.0
C17A Wharram Farm, 40.77 70 ⇓P P 12 57 12.4 -1.0
baz=41,SNR=9.8
WAKR Walker 40.79 87 eP P 12 57 14.5 +0.9
I13A Wildhorse Cree 40.82 76 ⇑P P 12 57 13.7 -0.1
baz=41,SNR=8.4
L11A Cat Creek Ranc 40.83 80 ⇓P P 12 57 13.6 -0.3
baz=41,SNR=13
HLID Hailey 40.84 77 eP P 12 57 13.5 -0.4
comp=Z,6.4nm,1.1s,mb4.2
H14A Leadore 40.87 75 ⇑P P 12 57 13.4 -0.8
baz=41
DLMT Dillon 40.92 74 eP P 12 57 17.0 +2.3
comp=Z,7.5nm,1.3s,mb4.2
B18A Beardsley Farm 40.94 68 ⇓P P 12 57 13.8 -1.0
baz=41,SNR=6.7
MCMT McKenzie Canyo 41.06 74 eP P 12 57 15.7 -0.1
comp=Z,2.6nm,0.6s,mb4.0
D17A Six Diamond Ra 41.07 70 ⇓P P 12 57 15.2 -0.7
baz=41,SNR=7.8
J13A Cove Ranch, Pi 41.08 77 ⇑P P 12 57 15.7 -0.3
baz=41,SNR=8.4
EGMT Eagleton 41.15 69 eP P 12 57 16.7 +0.3
comp=Z,8.6nm,0.9s,mb4.4
F16A Kennard Place, 41.26 73 ⇓P P 12 57 17.1 -0.3
baz=41
L12A House Creek Ra 41.29 79 ⇑P P 12 57 17.1 -0.6
baz=41
H15A Lima 41.30 75 ⇑P P 12 57 17.2 -0.6
baz=41
BOZ Bozeman (W) 41.33 73 eP P 12 57 16.7 -1.3
comp=Z,6.0nm,1.1s,mb4.1
BOZ Bozeman (W) 41.33 73 eP P 12 57 16.7 -1.3
BOZ pmax pmax
comp=Z,6.0nm,1.1s,mb4.1
E17A Martinsdale 41.34 71 ⇑P P 12 57 17.6 -0.5
baz=41,SNR=6.1
G16A Moss Hill, Enn 41.46 73 ⇑P P 12 57 18.4 -0.7
baz=41,SNR=7.4
J14A Carey 41.51 77 ⇓P P 12 57 19.6 +0.1
baz=41
NVAR Mina Array Bea 41.53 86 P P 12 57 18.7 -1.1
NVAR ScP ScP 13 03 03.9 -2.7
NVAR Mina Array Bea 41.53 86 P P 12 57 18.7 -1.0
comp=Z,3.9nm,0.8s,mb4.1,baz=294,slow=8.4,SNR=26
NVAR ScP ScP 13 03 03.9 -2.7
comp=Z,0.3nm,0.7s,baz=287,slow=6.2,SNR=2.7
D18A Linhart Farms, 41.56 70 ⇑P P 12 57 19.8 0.0
baz=42
KSRS Korea Array 41.56 272 P P 12 57 20.4 +0.3
KSRS LR LR 13 14 37.8
comp=Z,292nm,18.8s,MS4.2,baz=54,slow=36
KSRS Korea Array 41.56 272 P P 12 57 20.4 +0.4
KSRS pmax pmax
comp=Z,3.0nm,1.0s,mb3.9
KSRS MLR MLR
comp=Z,292nm,18.8s,MS4.2
F17A Fitzpatrick Pl 41.76 72 ⇑P P 12 57 21.5 0.0
baz=42
E18A Harlowton 41.83 71 ⇓P P 12 57 22.0 -0.1
baz=42,SNR=7.5
L13A Double Diamond 41.97 79 ⇓P P 12 57 23.5 +0.2
baz=42
G17A Pierce Place, 42.03 73 ⇓P P 12 57 24.6 +0.8
baz=42
N12A Clover Valley, 42.04 81 ⇑P P 12 57 24.5 +0.6
baz=42
H16A Russell Place, 42.08 74 ⇓P P 12 57 25.1 +0.9
baz=42,SNR=5.2
O11A Cowboy Ranch, 42.10 82 ⇑P P 12 57 24.8 +0.4
baz=42
J15A Blackfoot 42.12 76 ⇓P P 12 57 24.6 +0.1
baz=42
M13A Montello 42.27 80 ⇑P P 12 57 26.0 +0.3
baz=42
F18A Big Timber 42.31 71 ⇓P P 12 57 26.5 +0.5
baz=42
P11A Circle Ranch, 42.40 83 ⇓P P 12 57 27.3 +0.5
baz=42
GCMT Greycliff 42.40 71 eP P 12 57 27.2 +0.5
comp=Z,4.2nm,1.2s,mb3.9
I16A Newdale 42.41 75 ⇓P P 12 57 27.1 +0.3
baz=42
L14A Malta 42.43 78 ⇓P P 12 57 27.2 +0.2
baz=42,SNR=6.5
TIN Tinemaha 42.44 88 ⇓P P 12 57 27.5 +0.3
baz=42
Q10A Clear Creek Ra 42.45 84 ⇑P P 12 57 27.6 +0.4
baz=42,SNR=8.8
K15A Arbon 42.47 77 ⇓P P 12 57 27.6 +0.2
baz=42
N13A Wendover, West 42.55 80 ⇓P P 12 57 28.1 +0.1
baz=42
O12A Currie 42.57 81 ⇓P P 12 57 27.9 -0.3
baz=42,SNR=15
H17A Grant Village 42.65 74 ⇓P P 12 57 28.6 -0.2
baz=42
M14A Sheep Mountain 42.68 79 ⇑P P 12 57 29.2 +0.2
baz=43,SNR=5.6
J16A Bone 42.68 76 ⇓P P 12 57 28.9 -0.1
baz=43
VES Vestal, Richgr 42.70 90 ⇓P P 12 57 28.9 -0.4
baz=42
IMW Indian Meadow 42.72 74 eP P 12 57 30.8 +1.5
comp=Z,3.4nm,0.9s,mb4.1
G18A Lazy EL Ranch, 42.73 72 ⇓P P 12 57 29.5 +0.1
baz=43
FLWY Flagg Ranch 42.76 74 eP P 12 57 31.1 +1.5
comp=Z,7.3nm,1.0s,mb4.4
R10A Warm Springs 42.84 85 ⇓P P 12 57 29.9 -0.5
baz=43
HVU Hansel Valley 42.86 78 eP P 12 57 31.9 +1.4
comp=Z,6.1nm,0.8s,mb4.4
HVU Hansel Valley 42.86 78 eP P 12 57 31.9 +1.4
HVU pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
Q11A Duckwater 42.89 84 ⇓P P 12 57 31.1 +0.3
baz=43,SNR=8.5
S10A Tonopah Range, 42.90 85 ⇑P P 12 57 31.6 +0.7
baz=43,SNR=11
CWC Cottonwood Cre 42.93 88 ⇑P P 12 57 31.7 +0.5
baz=43,SNR=8.8
TPAW Ten Pass 42.95 75 eP P 12 57 32.5 +1.3
comp=Z,4.7nm,1.1s,mb4.1
K16A Soda Springs 42.95 76 ⇓P P 12 57 31.0 -0.3
baz=43
L15A Malad City 42.96 78 ⇑P P 12 57 31.8 +0.4
baz=43
P12A McGill 42.96 82 ⇓P P 12 57 31.8 +0.4
baz=43
RLMT Red Lodge 43.01 72 eP P 12 57 31.1 -0.6
comp=Z,16nm,1.2s,mb4.6
LOHW Long Hollow 43.08 75 eP P 12 57 33.8 +1.5
comp=Z,8.1nm,1.5s,mb4.2
N14A Grayback Hills 43.16 80 ⇓P P 12 57 33.6 +0.6
baz=43,SNR=6.3
ISA Isabella 43.19 89 ⇑P P 12 57 33.1 -0.2
baz=43,SNR=9.9
ISA Isabella 43.19 89 eP P 12 57 33.1 -0.2
comp=Z,25nm,1.4s,mb4.8
ISA Isabella 43.19 89 eP P 12 57 33.1 -0.2
ISA pmax pmax
comp=Z,25nm,1.4s,mb4.8
BGU Big Grassy Mou 43.21 79 eP P 12 57 33.9 +0.5
comp=Z,11nm,1.2s,mb4.5
R11A Troy Canyon, C 43.24 84 ⇑P P 12 57 33.2 -0.5
baz=43,SNR=15
Q12A Willow Creek R 43.27 83 ⇑P P 12 57 34.0 0.0
baz=43
P13A Bates Ranch, G 43.51 82 ⇑P P 12 57 35.4 -0.4
baz=43
MPMC Manual Prospec 43.54 88 ⇑P P 12 57 36.4 +0.3
baz=43,SNR=10
S11A Rachel 43.59 85 ⇓P P 12 57 36.3 -0.1
baz=43
FURC Furnace Creek, 43.66 87 ⇓P P 12 57 37.2 +0.2
baz=44,SNR=9.4
HWUT Hardware Ranch 43.69 78 eP P 12 57 38.2 +1.0
comp=Z,6.8nm,1.1s,mb4.3
DUG Dugway 43.79 80 eP P 12 57 38.7 +0.7
comp=Z,29nm,1.3s,mb4.8
DUG Dugway 43.79 80 eP P 12 57 38.7 +0.7
DUG pmax pmax
comp=Z,29nm,1.3s,mb4.8
Q13A Wheeler Ranch, 43.82 82 ⇑P P 12 57 38.0 -0.3
baz=44
R12A Pony Springs, 43.85 83 ⇓P P 12 57 37.9 -0.7
baz=44
LAO LASA Array 43.89 68 eP P 12 57 38.6 -0.1
comp=Z,9.7nm,0.9s,mb4.5
P14A Drum Mountains 44.01 81 ⇓P P 12 57 39.8 0.0
baz=44,SNR=5.9
EDW2 Edwards Air Fo 44.01 90 ⇓P P 12 57 39.2 -0.6
baz=44,SNR=5.6
U10A Ash Meadows, A 44.02 87 ⇑P P 12 57 39.8 -0.2
baz=44
S12A Delamar Landin 44.16 84 ⇑P P 12 57 41.0 -0.1
baz=44,SNR=12
BW06 Boulder Array 44.20 75 eP P 12 57 42.1 +0.8
comp=Z,5.5nm,0.8s,mb4.3
Q14A Sevier Lake (B 44.25 82 ⇓P P 12 57 41.5 -0.3
baz=44,SNR=16
R13A O'Grain Ranch, 44.34 83 ⇑P P 12 57 43.0 +0.5
baz=44
JLU Jordanelle 44.36 79 eP P 12 57 46.2 +3.5
comp=Z,15nm,1.3s,mb4.6
NLU North Lily Min 44.38 80 eP P 12 57 46.5 +3.6
comp=Z,8.7nm,0.9s,mb4.5
MWC Mont Wilson 44.40 90 eP P 12 57 43.8 +0.7
comp=Z,50nm,1.3s,mb5.1
GSC Goldstone 44.46 88 eP P 12 57 43.4 -0.1
baz=44,SNR=17
GSC Goldstone 44.46 88 eP P 12 57 42.1 -1.3
comp=Z,42nm,1.3s,mb5.0
GSC Goldstone 44.46 88 eP P 12 57 42.2 -1.3
GSC pmax pmax
comp=Z,42nm,1.3s,mb5.0
P15A Leamington 44.50 80 ⇓P P 12 57 43.5 -0.3
baz=44,SNR=5.9
K19A Absolon Red Bu 44.58 74 ⇓P P 12 57 44.3 -0.1
baz=44
DAU Daniels Canyon 44.60 79 eP P 12 57 46.2 +1.7
MPU Maple Canyon 44.61 79 eP P 12 57 48.4 +3.8
comp=Z,7.5nm,0.8s,mb4.6
BFSC Mount Baldy Ra 44.64 90 ⇓P P 12 57 45.3 +0.4
baz=44,SNR=8.0
L19A Farson 44.71 76 ⇓P P 12 57 45.8 +0.3
baz=45
S13A Holt Ranch, En 44.78 84 ⇑P P 12 57 45.9 -0.1
baz=45
TUQ Turquoise Moun 44.91 88 ⇑P P 12 57 47.0 -0.1
baz=45,SNR=5.8
V11A Goodsprings 44.95 87 ⇓P P 12 57 47.4 +0.1
baz=45,SNR=5.5
O17A Robinson Place 45.04 79 ⇓P P 12 57 48.8 +0.8
baz=45,SNR=6.5
BBRC Big Bear Solar 45.08 90 ⇓P P 12 57 48.8 +0.4
baz=45
CCUT Cedar City 45.11 83 eP P 12 57 49.7 +1.1
comp=Z,28nm,1.8s,mb4.8
U12A Valley of Fire 45.11 85 ⇓P P 12 57 48.7 +0.1
baz=45
T13A Saint George 45.12 84 ⇑P P 12 57 47.8 -0.9
baz=45,SNR=5.3
N18A Larsen Ranch, 45.20 77 ⇑P P 12 57 49.3 -0.1
baz=45
MSU Marysvale 45.22 81 eP P 12 57 50.5 +1.0
TMUT Trail Mountain 45.32 80 eP P 12 57 52.9 +2.6
comp=Z,15nm,1.0s,mb4.8
MURC Murrieta 45.35 90 ⇓P P 12 57 50.1 -0.5
baz=45
L20A Wamsutter 45.37 75 ⇓P P 12 57 50.5 -0.1
baz=45
V12A Nelson 45.38 86 ⇑P P 12 57 51.0 +0.2
baz=45,SNR=9.7
GMRC Granite Mounta 45.51 88 ⇓P P 12 57 51.3 -0.5
baz=45,SNR=12
N19A John Jarvie Ra 45.55 77 ⇓P P 12 57 52.0 -0.1
baz=45
Q16A Castle Valley 45.58 80 ⇑P P 12 57 52.4 +0.1
baz=45,SNR=8.2
T14A Hurricane 45.59 84 ⇓P P 12 57 52.2 -0.2
baz=46
P18A Preston Nutter 45.69 79 ⇓P P 12 57 53.1 -0.1
baz=46,SNR=12
M20A Sweetwater, Wa 45.78 76 ⇑P P 12 57 53.9 0.0
baz=46
R16A Teasdale 45.79 81 ⇓P P 12 57 53.9 -0.1
baz=46,SNR=11
PFO Pinyon Flat Ob 45.80 90 ⇓P P 12 57 53.4 -0.8
baz=46
PFO Pinyon Flat Ob 45.80 90 eP P 12 57 53.7 -0.4
comp=Z,8.2nm,1.0s,mb4.6
PFO Pinyon Flat Ob 45.80 90 eP P 12 57 53.7 -0.5
PFO pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
BELC Belle Mtn. Jos 45.82 89 ⇑P P 12 57 53.4 -0.8
baz=46,SNR=5.5
V13A Grand Canyon W 45.83 86 ⇓P P 12 57 53.7 -0.7
baz=46,SNR=15
SRU San Rafael 45.85 80 eP P 12 57 56.3 +1.8
comp=Z,12nm,0.9s,mb4.8
SRU San Rafael 45.85 80 eP P 12 57 56.3 +1.8
SRU pmax pmax
comp=Z,12nm,0.9s,mb4.8
O19A Miners Draw (B 45.95 77 ⇓P P 12 57 54.9 -0.3
baz=46
U14A Mt Trumbull 45.95 84 ⇑P P 12 57 54.9 -0.4
baz=46,SNR=8.3
L21A Rawlins 45.98 75 ⇑P P 12 57 55.8 +0.4
baz=46
T15A Red Dirt Ranch 46.05 83 ⇓P P 12 57 55.6 -0.5
baz=46
S16A Weppner Ranch, 46.08 82 ⇑P P 12 57 55.7 -0.6
baz=46
Q18A Rafter H Ranch 46.09 79 ⇓P P 12 57 55.7 -0.6
baz=46
N20A Spence Gulch, 46.13 76 ⇑P P 12 57 56.7 -0.1
baz=46
M21A Separation Pea 46.20 75 ⇑P P 12 57 57.2 0.0
baz=46
IRM Iron Mountain 46.23 88 ⇑P P 12 57 56.4 -1.2
baz=46,SNR=6.9
BAR Barrett 46.30 91 eP P 12 57 57.7 -0.4
comp=Z,17nm,1.3s,mb4.8
W13A Hualapai Mount 46.38 86 ⇑P P 12 57 57.9 -0.8
baz=46,SNR=11
BC3 Big Chuckawall 46.38 89 ⇓P P 12 57 58.3 -0.5
baz=46
P19A Cripple Cowboy 46.45 78 ⇓P P 12 57 58.6 -0.6
baz=46,SNR=7.3
U15A North Rim 46.49 84 ⇓P P 12 57 59.0 -0.5
baz=46,SNR=14
V14A Boquillas Ranc 46.51 85 ⇑P P 12 57 59.3 -0.4
baz=46,SNR=12
O20A White River Ci 46.58 77 ⇑P P 12 57 59.9 -0.3
baz=46
S17A Black Ridge (B 46.62 81 ⇑P P 12 57 59.7 -0.8
baz=46,SNR=15
R18A Canyonlands Na 46.69 80 ⇑P P 12 58 01.9 +0.8
baz=47,SNR=11
X13A Yucca 46.75 87 ⇑P P 12 58 00.7 -0.9
baz=47,SNR=7.6
M22A Cedar Creek Ra 46.78 75 ⇓P P 12 58 01.8 +0.1
baz=47
W14A Seligman 46.80 86 ⇑P P 12 58 01.6 -0.4
baz=47,SNR=9.8
P20A De Beque 46.89 78 ⇓P P 12 58 02.2 -0.5
baz=47
V15A Kaibab Nationa 46.96 84 ⇓P P 12 58 03.0 -0.2
baz=47,SNR=13
O21A Pagoda 46.99 76 ⇑P P 12 58 03.7 +0.3
baz=47
T17A Navajo Res., N 47.02 82 ⇑P P 12 58 02.8 -0.9
baz=47,SNR=11
S18A Hurst Farm, Bl 47.07 81 ⇑P P 12 58 03.2 -0.9
baz=47,SNR=14
BJI Beijing 47.08 283 P P 12 58 02.7 -1.4
BJI S S 13 04 59.4 +3.6
BJI pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
BJI pmax pmax
comp=Z,65nm,3.8s
BJI LR LR
comp=N,210nm,21.3s,MS4.6
BJI LR LR
comp=E,620nm,19.7s,MS4.6
BJI LR LR
comp=Z,620nm,21.3s,MS4.5
R19A Curley Farm, L 47.13 80 ⇑P P 12 58 03.9 -0.6
baz=47
GLA Glamis 47.18 89 ⇓P P 12 58 04.1 -0.8
baz=47,SNR=6.0
GLA Glamis 47.18 89 eP P 12 58 06.4 +1.4
comp=Z,12nm,1.0s,mb4.8
GLA Glamis 47.18 89 eP P 12 58 06.4 +1.4
GLA pmax pmax
comp=Z,12nm,1.0s,mb4.8
TLY Talaya 47.23 303 eP P 12 58 06.3 +1.2
TLY pmax pmax
comp=Z,12nm,1.2s,mb4.7
TLY MLR MLR
comp=Z,460nm,20.0s,MS4.4
PV04 Paradox Valley 47.28 79 eP P 12 58 08.1 +2.4
Q20A Ridgley Place, 47.29 78 ⇑P P 12 58 05.4 -0.4
baz=47
W15A Williams 47.32 85 ⇓P P 12 58 06.4 +0.4
baz=47
U16A Tuba City 47.38 83 ⇓P P 12 58 06.8 +0.3
baz=47
X14A Yava 47.41 86 ⇓P P 12 58 06.5 -0.3
baz=47,SNR=12
N23A Red Feather La 47.48 75 ⇑P P 12 58 07.1 -0.1
baz=47
T18A Mexican Hat 47.50 81 ⇓P P 12 58 07.1 -0.3
baz=47,SNR=18
S19A Harvey Farm, M 47.55 80 ⇓P P 12 58 06.8 -1.0
baz=47,SNR=10
ULM Lac du Bonnet 47.57 59 LR LR 13 18 37.5
comp=Z,747nm,18.1s,MS4.7,baz=290,slow=37
WUAZ Wupatki 47.65 84 eP P 12 58 10.5 +1.9
PV01 Paradox Valley 47.65 79 eP P 12 58 09.5 +0.9
comp=Z,940nm,0.7s
Y14A Wickenburg 47.70 87 ⇓P P 12 58 08.8 -0.2
baz=48
R20A Redvale 47.73 79 ⇓P P 12 58 09.6 +0.4
baz=48
Z13A Yuma Proving G 47.80 88 ⇓P P 12 58 09.5 -0.3
baz=48,SNR=6.2
X15A Humboldt 47.80 86 ⇑P P 12 58 09.9 +0.1
baz=48,SNR=6.1
P22A Eagle 47.81 77 ⇓P P 12 58 10.3 +0.6
baz=48
O23A Lake Granby, G 47.92 75 ⇑P P 12 58 11.1 +0.5
baz=48
V17A Tonalea, Kykot 47.93 84 ⇑P P 12 58 11.4 +0.6
baz=48
SMCO Snowmass 47.94 77 eP P 12 58 11.7 +0.9
comp=Z,3.1nm,0.7s,mb4.5
U18A Rough Rock, Ch 47.97 82 ⇓P P 12 58 11.0 -0.1
baz=48,SNR=6.0
SONM Songino Array 47.98 298 P P 12 58 10.8 -0.2
comp=Z,1.6nm,0.9s,mb4.1,baz=53,slow=7.1,SNR=8.3
SONM LR LR 13 19 12.1
comp=Z,921nm,19.3s,MS4.8,baz=52,slow=37
SONM Songino Array 47.98 298 P P 12 58 10.8 -0.3
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM MLR MLR
comp=Z,921nm,19.3s
113A Mohawk Valley, 48.02 89 ⇓P P 12 58 11.6 0.0
baz=48
Y15A Casa Rosa Ranc 48.10 86 ⇓P P 12 58 11.6 -0.5
baz=48
R21A Cimarron 48.11 78 ⇑P P 12 58 12.9 +0.8
baz=48

Z14A	**Wintersburg**	**48.12**	**87**	⇑P		**P**	**12 58 12.1**	**-0.2**
	baz=48									
ZAK	**Zakamensk**	**48.16**	**302**	*e*P		**P**	**12 58 12.2**	**-0.2**
ZAK					pmax	pmax				
	comp=Z,5.0nm,1.4s,mb4.3									
Q22A	**Crested Butte,**	**48.18**	**78**	⇓P		**P**	**12 58 13.4**	**+0.7**
	baz=48									
MVCO	**Mesa Verde**	**48.29**	**80**	*e*P		**P**	**12 58 15.9**	**+2.4**
	comp=Z,23nm,1.4s,mb5.0									
X16A	**Lo Mia Camp, P**	**48.34**	**85**	⇑P		**P**	**12 58 14.3**	**+0.4**
	baz=48,SNR=7.2									
ISCO	**Idaho Springs**	**48.36**	**76**	*e*P		**P**	**12 58 15.3**	**+1.2**
	comp=Z,7.0nm,1.3s,mb4.5									
ISCO	**Idaho Springs**	**48.36**	**76**	*e*P		**P**	**12 58 15.3**	**+1.2**
ISCO					pmax	pmax				
	comp=Z,7.0nm,1.3s,mb4.5									
U19A	**Dine' College,**	**48.46**	**82**	⇓P		**P**	**12 58 14.9**	**+0.1**
	baz=48									
P23A	**Jefferson**	**48.50**	**76**	⇓P		**P**	**12 58 15.1**	**-0.1**
	baz=48									
114A	**Black Gap (USA**	**48.58**	**88**	⇑P		**P**	**12 58 15.6**	**-0.2**
	baz=48									
Y16A	**Circle Bar Ran**	**48.67**	**86**	⇑P		**P**	**12 58 16.9**	**+0.4**
	baz=48,SNR=5.3									
R22A	**Saguache, Gunn**	**48.68**	**78**	⇑P		**P**	**12 58 17.1**	**+0.5**
	baz=48,SNR=7.1									
S22A	**4UR Ranch, Cre**	**48.95**	**79**	⇑P		**P**	**12 58 19.0**	**+0.4**
	baz=49,SNR=13									
T21A	**Navajo Lake**	**49.01**	**80**	⇑P		**P**	**12 58 18.7**	**-0.4**
	baz=49									
214A	**Organ Pipe Nat**	**49.17**	**89**	⇓P		**P**	**12 58 20.3**	**-0.1**
	baz=49,SNR=6.6									
Y17A	**Roosevelt**	**49.19**	**85**	⇑P		**P**	**12 58 20.7**	**+0.2**
	baz=49,SNR=7.8									
V20A	**Brimhall**	**49.23**	**82**	⇑P		**P**	**12 58 21.6**	**+0.8**
	baz=49									
U21A	**Nageezi**	**49.31**	**80**	⇓P		**P**	**12 58 21.5**	**+0.1**
	baz=49,SNR=16									
T22A	**Edith**	**49.38**	**79**	⇓P		**P**	**12 58 22.3**	**+0.4**
	baz=49,SNR=12									
P25A	**Willow Gulch B**	**49.40**	**75**	⇓P		**P**	**12 58 22.3**	**+0.2**
	baz=49									
SPITS	**Spitsbergen Ar**	**49.63**	**357**	P		**P**	**12 58 22.2**	**-1.1**
	comp=Z,39nm,1.0s,mb5.4,baz=27,slow=5.2,SNR=5.5									
X19A	**St. Johns**	**49.65**	**84**	⇓P		**P**	**12 58 23.8**	**-0.2**
	baz=50									
W20A	**Ramah**	**49.66**	**82**	⇑P		**P**	**12 58 24.1**	**+0.1**
	baz=50									
R24A	**Sanders Place,**	**49.67**	**77**	⇑P		**P**	**12 58 23.8**	**-0.3**
	baz=50									
Z17A	**San Carlos Hig**	**49.69**	**86**	⇑P		**P**	**12 58 24.4**	**+0.1**
	baz=50									
V21A	**Milan**	**49.73**	**81**	⇑P		**P**	**12 58 24.7**	**+0.1**
	baz=50,SNR=5.0									
Q25A	**Bedland, Calha**	**49.74**	**76**	⇑P		**P**	**12 58 25.0**	**+0.3**
	baz=50									
SDCO	**Great Sand Dun**	**49.75**	**78**	*e*P		**P**	**12 58 26.0**	**+1.3**
	comp=Z,7.3nm,1.0s,mb4.7									
U22A	**Llaves**	**49.83**	**80**	⇑P		**P**	**12 58 25.5**	**+0.1**
	baz=50									
216A	**Three Points,**	**49.97**	**88**	⇓P		**P**	**12 58 26.7**	**+0.2**
	baz=50									
Y19A	**Nutrioso**	**49.98**	**84**	⇓P		**P**	**12 58 27.0**	**+0.4**
	baz=50									
S24A	**Houchin Ranch,**	**49.99**	**78**	⇑P		**P**	**12 58 26.7**	**+0.2**
	baz=50,SNR=6.6									
117A	**Oracle**	**50.02**	**86**	⇓P		**P**	**12 58 26.8**	**0.0**
	baz=50,SNR=8.5									
X20A	**Quemado**	**50.05**	**83**	⇑P		**P**	**12 58 26.9**	**-0.2**
	baz=50,SNR=12									
V22A	**San Miguel Ran**	**50.10**	**80**	⇓P		**P**	**12 58 27.7**	**+0.2**
	baz=50,SNR=5.2									
TUC	**Tucson**	**50.17**	**87**	*e*P		**P**	**12 58 28.0**	**+0.1**
	comp=Z,24nm,1.4s,mb5.0									
TUC	**Tucson**	**50.17**	**87**	*e*P		**P**	**12 58 28.0**	**0.0**
TUC					pmax	pmax				
	comp=Z,24nm,1.4s,mb5.0									
U23A	**El Rito**	**50.26**	**80**	⇓P		**P**	**12 58 28.8**	**+0.1**
	baz=50,SNR=12									
DAG	**Danmarks Havn**	**50.42**	**7**	⇑*i*P		**P**	**12 58 31.0**	**+1.7**
DAG					pmax	pmax				
	comp=Z,3.0nm,0.7s,mb4.4									
DAG	**Danmarks Havn**	**50.42**	**7**	⇑*i*P		**P**	**12 58 31.0**	**+1.7**
	comp=Z,3.4nm,0.7s,mb4.5									
118A	**Homack Ranch,**	**50.44**	**86**	⇓P		**P**	**12 58 30.3**	**+0.2**
	baz=50,SNR=8.9									
217A	**Green Valley**	**50.52**	**87**	⇑P		**P**	**12 58 30.5**	**-0.1**
	baz=50									
X21A	**Alamocita Cree**	**50.55**	**83**	⇑P		**P**	**12 58 31.7**	**+0.8**
	baz=50,SNR=14									
Y20A	**Horse Springs,**	**50.55**	**83**	⇑P		**P**	**12 58 31.5**	**+0.7**
	baz=50,SNR=7.8									
V23A	**Ortiz Mt. (NFS**	**50.66**	**80**	⇓P		**P**	**12 58 32.0**	**+0.4**
	baz=50,SNR=7.4									
NJ2	**Nanjing**	**50.72**	**273**	*e*P		**P**	**12 58 33.8**	**+1.7**
NJ2					pmax	pmax				
	comp=Z,10.0nm,0.6s,mb4.9									
119A	**Ashpeak Ranch,**	**50.76**	**85**	⇑P		**P**	**12 58 31.7**	**-0.7**
	baz=51									
T25A	**Trinidad**	**50.80**	**78**	⇑P		**P**	**12 58 32.9**	**+0.2**
	baz=51,SNR=17									
218A	**Dragoon**	**50.85**	**87**	⇑P		**P**	**12 58 33.1**	**0.0**
	baz=51,SNR=11									
Y21A	**Point of Rocks**	**50.91**	**83**	⇑P		**P**	**12 58 33.7**	**+0.1**
	baz=51									
Z20A	**Nine Sixteen R**	**50.96**	**84**	⇑P		**P**	**12 58 34.0**	**0.0**
	baz=51,SNR=6.9									
LAZ	**Ladron**	**50.98**	**82**	*e*P		**P**	**12 58 35.6**	**+1.5**
	comp=Z,7.7nm,1.1s,mb4.5									
X22A	**Bernardo**	**50.98**	**82**	⇓P		**P**	**12 58 34.2**	**+0.1**
	baz=51									
ANMO	**Albuquerque**	**51.02**	**81**	*e*P		**P**	**12 58 35.7**	**+1.3**
	comp=Z,7.4nm,1.2s,mb4.5									
ANMO	**Albuquerque**	**51.02**	**81**	*e*P		**P**	**12 58 35.7**	**+1.3**
ANMO					pmax	pmax				
	comp=Z,7.0nm,1.2s									
W23A	**Werner Place,**	**51.06**	**81**	⇑P		**P**	**12 58 34.9**	**+0.2**
	baz=51									
V24A	**Rampart Ranch,**	**51.22**	**80**	⇑P		**P**	**12 58 35.9**	**0.0**
	baz=51,SNR=10.0									
318A	**Bisbee**	**51.26**	**87**	⇓P		**P**	**12 58 36.3**	**+0.1**
	baz=51,SNR=6.3									
U25A	**Circle Dot Ran**	**51.29**	**78**	⇑P		**P**	**12 58 36.7**	**+0.3**
	baz=51,SNR=5.9									
120A	**U Bar Ranch, L**	**51.33**	**85**	⇑P		**P**	**12 58 37.0**	**+0.3**
	baz=51,SNR=5.5									
LPM	**Los Pinos Moun**	**51.34**	**82**	*e*P		**P**	**12 58 38.9**	**+2.1**
Y22A	**Socorro**	**51.40**	**82**	⇓P		**P**	**12 58 37.9**	**+0.7**
	baz=51,SNR=6.7									
X23A	**Hourglass Bar**	**51.43**	**81**	⇓P		**P**	**12 58 37.9**	**+0.5**
	baz=51									
BNM	**Barren Site**	**51.46**	**82**	*e*P		**P**	**12 58 39.1**	**+1.5**
	comp=Z,27nm,1.5s,mb5.0									
W24A	**Lazy 6 Ranch,**	**51.48**	**80**	⇓P		**P**	**12 58 38.1**	**+0.2**
	baz=51,SNR=11									
V25A	**Rancho No Teng**	**51.54**	**79**	⇑P		**P**	**12 58 38.8**	**+0.5**
	baz=51,SNR=9.2									
U26A	**Atchley Ranch,**	**51.69**	**78**	⇑P		**P**	**12 58 39.0**	**-0.5**
	baz=52									
319A	**Douglas**	**51.74**	**86**	⇓P		**P**	**12 58 39.8**	**0.0**
	baz=52,SNR=5.7									
220A	**Playas Peak, P**	**51.83**	**85**	⇑P		**P**	**12 58 40.3**	**-0.2**
	baz=52,SNR=7.5									
121A	**Cookes Peak, D**	**51.85**	**84**	⇑P		**P**	**12 58 40.1**	**-0.6**
	baz=52									
Z22A	**Elephant Butte**	**51.86**	**83**	⇑P		**P**	**12 58 40.3**	**-0.4**
	baz=52,SNR=8.9									
SUMG	**Summit**	**51.97**	**15**	*e*P		**P**	**12 58 41.6**	**+0.6**
	comp=Z,18nm,1.0s,mb5.0									
W25A	**X Bar L Ranch,**	**52.05**	**79**	⇑P		**P**	**12 58 41.8**	**-0.2**
	baz=52,SNR=14									
221A	**Mesquite Ranch**	**52.22**	**85**	⇓P		**P**	**12 58 43.8**	**+0.4**
	baz=52									
320A	**Kipp Ranch, An**	**52.23**	**86**	⇓P		**P**	**12 58 43.4**	**0.0**
	baz=52,SNR=7.2									
Z23A	**Rita Site, Whi**	**52.30**	**82**	⇑P		**P**	**12 58 44.2**	**+0.2**
	baz=52									
Y24A	**Capitan**	**52.33**	**81**	⇓P		**P**	**12 58 44.3**	**+0.1**
	baz=52,SNR=17									
CBKS	**Cedar Bluff**	**52.48**	**73**	*e*P		**P**	**12 58 44.7**	**-0.5**
	comp=Z,19nm,0.9s,mb5.0									
CBKS	**Cedar Bluff**	**52.48**	**73**	*e*P		**P**	**12 58 44.7**	**-0.5**
CBKS					pmax	pmax				
	comp=Z,19nm,0.9s,mb5.0									
Y25A	**Mesa, Roswell**	**52.79**	**81**	⇑P		**P**	**12 58 47.1**	**-0.5**
	baz=53,SNR=9.4									
X26A	**CR and CF Fran**	**52.89**	**80**	⇑P		**P**	**12 58 47.9**	**-0.5**
	baz=53,SNR=8.8									
W27A	**Bowe Ranch, En**	**53.00**	**79**	⇓P		**P**	**12 58 49.5**	**+0.4**
	baz=53									
124A	**Stringfield Ra**	**53.16**	**82**	⇓P		**P**	**12 58 49.6**	**-0.8**
	baz=53,SNR=7.3									
Z25A	**Roswell**	**53.21**	**81**	⇓P		**P**	**12 58 50.4**	**-0.3**
	baz=53									
Y26A	**Elida**	**53.31**	**80**	⇑P		**P**	**12 58 50.9**	**-0.5**
	baz=53									
224A	**Cornudas Mount**	**53.55**	**83**	⇓P		**P**	**12 58 52.8**	**-0.4**
	baz=53,SNR=8.1									
Z26A	**Caprock**	**53.66**	**81**	⇑P		**P**	**12 58 53.4**	**-0.6**
	baz=54,SNR=8.1									
125A	**Gardner Draw,**	**53.68**	**82**	⇓P		**P**	**12 58 53.6**	**-0.5**
	baz=54,SNR=12									
Y27A	**Causey**	**53.74**	**80**	⇓P		**P**	**12 58 54.0**	**-0.6**
	baz=54,SNR=14									
MNTX	**Cornudas Mount**	**53.90**	**83**	*e*P		**P**	**12 58 54.9**	**-0.9**
	comp=Z,9.0nm,1.0s,mb4.7									
MSTX	**Muleshoe**	**53.92**	**79**	⇓P		**P**	**12 58 55.0**	**-0.8**
	baz=54,SNR=9.9									
225A	**Deer Hill, Car**	**53.95**	**82**	⇓P		**P**	**12 58 55.6**	**-0.5**
	baz=54									
324A	**Moseley Ranch,**	**54.02**	**84**	⇓P		**P**	**12 58 56.6**	**0.0**
	baz=54,SNR=6.3									
126A	**Clayton Basin,**	**54.07**	**81**	⇓P		**P**	**12 58 56.4**	**-0.6**
	baz=54									
Z27A	**Tatum**	**54.10**	**80**	⇓P		**P**	**12 58 56.2**	**-1.0**
	baz=54									
325A	**Bean Ranch, Si**	**54.38**	**83**	⇑P		**P**	**12 58 59.0**	**-0.3**
	baz=54,SNR=12									
425A	**Indio Mountain**	**54.78**	**84**	⇑P		**P**	**12 59 02.1**	**0.0**
	baz=55,SNR=7.9									
ZAA0	**Zalesovo Array**	**54.83**	**315**	*e*P		**P**	**12 59 01.9**	**-0.3**
ZALV	**Zalesovo Beam**	**54.83**	**315**	P		**P**	**12 59 00.9**	**-1.3**
	comp=Z,1.3nm,0.6s,mb4.1,baz=39,slow=5.7,SNR=6.7									
ZALV					LR	LR	13 24 21.9			
	comp=Z,206nm,18.0s,MS4.2,baz=51,slow=38									
ZALV	**Zalesovo Beam**	**54.83**	**315**	P		**P**	**12 59 00.9**	**-1.3**
ZALV					pmax	pmax				
	comp=Z,1.0nm,0.6s,mb4.0									
ZALV					MLR	MLR				
	comp=Z,206nm,18.0s,MS4.2									
326A	**Caldwell Ranch**	**55.02**	**83**	⇑P		**P**	**12 59 03.9**	**0.0**
	baz=55,SNR=6.3									
426A	**McDonald Obser**	**55.45**	**83**	⇑P		**P**	**12 59 06.9**	**-0.1**
	baz=55,SNR=6.7									
328A	**Wristen Ranch,**	**55.69**	**82**	⇑P		**P**	**12 59 08.2**	**-0.5**
	baz=56,SNR=9.7									
427A	**Hayter Ranch,**	**55.70**	**83**	⇓P		**P**	**12 59 07.5**	**-1.4**
	baz=56									
WMOK	**Wichita Mounta**	**55.79**	**76**	*e*P		**P**	**12 59 09.2**	**-0.2**
	comp=Z,4.4nm,0.8s,mb4.5									
WMOK	**Wichita Mounta**	**55.79**	**76**	*e*P		**P**	**12 59 09.2**	**-0.2**
WMOK					pmax	pmax				
	comp=Z,4.0nm,0.8s,mb4.5									
526A	**Mary Lane Ranc**	**55.84**	**84**	⇓P		**P**	**12 59 09.5**	**-0.3**
	baz=56,SNR=7.7									
626A	**Big Bend Ranch**	**56.17**	**84**	⇑P		**P**	**12 59 11.6**	**-0.6**
	baz=56,SNR=14									
428A	**Kincaid Ranch,**	**56.23**	**82**	⇓P		**P**	**12 59 12.3**	**-0.2**
	baz=56,SNR=11									
528A	**Cox Ranch, San**	**56.56**	**83**	⇑P		**P**	**12 59 14.7**	**-0.2**
	baz=56,SNR=11									
TXAR	**Lajitas Array**	**56.61**	**84**	P		**P**	**12 59 13.3**	**-2.1**
TXAR					LR	LR	13 22 18.9			
TXAR	**Lajitas Array**	**56.61**	**84**	P		**P**	**12 59 13.3**	**-2.1**
	comp=Z,4.1nm,0.7s,mb4.6,baz=301,slow=4.2,SNR=32									
TXAR					LR	LR	13 22 19.0			
	comp=Z,266nm,18.0s,MS4.4,baz=0.0,slow=35									
627A	**Terlingua Ranc**	**56.70**	**84**	⇓P		**P**	**12 59 15.3**	**-0.6**
	baz=57,SNR=10.0									
LZH	**Lanzhou**	**56.99**	**288**	*e*P		**P**	**12 59 17.5**	**-0.5**
LZH					pP	pP	12 59 22.0	+0.2		
LZH					sP	sP	12 59 24.5	+1.3		
LZH					pmax	pmax				
	comp=Z,13nm,1.0s,mb4.9									
LZH					pmax	pmax				
	comp=Z,70nm,5.0s									
LZH					LR	LR				
	comp=N,1μm,17.2s									
LZH					LR	LR				
	comp=Z,2μm,18.4s,MS5.2									
ARCES	**ARCESS Array B**	**57.55**	**351**	P		**P**	**12 59 20.3**	**-1.1**
	comp=Z,3.7nm,0.7s,mb4.5,baz=14,slow=6.2,SNR=7.9									
ARCES	**ARCESS Array B**	**57.55**	**351**	P		**P**	**12 59 20.3**	**-1.1**
ARCES					pmax	pmax				
	comp=Z,4.0nm,0.7s									
SCHQ	**Schefferville**	**58.10**	**40**	LR		LR	13 25 33.6			
	comp=Z,1μm,18.0s,MS5.0,baz=129,slow=37									
JCT	**Junction City**	**58.15**	**80**	*e*P		**P**	**12 59 26.8**	**+0.6**
	comp=Z,7.8nm,0.8s,mb4.8									
JCT	**Junction City**	**58.15**	**80**	*e*P		**P**	**12 59 26.8**	**+0.6**
JCT					pmax	pmax				
	comp=Z,8.0nm,0.8s,mb4.8									
APA	**Apatity**	**58.53**	**347**	⇑*e*P		**P**	**12 59 29.0**	**+0.7**
APA					pmax	pmax				
	comp=Z,15nm,1.1s,mb4.9									
APA					MLR	MLR				
	comp=Z,400nm,18.0s,MS4.6									
MIAR	**Mount Ida**	**59.00**	**73**	*e*P		**P**	**12 59 31.5**	**-0.6**
	comp=Z,16nm,1.0s,mb5.0									
MIAR	**Mount Ida**	**59.00**	**73**	*e*P		**P**	**12 59 31.5**	**-0.6**
MIAR					pmax	pmax				
	comp=Z,16nm,1.0s,mb5.0									
KURK	**Kurchatov**	**59.81**	**315**	P		**P**	**12 59 37.5**	**+0.1**
	comp=Z,5.1nm,0.7s,mb4.7,baz=40,slow=6.7,SNR=18									
KURK	**Kurchatov**	**59.81**	**315**	*c i*P		**P**	**12 59 37.1**	**-0.3**
KURK					pmax	pmax				
	comp=Z,14nm,1.2s,mb4.9									
KURK					MLR	MLR				
	comp=Z,270nm,15.0s,MS4.5									
HKT	**Hockley**	**60.92**	**78**	*e*P		**P**	**12 59 46.9**	**+1.5**
	comp=Z,22nm,1.5s,mb5.1									
HKT	**Hockley**	**60.92**	**78**	*e*P		**P**	**12 59 46.9**	**+1.5**
HKT					pmax	pmax				
	comp=Z,22nm,1.5s,mb5.1									
MKAR	**Makanchi Array**	**61.00**	**310**	P		**P**	**12 59 44.8**	**-0.8**
	comp=Z,2.7nm,0.9s,mb4.4,baz=58,slow=6.4,SNR=18									
MKAR					LR	LR	13 26 46.7			
	comp=Z,171nm,20.5s,MS4.2,baz=268,slow=37									
MKAR	**Makanchi Array**	**61.00**	**310**	*i* P		**P**	**12 59 44.7**	**-0.9**
MKAR					pmax	pmax				
	comp=Z,3.0nm,0.9s									
BVAR	**Borovoye Array**	**61.46**	**321**	P		**P**	**12 59 48.7**	**+0.1**
	comp=Z,5.7nm,0.6s,mb4.9,baz=54,slow=7.5,SNR=22									
BVAR	**Borovoye Array**	**61.46**	**321**	P		**P**	**12 59 48.7**	**+0.1**
BVAR					pmax	pmax				
	comp=Z,6.0nm,0.6s									
BRVK	**Borovoye**	**61.48**	**321**	*e*P		**P**	**12 59 48.8**	**+0.1**
	comp=Z,14nm,1.2s,mb5.0									
BRVK	**Borovoye**	**61.48**	**321**	*e*P		**P**	**12 59 48.8**	**+0.1**
BRVK					pmax	pmax				
	comp=Z,14nm,1.2s,mb5.0									
SJUU	**Sjulsmark**	**61.83**	**352**	P		**S**	**13 08 15.4**	**+1.8**
GYA	**Guiyang**	**62.15**	**278**	P		**P**	**12 59 55.8**	**+2.1**
GYA					PP	PP	13 02 14.0	+3.8		
GYA					ScP	ScP	13 04 35.4	+0.1		
GYA					S	**S**	**13 08 18.6**	**-0.1**		
GYA					SKS		13 09 43.1			
GYA					SS	SS	13 12 23.5	+2.3		
GYA					pmax	pmax				
	comp=Z,10.0nm,1.0s,mb4.9									
GYA					pmax	pmax				
	comp=Z,110nm,5.6s									
GYA					LR	LR				
	comp=N,550nm,18.6s,MS4.8									
GYA					LR	LR				
	comp=E,420nm,19.8s,MS4.8									
GYA					LR	LR				
	comp=Z,590nm,18.6s,MS4.8									
ARU	**Arti**	**62.87**	**330**	*e*P		**P**	**12 59 58.3**	**+0.3**
	comp=Z,5.8nm,0.9s,mb4.7									
ARU	**Arti**	**62.87**	**330**	*c i*P		**P**	**12 59 58.9**	**+0.9**
ARU							13 02 14.9			
ARU					S	**S**	**13 08 30.3**	**+3.4**		
ARU					SS	SS	13 12 28.2	-2.7		
ARU					pmax	pmax				
	comp=Z,7.0nm,1.2s,mb4.7									
ARU					MLR	MLR				
	comp=Z,331nm,20.0s,MS4.5									
BREU	**Bredtraesk**	**63.67**	**353**	P		**S**	**13 08 47.7**	**+11**		
KLMR	**Klimovskoe**	**63.79**	**342**	*e*P		**P**	**13 00 01.9**	**-2.1**		
KLMR					pmax	pmax				
	comp=Z,16nm,1.8s,mb4.8									
FINES	**FINESS Array B**	**65.34**	**349**	P		**P**	**13 00 12.7**	**-1.5**		
	comp=Z,7.1nm,1.0s,mb4.7,baz=29,slow=4.4,SNR=6.7									
FINES					LR	LR	13 33 09.3			
	comp=Z,184nm,19.0s,MS4.3,baz=1.1,slow=40									
FINES	**FINESS Array B**	**65.34**	**349**	P		**P**	**13 00 12.7**	**-1.5**		
FINES					pmax	pmax				
	comp=Z,7.0nm,1.0s									
FINES					MLR	MLR				
	comp=Z,184nm,19.0s									
KMI	**Kunming**	**65.52**	**280**	P		**P**	**13 00 16.8**	**+0.9**		
KMI					pP	pP	13 00 20.5	+0.8		
KMI					sP	sP	13 00 21.7	+0.6		
KMI					PP	PP	13 02 43.2	+3.4		
KMI					S	S	13 09 01.0	+0.4		
KMI					SS	SS	13 13 15.1	+1.4		
KMI					pmax	pmax				
	comp=Z,8.0nm,0.7s,mb4.9									
KMI					LR	LR				
	comp=N,440nm,18.9s,MS4.7									
KMI					LR	LR				
	comp=E,210nm,18.3s,MS4.7									
KMI					LR	LR				
	comp=Z,310nm,23.3s,MS4.4									
QIZ	**Qiongzhong**	**65.73**	**270**	P		**P**	**13 00 16.4**	**-0.9**		
QIZ					S	S	13 09 06.6	+3.4		
QIZ					LR	LR				
	comp=Z,110nm,26.7s,MS3.9									
NOA	**NORSAR Array B**	**66.93**	**356**	P		**P**	**13 00 23.3**	**-1.1**		
NOA					LR	LR	13 27 07.7			
NOA	**NORSAR Array B**	**66.93**	**356**	P		**P**	**13 00 23.3**	**-1.1**		
	comp=Z,5.1nm,1.0s,mb4.5,baz=2.6,slow=6.3,SNR=6.8									
NOA					LR	LR	13 27 07.7			
	comp=Z,122nm,21.9s,MS4.1,baz=0.0,slow=34									
AAK	**Ala-Archa**	**67.78**	**311**	⇑*e*P		**P**	**13 00 31.6**	**+1.5**		
AAK					pmax	pmax				
	comp=Z,3.0nm,1.0s,mb4.3									
AAK					MLR	MLR				
	comp=Z,146nm,20.0s,MS4.2									
TAOE	**Nuku Hiva Isla**	**68.04**	**142**	*e*LR		LR	13 20 47.2			
	comp=Z,180nm,24.5s									
ABKAR	**Akbulak array**	**68.39**	**324**	*e*P		**P**	**13 00 33.4**	**-0.4**		
	comp=Z,1.9nm,0.7s,mb4.2									
OBN	**Obninsk**	**69.72**	**341**	⇑*e*P		**P**	**13 00 43.8**	**+1.9**		
OBN					*e*		13 03 15.4			
OBN					eS	S	13 09 42.6	-7.5		
OBN					eSS	SS	13 14 11.1	-5.9		
OBN					pmax	pmax				
	comp=Z,5.0nm,0.5s,mb4.7									
PMOR	**Pomariorio Ree**	**71.17**	**152**	*e*T			14 17 55.4			
	comp=Z,9.6nm,0.2s									
VRHR	**Novokhopersk**	**72.32**	**336**	*e*P		**P**	**13 00 56.8**	**-1.0**		
VRHR					pmax	pmax				
	comp=N,10.0nm,0.4s									
VRHR					pmax	pmax				
	comp=E,9.0nm,0.4s									
VRHR					pmax	pmax				
	comp=Z,20nm,0.4s,mb5.4									
VSR	**Storozhevoye**	**72.80**	**338**	*e*P		**P**	**13 01 00.4**	**-0.2**		
VSR					pmax	pmax				
	comp=N,9.0nm,0.6s									
VSR					pmax	pmax				
	comp=E,6.0nm,0.6s									
VSR					pmax	pmax				
	comp=Z,10.0nm,0.6s,mb4.9									
VSR					MLR	MLR				
	comp=N,230nm,18.0s,MS4.7									
VSR					MLR	MLR				
	comp=E,280nm,18.0s,MS4.7									
VSR					MLR	MLR				
	comp=Z,220nm,18.0s,MS4.5									
CMAR	**Chiang Mai Arr**	**72.84**	**278**	LR		LR	13 38 16.1			
	comp=Z,153nm,18.6s,MS4.3,baz=239,slow=40									
VORD	**Divnogorie**	**73.00**	**338**	*e*P		**P**	**13 01 01.4**	**-0.4**		
VORD					pmax	pmax				
	comp=N,8.0nm,0.6s									
VORD					pmax	pmax				
	comp=E,8.0nm,0.6s									
VORD					pmax	pmax				
	comp=Z,8.0nm,0.6s,mb4.8									
VORD					MLR	MLR				
	comp=N,370nm,20.0s,MS4.7									
VORD					MLR	MLR				
	comp=E,120nm,20.0s,MS4.7									
VORD					MLR	MLR				
	comp=Z,230nm,20.0s,MS4.5

16nm,1.1s
ILAR Eielson Array 19.41 38 P Pn 12 56 16.1 -0.7
0.8nm,0.3s,baz=226,slow=8.2,SNR=12
INK Inuvik 25.70 35 P P 12 57 19.6 -0.2
4.1nm,0.6s,mb4.2,baz=241,slow=15,SNR=7.6
YKA Yellowknife Ar 33.24 48 P P 12 58 28.4 +1.7
0.8nm,0.7s,mb3.7,baz=282,slow=8.7,SNR=3.5
MJAR Matsushiro Arr 35.91 263 P P 12 58 50.0 0.0
1.0nm,0.6s,mb3.9,baz=44,slow=6.2,SNR=3.9
YBH Yreka Blue Hor 36.77 85 P P 12 58 57.8 +0.4
0.9nm,0.7s,mb3.7,baz=308,slow=12,SNR=2.4
BSMT Bassoo Peak 38.29 71 eP P 12 59 08.2 -2.0
8.9nm,1.3s,mb4.3
WVOR Wild Horse Val 38.86 81 P P 12 59 18.2 +3.2
MSO Missoula 39.30 72 eP P 12 59 10.7 -8.0
4.4nm,1.1s,mb4.1
NVAR Mina Array Bea 41.45 86 P P 12 59 38.8 +2.3
2.7nm,0.8s,mb3.9,baz=285,slow=9.0,SNR=6.1
KSRS Korea Array 41.66 272 P P 12 59 37.8 -0.5
1.7nm,0.9s,mb3.6,baz=68,slow=6.7,SNR=4.3
WUAZ Wupatki 47.57 84 eP P 13 00 23.5 -2.0
5.7nm,0.8s,mb4.7
SONM Songino Array 48.13 298 P P 13 00 28.3 -1.4
0.5nm,0.5s,mb3.8,baz=50,slow=4.6,SNR=4.3
LAZ Ladron 50.91 82 eP P 13 00 53.0 +2.0
7.1nm,1.5s,mb4.4
MNTX Cornudas Mount 53.83 83 eP P 13 01 13.1 +0.4
ZALV Zalesovo Beam 55.00 315 P P 13 01 20.0 -0.9
0.7nm,0.5s,mb4.0,baz=37,slow=9.9,SNR=2.7
TXAR Lajitas Array 56.54 84 P P 13 01 32.7 +0.4
2.2nm,0.7s,mb4.3,baz=298,slow=6.5,SNR=6.0
KURK Kurchatov 59.98 315 P P 13 01 56.3 +0.2
2.5nm,0.8s,mb4.3,baz=40,slow=6.7,SNR=4.9
MKAR Makanchi Array 61.16 310 P P 13 02 03.4 -0.8
1.0nm,0.7s,mb4.0,baz=50,slow=5.9,SNR=5.3
BVAR Borovoye Array 61.63 321 P P 13 02 07.1 -0.2
2.3nm,0.7s,mb4.5,baz=47,slow=5.8,SNR=4.6
NOA NORSAR Array B 67.08 356 P P 13 02 41.9 -0.9
NOA NORSAR Array B 67.08 356 P P 13 02 41.9 -0.9
1.8nm,0.9s,mb4.1,baz=1.6,slow=6.3,SNR=3.5
BRTR Keskin Array B 85.09 338 P P 13 04 26.0 +0.2
0.9nm,0.9s,mb3.9,baz=64,slow=6.6,SNR=3.2
ASAR Alice Springs 87.42 225 P P 13 04 37.2 0.0
0.9nm,0.6s,mb4.2,baz=28,slow=5.2,SNR=9.9
MMAI Mount Meron Ar 91.02 334 LR LR 13 52 58.9
comp=Z,158nm,18.2s,baz=350,slow=40
MAW Mawson 148.31 218 PKPbc PKPbc 13 11 35.4 +0.6
1.7nm,0.6s,baz=46,slow=3.7,SNR=2.3

*CSEM **07** 13:03:05.5±0.4,50.2°±22N×19.1°±14E,h1km,ML2.6/4, Error ellipse: s-maj=13.2km s-min=4.5km az=2.0*
*PRU **07** 13:03:06.7,50.1°±15N×19.2°±12E,h0km*
WAR 07 13:03:06.3,50.1°±11N×19.2°±21E,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.40**	**74**	*eP*	Pg	13 03 14.2	+0.3
OJC				*eS*	Sg	13 03 20.1	+1.1
OJC	**Ojcow**	**0.40**	**74**	*eP*	Pg	13 03 14.2	+0.3
OJC				*eS*	Sg	13 03 20.1	+1.1
OKC	**Ostrava-Krasne**	**0.74**	**249**	*eP*	Pg	13 03 20.9	+0.5
OKC				*eS*	Sg	13 03 30.3	+0.4
	comp=Z,14nm,0.4s						
OKC	**Ostrava-Krasne**	**0.74**	**249**	Pg	Pg	13 03 20.9	+0.5
OKC				Sg	Sg	13 03 30.3	+0.4
	comp=Z,14nm,0.4s						
NIE	**Niedzica**	**1.00**	**134**	*eP*	Pg	13 03 25.6	+0.2
NIE				*eS*	Sg	13 03 41.6	+3.3
NIE	**Niedzica**	**1.00**	**134**	*eP*	Pg	13 03 25.6	+0.2
NIE				*eS*	Sg	13 03 41.6	+3.3
MORC	**Moravsky Berou**	**1.13**	**253**	*eP*	Pg	13 03 27.5	-0.4
MORC				*eS*	Sg	13 03 41.9	-0.5
DPC	**Dobruska-Polom**	**1.87**	**278**	*eP*	Pg	13 03 39.3	-2.8
DPC				*eS*	Sg	13 04 04.9	-1.4
	comp=Z,6.6nm,0.3s						
DPC	**Dobruska-Polom**	**1.87**	**278**	Pg	Pg	13 03 39.3	-2.8
DPC				Sg	Sg	13 04 04.9	-1.4
	comp=Z,6.6nm,0.3s						
VRAC	**Vranov**	**1.88**	**246**	*eS*	Sg	13 04 02.8	-3.8
PRU	**Pruhonice**	**3.01**	**269**	*eS*	Sg	13 04 40.4	-2.5
	comp=Z,6.4nm,0.8s						
PRU	**Pruhonice**	**3.01**	**269**	Sg	Sg	13 04 40.4	-2.5
	comp=Z,6.4nm,0.8s						
KHC	**Kasperske Hory**	**3.79**	**257**	*eS*	Sg	13 05 05.8	-2.1
	comp=Z,2.6nm,0.4s						
KHC	**Kasperske Hory**	**3.79**	**257**	Sg	Sg	13 05 05.8	-2.1
	comp=Z,2.6nm,0.4s						

*IDC **07** 13:03:18.9±2.1,52.4°±42N×176.3°±38W,h0km,mb3.3/3, mb1 3.7/5,mb1mx3.4/26,mbtmp3.4/5,ML3.5/1, Error ellipse: s-maj=82.3km s-min=31.6km az=144.0*
*ISCJB **07** 13:03:20.5±1.2,52.2°±2N×0.2°×175.5°±5W×0.1°,h18km±12km, mb3.4/4, Error ellipse: s-maj=35.3km s-min=8.8km az=169.2*
*NEIC **07** 13:03:20.4±1.4,52.0°±2N×175.4°±5W,h7km±9km, ML3.0(AEIC), Error ellipse: s-maj=27.9km s-min=8.4km az=169.0*
ISC 07 13:03:20.7±1.2,52.1°±2N×0.2°×175.4°±8W±0.1°,h8km±9km,n9, σ0°±8°/10,mb3.4/4,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.36**	**269**	*eP*	**Pg**	**13 03 28.3**	**+0.6**
ATKA	**Atka Island**	**0.80**	**82**	P	**Pg**	**13 03 35.3**	**-0.6**
ATKA				S	**Sg**	**13 03 46.4**	**+0.1**
AMKA	**Amchitka**	**3.33**	**259**	P	**Pn**	**13 04 12.3**	**-0.6**
KDAK	**Kodiak Island**	**14.29**	**58**	Pn	**Pn**	**13 06 47.6**	**+4.6**
	0.2nm,0.3s,baz=259,slow=16,SNR=2.7						
ILAR	**Eielson Array**	**19.39**	**38**	P	**Pn**	**13 07 46.9**	**-0.8**
	baz=247,slow=10.0,SNR=4.0						
EGAK	**Eagle**	**21.65**	**41**	*eP*	**P**	**13 08 11.4**	**+0.4**
	1.8nm,0.6s,mb3.7						
NVAR	**Mina Array Bea**	**41.42**	**86**	P	**P**	**13 11 12.2**	**+4.8**
	0.3nm,0.7s,mb3.0,baz=275,slow=7.9,SNR=3.9						
TXAR	**Lajitas Array**	**56.51**	**84**	P	**P**	**13 13 04.8**	**+1.6**
	0.3nm,0.6s,mb3.5,baz=302,slow=4.2,SNR=3.6						
ASAR	**Alice Springs**	**87.44**	**225**	P	**P**	**13 16 07.6**	**-0.7**
	0.2nm,0.9s,mb3.4,baz=19,slow=6.0,SNR=3.1						

*IDC **07** 13:04:36.2±7.6,51.7°±88N×176.7°±92W,h0km,mb3.1/3, mb1 3.7/4,mb1mx3.4/26,mbtmp3.4/4,ML3.5/1, Error ellipse: s-maj=142.9km s-min=60.3km az=99.0*
NEIC 07 13:04:44.1±1.6,51.9°±99N×175.4°±46W,h10km,ML2.9(AEIC), Error ellipse: s-maj=39.5km s-min=11.3km az=181.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.39**	**286**	*eP*	Pg	13 04 51.0	-0.7
ATKA	**Atka Island**	**0.81**	**74**	P	Pg	13 04 57.9	-1.7
ATKA				S	Sg	13 05 08.8	-1.4
KDAK	**Kodiak Island**	**14.35**	**57**	Pn	Pn	13 08 10.9	+3.9
	0.2nm,0.3s,baz=256,slow=3.3,SNR=2.9						
ILAR	**Eielson Array**	**19.47**	**38**	P	Pn	13 09 11.4	-0.5
	0.4nm,0.5s,baz=236,slow=8.8,SNR=6.3						
EGAK	**Eagle**	**21.72**	**41**	*eP*	P	13 09 36.0	+0.9
NVAR	**Mina Array Bea**	**41.42**	**86**	P	P	13 12 32.1	+1.6
	0.3nm,0.6s,baz=289,slow=5.6,SNR=2.2						
TXAR	**Lajitas Array**	**56.51**	**84**	P	P	13 14 26.2	-0.2
	0.3nm,0.4s,baz=292,slow=6.4,SNR=5.8						

IDC 07 13:15:01.6±1.4,52.0°±4N×175.4°±3W,h0km,mb3.5/5, mb1 3.7/7,mb1mx3.5/27,mbtmp3.5/7,ML3.2/1,Error ellipse: s-maj=41.5km s-min=25.5km az=161.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**14.31**	**57**	Pn	Pn	13 18 25.8	+0.7
	0.1nm,0.3s,baz=280,slow=12,SNR=1.8						
ILAR	**Eielson Array**	**19.43**	**38**	P	Pn	13 19 27.6	-2.5
	0.1nm,0.3s,baz=234,slow=8.4,SNR=13						
INK	**Inuvik**	**25.72**	**35**	P	P	13 20 32.7	-0.4
	3.3nm,1.0s,baz=225,slow=4.3,SNR=3.3						
NVAR	**Mina Array Bea**	**41.40**	**86**	P	P	13 22 50.4	+1.1
	0.3nm,0.9s,baz=286,slow=7.4,SNR=3.0						
TXAR	**Lajitas Array**	**56.49**	**84**	P	P	13 24 45.7	+0.5
	0.2nm,0.3s,baz=314,slow=6.4,SNR=4.7						
MKAR	**Makanchi Array**	**61.24**	**310**	P	P	13 25 19.0	+1.0
	0.2nm,0.5s,baz=51,slow=7.6,SNR=3.8						
ASAR	**Alice Springs**	**87.41**	**225**	P	P	13 27 49.4	-1.0
	0.3nm,0.7s,baz=17,slow=4.8,SNR=3.5						

*ISCJB **07** 13:15:58.9±0.5,28.5°±2N±0.0°×129.5°±5E±0.0°,h27km±6km, mb3.7/11, Error ellipse: s-maj=12.5km s-min=5.9km az=37.1*
*NEIC **07** 13:15:59.1,28.5°±2N×129.5°±1E,h21km,mb4.0/1, After JMA.*
*JMA **07** 13:15:59.1,28.5°±2N×129.5°±1E,h21km±1km,M4.0*
JMA Felt II J1.
*IDC **07** 13:16:10.2±4.1,28.6°±1N×129.6°±2E,h118km±35km, mb3.4/10,mb1 3.5/11,mb1mx3.4/24,mbtmp3.4/11, Error ellipse: s-maj=33.2km s-min=21.9km az=68.0*
ISC 07 13:15:59.4±0.8,28.5°±3N±0.0°×129.5°±4E±0.0°,h19km±7km, n23,σ0°±9°/90/29,mb3.7/11,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAM	**Amami Oshima**	**0.13**	**156**	P	**Pg**	**13 16 03.4**	**-0.2**
JAM				S	**Sg**	**13 16 06.2**	**-0.2**
JZK	**Kikaishima**	**0.43**	**120**	P	**Pg**	**13 16 08.0**	**-0.4**
JZK				S	**Sg**	**13 16 14.8**	**+0.4**
JTK	**Tokunoshima**	**0.91**	**215**	P	**Pb**	**13 16 15.4**	**-1.1**
JTK				*eS*	**Sb**	**13 16 27.8**	**-0.4**
JNN	**Nakanoshima**	**1.34**	**12**	P	**Pn**	**13 16 22.8**	**-0.2**
JNN				*eS*	**Sn**	**13 16 40.1**	**-0.2**
JKC	**Kuchinoerabu**	**2.01**	**16**	P	**Pn**	**13 16 32.4**	**+0.2**
JKC				*eS*	**Sn**	**13 16 56.2**	**-0.6**
JOW	**Kunigami**	**2.03**	**214**	P	**Pn**	**13 16 33.2**	**+0.6**
JTN	**Tanegashima 3**	**2.46**	**30**	P	**Pn**	**13 16 40.3**	**+1.8**
JAGN	**Aguni-jima**	**2.81**	**227**	P	**Pn**	**13 16 43.6**	**+0.3**
JKE	**Kume jima 2**	**3.29**	**229**	P	**Pn**	**13 16 50.6**	**+0.7**
KSRS	**Korea Array**	**9.00**	**352**	P	**Pn**	**13 18 14.8**	**+6.5**
	0.1nm,0.3s,baz=162,slow=14,SNR=10.0						
KSRS				S	**Sn**	**13 19 57.6**	**+8.5**
	baz=179,slow=30,SNR=2.7						
SONM	**Songino Array**	**26.34**	**323**	P	**P**	**13 21 35.9**	**+1.9**
	0.2nm,0.4s,mb3.0,baz=144,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**40.92**	**310**	P	**P**	**13 23 40.6**	**+0.2**
	0.7nm,0.6s,mb3.5,baz=95,slow=10,SNR=8.1						
ZALV	**Zalesovo Beam**	**41.17**	**321**	P	**P**	**13 23 42.6**	**+0.3**
ZALV	**Zalesovo Beam**	**41.17**	**321**	P	**P**	**13 23 42.6**	**+0.3**
	0.5nm,0.5s,mb3.4,baz=106,slow=9.2,SNR=2.2						
UCH	**Uchtor**	**46.16**	**302**	*eP*	**P**	**13 24 24.6**	**+1.9**
	2.6nm,0.7s,mb4.3						
BVAR	**Borovoye Array**	**49.37**	**317**	P	**P**	**13 24 47.3**	**-0.1**
	1.1nm,0.6s,mb4.1,baz=90,slow=7.4,SNR=6.4						
BVAR				PcP	PcP	13 26 08.3	-1.4
	0.7nm,0.7s,baz=55,slow=5.5,SNR=3.1						
ASAR	**Alice Springs**	**52.06**	**175**	P	**P**	**13 25 08.8**	**+0.8**
	0.3nm,0.6s,mb3.4,baz=10.0,slow=13,SNR=5.8						
ILAR	**Eielson Array**	**61.87**	**29**	P	**P**	**13 26 16.1**	**-1.0**
	0.4nm,0.7s,mb3.7,baz=273,slow=6.4,SNR=8.2						
FINES	**FINESS Array B**	**71.44**	**330**	P	**P**	**13 27 16.9**	**-1.3**
	1.4nm,0.5s,mb4.1,baz=70,slow=8.8,SNR=6.6						
AKASG	**Malin Array Be**	**74.55**	**320**	P	**P**	**13 27 35.1**	**-1.6**
	0.2nm,0.3s,mb3.6,baz=53,slow=7.1,SNR=4.0						
BRTR	**Keskin Array B**	**76.55**	**308**	P	**P**	**13 27 48.5**	**0.0**
	1.7nm,0.9s,mb4.0,baz=76,slow=6.5,SNR=4.7						
NOA	**NORSAR Array B**	**77.77**	**334**	P	**P**	**13 27 53.6**	**-1.3**
NOA	**NORSAR Array B**	**77.77**	**334**	P	**P**	**13 27 53.6**	**-1.3**
	0.9nm,0.7s,mb3.8,baz=50,slow=5.4,SNR=3.2						

*IDC **07** 13:31:15.4±1.0,52.3°±3N×175.7°±7W,h0km,mb3.8/7, mb1 4.1/9,mb1mx3.8/26,mbtmp3.8/9,ML3.9/2,MS3.4/5, Ms1 3.5/5,ms1mx3.1/27, Error ellipse: s-maj=33.1km s-min=17.4km az=167.0*
*ISCJB **07** 13:31:16.4±1.4,52.2°±2N±0.1°×175.5°±9W±0.0°,h15km±10km, mb3.9/9,MS3.4/5, Error ellipse: s-maj=18.5km s-min=7.2km az=172.9*
*NEIC **07** 13:31:16.6±1.1,52.0°±9N×175.5°±5W,h12km±8km,mb4.1/3, ML3.8(AEIC), Error ellipse: s-maj=23.3km s-min=6.8km az=166.0*
ISC 07 13:31:16.1±1.2,52.2°±2N±0.1°×175.5°±5W±0.0°,h3km±10km, n25,σ1°±8°/28/23,mb3.9/9,MS3.4/5,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.34**	**247**	*eP*	**Pg**	**13 31 24.1**	**+1.6**
ATKA	**Atka Island**	**0.84**	**91**	P	**Pg**	**13 31 31.1**	**-1.0**
ATKA				S	**Sg**	**13 31 42.1**	**-0.8**
AMKA	**Amchitka**	**3.31**	**257**	P	**Pn**	**13 32 08.1**	**-0.5**
AKUT	**Akutan**	**6.18**	**68**	*eP*	**Pn**	**13 32 53.1**	**+4.9**
	56nm,0.9s						
SMY	**Shemya**	**6.34**	**279**	*eP*	**Pn**	**13 32 48.8**	**-1.6**
FALS	**False Pass**	**7.70**	**65**	*eP*	**Pn**	**13 33 09.6**	**+0.7**
	58nm,0.8s						
KDAK	**Kodiak Island**	**14.27**	**58**	Pn	**Pn**	**13 34 40.6**	**+1.9**
	0.3nm,0.3s,baz=280,slow=6.1,SNR=2.4						
TTA	**Tatalina**	**14.92**	**36**	*eP*	**Pn**	**13 34 56.1**	**+8.6**
	10nm,1.3s						
COLA	**College**	**19.01**	**38**	*eP*	**Pn**	**13 35 40.4**	**+1.3**
	4.6nm,0.8s						
ILAR	**Eielson Array**	**19.32**	**38**	P	**Pn**	**13 35 41.5**	**-1.5**
	0.3nm,0.3s,baz=246,slow=9.5,SNR=22						
MENT	**Mentasta**	**19.92**	**45**	*eP*	**Pn**	**13 35 49.4**	**-0.8**
EGAK	**Eagle**	**21.59**	**41**	*eP*	**P**	**13 36 06.8**	**+0.3**
	12nm,0.8s,mb4.4						
DAWY	**Dawson**	**22.11**	**44**	*eP*	**P**	**13 36 13.9**	**+1.8**
INK	**Inuvik**	**25.61**	**35**	P	**P**	**13 36 45.3**	**-0.8**
	2.2nm,0.8s,mb3.8,baz=262,slow=13,SNR=4.1						
INK				LR	LR	13 47 14.6	
	comp=Z,80nm,19.2s,MS3.3,baz=197,slow=38						
BBB	**Bella Bella**	**28.67**	**71**	LR	LR	13 46 48.3	
	comp=Z,59nm,20.0s,MS3.2,baz=290,slow=32						
MJAR	**Matsushiro Arr**	**35.90**	**263**	P	**P**	**13 38 16.7**	**-0.5**
	1.2nm,0.7s,mb3.9,baz=55,slow=15,SNR=3.1						
NVAR	**Mina Array Bea**	**41.46**	**86**	P	**P**	**13 39 06.0**	**+2.2**
	1.2nm,0.7s,mb3.6,baz=292,slow=8.4,SNR=8.5						
KSRS	**Korea Array**	**41.63**	**272**	P	**P**	**13 39 07.8**	**+2.5**
	0.5nm,0.6s,mb3.3,baz=52,slow=8.1,SNR=4.8						
KSRS				LR	LR	13 53 21.6	
	comp=Z,63nm,20.9s,MS3.5,baz=176,slow=32						
SONM	**Songino Array**	**48.06**	**298**	LR	LR	13 59 41.4	
	comp=Z,81nm,18.8s,MS3.7,baz=258,slow=36						
TXAR	**Lajitas Array**	**56.55**	**84**	P	**P**	**13 40 59.2**	**-0.4**
TXAR	**Lajitas Array**	**56.55**	**84**	P	**P**	**13 40 59.2**	**-0.4**
	1.1nm,0.7s,mb4.0,baz=308,slow=4.4,SNR=5.8						
MKAR	**Makanchi Array**	**61.06**	**310**	P	**P**	**13 41 28.6**	**-2.2**
	0.3nm,0.5s,mb3.7,baz=66,slow=3.6,SNR=3.5						
BVAR	**Borovoye Array**	**61.52**	**321**	P	**P**	**13 41 33.3**	**-0.4**
	0.9nm,0.6s,mb4.1,baz=67,slow=8.2,SNR=5.8						
NOA	**NORSAR Array B**	**66.96**	**356**	LR	LR	14 10 04.6	
	comp=Z,21nm,18.4s,MS3.4,baz=25,slow=35						
ASAR	**Alice Springs**	**87.49**	**225**	P	**P**	**13 44 04.2**	**-0.5**
	0.6nm,0.6s,mb4.0,baz=20,slow=5.5,SNR=8.7						

*IDC **07** 13:52:53.1±2.0,52.2°±7N×175.9°±3W,h0km,mb3.6/2, mb1 3.9/4,mb1mx3.5/26,mbtmp3.7/4,ML3.6/1,Error ellipse: s-maj=96.2km s-min=31.6km az=141.0*
*ISCJB **07** 13:52:55.0±1.1,52.2°±2N±0.1°×175.5°±1W±0.1°,h19km±11km, mb3.7/3, Error ellipse: s-maj=24.1km s-min=8.4km az=166.2*
*NEIC **07** 13:52:55.0±1.4,52.0°±4N×175.4°±6W,h7km±9km,mb3.7/2, ML3.3(AEIC),Error ellipse: s-maj=23.2km s-min=8.5km az=164.0*
ISC 07 13:52:55.2±1.1,52.1°±1N±0.1°×175.4°±7W±0.0°,h8km±8km,n11, σ1°±9°/01/12,mb3.7/3,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.36**	**272**	*eP*	**Pg**	**13 53 02.8**	**+0.5**
ATKA	**Atka Island**	**0.79**	**81**	P	**Pg**	**13 53 09.5**	**-1.0**
ATKA				S	**Sg**	**13 53 21.0**	**+0.3**
AMKA	**Amchitka**	**3.33**	**260**	P	**Pn**	**13 53 47.2**	**-0.2**
SPIA	**Saint Paul Isl**	**5.94**	**29**	P	**Pn**	**13 54 23.1**	**-0.2**
KDAK	**Kodiak Island**	**14.30**	**57**	Pn	**Pn**	**13 56 20.3**	**+2.6**
	0.2nm,0.3s,baz=280,slow=12,SNR=3.3						
COLA	**College**	**19.09**	**37**	*eP*	**Pn**	**13 57 18.3**	**-0.3**
	1.2nm,0.5s						
ILAR	**Eielson Array**	**19.41**	**38**	P	**Pn**	**13 57 19.6**	**-2.7**
	0.1nm,0.3s,baz=233,slow=8.4,SNR=13						
EGAK	**Eagle**	**21.66**	**41**	*eP*	**P**	**13 57 45.5**	**-0.2**
	5.0nm,0.8s,mb4.0						
DAWY	**Dawson**	**22.18**	**43**	*eP*	**P**	**13 57 52.0**	**+0.8**
TXAR	**Lajitas Array**	**56.51**	**84**	P	**P**	**14 02 38.2**	**+0.6**
	0.6nm,0.9s,mb3.6,baz=321,slow=7.0,SNR=3.0						
ASAR	**Alice Springs**	**87.43**	**225**	P	**P**	**14 05 42.2**	**-0.6**
	0.2nm,0.7s,mb3.4,baz=33,slow=7.0,SNR=3.2						

*IDC **07** 13:56:57.0±1.8,52.1°±9N×176.1°±5W,h0km,mb3.6/3, mb1 3.8/5,mb1mx3.4/27,mbtmp3.6/5,ML3.5/1, Error ellipse: s-maj=74.2km s-min=30.6km az=136.0*
*ISCJB **07** 13:57:00.9±1.0,52.1°±1N±0.2°×175.5°±1W±0.1°,h22km±9km, mb3.5/4, Error ellipse: s-maj=32.7km s-min=8.4km az=168.0*
*NEIC **07** 13:57:00.9±1.2,52.1°±6N×175.4°±4W,h2km±12km,mb3.6/1, ML3.4(AEIC), Error ellipse: s-maj=32.7km s-min=8.1km az=167.0*
ISC 07 13:57:01.1±1.2,52.2°±1N±0.2°×175.4°±8W±0.1°,h6km±11km, n11,σ0°±9°/96/12,mb3.5/4,1D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.36**	**257**	*eP*	**Pg**	**13 57 08.3**	**+0.2**
ATKA	**Atka Island**	**0.79**	**88**	P	**Pg**	**13 57 15.7**	**-0.6**
ATKA				S	**Sg**	**13 57 26.9**	**+0.4**
AMKA	**Amchitka**	**3.34**	**258**	*eP*	**Pn**	**13 57 54.2**	**+0.5**
KDAK	**Kodiak Island**	**14.26**	**58**	Pn	**Pn**	**14 00 22.7**	**-0.5**
	0.2nm,0.3s,baz=225,slow=11,SNR=2.5						
ILAR	**Eielson Array**	**19.34**	**38**	P	**Pn**	**14 01 26.3**	**-1.4**
	0.2nm,0.3s,baz=233,slow=9.0,SNR=17						
EGAK	**Eagle**	**21.59**	**41**	*eP*	**P**	**14 01 52.1**	**+1.0**
	2.0nm,0.7s,mb3.7						
DAWY	**Dawson**	**22.11**	**43**	*eP*	**P**	**14 01 59.1**	**+2.3**
INK	**Inuvik**	**25.62**	**35**	P	**P**	**14 02 30.1**	**-0.7**
	2.3nm,1.0s,mb3.6,baz=239,slow=5.9,SNR=3.1						
TXAR	**Lajitas Array**	**56.51**	**84**	P	**P**	**14 06 44.4**	**+0.5**
	0.2nm,0.5s,mb3.4,baz=289,slow=3.9,SNR=5.2						
PVCP	**Virac**	**61.31**	**254**	LR	**P**	**14 07 16.3**	**-1.1**
ASAR	**Alice Springs**	**87.49**	**225**	P	**P**	**14 09 44.6**	**-4.7**
	0.2nm,0.7s,mb3.5,baz=20,slow=5.6,SNR=2.8						

*NEIC **07** 14:14:54.7,37.5°±59N×21.0°±0E,h14km,MD3.5(ATH), After ATH.*
*CSEM **07** 14:14:54.7,37.5°±59N×21.0°±0E,h14km±2km,MD3.5, After ATH*
ATH 07 14:14:54.7,37.5°±59N×21.0°±0E,h14km±2km,MD3.5/9, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.60**	**38**	*eP*	Pb	14 15 06.7	-0.2
RLS				*eS*	Sb	14 15 14.3	-0.9
RLS	**Riolos of Patr**	**0.60**	**38**	*eP*	Pb	14 15 06.7	-0.2
RLS				*eS*	Sb	14 15 14.3	-0.9
RLS	**Riolos of Patr**	**0.60**	**38**	*eP*	Pb	14 15 06.7	-0.2
RLS				*eS*	Sb	14 15 14.3	-0.9
VLS	**Valsamata**	**0.67**	**331**	*eP*	Pg	14 15 07.3	-0.5
VLS				*eS*	Sb	14 15 17.9	+0.6
VLS	**Valsamata**	**0.67**	**331**	*eP*	Pg	14 15 07.2	-0.6
VLS				*eS*	Sb	14 15 17.9	+0.6
VLS	**Valsamata**	**0.67**	**331**	*eP*	Pg	14 15 07.3	-0.5
VLS				*eS*	Sb	14 15 17.9	+0.6
ITM	**Ithomi**	**0.84**	**119**	*eP*	Pb	14 15 11.1	0.0
ITM				*eS*	Sb	14 15 23.4	+1.1
ITM	**Ithomi**	**0.84**	**119**	*eP*	Pb	14 15 11.1	0.0
ITM				*eS*	Sb	14 15 23.4	+1.1
ITM	**Ithomi**	**0.84**	**119**	*eP*	Pb	14 15 11.1	0.0
ITM				*eS*	Sb	14 15 23.4	+1.1
PYL	**PYLOS**	**0.91**	**139**	*eP*	Pg	14 15 11.7	-0.6
PYL				*eS*	Sb	14 15 24.1	-0.1
PYL	**PYLOS**	**0.91**	**139**	*eP*	Pg	14 15 11.7	-0.6
PYL				*eS*	Sb	14 15 24.1	-0.1
GUR	**Goura**	**1.12**	**72**	*eP*	Pb	14 15 16.7	+0.9
GUR	**Goura**	**1.12**	**72**	*eP*	Pb	14 15 16.7	+0.9
VLX	**Vlachokerasia**	**1.12**	**101**	*eP*	Pn	14 15 15.9	0.0
VLX	**Vlachokerasia**	**1.12**	**101**	*eP*	Pn	14 15 15.9	0.0
LTK	**Loutraki**	**1.62**	**74**	*eP*	Pb	14 15 25.4	+1.1
LTK	**Loutraki**	**1.62**	**74**	*eP*	Pb	14 15 25.4	+1.1
AGG	**Agios Georgios**	**1.77**	**36**	*eP*	Pb	14 15 26.0	-1.0
AGG	**Agios Georgios**	**1.77**	**36**	*eP*	Pb	14 15 26.0	-1.0
AGG	**Agios Georgios**	**1.77**	**36**	*eP*	Pb	14 15 26.0	-1.0
VLI	**Veliai**	**1.77**	**119**	*eP*	Pn	14 15 27.4	+2.5
VLI	**Veliai**	**1.77**	**119**	*eP*	Pn	14 15 27.4	+2.5
VLI	**Veliai**	**1.77**	**119**	*eP*	Pn	14 15 27.4	+2.5
DID	**Didima**	**1.78**	**92**	*eP*	Pg	14 15 27.8	-1.1
DID	**Didima**	**1.78**	**92**	*eP*	Pg	14 15 27.8	-1.1
KYTH	**Kithira**	**2.09**	**128**	*eP*	Pn	14 15 32.2	+2.9
KYTH	**Kithira**	**2.09**	**128**	*eP*	Pn	14 15 32.2	+2.9
KYTH	**Kithira**	**2.09**	**128**	*eP*	Pn	14 15 32.2	+2.9

*IDC **07** 14:20:10.9±7.6,52.2°±25N×176.8°±9W,h0km,mb3.3/2, mb1 3.7/4,mb1mx3.3/26,mbtmp3.4/4,ML3.5/1,MS3.1/1, Ms1 3.1/1,ms1mx2.4/23, Error ellipse: s-maj=141.6km s-min=63.3km az=99.0*
*ISC

MJAR	**Matsushiro Arr**	**24.82**	**348**	P		**P**		**14 31 47.7**	**+0.7**
	0.8nm,0.5s,mb3.5,baz=157,slow=7.8,SNR=4.4								
KSRS	**Korea Array**	**29.07**	**333**	P		**P**		**14 32 25.5**	**+0.2**
	0.2nm,0.3s,mb3.3,baz=149,slow=8.6,SNR=3.6								
ASAR	**Alice Springs**	**37.08**	**196**	P		**P**		**14 33 35.6**	**+0.5**
	0.7nm,0.6s,mb3.7,baz=22,slow=10.0,SNR=15								
SONM	**Songino Array**	**47.51**	**326**	P		**P**		**14 34 60.0**	**+0.2**
	0.5nm,0.5s,mb3.8,baz=144,slow=6.9,SNR=3.7								
XMAS	**Kiritimati**	**58.61**	**95**	*eP*		**P**		**14 36 22.1**	**0.0**
MKAR	**Makanchi Array**	**62.06**	**317**	P		**P**		**14 36 45.6**	**+0.5**
	0.3nm,0.3s,mb3.9,baz=88,slow=9.7,SNR=5.4								
ZALV	**Zalesovo Beam**	**62.39**	**325**	P		**P**		**14 36 46.9**	**-0.2**
	0.4nm,0.3s,mb4.0,baz=127,slow=9.3,SNR=3.1								
KURK	**Kurchatov**	**65.24**	**320**	*eP*		**P**		**14 37 06.1**	**+0.1**
	0.9nm,0.4s,mb4.2								
KURK	**Kurchatov**	**65.24**	**320**	P		**P**		**14 37 06.5**	**+0.4**
	0.8nm,0.4s,mb4.1,baz=106,slow=6.5,SNR=5.6								
ILAR	**Eielson Array**	**70.05**	**25**	P		**P**		**14 37 35.2**	**-0.8**
	0.2nm,0.4s,mb3.4,baz=248,slow=5.8,SNR=10								
BVAR	**Borovoye Array**	**70.63**	**322**	P		**P**		**14 37 39.2**	**-0.6**
	0.8nm,0.4s,mb4.0,baz=110,slow=7.7,SNR=8.0								
YKA	**Yellowknife Ar**	**84.34**	**27**	P		**P**		**14 38 56.6**	**+0.3**
	0.6nm,0.7s,mb3.9,baz=287,slow=4.8,SNR=3.1								
NVAR	**Mina Array Bea**	**88.24**	**51**	P		**P**		**14 39 16.4**	**+0.6**
	0.3nm,0.5s,mb3.8,baz=0.0,slow=4.6,SNR=2.6								
FINES	**FINESS Array B**	**92.14**	**335**	P		**P**		**14 39 32.2**	**-1.4**
FINES	**FINESS Array B**	**92.14**	**335**	P		**P**		**14 39 32.2**	**-1.4**
	0.6nm,0.3s,mb4.4,baz=74,slow=3.9,SNR=5.9								

IDC 07 14:32:12.4±5.2, 23.41N×108.51W, h0km, mb3.0/1, mb1 3.5/3, mb1mx3.5/21, mbtmp3.0/3, ML3.2/1, Error ellipse: s-maj=85.7km s-min=31.8km az=147.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
TXAR	**Lajitas Array**	**7.32**	**35**	Pn	Pn		14 34 02.6	+2.0
	0.1nm,0.3s,baz=209,slow=14,SNR=4.1							
TXAR				Lg			14 36 02.4	
	0.1nm,0.3s,baz=216,slow=33,SNR=5.1							
NVAR	**Mina Array Bea**	**17.15**	**333**	P	Pn		14 36 15.1	+1.6
	0.1nm,0.3s,baz=147,slow=13,SNR=4.6							
ILAR	**Eielson Array**	**48.27**	**339**	P	P		14 40 54.4	-0.5
	0.2nm,0.8s,baz=144,slow=6.3,SNR=2.1							

*ISCJB **07** 14:34:13.6±1.3, 52.2N×0.1×175.51W×0.07, h11km±8km, mb3.8/7, Error ellipse: s-maj=19.5km s-min=6.1km az=169.3*
*IDC **07** 14:34:13.5±1.1, 52.12N×175.62W, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.6/26, mbtmp3.6/6, ML3.9/1, Error ellipse: s-maj=39.2km s-min=25.6km az=179.0*
*NEIC **07** 14:34:14.0±1.0, 52.07N×175.48W, h3km±6km, mb4.1/1, ML3.7(AEIC), Error ellipse: s-maj=15.1km s-min=5.7km az=168.0*

ISC 07 14:34:14.2±1.1, 52.1N±0.1×175.50W±0.08, h4km±8km, n17, σ0$70/20, mb3.8/7, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
GSTR	**Great Sitkin T**	**0.34**	**267**	*eP*	**Pg**		**14 34 21.3**	**+0.5**
ATKA	**Atka Island**	**0.81**	**83**	P	**Pg**		**14 34 29.1**	**-0.6**
ATKA				S	**Sg**		**14 34 40.2**	**+0.1**
AMKA	**Amchitka**	**3.31**	**259**	P	**Pn**		**14 35 06.3**	**-0.4**
AMKA				S	**Sn**		**14 35 47.0**	**+0.4**
UNV	**Unalaska Valle**	**5.71**	**69**	P	**Pn**		**14 35 39.5**	**-0.1**
SPIA	**Saint Paul Isl**	**5.92**	**29**	P	**Pn**		**14 35 43.2**	**+0.6**
AKUT	**Akutan**	**6.20**	**67**	*eP*	**Pn**		**14 35 51.2**	**+4.9**
	58nm,1.0s							
KDAK	**Kodiak Island**	**14.30**	**58**	Pn	**Pn**		**14 37 42.1**	**+4.9**
	0.5nm,0.3s,baz=296,slow=9.7,SNR=5.5							
ILAR	**Eielson Array**	**19.39**	**38**	P	**Pn**		**14 38 40.5**	**-1.3**
	0.2nm,0.3s,baz=237,slow=8.7,SNR=15							
EGAK	**Eagle**	**21.65**	**41**	*eP*	**P**		**14 39 05.4**	**+0.2**
	6.5nm,0.8s,mb4.1							
DAWY	**Dawson**	**22.17**	**43**	*eP*	**P**		**14 39 11.3**	**+0.6**
MDJ	**Mudanjiang**	**36.47**	**281**	P	**P**		**14 41 18.7**	**-1.3**
MDJ				PP	PP		14 42 41.1	-1.6
MDJ				S	**S**		**14 47 01.9**	**-0.3**
MDJ				ScP	ScP		14 47 30.7	-0.2
MDJ				SS	SS		14 49 41.5	+0.6
MDJ				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.1							
MDJ				pmax	pmax			
	comp=Z,16nm,3.9s							
MDJ				LR	LR			
	comp=N,88nm,23.0s							
MDJ				LR	LR			
	comp=E,120nm,23.0s							
MDJ				LR	LR			
	comp=Z,170nm,20.0s							
NVAR	**Mina Array Bea**	**41.44**	**86**	P	**P**		**14 42 02.4**	**+0.7**
	comp=Z,0.5nm,0.7s,mb3.3,baz=285,slow=7.9,SNR=3.5							
TXAR	**Lajitas Array**	**56.53**	**84**	P	**P**		**14 43 58.2**	**+0.7**
TXAR	**Lajitas Array**	**56.53**	**84**	P	**P**		**14 43 58.2**	**+0.7**
	comp=Z,1.3nm,0.7s,mb4.0,baz=299,slow=5.2,SNR=11							
KURK	**Kurchatov**	**59.98**	**315**	P	**P**		**14 44 22.4**	**+1.1**
	comp=Z,0.2nm,0.4s,mb3.5,baz=39,slow=5.9,SNR=3.0							
BVAR	**Borovoye Array**	**61.63**	**321**	P	**P**		**14 44 31.7**	**-0.8**
	comp=Z,0.2nm,0.4s,mb3.6,baz=52,slow=2.4,SNR=2.3							
ASAR	**Alice Springs**	**87.44**	**225**	P	**P**		**14 47 02.1**	**-0.4**
	comp=Z,0.4nm,0.6s,mb3.9,baz=20,slow=5.5,SNR=12							

*IDC **07** 14:36:25.8±3.9, 36.47N×71.07E, h186km±32km, mb3.3/6, mb1 3.3/12, mb1mx3.2/27, mbtmp3.2/12, Error ellipse: s-maj=28.6km s-min=19.9km az=5.0*
*ISCJB **07** 14:36:27.8±0.5, 36.67N±0.03×71.17E±0.06, h214km±6km, mb3.3/7, Error ellipse: s-maj=8.1km s-min=5.3km az=179.5*
*BJI **07** 14:36:27.4, 36.48N×71.18E, h208km, mb4.1/1*
*NEIC **07** 14:36:28.7±0.8, 36.62N×71.15E, h211km±7km, mb4.4/5, Error ellipse: s-maj=12.7km s-min=8.7km az=124.0*

ISC 07 14:36:28.8±0.5, 36.67N±0.03×71.19E±0.06, h205km±5km, n46, σ1$05/53, mb3.3/7, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KBL	**Kabul**	**2.75**	**220**	*eP*	**Pn**		**14 37 16.6**	**+0.8**
KBL				*eS*	**Sn**		**14 37 52.0**	**-0.6**
KSH	**Kashi**	**4.72**	**52**	⇓*iP*	**Pn**		**14 37 36.1**	**-3.6**
KSH				S	**Sn**		**14 38 25.6**	**-10**
KSH				smax				
	comp=N,120nm,0.6s							
KSH				smax				
	comp=E,93nm,0.4s							
AML	**Almayashu**	**5.79**	**19**	P	**Pn**		**14 37 54.4**	**+1.1**
	SNR=32							
AML	**Almayashu**	**5.79**	**19**	*eP*	**Pn**		**14 37 54.4**	**+1.1**
	comp=E,44nm,0.4s							
AML				*eS*	**Sn**		**14 38 57.3**	**-3.0**
UCH	**Uchtor**	**6.12**	**24**	P	**Pn**		**14 37 58.8**	**+1.3**
	SNR=55							
UCH	**Uchtor**	**6.12**	**24**	*eP*	**Pn**		**14 37 58.0**	**+0.5**
	comp=E,27nm,0.6s							
UCH				*eS*	**Sn**		**14 39 06.1**	**-1.8**
KZA	**Kyzart**	**6.25**	**29**	P	**Pn**		**14 37 59.8**	**+0.6**
	SNR=6.9							
EKS2	**Erkin-Say**	**6.31**	**18**	P	**Pn**		**14 38 01.1**	**+1.1**
	SNR=13							
EKS2	**Erkin-Say**	**6.31**	**18**	*eP*	**Pn**		**14 38 00.6**	**+0.6**
	comp=E,6.4nm,0.4s							
EKS2				*eS*	**Sn**		**14 39 08.5**	**-3.9**
KK31	**Karatay Array**	**6.45**	**356**	⇑Pn	**Pn**		**14 38 01.9**	**+0.1**
	comp=E,1.7nm,0.3s,baz=179,slow=22,SNR=4.6							
KK31				⇑Sn	**Sn**		**14 39 10.9**	**-4.8**
	comp=E,64nm,0.9s,baz=176,slow=23,SNR=18							
AAK	**Ala-Archa**	**6.48**	**22**	P	**Pn**		**14 38 04.0**	**+1.8**
	SNR=6.1							
AAK	**Ala-Archa**	**6.48**	**22**	P	**Pn**		**14 38 03.4**	**+1.2**
	comp=E,3.7nm,0.3s,baz=189,slow=6.3,SNR=10							
AAK				S	**Sn**		**14 39 16.0**	**-0.4**
	comp=E,1.4nm,0.3s,baz=321,slow=22,SNR=22							
ULHL	**Ulahol**	**6.80**	**33**	P	**Pn**		**14 38 07.9**	**+1.6**
	SNR=7.5							
TKM2	**Tokmak 2**	**7.10**	**27**	⇑Pn	**Pn**		**14 38 11.3**	**+1.0**
	comp=E,17nm,0.7s							
TKM2				⇓Sn	**Sn**		**14 39 29.5**	**-1.6**
	comp=E,4.0nm,0.7s							
TKM2	**Tokmak 2**	**7.10**	**27**	P	**Pn**		**14 38 11.2**	**+0.9**
	SNR=31							
TKM2	**Tokmak 2**	**7.10**	**27**	*eP*	**Pn**		**14 38 10.9**	**+0.6**
	comp=E,17nm,0.6s							
MK31	**Makanchi Array**	**13.06**	**36**	*e*P	**Pn**		**14 39 26.4**	**-0.3**
MKAR	**Makanchi Array**	**13.06**	**36**	P	**Pn**		**14 39 27.1**	**+0.4**
	comp=E,0.2nm,0.3s,baz=225,slow=15,SNR=4.7							
KOLN	**Koldanda**	**13.74**	**127**	*eP*	**Pn**		**14 39 34.2**	**-1.1**
	comp=E,12nm,0.5s							
GKN	**Gorkha**	**14.26**	**123**	*eP*	**Pn**		**14 39 41.2**	**-0.6**
	comp=E,18nm,0.6s							
DMN	**Daman**	**14.84**	**124**	*eP*	**Pn**		**14 39 48.6**	**-0.2**
	comp=E,8.3nm,0.3s							
KKN	**Kakani**	**14.84**	**123**	*eP*	**Pn**		**14 39 48.4**	**-0.4**
	comp=E,18nm,0.6s							
ABKAR	**Akbulak array**	**15.01**	**330**	*eP*	**Pn**		**14 39 48.6**	**-2.2**
	comp=E,2.6nm,0.6s							
KURK	**Kurchatov**	**15.02**	**18**	*eP*	**Pn**		**14 39 51.2**	**+0.4**
KURK	**Kurchatov**	**15.02**	**18**	P	**Pn**		**14 39 51.0**	**+0.1**
	comp=E,0.1nm,0.3s,baz=208,slow=11,SNR=5.0							
PKI	**Pulchoki**	**15.06**	**123**	*eP*	**Pn**		**14 39 51.3**	**-0.3**
	comp=E,21nm,0.5s							
GUN	**Gumba**	**15.17**	**121**	*eP*	**Pn**		**14 39 52.7**	**-0.2**
	comp=E,14nm,0.4s							
JIRN	**Jiri**	**15.54**	**121**	*eP*	**Pn**		**14 39 57.9**	**+0.5**
	comp=E,34nm,0.4s							
RAMN	**Ramite**	**16.27**	**122**	*eP*	**P**		**14 40 05.8**	**+0.4**
	comp=E,23nm,0.7s							
BVAR	**Borovoye Array**	**16.37**	**358**	P	**P**		**14 40 07.3**	**+1.2**
	comp=E,0.8nm,0.3s,baz=173,slow=13,SNR=4.2							
AKTK	**Aktyubinsk**	**16.71**	**330**	P	**P**		**14 40 10.7**	**+0.7**
AKTO	**Aktyubinsk**	**16.71**	**330**	P	**P**		**14 40 10.7**	**+0.7**
	comp=E,0.3nm,0.3s,baz=148,slow=8.2,SNR=5.8							
TAPN	**Taplejung**	**16.79**	**119**	*eP*	**P**		**14 40 11.8**	**+0.7**
	comp=E,13nm,0.5s							
ODAN	**Odare**	**16.87**	**121**	*eP*	**P**		**14 40 13.3**	**+1.3**
ZALV	**Zalesovo Beam**	**19.70**	**24**	P	**P**		**14 40 42.6**	**+0.3**
	comp=E,0.8nm,0.3s,baz=220,slow=9.6,SNR=8.3							
SONM	**Songino Array**	**28.11**	**56**	P	**P**		**14 42 03.0**	**+1.6**
	comp=E,0.2nm,0.4s,mb3.1,baz=272,slow=4.0,SNR=2.7							
SONM				pP	pP		14 42 47.1	+4.3
	comp=E,0.9nm,0.9s,baz=257,slow=5.8,SNR=3.7							
AKASG	**Malin Array Be**	**32.96**	**309**	pP	pP		14 43 29.8	+3.9
	comp=E,0.4nm,0.4s,baz=95,slow=9.2,SNR=2.9							
ARCES	**ARCESS Array B**	**41.05**	**337**	P	**P**		**14 43 51.9**	**+0.2**
	comp=E,1.0nm,0.6s,mb3.5,baz=120,slow=8.9,SNR=4.8							
NOA	**NORSAR Array B**	**44.34**	**323**	P	**P**		**14 44 18.1**	**-0.1**
	comp=E,0.6nm,0.4s,mb3.2,baz=97,slow=7.6,SNR=4.5							
TORD	**Torodi Ar. Bea**	**65.88**	**269**	P	**P**		**14 46 50.7**	**-2.1**
TORD	**Torodi Ar. Bea**	**65.88**	**269**	P	**P**		**14 46 50.7**	**-2.1**
	comp=E,0.3nm,0.3s,mb3.4,baz=50,slow=6.2,SNR=7.7							
ILAR	**Eielson Array**	**74.58**	**16**	P	**P**		**14 47 44.5**	**-0.3**
	comp=E,0.4nm,0.7s,mb3.1,baz=328,slow=4.0,SNR=7.7							
YKA	**Yellowknife Ar**	**81.07**	**3**	P	**P**		**14 48 20.7**	**+0.1**
YKA	**Yellowknife Ar**	**81.07**	**3**	P	**P**		**14 48 20.7**	**+0.1**
	comp=E,0.6nm,0.4s,mb3.6,baz=352,slow=5.5,SNR=6.3							
WB2	**Warramunga Arr**	**81.95**	**122**	*eP*	**P**		**14 48 24.1**	**-1.7**
ASAR	**Alice Springs**	**84.22**	**125**	P	**P**		**14 48 36.1**	**-1.2**
	comp=E,0.7nm,0.8s,mb3.4,baz=300,slow=4.7,SNR=6.3							

*IDC **07** 14:44:32.3±1.1, 52.18N×175.96W, h0km, mb3.9/7, mb1 4.0/9, mb1mx3.7/28, mbtmp3.8/9, ML3.8/2, MS3.9/3, Ms1 3.9/3, ms1mx3.3/30, Error ellipse: s-maj=34.3km s-min=19.7km az=178.0*
*ISCJB **07** 14:44:33.8±1.1, 52.2N±0.1×175.57W±0.09, h15km±10km, mb4.0/10, MS3.9/4, Error ellipse: s-maj=22.7km s-min=7.2km az=166.5*
*NEIC **07** 14:44:34.1±1.3, 52.06N×175.56W, h8km±8km, mb4.0/4, ML3.7(AEIC), Error ellipse: s-maj=20.8km s-min=7.6km az=167.0*

ISC 07 14:44:34.0±1.1, 52.1N±0.1×175.54W±0.08, h5km±7km, n21, σ1$21/22, mb4.0/10, MS3.9/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
GSTR	**Great Sitkin T**	**0.32**	**270**	*eP*	**Pg**		**14 44 41.3**	**+1.0**
ATKA	**Atka Island**	**0.83**	**82**	P	**Pg**		**14 44 49.0**	**-0.9**
ATKA				S	**Sg**		**14 45 00.6**	**-0.2**
AMKA	**Amchitka**	**3.29**	**259**	P	**Pn**		**14 45 25.6**	**-0.5**
AKUT	**Akutan**	**6.22**	**67**	*eP*	**Pn**		**14 46 06.5**	**+0.1**
	48nm,0.8s							
KDAK	**Kodiak Island**	**14.33**	**58**	Pn	**Pn**		**14 47 58.0**	**+0.8**
	0.2nm,0.3s,baz=253,slow=8.0,SNR=3.6							
TTA	**Tatalina**	**15.02**	**36**	*eP*	**Pn**		**14 48 07.9**	**+1.3**
	9.0nm,1.1s							
COLA	**College**	**19.10**	**37**	*eP*	**Pn**		**14 48 57.1**	**-0.9**
	8.4nm,0.9s							
ILAR	**Eielson Array**	**19.42**	**38**	P	**Pn**		**14 48 59.7**	**-2.1**
	0.2nm,0.3s,baz=238,slow=8.7,SNR=17							
EGAK	**Eagle**	**21.68**	**41**	*eP*	**P**		**14 49 24.5**	**-0.6**
	25nm,1.0s,mb4.6							
DAWY	**Dawson**	**22.19**	**43**	*eP*	**P**		**14 49 32.3**	**+1.6**
INK	**Inuvik**	**25.71**	**35**	P	**P**		**14 50 05.7**	**+1.1**
	3.7nm,0.8s,mb4.0,baz=277,slow=5.9,SNR=4.7							
MDJ	**Mudanjiang**	**36.45**	**281**	P	**P**		**14 51 40.3**	**+0.9**
MDJ				PP	PP		14 53 01.0	-1.1
MDJ				S	**S**		**14 57 22.4**	**+1.0**
MDJ				ScP	ScP		14 57 53.3	+3.1
MDJ				SS	SS		14 59 59.1	-0.9
MDJ				ScS	ScS		15 01 59.6	+3.3
MDJ				pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.6							
MDJ				pmax	pmax			
	comp=Z,15nm,1.6s,mb4.7							
MDJ				LR	LR			
	comp=N,140nm,21.1s							
MDJ				LR	LR			
	comp=E,130nm,26.4s							
MDJ				LR	LR			
	comp=Z,190nm,20.3s,MS3.9							
WVOR	**Wild Horse Val**	**38.88**	**81**	*eP*	**P**		**14 52 04.6**	**+4.6**
	comp=Z,2.7nm,1.0s,mb3.9							
NVAR	**Mina Array Bea**	**41.46**	**86**	P	**P**		**14 52 23.5**	**+2.0**
NVAR	**Mina Array Bea**	**41.46**	**86**	P	**P**		**14 52 23.5**	**+2.1**
	comp=Z,0.3nm,0.6s,mb3.1,baz=302,slow=5.2,SNR=3.3							
TXAR	**Lajitas Array**	**56.55**	**84**	P	**P**		**14 54 17.6**	**+0.4**
	comp=Z,2.3nm,1.0s,mb4.2,baz=301,slow=5.7,SNR=11							
KURK	**Kurchatov**	**59.97**	**315**	P	**P**		**14 54 38.9**	**-2.0**
	comp=Z,1.1nm,0.6s,mb4.1,baz=40,slow=6.6,SNR=5.2							
KURK				LR	LR		15 22 35.9	
	comp=Z,86nm,19.3s,MS3.9,baz=295,slow=38							
MKAR	**Makanchi Array**	**61.15**	**310**	P	**P**		**14 54 45.3**	**-3.7**
	comp=Z,1.0nm,0.9s,mb3.9,baz=45,slow=7.2,SNR=4.8							
MKAR				LR	LR		15 21 47.6	
	comp=Z,50nm,18.2s,MS3.7,baz=125,slow=37							
BVAR	**Borovoye Array**	**61.63**	**321**	P	**P**		**14 54 50.7**	**-1.4**
	comp=Z,1.2nm,0.5s,mb4.3,baz=54,slow=7.7,SNR=5.7							
ASAR	**Alice Springs**	**87.41**	**225**	P	**P**		**14 57 20.9**	**-1.1**
	comp=Z,0.5nm,0.8s,mb3.8,baz=20,slow=5.4,SNR=5.3							
STKA	**Stephens Creek**	**91.66**	**215**	LR	LR		15 36 47.3	
	comp=Z,107nm,19.6s,MS4.3,baz=26,slow=34							

*NEIC **07** 14:47:15.7, 52.10N×175.46W, h6km, mb4.3/11, ML4.5(PMR), ML4.0(AEIC), After AEIC.*
*IDC **07** 14:47:15.1±0.8, 52.33N×175.83W, h0km, mb4.0/15, mb1 4.2/17, mb1mx4.1/28, mbtmp4.0/17, ML4.1/2, MS3.8/13, Ms1 3.8/13, ms1mx3.6/31, Error ellipse: s-maj=26.8km s-min=15.3km az=175.0*

ISC 07 14:47:15.7±1.2, 52.31N±0.09×175.63W±0.06, h1km±8km, n54, σ1$29/49, mb4.2/30, MS3.9/12, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
GSTR	**Great Sitkin T**	**0.34**	**231**	*eP*	**Pg**		**14 47 24.3**	**+2.2**
ATKA	**Atka Island**	**0.89**	**96**	P	**Pg**		**14 47 31.1**	**-1.5**
ATKA				S	**Sg**		**14 47 41.9**	**-2.2**
AMKA	**Amchitka**	**3.28**	**256**	P	**Pn**		**14 48 08.9**	**+0.8**
NIKO	**Nikolski**	**4.18**	**78**	P	**Pn**		**14 48 19.6**	**-0.8**
UNV	**Unalaska Valle**	**5.71**	**71**	P	**Pn**		**14 48 42.4**	**+0.8**
SPIA	**Saint Paul Isl**	**5.79**	**30**	P	**Pn**		**14 48 43.2**	**+0.7**
AKUT	**Akutan**	**6.20**	**69**	*eP*	**Pn**		**14 48 53.4**	**+5.2**
SMY	**Shemya**	**6.29**	**278**	*eP*	**Pn**		**14 48 48.3**	**-1.1**
	50nm,0.8s							
FALS	**False Pass**	**7.71**	**66**	P	**Pn**		**14 49 03.7**	**-5.2**
	56nm,0.7s							
SVW2	**Sparrevohn**	**14.04**	**43**	*eP*	**Pn**		**14 50 45.8**	**+10**
	52nm,1.2s							
KDAK	**Kodiak Island**	**14.27**	**58**	Pn	**Pn**		**14 50 40.0**	**+1.5**
	0.2nm,0.3s,baz=270,slow=12,SNR=2.9							
TTA	**Tatalina**	**14.88**	**37**	*eP*	**Pn**		**14 50 49.3**	**+2.5**
	23nm,1.1s							
PETK	**Petropavlovsk-**	**16.16**	**283**	LR	LR		14 56 34.5	
	comp=Z,99nm,20.4s,baz=292,slow=35							
ILAR	**Eielson Array**	**19.29**	**39**	P	**Pn**		**14 51 41.5**	**-1.0**
	0.7nm,0.3s,baz=237,slow=8.2,SNR=26							
ILAR				LR	LR		14 59 05.0	
	comp=Z,315nm,18.1s,baz=76,slow=37							
INK	**Inuvik**	**25.57**	**35**	P	**P**		**14 52 47.0**	**+1.4**
	7.4nm,0.8s,mb4.4,baz=253,slow=9.4,SNR=8.7							
INK				LR	LR		15 02 29.5	
	comp=Z,352nm,18.5s,MS3.9,baz=71,slow=36							
ASAJ	**Asahikawa**	**28.68**	**270**	LR	LR		15 04 08.9	
	comp=Z,180nm,18.1s,MS3.7,baz=255,slow=36							
BBB	**Bella Bella**	**28.68**	**71**	LR	LR		15 03 28.9	
	comp=Z,146nm,18.6s,MS3.6,baz=265,slow=34							
MJAR	**Matsushiro Arr**	**35.87**	**263**	P	**P**		**14 54 16.4**	**-0.4**
	1.6nm,0.6s,mb4.0,baz=50,slow=8.0,SNR=6.9							
MAJO	**Matsushiro**	**35.87**	**263**	*eP*	**P**		**14 54 17.4**	**+0.6**
	10nm,1.0s,mb4.6							
MAT	**Matsushiro**	**35.87**	**263**	P	**P**		**14 54 16.9**	**+0.1**
MDJ	**Mudanjiang**	**36.35**	**280**	P	**P**		**14 54 20.6**	**-0.3**
MDJ				PP	PP		14 55 45.2	+1.9
MDJ				S	**S**		**15 00 01.8**	**-0.8**
MDJ				ScP	ScP		15 00 30.4	-2.2
MDJ				SS	SS		15 02 44.4	+3.7
MDJ				ScS	ScS		15 04 38.9	+0.3
MDJ				pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.3							
MDJ				pmax	pmax			
	comp=Z,2.0nm,1.2s,mb3.8							
MDJ				LR	LR			
	comp=N,140nm,21.5s							
MDJ				LR	LR			
	comp=E,130nm,26.6s							
MDJ				LR	LR			
	comp=Z,160nm,24.5s,MS3.7							
YBH	**Yreka Blue Hor**	**36.82**	**85**	P	**P**		**14 54 28.7**	**+3.8**
	comp=Z,1.2nm,0.7s,mb3.8,baz=290,slow=13,SNR=3.0							
MOD	**Modoc**	**38.19**	**83**	*eP*	**P**		**14 54 39.5**	**+3.0**
	comp=Z,3.9nm,0.8s,mb4.2							
WVOR	**Wild Horse Val**	**38.90**	**81**	*eP*	**P**		**14 54 41.1**	**-1.3**
	comp=Z,6.7nm,0.8s,mb4.3							
NVAR	**Mina Array Bea**	**41.50**	**86**	P	**P**		**14 55 05.4**	**+1.4**
	comp=Z,2.2nm,0.7s,mb4.0,baz=293,slow=7.9,SNR=13							
NVAR				PcP	PcP		14 57 00.9	-0.7
	comp=Z,0.1nm,0.3s,baz=278,slow=2.6,SNR=2.3							
KSRS	**Korea Array**	**41.58**	**272**	P	**P**		**14 55 08.1**	**+3.3**
	comp=Z,0.7nm,0.7s,mb3.5,baz=60,slow=8.1,SNR=5.5							
KSRS				LR	LR		15 09 33.6	
	comp=Z,79nm,21.2s,MS3.6,baz=44,slow=32							
GSC	**Goldstone**	**44.43**	**88**	*eP*	**P**		**14 55 28.7**	**+0.9**
	comp=Z,5.4nm,0.8s,mb4.3							
MSU	**Marysvale**	**45.19**	**82**	*eP*	**P**		**14 55 36.9**	**+3.1**
	comp=Z,2.1nm,0.7s,mb4.2							
SRU	**San Rafael**	**45.81**	**80**	P	**P**		**14 55 39.0**	**+0.2**
	comp=Z,3.1nm,0.7s,mb4.5							
ULM	**Lac du Bonnet**	**47.52**	**59**	LR	LR		15 16 23.6	
	comp=Z,199nm,18.3s,MS4.1,baz=351,slow=37							
WUAZ	**Wupatki**	**47.62**	**84**	*eP*	**P**		**14 55 54.3**	**+1.4**
	comp=Z,3.8nm,0.8s,mb4.6							
SONM	**Songino Array**	**47.98**	**297**	P	**P**		**14 55 54.3**	**-1.3**
	comp=Z,0.4nm,0.6s,mb3.8,baz=72,slow=4.7,SNR=2.6							
SONM				LR	LR		15 14 14.5	
	comp=Z,210nm,20.3s,MS4.1,baz=54,slow=34							
SPITS	**Spitsbergen Ar**	**49.57**	**357**	LR	LR		15 16 36.2	
	comp=Z,116nm,20.0s,MS3.9,baz=70,slow=36							
LAZ	**Ladron**	**50.95**	**82**	P	**P**		**14 56 18.6**	**+0.2**
	comp=Z,2.4nm,0.9s,mb4.1							
BNM	**Barren Site**	**51.43**	**82**	P	**P**		**14 56 22.8**	**+0.8**
	comp=Z,2.7nm,0.9s,mb4.2							
MNTX	**Cornudas Mount**	**53.87**	**83**	*eP*	**P**		**14 56 39.8**	**-0.4**
	comp=Z,4.0nm,1.0s,mb4.4							
ZALV	**Zalesovo Beam**	**54.80**	**314**	P	**P**		**14 56 46.0**	**

WVOR	**Wild Horse Val**	**38.81**	**81**	*e*Pn		**P**		**15 07 51.4**	**+1.6**
	comp=Z,2.5nm,0.8s,mb4.0								
NVAR	**Mina Array Bea**	**41.41**	**86**	P		**P**		**15 08 13.4**	**+2.1**
	comp=Z,1.0nm,0.7s,mb3.6,baz=282,slow=5.4,SNR=4.8								
KSRS	**Korea Array**	**41.68**	**272**	P		**P**		**15 08 16.0**	**+2.4**
	comp=Z,0.2nm,0.4s,mb3.1,baz=51,slow=7.4,SNR=3.4								
KSRS				LR		LR		15 24 13.8	
	comp=Z,40nm,18.4s,MS3.3,baz=163,slow=34								
GSC	**Goldstone**	**44.34**	**88**	*e*Pn		**P**		**15 08 34.3**	**-0.8**
	comp=Z,4.4nm,0.9s,mb4.2								
SONM	**Songino Array**	**48.10**	**298**	P		**P**		**15 09 05.6**	**+1.1**
	comp=Z,0.5nm,0.7s,mb3.7,baz=63,slow=10,SNR=3.5								
MNTX	**Cornudas Mount**	**53.78**	**83**	*e*P		**P**		**15 09 48.1**	**+0.6**
	comp=Z,2.0nm,1.0s,mb4.0								
ZALV	**Zalesovo Beam**	**54.92**	**315**	P		**P**		**15 09 56.1**	**+0.6**
	comp=Z,0.4nm,0.3s,mb4.0,baz=46,slow=4.2,SNR=2.9								
TXAR	**Lajitas Array**	**56.49**	**84**	P		**P**		**15 10 06.7**	**-0.4**
TXAR	**Lajitas Array**	**56.49**	**84**	P		**P**		**15 10 06.7**	**-0.4**
	comp=Z,0.7nm,0.7s,mb3.8,baz=296,slow=4.8,SNR=11								
KURK	**Kurchatov**	**59.90**	**315**	P		**P**		**15 10 29.2**	**-1.5**
KURK	**Kurchatov**	**59.90**	**315**	P		**P**		**15 10 29.2**	**-1.5**
	comp=Z,0.9nm,0.5s,mb4.0,baz=42,slow=6.5,SNR=5.3								
MKAR	**Makanchi Array**	**61.10**	**310**	P		**P**		**15 10 37.4**	**-1.6**
	comp=Z,0.8nm,0.7s,mb3.9,baz=47,slow=4.1,SNR=6.0								
BVAR	**Borovoye Array**	**61.55**	**321**	P		**P**		**15 10 41.5**	**-0.4**
	comp=Z,1.1nm,0.5s,mb4.2,baz=54,slow=7.5,SNR=9.7								
NOA	**NORSAR Array B**	**66.95**	**356**	P		**P**		**15 11 17.5**	**+0.3**
	comp=Z,1.2nm,0.8s,mb4.0,baz=3.1,slow=6.4,SNR=3.6								
AKTK	**Aktyubinsk**	**68.15**	**326**	P		**P**		**15 11 25.2**	**+0.3**
AKTO	**Aktyubinsk**	**68.15**	**326**	P		**P**		**15 11 25.2**	**+0.3**
	comp=Z,0.6nm,0.3s,mb4.1,baz=16,slow=7.4,SNR=3.3								
AKASG	**Malin Array Be**	**75.33**	**344**	P		**P**		**15 12 07.0**	**-1.1**
	comp=Z,0.3nm,0.4s,mb3.6,baz=19,slow=6.3,SNR=3.0								
ASAR	**Alice Springs**	**87.53**	**225**	P		**P**		**15 13 13.0**	**+0.1**
	comp=Z,0.3nm,0.4s,mb3.9,baz=30,slow=5.8,SNR=5.6								

*BJI **07** 15:14:57.3,52.˚10N×175.˚60W,h12km,mB4.8/3,mb4.7/7, Ms4.5/3,Ms7 4.2/3*
*IDC **07** 15:14:57.7±1.2,52.˚14N×175.˚59W,h0km,mb3.8/7, mb1 4.0/8,mb1mx3.7/27,mbtmp3.7/8,ML3.9/1,MS3.6/1, Ms1 3.7/1,ms1mx2.9/27,Error ellipse: s-maj=36.4km s-min=22.0km az=4.0*
*ISCJB **07** 15:14:59.6±0.7,52.˚2N±0.˚1×175.˚55W±0.˚07,h23km±6km, mb4.1/11,Error ellipse: s-maj=25.2km s-min=5.6km az=170.3*
*NEIC **07** 15:14:60.0±1.2,52.˚13N×175.˚57W,h12km±9km,mb4.2/3, ML3.9(AEIC),Error ellipse: s-maj=25.5km s-min=7.7km az=168.0*

ISC 07 15:14:59.5±1.3,52˚0N±0˚1×175˚51W±0˚05,h11km±6km, n25,σ1°31/28,mb4.1/11,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.36**	**290**	*e*Pg		**Pg**	**15 15 06.8**	**+0.1**
GSTR				*e*Sg		**Sg**	**15 15 12.4**	**+0.8**
ATKA	**Atka Island**	**0.84**	**74**	P		**Pg**	**15 15 14.7**	**-1.0**
ATKA				S		**Sg**	**15 15 25.7**	**-1.0**
AMKA	**Amchitka**	**3.29**	**262**	P		**Pn**	**15 15 51.4**	**+0.6**
UNV	**Unalaska Valle**	**5.76**	**67**	P		**Pn**	**15 16 25.2**	**+0.4**
AKUT	**Akutan**	**6.26**	**66**	Pn		**Pn**	**15 16 34.1**	**+2.5**
	103nm,1.0s							
FALS	**False Pass**	**7.78**	**63**	*e*Pn		**Pn**	**15 16 53.8**	**+1.3**
	26nm,0.6s							
KDAK	**Kodiak Island**	**14.38**	**57**	*e*Pn		**Pn**	**15 18 23.2**	**+0.5**
KDAK	**Kodiak Island**	**14.38**	**57**	Pn		**Pn**	**15 18 26.1**	**+3.4**
	1.6nm,0.3s,baz=233,slow=4.9,SNR=8.8							
TTA	**Tatalina**	**15.11**	**36**	*e*Pn		**Pn**	**15 18 36.5**	**+4.0**
	8.4nm,1.0s							
ILAR	**Eielson Array**	**19.51**	**38**	P		**Pn**	**15 19 24.0**	**-3.5**
	0.1nm,0.3s,baz=241,slow=9.3,SNR=22							
ILAR				LR		LR	15 27 38.2	
	comp=Z,174nm,18.9s,baz=219,slow=39							
MENT	**Mentasta**	**20.08**	**45**	*e*P		**P**	**15 19 35.1**	**+2.5**
EGAK	**Eagle**	**21.76**	**41**	*e*P		**P**	**15 19 50.0**	**-0.7**
	18nm,1.1s,mb4.4							
DAWY	**Dawson**	**22.27**	**43**	*e*P		**P**	**15 19 54.8**	**-1.4**
INK	**Inuvik**	**25.80**	**35**	P		**P**	**15 20 27.3**	**-2.7**
	1.0nm,0.3s,mb3.8,baz=184,slow=14,SNR=2.0							
MDJ	**Mudanjiang**	**36.49**	**281**	P		**P**	**15 22 03.3**	**-1.0**
MDJ				PP		PP	15 23 25.9	-1.3
MDJ				S		**S**	**15 27 46.1**	**+0.1**
MDJ				ScP		ScP	15 28 15.7	+1.6
MDJ				ScS		ScS	15 32 21.8	+1.4
MDJ				pmax		pmax		
	comp=Z,2.0nm,0.4s,mb4.4							
MDJ				LR		LR		
	comp=N,62nm,12.8s							
MDJ				LR		LR		
	comp=E,66nm,12.0s							
MDJ				LR		LR		
	comp=Z,71nm,23.3s							
WVOR	**Wild Horse Val**	**38.88**	**81**	*e*P		**P**	**15 22 28.5**	**+4.0**
	comp=Z,3.9nm,1.0s,mb4.1							
CN2	**Changchun**	**39.44**	**282**	*e*P		**P**	**15 22 26.7**	**-2.5**
NVAR	**Mina Array Bea**	**41.45**	**86**	P		**P**	**15 22 48.1**	**+2.1**
	comp=Z,0.7nm,0.6s,mb3.5,baz=296,slow=8.0,SNR=5.5							
TXAR	**Lajitas Array**	**56.55**	**84**	P		**P**	**15 24 41.9**	**+0.2**
TXAR	**Lajitas Array**	**56.55**	**84**	P		**P**	**15 24 41.9**	**+0.2**
	comp=Z,0.9nm,0.8s,mb3.9,baz=307,slow=4.4,SNR=11							
KURK	**Kurchatov**	**60.07**	**315**	P		**P**	**15 25 06.3**	**+0.2**
	comp=Z,0.6nm,0.2s,mb4.2,baz=47,slow=7.0,SNR=3.2							
MKAR	**Makanchi Array**	**61.25**	**310**	P		**P**	**15 25 13.5**	**-0.6**
	comp=Z,0.2nm,0.3s,mb3.7,baz=54,slow=3.7,SNR=3.3							
BVAR	**Borovoye Array**	**61.74**	**321**	P		**P**	**15 25 16.9**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.8,baz=56,slow=5.4,SNR=3.2							
GYA	**Guiyang**	**62.28**	**278**	*e*P		**P**	**15 25 22.0**	**+0.5**
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.9							
ASAR	**Alice Springs**	**87.33**	**225**	P		**P**	**15 27 45.3**	**-0.8**
	comp=Z,1.0nm,1.1s,mb4.0,baz=23,slow=6.4,SNR=5.1							

*MOS **07** 15:23:24.0±1.4,55.˚36N×110.˚32E,h16km,mb4.3/1,Error ellipse: s-maj=22.4km s-min=11.0km az=63.2*
*BYKL **07** 15:23:25.4±0.3,55.˚38N×110.˚33E*
*IDC **07** 15:23:29.6±7.6,55.˚15N×109.˚96E,h0km,mb3.3/1, mb1 3.4/5,mb1mx3.3/28,mbtmp3.4/5,ML3.3/3,Error ellipse: s-maj=104.6km s-min=28.4km az=78.0*

ISC 07 15:23:23.0±0.3,55˚29N±0˚02×110˚44E±0˚04,h10km,n37, σ1°59/63,1C-1D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YLYR	**Ulyunkhan**	**0.58**	**134**	*e*PG		**Pg**	**15 23 36.8**	**+2.5**
YLYR				*e*			15 23 46.0	
YLYR				pmax		pmax		
	comp=Z,180nm,0.3s							
YLYR				smax				
	comp=N,297nm,0.7s							
NIZ	**Nizh Angarsk**	**0.71**	**314**	⇑*i*Pg		**Pg**	**15 23 36.3**	**-0.4**
NIZ				*e*Sg		**Sg**	**15 23 44.9**	**-1.0**
NIZ				*e*Sb		**Sb**	**15 23 48.5**	**+1.3**
NIZ				Pmax				
	comp=N,78nm,0.2s							
NIZ				max				
	comp=N,214nm,0.7s							
KMO	**Kumora**	**0.74**	**35**	*e*PG		**Pg**	**15 23 37.0**	**-0.3**
KMO				*e*			15 23 46.3	
KMO				pmax		pmax		
	comp=Z,225nm,0.4s							
KMO				smax				
	comp=N,1μm,1.0s							
KMO	**Kumora**	**0.74**	**35**	*e*Pg		**Pg**	**15 23 37.3**	**0.0**
KMO				*e*Sg		**Sg**	**15 23 47.3**	**+0.3**
KMO				Pmax				
	comp=N,260nm,0.5s							
KMO				Smax				
	comp=N,1μm,1.0s							
YOA	**Uoyan**	**1.12**	**40**	*e*PG		**Pg**	**15 23 45.2**	**+0.8**
YOA				*e*			15 24 00.2	
YOA				pmax		pmax		
	comp=Z,254nm,0.2s							
YOA				smax				
	comp=E,1μm,0.6s							
YOA	**Uoyan**	**1.12**	**40**	*e*Pg		**Pg**	**15 23 45.2**	**+0.8**
YOA				*e*Sg		**Sg**	**15 23 59.6**	**+0.6**
YOA				Pmax				
	comp=E,247nm,0.6s							
YOA				Smax				
	comp=E,1μm,0.8s							
SYVR	**Suvo**	**1.65**	**189**	*e*PN		**Pn**	**15 23 55.7**	**+3.7**
SYVR				*e*			15 24 19.9	
SYVR				pmax		pmax		
	comp=Z,86nm,0.6s							
SYVR				smax				
	comp=N,743nm,0.8s							
SYVR	**Suvo**	**1.65**	**189**	*e*Pg		**Pg**	**15 23 55.8**	**+1.2**
SYVR				*e*Sg		**Sg**	**15 24 19.0**	**+3.0**
SYVR				*e*			15 24 22.3	
SYVR				Pmax				
	comp=N,36nm,0.5s							
SYVR				max				
	comp=N,727nm,0.8s							
UKT	**Uakit**	**1.83**	**82**	*e*Pg		**Pg**	**15 23 58.9**	**+0.9**
UKT				*i* Sg		**Sg**	**15 24 24.8**	**+3.1**
UKT				Smax				
	comp=N,481nm,0.9s							
OGRR	**Ongureny**	**2.34**	**226**	*e*Pg		**Pg**	**15 24 07.3**	**-0.5**
OGRR				*e*Sg		**Sg**	**15 24 38.4**	**+0.3**
OGRR				Pmax				
	comp=N,37nm,0.4s							
OGRR				Smax				
	comp=N,128nm,1.2s							
NLYR	**Nelyaty**	**3.20**	**66**	*e*Pn		**Pn**	**15 24 17.1**	**+3.8**
NLYR				*e*Pg		**Pg**	**15 24 23.2**	**-1.1**
NLYR				*e*			15 24 28.5	
NLYR				*i* Sg		**Sg**	**15 25 05.7**	**0.0**
NLYR				max				
	comp=N,30nm,0.9s							
NLYR				Smax				
	comp=N,146nm,1.0s							
ZRHB	**Zarechye**	**3.36**	**217**	*e*Pg		**Pg**	**15 24 26.7**	**-0.6**
ZRHB				*e*Sg		**Sg**	**15 25 12.3**	**+1.6**
ZRHB				Pmax				
	comp=N,86nm,1.0s							
ZRHB				Smax				
	comp=N,264nm,1.0s							
TRG	**Tyrgan**	**3.50**	**225**	*e*Pn		**Pn**	**15 24 21.1**	**+3.7**
TRG				*e*Pg		**Pg**	**15 24 27.9**	**-2.0**
TRG				*e*Sg		**Sg**	**15 25 15.6**	**+0.4**
TRG				Pmax				
	comp=N,6.0nm,0.3s							
TRG				Smax				
	comp=N,58nm,0.8s							
CIT	**Chita**	**3.76**	**149**	*e*Pg		**Pg**	**15 24 33.8**	**-1.1**
CIT				*e*			15 24 40.8	
CIT				*e*Sg		**Sg**	**15 25 23.7**	**+0.1**
CIT				Smax				
	comp=N,139nm,0.4s							
UUDB	**Ulan-Yde**	**3.80**	**207**	*e*		**Pg**	**15 24 31.4**	**-4.4**
UUDB				*e*Pg		**Pg**	**15 24 35.1**	**-0.7**
UUDB				*e*Sg		**Sg**	**15 25 26.4**	**+1.3**
UUDB				Pmax				
	comp=N,29nm,0.9s							
UUDB				Smax				
	comp=N,76nm,0.8s							
KAB	**Kabansk**	**3.95**	**216**	*e*Sg		**Sg**	**15 25 29.6**	**0.0**
KAB				Smax				
	comp=N,116nm,0.4s							
CRS	**Chara**	**4.67**	**67**	*e*PN		**Pg**	**15 24 49.9**	**-2.5**
CRS				*e*			15 25 50.0	
CRS				pmax		pmax		
	comp=Z,24nm,0.9s							
CRS				smax				
	comp=E,73nm,0.9s							
CRS	**Chara**	**4.67**	**67**	*e*Pg		**Pg**	**15 24 49.1**	**-3.3**
CRS				*e*Sg		**Sg**	**15 25 50.6**	**-2.3**
CRS				*e*			15 25 59.8	
CRS				Pmax				
	comp=E,24nm,0.8s							
CRS				max				
	comp=E,73nm,0.9s							
IRK	**Irkutsk**	**4.76**	**233**	*e*PN		**Pg**	**15 24 49.6**	**-4.6**
IRK	**Irkutsk**	**4.76**	**233**	*e*Sg		**Sg**	**15 25 52.1**	**-3.7**
IRK				Smax				
	comp=E,185nm,0.9s							
LSTR	**Listvyanka**	**4.78**	**227**	*e*Pn		**Pn**	**15 24 37.7**	**+2.7**
LSTR				*e*Pg		**Pg**	**15 24 51.7**	**-2.9**
LSTR				*e*Sg		**Sg**	**15 25 55.2**	**-1.3**
LSTR				Pmax				
	comp=E,8.0nm,0.9s							
LSTR				Smax				
	comp=E,47nm,0.8s							
TLY	**Talaya**	**5.43**	**231**	*e*PN		**Pg**	**15 25 04.3**	**-2.6**
TLY				*e*S		**Sn**	**15 25 47.7**	**+1.3**
TLY				*e*			15 26 12.4	
TLY				pmax		pmax		
	comp=Z,14nm,0.9s							
TLY				smax				
	comp=N,42nm,1.0s							
TLY	**Talaya**	**5.43**	**231**	*e*Pg		**Pg**	**15 25 02.1**	**-4.8**
TLY				*e*			15 25 04.6	
TLY				*e*Sg		**Sg**	**15 26 13.0**	**-4.2**
TLY				max				
	comp=N,8.0nm,0.6s							
TLY				Smax				
	comp=N,40nm,1.0s							
TUP	**Tupik**	**5.56**	**95**	*e*Pg		**Pg**	**15 25 05.8**	**-3.7**
TUP				*e*Sg		**Sg**	**15 26 19.5**	**-2.0**
TUP				*e*			15 26 24.2	
TUP				max				
	comp=N,34nm,0.9s							
ARS	**Arshan**	**5.84**	**238**	*e*PN		**Pg**	**15 25 08.9**	**-5.9**
ARS				*e*			15 26 23.1	
ARS				pmax		pmax		
	comp=Z,24nm,0.5s							
ARS				smax				
	comp=E,143nm,0.9s							
ARS	**Arshan**	**5.84**	**238**	*e*Pg		**Pg**	**15 25 09.4**	**-5.4**
ARS				*e*Sg		**Sg**	**15 26 24.8**	**-5.6**
ARS				Pmax				
	comp=E,24nm,0.5s							
ARS				Smax				
	comp=E,139nm,0.8s							
ZAK	**Zakamensk**	**6.55**	**224**	*e*Sg		**Sg**	**15 26 49.9**	**-3.2**
ZAK				Smax				
	comp=E,19nm,1.0s							
MOY	**Mondy**	**6.70**	**241**	*e*PG		**Pg**	**15 25 23.9**	**-7.3**
MOY				*e*S		**Sn**	**15 26 17.1**	**-0.6**
MOY				*e*			15 26 51.6	
MOY				pmax		pmax		
	comp=Z,11nm,0.9s							
MOY				smax				
	comp=E,52nm,1.0s							
MOY	**Mondy**	**6.70**	**241**	⇓*i*Pn		**Pn**	**15 25 05.9**	**+4.5**
MOY				*e*Pg		**Pg**	**15 25 25.4**	**-5.8**
MOY				*e*Sn		**Sn**	**15 26 18.0**	**+0.3**
MOY				*e*Sg		**Sg**	**15 26 51.8**	**-6.2**
MOY				Pmax				
	comp=E,12nm,0.9s							
MOY				Smax				
	comp=E,52nm,1.0s							
ULN	**Ulaanbaatar**	**7.72**	**197**	*e*		**Sb**	**15 27 12.4**	**+3.5**
ULN				*e*Sg		**Sg**	**15 27 27.6**	**-3.1**
SONM	**Songino Array**	**7.88**	**200**	Pn		**Pn**	**15 25 21.1**	**+3.6**
	comp=E,0.2nm,0.3s,baz=19,slow=18,SNR=2.7							
SONM				Pg		Pn	15 25 49.4	+32
	comp=E,0.3nm,0.3s,baz=12,slow=18,SNR=5.1							
SONM				Lg			15 27 35.0	
	comp=E,0.7nm,0.3s,baz=13,slow=27,SNR=14							
TDJR	**Todzha**	**8.96**	**257**	*e*Sg		Sx	15 28 00.8	
ZALV	**Zalesovo Beam**	**14.88**	**275**	Pn		**Pn**	**15 26 55.7**	**+2.5**
	comp=E,0.1nm,0.3s,baz=80,slow=9.5,SNR=9.5							
MKAR	**Makanchi Array**	**19.52**	**256**	P		**Pn**	**15 27 55.3**	**+3.8**
	comp=E,0.2nm,0.3s,baz=52,slow=9.3,SNR=4.4							
KURK	**Kurchatov**	**19.58**	**270**	P		**Pn**	**15 27 55.5**	**+3.3**
	comp=E,0.1nm,0.3s,baz=66,slow=12,SNR=6.4							
BVAR	**Borovoye Array**	**23.34**	**281**	P		**P**	**15 28 38.4**	**+7.3**
	comp=E,0.5nm,0.5s,baz=57,slow=10,SNR=3.7							
BVAR	**Borovoye Array**	**23.34**	**281**	P		**P**	**15 28 38.4**	**+7.2**
BVAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							

*IDC **07** 15:27:17.5±0.8,52.˚05N×175.˚41W,h0km,mb4.1/18, mb1 4.3/19,mb1mx4.2/28,mbtmp4.1/19,ML4.5/1,MS4.0/19, Ms1 4.0/19,ms1mx3.8/33,Error ellipse: s-maj=24.6km s-min=13.7km az=179.0*
*ISCJB **07** 15:27:18.3±0.2,52.˚24N±0.˚06×175.˚62W±0.˚03,h10km, mb4.4/66,MS4.0/28,Error ellipse: s-maj=8.1km s-min=2.9km az=179.2*
*NEIC **07** 15:27:19.7±0.4,52.˚27N×175.˚60W,h10km,mb4.5/38, ML4.4(AEIC),Error ellipse: s-maj=12.0km s-min=5.7km az=169.0*
*BJI **07** 15:27:19.6,52.˚13N×176.˚31W,h10km,mB4.9/13, mb4.6/21,Ms4.5/11,Ms7 4.3/13*

*MOS **07** 15:27:22.2±1.5,52.˚27N×175.˚56W,h33km,mb4.5/30, Error ellipse: s-maj=11.1km s-min=9.3km az=68.8*

ISC 07 15:27:20.1±0.2,52˚18N±0˚06×175˚62W±0˚03,h10km, (h13km,1.2km:pP-P),n294,σ0°98/289,mb4.4/66,MS4.0/28, 83C-62D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.28**	**253**	*e*Pg		**Pg**	**15 27 24.9**	**-0.9**
ATKA	**Atka Island**	**0.88**	**88**	P		**Pg**	**15 27 30.9**	**-6.0**
ATKA				S		**Sg**	**15 27 45.0**	**-3.3**
AMKA	**Amchitka**	**3.26**	**258**	P		**Pn**	**15 28 09.9**	**-1.3**
AMKA				S		**Sn**	**15 28 49.9**	**0.0**
NIKO	**Nikolski**	**4.20**	**76**	P		**Pn**	**15 28 20.9**	**-3.2**
UNV	**Unalaska Valle**	**5.75**	**70**	P		**Pn**	**15 28 43.0**	**-2.3**
SPIA	**Saint Paul Isl**	**5.90**	**30**	P		**Pn**	**15 28 43.3**	**-4.1**
AKUT	**Akutan**	**6.24**	**68**	*e*P		**Pn**	**15 28 54.0**	**+1.9**
SMY	**Shemya**	**6.31**	**279**	*e*Pn		**Pn**	**15 28 52.0**	**-1.1**
	89nm,0.8s							
SMY	**Shemya**	**6.31**	**279**	*e*P		**Pn**	**15 28 52.0**	**-1.1**
SMY				pmax		pmax		
	comp=Z,89nm,0.8s							
FALS	**False Pass**	**7.75**	**65**	*e*Pn		**Pn**	**15 29 12.6**	**-0.2**
SDPT	**Sand Point**	**9.51**	**65**	*e*Pn		**Pn**	**15 29 38.5**	**+1.6**
	comp=Z,42nm,0.7s							
CHGN	**Chignik**	**10.87**	**61**	Pn		**Pn**	**15 30 00.2**	**+4.6**
OHAK	**Old Harbor**	**13.83**	**60**	*e*Pn		**Pn**	**15 30 34.3**	**-1.7**
	comp=Z,13nm,0.6s							
SVW2	**Sparrevohn**	**14.13**	**43**	*e*P		**Pn**	**15 30 40.3**	**+0.3**
	comp=Z,10.0nm,1.1s							
KDAK	**Kodiak Island**	**14.33**	**58**	*e*Pn		**Pn**	**15 30 41.1**	**-1.6**
	comp=Z,23nm,0.6s							
KDAK	**Kodiak Island**	**14.33**	**58**	Pn		**Pn**	**15 30 42.9**	**+0.2**
	comp=Z,2.4nm,0.3s,baz=278,slow=6.1,SNR=9.4							
KDAK				LR		LR	15 36 46.6	
	comp=Z,2μm,18.6s,baz=245,slow=40							
KDAK	**Kodiak Island**	**14.33**	**58**	*i* P		**Pn**	**15 30 42.8**	**+0.1**
TTA	**Tatalina**	**14.98**	**36**	*e*Pn		**Pn**	**15 30 50.7**	**-0.9**
	comp=Z,55nm,1.3s							
TTA	**Tatalina**	**14.98**	**36**	*e*P		**Pn**	**15 30 50.7**	**-0.9**
TTA				pmax		pmax		
	comp=Z,55nm,1.3s							
RSO	**Redoubt South**	**15.09**	**48**	*e*Pn		**Pn**	**15 30 54.8**	**+1.8**
PET	**Petropavlovsk**	**15.63**	**283**	*e*P		**Pn**	**15 31 10.4**	**+10**
PET				pmax		pmax		
	comp=Z,100nm,15.4s							
PET				MLR		MLR		
	comp=Z,400nm,21.0s							
PMR	**Palmer**	**17.15**	**46**	*e*Pn		**Pn**	**15 31 22.5**	**+3.1**
	comp=Z,18nm,1.1s							
PMR	**Palmer**	**17.15**	**46**	*e*P		**Pn**	**15 31 22.5**	**+3.0**
PMR				pmax		pmax		
	comp=Z,17nm,1.1s							
COLA	**College**	**19.07**	**38**	*e*P		**Pn**	**15 31 42.3**	**-0.7**
	comp=Z,26nm,1.1s							
COLA	**College**	**19.07**	**38**	*e*P		**Pn**	**15 31 42.3**	**-0.7**
COLA				pmax		pmax		
	comp=Z,26nm,1.1s							
ILAR	**Eielson Array**	**19.39**	**38**	P		**Pn**	**15 31 40.9**	**-5.9**
	comp=Z,0.7nm,0.3s,baz=236,slow=9.1,SNR=22							
ILAR				LR		LR	15 39 57.1	
	comp=Z,802nm,18.4s,baz=218,slow=39							
ILAR	**Eielson Array**	**19.39**	**38**	P		**Pn**	**15 31 40.9**	**-5.9**
ILAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
ILAR				MLR		MLR		
	comp=Z,802nm,18.5s							
MENT	**Mentasta**	**19.98**	**45**	*e*P		**Pn**	**15 31 49.6**	**-4.3**
SEY	**Seymchan**	**20.03**	**315**	⇓*e*P		**P**	**15 31 52.8**	**+0.1**
EGAK	**Eagle**	**21.65**	**41**	*e*P		**P**	**15 32 06.9**	**-3.3**
	comp=Z,75nm,1.1s,mb5.0							
DAWY	**Dawson**	**22.17**	**44**	*e*P		**P**	**15 32 13.9**	**-1.9**
CRAG	**Craig**	**25.01**	**65**	*e*P		**P**	**15 32 41.2**	**-2.5**
INK	**Inuvik**	**25.67**	**35**	*e*P		**P**	**15 32 46.7**	**-2.9**
	comp=Z,15nm,0.8s,mb4.6							
INK	**Inuvik**	**25.67**	**35**	P		**P**	**15 32 48.5**	**-1.1**
	comp=Z,3.4nm,0.5s,mb4.1,baz=242,slow=9.3							
INK				LR		LR	15 43 55.0	
	comp=Z,601nm,18.5s,MS4.2,baz=30,slow=39							
INK	**Inuvik**	**25.67**	**35**	P		**P**	**15 32 48.5**	**-1.1**
INK				pmax		pmax		
	comp=Z,3.0nm,0.5s							
INK				MLR		MLR		
	comp=Z,601nm,18.5s							
DLBC	**Dease Lake**	**26.26**	**58**	*e*P		**P**	**15 32 53.8**	**-1.3**
DLBC	**Dease Lake**	**26.26**	**58**	P		**P**	**15 32 54.8**	**-0.3**
	comp=Z,0.6nm,0.4s,mb3.5,baz=295,slow=14							
DLBC				LR		LR	15 42 19.7	
	comp=Z,224nm,20.4s,MS3.7,baz=307,slow=34							
ASAJ	**Asahikawa**	**28.68**	**270**	LR		LR	15 44 03.7	
	comp=Z,236nm,19.1s,MS3.8,baz=265,slow=35							
BBB	**Bella Bella**	**28.72**	**71**	LR		LR	15 42 23.1	
	comp=Z,158nm,18.2s,MS3.7,baz=267,slow=32							
YAK	**Yakutsk**	**30.39**	**310**	*e*P		**P**	**15 33 29.5**	**-2.3**
	comp=Z,8.8nm,0.6s,mb4.7							
YAK	**Yakutsk**	**30.39**	**310**	*e*P		**P**	**15 33 29.5**	**-2.3**
YAK				pmax		pmax		
	comp=Z,9.0nm,0.6s,mb4.7							
NLWA	**Neilton Lookou**	**33.16**	**77**	P		**P**	**15 33 56.9**	**+0.5**
	comp=Z,14nm,0.5s,mb5.1							
LON	**Longmire**	**34.70**	**77**	*e*P		**P**	**15 34 09.4**	**-0.3**
	comp=Z,3.2nm,0.7s,mb4.4							
LON	**Longmire**	**34.70**	**77**	*e*P		**P**	**15 34 09.4**	**-0.3**
LON				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.3							
F04A	**Amboy**	**34.74**	**79**	⇓P		**P**	**15 34 09.9**	**-0.2**
	baz=35							
MAJO	**Mat

baz=38
WVOR Wild Horse Val 38.91 81 *e*P P 15 34 44.4 -1.3
comp=Z,5.9nm,0.8s,mb4.4
WVOR Wild Horse Val 38.91 81 *e*P P 15 34 44.4 -1.2
WVOR pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
A15A Johnson Ranch, 38.95 69 ⇑P P 15 34 45.5 -0.4
baz=39
F12A Elk City 39.12 75 ⇑P P 15 34 47.2 -0.1
baz=39
CN2 Changchun 39.33 282 *e*P P 15 34 49.1 0.0
B15A Bradely Ranch, 39.38 70 ⇓P P 15 34 49.1 -0.4
baz=39
D14A Greenough 39.46 72 ⇑P P 15 34 49.3 -0.9
baz=39
C15A Salmond Ranch, 39.63 70 ⇑P P 15 34 50.9 -0.7
baz=40
F13A Darby 39.65 74 ⇓P P 15 34 51.2 -0.5
baz=40
CHMT Chamberlain Mo 39.70 72 *e*P P 15 34 51.4 -0.8
comp=Z,2.7nm,1.0s,mb3.9
H12A Diamond D Ranc 40.01 76 ⇑P P 15 34 54.5 -0.3
baz=40
G13A Cobalt 40.09 75 ⇑P P 15 34 55.3 0.0
baz=40
A17A Triple J Farms 40.13 68 ⇓P P 15 34 54.8 -0.9
baz=40
I12A Atlanta 40.27 77 ⇑P P 15 34 56.5 -0.4
baz=40
E15A Deer Lodge 40.31 72 ⇑P P 15 34 56.2 -1.0
baz=40
M10A I.L. Ranch, Tu 40.72 81 ⇑P P 15 35 00.6 0.0
baz=41
I13A Wildhorse Cree 40.81 76 ⇑P P 15 35 00.8 -0.5
baz=41
L11A Cat Creek Ranc 40.82 80 ⇓P P 15 35 01.3 -0.2
baz=41
H14A Leadore 40.86 75 ⇑P P 15 35 01.8 -0.1
baz=41
J13A Cove Ranch, Pi 41.06 77 ⇓P P 15 35 03.4 -0.1
baz=41
L12A House Creek Ra 41.27 79 ⇑P P 15 35 05.1 -0.2
baz=41
H15A Lima 41.29 75 ⇓P P 15 35 05.4 +0.1
baz=41
BOZ Bozeman (W) 41.33 73 *e*P P 15 35 06.0 +0.4
comp=Z,3.2nm,0.8s,mb4.0
BOZ Bozeman (W) 41.33 73 *e*P P 15 35 06.0 +0.4
BOZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
E17A Martinsdale 41.34 71 ⇑P P 15 35 05.9 +0.2
baz=41
G16A Moss Hill, Enn 41.45 73 ⇓P P 15 35 06.7 +0.1
baz=41
NVAR Mina Array Bea 41.51 86 P P 15 35 06.8 -0.3
NVAR Mina Array Bea 41.51 86 P P 15 35 06.8 -0.3
comp=Z,4.2nm,0.8s,mb4.1,baz=294,slow=7.4,SNR=20
KSRS Korea Array 41.59 272 P P 15 35 11.2 +3.3
comp=Z,0.8nm,0.6s,mb3.5,baz=61,slow=8.2,SNR=6.4
KSRS LR LR 15 51 20.5
comp=Z,103nm,19.9s,MS3.7,baz=221,slow=35
E18A Harlowton 41.83 71 ⇑P P 15 35 09.4 -0.3
baz=42
N12A Clover Valley, 42.02 81 ⇓P P 15 35 11.7 +0.3
baz=42
H16A Russell Place, 42.07 74 ⇓P P 15 35 11.6 -0.1
baz=42
IMW Indian Meadow 42.71 74 *e*P P 15 35 18.9 +2.0
comp=Z,3.4nm,0.8s,mb4.1
RRI2 Red Ridge 42.80 75 P P 15 35 14.8 -2.9
comp=Z,4.9nm,0.7s,mb4.3
R10A Warm Springs 42.82 85 ⇓P P 15 35 18.2 +0.3
baz=43
HVU Hansel Valley 42.84 78 *e*P P 15 35 19.5 +1.5
comp=Z,5.7nm,0.7s,mb4.4
HVU Hansel Valley 42.84 78 *e*P P 15 35 19.5 +1.5
HVU pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
Q11A Duckwater 42.87 84 ⇑P P 15 35 18.9 +0.6
baz=43
S10A Tonopah Range, 42.87 85 ⇓P P 15 35 18.4 +0.1
baz=43,SNR=14
MOOW Moose Ponds 42.91 75 *e*P P 15 35 20.7 +2.2
comp=Z,2.0nm,1.0s,mb3.8
P12A McGill 42.94 82 ⇑P P 15 35 18.8 0.0
baz=43
RLMT Red Lodge 43.00 72 *e*P P 15 35 21.4 +2.1
comp=Z,7.7nm,1.0s,mb4.4
LOHW Long Hollow 43.07 75 *e*P P 15 35 23.1 +3.2
comp=Z,1.7nm,0.8s,mb3.8
N14A Grayback Hills 43.15 80 ⇑P P 15 35 21.0 +0.4
baz=43
ISA Isabella 43.17 89 ⇓P P 15 35 20.7 0.0
baz=43
ISA Isabella 43.17 89 *e*P P 15 35 20.0 -0.7
comp=Z,5.1nm,0.8s,mb4.3
ISA Isabella 43.17 89 *e*P P 15 35 20.0 -0.7
ISA pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
BGU Big Grassy Mou 43.20 79 *e*P P 15 35 22.8 +1.8
comp=Z,4.8nm,0.9s,mb4.2
R11A Troy Canyon, C 43.22 84 ⇓P P 15 35 20.5 -0.7
baz=43,SNR=14
P13A Bates Ranch, G 43.50 82 ⇓P P 15 35 23.7 +0.3
baz=43
L16A Fish Haven 43.51 77 ⇑P P 15 35 22.6 -0.8
baz=43
FURC Furnace Creek, 43.63 87 ⇓P P 15 35 25.0 +0.5
baz=44
DUG Dugway 43.77 80 *e*P P 15 35 25.7 +0.1
comp=Z,11nm,1.0s,mb4.5
DUG Dugway 43.77 80 *e*P P 15 35 25.7 +0.1
DUG pmax pmax
comp=Z,11nm,1.0s,mb4.5
K18A Toltan Ranch, 43.98 75 ⇑P P 15 35 27.9 +0.8
baz=44,SNR=8.4
EDW2 Edwards Air Fo 43.98 90 ⇓P P 15 35 26.9 -0.4
baz=44
P14A Drum Mountains 43.99 81 ⇓P P 15 35 27.5 +0.2
baz=44
U10A Ash Meadows, A 43.99 87 ⇑P P 15 35 27.7 +0.4
baz=44
S12A Delamar Landin 44.14 84 ⇑P P 15 35 28.5 0.0
baz=44
N16A Rees Ranch, Co 44.19 78 ⇑P P 15 35 29.8 +0.9
baz=44,SNR=6.7
Q14A Sevier Lake (B 44.23 82 ⇓P P 15 35 29.5 +0.2
baz=44
R13A O'Grain Ranch, 44.32 83 ⇑P P 15 35 29.9 0.0
baz=44
JLU Jordanelle 44.35 79 *e*P P 15 35 33.4 +3.2
comp=Z,16nm,0.5s,mb5.0
GSC Goldstone 44.43 88 ⇓P P 15 35 31.0 +0.1
baz=44
GSC Goldstone 44.43 88 *e*P P 15 35 30.6 -0.3
comp=Z,17nm,1.0s,mb4.7
GSC Goldstone 44.43 88 *e*P P 15 35 30.6 -0.3
GSC pmax pmax
comp=Z,17nm,1.0s,mb4.7
BFSC Mount Baldy Ra 44.61 90 ⇑P P 15 35 31.8 -0.5
baz=44
L19A Farson 44.70 76 ⇓P P 15 35 30.1 -2.9
baz=44,SNR=11
S13A Holt Ranch, En 44.77 84 ⇓P P 15 35 34.9 +1.3
baz=45
O17A Robinson Place 45.03 79 ⇑P P 15 35 36.3 +0.7
baz=45
T13A Saint George 45.09 84 ⇓P P 15 35 37.4 +1.2
baz=45
TMUT Trail Mountain 45.30 80 *e*P P 15 35 37.7 0.0
comp=Z,8.8nm,0.5s,mb4.8
L20A Wamsutter 45.36 75 ⇑P P 15 35 41.0 +2.8
baz=45,SNR=7.8
O18A Roosevelt 45.42 78 ⇑P P 15 35 39.7 +0.9
baz=45
GMRC Granite Mounta 45.48 88 ⇑P P 15 35 40.2 +1.0
baz=45,SNR=5.6
Q16A Castle Valley 45.56 80 ⇑P P 15 35 41.0 +1.2
baz=45
P18A Preston Nutter 45.68 79 ⇓P P 15 35 41.9 +1.2
baz=46,SNR=9.7
R16A Teasdale 45.77 81 ⇑P P 15 35 42.2 +0.7
baz=46
PFO Pinyon Flat Ob 45.77 90 ⇑P P 15 35 42.2 +0.6
baz=46
V13A Grand Canyon W 45.80 86 ⇑P P 15 35 42.4 +0.6
baz=46
SRU San Rafael 45.83 80 *e*P P 15 35 44.4 +2.4
comp=Z,15nm,0.8s,mb5.0
SRU San Rafael 45.83 80 *e*P P 15 35 44.4 +2.4
SRU pmax pmax
comp=Z,15nm,0.8s,mb5.0
U14A Mt Trumbull 45.93 84 ⇑P P 15 35 43.0 +0.2
baz=46
O19A Miners Draw (B 45.94 77 ⇓P P 15 35 43.2 +0.4
baz=46,SNR=5.6
L21A Rawlins 45.97 74 ⇓P P 15 35 43.4 +0.4
baz=46
S16A Weppner Ranch, 46.06 82 ⇑P P 15 35 44.0 +0.2
baz=46
Q18A Rafter H Ranch 46.07 79 ⇓P P 15 35 44.1 +0.2
baz=46,SNR=6.1
N20A Spence Gulch, 46.12 76 ⇑P P 15 35 44.9 +0.6
baz=46,SNR=9.6
IRM Iron Mountain 46.21 88 ⇓P P 15 35 45.2 +0.2
baz=46
P19A Cripple Cowboy 46.44 78 ⇓P P 15 35 47.1 +0.4
baz=46
U15A North Rim 46.47 84 ⇓P P 15 35 47.1 +0.1
baz=46,SNR=6.6
V14A Boquillas Ranc 46.49 85 ⇑P P 15 35 47.5 +0.3
baz=46
O20A White River Ci 46.57 77 ⇑P P 15 35 48.0 +0.3
baz=46
S17A Black Ridge (B 46.60 81 ⇑P P 15 35 48.2 +0.2
baz=46
R18A Canyonlands Na 46.67 80 ⇓P P 15 35 48.8 +0.2
baz=46
X13A Yucca 46.73 87 ⇑P P 15 35 48.6 -0.5
baz=47
W14A Seligman 46.78 86 ⇓P P 15 35 49.4 0.0
baz=47
P20A De Beque 46.88 78 ⇓P P 15 35 50.2 0.0
baz=47
V15A Kaibab Nationa 46.94 84 ⇓P P 15 35 51.2 +0.5
baz=47
O21A Pagoda 46.98 76 ⇓P P 15 35 51.4 +0.4
baz=47
S18A Hurst Farm, BI 47.05 81 ⇑P P 15 35 51.3 -0.3
baz=47,SNR=9.8
R19A Curley Farm, L 47.11 80 ⇓P P 15 35 52.0 -0.1
baz=47
BJI Beijing 47.13 283 P P 15 35 50.1 -2.0
BJI pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
BJI pmax pmax
comp=Z,58nm,5.1s
BJI LR LR
comp=N,300nm,20.6s,MS4.3
BJI LR LR
comp=E,110nm,19.1s,MS4.3
BJI LR LR
comp=Z,230nm,22.2s,MS4.1
PV04 Paradox Valley 47.26 79 *e*P P 15 35 52.9 -0.4
TLY Talaya 47.29 303 *e*P P 15 35 54.7 +1.4
TLY *e*S S 15 42 59.0 +13
TLY pmax pmax
comp=Z,10.0nm,1.6s,mb4.5
TLY MLR MLR
comp=Z,211nm,21.0s,MS4.1
T18A Mexican Hat 47.48 81 ⇓P P 15 35 54.1 -0.8
baz=47
S19A Harvey Farm, M 47.54 80 ⇓P P 15 35 54.8 -0.6
baz=47,SNR=7.7
ULM Lac du Bonnet 47.58 59 LR LR 15 56 26.0
comp=Z,205nm,18.8s,MS4.1,baz=274,slow=37
WUAZ Wupatki 47.62 84 *e*P P 15 35 57.5 +1.4
comp=Z,7.3nm,0.8s,mb4.8
PV01 Paradox Valley 47.63 79 *e*P P 15 35 55.9 -0.2
comp=Z,760nm,0.8s
Z13A Yuma Proving G 47.77 88 ⇑P P 15 35 56.7 -0.5
baz=48
V17A Tonalea, Kykot 47.91 84 ⇑P P 15 35 58.1 -0.2
baz=48
SONM Songino Array 48.04 298 P P 15 36 01.2 +2.1
comp=Z,0.8nm,0.6s,mb3.9,baz=57,slow=11,SNR=5.9
SONM LR LR 15 57 10.0
comp=Z,389nm,18.4s,MS4.4,baz=57,slow=37
SONM Songino Array 48.04 298 P P 15 36 01.2 +2.1
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM MLR MLR
comp=Z,389nm,18.4s
ZAK Zakamensk 48.22 302 *e*P P 15 36 02.5 +2.0
ZAK pmax pmax
comp=Z,3.0nm,1.6s,mb4.1
ISCO Idaho Springs 48.35 76 *e*P P 15 36 04.4 +2.8
comp=Z,4.4nm,1.2s,mb4.4
ISCO Idaho Springs 48.35 76 *e*P P 15 36 04.4 +2.8
ISCO pmax pmax
comp=Z,4.0nm,1.2s,mb4.3
R22A Saguache, Gunn 48.67 78 ⇓P P 15 36 03.9 -0.2
baz=48
214A Organ Pipe Nat 49.14 89 ⇓P P 15 36 07.6 -0.2
baz=49
Y17A Roosevelt 49.16 85 ⇓P P 15 36 07.7 -0.3
baz=49
V20A Brimhall 49.22 82 ⇑P P 15 36 08.4 +0.1
baz=49
U21A Nageezi 49.29 80 ⇑P P 15 36 09.0 +0.1
baz=49
HHC Hu-ho-hao-te 49.36 287 *e*P P 15 36 08.3 -1.0
HHC pP pP 15 36 12.6 +0.1
HHC sP sP 15 36 15.3 +1.6
HHC PP PP 15 38 01.7 -1.4
HHC S **S** **15 43 11.5 -4.2**
HHC sS sS 15 43 18.8 -2.1
HHC ScS ScS 15 45 56.5 -4.5
HHC SS SS 15 46 37.8 -9.1
HHC pmax pmax
comp=Z,13nm,0.9s,mb5.0
HHC pmax pmax
comp=Z,65nm,4.6s
HHC LR LR
comp=N,210nm,13.5s,MS4.3
HHC LR LR
comp=E,130nm,15.5s,MS4.3
HHC LR LR
comp=Z,200nm,13.1s,MS4.3
T22A Edith 49.37 79 ⇓P P 15 36 09.8 +0.3
baz=49
P25A Willow Gulch B 49.39 75 ⇑P P 15 36 09.3 -0.4
baz=49
R24A Sanders Place, 49.66 77 ⇓P P 15 36 11.4 -0.2
baz=50
SDCO Great Sand Dun 49.73 78 *e*P P 15 36 12.9 +0.7
comp=Z,5.7nm,1.0s,mb4.6
U22A Llaves 49.81 80 ⇑P P 15 36 12.4 -0.4
baz=50
S24A Houchin Ranch, 49.98 78 ⇑P P 15 36 13.4 -0.7
baz=50
117A Oracle 49.99 86 ⇑P P 15 36 14.4 +0.1
baz=50
X20A Quemado 50.03 83 ⇑P P 15 36 14.9 +0.3
baz=50
V22A San Miguel Ran 50.09 80 ⇑P P 15 36 15.0 +0.1
baz=50
TUC Tucson 50.14 87 *e*P P 15 36 17.1 +1.6
comp=Z,4.1nm,0.8s,mb4.5
TUC Tucson 50.14 87 *e*P P 15 36 17.1 +1.7
TUC pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
U23A El Rito 50.25 80 ⇑P P 15 36 16.2 +0.1
baz=50
118A Homack Ranch, 50.42 86 ⇑P P 15 36 18.5 +1.0
baz=50,SNR=8.9
217A Green Valley 50.49 87 ⇑P P 15 36 18.2 +0.1
baz=50
X21A Alamocita Cree 50.53 82 ⇑P P 15 36 18.6 +0.2
baz=50
Y20A Horse Springs, 50.53 83 ⇑P P 15 36 18.6 +0.2
baz=50
119A Ashpeak Ranch, 50.74 85 ⇑P P 15 36 20.5 +0.5
baz=51
NJ2 Nanjing 50.75 274 *e*P P 15 36 20.1 +0.1
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
T25A Trinidad 50.79 78 ⇓P P 15 36 20.5 +0.3
baz=51,SNR=9.3
Z20A Nine Sixteen R 50.94 84 ⇓P P 15 36 21.3 -0.1
baz=51
V24A Rampart Ranch, 51.20 79 ⇑P P 15 36 24.1 +0.7
baz=51
318A Bisbee 51.23 87 ⇑P P 15 36 23.6 -0.1
baz=51
U25A Circle Dot Ran 51.28 78 ⇓P P 15 36 24.0 0.0
baz=51,SNR=5.5
120A U Bar Ranch, L 51.30 85 ⇑P P 15 36 24.3 +0.1
baz=51
Y22A Socorro 51.38 82 ⇑P P 15 36 24.3 -0.4
baz=51
W24A Lazy 6 Ranch, 51.47 80 ⇑P P 15 36 25.1 -0.3
baz=51
V25A Rancho No Teng 51.52 79 ⇑P P 15 36 25.6 -0.2
baz=51
U26A Atchley Ranch, 51.68 78 ⇑P P 15 36 27.0 0.0
baz=52
220A Playas Peak, P 51.81 85 ⇑P P 15 36 28.0 0.0
baz=52,SNR=7.1
121A Cookes Peak, D 51.83 84 ⇓P P 15 36 28.4 +0.2
baz=52
Z22A Elephant Butte 51.84 83 ⇓P P 15 36 28.2 0.0
baz=52
W25A X Bar L Ranch, 52.03 79 ⇓P P 15 36 29.8 +0.2
baz=52
V26A Tequesquite Ra 52.05 78 ⇑P P 15 36 29.8 +0.1
baz=52
Y24A Capitan 52.32 81 ⇑P P 15 36 31.3 -0.4
baz=52,SNR=19
Y25A Mesa, Roswell 52.77 81 ⇓P P 15 36 34.8 -0.3
baz=53
X26A CR and CF Fran 52.88 80 ⇓P P 15 36 34.8 -1.0
baz=53
224A Cornudas Mount 53.53 83 ⇑P P 15 36 40.5 -0.2
baz=53
Z26A Caprock 53.65 81 ⇑P P 15 36 41.2 -0.4
baz=54
125A Gardner Draw, 53.66 82 ⇓P P 15 36 41.2 -0.4
baz=54
Y27A Causey 53.73 80 ⇓P P 15 36 41.7 -0.4
baz=54
MNTX Cornudas Mount 53.88 83 *e*P P 15 36 43.5 +0.2
comp=Z,5.3nm,1.0s,mb4.4
225A Deer Hill, Car 53.94 82 ⇑P P 15 36 43.9 +0.2
baz=54
Z27A Tatum 54.08 80 ⇑P P 15 36 44.1 -0.7
baz=54
325A Bean Ranch, Si 54.36 83 ⇑P P 15 36 46.2 -0.6
baz=54
226A Malaga, Loving 54.41 82 ⇑P P 15 36 46.9 -0.3
baz=54
ZALV Zalesovo Beam 54.90 315 P P 15 36 50.3 -0.1
comp=Z,0.9nm,0.5s,mb4.0,baz=16,slow=4.4,SNR=4.4
ZALV LR LR 16 01 43.9
comp=Z,84nm,19.4s,MS3.8,baz=80,slow=38
ZALV Zalesovo Beam 54.90 315 P P 15 36 50.3 0.0
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
ZALV MLR MLR
comp=Z,85nm,19.4s,MS3.8
326A Caldwell Ranch 55.00 83 ⇓P P 15 36 51.1 -0.4
baz=55
426A McDonald Obser 55.43 83 ⇑P P 15 36 54.7 +0.1
baz=55
328A Wristen Ranch, 55.67 82 ⇓P P 15 36 55.5 -0.7
baz=56
427A Hayter Ranch, 55.68 83 ⇓P P 15 36 55.9 -0.5
baz=56
WMOK Wichita Mounta 55.78 76 *e*P P 15 36 58.6 +1.6
comp=Z,4.8nm,1.0s,mb4.5
WMOK Wichita Mounta 55.78 76 *e*P P 15 36 58.6 +1.6
WMOK pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
526A Mary Lane Ranc 55.82 84 ⇑P P 15 36 56.9 -0.5
baz=56
626A Big Bend Ranch 56.15 84 ⇓P P 15 36 59.1 -0.6
baz=56
428A Kincaid Ranch, 56.21 82 ⇑P P 15 36 58.8 -1.3
baz=56
528A Cox Ranch, San 56.54 83 ⇑P P 15 37 01.8 -0.7
baz=56
TXAR Lajitas Array 56.59 84 P P 15 36 59.6 -3.2
comp=Z,1.4nm,0.5s,mb4.2,baz=299,slow=5.6,SNR=19
TXAR ScP ScP 15 41 58.2 -0.2
comp=Z,0.3nm,0.8s,baz=258,slow=3.6,SNR=3.9
TXAR LR LR 15 59 28.7
comp=Z,96nm,18.2s,MS3.9,baz=355,slow=34
627A Terlingua Ranc 56.68 84 ⇑P P 15 37 03.5 +0.1
baz=57
ARCES ARCESS Array B 57.62 351 P P 15 37 08.7 -0.8
comp=Z,4.1nm,0.8s,mb4.5,baz=9.8,slow=11,SNR=6.1
ARCES ARCESS Array B 57.62 351 P P 15 37 08.7 -0.8
ARCES pmax pmax
comp=Z,4.0nm,0.8s
SCHQ Schefferville 58.13 40 LR LR 16 03 21.9
comp=Z,390nm,18.6s,MS4.5,baz=292,slow=37
JCT Junction City 58.13 80 *e*P P 15 37 15.0 +1.2
MIAR Mount Ida 58.99 73 *e*P P 15 37 20.6 +0.9
comp=Z,5.3nm,0.8s,mb4.6
MIAR Mount Ida 58.99 73 *e*P P 15 37 20.6 +0.9
MIAR pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
KURK Kurchatov 59.88 315 *e*P P 15 37 25.8 +0.3
comp=Z,3.2nm,0.8s,mb4.4
KURK Kurchatov 59.88 315⇓*e*P P 15 37 26.6 +1.1
KURK pmax pmax
comp=Z,7.0nm,1.7s,mb4.4
KURK MLR MLR
comp=Z,145nm,16.0s,MS4.2
WMQ Urumqi 60.55 304 *e*P P 15 37 30.1 -0.1
WMQ pP pP 15 37 34.7 +1.3
WMQ sP sP 15 37 37.1 +2.5
WMQ PcP PcP 15 38 14.7 0.0
WMQ PP PP 15 39 45.3 +2.1
WMQ *e*S **S** **15 45 42.9 -2.8**
WMQ ScS ScS 15 47 16.6 -4.2
WMQ SS SS 15 49 41.7 -1.4
WMQ pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
WMQ pmax pmax
comp=Z,99nm,4.2s
WMQ LR LR
comp=N,220nm,20.1s,MS4.4
WMQ LR LR
comp=E,170nm,19.6s,MS4.4
WMQ LR LR
comp=Z,220nm,20.0s,MS4.3
CD2 Chengdu 60.73 284 P P 15 37 30.1 -1.6
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.2
CD2 pmax pmax
comp=Z,80nm,5.0s
MK31 Makanchi Array 61.06 310 *e*P P 15 37 34.9 +1.2
MKAR Makanchi Array 61.06 310 P P 15 37 34.4 +0.7
comp=Z,1.1nm,0.6s,mb4.2,baz=60,slow=6.2,SNR=12
MKAR LR LR 16 03 30.1
comp=Z,123nm,21.0s,MS4.0,baz=245,slow=36
MKAR Makanchi Array 61.06 310*ce*P P 15 37 34.5 +0.8
MKAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 61.53 321 P P 15 37 36.4 -0.4
comp=Z,3.1nm,0.5s,mb4.7,baz=54,slow=7.7,SNR=13
BVAR Borovoye Array 61.53 321 P P 15 37 36.4 -0.4
BVAR pmax pmax
comp=Z,3.0nm,0.5s
BRVK Borovoye 61.55 321 *i* P P 15 37 38.6 +1.7
BRVK pmax pmax
comp=Z,9.0nm,1.5s,mb4.7
BRVK MLR MLR
comp=Z,351nm,18.0s,MS4.6
GYA Guiyang 62.19 278 *e*P P 15 37 42.8 +1.2
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
ARU Arti 62.94 330*di*P P 15 37 48.6 +2.5
ARU 15 40 04.9
ARU S **S** **15 46 18.3 +2.7**
ARU SS SS 15 50 18.0 -1.9
ARU pmax pmax
comp=Z,4.0nm,1.2s,mb4.4
ARU MLR MLR
comp=Z,126nm,17.0s,MS4.2
BLA Blacksburg 64.54 62 *e*P P 15 37 56.7 -0.3
comp=Z,74nm,1.0s
FINES FINESS Array B 65.41 349 P P 15 38 02.1 -0.2
comp=Z,3.2nm,0.8s,mb4.4,baz=10,slow=12,SNR=4.5
FINES LR LR 16 06 48.8
comp=Z,58nm,21.0s,MS3.8,baz=127,slow=36
FINES FINESS Array B 65.41 349 P P 15 38 02.1 -0.2
FINES pmax pmax
comp=Z,3.0nm,0.8s
FINES MLR MLR
comp=Z,58nm,21.0s

KMI	**Kunming**	**65.56**	**280**	P	**P**	**15 38 04.6**	**+0.8**
KMI				pP	pP	15 38 07.8	+0.8
KMI				sP	sP	15 38 09.0	+0.8
KMI				PP	PP	15 40 29.7	+2.0
KMI				S	S	15 46 47.4	-1.5
KMI				sS	sS	15 46 51.5	-2.7
KMI				SS	SS	15 51 01.2	-1.0
KMI				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
KMI				LR	LR		
	comp=N,230nm,15.5s,MS4.6						
KMI				LR	LR		
	comp=E,210nm,17.7s,MS4.6						
KMI				LR	LR		
	comp=Z,170nm,20.8s,MS4.2						
QIZ	**Qiongzhong**	**65.75**	**270**	P	**P**	**15 38 03.2**	**-1.9**
QIZ				S	S	15 46 55.1	+3.7
QIZ				LR	LR		
	comp=Z,43nm,20.2s,MS3.6						
NOA	**NORSAR Array B**	**67.00**	**356**	P	**P**	**15 38 11.9**	**-0.5**
	comp=Z,1.8nm,0.8s,mb4.2,baz=2.0,slow=6.3,SNR=6.6						
NOA				LR	LR	16 04 33.5	
	comp=Z,37nm,21.9s,MS3.5,baz=10.0,slow=33						
AAK	**Ala-Archa**	**67.84**	**311**	*i* P	**P**	**15 38 20.7**	**+2.6**
AAK				MLR	MLR		
	comp=Z,60nm,17.0s,MS3.9						
TAOE	**Nuku Hiva Isla**	**67.97**	**142**	*e*LR	LR	15 58 40.7	
	comp=Z,134nm,25.1s						
AKTK	**Aktyubinsk**	**68.15**	**326**	P	**P**	**15 38 21.0**	**+1.1**
AKTO	**Aktyubinsk**	**68.15**	**326**	P	**P**	**15 38 21.0**	**+1.1**
	comp=Z,2.7nm,0.6s,mb4.4,baz=41,slow=6.2,SNR=7.7						
AKTO	**Aktyubinsk**	**68.15**	**326**	P	**P**	**15 38 21.0**	**+1.1**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
ABKAR	**Akbulak array**	**68.47**	**324**	*e*P	**P**	**15 38 22.1**	**+0.2**
	comp=Z,1.1nm,0.6s,mb4.1						
PMOR	**Pomariorio Ree**	**71.09**	**152**	*e*T		16 55 41.3	
	comp=Z,7.0nm,0.2s						
CMAR	**Chiang Mai Arr**	**72.88**	**278**	P	**P**	**15 38 50.5**	**+1.2**
	comp=Z,0.7nm,0.6s,mb3.8,baz=38,slow=5.6,SNR=4.9						
CMAR				LR	LR	16 14 43.2	
	comp=Z,71nm,18.1s,MS4.0,baz=170,slow=39						
CMAR	**Chiang Mai Arr**	**72.88**	**278**	P	**P**	**15 38 50.5**	**+1.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR				MLR	MLR		
	comp=Z,71nm,18.1s						
PPT	**Papeete**	**73.06**	**154**	*e*LR	LR	16 00 50.1	
	comp=Z,55nm,22.2s						
AKASG	**Malin Array Be**	**75.36**	**344**	P	**P**	**15 39 03.1**	**-0.2**
	comp=Z,1.0nm,0.6s,mb3.9,baz=20,slow=6.4,SNR=3.3						
AKASG	**Malin Array Be**	**75.36**	**344**	P	**P**	**15 39 03.1**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
DZM	**Mont Dzumac**	**75.58**	**197**	*e*LR	LR	16 02 17.5	
	comp=Z,230nm,28.4s						
TBI	**Tubuai**	**78.61**	**156**	*e*T		17 05 13.0	
	comp=Z,6.5nm,0.2s						
RKT	**Rikitea**	**82.96**	**143**	*e*T		17 10 42.2	
	comp=Z,2.1nm,0.2s						
BRTR	**Keskin Array B**	**85.00**	**338**	P	**P**	**15 39 54.5**	**-0.9**
	comp=Z,0.8nm,0.7s,mb4.0,baz=19,slow=6.1,SNR=3.2						
BRTR				LR	LR	16 24 11.3	
	comp=Z,44nm,19.1s,MS3.9,baz=102,slow=40						
BRTR	**Keskin Array B**	**85.00**	**338**	P	**P**	**15 39 54.5**	**-0.9**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR				MLR	MLR		
	comp=Z,44nm,19.1s						
ASAR	**Alice Springs**	**87.43**	**225**	P	**P**	**15 40 05.8**	**-1.5**
	comp=Z,1.6nm,0.7s,mb4.4,baz=28,slow=5.0,SNR=18						
ASAR	**Alice Springs**	**87.43**	**225**	P	**P**	**15 40 05.9**	**-1.5**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MMAI	**Mount Meron Ar**	**90.92**	**334**	LR	LR	16 30 47.7	
	comp=Z,67nm,18.9s,MS4.1,baz=330,slow=42						
STKA	**Stephens Creek**	**91.70**	**215**	LR	LR	16 14 35.7	
	comp=Z,114nm,21.2s,MS4.3,baz=24,slow=31						

IDC 07 15:43:56.1±1.6, 52°26N×177°00W, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/26, mbtmp3.4/5, ML3.8/1, Error ellipse: s-maj=56.2km s-min=29.0km az=138.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILAR	**Eielson Array**	**19.86**	**39**	P	Pn	15 48 28.1	-1.8
	0.1nm,0.3s,baz=226,slow=9.2,SNR=9.4						
INK	**Inuvik**	**26.10**	**36**	P	P	15 49 31.2	+0.1
	1.2nm,0.3s,baz=194,slow=8.3,SNR=2.4						
NVAR	**Mina Array Bea**	**42.35**	**85**	P	P	15 51 52.3	+0.6
	0.4nm,0.7s,baz=299,slow=7.7,SNR=3.3						
TXAR	**Lajitas Array**	**57.43**	**83**	P	P	15 53 46.2	-0.2
	0.2nm,0.5s,baz=322,slow=5.7,SNR=3.6						
ASAR	**Alice Springs**	**86.89**	**224**	P	P	15 56 42.5	+0.1
	0.2nm,0.7s,baz=21,slow=5.4,SNR=3.2						

BJI 07 15:56:54.0, 37°65N×78°39E, h20km, mb3.8/1, ML3.4/7, Ms3.3/1, Ms7 3.1/1, 2C, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.66**	**315**	Pn	Pn	15 57 36.9	+1.2
KSH				Sn	Sn	15 58 10.1	+2.8
KSH				smax			
	comp=N,130nm,0.5s						
KSH				smax			
	comp=E,160nm,0.7s						
KK31	**Karatay Array**	**8.11**	**315**	⇑Pn	Pn	15 58 54.6	+4.1
	comp=E,0.2nm,0.3s,baz=123,slow=13,SNR=5.6						
KK31				⇑Lg		16 01 08.1	
	comp=E,2.5nm,0.8s,baz=124,slow=23,SNR=4.5						
MK31	**Makanchi Array**	**9.58**	**16**	Pn	Pn	15 59 12.1	+1.4
	comp=E,0.4nm,0.3s,baz=197,slow=13,SNR=30						

*BJI **07** 16:01:19.3,52°.10N×175°.60W,h10km,mB4.6/7, mb4.6/12, Ms4.3/5, Ms7 3.9/6*
*IDC **07** 16:01:20.7±0.8,52°.24N×175°.81W,h0km, mb4.0/12, mb1 4.2/14,mb1mx4.0/31,mbtmp4.0/14,ML4.2/2, MS3.5/9, Ms1 3.6/9,ms1mx3.3/31,Error ellipse: s-maj=29.9km s-min=14.1km az=174.0*
*ISCJB **07** 16:01:21.3±0.8,52°.24N±0°.10×175°.55W±0°.06,h15km±7km, mb4.2/22, MS3.6/11, Error ellipse: s-maj=16.6km s-min=4.4km az=166.1*
*NEIC **07** 16:01:22.4±0.7,52°.15N×175°.56W,h10km,mb4.3/6, ML4.3(PMR),ML3.9(AEIC),Error ellipse: s-maj=19.8km s-min=8.1km az=163.0*

ISC 07 16:01:21.8±0.8, 52°.15N±0°.10×175°.52W±0°.05, h7km±5km, h17km±2.6km:pP-P, n48, σ1§24/49, mb4.2/22, MS3.6/11, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.34**	**261**	*e*Pg	**Pg**	**16 01 28.5**	**+0.1**
GSTR				*e*Sg	**Sg**	**16 01 34.7**	**+1.9**
ATKA	**Atka Island**	**0.82**	**86**	P	**Pg**	16 01 35.5	-2.0
ATKA				S	**Sg**	**16 01 46.9**	**-1.2**
AMKA	**Amchitka**	**3.31**	**259**	P	**Pn**	16 02 13.0	-0.9
AMKA				S	**Sn**	**16 02 54.2**	**+0.8**
NIKO	**Nikolski**	**4.15**	**76**	P	**Pn**	16 02 24.6	-0.9
UNV	**Unalaska Valle**	**5.71**	**69**	P	**Pn**	**16 02 46.4**	**-0.4**
SPIA	**Saint Paul Isl**	**5.89**	**29**	P	**Pn**	16 02 47.8	-1.6
AKUT	**Akutan**	**6.19**	**67**	*e*Pn	**Pn**	**16 02 55.6**	**+2.1**
	56nm,0.8s						
FALS	**False Pass**	**7.71**	**65**	*e*Pn	**Pn**	**16 03 15.1**	**+0.8**
	33nm,0.5s						
SDPT	**Sand Point**	**9.47**	**64**	*e*Pn	**Pn**	16 03 37.4	-1.0
SVW2	**Sparrevohn**	**14.11**	**43**	*e*P	**Pn**	**16 04 51.3**	**+9.5**
	18nm,1.3s						
KDAK	**Kodiak Island**	**14.29**	**58**	*e*Pn	**Pn**	**16 04 45.3**	**+1.0**
	9.1nm,0.6s						
KDAK	**Kodiak Island**	**14.29**	**58**	Pn	**Pn**	**16 04 47.7**	**+3.4**
	1.2nm,0.3s,baz=281,slow=11,SNR=10						
TTA	**Tatalina**	**14.97**	**36**	*e*Pn	**Pn**	**16 04 55.2**	**+1.7**
	6.5nm,0.9s						
RSO	**Redoubt South**	**15.06**	**48**	*e*Pn	**Pn**	**16 04 57.4**	**+2.7**
ILAR	**Eielson Array**	**19.37**	**38**	P	**Pn**	**16 05 46.4**	**-2.4**
	0.4nm,0.3s,baz=240,slow=9.5,SNR=27						
ILAR				LR	LR	16 13 50.6	
	comp=Z,210nm,18.9s,baz=126,slow=39						
MENT	**Mentasta**	**19.96**	**45**	*e*P	**Pn**	**16 05 55.4**	**-0.4**
EGAK	**Eagle**	**21.63**	**41**	*e*P	**P**	**16 06 11.6**	**-0.6**
	22nm,0.9s,mb4.6						
DAWY	**Dawson**	**22.15**	**43**	*e*P	**P**	**16 06 19.2**	**+1.5**
INK	**Inuvik**	**25.66**	**35**	*e*P	**P**	**16 06 51.5**	**-0.2**
	12nm,1.3s,mb4.3						
INK	**Inuvik**	**25.66**	**35**	P	**P**	**16 06 51.5**	**-0.2**
	2.3nm,0.5s,mb4.0,baz=242,slow=9.0,SNR=4.7						
INK				LR	LR	16 17 57.5	
	comp=Z,200nm,18.0s,MS3.7,baz=277,slow=39						
DLBC	**Dease Lake**	**26.23**	**58**	P	**P**	**16 06 57.9**	**+0.9**
	3.0nm,0.3s,mb4.3,baz=32,slow=7.0,SNR=3.9						
DLBC				LR	LR	16 16 56.1	
	comp=Z,59nm,18.6s,MS3.2,baz=264,slow=36						
BBB	**Bella Bella**	**28.67**	**71**	P	**P**	**16 07 20.2**	**+1.3**
BBB				LR	LR	16 16 35.1	
BBB	**Bella Bella**	**28.67**	**71**	P	**P**	**16 07 20.2**	**+1.3**
	13nm,1.2s,mb4.5,baz=325,slow=4.3,SNR=2.0						
BBB				LR	LR	16 16 35.1	
	comp=Z,52nm,19.0s,MS3.2,baz=311,slow=32						
MJAR	**Matsushiro Arr**	**35.91**	**263**	P	**P**	**16 08 22.0**	**-0.5**
	0.8nm,0.6s,mb3.9,baz=54,slow=6.6,SNR=3.9						
MDJ	**Mudanjiang**	**36.45**	**280**	P	**P**	**16 08 25.9**	**-1.0**
MDJ				pP	pP	16 08 29.0	-0.2
MDJ				sP	sP	16 08 30.2	+0.1
MDJ				S	**S**	**16 14 06.7**	**-2.0**
MDJ				sS	sS	16 14 12.0	-0.3
MDJ				ScP	ScP	16 14 37.2	-0.2
MDJ				PcS	PcS	16 14 38.6	+0.2
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,3.0nm,2.6s,mb3.8						
MDJ				LR	LR		
	comp=Z,50nm,22.3s,MS3.2						
YBH	**Yreka Blue Hor**	**36.77**	**85**	P	**P**	**16 08 32.8**	**+3.1**
	comp=Z,1.5nm,0.7s,mb3.9,baz=310,slow=5.0,SNR=4.7						
WVOR	**Wild Horse Val**	**38.86**	**81**	*e*P	**P**	**16 08 46.5**	**-0.8**
	comp=Z,2.7nm,0.8s,mb4.0						
CN2	**Changchun**	**39.39**	**282**	*e*P	**P**	**16 08 52.0**	**+0.2**
MCMT	**McKenzie Canyo**	**41.00**	**74**	*e*P	**P**	**16 09 05.1**	**0.0**
	comp=Z,1.0nm,0.5s,mb3.7						
BOZ	**Bozeman (W)**	**41.28**	**73**	P	**P**	**16 09 09.4**	**+2.1**
	comp=Z,5.4nm,0.6s,mb4.3						
NVAR	**Mina Array Bea**	**41.45**	**86**	P	**P**	**16 09 11.4**	**+2.5**
	comp=Z,1.5nm,0.8s,mb3.7,baz=288,slow=7.8,SNR=10						
KSRS	**Korea Array**	**41.65**	**272**	P	**P**	**16 09 09.7**	**-0.9**
	comp=Z,0.7nm,0.8s,mb3.4,baz=52,slow=6.9,SNR=3.5						
KSRS				LR	LR	16 26 27.9	
	comp=Z,40nm,18.2s,MS3.3,baz=136,slow=36						
PV01	**Paradox Valley**	**47.58**	**79**	*e*P	**P**	**16 09 59.8**	**+2.0**
	comp=Z,169nm,0.8s						
HHC	**Hu-ho-hao-te**	**49.42**	**287**	*e*P	**P**	**16 10 11.6**	**-0.4**
HHC				pP	pP	16 10 17.5	+3.2
HHC				sP	sP	16 10 20.7	+5.5
HHC				PP	PP	16 12 04.6	-1.2
HHC				*e*S	**S**	**16 17 13.7**	**-5.4**
HHC				sS	sS	16 17 23.9	+1.0
HHC				ScS	ScS	16 19 59.7	-4.3
HHC				SS	SS	16 20 40.7	-10
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
HHC				pmax	pmax		
	comp=Z,60nm,6.1s						
HHC				LR	LR		
	comp=N,84nm,14.9s,MS4.0						
HHC				LR	LR		
	comp=E,100nm,14.9s,MS4.0						
HHC				LR	LR		
	comp=Z,100nm,14.2s,MS4.0						
MNTX	**Cornudas Mount**	**53.82**	**83**	*e*P	**P**	**16 10 44.7**	**-0.4**
	comp=Z,1.7nm,0.8s,mb4.0						
TXAR	**Lajitas Array**	**56.53**	**84**	P	**P**	**16 11 04.3**	**-0.3**
	comp=Z,1.7nm,0.7s,mb4.2,baz=298,slow=4.9,SNR=19						
SCHQ	**Schefferville**	**58.12**	**40**	LR	LR	16 37 24.2	
	comp=Z,128nm,18.2s,MS4.1,baz=164,slow=37						
KURK	**Kurchatov**	**59.94**	**315**	P	**P**	**16 11 27.9**	**-0.3**
	comp=Z,1.3nm,0.7s,mb4.1,baz=45,slow=6.8,SNR=8.2						
WMQ	**Urumqi**	**60.61**	**304**	*e*P	**P**	**16 11 33.7**	**+0.8**
CD2	**Chengdu**	**60.79**	**284**	P	**P**	**16 11 33.1**	**-1.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
CD2				pmax	pmax		
	comp=Z,110nm,4.9s						
MKAR	**Makanchi Array**	**61.13**	**310**	P	**P**	**16 11 35.0**	**-1.3**
	comp=Z,1.0nm,0.9s,mb3.9,baz=34,slow=5.2,SNR=5.3						
BVAR	**Borovoye Array**	**61.59**	**321**	P	**P**	**16 11 38.2**	**-1.1**
	comp=Z,1.5nm,0.5s,mb4.3,baz=43,slow=6.5,SNR=9.2						
GYA	**Guiyang**	**62.25**	**278**	*e*P	**P**	**16 11 44.2**	**0.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
FINES	**FINESS Array B**	**65.45**	**349**	LR	LR	16 41 03.0	
	comp=Z,42nm,19.3s,MS3.6,baz=308,slow=36						
KMI	**Kunming**	**65.62**	**280**	P	**P**	**16 12 06.5**	**+0.1**
KMI				pP	pP	16 12 12.3	+3.6
KMI				sP	sP	16 12 14.6	+5.0
KMI				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
KMI				pmax	pmax		
	comp=Z,99nm,3.3s						
KMI				LR	LR		
	comp=N,220nm,11.9s,MS4.5						
KMI				LR	LR		
	comp=E,110nm,16.7s,MS4.5						
KMI				LR	LR		
	comp=Z,73nm,17.2s,MS3.9						
NOA	**NORSAR Array B**	**67.03**	**356**	LR	LR	16 39 08.4	
	comp=Z,20nm,21.8s,MS3.3,baz=305,slow=34						
CMAR	**Chiang Mai Arr**	**72.94**	**278**	LR	LR	16 47 31.4	
	comp=Z,34nm,19.1s,MS3.6,baz=359,slow=38						
ASAR	**Alice Springs**	**87.45**	**225**	P	**P**	**16 14 08.7**	**-1.0**
	comp=Z,0.6nm,0.7s,mb4.0,baz=22,slow=5.7,SNR=10						

*CSEM **07** 16:12:46.7±0.1, 39°.56N×23°.88E, h20km, ML2.5/10, Error ellipse: s-maj=4.7km s-min=2.5km az=101.0*
*THE **07** 16:12:46.7, 39°.58N×23°.88E, h9km±2km, ML2.5/10, Error ellipse: s-maj=2.3km s-min=1.1km az=119.0*
*SOF **07** 16:12:46.8, 39°.76N×24°.07E, h10km, MD2.8*
*ISCJB **07** 16:12:46.5±0.4, 39°.55N±0°.02×23°.90E±0°.05, h23km±4km, Error ellipse: s-maj=6.0km s-min=3.2km az=5.0*
*ATH **07** 16:12:47.2, 39°.49N×23°.78E, h32km±5km, MD2.8/6*
*NEIC **07** 16:12:47.2, 39°.49N×23°.78E, h32km, MD2.8(ATH), After ATH.*

ISC 07 16:12:46.6±0.5, 39°.56N±0°.02×23°.89E±0°.04, h18km±3km, n67, σ0§97/93, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AOS	**Alonnisos**	**0.39**	**182**	P	**Pg**	**16 12 54.5**	**0.0**
AOS				S	**Sg**	**16 13 00.9**	**+1.0**
AOS	**Alonnisos**	**0.39**	**182**	P	**Pg**	16 12 54.5	0.0
AOS				S	**Sg**	**16 13 00.9**	**+1.0**
PAIG	**Paliouri**	**0.41**	**336**	P	**Pg**	16 12 54.0	-0.9
PAIG				S	**Sg**	**16 13 00.0**	**-0.6**
PAIG	**Paliouri**	**0.41**	**336**	P	**Pg**	16 12 54.0	-0.9
PAIG				S	**Sg**	**16 13 00.0**	**-0.6**
XOR	**Xorichti**	**0.57**	**251**	P	**Pg**	16 12 58.3	+0.3
XOR				S	**Sg**	**16 13 07.2**	**+1.5**
XOR	**Xorichti**	**0.57**	**251**	P	**Pg**	16 12 58.3	+0.3
XOR				S	**Sg**	16 13 07.2	+1.5
OUR	**Ouranopolis**	**0.78**	**5**	P	**Sg**	**16 13 00.8**	**-0.8**
OUR				S	**Sb**	**16 13 11.5**	**-0.4**
OUR	**Ouranopolis**	**0.78**	**5**	P	**Pb**	**16 13 00.8**	**-0.8**
OUR				S	**Sb**	**16 13 11.5**	**-0.4**
LIA	**Limnos Island**	**1.05**	**71**	P	**Pb**	**16 13 06.2**	**0.0**
LIA				S	**Sb**	**16 13 22.0**	**+2.4**
LIA	**Limnos Island**	**1.05**	**71**	P	**Pb**	**16 13 06.2**	**0.0**
LIA				S	**Sb**	**16 13 22.0**	**+2.4**
ATAL	**Atalanti**	**1.10**	**218**	P	**Pb**	**16 13 06.7**	**-0.3**
ATAL	**Atalanti**	**1.10**	**218**	P	**Pb**	16 13 06.7	-0.3
LKR	**Lokris**	**1.14**	**218**	*e*Pn	**Pn**	**16 13 07.2**	**-0.4**
LKR	**Lokris**	**1.14**	**218**	*e*PN	**Pn**	16 13 07.2	-0.4
LKR	**Lokris**	**1.14**	**218**	P	**Pn**	**16 13 07.3**	**-0.3**
LKR	**Lokris**	**1.14**	**218**	P	**Pn**	16 13 07.3	-0.3
HORT	**Hortiatis**	**1.21**	**330**	P	**Pn**	**16 13 08.4**	**-0.1**
HORT				S	**Sb**	**16 13 25.1**	**+1.0**
HORT	**Hortiatis**	**1.21**	**330**	P	**Pn**	16 13 08.4	-0.1
HORT				S	**Sb**	**16 13 25.1**	**+1.0**
LIT	**Litokhoron**	**1.21**	**297**	P	**Pn**	16 13 07.1	-1.5
LIT	**Litokhoron**	**1.21**	**297**	P	**Pn**	16 13 07.1	-1.5
AGG	**Agios Georgios**	**1.32**	**247**	P	**Pn**	16 13 10.1	0.0
AGG				S	**Sn**	**16 13 29.9**	**+2.6**
AGG	**Agios Georgios**	**1.32**	**247**	P	**Pn**	16 13 10.1	0.0
SOH	**Sokhos**	**1.33**	**342**	P	**Pn**	**16 13 10.3**	**+0.1**
SOH				S	**Sn**	**16 13 28.1**	**+0.6**
SOH	**Sokhos**	**1.33**	**342**	P	**Pn**	**16 13 10.3**	**+0.1**
SOH				S	**Sn**	**16 13 28.1**	**+0.6**
THL	**Klokotos Trika**	**1.45**	**271**	*e*PN	**Pn**	**16 13 11.5**	**-0.4**
THL	**Klokotos Trika**	**1.45**	**271**	P	**Pn**	16 13 11.5	-0.4
THL	**Klokotos Trika**	**1.45**	**271**	P	**Pn**	16 13 11.5	-0.4
PTL	**Penteli**	**1.50**	**181**	*e*Pb	**Pb**	**16 13 12.3**	**-1.6**
PTL				*e*Sn	**Sn**	**16 13 30.6**	**-1.1**
PTL	**Penteli**	**1.50**	**181**	*e*PB	**Pb**	16 13 12.3	-1.6
PTL				*e*SN	**Sn**	**16 13 30.6**	**-1.1**
PTL	**Penteli**	**1.50**	**181**	*e*Pb	**Pb**	16 13 12.3	-1.6
PTL				*e*Sn	**Sn**	**16 13 30.6**	**-1.1**
KAVA	**Kavala**	**1.52**	**18**	P	**Pn**	16 13 12.2	-0.6
KAVA				S	**Sn**	**16 13 36.8**	**+4.8**
KAVA	**Kavala**	**1.52**	**18**	P	**Pn**	16 13 12.2	-0.6
SRS	**Serrai**	**1.58**	**352**	P	**Pn**	**16 13 14.1**	**+0.5**
SRS				S	**Sn**	**16 13 33.1**	**-0.4**
SRS	**Serrai**	**1.58**	**352**	P	**Pn**	**16 13 14.1**	**+0.5**
SRS				S	**Sn**	**16 13 33.1**	**-0.4**
LTK	**Loutraki**	**1.69**	**206**	*e*PN	**Pn**	**16 13 15.2**	**0.0**
LTK				*e*SN	**Sn**	**16 13 35.5**	**-0.9**
LTK	**Loutraki**	**1.69**	**206**	*e*Pn	**Pn**	16 13 15.2	0.0
LTK				*e*Sn	**Sn**	**16 13 35.5**	**-0.9**
VLY	**Voula,Athens**	**1.70**	**183**	*e*Pb	**Pb**	16 13 15.5	-1.8
VLY				*e*Sn	**Sn**	**16 13 37.2**	**+0.6**
VLY	**Voula,Athens**	**1.70**	**183**	*e*PB	**Pb**	16 13 15.5	-1.8
VLY				*e*SN	**Sn**	**16 13 37.2**	**+0.6**
VLY	**Voula,Athens**	**1.70**	**183**	*e*Pb	**Pb**	16 13 15.5	-1.8
VLY				*e*Sn	**Sn**	**16 13 37.2**	**+0.6**
KNT	**Kendrikon**	**1.78**	**335**	P	**Pn**	16 13 17.2	+0.9
KNT	**Kendrikon**	**1.78**	**335**	P	**Pn**	16 13 17.2	+0.9
PRK	**Paraskevi**	**1.87**	**99**	*e*Pn	**Pn**	**16 13 20.3**	**+2.7**
PRK	**Paraskevi**	**1.87**	**99**	*e*PN	**Pn**	**16 13 20.3**	**+2.7**
PRK	**Paraskevi**	**1.87**	**99**	*e*Pn	**Pn**	**16 13 20.3**	**+2.7**
GUR	**Goura**	**2.02**	**217**	*e*PB	**Pn**	16 13 20.0	+0.3
GUR	**Goura**	**2.02**	**217**	P	**Pn**	16 13 20.0	+0.3
GUR	**Goura**	**2.02**	**217**	P	**Pn**	16 13 20.0	+0.3
VAY	**Valandovo**	**2.03**	**331**	*e*Pn	**Pn**	**16 13 24.4**	**+4.5**
DID	**Didima**	**2.11**	**194**	*e*PN	**Pn**	16 13 21.0	+0.1
DID	**Didima**	**2.11**	**194**	P	**Pn**	**16 13 21.0**	**+0.1**
DID	**Didima**	**2.11**	**194**	P	**Pn**	16 13 21.0	+0.1
RZN	**Rozhen**	**2.22**	**16**	P	**Pn**	16 13 22.4	-0.1
RZN	**Rozhen**	**2.22**	**16**	P	**Pn**	16 13 22.4	-0.1
KKB	**Krupnik**	**2.39**	**345**	P	**Pn**	**16 13 25.0**	**+0.2**
KKB	**Krupnik**	**2.39**	**345**	P	**Pn**	16 13 25.0	+0.2
KDZ	**Kurdzhali**	**2.39**	**29**	P	**Pn**	**16 13 23.7**	**-1.1**
KDZ	**Kurdzhali**	**2.39**	**29**	P	**Pn**	16 13 23.7	-1.1
VLX	**Vlachokerasia**	**2.48**	**209**	*e*PN	**Pn**	**16 13 26.9**	**+0.8**
VLX	**Vlachokerasia**	**2.48**	**209**	*e*Pn	**Pn**	16 13 26.9	+0.8
KRUS	**Krusevo**	**2.71**	**313**	*e*Pn	**Pn**	**16 13 27.9**	**-1.3**
VLI	**Veliai**	**2.93**	**195**	*e*Pn	**Pn**	**16 13 32.1**	**-0.1**
VLI	**Veliai**	**2.93**	**195**	*e*PN	**Pn**	16 13 32.1	-0.1
VLI	**Veliai**	**2.93**	**195**	*e*Pn	**Pn**	16 13 32.1	-0.1
PGB	**Panagyurishte**	**3.00**	**4**	P	**Pn**	16 13 32.9	-0.3
PGB	**Panagyurishte**	**3.00**	**4**	P	**Pn**	**16 13 32.9**	**-0.3**
VTS	**Vitosha**	**3.08**	**351**	P	**Pn**	**16 13 35.7**	**+1.5**
VTS	**Vitosha**	**3.08**	**351**	P	**Pn**	**16 13 35.7**	**+1.5**

KRSC 07 16:21:32.9±0.6, 53°.57N×160°.83E, h38km±28km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.68**	**226**	*e*P	Pn	16 21 46.2	+0.3
SPN				*i* S	Sn	16 21 55.4	+0.1
KII	**Karymskiy**	**0.94**	**300**	*e*P	Pn	16 21 49.6	0.0
KII				*i* S	Sn	16 22 01.6	-0.2
NLC	**Nalytchevo**	**0.97**	**246**	*e*P	Pn	16 21 50.1	+0.1
NLC				*i* S	Sn	16 22 02.0	-0.6
MKZ	**Mys Kozlova**	**1.12**	**28**	*e*P	Pn	16 21 52.2	+0.1
MKZ				*i* S	Sn	16 22 05.6	-0.6
AVH	**Avacha**	**1.29**	**257**	*e*P	Pn	16 21 55.2	+0.9
AVH				*i* S	Sn	16 22 11.3	+0.9
PET	**Petropavlovsk**	**1.42**	**248**	*e*P	Pn	16 21 56.7	+0.6
PET				*i* S	Sn	16 22 13.6	+0.1
GNL	**Ganaly**	**1.72**	**275**	*e*P	Pn	16 22 01.5	+1.2
GNL				*i* S	Sn	16 22 22.1	+1.0
KPT	**Kopyto**	**2.43**	**352**	P	Pn	16 22 12.6	+2.6
ZLN	**Zelenaya**	**2.45**	**360**	P	Pn	16 22 11.5	+1.2
KOZ	**Kozyrevsk**	**2.55**	**348**	*e*P	Pn	16 22 13.8	+2.1
KRSR	**Krestovskiy**	**2.66**	**357**	*e*P	Pn

ASAR	**Alice Springs**	**46.54**	**256**	P		**P**	**16 30 00.7**	**+0.2**
	20nm,0.6s,mb4.6,baz=97,slow=8.1,SNR=258							
ASAR				S		**S**	**16 36 33.7**	**+1.1**
	0.8nm,0.9s,baz=86,slow=15,SNR=4.7							
WRAB	**Tennant Creek**	**46.62**	**261**	*e*P		**P**	**16 30 00.3**	**-0.9**
	6.6nm,0.4s,mb4.3							
KAKA	**Kakadu**	**49.98**	**270**	*e*P		**P**	**16 30 26.0**	**-0.9**
	7.9nm,0.4s,mb4.4							
KAKA	**Kakadu**	**49.98**	**270**	*e*P		**P**	**16 30 25.6**	**-1.3**
	30nm,0.5s,mb4.9							
FITZ	**Fitzroy Crossi**	**55.06**	**262**	*e*P		**P**	**16 31 04.3**	**+0.2**
	2.7nm,0.3s,mb4.2							
SBA	**Scott Base**	**58.31**	**184**	*e*P		**P**	**16 31 28.4**	**+2.4**
	5.5nm,0.8s,mb4.2							
MBWA	**Marble Bar**	**59.88**	**257**	P		**P**	**16 31 35.8**	**-1.9**
CASY	**Casey**	**65.09**	**205**	*e*P		**P**	**16 32 12.5**	**+1.2**
CASY	**Casey**	**65.09**	**205**	*e*P		**P**	**16 32 12.0**	**+0.7**
	4.5nm,0.8s,mb4.2							
QSPA	**South Pole Qui**	**69.87**	**180**	*e*P		**P**	**16 32 42.4**	**+1.4**
	11nm,0.8s,mb4.5							
MJAR	**Matsushiro Arr**	**71.18**	**322**	P		**P**	**16 32 48.0**	**-1.6**
	1.2nm,0.7s,mb3.7,baz=154,slow=6.2,SNR=4.0							
KKM	**Kota Kinabalu**	**71.63**	**284**	*e*P		**P**	**16 32 52.4**	**-0.3**
	2.5nm,0.4s,mb4.2							
KSM	**Kuching**	**75.36**	**277**	*e*P		**P**	**16 33 13.1**	**-1.5**
	13nm,1.2s,mb4.5							
ISA	**Isabella**	**77.70**	**45**	*e*P		**P**	**16 33 27.8**	**+0.7**
	1.3nm,0.4s,mb3.9							
KSRS	**Korea Array**	**78.01**	**317**	P		**P**	**16 33 28.4**	**-0.4**
	0.4nm,0.8s,mb3.1,baz=131,slow=6.6,SNR=5.2							
NVAR	**Mina Array Bea**	**79.44**	**42**	P		**P**	**16 33 37.0**	**+0.5**
	1.3nm,0.6s,mb3.8,baz=227,slow=9.7,SNR=12							
WVOR	**Wild Horse Val**	**81.62**	**39**	*e*P		**P**	**16 33 47.8**	**-0.3**
	2.2nm,1.1s,mb3.7							
ARUT	**Antelope Range**	**82.24**	**45**	*e*P		**P**	**16 33 52.6**	**+1.2**
	3.8nm,1.2s,mb3.9							
MAW	**Mawson**	**82.52**	**199**	*e*P		**P**	**16 33 53.6**	**+1.2**
	4.3nm,0.9s,mb4.2							
MAW	**Mawson**	**82.52**	**199**	P		**P**	**16 33 53.6**	**+1.3**
	4.5nm,0.8s,mb4.3,baz=71,slow=6.1,SNR=8.0							
HLID	**Hailey**	**84.80**	**40**	*e*P		**P**	**16 34 04.4**	**+0.2**
	4.7nm,1.4s,mb4.0							
MNTX	**Cornudas Mount**	**84.95**	**54**	*e*P		**P**	**16 34 05.6**	**+0.3**
	0.9nm,0.6s,mb3.7							
TXAR	**Lajitas Array**	**85.21**	**57**	P		**P**	**16 34 07.3**	**+0.7**
	2.4nm,1.0s,mb3.9,baz=211,slow=7.0,SNR=14							
ILAR	**Eielson Array**	**87.59**	**12**	P		**P**	**16 34 16.2**	**-1.1**
	0.6nm,0.9s,mb3.4,baz=248,slow=3.9,SNR=5.8							
VNA1	**Neumayer--Stat**	**88.98**	**176**	*e*		**P**	**16 34 22.2**	**-1.8**
CMAR	**Chiang Mai Arr**	**91.91**	**289**	P		**P**	**16 34 40.1**	**+1.5**
	1.7nm,1.0s,mb3.9,baz=107,slow=1.4,SNR=5.8							
BR131	**Keskin Array S**	**148.10**	**314**	*e*PKPbc	PKPbc	PKPbc	16 41 14.5	0.0
BRTR	**Keskin Array B**	**148.10**	**314**	PKPbc	PKPbc	PKPbc	16 41 15.0	+0.5
	2.3nm,0.8s,baz=136,slow=4.1,SNR=9.8							
MMAI	**Mount Meron Ar**	**149.40**	**301**	PKPbc	PKPbc	PKPbc	16 41 18.7	+0.7
	4.8nm,0.7s,baz=61,slow=2.2,SNR=5.1							
KHC	**Kasperske Hory**	**150.16**	**348**	*e*PKPbc	PKPbc	PKPbc	16 41 19.6	+0.3
TORD	**Torodi Ar. Bea**	**172.60**	**161**	PKPab	PKPab	PKPab	16 43 05.5	+1.1
	0.7nm,0.8s,baz=175,slow=3.9,SNR=2.9							

*GUC **07** 16:22:04.6±0.8,21°.96S×68°.79W,h129km±14km,ML3.8*
*IDC **07** 16:22:04.8±13.0,22°.22S×68°.17W,h104km±115km,*
mb1 3.1/1,mb1mx3.0/13,mbtmp2.9/1,ML3.3/1,Error
ellipse: s-maj=156.9km s-min=65.6km az=161.0
*ISCJB **07** 16:22:05.5±1.3,21°.94S±0°.08×68°.9W±0°.4,h136km±25km,*
Error ellipse: s-maj=62.7km s-min=11.7km az=7.0

ISC 07 16:22:06.4±1.2,21°.94S±0°.08×68°.9W±0°.4,h136km±22km,
n10,σ1°01/12,5C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB04	**Plate Boundary**	**0.62**	**238**	↑*i*P	**Pn**	**16 22 31.4**	**+4.6**
PB04				*i* S	**Sn**	**16 22 51.8**	**+9.4**
PB04				AML	AML	16 22 55.1	
	comp=N,2μm,0.2s						
MACH	**Maria Elena**	**0.82**	**252**	↑*i*P	**Pn**	**16 22 27.4**	**-0.9**
MACH				*i* S	**Sn**	**16 22 44.7**	**-0.2**
PB01	**Plate Boundary**	**1.04**	**329**	↑*i*P	**Pn**	**16 22 29.2**	**-1.0**
PB01				*i* S	**Sn**	**16 22 48.0**	**-0.2**
PB01				AML	AML	16 22 48.6	
	comp=N,1μm,0.3s						
MECH	**Mejillones**	**1.83**	**230**	*e*P	**Pn**	**16 22 38.5**	**-0.2**
MECH				AML	AML	16 23 12.8	
	comp=N,1μm,0.4s						
CEN1	**Los Morros**	**1.87**	**219**	↑*i*P	**Pn**	**16 22 41.3**	**+2.1**
HMBC	**Humberston**	**1.88**	**331**	↑*i*P	**Pn**	**16 22 38.9**	**-0.4**
HMBC				*i* S	**Sn**	**16 23 04.9**	**+0.4**
HMBC				AML	AML	16 23 08.2	
	comp=N,666nm,0.4s						
LPAZ	**La Paz**	**5.67**	**8**	P	**Pn**	**16 23 30.4**	**+1.8**
	comp=N,0.5nm,0.3s,baz=183,slow=7.1,SNR=13						
TORD	**Torodi Ar. Bea**	**77.51**	**70**	P	**P**	**16 33 46.6**	**-1.0**
	comp=N,0.6nm,0.4s,baz=245,slow=5.4,SNR=9.7						
ASAR	**Alice Springs**	**129.53**	**207**	PKP	PKPdf	16 41 02.1	+2.2
	comp=N,0.4nm,1.1s,baz=119,slow=1.9,SNR=3.3						
MKAR	**Makanchi Array**	**145.99**	**36**	PKPbc	PKPbc	16 41 31.1	+1.0
	comp=N,0.6nm,0.7s,baz=326,slow=3.9,SNR=4.7						

IDC 07 16:33:03.5±2.0,52°.41N×175°.27W,h0km,mb3.6/3,
mb1 3.9/4,mb1mx3.5/25,mbtmp3.5/4,MS3.1/5,Ms1 3.1/5,
ms1mx2.8/30,Error ellipse: s-maj=74.9km
s-min=35.8km az=146.0,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**16.35**	**283**	LR	LR	16 42 19.2	
	comp=Z,29nm,18.4s,baz=75,slow=34						
ILAR	**Eielson Array**	**19.07**	**39**	P	Pn	16 37 27.1	-0.7
	0.1nm,0.3s,baz=241,slow=10,SNR=8.6						
ILAR				LR	LR	16 45 30.0	
	comp=Z,72nm,18.4s,baz=162,slow=39						
INK	**Inuvik**	**25.36**	**35**	LR	LR	16 50 20.3	
	comp=Z,56nm,18.1s,baz=77,slow=41						
DLBC	**Dease Lake**	**25.96**	**59**	LR	LR	16 49 20.6	
	comp=Z,39nm,18.1s,baz=4.5,slow=38						
BBB	**Bella Bella**	**28.44**	**71**	LR	LR	16 47 45.0	
	comp=Z,29nm,18.9s,baz=202,slow=31						
NVAR	**Mina Array Bea**	**41.28**	**86**	P	P	16 40 51.2	+0.9
	0.4nm,0.5s,baz=284,slow=7.3,SNR=4.4						
TXAR	**Lajitas Array**	**56.35**	**84**	P	P	16 42 45.6	-0.6
	0.4nm,0.5s,baz=304,slow=5.6,SNR=6.9						
ASAR	**Alice Springs**	**87.75**	**225**	P	P	16 45 54.1	+0.2
	0.3nm,0.8s,baz=28,slow=5.3,SNR=2.6						

*IDC **07** 16:44:14.5±7.5,52°.16N×177°.36W,h0km,mb3.0/3,*
mb1 3.7/4,mb1mx3.4/26,mbtmp3.3/4,ML3.8/1,Error
ellipse: s-maj=143.2km s-min=60.8km az=101.0
*ISCJB **07** 16:44:22.9±1.1,52°.4N±0°.1×175°.5W±0°.1,h10km,mb3.1/2,*
Error ellipse: s-maj=21.1km s-min=9.4km az=172.4
*NEIC **07** 16:44:23.3,52°.10N×175°.46W,h13km,ML2.6(AEIC),After*
AEIC.

ISC 07 16:44:24.2±1.0,52°.3N±0°.2×175°.46W±0°.10,h10km,n7,
σ0°82/8,mb3.1/2,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.40**	**247**	*e*Pg	**Pg**	**16 44 31.6**	**-0.4**
ATKA	**Atka Island**	**0.78**	**93**	P	**Pg**	**16 44 38.3**	**-0.9**
ATKA				S	**Sg**	**16 44 49.3**	**0.0**
AKUT	**Akutan**	**6.12**	**68**	Pn	**Pn**	**16 46 00.6**	**+6.0**
KDAK	**Kodiak Island**	**14.21**	**58**	Pn	**Pn**	**16 47 50.5**	**+5.3**
	0.4nm,0.3s,baz=297,slow=6.8,SNR=3.0						
ILAR	**Eielson Array**	**19.27**	**38**	P	**Pn**	**16 48 49.0**	**-0.5**
	0.5nm,0.5s,baz=231,slow=8.6,SNR=6.5						
NVAR	**Mina Array Bea**	**41.41**	**86**	P	**P**	**16 52 12.1**	**+1.7**
	0.1nm,0.3s,mb2.9,baz=277,slow=7.2,SNR=2.2						
TXAR	**Lajitas Array**	**56.49**	**84**	P	**P**	**16 54 06.5**	**+0.3**
	0.2nm,0.7s,mb3.2,baz=290,slow=5.6,SNR=3.1						

*ISCJB **07** 16:45:19.9±0.8,52°.0N±0°.1×175°.44W±0°.06,h10km,*
mb3.7/8,Error ellipse: s-maj=18.2km s-min=5.0km
az=177.3
*IDC **07** 16:45:20.2±1.0,51°.83N×175°.49W,h0km,mb3.7/7,*
mb1 3.9/9,mb1mx3.7/27,mbtmp3.7/9,ML3.7/2,Error
ellipse: s-maj=40.6km s-min=18.2km az=165.0
*NEIC **07** 16:45:20.1±1.7,52°.26N×175°.45W,h3km±13km,*
ML3.4(AEIC),Error ellipse: s-maj=30.1km s-min=9.6km
az=164.0

ISC 07 16:45:21.6±0.8,52°.0N±0°.1×175°.46W±0°.06,h10km,n20,
σ1°30/22,mb3.7/8,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.38**	**282**	*e*Pg	**Pg**	**16 45 28.1**	**-1.0**
GSTR				*e*Sg	**Sg**	**16 45 33.7**	**-0.4**
ATKA	**Atka Island**	**0.80**	**76**	P	**Pg**	**16 45 34.8**	**-2.3**
ATKA				S	**Sg**	**16 45 46.4**	**-1.1**
AKUT	**Akutan**	**6.21**	**66**	*e*Pn	**Pn**	**16 46 51.9**	**-1.3**
	73nm,1.0s						
FALS	**False Pass**	**7.73**	**64**	*e*Pn	**Pn**	**16 47 16.6**	**+2.4**
	40nm,0.8s						
SDPT	**Sand Point**	**9.49**	**64**	*e*Pn	**Pn**	**16 47 39.5**	**+1.3**
KDAK	**Kodiak Island**	**14.33**	**57**	*e*Pn	**Pn**	**16 48 46.1**	**+1.8**
	7.1nm,0.4s						
KDAK	**Kodiak Island**	**14.33**	**57**	Pn	**Pn**	**16 48 48.5**	**+4.2**
	0.4nm,0.3s,baz=264,slow=9.2,SNR=3.3						
RSO	**Redoubt South**	**15.12**	**47**	*e*Pn	**Pn**	**16 48 58.5**	**+3.5**
ILAR	**Eielson Array**	**19.45**	**38**	P	**Pn**	**16 49 49.1**	**-0.1**
	0.1nm,0.3s,baz=229,slow=8.6,SNR=7.6						
MENT	**Mentasta**	**20.03**	**45**	*e*Pn	**P**	**16 49 52.8**	**-1.5**
EGAK	**Eagle**	**21.70**	**41**	*e*Pn	**P**	**16 50 12.1**	**-0.2**
	9.1nm,0.6s,mb4.4						
DAWY	**Dawson**	**22.22**	**43**	*e*Pn	**P**	**16 50 12.9**	**-4.9**
INK	**Inuvik**	**25.74**	**35**	P	**P**	**16 50 53.9**	**+2.1**
INK	**Inuvik**	**25.74**	**35**	P	**P**	**16 50 53.9**	**+2.1**
	1.4nm,0.5s,mb3.8,baz=247,slow=9.4,SNR=2.4						
MJAR	**Matsushiro Arr**	**35.93**	**263**	P	**P**	**16 52 21.9**	**-0.1**
	0.4nm,0.5s,mb3.6,baz=48,slow=7.9,SNR=3.1						
NVAR	**Mina Array Bea**	**41.42**	**86**	P	**P**	**16 53 09.2**	**+1.2**
	0.7nm,0.7s,mb3.4,baz=287,slow=6.9,SNR=5.7						
KSRS	**Korea Array**	**41.70**	**273**	P	**P**	**16 53 11.9**	**+1.6**
	0.2nm,0.3s,mb3.2,baz=45,slow=8.6,SNR=3.0						
TXAR	**Lajitas Array**	**56.51**	**84**	P	**P**	**16 55 03.2**	**-0.6**
	0.7nm,0.6s,mb3.9,baz=298,slow=4.7,SNR=10.0						
MKAR	**Makanchi Array**	**61.24**	**310**	P	**P**	**16 55 36.0**	**-0.5**
	0.5nm,0.8s,mb3.7,baz=72,slow=9.4,SNR=2.8						
ASAR	**Alice Springs**	**87.39**	**225**	P	**P**	**16 58 08.2**	**-0.5**
	0.4nm,0.8s,mb3.7,baz=19,slow=4.9,SNR=3.5						

IDC 07 16:45:33.0±1.0,52°.22N×175°.69W,h0km,mb3.9/11,
mb1 4.1/12,mb1mx3.9/25,mbtmp3.9/12,ML4.6/1,Error
ellipse: s-maj=30.3km s-min=18.9km az=176.0,
Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**14.34**	**58**	Pn	Pn	16 49 02.3	+5.2
	2.8nm,0.3s,baz=275,slow=9.5,SNR=10						
ILAR	**Eielson Array**	**19.38**	**38**	P	Pn	16 50 01.4	+0.4
	0.8nm,0.3s,baz=230,slow=8.2,SNR=16						
MJAR	**Matsushiro Arr**	**35.82**	**263**	P	P	16 52 34.0	+0.1
	1.6nm,0.6s,baz=54,slow=7.7,SNR=5.9						
NVAR	**Mina Array Bea**	**41.55**	**86**	P	P	16 53 23.9	+1.9
	1.3nm,0.9s,baz=289,slow=8.8,SNR=5.1						
KSRS	**Korea Array**	**41.55**	**272**	P	P	16 53 22.1	0.0
	0.3nm,0.3s,baz=47,slow=8.4,SNR=4.2						
SONM	**Songino Array**	**47.99**	**298**	P	P	16 54 15.1	+1.8
	0.6nm,0.9s,baz=69,slow=7.9,SNR=3.9						
ZALV	**Zalesovo Beam**	**54.84**	**315**	P	P	16 55 06.0	+1.5
	0.5nm,0.5s,baz=12,slow=7.4,SNR=2.6						
TXAR	**Lajitas Array**	**56.63**	**84**	P	P	16 55 16.6	-1.1
	0.4nm,0.5s,baz=299,slow=4.9,SNR=4.6						
ARCES	**ARCESS Array B**	**57.58**	**351**	P	P	16 55 23.2	-0.6
	1.5nm,0.7s,baz=18,slow=8.2,SNR=4.4						
MKAR	**Makanchi Array**	**61.01**	**310**	P	P	16 55 47.6	-0.2
	1.3nm,0.9s,baz=37,slow=3.0,SNR=6.2						
BVAR	**Borovoye Array**	**61.48**	**321**	P	P	16 55 50.8	-0.1
	3.2nm,0.7s,baz=48,slow=6.6,SNR=12						
AKASG	**Malin Array Be**	**75.31**	**344**	P	P	16 57 16.0	-1.5
	1.2nm,0.7s,baz=25,slow=6.4,SNR=3.0						
ASAR	**Alice Springs**	**87.43**	**225**	P	P	16 58 21.6	-0.4
	0.7nm,0.8s,baz=23,slow=5.8,SNR=8.0						

MAN 07 16:47:35.7±64.4N×124°.90E,h25km,mb4.2,ML3.0,MS2.7,
2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUKP	**Musuan**	**0.29**	**34**	*e*P	Pb	16 47 43.4	+1.5
BUKP				*e*S	Sb	16 47 47.4	+0.9
KCP	**Kidapawan**	**0.65**	**163**	↑*i*P	Pb	16 47 48.2	+0.4
KCP				*i* S	Sb	16 47 57.5	+1.0
DMPH	**Davao City--Mi**	**0.82**	**132**	*e*P	Pb	16 47 51.8	+1.2
DMPH				*e*S	Sb	16 48 03.7	+2.5
CGP	**Cagayan de Oro**	**0.84**	**346**	↑*i*P	Pb	16 47 51.9	+1.0
CGP				*i* S	Sb	16 48 04.0	+2.2
PAGZ	**Pagadian**	**1.52**	**278**	*e*P	Pn	16 48 04.8	+4.2
PAGZ				*e*S	Sn	16 48 21.7	+2.1

CASC 07 16:49:10.6±0.8,12°.83N×88°.70W,h34km±9km,MD3.5,Off
coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VSM	**San Miguel**	**0.73**	**35**	*e*P	Pn	16 49 25.0	+0.5
VSM				*e*S	Sn	16 49 35.7	+1.3
BLLM	**Bellamira**	**0.76**	**37**	*e*P	Pn	16 49 25.0	+0.1
BLLM				*e*S	Sn	16 49 35.4	+0.2
SNVI	**San Vicente**	**0.79**	**350**	*e*P	Pn	16 49 25.4	+0.1
SNVI				*e*S	Sn	16 49 37.0	+1.1
LFRS	**El Faro**	**0.86**	**336**	*e*P	Pn	16 49 26.4	+0.1
LFRS				*e*S	Sn	16 49 38.4	+0.7
CNCH	**Conchagua**	**0.96**	**62**	*i* P	Pn	16 49 27.5	-0.1
CNCH				*e*S	Sn	16 49 41.0	+1.0
LBRS	**Las Brisas**	**0.96**	**340**	*e*P	Pn	16 49 28.0	+0.3
CAHU	**Cacacuatique**	**1.05**	**27**	*i* P	Pn	16 49 29.0	+0.1
CAHU				*e*S	Sn	16 49 43.9	+1.5
BOQS	**Boqueron**	**1.06**	**328**	*e*P	Pn	16 49 29.2	+0.1
BOQS				*e*S	Sn	16 49 44.2	+1.6
SBLS	**San Blas**	**1.34**	**318**	*e*P	Pn	16 49 33.6	+0.6
SBLS				*e*S	Sn	16 49 51.7	+2.0
SNJE	**San Jose**	**1.35**	**320**	*e*P	Pn	16 49 32.7	-0.4
CRIN	**San Cristobal**	**1.62**	**94**	*i* P	Pn	16 49 37.1	+0.3

*ISCJB **07** 16:49:20.3±0.8,52°.48N±0°.10×175°.37W±0°.10,h10km,*
mb3.6/3,Error ellipse: s-maj=14.3km s-min=8.5km az=1.5
*NEIC **07** 16:49:21.3,51°.94N×175°.27W,h14km,ML3.3(AEIC),After*
AEIC.
*IDC **07** 16:49:21.5±1.3,52°.65N×175°.40W,h0km,mb3.4/3,*
mb1 3.6/5,mb1mx3.4/26,mbtmp3.4/5,ML3.6/1,Error
ellipse: s-maj=48.7km s-min=24.1km az=164.0

ISC 07 16:49:21.7±0.8,52°.4N±0°.1×175°.35W±0°.09,h10km,n9,
σ1°09/10,mb3.6/3,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.53**	**236**	*e*Pg	**Pg**	**16 49 30.7**	**-1.3**
ATKA	**Atka Island**	**0.74**	**105**	P	**Pg**	**16 49 35.2**	**-0.7**
ATKA				S	**Sg**	**16 49 45.6**	**+0.1**
FALS	**False Pass**	**7.51**	**66**	*e*Pn	**Pn**	**16 51 16.4**	**+5.2**
KDAK	**Kodiak Island**	**14.07**	**58**	Pn	**Pn**	**16 52 40.5**	**-0.4**
KDAK	**Kodiak Island**	**14.07**	**58**	Pn	**Pn**	**16 52 40.5**	**-0.4**
	0.3nm,0.3s,baz=198,slow=6.4,SNR=2.7						
ILAR	**Eielson Array**	**19.11**	**39**	P	**Pn**	**16 53 44.3**	**-0.9**
	0.1nm,0.3s,baz=238,slow=9.3,SNR=5.6						
SONM	**Songino Array**	**48.09**	**298**	P	**P**	**16 58 01.3**	**+0.2**
	0.4nm,0.7s,mb3.6,baz=64,slow=6.6,SNR=3.0						
TXAR	**Lajitas Array**	**56.41**	**84**	P	**P**	**16 59 04.4**	**+1.3**
	0.2nm,0.7s,mb3.3,baz=297,slow=8.9,SNR=4.0						
ASAR	**Alice Springs**	**87.70**	**225**	P	**P**	**17 02 12.9**	**+2.6**
	0.7nm,1.0s,mb3.8,baz=11,slow=4.4,SNR=4.5						

IDC 07 17:02:28.2±3.3,28°.39N×66°.31E,h0km,mb3.7/5,
mb1 3.7/5,mb1mx3.4/26,mbtmp3.7/5,MS3.0/1,Ms1 3.0/1,
ms1mx2.3/29,Error ellipse: s-maj=95.6km
s-min=32.6km az=84.0,Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**22.24**	**30**	P	P	17 07 26.2	-0.3
	1.4nm,0.7s,baz=216,slow=10,SNR=11						
BVAR	**Borovoye Array**	**24.80**	**6**	P	P	17 07 52.2	+0.5
	0.7nm,0.4s,baz=188,slow=8.7,SNR=4.2						
MMAI	**Mount Meron Ar**	**26.92**	**288**	LR	LR	17 19 12.5	
	comp=Z,32nm,21.1s,baz=200,slow=37						
ZALV	**Zalesovo Beam**	**28.91**	**23**	P	P	17 08 28.0	-0.7
	1.3nm,0.7s,baz=216,slow=10,SNR=5.0						
SONM	**Songino Array**	**36.52**	**47**	P	P	17 09 36.3	+1.0
	0.2nm,0.4s,baz=264,slow=10.0,SNR=3.6						
ASAR	**Alice Springs**	**83.16**	**121**	P	P	17 14 56.5	0.0
	0.3nm,0.6s,baz=306,slow=5.4,SNR=9.9						

*ATH **07** 17:04:38.9,39°.55N×23°.88E,h42km±10km,MD3.3/9,*
ML3.1
*SOF **07** 17:04:38.6,39°.69N×24°.10E,h19km,MD3.0*
*NEIC **07** 17:04:38.9,39°.55N×23°.88E,h42km,MD3.3(ATH),After*
ATH.
*ISCJB **07** 17:04:38.4±0.6,39°.57N±0°.02×23°.86E±0°.03,h14km±5km,*
Error ellipse: s-maj=3.4km s-min=2.7km az=20.2
*THE **07** 17:04:38.4,39°.58N×23°.94E,h13km±1km,ML3.2/11,Error*
ellipse: s-maj=1.3km s-min=0.7km az=227.0
*CSEM **07** 17:04:38.3±0.1,39°.57N×23°.81E,h10km,MD3.3,Error*
ellipse: s-maj=3.2km s-min=2.6km az=108.0

ISC 07 17:04:38.7±0.5,39°.58N±0°.02×23°.83E±0°.03,h13km±4km,
n152,σ1°07/184,8C-2D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.37**	**342**	P	**Pg**	**17 04 46.0**	**-0.2**
PAIG	**Paliouri**	**0.37**	**342**	P	**Pg**	**17 04 46.3**	**+0.1**
PAIG				S	**Sg**	**17 04 52.0**	**+0.8**
PAIG	**Paliouri**	**0.37**	**342**	P	**Pg**	**17 04 46.3**	**+0.1**
PAIG				S	**Sg**	**17 04 52.0**	**+0.8**
AOS	**Alonnisos**	**0.41**	**174**	P	**Pg**	**17 04 46.4**	**-0.4**
AOS	**Alonnisos**	**0.41**	**174**	P	**Pg**	**17 04 46.8**	**0.0**
AOS				S	**Sg**	**17 04 53.2**	**+0.9**
AOS	**Alonnisos**	**0.41**	**174**	P	**Pg**	**17 04 46.4**	**-0.4**
AOS				S	**Sg**	**17 04 53.2**	**+0.9**
XOR	**Xorichti**	**0.53**	**247**	P	**Pg**	**17 04 50.3**	**+1.1**
XOR	**Xorichti**	**0.53**	**247**	P	**Pg**	**17 04 50.6**	**+1.4**
XOR				S	**Sg**	**17 05 00.0**	**+3.7**
XOR	**Xorichti**	**0.53**	**247**	P	**Pg**	**17 04 50.3**	**+1.1**
OUR	**Ouranopolis**	**0.77**	**9**	P	**Pg**	**17 04 52.2**	**-1.4**
OUR	**Ouranopolis**	**0.77**	**9**	P	**Pg**	**17 04 52.8**	**-0.8**
OUR				S	**Sg**	**17 05 02.9**	**-0.8**
OUR	**Ouranopolis**	**0.77**	**9**	P	**Pg**	**17 04 52.8**	**-0.8**
OUR				S	**Sg**	**17 05 02.9**	**-0.8**
ATAL	**Atalanti**	**1.08**	**216**	P	**Pb**	**17 04 58.8**	**-0.4**
ATAL	**Atalanti**	**1.08**	**216**	P	**Pb**	**17 04 58.8**	**-0.4**
LIA	**Limnos Island**	**1.09**	**72**	P	**Pb**	**17 04 58.2**	**-1.1**
LIA	**Limnos Island**	**1.09**	**72**	P	**Pb**	**17 04 57.7**	**-1.8**
LIA				S	**Sb**	**17 05 11.6**	**-2.0**
LIA	**Limnos Island**	**1.09**	**72**	P	**Pb**	**17 04 58.4**	**-1.1**
LIA				S	**Sb**	**17 05 11.6**	**-2.0**
LKR	**Lokris**	**1.12**	**215**	*e*P	**Pb**	**17 04 59.3**	**-0.7**
LKR				*e*S	**Sb**	**17 05 14.7**	**+0.2**
LKR	**Lokris**	**1.12**	**215**	*e*P	**Pb**	**17 04 59.3**	**-0.7**
LKR				*e*S	**Sb**	**17 05 14.7**	**+0.2**
LKR	**Lokris**	**1.12**	**215**	P	**Pb**	**17 04 59.3**	**-0.7**
LKR	**Lokris**	**1.12**	**215**	*e*P	**Pb**	**17 04 59.3**	**-0.7**
LKR				*e*S	**Sb**	**17 05 14.7**	**+0.2**
LIT	**Litokhoron**	**1.16**	**297**	P	**Pb**	**17 04 59.1**	**-1.4**
LIT	**Litokhoron**	**1.16**	**297**	P	**Pb**	**17 04 59.0**	**-1.5**
LIT	**Litokhoron**	**1.16**	**297**	P	**Pb**	**17 04 59.1**	**-1.4**
HORT	**Hortiatis**	**1.16**	**332**	P	**Pb**	**17 05 00.5**	**-0.2**
HORT	**Hortiatis**	**1.16**	**332**	P	**Pb**	**17 05 00.3**	**-0.4**
HORT				S	**Sb**	**17 05 17.0**	**+1.4**
HORT	**Hortiatis**	**1.16**	**332**	P	**Pb**	**17 05 00.3**	**-0.4**
HORT				S	**Sb**	**17 05 17.0**	**+1.4**
THE	**Thessaloniki**	**1.25**	**328**	P	**Pn**	**17 05 03.2**	**+1.4**
THE	**Thessaloniki**	**1.25**	**328**	P	**Pn**	**17 05 02.3**	**+0.5**
THE				S	**Sb**	**17 05 18.6**	**+0.6**
THE	**Thessaloniki**	**1.25**	**328**	P	**Pn**	**17 05 02.3**	**+0.5**
THE				S	**Sb**	**17 05 18.6**	**+0.6**
AGG	**Agios Georgios**	**1.28**	**245**	*e*P	**Pn**	**17 05 01.7**	**-0.6**
AGG				*e*S	**Sb**	**17 05 18.2**	**-0.9**
**AGG

ERIK	**Erikli-Kesan**	**2.33**	**61**	*e*Pn	**Pn**	**17 05 17.4**	**+0.4**
KKB	**Krupnik**	**2.36**	**346**	P	**Pn**	**17 05 16.7**	**-0.4**
KKB	**Krupnik**	**2.36**	**346**	P	**Pn**	**17 05 16.7**	**-0.4**
RLS	**Riolos of Patr**	**2.39**	**231**	P	**Pn**	**17 05 21.5**	**+4.1**
LPK	**Lapseki**	**2.39**	**70**	*e*PN	**Pn**	**17 05 18.5**	**+1.0**
LPK	**Lapseki**	**2.39**	**70**	*e*Pn	**Pn**	**17 05 18.5**	**+1.0**
KDZ	**Kurdzhali**	**2.40**	**30**	P	**Pn**	**17 05 15.2**	**-2.4**
KDZ	**Kurdzhali**	**2.40**	**30**	P	**Pn**	**17 05 15.2**	**-2.4**
VLX	**Vlachokerasia**	**2.48**	**208**	*e*P	**Pn**	**17 05 19.0**	**+0.3**
VLX	**Vlachokerasia**	**2.48**	**208**	*e*P	**Pn**	**17 05 19.0**	**+0.3**
KRUS	**Krusevo**	**2.66**	**313**	*e*Pn	**Pn**	**17 05 19.0**	**-2.2**
BLCB	**Balcova**	**2.77**	**114**	*e*PN	**Pn**	**17 05 23.5**	**+0.7**
BLCB	**Balcova**	**2.77**	**114**	*e*Pn	**Pn**	**17 05 23.5**	**+0.7**
RKY	**Sarkoy-Tekirda**	**2.80**	**66**	*e*PN	**Pn**	**17 05 23.9**	**+0.8**
RKY	**Sarkoy-Tekirda**	**2.80**	**66**	*e*Pn	**Pn**	**17 05 24.0**	**+0.9**
ITM	**Ithomi**	**2.82**	**213**	P	**Pn**	**17 05 25.5**	**+2.1**
ITM	**Ithomi**	**2.82**	**213**	P	**Pn**	**17 05 25.5**	**+2.1**
APE	**Apeiranthos**	**2.84**	**151**	*e*PN	**Pn**	**17 05 23.3**	**-0.4**
APE	**Apeiranthos**	**2.84**	**151**	*e*Pn	**Pn**	**17 05 23.3**	**-0.4**
VLI	**Veliai**	**2.94**	**194**	*e*P	**Pn**	**17 05 24.5**	**-0.5**
VLI	**Veliai**	**2.94**	**194**	*e*P	**Pn**	**17 05 24.5**	**-0.5**
VLI	**Veliai**	**2.94**	**194**	*e*P	**Pn**	**17 05 24.5**	**-0.5**
GONE	**Gonen-Balikesi**	**3.01**	**80**	*e*PN	**Pn**	**17 05 27.3**	**+1.3**
GONE	**Gonen-Balikesi**	**3.01**	**80**	*e*Pn	**Pn**	**17 05 27.3**	**+1.3**
VTS	**Vitosha**	**3.05**	**351**	P	**Pn**	**17 05 27.0**	**+0.4**
VTS	**Vitosha**	**3.05**	**351** ⇑	*i*P	**Pn**	**17 05 26.9**	**+0.3**
VTS	**Vitosha**	**3.05**	**351**	P	**Pn**	**17 05 27.2**	**+0.6**
VTS	**Vitosha**	**3.05**	**351**	P	**Pn**	**17 05 27.0**	**+0.4**
EDRB	**Edirne**	**3.17**	**43**	*e*PN	**Pn**	**17 05 28.7**	**+0.5**
EDRB	**Edirne**	**3.17**	**43**	*e*Pn	**Pn**	**17 05 28.7**	**+0.4**
BARS	**Barje**	**3.58**	**336** ⇑	*i*Pn	**Pn**	**17 05 34.0**	**+0.2**
MPEP	**Malo Peshtene**	**3.78**	**359**	P	**Pn**	**17 05 37.5**	**+0.9**
KULA	**Kula-Manisa**	**3.91**	**104**	*e*PN	**Pn**	**17 05 40.0**	**+1.6**
KULA	**Kula-Manisa**	**3.91**	**104**	*e*Pn	**Pn**	**17 05 40.0**	**+1.6**
CTKS	**Kestanelik-??a**	**3.94**	**64**	*e*PN	**Pn**	**17 05 40.2**	**+1.4**
CTKS	**Kestanelik-??a**	**3.94**	**64**	*e*Pn	**Pn**	**17 05 40.2**	**+1.4**
DIVS	**Divibare**	**5.35**	**329** ⇑	*i*Pn	**Pn**	**17 05 58.1**	**-0.1**
VOIR		**5.93**	**8** ⇑	P	**Pn**	**17 06 06.2**	**+0.1**
VOIR		**5.93**	**8** ⇑	*i*P	**Pn**	**17 06 06.2**	**+0.1**
VOIR		**5.93**	**8** ⇑	P	**Pn**	**17 06 06.2**	**+0.1**
MLR	**Muntele Rosu**	**6.12**	**14** ⇑	*i*P	**Pn**	**17 06 12.9**	**+4.2**
MLR	**Muntele Rosu**	**6.12**	**14** ⇑	*i*P	**Pn**	**17 06 12.9**	**+4.2**
DOPR	**Dopca**	**6.49**	**10** ⇓	*i*P	**Pn**	**17 06 14.4**	**+0.6**
DOPR	**Dopca**	**6.49**	**10** ⇓	*i*P	**Pn**	**17 06 14.4**	**+0.6**

*ISCJB **07** 17:32:29.3±0.3, 23°.78N±0°.02×121°.85E±0°.02, h36km±8km, Error ellipse: s-maj=3.4km s-min=2.3km az=43.8*
*TAP **07** 17:32:29.2, 23°.81N×121°.78E, h45km, ML3.1, C*
*JMA **07** 17:32:29.7±0.4, 23°.87N×121°.87E, h76km, M2.9*

ISC 07 17:32:29.5±0.3, 23°.78N±0°.02×121°.83E±0°.02, h33km±2km, n55, σ0^{s}76/102, 2C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEGC	**Jichi Village**	**0.28**	**255**	*e*P	**Pb**	**17 32 37.4**	**+0.4**
	baz=245						
TEGC				S	**Sb**	**17 32 43.8**	**+1.7**
	baz=245						
HWA	**Hwalien**	**0.28**	**313** ⇓	*i*P	**Pb**	**17 32 37.2**	**+0.1**
	baz=318						
HWA				*e*S	**Sb**	**17 32 42.9**	**+0.7**
	baz=318						
ESF	**Shoufeng Towns**	**0.31**	**286**	*e*P	**Pb**	**17 32 36.9**	**-0.5**
	baz=289						
TWD	**Chiawan**	**0.37**	**324** ⇓	*i*P	**Pb**	**17 32 38.0**	**-0.2**
	baz=333						
TWD				*i* S	**Sb**	**17 32 44.4**	**+0.3**
	baz=333						
ESL	**Shilin**	**0.37**	**275**	P	**Pb**	**17 32 37.9**	**-0.3**
	baz=271						
ESL				S	**Sb**	**17 32 44.2**	**+0.1**
	baz=271						
EHY	**Hungye**	**0.55**	**240** ⇑	*i*P	**Pb**	**17 32 40.1**	**-0.8**
	baz=244						
EHY				*e*S	**Sb**	**17 32 47.9**	**-0.6**
	baz=244						
WHF	**Hehuan Shan**	**0.63**	**305**	*i* P	**Pn**	**17 32 41.5**	**-0.7**
	baz=306						
WHF				S	**Sb**	**17 32 50.0**	**-0.9**
	baz=306						
ENA	**Nanau**	**0.65**	**352** ⇓	*i*P	**Pn**	**17 32 41.7**	**-0.7**
	baz=357						
ENA				*e*S	**Sb**	**17 32 51.1**	**-0.2**
	baz=357						
TWF1	**Yuli**	**0.65**	**229**	*i* P	**Pn**	**17 32 41.7**	**-0.8**
	baz=233						
TWF1				*e*S	**Sb**	**17 32 50.5**	**-0.9**
	baz=233						
TWT	**Tachien**	**0.76**	**308**	*e*P	**Pn**	**17 32 43.6**	**-0.4**
	baz=314						
TWT				*e*S	**Sn**	**17 32 53.5**	**-0.9**
	baz=314						
NNS	**Nan Shan**	**0.78**	**327**	P	**Pn**	**17 32 43.8**	**-0.5**
	baz=324						
NNS				S	**Sn**	**17 32 54.0**	**-0.8**
	baz=324						
CHKT	**Chengkung**	**0.81**	**212**	*e*P	**Pn**	**17 32 43.6**	**-1.0**
	baz=199						
CHKT				*e*S	**Sn**	**17 32 53.8**	**-1.6**
	baz=199						
TWC	**Suao**	**0.82**	**1**	*i* P	**Pn**	**17 32 44.6**	**-0.2**
	baz=13						
TWC				*i* S	**Sn**	**17 32 55.8**	**-0.1**
	baz=13						
YUS	**Yu-Shan**	**0.86**	**250** ⇑	*i*P	**Pn**	**17 32 45.6**	**+0.2**
	baz=247						
YUS				S	**Sn**	**17 32 56.4**	**-0.4**
	baz=247						
SMLT	**Sun Moon Lake**	**0.86**	**277**	P	**Pn**	**17 32 44.7**	**-0.6**
	baz=279						
SMLT				*e*S	**Sn**	**17 32 55.6**	**-1.2**
	baz=279						
ENTT	**Nioudou**	**0.89**	**344**	P	**Pn**	**17 32 45.3**	**-0.4**
	baz=347						
ENTT				S	**Sn**	**17 32 57.1**	**-0.3**
	baz=347						
TYC	**Yuchr**	**0.90**	**278**	*e*P	**Pn**	**17 32 45.3**	**-0.7**
	baz=280						
TYC				*e*S	**Sn**	**17 32 56.6**	**-1.2**
	baz=280						
TWE	**Neicheng**	**0.95**	**351**	P	**Pn**	**17 32 46.3**	**-0.2**
	baz=344						
TWE				S	**Sn**	**17 32 58.6**	**-0.4**
	baz=344						
ELDTW	**Lidau**	**0.95**	**232**	P	**Pn**	**17 32 45.8**	**-0.9**
	baz=228						
ELDTW				*e*S	**Sn**	**17 32 57.9**	**-1.2**
	baz=228						
ILA	**Ilan**	**0.98**	**355**	*e*P	**Pn**	**17 32 46.7**	**-0.3**
	baz=358						
ILA				*e*S	**Sn**	**17 32 59.0**	**-0.7**
	baz=358						
ALS	**Alishan**	**0.98**	**254**	*e*P	**Pn**	**17 32 47.3**	**+0.3**
	baz=251						
ALS				*e*S	**Sn**	**17 32 58.7**	**-1.1**
	baz=251						
NSK	**Sanguang**	**0.99**	**334**	P	**Pn**	**17 32 46.9**	**-0.3**
	baz=336						
NSK				S	**Sn**	**17 32 59.1**	**-0.9**
	baz=336						
WNT	**Mingjian**	**1.06**	**275**	*e*P	**Pn**	**17 32 48.4**	**+0.4**
	baz=274						
WNT				*e*S	**Sn**	**17 33 02.1**	**+0.5**
	baz=274						
CHN5	**Tsauling**	**1.08**	**260**	*e*P	**Pn**	**17 32 48.7**	**+0.4**
	baz=258						
CHN5				*e*S	**Sn**	**17 33 03.0**	**+0.8**
	baz=258						
TCU	**Taichung**	**1.12**	**289**	*e*P	**Pn**	**17 32 49.7**	**+0.8**
	baz=288						
TCU				*e*S	**Sn**	**17 33 04.6**	**+1.4**
	baz=288						
TWQ1	**Liyutan**	**1.12**	**300**	*e*P	**Pn**	**17 32 49.1**	**+0.2**
	baz=300						
TWQ1				*e*S	**Sn**	**17 33 03.8**	**+0.6**
	baz=300						
NSTT	**Nanjuang**	**1.14**	**318**	*e*P	**Pn**	**17 32 49.8**	**+0.7**
	baz=306						
NSTT				*e*S	**Sn**	**17 33 03.1**	**-0.5**
	baz=306						
NSY	**Sanyi**	**1.17**	**303**	*e*P	**Pn**	**17 32 49.6**	**0.0**
	baz=303						
STYT	**Tauyuan**	**1.17**	**238**	P	**Pn**	**17 32 49.5**	**0.0**
	baz=230						
STYT				*e*S	**Sn**	**17 33 04.5**	**+0.1**
	baz=230						
WGK	**Gukeng**	**1.17**	**266**	*e*P	**Pn**	**17 32 49.9**	**+0.2**
	baz=263						
WGK				*e*S	**Sn**	**17 33 05.6**	**+1.2**
	baz=263						
TWG	**Pinlang**	**1.19**	**216**	*e*P	**Pn**	**17 32 48.4**	**-1.5**
	baz=213						
TWG				*e*S	**Sn**	**17 33 03.4**	**-1.5**
	baz=213						
TTN	**Taitung**	**1.20**	**212**	*e*P	**Pn**	**17 32 50.4**	**+0.3**
	baz=218						
TWA	**Mucha**	**1.21**	**349**	*e*P	**Pn**	**17 32 49.6**	**-0.6**
	baz=342						
TWA				*e*S	**Sn**	**17 33 05.3**	**-0.2**
	baz=342						
CHN4	**Tsaushan**	**1.22**	**250**	*e*P	**Pn**	**17 32 50.8**	**+0.6**
	baz=247						
CHN4				*e*S	**Sn**	**17 33 07.4**	**+1.8**
	baz=247						
TWB1	**Santiao Chiao**	**1.23**	**7**	P	**Pn**	**17 32 50.0**	**-0.4**
	baz=23						
TWB1				S	**Sn**	**17 33 05.5**	**-0.3**
	baz=23						
WTP	**Ta-pu**	**1.24**	**245**	*e*P	**Pn**	**17 32 50.9**	**+0.3**
	baz=242						
WTP				*e*S	**Sn**	**17 33 06.9**	**+0.7**
	baz=242						
YOJ	**Yonaguni jima**	**1.27**	**58**	P	**Pn**	**17 32 51.3**	**+0.3**
YOJ				S	**Sn**	**17 33 07.0**	**+0.1**
NWF	**Wu-fen Shan**	**1.28**	**358**	*e*P	**Pn**	**17 32 51.8**	**+0.6**
	baz=347						
NWF				*e*S	**Sn**	**17 33 07.9**	**+0.7**
	baz=347						
TWK	**Hsinying**	**1.34**	**248**	*e*P	**Pn**	**17 32 52.7**	**+0.8**
	baz=245						
TWK				*e*S	**Sn**	**17 33 09.7**	**+1.1**
	baz=245						
CHN1	**Nanshi**	**1.34**	**244**	*e*P	**Pn**	**17 32 52.4**	**+0.5**
	baz=241						
CHN1				*e*S	**Sn**	**17 33 09.9**	**+1.3**
	baz=241						
SGST	**Jiashian**	**1.34**	**239**	*e*P	**Pn**	**17 32 52.7**	**+0.7**
	baz=236						
SGST				*e*S	**Sn**	**17 33 09.9**	**+1.2**
	baz=236						
TWS1	**Kuangyinshan**	**1.36**	**344**	*e*P	**Pn**	**17 32 53.1**	**+0.8**
	baz=346						
TWS1				*e*S	**Sn**	**17 33 10.1**	**+0.9**
	baz=346						
WTCT	**Ta-ch'eng**	**1.43**	**274**	*e*P	**Pn**	**17 32 53.6**	**+0.5**
	baz=272						
WTCT				*e*S	**Sn**	**17 33 12.6**	**+1.9**
	baz=272						
ECL	**Taimali**	**1.43**	**215**	*e*P	**Pn**	**17 32 52.4**	**-0.8**
	baz=212						
ECL				*e*S	**Sn**	**17 33 09.2**	**-1.7**
	baz=212						
WSF	**Szhu**	**1.48**	**265**	*e*P	**Pn**	**17 32 54.2**	**+0.2**
	baz=264						
SSD	**Sandimen**	**1.51**	**227**	*e*P	**Pn**	**17 32 55.1**	**+0.8**
	baz=224						
SSD				*e*S	**Sn**	**17 33 13.7**	**+0.8**
	baz=224						
CHN8	**Yiju**	**1.55**	**254**	*e*P	**Pn**	**17 32 54.9**	**0.0**
	baz=253						
SGLT	**Jiouru**	**1.62**	**230**	*e*P	**Pn**	**17 32 56.0**	**+0.1**
	baz=220						
EAST	**Anshuo**	**1.66**	**213**	*e*P	**Pn**	**17 32 56.6**	**+0.2**
	baz=212						
IRIF	**Iriomote-Funau**	**1.82**	**72**	P	**Pn**	**17 32 58.9**	**+0.4**
IRIF				S	**Sn**	**17 33 21.5**	**+1.1**
HATJ	**Hateruma jima**	**1.82**	**81**	P	**Pn**	**17 32 58.8**	**+0.2**
HATJ				*e*S	**Sn**	**17 33 20.8**	**+0.2**
JKRS	**Kuro-shima**	**2.04**	**77**	P	**Pn**	**17 33 02.3**	**+0.7**
JKRS				S	**Sn**	**17 33 27.5**	**+1.6**
PNG	**Penghu**	**2.10**	**265**	*e*P	**Pn**	**17 33 01.9**	**-0.5**
	baz=264						
JIJ	**Ishigaki jima**	**2.19**	**74**	P	**Pn**	**17 33 03.6**	**0.0**
JIJ				S	**Sn**	**17 33 28.9**	**-0.7**
JTJ	**Tarama**	**2.75**	**71**	P	**Pn**	**17 33 11.5**	**+0.1**
JTJ				*e*S	**Sn**	**17 33 43.1**	**-0.5**

FUNV 07 17:44:34.4, 9°.73N×73°.67W, h5km, MW3.5, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIRV	**Villa del Rosa**	**1.46**	**58**	*e*P	Pn	17 45 01.2	-0.3
VIRV				*e*S	Sn	17 45 20.5	-0.5
CAPV	**Capacho**	**2.29**	**144**	*e*P	Pn	17 45 12.0	-0.9
CAPV				*e*S	Sn	17 45 40.7	-0.7
VIGV	**El Vigia**	**2.45**	**111**	*e*P	Pn	17 45 13.9	-1.0
VIGV				*e*S	Sn	17 45 43.3	-1.9
SOCV	**Socops**	**3.13**	**117**	*e*P	Pn	17 45 23.4	-1.0
SOCV				*e*S	Sn	17 45 59.8	-2.4
SIQV	**Siquisique**	**3.91**	**76**	*e*P	Pn	17 45 34.4	-0.8
SANV	**Sanarito**	**4.09**	**93**	*e*P	Pn	17 45 36.2	-1.4
SANV				*e*S	Sn	17 46 22.4	-3.4
BAUV	**El Baul**	**5.61**	**98**	*e*P	Pn	17 45 56.9	-1.7

*IDC **07** 17:56:11.5±1.8, 52°.26N×176°.12W, h0km, mb3.4/3, mb1 3.8/5, mb1mx3.5/26, mbtmp3.5/5, ML3.3/1, MS3.6/1, Ms1 3.6/1, ms1mx2.9/21, Error ellipse: s-maj=73.4km s-min=27.4km az=145.0*
*ISCJB **07** 17:56:12.1±0.9, 52°.0N±0°.2×175°.47W±0°.09, h10km, mb3.4/3, Error ellipse: s-maj=25.9km s-min=6.9km az=169.3*
*NEIC **07** 17:56:13.1±0.9, 51°.97N×175°.48W, h10km, ML3.0(AEIC), Error ellipse: s-maj=24.7km s-min=8.8km az=170.0*

ISC 07 17:56:13.5±0.9, 52°.0N±0°.2×175°.48W±0°.09, h10km, n12, σ1^{s}34/12, mb3.4/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.37**	**285**	*e*P	**Pg**	**17 56 20.2**	**-0.6**
ATKA	**Atka Island**	**0.82**	**75**	P	**Pg**	**17 56 27.3**	**-1.9**
ATKA				S	**Sg**	**17 56 38.1**	**-1.7**
AMKA	**Amchitka**	**3.31**	**261**	P	**Pn**	**17 57 04.3**	**-0.9**
AKUT	**Akutan**	**6.23**	**66**	*e*P	**Pn**	**17 57 47.1**	**+1.7**
KDAK	**Kodiak Island**	**14.35**	**57**	Pn	**Pn**	**17 59 38.2**	**+1.8**
	0.1nm,0.3s,baz=303,slow=18,SNR=2.6						
ILAR	**Eielson Array**	**19.47**	**38**	P	**Pn**	**18 00 40.1**	**-1.1**
	0.2nm,0.3s,baz=231,slow=8.3,SNR=19						
EGAK	**Eagle**	**21.73**	**41**	*e*P	**P**	**18 01 04.3**	**-0.1**
DAWY	**Dawson**	**22.24**	**43**	*e*P	**P**	**18 01 11.1**	**+1.2**
NVAR	**Mina Array Bea**	**41.43**	**86**	P	**P**	**18 04 03.6**	**+3.7**
	0.3nm,0.6s,mb3.1,baz=303,slow=8.5,SNR=3.2						
TXAR	**Lajitas Array**	**56.52**	**84**	P	**P**	**18 05 57.2**	**+1.4**
	0.4nm,0.7s,mb3.6,baz=300,slow=4.6,SNR=5.7						
BVAR	**Borovoye Array**	**61.73**	**321**	LR	LR	18 35 51.9	
	comp=Z,46nm,21.1s,baz=312,slow=39						
ASAR	**Alice Springs**	**87.37**	**225**	P	**P**	**18 08 59.9**	**-0.5**
	0.3nm,0.9s,mb3.5,baz=24,slow=5.5,SNR=3.3						

*IDC **07** 17:56:51.7±1.1, 52°.25N×175°.69W, h0km, mb3.9/6, mb1 4.2/9, mb1mx3.8/28, mbtmp4.0/9, ML4.0/3, MS3.2/3, Ms1 3.2/3, ms1mx3.0/32, Error ellipse: s-maj=34.2km s-min=19.9km az=174.0*
*ISCJB **07** 17:56:52.5±2.7, 52°.27N±0°.09×175°.56W±0°.07, h13km±19km, mb4.0/9, MS3.2/2, Error ellipse: s-maj=15.5km s-min=7.0km az=170.4*
*NEIC **07** 17:56:53.6±0.5, 52°.21N×175°.58W, h10km, mb4.2/3, ML3.8(AEIC), Error ellipse: s-maj=14.8km s-min=6.2km az=163.0*

ISC 07 17:56:52.5±1.2, 52°.2N±0°.1×175°.55W±0°.07, h0km±9km, n23, σ1^{s}06/22, mb4.0/9, MS3.2/2, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.35**	**245**	*e*P	**Pg**	**17 57 00.2**	**+1.1**
ATKA	**Atka Island**	**0.83**	**92**	P	**Pg**	**17 57 07.6**	**-0.9**
ATKA				S	**Sg**	**17 57 18.2**	**-1.0**
AMKA	**Amchitka**	**3.31**	**257**	P	**Pn**	**17 57 45.0**	**-0.4**
UNV	**Unalaska Valle**	**5.69**	**70**	P	**Pn**	**17 58 18.9**	**+0.8**
SPIA	**Saint Paul Isl**	**5.82**	**30**	P	**Pn**	**17 58 19.2**	**-0.7**
AKUT	**Akutan**	**6.18**	**68**	*e*P	**Pn**	**17 58 25.8**	**+1.0**
	138nm,1.2s						
KDAK	**Kodiak Island**	**14.26**	**58**	Pn	**Pn**	**18 00 16.9**	**+1.5**
	0.4nm,0.3s,baz=245,slow=7.5,SNR=2.5						
TTA	**Tatalina**	**14.91**	**36**	P	**Pn**	**18 00 25.0**	**+0.9**
	4.6nm,0.8s						
PETK	**Petropavlovsk-**	**16.22**	**284**	Pn	**Pn**	**18 00 41.6**	**+0.3**
	0.4nm,0.3s,baz=90,slow=18,SNR=5.1						
PETK				LR	LR	18 06 11.8	
	comp=Z,67nm,21.6s,baz=304,slow=35						
ILAR	**Eielson Array**	**19.31**	**38**	P	**Pn**	**18 01 18.1**	**-1.5**
	0.3nm,0.3s,baz=239,slow=9.8,SNR=25						
EGAK	**Eagle**	**21.57**	**41**	*e*P	**P**	**18 01 43.0**	**-0.2**
	16nm,0.8s,mb4.5						
DAWY	**Dawson**	**22.09**	**44**	*e*P	**P**	**18 01 50.5**	**+1.8**
INK	**Inuvik**	**25.59**	**35**	P	**P**	**18 02 21.7**	**-1.1**
	2.1nm,0.5s,mb4.0,baz=231,slow=7.0,SNR=3.9						
DLBC	**Dease Lake**	**26.20**	**58**	LR	LR	18 12 05.0	
	comp=Z,70nm,18.4s,MS3.2,baz=174,slow=35						
BBB	**Bella Bella**	**28.66**	**71**	LR	LR	18 12 26.4	
	comp=Z,54nm,18.7s,MS3.2,baz=354,slow=32						
NEW	**Newport**	**36.70**	**72**	*e*P	**P**	**18 04 00.4**	**-0.3**
MCMT	**McKenzie Canyo**	**41.00**	**75**	*e*P	**P**	**18 04 36.7**	**-0.1**
	0.6nm,0.5s,mb3.6						
NVAR	**Mina Array Bea**	**41.46**	**86**	P	**P**	**18 04 41.9**	**+1.2**
	1.3nm,0.8s,mb3.7,baz=292,slow=8.2,SNR=7.8						
MNTX	**Cornudas Mount**	**53.83**	**83**	*e*P	**P**	**18 06 19.1**	**+2.2**
	2.5nm,0.9s,mb4.2						
TXAR	**Lajitas Array**	**56.54**	**84**	P	**P**	**18 06 35.8**	**-0.6**
	0.8nm,0.5s,mb4.0,baz=304,slow=6.0,SNR=11						
MKAR	**Makanchi Array**	**61.05**	**310**	P	**P**	**18 07 06.7**	**-0.9**
	0.6nm,0.8s,mb3.8,baz=49,slow=8.5,SNR=3.2						
BVAR	**Borovoye Array**	**61.51**	**321**	P	**P**	**18 07 09.4**	**-1.2**
	1.3nm,0.6s,mb4.3,baz=51,slow=8.0,SNR=9.0						
ASAR	**Alice Springs**	**87.50**	**225**	P	**P**	**18 09 40.5**	**-1.2**
	0.5nm,0.6s,mb4.0,baz=23,slow=5.4,SNR=8.4						

*ISCJB **07** 18:08:29.2±0.8, 52°.3N±0°.1×175°.5W±0°.1, h10km, mb3.3/3, Error ellipse: s-maj=20.0km s-min=8.3km az=168.6*
*NEIC **07** 18:08:29.7±0.8, 52°.12N×175°.41W, h10km, ML2.9(AEIC), Error ellipse: s-maj=32.7km s-min=8.4km az=169.0*
*IDC **07** 18:08:29.1±2.0, 52°.52N×176°.22W, h0km, mb3.4/3, mb1 3.7/5, mb1mx3.4/26, mbtmp3.4/5, ML3.5/1, Error ellipse: s-maj=77.4km s-min=31.5km az=145.0*

ISC 07 18:08:30.0±0.9, 52°.2N±0°.2×175°.48W±0°.09, h10km, n9, σ1^{s}05/10, mb3.3/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.37**	**255**	*e*P	**Pg**	**18 08 37.2**	**0.0**
ATKA	**Atka Island**	**0.79**	**89**	P	**Pg**	**18 08 44.2**	**-1.1**
ATKA				S	**Sg**	**18 08 56.0**	**+0.5**
AKUT	**Akutan**	**6.16**	**68**	P	**Pn**	**18 10 00.9**	**0.0**
KDAK	**Kodiak Island**	**14.25**	**58**	Pn	**Pn**	**18 11 54.6**	**+3.1**
	0.2nm,0.3s,baz=111,slow=14,SNR=2.1						
ILAR	**Eielson Array**	**19.32**	**38**	P	**Pn**	**18 12 55.5**	**-0.5**
	0.1nm,0.3s,baz=233,slow=8.5,SNR=6.4						
SLMT	**Seeley Lake**	**39.30**	**72**	P	**P**	**18 15 57.5**	**-1.2**
NVAR	**Mina Array Bea**	**41.42**	**86**	P	**P**	**18 16 20.0**	**+3.7**
	0.3nm,0.3s,mb2.9,baz=313,slow=11,SNR=2.0						
TXAR	**Lajitas Array**	**56.51**	**84**	P	**P**	**18 18 16.8**	**+4.7**
	0.3nm,0.6s,mb3.5,baz=296,slow=3.7,SNR=4.5						
ASAR	**Alice Springs**	**87.50**	**225**	P	**P**	**18 21 18.1**	**+0.5**
	0.3nm,0.8s,mb3.6,baz=11,slow=5.7,SNR=3.0						

*IDC **07** 18:16:08.5±2.0, 52°.44N×176°.14W, h0km, mb3.8/3, mb1 4.1/5, mb1mx3.6/26, mbtmp3.8/5, ML3.8/2, MS3.3/1, Ms1 3.5/1, ms1mx2.6/35, Error ellipse: s-maj=75.3km s-min=31.3km az=144.0*
*ISCJB **07** 18:16:09.8±3.5, 52°.2N±0°.1×175°.54W±0°.09, h15km±27km, mb3.8/3, Error ellipse: s-maj=21.1km s-min=8.4km az=166.9*
*NEIC **07** 18:16:10.6±0.9, 52°.09N×175°.51W, h10km, ML4.3(PMR), ML3.7(AEIC), Error ellipse: s-maj=25.4km s-min=8.5km az=164.0*

ISC 07 18:16:10.0±1.2, 52°.2N±0°.2×175°.51W±0°.09, h4km±10km, n11, σ1^{s}11/12, mb3.8/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.34**	**261**	*e*P	**Pg**	**18 16 17.1**	**+0.6**
ATKA	**Atka Island**	**0.81**	**86**	P	**Pg**	**18 16 24.8**	**-0.7**
ATKA				S	**Sg**	**18 16 36.0**	**0.0**
AMKA	**Amchitka**	**3.31**	**259**	P	**Pn**	**18 17 02.4**	**-0.2**
SPIA	**Saint Paul Isl**	**5.89**	**29**	P	**Pn**	**18 17 36.8**	**-1.2**
AKUT	**Akutan**	**6.19**	**67**	*e*P	**Pn**	**18 17 44.1**	**+2.0**
	89nm,1.1s						
KDAK	**Kodiak Island**	**14.29**	**58**	Pn	**Pn**	**18 19 33.0**	**+0.2**
	0.2nm,0.3s,baz=306,slow=8.7,SNR=2.1						
ILAR	**Eielson Array**	**19.37**	**38**	P	**Pn**	**18 20 36.2**	**-1.2**
	0.2nm,0.3s,baz=238,slow=8.3,SNR=14						
ILAR				LR	LR	18 28 39.9	
	comp=Z,99nm,19.9s,baz=295,slow=39						
DAWY	**Dawson**	**22.14**	**43**	*e*P	**P**	**18 21 08.7**	**+2.3**
NVAR	**Mina Array Bea**	**41.44**	**86**	P	**P**	**18 24 01.4**	**+3.9**
	1.2nm,0.8s,mb3.6,baz=290,slow=7.6,SNR=8.2						
TXAR	**Lajitas Array**	**56.53**	**84**	P	**P**	**18 25 53.0**	**-0.3**
	0.7nm,0.5s,mb4.0,baz=309,slow=5.6,SNR=3.8						
ASAR	**Alice Springs**	**87.46**	**225**	P	**P**	**18 28 57.5**	**-1.0**
	0.5nm,0.9s,mb3.8,baz=15,slow=3.8,SNR=2.9						

*ISCJB **07** 18:18:40

Error ellipse: s-maj=3.5km s-min=2.2km az=11.4
*ATH **07** 18:26:35.8, 39°.59N×23°.88E, h27km±4km, MD3.8/29, ML3.2*
*NEIC **07** 18:26:35.9, 39°.59N×23°.88E, h28km, ML3.2(ATH), After ATH.*
*THE **07** 18:26:36.3, 39°.59N×23°.87E, h5km±1km, ML3.2/14, Error ellipse: s-maj=1.6km s-min=0.8km az=188.0*
*CSEM **07** 18:26:36.2±0.1, 39°.58N×23°.88E, h10km, ML3.2/14, Error ellipse: s-maj=3.3km s-min=2.2km az=105.0*
*SOF **07** 18:26:36.4, 39°.86N×24°.45E, h10km, MD3.2*

ISC 07 18:26:36.2±0.4, 39°.57N±0°.01×23°.90E±0°.03, h10km±3km, n188, σ1§09/239, 9C-8D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.40**	**335**	P		**Pg**		**18 26 43.9**	**-0.1**
PAIG	**Paliouri**	**0.40**	**335**	P		**Pg**		**18 26 44.4**	**+0.4**
PAIG				S		**Sg**		**18 26 50.0**	**+0.7**
PAIG	**Paliouri**	**0.40**	**335**	P		**Pg**		**18 26 43.9**	**-0.1**
PAIG				S		**Sg**		**18 26 50.0**	**+0.7**
AOS	**Alonnisos**	**0.40**	**182**	P		**Pg**		**18 26 44.6**	**+0.6**
AOS	**Alonnisos**	**0.40**	**182**	P		**Pg**		**18 26 45.1**	**+1.1**
AOS				S		**Sg**		**18 26 51.6**	**+2.3**
AOS	**Alonnisos**	**0.40**	**182**	P		**Pg**		**18 26 44.6**	**+0.6**
AOS				S		**Sg**		**18 26 51.6**	**+2.3**
XOR	**Xorichti**	**0.58**	**250**	P		**Pg**		**18 26 48.0**	**+0.5**
XOR	**Xorichti**	**0.58**	**250**	P		**Pg**		**18 26 48.1**	**+0.6**
XOR				S		**Sg**		**18 26 56.7**	**+1.6**
XOR	**Xorichti**	**0.58**	**250**	P		**Pg**		**18 26 48.0**	**+0.5**
XOR				S		**Sg**		**18 26 56.7**	**+1.6**
OUR	**Ouranopolis**	**0.77**	**5**	P		**Pg**		**18 26 50.4**	**-0.6**
OUR	**Ouranopolis**	**0.77**	**5**	P		**Pg**		**18 26 50.8**	**-0.2**
OUR				S		**Sg**		**18 27 01.4**	**+0.3**
OUR	**Ouranopolis**	**0.77**	**5**	P		**Pg**		**18 26 50.8**	**-0.2**
OUR				S		**Sg**		**18 27 01.4**	**+0.3**
LIA	**Limnos Island**	**1.05**	**71**	*e*Pn		**Pn**		**18 26 56.2**	**-0.6**
LIA				*e*Sn		**Sn**		**18 27 11.4**	**-0.1**
LIA	**Limnos Island**	**1.05**	**71**	*e*PN		**Pn**		**18 26 56.2**	**-0.6**
LIA				*e*SN		**Sn**		**18 27 11.4**	**-0.1**
LIA	**Limnos Island**	**1.05**	**71**	P		**Pg**		**18 26 56.0**	**-0.3**
LIA				S		**Sg**		**18 27 09.9**	**0.0**
LIA	**Limnos Island**	**1.05**	**71**	P		**Pg**		**18 26 56.0**	**-0.3**
LIA				S		**Sg**		**18 27 09.9**	**0.0**
LIA				*e*Sn		**Sn**		**18 27 11.4**	**-0.1**
ATAL	**Atalanti**	**1.11**	**218**	P		**Pb**		**18 26 56.9**	**-0.5**
ATAL				S		**Sg**		**18 27 12.4**	**+0.5**
ATAL	**Atalanti**	**1.11**	**218**	P		**Pb**		**18 26 56.9**	**-0.5**
ATAL				S		**Sg**		**18 27 12.4**	**+0.5**
LKR	**Lokris**	**1.15**	**218**	*e*Pn		**Pn**		**18 26 57.7**	**-0.6**
LKR				*e*Sn		**Sn**		**18 27 14.8**	**+0.7**
LKR	**Lokris**	**1.15**	**218**	*e*PN		**Pn**		**18 26 57.7**	**-0.6**
LKR	**Lokris**	**1.15**	**218**	P		**Pb**		**18 26 57.6**	**-0.5**
LKR				S		**Sb**		**18 27 14.7**	**+1.6**
LKR	**Lokris**	**1.15**	**218**	*e*Pn		**Pn**		**18 26 57.7**	**-0.6**
LKR				*e*Sn		**Sn**		**18 27 14.8**	**+0.7**
HORT	**Hortiatis**	**1.20**	**330**	P		**Pb**		**18 26 58.2**	**-0.7**
HORT	**Hortiatis**	**1.20**	**330**	P		**Pb**		**18 26 58.6**	**-0.3**
HORT				S		**Sb**		**18 27 14.1**	**-0.3**
HORT	**Hortiatis**	**1.20**	**330**	P		**Pb**		**18 26 58.6**	**-0.3**
HORT				S		**Sb**		**18 27 14.1**	**-0.3**
LIT	**Litokhoron**	**1.21**	**297**	*e*Pb		**Pb**		**18 26 57.2**	**-1.9**
LIT	**Litokhoron**	**1.21**	**297**	*e*PB		**Pb**		**18 26 57.2**	**-1.9**
LIT	**Litokhoron**	**1.21**	**297**	P		**Pn**		**18 26 57.0**	**-2.1**
LIT	**Litokhoron**	**1.21**	**297**	P		**Pn**		**18 26 57.0**	**-2.1**
THE	**Thessaloniki**	**1.28**	**326**	P		**Pn**		**18 26 59.6**	**-0.5**
THE	**Thessaloniki**	**1.28**	**326**	P		**Pn**		**18 26 59.5**	**-0.6**
THE				S		**Sb**		**18 27 16.6**	**-0.3**
THE	**Thessaloniki**	**1.28**	**326**	P		**Pn**		**18 26 59.6**	**-0.5**
THE				S		**Sb**		**18 27 16.6**	**-0.3**
SOH	**Sokhos**	**1.32**	**342**	*e*Pn		**Pn**		**18 27 00.3**	**-0.3**
SOH				*e*Sn		**Sn**		**18 27 18.1**	**-0.2**
SOH	**Sokhos**	**1.32**	**342**	*e*PN		**Pn**		**18 27 00.3**	**-0.3**
SOH				*e*SN		**Sn**		**18 27 18.1**	**-0.2**
SOH	**Sokhos**	**1.32**	**342**	P		**Pn**		**18 27 00.3**	**-0.3**
SOH				S		**Sb**		**18 27 19.1**	**+1.1**
SOH	**Sokhos**	**1.32**	**342**	P		**Pn**		**18 27 00.3**	**-0.3**
SOH				*e*Sn		**Sn**		**18 27 18.1**	**-0.2**
SOH				S		**Sb**		**18 27 19.1**	**+1.1**
AGG	**Agios Georgios**	**1.33**	**246**	*e*Pn		**Pn**		**18 27 00.3**	**-0.5**
AGG				*e*Sn		**Sn**		**18 27 18.5**	**0.0**
AGG	**Agios Georgios**	**1.33**	**246**	*e*PN		**Pn**		**18 27 00.2**	**-0.6**
AGG				*e*SN		**Sn**		**18 27 18.5**	**0.0**
AGG	**Agios Georgios**	**1.33**	**246**	P		**Pn**		**18 27 00.2**	**-0.6**
AGG				S		**Sb**		**18 27 19.1**	**+0.8**
AGG	**Agios Georgios**	**1.33**	**246**	*e*Pn		**Pn**		**18 27 00.3**	**-0.5**
AGG				*e*Sn		**Sn**		**18 27 18.5**	**0.0**
AGG				S		**Sb**		**18 27 19.1**	**+0.8**
THL	**Klokotos Trika**	**1.46**	**270**	*e*PN		**Pn**		**18 27 01.8**	**-0.7**
THL	**Klokotos Trika**	**1.46**	**270**	P		**Pn**		**18 27 01.7**	**-0.8**
THL	**Klokotos Trika**	**1.46**	**270**	*e*Pn		**Pn**		**18 27 01.8**	**-0.7**
KAVA	**Kavala**	**1.50**	**18**	P		**Pn**		**18 27 01.7**	**-1.5**
KAVA				S		**Sn**		**18 27 23.2**	**+0.4**
KAVA	**Kavala**	**1.50**	**18**	P		**Pn**		**18 27 01.7**	**-1.5**
KAVA				S		**Sn**		**18 27 23.2**	**+0.4**
PTL	**Penteli**	**1.52**	**181**	*e*Pn		**Pn**		**18 27 03.1**	**-0.2**
PTL				*e*Sn		**Sn**		**18 27 22.2**	**-0.9**
PTL	**Penteli**	**1.52**	**181**	*e*PN		**Pn**		**18 27 03.1**	**-0.2**
PTL				*e*SN		**Sn**		**18 27 22.2**	**-0.9**
PTL	**Penteli**	**1.52**	**181**	*e*Pn		**Pn**		**18 27 03.1**	**-0.2**
PTL				*e*Sn		**Sn**		**18 27 22.2**	**-0.9**
SIGR	**SIGRI**	**1.56**	**103**	P		**Pn**		**18 27 06.6**	**+2.7**
SIGR	**SIGRI**	**1.56**	**103**	P		**Pn**		**18 27 06.6**	**+2.7**
SRS	**Serrai**	**1.56**	**352**	P		**Pn**		**18 27 03.3**	**-0.7**
SRS	**Serrai**	**1.56**	**352**	P		**Pn**		**18 27 03.1**	**-0.9**
SRS				S		**Sn**		**18 27 24.2**	**-0.1**
SRS	**Serrai**	**1.56**	**352**	P		**Pn**		**18 27 03.3**	**-0.7**
SRS				S		**Sn**		**18 27 24.2**	**-0.1**
DSF	**Desfina**	**1.57**	**223**	P		**Pn**		**18 27 03.3**	**-0.8**
DSF	**Desfina**	**1.57**	**223**	P		**Pn**		**18 27 03.3**	**-0.8**
ATH	**Athens Observa**	**1.60**	**185**	*e*Pn		**Pn**		**18 27 04.4**	**-0.1**
ATH				*e*Sn		**Sn**		**18 27 24.9**	**-0.2**
ATH	**Athens Observa**	**1.60**	**185**	*e*PN		**Pn**		**18 27 04.4**	**-0.1**
ATH				*e*SN		**Sn**		**18 27 24.9**	**-0.2**
ATH	**Athens Observa**	**1.60**	**185**	*e*Pn		**Pn**		**18 27 04.4**	**-0.1**
ATH				*e*Sn		**Sn**		**18 27 24.9**	**-0.2**
LTK	**Loutraki**	**1.71**	**206**	*e*PB		**Pb**		**18 27 05.6**	**-2.0**
LTK	**Loutraki**	**1.71**	**206**	P		**Pn**		**18 27 05.5**	**-0.4**
LTK	**Loutraki**	**1.71**	**206**	P		**Pn**		**18 27 05.5**	**-0.4**
VLY	**Voula,Athens**	**1.71**	**183**	*e*Pb		**Pb**		**18 27 05.9**	**-1.8**
VLY				*e*Sn		**Sn**		**18 27 28.3**	**+0.3**
VLY	**Voula,Athens**	**1.71**	**183**	*e*PB		**Pb**		**18 27 05.9**	**-1.8**
VLY				*e*SN		**Sn**		**18 27 28.3**	**+0.3**
VLY	**Voula,Athens**	**1.71**	**183**	*e*Pb		**Pb**		**18 27 05.9**	**-1.8**
VLY				*e*Sn		**Sn**		**18 27 28.3**	**+0.3**
EVR	**Evrytania**	**1.75**	**249**	P		**Pn**		**18 27 06.5**	**+3.6**
EVR	**Evrytania**	**1.75**	**249**	*e*PN		**Pn**		**18 27 06.5**	**0.0**
EVR	**Evrytania**	**1.75**	**249**	*e*Pn		**Pn**		**18 27 06.5**	**0.0**
EVR	**Evrytania**	**1.75**	**249**	P		**Pn**		**18 27 10.1**	**+3.6**
KNT	**Kendrikon**	**1.77**	**335**	P		**Pn**		**18 27 06.8**	**0.0**
KNT				S		**Sn**		**18 27 30.6**	**+1.3**
KNT	**Kendrikon**	**1.77**	**335**	P		**Pn**		**18 27 06.8**	**0.0**
KNT				S		**Sn**		**18 27 30.6**	**+1.3**
NVR	**Nevrokopi**	**1.78**	**359**	*e*Pb		**Pb**		**18 27 06.4**	**-2.5**
NVR	**Nevrokopi**	**1.78**	**359**	*e*PB		**Pb**		**18 27 06.4**	**-2.5**
NVR	**Nevrokopi**	**1.78**	**359**	*e*Pb		**Pb**		**18 27 06.4**	**-2.5**
KZN	**Kozani**	**1.79**	**295**	*e*Pn		**Pn**		**18 27 06.9**	**-0.2**
KZN	**Kozani**	**1.79**	**295**	*e*PN		**Pn**		**18 27 06.9**	**-0.2**
KZN	**Kozani**	**1.79**	**295**	P		**Pn**		**18 27 06.6**	**-0.5**
KZN	**Kozani**	**1.79**	**295**	P		**Pn**		**18 27 06.6**	**-0.5**
KZN	**Kozani**	**1.79**	**295**	*e*Pn		**Pn**		**18 27 06.9**	**-0.2**
GRG	**Griva**	**1.80**	**321**	P		**Pn**		**18 27 07.2**	**0.0**
GRG	**Griva**	**1.80**	**321**	P		**Pn**		**18 27 07.2**	**0.0**
GRG	**Griva**	**1.80**	**321**	P		**Pn**		**18 27 07.2**	**0.0**
KALE	**Kalithea**	**1.80**	**230**	P		**Pn**		**18 27 07.1**	**-0.2**
KALE	**Kalithea**	**1.80**	**230**	P		**Pn**		**18 27 07.1**	**-0.2**
NAIG	**Nisos Aigina**	**1.83**	**190**	*e*Pb		**Pb**		**18 27 07.4**	**-2.4**
NAIG	**Nisos Aigina**	**1.83**	**190**	*e*PB		**Pb**		**18 27 07.4**	**-2.4**
NAIG	**Nisos Aigina**	**1.83**	**190**	*e*Pb		**Pb**		**18 27 07.4**	**-2.4**
TRIZ	**Trizonia**	**1.86**	**230**	P		**Pn**		**18 27 08.1**	**+0.1**
TRIZ	**Trizonia**	**1.86**	**230**	P		**Pn**		**18 27 08.1**	**+0.1**
PRK	**Paraskevi**	**1.87**	**99**	*e*Pn		**Pn**		**18 27 09.4**	**+1.3**
PRK	**Paraskevi**	**1.87**	**99**	*e*PN		**Pn**		**18 27 09.4**	**+1.3**
PRK	**Paraskevi**	**1.87**	**99**	P		**Pn**		**18 27 10.2**	**+2.1**
PRK				S		**Sn**		**18 27 35.9**	**+4.1**
PRK	**Paraskevi**	**1.87**	**99**	*e*Pn		**Pn**		**18 27 09.4**	**+1.3**
PRK	**Paraskevi**	**1.87**	**99**	P		**Pn**		**18 27 10.2**	**+2.1**
EFP	**Efpalio**	**1.92**	**234**	*e*PB		**Pb**		**18 27 09.1**	**-2.2**
EFP	**Efpalio**	**1.92**	**234**	P		**Pn**		**18 27 09.2**	**+0.3**
EFP	**Efpalio**	**1.92**	**234**	P		**Pn**		**18 27 09.2**	**+0.3**
LAKA	**Lakka**	**2.00**	**229**	P		**Pn**		**18 27 10.1**	**+0.1**
LAKA	**Lakka**	**2.00**	**229**	P		**Pn**		**18 27 10.1**	**+0.1**
RDO	**Rodhopi**	**2.02**	**38**	*e*Pn		**Pn**		**18 27 08.6**	**-1.6**
RDO	**Rodhopi**	**2.02**	**38**	*e*PN		**Pn**		**18 27 08.6**	**-1.6**
RDO	**Rodhopi**	**2.02**	**38**	P		**Pn**		**18 27 08.7**	**-1.5**
RDO	**Rodhopi**	**2.02**	**38**	P		**Pn**		**18 27 08.7**	**-1.5**
VAY	**Valandovo**	**2.02**	**330**	P		**Pn**		**18 27 10.6**	**+0.3**
VAY				S		**Sn**		**18 27 36.6**	**+1.0**
VAY	**Valandovo**	**2.02**	**330**	*e*Pn		**Pn**		**18 27 12.4**	**+2.2**
VAY				*e*Sg		**Sg**		**18 27 40.3**	**-1.0**
VAY	**Valandovo**	**2.02**	**330**	P		**Pn**		**18 27 10.6**	**+0.3**
VAY				S		**Sn**		**18 27 36.6**	**+1.0**
MMB	**Musomiste**	**2.02**	**356**	P		**Pn**		**18 27 08.8**	**-1.5**
MMB	**Musomiste**	**2.02**	**356**	P		**Pn**		**18 27 08.8**	**-1.5**
GUR	**Goura**	**2.03**	**217**	*e*PN		**Pn**		**18 27 10.5**	**+0.1**
GUR	**Goura**	**2.03**	**217**	P		**Pn**		**18 27 10.2**	**-0.2**
GUR	**Goura**	**2.03**	**217**	P		**Pn**		**18 27 10.2**	**-0.2**
GUR	**Goura**	**2.03**	**217**	*e*Pn		**Pn**		**18 27 10.5**	**+0.1**
CHOS	**Chios island**	**2.05**	**124**	*e*PN		**Pn**		**18 27 10.7**	**0.0**
CHOS	**Chios island**	**2.05**	**124**	*e*Pn		**Pn**		**18 27 10.7**	**0.0**
ALN	**Alexandroupoli**	**2.11**	**50**	*e*Pn		**Pn**		**18 27 10.4**	**-1.1**
ALN	**Alexandroupoli**	**2.11**	**50**	*e*PN		**Pn**		**18 27 10.4**	**-1.1**
ALN	**Alexandroupoli**	**2.11**	**50**	P		**Pn**		**18 27 10.7**	**-0.8**
ALN	**Alexandroupoli**	**2.11**	**50**	*e*Pn		**Pn**		**18 27 10.4**	**-1.1**
ALN	**Alexandroupoli**	**2.11**	**50**	P		**Pn**		**18 27 10.7**	**-0.8**
DID	**Didima**	**2.12**	**194**	*e*PN		**Pn**		**18 27 11.3**	**-0.3**
DID	**Didima**	**2.12**	**194**	P		**Pn**		**18 27 11.1**	**-0.5**
DID	**Didima**	**2.12**	**194**	*e*Pn		**Pn**		**18 27 11.3**	**-0.3**
RZN	**Rozhen**	**2.21**	**16**	P		**Pn**		**18 27 09.0**	**-3.8**
RZN	**Rozhen**	**2.21**	**16**	P		**Pn**		**18 27 09.0**	**-3.8**
FNA	**Florina**	**2.28**	**303**	P		**Pn**		**18 27 13.7**	**-0.1**
FNA	**Florina**	**2.28**	**303**	P		**Pn**		**18 27 13.9**	**+0.1**
FNA	**Florina**	**2.28**	**303**	P		**Pn**		**18 27 13.9**	**+0.1**
NEST	**Nestorio**	**2.35**	**292**	P		**Pn**		**18 27 15.2**	**+0.5**
NEST	**Nestorio**	**2.35**	**292**	P		**Pn**		**18 27 15.2**	**+0.5**
JAN	**Janina**	**2.35**	**273**	*e*Pb		**Pb**		**18 27 15.5**	**-3.1**
JAN	**Janina**	**2.35**	**273**	*e*PB		**Pb**		**18 27 15.5**	**-3.1**
JAN	**Janina**	**2.35**	**273**	*e*Pb		**Pb**		**18 27 15.5**	**-3.1**
KKB	**Krupnik**	**2.38**	**345**	P		**Pn**		**18 27 14.9**	**-0.3**
KKB	**Krupnik**	**2.38**	**345**	P		**Pn**		**18 27 14.9**	**-0.3**
KDZ	**Kurdzhali**	**2.38**	**29**	P		**Pn**		**18 27 11.0**	**-4.2**
KDZ	**Kurdzhali**	**2.38**	**29**	P		**Pn**		**18 27 11.0**	**-4.2**
RLS	**Riolos of Patr**	**2.42**	**232**	*e*Pb		**Pb**		**18 27 17.1**	**-2.7**
RLS	**Riolos of Patr**	**2.42**	**232**	*e*PB		**Pb**		**18 27 17.1**	**-2.7**
RLS	**Riolos of Patr**	**2.42**	**232**	*e*Pb		**Pb**		**18 27 17.1**	**-2.7**
BIA	**Bitola**	**2.44**	**307**	*e*Pn		**Pn**		**18 27 16.0**	**0.0**
VLX	**Vlachokerasia**	**2.50**	**209**	*e*PN		**Pn**		**18 27 17.3**	**+0.5**
VLX	**Vlachokerasia**	**2.50**	**209**	P		**Pn**		**18 27 17.1**	**+0.3**
VLX	**Vlachokerasia**	**2.50**	**209**	P		**Pn**		**18 27 17.1**	**+0.3**
PLD	**Plovdiv**	**2.61**	**13**	P		**Pn**		**18 27 18.6**	**+0.3**
PLD	**Plovdiv**	**2.61**	**13**	P		**Pn**		**18 27 18.6**	**+0.3**
IGT	**Igoumenitsa**	**2.76**	**270**	P		**Pn**		**18 27 23.1**	**+2.7**
IGT	**Igoumenitsa**	**2.76**	**270**	P		**Pn**		**18 27 23.1**	**+2.7**
ITM	**Ithomi**	**2.84**	**214**	*e*Pn		**Pn**		**18 27 22.6**	**+1.0**
ITM	**Ithomi**	**2.84**	**214**	*e*PN		**Pn**		**18 27 22.6**	**+1.0**
ITM	**Ithomi**	**2.84**	**214**	*e*Pn		**Pn**		**18 27 22.6**	**+1.0**
VLS	**Valsamata**	**2.93**	**243**	*e*Pb		**Pb**		**18 27 24.5**	**-4.0**
VLS	**Valsamata**	**2.93**	**243**	*e*PB		**Pb**		**18 27 24.5**	**-4.0**
VLS	**Valsamata**	**2.93**	**243**	*e*Pb		**Pb**		**18 27 24.5**	**-4.0**
VLI	**Veliai**	**2.94**	**195**	*e*Pn		**Pn**		**18 27 22.7**	**-0.2**
VLI	**Veliai**	**2.94**	**195**	*e*PN		**Pn**		**18 27 22.7**	**-0.2**
VLI	**Veliai**	**2.94**	**195**	*e*Pn		**Pn**		**18 27 22.7**	**-0.2**
PGB	**Panagyurishte**	**2.99**	**4**	P		**Pn**		**18 27 31.2**	**+7.7**
VTS	**Vitosha**	**3.07**	**350**	⇑P		**Pn**		**18 27 25.2**	**+0.6**
VTS	**Vitosha**	**3.07**	**350**	P		**Pn**		**18 27 24.4**	**-0.2**
VTS	**Vitosha**	**3.07**	**350**	⇑*i*P		**Pn**		**18 27 25.3**	**+0.7**
VTS	**Vitosha**	**3.07**	**350**	P		**Pn**		**18 27 25.1**	**+0.5**
VTS	**Vitosha**	**3.07**	**350**	P		**Pn**		**18 27 24.4**	**-0.2**
PYL	**PYLOS**	**3.16**	**213**	*e*PN		**Pn**		**18 27 27.4**	**+1.5**
PYL	**PYLOS**	**3.16**	**213**	*e*Pn		**Pn**		**18 27 27.4**	**+1.5**
KEK	**Kerkira**	**3.17**	**274**	*e*Pb		**Pb**		**18 27 28.0**	**-4.5**
KEK	**Kerkira**	**3.17**	**274**	*e*PB		**Pb**		**18 27 28.0**	**-4.5**
KEK	**Kerkira**	**3.17**	**274**	*e*Pb		**Pb**		**18 27 28.0**	**-4.5**
KYTH	**Kithira**	**3.35**	**192**	*e*Pn		**Pn**		**18 27 29.0**	**+0.5**
KYTH	**Kithira**	**3.35**	**192**	*e*PN		**Pn**		**18 27 29.0**	**+0.5**
KYTH	**Kithira**	**3.35**	**192**	*e*Pn		**Pn**		**18 27 29.0**	**+0.5**
BARS	**Barje**	**3.61**	**335**	⇑*i*Pn		**Pn**		**18 27 32.3**	**+0.3**
SZH	**Strazhica**	**4.00**	**22**	P		**Pn**		**18 27 41.1**	**+3.6**
SZH	**Strazhica**	**4.00**	**22**	P		**Pn**		**18 27 41.1**	**+3.6**
TIP	**Timpagrande**	**5.54**	**268**	P		**Pn**		**18 28 00.3**	**+1.6**
TIP	**Timpagrande**	**5.54**	**268**	P		**Pn**		**18 28 00.3**	**+1.6**
VOIR		**5.93**	**8**	⇓P		**Pn**		**18 28 04.3**	**+0.4**
VOIR		**5.93**	**8**	⇓*i*P		**Pn**		**18 28 04.3**	**+0.4**
VOIR		**5.93**	**8**	⇓P		**Pn**		**18 28 04.3**	**+0.4**
MLR	**Muntele Rosu**	**6.11**	**14**	⇓P		**Pn**		**18 28 08.1**	**+1.7**
MLR	**Muntele Rosu**	**6.11**	**14**	⇓*i*P		**Pn**		**18 28 08.1**	**+1.7**
MLR	**Muntele Rosu**	**6.11**	**14**	⇓P		**Pn**		**18 28 08.1**	**+1.7**
PLOR	**Plostina**	**6.60**	**17**	⇓*i*P		**Pn**		**18 28 15.0**	**+1.9**
PLOR	**Plostina**	**6.60**	**17**	⇓*i*P		**Pn**		**18 28 15.0**	**+1.9**
PETR		**6.62**	**21**	⇑*i*P		**Pn**		**18 28 15.1**	**+1.6**
PETR		**6.62**	**21**	⇑*i*P		**Pn**		**18 28 15.1**	**+1.6**
PETR		**6.62**	**21**	⇑P		**Pn**		**18 28 15.1**	**+1.6**
VRI	**Vrincioaia**	**6.63**	**17**	⇑P		**Pn**		**18 28 15.5**	**+1.9**
VRI	**Vrincioaia**	**6.63**	**17**	⇑*i*P		**Pn**		**18 28 15.5**	**+1.9**
VRI	**Vrincioaia**	**6.63**	**17**	⇑P		**Pn**		**18 28 15.5**	**+1.9**

*BGS **07** 18:29:53.2±1.7, 51°.49N×176°.41W, h13km, mb5.4, MS5.5*
*BJI **07** 18:30:00.2, 52°.64N×175°.64W, h6km, mB5.5/41, mb4.9/45, Ms5.9/59, Ms7 5.5/51*
*ISCJB **07** 18:30:00.3±0.6, 52°.22N±0°.02×175°.57W±0°.02, h2km±3km, mb5.5/434, MS5.5/194, Error ellipse: s-maj=3.8km s-min=1.9km az=3.8*
*NEIC **07** 18:30:03.1±0.1, 52°.19N×175°.65W, h12km, mb5.6/280, ME5.9, MS5.5/102, MW5.8, MW5.8, ML5.9(PMR), ML5.5(AEIC), Error ellipse: s-maj=4.7km s-min=2.8km az=187.0 Broadband fault plane solution: P waves. NP1:φs75.00000°, δ70.00000°, λ-90.00000°. NP2: φs255.00000°, δ20.00000°, λ-90.00000°. Principal axes: T Plg25.0000°, Azm165.0000°; N Plg0.0000°, Azm0.0000°; P Plg65.0000°, Azm345.0000°; Moment Tensor Solution. s147 Moment tensor: Scale 10^17 Nm; Mrr-3.82; Mθθ4.68; Mφφ-0.86; Mrθ 1.45; Mθφ-3.53; Mφr-0.67; Best double couple: M0 5.80000×10^17 NP1:φs117.00000°, δ36.00000°, λ-88.00000°. NP2:φs295.00000°, δ54.00000°, λ-91.00000°. Principal axes: T 6.6400, Plg8.0000°, Azm25.0000°; N -2.5800, Plg1.0000°, Azm295.0000°; P -4.0600, Plg81.0000°, Azm198.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt at Unalaska.
*IDC **07** 18:30:04.0±1.6, 52°.34N×175°.75W, h17km±9km, mb5.0/30, mb1 5.1/33, mb1mx5.1/35, mbtmp5.0/33, ML4.6/3, MS5.5/33, Ms1 5.5/33, ms1mx5.5/35 Error ellipse: s-maj=12.8km s-min=7.4km az=158.0*
*DJA **07** 18:30:04, 52°.41N×175°.05W, h10km, Mw6.1/25*
*MOS **07** 18:30:04.6±1.2, 52°.30N×175°.63W, h33km, mb5.8/141, MS5.5/82, Error ellipse: s-maj=8.7km s-min=7.5km az=147.0*
*GCMT **07** 18:30:08.9±0.1, 52°.22N×175°.63W, h12km, MW5.8, Moment Tensor Solution. s74,c135; s50,c67; Moment tensor: Scale 10^17Nm; Mrr-4.07±.08; Mθθ6.42±.08; Mφφ-2.34±.09; Mrθ 1.71±.22; Mθφ-4.89±.08; Mφr-1.79±.25; Best double couple: M0 7.20000×10^17 NP1:φs75.00000°, δ53.00000°, λ-153.00000°. NP2:φs328.00000°, δ69.00000°, λ-41.00000°. Principal axes: T 9.0100, Plg10.0000°, Azm25.0000°; N -3.5800, Plg45.0000°, Azm125.0000°; P -5.4200, Plg43.0000°, Azm285.0000°; Data Used: II IU IC CN G. Surface waves: sta= 90, comp=182, per= 50.*
*SZGRF **07** 18:30:10.7, 52°.87N×174°.77W, h33km, mb5.8, MS5.6, Andreanof Islands, Aleutian Islands, United States*

ISC 07 18:30:02.0±0.6, 52°.25N±0°.02×175°.60W±0°.02, h2km±3km, h15km±1.6km: pP-P, n1545, σ1§06/1490, mb5.5/434, MS5.5/194, 233C-231D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.32**	**242**	*e*P		**Pg**		**18 30 09.2**	**+1.0**
ATKA	**Atka Island**	**0.87**	**92**	P		**Pg**		**18 30 17.3**	**-1.3**
ATKA				S		**Sg**		**18 30 28.2**	**-1.6**
AMKA	**Amchitka**	**3.28**	**257**	P		**Pn**		**18 30 53.3**	**-1.1**
AMKA				S		**Sn**		**18 31 33.6**	**-0.3**
NIKO	**Nikolski**	**4.18**	**77**	P		**Pn**		**18 31 06.1**	**-0.5**
OKFG	**Magazine Ridge**	**4.81**	**73**	P		**Pn**		**18 31 15.3**	**0.0**
UNV	**Unalaska Valle**	**5.72**	**70**	P		**Pn**		**18 31 28.5**	**+0.7**
SPIA	**Saint Paul Isl**	**5.83**	**30**	P		**Pn**		**18 31 29.6**	**+0.2**
AKUT	**Akutan**	**6.20**	**68**	*e*P		**Pn**		**18 31 36.2**	**+1.7**
SMY	**Shemya**	**6.31**	**278**	*e*P		**Pn**		**18 31 34.0**	**-2.0**
SDPT	**Sand Point** 84nm,0.5s	**9.47**	**65**	*e*P		**Pn**		**18 32 22.6**	**+3.3**
CHGN	**Chignik**	**10.83**	**61**	*e*P		**Pn**		**18 32 41.3**	**+3.4**
OHAK	**Old Harbor** 16nm,0.4s	**13.79**	**60**	*e*P		**Pn**		**18 33 21.7**	**+3.4**
SVW2	**Sparrevohn** 118nm,0.9s	**14.07**	**43**	*e*P		**Pn**		**18 33 23.5**	**+1.4**
KDAK	**Kodiak Island** 2μm,0.7s,SNR=7.8	**14.28**	**58**	P		**Pn**		**18 33 28.9**	**+3.9**
KDAK	**Kodiak Island** 198nm,0.4s	**14.28**	**58**	*e*P		**Pn**		**18 33 24.4**	**-0.6**
KDAK				P				18 33 28.8	
KDAK	**Kodiak Island** 2.4nm,0.3s,baz=277,slow=8.7,SNR=14	**14.28**	**58**	Pn		**Pn**		**18 33 24.4**	**-0.6**
KDAK	1.7nm,0.3s,baz=162,slow=20,SNR=3.5			Sn		**Sn**		**18 36 15.4**	**+12**
KDAK	comp=Z,72μm,18.2s,baz=249,slow=40			LR		LR		18 39 41.0	
TTA	**Tatalina**	**14.92**	**37**	*e*P		**Pn**		**18 33 34.7**	**+1.1**
RSO	**Redoubt South**	**15.03**	**48**	*e*P		**Pn**		**18 33 37.4**	**+2.2**
PET	**Petropavlovsk** 218nm,1.2s	**15.63**	**283**	*e*P		**Pn**		**18 33 42.2**	**-0.9**
PET	**Petropavlovsk**	**15.63**	**283**	*e*P		**Pn**		**18 33 41.7

BBB PcP PcP 18 39 11.5 +1.2
comp=Z,17nm,0.9s,baz=117,slow=6.2,SNR=3.8
BBB S **S** **18 40 47.4 -2.1**
comp=Z,2.7nm,0.7s,baz=288,slow=3.2,SNR=1.8
BBB ScP ScP 18 42 49.1 -3.2
comp=Z,28nm,1.2s,baz=39,slow=11,SNR=2.3
BBB LR LR 18 45 48.0
comp=Z,9µm,18.8s,MS5.4,baz=106,slow=33
ASAJ Asahikawa 28.69 270 P **P** **18 36 00.5 +0.4**
comp=Z,28nm,0.9s,mb5.0,baz=18,slow=2.3,SNR=16
ASAJ PcP PcP 18 39 08.7 -1.8
comp=Z,22nm,0.9s,baz=141,slow=6.7,SNR=2.0
ASAJ S **S** **18 40 45.5 -4.2**
comp=Z,6.0nm,1.0s,baz=40,slow=7.9,SNR=2.0
ASAJ ScP ScP 18 42 48.5 -4.0
comp=Z,11nm,1.0s,baz=159,slow=8.6,SNR=3.2
ASAJ LR LR 18 46 57.6
comp=Z,7µm,19.1s,MS5.3,baz=78,slow=35
ASAJ Asahikawa 28.69 270 P **P** **18 36 00.5 +0.4**
ASAJ 18 39 08.7
ASAJ S **S** **18 40 45.5 -4.2**
ASAJ pmax pmax
comp=Z,28nm,0.9s
ASAJ smax
comp=N,6.0nm,1.0s
ASAJ MLR MLR
comp=Z,7µm,19.1s
ERM Erimo 29.49 266 P **P** **18 36 06.4 -0.9**
comp=Z,517nm,0.7s,mb6.4,SNR=8.0
ERM Erimo 29.49 266 *e*P **P** **18 36 05.3 -1.9**
comp=Z,58nm,0.8s,mb5.4
ERM LR LR
comp=Z,5µm,19.0s,MS5.2
ERM Erimo 29.49 266 *i* P **P** **18 36 06.5 -0.8**
YAK Yakutsk 30.35 310 *e*P **P** **18 36 12.4 -2.3**
comp=Z,229nm,1.1s,mb5.8
YAK Yakutsk 30.35 310 *e*P **P** **18 36 14.1 -0.6**
YAK *e**PP pP 18 36 20.5 +5.2
YAK *e* 18 37 11.5
YAK *e*PPP 18 37 21.5
YAK *e* 18 39 15.4
YAK *e*S **S** **18 41 15.2 -0.2**
YAK *e*SS SS 18 43 17.3 -6.7
YAK pmax pmax
comp=Z,125nm,1.1s,mb5.6
YAK pmax pmax
comp=E,86nm,1.3s
YAK pmax pmax
comp=N,13nm,1.4s
YAK pmax pmax
comp=Z,143nm,2.0s,mb5.3
YAK pmax pmax
comp=N,112nm,2.2s
YAK pmax pmax
comp=E,249nm,2.1s
YAK smax
comp=N,533nm,2.7s
YAK smax
comp=E,669nm,3.0s
YAK MLR MLR
comp=E,4µm,17.0s,MS5.6
YAK MLR MLR
comp=N,11µm,19.0s,MS5.6
YAK MLR MLR
comp=Z,5µm,17.0s,MS5.2
TIXI Tiksi 30.88 329 *e*P **P** **18 36 19.0 -0.2**
comp=Z,107nm,1.1s,mb5.6
TIXI Tiksi 30.88 329 *e*P **P** **18 36 18.7 -0.5**
TIXI *e*S **S** **18 41 24.2 +0.7**
TIXI pmax pmax
comp=Z,200nm,2.2s,mb5.6
TIXI MLR MLR
comp=Z,13µm,16.0s,MS5.7
HABR Khabarovsk 31.22 283 *i* P **P** **18 36 21.8 -0.6**
HABR *e* 18 37 24.2
HABR *e* 18 39 16.4
HABR *e*S **S** **18 41 28.9 -0.3**
HABR SS SS 18 43 13.4 -29
HABR *e*SSS 18 43 29.3
HABR 18 46 59.2
HABR pmax pmax
comp=N,20nm,1.9s
HABR pmax pmax
comp=E,42nm,2.8s
HABR pmax pmax
comp=Z,51nm,1.9s,mb5.0
HABR MLR MLR
comp=N,3µm,14.0s,MS5.6
HABR MLR MLR
comp=Z,9µm,17.0s,MS5.5
HABR MLR MLR
comp=E,10µm,16.0s,MS5.6
OOW Octopus West 32.78 77 P **P** **18 36 39.5 +3.3**
KLR Kul'dur 32.85 286 *e*P **P** **18 36 32.2 -4.6**
KLR *e*SSS 18 44 13.5
KLR pmax pmax
comp=E,80nm,2.0s
KLR pmax pmax
comp=Z,90nm,2.0s,mb5.3
KLR MLR MLR
comp=N,9µm,16.0s,MS5.6
KLR MLR MLR
comp=E,5µm,16.0s,MS5.6
NLWA Neilton Lookou 33.14 77 *e*P **P** **18 36 40.4 +1.2**
comp=E,110nm,1.0s,mb5.7
YKA Yellowknife Ar 33.19 48 P **P** **18 36 38.1 -1.4**
YKA PcP PcP 18 39 20.8 -1.2
YKA S **S** **18 41 50.1 -9.5**
YKA ScP ScP 18 43 04.7 -2.3
YKA Yellowknife Ar 33.19 48 P **P** **18 36 38.1 -1.4**
comp=E,19nm,0.8s,mb5.1,baz=282,slow=8.6,SNR=37
YKA PcP PcP 18 39 20.8 -1.2
comp=E,11nm,0.8s,baz=288,slow=3.0,SNR=10
YKA S **S** **18 41 50.1 -9.5**
comp=E,0.6nm,0.6s,baz=141,slow=40,SNR=2.2
YKA ScP ScP 18 43 04.7 -2.3
comp=E,1.4nm,0.8s,baz=312,slow=2.9,SNR=3.3
YKA Yellowknife Ar 33.19 48 P **P** **18 36 38.1 -1.4**
YKA 18 39 20.8
YKA S **S** **18 41 50.1 -9.5**
YKA pmax pmax
comp=Z,19nm,0.8s
YKA smax
comp=N,1.0nm,0.6s
A05A Maple Falls 33.47 74 ⇑P **P** **18 36 42.0 -0.1**
baz=33,SNR=15
A05A ⇓S **S** **18 42 02.8 -1.4**
baz=33
KIP Kipapa 33.65 149 *e*P **P** **18 36 45.7 +1.7**
comp=N,817nm,1.5s,mb6.4
KIP LR LR
comp=Z,3µm,19.0s,MS5.1
KIP Kipapa 33.65 149 *i* P **P** **18 36 43.9 0.0**
GNW Green Mountain 33.68 77 P **P** **18 36 46.8 +2.7**
E03A Lebam 33.73 79 ⇓P **P** **18 36 43.8 -0.6**
baz=34,SNR=22
E03A ⇑S **S** **18 42 09.3 +1.1**
baz=34
CLNS Chul'man 33.87 302 *e*P **P** **18 36 47.1 +1.6**
CLNS *e**PP pP 18 37 02.7 +17
CLNS *e* 18 37 56.0
CLNS *e* 18 39 23.8
CLNS *e*S **S** **18 42 04.7 -5.5**
CLNS *e*SS SS 18 44 18.5 -17
CLNS pmax pmax
comp=Z,46nm,1.3s,mb5.2
CLNS pmax pmax
comp=E,34nm,1.2s
CLNS pmax pmax
comp=N,11nm,0.8s
CLNS pmax pmax
comp=Z,17nm,1.3s,mb4.8
CLNS pmax pmax
comp=E,14nm,1.1s
CLNS pmax pmax
comp=N,17nm,1.3s
CLNS smax
comp=N,246nm,11.6s
CLNS smax
comp=E,273nm,10.4s
CLNS MLR MLR
comp=Z,5µm,16.0s,MS5.3
CLNS MLR MLR
comp=E,4µm,18.0s,MS5.5
CLNS MLR MLR
comp=N,7µm,19.0s,MS5.5

JCW Jim Creek 33.92 75 *e*P **P** **18 36 47.3 +1.2**
comp=N,120nm,1.0s,mb5.8
JCW *e*ScP ScP 18 43 06.6 -3.3
F03A Seaside 34.03 80 ⇓P **P** **18 36 46.9 -0.2**
baz=34,SNR=11
F03A ⇑S **S** **18 42 13.5 +0.5**
baz=34
B06A Marblemount 34.04 74 ⇓P **P** **18 36 47.0 -0.1**
baz=34
B06A ⇓S **S** **18 42 12.4 -0.6**
baz=34
RPW Rockport 34.05 74 *e*P **P** **18 36 44.0 -3.2**
comp=N,10nm,0.5s,mb5.0
HEBO Mount Hebo 34.28 81 *e*P **P** **18 36 51.0 +1.8**
comp=N,180nm,1.2s,mb5.9
D05A Enumclaw 34.36 77 ⇑P **P** **18 36 51.2 +1.3**
baz=34,SNR=13
D05A ⇓S **S** **18 42 17.7 -0.4**
baz=34
TDL Tradedollar La 34.63 78 P **P** **18 36 54.1 +1.9**
F04A Amboy 34.72 79 ⇑P **P** **18 36 53.2 +0.1**
baz=35,SNR=19
MPOR Mary's Peak 34.77 82 P **P** **18 36 55.5 +2.0**
COR Corvallis 34.88 81 *e*P **P** **18 36 56.1 +1.7**
comp=N,214nm,1.3s,mb5.9
COR LR LR
comp=Z,5µm,20.0s,MS5.3
COR Corvallis 34.88 81 *e*P **P** **18 36 56.2 +1.8**
COR pmax pmax
comp=Z,214nm,1.3s,mb5.9
COR MLR MLR
comp=Z,5µm,20.0s,MS5.3
G04A Mulino 35.05 80 ⇓P **P** **18 36 56.2 +0.3**
baz=35
ASR Mount Adams--S 35.11 78 P **P** **18 36 58.9 +2.5**
ETW Entiat 35.15 75 *e*P **P** **18 36 57.2 +0.5**
comp=Z,133nm,0.8s,mb5.9
B08A Colville Reser 35.38 73 ⇑P **P** **18 36 58.5 -0.2**
baz=35,SNR=44
VLL Laurance Lake 35.40 79 P **P** **18 37 00.7 +1.7**
HOOD Mount Hood Mea 35.49 79 *e*P **P** **18 37 01.7 +1.9**
comp=Z,80nm,0.9s,mb5.7
JOHN Johnston Islan 35.76 170 PFAKE 18 37 10.0 +7.8
JOHN LR LR
comp=Z,6µm,20.0s,MS5.3
VLA Vladivostok 35.79 277 *i* P **P** **18 37 04.6 +2.3**
VLA pmax pmax
comp=Z,17nm,0.9s,mb5.0
VLA MLR MLR
comp=Z,5µm,20.0s,MS5.2
MAJO Matsushiro 35.87 263 *e*P **P** **18 37 01.3 -1.8**
comp=Z,269nm,1.0s,mb6.1
MAJO LR LR
comp=Z,6µm,20.0s,MS5.3
MAJO Matsushiro 35.87 263 *e*P **P** **18 37 01.3 -1.8**
MAJO pmax pmax
comp=Z,269nm,1.0s,mb6.1
MAJO MLR MLR
comp=Z,6µm,20.0s,MS5.3
MAT Matsushiro 35.87 263 P **P** **18 37 01.9 -1.2**
MAT S **S** **18 42 37.0 -4.6**
MJAR Matsushiro Arr 35.87 263 P **P** **18 37 02.2 -0.9**
comp=Z,19nm,0.8s,mb5.1,baz=54,slow=7.9,SNR=40
MJAR PcP PcP 18 39 30.7 +0.5
comp=Z,26nm,1.1s,baz=310,slow=1.0,SNR=11
MJAR S **S** **18 42 44.4 +2.8**
comp=Z,0.9nm,0.8s,baz=349,slow=30,SNR=2.7
MJAR Matsushiro Arr 35.87 263 P **P** **18 37 02.2 -0.9**
MJAR 18 39 30.7
MJAR S **S** **18 42 44.4 +2.9**
MJAR pmax pmax
comp=Z,19nm,0.8s
MJAR smax
comp=N,1.0nm,0.8s
E07A Sunnyside 35.94 76 ⇑P **P** **18 37 03.1 -0.4**
baz=36
POHA Pohakuloa 36.01 147 *e*P **P** **18 37 06.1 +1.7**
comp=N,445nm,1.1s,mb6.3
POHA LR LR
comp=Z,3µm,19.0s,MS5.0
G06A Carlson Farm, 36.15 79 ⇑P **P** **18 37 04.7 -0.7**
baz=36,SNR=16
HUMO Hull Mountain 36.16 84 *e*P **P** **18 37 07.3 +1.8**
comp=Z,47nm,1.0s,mb5.4
HUMO LR LR
comp=Z,7µm,19.0s,MS5.5
RSW Rattlesnake Hi 36.18 76 *e*P **P** **18 37 05.9 +0.3**
comp=Z,109nm,0.6s,mb6.0
OD2 Odessa Site #2 36.21 74 P **P** **18 37 06.5 +0.6**
HAWA Hanford 36.22 76 *e*P **P** **18 37 06.7 +0.8**
comp=Z,82nm,0.7s,mb5.8
F07A Phinny Hill Vi 36.24 77 ⇑P **P** **18 37 05.7 -0.4**
baz=36
D08A Wollman Farm, 36.25 75 ⇓P **P** **18 37 06.0 -0.2**
baz=36,SNR=28
C09A Chrisman Ranch 36.27 74 ⇓P **P** **18 37 06.2 -0.1**
baz=36,SNR=26
MDJ Mudanjiang 36.38 280 P **P** **18 37 04.3 -3.0**
MDJ pP pP 18 37 07.4 -0.6
MDJ PP PP 18 38 26.3 -3.5
MDJ S **S** **18 42 44.1 -5.0**
MDJ ScP ScP 18 43 16.4 -2.4
MDJ PcS PcS 18 43 17.9 -1.3
MDJ pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
MDJ pmax pmax
comp=Z,100nm,6.2s
MDJ LR LR
comp=N,4µm,23.2s,MS5.2
MDJ LR LR
comp=E,2µm,21.6s,MS5.2
MDJ LR LR
comp=Z,8µm,19.9s,MS5.5
E08A Dider Farm, El 36.45 76 ⇑P **P** **18 37 07.7 -0.2**
baz=36,SNR=8.1
EDM Edmonton 36.65 63 *e*P **P** **18 37 07.9 -1.6**
NEW Newport 36.72 72 *e*P **P** **18 37 08.8 -1.4**
comp=Z,108nm,0.8s,mb5.7
NEW Newport 36.72 72 *e*P **P** **18 37 08.8 -1.4**
NEW pmax pmax
comp=Z,108nm,0.8s
YBH Yreka Blue Hor 36.81 85 *e*P **P** **18 37 12.6 +1.6**
comp=Z,49nm,0.9s,mb5.3
YBH Yreka Blue Hor 36.81 85 S **S** **18 42 58.3 +2.6**
comp=Z,1.0nm,0.6s,baz=163,slow=13,SNR=2.3
YBH LR LR 18 50 21.0
comp=Z,10µm,18.1s,MS5.7,baz=301,slow=33
YBH Yreka Blue Hor 36.81 85 *e*P **P** **18 37 12.6 +1.6**
YBH pmax pmax
comp=Z,49nm,0.9s
E09A Wood Farm, Sta 36.98 75 ⇓P **P** **18 37 11.4 -1.1**
baz=37,SNR=27
G08A Pilot Rock 37.13 78 ⇓P **P** **18 37 12.9 -0.9**
baz=37,SNR=44
LNOR Lincton Mounta 37.23 76 *e*P **P** **18 37 16.4 +1.8**
comp=Z,22nm,0.7s,mb5.1
LNOR Lincton Mounta 37.23 76 *e*P **P** **18 37 16.4 +1.8**
LNOR pmax pmax
comp=Z,23nm,0.7s,mb5.1
A12A Yaak River Ran 37.26 71 ⇓P **P** **18 37 15.0 +0.2**
baz=37,SNR=14
K05A Summer Lake 37.35 82 ⇑P **P** **18 37 15.0 -0.7**
baz=37,SNR=82
I07A Izee 37.45 80 ⇓P **P** **18 37 15.5 -1.0**
baz=37,SNR=111
B12A Libby 37.52 71 ⇑P **P** **18 37 16.0 -1.0**
baz=37
WDC Whiskeytown Da 37.58 86 *e*P **P** **18 37 19.1 +1.5**
comp=Z,172nm,1.3s,mb5.6
WDC Whiskeytown Da 37.58 86 *e*P **P** **18 37 19.1 +1.5**
WDC pmax pmax
comp=Z,172nm,1.3s,mb5.6
F10A Beach Ranch, E 37.81 76 ⇓P **P** **18 37 18.8 -0.6**
baz=38,SNR=20
C12B Naegeli Ranch, 37.96 72 ⇑P **P** **18 37 19.8 -0.9**
baz=38,SNR=29
A13A Flathead Natio 37.98 70 ⇓P **P** **18 37 19.3 -1.5**
baz=38
RES Resolute Bay 38.12 25 *e*P **P** **18 37 25.7 +3.9**
comp=Z,130nm,1.4s,mb5.5
RES Resolute Bay 38.12 25 LR LR 18 55 33.2
comp=Z,9µm,19.5s,MS5.6,baz=86,slow=40
RES Resolute Bay 38.12 25 *e*P **P** **18 37 25.7 +3.9**
RES pmax pmax
comp=Z,130nm,1.4s,mb5.5
MOD Modoc 38.18 83 *e*P **P** **18 37 22.9 +0.3**
comp=Z,201nm,1.1s,mb5.8

MOD LR LR
comp=Z,6µm,19.0s,MS5.5
WALA Waterton Lakes 38.20 69 *e*P **P** **18 37 22.8 +0.1**
comp=Z,7.9nm,1.3s,mb4.3
HOPS Hopland 38.21 89 *e*P **P** **18 37 24.4 +1.4**
comp=Z,378nm,1.3s,mb6.0
HOPS LR LR
comp=Z,9µm,19.0s,MS5.6
B13A Whitefish 38.22 71 ⇓P **P** **18 37 22.0 -0.8**
baz=38,SNR=42
BSMT Bassoo Peak 38.29 72 *e*P **P** **18 37 22.8 -0.7**
comp=Z,159nm,1.0s,mb5.7
BMO Blue Mountains 38.36 77 *e*P **P** **18 37 24.1 +0.1**
comp=Z,28nm,0.9s,mb5.0
BMO LR LR
comp=Z,5µm,22.0s,MS5.3
C13A Hot Springs 38.50 72 ⇑P **P** **18 37 24.0 -1.3**
baz=38,SNR=104
A14A Double T Ranch 38.53 69 ⇓P **P** **18 37 24.9 -0.6**
baz=38,SNR=151
JTMT Jette 38.64 71 *e*P **P** **18 37 25.3 -1.1**
comp=Z,77nm,1.1s,mb5.3
YBMT Yellow Bay 38.74 71 *e*P **P** **18 37 27.1 -0.1**
comp=Z,94nm,1.1s,mb5.4
MCCM Marconi Confer 38.86 90 *e*P **P** **18 37 27.5 -0.9**
comp=Z,258nm,1.4s,mb5.8
MCCM LR LR
comp=Z,7µm,19.0s,MS5.5
D13A Huson 38.87 72 ⇓P **P** **18 37 27.2 -1.2**
baz=39,SNR=62
WVOR Wild Horse Val 38.89 81 *e*P **P** **18 37 28.7 +0.1**
comp=Z,86nm,0.8s,mb5.5
WVOR Wild Horse Val 38.89 81 *e*P **P** **18 37 28.7 +0.1**
WVOR pmax pmax
comp=Z,86nm,0.8s,mb5.5
A15A Johnson Ranch, 38.92 69 ⇑P **P** **18 37 27.8 -1.0**
baz=39,SNR=49
SWMT Swartz Lake 38.92 72 *e*P **P** **18 37 28.9 +0.1**
comp=Z,44nm,1.0s,mb5.1
F12A Elk City 39.10 75 ⇓P **P** **18 37 29.5 -0.8**
baz=39,SNR=105
MSO Missoula 39.31 73 *e*P **P** **18 37 31.3 -0.7**
comp=Z,89nm,1.0s,mb5.5
MSO LR LR
comp=Z,2µm,20.0s,MS5.0
B15A Bradely Ranch, 39.35 70 ⇑P **P** **18 37 30.9 -1.5**
baz=39,SNR=95
SLMT Seeley Lake 39.36 72 *e*P **P** **18 37 31.7 -0.8**
comp=Z,275nm,1.4s,mb5.8
E13A Victor 39.37 73 ⇑P **P** **18 37 32.0 -0.6**
baz=39,SNR=26
D14A Greenough 39.43 72 ⇓P **P** **18 37 32.1 -1.0**
baz=39,SNR=159
A16A West Butte Ran 39.59 68 ⇓P **P** **18 37 32.8 -1.5**
baz=40,SNR=26
C15A Salmond Ranch, 39.60 71 ⇑P **P** **18 37 33.7 -0.7**
baz=40,SNR=422
F13A Darby 39.63 74 ⇑P **P** **18 37 33.4 -1.3**
baz=40,SNR=46
CHMT Chamberlain Mo 39.67 72 *e*P **P** **18 37 33.4 -1.6**
comp=Z,63nm,1.0s,mb5.3
E14A Clinton 39.79 73 ⇑P **P** **18 37 34.9 -1.1**
baz=40,SNR=53
B16A M & M Farms, S 39.79 69 ⇑P **P** **18 37 34.3 -1.8**
baz=40,SNR=45
H12A Diamond D Ranc 39.99 76 ⇑P **P** **18 37 36.5 -1.2**
baz=40,SNR=39
MFID Camas Ranch 40.04 78 ⇑P **P** **18 37 37.5 -0.7**
baz=40,SNR=20
G13A Cobalt 40.06 75 ⇓P **P** **18 37 37.4 -1.0**
baz=40,SNR=71
WCN Washoe City 40.06 86 ⇓P **P** **18 37 37.7 -0.7**
baz=40,SNR=42
C16A Fuhringer Ranc 40.08 70 ⇑P **P** **18 37 37.0 -1.5**
baz=40,SNR=112
A17A Triple J Farms 40.10 68 ⇓P **P** **18 37 37.3 -1.3**
baz=40,SNR=107
F14A Wisdom 40.18 74 ⇑P **P** **18 37 39.6 +0.3**
baz=40,SNR=49
I12A Atlanta 40.24 77 ⇑P **P** **18 37 39.9 +0.1**
baz=40
E15A Deer Lodge 40.28 72 ⇑P **P** **18 37 39.0 -1.1**
baz=40,SNR=73
B17A L&G Farms, Che 40.38 69 ⇑P **P** **18 37 40.5 -0.4**
baz=40
L10A Juniper Basin 40.41 80 ⇑P **P** **18 37 41.6 +0.3**
baz=40,SNR=21
G14A Jackson 40.44 74 ⇓P **P** **18 37 41.2 -0.2**
baz=40,SNR=16
CMB Columbia Colle 40.46 88 *e*P **P** **18 37 42.6 +0.9**
comp=Z,280nm,1.4s,mb5.8
CMB LR LR
comp=Z,5µm,21.0s,MS5.4
CMB Columbia Colle 40.46 88 *e*P **P** **18 37 42.6 +0.9**
CMB pmax pmax
comp=Z,279nm,1.4s,mb5.8
CMB MLR MLR
comp=Z,5µm,21.0s,MS5.4
A18A Metzger Ranch, 40.60 68 ⇑P **P** **18 37 41.6 -1.2**
baz=40,SNR=17
D16A Dana Ranch, Ca 40.60 71 ⇑P **P** **18 37 42.2 -0.5**
baz=40,SNR=81
HRY Holter Researc 40.60 72 *e*P **P** **18 37 42.2 -0.6**
comp=Z,90nm,0.9s,mb5.4
M10A I.L. Ranch, Tu 40.70 81 ⇓P **P** **18 37 43.4 -0.2**
baz=41,SNR=38
LRM Limekiln Ridge 40.72 73 *e*P **P** **18 37 42.6 -1.1**
comp=Z,130nm,0.9s,mb5.6
LRM *e*ScP ScP 18 43 33.2 -2.2
C17A Wharram Farm, 40.74 70 ⇓P **P** **18 37 43.2 -0.7**
baz=41,SNR=21
I13A Wildhorse Cree 40.78 76 ⇑P **P** **18 37 43.4 -0.9**
baz=41,SNR=94
E16A East Helena 40.79 72 ⇓P **P** **18 37 43.4 -1.0**
baz=41,SNR=29
L11A Cat Creek Ranc 40.80 80 ⇓P **P** **18 37 44.1 -0.4**
baz=41,SNR=91
HLID Hailey 40.80 77 *e*P **P** **18 37 44.9 +0.4**
comp=Z,47nm,0.8s,mb5.2
H14A Leadore 40.84 75 ⇑P **P** **18 37 44.4 -0.3**
baz=41,SNR=32
DLMT Dillon 40.88 74 *e*P **P** **18 37 45.0 -0.1**
comp=Z,83nm,1.3s,mb5.2
B18A Beardsley Farm 40.91 68 ⇓P **P** **18 37 44.4 -0.9**
baz=41,SNR=60
BMN Battle Mountai 40.93 83 *e*P **P** **18 37 45.7 +0.1**
comp=Z,140nm,1.2s,mb5.5
BMN LR LR
comp=Z,6µm,19.0s,MS5.5
BMN Battle Mountai 40.93 83 *e*P **P** **18 37 45.7 +0.1**
BMN pmax pmax
comp=Z,140nm,1.2s,mb5.5
BMN MLR MLR
comp=Z,6µm,19.0s,MS5.5
MCMT McKenzie Canyo 41.03 75 *e*P **P** **18 37 45.0 -1.3**
comp=Z,29nm,0.5s,mb5.2
D17A Six Diamond Ra 41.03 70 ⇓P **P** **18 37 45.4 -1.0**
baz=41,SNR=147
J13A Cove Ranch, Pi 41.04 77 ⇓P **P** **18 37 45.4 -1.0**
baz=41,SNR=45
G15A Dillon 41.05 74 ⇓P **P** **18 37 45.2 -1.3**
baz=41,SNR=70
EGMT Eagleton 41.11 69 *e*P **P** **18 37 42.5 -4.5**
comp=Z,155nm,1.1s,mb5.5
N10A Dunphy 41.19 82 ⇑P **P** **18 37 47.4 -0.4**
baz=41
M11A Holland Ranch, 41.20 81 ⇑P **P** **18 37 47.4 -0.4**
baz=41,SNR=39
F16A Kennard Place, 41.22 73 ⇓P **P** **18 37 47.3 -0.6**
baz=41,SNR=14
L12A House Creek Ra 41.25 79 ⇓P **P** **18 37 46.7 -1.5**
baz=41,SNR=22
H15A Lima 41.27 75 ⇓P **P** **18 37 46.8 -1.5**
baz=41,SNR=54
BOZ Bozeman (W) 41.30 73 *e*P **P** **18 37 46.7 -1.8**
comp=Z,101nm,1.1s,mb5.4
BOZ LR LR
comp=Z,3µm,21.0s,MS5.1
BOZ Bozeman (W) 41.30 73 *e*P **P** **18 37 46.7 -1.8**
BOZ pmax pmax
comp=Z,101nm,1.1s,mb5.4
BOZ MLR MLR
comp=Z,3µm,21.0s,MS5.1
E17A Martinsdale 41.30 71 ⇑P **P** **18 37 48.3 -0.2**
baz=41,SNR=84
ALE Alert 41.41 11 P **P** **18 37 51.0 +1.9**
comp=Z,795nm,1.2s,mb6.2,SNR=31
G16A Moss Hill, Enn 41.42 73 ⇓P **P** **18 37 48.6 -1.0**

baz=41
O10A **Cortez Mining,** 41.45 83 ⇓P P 18 37 50.5 +0.6
baz=41,SNR=9.6
J14A **Carey** 41.48 77 ⇓P P 18 37 50.5 +0.5
baz=41,SNR=60
NVAR **Mina Array Bea** 41.49 86 P P 18 37 50.3 +0.1
NVAR PcP PcP 18 39 48.7 +0.9
NVAR ScP ScP 18 43 35.9 -2.7
NVAR **Mina Array Bea** 41.49 86 P P 18 37 50.3 +0.1
comp=Z,60nm,0.9s,mb5.2,baz=295,slow=7.4,SNR=84
NVAR PcP PcP 18 39 48.7 +0.9
comp=Z,14nm,0.9s,baz=277,slow=2.8,SNR=4.0
NVAR ScP ScP 18 43 35.9 -2.7
comp=Z,2.2nm,0.8s,baz=259,slow=5.8,SNR=3.6
D18A **Linhart Farms,** 41.52 70 ⇑P P 18 37 50.3 0.0
baz=41,SNR=127
KSRS **Korea Array** 41.60 272 P P 18 37 49.8 -1.3
comp=Z,4.8nm,0.8s,mb4.2,baz=56,slow=7.9,SNR=22
KSRS PcP PcP 18 39 49.6 +1.4
comp=Z,3.7nm,0.7s,baz=69,slow=4.1,SNR=4.5
KSRS LR LR 18 54 52.7
comp=Z,2µm,18.4s,MS5.1,baz=60,slow=36
KSRS **Korea Array** 41.60 272 P P 18 37 49.8 -1.3
KSRS 18 39 49.6
KSRS pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
KSRS MLR MLR
comp=Z,2µm,18.4s,MS5.1
N11A **Elko Archery C** 41.60 81 ⇓P P 18 37 50.8 -0.3
baz=42
MLAC **Mammoth Lakes** 41.67 87 ⇑P P 18 37 51.5 -0.2
baz=42
I15A **Monteview** 41.71 75 ⇓P P 18 37 52.0 +0.1
baz=42,SNR=12
F17A **Fitzpatrick Pl** 41.72 72 ⇑P P 18 37 51.5 -0.5
baz=42,SNR=68
M12A **Wells** 41.74 80 ⇓P P 18 37 52.1 -0.2
baz=42,SNR=32
E18A **Harlowton** 41.80 71 ⇑P P 18 37 51.7 -0.9
baz=42,SNR=146
G17A **Pierce Place,** 42.00 73 ⇓P P 18 37 53.5 -0.8
baz=42,SNR=12
N12A **Clover Valley,** 42.00 81 ⇑P P 18 37 53.2 -1.1
baz=42,SNR=46
FFC **Flin Flon** 42.02 56 P P 18 37 55.0 +0.7
comp=Z,94nm,0.6s,mb5.6,SNR=7.0
FFC **Flin Flon** 42.02 56 eP P 18 37 54.1 -0.2
FFC comp=Z,14nm,0.6s,mb4.8 LR LR
comp=Z,11µm,19.0s,MS5.8
FFC **Flin Flon** 42.02 56 *i* P P 18 37 55.3 +1.0
H16A **Russell Place,** 42.04 74 ⇓P P 18 37 53.4 -1.3
baz=42,SNR=76
O11A **Cowboy Ranch,** 42.06 82 ⇓P P 18 37 55.1 +0.2
baz=42,SNR=16
J15A **Blackfoot** 42.08 76 ⇑P P 18 37 54.6 -0.4
baz=42,SNR=13
K14A **Jones Ranch, D** 42.13 78 ⇑P P 18 37 54.5 -0.8
baz=42,SNR=15
M13A **Montello** 42.23 80 ⇑P P 18 37 56.7 +0.4
baz=42,SNR=52
RCTC **Rector, Farmer** 42.26 89 ⇓P P 18 37 56.0 -0.5
baz=42,SNR=17
F18A **Big Timber** 42.27 71 ⇑P P 18 37 56.2 -0.3
baz=42,SNR=61
P11A **Circle Ranch,** 42.36 83 ⇓P P 18 37 58.1 +0.8
baz=42,SNR=48
GCMT **Greycliff** 42.36 71 eP P 18 37 56.1 -1.1
comp=Z,63nm,1.3s,mb5.1
I16A **Newdale** 42.37 75 ⇓P P 18 37 57.1 -0.3
baz=42,SNR=12
YNR **Norris Junctio** 42.37 73 eP P 18 37 57.5 +0.1
comp=Z,173nm,1.2s,mb5.6
INCN **Inchon** 42.37 273 eP P 18 37 58.4 +1.0
INCN comp=Z,100nm,1.3s,mb5.3 LR LR
comp=Z,3µm,20.0s,MS5.1
TIN **Tinemaha** 42.41 88 ⇓P P 18 37 58.9 +1.2
baz=42,SNR=50
Q10A **Clear Creek Ra** 42.41 84 ⇑P P 18 37 58.5 +0.7
baz=42,SNR=66
YFT **Old Faithful** 42.43 74 eP P 18 37 59.3 +1.5
comp=Z,53nm,0.8s,mb5.2
K15A **Arbon** 42.44 77 ⇓P P 18 37 59.1 +1.3
baz=42,SNR=50
SMMC **Simmler** 42.45 91 ⇓P P 18 37 59.2 +1.1
baz=42,SNR=32
N13A **Wendover, West** 42.51 80 ⇓P P 18 37 59.2 +0.7
baz=42,SNR=15
O12A **Currie** 42.53 81 ⇓P P 18 37 58.7 0.0
baz=42,SNR=105
H17A **Grant Village** 42.61 74 ⇑P P 18 38 00.5 +1.2
baz=42,SNR=36
LKWY **Lake** 42.62 73 eP P 18 38 00.1 +0.8
LKWY comp=Z,6µm,19.0s,MS5.5 LR LR
comp=Z,111nm,1.0s,mb5.5
LKWY **Lake** 42.62 73 eP P 18 38 00.1 +0.7
LKWY pmax pmax
comp=Z,111nm,1.0s,mb5.5
LKWY MLR MLR
comp=Z,6µm,19.0s,MS5.5
M14A **Sheep Mountain** 42.64 79 ⇓P P 18 37 59.6 0.0
baz=42,SNR=28
J16A **Bone** 42.64 76 ⇓P P 18 37 59.9 +0.4
baz=42,SNR=47
VES **Vestal, Richgr** 42.66 90 ⇑P P 18 38 00.4 +0.6
baz=43,SNR=29
IMW **Indian Meadow** 42.68 75 eP P 18 38 00.1 +0.2
comp=Z,46nm,1.0s,mb5.2
G18A **Lazy EL Ranch,** 42.69 72 ⇑P P 18 37 59.9 0.0
baz=43,SNR=20
FLWY **Flagg Ranch** 42.72 74 eP P 18 38 01.0 +0.9
comp=Z,66nm,0.9s,mb5.4
RRI2 **Red Ridge** 42.77 75 eP P 18 38 01.5 +0.9
comp=Z,57nm,0.8s,mb5.4
R10A **Warm Springs** 42.81 85 ⇑P P 18 38 01.4 +0.5
baz=43,SNR=25
HVU **Hansel Valley** 42.82 78 eP P 18 38 01.0 0.0
comp=Z,51nm,0.7s,mb5.4
HVU **Hansel Valley** 42.82 78 eP P 18 38 01.0 0.0
HVU pmax pmax
comp=Z,51nm,0.7s,mb5.4
Q11A **Duckwater** 42.85 84 ⇑P P 18 38 02.2 +0.9
baz=43,SNR=141
S10A **Tonopah Range,** 42.86 85 ⇓P P 18 38 01.9 +0.5
baz=43,SNR=216
MOOW **Moose Ponds** 42.88 75 eP P 18 38 01.8 +0.3
comp=Z,38nm,1.3s,mb5.0
I17A **Pilgrim Ck.** 42.88 74 ⇓P P 18 38 01.8 +0.3
baz=43
CWC **Cottonwood Cre** 42.89 88 ⇓P P 18 38 02.5 +0.8
baz=43,SNR=9.5
TPAW **Teton Pass** 42.91 75 eP P 18 38 01.7 0.0
comp=Z,20nm,0.7s,mb5.0
K16A **Soda Springs** 42.91 76 ⇑P P 18 38 02.7 +1.0
baz=43,SNR=58
L15A **Malad City** 42.92 78 ⇓P P 18 38 01.6 -0.2
baz=43,SNR=20
P12A **McGill** 42.92 82 ⇓P P 18 38 02.5 +0.6
baz=43,SNR=69
RLMT **Red Lodge** 42.97 72 eP P 18 38 01.4 -0.8
comp=Z,203nm,1.2s,mb5.7
SNOW **Snow King Moun** 43.04 75 eP P 18 38 04.3 +1.5
comp=Z,80nm,1.3s,mb5.3
REDW **Red Top Meadow** 43.04 75 eP P 18 38 03.8 +1.0
comp=Z,123nm,1.4s,mb5.4
LOHW **Long Hollow** 43.05 75 eP P 18 38 02.6 -0.3
comp=Z,42nm,1.3s,mb5.0
O13A **Hicks Ranch, I** 43.08 81 ⇓P P 18 38 03.7 +0.6
baz=43
J17A **Brown Place, J** 43.13 75 ⇑P P 18 38 03.4 0.0
baz=43
N14A **Grayback Hills** 43.13 80 ⇑P P 18 38 03.3 -0.2
baz=43,SNR=60
ISA **Isabella** 43.16 89 ⇓P P 18 38 04.3 +0.5
baz=43,SNR=147
ISA **Isabella** 43.16 89 eP P 18 38 03.2 -0.6
comp=Z,232nm,1.1s,mb5.8
ISA **Isabella** 43.16 89 eP P 18 38 03.3 -0.5
ISA pmax pmax
comp=Z,232nm,1.1s,mb5.8
BGU **Big Grassy Mou** 43.18 79 eP P 18 38 04.5 +0.6
comp=Z,80nm,1.1s,mb5.4
SBC **Santa Barbara** 43.20 92 ⇓P P 18 38 04.0 -0.2
baz=43
M15A **Larsen Ranch,** 43.21 78 ⇑P P 18 38 04.4 +0.3
baz=43,SNR=12
R11A **Troy Canyon, C** 43.21 84 ⇑P P 18 38 03.9 -0.3
baz=43,SNR=275
Q12A **Willow Creek R** 43.24 83 ⇓P P 18 38 04.3 -0.2
baz=43,SNR=38
AHID **Auburn Hatcher** 43.24 76 eP P 18 38 04.9 +0.5
comp=Z,45nm,0.9s,mb5.2
AHID LR LR
comp=Z,7µm,21.0s,MS5.5
ARVC **Arvin** 43.29 90 ⇑P P 18 38 04.7 -0.2
baz=43,SNR=9.9
DAC **Darwin (Calif)** 43.30 88 PFAKE
DAC LR LR
comp=Z,5µm,21.0s,MS5.4
SPUT **South Promonto** 43.30 79 eP P 18 38 05.5 +0.7
comp=Z,62nm,1.1s,mb5.2
K17A **Gardner Place,** 43.36 76 ⇑P P 18 38 04.3 -1.1
baz=43
I18A **Diamond G Ranc** 43.46 74 ⇑P P 18 38 06.0 -0.2
baz=43,SNR=14
P13A **Bates Ranch, G** 43.48 82 ⇑P P 18 38 05.6 -0.8
baz=43,SNR=80
L16A **Fish Haven** 43.49 77 ⇓P P 18 38 06.3 -0.1
baz=43,SNR=29
MPMC **Manual Prospec** 43.50 88 ⇓P P 18 38 06.5 0.0
baz=43,SNR=154
N15A **Stansbury Isla** 43.51 79 ⇑P P 18 38 06.4 -0.2
baz=43,SNR=10
BSC **Santa Cruz Isl** 43.55 92 ⇓P P 18 38 07.7 +0.7
baz=44,SNR=11
S11A **Rachel** 43.55 85 ⇓P P 18 38 07.7 +0.8
baz=44,SNR=15
FURC **Furnace Creek,** 43.62 87 ⇑P P 18 38 08.5 +0.9
baz=44,SNR=76
J18A **Kendall Valley** 43.62 75 ⇑P P 18 38 06.6 -0.9
baz=44,SNR=44
HWUT **Hardware Ranch** 43.65 78 eP P 18 38 07.6 -0.1
comp=Z,18nm,0.6s,mb5.0
HWUT LR LR
comp=Z,5µm,22.0s,MS5.3
OSI **Osito Adit** 43.69 91 ⇓P P 18 38 07.7 -0.5
baz=44
DUG **Dugway** 43.75 80 eP P 18 38 09.2 +0.6
comp=Z,213nm,1.2s,mb5.8
DUG **Dugway** 43.75 80 eP P 18 38 09.2 +0.6
DUG pmax pmax
comp=Z,213nm,1.2s,mb5.8
LRMC **Laurel Mountai** 43.76 89 ⇑P P 18 38 08.8 +0.1
baz=44,SNR=35
L17A **Cokeville** 43.77 77 ⇓P P 18 38 07.9 -0.8
baz=44
Q13A **Wheeler Ranch,** 43.78 82 ⇑P P 18 38 09.5 +0.7
baz=44,SNR=70
R12A **Pony Springs,** 43.82 83 ⇑P P 18 38 09.0 -0.1
baz=44,SNR=82
LAO **LASA Array** 43.85 68 eP P 18 38 08.7 -0.6
comp=Z,161nm,1.1s,mb5.7
LAO LR LR
comp=Z,8µm,20.0s,MS5.6
NOQ **North Oquirrh** 43.89 79 eP P 18 38 10.5 +0.8
comp=Z,173nm,1.2s,mb5.7
O15A **The Old Anders** 43.91 80 ⇓P P 18 38 09.4 -0.4
baz=44
FCC **Fort Churchill** 43.92 48 eP P 18 38 09.0 -0.6
comp=Z,1.1nm,0.8s
K18A **Toltan Ranch,** 43.95 75 ⇑P P 18 38 10.3 +0.2
baz=44,SNR=10
P14A **Drum Mountains** 43.97 81 ⇑P P 18 38 10.6 +0.3
baz=44,SNR=66
EDW2 **Edwards Air Fo** 43.97 90 ⇑P P 18 38 11.2 +0.8
baz=44,SNR=65
U10A **Ash Meadows, A** 43.98 87 ⇑P P 18 38 11.2 +0.8
baz=44,SNR=62
CTU **Camp Tracy** 44.09 79 eP P 18 38 11.8 +0.5
comp=Z,51nm,0.9s,mb5.3
S12A **Delamar Landin** 44.13 84 ⇓P P 18 38 12.5 +0.9
baz=44,SNR=93
T11A **Corn Creek, Al** 44.13 85 ⇑P P 18 38 11.8 +0.2
baz=44
BW06 **Boulder Array** 44.16 75 eP P 18 38 10.3 -1.5
comp=Z,5.7nm,0.8s,mb4.3
BW06 LR LR
comp=Z,5µm,19.0s,MS5.5
N16A **Reese Ranch, Co** 44.16 78 ⇓P P 18 38 11.3 -0.6
baz=44,SNR=13
DECC **Green Verdugo** 44.18 91 ⇓P P 18 38 12.2 +0.1
baz=44,SNR=12
Q14A **Sevier Lake (B** 44.22 82 ⇓P P 18 38 12.4 +0.1
baz=44,SNR=155
M17A **Scullys Gap (B** 44.27 77 ⇓P P 18 38 11.4 -1.3
baz=44,SNR=26
R13A **O'Grain Ranch,** 44.30 83 ⇓P P 18 38 12.2 -0.8
baz=44,SNR=96
PASC **Pasadena Art C** 44.32 91 eP P 18 38 13.1 -0.1
comp=Z,926nm,1.2s,mb6.4
JLU **Jordanelle** 44.33 79 eP P 18 38 13.8 +0.7
comp=Z,102nm,1.4s,mb5.4
NLU **North Lily Min** 44.35 80 eP P 18 38 14.0 +0.7
comp=Z,84nm,1.0s,mb5.4
SHOC **Shoshone** 44.35 87 ⇓P P 18 38 14.0 +0.6
baz=44,SNR=97
MWC **Mount Wilson** 44.36 91 eP P 18 38 14.0 +0.5
comp=Z,629nm,1.3s,mb6.2
MWC **Mount Wilson** 44.36 91 eP P 18 38 14.0 +0.5
MWC pmax pmax
comp=Z,629nm,1.3s,mb6.2
L18A **Fontenelle, Gr** 44.38 76 ⇑P P 18 38 13.1 -0.5
baz=44,SNR=9.2
GSC **Goldstone** 44.42 88 ⇓P P 18 38 13.8 -0.1
baz=44,SNR=270
GSC **Goldstone** 44.42 88 eP P 18 38 13.5 -0.5
comp=Z,405nm,1.0s,mb6.1
GSC **Goldstone** 44.42 88 eP P 18 38 13.5 -0.5
GSC pmax pmax
comp=Z,405nm,1.0s,mb6.1
P15A **Leamington** 44.46 80 ⇓P P 18 38 15.3 +1.0
baz=44,SNR=23
N17A **Moffit Pass** 44.49 78 ⇓P P 18 38 14.1 -0.3
baz=44,SNR=12
O16A **Springville** 44.54 79 ⇓P P 18 38 15.4 +0.5
baz=44,SNR=30
K19A **Absolon Red Bu** 44.55 75 ⇓P P 18 38 14.2 -0.7
baz=44,SNR=66
U11A **Corn Creek** 44.56 86 ⇓P P 18 38 15.4 +0.3
baz=44,SNR=8.7
DAU **Daniels Canyon** 44.56 79 eP P 18 38 16.1 +1.1
comp=Z,115nm,1.0s,mb5.7
DAU **Daniels Canyon** 44.56 79 eP P 18 38 16.2 +1.2
DAU pmax pmax
comp=Z,115nm,1.0s,mb5.7
FMP **Fort Macarthur** 44.56 91 ⇑P P 18 38 15.0 -0.1
baz=44
MPU **Maple Canyon** 44.58 79 eP P 18 38 15.3 +0.2
comp=Z,37nm,0.7s,mb5.3
RRX **Edison Barstow** 44.58 89 ⇑P P 18 38 15.9 +0.6
baz=44,SNR=7.6
BFSC **Mount Baldy Ra** 44.60 90 ⇓P P 18 38 14.8 -0.6
baz=44,SNR=130
M18A **Lyman** 44.66 77 ⇑P P 18 38 16.0 +0.2
baz=44,SNR=21
L19A **Farson** 44.67 76 ⇓P P 18 38 16.0 +0.1
baz=45,SNR=14
CIS **Catalina Islan** 44.70 92 ⇑P P 18 38 16.8 +0.6
baz=45,SNR=13
S13A **Holt Ranch, En** 44.75 84 ⇓P P 18 38 17.2 +0.6
baz=45,SNR=128
Q15A **Fillmore** 44.75 81 ⇑P P 18 38 17.3 +0.7
baz=45,SNR=21
T12A **Moapa** 44.77 85 ⇓P P 18 38 17.3 +0.5
baz=45
R14A **James Farms, M** 44.80 82 ⇑P P 18 38 17.4 +0.3
baz=45
TUQ **Turquoise Moun** 44.87 88 ⇑P P 18 38 17.9 +0.3
baz=45,SNR=57
SCI **San Clemente I** 44.90 92 ⇓P P 18 38 17.7 -0.1
baz=45,SNR=11
V11A **Goodsprings** 44.91 87 ⇓P P 18 38 18.2 +0.3
baz=45,SNR=35
K20A **Yellowstone Ra** 44.95 74 ⇑P P 18 38 17.2 -0.9
baz=45,SNR=29
O17A **Robinson Place** 45.01 79 ⇓P P 18 38 18.4 -0.2
baz=45,SNR=34
HEC **Hector,Ludlow** 45.02 89 ⇓P P 18 38 19.0 +0.2
baz=45,SNR=95
BBRC **Big Bear Solar** 45.04 90 ⇓P P 18 38 19.2 +0.3
baz=45
S14A **Cedar City** 45.06 83 ⇓P P 18 38 19.4 +0.3
baz=45,SNR=15
CCUT **Cedar City** 45.07 83 eP P 18 38 19.2 +0.1
comp=Z,128nm,1.3s,mb5.6
U12A **Valley of Fire** 45.07 85 ⇓P P 18 38 19.3 +0.1
baz=45,SNR=37
T13A **Saint George** 45.08 84 ⇓P P 18 38 19.7 +0.5
baz=45,SNR=60
M19A **Rock Springs** 45.15 76 ⇑P P 18 38 20.1 +0.3
baz=45,SNR=7.9
MVU **Marysvale** 45.17 82 PFAKE 18 38 30.0 +10
MVU LR LR
comp=Z,6µm,19.0s,MS5.5
N18A **Larsen Ranch,** 45.17 77 ⇑P P 18 38 19.1 -0.8
baz=45,SNR=12
MSU **Marysvale** 45.18 82 eP P 18 38 20.7 +0.6
comp=Z,50nm,0.6s,mb5.5
MSU **Marysvale** 45.18 82 eP P 18 38 20.7 +0.7
MSU pmax pmax
comp=Z,50nm,0.6s,mb5.5
TMUT **Trail Mountain** 45.28 80 eP P 18 38 20.6 -0.2
comp=Z,140nm,1.0s,mb5.8
MURC **Murrieta** 45.31 91 ⇑P P 18 38 20.8 -0.2
baz=45,SNR=35
R15A **Junction** 45.31 82 ⇑P P 18 38 21.5 +0.4
baz=45,SNR=24
L20A **Wamsutter** 45.34 75 ⇓P P 18 38 21.3 +0.1
baz=45,SNR=11
V12A **Nelson** 45.34 86 ⇓P P 18 38 21.8 +0.5
baz=45,SNR=50
O18A **Roosevelt** 45.40 78 ⇓P P 18 38 22.2 +0.5
baz=45,SNR=8.3
P17A **Butcher Ranch,** 45.45 79 ⇓P P 18 38 21.7 -0.5
baz=45,SNR=23
GMRC **Granite Mounta** 45.47 88 ⇓P P 18 38 22.3 0.0
baz=45,SNR=224
N19A **John Jarvie Ra** 45.52 77 ⇑P P 18 38 21.8 -0.9
baz=45
Q16A **Castle Valley** 45.54 80 ⇑P P 18 38 23.2 +0.4
baz=45,SNR=57
T14A **Hurricane** 45.55 84 ⇑P P 18 38 23.1 +0.1
baz=46,SNR=74
S15A **Panguitch** 45.60 83 ⇑P P 18 38 23.4 +0.1
baz=46
W12A **Cal Nev Ari** 45.61 87 ⇑P P 18 38 23.7 +0.3
baz=46,SNR=23
P18A **Preston Nutter** 45.65 79 ⇑P P 18 38 24.0 +0.3
baz=46,SNR=76
M20A **Sweetwater, Wa** 45.74 76 ⇑P P 18 38 24.0 -0.4
baz=46,SNR=25
R16A **Teasdale** 45.75 81 ⇓P P 18 38 25.4 +0.9
baz=46,SNR=37
PFO **Pinyon Flat Ob** 45.76 90 P P 18 38 25.4 +0.7
comp=Z,596nm,0.9s,mb6.5,SNR=23
PFO **Pinyon Flat Ob** 45.76 90 ⇑P P 18 38 25.2 +0.6
baz=46,SNR=45
PFO **Pinyon Flat Ob** 45.76 90 eP P 18 38 23.8 -0.9
comp=Z,101nm,0.9s,mb5.8
PFO **Pinyon Flat Ob** 45.76 90 eP P 18 38 23.8 -0.9
PFO pmax pmax
comp=Z,101nm,0.9s,mb5.8
BELC **Belle Mtn. Jos** 45.78 89 ⇓P P 18 38 24.7 -0.1
baz=46,SNR=68
V13A **Grand Canyon W** 45.79 86 ⇓P P 18 38 24.9 0.0
baz=46,SNR=185
109C **Camp Elliot, M** 45.85 91 ⇓P P 18 38 25.1 -0.3
baz=46,SNR=14
U14A **Mt Trumbull** 45.91 84 ⇓P P 18 38 25.8 0.0
baz=46,SNR=125
O19A **Miners Draw (B** 45.91 78 ⇓P P 18 38 25.5 -0.3
baz=46,SNR=59
L21A **Rawlins** 45.94 75 ⇓P P 18 38 25.7 -0.3
baz=46,SNR=66
T15A **Red Dirt Ranch** 46.01 83 ⇑P P 18 38 27.4 +0.8
baz=46,SNR=59
S16A **Weppner Ranch,** 46.04 82 ⇓P P 18 38 27.6 +0.8
baz=46,SNR=84
Q18A **Rafter H Ranch** 46.05 79 ⇓P P 18 38 26.5 -0.4
baz=46,SNR=74
N20A **Spence Gulch,** 46.10 76 ⇓P P 18 38 27.7 +0.5
baz=46,SNR=32
NEE2 **Needles Airpor** 46.12 87 ⇑P P 18 38 27.5 0.0
baz=46,SNR=18
R17A **Hanksville Air** 46.13 81 ⇓P P 18 38 27.3 -0.2
baz=46,SNR=36
M21A **Separation Pea** 46.16 75 ⇑P P 18 38 26.8 -0.9
baz=46,SNR=22
IRM **Iron Mountain** 46.19 88 ⇑P P 18 38 28.4 +0.3
baz=46,SNR=132
RWWY **Rawlins** 46.20 75 eP P 18 38 27.8 -0.2
comp=Z,43nm,0.7s,mb5.5
BAR **Barrett** 46.26 91 eP P 18 38 28.0 -0.6
comp=Z,198nm,1.1s,mb6.0
MONP **Monument Peak** 46.27 91 ⇑P P 18 38 29.1 +0.5
baz=46,SNR=48
W13A **Hualapai Mount** 46.35 86 ⇑P P 18 38 29.1 -0.1
baz=46,SNR=107
BC3 **Big Chuckawall** 46.35 89 ⇓P P 18 38 28.7 -0.6
baz=46,SNR=62
P19A **Cripple Cowboy** 46.41 78 ⇓P P 18 38 29.5 -0.3
baz=46,SNR=90
U15A **North Rim** 46.45 84 ⇑P P 18 38 30.6 +0.6
baz=46,SNR=209
V14A **Boquillas Ranc** 46.47 85 ⇓P P 18 38 30.6 +0.4
baz=46,SNR=160
O20A **White River Ci** 46.54 77 ⇑P P 18 38 31.0 +0.2
baz=46,SNR=6.4
T16A **Glen Canyon Da** 46.57 83 ⇑P P 18 38 30.8 -0.2
baz=46
S17A **Black Ridge (B** 46.58 82 ⇑P P 18 38 31.1 0.0
baz=46,SNR=77
N21A **Black Mountain** 46.59 76 ⇓P P 18 38 30.5 -0.5
baz=46,SNR=30
RSSD **Black Hills** 46.59 70 eP P 18 38 30.9 -0.2
comp=Z,108nm,1.3s,mb5.6
RSSD **Black Hills** 46.59 70 eP P 18 38 30.9 -0.2
RSSD pmax pmax
comp=Z,108nm,1.3s,mb5.6
SWSC **Sam W. Stewart** 46.62 90 ⇑P P 18 38 31.5 +0.1
baz=46,SNR=18
DVTC **Desert V Tower** 46.62 91 ⇓P P 18 38 31.4 0.0
baz=47,SNR=39
IRK **Irkutsk** 46.63 304 eP P 18 38 30.1 -1.1
IRK *e* 18 40 01.8
IRK pmax pmax
comp=Z,223nm,1.4s,mb5.9
R18A **Canyonlands Na** 46.65 80 ⇑P P 18 38 31.0 -0.6
baz=46,SNR=40
Q19A **Hogan Spring (** 46.67 79 ⇑P P 18 38 31.6 -0.1
baz=47,SNR=48
X13A **Yucca** 46.72 87 ⇓P P 18 38 32.2 0.0
baz=47,SNR=133
M22A **Cedar Creek Ra** 46.74 75 ⇓P P 18 38 31.6 -0.7
baz=47,SNR=27
W14A **Seligman** 46.76 86 ⇓P P 18 38 33.8 +1.2
baz=47,SNR=103
P20A **De Beque** 46.85 78 ⇓P P 18 38 33.8 +0.6
baz=47,SNR=21
V15A **Kaibab Nationa** 46.92 84 ⇑P P 18 38 34.5 +0.7
baz=47,SNR=65
O21A **Pagoda** 46.95 77 ⇓P P 18 38 33.8 -0.2
baz=47,SNR=29
T17A **Navajo Res., N** 46.99 82 ⇑P P 18 38 34.0 -0.3
baz=47,SNR=59
S18A **Hurst Farm, Bl** 47.03 81 ⇑P P 18 38 35.4 +0.8
baz=47,SNR=187
R19A **Curley Farm, L** 47.09 80 ⇓P P 18 38 34.7 -0.4
baz=47,SNR=9.7
BJI **Beijing** 47.12 283 P P 18 38 28.2 -7.1
BJI PP PP 18 40 23.9 -1.8
BJI S S 18 45 24.4 -3.7
BJI SS SS 18 48 54.5 -0.2
BJI pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
BJI pmax pmax
comp=Z,530nm,8.1s
BJI LR LR
comp=N,9µm,20.0s,MS5.7
BJI LR LR
comp=E,2µm,17.8s,MS5.7
BJI LR LR
comp=Z,6µm,21.1s,MS5.6
GLA **Glamis** 47.14 89 ⇑P P 18 38 35.6 +0.1
baz=47,SNR=19
N22A **Wattenberg Ran** 47.20 75 ⇓P P 18 38 36.0 +0.2
baz=47,SNR=37
PV04 **Paradox Valley** 47.24 79 eP P 18 38 35.5 -0.7
Q20A **Ridgley Place,** 47.25 78 ⇓P P 18 38 36.3 0.0
baz=47,SNR=20
TLY **Talaya** 47.26 303 P P 18 38 38.0 +1.8
comp=Z,559nm,1.4s,mb6.3,SNR=14

TLY Talaya 47.26 303 *e*P P **18 38 35.8 -0.4**
comp=Z,213nm,1.4s,mb5.9
TLY Talaya 47.26 303 *c i*P P **18 38 37.0 +0.8**
TLY *e* 18 40 31.9
TLY *e* 18 45 34.3
TLY pmax pmax
comp=Z,212nm,1.4s,mb5.9
TLY MLR MLR
comp=Z,4µm,17.0s,MS5.5
W15A Williams 47.28 85 ⇓P P **18 38 37.0 +0.4**
baz=47,SNR=53
U16A Tuba City 47.35 83 ⇓P P **18 38 37.6 +0.6**
baz=47,SNR=37
X14A Yava 47.38 86 ⇓P P **18 38 37.8 +0.5**
baz=47,SNR=149
N23A Red Feather La 47.44 75 ⇓P P **18 38 37.4 -0.3**
baz=47,SNR=22
T18A Mexican Hat 47.46 81 ⇓P P **18 38 38.1 +0.2**
baz=47,SNR=153
PHWY Pilot Hill 47.48 74 *e*P P **18 38 36.6 -1.4**
comp=Z,20nm,0.8s,mb5.1
S19A Harvey Farm, M 47.52 80 ⇓P P **18 38 38.7 +0.3**
baz=47,SNR=81
O22A Kremmling 47.54 76 ⇑P P **18 38 38.1 -0.4**
baz=47,SNR=34
ULM Lac du Bonnet 47.54 59 *e*P P **18 38 38.4 0.0**
comp=Z,10.0nm,0.6s,mb5.0
ULM Lac du Bonnet 47.54 59 P P **18 38 37.9 -0.5**
comp=Z,6.8nm,0.5s,mb5.0,baz=305,slow=6.4,SNR=6.5
ULM LR LR 18 59 21.1
comp=Z,11µm,18.6s,MS5.8,baz=308,slow=37
WUAZ Wupatki 47.61 84 *e*P P **18 38 39.8 +0.6**
comp=Z,90nm,0.7s,mb5.9
PV01 Paradox Valley 47.61 79 *e*P P **18 38 39.0 -0.2**
comp=Z,7µm,0.7s
PV01 *e*ScP ScP 18 44 00.9 -2.7
ULN Ulaanbaatar 47.64 297 *e*P P **18 38 37.5 -1.7**
comp=Z,50nm,1.3s,mb5.4
ULN Ulaanbaatar 47.64 297 *e*P P **18 38 37.5 -1.7**
ULN pmax pmax
comp=Z,55nm,1.3s,mb5.4
112A Yuma 47.64 90 ⇓P P **18 38 40.1 +0.7**
baz=48,SNR=7.7
Y14A Wickenburg 47.66 87 ⇓P P **18 38 39.8 +0.3**
baz=48,SNR=85
R20A Redvale 47.69 79 ⇓P P **18 38 39.1 -0.6**
baz=48,SNR=11
Z13A Yuma Proving G 47.76 88 ⇑P P **18 38 40.4 +0.1**
baz=48,SNR=104
Q21A Lamborn Mesa, 47.76 78 ⇓P P **18 38 40.3 0.0**
baz=48,SNR=24
X15A Humboldt 47.76 86 ⇑P P **18 38 40.7 +0.4**
baz=48,SNR=62
P22A Eagle 47.77 77 ⇓P P **18 38 40.2 -0.2**
baz=48,SNR=12
W16A Flagstaff 47.79 85 ⇓P P **18 38 41.0 +0.5**
baz=48,SNR=67
O23A Lake Granby, G 47.88 76 ⇓P P **18 38 41.1 -0.1**
baz=48,SNR=16
V17A Tonalea, Kykot 47.89 84 ⇑P P **18 38 42.0 +0.7**
baz=48,SNR=205
SMCO Snowmass 47.91 77 *e*P P **18 38 41.7 +0.3**
comp=Z,27nm,0.6s,mb5.5
U18A Rough Rock, Ch 47.93 82 ⇑P P **18 38 41.8 +0.2**
baz=48,SNR=56
113A Mohawk Valley, 47.98 89 ⇑P P **18 38 41.1 -0.9**
baz=48,SNR=30
SONM Songino Array 48.02 298 P P **18 38 41.0 -1.1**
comp=Z,8.3nm,1.0s,mb4.7,baz=55,slow=8.2,SNR=23
SONM ScP ScP 18 44 03.2 -2.0
comp=Z,6.5nm,0.8s,baz=36,slow=4.6,SNR=8.8
SONM LR LR 18 59 55.0
comp=Z,8µm,18.6s,MS5.7,baz=51,slow=37
Y15A Casa Rosa Ranc 48.06 86 ⇑P P **18 38 43.2 +0.5**
baz=48,SNR=104
R21A Cimarron 48.08 78 ⇑P P **18 38 42.7 0.0**
baz=48,SNR=11
Z14A Wintersburg 48.09 87 ⇓P P **18 38 42.3 -0.6**
baz=48,SNR=24
N24A Carr 48.11 74 ⇑P P **18 38 43.2 +0.2**
baz=48,SNR=8.8
Q22A Crested Butte, 48.15 78 ⇑P P **18 38 42.8 -0.4**
baz=48,SNR=36
T19A Beclabito 48.18 81 ⇓P P **18 38 43.7 +0.2**
baz=48,SNR=142
ZAK Zakamensk 48.19 302 *e*P P **18 38 43.2 -0.2**
ZAK pmax pmax
comp=Z,69nm,1.7s,mb5.4
X16A Lo Mia Camp, P 48.30 85 ⇓P P **18 38 45.5 +1.0**
baz=48,SNR=109
W17A Winslow 48.30 84 ⇓P P **18 38 45.0 +0.5**
baz=48,SNR=26
ISCO Idaho Springs 48.33 76 *e*P P **18 38 45.5 +0.9**
comp=Z,50nm,1.3s,mb5.4
ISCO Idaho Springs 48.33 76 *e*P P **18 38 45.5 +0.9**
ISCO pmax pmax
comp=Z,50nm,1.3s,mb5.4
U19A Dine' College, 48.42 82 ⇑P P **18 38 46.2 +0.8**
baz=48,SNR=45
O24A Longmont 48.44 75 ⇑P P **18 38 45.2 -0.3**
baz=48
P23A Jefferson 48.46 76 ⇑P P **18 38 46.1 +0.4**
baz=48,SNR=27
114A Black Gap (USA 48.54 88 ⇑P P **18 38 47.4 +1.0**
baz=48,SNR=96
N25A Grover 48.59 74 ⇓P P **18 38 46.2 -0.4**
baz=48
Z15A Gila River Ind 48.62 87 ⇑P P **18 38 46.6 -0.3**
baz=48
MOY Mondy 48.62 304 *e*P P **18 38 47.3 +0.6**
MOY pmax pmax
comp=Z,251nm,2.0s,mb5.9
Y16A Circle Bar Ran 48.64 86 ⇑P P **18 38 46.6 -0.5**
baz=48,SNR=48
R22A Saguache, Gunn 48.64 78 ⇓P P **18 38 47.0 -0.1**
baz=48,SNR=53
AGMN Agassiz Nation 48.69 61 *e*P P **18 38 45.8 -1.5**
comp=Z,52nm,1.1s,mb5.5
X17A Forest Lakes 48.74 85 ⇓P P **18 38 48.5 +0.6**
baz=49,SNR=28
Q23A Hartsel 48.76 77 ⇓P P **18 38 48.1 +0.1**
baz=49,SNR=20
U20A Newcomb 48.78 81 ⇑P P **18 38 47.3 -0.9**
baz=49
W18A Petrified Fore 48.87 83 ⇑P P **18 38 49.6 +0.7**
baz=49,SNR=14
S22A 4UR Ranch, Cre 48.91 79 ⇓P P **18 38 49.4 +0.2**
baz=49,SNR=104
P24A Kohler Place, 48.93 76 ⇑P P **18 38 48.1 -1.2**
baz=49
115A Sonoran Desert 48.98 88 ⇑P P **18 38 50.4 +0.7**
baz=49,SNR=50
T21A Navajo Lake 48.98 80 ⇓P P **18 38 50.1 +0.4**
baz=49,SNR=17
TIA Tai'an 49.01 279 P P **18 38 48.4 -1.5**
TIA S S **18 45 56.6 +1.7**
TIA LR LR
comp=N,4µm,20.6s,MS5.5
TIA LR LR
comp=E,4µm,17.7s,MS5.5
KBS Kingsbay 49.01 358 *e*P P **18 38 51.0 +1.6**
KBS AMB AMB 18 38 55.4
comp=Z,419nm,0.9s,mb6.4
KBS *e*S S **18 45 56.9 +2.9**
KBS AMS AMS 18 58 17.8
comp=Z,6µm,18.8s,MS5.6
KBS Kingsbay 49.01 358 *e*P P **18 38 49.7 +0.3**
comp=Z,895nm,1.4s,mb6.6
KBS LR LR
comp=Z,7µm,20.0s,MS5.7
KBS Kingsbay 49.01 358 *d i*P P **18 38 50.1 +0.7**
KBS pmax pmax
comp=Z,538nm,1.2s,mb6.5
O25A Wiggins 49.01 74 ⇑P P **18 38 50.6 +0.7**
baz=49,SNR=15
Z16A Peralta Trail, 49.03 86 ⇑P P **18 38 50.8 +0.6**
baz=49,SNR=20
W19A Sanders 49.09 83 ⇓P P **18 38 50.5 0.0**
baz=49
214A Organ Pipe Nat 49.13 89 ⇓P P **18 38 50.6 -0.3**
baz=49,SNR=59
Q24A Divide 49.13 76 ⇑P P **18 38 51.0 +0.2**
baz=49,SNR=12
X18A Snowflake 49.14 84 ⇑P P **18 38 51.3 +0.3**
baz=49,SNR=40
Y17A Roosevelt 49.15 86 ⇓P P **18 38 51.4 +0.4**
baz=49,SNR=84
V20A Brimhall 49.20 82 ⇑P P **18 38 52.1 +0.8**
baz=49,SNR=46
U21A Nageezi 49.27 81 ⇑P P **18 38 52.2 +0.3**
baz=49,SNR=102
T22A Edith 49.34 79 ⇓P P **18 38 52.9 +0.4**
baz=49,SNR=83
HHC Hu-ho-hao-te 49.34 287 *e*P P **18 38 51.7 -0.7**
HHC pP pP 18 38 56.3 +3.2
HHC sP sP 18 38 59.3 +6.0
HHC PcP PcP 18 40 16.2 +1.2
HHC PP PP 18 40 44.7 -1.4
HHC PcS PcS 18 44 11.0 -0.4
HHC *e*S S **18 45 54.8 -4.8**
HHC sS sS 18 46 01.8 +1.2
HHC ScS ScS 18 48 40.4 -4.7
HHC SS SS 18 49 20.7 -10
HHC pmax pmax
comp=Z,18nm,1.1s,mb5.0
HHC pmax pmax
comp=Z,290nm,5.0s
HHC LR LR
comp=N,5µm,15.6s,MS5.7
HHC LR LR
comp=E,3µm,16.3s,MS5.7
HHC LR LR
comp=Z,4µm,15.1s,MS5.5
P25A Willow Gulch B 49.37 75 ⇓P P **18 38 52.3 -0.3**
baz=49,SNR=37
116A Eloy 49.39 87 ⇓P P **18 38 52.9 0.0**
baz=49,SNR=30
S23A Nye Farm, Mont 49.44 78 ⇑P P **18 38 52.7 -0.5**
baz=49
X19A St. Johns 49.61 84 ⇑P P **18 38 55.1 +0.6**
baz=50,SNR=59
W20A Ramah 49.62 82 ⇑P P **18 38 54.8 +0.2**
baz=50,SNR=23
R24A Sanders Place, 49.63 77 ⇓P P **18 38 55.0 +0.3**
baz=50,SNR=30
SPITS Spitsbergen Ar 49.63 357 LR LR 18 58 53.3
comp=Z,7µm,21.4s,MS5.6,baz=350,slow=35
Z17A San Carlos Hig 49.65 86 ⇓P P **18 38 55.7 +0.9**
baz=50,SNR=18
V21A Milan 49.70 81 ⇑P P **18 38 55.3 +0.2**
baz=50
Q25A Bedland, Calha 49.70 76 ⇓P P **18 38 55.4 +0.2**
baz=50,SNR=25
SDCO Great Sand Dun 49.71 78 *e*P P **18 38 55.8 +0.5**
comp=Z,56nm,0.9s,mb5.6
OGNE Ogallala 49.72 72 *e*P P **18 38 55.6 +0.4**
comp=Z,283nm,1.3s,mb6.1
U22A Llaves 49.79 80 ⇑P P **18 38 56.0 +0.1**
baz=50,SNR=63
GUMO Guam 49.82 234 PFAKE 18 39 10.0 +14
GUMO LR LR
comp=Z,3µm,19.0s,MS5.3
GUMO Guam 49.82 234 LR LR 18 57 29.6
comp=Z,3µm,19.7s,MS5.2,baz=34,slow=33
T23A Casias Ranch, 49.85 79 ⇓P P **18 38 56.2 -0.1**
baz=50,SNR=12
216A Three Points, 49.93 88 ⇓P P **18 38 56.8 -0.2**
baz=50,SNR=23
Y19A Nutrioso 49.95 84 ⇑P P **18 38 57.5 +0.3**
baz=50,SNR=52
S24A Houchin Ranch, 49.95 78 ⇑P P **18 38 57.8 +0.7**
baz=50,SNR=47
117A Oracle 49.98 87 ⇑P P **18 38 58.1 +0.8**
baz=50,SNR=102
SSE Sheshan 49.98 271 P P **18 38 57.1 -0.3**
SSE sP sP 18 39 01.2 +2.9
SSE S S **18 46 07.4 -1.3**
SSE pmax pmax
comp=Z,39nm,0.7s,mb5.5
SSE pmax pmax
comp=Z,380nm,5.1s
SSE LR LR
comp=N,3µm,21.9s,MS5.3
SSE LR LR
comp=E,920nm,22.0s,MS5.3
SSE LR LR
comp=Z,2µm,20.5s,MS5.2
X20A Quemado 50.01 83 ⇑P P **18 38 58.4 +0.8**
baz=50,SNR=38
Z18A Geronimo 50.06 85 ⇓P P **18 38 58.7 +0.7**
baz=50,SNR=11
V22A San Miguel Ran 50.06 81 ⇑P P **18 38 58.0 0.0**
baz=50,SNR=45
TUC Tucson 50.13 87 *e*P P **18 38 58.4 -0.1**
comp=Z,376nm,1.3s,mb6.3
TUC Tucson 50.13 87 *e*P P **18 38 58.4 -0.1**
TUC pmax pmax
comp=Z,376nm,1.3s,mb6.3
W21A San Fidel 50.15 82 ⇑P P **18 38 58.9 +0.3**
baz=50
U23A El Rito 50.23 80 ⇑P P **18 38 59.8 +0.6**
baz=50,SNR=69
Z19A T-Link Ranch, 50.39 85 ⇓P P **18 39 00.8 +0.4**
baz=50,SNR=16
118A Homack Ranch, 50.40 86 ⇓P P **18 39 01.2 +0.6**
baz=50,SNR=134
BTO Baotou 50.41 288 *e*P P **18 39 01.6 +1.1**
S25A Robets Cordova 50.41 77 ⇑P P **18 39 00.8 +0.2**
baz=50,SNR=74
DAG Danmarks Havn 50.42 7 *j i*P P **18 39 02.0 +1.9**
DAG pmax pmax
comp=Z,970nm,2.0s,mb6.5
DAG Danmarks Havn 50.42 7 *j i*P P **18 39 02.0 +1.9**
comp=Z,970nm,2.0s,mb6.5
217A Green Valley 50.48 87 ⇑P P **18 39 01.6 +0.4**
baz=50,SNR=90
X21A Alamocita Cree 50.51 83 ⇓P P **18 39 02.6 +1.2**
baz=50,SNR=60
Y20A Horse Springs, 50.52 83 ⇓P P **18 39 02.5 +1.1**
baz=50,SNR=39
V23A Ortiz Mt. (NFS 50.62 80 ⇑P P **18 39 02.9 +0.8**
baz=50,SNR=28
W22A Albuquerque 50.65 81 ⇑P P **18 39 03.1 +0.7**
baz=50,SNR=5.7
U24A Moreno Valley 50.72 79 ⇓P P **18 39 02.1 -0.8**
baz=51
119A Ashpeak Ranch, 50.73 85 ⇓P P **18 39 03.9 +0.9**
baz=51,SNR=90
NJ2 Nanjing 50.76 274 *e*P P **18 39 05.1 +1.9**
NJ2 pP pP 18 39 09.7 +5.8
NJ2 sP sP 18 39 12.0 +7.8
NJ2 PP PP 18 41 02.1 +3.0
NJ2 S S **18 46 19.0 -0.4**
NJ2 sS sS 18 46 28.5 +8.0
NJ2 pmax pmax
comp=Z,40nm,1.0s,mb5.3
NJ2 pmax pmax
comp=Z,450nm,8.6s
NJ2 LR LR
comp=N,4µm,16.9s,MS5.6
NJ2 LR LR
comp=E,2µm,19.7s,MS5.6
NJ2 LR LR
comp=Z,3µm,20.7s,MS5.3
T25A Trinidad 50.76 78 ⇑P P **18 39 03.5 +0.2**
baz=51,SNR=81
218A Dragoon 50.81 87 ⇑P P **18 39 03.7 0.0**
baz=51,SNR=132
TIY Taiyuan 50.85 283 *e*P P **18 39 02.3 -1.6**
TIY PP PP 18 40 57.7 -2.1
TIY S S **18 46 10.5 -10**
TIY pmax pmax
comp=Z,460nm,8.9s
TIY LR LR
comp=N,5µm,17.0s,MS5.7
TIY LR LR
comp=E,4µm,16.8s,MS5.7
TIY LR LR
comp=Z,5µm,20.3s,MS5.5
Y21A Point of Rocks 50.88 83 ⇓P P **18 39 05.0 +0.8**
baz=51,SNR=58
Z20A Nine Sixteen R 50.92 84 ⇑P P **18 39 05.6 +1.1**
baz=51,SNR=92
LAZ Ladron 50.94 82 *e*P P **18 39 05.5 +0.9**
comp=Z,85nm,1.1s,mb5.6
ANMO Albuquerque 50.98 81 *e*P P **18 39 05.5 +0.6**
comp=Z,103nm,1.4s,mb5.6
ANMO LR LR
comp=Z,4µm,20.0s,MS5.4
ANMO Albuquerque 50.98 81 LR LR 18 58 34.3
comp=Z,4µm,19.9s,MS5.4,baz=100,slow=34
ANMO Albuquerque 50.98 81 *e*P P **18 39 05.5 +0.6**
ANMO pmax pmax
comp=Z,103nm,1.4s
ANMO MLR MLR
comp=Z,4µm,20.0s
W23A Werner Place, 51.03 81 ⇓P P **18 39 06.0 +0.8**
baz=51,SNR=41
ECSD EROS Data Cent 51.07 66 *e*P P **18 39 03.6 -1.8**
comp=Z,20nm,0.6s,mb5.2
ECSD LR LR
comp=Z,6µm,20.0s,MS5.6
V24A Rampart Ranch, 51.18 80 ⇑P P **18 39 07.3 +0.9**
baz=51,SNR=41
LENM Lemitar 51.20 82 *e*P P **18 39 07.4 +0.9**
comp=Z,76nm,1.1s,mb5.5
318A Bisbee 51.22 87 ⇑P P **18 39 06.9 +0.2**
baz=51,SNR=103
EYMN Ely 51.23 59 *e*P P **18 39 06.0 -0.5**
comp=Z,32nm,1.0s,mb5.2
U25A Circle Dot Ran 51.25 78 ⇓P P **18 39 07.2 +0.2**
baz=51,SNR=75
120A U Bar Ranch, L 51.29 85 ⇑P P **18 39 07.6 +0.4**
baz=51,SNR=100
Y22D IRIS PASSCAL I 51.29 82 ⇑P P **18 39 07.1 -0.2**
baz=51
Z21A St. Cloud Mine 51.35 84 ⇓P P **18 39 08.5 +0.7**
baz=51,SNR=24
Y22A Socorro 51.36 82 ⇓P P **18 39 07.8 +0.1**
baz=51,SNR=49
X23A Hourglass Bar 51.40 81 ⇓P P **18 39 08.2 +0.2**
baz=51,SNR=14
BNM Barren Site 51.42 82 *e*P P **18 39 08.9 +0.7**
comp=Z,38nm,0.5s,mb5.6
W24A Lazy 6 Ranch, 51.45 80 ⇓P P **18 39 08.9 +0.5**
baz=51,SNR=91
V25A Rancho No Teng 51.50 79 ⇓P P **18 39 09.1 +0.2**
baz=51,SNR=101
U26A Atchley Ranch, 51.66 78 ⇑P P **18 39 10.6 +0.6**
baz=52,SNR=57
319A Douglas 51.70 87 ⇓P P **18 39 10.7 +0.4**
baz=52,SNR=78
220A Playas Peak, P 51.80 85 ⇓P P **18 39 11.4 +0.4**
baz=52,SNR=196
121A Cookes Peak, D 51.82 84 ⇑P P **18 39 11.7 +0.5**
baz=52,SNR=54
Z22A Elephant Butte 51.82 83 ⇓P P **18 39 11.9 +0.7**
baz=52,SNR=19
X24A Lazy VL Ranch, 51.86 81 ⇑P P **18 39 11.3 -0.2**
baz=52
SUMG Summit 51.96 15 *e*P P **18 39 12.0 +0.3**
comp=Z,296nm,1.3s,mb6.1
SUMG Summit 51.96 15 *i*P P **18 39 13.6 +1.9**
comp=Z,86nm,0.9s,mb5.7
SUMG *e*S S **18 46 35.3 +0.2**
SUMG
comp=Z,5µm,19.0s
W25A X Bar L Ranch, 52.01 79 ⇓P P **18 39 12.9 +0.3**
baz=52,SNR=138
V26A Tequesquite Ra 52.03 78 ⇓P P **18 39 13.3 +0.5**
baz=52,SNR=33
122A Conniff Cattle 52.18 84 ⇓P P **18 39 14.9 +1.0**
baz=52,SNR=34
221A Mesquite Ranch 52.18 85 ⇓P P **18 39 14.4 +0.5**
baz=52,SNR=29
320A Kipp Ranch, An 52.19 86 ⇓P P **18 39 14.5 +0.5**
baz=52,SNR=91
Z23A Rita Site, Whi 52.27 83 ⇓P P **18 39 15.4 +0.8**
baz=52,SNR=20
XMAS Kiritimati 52.28 157 *e*P P **18 39 11.2 -3.5**
comp=Z,173nm,1.1s,mb5.9
Y24A Capitan 52.30 81 ⇓P P **18 39 15.2 +0.4**
baz=52,SNR=284
X25A Clemmons Ranch 52.36 80 ⇓P P **18 39 15.4 +0.2**
baz=52,SNR=5.9
CBKS Cedar Bluff 52.44 73 *e*P P **18 39 15.0 -0.7**
comp=Z,149nm,0.7s,mb6.0
CBKS LR LR
comp=Z,4µm,20.0s,MS5.5
CBKS Cedar Bluff 52.44 73 *e*P P **18 39 15.0 -0.8**
CBKS pmax pmax
comp=Z,149nm,0.7s,mb6.0
CBKS MLR MLR
comp=Z,4µm,20.0s,MS5.5
W26A Owens Ranch, T 52.52 79 ⇓P P **18 39 16.2 -0.2**
baz=52,SNR=23
222A Williams Famil 52.53 84 ⇑P P **18 39 16.6 +0.1**
baz=52,SNR=24
123A Bell Site, Whi 52.68 83 ⇓P P **18 39 16.9 -0.7**
baz=53
Z24A Sheeppen Canyo 52.75 82 ⇑P P **18 39 18.3 +0.2**
baz=53,SNR=61
Y25A Mesa, Roswell 52.75 81 ⇓P P **18 39 18.4 +0.3**
baz=53,SNR=108
X26A CR and CF Fran 52.86 80 ⇑P P **18 39 19.1 +0.1**
baz=53,SNR=37
W27A Bowe Ranch, En 52.96 79 ⇑P P **18 39 19.4 -0.3**
baz=53,SNR=17
223A Chaparral, Ant 53.01 84 ⇑P P **18 39 19.3 -0.7**
baz=53
124A Stringfield Ra 53.12 82 ⇑P P **18 39 20.9 0.0**
baz=53,SNR=54
Z25A Roswell 53.17 81 ⇑P P **18 39 21.0 -0.3**
baz=53,SNR=30
X27A F and S Farms, 53.22 79 ⇑P P **18 39 21.6 0.0**
baz=53
Y26A Elida 53.28 80 ⇑P P **18 39 21.9 -0.1**
baz=53,SNR=69
224A Cornudas Mount 53.51 83 ⇑P P **18 39 24.1 +0.3**
baz=53,SNR=118
Z26A Caprock 53.63 81 ⇓P P **18 39 24.3 -0.3**
baz=54,SNR=82
125A Gardner Draw, 53.64 82 ⇓P P **18 39 24.4 -0.3**
baz=54,SNR=113
COWI Conover 53.64 60 *e*P P **18 39 25.2 +0.7**
comp=Z,17nm,0.6s,mb5.1
Y27A Causey 53.70 80 ⇓P P **18 39 25.2 0.0**
baz=54,SNR=97
MNTX Cornudas Mount 53.86 83 *e*P P **18 39 26.0 -0.3**
comp=Z,129nm,1.1s,mb5.8
MNTX LR LR
comp=Z,3µm,19.0s,MS5.4
MSTX Muleshoe 53.88 79 ⇑P P **18 39 26.5 0.0**
baz=54,SNR=73
AMTX Amarillo 53.91 78 *e*P P **18 39 26.8 +0.1**
comp=Z,98nm,0.7s,mb5.8
AMTX LR LR
comp=Z,4µm,22.0s,MS5.4
225A Deer Hill, Car 53.92 83 ⇓P P **18 39 26.8 +0.1**
baz=54,SNR=71
324A Moseley Ranch, 53.98 84 ⇑P P **18 39 26.9 -0.3**
baz=54,SNR=53
126A Clayton Basin, 54.03 81 ⇑P P **18 39 27.1 -0.4**
baz=54,SNR=16
Z27A Tatum 54.06 80 ⇑P P **18 39 26.5 -1.3**
baz=54,SNR=50
KSU1 Kansas State U 54.08 71 *e*P P **18 39 26.6 -1.2**
comp=Z,82nm,0.8s,mb5.7
KSU1 LR LR
comp=Z,6µm,19.0s,MS5.7
GDL2 Guadalupe Moun 54.13 82 *e*P P **18 39 27.9 -0.4**
comp=Z,18nm,0.5s,mb5.3
SCIA State Center 54.16 66 *e*P P **18 39 27.2 -1.1**
comp=Z,41nm,0.5s,mb5.6
325A Bean Ranch, Si 54.34 83 ⇑P P **18 39 29.0 -0.8**
baz=54,SNR=174
CLNB Carlsbad 54.38 82 *e*P P **18 39 30.3 +0.1**
comp=Z,8.6nm,0.7s,mb4.8
226A Malaga, Loving 54.39 82 ⇓P P **18 39 29.2 -1.0**
baz=54,SNR=63
127A Arkansas Junct 54.42 81 ⇓P P **18 39 29.6 -0.8**
baz=54
WHN Wuhan 54.56 276 P P **18 39 38.1 +6.6**
WHN S S **18 47 22.4 +11**
WHN LR LR
comp=N,8µm,19.3s,MS5.9
WHN LR LR
comp=E,7µm,18.9s,MS5.9
WHN LR LR
comp=Z,5µm,17.1s,MS5.6
425A Indio Mountain 54.74 84 ⇑P P **18 39 33.0 +0.2**
baz=55,SNR=184
ZAA0 Zalesovo Array 54.86 315 *e*P P **18 39 31.9 -1.3**
ZALV Zalesovo Beam 54.86 315 P P **18 39 31.6 -1.7**
comp=Z,8.9nm,0.8s,mb4.8,baz=48,slow=6.9,SNR=18
ZALV LR LR 19 06 31.3
comp=Z,3µm,18.2s,MS5.4,baz=160,slow=40
ZALV Zalesovo Beam 54.86 315 P P **18 39 31.6 -1.6**
ZALV pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ZALV MLR MLR
comp=Z,3µm,18.2s,MS5.4
227A Bennet, Jal 54.92 82 ⇓P P **18 39 33.7 -0.3**

baz=55
NVS Novosibirsk 54.94 316⇑ *i*P **P 18 39 32.9 -0.9**
NVS *e* 18 41 36.5
NVS *i*S **S 18 47 10.2 -5.7**
NVS pmax pmax
comp=N,68nm,1.8s
NVS pmax pmax
comp=Z,206nm,1.8s,mb5.9
NVS pmax pmax
comp=E,136nm,1.5s
NVS pmax pmax
comp=N,132nm,1.8s
NVS pmax pmax
comp=E,455nm,1.8s
NVS pmax pmax
comp=Z,267nm,1.8s,mb6.0
NVS smax
comp=N,28nm,2.6s
NVS smax
comp=E,83nm,2.2s
326A Caldwell Ranch 54.98 83⇓ P **P 18 39 34.5 0.0**
baz=55,SNR=97
JFWS Jewell Farm 55.13 63 *e*P **P 18 39 33.4 -2.0**
comp=E,25nm,0.6s,mb5.4
JFWS Jewell Farm 55.13 63 *e*P **P 18 39 33.4 -2.0**
JFWS pmax pmax
comp=Z,25nm,0.6s,mb5.4
327A Balmorhea Ranc 55.24 82⇓ P **P 18 39 35.8 -0.6**
baz=55
426A McDonald Obser 55.41 83⇓ P **P 18 39 37.6 0.0**
baz=55,SNR=83
XAN Xi'an 55.43 283 P **P 18 39 35.8 -1.9**
XAN S **S 18 47 24.7 +1.7**
XAN LR LR
comp=N,4μm,21.3s,MS5.5
XAN LR LR
comp=E,2μm,19.4s,MS5.5
XAN LR LR
comp=Z,2μm,22.0s,MS5.2
328A Wristen Ranch, 55.65 82⇑ P **P 18 39 38.8 -0.5**
baz=56,SNR=82
427A Hayter Ranch, 55.66 83⇑ P **P 18 39 39.6 +0.2**
baz=56,SNR=55
526A Mary Lane Ranc 55.80 84⇓ P **P 18 39 40.5 +0.1**
baz=56,SNR=103
QZH Quanzhou 55.98 268⇓ *i*P **P 18 39 42.4 +0.7**
QZH S **S 18 47 26.9 -3.7**
QZH pmax pmax
comp=Z,2μm,5.6s
QZH LR LR
comp=N,2μm,14.2s,MS5.5
QZH LR LR
comp=E,2μm,14.1s,MS5.5
QZH LR LR
comp=Z,3μm,15.5s,MS5.5
SCO Scoresbysund 56.11 10 *i*P **P 18 39 43.8 +1.8**
SCO pmax pmax
comp=Z,37nm,0.9s,mb5.4
SCO MLR MLR
comp=Z,5μm,20.0s,MS5.6
SCO Scoresbysund 56.11 10 *i*P **P 18 39 43.8 +1.8**
comp=Z,37nm,0.9s,mb5.4
SCO
comp=Z,5μm,20.0s
626A Big Bend Ranch 56.13 84⇓ P **P 18 39 42.7 -0.1**
baz=56,SNR=55
428A Kincaid Ranch, 56.19 82⇓ P **P 18 39 42.9 -0.3**
baz=56,SNR=127
528A Cox Ranch, San 56.52 83⇑ P **P 18 39 45.5 -0.1**
baz=56,SNR=92
TXAR Lajitas Array 56.57 84 P **P 18 39 44.8 -1.1**
TXAR ScP ScP 18 44 40.7 -1.9
TXAR LR LR 19 03 18.6
TXAR P'P' 19 09 36.7
TXAR ⇑*e* 19 10 00.2
TXAR Lajitas Array 56.57 84 P **P 18 39 44.8 -1.1**
comp=Z,83nm,0.9s,mb5.8,baz=303,slow=5.1,SNR=111
TXAR ScP ScP 18 44 40.7 -1.9
comp=Z,2.1nm,1.0s,baz=191,slow=0.9,SNR=3.5
TXAR LR LR 19 03 18.6
comp=Z,5μm,18.4s,MS5.6,baz=10.0,slow=35
TXAR PKPPKP 19 09 36.7
comp=Z,0.5nm,0.9s,baz=111,slow=4.9,SNR=3.5
TXAR PKP2bc 19 10 00.2
comp=Z,2.9nm,1.1s,baz=132,slow=3.5,SNR=7.2
627A Terlingua Ranc 56.66 84⇓ P **P 18 39 46.7 +0.1**
baz=57,SNR=127
JMIC Jan Mayen 56.72 5 *e*P **P 18 39 48.2 +1.8**
JMIC AMB AMB 18 39 53.3
comp=Z,234nm,2.2s,mb5.8
JMIC *e*PP PP 18 41 52.1 +0.2
JMIC *e*S **S 18 47 42.6 +3.3**
JMIC *e*SS SS 18 51 30.0 +4.0
JMIC AMS AMS 19 00 31.9
comp=Z,4μm,25.4s,MS5.4
LZH Lanzhou 57.03 288 *e*P **P 18 39 51.0 +1.9**
LZH pP pP 18 39 56.5 +6.7
LZH sP sP 18 39 59.0 +9.0
LZH S **S 18 47 43.0 -1.3**
LZH sS sS 18 47 50.0 +4.6
LZH SS SS 18 51 32.2 0.0
LZH pmax pmax
comp=Z,64nm,1.1s,mb5.6
LZH pmax pmax
comp=Z,450nm,5.4s
LZH LR LR
comp=E,7μm,16.2s
LZH LR LR
comp=Z,8μm,17.0s,MS5.9
KEV Kevo 57.20 351 *e*P **P 18 39 51.4 +1.7**
comp=Z,274nm,1.4s,mb6.1
KEV Kevo 57.20 351 *e*P **P 18 39 49.3 -0.5**
KEV Kevo 57.20 351 *e*p **P 18 39 49.3 -0.5**
comp=Z,1.2nm,0.4s,mb4.3
HDIL Hopedale 57.25 65 *e*P **P 18 39 49.2 -1.4**
comp=Z,62nm,0.6s,mb5.8
HDIL LR LR
comp=Z,7μm,20.0s,MS5.8
ARCES ARCESS Array B 57.55 351 P **P 18 39 50.8 -1.5**
comp=Z,45nm,0.8s,mb5.5,baz=11,slow=5.6,SNR=36
ARCES LR LR 19 09 35.4
comp=Z,3μm,18.6s,MS5.4,baz=183,slow=41
ARCES ARCESS Array B 57.55 351 P **P 18 39 50.8 -1.5**
ARCES pmax pmax
comp=Z,45nm,0.8s
ARCES MLR MLR
comp=Z,3μm,18.6s
ARE0 ARCESS Array S 57.55 351 *e*P **P 18 39 52.9 +0.6**
TRO Tromso 57.97 354 *e*P **P 18 39 56.0 +0.8**
TRO AMB AMB 18 40 01.0
comp=Z,166nm,2.3s,mb5.7
TRO *e*S **S 18 47 54.6 -1.1**
TRO *e*SS SS 18 51 54.4 +8.8
TRO AMS AMS 19 05 04.9
comp=Z,3μm,18.5s,MS5.5
SLM Saint Louis 58.04 67 *e*P **P 18 39 54.9 -1.3**
comp=Z,70nm,0.6s,mb5.9
SLM Saint Louis 58.04 67 *e*P **P 18 39 54.9 -1.3**
SLM pmax pmax
comp=Z,70nm,0.6s,mb5.9
SCHQ Schefferville 58.08 40 *e*P **P 18 39 52.4 -3.8**
comp=Z,30nm,1.1s,mb5.2
SCHQ Schefferville 58.08 40 P **P 18 39 54.6 -1.6**
comp=Z,15nm,0.9s,mb5.0,baz=315,slow=6.5,SNR=11
SCHQ LR LR 19 06 07.3
comp=Z,18μm,18.1s,MS6.2,baz=311,slow=37
SCHQ PKPPKP 19 09 38.2
comp=Z,3.3nm,0.8s,baz=222,slow=9.6,SNR=3.8
JCT Junction City 58.11 80 *e*P **P 18 39 55.0 -1.8**
comp=Z,109nm,1.1s,mb5.8
JCT Junction City 58.11 80 *e*P **P 18 39 55.0 -1.8**
JCT pmax pmax
comp=Z,109nm,1.1s,mb5.8
FVM French Village 58.39 68 *e*P **P 18 39 55.4 -3.2**
comp=Z,50nm,0.6s,mb5.7
FVM French Village 58.39 68 *e*P **P 18 39 55.4 -3.2**
FVM pmax pmax
comp=Z,50nm,0.6s,mb5.7
APA Apatity 58.54 347⇓ *i*P **P 18 40 02.5 +3.3**
APA *i* 18 42 16.0
APA *i*S **S 18 48 04.0 +0.8**
APA *i*PS 18 48 12.0
APA pmax pmax
comp=Z,230nm,1.6s,mb6.0
APA pmax pmax
comp=Z,1μm,4.5s
APA MLR MLR
comp=Z,5μm,17.0s,MS5.7
MIAR Mount Ida 58.97 73 *e*P **P 18 40 00.7 -2.0**
comp=Z,200nm,1.1s,mb6.1
MIAR Mount Ida 58.97 73 *e*P **P 18 40 00.7 -2.0**
MIAR pmax pmax
comp=Z,200nm,1.1s,mb6.1
OLIL Olney 59.18 65 *e*P **P 18 40 03.0 -1.1**
comp=Z,110nm,0.9s,mb5.9
SIUC Southern Illin 59.26 67 *e*P **P 18 40 01.6 -3.1**
comp=Z,65nm,0.7s,mb5.8
MAIG Mazatlaan 59.34 91 *i*P **P 18 40 05.7 +0.3**
UALR University of 59.52 72 *e*P **P 18 40 04.2 -2.4**
comp=Z,55nm,0.9s,mb5.6
PALP Palanan 59.58 258 *e*P **P 18 40 08.8 +1.7**
APYP Conner 59.68 260 *e*P **P 18 40 05.2 -2.6**
PARMO Parma 59.69 68 *e*P **P 18 40 07.1 -0.6**
BLO Bloomington 59.75 64 *e*P **P 18 40 06.0 -2.0**
comp=Z,85nm,1.0s,mb5.7
BLO Bloomington 59.75 64 *e*P **P 18 40 06.0 -2.0**
BLO pmax pmax
comp=Z,85nm,1.0s,mb5.7
KURK Kurchatov 59.84 315 P **P 18 40 07.6 -0.8**
comp=Z,670nm,0.9s,mb6.7,SNR=42
KURK Kurchatov 59.84 315 *e*P **P 18 40 05.9 -2.5**
comp=Z,402nm,1.5s,mb6.2
KURK LR LR
comp=Z,3μm,20.0s,MS5.4
KURK Kurchatov 59.84 315 S **S 18 48 22.5 +2.1**
comp=Z,0.7nm,0.8s,baz=42,slow=12,SNR=2.5
KURK Kurchatov 59.84 315*d* *i*P **P 18 40 07.6 -0.8**
KURK pmax pmax
comp=Z,84nm,1.2s,mb5.7
KURK MLR MLR
comp=Z,3μm,15.0s,MS5.5
HBAR Harrisburg 59.95 70 *e*P **P 18 40 08.0 -1.5**
USIN University of 59.96 66 *e*P **P 18 40 07.6 -1.9**
comp=Z,237nm,0.9s,mb6.2
CAUP Cauayan 60.03 259 *e*P **P 18 40 13.1 +2.8**
ABRA Dolores 60.16 260 *e*P **P 18 40 14.3 +3.2**
NATX Nacogdoches 60.29 76 *e*P **P 18 40 11.9 0.0**
comp=Z,51nm,0.6s,mb5.7
NATX LR LR
comp=Z,5μm,20.0s,MS5.6
HALT Halls 60.46 69 *e*P **P 18 40 12.8 -0.1**
WMQ Urumqi 60.52 304 P **P 18 40 15.4 +2.2**
WMQ pP pP 18 40 20.0 +6.1
WMQ sP sP 18 40 22.4 +8.3
WMQ PcP PcP 18 41 00.0 +2.2
WMQ PP PP 18 42 30.6 +4.5
WMQ ScP ScP 18 44 59.1 -0.7
WMQ *e*S **S 18 48 28.8 -0.5**
WMQ sS sS 18 48 36.4 +6.0
WMQ ScS ScS 18 50 01.9 -2.9
WMQ SS SS 18 52 27.0 +0.5
WMQ pmax pmax
comp=Z,77nm,1.2s,mb5.7
WMQ pmax pmax
comp=Z,940nm,5.2s
WMQ LR LR
comp=N,8μm,18.6s,MS5.9
WMQ LR LR
comp=E,4μm,18.6s,MS5.9
WMQ LR LR
comp=Z,5μm,20.0s,MS5.6
WCI Wyandotte Cave 60.54 65 *e*P **P 18 40 12.3 -1.2**
comp=Z,42nm,0.8s,mb5.6
WCI Wyandotte Cave 60.54 65 *e*P **P 18 40 12.3 -1.2**
WCI pmax pmax
comp=Z,42nm,0.8s,mb5.6
GZH Guangzhou 60.57 270 P **P 18 40 11.4 -2.5**
GZH S **S 18 48 23.5 -7.1**
GZH LR LR
comp=N,3μm,21.2s,MS5.5
GZH LR LR
comp=E,2μm,22.7s,MS5.5
FUNA Funafuti 60.69 186 PFAKE
FUNA LR LR 18 40 30.0 +15
comp=Z,7μm,19.0s,MS5.8
CD2 Chengdu 60.72 284 P **P 18 40 14.0 -0.8**
CD2 pP pP 18 40 18.6 +3.1
CD2 sP sP 18 40 21.0 +5.3
CD2 PP PP 18 42 29.4 +1.2
CD2 ScP ScP 18 44 57.6 -3.3
CD2 S **S 18 48 27.4 -4.9**
CD2 sS sS 18 48 35.0 +1.6
CD2 ScS ScS 18 50 00.5 -6.2
CD2 SS SS 18 52 26.5 -3.9
CD2 pmax pmax
comp=Z,30nm,0.9s,mb5.4
CD2 pmax pmax
comp=Z,490nm,6.5s
CD2 LR LR
comp=N,3μm,18.6s,MS5.7
CD2 LR LR
comp=E,4μm,18.1s,MS5.7
CD2 LR LR
comp=Z,6μm,20.1s,MS5.7
SOKR Solikamsk 60.80 332 *e*P **P 18 40 13.9 -1.0**
SOKR 18 42 37.6
SOKR PPP 18 43 54.2
SOKR S **S 18 48 31.9 -0.6**
SOKR SS SS 18 52 26.2 -4.1
SOKR pmax pmax
comp=Z,210nm,1.6s,mb6.0
SOKR MLR MLR
comp=Z,6μm,18.0s,MS5.8
HKT Hockley 60.89 78 *e*P **P 18 40 15.7 -0.3**
comp=Z,125nm,1.4s,mb5.8
HKT Hockley 60.89 78 *e*P **P 18 40 15.7 -0.3**
HKT pmax pmax
comp=Z,125nm,1.4s,mb5.8
ACSO Alum Creek Sta 60.93 61 *e*P **P 18 40 15.9 -0.2**
comp=Z,25nm,0.9s,mb5.3
MK31 Makanchi Array 61.03 310 *e*P **P 18 40 14.2 -2.4**
MKAR Makanchi Array 61.03 310 P **P 18 40 14.6 -2.0**
MKAR ⇑*e* 19 09 41.7
MKAR Makanchi Array 61.03 310 P **P 18 40 14.6 -2.0**
comp=Z,6.9nm,0.9s,mb4.8,baz=50,slow=5.5,SNR=29
MKAR PKP2bc 19 09 41.7
comp=Z,2.5nm,1.0s,baz=240,slow=6.5,SNR=5.0
MKAR Makanchi Array 61.03 310 *i*P **P 18 40 14.6 -2.0**
BALP Baler 61.12 258 *e*P **P 18 40 17.0 -0.6**
WVT Waverly 61.16 67 *e*P **P 18 40 16.6 -1.1**
comp=Z,29nm,0.7s,mb5.5
WVT Waverly 61.16 67 *e*P **P 18 40 16.7 -1.1**
WVT pmax pmax
comp=Z,29nm,0.7s,mb5.5
ERPA Erie 61.17 58 PFAKE
ERPA LR LR 18 40 30.0 +12
comp=Z,7μm,19.0s,MS5.8
PVCP Virac 61.25 254 *e*P **P 18 40 20.3 +1.8**
KVTX Kingsville 61.38 81 *e*P **P 18 40 22.0 +2.7**
comp=Z,155nm,0.9s,mb6.1
BVAR Borovoye Array 61.48 321 P **P 18 40 17.7 -2.0**
comp=Z,32nm,0.9s,mb5.5,baz=49,slow=6.7,SNR=57
BVAR PKPPKP 19 09 20.2
comp=Z,1.3nm,0.8s,baz=161,slow=9.4,SNR=5.6
BRVK Borovoye 61.50 321 P **P 18 40 20.8 +1.0**
comp=Z,625nm,0.9s,mb6.7,SNR=20
BRVK Borovoye 61.50 321 *e*P **P 18 40 19.0 -0.8**
comp=Z,122nm,1.0s,mb6.0
BRVK LR LR
comp=Z,5μm,19.0s,MS5.7
BRVK Borovoye 61.50 321*ce*P **P 18 40 20.4 +0.6**
BRVK pmax pmax
comp=Z,225nm,1.7s,mb6.0
BRVK MLR MLR
comp=Z,6μm,20.0s,MS5.7
BORG Borgarnes 61.65 12 P **P 18 40 23.0 +2.4**
comp=Z,372nm,1.0s,mb6.5,SNR=8.6
BORG Borgarnes 61.65 12 *e*P **P 18 40 22.6 +2.0**
comp=Z,67nm,1.0s,mb5.7
BORG LR LR
comp=Z,3μm,19.0s,MS5.5
BORG Borgarnes 61.65 12 *e*P **P 18 40 22.6 +2.0**
BORG pmax pmax
comp=Z,67nm,1.0s
BORG MLR MLR
comp=Z,3μm,19.0s
MOR8 Moi Rana 61.66 355 *e*P **P 18 40 21.3 +0.6**
MOR8 AMB AMB 18 40 25.5
comp=Z,85nm,2.4s,mb5.5
POLP Polilio Island 61.69 257 *e*P **P 18 40 23.7 +2.2**
CNP Catarman 61.81 253 *e*P **P 18 40 22.4 +0.1**
SVE Sverdlovsk 61.91 329⇑ *e*P **P 18 40 24.0 +1.6**
SVE *e*S **S 18 48 50.9 +4.3**
SVE pmax pmax
comp=Z,138nm,1.4s,mb5.9
SVE MLR MLR
comp=Z,5μm,20.0s,MS5.7
LONY Lake Ozonia 62.09 52 *e*P **P 18 40 22.5 -1.4**
comp=Z,19nm,1.0s,mb5.2
GYA Guiyang 62.19 278⇑ *i*P **P 18 40 25.0 +0.2**
GYA PP PP 18 42 43.8 +2.5
GYA ScP ScP 18 45 06.2 -1.3
GYA S **S 18 48 47.6 -3.5**
GYA SKS 18 50 14.3
GYA SS SS 18 52 51.9 -1.6
GYA pmax pmax
comp=Z,40nm,1.0s,mb5.5
GYA pmax pmax
comp=Z,180nm,5.8s
GYA LR LR
comp=N,7μm,19.6s,MS5.9
GYA LR LR
comp=E,5μm,20.8s,MS5.9
GYA LR LR
comp=Z,9μm,19.6s,MS5.9
AUQP San Andres 62.35 255 *e*P **P 18 40 31.1 +5.2**
VBMS Vicksburg 62.41 72 *e*P **P 18 40 26.6 +0.4**
comp=Z,116nm,0.3s,mb6.5
BOAC Boac 62.74 256 *e*P **P 18 40 30.8 +2.2**
NCB Newcomb 62.74 53 *e*P **P 18 40 26.6 -1.6**
comp=Z,33nm,1.2s,mb5.3
TGY Tagaytay City 62.78 257 P **P 18 40 29.1 +0.3**
comp=Z,189nm,0.3s,mb6.7,baz=197,slow=1.8,SNR=9.4
ARU Arti 62.88 330 *e*P **P 18 40 27.7 -1.2**
comp=Z,179nm,1.3s,mb6.0
ARU LR LR
comp=Z,5μm,20.0s,MS5.7
ARU Arti 62.88 330*d* *i*P **P 18 40 28.4 -0.6**
ARU *e* 18 41 04.6
ARU *e* 18 42 46.1
ARU *e*PPP 18 44 16.6
ARU S **S 18 48 58.5 -0.5**
ARU SSS 18 50 13.2
ARU pmax pmax
comp=Z,50nm,1.2s,mb5.5
ARU MLR MLR
comp=Z,5μm,20.0s,MS5.7
ARU Arti 62.88 330 P **P 18 40 29.8 +0.8**
comp=Z,529nm,0.9s,mb6.7,SNR=8.8
SWET Sewanee 62.89 67 *e*P **P 18 40 26.6 -2.8**
MCWV Mont Chateau 63.02 60 PFAKE 18 40 40.0 +10
MCWV LR LR
comp=Z,10μm,19.0s,MS6.0
BINY Binghamton 63.16 55 *e*P **P 18 40 30.1 -1.0**
comp=Z,84nm,1.2s,mb5.8
BINY LR LR
comp=Z,6μm,19.0s,MS5.8
JOF Joensuu 63.24 347 *e*P **P 18 40 30.9 -0.3**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.9
JOF Joensuu 63.24 347 *e*p **P 18 40 30.9 -0.3**
comp=Z,3.8nm,0.4s,mb4.9
NSS Namsos 63.41 356 *e*P **P 18 40 33.5 +1.2**
NSS AMB AMB 18 40 36.8
comp=Z,109nm,2.4s,mb5.6
NSS *e*S **S 18 49 08.0 +2.7**
NSS *e*SS SS 18 53 15.5 +4.6
NSS AMS AMS 19 02 47.5
comp=Z,3μm,25.8s,MS5.4
CPCT Cooper Cave 63.52 66 *e*P **P 18 40 30.7 -2.9**
LBNH Lisbon 63.65 51 PFAKE 18 40 50.0 +16
LBNH LR LR
comp=Z,9μm,19.0s,MS6.0
TKL Tuckaleechee C 63.79 65 *e*P **P 18 40 34.1 -1.2**
KLMR Klimovskoe 63.80 342*c* *i*P **P 18 40 34.6 -0.4**
KLMR *e* 18 42 54.5
KLMR *i*S **S 18 49 08.0 -2.3**
KLMR *e*SS SS 18 53 17.8 +0.7
KLMR pmax pmax
comp=Z,262nm,1.6s,mb6.0
KLMR pmax pmax
comp=Z,566nm,11.3s
KLMR MLR MLR
comp=Z,5μm,20.0s,MS5.7
LRAL Lakeview Retre 63.87 69 *e*P **P 18 40 33.3 -2.5**
comp=Z,14nm,0.6s,mb5.2
LRAL LR LR
comp=Z,3μm,21.0s,MS5.4
PKME Peaks-Kenny Pk 64.12 49 *e*P **P 18 40 36.9 -0.5**
comp=Z,64nm,1.6s,mb5.4
BLA Blacksburg 64.50 62 *e*P **P 18 40 38.5 -1.4**
comp=Z,92nm,1.0s,mb5.8
BLA Blacksburg 64.50 62 *e*P **P 18 40 38.6 -1.3**
BLA pmax pmax
comp=Z,92nm,1.0s,mb5.8
GUIM Jordan 64.53 254 *e*P **P 18 40 39.7 -0.7**
KAF Kangasniemi 64.67 349 *e*P **P 18 40 41.4 +0.7**
KAF Kangasniemi 64.67 349 *e*p **P 18 40 41.4 +0.7**
comp=Z,1.1nm,0.4s,mb4.2
BUSP Coron 64.86 257 *e*P **P 18 40 44.5 +1.9**
HNR Honiara 64.92 207 *e*P **P 18 40 44.9 +2.0**
comp=Z,317nm,1.3s,mb6.2
HNR LR LR
comp=Z,3μm,20.0s,MS5.5
HNR Honiara 64.92 207 *e*P **P 18 40 44.9 +2.1**
HNR pmax pmax
comp=Z,317nm,1.3s,mb6.2
HNR MLR MLR
comp=Z,3μm,20.0s,MS5.5
MOIG Morelia 65.19 90 *i*P **P 18 40 45.2 +0.5**
CUYO Cuyo Island 65.28 255 *e*P **P 18 40 47.6 +2.2**
BUKP Musuan 65.29 250 *e*P **P 18 40 46.7 +1.3**
BRAL Brewton 65.31 71 *e*P **P 18 40 44.3 -1.0**
comp=Z,138nm,0.9s,mb6.0
FINES FINESS Array B 65.35 349 P **P 18 40 43.5 -1.6**
comp=Z,45nm,0.9s,mb5.5,baz=20,slow=6.7,SNR=34
FINES PKPPKP 19 09 17.5
comp=Z,2.8nm,0.8s,baz=343,slow=6.0,SNR=5.3
FINES LR LR 19 10 07.1
comp=Z,3μm,20.7s,MS5.5,baz=165,slow=37
CBN Corbin 65.39 59 PFAKE 18 41 00.0 +14
CBN LR LR
comp=Z,9μm,19.0s,MS6.0
MOL Molde 65.50 358 *e*S S 18 49 32.3 +1.1
KMI Kunming 65.55 280 P **P 18 40 46.3 -0.7**
KMI pP pP 18 40 51.2 +3.6
KMI sP sP 18 40 52.7 +4.8
KMI PP PP 18 43 09.5 -1.4
KMI S S 18 49 28.4 -4.5
KMI sS sS 18 49 35.9 +1.9
KMI SS SS 18 53 42.8 -3.3
KMI pmax pmax
comp=Z,12nm,1.0s,mb4.9
KMI pmax pmax
comp=Z,410nm,4.8s
KMI LR LR
comp=N,3μm,19.7s,MS5.5
KMI LR LR
comp=E,1μm,18.6s,MS5.5
KMI LR LR
comp=Z,3μm,21.9s,MS5.4
GOGA Godfrey 65.60 67 *e*P **P 18 40 45.5 -1.7**
comp=Z,97nm,0.9s,mb5.8
GOGA LR LR
comp=Z,6μm,21.0s,MS5.8
GOGA Godfrey 65.60 67 *e*P **P 18 40 45.5 -1.7**
GOGA pmax pmax
comp=Z,97nm,0.9s,mb5.8
GOGA MLR MLR
comp=Z,6μm,21.0s,MS5.8
QIZ Qiongzhong 65.76 270 P **P 18 40 47.2 -1.2**
QIZ pP pP 18 40 50.0 +0.9
QIZ sP sP 18 40 51.7 +2.4
QIZ S S 18 49 32.8 -2.8
QIZ sS sS 18 49 38.4 +1.7
QIZ LR LR
comp=N,1μm,18.0s
QIZ LR LR
comp=Z,2μm,20.8s,MS5.2
ENPP El Nido 65.95 257 *e*P **P 18 40 53.0 +3.4**
AFI Afiamalu 65.96 176 PFAKE 18 41 00.0 +10
AFI LR LR
comp=Z,2μm,21.0s,MS5.3
AFI Afiamalu 65.96 176 LR LR 19 09 04.2
comp=Z,2μm,18.3s,MS5.3,baz=90,slow=35

JSC Jenkinsville 66.19 64 *e*P **P** **18 40 49.5 -1.5**
FOO Floro 66.50 360 *e*P **P** **18 40 55.4 +2.9**
FOO *e*PP PP 18 43 19.8 +1.7
FOO *e*S S 18 49 43.2 -0.3
FOO *e*SS SS 18 54 02.7 +3.7
FOO AMS AMS 19 02 37.8
comp=Z,2µm,35.4s,MS5.1
PTVM Pico Tres Padr 66.53 88 *i* P **P** **18 40 54.7 +1.4**
ZIIG Zihuatanejo 66.58 91 *i* P **P** **18 40 50.8 -2.9**
PBVM Pinon 66.66 88 *i* P **P** **18 40 54.2 +0.1**
IIO Organos 66.77 88 *i* P **P** **18 40 54.7 -0.2**
NOA NORSAR Array B 66.93 356 P **P** **18 40 54.5 -0.8**
NOA LR LR 19 08 15.3
NOA P'P' 19 09 18.6
NOA NORSAR Array B 66.93 356 P **P** **18 40 54.5 -0.8**
comp=Z,44nm,0.9s,mb5.5,baz=1.7,slow=6.3,SNR=29
NOA LR LR 19 08 15.3
comp=Z,2µm,21.2s,MS5.3,baz=10.0,slow=34
NOA PKPPKP 19 09 18.6
comp=Z,4.6nm,1.0s,baz=152,slow=3.2,SNR=5.1
NAO01 NORSAR Array S 67.14 357 *e*P **P** **18 40 54.4 -2.1**
comp=Z,23nm,0.9s,mb5.2
NAO01 LR LR
comp=Z,3µm,21.0s,MS5.5
PLIG Platanillo 67.20 89 *i* P **P** **18 40 56.5 -1.0**
PPM Popocatepetl 67.22 88 *i* P **P** **18 40 59.9 +2.2**
ULHL Ulahol 67.30 310 P **P** **18 41 03.3 +5.4**
SNR=14
USP Ospenovka 67.31 312 P **P** **18 40 57.0 -0.9**
SNR=11
CNNC Cliffs of the 67.33 62 *e*P **P** **18 40 57.2 -1.0**
comp=Z,24nm,0.5s,mb5.5
CHMS Chumysh 67.40 312 P **P** **18 41 04.6 +6.1**
SNR=17
KBK Karagaybulak 67.58 311 P **P** **18 41 05.3 +5.6**
SNR=12
NHSC New Hope 67.67 65 *e*P **P** **18 40 59.8 -0.6**
comp=Z,350nm,1.0s,mb6.3
BER Bergen 67.72 359 *e*P **P** **18 41 00.1 -0.2**
BER *e*S S 18 50 00.0 +1.9
BER *e*SS SS 18 54 22.1 +4.2
WAL1 Walls 67.75 3 *e*P **P** **18 41 01.4 +0.9**
CAIG El Cayaco 67.75 91 *i* P **P** **18 41 00.7 -0.3**
AAK Ala-Archa 67.81 311 P **P** **18 41 03.6 +2.5**
comp=Z,286nm,1.1s,mb6.2,SNR=12
AAK Ala-Archa 67.81 311 P **P** **18 41 07.3 +6.2**
SNR=7.4
AAK Ala-Archa 67.81 311 P **P** **18 40 59.7 -1.4**
comp=Z,5.6nm,0.5s,mb4.9,baz=55,slow=1.6,SNR=11
AAK Ala-Archa 67.81 311 P **P** **18 40 59.7 -1.4**
AAK pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
LRW Lerwick 67.88 3 *e*P **P** **18 41 01.9 +0.6**
LRW AMb AMB 18 41 06.5
comp=Z,72nm,2.6s,mb5.2
LRW AMS AMS 19 13 30.9
comp=Z,2µm,21.4s,MS5.4
KZA Kyzart 67.89 311 P **P** **18 41 03.3 +1.7**
SNR=15
TAOE Nuku Hiva Isla 68.02 142 *e*P **P** **18 41 02.3 -0.4**
comp=Z,388nm,1.0s,mb6.4
TAOE *e*S S 18 49 58.8 -3.9
comp=Z,441nm,24.6s
TAOE *e*LQ 18 58 17.3
comp=Z,6µm,37.2s
TAOE *e*LR LR 19 01 11.1
comp=Z,1µm,20.2s,baz=351
TAOE Nuku Hiva Isla 68.02 142 *e*P **P** **18 41 02.3 -0.4**
comp=Z,388nm,1.0s,mb6.4
TAOE *e*S S 18 49 58.8 -3.9
TAOE *e*LQ 18 58 17.3
LVIG Laguna Verde 68.08 86 *i* P **P** **18 41 01.8 -1.4**
AKTK Aktyubinsk 68.09 326 P **P** **18 41 01.2 -1.6**
AKTK PcP PcP 18 41 27.1 -1.7
AKTO Aktyubinsk 68.09 326 P **P** **18 41 01.2 -1.6**
comp=Z,21nm,0.9s,mb5.2,baz=34,slow=6.1,SNR=28
AKTO PcP PcP 18 41 27.1 -1.7
comp=Z,16nm,0.7s,baz=38,slow=9.3,SNR=4.6
AKTO Aktyubinsk 68.09 326 P **P** **18 41 01.2 -1.6**
AKTO 18 41 27.1
AKTO pmax pmax
comp=Z,21nm,0.9s,mb5.2
EKS2 Erkin-Say 68.11 312 P **P** **18 41 01.9 -1.2**
SNR=21
UCH Uchtor 68.11 311 P **P** **18 41 09.0 +5.9**
SNR=12
ACX Acapulco 68.14 91 *i* P **P** **18 41 01.5 -2.0**
KONO Kongsberg 68.38 357 *e*P **P** **18 41 03.2 -1.2**
KONO AMB AMB 18 41 10.1
comp=Z,87nm,2.0s,mb5.4
KONO *e*S S 18 50 05.4 -0.7
KONO *e*SS SS 18 54 37.0 +8.9
KONO AMS AMS 19 06 04.2
comp=Z,2µm,30.0s,MS5.2
KONO Kongsberg 68.38 357 *e*P **P** **18 41 05.2 +0.8**
comp=Z,97nm,1.1s,mb5.8
KONO LR LR
comp=Z,3µm,20.0s,MS5.5
KONO Kongsberg 68.38 357 *e*P **P** **18 41 05.2 +0.8**
KONO pmax pmax
comp=Z,97nm,1.1s,mb5.8
KONO MLR MLR
comp=Z,3µm,20.0s,MS5.5
AML Almayashu 68.57 312 P **P** **18 41 05.2 -0.6**
SNR=14
MOS Moscow 68.93 341 *e*P **P** **18 41 01.7 -6.2**
MOS *e*S S 18 50 06.4 -6.3
MOS *e*SS SS 18 54 31.0 -5.7
MOS pmax pmax
comp=Z,137nm,1.1s,mb5.8
MOS pmax pmax
comp=N,200nm,1.6s
MOS pmax pmax
comp=Z,700nm,2.6s,mb6.1
PMG Port Moresby 69.21 220 *e*P **P** **18 41 09.9 -0.2**
comp=Z,111nm,1.3s,mb5.6
PMG Port Moresby 69.21 220 *i* P **P** **18 41 11.1 +1.0**
PMG Port Moresby 69.21 220 P **P** **18 41 09.6 -0.5**
comp=Z,1µmcomp=Z,85nm,1.3s,mb5.5
KSH Kashi 69.55 308 P **P** **18 41 13.9 +1.9**
KSH pP pP 18 41 24.5 +12
KSH *e*PcP PcP 18 41 36.3 +1.2
KSH PP PP 18 43 50.4 +5.3
KSH S S 18 50 19.8 -0.7
KSH sS sS 18 50 36.4 +15
KSH *e*ScS ScS 18 51 09.7 -4.6
KSH *e*SS SS 18 54 49.6 +2.6
KSH pmax pmax
comp=Z,54nm,1.1s,mb5.4
KSH LR LR
comp=N,3µm,15.4s,MS5.8
KSH LR LR
comp=E,3µm,15.4s,MS5.8
KSH LR LR
comp=Z,4µm,15.4s,MS5.7
PNIG Pinotepa 69.56 89 *i* P **P** **18 41 13.8 +1.4**
OBN Obninsk 69.73 341 P **P** **18 41 13.1 +0.2**
comp=Z,480nm,1.0s,mb6.4,SNR=5.1
OBN Obninsk 69.73 341 *e*P **P** **18 41 13.5 +0.6**
comp=Z,114nm,1.1s,mb5.7
OBN Obninsk 69.73 341 ↓*i*P **P** **18 41 11.8 -1.1**
OBN *i* S S 18 50 21.7 -0.4
OBN pmax pmax
comp=Z,123nm,1.2s,mb5.7
TNTI Ternate 69.81 243 P **P** **18 41 17.2 +3.3**
comp=Z,2µmcomp=Z,121nm,1.7s,mb5.5
TNTI Ternate 69.81 243 P **P** **18 41 14.7 +0.8**
comp=Z,2µmcomp=Z,121nm,1.7s,mb5.5
MSVF Nonsavu 69.90 186 *e*P **P** **18 41 14.9 +0.7**
comp=Z,47nm,1.1s,mb5.3
MSVF LR LR
comp=Z,3µm,20.0s,MS5.5
VHO Vista Hermosa 69.90 88 *i* P **P** **18 41 16.2 +1.8**
MVH1 Achvaich 69.97 5 *e*P **P** **18 41 14.6 +0.3**
MCD Coleburn Disti 70.35 4 *e*P **P** **18 41 16.0 -0.6**
MDO Dochfour 70.44 5 *e*P **P** **18 41 17.2 0.0**
KPL Plockton 70.47 6 *e*P **P** **18 41 18.1 +0.7**
KPL AMb AMB 18 41 20.7
comp=Z,43nm,1.1s,mb5.3
KPL AMS AMS 19 06 03.4
comp=Z,2µm,27.7s,MS5.3
KSB Sheil Bridge 70.61 6 *e*P **P** **18 41 19.5 +1.2**
MME1 Meikle Cairn 70.64 4 *e*P **P** **18 41 19.0 +0.6**
MNI Manado 70.66 246 P **P** **18 41 22.3 +3.2**
comp=Z,2µmcomp=Z,187nm,1.6s,mb5.8
MNI Manado 70.66 246 P **P** **18 41 16.9 -2.2**
comp=Z,2µmcomp=Z,187nm,1.6s,mb5.8
DWPF Disney 70.72 69 *e*P **P** **18 41 17.5 -1.9**
comp=Z,67nm,0.7s,mb5.7
DWPF LR LR
comp=Z,4µm,22.0s,MS5.6
KAR1 Arisaig 70.87 6 *e*P **P** **18 41 20.5 +0.7**
KDM Kudat 70.89 256 P **P** **18 41 25.8 +5.2**
PMOR Pomariorio Ree 71.15 152 *e*P **P** **18 41 21.0 -0.9**
comp=Z,558nm,1.1s,mb6.4
HUIG Huatulco 71.28 88 *i* P **P** **18 41 22.7 -0.2**
MYLDM Lahad Datu 71.29 254 P **P** **18 41 26.8 +3.8**
MUD Monsted U'grnd 71.59 357 *i* P **P** **18 41 25.7 +1.5**
MUD pmax pmax
comp=Z,38nm,1.0s,mb5.3
MUD MLR MLR
comp=Z,2µm,22.0s,MS5.3
MUD Monsted U'grnd 71.59 357 *i* P **P** **18 41 25.7 +1.5**
comp=Z,38nm,1.0s,mb5.3
MUD
comp=Z,2µm,22.0s
NACGM Naroch 71.61 347 *e*P **P** **18 41 21.0 -3.4**
EBH Black Hill 71.67 5 *e*P **P** **18 41 24.9 +0.2**
EAB Aberfoyle 71.69 5 *e*P **P** **18 41 25.0 +0.2**
SDKM Sandakan 71.69 255 P **P** **18 41 28.5 +3.1**
MICGM Minsk 71.84 346 *e*P **P** **18 41 26.0 +0.3**
MNK Minsk 71.85 346 *e*P **P** **18 41 26.0 +0.2**
MNK MLR MLR
comp=Z,9µm,18.0s,MS6.1
KMSI Cibinong 71.86 246 P **P** **18 41 32.4 +6.0**
comp=Z,3µmcomp=Z,390nm,1.2s,mb6.2
KMSI Cibinong 71.86 246 P **P** **18 41 27.3 +0.9**
comp=Z,3µmcomp=Z,368nm,1.1s,mb6.2
KKM Kota Kinabalu 71.96 256 P **P** **18 41 31.0 +4.0**
PGBU Glenifferbraes 72.06 5 P **P** **18 41 27.6 +0.6**
PGBU AMb AMB 18 41 31.0
comp=Z,114nm,1.8s,mb5.5
PGBU AMS AMS 19 18 41.7
comp=Z,2µm,17.6s
PGBU Glenifferbraes 72.06 5 *e*P **P** **18 41 27.6 +0.6**
PGBU AMb AMB 18 41 31.0
comp=Z,114nm,1.8s,mb5.5
PGBU AMS AMS 19 18 41.7
comp=Z,2µm,17.6s,MS5.5
EAU Auchinoon 72.08 5 *e*P **P** **18 41 27.9 +0.8**
COP Copenhagen 72.23 355 *i* P **P** **18 41 31.2 +3.2**
COP pmax pmax
comp=Z,25nm,0.9s,mb5.1
COP MLR MLR
comp=Z,1µm,19.0s,MS5.2
COP Copenhagen 72.23 355 *i* P **P** **18 41 31.2 +3.2**
comp=Z,25nm,0.9s,mb5.1
COP
comp=Z,1µm,19.0s
VOR Voronezh 72.33 338 *e*P **P** **18 41 27.0 -1.7**
VOR pmax pmax
comp=Z,160nm,1.4s,mb5.8
VRHR Novokhopersk 72.34 336 *e*P **P** **18 41 27.8 -1.0**
VRHR pmax pmax
comp=N,5.0nm,0.6s
VRHR pmax pmax
comp=E,6.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CHTO Chiang Mai 72.61 278 *e*P **P** **18 41 30.4 -0.4**
comp=Z,24nm,1.2s,mb5.0
CHTO LR LR
comp=Z,1µm,20.0s,MS5.3
CHTO Chiang Mai 72.61 278 *e*P **P** **18 41 30.4 -0.4**
CHTO pmax pmax
comp=Z,24nm,1.2s,mb5.0
CHTO MLR MLR
comp=Z,1µm,20.0s,MS5.3
ESK Eskdalemuir 72.62 5 *e*P **P** **18 41 30.1 -0.3**
ESK AMb AMB 18 41 36.0
comp=Z,84nm,1.8s,mb5.4
ESK AMS AMS 19 17 50.2
comp=Z,2µm,18.0s,MS5.5
ESK Eskdalemuir 72.62 5 *e*P **P** **18 41 30.1 -0.2**
comp=Z,65nm,1.1s,mb5.5
ESK LR LR
comp=Z,2µm,19.0s,MS5.5
BSD Bornholm Skovb 72.65 354 *i* P **P** **18 41 31.1 +0.5**
BSD pmax pmax
comp=Z,24nm,1.1s,mb5.0
BSD MLR MLR
comp=Z,2µm,23.0s,MS5.4
BSD Bornholm Skovb 72.65 354 *i* P **P** **18 41 31.1 +0.5**
comp=Z,24nm,1.1s,mb5.0
BSD
comp=Z,2µm,23.0s
TEIG Tepich 72.66 79 *e*P **P** **18 41 30.8 -0.4**
comp=Z,200nm,1.5s,mb5.8
ECK Cauldkaine Hil 72.76 5 *e*P **P** **18 41 30.5 -0.7**
VSR Storozhevoye 72.81 338 *e*P **P** **18 41 31.3 -0.3**
VSR *e* 18 44 13.6
VSR *e*PPP 18 45 54.9
VSR *e*S S 18 50 53.8 -4.2
VSR *e*SSS 18 58 40.8
VSR pmax pmax
comp=N,30nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,30nm,0.9s,mb5.2
VSR pmax pmax
comp=E,20nm,1.5s
VSR pmax pmax
comp=Z,70nm,1.5s,mb5.4
VSR pmax pmax
comp=N,30nm,0.8s
VSR smax
comp=N,200nm,5.2s
VSR smax
comp=E,310nm,5.2s
VSR MLR MLR
comp=N,3µm,22.0s,MS5.7
VSR MLR MLR
comp=E,3µm,22.0s,MS5.7
VSR MLR MLR
comp=Z,4µm,22.0s,MS5.7
CM31 Chiang Mai Arr 72.88 278 *e*P **P** **18 41 34.8 +2.4**
comp=Z,12nm,0.7s,mb4.9
CM31 LR LR
comp=Z,2µm,21.0s,MS5.3
CMAR Chiang Mai Arr 72.88 278 P **P** **18 41 30.8 -1.7**
comp=Z,14nm,0.8s,mb4.9,baz=26,slow=5.8,SNR=12
CMAR LR LR 19 16 39.3
comp=Z,2µm,19.2s,MS5.3,baz=52,slow=38
CMAR Chiang Mai Arr 72.88 278 P **P** **18 41 30.8 -1.7**
CMAR pmax pmax
comp=Z,14nm,0.8s
CMAR MLR MLR
comp=Z,2µm,19.2s
SUW Suwalki 72.96 349 *e*P **P** **18 41 31.4 -1.0**
SUW LMZ 19 13 28.6
comp=Z,3µm,22.4s
SUW Suwalki 72.96 349 *e*P **P** **18 41 31.6 -0.8**
comp=Z,164nm,1.0s,mb5.9
GAL1 Galloway 72.99 5 *e*P **P** **18 41 32.5 -0.1**
GAL1 AMb AMB 18 41 36.4
comp=Z,90nm,1.6s,mb5.4
GAL1 AMS AMS 19 19 16.7
comp=Z,4µm,18.3s,MS5.7
VORD Divnogorie 73.02 338 *e*P **P** **18 41 32.6 -0.2**
VORD *e* 18 44 12.2
VORD *e*PPP 18 45 59.4
VORD *e*S S 18 50 57.8 -2.5
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,7.0nm,0.7s
VORD pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VORD pmax pmax
comp=Z,190nm,2.5s,mb5.6
VORD pmax pmax
comp=N,60nm,0.9s
VORD pmax pmax
comp=E,60nm,1.3s
VORD smax
comp=N,340nm,5.7s
VORD smax
comp=E,480nm,5.7s
VORD smax
comp=Z,100nm,5.7s
VORD MLR MLR
comp=N,6µm,26.0s,MS5.8
VORD MLR MLR
comp=E,4µm,26.0s,MS5.8
VORD MLR MLR
comp=Z,4µm,26.0s,MS5.6
GCD Castle Douglas 73.03 5 *e*P **P** **18 41 33.0 +0.2**
AAI Ambon 73.09 240 P **P** **18 41 36.2 +2.5**
comp=Z,235nm,1.6s,mb5.9
MRSI Marisa 73.09 248 P **P** **18 41 33.3 -0.5**
comp=Z,3µmcomp=Z,228nm,1.4s,mb5.9
MRSI Marisa 73.09 248 P **P** **18 41 32.4 -1.4**
comp=Z,3µmcomp=Z,228nm,1.4s,mb5.9
PPT Papeete 73.11 154 *e*P **P** **18 41 32.8 -0.8**
comp=Z,111nm,1.4s,mb5.6
PPT *e*S S 18 50 55.3 -6.6
comp=Z,1µm,24.2s
PPT *e*LQ 19 00 17.1
comp=Z,4µm,27.2s
PPT *e*LR LR 19 03 41.0
comp=Z,3µm,22.0s,baz=344
PPT Papeete 73.11 154 P **P** **18 41 34.0 +0.4**
comp=Z,42nm,0.2s,mb6.0,baz=180,slow=21,SNR=5.0
PPT LR LR 19 09 32.4
comp=Z,2µm,18.0s,MS5.5,baz=355,slow=32
PPT Papeete 73.11 154 P **P** **18 41 34.0 +0.4**
PPT pmax pmax
comp=Z,42nm,0.2s
PPT MLR MLR
comp=Z,2µm,18.0s
XAL Allendale 73.12 4 *e*P **P** **18 41 33.6 +0.2**
TIAR Tiarei 73.17 154 *e*P **P** **18 41 33.2 -0.8**
comp=Z,408nm,1.1s,mb6.3
PAE Paea 73.20 154 *e*P **P** **18 41 33.3 -0.9**
comp=Z,40nm,1.3s,mb5.2
PAE Paea 73.20 154 *e*P **P** **18 41 33.3 -0.9**
PAE pmax pmax
comp=Z,40nm,1.3s,mb5.2
TOLI Toli-Toli 73.22 249 P **P** **18 41 37.3 +2.8**
comp=Z,2µmcomp=Z,174nm,1.1s,mb5.9
TOLI Toli-Toli 73.22 249 P **P** **18 41 33.3 -1.2**
comp=Z,2µmcomp=Z,174nm,1.1s,mb5.9
AGT Agartala 73.35 287 *i* P **P** **18 41 34.0 -1.2**
AGT *i* x x 18 41 58.0
XDE Dent Fell 73.42 5 *e*P **P** **18 41 34.2 -0.9**
GMM Mts of Mourne 73.53 6 *e*P **P** **18 41 36.1 +0.3**
MEH Mehetia 73.82 153 *e*P **P** **18 41 36.9 -0.9**
comp=Z,233nm,1.3s,mb5.9
LUWI Luwuk 73.86 246 P **P** **18 41 38.7 +0.4**
comp=Z,4µmcomp=Z,323nm,1.5s,mb6.0
LUWI Luwuk 73.86 246 P **P** **18 41 36.3 -2.0**
comp=Z,4µmcomp=Z,322nm,1.5s,mb6.0
HPK Haverah Park 74.05 4 *e*P **P** **18 41 38.6 -0.2**
HPK AMb AMB 18 41 42.2
comp=Z,122nm,1.4s,mb5.6
HPK AMS AMS 19 16 12.6
comp=Z,2µm,19.9s,MS5.4
BSEG Bad Segeberg 74.07 356 *e*P **P** **18 41 38.4 -0.6**
comp=Z,127nm,1.2s,mb5.7
BSEG *e*S S 18 51 13.4 +1.3
BSEG Bad Segeberg 74.07 356 *e*P **P** **18 41 38.4 -0.6**
BSEG *e*S S 18 51 13.4 +1.3
BSEG Bad Segeberg 74.07 356 *e*P **P** **18 41 38.4 -0.6**
BSEG *e*S S 18 51 13.4 +1.3
GKP Gorka Klasztor 74.31 352 *e*P **P** **18 41 40.4 0.0**
GKP LMZ 19 11 46.0
comp=Z,6µm,24.3s
RAR Rarotonga 74.44 165 LR LR 19 07 19.4
comp=Z,4µm,20.3s,MS5.7,baz=54,slow=30
WME Myndd Eilian 74.48 5 *e*P **P** **18 41 41.2 -0.1**
KBI1 Birley Grange 74.75 4 *e*P **P** **18 41 42.9 0.0**
COEN Coen 74.93 221 *e*P **P** **18 41 42.5 -1.9**
comp=Z,691nm,1.4s,mb6.4
COEN Coen 74.93 221 P **P** **18 41 43.7 -0.7**
comp=Z,213nm,1.5s,mb5.8
CWF Charnwood Fore 75.28 4 *e*P **P** **18 41 45.6 -0.4**
CWF AMb AMB 18 41 48.2
comp=Z,64nm,1.3s,mb5.4
CWF *e* 18 51 20.7
CWF AMS AMS 19 21 10.5
comp=Z,3µm,18.6s,MS5.6
AKASG Malin Array Be 75.30 344 P **P** **18 41 44.2 -1.9**
comp=Z,36nm,0.8s,mb5.3,baz=15,slow=5.8,SNR=29
AKASG PP PP 18 44 17.4 -16
comp=Z,1.3nm,0.5s,baz=20,slow=6.2,SNR=4.5
AKASG PKPPKP 19 08 59.7
comp=Z,0.2nm,0.3s,baz=207,slow=0.7,SNR=6.8
AKASG LR LR 19 18 27.5
comp=Z,4µm,19.0s,MS5.8,baz=10.0,slow=39
AKBB Malin Array Si 75.30 344 *e*P **P** **18 41 44.7 -1.4**
RUE Ruedersdorf 75.35 354 *e*P **P** **18 41 45.4 -1.0**
comp=Z,168nm,1.5s,mb5.8
RUE *e*S S 18 51 24.9 -1.5
RUE *e*SS SS 18 56 37.9 +23
PCI Palu 75.42 249 P **P** **18 41 46.5 -0.8**
comp=Z,3µmcomp=Z,247nm,1.1s,mb6.0
PCI Palu 75.42 249 P **P** **18 41 46.1 -1.2**
comp=Z,3µmcomp=Z,247nm,1.1s,mb6.0
HLM1 Long Mynd 75.43 5 *e*P **P** **18 41 46.1 -0.7**
HLM1 AMb AMB 18 41 51.5
comp=Z,60nm,2.1s,mb5.2
NRDL Niedersach Rie 75.52 356 *e*P **P** **18 41 45.4 -2.0**
comp=Z,163nm,1.8s,mb5.7
NRDL *e*S S 18 51 26.8 -1.6
NRDL *e*SS SS 18 56 40.0 +23
DZM Mont Dzumac 75.64 197 *e*P **P** **18 41 48.8 +0.5**
comp=Z,346nm,1.3s,mb6.1
DZM *e*S S 18 51 27.2 -3.0
comp=Z,4µm,28.8s
DZM *e*LR LR 19 05 09.5
comp=Z,11µm,28.5s
DZM Mont Dzumac 75.64 197 *e*P **P** **18 41 47.3 -1.0**
DZM Mont Dzumac 75.64 197 *e*S SS 18 56 57.6 +36
NOUC Port Laguerre 75.70 197 *e*P **P** **18 41 47.4 -1.2**
IBBN Ibbenburen 75.78 358 *e*P **P** **18 41 48.3 -0.6**
comp=Z,286nm,1.7s,mb5.9
HTR Trewern Hill 75.85 5 *e*P **P** **18 41 48.9 -0.4**
MCH1 Michaelchurch 75.94 5 *e*P **P** **18 41 50.0 +0.2**
MCH1 AMb AMB 18 41 52.9
comp=Z,86nm,1.2s,mb5.6
MCH1 AMS AMS 19 20 58.5
comp=Z,2µm,18.9s,MS5.5
BTM Bintulu 76.09 257 P **P** **18 41 53.9 +2.8**
CLZ Clausthal 76.17 356 *e*P **P** **18 41 50.5 -0.6**
comp=Z,190nm,1.4s,mb5.8
CLZ *e*S S 18 51 35.1 -0.4
CLZ *e*SS SS 18 56 51.7 +25
CLZ Clausthal 76.17 356 *e*P **P** **18 41 50.5 -0.6**
comp=Z,190nm,1.4s,mb5.8
CLZ *e*S S 18 51 35.1 -0.4
CLZ *e*SS SS 18 56 51.7 +25
CLZ Clausthal 76.17 356 *e*P **P** **18 41 50.5 -0.6**
CLZ *e*S S 18 51 35.1 -0.4
CLZ pmax pmax
comp=Z,190nm,1.4s,mb5.8
HGH Gray Hill 76.31 5 *e*P **P** **18 41 51.1 -0.8**
KDI Kendari 76.35 245 P **P** **18 41 57.1 +4.5**
comp=Z,119nm,1.4s,mb5.6
KDI Kendari 76.35 245 P **P** **18 41 51.8 -0.8**
comp=Z,118nm,1.4s,mb5.6
BBSR BB Station 76.44 54 PFAKE 18 42 00.0 +7.1
BBSR LR LR
comp=Z,3µm,20.0s,MS5.6
CLL Collm 76.57 354 *e*P **P** **18 41 51.9 -1.4**
comp=Z,104nm,1.5s,mb5.5
CLL *e*S S 18 51 38.0 -1.9
CLL *e*SS SS 18 56 56.2 +23
CLL Collm 76.57 354 *i* P **P** **18 41 52.4 -0.9**
comp=Z,55nm,1.3s,mb5.3
CLL *e*S S 18 51 41.0 +1.1
CLL LR LR
comp=Z,2µm,21.4s,MS5.5
CLL Collm 76.57 354 *i* P **P** **18 41 52.4 -0.9**
CLL *e*S S 18 51 41.0 +1.1
CLL pmax pmax
comp=Z,55nm,1.3s,mb5.3
CLL MLR MLR
comp=Z,2µm,21.4s,MS5.5
CLL Collm 76.57 354 *i* P **P** **18 41 52.4 -0.9**
CLL *i* P(2) 18 41 55.5
comp=Z,55nm,1.3s
CLL *e*Plp 18 41 56.0
CLL *i* Pmax 18 41 58.7
comp=Z,107nm,1.5s
CLL *e*PP PP 18 44 49.0 +4.5
CLL *e*PPP 18 46 37.0

CLL eS S 18 51 41.0 +1.1
comp=N,800nm,14.2s
CLL eS S 18 51 41.0 +1.1
comp=E,600nm,16.1s
CLL eSS SS 18 56 42.0 +8.7
CLL eSSS 19 00 06.0
CLL eSSSS 19 02 18.0
CLL ePKPPKPdf 19 09 08.0
CLL L 19 19 00.0
comp=Z,2µm,21.4s
BUG Bochum-Univer 76.66 358 eP **P 18 41 52.8 -1.1**
comp=Z,142nm,1.5s,mb5.7
BUG eS S 18 51 40.9 0.0
BUG eSS SS 18 56 58.9 +24
WOL Wolverton 76.71 4 eP **P 18 41 54.1 0.0**
WOL AMb AMB 18 42 00.6
comp=Z,116nm,2.0s,mb5.5
WOL AMS AMS 19 22 54.4
comp=Z,2µm,19.2s,MS5.5
KSP Ksiaz 76.80 352 eP **P 18 41 55.4 +0.8**
KSP LMZ 19 12 42.1
comp=Z,7µm,24.8s
KSP Ksiaz 76.80 352 eP **P 18 41 53.6 -1.0**
KSP eS S 18 51 39.1 -3.3
KSP eSS SS 18 56 43.7 +6.9
KSP MLR MLR
comp=Z,8µm,24.8s,MS5.9
KBL Kabul 76.83 310 eP **P 18 41 51.9 -3.3**
comp=Z,36nm,1.1s,mb5.2
KBL Kabul 76.83 310 eP **P 18 41 51.9 -3.3**
KBL pmax pmax
comp=Z,37nm,1.1s,mb5.2
HTL Hartland 76.86 6 AMS AMS 19 13 23.8
comp=Z,3µm,25.0s,MS5.5
BRG Berggiesshubel 76.94 354 eP **P 18 41 54.1 -1.4**
comp=Z,77nm,1.3s,mb5.5
BRG eS S 18 51 42.5 -1.5
BRG eSS SS 18 57 02.1 +23
BRG Berggiesshubel 76.94 354 *i* P **P 18 41 55.2 -0.3**
comp=Z,77nm,1.3s,mb5.5
BRG PP PP 18 44 46.1 -1.5
comp=Z,48nm,1.9s
BRG S S 18 51 45.0 +1.0
BRG SS SS 18 56 44.0 +5.1
BRG ePKPPKP 19 09 07.2
comp=Z,3.0nm,0.7s
BRG
comp=N,3µm,25.8s
BRG
comp=E,3µm,26.4s
BRG
comp=Z,4µm,30.9s
BRG Berggiesshubel 76.94 354 *i* P **P 18 41 55.2 -0.3**
BRG 18 44 46.1
BRG S S 18 51 45.0 +1.0
BRG SS SS 18 56 44.0 +5.1
BRG pmax pmax
comp=Z,46nm,1.3s,mb5.2
BRG pmax pmax
comp=Z,29nm,1.9s,mb4.9
BRG MLR MLR
comp=N,2µm,25.8s,MS5.4
BRG MLR MLR
comp=E,2µm,26.4s,MS5.4
BRG MLR MLR
comp=Z,2µm,25.9s,MS5.4
LVV L'vov 76.95 347 eP **P 18 41 57.0 +1.4**
LVV eS S 18 51 46.0 +1.8
LVV MLR MLR
comp=Z,3µm,20.0s,MS5.6
OJC Ojcow 77.08 350 eP **P 18 41 56.0 -0.3**
OJC epP pP 18 41 58.4 +1.5
OJC ePcP PcP 18 42 06.0 -1.2
OJC eS S 18 51 44.2 -1.3
OJC L 19 24 55.4
comp=Z,3.0nm,18.4s
UPC Upice 77.15 352 eP **P 18 41 57.3 +0.6**
UPC Upice 77.15 352 eP **P 18 41 57.3 +0.6**
TTSI Tana Toraja 77.18 248 P **P 18 41 58.5 +1.2**
comp=Z,2µmcomp=Z,198nm,1.4s,mb5.9
TTSI Tana Toraja 77.18 248 P **P 18 41 56.0 -1.3**
comp=Z,2µmcomp=Z,198nm,1.4s,mb5.9
UBBA Unterbreizbach 77.20 356 eS S 18 51 46.5 -0.3
UBBA eSS SS 18 57 05.9 +23
PVCC Panska Ves 77.24 353 eP **P 18 41 59.0 +1.8**
PVCC e 18 44 46.2
PVCC e 18 46 46.6
PVCC MLR MLR
comp=Z,4µm,25.8s,MS5.6
PVCC Panska Ves 77.24 353 eP **P 18 41 59.0 +1.8**
PVCC ePP PP 18 44 46.2 -4.0
PVCC ex x 18 46 46.6
PVCC AMS AMS 19 10 40.0
comp=Z,4µm,25.8s
DPC Dobruska-Polom 77.28 352 eP **P 18 41 58.0 +0.6**
DPC e 18 44 46.8
DPC e 18 46 45.3
DPC eS S 18 51 47.9 +0.2
DPC MLR MLR
comp=Z,3µm,26.0s,MS5.5
DPC Dobruska-Polom 77.28 352 eP **P 18 41 58.0 +0.6**
DPC ePP PP 18 44 46.8 -3.7
DPC ex x 18 46 45.3
DPC eS S 18 51 47.9 +0.2
DPC eSS SS 18 56 57.8 +14
DPC AMS AMS 19 12 40.0
comp=Z,3µm,26.0s
MOX Moxa 77.30 355 eP **P 18 41 57.8 +0.3**
comp=Z,157nm,1.8s,mb5.6
MOX eS S 18 51 52.0 +4.1
MOX
comp=Z,2µm,23.0s
MOX Moxa 77.30 355 eP **P 18 41 56.5 -1.0**
comp=Z,60nm,1.3s,mb5.4
MOX eS S 18 51 47.4 -0.5
MOX eSS SS 18 57 07.9 +23
MOX Moxa 77.30 355 eP **P 18 41 57.8 +0.3**
MOX pmax pmax
comp=Z,157nm,1.8s,mb5.6
MOX MLR MLR
comp=Z,2µm,23.0s,MS5.3
KWP Kalwaria Pacla 77.31 348 eP **P 18 41 57.5 -0.1**
KWP LMZ 19 16 41.7
comp=Z,4µm,21.4s
KWP Kalwaria Pacla 77.31 348 eP **P 18 41 56.3 -1.3**
comp=Z,151nm,1.3s,mb5.8
KWP LR LR
comp=Z,4µm,21.0s,MS5.8
KWP Kalwaria Pacla 77.31 348 eP **P 18 41 56.3 -1.3**
KWP pmax pmax
comp=Z,151nm,1.3s,mb5.8
KWP MLR MLR
comp=Z,4µm,21.0s,MS5.8
KWP Kalwaria Pacla 77.31 348 *i*/P **P 18 41 58.6 +1.0**
WERD Werda 77.46 355 eP **P 18 41 57.5 -0.9**
comp=Z,51nm,1.4s,mb5.3
TANN Tannenbergstha 77.49 355 eP **P 18 41 57.7 -0.8**
comp=Z,57nm,1.4s,mb5.3
TANN eS S 18 51 49.3 -0.7
TANN eSS SS 18 57 11.0 +24
MEM Membach 77.51 359 P **P 18 41 58.2 -0.5**
GUNZ Gunzen 77.55 355 eP **P 18 41 58.1 -0.8**
comp=Z,63nm,1.4s,mb5.3
MENF Mencas 77.56 1 eP **P 18 41 59.2 +0.3**
WERN Wernitzgruen 77.62 355 eP **P 18 41 58.5 -0.8**
comp=Z,286nm,2.2s,mb5.8
SNF Seneffe 77.62 0 P **P 18 42 00.5 +1.2**
comp=Z,38nm,1.8s,mb5.0
OKC Ostrava-Krasne 77.62 351 eP **P 18 41 58.4 -0.9**
OKC e 18 44 53.8
OKC e 18 46 47.1
OKC eS S 18 51 51.1 -0.4
OKC MLR MLR
comp=Z,4µm,23.2s,MS5.6
OKC Ostrava-Krasne 77.62 351 eP **P 18 41 58.4 -0.9**
OKC ePP PP 18 44 53.8 +0.4
OKC ex x 18 46 47.1
OKC eS S 18 51 51.1 -0.4
OKC ex x 18 57 11.1
OKC AMS AMS 19 14 30.0
comp=Z,4µm,23.2s
BBSI Bau Bau 77.64 244 P PcP 18 42 16.8 +6.8
BBSI Bau Bau 77.64 244 P **P 18 42 00.9 +1.0**
comp=Z,2µmcomp=Z,164nm,1.1s,mb5.9
NKC Novy Kostel 77.67 355 eP **P 18 42 00.1 +0.5**
NKC e 18 44 51.1
NKC eS S 18 51 54.5 +2.6
NKC MLR MLR
comp=Z,4µm,28.0s,MS5.5
NKC Novy Kostel 77.67 355 eP **P 18 42 00.1 +0.5**
NKC ePP PP 18 44 51.1 -2.7
NKC ex x 18 46 52.3
NKC eS S 18 51 54.5 +2.6
NKC ex x 18 57 13.3
NKC AMS AMS 19 10 40.0
comp=Z,4µm,28.0s
PRA Prague 77.70 353 P **P 18 42 00.0 +0.2**
STHS Stebnicka Huta 77.71 349 eP **P 18 42 00.5 +0.7**
comp=Z,25nm,1.3s,mb5.0
STHS Stebnicka Huta 77.71 349 eP **P 18 42 00.5 +0.7**
STHS pmax pmax
comp=Z,25nm,1.3s,mb5.0
STHS Stebnicka Huta 77.71 349 eP **P 18 42 00.5 +0.7**
BCLA Clavier 77.71 359 P **P 18 42 00.7 +0.9**
comp=Z,56nm,1.9s,mb5.2
MORC Moravsky Berou 77.74 351 eP **P 18 41 59.9 -0.1**
comp=Z,51nm,1.5s,mb5.2
MORC Moravsky Berou 77.74 351 eP **P 18 41 59.9 -0.1**
MORC pmax pmax
comp=Z,51nm,1.5s,mb5.2
MORC Moravsky Berou 77.74 351 *i*/P **P 18 42 02.4 +2.4**
TNS Taunus Mts 77.85 357 eP **P 18 41 59.7 -0.9**
comp=Z,296nm,1.9s,mb5.9
TNS eS S 18 51 54.1 +0.2
TNS eSS SS 18 57 16.8 +24
TNS Taunus Mts 77.85 357 eP **P 18 41 59.7 -0.9**
comp=Z,296nm,1.9s,mb5.9
TNS eS S 18 51 54.1 +0.2
TNS eSS SS 18 57 16.8 +24
TNS Taunus Mts 77.85 357 eP **P 18 41 59.7 -0.9**
TNS eS S 18 51 54.1 +0.2
TNS pmax pmax
comp=Z,296nm,1.9s,mb5.9
SPSI Sidrap Palu 77.96 247 P **P 18 42 04.1 +2.5**
comp=Z,1µmcomp=Z,70nm,1.4s,mb5.4
SPSI Sidrap Palu 77.96 247 P **P 18 42 00.5 -1.1**
comp=Z,1µmcomp=Z,69nm,1.4s,mb5.4
GIVF Givet 78.03 360 eP **P 18 42 00.8 -0.8**
comp=Z,447nm,1.7s,mb5.8
GIVF Givet 78.03 360 eP **P 18 42 00.8 -0.8**
comp=Z,223nm,1.7s,mb5.8
GIVF Givet 78.03 360 eP **P 18 42 00.8 -0.8**
GIVF pmax pmax
comp=Z,223nm,1.7s,mb5.8
DOU Dourbes 78.03 360 P **P 18 42 02.1 +0.5**
comp=Z,43nm,1.8s,mb5.1
KOLS Kolonicke sedl 78.06 348 eP **P 18 42 01.8 +0.1**
comp=Z,743nm,4.3s
KOLS Kolonicke sedl 78.06 348 eP **P 18 42 01.8 +0.1**
KOLS pmax pmax
comp=Z,743nm,4.3s
KOLS Kolonicke sedl 78.06 348 eP **P 18 42 01.8 +0.1**
BAIF Baives 78.07 0 eP **P 18 42 01.2 -0.6**
comp=Z,197nm,1.3s,mb5.6
BAIF Baives 78.07 0 eP **P 18 42 01.2 -0.6**
comp=Z,98nm,1.3s,mb5.6
BAIF Baives 78.07 0 eP **P 18 42 01.2 -0.6**
BAIF pmax pmax
comp=Z,98nm,1.3s,mb5.6
MAK Makhachkala 78.11 329 eP **P 18 42 00.4 -1.8**
MAK *i* 18 42 12.0
MAK e 18 44 59.7
MAK eS S 18 51 55.0 -2.0
MAK e 18 52 21.5
MAK eSS SS 18 57 02.9 +5.8
MAK eSSS 19 00 19.3
MAK pmax pmax
comp=Z,147nm,1.4s,mb5.7
MAK MLR MLR
comp=Z,7µm,21.0s,MS6.0
CRVS Cervenica-Dubn 78.19 349 eP **P 18 42 03.4 +0.9**
comp=Z,30nm,1.5s,mb5.1
CRVS eS S 18 51 57.5 0.0
CRVS Cervenica-Dubn 78.19 349 eP **P 18 42 03.4 +0.9**
CRVS pmax pmax
comp=Z,30nm,1.2s,mb5.1
CRVS Cervenica-Dubn 78.19 349 eP **P 18 42 03.4 +0.9**
CRVS eS S 18 51 57.5 0.0
ABH Alteburg 78.21 358 eP **P 18 42 02.9 +0.3**
GRA1 Grafenberg Arr 78.27 355 eP **P 18 42 02.4 -0.5**
comp=Z,267nm,1.6s,mb5.9
GRA1 eS S 18 51 58.4 -0.1
GRA1 eSS SS 18 57 23.0 +24
GRA1 LR LR
comp=Z,2µm,18.7s,MS5.6
GRF Grafenberg Arr 78.27 355 eP **P 18 42 02.4 -0.5**
comp=Z,267nm,1.6s,mb5.9
GRF eS S 18 51 58.4 -0.1
GRF eSS SS 18 57 23.0 +24
GRF eL 19 27 11.5
comp=Z,2µm,18.7s
GRF Grafenberg Arr 78.27 355 eP **P 18 42 02.4 -0.5**
GRF eS S 18 51 58.4 -0.1
GRF pmax pmax
comp=Z,267nm,1.6s,mb5.9
GRF MLR MLR
comp=Z,2µm,18.7s,MS5.6
VRAC Vranov 78.29 352 ||P **P 18 42 03.9 +0.8**
VRAC Vranov 78.29 352 P **P 18 42 02.6 -0.4**
VRAC Vranov 78.29 352 ||*i*/P **P 18 42 03.8 +0.8**
UZH Uzhgorod 78.35 348 eP **P 18 42 05.0 +1.6**
UZH e 18 42 10.3
UZH e 18 42 21.0
UZH e 18 44 57.3
UZH eS S 18 51 59.0 -0.3
UZH ePS 18 52 50.4
UZH MLR MLR
comp=N,3µm,17.0s,MS5.8
UZH MLR MLR
comp=E,2µm,17.0s,MS5.8
UZH MLR MLR
comp=Z,2µm,17.0s,MS5.5
TREC Trest 78.40 353 eP **P 18 42 03.9 +0.3**
TREC e 18 45 00.0
TREC e 18 46 57.6
TREC eS S 18 52 00.1 +0.3
TREC MLR MLR
comp=Z,4µm,23.0s,MS5.6
TREC Trest 78.40 353 eP **P 18 42 03.9 +0.3**
TREC ePP PP 18 45 00.0 +0.1
TREC ex x 18 46 57.6
TREC eS S 18 52 00.1 +0.3
TREC ex x 18 57 37.0
TREC AMS AMS 19 13 00.0
comp=Z,4µm,23.0s
RUP Ruppelstein 78.40 358 eP **P 18 42 03.1 -0.6**
TOD Tromm 78.46 357 eP **P 18 42 04.6 +0.7**
WLF Walferdange 78.46 359 eP **P 18 42 01.8 -2.1**
comp=Z,64nm,1.4s,mb5.4
WLF eS S 18 52 01.8 +1.4
WLF eSS SS 18 57 27.0 +25
WLF Walferdange 78.46 359 eP **P 18 42 05.6 +1.6**
comp=Z,58nm,1.3s,mb5.3
WLF Walferdange 78.46 359 eP **P 18 42 05.6 +1.7**
WLF pmax pmax
comp=Z,58nm,1.3s,mb5.3
KAKA Kakadu 78.62 232 eP **P 18 42 03.2 -2.0**
comp=Z,136nm,1.1s,mb5.8
KAKA Kakadu 78.62 232 eP **P 18 42 03.5 -1.8**
comp=Z,455nm,1.0s,mb6.4
KAKA Kakadu 78.62 232 P **P 18 42 03.4 -1.8**
comp=Z,2µmcomp=Z,195nm,0.9s,mb6.0
KIV Kislovodsk 78.64 333 P **P 18 42 08.2 +3.1**
comp=Z,196nm,1.0s,mb6.0,SNR=5.1
KIV Kislovodsk 78.64 333 eP **P 18 42 05.7 +0.6**
comp=Z,37nm,1.0s,mb5.3
KIV LR LR
comp=Z,4µm,21.0s,MS5.7
KIV Kislovodsk 78.64 333 eP **P 18 42 06.0 +0.9**
KIV eS S 18 52 03.9 +1.3
KIV eSS SS 18 57 08.7 +3.8
KIV pmax pmax
comp=Z,209nm,4.7s
KIV pmax pmax
comp=Z,34nm,1.0s,mb5.2
KIV MLR MLR
comp=Z,3µm,19.0s,MS5.7
KHC Kasperske Hory 78.70 354 eP **P 18 42 05.9 +0.6**
KHC e 18 44 57.7
KHC eS S 18 52 07.0 +4.0
KHC MLR MLR
comp=Z,4µm,29.9s,MS5.5
KHC Kasperske Hory 78.70 354 eP **P 18 42 05.9 +0.6**
KHC ePP PP 18 44 57.7 -4.7
KHC ex x 18 47 07.8
KHC eS S 18 52 07.0 +4.0
KHC ex x 18 57 30.1
KHC AMS AMS 19 11 00.0
comp=Z,4µm,29.9s
KECS Kecovo 78.72 349 eP **P 18 42 06.6 +1.2**
comp=Z,10nm,1.2s,mb4.6
KECS Kecovo 78.72 349 eP **P 18 42 06.6 +1.2**
KECS pmax pmax
comp=Z,11nm,1.2s,mb4.7
KECS Kecovo 78.72 349 eP **P 18 42 06.6 +1.2**
WET Wettzell 78.73 354 eP **P 18 42 04.6 -0.9**
comp=Z,136nm,2.0s,mb5.5
WET eS S 18 52 03.4 0.0
WET eSS SS 18 57 30.6 +25
WET Wettzell 78.73 354 eP **P 18 42 04.6 -0.9**
comp=Z,136nm,2.0s,mb5.5
WET eS S 18 52 03.4 0.0
WET eSS SS 18 57 30.6 +25
WET Wettzell 78.73 354 eP **P 18 42 04.6 -0.9**
WET eS S 18 52 03.4 0.0
WET pmax pmax
comp=Z,136nm,2.0s,mb5.5
ABKT Ailbek 78.75 319 P **P 18 42 07.8 +2.0**
comp=Z,160nm,1.0s,mb5.9,SNR=13
TRPA Tarpa 78.81 348 ||*i*/P **P 18 42 06.3 +0.4**
KAPI Kappang 78.83 247 PFAKE 18 42 20.0 +14
KAPI LR LR
comp=Z,762nm,21.0s,MS5.0
KOLL Kolacno 78.85 351 eP **P 18 42 08.4 +2.3**
KOLL Kolacno 78.85 351 eP **P 18 42 08.4 +2.3**
BKSI Bulukumba 78.87 246 P **P 18 42 08.1 +1.4**
comp=Z,2µmcomp=Z,184nm,1.2s,mb5.9
BKSI Bulukumba 78.87 246 P **P 18 42 06.1 -0.6**
comp=Z,2µmcomp=Z,184nm,1.2s,mb5.9
VYHS Vyhne 78.89 350 eP **P 18 42 06.7 +0.4**
comp=Z,31nm,1.7s,mb5.0
VYHS eS S 18 52 00.6 -4.4
VYHS Vyhne 78.89 350 eP **P 18 42 06.7 +0.4**
VYHS pmax pmax
comp=Z,31nm,1.7s,mb5.0
VYHS Vyhne 78.89 350 eP **P 18 42 06.7 +0.4**
VYHS eS S 18 52 00.6 -4.4
BUR08 Bucovina Ar. S 78.91 346 eP **P 18 42 06.8 +0.3**
BUR01 Bucovina Ar. S 78.94 346 P **P 18 42 07.6 +1.0**
BURAR Bucovina Array 78.94 346 ||P **P 18 42 07.0 +0.3**
BURAR Bucovina Array 78.94 346 ||*i*/P **P 18 42 07.0 +0.4**
KIS Kishinev 78.94 343 ||*i*/P **P 18 42 06.0 -0.7**
comp=Z,400nm,1.5s,mb6.1
KIS Kishinev 78.94 343 ePP PP 18 45 06.0 +1.5
KIS Kishinev 78.94 343 ePPP 18 47 04.0
KIS eS S 18 52 08.0 +2.3
KIS Kishinev 78.94 343 ||*i*/P **P 18 42 06.0 -0.7**
KIS e 18 45 06.0
KIS ePPP 18 47 04.0
KIS eS S 18 52 08.0 +2.3
KIS ePS 18 53 10.0
KIS pmax pmax
comp=Z,400nm,1.5s,mb6.1
KIS pmax pmax
comp=Z,900nm,6.0s
KIS MLR MLR
comp=N,5µm,20.0s,MS5.9
KIS MLR MLR
comp=Z,6µm,20.0s,MS5.9
KIS MLR MLR
comp=E,2µm,19.0s,MS5.9
KIS MLR MLR
comp=Z,5µm,20.0s
GEC2 GERESS Array S 78.97 354 eP **P 18 42 05.7 -1.1**
comp=Z,88nm,1.8s,mb5.4
GEC2 eS S 18 52 05.5 -0.5
GEC2 eSS SS 18 57 33.9 +24
GEC2 GERESS Array S 78.97 354 eP **P 18 42 05.7 -1.1**
comp=Z,88nm,1.8s,mb5.4
GEC2 eS S 18 52 05.5 -0.5
GEC2 eSS SS 18 57 33.9 +24
GEC2 GERESS Array S 78.97 354 eP **P 18 42 05.7 -1.1**
GEC2 eS S 18 52 05.5 -0.5
GEC2 pmax pmax
comp=Z,88nm,1.8s,mb5.4
LANF Langenberg 79.11 358 eP **P 18 42 09.4 +1.8**
ANN Anapa 79.23 337 eP **P 18 42 09.7 +1.4**
STU Stuttgart 79.28 357 eP **P 18 42 07.4 -1.1**
comp=Z,124nm,1.8s,mb5.5
STU eS S 18 52 09.2 0.0
STU eSS SS 18 57 37.8 +24
STU Stuttgart 79.28 357 eP **P 18 42 10.5 +2.0**
comp=Z,100nm,1.5s,mb5.5
STU Stuttgart 79.28 357 eP **P 18 42 10.5 +2.0**
STU pmax pmax
comp=Z,100nm,1.5s,mb5.5
FLN La Foliniere 79.28 3 eP **P 18 42 07.4 -1.1**
comp=Z,183nm,1.3s,mb5.5
FLN eMLR MLR
comp=Z,4µm,19.5s,MS5.4
FLN La Foliniere 79.28 3 eP **P 18 42 07.4 -1.1**
comp=Z,91nm,1.3s,mb5.5
FLN LR LR
comp=Z,4µm,19.5s,MS5.7
FLN La Foliniere 79.28 3 eP **P 18 42 07.4 -1.1**
FLN pmax pmax
comp=Z,91nm,1.3s,mb5.5
FLN MLR MLR
comp=Z,4µm,19.5s,MS5.7
CTA Charters Tower 79.33 216 eP **P 18 42 07.1 -1.8**
comp=Z,55nm,1.1s,mb5.4
CTAO Charters Tower 79.33 216 eP **P 18 42 07.5 -1.5**
comp=Z,141nm,1.2s,mb5.8
CTAO LR LR
comp=Z,2µm,19.0s,MS5.4
CTAO Charters Tower 79.33 216 eP **P 18 42 07.5 -1.4**
CTAO pmax pmax
comp=Z,141nm,1.2s,mb5.8
CTAO MLR MLR
comp=Z,2µm,19.0s,MS5.4
PSZ Piszkesteto 79.34 349 eP **P 18 42 09.1 +0.3**
comp=Z,72nm,1.4s,mb5.4
PSZ Piszkesteto 79.34 349 eP **P 18 42 09.1 +0.3**
PSZ pmax pmax
comp=Z,72nm,1.4s,mb5.4
PSZ Piszkesteto 79.34 349 ||*i*/P **P 18 42 10.3 +1.5**
PSZ Piszkesteto 79.34 349 ||eP **P 18 42 10.1 +1.3**
ZST Bratislava 79.35 351 eP **P 18 42 09.6 +0.7**
comp=Z,57nm,1.6s,mb5.2
ZST eS S 18 52 10.5 +0.5
ZST Bratislava 79.35 351 eP **P 18 42 09.6 +0.7**
ZST pmax pmax
comp=Z,57nm,1.6s,mb5.2
ZST Bratislava 79.35 351 eP **P 18 42 09.6 +0.7**
ZEI Tsey 79.38 332 eP **P 18 42 07.7 -1.5**
ZEI pmax pmax
comp=Z,41nm,1.0s,mb5.3
LDF La Druitiere 79.47 3 eP **P 18 42 08.1 -1.4**
comp=Z,46nm,1.0s,mb5.1
LDF La Druitiere 79.47 3 eP **P 18 42 08.1 -1.4**
comp=Z,23nm,1.0s,mb5.1
LDF La Druitiere 79.47 3 eP **P 18 42 08.1 -1.4**
LDF pmax pmax
comp=Z,23nm,1.0s,mb5.1
KBKI Kotabaru 79.48 251 P **P 18 42 12.2 +2.2**
comp=Z,69nm,1.3s,mb5.4
KBKI Kotabaru 79.48 251 P **P 18 42 08.4 -1.6**
comp=Z,69nm,1.3s,mb5.4
STKI Sintang 79.55 256 P **P 18 42 10.9 +0.5**
comp=Z,2µmcomp=Z,115nm,1.5s,mb5.6
STKI Sintang 79.55 256 P **P 18 42 08.6 -1.8**
comp=Z,2µmcomp=Z,115nm,1.5s,mb5.6
ROSF Rostrenen 79.58 5 eP **P 18 42 09.1 -1.0**
comp=Z,271nm,1.5s,mb5.7
ROSF Rostrenen 79.58 5 eP **P 18 42 09.1 -1.0**
comp=Z,136nm,1.5s,mb5.7
ROSF Rostrenen 79.58 5 eP **P 18 42 09.1 -1.0**
ROSF pmax pmax
comp=Z,136nm,1.5s,mb5.7
MEZF Maizieres J'vi 79.63 360 eP **P 18 42 09.8 -0.6**
comp=Z,312nm,1.5s,mb5.7
MEZF Maizieres J'vi 79.63 360 eP **P 18 42 09.8 -0.6**
comp=Z,312nm,1.5s,mb6.0
GRR Gorron 79.64 4 eP **P 18 42 09.4 -1.1**

comp=Z,197nm,1.2s,mb5.6
GRR Gorton 79.64 4 *e*P **P 18 42 09.4 -1.1**
comp=Z,99nm,1.2s,mb5.6
GRR Gorton 79.64 4 *e*P **P 18 42 09.4 -1.1**
GRR pmax pmax
comp=Z,99nm,1.2s,mb5.6
CDF Champ du Feu 79.69 358 *e*P **P 18 42 09.9 -0.8**
comp=Z,259nm,1.6s,mb5.6
CDF Champ du Feu 79.69 358 *e*P **P 18 42 09.9 -0.8**
comp=Z,130nm,1.6s,mb5.6
CDF Champ du Feu 79.69 358 *e*P **P 18 42 09.9 -0.8**
CDF pmax pmax
comp=Z,130nm,1.6s,mb5.6
SGMF Saint Gilles 79.70 5 *e*P **P 18 42 09.8 -1.0**
comp=Z,311nm,1.6s,mb5.7
SGMF Saint Gilles 79.70 5 *e*P **P 18 42 09.8 -1.0**
comp=Z,156nm,1.6s,mb5.7
SGMF Saint Gilles 79.70 5 *e*P **P 18 42 09.8 -1.0**
SGMF pmax pmax
comp=Z,156nm,1.6s,mb5.7
CONA Conrad Observa 79.72 352 ⇑*i*pP pP 18 42 11.1 -0.5
comp=Z,82nm,1.9s,SNR=8.7
BFO Black Forest 79.75 357 P **P 18 42 11.0 0.0**
comp=Z,135nm,1.2s,mb5.8,SNR=6.2
BFO Black Forest 79.75 357 *e*P **P 18 42 10.0 -1.0**
comp=Z,88nm,1.6s,mb5.4
BFO *e*S S 18 52 14.0 -0.2
BFO *e*SS SS 18 57 44.9 +24
BFO Black Forest 79.75 357 *e*P **P 18 42 10.0 -1.0**
comp=Z,88nm,1.6s,mb5.4
BFO *e*S S 18 52 14.0 -0.2
BFO *e*SS SS 18 57 44.9 +24
BFO LR LR
comp=Z,3µm,21.0s,MS5.6
BFO Black Forest 79.75 357 *e*P **P 18 42 10.0 -1.0**
BFO *e*S S 18 52 14.0 -0.2
BFO pmax pmax
comp=Z,88nm,1.6s,mb5.4
BFO MLR MLR
comp=Z,3µm,21.0s,MS5.6
TESR 79.79 345 ⇑P **P 18 42 11.9 +0.7**
TESR 79.79 345 ⇑*i*P **P 18 42 11.9 +0.6**
SOC Sochi 79.79 335*c i*P **P 18 42 13.0 +1.6**
SOC *e* 18 45 10.7
SOC *e*S S 18 52 17.1 +2.2
SOC *e*SSS 19 00 46.0
SOC pmax pmax
comp=Z,37nm,0.9s,mb5.3
SOC MLR MLR
comp=Z,3µm,14.0s,MS5.7
FUR Furstenfeldbru 79.80 355 *e*P **P 18 42 10.4 -0.9**
comp=Z,92nm,1.5s,mb5.5
FUR *e*S S 18 52 14.2 -0.5
FUR *e*SS SS 18 57 46.7 +25
FUR Furstenfeldbru 79.80 355 *e*P **P 18 42 10.4 -0.9**
comp=Z,92nm,1.5s,mb5.5
FUR *e*S S 18 52 14.2 -0.5
FUR *e*SS SS 18 57 46.7 +25
FUR Furstenfeldbru 79.80 355 *e*P **P 18 42 10.4 -0.9**
FUR *e*S S 18 52 14.2 -0.5
FUR pmax pmax
comp=Z,92nm,1.5s,mb5.5
SIM Simferopol' 79.86 339*ce*P **P 18 42 14.8 +3.1**
SIM *e* 18 45 18.0
SIM *e*S S 18 52 21.0 +5.5
SIM pmax pmax
comp=Z,45nm,1.2s,mb5.3
SIM pmax pmax
comp=Z,21nm,0.9s,mb5.1
SIM MLR MLR
comp=Z,5µm,19.0s,MS5.9
BUD Budapest 79.86 350 *e*P **P 18 42 12.8 +1.1**
ECH Echery 79.89 358 *e*P **P 18 42 12.2 +0.4**
THEF They Montfort 79.90 359 *e*P **P 18 42 12.4 +0.5**
MOA Molln 79.93 353 ⇑*i*P **P 18 42 11.4 -0.7**
comp=Z,27nm,1.4s,mb5.0,SNR=11
LIBD Limburg 79.94 358 *e*P **P 18 42 15.3 +3.2**
SPAK Spaichingen-Ko 79.96 357 *e*P **P 18 42 13.9 +1.7**
QUIF Quistinic 80.01 5 *e*P **P 18 42 11.5 -1.0**
comp=Z,165nm,1.3s,mb5.5
QUIF Quistinic 80.01 5 *e*P **P 18 42 11.5 -1.0**
comp=Z,83nm,1.3s,mb5.5
QUIF Quistinic 80.01 5 *e*P **P 18 42 11.5 -1.0**
QUIF pmax pmax
comp=Z,83nm,1.3s,mb5.5
DRGR 80.10 347 ⇑P **P 18 42 14.4 +1.4**
DRGR 80.10 347 P **P 18 42 13.9 +0.9**
DRGR 80.10 347 ⇑*i*P **P 18 42 14.4 +1.4**
HAU Haudompre 80.11 359 *e*P **P 18 42 12.1 -0.9**
comp=Z,241nm,1.6s,mb5.6
HAU *e*MLR MLR
comp=Z,3µm,19.2s,MS5.4
HAU Haudompre 80.11 359 *e*P **P 18 42 12.1 -0.9**
comp=Z,120nm,1.6s,mb5.6
HAU LR LR
comp=Z,3µm,19.3s,MS5.7
HAU Haudompre 80.11 359 *e*P **P 18 42 12.1 -0.9**
HAU pmax pmax
comp=Z,120nm,1.6s,mb5.6
HAU MLR MLR
comp=Z,3µm,19.3s,MS5.7
FELD Feldberg im Sc 80.21 358 *e*P **P 18 42 16.4 +2.9**
MOF Molkenrain 80.25 358 *e*P **P 18 42 15.2 +1.4**
HINF Hinteralfeld 80.29 358 *e*P **P 18 42 13.0 -1.0**
comp=Z,325nm,1.8s,mb5.7
HINF Hinteralfeld 80.29 358 *e*P **P 18 42 13.0 -1.0**
comp=Z,162nm,1.8s,mb5.7
HINF Hinteralfeld 80.29 358 *e*P **P 18 42 13.0 -1.0**
HINF pmax pmax
comp=Z,162nm,1.8s,mb5.7
VRI Vrincioaia 80.40 344 ⇑P **P 18 42 14.2 -0.4**
VRI Vrincioaia 80.40 344 ⇑*i*P **P 18 42 14.3 -0.3**
ARSA Arzberg 80.43 352 ⇑*i*P **P 18 42 14.3 -0.4**
comp=Z,43nm,1.7s,mb5.1,SNR=19
MMRI Maumere 80.43 242 P **P 18 42 18.1 +3.0**
comp=Z,3µmcomp=Z,187nm,1.7s,mb5.7
MMRI Maumere 80.43 242 P **P 18 42 16.8 +1.7**
comp=Z,3µmcomp=Z,187nm,1.7s,mb5.7
KTGM Kuala Trenggan 80.46 266 P **P 18 42 18.0 +2.6**
AJM Ajmer 80.59 301 *e*PKP **P 18 42 16.1 +0.2**
AJM AMb AMB 18 42 21.0
comp=Z,52nm,1.3s,mb5.3
MTDJ Mount Denham 80.61 73 *e*P **P 18 42 16.1 0.0**
comp=Z,297nm,1.2s,mb6.1
MTDJ LR LR
comp=Z,3µm,21.0s,MS5.6
MOTA Moosalm 80.62 355 ⇑*i*pP pP 18 42 16.1 -0.4
comp=Z,49nm,1.3s,SNR=16
WTTA Wattenberg 80.68 355 ⇑*i*pP pP 18 42 16.6 -0.2
comp=Z,84nm,1.4s,SNR=33
GTBY Guantanamo Bay 80.69 70 *e*P **P 18 42 14.9 -1.7**
comp=Z,88nm,0.9s,mb5.7
GTBY LR LR
comp=Z,3µm,20.0s,MS5.7
TLCR 80.70 343 ⇓P **P 18 42 16.5 +0.3**
TLCR 80.70 343 ⇓*i*P **P 18 42 16.5 +0.3**
DAVA Damuels 80.73 356 ⇑*i*pP pP 18 42 18.0 +0.9
comp=Z,46nm,1.7s,SNR=9.4
KBA Koelnbreinsper 80.76 354 ⇑*i*P **P 18 42 16.3 -0.2**
comp=Z,174nm,1.5s,mb5.8,SNR=19
LOMF Lomont 80.76 358 *e*P **P 18 42 18.7 +2.2**
CFR Carcaliu 80.83 343 P **P 18 42 20.0 +3.1**
CFR Carcaliu 80.83 343 ⇓*i*P **P 18 42 18.8 +1.9**
GRER 80.83 344 ⇓P **P 18 42 18.5 +1.5**
GRER 80.83 344 ⇓*i*P **P 18 42 18.5 +1.6**
HYF Humbligny 80.85 1 *e*P **P 18 42 16.5 -0.5**
LOR Lormes 80.86 0 *e*P **P 18 42 16.2 -0.9**
comp=Z,349nm,1.6s,mb5.7
LOR *e*MLR MLR
comp=Z,5µm,18.8s,MS5.6
LOR Lormes 80.86 0 *e*P **P 18 42 16.2 -0.9**
comp=Z,174nm,1.6s,mb5.7
LOR LR LR
comp=Z,5µm,18.8s,MS5.9
LOR Lormes 80.86 0 *e*P **P 18 42 16.2 -0.9**
LOR pmax pmax
comp=Z,174nm,1.6s,mb5.7
LOR MLR MLR
comp=Z,5µm,18.8s,MS5.9
MLR Muntele Rosu 80.89 345 ⇑P **P 18 42 17.9 +0.7**
MLR Muntele Rosu 80.89 345 P **P 18 42 17.2 -0.1**
comp=Z,19nm,0.9s,mb5.0,baz=275,slow=3.5,SNR=22
MLR Muntele Rosu 80.89 345 P **P 18 42 17.2 -0.1**
MLR pmax pmax
comp=Z,19nm,1.0s
MLR Muntele Rosu 80.89 345 ⇑*i*P **P 18 42 18.0 +0.7**
FETA Feichten 80.96 356 ⇑*i*pP pP 18 42 18.0 -0.3
comp=Z,46nm,1.1s,SNR=10
SOKA Soboth 81.03 353 ⇑*i*P **P 18 42 16.6 -1.4**
comp=Z,103nm,1.9s,mb5.4
PERS Pernice 81.07 353 *i*P **P 18 42 18.6 +0.5**
SSF Saint Saulge 81.07 1 *e*P **P 18 42 17.3 -0.9**
comp=Z,188nm,1.4s,mb5.5
SSF Saint Saulge 81.07 1 *e*P **P 18 42 17.3 -0.9**
comp=Z,94nm,1.4s,mb5.5
SSF Saint Saulge 81.07 1 *e*P **P 18 42 17.3 -0.9**
SSF pmax pmax
comp=Z,94nm,1.4s,mb5.5
VOIR 81.09 345 P **P 18 42 20.7 +2.4**
ABTA Abfaltersbach 81.14 354 *i*P **P 18 42 17.8 -0.8**
comp=Z,50nm,1.3s,mb5.3,SNR=22
PKSM Moragy 81.16 350 ⇑P **P 18 42 20.1 +1.5**
PKSM Moragy 81.16 350 P **P 18 42 19.2 +0.5**
PKSM Moragy 81.16 350 ⇑*i*P **P 18 42 20.1 +1.4**
MYKA Terra Mystica 81.19 354 P **P 18 42 19.7 +0.9**
comp=Z,46nm,1.7s,mb5.1
OBKA Obir 81.24 353 ⇑*i*P **P 18 42 19.0 -0.1**
comp=Z,39nm,1.1s,mb5.2,SNR=18
AVF Avril sur Loir 81.34 1 *e*P **P 18 42 18.5 -1.1**
comp=Z,153nm,1.3s,mb5.5
AVF Avril sur Loir 81.34 1 *e*P **P 18 42 18.5 -1.1**
comp=Z,76nm,1.3s,mb5.5
AVF Avril sur Loir 81.34 1 *e*P **P 18 42 18.5 -1.1**
AVF pmax pmax
comp=Z,76nm,1.3s,mb5.5
BZS Buzias 81.40 348 ⇓P **P 18 42 22.2 +2.3**
BZS Buzias 81.40 348 ⇓*i*P **P 18 42 22.2 +2.3**
QUE Quetta 81.42 309 *e*P **P 18 42 19.0 -1.3**
QUE *e*S S 18 52 35.0 +2.7
MFF Saint Martin d 81.45 3 *e*P **P 18 42 19.3 -0.9**
comp=Z,127nm,1.2s,mb5.4
MFF Saint Martin d 81.45 3 *e*P **P 18 42 19.3 -0.9**
comp=Z,64nm,1.2s,mb5.4
MFF Saint Martin d 81.45 3 *e*P **P 18 42 19.3 -0.9**
MFF pmax pmax
comp=Z,63nm,1.2s,mb5.4
GZR Guza Zlata 81.46 347 ⇑*i*P **P 18 42 19.8 -0.5**
SMF Signal de Mont 81.49 0 *e*P **P 18 42 19.4 -1.0**
comp=Z,275nm,1.4s,mb5.7
SMF Signal de Mont 81.49 0 *e*P **P 18 42 19.4 -1.0**
comp=Z,137nm,1.4s,mb5.7
SMF Signal de Mont 81.49 0 *e*P **P 18 42 19.4 -1.0**
SMF pmax pmax
comp=Z,137nm,1.4s,mb5.7
CABF La Chapelle 81.51 359 *e*P **P 18 42 20.0 -0.5**
comp=Z,240nm,1.4s,mb5.6
CABF La Chapelle 81.51 359 *e*P **P 18 42 20.0 -0.5**
comp=Z,120nm,1.4s,mb5.6
CABF La Chapelle 81.51 359 *e*P **P 18 42 20.0 -0.5**
CABF pmax pmax
comp=Z,120nm,1.4s,mb5.6
AMRR Amara 81.52 344 P **P 18 42 24.5 +3.9**
GNI Garni 81.53 330 *e*P **P 18 42 22.5 +1.7**
comp=Z,140nm,1.6s,mb5.6
GNI LR LR
comp=Z,5µm,20.0s,MS5.9
GNI Garni 81.53 330 *e*P **P 18 42 22.5 +1.8**
GNI pmax pmax
comp=Z,140nm,1.6s
GNI MLR MLR
comp=Z,5µm,20.0s
BGF Bois d'Agland 81.57 1 *e*P **P 18 42 19.9 -0.9**
comp=Z,125nm,1.3s,mb5.4
BGF Bois d'Agland 81.57 1 *e*P **P 18 42 19.9 -0.9**
comp=Z,62nm,1.3s,mb5.4
BGF Bois d'Agland 81.57 1 *e*P **P 18 42 19.9 -0.9**
BGF pmax pmax
comp=Z,62nm,1.3s,mb5.4
SULR 81.63 344 ⇓P **P 18 42 20.8 -0.4**
SULR 81.63 344 ⇓*i*P **P 18 42 20.8 -0.4**
GRTK Grand Turk 81.69 66 PFAKE 18 42 30.0 +8.1
GRTK LR LR
comp=Z,5µm,21.0s,MS5.8
BHPL Bhopal 81.70 297 *e*PKP **P 18 42 21.8 -0.1**
BHPL AMb AMB 18 42 26.7
comp=Z,63nm,1.4s,mb5.3
LJU Ljubljana 81.70 353 *e*P **P 18 42 23.5 +1.9**
LJU *e*S S 18 52 31.1 -3.7
TCF Toulx Ste Croi 81.83 2 *e*P **P 18 42 21.1 -1.1**
comp=Z,50nm,1.0s,mb5.1
TCF Toulx Ste Croi 81.83 2 *e*P **P 18 42 21.1 -1.1**
comp=Z,25nm,1.0s,mb5.1
TCF Toulx Ste Croi 81.83 2 *e*P **P 18 42 21.1 -1.1**
TCF pmax pmax
comp=Z,25nm,1.0s,mb5.1
JAVS Javornik 81.89 353 *i*P **P 18 42 23.8 +1.2**
KULM Kulim 82.02 268 P **P 18 42 25.5 +1.8**
AGO Saint Agoulin 82.08 1 *e*P **P 18 42 25.6 +2.1**
PLDF La Plantade 82.16 1 *e*P **P 18 42 26.0 +2.0**
BOJS Bojanci 82.18 352 *i*P **P 18 42 24.2 +0.1**
BOJS *e*S S 18 52 33.7 -6.0
PSN Preselentsi 82.27 343 P **P 18 42 27.9 +3.3**
JTS JuntasAbangare 82.35 83 PFAKE 18 42 40.0 +15
JTS LR LR
comp=Z,2µm,20.0s,MS5.5
JTS JuntasAbangare 82.35 83 *i*P **P 18 42 26.6 +1.2**
PYM Petit Puy Mans 82.38 1 *e*P **P 18 42 27.1 +2.0**
NGP Nagpur 82.47 295 *e*PKP **P 18 42 24.8 -1.2**
NGP AMb AMB 18 42 28.0
comp=Z,64nm,0.9s,mb5.6
LPL La Plagne 82.60 358 *e*P **P 18 42 26.4 +0.1**
comp=Z,90nm,1.5s,mb5.3
LPL La Plagne 82.60 358 *e*P **P 18 42 26.4 +0.1**
comp=Z,45nm,1.5s,mb5.3
LPL La Plagne 82.60 358 *e*P **P 18 42 26.4 +0.1**
LPL pmax pmax
comp=Z,45nm,1.5s,mb5.3
EIDS Eidsvold 82.60 210 *e*P **P 18 42 25.1 -1.2**
comp=Z,72nm,1.0s,mb5.7
LPG La Plagne 82.61 358 *e*P **P 18 42 26.7 +0.4**
comp=Z,144nm,1.6s,mb5.5
LPG La Plagne 82.61 358 *e*P **P 18 42 26.7 +0.4**
comp=Z,72nm,1.5s,mb5.5
LPG La Plagne 82.61 358 *e*P **P 18 42 26.7 +0.4**
LPG pmax pmax
comp=Z,72nm,1.5s,mb5.5
VIS Vishakhapatnam 82.76 289 *e*PKP **P 18 42 27.4 -0.1**
RJF Les Rejaudoux 82.80 2 *e*P **P 18 42 26.3 -1.0**
comp=Z,266nm,1.6s,mb5.7
RJF *e*MLR MLR
comp=Z,4µm,17.8s,MS5.6
RJF Les Rejaudoux 82.80 2 *e*P **P 18 42 26.3 -1.0**
comp=Z,133nm,1.6s,mb5.7
RJF LR LR
comp=Z,4µm,17.8s,MS5.9
RJF Les Rejaudoux 82.80 2 *e*P **P 18 42 26.3 -1.0**
RJF pmax pmax
comp=Z,133nm,1.6s,mb5.7
RJF MLR MLR
comp=Z,4µm,17.8s,MS5.9
SSB Saint Sauveur 82.86 360 *e*P **P 18 42 30.8 +3.2**
LBL Lubilhac 82.90 1 *e*P **P 18 42 30.3 +2.5**
KOPT Kop Dagi 82.90 333 *i*P PP 18 45 37.4 0.0
RKT Rikitea 83.01 143 *e*SS SS 18 58 14.5 +1.9
comp=Z,2µm,35.0s
RKT *e*LQ 19 04 19.9
comp=Z,2µm,30.2s
RKT *e*LR LR 19 08 18.3
comp=Z,2µmcomp=Z,25.2s,baz=335
KNA Kununurra 83.02 233 P **P 18 42 28.2 -0.5**
comp=Z,1µmcomp=Z,141nm,1.1s,mb5.9
FRIM Kepong 83.02 266 P **P 18 42 31.2 +2.3**
SZH Strazhica 83.06 344 P **P 18 42 28.4 -0.3**
LFF La Frestale 83.14 3 *e*P **P 18 42 28.3 -0.8**
comp=Z,467nm,1.6s,mb6.0
LFF La Frestale 83.14 3 *e*P **P 18 42 28.3 -0.8**
comp=Z,234nm,1.6s,mb6.0
LFF La Frestale 83.14 3 *e*P **P 18 42 28.3 -0.8**
LFF pmax pmax
comp=Z,234nm,1.6s,mb6.0
CAF Calviac 83.19 2 *e*P **P 18 42 28.7 -0.6**
comp=Z,254nm,1.6s,mb5.7
CAF Calviac 83.19 2 *e*P **P 18 42 28.7 -0.6**
comp=Z,127nm,1.6s,mb5.7
CAF Calviac 83.19 2 *e*P **P 18 42 28.7 -0.6**
CAF pmax pmax
comp=Z,127nm,1.6s,mb5.7
ORIF Oris-en-Rattie 83.21 359 *e*P **P 18 42 29.3 -0.1**
comp=Z,174nm,1.6s,mb5.5
ORIF *e*MLR MLR
comp=Z,4µm,21.0s,MS5.4
ORIF Oris-en-Rattie 83.21 359 *e*P **P 18 42 29.3 -0.1**
comp=Z,87nm,1.6s,mb5.5
ORIF Oris-en-Rattie 83.21 359 *e*P **P 18 42 29.3 -0.1**
ORIF pmax pmax
comp=Z,87nm,1.6s,mb5.5
VIVF Saint-Julien-l 83.28 360 *e*P **P 18 42 29.3 -0.5**
comp=Z,226nm,1.7s,mb5.6
VIVF Saint-Julien-l 83.28 360 *e*P **P 18 42 29.3 -0.5**
comp=Z,113nm,1.7s,mb5.6
VIVF Saint-Julien-l 83.28 360 *e*P **P 18 42 29.3 -0.5**
VIVF pmax pmax
comp=Z,113nm,1.7s,mb5.6
MPEP Malo Peshtene 83.32 346 P **P 18 42 31.5 +1.5**
SUSE Susehri 83.35 335 *i*P PP 18 45 29.9 -11
MBDF Montbardon 83.39 358 *e*P **P 18 42 30.3 -0.1**
comp=Z,90nm,1.6s,mb5.3
MBDF Montbardon 83.39 358 *e*P **P 18 42 30.3 -0.1**
comp=Z,45nm,1.6s,mb5.2
MBDF Montbardon 83.39 358 *e*P **P 18 42 30.3 -0.1**
MBDF pmax pmax
comp=Z,45nm,1.6s,mb5.2
OCF Saint Nazaire 83.55 359 *e*P **P 18 42 34.9 +3.7**
OG26 St.-Nazaire-De 83.55 359 *e*P **P 18 42 34.9 +3.7**
SDDR Presa de Saban 83.62 67 *e*P **P 18 42 30.7 -1.2**
comp=Z,24nm,0.8s,mb5.4
SURF Saint Ours 83.63 358 *e*P **P 18 42 35.9 +4.3**
JMB Yambol 83.73 344 P **P 18 42 35.7 +3.5**
JMB Yambol 83.73 344 P **P 18 42 35.7 +3.5**
JMB Yambol 83.73 344 P **P 18 42 35.2 +3.0**
KHKI Kahang-Kahang 83.91 248 P **P 18 42 37.4 +4.0**
comp=Z,98nm,1.1s,mb5.8
PLE Pijevlja 83.92 349 ⇑*i*P **P 18 42 33.8 +0.7**
AKL Akola 83.96 296 *e*PKP **P 18 42 35.1 +1.4**
AKL AMb AMB 18 43 01.3
comp=Z,40nm,2.2s,mb5.2
WRAB Tennant Creek 84.02 226 P **P 18 42 33.0 -0.8**
comp=Z,398nm,1.2s,mb6.4,SNR=15
WRAB Tennant Creek 84.02 226 *e*P **P 18 42 32.0 -1.7**
comp=Z,156nm,1.4s,mb6.0
WRAB Tennant Creek 84.02 226 *e*P **P 18 42 32.0 -1.8**
WRAB pmax pmax
comp=Z,156nm,1.4s,mb6.0
WB2 Warramunga Arr 84.03 226 *e*P **P 18 42 31.6 -2.1**
PGB Panagyurishte 84.04 345 P **P 18 42 36.1 +2.3**
TPI Tanjungpandan 84.08 258 P **P 18 42 37.3 +3.0**
comp=Z,2µmcomp=Z,149nm,1.2s,mb6.0
TPI Tanjungpandan 84.08 258 P **P 18 42 33.6 -0.7**
comp=Z,2µmcomp=Z,149nm,1.2s,mb6.0
TOUF Mont Tournerai 84.09 358 *e*P **P 18 42 35.7 +1.7**
AUTN L'Aution 84.10 358 *e*P **P 18 42 36.5 +2.5**
UPM Unac-Piva 84.11 349 ⇑*i*P **P 18 42 33.4 -0.7**
UPM Unac-Piva 84.11 349 ⇑*i*P **P 18 42 33.5 -0.6**
SAOF Saorge 84.11 358 *e*P **P 18 42 35.5 +1.4**
VTS Vitosha 84.15 346 P **P 18 42 33.5 -0.8**
VTS Vitosha 84.15 346 P **P 18 42 33.5 -0.8**
VTS Vitosha 84.15 346 ⇑*i*P **P 18 42 34.5 +0.2**
VTS Vitosha 84.15 346 P **P 18 42 34.0 -0.3**
KEMA Kemaliye 84.15 334 *i*P PP 18 45 43.8 -3.8
SMRF Simiane la Rot 84.15 359 *e*P **P 18 42 34.1 -0.2**
comp=Z,237nm,1.6s,mb5.8
SMRF Simiane la Rot 84.15 359 *e*P **P 18 42 34.1 -0.2**
comp=Z,237nm,1.6s,mb6.1
LUCF Luceram 84.21 358 *e*P **P 18 42 37.2 +2.6**
MVIF Mont Vial 84.21 358 *e*P **P 18 42 37.5 +2.9**
SBF Sospel 84.23 358 *e*P **P 18 42 33.5 -1.2**
comp=Z,134nm,1.3s,mb5.6
SBF Sospel 84.23 358 *e*P **P 18 42 33.5 -1.2**
comp=Z,67nm,1.3s,mb5.6
SBF Sospel 84.23 358 *e*P **P 18 42 33.5 -1.2**
SBF pmax pmax
comp=Z,67nm,1.3s,mb5.6
ELDT Eldivan 84.26 338 *i*P PP 18 45 51.2 +2.8
EPON Pontenova 84.28 8 P **P 18 42 34.5 -0.5**
comp=Z,261nm,1.6s,mb6.1
IVA Berane 84.32 349 ⇑*i*P **P 18 42 35.1 -0.1**
IVA Berane 84.32 349 ⇑*i*P **P 18 42 35.2 0.0**
REVF Revere 84.36 358 *e*P **P 18 42 38.0 +2.6**
PLD Plovdiv 84.39 345 P **P 18 42 38.8 +3.2**
PLD Plovdiv 84.39 345 P **P 18 42 38.8 +3.2**
BRY Bratogost 84.44 350 ⇑*i*P **P 18 42 34.1 -1.7**
BRY Bratogost 84.44 350 ⇑*i*P **P 18 42 34.2 -1.6**
EARI Arriondas 84.47 7 P **P 18 42 37.2 +1.3**
comp=Z,250nm,2.0s,mb6.0
NKY Niksic 84.48 349 ⇑*i*P **P 18 42 35.0 -1.0**
FRF La Foret Royal 84.55 358 *e*P **P 18 42 35.1 -1.2**
comp=Z,137nm,1.5s,mb5.5
FRF La Foret Royal 84.55 358 *e*P **P 18 42 35.1 -1.2**
comp=Z,69nm,1.5s,mb5.6
FRF La Foret Royal 84.55 358 *e*P **P 18 42 35.1 -1.2**
FRF pmax pmax
comp=Z,69nm,1.5s,mb5.6
PVY Plav 84.58 349 *e*P **P 18 42 35.9 -0.6**
STS Santiago 84.59 10 P **P 18 42 38.0 +1.5**
comp=Z,59nm,0.9s,mb5.7
STS Santiago 84.59 10 P **P 18 42 38.0 +1.5**
STS pmax pmax
comp=Z,59nm,0.9s,mb5.7
ELAN Lanestosa 84.66 6 P **P 18 42 36.8 -0.1**
comp=Z,178nm,1.2s,mb6.1
ELBA Catalca 84.67 342 *i*P PP 18 45 47.0 -4.8
TSI Tuntungan 84.70 269 P **P 18 42 38.4 +0.9**
KDZ Kurdzhali 84.72 344 P **P 18 42 39.7 +2.5**
MTLF Montolieu 84.77 2 *e*P **P 18 42 36.6 -0.9**
comp=Z,122nm,1.5s,mb5.5
MTLF Montolieu 84.77 2 *e*P **P 18 42 36.6 -0.9**
comp=Z,61nm,1.5s,mb5.5
MTLF Montolieu 84.77 2 *e*P **P 18 42 36.6 -0.9**
MTLF pmax pmax
comp=Z,61nm,1.5s,mb5.5
EALK Alkurruntz 84.78 4 P **P 18 42 38.8 +1.3**
comp=Z,181nm,1.6s,mb6.0
LMR La Mourre 84.78 358 *e*P **P 18 42 36.4 -1.1**
comp=Z,206nm,1.6s,mb5.7
LMR La Mourre 84.78 358 *e*P **P 18 42 36.4 -1.1**
comp=Z,103nm,1.6s,mb5.7
LMR La Mourre 84.78 358 *e*P **P 18 42 36.4 -1.1**
LMR pmax pmax
comp=Z,103nm,1.6s,mb5.7
BCI Bajram Curri 84.79 348 *i*P **P 18 42 39.9 +2.3**
RZN Rozhen 84.80 345 P **P 18 42 41.0 +3.4**
TTG Podgorica 84.83 349 ⇑*i*P **P 18 42 35.9 -1.8**
TTG Podgorica 84.83 349 ⇑*i*P **P 18 42 36.0 -1.7**
CDAG Cicekdag 84.86 337 *i*P PP 18 45 52.3 -1.1
KKB Krupnik 84.88 346 P **P 18 42 39.5 +1.5**
SJPF Ste Jean 84.89 4 *e*P **P 18 42 37.4 -0.7**
comp=Z,36nm,1.0s,mb5.2
SJPF Ste Jean 84.89 4 *e*P **P 18 42 37.4 -0.7**
comp=Z,18nm,1.0s,mb5.2
SJPF Ste Jean 84.89 4 *e*P **P 18 42 37.4 -0.7**
SJPF pmax pmax
comp=Z,18nm,1.0s,mb5.2
HCY Herceg Novi 84.90 350 ⇑*i*P **P 18 42 37.1 -1.0**
BR131 Keskin Array S 84.94 338 *e*P **P 18 42 39.4 +1.0**
comp=Z,21nm,0.9s,mb5.3
BR131 LR LR
comp=Z,2µm,20.0s,MS5.5
BRTR Keskin Array B 84.94 338 P **P 18 42 36.4 -1.9**
comp=Z,18nm,0.9s,mb5.2,baz=50,slow=2.5,SNR=24
BRTR PP PP 18 45 41.5 -12
comp=Z,4.5nm,0.9s,baz=15,slow=4.7,SNR=4.5
BRTR PKKPbc PKKPbc 19 00 44.0 +0.2
comp=Z,1.8nm,0.9s,baz=173,slow=5.0,SNR=7.4
BRTR PKPPKP 19 08 39.2
comp=Z,1.7nm,0.9s,baz=175,slow=5.7,SNR=7.1
BRTR LR LR 19 26 56.2
comp=Z,2µm,18.5s,MS5.5,baz=194,slow=40
BUM Brajici-Budva 85.00 349 ⇑*i*P **P 18 42 37.8 -0.8**
BUM Brajici-Budva 85.00 349 ⇑*i*P **P 18 42 37.9 -0.8**
SKO Skopje 85.00 347 P **P 18 42 40.7 +2.1**
SKO Skopje 85.00 347 P **P 18 42 40.7 +2.1**
SKO Skopje 85.00 347 *e*P **P 18 42 37.9 -0.7**
PSI Prapat 85.02 268 P **P 18 42 38.0 -1.2**
comp=Z,153nm,0.9s,mb6.1,baz=360,slow=1.7,SNR=31
EPF Esparros 85.04 3 *e*P **P 18 42 37.1 -1.7**
comp=Z,76nm,1.4s,mb5.3
EPF Esparros 85.04 3 *e*P **P 18 42 37.1 -1.7**
comp=Z,38nm,1.4s,mb5.3
EPF Esparros 85.04 3 *e*P **P 18 42 37.1 -1.7**
EPF pmax pmax
comp=Z,38nm,1.4s,mb5.3
MMB Musomiste 85.05 346 P **P 18 42 41.4 +2.5**
MALT Malatya 85.06 334 *e*P **P 18 42 40.2 +1.2**
comp=Z,47nm,1.4s,mb5.4
MALT LR LR
comp=Z,2µm,19.0s,MS5.5

MALT Malatya 85.06 334 ⇓*i* P **P** **18 42 40.0 +1.0**
MALT Malatya 85.06 334 ⇓*i* P **P** **18 42 40.0 +1.0**
MALT Malatya 85.06 334 P **P** **18 42 40.2 +1.2**
comp=Z,532nmcomp=Z,22nm,1.4s,mb5.1
PUK Puka 85.13 348 *i* P **P** **18 42 41.4 +2.1**
PUK Puka 85.13 348 *i* P PP 18 45 58.6 +3.1
ETSF Etsaut 85.14 4 *e*P **P** **18 42 38.7 -0.6**
comp=Z,178nm,1.6s,mb5.7
ETSF Etsaut 85.14 4 *e*P **P** **18 42 38.7 -0.6**
comp=Z,89nm,1.6s,mb5.7
ETSF Etsaut 85.14 4 *e*P **P** **18 42 38.7 -0.6**
ETSF pmax pmax
comp=Z,89nm,1.6s,mb5.7
VIEF Viey 85.17 3 *e*P **P** **18 42 41.3 +1.8**
RDO Rodhopi 85.19 344 P **P** **18 42 42.5 +2.9**
RDO Rodhopi 85.19 344 P **P** **18 42 42.5 +2.9**
ERUA La Rua 85.21 9 P **P** **18 42 41.8 +2.1**
comp=Z,111nm,0.8s,mb5.0
ERUA La Rua 85.21 9 P **P** **18 42 41.8 +2.1**
ERUA pmax pmax
comp=Z,11nm,0.8s,mb5.0
BBAL Bala 85.23 338 *i* P PP 18 45 59.8 +3.4
RESF Ens 85.26 3 *e*P **P** **18 42 40.2 +2.1**
ULC Ulcinj 85.29 349 ⇑*i* P **P** **18 42 39.3 -0.8**
ALN Alexandroupoli 85.35 344 P **P** **18 42 39.5 -0.9**
ALN Alexandroupoli 85.35 344 P **P** **18 42 39.5 -0.9**
EBIE Bielsa 85.38 3 P **P** **18 42 41.9 +1.4**
comp=Z,94nm,1.5s,mb5.7
PHP Peshkopia 85.42 348 *i* P **P** **18 42 42.4 +1.7**
AQU L'Aquila 85.46 353 *e*P **P** **18 42 42.9 +2.0**
comp=Z,31nm,0.9s,mb5.4
AQU LR LR
comp=Z,2µm,20.0s,MS5.5
AQU L'Aquila 85.46 353 *e*P **P** **18 42 42.9 +2.0**
AQU pmax pmax
comp=Z,31nm,0.9s,mb5.4
AQU MLR MLR
comp=Z,2µm,20.0s,MS5.5
AQU L'Aquila 85.46 353 ⇑*i* P **P** **18 42 43.2 +2.3**
VAY Valandovo 85.48 346 P **P** **18 42 39.2 -1.9**
VAY Valandovo 85.48 346 P **P** **18 42 39.2 -1.9**
VAY Valandovo 85.48 346 *e*P **P** **18 42 40.3 -0.7**
NGJI Ngawi 85.50 252 P **P** **18 42 45.7 +4.3**
comp=Z,132nm,1.6s,mb5.8
NGJI Ngawi 85.50 252 P **P** **18 42 41.7 +0.3**
comp=Z,132nm,1.6s,mb5.8
PGF Pioggiola 85.50 357 *e*P **P** **18 42 39.7 -1.4**
comp=Z,159nm,1.4s,mb5.7
PGF Pioggiola 85.50 357 *e*P **P** **18 42 39.7 -1.4**
comp=Z,80nm,1.4s,mb5.8
PGF Pioggiola 85.50 357 *e*P **P** **18 42 39.7 -1.4**
PGF pmax pmax
comp=Z,80nm,1.4s,mb5.8
KAVA Kavala 85.50 345 P **P** **18 42 39.6 -1.6**
SRS Serrai 85.53 346 P **P** **18 42 40.4 -0.9**
SRS Serrai 85.53 346 P **P** **18 42 40.4 -0.9**
KNT Kendrikon 85.59 346 P **P** **18 42 40.8 -0.8**
KNT Kendrikon 85.59 346 P **P** **18 42 40.8 -0.8**
SJI Sawahan 85.61 252 P **P** **18 42 45.9 +3.9**
comp=Z,55nm,1.7s,mb5.5
SJI Sawahan 85.61 252 P **P** **18 42 41.4 -0.6**
comp=Z,56nm,1.7s,mb5.5
KRUS Krusevo 85.62 347 *e*P **P** **18 42 40.8 -1.0**
ELOB Lobios 85.64 9 P **P** **18 42 42.6 +0.8**
comp=Z,66nm,1.3s,mb5.7
BKNI Bangkinang 85.67 265 P **P** **18 42 45.0 +2.7**
comp=Z,2µmcomp=Z,178nm,1.1s,mb6.2
BKNI Bangkinang 85.67 265 P **P** **18 42 42.6 +0.3**
comp=Z,2µmcomp=Z,178nm,1.1s,mb6.2
CSOR Sort 85.72 2 P **P** **18 42 44.3 +2.1**
comp=Z,55nm,0.9s,mb5.8
HYB Hyderabad 85.74 293 *i* P **P** **18 42 43.0 +0.3**
PCAB Cabril 85.80 9 *e*P **P** **18 42 41.2 -1.4**
comp=Z,53nm,1.7s,mb5.5
TIR Tirane 85.82 348 P **P** **18 42 42.2 -0.5**
TIR Tirane 85.82 348 P **P** **18 42 42.2 -0.5**
PWJI Pagerwojo 85.82 251 P **P** **18 42 44.8 +1.8**
comp=Z,110nm,1.1s,mb6.0
PWJI Pagerwojo 85.82 251 P **P** **18 42 43.3 +0.3**
comp=Z,110nm,1.1s,mb6.0
SOH Sokhos 85.86 346 P **P** **18 42 42.3 -0.6**
SOH Sokhos 85.86 346 P **P** **18 42 42.3 -0.6**
GRG Griva 85.87 346 P **P** **18 42 43.1 +0.1**
GRG Griva 85.87 346 P **P** **18 42 43.1 +0.1**
BIA Bitola 85.96 347 *e*P **P** **18 42 42.6 -0.8**
THE Thessaloniki 86.10 346 P **P** **18 42 42.5 -1.6**
THE Thessaloniki 86.10 346 P **P** **18 42 42.5 -1.6**
HORT Hortiatis 86.11 346 P **P** **18 42 44.2 0.0**
HORT Hortiatis 86.11 346 P **P** **18 42 44.2 0.0**
FNA Florina 86.18 347 P **P** **18 42 43.2 -1.3**
FNA Florina 86.18 347 P **P** **18 42 43.2 -1.3**
EMIR Miracle 86.19 2 P **P** **18 42 45.6 +1.1**
comp=Z,34nm,0.9s,mb5.5
BALY Balya 86.19 342 *i* P PP 18 45 52.3 -12
MNSI Mandailing Nat 86.19 266 P **P** **18 42 49.1 +4.2**
comp=Z,28nm,0.7s,mb5.6
MNSI Mandailing Nat 86.19 266 P **P** **18 42 45.2 +0.3**
comp=Z,28nm,0.7s,mb5.6
OUR Ouranopolis 86.24 345 P **P** **18 42 43.0 -1.8**
OUR Ouranopolis 86.24 345 P **P** **18 42 43.0 -1.8**
PVRL Vila Real 86.26 9 *e*P **P** **18 42 46.4 +1.5**
comp=Z,40nm,1.9s,mb5.3
ANDN Andirin 86.31 335 *i* P PP 18 46 04.1 -1.1
BCIP Isla Barro Col 86.34 80 *e*P **P** **18 42 47.2 +1.5**
comp=Z,324nm,1.7s,mb6.3
BCIP LR LR
comp=Z,1µm,20.0s,MS5.2
KBN Korca 86.42 348 *i* P **P** **18 42 48.9 +3.2**
KBN Korca 86.42 348 *i* P PP 18 46 09.3 +3.4
SDSI Sungai Dareh 86.42 264 P **P** **18 42 47.0 +1.0**
comp=Z,2µmcomp=Z,91nm,1.3s,mb5.8
SDSI Sungai Dareh 86.42 264 P **P** **18 42 45.7 -0.3**
comp=Z,2µmcomp=Z,91nm,1.3s,mb5.8
MVO Moncorvo 86.44 9 *e*P **P** **18 42 46.1 +0.3**
comp=Z,43nm,1.5s,mb5.5
MVO Moncorvo 86.44 9 *e*PP PP 18 46 11.3 +5.2
MVO *e*S S 18 53 17.0 -5.4
MVO *e*SS SS 18 59 12.2 +12
MVO *e*LQ 19 06 34.9
MVO *e*LR LR 19 10 38.8
comp=Z,3µm,18.0s
MVO Moncorvo 86.44 9 P **P** **18 42 46.4 +0.6**
GDZ Gediz 86.45 341 *i* P PP 18 45 48.0 -18
BJII Banjamegara 86.50 253 P **P** **18 42 53.4 +7.0**
comp=Z,61nm,2.3s,mb5.4
FITZ Fitzroy Crossi 86.58 235 *e*P **P** **18 42 45.4 -1.2**
comp=Z,78nm,0.9s,mb5.9
FITZ Fitzroy Crossi 86.58 235 *e*P **P** **18 42 45.3 -1.2**
FITZ Fitzroy Crossi 86.58 235 P **P** **18 42 48.1 +1.5**
comp=Z,147nm,1.4s,mb6.0
NEST Nestorio 86.59 347 P **P** **18 42 46.4 -0.1**
KZN Kozani 86.59 347 P **P** **18 42 44.9 -1.7**
KZN Kozani 86.59 347 P **P** **18 42 44.9 -1.7**
PPI Padang Panjang 86.67 265 P **P** **18 42 49.3 +2.0**
comp=Z,1µmcomp=Z,57nm,1.4s,mb5.6
PPI Padang Panjang 86.67 265 P **P** **18 42 47.2 -0.1**
comp=Z,1µmcomp=Z,57nm,1.4s,mb5.6
LIT Litokhoron 86.69 346 P **P** **18 42 44.3 -2.8**
LIT Litokhoron 86.69 346 P **P** **18 42 44.3 -2.8**
EPOB Poblet 86.73 3 P **P** **18 42 50.2 +3.0**
comp=Z,31nm,0.9s,mb5.5
CRPR Cabo Rojo, PR 86.75 65 *e*P **P** **18 42 48.4 +0.7**
comp=Z,23nm,0.9s,mb5.4
PVIS Viseu 86.80 9 *e*P **P** **18 42 47.9 +0.3**
comp=Z,58nm,1.3s,mb5.7
GULE Gulek 86.98 336 *i* P PP 18 46 11.5 +0.9
AKHS Akhisar 86.98 342 *i* P PP 18 46 05.1 -5.4
PDSI Padang 86.99 265 P **P** **18 42 50.2 +1.3**
comp=Z,2µmcomp=Z,110nm,1.2s,mb6.0
PDSI Padang 86.99 265 P **P** **18 42 49.3 +0.4**
comp=Z,2µmcomp=Z,111nm,1.2s,mb6.0
ERTA Horta de San J 87.11 3 P **P** **18 42 51.3 +2.2**
comp=Z,14nm,1.0s,mb5.2
ETOR Torete 87.14 5 P **P** **18 42 50.7 +1.4**
comp=Z,9.6nm,1.1s,mb4.9
ETOR Torete 87.14 5 P **P** **18 42 50.7 +1.5**
ETOR pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
KHAL Karahalli 87.14 341 *i* P PP 18 46 12.6 +0.8
MTE Manteigas 87.15 9 *e*P **P** **18 42 49.3 0.0**
comp=Z,34nm,1.3s,mb5.4
MTE *e*S S 18 53 33.7 +4.4
MTE *e*SS SS 18 59 23.7 +13
MTE *e*LQ 19 08 31.9
MTE *e*LR LR 19 11 59.6
comp=Z,2µm,18.0s
MTE Manteigas 87.15 9 PFAKE 18 43 00.0 +11
MTE LR LR
comp=Z,2µm,20.0s,MS5.5
ARMA Armidale 87.17 208 *e*P **P** **18 42 49.0 -0.2**
ARMA Armidale 87.17 208 *e*P **P** **18 42 49.3 +0.1**
comp=Z,197nm,1.1s,mb6.2
GUD Guadarrama 87.19 7 P **P** **18 42 49.8 +0.4**
comp=Z,11nm,0.9s,mb5.1
GUD Guadarrama 87.19 7 P **P** **18 42 49.8 +0.3**
GUD pmax pmax
comp=Z,11nm,0.9s,mb5.1
SJG San Juan 87.19 64 *e*P **P** **18 42 48.0 -1.8**
comp=Z,50nm,1.0s,mb5.7
SJG San Juan 87.19 64 *e*P **P** **18 42 48.0 -1.8**
SJG pmax pmax
comp=Z,51nm,1.0s
YURE YUREGIR 87.20 335 *i* P PP 18 46 08.3 -4.0
SRN Sarande 87.25 348 *i* P **P** **18 42 52.9 +3.1**
SRN Sarande 87.25 348 *i* P PP 18 46 13.3 +0.7
THL Klokotos Trika 87.29 346 P **P** **18 42 47.3 -2.7**
KRJI Kerinci 87.31 263 P **P** **18 42 55.4 +5.0**
comp=Z,478nm,1.2s,mb6.6
KRJI Kerinci 87.31 263 P **P** **18 42 51.0 +0.6**
comp=Z,478nm,1.2s,mb6.6
KLSI 87.37 259 P **P** **18 42 51.7 +1.0**
comp=Z,3µmcomp=Z,140nm,1.1s,mb6.1
KLSI 87.37 259 P **P** **18 42 50.6 -0.1**
comp=Z,3µmcomp=Z,139nm,1.1s,mb6.1
POO Poona 87.46 297 *e*PKP **P** **18 42 51.6 +0.5**
POO AMb AMB 18 42 53.9
comp=Z,54nm,0.7s,mb5.9
ASAR Alice Springs 87.49 225 P **P** **18 42 49.1 -1.7**
comp=Z,12nm,0.8s,mb5.2,baz=29,slow=3.8,SNR=41
ASAR Alice Springs 87.49 225 P **P** **18 42 49.2 -1.7**
ASAR pmax pmax
comp=Z,12nm,0.8s
MTP Monte Pirata 87.54 63 *e*P **P** **18 42 49.9 -1.5**
comp=Z,114nm,1.0s,mb6.1
MDSI Maura Dua 87.54 260 P **P** **18 42 50.9 -0.6**
comp=Z,1µmcomp=Z,79nm,1.4s,mb5.8
MDSI Maura Dua 87.54 260 P **P** **18 42 50.6 -0.9**
comp=Z,1µmcomp=Z,79nm,1.4s,mb5.8
CUC Castrocucco 87.60 351 *e*P **P** **18 42 49.7 -1.8**
comp=Z,18nm,1.3s,mb5.2
CUC LR LR
comp=Z,2µm,20.0s,MS5.4
OUZ Omahuta 87.61 189 *e*P **P** **18 42 50.9 -0.3**
comp=Z,120nm,1.1s,mb6.0
EPLA Plasencia 87.61 8 P **P** **18 42 51.3 -0.2**
comp=Z,93nm,1.3s,mb5.8
EPLA Plasencia 87.61 8 P **P** **18 42 51.3 -0.2**
EPLA pmax pmax
comp=Z,93nm,1.3s,mb5.8
PAYG Puerto Ayora 87.65 94 PFAKE 18 43 00.0 +8.0
PAYG LR LR
comp=Z,2µm,20.0s,MS5.5
EMOS Mosqueruela 87.67 4 P **P** **18 42 53.6 +1.8**
comp=Z,9.4nm,0.8s,mb5.1
PCBR Castelo Branco 87.71 9 *e*P **P** **18 42 52.0 0.0**
comp=Z,28nm,1.6s,mb5.2
KSI Kapahiang 87.85 261 P **P** **18 42 57.6 +4.6**
comp=Z,167nm,1.1s,mb6.2
KSI Kapahiang 87.85 261 P **P** **18 42 53.8 +0.8**
comp=Z,167nm,1.1s,mb6.2
DNZL Cakiroluk 87.89 341 *i* P PP 18 46 14.7 -3.1
BHD Baghdad 87.94 327 *ex* **P** **18 42 53.0 -0.2**
BHD *i* x x 18 46 20.0
BHD *i* x x 18 53 37.5
LWLI Liwa 88.04 259 P **P** **18 42 55.5 +1.7**
comp=Z,134nm,1.0s,mb6.1
LWLI Liwa 88.04 259 P **P** **18 42 54.5 +0.7**
comp=Z,134nm,1.0s,mb6.1
PMRV Marv??o 88.13 9 *e*P **P** **18 42 54.7 +0.7**
comp=Z,46nm,1.7s,mb5.4
PMRV *e*S S 18 53 40.4 +1.7
PMRV *e*SS SS 18 59 33.9 +8.7
PMRV *e*LR LR 19 07 49.3
SISI Saibi 88.16 265 P **P** **18 42 57.6 +3.1**
SISI Saibi 88.16 265 P **P** **18 42 56.2 +1.7**
ESDC Sonseca Array 88.17 6 P **P** **18 42 53.1 -1.1**
comp=Z,10nm,1.1s,mb5.0
ESDC Sonseca Array 88.17 6 P **P** **18 42 52.2 -1.9**
comp=Z,7.0nm,0.9s,mb4.9,baz=360,slow=5.0,SNR=18
ESDC PP PP 18 46 20.6 +0.6
comp=Z,0.4nm,0.4s,baz=356,slow=7.4,SNR=6.0
ESDC PKKPbc PKKPbc 19 00 37.6 +1.4
comp=Z,0.2nm,0.3s,baz=203,slow=1.1,SNR=7.8
ESDC LR LR 19 21 42.4
comp=Z,2µm,21.4s,MS5.4,baz=355,slow=35
ESLA Sonseca Array 88.17 6 PFAKE 18 43 10.0 +16
ESLA LR LR
comp=Z,13µm,22.0s,MS6.3
GOLH Golhisar 88.22 340 *i* P PP 18 46 12.6 -7.9
LKD2 Lefkada island 88.24 347 P **P** **18 42 52.3 -2.2**
KAD Karad 88.27 296 *e*PKP **P** **18 42 54.4 -0.6**
KAD AMb AMB 18 43 15.4
comp=Z,50nm,1.3s,mb5.6
PAB San Pablo 88.27 7 PFAKE 18 43 10.0 +15
PAB LR LR
comp=Z,3µm,19.0s,MS5.7
KORT Korkueli 88.28 339 *i* P PP 18 46 15.8 -5.2
TIP Timpagrande 88.32 350 *e*P **P** **18 42 53.0 -1.9**
comp=Z,57nm,1.4s,mb5.6
DSF Desfina 88.34 346 P **P** **18 42 52.8 -2.2**
PMAFR Mafra 88.39 11 *e*S S 18 53 43.6 +2.3
PMAFR *e*SS SS 18 59 38.3 +9.2
ECHE Chera 88.42 4 P **P** **18 42 57.0 +1.6**
comp=Z,9.4nm,0.8s,mb5.1
ECHE Chera 88.42 4 P **P** **18 42 57.0 +1.6**
ECHE pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
EFP Efpalio 88.42 346 P **P** **18 42 54.7 -0.7**
TRIZ Trizonia 88.46 346 P **P** **18 42 51.6 -4.0**
GAZI Gazipasa 88.58 338 *i* P PP 18 46 14.7 -8.7
PESTR Estremoz 88.66 9 *e*P **P** **18 42 56.4 -0.1**
comp=Z,47nm,1.3s,mb5.7
PESTR *e*S S 18 53 50.6 +6.8
PESTR *e*SS SS 18 59 40.6 +7.6
PESTR *e*LQ 19 07 25.6
PESTR *e*LR LR 19 12 40.6
comp=Z,4µm,18.0s
EBAD Badajoz 88.83 9 P **P** **18 42 56.1 -1.2**
comp=Z,34nm,1.1s,mb5.6
GUR Goura 88.84 346 P **P** **18 42 57.9 +0.5**
EVO Evora 88.95 10 *e*P **P** **18 42 58.3 +0.4**
comp=Z,67nm,1.4s,mb5.5
EVO *e*MLR MLR
comp=Z,4µm,19.8s,MS5.5
EVO Evora 88.95 10 *e*P **P** **18 42 57.4 -0.5**
comp=Z,31nm,1.5s,mb5.4
CEL Celeste 89.31 351 *e*P **P** **18 43 00.3 +0.7**
comp=Z,11nm,0.9s,mb5.2
CEL LR LR
comp=Z,2µm,20.0s,MS5.4
ETOB Tobarra 89.34 5 P **P** **18 43 00.6 +0.9**
comp=Z,117nm,1.8s,mb5.9
PBAR Barrancos 89.40 9 *e*P **P** **18 43 01.0 +1.0**
comp=Z,79nm,1.6s,mb5.8
PBAR Barrancos 89.40 9 *e*PP PP 18 46 32.0 +2.1
PBAR *e*S S 18 53 49.3 -1.5
PBAR *e*SS SS 18 59 46.2 +2.4
PBAR *e*LQ 19 09 22.2
PBAR *e*LR LR 19 13 04.6
comp=Z,4µm,18.0s
PBEJ Beja 89.47 10 *e*PP PP 18 46 34.5 +4.1
EADA Adamuz 89.62 7 P **P** **18 43 00.8 -0.2**
comp=Z,36nm,1.2s,mb5.6
PCVE Castro Verde 89.84 10 *e*P **P** **18 43 01.7 -0.4**
comp=Z,33nm,1.6s,mb5.4
PCVE Castro Verde 89.84 10 *e*PP PP 18 46 36.9 +3.5
PCVE *e*S S 18 53 53.2 -1.7
PCVE *e*LQ 19 07 05.0
PCVE *e*LR LR 19 12 40.3
EMIN Mina Concepcio 89.84 9 P **P** **18 43 01.4 -0.7**
comp=Z,29nm,0.9s,mb5.6
ANWB Willy Bob 89.93 61 PFAKE 18 43 10.0 +7.2
ANWB LR LR
comp=Z,3µm,21.0s,MS5.7
PYL PYLOS 89.95 346 P **P** **18 42 58.2 -4.4**
EQES Quesada 90.09 6 P **P** **18 43 03.9 +0.7**
MORF Marmelete 90.09 10 *e*PP PP 18 46 39.3 +3.9
MORF *e*SS SS 19 00 00.7 +6.9
MORF *e*LQ 19 09 55.2
MORF *e*LR LR 19 14 20.4
comp=Z,2µm,20.0s
PVAQ Vaqueiros 90.10 10 *e*PP PP 18 46 39.8 +4.4
PVAQ *e*S S 18 53 59.7 +2.4
PVAQ *e*SS SS 18 59 59.5 +5.6
PVAQ *e*LQ 19 09 44.8
PVAQ *e*LR LR 19 13 26.0
comp=Z,3µm,18.0s
EHUE Huescar 90.11 6 P **P** **18 43 03.0 -0.3**
comp=Z,10nm,0.8s,mb5.2
EHUE Huescar 90.11 6 P **P** **18 43 03.0 -0.3**
EHUE pmax pmax
comp=Z,11nm,0.8s,mb5.2
PBDV Barranco-do-Ve 90.23 10 *e*S S 18 53 57.8 -0.8
PBDV *e*SS SS 19 00 03.1 +7.2
PBDV *e*LQ 19 07 36.0
PBDV *e*LR LR 19 13 32.7
comp=Z,2µm,18.0s
PFVI Vila Bisbo 90.25 11 *e*SS SS 19 00 05.5 +9.5
PFVI *e*LR LR 19 13 06.3
comp=Z,2µm,18.0s
URZ Urewera 90.36 186 *e*P **P** **18 43 02.3 -1.7**
comp=Z,38nm,1.0s,mb5.7
URZ Urewera 90.36 186 P **P** **18 43 03.4 -0.7**
comp=Z,28nm,0.9s,mb5.6,baz=304,slow=5.0
RIV Riverview 90.51 207 *e*P **P** **18 43 07.0 +2.1**
ECOG Cogollos-Vega 90.58 6 P **P** **18 43 06.5 +1.0**
comp=Z,1.8nm,0.5s,mb4.7
ECOG Cogollos-Vega 90.58 6 P **P** **18 43 06.5 +1.0**
ECOG pmax pmax
comp=Z,2.0nm,0.5s,mb4.7
ELOJ Sierra Loja 90.67 7 P **P** **18 43 06.4 +0.4**
comp=Z,17nm,0.9s,mb5.4
ELOJ Sierra Loja 90.67 7 P **P** **18 43 06.4 +0.5**
ELOJ pmax pmax
comp=Z,17nm,0.9s,mb5.4
ESPR Espera 90.81 8 P **P** **18 43 06.2 -0.4**
comp=Z,20nm,1.0s,mb5.4
MMAI Mount Meron Ar 90.87 334 LR LR 19 33 40.9
comp=Z,2µm,18.3s,MS5.5,baz=35,slow=42
EMIJ Mijas 91.20 7 P **P** **18 43 07.6 -0.8**
comp=Z,16nm,0.9s,mb5.4
ASF Jabal al Asfar 91.25 333 P **P** **18 43 07.0 -1.7**
comp=Z,5.4nm,0.9s,mb4.9,baz=297,slow=4.5,SNR=7.8
ASF Jabal al Asfar 91.25 333 P **P** **18 43 07.0 -1.7**
ASF pmax pmax
comp=Z,5.0nm,0.9s
STKA Stephens Creek 91.76 215 *e*P **P** **18 43 09.9 -0.8**
comp=Z,38nm,0.9s,mb5.7
STKA Stephens Creek 91.76 215 *e*P **P** **18 43 10.2 -0.5**
comp=Z,13nm,1.0s,mb5.2
STKA Stephens Creek 91.76 215 P **P** **18 43 10.6 -0.2**
comp=Z,40nm,0.9s,mb5.7,baz=350,slow=5.8,SNR=14
STKA LR LR 19 20 19.4
comp=Z,4µm,21.4s,MS5.8,baz=18,slow=33
MBWA Marble Bar 92.15 238 *e*P **P** **18 43 10.9 -1.9**
comp=Z,58nm,1.1s,mb5.8
MBWA LR LR
comp=Z,2µm,19.0s,MS5.6
KEST Kesra 92.28 356 *e*P **P** **18 43 13.7 +0.3**
KEST Kesra 92.28 356 P **P** **18 43 13.7 +0.2**
comp=Z,1.0nm,0.9s,mb4.1,baz=359,slow=4.3,SNR=5.3
KEST PP PP 18 46 55.1 +2.4
comp=Z,1.3nm,0.9s,baz=346,slow=8.7,SNR=3.9
KEST LR LR 19 23 52.3
comp=Z,501nm,21.6s,MS4.9,baz=115,slow=35
CNB Canberra Magne 92.42 208 *e*P **P** **18 43 14.9 +1.2**
ROSC El Rosal 93.06 78 LR LR 19 30 44.0
comp=Z,950nm,18.5s,MS5.3,baz=205,slow=39
OTAV Otavalo 94.20 84 *e*P **P** **18 43 22.7 +0.1**
comp=Z,35nm,1.1s,mb5.7
GRGR Grenville 94.55 64 PFAKE 18 43 40.0 +16
GRGR LR LR
comp=Z,3µm,21.0s,MS5.8
BBGH Gun Hill 94.86 61 PFAKE 18 43 40.0 +14
BBGH LR LR
comp=Z,6µm,22.0s,MS6.0
TOO Toolangi 95.66 210 *e*P **P** **18 43 31.4 +2.8**
FORT Forrest 96.22 226 *e*P **P** **18 43 19.6 -12**
comp=Z,14nm,0.8s,mb5.5
RPZ Rata Peaks 96.28 190 LR LR 19 22 32.1
comp=Z,4µm,18.9s,MS6.0,baz=26,slow=33
RPN Rapa Nui 97.88 125 LR LR 19 23 49.0
comp=Z,777nm,18.4s,MS5.2,baz=319,slow=33
COCO West Island 98.04 261 PFAKE 18 43 50.0 +10
COCO LR LR
comp=Z,832nm,20.0s,MS5.2
NWAO Narrogin (SRO) 103.06 233 PFAKE 18 44 10.0 +7.7
NWAO LR LR
comp=Z,2µm,19.0s,MS5.6
LPAZ La Paz 113.40 87 PKPdf PKiKP 18 48 42.8 +1.4
LPAZ LR LR
comp=Z,1µm,19.0s,MS5.5
LPAZ La Paz 113.40 87 PKiKP PKiKP 18 48 42.8 +1.4
comp=Z,1.3nm,0.7s,baz=22,slow=5.8,SNR=5.3
LPAZ La Paz 113.40 87 *i* PKIKP PKiKP 18 48 42.8 +1.4
LPAZ pmax pmax
comp=Z,1.0nm,0.7s
TORD Torodi Ar. Bea 114.84 3 PKP PKiKP 18 48 42.9 -1.4
comp=Z,0.8nm,0.6s,baz=1.0,slow=2.3,SNR=3.5
TORD PP PP 18 49 36.4 -5.0
comp=Z,2.0nm,0.8s,baz=347,slow=5.7,SNR=5.1
TORD PKKPbc PKKPbc 18 59 18.9 -0.2
comp=Z,8.7nm,0.9s,baz=182,slow=2.0,SNR=18
MSEY Mahe Island 116.67 300 PFAKE 18 49 00.0 +12
MSEY LR LR
comp=Z,916nm,19.0s,MS5.4
DBIC Dimbokro 120.78 11 PKP PKPdf 18 48 54.1 -1.7
DBIC PKKPbc PKKPbc 18 59 00.2 +2.3
DBIC LR LR
comp=Z,2µm,20.0s,MS5.8
DBIC Dimbokro 120.78 11 PKP PKPdf 18 48 54.1 -1.7
comp=Z,2.2nm,0.6s,baz=26,slow=8.7,SNR=7.5
DBIC PKKPbc PKKPbc 18 59 00.2 +2.3
comp=Z,5.5nm,0.9s,baz=156,slow=5.4,SNR=4.7
LIC Lamto 121.20 11 *e*PKIKP PKPdf 18 48 58.4 +1.8
comp=Z,28nm,1.1s
LIC *e*MLR MLR
comp=Z,5µm,21.2s,MS5.8
LIC Lamto 121.20 11 *e*PKPdf PKPdf 18 48 58.4 +1.8
LIC LR LR
comp=Z,2µm,21.3s,MS5.8
LCO Las Campanas 121.27 98 PFAKE 18 49 10.0 +14
LCO LR LR
comp=Z,1µm,19.0s,MS5.5
DRV Dumont d'Urvil 123.25 199 SS SS 19 07 24.0 -2.2
DRV R 19 29 00.0
CPUP Villa Florida 127.54 85 PKP PKPdf 18 49 08.6 +0.2
comp=Z,2.7nm,0.4s,baz=306,slow=2.4,SNR=13
CPUP Villa Florida 127.54 85 PKIKP PKPdf 18 49 08.6 +0.3
CPUP pmax pmax
comp=Z,3.0nm,0.4s
PLCA Paso Flores 129.34 108 PKP PKPdf 18 49 12.1 +0.8
comp=Z,26nm,0.9s,baz=292,slow=2.9,SNR=19
PLCA SKPbc 18 52 34.0
comp=Z,6.7nm,0.9s,baz=302,slow=4.2,SNR=5.6
PLCA Paso Flores 129.34 108 *e*PKIKP PKPdf 18 49 11.3 0.0
PLCA MLR MLR
comp=Z,2µm,20.0s
CASY Casey 130.70 211 *e*P PKPdf 18 49 12.8 -0.2
CASY Casey 130.70 211 PFAKE 18 49 20.0 +7.0
CASY LR LR
comp=Z,2µm,19.0s,MS5.8
OPO Ambohidratompo132.66 299 PKP PKPdf 18 49 19.2 +1.0
comp=Z,2.4nm,0.8s,baz=44,slow=2.3,SNR=5.1
ABPO Ambohimpanom 133.00 298 PFAKE 18 49 30.0 +11
ABPO LR LR
comp=Z,2µm,20.0s,MS5.7
LSZ Lusaka 138.54 324 PFAKE 18 49 40.0 +11
LSZ LR LR
comp=Z,1µm,20.0s,MS5.7
QSPA South Pole Qui 142.00 180 PKP PKPpre 18 49 27.4
QSPA South Pole Qui 142.00 180 PKhKP PKPpre 18 49 27.4
comp=Z,51nm,0.8s,baz=14,slow=1.7,SNR=36
PMSA Palmer Station 144.03 137 PFAKE 18 49 50.0 +12
PMSA LR LR
comp=Z,1µm,19.0s,MS5.8
MAW Mawson 148.39 219 *e*P PKPdf 18 49 47.5 +2.6
comp=Z,90nm,0.9s
MAW Mawson 148.39 219 PKPbc PKPbc 18 49 47.8 -0.7
comp=Z,53nm,0.8s,baz=72,slow=2.1,SNR=27
MAW Mawson 148.39 219 PKP2 PKPbc 18 49 47.8 -0.6
MAW pmax pmax
comp=Z,53nm,0.9s
LBTB Lobatse 148.40 321 PFAKE 18 50 00.0 +14
LBTB LR LR
comp=Z,2µm,20.0s,MS5.9

LBTB	**Lobatse**	**148.40**	**321**	PKPbc	PKPbc	18 49 49.1	-0.7	
	comp=Z,21nm,0.8s,baz=349,slow=1.9,SNR=11							
LBTB	**Lobatse**	**148.40**	**321**	PKP2	PKPbc	18 49 49.1	-0.7	
LBTB				pmax	pmax			
	comp=Z,21nm,0.8s							
BOSA	**Boshof**	**151.75**	**319**	PKP	PKPdf	18 49 49.8	-1.7	
	comp=Z,11nm,1.0s,baz=304,slow=4.6,SNR=4.7							
BOSA				PKPbc	PKPbc	18 49 57.9	+0.1	
	comp=Z,22nm,0.9s,baz=17,slow=1.9,SNR=17							
BOSA	**Boshof**	**151.75**	**319**	PKIKP	PKPdf	18 49 49.8	-1.7	
BOSA						18 49 57.9		
BOSA				pmax	pmax			
	comp=Z,11nm,1.0s							
SUR	**Sutherland**	**156.83**	**323**	PKP	PKPdf	18 49 58.2	-0.3	
	comp=Z,14nm,1.1s,baz=18,slow=20,SNR=2.3							
VNA1	**Neumayer--Stat**	**160.65**	**167**	*e*PKPdf	PKPdf	18 50 03.3	+1.5	
VNA1				*e*		18 50 42.6		
VNA1				*e*		18 50 46.7		
MAIT	**Maitri**	**161.11**	**188**	*e*PKPdif	PKPab	18 50 44.0	-1.7	

*ISCJB **07** 18:31:15.4±1.0, 33˚.43N×0˚.04×45˚.83E±0˚.09, h15km±13km, Error ellipse: s-maj=13.9km s-min=5.6km az=23.6*
*TEH **07** 18:31:15.8, 33˚.57N×45˚.71E, h19km*
*KISR **07** 18:31:16.6±0.8, 33˚.25N×46˚.13E, h6km±999km, ML2.9*

ISC 07 18:31:15.6±1.3, 33˚.55N±0˚.05×45˚.78E±0˚.07, h16km±10km, n12, σ0$77/19, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGHG	**Ghaleghazi**	**1.02**	**40**	*e*Pg	**Pg**	**18 31 34.7**	**-0.6**
IGHG				*e*Sg	**Sg**	**18 31 50.2**	**+1.6**
IGHG				*e*		18 31 52.5	
	comp=Z,12μm,0.3s						
BHD	**Baghdad**	**1.20**	**257**	*i* x	**Pb**	**18 31 38.0**	**0.0**
BHD				*ex*	x	18 31 58.0	
IVIS	**Veis**	**1.32**	**42**	*e*Pg	**Pg**	**18 31 40.5**	**-0.5**
IVIS				*e*Sg	**Sg**	**18 31 57.4**	**-0.8**
IVIS				*e*		18 32 00.2	
	comp=Z,7μm,0.3s						
IKOM	**Komasi**	**1.57**	**66**	*e*Pn	**Pn**	**18 31 43.4**	**+0.6**
IKOM				*e*Sg	**Sg**	**18 32 05.9**	**-0.3**
IKOM				*e*		18 32 06.6	
	comp=Z,6μm,0.3s						
ILIN	**Lien**	**1.68**	**35**	*e*Pn	**Pn**	**18 31 45.0**	**+0.7**
ILIN				*e*Sg	**Sg**	**18 32 09.3**	**-0.4**
ILIN				*e*		18 32 10.9	
	comp=Z,6μm,0.4s						
IRAZ	**Razeghan**	**3.89**	**61**	*e*Pn	**Pn**	**18 32 15.2**	**+0.4**
IRAZ				*e*		18 32 30.1	
	comp=Z,320nm,0.3s						
MIB	**Mutribah**	**3.97**	**160**	*e*P	**Pn**	**18 32 16.6**	**+0.8**
MIB				*e*S	**Sn**	**18 33 01.6**	**-0.4**
MIB				AML	AML	18 33 07.6	
	comp=Z,15nm,0.5s						
UMR	**Umm Al-Rimmam**	**4.32**	**157**	*e*P	**Pn**	**18 32 21.3**	**+0.7**
UMR				*e*S	**Sn**	**18 33 09.5**	**-1.1**
UMR				AML	AML	18 33 13.4	
	comp=Z,14nm,0.5s						
ISHB	**Shabestar**	**4.72**	**358**	*e*Pn	**Pn**	**18 32 25.0**	**-1.2**
ISHB				*e*		18 33 53.5	
	comp=Z,137nm,0.2s						
RDF	**Al-Radifah**	**4.85**	**161**	*e*P	**Pn**	**18 32 28.7**	**+0.8**
RDF				*e*S	**Sn**	**18 33 23.2**	**-0.6**
RDF				AML	AML	18 33 23.8	
	comp=Z,17nm,0.6s						
IZEF	**Zefreh**	**5.53**	**95**	*e*Pn	**Pn**	**18 32 38.2**	**+1.0**
IZEF				*e*		18 34 16.7	
	comp=Z,37nm,0.2s						
IDMV	**Damavand**	**5.54**	**67**	*e*Pn	**Pn**	**18 32 36.7**	**-0.7**
IDMV				*e*		18 33 43.5	
	comp=Z,84nm,0.3s						

*IDC **07** 18:35:24.8±2.1, 5˚.22N×92˚.75E, h0km, mb4.4/8, mb1 4.4/10, mb1mx4.0/26, mbtmp4.3/10, ML4.2/2, Error ellipse: s-maj=49.8km s-min=32.0km az=20.0*
*ISCJB **07** 18:35:30.7±3.1, 5˚.2N±0˚.1×93˚.0E±0˚.2, h61km±30km, mb4.5/13, Error ellipse: s-maj=33.6km s-min=18.9km az=152.2*
*NEIC **07** 18:35:30.4±1.0, 5˚.30N×92˚.82E, h35km, mb4.9/1, Error ellipse: s-maj=20.6km s-min=14.8km az=224.0*

ISC 07 18:35:31.4±2.7, 5˚.3N±0˚.1×92˚.9E±0˚.2, h45km±25km, n28, σ0$89/27, mb4.5/13, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**6.49**	**112**	Pn	**Pn**	**18 37 04.6**	**+0.3**
	1.7nm,0.3s,baz=217,slow=10,SNR=2.9						
PSI				Sn	Sx	18 38 12.0	
	3.9nm,0.3s,baz=254,slow=23,SNR=8.6						
CMAR	**Chiang Mai Arr**	**14.39**	**24**	Pn	**Pn**	**18 38 51.4**	**-1.1**
	0.7nm,0.3s,baz=219,slow=14,SNR=18						
CHTO	**Chiang Mai**	**14.71**	**23**	*e*P	**Pn**	**18 38 56.6**	**-0.1**
	5.6nm,0.8s						
ODAN	**Odare**	**22.12**	**347**	*e*P	**P**	**18 40 24.3**	**+1.2**
	28nm,0.4s,mb5.0						
RAMN	**Ramite**	**22.40**	**345**	*e*P	**P**	**18 40 27.1**	**+1.1**
TAPN	**Taplejung**	**22.52**	**348**	*e*P	**P**	**18 40 25.2**	**-2.2**
JIRN	**Jiri**	**23.18**	**345**	*e*P	**P**	**18 40 34.3**	**0.0**
	32nm,0.7s,mb4.9						
PKI	**Pulchoki**	**23.31**	**343**	*e*P	**P**	**18 40 35.8**	**+0.1**
PKIN	**Phulchoki**	**23.32**	**343**	*e*P	**P**	**18 40 36.6**	**+0.9**
DMN	**Daman**	**23.44**	**342**	*e*P	**P**	**18 40 37.8**	**+1.0**
GUN	**Gumba**	**23.50**	**344**	*e*P	**P**	**18 40 35.8**	**-1.6**
KKN	**Kakani**	**23.55**	**343**	*e*P	**P**	**18 40 37.6**	**-0.3**
	22nm,0.8s,mb4.7						
GKN	**Gorkha**	**23.95**	**342**	*e*P	**P**	**18 40 42.1**	**+0.6**
KOLN	**Koldanda**	**24.08**	**339**	*e*P	**P**	**18 40 44.1**	**+1.4**
	20nm,0.7s,mb4.7						
LSA	**Lhasa**	**24.37**	**356**	*e*P	**P**	**18 40 46.6**	**+1.3**
	28nm,0.8s,mb4.7						
MK31	**Makanchi Array**	**42.38**	**349**	P	**P**	**18 43 20.7**	**-0.5**
MKAR	**Makanchi Array**	**42.38**	**349**	P	**P**	**18 43 20.6**	**-0.6**
	2.4nm,0.6s,mb4.0,baz=169,slow=8.3,SNR=5.9						
SONM	**Songino Array**	**43.97**	**13**	P	**P**	**18 43 33.9**	**-0.1**
	0.6nm,0.5s,mb3.6,baz=191,slow=9.0,SNR=4.5						
KURK	**Kurchatov**	**46.86**	**348**	*e*P	**P**	**18 43 54.0**	**-3.0**
KURK	**Kurchatov**	**46.86**	**348**	P	**P**	**18 43 56.7**	**-0.2**
	2.3nm,0.6s,mb4.3,baz=161,slow=7.0,SNR=3.5						
ZAA0	**Zalesovo Array**	**48.99**	**354**	*e*P	**P**	**18 44 13.3**	**0.0**
ZALV	**Zalesovo Beam**	**48.99**	**354**	P	**P**	**18 44 13.6**	**+0.3**
	4.7nm,0.5s,mb4.8,baz=174,slow=6.8,SNR=21						
BHD	**Baghdad**	**52.97**	**308**	*ex*	**P**	**18 44 42.9**	**-0.7**
BRTR	**Keskin Array B**	**63.23**	**312**	P	**P**	**18 45 55.0**	**-0.3**
	17nm,1.2s,mb5.1,baz=118,slow=5.7,SNR=10						
PETK	**Petropavlovsk-**	**70.84**	**35**	P	**P**	**18 46 44.0**	**+0.6**
	2.0nm,0.7s,mb4.2,baz=244,slow=6.5,SNR=3.7						
FINES	**FINESS Array B**	**74.45**	**333**	P	**P**	**18 47 04.2**	**-0.4**
	1.6nm,0.7s,mb4.1,baz=132,slow=6.2,SNR=3.0						
ARCES	**ARCESS Array B**	**77.30**	**341**	P	**P**	**18 47 20.3**	**-0.5**
	3.1nm,1.0s,mb4.2,baz=76,slow=5.1,SNR=4.1						
TXAR	**Lajitas Array**	**142.10**	**24**	PKP	PKPdf	18 55 02.3	+2.9
	0.2nm,0.6s,baz=48,slow=1.3,SNR=2.0						

*NEIC **07** 18:37:48.5±1.5, 52˚.07N×175˚.58W, h10km, ML3.6(AEIC), Error ellipse: s-maj=44.3km s-min=10.3km az=177.0*
*ISCJB **07** 18:37:49.1±0.6, 52˚.4N±0˚.1×175˚.42W±0˚.07, h10km, mb3.9/6, Error ellipse: s-maj=14.5km s-min=6.3km az=0.8*
*IDC **07** 18:37:49.1±1.2, 52˚.45N×175˚.70W, h0km, mb3.9/6, mb1 4.2/8, mb1mx3.8/28, mbtmp4.0/8, ML3.9/2, Error ellipse: s-maj=37.6km s-min=23.5km az=180.0*

ISC 07 18:37:50.7±0.6, 52˚.4N±0˚.1×175˚.38W±0˚.07, h10km, n12, σ1$11/14, mb3.9/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.49**	**238**	P	**Pg**	**18 37 53.3**	**-7.0**
ATKA	**Atka Island**	**0.74**	**102**	P	**Pg**	**18 38 03.6**	**-1.4**
ATKA				S	**Sg**	**18 38 14.7**	**0.0**
AMKA	**Amchitka**	**3.44**	**255**	P	**Pn**	**18 38 43.2**	**-1.0**
AMKA				S	**Sn**	**18 39 26.5**	**+1.4**
KDAK	**Kodiak Island**	**14.11**	**58**	Pn	**Pn**	**18 41 10.9**	**+0.6**
	0.4nm,0.3s,baz=0.0,slow=0.0,SNR=2.3						
ILAR	**Eielson Array**	**19.15**	**39**	P	**Pn**	**18 42 15.9**	**+1.2**
	0.2nm,0.3s,baz=243,slow=7.7,SNR=4.9						
NVAR	**Mina Array Bea**	**41.35**	**86**	P	**P**	**18 45 37.6**	**+1.1**
	0.5nm,0.7s,mb3.2,baz=300,slow=5.7,SNR=2.3						
TXAR	**Lajitas Array**	**56.43**	**84**	P	**P**	**18 47 34.3**	**+2.0**
	0.5nm,0.6s,mb3.7,baz=311,slow=4.7,SNR=2.7						
KURK	**Kurchatov**	**59.85**	**315**	P	**P**	**18 47 55.9**	**-0.1**
	1.4nm,0.7s,mb4.1,baz=36,slow=6.9,SNR=3.6						
AKTK	**Aktyubinsk**	**68.08**	**326**	P	**P**	**18 48 49.2**	**-0.8**
AKTO	**Aktyubinsk**	**68.08**	**326**	P	**P**	**18 48 49.2**	**-0.8**
	2.0nm,0.8s,mb4.2,baz=68,slow=5.3,SNR=3.5						
AKASG	**Malin Array Be**	**75.23**	**344**	P	**P**	**18 49 31.3**	**-1.8**
	1.3nm,0.7s,mb4.0,baz=18,slow=6.0,SNR=3.4						
ASAR	**Alice Springs**	**87.66**	**225**	P	**P**	**18 50 39.0**	**-0.2**
	0.7nm,0.8s,mb4.0,baz=35,slow=4.3,SNR=5.1						

IDC 07 19:22:38.5±1.3, 52˚.19N×175˚.84W, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.6/25, mbtmp3.7/6, ML3.8/2, Error ellipse: s-maj=40.8km s-min=26.0km az=161.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**14.44**	**58**	Pn	**Pn**	**19 26 03.3**	**-0.5**
	0.4nm,0.3s,baz=278,slow=19,SNR=3.4						
ILAR	**Eielson Array**	**19.46**	**39**	P	**Pn**	**19 27 05.8**	**-1.7**
	0.1nm,0.3s,baz=235,slow=8.4,SNR=7.1						
TXAR	**Lajitas Array**	**56.72**	**84**	P	**P**	**19 32 24.7**	**+0.9**
	0.8nm,0.9s,baz=304,slow=6.2,SNR=6.9						
BVAR	**Borovoye Array**	**61.44**	**321**	P	**P**	**19 32 57.4**	**+1.2**
	0.7nm,0.6s,baz=36,slow=7.7,SNR=4.7						
BRTR	**Keskin Array B**	**84.93**	**338**	P	**P**	**19 35 14.5**	**-0.6**
	0.6nm,0.8s,baz=42,slow=4.7,SNR=2.7						
ASAR	**Alice Springs**	**87.35**	**225**	P	**P**	**19 35 26.7**	**-0.4**
	0.2nm,0.7s,baz=21,slow=6.0,SNR=2.5						

*ISCJB **07** 19:31:19.2±0.8, 52˚.1N±0˚.2×175˚.54W±0˚.08, h10km, mb3.8/5, Error ellipse: s-maj=21.9km s-min=7.1km az=173.5*
*IDC **07** 19:31:19.4±1.2, 52˚.13N×175˚.70W, h0km, mb3.8/5, mb1 4.1/7, mb1mx3.7/26, mbtmp3.8/7, ML4.1/2, Error ellipse: s-maj=39.4km s-min=22.5km az=177.0*
*NEIC **07** 19:31:20.6±1.0, 52˚.02N×175˚.58W, h10km, ML3.4(AEIC), Error ellipse: s-maj=25.3km s-min=9.8km az=173.0*

ISC 07 19:31:20.7±0.9, 52˚.1N±0˚.2×175˚.51W±0˚.08, h10km, n14, σ1$42/15, mb3.8/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.34**	**276**	*e*P	**Pg**	**19 31 26.1**	**-1.3**
ATKA	**Atka Island**	**0.82**	**79**	P	**Pg**	**19 31 34.5**	**-2.1**
ATKA				S	**Sg**	**19 31 45.8**	**-1.6**
AKUT	**Akutan**	**6.22**	**67**	*e*Pn	**Pn**	**19 32 53.4**	**+0.9**
	254nm,1.4s						
KDAK	**Kodiak Island**	**14.34**	**57**	Pn	**Pn**	**19 34 46.3**	**+2.8**
	0.8nm,0.3s,baz=236,slow=8.2,SNR=7.4						
TTA	**Tatalina**	**15.04**	**36**	*e*P	**Pn**	**19 34 55.1**	**+2.1**
	3.5nm,0.9s						
ILAR	**Eielson Array**	**19.44**	**38**	P	**Pn**	**19 35 45.6**	**-2.5**
	0.3nm,0.3s,baz=226,slow=8.6,SNR=16						
EGAK	**Eagle**	**21.70**	**41**	*e*P	**P**	**19 36 10.8**	**-0.6**
EGAK				*e*P		19 36 11.8	
DAWY	**Dawson**	**22.21**	**43**	*e*P	**P**	**19 36 17.9**	**+1.1**
NVAR	**Mina Array Bea**	**41.45**	**86**	P	**P**	**19 39 09.2**	**+1.8**
	1.2nm,0.8s,mb3.6,baz=278,slow=7.9,SNR=5.3						
TXAR	**Lajitas Array**	**56.54**	**84**	P	**P**	**19 41 03.6**	**+0.5**
	0.9nm,0.6s,mb4.0,baz=304,slow=5.7,SNR=11						
MKAR	**Makanchi Array**	**61.19**	**310**	P	**P**	**19 41 34.5**	**-0.7**
MKAR	**Makanchi Array**	**61.19**	**310**	P	**P**	**19 41 34.5**	**-0.7**
	0.1nm,0.4s,mb3.3,baz=41,slow=3.6,SNR=4.4						
BVAR	**Borovoye Array**	**61.67**	**321**	P	**P**	**19 41 38.1**	**-0.2**
	0.8nm,0.6s,mb4.0,baz=35,slow=5.5,SNR=4.1						
ASAR	**Alice Springs**	**87.39**	**225**	P	**P**	**19 44 08.1**	**+0.2**
	0.6nm,0.8s,mb3.9,baz=17,slow=5.3,SNR=4.4						

*NIED **07** 19:35:00, 35˚.40N×135˚.90E, h14km, Mw3.8 Best double couple: M0 6.01000×10^14 NP1:φs202.00000°, δ65.00000°, λ144.00000°. NP2:φs309.00000°, δ58.00000°, λ31.00000°.*
*ISCJB **07** 19:35:15.6±0.5, 35˚.42N±0˚.03×135˚.88E±0˚.03, h11km±4km, mb3.4/5, Error ellipse: s-maj=5.1km s-min=3.4km az=158.0*
*IDC **07** 19:35:15.3±1.1, 35˚.45N×135˚.87E, h0km, mb3.5/5, mb1 3.7/8, mb1mx3.6/27, mbtmp3.6/8, ML3.6/3, MS3.2/1, Ms1 3.2/1, ms1mx2.0/35, Error ellipse: s-maj=23.3km s-min=13.9km az=167.0*
*JMA **07** 19:35:16.2, 35˚.42N×135˚.86E, h15km±1km, M4.2 Broadband fault plane solution: P waves. NP1: φs178.00000°, δ38.00000°, λ148.00000°. NP2: φs295.00000°, δ71.00000°, λ57.00000°. Principal axes: T Plg52.0000°, Azm166.0000°; N Plg31.0000°, Azm307.0000°; P Plg19.0000°, Azm49.0000°;*
JMA Felt III J1.
*NEIC **07** 19:35:18.3±6.4, 35˚.67N×135˚.77E, h21km±46km, MG4.2(JMA) Error ellipse: s-maj=24.5km s-min=22.2km az=144.0*
NEIC Recorded [3 JMA] in Fukui and Shiga and [1 JMA] in Aichi, Gifu, Hyogo, Kyoto, Mie, Nara and Osaka.

ISC 07 19:35:16.1±0.4, 35˚.43N±0˚.03×135˚.86E±0˚.02, h9km±3km, n20, σ0$77/34, mb3.4/5, 1C-7D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFM	**Mihama**	**0.15**	**46**	⇓P	**Pg**	**19 35 20.1**	**+0.8**
JFM				S	**Sg**	**19 35 22.6**	**+1.1**
JWT	**Wachi**	**0.40**	**249**	⇓P	**Pg**	**19 35 24.1**	**+0.3**
JWT				S	**Sg**	**19 35 29.2**	**+0.1**
JKY	**Yasaka**	**0.65**	**288**	P	**Pg**	**19 35 28.8**	**+0.3**
JKY				S	**Sg**	**19 35 37.5**	**+0.5**
JGM	**Miyama**	**0.75**	**69**	⇓P	**Pg**	**19 35 30.5**	**-0.1**
JGM				S	**Sg**	**19 35 40.1**	**-0.3**
JHE	**Heguri**	**0.78**	**190**	⇓P	**Pg**	**19 35 31.0**	**-0.2**
JHE				S	**Sg**	**19 35 41.4**	**0.0**
TSUJ	**Tsu 2**	**0.85**	**147**	⇑P	**Pg**	**19 35 31.8**	**-0.7**
TSUJ				S	**Sg**	**19 35 43.1**	**-0.5**
JKG	**Kaga**	**0.93**	**24**	⇓P	**Pg**	**19 35 34.0**	**0.0**
JKG				S	**Sg**	**19 35 46.2**	**+0.1**
JKS	**Kasai**	**0.94**	**242**	⇓P	**Pg**	**19 35 33.9**	**-0.2**
JKS				S	**Sg**	**19 35 46.1**	**-0.2**
JKSM	**Kasumi**	**0.98**	**280**	⇓P	**Pg**	**19 35 34.7**	**-0.3**
JKSM				S	**Sg**	**19 35 47.6**	**-0.2**
MAJO	**Matsushiro**	**2.21**	**59**	*e*Pn	**Pn**	**19 35 53.0**	**+0.2**
MAJO				*e*Pg	**Pg**	**19 35 57.8**	**-0.6**
MAJO				*e*Sg	**Sg**	**19 36 26.6**	**-0.4**
MAT	**Matsushiro**	**2.21**	**59**	P	**Pn**	**19 35 53.1**	**+0.2**
MAT				S	**Sn**	**19 36 19.9**	**-0.4**
MJAR	**Matsushiro Arr**	**2.21**	**59**	Pn	**Pn**	**19 35 53.3**	**+0.4**
	74nm,0.3s,baz=258,slow=14,SNR=99						
MJAR				Pg	**Pg**	**19 35 57.1**	**-1.3**
	135nm,0.3s,baz=237,slow=17,SNR=330						
MJAR				Lg		19 36 26.5	
	58nm,0.3s,baz=235,slow=36,SNR=8.1						
MJAR				LR	LR	19 36 40.2	
	comp=Z,512nm,20.8s,baz=305,slow=38						
JHJ	**Hachijo jima 2**	**3.98**	**124**	Pn	**Pn**	**19 36 17.3**	**0.0**
	9.2nm,0.3s,baz=242,slow=17,SNR=13						
JHJ				Sn	**Sn**	**19 37 04.9**	**+0.8**
	8.4nm,0.3s,baz=72,slow=20,SNR=3.2						
KSRS	**Korea Array**	**6.71**	**290**	Pn	**Pn**	**19 36 55.2**	**+0.6**
	0.4nm,0.3s,baz=104,slow=14,SNR=5.4						
KSRS				Sn	**Sn**	**19 38 09.2**	**-1.9**
	0.4nm,0.3s,baz=104,slow=23,SNR=4.8						
SONM	**Songino Array**	**25.11**	**309**	P	**P**	**19 40 43.8**	**+2.8**
	2.2nm,0.8s,mb3.7,baz=118,slow=8.5,SNR=9.2						
ZALV	**Zalesovo Beam**	**39.73**	**314**	PcP	PcP	19 44 56.7	+1.7
	0.4nm,0.5s,baz=70,slow=1.7,SNR=3.6						
MKAR	**Makanchi Array**	**41.19**	**303**	P	**P**	**19 42 59.8**	**-1.0**
	0.3nm,0.8s,mb3.0,baz=99,slow=6.4,SNR=2.2						
ILAR	**Eielson Array**	**53.23**	**31**	P	**P**	**19 44 33.6**	**-0.8**
	0.3nm,0.7s,mb3.4,baz=266,slow=6.6,SNR=4.7						
ASAR	**Alice Springs**	**58.80**	**182**	P	**P**	**19 45 16.8**	**+2.2**
	0.3nm,0.7s,mb3.4,baz=13,slow=13,SNR=3.7						
NVAR	**Mina Array Bea**	**79.51**	**50**	P	**P**	**19 47 23.4**	**+0.2**
	0.4nm,0.6s,mb3.5,baz=265,slow=5.2,SNR=3.3						

*ISCJB **07** 19:36:57.3±0.8, 52˚.3N±0˚.1×175˚.5W±0˚.1, h10km, mb3.7/4, Error ellipse: s-maj=20.1km s-min=8.3km az=170.7*
*IDC **07** 19:36:57.9±2.0, 52˚.39N×175˚.69W, h0km, mb3.6/3, mb1 3.9/5, mb1mx3.5/26, mbtmp3.6/5, ML3.9/2, Error ellipse: s-maj=75.0km s-min=30.0km az=143.0*
*NEIC **07** 19:36:58.1±1.1, 52˚.12N×175˚.42W, h10km, ML3.0(AEIC), Error ellipse: s-maj=33.5km s-min=10.1km az=166.0*

ISC 07 19:36:58.7±0.9, 52˚.2N±0˚.2×175˚.42W±0˚.10, h10km, n8, σ1$34/9, mb3.7/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.40**	**257**	*e*P	**Pg**	**19 37 04.6**	**-2.0**
ATKA	**Atka Island**	**0.76**	**88**	P	**Pg**	**19 37 11.8**	**-1.4**
ATKA				S	**Sg**	**19 37 22.6**	**-0.5**
KDAK	**Kodiak Island**	**14.22**	**58**	Pn	**Pn**	**19 40 18.9**	**-1.0**
	0.6nm,0.3s,baz=332,slow=23,SNR=11						
ILAR	**Eielson Array**	**19.31**	**38**	P	**Pn**	**19 41 24.4**	**-0.1**
	0.2nm,0.3s,baz=233,slow=8.6,SNR=13						
EGAK	**Eagle**	**21.56**	**41**	*e*P	**P**	**19 41 48.3**	**+0.4**
	4.1nm,0.7s,mb4.0						
NVAR	**Mina Array Bea**	**41.38**	**86**	P	**P**	**19 44 47.8**	**+3.0**
	0.7nm,0.7s,mb3.4,baz=302,slow=8.1,SNR=4.6						
TXAR	**Lajitas Array**	**56.47**	**84**	P	**P**	**19 46 42.6**	**+2.0**
	0.4nm,0.7s,mb3.6,baz=297,slow=5.7,SNR=5.5						
ASAR	**Alice Springs**	**87.52**	**225**	P	**P**	**19 49 47.3**	**+0.9**
	0.3nm,0.6s,mb3.7,baz=12,slow=4.7,SNR=3.5						

*ISCJB **07** 19:40:35.0±0.6, 52˚.2N±0˚.1×175˚.41W±0˚.08, h10km, mb4.1/6, Error ellipse: s-maj=16.0km s-min=6.5km az=171.3*
*IDC **07** 19:40:35.7±1.2, 52˚.24N×175˚.34W, h0km, mb4.0/5, mb1 4.2/7, mb1mx3.7/27, mbtmp4.0/7, ML3.9/2, Error ellipse: s-maj=37.2km s-min=21.8km az=1.0*
*NEIC **07** 19:40:36.4±0.7, 52˚.14N×175˚.41W, h10km, mb4.3/1, ML4.2(PMR), ML3.8(AEIC), Error ellipse: s-maj=19.6km s-min=7.5km az=165.0*

ISC 07 19:40:36.5±0.7, 52˚.1N±0˚.1×175˚.37W±0˚.08, h10km, n14, σ1$18/15, mb4.1/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSTR	**Great Sitkin T**	**0.42**	**264**	*e*P	**Pg**	**19 40 42.5**	**-2.3**
ATKA	**Atka Island**	**0.73**	**85**	P	**Pg**	**19 40 49.3**	**-1.2**
ATKA				S	**Sg**	**19 40 59.0**	**-1.0**
AMKA	**Amchitka**	**3.40**	**259**	P	**Pn**	**19 41 28.6**	**-0.8**
SPIA	**Saint Paul Isl**	**5.86**	**28**	P	**Pn**	**19 42 02.9**	**-0.4**
AKUT	**Akutan**	**6.12**	**67**	*e*P	**Pn**	**19 42 09.0**	**+2.2**
KDAK	**Kodiak Island**	**14.22**	**58**	Pn	**Pn**	**19 43 57.8**	**+0.1**
	0.3nm,0.3s,baz=155,slow=17,SNR=2.5						
ILAR	**Eielson Array**	**19.32**	**38**	P	**Pn**	**19 45 01.1**	**-1.4**
	0.2nm,0.3s,baz=233,slow=8.3,SNR=17						
EGAK	**Eagle**	**21.58**	**41**	*e*P	**P**	**19 45 26.1**	**+0.2**
	8.7nm,0.7s,mb4.3						
NVAR	**Mina Array Bea**	**41.36**	**86**	P	**P**	**19 48 23.7**	**+1.3**
	0.9nm,0.7s,mb3.5,baz=301,slow=6.6,SNR=6.5						
TXAR	**Lajitas Array**	**56.45**	**84**	P	**P**	**19 50 18.2**	**-0.1**
TXAR	**Lajitas Array**	**56.45**	**84**	P	**P**	**19 50 18.2**	**0.0**
	0.7nm,0.5s,mb4.0,baz=303,slow=5.0,SNR=10						
KURK	**Kurchatov**	**60.01**	**315**	P	**P**	**19 50 43.7**	**+0.9**
	1.4nm,0.2s,mb4.5,baz=40,slow=6.0,SNR=3.7						
BVAR	**Borovoye Array**	**61.56**	**321**	P	**P**	**19 50 54.7**	**+0.7**
	1.3nm,0.6s,mb4.2,baz=70,slow=4.9,SNR=6.5						
ASAR	**Alice Springs**	**87.51**	**225**	P	**P**	**19 53 25.9**	**+1.7**
	0.8nm,0.8s,mb4.0,baz=16,slow=5.3,SNR=5.8						

*NEIC **07** 19:43:03.7, 19˚.57N×69˚.36W, h66km, MD3.7(RSPR), After RSPR.*

RSPR 07 19:43:03.7, 19˚.57N×69˚.36W, h66km±2km, MD3.7/10, 8C-4D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMN1	**Samana, DR**	**0.39**	**167**	⇑*e*P	Pn	19 43 14.4	-0.8
SMN1				*e*S	Sn	19 43 23.2	-0.3
SDDR	**Presa de Saban**	**1.91**	**253**	⇑*e*P	Pn	19 43 33.8	-0.2
SDDR				*e*S	Sn	19 43 56.2	-0.8
IMO	**Isla Mona**	**2.00**	**136**	⇑*e*P	Pn	19 43 34.6	-0.7
AGPR	**Aguadilla, PR**	**2.40**	**117**	⇓*i*P	Pn	19 43 40.3	-0.3
AGPR				*e*S	Sn	19 44 08.5	-0.4
GRTK	**Grand Turk**	**2.55**	**320**	⇓*i*P	Pn	19 43 43.3	+0.7
GRTK				*e*S	Sn	19 44 14.2	+1.7
LSP	**Las Mesas**	**2.56**	**122**	⇑*e*P	Pn	19 43 43.1	+0.2
LRS	**Lares**	**2.70**	**118**	⇓*e*P	Pn	19 43 44.4	-0.4
AOPR	**Arecibo Observ**	**2.75**	**116**	⇓*e*P	Pn	19 43 44.9	-0.6
AOPR				*e*S	Sn	19 44 15.4	-2.2
CELP	**Cerrillos**	**3.03**	**119**	⇑*i*P	Pn	19 43 49.3	+0.1
CELP				*e*S	Sn	19 44 22.6	-1

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.42**	**250**	P	**Pg**	**19 54 11.8**	**+0.6**
ATKA	**Atka Island**	**0.75**	**92**	P	**Pg**	**19 54 16.9**	**-0.5**
ATKA				S	**Sg**	**19 54 27.0**	**-0.1**
KDAK	**Kodiak Island**	**14.19**	**58**	Pn	**Pn**	**19 57 30.8**	**+6.2**
	1.0nm,0.3s,baz=280,slow=8.6,SNR=2.9						
ILAR	**Eielson Array**	**19.26**	**38**	P	**Pn**	**19 58 28.3**	**-0.9**
	0.3nm,0.3s,baz=244,slow=13,SNR=4.2						
EGAK	**Eagle**	**21.52**	**41**	*e*P	**P**	**19 58 53.7**	**+0.9**
	12nm,1.0s,mb4.3						
INK	**Inuvik**	**25.55**	**35**	P	**P**	**19 59 32.1**	**-0.5**
	3.9nm,0.8s,mb4.0,baz=271,slow=4.7,SNR=3.2						
NVAR	**Mina Array Bea**	**41.38**	**86**	P	**P**	**20 01 53.1**	**+2.9**
	0.6nm,0.6s,mb3.4,baz=310,slow=7.5,SNR=4.0						
SONM	**Songino Array**	**48.12**	**298**	P	**P**	**20 02 43.3**	**-0.6**
	0.5nm,0.5s,mb3.8,baz=53,slow=11,SNR=3.2						
SPITS	**Spitsbergen Ar**	**49.65**	**357**	P	**P**	**20 02 56.2**	**+1.1**
	14nm,0.9s,mb5.0,baz=357,slow=12,SNR=7.0						
TXAR	**Lajitas Array**	**56.46**	**84**	P	**P**	**20 03 46.7**	**+0.6**
TXAR	**Lajitas Array**	**56.46**	**84**	P	**P**	**20 03 46.7**	**+0.6**
	0.9nm,0.8s,mb3.9,baz=301,slow=5.0,SNR=5.0						
MKAR	**Makanchi Array**	**61.12**	**310**	P	**P**	**20 04 18.2**	**0.0**
	1.0nm,0.9s,mb3.9,baz=56,slow=8.9,SNR=3.1						
BVAR	**Borovoye Array**	**61.56**	**321**	P	**P**	**20 04 20.5**	**-0.6**
	1.7nm,0.6s,mb4.3,baz=60,slow=8.8,SNR=7.7						
ASAR	**Alice Springs**	**87.56**	**225**	P	**P**	**20 06 50.8**	**-1.4**
	0.6nm,0.8s,mb3.9,baz=24,slow=5.5,SNR=2.9						

ISCJB ***07*** *19:59:58.5±1.4, 23.°6N±0.°2×94.°7E±0.°3, h93km±17km, mb3.8/4, Error ellipse: s-maj=53.4km s-min=11.5km az=140.9*

IDC ***07*** *20:00:00.2±4.4, 23.°19N×94.°27E, h96km±42km, mb3.5/4, mb1 3.4/5, mb1mx3.1/24, mbtmp3.3/5, Error ellipse: s-maj=96.1km s-min=21.7km az=59.0*

ISC 07 20:00:00.1±1.2, 23.°6N±0.°2×94.°8E±0.°2, h85km±15km, n7, σ1℘01/9, mb3.8/4, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**3.28**	**307**	*e*PN	**Pn**	**20 00 53.0**	**+3.7**
SHL				*e*SN	**Sn**	**20 01 27.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**6.43**	**142**	P	**Pn**	**20 01 32.0**	**-0.2**
	0.1nm,0.3s,baz=311,slow=12,SNR=3.0						
LSA	**Lhasa**	**6.88**	**333**	Pg	**Pn**	**20 01 39.5**	**+1.3**
LSA				Sg	**Sn**	**20 02 53.4**	**-1.6**
LSA				smax			
	comp=E,10.0nm,0.6s						
MKAR	**Makanchi Array**	**25.22**	**340**	P	**P**	**20 05 19.2**	**+1.4**
	comp=E,0.6nm,0.5s,mb3.3,baz=151,slow=10,SNR=11						
FINES	**FINESS Array B**	**59.38**	**329**	P	**P**	**20 09 53.0**	**-0.2**
	comp=E,1.1nm,0.9s,mb3.9,baz=66,slow=3.4,SNR=4.1						
ASAR	**Alice Springs**	**60.43**	**138**	P	**P**	**20 10 00.0**	**-0.9**
	comp=E,0.3nm,0.4s,mb3.6,baz=319,slow=6.3,SNR=6.1						
ARCES	**ARCESS Array B**	**60.86**	**338**	P	**P**	**20 10 03.1**	**-0.1**
	comp=E,2.6nm,1.0s,mb4.2,baz=102,slow=8.4,SNR=4.2						

ISCJB ***07*** *20:05:50.6±0.9, 52.°4N±0.°1×175.°45W±0.°10, h10km, mb3.8/3, Error ellipse: s-maj=17.4km s-min=8.6km az=177.0*

NEIC ***07*** *20:05:51.7±1.0, 52.°18N×175.°38W, h10km, ML3.0(AEIC), Error ellipse: s-maj=31.6km s-min=9.7km az=170.0*

IDC ***07*** *20:05:52.6±2.3, 52.°56N×175.°47W, h0km, mb3.7/3, mb1 3.9/5, mb1mx3.5/26, mbtmp3.6/5, ML3.5/2, Error ellipse: s-maj=58.7km s-min=31.2km az=10.0*

ISC 07 20:05:51.9±0.9, 52.°2N±0.°2×175.°42W±0.°09, h10km, n8, σ1℘16/9, mb3.8/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.42**	**250**	*e*P	**Pg**	**20 05 59.4**	**-0.7**
ATKA	**Atka Island**	**0.75**	**92**	P	**Pg**	**20 06 04.8**	**-1.6**
ATKA				S	**Sg**	**20 06 16.5**	**+0.3**
KDAK	**Kodiak Island**	**14.19**	**58**	Pn	**Pn**	**20 09 12.6**	**0.0**
	0.2nm,0.3s,baz=277,slow=8.1,SNR=2.5						
ILAR	**Eielson Array**	**19.26**	**38**	P	**Pn**	**20 10 16.1**	**-1.0**
	0.1nm,0.3s,baz=239,slow=10,SNR=4.4						
NVAR	**Mina Array Bea**	**41.38**	**86**	P	**P**	**20 13 41.3**	**+3.4**
	0.5nm,0.5s,mb3.4,baz=304,slow=4.9,SNR=4.1						
TXAR	**Lajitas Array**	**56.46**	**84**	P	**P**	**20 15 35.5**	**+1.7**
TXAR	**Lajitas Array**	**56.46**	**84**	P	**P**	**20 15 35.5**	**+1.8**
	1.1nm,0.8s,mb4.0,baz=315,slow=5.7,SNR=7.5						
BVAR	**Borovoye Array**	**61.56**	**321**	P	**P**	**20 16 09.3**	**+0.5**
	0.6nm,0.6s,mb3.9,baz=74,slow=6.3,SNR=4.0						

ISCJB ***07*** *20:13:37.9±0.4, 43.°77N±0.°04×105.°31W±0.°05, h0km, mb4.2/3, Error ellipse: s-maj=5.5km s-min=5.4km az=5.5*

NEIC ***07*** *20:13:39.4±0.4, 43.°81N×105.°32W, h0km, ML3.3, Error ellipse: s-maj=5.5km s-min=5.2km az=186.0, Suspected Mining explosion.*

NEIC 55 km [35 miles] SSE of Gillette.

IDC ***07*** *20:13:39.4±1.0, 43.°86N×105.°52W, h0km, mb4.1/3, mb1 4.0/6, mb1mx3.6/26, mbtmp3.8/6, ML3.3/3, Error ellipse: s-maj=26.3km s-min=13.1km az=123.0*

ISC 07 20:13:39.4±0.4, 43.°81N±0.°04×105.°30W±0.°05, h0km, n50, σ1℘06/50, mb4.2/3, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.96**	**70**	*e*P	**Pg**	**20 13 57.9**	**0.0**
PHWY	**Pilot Hill**	**2.51**	**183**	*e*Pn	**Pn**	**20 14 20.2**	**-1.2**
RWWY	**Rawlins**	**2.54**	**214**	*e*Pn	**Pn**	**20 14 22.1**	**+0.2**
LAO	**LASA Array**	**2.96**	**348**	*e*Pn	**Pn**	**20 14 28.8**	**+1.2**
RLMT	**Red Lodge**	**3.13**	**296**	*e*Pn	**Pn**	**20 14 30.8**	**+0.8**
BW06	**Boulder Array**	**3.28**	**253**	*e*Pn	**Pn**	**20 14 32.0**	**0.0**
GCMT	**Greycliff**	**3.69**	**304**	*e*Pn	**Pn**	**20 14 38.6**	**+1.0**
OGNE	**Ogallala**	**3.74**	**139**	*e*Pn	**Pn**	**20 14 38.2**	**-0.2**
LKWY	**Lake**	**3.75**	**263**	*e*Pg	**Pg**	**20 14 50.2**	**-1.1**
LOHW	**Long Hollow**	**3.85**	**269**	*e*Pn	**Pn**	**20 14 41.7**	**+1.8**
FLWY	**Flagg Ranch**	**3.91**	**276**	*e*Pn	**Pn**	**20 14 41.2**	**+0.4**
MOOW	**Moose Ponds**	**3.95**	**271**	*e*Pn	**Pn**	**20 14 42.5**	**+1.3**
YNR	**Norris Junctio**	**3.97**	**285**	*e*Pg	**Pg**	**20 14 52.7**	**-2.9**
SNOW	**Snow King Moun**	**3.98**	**267**	Pn	**Pn**	**20 14 41.0**	**-0.6**
ISCO	**Idaho Springs**	**4.01**	**184**	*e*Pn	**Pn**	**20 14 41.8**	**-0.3**
YFT	**Old Faithful**	**4.04**	**281**	*e*Pg	**Pg**	**20 14 53.8**	**-3.1**
REDW	**Red Top Meadow**	**4.06**	**266**	*e*Pn	**Pn**	**20 14 43.8**	**+1.0**
IMW	**Indian Meadow**	**4.08**	**273**	*e*Pn	**Pn**	**20 14 45.1**	**+2.0**
TPAW	**Teton Pass**	**4.12**	**268**	*e*Pn	**Pn**	**20 14 44.6**	**+1.1**
AHID	**Auburn Hatcher**	**4.36**	**258**	*e*Pg	**Pg**	**20 14 58.8**	**-4.3**
RRI2	**Red Ridge**	**4.40**	**266**	*e*Pn	**Pn**	**20 14 46.0**	**-1.5**
SMCO	**Snowmass**	**4.79**	**196**	*e*Pg	**Pg**	**20 15 05.1**	**-6.2**
BOZ	**Bozeman (W)**	**4.88**	**294**	*e*Pn	**Pn**	**20 14 55.2**	**+1.2**
HWUT	**Hardware Ranch**	**5.12**	**247**	*e*Pn	**Pn**	**20 14 56.8**	**-0.5**
	13nm,0.4s						
EGMT	**Eagleton**	**5.24**	**325**	*e*Pn	**Pn**	**20 14 57.2**	**-1.8**
	21nm,0.4s						
HRY	**Holter Researc**	**5.45**	**304**	*e*Pn	**Pn**	**20 15 02.0**	**+0.2**
	10nm,0.4s						
LRM	**Limekiln Ridge**	**5.47**	**294**	*e*Pg	**Pg**	**20 15 20.1**	**-4.2**
	20nm,0.4s						
JLU	**Jordanelle**	**5.58**	**237**	*e*Pn	**Pn**	**20 15 02.8**	**-0.9**
	9.1nm,0.6s						
DAU	**Daniels Canyon**	**5.58**	**235**	*e*Pn	**Pn**	**20 15 03.5**	**-0.1**
	13nm,0.5s						
SPUT	**South Promonto**	**5.84**	**247**	*e*Pn	**Pn**	**20 15 07.3**	**0.0**
	9.2nm,0.4s						
PV04	**Paradox Valley**	**6.05**	**208**	*e*Pn	**Pn**	**20 15 10.4**	**+0.2**
SRU	**San Rafael**	**6.12**	**222**	*e*P	**Pn**	**20 15 10.8**	**-0.2**
	14nm,0.5s						
PV01	**Paradox Valley**	**6.18**	**205**	*e*P	**Pn**	**20 15 12.6**	**+0.7**
	816nm,0.7s						
ECSD	**EROS Data Cent**	**6.29**	**88**	*e*P	**Pn**	**20 15 13.6**	**+0.2**
	6.7nm,0.5s						
TMUT	**Trail Mountain**	**6.32**	**227**	*e*Pn	**Pn**	**20 15 14.3**	**+0.5**
	16nm,0.6s						
CHMT	**Chamberlain Mo**	**6.41**	**302**	*e*Pn	**Pn**	**20 15 12.3**	**-2.7**
	2.3nm,0.5s						
BGU	**Big Grassy Mou**	**6.41**	**246**	*e*Pn	**Pn**	**20 15 13.8**	**-1.3**
	3.4nm,0.7s						
HLID	**Hailey**	**6.62**	**271**	*e*Pn	**Pn**	**20 15 17.6**	**-0.3**
	1.7nm,0.4s						
DUG	**Dugway**	**6.66**	**240**	*e*Pn	**Pn**	**20 15 17.6**	**-0.9**
	5.3nm,0.4s						
YBMT	**Yellow Bay**	**7.32**	**307**	*e*Pn	**Pn**	**20 15 29.1**	**+1.7**
	3.2nm,0.4s						
MSU	**Marysvale**	**7.41**	**227**	*e*Pn	**Pn**	**20 15 28.4**	**-0.4**
	9.0nm,0.7s						
ARUT	**Antelope Range**	**8.62**	**229**	*e*Pn	**Pn**	**20 15 46.0**	**+0.6**
	3.3nm,0.6s						
ULM	**Lac du Bonnet**	**9.10**	**42**	Pn	**Pn**	**20 15 50.7**	**-1.2**
	1.6nm,0.3s,baz=235,slow=13,SNR=5.6						
ULM				Lg		20 18 21.4	
	0.5nm,0.3s,baz=351,slow=19,SNR=2.6						
WUAZ	**Wupatki**	**9.51**	**212**	*e*Pn	**Pn**	**20 15 56.7**	**-0.9**
	7.8nm,0.6s						
NVAR	**Mina Array Bea**	**11.18**	**246**	Pn	**Pn**	**20 16 21.6**	**+1.1**
	0.2nm,0.3s,baz=46,slow=14,SNR=3.4						
TXAR	**Lajitas Array**	**14.50**	**174**	Pn	**Pn**	**20 17 07.7**	**+1.8**
TXAR				Pg	Pn	20 18 06.4	+61
TXAR				Lg		20 21 13.8	
TXAR	**Lajitas Array**	**14.50**	**174**	Pn	**Pn**	**20 17 07.7**	**+1.8**
	0.2nm,0.3s,baz=15,slow=14,SNR=7.1						
TXAR				Pg	Pn	20 18 06.4	+61
	baz=11,slow=15,SNR=3.2						
TXAR				Lg		20 21 13.8	
	0.1nm,0.3s,baz=347,slow=31,SNR=3.7						
ARCES	**ARCESS Array B**	**61.36**	**18**	P	**P**	**20 23 56.3**	**-0.2**
	2.5nm,0.8s,mb4.4,baz=339,slow=5.5,SNR=8.0						
ZALV	**Zalesovo Beam**	**82.24**	**354**	P	**P**	**20 26 01.8**	**-0.4**
	1.0nm,0.6s,mb4.1,baz=9.3,slow=5.6,SNR=3.6						
MKAR	**Makanchi Array**	**89.54**	**355**	P	**P**	**20 26 38.5**	**+0.1**
	0.8nm,0.8s,mb4.0,baz=9.5,slow=6.6,SNR=3.7						

IDC 07 20:24:12.8±9.3, 17.°18S×179.°14W, h591km±112km, mb2.8/4, mb1 3.1/4, mb1mx2.9/15, mbtmp2.8/4, Error ellipse: s-maj=109.5km s-min=43.7km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.38**	**240**	P	P	20 30 44.0	-0.7
	2.3nm,0.7s,baz=90,slow=12,SNR=4.4						
ASAR	**Alice Springs**	**44.32**	**254**	P	P	20 31 32.0	+0.3
	1.0nm,0.4s,baz=86,slow=8.1,SNR=27						
ILAR	**Eielson Array**	**85.34**	**13**	P	P	20 35 47.4	-0.4
	0.2nm,0.4s,baz=220,slow=5.1,SNR=4.7						
TXAR	**Lajitas Array**	**86.20**	**58**	P	P	20 35 53.3	+0.5
	0.2nm,0.6s,baz=219,slow=7.0,SNR=3.5						
MKAR	**Makanchi Array**	**108.13**	**314**	PKiKP	PKiKP	20 41 34.0	-0.2
	0.2nm,0.5s,baz=152,slow=1.2,SNR=3.2						
BRTR	**Keskin Array B**	**143.78**	**315**	PKP	PKPdf	20 42 41.2	-0.4
	0.9nm,0.8s,baz=114,slow=1.5,SNR=4.4						

ISCJB ***07*** *20:28:50.2±0.6, 31.°80S±0.°05×69.°39W±0.°07, h114km±8km, Error ellipse: s-maj=10.8km s-min=6.2km az=37.0*

NEIC ***07*** *20:28:50.9±0.5, 31.°86S×69.°32W, h111km±7km, MD3.3(GUC), Error ellipse: s-maj=12.9km s-min=6.5km az=109.0*

GUC ***07*** *20:28:50.4±0.8, 31.°86S×69.°73W, h150km±11km, MD3.3, ML3.7*

IDC ***07*** *20:28:51.5±2.6, 31.°88S×69.°17W, h116km±21km, mb3.1/1, mb1 3.5/3, mb1mx3.4/13, mbtmp3.2/3, Error ellipse: s-maj=60.6km s-min=37.7km az=76.0*

ISC 07 20:28:51.2±0.6, 31.°79S±0.°05×69.°40W±0.°07, h108km±8km, n31, σ0℘94/45, 9C-4D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**1.00**	**80**	P	**Pn**	**20 29 11.8**	**-0.4**
	5.1nm,0.3s,baz=248,slow=11,SNR=208						
CFAA				S	**Sn**	**20 29 27.8**	**-0.4**
	11nm,0.3s,baz=331,slow=23,SNR=88						
JACH	**Jahuel**	**1.35**	**229**	⇓*i*P	**Pn**	**20 29 16.7**	**+0.7**
JACH				*i* S	**Sn**	**20 29 35.9**	**+1.0**
JACH	**Jahuel**	**1.35**	**229**	⇓*i*P	**Pn**	**20 29 16.7**	**+0.7**
JACH				*i* S	**Sn**	**20 29 35.9**	**+1.0**
FCH	**Farellones**	**1.71**	**206**	*e*P	**Pn**	**20 29 21.2**	**+0.8**
FCH				*i* S	**Sn**	**20 29 44.7**	**+2.1**
FCH	**Farellones**	**1.71**	**206**	*e*P	**Pn**	**20 29 21.2**	**+0.8**
FCH				*i* S	**Sn**	**20 29 44.7**	**+2.1**
FCH				AML	AML	20 29 50.3	
	comp=E,688nm,0.2s						
PEL	**Peldehue**	**1.73**	**219**	⇑*i*P	**Pn**	**20 29 20.4**	**-0.3**
PEL				*i* S	**Sn**	**20 29 43.5**	**+0.3**
PEL				AML	AML	20 29 44.9	
	comp=E,2μm,0.4s						
CHNG	**Los Chungos**	**1.79**	**267**	*e*P	**Pn**	**20 29 19.7**	**-1.7**
CHNG				*i* S	**Sn**	**20 29 42.6**	**-2.0**
CHNG				AML	AML	20 29 48.8	
	comp=N,344nm,0.6s						
ROCH	**El Roble**	**1.80**	**229**	⇓*i*P	**Pn**	**20 29 21.4**	**-0.2**
ROCH				*i* S	**Sn**	**20 29 45.1**	**+0.3**
ROCH				AML	AML	20 29 46.5	
	comp=N,1μm,0.3s						
CLCH	**Cerro Calan**	**1.87**	**211**	⇓*i*P	**Pn**	**20 29 22.6**	**+0.2**
CLCH				*i* S	**Sn**	**20 29 46.9**	**+0.8**
CLCH				AML	AML	20 29 49.3	
	comp=E,911nm,0.6s						
CLCH				AML	AML	20 29 50.4	
	comp=E,921nm,0.4s						
OVCH	**Ovalle**	**1.95**	**307**	AML	AML	20 29 51.6	
	comp=N,746nm,0.3s						
SAN	**Santiago**	**1.97**	**213**	*e*P	**Pn**	**20 29 22.9**	**-0.8**
SAN				*i* S	**Sn**	**20 29 48.4**	**-0.1**
SAN	**Santiago**	**1.97**	**213**	*e*P	**Pn**	**20 29 22.9**	**-0.8**
SAN				*i* S	**Sn**	**20 29 48.4**	**-0.1**
TLL	**Tololo Astrono**	**2.02**	**323**	⇑*i*P	**Pn**	**20 29 25.8**	**+1.4**
TLL	**Tololo Astrono**	**2.02**	**323**	⇑*i*P	**Pn**	**20 29 25.8**	**+1.4**
TLL				AML	AML	20 29 56.7	
	comp=E,324nm,0.6s						
PCH	**Pirque**	**2.05**	**207**	*i* P	**Pn**	**20 29 24.8**	**0.0**
PCH				*i* S	**Sn**	**20 29 51.0**	**+0.6**
PCH	**Pirque**	**2.05**	**207**	*i* P	**Pn**	**20 29 24.8**	**0.0**
PCH				*i* S	**Sn**	**20 29 51.0**	**+0.6**
LMEL	**Las Melosas**	**2.16**	**198**	*i* P	**Pn**	**20 29 25.8**	**-0.3**
LMEL	**Las Melosas**	**2.16**	**198**	*i* P	**Pn**	**20 29 25.8**	**-0.3**
LMEL				AML	AML	20 30 03.4	
	comp=N,404nm,0.2s						
TACH	**Talagante**	**2.27**	**215**	⇑*i*P	**Pn**	**20 29 26.8**	**-0.7**
TACH				*i* S	**Sn**	**20 29 54.6**	**-0.6**
TACH	**Talagante**	**2.27**	**215**	⇑*i*P	**Pn**	**20 29 26.8**	**-0.7**
TACH				*i* S	**Sn**	**20 29 54.6**	**-0.6**
CHCH	**Chadas Angostu**	**2.38**	**206**	⇑*i*P	**Pn**	**20 29 28.9**	**-0.1**
CHCH				*i* S	**Sn**	**20 29 57.3**	**-0.7**
CHCH	**Chadas Angostu**	**2.38**	**206**	⇑*i*P	**Pn**	**20 29 28.9**	**-0.1**
CHCH				*i* S	**Sn**	**20 29 57.3**	**-0.7**
LNV	**Longovilo**	**2.74**	**218**	⇑*i*P	**Pn**	**20 29 31.7**	**-2.0**
LNV	**Longovilo**	**2.74**	**218**	⇑*i*P	**Pn**	**20 29 31.7**	**-2.0**
LCO	**Las Campanas**	**2.99**	**338**	*e*Pn	**Pn**	**20 29 37.8**	**+0.7**
LCO	**Las Campanas**	**2.99**	**338**	AML	AML	20 30 19.2	
	comp=E,280nm,0.4s						
LPAZ	**La Paz**	**15.48**	**5**	P	**Pn**	**20 32 24.9**	**+1.3**
LPAZ	**La Paz**	**15.48**	**5**	P	**Pn**	**20 32 24.9**	**+1.3**
	comp=E,0.1nm,0.3s,baz=178,slow=6.2,SNR=7.5						
SIV	**San Ignacio**	**17.46**	**28**	P	**Pn**	**20 32 46.9**	**-1.2**
	comp=E,0.4nm,0.3s,baz=217,slow=12,SNR=6.5						
TXAR	**Lajitas Array**	**68.97**	**328**	P	**P**	**20 39 45.5**	**+0.7**
	comp=E,0.3nm,0.6s,baz=153,slow=8.7,SNR=5.8						
ZALV	**Zalesovo Beam**	**151.18**	**32**	PKPbc	PKPbc	20 48 30.4	-0.8
	comp=E,1.0nm,0.5s,baz=301,slow=4.1,SNR=4.5						

IDC ***07*** *20:33:12.9±4.0, 2.°43S×101.°95E, h0km, mb3.7/4, mb1 3.7/4, mb1mx3.4/20, mbtmp3.7/4, MS2.9/1, Ms1 2.9/1, ms1mx2.2/25, Error ellipse: s-maj=179.0km s-min=26.9km az=57.0*

ISCJB ***07*** *20:33:34.0±0.6, 2.°4S±0.°1×102.°3E±0.°1, h201km±8km, mb3.2/4, Error ellipse: s-maj=28.4km s-min=8.8km az=142.1*

DJA ***07*** *20:33:37, 2.°25S×102.°44E, h9km, MLv3.8/5*

ISC 07 20:33:35.1±0.6, 2.°4S±0.°1×102.°3E±0.°1, h193km±8km, n11, σ0℘79/12, mb3.2/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RGRI	**Rengat**	**2.00**	**2**	P	**Pn**	**20 34 13.2**	**+0.1**
MNAI	**Manna**	**2.10**	**161**	P	**Pn**	**20 34 14.1**	**0.0**
MNAI				S	**Sn**	**20 34 44.1**	**-0.4**
PDSI	**Padang**	**2.32**	**308**	P	**Pn**	**20 34 18.7**	**+2.2**
PDSI				S	**Sn**	**20 34 47.2**	**-1.5**
MDSI	**Maura Dua**	**2.84**	**138**	P	**Pn**	**20 34 22.3**	**-0.1**
SISI	**Saibi**	**3.35**	**288**	P	**Pn**	**20 34 29.1**	**+0.6**
KLSI		**3.37**	**133**	P	**Pn**	**20 34 29.0**	**+0.2**
PSI	**Prapat**	**6.13**	**327**	LR	LR	20 37 04.1	
	comp=Z,106nm,20.4s,baz=106,slow=39						
ASAR	**Alice Springs**	**37.21**	**127**	P	**P**	**20 40 28.1**	**0.0**
	0.3nm,0.4s,mb3.1,baz=301,slow=8.4,SNR=8.4						
SONM	**Songino Array**	**50.12**	**4**	P	**P**	**20 42 10.5**	**0.0**
	1.0nm,0.6s,mb3.4,baz=188,slow=9.8,SNR=6.4						
MKAR	**Makanchi Array**	**52.02**	**343**	P	**P**	**20 42 23.8**	**-0.9**
	0.3nm,0.5s,mb3.0,baz=159,slow=8.9,SNR=4.6						
ZALV	**Zalesovo Beam**	**57.97**	**348**	P	**P**	**20 43 07.2**	**+0.1**
	0.3nm,0.2s,mb3.5,baz=131,slow=6.1,SNR=4.0						

THE ***07*** *20:33:53.0, 38.°00N×20.°19E, h0km±5km, ML2.0/2, Error ellipse: s-maj=7.6km s-min=3.2km az=255.0*

CSEM ***07*** *20:33:56.2±0.8, 38.°19N×20.°38E, h15km, MD3.5, Error ellipse: s-maj=17.9km s-min=9.4km az=69.0*

ATH ***07*** *20:33:57.3, 38.°10N×20.°41E, h5km±4km, MD3.5/8*

ISC 07 20:33:54.5±1.8, 38.°13N±0.°06×20.°2E±0.°1, h5km±7km, n22, σ1℘04/34, 1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.28**	**81**	⇓*i*PG	**Pg**	**20 34 00.5**	**+0.5**
VLS				*e*SG	**Sg**	**20 34 04.1**	**+0.4**
VLS	**Valsamata**	**0.28**	**81**	P	**Pg**	**20 34 00.5**	**+0.5**
VLS				S	**Sg**	**20 34 04.7**	**+1.0**
VLS	**Valsamata**	**0.28**	**81**	P	**Pg**	**20 34 00.5**	**+0.5**
VLS				*e*Sg	**Sg**	**20 34 04.1**	**+0.4**
VLS				S	**Sg**	**20 34 04.7**	**+1.0**
KFL	**Anninata**	**0.44**	**93**	P	**Pg**	**20 34 03.1**	**+0.2**
KFL	**Anninata**	**0.44**	**93**	P	**Pg**	**20 34 03.1**	**+0.2**
LKD2	**Lefkada island**	**0.73**	**27**	P	**Pg**	**20 34 08.9**	**+0.3**
LKD2				S	**Sg**	**20 34 22.9**	**+4.8**
LKD2	**Lefkada island**	**0.73**	**27**	P	**Pg**	**20 34 08.9**	**+0.3**
LKD2				S	**Sg**	**20 34 22.9**	**+4.8**
RLS	**Riolos of Patr**	**0.97**	**94**	*e*PG	**Pg**	**20 34 12.8**	**-0.4**
RLS				*e*SB	**Sb**	**20 34 25.2**	**-1.8**
RLS	**Riolos of Patr**	**0.97**	**94**	*e*Pg	**Pg**	**20 34 12.8**	**-0.4**
RLS				*e*Sb	**Sb**	**20 34 25.2**	**-1.8**
EFP	**Efpalio**	**1.35**	**77**	*e*PB	**Pb**	**20 34 20.6**	**+0.4**
EFP	**Efpalio**	**1.35**	**77**	*e*Pb	**Pb**	**20 34 20.6**	**+0.4**
TRIZ	**Trizonia**	**1.46**	**80**	P	**Pn**	**20 34 20.0**	**-1.6**
TRIZ				S	**Sn**	**20 34 42.8**	**+1.7**
TRIZ	**Trizonia**	**1.46**	**80**	P	**Pn**	**20 34 20.0**	**-1.6**
TRIZ				S	**Sn**	**20 34 42.8**	**+1.7**
ITM	**Ithomi**	**1.65**	**125**	*e*PB	**Pb**	**20 34 26.0**	**+0.7**
ITM				*e*SG	**Sg**	**20 34 48.1**	**+0.7**
ITM	**Ithomi**	**1.65**	**125**	*e*Pb	**Pb**	**20 34 26.0**	**+0.7**
ITM				*e*Sg	**Sg**	**20 34 48.1**	**+0.7**
GUR	**Goura**	**1.67**	**96**	*e*PG	**Pg**	**20 34 25.7**	**-0.9**
GUR	**Goura**	**1.67**	**96**	*e*Pg	**Pg**	**20 34 25.7**	**-0.9**
PYL	**PYLOS**	**1.72**	**135**	*e*PB	**Pb**	**20 34 27.5**	**+0.9**
PYL	**PYLOS**	**1.72**	**135**	*e*Pb	**Pb**	**20 34 27.5**	**+0.9**
THL	**Klokotos Trika**	**1.99**	**44**	*e*PN	**Pn**	**20 34 34.3**	**+5.5**
DID	**Didima**	**2.46**	**104**	*e*PG	**Pg**	**20 34 39.8**	**-1.8**
DID	**Didima**	**2.46**	**104**	*e*Pg	**Pg**	**20 34 39.8**	**-1.8**

ISCJB ***07*** *20:38:46.8±1.0, 36.°47N±0.°03×42.°66E±0.°05, h2km±8km, Error ellipse: s-maj=7.4km s-min=4.6km az=165.4*

DDA ***07*** *20:38:47.4, 36.°66N×42.°45E, h8km±3km, Md3.4*

ISK ***07*** *20:38:49.2, 36.°55N×42.°77E, h18km, MD3.6*

CSEM ***07*** *20:38:49.4±0.2, 36.°49N×42.°82E, h15km, MD3.6, Error ellipse: s-maj=7.0km s-min=5.4km az=71.0*

ISC 07 20:38:49.4±1.0, 36.°52N±0.°03×42.°71E±0.°06, h15km±8km, n26, σ1℘35/38, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUKT	**Cukurca**	**1.02**	**44**	*e*PG	**Pg**	**20 39 08.3**	**-0.8**
CUKT	**Cukurca**	**1.02**	**44**	*e*Pg	**Pg**	**20 39 08.3**	**-0.9**
CUKT				*e*Sg	**Sg**	**20 39 22.4**	**-0.1**
HAKT	**HAKKARI**	**1.31**	**37**	*i* P	**Pn**	**20 39 13.5**	**+0.4**
HAKT				*i* S	**Sb**	**20 39 31.3**	**+1.1**
HAKT	**HAKKARI**	**1.31**	**37**	*i* P	**Pn**	**20 39 13.5**	**+0.4**
HAKT				*i* S	**Sb**	**20 39 31.3**	**+1

mb4.3/4, Error ellipse: s-maj=16.3km s-min=7.7km az=171.6
*IDC **07** 20:58:47.9±1.3, 52.06N×175.36W, h0km, mb3.9/2, mb1 3.9/4, mb1mx3.5/25, mbtmp3.8/4, ML3.7/2, Error ellipse: s-maj=42.0km s-min=26.7km az=164.0*
*NEIC **07** 20:58:49.4±0.9, 52.05N×175.46W, h10km, mb3.9/6, ML3.5(AEIC), Error ellipse: s-maj=21.5km s-min=9.6km az=158.0*

ISC 07 20:58:49.5±0.9, 52.1N±0.1×175.46W±0.09, h10km, n17, σ1§09/18, mb4.3/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**0.79**	**78**	P	**Pg**	**20 59 03.6**	**-1.2**
ATKA				S	**Sg**	**20 59 15.1**	**0.0**
AMKA	**Amchitka**	**3.33**	**260**	P	**Pn**	**20 59 40.9**	**-0.6**
UNV	**Unalaska Valle**	**5.71**	**68**	P	**Pn**	**21 00 14.8**	**+0.6**
	18nm,0.6s						
SPIA	**Saint Paul Isl**	**5.96**	**28**	P	**Pn**	**21 00 16.2**	**-1.4**
KDAK	**Kodiak Island**	**14.31**	**57**	Pn	**Pn**	**21 02 13.6**	**+1.6**
	0.1nm,0.3s,baz=343,slow=19,SNR=2.0						
TTA	**Tatalina**	**15.03**	**36**	*e*P	**Pn**	**21 02 26.9**	**+5.3**
	4.8nm,1.0s						
PPLA	**Purkeypile**	**16.46**	**40**	*e*P	**Pn**	**21 02 41.6**	**+1.4**
	5.6nm,0.8s						
TRF	**Thorofare Moun**	**17.48**	**40**	*e*P	**Pn**	**21 02 49.1**	**-3.9**
BPAW	**Bear Paw Mtn.**	**17.55**	**37**	*e*P	**Pn**	**21 02 55.2**	**+1.4**
	10nm,1.0s						
MCK	**McKinley**	**18.15**	**40**	*e*P	**Pn**	**21 03 00.1**	**-1.1**
	14nm,1.0s						
ILAR	**Eielson Array**	**19.43**	**38**	P	**Pn**	**21 03 13.5**	**-3.2**
	0.2nm,0.3s,baz=235,slow=8.3,SNR=13						
COLD	**Coldfoot**	**19.63**	**30**	P	**Pn**	**21 03 13.4**	**-5.7**
	7.0nm,1.0s						
EGAK	**Eagle**	**21.68**	**41**	*e*P	**P**	**21 03 40.0**	**0.0**
	24nm,1.0s,mb4.6						
DAWY	**Dawson**	**22.20**	**43**	*e*P	**P**	**21 03 45.9**	**+0.4**
TXAR	**Lajitas Array**	**56.51**	**84**	P	**P**	**21 08 31.0**	**-0.6**
	3.6nm,0.4s,mb4.8,baz=268,slow=7.1,SNR=35						
BVAR	**Borovoye Array**	**61.69**	**321**	P	**P**	**21 09 07.6**	**+0.3**
	1.1nm,0.6s,mb4.2,baz=48,slow=7.0,SNR=8.0						
ASAR	**Alice Springs**	**87.41**	**225**	P	**P**	**21 11 37.4**	**+0.7**
	0.5nm,0.7s,mb3.9,baz=35,slow=5.5,SNR=5.0						

JMA 07 21:04:57.4±0.5, 46.05N×147.87E, h313km, M3.5, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**3.08**	**210**	P	Pn	21 05 55.1	+0.2
NEM2				*e*S	S	21 06 39.8	-1.1
JNK	**Nakash**	**3.33**	**223**	P	Pn	21 05 58.0	+0.7
JTKR	**Abashiri--Toko**	**3.50**	**235**	P	Pn	21 05 59.3	+0.3
JAK	**Akkeshi**	**3.80**	**218**	P	Pn	21 06 02.3	+0.1
JAK				*e*S	S	21 06 52.9	-1.3
JAR	**Ashorobuto**	**4.02**	**228**	P	Pn	21 06 05.2	+0.7
JCH	**Churui**	**4.72**	**225**	P	Pn	21 06 11.7	-0.5
JCH				*e*S	S	21 07 08.1	-4.3
JFR	**Furan**	**4.75**	**234**	P	Pn	21 06 13.2	+0.7
JNBK	**Urakawa-nobuka**	**5.27**	**226**	P	Pn	21 06 17.4	-1.1
JKB	**Kayabe**	**6.45**	**232**	P	Pn	21 06 30.8	-1.6
JKB				*e*S	S	21 07 41.1	-8.1
JOT	**Ohata**	**6.80**	**229**	P	Pn	21 06 34.5	-2.0
JOT				*e*S	S	21 07 48.6	-8.1

*IDC **07** 21:25:58.3±7.2, 52.22N×175.99W, h0km, mb3.6/2, mb1 3.9/4, mb1mx3.5/26, mbtmp3.6/4, ML3.8/2, Error ellipse: s-maj=136.1km s-min=58.9km az=101.0*

NEIC 07 21:25:56.6, 52.10N×175.48W, h5km, ML3.1(AEIC), **After AEIC., Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**0.80**	**82**	P	Pg	21 26 12.3	+0.3
ATKA				S	Sg	21 26 23.0	+0.7
KDAK	**Kodiak Island**	**14.30**	**58**	Pn	Pn	21 29 24.3	+4.8
KDAK	**Kodiak Island**	**14.30**	**58**	Pn	Pn	21 29 24.3	+4.8
	0.2nm,0.3s,baz=258,slow=19,SNR=2.1						
ILAR	**Eielson Array**	**19.40**	**38**	P	Pn	21 30 26.7	+2.5
	0.2nm,0.3s,baz=230,slow=8.4,SNR=7.6						
COLD	**Coldfoot**	**19.59**	**30**	P	Pn	21 30 26.9	+0.4
PNL	**Peninsula**	**21.38**	**55**	*e*P	P	21 30 47.4	+2.7
	8.1nm,0.5s						
NVAR	**Mina Array Bea**	**41.43**	**86**	P	P	21 33 49.3	+5.5
	0.5nm,0.5s,baz=307,slow=6.6,SNR=3.5						
TXAR	**Lajitas Array**	**56.52**	**84**	P	P	21 35 44.0	+4.4
	0.2nm,0.5s,baz=299,slow=5.8,SNR=6.1						

*BJI **07** 21:27:28.4, 2.46N×95.78E, h11km, mB4.9/5, mb4.8/16, Ms4.4/1*
*IDC **07** 21:27:28.4±0.9, 2.34N×95.78E, h0km, mb4.3/12, mb1 4.4/14, mb1mx4.1/25, mbtmp4.3/14, ML4.0/2, MS3.2/2, Ms1 3.2/2, ms1mx2.8/36, Error ellipse: s-maj=30.9km s-min=16.0km az=52.0*
*ISCJB **07** 21:27:33.2±0.9, 2.39N±0.04×95.85E±0.05, h45km±8km, mb4.7/36, Error ellipse: s-maj=9.3km s-min=5.2km az=152.3*
*NEIC **07** 21:27:33.6±2.1, 2.42N×95.87E, h33km±15km, mb4.6/11, Error ellipse: s-maj=8.3km s-min=5.0km az=58.0*
*DJA **07** 21:27:35, 2.44N×95.92E, h30km, mb4.8/7*

ISC 07 21:27:35.2±0.7, 2.41N±0.04×95.85E±0.05, h44km±7km, n95, σ0§90/95, mb4.7/36, 1C, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPTI		**1.58**	**58**	P	**Pn**	**21 27 59.0**	**-1.8**
TSI	**Tuntungan**	**2.92**	**68**	P	**Pn**	**21 28 20.7**	**+1.5**
PSI	**Prapat**	**3.10**	**83**	Pn	**Pn**	**21 28 20.6**	**-1.1**
	10nm,0.3s,baz=274,slow=6.7,SNR=32						
PSI					LR	21 29 46.6	
	comp=Z,369nm,19.8s,baz=264,slow=44						
MNSI	**Mandailing Nat**	**4.06**	**113**	P	**Pn**	**21 28 35.2**	**+0.3**
MNSI				S	**Sn**	**21 29 23.3**	**+2.1**
SISI	**Saibi**	**4.93**	**139**	P	**Pn**	**21 28 46.8**	**0.0**
SISI				S	**Sn**	**21 29 41.8**	**-0.7**
PPI	**Padang Panjang**	**5.37**	**122**	P	**Pn**	**21 28 53.7**	**+0.9**
	0.2nm5µm52nm,0.7s						
IPM	**Ipoh**	**5.57**	**68**	P	**Pn**	**21 28 54.9**	**-0.6**
KULM	**Kulim**	**5.58**	**59**	P	**Pn**	**21 28 55.1**	**-0.7**
PDSI	**Padang**	**5.67**	**125**	P	**Pn**	**21 28 57.1**	**+0.1**
	0.4nm2µm58nm,0.6s						
FRIM	**Kepong**	**5.83**	**82**	P	**Pn**	**21 28 59.1**	**-0.1**
SDSI	**Sungai Dareh**	**6.49**	**121**	P	**Pn**	**21 29 09.4**	**+1.1**
	0.1nm21nm,0.8s						
KGM	**Kluang**	**7.48**	**93**	P	**Pn**	**21 29 22.1**	**+0.3**
KTGM	**Kuala Trenggan**	**7.83**	**68**	P	**Pn**	**21 29 26.0**	**-0.6**
MYKOM	**Kota Tinggi**	**8.02**	**94**	P	**Pn**	**21 29 29.7**	**+0.4**
KSI	**Kapahiang**	**9.04**	**132**	P	**Pn**	**21 29 43.8**	**+0.6**
	115nm,1.0s						
MNAI	**Manna**	**9.78**	**133**	P	**Pn**	**21 29 53.4**	**0.0**
MDSI	**Maura Dua**	**10.78**	**129**	P	**Pn**	**21 30 06.4**	**-0.7**
	30nm,0.8s						
LWLI	**Liwa**	**11.03**	**132**	P	**Pn**	**21 30 10.0**	**-0.5**
	95nm,0.7s						
KLSI		**11.34**	**128**	P	**Pn**	**21 30 15.4**	**+0.7**
COCO	**West Island**	**14.53**	**176**	Pn	**Pn**	**21 30 57.7**	**-0.5**
PALK	**Pallekele**	**15.84**	**288**	*e*Pn	**Pn**	**21 31 14.4**	**-0.9**
CM31	**Chiang Mai Arr**	**16.24**	**11**	*e*Pn	**Pn**	**21 31 18.4**	**-2.0**
	12nm,1.0s						
CMAR	**Chiang Mai Arr**	**16.24**	**11**	Pn	**Pn**	**21 31 18.7**	**-1.6**
	0.3nm,0.3s,baz=202,slow=12,SNR=21						
SBUM	**Sibu**	**16.36**	**90**	P	**Pn**	**21 31 22.6**	**+0.7**
CHTO	**Chiang Mai**	**16.59**	**10**	*e*Pn	**Pn**	**21 31 21.9**	**-2.8**
	5.8nm,0.7s						
BTM	**Bintulu**	**17.24**	**87**	P	**Pn**	**21 31 33.6**	**+0.7**
KKM	**Kota Kinabalu**	**20.63**	**79**	P	**P**	**21 32 12.4**	**+1.3**
KDM	**Kudat**	**21.39**	**77**	P	**P**	**21 32 20.6**	**+1.3**
SDKM	**Sandakan**	**21.54**	**81**	P	**P**	**21 32 22.3**	**+1.4**
SHL	**Shillong**	**23.34**	**351**	*e*PKP	**P**	**21 32 40.0**	**+0.2**
KMI	**Kunming**	**23.54**	**16**	P	**P**	**21 32 42.4**	**+0.7**
KMI				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.3						
KAPI	**Kappang**	**25.00**	**107**	*e*P	**P**	**21 32 54.6**	**-0.6**
ODAN	**Odare**	**25.63**	**342**	*e*P	**P**	**21 33 01.7**	**+1.0**
	comp=Z,64nm,0.7s,mb5.3						
RAMN	**Ramite**	**25.96**	**341**	*e*P	**P**	**21 33 05.3**	**+1.6**
	comp=Z,91nm,0.7s,mb5.4						
TAPN	**Taplejung**	**26.00**	**343**	*e*P	**P**	**21 33 05.5**	**+1.5**
	comp=Z,98nm,0.9s,mb5.3						
JIRN	**Jiri**	**26.76**	**341**	*e*P	**P**	**21 33 12.4**	**+1.5**
	comp=Z,127nm,0.9s,mb5.5						
PKI	**Pulchoki**	**26.94**	**339**	*e*P	**P**	**21 33 13.3**	**+0.7**
	comp=Z,42nm,0.9s,mb5.0						
PKIN	**Phulchoki**	**26.95**	**339**	*e*P	**P**	**21 33 14.4**	**+1.8**
	comp=Z,25nm,0.7s,mb4.9						
DMN	**Daman**	**27.09**	**339**	*e*P	**P**	**21 33 14.6**	**+0.8**
	comp=Z,10nm,0.6s,mb4.5						
GUN	**Gumba**	**27.09**	**340**	*e*P	**P**	**21 33 13.9**	**0.0**
	comp=Z,50nm,0.5s,mb5.3						
KKN	**Kakani**	**27.19**	**339**	*e*P	**P**	**21 33 15.3**	**+0.5**
	comp=Z,41nm,0.9s,mb5.0						
LSA	**Lhasa**	**27.51**	**351**	P	**P**	**21 33 17.2**	**-0.4**
LSA	**Lhasa**	**27.51**	**351**	*e*P	**P**	**21 33 18.6**	**+1.0**
	comp=Z,26nm,0.8s,mb4.9						
GKN	**Gorkha**	**27.61**	**338**	*e*P	**P**	**21 33 19.3**	**+0.7**
	comp=Z,43nm,1.1s,mb5.0						
KOLN	**Koldanda**	**27.81**	**336**	*e*P	**P**	**21 33 21.0**	**+0.7**
	comp=Z,27nm,0.8s,mb5.0						
ENH	**Enshi**	**30.58**	**24**	*e*P	**P**	**21 33 43.5**	**-1.5**
	comp=Z,15nm,1.0s,mb4.8						
MBWA	**Marble Bar**	**33.10**	**136**	P	**P**	**21 34 06.4**	**-0.7**
XAN	**Xi'an**	**33.76**	**20**	P	**P**	**21 34 11.7**	**-1.0**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LZH	**Lanzhou**	**34.32**	**12**	*e*P	**P**	**21 34 17.0**	**-0.6**
LZH				pP	pP	21 34 21.5	-8.0
LZH				sP	sP	21 34 23.0	-12
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
FITZ	**Fitzroy Crossi**	**35.73**	**126**	*e*P	**P**	**21 34 28.6**	**-1.4**
FITZ	**Fitzroy Crossi**	**35.73**	**126**	P	**P**	**21 34 28.5**	**-1.4**
	comp=Z,4.4nm,0.9s,mb4.4,baz=283,slow=2.2,SNR=4.2						
GTA	**Gaotai**	**37.01**	**5**	↑P	**P**	**21 34 40.2**	**-0.4**
GTA				pP	pP	21 34 46.1	-6.5
GTA				sP	sP	21 34 48.9	-8.9
GTA				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
NWAO	**Narrogin (SRO)**	**40.55**	**152**	*e*P	**P**	**21 35 09.0**	**-1.3**
NWAO	**Narrogin (SRO)**	**40.55**	**152**	P	**P**	**21 35 08.9**	**-1.4**
	comp=Z,9.8nm,0.9s,mb4.4,baz=53,slow=20,SNR=3.3						
KBL	**Kabul**	**40.56**	**325**	P	**P**	**21 35 09.9**	**-0.5**
BJT	**Baijiatuan**	**41.73**	**24**	*e*P	**P**	**21 35 20.6**	**+0.6**
	comp=Z,21nm,0.8s,mb4.8						
BJI	**Beijing**	**41.76**	**24**	P	**P**	**21 35 20.3**	**+0.1**
BJI				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.8						
WRAB	**Tennant Creek**	**43.82**	**122**	*e*P	**P**	**21 35 36.5**	**-0.8**
	comp=Z,2.8nm,0.5s,mb4.2						
WB2	**Warramunga Arr**	**43.83**	**122**	*e*P	**P**	**21 35 37.8**	**+0.5**
AAK	**Ala-Archa**	**44.37**	**337**	*e*P	**P**	**21 35 42.7**	**+1.5**
ASAR	**Alice Springs**	**45.20**	**127**	P	**P**	**21 35 48.3**	**+0.1**
	comp=Z,1.1nm,0.8s,mb3.7,baz=302,slow=7.9,SNR=7.8						
KSRS	**Korea Array**	**45.65**	**36**	P	**P**	**21 35 50.2**	**-1.4**
	comp=Z,1.7nm,0.8s,mb4.0,baz=230,slow=9.3,SNR=10.0						
MK31	**Makanchi Array**	**45.76**	**347**	*e*P	**P**	**21 35 52.6**	**+0.3**
MKAR	**Makanchi Array**	**45.76**	**347**	P	**P**	**21 35 52.3**	**+0.1**
	comp=Z,11nm,0.8s,mb4.9,baz=163,slow=7.9,SNR=77						
SONM	**Songino Array**	**46.16**	**10**	P	**P**	**21 35 55.3**	**-0.1**
	comp=Z,6.6nm,0.7s,mb4.7,baz=188,slow=8.7,SNR=27						
SONM				PcP	PcP	21 37 31.9	+1.1
	comp=Z,1.5nm,0.7s,baz=199,slow=4.0,SNR=4.0						
ULN	**Ulaanbaatar**	**46.31**	**10**	*e*P	**P**	**21 35 56.4**	**-0.1**
	comp=Z,4.3nm,0.9s,mb4.4						
TLY	**Talaya**	**49.54**	**6**	*e*P	**P**	**21 36 21.6**	**+0.1**
GUMO	**Guam**	**49.70**	**74**	*e*P	**P**	**21 36 22.1**	**-1.2**
KURK	**Kurchatov**	**50.29**	**346**	*e*P	**P**	**21 36 27.7**	**+0.5**
	comp=Z,6.9nm,0.9s,mb4.7						
KURK	**Kurchatov**	**50.29**	**346**	LR	LR	21 59 52.8	
	comp=Z,27nm,21.4s,baz=205,slow=39						
MAJO	**Matsushiro**	**51.74**	**44**	P	P	**21 36 37.3**	**-1.0**
ZAA0	**Zalesovo Array**	**52.17**	**352**	*e*P	P	**21 36 41.0**	**-0.2**
ZALV	**Zalesovo Beam**	**52.17**	**352**	P	P	**21 36 41.3**	**+0.1**
	comp=Z,4.7nm,0.4s,mb4.8,baz=178,slow=6.9,SNR=42						
CTAO	**Charters Tower**	**54.25**	**117**	*e*P	**P**	**21 36 56.2**	**-0.9**
BVAR	**Borovoye Array**	**54.68**	**341**	P	**P**	**21 36 59.6**	**0.0**
	comp=Z,8.7nm,0.7s,mb4.9,baz=145,slow=8.1,SNR=35						
BRVK	**Borovoye**	**54.74**	**341**	*e*P	**P**	**21 36 59.9**	**-0.2**
	comp=Z,8.7nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**55.16**	**132**	*e*P	**P**	**21 37 04.5**	**+0.9**
GNI	**Garni**	**59.49**	**316**	*e*P	**P**	**21 37 33.4**	**-0.6**
YSS	**Yuzh-Sakhalins**	**60.13**	**35**	*e*P	**P**	**21 37 37.5**	**-0.7**
ARU	**Arti**	**61.55**	**337**	*e*P	**P**	**21 37 47.5**	**-0.2**
	comp=Z,9.2nm,1.1s,mb4.8						
KIV	**Kislovodsk**	**62.52**	**319**	*e*P	**P**	**21 37 54.7**	**+0.3**
MALT	**Malatya**	**63.32**	**312**	*e*P	**P**	**21 38 00.6**	**+0.7**
YAK	**Yakutsk**	**64.66**	**17**	*e*P	**P**	**21 38 07.8**	**-0.4**
BR131	**Keskin Array S**	**67.30**	**312**	*e*P	**P**	**21 38 23.6**	**-2.0**
	comp=Z,0.9nm,0.7s,mb3.9						
BRTR	**Keskin Array B**	**67.30**	**312**	P	**P**	**21 38 24.9**	**-0.8**
	comp=Z,1.3nm,0.9s,mb4.0,baz=95,slow=5.5,SNR=6.6						
CASY	**Casey**	**69.34**	**174**	*e*P	**P**	**21 38 36.7**	**-1.1**
AKASG	**Malin Array Be**	**73.48**	**322**	P	**P**	**21 39 02.7**	**-0.4**
AKASG	**Malin Array Be**	**73.48**	**322**	P	**P**	**21 39 02.7**	**-0.4**
	comp=Z,0.4nm,0.3s,mb3.8,baz=100,slow=3.9,SNR=5.0						
MAW	**Mawson**	**73.58**	**193**	P	**P**	**21 39 07.6**	**+4.3**
BUR08	**Bucovina Ar. S**	**75.25**	**319**	*e*P	**P**	**21 39 13.5**	**0.0**
KWP	**Kalwaria Pacla**	**77.28**	**320**	*e*P	**P**	**21 39 25.8**	**+0.8**
FINES	**FINESS Array B**	**78.31**	**333**	P	**P**	**21 39 30.4**	**-0.1**
	comp=Z,1.8nm,0.6s,mb4.2,baz=122,slow=2.5,SNR=7.9						
ARCES	**ARCESS Array B**	**80.95**	**340**	P	**P**	**21 39 45.3**	**+0.6**
	comp=Z,2.8nm,0.9s,mb4.2,baz=93,slow=6.3,SNR=14						
VSL	**Villasalto**	**85.75**	**309**	*e*P	**P**	**21 40 09.2**	**-0.8**
TXAR	**Lajitas Array**	**143.32**	**29**	PKhKP	PKPpre	21 47 02.8	
	comp=Z,0.5nm,0.7s,baz=177,slow=0.5,SNR=5.2						

*IDC **07** 21:36:20.9±1.6, 5.67S×152.98E, h0km, mb4.1/10, mb1 4.3/10, mb1mx4.2/16, mbtmp4.1/10, MS3.6/1, Ms1 3.6/1, ms1mx3.0/22, Error ellipse: s-maj=49.3km s-min=20.1km az=106.0*
*ISCJB **07** 21:36:24.7±0.8, 5.72S±0.09×152.9E±0.1, h33km, mb4.3/16, Error ellipse: s-maj=20.1km s-min=8.4km az=32.4*
*NEIC **07** 21:36:25.2±0.6, 5.83S×153.18E, h35km, mb4.4/5, Error ellipse: s-maj=13.6km s-min=11.4km az=112.0*

ISC 07 21:36:25.4±3.9, 5.74S±0.09×153.0E±0.1, h29km±27km, n27, σ0§85/29, mb4.3/16, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.84**	**237**	*e*Pn	**Pn**	**21 38 03.6**	**-0.2**
	29nm,0.6s						
PMG				*e*Sn	**Sn**	**21 39 21.4**	**+0.7**
HNR	**Honiara**	**7.80**	**118**	Pn	**Pn**	**21 38 11.5**	**-5.6**
GUMO	**Guam**	**20.83**	**337**	*e*P	**P**	**21 41 05.8**	**+0.9**
KAKA	**Kakadu**	**21.43**	**250**	*e*P	**P**	**21 41 10.9**	**-0.5**
	39nm,0.6s,mb4.9						
KAKA	**Kakadu**	**21.43**	**250**	*e*P	**P**	**21 41 10.7**	**-0.7**
	116nm,0.6s,mb5.4						
KAKA				*e*S	**S**	**21 45 07.7**	**-0.2**
WRAB	**Tennant Creek**	**22.97**	**230**	*e*P	**P**	**21 41 27.9**	**+0.1**
	24nm,1.1s,mb4.5						
WRAB				*e*PcP	PcP	21 45 18.4	+1.0
WB2	**Warramunga Arr**	**22.98**	**230**	*e*P	**P**	**21 41 27.8**	**0.0**
ASAR	**Alice Springs**	**25.60**	**224**	P	**P**	**21 41 52.2**	**-0.1**
	4.3nm,0.8s,mb4.0,baz=54,slow=9.4,SNR=26						
STKA	**Stephens Creek**	**28.11**	**201**	*e*P	**P**	**21 42 15.1**	**+0.3**
	3.0nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**28.11**	**201**	*e*P	**P**	**21 42 15.4**	**+0.6**
	0.7nm,0.7s,mb3.4						
STKA	**Stephens Creek**	**28.11**	**201**	P	**P**	**21 42 15.8**	**+1.0**
	3.1nm,0.7s,mb4.0,baz=29,slow=17,SNR=8.8						
FITZ	**Fitzroy Crossi**	**29.40**	**243**	*e*P	**P**	**21 42 25.9**	**-0.6**
	16nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**29.40**	**243**	*e*P	**P**	**21 42 26.1**	**-0.4**
FITZ				LR	LR	21 54 07.2	
FITZ	**Fitzroy Crossi**	**29.40**	**243**	P	**P**	**21 42 26.1**	**-0.4**
	8.2nm,0.6s,mb4.7,baz=74,slow=5.5,SNR=31						
FITZ				LR	LR	21 54 07.2	
	comp=Z,112nm,20.9s,baz=62,slow=36						
FORT	**Forrest**	**34.20**	**220**	*e*P	**P**	**21 43 06.8**	**-1.7**
	18nm,0.6s,mb5.2						
KSRS	**Korea Array**	**48.92**	**333**	P	**P**	**21 45 08.4**	**-0.5**
	0.4nm,0.3s,mb3.9,baz=146,slow=8.8,SNR=3.6						
CMAR	**Chiang Mai Arr**	**58.46**	**296**	P	**P**	**21 46 19.8**	**+0.7**
	1.2nm,0.8s,mb4.0,baz=112,slow=4.7,SNR=5.4						
SONM	**Songino Array**	**67.22**	**328**	P	**P**	**21 47 18.2**	**+1.3**
	0.8nm,0.6s,mb3.9,baz=141,slow=5.1,SNR=4.1						
LSA	**Lhasa**	**68.93**	**305**	*e*P	**P**	**21 47 29.9**	**+1.8**
	5.5nm,1.4s,mb4.3						
MK31	**Makanchi Array**	**81.16**	**319**	*e*P	**P**	**21 48 37.5**	**-0.8**
MKAR	**Makanchi Array**	**81.16**	**319**	P	**P**	**21 48 37.6**	**-0.7**
	1.0nm,0.7s,mb3.8,baz=81,slow=7.5,SNR=7.1						
ZALV	**Zalesovo Beam**	**82.04**	**326**	P	**P**	**21 48 41.7**	**-1.1**
	0.7nm,0.5s,mb3.8,baz=104,slow=6.1,SNR=3.1						
ILAR	**Eielson Array**	**82.95**	**22**	P	**P**	**21 48 47.5**	**+0.2**
	1.4nm,1.0s,mb4.0,baz=258,slow=4.6,SNR=5.2						
QSPA	**South Pole Qui**	**84.23**	**180**	*e*P	**P**	**21 48 55.3**	**+1.7**
	1.8nm,0.6s,mb4.4						
KURK	**Kurchatov**	**84.63**	**322**	*e*P	**P**	**21 48 55.5**	**-0.7**
	4.1nm,1.6s,mb4.3						
AAK	**Ala-Archa**	**85.45**	**313**	*e*P	**P**	**21 49 00.6**	**+0.1**
BVAR	**Borovoye Array**	**90.11**	**323**	P	**P**	**21 49 21.9**	**-0.7**
	1.6nm,0.7s,mb4.5,baz=111,slow=6.5,SNR=6.1						

*SGS **07** 21:41:39.3, 30.57N×50.34E, h12km*
*ISCJB **07** 21:41:41.7±1.6, 30.14N±0.05×50.37E±0.05, h12km±13km, Error ellipse: s-maj=8.4km s-min=6.8km az=29.0*
*TEH **07** 21:41:42.4, 30.27N×50.30E, h3km*
*KISR **07** 21:41:43.7±0.4, 30.32N×50.17E, h33km, ML2.8*

ISC 07 21:41:41.9±1.9, 30.18N±0.05×50.31E±0.05, h5km±15km, n16, σ0§88/20, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UMR	**Umm Al-Rimmam**	**2.34**	**255**	*e*P	**Pn**	**21 42 21.4**	**+0.3**
UMR				*e*S	**Sn**	**21 42 50.1**	**-0.2**
UMR				AML	AML	21 42 53.1	
	comp=Z,58nm,0.4s						
IPAR	**Pars**	**2.40**	**97**	*e*Pn	**Pn**	**21 42 22.9**	**+1.0**
IPAR				*e*		21 43 22.1	
	comp=Z,608nm,0.3s						
KBD	**Kabd**	**2.49**	**247**	*e*P	**Pn**	**21 42 23.9**	**+0.8**
KBD				*e*S	**Sn**	**21 42 54.4**	**+0.5**
KBD				AML	AML	21 43 00.8	
	comp=Z,38nm,0.4s						
ISRV	**Sarvestan**	**2.56**	**107**	*e*Pn	**Pn**	**21 42 25.3**	**+1.1**
ISRV				*e*Sg	**Sg**	**21 43 03.6**	**-0.7**
ISRV				*e*		21 43 27.4	
	comp=Z,1µm,0.4s						
MIB	**Mutribah**	**2.61**	**262**	*e*P	**Pn**	**21 42 25.2**	**+0.5**
MIB				*e*S	**Sn**	**21 42 56.1**	**-0.7**
MIB				AML	AML	21 43 02.8	
	comp=Z,36nm,0.6s						
IGAR	**Gharneh**	**2.66**	**33**	*e*Pn	**Pn**	**21 42 25.4**	**-0.1**
IGAR				*e*		21 43 08.6	
	comp=Z,732nm,0.2s						
RDF	**Al-Radifah**	**2.71**	**243**	*e*P	**Pn**	**21 42 27.6**	**+1.4**
KFJS		**2.87**	**227**	P	**Pn**	**21 42 28.3**	**-0.1**
IZEF	**Zefreh**	**3.21**	**32**	*e*Pn	**Pn**	**21 42 32.5**	**-0.5**
IZEF				*e*		21 42 43.5	
	comp=Z,319nm,0.3s						
IKLH	**Kolahrood**	**3.31**	**19**	*e*Pn	**Pn**	**21 42 33.9**	**-0.5**
IKLH				*e*		21 43 34.4	
	comp=Z,370nm,0.2s						
SLWS		**5.37**	**177**	S	**Sn**	**21 44 05.7**	**+0.6**
SLWS		**5.37**	**177**	P	**Pn**	**21 43 03.2**	**+0.4**
ASYS		**5.88**	**244**	S	**Sn**	**21 44 13.7**	**-3.8**
ASYS		**5.88**	**244**	P	**Pn**	**21 43 07.4**	**-2.4**
BTHS		**6.13**	**175**	S	**Sn**	**21 44 22.5**	**-1.3**
BTHS		**6.13**	**175**	P	**Pn**	**21 43 12.9**	**-0.3**

*NEIC **07** 21:43:09.8, 52.13N×175.44W, h5km, mb3.6/1, ML3.4(AEIC), After AEIC.*
*IDC **07** 21:43:09.8±1.4, 52.27N×175.81W, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.6/27, mbtmp3.7/6, ML3.9/2, Error ellipse: s-maj=45.0km s-min=26.8km az=167.0*
*ISCJB **07** 21:43:10.6±1.3, 52.2N±0.2×175.5W±0.1, h15km±13km, mb3.8/5, Error ellipse: s-maj=27.1km s-min=9.0km az=168.0*

ISC 07 21:43:10.9±1.2, 52.2N±0.2×175.50W±0.09, h5km±9km, n11, σ1§17/12, mb3.8/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res

KSH					LR	LR				
	comp=Z,20nm,4.9s									
ASAR	**Alice Springs**	**87.55**	**225**	P		**P**		**22**	**01**	**23.9** **+0.3**
	comp=Z,0.4nm,0.8s,mb3.7,baz=22,slow=5.3,SNR=3.5									

IDC 07 22:00:40.6±2.6, 51°.74N×175°.51W, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/26, mbtmp3.4/5, Error ellipse: s-maj=81.0km s-min=30.6km az=10.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
ILAR	**Eielson Array**	**19.69**	**38**	P	Pn	22	05	11.0	-1.4
	0.1nm,0.3s,baz=236,slow=9.7,SNR=4.3								
TXAR	**Lajitas Array**	**56.57**	**84**	P	P	22	10	25.0	+0.1
	0.3nm,0.7s,baz=278,slow=3.4,SNR=4.4								
KURK	**Kurchatov**	**60.23**	**315**	P	P	22	10	49.2	-1.0
	0.1nm,0.3s,baz=38,slow=6.9,SNR=2.6								
MKAR	**Makanchi Array**	**61.39**	**310**	P	P	22	10	58.4	+0.3
	0.6nm,0.8s,baz=58,slow=5.3,SNR=3.5								
BVAR	**Borovoye Array**	**61.91**	**321**	P	P	22	11	03.0	+1.5
	0.4nm,0.5s,baz=43,slow=6.5,SNR=2.4								

IDC 07 22:06:19.8±7.8, 52°.10N×176°.75W, h0km, mb3.5/2, mb1 4.0/4, mb1mx3.5/26, mbtmp3.7/4, ML3.8/2, Error ellipse: s-maj=144.3km s-min=62.3km az=98.0
NEIC 07 22:06:23.1, 52°.16N×175°.41W, h5km, ML3.5(AEIC), After AEIC., Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
ATKA	**Atka Island**	**0.75**	**86**	P	Pg	22	06	37.6	+0.1
ATKA				S	Sg	22	06	48.1	+0.9
KDAK	**Kodiak Island**	**14.23**	**58**	Pn	Pn	22	09	52.0	+6.9
	0.4nm,0.3s,baz=250,slow=15,SNR=3.0								
ILAR	**Eielson Array**	**19.32**	**38**	P	Pn	22	10	52.3	+2.4
	0.2nm,0.3s,baz=233,slow=8.2,SNR=6.3								
NVAR	**Mina Array Bea**	**41.38**	**86**	P	P	22	14	14.7	+4.7
	0.3nm,0.4s,baz=309,slow=10,SNR=2.7								
TXAR	**Lajitas Array**	**56.47**	**84**	P	P	22	16	08.9	+3.1
	0.5nm,0.6s,baz=305,slow=5.0,SNR=4.4								

NEIC 07 22:07:06.0±1.4, 23°.70S×179°.20E, h548km±18km, mb4.0/8, Error ellipse: s-maj=12.6km s-min=10.4km az=177.0
ISCJB 07 22:07:06.1±2.3, 23°.7S±0°.1×179°.2E±0°.1, h568km±35km, mb3.8/10, Error ellipse: s-maj=19.2km s-min=15.7km az=158.0
IDC 07 22:07:08.1±18.0, 23°.69S×179°.19E, h571km±183km, mb3.2/5, mb1 3.4/5, mb1mx3.1/15, mbtmp3.2/5, Error ellipse: s-maj=135.4km s-min=53.5km az=102.0
ISC 07 22:07:05.4±2.4, 23°.7S±0°.1×179°.2E±0°.1, h539km±34km, n27, σ0°70/20, mb3.8/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
URZ	**Urewera**	**14.63**	**186**	*e*Pn	**P**	**22**	**10**	**09.8**	**-1.3**
	15nm,0.4s								
RAR	**Rarotonga**	**19.61**	**87**	P	**P**	**22**	**10**	**59.5**	**+0.9**
CTA	**Charters Tower**	**30.72**	**270**	P	**P**	**22**	**12**	**38.0**	**+1.1**
	4.9nm,0.3s,mb4.5,baz=102,slow=9.3,SNR=8.7								
CTAO	**Charters Tower**	**30.72**	**270**	*e*P	**P**	**22**	**12**	**37.2**	**+0.3**
	5.2nm,0.4s,mb4.4								
PMG	**Port Moresby**	**33.72**	**290**	*e*P	**P**	**22**	**13**	**02.5**	**+0.1**
	7.4nm,0.5s,mb4.5								
STKA	**Stephens Creek**	**34.11**	**248**	*e*P	**P**	**22**	**13**	**06.2**	**+0.8**
STKA	**Stephens Creek**	**34.11**	**248**	P	**P**	**22**	**13**	**06.1**	**+0.6**
	1.7nm,0.7s,mb3.7,baz=144,slow=19,SNR=2.9								
MCQ	**Macquarie Isla**	**34.28**	**201**	P	**P**	**22**	**13**	**08.1**	**+1.6**
ASAR	**Alice Springs**	**41.33**	**261**	P	**P**	**22**	**14**	**04.7**	**+0.2**
	2.9nm,0.8s,mb3.9,baz=90,slow=7.1,SNR=17								
WB2	**Warramunga Arr**	**41.66**	**266**	*e*P	**P**	**22**	**14**	**06.7**	**-0.4**
WRAB	**Tennant Creek**	**41.66**	**266**	*e*P	**P**	**22**	**14**	**06.5**	**-0.6**
	2.2nm,0.4s,mb4.0								
FITZ	**Fitzroy Crossi**	**50.09**	**266**	*e*P	**P**	**22**	**15**	**11.9**	**+0.6**
	0.8nm,0.4s,mb3.5								
FITZ	**Fitzroy Crossi**	**50.09**	**266**	P	**P**	**22**	**15**	**12.0**	**+0.7**
	3.4nm,0.9s,mb3.8,baz=141,slow=6.5,SNR=5.3								
MIDW	**Midway**	**51.71**	**4**	*e*P	**P**	**22**	**15**	**22.8**	**+0.1**
SBA	**Scott Base**	**54.55**	**183**	*e*P	**P**	**22**	**15**	**41.6**	**-0.7**
	0.5nm,0.4s,mb3.1								
MBWA	**Marble Bar**	**54.67**	**260**	*e*P	**P**	**22**	**15**	**43.5**	**-0.6**
	4.2nm,0.6s,mb3.9								
CASY	**Casey**	**59.97**	**206**	*e*P	**P**	**22**	**16**	**19.5**	**0.0**
	0.3nm,0.4s,mb3.0								
MJAR	**Matsushiro Arr**	**71.30**	**326**	P	**P**	**22**	**17**	**30.4**	**-0.3**
	0.6nm,0.4s,mb3.5,baz=145,slow=5.4,SNR=4.2								
MAJO	**Matsushiro**	**71.30**	**326**	P	**P**	**22**	**17**	**30.4**	**-0.3**
KDAK	**Kodiak Island**	**34.53**	**15**	P	**P**	**22**	**18**	**40.6**	**-0.7**
MKAR	**Makanchi Array**	**111.46**	**313**	PKiKP	PKiKP	22	24	37.1	-1.2
	0.2nm,0.6s,baz=225,slow=1.8,SNR=2.6								
BVAR	**Borovoye Array**	**119.78**	**319**	PKP	PKPdf	22	24	53.5	-0.6
	0.4nm,0.3s,baz=111,slow=1.8,SNR=4.8								
ARCES	**ARCESS Array B**	**131.53**	**348**	PKP	PKPdf	22	25	16.3	+0.2
ARCES	**ARCESS Array B**	**131.53**	**348**	PKP	PKPdf	22	25	16.3	+0.2
	2.2nm,0.9s,baz=80,slow=1.6,SNR=5.9								
HFS	**Hagfors**	**142.19**	**348**	PKhKP	PKPpre	22	25	31.7	
	1.4nm,0.4s,baz=48,slow=2.4,SNR=19								
EKA	**Eskdalemuir Ar**	**148.35**	**3**	PKPbc	PKPbc	22	25	49.8	-1.0
EKA	**Eskdalemuir Ar**	**148.35**	**3**	PKPbc	PKPbc	22	25	49.8	-1.0
	0.4nm,0.3s,baz=347,slow=2.9,SNR=4.3								

ISCJB 07 22:09:13.2±0.5, 32°.36N±0°.03×115°.26W±0°.04, h20km±4km, Error ellipse: s-maj=5.3km s-min=4.5km az=177.3
NEIC 07 22:09:14.7, 32°.33N×115°.30W, h8km, ML3.3(ECX), ML3.0(PAS), After ECX.
ECX 07 22:09:14.7±0.7, 32°.33N×115°.30W, h8km, MD3.1, ML3.3
ISC 07 22:09:13.3±0.5, 32°.35N±0°.03×115°.29W±0°.04, h15km±3km, n18, σ0°51/33, 5C-1D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
CPBX	**Cerro Prieto**	**0.07**	**350**	*e*P	**Pg**	**22**	**09**	**16.6**	**+0.2**
CPBX				*e*S	**Sg**	**22**	**09**	**18.8**	**+0.4**
CPBX				⇑*e*		22	09	19.8	
	comp=N,22μm,0.2s								
EMX	**El Mayor**	**0.36**	**173**	*e*S	**Sg**	**22**	**09**	**25.6**	**0.0**
EMX				⇑*e*		22	09	26.4	
	comp=E,3μm,0.5s								
RDX	**Rancho Dawling**	**0.69**	**233**	*e*P	**Pg**	**22**	**09**	**26.4**	**-0.4**
RDX				*e*S	**Sg**	**22**	**09**	**35.8**	**-0.3**
RDX	**Rancho Dawling**	**0.69**	**233**	⇑*e*P	**Pg**	**22**	**09**	**26.4**	**-0.4**
RDX				*e*S	**Sg**	**22**	**09**	**35.8**	**-0.3**
RDX				⇑*e*		22	09	37.7	
	comp=N,872nm,0.5s								
RMX	**La Rumorosa**	**0.71**	**291**	*e*P	**Pg**	**22**	**09**	**27.2**	**0.0**
RMX				*e*S	**Sg**	**22**	**09**	**36.4**	**-0.3**
GLA	**Glamis**	**0.80**	**29**	*e*P	**Pb**	**22**	**09**	**28.9**	**-0.1**
GLA				*e*S	**Sb**	**22**	**09**	**40.8**	**+1.2**
ECBX	**El Chinero**	**0.90**	**167**	*e*P	**Pb**	**22**	**09**	**30.4**	**-0.1**
ECBX				*e*S	**Sb**	**22**	**09**	**42.0**	**-0.2**
ECBX				⇓*e*		22	09	43.3	
	comp=N,966nm,0.3s								
CBX	**Cerro Bola**	**1.16**	**269**	*e*P	**Pn**	**22**	**09**	**35.0**	**0.0**
CBX				*e*S	**Sb**	**22**	**09**	**50.1**	**+0.1**
BAR	**Barrett**	**1.21**	**286**	*e*P	**Pn**	**22**	**09**	**36.1**	**+0.4**
BAR				*e*S	**Sb**	**22**	**09**	**51.4**	**-0.1**
CCX	**Cicese**	**1.26**	**248**	*e*P	**Pn**	**22**	**09**	**36.4**	**+0.1**
CCX				*e*S	**Sb**	**22**	**09**	**53.0**	**+0.3**
SPX	**San Pedro Mart**	**1.31**	**187**	⇑*e*P	**Pn**	**22**	**09**	**36.8**	**-0.2**
SPX				*e*S	**Sb**	**22**	**09**	**55.1**	**+1.0**
ECNX	**Esteban Cantu**	**1.31**	**239**	*e*P	**Pn**	**22**	**09**	**36.9**	**0.0**
ECNX				*e*P		22	09	36.4	
ECNX				*e*S	**Sb**	**22**	**09**	**53.0**	**-1.0**
ECNX				*e*S	**Sb**	**22**	**09**	**54.6**	**+0.5**
PBX	**Punta Banda**	**1.36**	**244**	*e*P	**Pn**	**22**	**09**	**37.7**	**0.0**
PBX				*e*S	**Sn**	**22**	**09**	**56.2**	**+0.8**
PFO	**Pinyon Flat Ob**	**1.59**	**322**	*e*Pn	**Pn**	**22**	**09**	**40.1**	**-0.8**
PFO				*e*Sn	**Sn**	**22**	**10**	**00.8**	**-0.4**
PASC	**Pasadena Art C**	**3.03**	**308**	Pn	**Pn**	**22**	**10**	**01.1**	**+0.4**
GSC	**Goldstone**	**3.21**	**337**	*e*Pn	**Pn**	**22**	**10**	**02.8**	**-0.3**
TUC	**Tucson**	**3.81**	**89**	*e*Pn	**Pn**	**22**	**10**	**10.1**	**-1.3**
TUC				S	**Sn**	**22**	**11**	**11.1**	**+15**
ISA	**Isabella**	**4.24**	**322**	Pn	**Pn**	**22**	**10**	**17.3**	**0.0**

IDC 07 22:10:22.1±1.1, 6°.44N×126°.80E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.8/22, mbtmp3.9/6, MS2.5/1, Ms1 2.5/1, ms1mx2.3/25, Error ellipse: s-maj=42.1km s-min=16.0km az=57.0
MAN 07 22:10:23, 6°.29N×126°.95E, h29km, mb4.9, ML3.8, MS3.8
ISCJB 07 22:10:26.9±1.0, 6°.47N±0°.05×126°.81E±0°.09, h52km±9km, mb4.0/10, Error ellipse: s-maj=15.2km s-min=6.4km az=162.4
NEIC 07 22:10:27.1±0.3, 6°.42N×126°.73E, h35km, mb4.3/6, Error ellipse: s-maj=14.5km s-min=5.4km az=67.0
DJA 07 22:10:45, 5°.26N×126°.37E, h10km, MLv4.6/3
ISC 07 22:10:28.3±1.0, 6°.51N±0°.05×126°.79E±0°.09, h46km±9km, n38, σ0°92/44, mb4.0/10, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
MATI	**Mati**	**0.69**	**309**	*e*P	**Pn**	**22**	**10**	**40.6**	**-1.2**
MATI				*e*S	**Sn**	**22**	**10**	**50.8**	**-0.7**
DAV	**Davao City (W)**	**1.33**	**295**	*e*P	**Pn**	**22**	**10**	**48.7**	**-1.8**
DAV				*e*S	**Sn**	**22**	**11**	**06.0**	**-1.0**
DAV	**Davao City (W)**	**1.33**	**295**	Pn	**Pn**	**22**	**10**	**49.0**	**-1.5**
	221nm,0.3s,baz=82,slow=12,SNR=17								
DAV				Sn	**Sn**	**22**	**11**	**07.5**	**+0.5**
	253nm,0.3s,baz=76,slow=20,SNR=9.5								
DMPH	**Davao City--Mi**	**1.40**	**294**	*e*P	**Pn**	**22**	**10**	**51.0**	**-0.5**
DMPH				*i* S	**Sn**	**22**	**11**	**10.9**	**+2.2**
KCP	**Kidapawan**	**1.76**	**287**	⇓*e*P	**Pn**	**22**	**10**	**56.8**	**+0.3**
KCP				*i* S	**Sn**	**22**	**11**	**17.4**	**-0.3**
BUKP	**Musuan**	**2.19**	**309**	*e*P	**Pn**	**22**	**11**	**02.5**	**+0.1**
CTBH	**Cotabato--PC H**	**2.63**	**286**	⇓*i*P	**Pn**	**22**	**11**	**07.9**	**-0.4**
SCPH	**Surigao**	**3.50**	**338**	*e*P	**Pn**	**22**	**11**	**20.9**	**+0.6**
SCPH				*e*S	**Sn**	**22**	**12**	**05.4**	**+4.9**
PAGZ	**Pagadian**	**3.64**	**292**	*e*P	**Pn**	**22**	**11**	**22.0**	**-0.2**
MNI	**Manado**	**5.39**	**201**	P	**Pn**	**22**	**11**	**47.0**	**+0.7**
TNTI	**Ternate**	**5.72**	**174**	P	**Pn**	**22**	**11**	**52.4**	**+1.6**
TNTI				S	**Sn**	**22**	**12**	**49.8**	**-5.5**
KMSI	**Cibinong**	**6.53**	**206**	P	**Pn**	**22**	**12**	**02.8**	**+1.0**
LBMI	**Labuha**	**7.13**	**174**	P	**Pn**	**22**	**12**	**15.2**	**+5.1**
MRSI	**Marisa**	**7.70**	**219**	P	**Pn**	**22**	**12**	**16.2**	**-1.8**
LUWI	**Luwuk**	**8.51**	**208**	P	**Pn**	**22**	**12**	**29.6**	**+0.6**
	0.3nm106nm,1.0s								
TTSI	**Tana Toraja**	**11.77**	**216**	P	**Pn**	**22**	**13**	**15.7**	**+2.0**
GUMO	**Guam**	**19.13**	**67**	LR	LR	22	20	57.9	
	comp=Z,13nm,19.0s,baz=248,slow=33								
FITZ	**Fitzroy Crossi**	**24.48**	**183**	*e*P	**P**	**22**	**15**	**42.1**	**-1.1**
	6.8nm,0.9s,mb4.1								
FITZ	**Fitzroy Crossi**	**24.48**	**183**	P	**P**	**22**	**15**	**42.8**	**-0.4**
	2.2nm,0.4s,mb3.9,baz=144,slow=4.4,SNR=9.7								
WRAB	**Tennant Creek**	**27.30**	**164**	*e*P	**P**	**22**	**16**	**08.3**	**-0.5**
	3.4nm,0.6s,mb4.0								
WB2	**Warramunga Arr**	**27.31**	**164**	*e*P	**P**	**22**	**16**	**08.4**	**-0.5**
MBWA	**Marble Bar**	**28.35**	**194**	*e*P	**P**	**22**	**16**	**16.4**	**-1.7**
	29nm,1.5s,mb4.7								
ENH	**Enshi**	**28.70**	**328**	P	**P**	**22**	**16**	**21.4**	**+0.2**
CHTO	**Chiang Mai**	**29.74**	**297**	*e*P	**P**	**22**	**16**	**30.2**	**-0.3**
ASAR	**Alice Springs**	**30.78**	**167**	P	**P**	**22**	**16**	**39.1**	**-0.5**
	0.6nm,0.6s,mb3.6,baz=344,slow=7.2,SNR=8.8								
NWAO	**Narrogin (SRO)**	**40.25**	**192**	*e*P	**P**	**22**	**18**	**00.1**	**-0.7**
	5.8nm,0.5s,mb4.6								
STKA	**Stephens Creek**	**40.70**	**161**	*e*P	**P**	**22**	**18**	**03.9**	**-0.6**
	2.7nm,1.3s,mb3.7								
STKA	**Stephens Creek**	**40.70**	**161**	P	**P**	**22**	**18**	**03.6**	**-0.8**
	1.5nm,0.4s,mb4.0,baz=342,slow=16,SNR=3.8								
SONM	**Songino Array**	**44.71**	**341**	P	**P**	**22**	**18**	**38.0**	**+1.2**
	0.5nm,0.6s,mb3.5,baz=169,slow=8.1,SNR=3.7								
PET	**Petropavlovsk**	**53.17**	**23**	P	**P**	**22**	**19**	**41.3**	**-0.2**
MK31	**Makanchi Array**	**55.34**	**324**	*e*P	**P**	**22**	**19**	**57.6**	**+0.1**
MKAR	**Makanchi Array**	**55.34**	**324**	P	**P**	**22**	**19**	**57.8**	**+0.3**
	0.4nm,0.5s,mb3.7,baz=116,slow=7.5,SNR=9.6								
KURK	**Kurchatov**	**59.46**	**327**	*e*P	**P**	**22**	**20**	**25.8**	**-0.6**
	1.2nm,0.7s,mb4.0								
MCQ	**Macquarie Isla**	**66.47**	**160**	*e*P	**P**	**22**	**21**	**12.9**	**+0.1**
ARU	**Arti**	**72.64**	**327**	P	**P**	**22**	**21**	**51.5**	**+0.6**
KIV	**Kislovodsk**	**81.28**	**313**	P	**P**	**22**	**22**	**40.9**	**+1.1**
FINES	**FINESS Array B**	**89.43**	**332**	P	**P**	**22**	**23**	**21.0**	**+1.0**
FINES	**FINESS Array B**	**89.43**	**332**	P	**P**	**22**	**23**	**21.0**	**+1.0**
	2.1nm,1.0s,mb4.4,baz=72,slow=4.5,SNR=3.0								

BJI 07 22:17:24.9, 52°.86N×174°.89W, h14km, mB5.0/5, mb4.7/9, Ms4.4/2, Ms7 4.4/3
IDC 07 22:17:27.5±1.3, 52°.26N×175°.73W, h0km, mb3.9/7, mb1 4.1/9, mb1mx3.8/28, mbtmp3.9/9, ML3.9/2, Error ellipse: s-maj=37.7km s-min=21.2km az=167.0
NEIC 07 22:17:28.6, 52°.13N×175°.47W, h5km, mb4.2/5, ML4.3(PMR), ML3.8(AEIC), After AEIC.
ISCJB 07 22:17:29.1±0.9, 52°.2N±0°.1×175°.52W±0°.08, h22km±8km, mb4.2/10, Error ellipse: s-maj=19.8km s-min=6.2km az=162.8
ISC 07 22:17:29.1±1.0, 52°.2N±0°.1×175°.50W±0°.08, h9km±8km, n26, σ1§11/28, mb4.2/10, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
GSTR	**Great Sitkin T**	**0.35**	**261**	*e*P	**Pg**	**22**	**17**	**36.7**	**+0.7**
ATKA	**Atka Island**	**0.80**	**86**	P	**Pg**	**22**	**17**	**43.8**	**-0.8**
ATKA				S	**Sg**	**22**	**17**	**54.5**	**-0.5**
AMKA	**Amchitka**	**3.32**	**259**	P	**Pn**	**22**	**18**	**21.1**	**-0.1**
AMKA				S	**Sn**	**22**	**19**	**02.8**	**+2.0**
UNV	**Unalaska Valle**	**5.69**	**69**	*e*Pn	**Pn**	**22**	**18**	**55.1**	**+1.3**
	92nm,1.2s								
SPIA	**Saint Paul Isl**	**5.89**	**29**	P	**Pn**	**22**	**18**	**57.0**	**+0.6**
SVW2	**Sparrevohn**	**14.10**	**43**	*e*P	**Pn**	**22**	**20**	**59.1**	**+10**
KDAK	**Kodiak Island**	**14.28**	**58**	Pn	**Pn**	**22**	**20**	**51.8**	**+0.6**
	0.2nm,0.3s,baz=263,slow=3.8,SNR=2.9								
TTA	**Tatalina**	**14.96**	**36**	*e*P	**Pn**	**22**	**21**	**09.3**	**+8.8**
PPLA	**Purkeypile**	**16.40**	**40**	*e*P	**Pn**	**22**	**21**	**20.1**	**+0.9**
	31nm,1.2s								
TRF	**Thorofare Moun**	**17.42**	**40**	*e*Pn	**Pn**	**22**	**21**	**33.7**	**+1.7**
	11nm,0.8s								
BPAW	**Bear Paw Mtn.**	**17.48**	**37**	*e*P	**Pn**	**22**	**21**	**33.9**	**+1.1**
	19nm,1.2s								
ILAR	**Eielson Array**	**19.36**	**38**	P	**Pn**	**22**	**21**	**54.4**	**-1.4**
	0.3nm,0.3s,baz=241,slow=9.6,SNR=16								
COLD	**Coldfoot**	**19.55**	**30**	*e*P	**Pn**	**22**	**21**	**56.4**	**-1.6**
	8.6nm,1.0s								
DAWY	**Dawson**	**22.14**	**43**	*e*P	**P**	**22**	**22**	**26.1**	**+1.5**
INK	**Inuvik**	**25.65**	**35**	*e*P	**P**	**22**	**22**	**58.0**	**-0.7**
	29nm,1.5s,mb4.6								
INK	**Inuvik**	**25.65**	**35**	P	**P**	**22**	**22**	**58.4**	**-0.3**
	4.4nm,0.7s,mb4.1,baz=231,slow=9.9,SNR=5.6								
YKA	**Yellowknife Ar**	**33.20**	**48**	P	**P**	**22**	**24**	**05.7**	**0.0**
	0.6nm,0.6s,mb3.7,baz=286,slow=7.5,SNR=3.4								
MDJ	**Mudanjiang**	**36.46**	**280**	P	**P**	**22**	**24**	**33.4**	**-0.7**
MDJ				pmax	pmax				
	comp=Z,3.0nm,0.3s,mb4.7								
MDJ				pmax	pmax				
	comp=Z,43nm,7.5s								
CN2	**Changchun**	**39.41**	**282**	*e*P	**P**	**22**	**24**	**56.7**	**-2.3**
TXAR	**Lajitas Array**	**56.52**	**84**	P	**P**	**22**	**27**	**12.2**	**+0.6**
	comp=Z,1.2nm,0.7s,mb4.0,baz=323,slow=9.4,SNR=6.1								
KURK	**Kurchatov**	**59.95**	**315**	P	**P**	**22**	**27**	**35.6**	**+0.4**
	comp=Z,0.8nm,0.5s,mb4.0,baz=40,slow=7.1,SNR=3.8								
MKAR	**Makanchi Array**	**61.14**	**310**	P	**P**	**22**	**27**	**41.2**	**-2.2**
	comp=Z,0.5nm,0.7s,mb3.8,baz=42,slow=4.3,SNR=3.3								
BVAR	**Borovoye Array**	**61.60**	**321**	P	**P**	**22**	**27**	**44.8**	**-1.6**
	comp=Z,1.3nm,0.6s,mb4.2,baz=51,slow=8.0,SNR=8.4								
GYA	**Guiyang**	**62.26**	**278**	*e*P	**P**	**22**	**27**	**51.4**	**+0.1**
GYA				pmax	pmax				
	comp=Z,10.0nm,1.0s,mb4.9								
KSH	**Kashi**	**69.65**	**309**	*e*P	**P**	**22**	**28**	**38.3**	**-0.4**
KSH				*e*pP	pP	22	28	43.1	+1.5
KSH				*e*sP	sP	22	28	45.4	+2.8
KSH				*e*PcP	PcP	22	29	01.8	+0.2
KSH				*e*PP	PP	22	31	14.0	+1.9
KSH				*e*ScP		22	33	03.7	
KSH				*e*PcS		22	33	05.8	
KSH				*e*S	S	22	37	43.7	-3.4
KSH				*e*ScS	ScS	22	38	35.8	-4.5
KSH				pmax	pmax				
	comp=Z,13nm,1.4s,mb4.7								
ASAR	**Alice Springs**	**87.47**	**225**	P	**P**	**22**	**30**	**16.8**	**0.0**
	comp=Z,0.5nm,0.7s,mb3.9,baz=25,slow=5.2,SNR=5.0								

IDC 07 22:21:52.0±1.2, 35°.00N×24°.89E, h0km, mb4.0/13, mb1 4.0/15, mb1mx3.9/29, mbtmp3.9/15, ML3.1/2, Error ellipse: s-maj=27.8km s-min=16.6km az=165.0
ISCJB 07 22:21:53.2±0.5, 34°.59N±0°.02×25°.02E±0°.02, h25km±4km, mb3.9/18, Error ellipse: s-maj=4.0km s-min=2.6km az=43.9
CSEM 07 22:21:53.6±0.1, 34°.63N×25°.03E, h10km, ML3.5/3, Error ellipse: s-maj=4.5km s-min=2.7km az=37.0

ATH 07 22:21:54.2, 34°.72N×24°.96E, h18km, ML3.6
NEIC 07 22:21:54.2, 34°.72N×24°.96E, h18km, mb4.1/6, ML3.6(ATH), After ATH.
THE 07 22:21:55.4, 34°.72N×25°.00E, h2km±2km, ML3.5/3, Error ellipse: s-maj=3.4km s-min=1.0km az=185.0
ISK 07 22:21:58.0, 35°.16N×25°.36E, h5km, MD4.3
HLW 07 22:22:00.5, 34°.46N×25°.38E, h35km±44km, Ml3.5
ISC 07 22:21:53.5±0.5, 34°.62N±0°.02×25°.01E±0°.02, h10km±3km, n309, σ1§20/368, mb3.9/18, 4C, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h	m	s	Res ISC
SIVA	**Sivas**	**0.43**	**338**	P	**Pg**	**22**	**22**	**02.1**	**+0.2**
SIVA				S	**Sg**	**22**	**22**	**07.5**	**-0.1**
SIVA	**Sivas**	**0.43**	**338**	P	**Pg**	**22**	**22**	**02.1**	**+0.2**
SIVA				S	**Sg**	**22**	**22**	**07.5**	**-0.1**
IDI	**Anoyia**	**0.67**	**352**	*e*Pn	**Pg**	**22**	**22**	**05.3**	**-1.3**
IDI				*e*Sn	**Sg**	**22**	**22**	**13.8**	**-1.6**
IDI	**Anoyia**	**0.67**	**352**	*e*PN	**Pg**	**22**	**22**	**05.3**	**-1.3**
IDI				*e*SN	**Sg**	**22**	**22**	**13.8**	**-1.6**
IDI	**Anoyia**	**0.67**	**352**	*e*Pn	**Pg**	**22**	**22**	**05.3**	**-1.3**
IDI				*e*Sn	**Sg**	**22**	**22**	**13.8**	**-1.6**
GVD	**Gavdhos**	**0.79**	**286**	*e*P	**Pg**	**22**	**22**	**09.3**	**+0.5**
GVD				*e*S	**Sg**	**22**	**22**	**23.8**	**+4.8**
GVD	**Gavdhos**	**0.79**	**286**	P	**Pg**	**22**	**22**	**09.4**	**+0.7**
GVD				S	**Sg**	**22**	**22**	**22.1**	**+3.1**
GVD	**Gavdhos**	**0.79**	**286**	P	**Pg**	**22**	**22**	**09.4**	**+0.7**
GVD				S	**Sg**	**22**	**22**	**22.1**	**+3.1**
NPS	**Neapolis**	**0.81**	**38**	*e*Pn	**Pg**	**22**	**22**	**08.6**	**-0.6**
NPS				*e*Sn	**Sg**	**22**	**22**	**18.6**	**-1.2**
NPS	**Neapolis**	**0.81**	**38**	*e*PN	**Pg**	**22**	**22**	**08.6**	**-0.6**
NPS				*e*SN	**Sg**	**22**	**22**	**18.6**	**-1.2**
NPS	**Neapolis**	**0.81**	**38**	*e*Pn	**Pg**	**22**	**22**	**08.6**	**-0.6**
NPS				*e*Sn	**Sg**	**22**	**22**	**18.6**	**-1.2**
VAM	**Vamos**	**1.03**	**320**	*e*Pn	**Pg**	**22**	**22**	**12.0**	**-1.3**
VAM				*e*Sn	**Sg**	**22**	**22**	**25.2**	**-1.4**
VAM	**Vamos**	**1.03**	**320**	*e*PN	**Pg**	**22**	**22**	**12.0**	**-1.3**
VAM				*e*SN	**Sg**	**22**	**22**	**25.2**	**-1.4**
VAM	**Vamos**	**1.03**	**320**	*e*Pn	**Pg**	**22**	**22**	**12.0**	**-1.3**
VAM				*e*Sn	**Sg**	**22**	**22**	**25.2**	**-1.4**
ZKR	**Zakros**	**1.11**	**63**	*e*Pb	**Pg**	**22**	**22**	**14.5**	**-0.4**
ZKR				*e*Sn	**Sn**	**22**	**22**	**31.0**	**+0.5**
ZKR	**Zakros**	**1.11**	**63**	*e*PB	**Pg**	**22**	**22**	**14.5**	**-0.4**
ZKR				*e*SN	**Sn**	**22**	**22**	**31.0**	**+0.5**
ZKR	**Zakros**	**1.11**	**63**	P	**Pg**	**22**	**22**	**14.7**	**-0.2**
ZKR				S	**Sg**	**22**	**22**	**29.9**	**+0.5**
ZKR	**Zakros**	**1.11**	**63**	*e*Pb	**Pg**	**22**	**22**	**14.5**	**-0.4**
ZKR				S	**Sg**	**22**	**22**	**29.9**	**+0.5**
ZKR				*e*Sn	**Sn**	**22**	**22**	**31.0**	**+0.5**
KARN	**Karanos**	**1.19**	**311**	P	**Pb**	**22**	**22**	**15.0**	**-1.1**
KARN				S	**Sb**	**22**	**22**	**32.9**	**+1.4**
**K

HMAT S Sn 22 23 34.8 -5.3
GUR Goura 3.95 328 *e*PN Pn 22 22 54.9 +0.8
GUR Goura 3.95 328 P Pn 22 22 54.8 +0.7
GUR S Sn 22 23 40.0 -0.5
GUR Goura 3.95 328 P Pn 22 22 54.8 +0.7
GUR S Sn 22 23 40.0 -0.5
AKAS Kas 4.09 65 *i* P Pn 22 22 55.3 -0.7
AKAS Kas 4.09 65 *i* P Pn 22 22 55.3 -0.8
BLCB Balcova 4.10 23 *e*PN Pn 22 22 55.0 -1.2
BLCB Balcova 4.10 23 P Pn 22 22 57.4 +1.2
BLCB Balcova 4.10 23 *e*Pn Pn 22 22 55.0 -1.2
BLCB Balcova 4.10 23 P Pn 22 22 57.4 +1.2
IZM Izmir 4.18 25 *e*PN Pn 22 22 56.2 -1.2
IZM Izmir 4.18 25 *e*Pn Pn 22 22 56.2 -1.2
DSF Desfina 4.28 333 P Pn 22 22 58.9 +0.2
DSF S Sn 22 23 48.5 -0.1
DSF Desfina 4.28 333 P Pn 22 22 58.9 +0.2
DSF S Sn 22 23 48.5 -0.1
LKR Lokris 4.33 339 *e*Pn Pn 22 23 00.0 +0.6
LKR Lokris 4.33 339 *e*PN Pn 22 23 00.0 +0.6
LKR Lokris 4.33 339 P Pn 22 22 59.7 +0.2
LKR Lokris 4.33 339 P Pn 22 22 59.7 +0.2
LKR Lokris 4.33 339 *e*Pn Pn 22 23 00.0 +0.6
LAKA Lakka 4.36 327 P Pn 22 22 59.8 0.0
LAKA S Sn 22 23 51.8 +1.2
LAKA Lakka 4.36 327 P Pn 22 22 59.8 0.0
LAKA S Sn 22 23 51.8 +1.2
TRIZ Trizonia 4.42 329 P Pn 22 23 01.9 +1.2
TRIZ Trizonia 4.42 329 P Pn 22 23 01.9 +1.2
GLHS Glhisar (BURDU 4.44 54 *e*PN Pn 22 23 01.1 +0.2
GLHS Glhisar (BURDU 4.44 54 *e*Pn Pn 22 23 01.1 +0.2
RLS Riolos of Patr 4.46 321 *e*PN Pn 22 23 03.3 +2.1
RLS Riolos of Patr 4.46 321 *e*Pn Pn 22 23 03.3 +2.1
DNZL Cakiroluk 4.48 46 *i* P Pn 22 23 02.7 +1.2
DNZL Cakiroluk 4.48 46 *i* P Pn 22 23 02.7 +1.2
ELL Elmali 4.52 61 *e*PN Pn 22 23 03.0 +0.9
ELL Elmali 4.52 61 *e*Pn Pn 22 23 03.0 +1.0
GOLH Golhisar 4.53 53 *i* P Pn 22 23 02.1 0.0
GOLH Golhisar 4.53 53 *i* P Pn 22 23 02.1 0.0
EFP Efpalio 4.54 328 *e*PN Pn 22 23 03.1 +0.7
EFP Efpalio 4.54 328 P Pn 22 23 03.4 +1.0
EFP Efpalio 4.54 328 *e*Pn Pn 22 23 03.1 +0.7
EFP Efpalio 4.54 328 P Pn 22 23 03.4 +1.0
AOS Alonnisos 4.63 349 P Pn 22 23 04.1 +0.6
AOS Alonnisos 4.63 349 P Pn 22 23 04.1 +0.6
PRK Paraskevi 4.73 12 *e*Pn Pn 22 23 05.2 +0.3
PRK Paraskevi 4.73 12 *e*PN Pn 22 23 05.2 +0.3
PRK Paraskevi 4.73 12 *e*Pn Pn 22 23 05.2 +0.3
KULA Kula-Manisa 4.87 36 *e*PN Pn 22 23 06.0 -0.9
KULA Kula-Manisa 4.87 36 *e*Pn Pn 22 23 06.0 -0.9
AGG Agios Georgios 4.89 335 *e*Pn Pn 22 23 09.1 +2.0
AGG Agios Georgios 4.89 335 *e*PN Pn 22 23 09.1 +2.0
AGG Agios Georgios 4.89 335 P Pn 22 23 08.5 +1.4
AGG Agios Georgios 4.89 335 P Pn 22 23 08.5 +1.4
AGG Agios Georgios 4.89 335 *e*Pn Pn 22 23 09.1 +2.0
KORT Korkueli 4.95 60 *i* P Pn 22 23 09.6 +1.7
KORT Korkueli 4.95 60 *i* P Pn 22 23 09.6 +1.7
XOR Xorichti 4.95 343 P Pn 22 23 09.0 +1.0
XOR Xorichti 4.95 343 P Pn 22 23 09.0 +1.0
VLS Valsamata 5.03 316 *e*Pn Pn 22 23 10.9 +1.9
VLS Valsamata 5.03 316 *e*PN Pn 22 23 10.9 +1.9
VLS Valsamata 5.03 316 P Pn 22 23 08.4 -0.6
VLS Valsamata 5.03 316 P Pn 22 23 08.4 -0.6
VLS Valsamata 5.03 316 *e*Pn Pn 22 23 10.9 +1.9
ANTB Antalya 5.12 62 *e*PN Pn 22 23 12.0 +1.7
ANTB Antalya 5.12 62 *e*Pn Pn 22 23 12.0 +1.7
KHL Karahalli 5.19 43 *e*PN Pn 22 23 11.1 -0.1
KHL Karahalli 5.19 43 *e*Pn Pn 22 23 11.1 -0.1
KHAL Karahalli 5.20 43 *i* P Pn 22 23 12.3 +0.9
KHAL Karahalli 5.20 43 *i* P Pn 22 23 12.3 +0.9
DEMI Demirci 5.32 33 *i* P Pn 22 23 14.1 +1.0
DEMI Demirci 5.32 33 *i* P Pn 22 23 14.1 +1.1
BCK Bucak 5.34 56 *e*PN Pn 22 23 14.6 +1.3
BCK Bucak 5.34 56 *e*Pn Pn 22 23 14.6 +1.3
SWA2 5.38 176 P Pn 22 23 15.1 +1.3
baz=179
SWA2 S Sn 22 24 12.3 -3.4
baz=179
SWA2 5.38 176 P Pn 22 23 15.1 +1.3
SWA2 S Sn 22 24 12.3 -3.4
LKD2 Lefkada island 5.43 321 P Pn 22 23 15.1 +0.6
LKD2 Lefkada island 5.43 321 P Pn 22 23 15.1 +0.6
THL Klokotos Trika 5.48 335 *e*PN Pn 22 23 17.6 +2.4
THL Klokotos Trika 5.48 335 P Pn 22 23 16.2 +1.0
THL Klokotos Trika 5.48 335 P Pn 22 23 16.2 +1.0
THL Klokotos Trika 5.48 335 *e*Pn Pn 22 23 17.6 +2.4
HBRG Burj al 'Arab 5.74 133 P Pn 22 23 19.3 +0.6
baz=134
LIT Litokhoron 5.83 341 *e*Pn Pn 22 23 21.4 +1.5
LIT Litokhoron 5.83 341 *e*PN Pn 22 23 21.4 +1.5
LIT Litokhoron 5.83 341 P Pn 22 23 20.1 +0.2
LIT Litokhoron 5.83 341 P Pn 22 23 20.1 +0.2
LIT Litokhoron 5.83 341 *e*Pn Pn 22 23 21.4 +1.5
SHUT Suhut-Afyon 5.94 47 *e*PN Pn 22 23 22.3 +0.8
SHUT Suhut-Afyon 5.94 47 *e*Pn Pn 22 23 22.3 +0.8
JAN Janina 6.02 328 *e*PN Pn 22 23 23.7 +1.0
JAN Janina 6.02 328 *e*Pn Pn 22 23 23.7 +1.0
IGT Igoumenitsa 6.16 324 P Pn 22 23 25.5 +0.9
IGT Igoumenitsa 6.16 324 P Pn 22 23 25.5 +0.9
GAZI Gazipasa 6.18 73 *i* P Pn 22 23 22.8 -2.0
GAZI Gazipasa 6.18 73 *i* P Pn 22 23 22.8 -2.1
KEK Kerkira 6.56 322 P Pn 22 23 29.3 -0.8
KEK Kerkira 6.56 322 P Pn 22 23 29.3 -0.8
FNA Florina 6.79 336 P Pn 22 23 33.9 +0.7
FNA Florina 6.79 336 P Pn 22 23 33.9 +0.7
HMYD Mayadein 6.87 133 P Pn 22 23 34.6 +0.3
baz=133
HMYD Mayadein 6.87 133 P Pn 22 23 34.7 +0.3
HNAT Natroun 6.88 135 P Pn 22 23 35.3 +0.8
baz=135
HNAT Natroun 6.88 135 P Pn 22 23 35.3 +0.8
VAY Valandovo 6.96 345 *e*Pn Pn 22 23 38.2 +2.6
BIA Bitola 7.02 337 *e*Pn Pn 22 23 37.5 +1.2
AWBH 7.11 151 P Pn 22 23 38.0 +0.4
baz=152
AWBH 7.11 151 P Pn 22 23 38.0 +0.4
AYT Al 'Ayyat 7.15 132 P Pn 22 23 38.9 +0.6
baz=132
AYT Al 'Ayyat 7.15 132 P Pn 22 23 38.9 +0.7
KRUS Krusevo 7.36 337 *e*Pn Pn 22 23 44.6 +3.6
KOT Kottamia 7.43 127 P Pn 22 23 41.9 -0.2
baz=127
KOT Kottamia 7.43 127 P Pn 22 23 41.9 -0.2
HSAF As Saff 7.46 130 P Pn 22 23 43.0 +0.5
baz=131
HSAF As Saff 7.46 130 P Pn 22 23 43.0 +0.5
GLL Jalalah 7.59 130 P Pn 22 23 44.3 +0.1
baz=130
GLL Jalalah 7.59 130 P Pn 22 23 44.3 +0.1
HHAG Hagoal 7.60 126 P Pn 22 23 44.2 0.0
baz=126
HHAG Hagoal 7.60 126 P Pn 22 23 44.2 -0.1
HBNS Bani Suwayf 7.74 135 P Pn 22 23 46.9 +0.7
baz=136
HBNS Bani Suwayf 7.74 135 P Pn 22 23 46.9 +0.7
AMAG Maghara 7.97 118 P Pn 22 23 48.9 -0.6
baz=117
AMAG Maghara 7.97 118 P Pn 22 23 48.9 -0.6
TIP Timpagrande 8.02 307 *e*Pn Pn 22 23 48.1 -1.9
comp=N,6.2nm,0.6s
CEL Celeste 8.19 299 *e*Pn Pn 22 23 50.7 -1.8
comp=N,7.7nm,0.3s
CEL S Sn 22 25 15.5 -10
BRTR Keskin Array B 8.57 51 Pn Pn 22 23 55.6 -1.9
comp=N,0.1nm,0.3s,baz=232,slow=12,SNR=3.0
BRTR Keskin Array B 8.57 51 Pn Pn 22 23 55.7 -1.9
BR131 Keskin Array S 8.57 51 *e*Pn Pn 22 23 56.9 -0.6
BR131 Keskin Array S 8.57 51 *e*Pn Pn 22 23 56.9 -0.7
MMAI Mount Meron Ar 8.80 98 Pn Pn 22 23 57.5 -3.3
comp=N,2.4nm,0.3s,baz=302,slow=12,SNR=2.6
MMAI S Sn 22 25 35.4 -4.6
comp=N,5.0nm,0.3s,baz=256,slow=23,SNR=9.1
VAE Valguarnera 9.04 291 Pn Pn 22 24 00.9 -3.1
VAE S Sn 22 25 37.1 -8.8
VAE Valguarnera 9.04 291 Pn Pn 22 24 00.9 -3.1
comp=N,0.5nm,0.3s,baz=72,slow=16,SNR=2.2
VAE S Sn 22 25 37.1 -8.8
comp=N,0.6nm,0.3s,baz=106,slow=7.4,SNR=1.9
SG1 Sgolgore (BA) 9.05 316 *e*Pn Pn 22 24 03.2 -1.1

CUC Castrocucco 9.07 309 *e*Pn Pn 22 24 03.3 -1.2
comp=N,8.2nm,0.6s
CUC S *e*Sn Sn 22 25 41.7 -4.9
CUC Castrocucco 9.07 309 *e*Pn Pn 22 24 03.3 -1.2
comp=N,8.1nm,0.6s
HBST Basata 9.86 120 P Pn 22 24 15.8 +0.4
baz=120
HBST Basata 9.86 120 P Pn 22 24 15.8 +0.4
STON Ston 10.02 327 *e*Pn Pn 22 24 14.3 -3.1
STON S Sn 22 25 57.2 -13
ASF Jabal al Asfar 10.24 100 Pn Pn 22 24 19.0 -1.5
comp=N,0.3nm,0.3s,baz=270,slow=2.0,SNR=3.2
ASF S Sn 22 26 07.8 -7.5
comp=N,0.3nm,0.3s,baz=252,slow=20,SNR=2.9
MLR Muntele Rosu 10.88 4 Pn Pn 22 24 24.4 -4.9
baz=192,slow=20
NVLJ Novalja 12.62 325 *e*Pn Pn 22 24 47.7 -5.4
NVLJ S Sn 22 27 01.4 -12
MORC Moravsky Berou 16.11 342 Pn Pn 22 25 38.1 -1.9
MORC Moravsky Berou 16.11 342 Pn Pn 22 25 38.1 -1.9
BHD Baghdad 16.14 89 *ex* Pn 22 25 45.7 +5.3
BHD *ex* x 22 28 43.6
WATA Walderalm 16.22 326 ⇑ *i*P Pn 22 25 46.0 +4.6
comp=N,2.8nm,0.4s
WATA Walderalm 16.22 326 P Pn 22 25 46.0 +4.6
comp=N,2.8nm,0.4s
AKASG Malin Array Be 16.36 10 Pn Pn 22 25 40.2 -3.0
AKASG Malin Array Be 16.36 10 Pn Pn 22 25 40.2 -3.0
comp=N,5.7nm,0.3s,baz=202,slow=11,SNR=2.5
AKBB Malin Array Si 16.36 10 *e*Pn Pn 22 25 41.4 -1.8
FETA Feichten 16.41 323 ⇑ *i*sP sP 22 25 52.0 +1.3
comp=N,1.6nm,0.7s
KIV Kislovodsk 16.53 50 *e*Pn Pn 22 25 44.5 -1.0
KIV Kislovodsk 16.53 50 *e*Pn Pn 22 25 44.5 -0.9
GNI Garni 16.62 65 *e*Pn Pn 22 25 46.1 -0.4
GNI Garni 16.62 65 *e*Pn Pn 22 25 46.1 -0.4
RETA Reutte 16.72 325 ⇑ *i*P Pn 22 25 50.1 +2.4
comp=N,1.1nm,0.4s
RETA Reutte 16.72 325 P Pn 22 25 50.1 +2.4
comp=N,1.1nm,0.4s
DAVA Damuels 17.01 323 ⇑ *i*P Pn 22 25 53.7 +2.3
comp=N,2.0nm,0.5s
DAVA Damuels 17.01 323 P Pn 22 25 53.7 +2.3
comp=N,2.0nm,0.5s
ORIF Oris-en-Rattie 17.90 311 *e*Pn Pn 22 25 56.9 -5.6
HAU Haudompre 19.30 319 *e*P Pn 22 26 18.6 -1.0
SUW Suwalki 19.43 357 *e*P Pn 22 26 17.7 -3.4
SUW Suwalki 19.43 357 *e*P Pn 22 26 17.7 -3.3
LOR Lormes 20.29 315 *e*P P 22 26 29.6 +0.3
MEZF Maizieres J'vi 20.30 319 *e*P P 22 26 28.5 -0.8
comp=N,27nm,1.2s
MEZF Maizieres J'vi 20.30 319 *e*P P 22 26 28.5 -0.8
comp=N,27nm,1.2s
MEZF Maizieres J'vi 20.30 319 *e*P P 22 26 28.5 -0.8
comp=N,27nm,1.2s
SSF Saint Saulge 20.39 314 *e*P P 22 26 30.4 0.0
comp=N,10nm,1.0s
SSF Saint Saulge 20.39 314 *e*P P 22 26 30.4 0.0
comp=N,5.3nm,1.0s
WLF Walferdange 20.44 323 *e*P P 22 26 29.4 -1.6
WLF Walferdange 20.44 323 *e*P P 22 26 29.4 -1.5
LFF La Frestale 21.23 306 *e*P P 22 26 39.5 0.0
comp=N,43nm,1.1s,mb4.4
LFF La Frestale 21.23 306 *e*P P 22 26 39.5 0.0
comp=N,22nm,1.1s,mb4.2
LFF La Frestale 21.23 306 *e*P P 22 26 39.5 0.0
comp=N,22nm,1.1s,mb4.4
GIVF Givet 21.39 322 *e*P P 22 26 40.1 -1.0
comp=N,4.3nm,0.3s,mb4.0
GIVF Givet 21.39 322 *e*P P 22 26 40.1 -1.0
comp=N,2.2nm,0.3s,mb4.0
GIVF Givet 21.39 322 *e*P P 22 26 40.1 -1.0
comp=N,2.2nm,0.3s,mb4.0
BAIF Baives 21.67 322 *e*P P 22 26 42.7 -1.5
comp=N,11nm,0.8s,mb4.0
BAIF Baives 21.67 322 *e*P P 22 26 42.7 -1.5
comp=N,5.6nm,0.8s,mb4.0
BAIF Baives 21.67 322 *e*P P 22 26 42.7 -1.5
comp=N,5.6nm,0.8s,mb4.0
ESDC Sonseca Array 23.58 291 P P 22 27 03.6 -0.9
comp=N,1.2nm,0.7s,mb3.4,baz=82,slow=9.7,SNR=7.3
ESDC Sonseca Array 23.58 291 P P 22 27 03.7 -0.8
ESLA Sonseca Array 23.58 291 *e*P P 22 27 03.6 -0.9
ESLA Sonseca Array 23.58 291 *e*P P 22 27 03.6 -0.9
HFS Hagfors 26.57 347 P P 22 27 26.8 -4.7
comp=N,0.7nm,0.5s,mb3.5,baz=145,slow=10,SNR=4.1
FINES FINESS Array B 26.85 1 P P 22 27 30.1 -3.8
comp=N,1.9nm,0.7s,mb3.8,baz=156,slow=11,SNR=7.0
KAF Kangasniemi 27.52 1 *e*p P 22 27 35.2 -4.8
comp=N,0.4nm,0.3s,mb3.5
NAO01 NORSAR Array S 27.78 345 *e*P P 22 27 40.4 -1.9
NAO01 NORSAR Array S 27.78 345 *e*P P 22 27 40.4 -1.9
EKA Eskdalemuir Ar 28.41 325 P P 22 27 43.6 -4.3
comp=N,1.1nm,0.8s,mb3.5,baz=129,slow=10,SNR=3.2
JOF Jousu 28.60 6 *e*p P 22 27 43.0 -6.5
comp=N,0.8nm,0.3s,mb3.9
AKTK Aktyubinsk 28.71 46 P P 22 27 49.2 -1.6
AKTK Aktyubinsk 28.71 46 P P 22 27 49.2 -1.5
AKTO Aktyubinsk 28.71 46 P P 22 27 49.2 -1.5
comp=N,1.4nm,0.5s,mb4.0,baz=244,slow=9.5,SNR=9.8
ARU Arti 31.57 36 *e*P P 22 28 14.4 -1.5
ARU Arti 31.57 36 *e*P P 22 28 14.4 -1.5
ARCES ARCESS Array B 34.97 0 P P 22 28 42.1 -3.3
comp=N,1.5nm,0.7s,mb4.0,baz=181,slow=7.3,SNR=6.7
KBL Kabul 36.04 77 P P 22 28 54.6 -0.4
KBL Kabul 36.04 77 P P 22 28 54.6 -0.5
DBIC Dimbokro 39.13 232 P P 22 29 21.4 -0.1
DBIC Dimbokro 39.13 232 *e*P P 22 29 20.8 -0.6
DBIC Dimbokro 39.13 232 P P 22 29 21.4 -0.1
comp=N,1.9nm,0.7s,mb3.9,baz=30,slow=8.1,SNR=4.7
DBIC Dimbokro 39.13 232 *e*P P 22 29 20.8 -0.6
KURK Kurchatov 41.62 50 *e*P P 22 29 39.1 -2.5
comp=N,1.2nm,0.4s,mb3.9
KURK Kurchatov 41.62 50 P P 22 29 39.5 -2.1
comp=N,1.5nm,0.4s,mb3.9,baz=276,slow=8.5,SNR=8.5
MK31 Makanchi Array 44.18 56 *e*P P 22 30 01.5 -0.9
MK31 Makanchi Array 44.18 56 *e*P P 22 30 01.5 -0.9
MKAR Makanchi Array 44.18 56 P P 22 30 01.7 -0.7
comp=N,1.1nm,0.4s,mb3.9,baz=267,slow=8.0,SNR=22
MKAR Makanchi Array 44.18 56 P P 22 30 01.7 -0.7
ZALV Zalesovo Beam 45.47 46 P P 22 30 10.6 -2.0
comp=N,1.1nm,0.4s,mb4.0,baz=264,slow=9.0,SNR=4.6
SUMG Summit 49.44 339 P P 22 30 41.4 -1.8
SONM Songino Array 59.93 50 P P 22 31 59.2 -0.4
comp=N,0.4nm,0.5s,mb3.7,baz=288,slow=7.0,SNR=4.2
SONM Songino Array 59.93 50 P P 22 31 59.2 -0.5
SCHQ Schefferville 63.52 320 P P 22 32 22.4 -1.3
SCHQ Schefferville 63.52 320 P P 22 32 22.4 -1.3
comp=N,1.4nm,0.5s,mb4.3,baz=67,slow=6.4,SNR=5.6
SCHQ Schefferville 63.52 320 P P 22 32 22.4 -1.3
YKA Yellowknife Ar 77.92 342 P P 22 33 50.4 -0.9
comp=N,0.7nm,0.4s,mb3.9,baz=25,slow=4.8,SNR=8.9
YKA Yellowknife Ar 77.92 342 P P 22 33 50.4 -0.9

SVRC Sivrice-ELAZID 3.15 302 *e*PN Pn 22 28 48.5 +0.3
SVRC Sivrice-ELAZID 3.15 302 *e*Pn Pn 22 28 48.5 +0.3
URFA Urfa 3.17 284 *e*PN Pn 22 28 48.7 +0.2
URFA Urfa 3.17 284 *e*Pn Pn 22 28 48.7 +0.2
PTK Pertek 3.38 310 *e*PN Pn 22 28 51.5 +0.1
PTK Pertek 3.38 310 *e*Pn Pn 22 28 51.5 +0.1
BHD Baghdad 3.73 158 *ex* Pn 22 28 55.0 -1.2
BHD *ex* Sn 22 29 41.0 +0.9
BHD Baghdad 3.73 158 *e*Pn Pn 22 28 55.0 -1.2
BHD *e*Sn Sn 22 29 41.0 +0.9
MALT Malatya 3.73 296 *e*PN Pn 22 28 57.6 +1.4
MALT Malatya 3.73 296 *e*Pn Pn 22 28 57.6 +1.4

*BJI **07** 22:33:30.3, 12°.32N×143°.50E, h175km, mB4.5/3, mb4.4/8*
*ISCJB **07** 22:33:35.4±0.9, 12°.78N±0°.06×142°.88E±0°.09,*
h177km±10km, mb4.3/29, Error ellipse: s-maj=14.7km
s-min=9.5km az=2.4
*NEIC **07** 22:33:36.8±0.8, 12°.78N×142°.90E, h175km±8km, mb4.3/14,*
Error ellipse: s-maj=9.0km s-min=6.2km az=95.0
*IDC **07** 22:33:36.9±1.1, 12°.77N×142°.96E, h174km±12km,*
mb3.9/12, mb1 4.0/13, mb1mx3.8/25, mbtmp3.9/13, Error
ellipse: s-maj=16.9km s-min=13.2km az=86.0
ISC 07 22:33:36.5±0.8, 12°.78N±0°.06×142°.88E±0°.09,
h169km±10km, n44, σ0°73/45, mb4.3/29, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.10**	**67**	*e*Pn	**Pn**		**22 34 14.6**	**+0.7**
GUMO				*e*Sn	**Sn**		**22 34 42.4**	**-0.4**
GUMO	**Guam**	**2.10**	**67**	P	**Pn**		**22 34 14.6**	**+0.7**
	33nm,0.3s,baz=191,slow=12,SNR=12							
GUMO				S	**Sn**		**22 34 42.7**	**0.0**
	176nm,0.3s,baz=304,slow=23,SNR=48							
DAV	**Davao City (W)**	**17.96**	**253**	*e*P	**Pn**		**22 37 34.1**	**-1.7**
MAJO	**Matsushiro**	**24.03**	**351**	*e*P	**P**		**22 38 34.7**	**-1.1**
	3.7nm,0.4s,mb4.3							
CTAO	**Charters Tower**	**32.83**	**174**	*e*P	**P**		**22 39 54.1**	**-0.1**
	2.5nm,0.6s,mb4.1							
WRAB	**Tennant Creek**	**33.58**	**195**	*e*P	**P**		**22 40 00.4**	**-0.2**
	14nm,0.7s,mb4.8							
WB2	**Warramunga Arr**	**33.59**	**195**	*e*P	**P**		**22 40 00.5**	**-0.2**
FITZ	**Fitzroy Crossi**	**35.09**	**209**	*e*P	**P**		**22 40 13.4**	**-0.3**
	2.2nm,0.6s,mb4.0							
ENH	**Enshi**	**35.42**	**305**	*e*P	**P**		**22 40 16.2**	**-0.2**
	11nm,0.9s,mb4.5							
ASAR	**Alice Springs**	**37.27**	**194**	P	**P**		**22 40 32.2**	**0.0**
	2.3nm,0.6s,mb4.0,baz=19,slow=12,SNR=33							
KULM	**Kulim**	**42.32**	**264**	*e*P	**P**		**22 41 13.8**	**-0.2**
	10nm,0.7s,mb4.6							
CMAR	**Chiang Mai Arr**	**42.61**	**283**	P	**P**		**22 41 17.4**	**+1.2**
	5.0nm,0.8s,mb4.2,baz=84,slow=6.3,SNR=19							
STKA	**Stephens Creek**	**44.42**	**182**	*e*P	**P**		**22 41 29.6**	**-0.9**
	0.7nm,0.6s,mb3.5							
STKA	**Stephens Creek**	**44.42**	**182**	P	**P**		**22 41 29.7**	**-0.8**
	4.9nm,0.8s,mb4.2,baz=330,slow=12,SNR=8.9							
PSI	**Prapat**	**44.59**	**261**	P	**P**		**22 41 32.3**	**+0.1**
	4.3nm,0.6s,mb4.2,baz=124,slow=18,SNR=4.2							
FORT	**Forrest**	**45.59**	**198**	*e*P	**P**		**22 41 40.1**	**+0.3**
	22nm,0.7s,mb4.9							
ULN	**Ulaanbaatar**	**45.96**	**327**	*e*P	**P**		**22 41 42.8**	**+0.4**
	1.7nm,0.3s,mb4.2							
SONM	**Songino Array**	**46.30**	**326**	P	**P**		**22 41 46.3**	**+1.2**
	2.0nm,0.6s,mb4.0,baz=148,slow=7.3,SNR=14							
SONM				PcP	PcP		22 43 17.4	-0.1
	0.5nm,0.6s,baz=137,slow=4.3,SNR=2.9							
TLY	**Talaya**	**50.02**	**329**	P	**P**		**22 42 12.2**	**-1.4**
YAK	**Yakutsk**	**50.08**	**352**	*e*P	**P**		**22 42 13.8**	**0.0**
TOO	**Toolangi**	**50.15**	**177**	*e*P	**P**		**22 42 15.9**	**+1.3**
LSA	**Lhasa**	**50.65**	**298**	*e*P	**P**		**22 42 19.8**	**+1.1**
	4.2nm,0.5s,mb4.3							
JIRN	**Jiri**	**54.78**	**295**	*e*P	**P**		**22 42 49.5**	**+0.5**
	20nm,0.5s,mb5.1							
GUN	**Gumba**	**55.07**	**295**	*e*P	**P**		**22 42 51.0**	**-0.1**
	26nm,0.5s,mb5.2							
PKI	**Pulchoki**	**55.47**	**295**	*e*P	**P**		**22 42 53.9**	**0.0**
PKIN	**Phulchoki**	**55.48**	**295**	*e*P	**P**		**22 42 54.5**	**+0.5**
	7.6nm,0.5s,mb4.7							
KKN	**Kakani**	**55.59**	**295**	*e*P	**P**		**22 42 55.4**	**+0.6**
DMN	**Daman**	**55.74**	**295**	*e*P	**P**		**22 42 56.1**	**+0.2**
MKAR	**Makanchi Array**	**60.73**	**317**	P	**P**		**22 43 30.9**	**+0.8**
	2.8nm,0.8s,mb4.2,baz=90,slow=8.9,SNR=18							
ZAA0	**Zalesovo Array**	**61.16**	**325**	*e*P	**P**		**22 43 32.3**	**-0.6**
ZALV	**Zalesovo Beam**	**61.16**	**325**	P	**P**		**22 43 32.8**	**-0.1**
	2.1nm,0.3s,mb4.4,baz=109,slow=7.6,SNR=12							
ZALV				PcP	PcP		22 44 13.1	-1.0
	1.1nm,0.5s,baz=127,slow=3.9,SNR=4.6							
KURK	**Kurchatov**	**63.96**	**320**	P	**P**		**22 43 52.0**	**+0.5**
KURK	**Kurchatov**	**63.96**	**320**	P	**P**		**22 43 52.0**	**+0.5**
	9.4nm,0.7s,mb4.8,baz=105,slow=6.9,SNR=16							
AAK	**Ala-Archa**	**65.57**	**311**	*e*P	**P**		**22 44 01.2**	**-0.9**
	2.3nm,0.3s,mb4.5							
MCK	**McKinley**	**69.01**	**26**	*e*P	**P**		**22 44 22.9**	**-0.4**
	6.5nm,0.9s,mb4.4							
BVAR	**Borovoye Array**	**69.36**	**322**	P	**P**		**22 44 26.0**	**+0.3**
	4.2nm,0.3s,mb4.6,baz=101,slow=8.0,SNR=28							
BRVK	**Borovoye**	**69.43**	**322**	*e*P	**P**		**22 44 26.9**	**+0.8**
	3.9nm,0.5s,mb4.4							
KBL	**Kabul**	**69.62**	**302**	*e*P	**P**		**22 44 27.7**	**0.0**
	6.9nm,0.9s,mb4.4							
ILAR	**Eielson Array**	**70.12**	**25**	P	**P**		**22 44 29.3**	**-0.8**
	1.3nm,0.6s,mb3.9,baz=248,slow=6.1,SNR=12							
ARU	**Arti**	**76.32**	**325**	*e*P	**P**		**22 45 06.2**	**-0.4**
	2.2nm,0.5s,mb4.0							
RES	**Resolute Bay**	**85.77**	**13**	P	**P**		**22 45 55.5**	**-0.7**
NVAR	**Mina Array Bea**	**88.93**	**51**	P	**P**		**22 46 13.4**	**+1.3**
	0.9nm,0.7s,mb3.8,baz=262,slow=6.5,SNR=5.9							
FINES	**FINESS Array B**	**91.06**	**335**	P	**P**		**22 46 20.1**	**-1.4**
	1.2nm,0.7s,mb4.0,baz=20,slow=6.3,SNR=4.3							
LPAZ	**La Paz**	**149.80**	**100**	PKPbc	PKPbc		22 53 08.2	+0.9
	2.8nm,0.8s,baz=276,slow=1.8,SNR=13							

*IDC **07** 22:34:16.0±1.0, 31°.78N×104°.14E, h0km, mb3.8/10,*
mb1 4.0/12, mb1mx3.8/27, mbtmp3.8/12, ML3.9/2, Error
ellipse: s-maj=33.6km s-min=19.6km az=55.0
*NEIC **07** 22:34:17.4±0.3, 31°.77N×104°.13E, h10km, mb4.1/4, Error*
ellipse: s-maj=7.7km s-min=5.4km az=78.0
*BJI **07** 22:34:18.7, 31°.84N×104°.38E, h22km, mb3.9/1, ML3.7/16,*
Ms3.5/2, Ms7 3.7/4
ISC 07 22:34:16.9±0.9, 31°.79N±0°.03×104°.32E±0°.04, h9km±6km,
n34, σ1°905/44, mb4.0/13, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.00**	**209**	Pg	**Pg**		**22 34 35.8**	**-0.4**
CD2				Sg	**Sg**		**22 34 49.9**	**+0.7**
CD2				smax				
	comp=N,3μm,0.5s							
CD2				smax				
	comp=E,2μm,0.6s							
LZH	**Lanzhou**	**4.30**	**355**	Pn	**Pn**		**22 35 25.9**	**+3.4**
LZH				Sn	**Sn**		**22 36 16.2**	**+3.4**
LZH				Sg	**Sg**		**22 36 29.8**	**-5.2**
LZH				smax				
	comp=N,160nm,1.0s							
LZH				smax				
	comp=E,120nm,0.8s							
LZH				LR	LR			
	comp=N,350nm,4.4s							
LZH				LR	LR			
	comp=Z,520nm,6.1s							
XAN	**Xi'an**	**4.47**	**59**	Pn	**Pn**		**22 35 26.7**	**+1.8**
XAN				Pg	**Pg**		**22 35 40.0**	**-2.6**
XAN				Sg	**Sg**		**22 36 39.1**	**-1.4**
XAN				smax				
	comp=N,140nm,0.5s							
XAN				smax				
	comp=E,59nm,0.8s							
ENH	**Enshi**	**4.69**	**108**	*e*Pn	**Pn**		**22 35 31.5**	**+3.6**
ENH				*e*Sg	**Sg**		**22 36 54.0**	**+6.5**
GYA	**Guiyang**	**5.70**	**158**	Pn	**Pn**		**22 35 44.1**	**+2.4**
GYA				Sn	**Sn**		**22 36 47.2**	**-0.1**
GYA				Sg	**Sg**		**22 37 20.8**	**+0.9**
GYA				smax				
	comp=N,90nm,0.9s							
GYA				smax				
	comp=E,80nm,0.8s							
KMI	**Kunming**	**6.79**	**192**	Pn	**Pn**		**22 36 02.2**	**+5.5**
KMI				Sn	**Sn**		**22 37 12.5**	**-1.7**
KMI				smax				
	comp=N,22nm,0.7s							

KMI smax
comp=E,19nm,0.7s
WHN Wuhan 8.69 96 P **Pn** **22 36 22.8 +0.1**
WHN S **Sn** **22 37 59.3 -1.5**
CHTO Chiang Mai 13.80 202 Pn **Pn** **22 37 31.9 -1.0**
CMAR Chiang Mai Arr 14.14 201 Pn **Pn** **22 37 37.1 -0.3**
comp=E,0.6nm,0.3s,baz=9.0,slow=9.1,SNR=4.6
SONM Songino Array 16.10 5 Pn **Pn** **22 38 04.3 +0.9**
comp=E,0.1nm,0.3s,baz=179,slow=13,SNR=3.1
KSRS Korea Array 20.21 67 P **P** **22 38 54.5 +2.5**
comp=E,1.1nm,0.6s,baz=257,slow=10,SNR=7.3
HIA Hailar 20.95 29 P **P** **22 39 00.1 +0.1**
MK31 Makanchi Array 22.59 318 *eP* **P** **22 39 17.5 0.0**
MKAR Makanchi Array 22.59 318 P **P** **22 39 18.1 +0.7**
comp=E,1.3nm,0.7s,mb3.5,baz=118,slow=12,SNR=10
MKAR PcP PcP 22 43 11.0 +0.3
comp=E,0.2nm,0.5s,baz=169,slow=3.8,SNR=4.6
AAK Ala-Archa 25.97 303 *eP* **P** **22 39 49.5 -0.3**
comp=E,2.2nm,0.7s,mb3.8
ZAA0 Zalesovo Array 26.18 333 *eP* **P** **22 39 51.9 +0.3**
ZALV Zalesovo Beam 26.18 333 P **P** **22 39 51.9 +0.3**
comp=E,2.6nm,0.8s,mb3.8,baz=148,slow=12,SNR=7.9
KURK Kurchatov 26.81 322 P **P** **22 39 57.6 +0.3**
comp=E,0.8nm,0.8s,mb3.3,baz=129,slow=8.5,SNR=4.8
BRVK Borovoye 32.44 321 *eP* **P** **22 40 47.2 0.0**
comp=E,2.8nm,0.8s,mb4.1
PALK Pallekele 32.86 227 *eP* **P** **22 40 50.2 -1.0**
ARU Arti 40.00 322 *eP* **P** **22 41 51.6 -0.1**
comp=E,2.2nm,0.6s,mb4.1
KIV Kislovodsk 49.09 303 P **P** **22 43 03.6 -1.0**
BR131 Keskin Array S 56.56 299 P **P** **22 43 59.0 -0.9**
ARCES ARCESS Array B 56.71 336 P **P** **22 44 00.2 -0.2**
comp=E,6.3nm,1.1s,mb4.5,baz=68,slow=8.0,SNR=7.1
FINES FINESS Array B 57.10 326 P **P** **22 44 03.2 -0.1**
FINES FINESS Array B 57.10 326 P **P** **22 44 03.2 -0.1**
comp=E,1.1nm,0.6s,mb4.1,baz=101,slow=6.2,SNR=11
WRAB Tennant Creek 58.94 147 *eP* **P** **22 44 17.0 +0.4**
comp=E,5.1nm,0.9s,mb4.5
KWP Kalwaria Pacla 61.37 313 P **P** **22 44 32.6 -0.4**
ASAR Alice Springs 61.99 149 P **P** **22 44 38.5 +1.1**
comp=E,0.4nm,0.5s,mb3.8,baz=336,slow=6.8,SNR=7.8
HFS Hagfors 63.30 326 P **P** **22 44 45.5 -0.3**
comp=E,2.2nm,0.9s,mb4.3,baz=77,slow=6.5,SNR=5.5
NOA NORSAR Array B 64.18 327 P **P** **22 44 50.7 -0.8**
NOA NORSAR Array B 64.18 327 P **P** **22 44 50.7 -0.8**
comp=E,0.7nm,0.8s,mb3.8,baz=72,slow=4.3,SNR=3.6
KMBO Kilima Mbogo 71.25 257 P **P** **22 45 36.4 -0.5**
YKA Yellowknife Ar 80.98 17 P **P** **22 46 32.0 +0.5**
comp=E,0.8nm,0.7s,mb3.8,baz=330,slow=4.5,SNR=5.0

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*ISCJB **07** 22:58:30.2±0.3, 9.36S±0.04×109.47W±0.05, h10km, mb5.0/122, MS5.1/197, Error ellipse: s-maj=7.1km s-min=6.3km az=171.8*

*IDC **07** 22:58:31.3±0.7, 9.02S×109.56W, h0km, mb4.4/11, mb1 4.6/11, mb1mx4.6/14, mbtmp4.4/11, MS5.0/13, Ms1 5.0/13, ms1mx5.0/14, Error ellipse: s-maj=30.5km s-min=17.5km az=60.0*

*MOS **07** 22:58:33.1±1.0, 8.90S×109.25W, h10km, mb5.2/43, MS5.1/38, Error ellipse: s-maj=15.8km s-min=5.9km az=86.9*

*NEIC **07** 22:58:33.1±0.2, 9.14S×109.52W, h10km, mb5.1/114, MS5.1/181, MW5.5, MW5.5, Error ellipse: s-maj=7.2km s-min=4.7km az=82.0, Moment Tensor Solution. s51 Moment tensor: Scale 10^{17}Nm; M_{rr}=0.14; $M_{\theta\theta}$0.35; $M_{\phi\phi}$-0.22; $M_{r\theta}$0.24; $M_{r\phi}$ 1.99; $M_{\theta\phi}$0.53; Best double couple: $M_0$2.10000×10^{17} NP1:ϕ_s4.00000°, δ87.00000°, λ165.00000°. NP2:ϕ_s95.00000°, δ75.00000°, λ4.00000°. Principal axes: T 2.2000, Plg12.0000°, Azm318.0000°; N -0.2200, Plg74.0000°, Azm170.0000°; P -1.9800, Plg7.0000°, Azm50.0000°;*

*BJI **07** 22:58:34.6, 9.10S×109.50W, h10km, mB5.4/16, Ms5.5/18, Ms7 5.3/20*

*GCMT **07** 22:58:37.3±0.1, 9.12S×109.72W, h19km, MW5.6, Moment Tensor Solution. s83,c137; s51,c53; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.10±.04; $M_{\theta\theta}$0.97±.04; $M_{\phi\phi}$-0.87±.04; $M_{r\theta}$0.11±.08; $M_{r\phi}$2.67±.03; $M_{\theta\phi}$0.06±.09; Best double couple: $M_0$2.80000×10^{17} NP1:ϕ_s10.00000°, δ88.00000°, λ179.00000°. NP2:ϕ_s100.00000°, δ89.00000°, λ2.00000°. Principal axes: T 2.8800, Plg2.0000°, Azm325.0000°; N -0.1100, Plg88.0000°, Azm136.0000°; P -2.7800, Plg0.0000°, Azm235.0000°; Data Used: II IU IC G CN. Surface waves: sta=108, comp=210, per= 50.*

ISC 07 22:58:33.4±0.3, 9.21S±0.04×109.44W±0.05, h10km, n749, σ0=84/642, mb5.0/122, MS5.1/197, 185C-186D, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**17.82**	**180**	*e*Pn	**Pn**	**23 02 43.3**	**+1.6**
RPN	**Rapa Nui**	**17.82**	**180**	LR	LR	23 07 37.7	
	comp=Z,5μm,21.9s,baz=359,slow=30						
PAYG	**Puerto Ayora**	**20.87**	**67**	PFAKE		23 03 30.0	+14
PAYG				LR	LR		
	comp=Z,10μm,21.0s,MS5.2						
PTCN	**Pitcairn Islan**	**25.21**	**229**	PFAKE		23 04 10.0	+11
PTCN				LR	LR		
	comp=Z,8μm,22.0s,MS5.2						
RKT	**Rikitea**	**28.09**	**237**	*e*S	**S**	**23 09 09.2**	**-1.3**
	comp=Z,614nm,25.2s						
RKT				*e*LR	LR	23 11 37.6	
	comp=Z,10μm,27.5s,baz=60						
CMIG	**Matias Romero**	**29.83**	**29**	P	**P**	**23 04 38.2**	**-2.7**
	comp=Z,5.2nm,0.9s,mb4.3,baz=203,slow=7.7,SNR=3.4						
CMIG				LR	LR	23 12 52.9	
	comp=Z,1μm,21.7s,MS4.5,baz=207,slow=29						
TAOE	**Nuku Hiva Isla**	**30.32**	**268**	*e*LQ		23 11 09.2	
	comp=Z,4μm,24.3s						
TAOE				*e*LR	LR	23 12 13.5	
	comp=Z,2μm,27.2s						
JTS	**JuntasAbangare**	**31.13**	**52**	*e*P	**P**	**23 04 51.3**	**-1.2**
	comp=Z,131nm,1.7s,mb5.5						
JTS				*e*PP	PP	23 06 07.1	+4.2
JTS				*e*S	**S**	**23 09 58.5**	**+0.1**
JTS				LR	LR		
	comp=Z,8μm,22.0s,MS5.4						
JTS	**JuntasAbangare**	**31.13**	**52**	*e*P	**P**	**23 04 51.3**	**-1.2**
JTS				*e*		23 06 07.1	
JTS				*e*S	**S**	**23 09 58.5**	**+0.1**
JTS				pmax	pmax		
	comp=Z,131nm,1.7s						
JTS				MLR	MLR		
	comp=Z,8μm,22.0s						
TGUH	**Tegucigalpa,Un**	**31.91**	**44**	*e*P	**P**	**23 05 00.8**	**+1.5**
	comp=Z,61nm,1.1s,mb5.3						
TGUH				LR	LR		
	comp=Z,5μm,22.0s,MS5.1						
NNA	**Nana**	**32.15**	**98**	PFAKE		23 05 10.0	+8.5
NNA				LR	LR		
	comp=Z,1μm,19.0s,MS4.7						
OTAV	**Otavalo**	**32.25**	**75**	*e*P	**P**	**23 05 02.6**	**+0.2**
	comp=Z,56nm,1.9s,mb5.1						
OTAV				LR	LR		
	comp=Z,6μm,21.0s,MS5.3						
BCIP	**Isla Barro Col**	**34.67**	**59**	PFAKE		23 05 40.0	+17
BCIP				LR	LR		
	comp=Z,6μm,22.0s,MS5.3						
TEIG	**Tepich**	**35.91**	**35**	*e*P	**P**	**23 05 33.5**	**-0.5**
	comp=Z,30nm,0.9s,mb5.2						
TEIG				LR	LR		
	comp=Z,3μm,21.0s,MS5.1						
ROSC	**El Rosal**	**37.68**	**70**	LR	LR	23 18 28.4	
	comp=Z,1μm,20.0s,MS4.7,baz=219,slow=32						
KVTX	**Kingsville**	**38.21**	**17**	PFAKE		23 06 00.0	+6.5
KVTX				LR	LR		
	comp=Z,4μm,19.0s,MS5.2						
TXAR	**Lajitas Array**	**38.72**	**8**	P	**P**	**23 05 57.2**	**-0.5**
	comp=Z,2.8nm,1.0s,mb4.0,baz=193,slow=6.8,SNR=11						
TXAR				PcP	PcP	23 08 09.0	-0.6
	comp=Z,1.2nm,0.8s,baz=182,slow=4.2,SNR=3.4						
TXAR				LR	LR	23 18 54.9	
	comp=Z,2μm,18.8s,MS4.8,baz=100,slow=32						
TXAR	**Lajitas Array**	**38.72**	**8**	P	**P**	**23 05 57.2**	**-0.5**
TXAR						23 08 09.0	
626A	**Big Bend Ranch**	**38.87**	**7**	⇓P	**P**	**23 05 59.2**	**+0.2**
	baz=39						
627A	**Terlingua Ranc**	**38.87**	**8**	⇓P	**P**	**23 05 59.7**	**+0.7**
	baz=39						
528A	**Cox Ranch, San**	**39.66**	**9**	⇑P	**P**	**23 06 05.8**	**+0.2**
	baz=40						
PPT	**Papeete**	**39.85**	**254**	*e*S	**S**	**23 12 13.4**	**+1.1**
	comp=Z,397nm,24.8s						
PPT				*e*LQ		23 15 10.1	
	comp=Z,10μm,28.8s						
PPT				*e*LR	LR	23 16 48.9	
	comp=Z,7μm,26.5s,baz=82						
PPT	**Papeete**	**39.85**	**254**	LR	LR	23 17 52.4	
	comp=Z,2μm,18.1s,MS5.0,baz=80,slow=29						
426A	**McDonald Obser**	**39.98**	**7**	⇓P	**P**	**23 06 08.6**	**+0.3**
	baz=40						
425A	**Indio Mountain**	**39.99**	**6**	⇑P	**P**	**23 06 08.8**	**+0.4**
	baz=40						
428A	**Kincaid Ranch,**	**40.23**	**9**	⇓P	**P**	**23 06 10.8**	**+0.4**
	baz=40						
320A	**Kipp Ranch, An**	**40.32**	**1**	⇑P	**P**	**23 06 11.4**	**+0.3**
	baz=40						
319A	**Douglas**	**40.35**	**0**	⇓P	**P**	**23 06 12.1**	**+0.8**
	baz=40						
318A	**Bisbee**	**40.42**	**359**	⇓P	**P**	**23 06 12.3**	**+0.4**
	baz=40						
JCT	**Junction City**	**40.53**	**13**	*e*P	**P**	**23 06 12.5**	**-0.4**
	comp=Z,54nm,1.8s,mb4.9						
JCT				LR	LR		
	comp=Z,2μm,21.0s,MS5.0						
JCT	**Junction City**	**40.53**	**13**	*e*P	**P**	**23 06 12.5**	**-0.3**
JCT				pmax	pmax		
	comp=Z,54nm,1.8s,mb4.9						
JCT				MLR	MLR		
	comp=Z,2μm,21.0s,MS5.0						
325A	**Bean Ranch, Si**	**40.57**	**6**	⇑P	**P**	**23 06 13.2**	**+0.1**
	baz=41,SNR=8.8						
324A	**Moseley Ranch,**	**40.59**	**5**	⇑P	**P**	**23 06 13.2**	**-0.2**
	baz=41						
326A	**Caldwell Ranch**	**40.63**	**7**	⇑P	**P**	**23 06 13.7**	**+0.1**
	baz=41						
217A	**Green Valley**	**40.77**	**358**	⇓P	**P**	**23 06 15.1**	**+0.3**
	baz=41						
LPAZ	**La Paz**	**40.84**	**104**	*e*P	**P**	**23 06 17.6**	**+1.9**
	comp=Z,22nm,1.1s,mb4.7						
LPAZ				*e*PcP	PcP	23 08 17.7	+1.0
LPAZ				LR	LR		
	comp=Z,2μm,20.0s,MS4.9						
LPAZ	**La Paz**	**40.84**	**104**	P	**P**	**23 06 18.3**	**+2.6**
	comp=Z,7.8nm,0.9s,mb4.3,baz=300,slow=5.6,SNR=15						
LPAZ				LR	LR	23 19 18.5	
	comp=Z,2μm,20.7s,MS4.9,baz=81,slow=30						
LPAZ	**La Paz**	**40.84**	**104**	*e*P	**P**	**23 06 17.6**	**+1.9**
LPAZ				*e*		23 08 17.7	
LPAZ				pmax	pmax		
	comp=Z,22nm,1.1s						
LPAZ				MLR	MLR		
	comp=Z,2μm,20.0s						
328A	**Wristen Ranch,**	**40.85**	**9**	⇑P	**P**	**23 06 15.9**	**+0.4**
	baz=41						
MNTX	**Cornudas Mount**	**40.86**	**5**	*e*P	**P**	**23 06 14.5**	**-1.0**
	comp=Z,24nm,1.3s,mb4.7						
MNTX				*e*S	**S**	**23 12 25.7**	**-1.1**
MNTX				LR	LR		
	comp=Z,917nm,19.0s,MS4.7						
220A	**Playas Peak, P**	**40.89**	**1**	⇓P	**P**	**23 06 15.8**	**0.0**
	baz=41,SNR=13						
218A	**Dragoon**	**40.95**	**359**	⇓P	**P**	**23 06 16.6**	**+0.3**
	baz=41						
221A	**Mesquite Ranch**	**41.01**	**2**	⇑P	**P**	**23 06 17.7**	**+0.9**
	baz=41						
216A	**Three Points,**	**41.02**	**357**	⇓P	**P**	**23 06 17.4**	**+0.5**
	baz=41						
214A	**Organ Pipe Nat**	**41.05**	**356**	⇑P	**P**	**23 06 17.6**	**+0.5**
	baz=41						
HKT	**Hockley**	**41.07**	**18**	*e*P	**P**	**23 06 16.7**	**-0.7**
	comp=Z,27nm,1.6s,mb4.6						
HKT				*e*S	**S**	**23 12 29.4**	**-0.7**
HKT				LR	LR		
	comp=Z,1μm,21.0s,MS4.7						
HKT	**Hockley**	**41.07**	**18**	*e*P	**P**	**23 06 16.7**	**-0.6**
HKT				*e*S	**S**	**23 12 29.4**	**-0.7**
HKT				pmax	pmax		
	comp=Z,27nm,1.6s,mb4.6						
HKT				MLR	MLR		
	comp=Z,1μm,21.0s,MS4.7						
223A	**Chaparral, Ant**	**41.08**	**4**	⇑P	**P**	**23 06 17.3**	**-0.1**
	baz=41						
222A	**Williams Famil**	**41.14**	**3**	⇓P	**P**	**23 06 18.1**	**+0.3**
	baz=41						
224A	**Cornudas Mount**	**41.22**	**5**	⇓P	**P**	**23 06 18.8**	**+0.3**
	baz=41,SNR=13						
TUC	**Tucson**	**41.30**	**358**	*e*P	**P**	**23 06 18.8**	**-0.3**
	comp=Z,41nm,2.1s,mb4.7						
TUC				LR	LR		
	comp=Z,4μm,20.0s,MS5.3						
TUC	**Tucson**	**41.30**	**358**	*e*P	**P**	**23 06 18.8**	**-0.4**
TUC				pmax	pmax		
	comp=Z,41nm,2.1s,mb4.7						
TUC				MLR	MLR		
	comp=Z,4μm,20.0s,MS5.3						
LCO	**Las Campanas**	**41.31**	**124**	PFAKE		23 06 30.0	+11
LCO				LR	LR		
	comp=Z,3μm,19.0s,MS5.1						
225A	**Deer Hill, Car**	**41.32**	**6**	⇓P	**P**	**23 06 19.3**	**0.0**
	baz=42						
226A	**Malaga, Loving**	**41.35**	**7**	⇑P	**P**	**23 06 19.9**	**+0.3**
	baz=42						
227A	**Bennet, Jal**	**41.40**	**8**	⇑P	**P**	**23 06 20.1**	**+0.1**
	baz=42						
120A	**U Bar Ranch, L**	**41.52**	**1**	⇑P	**P**	**23 06 21.2**	**+0.2**
	baz=42,SNR=5.6						
121A	**Cookes Peak, D**	**41.53**	**2**	⇑P	**P**	**23 06 21.5**	**+0.4**
	baz=42						
117A	**Oracle**	**41.56**	**358**	⇑P	**P**	**23 06 21.7**	**+0.4**
	baz=42						
116A	**Eloy**	**41.59**	**357**	⇓P	**P**	**23 06 21.5**	**0.0**
	baz=42						
118A	**Homack Ranch,**	**41.61**	**359**	⇓P	**P**	**23 06 22.1**	**+0.4**
	baz=42						
MTDJ	**Mount Denham**	**41.65**	**49**	PFAKE		23 06 30.0	+7.7
MTDJ				LR	LR		
	comp=Z,3μm,21.0s,MS5.1						
123A	**Bell Site, Whi**	**41.72**	**4**	⇓P	**P**	**23 06 22.8**	**+0.2**
	baz=42						
122A	**Conniff Cattle**	**41.73**	**3**	⇓P	**P**	**23 06 23.0**	**+0.3**
	baz=42						
119A	**Ashpeak Ranch,**	**41.74**	**0**	⇓P	**P**	**23 06 22.8**	**+0.1**
	baz=42						
115A	**Sonoran Desert**	**41.76**	**356**	⇑P	**P**	**23 06 23.4**	**+0.5**
	baz=42						
112A	**Yuma**	**41.80**	**353**	⇓P	**P**	**23 06 23.4**	**+0.2**
	baz=42						
124A	**Stringfield Ra**	**41.84**	**5**	⇓P	**P**	**23 06 24.6**	**+1.0**
	baz=42						
114A	**Black Gap (USA**	**41.85**	**356**	⇑P	**P**	**23 06 23.9**	**+0.3**
	baz=42						
125A	**Gardner Draw,**	**41.88**	**6**	⇓P	**P**	**23 06 24.5**	**+0.6**
	baz=42						
126A	**Clayton Basin,**	**41.94**	**7**	⇑P	**P**	**23 06 25.6**	**+1.2**
	baz=42						
127A	**Arkansas Junct**	**42.05**	**8**	⇓P	**P**	**23 06 25.4**	**+0.1**
	baz=42						
Z18A	**Geronimo**	**42.06**	**359**	⇑P	**P**	**23 06 27.1**	**+1.8**
	baz=42						
Z20A	**Nine Sixteen R**	**42.09**	**1**	⇓P	**P**	**23 06 27.2**	**+1.6**
	baz=42						
DVTC	**Desert V Tower**	**42.11**	**352**	⇑P	**P**	**23 06 27.2**	**+1.4**
	baz=42						
BAR	**Barrett**	**42.22**	**351**	*e*P	**P**	**23 06 25.4**	**-1.3**
	comp=Z,38nm,1.5s,mb4.8						
Z19A	**T-Link Ranch,**	**42.26**	**0**	⇑P	**P**	**23 06 28.1**	**+1.1**
	baz=42						
Z17A	**San Carlos Hig**	**42.28**	**359**	⇓P	**P**	**23 06 28.1**	**+0.9**
	baz=42						
Z22A	**Elephant Butte**	**42.29**	**3**	⇑P	**P**	**23 06 28.7**	**+1.5**
	baz=42						
Z21A	**St. Cloud Mine**	**42.31**	**2**	⇓P	**P**	**23 06 28.6**	**+1.2**
	baz=42						
GLA	**Glamis**	**42.33**	**353**	⇓P	**P**	**23 06 28.1**	**+0.5**
	baz=42						
Z15A	**Gila River Ind**	**42.34**	**357**	⇑P	**P**	**23 06 28.3**	**+0.7**
	baz=42						
Z23A	**Rita Site, Whi**	**42.34**	**4**	⇑P	**P**	**23 06 29.4**	**+1.7**
	baz=42						
SWSC	**Sam W. Stewart**	**42.35**	**352**	⇑P	**P**	**23 06 29.3**	**+1.6**
	baz=42						
Z16A	**Peralta Trail,**	**42.35**	**358**	⇑P	**P**	**23 06 28.2**	**+0.4**
	baz=42						
Z13A	**Yuma Proving G**	**42.36**	**355**	⇓P	**P**	**23 06 28.4**	**+0.6**
	baz=42						
MONP	**Monument Peak**	**42.38**	**351**	⇑P	**P**	**23 06 28.7**	**+0.7**
	baz=42						
Z14A	**Wintersburg**	**42.46**	**356**	⇓P	**P**	**23 06 29.5**	**+0.9**
	baz=43						
Z24A	**Sheeppen Canyo**	**42.48**	**5**	⇓P	**P**	**23 06 29.4**	**+0.6**
	baz=43						
Z25A	**Roswell**	**42.49**	**6**	⇑P	**P**	**23 06 29.0**	**+0.1**
	baz=43						
109C	**Camp Elliot, M**	**42.49**	**350**	⇑P	**P**	**23 06 29.2**	**+0.3**
	baz=43						
Z26A	**Caprock**	**42.56**	**7**	⇑P	**P**	**23 06 29.7**	**+0.2**
	baz=43						
SDV	**Santo Domingo**	**42.62**	**66**	PFAKE		23 06 40.0	+10
SDV				LR	LR		
	comp=Z,583nm,20.0s,MS4.5						
Y17A	**Roosevelt**	**42.68**	**358**	⇓P	**P**	**23 06 31.0**	**+0.6**
	baz=43						
Z27A	**Tatum**	**42.70**	**8**	⇓P	**P**	**23 06 30.9**	**+0.4**
	baz=43						
SCI	**San Clemente I**	**42.84**	**349**	⇑P	**P**	**23 06 32.5**	**+0.8**
	baz=43						
Y20A	**Horse Springs,**	**42.89**	**1**	⇓P	**P**	**23 06 32.6**	**+0.5**
	baz=43						
Y16A	**Circle Bar Ran**	**42.89**	**358**	⇑P	**P**	**23 06 32.7**	**+0.6**
	baz=43,SNR=13						
Y19A	**Nutrioso**	**42.92**	**0**	⇑P	**P**	**23 06 33.0**	**+0.6**
	baz=43,SNR=16						
Y22A	**Socorro**	**42.97**	**3**	⇑P	**P**	**23 06 33.6**	**+0.9**
	baz=43						
Y13A	**Salome**	**42.98**	**355**	⇑P	**P**	**23 06 33.6**	**+0.8**
	baz=43						
BC3	**Big Chuckawall**	**43.00**	**353**	⇓P	**P**	**23 06 33.8**	**+0.7**
	baz=43						
Y15A	**Casa Rosa Ranc**	**43.01**	**356**	⇓P	**P**	**23 06 33.9**	**+0.8**
	baz=43						
Y21A	**Point of Rocks**	**43.01**	**2**	⇓P	**P**	**23 06 33.7**	**+0.6**
	baz=43						
Y14A	**Wickenburg**	**43.04**	**356**	⇓P	**P**	**23 06 34.1**	**+0.8**
	baz=43						
Y24A	**Capitan**	**43.06**	**5**	⇑P	**P**	**23 06 34.0**	**+0.5**
	baz=43						
PFO	**Pinyon Flat Ob**	**43.10**	**351**	⇓P	**P**	**23 06 34.5**	**+0.7**
	baz=43						
PFO	**Pinyon Flat Ob**	**43.10**	**351**	*e*P	**P**	**23 06 33.5**	**-0.3**
	comp=Z,19nm,1.4s,mb4.6						
PFO				*e*S	**S**	**23 12 59.2**	**-0.8**
PFO				LR	LR		
	comp=Z,4μm,21.0s,MS5.2						
PFO	**Pinyon Flat Ob**	**43.10**	**351**	*e*P	**P**	**23 06 33.5**	**-0.3**
PFO				*e*S	**S**	**23 12 59.2**	**-0.7**
PFO				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.6						
PFO				MLR	MLR		
	comp=Z,4μm,21.0s,MS5.2						
Y22D	**IRIS PASSCAL I**	**43.11**	**3**	⇓P	**P**	**23 06 34.5**	**+0.6**
	baz=43						
Y25A	**Mesa, Roswell**	**43.13**	**6**	⇑P	**P**	**23 06 34.4**	**+0.4**
	baz=43						
LENM	**Lemitar**	**43.20**	**3**	*e*P	**P**	**23 06 34.4**	**-0.2**
BNM	**Barren Site**	**43.20**	**3**	*e*P	**P**	**23 06 34.7**	**+0.1**
	comp=Z,20nm,1.2s,mb4.7						
MURC	**Murrieta**	**43.20**	**351**	⇑P	**P**	**23 06 34.9**	**+0.2**
	baz=43						
Y26A	**Elida**	**43.22**	**7**	⇓P	**P**	**23 06 34.3**	**-0.5**
	baz=43						
CIS	**Catalina Islan**	**43.23**	**349**	⇑P	**P**	**23 06 34.7**	**-0.1**
	baz=43						
X17A	**Forest Lakes**	**43.32**	**358**	⇑P	**P**	**23 06 37.3**	**+1.7**
	baz=44						
X19A	**St. Johns**	**43.39**	**0**	⇑P	**P**	**23 06 37.8**	**+1.6**
	baz=44						
MSTX	**Muleshoe**	**43.40**	**8**	⇓P	**P**	**23 06 37.6**	**+1.4**
	baz=44						
BELC	**Belle Mtn. Jos**	**43.42**	**352**	⇓P	**P**	**23 06 37.4**	**+1.0**
	baz=44						
LAZ	**Ladron**	**43.42**	**3**	*e*P	**P**	**23 06 36.0**	**-0.4**
	comp=Z,15nm,1.3s,mb4.5						
X16A	**Lo Mia Camp, P**	**43.42**	**358**	⇑P	**P**	**23 06 37.5**	**+1.1**
	baz=44						
X21A	**Alamocita Cree**	**43.44**	**2**	⇓P	**P**	**23 06 37.7**	**+1.1**
	baz=44						
IRM	**Iron Mountain**	**43.47**	**353**	⇑P	**P**	**23 06 37.6**	**+0.9**
	baz=44						
X18A	**Snowflake**	**43.50**	**359**	⇑P	**P**	**23 06 37.5**	**+0.5**
	baz=44						
X20A	**Quemado**	**43.52**	**1**	⇓P	**P**	**23 06 38.4**	**+1.2**
	baz=44						
X15A	**Humboldt**	**43.53**	**357**	⇓P	**P**	**23 06 38.2**	**+0.9**
	baz=44						
X14A	**Yava**	**43.56**	**356**	⇑P	**P**	**23 06 38.1**	**+0.5**
	baz=44						
X23A	**Hourglass Bar**	**43.66**	**4**	⇑P	**P**	**23 06 39.3**	**+1.0**
	baz=44						
X24A	**Lazy VL Ranch,**	**43.70**	**5**	⇓P	**P**	**23 06 39.0**	**+0.4**
	baz=44						
X25A	**Clemmons Ranch**	**43.73**	**6**	⇓P	**P**	**23 06 39.3**	**+0.4**
	baz=44						
X13A	**Yucca**	**43.76**	**355**	⇓P	**P**	**23 06 39.6**	**+0.5**
	baz=44						
BBRC	**Big Bear Solar**	**43.81**	**351**	⇓P	**P**	**23 06 40.0**	**+0.5**
	baz=44						
X26A	**CR and CF Fran**	**43.84**	**7**	⇑P	**P**	**23 06 40.2**	**+0.4**
	baz=44						
BFSC	**Mount Baldy Ra**	**43.90**	**350**	⇑P	**P**	**23 06 40.9**	**+0.6**
	baz=44						
ANMO	**Albuquerque**	**44.01**	**4**	*e*P	**P**	**23 06 40.3**	**-0.8**
	comp=Z,16nm,1.4s,mb4.5						
ANMO				*e*S	**S**	**23 13 12.5**	**-0.7**
ANMO				LR	LR		
	comp=Z,2μm,19.0s,MS5.0						
ANMO	**Albuquerque**	**44.01**	**4**	*e*P	**P**	**23 06 40.3**	**-0.8**
ANMO				*e*S	**S**	**23 13 12.5**	**-0.7**
ANMO				pmax	pmax		
	comp=Z,16nm,1.4s						
ANMO				MLR	MLR		
	comp=Z,2μm,19.0s						
NEE2	**Needles Airpor**	**44.01**	**354**	⇑P	**P**	**23 06 41.8**	**+0.7**
	baz=44						
X27A	**F and S Farms,**	**44.02**	**8**	⇑P	**P**	**23 06 41.4**	**+0.1**
	baz=44						
DECC	**Green Verdugo**	**44.03**	**349**	⇓P	**P**	**23 06 41.7**	**+0.4**
	baz=44						
BSC	**Santa Cruz Isl**	**44.04**	**348**	⇓P	**P**	**23 06 41.4**	**+0.1**
	baz=44						
W17A	**Winslow**	**44.06**	**359**	⇓P	**P**	**23 06 42.4**	**+0.8**
	baz=44						
W19A	**Sanders**	**44.08**	**0**	⇑P	**P**	**23 06 42.3**	**+0.6**
	baz=44						
W18A	**Petrified Fore**	**44.08**	**360**	⇑P	**P**	**23 06 42.3**	**+0.6**
	baz=44						
W20A	**Ramah**	**44.10**	**1**	⇓P	**P**	**23 06 42.5**	**+0.6**
	baz=44						
W16A	**Flagstaff**	**44.10**	**358**	⇑P	**P**	**23 06 42.7

comp=Z,135nm,2.5s,mb5.3
WUAZ LR LR

comp=Z,4µm,20.0s,MS5.3
W12A Cal Nev Ari 44.56 354 ⇓P P 23 06 45.6 0.0
baz=45
EDW2 Edwards Air Fo 44.59 350 ⇓P P 23 06 46.2 +0.5
baz=45
V17A Tonalea, Kykot 44.60 358 ⇑P P 23 06 47.2 +1.3
baz=45
V19A Window Rock 44.68 0 ⇓P P 23 06 46.9 +0.4
baz=45
V14A Boquillas Ranc 44.73 356 ⇑P P 23 06 47.6 +0.7
baz=45,SNR=10
V20A Brimhall 44.77 1 ⇓P P 23 06 47.7 +0.5
baz=45
GSC Goldstone 44.81 351 ⇑P P 23 06 48.2 +0.6
baz=45
GSC Goldstone 44.81 351 eP P 23 06 47.3 -0.2
comp=Z,16nm,0.8s,mb4.9
GSC Goldstone 44.81 351 eP P 23 06 47.3 -0.2
GSC pmax pmax

comp=Z,16nm,0.8s,mb4.9
V23A Ortiz Mt. (NFS 44.81 4 ⇓P P 23 06 48.3 +0.8
baz=45
TUQ Turquoise Moun 44.82 352 ⇑P P 23 06 48.5 +0.9
baz=45
WMOK Wichita Mounta 44.85 12 eP P 23 06 47.7 -0.2
comp=Z,7.7nm,0.9s,mb4.5
WMOK LR LR

comp=Z,1µm,22.0s,MS4.8
WMOK Wichita Mounta 44.85 12 eP P 23 06 47.7 -0.2
WMOK pmax pmax

comp=Z,8.0nm,0.9s,mb4.5
WMOK MLR MLR

comp=Z,1µm,22.0s,MS4.8
V15A Kaibab Nationa 44.85 357 ⇓P P 23 06 48.7 +0.8
baz=45
V24A Rampart Ranch, 44.86 5 ⇑P P 23 06 49.0 +1.0
baz=45
V22A San Miguel Ran 44.94 3 ⇑P P 23 06 49.3 +0.8
baz=45
ARVC Arvin 44.98 349 ⇑P P 23 06 48.3 -0.5
baz=45
V12A Nelson 44.98 354 ⇓P P 23 06 48.9 0.0
baz=45
VBMS Vicksburg 44.98 23 PFAKE 23 07 00.0 +11
VBMS LR LR

comp=Z,597nm,19.0s,MS4.5
V13A Grand Canyon W 45.02 355 ⇑P P 23 06 50.1 +0.9
baz=45
V25A Rancho No Teng 45.03 6 ⇓P P 23 06 49.8 +0.5
baz=45
V26A Tequesquite Ra 45.08 6 ⇓P P 23 06 49.4 -0.2
baz=45,SNR=11
LRMC Laurel Mountai 45.12 350 ⇑P P 23 06 50.1 +0.1
baz=45
U16A Tuba City 45.13 358 ⇑P P 23 06 50.4 +0.4
baz=45
V11A Goodsprings 45.16 353 ⇓P P 23 06 50.8 +0.5
baz=45
U19A Dine' College, 45.25 0 ⇑P P 23 06 51.8 +0.8
baz=45
SHOC Shoshone 45.32 352 ⇓P P 23 06 52.3 +0.6
baz=46
U20A Newcomb 45.34 1 ⇑P P 23 06 52.5 +0.8
baz=46
U18A Rough Rock, Ch 45.38 360 ⇑P P 23 06 53.1 +1.0
baz=46
SMMC Simmler 45.38 348 ⇓P P 23 06 52.7 +0.6
baz=46
BRAL Brewton 45.39 27 PFAKE 23 07 00.0 +7.8
BRAL LR LR

comp=Z,851nm,19.0s,MS4.7
U23A El Rito 45.39 4 ⇑P P 23 06 52.6 +0.4
baz=46
U22A Llaves 45.40 3 ⇑P P 23 06 53.0 +0.8
baz=46
U21A Nageezi 45.42 2 ⇑P P 23 06 53.1 +0.8
baz=46
ISA Isabella 45.43 350 ⇑P P 23 06 52.8 +0.4
baz=46
ISA Isabella 45.43 350 eP P 23 06 53.1 +0.6
comp=Z,9.9nm,0.9s,mb4.6
ISA Isabella 45.43 350 eP P 23 06 53.1 +0.6
ISA pmax pmax

comp=Z,10.0nm,0.9s,mb4.7
U15A North Rim 45.47 357 ⇓P P 23 06 53.6 +0.8
baz=46
U14A Mt Trumbull 45.52 356 ⇓P P 23 06 53.6 +0.5
baz=46
U24A Moreno Valley 45.54 5 ⇓P P 23 06 54.3 +1.0
baz=46
U17A Shonto 45.57 359 ⇓P P 23 06 54.3 +0.7
baz=46
U25A Circle Dot Ran 45.61 6 ⇓P P 23 06 54.9 +1.0
baz=46
U12A Valley of Fire 45.65 354 ⇑P P 23 06 55.0 +0.8
baz=46
MPMC Manual Prospec 45.66 351 ⇓P P 23 06 54.5 +0.2
baz=46
U26A Atchley Ranch, 45.67 6 ⇓P P 23 06 54.9 +0.5
baz=46
VES Vestal, Richgr 45.72 349 ⇓P P 23 06 55.1 +0.4
baz=46
U11A Corn Creek 45.73 353 ⇓P P 23 06 55.2 +0.4
baz=46
T19A Beclabito 45.79 0 ⇑P P 23 06 55.9 +0.6
baz=46
U10A Ash Meadows, A 45.84 352 ⇑P P 23 06 56.4 +0.7
baz=46
DAC Darwin (Calif) 45.88 351 PFAKE 23 07 10.0 +14
DAC LR LR

comp=Z,2µm,19.0s,MS5.0
DWPF Disney 45.93 35 eP P 23 06 56.3 -0.3
comp=Z,52nm,1.0s,mb5.4
DWPF eS S 23 13 40.2 -1.2
DWPF LR LR

comp=Z,3µm,21.0s,MS5.2
T12A Moapa 45.95 354 ⇓P P 23 06 57.2 +0.6
baz=46
FURC Furnace Creek, 45.96 352 ⇑P P 23 06 57.2 +0.5
baz=46
T17A Navajo Res., N 45.97 358 ⇑P P 23 06 57.2 +0.5
baz=46
T16A Glen Canyon Da 45.98 358 ⇓P P 23 06 57.6 +0.7
baz=46
T21A Navajo Lake 45.99 2 ⇓P P 23 06 57.5 +0.7
baz=46
T22A Edith 46.03 3 ⇑P P 23 06 57.9 +0.7
baz=46
MIAR Mount Ida 46.04 18 eP P 23 06 56.6 -0.7
comp=Z,80nm,2.0s,mb5.3
MIAR LR LR

comp=Z,627nm,20.0s,MS4.6
MIAR Mount Ida 46.04 18 eP P 23 06 56.6 -0.7
MIAR pmax pmax

comp=Z,80nm,2.0s,mb5.3
MIAR MLR MLR

comp=Z,627nm,20.0s,MS4.6
T15A Red Dirt Ranch 46.06 357 ⇑P P 23 06 58.3 +0.9
baz=46
T18A Mexican Hat 46.10 360 ⇓P P 23 06 58.0 +0.3
baz=46
T23A Casias Ranch, 46.11 4 ⇓P P 23 06 58.1 +0.3
baz=46
CWC Cottonwood Cre 46.12 350 ⇓P P 23 06 58.4 +0.5
baz=46
T14A Hurricane 46.15 356 ⇑P P 23 06 58.3 +0.2
baz=46
T13A Saint George 46.17 355 ⇑P P 23 06 58.8 +0.5
baz=46
MVCO Mesa Verde 46.18 1 eP P 23 06 57.5 -0.9
comp=Z,31nm,1.3s,mb5.1
MVCO eS S 23 13 43.8 -0.8
MVCO LR LR

comp=Z,2µm,21.0s,MS5.0
T25A Trinidad 46.34 6 ⇑P P 23 07 00.3 +0.7
baz=46
T11A Corn Creek, Al 46.52 354 ⇓P P 23 07 01.7 +0.7
baz=47,SNR=13
GRAC Grapevine Rang 46.56 351 ⇑P P 23 07 01.6 +0.3
baz=47
PLCA Paso Flores 46.59 139 eP P 23 07 03.2 +1.6
comp=Z,30nm,1.2s,mb5.1
PLCA eS S 23 13 51.9 +1.4
PLCA LR LR

comp=Z,4µm,19.0s,MS5.4
PLCA Paso Flores 46.59 139 P P 23 07 03.0 +1.4
comp=Z,17nm,1.0s,mb4.9,baz=294,slow=10,SNR=8.0
PLCA LR LR 23 21 33.3

comp=Z,4µm,21.1s,MS5.4,baz=274,slow=30
PLCA Paso Flores 46.59 139 eP P 23 07 03.2 +1.6
PLCA eS S 23 13 51.9 +1.4
PLCA pmax pmax

comp=Z,31nm,1.2s
PLCA MLR MLR

comp=Z,4µm,19.0s
S17A Black Ridge (B 46.61 359 ⇓P P 23 07 02.4 +0.6
baz=47
UALR University of 46.64 19 eP P 23 07 01.4 -0.6
comp=Z,87nm,1.8s,mb5.4
S18A Hurst Farm, Bl 46.65 359 ⇑P P 23 07 03.7 +1.6
baz=47
CCUT Cedar City 46.65 356 eP P 23 07 02.6 +0.5
comp=Z,11nm,1.0s,mb4.7
S19A Harvey Farm, M 46.70 0 ⇑P P 23 07 03.6 +1.2
baz=47
S15A Panguitch 46.72 357 ⇑P P 23 07 03.6 +1.0
baz=47
S13A Holt Ranch, En 46.72 355 ⇓P P 23 07 03.2 +0.6
baz=47,SNR=7.5
S16A Weppner Ranch, 46.72 358 ⇓P P 23 07 03.0 +0.4
baz=47,SNR=7.4
TIN Tinemaha 46.75 350 ⇑P P 23 07 02.7 -0.1
baz=47
S24A Houchin Ranch, 46.77 5 ⇓P P 23 07 03.8 +0.8
baz=47
S22A 4UR Ranch, Cre 46.77 3 ⇑P P 23 07 03.5 +0.6
baz=47
S23A Nye Farm, Mont 46.77 4 ⇑P P 23 07 03.8 +0.8
baz=47
S12A Delamar Landin 46.84 354 ⇓P P 23 07 04.0 +0.5
baz=47
S14A Cedar City 46.85 356 ⇑P P 23 07 04.3 +0.7
baz=47
SDCO Great Sand Dun 46.85 4 eP P 23 07 03.1 -0.5
comp=Z,5.2nm,1.0s,mb4.4
SDCO eS S 23 13 53.7 -0.5
SDCO LR LR

comp=Z,2µm,19.0s,MS5.1
S25A Robets Cordova 46.85 5 ⇓P P 23 07 04.0 +0.3
baz=47,SNR=5.6
ARUT Antelope Range 46.90 356 eP P 23 07 04.1 +0.1
comp=Z,20nm,1.1s,mb5.0
ARUT Antelope Range 46.90 356 eP P 23 07 04.1 +0.1
ARUT pmax pmax

comp=Z,20nm,1.1s,mb5.0
SDDR Presa de Saban 46.90 53 PFAKE 23 07 20.0 +16
SDDR LR LR

comp=Z,2µm,20.0s,MS5.0
S11A Rachel 46.98 353 ⇑P P 23 07 05.4 +0.8
baz=47
MTUM Tungsten Hills 47.10 350 eP P 23 07 05.1 -0.4
SAO San Andreas Ge 47.10 347 eP P 23 07 05.1 -0.5
comp=Z,17nm,1.0s,mb4.9
SAO eS S 23 13 56.6 -1.1
SAO LR LR

comp=Z,3µm,19.0s,MS5.3
SAO San Andreas Ge 47.10 347 eP P 23 07 05.1 -0.5
SAO eS S 23 13 56.6 -1.2
SAO pmax pmax

comp=Z,17nm,1.0s,mb4.9
SAO MLR MLR

comp=Z,3µm,19.0s,MS5.3
LRAL Lakeview Retre 47.13 26 eP P 23 07 05.8 -0.1
comp=Z,13nm,0.7s,mb5.0
LRAL eS S 23 13 57.8 -0.7
LRAL LR LR

comp=Z,851nm,19.0s,MS4.7
R20A Redvale 47.16 1 ⇑P P 23 07 06.2 +0.2
baz=47
R15A Junction 47.24 357 ⇓P P 23 07 07.7 +1.0
baz=47
R19A Curley Farm, L 47.25 0 ⇓P P 23 07 07.4 +0.7
baz=47
R22A Saguache, Gunn 47.25 3 ⇑P P 23 07 07.7 +0.9
baz=47
R16A Teasdale 47.28 358 ⇓P P 23 07 07.7 +0.8
baz=47
R13A O'Grain Ranch, 47.33 355 ⇑P P 23 07 08.2 +0.9
baz=48
R18A Canyonlands Na 47.34 360 ⇓P P 23 07 08.1 +0.7
baz=48
S10A Tonopah Range, 47.36 352 ⇑P P 23 07 08.3 +0.7
baz=48
R21A Cimarron 47.36 2 ⇓P P 23 07 08.6 +1.1
baz=48
R24A Sanders Place, 47.36 5 ⇓P P 23 07 08.1 +0.4
baz=48
R14A James Farms, M 47.37 356 ⇓P P 23 07 08.3 +0.6
baz=48
R17A Hanksville Air 47.39 359 ⇓P P 23 07 08.5 +0.7
baz=48
MLAC Mammoth Lakes 47.41 350 ⇓P P 23 07 08.7 +0.7
baz=48
MVU Marysvale 47.53 357 PFAKE 23 07 20.0 +11
MVU LR LR

comp=Z,4µm,19.0s,MS5.5
R12A Pony Springs, 47.53 354 ⇓P P 23 07 10.0 +1.1
baz=48
MSU Marysvale 47.54 357 eP P 23 07 06.3 -2.6
R11A Troy Canyon, C 47.65 353 ⇓P P 23 07 09.7 -0.2
baz=48
R10A Warm Springs 47.68 353 ⇑P P 23 07 10.2 +0.1
baz=48
Q21A Lamborn Mesa, 47.82 2 ⇓P P 23 07 11.7 +0.6
baz=48
Q22A Crested Butte, 47.88 3 ⇑P P 23 07 12.4 +0.8
baz=48
Q16A Castle Valley 47.90 358 ⇓P P 23 07 12.6 +0.8
baz=48
Q19A Hogan Spring (47.91 0 ⇓P P 23 07 12.5 +0.7
baz=48
Q20A Ridgley Place, 47.92 1 ⇓P P 23 07 12.9 +0.9
baz=48
Q23A Hartsel 47.98 4 ⇑P P 23 07 13.0 +0.6
baz=48
Q15A Fillmore 48.03 357 ⇑P P 23 07 13.3 +0.5
baz=48
R18A Rafter H Ranch 48.06 359 ⇑P P 23 07 14.0 +0.9
baz=48
Q14A Sevier Lake (B 48.08 356 ⇓P P 23 07 13.7 +0.5
baz=48,SNR=7.9
SRU San Rafael 48.08 359 eP P 23 07 13.2 +0.1
comp=Z,9.8nm,1.0s,mb4.8
SRU San Rafael 48.08 359 eP P 23 07 13.3 +0.2
SRU pmax pmax

comp=Z,10.0nm,1.0s,mb4.8
Q24A Divide 48.09 4 ⇑P P 23 07 13.8 +0.6
baz=48
CMB Columbia Colle 48.09 348 eP P 23 07 13.1 -0.2
comp=Z,8.1nm,0.9s,mb4.8
CMB eS S 23 14 11.4 -0.5
CMB LR LR

comp=Z,4µm,20.0s,MS5.4
CMB Columbia Colle 48.09 348 eP P 23 07 13.1 -0.2
CMB eS S 23 14 11.4 -0.5
CMB pmax pmax

comp=Z,8.0nm,0.9s,mb4.8
CMB MLR MLR

comp=Z,4µm,20.0s,MS5.4
Q13A Wheeler Ranch, 48.10 355 ⇓P P 23 07 13.6 +0.3
baz=48
NVAR Mina Array Bea 48.10 351 P P 23 07 12.7 -0.7
comp=Z,3.7nm,0.7s,mb4.5,baz=177,slow=8.7,SNR=18
NVAR PcP PcP 23 08 42.7 +1.7

comp=Z,3.3nm,0.9s,baz=165,slow=7.4,SNR=1.9
Q25A Bedland, Calha 48.12 5 ⇑P P 23 07 13.7 +0.2
baz=48
Q11A Duckwater 48.15 353 ⇓P P 23 07 14.2 +0.5
baz=48
SMCO Snowmass 48.19 3 eP P 23 07 13.9 -0.1
comp=Z,14nm,1.3s,mb4.8
Q10A Clear Creek Ra 48.22 353 ⇓P P 23 07 14.3 +0.1
baz=48
Q12A Willow Creek R 48.26 354 ⇑P P 23 07 14.9 +0.4
baz=48
TMUT Trail Mountain 48.28 358 eP P 23 07 14.6 -0.1
comp=Z,9.1nm,1.0s,mb4.8
WAKR Walker 48.37 350 eP P 23 07 21.7 +6.3
GRTK Grand Turk 48.44 50 PFAKE 23 07 30.0 +14
GRTK LR LR

comp=Z,3µm,22.0s,MS5.2
P17A Butcher Ranch, 48.44 359 ⇓P P 23 07 16.5 +0.6
baz=49
P23A Jefferson 48.45 4 ⇓P P 23 07 16.8 +0.8
baz=49
P20A De Beque 48.47 1 ⇓P P 23 07 16.8 +0.7
baz=49
P18A Preston Nutter 48.59 359 ⇓P P 23 07 17.5 +0.4
baz=49
P19A Cripple Cowboy 48.59 0 ⇑P P 23 07 17.4 +0.3
baz=49,SNR=8.6
P13A Bates Ranch, G 48.60 355 ⇓P P 23 07 17.5 +0.4
baz=49,SNR=8.4
P15A Leamington 48.60 357 ⇑P P 23 07 17.4 +0.3
baz=49
P22A Eagle 48.62 3 ⇓P P 23 07 18.0 +0.7
baz=49
CBKS Cedar Bluff 48.62 10 eP P 23 07 16.8 -0.5
comp=Z,32nm,1.2s,mb5.2
CBKS LR LR

comp=Z,893nm,20.0s,MS4.8
CBKS Cedar Bluff 48.62 10 eP P 23 07 16.8 -0.5
CBKS pmax pmax

comp=Z,32nm,1.2s,mb5.2
CBKS MLR MLR

comp=Z,893nm,20.0s,MS4.8
P14A Drum Mountains 48.66 356 ⇑P P 23 07 19.3 +1.6
baz=49
P25A Willow Gulch B 48.72 5 ⇑P P 23 07 19.5 +1.5
baz=49
MCCM Marconi Confer 48.75 346 PFAKE 23 07 30.0 +12
MCCM LR LR

comp=Z,2µm,20.0s,MS5.2
P11A Circle Ranch, 48.86 354 ⇑P P 23 07 20.2 +1.0
baz=49
ISCO Idaho Springs 48.88 4 eP P 23 07 18.8 -0.6
comp=Z,16nm,1.2s,mb4.9
ISCO LR LR

comp=Z,3µm,20.0s,MS5.2
ISCO Idaho Springs 48.88 4 eP P 23 07 18.8 -0.6
ISCO pmax pmax

comp=Z,16nm,1.2s,mb4.9
ISCO MLR MLR

comp=Z,3µm,20.0s,MS5.2
NLU North Lily Min 48.97 357 eP P 23 07 20.3 +0.3
comp=Z,16nm,1.2s,mb4.9
MPU Maple Canyon 49.01 358 eP P 23 07 19.8 -0.5
comp=Z,41nm,1.6s,mb5.2
GLAT Glass 49.05 22 P P 23 07 20.7 0.0
GOGA Godfrey 49.06 29⇓eP P 23 07 19.9 -0.9
comp=Z,23nm,0.9s,mb5.2
GOGA eS S 23 14 24.6 -1.1
GOGA LR LR

comp=Z,596nm,21.0s,MS4.6
GOGA Godfrey 49.06 29⇓eP P 23 07 19.9 -0.9
GOGA eS S 23 14 24.7 -1.0
GOGA pmax pmax

comp=Z,23nm,0.9s,mb5.2
GOGA MLR MLR

comp=Z,596nm,21.0s,MS4.6
O20A White River Ci 49.10 1 ⇑P P 23 07 21.9 +0.8
baz=49
XMAS Kiritimati 49.12 281 PFAKE 23 07 30.0 +8.3
XMAS LR LR

comp=Z,2µm,19.0s,MS5.2
O17A Robinson Place 49.16 359 ⇑P P 23 07 22.2 +0.7
baz=49
O22A Kremmling 49.19 3 ⇑P P 23 07 21.8 +0.1
baz=49,SNR=14
O16A Springville 49.20 358 ⇓P P 23 07 22.6 +0.8
baz=49
DUG Dugway 49.25 357 eP P 23 07 21.7 -0.5
comp=Z,18nm,1.1s,mb5.0
DUG PcP PcP 23 08 50.0 +4.9
DUG eS S 23 14 27.9 -0.2
DUG LR LR

comp=Z,3µm,20.0s,MS5.2
DUG Dugway 49.25 357 eP P 23 07 21.7 -0.4
DUG 23 08 50.0
DUG eS S 23 14 27.9 -0.2
DUG pmax pmax

comp=Z,18nm,1.1s,mb5.0
DUG MLR MLR

comp=Z,3µm,20.0s,MS5.2
O19A Miners Draw (B 49.25 0 ⇑P P 23 07 23.0 +0.8
baz=49
O13A Hicks Ranch, I 49.27 355 ⇓P P 23 07 23.2 +0.9
baz=49
UTMT University of 49.27 22 eP P 23 07 22.7 +0.3
O23A Lake Granby, G 49.27 4 ⇑P P 23 07 23.9 +1.6
baz=49
O15A The Old Anders 49.31 357 ⇓P P 23 07 23.7 +1.0
baz=50
O25A Wiggins 49.31 5 ⇑P P 23 07 23.8 +1.1
baz=50
DAU Daniels Canyon 49.40 358 eP P 23 07 23.4 +0.2
O11A Cowboy Ranch, 49.42 354 ⇑P P 23 07 24.7 +1.2
baz=50
SWET Sewanee 49.45 25 eP P 23 07 23.3 -0.5
O12A Currie 49.47 355 ⇑P P 23 07 24.9 +1.1
baz=50
WVT Waverly 49.47 23 eP P 23 07 22.8 -1.2
comp=Z,11nm,0.8s,mb4.9
WVT eS S 23 14 30.5 -0.9
WVT LR LR

comp=Z,741nm,20.0s,MS4.7
WVT Waverly 49.47 23 eP P 23 07 22.8 -1.1
WVT eS S 23 14 30.5 -0.9
WVT pmax pmax

comp=Z,11nm,0.8s,mb4.9
WVT MLR MLR

comp=Z,741nm,20.0s,MS4.7
KSU1 Kansas State U 49.52 13 eP P 23 07 24.6 +0.4
comp=Z,127nm,2.1s,mb5.6
KSU1 eS S 23 14 31.2 -0.8
KSU1 LR LR

comp=Z,1µm,21.0s,MS4.8
JLU Jordanelle 49.59 358 eP P 23 07 24.7 0.0
comp=Z,34nm,1.6s,mb5.1
HOPS Hopland 49.60 346 PFAKE 23 07 40.0 +15
HOPS LR LR

comp=Z,3µm,21.0s,MS5.3
O10A Cortez Mining, 49.68 353 ⇑P P 23 07 26.5 +1.1
baz=50
CTU Camp Tracy 49.69 358 eP P 23 07 26.1 +0.6
comp=Z,16nm,1.0s,mb5.0
N21A Black Mountain 49.75 2 ⇓P P 23 07 27.1 +1.2
baz=50
N20A Spence Gulch, 49.80 1 ⇑P P 23 07 26.8 +0.5
baz=50,SNR=13
N22A Wattenberg Ran 49.83 3 ⇓P P 23 07 26.8 +0.2
baz=50
N19A John Jarvie Ra 49.85 0 ⇑P P 23 07 27.0 +0.3
baz=50
N16A Rees Ranch, Co 49.88 358 ⇑P P 23 07 28.0 +1.1
baz=50
BMN Battle Mountai 49.91 352 eP P 23 07 26.4 -0.8
BMN eS S 23 14 36.5 -0.8
BMN LR LR

comp=Z,2µm,21.0s,MS5.1
N17A Moffit Pass 49.91 359 ⇑P P 23 07 28.1 +0.9
baz=50
N14A Grayback Hills 49.92 356 ⇑P P 23 07 28.0 +0.7
baz=50
N15A Stansbury Isla 49.92 357 ⇓P P 23 07 28.1 +0.8
baz=50
N18A Larsen Ranch, 49.93 360 ⇓P P 23 07 27.9 +0.6
baz=50
N23A Red Feather La 49.95 3 ⇑P P 23 07 28.2 +0.7
baz=50
BGU Big Grassy Mou 49.99 356 eP P 23 07 27.6 -0.2
comp=Z,7.2nm,1.1s,mb4.6
N13A Wendover, West 50.00 355 ⇑P P 23 07 28.4 +0.5
baz=50
N25A Grover 50.01 5 ⇓P P 23 07 28.2 +0.2
baz=50
N12A Clover Valley, 50.07 354 ⇑P P 23 07 29.1 +0.7
baz=50
N10A Dunphy 50.10 353 ⇑P P 23 07 29.4 +0.8
baz=50
N11A Elko Archery C 50.11 354 ⇓P P 23 07 29.7 +1.0
baz=50
FVM French Village 50.20 20 eP P 23 07 28.4 -1.1
comp=Z,9.3nm,0.8s,mb4.9
FVM French Village 50.20 20 eP P 23 07 28.4 -1.0
FVM pmax pmax

comp=Z,9.0nm,0.8s,mb4.8
CPCT Cooper Cave 50.26 27 eP P 23 07 30.2 +0.3
SPUT South Promonto 50.34 357 eP P 23 07 31.3 +0.9
comp=Z,16nm,1.0s,mb5.0

OGNE **Ogallala** 50.37 7 *eP* **P** 23 07 30.3 -0.3
OGNE *eS* **S** 23 14 43.4 -0.4
OGNE LR LR
comp=Z,1µm,20.0s,MS4.8

SIUC Southern Illin 50.37 21 *eP* **P** 23 07 30.4 -0.2
comp=Z,24nm,1.0s,mb5.2

M18A Lyman 50.38 359 ⇓P **P** 23 07 31.5 +0.7
baz=50

PHWY Pilot Hill 50.39 4 *eP* **P** 23 07 31.9 +1.1
comp=Z,37nm,1.4s,mb5.2

M17A Scullys Gap (B 50.44 359 ⇓P **P** 23 07 31.1 0.0
baz=51

M20A Sweetwater, Wa 50.46 1 ⇑P **P** 23 07 31.2 -0.1
baz=51

M19A Rock Springs 50.46 0 ⇑P **P** 23 07 30.8 -0.5
baz=51

NHSC New Hope 50.47 32 PFAKE 23 07 40.0 +8.4
NHSC LR LR
comp=Z,2µm,22.0s,MS5.0

M15A Larsen Ranch, 50.49 357 ⇓P **P** 23 07 31.0 -0.6
baz=51

M13A Montello 50.50 355 ⇑P **P** 23 07 31.3 -0.3
baz=51

M14A Sheep Mountain 50.58 356 ⇑P **P** 23 07 32.2 -0.1
baz=51,SNR=8.4

M21A Separation Pea 50.60 2 ⇑P **P** 23 07 32.0 -0.4
baz=51

HWUT Hardware Ranch 50.60 358 *eP* **P** 23 07 32.0 -0.3
comp=Z,16nm,0.8s,mb5.0
HWUT *eS* **S** 23 14 46.3 -0.6
HWUT LR LR
comp=Z,5µm,20.0s,MS5.5

M12A Wells 50.62 355 ⇑P **P** 23 07 32.6 0.0
baz=51

SJG San Juan 50.63 58 PFAKE 23 07 40.0 +7.0
SJG LR LR
comp=Z,1µm,21.0s,MS4.9

RWWY Rawlins 50.68 2 *eP* **P** 23 07 32.5 -0.6
comp=Z,20nm,1.1s,mb5.0

M11A Holland Ranch, 50.72 354 ⇓P **P** 23 07 33.4 0.0
baz=51

TKL Tuckaleechee C 50.77 27 *eP* **P** 23 07 33.3 -0.5
TKL *eS* **S** 23 14 48.0 -1.5

HVU Hansel Valley 50.83 357 *eP* **P** 23 07 34.8 +0.7
comp=Z,11nm,1.0s,mb4.7
HVU Hansel Valley 50.83 357 *eP* **P** 23 07 34.8 +0.7
HVU pmax pmax
comp=Z,11nm,1.0s,mb4.7

JSC Jenkinsville 50.84 30 *eP* **P** 23 07 34.5 +0.1

SLM Saint Louis 50.85 19 *eP* **P** 23 07 33.7 -0.7

L18A Fontenelle, Gr 50.88 359 ⇓P **P** 23 07 34.6 +0.1
baz=51

M10A I.L. Ranch, Tu 50.90 353 ⇓P **P** 23 07 34.6 0.0
baz=51

L21A Rawlins 50.95 2 ⇓P **P** 23 07 35.0 0.0
baz=51

L20A Wamsutter 50.97 1 ⇑P **P** 23 07 35.2 0.0
baz=51,SNR=6.7

WDC Whiskeytown Da 50.99 347 *eP* **P** 23 07 34.9 -0.5
comp=Z,15nm,1.0s,mb4.9
WDC *eS* **S** 23 14 51.6 -0.8
WDC LR LR
comp=Z,2µm,21.0s,MS5.1

WDC Whiskeytown Da 50.99 347 *eP* **P** 23 07 34.9 -0.5
WDC *eS* **S** 23 14 51.6 -0.8
WDC pmax pmax
comp=Z,15nm,1.0s,mb4.9
WDC MLR MLR
comp=Z,2µm,21.0s,MS5.1

L16A Fish Haven 51.00 358 ⇓P **P** 23 07 35.2 -0.2
baz=51

L15A Malad City 51.03 357 ⇑P **P** 23 07 35.4 -0.2
baz=51

L19A Farson 51.05 0 ⇑P **P** 23 07 35.8 0.0
baz=51

L17A Cokeville 51.07 359 ⇓P **P** 23 07 35.4 -0.5
baz=51

L14A Malta 51.11 356 ⇑P **P** 23 07 36.1 -0.1
baz=51

USIN University of 51.15 22 *eP* **P** 23 07 36.4 -0.2
comp=Z,36nm,0.8s,mb5.4

L12A House Creek Ra 51.35 355 ⇓P **P** 23 07 37.5 -0.6
baz=52

TRQA Tornquist 51.35 132 *eP* **P** 23 07 38.7 +0.4
TRQA *eS* **S** 23 14 58.2 +0.4
TRQA LR LR
comp=Z,3µm,21.0s,MS5.3

L10A Juniper Basin 51.44 353 ⇓P **P** 23 07 38.5 -0.2
baz=52,SNR=5.3

L11A Cat Creek Ranc 51.45 354 ⇑P **P** 23 07 38.4 -0.3
baz=52

KHMM Horse Mountain 51.54 346 *eP* **P** 23 07 40.4 +0.9
comp=Z,22nm,1.1s,mb5.0

K18A Toltan Ranch, 51.59 359 ⇓P **P** 23 07 39.7 -0.1
baz=52

K14A Jones Ranch, D 51.61 356 ⇑P **P** 23 07 39.7 -0.3
baz=52

K20A Yellowstone Ra 51.62 1 ⇑P **P** 23 07 39.3 -0.7
baz=52

OLIL Olney 51.67 21 *eP* **P** 23 07 39.7 -0.8
comp=Z,33nm,0.8s,mb5.3

K15A Arbon 51.72 357 ⇓P **P** 23 07 40.2 -0.5
baz=52

BW06 Boulder Array 51.72 360 PFAKE 23 07 50.0 +9.2
BW06 LR LR
comp=Z,3µm,19.0s,MS5.4

K17A Gardner Place, 51.72 359 ⇓P **P** 23 07 40.0 -0.8
baz=52

AHID Auburn Hatcher 51.74 358 PFAKE 23 07 50.0 +9.1
AHID LR LR
comp=Z,5µm,20.0s,MS5.5

K19A Absolon Red Bu 51.78 1 ⇓P **P** 23 07 40.1 -1.1
baz=52

K16A Soda Springs 51.82 358 ⇓P **P** 23 07 41.1 -0.4
baz=52

MOD Modoc 51.82 350 *eP* **P** 23 07 40.2 -1.3
comp=Z,13nm,0.9s,mb4.9
MOD *eS* **S** 23 15 03.1 -0.8
MOD LR LR
comp=Z,3µm,19.0s,MS5.4

WCI Wyandotte Cave 51.90 23 *eP* **P** 23 07 41.7 -0.5
comp=Z,12nm,0.8s,mb4.9
WCI *eS* **S** 23 15 04.3 -0.8
WCI LR LR
comp=Z,632nm,21.0s,MS4.6

WCI Wyandotte Cave 51.90 23 *eP* **P** 23 07 41.7 -0.5
WCI *eS* **S** 23 15 04.3 -0.8
WCI pmax pmax
comp=Z,12nm,0.8s,mb4.9
WCI MLR MLR
comp=Z,632nm,21.0s,MS4.6

GRGR Grenville 52.01 67 PFAKE 23 08 00.0 +17
GRGR LR LR
comp=Z,969nm,20.0s,MS4.8

WVOR Wild Horse Val 52.07 351 *eP* **P** 23 07 43.2 -0.2
comp=Z,11nm,1.2s,mb4.7
WVOR *eS* **S** 23 15 06.1 -1.1
WVOR LR LR
comp=Z,2µm,22.0s,MS5.2

WVOR Wild Horse Val 52.07 351 *eP* **P** 23 07 43.2 -0.2
WVOR *eS* **S** 23 15 06.1 -1.2
WVOR pmax pmax
comp=Z,11nm,1.2s,mb4.7
WVOR MLR MLR
comp=Z,2µm,22.0s,MS5.2

CPUP Villa Florida 52.10 116 P **P** 23 07 43.8 -0.3
comp=Z,3.8nm,0.9s,mb4.3,baz=273,slow=8.6,SNR=6.2
CPUP LR LR 23 25 49.9
comp=Z,2µm,21.7s,MS5.1,baz=264,slow=31

YBH Yreka Blue Hor 52.13 347 *eP* **P** 23 07 43.1 -0.8
comp=Z,42nm,2.1s,mb5.0
YBH *eS* **S** 23 15 07.3 -0.9
YBH LR LR
comp=Z,2µm,20.0s,MS5.2

YBH Yreka Blue Hor 52.13 347 *eP* **P** 23 07 43.1 -0.8
YBH *eS* **S** 23 15 07.3 -0.8
YBH pmax pmax
comp=Z,42nm,2.1s
YBH MLR MLR
comp=Z,2µm,20.0s

J18A Kendall Valley 52.17 359 ⇑P **P** 23 07 43.2 -0.9
baz=52

J16A Bone 52.26 358 ⇑P **P** 23 07 44.1 -0.8
baz=52

J17A Brown Place, J 52.33 359 ⇓P **P** 23 07 44.8 -0.5
baz=52

RRI2 Red Ridge 52.33 358 *eP* **P** 23 07 44.5 -0.8
comp=Z,34nm,0.9s,mb5.3

REDW Red Top Meadow 52.33 359 *eP* **P** 23 07 44.1 -1.2
comp=Z,23nm,0.7s,mb5.2

J14A Carey 52.41 356 ⇓P **P** 23 07 45.4 -0.5
baz=53

J15A Blackfoot 52.42 357 ⇓P **P** 23 07 45.2 -0.8
baz=53

TPAW Teton Pass 52.46 359 P **P** 23 07 46.6 +0.4
comp=Z,25nm,1.2s,mb5.0

J13A Cove Ranch, Pi 52.53 356 ⇓P **P** 23 07 46.4 -0.4
baz=53

DCID1 Drake Creek 52.57 358 *eP* **P** 23 07 47.4 +0.3

LOHW Long Hollow 52.58 359 *eP* **P** 23 07 45.7 -1.4
comp=Z,11nm,1.1s,mb4.7

BLO Bloomington 52.64 22 *eP* **P** 23 07 46.4 -1.3
comp=Z,18nm,0.6s,mb5.2
BLO Bloomington 52.64 22 *eP* **P** 23 07 46.4 -1.3
BLO pmax pmax
comp=Z,18nm,0.6s,mb5.2

I18A Diamond G Ranc 52.66 360 ⇑P **P** 23 07 47.3 -0.4
baz=53

MFID Camas Ranch 52.69 354 ⇑P **P** 23 07 47.8 -0.2
baz=53,SNR=17

HLID Hailey 52.71 355 *eP* **P** 23 07 47.0 -1.2
comp=Z,31nm,1.6s,mb5.0
HLID *eS* **S** 23 15 15.7 -0.2
HLID LR LR
comp=Z,1µm,21.0s,MS5.0

MOOW Moose Ponds 52.71 359 *eP* **P** 23 07 48.4 +0.2
comp=Z,28nm,1.5s,mb5.0

K05A Summer Lake 52.73 349 ⇓P **P** 23 07 48.5 +0.2
baz=53

I16A Newdale 52.86 358 ⇓P **P** 23 07 49.1 -0.1
baz=53

IMW Indian Meadow 52.87 359 *eP* **P** 23 07 48.1 -1.2
comp=Z,15nm,0.8s,mb5.0

I17A Pilgrim Ck. 52.88 359 ⇑P **P** 23 07 49.3 -0.1
baz=53

HDIL Hopedale 52.90 19 *eP* **P** 23 07 49.4 -0.1
comp=Z,146nm,1.8s,mb5.6
HDIL *eS* **S** 23 15 18.3 -0.3
HDIL LR LR
comp=Z,839nm,20.0s,MS4.8

SCIA State Center 53.00 15 PFAKE 23 08 00.0 +10
SCIA LR LR
comp=Z,840nm,20.0s,MS4.8

I12A Atlanta 53.00 355 ⇓P **P** 23 07 50.3 +0.1
baz=53,SNR=14

HUMO Hull Mountain 53.02 348 *eP* **P** 23 07 50.0 -0.5
comp=Z,8.0nm,1.0s,mb4.6
HUMO *eS* **S** 23 15 20.1 -0.1
HUMO LR LR
comp=Z,3µm,21.0s,MS5.4

I15A Monteview 53.02 357 ⇓P **P** 23 07 50.3 -0.1
baz=53

I13A Wildhorse Cree 53.04 356 ⇓P **P** 23 07 50.5 0.0
baz=53,SNR=7.1

FLWY Flagg Ranch 53.05 359 *eP* **P** 23 07 49.7 -0.9
comp=Z,60nm,1.4s,mb5.3

RSSD Black Hills 53.30 5 *eP* **P** 23 07 53.0 +0.6
comp=Z,19nm,1.2s,mb4.9
RSSD *eS* **S** 23 15 23.8 -0.2
RSSD LR LR
comp=Z,906nm,21.0s,MS4.8

RSSD Black Hills 53.30 5 *eP* **P** 23 07 53.1 +0.6
RSSD *eS* **S** 23 15 23.8 -0.2
RSSD pmax pmax
comp=Z,19nm,1.2s,mb4.9
RSSD MLR MLR
comp=Z,906nm,21.0s,MS4.8

CNNC Cliffs of the 53.32 32 PFAKE 23 08 00.0 +7.2
CNNC LR LR
comp=Z,2µm,22.0s,MS5.1

H17A Grant Village 53.36 359 ⇑P **P** 23 07 52.8 -0.1
baz=54

YFT Old Faithful 53.42 359 *eP* **P** 23 07 53.2 -0.1

LPA La Plata 53.45 127 *de*PKIKP PKiKP 23 15 35.0 -3.0

LKWY Lake 53.52 359 PFAKE 23 08 10.0 +16
LKWY LR LR
comp=Z,3µm,21.0s,MS5.3

BLA Blacksburg 53.59 29 *eP* **P** 23 07 54.4 -0.4
comp=Z,39nm,1.3s,mb5.2
BLA *eS* **S** 23 15 28.0 -0.3
BLA LR LR
comp=Z,947nm,19.0s,MS4.9

BLA Blacksburg 53.59 29 *eP* **P** 23 07 54.4 -0.4
BLA *eS* **S** 23 15 28.0 -0.2
BLA pmax pmax
comp=Z,39nm,1.3s,mb5.2
BLA MLR MLR
comp=Z,947nm,19.0s,MS4.9

YMR Madison River 53.64 359 P **P** 23 07 55.0 +0.1

H15A Lima 53.65 357 ⇓P **P** 23 07 55.1 +0.1
baz=54

H16A Russell Place, 53.68 358 ⇑P **P** 23 07 54.6 -0.6
baz=54

H14A Leadore 53.69 357 ⇓P **P** 23 07 54.5 -0.8
baz=54

H13A Challis 53.69 356 ⇓P **P** 23 07 55.2 -0.1
baz=54,SNR=6.7

H12A Diamond D Ranc 53.73 355 ⇓P **P** 23 07 55.3 -0.3
baz=54,SNR=12

POHA Pohakuloa 53.74 303 PFAKE 23 08 10.0 +14
POHA LR LR
comp=Z,2µm,20.0s,MS5.2

I07A Izee 53.81 351 ⇑P **P** 23 07 56.0 -0.2
baz=54,SNR=13

VWCC Virginia Weste 53.83 29 *eP* **P** 23 07 58.0 +1.5

MCMT McKenzie Canyo 53.87 357 *eP* **P** 23 07 56.1 -0.5
comp=Z,8.6nm,0.9s,mb4.7

ECSD EROS Data Cent 53.96 11 *eP* **P** 23 07 56.6 -0.8
comp=Z,11nm,1.0s,mb4.7
ECSD *eS* **S** 23 15 32.4 -0.6
ECSD LR LR
comp=Z,1µm,20.0s,MS4.9

RLMT Red Lodge 54.07 0 PFAKE 23 08 10.0 +12
RLMT LR LR
comp=Z,1µm,20.0s,MS4.9

ANWB Willy Bob 54.12 60 PFAKE 23 08 10.0 +11
ANWB LR LR
comp=Z,689nm,20.0s,MS4.7

G15A Dillon 54.19 357 ⇑P **P** 23 07 58.6 -0.4
baz=54

G13A Cobalt 54.22 356 ⇑P **P** 23 07 58.3 -0.9
baz=54

G16A Moss Hill, Enn 54.22 358 ⇓P **P** 23 07 58.6 -0.6
baz=54

G18A Lazy EL Ranch, 54.27 360 ⇑P **P** 23 07 58.1 -1.5
baz=54

BMO Blue Mountains 54.27 353 *eP* **P** 23 07 59.0 -0.6
comp=Z,14nm,1.5s,mb4.7
BMO *eS* **S** 23 15 36.3 -0.8
BMO LR LR
comp=Z,2µm,19.0s,MS5.1

BBGH Gun Hill 54.28 67 PFAKE 23 08 10.0 +10
BBGH LR LR
comp=Z,2µm,22.0s,MS5.0

G17A Pierce Place, 54.29 359 ⇓P **P** 23 07 58.4 -1.2
baz=54

G14A Jackson 54.32 357 ⇓P **P** 23 07 59.3 -0.6
baz=54

BOZ Bozeman (W) 54.63 358 PFAKE 23 08 10.0 +7.8
BOZ LR LR
comp=Z,3µm,19.0s,MS5.3

GCMT Greycliff 54.74 360 P **P** 23 08 01.1 -1.9
comp=Z,13nm,1.3s,mb4.8

JFWS Jewell Farm 54.75 17 *eP* **P** 23 08 01.0 -2.1
comp=Z,48nm,1.2s,mb5.4
JFWS *eS* **S** 23 15 42.1 -1.5
JFWS LR LR
comp=Z,846nm,19.0s,MS4.8

JFWS Jewell Farm 54.75 17 *eP* **P** 23 08 01.0 -2.1
JFWS *eS* **S** 23 15 42.1 -1.5
JFWS pmax pmax
comp=Z,49nm,1.2s,mb5.4
JFWS MLR MLR
comp=Z,846nm,19.0s,MS4.8

F16A Kennard Place, 54.77 358 ⇑P **P** 23 08 02.6 -0.6
baz=55

F18A Big Timber 54.86 360 ⇓P **P** 23 08 02.7 -1.1
baz=55

H04A Detroit Lake 54.86 349 ⇑P **P** 23 08 03.2 -0.6
baz=55

F17A Fitzpatrick Pl 54.87 359 ⇑P **P** 23 08 03.3 -0.6
baz=55

F14A Wisdom 54.88 357 ⇑P **P** 23 08 03.7 -0.3
baz=55

G08A Pilot Rock 54.92 352 ⇓P **P** 23 08 03.7 -0.6
baz=55

F13A Darby 54.92 356 ⇑P **P** 23 08 03.6 -0.6
baz=55

F12A Elk City 54.96 355 ⇓P **P** 23 08 04.1 -0.4
baz=55

COR Corvallis 54.99 348 PFAKE 23 08 20.0 +15
COR LR LR
comp=Z,2µm,21.0s,MS5.2

G06A Carlson Farm, 55.12 350 ⇑P **P** 23 08 06.0 +0.3
baz=55

JSRW J. Sargeant Re 55.21 30 *eP* **P** 23 08 10.4 +3.8

F10A Beach Ranch, E 55.37 353 ⇑P **P** 23 08 07.0 -0.5
baz=56

HOOD Mount Hood Mea 55.38 350 *eP* **P** 23 08 07.7 +0.1
comp=Z,34nm,1.1s,mb5.3

G04A Mulino 55.42 349 ⇑P **P** 23 08 07.1 -0.7
baz=56

E17A Martinsdale 55.43 359 ⇑P **P** 23 08 07.1 -0.8
baz=56

E15A Deer Lodge 55.45 357 ⇑P **P** 23 08 07.2 -0.9
baz=56

E14A Clinton 55.49 357 ⇑P **P** 23 08 07.2 -1.1
baz=56

E18A Harlowton 55.52 360 ⇓P **P** 23 08 07.5 -1.1
baz=56

E16A East Helena 55.52 358 ⇑P **P** 23 08 07.3 -1.3
baz=56

E13A Victor 55.56 356 ⇑P **P** 23 08 08.1 -0.8
baz=56

F07A Phinny Hill Vi 55.65 351 ⇓P **P** 23 08 09.2 -0.3
baz=56

LAO LASA Array 55.72 3 *eP* **P** 23 08 07.6 -2.4
comp=Z,31nm,1.1s,mb5.2
LAO *eS* **S** 23 15 55.4 -1.0
LAO LR LR
comp=Z,1µm,22.0s,MS5.0

MCWV Mont Chateau 55.83 27 *eP* **P** 23 08 10.8 -0.1
comp=Z,67nm,1.3s,mb5.5
MCWV LR LR
comp=Z,1µm,20.0s,MS4.9

CBN Corbin 55.86 30 *eP* **P** 23 08 11.0 -0.2
CBN *eS* **S** 23 15 57.3 -1.4
CBN LR LR
comp=Z,1µm,20.0s,MS5.0

MSO Missoula 55.93 356 P **P** 23 08 10.9 -0.6
comp=Z,4.7nm,1.1s,mb4.4
MSO *eS* **S** 23 15 58.7 -0.5
MSO LR LR
comp=Z,1µm,19.0s,MS5.0

CHMT Chamberlain Mo 55.97 357 *eP* **P** 23 08 09.8 -2.0

E09A Wood Farm, Sta 56.01 353 ⇓P **P** 23 08 11.6 -0.5
baz=56

D16A Dana Ranch, Ca 56.02 358 ⇑P **P** 23 08 10.3 -1.8
baz=56,SNR=6.3

HAWA Hanford 56.08 352 PFAKE 23 08 20.0 +7.4
HAWA LR LR
comp=Z,4µm,19.0s,MS5.5

RSW Rattlesnake Hi 56.09 352 *eP* **P** 23 08 12.4 -0.3

E08A Dider Farm, El 56.11 352 ⇓P **P** 23 08 12.7 -0.1
baz=56

F04A Amboy 56.11 349 ⇓P **P** 23 08 12.1 -0.7
baz=56

D17A Six Diamond Ra 56.12 359 ⇓P **P** 23 08 10.9 -2.0
baz=56,SNR=9.5

D18A Linhart Farms, 56.15 360 ⇓P **P** 23 08 11.8 -1.3
baz=56

D14A Greenough 56.15 357 ⇑P **P** 23 08 12.0 -1.1
baz=56

D13A Huson 56.23 356 ⇑P **P** 23 08 12.0 -1.6
baz=56

D12A Red Ives Fores 56.25 355 ⇑P **P** 23 08 12.3 -1.5
baz=56

E07A Sunnyside 56.29 351 ⇓P **P** 23 08 12.5 -1.6
baz=56

SLMT Seeley Lake 56.31 357 *eP* **P** 23 08 13.8 -0.4

F03A Seaside 56.33 348 ⇑P **P** 23 08 14.0 -0.4
baz=56

AAM Ann Arbor 56.43 23 *eP* **P** 23 08 14.7 -0.5
comp=Z,16nm,0.4s,mb5.4
AAM *eS* **S** 23 16 06.2 0.0
AAM LR LR
comp=Z,831nm,19.0s,MS4.8

AAM Ann Arbor 56.43 23 *eP* **P** 23 08 14.7 -0.5
AAM *eS* **S** 23 16 06.2 +0.1
AAM pmax pmax
comp=Z,16nm,0.4s,mb5.4
AAM MLR MLR
comp=Z,831nm,19.0s,MS4.8

KIP Kipapa 56.57 303 PFAKE 23 08 30.0 +13
KIP LR LR
comp=Z,3µm,19.0s,MS5.4

C17A Wharram Farm, 56.60 359 ⇑P **P** 23 08 14.3 -1.9
baz=57

SWMT Swartz Lake 56.61 356 *eP* **P** 23 08 14.9 -1.4

D08A Wollman Farm, 56.64 352 ⇑P **P** 23 08 16.2 -0.4
baz=57

LON Longmire 56.79 350 *eP* **P** 23 08 16.3 -1.4
comp=Z,15nm,1.1s,mb4.9
LON Longmire 56.79 350 *eP* **P** 23 08 16.3 -1.4
LON pmax pmax
comp=Z,15nm,1.1s,mb4.9

C16A Fuhringer Ranc 56.79 358 ⇑P **P** 23 08 15.8 -1.8
baz=57,SNR=8.3

C15A Salmond Ranch, 56.80 357 ⇑P **P** 23 08 16.2 -1.5
baz=57

JTMT Jette 56.86 356 *eP* **P** 23 08 16.4 -1.7

C12B Naegeli Ranch, 56.91 355 ⇓P **P** 23 08 17.2 -1.4
baz=57

E03A Lebam 56.92 348 ⇑P **P** 23 08 17.2 -1.4
baz=57

OD2 Odessa Site #2 56.95 352 *eP* **P** 23 08 18.5 -0.3

YBMT Yellow Bay 56.96 356 *eP* **P** 23 08 18.7 -0.1

EGMT Eagleton 56.98 360 *eP* **P** 23 08 19.5 +0.6
comp=Z,44nm,1.4s,mb5.3
EGMT *eS* **S** 23 16 12.2 -1.0
EGMT LR LR
comp=Z,3µm,20.0s,MS5.4

BSMT Bassoo Peak 57.00 356 *eP* **P** 23 08 17.9 -1.3

D05A Enumclaw 57.24 350 ⇓P **P** 23 08 19.7 -1.2
baz=57

C09A Chrisman Ranch 57.29 353 ⇑P **P** 23 08 19.9 -1.3
baz=57

B15A Bradely Ranch, 57.33 358 ⇑P **P** 23 08 20.5 -1.0
baz=58

B18A Beardsley Farm 57.35 360 ⇓P **P** 23 08 20.5 -1.1
baz=58,SNR=13

ETW Entiat 57.38 351 *eP* **P** 23 08 21.8 -0.1

B16A M & M Farms, S 57.40 358 ⇑P **P** 23 08 20.8 -1.2
baz=58

B13A Whitefish 57.50 356 ⇑P **P** 23 08 21.8 -0.9
baz=58

NEW Newport 57.62 354 *eP* **P** 23 08 23.9 +0.4
comp=Z,23nm,1.6s,mb5.0
NEW *eS* **S** 23 16 21.0 -0.6
NEW LR LR
comp=Z,2µm,21.0s,MS5.1

NEW Newport 57.62 354 *eP* **P** 23 08 23.9 +0.4
NEW *eS* **S** 23 16 21.0 -0.6
NEW pmax pmax
comp=Z,23nm,1.6s
NEW MLR MLR
comp=Z,2µm,21.0s

B12A Libby 57.68 355 ⇓P **P** 23 08 22.7 -1.2
baz=58

MVL Millersville 57.75 30 *eP* **P** 23 08 24.2 -0.3
comp=Z,40nm,1.0s,mb5.4

ERPA Erie 57.76 26 PFAKE 23 08 40.0 +15
ERPA LR LR
comp=Z,930nm,21.0s,MS4.9

NLWA Neilton Lookou 57.79 348 *eP* **P** 23 08 23.7 -1.0
comp=Z,30nm,1.4s,mb5.1
NLWA *eS* **S** 23 16 23.1 -0.7
NLWA LR LR
comp=Z,2µm,20.0s,MS5.2

A18A Metzger Ranch, 57.88 360 ⇑P **P** 23 08 23.8 -1.4
baz=58,SNR=14

A17A Triple J Farms 57.91 359 ⇑P **P** 23 08 24.0 -1.6
baz=58

A16A West Butte Ran 57.93 358 ⇓P **P** 23 08 24.1 -1.6
baz=58

B08A Colville Reser 57.98 352 ⇓P **P** 23 08 24.6 -1.4
baz=58

COWI Conover 57.98 17 *eP* **P** 23 08 24.9 -1.2
comp=Z,23nm,0.8s,mb5.3
COWI LR LR
comp=Z,815nm,20.0s,MS4.8

A15A	**Johnson Ranch,**	**58.00**	**357**	⇓P		**P**	**23 08 25.0**	**-1.2**		
	baz=58,SNR=12									
A14A	**Double T Ranch**	**58.03**	**357**	⇓P		**P**	**23 08 25.1**	**-1.3**		
	baz=58									
A13A	**Flathead Natio**	**58.05**	**356**	⇑P		**P**	**23 08 25.1**	**-1.5**		
	baz=58									
A12A	**Yaak River Ran**	**58.15**	**355**	⇑P		**P**	**23 08 25.7**	**-1.5**		
	baz=58									
JCW	**Jim Creek**	**58.21**	**350**	*e*P		**P**	**23 08 27.4**	**-0.2**		
B06A	**Marblemount**	**58.45**	**351**	⇑P		**P**	**23 08 27.9**	**-1.4**		
	baz=59									
AGMN	**Agassiz Nation**	**58.50**	**11**	*e*P		**P**	**23 08 27.9**	**-1.7**		
	comp=Z,11nm,1.0s,mb4.8									
AGMN					LR	LR				
	comp=Z,708nm,20.0s,MS4.8									
A05A	**Maple Falls**	**59.01**	**350**	⇓P		**P**	**23 08 32.4**	**-0.8**		
	baz=59									
EYMN	**Ely**	**59.08**	**14**	*e*P		**P**	**23 08 32.3**	**-1.4**		
	comp=Z,20nm,0.9s,mb5.2									
EYMN					*e*S	**S**	**23 16 39.6**	**-1.1**		
EYMN					LR	LR				
	comp=Z,2μm,20.0s,MS5.2									
BBSR	**BB Station**	**59.42**	**44**	PFAKE			23 08 50.0	+14		
BBSR					LR	LR				
	comp=Z,1μm,22.0s,MS5.0									
BINY	**Binghamton**	**59.62**	**28**	*e*P		**P**	**23 08 37.1**	**-0.5**		
	comp=Z,37nm,1.1s,mb5.3									
BINY					*e*S	**S**	**23 16 47.1**	**-0.8**		
BINY					LR	LR				
	comp=Z,782nm,20.0s,MS4.8									
ULM	**Lac du Bonnet**	**60.38**	**10**	*e*P		**P**	**23 08 42.3**	**-0.3**		
	comp=Z,20nm,1.1s,mb5.1									
ULM					LR	LR				
	comp=Z,828nm,20.0s,MS4.9									
ULM	**Lac du Bonnet**	**60.38**	**10**	P		**P**	**23 08 40.5**	**-2.1**		
	comp=Z,18nm,1.0s,mb5.0,baz=254,slow=4.8,SNR=5.7									
ULM					LR	LR	23 32 48.9			
	comp=Z,1μm,18.1s,MS5.0,baz=199,slow=34									
AFI	**Afiamalu**	**61.11**	**259**	PFAKE			23 09 00.0	+12		
AFI					LR	LR				
	comp=Z,811nm,20.0s,MS4.9									
ACCN	**Adirondack Com**	**61.63**	**29**	*e*P		**P**	**23 08 51.1**	**-0.2**		
	comp=Z,34nm,0.9s,mb5.5									
NCB	**Newcomb**	**61.81**	**28**	*e*P		**P**	**23 08 51.8**	**-0.6**		
	comp=Z,29nm,1.2s,mb5.3									
NCB					LR	LR				
	comp=Z,714nm,20.0s,MS4.8									
LONY	**Lake Ozonia**	**62.14**	**27**	*e*P		**P**	**23 08 54.4**	**-0.3**		
	comp=Z,18nm,1.0s,mb5.2									
LONY					LR	LR				
	comp=Z,930nm,21.0s,MS4.9									
EDM	**Edmonton**	**62.27**	**357**	*e*P		**P**	**23 08 53.7**	**-1.6**		
MDV	**Middlebury**	**62.32**	**29**	*e*P		**P**	**23 08 53.7**	**-2.3**		
FRNY	**Flat Rock**	**62.76**	**28**	*e*P		**P**	**23 08 58.7**	**-0.1**		
	comp=Z,32nm,1.0s,mb5.4									
LBNH	**Lisbon**	**63.10**	**29**	PFAKE			23 09 10.0	+8.9		
LBNH					LR	LR				
	comp=Z,924nm,19.0s,MS5.0									
PMSA	**Palmer Station**	**63.85**	**160**	PFAKE			23 09 20.0	+14		
PMSA					LR	LR				
	comp=Z,1μm,19.0s,MS5.2									
FFC	**Flin Flon**	**64.00**	**5**	*e*P		**P**	**23 09 05.6**	**-1.2**		
	comp=Z,15nm,1.3s,mb4.8									
FFC					LR	LR				
	comp=Z,3μm,20.0s,MS5.5									
FFC	**Flin Flon**	**64.00**	**5**	*i* P		**P**	**23 09 06.8**	**0.0**		
JOHN	**Johnston Islan**	**64.77**	**293**	PFAKE			23 09 20.0	+7.4		
JOHN					LR	LR				
	comp=Z,1μm,20.0s,MS5.1									
PKME	**Peaks-Kenny Pk**	**65.14**	**30**	*e*P		**P**	**23 09 14.3**	**-0.1**		
	comp=Z,33nm,1.1s,mb5.3									
PKME					LR	LR				
	comp=Z,1μm,21.0s,MS5.2									
FCC	**Fort Churchill**	**68.87**	**9**	*e*P		**P**	**23 09 36.8**	**-1.1**		
	comp=Z,0.5nm,0.9s									
SIT	**Sitka**	**69.38**	**345**	*e*P		**P**	**23 09 40.7**	**-0.4**		
	comp=Z,21nm,1.0s,mb5.0									
DLBC	**Dease Lake**	**69.45**	**349**	*e*P		**P**	**23 09 41.1**	**-0.4**		
MSVF	**Nonsavu**	**70.67**	**254**	PFAKE			23 10 00.0	+10		
MSVF					LR	LR				
	comp=Z,1μm,22.0s,MS5.2									
SKAG	**Skagway**	**71.52**	**346**	*e*P		**P**	**23 09 54.0**	**-0.2**		
	comp=Z,22nm,1.4s,mb4.9									
YKA	**Yellowknife Ar**	**71.59**	**357**	P		**P**	**23 09 51.7**	**-2.8**		
	comp=Z,4.3nm,0.9s,mb4.4,baz=169,slow=5.6,SNR=9.8									
YKA	**Yellowknife Ar**	**71.59**	**357**	P		**P**	**23 09 51.7**	**-2.8**		
PNL	**Peninsula**	**72.71**	**345**	*e*P		**P**	**23 10 01.1**	**-0.2**		
	comp=Z,10nm,0.9s,mb4.8									
RCBR	**Riachuelo**	**72.88**	**93**	PFAKE			23 10 20.0	+17		
RCBR					LR	LR				
	comp=Z,925nm,19.0s,MS5.1									
SCHQ	**Schefferville**	**73.09**	**24**	*e*P		**P**	**23 10 02.9**	**-0.8**		
SCHQ					LR	LR				
	comp=Z,1μm,20.0s,MS5.2									
SCHQ	**Schefferville**	**73.09**	**24**	P		**P**	**23 10 02.2**	**-1.5**		
	comp=Z,6.0nm,0.9s,mb4.5,baz=236,slow=4.7,SNR=6.1									
SCHQ					LR	LR	23 42 01.5			
	comp=Z,1μm,18.1s,MS5.3,baz=231,slow=36									
HYT	**Haines Junctio**	**73.24**	**346**	*e*P		**P**	**23 10 03.7**	**-0.7**		
SNZO	**South Karori**	**73.36**	**230**	PFAKE			23 10 20.0	+14		
SNZO					LR	LR				
	comp=Z,2μm,22.0s,MS5.4									
BMRM	**Bremner River**	**75.23**	**343**	*e*P		**P**	**23 10 15.4**	**-0.6**		
	comp=Z,38nm,1.4s,mb5.1									
OHAK	**Old Harbor**	**75.29**	**337**	*e*P		**P**	**23 10 15.7**	**-0.7**		
	comp=Z,35nm,1.1s,mb5.2									
MIDW	**Midway**	**75.37**	**302**	*e*P		**P**	**23 10 15.7**	**-1.8**		
MIDW					LR	LR				
	comp=Z,2μm,22.0s,MS5.3									
KDAK	**Kodiak Island**	**75.42**	**338**	P		**P**	**23 10 15.7**	**-1.5**		
	comp=Z,20nm,0.9s,mb5.0,baz=132,slow=3.1,SNR=4.2									
KDAK	**Kodiak Island**	**75.42**	**338**	*e*P		**P**	**23 10 16.0**	**-1.2**		
KDAK					MLR	MLR				
	comp=Z,3μm,20.0s,MS5.5									
DAWY	**Dawson**	**76.50**	**347**	*e*P		**P**	**23 10 21.6**	**-1.6**		
RC01	**Rabbit Creek A**	**76.88**	**341**	*e*P		**P**	**23 10 23.1**	**-2.3**		
	comp=Z,13nm,0.9s,mb4.9									
PMR	**Palmer**	**77.07**	**342**	*e*P		**P**	**23 10 25.9**	**-0.6**		
	comp=Z,25nm,1.0s,mb5.1									
PMR	**Palmer**	**77.07**	**342**	*e*P		**P**	**23 10 25.9**	**-0.6**		
PMR					pmax	pmax				
	comp=Z,25nm,1.0s,mb5.1									
RSO	**Redoubt South**	**77.41**	**340**	*e*P		**P**	**23 10 26.6**	**-1.8**		
EGAK	**Eagle**	**77.51**	**347**	*e*P		**P**	**23 10 27.9**	**-0.9**		
	comp=Z,21nm,1.0s,mb5.0									
EGAK					LR	LR				
	comp=Z,1μm,21.0s,MS5.2									
TARA	**Tarawa**	**78.02**	**273**	PFAKE			23 10 40.0	+7.1		
TARA					LR	LR				
	comp=Z,31nm,22.0s									
MCK	**McKinley**	**78.66**	**343**	*e*P		**P**	**23 10 33.8**	**-1.4**		
	comp=Z,32nm,1.3s,mb5.1									
MCK	**McKinley**	**78.66**	**343**	*e*P		**P**	**23 10 33.8**	**-1.5**		
MCK					pmax	pmax				
	comp=Z,32nm,1.3s,mb5.1									
TRF	**Thorofare Moun**	**78.83**	**343**	*e*P		**P**	**23 10 33.8**	**-2.5**		
	comp=Z,30nm,1.1s,mb5.1									
ILAR	**Eielson Array**	**78.91**	**345**	P		**P**	**23 10 33.9**	**-2.8**		
	comp=Z,1.4nm,0.9s,mb3.9,baz=178,slow=4.5,SNR=8.1									
ILAR					LR	LR	23 38 04.8			
	comp=Z,774nm,20.8s,MS5.0,baz=148,slow=30									
PPLA	**Purkeypile**	**79.00**	**342**	*e*P		**P**	**23 10 34.6**	**-2.5**		
	comp=Z,50nm,1.2s,mb5.3									
INK	**Inuvik**	**79.19**	**351**	*e*P		**P**	**23 10 42.2**	**+4.1**		
	comp=Z,13nm,1.0s,mb4.8									
INK	**Inuvik**	**79.19**	**351**	LR		LR	23 41 23.3			
	comp=Z,2μm,20.7s,MS5.3,baz=90,slow=33									
INK	**Inuvik**	**79.19**	**351**	*e*P		**P**	**23 10 42.2**	**+4.1**		
INK					pmax	pmax				
	comp=Z,13nm,1.0s									
COLA	**College**	**79.25**	**344**	PFAKE			23 10 50.0	+12		
COLA					LR	LR				
	comp=Z,853nm,20.0s,MS5.1									
BPAW	**Bear Paw Mtn.**	**79.53**	**343**	*e*P		**P**	**23 10 39.0**	**-1.0**		
	comp=Z,16nm,1.0s,mb4.9									
SBA	**Scott Base**	**79.75**	**192**	*e*P		**P**	**23 10 41.5**	**+0.4**		
TTA	**Tatalina**	**80.26**	**340**	*e*P		**P**	**23 10 46.2**	**+2.2**		
QSPA	**South Pole Qui**	**80.87**	**180**	*e*P		**P**	**23 10 47.4**	**+0.2**		
	comp=Z,37nm,1.1s,mb5.2									
QSPA					*e*PcP	PcP	23 10 54.1	+0.4		
QSPA					LR	LR				
	comp=Z,997nm,19.0s,MS5.2									
DZM	**Mont Dzumac**	**81.18**	**249**	*e*S		S	23 20 58.2	-2.4		
	comp=Z,263nm,28.3s									
DZM					*e*LQ		23 32 56.2			
	comp=Z,2μm,28.8s									
DZM					*e*LR	LR	23 36 08.3			
	comp=Z,954nm,33.7s									
COLD	**Coldfoot**	**81.68**	**345**	*e*P		**P**	**23 10 50.4**	**-1.1**		
	comp=Z,20nm,1.0s,mb5.0									
VNA1	**Neumayer--Stat**	**85.06**	**161**	*e*P		**P**	**23 11 05.9**	**-3.1**		
VNA1					*e*	pP	23 11 08.3	-4.1		
WAKE	**Wake Island**	**87.31**	**290**	PFAKE			23 11 30.0	+8.9		
WAKE					LR	LR				
	comp=Z,842nm,19.0s,MS5.2									
HNR	**Honiara**	**89.11**	**261**	PFAKE			23 11 40.0	+10		
HNR					LR	LR				
	comp=Z,383nm,20.0s,MS4.8									
SUMG	**Summit**	**93.13**	**17**	*e*P		**P**	**23 11 46.9**	**-0.3**		
	comp=Z,16nm,0.9s,mb5.4									
SUMG	**Summit**	**93.13**	**17**	*i* P		**P**	**23 11 45.5**	**-1.7**		
	comp=Z,14nm,0.9s,mb5.4									
BORG	**Borgarnes**	**97.45**	**26**	PFAKE			23 12 20.0	+13		
BORG					LR	LR				
	comp=Z,474nm,20.0s,MS5.0									
BORG	**Borgarnes**	**97.45**	**26**	LR		LR	23 54 44.2			
	comp=Z,470nm,19.9s,MS5.0,baz=34,slow=35									
PET	**Petropavlovsk**	**98.42**	**322**	PFAKE			23 12 20.0	+8.3		
PET					LR	LR				
	comp=Z,1μm,21.0s,MS5.3									
CASY	**Casey**	**99.25**	**195**	PFAKE			23 12 30.0	+15		
CASY					LR	LR				
	comp=Z,1μm,22.0s,MS5.3									
CTAO	**Charters Tower**	**100.08**	**248**	PFAKE			23 12 30.0	+11		
CTAO					LR	LR				
	comp=Z,520nm,22.0s,MS5.0									
SHEL	**Horse Pasture**	**100.45**	**108**	PFAKE			23 12 30.0	+9.2		
SHEL					LR	LR				
	comp=Z,1μm,20.0s,MS5.4									
PMG	**Port Moresby**	**101.53**	**258**	PFAKE			23 12 40.0	+14		
PMG					LR	LR				
	comp=Z,545nm,21.0s,MS5.0									
MAW	**Mawson**	**103.19**	**177**	PFAKE			23 12 40.0	+7.1		
MAW					LR	LR				
	comp=Z,2μm,20.0s,MS5.7									
KBS	**Kingsbay**	**104.79**	**10**	PFAKE			23 12 50.0	+10		
KBS					LR	LR				
	comp=Z,735nm,19.0s,MS5.2									
MTE	**Manteigas**	**104.95**	**51**	PFAKE			23 12 50.0	+9.2		
MTE					LR	LR				
	comp=Z,725nm,22.0s,MS5.2									
DBIC	**Dimbokro**	**105.39**	**86**	PFAKE			23 17 10.0	+12		
DBIC					LR	LR				
	comp=Z,574nm,19.0s,MS5.1									
SFS	**San Fernando**	**106.04**	**55**	PFAKE			23 17 10.0	+12		
SFS					LR	LR				
	comp=Z,584nm,21.0s,MS5.1									
ESK	**Eskdalemuir**	**106.75**	**35**	PFAKE			23 17 10.0	+11		
ESK					LR	LR				
	comp=Z,381nm,21.0s,MS4.9									
GUMO	**Guam**	**107.26**	**281**	PFAKE			23 17 10.0	+9.0		
GUMO					LR	LR				
	comp=Z,479nm,19.0s,MS5.1									
PAB	**San Pablo**	**107.43**	**51**	PFAKE			23 17 10.0	+9.3		
PAB					LR	LR				
	comp=Z,681nm,21.0s,MS5.2									
ESLA	**Sonseca Array**	**107.72**	**51**	PFAKE			23 17 10.0	+8.8		
ESLA					LR	LR				
	comp=Z,5μm,22.0s,MS6.0									
TIXI	**Tiksi**	**108.36**	**344**	PFAKE			23 17 10.0	+8.5		
TIXI					LR	LR				
	comp=Z,632nm,20.0s,MS5.2									
YSS	**Yuzh-Sakhalins**	**108.82**	**316**	PFAKE			23 17 10.0	+7.0		
YSS					LR	LR				
	comp=Z,286nm,22.0s,MS4.8									
ERM	**Erimo**	**109.03**	**311**	PFAKE			23 17 10.0	+6.4		
ERM					LR	LR				
	comp=Z,777nm,21.0s,MS5.2									
WRAB	**Tennant Creek**	**110.88**	**245**	PFAKE			23 17 20.0	+12		
WRAB					LR	LR				
	comp=Z,705nm,20.0s,MS5.2									
YAK	**Yakutsk**	**112.28**	**334**	PFAKE			23 17 20.0	+11		
YAK					LR	LR				
	comp=Z,482nm,21.0s,MS5.1									
KONO	**Kongsberg**	**112.35**	**29**	PFAKE			23 17 20.0	+11		
KONO					LR	LR				
	comp=Z,420nm,22.0s,MS5.0									
MAJO	**Matsushiro**	**113.36**	**306**	PFAKE			23 17 20.0	+8.0		
MAJO					LR	LR				
	comp=Z,546nm,20.0s,MS5.2									
WLF	**Walferdange**	**113.45**	**40**	PFAKE			23 17 20.0	+8.3		
WLF					LR	LR				
	comp=Z,568nm,21.0s,MS5.1									
BFO	**Black Forest**	**115.17**	**41**	PFAKE			23 17 30.0	+15		
BFO					LR	LR				
	comp=Z,272nm,20.0s,MS4.9									
SUR	**Sutherland**	**117.07**	**134**	PFAKE			23 17 30.0	+11		
SUR					LR	LR				
	comp=Z,2μm,22.0s,MS5.6									
CLL	**Collm**	**117.14**	**37**	*e*PS		PS	23 28 11.0	-1.8		
CLL				*e*PPS			23 29 24.0			
CLL				*e*SS		SS	23 34 24.0	-14		
CLL				*e*SSS			23 39 36.0			
CLL				Lm			00 04 00.0			
	comp=N,100nm,21.3s									
CLL				Lm			00 04 00.0			
	comp=E,300nm,21.9s									
CLL				Lm			00 04 00.0			
	comp=Z,400nm,21.9s									
VSL	**Villasalto**	**117.97**	**50**	PFAKE			23 17 30.0	+9.3		
VSL					LR	LR				
	comp=Z,442nm,21.0s,MS5.1									
KHC	**Kasperske Hory**	**118.24**	**39**	AMS		AMS	00 00 50.0			
	comp=Z,400nm,21.0s									
MDJ	**Mudanjiang**	**118.30**	**316**	PKP		PKPdf	23 17 21.1	-0.1		
MDJ	**Mudanjiang**	**118.30**	**316**	PFAKE			23 17 30.0	+8.8		
MDJ					LR	LR				
	comp=Z,887nm,22.0s,MS5.3									
PVCC	**Panska Ves**	**118.35**	**37**	AMS		AMS	00 10 00.0			
	comp=Z,300nm,18.1s									
PRU	**Pruhonice**	**118.53**	**38**	AMS		AMS	00 08 30.0			
	comp=Z,300nm,19.2s									
NWAO	**Narrogin (SRO)**	**118.93**	**224**	PFAKE			23 17 30.0	+7.1		
NWAO					LR	LR				
	comp=Z,703nm,19.0s,MS5.3									
FITZ	**Fitzroy Crossi**	**119.24**	**243**	PKPdf		PKPdf	23 17 23.6	-0.2		
TREC	**Trest**	**119.36**	**38**	AMS		AMS	00 00 50.0			
	comp=Z,600nm,22.2s									
DPC	**Dobruska-Polom**	**119.45**	**37**	AMS		AMS	00 04 50.0			
	comp=Z,300nm,22.4s									
TRI	**Trieste**	**119.49**	**42**	PFAKE			23 17 30.0	+6.5		
TRI					LR	LR				
	comp=Z,269nm,21.0s,MS4.9									
AQU	**L'Aquila**	**120.24**	**46**	PFAKE			23 17 40.0	+15		
AQU					LR	LR				
	comp=Z,523nm,21.0s,MS5.2									
TSUM	**Tsumeb**	**120.66**	**119**	PKPdf		PKPdf	23 17 27.1	+0.6		
TSUM					LR	LR				
	comp=Z,472nm,19.0s,MS5.2									
OKC	**Ostrava-Krasne**	**120.73**	**37**	AMS		AMS	00 05 00.0			
	comp=Z,300nm,18.5s									
KSRS	**Korea Array**	**121.33**	**308**	PKP		PKPdf	23 17 27.6	+0.3		
	comp=Z,0.4nm,0.3s,baz=128,slow=1.2,SNR=3.4									
CN2	**Changchun**	**121.39**	**316**	*e*PKP		PKPdf	23 17 28.3	+1.1		
INCN	**Inchon**	**122.32**	**309**	PFAKE			23 17 40.0	+11		
INCN					LR	LR				
	comp=Z,314nm,20.0s,MS5.0									
BOSA	**Boshof**	**122.33**	**132**	PFAKE			23 17 40.0	+10		
BOSA					LR	LR				
	comp=Z,1μm,21.0s,MS5.5									
PSZ	**Piszkesteto**	**122.59**	**38**	PFAKE			23 17 40.0	+11		
PSZ					LR	LR				
	comp=Z,258nm,21.0s,MS4.9									
CUC	**Castrocucco**	**122.66**	**48**	PFAKE			23 17 40.0	+10		
CUC					LR	LR				
	comp=Z,200nm,19.0s,MS4.8									
WDD	**Wield Dalam**	**122.73**	**53**	PFAKE			23 17 40.0	+10		
WDD					LR	LR				
	comp=Z,198nm,20.0s,MS4.8									
HIA	**Hailar**	**122.88**	**324**	PFAKE			23 17 40.0	+10		
HIA					LR	LR				
	comp=Z,825nm,19.0s,MS5.4									
MBWA	**Marble Bar**	**123.06**	**237**	PFAKE			23 17 40.0	+8.9		
MBWA					LR	LR				
	comp=Z,2μm,19.0s,MS5.8									
CEL	**Celeste**	**123.20**	**50**	PFAKE			23 17 40.0	+9.2		
CEL					LR	LR				
	comp=Z,317nm,22.0s,MS4.9									
KWP	**Kalwaria Pacla**	**123.47**	**35**	*e*PKPdf		PKPdf	23 17 30.5	-0.5		
KWP					LR	LR				
	comp=Z,367nm,19.0s,MS5.1									
KLMR	**Klimovskoe**	**123.55**	**18**	*e*PKIKP		PKPdf	23 17 32.2	+1.4		
KLMR					*e*		23 19 11.3			
KLMR					*e*SS	SS	23 36 03.3	+4.6		
KLMR					pmax	pmax				
	comp=Z,12nm,1.6s									
KLMR					MLR	MLR				
	comp=Z,616nm,20.0s,MS5.3									
TIP	**Timpagrande**	**123.59**	**49**	PFAKE			23 17 40.0	+8.4		
TIP					LR	LR				
	comp=Z,317nm,20.0s,MS5.0									
LBTB	**Lobatse**	**124.54**	**129**	*e*PKPdf		PKPdf	23 17 34.8	+1.0		
LBTB					LR	LR				
	comp=Z,1μm,19.0s,MS5.6									
TIR	**Tirane**	**125.13**	**45**	PFAKE			23 17 50.0	+16		
TIR					LR	LR				
	comp=Z,312nm,19.0s,MS5.0									
DAV	**Davao City (W)**	**125.53**	**272**	PFAKE			23 17 50.0	+14		
DAV					LR	LR				
	comp=Z,403nm,21.0s,MS5.1									
AKASG	**Malin Array Be**	**126.45**	**31**	PKP		PKPdf	23 17 34.4	-2.2		
	comp=Z,1.8nm,0.6s,baz=292,slow=2.4,SNR=4.2									
OBN	**Obninsk**	**126.90**	**24**	PFAKE			23 17 50.0	+13		
OBN					LR	LR				
	comp=Z,474nm,20.0s,MS5.2									
OBN	**Obninsk**	**126.90**	**24**	⇓*i*PKIKP		PKPdf	23 17 36.7	-0.7		
OBN				*e*			23 19 37.9			
OBN				*e*SS		SS	23 36 36.7	-4.4		
OBN				pmax	pmax					
	comp=Z,14nm,1.5s									
OBN				MLR	MLR					
	comp=Z,500nm,21.0s,MS5.2									
KAPI	**Kappang**	**128.97**	**256**	PFAKE			23 17 50.0	+7.4		
KAPI					LR	LR				
	comp=Z,259nm,19.0s,MS4.9									
TATO	**Taipei**	**129.16**	**295**	PFAKE			23 17 50.0	+7.4		
TATO					LR	LR				
	comp=Z,722nm,19.0s,MS5.4									
BJI	**Beijing**	**129.20**	**315**	PKP		PKPdf	23 17 43.2	+0.9		
BJI					LR	LR				
	comp=N,100nm,19.2s,MS4.9									
BJI					LR	LR				
	comp=E,250nm,22.6s,MS4.9									
BJI					LR	LR				
	comp=Z,380nm,33.4s									
BJT	**Baijiatuau**	**129.21**	**315**	PFAKE			23 17 50.0	+7.7		
BJT					LR	LR				
	comp=Z,612nm,19.0s,MS5.3									
TLY	**Talaya**	**129.75**	**334**	PFAKE			23 17 50.0	+7.1		
TLY					LR	LR				
	comp=Z,916nm,21.0s,MS5.5									
TLY	**Talaya**	**129.75**	**334**	*i* PKIKP		PKiKP	23 17 53.4	+10		
TLY				*e*SS		SS	23 37 44.9	+28		
TLY				pmax	pmax					
	comp=Z,5.0nm,1.0s									
TLY				MLR	MLR					
	comp=Z,694nm,18.0s,MS5.4									
NJ2	**Nanjing**	**129.92**	**304**	*e*PKP		PKPdf	23 17 40.1	-3.8		
ULN	**Ulaanbaatar**	**130.69**	**328**	PKPdf		PKPdf	23 17 45.0	+0.2		
ULN					LR	LR				
	comp=Z,1μm,22.0s,MS5.6									
VSR	**Storozhevoye**	**130.82**	**26**	*e*PKIKP		PKPdf	23 17 43.2	-1.8		
VSR					pmax	pmax				
	comp=N,9.0nm,1.1s									
VSR					pmax	pmax				
	comp=E,6.0nm,1.1s									
VSR					pmax	pmax				
	comp=Z,10.0nm,1.1s									
VSR					MLR	MLR				
	comp=N,440nm,24.0s,MS5.2									
VSR					MLR	MLR				
	comp=E,360nm,24.0s,MS5.2									
VSR					MLR	MLR				
	comp=Z,760nm,24.0s,MS5.3									
ZAK	**Zakamensk**	**130.83**	**333**	*e*PKHKP		PKPpre	23 17 34.3			
SONM	**Songino Array**	**131.05**	**328**	PKP		PKPdf	23 17 46.1	+0.6		
	comp=Z,4.0nm,1.1s,baz=128,slow=1.2,SNR=9.2									
SONM					PP	PP	23 20 03.1	+1.2		
	comp=Z,1.0nm,0.9s,baz=46,slow=6.2,SNR=2.1									
LSZ	**Lusaka**	**131.48**	**120**	PFAKE			23 18 00.0	+13		
LSZ					LR	LR				
	comp=Z,811nm,19.0s,MS5.5									
VRHR	**Novokhopersk**	**131.93**	**24**	*e*PKIKP		PKPdf	23 17 46.9	-0.2		
VRHR					pmax	pmax				
	comp=Z,10.0nm,1.2s									
VRHR					pmax	pmax				
	comp=N,10.0nm,1.1s									
VRHR					pmax	pmax				
	comp=E,10.0nm,1.1s									
ARU	**Arti**	**131.96**	**9**	*e*PKPdf		PKPdf	23 17 47.4	+0.4		
ARU					LR	LR		

GYA				SKKS	SKKSac	23 28 01.4	-2.9	
GYA				SS	SS	23 39 42.0	-0.7	
GYA				AMB	AMB			
	comp=Z,120nm,7.8s							
GYA				LR	LR			
	comp=N,120nm,24.6s,MS4.7							
GYA				LR	LR			
	comp=E,110nm,25.8s,MS4.7							
GYA				LR	LR			
	comp=Z,120nm,23.6s,MS4.6							
CD2	**Chengdu**	**142.31**	**310**	PKP	PKPdf	23 18 06.1	-0.8	
CD2				PP	PP	23 21 15.6	+2.4	
CD2				PKS		23 21 40.4		
CD2				SKS	SKSdf	23 25 14.5	-2.7	
CD2				SKKS	SKKSac	23 28 05.6	-1.5	
CD2				SS	SS	23 39 48.1	-0.3	
CD2				AMB	AMB			
	comp=Z,300nm,5.0s							
CD2				LR	LR			
	comp=N,390nm,14.5s							
CD2				LR	LR			
	comp=Z,660nm,18.6s,MS5.4							
WMQ	**Urumqi**	**142.43**	**340**	*e*PKP	PKPdf	23 18 05.8	-0.9	
WMQ				PP	PP	23 21 16.3	+3.5	
WMQ				PKS		23 21 40.1		
WMQ				SKS	SKSdf	23 25 10.4	-6.4	
WMQ				SKKS	SKKSac	23 28 02.4	-4.6	
WMQ				SS	SS	23 39 46.0	-1.7	
WMQ				AMB	AMB			
	comp=Z,120nm,4.5s							
WMQ				LR	LR			
	comp=N,880nm,24.6s,MS5.5							
WMQ				LR	LR			
	comp=E,700nm,24.8s,MS5.5							
WMQ				LR	LR			
	comp=Z,1μm,24.6s,MS5.5							
ABPO	**Ambohimpanom**	**143.73**	**141**	PFAKE		23 18 20.0	+10	
ABPO				LR	LR			
	comp=Z,936nm,22.0s,MS5.5							
OPO	**Ambohidratompo**	**144.03**	**140**	PKP	PKPdf	23 18 10.3	0.0	
	comp=Z,3.5nm,0.9s,baz=259,slow=8.2,SNR=3.9							
KMBO	**Kilima Mbogo**	**145.27**	**105**	PKPbc	PKPbc	23 18 11.5	-0.8	
	comp=Z,2.9nm,1.1s,baz=191,slow=19,SNR=3.9							
KMI	**Kunming**	**145.55**	**301**	PKPbc	PKPbc	23 18 14.7	+1.9	
KMI				PP	PP	23 21 35.3	+2.3	
KMI				SS	SS	23 40 24.9	-1.4	
KMI				AMB	AMB			
	comp=Z,73nm,5.8s							
KMI				LR	LR			
	comp=N,260nm,26.3s,MS5.2							
KMI				LR	LR			
	comp=E,480nm,27.4s,MS5.2							
KMI				LR	LR			
	comp=Z,630nm,23.7s,MS5.3							
AAK	**Ala-Archa**	**146.53**	**355**	*e*PKPdf	PKPdf	23 18 13.5	-0.4	
AAK				LR	LR			
	comp=Z,765nm,19.0s,MS5.5							
KSH	**Kashi**	**149.43**	**352**	*e*PKPbc	PKPbc	23 18 22.1	-1.0	
KSH				*e*PKPab	PKPab	23 18 35.2	+7.4	
KSH				*e*PKS		23 21 55.5		
KSH				*e*PP	PP	23 22 06.2	+12	
KSH				*e*SKS	SKSdf	23 25 24.6	-2.5	
KSH				*e*SKKS	SKKSac	23 28 50.0	+3.3	
KSH				*e*SS	SS	23 41 18.1	+11	
KSH				AMB	AMB			
	comp=Z,100nm,5.1s							
KSH				LR	LR			
	comp=E,100nm,5.0s							
KSH				LR	LR			
	comp=Z,130nm,4.7s							
KULM	**Kulim**	**149.91**	**265**	PFAKE		23 18 30.0	+10	
KULM				LR	LR			
	comp=Z,638nm,20.0s,MS5.4							
CHTO	**Chiang Mai**	**150.89**	**292**	PKPdf	PKPdf	23 18 23.1	+1.5	
CHTO				LR	LR			
	comp=Z,349nm,21.0s,MS5.1							
CMAR	**Chiang Mai Arr**	**150.98**	**292**	PKPbc	PKPbc	23 18 25.4	-2.0	
	comp=Z,7.4nm,0.9s,baz=97,slow=1.2,SNR=20							
PSI	**Prapat**	**151.10**	**259**	PKPbc	PKPbc	23 18 26.9	-1.1	
	comp=Z,23nm,1.1s,baz=199,slow=4.5,SNR=7.2							
LSA	**Lhasa**	**151.94**	**319**	PKPbc	PKPbc	23 18 29.0	-0.4	
LSA	**Lhasa**	**151.94**	**319**	*e*PKIKP	PKPdf	23 18 24.4	+1.5	
LSA				*e*		23 18 30.0		
LSA				*e*		23 18 38.6		
LSA				MLR	MLR			
	comp=Z,710nm,21.0s,MS5.5							
KBL	**Kabul**	**154.75**	**3**	PKPbc	PKPbc	23 18 36.1	+0.7	
NIL	**Nilore**	**155.55**	**355**	PFAKE		23 18 40.0	+12	
NIL				LR	LR			
	comp=Z,122nm,21.0s,MS4.7							
MSEY	**Mahe Island**	**159.60**	**132**	PFAKE		23 18 40.0	+6.4	
MSEY				LR	LR			
	comp=Z,634nm,20.0s,MS5.5							

*IDC **07** 23:02:00.0±2.2, 48.°83N×156.°46E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/25, mbtmp3.7/7, ML4.4/1, Error ellipse: s-maj=59.5km s-min=26.0km az=176.0*
*MOS **07** 23:02:04.2±0.8, 49.°05N×156.°52E, h35km, mb4.0/5, Error ellipse: s-maj=23.1km s-min=7.7km az=77.5*
*NEIC **07** 23:02:06.4±1.4, 49.°02N×156.°50E, h38km±13km, mb4.2/2, Error ellipse: s-maj=14.3km s-min=10.2km az=123.0*
*KRSC **07** 23:02:11.4±0.8, 49.°60N×157.°01E, h72km±77km, ML4.6*
*ISCJB **07** 23:02:12.9±1.4, 49.°6N±0.°1×156.°7E±0.°1, h94km±10km, mb3.5/7, Error ellipse: s-maj=18.9km s-min=8.5km az=154.6*

ISC 07 23:02:14.4±1.3, 49.°6N±0.°1×156.°61E±0.°10, h89km±9km, n45, σ1§12/55, mb3.5/7, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.09**	**344**	*e*PN		**Pn**	**Pn**	**23 02 37.0**	**+2.0**
SKR				*e*S		**Sn**	**Sn**	**23 02 50.9**	**+0.3**
SKR				pmax	pmax				
	comp=Z,100nm,0.5s								
SKR				pmax	pmax				
	comp=N,110nm,0.4s								
SKR				smax					
	comp=N,3μm,0.3s								
SKR				smax					
	comp=E,5μm,0.3s								
ALID	**Alaid**	**1.41**	**332**	*e*P		**Pn**	**Pn**	**23 02 37.7**	**-1.1**
ALID				*i* S		**Sn**	**Sn**	**23 02 56.6**	**-0.7**
MIPR	**Malaya Ipel'ka**	**2.64**	**2**	*e*P		**Pn**	**Pn**	**23 02 54.8**	**-0.2**
MIPR				*i* S		**Sn**	**Sn**	**23 03 25.9**	**-0.3**
GRL	**Gorelyy**	**3.06**	**17**	*e*P		**Pn**	**Pn**	**23 03 00.8**	**+0.2**
GRL				*i* S		**Sn**	**Sn**	**23 03 37.0**	**+0.7**
PETK	**Petropavlovsk-**	**3.54**	**11**	Pn		**Pn**	**Pn**	**23 03 07.7**	**+0.6**
PETK	**Petropavlovsk-**	**3.54**	**11**	Pn		**Pn**	**Pn**	**23 03 07.7**	**+0.6**
	comp=E,22nm,0.3s,baz=166,slow=12,SNR=72								
PETK	**Petropavlovsk-**	**3.54**	**11**	PN		**Pn**	**Pn**	**23 03 07.7**	**+0.6**
PETK				pmax	pmax				
	comp=Z,22nm,0.3s								
PET	**Petropavlovsk**	**3.63**	**20**	*e*Pn		**Pn**	**Pn**	**23 03 07.8**	**-0.5**
PET				*e*Sn		**Sn**	**Sn**	**23 03 49.6**	**-0.3**
PET	**Petropavlovsk**	**3.63**	**20**	*e*P		**Pn**	**Pn**	**23 03 08.0**	**-0.2**
PET				*i* S		**Sn**	**Sn**	**23 03 50.3**	**+0.4**
PET	**Petropavlovsk**	**3.63**	**20**	⇓*e*Pn		**Pn**	**Pn**	**23 03 07.9**	**-0.3**
PET				pmax	pmax				
	comp=Z,100nm,0.4s								
PET				pmax	pmax				
	comp=Z,198nm,0.5s								
AVH	**Avacha**	**3.87**	**19**	*e*P		**Pn**	**Pn**	**23 03 12.6**	**+1.1**
NLC	**Nalytchevo**	**3.93**	**25**	*e*P		**Pn**	**Pn**	**23 03 10.6**	**-1.8**
NLC				*i* S		**Sn**	**Sn**	**23 03 54.4**	**-2.9**
SPN	**Mys Shipunski**	**4.07**	**30**	*e*P		**Pn**	**Pn**	**23 03 13.9**	**-0.4**
SPN				*i* S		**Sn**	**Sn**	**23 03 59.4**	**-1.4**
GNL	**Ganaly**	**4.15**	**11**	*e*P		**Pn**	**Pn**	**23 03 16.1**	**+0.8**
KII	**Karymskiy**	**4.75**	**21**	*e*P		**Pn**	**Pn**	**23 03 23.4**	**0.0**
MKZ	**Mys Kozlova**	**5.85**	**31**	*e*P		**Pn**	**Pn**	**23 03 36.7**	**-1.7**
MKZ				*i* S		**Sn**	**Sn**	**23 04 39.5**	**-4.5**
KPT	**Kopyto**	**6.71**	**18**	*e*P		**Pn**	**Pn**	**23 03 51.4**	**+1.3**
KOZ	**Kozyrevsk**	**6.73**	**16**	*e*P		**Pn**	**Pn**	**23 03 52.3**	**+2.0**
KOZR	**Kozyr**	**6.74**	**16**	PN		**Pn**	**Pn**	**23 03 52.3**	**+1.8**
SRDR	**Sredinnyy**	**6.95**	**14**	*e*P		**Pn**	**Pn**	**23 03 54.3**	**+0.9**
KBTR	**Krutoberegovo**	**7.58**	**27**	*e*P		**Pn**	**Pn**	**23 04 00.9**	**-1.0**
BKI	**Bering**	**7.99**	**42**	*e*P		**Pn**	**Pn**	**23 04 06.6**	**-0.9**
BKI				*i* S		**Sn**	**Sn**	**23 05 30.0**	**-6.1**
ERM	**Erimo**	**12.07**	**236**	*i* PN		**Pn**	**Pn**	**23 05 09.3**	**+6.1**
MAJO	**Matsushiro**	**18.69**	**232**	P		**Pn**	**Pn**	**23 06 16.9**	**-10**
INCN	**Inchon**	**24.71**	**252**	P		**P**	**P**	**23 07 25.7**	**-1.3**
BJT	**Baijiatuan**	**29.93**	**267**	P		**P**	**P**	**23 08 14.7**	**+1.1**
ULN	**Ulaanbaatar**	**32.25**	**286**	*e*P		**P**	**P**	**23 08 31.4**	**-2.6**
	comp=Z,0.8nm,0.4s,mb3.8								
ULN	**Ulaanbaatar**	**32.25**	**286**	*e*P		**P**	**P**	**23 08 31.4**	**-2.6**
ULN				pmax	pmax				
	comp=Z,1.0nm,0.4s,mb3.9								
ILAR	**Eielson Array**	**32.83**	**41**	P		**P**	**P**	**23 08 40.5**	**+1.5**
	comp=Z,0.5nm,0.7s,mb3.5,baz=247,slow=7.2,SNR=4.0								
GUMO	**Guam**	**37.22**	**199**	P		**P**	**P**	**23 09 09.1**	**-7.9**
MKAR	**Makanchi Array**	**47.71**	**297**	P		**P**	**P**	**23 10 41.2**	**-0.6**
	comp=Z,0.1nm,0.3s,mb3.2,baz=56,slow=6.5,SNR=4.3								
MKAR	**Makanchi Array**	**47.71**	**297**	*i* P		**P**	**P**	**23 10 41.2**	**-0.6**
KURK	**Kurchatov**	**47.74**	**303**	*e*P		**P**	**P**	**23 10 41.0**	**-0.9**
	comp=Z,2.5nm,0.6s,mb4.2								
KURK	**Kurchatov**	**47.74**	**303**	P		**P**	**P**	**23 10 41.1**	**-0.8**
	comp=Z,1.2nm,0.5s,mb4.0,baz=66,slow=8.7,SNR=8.2								
KURK	**Kurchatov**	**47.74**	**303**	P		**P**	**P**	**23 10 41.1**	**-0.8**
KURK				pmax	pmax				
	comp=Z,1.0nm,0.5s,mb3.9								
BVAR	**Borovoye Array**	**50.84**	**309**	P		**P**	**P**	**23 11 06.2**	**+0.7**
	comp=Z,0.6nm,0.4s,mb4.0,baz=116,slow=3.4,SNR=3.1								
BVAR	**Borovoye Array**	**50.84**	**309**	P		**P**	**P**	**23 11 06.2**	**+0.7**
BVAR				pmax	pmax				
	comp=Z,1.0nm,0.4s								
ARU	**Arti**	**54.46**	**317**	P		**P**	**P**	**23 11 33.5**	**+1.4**
ARU	**Arti**	**54.46**	**317**	P		**P**	**P**	**23 11 33.5**	**+1.4**
KIV	**Kislovodsk**	**70.42**	**316**	P		**P**	**P**	**23 13 18.4**	**-0.1**
KIV	**Kislovodsk**	**70.42**	**316**	P		**P**	**P**	**23 13 18.5**	**-0.1**
WB2	**Warramunga Arr**	**72.03**	**202**	P		**P**	**P**	**23 13 22.1**	**-6.4**
TXAR	**Lajitas Array**	**74.07**	**64**	P		**P**	**P**	**23 13 40.9**	**+0.2**
	comp=Z,0.1nm,0.5s,mb2.8,baz=261,slow=3.6,SNR=2.8								
BRTR	**Keskin Array B**	**77.83**	**319**	P		**P**	**P**	**23 14 01.4**	**-0.4**
	comp=Z,0.5nm,0.7s,mb3.3,baz=75,slow=7.6,SNR=4.2								
BRTR	**Keskin Array B**	**77.83**	**319**	*e*P		**P**	**P**	**23 14 01.3**	**-0.5**
BRTR				pmax	pmax				
	comp=Z,1.0nm,0.7s								

*BJI **07** 23:03:03.1, 38.°18N×70.°37E, h12km, ML3.3/3*
*IDC **07** 23:03:10.1±8.4, 37.°71N×71.°96E, h34km±50km, mb4.0/2, mb1 3.7/7, mb1mx3.3/27, mbtmp3.7/7, ML3.2/5, Error ellipse: s-maj=70.3km s-min=36.2km az=170.0*
*ISCJB **07** 23:03:13.0±0.6, 38.°44N±0.°05×71.°50E±0.°07, h10km, mb4.0/4, Error ellipse: s-maj=8.9km s-min=6.0km az=41.0*
*NEIC **07** 23:03:18.1±1.1, 38.°42N×71.°30E, h39km±17km, mb3.8/2, Error ellipse: s-maj=18.4km s-min=10.8km az=131.0*

ISC 07 23:03:14.9±0.6, 38.°45N±0.°05×71.°48E±0.°07, h10km, n21, σ1§38/28, mb4.0/4, 3C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.66**	**72**	Pn		**Pn**	**Pn**	**23 04 10.3**	**-1.3**
KSH				Sn		**Sn**	**Sn**	**23 04 54.0**	**-0.8**
KSH				smax					
	comp=N,71nm,0.8s								
KSH				smax					
	comp=E,100nm,1.2s								
KBL	**Kabul**	**4.37**	**207**	*e*Pn		**Pn**	**Pn**	**23 04 21.2**	**-0.1**
KBL				*e*Sn		**Sn**	**Sn**	**23 05 13.4**	**+1.2**
KK31	**Karatay Array**	**4.70**	**351**	⇑Pn		**Pn**	**Pn**	**23 04 27.1**	**+1.2**
	comp=E,0.9nm,0.3s,baz=179,slow=13								
KK31				⇑Pg		**Pg**		**23 04 39.7**	**-5.3**
	comp=E,4.9nm,0.6s,baz=174,slow=13								
KK31				⇑Sn		**Sn**	**Sn**	**23 05 25.0**	**+4.5**
	comp=E,3.8nm,0.5s,baz=179,slow=21								
KK31				⇓Lg				23 05 43.2	
	comp=E,20nm,0.6s,baz=176,slow=29								
AAK	**Ala-Archa**	**4.77**	**28**	*e*Pn		**Pn**	**Pn**	**23 04 29.9**	**+3.1**
AAK				*e*Sn		**Sn**	**Sn**	**23 05 23.5**	**+1.5**
AAK	**Ala-Archa**	**4.77**	**28**	Pn		**Pn**	**Pn**	**23 04 30.0**	**+3.2**
	comp=E,1.0nm,0.3s,baz=208,slow=7.9,SNR=3.2								
AAK				Pg		**Pg**	**Pg**	**23 04 44.8**	**-1.5**
	comp=E,2.6nm,0.3s,baz=179,slow=3.2,SNR=11								
AAK				Sn		**Sn**	**Sn**	**23 05 30.5**	**+8.4**
	baz=90,slow=18,SNR=2.0								
MK31	**Makanchi Array**	**11.52**	**40**	*e*Pn		**Pn**	**Pn**	**23 06 01.2**	**+1.9**
MKAR	**Makanchi Array**	**11.52**	**40**	Pn		**Pn**	**Pn**	**23 05 59.4**	**+0.1**
MKAR	**Makanchi Array**	**11.52**	**40**	Pn		**Pn**	**Pn**	**23 05 59.4**	**+0.1**
	comp=E,0.1nm,0.3s,baz=228,slow=12,SNR=9.2								
BVAR	**Borovoye Array**	**14.60**	**357**	Pn		**Pn**	**Pn**	**23 06 42.5**	**+1.3**
	comp=E,0.1nm,0.3s,baz=150,slow=13,SNR=2.9								
AKTK	**Aktyubinsk**	**15.33**	**326**	Pn		**Pn**	**Pn**	**23 06 51.9**	**+0.8**
AKTO	**Aktyubinsk**	**15.33**	**326**	Pn		**Pn**	**Pn**	**23 06 51.9**	**+0.8**
	comp=E,0.3nm,0.3s,baz=131,slow=12,SNR=10								
ZAA0	**Zalesovo Array**	**17.99**	**26**	*e*Pn		**Pn**	**Pn**	**23 07 25.7**	**+0.8**
ZALV	**Zalesovo Beam**	**17.99**	**26**	P		**Pn**	**Pn**	**23 07 23.2**	**-1.7**
	comp=E,0.2nm,0.3s,baz=224,slow=10,SNR=4.2								
ARU	**Arti**	**19.93**	**339**	P		**Pn**	**Pn**	**23 07 46.6**	**-1.7**
KIV	**Kislovodsk**	**22.29**	**293**	*e*P		**P**	**P**	**23 08 08.8**	**-3.4**
	comp=E,2.2nm,0.6s,mb3.8								
TLY	**Talaya**	**26.05**	**49**	*e*P		**P**	**P**	**23 08 50.0**	**+1.8**
	comp=E,2.2nm,0.6s,mb3.9								
TLY	**Talaya**	**26.05**	**49**	*e*P		**P**	**P**	**23 08 50.0**	**+1.8**
TLY				pmax	pmax				
	comp=Z,2.0nm,0.6s,mb3.8								
FINES	**FINESS Array B**	**36.10**	**324**	P		**P**	**P**	**23 10 14.7**	**-1.8**
	comp=Z,3.9nm,1.1s,mb4.2,baz=118,slow=10,SNR=8.1								
ARCES	**ARCESS Array B**	**39.50**	**337**	P		**P**	**P**	**23 10 43.7**	**-1.5**
ARCES	**ARCESS Array B**	**39.50**	**337**	P		**P**	**P**	**23 10 43.7**	**-1.5**
	comp=Z,2.6nm,0.8s,mb4.0,baz=112,slow=8.0,SNR=10								
MORC	**Moravsky Berou**	**39.54**	**305**	P		**P**	**P**	**23 10 45.0**	**-0.8**

*NEIC **07** 23:05:24.9, 30.°93S×71.°66W, h26km, ML3.5(GUC), After GUC.*

GUC 07 23:05:24.9±0.7, 30.°93S×71.°66W, h26km±4km, MD3.8, ML3.5, 1C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.51**	**51**	⇓*i* P			Pb	23 05 35.4	+0.1
OVCH				*i* S			Sb	23 05 42.7	+0.4
OVCH	**Ovalle**	**0.51**	**51**	⇓*i* P			Pb	23 05 35.4	+0.1
OVCH				*i* S			Sb	23 05 42.7	+0.4
OVCH				AML	AML			23 05 42.9	
	comp=N,4μm,0.2s								
CHNG	**Los Chungos**	**0.96**	**172**	*e*P			Pn	23 05 41.8	-0.9
CHNG				*i* S			Sb	23 05 54.9	-0.3
TLL	**Tololo Astrono**	**1.06**	**44**	⇓*i* P			Pn	23 05 44.1	+0.1
TLL				*i* S			Sn	23 05 58.6	+0.6
TLL	**Tololo Astrono**	**1.06**	**44**	⇓*i* P			Pn	23 05 44.1	+0.1
TLL				*i* S			Sn	23 05 58.6	+0.6
LCO	**Las Campanas**	**2.09**	**24**	*e*Pn			Pn	23 05 58.8	+0.6
LCO				*e*Sn			Sn	23 06 25.6	+2.3
ROCH	**El Roble**	**2.11**	**165**	⇓*i* P			Pn	23 06 00.1	+1.7
ROCH				*i* S			Sn	23 06 27.5	+3.7
ROCH				AML	AML			23 06 37.0	
	comp=N,314nm,0.4s								
PEL	**Peldehue**	**2.35**	**160**	*e*P			Pn	23 06 03.5	+1.6
PEL				*e*S			Sn	23 06 32.2	+2.3
PEL				AML	AML			23 06 45.9	
	comp=E,405nm,0.4s								
CLCH	**Cerro Calan**	**2.63**	**159**	*i* P			Pn	23 06 11.8	+6.1
CLCH				*i* S			Sn	23 06 44.1	+7.3
CLCH				AML	AML			23 06 53.8	
	comp=E,281nm,0.7s								
FCH	**Farellones**	**2.66**	**154**	⇑*i* P			Pn	23 06 07.5	+1.5
FCH				*i* S			Sn	23 06 40.2	+2.9
FCH				AML	AML			23 06 52.7	
	comp=E,138nm,0.4s								
LMEL	**Las Melosas**	**3.16**	**157**	*i* P			Pn	23 06 15.9	+3.0
LMEL				*i* S			Sn	23 06 53.7	+4.0
LMEL	**Las Melosas**	**3.16**	**157**	*i* P			Pn	23 06 15.9	+3.0
LMEL				*i* S			Sn	23 06 53.7	+4.0
LMEL				AML	AML			23 07 07.5	
	comp=N,167nm,0.3s								

MAN 07 23:24:08, 17.°90N×120.°87E, h30km, mb4.0, ML2.7, MS2.4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.29**	**211**	*e*P			Pb	23 24 17.0	+1.7
ABRA				*e*S			Sb	23 24 20.1	-0.2
APYP	**Conner**	**0.36**	**96**	*e*P			Pb	23 24 17.7	+1.5
APYP				*e*S			Sb	23 24 25.7	+3.7
CVP	**Callao Caves**	**0.93**	**102**	⇓*e*P			Pn	23 24 25.2	+0.2
CVP				*i* S			Sn	23 24 41.5	+4.1

*BJI **07** 23:41:25.6, 12.°60N×87.°70W, h64km, mB5.2/4, Ms5.2/5, Ms7 4.8/5*
*ISCJB **07** 23:41:26.5±0.1, 12.°58N±0.°03×87.°76W±0.°02, h65km, mb4.8/126, Error ellipse: s-maj=4.6km s-min=1.7km az=32.6*
*IDC **07** 23:41:27.0±0.7, 12.°78N×87.°38W, h64km±5km, mb4.3/18, mb1 4.5/20, mb1mx4.4/26, mbtmp4.3/20, MS4.1/17, Ms1 4.1/17, ms1mx4.0/30, Error ellipse: s-maj=20.8km s-min=8.1km az=55.0*
*NEIC **07** 23:41:27.6±0.2, 12.°57N×87.°72W, mb4.9/113, MD5.6(SNET), Error ellipse: s-maj=5.9km s-min=3.6km az=210.0*
NEIC Felt at Managua. Felt [III] at San Salvador, El Salvador.
*CASC **07** 23:41:27.8±2.3, 12.°51N×87.°80W, h34km±13km, MD4.5, ML5.2, mb4.9(NEIC)*
*GCMT **07** 23:41:28.9±0.2, 12.°47N×87.°89W, h72km±3km, MW5.1, Moment Tensor Solution. s33,c43; s74,c99; Moment tensor: Scale 10^16^Nm; Mrr2.56±.21; Mθθ-1.72±.18; Mφφ-0.84±.21; Mrθ2.08±.10; Mrφ2.19±.16; Mθr-3.80±.11; Best double couple: M0 5.30000×10^16^ NP1:φ285.00000°, δ22.00000°, λ48.00000°. NP2:φ149.00000°, δ74.00000°, λ105.00000°. Principal axes: T 5.0800, Plg59.0000°, Azm79.0000°; N 0.5200, Plg15.0000°, Azm324.0000°; P -5.5900, Plg27.0000°, Azm227.0000°; Data Used: IU II CN G IC.*

ISC 07 23:41:28.3±0.1, 12.°59N±0.°03×87.°71W±0.°02, h67km, h67km±1.4km; pP-P, n615, σ0§85/607, mb4.8/126, 167C-164D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.66**	**80**	*e*P		**Pn**	**Pn**	**23 41 42.7**	**+0.2**
CRIN				*e*S		**Sn**	**Sn**	**23 41 54.7**	**+1.7**
CRIN				AML	AML			23 41 59.8	
	comp=E,99μm,0.4s								
CNCH	**Conchagua**	**0.69**	**350**	⇓*i* P		**Pn**	**Pn**	**23 41 42.7**	**-0.3**
BLLM	**Bellamira**	**0.99**	**329**	⇓*e*P		**Pn**	**Pn**	**23 41 46.1**	**-0.5**
CNGN	**Cerro Negro**	**0.99**	**95**	*e*P		**Pn**	**Pn**	**23 41 45.9**	**-0.7**
CNGN				*e*S		**Sn**	**Sn**	**23 42 00.6**	**+0.4**
CNGN				AML	AML			23 42 09.5	
	comp=N,41μm,0.4s								
MOMN	**Momotombo**	**1.16**	**99**	*e*P		**Pn**	**Pn**	**23 41 48.4**	**-0.3**
COPN	**Copaltepe**	**1.17**	**110**	⇓*e*P		**Pn**	**Pn**	**23 41 48.0**	**-0.9**
CAHU	**Cacaocatuique**	**1.27**	**338**	⇓*i* P		**Pn**	**Pn**	**23 41 50.5**	**+0.3**
CAHU				*e*S		**Sn**	**Sn**	**23 42 07.6**	**+1.1**
CSAN		**1.32**	**108**	*e*P		**Pn**	**Pn**	**23 41 50.1**	**-0.7**
XAVN	**Gruta Xavier**	**1.42**	**108**	*e*P		**Pn**	**Pn**	**23 41 51.5**	**-0.7**
TISN	**Laguna Tiscapa**	**1.48**	**107**	*e*P		**Pn**	**Pn**	**23 41 52.2**	**-0.7**
SNVI	**San Vicente**	**1.50**	**313**	*e*P		**Pn**	**Pn**	**23 41 52.4**	**-0.8**
SNVI				*e*S		**Sn**	**Sn**	**23 42 11.5**	**-0.4**
MGAN	**Managua**	**1.50**	**107**	*e*P		**Pn**	**Pn**	**23 41 52.4**	**-0.8**
CRUN	**El Crucero**	**1.51**	**113**	*e*P		**Pn**	**Pn**	**23 41 52.8**	**-0.5**
TGUH	**Tegucigalpa,Un**	**1.52**	**16**	⇓*i* Pn		**Pn**	**Pn**	**23 41 54.4**	**+0.9**
HUEN		**1.52**	**99**	⇓*e*P		**Pn**	**Pn**	**23 41 53.3**	**-0.3**
AIES	**Las Flores**	**1.56**	**304**	*e*P		**Pn**	**Pn**	**23 41 53.0**	**-1.1**
AIES				*e*S		**Sn**	**Sn**	**23 42 11.5**	**-2.0**
AIES				AML	AML			23 42 19.4	
	comp=Z,50μm,0.3s								
MASN	**Masaya**	**1.64**	**111**	*e*P		**Pn**	**Pn**	**23 41 53.8**	**-1.2**
APON	**Apoyo**	**1.74**	**112**	*e*P		**Pn**	**Pn**	**23 41 55.8**	**-0.6**
SNET	**Serv Nac Est T**	**1.84**	**307**	*e*P		**Pn**	**Pn**	**23 41 56.9**	**-0.8**
SNET				*e*S		**Sn**	**Sn**	**23 42 18.8**	**-1.3**
SNET				AML	AML			23 42 20.5	
	comp=Z,52μm,0.2s								
BOQS	**Boqueron**	**1.91**	**307**	⇓*e*P		**Pn**	**Pn**	**23 41 58.2**	**-0.4**
SSN	**San Juan del S**	**2.22**	**125**	*e*P		**Pn**	**Pn**	**23 42 01.4**	**-1.6**
SBLS	**San Blas**	**2.24**	**304**	⇑*e*P		**Pn**	**Pn**	**23 42 02.4**	**-0.7**
SNJE	**San Jose**	**2.24**	**305**	*e*P		**Pn**	**Pn**	**23 42 02.7**	**-0.5**
SONS	**Sonsonate**	**2.26**	**301**	*e*P		**Pn**	**Pn**	**23 42 03.5**	**0.0**
SONS				*e*S		**Sn**	**Sn**	**23 42 28.4**	**-2.0**
SONS				AML	AML			23 42 33.9	
	comp=Z,16μm,0.7s								
CONN	**Concepcion**	**2.28**	**116**	*e*P		**Pn**	**Pn**	**23 42 02.7**	**-1.0**
RBDL	**Robledal**	**2.45**	**308**	*e*P		**Pn**	**Pn**	**23 42 05.5**	**-0.5**
GBS2	**Las Lilas**	**2.82**	**128**	*i* P		**Pn**	**Pn**	**23 42 11.2**	**+0.2**
GBS3	**Finca Las Im˜

627A **Terlingua Ranc** 22.22 321 ⇑P P 23 46 19.4 0.0
baz=22,SNR=80
TXAR **Lajitas Array** 22.30 321 P P 23 46 20.4 +0.2
TXAR PcP PcP 23 50 12.2 -1.7
TXAR ScP ScP 23 53 45.3 -0.4
TXAR LR LR 23 55 17.2
TXAR **Lajitas Array** 22.30 321 P P 23 46 20.4 +0.2
comp=Z,44nm,0.9s,mb4.8,baz=141,slow=7.7,SNR=168
TXAR PcP PcP 23 50 12.2 -1.7
comp=Z,0.8nm,0.6s,baz=141,slow=5.8,SNR=4.1
TXAR ScP ScP 23 53 45.3 -0.4
comp=Z,4.1nm,0.8s,baz=149,slow=5.7,SNR=22
TXAR LR LR 23 55 17.2
comp=Z,151nm,21.9s,baz=0.0,slow=37
JSC **Jenkinsville** 22.38 14 eP P 23 46 22.0 +1.0
528A **Cox Ranch, San** 22.38 324 ⇓P P 23 46 20.9 -0.2
baz=22,SNR=22
UALR **University of** 22.48 350 eP P 23 46 22.2 +0.1
comp=Z,38nm,0.8s,mb4.8
UALR epP 23 46 30.2
MIAR **Mount Ida** 22.50 347 eP P 23 46 22.5 +0.2
comp=Z,58nm,0.9s,mb4.9
SWET **Sewanee** 22.59 4 eP P 23 46 23.3 +0.2
STVI **Saint Thomas** 22.66 73 eP P 23 46 23.4 -0.7
comp=Z,162nm,1.1s,mb5.3
428A **Kincaid Ranch,** 22.74 325 ⇑P P 23 46 25.3 +0.4
baz=23,SNR=38
PCRV **Puerto La Cruz** 22.75 94 P P 23 46 24.2 -0.9
comp=Z,25nm,0.8s,mb4.6,baz=245,slow=0.5,SNR=5.7
626A **Big Bend Ranch** 22.75 320 ⇑P P 23 46 25.1 +0.1
baz=23,SNR=74
CPCT **Cooper Cave** 22.94 7 eP P 23 46 27.6 +0.7
HBAR **Harrisburg** 23.02 354 eP P 23 46 27.6 -0.1
526A **Mary Lane Ranc** 23.08 321 ⇑P P 23 46 28.8 +0.3
baz=23,SNR=15
TKL **Tuckaleechee C** 23.24 8 eP P 23 46 29.9 0.0
TKL **Tuckaleechee C** 23.24 8 P P 23 46 29.4 -0.5
comp=Z,66nm,0.9s,mb5.0,baz=182,slow=10,SNR=59
TKL LR LR 23 56 54.5
comp=Z,302nm,18.9s,baz=192,slow=40
427A **Hayter Ranch,** 23.24 324 ⇑P P 23 46 29.6 -0.3
baz=23,SNR=10
HALT **Halls** 23.27 357 eP P 23 46 29.6 -0.5
328A **Wristen Ranch,** 23.31 326 ⇑P P 23 46 30.5 -0.1
baz=23,SNR=124
WVT **Waverly** 23.44 360 eP P 23 46 30.2 -1.5
comp=Z,15nm,0.9s,mb4.3
426A **McDonald Obser** 23.48 323 ⇑P P 23 46 32.0 -0.1
baz=24,SNR=34
UTMT **University of** 23.67 358 eP P 23 46 32.9 -0.9
327A **Balmorhea Ranc** 23.68 325 ⇑P P 23 46 33.6 -0.4
baz=24
326A **Caldwell Ranch** 23.92 324 ⇑P P 23 46 35.9 -0.2
baz=24,SNR=13
227A **Bennet, Jal** 24.06 326 ⇑P P 23 46 37.3 -0.1
baz=24
425A **Indio Mountain** 24.14 321 ⇓P P 23 46 37.7 -0.4
baz=24,SNR=19
WMOK **Wichita Mounta** 24.23 337 eP P 23 46 38.1 -0.8
comp=Z,66nm,1.2s,mb4.7
226A **Malaga, Loving** 24.54 325 ⇓P P 23 46 41.8 0.0
baz=25,SNR=21
325A **Bean Ranch, Si** 24.54 322 ⇑P P 23 46 41.2 -0.6
baz=25,SNR=16
CLNB **Carlsbad** 24.57 325 eP P 23 46 42.0 0.0
127A **Arkansas Junct** 24.60 327 ⇑P P 23 46 41.4 -0.9
baz=25,SNR=19
GDL2 **Guadalupe Moun** 24.79 325 eP P 23 46 45.7 +1.6
324A **Moseley Ranch,** 24.90 322 ⇑P P 23 46 44.4 -0.6
baz=25,SNR=32
126A **Clayton Basin,** 24.94 326 ⇓P P 23 46 44.7 -0.6
baz=25,SNR=16
225A **Deer Hill, Car** 24.99 324 ⇑P P 23 46 45.9 +0.1
baz=25,SNR=20
MNTX **Cornudas Mount** 25.02 322 eP P 23 46 45.3 -0.8
comp=Z,7.6nm,0.7s,mb4.2
Z27A **Tatum** 25.02 328 ⇓P P 23 46 45.3 -0.8
baz=25,SNR=36
SIUC **Southern Illin** 25.06 357 eP P 23 46 45.9 -0.5
comp=Z,50nm,0.8s,mb5.0
SIUC epP pP 23 47 03.5 +1.1
USIN **University of** 25.27 0 eP P 23 46 47.2 -1.1
125A **Gardner Draw,** 25.30 325 ⇑P P 23 46 48.7 0.0
baz=25,SNR=54
MSTX **Muleshoe** 25.32 330 ⇓P P 23 46 48.1 -0.7
baz=25,SNR=12
224A **Cornudas Mount** 25.37 323 ⇑P P 23 46 49.1 -0.3
baz=26,SNR=14
BLA **Blacksburg** 25.37 14 eP P 23 46 49.4 +0.2
comp=Z,78nm,1.4s,mb5.0
Z26A **Caprock** 25.39 327 ⇑P P 23 46 48.8 -0.6
baz=26,SNR=12
FVM **French Village** 25.41 355 eP P 23 46 48.1 -1.4
comp=Z,7.5nm,0.7s,mb4.2
VWCC **Virginia Weste** 25.51 14 eP P 23 46 51.2 +0.7
AMTX **Amarillo** 25.56 333 eP P 23 46 50.7 -0.2
comp=Z,41nm,0.7s,mb5.0
AMTX ScP ScP 23 53 52.8 -1.7
WCI **Wyandotte Cave** 25.57 3 eP P 23 46 50.3 -0.7
comp=Z,31nm,0.7s,mb4.8
124A **Stringfield Ra** 25.78 324 ⇑P P 23 46 53.2 +0.1
baz=26,SNR=28
Z25A **Roswell** 25.80 326 ⇑P P 23 46 52.9 -0.3
baz=26,SNR=23
Y26A **Elida** 25.82 328 ⇑P P 23 46 52.6 -0.7
baz=26,SNR=9.5
223A **Chaparral, Ant** 25.87 321 ⇑P P 23 46 53.1 -0.8
baz=26
X27A **F and S Farms,** 26.02 330 ⇓P P 23 46 54.3 -0.9
baz=26,SNR=9.2
OLIL **Olney** 26.04 359 eP P 23 46 54.5 -0.8
comp=Z,37nm,1.1s,mb4.7
Z24A **Sheeppen Canyo** 26.20 325 ⇓P P 23 46 56.7 0.0
baz=26,SNR=23
123A **Bell Site, Whi** 26.21 323 ⇓P P 23 46 56.1 -0.8
baz=26
Y25A **Mesa, Roswell** 26.27 327 ⇑P P 23 46 57.4 -0.1
baz=26,SNR=27
X26A **CR and CF Fran** 26.30 329 ⇓P P 23 46 57.1 -0.6
baz=26,SNR=12
W27A **Bowe Ranch, En** 26.34 331 ⇓P P 23 46 57.8 -0.3
baz=26,SNR=15
222A **Williams Famil** 26.35 321 ⇑P P 23 46 57.1 -1.0
baz=26
BLO **Bloomington** 26.50 2 eP P 23 46 58.0 -1.4
comp=Z,9.2nm,0.8s,mb4.3
JSRW **J. Sargeant Re** 26.50 18 eP P 23 46 59.6 +0.2
Z23A **Rita Site, Whi** 26.64 324 ⇑P P 23 47 00.9 +0.1
baz=27
Y24A **Capitan** 26.68 326 ⇑P P 23 47 01.5 +0.4
baz=27,SNR=35
NNA **Nana** 26.69 156 P P 23 47 00.2 -1.2
122A **Conniff Cattle** 26.70 322 ⇑P P 23 47 01.3 0.0
baz=27
W26A **Owens Ranch, T** 26.71 330 ⇑P P 23 47 00.9 -0.4
baz=27
221A **Mesquite Ranch** 26.71 320 ⇓P P 23 47 00.8 -0.6
baz=27
X25A **Clemmons Ranch** 26.72 328 ⇓P P 23 47 01.6 +0.1
baz=27
320A **Kipp Ranch, An** 26.76 318 ⇓P P 23 47 02.8 +1.0
baz=27
121A **Cookes Peak, D** 27.07 320 ⇑P P 23 47 04.9 +0.3
baz=27,SNR=13
Z22A **Elephant Butte** 27.07 323 ⇑P P 23 47 04.5 0.0
baz=27,SNR=5.5
220A **Playas Peak, P** 27.12 318 ⇑P P 23 47 05.0 -0.1
baz=27,SNR=12
CBN **Corbin** 27.12 18 eP P 23 47 05.3 +0.3
comp=Z,34nm,0.7s,mb5.0
W25A **X Bar L Ranch,** 27.15 329 ⇑P P 23 47 05.2 -0.2
baz=27,SNR=20
X24A **Lazy VL Ranch,** 27.16 327 ⇓P P 23 47 05.7 +0.3
baz=27
319A **Douglas** 27.28 317 ⇑P P 23 47 06.5 -0.1
baz=27
V26A **Tequesquite Ra** 27.28 331 ⇓P P 23 47 06.3 -0.2
baz=27,SNR=22
BBGH **Gun Hill** 27.45 86 P P 23 47 07.4 -0.8
BNM **Barren Site** 27.51 324 eP P 23 47 08.8 +0.2
comp=Z,5.2nm,0.8s,mb4.1
Z21A **St. Cloud Mine** 27.52 322 ⇑P P 23 47 09.1 +0.4
baz=28,SNR=6.9
Y22A **Socorro** 27.55 324 ⇑P P 23 47 09.3 +0.4
baz=28,SNR=15
KSU1 **Kansas State U** 27.56 345 eP P 23 47 07.6 -1.3
comp=Z,11nm,0.6s,mb4.6

X23A **Hourglass Bar** 27.58 326 ⇑P P 23 47 09.8 +0.7
baz=28
120A **U Bar Ranch, L** 27.61 319 ⇓P P 23 47 09.5 0.0
baz=28
W24A **Lazy 6 Ranch,** 27.64 328 ⇑P P 23 47 10.1 +0.4
baz=28,SNR=17
V25A **Rancho No Teng** 27.72 329 ⇓P P 23 47 10.7 +0.3
baz=28,SNR=27
U26A **Atchley Ranch,** 27.75 331 ⇑P P 23 47 10.8 +0.1
baz=28
318A **Bisbee** 27.80 316 ⇑P P 23 47 11.0 -0.2
baz=28
MCWV **Mont Chateau** 27.84 13 eP P 23 47 11.6 +0.1
comp=Z,10nm,0.5s,mb4.6
Z20A **Nine Sixteen R** 27.96 320 ⇓P P 23 47 12.6 +0.1
baz=28
V24A **Rampart Ranch,** 27.96 328 ⇓P P 23 47 13.0 +0.5
baz=28,SNR=9.4
LAZ **Ladron** 27.98 324 eP P 23 47 12.3 -0.4
comp=Z,3.3nm,0.9s,mb3.9
W23A **Werner Place,** 27.99 326 ⇑P P 23 47 13.7 +0.8
baz=28,SNR=16
ANMO **Albuquerque** 28.00 326 eP P 23 47 13.3 +0.4
ANMO **Albuquerque** 28.00 326 P P 23 47 13.2 +0.3
comp=Z,4.3nm,0.7s,mb4.1,baz=140,slow=7.3,SNR=14
ANMO ScP ScP 23 54 00.7 -1.1
comp=Z,1.1nm,0.8s,baz=122,slow=4.1,SNR=4.6
Y21A **Point of Rocks** 28.02 323 ⇑P P 23 47 13.9 +0.9
baz=28,SNR=17
U25A **Circle Dot Ran** 28.07 330 ⇓P P 23 47 14.3 +0.8
baz=28
218A **Dragoon** 28.16 317 ⇑P P 23 47 14.2 -0.2
baz=28
119A **Ashpeak Ranch,** 28.18 319 ⇑P P 23 47 14.9 +0.4
baz=28
CBKS **Cedar Bluff** 28.22 340 eP P 23 47 15.6 +0.8
comp=Z,21nm,0.7s,mb4.8
W22A **Albuquerque** 28.32 325 ⇓P P 23 47 16.7 +0.9
baz=28
Y20A **Horse Springs,** 28.36 322 ⇓P P 23 47 17.3 +1.1
baz=28,SNR=14
X21A **Alamocita Cree** 28.39 323 ⇓P P 23 47 17.0 +0.6
baz=28,SNR=16
V23A **Ortiz Mt. (NFS** 28.45 327 ⇓P P 23 47 17.7 +0.8
baz=29,SNR=6.5
Z19A **T-Link Ranch,** 28.50 320 ⇓P P 23 47 17.9 +0.5
baz=29
U24A **Moreno Valley** 28.50 329 ⇓P P 23 47 18.3 +0.9
baz=29
118A **Homack Ranch,** 28.53 318 ⇑P P 23 47 17.9 +0.2
baz=29
217A **Green Valley** 28.56 316 ⇑P P 23 47 17.7 -0.2
baz=29
T25A **Trinidad** 28.66 331 ⇑P P 23 47 19.4 +0.6
baz=29,SNR=5.6
W21A **San Fidel** 28.79 325 ⇑P P 23 47 20.4 +0.5
baz=29
BBSR **BB Station** 28.86 43 eP P 23 47 21.0 +0.4
TUC **Tucson** 28.86 317 eP P 23 47 20.8 +0.1
comp=Z,9.3nm,1.3s,mb4.2
TUC ePcP PcP 23 50 28.2 -0.5
X20A **Quemado** 28.88 323 ⇓P P 23 47 21.4 +0.7
baz=29
U23A **El Rito** 28.90 328 ⇑P P 23 47 21.7 +0.8
baz=29,SNR=35
Y19A **Nutrioso** 28.93 321 ⇓P P 23 47 22.2 +1.0
baz=29
V22A **San Miguel Ran** 28.97 327 ⇑P P 23 47 21.8 +0.3
baz=29,SNR=6.5
117A **Oracle** 28.99 317 ⇓P P 23 47 21.6 -0.2
baz=29
S25A **Robets Cordova** 29.10 332 ⇓P P 23 47 23.0 +0.4
baz=29,SNR=9.0
216A **Three Points,** 29.14 315 ⇓P P 23 47 23.3 +0.2
baz=29
X19A **St. Johns** 29.27 322 ⇑P P 23 47 24.6 +0.4
baz=29
W20A **Ramah** 29.28 324 ⇓P P 23 47 24.5 +0.2
baz=29
U22A **Llaves** 29.29 327 ⇑P P 23 47 25.1 +0.8
baz=29,SNR=6.3
T23A **Casias Ranch,** 29.37 329 ⇑P P 23 47 26.0 +0.9
baz=30
S24A **Houchin Ranch,** 29.45 331 ⇓P P 23 47 26.6 +0.8
baz=30,SNR=8.5
116A **Eloy** 29.64 316 ⇑P P 23 47 27.6 +0.1
baz=30
SDCO **Great Sand Dun** 29.67 331 eP P 23 47 27.9 +0.2
comp=Z,23nm,1.4s,mb4.6
V20A **Brimhall** 29.74 325 ⇑P P 23 47 29.2 +0.9
baz=30
U21A **Nageezi** 29.75 326 ⇑P P 23 47 29.1 +0.7
baz=30,SNR=6.9
Y17A **Roosevelt** 29.76 319 ⇓P P 23 47 28.6 0.0
baz=30
T22A **Edith** 29.79 328 ⇑P P 23 47 29.5 +0.7
baz=30,SNR=5.2
R24A **Sanders Place,** 29.87 332 ⇑P P 23 47 30.0 +0.5
baz=30
W18A **Petrified Fore** 30.01 322 ⇓P P 23 47 31.1 +0.4
baz=30
V19A **Window Rock** 30.01 324 ⇑P P 23 47 31.1 +0.3
baz=30
Q25A **Bedland, Calha** 30.05 334 ⇑P P 23 47 32.0 +1.0
baz=30
214A **Organ Pipe Nat** 30.05 314 ⇓P P 23 47 31.1 -0.1
baz=30
115A **Sonoran Desert** 30.07 316 ⇑P P 23 47 31.5 +0.1
baz=30
T21A **Navajo Lake** 30.11 327 ⇑P P 23 47 32.3 +0.7
baz=30
X17A **Forest Lakes** 30.15 320 ⇑P P 23 47 32.3 +0.3
baz=30
U20A **Newcomb** 30.19 325 ⇑P P 23 47 32.8 +0.5
baz=30
Y16A **Circle Bar Ran** 30.29 318 ⇑P P 23 47 33.1 -0.1
baz=30
JFWS **Jewell Farm** 30.29 356 eP P 23 47 31.1 -2.0
S22A **4UR Ranch, Cre** 30.32 329 ⇓P P 23 47 34.1 +0.7
baz=30,SNR=8
P25A **Willow Gulch B** 30.51 334 ⇓P P 23 47 35.7 +0.6
baz=31
U19A **Dine' College,** 30.52 324 ⇓P P 23 47 35.8 +0.6
baz=31
114A **Black Gap (USA** 30.55 315 ⇓P P 23 47 35.6 0.0
baz=31
X16A **Lo Mia Camp, P** 30.60 319 ⇑P P 23 47 36.7 +0.6
baz=31,SNR=17
R22A **Saguache, Gunn** 30.66 330 ⇓P P 23 47 37.3 +0.9
baz=31,SNR=5.4
Q23A **Hartsel** 30.75 332 ⇑P P 23 47 37.9 +0.6
baz=31
MVCO **Mesa Verde** 30.78 326 eP P 23 47 38.2 +0.6
comp=Z,12nm,0.8s,mb4.7
MVCO epP pP 23 47 59.1 +5.3
MVCO ePP PP 23 48 50.0 +1.8
Y15A **Casa Rosa Ranc** 30.89 318 ⇓P P 23 47 38.8 +0.2
baz=31
Z14A **Wintersburg** 30.95 316 ⇓P P 23 47 39.5 +0.4
baz=31
U18A **Rough Rock, Ch** 30.98 324 ⇑P P 23 47 39.8 +0.4
baz=31
V17A **Tonalea, Kykot** 30.99 322 ⇑P P 23 47 39.4 0.0
baz=31
W16A **Flagstaff** 31.09 320 ⇓P P 23 47 40.9 +0.5
baz=31
P23A **Jefferson** 31.13 332 ⇓P P 23 47 41.5 +0.9
baz=31,SNR=12
R21A **Cimarron** 31.16 329 ⇓P P 23 47 41.5 +0.7
baz=31
X15A **Humboldt** 31.16 318 ⇑P P 23 47 41.5 +0.6
baz=31
BINY **Binghamton** 31.22 17 eP P 23 47 41.0 -0.3
comp=Z,55nm,1.3s,mb5.1
BINY epP pP 23 47 58.6 +1.1
Q22A **Crested Butte,** 31.23 330 ⇑P P 23 47 42.1 +0.7
baz=31,SNR=13
Y14A **Wickenburg** 31.33 317 ⇓P P 23 47 42.5 0.0
baz=31
Z13A **Yuma Proving G** 31.34 315 ⇓P P 23 47 42.6 +0.1
baz=31
ISCO **Idaho Springs** 31.38 333 eP P 23 47 43.2 +0.5
comp=Z,7.4nm,1.0s,mb4.4
ISCO epP pP 23 48 04.2 +5.2
ISCO ePP PP 23 48 55.6 +0.9
ISCO eScP ScP 23 54 10.7 -1.8
R20A **Redvale** 31.45 328 ⇓P P 23 47 44.3 +0.9
baz=32,SNR=8.8

T18A **Mexican Hat** 31.49 325 ⇑P P 23 47 44.1 +0.3
baz=32,SNR=8.6
SMCO **Snowmass** 31.50 331 eP P 23 47 45.1 +1.2
comp=Z,8.9nm,0.7s,mb4.6
SMCO epP pP 23 48 06.3 +6.1
SMCO ePP PP 23 48 56.6 +0.5
S19A **Harvey Farm, M** 31.52 326 ⇓P P 23 47 44.4 +0.4
baz=32,SNR=17
Q21A **Lamborn Mesa,** 31.53 330 ⇓P P 23 47 44.8 +0.7
baz=32
U16A **Tuba City** 31.54 322 ⇓P P 23 47 44.7 +0.5
baz=32,SNR=10
U17A **Shonto** 31.57 323 ⇓P P 23 47 44.8 +0.3
baz=32
X14A **Yava** 31.57 318 ⇓P P 23 47 45.1 +0.5
baz=32,SNR=6.0
W15A **Williams** 31.61 319 ⇑P P 23 47 45.3 +0.4
baz=32
P22A **Eagle** 31.73 331 ⇑P P 23 47 46.5 +0.6
baz=32
Y13A **Salome** 31.81 316 ⇑P P 23 47 46.6 0.0
baz=32
N24A **Carr** 31.91 335 ⇑P P 23 47 48.4 +1.0
baz=32
T17A **Navajo Res., N** 31.92 324 ⇓P P 23 47 48.2 +0.6
baz=32,SNR=9.3
S18A **Hurst Farm, Bl** 31.95 325 ⇓P P 23 47 48.1 +0.3
baz=32,SNR=18
V15A **Kaibab Nationa** 31.96 321 ⇑P P 23 47 48.9 +0.9
baz=32,SNR=9.3
ECSD **EROS Data Cent** 31.97 348 eP P 23 47 45.6 -2.2
comp=Z,52nm,1.2s,mb5.1
ECSD eS S 23 52 48.6 -5.8
Q20A **Ridgley Place,** 31.98 329 ⇑P P 23 47 47.8 -0.2
baz=32
R19A **Curley Farm, L** 31.99 327 ⇓P P 23 47 48.4 +0.3
baz=32,SNR=7.5
O22A **Kremmling** 32.09 332 ⇑P P 23 47 49.2 +0.2
baz=32,SNR=10
W14A **Seligman** 32.15 319 ⇑P P 23 47 50.2 +0.5
baz=32,SNR=6.0
X13A **Yucca** 32.27 317 ⇑P P 23 47 50.8 +0.1
baz=32
T16A **Glen Canyon Da** 32.33 323 ⇓P P 23 47 52.0 +0.9
baz=32
S17A **Black Ridge (B** 32.37 324 ⇑P P 23 47 51.4 -0.1
baz=32
R18A **Canyonlands Na** 32.40 326 ⇓P P 23 47 51.9 +0.1
baz=32
N23A **Red Feather La** 32.42 334 ⇑P P 23 47 52.4 +0.6
baz=32
U15A **North Rim** 32.43 321 ⇓P P 23 47 53.0 +1.0
baz=32,SNR=7.0
V14A **Boquillas Ranc** 32.43 319 ⇓P P 23 47 53.1 +1.0
baz=32,SNR=7.0
P20A **De Beque** 32.45 329 ⇑P P 23 47 52.7 +0.5
baz=32
Q19A **Hogan Spring (** 32.48 328 ⇓P P 23 47 52.4 0.0
baz=33,SNR=12
O21A **Pagoda** 32.56 331 ⇓P P 23 47 53.5 +0.4
baz=33
N22A **Wattenberg Ran** 32.56 333 ⇓P P 23 47 53.6 +0.4
baz=33
W13A **Hualapai Mount** 32.61 318 ⇑P P 23 47 53.8 +0.2
baz=33
BC3 **Big Chuckawall** 32.84 314 ⇑P P 23 47 56.2 +0.5
baz=33,SNR=5.7
P19A **Cripple Cowboy** 32.84 329 ⇑P P 23 47 56.8 +1.2
baz=33,SNR=9.0
O20A **White River Ci** 32.86 330 ⇑P P 23 47 56.8 +1.0
baz=33,SNR=18
R17A **Hanksville Air** 32.87 326 ⇓P P 23 47 56.2 +0.4
baz=33,SNR=16
T15A **Red Dirt Ranch** 32.87 322 ⇑P P 23 47 56.5 +0.6
baz=33
S16A **Weppner Ranch,** 32.88 324 ⇑P P 23 47 56.6 +0.6
baz=33
SADO **Sadowa** 32.90 11 ScP ScP 23 54 14.2 -3.3
comp=Z,13nm,1.0s,baz=307,slow=3.4,SNR=3.4
SADO LR LR 00 00 45.9
comp=Z,371nm,19.9s,baz=50,slow=36
IRM **Iron Mountain** 32.91 315 ⇓P P 23 47 56.3 0.0
baz=33
U14A **Mt Trumbull** 32.97 320 ⇑P P 23 47 57.5 +0.8
baz=33,SNR=6.8
N21A **Black Mountain** 33.01 332 ⇓P P 23 47 58.3 +1.2
baz=33,SNR=16
Q18A **Rafter H Ranch** 33.05 327 ⇓P P 23 47 57.7 +0.3
baz=33,SNR=17
M22A **Cedar Creek Ra** 33.11 334 ⇑P P 23 47 58.4 +0.5
baz=33,SNR=18
V13A **Grand Canyon W** 33.13 319 ⇑P P 23 47 58.4 +0.2
baz=33,SNR=5.3
R16A **Teasdale** 33.20 325 ⇑P P 23 47 59.6 +0.9
baz=33,SNR=22
SRU **San Rafael** 33.26 327 eP P 23 47 59.4 +0.1
comp=Z,21nm,0.9s,mb5.0
S15A **Panguitch** 33.30 323 ⇓P P 23 48 00.6 +1.0
baz=33
T14A **Hurricane** 33.32 321 ⇑P P 23 48 01.0 +1.1
baz=33,SNR=5.7
NCB **Newcomb** 33.35 18 eP P 23 47 59.2 -0.8
comp=Z,36nm,1.5s,mb5.0
NCB epP pP 23 48 16.8 +0.5
BELC **Belle Mtn. Jos** 33.41 314 ⇑P P 23 48 00.0 -0.6
baz=34
N20A **Spence Gulch,** 33.42 331 ⇓P P 23 48 01.3 +0.7
baz=34,SNR=32
COWI **Conover** 33.42 358 eP P 23 47 58.5 -2.1
comp=Z,8.7nm,0.6s,mb4.8
COWI epP pP 23 48 21.0 +4.1
Q16A **Castle Valley** 33.47 326 ⇑P P 23 48 01.5 +0.4
baz=34,SNR=17
P18A **Preston Nutter** 33.49 328 ⇑P P 23 48 01.7 +0.4
baz=34,SNR=31
PFO **Pinyon Flat Ob** 33.52 313 ⇑P P 23 48 01.1 -0.5
baz=34
GMRC **Granite Mounta** 33.61 316 ⇓P P 23 48 02.5 +0.2
baz=34
R15A **Junction** 33.61 324 ⇓P P 23 48 02.7 +0.4
baz=34
V12A **Nelson** 33.61 318 ⇑P P 23 48 03.2 +0.8
baz=34,SNR=6.4
RWWY **Rawlins** 33.62 333 eP P 23 48 02.7 +0.4
comp=Z,17nm,0.7s,mb5.0
RWWY epP pP 23 48 24.5 +5.9
M21A **Separation Pea** 33.62 333 ⇓P P 23 48 02.8 +0.4
baz=34,SNR=14
109C **Camp Elliot, M** 33.62 312 ⇓P P 23 48 02.4 -0.1
baz=34
P17A **Butcher Ranch,** 33.64 327 ⇑P P 23 48 03.0 +0.5
baz=34,SNR=28
MSU **Marysvale** 33.76 324 eP P 23 48 04.5 +0.9
comp=Z,4.4nm,0.8s,mb4.3
TMUT **Trail Mountain** 33.76 326 eP P 23 48 03.9 +0.2
comp=Z,9.2nm,0.8s,mb4.7
T13A **Saint George** 33.80 321 ⇑P P 23 48 05.0 +1.0
baz=34,SNR=5.8
S14A **Cedar City** 33.83 322 ⇓P P 23 48 04.4 +0.2
baz=34
U12A **Valley of Fire** 33.84 319 ⇓P P 23 48 04.4 +0.1
baz=34
O18A **Roosevelt** 33.84 329 ⇓P P 23 48 04.7 +0.4
baz=34
LONY **Lake Ozonia** 33.84 17 eP P 23 48 03.4 -0.8
comp=Z,69nm,1.4s,mb5.3
LONY epP pP 23 48 20.2 -0.3
LONY ePP PP 23 49 22.5 +0.5
M20A **Sweetwater, Wa** 33.90 332 ⇓P P 23 48 05.2 +0.5
baz=34
N19A **John Jarvie Ra** 33.90 330 ⇑P P 23 48 04.8 0.0
baz=34,SNR=12
L21A **Rawlins** 33.91 333 ⇑P P 23 48 04.8 -0.1
baz=34,SNR=21
ARUT **Antelope Range** 34.01 322 eP P 23 48 07.1 +1.3
comp=Z,10nm,0.8s,mb4.7
V11A **Goodsprings** 34.06 318 ⇓P P 23 48 06.1 -0.1
baz=34
S13A **Holt Ranch, En** 34.13 321 ⇑P P 23 48 07.9 +1.1
baz=34,SNR=16
TUQ **Turquoise Moun** 34.16 317 ⇓P P 23 48 07.2 +0.1
baz=34
O17A **Robinson Place** 34.16 328 ⇓P P 23 48 07.6 +0.6
baz=34,SNR=19
Q15A **Fillmore** 34.20 325 ⇑P P 23 48 07.7 +0.3
baz=34
N18A **Larsen Ranch,** 34.21 330 ⇑P P 23 48 07.5 0.0
baz=34,SNR=11

L20A **Wamsutter** 34.38 332 ⇑P P 23 48 08.8 -0.1
baz=34,SNR=5.5
MPU **Maple Canyon** 34.51 327 eP P 23 48 10.9 +0.8
comp=Z,31nm,0.9s,mb5.1
MPU ePP pP 23 48 29.0 +2.6
P15A **Leamington** 34.54 325 ⇓P P 23 48 10.8 +0.5
baz=35,SNR=9.8
O16A **Springville** 34.57 327 ⇑P P 23 48 11.0 +0.4
baz=35,SNR=22
R13A **O'Grain Ranch,** 34.58 322 ⇓P P 23 48 11.8 +1.1
baz=35,SNR=14
DAU **Daniels Canyon** 34.59 328 eP P 23 48 11.7 +0.9
comp=Z,35nm,1.1s,mb5.1
DAU ePP pP 23 48 33.2 +6.0
LPAZ **La Paz** 34.61 145 P P 23 48 11.2 0.0
comp=Z,1.5nm,0.5s,mb4.1,baz=348,slow=7.6,SNR=7.4
LPAZ PcP PcP 23 50 44.3 -0.2
comp=Z,2.7nm,0.8s,baz=329,slow=4.5,SNR=4.8
Q14A **Sevier Lake (B** 34.71 324 ⇓P P 23 48 12.6 +0.7
baz=35,SNR=19
M18A **Lyman** 34.74 330 ⇓P P 23 48 12.4 +0.4
baz=35
N17A **Moffit Pass** 34.76 329 ⇓P P 23 48 13.0 +0.7
baz=35,SNR=8.1
T11A **Corn Creek, Al** 34.76 320 ⇓P P 23 48 12.5 +0.2
baz=35
JLU **Jordanelle** 34.83 328 eP P 23 48 13.0 +0.2
comp=Z,12nm,0.8s,mb4.8
L19A **Farson** 34.92 331 ⇓P P 23 48 13.3 -0.3
baz=35,SNR=10
U10A **Ash Meadows, A** 34.99 318 ⇑P P 23 48 15.0 +0.7
baz=35
P14A **Drum Mountains** 35.00 325 ⇓P P 23 48 15.1 +0.8
baz=35,SNR=26
N16A **Rees Ranch, Co** 35.03 328 ⇑P P 23 48 14.9 +0.3
baz=35,SNR=5.5
CTU **Camp Tracy** 35.05 327 eP P 23 48 15.0 +0.2
comp=Z,23nm,0.9s,mb5.0
M17A **Scullys Gap (B** 35.07 329 ⇓P P 23 48 14.7 -0.2
baz=35,SNR=28
L18A **Fontenelle, Gr** 35.10 330 ⇓P P 23 48 15.5 +0.3
baz=35,SNR=10
Q13A **Wheeler Ranch,** 35.12 323 ⇑P P 23 48 16.0 +0.7
baz=35,SNR=12
O15A **The Old Anders** 35.15 326 ⇑P P 23 48 16.1 +0.5
baz=35
NOQ **North Oquirrh** 35.22 327 eP P 23 48 16.1 -0.2
comp=Z,42nm,0.8s,mb5.3
TPNV **Topopah Spring** 35.24 318 eP P 23 48 17.5 +1.0
K19A **Absolon Red Bu** 35.25 333 ⇑P P 23 48 16.6 +0.2
baz=35
DUG **Dugway** 35.27 326 eP P 23 48 16.8 +0.2
comp=Z,18nm,1.1s,mb4.8
EYMN **Ely** 35.39 356 eP P 23 48 15.4 -2.2
comp=Z,9.6nm,0.7s,mb4.7
P13A **Bates Ranch, G** 35.45 324 ⇓P P 23 48 19.2 +1.0
baz=36,SNR=34
BW06 **Boulder Array** 35.53 332 eP P 23 48 18.9 +0.1
comp=Z,8.4nm,0.5s,mb4.9
MPMC **Manual Prospec** 35.56 316 ⇓P P 23 48 19.3 +0.2
baz=36,SNR=6.4
N15A **Stansbury Isla** 35.60 327 ⇓P P 23 48 19.8 +0.3
baz=36,SNR=12
HWUT **Hardware Ranch** 35.62 329 eP P 23 48 19.8 +0.1
comp=Z,49nm,0.9s,mb5.4
L17A **Cokeville** 35.64 330 ⇓P P 23 48 19.5 -0.3
baz=36,SNR=9.1
Q12A **Willow Creek R** 35.65 322 ⇑P P 23 48 20.6 +0.7
baz=36,SNR=6.7
K18A **Toltan Ranch,** 35.65 331 ⇓P P 23 48 20.4 +0.5
baz=36,SNR=16
R11A **Troy Canyon, C** 35.67 321 ⇑P P 23 48 20.8 +0.7
baz=36,SNR=13
L16A **Fish Haven** 35.86 329 ⇓P P 23 48 21.5 -0.1
baz=36,SNR=19
SPUT **South Promonto** 35.86 327 eP P 23 48 21.4 -0.3
comp=Z,18nm,0.8s,mb5.0
SPUT ePP pP 23 48 43.6 +5.5
BGU **Big Grassy Mou** 35.90 326 eP P 23 48 22.4 +0.4
comp=Z,24nm,1.2s,mb5.0
N14A **Grayback Hills** 35.93 326 ⇑P P 23 48 22.9 +0.5
baz=36,SNR=36
M15A **Larsen Ranch,** 35.97 328 ⇑P P 23 48 22.8 +0.2
baz=36,SNR=36
P12A **McGill** 35.98 323 ⇓P P 23 48 23.5 +0.8
baz=36,SNR=8.5
ARVC **Arvin** 35.99 314 ⇓P P 23 48 22.8 -0.1
baz=36
GRAC **Grapevine Rang** 36.01 318 ⇑P P 23 48 23.1 +0.1
baz=36
Q11A **Duckwater** 36.02 322 ⇓P P 23 48 23.4 +0.2
baz=36
S10A **Tonopah Range,** 36.04 320 ⇓P P 23 48 24.0 +0.7
baz=36,SNR=7.0
R10A **Warm Springs** 36.08 320 ⇓P P 23 48 24.3 +0.7
baz=36
J18A **Kendall Valley** 36.09 332 ⇑P P 23 48 23.6 0.0
baz=36,SNR=15
PKME **Peaks-Kenny Pk** 36.15 22 eP P 23 48 23.9 -0.2
comp=Z,53nm,1.3s,mb5.3
PKME e pP 23 48 41.3 +0.8
K17A **Gardner Place,** 36.16 331 ⇑P P 23 48 24.6 +0.3
baz=36,SNR=7.4
AGMN **Agassiz Nation** 36.24 351 eP P 23 48 22.5 -2.3
comp=Z,44nm,1.1s,mb5.3
AGMN eS S 23 53 56.1 -4.2
AHID **Auburn Hatcher** 36.26 330 eP P 23 48 24.0 -1.0
comp=Z,24nm,0.6s,mb5.3
AHID ePP PP 23 49 40.9 -7.8
L15A **Malad City** 36.33 328 ⇓P P 23 48 25.6 -0.1
baz=36,SNR=30
HVU **Hansel Valley** 36.37 328 eP P 23 48 26.4 +0.3
comp=Z,18nm,0.8s,mb5.0
I18A **Diamond G Ranc** 36.38 333 ⇓P P 23 48 26.6 +0.6
baz=36
O12A **Currie** 36.41 324 ⇑P P 23 48 27.1 +0.8
baz=36,SNR=11
Q10A **Clear Creek Ra** 36.47 321 ⇑P P 23 48 27.9 +1.0
baz=36,SNR=7.0
M14A **Sheep Mountain** 36.48 327 ⇓P P 23 48 27.5 +0.5
baz=37,SNR=86
N13A **Wendover, West** 36.50 325 ⇑P P 23 48 27.9 +0.8
baz=37,SNR=13
J17A **Brown Place, J** 36.53 331 ⇑P P 23 48 27.6 +0.3
baz=37,SNR=22
K16A **Soda Springs** 36.54 330 ⇓P P 23 48 27.5 0.0
baz=37,SNR=8.3
REDW **Red Top Meadow** 36.59 331 eP P 23 48 28.2 +0.3
comp=Z,58nm,0.7s,mb5.6
SNOW **Snow King Moun** 36.62 331 eP P 23 48 28.4 +0.3
comp=Z,89nm,0.9s,mb5.7
LOHW **Long Hollow** 36.67 332 eP P 23 48 28.7 +0.2
comp=Z,30nm,1.1s,mb5.1
TPAW **Teton Pass** 36.74 331 eP P 23 48 29.2 +0.1
comp=Z,31nm,0.8s,mb5.3
L14A **Malta** 36.80 328 ⇓P P 23 48 29.7 0.0
baz=37,SNR=24
RRI2 **Red Ridge** 36.80 331 eP P 23 48 29.1 -0.6
comp=Z,28nm,0.8s,mb5.2
M13A **Montello** 36.82 326 ⇑P P 23 48 30.0 +0.1
baz=37,SNR=29
MOOW **Moose Ponds** 36.84 332 eP P 23 48 29.0 -0.9
comp=Z,14nm,0.7s,mb5.0
O11A **Cowboy Ranch,** 36.84 323 ⇑P P 23 48 30.3 +0.2
baz=37
J16A **Bone** 36.89 330 ⇑P P 23 48 30.5 +0.1
baz=37,SNR=17
RCTC **Rector, Farmer** 36.89 315 ⇓P P 23 48 30.5 -0.1
baz=37
I17A **Pilgrim Ck.** 36.89 332 ⇓P P 23 48 31.1 +0.6
baz=37,SNR=9.2
K15A **Arbon** 36.90 329 ⇑P P 23 48 30.5 0.0
baz=37,SNR=21
N12A **Clover Valley,** 36.96 325 ⇓P P 23 48 31.7 +0.6
baz=37,SNR=5.3
IMW **Indian Meadow** 37.04 332 eP P 23 48 32.0 +0.3
comp=Z,8.1nm,0.5s,mb4.9
FLWY **Flagg Ranch** 37.08 332 eP P 23 48 32.0 0.0
comp=Z,27nm,0.9s,mb5.2
K14A **Jones Ranch, D** 37.13 328 ⇓P P 23 48 32.3 -0.2
baz=37,SNR=12
H17A **Grant Village** 37.26 333 ⇑P P 23 48 34.0 +0.4
baz=37
M12A **Wells** 37.27 325 ⇓P P 23 48 33.7 0.0
baz=37,SNR=7.2
I16A **Newdale** 37.28 331 ⇓P P 23 48 34.2 +0.5
baz=37
N11A **Elko Archery C** 37.34 324 ⇓P P 23 48 34.6 +0.3
baz=37
J15A **Blackfoot** 37.38 330 ⇑P P 23 48 34.9 +0.4
baz=38,SNR=33
YFT **Old Faithful** 37.42 332 eP P 23 48 35.1 +0.2
comp=Z,29nm,0.9s,mb5.2
NVAR **Mina Array Bea** 37.43 319 P P 23 48 35.8 +0.7
comp=Z,6.1nm,0.8s,mb4.6,baz=133,slow=7.7,SNR=35
NVAR PcP PcP 23 50 52.5 -0.1
comp=Z,1.7nm,0.6s,baz=160,slow=2.8,SNR=5.1
NVAR ScP ScP 23 54 34.0 -0.2
comp=Z,4.8nm,0.9s,baz=140,slow=4.9,SNR=12
O10A **Cortez Mining,** 37.44 323 ⇑P P 23 48 35.2 0.0
baz=38
G18A **Lazy EL Ranch,** 37.55 334 ⇑P P 23 48 35.6 -0.4
baz=38
YMR **Madison River** 37.65 333 eP P 23 48 36.8 0.0
comp=Z,37nm,1.0s,mb5.2
M11A **Holland Ranch,** 37.77 325 ⇓P P 23 48 38.2 +0.3
baz=38
H16A **Russell Place,** 37.80 332 ⇑P P 23 48 38.7 +0.6
baz=38,SNR=9.4
L12A **House Creek Ra** 37.82 326 ⇓P P 23 48 38.2 -0.1
baz=38
I15A **Monteview** 37.85 330 ⇓P P 23 48 39.0 +0.4
baz=38
J14A **Carey** 37.86 329 ⇓P P 23 48 39.0 +0.4
baz=38,SNR=18
BMN **Battle Mountai** 37.96 322 eP P 23 48 38.4 -1.1
comp=Z,5.1nm,0.7s,mb4.5
G17A **Pierce Place,** 38.06 333 ⇑P P 23 48 41.2 +0.9
baz=38,SNR=5.9
F18A **Big Timber** 38.09 335 ⇓P P 23 48 40.2 -0.4
baz=38
ULM **Lac du Bonnet** 38.15 352 P P 23 48 38.5 -2.4
ULM LR LR 00 05 56.8
ULM **Lac du Bonnet** 38.15 352 P P 23 48 38.5 -2.4
comp=Z,20nm,0.8s,mb5.0,baz=172,slow=8.4,SNR=14
ULM LR LR 00 05 56.8
comp=Z,270nm,18.9s,baz=177,slow=39
L11A **Cat Creek Ranc** 38.24 326 ⇓P P 23 48 41.7 -0.2
baz=38,SNR=16
J13A **Cove Ranch, Pi** 38.25 328 ⇓P P 23 48 41.8 -0.1
baz=38,SNR=16
M10A **I.L. Ranch, Tu** 38.26 324 ⇑P P 23 48 42.4 +0.4
baz=38
H15A **Lima** 38.39 331 ⇑P P 23 48 43.9 +0.9
baz=38,SNR=55
G16A **Moss Hill, Enn** 38.46 332 ⇑P P 23 48 44.2 +0.6
baz=39,SNR=6.2
F17A **Fitzpatrick Pl** 38.48 334 ⇓P P 23 48 44.2 +0.3
baz=39
HLID **Hailey** 38.49 328 eP P 23 48 44.0 0.0
comp=Z,6.8nm,0.7s,mb4.6
CMB **Columbia Colle** 38.58 317 eP P 23 48 43.1 -1.6
comp=Z,2.3nm,0.6s,mb4.2
L10A **Juniper Basin** 38.58 325 ⇓P P 23 48 44.6 -0.1
baz=39,SNR=5.8
I13A **Wildhorse Cree** 38.59 329 ⇑P P 23 48 45.4 +0.6
baz=39,SNR=41
MCMT **McKenzie Canyo** 38.64 331 eP P 23 48 46.0 +0.8
comp=Z,24nm,0.8s,mb5.1
MCMT e pP 23 49 03.8 +2.0
E18A **Harlowton** 38.70 335 ⇓P P 23 48 45.5 -0.1
baz=39
BOZ **Bozeman (W)** 38.70 333 eP P 23 48 45.1 -0.6
comp=Z,5.6nm,0.8s,mb4.5
BOZ epP pP 23 49 00.5 -1.8
G15A **Dillon** 38.73 332 ⇑P P 23 48 46.6 +0.7
baz=39,SNR=25
H14A **Leadore** 38.73 330 ⇓P P 23 48 46.6 +0.7
baz=39,SNR=63
SIV **San Ignacio** 38.74 136 ScP ScP 23 54 37.4 -2.0
comp=Z,2.1nm,1.0s,baz=251,slow=18,SNR=4.6
F16A **Leonard Place,** 38.81 333 ⇑P P 23 48 46.7 +0.1
baz=39,SNR=5.5
DLMT **Dillon** 38.92 332 eP P 23 48 47.9 +0.4
comp=Z,33nm,1.0s,mb5.1
DLMT epP pP 23 49 04.3 +0.2
E17A **Martinsdale** 39.01 334 ⇓P P 23 48 48.4 +0.2
baz=39
I12A **Atlanta** 39.02 328 ⇓P P 23 48 48.4 +0.1
baz=39,SNR=27
MFID **Camas Ranch** 39.12 327 ⇓P P 23 48 49.1 -0.1
baz=39,SNR=12
H13A **Challis** 39.13 330 ⇑P P 23 48 49.4 +0.1
baz=39,SNR=57
D18A **Linhart Farms,** 39.17 336 ⇑P P 23 48 49.6 +0.1
baz=39,SNR=7.1
G14A **Jackson** 39.24 331 ⇑P P 23 48 50.5 +0.3
baz=39
E16A **East Helena** 39.41 334 ⇓P P 23 48 51.4 -0.2
baz=40,SNR=7.2
H12A **Diamond D Ranc** 39.41 329 ⇑P P 23 48 51.9 +0.2
baz=40,SNR=31
D17A **Six Diamond Ra** 39.49 335 ⇓P P 23 48 51.9 -0.3
baz=40,SNR=9.0
G13A **Cobalt** 39.50 330 ⇑P P 23 48 51.9 -0.4
baz=40,SNR=20
HRY **Holter Researc** 39.62 334 eP P 23 48 47.0 -6.3
comp=Z,18nm,1.0s,mb4.8
D16A **Dana Ranch, Ca** 39.75 334 ⇓P P 23 48 54.2 -0.2
baz=40,SNR=13
E15A **Deer Lodge** 39.75 333 ⇑P P 23 48 54.2 -0.3
baz=40,SNR=18
EGMT **Eagleton** 39.83 337 eP P 23 48 54.3 -0.7
comp=Z,20nm,0.8s,mb5.0
EGMT e pP 23 49 10.1 -1.5
C17A **Wharram Farm,** 39.91 336 ⇓P P 23 48 55.4 -0.3
baz=40,SNR=7.4
WVOR **Wild Horse Val** 40.04 324 eP P 23 48 56.1 -0.7
comp=Z,12nm,0.8s,mb4.8
WVOR epP pP 23 49 14.0 +0.5
F13A **Darby** 40.06 331 ⇓P P 23 48 56.4 -0.5
baz=40,SNR=40
E14A **Clinton** 40.13 332 ⇓P P 23 48 57.1 -0.4
baz=40,SNR=5.6
B18A **Beardsley Farm** 40.14 337 ⇓P P 23 48 57.5 -0.1
baz=40
CHMT **Chamberlain Mo** 40.40 333 eP P 23 48 59.3 -0.4
comp=Z,7.2nm,1.0s,mb4.5
CHMT epP pP 23 49 14.8 -1.6
C16A **Fuhringer Ranc** 40.44 335 ⇓P P 23 49 00.2 +0.1
baz=40
E13A **Victor** 40.47 332 ⇑P P 23 48 59.7 -0.7
baz=41,SNR=26
F12A **Elk City** 40.48 330 ⇓P P 23 48 59.8 -0.6
baz=41,SNR=106
A18A **Metzger Ranch,** 40.60 338 ⇓P P 23 49 00.8 -0.6
baz=41,SNR=5.3
D14A **Greenough** 40.64 333 ⇓P P 23 49 01.0 -0.8
baz=41,SNR=7.5
MSO **Missoula** 40.65 332 eP P 23 49 00.9 -0.8
comp=Z,25nm,1.3s,mb4.9
MSO epP pP 23 49 16.3 -2.2
MOD **Modoc** 40.70 322 eP P 23 49 02.0 -0.4
comp=Z,7.3nm,1.0s,mb4.5
MOD epP pP 23 49 19.1 0.0
MOD ePcP PcP 23 51 02.4 -0.5
C15A **Salmond Ranch,** 40.78 334 ⇑P P 23 49 02.4 -0.5
baz=41,SNR=26
BMO **Blue Mountains** 40.88 328 eP P 23 49 02.1 -1.6
comp=Z,8.0nm,0.9s,mb4.5
BMO epP pP 23 49 18.5 -2.0
B16A **M & M Farms, S** 40.91 336 ⇑P P 23 49 03.5 -0.4
baz=41
A17A **Triple J Farms** 40.94 337 ⇑P P 23 49 03.4 -0.8
baz=41,SNR=11
D13A **Huson** 41.08 332 ⇑P P 23 49 04.7 -0.7
baz=41,SNR=21
B15A **Bradely Ranch,** 41.18 335 ⇓P P 23 49 05.3 -0.9
baz=41,SNR=8.4
SWMT **Swartz Lake** 41.18 333 eP P 23 49 05.5 -0.7
comp=Z,4.5nm,1.0s,mb4.2
SWMT e 23 49 28.1
D12A **Red Ives Fores** 41.46 331 ⇓P P 23 49 07.8 -0.7
baz=42
JTMT **Jette** 41.49 333 eP P 23 49 07.2 -1.5
comp=Z,4.7nm,1.0s,mb4.3
K05A **Summer Lake** 41.54 323 ⇑P P 23 49 08.3 -1.0
baz=42
C13A **Hot Springs** 41.57 333 ⇑P P 23 49 08.7 -0.7
baz=42
I07A **Izee** 41.57 325 ⇓P P 23 49 08.2 -1.2
baz=42,SNR=15
F10A **Beach Ranch, E** 41.61 329 ⇓P P 23 49 09.0 -0.7
baz=42,SNR=16
A15A **Johnson Ranch,** 41.77 335 ⇑P P 23 49 10.5 -0.5
baz=42,SNR=21
BSMT **Bassoo Peak** 41.79 333 eP P 23 49 10.5 -0.7
comp=Z,5.3nm,0.8s,mb4.3
C12B **Naegeli Ranch,** 42.00 332 ⇓P P 23 49 12.5 -0.3
baz=42,SNR=7.5
B13A **Whitefish** 42.04 333 ⇓P P 23 49 12.7 -0.6
baz=42,SNR=7.8
G08A **Pilot Rock** 42.05 327 ⇑P P 23 49 12.8 -0.5
baz=42
A14A **Double T Ranch** 42.05 335 ⇑P P 23 49 12.9 -0.4
baz=42,SNR=33
LNOR **Lincton Mounta** 42.08 328 eP P 23 49 12.8 -0.8
comp=Z,8.4nm,0.9s,mb4.5
YBH **Yreka Blue Hor** 42.08 320 P P 23 49 11.9 -1.8
comp=Z,1.5nm,0.5s,mb3.9,baz=163,slow=5.7,SNR=5.8
WALA **Waterton Lakes** 42.33 334 eP P 23 49 14.3 -1.2
comp=Z,0.2nm,0.8s
WALA epP pP 23 49 32.1 -0.2
E09A **Wood Farm, Sta** 42.44 329 ⇑P P 23 49 15.4 -1.1
baz=42,SNR=8.9
B12A **Libby** 42.61 333 ⇑P P 23 49 17.7 -0.2
baz=43
E08A **Dider Farm, El** 42.89 328 ⇓P P 23 49 19.8 -0.4
baz=43
G06A **Carlson Farm,** 42.92 326 ⇓P P 23 49 20.3 -0.1
baz=43
A12A **Yaak River Ran** 42.98 333 ⇓P P 23 49 20.9 +0.1
baz=43
HAWA **Hanford** 43.07 328 eP P 23 49 20.5 -1.2
comp=Z,14nm,0.9s,mb4.7
RSW **Rattlesnake Hi** 43.11 328 eP P 23 49 21.3 -0.6
comp=Z,8.0nm,0.6s,mb4.6
RSW epP pP 23 49 36.4 -2.3
NEW **Newport** 43.16 331 eP P 23 49 20.4 -1.9
comp=Z,6.5nm,0.7s,mb4.5
NEW epP pP 23 49 38.2 -0.9
D08A **Wollman Farm,** 43.20 329 ⇑P P 23 49 21.8 -0.8
baz=43,SNR=14
OD2 **Odessa Site #2** 43.32 329 eP P 23 49 22.6 -1.1
comp=Z,45nm,1.0s,mb5.2
OD2 epP pP 23 49 37.2 -3.3
OD2 esP sP 23 49 45.4 -2.8
E07A **Sunnyside** 43.35 328 ⇓P P 23 49 23.1 -0.7
baz=43,SNR=7.8
C09A **Chrisman Ranch** 43.39 330 ⇓P P 23 49 23.4 -0.7
baz=44,SNR=8.2
VFP **Flag Point** 43.43 325 P P 23 49 24.9 +0.4
H04A **Detroit Lake** 43.46 324 ⇓P P 23 49 23.6 -1.1
baz=44,SNR=5.8
FFC **Flin Flon** 43.51 348 eP P 23 49 23.6 -1.3
comp=Z,28nm,1.0s,mb4.9
HOOD **Mount Hood Mea** 43.54 325 eP P 23 49 24.7 -0.7
comp=Z,56nm,0.9s,mb5.3
HOOD epP pP 23 49 42.8 +0.5
G04A **Mulino** 43.93 324 ⇓P P 23 49 28.0 -0.5
baz=44
TBM **Table Mountain** 44.14 328 P P 23 49 29.8 -0.3
WTV **Waterville** 44.15 329 P P 23 49 30.4 +0.2
B08A **Colville Reser** 44.29 330 ⇓P P 23 49 30.2 -1.2
baz=44,SNR=16
F04A **Amboy** 44.34 325 ⇑P P 23 49 31.1 -0.6
baz=44
LCO **Las Campanas** 44.50 159 eP P 23 49 33.8 +0.5
LCO epP pP 23 49 49.2 -0.9
LON **Longmire** 44.51 327 eP P 23 49 32.2 -0.9
comp=Z,12nm,0.9s,mb4.6
LON epP pP 23 49 48.8 -1.2
NLW **Nelson Butte** 44.60 329 P P 23 49 33.4 -0.4
RPN **Rapa Nui** 44.71 208 LR LR 00 02 34.1
comp=Z,198nm,21.7s,baz=200,slow=28
WRW **Wenatchee Ridg** 44.73 328 P P 23 49 34.8 -0.1
D05A **Enumclaw** 44.88 327 ⇑P P 23 49 35.4 -0.7
baz=45
SCHQ **Schefferville** 45.22 17 P P 23 49 36.8 -1.8
comp=Z,32nm,0.6s,mb5.2,baz=211,slow=6.2,SNR=68
SCHQ LR LR 00 08 41.6
comp=Z,470nm,21.9s,baz=209,slow=36
E03A **Lebam** 45.34 325 ⇓P P 23 49 38.8 -0.9
baz=45,SNR=8.9
EDM **Edmonton** 45.39 339 eP P 23 49 38.6 -1.4
EDM epP pP 23 49 55.3 -1.6
RPW **Rockport** 45.44 329 eP P 23 49 39.1 -1.3
comp=Z,6.4nm,0.9s,mb4.3
B06A **Marblemount** 45.47 329 ⇓P P 23 49 40.1 -0.6
baz=46
JCW **Jim Creek** 45.48 328 eP P 23 49 39.5 -1.4
comp=Z,43nm,1.1s,mb5.1
JCW e 23 50 02.3
GNW **Green Mountain** 45.56 327 eP P 23 49 39.9 -1.5
comp=Z,5.8nm,0.7s,mb4.4
GNW epP pP 23 49 57.0 -1.4
GNW ePcP PcP 23 51 18.2 -0.8
NLWA **Neilton Lookou** 46.02 326 eP P 23 49 46.8 +1.7
comp=Z,14nm,0.9s,mb4.7
NLWA epP pP 23 50 01.4 -0.6
A05A **Maple Falls** 46.08 329 ⇓P P 23 49 44.0 -1.5
baz=46
FCC **Fort Churchill** 46.33 355 eP P 23 49 45.1 -2.2
FCC ePcP PcP 23 51 18.5 -3.0
CPUP **Villa Florida** 48.68 143 P P 23 50 04.0 -2.0
comp=Z,4.4nm,0.6s,mb4.6,baz=317,slow=8.5,SNR=19
CPUP PcP PcP 23 51 29.1 -1.4
comp=Z,1.7nm,0.6s,baz=295,slow=3.5,SNR=3.3
FRB **Frobisher Bay** 52.84 11 P P 23 50 34.3 -2.4
comp=Z,24nm,0.7s,mb5.4,baz=207,slow=11,SNR=8.5
FRB LR LR 00 13 47.8
comp=Z,327nm,20.2s,baz=319,slow=37
YKA **Yellowknife Ar** 53.41 345 P P 23 50 38.9 -2.0
YKA pP pP 23 50 55.0 -3.2
YKA ScP ScP 23 55 36.2 -3.2
YKA **Yellowknife Ar** 53.41 345 P P 23 50 38.9 -2.0
comp=Z,4.8nm,0.8s,mb4.5,baz=138,slow=7.5,SNR=30
YKA pP pP 23 50 55.0 -3.2
comp=Z,7.3nm,0.9s,baz=141,slow=7.6,SNR=11
YKA ScP ScP 23 55 36.2 -3.2
comp=Z,1.5nm,0.6s,baz=144,slow=4.4,SNR=9.6
RCBR **Riachuelo** 54.64 107 eP P 23 50 47.7 -3.0
PLCA **Paso Flores** 55.38 164 eP P 23 50 55.2 -0.3
PLCA epP pP 23 51 12.2 -0.8
PLCA **Paso Flores** 55.38 164 P P 23 50 55.6 +0.1
comp=Z,3.3nm,0.9s,mb4.4,baz=295,slow=8.5,SNR=3.9
PLCA LR LR 00 11 03.9
comp=Z,194nm,19.4s,baz=345,slow=32
DLBC **Dease Lake** 55.67 335 P P 23 50 57.2 -0.2
comp=Z,14nm,0.9s,mb5.0,baz=136,slow=5.7,SNR=24
TAOE **Nuku Hiva Isla** 56.28 250 eS S 23 58 57.0 +9.0
comp=Z,186nm,28.4s
TAOE eLR LR 00 07 17.2
comp=Z,791nm,28.0s
SIT **Sitka** 57.25 331 P P 23 51 07.8 -0.8
RKT **Rikitea** 58.30 233 eLR LR 00 08 34.4
comp=Z,527nm,29.2s
RES **Resolute Bay** 62.21 358 P P 23 51 40.1 -2.4
RES **Resolute Bay** 62.21 358 LR LR 00 18 00.4
comp=Z,198nm,19.6s,baz=278,slow=35
INK **Inuvik** 63.00 343 eP P 23 51 45.8 -2.0
INK epP pP 23 52 03.1 -2.4
INK **Inuvik** 63.00 343 P P 23 51 46.5 -1.3
comp=Z,9.3nm,1.1s,mb4.6,baz=123,slow=5.8,SNR=5.3
EGAK **Eagle** 63.59 337 eP P 23 51 49.6 -2.1
comp=Z,3.4nm,1.0s,mb4.1
PAX **Paxson** 64.49 335 eP P 23 51 52.9 -4.8
comp=Z,4.4nm,0.8s,mb4.3
PMR **Palmer** 65.57 333 eP P 23 52 03.5 -1.3
ILAR **Eielson Array** 65.79 336 P P 23 52 04.0 -2.1
comp=Z,6.2nm,1.1s,mb4.3,baz=113,slow=4.7,SNR=40
ILAR pP pP 23 52 22.0 -1.9
comp=Z,4.6nm,1.0s,baz=132,slow=5.6,SNR=7.6
ILAR PP PP 23 54 43.2 +12
comp=Z,2.2nm,1.1s,baz=134,slow=6.4,SNR=3.1
ILAR LR LR 00 23 28.5
comp=Z,255nm,19.2s,baz=112,slow=38
COLA **College** 66.21 336 P P 23 52 06.6 -2.2
SUMG **Summit** 66.52 14 eP P 23 52 08.1 -2.6
comp=Z,13nm,1.1s,mb4.7
SUMG epP pP 23 52 25.4 -3.2
SUMG **Summit** 66.52 14 iP P 23 52 09.7 -0.9
comp=Z,7.9nm,1.0s,mb4.5
TRF **Thorofare Moun** 66.70 334 eP P 23 52 10.1 -1.8
comp=Z,9.3nm,0.9s,mb4.6
TRF epP pP 23 52 27.9 -2.0
BPAW **Bear Paw Mtn.** 67.21 335 eP P 23 52 12.7 -2.5
comp=Z,7.5nm,0.8s,mb4.6
BPAW epP pP 23 52 31.3 -1.8
BPAW esP sP 23 52 38.7 -1.9
COLD **Coldfoot** 67.97 338 eP P 23 52 18.4 -1.6
comp=Z,12nm,1.0s,mb4.7

COLD ePP pP 23 52 36.4 -1.5
PPT Papeete 68.03 245 eS S 00 01 24.9 +9.2
comp=Z,96nm,24.8s
PPT eLR LR 00 12 48.8
comp=Z,903nm,28.0s,baz=63
PPT Papeete 68.03 245 LR LR 00 16 12.5
comp=Z,236nm,19.0s,baz=28,slow=30
EVO Evora 74.26 53 eP **P 23 52 57.4 -1.1**
comp=Z,28nm,1.3s,mb4.5
EVO eMLR MLR
comp=Z,220nm,22.0s
ROSF Rostrenen 77.03 43 eP **P 23 53 14.8 +0.7**
ROSF epP pP 23 53 30.0 -2.4
ESDC Sonseca Array 77.31 52 P **P 23 53 12.2 -3.6**
comp=Z,0.4nm,0.4s,mb3.5,baz=289,slow=5.8,SNR=5.6
ESDC pP pP 23 53 33.1 -1.0
comp=Z,8.3nm,1.0s,baz=286,slow=5.5,SNR=15
ESDC LR LR 00 22 46.8
comp=Z,156nm,20.5s,baz=285,slow=32
ESLA Sonseca Array 77.31 52 eP **P 23 53 11.6 -4.3**
comp=Z,7.2nm,1.5s,mb4.2
SGMF Saint Gilles 77.51 43 eP **P 23 53 16.5 -0.3**
comp=Z,127nm,1.8s,mb5.0
SGMF Saint Gilles 77.51 43 eP **P 23 53 16.5 -0.3**
comp=Z,64nm,1.8s,mb5.0
RAR Rarotonga 78.31 245 LR LR 00 21 10.5
comp=Z,283nm,18.1s,baz=301,slow=30
GRR Gorron 78.63 43 eP **P 23 53 23.6 +0.6**
FLN La Foliniere 78.84 42 eP **P 23 53 24.9 +0.8**
FLN epP pP 23 53 40.0 -2.5
FLN eMLR MLR
comp=Z,315nm,22.2s
FLN La Foliniere 78.84 42 eP **P 23 53 24.9 +0.8**
FLN epP pP 23 53 40.0 -2.5
FLN LR LR
comp=Z,320nm,22.3s
SJPF Ste Jean 78.97 48 eP **P 23 53 24.9 -0.1**
comp=Z,79nm,1.5s,mb5.0
SJPF epP pP 23 53 41.7 -1.6
SJPF Ste Jean 78.97 48 eP **P 23 53 24.9 -0.1**
comp=Z,40nm,1.5s,mb5.0
SJPF epP pP 23 53 41.7 -1.6
LDF La Druitiere 79.09 42 eP **P 23 53 26.0 +0.5**
MFF Saint Martin d 79.31 45 eP **P 23 53 27.6 +0.8**
comp=Z,32nm,1.4s,mb4.7
MFF epP pP 23 53 43.6 -1.5
MFF Saint Martin d 79.31 45 eP **P 23 53 27.6 +0.8**
comp=Z,16nm,1.4s,mb4.7
MFF epP pP 23 53 43.6 -1.5
ETSF Etsaut 79.48 48 eP **P 23 53 28.5 +0.7**
comp=Z,12nm,1.1s,mb4.3
ETSF epP pP 23 53 45.7 -0.5
ETSF Etsaut 79.48 48 eP **P 23 53 28.5 +0.7**
comp=Z,6.1nm,1.1s,mb4.3
ETSF epP pP 23 53 45.7 -0.5
EPF Esparros 80.12 48 eP **P 23 53 32.6 +1.4**
RJF Les Rejaudoux 80.64 46 eP **P 23 53 34.9 +0.9**
RJF eMLR MLR
comp=Z,391nm,19.0s
RJF Les Rejaudoux 80.64 46 eP **P 23 53 34.9 +0.9**
RJF LR LR
comp=Z,390nm,19.0s
TCF Toulx Ste Croi 80.97 45 eP **P 23 53 36.2 +0.5**
TCF epP pP 23 53 51.3 -2.8
LIC Lamto 81.55 85 eP **P 23 53 37.7 -1.7**
comp=Z,27nm,1.1s,mb4.7
LIC eMLR MLR
comp=Z,217nm,22.8s
LIC Lamto 81.55 85 eP **P 23 53 37.7 -1.7**
comp=Z,14nm,1.1s,mb4.7
LIC LR LR
comp=Z,110nm,22.8s
DBIC Dimbokro 81.63 85 eP **P 23 53 37.5 -2.4**
DBIC Dimbokro 81.63 85 LR LR 00 25 47.2
comp=Z,214nm,19.6s,baz=241,slow=33
SSF Saint Saulge 81.73 44 eP **P 23 53 40.0 +0.3**
SSF epP pP 23 53 56.2 -1.9
LOR Lormes 81.93 43 eP **P 23 53 41.3 +0.5**
comp=Z,34nm,1.5s,mb4.7
LOR epP pP 23 53 57.5 -1.7
LOR eMLR MLR
comp=Z,183nm,22.5s
LOR Lormes 81.93 43 eP **P 23 53 41.3 +0.5**
comp=Z,17nm,1.5s,mb4.7
LOR epP pP 23 53 57.5 -1.7
LOR LR LR
comp=Z,180nm,22.5s
SMF Signal de Mont 82.03 44 eP **P 23 53 41.4 +0.1**
SMF epP pP 23 53 57.5 -2.2
MEZF Maizieres J'vi 82.51 42 eP **P 23 53 44.4 +0.6**
VIVF Saint-Julien-l 82.92 46 eP **P 23 53 47.5 +1.5**
NOA NORSAR Array B 83.37 29 pP pP 23 54 03.7 -2.8
comp=Z,1.7nm,0.7s,baz=286,slow=5.0,SNR=3.8
NOA LR LR 00 30 18.8
comp=Z,56nm,19.7s,baz=290,slow=35
HAU Haudompre 83.45 42 eP **P 23 53 49.2 +0.5**
HAU eMLR MLR
comp=Z,232nm,22.0s
HAU Haudompre 83.45 42 eP **P 23 53 49.2 +0.5**
HAU LR LR
comp=Z,230nm,22.0s
HINF Hinteralfeld 83.82 43 eP **P 23 53 51.1 +0.5**
CDF Champ du Feu 83.98 42 eP **P 23 53 52.2 +0.9**
LPL La Plagne 84.22 45 eP **P 23 53 54.2 +1.6**
LPG La Plagne 84.23 45 eP **P 23 53 54.6 +1.9**
DAVA Damuels 85.94 43 ⇑rpP pP 23 54 21.8 +2.0
comp=Z,14nm,1.0s
ARCES ARCESS Array B 86.14 19 P **P 23 53 58.4 -3.3**
ARCES ARCESS Array B 86.14 19 P **P 23 53 58.4 -3.3**
comp=Z,4.3nm,1.1s,mb4.3,baz=310,slow=4.6,SNR=4.5
FETA Feichten 86.57 43 ⇑rSP pP 23 54 24.9 +2.0
comp=Z,7.2nm,1.0s
NKC Novy Kostel 86.82 39 epP pP 23 54 25.6 +1.5
KHC Kasperske Hory 87.84 40 eP **P 23 54 06.4 -4.0**
comp=Z,8.1nm,1.0s,mb4.7
KHC Kasperske Hory 87.84 40 epP pP 23 54 30.5 +1.5
UPC Upice 88.92 38 epP pP 23 54 35.4 +1.3
CSNA Conrad Observa 89.64 41 ⇑rpP pP 23 54 39.5 +1.9
comp=Z,4.8nm,1.0s
CONA Conrad Observa 89.65 41 ⇑rpP pP 23 54 39.5 +1.9
comp=Z,5.7nm,1.0s
SUW Suwalki 91.76 33 eP **P 23 54 26.0 -2.6**
PET Petropavlovsk 93.66 326 P **P 23 54 36.4 -1.0**
BVAR Borovoye Array 112.00 14 PP PP 00 00 30.7 -8.6
comp=Z,1.1nm,0.9s,baz=333,slow=1.7,SNR=5.5
ZALV Zalesovo Beam 113.42 5 PKiKP PKiKP 23 59 56.1 -2.5
comp=Z,0.5nm,0.5s,baz=287,slow=2.2,SNR=3.5
ZALV PP PP 00 00 44.6 -4.7
comp=Z,0.4nm,0.3s,baz=350,slow=7.5,SNR=5.1
MAJO Matsushiro 114.74 320 ePKiKP PKiKP 00 00 00.7 -0.9
KSRS Korea Array 120.02 328 PKP PKPdf 00 00 09.8 -2.0
comp=Z,1.6nm,0.6s,baz=359,slow=2.1,SNR=11
WMQ Urumqi 123.71 4 ePKP PKPdf 00 00 17.8 -0.9
WMQ LR LR
comp=N,250nm,24.6s
WMQ LR LR
comp=E,160nm,20.8s
WMQ LR LR
comp=Z,270nm,20.8s
HHC Hu-ho-hao-te 123.92 342 ePKP PKPdf 00 00 17.1 -2.1
HHC PP PP 00 02 05.4 +3.4
HHC PKS 00 03 51.5
HHC SKS SKSdf 00 07 16.5 -8.9
HHC SKKS SKKSac 00 08 47.2 -8.7
HHC SS SS 00 18 42.5 -3.1
HHC AMB AMB
comp=Z,620nm,4.0s
HHC LR LR
comp=N,150nm,16.6s
HHC LR LR
comp=E,180nm,16.2s
HHC LR LR
comp=Z,160nm,16.1s
PMG Port Moresby 126.12 267 PKPdf PKPdf 00 00 23.9 -0.1
CTA Charters Tower 127.86 254 SKPbc 00 03 41.5
comp=Z,13nm,0.9s,baz=77,slow=6.6,SNR=6.9
CD2 Chengdu 135.37 346 PKP PKPdf 00 00 35.9 -5.3
GYA Guiyang 138.75 340 ePdif Pdif 23 57 55.2 -3.1
GYA PKP PKPdf 00 00 44.8 -2.8
GYA sPKP 00 01 15.9
GYA PP PP 00 03 40.4 +2.7
GYA SKS SKSdf 00 07 45.0 -7.7
GYA SKKS SKKSac 00 10 23.5 -4.1
GYA SS SS 00 21 44.6 -2.3
GYA AMB AMB
comp=Z,90nm,7.6s
GYA LR LR
comp=N,110nm,21.0s
GYA LR LR
comp=E,90nm,22.8s
GYA LR LR
comp=Z,110nm,21.6s
ASAR Alice Springs 139.08 248 PKhKP PKPpre 00 00 40.6
comp=Z,0.4nm,0.7s,baz=104,slow=2.6,SNR=3.4
ASAR PKP PKPdf 00 00 48.2 0.0
comp=Z,2.3nm,0.7s,baz=112,slow=2.0,SNR=15
ASAR pPKP pPKPdf 00 01 07.1 -0.5
comp=Z,3.4nm,0.8s,baz=111,slow=2.2,SNR=7.6
ASAR SKPbc SKPbc 00 04 18.2 +0.6
comp=Z,2.2nm,0.8s,baz=110,slow=3.0,SNR=12
KMI Kunming 141.16 345 PKP PKPdf 00 00 49.8 -2.2
KMI sPKP 00 01 19.2
KMI PP PP 00 03 55.7 +3.3
KMI SS SS 00 22 13.1 -1.8
KMI AMB AMB
comp=Z,87nm,5.5s
KMI LR LR
comp=N,210nm,27.0s
KMI LR LR
comp=E,180nm,28.4s
KMI LR LR
comp=Z,200nm,23.5s
FITZ Fitzroy Crossi 147.41 256 PKPbc PKPbc 00 01 06.2 +0.7
comp=Z,4.3nm,0.8s,baz=92,slow=1.3,SNR=6.3
CMAR Chiang Mai Arr 148.46 348 PKP PKPdf 00 01 03.2 -1.5
comp=Z,5.0nm,0.8s,baz=337,slow=3.0,SNR=16
CMAR PKPbc PKPbc 00 01 06.3 -1.9
comp=Z,5.3nm,0.8s,baz=349,slow=4.1,SNR=15

BJI 07 23:46:16.5, 39.74N×77.97E, h12km, ML3.5/7, 2C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.56**	**262**	Pn	Pn	23 46 49.9	+5.9
KSH				Sn	Sn	23 47 17.1	+13
KSH				smax			
	comp=N,700nm,0.4s						
KSH				smax			
	comp=E,840nm,0.3s						
KK31	**Karatay Array**	**6.54**	**303**	⇑Pn	Pb	23 48 14.0	+3.9
	comp=E,0.3nm,0.3s,baz=120,slow=13						
KK31				⇓Sn	Sg	23 49 39.5	-6.6
	comp=E,6.9nm,0.8s,baz=118,slow=29						
MK31	**Makanchi Array**	**7.72**	**23**	⇓Pn	Pn	23 48 11.3	+2.7
	comp=E,0.3nm,0.3s,baz=199,slow=13						
MK31				⇑Sn	Sn	23 49 38.9	+3.0
	comp=E,0.6nm,0.4s,baz=193,slow=28						

*ISCJB **07** 23:56:20.3±0.9, 24°.95S±0°.04×67°.72W±0°.08, h121km±8km, mb4.1/14, Error ellipse: s-maj=11.6km s-min=7.2km az=1.2*
*NEIC **07** 23:56:21.6±0.6, 24°.92S×67°.66W, h120km±6km, mb4.3/10, Error ellipse: s-maj=9.0km s-min=5.7km az=81.0*
*IDC **07** 23:56:23.5±0.6, 25°.03S×67°.69W, h136km±5km, mb3.7/7, mb1 3.8/10, mb1mx3.7/15, mbtmp3.6/10, MS3.3/1, Ms1 3.3/1, ms1mx2.9/17, Error ellipse: s-maj=22.3km s-min=14.0km az=81.0*
ISC 07 23:56:21.5±0.7, 24°.94S±0°.04×67°.68W±0°.08, h117km±7km, h139km±1.7km; pP-P, n53, σ0s86/43, mb4.1/14, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**4.87**	**213**	ePn	**Pn**	**23 57 32.0**	**-0.6**
LCO				eSn	**Sn**	**23 58 26.7**	**-1.1**
CFAA	**Coronel Fontan**	**6.65**	**184**	P	**Pn**	**23 57 58.4**	**+1.7**
	0.5nm,0.3s,baz=354,slow=11,SNR=28						
CFAA				S	**Sn**	**23 59 10.8**	**-0.3**
	0.9nm,0.3s,baz=336,slow=12,SNR=7.1						
LPAZ	**La Paz**	**8.62**	**357**	P	**Pn**	**23 58 23.2**	**-0.2**
	1.4nm,0.3s,baz=174,slow=6.2,SNR=43						
CPUP	**Villa Florida**	**9.44**	**101**	P	**Pn**	**23 58 35.4**	**+0.8**
	0.5nm,0.3s,baz=261,slow=12,SNR=7.6						
SIV	**San Ignacio**	**10.85**	**36**	P	**Pn**	**23 58 51.5**	**-1.9**
	2.2nm,0.3s,baz=219,slow=14,SNR=84						
TRQA	**Tornquist**	**13.94**	**161**	ePn	**Pn**	**23 59 34.2**	**+0.3**
	14nm,0.7s						
NNA	**Nana**	**15.53**	**324**	ePn	**Pn**	**23 59 56.0**	**+1.9**
PLCA	**Paso Flores**	**15.93**	**188**	eP	**Pn**	**23 59 59.0**	**+0.2**
	5.5nm,0.9s						
PLCA	**Paso Flores**	**15.93**	**188**	P	**Pn**	**00 00 00.0**	**+1.2**
	0.2nm,0.3s,baz=10,slow=13,SNR=3.3						
ATAH	**Atahualpa**	**20.46**	**328**	LR	LR	00 08 20.0	
	comp=Z,88nm,20.7s,baz=360,slow=35						
BCIP	**Isla Barro Col**	**35.91**	**339**	eP	**P**	**00 03 10.1**	**-0.5**
BBGH	**Gun Hill**	**38.67**	**13**	eP	**P**	**00 03 38.3**	**+4.5**
SJG	**San Juan**	**42.82**	**2**	P	**P**	**00 04 07.7**	**-0.2**
VNA1	**Neumayer--Stat**	**56.68**	**160**	e	**P**	**00 05 51.2**	**-0.9**
TKL	**Tuckaleechee C**	**62.16**	**345**	P	**P**	**00 06 27.5**	**-2.7**
	0.6nm,0.4s,mb3.9,baz=156,slow=10.0,SNR=3.6						
TXAR	**Lajitas Array**	**64.09**	**325**	P	**P**	**00 06 44.1**	**+1.0**
	0.3nm,0.8s,mb3.2,baz=122,slow=8.6,SNR=3.0						
TXAR				pP	pP	00 07 16.7	+4.9
	0.6nm,0.8s,baz=143,slow=9.1,SNR=3.6						
QSPA	**South Pole Qui**	**65.27**	**180**	eP	**P**	**00 06 50.6**	**+0.6**
	6.5nm,0.7s,mb4.6						
WMOK	**Wichita Mounta**	**66.28**	**332**	eP	**P**	**00 06 57.3**	**+0.2**
DBIC	**Dimbokro**	**68.69**	**72**	eP	**P**	**00 07 13.2**	**+0.5**
	4.3nm,0.7s,mb4.4						
DBIC	**Dimbokro**	**68.69**	**72**	P	**P**	**00 07 12.9**	**+0.1**
	2.2nm,0.3s,mb4.4,baz=210,slow=4.8,SNR=14						
KSU1	**Kansas State U**	**69.22**	**336**	P	**P**	**00 07 15.7**	**+0.3**
ANMO	**Albuquerque**	**69.99**	**327**	P	**P**	**00 07 20.2**	**-0.1**
ANMO				pP	pP	00 07 54.5	+5.1
ANMO	**Albuquerque**	**69.99**	**327**	P	**P**	**00 07 20.2**	**-0.1**
	0.7nm,0.6s,mb3.7,baz=142,slow=8.6,SNR=3.7						
ANMO				pP	pP	00 07 54.5	+5.1
	1.6nm,0.8s,baz=132,slow=9.8,SNR=4.0						
SBA	**Scott Base**	**72.66**	**190**	eP	**P**	**00 07 34.9**	**-0.9**
SUR	**Sutherland**	**75.89**	**119**	eP	**P**	**00 07 53.8**	**-1.6**
	46nm,1.3s,mb5.0						
RSSD	**Black Hills**	**76.37**	**334**	eP	**P**	**00 07 57.7**	**+0.1**
ISA	**Isabella**	**77.06**	**320**	P	**P**	**00 08 01.8**	**+0.1**
HWUT	**Hardware Ranch**	**77.69**	**328**	eP	**P**	**00 08 05.5**	**+0.5**
	1.5nm,0.6s,mb3.9						
TSUM	**Tsumeb**	**78.00**	**106**	eP	**P**	**00 08 08.3**	**+0.9**
	4.8nm,0.8s,mb4.3						
NVAR	**Mina Array Bea**	**78.89**	**322**	pP	pP	00 08 46.7	+5.2
	0.3nm,0.4s,baz=148,slow=6.7,SNR=2.9						
SCHQ	**Schefferville**	**79.45**	**0**	P	**P**	**00 08 14.4**	**0.0**
HLID	**Hailey**	**80.54**	**328**	eP	**P**	**00 08 21.1**	**+0.5**
	2.1.1s,mb4.2						
MAW	**Mawson**	**80.72**	**163**	eP	**P**	**00 08 20.3**	**-0.9**
	0.6nm,0.5s,mb3.7						
MAW	**Mawson**	**80.72**	**163**	P	**P**	**00 08 21.5**	**+0.2**
	3.3nm,0.5s,mb4.4,baz=219,slow=7.7,SNR=8.2						
BOSA	**Boshof**	**80.86**	**117**	P	**P**	**00 08 22.4**	**-0.3**
	3.9nm,0.7s,mb4.4,baz=99,slow=14,SNR=9.8						
LBTB	**Lobatse**	**82.57**	**114**	eP	**P**	**00 08 32.0**	**+0.2**
WALA	**Waterton Lakes**	**84.42**	**331**	eP	**P**	**00 08 40.2**	**-0.3**
ESDC	**Sonseca Array**	**87.50**	**44**	P	**P**	**00 08 56.8**	**+0.8**
	0.2nm,0.4s,mb3.5,baz=258,slow=4.5,SNR=3.6						
LSZ	**Lusaka**	**88.84**	**106**	eP	**P**	**00 09 02.9**	**0.0**
CASY	**Casey**	**89.06**	**179**	eP	**P**	**00 09 03.8**	**+0.8**
	7.8nm,0.7s,mb4.8						
YKA	**Yellowknife Ar**	**94.79**	**340**	P	**P**	**00 09 28.4**	**-0.8**
YKA				pP	pP	00 10 03.7	+4.0
YKA	**Yellowknife Ar**	**94.79**	**340**	P	**P**	**00 09 28.4**	**-0.8**
	0.5nm,0.8s,mb4.0,baz=132,slow=4.6,SNR=5.8						
YKA				pP	pP	00 10 03.7	+4.0
	0.6nm,0.8s,baz=139,slow=4.5,SNR=3.0						
ESK	**Eskdalemuir**	**96.92**	**31**	eP	**P**	**00 09 38.8**	**-0.3**
INK	**Inuvik**	**104.55**	**339**	eP	Pdif	00 10 12.4	-1.0
ASAR	**Alice Springs**	**127.34**	**205**	PKP	PKPdf	00 15 11.8	-1.1
	1.6nm,0.7s,baz=135,slow=1.7,SNR=19						
ASAR				pPKP	pPKPdf	00 15 48.7	+4.0
	1.2nm,0.8s,baz=127,slow=1.9,SNR=5.4						
WRAB	**Tennant Creek**	**130.51**	**208**	ePKPdf	PKPdf	00 15 18.6	-0.5
FITZ	**Fitzroy Crossi**	**135.29**	**198**	PKPdf	PKPdf	00 15 27.6	-0.5
BVAR	**Borovoye Array**	**137.92**	**37**	PKP	PKPdf	00 15 31.4	-0.4
	0.7nm,0.7s,baz=287,slow=5.6,SNR=5.0						
ZAA0	**Zalesovo Array**	**144.51**	**28**	ePKPdf	PKPdf	00 15 42.3	-1.3
ZALV	**Zalesovo Beam**	**144.51**	**28**	PKP	PKPdf	00 15 42.5	-1.1
	15nm,0.6s,baz=307,slow=4.3,SNR=64						
ZALV				pPKP	pPKPdf	00 16 19.2	+3.8
	6.0nm,0.9s,baz=297,slow=4.8,SNR=3.6						
KSH	**Kashi**	**146.24**	**56**	P	PKPdf	00 15 48.3	+1.3
KSH				epP		00 16 00.7	
KSH				esP		00 16 06.0	
KSH				ePcP		00 16 26.1	
KSH				ePP	PP	00 18 07.4	-64
KSH				eScP		00 20 24.2	
KSH				ePcS		00 20 29.0	
KSH				eS		00 24 09.3	
KSH				esS		00 24 31.1	
KSH				eScS		00 25 32.2	
KSH				eSS		00 28 16.1	
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,82nm,4.4s						
KSH				LR	LR		
	comp=N,210nm,12.1s						
KSH				LR	LR		
	comp=E,170nm,13.1s						
KSH				LR	LR		
	comp=Z,420nm,17.4s						
MK31	**Makanchi Array**	**147.64**	**40**	ePKPdf	PKPdf	00 15 49.3	+0.1
MKAR	**Makanchi Array**	**147.64**	**40**	PKPbc	PKPbc	00 15 51.8	-0.2
	comp=Z,8.9nm,0.7s,baz=306,slow=3.0,SNR=57						
MKAR				pPKPbc	pPKPbc	00 16 27.6	+4.1
	comp=Z,3.0nm,0.9s,baz=298,slow=2.6,SNR=3.1						

*BJI **08** 00:13:38.4, 3°.60S×152°.07E, h26km, mB5.1/6, mb4.8/13, Ms4.6/1, Ms7 4.4/1*
*ISCJB **08** 00:13:39.4±2.9, 3°.90S±0°.07×151°.8E±0°.1, h46km±26km, mb4.5/27, MS4.1/10, Error ellipse: s-maj=19.0km s-min=12.2km az=169.7*
*NEIC **08** 00:13:43.9±1.7, 3°.97S×151°.73E, h74km±15km, mb4.6/14, Error ellipse: s-maj=11.9km s-min=7.9km az=76.0*
*IDC **08** 00:13:43.0±8.3, 3°.94S×151°.80E, h65km±79km, mb3.9/11, mb1 4.0/12, mb1mx4.0/16, mbtmp3.9/12, ML4.0/1, MS4.1/10, Ms1 4.1/10, ms1mx3.8/20, Error ellipse: s-maj=41.5km s-min=23.3km az=102.0*
ISC 08 00:13:43.3±2.3, 3°.97S±0°.07×151°.8E±0°.1, h68km±21km, n54, σ0s95/45, mb4.3/26, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.07**	**220**	ePn	**Pn**	**00 15 23.6**	**-0.6**
	61nm,0.9s						
PMG				Sn	**Sn**	**00 16 50.4**	**+7.3**
CTA	**Charters Tower**	**16.89**	**198**	eP	**Pn**	**00 17 36.9**	**+1.5**
	7.2nm,0.9s						
CTA	**Charters Tower**	**16.89**	**198**	P	**Pn**	**00 17 37.0**	**+1.7**
	0.3nm,0.3s,baz=17,slow=17,SNR=4.4						
CTAO	**Charters Tower**	**16.89**	**198**	Pn	**Pn**	**00 17 35.9**	**+0.5**
	13nm,0.9s						
KAKA	**Kakadu**	**20.98**	**244**	eP	**P**	**00 18 17.2**	**-3.9**
	28nm,1.0s						
EIDS	**Eidsvold**	**21.28**	**182**	eP	**P**	**00 18 24.2**	**0.0**
DZM	**Mont Dzumac**	**22.95**	**143**	eP	**P**	**00 18 45.8**	**+3.8**
DZM	**Mont Dzumac**	**22.95**	**143**	eP	**P**	**00 18 43.5**	**+1.5**
	82nm,1.2s,mb4.9						
WRAB	**Tennant Creek**	**23.23**	**226**	eP	**P**	**00 18 44.3**	**-0.5**
	23nm,1.2s,mb4.4						
WB2	**Warramunga Arr**	**23.24**	**226**	eP	**P**	**00 18 45.0**	**+0.1**
ASAR	**Alice Springs**	**26.09**	**220**	P	**P**	**00 19 10.7**	**0.0**
	4.8nm,0.9s,mb3.9,baz=53,slow=8.5,SNR=15						
DAV	**Davao City (W)**	**28.34**	**293**	P	**P**	**00 19 30.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**29.17**	**239**	LR	LR	00 31 09.6	
	comp=Z,489nm,20.6s,baz=65,slow=36						
STKA	**Stephens Creek**	**29.35**	**198**	eP	**P**	**00 19 40.2**	**+0.4**
	2.3nm,1.2s,mb3.7						
STKA				LR	LR	00 31 26.4	
STKA	**Stephens Creek**	**29.35**	**198**	P	**P**	**00 19 40.7**	**+0.8**
	4.0nm,1.0s,mb4.0,baz=4.8,slow=12,SNR=2.9						
STKA				LR	LR	00 31 26.3	
	comp=Z,373nm,18.4s,baz=12,slow=36						
CBIJ	**Chichi jima**	**32.24**	**344**	LR	LR	00 31 16.4	
	comp=Z,442nm,21.1s,baz=124,slow=33						
AFI	**Afiamalu**	**37.29**	**108**	LR	LR	00 33 59.2	
	comp=Z,315nm,18.1s,baz=254,slow=33						
URZ	**Urewera**	**41.22**	**149**	LR	LR	00 35 05.2	
	comp=Z,241nm,21.6s,baz=332,slow=31						
KSM	**Kuching**	**41.78**	**277**	eP	**P**	**00 21 27.1**	**+0.7**
MJAR	**Matsushiro Arr**	**42.25**	**344**	P	**P**	**00 21 28.6**	**-1.2**
	0.7nm,0.4s,mb3.8,baz=160,slow=9.2,SNR=5.8						
MJAR				LR	LR	00 37 37.6	
	comp=Z,202nm,19.8s,baz=190,slow=34						
KSRS	**Korea Array**	**46.80**	**334**	P	**P**	**00 22 05.6**	**-0.6**
	1.7nm,0.7s,mb3.9,baz=147,slow=8.8,SNR=5.3						
KSRS				LR	LR	00 39 49.3	
	comp=Z,171nm,20.5s,baz=106,slow=34						
ASAJ	**Asahikawa**	**48.57**	**351**	LR	LR	00 40 03.0	
	comp=Z,199nm,19.1s,baz=180,slow=32						
RAR	**Rarotonga**	**50.06**	**114**	LR	LR	00 37 55.1	
	comp=Z,130nm,20.4s,baz=268,slow=29						
MCQ	**Macquarie Isla**	**50.71**	**175**	eP	**P**	**00 22 34.3**	**-1.6**
MDJ	**Mudanjiang**	**52.29**	**340**	eP	**P**	**00 22 45.6**	**-2.2**
ENH	**Enshi**	**52.83**	**313**	P	**P**	**00 22 51.2**	**-1.0**
BJT	**Baijiatuao**	**54.62**	**327**	P	**P**	**00 23 05.3**	**+0.3**
BJI	**Beijing**	**54.63**	**327**	P	pP	00 23 16.6	-6.0
BJI				pmax	pmax		
	comp=Z,8.0nm,1.9s,mb4.4						
CMAR	**Chiang Mai Arr**	**56.59**	**295**	P	**P**	**00 23 20.7**	**+1.2**
	comp=Z,1.2nm,0.3s,mb4.4,baz=117,slow=5.0,SNR=4.9						
PETK	**Petropavlovsk-**	**57.09**	**4**	P	**P**	**00 23 23.4**	**+0.9**
	comp=Z,11nm,1.0s,mb4.8,baz=170,slow=6.3,SNR=4.9						
LZH	**Lanzhou**	**59.92**	**316**	eP	**P**	**00 23 45.5**	**+3.0**
LZH				pP	pP	00 23 50.0	-10
LZH				sP	sP	00 23 52.1	-16
LZH				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.9						
GTA	**Gaotai**	**64.35**	**317**	eP	**P**	**00 24 13.2**	**+1.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
ULN	**Ulaanbaatar**	**64.75**	**328**	eP	**P**	**00 24 15.6**	**+1.1**
	comp=Z,6.3nm,1.2s,mb4.3						
SONM	**Songino Array**	**65.08**	**328**	P	**P**	**00 24 17.3**	**+0.6**
	comp=Z,1.7nm,0.7s,mb4.0,baz=141,slow=5.9,SNR=7.9						
SONM				LR	LR	00 47 46.4	
	comp=Z,209nm,22.0s,baz=57,slow=31						
LSA	**Lhasa**	**66.92**	**305**	eP	**P**	**00 24 29.1**	**+0.2**
YAK	**Yakutsk**	**67.97**	**349**	eP	**P**	**00 24 34.2**	**-0.5**
CASY	**Casey**	**68.50**	**197**	eP	**P**	**00 24 36.2**	**-1.8**
	comp=Z,6.6nm,1.1s,mb4.4						
TTA	**Tatalina**	**77.39**	**22**	eP	**P**	**00 25 32.7**	**+2.1**
	comp=Z,11nm,1.2s,mb4.5						
MK31	**Makanchi Array**	**79.02**	**319**	eP	**P**	**00 25 39.6**	**-0.4**
MKAR	**Makanchi Array**	**79.02**	**319**	P	**P**	**00 25 41.0**	**+1.0**
	comp=Z,1.8nm,1.0s,mb3.9,baz=100,slow=6.3,SNR=8.2						
PMR	**Palmer**	**79.37**	**25**	eP	**P**	**00 25 41.2**	**-0.4**
	comp=Z,14nm,1.1s,mb4.7						
ZALV	**Zalesovo Beam**	**79.89**	**326**	P	**P**	**00 25 44.0**	**-0.6**
	comp=Z,1.7nm,0.7s,mb4.0,baz=102,slow=5.3,SNR=6.8						
ILAR	**Eielson Array**	**81.79**	**22**	P	**P**	**00 25 54.2**	**-0.2**
	comp=Z,2.4nm,0.9s,mb4.0,baz=256,slow=5.0,SNR=18						
KURK	**Kurchatov**	**82.48**	**322**	eP	**P**	**00 25 58.2**	**-0.2**
	comp=Z,5.0nm,1.1s,mb4.3						
AAK	**Ala-Archa**	**83.35**	**314**	eP	**P**	**00 26 03.0**	**-0.1**
	comp=Z,3.6nm,1.0s,mb4.2						
EGAK	**Eagle**	**84.02**	**23**	eP	**P**	**00 26 05.3**	**-0.7**
	comp=Z,7.9nm,1.2s,mb4.4						
QSPA	**South Pole Qui**	**85.98**	**180**	eP	**P**	**00 26 16.2**	**+0.5**
	comp=Z,6.7nm,1.0s,mb4.5						
KBL	**Kabul**	**86.24**	**305**	eP	**P**	**00 26 18.0**	**+0.2**
BVAR	**Borovoye Array**	**87.96**	**323**	P	**P**	**00 26 25.1**	**-0.6**
	comp=Z,1.7nm,0.7s,mb4.2,baz=100,slow=5.6,SNR=11						
ARU	**Arti**	**95.06**	**326**	eP	**P**	**00 26 58.5**	**-0.1**
	comp=Z,4.3nm,0.7s,mb5.0						
ARUT	**Antelope Range**	**96.21**	**53**

PMG				*e*Pg		**Pg**		00 17 53.9	**-1.7**
PMG				*e*Sn		**Sn**		00 18 25.1	**+0.1**
PMG	**Port Moresby**	**3.62**	**175**	P		**Pn**		00 17 44.1	**+1.9**
COEN	**Coen**	**8.88**	**204**	*e*Pn		**Pn**		00 18 55.2	**+0.8**
COEN	**Coen**	**8.88**	**204**	P		**Pn**		00 18 56.4	**+1.9**
	6µm280nm,0.8s								
HNR	**Honiara**	**13.52**	**106**	*e*Pn		**Pn**		00 19 59.4	**+1.5**
CTA	**Charters Tower**	**14.24**	**182**	*e*P		**Pn**		00 20 10.4	**+2.7**
	8.3nm,0.8s								
CTA	**Charters Tower**	**14.24**	**182**	Pn		**Pn**		00 20 10.4	**+2.7**
	1.2nm,0.3s,baz=2.4,slow=14,SNR=5.6								
CTAO	**Charters Tower**	**14.24**	**182**	*e*Pn		**Pn**		00 20 09.6	**+1.8**
KAKA	**Kakadu**	**15.77**	**243**	*e*P		**Pn**		00 20 25.5	**-2.7**
	24nm,0.5s								
KAKA	**Kakadu**	**15.77**	**243**	*e*Pn		**Pn**		00 20 28.8	**+0.6**
	61nm,0.5s								
KAKA	**Kakadu**	**15.77**	**243**	P		**Pn**		00 20 31.1	**+2.9**
SWI	**Sorong**	**16.27**	**287**	P		**Pn**		00 20 40.3	**+5.5**
	1µm123nm,0.9s								
WRAB	**Tennant Creek**	**18.57**	**220**	*e*P		**Pn**		00 21 03.3	**-0.1**
	12nm,0.7s								
WB2	**Warramunga Arr**	**18.58**	**220**	*e*P		**Pn**		00 21 03.6	**+0.1**
GUMO	**Guam**	**19.33**	**354**	*e*P		**Pn**		00 21 12.4	**-0.2**
EIDS	**Eidsvold**	**19.91**	**169**	*e*P		**Pn**		00 21 17.6	**-1.8**
	6.8nm,0.6s								
KNA	**Kununurra**	**20.29**	**239**	P		**P**		00 21 26.5	**+4.5**
	110nm,0.7s								
ASAR	**Alice Springs**	**21.70**	**214**	P		**P**		00 21 37.2	**+0.1**
	2.8nm,0.5s,mb3.9,baz=55,slow=8.9,SNR=14								
ASAR				S		**S**		00 25 34.2	**-3.2**
	1.5nm,0.8s,baz=33,slow=16,SNR=5.6								
FITZ	**Fitzroy Crossi**	**24.03**	**238**	*e*P		**P**		00 21 59.9	**-1.4**
	17nm,0.6s,mb4.7								
FITZ	**Fitzroy Crossi**	**24.03**	**238**	*e*P		**P**		00 22 00.6	**-0.7**
	8.7nm,0.6s,mb4.4								
FITZ	**Fitzroy Crossi**	**24.03**	**238**	P		**P**		00 22 00.6	**-0.6**
	14nm,1.1s,mb4.3,baz=74,slow=4.3,SNR=11								
FITZ	**Fitzroy Crossi**	**24.03**	**238**	P		**P**		00 22 02.4	**+1.1**
	40nm,1.1s,mb4.7								
LUWI	**Luwuk**	**24.45**	**280**	P		**P**		00 22 05.8	**+0.6**
	150nm,0.9s,mb5.4								
DAV	**Davao City (W)**	**24.73**	**301**	P		**P**		00 22 07.6	**-0.2**
MRSI	**Marisa**	**25.60**	**283**	P		**P**		00 22 16.1	**+0.5**
STKA	**Stephens Creek**	**26.42**	**190**	*e*P		**P**		00 22 21.5	**-1.4**
	5.9nm,0.9s,mb4.1								
STKA	**Stephens Creek**	**26.42**	**190**	*e*P		**P**		00 22 23.3	**+0.4**
	1.3nm,0.8s,mb3.5								
STKA	**Stephens Creek**	**26.42**	**190**	P		**P**		00 22 24.2	**+1.4**
	3.9nm,0.9s,mb3.9,baz=345,slow=12,SNR=6.5								
KAPI	**Kappang**	**26.95**	**270**	*e*P		**P**		00 22 27.9	**0.0**
MBWA	**Marble Bar**	**30.37**	**237**	*e*P		**P**		00 22 57.8	**-0.4**
KKM	**Kota Kinabalu**	**32.72**	**291**	*e*P		**P**		00 23 19.0	**0.0**
KSM	**Kuching**	**37.16**	**280**	*e*P		**P**		00 23 57.9	**+0.5**
KSRS	**Korea Array**	**46.48**	**339**	P		**P**		00 25 13.6	**+0.4**
	1.2nm,0.5s,mb4.1,baz=151,slow=9.0,SNR=6.8								
KULM	**Kulim**	**47.38**	**283**	*e*P		**P**		00 25 20.4	**-0.3**
CMAR	**Chiang Mai Arr**	**52.98**	**298**	P		**P**		00 26 04.2	**+1.1**
	1.0nm,0.3s,mb4.2,baz=134,slow=6.4,SNR=4.5								
BJT	**Baijiatuau**	**53.60**	**331**	*e*P		**P**		00 26 07.1	**-0.2**
	7.8nm,1.0s,mb4.6								
SONM	**Songino Array**	**64.12**	**331**	P		**P**		00 27 21.1	**+0.8**
	2.0nm,0.9s,mb4.2,baz=143,slow=7.1,SNR=8.4								
CASY	**Casey**	**65.42**	**195**	*e*P		**P**		00 27 27.8	**-0.7**
	3.5nm,0.5s,mb4.7								
SBA	**Scott Base**	**72.79**	**176**	*e*P		**P**		00 28 10.9	**-3.2**
	4.0nm,0.8s,mb4.4								
MK31	**Makanchi Array**	**77.20**	**321**	*e*P		**P**		00 28 39.4	**-0.7**
MKAR	**Makanchi Array**	**77.20**	**321**	P		**P**		00 28 39.9	**-0.2**
	0.6nm,0.8s,mb3.6,baz=114,slow=6.9,SNR=3.8								
ZALV	**Zalesovo Beam**	**78.72**	**328**	P		**P**		00 28 47.2	**-1.2**
	0.6nm,0.4s,mb3.9,baz=117,slow=6.6,SNR=3.1								
MAW	**Mawson**	**82.38**	**203**	*e*P		**P**		00 29 07.3	**-0.6**
	0.9nm,0.7s,mb3.8								
MAW	**Mawson**	**82.38**	**203**	P		**P**		00 29 07.4	**-0.4**
	1.3nm,0.3s,mb4.3,baz=56,slow=2.1,SNR=5.1								
QSPA	**South Pole Qui**	**84.19**	**180**	*e*P		**P**		00 29 16.7	**-0.3**
	6.6nm,0.9s,mb4.8								
COLA	**College**	**85.02**	**23**	*e*P		**P**		00 29 21.3	**0.0**
ILAR	**Eielson Array**	**85.35**	**23**	P		**P**		00 29 22.5	**-0.5**
	2.2nm,0.8s,mb4.3,baz=252,slow=5.2,SNR=21								
LPAZ	**La Paz**	**139.06**	**123**	PKhKP		PKPpre		00 36 07.2	
	0.8nm,0.8s,baz=268,slow=4.3,SNR=3.7								
LPAZ				PKP		PKPdf		00 36 13.7	**-0.2**
	3.1nm,1.0s,baz=23,slow=5.4,SNR=6.3								
CPUP	**Villa Florida**	**140.42**	**145**	PKP		PKPdf		00 36 16.9	**+0.7**
CPUP	**Villa Florida**	**140.42**	**145**	PKP		PKPdf		00 36 16.9	**+0.7**
	4.8nm,1.0s,baz=335,slow=4.5,SNR=4.6								
DBIC	**Dimbokro**	**151.82**	**273**	PKPbc		PKPbc		00 36 42.0	**-0.1**
	3.1nm,0.9s,baz=322,slow=2.1,SNR=6.7								

IDC ***08*** *00:57:18.1±0.7, 4.°12N×126.°87E, h0km, mb4.3/15, mb1 4.4/16, mb1mx4.3/22, mbtmp4.3/16, ML4.6/1, MS3.5/2, Ms1 3.5/2, ms1mx3.0/21, Error ellipse: s-maj=30.0km s-min=14.2km az=70.0*

BJI ***08*** *00:57:19.3, 3.°80N×126.°56E, h30km, mB4.8/9, mb4.6/15, Ms4.9/3, Ms7 4.2/2*

NEIC ***08*** *00:57:23.4±0.8, 4.°16N×126.°89E, h37km±8km, mb4.6/18, Error ellipse: s-maj=6.5km s-min=4.3km az=69.0*

ISCJB ***08*** *00:57:25.2±0.8, 4.°19N±0.°04×126.°85E±0.°06, h69km±7km, mb4.4/37, Error ellipse: s-maj=10.3km s-min=6.0km az=153.6*

DJA ***08*** *00:57:27, 4.°13N×126.°73E, h30km, MLv4.5/3*

ISC 08 00:57:27.0±0.8, 4.°17N±0.°04×126.°85E±0.°06, h69km±8km, h37km±3.4km:pP-P,n71,σ1s04/75,mb4.4/37,3D,Taluad Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SGSI	**Sangihe**	**1.40**	**250**	P		**Pn**	00 57 47.4	**-3.2**
SGSI				S		**Sn**	00 58 06.3	**-1.5**
GSPH	**General Santos**	**2.68**	**315**	*e*P		**Pn**	00 58 07.8	**-0.1**
DAV	**Davao City (W)**	**3.14**	**336**	Pn		**Pn**	00 58 11.0	**-3.1**
	69nm,0.3s,baz=262,slow=14,SNR=2.1							
DAV				Lg			00 59 01.2	
	124nm,0.3s,baz=72,slow=23,SNR=4.2							
KCP	**Kidapawan**	**3.32**	**328**	*i*P		**Pn**	00 58 21.8	**+5.3**
KCP				*e*S		**Sn**	00 59 14.7	**+20**
MNI	**Manado**	**3.37**	**217**	P		**Pn**	00 58 17.4	**+0.1**
MNI				S		**Sn**	00 59 02.4	**+6.3**
TNTI	**Ternate**	**3.42**	**171**	P		**Pn**	00 58 19.0	**+1.1**
TNTI				S		**Sn**	00 58 59.3	**+2.1**
KMSI	**Cibinong**	**4.58**	**219**	P		**Pn**	00 58 35.0	**+1.2**
CGP	**Cagayan de Oro**	**4.76**	**333**	*i*eP		**Pn**	00 58 41.3	**+5.0**
LBMI	**Labuha**	**4.82**	**172**	P		**Pn**	00 58 38.6	**+1.5**
MRSI	**Marisa**	**6.12**	**233**	P		**Pn**	00 58 54.4	**-0.5**
LUWI	**Luwuk**	**6.59**	**218**	P		**Pn**	00 59 06.9	**+5.6**
SPSI	**Sidrap Palu**	**10.74**	**221**	P		**Pn**	01 00 00.7	**+2.7**
KAPI	**Kappang**	**11.55**	**218**	Pn		**Pn**	01 00 06.2	**-3.0**
KSM	**Kuching**	**16.73**	**261**	Pn		**Pn**	01 01 15.7	**-1.4**
GUMO	**Guam**	**20.10**	**61**	P		**P**	01 01 53.3	**-1.9**
FITZ	**Fitzroy Crossi**	**22.16**	**183**	*e*P		**P**	01 02 16.0	**-1.3**
	4.5nm,0.6s,mb4.0							
QIZ	**Qiongzhong**	**22.22**	**313**	*e*P		**P**	01 02 17.0	**-0.9**
PMG	**Port Moresby**	**24.33**	**124**	*e*P		**P**	01 02 37.6	**-0.8**
WRAB	**Tennant Creek**	**25.06**	**163**	*e*P		**P**	01 02 44.4	**-0.7**
	14nm,0.8s,mb4.4							
WB2	**Warramunga Arr**	**25.07**	**163**	*e*P		**P**	01 02 44.0	**-1.1**
MBWA	**Marble Bar**	**26.12**	**195**	*e*P		**P**	01 02 53.9	**-0.8**
	14nm,1.0s,mb4.4							
ASAR	**Alice Springs**	**28.51**	**166**	P		**P**	01 03 15.5	**-0.5**
	0.8nm,0.6s,mb3.5,baz=338,slow=6.7,SNR=10							
CTAO	**Charters Tower**	**30.74**	**142**	P		**P**	01 03 35.0	**-0.8**
CMAR	**Chiang Mai Arr**	**30.75**	**300**	P		**P**	01 03 37.0	**+1.0**
	3.6nm,0.7s,mb4.2,baz=109,slow=7.0,SNR=14							
CHTO	**Chiang Mai**	**30.90**	**300**	*e*P		**P**	01 03 36.7	**-0.5**
	5.1nm,0.9s,mb4.2							
KSRS	**Korea Array**	**33.14**	**2**	P		**P**	01 03 57.4	**+0.8**
	2.4nm,0.6s,mb4.2,baz=184,slow=9.2,SNR=12							
MJAR	**Matsushiro Arr**	**33.87**	**17**	P		**P**	01 04 01.2	**-1.7**
	0.5nm,0.4s,mb3.7,baz=198,slow=7.5,SNR=4.6							
MJAR				LR		LR	01 15 58.3	
	comp=Z,62nm,20.4s,baz=320,slow=33							
COCO	**West Island**	**33.98**	**241**	*e*P		**P**	01 04 04.0	**-0.2**
XAN	**Xi'an**	**34.08**	**333**	P		**P**	01 04 04.1	**-0.7**
XAN				pP		pP	01 04 13.2	-8.4
XAN				sP		sP	01 04 19.9	-10
XAN				pmax		pmax		
	comp=Z,5.0nm,1.1s,mb4.3							
XAN				pmax		pmax		
	comp=Z,21nm,6.6s							
HNR	**Honiara**	**35.65**	**112**	P		**P**	01 04 18.0	**-0.7**
BJT	**Baijiatuau**	**36.97**	**346**	*e*P		**P**	01 04 28.4	**-1.1**
	comp=Z,20nm,0.8s,mb5.1							
BJI	**Beijing**	**36.98**	**346**	P		**P**	01 04 30.7	**+1.0**
BJI				pmax		pmax		
	comp=Z,32nm,1.1s,mb5.2							
NWAO	**Narrogin (SRO)**	**38.01**	**193**	*e*P		**P**	01 04 46.8	**+8.4**
	comp=Z,21nm,1.3s,mb4.8							
LZH	**Lanzhou**	**38.18**	**329**	⇓P		**P**	01 04 41.2	**+1.3**
LZH				pP		pP	01 04 53.0	-3.8
LZH				pmax		pmax		
	comp=Z,27nm,1.0s,mb5.0							
LZH				pmax		pmax		
	comp=Z,90nm,4.0s							
STKA	**Stephens Creek**	**38.50**	**160**	*e*P		**P**	01 04 42.5	**-0.1**
	comp=Z,1.5nm,0.8s,mb3.9							
STKA	**Stephens Creek**	**38.50**	**160**	P		**P**	01 04 42.0	**-0.6**
	comp=Z,5.7nm,0.8s,mb4.5,baz=338,slow=12,SNR=6.8							
MDJ	**Mudanjiang**	**40.35**	**3**	P		**P**	01 04 55.8	**-2.0**
LSA	**Lhasa**	**42.24**	**311**	*e*P		**P**	01 05 13.7	**+0.2**
	comp=Z,6.1nm,0.8s,mb4.4							
GTA	**Gaotai**	**42.78**	**329**	P		**P**	01 05 18.0	**+0.2**
GTA				pP		pP	01 05 27.9	-7.1
GTA				sP		sP	01 05 31.7	-11
GTA				pmax		pmax		
	comp=Z,7.0nm,0.8s,mb4.4							
PALK	**Pallekele**	**46.00**	**276**	*e*P		**P**	01 05 45.4	**+1.4**
ULN	**Ulaanbaatar**	**46.74**	**342**	*e*P		**P**	01 05 49.4	**+0.3**
	comp=Z,3.1nm,0.8s,mb4.1							
ULN				*e*PcP		PcP	01 07 22.9	+1.4
SONM	**Songino Array**	**46.92**	**341**	P		**P**	01 05 51.6	**+1.1**
	comp=Z,1.2nm,0.5s,mb3.9,baz=153,slow=7.8,SNR=8.7							
SONM				PcP		PcP	01 07 24.0	+1.8
	comp=Z,2.6nm,0.8s,baz=155,slow=3.9,SNR=8.9							
PETK	**Petropavlovsk-**	**54.98**	**22**	P		**P**	01 06 51.9	**+1.0**
PETK	**Petropavlovsk-**	**54.98**	**22**	P		**P**	01 06 51.9	**+1.0**
	comp=Z,2.2nm,0.7s,mb4.3,baz=202,slow=7.2,SNR=3.2							
MK31	**Makanchi Array**	**57.26**	**325**	*e*P		**P**	01 07 07.4	**+0.1**
MKAR	**Makanchi Array**	**57.26**	**325**	P		**P**	01 07 07.5	**+0.2**
	comp=Z,5.3nm,0.6s,mb4.8,baz=121,slow=8.5,SNR=68							
MKAR				LR		LR	01 33 02.5	
	comp=Z,64nm,20.3s,baz=158,slow=37							
KSH	**Kashi**	**57.81**	**315**	*e*P		**P**	01 07 12.1	**+0.7**
KSH				*e*PcP		PcP	01 08 04.0	+0.7
KSH				*e*PP		PP	01 09 22.7	+2.5
KSH				*e*PcS		PcS	01 12 04.0	-0.6
KSH				*e*S		**S**	01 15 00.7	**-5.0**
KSH				pmax		pmax		
	comp=Z,2.0nm,1.0s,mb4.1							
KSH				pmax		pmax		
	comp=Z,77nm,4.6s							
KSH				LR		LR		
	comp=N,84nm,6.7s							
KSH				LR		LR		
	comp=E,130nm,4.7s							
KSH				LR		LR		
	comp=Z,100nm,5.4s							
AAK	**Ala-Archa**	**60.11**	**318**	P		**P**	01 07 28.0	**+0.8**
ZAA0	**Zalesovo Array**	**60.25**	**333**	*e*P		**P**	01 07 27.4	**-0.5**
ZALV	**Zalesovo Beam**	**60.25**	**333**	P		**P**	01 07 27.6	**-0.3**
	comp=Z,1.4nm,0.4s,mb4.4,baz=111,slow=8.1,SNR=9.1							
KBL	**Kabul**	**61.35**	**307**	*e*P		**P**	01 07 35.8	**0.0**
	comp=Z,2.7nm,0.5s,mb4.5							
KURK	**Kurchatov**	**61.43**	**327**	*e*P		**P**	01 07 35.9	**-0.1**
	comp=Z,9.7nm,0.6s,mb5.0							
BVAR	**Borovoye Array**	**67.02**	**327**	P		**P**	01 08 12.8	**+0.3**
	comp=Z,7.5nm,0.7s,mb4.6,baz=126,slow=9.3,SNR=37							
BRVK	**Borovoye**	**67.09**	**327**	*e*P		**P**	01 08 12.9	**-0.1**
	comp=Z,12nm,0.8s,mb4.8							
CASY	**Casey**	**71.27**	**187**	*e*P		**P**	01 08 38.0	**-0.5**
	comp=Z,2.8nm,0.7s,mb4.2							
ARU	**Arti**	**74.63**	**328**	*e*P		**P**	01 08 58.4	**-0.2**
	comp=Z,7.3nm,0.8s,mb4.5							
TTA	**Tatalina**	**80.45**	**27**	*e*P		**P**	01 09 33.3	**+2.3**
	comp=Z,6.4nm,1.2s,mb4.3							
KIV	**Kislovodsk**	**82.92**	**314**	*e*P		**P**	01 09 45.0	**+0.5**
	comp=Z,5.2nm,0.9s,mb4.4							
PMR	**Palmer**	**83.50**	**29**	*e*P		**P**	01 09 47.8	**+0.8**
	comp=Z,16nm,1.4s,mb4.7							
ILAR	**Eielson Array**	**84.66**	**25**	P		**P**	01 09 54.0	**+1.2**
	comp=Z,1.7nm,0.9s,mb4.0,baz=243,slow=6.8,SNR=19							
SBA	**Scott Base**	**84.75**	**172**	P		**P**	01 09 51.5	**-1.6**
MALT	**Malatya**	**86.20**	**308**	*e*P		**P**	01 10 01.8	**+0.7**
OBN	**Obninsk**	**86.77**	**325**	*e*P		**P**	01 10 03.2	**-0.3**
	comp=Z,10nm,1.0s,mb4.7							
BR131	**Keskin Array S**	**89.83**	**310**	*e*P		**P**	01 10 18.8	**+0.4**
BRTR	**Keskin Array B**	**89.83**	**310**	P		**P**	01 10 18.9	**+0.5**
	comp=Z,1.1nm,0.8s,mb4.0,baz=121,slow=4.4,SNR=6.2							
ARCES	**ARCESS Array B**	**90.08**	**340**	P		**P**	01 10 18.6	**-0.2**
	comp=Z,2.0nm,0.6s,mb4.4,baz=95,slow=7.7,SNR=9.6							
FINES	**FINESS Array B**	**91.50**	**332**	P		**P**	01 10 25.9	**+0.2**
	comp=Z,2.4nm,0.9s,mb4.3,baz=238,slow=29,SNR=4.0							
AKASG	**Malin Array Be**	**91.62**	**321**	P		**P**	01 10 26.4	**-0.1**
	comp=Z,0.5nm,0.3s,mb4.2,baz=277,slow=3.8,SNR=7.1							
BUR08	**Buccfina Array S**	**94.76**	**318**	*e*P		**P**	01 10 41.2	**+0.3**
KWP	**Kalwaria Pacla**	**95.94**	**321**	*e*P		**P**	01 10 47.2	**+0.9**
TORD	**Torodi Ar. Bea**	**122.89**	**288**	PKP		PKPdf	01 16 17.4	**+1.2**
	comp=Z,1.1nm,0.7s,baz=71,slow=2.2,SNR=8.1							

ISCJB ***08*** *01:09:20.4±0.4, 56.°83S±0.°07×25.°9W±0.°1, h10km, mb4.8/23,MS4.2/11, Error ellipse: s-maj=10.6km s-min=9.7km az=1.7*

NEIC ***08*** *01:09:27.9±1.9, 56.°83S×25.°95W, h55km±16km, mb4.8/13, Error ellipse: s-maj=8.4km s-min=6.9km az=178.0*

IDC ***08*** *01:09:28.3±4.6, 56.°86S×26.°02W, h59km±41km, mb4.4/10, mb1 4.3/11, mb1mx4.1/18, mbtmp4.4/11, ML5.4/1, MS4.2/12, Ms1 4.2/12, ms1mx4.0/18, Error ellipse: s-maj=18.3km s-min=15.2km az=21.0*

ISC 08 01:09:22.3±0.4, 56.°86S±0.°07×26.°0W±0.°1, h10km, n80, σ0s86/32, mb4.8/23, MS4.2/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**15.78**	**158**	*e*		**Pn**	01 13 00.2	**-4.0**
PMSA	**Palmer Station**	**19.91**	**231**	P		**Pn**	01 13 54.5	**-0.6**
	1.2nm,0.3s,baz=138,slow=14,SNR=3.1							
PMSA				LR		LR	01 20 04.6	
	comp=Z,974nm,20.7s,baz=131,slow=32							
MAIT	**Maitri**	**21.18**	**146**	*e*P		**P**	01 14 05.3	**-2.0**
USHA	**Ushuaia**	**23.66**	**257**	P		**P**	01 14 34.2	**+0.5**
	11nm,0.8s,mb4.3,baz=87,slow=16,SNR=3.9							
USHA				LR		LR	01 21 29.3	
	comp=Z,994nm,21.1s,MS4.2,baz=92,slow=30							
TRQA	**Tornquist**	**30.28**	**293**	*e*P		**P**	01 15 32.9	**-0.3**
	13nm,1.1s,mb4.6							
PLCA	**Paso Flores**	**32.82**	**280**	LR		LR	01 28 28.3	
	comp=Z,535nm,20.0s,MS4.2,baz=118,slow=35							
QSPA	**South Pole Qui**	**33.39**	**180**	P		**P**	01 15 59.6	**-0.5**
QSPA				PcP		PcP	01 18 41.1	-0.1
QSPA	**South Pole Qui**	**33.39**	**180**	P		**P**	01 15 59.6	**-0.5**
	39nm,0.6s,mb5.5,baz=202,slow=3.1,SNR=159							
QSPA				PcP		PcP	01 18 41.1	0.0
	4.8nm,0.7s,baz=2.1,slow=1.3,SNR=4.4							
CPUP	**Villa Florida**	**37.87**	**310**	*e*P		**P**	01 16 38.7	**-0.4**
	31nm,0.8s,mb5.1							
CPUP				PcP		PcP	01 18 53.7	-1.5
CPUP				LR		LR	01 30 36.6	
CPUP	**Villa Florida**	**37.87**	**310**	P		**P**	01 16 38.4	**-0.8**
	1.2nm,0.3s,mb4.0,baz=144,slow=6.2,SNR=8.4							
CPUP				PcP		PcP	01 18 53.7	-1.5
	1.1nm,0.4s,baz=93,slow=1.6,SNR=3.8							
CPUP				LR		LR	01 30 36.6	
	comp=Z,84nm,21.4s,MS3.5,baz=141,slow=34							
CFAA	**Coronel Fontan**	**38.51**	**293**	P		**P**	01 16 43.1	**-1.4**
	0.2nm,0.3s,baz=158,slow=10.0,SNR=4.5							
CFAA				PcP		PcP	01 18 55.9	-1.3
	0.3nm,0.5s,baz=160,slow=3.8,SNR=3.7							
MAW	**Mawson**	**39.08**	**143**	P		**P**	01 16 50.4	**+1.5**
	4.6nm,0.9s,mb4.2,baz=255,slow=11,SNR=3.6							
MAW				LR		LR	01 30 27.9	
	comp=Z,309nm,20.6s,MS4.1,baz=264,slow=32							
SUR	**Sutherland**	**40.20**	**73**	P		**P**	01 16 59.9	**+1.3**
	13nm,1.1s,mb4.6,baz=78,slow=9.3,SNR=3.0							
SBA	**Scott Base**	**45.31**	**184**	*e*P		**P**	01 17 39.6	**+0.1**
	9.2nm,0.8s,mb4.7							
BOSA	**Boshof**	**45.52**	**74**	P		**P**	01 17 41.0	**-0.7**
	4.6nm,0.9s,mb4.4							
BOSA	**Boshof**	**45.52**	**74**	LR		LR	01 32 41.7	
	comp=Z,682nm,20.4s,MS4.6,baz=198,slow=31							
LBTB	**Lobatse**	**48.60**	**71**	*e*P		**P**	01 18 05.7	**-0.1**
	8.9nm,0.9s,mb4.8							
LBTB	**Lobatse**	**48.60**	**71**	P		**P**	01 18 05.7	**-0.2**
	3.9nm,0.8s,mb4.5,baz=260,slow=4.8,SNR=5.1							
TSUM	**Tsumeb**	**49.49**	**59**	*e*P		**P**	01 18 12.1	**-0.6**
	7.0nm,1.0s,mb4.7							
LPAZ	**La Paz**	**51.41**	**304**	*e*P		**P**	01 18 28.3	**+1.1**
	27nm,0.4s,mb5.5							
LPAZ	**La Paz**	**51.41**	**304**	P		**P**	01 18 28.5	**+1.3**
	26nm,0.4s,mb5.6,baz=135,slow=5.6,SNR=210							
CASY	**Casey**	**52.91**	**160**	*e*P		**P**	01 18 38.9	**+1.1**
	7.6nm,0.9s,mb4.6							
LSZ	**Lusaka**	**58.04**	**67**	*e*P		**P**	01 19 16.2	**+0.9**
	8.8nm,1.3s,mb4.6							
LIC	**Lamto**	**65.16**	**23**	*e*P		**P**	01 20 03.3	**0.0**
	40nm,1.4s,mb5.3							
KIC	**Kosan Boka**	**65.36**	**23**	*e*P		**P**	01 20 03.3	**-1.3**
	104nm,1.6s,mb5.6							
TIC	**Toumodi**	**65.57**	**23**	*e*P		**P**	01 20 05.7	**-0.3**
	30nm,1.0s,mb5.3							
DBIC	**Dimbokro**	**65.63**	**23**	*e*P		**P**	01 20 06.1	**-0.3**
	15nm,1.1s,mb4.9							
DBIC				LR		LR	01 43 09.3	
DBIC	**Dimbokro**	**65.63**	**23**	P		**P**	01 20 05.9	**-0.4**
	5.2nm,0.6s,mb4.7,baz=166,slow=9.1,SNR=8.5							
DBIC				LR		LR	01 43 09.3	
	comp=Z,130nm,18.5s,MS4.2,baz=103,slow=31							
OTAV	**Otavalo**	**70.68**	**303**	*e*P		**P**	01 20 39.4	**+1.3**
	18nm,1.2s,mb4.9							
ROSC	**El Rosal**	**72.95**	**309**	P		**P**	01 20 52.1	**+0.4**
	6.6nm,0.7s,mb4.7,baz=90,slow=20,SNR=8.8							
TORD	**Torodi Ar. Bea**	**73.44**	**28**	P		**P**	01 20 54.4	**-0.1**
	10nm,0.6s,mb5.0,baz=203,slow=6.3							
PCRV	**Puerto La Cruz**	**74.02**	**320**	LR		LR	01 49 10.1	
	comp=Z,87nm,21.6s,MS4.0,baz=252,slow=32							
KMBO	**Kilima Mbogo**	**74.70**	**68**	LR		LR	01 50 02.9	
	comp=Z,124nm,20.2s,MS4.2,baz=180,slow=33							
RKT	**Rikitea**	**80.71**	**242**	*e*LR		LR	01 46 53.3	
	141nm,30.2s							
SJG	**San Juan**	**81.91**	**322**	LR		LR	01 57 54.0	
	comp=Z,91nm,19.8s,MS4.1,baz=90,slow=36							
JTS	**JuntasAbangare**	**82.53**	**302**	*e*P		**P**	01 21 45.4	**+0.3**
	25nm,1.3s,mb5.1							
STKA	**Stephens Creek**	**90.98**	**169**	LR		LR	01 58 50.0	
	comp=Z,161nm,21.0s,MS4.4,baz=205,slow=32							
PPT	**Papeete**	**92.26**	**233**	*e*LR		LR	01 52 13.2	
	461nm,26.5s,baz=153							
PPT	**Papeete**	**92.26**	**233**	LR		LR	01 55 07.0	
	comp=Z,192nm,18.0s,MS4.6,baz=184,slow=30							
TEIG	**Tepich**	**92.73**	**304**	*e*P		**P**	01 22 34.4	**0.0**
	13nm,0.6s,mb5.5							
ASAR	**Alice Springs**	**98.00**

STKA **Stephens Creek** 35.00 258 *e*P P 02 32 03.2 +1.4
3.6nm,1.2s,mb4.2
STKA **Stephens Creek** 35.00 258 P P 02 32 03.8 +2.0
8.2nm,0.9s,mb4.7,baz=82,slow=8.0,SNR=9.1
STKA LR LR 02 45 03.7
comp=Z,335nm,19.0s,MS4.1,baz=34,slow=34
RKT **Rikitea** 38.16 88 *e*LR LR 02 42 43.8
410nm,30.0s
TAOE **Nuku Hiva Isla** 41.06 65 *e*LR LR 02 44 12.7
162nm,22.5s
ASAR **Alice Springs** 43.84 268 P P 02 33 15.4 -0.3
6.7nm,1.0s,mb4.3,baz=109,slow=7.9,SNR=31
WRAB **Tennant Creek** 44.92 273 *e*P P 02 33 24.2 -0.2
13nm,0.8s,mb4.8
FORT **Forrest** 46.52 256 *e*P P 02 33 37.5 +0.6
35nm,1.0s,mb5.2
SBA **Scott Base** 46.97 185 *e*P P 02 33 44.0 +4.2
14nm,1.4s,mb4.7
FITZ **Fitzroy Crossi** 53.14 270 P P 02 34 26.4 -1.1
4.3nm,0.8s,mb4.4,baz=119,slow=10,SNR=4.5
CASY **Casey** 54.51 208 *e*P P 02 34 38.2 +1.4
CASY **Casey** 54.51 208 *e*P P 02 34 38.4 +1.6
11nm,1.0s,mb4.9
QSPA **South Pole Qui** 58.58 180 *e*P P 02 35 09.0 +3.4
7.7nm,0.8s,mb4.8
QSPA **South Pole Qui** 58.58 180 P P 02 35 09.1 +3.5
7.2nm,1.0s,mb4.7,baz=49,slow=4.4,SNR=11
PMSA **Palmer Station** 70.91 155 LR LR 03 02 26.9
comp=Z,221nm,18.6s,MS4.5,baz=237,slow=31
MAW **Mawson** 71.52 200 P P 02 36 32.3 +2.5
2.4nm,0.9s,mb4.1,baz=99,slow=5.3,SNR=4.5
MAW LR LR 03 07 20.7
comp=Z,79nm,20.1s,MS4.0,baz=136,slow=35
MJAR **Matsushiro Arr** 79.62 325 P P 02 37 14.3 -2.2
4.6nm,1.1s,mb4.3,baz=162,slow=7.5,SNR=7.2
PLCA **Paso Flores** 81.17 133 LR LR 03 04 16.6
comp=Z,156nm,21.6s,MS4.3,baz=277,slow=29
KSRS **Korea Array** 85.72 319 P P 02 37 47.8 -0.5
3.2nm,0.9s,mb4.6,baz=142,slow=5.8,SNR=14
KSRS LR LR 03 12 44.7
comp=Z,43nm,18.9s,MS3.9,baz=51,slow=33
YSS **Yuzh-Sakhalins** 86.11 334 *e*P P 02 37 50.1 +0.1
23nm,0.8s,mb5.5
ISA **Isabella** 86.56 44 ⇓P P 02 37 52.1 -0.4
baz=87,SNR=5.4
ISA **Isabella** 86.56 44 *e*P P 02 37 52.3 -0.2
11nm,1.2s,mb5.0
BELC **Belle Mtn. Jos** 86.95 47 ⇑P P 02 37 54.5 0.0
baz=87
BC3 **Big Chuckawall** 87.06 47 ⇓P P 02 37 55.2 +0.1
baz=87
CMB **Columbia Colle** 87.09 41 *e*P P 02 37 54.5 -0.5
7.0nm,1.1s,mb4.8
PETK **Petropavlovsk-** 87.11 345 P P 02 37 52.7 -2.0
9.7nm,0.8s,mb5.1,baz=134,slow=7.6,SNR=8.5
GSC **Goldstone** 87.32 45 ⇓P P 02 37 55.9 -0.3
baz=87,SNR=5.1
GSC **Goldstone** 87.32 45 *e*P P 02 37 55.7 -0.5
8.5nm,1.1s,mb4.9
MPMC **Manual Prospec** 87.42 44 ⇑P P 02 37 56.5 -0.2
baz=88,SNR=6.6
113A **Mohawk Valley,** 87.56 49 ⇑P P 02 37 57.3 -0.2
baz=88
NJ2 **Nanjing** 87.57 310 *e*P P 02 37 57.1 -0.4
NJ2 pmax pmax
comp=Z,20nm,0.6s,mb5.5
IRM **Iron Mountain** 87.58 47 ⇑P P 02 37 57.5 0.0
baz=88,SNR=5.2
214A **Organ Pipe Nat** 87.66 50 ⇑P P 02 37 57.6 -0.3
baz=88
GMRC **Granite Mounta** 87.67 46 ⇑P P 02 37 57.9 -0.1
baz=88
WDC **Whiskeytown Da** 87.71 38 *e*P P 02 37 57.8 -0.2
Z13A **Yuma Proving G** 87.91 49 ⇑P P 02 37 59.0 -0.1
baz=88
TUQ **Turquoise Moun** 87.95 46 ⇓P P 02 37 59.4 +0.2
baz=88
WAKR **Walker** 87.95 42 *e*P P 02 37 59.3 +0.2
SHOC **Shoshone** 88.04 45 ⇓P P 02 37 59.7 +0.1
baz=88
Y13A **Salome** 88.19 48 ⇓P P 02 38 01.0 +0.6
baz=88
U10A **Ash Meadows, A** 88.35 45 ⇓P P 02 38 01.3 +0.1
baz=88
NVAR **Mina Array Bea** 88.55 42 P P 02 38 00.7 -1.3
comp=Z,3.0nm,0.9s,mb4.6,baz=220,slow=7.4,SNR=16
X13A **Yucca** 88.69 47 ⇓P P 02 38 02.7 -0.1
baz=89,SNR=5.2
V12A **Nelson** 88.80 46 ⇓P P 02 38 03.5 +0.3
baz=89
217A **Green Valley** 88.86 51 ⇓P P 02 38 03.8 +0.1
baz=89
HUMO **Hull Mountain** 88.95 37 *e*P P 02 38 03.9 +0.1
W13A **Hualapai Mount** 88.99 47 ⇑P P 02 38 04.4 +0.3
baz=89
S10A **Tonopah Range,** 89.20 44 ⇓P P 02 38 04.6 -0.4
baz=89,SNR=6.9
318A **Bisbee** 89.21 52 ⇓P P 02 38 05.4 +0.1
baz=89
X14A **Yava** 89.21 48 ⇑P P 02 38 05.5 +0.3
baz=89,SNR=6.7
TUC **Tucson** 89.22 51 *e*P P 02 38 05.9 +0.6
Y15A **Casa Rosa Ranc** 89.24 49 ⇑P P 02 38 05.3 0.0
baz=89,SNR=5.0
117A **Oracle** 89.41 51 ⇑P P 02 38 06.2 0.0
baz=90
V13A **Grand Canyon W** 89.41 46 ⇓P P 02 38 06.1 0.0
baz=90,SNR=7.8
U12A **Valley of Fire** 89.45 46 ⇑P P 02 38 06.6 +0.3
baz=90
218A **Dragoon** 89.50 52 ⇑P P 02 38 07.3 +0.6
baz=90
S11A **Rachel** 89.51 44 ⇑P P 02 38 07.2 +0.6
baz=90
T11A **Corn Creek, Al** 89.56 45 ⇓P P 02 38 07.1 +0.3
baz=90
W14A **Seligman** 89.56 47 ⇓P P 02 38 07.3 +0.4
baz=90,SNR=6.7
R10A **Warm Springs** 89.61 43 ⇓P P 02 38 07.5 +0.5
baz=90
X15A **Humboldt** 89.64 48 ⇓P P 02 38 07.9 +0.7
baz=90
319A **Douglas** 89.65 52 ⇑P P 02 38 07.8 +0.5
baz=90
Y16A **Circle Bar Ran** 89.74 49 ⇑P P 02 38 08.0 +0.3
baz=90,SNR=8.0
V14A **Boquillas Ranc** 89.82 47 ⇑P P 02 38 08.4 +0.3
baz=90,SNR=7.6
118A **Homack Ranch,** 89.96 51 ⇓P P 02 38 09.0 +0.2
baz=90,SNR=5.3
S12A **Delamar Landin** 90.03 45 ⇓P P 02 38 09.4 +0.4
baz=90,SNR=5.2
Y17A **Roosevelt** 90.04 50 ⇓P P 02 38 09.5 +0.4
baz=90
219A **White Tail Can** 90.04 52 ⇓P P 02 38 09.4 +0.2
baz=90
X16A **Lo Mia Camp, P** 90.10 49 ⇑P P 02 38 10.4 +1.0
baz=90
K05A **Summer Lake** 90.10 38 ⇓P P 02 38 09.6 +0.4
baz=90
T13A **Saint George** 90.21 46 ⇓P P 02 38 10.2 +0.3
baz=90
U14A **Mt Trumbull** 90.27 46 ⇑P P 02 38 10.6 +0.4
baz=90,SNR=12
X17A **Forest Lakes** 90.46 49 ⇑P P 02 38 11.8 +0.7
baz=91,SNR=5.2
W16A **Flagstaff** 90.47 48 ⇓P P 02 38 11.8 +0.7
baz=91
220A **Playas Peak, P** 90.48 52 ⇑P P 02 38 11.8 +0.6
baz=91
119A **Ashpeak Ranch,** 90.48 51 ⇓P P 02 38 12.1 +0.9
baz=91
V15A **Kaibab Nationa** 90.52 47 ⇑P P 02 38 11.9 +0.6
baz=91,SNR=7.1
S13A **Holt Ranch, En** 90.60 45 ⇑P P 02 38 12.5 +0.8
baz=91
R12A **Pony Springs,** 90.64 44 ⇑P P 02 38 12.2 +0.3
baz=91
120A **U Bar Ranch, L** 90.80 52 ⇑P P 02 38 13.3 +0.6
baz=91
U15A **North Rim** 90.83 47 ⇓P P 02 38 13.2 +0.5
baz=91,SNR=12
WUAZ **Wupatki** 90.83 48 *e*P P 02 38 13.4 +0.6
comp=Z,9.5nm,1.1s,mb5.0
CCUT **Cedar City** 90.89 45 *e*P P 02 38 13.8 +0.9
Q12A **Willow Creek R** 90.97 44 ⇓P P 02 38 12.8 -0.6
baz=91
WVOR **Wild Horse Val** 91.10 39 *e*P P 02 38 13.0 -0.9
comp=Z,5.5nm,1.2s,mb4.8
X18A **Snowflake** 91.14 50 ⇓P P 02 38 14.4 +0.2
baz=91
T15A **Red Dirt Ranch** 91.15 46 ⇓P P 02 38 14.5 +0.3
baz=91
Z20A **Nine Sixteen R** 91.17 51 ⇑P P 02 38 14.6 +0.3
baz=91
O11A **Cowboy Ranch,** 91.21 42 ⇓P P 02 38 14.3 -0.1
baz=91
P12A **McGill** 91.21 43 ⇓P P 02 38 14.1 -0.4
baz=91
Y19A **Nutrioso** 91.24 50 ⇑P P 02 38 15.1 +0.4
baz=91
V17A **Tonalea, Kykot** 91.27 48 ⇓P P 02 38 14.3 -0.5
baz=91,SNR=5.7
U16A **Tuba City** 91.38 48 ⇓P P 02 38 15.8 +0.5
baz=92
Q13A **Wheeler Ranch,** 91.40 44 ⇑P P 02 38 15.0 -0.3
baz=92
E03A **Lebam** 91.51 34 ⇑P P 02 38 16.0 +0.4
baz=92
CN2 **Changchun** 91.52 322 *e*P P 02 38 15.5 -0.2
CN2 *e*S S 02 49 12.3 -3.0
CN2 pmax pmax
comp=Z,20nm,0.9s,mb5.5
CN2 pmax pmax
comp=Z,200nm,7.0s
CN2 LR LR
comp=N,400nm,21.0s,MS4.9
CN2 LR LR
comp=E,200nm,21.0s,MS4.9
CN2 LR LR
comp=Z,200nm,20.0s,MS4.6
P13A **Bates Ranch, G** 91.72 44 ⇑P P 02 38 17.3 +0.5
baz=92
I07A **Izee** 91.78 37 ⇑P P 02 38 16.3 -0.7
baz=92
Y20A **Horse Springs,** 91.79 51 ⇓P P 02 38 17.6 +0.3
baz=92,SNR=5.3
J08A **Circle Bar Ran** 91.82 39 ⇑P P 02 38 17.3 +0.1
baz=92
O12A **Currie** 91.83 43 ⇑P P 02 38 17.0 -0.2
baz=92
Q14A **Sevier Lake (B** 91.86 44 ⇑P P 02 38 17.4 0.0
baz=92
Z21A **St. Cloud Mine** 91.90 52 ⇑P P 02 38 18.1 +0.4
baz=92
G06A **Carlson Farm,** 92.00 36 ⇓P P 02 38 17.1 -0.8
baz=92
N12A **Clover Valley,** 92.04 42 ⇑P P 02 38 18.4 +0.2
baz=92
S16A **Weppner Ranch,** 92.08 46 ⇓P P 02 38 18.5 0.0
baz=92
X20A **Quemado** 92.09 50 ⇑P P 02 38 19.3 +0.7
baz=92
T17A **Navajo Res., N** 92.12 47 ⇑P P 02 38 19.4 +0.7
baz=92
626A **Big Bend Ranch** 92.14 56 ⇓P P 02 38 18.9 -0.2
baz=92
MSU **Marysvale** 92.22 45 *e*P P 02 38 20.0 +0.9
324A **Moseley Ranch,** 92.29 54 ⇑P P 02 38 19.2 -0.5
baz=92
Y21A **Point of Rocks** 92.32 51 ⇑P P 02 38 20.0 +0.3
baz=92
Z22A **Elephant Butte** 92.34 52 ⇑P P 02 38 19.8 0.0
baz=92
TXAR **Lajitas Array** 92.35 57 P P 02 38 19.4 -0.5
comp=Z,1.2nm,1.0s,mb4.2,baz=214,slow=6.0,SNR=9.3
TXAR LR LR 03 12 13.8
comp=Z,78nm,18.2s,MS4.2,baz=95,slow=31
U18A **Rough Rock, Ch** 92.35 48 ⇑P P 02 38 19.5 -0.3
baz=92
L11A **Cat Creek Ranc** 92.50 41 ⇓P P 02 38 20.5 +0.2
baz=93
X21A **Alamocita Cree** 92.50 51 ⇓P P 02 38 20.6 0.0
baz=93,SNR=5.8
MNTX **Cornudas Mount** 92.51 54 *e*P P 02 38 19.8 -0.8
comp=Z,0.8nm,0.8s,mb4.2
325A **Bean Ranch, Si** 92.60 55 ⇓P P 02 38 20.5 -0.6
baz=93
627A **Terlingua Ranc** 92.61 57 ⇑P P 02 38 21.0 -0.2
baz=93
U19A **Dine' College,** 92.69 49 ⇑P P 02 38 21.6 +0.2
baz=93
D05A **Enumclaw** 92.72 34 ⇑P P 02 38 21.6 +0.4
baz=93
Y22A **Socorro** 92.75 52 ⇓P P 02 38 21.7 0.0
baz=93
GYA **Guiyang** 92.79 299 *e*P P 02 38 22.2 +0.1
GYA PP PP 02 42 07.6 +3.0
GYA SKS 02 48 55.4
GYA S S 02 49 25.3 -2.3
GYA SS SS 02 55 43.2 +1.9
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb5.3
GYA pmax pmax
comp=Z,110nm,5.6s
GYA LR LR
comp=N,490nm,20.0s,MS5.0
GYA LR LR
comp=E,360nm,21.8s,MS5.0
GYA LR LR
comp=Z,410nm,20.6s,MS4.9
T18A **Mexican Hat** 92.79 48 ⇓P P 02 38 21.4 -0.4
baz=93
426A **McDonald Obser** 92.86 56 ⇑P P 02 38 21.3 -0.9
baz=93
M13A **Montello** 92.87 42 ⇑P P 02 38 21.4 -0.7
baz=93
ENH **Enshi** 92.88 304 *e*P P 02 38 22.6 +0.2
comp=Z,14nm,0.8s,mb5.4
G08A **Pilot Rock** 92.89 37 ⇑P P 02 38 21.4 -0.7
baz=93
MFID **Camas Ranch** 93.28 40 ⇑P P 02 38 23.6 -0.3
baz=93
427A **Hayter Ranch,** 93.40 56 ⇑P P 02 38 24.0 -0.8
baz=94
M14A **Sheep Mountain** 93.43 42 ⇑P P 02 38 24.5 -0.1
baz=94
528A **Cox Ranch, San** 93.45 57 ⇓P P 02 38 24.4 -0.7
baz=94
R18A **Canyonlands Na** 93.54 47 ⇓P P 02 38 25.1 -0.1
baz=94
SRU **San Rafael** 93.60 46 *e*P P 02 38 25.8 +0.3
ANMO **Albuquerque** 93.68 51 *e*P P 02 38 25.4 -0.6
comp=Z,1.7nm,0.9s,mb4.5
Y24A **Capitan** 93.77 52 ⇓P P 02 38 26.1 -0.3
baz=94
U21A **Nageezi** 93.77 49 ⇑P P 02 38 26.5 +0.2
baz=94
L14A **Malta** 93.83 42 ⇓P P 02 38 26.2 -0.3
baz=94
I12A **Atlanta** 93.91 40 ⇑P P 02 38 26.9 +0.1
baz=94
M15A **Larsen Ranch,** 93.93 43 ⇓P P 02 38 26.9 0.0
baz=94
D08A **Wollman Farm,** 94.12 36 ⇑P P 02 38 27.4 -0.3
baz=94
O17A **Robinson Place** 94.14 45 ⇓P P 02 38 27.9 -0.1
baz=94
HLID **Hailey** 94.16 40 *e*P P 02 38 27.4 -0.6
comp=Z,2.3nm,0.9s,mb4.6
BJI **Beijing** 94.28 315 P P 02 38 28.4 -0.2
BJI pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
BJI pmax pmax
comp=Z,38nm,3.8s
BJI LR LR
comp=Z,34nm,42.6s,MS3.5
L15A **Malad City** 94.31 43 ⇓P P 02 38 28.6 0.0
baz=94
J14A **Carey** 94.50 41 ⇑P P 02 38 29.6 0.0
baz=95
H12A **Diamond D Ranc** 94.56 39 ⇑P P 02 38 29.1 -0.7
baz=95
G12A **Big Creek, Yel** 94.68 39 ⇑P P 02 38 29.7 -0.6
baz=95
H13A **Challis** 94.89 40 ⇓P P 02 38 31.1 -0.2
baz=95
R21A **Cimarron** 95.00 48 ⇑P P 02 38 31.8 -0.2
baz=95
KMI **Kunming** 95.03 296 P P 02 38 33.4 +1.0
KMI pP pP 02 38 36.1 +0.4
KMI sP sP 02 38 37.5 +0.6
KMI PP PP 02 42 26.0 +3.9
KMI S S 02 49 46.3 -0.9
KMI sS sS 02 49 51.7 -1.1
KMI SS SS 02 56 15.7 +2.4
KMI pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
KMI pmax pmax
comp=Z,53nm,3.1s
KMI LR LR
comp=N,220nm,36.6s,MS4.5
KMI LR LR
comp=E,170nm,38.3s,MS4.5
KMI LR LR
comp=Z,63nm,24.7s
F12A **Elk City** 95.13 38 ⇓P P 02 38 31.4 -1.0
baz=95
P20A **De Beque** 95.15 46 ⇑P P 02 38 32.5 -0.1
baz=95
J15A **Blackfoot** 95.16 41 ⇑P P 02 38 32.9 +0.4
baz=95
W25A **X Bar L Ranch,** 95.17 52 ⇓P P 02 38 32.4 -0.4
baz=95
G13A **Cobalt** 95.25 39 ⇓P P 02 38 32.6 -0.3
baz=95
H14A **Leadore** 95.41 40 ⇓P P 02 38 33.6 -0.1
baz=96
V25A **Rancho No Teng** 95.42 51 ⇓P P 02 38 33.9 0.0
baz=96
F13A **Darby** 95.65 39 ⇓P P 02 38 33.9 -0.8
baz=96
SMCO **Snowmass** 95.84 47 *e*P P 02 38 33.8 -2.0
comp=Z,2.9nm,1.1s,mb4.6
K18A **Toltan Ranch,** 96.06 43 ⇓P P 02 38 37.0 +0.3
baz=96
G15A **Dillon** 96.25 40 ⇓P P 02 38 37.3 -0.1
baz=96
LPAZ **La Paz** 96.97 114 LR LR 03 14 00.9
comp=Z,71nm,19.0s,MS4.2,baz=113,slow=30
BOZ **Bozeman (W)** 97.02 40 *e*P P 02 38 41.1 +0.2
CD2 **Chengdu** 97.35 302 P P 02 38 42.9 +0.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.5
CD2 pmax pmax
comp=Z,160nm,6.1s
HHC **Hu-ho-hao-te** 97.58 314 *e*P P 02 38 44.4 +0.8
HHC pP pP 02 38 49.2 +2.2
HHC sP sP 02 38 52.0 +3.9
HHC PP PP 02 42 44.6 +3.0
HHC SKS 02 49 19.3
HHC S S 02 50 05.7 -2.9
HHC sS sS 02 50 13.7 -0.5
HHC SS SS 02 56 49.6 +0.6
HHC pmax pmax
comp=Z,9.0nm,1.2s,mb5.2
HHC pmax pmax
comp=Z,33nm,3.6s
HHC LR LR
comp=N,94nm,16.9s,MS4.5
HHC LR LR
comp=E,82nm,15.5s,MS4.5
HHC LR LR
comp=Z,83nm,14.5s,MS4.4
CPUP **Villa Florida** 98.67 128 LR LR 03 15 09.9
comp=Z,59nm,18.3s,MS4.1,baz=86,slow=30
ILAR **Eielson Array** 98.86 13 P P 02 38 46.5 -2.2
comp=Z,0.3nm,0.8s,mb3.9,baz=222,slow=6.5,SNR=5.1
LZH **Lanzhou** 100.02 306 *e*P Pdif 02 38 56.0 +1.3
LZH pP 02 38 59.2
LZH sP 02 39 00.8
LZH pmax pmax
comp=Z,13nm,1.0s
GTA **Gaotai** 104.45 307 *e*P Pdif 02 39 14.4 0.0
GTA pmax pmax
comp=Z,2.0nm,0.7s
WMQ **Urumqi** 114.54 308 *e*PKP PKiKP 02 43 49.3 0.0
WMQ LR LR
comp=N,73nm,21.4s
WMQ LR LR
comp=Z,54nm,22.3s,MS4.1
MKAR **Makanchi Array** 119.10 309 PKP PKPdf 02 43 56.6 -1.4
comp=Z,0.3nm,0.2s,baz=102,slow=2.9,SNR=3.2
BIM **Bigot** 119.50 91 *e*P Sdif 02 53 10.7 -1.2
FDF **Fort de France** 119.53 90 ⇓*e*P Sdif 02 53 08.9 -3.3
FDF ⇓*e*S Sdif 02 53 17.4 +5.2
MVM **Montagne Vaucl** 119.67 91 *e*P Sdif 02 53 08.9 -4.4
KURK **Kurchatov** 122.39 313 *e*PKPdf PKPdf 02 44 02.9 -1.3
BVAR **Borovoye Array** 127.76 315 PKP PKPdf 02 44 13.7 -0.7
comp=Z,0.6nm,0.5s,baz=129,slow=2.1,SNR=7.3
JOF **Joensuu** 143.76 338 *e*pkp PKPdf 02 44 41.0 -2.7
DGRG **David-gareji** 144.76 298 P PKiKP 02 44 49.0 -1.0
MTA **Mtatsminda** 145.19 299 P PKPbc 02 44 47.2 +0.7
TBLG **Delisi** 145.22 299 P PKPbc 02 44 47.0 +0.3
GNI **Garni** 145.28 296 *e*PKPbc PKPbc 02 44 47.1 +0.2
KAF **Kangasniemi** 145.88 341 *e*pkp PKPdf 02 44 45.0 -2.4
baz=31,slow=2.9
ONI **Oni** 146.11 301 P PKPab 02 44 50.3 +0.3
FINES **FINESS Array B** 146.48 340 PKPbc PKPbc 02 44 48.4 -1.5
comp=Z,19nm,0.8s,baz=56,slow=4.8,SNR=34
KIV **Kislovodsk** 146.51 303 *e*PKPbc PKPbc 02 44 48.8 -1.7
NOA **NORSAR Array B** 149.99 352 PKPbc PKPbc 02 44 57.6 -1.5
comp=Z,5.1nm,0.9s,baz=14,slow=4.2,SNR=7.5
NAO01 **NORSAR Array S** 150.22 352 *e*PKPbc PKPbc 02 44 57.8 -1.9
MALT **Malatya** 150.23 293 *e*PKPbc PKPbc 02 45 01.1 +0.6
MALT *e*PKPab PKPab 02 45 07.2 +0.5
ASF **Jabal al Asfar** 151.19 280 PKPbc PKPbc 02 45 03.7 +0.7
comp=Z,2.5nm,0.8s,baz=247,slow=0.8,SNR=4.7
ASF PKPab PKPab 02 45 12.2 +1.4
comp=Z,5.9nm,0.9s,baz=14,slow=1.1,SNR=7.4
MMAI **Mount Meron Ar** 152.54 282 PKPbc PKPbc 02 45 06.0 -0.1
comp=Z,3.2nm,0.7s,baz=19,slow=5.3,SNR=4.5
MMAI PKPab PKPab 02 45 16.0 -0.4
comp=Z,5.6nm,0.8s,baz=76,slow=3.5,SNR=5.6
AKASG **Malin Array Be** 152.67 322 PKP PKPdf 02 44 57.8 -0.8
AKASG PKPbc PKPbc 02 45 04.9 -0.8
AKASG PKPab PKPab 02 45 15.0 -1.4
AKASG **Malin Array Be** 152.67 322 PKP PKPdf 02 44 57.8 -0.8
comp=Z,1.1nm,0.4s,baz=49,slow=2.5,SNR=5.9
AKASG PKPbc PKPbc 02 45 04.9 -0.8
comp=Z,2.6nm,0.7s,baz=67,slow=3.0,SNR=13
AKASG PKPab PKPab 02 45 15.0 -1.4
comp=Z,5.4nm,0.8s,baz=47,slow=4.1,SNR=12
AKBB **Malin Array Si** 152.67 322 *e*PKPbc PKPbc 02 45 04.9 -0.8
AKBB *e*PKPab PKPab 02 45 14.9 -1.5
SUW **Suwalki** 153.24 333 *e*PKPbc PKPbc 02 45 06.5 -0.3
SUW *e*PKPab PKPab 02 45 17.5 -1.2
BR131 **Keskin Array S** 153.82 297 *e*PKPab PKPab 02 45 21.4 -0.2
BRTR **Keskin Array B** 153.82 297 PKPbc PKPbc 02 45 08.2 -0.3
comp=Z,0.6nm,0.7s,baz=351,slow=6.5,SNR=4.0
BRTR PKPab PKPab 02 45 21.1 -0.6
comp=Z,2.6nm,0.8s,baz=108,slow=4.2,SNR=11
BUR08 **Bucovina Ar. S** 156.59 320 *e*PKPab PKPab 02 45 32.5 -0.7
KWP **Kalwaria Pacla** 156.61 326 *e*PKPab PKPab 02 45 31.8 -1.4
BSEG **Bad Segeberg** 156.99 349 *e*PKPab PKPab 02 45 33.6 -1.0
KOLS **Kolonicke sedl** 157.29 325 *e*P PKPab 02 45 35.3 -0.8
KOLS **Kolonicke sedl** 157.29 325 *e*PKP PKPab 02 45 35.3 -0.8
STHS **Stebnicka Huta** 157.44 328 *e*P PKPab 02 45 36.4 -0.4
STHS **Stebnicka Huta** 157.44 328 *e*PKP PKPab 02 45 36.4 -0.4
CRVS **Cervenica-Dubn** 157.71 326 *e*P PKPab 02 45 37.0 -0.9
CRVS **Cervenica-Dubn** 157.71 326 *e*PKP PKPab 02 45 37.0 -0.9
KECS **Kecovo** 158.46 327 *e*P PKPab 02 45 40.4 -0.8
KECS **Kecovo** 158.46 327 *e*PKP PKPab 02 45 40.3 -0.9
UPC **Upice** 158.68 337 *e*PKPAB PKPab 02 45 41.4 -0.7
DPC **Dobruska-Polom** 158.71 336 *e*PKPAB PKPab 02 45 41.9 -0.3
CLL **Collm** 158.88 342 *e*PKPab PKPab 02 45 41.5 -1.4
CLL **Collm** 158.88 342 ⇑*i*P PKPab 02 45 41.6 -1.3
CLL **Collm** 158.88 342 ⇑*i*PKPab PKPab 02 45 41.6 -1.3
comp=Z,10.0nm,1.0s
CLZ **Clausthal** 158.98 347 *e*PKPab PKPab 02 45 42.3 -1.0
BRG **Berggiesshubel** 159.02 340 *e*PKPab PKPab 02 45 42.5 -1.0
BRG **Berggiesshubel** 159.02 340 *e*P PKPab 02 45 42.2 -1.3
comp=Z,7.0nm,1.0s
PVCC **Panska Ves** 159.13 339 *e*PKPAB PKPab 02 45 43.4 -0.6
VYHS **Vyhne** 159.20 329 *e*P PKPab 02 45 43.8 -0.6
VYHS **Vyhne** 159.20 329 *e*PKP PKPab 02 45 43.8 -0.6
PRU **Pruhonice** 159.62 338 *e*PKPAB PKPab 02 45 46.0 -0.1
TANN **Tannenbergstha** 159.84 342 *e*PKPab PKPab 02 45 46.2 -0.9
MOX **Moxa** 159.84 344 *e*PKP PKPab 02 45 45.8 -1.3
comp=Z,13nm,1.6s
MOX **Moxa** 159.84 344 *e*PKPab PKPab 02 45 45.9 -1.2
WERD **Werda** 159.85 342 *e*PKPab PKPab 02 45 46.4 -0.7
GUNZ **Gunzen** 159.92 342 *e*PKPab PKPab 02 45 46.6 -0.8
WERN **Wernitzgruen** 159.98 342 *e*PKPab PKPab 02 45 47.0 -0.7
NKC **Novy Kostel** 160.01 342 *e*PKPAB PKPab 02 45 47.0 -0.8
KHC **Kasperske Hory** 160.67 338 *e*PKPAB PKPab 02 45 50.3 -0.4
GRA1 **Grafenberg Arr** 160.82 343 *e*PKPab PKPab 02 45 50.9 -0.5
GRF **Grafenberg Arr** 160.82 343 *e*PKPab PKPab 02 45 50.9 -0.5
WET **Wettzell** 160.87 340 *e*PKPab PKPab 02 45 51.2 -0.4
TNS **Taunus Mts** 160.88 349 *e*PKPab PKPab 02 45 50.4 -1.2

GEC2	GERESS Array S	160.88	338	ePKPab	PKPab	02 45 50.7	-1.0
FUR	Furstenfeldbru	162.21	341	ePKPab	PKPab	02 45 57.1	-0.4
FLN	La Foliniere	162.60	8	ePKP2	PKPab	02 45 56.9	-2.3
LDF	La Druitiere	162.81	7	ePKP2	PKPab	02 45 57.6	-2.5
	comp=Z,5.4nm,0.8s						
DAVOX	Davos/Dischmat	163.86	343	PKPab	PKPab	02 46 04.4	-0.3
	comp=Z,2.4nm,0.8s,baz=322,slow=12,SNR=6.2						
CABF	La Chapelle	164.75	352	ePKP2	PKPab	02 46 06.9	-1.7
AVF	Avril sur Loir	164.76	359	ePKP2	PKPab	02 46 06.4	-2.3
	comp=Z,7.5nm,1.1s						
LPL	La Plagne	165.73	349	ePKP2	PKPab	02 46 12.2	-0.8
	comp=Z,9.1nm,1.0s						
LPG	La Plagne	165.74	349	ePKP2	PKPab	02 46 12.1	-1.0
	comp=Z,13nm,1.1s						
RJF	Les Rejaudoux	166.21	4	ePKP2	PKPab	02 46 13.0	-2.1
	comp=Z,34nm,1.4s						
ORIF	Oris-en-Rattie	166.44	351	ePKP2	PKPab	02 46 15.4	-0.7
	comp=Z,12nm,1.1s						
VIVF	Saint-Julien-l	166.63	355	ePKP2	PKPab	02 46 16.2	-0.8
EVO	Evora	168.66	49	ePKIKP	PKPdf	02 45 14.1	-2.2
	comp=Z,7.5nm,0.8s						

*NEIC **08** 02:39:23.6, 36°.39N×21°.79E, h15km, MD3.5(ATH), After ATH.*
*ATH **08** 02:39:23.6, 36°.39N×21°.79E, h15km±2km, MD3.5/11*
*THE **08** 02:39:23.5, 36°.40N×21°.52E, h0km±7km, ML2.4/3, Error ellipse: s-maj=11.6km s-min=2.3km az=267.0*
*CSEM **08** 02:39:26.4±0.8, 36°.51N×21°.88E, h2km, MD3.5, Error ellipse: s-maj=19.3km s-min=9.3km az=54.0*

ISC 08 02:39:21.0±1.4, 36°.31N±0°.05×21°.62E±0°.08, h7km±15km, n33, σ0°89/50, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	PYLOS	0.60	10	ePN	Pg	02 39 33.0	+0.5
PYL				eSN	Sg	02 39 40.8	+0.5
PYL	PYLOS	0.60	10	P	Pg	02 39 33.0	+0.5
PYL				S	Sg	02 39 41.2	+0.9
PYL	PYLOS	0.60	10	P	Pg	02 39 33.0	+0.5
PYL				S	Sg	02 39 41.2	+0.9
ITM	Ithomi	0.91	16	ePn	Pg	02 39 38.8	+0.4
ITM				eSn	Sg	02 39 50.3	+0.1
ITM	Ithomi	0.91	16	ePN	Pg	02 39 38.8	+0.4
ITM				eSN	Sg	02 39 50.3	+0.1
ITM	Ithomi	0.91	16	P	Pg	02 39 38.8	+0.4
ITM				S	Sg	02 39 51.9	+1.7
ITM	Ithomi	0.91	16	P	Pg	02 39 38.8	+0.4
ITM				eSn	Sg	02 39 50.3	+0.1
ITM				S	Sg	02 39 51.9	+1.7
VLI	Veliai	1.14	69	ePn	Pg	02 39 42.3	-0.6
VLI				eSn	Sg	02 39 56.1	-1.6
VLI	Veliai	1.14	69	ePN	Pg	02 39 42.3	-0.6
VLI				eSN	Sg	02 39 56.1	-1.6
KYTH	Kithira	1.15	91	ePn	Pg	02 39 43.2	+0.2
KYTH	Kithira	1.15	91	ePN	Pg	02 39 43.2	+0.2
VLX	Vlachokerasia	1.23	30	ePN	Pg	02 39 44.2	-0.3
VLX				eSN	Sg	02 39 59.2	-1.2
VLX	Vlachokerasia	1.23	30	P	Pg	02 39 44.2	-0.3
VLX				S	Sg	02 40 03.8	+3.4
VLX	Vlachokerasia	1.23	30	P	Pg	02 39 44.2	-0.3
VLX				eSn	Sg	02 39 59.2	-1.2
GUR	Goura	1.73	19	ePN	Pg	02 39 53.7	-0.4
GUR	Goura	1.73	19	P	Pg	02 39 53.7	-0.4
GUR	Goura	1.73	19	P	Pg	02 39 53.7	-0.4
RLS	Riolos of Patr	1.75	356	ePn	Pg	02 39 54.4	-0.2
RLS	Riolos of Patr	1.75	356	ePN	Pg	02 39 54.4	-0.2
RLS	Riolos of Patr	1.75	356	ePn	Pg	02 39 54.4	-0.2
DID	Didima	1.77	47	ePN	Pg	02 39 53.8	-1.1
DID	Didima	1.77	47	P	Pg	02 39 54.0	-0.9
DID				S	Sg	02 40 19.1	+1.3
DID	Didima	1.77	47	ePn	Pg	02 39 53.8	-1.1
LAKA	Lakka	1.95	8	P	Pg	02 39 58.1	-0.3
LAKA				S	Sg	02 40 24.7	+1.0
LAKA	Lakka	1.95	8	P	Pg	02 39 58.1	-0.3
LTK	Loutraki	2.02	32	ePN	Pg	02 39 58.5	-1.3
LTK	Loutraki	2.02	32	ePn	Pg	02 39 58.5	-1.3
KARN	Karanos	2.08	115	P	Pg	02 40 00.8	0.0
KARN				S	Sg	02 40 29.5	+1.8
KARN	Karanos	2.08	115	P	Pg	02 40 00.8	0.0
KARN				S	Sg	02 40 29.5	+1.8
EFP	Efpalio	2.13	6	ePN	Pg	02 40 01.5	-0.3
EFP	Efpalio	2.13	6	ePn	Pg	02 40 01.5	-0.3
VLY	Voula,Athens	2.33	48	ePb	Pn	02 39 59.9	+0.2
VLY	Voula,Athens	2.33	48	ePB	Pn	02 39 59.9	+0.2

*ISK **08** 02:40:21.4, 37°.07N×29°.17E, h5km, MD2.9*
*ISCJB **08** 02:40:22.7±0.7, 37°.07N±0°.04×29°.14E±0°.04, h2km±9km, Error ellipse: s-maj=6.4km s-min=5.3km az=9.8*
*DDA **08** 02:40:22.9, 37°.04N×29°.17E, h7km±7km, Md2.9*
*CSEM **08** 02:40:23.0±0.2, 37°.08N×29°.16E, h5km, MD2.9, Error ellipse: s-maj=4.6km s-min=3.3km az=2.0*

ISC 08 02:40:23.2±0.5, 37°.08N±0°.04×29°.14E±0°.04, h5km±8km, n28, σ0°86/38, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLHS	Glhisar (BURDU	0.30	74	ePG	Pg	02 40 28.3	-0.6
GLHS				eSG	Sg	02 40 33.3	+0.5
GLHS	Glhisar (BURDU	0.30	74	ePg	Pg	02 40 28.3	-0.6
GLHS				eSg	Sg	02 40 33.3	+0.4
GOLH	Golhisar	0.37	64	iP	Pg	02 40 29.0	-1.3
GOLH				iS	Sg	02 40 36.6	+1.3
GOLH	Golhisar	0.37	64	iP	Pg	02 40 29.0	-1.4
GOLH				iS	Sg	02 40 36.6	+1.3
TURN	Turunc	0.47	245	iP	Pg	02 40 36.6	+4.3
TURN	Turunc	0.47	245	iP	Pg	02 40 36.6	+4.3
DNZL	Cakiroluk	0.62	353	iP	Pg	02 40 36.0	+1.0
DNZL	Cakiroluk	0.62	353	iP	Pg	02 40 36.0	+1.0
DENT	Denizli	0.68	353	ePG	Pg	02 40 35.9	-0.4
DENT	Denizli	0.68	353	ePg	Pg	02 40 35.9	-0.4
YER	Yerkesik	0.69	275	ePG	Pg	02 40 36.2	-0.1
YER	Yerkesik	0.69	275	ePg	Pg	02 40 36.2	-0.1
ELL	Elmali	0.70	118	ePG	Pg	02 40 35.6	-1.0
ELL				eSG	Sg	02 40 46.2	+0.6
ELL	Elmali	0.70	118	ePg	Pg	02 40 35.6	-1.0
ELL				eSg	Sg	02 40 46.2	+0.6
AKAS	Kas	0.92	156	iP	Pg	02 40 38.0	-2.8
AKAS				iS	Sg	02 40 53.8	+1.1
AKAS	Kas	0.92	156	iP	Pg	02 40 38.0	-2.8
AKAS				iS	Sg	02 40 53.8	+1.1
MLSB	Milas	1.11	282	ePN	Pg	02 40 44.2	-0.3
MLSB	Milas	1.11	282	ePn	Pg	02 40 44.2	-0.2
KHL	Karahalli	1.28	14	ePN	Pn	02 40 47.1	-0.6
KHL	Karahalli	1.28	14	ePn	Pn	02 40 47.2	-0.6
DAT	Datca	1.30	255	ePN	Pn	02 40 48.1	+0.1
DAT	Datca	1.30	255	ePn	Pn	02 40 48.1	+0.1
BDRM	Kayabasi	1.35	270	iP	Pn	02 40 49.1	+0.4
BDRM				iS	Sg	02 41 07.1	+0.4
BDRM	Kayabasi	1.35	270	iP	Pn	02 40 49.1	+0.3
BDRM				iS	Sg	02 41 07.1	+0.4
BODT	Bodrum	1.46	270	ePN	Pn	02 40 50.5	+0.3
BODT	Bodrum	1.46	270	ePn	Pn	02 40 50.5	+0.3
ALT	Altintas	2.12	21	ePN	Pn	02 40 59.3	0.0
ALT	Altintas	2.12	21	ePn	Pn	02 40 59.3	0.0

WEL 08 02:43:52.0±0.3, 37°.52S×177°.35E, h117km±2km, ML3.7/6, Error ellipse: s-maj=3.0km s-min=2.2km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	0.76	94	PN	Pn	02 44 11.5	0.0
MXZ				SN	Sn	02 44 26.2	0.0
URZ	Urewera	0.77	194	PN	Pn	02 44 11.6	0.0
URZ				SN	Sn	02 44 26.4	+0.1
MWZ	Matawai	0.83	170	PN	Pn	02 44 12.1	0.0
MWZ				SN	Sn	02 44 27.9	+0.6
PUZ	Puketiti	0.91	128	PN	Pn	02 44 12.7	-0.2
CNGZ	Carnagh Statio	1.18	145	PN	Pn	02 44 15.9	+0.3
PRGZ	Paritu Road	1.47	163	PN	Pn	02 44 18.5	-0.3
KNZ	Kokohu	1.52	170	PN	Pn	02 44 19.1	-0.4
KNZ				SN	Sn	02 44 39.4	-1.0
NMHZ	Naumai	1.64	195	PN	Pn	02 44 21.2	+0.5
MHGZ	Mahia Peninsul	1.69	165	PN	Pn	02 44 21.4	0.0
BKZ	Black Stump Fm	1.78	202	ePN	Pn	02 44 22.8	+0.3
MCHZ	McNeill Hill	1.99	195	PN	Pn	02 44 25.4	+0.3
KAHZ	Kahuranaki	2.31	189	PN	Pn	02 44 28.3	-0.7
PXZ	Pawanui	2.54	188	PN	Pn	02 44 30.5	-1.6
PNHZ	Pukenui	2.56	200	PN	Pn	02 44 30.8	-1.5
PRHZ	Porangahau	2.80	191	PN	Pn	02 44 33.7	-1.8
BFZ	Birch Farm	3.27	195	ePN	Pn	02 44 39.9	-1.8
MRZ	Mangatainoka R	3.43	203	ePN	Pn	02 44 41.4	-2.3
MRZ				SN	Sn	02 45 20.1	-3.8

*IDC **08** 02:49:33.5±1.4, 31°.18S×176°.94W, h0km, mb4.2/7, mb1 4.4/7, mb1mx4.2/15, mbtmp4.2/7, MS3.9/3, Ms1 3.8/3, ms1mx3.3/18, Error ellipse: s-maj=72.6km s-min=24.1km az=161.0*
*NEIC **08** 02:49:34.7±0.5, 31°.26S×176°.95W, h10km, mb4.6/8, Error ellipse: s-maj=19.5km s-min=11.5km az=157.0*

ISC 08 02:49:34.3±3.5, 31°.73S±0°.07×176°.8W±0°.1, h12km±21km, n38, σ1°30/27, mb4.4/14, MS3.8/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUZ	Puketiti	7.53	211	ePN	Pn	02 51 25.0	+1.2
PUZ				eSN	Sn	02 52 52.6	+3.4
URZ	Urewera	8.22	216	ePN	Pn	02 51 34.0	+0.6
URZ				eSN	Sn	02 53 08.4	+2.2
BFZ	Birch Farm	10.56	210	eSN	Sn	02 54 02.2	-1.4
MRZ	Mangatainoka R	10.84	213	ePN	Pn	02 52 07.5	-1.8
MRZ				eSN	Sn	02 54 06.3	-4.1
THZ	Tophouse	12.98	217	ePN	Pn	02 52 38.3	-0.2
THZ				eSN	Sn	02 54 57.4	-5.4
LTZ	Lake Taylor	14.05	215	ePN	Pn	02 52 52.0	-1.1
MQZ	McQueen's Vall	14.58	212	eSN	Sn	02 55 32.8	-9.0
DZM	Mont Dzumac	17.77	299	eP	Pn	02 53 43.3	+1.7
	38nm,1.2s						
DZM				eLR	LR	02 57 55.5	
	207nm,20.9s						
PPT	Papeete	28.36	67	eLR	LR	03 02 33.7	
	85nm,27.0s						
PPT	Papeete	28.36	67	LR	LR	03 04 20.9	
	comp=Z,188nm,18.0s,MS3.7,baz=178,slow=31						
CTA	Charters Tower	35.06	280	P	P	02 56 27.7	+0.5
	3.4nm,0.8s,mb4.3,baz=114,slow=15,SNR=4.0						
CTAO	Charters Tower	35.06	280	eP	P	02 56 27.4	+0.2
	5.6nm,0.6s,mb4.7						
STKA	Stephens Creek	35.22	258	P	P	02 56 29.8	+1.3
	4.0nm,0.7s,mb4.5,baz=107,slow=11,SNR=6.6						
STKA				LR	LR	03 09 22.5	
	comp=Z,142nm,21.0s,MS3.7,baz=28,slow=34						
TAOE	Nuku Hiva Isla	40.90	64	eLR	LR	03 08 34.1	
	127nm,25.9s						
ASAR	Alice Springs	44.10	268	P	P	02 57 41.8	-0.7
	2.6nm,0.7s,mb4.1,baz=103,slow=7.2,SNR=23						
WRAB	Tennant Creek	45.20	273	eP	P	02 57 50.2	-1.1
	6.8nm,0.8s,mb4.5						
FORT	Forrest	46.73	256	eP	P	02 58 02.8	-0.5
	11nm,0.7s,mb4.9						
FITZ	Fitzroy Crossi	53.41	270	LR	LR	03 20 39.3	
	comp=Z,136nm,19.2s,MS4.0,baz=245,slow=35						
CASY	Casey	54.47	208	eP	P	02 59 04.2	+3.0
	5.6nm,0.9s,mb4.5						
QSPA	South Pole Qui	58.39	180	eP	P	02 59 34.1	+5.1
	5.5nm,1.1s,mb4.5						
KSRS	Korea Array	86.03	319	P	P	03 02 13.2	-1.3
	1.3nm,0.7s,mb4.3,baz=135,slow=6.7,SNR=4.9						
CMB	Columbia Colle	87.05	41	eP	P	03 02 18.5	-1.1
	2.4nm,0.8s,mb4.5						
PETK	Petropavlovsk-	87.36	345	P	P	03 02 18.6	-2.1
	4.2nm,0.7s,mb4.8,baz=110,slow=8.2,SNR=3.6						
NVAR	Mina Array Bea	88.51	42	P	P	03 02 27.6	+1.0
	1.0nm,0.8s,mb4.2,baz=225,slow=8.9,SNR=7.9						
TXAR	Lajitas Array	92.23	57	P	P	03 02 45.1	+1.0
	0.5nm,0.9s,mb3.8,baz=233,slow=7.2,SNR=3.6						
MNTX	Cornudas Mount	92.40	54	eP	P	03 02 45.0	+0.1
	0.6nm,0.7s,mb4.0						
HLID	Hailey	94.13	40	eP	P	03 02 53.4	+0.9
	1.0nm,0.8s,mb4.3						
BVAR	Borovoye Array	128.08	315	PKP	PKPdf	03 08 39.8	+0.1
	0.3nm,0.3s,baz=0.0,slow=1.4,SNR=3.6						
JOF	Joensuu	144.03	338	epkp	PKPdf	03 09 06.1	-2.8
KAF	Kangasniemi	146.15	341	epkp	PKPdf	03 09 09.3	-3.3
	baz=39,slow=2.8						
FINES	FINESS Array B	146.75	340	PKPbc	PKPbc	03 09 14.3	-1.0
	9.1nm,0.8s,baz=59,slow=4.9,SNR=21						
KIV	Kislovodsk	146.84	303	ePKPbc	PKPbc	03 09 14.2	-1.9
NOA	NORSAR Array B	150.21	352	PKPbc	PKPbc	03 09 24.1	-0.3
	1.5nm,0.6s,baz=14,slow=4.1,SNR=4.6						
ASF	Jabal al Asfar	151.49	280	PKPbc	PKPbc	03 09 27.5	-0.9
	1.6nm,0.6s,baz=27,slow=4.5,SNR=3.4						
ASF				PKPab	PKPab	03 09 38.1	+1.3
	1.7nm,0.8s,baz=343,slow=5.5,SNR=3.7						
MMAI	Mount Meron Ar	152.84	281	PKPbc	PKPbc	03 09 32.6	+1.2
	0.5nm,0.3s,baz=135,slow=2.9,SNR=2.9						
AKASG	Malin Array Be	152.99	322	PKPbc	PKPbc	03 09 30.3	-0.8
	0.7nm,0.5s,baz=49,slow=3.6,SNR=5.0						
AKASG				PKPab	PKPab	03 09 40.2	-2.2
	1.7nm,0.5s,baz=48,slow=4.1,SNR=10						
BRTR	Keskin Array B	154.14	296	PKPab	PKPab	03 09 47.5	-0.2
	1.4nm,0.7s,baz=113,slow=3.2,SNR=5.4						
KWP	Kalwaria Pacla	156.92	326	ePKPab	PKPab	03 09 58.2	-1.0

IDC 08 03:05:17.6±1.8, 9°.07S×67°.60E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/22, mbtmp3.9/6, MS3.6/4, Ms1 3.6/4, ms1mx3.1/28, Error ellipse: s-maj=52.7km s-min=31.3km az=34.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATD	Arta Tunnel	32.02	309	LR	LR	03 21 50.1	
	comp=Z,90nm,21.9s,baz=223,slow=31						
PSI	Prapat	33.37	71	LR	LR	03 21 45.5	
	comp=Z,112nm,21.3s,baz=246,slow=30						
CMAR	Chiang Mai Arr	41.29	48	P	P	03 13 06.4	+1.3
	1.2nm,0.3s,baz=241,slow=10.0,SNR=7.1						
MKAR	Makanchi Array	57.14	12	P	P	03 15 04.1	-1.9
	0.2nm,0.2s,baz=217,slow=9.4,SNR=2.5						
BRTR	Keskin Array B	57.86	329	P	P	03 15 12.4	+1.1
	1.3nm,0.9s,baz=112,slow=8.1,SNR=4.5						
MAW	Mawson	58.54	182	LR	LR	03 32 18.9	
	comp=Z,48nm,20.9s,baz=268,slow=28						
ASAR	Alice Springs	64.75	112	P	P	03 15 58.2	-0.2
	0.8nm,0.8s,baz=267,slow=5.4,SNR=4.2						
SONM	Songino Array	66.24	27	P	P	03 16 07.7	+0.3
	1.6nm,0.8s,baz=224,slow=7.8,SNR=6.4						
SONM				LR	LR	03 44 37.2	
	comp=Z,62nm,21.0s,baz=108,slow=36						
AKASG	Malin Array Be	68.20	335	P	P	03 16 20.6	+0.8
	0.7nm,0.5s,baz=269,slow=26,SNR=4.1						
NVAR	Mina Array Bea	150.29	9	PKPbc	PKPbc	03 25 11.5	+0.2
	0.5nm,0.6s,baz=286,slow=2.7,SNR=4.6						
TXAR	Lajitas Array	158.25	339	PKPab	PKPab	03 25 49.8	-1.5
	0.3nm,0.8s,baz=90,slow=6.3,SNR=3.4						

*BEO **08** 03:17:52.3±1.2, 43°.47N×16°.58E, h31km±4km, ML3.2/4*
*CSEM **08** 03:17:55.8±0.2, 43°.33N×17°.28E, h2km, ML2.7/10, Error ellipse: s-maj=7.0km s-min=4.3km az=45.0*
*ISCJB **08** 03:17:56.0±0.3, 43°.31N±0°.02×17°.28E±0°.03, h10km, Error ellipse: s-maj=3.4km s-min=2.5km az=34.1*
*NEIC **08** 03:17:56.2, 43°.38N×17°.41E, h5km, ML2.7(PDG), After PDG.*
*PDG **08** 03:17:56.2±0.5, 43°.38N×17°.41E, h5km±1km, ML2.7/10, Error ellipse: s-maj=1.5km s-min=1.5km az=0.0*

ISC 08 03:17:56.3±0.7, 43°.31N±0°.02×17°.27E±0°.03, h6km±4km, n43, σ1°20/82, 13C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STON	Ston	0.54	144	iPg	Pg	03 18 04.3	-2.4
STON				eSg	Sg	03 18 13.6	-0.1
STON	Ston	0.54	144	iPg	Pg	03 18 04.3	-2.4
STON				eSg	Sg	03 18 13.6	-0.2
BRY	Bratogost	1.02	113	ePg	Pg	03 18 13.1	-2.8
BRY				eSg	Sg	03 18 28.6	-0.5
UPM	Unac-Piva	1.20	95	iPg	Pn	03 18 17.0	-2.6
UPM				eSg	Sn	03 18 34.7	-1.5
HCY	Herceg Novi	1.25	133	iPg	Pn	03 18 18.2	-2.1
HCY				eSg	Sn	03 18 38.0	+0.6
HCY	Herceg Novi	1.25	133	iPg	Pn	03 18 18.2	-2.1
HCY				eSg	Sn	03 18 38.0	+0.6
NKY	Niksic	1.36	111	iPg	Pn	03 18 20.2	-1.6
NKY				eSg	Sn	03 18 40.5	+0.4
NKY	Niksic	1.36	111	iPg	Pn	03 18 20.2	-1.6
NKY				eSg	Sn	03 18 40.5	+0.4
PLE	Pljevlja	1.55	89	iPg	Pn	03 18 23.5	-0.9
PLE				eSg	Sg	03 18 46.6	+0.5
BUM	Brajici-Budva	1.57	130	iPg	Pn	03 18 24.1	-0.5
BUM				eSg	Sg	03 18 48.1	+1.4
BUM	Brajici-Budva	1.57	130	iPg	Pn	03 18 24.1	-0.5
BUM				eSg	Sg	03 18 48.1	+1.4
BBLS	Lazi?i	1.65	70	ePn	Pn	03 18 25.2	-0.5
BBLS				eSn	Sg	03 18 50.6	+1.4
BBLS	Lazi?i	1.65	70	ePn	Pn	03 18 25.2	-0.5
BBLS				eSn	Sg	03 18 50.6	+1.4
PDG	Podgorica	1.71	120	iPn	Pn	03 18 26.7	+0.1
PDG				eSn	Sg	03 18 51.6	+0.4
TTG	Podgorica	1.71	120	iPn	Pn	03 18 26.7	+0.1
TTG				eSn	Sg	03 18 51.6	+0.4
TTG	Podgorica	1.71	120	iPn	Pn	03 18 26.7	+0.1
TTG				eSn	Sg	03 18 51.6	+0.4
MS1	Monte Sant'Ang	1.88	212	ePn	Pb	03 18 31.4	+0.4
MS1				eSn	Sg	03 18 58.2	+1.5
BEY	Berane	1.98	102	iPn	Pn	03 18 30.8	+0.6
BEY				eSn	Sn	03 18 57.8	+2.5
IVA	Berane	1.98	102	iPn	Pn	03 18 30.8	+0.6
IVA				eSn	Sn	03 18 57.8	+2.5
IVA	Berane	1.98	102	iPn	Pn	03 18 30.8	+0.6
IVA				eSn	Sn	03 18 57.8	+2.5
SJES	Sjenica	1.98	91	ePn	Pn	03 18 31.0	+0.8
SJES				eSn	Sg	03 19 00.0	+0.2
ULC	Ulcinj	1.99	132	iPn	Pn	03 18 30.9	+0.5
ULC				eSn	Sb	03 18 58.6	+0.8
ULC	Ulcinj	1.99	132	iPn	Pn	03 18 30.9	+0.5
ULC				eSn	Sb	03 18 58.6	+0.8
PVY	Plav	2.11	109	iPn	Pn	03 18 32.5	+0.4
PVY				eSn	Sb	03 19 01.5	+0.1
PVY	Plav	2.11	109	iPn	Pn	03 18 32.5	+0.4
PVY				eSn	Sb	03 19 01.5	+0.1
DIVS	Divibare	2.13	67	ePn	Pn	03 18 32.0	-0.3
DIVS				eSn	Sb	03 19 02.5	+0.7
DIVS	Divibare	2.13	67	ePn	Pn	03 18 32.0	-0.3
DIVS				eSn	Sb	03 19 02.5	+0.7
NVLJ	Novalja	2.14	307	ePn	Pn	03 18 32.0	-0.4
NVLJ				Sn	Sn	03 19 00.5	+1.3
NVLJ	Novalja	2.14	307	ePn	Pn	03 18 32.0	-0.4
NVLJ				Sn	Sn	03 19 00.5	+1.3
PE1	Pezze di Greco	2.51	177	ePn	Pn	03 18 38.1	+0.6
PE1				eSn	Sn	03 19 07.8	-0.6
SG1	Sgolgore (BA)	2.51	190	ePn	Pn	03 18 37.4	-0.2
SG1				eSn	Sn	03 19 05.4	-3.0
FRGS	Fruska Gora	2.60	44	ePn	Pn	03 18 36.1	-2.7
FRGS				eSn	Sn	03 19 09.2	-1.4
BOJS	Bojanci	2.62	327	ePn	Pn	03 18 39.3	+0.2
BOJS				eSn	Sn	03 19 12.7	+1.4
BOJS	Bojanci	2.62	327	ePn	Pn	03 18 39.3	+0.2
BOJS				eSn	Sn	03 19 12.7	+1.4
BOJS							
	comp=Z,25nm,0.6s						
BOJS	Bojanci	2.62	327	ePn	Pn	03 18 39.3	+0.1
BOJS				eSn	Sn	03 19 12.7	+1.4
KNDS	Knezji Dol	3.03	318	ePn	Pn	03 18 45.8	+1.1
KNDS				eSn	Sb	03 19 27.1	-0.8
KNDS	Knezji Dol	3.03	318	ePn	Pn	03 18 45.8	+1.1
PKSM	Moragy	3.06	18	ePn	Pn	03 18 43.1	-2.0
PKS2	Kecel	3.47	23	ePn	Pn	03 18 51.7	+1.0
VOY	Vojsko	3.63	320	ePn	Pn	03 18 55.8	+2.8
VOY				eSn	Sn	03 19 35.7	-0.4
VOY				e		03 19 38.7	
VOY	Vojsko	3.63	320	ePn	Pn	03 18 55.8	+2.8
VOY				eSn	Sn	03 19 35.7	-0.4
ZAPS	Zavoj	3.92	89	ePn	Pn	03 18 57.6	+0.7
ZAPS				eSn	Sn	03 19 45.3	+2.1
PKSG		4.16	11	ePn	Pn	03 18 59.4	-0.8

*IDC **08** 03:27:28.9±8.6, 28°.07S×177°.92W, h104km±66km, mb3.9/2, mb1 3.9/3, mb1mx3.6/14, mbtmp3.9/3, ML3.5/1, Error ellipse: s-maj=62.7km s-min=42.3km az=54.0*
*NEIC **08** 03:27:29.8±3.7, 28°.03S×178°.02W, h113km±29km, mb4.4/7, Error ellipse: s-maj=29.4km s-min=24.6km az=212.0*
*ISCJB **08** 03:27:30.9±4.3, 28°.1S±0°.2×178°.1W±0°.2, h131km±33km, mb4.2/8, Error ellipse: s-maj=38.7km s-min=29.0km az=31.8*

ISC 08 03:27:30.3±4.1, 28°.0S±0°.2×178°.1W±0°.2, h112km±31km, n15, σ0°98/12, mb4.3/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUZ	Omahuta	10.08	223	ePn	Pn	03 29 51.9	+0.1
URZ	Urewera	10.96	200	P	Pn	03 30 03.5	-0.2
	0.4nm,0.3s,baz=303,slow=17,SNR=3.1						
URZ				S	Sn	03 31 56.1	-8.1
	5.0nm,0.3s,baz=119,slow=23,SNR=26						
ASAR	Alice Springs	43.22	264	P	P	03 35 20.8	+0.3
	0.7nm,0.6s,mb3.6,baz=94,slow=6.6,SNR=16						
ASAR				PcP	PcP	03 37 07.7	-0.2
	0.5nm,0.7s,baz=109,slow=3.4,SNR=4.4						
WR

KHL	**Karahalli**	**1.30**	**9**	*e*PN	**Pn**	**03 46 53.6**	**-0.5**
KHL	**Karahalli**	**1.30**	**9**	*e*Pn	**Pn**	**03 46 53.6**	**-0.5**
KHAL	**Karahalli**	**1.35**	**8**	*i* P	**Pn**	**03 46 55.0**	**+0.4**
KHAL				*i* S	**Sb**	**03 47 15.3**	**+2.8**
KHAL	**Karahalli**	**1.35**	**8**	*i* P	**Pn**	**03 46 55.0**	**+0.3**
KHAL				*i* S	**Sb**	**03 47 15.3**	**+2.9**
DAT	**Datca**	**1.38**	**258**	*e*PN	**Pn**	**03 46 55.8**	**+0.7**
DAT	**Datca**	**1.38**	**258**	*e*Pn	**Pn**	**03 46 55.8**	**+0.6**
KULA	**Kula-Manisa**	**1.55**	**342**	*e*PN	**Pn**	**03 46 57.5**	**0.0**
KULA	**Kula-Manisa**	**1.55**	**342**	*e*Pn	**Pn**	**03 46 57.5**	**0.0**
BODT	**Bodrum**	**1.56**	**272**	*e*PN	**Pn**	**03 46 58.1**	**+0.5**
BODT	**Bodrum**	**1.56**	**272**	*e*Pn	**Pn**	**03 46 58.1**	**+0.5**

NIED ***08*** *03:57:00, 35.7′0N × 139.5′0E, h38km, Mw4.6 Best double couple: M0 9.46000 × 10^15 NP1: φ 70.00000°, δ 85.00000°, λ 83.00000°. NP2: φ 302.00000°, δ 8.00000°, λ 142.00000°.*

IDC ***08*** *03:57:07.5 ± 0.6, 35.5′5N × 139.4′8E, h26km ± 3km, mb4.2/19, mb1 4.3/22, mb1mx4.2/29, mbtmp4.2/22, ML4.3/3, MS3.9/24, Ms1 3.9/24, ms1mx3.8/36, Error ellipse: s-maj=14.0km s-min=9.8km az=49.0*

MOS ***08*** *03:57:07.7 ± 1.1, 35.6′7N × 139.5′2E, h33km, mb4.6/38, Error ellipse: s-maj=9.9km s-min=5.9km az=107.8*

ISCJB ***08*** *03:57:09.2 ± 0.3, 35.6′2N ± 0.0′2 × 139.7′44E ± 0.0′3, h40km ± 2km, mb4.4/78, MS4.0/34, Error ellipse: s-maj=4.1km s-min=4.0km az=10.2*

JMA ***08*** *03:57:09.1 ± 0.1, 35.6′3N × 139.5′4E, h30km ± 1km, M4.6 Broadband fault plane solution: P waves. NP1: φ 270.00000°, δ 22.00000°, λ 94.00000°. NP2: φ 86.00000°, δ 68.00000°, λ 88.00000°. Principal axes: T Plg 67.0000°, Azm 353.0000°; N Plg 1.0000°, Azm 86.0000°; P Plg 23.0000°, Azm 177.0000°;*

JMA Felt IV J1.

BJI ***08*** *03:57:14.1, 36.′05N × 139.′51E, h78km, mB4.8/16, mb4.7/23, Ms4.1/15, Ms7 3.9/15*

NEIC ***08*** *03:57:15.1 ± 1.1, 36.′02N × 139.′35E, h68km ± 6km, mb4.4/48, Error ellipse: s-maj=15.6km s-min=4.5km az=176.0*

NEIC Felt at Tokyo. Recorded [4 JMA] in Kanagawa and Tokyo; [3 JMA] in Saitama; [2 JMA] in Chiba, Gumma, Ibaraki, Nagano, Shizuoka, Tochigi and Yamanashi.

ISC 08 03:57:09.7 ± 0.4, 35.6′0N ± 0.0′2 × 139.7′43E ± 0.0′3, h32km ± 2km, h41km ± 2.4km: pP-P, n359, σ 0s 81/359, mb4.4/78, MS4.0/34, 85C-83D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHU	**Hanno**	**0.28**	**335**	⇓P	**Pb**	**03 57 16.5**	**-0.6**
JHU				S	**Sb**	**03 57 22.6**	**+0.4**
TOK	**Tokyo**	**0.28**	**72**	⇑P	**Pb**	**03 57 15.4**	**-1.8**
TOK				S	**Sb**	**03 57 20.4**	**-1.9**
JOD2	**Odawara 2**	**0.43**	**220**	⇓P	**Pb**	**03 57 19.6**	**+0.4**
JOD2				S	**Sb**	**03 57 27.6**	**+1.8**
JRY	**Ryogami san**	**0.60**	**315**	⇓P	**Pb**	**03 57 21.3**	**-0.5**
JRY				*e*S	**Sb**	**03 57 31.1**	**+1.1**
JYN	**Shimob**	**0.73**	**262**	P	**Pn**	**03 57 24.4**	**+0.7**
JYN				*e*S	**Sb**	**03 57 36.2**	**+2.6**
JAG	**Ashikaga**	**0.82**	**2**	⇓P	**Pn**	**03 57 24.3**	**-0.8**
JAG				*e*S	**Sn**	**03 57 35.4**	**-0.7**
JIM2	**Oshima 3**	**0.88**	**180**	P	**Pn**	**03 57 24.5**	**-1.3**
JIM2				*e*S	**Sn**	**03 57 36.5**	**-0.9**
JIZS	**Izushimoda**	**0.99**	**207**	⇓P	**Pn**	**03 57 26.9**	**-0.4**
JIZS				*e*S	**Sn**	**03 57 41.7**	**+1.6**
JKT	**Katashina**	**1.17**	**353**	P	**Pn**	**03 57 30.0**	**+0.1**
JKT				S	**Sn**	**03 57 46.5**	**+1.8**
BSO3	**Boso 3**	**1.19**	**132**	⇓P	**Pn**	**03 57 27.9**	**-2.2**
MJAR	**Matsushiro Arr**	**1.36**	**314**	Pg	**Pn**	**03 57 33.9**	**+1.5**
	955nm,0.3s,baz=323,slow=6.0,SNR=2209						
MJAR				Lg		03 57 53.6	
	726nm,0.3s,baz=141,slow=26,SNR=17						
MJAR	**Matsushiro Arr**	**1.36**	**314**	P	**Pn**	**03 57 33.9**	**+1.5**
MJAR						03 57 53.6	
MJAR				pmax	pmax		
	comp=Z,955nm,0.3s						
MJAR				smax			
	comp=N,1.0nm,0.3s						
MAJO	**Matsushiro**	**1.36**	**314**	⇑*e*P	**Pn**	**03 57 34.6**	**+2.1**
MAT	**Matsushiro**	**1.36**	**314**	P	**Pn**	**03 57 34.6**	**+2.1**
MAT				S	**Sn**	**03 57 54.9**	**+5.5**
JHJ	**Hachijo jima 2**	**2.49**	**173**	Pn	**Pn**	**03 57 47.7**	**-0.2**
	comp=N,273nm,0.3s,baz=6.0,slow=3.4,SNR=90						
JHJ				Sn	**Sn**	**03 58 16.5**	**-0.8**
	comp=N,224nm,0.3s,baz=116,slow=23,SNR=21						
ERM	**Erimo**	**7.04**	**23**	*e*Pn	**Pn**	**03 58 50.4**	**0.0**
ERM	**Erimo**	**7.04**	**23**	*i* P	**Pn**	**03 58 49.2**	**-1.2**
CBIJ	**Chichi jima**	**8.80**	**164**	Pn	**Pn**	**03 59 11.6**	**-3.1**
	comp=N,20nm,0.3s,baz=332,slow=20,SNR=16						
CBIJ				Sn	**Sn**	**04 00 46.0**	**-6.7**
	comp=N,4.9nm,0.3s,baz=295,slow=19,SNR=2.4						
CBIJ				LR	LR	04 01 21.0	
	comp=N,75nm,21.2s,baz=264,slow=29						
ASAJ	**Asahikawa**	**8.85**	**15**	Pn	**Pn**	**03 59 15.8**	**+0.6**
	comp=N,1.6nm,0.3s,baz=252,slow=12,SNR=7.4						
ASAJ				LR	LR	04 03 08.7	
	comp=N,269nm,20.8s,baz=180,slow=41						
KSRS	**Korea Array**	**9.44**	**285**	Pn	**Pn**	**03 59 27.0**	**+3.6**
	comp=N,1.1nm,0.3s,baz=100,slow=14,SNR=24						
KSRS				LR	LR	04 03 01.9	
	comp=N,463nm,20.0s,baz=230,slow=37						
YSS	**Yuzh-Sakhalins**	**11.62**	**11**	*e*P	**Pn**	**03 59 51.0**	**-2.1**
YSS				MLR	MLR		
	comp=N,1μm,18.0s						
YSS				MLR	MLR		
	comp=Z,1μm,18.0s						
YSS				MLR	MLR		
	comp=E,700nm,16.0s						
MDJ	**Mudanjiang**	**11.73**	**323**	*e*Pn	**Pn**	**03 59 53.2**	**-1.5**
	comp=E,8.2nm,0.8s						
HABR	**Khabarovsk**	**13.27**	**347**	P	**Pn**	**04 00 18.5**	**+2.9**
HABR				MLR	MLR		
	comp=Z,496nm,15.0s						
DL2	**Dalian**	**14.55**	**288**	P	**Pn**	**04 00 42.0**	**+8.7**
DL2				S	**Sn**	**04 03 23.5**	**+10**
DL2				*es*S		04 03 40.1	
DL2				pmax	pmax		
	comp=Z,20nm,0.7s						
DL2				LR	LR		
	comp=N,150nm,16.9s						
DL2				LR	LR		
	comp=E,180nm,18.9s						
DL2				LR	LR		
	comp=Z,320nm,18.9s						
KLR	**Kul'dur**	**14.74**	**340**	*e*P	**Pn**	**04 00 37.0**	**+1.3**
NJ2	**Nanjing**	**17.45**	**264**	*e*P	**Pn**	**04 01 16.4**	**+5.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJI	**Beijing**	**18.88**	**291**	P	**Pn**	**04 01 27.0**	**-1.0**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,65nm,3.5s						
BJI				LR	LR		
	comp=N,110nm,20.7s						
BJI				LR	LR		
	comp=E,190nm,20.7s						
BJI				LR	LR		
	comp=Z,190nm,24.8s						
BJT	**Baijiatuan**	**18.88**	**290**	*e*P	**Pn**	**04 01 30.1**	**+2.0**
	comp=Z,8.9nm,0.6s						
BJT	**Baijiatuan**	**18.88**	**290**	*e*P	**Pn**	**04 01 30.1**	**+2.1**
BJT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WHN	**Wuhan**	**21.59**	**264**	P	**P**	**04 02 04.5**	**+7.8**
WHN				S	**S**	**04 05 59.8**	**+5.7**
WHN				LR	LR		
	comp=Z,390nm,13.2s,MS4.0						
PETK	**Petropavlovsk-**	**21.73**	**31**	P	**P**	**04 01 56.6**	**-1.4**
	comp=Z,3.0nm,0.7s,mb3.9,baz=217,slow=7.2,SNR=3.8						
PETK	**Petropavlovsk-**	**21.73**	**31**	P	**P**	**04 01 56.7**	**-1.4**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
PET	**Petropavlovsk**	**22.08**	**32**	*e*P	**P**	**04 01 54.8**	**-6.9**
PET				MLR	MLR		
	comp=Z,300nm,16.0s,MS3.8						
GUMO	**Guam**	**22.46**	**166**	LR	LR	04 09 47.9	
	comp=Z,289nm,21.1s,MS3.7,baz=42,slow=34						
HHC	**Hu-ho-hao-te**	**22.46**	**292**	*e*P	**P**	**04 02 07.0**	**+1.1**
HHC				pP		04 02 23.7	
HHC				sP	sP	04 02 33.1	+14
HHC				*e*S	**S**	**04 06 00.1**	**-11**
HHC				sS	sS	04 06 27.7	+2.8
HHC				SS		04 06 43.6	
HHC				PcS	PcS	04 09 41.0	+2.9
HHC				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.4						
HHC				pmax	pmax		
	comp=Z,62nm,4.5s						
HHC				LR	LR		
	comp=N,170nm,9.7s						
HHC				LR	LR		
	comp=E,120nm,10.4s						
HHC				LR	LR		
	comp=Z,240nm,17.9s						
SONM	**Songino Array**	**27.30**	**307**	P	**P**	**04 02 49.8**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=112,slow=6.6,SNR=4.7						
SONM				LR	LR	04 14 15.9	
	comp=Z,461nm,19.3s,baz=131,slow=38						
SEY	**Seymchan**	**28.52**	**12**	*i* P	**P**	**04 03 01.6**	**-0.3**
LZH	**Lanzhou**	**28.75**	**282**	*e*P	**P**	**04 03 08.7**	**+4.5**
LZH				pP	pP	04 03 26.8	+13
LZH				sP	sP	04 03 35.5	+18
LZH				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.7						
GYA	**Guiyang**	**29.41**	**261**	*e*P	**P**	**04 03 13.8**	**+3.7**
GYA				pP	pP	04 03 31.6	+12
GYA				sP	sP	04 03 41.0	+18
GYA				PP	PP	04 04 11.9	-4.8
GYA				PcP	PcP	04 06 18.5	+2.9
GYA				S	**S**	**04 08 01.6**	**-0.4**
GYA				sS	sS	04 08 31.2	+14
GYA				ScP	ScP	04 09 51.0	-3.9
GYA				ScS	ScS	04 13 44.8	-4.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
GYA				pmax	pmax		
	comp=Z,70nm,4.5s						
CD2	**Chengdu**	**30.09**	**271**	P	**P**	**04 03 19.7**	**+3.6**
CD2				pP	pP	04 03 37.4	+12
CD2				sP	sP	04 03 46.5	+17
CD2				PP	PP	04 04 19.6	-4.7
CD2				PcP	PcP	04 06 21.2	+3.9
CD2				S	**S**	**04 08 11.0**	**-1.6**
CD2				sS	sS	04 08 40.7	+13
CD2				SS	SS	04 09 51.2	-30
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
CD2				pmax	pmax		
	comp=Z,110nm,5.9s						
CD2				LR	LR		
	comp=N,370nm,16.7s,MS4.3						
CD2				LR	LR		
	comp=E,420nm,16.5s,MS4.3						
CD2				LR	LR		
	comp=Z,410nm,17.6s,MS4.1						
QIZ	**Qiongzhong**	**30.88**	**246**	P	**P**	**04 03 28.1**	**+4.9**
QIZ				pP	pP	04 03 44.6	+12
QIZ				S	**S**	**04 08 29.4**	**+4.3**
QIZ				pmax	pmax		
	comp=Z,33nm,2.1s,mb4.8						
QIZ				LR	LR		
	comp=Z,67nm,21.1s,MS3.3						
GTA	**Gaotai**	**31.48**	**289**	*e*P	**P**	**04 03 25.4**	**-2.9**
GTA				pP	pP	04 03 42.8	+5.1
GTA				sP	sP	04 03 52.1	+10
GTA				S	**S**	**04 08 25.3**	**-8.9**
GTA				sS	sS	04 08 55.9	+6.1
GTA				SS	SS	04 10 16.9	-33
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
GTA				pmax	pmax		
	comp=Z,82nm,6.3s						
GTA				LR	LR		
	comp=N,130nm,19.2s,MS3.7						
GTA				LR	LR		
	comp=E,100nm,20.1s,MS3.7						
GTA				LR	LR		
	comp=Z,160nm,23.4s,MS3.6						
KMI	**Kunming**	**33.16**	**262**	P	**P**	**04 03 48.4**	**+5.2**
KMI				pP	pP	04 04 06.6	+14
KMI				sP	sP	04 04 15.3	+19
KMI				PP	PP	04 05 00.8	+2.3
KMI				S	**S**	**04 09 00.6**	**-0.1**
KMI				sS	sS	04 09 32.3	+16
KMI				SS	SS	04 11 05.8	-18
KMI				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
KMI				pmax	pmax		
	comp=Z,78nm,3.4s						
KMI				LR	LR		
	comp=N,140nm,14.9s,MS4.0						
KMI				LR	LR		
	comp=E,160nm,15.4s,MS4.0						
KMI				LR	LR		
	comp=Z,160nm,13.9s,MS3.9						
TIXI	**Tiksi**	**36.54**	**354**	*e*P	**P**	**04 04 09.8**	**-2.0**
	comp=Z,4.2nm,0.6s,mb4.5						
TIXI	**Tiksi**	**36.54**	**354**	*e*P	**P**	**04 04 09.8**	**-2.0**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
CMAR	**Chiang Mai Arr**	**39.58**	**255**	pP	pP	04 04 46.0	-1.6
	comp=Z,2.0nm,0.7s,baz=48,slow=8.7,SNR=2.2						
CMAR				LR	LR	04 22 47.7	
	comp=Z,69nm,18.1s,MS3.5,baz=65,slow=39						
WMQ	**Urumqi**	**40.07**	**298**	*e*P	**P**	**04 04 42.6**	**+0.7**
WMQ				pP	pP	04 05 00.9	+9.4
WMQ				sP	sP	04 05 10.0	+15
WMQ				PP	PP	04 06 18.9	+4.7
WMQ				PcP	PcP	04 06 46.5	+0.3
WMQ				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
WMQ				pmax	pmax		
	comp=Z,90nm,4.0s						
WMQ				LR	LR		
	comp=N,110nm,26.0s						
WMQ				LR	LR		
	comp=Z,98nm,23.9s,MS3.6						
ZAA0	**Zalesovo Array**	**41.72**	**314**	*e*P	**P**	**04 04 54.0**	**-1.3**
ZALV	**Zalesovo Beam**	**41.72**	**314**	P	**P**	**04 04 54.3**	**-1.0**
	comp=Z,2.3nm,0.5s,mb4.1,baz=90,slow=7.4,SNR=10						
ZALV				PcP	PcP	04 06 49.9	-1.4
	comp=Z,1.2nm,0.5s,baz=93,slow=3.4,SNR=4.1						
ZALV				LR	LR	04 22 55.9	
	comp=Z,63nm,19.1s,MS3.5,baz=84,slow=37						
ZALV	**Zalesovo Beam**	**41.72**	**314**	P	**P**	**04 04 54.3**	**-1.0**
ZALV						04 06 49.9	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
ZALV				MLR	MLR		
	comp=Z,63nm,19.1s,MS3.5						
MK31	**Makanchi Array**	**43.54**	**303**	*e*P	**P**	**04 05 10.0**	**-0.2**
MKAR	**Makanchi Array**	**43.54**	**303**	P	**P**	**04 05 09.4**	**-0.7**
	comp=Z,2.3nm,0.6s,mb4.1,baz=91,slow=10,SNR=19						
MKAR				pP	pP	04 05 17.6	-2.2
	comp=Z,1.9nm,0.7s,baz=91,slow=10.0,SNR=3.1						
MKAR				LR	LR	04 24 19.0	
	comp=Z,212nm,18.4s,MS4.1,baz=265,slow=37						
MKAR	**Makanchi Array**	**43.54**	**303**	P	**P**	**04 05 09.5**	**-0.7**
MKAR				*PP	pP	04 05 17.6	-2.2
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,212nm,18.4s						
KURK	**Kurchatov**	**45.57**	**309**	*e*P	**P**	**04 05 24.7**	**-1.6**
	comp=Z,13nm,0.8s,mb4.9						
KURK	**Kurchatov**	**45.57**	**309**	*c* P	**P**	**04 05 24.9**	**-1.4**
KURK				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.9						
KURK				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.2						
HNR	**Honiara**	**48.80**	**153**	LR	LR	04 23 08.3	
	comp=Z,87nm,19.7s,MS3.8,baz=71,slow=32						
TKM2	**Tokmak 2**	**48.91**	**299**	*e*P	**P**	**04 05 52.7**	**+0.2**
	comp=Z,12nm,1.1s,mb4.8						
TKM2	**Tokmak 2**	**48.91**	**299**	*e*P	**P**	**04 05 52.7**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
KDAK	**Kodiak Island**	**49.23**	**41**	P	**P**	**04 05 53.6**	**-1.1**
	comp=Z,9.1nm,0.8s,mb4.9,baz=142,slow=0.9,SNR=6.9						
KSH	**Kashi**	**49.53**	**295**	*e*P	**P**	**04 06 00.2**	**+2.9**
KSH				*e*pP	pP	04 06 18.8	+12
KSH				*e*sP	sP	04 06 27.8	+17
KSH				*e*PcP	PcP	04 07 22.8	+4.0
KSH				*e*PP	PP	04 07 55.3	+3.8
KSH				*e*ScP	ScP	04 11 10.0	-1.7
KSH				*e*PcS	PcS	04 11 17.5	+2.1
KSH				*e*S	**S**	**04 12 58.7**	**-4.2**
KSH				*e*ScS	ScS	04 15 41.8	-4.7
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
KSH				pmax	pmax		
	comp=Z,27nm,3.7s						
KSH				LR	LR		
	comp=N,80nm,4.7s						
KSH				LR	LR		
	comp=E,69nm,5.7s						
KSH				LR	LR		
	comp=Z,87nm,5.0s						
AAK	**Ala-Archa**	**49.77**	**299**	LR	LR	04 28 48.6	
	comp=Z,111nm,18.7s,MS3.9,baz=268,slow=38						
UCH	**Uchtor**	**49.86**	**298**	*e*P	**P**	**04 06 00.7**	**+1.0**
	comp=Z,2.0nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**50.36**	**313**	P	**P**	**04 06 02.5**	**-0.9**
	comp=Z,2.3nm,0.5s,mb4.5,baz=90,slow=7.4,SNR=12						
BVAR				pP	pP	04 06 11.1	-2.0
	comp=Z,1.5nm,0.4s,baz=99,slow=7.8,SNR=5.2						
BVAR	**Borovoye Array**	**50.36**	**313**	P	**P**	**04 06 02.5**	**-0.8**
BVAR				*PP	pP	04 06 11.1	-2.0
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	**Borovoye**	**50.42**	**313**	*e*P	**P**	**04 06 03.5**	**-0.3**
	comp=Z,2.8nm,0.5s,mb4.5						
BRVK	**Borovoye**	**50.42**	**313**	*i* P	**P**	**04 06 03.7**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
BRVK				MLR	MLR		
	comp=Z,148nm,17.0s,MS4.1						
AML	**Almayashu**	**50.47**	**298**	*e*P	**P**	**04 06 04.7**	**+0.4**
	comp=Z,124nm,0.6s						
PMR	**Palmer**	**50.73**	**36**	*e*P	**P**	**04 06 04.9**	**-1.1**
	comp=Z,48nm,2.2s,mb5.0						
PMR	**Palmer**	**50.73**	**36**	*e*P	**P**	**04 06 04.9**	**-1.1**
PMR				pmax	pmax		
	comp=Z,48nm,2.2s,mb5.0						
COLA	**College**	**51.14**	**32**	*e*P	**P**	**04 06 09.1**	**0.0**
	comp=Z,4.2nm,0.8s,mb4.4						
COLA	**College**	**51.14**	**32**	*e*P	**P**	**04 06 09.1**	**0.0**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ILAR	**Eielson Array**	**51.56**	**32**	P	**P**	**04 06 11.3**	**-0.8**
	comp=Z,4.1nm,0.8s,mb4.4,baz=273,slow=6.2,SNR=60						
ILAR				sP	sP	04 06 22.4	-3.4
	comp=Z,4.4nm,0.8s,baz=276,slow=5.4,SNR=14						
ILAR	**Eielson Array**	**51.56**	**32**	P	**P**	**04 06 11.4**	**-0.8**
ILAR				*SP	sP	04 06 22.4	-3.4
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
EGAK	**Eagle**	**54.00**	**31**	*e*P	**P**	**04 06 29.9**	**-0.3**
	comp=Z,4.8nm,0.9s,mb4.4						
EGAK				*e*pP	pP	04 06 40.6	+0.5
SVE	**Sverdlovsk**	**55.17**	**319**	*e*P	**P**	**04 06 38.5**	**-0.3**
SVE				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
WRAB	**Tennant Creek**	**55.44**	**186**	*e*P	**P**	**04 06 49.7**	**+8.6**
	comp=Z,3.4nm,0.5s,mb4.6						
WRAB	**Tennant Creek**	**55.44**	**186**	*e*P	**P**	**04 06 49.7**	**+8.6**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
ARU	**Arti**	**56.38**	**319**	*e*P	**P**	**04 06 46.5**	**-0.9**
	comp=Z,20nm,0.7s,mb5.3						
ARU				*e*pP	pP	04 06 59.7	+2.4
ARU	**Arti**	**56.38**	**319**	*d i* P	**P**	**04 06 46.4**	**-1.1**
ARU				*PP	pP	04 07 03.7	+6.4
ARU						04 08 48.7	
ARU				S	**S**	**04 14 29.7**	**-5.9**
ARU				SS	SS	04 18 14.5	-7.8
ARU				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.3						
INK	**Inuvik**	**56.39**	**26**	*e*P	**P**	**04 06 46.4**	**-1.0**
	comp=Z,5.2nm,0.7s,mb4.7						
INK	**Inuvik**	**56.39**	**26**	P	**P**	**04 06 47.1**	**-0.3**
	comp=Z,4.9nm,0.8s,mb4.6,baz=333,slow=7.0,SNR=8.2						
INK	**Inuvik**	**56.39**	**26**	P	**P**	**04 06 47.1**	**-0.3**
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HYT	**Haines Junctio**	**56.40**	**36**	*e*P	**P**	**04 06 48.8**	**+1.2**
ABKAR	**Akbulak array**	**57.64**	**310**	*e*P	**P**	**04 06 55.2**	**-1.3**
	comp=Z,6.7nm,0.5s,mb4.9						
ABKAR				*e*pP	pP	04 07 08.9	+2.5
AKTK	**Aktyubinsk**	**58.44**	**312**	P	**P**	**04 07 01.2**	**-0.9**
AKTK				LR	LR	04 33 39.1	
AKTO	**Aktyubinsk**	**58.44**	**312**	P	**P**	**04 07 01.2**	**-0.9**
	comp=Z,5.0nm,0.7s,mb4.6,baz=77,slow=11,SNR=16						
AKTO				LR	LR	04 33 39.1	
	comp=Z,143nm,18.8s,MS4.1,baz=251,slow=38						
AKTO	**Aktyubinsk**	**58.44**	**312**	P	**P**	**04 07 01.2**	**-0.9**
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
AKTO				MLR	MLR		
	comp=Z,143nm,18.8s,MS4.1						
ASAR	**Alice Springs**	**59.17**	**186**	P	**P**	**04 07 05.7**	**-1.7**
	comp=Z,0.9nm,0.5s,mb4.0,baz=14,slow=11,SNR=10						
ASAR				pP	pP	04 07 13.9	-3.4
	comp=Z,3.3nm,0.8s,baz=7.6,slow=7.8,SNR=12						
ASAR	**Alice Springs**	**59.17**	**186**	P	**P**	**04 07 05.7**	**-1.7**
ASAR				*PP	pP	04 07 13.9	-3.4
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DLBC	**Dease Lake**	**60.74**	**37**	*e*P	**P**	**04 07 18.8**	**+1.0**
SPITS	**Spitsbergen Ar**	**61.62**	**349**	LR	LR	04 36 41.4	
	comp=Z,89nm,18.5s,MS4.0,baz=280,slow=38						
KEV	**Kevo**	**64.21**	**339**	*e*P	**P**	**04 07 38.4**	**-2.4**
KEV	**Kevo**	**64.21**	**339**	*e*p	**P**	**04 07 38.4**	**-2.4**
ARCES	**ARCESS Array B**	**64.77**	**339**	P	**P**	**04 07 43.4**	**-1.1**
	comp=Z,4.9nm,0.9s,mb4.5,baz=62,slow=7.6,SNR=13						
ARCES	**ARCESS Array B**	**64.77**	**339**	P	**P**	**04 07 43.4**	**-1.1**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YKA	**Yellowknife Ar**	**65.85**	**29**	P	**P**	**04 07 49.6**	**-2.0**
	comp=Z,1.3nm,0.9s,mb4.0,baz=292,slow=6.0,SNR=4.8						
YKA				sP	sP	04 08 00.7	-4.7
	comp=Z,1.2nm,0.8s,baz=290,slow=6.4,SNR=4.5						
YKA	**Yellowknife Ar**	**65.85**	**29**	P	**P**	**04 07 49.6**	**-2.0**
YKA				*SP	sP	04 08 00.7	-4.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
JOF	**Joensuu**	**66.47**	**332**	*e*P	**P**	**04 07 53.6**	**-1.9**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
JOF	**Joensuu**	**66.47**	**332**	*e*p	**P**	**04 07 53.6**	**-1.9**
	comp=Z,4.4nm,0.5s,mb4.7						
STKA	**Stephens Creek**	**67.15**	**178**	LR	LR	04 35 02.5	
	comp=Z,133nm,18.4s,MS4.2,baz=205,slow=34						
OBN	**Obninsk**	**68.28

baz=70
F04A Amboy 70.47 47 ⇓P P 04 08 21.6 +0.7
baz=70
KIV Kislovodsk 70.62 311 *e*P P 04 08 21.7 -0.1
comp=Z,8.4nm,0.5s,mb4.9
KIV Kislovodsk 70.62 311⇑*e*P P 04 08 22.4 +0.6
KIV *e* 04 10 54.6
KIV pmax pmax
comp=Z,19nm,1.2s,mb4.9
G04A Mulino 70.81 48 ⇓P P 04 08 23.4 +0.5
baz=70
B08A Colville Reser 70.98 44 ⇑P P 04 08 24.1 +0.2
baz=70
OD2 Odessa Site #2 71.86 44 *e*P P 04 08 28.8 -0.4
comp=Z,4.3nm,0.9s,mb4.4
G06A Carlson Farm, 71.90 47 ⇑P P 04 08 29.9 +0.4
baz=71
D08A Wollman Farm, 71.92 45 ⇑P P 04 08 29.6 0.0
baz=71
SUMG Summit 72.11 359 *e*P P 04 08 29.9 -0.4
comp=Z,9.6nm,0.9s,mb4.7
SUMG Summit 72.11 359 *i* P P 04 08 30.1 -0.2
comp=Z,9.2nm,0.9s,mb4.7
E08A Dider Farm, El 72.15 45 ⇑P P 04 08 30.9 -0.1
baz=72
NEW Newport 72.27 43 *e*P P 04 08 31.2 -0.4
comp=Z,2.6nm,1.0s,mb4.1
NEW *e*pP pP 04 08 42.8 +1.0
NEW Newport 72.27 43 *e*P P 04 08 31.3 -0.4
NEW *e**PP pP 04 08 42.8 +1.0
NEW pmax pmax
comp=Z,3.0nm,1.0s
YBH Yreka Blue Hor 72.49 51 *e*P P 04 08 33.5 +0.3
comp=Z,2.7nm,0.9s,mb4.2
YBH Yreka Blue Hor 72.49 51 *e*P P 04 08 33.5 +0.4
YBH pmax pmax
comp=Z,3.0nm,0.9s
E09A Wood Farm, Sta 72.66 45 ⇓P P 04 08 34.1 0.0
baz=72
G08A Pilot Rock 72.86 46 ⇓P P 04 08 35.3 +0.1
baz=72
C11A Tepee Creek (N 72.99 43 ⇑P P 04 08 35.8 -0.2
baz=72,SNR=7.7
K05A Summer Lake 73.10 49 ⇑P P 04 08 37.3 +0.6
baz=72
I07A Izee 73.20 48 ⇑P P 04 08 37.3 0.0
baz=73
WDC Whiskeytown Da 73.22 52 *e*P P 04 08 37.5 0.0
comp=Z,4.4nm,1.0s,mb4.3
WDC Whiskeytown Da 73.22 52 *e*P P 04 08 37.5 +0.1
WDC pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
A13A Flathead Natio 73.38 41 ⇓P P 04 08 38.2 -0.1
baz=73
F10A Beach Ranch, E 73.49 45 ⇓P P 04 08 39.2 +0.3
baz=73
B13A Whitefish 73.67 42 ⇓P P 04 08 40.1 +0.1
baz=73
A14A Double T Ranch 73.89 41 ⇑P P 04 08 40.8 -0.4
baz=73
C13A Hot Springs 74.02 43 ⇓P P 04 08 41.6 -0.4
baz=73,SNR=5.2
BMO Blue Mountains 74.08 46 *e*P P 04 08 42.5 +0.1
comp=Z,3.2nm,1.0s,mb4.2
JTMT Jette 74.14 42 *e*P P 04 08 42.9 +0.2
comp=Z,3.2nm,0.9s,mb4.2
J08A Circle Bar Ran 74.23 48 ⇑P P 04 08 43.4 +0.1
baz=74
A15A Johnson Ranch, 74.25 41 ⇓P P 04 08 43.0 -0.3
baz=74
C14A Swan Lake 74.42 42 ⇑P P 04 08 44.0 -0.4
baz=74
D13A Huson 74.42 43 ⇑P P 04 08 44.0 -0.3
baz=74
SWMT Swartz Lake 74.43 42 *e*P P 04 08 44.4 -0.1
comp=Z,2.9nm,0.9s,mb4.2
AKASG Malin Array Be 74.44 322 P P 04 08 43.1 -1.3
comp=Z,6.5nm,0.7s,mb4.7,baz=48,slow=5.9,SNR=13
AKASG LR LR 04 44 19.3
comp=Z,262nm,18.2s,MS4.6,baz=55,slow=38
AKASG Malin Array Be 74.44 322*ce*P P 04 08 43.0 -1.4
AKASG pmax pmax
comp=Z,7.0nm,0.7s
AKBB Malin Array Si 74.44 322 *e*P P 04 08 42.9 -1.5
WVOR Wild Horse Val 74.65 49 *e*P P 04 08 45.9 +0.1
comp=Z,4.2nm,1.0s,mb4.3
WVOR *e*pP pP 04 08 57.2 +1.3
WVOR Wild Horse Val 74.65 49 *e*P P 04 08 45.9 +0.1
WVOR *e**PP pP 04 08 57.2 +1.3
WVOR pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
HFS Hagfors 74.72 335 LR LR 04 43 53.9
comp=Z,140nm,20.6s,MS4.2,baz=27,slow=38
B15A Bradely Ranch, 74.74 41 ⇑P P 04 08 46.0 -0.2
baz=74,SNR=8.6
F12A Elk City 74.75 44 ⇑P P 04 08 46.1 -0.2
baz=74,SNR=11
SLMT Seeley Lake 74.87 42 *e*P P 04 08 46.6 -0.4
comp=Z,5.4nm,0.8s,mb4.5
SLMT *e*pP pP 04 08 58.0 +0.9
NOA NORSAR Array B 74.88 337 P P 04 08 45.8 -0.9
comp=Z,5.9nm,0.8s,mb4.6,baz=39,slow=5.9,SNR=16
NOA LR LR 04 44 42.6
comp=Z,121nm,19.4s,MS4.2,baz=15,slow=38
NOA NORSAR Array B 74.88 337 P P 04 08 45.8 -0.9
NOA pmax pmax
comp=Z,6.0nm,0.8s
NOA MLR MLR
comp=Z,121nm,19.4s
D14A Greenough 74.95 43 ⇑P P 04 08 47.1 -0.3
baz=74
C15A Salmond Ranch, 75.03 42 ⇑P P 04 08 47.8 -0.1
baz=74,SNR=9.3
G12A Big Creek, Yel 75.07 45 ⇓P P 04 08 47.8 -0.3
baz=74
NAO01 NORSAR Array S 75.13 337 *e*P P 04 08 46.7 -1.5
comp=Z,6.4nm,0.8s,mb4.6
F13A Darby 75.25 44 ⇑P P 04 08 48.7 -0.5
baz=75
A17A Triple J Farms 75.34 40 ⇓P P 04 08 49.3 -0.3
baz=75
C16A Fuhringer Ranc 75.48 41 ⇓P P 04 08 50.3 -0.2
baz=75
H12A Diamond D Ranc 75.68 45 ⇓P P 04 08 51.6 -0.1
baz=75
WCN Washoe City 75.71 52 ⇑P P 04 08 52.2 +0.3
baz=75
G13A Cobalt 75.72 45 ⇓P P 04 08 51.7 -0.2
baz=75
FFC Flin Flon 75.77 32 *e*P P 04 08 51.1 -0.9
comp=Z,2.5nm,0.9s,mb4.1
FFC *e*pP pP 04 09 03.7 +1.5
MFID Camas Ranch 75.78 47 ⇑P P 04 08 52.3 0.0
baz=75
A18A Metzger Ranch, 75.80 40 ⇓P P 04 08 51.8 -0.5
baz=75
E15A Deer Lodge 75.82 43 ⇓P P 04 08 52.1 -0.3
baz=75
I12A Atlanta 75.97 46 ⇑P P 04 08 53.0 -0.3
baz=75,SNR=6.2
CMB Columbia Colle 76.01 53 *e*P P 04 08 53.9 +0.2
comp=Z,3.3nm,1.1s,mb4.2
CMB Columbia Colle 76.01 53 *e*P P 04 08 53.9 +0.2
CMB pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
H13A Challis 76.02 45 ⇑P P 04 08 53.3 -0.3
baz=75,SNR=5.4
D16A Dana Ranch, Ca 76.06 42 ⇓P P 04 08 53.3 -0.5
baz=75,SNR=6.5
C17A Wharram Farm, 76.11 41 ⇓P P 04 08 53.9 -0.2
baz=75
L10A Juniper Basin 76.17 48 ⇓P P 04 08 54.9 +0.3
baz=76
LRM Limekiln Ridge 76.29 43 *e*P P 04 08 55.6 +0.5
comp=Z,28nm,0.9s,mb5.2
LRM *e*pP pP 04 09 06.9 +1.6
EGMT Eagleton 76.40 40 ⇓P P 04 08 55.5 -0.2
baz=76
EGMT Eagleton 76.40 40 *e*P P 04 08 55.7 -0.1
comp=Z,4.5nm,0.9s,mb4.4
D17A Six Diamond Ra 76.45 41 ⇓P P 04 08 56.0 0.0
baz=76
M10A I.L. Ranch, Tu 76.45 49 ⇓P P 04 08 56.4 +0.2
baz=76
I13A Wildhorse Cree 76.49 45 ⇑P P 04 08 56.6 +0.3
baz=76
DLMT Dillon 76.49 44 *e*P P 04 08 56.7 +0.5
comp=Z,8.9nm,1.1s,mb4.6
HLID Hailey 76.52 46 ⇓P P 04 08 56.5 0.0
baz=76
HLID Hailey 76.52 46 *e*P P 04 08 56.8 +0.3
comp=Z,6.4nm,1.6s,mb4.3
L11A Cat Creek Ranc 76.55 48 ⇓P P 04 08 56.9 +0.2
baz=76,SNR=6.2
G15A Dillon 76.67 44 ⇑P P 04 08 57.0 -0.3
baz=76,SNR=5.6
J13A Cove Ranch, Pi 76.76 46 ⇑P P 04 08 58.4 +0.6
baz=76
F16A Kennard Place, 76.77 43 ⇓P P 04 08 58.3 +0.4
baz=76
E17A Martinsdale 76.78 42 ⇑P P 04 08 58.2 +0.3
baz=76,SNR=6.4
BOZ Bozeman (W) 76.86 43 *e*P P 04 08 58.4 0.0
comp=Z,2.1nm,0.9s,mb4.1
BOZ Bozeman (W) 76.86 43 *e*P P 04 08 58.4 +0.1
BOZ pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
M11A Holland Ranch, 76.96 48 ⇓P P 04 08 59.5 +0.5
baz=76
L12A House Creek Ra 77.00 47 ⇓P P 04 08 59.7 +0.4
baz=76
NVAR Mina Array Bea 77.13 52 P P 04 09 00.1 +0.1
comp=Z,3.3nm,0.8s,mb4.3,baz=284,slow=6.1,SNR=20
J14A Carey 77.19 46 ⇑P P 04 09 00.7 +0.5
baz=76
E18A Harlowton 77.23 41 ⇓P P 04 09 00.0 -0.4
baz=76,SNR=5.3
F17A Fitzpatrick Pl 77.23 42 ⇓P P 04 09 00.6 +0.2
baz=77
M12A Wells 77.50 48 ⇓P P 04 09 02.9 +0.8
baz=77,SNR=6.4
G17A Pierce Place, 77.55 43 ⇑P P 04 09 02.7 +0.4
baz=77
F18A Big Timber 77.75 42 ⇓P P 04 09 03.5 +0.2
baz=77
J15A Blackfoot 77.77 45 ⇓P P 04 09 04.0 +0.4
baz=77
O11A Cowboy Ranch, 77.81 49 ⇑P P 04 09 04.7 +0.9
baz=77
K14A Jones Ranch, D 77.86 46 ⇓P P 04 09 04.8 +0.8
baz=77
I16A Newdale 78.02 44 ⇓P P 04 09 05.4 +0.5
baz=77,SNR=5.5
N13A Wendover, West 78.26 48 ⇑P P 04 09 07.2 +0.9
baz=78
O12A Currie 78.29 49 ⇑P P 04 09 07.2 +0.8
baz=78
IMW Indian Meadow 78.32 44 *e*P P 04 09 07.7 +1.1
comp=Z,2.9nm,1.0s,mb4.2
KWP Kalwaria Pacla 78.34 324 *e*P P 04 09 06.3 -0.3
KWP Kalwaria Pacla 78.34 324 *e*P P 04 09 06.3 -0.2
comp=Z,16nm,0.9s,mb4.9
KWP Kalwaria Pacla 78.34 324 *e*P P 04 09 06.4 -0.2
KWP pmax pmax
comp=Z,16nm,0.9s,mb5.0
BUR08 Bucovina Ar. S 78.42 321 *e*P P 04 09 06.2 -0.7
S10A Tonopah Range, 78.52 52 ⇓P P 04 09 08.1 +0.3
baz=78,SNR=8.4
GRAC Grapevine Rang 78.57 53 ⇑P P 04 09 08.7 +0.7
baz=78
BR131 Keskin Array S 78.59 311 *e*P P 04 09 08.1 0.0
comp=Z,4.4nm,0.9s,mb4.4
BRTR Keskin Array B 78.59 311 P P 04 09 07.8 -0.2
comp=Z,5.3nm,1.0s,mb4.4,baz=106,slow=4.4,SNR=20
BRTR LR LR 04 49 17.7
comp=Z,34nm,18.3s,MS3.7,baz=285,slow=40
BRTR Keskin Array B 78.59 311*ce*P P 04 09 07.9 -0.2
BRTR pmax pmax
comp=Z,5.0nm,1.0s
P12A McGill 78.66 49 ⇑P P 04 09 09.0 +0.4
baz=78
BORG Borgarnes 78.85 352 LR LR 04 44 34.4
comp=Z,16nm,19.4s,MS3.4,baz=26,slow=36
N14A Grayback Hills 78.88 48 ⇑P P 04 09 09.9 +0.2
baz=78
R11A Troy Canyon, C 78.91 51 ⇑P P 04 09 10.2 +0.3
baz=78,SNR=6.9
M15A Larsen Ranch, 78.95 47 ⇑P P 04 09 10.5 +0.4
baz=78
KOLS Kolonicke sedl 79.03 323 *e*P P 04 09 09.6 -0.7
comp=Z,1.9nm,1.0s,mb4.0
KOLS Kolonicke sedl 79.03 323 *e*P P 04 09 09.6 -0.7
KOLS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
KOLS Kolonicke sedl 79.03 323 *e*P P 04 09 09.6 -0.7
MPMC Manual Prospec 79.04 54 ⇑P P 04 09 10.9 +0.2
baz=78
STHS Stebnicka Huta 79.19 324 *e*P P 04 09 08.8 -2.4
STHS Stebnicka Huta 79.19 324 *e*P P 04 09 08.8 -2.4
FURC Furnace Creek, 79.21 53 ⇑P P 04 09 12.0 +0.4
baz=79
OJC Ojcow 79.32 325 *e*P P 04 09 11.3 -0.6
MLR Muntele Rosu 79.43 319 LR LR 04 45 57.3
comp=Z,60nm,21.1s,MS3.9,baz=187,slow=37
CRVS Cervenica-Dubn 79.44 324 *e*P P 04 09 11.9 -0.7
comp=Z,5.2nm,1.3s,mb4.3
CRVS Cervenica-Dubn 79.44 324 *e*P P 04 09 11.9 -0.7
CRVS pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
CRVS Cervenica-Dubn 79.44 324 *e*P P 04 09 11.9 -0.7
DUG Dugway 79.51 48 ⇑P P 04 09 13.4 +0.2
baz=79
DUG Dugway 79.51 48 *e*P P 04 09 13.2 +0.1
comp=Z,3.2nm,1.1s,mb4.2
DUG Dugway 79.51 48 *e*P P 04 09 13.2 +0.1
DUG pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
Q13A Wheeler Ranch, 79.53 49 ⇓P P 04 09 13.7 +0.5
baz=79
R12A Pony Springs, 79.54 50 ⇑P P 04 09 13.7 +0.4
baz=79
U10A Ash Meadows, A 79.58 53 ⇑P P 04 09 14.1 +0.5
baz=79
NIE Niedzica 79.63 325 *e*P P 04 09 13.2 -0.4
P14A Drum Mountains 79.72 48 ⇑P P 04 09 14.7 +0.4
baz=79
T11A Corn Creek, Al 79.81 51 ⇑P P 04 09 15.0 +0.2
baz=79,SNR=6.9
BW06 Boulder Array 79.81 44 *e*P P 04 09 15.1 +0.3
comp=Z,1.6nm,0.9s,mb4.0
Q14A Sevier Lake (B 79.96 49 ⇓P P 04 09 16.1 +0.4
baz=79
O16A Springville 80.29 47 ⇓P P 04 09 17.6 +0.2
baz=80
OKC Ostrava-Krasne 80.35 326 AMS AMS 04 48 30.0
comp=Z,200nm,14.7s
L19A Farson 80.35 45 ⇓P P 04 09 17.2 -0.4
baz=80
TUQ Turquoise Moun 80.44 53 ⇓P P 04 09 18.4 +0.2
baz=80
KSP Ksiaz 80.46 327 *e*P P 04 09 17.5 -0.6
S13A Holt Ranch, En 80.46 50 ⇓P P 04 09 18.4 0.0
baz=80
MORC Moravsky Berou 80.67 326 *e*P P 04 09 18.5 -0.7
comp=Z,2.0nm,0.8s,mb4.1
MORC Moravsky Berou 80.67 326 *e*P P 04 09 18.5 -0.7
MORC pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
U12A Valley of Fire 80.73 52 ⇓P P 04 09 20.4 +0.6
baz=80
T13A Saint George 80.77 51 ⇑P P 04 09 20.4 +0.4
baz=80
DPC Dobruska-Polom 80.80 327 *e*P P 04 09 19.6 -0.3
DPC *e* pP 04 09 30.8 +0.6
DPC MLR MLR
comp=Z,100nm,14.1s,MS4.3
DPC Dobruska-Polom 80.80 327 *e*P P 04 09 19.6 -0.3
DPC *ex* x 04 09 30.8
DPC AMS AMS 04 48 50.0
comp=Z,100nm,14.1s
PSZ Piszkesteto 80.88 324 *e*P P 04 09 19.4 -0.9
comp=Z,3.7nm,0.9s,mb4.3
PSZ Piszkesteto 80.88 324 *e*P P 04 09 19.4 -0.9
PSZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
V12A Nelson 80.96 52 ⇓P P 04 09 21.5 +0.5
baz=80
ASF Jabal al Asfar 80.96 303 LR LR 04 49 03.8
comp=Z,51nm,18.6s,MS3.9,baz=120,slow=38
VYHS Vyhne 80.98 325 *e*P P 04 09 20.7 -0.2
comp=Z,2.7nm,1.8s,mb3.9
VYHS Vyhne 80.98 325 *e*P P 04 09 20.7 -0.2
VYHS pmax pmax
comp=Z,3.0nm,1.8s,mb3.9
VYHS Vyhne 80.98 325 *e*P P 04 09 20.7 -0.2
GMRC Granite Mounta 81.00 54 ⇑P P 04 09 22.1 +0.8
baz=80
P17A Butcher Ranch, 81.21 47 ⇑P P 04 09 22.4 +0.1
baz=81
N19A John Jarvie Ra 81.23 46 ⇓P P 04 09 22.9 +0.5
baz=81
P18A Preston Nutter 81.40 47 ⇑P P 04 09 24.0 +0.7
baz=81
M20A Sweetwater, Wa 81.42 45 ⇓P P 04 09 23.6 +0.2
baz=81
VRAC Vranov 81.43 326 LR LR 04 47 54.6
comp=Z,80nm,19.1s,MS4.1,baz=38,slow=37
V13A Grand Canyon W 81.44 52 ⇑P P 04 09 24.1 +0.5
baz=81
PVCC Panska Ves 81.44 328 *e*P P 04 09 22.8 -0.5
PVCC MLR MLR
comp=Z,100nm,22.6s,MS4.1
PVCC Panska Ves 81.44 328 *e*P P 04 09 22.8 -0.5
PVCC AMS AMS 04 48 00.0
comp=Z,100nm,22.6s
BRG Berggiesshubel 81.45 329 *e*P P 04 09 22.3 -1.0
comp=Z,3.8nm,0.9s,mb4.3
BRG *e* 04 09 36.1
comp=Z,5.7nm,1.0s
BRG Berggiesshubel 81.45 329 *e*P P 04 09 22.3 -1.1
BRG *e* 04 09 36.1
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
MMAI Mount Meron Ar 81.47 304 LR LR 04 49 16.8
comp=Z,95nm,20.4s,MS4.1,baz=315,slow=38
R16A Teasdale 81.50 49 ⇑P P 04 09 24.4 +0.5
baz=81
CLL Collm 81.52 329⇑*i*P P 04 09 22.4 -1.3
comp=Z,6.0nm,0.8s,mb4.6
CLL Collm 81.52 329⇑*i*P P 04 09 22.4 -1.3
CLL pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CLL Collm 81.52 329⇑*i*P P 04 09 22.4 -1.3
comp=Z,6.0nm,0.8s,mb4.6
CLL *i* PcP PcP 04 09 28.9 -0.7
comp=Z,6.0nm,1.0s
CLL *e*pP pP 04 09 35.0 +1.0
comp=Z,8.0nm,1.0s
CLL LmV 04 49 00.0
comp=Z,100nm,19.1s
SRU San Rafael 81.56 48 ⇑P P 04 09 24.4 +0.2
baz=81
SRU San Rafael 81.56 48 *e*P P 04 09 24.7 +0.5
comp=Z,2.4nm,0.8s,mb4.2
SRU San Rafael 81.56 48 *e*P P 04 09 24.7 +0.5
SRU pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
L21A Rawlins 81.57 44 ⇑P P 04 09 24.5 +0.3
baz=81
U14A Mt Trumbull 81.60 51 ⇓P P 04 09 24.8 +0.3
baz=81
MONP Monument Peak 81.63 56 ⇓P P 04 09 25.4 +0.7
baz=81
O19A Miners Draw (B 81.64 46 ⇑P P 04 09 24.8 +0.3
baz=81
IRM Iron Mountain 81.71 54 ⇑P P 04 09 25.4 +0.4
baz=81
N20A Spence Gulch, 81.80 45 ⇑P P 04 09 25.6 +0.2
baz=81
Q18A Rafter H Ranch 81.81 47 ⇓P P 04 09 25.7 +0.2
baz=81
M21A Separation Pea 81.81 44 ⇑P P 04 09 25.6 +0.2
baz=81
PRU Pruhonice 81.85 328 AMS AMS 04 49 40.0
comp=Z,100nm,14.6s
W13A Hualapai Mount 81.96 52 ⇓P P 04 09 26.5 +0.1
baz=81
V14A Boquillas Ranc 82.14 52 ⇓P P 04 09 27.6 +0.3
baz=82
P19A Cripple Cowboy 82.15 46 ⇑P P 04 09 27.3 +0.1
baz=82
U15A North Rim 82.16 51 ⇑P P 04 09 27.8 +0.4
baz=82
O20A White River Ci 82.26 46 ⇑P P 04 09 28.2 +0.4
baz=82
X13A Yucca 82.31 53 ⇑P P 04 09 28.6 +0.4
baz=82
R18A Canyonlands Na 82.40 48 ⇓P P 04 09 28.6 0.0
baz=82
W14A Seligman 82.41 52 ⇑P P 04 09 29.3 +0.6
baz=82
Q19A Hogan Spring (82.42 47 ⇑P P 04 09 28.8 +0.1
baz=82
V15A Kaibab Nationa 82.61 51 ⇑P P 04 09 30.3 +0.6
baz=82
T17A Navajo Res., N 82.73 49 ⇓P P 04 09 29.7 -0.6
baz=82
R19A Curley Farm, L 82.85 48 ⇓P P 04 09 31.2 +0.2
baz=82
N22A Wattenberg Ran 82.85 44 ⇑P P 04 09 31.1 +0.2
baz=82
KHC Kasperske Hory 82.91 328 *e*P P 04 09 30.4 -0.6
KHC *e* pP 04 09 40.9 -0.4
KHC MLR MLR
comp=Z,100nm,15.9s,MS4.3
KHC Kasperske Hory 82.91 328 *e*P P 04 09 30.4 -0.6
KHC *ex* x 04 09 40.9
KHC AMS AMS 04 50 20.0
comp=Z,100nm,15.9s
X14A Yava 83.00 52 ⇑P P 04 09 32.4 +0.6
baz=82
U16A Tuba City 83.07 50 ⇓P P 04 09 32.6 +0.5
baz=82
N23A Red Feather La 83.08 44 ⇓P P 04 09 32.3 +0.2
baz=82
T18A Mexican Hat 83.22 49 ⇑P P 04 09 32.8 -0.1
baz=83
O22A Kremmling 83.22 45 ⇓P P 04 09 32.9 +0.1
baz=83
Y14A Wickenburg 83.25 53 ⇑P P 04 09 33.6 +0.6
baz=83
S19A Harvey Farm, M 83.27 48 ⇑P P 04 09 33.0 -0.1
baz=83
Z13A Yuma Proving G 83.28 54 ⇓P P 04 09 33.8 +0.5
baz=83
WUAZ Wupatki 83.31 51 ⇓P P 04 09 33.7 +0.3
baz=83
WUAZ Wupatki 83.31 51 *e*P P 04 09 34.2 +0.9
comp=Z,6.5nm,1.3s,mb4.5
WUAZ *e*pP pP 04 09 45.9 +2.2
X15A Humboldt 83.41 52 ⇑P P 04 09 34.4 +0.5
baz=83
R20A Redvale 83.44 47 ⇓P P 04 09 34.2 +0.2
baz=83
W16A Flagstaff 83.47 51 ⇑P P 04 09 34.4 +0.2
baz=83
P22A Eagle 83.48 45 ⇓P P 04 09 34.4 +0.3
baz=83
GRA1 Grafenberg Arr 83.49 329 *e*P P 04 09 33.3 -0.7
GRF Grafenberg Arr 83.49 329 *e*P P 04 09 33.3 -0.7
V17A Tonalea, Kykot 83.61 50 ⇓P P 04 09 35.4 +0.5
baz=83
SMCO Snowmass 83.63 46 *e*P P 04 09 35.1 +0.2
comp=Z,1.7nm,1.0s,mb4.1
U18A Rough Rock, Ch 83.68 49 ⇓P P 04 09 35.8 +0.6
baz=83
Y15A Casa Rosa Ranc 83.68 53 ⇓P P 04 09 35.7 +0.4
baz=83
R21A Cimarron 83.82 47 ⇓P P 04 09 36.3 +0.3
baz=83
Q22A Crested Butte, 83.87 46 ⇑P P 04 09 36.5 +0.3
baz=83
EKA Eskdalemuir Ar 83.93 340 P P 04 09 35.3 -0.8
comp=Z,1.4nm,0.9s,mb4.1,baz=33,slow=5.2,SNR=4.7
EKA Eskdalemuir Ar 83.93 340 P P 04 09 35.3 -0.8
EKA pmax pmax
comp=Z,1.0nm,0.9s
T19A Beclabito 83.93 49 ⇓P P 04 09 36.8 +0.3
baz=83
X16A Lo Mia Camp, P 83.96 52 ⇓P P 04 09 37.3 +0.6
baz=83
MVCO Mesa Verde 84.01 48 ⇑P P 04 09 37.2 +0.3
baz=83
R22A Saguache, Gunn 84.38 46 ⇑P P 04 09 39.9 +1.1
baz=84
S22A 4UR Ranch, Cre 84.66 47 ⇓P P 04 09 40.5 +0.3
baz=84
U21A Nageezi 85.03 48 ⇑P P 04 09 42.5 +0.4
baz=84
T22A Edith 85.10 47 ⇓P P 04 09 43.3 +0.9
baz=84

PMOR	**Pomariorio Ree**	**85.10**	**112**	*e*T			05 43 41.6		
	comp=Z,2.4nm,0.2s								
R24A	**Sanders Place,**	**85.34**	**46**	⇓P		**P**	**04 09 44.0**	**+0.4**	
	baz=85								
SDCO	**Great Sand Dun**	**85.44**	**46**	*e*P		**P**	**04 09 44.5**	**+0.3**	
	comp=Z,3.1nm,1.4s,mb4.2								
SDCO				*e*pP		pP	04 09 58.9	+4.5	
PPT	**Papeete**	**85.45**	**115**	*e*LR		LR	04 36 28.3		
	comp=Z,106nm,25.0s,baz=309								
PPT	**Papeete**	**85.45**	**115**	LR		LR	04 41 24.3		
	comp=Z,119nm,19.3s,MS4.3,baz=316,slow=31								
X20A	**Quemado**	**85.74**	**50**	⇓P		**P**	**04 09 46.2**	**+0.5**	
	baz=85								
V22A	**San Miguel Ran**	**85.82**	**48**	⇑P		**P**	**04 09 46.2**	**+0.2**	
	baz=85								
U23A	**El Rito**	**85.98**	**48**	⇓P		**P**	**04 09 47.6**	**+0.8**	
	baz=85								
Y20A	**Horse Springs,**	**86.23**	**51**	⇓P		**P**	**04 09 48.5**	**+0.4**	
	baz=86								
X21A	**Alamocita Cree**	**86.25**	**50**	⇑P		**P**	**04 09 48.6**	**+0.4**	
	baz=86								
DAVOX	**Davos/Dischmat**	**86.31**	**328**	LR		LR	04 52 48.9		
	comp=Z,114nm,18.6s,MS4.3,baz=182,slow=39								
V24A	**Rampart Ranch,**	**86.94**	**47**	⇓P		**P**	**04 09 53.1**	**+1.5**	
	baz=86								
V25A	**Rancho No Teng**	**87.25**	**47**	⇑P		**P**	**04 09 53.8**	**+0.8**	
	baz=87								
TAOE	**Nuku Hiva Isla**	**87.40**	**103**	*e*LR		LR	04 37 20.4		
	comp=Z,85nm,25.4s								
TXAR	**Lajitas Array**	**92.27**	**51**	P		**P**	**04 10 16.7**	**0.0**	
	comp=Z,0.7nm,1.0s,mb4.0,baz=270,slow=2.5,SNR=5.0								
TXAR	**Lajitas Array**	**92.27**	**51**	P		**P**	**04 10 16.7**	**0.0**	
TXAR				pmax		pmax			
	comp=Z,1.0nm,1.0s								
LPAZ	**La Paz**	**148.80**	**59**	PKPbc		PKPbc	04 16 53.6	-0.7	
	comp=Z,1.4nm,0.9s,baz=36,slow=5.0,SNR=6.4								
LPAZ	**La Paz**	**148.80**	**59**	*e*PKP2		PKPbc	04 16 54.3	0.0	
SIV	**San Ignacio**	**153.24**	**48**	PKPbc		PKPbc	04 17 02.2	-2.5	
	comp=Z,1.4nm,1.0s,baz=8.9,slow=7.4,SNR=4.6								
SIV				PKPab		PKPab	04 17 14.4	-2.1	
	comp=Z,3.0nm,1.1s,baz=20,slow=1.6,SNR=3.9								

BJI 08 03:59:50.3, 32°52N×104°62E, h15km, ML3.5/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
CD2	**Chengdu**	**1.77**	**205**	Pg		Pg	04 00 19.3		-4.9
CD2				Sg		Sg	04 00 40.4		-6.7
CD2				smax					
	comp=N,4μm,0.3s								
LZH	**Lanzhou**	**3.62**	**350**	*e*Pg		Pg	04 00 55.8		-3.8
LZH				Sg		Sg	04 01 40.1		-6.3
LZH				smax					
	comp=N,120nm,0.7s								
LZH				smax					
	comp=E,190nm,0.8s								
XAN	**Xi'an**	**3.91**	**66**	Pg		Pg	04 00 59.3		-5.9
XAN				Sn		Sn	04 01 34.8		-0.6
XAN				Sg		Sg	04 01 53.3		-2.5
XAN				smax					
	comp=N,33nm,0.8s								
XAN				smax					
	comp=E,24nm,0.9s								

IDC 08 04:05:17.6±8.0, 18°96S×177°82W, h646km±98km, mb3.1/3, mb1 3.4/4, mb1mx3.0/16, mbtmp3.2/4, Error ellipse: s-maj=73.1km s-min=29.7km az=5.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
URZ	**Urewera**	**19.74**	**192**	P		P	04 09 06.8		0.0
	2.1nm,0.3s,baz=289,slow=2.9,SNR=7.9								
STKA	**Stephens Creek**	**38.63**	**242**	P		P	04 11 49.2		+0.8
	1.6nm,0.3s,baz=90,slow=9.6,SNR=5.4								
ASAR	**Alice Springs**	**45.05**	**255**	P		P	04 12 38.5		-0.1
	4.4nm,0.5s,baz=86,slow=8.0,SNR=78								
ASAR				PcP		PcP	04 14 05.5		+0.4
	0.6nm,0.6s,baz=100,slow=3.6,SNR=4.2								
TXAR	**Lajitas Array**	**86.08**	**57**	P		P	04 16 53.0		+0.8
	0.3nm,0.8s,baz=227,slow=5.0,SNR=4.1								
ARCES	**ARCESS Array B**	**127.44**	**350**	PKP		PKPdf	04 23 09.7		-0.3
	4.5nm,1.1s,baz=40,slow=2.1,SNR=6.3								
BRTR	**Keskin Array B**	**145.91**	**314**	PKPbc		PKPbc	04 23 45.7		-1.1
	0.4nm,0.4s,baz=82,slow=4.5,SNR=3.8								

*ISCJB **08** 04:06:12.0±0.7, 10°23N±0°03×60°20W±0°05, h42km±6km, mb3.8/16, Error ellipse: s-maj=7.9km s-min=4.2km az=17.2*
*NEIC **08** 04:06:11.5, 10°24N×60°03W, h82km, mb3.9/9, MD4.0(TRN), After TRN.*
*FUNV **08** 04:06:11.3, 10°31N×59°95W, h35km, MW3.8*
*TRN **08** 04:06:12.2, 10°25N×60°05W, h76km, MD4.0*
*IDC **08** 04:06:13.8±0.9, 10°23N×60°16W, h35km±5km, mb3.6/9, mb1 3.9/12, mb1mx3.7/26, mbtmp3.7/12, ML3.2/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/33, Error ellipse: s-maj=24.0km s-min=16.1km az=87.0*

ISC 08 04:06:12.3±1.2, 10°24N±0°02×60°18W±0°04, h26km±10km, h41km±1.4km:pP-P, n81, σ1s13/113, mb3.8/16, 2D, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
TBH	**Brigand Hill**	**0.91**	**286**	*e*P		**Pn**	**04 06 31.2**		**+1.8**
TBH				*e*S		**Sb**	**04 06 46.4**		**+5.3**
TBH	**Brigand Hill**	**0.91**	**286**	*e*P		**Pn**	**04 06 31.2**		**+1.8**
TBH				*e*S		**Sb**	**04 06 46.4**		**+5.3**
BOT	**Bacolet**	**1.06**	**330**	*e*P		**Pn**	**04 06 32.8**		**+1.2**
BOT	**Bacolet**	**1.06**	**330**	*e*P		**Pn**	**04 06 32.8**		**+1.2**
TPR	**Prospect**	**1.11**	**328**	*e*P		**Pn**	**04 06 32.8**		**+0.6**
TPR				*e*S		**Sn**	**04 06 50.0**		**+3.4**
TPR	**Prospect**	**1.11**	**328**	*e*P		**Pn**	**04 06 32.8**		**+0.6**
TPR				*e*S		**Sn**	**04 06 50.0**		**+3.4**
TOSP	**Speyside**	**1.11**	**342**	*e*P		**Pn**	**04 06 32.7**		**+0.5**
TOSP				*e*S		**Sn**	**04 06 47.9**		**+1.3**
TPP	**Pointe-a-Pierr**	**1.25**	**274**	*e*P		**Pn**	**04 06 36.6**		**+2.5**
TPP				*e*S		**Sn**	**04 06 53.3**		**+3.1**
TPP	**Pointe-a-Pierr**	**1.25**	**274**	*e*P		**Pn**	**04 06 36.6**		**+2.5**
TPP				*e*S		**Sn**	**04 06 53.3**		**+3.1**
TRN	**Trinidad (W)**	**1.27**	**289**	*e*P		**Pn**	**04 06 35.7**		**+1.4**
TRN				*e*S		**Sn**	**04 06 53.7**		**+3.1**
TRN	**Trinidad (W)**	**1.27**	**289**	*e*P		**Pn**	**04 06 35.7**		**+1.4**
TRN				*e*S		**Sn**	**04 06 53.7**		**+3.1**
TCE	**Chacachacare**	**1.61**	**287**	*e*P		**Pn**	**04 06 40.1**		**+1.1**
TCE				*e*S		**Sn**	**04 07 01.7**		**+2.7**
TCE	**Chacachacare**	**1.61**	**287**	*e*P		**Pn**	**04 06 40.1**		**+1.1**
TCE				*e*S		**Sn**	**04 07 01.7**		**+2.7**
GUIV	**Guiria**	**2.05**	**282**	*e*P		**Pn**	**04 06 45.5**		**+0.4**
GUIV				*e*S		**Sn**	**04 07 10.2**		**+0.3**
GRGR	**Grenville**	**2.37**	**323**	*e*Pn		**Pn**	**04 06 50.0**		**+0.4**
GRW	**Mount Saint Ca**	**2.40**	**323**	*e*P		**Pn**	**04 06 51.2**		**+1.2**
GRW	**Mount Saint Ca**	**2.40**	**323**	*e*P		**Pn**	**04 06 51.2**		**+1.2**
GRHS	**Sauteurs**	**2.44**	**324**	*e*P		**Pn**	**04 06 50.7**		**+0.2**
GRHS				*e*S		**Sn**	**04 07 19.8**		**+0.3**
GRHS	**Sauteurs**	**2.44**	**324**	*e*P		**Pn**	**04 06 50.7**		**+0.2**
GRHS				*e*S		**Sn**	**04 07 19.8**		**+0.3**
GRIC	**Isle de Caille**	**2.46**	**326**	*e*P		**Pn**	**04 06 50.3**		**-0.5**
GRIC				*e*S		**Sn**	**04 07 19.8**		**-0.1**
GRSS	**Sisters**	**2.48**	**326**	*e*P		**Pn**	**04 06 51.1**		**0.0**
GRSS				*e*S		**Sn**	**04 07 20.8**		**+0.2**
GRSS	**Sisters**	**2.48**	**326**	*e*P		**Pn**	**04 06 51.1**		**0.0**
GRSS				*e*S		**Sn**	**04 07 20.8**		**+0.2**
RIOV	**Rio Grande**	**2.69**	**217**	*e*P		**Pn**	**04 06 53.6**		**-0.4**
GUNV	**Guanoco**	**2.72**	**269**	*e*P		**Pn**	**04 06 55.5**		**+1.2**
GUNV				*e*S		**Sn**	**04 07 27.1**		**+0.7**
BBGH	**Gun Hill**	**2.95**	**12**	*e*Pn		**Pn**	**04 06 58.9**		**+1.3**
CRUV	**Carupano**	**3.04**	**279**	*e*P		**Pn**	**04 06 57.9**		**-0.8**
ITEV	**Isla Los Testi**	**3.10**	**291**	*e*P		**Pn**	**04 06 59.1**		**-0.5**
ITEV				*e*S		**Sn**	**04 07 35.0**		**-0.9**
SVB	**Belmont**	**3.19**	**341**	*e*P		**Pn**	**04 07 00.9**		**+0.1**
SVB				*e*S		**Sn**	**04 07 36.6**		**-1.5**
SVB	**Belmont**	**3.19**	**341**	*e*P		**Pn**	**04 07 00.9**		**+0.1**
SVB				*e*S		**Sn**	**04 07 36.6**		**-1.5**
SSV	**Crater Summit**	**3.23**	**342**	*e*P		**Pn**	**04 07 01.4**		**+0.1**
SSV				*e*S		**Sn**	**04 07 37.4**		**-1.5**
SSV	**Crater Summit**	**3.23**	**342**	*e*P		**Pn**	**04 07 01.4**		**+0.1**
SSV				*e*S		**Sn**	**04 07 37.4**		**-1.5**
ORIV	**Oritupano**	**3.39**	**250**	*e*P		**Pn**	**04 07 03.9**		**+0.3**
MCLT	**Moule a Chique**	**3.53**	**348**	*e*P		**Pn**	**04 07 05.2**		**-0.3**
MCLT				*e*S		**Sn**	**04 07 43.7**		**-2.7**
MCLT	**Moule a Chique**	**3.53**	**348**	*e*P		**Pn**	**04 07 05.2**		**-0.3**
MCLT				*e*S		**Sn**	**04 07 43.7**		**-2.7**
SLB	**Belfond**	**3.67**	**347**	*e*P		**Pn**	**04 07 07.0**		**-0.4**
SLB				*e*S		**Sn**	**04 07 46.7**		**-3.0**
SLB	**Belfond**	**3.67**	**347**	*e*P		**Pn**	**04 07 07.0**		**-0.4**
SLB				*e*S		**Sn**	**04 07 46.7**		**-3.0**
GURV	**El Guri**	**3.78**	**230**	*e*P		**Pn**	**04 07 09.3**		**+0.4**
GURV				*e*S		**Sn**	**04 07 51.3**		**-1.3**
BIM	**Bigot**	**4.34**	**349**	*e*P		**Pn**	**04 07 17.4**		**+0.7**
MVM	**Montagne Vaucl**	**4.35**	**351**	*e*P		**Pn**	**04 07 16.4**		**-0.4**
MVM				*e*S		**Sn**	**04 08 04.2**		**-2.4**
PCRV	**Puerto La Cruz**	**4.39**	**270**	Pn		**Pn**	**04 07 16.9**		**-0.3**
	1.1nm,0.3s,baz=46,slow=9.8,SNR=18								
PCRV				Pg		**Pn**	**04 07 31.9**		**+15**
	4.0nm,0.3s,baz=146,slow=6.2,SNR=7.1								
PCRV				Sn		**Sn**	**04 08 03.9**		**-3.7**
	5.1nm,0.3s,baz=338,slow=13,SNR=6.9								
PCRV	**Puerto La Cruz**	**4.39**	**270**	*e*P		**Pn**	**04 07 15.7**		**-1.6**
LUEV	**Luepa**	**4.55**	**196**	*e*P		**Pn**	**04 07 17.4**		**-2.1**
FDF	**Fort de France**	**4.57**	**348**	*i*P		**Pn**	**04 07 20.0**		**+0.2**
FDF				⇓*e*S		**Sn**	**04 08 10.7**		**-1.4**
PRGV	**PARIAGUAN**	**4.64**	**252**	*e*P		**Pn**	**04 07 20.8**		**0.0**
CUPV	**Cœpira**	**5.52**	**269**	*e*P		**Pn**	**04 07 32.7**		**-0.2**
BCG	**Bois Riant Cap**	**5.98**	**347**	*e*P		**Pn**	**04 07 40.3**		**+1.2**
BIRV	**Birongo**	**6.00**	**273**	*e*P		**Pn**	**04 07 38.0**		**-1.4**
LZG	**Guadaloupe-1**	**6.07**	**345**	*e*P		**Pn**	**04 07 40.7**		**+0.3**
MERV	**Las Mercedes**	**6.11**	**261**	*e*P		**Pn**	**04 07 40.3**		**-0.6**
CAOV	**Caicara del Or**	**6.72**	**245**	*e*P		**Pn**	**04 07 48.3**		**-1.1**
TURV	**Turiamo**	**7.54**	**272**	*e*P		**Pn**	**04 07 59.6**		**-1.0**
BAUV	**El Baul**	**7.86**	**261**	*e*P		**Pn**	**04 08 03.9**		**-1.0**
MAPV	**Macapo**	**8.16**	**268**	*e*P		**Pn**	**04 08 07.3**		**-1.9**
TEPV	**Terepaima**	**8.88**	**269**	*e*P		**Pn**	**04 08 18.0**		**-1.0**
SANV	**Sanarito**	**9.25**	**266**	*e*P		**Pn**	**04 08 22.4**		**-1.7**
CURV	**Curarigua**	**9.63**	**270**	*e*P		**Pn**	**04 08 26.8**		**-2.5**
CBYP	**Canovanas**	**9.70**	**326**	*e*Pn		**Pn**	**04 08 32.3**		**+2.1**
	20nm,0.8s								
SJG	**San Juan**	**9.73**	**324**	Pn		**Pn**	**04 08 30.8**		**+0.1**
SJG	**San Juan**	**9.73**	**324**	Pn		**Pn**	**04 08 30.8**		**+0.1**
	1.1nm,0.3s,baz=163,slow=14,SNR=3.0								
MONV	**Montecano**	**9.76**	**281**	*e*P		**Pn**	**04 08 29.6**		**-1.5**
SDDR	**Presa de Saban**	**13.82**	**310**	*e*Pn		**Pn**	**04 09 26.4**		**-0.2**
ROSC	**El Rosal**	**15.01**	**250**	*e*Pn		**Pn**	**04 09 43.2**		**+0.4**
ROSC	**El Rosal**	**15.01**	**250**	Pn		**Pn**	**04 09 42.7**		**-0.1**
	0.4nm,0.3s,baz=104,slow=19,SNR=3.1								
OTAV	**Otavalo**	**20.71**	**242**	*e*P		**P**	**04 10 51.8**		**+0.9**
	5.5nm,1.0s								
ATAH	**Atahualpa**	**25.04**	**227**	P		**P**	**04 11 36.8**		**+2.2**
	3.2nm,0.5s,mb4.2,baz=6.3,slow=9.2,SNR=3.2								
ATAH				LR		LR	04 22 51.8		
	comp=Z,80nm,20.7s,baz=237,slow=40								
SIV	**San Ignacio**	**26.07**	**182**	P		**P**	**04 11 44.4**		**+0.5**
	2.7nm,0.5s,mb4.0,baz=23,slow=9.3,SNR=19								
LPAZ	**La Paz**	**27.50**	**197**	*e*P		**P**	**04 11 58.0**		**+1.2**
	0.6nm,0.5s,mb3.5								
LPAZ	**La Paz**	**27.50**	**197**	P		**P**	**04 11 58.1**		**+1.4**
	0.5nm,0.5s,mb3.4,baz=0.0,slow=9.1,SNR=4.6								
CPUP	**Villa Florida**	**36.45**	**176**	P		**P**	**04 13 14.6**		**-0.6**
	1.0nm,0.6s,mb3.9,baz=322,slow=4.8,SNR=4.1								
TXAR	**Lajitas Array**	**44.80**	**301**	P		**P**	**04 14 23.8**		**-0.4**
	0.3nm,0.7s,mb3.2,baz=112,slow=8.3,SNR=4.7								
TXAR				pP		pP	04 14 35.4		+3.3
	0.3nm,0.5s,baz=109,slow=10,SNR=5.1								
TXAR				PcP		PcP	04 16 06.8		+0.8
	0.1nm,0.5s,baz=136,slow=5.2,SNR=3.6								
MNTX	**Cornudas Mount**	**46.88**	**304**	*e*P		**P**	**04 14 40.2**		**-0.4**
	1.0nm,0.9s,mb3.8								
SDCO	**Great Sand Dun**	**48.98**	**312**	*e*P		**P**	**04 14 56.4**		**-0.4**
	0.6nm,0.6s,mb3.8								
SMCO	**Snowmass**	**50.59**	**313**	*e*P		**P**	**04 15 08.9**		**-0.1**
	0.5nm,0.5s,mb3.7								
BW06	**Boulder Array**	**53.74**	**316**	*e*P		**P**	**04 15 32.0**		**-0.4**
	1.1nm,0.6s,mb4.0								
DUG	**Dugway**	**55.17**	**312**	*e*P		**P**	**04 15 42.9**		**+0.1**
	1.5nm,0.7s,mb4.1								
BOZ	**Bozeman (W)**	**56.21**	**319**	*e*P		**P**	**04 15 51.1**		**+1.0**
	1.9nm,1.0s,mb4.1								
HLID	**Hailey**	**57.35**	**316**	*e*P		**P**	**04 15 59.0**		**+0.6**
	1.5nm,0.9s,mb4.0								
NVAR	**Mina Array Bea**	**58.83**	**309**	P		**P**	**04 16 09.2**		**+0.4**
	0.5nm,0.6s,mb3.7,baz=99,slow=9.2,SNR=5.2								
NVAR				pP		pP	04 16 21.0		+4.1
	0.6nm,0.6s,baz=98,slow=6.8,SNR=5.4								
YKA	**Yellowknife Ar**	**65.02**	**335**	P		**P**	**04 16 48.5**		**-1.5**
	1.2nm,0.6s,mb4.1,baz=106,slow=7.3,SNR=8.8								
YKA				pP		pP	04 17 01.6		+3.5
	2.0nm,0.6s,baz=110,slow=7.5,SNR=10								
FINES	**FINESS Array B**	**79.30**	**29**	P		**P**	**04 18 16.0**		**+0.7**
	0.6nm,0.3s,mb3.9,baz=219,slow=3.6,SNR=3.4								
ILAR	**Eielson Array**	**79.41**	**334**	P		**P**	**04 18 16.7**		**+0.8**
	0.3nm,0.6s,mb3.4,baz=102,slow=4.2,SNR=4.4								
ILAR				pP		pP	04 18 28.1		+3.9
	0.4nm,0.6s,baz=89,slow=5.2,SNR=4.7								

*ISCJB **08** 04:20:16.4±0.6, 12°99N±0°04×89°85W±0°03, h10km, mb3.3/3, Error ellipse: s-maj=6.1km s-min=3.7km az=36.5*
*IDC **08** 04:20:16.1±3.5, 12°95N×89°78W, h0km, mb3.3/3, mb1 3.8/4, mb1mx3.6/19, mbtmp3.4/4, ML3.2/1, Error ellipse: s-maj=167.3km s-min=16.8km az=36.0*
*NEIC **08** 04:20:20.5±0.9, 12°99N×89°76W, h35km, mb3.3/1, Error ellipse: s-maj=21.0km s-min=10.6km az=224.0*
*CASC **08** 04:20:20.6±2.0, 13°19N×89°77W, h31km±4km, MD3.8, ML2.9, mb3.3(NEIC)*

ISC 08 04:20:17.8±0.5, 13°06N±0°04×89°81W±0°03, h10km, n32, σ0s87/43, mb3.3/3, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
SBLS	**San Blas**	**0.80**	**13**	*e*P		**Pg**	**04 20 33.4**		**+0.2**
SNJE	**San Jose**	**0.83**	**14**	*e*P		**Pg**	**04 20 34.0**		**+0.2**
SNET	**Serv Nac Est T**	**0.84**	**42**	*e*P		**Pg**	**04 20 34.2**		**+0.3**
SNET				*e*S		**Sg**	**04 20 45.1**		**+0.2**
BOQS	**Boqueron**	**0.84**	**37**	*e*P		**Pg**	**04 20 34.8**		**+0.7**
RTR	**El Retiro**	**0.85**	**11**	*e*P		**Pg**	**04 20 34.7**		**+0.5**
LFRS	**El Faro**	**0.92**	**52**	*e*P		**Pg**	**04 20 35.7**		**+0.3**
LFU	**La Fuente**	**0.96**	**45**	*e*P		**Pg**	**04 20 36.6**		**+0.3**
LBRS	**Las Brisas**	**1.00**	**48**	*e*P		**Pg**	**04 20 37.1**		**0.0**
RBDL	**Robledal**	**1.05**	**6**	*e*P		**Pg**	**04 20 37.8**		**-0.3**
SNVI	**San Vicente**	**1.09**	**60**	*e*P		**Pb**	**04 20 38.6**		**-0.1**
SNVI				*e*S		**Sg**	**04 20 52.6**		**-0.4**
MTO2	**Montecristo 2**	**1.40**	**18**	*e*P		**Pn**	**04 20 42.9**		**-0.6**
MTO2				*e*S		**Sn**	**04 21 00.1**		**-1.9**
BLLM	**Bellamira**	**1.57**	**76**	*e*P		**Pn**	**04 20 46.1**		**+0.3**
NBG	**Las Nubes**	**1.61**	**341**	*e*P		**Pn**	**04 20 47.3**		**+1.1**
NBG				*e*S		**Sn**	**04 21 07.2**		**+0.2**
CAHU	**Cacacuatique**	**1.71**	**65**	*e*P		**Pn**	**04 20 47.4**		**-0.2**
FUG	**Fuego 3**	**1.71**	**324**	*e*P		**Pn**	**04 20 47.4**		**-0.2**
FUG				*e*S		**Sn**	**04 21 07.2**		**-2.3**
FG6		**1.82**	**325**	*e*P		**Pn**	**04 20 49.3**		**+0.1**
FG6				*e*S		**Sn**	**04 21 09.9**		**-2.4**
CNCH	**Conchagua**	**1.93**	**83**	*e*P		**Pn**	**04 20 51.1**		**+0.3**
MRL	**Marmol**	**2.00**	**3**	*e*P		**Pn**	**04 20 52.5**		**+0.9**
TP2	**Tecpan 2**	**2.08**	**326**	*e*P		**Pn**	**04 20 53.8**		**+1.1**
TP2				*e*S		**Sn**	**04 21 18.6**		**-0.1**
JAT	**Jato**	**2.17**	**305**	*e*P		**Pn**	**04 20 55.0**		**+0.9**
TGUH	**Tegucigalpa,Un**	**2.66**	**68**	*e*Pn		**Pn**	**04 21 00.7**		**0.0**
CRIN	**San Cristobal**	**2.71**	**97**	*e*P		**Pn**	**04 21 01.6**		**+0.2**
CSAN		**3.42**	**104**	*e*P		**Pn**	**04 21 11.7**		**+0.6**
JTS	**JuntasAbangare**	**5.49**	**120**	Pn		**Pn**	**04 21 39.4**		**-0.3**
JTS				Pg		**Pg**	**04 21 54.0**		**-9.1**
JTS				Sn		**Sn**	**04 22 43.6**		**+0.6**
JTS				Lg			04 23 06.4		
JTS	**JuntasAbangare**	**5.49**	**120**	Pn		**Pn**	**04 21 39.4**		**-0.3**
	0.8nm,0.3s,baz=301,slow=22,SNR=6.9								
JTS				Pg		**Pg**	**04 21 54.0**		**-9.1**
	1.7nm,0.3s,baz=304,slow=14,SNR=6.3								
JTS				Sn		**Sn**	**04 22 43.6**		**+0.6**
	0.9nm,0.3s,baz=280,slow=18,SNR=1.1								
JTS				Lg			04 23 06.4		
	0.6nm,0.3s,baz=95,slow=24,SNR=5.0								
TEIG	**Tepich**	**7.28**	**11**	*e*Pn		**Pn**	**04 22 04.7**		**+0.5**
	11nm,0.6s								
OTAV	**Otavalo**	**17.00**	**138**	*e*Pn		**Pn**	**04 24 14.5**		**-1.4**
ROSC	**El Rosal**	**17.32**	**117**	Sn		**Sn**	**04 27 30.4**		**-2.3**
	0.8nm,0.3s,baz=258,slow=21,SNR=3.1								
TXAR	**Lajitas Array**	**20.68**	**324**	P		**P**	**04 24 58.9**		**+0.9**
	0.7nm,0.6s,baz=149,slow=13,SNR=12								
MNTX	**Cornudas Mount**	**23.43**	**325**	*e*P		**P**	**04 25 25.9**		**-1.5**
	0.7nm,0.7s,mb3.2								
NVAR	**Mina Array Bea**	**35.75**	**320**	P		**P**	**04 27 17.2**		**+0.3**
	0.7nm,0.8s,mb3.7,baz=126,slow=9.1,SNR=6.0								
ILAR	**Eielson Array**	**64.54**	**337**	P		**P**	**04 30 56.0**		**+1.3**
	0.1nm,0.5s,mb3.1,baz=108,slow=8.6,SNR=2.7								

*BER **08** 04:21:19.9±3.9, 79°95N×4°02E, h15km±957km, MD2.9, ML3.3*
*ISCJB **08** 04:21:20.8±1.6, 79°4N±0°2×4°0E±0°5, h10km, mb3.6/2, Error ellipse: s-maj=25.1km s-min=12.6km az=4.9*
*NEIC **08** 04:21:20.8, 79°88N×5°00E, h0km, ML2.9(NAO), After BER.*
*CSEM **08** 04:21:21.6±0.6, 79°62N×5°09E, h2km, ML2.9, Error ellipse: s-maj=17.5km s-min=12.2km az=25.0*
*NAO **08** 04:21:22.8±3.9, 79°90N×5°95E, ML2.9*
*IDC **08** 04:21:27.0±3.1, 79°87N×8°84E, h0km, mb3.7/2, mb1 3.6/5, mb1mx3.3/26, mbtmp3.6/5, ML3.5/3, Error ellipse: s-maj=51.0km s-min=28.4km az=89.0*

ISC 08 04:21:23.1±1.6, 79°5N±0°2×4°7E±0°6, h10km, n21, σ0s63/25, mb3.6/2, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
KBS	**Kingsbay**	**1.49**	**111**	Pg		**Pn**	**04 21 48.8**		**-1.0**
KBS				Lg			04 22 09.7		
KBS	**Kingsbay**	**1.49**	**111**	*e*P		**Pn**	**04 21 48.2**		**-1.6**
KBS				*e*S		**Sn**	**04 22 09.3**		**0.0**
KBS				AML		AML	04 22 14.5		
	comp=Z,473nm,0.4s								
KBS	**Kingsbay**	**1.49**	**111**	*e*P		**Pn**	**04 21 48.2**		**-1.6**
KBS				*e*S		**Sn**	**04 22 09.3**		**0.0**
KBS	**Kingsbay**	**1.49**	**111**	*e*P		**Pn**	**04 21 48.2**		**-1.7**
	SNR=55								
KBS	**Kingsbay**	**1.49**	**111**	Pg		**Pn**	**04 21 48.8**		**-1.1**
KBS				*e*S		**Sn**	**04 22 09.3**		**0.0**
	comp=Z,473nm,0.4s,SNR=55								
SPA0	**Spitsbergen Ar**	**2.64**	**115**	Pn		**Pn**	**04 22 05.4**		**-0.3**
	baz=318,slow=11,SNR=999								
SPA0				Sn		**Sn**	**04 22 38.3**		**+0.6**
HSP	**Hornsund**	**3.37**	**133**	*e*P		**Pn**	**04 22 15.1**		**-0.5**
KEV	**Kevo**	**11.32**	**138**	*e*p		**Pn**	**04 24 05.3**		**+0.7**
	comp=Z,2.6nm,0.4s								
KEV	**Kevo**	**11.32**	**138**	*e*P		**Pn**	**04 24 05.3**		**+0.7**
	comp=Z,2.6nm,0.4s								
ARA0	**ARCESS Array S**	**11.35**	**141**	Pn		**Pn**	**04 24 04.9**		**-0.1**
	baz=351,slow=12,SNR=3.0								
ARCES	**ARCESS Array B**	**11.35**	**141**	Pn		**Pn**	**04 24 04.5**		**-0.5**
ARCES				Sn		Sx	04 26 06.9		
ARCES	**ARCESS Array B**	**11.35**	**141**	Pn		**Pn**	**04 24 04.5**		**-0.5**
	comp=Z,0.3nm,0.3s,baz=344,slow=11,SNR=21								
ARCES				Sn		Sx

HHAG	**Hagoal**	**5.34**	**175**	P		**Pn**	**04 31 28.5**	**+1.1**
HHAG				S		**Sn**	**04 32 25.0**	**-4.1**
KOT	**Kottamia**	**5.35**	**178**	P		**Pn**	**04 31 28.5**	**+0.9**
	baz=169							
KOT				AMP			04 32 00.0	
	comp=N,30μm,0.6s,logA/T=4.7,baz=169							
KOT				S		**Sn**	**04 32 24.5**	**-5.0**
	baz=169							
KOT	**Kottamia**	**5.35**	**178**	P		**Pn**	**04 31 28.5**	**+0.9**
KOT				S		**Sn**	**04 32 24.5**	**-5.0**
ASF	**Jabal al Asfar**	**5.39**	**124**	Pn		**Pn**	**04 31 31.9**	**+3.9**
	comp=N,0.2nm,0.3s,baz=329,slow=19,SNR=4.7							
ASF				Pg		**Pg**	**04 31 43.7**	**-6.8**
	comp=N,0.6nm,0.3s,baz=200,slow=11,SNR=2.5							
SUZ		**5.53**	**169**	P		**Pn**	**04 31 31.4**	**+1.4**
	baz=160							
SUZ		**5.53**	**169**	P		**Pn**	**04 31 31.4**	**+1.3**
HMAT	**Matruh**	**5.64**	**223**	P		**Pn**	**04 31 25.9**	**-5.8**
	baz=221							
HSAF	**As Saff**	**5.66**	**181**	P		**Pn**	**04 31 31.7**	**-0.1**
	baz=172							
HSAF	**As Saff**	**5.66**	**181**	P		**Pn**	**04 31 31.7**	**-0.1**
GLL	**Jalalah**	**5.70**	**179**	P		**Pn**	**04 31 33.2**	**+0.9**
	baz=171							
GLL	**Jalalah**	**5.70**	**179**	P		**Pn**	**04 31 33.2**	**+0.8**
HNAT	**Natroun**	**5.71**	**189**	P		**Pn**	**04 31 31.8**	**-0.6**
	baz=182							
HNAT	**Natroun**	**5.71**	**189**	P		**Pn**	**04 31 31.8**	**-0.6**
MALT	**Malatya**	**6.24**	**59**	*e*Pn		**Pn**	**04 31 41.5**	**+1.7**
	comp=N,4.3nm,0.6s							
MALT	**Malatya**	**6.24**	**59**	*e*Pn		**Pn**	**04 31 41.5**	**+1.7**
	comp=N,4.3nm,0.6s							
HFRF	**Wahat Farafira**	**8.60**	**200**	P		**Pn**	**04 32 10.1**	**-2.0**
	baz=196							
HDK1	**Dakhla**	**9.90**	**192**	P		**Pn**	**04 32 28.1**	**-1.9**
	baz=188							
HDK2	**Wahat Dakhilah**	**11.18**	**193**	P		**Pn**	**04 32 45.7**	**-1.8**
	baz=190							
FINES	**FINESS Array B**	**26.41**	**354**	P		**P**	**04 35 43.5**	**-0.7**
	comp=N,1.7nm,0.7s,mb3.7,baz=163,slow=24,SNR=2.9							
FINES	**FINESS Array B**	**26.41**	**354**	P		**P**	**04 35 43.5**	**-0.7**
ARCES	**ARCESS Array B**	**34.47**	**356**	P		**P**	**04 36 54.5**	**-0.8**
	comp=N,4.7nm,1.1s,mb4.3,baz=183,slow=4.7,SNR=4.0							
ARCES	**ARCESS Array B**	**34.47**	**356**	P		**P**	**04 36 54.5**	**-0.8**

*BJI **08** 04:45:45.1,8.°96S×107.°12E,h77km,mB4.9/3,mb5.0/7, Ms4.6/1,Ms7 4.3/1*
*DJA **08** 04:45:49,8.°46S×107.°47E,h18km,MLv5.0/29*
*ISCJB **08** 04:45:51.6±0.6,8.°18S±0.°06×107.°59E±0.°04,h90km±4km, mb4.7/47,Error ellipse: s-maj=12.0km s-min=4.4km az=28.4*
*NEIC **08** 04:45:52.1±2.0,8.°10S×107.°65E,h77km±18km,mb4.8/17, Error ellipse: s-maj=10.5km s-min=6.1km az=58.0*
*IDC **08** 04:45:55.8±4.7,8.°13S×107.°79E,h112km±42km,mb4.2/20, mb1 4.2/21,mb1mx4.2/23,mbtmp4.2/21,MS3.2/5, Ms1 3.3/5,ms1mx2.9/23,Error ellipse: s-maj=16.9km s-min=10.2km az=51.0*

ISC 08 04:45:53.0±0.5,8.°18S±0.°07×107.°58E±0.°04,h84km±4km, n123,σ0.°81/106,mb4.7/47,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CISI	**Cisompet, Garu**	**0.66**	**21**	P		**Pn**	**04 46 06.7**	**-1.8**
LEM	**Lembang**	**1.34**	**1**	P		**Pn**	**04 46 17.5**	**+1.1**
LEM				S		**Sn**	**04 46 39.6**	**+5.5**
SKJI	**Sukabumi**	**1.54**	**319**	P		**Pn**	**04 46 18.0**	**-1.0**
BJII	**Banjamegara**	**2.27**	**68**	P		**Pn**	**04 46 29.8**	**+1.3**
CGJI	**Cibinong**	**2.43**	**309**	P		**Pn**	**04 46 29.1**	**-1.7**
SBJI	**Serang**	**2.50**	**325**	P		**Pn**	**04 46 32.2**	**+0.5**
UGM	**Wanagama**	**2.92**	**85**	P		**Pn**	**04 46 36.0**	**-1.4**
RBSI	**Rajabasa**	**2.95**	**322**	P		**Pn**	**04 46 38.2**	**+0.5**
SMRI	**Semarang**	**3.04**	**69**	P		**Pn**	**04 46 40.3**	**+1.3**
PCJI	**Pacitan**	**3.56**	**91**	P		**Pn**	**04 46 44.9**	**-1.1**
BLSI	**Bandar Lampung**	**3.63**	**320**	P		**Pn**	**04 46 47.4**	**+0.5**
NGJI	**Ngawi**	**3.93**	**78**	P		**Pn**	**04 46 55.3**	**+4.3**
KASI	**Kota Agung**	**4.04**	**310**	P		**Pn**	**04 46 51.8**	**-0.7**
SJI	**Sawahan**	**4.17**	**84**	P		**Pn**	**04 46 54.6**	**+0.4**
PWJI	**Pagerwojo**	**4.18**	**88**	P		**Pn**	**04 46 53.4**	**-1.0**
KLJ	**Kotabumi**	**4.26**	**320**	P		**Pn**	**04 46 56.0**	**+0.4**
KLSI		**4.47**	**321**	P		**Pn**	**04 46 59.3**	**+0.8**
LWLI	**Liwa**	**4.70**	**312**	P		**Pn**	**04 47 01.6**	**+0.1**
KRKI	**Karangkates**	**4.82**	**90**	P		**Pn**	**04 47 03.9**	**+0.8**
MDSI	**Maura Dua**	**4.99**	**317**	P		**Pn**	**04 47 05.5**	**+0.1**
	0.4nm1μm81nm,1.0s							
TPI	**Tanjungpandan**	**5.38**	**1**	P		**Pn**	**04 47 13.6**	**+2.8**
	0.2nm57nm,0.8s							
GMJI	**Gumukmas**	**5.80**	**91**	P		**Pn**	**04 47 18.1**	**+1.6**
	0.5nm101nm,0.7s							
MNAI	**Manna**	**5.96**	**309**	P		**Pn**	**04 47 18.0**	**-0.7**
	2.7nm522nm,1.3s							
JAGI	**Jajag, Banyuwa**	**6.51**	**93**	P		**Pn**	**04 47 26.1**	**-0.1**
	0.9nm4μm210nm,0.9s							
KSI	**Kapahiang**	**6.70**	**312**	P		**Pn**	**04 47 28.6**	**-0.1**
	1.5nm342nm,0.7s							
BYJI	**Banyuwangi**	**6.70**	**91**	P		**Pn**	**04 47 30.0**	**+1.1**
	2.0nm458nm,0.6s							
NBBI	**Negara**	**6.97**	**92**	P		**Pn**	**04 47 33.2**	**+0.8**
	1.5nm390nm,0.6s							
IGBI	**Denpasar**	**7.51**	**95**	P		**Pn**	**04 47 38.4**	**-1.4**
	0.5nm146nm,0.9s							
SRBI	**Singaraja**	**7.55**	**90**	P		**Pn**	**04 47 40.8**	**+0.3**
	0.9nm4μm255nm,0.7s							
KHKI	**Kahang-Kahang**	**7.94**	**92**	P		**Pn**	**04 47 44.9**	**-0.9**
SISI	**Saibi**	**10.86**	**308**	P		**Pn**	**04 48 21.6**	**-3.9**
GIRL	**Giralia**	**15.74**	**157**	*e*P		**Pn**	**04 49 24.7**	**-5.2**
	529nm,1.1s							
MBWA	**Marble Bar**	**17.44**	**139**	*e*P		**Pn**	**04 49 47.2**	**-3.7**
MBWA	**Marble Bar**	**17.44**	**139**	*e*P		**Pn**	**04 49 46.8**	**-4.1**
FITZ	**Fitzroy Crossi**	**20.14**	**121**	*e*P		**P**	**04 50 20.3**	**-0.3**
	50nm,0.8s							
FITZ				*e*S		**S**	**04 53 50.2**	**-12**
FITZ	**Fitzroy Crossi**	**20.14**	**121**	P		**P**	**04 50 20.3**	**-0.3**
	1.1nm,0.3s,baz=296,slow=6.6,SNR=38							
FITZ				S		**S**	**04 53 56.2**	**-6.1**
	0.4nm,0.3s,baz=75,slow=20,SNR=2.8							
FITZ				LR		LR	04 57 14.9	
	comp=Z,67nm,21.9s,baz=308,slow=34							
DAV	**Davao City (W)**	**23.48**	**50**	LR		LR	04 59 56.4	
	comp=Z,17nm,19.1s,baz=228,slow=36							
NWAO	**Narrogin (SRO)**	**26.20**	**161**	P		**P**	**04 51 19.4**	**-0.5**
NWAO	**Narrogin (SRO)**	**26.20**	**161**	P		**P**	**04 51 19.4**	**-0.5**
	6.6nm,0.8s,mb4.1,baz=347,slow=14,SNR=4.1							
CMAR	**Chiang Mai Arr**	**27.80**	**342**	P		**P**	**04 51 34.1**	**-0.3**
	1.7nm,0.5s,mb3.8,baz=179,slow=8.6,SNR=4.3							
CMAR				LR		LR	05 02 26.2	
	comp=Z,51nm,19.8s,baz=141,slow=36							
CHTO	**Chiang Mai**	**28.14**	**342**	*e*P		**P**	**04 51 37.0**	**-0.4**
	2.7nm,0.7s,mb3.9							
ASAR	**Alice Springs**	**29.54**	**124**	P		**P**	**04 51 50.1**	**+0.2**
	0.9nm,0.8s,mb3.5,baz=301,slow=8.6,SNR=8.6							
CTA	**Charters Tower**	**39.22**	**112**	LR		LR	05 07 49.1	
	comp=Z,49nm,21.8s,baz=47,slow=34							
STKA	**Stephens Creek**	**39.43**	**131**	*e*P		**P**	**04 53 15.1**	**+0.1**
	11nm,0.6s,mb4.9							
STKA	**Stephens Creek**	**39.43**	**131**	P		**P**	**04 53 14.9**	**-0.1**
	16nm,0.7s,mb5.0,baz=300,slow=8.3,SNR=22							
STKA				LR		LR	05 08 10.4	
	comp=Z,126nm,20.9s,baz=335,slow=34							
ODAN	**Odare**	**39.96**	**331**	*e*P		**P**	**04 53 19.6**	**+0.2**
	22nm,0.6s,mb5.2							
TAPN	**Taplejung**	**40.22**	**332**	*e*P		**P**	**04 53 22.4**	**+0.8**
	18nm,0.6s,mb5.1							
LSA	**Lhasa**	**40.84**	**338**	*e*P		**P**	**04 53 27.5**	**+0.9**
	6.5nm,0.6s,mb4.6							
JIRN	**Jiri**	**41.20**	**331**	*e*P		**P**	**04 53 30.3**	**+0.7**
	23nm,0.6s,mb5.2							
PKI	**Pulchoki**	**41.52**	**330**	*e*P		**P**	**04 53 32.4**	**+0.2**
PKIN	**Phulchoki**	**41.53**	**330**	*e*P		**P**	**04 53 32.6**	**+0.3**
	17nm,0.8s,mb4.9							
GUN	**Gumba**	**41.56**	**330**	*e*P		**P**	**04 53 33.1**	**+0.5**
	44nm,0.7s,mb5.3							
DMN	**Daman**	**41.70**	**329**	*e*P		**P**	**04 53 34.0**	**+0.3**
	36nm,1.0s,mb5.1							
KKN	**Kakani**	**41.76**	**330**	*e*P		**P**	**04 53 34.1**	**-0.1**
GKN	**Gorkha**	**42.26**	**329**	*e*P		**P**	**04 53 38.4**	**+0.2**
	18nm,0.6s,mb5.0							
CMSA	**Cobar Meteorol**	**42.38**	**129**	*e*P		**P**	**04 53 39.9**	**+0.6**
KOLN	**Koldanda**	**42.61**	**328**	*e*P		**P**	**04 53 41.2**	**+0.1**
	37nm,0.6s,mb5.3							
NDI	**New Delhi**	**46.92**	**323**	*e*PKP		**P**	**04 54 15.0**	**-0.3**
KSRS	**Korea Array**	**49.22**	**21**	P		**P**	**04 54 32.2**	**-0.8**
	1.2nm,0.7s,mb4.0,baz=195,slow=9.0,SNR=5.3							
KSRS				PcP		PcP	04 55 55.0	+0.1
	1.2nm,0.5s,baz=198,slow=4.3,SNR=6.4							
MJAR	**Matsushiro Arr**	**52.96**	**31**	P		**P**	**04 54 58.2**	**-2.8**
	1.4nm,0.5s,mb4.3,baz=200,slow=8.1,SNR=7.3							
MJAR				PcP		PcP	04 56 09.2	+0.3
	1.4nm,0.7s,baz=186,slow=2.9,SNR=5.1							
KSH	**Kashi**	**55.76**	**331**	P		**P**	**04 55 19.6**	**-1.6**
KSH				*e*pP		pP	04 55 35.1	-7.0
KSH				*e*ScS		ScS	05 05 01.1	-1.5
KSH				pmax		pmax		
	comp=Z,9.0nm,0.6s,mb5.0							
KSH				pmax		pmax		
	comp=Z,68nm,4.1s							
KSH				LR		LR		
	comp=N,140nm,13.4s							
KSH				LR		LR		
	comp=E,150nm,14.0s							
KSH				LR		LR		
	comp=Z,67nm,5.0s							
SONM	**Songino Array**	**55.77**	**359**	P		**P**	**04 55 21.4**	**+0.2**
	comp=Z,6.0nm,0.5s,mb4.8,baz=176,slow=8.1,SNR=42							
SONM				PcP		PcP	04 56 19.8	+0.5
	comp=Z,2.3nm,0.5s,baz=184,slow=3.5,SNR=7.6							
ULN	**Ulaanbaatar**	**55.80**	**360**	*e*P		**P**	**04 55 21.4**	**+0.1**
	comp=Z,12nm,0.7s,mb5.0							
KBL	**Kabul**	**55.98**	**322**	*e*P		**P**	**04 55 22.0**	**-0.9**
	comp=Z,6.2nm,0.7s,mb4.8							
KZA	**Kyzart**	**58.10**	**332**	P		**P**	**04 55 38.3**	**+0.6**
	SNR=13							
UCH	**Uchtor**	**58.56**	**332**	P		**P**	**04 55 41.2**	**+0.3**
	SNR=6.3							
UCH	**Uchtor**	**58.56**	**332**	*e*P		**P**	**04 55 40.3**	**-0.6**
	comp=Z,3.1nm,0.7s,mb4.5							
TKM2	**Tokmak 2**	**58.60**	**333**	P		**P**	**04 55 41.4**	**+0.1**
	SNR=37							
TKM2	**Tokmak 2**	**58.60**	**333**	*e*P		**P**	**04 55 40.8**	**-0.4**
	comp=Z,25nm,0.6s,mb5.4							
KBK	**Karagaybulak**	**58.69**	**332**	P		**P**	**04 55 42.2**	**+0.3**
	SNR=6.9							
AML	**Almayashu**	**58.88**	**331**	P		**P**	**04 55 43.5**	**+0.4**
	SNR=12							
AML	**Almayashu**	**58.88**	**331**	*e*P		**P**	**04 55 42.9**	**-0.2**
	comp=Z,9.6nm,0.7s,mb4.9							
AAK	**Ala-Archa**	**58.88**	**332**	*e*P		**P**	**04 55 43.6**	**+0.4**
	comp=Z,3.8nm,0.4s,mb4.8							
MK31	**Makanchi Array**	**59.18**	**340**	*e*P		**P**	**04 55 44.5**	**-0.6**
MKAR	**Makanchi Array**	**59.18**	**340**	P		**P**	**04 55 44.3**	**-0.8**
	comp=Z,13nm,0.5s,mb5.2,baz=145,slow=7.9,SNR=162							
EKS2	**Erkin-Say**	**59.24**	**331**	P		**P**	**04 55 46.1**	**+0.4**
	SNR=13							
EKS2	**Erkin-Say**	**59.24**	**331**	*e*P		**P**	**04 55 46.0**	**+0.3**
	comp=Z,10nm,0.8s,mb4.9							
USP	**Ospenovka**	**59.37**	**332**	P		**P**	**04 55 46.2**	**-0.3**
	SNR=9.4							
OPO	**Ambohidratompo**	**59.43**	**253**	P		**P**	**04 55 48.0**	**+0.6**
	comp=Z,1.1nm,0.3s,mb4.3,baz=93,slow=5.3,SNR=6.2							
KURK	**Kurchatov**	**63.79**	**340**	*e*P		**P**	**04 56 16.0**	**-0.1**
	comp=Z,24nm,1.0s,mb5.0							
ZAA0	**Zalesovo Array**	**64.81**	**345**	*e*P		**P**	**04 56 21.9**	**-0.7**
ZALV	**Zalesovo Beam**	**64.81**	**345**	P		**P**	**04 56 22.0**	**-0.7**
	comp=Z,4.6nm,0.3s,mb4.7,baz=119,slow=4.1,SNR=25							
MAW	**Mawson**	**66.42**	**197**	P		**P**	**04 56 33.3**	**+0.4**
	comp=Z,1.1nm,0.4s,mb4.0,baz=67,slow=12,SNR=3.2							
RDF	**Al-Radifah**	**68.56**	**305**	*e*P		**P**	**04 56 47.3**	**+0.2**
RDF				AMb		AMB	04 56 48.5	
	comp=Z,32nm,0.9s,mb5.2							
BVAR	**Borovoye Array**	**68.67**	**337**	P		**P**	**04 56 47.1**	**-0.1**
	comp=Z,13nm,0.7s,mb4.9,baz=143,slow=8.4,SNR=66							
UMR	**Umm Al-Rimmam**	**68.67**	**306**	*e*P		**P**	**04 56 47.7**	**-0.1**
UMR				AMb		AMB	04 56 48.4	
	comp=Z,50nm,0.5s,mb5.6							
BRVK	**Borovoye**	**68.73**	**337**	*e*P		**P**	**04 56 47.3**	**-0.3**
	comp=Z,23nm,1.0s,mb5.0							
MIB	**Mutribah**	**69.07**	**306**	*e*P		**P**	**04 56 50.0**	**-0.2**
MIB				AMb		AMB	04 56 51.7	
	comp=Z,22nm,1.0s,mb4.9							
KMBO	**Kilima Mbogo**	**70.37**	**272**	*e*P		**P**	**04 56 59.6**	**+1.0**
	comp=Z,2.0nm,0.6s,mb4.1							
KMBO	**Kilima Mbogo**	**70.37**	**272**	P		**P**	**04 57 00.1**	**+1.5**
	comp=Z,1.2nm,0.5s,mb4.0,baz=180,slow=24,SNR=5.7							
ABKAR	**Akbulak array**	**70.71**	**329**	*e*P		**P**	**04 56 59.7**	**-0.2**
	comp=Z,18nm,0.5s,mb5.2							
YAK	**Yakutsk**	**72.07**	**11**	*e*P		**P**	**04 57 07.0**	**-0.8**
AKTK	**Aktyubinsk**	**72.42**	**329**	P		**P**	**04 57 10.1**	**-0.1**
AKTO	**Aktyubinsk**	**72.42**	**329**	P		**P**	**04 57 10.1**	**-0.1**
	comp=Z,3.4nm,0.5s,mb4.5,baz=93,slow=2.3,SNR=14							
PETK	**Petropavlovsk-**	**74.33**	**29**	P		**P**	**04 57 20.8**	**-0.6**
	comp=Z,4.3nm,0.5s,mb4.4,baz=343,slow=32,SNR=5.8							
ARU	**Arti**	**75.92**	**334**	*e*P		**P**	**04 57 30.5**	**+0.1**
	comp=Z,7.2nm,0.3s,mb4.9							
LSZ	**Lusaka**	**77.71**	**256**	*e*P		**P**	**04 57 42.0**	**+0.6**
	comp=Z,1.8nm,0.5s,mb4.1							
MALT	**Malatya**	**79.05**	**312**	*e*P		**P**	**04 57 49.0**	**+0.7**
	comp=Z,2.3nm,0.7s,mb4.1							
MMAI	**Mount Meron Ar**	**79.75**	**306**	P		**P**	**04 57 53.9**	**+1.7**
	comp=Z,4.3nm,0.4s,mb4.1,baz=98,slow=6.0,SNR=4.3							
BR131	**Keskin Array S**	**83.04**	**312**	*e*P		**P**	**04 58 09.3**	**0.0**
	comp=Z,5.2nm,0.7s,mb4.5							
BRTR	**Keskin Array B**	**83.04**	**312**	P		**P**	**04 58 09.3**	**0.0**
	comp=Z,6.1nm,0.8s,mb4.5,baz=135,slow=7.0,SNR=30							
AKASG	**Malin Array Be**	**88.97**	**321**	P		**P**	**04 58 37.5**	**-0.9**
	comp=Z,0.7nm,0.4s,mb4.0,baz=76,slow=5.8,SNR=6.1							
BUR08	**Bucovina Ar. S**	**90.88**	**318**	*e*P		**P**	**04 58 48.2**	**+0.9**
FINES	**FINESS Array B**	**93.07**	**332**	P		**P**	**04 58 57.6**	**+0.5**
	comp=Z,3.2nm,0.8s,mb4.7,baz=90,slow=3.8,SNR=4.7							
ARCES	**ARCESS Array B**	**94.83**	**340**	P		**P**	**04 59 03.7**	**-1.3**
	comp=Z,3.7nm,0.9s,mb4.8,baz=90,slow=6.1,SNR=12							
TORD	**Torodi Ar. Bea**	**107.21**	**281**	PKPdf		PKiKP	05 04 09.3	-1.2
TORD	**Torodi Ar. Bea**	**107.21**	**281**	PKiKP		PKiKP	05 04 09.3	-1.2
	comp=Z,0.5nm,0.7s,baz=51,slow=1.5,SNR=8.3							
YKA	**Yellowknife Ar**	**117.75**	**21**	PKP		PKPdf	05 04 29.0	-0.2
	comp=Z,0.6nm,0.6s,baz=344,slow=2.2,SNR=6.2							
BOZ	**Bozeman (W)**	**129.70**	**35**	*e*PKPdf		PKPdf	05 04 53.8	+1.1
RSSD	**Black Hills**	**134.84**	**32**	*e*PKPdf		PKPdf	05 05 02.7	+0.3
CPUP	**Villa Florida**	**142.70**	**203**	*e*PKPdf		PKPdf	05 05 18.7	+1.4
TXAR	**Lajitas Array**	**143.89**	**50**	PKP		PKPdf	05 05 18.1	-1.2
	comp=Z,0.6nm,0.5s,baz=286,slow=1.0,SNR=21							
WMOK	**Wichita Mounta**	**144.16**	**39**	*e*PKPdf		PKPdf	05 05 17.9	-1.7
NCB	**Newcomb**	**144.31**	**2**	*e*PKPdf		PKPdf	05 05 17.9	-1.7
JCT	**Junction City**	**146.12**	**45**	*e*PKPbc		PKPbc	05 05 25.1	+1.0
OLIL	**Olney**	**146.46**	**22**	*e*PKPbc		PKPbc	05 05 25.4	+0.5
MIAR	**Mount Ida**	**147.33**	**34**	*e*PKPbc		PKPbc	05 05 28.0	+0.4
PARMO	**Parma**	**147.55**	**27**	*e*PKPbc		PKPbc	05 05 28.5	+0.4
WCI	**Wyandotte Cave**	**147.56**	**21**	*e*PKPbc		PKPbc	05 05 27.9	-0.1
WVT	**Waverly**	**148.82**	**25**	*e*PKPbc		PKPbc	05 05 31.7	+0.3
SWET	**Sewanee**	**150.37**	**23**	*e*PKPbc		PKPbc	05 05 34.6	-0.7
CPCT	**Cooper Cave**	**150.68**	**20**	*e*PKPbc		PKPbc	05 05 36.5	+0.6
CPCT				*e*PKPab		PKPab	05 05 43.0	0.0
TKL	**Tuckaleechee C**	**150.74**	**19**	*e*PKPbc		PKPbc	05 05 36.2	+0.1

IDC 08 04:54:19.8±1.4,2.°24N×125.°89E,h0km,mb3.5/4, mb1 3.6/4,mb1mx3.5/20,mbtmp3.5/4,Error ellipse: s-maj=95.4km s-min=28.5km az=71.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ASAR	**Alice Springs**	**26.91**	**164**	P		P	05 00 02.5	-0.3
	0.2nm,0.4s,baz=346,slow=11,SNR=4.2							
SONM	**Songino Array**	**48.44**	**343**	P		P	05 03 02.3	-1.6
	0.6nm,0.8s,baz=145,slow=5.3,SNR=3.5							
MKAR	**Makanchi Array**	**58.30**	**326**	P		P	05 04 17.9	+1.4
	0.3nm,0.4s,baz=119,slow=8.5,SNR=3.9							
ILAR	**Eielson Array**	**86.80**	**25**	P		P	05 07 06.8	+1.0
	0.2nm,0.6s,baz=234,slow=7.9,SNR=4.1							

*CSEM **08** 04:56:17.6±0.3,38.°24N×38.°55E,h33km±5km,MD2.7, Error ellipse: s-maj=8.3km s-min=6.7km az=169.0*
*ISK **08** 04:56:17.8,38.°20N×38.°53E,h26km,MD2.7*
*DDA **08** 04:56:18.6,38.°14N×38.°58E,h4km±1km,Md2.8*
*ISCJB **08** 04:56:19.0±0.5,38.°23N±0.°04×38.°54E±0.°04,h27km±5km, Error ellipse: s-maj=6.7km s-min=5.4km az=145.4*

ISC 08 04:56:19.1±0.5,38.°23N±0.°04×38.°54E±0.°04,h25km±9km, n23,σ1.°812/35,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MALT	**Malatya**	**0.12**	**313**	*e*PG		**Pb**	**04 56 23.2**	**-0.8**
MALT	**Malatya**	**0.12**	**313**	*e*Pg		**Pb**	**04 56 23.2**	**-0.7**
MYA	**Malataya**	**0.13**	**316**	*e*PG		**Pb**	**04 56 23.4**	**-0.7**
MYA	**Malataya**	**0.13**	**316**	*e*Pg		**Pb**	**04 56 23.4**	**-0.6**
ELZG	**Elazig**	**0.44**	**52**	*i* P		**Pb**	**04 56 28.0**	**-0.3**
ELZG				*i* S		**Sb**	**04 56 35.7**	**+1.2**
ELZG	**Elazig**	**0.44**	**52**	*i* P		**Pb**	**04 56 28.0**	**-0.3**
ELZG				*i* S		**Sb**	**04 56 35.7**	**+1.2**
AKCD	**Akcadag**	**0.49**	**278**	*i* P		**Pb**	**04 56 29.5**	**+0.3**
AKCD				*i* S		**Sb**	**04 56 37.8**	**+1.7**
AKCD	**Akcadag**	**0.49**	**278**	*i* P		**Pb**	**04 56 29.5**	**+0.3**
AKCD				*i* S		**Sb**	**04 56 37.8**	**+1.8**
SVRC	**Sivrice-ELAZID**	**0.62**	**76**	*e*PG		**Pb**	**04 56 30.8**	**-0.5**
SVRC				*e*SG		**Sb**	**04 56 40.9**	**+1.3**
SVRC	**Sivrice-ELAZID**	**0.62**	**76**	*e*Pg		**Pb**	**04 56 30.8**	**-0.5**
SVRC				*e*Sg		**Sb**	**04 56 40.9**	**+1.3**
ATAB	**Bozova**	**0.78**	**195**	*i* P		**Pb**	**04 56 31.8**	**-2.3**
ATAB				*i* S		**Sb**	**04 56 45.3**	**+1.0**
ATAB	**Bozova**	**0.78**	**195**	*i* P		**Pb**	**04 56 31.8**	**-2.3**
ATAB				*i* S		**Sb**	**04 56 45.3**	**+1.0**
URFA	**Urfa**	**0.82**	**164**	*e*PG		**Pb**	**04 56 33.7**	**-1.0**
URFA	**Urfa**	**0.82**	**164**	*e*Pg		**Pb**	**04 56 33.7**	**-1.0**
DARE	**Darende-Malaty**	**0.92**	**322**	*e*PG		**Pb**	**04 56 35.1**	**-1.4**
DARE				*e*SG		**Sb**	**04 56 48.0**	**-0.4**
DARE	**Darende-Malaty**	**0.92**	**322**	*e*Pg		**Pb**	**04 56 35.1**	**-1.4**
DARE				*e*Sg		**Sb**	**04 56 48.0**	**-0.3**
PTK	**Pertek**	**0.94**	**45**	*e*PG		**Pb**	**04 56 35.7**	**-1.0**
PTK	**Pertek**	**0.94**	**45**	*e*Pg		**Pb**	**04 56 35.7**	**-1.0**
KEMA	**Kemaliye**	**1.04**	**358**	*i* P		**Pb**	**04 56 39.6**	**+1.2**
KEMA				*i* S		**Sb**	**04 56 56.6**	**+5.0**
KEMA	**Kemaliye**	**1.04**	**358**	*i* P		**Pb**	**04 56 39.6**	**+1.2**
GZT	**Gaziantep**	**1.17**	**222**	*i* P		**Pn**	**04 56 40.1**	**+0.3**
GZT				*i* S		**Sb**	**04 56 57.0**	**+1.7**
KMRS	**Kahramanmaras**	**1.49**	**241**	*e*PN		**Pn**	**04 56 42.9**	**-1.3**
KMRS	**Kahramanmaras**	**1.49**	**241**	*e*Pn		**Pn**	**04 56 42.9**	**-1.4**

*ISCJB **08** 05:56:14.0±1.1,43.°1N±0.°1×146.°1E±0.°1,h62km±7km, mb3.3/6,Error ellipse: s-maj=17.8km s-min=10.8km az=155.0*
*JMA **08** 05:56:14.3±0.1,43.°13N×146.°16E,h52km±1km,M3.4*
*IDC **08** 05:56:16.6±5.8,42.°76N×146.°02E,h89km±36km,mb3.1/6, mb1 3.3/7,mb1mx3.2/23,mbtmp3.1/7,Error ellipse: s-maj=79.8km s-min=23.5km az=180.0*

ISC 08 05:56:14.8±1.2,43.°1N±0.°1×146.°1E±0.°1,h55km±8km,n14, σ0.°66/21,mb3.3/6,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.37**	**311**	P		**Pn**	**05 56 24.4**	**-0.6**
NEM2				*e*S		**Sn**	**05 56 31.7**	**-0.6**
JAK	**Akkeshi**	**1.05**	**264**	P		**Pn**	**05 56 33.3**	**-0.1**
JAK				*e*S		**Sn**	**05 56 47.4**

	baz=245							
ENTT				*e*S		**Sg**	**06 35 19.4**	**-1.4**
	baz=245							
TWY	**Chenhua**	**0.64**	**316**	*e*P		**Pg**	**06 35 17.8**	**+1.0**
	baz=323							
NSK	**Sanguang**	**0.68**	**259**	P		**Pg**	**06 35 16.7**	**-0.9**
	baz=267							
NNS	**Nan Shan**	**0.75**	**240**	*e*P		**Pg**	**06 35 19.2**	**+0.3**
	baz=243							
YOJ	**Yonaguni jima**	**0.91**	**112**	P		**Pg**	**06 35 22.9**	**+0.9**
YOJ				S		**Sg**	**06 35 35.9**	**+2.2**
WHF	**Hehuan Shan**	**1.00**	**229**	P		**Pg**	**06 35 23.7**	**0.0**
	baz=225							
WHF				*e*S		**Sg**	**06 35 37.0**	**+0.2**
	baz=225							
NSTT	**Nanjuang**	**1.01**	**260**	*e*P		**Pg**	**06 35 24.0**	**+0.2**
	baz=258							
NSTT				*e*S		**Sg**	**06 35 37.8**	**+0.9**
	baz=258							
TYC	**Yuchr**	**1.44**	**231**	*e*P		**Pn**	**06 35 31.6**	**-0.1**
	baz=221							
TYC				*e*S		**Sg**	**06 35 51.0**	**+0.1**
	baz=221							
IRIF	**Iriomote-Funau**	**1.57**	**107**	P		**Pn**	**06 35 32.3**	**-1.1**
IRIF				*e*S		**Sn**	**06 35 52.5**	**-1.7**
YUS	**Yu-Shan**	**1.68**	**218**	*e*P		**Pn**	**06 35 35.5**	**+0.7**
	baz=225							
YUS				*e*S		**Sn**	**06 35 59.2**	**+2.2**
	baz=225							
HATJ	**Hateruma jima**	**1.74**	**115**	*e*S		**Sn**	**06 35 59.5**	**+1.1**
CHN5	**Tsauling**	**1.77**	**227**	*e*P		**Pn**	**06 35 36.8**	**+0.6**
	baz=226							
CHN5				*e*S		**Sn**	**06 36 00.2**	**+1.1**
	baz=226							
JKRS	**Kuro-shima**	**1.84**	**108**	P		**Pn**	**06 35 36.7**	**-0.4**
JKRS				S		**Sn**	**06 35 59.7**	**-1.3**
JIJ	**Ishigaki jima**	**1.92**	**103**	P		**Pn**	**06 35 36.5**	**-1.7**

BJI ***08*** *06:37:34.4, 4.˚78S×100.˚98E, h32km, mB5.9/47, mb5.6/62, Ms5.9/76, Ms7 5.8/62*

SZGRF ***08*** *06:37:34.4, 4.˚41S×103.˚33E, h33km, mb5.4, MS5.3, Southern Sumatera, Indonesia*

IDC ***08*** *06:37:37.3±0.4, 4.˚01S×101.˚09E, h0km, mb5.0/29, mb1 5.1/30, mb1mx5.1/30, mbtmp5.0/30, ML4.8/1, MS5.4/23, Ms1 5.4/23, ms1mx5.2/34, Error ellipse: s-maj=15.4km s-min=10.0km az=53.0*

ISCJB ***08*** *06:37:40.7±0.4, 4.˚05S±0.˚02×100.˚97E±0.˚02, h29km, mb5.5/189, MS5.5/245, Error ellipse: s-maj=3.5km s-min=2.2km az=35.3*

DJA ***08*** *06:37:40, 4.˚09S×100.˚86E, h13km, Mw5.8/32*

NEIC ***08*** *06:37:41.9±0.1, 3.˚94S×101.˚08E, h23km, mb5.5/76, ME5.5, MS5.5/185, MW5.8, MW5.6, Error ellipse: s-maj=6.5km s-min=4.6km az=47.0, Moment Tensor Solution. s52 Moment tensor: Scale 10^{17}Nm; M_{rr}2.25; $M_{\theta\theta}$-2.09; $M_{\phi\phi}$-0.16; $M_{r\theta}$1.91; $M_{\theta\phi}$0.93; $M_{r\phi}$-0.79; Best double couple: $M_0$3.10000×10^{17} NP1:ϕ_s291.00000°, δ24.00000°, λ89.00000°. NP2:ϕ_s112.00000°, δ66.00000°, λ90.00000°. Principal axes: T 3.0300, Plg69.0000°, Azm22.0000°; N 0.2100, Plg0.0000°, Azm292.0000°; P -3.2400, Plg20.0000°, Azm202.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Felt [II] at Kapahiang.

MOS ***08*** *06:37:42.5±1.5, 3.˚76S×101.˚08E, h33km, mb5.8/63, MS5.4/68 Error ellipse: s-maj=8.3km s-min=4.4km az=112.0*

GCMT ***08*** *06:37:43.4±0.1, 4.˚29S×100.˚75E, h16km, MW5.8, Moment Tensor Solution. s86,c152; s21,c21; Moment tensor: Scale 10^{17}Nm; M_{rr}1.78±.04; $M_{\theta\theta}$-0.93±.03; $M_{\phi\phi}$-0.85±.04; $M_{r\theta}$5.13±.11; $M_{\theta\phi}$0.97±.03; $M_{r\phi}$-3.36±.11; Best double couple: $M_0$6.40000×10^{17} NP1:ϕ_s324.00000°, δ9.00000°, λ110.00000°. NP2:ϕ_s124.00000°, δ82.00000°, λ87.00000°. Principal axes: T 6.3900, Plg53.0000°, Azm30.0000°; N 0.0200, Plg3.0000°, Azm124.0000°; P -6.4100, Plg37.0000°, Azm216.0000°; Data Used: II IU IC G CN. Surface waves: sta= 80, comp=126, per= 50.*

ISC **08 06:37:42.8±0.1, 4.˚05S±0.˚02×100.˚96E±0.˚02, h31km, h31km±.5km:pP-P, n759, σ1928/552, mb5.5/188, MS5.5/245, 60C-4D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSI	**Kapahiang**	**1.68**	**76**	P		**Pn**	**06 38 10.5**	**+0.5**
KSI				S		**Sn**	**06 38 33.8**	**+3.3**
KRJI	**Kerinci**	**2.01**	**14**	P		**Pn**	**06 38 15.6**	**+1.0**
KRJI				S		**Sn**	**06 38 41.6**	**+2.9**
MNAI	**Manna**	**2.02**	**99**	P		**Pn**	**06 38 14.9**	**+0.2**
MNAI				S		**Sn**	**06 38 41.6**	**+2.8**
SDSI	**Sungai Dareh**	**3.13**	**9**	P		**Pn**	**06 38 30.5**	**+0.4**
SDSI				S		**Sn**	**06 39 09.8**	**+3.4**
PDSI	**Padang**	**3.16**	**351**	P		**Pn**	**06 38 29.5**	**-0.9**
PDSI				S		**Sn**	**06 39 09.3**	**+2.3**
LWLI	**Liwa**	**3.24**	**107**	P		**Pn**	**06 38 31.3**	**-0.2**
LWLI				S		**Sn**	**06 39 12.6**	**+3.6**
MDSI	**Maura Dua**	**3.24**	**98**	P		**Pn**	**06 38 31.4**	**-0.1**
MDSI				S		**Sn**	**06 39 13.5**	**+4.4**
SISI	**Saibi**	**3.29**	**325**	P		**Pn**	**06 38 31.0**	**-1.2**
SISI				S		**Sn**	**06 39 12.0**	**+1.7**
PPI	**Padang Panjang**	**3.61**	**351**	P		**Pn**	**06 38 36.2**	**-0.5**
PPI				S		**Sn**	**06 39 20.3**	**+2.0**
KLSI		**3.81**	**100**	P		**Pn**	**06 38 39.5**	**+0.1**
KLSI				S		**Sn**	**06 39 28.6**	**+5.3**
KASI	**Kota Agung**	**3.82**	**113**	P		**Pn**	**06 38 38.6**	**-0.9**
KASI				S		**Sn**	**06 39 28.5**	**+5.2**
RGRI	**Rengat**	**3.92**	**21**	P		**Pn**	**06 38 41.2**	**+0.2**
RGRI				S		**Sn**	**06 39 29.8**	**+3.8**
KLI	**Kotabumi**	**3.97**	**102**	P		**Pn**	**06 38 42.7**	**+1.1**
KLI				S		**Sn**	**06 39 31.8**	**+4.7**
BKNI	**Bangkinang**	**4.35**	**1**	P		**Pn**	**06 38 46.8**	**0.0**
BKNI				S		**Sn**	**06 39 41.3**	**+4.8**
BLSI	**Bandar Lampung**	**4.47**	**107**	P		**Pn**	**06 38 48.7**	**+0.3**
BLSI				S		**Sn**	**06 39 44.5**	**+5.1**
MNSI	**Mandailing Nat**	**5.01**	**344**	P		**Pn**	**06 38 55.0**	**-0.8**
	6.7nm937nm,0.9s							
MNSI				S		**Sn**	**06 39 55.9**	**+3.2**
	6.7nm937nm,0.9s							
RBSI	**Rajabasa**	**5.09**	**111**	P		**Pn**	**06 38 57.0**	**+0.1**
	4.8nm869nm,1.0s							
RBSI				S		**Sn**	**06 39 59.9**	**+5.2**
	4.8nm869nm,1.0s							
CGJI	**Cibinong**	**5.36**	**119**	P		**Pn**	**06 39 00.8**	**+0.1**
CGJI				S		**Sn**	**06 40 06.9**	**+5.5**
SBJI	**Serang**	**5.55**	**112**	P		**Pn**	**06 39 03.6**	**+0.4**
	6.3nm602nm,1.0s							
SBJI				S		**Sn**	**06 40 11.8**	**+5.8**
	6.3nm602nm,1.0s							
TNG	**Tangerang**	**6.04**	**111**	P		**Pn**	**06 39 11.5**	**+1.4**
	9.0nm2µm,1.2s							
TNG	**Tangerang**	**6.04**	**111**	P		**Pn**	**06 39 11.5**	**+1.4**
	14nm2µm,1.2s							
SKJI	**Sukabumi**	**6.30**	**118**	P		**Pn**	**06 39 16.3**	**+2.7**
	5.5nm762nm,0.7s							
KGM	**Kluang**	**6.47**	**21**	P		**Pn**	**06 39 18.5**	**+2.6**
MYKOM	**Kota Tinggi**	**6.48**	**27**	P		**Pn**	**06 39 19.0**	**+2.9**
TPI	**Tanjungpandan**	**6.80**	**79**	P		**Pn**	**06 39 22.1**	**+1.5**
	2.8nm4µm109nm,1.1s							
PSI	**Prapat**	**7.10**	**343**	Pn		**Pn**	**06 39 22.4**	**-2.3**
	19nm,0.3s,baz=160,slow=4.2,SNR=38							
PSI				Sn		**Sn**	**06 40 37.3**	**-7.1**
	7.7nm,0.3s,baz=179,slow=15,SNR=1.9							
PSI				Lg			06 41 31.5	
	baz=65,slow=15,SNR=2.0							
PSI				LR		LR	06 43 00.3	
	comp=Z,78µm,18.5s,baz=146,slow=46							
PSI	**Prapat**	**7.10**	**343**	P		**Pn**	**06 39 22.4**	**-2.3**
PSI							06 40 37.3	
LEM	**Lembang**	**7.18**	**113**	P		**Pn**	**06 39 26.4**	**+0.7**
	3.7nm653nm,1.0s							
FRIM	**Kepong**	**7.27**	**5**	P		**Pn**	**06 39 29.3**	**+2.3**
CISI	**Cisompet, Garu**	**7.66**	**117**	P		**Pn**	**06 39 29.6**	**-2.7**
	4.6nm922nm,0.6s							
TSI	**Tuntungan**	**7.87**	**342**	P		**Pn**	**06 39 35.8**	**+0.6**
TPTI		**8.19**	**332**	P		**Pn**	**06 39 39.8**	**+0.3**
	7µm494nm,0.8s							
IPM	**Ipoh**	**8.47**	**0**	P		**Pn**	**06 39 46.0**	**+2.5**
COCO	**West Island**	**9.06**	**207**	Pn		**Pn**	**06 39 46.9**	**-4.6**
	6µm,0.6s,SNR=6.9							
COCO	**West Island**	**9.06**	**207**	*e*Pn		**Pn**	**06 39 46.3**	**-5.2**
COCO	**West Island**	**9.06**	**207**	*i* P		**Pn**	**06 39 48.2**	**-3.3**
KULM	**Kulim**	**9.28**	**358**	P		**Pn**	**06 39 56.9**	**+2.4**
BJII	**Banjamegara**	**9.30**	**111**	P		**Pn**	**06 39 54.4**	**-0.4**
	3µm158nm,1.6s							
KTGM	**Kuala Trenggan**	**9.57**	**13**	P		**Pn**	**06 40 01.1**	**+2.6**
SMRI	**Semarang**	**9.90**	**108**	P		**Pn**	**06 40 04.6**	**+1.6**
	6µm318nm,1.0s							
UGM	**Wanagama**	**10.26**	**112**	P		**Pn**	**06 40 06.3**	**-1.6**
	375nm,1.0s							
PBKI	**Pangkalan Bun**	**10.78**	**83**	P		**Pn**	**06 40 17.8**	**+2.7**
	7µm321nm,1.1s							
KSM	**Kuching**	**10.84**	**60**	P		**Pn**	**06 40 19.7**	**+3.9**
NGJI	**Ngawi**	**10.96**	**108**	P		**Pn**	**06 40 18.2**	**+0.7**
	179nm,1.1s							
PCJI	**Pacitan**	**10.96**	**113**	P		**Pn**	**06 40 16.0**	**-1.6**
	148nm,1.3s							
STKI	**Sintang**	**11.28**	**69**	P		**Pn**	**06 40 25.6**	**+3.7**
	119nm,1.8s							
SJI	**Sawahan**	**11.36**	**109**	P		**Pn**	**06 40 22.8**	**-0.2**
	6µm185nm,0.7s							
PWJI	**Pagerwojo**	**11.48**	**111**	P		**Pn**	**06 40 23.8**	**-0.9**
	148nm,1.3s							
KRKI	**Karangkates**	**12.13**	**110**	P		**Pn**	**06 40 32.0**	**-1.6**
	279nm,0.4s							
SBUM	**Sibu**	**12.97**	**60**	P		**Pn**	**06 40 48.6**	**+3.4**
GMJI	**Gumukmas**	**13.10**	**109**	P		**Pn**	**06 40 48.2**	**+1.3**
	79nm,1.3s							
KMMI	**Kalianget**	**13.28**	**104**	P		**Pn**	**06 40 50.3**	**+0.9**
	190nm,1.2s							
JAGI	**Jajag, Banyuwa**	**13.83**	**109**	P		**Pn**	**06 40 55.1**	**-1.7**
	141nm,0.8s							
BTM	**Bintulu**	**14.10**	**59**	P		**Pn**	**06 41 03.5**	**+3.0**
KHKI	**Kahang-Kahang**	**15.18**	**107**	P		**Pn**	**06 41 12.3**	**-2.8**
	86nm,0.7s							
KBKI	**Kotabaru**	**15.20**	**88**	P		**Pn**	**06 41 16.4**	**+1.1**
	3µm133nm,1.1s							
SMKI	**Samarinda**	**16.62**	**78**	P		**Pn**	**06 41 35.7**	**+2.0**
	434nm,1.7s							
KKM	**Kota Kinabalu**	**18.24**	**57**	P		**Pn**	**06 41 54.3**	**+0.5**
KAPI	**Kappang**	**18.76**	**94**	P		**Pn**	**06 41 58.0**	**-2.1**
	784nm,0.9s,SNR=5.9							
KAPI	**Kappang**	**18.76**	**94**	*e*P		**Pn**	**06 41 58.1**	**-2.0**
	183nm,1.1s							
SPSI	**Sidrap Palu**	**18.77**	**90**	P		**Pn**	**06 41 59.5**	**-0.7**
	6µm225nm,1.0s							
TTSI	**Tana Toraja**	**18.85**	**88**	P		**Pn**	**06 42 00.8**	**-0.4**
	3µm220nm,0.8s							
SDKM	**Sandakan**	**18.86**	**59**	P		**Pn**	**06 42 02.5**	**+1.2**
PCI	**Palu**	**19.11**	**81**	P		**Pn**	**06 42 03.6**	**-0.8**
	912nm,1.5s							
BKSI	**Bulukumba**	**19.14**	**95**	P		**Pn**	**06 42 03.6**	**-1.1**
	3µm244nm,1.2s							
KDM	**Kudat**	**19.23**	**56**	P		**Pn**	**06 42 07.0**	**+1.2**
UBT	**Ubonrachathani**	**19.59**	**12**	P		**Pn**	**06 42 08.0**	**-2.0**
	312nm,0.5s							
NST	**Nakhon Sawan**	**19.61**	**358**	P		**Pn**	**06 42 08.0**	**-2.3**
	117nm,0.9s							
MYLDM	**Lahad Datu**	**19.77**	**63**	P		**Pn**	**06 42 13.5**	**+1.2**
TOLI	**Toli-Toli**	**20.48**	**76**	P		**P**	**06 42 18.9**	**+0.6**
	6µm373nm,1.1s							
BDT	**Bhumibol Dam**	**21.25**	**355**	P		**P**	**06 42 25.0**	**-1.5**
	100nm,1.0s,mb5.1							
MRSI	**Marisa**	**21.44**	**78**	P		**P**	**06 42 29.5**	**+0.8**
	3µm246nm,0.8s,mb5.6							
BBSI	**Bau Bau**	**21.58**	**95**	P		**P**	**06 42 30.2**	**0.0**
	3µm295nm,1.3s,mb5.5							
KDI	**Kendari**	**21.61**	**91**	P		**P**	**06 42 31.0**	**+0.5**
	4µm272nm,1.4s,mb5.5							
LUWI	**Luwuk**	**21.99**	**83**	P		**P**	**06 42 36.0**	**+1.4**
	9µm619nm,1.4s,mb5.8							
CM31	**Chiang Mai Arr**	**22.45**	**355**	*e*P		**P**	**06 42 39.2**	**-0.2**
	120nm,0.8s,mb5.4							
CM31					LR	LR		
	comp=Z,12µm,21.0s,MS5.3							
CMAR	**Chiang Mai Arr**	**22.45**	**355**	P		**P**	**06 42 37.7**	**-1.7**
	comp=Z,139nm,0.9s,mb5.4,baz=185,slow=8.8,SNR=70							
CMAR					LR	LR	06 52 52.6	
	comp=Z,18µm,18.0s,MS5.5,baz=186,slow=41							
CHG	**Chiang Mai**	**22.81**	**355**	P		**P**	**06 42 42.1**	**-1.0**
	comp=Z,188nm,0.9s,mb5.5							
CHTO	**Chiang Mai**	**22.81**	**355**	*e*P		**P**	**06 42 42.5**	**-0.7**
	comp=Z,213nm,1.1s,mb5.5							
CHTO					LR	LR		
	comp=Z,9µm,20.0s,MS5.2							
CHTO	**Chiang Mai**	**22.81**	**355**	*e*P		**P**	**06 42 42.5**	**-0.6**
CHTO					pmax	pmax		
	comp=Z,213nm,1.1s,mb5.5							
CHTO					MLR	MLR		
	comp=Z,9µm,20.0s,MS5.2							
KMSI	**Cibinong**	**23.46**	**79**	P		**P**	**06 42 51.0**	**+0.9**
	comp=Z,365nm,0.9s,mb5.8							
MNI	**Manado**	**24.48**	**78**	P		**P**	**06 43 00.0**	**+0.6**
	comp=Z,5µmcomp=Z,325nm,1.5s,mb5.5							
QIZ	**Qiongzhong**	**24.55**	**21**	P		**P**	**06 43 00.4**	**+0.5**
QIZ				pP			06 43 09.2	
QIZ				sP		sP	06 43 13.2	+0.7
QIZ				S		**S**	**06 47 20.1**	**+1.2**
QIZ				sS		sS	06 47 35.0	+1.5
QIZ					pmax	pmax		
	comp=Z,240nm,1.5s,mb5.5							
QIZ					pmax	pmax		
	comp=Z,2µm,7.5s							
QIZ					LR	LR		
	comp=N,6µm,20.4s							
QIZ					LR	LR		
	comp=Z,9µm,21.0s,MS5.2							
QIZ	**Qiongzhong**	**24.55**	**21**	*e*P		**P**	**06 42 59.9**	**0.0**
	comp=Z,463nm,1.4s,mb5.8							
QIZ					LR	LR		
	comp=Z,10µm,21.0s,MS5.3							
MBWA	**Marble Bar**	**24.94**	**135**	*e*P		**P**	**06 43 02.5**	**-1.0**
	comp=Z,69nm,1.3s,mb5.0							
MBWA					LR	LR		
	comp=Z,11µm,21.0s,MS5.3							
MDRS	**Chennai**	**26.69**	**310**	*e*x		x	06 43 45.2	
MDRS				*e*x		x	06 47 57.2	
LBMI	**Labuha**	**26.73**	**83**	P		**P**	**06 43 20.7**	**+0.8**
TGY	**Tagaytay City**	**26.79**	**47**	P		**P**	**06 43 19.8**	**-0.6**
	comp=Z,179nm,0.4s,mb6.0,baz=170,slow=11,SNR=5.9							
TNTI	**Ternate**	**26.82**	**80**	P		**P**	**06 43 20.0**	**-0.7**
DAV	**Davao City (W)**	**26.94**	**66**	PFAKE			06 43 30.0	+8.3
DAV					LR	LR		
	comp=Z,7µm,20.0s,MS5.2							
DAV	**Davao City (W)**	**26.94**	**66**	*e*P		**P**	**06 43 18.8**	**-2.9**
VIS	**Vishakhapatnam**	**27.76**	**322**	*e*PKP		**P**	**06 43 31.1**	**+2.1**
VIS					AMb	AMB	06 43 41.3	
	comp=Z,100nm,0.3s,mb5.9							
VIS				*i* x		x	06 48 26.8	
FITZ	**Fitzroy Crossi**	**27.90**	**122**	*i* P		**P**	**06 43 28.7**	**-1.5**
	comp=Z,92nm,1.0s,mb5.4							
FITZ	**Fitzroy Crossi**	**27.90**	**122**	*e*P		**P**	**06 43 28.7**	**-1.5**
	comp=Z,110nm,1.1s,mb5.4							
FITZ	**Fitzroy Crossi**	**27.90**	**122**	P		**P**	**06 43 28.8**	**-1.4**
	comp=Z,44nm,0.8s,mb5.1,baz=302,slow=5.1,SNR=29							
FITZ					LR	LR	06 54 48.6	
	comp=Z,4µm,20.3s,MS4.9,baz=309,slow=37							
FITZ	**Fitzroy Crossi**	**27.90**	**122**	P		**P**	**06 43 29.2**	**-1.0**
DGAR	**Diego Garcia**	**28.55**	**262**	PFAKE			06 43 50.0	+14
DGAR					LR	LR		
	comp=Z,6µm,20.0s,MS5.2							
KMI	**Kunming**	**29.05**	**3**	P		**P**	**06 43 41.1**	**+0.7**
KMI				pP		pP	06 43 51.0	+1.7
KMI				sP		sP	06 43 54.4	+1.4
KMI				PP		PP	06 44 36.2	-10
KMI				S		**S**	**06 48 29.8**	**-0.2**
KMI				sS		sS	06 48 46.1	+1.3
KMI					pmax	pmax		
	comp=Z,98nm,1.6s,mb5.3							
KMI					pmax	pmax		
	comp=Z,1µm,6.1s							
KMI					LR	LR		
	comp=N,11µm,16.5s,MS5.8							
KMI					LR	LR		
	comp=E,16µm,16.5s,MS5.8							
KMI					LR	LR		
	comp=Z,18µm,14.5s,MS5.8							
CAL	**Calcutta**	**29.17**	**335**	*e*PKP		**P**	**06 43 41.6**	**+0.1**
CAL				*e*S		**S**	**06 48 33.0**	**+1.1**
HKC	**Hong Kong Obse**	**29.21**	**26**	*i* P		**P**	**06 43 42.0**	**+0.2**
GZH	**Guangzhou**	**29.56**	**24**	P		**P**	**06 43 49.8**	**+4.9**
GZH				S		**S**	**06 48 47.1**	**+9.0**
GZH					LR	LR		
	comp=N,8µm,18.3s,MS5.8							
GZH					LR	LR		
	comp=E,18µm,18.3s,MS5.8							
GZH					LR	LR		
	comp=Z,17µm,14.3s,MS5.8							
KNA	**Kununurra**	**29.71**	**115**	P		**P**	**06 43 44.2**	**-2.2**
HYB	**Hyderabad**	**30.73**	**315**	*i* P		**P**	**06 43 54.0**	**-1.3**
SHL	**Shillong**	**30.73**	**344**	*e*PKP		**P**	**06 43 55.0**	**-0.2**
SHL				*i* x		x	06 48 55.0	
GYA	**Guiyang**	**30.83**	**10**	*i* P		**P**	**06 43 55.6**	**-0.5**
GYA				pP		pP	06 44 05.1	+0.1
GYA				PP		PP	06 44 57.2	-8.9
GYA				PcP		PcP	06 46 52.5	-0.4
GYA				S		**S**	**06 48 56.3**	**-1.6**
GYA				ScP		ScP	06 50 33.0	-0.6
GYA					pmax	pmax		
	comp=Z,100nm,1.0s,mb5.6							
GYA					pmax	pmax		
	comp=Z,780nm,5.6s							
GYA					LR	LR		
	comp=N,8µm,19.2s,MS5.9							
GYA					LR	LR		
	comp=E,23µm,18.6s,MS5.9							
GYA					LR	LR		
	comp=Z,10µm,21.0s,MS5.5							
KLBR	**Kellerberrin**	**31.62**	**152**	*e*P		**P**	**06 44 05.8**	**+2.7**
	comp=Z,39nm,1.4s,mb5.0							
KAKA	**Kakadu**	**32.28**	**107**	*e*P		**P**	**06 44 06.4**	**-2.6**
	comp=Z,103nm,0.6s,mb5.8							
KAKA				*e*		pP	06 44 15.6	-2.4
NWAO	**Narrogin (SRO)**	**32.51**	**154**	P		**P**	**06 44 11.5**	**+0.7**
	comp=Z,8.2nm,0.9s,mb4.7,baz=320,slow=11,SNR=3.7							
NWAO	**Narrogin (SRO)**	**32.51**	**154**	P		**P**	**06 44 11.5**	**+0.6**
NWAO					MLR	MLR		
	comp=Z,8µm,20.0s							
NGP	**Nagpur**	**32.99**	**320**	*e*PKP		**P**	**06 44 15.0**	**-0.2**
TPUB	**Ta-pu**	**33.28**	**34**	*e*P		**P**	**06 44 16.4**	**-1.3**
	comp=Z,183nm,1.5s,mb5.8							
ODAN	**Odare**	**33.41**	**338**	*e*P		**P**	**06 44 19.4**	**+0.6**
	comp=Z,662nm,1.0s,mb6.5							
QZH	**Quanzhou**	**33.53**	**30**	*i* P		**P**	**06 44 18.0**	**-1.8**
QZH				S		**S**	**06 49 38.0**	**-2.1**
QZH					pmax	pmax		
	comp=Z,2µm,5.5s							
QZH					LR	LR		
	comp=N,8µm,18.9s,MS5.8							
QZH					LR	LR		
	comp=E,16µm,19.4s,MS5.8							
QZH					LR	LR		
	comp=Z,10µm,21.9s,MS5.5							
TAPN	**Taplejung**	**33.74**	**338**	*e*P		**P**	**06 44 22.7**	**+1.1**
	comp=Z,1µm,1.0s,mb6.8							
RAMN	**Ramite**	**33.80**	**337**	*e*P		**P**	**06 44 23.3**	**+1.1**
SSLB	**Suanglung**	**33.84**	**34**	*e*P		**P**	**06 44 21.7**	**-0.9**
	comp=Z,21nm,0.7s,mb5.2							
KAD	**Karad**	**33.90**	**310**	*ex*		**P**	**06 44 21.4**	**-1.8**
KAD					AMb	AMB	06 44 42.4	
	comp=Z,60nm,1.1s,mb5.4							
AKL	**Akola**	**34.02**	**317**	*e*PKP		**P**	**06 44 26.3**	**+2.1**
AKL					AMb	AMB	06 44 48.2	
	comp=Z,68nm,1.4s,mb5.4							
NACB	**Ninganchiao**	**34.51**	**35**	*e*P		**P**	**06 44 27.8**	**-0.6**
	comp=Z,58nm,1.0s,mb5.5							
JIRN	**Jiri**	**34.59**	**337**	*e*P		**P**	**06 44 30.0**	**+0.9**
	comp=Z,987nm,1.1s,mb6.6							
YHNB	**Yeheng**	**34.77**	**34**	*e*P		**P**	**06 44 30.4**	**-0.2**
	comp=Z,30nm,0.8s,mb5.3							
YHNB					LR	LR		
	comp=Z,4µm,20.0s,MS5.1							
PKI	**Pulchoki**	**34.83**	**335**	*e*P		**P**	**06 44 31.5**	**+0.4**
	comp=Z,509nm,1.4s,mb6.3							
PKIN	**Phulchoki**	**34.84**	**335**	*e*P		**P**	**06 44 31.5**	**+0.3**
LSA	**Lhasa**	**34.85**	**345**	P		**P**	**06 44 32.7**	**+1.5**
LSA				S		**S**	**06 50 03.0**	**+2.6**
LSA					LR	LR		
	comp=E,5µm,24.0s							
LSA					LR	LR		
	comp=Z,23µm,22.2s,MS5.9							
LSA	**Lhasa**	**34.85**	**345**	*e*P		**P**	**06 44 31.8**	**+0.5**
	comp=Z,218nm,1.3s,mb5.9							
LSA					LR	LR		
	comp=Z,6µm,19.0s,MS5.4							
LSA	**Lhasa**	**34.85**	**345**	*e*P		**P**	**06 44 31.8**	**+0.6**
LSA					pmax	pmax		
	comp=Z,218nm,1.3s,mb5.9							
LSA					MLR	MLR		
	comp=Z,6µm,19.0s,MS5.4							
CD2	**Chengdu**	**34.87**	**4**	P		**P**	**06 44 31.2**	**-0.1**
CD2				pP		pP	06 44 40.9	+0.6
CD2				sP		sP	06 44 44.8	+0.7
CD2				PP		PP	06 45 49.0	-1.8
CD2				PcP		PcP	06 47 04.3	+0.3
CD2				S		**S**	**06 49 58.4**	**-2.2**
CD2				PcS		PcS	06 50 49.8	-0.9
CD2				ScS		ScS	06 54 47.9	-3.1
CD2					pmax	pmax		
	comp=Z,100nm,1.0s,mb5.7							
CD2					pmax	pmax		
	comp=Z,1µm,5.0s							
CD2					LR	LR		
	comp=N,19µm,16.7s,MS6.1							
CD2					LR	LR		
	comp=E,28µm,20.1s,MS6.1							
CD2					LR	LR		
	comp=Z,20µm,15.9s,MS6.0							
POO	**Poona**	**34.88**	**311**	*e*PKP		**P**	**06 44 33.1**	**+1.4**
POO					AMb	AMB	06 45 13.4	
	comp=Z,71nm,1.6s,mb5.3							
GUN	**

comp=E,3μm,21.0s
XAN LR LR
comp=Z,4μm,15.4s,MS5.3
PTH Pithoragarh 38.88 331 *e*PKP **P** **06 45 06.0 +0.4**
AJM Ajmer 39.62 321 *e*PKP **P** **06 45 13.4 +1.7**
AJM AMb AMB 06 45 24.3
comp=Z,72nm,1.6s,mb5.2
AYAN Aya Nagar 39.65 326 *e*PKP **P** **06 45 11.8 -0.2**
AYAN AMb AMB 06 45 16.1
comp=Z,36nm,0.7s,mb5.2
NJ2 Nanjing 39.73 24 *e*P **P** **06 45 11.6 -1.0**
NJ2 pP pP 06 45 20.0 -1.7
NJ2 sP sP 06 45 26.8 +1.4
NJ2 PP PP 06 46 43.4 -0.9
NJ2 S **S** **06 51 12.8 -1.8**
NJ2 pmax pmax
comp=Z,70nm,1.1s,mb5.3
NJ2 pmax pmax
comp=Z,1μm,7.3s
NJ2 LR LR
comp=N,3μm,19.6s,MS5.3
NJ2 LR LR
comp=E,3μm,21.1s,MS5.3
NJ2 LR LR
comp=Z,20μm,19.0s,MS6.0
NDI New Delhi 39.75 326 *e*PKP **P** **06 45 14.4 +1.6**
NDI AMb AMB 06 45 24.4
comp=Z,129nm,0.4s,mb6.0
SSE Sheshan 39.92 28 P **P** **06 45 13.6 -0.6**
SSE sP sP 06 45 25.5 -1.5
SSE S **S** **06 51 20.7 +3.2**
SSE sS sS 06 51 32.0 -0.5
SSE pmax pmax
comp=Z,70nm,0.8s,mb5.4
SSE pmax pmax
comp=Z,770nm,6.7s
SSE LR LR
comp=N,5μm,14.5s,MS5.7
SSE LR LR
comp=E,6μm,14.5s,MS5.7
SSE LR LR
comp=Z,6μm,15.8s,MS5.5
LZH Lanzhou 40.02 4 ⇑P **P** **06 45 15.1 +0.2**
LZH pP pP 06 45 24.5 +0.5
LZH sP sP 06 45 28.8 +1.1
LZH PP PP 06 46 52.2 +4.8
LZH S **S** **06 51 19.2 +0.5**
LZH sS sS 06 51 34.1 +0.4
LZH pmax pmax
comp=Z,630nm,1.0s,mb6.3
LZH pmax pmax
comp=Z,2μm,4.0s
LZH LR LR
comp=E,14μm,14.5s
LZH LR LR
comp=Z,14μm,15.4s,MS5.9
JOSI Joshimath 40.03 331 *e*PKP **P** **06 45 16.2 +1.1**
JOSI AMb AMB 06 45 18.4
comp=Z,560nm,0.9s,mb6.3
KHET Khetri 40.09 324 *e*PKP **P** **06 45 16.0 +0.3**
KLP Kalpa 41.48 330 *e*S **S** **06 51 42.8 +2.2**
SMLA Simla 41.70 329 *i* P **P** **06 45 27.4 -1.4**
SMLA AMb AMB 06 45 29.2
comp=Z,17nm,0.1s,mb5.6
SMLA *i* x x 06 51 37.6
BHK Bhakra 42.32 328 *ex* **P** **06 45 29.4 -4.5**
COEN Coen 42.77 106 *e*P **P** **06 45 36.0 -1.9**
comp=Z,548nm,1.3s,mb6.1
COEN *e* pP 06 45 45.2 -1.8
COEN Coen 42.77 106 P **P** **06 45 33.7 -4.2**
TIA Tai'an 42.81 19 P **P** **06 45 35.9 -2.0**
TIA S **S** **06 52 12.1 +12**
TIA LR LR
comp=N,11μm,15.7s,MS6.0
TIA LR LR
comp=E,11μm,14.7s,MS6.0
TIY Taiyuan 42.90 13 P **P** **06 45 37.8 -0.7**
TIY pP pP 06 45 46.8 -0.9
TIY sP sP 06 45 52.1 +0.7
TIY pmax pmax
comp=Z,1μm,6.9s
TIY LR LR
comp=N,6μm,14.2s,MS5.8
TIY LR LR
comp=E,5μm,12.1s,MS5.8
TIY LR LR
comp=Z,7μm,19.3s
GTA Gaotai 43.26 359 ⇑P **P** **06 45 41.4 0.0**
GTA pP pP 06 45 53.0 +2.4
GTA sP sP 06 45 56.8 +2.6
GTA PP PP 06 47 25.7 +3.3
GTA S **S** **06 52 04.5 -2.1**
GTA pmax pmax
comp=Z,130nm,1.3s,mb5.5
GTA pmax pmax
comp=Z,1μm,6.3s
GTA LR LR
comp=N,4μm,18.9s,MS5.8
GTA LR LR
comp=E,10μm,14.7s,MS5.8
GTA LR LR
comp=Z,4μm,17.7s,MS5.4
BTO Baotou 45.21 10 *e*P **P** **06 45 56.0 -1.0**
MSEY Mahe Island 45.35 267 *e*P **P** **06 45 59.2 +0.6**
comp=Z,76nm,1.6s,mb5.3
MSEY LR LR
comp=Z,4μm,19.0s,MS5.4
MSEY Mahe Island 45.35 267 *e*P **P** **06 45 59.2 +0.6**
MSEY pmax pmax
comp=Z,76nm,1.6s,mb5.3
MSEY MLR MLR
comp=Z,4μm,19.0s,MS5.4
HHC Hu-ho-hao-te 45.73 11 *e*P **P** **06 46 01.5 +0.4**
HHC pP pP 06 46 09.1 -1.2
HHC sP sP 06 46 12.4 -1.6
HHC PcP PcP 06 47 38.5 -0.1
HHC PP PP 06 47 48.3 -0.4
HHC S **S** **06 52 42.5 +0.1**
HHC ScS ScS 06 55 51.8 -3.3
HHC SS SS 06 55 58.1 -9.2
HHC pmax pmax
comp=Z,150nm,1.2s,mb5.8
HHC pmax pmax
comp=Z,1μm,3.6s
HHC LR LR
comp=N,10μm,13.5s,MS6.0
HHC LR LR
comp=E,3μm,11.2s,MS6.0
HHC LR LR
comp=Z,10μm,13.1s,MS5.9
BJT Baijiatuau 46.03 16 *e*P **P** **06 46 03.0 -0.5**
comp=Z,153nm,0.9s,mb5.9
BJT *e* pP 06 46 12.0 -0.7
BJT LR LR
comp=Z,8μm,20.0s,MS5.7
BJT Baijiatuau 46.03 16 *e*P **P** **06 46 03.0 -0.5**
BJT *e* pP 06 46 12.0 -0.7
BJT pmax pmax
comp=Z,153nm,0.9s
BJT MLR MLR
comp=Z,8μm,20.0s
BJI Beijing 46.05 16 P **P** **06 46 02.8 -0.9**
BJI pP pP 06 46 12.3 -0.6
BJI sP sP 06 46 17.8 +1.2
BJI PP PP 06 47 53.5 +1.4
BJI S **S** **06 52 45.4 -1.7**
BJI sS sS 06 53 03.5 +1.2
BJI pmax pmax
comp=Z,160nm,1.0s,mb5.9
BJI pmax pmax
comp=Z,1μm,6.8s
BJI LR LR
comp=N,4μm,20.8s,MS5.9
BJI LR LR
comp=E,13μm,20.1s,MS5.9
BJI LR LR
comp=Z,6μm,18.5s,MS5.5
PMG Port Moresby 46.16 99 *e*P **P** **06 46 05.1 +0.1**
comp=Z,35nm,0.8s,mb5.3
PMG LR LR
comp=Z,5μm,22.0s,MS5.4
PMG Port Moresby 46.16 99 *e*P **P** **06 46 05.1 +0.1**
PMG pmax pmax
comp=Z,35nm,0.8s
PMG MLR MLR
comp=Z,5μm,22.0s
PMG Port Moresby 46.16 99 P **P** **06 46 58.8 -6.2**
DL2 Dalian 46.82 22 ⇑*i*P **P** **06 46 08.8 -0.9**
DL2 PP PP 06 48 01.3 +1.1
DL2 S **S** **06 52 57.2 -1.0**
DL2 SS SS 06 56 16.7 -8.5
DL2 pmax pmax
comp=Z,40nm,1.4s,mb5.2
DL2 pmax pmax
comp=Z,560nm,6.2s
DL2 LR LR
comp=N,3μm,16.8s,MS5.5
DL2 LR LR
comp=E,4μm,17.0s,MS5.5
DL2 LR LR
comp=Z,4μm,18.5s,MS5.4
CTA Charters Tower 46.88 114 *e*P **P** **06 46 10.2 -0.4**
comp=Z,46nm,0.9s,mb5.4
CTAO Charters Tower 46.88 114 *e*P **P** **06 46 10.4 -0.2**
comp=Z,97nm,1.1s,mb5.7
CTAO LR LR
comp=Z,3μm,21.0s,MS5.2
CTAO Charters Tower 46.88 114 *e*P **P** **06 46 10.4 -0.2**
CTAO pmax pmax
comp=Z,97nm,1.1s,mb5.7
CTAO MLR MLR
comp=Z,3μm,21.0s,MS5.2
RER Riviere de l'E 47.07 245 PFAKE 06 46 30.0 +18
RER LR LR
comp=Z,2μm,20.0s,MS5.2
STKA Stephens Creek 47.09 131 *e*P **P** **06 46 11.2 -0.8**
comp=Z,23nm,0.6s,mb5.3
STKA Stephens Creek 47.09 131 *e*P **P** **06 46 10.9 -1.1**
comp=Z,6.9nm,0.8s,mb4.6
STKA *e* pP 06 46 20.2 -1.1
STKA Stephens Creek 47.09 131 P **P** **06 46 10.8 -1.2**
comp=Z,14nm,0.7s,mb5.0,baz=302,slow=7.3,SNR=23
STKA LR LR 07 07 25.1
comp=Z,7μm,21.5s,MS5.6,baz=298,slow=38
INCN Inchon 47.73 28 PFAKE 06 46 30.0 +13
INCN LR LR
comp=Z,4μm,19.0s,MS5.4
KSRS Korea Array 48.31 29 P **P** **06 46 20.1 -1.3**
comp=Z,75nm,1.0s,mb5.7,baz=221,slow=7.7,SNR=85
KSRS LR LR 07 08 10.5
comp=Z,2μm,19.0s,MS5.1,baz=112,slow=38
KBL Kabul 48.75 325 *e*P **P** **06 46 26.0 +1.2**
comp=Z,22nm,0.7s,mb5.3
KBL Kabul 48.75 325 *e*P **P** **06 46 26.0 +1.2**
KBL pmax pmax
comp=Z,22nm,0.7s,mb5.3
KSH Kashi 49.08 334 P **P** **06 46 25.1 -2.2**
KSH *e*pP pP 06 46 35.1 -1.4
KSH *e*sP sP 06 46 39.0 -1.2
KSH *e*PP PP 06 48 15.0 -6.2
KSH *e*S **S** **06 53 21.7 -8.6**
KSH *e*ScS ScS 06 56 14.2 -3.1
KSH pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
KSH pmax pmax
comp=Z,730nm,3.9s
KSH LR LR
comp=N,4μm,20.3s,MS5.6
KSH LR LR
comp=E,5μm,20.1s,MS5.6
KSH LR LR
comp=Z,5μm,22.3s,MS5.5
WMQ Urumqi 49.13 347 P **P** **06 46 28.4 +0.9**
WMQ pP pP 06 46 38.3 +1.5
WMQ sP sP 06 46 42.2 +1.8
WMQ PcP PcP 06 47 52.4 +1.7
WMQ PP PP 06 48 22.0 +0.5
WMQ ScP ScP 06 51 43.5 -0.4
WMQ S **S** **06 53 29.4 -1.3**
WMQ sS sS 06 53 46.0 0.0
WMQ ScS ScS 06 56 15.0 -2.4
WMQ pmax pmax
comp=Z,260nm,1.0s,mb6.2
WMQ pmax pmax
comp=Z,2μm,4.3s
WMQ LR LR
comp=N,3μm,22.5s,MS5.5
WMQ LR LR
comp=E,4μm,20.3s,MS5.5
WMQ LR LR
comp=Z,3μm,26.0s
SNY Shenyang 50.09 22 ⇑P **P** **06 46 32.6 -2.3**
SNY PP PP 06 48 31.7 +1.4
SNY S **S** **06 53 44.8 +0.5**
SNY pmax pmax
comp=Z,62nm,1.3s,mb5.5
SNY pmax pmax
comp=Z,840nm,12.0s
SNY LR LR
comp=E,6μm,15.6s
SNY LR LR
comp=Z,6μm,16.4s,MS5.7
CBIJ Chichi jima 50.43 50 LR LR 07 06 15.1
comp=Z,1μm,21.4s,MS5.0,baz=68,slow=34
ULHL Ulahol 51.26 337 P **P** **06 46 43.8 +0.1**
SNR=60
KZA Kyzart 51.52 336 P **P** **06 46 49.0 +3.3**
SNR=9.8
SONM Songino Array 51.89 5 P **P** **06 46 48.6 +0.3**
comp=Z,136nm,1.0s,mb5.8,baz=186,slow=8.0,SNR=195
SONM PcP PcP 06 47 58.7 -2.0
comp=Z,28nm,0.8s,baz=186,slow=3.9,SNR=5.6
UCH Uchtor 51.95 335 P **P** **06 46 49.2 +0.4**
SNR=43
UCH Uchtor 51.95 335 *e*P **P** **06 46 48.9 0.0**
comp=Z,27nm,0.6s,mb5.3
UCH LR LR
comp=Z,5μm,21.0s,MS5.5
ULN Ulaanbaatar 51.97 5 *e*P **P** **06 46 49.1 +0.1**
comp=Z,304nm,1.3s,mb6.1
ULN *e* pP 06 46 58.6 +0.4
ULN LR LR
comp=Z,4μm,20.0s,MS5.4
ULN Ulaanbaatar 51.97 5 *e*P **P** **06 46 49.1 +0.2**
ULN *e* pP 06 46 58.6 +0.4
ULN pmax pmax
comp=Z,304nm,1.3s,mb6.1
ULN MLR MLR
comp=Z,4μm,20.0s,MS5.4
TKM2 Tokmak 2 52.08 336 P **P** **06 46 49.4 -0.4**
SNR=81
TKM2 Tokmak 2 52.08 336 *e*P **P** **06 46 49.7 -0.2**
comp=Z,65nm,0.6s,mb5.7
TKM2 LR LR
comp=Z,5μm,20.0s,MS5.6
TKM2 Tokmak 2 52.08 336 *e*P **P** **06 46 49.7 -0.1**
TKM2 pmax pmax
comp=Z,65nm,0.6s,mb5.7
TKM2 MLR MLR
comp=Z,5μm,20.0s,MS5.6
KBK Karagaybulak 52.12 336 P **P** **06 46 52.7 +2.5**
SNR=16
AML Almayashu 52.22 334 P **P** **06 46 51.0 +0.2**
SNR=37
AML Almayashu 52.22 334 *e*P **P** **06 46 50.7 -0.2**
comp=Z,232nm,1.5s,mb5.9
AML LR LR
comp=Z,3μm,21.0s,MS5.2
AAK Ala-Archa 52.29 335 P **P** **06 46 52.2 +0.8**
comp=Z,209nm,1.2s,mb5.9,SNR=17
AAK Ala-Archa 52.29 335 P **P** **06 46 53.7 +2.3**
SNR=6.5
AAK Ala-Archa 52.29 335 *e*P **P** **06 46 52.0 +0.6**
comp=Z,48nm,1.1s,mb5.3
AAK LR LR
comp=Z,6μm,20.0s,MS5.7
AAK Ala-Archa 52.29 335 P **P** **06 46 52.1 +0.7**
comp=Z,6.3nm,0.6s,mb4.7,baz=207,slow=4.1,SNR=25
AAK LR LR 07 11 50.5
comp=Z,7μm,20.8s,MS5.7,baz=143,slow=39
AAK Ala-Archa 52.29 335 *e*P **P** **06 46 52.0 +0.6**
AAK pmax pmax
comp=Z,48nm,1.1s,mb5.3
AAK MLR MLR
comp=Z,6μm,20.0s,MS5.7
CHMS Chumysh 52.49 336 P **P** **06 46 52.4 -0.4**
SNR=17
CN2 Changchun 52.49 22 *e*P **P** **06 46 51.1 -1.7**
CN2 *e*pP pP 06 47 01.0 -1.2
CN2 *e*sP sP 06 47 05.0 -0.8
CN2 *e*S **S** **06 54 24.7 +7.3**
CN2 pmax pmax
comp=Z,30nm,1.0s,mb5.2
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,6μm,18.0s,MS5.7
CN2 LR LR
comp=E,3μm,18.0s,MS5.7
EIDS Eidsvold 52.52 119 *e*P **P** **06 46 53.4 -0.1**
comp=E,77nm,1.3s,mb5.5
TOO Toolangi 52.58 135 *e*P **P** **06 47 02.9 +9.2**
EKS2 Erkin-Say 52.61 335 P **P** **06 46 54.1 +0.3**
SNR=61
EKS2 Erkin-Say 52.61 335 *e*P **P** **06 46 53.5 -0.3**
comp=E,45nm,0.6s,mb5.6
EKS2 LR LR
comp=Z,4μm,21.0s,MS5.4
USP Ospenovka 52.81 336 P **P** **06 46 54.9 -0.4**
SNR=42
MK31 Makanchi Array 53.25 344 *e*P **P** **06 46 57.8 -0.6**
MK31 *e* pP 06 47 07.9 +0.1
MK31 Makanchi Array 53.25 344 *ce*P **P** **06 46 57.7 -0.7**
MK31 pmax pmax
comp=Z,174nm,1.0s,mb5.9
MKAR Makanchi Array 53.25 344 P **P** **06 46 57.8 -0.6**
comp=Z,87nm,0.9s,mb5.7,baz=150,slow=7.0,SNR=164
MKAR LR LR 07 14 10.9
comp=Z,2μm,18.1s,MS5.3,baz=354,slow=41
MAJO Matsushiro 53.28 37 *e*P **P** **06 46 56.4 -2.5**
comp=Z,56nm,0.9s,mb5.5
MAJO LR LR
comp=Z,2μm,20.0s,MS5.2
MAJO Matsushiro 53.28 37 *e*P **P** **06 46 56.4 -2.5**
MAJO pmax pmax
comp=Z,56nm,0.9s,mb5.5
MAJO MLR MLR
comp=Z,2μm,20.0s,MS5.2
MAT Matsushiro 53.28 37 P **P** **06 46 56.4 -2.5**
MAT S **S** **06 54 26.0 -2.4**
MJAR Matsushiro Arr 53.28 37 P **P** **06 46 56.5 -2.3**
comp=Z,59nm,1.1s,mb5.4,baz=218,slow=6.8,SNR=53
MJAR ScP ScP 06 52 03.0 +1.0
comp=Z,0.7nm,0.4s,baz=190,slow=4.7,SNR=4.2
MJAR LR LR 07 11 28.0
comp=Z,1μm,19.7s,MS5.0,baz=230,slow=38
CAN Canberra 54.14 131 PFAKE 06 47 20.0 +15
CAN LR LR
comp=Z,7μm,20.0s,MS5.7
ZAK Zakamensk 54.25 2 *e*P **P** **06 47 04.9 -0.8**
ZAK *e* pP 06 47 14.8 -0.2
ZAK *e* 06 48 08.5
ZAK pmax pmax
comp=Z,23nm,1.0s,mb5.1
KK31 Karatay Array 54.40 333 *ce*P **P** **06 47 05.2 -1.7**
KK31 pmax pmax
comp=Z,14nm,0.5s,mb5.2
CNB Canberra Magne 54.41 131 *e*P sP 06 47 23.1 +2.9
ARMA Armidale 54.45 125 *e*P **P** **06 47 09.3 +1.8**
ARMA Armidale 54.45 125 *e*P **P** **06 47 09.5 +2.0**
comp=Z,192nm,1.9s,mb5.7
ABPO Ambohimpanom 54.48 250 *e*P **P** **06 47 09.2 +1.3**
comp=Z,28nm,1.1s,mb5.1
ABPO *e* pP 06 47 17.2 -0.1
ABPO LR LR
comp=Z,3μm,21.0s,MS5.3
ABPO Ambohimpanom 54.48 250 *e*P **P** **06 47 09.2 +1.3**
ABPO *e* pP 06 47 17.2 -0.1
ABPO pmax pmax
comp=Z,28nm,1.1s,mb5.1
ABPO MLR MLR
comp=Z,3μm,21.0s,MS5.3
VLA Vladivostok 54.64 27 *ce*P **P** **06 47 08.0 -0.6**
VLA pmax pmax
comp=Z,216nm,1.7s,mb5.9
MDJ Mudanjiang 54.82 25 P **P** **06 47 09.0 -0.9**
MDJ pP pP 06 47 17.0 -2.3
MDJ sP sP 06 47 20.7 -2.2
MDJ PP PP 06 49 12.6 -0.4
MDJ ScP ScP 06 52 07.8 -0.7
MDJ PcS PcS 06 52 11.5 -0.1
MDJ S **S** **06 54 48.0 -0.9**
MDJ pmax pmax
comp=Z,60nm,1.1s,mb5.5
MDJ pmax pmax
comp=Z,810nm,7.2s
MDJ LR LR
comp=N,3μm,21.2s,MS5.8
MDJ LR LR
comp=E,7μm,17.9s,MS5.8
MDJ LR LR
comp=Z,8μm,13.9s,MS6.0
MDJ Mudanjiang 54.82 25 *e*P **P** **06 47 09.8 -0.1**
comp=Z,79nm,1.1s,mb5.7
MDJ LR LR
comp=Z,6μm,20.0s,MS5.7
MOY Mondy 55.50 0 *e*P **P** **06 47 16.0 +1.3**
HIA Hailar 55.55 15 *e*P **P** **06 47 14.5 -0.7**
comp=Z,110nm,1.4s,mb5.7
HIA *e* pP 06 47 23.1 -1.4
HIA LR LR
comp=Z,7μm,19.0s,MS5.8
HIA Hailar 55.55 15 *e*P **P** **06 47 14.5 -0.6**
HIA *e* pP 06 47 23.1 -1.4
HIA pmax pmax
comp=Z,110nm,1.4s
HIA MLR MLR
comp=Z,7μm,19.0s
TLY Talaya 55.56 2 P **P** **06 47 15.5 +0.4**
comp=Z,582nm,1.2s,mb6.5,SNR=36
TLY Talaya 55.56 2 *e*P **P** **06 47 15.3 +0.2**
comp=Z,114nm,1.0s,mb5.9
TLY *e* pP 06 47 24.6 +0.1
TLY LR LR
comp=Z,3μm,21.0s,MS5.3
TLY Talaya 55.56 2 *c i*P **P** **06 47 15.2 +0.1**
TLY *e*S **S** **06 55 00.0 +1.4**
TLY *e*PS 06 55 16.7
TLY *e* 06 57 02.4
TLY pmax pmax
comp=Z,146nm,1.1s,mb5.9
TLY MLR MLR
comp=Z,9μm,16.0s,MS6.0
IRK Irkutsk 56.15 2 *e*P **P** **06 47 18.9 -0.4**
IRK *e* pP 06 47 27.1 -1.6
IRK pmax pmax
comp=Z,185nm,2.3s,mb5.7
CIT Chita 56.88 9 *e*P **P** **06 47 24.7 +0.2**
CIT *e* pP 06 47 33.5 -0.4
CIT *e* 06 47 42.0
CIT *e* 06 48 27.8
ABKT Ailbek 57.62 320 P **P** **06 47 29.8 -0.3**
comp=Z,251nm,1.1s,mb6.2,SNR=8.8
VAN Vannovskaya 57.64 320 ⇑*i*P **P** **06 47 28.2 -2.0**
VAN *e*S **S** **06 55 18.3 -8.4**
KURK Kurchatov 57.83 343 P **P** **06 47 30.1 -1.2**
comp=Z,915nm,1.0s,mb6.8
KURK Kurchatov 57.83 343 *e*P **P** **06 47 30.5 -0.8**
comp=Z,207nm,1.1s,mb6.1
KURK *e* pP 06 47 40.2 -0.5
KURK LR LR
comp=Z,6μm,19.0s,MS5.7
KURK Kurchatov 57.83 343 *c i*P **P** **06 47 30.4 -0.9**
KURK pmax pmax
comp=Z,196nm,1.0s,mb6.1
HNR Honiara 58.77 99 PFAKE 06 47 50.0 +11
HNR LR LR
comp=Z,2μm,21.0s,MS5.2
ZAA0 Zalesovo Array 59.35 349 *e*P **P** **06 47 40.8 -1.0**
ZAA0 *e* pP 06 47 50.5 -0.7
ZALV Zalesovo Beam 59.35 349 P **P** **06 47 40.8 -0.9**
comp=Z,170nm,0.9s,mb6.1,baz=174,slow=5.6,SNR=129
ZALV LR LR 07 16 38.4
comp=Z,3μm,19.8s,MS5.3,baz=165,slow=40
KLR Kul'dur 59.42 23 *e*P **P** **06 47 35.8 -6.6**
KLR *e* pP 06 47 46.0 -5.8
KLR *e*S **S** **06 55 42.0 -7.4**
KLR *e* 06 57 25.5
KLR pmax pmax
comp=E,140nm,2.0s
KLR pmax pmax
comp=Z,250nm,2.0s,mb5.9
KLR MLR MLR
comp=Z,6μm,15.0s,MS5.8
ERM Erimo 59.74 35 *e*P **P** **06 47 44.5 -0.2**
comp=Z,47nm,1.1s,mb5.4

ERM LR LR
comp=Z,2µm,19.0s,MS5.2
ERM Erimo 59.74 35 *de*P **P 06 47 44.5 -0.2**
ERM pmax pmax
comp=Z,30nm,1.2s,mb5.2
HABR Khabarovsk 60.17 25 *e*P **P 06 47 45.0 -2.6**
HABR *e**PP pP 06 47 54.7 -2.3
HABR 06 48 29.5
HABR S **S 06 55 57.7 -1.4**
HABR *e**SS sS 06 56 14.1 -0.6
HABR *e* 06 57 32.4
HABR *e*SS SS 06 59 56.4 -0.4
HABR pmax pmax
comp=Z,217nm,2.3s,mb5.8
HABR pmax pmax
comp=N,89nm,2.3s
HABR pmax pmax
comp=E,158nm,3.1s
HABR MLR MLR
comp=Z,5µm,19.0s,MS5.7
NVS Novosibirsk 60.50 348⇑ *i*P **P 06 47 48.2 -1.5**
NVS *e* 06 50 03.7
NVS *i* S **S 06 56 02.8 -0.3**
NVS pmax pmax
comp=N,192nm,1.6s
NVS pmax pmax
comp=Z,408nm,1.6s,mb6.3
NVS pmax pmax
comp=E,150nm,1.5s
NVS pmax pmax
comp=E,45nm,1.9s
NVS pmax pmax
comp=Z,80nm,1.9s,mb5.5
NVS pmax pmax
comp=N,64nm,2.3s
NVS smax
comp=N,116nm,2.2s
NVS smax
comp=E,138nm,2.0s
KBD Kabd 60.81 307 *e*P **P 06 47 51.3 -1.0**
KBD AMb AMB 06 48 04.0
comp=Z,49nm,1.2s,mb5.5
RDF Al-Radifah 60.82 306 *e*P **P 06 47 51.8 -0.7**
RDF AMb AMB 06 48 05.4
comp=Z,92nm,1.5s,mb5.7
UMR Umm Al-Rimmam 60.94 307 *e*P **P 06 47 52.4 -0.8**
NAY Al-Naaiem 61.20 306 *e*P **P 06 47 54.2 -0.8**
NAY AMb AMB 06 48 06.3
comp=Z,35nm,1.3s,mb5.3
MIB Mutribah 61.34 307 *e*P **P 06 47 54.4 -1.5**
MIB AMb AMB 06 48 07.5
comp=Z,94nm,1.4s,mb5.7
VOSK Vostochnaya 61.97 340 P **P 06 47 57.9 -1.8**
VOSK pmax pmax
comp=Z,119nm,1.2s,mb5.9
BVA0 Borovoye Array 62.43 340 *i* P **P 06 48 01.0 -1.7**
BVA0 pmax pmax
comp=Z,17nm,1.3s,mb5.0
BVAR Borovoye Array 62.43 340 P **P 06 48 01.2 -1.5**
comp=Z,21nm,0.8s,mb5.3,baz=148,slow=8.1,SNR=56
CASY Casey 62.48 176 *e*P **P 06 48 03.0 +0.1**
comp=Z,17nm,1.0s,mb5.1
CASY LR LR
comp=Z,5µm,19.0s,MS5.7
BRVK Borovoye 62.49 340 *ce*P **P 06 48 01.4 -1.7**
BRVK pmax pmax
comp=Z,75nm,1.2s,mb5.7
YUK Yuzh-Kuril'sk 62.55 35 *c i*P **P 06 48 02.6 -1.1**
YUK *i* S **S 06 56 27.7 -1.8**
YUK *i* *SS sS 06 56 43.4 -1.7
YUK *i* 06 57 53.7
YUK *i* SS SS 07 00 30.9 -3.3
YUK pmax pmax
comp=N,400nm,2.1s
YUK pmax pmax
comp=E,300nm,2.1s
YUK pmax pmax
comp=Z,500nm,2.1s,mb6.3
YSS Yuzh-Sakhalins 62.72 31 *e*P **P 06 48 03.6 -1.2**
comp=Z,157nm,1.1s,mb6.0
YSS *e* pP 06 48 12.9 -1.4
YSS LR LR
comp=Z,714nm,19.0s,MS4.9
YSS Yuzh-Sakhalins 62.72 31⇑ *i*P **P 06 48 03.0 -1.8**
YSS *e**SP sP 06 48 12.2 -5.7
YSS *e* 06 50 28.0
YSS *e*S **S 06 56 30.0 -1.5**
YSS *e*PS 06 56 44.0
YSS pmax pmax
comp=Z,130nm,1.0s,mb6.0
YSS MLR MLR
comp=E,2µm,18.0s
YSS MLR MLR
comp=Z,2µm,18.0s,MS5.3
ZRNK Zerenda 62.85 339 *i* P **P 06 48 03.7 -1.9**
ZRNK pmax pmax
comp=Z,93nm,1.1s,mb5.8
KMBO Kilima Mbogo 63.69 271 *e*P **P 06 48 14.9 +2.9**
comp=Z,22nm,1.3s,mb5.0
KMBO *e* pP 06 48 21.9 +0.5
KMBO LR LR
comp=Z,2µm,19.0s,MS5.4
KMBO Kilima Mbogo 63.69 271 P **P 06 48 12.2 +0.2**
comp=Z,2.5nm,0.8s,mb4.3,baz=360,slow=24,SNR=3.9
KMBO LR LR 07 14 29.9
comp=Z,3µm,18.9s,MS5.4,baz=90,slow=35
KMBO Kilima Mbogo 63.69 271 *e*P **P 06 48 14.9 +2.9**
KMBO *e* pP 06 48 22.0 +0.5
KMBO pmax pmax
comp=Z,22nm,1.3s
KMBO MLR MLR
comp=Z,2µm,19.0s
CLNS Chul'man 63.74 14 *e*P **P 06 48 10.2 -1.1**
CLNS Chul'man 63.74 14 *e*P **P 06 48 10.1 -1.2**
CLNS *e* 06 48 43.8
CLNS *e* 06 50 32.2
CLNS *e*PPP 06 52 03.7
CLNS *e*S **S 06 56 47.7 +3.9**
CLNS pmax pmax
comp=Z,52nm,1.0s,mb5.5
CLNS pmax pmax
comp=N,34nm,1.2s
CLNS pmax pmax
comp=E,20nm,1.2s
CLNS pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
CLNS pmax pmax
comp=E,14nm,1.5s
CLNS pmax pmax
comp=N,11nm,1.4s
CLNS smax
comp=N,449nm,13.8s
CLNS smax
comp=E,412nm,16.9s
CLNS MLR MLR
comp=N,3µm,18.0s,MS5.5
CLNS MLR MLR
comp=Z,2µm,20.0s,MS5.3
CLNS MLR MLR
comp=E,1µm,16.0s,MS5.5
AB31 Akbulak array 63.89 331⇑ *e*P **P 06 48 10.9 -1.6**
AB31 Akbulak array 63.89 331 *ce*P **P 06 48 10.8 -1.7**
AB31 pmax pmax
comp=Z,100nm,0.8s,mb5.9
ABKAR Akbulak array 63.89 331 *e*P **P 06 48 10.9 -1.6**
comp=Z,147nm,1.0s,mb6.0
BHD Baghdad 65.04 310 *i* x x 06 48 18.9
BHD *i* x x 06 48 50.0
BHD *i* x x 06 56 59.7
BHD *i* x x 06 57 13.9
AKTK Aktyubinsk 65.60 331 P **P 06 48 22.3 -1.4**
AKTO Aktyubinsk 65.60 331 P **P 06 48 22.3 -1.4**
comp=Z,14nm,1.1s,mb4.9,baz=128,slow=6.7,SNR=42
DZM Mont Dzumac 65.79 112 *e*P **P 06 48 26.6 +1.1**
comp=Z,62nm,1.4s,mb5.4
DZM *e*S S 06 57 05.3 -5.1
comp=Z,3µm,26.6s
DZM *e*LR LR 07 08 08.3
comp=Z,6µm,24.1s
MAK Makhachkala 67.14 320 *e*P **P 06 48 32.2 -1.5**
MAK Makhachkala 67.14 320 *e*P **P 06 48 30.1 -3.6**
MAK *e* 06 48 57.9
MAK *e* 06 50 58.1
MAK *e*S S 06 57 24.8 -1.3
MAK pmax pmax
comp=Z,205nm,1.5s,mb5.9
GNI Garni 67.66 316 *ce*P **P 06 48 35.0 -2.0**
GNI pmax pmax
comp=Z,37nm,1.7s
DGRG David-gareji 67.82 318 P **P 06 48 36.8 -1.2**
DGRG S S 06 57 36.4 +2.2
DRV Dumont d'Urvil 68.10 164 S S 06 57 43.0 +6.2
DRV SS SS 07 02 07.0 +7.4
MTA Mtatsminda 68.32 318 P **P 06 48 42.5 +1.3**
MTA S S 06 57 39.4 -0.8
TBLG Delisi 68.37 318 P **P 06 48 43.2 +1.7**
TBLG Delisi 68.37 318 P **P 06 48 43.2 +1.7**
MAW Mawson 68.55 195 *e*P **P 06 48 43.2 +1.1**
comp=Z,6.3nm,0.9s,mb4.5
MAW Mawson 68.55 195 *e*P **P 06 48 42.4 +0.3**
comp=Z,1.9nm,0.9s
MAW LR LR
comp=Z,7µm,22.0s
MAW Mawson 68.55 195 P **P 06 48 42.0 -0.1**
comp=Z,12nm,1.1s,mb4.7,baz=23,slow=7.7,SNR=12
MAW LR LR 07 12 23.1
comp=Z,4µm,20.6s,MS5.6,baz=36,slow=30
MAW PKP2ab 07 16 57.2
comp=Z,3.8nm,0.9s,baz=233,slow=5.3,SNR=6.3
WAKE Wake Island 68.61 68 PFAKE
WAKE LR LR 06 48 50.0 +6.6
comp=Z,731nm,21.0s,MS4.9
GOR Gori 68.90 318 P **P 06 48 43.2 -1.6**
SVE Sverdlovsk 68.93 338‖ *e*P **P 06 48 44.2 -0.4**
SVE *e* 06 51 24.3
SVE *e*S S 06 57 46.6 -0.3
SVE *e* 06 58 36.8
SVE *e*SS SS 07 02 10.5 -2.4
SVE pmax pmax
comp=Z,252nm,1.2s,mb6.0
SVE MLR MLR
comp=Z,6µm,21.0s,MS5.8
ZEI Tsey 69.39 319 *e*P **P 06 48 47.1 -0.7**
ZEI *e* 06 49 09.4
ZEI *e* 06 51 19.3
ZEI *e*S S 06 57 53.8 +0.9
ZEI *e* 06 58 46.6
ZEI pmax pmax
comp=Z,40nm,1.0s,mb5.3
ARU Arti 69.46 336 *e*P **P 06 48 46.5 -1.3**
comp=Z,225nm,1.4s,mb5.9
ARU *e* pP 06 48 56.8 -0.7
ARU LR LR
comp=Z,3µm,19.0s,MS5.5
ARU Arti 69.46 336 *c i*P **P 06 48 46.8 -1.1**
ARU *e**PP pP 06 48 56.4 -1.1
ARU *e* 06 49 06.2
ARU *e*PPP 06 53 02.2
ARU S S 06 57 52.9 -0.2
ARU 06 58 40.0
ARU SS SS 07 02 25.5 +4.5
ARU pmax pmax
comp=Z,128nm,1.7s,mb5.6
ARU MLR MLR
comp=Z,4µm,17.0s,MS5.7
ARU Arti 69.46 336 P **P 06 48 46.3 -1.6**
comp=Z,537nm,1.4s,mb6.3,SNR=10
YAK Yakutsk 69.48 14 *e*P **P 06 48 46.9 -1.0**
comp=Z,235nm,1.1s,mb6.0
YAK LR LR
comp=Z,6µm,19.0s,MS5.9
YAK Yakutsk 69.48 14 *e*P **P 06 48 45.8 -2.1**
YAK *e**PP pP 06 48 55.3 -2.2
YAK *e* 06 49 09.2
YAK *e* 06 51 18.4
YAK *e*PPP 06 53 03.5
YAK *e*S S 06 57 48.0 -5.2
YAK *e* 06 58 42.8
YAK pmax pmax
comp=Z,165nm,1.0s,mb5.9
YAK pmax pmax
comp=E,38nm,1.2s
YAK pmax pmax
comp=N,65nm,1.2s
YAK pmax pmax
comp=N,58nm,2.0s
YAK pmax pmax
comp=E,99nm,3.8s
YAK pmax pmax
comp=Z,211nm,3.9s
YAK smax
comp=E,187nm,4.1s
YAK smax
comp=N,338nm,4.5s
YAK MLR MLR
comp=N,6µm,20.0s,MS5.9
YAK MLR MLR
comp=Z,9µm,17.0s,MS6.1
YAK MLR MLR
comp=E,4µm,19.0s,MS5.9
ONI Oni 69.61 318 P **P 06 48 49.3 +0.1**
MBAR Mbarara 70.23 271 PFAKE 06 49 10.0 +16
MBAR LR LR
comp=Z,826nm,21.0s,MS5.0
KIV Kislovodsk 70.71 319 P **P 06 48 57.1 +1.2**
comp=Z,292nm,1.0s,mb6.2,SNR=5.0
KIV Kislovodsk 70.71 319 *e*P **P 06 48 57.6 +1.8**
comp=Z,89nm,1.1s,mb5.6
KIV *e* pP 06 49 05.4 0.0
KIV LR LR
comp=Z,1µm,21.0s,MS5.2
KIV Kislovodsk 70.71 319 *c i*P **P 06 48 57.0 +1.1**
KIV *e* pP 06 49 05.3 -0.2
KIV *e* 06 49 14.9
KIV *e* 06 51 30.3
KIV *e*S S 06 58 10.0 +1.7
KIV pmax pmax
comp=Z,70nm,1.7s,mb5.3
KIV MLR MLR
comp=Z,2µm,23.0s,MS5.2
MALT Malatya 71.42 313 *e*P **P 06 49 00.8 +0.5**
comp=Z,50nm,1.4s,mb5.3
MALT LR LR
comp=Z,2µm,21.0s,MS5.3
MALT Malatya 71.42 313 *e*P **P 06 49 00.8 +0.5**
MALT pmax pmax
comp=Z,50nm,1.4s,mb5.2
MALT MLR MLR
comp=Z,2µm,21.0s,MS5.3
MALT Malatya 71.42 313 P **P 06 49 02.9 +2.6**
HWQ Hawqa 71.97 308 *e*P **P 06 49 05.4 +1.7**
MMAI Mount Meron Ar 72.02 306 P **P 06 49 05.6 +1.6**
comp=Z,4.8nm,0.6s,mb4.6,baz=90,slow=10.0,SNR=7.7
MMAI LR LR 07 20 31.3
comp=Z,5µm,20.0s,MS5.8,baz=115,slow=36
SKR Severo-Kuril's 72.04 33 *e*P **P 06 49 04.0 +0.3**
SKR *e* pP 06 49 13.0 -0.3
SKR *e* 06 49 19.8
SKR *e* 06 51 41.0
SKR *e*PPP 06 53 20.0
SKR *e*S S 06 58 22.0 -1.4
SKR pmax pmax
comp=N,130nm,1.0s
SKR pmax pmax
comp=Z,160nm,1.0s,mb5.9
SKR pmax pmax
comp=Z,1µm,4.0s
SKR smax
comp=N,1µm,14.0s
SKR smax
comp=E,2µm,14.0s
SKR MLR MLR
comp=N,2µm,18.0s,MS5.6
SKR MLR MLR
comp=E,2µm,18.0s,MS5.6
SKR MLR MLR
comp=Z,3µm,18.0s,MS5.6
SOKR Solikamsk 72.31 338 *c i*P **P 06 49 04.6 -0.6**
SOKR 06 51 50.4
SOKR PPP 06 53 33.8
SOKR S S 06 58 24.2 -2.0
SOKR SS SS 07 03 04.6 -0.1
SOKR pmax pmax
comp=Z,190nm,1.1s,mb5.9
SOKR MLR MLR
comp=Z,5µm,24.0s,MS5.7
LSZ Lusaka 72.33 255 *e*P **P 06 49 05.9 -0.3**
comp=Z,36nm,1.4s,mb5.1
LSZ *e* pP 06 49 14.5 -1.4
LSZ LR LR
comp=Z,5µm,19.0s,MS5.8
LSZ Lusaka 72.33 255 *e*P **P 06 49 05.9 -0.3**
LSZ *e* pP 06 49 14.5 -1.3
LSZ pmax pmax
comp=Z,36nm,1.4s,mb5.1
LSZ MLR MLR
comp=Z,5µm,19.0s,MS5.8
SOC Sochi 72.51 318 *e*P **P 06 49 04.4 -2.3**
SOC *e**PP pP 06 49 12.5 -3.8
SOC *e* 06 51 45.5
SOC *e*PPP 06 53 30.2
SOC *e*S S 06 58 25.2 -3.9
SOC *e* 06 59 08.8
SOC *e*SS SS 07 03 09.4 +0.9
SOC pmax pmax
comp=Z,43nm,1.0s,mb5.3
SOC MLR MLR
comp=Z,2µm,18.0s,MS5.3
RPZ Rata Peaks 72.87 134 LR LR 07 21 17.3
comp=Z,4µm,21.9s,MS5.7,baz=285,slow=36
PETK Petropavlovsk- 74.11 32 P **P 06 49 14.2 -1.7**
comp=Z,15nm,0.7s,mb5.0,baz=215,slow=2.5,SNR=15
ANN Anapa 74.50 319 *e*P **P 06 49 14.5 -3.9**
ANN *e*S S 06 58 46.8 -4.7
ANN pmax pmax
comp=Z,237nm,7.2s
ANN MLR MLR
comp=Z,1µm,23.0s,MS5.2
VRHR Novokhopersk 74.55 326 *e*P **P 06 49 17.2 -1.3**
VRHR *e* pP 06 49 27.2 -1.0
VRHR pmax pmax
comp=N,30nm,0.9s
VRHR pmax pmax
comp=Z,60nm,0.9s,mb5.5
VRHR pmax pmax
comp=E,7.0nm,0.4s
PET Petropavlovsk 74.57 32 *e*P **P 06 49 17.1 -1.5**
comp=E,89nm,1.0s,mb5.7
PET LR LR
comp=Z,2µm,20.0s,MS5.5
PET Petropavlovsk 74.57 32 *ce*P **P 06 49 18.0 -0.6**
PET *e* 06 49 33.2
PET *e*S S 06 58 50.8 -1.1
PET *e*PS 06 59 25.2
PET *e*SS SS 07 03 43.5 +4.1
PET pmax pmax
comp=Z,900nm,5.8s
PET pmax pmax
comp=Z,89nm,1.2s,mb5.6
PET pmax pmax
comp=Z,800nm,16.2s
LBTB Lobatse 75.03 245 PFAKE 06 49 40.0 +18
LBTB LR LR
comp=Z,4µm,21.0s,MS5.7
SNZO South Karori 75.14 132 PFAKE 06 49 30.0 +7.8
SNZO LR LR
comp=Z,4µm,19.0s,MS5.8
BR131 Keskin Array S 75.41 313 *e*P **P 06 49 22.8 -0.9**
comp=Z,6.4nm,0.6s,mb4.7
BR131 *e* pP 06 49 31.6 -1.9
BR131 LR LR
comp=Z,1µm,19.0s,MS5.2
BRTR Keskin Array B 75.41 313 P **P 06 49 22.4 -1.3**
comp=Z,7.6nm,0.9s,mb4.6,baz=132,slow=5.6,SNR=26
BRTR LR LR 07 26 25.7
comp=Z,1µm,20.8s,MS5.3,baz=313,slow=39
BRTR Keskin Array B 75.41 313 *ce*P **P 06 49 22.5 -1.2**
BRTR pmax pmax
comp=Z,8.0nm,0.9s
BOSA Boshof 75.52 242 P **P 06 49 24.4 -0.3**
BOSA LR LR 07 16 35.6
BOSA Boshof 75.52 242 P **P 06 49 24.4 -0.3**
comp=Z,7.6nm,0.9s,mb4.6,baz=95,slow=4.8,SNR=6.3
BOSA LR LR 07 16 35.6
comp=Z,3µm,20.3s,MS5.6,baz=83,slow=31
VORD Divnogorie 75.82 325 *e*P **P 06 49 24.4 -1.4**
VORD *e* pP 06 49 34.2 -1.3
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VORD pmax pmax
comp=N,20nm,1.3s
VORD pmax pmax
comp=E,50nm,1.3s
VSR Storozhevoye 76.00 325 *e*P **P 06 49 24.8 -2.0**
VSR *e**PP pP 06 49 34.4 -2.1
VSR *e* 06 52 15.3
VSR *e*S S 06 59 03.2 -4.7
VSR *e*SS SS 07 03 57.6 -3.6
VSR pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,30nm,0.9s
VSR pmax pmax
comp=Z,120nm,3.1s
VSR pmax pmax
comp=N,30nm,1.0s
VSR pmax pmax
comp=E,10.0nm,0.4s
VSR smax
comp=N,230nm,1.9s
VSR smax
comp=Z,80nm,3.6s
VSR smax
comp=E,140nm,1.8s
VSR MLR MLR
comp=N,790nm,20.0s,MS5.3
VSR MLR MLR
comp=E,1µm,20.0s,MS5.3
VSR MLR MLR
comp=Z,2µm,20.0s,MS5.5
MSVF Nonsavu 76.49 107 PFAKE 06 49 40.0 +10
MSVF LR LR
comp=Z,3µm,22.0s,MS5.5
URZ Urewera 76.63 128 LR LR 07 23 45.9
comp=Z,2µm,20.6s,MS5.4,baz=90,slow=36
SIM Simferopol' 76.75 318 *e*P **P 06 49 30.2 -1.1**
SIM *e*S S 06 59 13.0 -3.5
SIM pmax pmax
comp=Z,400nm,19.0s
SEY Seymchan 77.16 22⇑ *e*P **P 06 49 32.3 -0.9**
SEY Seymchan 77.16 22 *ce*P **P 06 49 32.2 -1.0**
TIXI Tiksi 77.72 9 *e*P **P 06 49 34.1 -2.1**
comp=Z,40nm,0.6s,mb5.5
TIXI LR LR
comp=Z,5µm,20.0s,MS5.8
TIXI Tiksi 77.72 9 *c i*P **P 06 49 33.6 -2.6**
TIXI *e* pP 06 49 43.7 -2.2
TIXI *e* 06 52 27.4
TIXI *e*S S 06 59 20.6 -5.4
TIXI pmax pmax
comp=Z,90nm,1.1s,mb5.6
TIXI MLR MLR
comp=Z,5µm,19.0s,MS5.9
MOS Moscow 78.74 329 *e*P **P 06 49 41.3 -0.8**
MOS *e* pP 06 49 50.3 -1.5
MOS *e* 06 52 38.7
MOS *e*S S 06 59 34.9 -2.5
MOS pmax pmax
comp=Z,300nm,2.0s,mb5.9
MOS pmax pmax
comp=Z,133nm,1.4s,mb5.7
MOS MLR MLR
comp=Z,4µm,22.0s,MS5.7
OBN Obninsk 79.03 328 *e*P **P 06 49 45.0 +1.3**
comp=Z,78nm,0.8s,mb5.7
OBN *e* pP 06 49 52.9 -0.6
OBN LR LR
comp=Z,2µm,20.0s,MS5.5
OBN Obninsk 79.03 328⇑ *i*P **P 06 49 44.1 +0.4**
OBN *e* pP 06 49 53.0 -0.5
OBN *e*S S 06 59 38.8 -1.8
OBN pmax pmax
comp=Z,151nm,1.7s,mb5.7
SUR Sutherland 79.52 238 PFAKE 06 50 00.0 +13
SUR LR LR
comp=Z,2µm,20.0s,MS5.4
KLMR Klimovskoe 80.08 334 *c i*P **P 06 49 48.4 -0.9**
KLMR *e*PPP 06 54 39.3
KLMR *i* S S 06 59 49.9 -1.6
KLMR *e*SS SS 07 04 59.8 -2.4

KLMR pmax pmax
comp=Z,249nm,6.2s
KLMR pmax pmax
comp=Z,268nm,1.5s,mb6.0
KIS Kishinev 80.89 319 *e*P **P 06 49 52.0 -2.0**
comp=Z,200nm,1.3s,mb5.9
KIS Kishinev 80.89 319 *e*PP PP 06 53 08.0 +9.2
KIS *i* S S 06 59 56.0 -4.6
KIS *i* ScS ScS 07 00 09.0 -10
KIS Kishinev 80.89 319 *e*P **P 06 49 52.0 -2.0**
KIS *e* pP 06 50 02.0 -1.8
KIS *e* 06 50 10.0
KIS *i* S S 06 59 56.0 -4.6
KIS *i* 07 00 09.0
KIS *e*PS 07 00 44.0
KIS *e*SS SS 07 05 20.0 +4.9
KIS pmax pmax
comp=Z,180nm,1.3s,mb5.8
SBA Scott Base 81.07 169 *e*P **P 06 49 56.8 +2.3**
comp=Z,7.0nm,0.8s,mb4.6
SBA LR LR
comp=Z,1μm,19.0s,MS5.3
SBA Scott Base 81.07 169 *e*P **P 06 49 56.8 +2.4**
SBA pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
SBA MLR MLR
comp=Z,1μm,19.0s,MS5.3
AKASG Malin Array Be 81.68 322 P **P 06 49 57.0 -1.0**
AKASG LR LR 07 30 04.4
AKASG Malin Array Be 81.68 322 P **P 06 49 57.0 -1.0**
comp=Z,4.5nm,0.9s,mb4.4,baz=88,slow=4.8,SNR=25
AKASG LR LR 07 30 04.4
comp=Z,2μm,21.3s,MS5.3,baz=80,slow=38
AKASG Malin Array Be 81.68 322 *ce*P **P 06 49 57.0 -1.1**
AKBB Malin Array Si 81.68 322 *e*P **P 06 49 58.1 0.0**
AKBB *e* pP 06 50 06.7 -1.1
VRI Vrincioaia 82.00 317 ⇑P **P 06 50 00.6 +0.7**
VRI Vrincioaia 82.00 317 ⇑*i*P **P 06 50 00.6 +0.7**
PLOR Plostina 82.05 317 P **P 06 50 02.5 +2.4**
TESR 82.21 318 ⇑P **P 06 50 02.0 +1.0**
TESR 82.21 318 ⇑*i*P **P 06 50 02.0 +1.0**
TSUM Tsumeb 82.43 251 *e*P **P 06 50 03.9 +1.2**
comp=Z,6.9nm,1.0s,mb4.5
TSUM *e* pP 06 50 12.1 -0.4
TSUM LR LR
comp=Z,2μm,21.0s,MS5.5
MLR Muntele Rosu 82.44 317 P **P 06 50 02.5 +0.4**
comp=Z,14nm,1.1s,mb4.8,baz=71,slow=3.8,SNR=23
MLR Muntele Rosu 82.44 317 ⇑P **P 06 50 02.7 +0.5**
MLR Muntele Rosu 82.44 317 ⇑*i*P **P 06 50 02.7 +0.5**
VOIR 83.04 317 ⇑P **P 06 50 05.7 +0.4**
VOIR 83.04 317 ⇑*i*P **P 06 50 05.7 +0.4**
SMY Shemya 83.09 36 *e*P **P 06 50 05.8 +0.4**
comp=Z,170nm,1.5s,mb5.8
SMY Shemya 83.09 36 *e*P **P 06 50 05.8 +0.4**
SMY pmax pmax
comp=Z,170nm,1.5s,mb5.8
BUR01 Bucovina Ar. S 83.42 319 ⇑P **P 06 50 05.9 -1.4**
BUR01 P 06 50 10.0
BURAR Bucovina Array 83.42 319 ⇓P **P 06 50 08.1 +0.8**
BURAR Bucovina Array 83.42 319 ⇑*i*P **P 06 50 05.9 -1.3**
BURAR Bucovina Array 83.42 319 ⇓*i*P **P 06 50 08.1 +0.9**
BUR08 Bucovina Ar. S 83.44 319 *e*P **P 06 50 07.6 +0.3**
BUR08 *e* pP 06 50 16.2 -0.9
MICGM Minsk 83.55 326 *e*P **P 06 50 05.0 -2.7**
MNK Minsk 83.58 326 *e*P **P 06 50 05.0 -2.9**
VTS Vitosha 83.74 313 ⇑P **P 06 50 09.9 +0.9**
VTS Vitosha 83.74 313 ⇑*i*P **P 06 50 09.9 +0.9**
VAY Valandovo 83.97 312 *e*P **P 06 50 10.1 -0.1**
NACGM Naroch 84.27 326 *e* **P 06 50 08.0 -3.4**
JOF Joensuu 84.47 334 *e*P **P 06 50 11.1 -1.1**
JOF pmax pmax
comp=Z,53nm,1.3s,mb5.5
JOF Joensuu 84.47 334 *ep* **P 06 50 11.1 -1.1**
comp=Z,53nm,1.3s,mb5.5
MIDW Midway 84.58 61 PFAKE 06 50 20.0 +6.4
MIDW LR LR
comp=Z,736nm,20.0s,MS5.1
GZR Gura Zlata 84.60 316 ⇑P **P 06 50 13.6 +0.3**
GZR Gura Zlata 84.60 316 P **P 06 50 15.0 +1.7**
GZR Gura Zlata 84.60 316 ⇑*i*P **P 06 50 13.6 +0.3**
LVV L'vov 84.68 321 *e*P **P 06 50 15.1 +1.5**
LVV *e* 06 53 32.1
LVV *e* 07 00 25.3
LVV *e*SS SS 07 06 13.1 +2.0
DRGR 84.92 318 ⇑P **P 06 50 15.5 +0.6**
DRGR 84.92 318 ⇑*i*P **P 06 50 15.5 +0.6**
KRUS Krusevo 84.96 312 *e*P **P 06 50 12.4 -2.8**
APA Apatity 85.33 339 ⇑*i*P **P 06 50 14.0 -2.5**
APA *i* 06 50 26.8
APA *i* 06 53 29.0
APA *i* S S 07 00 41.0 -3.8
APA pmax pmax
comp=Z,76nm,1.4s,mb5.6
APA pmax pmax
comp=Z,800nm,14.0s
APA MLR MLR
comp=Z,3μm,20.0s,MS5.7
BZS Buzias 85.44 316 P **P 06 50 19.0 +1.5**
BZS Buzias 85.44 316 ⇑*i*P **P 06 50 18.5 +1.0**
KWP Kalwaria Pacla 85.48 320 *e*P **P 06 50 18.4 +0.8**
KWP *e*PcP PcP 06 50 22.0 +1.4
KWP *e*pP pP 06 50 26.5 -0.9
KWP *e*SKS 07 00 37.6
KWP *e*S S 07 00 48.7 +1.7
UZH Uzhgorod 85.55 319 *e*P **P 06 50 18.7 +0.7**
UZH *e* pP 06 50 26.9 -0.9
UZH *e* 06 53 40.0
UZH *e*PPP 06 55 39.5
UZH *e* 07 00 39.3
UZH *e*S S 07 00 45.7 -2.0
UZH *e*PS 07 01 41.0
UZH *e*SSS 07 09 48.7
KOLS Kolonicke sedl 85.62 320 *e*P **P 06 50 20.3 +2.0**
comp=Z,50nm,1.3s,mb5.6
KOLS *e*PP pP 06 50 28.4 +0.2
KOLS *e*S S 07 00 47.1 -1.3
KOLS LR LR
comp=Z,800nm,22.9s,MS5.0
KOLS Kolonicke sedl 85.62 320 *e*P **P 06 50 20.3 +2.0**
KOLS *e* pP 06 50 28.4 +0.2
KOLS *e*S S 07 00 47.1 -1.3
KOLS pmax pmax
comp=Z,50nm,1.3s,mb5.6
KOLS MLR MLR
comp=Z,800nm,22.9s,MS5.0
KOLS Kolonicke sedl 85.62 320 *e*P **P 06 50 20.3 +2.0**
KOLS *e*pP pP 06 50 28.4 +0.2
QSPA South Pole Qui 85.92 180 *e*P **P 06 50 20.0 +0.7**
QSPA *e* pP 06 50 28.4 +0.2
comp=Z,22nm,1.4s,mb5.2
QSPA LR LR
comp=Z,3μm,19.0s,MS5.7
MAIT Maitri 85.95 199 *e*P **P 06 50 21.6 +2.1**
TIR Tirane 85.98 312 PFAKE 06 50 30.0 +10
TIR LR LR
comp=Z,1μm,20.0s,MS5.3
SUW Suwalki 86.10 325 *e*P **P 06 50 20.5 -0.1**
SUW *e*S S 07 01 16.8 +24
SUW LMZ 07 37 14.2
comp=Z,1μm,23.7s
SUW Suwalki 86.10 325 *e*P **P 06 50 21.0 +0.4**
comp=Z,52nm,0.4s,mb6.1
SUW *e* pP 06 50 30.0 -0.4
CRVS Cervenica-Dubn 86.14 319 *e*P **P 06 50 22.3 +1.4**
comp=Z,27nm,1.9s,mb5.2
CRVS *e*PP pP 06 50 33.5 +2.8
CRVS *e*S S 07 00 53.2 -0.3
CRVS LR LR
comp=Z,800nm,22.3s,MS5.1
CRVS Cervenica-Dubn 86.14 319 *e*P **P 06 50 22.3 +1.4**
CRVS *e* pP 06 50 33.5 +2.8
CRVS *e*S S 07 00 53.2 -0.3
CRVS pmax pmax
comp=Z,27nm,1.9s,mb5.2
CRVS MLR MLR
comp=Z,800nm,22.3s,MS5.1
CRVS Cervenica-Dubn 86.14 319 *e*P **P 06 50 22.3 +1.4**
CRVS *e*pP pP 06 50 33.5 +2.8
CRVS *e*SKSac SKSac 07 01 43.6 +33
JOHN Johnston Islan 90.68 73 PFAKE 06 50 50.0 +6.8
JOHN LR LR
comp=Z,957nm,22.0s,MS5.2
JAVS Javornik 90.72 316 *e*P **P 06 50 44.1 +1.4**
JAVS *e*S S 07 01 35.7 -1.3
JAVS *e*SKSac SKSac 07 01 47.2 +35
PRU Pruhonice 90.77 320 *e*P **P 06 50 45.3 +2.4**
PRU *e* pP 06 50 53.5 +0.8
PRU *e* 07 01 37.2
PRU MLR MLR
comp=Z,900nm,17.0s,MS5.3
PRU Pruhonice 90.77 320 *e*P **P 06 50 45.3 +2.4**
PRU *e*pP pP 06 50 53.5 +0.8
PRU *e*S S 07 01 37.2 0.0
PRU AMS AMS 07 41 20.0
comp=Z,900nm,17.0s
PVCC Panska Ves 90.80 320 *e*P **P 06 50 45.1 +2.1**
PVCC *e* pP 06 50 54.0 +1.1
PVCC *e* 07 01 38.0
PVCC MLR MLR
comp=Z,2μm,17.8s,MS5.5
PVCC Panska Ves 90.80 320 *e*P **P 06 50 45.1 +2.1**
PVCC *e*pP pP 06 50 54.0 +1.1
PVCC *e*S S 07 01 38.0 +0.5
PVCC AMS AMS 07 40 20.0
comp=Z,2μm,17.8s
PRA Prague 90.84 320 P **P 06 50 46.0 +2.8**
PRA S S 07 01 42.0 +4.1
PRA AMS AMS 07 42 30.0
VOY Vojsko 90.84 316 *e*P **P 06 50 44.2 +0.9**
VOY *e* pP 06 50 52.5 -0.7
VOY *e* 06 51 00.7
VOY *e* 06 51 17.3
AQU L'Aquila 90.89 312 *e*P **P 06 50 43.7 0.0**
comp=Z,14nm,0.6s,mb5.5
AQU LR LR
comp=Z,1μm,22.0s,MS5.3
AQU L'Aquila 90.89 312 *e*P **P 06 50 43.7 0.0**
AQU pmax pmax
comp=Z,14nm,0.6s,mb5.5
AQU MLR MLR
comp=Z,1μm,22.0s,MS5.3
TRI Trieste 90.91 316 PFAKE 06 51 00.0 +16
TRI LR LR
comp=Z,766nm,21.0s,MS5.1
TRO Tromso 90.99 340 *e*P **P 06 50 42.6 -0.9**
TRO *e*SKS 07 01 11.4
TRO AMS AMS 07 35 19.0
comp=Z,3μm,21.1s,MS5.7
BSD Bornholm Skovb 91.03 325 *i* P **P 06 50 43.7 -0.3**
BSD *i* S S 07 01 35.9 -3.5
BSD Bornholm Skovb 91.03 325 *i* P **P 06 50 43.7 -0.3**
GEC2 GERESS Array S 91.21 319 *e*P **P 06 50 44.9 -0.1**
comp=Z,46nm,1.6s,mb5.6
GEC2 *e*S S 07 01 40.1 -1.3
GEC2 GERESS Array S 91.21 319 *e*P **P 06 50 44.9 -0.1**
comp=Z,46nm,1.6s,mb5.6
GEC2 *e*S S 07 01 40.1 -1.3
GEC2 GERESS Array S 91.21 319 *e*P **P 06 50 44.9 -0.1**
GEC2 *e*S S 07 01 40.1 -1.3
GEC2 pmax pmax
comp=Z,46nm,1.6s,mb5.6
BRG Berggiesshubel 91.22 321 *e*P **P 06 50 45.0 0.0**
comp=Z,44nm,1.7s,mb5.5
BRG *e*S S 07 01 40.6 -0.8
BRG Berggiesshubel 91.22 321 *e*P **P 06 50 46.5 +1.5**
comp=Z,43nm,1.7s,mb5.5
BRG *i* pP 06 50 54.8 -0.1
comp=Z,24nm,1.2s
BRG *e* 06 54 07.5
comp=Z,8.2nm,1.2s
BRG *e* 06 54 22.4
comp=Z,9.0nm,1.2s
BRG PP PP 06 54 24.0 +1.7
BRG *e* 07 01 08.7
comp=Z,5.8nm,1.1s
BRG SS SS 07 08 00.0 +14
BRG
comp=N,982nm,19.7s
BRG
comp=E,1μm,26.6s
BRG
comp=Z,2μm,20.9s
BRG Berggiesshubel 91.22 321 *e*P **P 06 50 46.5 +1.5**
BRG *i* pP 06 50 54.8 -0.1
BRG 06 54 24.0
BRG *e* 07 01 08.7
BRG SS SS 07 08 00.0 +14
BRG pmax pmax
comp=Z,26nm,1.7s,mb5.3
BRG MLR MLR
comp=N,588nm,19.7s
BRG MLR MLR
comp=E,617nm,26.6s
BRG MLR MLR
comp=Z,906nm,20.9s,MS5.2
KHC Kasperske Hory 91.32 319 *e*P **P 06 50 47.4 +2.0**
comp=Z,9.2nm,1.2s,mb5.0
KHC Kasperske Hory 91.32 319 *e*P **P 06 50 46.9 +1.4**
KHC *e* pP 06 50 54.9 -0.4
KHC *e* 07 01 42.4
KHC MLR MLR
comp=Z,2μm,20.1s,MS5.4
KHC Kasperske Hory 91.32 319 *e*P **P 06 50 46.9 +1.4**
KHC *e*pP pP 06 50 54.9 -0.4
KHC *e*S S 07 01 42.4 +0.1
KHC AMS AMS 07 38 30.0
comp=Z,2μm,20.1s
RUE Ruedersdorf 91.46 322 *e*P **P 06 50 45.9 -0.1**
comp=Z,31nm,0.9s,mb5.6
RUE *e*S S 07 01 40.6 -2.9
BJO Bjornoya 91.67 345 AMS AMS 07 38 53.0
comp=Z,2μm,29.9s,MS5.5
WET Wettzell 91.78 319 *e*P **P 06 50 47.4 -0.2**
comp=Z,44nm,1.8s,mb5.5
WET *e*S S 07 01 46.0 -0.5
WET Wettzell 91.78 319 *e*P **P 06 50 47.4 -0.2**
comp=Z,44nm,1.8s,mb5.5
WET *e*S S 07 01 46.0 -0.5
WET Wettzell 91.78 319 *e*P **P 06 50 47.4 -0.2**
WET *e*S S 07 01 46.0 -0.5
WET pmax pmax
comp=Z,44nm,1.8s,mb5.5
CLL Collm 91.85 321 *e*P **P 06 50 47.3 -0.6**
comp=Z,39nm,1.9s,mb5.4
CLL *e*S S 07 01 45.0 -2.0
CLL Collm 91.85 321 ⇑*i*P **P 06 50 49.0 +1.1**
comp=Z,40nm,1.9s,mb5.4
CLL *i* pP 06 50 56.9 -0.8
CLL *e*S S 07 01 31.0 -16
CLL LR LR
comp=Z,2μm,20.4s,MS5.4
CLL Collm 91.85 321 ⇑*i*P **P 06 50 49.0 +1.1**
CLL *i* pP 06 50 56.9 -0.8
CLL pmax pmax
comp=Z,40nm,1.9s,mb5.4
CLL MLR MLR
comp=Z,2μm,20.4s,MS5.4
CLL Collm 91.85 321 ⇑*i*P **P 06 50 49.0 +1.1**
comp=Z,40nm,1.9s,mb5.4
CLL *e*Plp 06 50 53.0
comp=Z,200nm,15.4s
CLL *i* pP pP 06 50 56.9 -0.8
CLL *e*PP PP 06 54 26.0 -1.2
CLL *e*PPP 06 56 35.0
CLL *e*(pSKSac) 07 01 27.0
CLL *e*S S 07 01 41.0 -6.0
CLL *e*PS PS 07 03 00.0 -0.6
CLL *e*SS SS 07 07 58.0 +2.6
CLL *e*SSS 07 11 30.0
CLL *e*SSSS 07 14 54.0
CLL LmV 07 41 00.0
comp=Z,2μm,20.4s
HFS Hagfors 92.11 330 P **P 06 50 48.7 -0.2**
comp=Z,9.0nm,0.9s,mb5.1,baz=172,slow=3.0,SNR=8.2
NKC Novy Kostel 92.13 320 *e*P **P 06 50 48.1 -1.1**
NKC *e* pP 06 50 59.3 +0.2
NKC *e* 07 01 48.6
NKC MLR MLR
comp=Z,1μm,18.1s,MS5.4
NKC Novy Kostel 92.13 320 *e*P **P 06 50 48.1 -1.1**
NKC *e*pP pP 06 50 59.3 +0.2
NKC *e*S S 07 01 48.6 -1.0

NKC AMS AMS 07 40 00.0
comp=Z,1µm,18.1s
TANN Tannenbergstha 92.13 320 *e*P **P 06 50 49.0 -0.2**
comp=Z,16nm,1.6s,mb5.1
TANN *e*S S 07 01 49.8 +0.2
WERN Wernitzgruen 92.18 320 *e*P **P 06 50 49.4 0.0**
comp=Z,14nm,1.5s,mb5.1
GUNZ Gunzen 92.21 320 *e*P **P 06 50 49.5 -0.1**
comp=Z,13nm,1.5s,mb5.0
WERD Werda 92.23 320 *e*P **P 06 50 49.4 -0.3**
comp=Z,19nm,1.6s,mb5.2
COP Copenhagen 92.48 325 *i* P **P 06 50 52.4 +1.7**
COP MLR MLR
comp=Z,630nm,20.0s,MS5.1
COP Copenhagen 92.48 325 *i* P **P 06 50 52.4 +1.7**
COP
comp=Z,630nm,20.0s
VNA1 Neumayer--Stat 92.48 198 *e*P **P 06 50 50.0 -0.5**
MOX Moxa 92.68 320 *e*P **P 06 50 53.3 +1.6**
comp=Z,23nm,1.6s,mb5.4
MOX *e*S S 07 01 38.0 -17
MOX
comp=Z,800nm,21.0s
MOX Moxa 92.68 320 *e*P **P 06 50 51.4 -0.3**
comp=Z,18nm,1.4s,mb5.3
MOX *e*S S 07 01 53.8 -0.7
MOX Moxa 92.68 320 *e*P **P 06 50 53.3 +1.6**
comp=Z,23nm,1.6s,mb5.4
MOX *e*S S 07 01 38.0 -17
MOX LR LR
comp=Z,800nm,21.0s,MS5.2
MOX Moxa 92.68 320 *e*P **P 06 50 53.3 +1.6**
MOX pmax pmax
comp=Z,23nm,1.6s,mb5.4
MOX MLR MLR
comp=Z,800nm,21.0s,MS5.2
FUR Furstenfeldbru 92.78 318 *e*S S 07 01 52.6 -2.9
SPITS Spitsbergen Ar 92.82 348 P **P 06 50 49.7 -2.1**
comp=Z,7.1nm,0.7s,mb5.2,baz=126,slow=5.6,SNR=8.6
GRA1 Grafenberg Arr 92.89 319 *e*P **P 06 50 52.8 +0.1**
comp=Z,64nm,1.7s,mb5.8
GRA1 *e*S S 07 01 56.5 +0.1
GRA1 LR LR
comp=Z,1µm,21.6s,MS5.3
GRF Grafenberg Arr 92.89 319 *e*P **P 06 50 52.8 +0.1**
comp=Z,64nm,1.7s,mb5.8
GRF *e*S S 07 01 56.5 +0.1
GRF *e*L 07 42 25.3
comp=Z,1µm,21.6s
GRF Grafenberg Arr 92.89 319 *e*P **P 06 50 52.8 +0.1**
comp=Z,64nm,1.7s,mb5.8
GRF *e*S S 07 01 56.5 +0.1
GRF LR LR
comp=Z,1µm,21.6s,MS5.3
GRF Grafenberg Arr 92.89 319 *e*P **P 06 50 52.8 +0.1**
GRF *e*S S 07 01 56.5 +0.1
GRF pmax pmax
comp=Z,64nm,1.7s,mb5.8
GRF MLR MLR
comp=Z,1µm,21.6s,MS5.3
GRF Grafenberg Arr 92.89 319 *e*P **P 06 50 52.8 +0.1**
GRF *e*S S 07 01 56.5 +0.1
GRF pmax pmax
comp=Z,64nm,1.7s,mb5.8
GRF MLR MLR
comp=Z,1µm,21.6s,MS5.3
NSS Namsos 93.19 334 *e* S 07 02 03.2 +4.7
NOA NORSAR Array B 93.39 331 P **P 06 50 54.5 -0.3**
comp=Z,5.1nm,1.1s,mb4.9,baz=92,slow=4.7,SNR=4.3
NOA LR LR 07 38 08.4
comp=Z,1µm,21.9s,MS5.4,baz=75,slow=39
CLZ Clausthal 93.52 322 *e*P **P 06 50 55.3 -0.3**
comp=Z,68nm,2.6s,mb5.6
CLZ *e*S S 07 01 59.5 -2.3
CLZ Clausthal 93.52 322 *e*P **P 06 50 55.3 -0.3**
comp=Z,68nm,2.6s,mb5.6
CLZ *e*S S 07 01 59.5 -2.3
CLZ Clausthal 93.52 322 *e*P **P 06 50 55.3 -0.3**
CLZ *e*S S 07 01 59.5 -2.3
CLZ pmax pmax
comp=Z,68nm,2.6s,mb5.6
NAO01 NORSAR Array S 93.54 331 PFAKE 06 51 10.0 +15
NAO01 LR LR
comp=Z,2µm,22.0s,MS5.6
BSEG Bad Segeberg 93.62 324 *e*P **P 06 50 55.7 -0.3**
comp=Z,7.0nm,0.7s,mb5.2
BSEG *e*S S 07 02 01.3 -1.4
BSEG Bad Segeberg 93.62 324 *e*P **P 06 50 55.7 -0.3**
BSEG *e*S S 07 02 01.3 -1.4
BSEG Bad Segeberg 93.62 324 *e*P **P 06 50 55.7 -0.3**
BSEG *e*S S 07 02 01.3 -1.4
KEST Kesra 93.65 305 P **P 06 50 57.2 +0.7**
comp=Z,1.3nm,0.8s,mb4.4,baz=42,slow=4.2,SNR=3.2
KEST LR LR 07 33 16.9
comp=Z,713nm,20.2s,MS5.1,baz=23,slow=36
DAVOX Davos/Dischmat 93.66 316 P **P 06 50 57.3 +0.9**
comp=Z,2.2nm,0.7s,mb4.7,baz=338,slow=23,SNR=6.1
NRDL Niedersach Rie 93.70 322 *e*P **P 06 50 55.2 -1.2**
comp=Z,39nm,2.0s,mb5.5
NRDL *e*S S 07 02 00.3 -3.1
UBBA Unterbreizbach 93.72 321 *e*S S 07 02 02.2 -1.4
KBS Kingsbay 93.76 349 *e*P **P 06 50 53.9 -2.3**
KBS *e*PP PP 06 54 42.6 +1.1
KBS AMS AMS 07 41 35.6
comp=Z,4µm,21.4s,MS5.8
KBS Kingsbay 93.76 349 PFAKE 06 51 10.0 +14
KBS LR LR
comp=Z,4µm,19.0s,MS5.8
VSL Villasalto 93.77 309 PFAKE 06 51 10.0 +13
VSL LR LR
comp=Z,361nm,20.0s,MS4.8
KONO Kongsberg 94.16 329 *e*P **P 06 50 58.9 +0.6**
KONO *e*SKS 07 01 29.3
KONO *e* 07 02 06.0
KONO AMS AMS 07 38 51.4
comp=Z,1µm,20.0s,MS5.4
KONO Kongsberg 94.16 329 PFAKE 06 51 10.0 +12
KONO LR LR
comp=Z,1µm,19.0s,MS5.5
STU Stuttgart 94.18 318 *e*S S 07 02 06.5 -1.3
MUD Monsted U'grnd 94.34 326 *i* P **P 06 50 59.5 +0.3**
MUD *i* S S 07 02 14.3 +5.5
MUD MLR MLR
comp=Z,2µm,17.0s,MS5.5
MUD Monsted U'grnd 94.34 326 *i* P **P 06 50 59.5 +0.3**
MUD Monsted U'grnd 94.34 326 *i* S S 07 02 14.3 +5.5
MUD
comp=Z,1µm,17.0s
TNS Taunus Mts 94.69 320 *e*P **P 06 51 00.6 -0.4**
comp=Z,9.0nm,0.7s,mb5.3
TNS *e*S S 07 02 11.3 -0.9
TNS Taunus Mts 94.69 320 *e*P **P 06 51 00.6 -0.4**
comp=Z,9.0nm,0.7s,mb5.3
TNS *e*S S 07 02 11.3 -0.9
TNS Taunus Mts 94.69 320 *e*P **P 06 51 00.6 -0.4**
TNS *e*S S 07 02 11.3 -0.9
TNS pmax pmax
comp=Z,9.0nm,0.7s,mb5.3
BFO Black Forest 94.75 318 *e*S S 07 02 11.3 -1.5
BFO Black Forest 94.75 318 PFAKE 06 51 10.0 +8.7
BFO LR LR
comp=Z,944nm,19.0s,MS5.3
IBBN Ibbenburen 95.14 322 *e*P **P 06 51 02.4 -0.6**
comp=Z,8.0nm,0.6s,mb5.3
BUG Bochum--Univer 95.44 321 *e*S S 07 02 17.3 -1.4
ECH Echery 95.53 318 PFAKE 06 51 20.0 +15
ECH LR LR
comp=Z,753nm,19.0s,MS5.2
WLF Walferdange 96.18 319 *e*P **P 06 51 07.2 -0.6**
comp=Z,28nm,1.6s,mb5.4
WLF *e*S S 07 02 24.0 -1.1
WLF Walferdange 96.18 319 PFAKE 06 51 20.0 +12
WLF LR LR
comp=Z,1µm,20.0s,MS5.4
BER Bergen 96.28 330 *e*P **P 06 51 11.1 +3.0**
BER *e*PP PP 06 55 04.2 +2.7
BER *e*SKS 07 01 43.5
BER *e* 07 02 24.6
BER AMS AMS 07 39 16.4
comp=Z,1µm,20.3s,MS5.4
FOO Floro 96.36 331 *e*P **P 06 51 10.3 +1.9**
FOO *e*PP PP 06 55 02.6 +0.5
FOO *e*SKS 07 01 42.0
FOO *e* 07 02 24.6
FOO AMS AMS 07 43 57.1
comp=Z,2µm,19.9s,MS5.6
TAM Tamanrasset 96.56 292 PFAKE 06 51 20.0 +10
TAM LR LR
comp=Z,955nm,21.0s,MS5.2
SSB Saint Sauveur 97.38 315 PFAKE 06 51 20.0 +6.7
SSB LR LR
comp=Z,750nm,22.0s,MS5.1
TTA Tatalina 99.51 27 *e*P **P 06 51 23.8 +1.3**
comp=Z,11nm,1.4s,mb5.1
TTA Tatalina 99.51 27 *e*P **P 06 51 23.8 +1.3**
TTA pmax pmax
comp=Z,11nm,1.4s,mb5.1
TORD Torodi Ar. Bea 99.92 283 P Pdif 06 51 25.9 +1.3
comp=Z,0.9nm,1.0s,baz=172,slow=24,SNR=4.5
TORD PP PP 06 55 33.0 +2.3
comp=Z,0.2nm,0.7s,baz=308,slow=36,SNR=2.8
TORD PKKPbc PKKPbc 07 07 44.1 -0.8
comp=Z,0.2nm,0.5s,baz=307,slow=4.5,SNR=4.5
JMIC Jan Mayen 100.09 342 *e*P Pdif 06 51 28.7 +3.4
JMIC *e*PP PP 06 55 31.2 +0.8
JMIC AMS AMS 07 40 03.3
comp=Z,1µm,22.1s,MS5.4
EKA Eskdalemuir Ar 101.34 326 PP PP 06 55 39.2 -1.0
comp=Z,2.0nm,0.8s,baz=78,slow=10,SNR=3.5
ESK Eskdalemuir 101.37 326 PFAKE 06 51 40.0 +9.1
ESK LR LR
comp=Z,997nm,20.0s,MS5.3
XMAS Kiritimati 101.70 89 PFAKE 06 51 40.0 +7.6
XMAS LR LR
comp=Z,1µm,22.0s,MS5.4
KIP Kipapa 101.73 69 PFAKE 06 51 40.0 +7.5
KIP LR LR
comp=Z,1µm,19.0s,MS5.4
KDAK Kodiak Island 102.16 32 PFAKE 06 51 50.0 +16
KDAK LR LR
comp=Z,2µm,22.0s,MS5.6
COLA College 102.56 24 PFAKE 06 51 50.0 +14
COLA LR LR
comp=Z,2µm,19.0s,MS5.5
ILAR Eielson Array 102.98 24 Pdiff Pdif 06 51 36.5 -1.6
comp=Z,0.7nm,0.9s,baz=324,slow=3.9,SNR=8.1
ILAR PP PP 06 55 54.9 +2.7
comp=Z,1.9nm,0.9s,baz=290,slow=8.4,SNR=4.8
ESLA Sonseca Array 104.06 310 PFAKE 06 52 00.0 +17
ESLA LR LR
comp=Z,3µm,19.0s,MS5.9
POHA Pohakuloa 104.07 71 PFAKE 06 52 00.0 +17
POHA LR LR
comp=Z,639nm,20.0s,MS5.2
PAB San Pablo 104.37 310 PFAKE 06 52 00.0 +16
PAB LR LR
comp=Z,691nm,19.0s,MS5.2
SCO Scoresbysund 104.37 343 *i* P PKiKP 06 56 03.9 +3.7
SHEL Horse Pasture 104.87 252 PFAKE 06 56 10.0 +7.3
SHEL LR LR
comp=Z,2µm,19.0s,MS5.6
EGAK Eagle 105.27 23 *e*PKPdf PKiKP 06 56 02.8 +0.8
EGAK LR LR
comp=Z,1µm,20.0s,MS5.5
DBIC Dimbokro 106.15 276 PFAKE 06 56 20.0 +15
DBIC LR LR
comp=Z,1µm,19.0s,MS5.5
MVO Moncorvo 106.18 312 *e*P Pdif 06 51 59.0 +6.7
MVO Moncorvo 106.18 312 *e*PP PP 06 56 20.1 +3.3
MVO *e*SS SS 07 11 07.7 -8.8
MVO *e*LR LR 07 30 52.2
comp=Z,522nm,20.0s
SFS San Fernando 106.19 307 PFAKE 06 56 20.0 +15
SFS LR LR
comp=Z,1µm,19.0s,MS5.5
PBAR Barrancos 106.62 309 *e*P Pdif 06 51 56.9 +2.6
PBAR Barrancos 106.62 309 *e*PP PP 06 56 25.1 +4.9
PBAR *e*SS SS 07 11 25.2 +2.4
PBAR *e*LR LR 07 32 41.5
comp=Z,741nm,18.0s
MTE Manteigas 106.68 311 *e*P Pdif 06 51 47.7 -6.9
MTE Manteigas 106.68 311 *e*PP PP 06 56 23.1 +2.6
MTE *e*SS SS 07 11 30.6 +7.2
MTE *e*LR LR 07 30 55.3
comp=Z,597nm,20.0s
MTE Manteigas 106.68 311 PFAKE 06 56 20.0 +15
MTE LR LR
comp=Z,672nm,21.0s,MS5.2
PMRV Marv??o 106.72 310 *e*PP PP 06 56 23.3 +2.5
PMRV *e*LR LR 07 32 36.1
comp=Z,552nm,18.0s
PESTR Estremoz 106.95 309 *e*P Pdif 06 52 02.2 +6.4
PESTR Estremoz 106.95 309 *e*PP PP 06 56 25.9 +3.4
PESTR *e*SS SS 07 11 29.0 +1.8
PESTR *e*LR LR 07 30 29.2
comp=Z,684nm,20.0s
BORG Borgarnes 106.97 338 PFAKE 06 56 20.0 +15
BORG LR LR
comp=Z,1µm,22.0s,MS5.4
SUMG Summit 107.17 348 *i* P Pdif 06 51 57.8 +1.1
SUMG Summit 107.17 348 *i* P PP 06 56 26.8 +3.9
SUMG *i* S SKSac 07 02 35.6 +1.7
PPT Papeete 107.22 110 *e*PP PP 06 56 14.5 -11
comp=Z,151nm,26.0s
PPT *e*Sdif Sdif 07 03 52.1 -5.5
comp=Z,1µm,25.2s
PPT Papeete 107.22 110 *e*PS PS 07 05 45.4 -1.4
comp=Z,410nm,27.5s
PPT *e*SS SS 07 11 28.4 -3.4
comp=Z,760nm,25.5s
PPT *e*LR LR 07 27 27.2
comp=Z,2µm,22.2s
PVAQ Vaqueiros 107.27 308 *e*PP PP 06 56 29.7 +4.8
PVAQ *e*SS SS 07 11 42.3 +11
PVAQ *e*LR LR 07 31 08.2
comp=Z,819nm,20.0s
PBDV Barranco-do-Ve 107.46 308 *e*P Pdif 06 51 50.6 -7.4
PBDV Barranco-do-Ve 107.46 308 *e*PP PP 06 56 28.6 +2.3
PBDV *e*SS SS 07 11 28.4 -5.8
PBDV *e*LR LR 07 30 21.7
comp=Z,676nm,18.0s
PCVE Castro Verde 107.49 308 *e*SS SS 07 11 33.3 -1.2
PCVE *e*LR LR 07 32 46.0
comp=Z,753nm,18.0s
MORF Marmelete 108.02 308 *e*SS SS 07 11 29.8 -12
MORF *e*LR LR 07 33 01.1
comp=Z,800nm,22.0s
PFVI Vila Bisbo 108.18 308 *e*P Pdif 06 52 10.2 +9.0
PFVI Vila Bisbo 108.18 308 *e*PP PP 06 56 33.6 +2.0
PFVI *e*SS SS 07 11 35.8 -8.2
PFVI *e*LR LR 07 30 41.7
comp=Z,641nm,20.0s
PMAFR Mafra 108.24 310 *e*PP PP 06 56 35.3 +3.3
PMAFR *e*SS SS 07 11 51.3 +6.7
PMAFR *e*LR LR 07 34 07.8
comp=Z,620nm,20.0s
PMSA Palmer Station 110.46 187 PFAKE 06 56 20.0 +8.3
PMSA LR LR
comp=Z,2µm,22.0s,MS5.7
YKA Yellowknife Ar 116.03 17 PKP PKPdf 06 56 21.1 -1.3
comp=Z,2.0nm,0.8s,baz=335,slow=2.4,SNR=7.3
YKA PP PP 06 57 21.8 -4.8
comp=Z,1.6nm,0.9s,baz=323,slow=6.8,SNR=5.3
TAOE Nuku Hiva Isla 117.75 102 *e*PP PP 06 57 40.5 0.0
comp=Z,178nm,26.8s
TAOE *e*Sdif Sdif 07 05 33.2 +7.8
comp=Z,495nm,27.3s
TAOE Nuku Hiva Isla 117.75 102 *e*PS PS 07 07 24.2 -2.1
comp=Z,503nm,24.4s
TAOE *e*SS SS 07 13 47.6 -4.4
comp=Z,1µm,26.1s
TAOE *e*LR LR 07 32 12.2
comp=Z,2µm,24.3s
RKT Rikitea 119.15 119 *e*PP PP 06 57 44.2 -5.5
comp=Z,121nm,31.2s
RKT *e*SS SS 07 14 06.1 -3.2
comp=Z,1µm,28.0s
RKT *e*LR LR 07 32 57.4
comp=Z,2µm,26.2s
NLWA Neilton Lookou 122.15 34 PFAKE 06 56 50.0 +15
NLWA LR LR
comp=Z,1µm,20.0s,MS5.5
HDW Hoodsport 122.46 34 P PKPdf 06 56 35.8 +0.6
GNW Green Mountain 122.64 34 *e*PKPdf PKPdf 06 56 35.8 +0.2
JCW Jim Creek 122.76 33 *e*PKPdf PKPdf 06 56 36.1 +0.4
HEBO Mount Hebo 123.42 37 *e*PKPdf PKPdf 06 56 37.0 -0.1
EDM Edmonton 123.47 24 *e*PKPdf PKPdf 06 56 36.1 -0.9
LON Longmire 123.68 34 *e*PKPdf PKPdf 06 56 38.0 +0.4
TDL Tradedollar La 123.68 35 P PKPdf 06 56 38.4 +0.8
NLW Nelson Butte 123.69 32 P PKPdf 06 56 38.1 +0.5
FL2 Flat Top 2 123.69 35 P PKPdf 06 56 39.1 +1.5
ETW Entiat 123.98 33 *e*PKPdf PKPdf 06 56 38.0 -0.1
COR Corvallis 124.03 37 *e*PKPdf PKPdf 06 56 39.1 +0.8
COR LR LR
comp=Z,692nm,19.0s,MS5.3
TBM Table Mountain 124.10 33 P PKPdf 06 56 38.8 +0.4
OD2 Odessa Site #2 124.97 32 *e*PKPdf PKPdf 06 56 40.1 +0.1
RSW Rattlesnake Hi 125.12 33 *e*PKPdf PKPdf 06 56 41.0 +0.7
HAWA Hanford 125.15 33 *e*PKPdf PKPdf 06 56 40.5 +0.1
HAWA LR LR
comp=Z,1µm,22.0s,MS5.5
NEW Newport 125.23 30 *e*PKPdf PKPdf 06 56 40.0 -0.5
NEW LR LR
comp=Z,2µm,22.0s,MS5.7
HUMO Hull Mountain 125.30 39 *e*PKPdf PKPdf 06 56 40.7 -0.1
HUMO LR LR
comp=Z,883nm,21.0s,MS5.4
VTHM Trough 125.30 35 P PKPdf 06 56 41.6 +0.8
VIPM Ingram Point 125.66 36 P PKPdf 06 56 42.1 +0.7
YBH Yreka Blue Hor 125.92 40 *e*PKPdf PKPdf 06 56 42.2 +0.2
YBH LR LR
comp=Z,772nm,22.0s,MS5.3
LNOR Lincton Mounta 126.16 33 *e*PKPdf PKPdf 06 56 42.7 +0.4
FFC Flin Flon 126.16 16 *e*PKPdf PKPdf 06 56 41.5 -0.6
FFC LR LR
comp=Z,3µm,22.0s,MS5.8
WALA Waterton Lakes 126.24 28 *e*PKPdf PKPdf 06 56 42.1 -0.3
WDC Whiskeytown Da 126.63 41 PFAKE 06 57 00.0 +17
WDC LR LR
comp=Z,924nm,21.0s,MS5.4
BSMT Bassoo Peak 126.67 29 *e*PKPdf PKPdf 06 56 42.6 -0.7
JTMT Jette 126.99 29 *e*PKPdf PKPdf 06 56 43.7 -0.1
HOPS Hopland 127.08 43 PFAKE 06 57 00.0 +16
HOPS LR LR
comp=Z,793nm,21.0s,MS5.4
SWMT Swartz Lake 127.29 29 *e*PKPdf PKPdf 06 56 44.8 +0.3
BMO Blue Mountains 127.33 34 *e*PKPdf PKPdf 06 56 45.0 +0.3
BMO LR LR
comp=Z,644nm,20.0s,MS5.3
MOD Modoc 127.33 38 *e*PKPdf PKPdf 06 56 44.9 +0.1
MOD LR LR
comp=Z,1µm,21.0s,MS5.5
MCCM Marconi Confer 127.62 44 PFAKE 06 57 00.0 +15
MCCM LR LR
comp=Z,610nm,21.0s,MS5.3
SLMT Seeley Lake 127.72 29 *e*PKPdf PKPdf 06 56 44.8 -0.5
MSO Missoula 127.79 30 *e*PKPdf PKPdf 06 56 44.6 -0.9
MSO LR LR
comp=Z,792nm,20.0s,MS5.4
WVOR Wild Horse Val 128.04 37 *e*PKPdf PKPdf 06 56 46.6 +0.5
WVOR LR LR
comp=Z,740nm,19.0s,MS5.4
CHMT Chamberlain Mo 128.07 29 *e*PKPdf PKPdf 06 56 45.8 -0.2
SCHQ Schefferville 128.41 351 PKP PKPdf 06 56 45.9 -0.5
SCHQ PP PP 06 58 50.9 +0.5
SCHQ LR LR
comp=Z,2µm,19.0s,MS5.8
SCHQ Schefferville 128.41 351 PKP PKPdf 06 56 45.9 -0.5
comp=Z,2.3nm,0.8s,baz=101,slow=1.0,SNR=3.8
SCHQ PP PP 06 58 50.9 +0.5
comp=Z,8.4nm,1.1s,baz=2.4,slow=6.1,SNR=3.5
EGMT Eagleton 128.88 26 *e*PKPdf PKPdf 06 56 47.4 -0.1
EGMT LR LR
comp=Z,1µm,20.0s,MS5.5
LRM Limekiln Ridge 129.23 30 *e*PKPdf PKPdf 06 56 49.5 +1.3
SAO San Andreas Ge 129.29 44 PFAKE 06 57 00.0 +11
SAO LR LR
comp=Z,568nm,20.0s,MS5.3
CMB Columbia Colle 129.38 42 PFAKE 06 57 00.0 +11
CMB LR LR
comp=Z,730nm,22.0s,MS5.3
DLMT Dillon 129.48 30 *e*PKPdf PKPdf 06 56 49.0 +0.3
MCMT McKenzie Canyo 129.73 31 *e*PKPdf PKPdf 06 56 50.1 +0.9
HLID Hailey 129.75 33 *e*PKPdf PKPdf 06 56 51.1 +1.8
HLID LR LR
comp=Z,1µm,20.0s,MS5.6
BOZ Bozeman (W) 129.76 29 *e*PKPdf PKPdf 06 56 49.5 +0.2
BOZ *e*PP PP 06 59 00.2 +0.6
BOZ LR LR
comp=Z,1µm,19.0s,MS5.5
BMN Battle Mountai 130.08 38 PFAKE 06 57 00.0 +10
BMN LR LR
comp=Z,957nm,21.0s,MS5.5
NVAR Mina Array Bea 130.54 41 PKP PKPdf 06 56 48.1 -2.9
comp=Z,4.2nm,0.8s,baz=265,slow=2.2,SNR=26
NVAR PP PP 06 59 06.0 +0.8
comp=Z,1.5nm,1.0s,baz=286,slow=7.0,SNR=3.4
GCMT Greycliff 130.60 28 *e*PKPdf PKPdf 06 56 51.8 +1.0
YMR Madison River 130.79 30 *e*PKPdf PKPdf 06 56 53.8 +2.6
LKWY Lake 131.15 30 PFAKE 06 57 00.0 +8.1
LKWY LR LR
comp=Z,2µm,20.0s,MS5.9
RLMT Red Lodge 131.28 28 *e*PKPdf PKPdf 06 56 54.0 +1.8
RLMT LR LR
comp=Z,2µm,19.0s,MS5.7
FLWY Flagg Ranch 131.34 30 *e*PKPdf PKPdf 06 56 54.9 +2.6
FLWY *e*PP PP 06 59 10.7 +0.8
FLWY *e*SKPbc SKPbc 07 00 16.1 +0.9
IMW Indian Meadow 131.35 31 *e*PKPdf PKPdf 06 56 53.5 +1.2
IMW *e*SKPbc SKPbc 07 00 16.5 +1.2
LAO LASA Array 131.44 25 *e*PKPdf PKPdf 06 56 53.8 +1.4
LAO LR LR
comp=Z,1µm,22.0s,MS5.5
RRI2 Red Ridge 131.55 31 *e*PKPdf PKPdf 06 56 54.0 +1.3
MOOW Moose Ponds 131.56 31 *e*PKPdf PKPdf 06 56 53.8 +1.0
MOOW *e*SKPbc SKPbc 07 00 17.1 +1.1
TPAW Teton Pass 131.64 31 *e*PKPdf PKPdf 06 56 53.8 +0.9
TPAW *e*PP PP 06 59 14.7 +2.9
TPAW *e*SKPbc SKPbc 07 00 16.1 -0.2
LOHW Long Hollow 131.73 31 *e*PKPdf PKPdf 06 56 54.1 +1.1
SNOW Snow King Moun 131.76 31 *e*PKPdf PKPdf 06 56 54.5 +1.4
REDW Red Top Meadow 131.78 31 *e*PKPdf PKPdf 06 56 54.0 +0.8
REDW *e*SKPbc SKPbc 07 00 16.9 0.0
ULM Lac du Bonnet 131.82 14 *e*PKPdf PKPdf 06 56 52.8 -0.1
ULM LR LR
comp=Z,2µm,22.0s,MS5.8
ULM Lac du Bonnet 131.82 14 PKP PKPdf 06 56 52.0 -1.0
comp=Z,9.3nm,0.8s,baz=344,slow=4.2,SNR=8.3
HVU Hansel Valley 131.84 34 *e*PKPdf PKPdf 06 56 54.6 +1.3
HVU *e*SKPbc SKPbc 07 00 18.9 +1.8
AHID Auburn Hatcher 132.07 32 PFAKE 06 57 10.0 +16
AHID LR LR
comp=Z,1µm,20.0s,MS5.6
DAC Darwin (Calif) 132.20 43 PFAKE 06 57 10.0 +16
DAC LR LR
comp=Z,810nm,21.0s,MS5.4
BGU Big Grassy Mou 132.26 35 *e*PKPdf PKPdf 06 56 56.7 +2.6
BGU *e*SKPbc SKPbc 07 00 20.2 +1.6
HWUT Hardware Ranch 132.62 33 *e*PKPdf PKPdf 06 56 55.8 +1.0
HWUT LR LR
comp=Z,787nm,20.0s,MS5.4
DUG Dugway 132.87 36 *e*PKPdf PKPdf 06 56 56.5 +1.3
DUG LR LR
comp=Z,997nm,20.0s,MS5.5
BW06 Boulder Array 132.87 31 PFAKE 06 57 10.0 +15
BW06 LR LR
comp=Z,1µm,19.0s,MS5.6
GSC Goldstone 133.27 43 *e*PKPdf PKPdf 06 56 58.0 +1.8
GSC *e*SKPbc SKPbc 07 00 23.4 +1.1
NLU North Lily Min 133.45 35 *e*PKPdf PKPdf 06 56 57.8 +1.4
NLU *e*SKPbc SKPbc 07 00 23.9 +1.1
DAU Daniels Canyon 133.61 34 *e*PKPdf PKPdf 06 56 58.6 +1.9
AGMN Agassiz Nation 133.62 15 *e*PKPdf PKPdf 06 56 56.1 -0.4
AGMN LR LR
comp=Z,2µm,22.0s,MS5.8
CCUT Cedar City 134.22 39 *e*PKPdf PKPdf 06 57 00.1 +2.2
MVU Marysvale 134.32 37 PFAKE 06 57 10.0 +12
MVU LR LR
comp=Z,728nm,21.0s,MS5.4
MSU Marysvale 134.33 37 *e*PKPdf PKPdf 06 56 59.9 +1.8
MSU *e*SKPbc SKPbc 07 00 25.2 -0.5
RSSD Black Hills 134.41 25 *e*PKPdf PKPdf 06 56 57.9 -0.2
RSSD *e*SKPbc SKPbc 07 00 25.1 -0.6
RSSD LR LR
comp=Z,965nm,21.0s,MS5.5
PFO Pinyon Flat Ob 134.42 45 *e*PKPdf PKPdf 06 57 00.0 +1.6
PFO *e*SKPbc SKPbc 07 00 26.8 +0.7
PFO LR LR
comp=Z,748nm,21.0s,MS5.4
PLCA Paso Flores 134.76 189 PFAKE 06 57 10.0 +11
PLCA LR LR
comp=Z,2µm,19.0s,MS5.8
RWWY Rawlins 134.84 30 *e*PKPdf PKPdf 06 56 59.9 +0.9

EYMN	**Ely**	**134.98**	**12**	PFAKE			06 57 10.0	+11
EYMN				LR	LR				
	comp=Z,2μm,20.0s,MS5.8								
TRQA	**Tornquist**	**135.21**	**199**	PFAKE			06 57 10.0	+10
TRQA				LR	LR				
	comp=Z,1μm,21.0s,MS5.6								
RCBR	**Riachuelo**	**135.82**	**257**	PFAKE			06 57 10.0	+8.4
RCBR				LR	LR				
	comp=Z,2μm,19.0s,MS5.8								
WUAZ	**Wupatki**	**136.74**	**40**	*e*PKPdf	PKPdf		06 57 04.8	+2.1
WUAZ				*e*SKPbc	SKPbc		07 00 34.1	+0.7
WUAZ				LR	LR				
	comp=Z,789nm,20.0s,MS5.4								
ISCO	**Idaho Springs**	**137.06**	**30**	*e*PKPdf	PKPdf		06 57 05.2	+2.1
ISCO				LR	LR				
	comp=Z,1μm,22.0s,MS5.6								
COWI	**Conover**	**137.20**	**10**	PFAKE			06 57 20.0	+17
COWI				LR	LR				
	comp=Z,2μm,21.0s,MS5.8								
MVCO	**Mesa Verde**	**137.37**	**35**	*e*PKPdf	PKPdf		06 57 05.0	+1.2
MVCO				LR	LR				
	comp=Z,1μm,19.0s,MS5.6								
ECSD	**EROS Data Cent**	**137.53**	**19**	*e*PKPdf	PKPdf		06 57 02.7	-1.2
ECSD				*e*SKPbc	SKPbc		07 00 35.9	+0.5
ECSD				LR	LR				
	comp=Z,2μm,22.0s,MS5.8								
OGNE	**Ogallala**	**137.85**	**26**	PFAKE			06 57 20.0	+15
OGNE				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
PKME	**Peaks-Kenny Pk**	**138.07**	**350**	PFAKE			06 57 20.0	+15
PKME				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
SDCO	**Great Sand Dun**	**138.65**	**32**	*e*PKPpre	PKPpre		06 56 57.1		
SDCO				*e*PKPdf	PKPdf		06 57 06.8	+0.7
SDCO				LR	LR				
	comp=Z,900nm,19.0s,MS5.5								
SPB	**Sao Paulo**	**138.72**	**227**	PFAKE			06 57 20.0	+13
SPB				LR	LR				
	comp=Z,898nm,19.0s,MS5.5								
TUC	**Tucson**	**139.08**	**43**	*e*PKPdf	PKPdf		06 57 09.1	+2.0
TUC				*e*SKPdf	SKPdf		07 00 42.1	+2.1
TUC				LR	LR				
	comp=Z,940nm,21.0s,MS5.5								
LONY	**Lake Ozonia**	**139.41**	**355**	PFAKE			06 57 20.0	+13
LONY				LR	LR				
	comp=Z,1μm,21.0s,MS5.7								
LBNH	**Lisbon**	**139.49**	**352**	PFAKE			06 57 20.0	+13
LBNH				LR	LR				
	comp=Z,2μm,19.0s,MS5.8								
NCB	**Newcomb**	**140.02**	**355**	PFAKE			06 57 20.0	+12
NCB				LR	LR				
	comp=Z,1μm,21.0s,MS5.7								
JFWS	**Jewell Farm**	**140.04**	**13**	PFAKE			06 57 20.0	+11
JFWS				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
LAZ	**Ladron**	**140.09**	**37**	*e*PKPdf	PKPdf		06 57 09.1	+0.2
ANMO	**Albuquerque**	**140.12**	**36**	*e*PKPdf	PKPdf		06 57 04.4	-4.5
ANMO				LR	LR				
	comp=Z,1μm,22.0s,MS5.6								
SCIA	**State Center**	**140.23**	**17**	PFAKE			06 57 20.0	+11
SCIA				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
BNM	**Barren Site**	**140.57**	**37**	*e*PKPdf	PKPdf		06 57 09.4	-0.4
CBKS	**Cedar Bluff**	**140.61**	**26**	*e*PKPdf	PKPdf		06 57 03.9	-5.7
CBKS				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
KSU1	**Kansas State U**	**141.63**	**22**	*e*PKPdf	PKPdf		06 57 11.8	+0.3
KSU1				LR	LR				
	comp=Z,2μm,21.0s,MS5.8								
AAM	**Ann Arbor**	**141.69**	**6**	PFAKE			06 57 20.0	+8.5
AAM				LR	LR				
	comp=Z,2μm,21.0s,MS5.9								
BINY	**Binghamton**	**141.92**	**356**	PFAKE			06 57 20.0	+8.1
BINY				LR	LR				
	comp=Z,2μm,22.0s,MS5.8								
ERPA	**Erie**	**142.09**	**1**	PFAKE			06 57 20.0	+7.8
ERPA				LR	LR				
	comp=Z,1μm,22.0s,MS5.6								
HDIL	**Hopedale**	**142.50**	**13**	PFAKE			06 57 20.0	+7.0
HDIL				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
AMTX	**Amarillo**	**142.83**	**32**	*e*PKPdf	PKPdf		06 57 15.6	+1.9
AMTX				LR	LR				
	comp=Z,2μm,20.0s,MS5.8								
MNTX	**Cornudas Mount**	**143.01**	**39**	*e*PKPdf	PKPdf		06 57 11.7	-2.5
MNTX				LR	LR				
	comp=Z,895nm,21.0s,MS5.5								
CPUP	**Villa Florida**	**143.20**	**214**	PKP	PKPdf		06 57 16.4	+1.7
CPUP				LR	LR				
	comp=Z,252nm,19.0s,MS5.0								
CPUP	**Villa Florida**	**143.20**	**214**	PKhKP	PKPbc		06 57 06.0		
	comp=Z,0.3nm,0.3s,baz=80,slow=5.3,SNR=4.8								
CPUP				PKP	PKPdf		06 57 16.4	+1.7
	comp=Z,0.7nm,0.5s,baz=0.6,slow=7.4,SNR=3.9								
GDL2	**Guadalupe Moun**	**143.29**	**37**	*e*PKPdf	PKPdf		06 57 11.8	-2.9
CLNB	**Carlsbad**	**143.54**	**37**	*e*PKPdf	PKPdf		06 57 13.5	-1.6
BLO	**Bloomington**	**144.39**	**10**	*e*PKPdf	PKPdf		06 57 13.3	-3.1
WMOK	**Wichita Mounta**	**144.40**	**29**	*e*PKPdf	PKPdf		06 57 13.2	-3.4
WMOK				LR	LR				
	comp=Z,1μm,22.0s,MS5.6								
OLIL	**Olney**	**144.51**	**12**	*e*PKPdf	PKPdf		06 57 13.9	-2.7
MCWV	**Mont Chateau**	**144.55**	**1**	*e*PKPdf	PKPdf		06 57 13.9	-2.7
MCWV				LR	LR				
	comp=Z,2μm,21.0s,MS6.0								
FVM	**French Village**	**144.66**	**16**	*e*PKPdf	PKPdf		06 57 14.4	-2.5
SIUC	**Southern Illin**	**145.22**	**14**	*e*PKPdf	PKPdf		06 57 16.1	-1.8
USIN	**University of**	**145.34**	**12**	*e*PKPdf	PKPdf		06 57 16.7	-1.3
WCI	**Wyandotte Cave**	**145.34**	**10**	*e*PKPdf	PKPdf		06 57 16.4	-1.7
WCI				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
TXAR	**Lajitas Array**	**145.69**	**40**	PKPbc	PKPbc		06 57 19.1	-0.1
	comp=Z,61nm,0.9s,baz=282,slow=1.3,SNR=288								
CBN	**Corbin**	**145.97**	**358**	*e*PKPdf	PKPdf		06 57 18.6	-0.5
CBN				LR	LR				
	comp=Z,2μm,19.0s,MS5.8								
PARMO	**Parma**	**146.08**	**16**	*e*PKPdf	PKPdf		06 57 19.6	+0.3
GLAT	**Glass**	**146.58**	**15**	*e*PKPbc	PKPbc		06 57 21.7	+0.1
UTMT	**University of**	**146.62**	**14**	*e*PKPbc	PKPbc		06 57 22.0	+0.2
MIAR	**Mount Ida**	**146.79**	**22**	*e*PKPdf	PKPdf		06 57 21.4	+0.8
MIAR				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
HALT	**Halls**	**146.90**	**15**	*e*PKPdf	PKPdf		06 57 21.3	+0.5
BLA	**Blacksburg**	**146.97**	**2**	*e*PKPdf	PKPdf		06 57 21.7	+0.8
BLA				LR	LR				
	comp=Z,2μm,21.0s,MS5.8								
UALR	**University of**	**147.03**	**20**	*e*PKPbc	PKPbc		06 57 22.5	-0.5
WVT	**Waverly**	**147.06**	**13**	*e*PKPdf	PKPdf		06 57 21.6	+0.5
WVT				LR	LR				
	comp=Z,2μm,21.0s,MS5.8								
JCT	**Junction City**	**147.21**	**34**	*e*PKPdf	PKPdf		06 57 21.5	0.0
JCT				LR	LR				
	comp=Z,1μm,19.0s,MS5.7								
TKL	**Tuckaleechee C**	**148.25**	**7**	*e*PKPdf	PKPdf		06 57 24.3	+1.3
SWET	**Sewanee**	**148.34**	**11**	*e*PKPdf	PKPdf		06 57 24.4	+1.2
CPCT	**Cooper Cave**	**148.35**	**9**	*e*PKPbc	PKPbc		06 57 25.5	-1.1
NATX	**Nacogdoches**	**148.77**	**26**	*e*PKPbc	PKPbc		06 57 27.6	-0.2
NATX				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
BBSR	**BB Station**	**148.78**	**336**	PFAKE			06 57 40.0	+16
BBSR				LR	LR				
	comp=Z,909nm,19.0s,MS5.6								
CNNC	**Cliffs of the**	**148.95**	**358**	*e*PKPbc	PKPbc		06 57 28.2	+0.1
CNNC				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
HKT	**Hockley**	**149.74**	**30**	PFAKE			06 57 40.0	+14
HKT				LR	LR				
	comp=Z,1μm,19.0s,MS5.7								
JSC	**Jenkinsville**	**149.85**	**4**	*e*PKPbc	PKPbc		06 57 30.1	-0.3
VBMS	**Vicksburg**	**149.98**	**20**	PFAKE			06 57 40.0	+14
VBMS				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
LRAL	**Lakeview Retre**	**150.22**	**14**	*e*PKPbc	PKPbc		06 57 30.3	-1.0
LRAL				LR	LR				
	comp=Z,2μm,22.0s,MS5.8								
GOGA	**Godfrey**	**150.50**	**8**	*e*PKPbc	PKPbc		06 57 30.7	-1.3
GOGA				LR	LR				
	comp=Z,1μm,20.0s,MS5.8								
KVTX	**Kingsville**	**150.52**	**36**	*e*PKPbc	PKPbc		06 57 33.6	+1.3
KVTX				LR	LR				
	comp=Z,1μm,20.0s,MS5.7								
NHSC	**New Hope**	**151.07**	**2**	PFAKE			06 57 40.0	+12
NHSC				LR	LR				
	comp=Z,1μm,19.0s,MS5.8								
BRAL	**Brewton**	**152.14**	**15**	*e*PKPbc	PKPbc		06 57 35.3	-0.6
BRAL				LR	LR				
	comp=Z,2μm,21.0s,MS5.9								
PPM	**Popocatepetl**	**155.74**	**50**	*e*P	PKPdf		06 57 31.8	-2.8
DWPF	**Disney**	**155.97**	**5**	PFAKE			06 57 50.0	+15
DWPF				LR	LR				
	comp=Z,2μm,20.0s,MS5.9								
LPAZ	**La Paz**	**157.09**	**208**	PKP	PKPdf		06 57 38.8	+2.3
	comp=Z,1.3nm,1.2s,baz=282,slow=1.3,SNR=2.8								
LPAZ				PKPab	PKPab		06 58 05.7	-1.1
	comp=Z,2.2nm,1.0s,baz=347,slow=0.6,SNR=4.0								
LPAZ	**La Paz**	**157.09**	**208**	PKIKP	PKPdf		06 57 38.8	+2.3
LPAZ							06 58 05.7		
LPAZ				MLR	MLR				
	comp=Z,1μm,20.0s								
ANWB	**Willy Bob**	**158.35**	**310**	PFAKE			06 57 50.0	+12
ANWB				LR	LR				
	comp=Z,910nm,21.0s,MS5.6								
BBGH	**Gun Hill**	**158.74**	**296**	PFAKE			06 57 50.0	+11
BBGH				LR	LR				
	comp=Z,2μm,19.0s,MS5.9								
FDF	**Fort de France**	**159.43**	**302**	PFAKE			06 57 50.0	+11
FDF				LR	LR				
	comp=Z,771nm,21.0s,MS5.5								
GRGR	**Grenville**	**161.02**	**296**	PFAKE			06 57 50.0	+8.9
GRGR				LR	LR				
	comp=Z,775nm,20.0s								
GRTK	**Grand Turk**	**161.02**	**337**	PFAKE			06 57 50.0	+9.0
GRTK				LR	LR				
	comp=Z,1μm,22.0s								
SJG	**San Juan**	**161.17**	**319**	PFAKE			06 57 50.0	+8.8
SJG				LR	LR				
	comp=Z,951nm,20.0s								
TEIG	**Tepich**	**161.58**	**28**	PFAKE			06 57 50.0	+8.4
TEIG				LR	LR				
	comp=Z,2μm,20.0s								
SDDR	**Presa de Saban**	**163.34**	**334**	PFAKE			06 57 50.0	+6.6
SDDR				LR	LR				
	comp=Z,1μm,19.0s								
GTBY	**Guantanamo Bay**	**163.76**	**347**	PFAKE			06 57 50.0	+6.3
GTBY				LR	LR				
	comp=Z,883nm,20.0s								
NNA	**Nana**	**163.92**	**188**	PFAKE			06 58 00.0	+16
NNA				LR	LR				
	comp=Z,1μm,19.0s								
MTDJ	**Mount Denham**	**165.84**	**354**	PFAKE			06 58 00.0	+14
MTDJ				LR	LR				
	comp=Z,1μm,20.0s								
TGUH	**Tegucigalpa,Un**	**167.16**	**39**	PFAKE			06 58 00.0	+13
TGUH				LR	LR				
	comp=Z,1μm,22.0s								
PAYG	**Puerto Ayora**	**167.82**	**112**	PFAKE			06 58 00.0	+13
PAYG				LR	LR				
	comp=Z,1μm,22.0s								
SDV	**Santo Domingo**	**170.37**	**300**	PFAKE			06 58 00.0	+11
SDV				LR	LR				
	comp=Z,851nm,19.0s								
JTS	**JuntasAbangare**	**171.47**	**43**	PFAKE			06 58 00.0	+11
JTS				LR	LR				
	comp=Z,2μm,19.0s								
BCIP	**Isla Barro Col**	**174.86**	**9**	PFAKE			06 58 00.0	+9.3
BCIP				LR	LR				
	comp=Z,1μm,19.0s								
OTAV	**Otavalo**	**176.17**	**189**	*e*PKPdf	PKPdf		06 57 52.6	+1.5
OTAV				LR	LR				
	comp=Z,900nm,19.0s								

*NEIC **08** 07:11:23.9, 17°.29N×94°.83W, h137km, MD3.8(MEX), After MEX.*

MEX 08 07:11:25.3±1.0, 17°.23N×94°.84W, h131km±26km, MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.81**	**265**	*i*	P	Pn		07 11 55.5	-1.6
VHO					S	Sn		07 12 19.4	-2.0
VHO	**Vista Hermosa**	**1.81**	**265**	*e*	P	Pn		07 11 56.8	-0.3
VHO					S	Sn		07 12 19.2	-2.2
HUIG	**Huatulco**	**1.89**	**220**	*i*	P	Pn		07 11 56.2	-1.8
HUIG					S	Sn		07 12 22.3	-0.8
HUIG	**Huatulco**	**1.89**	**220**	*i*	P	Pn		07 11 56.2	-1.8
HUIG					S	Sn		07 12 21.8	-1.3
PCIG		**2.17**	**134**	*i*	P	Pn		07 12 00.6	-0.9
PCIG					S	Sn		07 12 26.5	-2.7
UTMO	**Huajuapan**	**2.89**	**282**	*i*	P	Pn		07 12 09.5	-1.0
UTMO					S	Sn		07 12 44.0	-1.4
PNIG	**Pinotepa**	**3.25**	**256**	*i*	P	Pn		07 12 13.2	-2.0
PNIG					S	Sn		07 12 51.3	-2.6
PNIG	**Pinotepa**	**3.25**	**256**	*i*	P	Pn		07 12 13.3	-1.9
PNIG					S	Sn		07 12 51.8	-2.1
PPM	**Popocatepetl**	**4.04**	**298**	*e*	P	Pn		07 12 23.2	-2.4
PPM					S	Sn		07 13 09.3	-3.0
PPM	**Popocatepetl**	**4.04**	**298**	*e*	P	Pn		07 12 24.5	-1.1
PPM					S	Sn		07 13 11.2	-1.1

*BJI **08** 07:15:22.4, 4°.29S×100°.90E, h23km, mB5.4/3, mb4.4/7, Ms5.0/2, Ms7 4.6/2*
*ISCJB **08** 07:15:23.5±1.9, 4°.20S±0°.07×100°.80E±0°.05, h27km±13km, mb4.4/20, Error ellipse: s-maj=13.5km s-min=5.1km az=34.2*
*DJA **08** 07:15:26, 4°.16S×100°.90E, h68km, MLv4.4/9*
*NEIC **08** 07:15:27.1±0.5, 4°.11S×100°.95E, h35km, mb4.6/6, Error ellipse: s-maj=19.1km s-min=8.2km az=57.0*
*IDC **08** 07:15:28.5±3.8, 4°.05S×100°.99E, h44km±37km, mb4.1/11, mb1 4.1/12, mb1mx3.9/24, mbtmp4.1/12, ML3.9/1, MS4.1/1, Ms1 4.1/1, ms1mx3.1/40, Error ellipse: s-maj=28.4km s-min=14.7km az=58.0*

ISC 08 07:15:23.8±2.2, 4°.19S±0°.06×100°.84E±0°.05, h13km±14km, h22km±2.6km: pP-P, n45, σ0°87/42, mb4.4/20, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.83**	**73**	P		**Pn**		**07 15 54.7**	**-0.2**
KSI				S		**Sn**		**07 16 20.0**	**+2.0**
MNAI	**Manna**	**2.12**	**95**	P		**Pn**		**07 16 01.7**	**+2.8**
MNAI				S		**Sn**		**07 16 24.8**	**-0.3**
PDSI	**Padang**	**3.27**	**353**	P		**Pn**		**07 16 14.2**	**-0.7**
SDSI	**Sungai Dareh**	**3.29**	**10**	P		**Pn**		**07 16 14.9**	**-0.1**
LWLI	**Liwa**	**3.31**	**105**	P		**Pn**		**07 16 15.4**	**0.0**
LWLI				S		**Sn**		**07 16 42.0**	**-13**
SISI	**Saibi**	**3.33**	**328**	P		**Pn**		**07 16 15.5**	**-0.2**
MDSI	**Maura Dua**	**3.34**	**95**	P		**Pn**		**07 16 15.8**	**0.0**
MDSI				S		**Sn**		**07 16 55.1**	**-0.3**
PPI	**Padang Panjang**	**3.73**	**353**	P		**Pn**		**07 16 21.4**	**+0.3**
KASI	**Kota Agung**	**3.88**	**110**	P		**Pn**		**07 16 23.0**	**-0.2**
KASI				S		**Sn**		**07 17 08.6**	**0.0**
KLSI		**3.91**	**97**	P		**Pn**		**07 16 24.1**	**+0.5**
MNSI	**Mandailing Nat**	**5.11**	**346**	P		**Pn**		**07 16 39.8**	**-0.3**
	0.3nm3μm44nm,0.8s								
CGJI	**Cibinong**	**5.40**	**117**	P		**Pn**		**07 16 43.5**	**-0.6**
	85nm,0.8s								
PSI	**Prapat**	**7.20**	**345**	P		**Pn**		**07 17 09.5**	**+0.7**
	2.0nm,0.3s,baz=186,slow=9.8,SNR=4.5								
CISI	**Cisompet, Garu**	**7.70**	**116**	P		**Pn**		**07 17 13.9**	**-1.9**
	88nm,0.8s								
TPTI		**8.25**	**334**	P		**Pn**		**07 17 24.7**	**+1.4**
CMAR	**Chiang Mai Arr**	**22.58**	**355**	P		**P**		**07 20 24.2**	**+0.2**
	5.5nm,0.8s,mb4.0,baz=183,slow=8.2,SNR=14								
FITZ	**Fitzroy Crossi**	**27.93**	**122**	P		**P**		**07 21 14.0**	**0.0**
	5.2nm,0.9s,mb4.1,baz=285,slow=11,SNR=3.0								
NWAO	**Narrogin (SRO)**	**32.44**	**154**	LR		LR		07 34 56.1	
	comp=Z,364nm,20.2s,baz=8.0,slow=36								
WRAB	**Tennant Creek**	**36.20**	**118**	*e*P		**P**		**07 22 27.0**	**+0.4**
	7.5nm,1.0s,mb4.6								
ASAR	**Alice Springs**	**37.31**	**124**	P		**P**		**07 22 36.0**	**0.0**
	1.3nm,0.7s,mb3.9,baz=295,slow=8.1,SNR=12								
XAN	**Xi'an**	**38.78**	**11**	P		**P**		**07 22 46.9**	**-1.2**
XAN				pP		pP		07 22 54.3	+2.0
XAN				sP		sP		07 22 59.4	+5.4
XAN				pmax		pmax			
	comp=Z,4.0nm,0.9s,mb4.2								
XAN				pmax		pmax			
	comp=Z,190nm,14.4s								
LZH	**Lanzhou**	**40.16**	**4**	P		**P**		**07 23 00.7**	**+1.0**
LZH				pP		pP		07 23 07.4	+3.6
LZH				sP		sP		07 23 11.4	+5.9
LZH				pmax		pmax			
	comp=Z,45nm,1.2s,mb5.1								
LZH				pmax		pmax			
	comp=Z,220nm,5.3s								
GTA	**Gaotai**	**43.39**	**359**	*e*P		**P**		**07 23 26.2**	**+0.2**
GTA				pP		pP		07 23 30.8	+0.6
GTA				sP		sP		07 23 33.9	+2.0
GTA				pmax		pmax			
	comp=Z,4.0nm,1.3s,mb4.0								
STKA	**Stephens Creek**	**47.09**	**131**	P		**P**		**07 23 56.6**	**+1.0**
	comp=Z,2.9nm,0.9s,mb4.2,baz=31,slow=23,SNR=2.5								
KSRS	**Korea Array**	**48.49**	**29**	P		**P**		**07 24 05.3**	**-1.0**
	comp=Z,3.7nm,1.0s,mb4.4,baz=214,slow=8.2,SNR=15								
SONM	**Songino Array**	**52.03**	**5**	P		**P**		**07 24 33.4**	**+0.4**
	comp=Z,6.7nm,0.8s,mb4.6,baz=181,slow=9.0,SNR=35								
ULN	**Ulaanbaatar**	**52.12**	**5**	*e*P		**P**		**07 24 33.9**	**+0.3**
	comp=Z,2.4nm,0.3s,mb4.6								
TKM2	**Tokmak 2**	**52.16**	**337**	*e*P		**P**		**07 24 35.0**	**+1.0**
	comp=Z,3.2nm,0.6s,mb4.4								
MK31	**Makanchi Array**	**53.35**	**344**	*e*P		**P**		**07 24 42.9**	**+0.1**
MKAR	**Makanchi Array**	**53.35**	**344**	P		**P**		**07 24 42.9**	**+0.1**
	comp=Z,6.5nm,0.8s,mb4.6,baz=150,slow=7.9,SNR=58								
MJAR	**Matsushiro Arr**	**53.46**	**37**	P		**P**		**07 24 41.6**	**-2.2**
	comp=Z,1.4nm,0.8s,mb3.9,baz=214,slow=6.9,SNR=7.2								
OPO	**Ambohidratompo**	**54.29**	**250**	P		**P**		**07 24 52.0**	**+1.8**
	comp=Z,3.2nm,0.9s,mb4.2,baz=78,slow=6.4,SNR=3.7								
KURK	**Kurchatov**	**57.93**	**344**	*e*P		**P**		**07 25 15.4**	**-0.2**
	comp=Z,9.8nm,0.9s,mb4.8								
ZAA0	**Zalesovo Array**	**59.46**	**349**	*e*P		**P**		**07 25 25.1**	**-1.0**
ZALV	**Zalesovo Beam**	**59.46**	**349**	P		**P**		**07 25 25.4**	**-0.8**
	comp=Z,11nm,0.9s,mb4.9,baz=160,slow=4.7,SNR=28								
BVAR	**Borovoye Array**	**62.51**	**340**	P		**P**		**07 25 46.3**	**-0.7**
	comp=Z,1.6nm,0.6s,mb4.3,baz=139,slow=7.7,SNR=11								
BRVK	**Borovoye**	**62.58**	**340**	*e*P		**P**		**07 25 46.6**	**-0.8**
	comp=Z,2.3nm,0.6s,mb4.5								
ABKAR	**Akbulak array**	**63.95**	**331**	*e*P		**P**		**07 25 56.2**	**-0.4**
	comp=Z,3.9nm,0.8s,mb4.5								
WMOK	**Wichita Mounta**	**144.57**	**28**	*e*PKPdf	PKPdf		07 34 57.9	-2.8
WCI	**Wyandotte Cave**	**145.50**	**10**	*e*PKPdf	PKPdf		07 35 01.0	-1.2
TXAR	**Lajitas Array**	**145.87**	**40**	PKPbc	PKPbc		07 35 04.1	+0.4
TXAR	**Lajitas Array**	**145.87**	**40**	PKPbc	PKPbc		07 35 04.1	+0.4
	comp=Z,4.6nm,0.9s,baz=286,slow=1.9,SNR=40								
MIAR	**Mount Ida**	**146.96**	**22**	*e*PKPbc	PKPbc		07 35 06.3	-0.4
WVT	**Waverly**	**147.22**	**13**	*e*PKPbc	PKPbc		07 35 06.3	-1.1
JCT	**Junction City**	**147.39**	**34**	*e*PKPbc	PKPbc		07 35 07.5	-0.5

*ISCJB **08** 07:16:41.4±1.0, 23°.8S±0°.2×175°.3W±0°.1, h10km, mb3.9/9, Error ellipse: s-maj=29.3km s-min=18.2km az=170.9*
*IDC **08** 07:16:42.0±1.8, 23°.59S×175°.29W, h0km, mb4.0/9, mb1 4.2/9, mb1mx4.1/17, mbtmp4.0/9, Error ellipse: s-maj=75.5km s-min=23.0km az=157.0*
*NEIC **08** 07:16:42.5±0.8, 23°.87S×175°.16W, h10km, Error ellipse: s-maj=27.3km s-min=16.7km az=171.0*

ISC 08 07:16:42.7±1.0, 23°.9S±0°.2×175°.2W±0°.1, h10km, n16, σ0°90/14, mb3.9/9, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.79**	**313**	*e*Pn		**Pn**		**07 18 50.6**	**+0.6**
	53nm,1.0s								
AFI	**Afiamalu**	**10.40**	**19**	*e*Pn		**Pn**		**07 19 01.4**	**-11**
AFI					Sn	Sx		07 20 44.4	
AFI	**Afiamalu**	**10.40**	**19**	P		**Pn**		**07 19 01.9**	**-10**
	1.8nm,0.3s,baz=243,slow=23,SNR=2.8								
AFI					Sn	Sx		07 20 44.4	
	1.5nm,0.3s,baz=3.1,slow=21,SNR=2.4								
RAR	**Rarotonga**	**14.47**	**83**	Pn		**Pn**		**07 19 59.8**	**-7.9**
	2.3nm,0.3s,baz=192,slow=6.0,SNR=8.4								
RAR					Sn	Sx		07 22 26.0	
	1.2nm,0.3s,baz=84,slow=23,SNR=3.1								
CTA	**Charters Tower**	**35.89**	**268**	P		**P**		**07 23 43.0**	**-0.2**
	2.1nm,0.4s,mb4.4,baz=99,slow=15,SNR=5.0								
ASAR	**Alice Springs**	**46.39**	**259**	P		**P**		**07 25 09.4**	**-0.2**
	1.8nm,0.9s,mb4.0,baz=94,slow=6.4,SNR=8.2								
FITZ	**Fitzroy Crossi**	**55.23**	**264**	P		**P**		**07 26 17.0**	**+0.7**
	1.5nm,0.7s,mb4.2,baz=194,slow=4.2,SNR=3.0								
TGY	**Tagaytay City**	**72.93**	**294**	P		**P**		**07 28 10.5**	**-2.2**
	217nm,0.3s,baz=225,slow=2.9,SNR=3.6								
PETK	**Petropavlovsk-**	**80.19**	**344**	P		**P**		**07 28 52.2**	**-0.7**
	4.2nm,0.8s,mb4.4,baz=132,slow=8.2,SNR=4.1								
KSRS	**Korea Array**	**81.12**	**318**	P		**P**		**07 28 57.8**	**-0.6**
	0.4nm,0.3s,mb3.8,baz=147,slow=6.2,SNR=4.5								
NVAR	**Mina Array Bea**	**81.72**	**42**	P		**P**		**07 29 01.

Plg23.0000°, Azm228.0000°; Data Used: IU IC II CN G.
ISC 08 07:32:52.5±0.2,**3°99S**±0.0°03×**100°88E**±0.0°03,**h30**km,
h30km±.9km:**pP-P,n329,**σ1**s15/291,mb5.2**/121,**MS5.0**/60,
27C-6D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.74**	**79**	P	**Pn**	**07 33 21.7**	**+0.9**
KRJI	**Kerinci**	**1.97**	**17**	P	**Pn**	**07 33 24.3**	**+0.4**
KRJI				S	**Sn**	**07 33 55.3**	**+7.7**
MNAI	**Manna**	**2.10**	**100**	P	**Pn**	**07 33 30.7**	**+5.0**
MNAI				S	**Sn**	**07 33 58.5**	**+7.6**
PDSI	**Padang**	**3.08**	**352**	P	**Pn**	**07 33 37.4**	**-1.8**
PDSI				S	**Sn**	**07 34 15.9**	**+0.8**
SDSI	**Sungai Dareh**	**3.08**	**10**	P	**Pn**	**07 33 39.4**	**+0.2**
SISI	**Saibi**	**3.19**	**326**	P	**Pn**	**07 33 40.9**	**+0.2**
MDSI	**Maura Dua**	**3.33**	**99**	P	**Pn**	**07 33 42.3**	**-0.3**
LWLI	**Liwa**	**3.33**	**108**	P	**Pn**	**07 33 42.6**	**0.0**
PPI	**Padang Panjang**	**3.54**	**352**	P	**Pn**	**07 33 46.3**	**+0.8**
PPI				S	**Sn**	**07 34 28.2**	**+1.8**
RGRI	**Rengat**	**3.90**	**22**	P	**Pn**	**07 33 52.0**	**+1.6**
KLSI		**3.90**	**100**	P	**Pn**	**07 33 51.1**	**+0.6**
KASI	**Kota Agung**	**3.92**	**113**	P	**Pn**	**07 33 49.6**	**-1.1**
BKNI	**Bangkinang**	**4.29**	**2**	P	**Pn**	**07 33 56.5**	**+0.7**
BLSI	**Bandar Lampung**	**4.56**	**108**	P	**Pn**	**07 34 00.1**	**+0.5**
MNSI	**Mandailing Nat**	**4.92**	**345**	P	**Pn**	**07 34 04.9**	**+0.3**
RBSI	**Rajabasa** 3.2nm7μm384nm,1.0s	**5.18**	**111**	P	**Pn**	**07 34 08.0**	**-0.1**
TNG	**Tangerang**	**6.14**	**111**	P	**Pn**	**07 34 23.3**	**+2.0**
CBJI	**Citeko** 5.6nm1μm,0.8s	**6.42**	**112**	P	**Pn**	**07 34 28.6**	**+3.5**
KGM	**Kluang**	**6.44**	**22**	P	**Pn**	**07 34 26.5**	**+1.1**
PSI	**Prapat**	**7.02**	**344**	Pn	**Pn**	**07 34 30.9**	**-2.5**
PSI				Sn	**Sn**	**07 35 42.2**	**-10**
PSI				Lg		07 36 30.7	
PSI				LR	LR	07 37 58.1	
PSI	**Prapat** 12nm,0.3s,baz=161,slow=6.6,SNR=23	**7.02**	**344**	P	**Pn**	**07 34 30.9**	**-2.5**
PSI				Sn	**Sn**	**07 35 42.2**	**-10**
PSI	1.6nm,0.3s,baz=28,slow=19,SNR=2.0 baz=157,slow=17,SNR=2.1			Lg		07 36 30.7	
PSI				LR	LR	07 37 58.1	
PSI	**Prapat** comp=Z,18μm,20.5s,baz=146,slow=45	**7.02**	**344**	P	**Pn**	**07 34 30.9**	**-2.5**
PSI						07 35 42.2	
FRIM	**Kepong**	**7.21**	**6**	P	**Pn**	**07 34 36.0**	**-0.1**
LEM	**Lembang** 1.7nm6μm324nm,1.0s	**7.28**	**113**	P	**Pn**	**07 34 37.9**	**+1.0**
CISI	**Cisompet, Garu** 2.1nm562nm,0.6s	**7.76**	**118**	P	**Pn**	**07 34 41.3**	**-2.2**
TPTI	3μm208nm,0.6s	**8.09**	**333**	P	**Pn**	**07 34 47.8**	**-0.3**
IPM	**Ipoh**	**8.41**	**1**	P	**Pn**	**07 34 52.9**	**+0.4**
COCO	**West Island**	**9.08**	**206**	*e*Pn	**Pn**	**07 34 56.7**	**-4.9**
KULM	**Kulim** 343nm,1.3s	**9.22**	**359**	*e*Pn	**Pn**	**07 35 03.9**	**+0.3**
KULM	**Kulim**	**9.22**	**359**	P	**Pn**	**07 35 04.0**	**+0.5**
BJII	**Banjamegara** 105nm,1.6s	**9.39**	**111**	P	**Pn**	**07 35 07.1**	**+1.1**
SMRI	**Semarang** 227nm,1.1s	**9.99**	**108**	P	**Pn**	**07 35 17.0**	**+2.8**
KSM	**Kuching** 21nm,0.8s	**10.87**	**60**	*e*Pn	**Pn**	**07 35 31.5**	**+5.2**
PWJI	**Pagerwojo** 83nm,0.9s	**11.58**	**111**	P	**Pn**	**07 35 40.0**	**+4.1**
SBUM	**Sibu**	**13.01**	**61**	P	**Pn**	**07 35 58.7**	**+3.2**
JAGI	**Jajag, Banyuwa** 112nm,0.8s	**13.92**	**109**	P	**Pn**	**07 36 11.1**	**+3.1**
BTM	**Bintulu**	**14.13**	**60**	P	**Pn**	**07 36 14.1**	**+3.2**
KKM	**Kota Kinabalu** 309nm,1.5s	**18.27**	**57**	*e*P	**Pn**	**07 37 03.7**	**-0.3**
KKM	**Kota Kinabalu**	**18.27**	**57**	P	**Pn**	**07 37 03.8**	**-0.2**
KAPI	**Kappang** 82nm,0.9s	**18.84**	**94**	*e*P	**Pn**	**07 37 11.1**	**+0.1**
TSM	**Tawau**	**18.87**	**64**	P	**Pn**	**07 37 11.4**	**+0.1**
SDKM	**Sandakan**	**18.89**	**60**	P	**Pn**	**07 37 11.0**	**-0.5**
TTSI	**Tana Toraja** 2μm98nm,1.3s	**18.93**	**88**	P	**Pn**	**07 37 13.5**	**+1.5**
PCI	**Palu** 6μm364nm,1.6s	**19.18**	**81**	P	**Pn**	**07 37 15.6**	**+0.5**
BKSI	**Bulukumba** 2μm125nm,0.9s	**19.23**	**95**	P	**Pn**	**07 37 14.7**	**-0.9**
KDM	**Kudat**	**19.26**	**56**	P	**Pn**	**07 37 15.4**	**-0.6**
NST	**Nakhon Sawan** 50nm,1.0s	**19.55**	**358**	P	**Pn**	**07 37 17.0**	**-2.4**
MYLDM	**Lahad Datu**	**19.82**	**63**	P	**Pn**	**07 37 21.4**	**-1.2**
TOLI	**Toli-Toli** 214nm,1.1s	**20.54**	**76**	P	**P**	**07 37 32.0**	**+3.2**
BDT	**Bhumibol Dam** 40nm,1.0s,mb4.7	**21.18**	**355**	P	**P**	**07 37 34.0**	**-1.6**
KDI	**Kendari** 2μm142nm,1.5s,mb5.2	**21.69**	**91**	P	**P**	**07 37 43.9**	**+2.7**
LUWI	**Luwuk** 4μm266nm,1.7s,mb5.4	**22.06**	**83**	P	**P**	**07 37 48.9**	**+3.7**
CM31	**Chiang Mai Arr** 46nm,0.7s,mb5.0	**22.38**	**355**	*e*P	**P**	**07 37 47.6**	**-0.9**
CMAR	**Chiang Mai Arr** 69nm,0.9s,mb5.1,baz=187,slow=9.7,SNR=55	**22.38**	**355**	P	**P**	**07 37 47.1**	**-1.4**
CMAR	comp=Z,2μm,21.2s,MS4.6,baz=0.8,slow=37			LR	LR	07 46 28.3	
CHG	**Chiang Mai** 82nm,1.1s,mb5.1	**22.74**	**355**	⇑P	**P**	**07 37 51.1**	**-1.2**
CHTO	**Chiang Mai** 75nm,1.0s,mb5.1	**22.74**	**355**	*e*P	**P**	**07 37 51.0**	**-1.2**
CHTO	**Chiang Mai** comp=Z,75nm,1.0s,mb5.1	**22.74**	**355**	*e*P	**P**	**07 37 51.0**	**-1.3**
CHTO				pmax	pmax		
CHRT	**Chiangrai** comp=Z,645nm,1.1s,mb6.0	**23.73**	**357**	⇑P	**P**	**07 38 00.0**	**-2.3**
QIZ	**Qiongzhong**	**24.51**	**21**	P	**P**	**07 38 08.7**	**-0.8**
QIZ				pP		07 38 18.0	
QIZ				S	**S**	**07 42 31.3**	**+2.9**
QIZ	comp=Z,120nm,1.5s,mb5.2			pmax	pmax		
QIZ	comp=Z,1μm,2.8s,mb5.9			pmax	pmax		
QIZ	comp=N,2μm,12.1s,MS5.0			LR	LR		
QIZ	comp=E,2μm,12.1s,MS5.0			LR	LR		
QIZ	comp=Z,3μm,20.0s			LR	LR		
QIZ	**Qiongzhong** comp=Z,293nm,1.5s,mb5.6	**24.51**	**21**	*e*P	**P**	**07 38 08.8**	**-0.7**
LBMI	**Labuha** comp=Z,2μmcomp=Z,135nm,0.9s,mb5.5	**26.80**	**84**	P	**P**	**07 38 31.1**	**+0.7**
TGY	**Tagaytay City** comp=Z,122nm,0.3s,mb5.9,baz=156,slow=17,SNR=4.5	**26.81**	**48**	P	**P**	**07 38 29.0**	**-1.4**
TNTI	**Ternate** comp=Z,84nm,1.0s,mb5.2	**26.89**	**80**	P	**P**	**07 38 28.3**	**-2.9**
FITZ	**Fitzroy Crossi** comp=Z,38nm,0.8s,mb5.1	**28.00**	**122**	*e*P	**P**	**07 38 40.1**	**-0.9**
FITZ	**Fitzroy Crossi** comp=Z,36nm,1.0s,mb5.0	**28.00**	**122**	*e*P	**P**	**07 38 39.9**	**-1.2**
FITZ	**Fitzroy Crossi** comp=Z,14nm,0.8s,mb4.6,baz=286,slow=4.6,SNR=21	**28.00**	**122**	P	**P**	**07 38 40.1**	**-0.9**
FITZ	comp=Z,1μm,21.4s,MS4.4,baz=312,slow=37			LR	LR	07 50 00.4	
FITZ	**Fitzroy Crossi** comp=Z,74nm,1.4s,mb5.1	**28.00**	**122**	P	**P**	**07 38 40.6**	**-0.4**
KMI	**Kunming**	**28.99**	**3**	P	**P**	**07 38 50.9**	**+1.2**
KMI				pP	pP	07 39 03.0	+4.6
KMI				PP	PP	07 39 48.0	-7.6
KMI				S	**S**	**07 43 41.5**	**+2.4**
KMI				SS	SS	07 45 12.5	-30
KMI	comp=Z,32nm,1.0s,mb5.0			pmax	pmax		
KMI	comp=Z,480nm,4.2s			pmax	pmax		
KMI	comp=N,5μm,15.1s,MS5.3			LR	LR		
KMI	comp=E,4μm,15.1s,MS5.3			LR	LR		
KMI	comp=Z,5μm,14.6s,MS5.2			LR	LR		
GZH	**Guangzhou**	**29.53**	**24**	P	**P**	**07 39 00.4**	**+5.8**
GZH				S	**S**	**07 43 57.8**	**+10**
GZH	comp=N,3μm,15.6s,MS5.2			LR	LR		
GZH	comp=E,4μm,13.9s,MS5.2			LR	LR		
KNA	**Kununurra**	**29.81**	**115**	P	**P**	**07 38 56.4**	**-0.7**
SHL	**Shillong**	**30.65**	**344**	*e*PKP	**P**	**07 39 04.0**	**-0.4**
SHL				*i*S	**S**	**07 44 04.0**	**-1.1**
GYA	**Guiyang**	**30.78**	**10**	⇓P	**P**	**07 39 06.0**	**+0.4**
GYA				PP	PP	07 40 07.6	-7.9
GYA				PcP	PcP	07 42 02.9	+0.2
GYA				S	**S**	**07 44 05.6**	**-1.5**
GYA				SS	SS	07 45 49.6	-30
GYA	comp=Z,50nm,0.9s,mb5.3			pmax	pmax		
GYA	comp=Z,790nm,10.6s			pmax	pmax		
GYA	comp=N,2μm,18.9s,MS5.3			LR	LR		
GYA	comp=E,6μm,18.3s,MS5.3			LR	LR		
GYA	comp=Z,5μm,14.0s,MS5.3			LR	LR		
KAKA	**Kakadu** comp=Z,22nm,0.6s,mb5.2	**32.37**	**107**	*e*P	**P**	**07 39 17.4**	**-2.4**
KAKA	**Kakadu** comp=Z,61nm,0.6s,mb5.6	**32.37**	**107**	*e*P	**P**	**07 39 17.1**	**-2.7**
NWAO	**Narrogin (SRO)** comp=Z,2μm,19.6s,MS4.9,baz=329,slow=35	**32.60**	**154**	LR	LR	07 52 02.3	
NGP	**Nagpur**	**32.89**	**320**	*e*PKP	**P**	**07 39 23.4**	**-0.8**
ODAN	**Odare** comp=Z,275nm,1.1s,mb6.1	**33.32**	**338**	*e*P	**P**	**07 39 28.8**	**+0.9**
QZH	**Quanzhou**	**33.52**	**30**	⇑*i*P	**P**	**07 39 27.4**	**-2.2**
QZH				S	**S**	**07 44 53.1**	**+3.2**
QZH	comp=N,3μm,13.0s			LR	LR		
QZH	comp=E,5μm,18.4s			LR	LR		
QZH	comp=Z,4μm,13.0s,MS5.3			LR	LR		
TAPN	**Taplejung** comp=Z,402nm,0.9s,mb6.3	**33.65**	**339**	*e*P	**P**	**07 39 32.1**	**+1.4**
RAMN	**Ramite**	**33.71**	**337**	*e*P	**P**	**07 39 32.7**	**+1.4**
JIRN	**Jiri** comp=Z,253nm,0.9s,mb6.2	**34.51**	**337**	*e*P	**P**	**07 39 39.4**	**+1.2**
PKI	**Pulchoki**	**34.74**	**335**	*e*P	**P**	**07 39 41.2**	**+1.0**
LSA	**Lhasa**	**34.77**	**345**	P	**P**	**07 39 37.0**	**-3.4**
LSA				S	**S**	**07 45 11.9**	**+2.8**
LSA	comp=Z,6μm,17.6s,MS5.4			LR	LR		
LSA	**Lhasa** comp=Z,104nm,1.4s,mb5.6	**34.77**	**345**	*e*P	**P**	**07 39 41.6**	**+1.2**
LSA				*e*	pP	07 39 50.8	+1.6
LSA	**Lhasa**	**34.77**	**345**	*e*P	**P**	**07 39 41.6**	**+1.2**
LSA				*e*	pP	07 39 50.8	+1.7
LSA	comp=Z,104nm,1.4s,mb5.6			pmax	pmax		
CD2	**Chengdu**	**34.81**	**4**	⇑P	**P**	**07 39 40.1**	**-0.7**
CD2				PP	PP	07 40 57.9	-2.2
CD2				PcP	PcP	07 42 13.1	-0.7
CD2				S	**S**	**07 45 07.6**	**-2.1**
CD2				PcS	PcS	07 45 58.6	-1.9
CD2				SS	SS	07 47 21.9	-20
CD2				ScS	ScS	07 49 56.8	-3.9
CD2	comp=Z,130nm,1.1s,mb5.8			pmax	pmax		
CD2	comp=Z,550nm,4.2s			pmax	pmax		
CD2	comp=N,5μm,17.6s,MS5.5			LR	LR		
CD2	comp=E,8μm,19.6s,MS5.5			LR	LR		
CD2	comp=Z,5μm,16.0s,MS5.4			LR	LR		
GUN	**Gumba**	**34.85**	**336**	*e*P	**P**	**07 39 42.7**	**+1.5**
DMN	**Daman** comp=Z,104nm,1.1s,mb5.7	**34.90**	**335**	*e*P	**P**	**07 39 42.6**	**+1.0**
KKN	**Kakani** comp=Z,81nm,0.7s,mb5.7	**34.99**	**335**	*e*P	**P**	**07 39 43.3**	**+0.9**
ENH	**Enshi** comp=Z,117nm,0.8s,mb5.9	**35.05**	**13**	*e*P	**P**	**07 39 41.9**	**-1.0**
ENH				*e*	pP	07 39 49.7	-1.8
GKN	**Gorkha** comp=Z,160nm,1.1s,mb5.9	**35.45**	**335**	*e*P	**P**	**07 39 46.8**	**+0.5**
KOLN	**Koldanda** comp=Z,81nm,0.7s,mb5.8	**35.70**	**333**	*e*P	**P**	**07 39 49.7**	**+1.2**
WRAB	**Tennant Creek** comp=Z,152nm,0.9s,mb5.9,SNR=6.8	**36.26**	**119**	P	**P**	**07 39 53.9**	**+0.5**
WRAB	**Tennant Creek** comp=Z,21nm,0.7s,mb5.2	**36.26**	**119**	*e*P	**P**	**07 39 52.1**	**-1.4**
WRAB	**Tennant Creek**	**36.26**	**119**	*e*P	**P**	**07 39 52.1**	**-1.3**
WRAB	comp=Z,21nm,0.7s,mb5.2			pmax	pmax		
WHN	**Wuhan**	**36.67**	**20**	P	**P**	**07 39 57.0**	**+0.3**
WHN				S	**S**	**07 45 38.9**	**+0.6**
WHN	comp=Z,110nm,1.1s,mb5.6			pmax	pmax		
WHN	comp=N,6μm,13.2s,MS5.6			LR	LR		
WHN	comp=E,3μm,12.1s,MS5.6			LR	LR		
WHN	comp=Z,9μm,13.9s,MS5.7			LR	LR		
FORT	**Forrest** comp=Z,11nm,0.7s,mb4.8	**36.97**	**139**	*e*P	**P**	**07 39 54.9**	**-4.4**
ASAR	**Alice Springs** comp=Z,5.4nm,0.7s,mb4.5,baz=294,slow=8.2,SNR=76	**37.39**	**125**	P	**P**	**07 40 02.0**	**-1.0**
XAN	**Xi'an**	**38.58**	**11**	P	**P**	**07 40 11.4**	**-1.4**
XAN				S	**S**	**07 46 06.6**	**-0.5**
XAN	comp=Z,47nm,1.2s,mb5.1			pmax	pmax		
XAN	comp=Z,190nm,12.1s			pmax	pmax		
XAN	comp=N,3μm,12.4s			LR	LR		
XAN	comp=E,580nm,19.9s			LR	LR		
XAN	comp=Z,1μm,13.7s,MS5.0			LR	LR		
PTH	**Pithoragarh**	**38.79**	**331**	*e*PKP	**P**	**07 40 15.8**	**+1.1**
SONA	**Sohna**	**39.40**	**326**	*e*PKP	**P**	**07 40 19.8**	**0.0**
SONA	comp=Z,30nm,1.2s,mb4.9			AMb	AMB	07 40 29.7	
BISR	**Bishrakh**	**39.45**	**327**	*e*PKP	**P**	**07 40 19.8**	**-0.4**
BISR	comp=Z,126nm,0.7s,mb5.8			AMb	AMB	07 40 28.9	
AYAN	**Aya Nagar**	**39.55**	**326**	*e*PKP	**P**	**07 40 20.9**	**-0.2**
AYAN	comp=Z,34nm,1.0s,mb5.0			AMb	AMB	07 40 30.5	
KUDL	**Kundal**	**39.65**	**325**	*e*PKP	**P**	**07 40 20.6**	**-1.3**
KUDL	comp=Z,32nm,1.0s,mb5.0			AMb	AMB	07 40 30.8	
NDI	**New Delhi** comp=Z,65nm,0.8s,mb5.4	**39.66**	**326**	*e*PKP	**P**	**07 40 21.7**	**-0.2**
NDI				AMb	AMB	07 40 30.6	
NJ2	**Nanjing**	**39.71**	**24**	*e*P	**P**	**07 40 22.4**	**+0.1**
NJ2				PP	PP	07 41 57.5	+3.6
NJ2				S	**S**	**07 46 23.1**	**-1.1**
NJ2	comp=Z,20nm,0.7s,mb5.0			pmax	pmax		
NJ2	comp=Z,360nm,4.4s			pmax	pmax		
NJ2	comp=N,3μm,13.4s,MS5.4			LR	LR		
NJ2	comp=E,3μm,15.8s,MS5.4			LR	LR		
SSE	**Sheshan**	**39.91**	**28**	P	**P**	**07 40 24.3**	**+0.3**
SSE	comp=Z,24nm,0.7s,mb5.0			pmax	pmax		
SSE	comp=Z,390nm,6.5s			pmax	pmax		
SSE	comp=N,1μm,14.5s,MS5.2			LR	LR		
SSE	comp=E,2μm,15.3s,MS5.2			LR	LR		
SSE	comp=Z,1μm,19.1s,MS4.7			LR	LR		
JOSI	**Joshimath**	**39.94**	**331**	*e*PKP	**P**	**07 40 25.0**	**+0.7**
JOSI	comp=Z,534nm,1.4s,mb6.1			AMb	AMB	07 40 41.5	
LZH	**Lanzhou**	**39.96**	**4**	⇑P	**P**	**07 40 25.3**	**+1.0**
LZH				PP	PP	07 42 02.9	+6.3
LZH				S	**S**	**07 46 30.0**	**+2.2**
LZH				SS	SS	07 49 22.8	-2.7
LZH	comp=Z,210nm,1.0s,mb5.8			pmax	pmax		
LZH	comp=Z,840nm,4.0s			pmax	pmax		
LZH	comp=N,2μm,14.0s			LR	LR		
LZH	comp=Z,3μm,16.2s,MS5.2			LR	LR		
KHET	**Khetri**	**39.99**	**324**	*e*PKP	**P**	**07 40 24.6**	**-0.1**
KHET	comp=Z,20nm,1.9s,mb4.5			AMb	AMB	07 40 33.2	
KLP	**Kalpa**	**41.38**	**330**	*e*PKP	**P**	**07 40 36.5**	**+0.4**
KLP	comp=Z,26nm,1.0s,mb4.8			AMb	AMB	07 40 40.5	
TIY	**Taiyuan**	**42.85**	**14**	*e*P	**P**	**07 40 46.9**	**-1.2**
TIY				S	**S**	**07 47 05.7**	**-5.1**
TIY	comp=Z,340nm,6.9s			pmax	pmax		
TIY	comp=N,1μm,11.9s,MS5.2			LR	LR		
TIY	comp=E,2μm,16.0s,MS5.2			LR	LR		
TIY	comp=Z,2μm,13.3s,MS5.1			LR	LR		
GTA	**Gaotai**	**43.19**	**359**	⇑P	**P**	**07 40 51.0**	**+0.2**
GTA				pP	pP	07 41 01.7	+2.1
GTA				S	**S**	**07 47 16.2**	**+0.5**
GTA				SS	SS	07 50 23.2	-6.2
GTA	comp=Z,51nm,1.6s,mb5.0			pmax	pmax		
GTA	comp=Z,590nm,3.8s			pmax	pmax		
GTA	comp=N,2μm,15.3s,MS5.4			LR	LR		
GTA	comp=E,3μm,14.7s,MS5.4			LR	LR		
GTA	comp=Z,4μm,15.0s,MS5.4			LR	LR		
BTO	**Baotou**	**45.16**	**10**	*e*P	**P**	**07 41 04.9**	**-1.6**
HHC	**Hu-ho-hao-te**	**45.68**	**11**	*e*P	**P**	**07 41 11.4**	**+0.8**
HHC				PP	PP	07 42 58.7	+0.6
HHC				PcS	PcS	07 46 41.4	-1.1
HHC				S	**S**	**07 47 51.5**	**-0.3**
HHC				ScS	ScS	07 51 01.3	-3.5
HHC				SS	SS	07 51 08.4	-8.1
HHC	comp=Z,83nm,1.2s,mb5.5			pmax	pmax		
HHC	comp=Z,410nm,4.8s			pmax	pmax		
HHC	comp=N,4μm,13.6s,MS5.5			LR	LR		
HHC	comp=E,750nm,11.2s,MS5.5			LR	LR		
HHC	comp=Z,3μm,12.7s,MS5.5			LR	LR		
BJT	**Baijiatuau** comp=Z,115nm,1.2s,mb5.7	**45.99**	**16**	*e*P	**P**	**07 41 13.2**	**+0.1**
BJT				*e*	pP	07 41 20.6	-1.4
BJT	**Baijiatuau**	**45.99**	**16**	*e*P	**P**	**07 41 13.3**	**+0.2**
BJT				*e*	pP	07 41 20.6	-1.4
BJT	comp=Z,115nm,1.2s			pmax	pmax		
BJI	**Beijing**	**46.01**	**16**	P	**P**	**07 41 12.7**	**-0.6**
BJI				S	**S**	**07 47 57.4**	**+0.8**
BJI	comp=Z,64nm,0.9s,mb5.5			pmax	pmax		
BJI	comp=Z,470nm,7.0s			pmax	pmax		
BJI	comp=N,570nm,21.9s,MS5.2			LR	LR		
BJI	comp=E,3μm,21.1s,MS5.2			LR	LR		
BJI	comp=Z,740nm,23.6s,MS4.6			LR	LR		
PMG	**Port Moresby**	**46.25**	**99**	⇓*e*P	**P**	**07 41 15.5**	**-0.1**
PMG	comp=Z,64nm,1.7s			pmax	pmax		
DL2	**Dalian**	**46.79**	**22**	⇑*i*P	**P**	**07 41 19.0**	**-0.4**
DL2				S	**S**	**07 48 10.0**	**+2.2**
DL2	comp=Z,20nm,1.1s,mb5.0			pmax	pmax		
DL2	comp=Z,300nm,6.5s			pmax	pmax		
DL2	comp=N,710nm,15.1s,MS4.9			LR	LR		
DL2	comp=E,890nm,18.9s,MS4.9			LR	LR		
DL2	comp=Z,1μm,17.3s,MS4.9			LR	LR		
CTA	**Charters Tower** comp=Z,22nm,1.1s,mb5.0	**46.98**	**114**	*e*P	**P**	**07 41 19.9**	**-1.4**
CTAO	**Charters Tower** comp=Z,44nm,1.1s,mb5.3	**46.98**	**114**	*e*P	**P**	**07 41 20.2**	**-1.1**
CTAO	comp=Z,44nm,1.1s,mb5.3			pmax	pmax		
STKA	**Stephens Creek** comp=Z,24nm,1.4s,mb4.9	**47.19**	**131**	*e*P	**P**	**07 41 22.0**	**-0.7**
STKA	**Stephens Creek** comp=Z,6.1nm,1.1s,mb4.4	**47.19**	**131**	*e*P	**P**	**07 41 22.5**	**-0.2**
STKA				*e*	pP	07 41 30.6	-1.0
STKA	**Stephens Creek** comp=Z,10nm,0.7s,mb4.9,baz=302,slow=7.8,SNR=23	**47.19**	**131**	P	**P**	**07 41 22.2**	**-0.5**
STKA	comp=Z,2μm,21.6s,MS5.1,baz=300,slow=38			LR	LR	08 02 36.3	
KSRS	**Korea Array** comp=Z,24nm,1.0s,mb5.2,baz=217,slow=8.1,SNR=79	**48.30**	**29**	P	**P**	**07 41 30.2**	**-1.0**
KSRS	comp=Z,656nm,18.6s,MS4.6,baz=101,slow=40			LR	LR	08 05 04.9	
KBL	**Kabul** comp=Z,16nm,0.9s,mb5.0	**48.65**	**325**	*e*P	**P**	**07 41 32.8**	**-1.1**
KBL	**Kabul** comp=Z,16nm,0.9s,mb5.0	**48.65**	**325**	*e*P	**P**	**07 41 32.8**	**-1.1**
KBL				pmax	pmax		
KSH	**Kashi**	**48.99**	**334**	⇑*i*P	**P**	**07 41 35.8**	**-0.7**
KSH				*e*pP	pP	07 41 45.8	+0.4
KSH				*e*PcP	PcP	07 43 01.2	+1.0
KSH				*e*PP	PP	07 43 28.3	-1.9
KSH				S	**S**	**07 48 33.9**	**-5.1**
KSH				*e*SS	SS	07 52 00.0	-10
KSH	comp=Z,19nm,0.8s,mb5.2			pmax	pmax		
KSH	comp=Z,180nm,3.9s			pmax	pmax		
KSH	comp=N,1μm,16.3s			LR	LR		
KSH	comp=E,1μm,22.0s			LR	LR		
KSH	comp=Z,1μm,19.1s,MS4.8			LR	LR		
WMQ	**Urumqi**	**49.05**	**347**	P	**P**	**07 41 38.4**	**+1.6**
WMQ				pP	pP	07 41 48.3	+2.5
WMQ				PcP	PcP	07 43 02.4	+2.1
WMQ				PP	PP	07 43 32.0	+1.3
WMQ				S	**S**	**07 48 39.4**	**-0.2**
WMQ				SS	SS	07 52 06.0	-5.1
WMQ	comp=Z,92nm,0.8s,mb5.9			pmax	pmax		
WMQ	comp=Z,760nm,5.0s			pmax	pmax		
WMQ	comp=N,740nm,22.5s,MS4.9			LR	LR		
WMQ	comp=E,1μm,20.7s,MS4.9			LR	LR		
WMQ	comp=Z,840nm,23.4s,MS4.7			LR	LR		
SNY	**Shenyang**	**50.06**	**22**	⇑P	**P**	**07 41 42.9**	**-1.7**
SNY				S	**S**	**07 48 55.9**	**+2.0**
SNY	comp=Z,24nm,1.3s,mb5.1			pmax	pmax		
SNY	comp=Z,310nm,12.0s			pmax	pmax		
SNY	comp=E,2μm,15.5s			LR	LR		
SNY	comp=Z,2μm,14.7s,MS5.3			LR	LR		
CBIJ	**Chichi jima** comp=Z,77nm,0.9s,mb5.7,baz=94,slow=20,SNR=6.3	**50.45**	**50**	P	**P**	**07 41 45.5**	**-2.3**
CBIJ	comp=Z,412nm,20.0s,MS4.4,baz=119,slow=36			LR	LR	08 02 32.6	
ULHL	**Ulahol** SNR=22	**51.17**	**337**	P	**P**	**07 41 54.1**	**+1.2**
KZA	**Kyzart** SNR=20	**51.43**	**336**	P	**P**	**07 41 56.5**	**+1.6**
SONM	**Songino Array** comp=Z,62nm,0.9s,mb5.5,baz=186,slow=8.5,SNR=234	**51.83**	**5**	P	**P**	**07 41 58.3**	**+0.5**
UCH	**Uchtor** SNR=15	**51.86**	**335**	P	**P**	**07 41 59.2**	**+1.2**
UCH	**Uchtor** comp=Z,13nm,0.7s,mb5.0	**51.86**	**335**	*e*P	**P**	**07 41 58.9**	**+0.9**
UCH				*e*		07 42 12.7	
ULN	**Ulaanbaatar** comp=Z,40nm,0.8s,mb5.4	**51.92**	**5**	*e*P	**P**	**07 41 58.5**	**+0.1**
ULN	**Ulaanbaatar** comp=Z,40nm,0.8s,mb5.4	**51.92**	**5**	*e*P	**P**	**07 41 58.5**	**+0.1**
ULN				pmax	pmax		
TKM2	**Tokmak 2**	**51.99**	**337**	P	**P**	**07 41 59.3**	**+0.2**

SNR=34
TKM2 Tokmak 2 51.99 337 *e*P P **07 41 59.3 +0.3**
comp=Z,36nm,0.8s,mb5.4
TKM2 Tokmak 2 51.99 337 *e*P P **07 41 59.3 +0.2**
TKM2 pmax pmax
comp=Z,36nm,0.8s,mb5.3
KBK Karagaybulak 52.03 336 P P **07 42 01.1 +1.7**
SNR=10
AML Almayashu 52.12 334 *e*P P **07 42 01.4 +1.3**
comp=Z,38nm,1.1s,mb5.2
AAK Ala-Archa 52.20 335 P P **07 42 02.4 +1.8**
comp=Z,65nm,1.3s,mb5.4,SNR=6.5
AAK Ala-Archa 52.20 335 *e*P P **07 42 01.8 +1.2**
comp=Z,23nm,1.1s,mb5.0
AAK Ala-Archa 52.20 335 P P **07 42 00.3 -0.3**
comp=Z,1.6nm,0.3s,mb4.4,baz=243,slow=8.7,SNR=8.8
AAK LR LR 08 06 26.5
comp=Z,2μm,21.4s,MS5.0,baz=143,slow=39
AAK Ala-Archa 52.20 335 *e*P P **07 42 01.8 +1.2**
AAK pmax pmax
comp=Z,23nm,1.1s,mb5.0
CN2 Changchun 52.46 22 *e*P P **07 42 01.4 -1.1**
CN2 *e*S S **07 49 26.9 -0.1**
CN2 pmax pmax
comp=Z,30nm,1.0s,mb5.2
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,1μm,18.0s,MS5.1
CN2 LR LR
comp=E,1μm,18.0s,MS5.1
EKS2 Erkin-Say 52.52 335 P P **07 42 04.2 +1.2**
SNR=17
EKS2 Erkin-Say 52.52 335 *e*P P **07 42 03.5 +0.4**
comp=E,26nm,0.7s,mb5.3
EIDS Eidsvold 52.62 119 *e*P P **07 42 04.8 +0.7**
comp=E,50nm,1.6s,mb5.2
USP Ospenovka 52.72 336 P P **07 42 04.5 0.0**
SNR=16
MK31 Makanchi Array 53.17 344 *e*P P **07 42 07.5 -0.2**
MK31 Makanchi Array 53.17 344*ce*P P **07 42 07.5 -0.2**
MK31 pmax pmax
comp=Z,51nm,0.8s,mb5.5
MKAR Makanchi Array 53.17 344 P P **07 42 07.4 -0.3**
comp=Z,49nm,0.8s,mb5.5,baz=150,slow=7.4,SNR=301
MKAR LR LR 08 09 27.6
comp=Z,506nm,18.1s,MS4.6,baz=356,slow=41
MKAR Makanchi Array 53.17 344*ce*P P **07 42 07.4 -0.3**
MKAR pmax pmax
comp=Z,49nm,0.8s
MAJO Matsushiro 53.28 38 *e*P P **07 42 07.1 -1.6**
comp=Z,61nm,1.4s,mb5.3
MAJO Matsushiro 53.28 38 *e*P P **07 42 07.1 -1.6**
MAJO pmax pmax
comp=Z,61nm,1.4s,mb5.3
MAT Matsushiro 53.28 38 P P **07 42 07.2 -1.5**
MJAR Matsushiro Arr 53.28 38 P P **07 42 06.8 -2.0**
comp=Z,16nm,0.9s,mb4.9,baz=218,slow=8.0,SNR=36
MJAR LR LR 08 04 51.0
comp=Z,294nm,20.9s,MS4.3,baz=240,slow=36
KK31 Karatay Array 54.31 333*ce*P P **07 42 15.6 -0.6**
KK31 pmax pmax
comp=Z,2.0nm,0.3s,mb4.5
OPO Ambohidratompo 54.39 250 P P **07 42 18.8 +1.6**
comp=Z,3.2nm,0.9s,mb4.3,baz=38,slow=5.6,SNR=4.2
ARMA Armidale 54.55 125 *e*P P **07 42 20.2 +2.0**
MDJ Mudanjiang 54.79 25 P P **07 42 19.1 -0.5**
MDJ PcS PcS 07 47 21.1 -0.3
MDJ S S **07 50 00.9 +2.3**
MDJ pmax pmax
comp=Z,23nm,1.1s,mb5.1
MDJ pmax pmax
comp=Z,370nm,6.7s
MDJ LR LR
comp=N,500nm,21.3s
MDJ LR LR
comp=E,430nm,14.2s
MDJ LR LR
comp=Z,450nm,17.0s,MS4.6
MDJ Mudanjiang 54.79 25 *e*P P **07 42 19.6 0.0**
comp=Z,24nm,0.9s,mb5.2
TLY Talaya 55.50 2 P P **07 42 25.4 +0.8**
comp=Z,143nm,0.8s,mb6.0,SNR=12
TLY Talaya 55.50 2 *e*P P **07 42 24.8 +0.2**
comp=Z,171nm,2.0s,mb5.7
TLY Talaya 55.50 2*c i*P P **07 42 24.6 0.0**
TLY *e*PPP **07 45 37.7**
TLY *e*S S **07 50 09.6 +1.8**
TLY pmax pmax
comp=Z,72nm,1.9s,mb5.4
TLY MLR MLR
comp=Z,3μm,16.0s,MS5.5
IRK Irkutsk 56.09 3 *e*P P **07 42 29.0 +0.2**
IRK *e* pP 07 42 37.1 -0.8
IRK pmax pmax
comp=Z,65nm,1.8s,mb5.4
ABKT Ailbek 57.53 320 P P **07 42 39.3 0.0**
comp=Z,99nm,0.8s,mb5.9,SNR=6.3
KURK Kurchatov 57.75 343 P P **07 42 40.0 -0.6**
comp=Z,378nm,0.9s,mb6.4,SNR=32
KURK Kurchatov 57.75 343 *e*P P **07 42 40.7 +0.2**
comp=Z,62nm,0.9s,mb5.6
KURK Kurchatov 57.75 343*c i*P P **07 42 39.7 -0.9**
KURK pmax pmax
comp=Z,79nm,1.0s,mb5.7
ZAA0 Zalesovo Array 59.27 349 *e*P P **07 42 50.4 -0.7**
ZALV Zalesovo Beam 59.27 349 P P **07 42 50.4 -0.7**
ZALV LR LR 08 11 46.4
ZALV Zalesovo Beam 59.27 349 P P **07 42 50.4 -0.7**
comp=Z,59nm,0.8s,mb5.7,baz=178,slow=5.1,SNR=142
ZALV LR LR 08 11 46.4
comp=Z,723nm,19.1s,MS4.8,baz=347,slow=40
KLR Kul'dur 59.39 23 *e*P P **07 42 47.0 -5.1**
KLR *e* pP 07 42 55.2 -6.0
KLR pmax pmax
comp=E,56nm,1.8s
KLR pmax pmax
comp=Z,120nm,1.8s,mb5.6
ATD Arta Tunnel 59.74 286 LR LR 08 06 11.8
comp=Z,539nm,18.1s,MS4.7,baz=193,slow=34
HABR Khabarovsk 60.15 26 *e*P P **07 42 53.7 -3.6**
HABR *e*PP pP 07 43 03.8 -2.7
HABR 07 45 06.6
HABR *e*S S **07 51 04.4 -4.4**
HABR *e**SS sS 07 51 20.7 -3.2
HABR *e* 07 52 41.4
HABR *e*SS SS 07 55 02.4 -4.0
HABR pmax pmax
comp=N,76nm,3.1s
HABR pmax pmax
comp=Z,136nm,2.3s,mb5.6
HABR pmax pmax
comp=E,62nm,2.3s
HABR MLR MLR
comp=Z,2μm,20.0s,MS5.1
RDF Al-Radifah 60.72 306 *e*P P **07 43 00.4 -1.2**
RDF AMb AMB 07 43 03.9
comp=Z,28nm,1.2s,mb5.3
ASAJ Asahikawa 60.76 33 LR LR 08 12 29.4
comp=Z,808nm,19.2s,MS4.9,baz=177,slow=39
NAY Al-Naaiem 61.10 306 *e*P P **07 43 03.3 -0.9**
NAY AMb AMB 07 43 15.7
comp=Z,16nm,0.8s,mb5.2
MIB Mutribah 61.24 307 *e*P P **07 43 04.4 -0.8**
MIB AMb AMB 07 43 16.4
comp=Z,41nm,0.9s,mb5.6
VOSK Vostochnaya 61.89 340 P P **07 43 07.9 -1.1**
VOSK pmax pmax
comp=Z,32nm,1.1s,mb5.4
BVAR Borovoye Array 62.34 340 P P **07 43 10.8 -1.2**
comp=Z,10nm,0.6s,mb5.1,baz=144,slow=8.5,SNR=63
BRVK Borovoye 62.40 340 P P **07 43 11.7 -0.8**
comp=Z,122nm,0.8s,mb6.1,SNR=6.8
BRVK Borovoye 62.40 340 *e*P P **07 43 11.3 -1.1**
comp=Z,16nm,0.8s,mb5.2
BRVK Borovoye 62.40 340*c i*P P **07 43 11.0 -1.5**
BRVK pmax pmax
comp=Z,27nm,1.2s,mb5.2
CASY Casey 62.55 176 *e*P pP 07 43 20.3 -2.1
YSS Yuzh-Sakhalins 62.71 31 *e*P P **07 43 14.4 -0.3**
comp=Z,99nm,1.2s,mb5.8
YSS Yuzh-Sakhalins 62.71 31⇑*e*P P **07 43 13.5 -1.1**
YSS *e* pP 07 43 22.0 -1.8
ZRNK Zerenda 62.77 339 *i*P P **07 43 13.6 -1.3**
ZRNK pmax pmax
comp=Z,23nm,0.9s,mb5.3
KMBO Kilima Mbogo 63.61 271 LR LR 08 09 37.7
comp=Z,618nm,18.1s,MS4.8,baz=90,slow=35
CLNS Chul'man 63.70 14 *e*P P **07 43 20.4 -0.6**
CLNS pmax pmax
comp=Z,25nm,1.1s,mb5.2
CLNS pmax pmax
comp=N,12nm,1.0s
CLNS pmax pmax
comp=E,8.0nm,1.0s
AB31 Akbulak array 63.79 331*ce*P P **07 43 20.6 -1.2**
AB31 pmax pmax
comp=Z,23nm,0.7s,mb5.3
ABKAR Akbulak array 63.79 331 *e*P P **07 43 20.5 -1.3**
comp=Z,29nm,0.8s,mb5.4
BHD Baghdad 64.94 310 *ex* x 07 43 20.9
BHD *ex* x 07 51 58.0
AKTK Aktyubinsk 65.51 331 P P **07 43 32.7 -0.3**
AKTO Aktyubinsk 65.51 331 P P **07 43 32.7 -0.3**
comp=Z,4.6nm,0.8s,mb4.6,baz=138,slow=5.6,SNR=18
DZM Mont Dzumac 65.88 112 *e*S S 07 52 23.2 +1.6
comp=Z,924nm,26.8s
DZM *e*LR LR 08 03 26.8
comp=Z,2μm,24.1s
GNI Garni 67.56 316⇑*e*P P **07 43 45.2 -1.1**
GNI pmax pmax
comp=Z,25nm,1.2s
MAW Mawson 68.59 195 *e*P P **07 43 52.1 -0.2**
comp=Z,3.0nm,0.9s,mb4.2
MAW Mawson 68.59 195 P P **07 43 53.1 +0.8**
comp=Z,1.2nm,0.8s,baz=289,slow=11,SNR=3.1
MAW LR LR 08 08 30.7
comp=Z,878nm,18.2s,MS5.0,baz=30,slow=31
SVE Sverdlovsk 68.84 338⇑*e*P P **07 43 54.3 +0.3**
SVE pmax pmax
comp=Z,70nm,1.6s,mb5.3
SVE MLR MLR
comp=Z,2μm,22.0s,MS5.2
ZEI Tsey 69.29 319 *e*P P **07 43 57.1 0.0**
ZEI *e*S S 07 53 03.9 +2.1
ZEI pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
ARU Arti 69.37 336 *e*P P **07 43 57.1 -0.1**
ARU Arti 69.37 336*c i*P P **07 43 56.7 -0.5**
ARU *e*PPP 07 48 16.8
ARU S S 07 53 02.2 +0.1
ARU 07 53 49.4
ARU pmax pmax
comp=Z,41nm,1.7s,mb5.1
ARU MLR MLR
comp=Z,785nm,18.0s,MS5.0
YAK Yakutsk 69.44 14 *e*P P **07 43 56.4 -1.2**
comp=Z,85nm,0.9s,mb5.7
YAK *e* pP 07 44 04.4 -2.4
YAK Yakutsk 69.44 14*c i*P P **07 43 55.8 -1.8**
YAK pmax pmax
comp=Z,64nm,0.9s,mb5.5
YAK pmax pmax
comp=E,17nm,1.3s
YAK pmax pmax
comp=N,21nm,1.1s
YAK MLR MLR
comp=Z,3μm,18.0s,MS5.6
YAK MLR MLR
comp=E,1μm,16.0s,MS5.4
YAK MLR MLR
comp=N,2μm,20.0s,MS5.4
ASF Jabal al Asfar 70.46 306 LR LR 08 18 16.8
comp=N,886nm,18.0s,MS5.1,baz=340,slow=39
KIV Kislovodsk 70.61 319⇑*e*P P **07 44 05.5 +0.3**
KIV *e**PP pP 07 44 14.2 -0.3
KIV *e* 07 44 23.5
KIV *e* 07 46 39.7
KIV *e*S S 07 53 16.3 -0.9
KIV pmax pmax
comp=Z,63nm,2.5s,mb5.1
KIV MLR MLR
comp=Z,400nm,20.0s,MS4.7
MALT Malatya 71.32 313 *e*P P **07 44 10.3 +0.7**
comp=Z,4.0nm,0.6s,mb4.5
MALT *e* pP 07 44 18.1 -0.8
MMAI Mount Meron Ar 71.91 306 P P **07 44 13.6 +0.3**
comp=Z,0.9nm,0.3s,mb4.1,baz=96,slow=4.4,SNR=3.6
MMAI LR LR 08 15 39.0
comp=Z,1μm,20.2s,MS5.1,baz=130,slow=36
SOKR Solikamsk 72.22 338*c i*P P **07 44 14.6 +0.1**
SOKR pmax pmax
comp=Z,30nm,0.9s,mb5.2
RPZ Rata Peaks 72.97 134 LR LR 08 16 27.8
comp=Z,1μm,20.1s,MS5.3,baz=186,slow=36
PETK Petropavlovsk- 74.09 32 P P **07 44 23.9 -1.8**
comp=Z,4.3nm,0.6s,mb4.6,baz=204,slow=3.3,SNR=4.8
VRHR Novokhopersk 74.45 326 *e*P P **07 44 27.6 -0.3**
VRHR pmax pmax
comp=N,30nm,0.8s
VRHR pmax pmax
comp=E,20nm,0.8s
VRHR pmax pmax
comp=Z,40nm,0.8s,mb5.4
PET Petropavlovsk 74.56 32 *e*P P **07 44 27.9 -0.5**
PET pmax pmax
comp=Z,35nm,0.9s,mb5.3
LBTB Lobatse 74.99 245 LR LR 08 11 22.1
comp=Z,1μm,21.5s,MS5.1,baz=92,slow=31
BR131 Keskin Array S 75.30 313 *e*P P **07 44 32.5 -0.6**
comp=Z,7.2nm,0.8s,mb4.7
BR131 *e* pP 07 44 40.4 -2.1
BRTR Keskin Array B 75.30 313 P P **07 44 32.8 -0.3**
comp=Z,2.8nm,0.7s,mb4.3,baz=126,slow=6.3,SNR=17
BRTR LR LR 08 19 50.5
comp=Z,387nm,20.0s,MS4.7,baz=313,slow=38
BRTR Keskin Array B 75.30 313*ce*P P **07 44 32.7 -0.4**
BOSA Boshof 75.48 242 *e*P P **07 44 34.4 +0.1**
comp=Z,7.4nm,0.8s,mb4.7
BOSA *e* pP 07 44 42.4 -1.3
BOSA Boshof 75.48 242 P P **07 44 35.6 +1.3**
comp=Z,4.0nm,0.9s,mb4.3,baz=344,slow=4.2,SNR=3.6
BOSA LR LR 08 11 53.6
comp=Z,892nm,19.1s,MS5.1,baz=32,slow=31
BOSA Boshof 75.48 242 *e*P P **07 44 34.4 0.0**
BOSA *e* pP 07 44 42.4 -1.3
BOSA pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
VSR Storozhevoye 75.90 325 *e*P P **07 44 35.7 -0.5**
VSR *e* pP 07 44 43.6 -2.0
VSR pmax pmax
comp=N,20nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=E,10.0nm,0.3s
VSR MLR MLR
comp=N,130nm,23.0s,MS4.7
VSR MLR MLR
comp=E,410nm,23.0s,MS4.7
VSR MLR MLR
comp=Z,940nm,23.0s,MS5.0
URZ Urewera 76.73 128 LR LR 08 19 07.2
comp=Z,677nm,20.9s,MS4.9,baz=86,slow=36
SEY Seymchan 77.13 22*ce*P P **07 44 42.3 -0.7**
TIXI Tiksi 77.67 9 *e*P P **07 44 44.3 -1.5**
comp=Z,49nm,1.3s,mb5.3
TIXI Tiksi 77.67 9 *e*P P **07 44 43.6 -2.2**
TIXI *e* pP 07 44 52.4 -2.8
TIXI pmax pmax
comp=Z,33nm,1.1s,mb5.2
TIXI MLR MLR
comp=Z,1μm,19.0s,MS5.2
MOS Moscow 78.64 329 *e*P P **07 44 49.0 -2.5**
MOS *e* pP 07 44 58.8 -2.1
MOS *e*S S 07 54 42.1 -4.3
MOS pmax pmax
comp=Z,65nm,1.4s,mb5.4
OBN Obninsk 78.93 328⇓*i*P P **07 44 53.2 +0.1**
OBN *e* pP 07 45 01.1 -1.4
OBN *e* 07 47 52.4
OBN *e*S S 07 54 49.7 +0.1
OBN *e*SS SS 07 59 57.4 +2.1
OBN pmax pmax
comp=Z,41nm,1.7s,mb5.1
SUR Sutherland 79.49 238 LR LR 08 14 02.4
comp=Z,394nm,18.5s,MS4.8,baz=74,slow=31
KLMR Klimovskoe 79.99 334 *e*P P **07 44 58.4 -0.3**
KLMR pmax pmax
comp=Z,62nm,1.6s,mb5.3
KIS Kishinev 80.80 319 *e*P P **07 45 02.0 -1.4**
KIS *e* pP 07 45 11.0 -1.8
SBA Scott Base 81.15 169 *e*P P **07 45 06.1 +1.3**
comp=Z,11nm,1.2s,mb4.7
SBA *e* 07 45 12.3
SBA Scott Base 81.15 169 *e*P P **07 45 06.1 +1.4**
SBA *e* 07 45 12.3
SBA pmax pmax
comp=Z,11nm,1.2s,mb4.7
AKASG Malin Array Be 81.58 322 P P **07 45 06.5 -1.0**
comp=Z,0.5nm,0.3s,baz=81,slow=4.8,SNR=14
AKASG LR LR 08 25 11.7
comp=Z,413nm,21.3s,MS4.8,baz=355,slow=38
AKASG Malin Array Be 81.58 322*ce*P P **07 45 07.1 -0.4**
VRI Vrincioaia 81.90 317⇓*i*P P **07 45 10.4 +1.1**
MLR Muntele Rosu 82.34 317⇓*i*P P **07 45 12.5 +0.9**
TSUM Tsumeb 82.38 251 LR LR 08 21 19.5
comp=Z,723nm,18.1s,MS5.1,baz=326,slow=35
SMY Shemya 83.09 36 *e*P P **07 45 13.9 -1.4**
comp=Z,68nm,1.3s,mb5.5
SMY *e* pP 07 45 22.1 -2.6
SMY Shemya 83.09 36 *e*P P **07 45 13.9 -1.4**
SMY *e* pP 07 45 22.1 -2.7
SMY pmax pmax
comp=Z,68nm,1.3s,mb5.5
BURAR Bucovina Array 83.32 319⇓*i*P P **07 45 18.4 +1.8**
BUR08 Bucovina Ar. S 83.34 319 *e*P P **07 45 18.2 +1.5**
APA Apatity 85.25 339⇑*i*P P **07 45 28.6 +2.6**
APA pmax pmax
comp=Z,16nm,1.0s,mb5.1
UZH Uzhgorod 85.45 319 *e*P sP 07 45 45.1 +4.8
KOLS Kolonicke sedl 85.52 320 *e*P P **07 45 29.2 +1.4**
KOLS *e* pP 07 45 36.5 -0.8
KOLS Kolonicke sedl 85.52 320 *e*P P **07 45 29.2 +1.4**
KOLS *e*PCP PcP 07 45 36.5 +5.8
MAIT Maitri 85.98 199 *e*P pP 07 45 38.7 -0.4
QSPA South Pole Qui 85.99 180 LR LR 08 19 52.4
comp=Z,644nm,18.9s,MS5.0,baz=85,slow=33
SUW Suwalki 86.00 325 *e*P P **07 45 29.0 -1.0**
comp=Z,98nm,1.1s,mb6.0
SUW Suwalki 86.00 325 *e*P P **07 45 29.0 -1.0**
SUW pmax pmax
comp=Z,98nm,1.1s,mb6.0
CRVS Cervenica-Dubn 86.04 319 *e*P P **07 45 35.1 +4.8**
CRVS Cervenica-Dubn 86.04 319 *e*PCP P **07 45 35.1 +4.8**
FINES FINESS Array B 86.27 332 P P **07 45 30.9 -0.2**
comp=Z,3.5nm,0.7s,mb4.7,baz=50,slow=6.0,SNR=7.6
FINES LR LR 08 29 53.4
comp=Z,598nm,18.5s,MS5.0,baz=109,slow=40
STHS Stebnicka Huta 86.28 320 *e*P P **07 45 33.0 +1.5**
STHS Stebnicka Huta 86.28 320 *e*P P **07 45 33.0 +1.5**
VYHS Vyhne 87.69 319 *e*P P **07 45 39.6 +1.2**
comp=Z,2.8nm,0.5s,mb4.8
VYHS Vyhne 87.69 319 *e*P P **07 45 39.6 +1.2**
VYHS pmax pmax
comp=Z,3.0nm,0.5s,mb4.8
VYHS Vyhne 87.69 319 *e*P P **07 45 39.5 +1.1**
TIP Timpagrande 87.94 309 *e*P P **07 45 41.2 +1.4**
comp=Z,20nm,1.7s,mb5.1
CEL Celeste 88.51 308 *e*P P **07 45 44.2 +1.7**
comp=Z,1.6nm,0.3s,mb4.8
ARCES ARCESS Array B 88.63 340 P P **07 45 42.4 0.0**
comp=Z,8.5nm,0.7s,mb5.2,baz=95,slow=6.1,SNR=21
ARCES LR LR 08 29 37.4
comp=Z,940nm,21.0s,MS5.2,baz=280,slow=38
MORC Moravsky Berou 88.71 320 *e*P P **07 45 42.1 -1.1**
comp=Z,10nm,1.4s,mb5.0
MORC Moravsky Berou 88.71 320 *e*P P **07 45 42.1 -1.1**
MORC pmax pmax
comp=Z,10.0nm,1.4s,mb5.0
BRG Berggiesshubel 91.13 321 *e*P P **07 45 55.0 +0.6**
comp=Z,6.0nm,1.2s,mb4.8
BRG Berggiesshubel 91.13 321 *e*P P **07 45 55.0 +0.6**
BRG pmax pmax
comp=Z,4.0nm,1.2s,mb4.6
KHC Kasperske Hory 91.22 319 *e*P P **07 45 56.5 +1.6**
CLL Collm 91.75 321 *i*P P **07 45 57.1 -0.2**
comp=Z,22nm,1.9s,mb5.2
CLL Collm 91.75 321 *i*P P **07 45 57.1 -0.2**
CLL pmax pmax
comp=Z,22nm,1.9s,mb5.2
CLL Collm 91.75 321 *i*P P **07 45 57.1 -0.2**
comp=Z,22nm,1.9s,mb5.2
CLL LmV 08 36 00.0
comp=Z,400nm,20.1s
NOA NORSAR Array B 93.30 331 P P **07 46 04.3 0.0**
NOA LR LR 08 35 16.3
NOA NORSAR Array B 93.30 331 P P **07 46 04.3 0.0**
comp=Z,1.7nm,0.8s,mb4.5,baz=92,slow=4.6,SNR=3.0
NOA LR LR 08 35 16.3
comp=Z,215nm,20.7s,MS4.6,baz=80,slow=40
KEST Kesra 93.55 305 LR LR 08 28 23.7
comp=Z,245nm,19.6s,MS4.7,baz=293,slow=36
TORD Torodi Ar. Bea 99.83 283 LR LR 08 33 55.6
comp=Z,380nm,18.2s,MS4.9,baz=0.0,slow=37
ILAR Eielson Array 102.95 24 P Pdif 07 46 45.5 -2.4
comp=Z,0.3nm,0.9s,baz=300,slow=4.9,SNR=4.2
PPT Papeete 107.32 110 *e*LR LR 08 22 37.3
comp=Z,652nm,22.8s
YKA Yellowknife Ar 116.00 17 PKP PKPdf 07 51 31.6 -0.6
comp=Z,0.5nm,0.7s,baz=335,slow=2.2,SNR=4.0
TAOE Nuku Hiva Isla 117.84 102 *e*LR LR 08 27 31.8
comp=Z,362nm,22.4s
ETW Entiat 123.97 33 *e*PKPdf PKPdf 07 51 48.6 +0.6
HUMO Hull Mountain 125.30 39 *e*PKPdf PKPdf 07 51 51.6 +0.8
FFC Flin Flon 126.12 16 *i* PKIKP PKPdf 07 51 54.3 +2.4
BSMT Bassoo Peak 126.65 29 *e*PKPdf PKPdf 07 51 53.2 0.0
SWMT Swartz Lake 127.27 29 *e*PKPdf PKPdf 07 51 54.2 -0.2
SLMT Seeley Lake 127.70 29 *e*PKPdf PKPdf 07 51 55.1 -0.1
CHMT Chamberlain Mo 128.05 29 *e*PKPdf PKPdf 07 51 55.1 -0.7
DLMT Dillon 129.47 30 *e*PKPdf PKPdf 07 51 59.4 +0.8
NVAR Mina Array Bea 130.55 41 PKP PKPdf 07 52 00.7 -0.2
comp=Z,1.8nm,0.7s,baz=274,slow=2.0,SNR=15
LAO LASA Array 131.41 25 *e*PKPdf PKPdf 07 52 01.3 -1.0
REDW Red Top Meadow 131.77 31 *e*PKPdf PKPdf 07 52 03.9 +0.9
HVU Hansel Valley 131.83 34 *e*PKPdf PKPdf 07 52 04.2 +1.0
MSU Marysvale 134.33 37 *e*PKPdf PKPdf 07 52 10.8 +2.8
SRU San Rafael 134.90 35 *e*PKPdf PKPdf 07 52 10.5 +1.4
LAZ Ladron 140.09 37 *e*PKPdf PKPdf 07 52 19.1 +0.4
ANMO Albuquerque 140.12 36 *e*PKPdf PKPdf 07 52 19.4 +0.6
MNTX Cornudas Mount 143.01 39 *e*PKPdf PKPdf 07 52 20.5 -3.6
CFAA Coronel Fontan 143.12 196 PKP PKPdf 07 52 25.5 +1.2
CFAA Coronel Fontan 143.12 196 PKP PKPdf 07 52 25.5 +1.2
comp=Z,0.2nm,0.6s,baz=228,slow=5.5,SNR=3.5
GDL2 Guadalupe Moun 143.29 37 *e*PKPdf PKPdf 07 52 22.5 -2.1
BLO Bloomington 144.34 10 *e*PKPdf PKPdf 07 52 23.5 -2.7
WMOK Wichita Mounta 144.38 28 *e*PKPdf PKPdf 07 52 24.2 -2.2
OLIL Olney 144.46 12 *e*PKPdf PKPdf 07 52 24.4 -2.1
MCWV Mont Chateau 144.49 1 *e*PKPdf PKPdf 07 52 24.7 -1.7
FVM French Village 144.62 16 *e*PKPdf PKPdf 07 52 24.8 -2.0
SIUC Southern Illin 145.18 14 *e*PKPdf PKPdf 07 52 26.9 -0.8
USIN University of 145.29 12 *e*PKPdf PKPdf 07 52 27.1 -0.8
WCI Wyandotte Cave 145.29 10 *e*PKPdf PKPdf 07 52 27.1 -0.8
TXAR Lajitas Array 145.69 40 PKPbc PKPbc 07 52 30.4 +1.3
comp=Z,28nm,0.9s,baz=283,slow=1.1,SNR=208
CBN Corbin 145.91 358 *e*PKPdf PKPdf 07 52 29.4 +0.5
PARMO Parma 146.04 15 *e*PKPdf PKPdf 07 52 30.0 +0.8
GLAT Glass 146.54 15 *e*PKPbc PKPbc 07 52 31.4 -0.1
UTMT University of 146.57 14 *e*PKPbc PKPbc 07 52 31.3 -0.3
MIAR Mount Ida 146.76 22 *e*PKPbc PKPbc 07 52 30.9 +0.4
UALR University of 147.00 20 *e*PKPbc PKPbc 07 52 32.7 -0.1
WVT Waverly 147.02 13 *e*PKPbc PKPbc 07 52 32.3 -0.6
JCT Junction City 147.20 34 *e*PKPdf PKPdf 07 52 32.2 +0.8
JCT *e*PKPbc PKPbc 07 52 34.1 +0.6
TKL Tuckaleechee C 148.19 7 *e*PKPbc PKPbc 07 52 35.6 -0.5
SWET Sewanee 148.29 11 *e*PKPbc PKPbc 07 52 35.6 -0.7
CPCT Cooper Cave 148.30 8 *e*PKPbc PKPbc 07 52 36.1 -0.2
NATX Nacogdoches 148.75 26 *e*PKPbc PKPbc 07 52 38.3 +0.6
HKT Hockley 149.72 30 *e*PKPbc PKPbc 07 52 40.3 +0.1
JSC Jenkinsville 149.79 4 *e*PKPbc PKPbc 07 52 40.1 -0.1
VBMS Vicksburg 149.95 20 *e*PKPbc PKPbc 07 52 40.7 +0.1
LRAL Lakeview Retre 150.18 13 *e*PKPbc PKPbc 07 52 40.3 -0.9
GOGA Godfrey 150.45 7 *e*PKPbc PKPbc 07 52 41.6 -0.3

*ISCJB **08** 07:36:19.6±0.5, 10°.50S±0°.06×73°.51W±0°.06, h10km, mb3.8/7, Error ellipse: s-maj=9.4km s-min=8.1km az=26.0*
*IDC **08** 07:36:19.6±0.9, 10°.41S×73°.41W, h0km, mb3.7/4, mb1 4.1/9, mb1mx4.0/20, mbtmp3.9/9, ML4.0/3, MS3.6/2, Ms1 3.6/2, ms1mx3.2/36, Error ellipse: s-maj=30.1km s-min=15.6km az=45.0*
*NEIC **08** 07:36:25.5±1.0, 10°.51S×73°.51W, h44km±13km, mb3.9/2, Error ellipse: s-maj=16.4km s-min=9.2km az=53.0*
ISC 08 07:36:21.6±0.5, **10°.49S**±0°.07×**73°.54W**±0°.06, **h10**km, **n19,**

σ0.95/19, **mb3.8**/7, **Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.57**	**245**	*e*Pn	**Pn**	**07 37 17.6**	**+0.6**
NNA				Lg		07 37 57.9	
NNA				*e*Sn	**Sn**	**07 37 58.4**	**-0.9**
NNA				LR	LR	07 38 55.2	
NNA	**Nana**	**3.57**	**245**	Pn	**Pn**	**07 37 17.8**	**+0.8**
	119nm,0.3s,baz=66,slow=9.5,SNR=148						
NNA				Lg		07 37 57.9	
	333nm,0.3s,baz=178,slow=22,SNR=37						
NNA				LR	LR	07 38 55.2	
	comp=Z,698nm,19.6s,baz=94,slow=42						
ATAH	**Atahualpa**	**5.84**	**304**	Pn	**Pn**	**07 37 49.5**	**+1.1**
	14nm,0.3s,baz=118,slow=4.7,SNR=33						
ATAH				Pg	**Pg**	**07 38 07.5**	**-6.1**
	14nm,0.3s,baz=305,slow=3.5,SNR=10						
ATAH				Lg		07 39 20.7	
	4.4nm,0.3s,baz=277,slow=21,SNR=1.8						
LPAZ	**La Paz**	**7.80**	**138**	*e*Pn	**Pn**	**07 38 18.1**	**+2.8**
LPAZ				Pg	Pn	07 38 39.8	+25
LPAZ				Lg		07 40 16.8	
LPAZ				*e*Sg	Sn	07 40 25.0	+41
LPAZ	**La Paz**	**7.80**	**138**	Pn	**Pn**	**07 38 16.3**	**+1.1**
	0.2nm,0.3s,baz=326,slow=9.1,SNR=11						
LPAZ				Pg	Pn	07 38 39.8	+25
	1.4nm,0.3s,baz=300,slow=12,SNR=8.9						
LPAZ				Lg		07 40 16.8	
	2.5nm,0.3s,baz=180,slow=12,SNR=2.4						
OTAV	**Otavalo**	**11.72**	**335**	*e*Pn	**Pn**	**07 39 12.8**	**+3.8**
	9.1nm,0.8s						
SIV	**San Ignacio**	**13.31**	**116**	Pn	**Pn**	**07 39 30.8**	**+0.1**
	1.1nm,0.3s,baz=306,slow=11,SNR=21						
SIV				Lg		07 43 09.4	
	3.5nm,0.3s,baz=50,slow=21,SNR=3.6						
ROSC	**El Rosal**	**15.26**	**357**	Pn	**Pn**	**07 39 56.7**	**-0.6**
	0.4nm,0.3s,baz=118,slow=16,SNR=2.7						
ROSC				Lg		07 44 11.8	
	1.0nm,0.3s,baz=103,slow=21,SNR=2.8						
CFAA	**Coronel Fontan**	**21.58**	**168**	P	**P**	**07 41 10.8**	**-0.7**
CFAA	**Coronel Fontan**	**21.58**	**168**	P	**P**	**07 41 10.8**	**-0.7**
	0.1nm,0.3s,baz=360,slow=23,SNR=1.9						
CPUP	**Villa Florida**	**21.98**	**138**	P	**P**	**07 41 15.9**	**+0.1**
	0.7nm,0.6s,mb3.2,baz=337,slow=12,SNR=2.8						
PCRV	**Puerto La Cruz**	**22.36**	**24**	Lg		07 48 08.6	
	7.0nm,0.9s,baz=29,slow=18,SNR=2.1						
JTS	**JuntasAbangare**	**23.56**	**331**	LR	LR	07 51 20.1	
	comp=Z,156nm,19.7s,baz=360,slow=38						
TXAR	**Lajitas Array**	**49.11**	**325**	P	**P**	**07 45 09.9**	**+0.5**
	1.2nm,0.6s,mb4.1,baz=153,slow=8.4,SNR=21						
ANMO	**Albuquerque**	**54.90**	**327**	*e*P	**P**	**07 45 52.8**	**+0.3**
	0.7nm,0.7s,mb3.8						
SDCO	**Great Sand Dun**	**56.55**	**330**	*e*P	**P**	**07 46 05.0**	**+0.7**
	1.1nm,0.7s,mb4.0						
NVAR	**Mina Array Bea**	**64.12**	**322**	P	**P**	**07 46 56.1**	**-0.1**
	0.3nm,0.7s,mb3.5,baz=150,slow=8.3,SNR=4.4						
TORD	**Torodi Ar. Bea**	**78.27**	**74**	P	**P**	**07 48 20.6**	**-1.7**
	1.8nm,0.8s,mb4.0,baz=235,slow=4.2,SNR=9.0						
YKA	**Yellowknife Ar**	**79.39**	**342**	P	**P**	**07 48 26.1**	**-1.4**
	0.6nm,0.6s,mb3.7,baz=141,slow=5.3,SNR=4.2						

*IDC **08** 07:41:00.0±2.7, 8°.05S×118°.68E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/21, mbtmp3.8/4, ML3.1/1, Error ellipse: s-maj=217.4km s-min=23.4km az=59.0*
*DJA **08** 07:41:00, 9°.66S×117°.55E, h20km, MLv4.2/5*
*ISCJB **08** 07:41:05.3±0.9, 9°.05S±0°.10×117°.33E±0°.10, h91km±16km, mb3.6/3, Error ellipse: s-maj=19.8km s-min=10.5km az=135.3*

ISC 08 07:41:06.6±0.8, **9°.07S**±0°.10×**117°.31E**±0°.09, **h83**km±14km, **n10**, σ1**9**10/12, **mb3.6**/3, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**1.83**	**292**	P	**Pn**	**07 41 34.3**	**-2.0**
KHKI				S	**Sn**	**07 42 06.3**	**+7.4**
IGBI	**Denpasar**	**2.16**	**276**	P	**Pn**	**07 41 41.8**	**+1.2**
JAGI	**Jajag, Banyuwa**	**3.18**	**281**	P	**Pn**	**07 41 54.4**	**0.0**
GMJI	**Gumukmas**	**3.91**	**281**	P	**Pn**	**07 42 04.6**	**+0.3**
SPSI	**Sidrap Palu**	**5.63**	**26**	P	**Pn**	**07 42 28.2**	**+0.4**
	0.3nm70nm,0.8s						
KBKI	**Kotabaru**	**5.84**	**349**	P	**Pn**	**07 42 35.8**	**+5.1**
FITZ	**Fitzroy Crossi**	**12.08**	**139**	Pn	**Pn**	**07 43 55.3**	**-0.4**
	0.1nm,0.3s,baz=7.1,slow=8.1,SNR=3.2						
FITZ				Sn	**Sn**	**07 46 09.4**	**+0.8**
	0.1nm,0.3s,baz=144,slow=10,SNR=3.8						
ASAR	**Alice Springs**	**21.50**	**134**	P	**P**	**07 45 47.8**	**-1.1**
	1.7nm,1.1s,mb3.3,baz=299,slow=16,SNR=4.4						
SONM	**Songino Array**	**57.47**	**351**	P	**P**	**07 50 45.6**	**-1.2**
	1.1nm,0.8s,mb4.0,baz=160,slow=5.2,SNR=5.0						
MKAR	**Makanchi Array**	**63.77**	**334**	P	**P**	**07 51 31.6**	**+1.9**
	0.7nm,0.8s,mb3.6,baz=152,slow=7.9,SNR=3.8						

*ISCJB **08** 07:53:17.0±1.4, 15°.85N±0°.06×98°.46W±0°.05, h30km±8km, Error ellipse: s-maj=10.9km s-min=7.1km az=15.5*
*NEIC **08** 07:53:19.0, 15°.81N×98°.44W, h16km, MD3.8(MEX), After MEX.*
*MEX **08** 07:53:19.9±0.8, 15°.89N×98°.47W, h17km±6km, MD3.8*

ISC 08 07:53:17.1±1.5, **15°.84N**±0°.06×**98°.46W**±0°.05, **h24**km±10km, **n18**, σ1**9**08/36, **Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.63**	**30**	*i* P	**Pb**	**07 53 29.9**	**+0.4**
PNIG				*i* S	**Sb**	**07 53 36.8**	**-1.2**
PNIG	**Pinotepa**	**0.63**	**30**	*i* P	**Pb**	**07 53 29.9**	**+0.4**
PNIG				*i* S	**Sb**	**07 53 36.8**	**-1.2**
VHO	**Vista Hermosa**	**2.06**	**53**	*i* P	**Pn**	**07 53 50.7**	**+0.4**
VHO				*i* S	**Sn**	**07 54 15.5**	**+0.3**
VHO	**Vista Hermosa**	**2.06**	**53**	*i* P	**Pn**	**07 53 50.7**	**+0.4**
VHO				*i* S	**Sn**	**07 54 14.5**	**-0.7**
OXX	**Oaxaca**	**2.07**	**53**	*e*P	**Pn**	**07 53 53.8**	**+3.3**
OXX				*i* S	**Sn**	**07 54 19.9**	**+4.4**
OXX	**Oaxaca**	**2.07**	**53**	*e*P	**Pn**	**07 53 53.8**	**+3.3**
OXX				*i* S	**Sn**	**07 54 19.9**	**+4.4**
UTMO	**Huajuapan**	**2.08**	**17**	*i* P	**Pn**	**07 53 50.7**	**+0.2**
UTMO				*i* S	**Sn**	**07 54 15.5**	**-0.2**
CAIG	**El Cayaco**	**2.11**	**305**	*e*P	**Pn**	**07 53 50.7**	**-0.3**
CAIG				*i* S	**Sn**	**07 54 15.1**	**-1.4**
CAIG	**El Cayaco**	**2.11**	**305**	*e*P	**Pn**	**07 53 50.7**	**-0.3**
CAIG				*i* S	**Sn**	**07 54 15.1**	**-1.4**
HUIG	**Huatulco**	**2.26**	**92**	*e*P	**Pn**	**07 53 52.2**	**-0.8**
HUIG				*i* S	**Sn**	**07 54 16.7**	**-3.6**
HUIG	**Huatulco**	**2.26**	**92**	*e*P	**Pn**	**07 53 52.2**	**-0.8**
HUIG				*i* S	**Sn**	**07 54 19.7**	**-0.6**
MEIG	**Mezcala**	**2.35**	**332**	*e*P	**Pn**	**07 53 55.1**	**+0.8**
MEIG				*i* S	**Sn**	**07 54 20.8**	**-1.7**
TPIG	**Tehuac#an**	**2.77**	**22**	*e*P	**Pn**	**07 54 01.1**	**+1.0**
TPIG				*i* S	**Sn**	**07 54 32.0**	**-0.8**
PPM	**Popocatepetl**	**3.21**	**357**	*i* P	**Pn**	**07 54 06.5**	**+0.3**
PPM				*i* S	**Sn**	**07 54 44.0**	**+0.3**
PPM	**Popocatepetl**	**3.21**	**357**	*i* P	**Pn**	**07 54 06.5**	**+0.3**
PPM				*i* S	**Sn**	**07 54 44.0**	**+0.3**
MZVM		**3.41**	**348**	*e*P	**Pn**	**07 54 12.3**	**+3.5**
MZVM				*i* S	**Sn**	**07 54 50.6**	**+2.0**
IIO	**Organos**	**3.74**	**356**	*e*P	**Pn**	**07 54 13.2**	**-0.2**
IIO				*i* S	**Sn**	**07 54 53.2**	**-3.5**
IIO	**Organos**	**3.74**	**356**	*e*P	**Pn**	**07 54 14.2**	**+0.8**
IIO				*i* S	**Sn**	**07 54 57.5**	**+0.8**

IDC 08 07:57:19.6±0.9, **59°.59S×30°.02W, h0**km, **mb4.1**/5, **mb1 4.2**/5, **mb1mx4.0**/12, **mbtmp4.0**/5, **MS4.1**/3, **Ms1 4.1**/3, **ms1mx3.9**/16, **Error ellipse: s-maj=45.8km s-min=21.2km az=62.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**16.55**	**237**	LR	LR	08 06 52.4	
	comp=Z,429nm,18.1s,baz=336,slow=35						
USHA	**Ushuaia**	**21.12**	**266**	LR	LR	08 08 00.5	
	comp=Z,648nm,20.9s,baz=189,slow=30						
QSPA	**South Pole Qui**	**30.65**	**180**	P	P	08 03 34.7	-0.3
	2.9nm,1.1s,baz=267,slow=1.5,SNR=3.4						
PLCA	**Paso Flores**	**31.41**	**289**	LR	LR	08 14 26.4	
	comp=Z,378nm,20.2s,baz=236,slow=33						
CPUP	**Villa Florida**	**38.24**	**318**	P	P	08 04 40.1	-1.0
	3.6nm,0.9s,baz=118,slow=4.2,SNR=4.8						
MAW	**Mawson**	**38.24**	**142**	P	P	08 04 40.2	-0.5
	2.1nm,0.8s,baz=252,slow=6.5,SNR=4.5						
LPAZ	**La Paz**	**51.37**	**311**	P	P	08 06 26.7	+0.9
	0.5nm,0.5s,baz=149,slow=5.9,SNR=3.9						
TORD	**Torodi Ar. Bea**	**76.88**	**32**	P	P	08 09 13.3	0.0
	1.9nm,1.1s,baz=200,slow=4.9,SNR=4.8						
ASAR	**Alice Springs**	**96.00**	**165**	P	P	08 10 50.2	+1.7
	0.4nm,0.7s,baz=186,slow=4.3,SNR=4.1						
ILAR	**Eielson Array**	**151.21**	**307**	PKPbc	PKPbc	08 17 12.1	-1.0
	0.6nm,0.9s,baz=75,slow=0.7,SNR=6.1						
ILAR				PKPab	PKPab	08 17 22.2	+1.1
	1.2nm,1.0s,baz=148,slow=1.7,SNR=6.3						

*NEIC **08** 07:57:43.5, 14°.09N×93°.38W, h22km, MD4.0(MEX), After MEX.*

MEX 08 07:57:43.5±0.6, **14°.09N×93°.39W, h20**km±22km, **MD4.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.36**	**53**	*i* P	Pn	07 58 03.7	-3.6
THIG				*i* S	Sn	07 58 20.8	-3.9
PCIG		**1.62**	**6**	*i* P	Pn	07 58 08.2	-2.7
PCIG				*i* S	Sn	07 58 26.7	-4.5
TGIG		**2.69**	**5**	*i* P	Pn	07 58 23.8	-1.9
TGIG				*i* S	Sn	07 58 53.8	-3.8
SCX	**San Cristobal**	**2.73**	**15**	*i* P	Pn	07 58 24.7	-1.5
SCX				*i* S	Sn	07 58 54.5	-4.2
SCX	**San Cristobal**	**2.73**	**15**	*i* P	Pn	07 58 24.7	-1.5
SCX				*i* S	Sn	07 58 55.4	-3.3
HUIG	**Huatulco**	**3.12**	**303**	*i* P	Pn	07 58 29.1	-2.4
HUIG				*i* S	Sn	07 59 04.5	-3.7
HUIG	**Huatulco**	**3.12**	**303**	*i* P	Pn	07 58 29.1	-2.4
HUIG				*i* S	Sn	07 59 04.5	-3.7
CMIG	**Matias Romero**	**3.32**	**334**	*e*P	Pn	07 58 32.3	-2.0
CMIG				*i* S	Sn	07 59 10.3	-2.8
CMIG	**Matias Romero**	**3.32**	**334**	*e*P	Pn	07 58 32.3	-2.0
CMIG				*i* S	Sn	07 59 10.3	-2.8
VHO	**Vista Hermosa**	**4.38**	**313**	*i* P	Pn	07 58 47.7	-1.3
VHO				*i* S	Sn	07 59 35.9	-3.5
VHO	**Vista Hermosa**	**4.38**	**313**	*i* P	Pn	07 58 47.7	-1.3
VHO				*i* S	Sn	07 59 35.9	-3.5
UTMO	**Huajuapan**	**5.65**	**312**	*i* P	Pn	07 59 06.0	-0.4
UTMO				*i* S	Sn	08 00 08.4	-2.3
PPM	**Popocatepetl**	**7.05**	**315**	*e*P	Pn	07 59 29.4	+3.7
PPM				*i* S	Sn	08 00 45.0	-0.3
PPM	**Popocatepetl**	**7.05**	**315**	*e*P	Pn	07 59 29.4	+3.7
PPM				*i* S	Sn	08 00 45.0	-0.3

*IDC **08** 07:57:37.4±0.7, 4°.53S×102°.69E, h0km, mb4.7/18, mb1 4.7/18, mb1mx4.6/24, mbtmp4.7/18, Error ellipse: s-maj=28.7km s-min=13.1km az=49.0*
*MOS **08** 07:57:39.1±1.1, 4°.52S×102°.65E, h22km, mb5.0/20, Error ellipse: s-maj=13.9km s-min=7.5km az=110.4*
*BJI **08** 07:57:40.2, 4°.60S×102°.70E, h35km, mB5.2/16, mb4.9/32, Ms4.6/15, Ms7 4.4/16*
*NEIC **08** 07:57:42.6±0.2, 4°.56S×102°.70E, h35km, mb4.9/19, Error ellipse: s-maj=9.3km s-min=5.5km az=58.0*
NEIC Felt [III] at Manna.
*ISCJB **08** 07:57:44.8±0.5, 4°.69S±0°.05×102°.71E±0°.04, h77km±3km, mb4.8/63, Error ellipse: s-maj=9.5km s-min=3.7km az=40.8*
*DJA **08** 07:57:46, 4°.63S×102°.76E, h50km, MLv5.0/21*

ISC 08 07:57:46.2±0.5, **4°.68S**±0°.04×**102°.73E**±0°.04, **h70**km±3km, **h35**km±3.3km, **pP-P, n138**, σ0**96**/140, **mb4.8**/63, **7C-1D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.39**	**35**	P	**Pn**	**07 57 56.3**	**-1.7**
KSI	**Kapahiang**	**1.03**	**352**	P	**Pn**	**07 58 04.3**	**-0.8**
KSI				S	**Sn**	**07 58 18.7**	**-0.4**
LWLI	**Liwa**	**1.36**	**104**	P	**Pn**	**07 58 09.2**	**-0.1**
LWLI				S	**Sn**	**07 58 26.2**	**-0.6**
MDSI	**Maura Dua**	**1.45**	**82**	P	**Pn**	**07 58 10.1**	**-0.4**
MDSI				S	**Sn**	**07 58 28.6**	**-0.3**
KASI	**Kota Agung**	**1.95**	**116**	P	**Pn**	**07 58 17.3**	**+0.2**
KASI				S	**Sn**	**07 58 39.4**	**-1.3**
KLSI		**1.99**	**90**	P	**Pn**	**07 58 17.7**	**0.0**
KLSI				S	**Sn**	**07 58 42.4**	**+0.7**
KLI	**Kotabumi**	**2.12**	**95**	P	**Pn**	**07 58 19.4**	**-0.1**
BLSI	**Bandar Lampung**	**2.59**	**105**	P	**Pn**	**07 58 26.9**	**+1.0**
BLSI				S	**Sn**	**07 58 56.9**	**+0.5**
KRJI	**Kerinci**	**2.87**	**334**	P	**Pn**	**07 58 30.1**	**+0.5**
KRJI				S	**Sn**	**07 59 04.2**	**+1.2**
RBSI	**Rajabasa**	**3.21**	**111**	P	**Pn**	**07 58 36.8**	**+2.5**
CGJI	**Cibinong**	**3.52**	**123**	P	**Pn**	**07 58 36.9**	**-1.5**
SDSI	**Sungai Dareh**	**3.94**	**341**	P	**Pn**	**07 58 44.9**	**+0.6**
PDSI	**Padang**	**4.38**	**329**	P	**Pn**	**07 58 50.4**	**+0.2**
PDSI				S	**Sn**	**07 59 41.3**	**+1.3**
CBJI	**Citeko**	**4.45**	**113**	P	**Pn**	**07 58 57.0**	**+5.8**
PPI	**Padang Panjang**	**4.80**	**331**	P	**Pn**	**07 58 56.0**	**0.0**
PPI				S	**Sn**	**07 59 52.0**	**+1.7**
SISI	**Saibi**	**4.93**	**312**	P	**Pn**	**07 58 57.2**	**-0.6**
BKNI	**Bangkinang**	**5.25**	**341**	P	**Pn**	**07 59 04.1**	**+1.9**
	1.3nm148nm,0.7s						
TPI	**Tanjungpandan**	**5.27**	**69**	P	**Pn**	**07 59 02.8**	**+0.4**
	0.4nm57nm,1.3s						
LEM	**Lembang**	**5.31**	**114**	P	**Pn**	**07 59 05.0**	**+2.1**
	0.6nm108nm,0.8s						
CISI	**Cisompet, Garu**	**5.80**	**120**	P	**Pn**	**07 59 09.7**	**0.0**
	1.2nm4μm121nm,0.7s						
CISI				S	**Sn**	**08 00 09.0**	**-6.0**
	1.2nm4μm121nm,0.7s						
MNSI	**Mandailing Nat**	**6.29**	**330**	P	**Pn**	**07 59 15.2**	**-1.1**
COCO	**West Island**	**9.47**	**218**	*e*Pn	**Pn**	**07 59 58.4**	**-1.5**
CM31	**Chiang Mai Arr**	**23.29**	**351**	*e*P	**P**	**08 02 47.0**	**-1.0**
	4.1nm,0.5s,mb4.0						
CMAR	**Chiang Mai Arr**	**23.29**	**351**	P	**P**	**08 02 47.0**	**-1.0**
	6.3nm,0.7s,mb4.1,baz=185,slow=8.4,SNR=21						
CHTO	**Chiang Mai**	**23.64**	**351**	*e*P	**P**	**08 02 50.0**	**-1.2**
	6.1nm,0.7s,mb4.0						
FITZ	**Fitzroy Crossi**	**26.07**	**123**	*e*P	**P**	**08 03 13.7**	**+0.4**
	12nm,0.6s,mb4.5						
FITZ	**Fitzroy Crossi**	**26.07**	**123**	*e*P	**P**	**08 03 13.7**	**+0.4**
	5.6nm,0.5s,mb4.2						
FITZ	**Fitzroy Crossi**	**26.07**	**123**	P	**P**	**08 03 14.0**	**+0.6**
	6.8nm,0.7s,mb4.2,baz=304,slow=2.3,SNR=13						
KMI	**Kunming**	**29.62**	**0**	P	**P**	**08 03 45.8**	**+0.8**
KMI				pP	pP	08 03 57.1	-4.6
KMI				sP	sP	08 04 01.2	-8.7
KMI				PP	PP	08 04 45.1	-8.0
KMI				S	**S**	**08 08 40.1**	**+4.7**
KMI				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.7						
KMI				pmax	pmax		
	comp=Z,280nm,4.9s						
KMI				LR	LR		
	comp=N,250nm,14.7s						
KMI				LR	LR		
	comp=E,340nm,12.8s						
KMI				LR	LR		
	comp=Z,300nm,12.4s						
GYA	**Guiyang**	**31.19**	**7**	*e*P	**P**	**08 03 58.3**	**-0.4**
GYA				pP	pP	08 04 08.9	-6.7
GYA				sP	sP	08 04 14.8	-9.0
GYA				PP	PP	08 05 02.1	-8.3
GYA				PcP	PcP	08 06 53.4	+1.1
GYA				S	**S**	**08 09 01.8**	**+1.9**
GYA				sS	sS	08 09 20.0	-8.7
GYA				ScP	ScP	08 10 33.2	+3.9
GYA				SS	SS	08 10 50.8	-25
GYA				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
GYA				pmax	pmax		
	comp=Z,190nm,4.6s						
GYA				LR	LR		
	comp=N,870nm,18.0s						
GYA				LR	LR		
	comp=E,790nm,18.6s						
GYA				LR	LR		
	comp=Z,830nm,15.6s						
WRAB	**Tennant Creek**	**34.31**	**119**	*e*P	**P**	**08 04 27.6**	**+1.5**
	comp=Z,8.7nm,0.6s,mb4.8						
WRAB	**Tennant Creek**	**34.31**	**119**	*e*P	**P**	**08 04 27.6**	**+1.4**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.8						
ODAN	**Odare**	**34.69**	**335**	*e*P	**P**	**08 04 28.9**	**-0.4**
	comp=Z,24nm,0.6s,mb5.2						
TAPN	**Taplejung**	**34.99**	**336**	*e*P	**P**	**08 04 32.1**	**+0.2**
	comp=Z,27nm,0.7s,mb5.2						
RAMN	**Ramite**	**35.10**	**334**	*e*P	**P**	**08 04 33.5**	**+0.6**
	comp=Z,18nm,0.4s,mb5.2						
ENH	**Enshi**	**35.35**	**10**	*e*P	**P**	**08 04 34.4**	**-0.6**
	comp=Z,10nm,0.7s,mb4.8						
CD2	**Chengdu**	**35.40**	**2**	P	**P**	**08 04 35.0**	**-0.4**
CD2				pP	pP	08 04 44.7	-7.7
CD2				sP	sP	08 04 48.6	-12
CD2				PP	PP	08 05 55.1	-2.0
CD2				S	**S**	**08 10 06.7**	**+1.6**
CD2				sS	sS	08 10 22.7	-11
CD2				SS	SS	08 12 25.5	-16
CD2				ScS	ScS	08 14 49.8	+1.3
CD2				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
CD2				pmax	pmax		
	comp=Z,300nm,6.8s						
CD2				LR	LR		
	comp=N,460nm,14.5s						
CD2				LR	LR		
	comp=Z,400nm,11.4s						
ASAR	**Alice Springs**	**35.48**	**125**	P	**P**	**08 04 37.2**	**+0.9**
	comp=Z,2.3nm,0.3s,mb4.4,baz=299,slow=7.5,SNR=92						
JIRN	**Jiri**	**35.90**	**334**	*e*P	**P**	**08 04 40.4**	**+0.7**
	comp=Z,29nm,0.5s,mb5.4						
PKI	**Pulchoki**	**36.16**	**333**	*e*P	**P**	**08 04 42.1**	**+0.1**
PKIN	**Phulchoki**	**36.17**	**333**	*e*P	**P**	**08 04 42.2**	**+0.1**
GUN	**Gumba**	**36.25**	**334**	*e*P	**P**	**08 04 43.0**	**+0.3**
	comp=Z,85nm,0.5s						
DMN	**Daman**	**36.33**	**333**	*e*P	**P**	**08 04 43.7**	**+0.3**
KKN	**Kakani**	**36.41**	**333**	*e*P	**P**	**08 04 44.4**	**+0.3**
	comp=Z,33nm,0.4s,mb5.6						
WHN	**Wuhan**	**36.74**	**17**	P	**P**	**08 04 43.7**	**-3.2**
GKN	**Gorkha**	**36.88**	**333**	*e*P	**P**	**08 04 48.1**	**0.0**
	comp=Z,24nm,0.4s,mb5.5						
KOLN	**Koldanda**	**37.17**	**331**	*e*P	**P**	**08 04 51.0**	**+0.5**
	comp=Z,70nm,0.7s,mb5.7						
XAN	**Xi'an**	**38.95**	**8**	P	**P**	**08 05 04.6**	**-0.8**
XAN				sP	sP	08 05 19.2	-12
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
NJ2	**Nanjing**	**39.62**	**22**	*e*P	**P**	**08 05 12.2**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
LZH	**Lanzhou**	**40.56**	**1**	*e*P	**P**	**08 05 19.1**	**+0.3**
LZH				pP	pP	08 05 26.1	-10
LZH				sP	sP	08 05 30.6	-14
LZH				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.0						
LZH				pmax	pmax		
	comp=Z,120nm,5.3s						
LZH				LR	LR		
	comp=E,290nm,12.7s						
LZH				LR	LR		
	comp=Z,300nm,14.3s						
COEN	**Coen**	**40.90**	**106**	*e*P	**P**	**08 05 16.4**	**-5.5**
	comp=Z,127nm,0.5s						
NDI	**New Delhi**	**41.27**	**325**	*e*PKP	**P**	**08 05 24.0**	**-0.7**
GTA	**Gaotai**	**43.95**	**357**	*e*P	**P**	**08 05 46.6**	**+0.3**
GTA				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.8						
CTA	**Charters Tower**	**45.01**	**114**	*e*P	**P**	**08 05 56.0**	**+0.9**
	comp=Z,18nm,0.8s,mb4.8						
CTA	**Charters Tower**	**45.01**	**114**	P	**P**	**08 05 55.8**	**+0.7**
	comp=Z,21nm,0.8s,mb4.9,baz=290,slow=8.7,SNR=13						
CTAO	**Charters Tower**	**45.01**	**114**	*e*P	**P**	**08 05 55.9**	**+0.8**
	comp=Z,21nm,0.7s,mb5.0						
CTAO	**Charters Tower**	**45.01**	**114**	*e*P	**P**	**08 05 55.9**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.0						
STKA	**Stephens Creek**	**45.34**	**131**	*e*P	**P**	**08 05 59.3**	**+1.8**
	comp=Z,16nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**45.34**	**131**	*e*P	**P**	**08 05 58.9**	**+1.3**
	comp=Z,3.2nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**45.34**	**131**	P	**P**	**08 05 59.3**	**+1.8**
	comp=Z,21nm,0.6s,mb5.0,baz=307,slow=7.2,SNR=17						
STKA	**Stephens Creek**	**45.34**	**131**	*e*P	**P**	**08 05 58.9**	**+1.4**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GUMO	**Guam**	**45.59**	**66**	*e*P	**P**	**08 05 59.8**	**+0.1**
	comp=Z,206nm,1.5s,mb5.6						
GUMO	**Guam**	**45.59**	**66**	P	**P**	**08 05 56.6**	**-3.1**
	comp=Z,53nm,0.9s,mb5.3,baz=224,slow=22,SNR=5.5						
BJI	**Beijing**	**46.19**	**14**	P	**P**	**08 06 03.2**	**-0.8**
BJI				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.0						
KSRS	**Korea Array**	**48.03**	**27**	P	**P**	**08 06 17.6**	**-0.9**
	comp=Z,2.5nm,0.6s,mb4.2,baz=229,slow=7.0,SNR=12						
KSRS				PcP	PcP	08 07 45.4	0.0
	comp=Z,1.4nm,0.8s,baz=210,slow=3.6,SNR=7.2						
WMQ	**Urumqi**	**50.15**	**346**	*e*P	**P**	**08 06 35.1**	**+0.7**
WMQ				pP	pP	08 06 45.0	-7.2
WMQ				sP	sP	08 06 49.0	-11
WMQ				PP	PP	08 08 31.0	+0.6
WMQ				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.3						
WMQ				pmax	pmax		
	comp=Z,89nm,6.5s						
KBL	**Kabul**	**50.29**	**323**	*e*P	**P**	**08 06 36.1**	**+0.4**
	comp=Z,4.9nm,0.6s,mb4.6						
KBL	**Kabul**	**50.29**	**

MK31	**Makanchi Array**	**54.35**	**343**	*e*P		**P**		**08 07 04.8**	**-0.7**
MK31	**Makanchi Array**	**54.35**	**343**	*ce*P		**P**		**08 07 04.5**	**-1.1**
MK31					pmax	pmax			
	comp=Z,8.0nm,0.4s,mb5.1								
MKAR	**Makanchi Array**	**54.35**	**343**	P		**P**		**08 07 04.9**	**-0.6**
	comp=Z,19nm,0.7s,mb5.2,baz=148,slow=8.3,SNR=189								
ZAK	**Zakamensk**	**54.84**	**0**	*e*P		**P**		**08 07 08.8**	**-0.2**
ZAK				*e*				08 08 11.0	
ZAK					pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.4								
KK31	**Karatay Array**	**55.78**	**332**	*ce*P		**P**		**08 07 15.1**	**-0.8**
KK31					pmax	pmax			
	comp=Z,2.0nm,0.3s,mb4.6								
TLY	**Talaya**	**56.15**	**1**	*e*P		**P**		**08 07 18.5**	**+0.1**
	comp=Z,13nm,0.7s,mb5.1								
TLY	**Talaya**	**56.15**	**1**	*e*P		**P**		**08 07 18.5**	**+0.1**
TLY					pmax	pmax			
	comp=Z,13nm,0.7s,mb5.1								
KURK	**Kurchatov**	**58.95**	**342**	*e*P		**P**		**08 07 37.3**	**-0.8**
	comp=Z,20nm,1.0s,mb5.1								
KURK	**Kurchatov**	**58.95**	**342**	*c i*P		**P**		**08 07 37.0**	**-1.1**
KURK					pmax	pmax			
	comp=Z,16nm,0.8s,mb5.1								
KLR	**Kul'dur**	**59.32**	**22**	*e*P		**P**		**08 07 35.8**	**-4.9**
ZAA0	**Zalesovo Array**	**60.31**	**348**	*e*P		**P**		**08 07 46.4**	**-1.0**
ZALV	**Zalesovo Beam**	**60.31**	**348**	P		**P**		**08 07 46.5**	**-0.9**
	comp=Z,23nm,0.6s,mb5.4,baz=162,slow=4.9,SNR=104								
ASAJ	**Asahikawa**	**60.34**	**32**	P		**P**		**08 07 47.5**	**-0.4**
	comp=Z,7.4nm,0.6s,mb4.9,baz=205,slow=5.7,SNR=7.2								
RDF	**Al-Radifah**	**62.62**	**306**	*e*P		**P**		**08 08 04.9**	**+1.3**
RDF					AMb	AMB		08 08 06.4	
	comp=Z,34nm,0.9s,mb5.3								
UMR	**Umm Al-Rimmam**	**62.73**	**307**	*e*P		**P**		**08 08 05.1**	**+0.8**
UMR					AMb	AMB		08 08 06.3	
	comp=Z,45nm,0.7s,mb5.5								
NAY	**Al-Naaiem**	**62.99**	**306**	*e*P		**P**		**08 08 06.7**	**+0.7**
NAY					AMb	AMB		08 08 07.4	
	comp=Z,20nm,0.8s,mb5.1								
BVA0	**Borovoye Array**	**63.64**	**339**	*i* P		**P**		**08 08 08.4**	**-1.3**
BVA0					pmax	pmax			
	comp=Z,1.0nm,0.7s,mb3.8								
BVAR	**Borovoye Array**	**63.64**	**339**	P		**P**		**08 08 08.7**	**-1.0**
	comp=Z,8.1nm,0.5s,mb4.8,baz=143,slow=9.2,SNR=37								
BRVK	**Borovoye**	**63.70**	**339**	*e*P		**P**		**08 08 08.8**	**-1.3**
	comp=Z,4.8nm,0.3s,mb4.8								
BRVK	**Borovoye**	**63.70**	**339**	*c i*P		**P**		**08 08 09.0**	**-1.1**
BRVK					pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.3								
AB31	**Akbulak array**	**65.29**	**331**	*ce*P		**P**		**08 08 19.8**	**-0.8**
AB31					pmax	pmax			
	comp=Z,7.0nm,0.5s,mb4.8								
ABKAR	**Akbulak array**	**65.29**	**331**	*e*P		**P**		**08 08 19.6**	**-1.0**
	comp=Z,8.3nm,0.5s,mb4.8								
AKTK	**Aktyubinsk**	**67.01**	**331**	P		**P**		**08 08 30.6**	**-1.0**
AKTO	**Aktyubinsk**	**67.01**	**331**	P		**P**		**08 08 30.6**	**-1.0**
	comp=Z,1.2nm,0.3s,mb4.1,baz=127,slow=5.1								
ARU	**Arti**	**70.74**	**336**	*e*P		**P**		**08 08 54.0**	**-0.7**
ARU	**Arti**	**70.74**	**336**	*d i*P		**P**		**08 08 54.5**	**-0.1**
ARU								08 11 32.7	
ARU					S	S		08 18 09.0	+5.4
ARU					SS	SS		08 22 36.7	-0.5
ARU					pmax	pmax			
	comp=Z,7.0nm,1.2s,mb4.4								
ZEI	**Tsey**	**71.03**	**318**	*e*P		**P**		**08 08 56.9**	**+0.2**
ZEI					pmax	pmax			
	comp=Z,7.0nm,0.5s,mb4.8								
KIV	**Kislovodsk**	**72.34**	**319**	*e*P		**P**		**08 09 02.9**	**-1.6**
KIV				*e*		pP		08 09 21.0	-2.3
KIV					pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.3								
MMAI	**Mount Meron Ar**	**73.81**	**306**	P		**P**		**08 09 15.4**	**+2.0**
	comp=Z,0.7nm,0.3s,mb3.9,baz=106,slow=7.9,SNR=4.9								
SEY	**Seymchan**	**77.10**	**21⇑**	*e*P		**P**		**08 09 31.8**	**+0.1**
BR131	**Keskin Array S**	**77.13**	**312**	*e*P		**P**		**08 09 32.4**	**0.0**
	comp=Z,0.0nm,0.6s,mb4.8								
BRTR	**Keskin Array B**	**77.13**	**312**	P		**P**		**08 09 32.1**	**-0.2**
	comp=Z,4.7nm,0.7s,mb4.3,baz=134,slow=7.7,SNR=23								
VSR	**Storozhevoye**	**77.52**	**325**	*e*P		**P**		**08 09 33.9**	**-0.4**
VSR					pmax	pmax			
	comp=N,5.0nm,0.5s								
VSR					pmax	pmax			
	comp=Z,10.0nm,0.5s,mb4.8								
VSR					pmax	pmax			
	comp=E,4.0nm,0.3s								
OBN	**Obninsk**	**80.50**	**328⇑**	*i*P		**P**		**08 09 50.2**	**-0.2**
OBN				*e*				08 09 56.9	
OBN				*e*				08 12 54.6	
OBN					pmax	pmax			
	comp=Z,10.0nm,0.6s,mb4.8								
AKASG	**Malin Array Be**	**83.26**	**322**	P		**P**		**08 10 04.3**	**-0.8**
	comp=Z,2.2nm,0.6s,mb4.2,baz=92,slow=4.6,SNR=6.5								
BUR08	**Bucovina Ar. S**	**85.08**	**318**	*e*P		**P**		**08 10 16.1**	**+1.8**
FINES	**FINESS Array B**	**87.74**	**332**	P		**P**		**08 10 27.0**	**0.0**
	comp=Z,2.0nm,0.4s,mb4.5,baz=116,slow=6.0,SNR=12								
ARCES	**ARCESS Array B**	**89.91**	**340**	P		**P**		**08 10 37.2**	**+0.1**
	comp=Z,1.1nm,0.6s,mb4.2,baz=98,slow=5.3,SNR=8.8								
VNA1	**Neumayer--Stat**	**92.44**	**198**	*e*P		**P**		**08 10 51.3**	**+2.4**
VNA1				*e*				08 28 10.1	
HUMO	**Hull Mountain**	**124.66**	**40**	*e*PKPdf		PKPdf		08 16 39.3	+1.3
NVAR	**Mina Array Bea**	**129.84**	**42**	PKP		PKPdf		08 16 49.2	+1.2
	comp=Z,0.7nm,0.5s,baz=320,slow=2.4,SNR=9.4								
ANMO	**Albuquerque**	**139.55**	**38**	PKP		PKPdf		08 17 08.0	+1.7
	comp=Z,0.2nm,0.3s,baz=254,slow=3.1,SNR=4.3								
CPUP	**Villa Florida**	**143.62**	**211**	PKP		PKPdf		08 17 13.2	-0.6
	comp=Z,0.5nm,0.4s,baz=254,slow=1.0,SNR=5.4								
WMOK	**Wichita Mounta**	**144.06**	**31**	*e*PKPdf		PKPdf		08 17 11.4	-2.9
TXAR	**Lajitas Array**	**144.99**	**43**	PKP		PKPdf		08 17 16.2	+0.1
	comp=Z,7.6nm,0.6s,baz=279,slow=1.2,SNR=149								
MCWV	**Mont Chateau**	**145.10**	**3**	*e*PKPdf		PKPdf		08 17 15.2	-0.8
WCI	**Wyandotte Cave**	**145.61**	**13**	*e*PKPbc		PKPbc		08 17 16.4	-0.8
MIAR	**Mount Ida**	**146.66**	**25**	*e*PKPdf		PKPdf		08 17 20.1	+1.3
JCT	**Junction City**	**146.68**	**37**	*e*PKPdf		PKPdf		08 17 20.5	+1.5
WVT	**Waverly**	**147.22**	**16**	*e*PKPdf		PKPdf		08 17 21.3	+1.6
GOGA	**Godfrey**	**150.84**	**11**	*e*PKPbc		PKPbc		08 17 30.7	-0.6

*SZGRF **08** 07:57:43.2, 19.60S×178.16W, h33km, Fiji Islands region*
*ISCJB **08** 07:58:51.7±0.6, 17.86S±0.06×178.12W±0.05,*
h622km±7km, mb4.4/95, Error ellipse: s-maj=10.8km
s-min=4.9km az=151.9
*BJI **08** 07:58:51.2, 17.83S×177.83W, h624km, mB5.2/6,*
mb4.5/20
*IDC **08** 07:58:51.2±1.1, 17.99S×177.96W, h608km±14km,*
mb3.9/26, mb1 4.0/27, mb1mx4.0/30, mbtmp3.9/27, Error
ellipse: s-maj=13.6km s-min=7.8km az=138.0
*NEIC **08** 07:58:52.4±0.5, 17.83S×178.08W, h616km±6km, mb4.5/71,*
Error ellipse: s-maj=10.3km s-min=4.8km az=142.0
ISC 08 07:58:51.8±0.6, **17.84S**±0.06×**178.08W**±0.05,
h606km±7km, **h619**km±5.1km;**pP-P,n586,**-0**2**53/472,
mb4.4/95,**192C-154D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.69**	**271**		*e*Pn		**P**	**08 00 19.1**	**+3.4**
AFI	**Afiamalu**	**7.21**	**58**		*e*Pn		**P**	**08 00 43.0**	**-1.1**
	177nm,1.3s								
AFI	**Afiamalu**	**7.21**	**58**	P			**P**	**08 00 43.2**	**-0.9**
	7.6nm,0.3s,baz=196,slow=23,SNR=9.8								
AFI					S		**S**	**08 02 15.1**	**-0.8**
	1.5nm,0.3s,baz=4.5,slow=23,SNR=2.3								
FUNA	**Funafuti**	**9.63**	**344**		*e*Pn		**P**	**08 01 07.8**	**+0.6**
	190nm,0.8s								
OUZ	**Omahuta**	**18.83**	**202**		*e*P		**P**	**08 02 36.4**	**+1.8**
	15nm,0.7s								
URZ	**Urewera**	**20.78**	**191**	P			**P**	**08 02 48.4**	**-3.6**
	5.6nm,0.4s,baz=244,slow=13,SNR=8.4								
RPZ	**Rata Peaks**	**27.38**	**197**	P			**P**	**08 03 47.9**	**-2.5**
	15nm,0.8s,mb4.7,baz=32,slow=7.5,SNR=7.0								
JCZ	**Jackson Bay**	**28.41**	**200**		*e*PN		**P**	**08 03 58.0**	**-1.3**
EIDS	**Eidsvold**	**29.58**	**250**		*e*P		**P**	**08 04 09.2**	**-0.5**
	22nm,1.0s,mb4.8								
ARMA	**Armidale**	**30.25**	**240**		*e*P		**P**	**08 04 16.3**	**+1.0**
ARMA	**Armidale**	**30.25**	**240**		*e*P		**P**	**08 04 16.3**	**+1.0**
CNB	**Canberra Magne**	**33.72**	**232**		*i*P		**P**	**08 04 45.4**	**+0.8**
CTA	**Charters Tower**	**33.77**	**260**		*e*P		**P**	**08 04 45.8**	**+0.6**
	6.7nm,0.7s,mb4.4								
CTA	**Charters Tower**	**33.77**	**260**	P			**P**	**08 04 45.8**	**+0.6**
	7.2nm,0.6s,mb4.5,baz=88,slow=11,SNR=12								
CTAO	**Charters Tower**	**33.77**	**260**		*e*P		**P**	**08 04 45.3**	**+0.1**
	11nm,0.7s,mb4.6								
CAN	**Canberra**	**33.99**	**233**		*e*P		**P**	**08 04 47.3**	**+0.4**
	29nm,0.6s,mb5.1								
TOO	**Toolangi**	**37.45**	**231**		*e*P		**P**	**08 05 15.5**	**+0.2**
STKA	**Stephens Creek**	**38.94**	**241**		*e*P		**P**	**08 05 28.0**	**+0.6**
	23nm,0.9s,mb4.7								
STKA	**Stephens Creek**	**38.94**	**241**		*e*P		**P**	**08 05 27.9**	**+0.5**
	7.0nm,0.9s,mb4.2								
STKA	**Stephens Creek**	**38.94**	**241**	P			**P**	**08 05 28.1**	**+0.7**
	28nm,0.8s,mb4.8,baz=85,slow=8.5,SNR=39								
WRAB	**Tennant Creek**	**44.94**	**259**		*e*P		**P**	**08 06 15.2**	**+0.6**
	32nm,1.2s,mb4.7								
ASAR	**Alice Springs**	**45.11**	**254**	P			**P**	**08 06 15.9**	**+0.1**
	26nm,0.6s,mb4.9,baz=84,slow=8.5,SNR=121								
ASAR					PcP		PcP	08 07 42.4	-0.8
	8.1nm,0.9s,baz=100,slow=3.8,SNR=8.3								
ASAR					S		**S**	**08 12 10.9**	**-1.4**
	2.8nm,0.7s,baz=90,slow=15,SNR=18								
KAKA	**Kakadu**	**47.90**	**269**		*e*P		**P**	**08 06 36.9**	**0.0**
	17nm,0.4s,mb4.9								
KAKA	**Kakadu**	**47.90**	**269**		*e*P		**P**	**08 06 36.3**	**-0.5**
	53nm,0.6s,mb5.2								
FORT	**Forrest**	**50.32**	**245**		*e*P		**P**	**08 06 53.5**	**-0.9**
	35nm,0.7s,mb4.9								
FORT	**Forrest**	**50.32**	**245**		*e*P		**P**	**08 06 53.4**	**-1.0**
	38nm,0.8s,mb4.9								
FITZ	**Fitzroy Crossi**	**53.35**	**260**		*e*P		**P**	**08 07 16.0**	**-0.3**
	5.1nm,0.3s,mb4.3								
FITZ	**Fitzroy Crossi**	**53.35**	**260**		*e*P		**P**	**08 07 16.1**	**-0.2**
	3.8nm,0.4s,mb4.1								
FITZ	**Fitzroy Crossi**	**53.35**	**260**	P			**P**	**08 07 16.5**	**+0.2**
	2.6nm,0.3s,mb4.0,baz=119,slow=9.8,SNR=12								
MBWA	**Marble Bar**	**58.39**	**256**		*e*P		**P**	**08 07 49.9**	**-1.1**
	16nm,0.7s,mb4.3								
KLBR	**Kellerberrin**	**59.14**	**243**		*e*P		**P**	**08 07 54.8**	**-1.0**
	16nm,0.6s,mb4.3								
NWAO	**Narrogin (SRO)**	**59.52**	**242**	P			**P**	**08 07 57.6**	**-0.7**
	3.7nm,0.6s,mb3.8,baz=194,slow=3.8,SNR=3.8								
SBA	**Scott Base**	**60.51**	**184**		*e*P		**P**	**08 08 04.8**	**+0.7**
	1.5nm,0.5s,mb3.5								
MJAR	**Matsushiro Arr**	**68.04**	**323**	P			**P**	**08 08 51.9**	**-0.2**
	7.0nm,0.6s,mb4.3,baz=160,slow=5.8,SNR=18								
MAJO	**Matsushiro**	**68.04**	**323**		*e*P		**P**	**08 08 52.0**	**-0.2**
	8.6nm,0.6s,mb4.4								
MAT	**Matsushiro**	**68.04**	**323**	P			**P**	**08 08 51.9**	**-0.2**
ASAJ	**Asahikawa**	**71.37**	**331**	P			**P**	**08 09 13.2**	**+1.5**
	5.1nm,0.5s,mb4.3,baz=209,slow=0.6,SNR=4.7								
QSPA	**South Pole Qui**	**72.22**	**180**	P			**P**	**08 09 15.7**	**-0.3**
QSPA	**South Pole Qui**	**72.22**	**180**	P			**P**	**08 09 15.7**	**-0.3**
	5.2nm,0.5s,mb4.3,baz=243,slow=0.3,SNR=44								
TPUB	**Ta-pu**	**72.49**	**302**		*e*P		**P**	**08 09 17.5**	**-1.1**
	25nm,0.7s,mb4.9								
PETK	**Petropavlovsk-**	**73.69**	**345**	P			**P**	**08 09 24.6**	**-0.2**
	14nm,0.6s,mb4.7,baz=121,slow=7.2,SNR=14								
KSRS	**Korea Array**	**74.86**	**318**	P			**P**	**08 09 32.8**	**+1.0**
	1.6nm,0.6s,mb3.8,baz=140,slow=6.7,SNR=12								
CHGN	**Chignik**	**75.69**	**11**		*e*P		**P**	**08 09 33.8**	**-2.1**
SAO	**San Andreas Ge**	**76.16**	**44**		*e*P		**P**	**08 09 39.4**	**+0.5**
	19nm,0.9s,mb4.5								
SMMC	**Simmler**	**76.31**	**46**	⇑	P		**P**	**08 09 40.1**	**+0.3**
	baz=76								
ARVC	**Arvin**	**77.01**	**46**	⇓	P		**P**	**08 09 43.5**	**-0.1**
	baz=77								
MWC	**Mount Wilson**	**77.06**	**47**		*e*P		**P**	**08 09 43.6**	**-0.3**
	11nm,0.6s,mb4.5								
KHMM	**Horse Mountain**	**77.14**	**39**		*e*P		**P**	**08 09 45.2**	**+1.0**
	21nm,1.1s,mb4.5								
VES	**Vestal, Richgr**	**77.22**	**46**	⇓	P		**P**	**08 09 44.3**	**-0.5**
	baz=77,SNR=7.5								
BFSC	**Mount Baldy Ra**	**77.35**	**48**	⇑	P		**P**	**08 09 45.1**	**-0.3**
	baz=78								
EDW2	**Edwards Air Fo**	**77.46**	**47**	⇑	P		**P**	**08 09 46.1**	**0.0**
	baz=78,SNR=8.5								
MONP	**Monument Peak**	**77.53**	**49**	⇓	P		**P**	**08 09 46.7**	**+0.2**
	baz=78,SNR=13								
ISA	**Isabella**	**77.54**	**46**	⇑	P		**P**	**08 09 46.4**	**0.0**
	baz=78,SNR=14								
ISA	**Isabella**	**77.54**	**46**		*e*P		**P**	**08 09 46.7**	**+0.2**
	15nm,0.9s,mb4.4								
CMB	**Columbia Colle**	**77.58**	**43**		*e*P		**P**	**08 09 46.5**	**-0.1**
	14nm,0.9s,mb4.4								
OHAK	**Old Harbor**	**77.59**	**14**		*e*P		**P**	**08 09 45.7**	**-0.5**
	23nm,0.6s,mb4.8								
DVTC	**Desert V Tower**	**77.65**	**50**	⇓	P		**P**	**08 09 47.0**	**-0.1**
	baz=78								
WDC	**Whiskeytown Da**	**77.69**	**40**		*e*P		**P**	**08 09 47.5**	**+0.3**
	19nm,1.4s,mb4.3								
PFO	**Pinyon Flat Ob**	**77.88**	**49**	⇑	P		**P**	**08 09 48.2**	**-0.2**
	baz=78								
BBRC	**Big Bear Solar**	**77.88**	**48**	⇓	P		**P**	**08 09 48.4**	**0.0**
	baz=78								
SWSC	**Sam W. Stewart**	**78.01**	**50**	⇓	P		**P**	**08 09 48.9**	**-0.2**
	baz=78								
RRX	**Edison Barstow**	**78.15**	**47**	⇑	P		**P**	**08 09 49.6**	**-0.2**
	baz=78								
CWC	**Cottonwood Cre**	**78.23**	**46**	⇑	P		**P**	**08 09 50.2**	**0.0**
	baz=78								
KDAK	**Kodiak Island**	**78.26**	**14**		*e*P		**P**	**08 09 49.6**	**-0.1**
	86nm,1.7s,mb4.9								
KDAK	**Kodiak Island**	**78.26**	**14**	P			**P**	**08 09 49.4**	**-0.4**
	11nm,0.6s,mb4.4,baz=190,slow=2.5,SNR=14								
YBH	**Yreka Blue Hor**	**78.27**	**39**		*e*P		**P**	**08 09 50.6**	**+0.3**
	16nm,1.1s,mb4.4								
YBH	**Yreka Blue Hor**	**78.27**	**39**	P			**P**	**08 09 50.7**	**+0.4**
	7.1nm,0.6s,mb4.3,baz=188,slow=1.6,SNR=46								
MLAC	**Mammoth Lakes**	**78.37**	**44**	⇑	P		**P**	**08 09 51.2**	**+0.3**
	baz=78								
MTUM	**Tungsten Hills**	**78.40**	**45**		*e*P		**P**	**08 09 51.4**	**+0.4**
BELC	**Belle Mtn. Jos**	**78.40**	**49**	⇑	P		**P**	**08 09 51.2**	**0.0**
	baz=79,SNR=6.8								
MPMC	**Manual Prospec**	**78.43**	**46**	⇓	P		**P**	**08 09 51.1**	**-0.1**
	baz=79,SNR=12								
WAKR	**Walker**	**78.46**	**43**		*e*P		**P**	**08 09 51.6**	**+0.3**
TIN	**Tinemaha**	**78.46**	**45**	⇓	P		**P**	**08 09 51.5**	**+0.2**
	baz=79								
GSC	**Goldstone**	**78.50**	**47**	⇓	P		**P**	**08 09 51.6**	**0.0**
	baz=79								
LBCM	**Butte Creek Ri**	**78.57**	**40**	P			**P**	**08 09 52.0**	**+0.1**
HEC	**Hector,Ludlow**	**78.59**	**48**	⇓	P		**P**	**08 09 51.8**	**-0.3**
	baz=79								
BC3	**Big Chuckawall**	**78.62**	**49**	⇑	P		**P**	**08 09 52.4**	**+0.1**
	baz=79								
HUMO	**Hull Mountain**	**78.65**	**38**		*e*P		**P**	**08 09 52.5**	**+0.3**
	21nm,1.2s,mb4.3								
112A	**Yuma**	**78.69**	**50**	⇓	P		**P**	**08 09 53.1**	**+0.4**
	baz=79								
WCN	**Washoe City**	**78.70**	**42**	⇓	P		**P**	**08 09 52.8**	**+0.3**
	baz=79,SNR=9.5								
GRAC	**Grapevine Rang**	**79.01**	**45**	⇑	P		**P**	**08 09 54.4**	**+0.2**
	baz=79,SNR=7.2								
GMRC	**Granite Mounta**	**79.04**	**48**	⇓	P		**P**	**08 09 54.3**	**-0.2**
	baz=79,SNR=5.3								
FURC	**Furnace Creek,**	**79.08**	**46**	⇓	P		**P**	**08 09 54.5**	**-0.1**
	baz=79,SNR=6.4								
IRM	**Iron Mountain**	**79.09**	**49**	⇓	P		**P**	**08 09 54.8**	**+0.1**
	baz=79,SNR=7.6								
NVAR	**Mina Array Bea**	**79.16**	**44**	P			**P**	**08 09 55.2**	**+0.2**
NVAR	**Mina Array Bea**	**79.16**	**44**	P			**P**	**08 09 55.2**	**+0.2**
	9.7nm,0.7s,mb4.2,baz=224,slow=8.7,SNR=74								
PAHR	**Pah Rah Range**	**79.16**	**42**		*e*P		**P**	**08 09 55.5**	**+0.5**
	18nm,1.1s,mb4.3								
SHOC	**Shoshone**	**79.18**	**47**	⇑	P		**P**	**08 09 55.4**	**+0.2**
	baz=79								
TUQ	**Turquoise Moun**	**79.19**	**47**	⇑	P		**P**	**08 09 55.1**	**-0.1**
	baz=79								
113A	**Mohawk Valley,**	**79.41**	**51**	⇑	P		**P**	**08 09 56.6**	**+0.1**
	baz=80								
U10A	**Ash Meadows, A**	**79.42**	**46**	⇑	P		**P**	**08 09 56.7**	**+0.2**
	baz=80,SNR=5.5								
MPOR	**Mary's Peak**	**79.47**	**36**	P			**P**	**08 09 56.9**	**+0.5**
Z13A	**Yuma Proving G**	**79.70**	**50**	⇓	P		**P**	**08 09 58.1**	**+0.1**
	baz=80,SNR=7.3								
214A	**Organ Pipe Nat**	**79.72**	**52**	⇑	P		**P**	**08 09 58.5**	**+0.3**
	baz=80								
V11A	**Goodsprings**	**79.74**	**47**	⇓	P		**P**	**08 09 58.1**	**-0.1**
	baz=80								
NEE2	**Needles Airpor**	**79.77**	**48**	⇑	P		**P**	**08 09 58.3**	**0.0**
	baz=80								
HEBO	**Mount Hebo**	**79.79**	**36**		*e*P		**P**	**08 09 58.2**	**+0.1**
	12nm,0.8s,mb4.3								
MOD	**Modoc**	**79.83**	**40**		*e*P		**P**	**08 09 58.3**	**-0.1**
	17nm,0.8s,mb4.4								
W12A	**Cal Nev Ari**	**79.86**	**48**	⇑	P		**P**	**08 09 59.0**	**+0.3**
	baz=80								
Y13A	**Salome**	**79.87**	**50**	⇑	P		**P**	**08 09 59.1**	**+0.3**
	baz=80								
K05A	**Summer Lake**	**79.95**	**39**	⇑	P		**P**	**08 09 59.5**	**+0.5**
	baz=80,SNR=30								
S10A	**Tonopah Range,**	**80.02**	**45**	⇓	P		**P**	**08 09 59.6**	**+0.1**
	baz=80,SNR=23								
114A	**Black Gap (USA**	**80.05**	**51**	⇑	P		**P**	**08 10 00.1**	**+0.2**
	baz=80,SNR=5.6								
V12A	**Nelson**	**80.09**	**48**	⇑	P		**P**	**08 09 59.8**	**-0.1**
	baz=80								
CN2	**Changchun**	**80.16**	**322**		*e*P		**P**	**08 10 00.8**	**+0.7**
CN2					pmax	pmax			
	comp=Z,10.0nm,0.6s,mb4.3								
X13A	**Yucca**	**80.25**	**49**	⇑	P		**P**	**08 10 01.0**	**+0.1**
	baz=80								
Z14A	**Wintersburg**	**80.30**	**50**	⇑	P		**P**	**08 10 01.3**	**+0.2**
	baz=80								
F03A	**Seaside**	**80.34**	**35**	⇓	P		**P**	**08 10 01.1**	**+0.1**
	baz=80								
H04A	**Detroit Lake**	**80.35**	**37**	⇓	P		**P**	**08 10 00.7**	**-0.4**
	baz=80,SNR=20								
R10A	**Warm Springs**	**80.41**	**45**	⇑	P		**P**	**08 10 01.9**	**+0.4**
	baz=81,SNR=25								
S11A	**Rachel**	**80.45**	**45**	⇑	P		**P**	**08 10 01.6**	**-0.2**
	baz=81,SNR=11								
W13A	**Hualapai Mount**	**80.46**	**48**	⇑	P		**P**	**08 10 02.1**	**+0.2**
	baz=81								
G04A	**Mulino**	**80.50**	**36**	⇑	P		**P**	**08 10 02.1**	**+0.3**
	baz=81								
Y14A	**Wickenburg**	**80.53**	**50**	⇓	P		**P**	**08 10 02.1**	**-0.2**
	baz=81,SNR=5.7								
T11A	**Corn Creek, Al**	**80.60**	**46**	⇓	P		**P**	**08 10 02.8**	**+0.2**
	baz=81,SNR=24								
Q10A	**Clear Creek Ra**	**80.63**	**44**	⇑	P		**P**	**08 10 02.6**	**-0.1**
	baz=81,SNR=8.3								
U12A	**Valley of Fire**	**80.66**	**47**	⇑	P		**P**	**08 10 03.1**	**+0.2**
	baz=81,SNR=12								
T12A	**Moapa**	**80.69**	**47**	⇑	P		**P**	**08 10 03.0**	**0.0**
	baz=81								
E03A	**Lebam**	**80.72**	**35**	⇓	P		**P**	**08 10 03.0**	**+0.1**
	baz=81,SNR=12								
216A	**Three Points,**	**80.76**	**52**	⇑	P		**P**	**08 10 04.1**	**+0.6**
	baz=81,SNR=6.9								
V13A	**Grand Canyon W**	**80.76**	**48**	⇑	P		**P**	**08 10 03.3**	**-0.2**
	baz=81,SNR=7.2								
WHN	**Wuhan**	**80.82**	**306**	P			**P**	**08 10 03.8**	**0.0**
116A	**Eloy**	**80.84**	**52**	⇓	P		**P**	**08 10 04.2**	**+0.3**
	baz=81,SNR=5.6								
Z15A	**Gila River Ind**	**80.84**	**51**	⇓	P		**P**	**08 10 04.0**	**+0.1**
	baz=81								
X14A	**Yava**	**80.87**	**49**	⇑	P		**P**	**08 10 04.3**	**+0.3**
	baz=81,SNR=9.1								
R11A	**Troy Canyon, C**	**80.92**	**45**	⇑	P		**P**	**08 10 03.9**	**-0.3**
	baz=81,SNR=16								
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O12A **Currie** 82.47 44 ⇑P P 08 10 12.1 +0.1
baz=83,SNR=8.8
P13A **Bates Ranch, G** 82.54 45 ⇑P P 08 10 12.5 +0.1
baz=83,SNR=21
G08A **Pilot Rock** 82.56 38 ⇓P P 08 10 12.3 -0.1
baz=83,SNR=30
N12A **Clover Valley,** 82.58 43 ⇑P P 08 10 12.6 +0.1
baz=83,SNR=16
JCW **Jim Creek** 82.60 34 eP P 08 10 12.2 -0.2
320A **Kipp Ranch, An** 82.69 54 ⇓P P 08 10 14.4 +1.1
baz=83,SNR=16
119A **Ashpeak Ranch,** 82.73 52 ⇑P P 08 10 14.3 +0.8
baz=83
E07A **Sunnyside** 82.78 36 ⇑P P 08 10 13.3 -0.1
baz=83
S15A **Panguitch** 82.79 47 ⇑P P 08 10 14.6 +1.0
baz=83,SNR=10
L11A **Cat Creek Ranc** 82.81 42 ⇑P P 08 10 13.7 +0.1
baz=83,SNR=19
Q14A **Sevier Lake (B** 82.81 45 ⇑P P 08 10 14.0 +0.3
baz=83,SNR=28
RSW **Rattlesnake Hi** 82.83 36 eP P 08 10 13.8 +0.2
HAWA **Hanford** 82.86 37 eP P 08 10 13.8 0.0
comp=Z,23nm,1.1s,mb4.6
O13A **Hicks Ranch, I** 82.90 44 ⇓P P 08 10 14.4 +0.2
baz=83
V17A **Tonalea, Kykot** 82.93 49 ⇓P P 08 10 14.5 +0.1
baz=83,SNR=16
U16A **Tuba City** 82.93 49 ⇓P P 08 10 14.8 +0.4
baz=83,SNR=23
220A **Playas Peak, P** 82.94 53 ⇓P P 08 10 15.2 +0.7
baz=83,SNR=6.6
M12A **Wells** 82.95 43 ⇓P P 08 10 14.3 0.0
baz=83,SNR=11
Z19A **T-Link Ranch,** 82.99 52 ⇓P P 08 10 15.1 +0.3
baz=83
X18A **Snowflake** 83.04 51 ⇓P P 08 10 15.3 +0.3
baz=83,SNR=5.3
T16A **Glen Canyon Da** 83.06 48 ⇑P P 08 10 15.3 +0.3
baz=83,SNR=14
R15A **Junction** 83.11 46 ⇑P P 08 10 15.9 +0.6
baz=83
ETW **Entiat** 83.12 35 P P 08 10 14.9 -0.1
N13A **Wendover, West** 83.12 43 ⇑P P 08 10 15.3 0.0
baz=83
120A **U Bar Ranch, L** 83.14 53 ⇓P P 08 10 15.4 -0.2
baz=83
E08A **Dider Farm, El** 83.19 37 ⇑P P 08 10 15.1 -0.3
baz=83,SNR=6.1
P14A **Drum Mountains** 83.24 45 ⇓P P 08 10 15.9 0.0
baz=83,SNR=9.6
L12A **House Creek Ra** 83.26 42 ⇑P P 08 10 16.0 +0.1
baz=83,SNR=12
BMO **Blue Mountains** 83.29 39 eP P 08 10 15.6 -0.4
comp=Z,4.6nm,0.9s,mb4.0
Y19A **Nutrioso** 83.30 51 ⇑P P 08 10 17.0 +0.7
baz=83,SNR=11
MSU **Marysvale** 83.32 46 eP P 08 10 17.3 +1.0
S16A **Weppner Ranch,** 83.35 47 ⇑P P 08 10 16.2 -0.2
baz=84,SNR=5.3
M13A **Montello** 83.41 43 ⇓P P 08 10 16.6 -0.1
baz=84,SNR=11
MFID **Camas Ranch** 83.42 40 ⇑P P 08 10 16.4 -0.2
baz=84,SNR=9.4
Q15A **Fillmore** 83.42 46 ⇓P P 08 10 16.9 +0.1
baz=84,SNR=8.4
Z20A **Nine Sixteen R** 83.42 52 ⇑P P 08 10 17.5 +0.5
baz=84
X19A **St. Johns** 83.48 51 ⇓P P 08 10 17.5 +0.3
baz=84,SNR=11
221A **Mesquite Ranch** 83.56 54 ⇑P P 08 10 18.3 +0.7
baz=84,SNR=6.1
T17A **Navajo Res., N** 83.56 48 ⇑P P 08 10 17.9 +0.4
baz=84,SNR=13
D08A **Wollman Farm,** 83.59 36 ⇓P P 08 10 17.2 -0.2
baz=84,SNR=9.8
V18A **Ganado** 83.59 49 ⇓P P 08 10 18.0 +0.3
baz=84,SNR=9.3
R16A **Teasdale** 83.69 47 ⇑P P 08 10 18.6 +0.5
baz=84,SNR=7.1
DUG **Dugway** 83.71 44 ⇑P P 08 10 17.8 -0.4
baz=84
E09A **Wood Farm, Sta** 83.72 37 ⇓P P 08 10 17.5 -0.6
baz=84,SNR=5.4
121A **Cookes Peak, D** 83.78 53 ⇓P P 08 10 19.3 +0.5
baz=84
N14A **Grayback Hills** 83.79 44 ⇑P P 08 10 19.0 +0.4
baz=84
S17A **Black Ridge (B** 83.86 47 ⇓P P 08 10 18.4 -0.6
baz=84,SNR=7.2
OD2 **Odessa Site #2** 83.89 36 P P 08 10 18.5 -0.4
Y20A **Horse Springs,** 83.93 52 ⇑P P 08 10 19.9 +0.5
baz=84
F10A **Beach Ranch, E** 83.95 38 ⇓P P 08 10 18.7 -0.6
baz=84,SNR=32
BJI **Beijing** 83.95 315 P P 08 10 19.9 +0.5
BJI pP pP 08 12 30.4 +2.4
BJI sP sP 08 13 33.1 +4.2
BJI pmax pmax
comp=Z,12nm,1.1s,mb4.3
U18A **Rough Rock, Ch** 83.96 49 ⇓P P 08 10 19.4 -0.1
baz=84,SNR=5.6
M14A **Sheep Mountain** 84.01 43 ⇓P P 08 10 19.4 -0.2
baz=84,SNR=8.2
MAW **Mawson** 84.03 200 eP P 08 10 18.0 -1.3
comp=Z,0.6nm,0.8s
MAW **Mawson** 84.03 200 P P 08 10 18.4 -0.9
comp=Z,1.2nm,0.6s,mb3.6,baz=127,slow=6.6,SNR=4.3
I12A **Atlanta** 84.05 40 ⇑P P 08 10 20.0 +0.2
baz=84,SNR=19
B08A **Colville Reser** 84.10 35 ⇑P P 08 10 18.9 -0.9
baz=84,SNR=18
X20A **Quemado** 84.12 51 ⇓P P 08 10 20.7 +0.4
baz=84,SNR=5.7
PSI **Prapat** 84.19 275 P P 08 10 20.9 -0.3
comp=Z,18nm,0.9s,mb4.6,baz=244,slow=2.4,SNR=6.9
P16A **Fountain Green** 84.20 45 ⇑P P 08 10 21.0 +0.4
baz=84
Q16A **Castle Valley** 84.21 46 ⇑P P 08 10 21.0 +0.4
baz=84
V19A **Window Rock** 84.24 50 ⇑P P 08 10 20.9 +0.1
baz=84
T18A **Mexican Hat** 84.28 48 ⇓P P 08 10 21.2 +0.1
baz=84,SNR=28
R17A **Hanksville Air** 84.29 47 ⇓P P 08 10 20.9 -0.2
baz=84
L14A **Malta** 84.34 43 ⇑P P 08 10 21.2 0.0
baz=84
C09A **Chrisman Ranch** 84.37 36 ⇓P P 08 10 20.9 -0.4
baz=84
HLID **Hailey** 84.37 41 ⇑P P 08 10 21.6 +0.3
baz=84,SNR=18
HLID **Hailey** 84.37 41 eP P 08 10 21.7 +0.3
comp=Z,8.0nm,0.8s,mb4.3
W20A **Ramah** 84.38 51 ⇑P P 08 10 21.9 +0.3
baz=84,SNR=10
U19A **Dine' College,** 84.38 49 ⇑P P 08 10 21.5 -0.1
baz=84,SNR=9.2
J13A **Cove Ranch, Pi** 84.44 41 ⇓P P 08 10 22.0 +0.4
baz=85,SNR=8.1
S18A **Hurst Farm, Bl** 84.45 48 ⇑P P 08 10 21.9 0.0
baz=85
ENH **Enshi** 84.49 304 eP P 08 10 22.6 +0.4
comp=Z,47nm,1.3s,mb4.8
Y21A **Point of Rocks** 84.50 52 ⇓P P 08 10 22.5 +0.3
baz=85
SKAG **Skagway** 84.53 20 eP P 08 10 22.1 +0.4
comp=Z,11nm,0.9s,mb4.5
O16A **Springville** 84.59 45 ⇑P P 08 10 22.7 +0.2
baz=85
X21A **Alamocita Cree** 84.61 51 ⇑P P 08 10 22.8 +0.1
baz=85
H12A **Diamond D Ranc** 84.61 40 ⇓P P 08 10 22.3 -0.2
baz=85,SNR=30
K14A **Jones Ranch, D** 84.64 42 ⇑P P 08 10 22.6 -0.1
baz=85,SNR=6.3
Z22A **Elephant Butte** 84.71 53 ⇓P P 08 10 23.4 +0.2
baz=85
I13A **Wildhorse Cree** 84.74 41 ⇑P P 08 10 23.2 +0.1
baz=85,SNR=7.3
SRU **San Rafael** 84.74 46 ⇓P P 08 10 23.1 -0.2
baz=85,SNR=9.5
SRU **San Rafael** 84.74 46 eP P 08 10 22.4 -0.8
comp=Z,6.4nm,0.8s,mb4.3
T19A **Beclabito** 84.75 49 ⇓P P 08 10 23.3 0.0
baz=85
J14A **Carey** 84.81 41 ⇑P P 08 10 24.0 +0.5
baz=85,SNR=16

R18A **Canyonlands Na** 84.84 47 ⇓P P 08 10 23.5 -0.3
baz=85,SNR=7.0
L15A **Malad City** 84.88 43 ⇑P P 08 10 23.6 -0.3
baz=85
HYT **Haines Junctio** 84.89 19 eP P 08 10 23.2 -0.2
MENT **Mentasta** 84.90 15 eP P 08 10 22.6 -0.8
U20A **Newcomb** 84.91 49 ⇑P P 08 10 23.7 -0.4
baz=85,SNR=5.2
N16A **Rees Ranch, Co** 84.96 44 ⇑P P 08 10 24.3 +0.1
baz=85
H13A **Challis** 84.98 40 ⇑P P 08 10 24.3 0.0
baz=85,SNR=11
F12A **Elk City** 85.00 39 ⇑P P 08 10 23.8 -0.5
baz=85,SNR=32
W21A **San Fidel** 85.00 51 ⇓P P 08 10 24.9 +0.3
baz=85
Y22A **Socorro** 85.00 52 ⇓P P 08 10 24.5 -0.1
baz=85,SNR=6.7
Q18A **Rafter H Ranch** 85.01 46 ⇑P P 08 10 24.0 -0.5
baz=85,SNR=5.0
S19A **Harvey Farm, M** 85.08 48 ⇓P P 08 10 24.6 -0.3
baz=85,SNR=5.1
324A **Moseley Ranch,** 85.10 55 ⇑P P 08 10 25.0 -0.2
baz=85,SNR=10
O17A **Robinson Place** 85.11 45 ⇑P P 08 10 25.3 +0.3
baz=85,SNR=10
K15A **Arbon** 85.12 42 ⇑P P 08 10 25.1 +0.1
baz=85
425A **Indio Mountain** 85.22 56 ⇑P P 08 10 26.0 +0.3
baz=85,SNR=13
HWUT **Hardware Ranch** 85.22 44 eP P 08 10 24.5 -1.0
comp=Z,4.2nm,1.0s,mb4.0
R19A **Curley Farm, L** 85.24 47 ⇑P P 08 10 25.3 -0.4
baz=85,SNR=9.8
G13A **Cobalt** 85.27 40 ⇑P P 08 10 25.3 -0.3
baz=85,SNR=12
NEW **Newport** 85.27 36 eP P 08 10 24.6 -1.0
comp=Z,4.9nm,0.8s,mb4.2
Z23A **Rita Site, Whi** 85.27 53 ⇓P P 08 10 26.1 +0.2
baz=85
GYA **Guiyang** 85.27 300 eP P 08 10 25.8 -0.3
GYA pP pP 08 12 38.3 +3.1
GYA sP sP 08 13 39.0 +3.0
GYA PP PP 08 13 58.7 +2.9
GYA SKS 08 19 50.4
GYA S S 08 20 05.5 -1.8
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
MNTX **Cornudas Mount** 85.28 55 eP P 08 10 25.9 -0.2
comp=Z,20nm,1.7s,mb4.5
224A **Cornudas Mount** 85.33 54 ⇓P P 08 10 26.3 +0.1
baz=86,SNR=6.9
N17A **Moffit Pass** 85.39 44 ⇓P P 08 10 26.4 0.0
baz=86
626A **Big Bend Ranch** 85.41 57 ⇓P P 08 10 27.2 +0.5
baz=86,SNR=16
LPM **Los Pinos Moun** 85.41 52 eP P 08 10 27.4 +0.8
325A **Bean Ranch, Si** 85.47 55 ⇑P P 08 10 26.9 0.0
baz=86,SNR=8.6
L16A **Fish Haven** 85.51 43 ⇑P P 08 10 26.4 -0.4
baz=86,SNR=5.5
Q19A **Hogan Spring (** 85.54 47 ⇓P P 08 10 26.6 -0.5
baz=86,SNR=5.9
H14A **Leadore** 85.56 40 ⇓P P 08 10 27.3 +0.3
baz=86,SNR=13
W22A **Albuquerque** 85.56 51 ⇑P P 08 10 27.7 +0.4
baz=86
U21A **Nageezi** 85.56 50 ⇑P P 08 10 27.3 0.0
baz=86,SNR=23
F13A **Darby** 85.57 39 ⇑P P 08 10 26.6 -0.5
baz=86,SNR=17
D12A **Red Ives Fores** 85.63 38 ⇑P P 08 10 26.7 -0.6
baz=86
O18A **Roosevelt** 85.63 45 ⇑P P 08 10 27.5 0.0
baz=86
124A **Stringfield Ra** 85.64 54 ⇓P P 08 10 27.8 +0.1
baz=86
COLA **College** 85.64 12 eP P 08 10 25.2 -1.7
comp=Z,24nm,1.0s,mb4.8
DLBC **Dease Lake** 85.64 23 eP P 08 10 27.0 -0.1
DLBC **Dease Lake** 85.64 23 P P 08 10 26.4 -0.6
comp=Z,3.4nm,0.8s,mb4.0,baz=244,slow=6.2,SNR=10
TXAR **Lajitas Array** 85.69 58 P P 08 10 28.5 +0.5
comp=Z,11nm,0.8s,mb4.5,baz=220,slow=6.0,SNR=139
ILAR **Eielson Array** 85.75 13 P P 08 10 25.9 -1.5
comp=Z,5.0nm,0.4s,mb4.5,baz=220,slow=4.9,SNR=99
I15A **Monteview** 85.80 41 ⇑P P 08 10 28.6 +0.4
baz=86
K16A **Soda Springs** 85.80 43 ⇑P P 08 10 28.6 +0.3
baz=86
ANMO **Albuquerque** 85.81 51 eP P 08 10 28.1 -0.4
comp=Z,7.2nm,1.0s,mb4.3
ANMO **Albuquerque** 85.81 51 P P 08 10 28.1 -0.4
comp=Z,6.1nm,1.0s,mb4.2,baz=218,slow=5.5,SNR=23
G14A **Jackson** 85.82 40 ⇓P P 08 10 28.3 0.0
baz=86,SNR=5.3
R20A **Redvale** 85.82 48 ⇑P P 08 10 27.8 -0.6
baz=86
225A **Deer Hill, Car** 85.88 55 ⇓P P 08 10 28.8 0.0
baz=86,SNR=6.2
V22A **San Miguel Ran** 85.89 50 ⇑P P 08 10 28.2 -0.6
baz=86
T21A **Navajo Lake** 85.89 49 ⇓P P 08 10 29.0 +0.1
baz=86
C12B **Naegeli Ranch,** 85.90 37 ⇓P P 08 10 28.0 -0.6
baz=86,SNR=5.2
426A **McDonald Obser** 85.93 56 ⇓P P 08 10 29.5 +0.4
baz=86,SNR=14
Z24A **Sheeppen Canyo** 85.96 53 ⇑P P 08 10 29.0 -0.3
baz=86
627A **Terlingua Ranc** 85.96 57 ⇑P P 08 10 29.9 +0.5
baz=86,SNR=32
MCMT **McKenzie Canyo** 85.98 40 eP P 08 10 29.1 0.0
comp=Z,8.9nm,1.1s,mb4.3
E13A **Victor** 85.99 38 ⇓P P 08 10 28.1 -0.9
baz=86,SNR=6.1
J16A **Bone** 86.00 42 ⇑P P 08 10 29.5 +0.3
baz=86,SNR=14
H15A **Lima** 86.00 41 ⇓P P 08 10 29.4 +0.3
baz=86,SNR=19
P19A **Cripple Cowboy** 86.05 46 ⇑P P 08 10 29.4 -0.1
baz=86
U22A **Llaves** 86.12 50 ⇑P P 08 10 29.6 -0.3
baz=86
W23A **Werner Place,** 86.13 51 ⇓P P 08 10 30.0 +0.1
baz=86
M18A **Lyman** 86.13 44 ⇑P P 08 10 29.5 -0.3
baz=86,SNR=5.9
Y24A **Capitan** 86.15 53 ⇓P P 08 10 29.9 -0.2
baz=86,SNR=18
F14A **Wisdom** 86.16 39 ⇑P P 08 10 29.3 -0.5
baz=86
D13A **Huson** 86.17 38 ⇓P P 08 10 29.2 -0.6
baz=86
N18A **Larsen Ranch,** 86.19 45 ⇑P P 08 10 29.9 -0.2
baz=86
K17A **Gardner Place,** 86.19 43 ⇓P P 08 10 29.9 -0.1
baz=86,SNR=6.0
Q20A **Ridgley Place,** 86.22 47 ⇓P P 08 10 29.8 -0.5
baz=86,SNR=5.2
RRI2 **Red Ridge** 86.22 42 eP P 08 10 30.9 +0.7
comp=Z,21nm,0.9s,mb4.8
125A **Gardner Draw,** 86.23 54 ⇑P P 08 10 30.5 0.0
baz=86
B12A **Libby** 86.24 36 ⇑P P 08 10 30.1 0.0
baz=86
O19A **Miners Draw (B** 86.25 46 ⇑P P 08 10 30.1 -0.3
baz=86
GDL2 **Guadalupe Moun** 86.28 55 eP P 08 10 31.3 +0.6
MSO **Missoula** 86.33 38 eP P 08 10 29.2 -1.5
comp=Z,1.6nm,0.5s,mb3.9
V23A **Ortiz Mt. (NFS** 86.35 51 ⇑P P 08 10 31.3 +0.3
baz=86,SNR=8.2
T22A **Edith** 86.36 49 ⇓P P 08 10 30.6 -0.4
baz=86
I16A **Newdale** 86.37 42 ⇑P P 08 10 31.4 +0.5
baz=86,SNR=24
BSMT **Bassoo Peak** 86.37 37 eP P 08 10 30.1 -0.7
G15A **Dillon** 86.37 40 ⇑P P 08 10 30.9 +0.1
baz=86,SNR=25
E14A **Clinton** 86.39 39 ⇑P P 08 10 30.5 -0.5
baz=86,SNR=8.7
P20A **De Beque** 86.39 47 ⇓P P 08 10 30.7 -0.4
baz=86,SNR=6.1
DLMT **Dillon** 86.40 40 eP P 08 10 31.0 0.0
comp=Z,11nm,1.0s,mb4.5
C13A **Hot Springs** 86.41 37 ⇓P P 08 10 29.9 -1.1
baz=87,SNR=5.9

226A **Malaga, Loving** 86.42 55 ⇓P P 08 10 30.9 -0.5
baz=87
Z25A **Roswell** 86.44 54 ⇑P P 08 10 31.3 -0.1
baz=87,SNR=5.2
A12A **Yaak River Ran** 86.45 36 ⇑P P 08 10 30.9 -0.3
baz=87
XAN **Xi'an** 86.47 307 P P 08 10 32.3 +0.7
XAN pmax pmax
comp=Z,23nm,0.7s,mb4.9
R21A **Cimarron** 86.48 48 ⇑P P 08 10 31.7 +0.1
baz=87,SNR=9.3
427A **Hayter Ranch,** 86.50 56 ⇓P P 08 10 32.1 +0.3
baz=87,SNR=19
TPAW **Teton Pass** 86.52 42 eP P 08 10 31.8 +0.1
comp=Z,9.2nm,0.9s,mb4.5
REDW **Red Top Meadow** 86.53 42 eP P 08 10 31.8 +0.1
comp=Z,16nm,1.0s,mb4.7
U23A **El Rito** 86.59 50 ⇓P P 08 10 31.9 -0.2
baz=87,SNR=7.8
J17A **Brown Place, J** 86.62 42 ⇓P P 08 10 32.1 +0.1
baz=87,SNR=13
SNOW **Snow King Moun** 86.64 42 eP P 08 10 32.6 +0.4
comp=Z,19nm,1.0s,mb4.8
SWMT **Swartz Lake** 86.65 38 eP P 08 10 34.1 +2.0
W24A **Lazy 6 Ranch,** 86.70 52 ⇓P P 08 10 32.1 -0.6
baz=87,SNR=8.9
K18A **Toltan Ranch,** 86.71 43 ⇑P P 08 10 32.7 +0.2
baz=87,SNR=22
Y25A **Mesa, Roswell** 86.72 53 ⇓P P 08 10 32.1 -0.6
baz=87,SNR=6.0
528A **Cox Ranch, San** 86.72 57 ⇓P P 08 10 33.2 +0.3
baz=87,SNR=18
D14A **Greenough** 86.72 38 ⇑P P 08 10 31.4 -1.0
baz=87
LRM **Limekiln Ridge** 86.72 40 eP P 08 10 32.6 +0.1
IMW **Indian Meadow** 86.73 42 eP P 08 10 32.9 +0.4
comp=Z,16nm,0.9s,mb4.8
S22A **4UR Ranch, Cre** 86.73 49 ⇑P P 08 10 32.8 +0.1
baz=87,SNR=11
M19A **Rock Springs** 86.77 45 ⇓P P 08 10 32.4 -0.4
baz=87
O20A **White River Ci** 86.78 46 ⇓P P 08 10 32.7 -0.2
baz=87
MOOW **Moose Ponds** 86.78 42 eP P 08 10 32.8 0.0
comp=Z,4.1nm,0.9s,mb4.2
CHMT **Chamberlain Mo** 86.79 38 eP P 08 10 31.9 -0.9
comp=Z,3.9nm,0.8s,mb4.2
LOHW **Long Hollow** 86.80 42 eP P 08 10 32.8 -0.1
comp=Z,7.7nm,1.0s,mb4.4
SLMT **Seeley Lake** 86.81 38 eP P 08 10 31.8 -1.1
comp=Z,2.0nm,0.8s,mb3.9
G16A **Moss Hill, Enn** 86.83 40 ⇑P P 08 10 33.0 0.0
baz=87,SNR=12
B13A **Whitefish** 86.83 37 ⇑P P 08 10 31.8 -1.1
baz=87,SNR=6.0
E15A **Deer Lodge** 86.91 39 ⇑P P 08 10 32.9 -0.5
baz=87
L19A **Farson** 86.91 44 ⇑P P 08 10 33.4 -0.1
baz=87,SNR=12
H16A **Russell Place,** 86.92 41 ⇓P P 08 10 34.1 +0.7
baz=87,SNR=43
C14A **Swan Lake** 86.93 38 ⇑P P 08 10 32.8 -0.6
baz=87
DAWY **Dawson** 86.94 16 eP P 08 10 32.4 -0.6
FLWY **Flagg Ranch** 86.97 42 eP P 08 10 34.1 +0.5
comp=Z,19nm,1.1s,mb4.7
I17A **Pilgrim Ck.** 86.97 42 ⇑P P 08 10 34.4 +0.7
baz=87
R22A **Saguache, Gunn** 86.99 48 ⇑P P 08 10 34.2 +0.3
baz=87,SNR=7.6
J18A **Kendall Valley** 86.99 43 ⇓P P 08 10 33.9 +0.1
baz=87,SNR=40
T23A **Casias Ranch,** 87.00 50 ⇓P P 08 10 33.8 -0.2
baz=87
Z26A **Caprock** 87.00 54 ⇑P P 08 10 33.7 -0.4
baz=87,SNR=9.7
V24A **Rampart Ranch,** 87.02 51 ⇑P P 08 10 33.9 -0.3
baz=87,SNR=5.5
428A **Kincaid Ranch,** 87.02 57 ⇑P P 08 10 34.1 -0.2
baz=87
EGAK **Eagle** 87.07 15 eP P 08 10 32.9 -0.8
comp=Z,15nm,1.1s,mb4.6
N20A **Spence Gulch,** 87.08 45 ⇑P P 08 10 34.1 -0.1
baz=87,SNR=7.9
BW06 **Boulder Array** 87.09 43 eP P 08 10 33.7 -0.5
comp=Z,5.6nm,0.7s,mb4.4
A13A **Flathead Natio** 87.15 36 ⇓P P 08 10 34.2 -0.2
baz=87
Q22A **Crested Butte,** 87.15 48 ⇓P P 08 10 34.7 0.0
baz=87,SNR=5.4
328A **Wristen Ranch,** 87.17 56 ⇑P P 08 10 34.6 -0.4
baz=87
H17A **Grant Village** 87.19 42 ⇑P P 08 10 36.2 +1.5
baz=87
F16A **Kennard Place,** 87.20 40 ⇑P P 08 10 34.8 0.0
baz=87,SNR=7.1
127A **Arkansas Junct** 87.25 55 ⇓P P 08 10 35.1 -0.2
baz=87
I18A **Diamond G Ranc** 87.35 42 ⇑P P 08 10 35.4 -0.1
baz=88,SNR=8.6
Y26A **Elida** 87.38 53 ⇑P P 08 10 35.5 -0.4
baz=88
W25A **X Bar L Ranch,** 87.41 52 ⇑P P 08 10 35.1 -0.9
baz=88,SNR=6.5
HHC **Hu-ho-hao-te** 87.45 314 eP P 08 10 38.2 +2.2
HHC pP pP 08 12 48.0 +1.9
HHC sP sP 08 13 48.0 +1.4
HHC PP PP 08 14 16.3 +3.6
HHC SKS 08 20 08.5
HHC eS S 08 20 29.3 +2.2
HHC SS SS 08 26 35.4 +3.5
HHC pmax pmax
comp=Z,15nm,0.8s,mb4.8
HHC pmax pmax
comp=Z,270nm,5.2s
WALA **Waterton Lakes** 87.50 36 eP P 08 10 35.7 -0.3
comp=Z,0.2nm,0.9s
G17A **Pierce Place,** 87.53 41 ⇑P P 08 10 36.7 +0.4
baz=88
HRY **Holter Researc** 87.53 39 eP P 08 10 36.1 -0.2
E16A **East Helena** 87.54 39 ⇓P P 08 10 36.2 -0.1
baz=88
L20A **Wamsutter** 87.55 44 ⇓P P 08 10 36.5 +0.1
baz=88,SNR=9.7
V25A **Rancho No Teng** 87.55 51 ⇑P P 08 10 36.1 -0.5
baz=88,SNR=5.1
N21A **Black Mountain** 87.55 46 ⇑P P 08 10 36.5 0.0
baz=88,SNR=11
P22A **Eagle** 87.57 47 ⇑P P 08 10 36.3 -0.3
baz=88
K19A **Absolon Red Bu** 87.58 44 ⇓P P 08 10 35.7 -0.9
baz=88,SNR=8.1
C15A **Salmond Ranch,** 87.60 38 ⇑P P 08 10 35.8 -0.7
baz=88,SNR=9.8
Z27A **Tatum** 87.61 54 ⇓P P 08 10 36.3 -0.6
baz=88
SDCO **Great Sand Dun** 87.68 49 eP P 08 10 36.5 -0.6
comp=Z,1.5nm,0.9s,mb3.7
A14A **Double T Ranch** 87.73 37 ⇑P P 08 10 36.6 -0.5
baz=88,SNR=13
K20A **Yellowstone Ra** 87.84 44 ⇓P P 08 10 37.0 -0.8
baz=88,SNR=12
S24A **Houchin Ranch,** 87.85 49 ⇓P P 08 10 38.0 0.0
baz=88
F17A **Fitzpatrick Pl** 87.86 40 ⇑P P 08 10 38.1 +0.3
baz=88,SNR=9.3
D16A **Dana Ranch, Ca** 87.86 39 ⇑P P 08 10 37.6 -0.2
baz=88,SNR=6.2
Y27A **Causey** 87.87 53 ⇑P P 08 10 37.7 -0.4
baz=88
B15A **Bradely Ranch,** 87.89 37 ⇑P P 08 10 36.6 -1.3
baz=88,SNR=6.8
U25A **Circle Dot Ran** 87.93 51 ⇓P P 08 10 37.7 -0.6
baz=88
O22A **Kremmling** 87.96 47 ⇓P P 08 10 38.3 -0.2
baz=88,SNR=5.9
E17A **Martinsdale** 88.00 40 ⇑P P 08 10 38.3 -0.1
baz=88
M21A **Separation Pea** 88.02 45 ⇑P P 08 10 38.3 -0.4
baz=88,SNR=8.4
KMI **Kunming** 88.08 297 P P 08 10 40.4 +1.1
KMI pmax pmax
comp=Z,12nm,1.3s,mb4.5
C16A **Fuhringer Ranc** 88.11 38 ⇓P P 08 10 38.1 -0.8
baz=88,SNR=6.6
P23A **Jefferson** 88.12 48 ⇓P P 08 10 39.9 +0.7
baz=88
A15A **Johnson Ranch,** 88.12 37 ⇓P P 08 10 38.0 -0.9

baz=88,SNR=9.8
L21A Rawlins 88.18 45 ⇓P P 08 10 38.9 -0.5
baz=88,SNR=5.9
MSTX Muleshoe 88.20 54 ⇑P P 08 10 39.3 -0.4
baz=88
X27A F and S Farms, 88.21 53 ⇑P P 08 10 39.8 0.0
baz=88
T25A Trinidad 88.22 50 ⇑P P 08 10 39.8 0.0
baz=88
G18A Lazy EL Ranch, 88.26 41 ⇑P P 08 10 39.9 +0.2
baz=88,SNR=6.6
N22A Wattenberg Ran 88.30 46 ⇑P P 08 10 40.2 +0.2
baz=88,SNR=7.7
RLMT Red Lodge 88.36 41 eP P 08 10 40.6 +0.5
comp=Z,9.8nm,1.0s,mb4.5
W27A Bowe Ranch, En 88.40 52 ⇓P P 08 10 39.9 -0.7
baz=88
GCMT Greycliff 88.42 41 eP P 08 10 40.8 +0.3
comp=Z,7.9nm,1.4s,mb4.2
O23A Lake Granby, G 88.42 47 ⇑P P 08 10 40.7 +0.1
baz=89
U26A Atchley Ranch, 88.42 51 ⇑P P 08 10 40.4 -0.2
baz=89
S25A Robets Cordova 88.42 50 ⇑P P 08 10 40.1 -0.5
baz=89
D17A Six Diamond Ra 88.43 39 ⇓P P 08 10 40.5 0.0
baz=89,SNR=9.6
F18A Big Timber 88.44 40 ⇓P P 08 10 40.7 +0.2
baz=89,SNR=6.4
M22A Cedar Creek Ra 88.46 46 ⇓P P 08 10 40.9 +0.1
baz=89
C17A Wharram Farm, 88.62 39 ⇓P P 08 10 40.8 -0.5
baz=89,SNR=15
E18A Harlowton 88.62 40 ⇑P P 08 10 41.6 +0.3
baz=89,SNR=8.9
N23A Red Feather La 88.69 46 ⇑P P 08 10 41.9 +0.1
baz=89,SNR=5.4
CMAR Chiang Mai Arr 89.16 290 P P 08 10 45.2 +0.7
comp=Z,5.0nm,0.9s,mb4.3,baz=109,slow=3.2,SNR=14
JCT Junction City 89.23 58 eP P 08 10 44.2 -0.3
comp=Z,5.9nm,0.8s,mb4.5
A17A Triple J Farms 89.28 37 ⇓P P 08 10 44.0 -0.4
baz=89,SNR=12
P25A Willow Gulch B 89.36 48 ⇑P P 08 10 45.2 +0.3
baz=90
N24A Carr 89.39 47 ⇓P P 08 10 45.5 +0.4
baz=90
B18A Beardsley Farm 89.56 38 ⇓P P 08 10 45.1 -0.5
baz=90,SNR=9.5
A18A Metzger Ranch, 89.76 38 ⇓P P 08 10 45.8 -0.8
baz=90,SNR=7.0
LZH Lanzhou 91.10 308 eP P 08 10 54.6 +1.5
LZH pP pP 08 13 09.5 +5.5
LZH sP sP 08 14 12.1 +7.9
LZH pmax pmax
comp=Z,29nm,1.4s,mb5.0
LZH pmax pmax
comp=Z,160nm,5.1s
RSSD Black Hills 91.30 44 eP P 08 10 53.5 -0.3
comp=Z,4.3nm,0.6s,mb4.6
INK Inuvik 91.74 15 eP P 08 10 53.7 -1.5
comp=Z,13nm,1.1s,mb4.9
INK Inuvik 91.74 15 P P 08 10 54.2 -1.0
comp=Z,7.5nm,0.9s,mb4.7,baz=216,slow=5.7,SNR=13
SONM Songino Array 93.70 319 P P 08 11 04.7 0.0
comp=Z,0.6nm,0.5s,mb4.0,baz=126,slow=7.5,SNR=5.8
YKA Yellowknife Ar 94.14 25 P P 08 11 04.5 -1.8
comp=Z,2.0nm,0.6s,mb4.4,baz=237,slow=4.6,SNR=15
GTA Gaotai 95.23 310 eP P 08 11 15.4 +3.5
GTA pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
WMQ Urumqi 105.12 312 eP Pdif 08 11 56.6 +0.8
MKAR Makanchi Array 109.31 314 PKiKP PKiKP 08 16 12.2 -1.8
comp=Z,1.0nm,0.5s,baz=210,slow=0.8,SNR=19
KSH Kashi 113.29 306 ePKP PKiKP 08 16 21.1 -0.7
KSH esPKP 08 19 37.1
KSH ePKS 08 19 56.8
KSH eSKS SKSdf 08 22 37.5 +0.3
BVAR Borovoye Array 116.99 321 PKP PKPdf 08 16 27.1 -1.4
comp=Z,1.9nm,0.4s,baz=79,slow=3.2,SNR=14
KBL Kabul 118.52 300 ePKPdf PKPdf 08 16 31.4 -0.7
ARU Arti 122.97 326 ePKPdf PKPdf 08 16 38.6 -1.3
ABKAR Akbulak array 124.09 318 ePKPdf PKPdf 08 16 40.9 -1.4
AKTO Aktyubinsk 125.02 320 PKP PKPdf 08 16 43.0 -1.0
comp=Z,3.3nm,0.8s,baz=32,slow=1.5,SNR=9.6
ARCES ARCESS Array B 126.30 350 PKP PKPdf 08 16 44.9 -1.0
comp=Z,2.5nm,0.5s,baz=50,slow=1.2,SNR=31
FINES FINESS Array B 133.21 344 PKhKP PKPpre 08 16 50.5
comp=Z,2.2nm,0.6s,baz=27,slow=0.4,SNR=3.9
FINES PKP PKPdf 08 16 57.4 -1.8
comp=Z,2.3nm,0.7s,baz=113,slow=2.5,SNR=4.4
NOA NORSAR Array B 136.34 353 PKP PKPdf 08 17 05.7 +0.6
comp=Z,1.2nm,0.5s,baz=14,slow=3.7,SNR=3.4
LSZ Lusaka 138.13 220 PKP PKPdf 08 17 10.9 +1.2
comp=Z,1.2nm,0.4s,baz=200,slow=1.6,SNR=4.6
AKASG Malin Array Be 140.64 333 PKhKP PKPpre 08 17 06.0
comp=Z,0.8nm,0.3s,baz=44,slow=4.2,SNR=7.9
AKASG PKP PKPdf 08 17 14.6 +1.3
comp=Z,2.0nm,0.5s,baz=31,slow=1.3,SNR=7.4
MALT Malatya 142.21 310 ePKPdf PKPdf 08 17 13.4 -3.1
MALT Malatya 142.21 310 ⇑iP PKPdf 08 17 13.8 -2.6
BSEG Bad Segeberg 143.39 352 ePKPbc PKPdf 08 17 16.0 -2.0
KIS Kishinev 143.46 329 eUNK PKPdf 08 17 15.5 -2.8
KIS XM 08 17 16.0
comp=Z,200nm,0.8s
KWP Kalwaria Pacla 144.13 337 ePKP PKPdf 08 17 19.1 -0.3
RUE Ruedersdorf 144.20 348 ePKPbc PKPdf 08 17 18.4 -1.1
OJC Ojcow 144.68 340 ePKP PKPdf 08 17 20.1 -0.2
BUR08 Bucovina Ar. S 144.68 332 ePKPdf PKPdf 08 17 21.2 +0.8
TLCR 144.69 326 ⇑iP PKPdf 08 17 20.1 -0.4
BURAR Bucovina Array 144.70 332 ⇑P PKPdf 08 17 21.4 +0.9
BURAR Bucovina Array 144.70 332 ⇑iP PKPdf 08 17 21.4 +0.9
STHS Stebnicka Huta 144.85 338 ePKP PKPdf 08 17 21.4 +0.7
TESR 144.86 330 ⇓P PKPdf 08 17 21.0 +0.2
TESR 144.86 330 ⇓iP PKPdf 08 17 21.0 +0.2
KOLS Kolonicke sedl 144.87 337 ePKP PKPdf 08 17 21.1 +0.4
BR131 Keskin Array S 144.96 315 ePKPdf PKPdf 08 17 21.3 +0.1
BRTR Keskin Array B 144.96 315 PKPbc PKPdf 08 17 20.5 -0.7
comp=Z,11nm,0.7s,baz=136,slow=3.8,SNR=45
KSP Ksiaz 145.13 344 ePKP PKPbc 08 17 22.4 +0.2
NIE Niedzica 145.17 339 ePKP PKPbc 08 17 22.7 +0.4
CRVS Cervenica-Dubn 145.20 337 ePKP PKPbc 08 17 22.5 +0.1
VRI Vrincioaia 145.28 329 ⇓P PKPdf 08 17 22.4 +0.9
VRI Vrincioaia 145.28 329 ⇓iP PKPdf 08 17 22.4 +0.9
ASF Jabal al Asfar 145.41 301 PKPbc PKPbc 08 17 23.7 +0.1
comp=Z,7.8nm,0.7s,baz=308,slow=3.1,SNR=15
TRPA Tarpa 145.42 335 ⇓iP PKPdf 08 17 22.4 +0.7
CLZ Clausthal 145.42 351 ePKPbc PKPbc 08 17 22.5 -0.5
CLL Collm 145.46 348 ePKPbc PKPbc 08 17 22.4 -0.7
CLL Collm 145.46 348 ⇓iPKPbc PKPbc 08 17 22.4 -0.7
comp=Z,44nm,0.7s
OKC Ostrava-Krasne 145.51 341 ePKP PKPdf 08 17 22.5 +0.7
UPC Upice 145.51 344 ePKP PKPbc 08 17 23.0 -0.3
DPC Dobruska-Polom 145.57 344 ePKP PKPbc 08 17 23.4 -0.1
BRG Berggiesshubel 145.67 346 ePKPdf PKPdf 08 17 21.7 -0.3
BRG ePKPbc PKPbc 08 17 23.2 -0.5
BRG Berggiesshubel 145.67 346 i PKP PKPbc 08 17 23.2 -0.5
comp=Z,21nm,0.7s
BRG e 08 17 30.1
comp=Z,7.3nm,1.1s
WTSB Winterswijk 145.73 355 ePKP PKPdf 08 17 22.7 +0.6
comp=Z,43nm,1.0s
MORC Moravsky Berou 145.74 342 ePKPbc PKPbc 08 17 23.6 -0.4
MORC Moravsky Berou 145.74 342 ⇓iP PKPbc 08 17 23.9 -0.1
PVCC Panska Ves 145.85 346 ePKP PKPbc 08 17 23.9 -0.3
DOPR Dopca 145.85 330 ⇑iP PKPbc 08 17 25.0 +0.6
KECS Kecovo 145.90 338 ePKP PKPbc 08 17 24.4 -0.1
MLR Muntele Rosu 145.93 329 ⇑P PKPbc 08 17 24.8 +0.1
MLR Muntele Rosu 145.93 329 ⇑iP PKPbc 08 17 24.8 +0.2
PRU Pruhonice 146.36 345 ePKP PKPbc 08 17 25.7 0.0
PRU ex x 08 17 29.1
MOX Moxa 146.37 349 ePKP PKPbc 08 17 25.1 -0.6
comp=Z,25nm,1.4s
MOX Moxa 146.37 349 ePKPdf PKPdf 08 17 22.7 -0.5
MOX ePKPbc PKPbc 08 17 25.0 -0.7
MOX ePKPab PKPab 08 17 27.5 -0.8
MMAI Mount Meron Ar 146.37 303 PKPbc PKPbc 08 17 26.4 +0.1
comp=Z,16nm,0.5s,baz=70,slow=5.6,SNR=34
VOIR 146.41 330 ⇓P PKPbc 08 17 25.4 -0.6
VOIR 146.41 330 ⇓iP PKPbc 08 17 25.4 -0.5
DRGR 146.42 334 ⇑P PKPbc 08 17 25.8 -0.1
DRGR 146.42 334 ⇑iP PKPbc 08 17 25.8 -0.1
TANN Tannenbergstha 146.42 348 ePKPbc PKPbc 08 17 25.2 -0.6
WERD Werda 146.42 348 ePKPdf PKPdf 08 17 22.7 -0.6
WERD ePKPbc PKPbc 08 17 25.2 -0.6
VRAC Vranov 146.44 343 ⇑iP PKPbc 08 17 25.9 0.0
GUNZ Gunzen 146.50 348 ePKPdf PKPdf 08 17 23.0 -0.4
GUNZ ePKPbc PKPbc 08 17 25.5 -0.5
GUNZ ePKPab PKPab 08 17 28.4 -0.4
KOLL Kolacno 146.53 340 ePKP PKPbc 08 17 26.2 0.0
WERN Wernitzgruen 146.56 348 ePKPbc PKPbc 08 17 25.5 -0.7
PSZ Piszkesteto 146.59 338 ePKPbc PKPbc 08 17 25.7 -0.7
NKC Novy Kostel 146.60 348 ePKP PKPbc 08 17 25.6 -0.7
HGN Heimansgroeve 147.00 355 ePKP PKPbc 08 17 26.3 -1.0
comp=Z,15nm,0.9s
MEM Membach 147.14 355 PKPbc PKPbc 08 17 27.0 -0.8
TNS Taunus Mts 147.27 352 ePKPbc PKPbc 08 17 27.6 -0.5
GRF Grafenberg Arr 147.35 349 ePKPab PKPab 08 17 31.9 -0.4
SNF Seneffe 147.35 357 PKPbc PKPbc 08 17 27.8 -0.5
BCLA Clavier 147.38 356 PKPbc PKPbc 08 17 28.2 -0.2
BCLA PKPab PKPab 08 17 31.8 -0.6
KHC Kasperske Hory 147.39 346 ePKPbc PKPbc 08 17 27.9 -0.5
KHC Kasperske Hory 147.39 346 ePKP PKPbc 08 17 28.1 -0.3
KHC ex x 08 17 32.4
GZR Gura Zlata 147.49 332 ⇑iP PKPbc 08 17 28.1 -0.7
GEC2 GERESS Array S 147.63 345 ePKPbc PKPbc 08 17 28.4 -0.6
GIVF Givet 147.73 356 ePKP1 PKPbc 08 17 28.6 -0.7
comp=Z,29nm,0.6s
DOU Dourbes 147.75 357 PKPbc PKPbc 08 17 28.5 -0.8
BAIF Baives 147.81 357 ePKP1 PKPbc 08 17 28.9 -0.5
comp=Z,21nm,0.6s
WLF Walferdange 148.07 355 ePKPbc PKPbc 08 17 30.1 0.0
WLF Walferdange 148.07 355 ePKPbc PKPbc 08 17 29.9 -0.2
STU Stuttgart 148.59 351 ePKPbc PKPbc 08 17 30.8 -0.6
FUR Furstenfeldbru 148.80 348 ePKPbc PKPbc 08 17 31.4 -0.6
FLN La Foliniere 149.09 3 ePKP1 PKPbc 08 17 31.6 -1.1
comp=Z,28nm,0.6s
BFO Black Forest 149.14 352 ePKPbc PKPbc 08 17 32.1 -0.7
BFO ePKPab PKPab 08 17 38.9 -0.8
BFO Black Forest 149.14 352 ePKPbc PKPbc 08 17 32.1 -0.7
BFO ePKPab PKPab 08 17 38.9 -0.8
CDF Champ du Feu 149.19 353 ePKP1 PKPbc 08 17 32.3 -0.6
comp=Z,20nm,0.6s
LDF La Druitiere 149.28 3 ePKP1 PKPbc 08 17 31.8 -1.3
comp=Z,14nm,0.4s
MEZF Mazieres J'vi 149.31 356 ePKP1 PKPbc 08 17 32.8 -0.4
SGMF Saint Gilles 149.44 6 ePKP1 PKPbc 08 17 32.2 -1.3
comp=Z,36nm,0.8s
GRR Gorron 149.45 4 ePKP1 PKPbc 08 17 32.5 -1.0
comp=Z,29nm,0.5s
HAU Haudompre 149.70 354 ePKP1 PKPbc 08 17 33.3 -0.8
comp=Z,20nm,0.6s
HINF Hinteralfeld 149.83 353 ePKP1 PKPbc 08 17 33.4 -1.0
comp=Z,13nm,0.6s
LOR Lormes 150.61 357 ePKP1 PKPbc 08 17 35.5 -0.8
comp=Z,31nm,0.8s
SSF Saint Saulge 150.83 358 ePKP1 PKPbc 08 17 36.1 -0.7
comp=Z,40nm,0.9s
CABF La Chapelle 151.10 354 ePKP1 PKPbc 08 17 37.2 -0.2
comp=Z,37nm,1.0s
AVF Avril sur Loir 151.10 358 ePKP1 PKPbc 08 17 36.3 -1.1
SMF Signal de Mont 151.23 357 ePKP1 PKPbc 08 17 36.7 -1.0
MFF Saint Martin d 151.27 3 ePKP1 PKPbc 08 17 36.7 -1.1
comp=Z,14nm,0.6s
BGF Bois d'Agland 151.35 359 ePKP1 PKPbc 08 17 37.1 -0.9
comp=Z,17nm,0.6s
TCF Toulx Ste Croi 151.63 360 ePKP1 PKPbc 08 17 37.6 -1.0
comp=Z,20nm,0.8s
LPL La Plagne 152.11 353 ePKP1 PKPbc 08 17 39.7 0.0
LPG La Plagne 152.13 353 ePKP1 PKPbc 08 17 39.8 +0.1
ORIF Oris-en-Rattie 152.80 354 ePKP1 PKPbc 08 17 40.6 -0.6
comp=Z,8.7nm,0.7s
MBDF Montbardon 152.89 352 ePKP1 PKPbc 08 17 40.8 -0.6
comp=Z,13nm,0.7s
LFF La Forstale 152.96 2 ePKP1 PKPbc 08 17 40.9 -0.7
VIVF Saint-Julien-l 152.97 356 ePKP1 PKPbc 08 17 41.0 -0.6
comp=Z,5.1nm,0.6s
CAF Calviac 152.99 360 ePKP1 PKPbc 08 17 41.5 -0.1
SBF Sospel 153.64 351 ePKP1 PKPbc 08 17 40.6 -2.4
ESDC Sonseca Array 157.65 12 PKPab PKPab 08 18 15.6 -0.7
comp=Z,0.6nm,0.4s,baz=355,slow=4.1,SNR=8.1
KEST Kesra 161.00 341 PKPab PKPab 08 18 30.9 -0.1
comp=Z,1.3nm,0.6s,baz=12,slow=5.1,SNR=4.0
MDT Midelt 163.97 20 PKP PKPdf 08 17 46.9 0.0
comp=Z,3.2nm,1.1s,baz=14,slow=6.0,SNR=3.7
MDT PKPab PKPab 08 18 43.6 -0.6
comp=Z,1.4nm,0.7s,baz=31,slow=3.9,SNR=3.6
TORD Torodi Ar. Bea 175.33 177 PKP PKPdf 08 17 51.9 -2.1
comp=Z,2.5nm,1.0s,baz=310,slow=3.0,SNR=8.5

*ATH **08** 08:10:25.7, 40°.55N×21°.81E, h10km, MD3.0/3*
*SKO **08** 08:10:27.8, 40°.25N×21°.79E, h19km, M1.4, ML1.8*
*ISCJB **08** 08:10:29.1±1.0, 40°.28N±0°.05×21°.82E±0°.10, h17km±9km, Error ellipse: s-maj=13.7km s-min=7.7km az=153.0*

ISC 08 08:10:28.6±0.9, **40°.32N**±0°.04×**21°.84E**±0°.09, **h19**km±7km, **n6,** σ0°.79/10, **Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
KZN	**Kozani**	**0.05**	**253**	*e*PG	**Pg**		**08 10 31.0**	**-0.9**
KZN				*e*SG	**Sg**		**08 10 34.8**	**+0.6**
LIT	**Litokhoron**	**0.55**	**114**	*e*PB	**Pb**		**08 10 38.9**	**-0.7**
THL	**Klokotos Trika**	**0.77**	**170**	*e*PB	**Pb**		**08 10 44.6**	**+1.3**
BIA	**Bitola**	**0.80**	**331**	*e*Pg	**Pg**		**08 10 43.1**	**-1.1**
BIA				*e*Sg	**Sg**		**08 10 55.6**	**+0.8**
BIA				*e*Lg			08 10 56.5	
	comp=E,6.7nm,0.2s							
BIA				*e*Lg			08 10 57.6	
	comp=N,10nm,0.4s							
KRUS	**Krusevo**	**1.14**	**337**	*e*Pg	**Pg**		**08 10 50.0**	**-0.6**
KRUS				*e*Sg	**Sg**		**08 11 05.8**	**+0.2**
KRUS				*e*Lg			08 11 06.8	
	comp=N,8.2nm,0.7s							
KRUS				*e*Lg			08 11 07.3	
	comp=E,5.0nm,0.4s							
VAY	**Valandovo**	**1.14**	**29**	*e*Pg	**Pg**		**08 10 50.3**	**-0.4**
VAY				*e*Sg	**Sg**		**08 11 06.5**	**+0.8**
VAY				*e*Lg			08 11 08.4	
	comp=N,37nm,1.1s							
VAY				*e*Lg			08 11 10.8	
	comp=E,14nm,0.7s							

IDC 08 08:22:55.7±2.5, **21°.98N**×**143°.26E, h216**km±22km, **mb3.1**/7, **mb1 3.2**/9, **mb1mx3.1**/23, **mbtmpg3.1**/9, **Error ellipse: s-maj=28.1km s-min=18.9km az=83.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.18**	**349**	P		Pn	08 24 13.8	+1.1
	5.4nm,0.3s,baz=253,slow=14,SNR=5.3							
CBIJ				S		S	08 25 13.4	-0.4
	4.9nm,0.3s,baz=116,slow=23,SNR=4.3							
MJAR	**Matsushiro Arr**	**15.16**	**344**	P		Pn	08 26 17.5	-1.6
	0.3nm,0.3s,baz=4.9,slow=17,SNR=3.0							
KSRS	**Korea Array**	**20.33**	**323**	P		P	08 27 16.4	+1.1
	2.4nm,0.9s,baz=145,slow=9.4,SNR=9.1							
SONM	**Songino Array**	**39.16**	**320**	P		P	08 30 01.8	-0.6
	0.5nm,0.5s,baz=120,slow=9.4,SNR=3.9							
CMAR	**Chiang Mai Arr**	**41.63**	**273**	P		P	08 30 26.1	+3.0
	0.8nm,0.3s,baz=66,slow=9.0,SNR=3.1							
ASAR	**Alice Springs**	**46.28**	**192**	P		P	08 30 59.5	-0.2
	0.2nm,0.6s,baz=11,slow=7.2,SNR=3.7							
ZALV	**Zalesovo Beam**	**54.03**	**322**	P		P	08 31 57.1	-0.5
	0.9nm,0.5s,baz=111,slow=7.1,SNR=3.8							
MKAR	**Makanchi Array**	**54.56**	**312**	P		P	08 32 01.8	+0.4
	0.2nm,0.5s,baz=88,slow=9.1,SNR=2.8							
ILAR	**Eielson Array**	**61.75**	**27**	P		P	08 32 51.1	+0.2
	0.7nm,0.7s,baz=256,slow=5.4,SNR=11							
BVAR	**Borovoye Array**	**62.50**	**319**	P		P	08 32 55.9	-0.2
	1.2nm,0.5s,baz=88,slow=8.0,SNR=6.7							

*ISCJB **08** 08:30:53.1±0.6, 26°.6S±0°.1×13°.7W±0°.1, h10km, mb4.0/13, MS3.9/3, Error ellipse: s-maj=19.2km s-min=13.0km az=167.5*
*IDC **08** 08:30:53.1±0.7, 26°.57S×13°.69W, h0km, mb4.0/10, mb1 4.1/10, mb1mx4.0/21, mbtmpg4.0/10, MS3.9/3, Ms1 3.9/3, ms1mx3.5/23, Error ellipse: s-maj=24.8km s-min=17.9km az=167.0*
*NEIC **08** 08:30:54.6±0.5, 26°.51S×13°.70W, h10km, mb4.3/4, Error ellipse: s-maj=17.7km s-min=11.2km az=170.0*

ISC 08 08:30:55.0±0.6, **26°.5S**±0°.1×**13°.7W**±0°.1, **h10**km, **n19,** σ0°.92/15, **mb4.0**/13, **MS3.9**/3, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TSUM	**Tsumeb**	**29.68**	**82**	*e*P		**P**	**08 37 01.9**	**+0.7**
	2.6nm,0.8s,mb4.0							
SUR	**Sutherland**	**30.52**	**109**	LR		LR	08 46 15.1	
	comp=Z,352nm,19.7s,MS4.0,baz=250,slow=30							
BOSA	**Boshof**	**34.49**	**103**	P		**P**	**08 37 42.3**	**-1.0**
	3.2nm,0.9s,mb4.3,baz=249,slow=8.8,SNR=4.1							
BOSA				LR		LR	08 49 28.9	
	comp=Z,132nm,20.3s,MS3.7,baz=337,slow=32							
LBTB	**Lobatse**	**35.33**	**96**	*e*P		**P**	**08 37 50.0**	**-0.6**
	14nm,1.2s,mb4.8							
LBTB	**Lobatse**	**35.33**	**96**	P		**P**	**08 37 49.9**	**-0.7**
	5.4nm,0.8s,mb4.5,baz=274,slow=7.3,SNR=6.8							
CPUP	**Villa Florida**	**38.92**	**260**	P		**P**	**08 38 22.3**	**+1.2**
	1.8nm,0.8s,mb3.8,baz=159,slow=10,SNR=2.2							
LSZ	**Lusaka**	**40.54**	**83**	P		**P**	**08 38 35.6**	**+1.0**
	1.6nm,0.6s,mb3.9,baz=125,slow=5.0,SNR=5.0							
LSZ				LR		LR	08 54 53.3	
	comp=Z,173nm,18.0s,MS4.0,baz=272,slow=36							
TORD	**Torodi Ar. Bea**	**42.20**	**23**	P		**P**	**08 38 47.4**	**-0.8**
	3.4nm,0.9s,mb4.0,baz=199,slow=8.2,SNR=14							
SIV	**San Ignacio**	**45.16**	**274**	P		**P**	**08 39 12.1**	**0.0**
	0.6nm,0.9s,mb3.4,baz=131,slow=12,SNR=2.8							
CFAA	**Coronel Fontan**	**47.53**	**250**	P		**P**	**08 39 29.1**	**-1.5**
	0.5nm,0.7s,mb3.7,baz=68,slow=6.8,SNR=9.0							
MAW	**Mawson**	**60.64**	**155**	*e*P		**P**	**08 41 05.8**	**0.0**
	1.1nm,0.3s,mb4.0							
MAW	**Mawson**	**60.64**	**155**	P		**P**	**08 41 05.8**	**0.0**
	2.5nm,0.8s,mb4.4,baz=282,slow=11,SNR=9.1							
QSPA	**South Pole Qui**	**63.68**	**180**	*e*P		**P**	**08 41 26.6**	**+0.7**
	3.5nm,0.9s,mb4.4							
KEST	**Kesra**	**65.65**	**20**	P		**P**	**08 41 40.7**	**+1.3**
	1.1nm,0.8s,mb3.9,baz=274,slow=2.4,SNR=3.6							
BRTR	**Keskin Array B**	**79.32**	**35**	P		**P**	**08 43 01.1**	**+0.4**
	0.9nm,0.8s,mb3.7,baz=183,slow=4.5,SNR=4.9							
AKASG	**Malin Array Be**	**85.75**	**26**	P		**P**	**08 43 32.7**	**-1.3**
	0.2nm,0.2s,mb3.9,baz=219,slow=4.9,SNR=3.9							
ASAR	**Alice Springs**	**121.07**	**145**	PKP		PKPdf	08 49 47.3	-1.2
	0.7nm,1.1s,baz=194,slow=1.9,SNR=4.0							
ILAR	**Eielson Array**	**131.63**	**335**	PKP		PKPdf	08 50 06.8	-0.5
	0.6nm,0.9s,baz=261,slow=0.9,SNR=5.7							
KSRS	**Korea Array**	**145.89**	**62**	PKPbc		PKPbc	08 50 33.4	-1.4
	2.5nm,0.9s,baz=280,slow=5.0,SNR=8.5							

IDC 08 08:43:51.8±3.2, **55°.37N**×**86°.35E, h0**km, **mb1 3.3**/2, **mb1mx3.1**/26, **mbtmp3.3**/2, **ML3.1**/2, **Error ellipse: s-maj=31.5km s-min=20.2km az=72.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**1.68**	**213**	Pg		Pg	08 44 21.2	-2.7
	2.9nm,0.3s,baz=32,slow=17,SNR=44							
ZALV				Lg			08 44 45.4	
	2.5nm,0.3s,baz=32,slow=30,SNR=10							
MKAR	**Makanchi Array**	**8.96**	**198**	Pn		Pn	08 46 02.8	+0.6
	0.1nm,0.3s,baz=21,slow=14,SNR=5.0							
BVAR	**Borovoye Array**	**9.65**	**263**	Pn		Pn	08 46 10.7	-1.0
	0.5nm,0.3s,baz=53,slow=17,SNR=7.1							

IDC 08 08:44:11.7±0.9, **26°.46S**×**13°.80W, h0**km, **mb3.9**/6, **mb1 4.0**/6, **mb1mx3.8**/20, **mbtmpg3.9**/6, **MS3.8**/1, **Ms1 3.8**/1, **ms1mx3.2**/20, **Error ellipse: s-maj=31.5km s-min=22.9km az=164.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TSUM	**Tsumeb**	**29.76**	**83**	LR		LR	09 00 18.6	
	comp=Z,165nm,18.4s,baz=138,slow=32							
LBTB	**Lobatse**	**35.42**	**97**	P		P	08 51 08.8	-0.8
	1.7nm,0.6s,baz=261,slow=5.2,SNR=4.2							
LSZ	**Lusaka**	**40.61**	**83**	P		P	08 51 54.2	+0.7
	0.9nm,0.3s,baz=47,slow=15,SNR=3.0							
TORD	**Torodi Ar. Bea**	**42.16**	**23**	P		P	08 52 05.9	-0.1
	1.7nm,0.8s,baz=195,slow=8.7,SNR=7.9							
CFAA	**Coronel Fontan**	**47.47**	**250**	P		P	08 52 48.2	-0.2
	0.4nm,0.7s,baz=76,slow=7.0,SNR=4.1							
LPAZ	**La Paz**	**51.28**	**270**	P		P	08 53 18.7	+1.0
	0.7nm,0.7s,baz=222,slow=1.6,SNR=3.9							
MAW	**Mawson**	**60.75**	**155**	P		P	08 54 25.0	+0.2
	2.1nm,0.7s,baz=260,slow=14,SNR=5.5							
BRTR	**Keskin Array B**	**79.31**	**35**	P		P	08 56 19.6	+0.6
	0.5nm,0.5s,baz=284,slow=6.1,SNR=3.7							
ILAR	**Eielson Array**	**131.52**	**335**	PKP		PKPdf	09 03 24.0	-1.5
	0.4nm,0.9s,baz=54,slow=0.7,SNR=4.8							
KSRS	**Korea Array**	**145.93**	**62**	PKPbc		PKPbc	09 03 52.9	-0.4
	0.4nm,0.3s,baz=274,slow=5.8,SNR=6.0							

*ISCJB **08** 09:23:57.9±0.3, 37°.83N±0°.06×134°.48E±0°.06, h404km±6km, mb3.5/12, Error ellipse: s-maj=10.0km s-min=6.4km az=153.8*
*NEIC **08** 09:23:58.6±0.5, 38°.01N×134°.24E, h376km±9km, mb4.7/2, Error ellipse: s-maj=18.0km s-min=9.2km az=170.0*
*JMA **08** 09:23:58.0±0.2, 37°.83N×134°.45E, h405km±2km, MS3.6 BJI **08** 09:23:59.5, 38°.00N×134°.20E, h375km, mB4.4/3, mb4.7/5*
*IDC **08** 09:23:59.8±0.9, 38°.20N×134°.29E, h378km±13km, mb3.1/11, mb1 3.3/14, mb1mx3.2/27, mbtmpg3.2/14, Error ellipse: s-maj=28.5km s-min=12.8km az=180.0*

ISC 08 09:23:59.0±0.3, **37.80N**±0°.07×**134.44E**±0°.06, **h395**km±5km, **n38,** σ0°.81/50, **mb3.5**/12, **Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
SAI	**Saigo**	**1.83**	**209**	P		Pn	**09 24 53.8**	**+0.4**
SAI				*e*S		**S**	**09 25 38.0**	**+0.7**
JHG	**Hegura jima**	**1.97**	**88**	P		**Pn**	**09 24 54.3**	**+0.1**
JKG	**Kaga**	**2.15**	**135**	P		**Pn**	**09 24 55.6**	**+0.2**
JHS	**Saijyo**	**3.00**	**201**	P		**Pn**	**09 25 02.0**	**+0.2**
JHS				*e*S		**S**	**09 25 51.9**	**-0.6**
MAJO	**Matsushiro**	**3.26**	**112**	*e*Pn		**Pn**	**09 25 04.1**	**+0.2**
MAT	**Matsushiro**	**3.26**	**112**	P		**Pn**	**09 25 03.8**	**-0.2**
MAT				S		**S**	**09 25 56.3**	**-0.3**
MAT	**Matsushiro**	**3.26**	**112**	P		**Pn**	**09 25 04.2**	**+0.2**
MAT				*e*S		**S**	**09 25 57.5**	**+0.9**
MJAR	**Matsushiro Arr**	**3.27**	**112**	P		**Pn**	**09 25 04.4**	**+0.4**
	1.3nm,0.3s,baz=289,slow=10,SNR=22							
MJAR				S		**S**	**09 26 01.2**	**+4.6**
	baz=133,slow=14,SNR=3.2							
JIE	**Ise**	**3.87**	**151**	P		**Pn**	**09 25 09.8**	**+0.3**
JIE				*e*S		**S**	**09 26 05.5**	**-1.2**
JRY	**Ryogami san**	**4.00**	**115**	P		**Pn**	**09 25 12.2**	**+1.5**
JWZ	**Kozaga**	**4.39**	**166**	P		**Pn**	**09 25 14.2**	**-0.4**
JOD2	**Odawara 2**	**4.52**	**123**	P		**Pn**	**09 25 17.1**	**+1.2**
JOD2				*e*S		**S**	**09 26 18.2**	**0.0**
JTO	**Tosashim

FINES	**FINES Array B**	**65.45**	**330**	P		**P**	**09 34 00.5**	**-0.1**
FINES	**FINES Array B**	**65.45**	**330**	P		**P**	**09 34 00.5**	**-0.1**
	2.1nm,0.4s,mb4.1,baz=59,slow=7.4,SNR=11							
AKASG	**Malin Array Be**	**70.19**	**319**	P		**P**	**09 34 29.5**	**-0.5**
	1.9nm,0.7s,mb3.8,baz=51,slow=5.7,SNR=6.9							
NOA	**NORSAR Array B**	**71.22**	**335**	P		**P**	**09 34 35.8**	**-0.1**
	1.3nm,0.6s,mb3.6,baz=43,slow=6.1,SNR=7.1							
NVAR	**Mina Array Bea**	**78.86**	**50**	P		**P**	**09 35 21.6**	**+2.1**
NVAR	**Mina Array Bea**	**78.86**	**50**	P		**P**	**09 35 21.6**	**+2.1**
	0.2nm,0.5s,mb3.0,baz=306,slow=5.4,SNR=3.0							
TXAR	**Lajitas Array**	**93.90**	**48**	P		**P**	**09 36 34.4**	**+1.5**
	0.2nm,0.6s,mb3.3,baz=339,slow=2.3,SNR=3.0							

KRSC 08 09:35:23.4±0.5, 51°31N×157°01E, h124km±124km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRL	**Gorelyy**	**1.41**	**27**	*eP*	Pn	09 35 53.0	+3.0
GRL				*eS*	Sn	09 36 15.2	+5.0
PET	**Petropavlovsk**	**1.99**	**30**	*eP*	Pn	09 35 59.6	+2.7
PET				*i* S	Sn	09 36 25.7	+3.2
AVH	**Avacha**	**2.23**	**28**	P	Pn	09 36 01.7	+1.9
NLC	**Nalytchevo**	**2.35**	**37**	*eP*	Pn	09 36 04.2	+2.8
NLC				*i* S	Sn	09 36 33.6	+3.0
GNL	**Ganaly**	**2.46**	**13**	*eP*	Pn	09 36 04.3	+1.6
SPN	**Mys Shipunski**	**2.58**	**45**	*eP*	Pn	09 36 07.3	+3.1
SPN				*i* S	Sn	09 36 38.3	+2.6
MKZ	**Mys Kozlova**	**4.33**	**39**	P	Pn	09 36 29.4	+2.1
MKZ				*i* S	Sn	09 37 18.7	+1.9
KBTR	**Krutoberegovo**	**5.99**	**33**	*eP*	Pn	09 36 52.3	+2.7

*IDC **08** 10:07:56.1±1.1, 44.°04N×128.°43W, h0km, mb3.6/7, mb1 3.8/11,mb1mx3.7/28,mbtmp3.6/11, ML3.2/4, MS3.2/3, Ms1 3.1/3,ms1mx2.6/36, Error ellipse: s-maj=40.2km s-min=13.2km az=43.0*

*ISCJB **08** 10:07:57.6±0.5, 44.°03N±0.°05×128.°44W±0.°06, h10km, mb3.7/10, MS3.0/3, Error ellipse: s-maj=7.5km s-min=5.1km az=36.3*

*NEIC **08** 10:07:58.3±0.8, 44.°01N×128.°58W, h10km, mb3.9/9, Error ellipse: s-maj=10.8km s-min=6.5km az=51.0*

*BJI **08** 10:08:00.1, 44.°59N×129.°34W, h7km, mB5.0/3, mb5.4/6, Ms4.8/1, Ms7 4.7/1*

ISC 08 10:07:59.0±0.5, 44°03N±0.°05×128°54W±0.°06, h10km, n64, σ1s24/64, mb3.7/10, MS3.0/3, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**3.28**	**109**	*e*Pn	**Pn**	**10 08 46.3**	**-4.0**
RNO	**Roman Nose**	**3.47**	**90**	P	**Pn**	**10 08 50.3**	**-2.7**
HEBO	**Mount Hebo**	**3.62**	**69**	*e*Pn	**Pn**	**10 08 53.1**	**-1.9**
MPOR	**Mary's Peak**	**3.62**	**81**	P	**Pn**	**10 08 52.4**	**-2.6**
COR	**Corvallis**	**3.80**	**80**	*e*Pn	**Pn**	**10 08 55.7**	**-1.8**
HUMO	**Hull Mountain**	**4.32**	**107**	*e*Pn	**Pn**	**10 09 03.0**	**-1.7**
NLWA	**Neilton Lookou**	**4.69**	**43**	*e*Pn	**Pn**	**10 09 09.7**	**-0.1**
KHMM	**Horse Mountain**	**4.76**	**130**	*e*Pn	**Pn**	**10 09 11.8**	**+1.1**
YBH	**Yreka Blue Hor**	**4.86**	**116**	Pn	**Pn**	**10 09 09.6**	**-2.6**
	0.2nm,0.3s,baz=305,slow=9.8,SNR=7.3						
YBH				Sn	**Sn**	**10 10 05.1**	**-3.4**
	0.1nm,0.3s,baz=128,slow=19,SNR=3.2						
FL2	**Flat Top 2**	**4.89**	**62**	P	**Pn**	**10 09 12.2**	**-0.3**
TDH	**Tom, Dick, Har**	**4.98**	**73**	P	**Pn**	**10 09 13.4**	**-0.3**
TDL	**Tradedollar La**	**5.04**	**60**	P	**Pn**	**10 09 14.2**	**-0.3**
HOOD	**Mount Hood Mea**	**5.08**	**73**	*e*Pn	**Pn**	**10 09 15.0**	**-0.1**
GNW	**Green Mountain**	**5.33**	**47**	*e*Pn	**Pn**	**10 09 18.9**	**+0.3**
	5.6nm,0.6s						
LON	**Longmire**	**5.46**	**58**	*e*Pn	**Pn**	**10 09 19.8**	**-0.6**
JCW	**Jim Creek**	**6.20**	**46**	*e*Pn	**Pn**	**10 09 31.5**	**+1.1**
MOD	**Modoc**	**6.41**	**107**	*e*Pn	**Pn**	**10 09 34.7**	**+1.3**
RPW	**Rockport**	**6.58**	**45**	*e*Pn	**Pn**	**10 09 36.2**	**+0.6**
RSW	**Rattlesnake Hi**	**6.75**	**66**	*e*Pn	**Pn**	**10 09 38.1**	**+0.1**
ETW	**Entiat**	**6.76**	**55**	*e*Pn	**Pn**	**10 09 38.0**	**-0.1**
HAWA	**Hanford**	**6.79**	**67**	*e*Pn	**Pn**	**10 09 39.1**	**+0.5**
WVOR	**Wild Horse Val**	**7.41**	**99**	*e*Pn	**Pn**	**10 09 46.1**	**-1.1**
	3.1nm,0.9s						
LNOR	**Lincton Mounta**	**7.51**	**72**	Pn	**Pn**	**10 09 48.0**	**-0.4**
	3.3nm,0.7s						
OD2	**Odessa Site #2**	**7.66**	**61**	*e*Pn	**Pn**	**10 09 50.3**	**-0.2**
BBB	**Bella Bella**	**8.16**	**2**	Pn	**Pn**	**10 09 54.6**	**-2.8**
	0.5nm,0.3s,baz=108,slow=16,SNR=9.0						
CMB	**Columbia Colle**	**8.59**	**131**	*e*Pn	**Pn**	**10 10 05.0**	**+1.6**
NEW	**Newport**	**8.98**	**58**	*e*Pn	**Pn**	**10 10 10.0**	**+1.3**
NVAR	**Mina Array Bea**	**9.53**	**122**	Pn	**Pn**	**10 10 16.8**	**+0.6**
	0.1nm,0.3s,baz=294,slow=14,SNR=8.9						
HLID	**Hailey**	**10.23**	**88**	*e*Pn	**Pn**	**10 10 25.0**	**-0.8**
BSMT	**Bassoo Peak**	**10.31**	**63**	*e*Pn	**Pn**	**10 10 30.4**	**+3.5**
MSO	**Missoula**	**10.64**	**70**	*e*Pn	**Pn**	**10 10 32.8**	**+1.4**
SLMT	**Seeley Lake**	**11.02**	**68**	*e*Pn	**Pn**	**10 10 36.4**	**-0.1**
CHMT	**Chamberlain Mo**	**11.12**	**70**	*e*Pn	**Pn**	**10 10 39.6**	**+1.7**
	2.0nm,1.0s						
IMW	**Indian Meadow**	**12.69**	**84**	Pn	**Pn**	**10 10 59.5**	**+0.2**
FLWY	**Flagg Ranch**	**12.84**	**84**	*e*Pn	**Pn**	**10 11 03.8**	**+2.4**
	4.3nm,0.9s						
CCUT	**Cedar City**	**13.19**	**114**	Pn	**Pn**	**10 11 06.4**	**+0.1**
RLMT	**Red Lodge**	**13.79**	**79**	*e*Pn	**Pn**	**10 11 15.4**	**+1.1**
SRU	**San Rafael**	**14.35**	**104**	*e*Pn	**Pn**	**10 11 31.7**	**+10**
WUAZ	**Wupatki**	**15.68**	**117**	*e*Pn	**Pn**	**10 11 40.1**	**+0.2**
	5.8nm,0.8s						
MVCO	**Mesa Verde**	**16.66**	**107**	*e*Pn	**Pn**	**10 11 54.6**	**+2.2**
	6.0nm,0.9s						
HYT	**Haines Junctio**	**17.65**	**345**	*e*Pn	**Pn**	**10 12 06.7**	**+2.0**
TUC	**Tucson**	**18.18**	**124**	*e*Pn	**Pn**	**10 12 12.1**	**+0.7**
	7.7nm,1.4s						
SDCO	**Great Sand Dun**	**18.49**	**102**	*e*Pn	**Pn**	**10 12 16.8**	**+1.6**
	23nm,2.3s						
ANMO	**Albuquerque**	**19.26**	**111**	P	**Pn**	**10 12 22.3**	**-2.2**
ANMO				*e*Pn	**Pn**	**10 12 25.3**	**+0.8**
ANMO	**Albuquerque**	**19.26**	**111**	P	**Pn**	**10 12 22.3**	**-2.2**
	0.1nm,0.3s,baz=331,slow=10,SNR=6.8						
YKA	**Yellowknife Ar**	**20.20**	**19**	P	**P**	**10 12 32.5**	**-1.1**
	3.1nm,0.8s,baz=202,slow=9.8,SNR=4.0						
FFC	**Flin Flon**	**20.21**	**49**	*e*P	**P**	**10 12 34.4**	**+0.7**
	20nm,0.8s						
DAWY	**Dawson**	**21.00**	**347**	*e*Pn	**P**	**10 12 45.4**	**+3.2**
PMR	**Palmer**	**21.38**	**333**	*e*P	**P**	**10 12 46.3**	**+0.1**
	3.7nm,0.9s,mb3.7						
EGAK	**Eagle**	**21.96**	**346**	*e*P	**P**	**10 12 52.2**	**-0.3**
	5.6nm,1.1s,mb3.9						
AMTX	**Amarillo**	**22.58**	**105**	*e*P	**P**	**10 12 59.4**	**0.0**
	5.9nm,0.8s,mb4.1						
ECSD	**EROS Data Cent**	**22.95**	**80**	*e*P	**P**	**10 13 03.4**	**+0.2**
	7.0nm,0.9s,mb4.1						
ULM	**Lac du Bonnet**	**22.95**	**63**	LR	LR	10 21 23.9	
	comp=Z,50nm,20.8s,MS2.9,baz=186,slow=35						
ILAR	**Eielson Array**	**23.19**	**340**	P	**P**	**10 13 04.2**	**-1.4**
	1.0nm,0.9s,mb3.3,baz=150,slow=10,SNR=10						
ILAR				PcP	PcP	10 16 51.1	-2.1
	0.4nm,0.7s,baz=175,slow=1.3,SNR=6.9						
INK	**Inuvik**	**24.47**	**356**	LR	LR	10 22 26.4	
	comp=Z,88nm,19.0s,MS3.3,baz=178,slow=36						
TXAR	**Lajitas Array**	**24.64**	**118**	P	**P**	**10 13 18.6**	**-1.0**
	1.2nm,0.8s,mb3.5,baz=292,slow=8.1,SNR=18						
TXAR				LR	LR	10 24 29.5	
	comp=Z,33nm,18.5s,MS2.9,baz=310,slow=40						
KSRS	**Korea Array**	**73.44**	**306**	P	**P**	**10 19 32.1**	**+0.7**
	0.6nm,0.8s,mb3.6,baz=46,slow=7.0,SNR=3.7						
SONM	**Songino Array**	**76.55**	**325**	P	**P**	**10 19 47.8**	**-1.3**
	1.0nm,0.9s,mb3.8,baz=38,slow=4.4,SNR=6.9						
LPAZ	**La Paz**	**81.43**	**122**	P	**P**	**10 20 13.6**	**-2.7**
	1.4nm,0.8s,mb3.9,baz=11,slow=5.2,SNR=4.0						
MKAR	**Makanchi Array**	**85.54**	**339**	P	**P**	**10 20 36.8**	**-0.2**
	0.4nm,0.8s,mb3.7,baz=35,slow=5.3,SNR=3.1						
WMQ	**Urumqi**	**86.74**	**335**	*e*P	**P**	**10 20 44.0**	**+1.0**
LZH	**Lanzhou**	**87.16**	**320**	*e*P	**P**	**10 20 44.3**	**-0.9**
LZH				pP	pP	10 20 47.5	-1.0
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
CD2	**Chengdu**	**91.44**	**317**	P	**P**	**10 21 04.9**	**-0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,60nm,4.8s						
KMI	**Kunming**	**96.69**	**315**	P	**P**	**10 21 30.9**	**+1.3**
KMI				pP	pP	10 21 34.7	+1.7
KMI				sP	sP	10 21 36.5	+2.3
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s						

CASC 08 10:08:47.3±1.1, 10°62N×85°53W, h44km±18km, MD3.8, ML3.2, 3C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VCR	**Vista de Mar**	**0.50**	**192**	*i*P	Pn	10 08 58.0	-0.3
SSN	**San Juan del S**	**0.75**	**335**	*e*P	Pn	10 09 01.5	0.0
SSN				*e*S	Sn	10 09 12.8	+1.0
SSN				AML	AML	10 09 18.1	
	comp=Z,721nm,0.5s						
JCR	**Jicaral**	**0.87**	**152**	*e*P	Pn	10 09 02.9	-0.2
JCR				*e*S	Sn	10 09 15.2	+0.7
CONN	**Concepcion**	**0.94**	**354**	*e*P	Pn	10 09 04.2	0.0
CGA2	**Cerro Gallo 2**	**1.20**	**120**	*e*P	Pn	10 09 08.0	+0.4
CGA2				*e*S	Sn	10 09 24.2	+1.4
PRS1	**Puriscal**	**1.35**	**118**	*e*P	Pn	10 09 10.4	+0.7
APON	**Apoyo**	**1.40**	**338**	*e*P	Pn	10 09 10.7	+0.4
CRUN	**El Crucero**	**1.55**	**331**	*e*P	Pn	10 09 13.4	+0.9
LAJ	**Bijagual**	**1.57**	**118**	*e*P	Pn	10 09 09.6	-3.1
LAJ				*e*S	Sn	10 09 26.0	-5.9
TISN	**Laguna Tiscapa**	**1.68**	**334**	*e*P	Pn	10 09 14.0	-0.2
XAVN	**Gruta Xavier**	**1.71**	**333**	*e*P	Pn	10 09 14.7	0.0
CSAN		**1.79**	**331**	*e*P	Pn	10 09 15.3	-0.4
QCR	**Quepos**	**1.79**	**131**	*e*P	Pn	10 09 16.0	+0.2
COPN	**Copaltepe**	**1.87**	**326**	*e*P	Pn	10 09 17.6	+0.7
URSC	**Urasca**	**1.89**	**114**	*e*P	Pn	10 09 17.9	+0.8
BUS	**Buena Vista**	**2.04**	**121**	*e*P	Pn	10 09 20.4	+1.2
LEON	**Leon**	**2.23**	**323**	*e*P	Pn	10 09 21.4	-0.4

*CSEM **08** 10:16:18.7±0.1, 38.°44N×21.°96E, h15km, ML2.2/6, Error ellipse: s-maj=3.9km s-min=2.8km az=111.0*

*ISCJB **08** 10:16:19.3±0.5, 38.°45N±0.°03×21.°97E±0.°04, h12km±5km, Error ellipse: s-maj=6.4km s-min=4.8km az=136.9*

*ATH **08** 10:16:19.9, 38.°43N×22.°00E, h5km±4km, MD2.7/6*

*NEIC **08** 10:16:19.9, 38.°43N×22.°00E, h5km, MD2.7(ATH), After ATH.*

*THE **08** 10:16:19.4, 38.°47N×21.°95E, h10km±1km, ML2.2/6, Error ellipse: s-maj=1.5km s-min=0.5km az=232.0*

ISC 08 10:16:19.4±0.5, 38°45N±0.°03×21°96E±0.°04, h13km±4km, n27, σ0s53/49, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EFP	**Efpalio**	**0.04**	**244**	*e*PG	**Pg**	**10 16 21.5**	**-0.3**
EFP				*e*SG	**Sg**	**10 16 23.0**	**-0.5**
EFP	**Efpalio**	**0.04**	**244**	P	**Pg**	**10 16 21.5**	**-0.3**
EFP				S	**Sg**	**10 16 22.9**	**-0.6**
EFP	**Efpalio**	**0.04**	**244**	P	**Pg**	**10 16 21.5**	**-0.3**
EFP				*e*Sg	**Sg**	**10 16 23.0**	**-0.5**
TRIZ	**Trizonia**	**0.12**	**131**	P	**Pg**	**10 16 22.4**	**-0.2**
TRIZ				S	**Sg**	**10 16 24.9**	**0.0**
TRIZ	**Trizonia**	**0.12**	**131**	P	**Pg**	**10 16 22.4**	**-0.2**
TRIZ				S	**Sg**	**10 16 24.9**	**0.0**
KALE	**Kalithea**	**0.15**	**111**	P	**Pg**	**10 16 23.0**	**-0.1**
KALE				S	**Sg**	**10 16 25.7**	**0.0**
KALE	**Kalithea**	**0.15**	**111**	P	**Pg**	**10 16 23.0**	**-0.1**
KALE				S	**Sg**	**10 16 25.7**	**0.0**
LAKA	**Lakka**	**0.21**	**175**	P	**Pg**	**10 16 23.9**	**0.0**
LAKA				S	**Sg**	**10 16 27.7**	**+0.7**
LAKA	**Lakka**	**0.21**	**175**	P	**Pg**	**10 16 23.9**	**0.0**
LAKA				S	**Sg**	**10 16 27.7**	**+0.7**
DSF	**Desfina**	**0.45**	**94**	P	**Pg**	**10 16 27.9**	**-0.4**
DSF				S	**Sg**	**10 16 35.2**	**+0.9**
DSF	**Desfina**	**0.45**	**94**	P	**Pg**	**10 16 27.9**	**-0.4**
DSF				S	**Sg**	**10 16 35.2**	**+0.9**
EVR	**Evrytania**	**0.48**	**346**	*e*Pb	**Pb**	**10 16 29.2**	**-0.5**
EVR				*e*Sb	**Sg**	**10 16 37.0**	**+1.6**
EVR	**Evrytania**	**0.48**	**346**	*e*PB	**Pb**	**10 16 29.2**	**-0.5**
EVR				*e*SB	**Sg**	**10 16 37.0**	**+1.6**
EVR	**Evrytania**	**0.48**	**346**	*e*Pb	**Pb**	**10 16 29.2**	**-0.5**
EVR				*e*Sb	**Sg**	**10 16 37.0**	**+1.6**
RLS	**Riolos of Patr**	**0.55**	**225**	*e*Pb	**Pb**	**10 16 30.6**	**-0.2**
RLS				*e*Sb	**Sb**	**10 16 38.8**	**+0.3**
RLS	**Riolos of Patr**	**0.55**	**225**	*e*PB	**Pb**	**10 16 30.6**	**-0.2**
RLS				*e*SB	**Sb**	**10 16 38.8**	**+0.3**
RLS	**Riolos of Patr**	**0.55**	**225**	*e*Pb	**Pb**	**10 16 30.6**	**-0.2**
RLS				*e*Sb	**Sb**	**10 16 38.8**	**+0.3**
GUR	**Goura**	**0.59**	**149**	*e*PB	**Pg**	**10 16 30.6**	**-0.3**
GUR	**Goura**	**0.59**	**149**	*e*Pb	**Pg**	**10 16 30.6**	**-0.3**
AGG	**Agios Georgios**	**0.65**	**27**	*e*Pb	**Pg**	**10 16 31.8**	**-0.1**
AGG				*e*Sb	**Sb**	**10 16 41.3**	**-0.1**
AGG	**Agios Georgios**	**0.65**	**27**	*e*PB	**Pg**	**10 16 31.8**	**-0.1**
AGG				*e*SB	**Sb**	**10 16 41.3**	**-0.1**
AGG	**Agios Georgios**	**0.65**	**27**	P	**Pg**	**10 16 31.4**	**-0.6**
AGG				S	**Sg**	**10 16 39.9**	**-0.6**
AGG	**Agios Georgios**	**0.65**	**27**	P	**Pg**	**10 16 31.4**	**-0.6**
AGG	**Agios Georgios**	**0.65**	**27**	*e*Pb	**Pg**	**10 16 31.8**	**-0.1**
AGG				S	**Sg**	**10 16 39.9**	**-0.6**
AGG				*e*Sb	**Sb**	**10 16 41.3**	**-0.1**
LKR	**Lokris**	**0.84**	**76**	*e*Pb	**Pg**	**10 16 35.7**	**0.0**
LKR	**Lokris**	**0.84**	**76**	*e*PB	**Pg**	**10 16 35.7**	**0.0**
LKR	**Lokris**	**0.84**	**76**	*e*Pb	**Pg**	**10 16 35.7**	**0.0**

*ISCJB **08** 10:58:01.9±0.3, 12.°92N±0.°04×88.°65W±0.°03, h67km±2km, mb4.3/44, Error ellipse: s-maj=8.6km s-min=2.6km az=36.9*

*CASC **08** 10:58:02.5±2.5, 12.°87N×88.°69W, h44km±47km, MD4.3, ML4.3, mb4.4(NEIC)*

*BJI **08** 10:58:03.4, 12.°90N×88.°60W, h85km, mB4.8/3, Ms4.8/2, Ms7 4.4/2*

*IDC **08** 10:58:03.9±1.5, 13.°09N×88.°49W, h78km±14km, mb3.8/13, mb1 4.0/15, mb1mx3.9/25, mbtmp3.8/15, MS3.5/17, Ms1 3.5/17, ms1mx3.5/23, Error ellipse: s-maj=25.9km s-min=9.1km az=50.0*

*NEIC **08** 10:58:04.4±1.0, 12.°87N×88.°58W, h85km±8km, mb4.4/34, MD4.5(SNET), Error ellipse: s-maj=12.9km s-min=6.3km az=47.0*

NEIC Felt [II] at Usulutan.

ISC 08 10:58:03.2±0.3, 12°96N±0.°04×88°62W±0.°03, h59km±2km, n273, σ0s82/264, mb4.3/44, MS3.6/17, 78C-70D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLLM	**Bellamira**	**0.60**	**38**	*i*P	**Pn**	**10 58 16.8**	**+0.6**
AIES	**Las Flores**	**0.65**	**319**	*e*P	**Pn**	**10 58 15.5**	**-1.2**
AIES				*e*S	**Sn**	**10 58 25.0**	**-1.6**
AIES				AML	AML	10 58 31.0	
	comp=Z,17µm,0.4s						
SNVI	**San Vicente**	**0.68**	**341**	*e*P	**Pn**	**10 58 16.9**	**-0.2**
LFRS	**El Faro**	**0.79**	**327**	*i*P	**Pn**	**10 58 17.6**	**-0.8**
CNCH	**Conchagua**	**0.82**	**68**	*e*P	**Pn**	**10 58 19.0**	**+0.2**
LBRS	**Las Brisas**	**0.88**	**332**	*e*P	**Pn**	**10 58 19.1**	**-0.4**
CAHU	**Cacacuatique**	**0.89**	**26**	*e*P	**Pn**	**10 58 20.9**	**+1.1**
CAHU				*e*S	**Sn**	**10 58 36.1**	**+4.1**
LFU	**La Fuente**	**0.92**	**328**	*e*P	**Pn**	**10 58 19.8**	**-0.3**
LFU				*e*S	**Sn**	**10 58 31.3**	**-0.6**
SNET	**Serv Nac Est T**	**0.94**	**320**	*e*P	**Pn**	**10 58 19.2**	**-1.1**
SNET				*e*S	**Sn**	**10 58 32.5**	**-0.5**
SNET				AML	AML	10 58 33.9	
	comp=Z,13µm,0.4s						
BOQS	**Boqueron**	**1.00**	**320**	*e*P	**Pn**	**10 58 20.6**	**-0.6**
SBLS	**San Blas**	**1.31**	**312**	*e*P	**Pn**	**10 58 24.5**	**-0.7**
SNJE	**San Jose**	**1.32**	**313**	*e*P	**Pn**	**10 58 24.8**	**-0.6**
SONS	**Sonsonate**	**1.32**	**306**	*e*P	**Pn**	**10 58 23.8**	**-1.5**
SONS				*e*S	**Sn**	**10 58 40.5**	**-1.6**
SONS				AML	AML	10 58 44.8	
	comp=Z,7µm,0.3s						
RTR	**El Retiro**	**1.36**	**313**	*e*P	**Pn**	**10 58 25.3**	**-0.7**
RBDL	**Robledal**	**1.54**	**318**	*e*P	**Pn**	**10 58 28.1**	**-0.4**
CRIN	**San Cristobal**	**1.55**	**100**	*e*P	**Pn**	**10 58 28.2**	**-0.3**
CRIN				*e*S	**Sn**	**10 58 48.9**	**+1.3**
MTO2	**Montecristo 2**	**1.60**	**333**	*e*P	**Pn**	**10 58 29.2**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.70**	**50**	*e*Pn	**Pn**	**10 58 31.9**	**+1.4**
LEON	**Leon**	**1.77**	**108**	*e*P	**Pn**	**10 58 30.4**	**-1.1**
TELN	**Telica**	**1.78**	**101**	*e*P	**Pn**	**10 58 31.2**	**-0.4**
CNGN	**Cerro Negro**	**1.93**	**104**	*e*P	**Pn**	**10 58 33.0**	**-0.6**
CNGN				*e*S	**Sn**	**10 58 55.4**	**-1.4**
MOMN	**Momotombo**	**2.10**	**105**	*e*P	**Pn**	**10 58 35.7**	**-0.2**
COPN	**Copaltepe**	**2.12**	**111**	*e*P	**Pn**	**10 58 35.2**	**-1.1**
CSAN		**2.28**	**110**	*e*P	**Pn**	**10 58 38.1**	**-0.3**
NBG	**Las Nubes**	**2.33**	**314**	*e*P	**Pn**	**10 58 40.3**	**+1.2**
MRL	**Marmol**	**2.33**	**334**	*e*P	**Pn**	**10 58 40.9**	**+1.7**
XAVN	**Gruta Xavier**	**2.38**	**110**	*e*P	**Pn**	**10 58 39.4**	**-0.4**
PCG	**Pacaya**	**2.40**	**307**	*e*P	**Pn**	**10 58 41.3**	**+1.2**
TISN	**Laguna Tiscapa**	**2.43**	**109**	*e*P	**Pn**	**10 58 40.0**	**-0.5**
MGAN	**Managua**	**2.45**	**109**	*e*P	**Pn**	**10 58 40.0**	**-0.8**
MGAN				*e*S	**Sn**	**10 59 08.9**	**-0.7**
CRUN	**El Crucero**	**2.46**	**113**	*e*P	**Pn**	**10 58 40.4**	**-0.5**

FUG	**Fuego 3**	**2.62**	**305**	*e*P		**Pn**	**10 58 43.7**	**+0.6**
APON	**Apoyo**	**2.70**	**112**	*e*P		**Pn**	**10 58 43.8**	**-0.3**
FG6		**2.71**	**306**	*e*P		**Pn**	**10 58 45.2**	**+0.9**
TP2	**Tecpan 2**	**2.95**	**308**	*e*P		**Pn**	**10 58 49.5**	**+1.9**
SSN	**San Juan del S**	**3.17**	**121**	*e*P		**Pn**	**10 58 50.4**	**-0.1**
JAT	**Jato**	**3.23**	**295**	*e*P		**Pn**	**10 58 51.6**	**+0.2**
CONN	**Concepcion**	**3.24**	**115**	*e*P		**Pn**	**10 58 51.3**	**-0.2**
VCR	**Vista de Mar**	**4.06**	**134**	*e*P		**Pn**	**10 59 03.0**	**+0.2**
JTS	**JuntasAbangare**	**4.46**	**126**	*e*Pn		**Pn**	**10 59 10.2**	**+1.8**
JTS				*e*Sn		**Sn**	**11 00 02.6**	**+3.5**
JTS	**JuntasAbangare**	**4.46**	**126**	P		**Pn**	**10 59 08.3**	**-0.1**
	comp=Z,4.7nm,0.3s,baz=305,slow=17,SNR=35							
JTS				S		**Sn**	**11 00 01.1**	**+2.1**
	comp=Z,5.2nm,0.3s,baz=292,slow=19,SNR=5.1							
JTS				LR		LR	11 00 41.0	
	comp=Z,127nm,21.4s,baz=67,slow=35							
JCR	**Jicaral**	**4.62**	**132**	*e*P		**Pn**	**10 59 10.9**	**+0.4**
CGA2	**Cerro Gallo 2**	**5.01**	**125**	*e*P		**Pn**	**10 59 18.0**	**+2.2**
PRS1	**Puriscal**	**5.16**	**125**	*e*P		**Pn**	**10 59 19.7**	**+1.9**
LAJ	**Bijagual**	**5.38**	**125**	*e*P		**Pn**	**10 59 18.8**	**-2.1**
QCR	**Quepos**	**5.61**	**128**	*e*P		**Pn**	**10 59 25.0**	**+1.0**
URSC	**Urasca**	**5.67**	**123**	*e*P		**Pn**	**10 59 26.9**	**+2.1**
BUS	**Buena Vista**	**5.85**	**125**	*e*P		**Pn**	**10 59 29.9**	**+2.6**
ACR	**Cerro Adams**	**6.86**	**128**	*e*P		**Pn**	**10 59 42.4**	**+1.3**
TEIG	**Tepich**	**7.23**	**3**	*e*Pn		**Pn**	**10 59 48.6**	**+2.4**
CMIG	**Matias Romero**	**7.31**	**305**	P		**Pn**	**10 59 47.3**	**-0.1**
	comp=Z,2.1nm,0.3s,baz=116,slow=9.5,SNR=20							
CMIG				S		**Sn**	**11 01 10.9**	**+1.9**
	comp=Z,4.3nm,0.3s,baz=78,slow=19,SNR=6.2							
SDV	**Santo Domingo**	**18.11**	**101**	*e*Pn		**Pn**	**11 02 09.6**	**-1.1**
	comp=Z,13nm,0.9s							
LRAL	**Lakeview Retre**	**20.03**	**4**	*e*P		**P**	**11 02 31.7**	**+0.4**
	comp=Z,3.9nm,0.8s							
JCT	**Junction City**	**20.27**	**331**	*e*P		**P**	**11 02 33.8**	**-0.1**
	comp=Z,8.4nm,0.9s							
GOGA	**Godfrey**	**20.89**	**12**	*e*P		**P**	**11 02 42.8**	**+2.2**
	comp=Z,28nm,1.0s							
627A	**Terlingua Banc**	**21.38**	**322**	⇓P		**P**	**11 02 46.7**	**+0.8**
	baz=22,SNR=16							
TXAR	**Lajitas Array**	**21.46**	**322**	P		**P**	**11 02 46.7**	**-0.1**
TXAR				PcP		PcP	11 06 46.2	-1.8
TXAR				ScP		ScP	11 10 17.7	-2.6
TXAR				LR		LR	11 12 53.1	
TXAR	**Lajitas Array**	**21.46**	**322**	P		**P**	**11 02 46.7**	**-0.1**
	comp=Z,2.4nm,0.7s,mb3.6,baz=148,slow=9.3,SNR=23							
TXAR				PcP		PcP	11 06 46.2	-1.8
	comp=Z,1.3nm,1.1s,baz=131,slow=3.7,SNR=4.6							
TXAR				ScP		ScP	11 10 17.7	-2.6
	comp=Z,0.4nm,0.8s,baz=181,slow=4.4,SNR=5.9							
TXAR				LR		LR	11 12 53.1	
	comp=Z,39nm,20.6s,MS2.8,baz=185,slow=42							

T23A	Casias Ranch, baz=29	28.60	330	⇓P		P	11 03 54.4 +0.5
S24A	Houchin Ranch, baz=29	28.70	332	⇑P		P	11 03 55.3 +0.7
SDCO	Great Sand Dun comp=Z,4.9nm,1.1s,mb4.2	28.91	332	*e*P		P	11 03 57.2 +0.6
T22A	Edith baz=29	29.01	329	⇑P		P	11 03 58.3 +0.8
R24A	Sanders Place, baz=29	29.13	333	⇓P		P	11 03 59.3 +0.8
Q25A	Bedland, Calha baz=30,SNR=5.4	29.33	335	⇑P		P	11 04 00.2 0.0
S22A	4UR Ranch, Cre baz=30,SNR=7.9	29.55	330	⇑P		P	11 04 02.5 +0.2
X16A	Lo Mia Camp, P baz=30	29.75	320	⇑P		P	11 04 04.2 +0.1
R22A	Saguache, Gunn baz=30	29.89	331	⇓P		P	11 04 05.6 +0.3
Q23A	Hartsel baz=30	30.01	332	⇑P		P	11 04 06.6 +0.3
P23A	Jefferson baz=31	30.39	333	⇑P		P	11 04 10.5 +0.8
Q22A	Crested Butte, baz=31	30.47	331	⇓P		P	11 04 10.6 +0.2
ISCO	Idaho Springs comp=Z,3.0nm,1.0s,mb4.1	30.65	334	*e*P		P	11 04 12.2 +0.3
R20A	Redvale baz=31	30.66	329	⇑P		P	11 04 12.6 +0.4
T18A	Mexican Hat baz=31	30.68	325	⇑P		P	11 04 12.9 +0.6
S19A	Harvey Farm, M baz=31	30.73	327	⇓P		P	11 04 12.9 +0.3
SMCO	Snowmass comp=Z,6.7nm,1.3s,mb4.3	30.75	331	*e*P		P	11 04 13.5 +0.6
Q21A	Lamborn Mesa, baz=31	30.76	330	⇑P		P	11 04 14.1 +1.1
P22A	Eagle baz=31	30.99	332	⇓P		P	11 04 15.4 +0.4
T17A	Navajo Res., N baz=31	31.10	324	⇓P		P	11 04 16.5 +0.5
V15A	Kaibab Nationa baz=31	31.11	321	⇓P		P	11 04 15.6 -0.6
O23A	Lake Granby, G baz=31,SNR=6.0	31.12	334	⇓P		P	11 04 16.1 0.0
S18A	Hurst Farm, Bl baz=31	31.15	326	⇑P		P	11 04 17.4 +1.0
R19A	Curley Farm, L baz=31	31.20	328	⇑P		P	11 04 17.2 +0.4
O22A	Kremmling baz=32,SNR=7.8	31.35	333	⇑P		P	11 04 18.1 0.0
R18A	Canyonlands Na baz=32	31.60	327	⇑P		P	11 04 20.6 +0.3
N23A	Red Feather La baz=32	31.70	335	⇓P		P	11 04 21.5 +0.3
N22A	Wattenberg Ran baz=32,SNR=5.8	31.84	334	⇑P		P	11 04 22.9 +0.6
PHWY	Pilot Hill comp=Z,6.5nm,1.1s,mb4.4	31.84	336	*e*P		P	11 04 22.8 +0.4
O20A	White River Ci baz=32,SNR=6.7	32.10	331	⇑P		P	11 04 25.1 +0.4
U14A	Mt Trumbull baz=32	32.12	321	⇑P		P	11 04 25.3 +0.3
Q18A	Rafter H Ranch baz=32	32.26	328	⇑P		P	11 04 26.5 +0.4
N21A	Black Mountain baz=32,SNR=7.2	32.27	333	⇓P		P	11 04 27.0 +0.8
R16A	Teasdale baz=33	32.39	325	⇑P		P	11 04 28.1 +0.8
T14A	Hurricane baz=33	32.48	322	⇓P		P	11 04 28.5 +0.4
N20A	Spence Gulch, baz=33,SNR=12	32.67	332	⇓P		P	11 04 30.2 +0.6
P18A	Preston Nutter baz=33	32.70	328	⇑P		P	11 04 31.0 +0.9
V12A	Nelson baz=33	32.75	318	⇑P		P	11 04 30.8 +0.3
M21A	Separation Pea baz=33	32.89	334	⇓P		P	11 04 32.0 +0.4
RWWY	Rawlins comp=Z,12nm,1.0s,mb4.8	32.89	334	*e*P		P	11 04 32.3 +0.7
O18A	Roosevelt baz=33	33.06	329	⇓P		P	11 04 33.5 +0.3
N19A	John Jarvie Ra baz=33	33.14	331	⇓P		P	11 04 34.2 +0.3
L21A	Rawlins baz=33,SNR=12	33.18	334	⇑P		P	11 04 34.4 +0.2
O17A	Robinson Place baz=34	33.38	328	⇓P		P	11 04 36.1 +0.2
L20A	Wamsutter baz=34	33.64	333	⇓P		P	11 04 38.1 0.0
RRX	Edison Barstow baz=34	33.69	315	⇑P		P	11 04 38.4 -0.3
RSSD	Black Hills comp=Z,3.1nm,1.0s,mb4.2	33.75	340	*e*P		P	11 04 39.4 +0.4
O16A	Springville baz=34	33.78	328	⇓P		P	11 04 39.6 +0.2
K20A	Yellowstone Ra baz=34	34.16	334	⇓P		P	11 04 43.0 +0.3
P14A	Drum Mountains baz=34	34.19	325	⇑P		P	11 04 43.3 +0.3
R12A	Pony Springs, baz=34	34.23	322	⇓P		P	11 04 43.7 +0.4
M17A	Scullys Gap (B baz=34	34.30	330	⇑P		P	11 04 44.2 +0.3
L18A	Fontenelle, Gr baz=34	34.35	331	⇑P		P	11 04 44.5 +0.3
LRMC	Laurel Mountai baz=35	34.49	316	⇑P		P	11 04 45.5 -0.2
K19A	Absolon Red Bu baz=35	34.52	333	⇓P		P	11 04 45.7 -0.1
P13A	Bates Ranch, G baz=35	34.63	324	⇑P		P	11 04 47.0 +0.3
BW06	Boulder Array comp=Z,38nm,2.8s,mb4.8	34.79	333	*e*P		P	11 04 47.6 -0.4
HWUT	Hardware Ranch comp=Z,24nm,2.1s,mb4.8	34.85	329	*e*P		P	11 04 49.1 +0.5
L17A	Cokeville baz=35	34.88	330	⇑P		P	11 04 48.9 0.0
K18A	Toltan Ranch, baz=35,SNR=6.2	34.91	332	⇑P		P	11 04 49.1 0.0
L16A	Fish Haven baz=35	35.09	330	⇓P		P	11 04 50.5 -0.2
N14A	Grayback Hills baz=35	35.14	327	⇑P		P	11 04 51.3 +0.2
J18A	Kendall Valley baz=36,SNR=7.8	35.35	333	⇑P		P	11 04 52.7 -0.2
LPAZ	La Paz comp=Z,1.2nm,0.7s,mb4.0,baz=344,slow=6.1,SNR=5.0	35.42	145	P		P	11 04 53.4 -0.4
L15A	Malad City baz=36	35.55	329	⇑P		P	11 04 54.2 -0.5
I18A	Diamond G Ranc baz=36	35.65	333	⇓P		P	11 04 55.7 +0.2
M14A	Sheep Mountain baz=36	35.69	327	⇑P		P	11 04 55.5 -0.3
AGMN	Agassiz Nation comp=Z,14nm,1.3s,mb4.7	35.74	352	*e*P		P	11 04 54.7 -1.5
J17A	Brown Place, J baz=36,SNR=5.2	35.78	332	⇑P		P	11 04 56.5 -0.1
REDW	Red Top Meadow comp=Z,15nm,1.1s,mb4.8	35.84	332	*e*P		P	11 04 56.9 -0.3
SNOW	Snow King Moun comp=Z,8.9nm,0.9s,mb4.7	35.88	332	*e*P		P	11 04 57.8 +0.3
LOHW	Long Hollow comp=Z,17nm,1.6s,mb4.7	35.93	332	*e*P		P	11 04 57.8 0.0
TPAW	Teton Pass comp=Z,4.8nm,0.8s,mb4.5	35.99	332	*e*P		P	11 04 59.4 +1.0
J16A	Bone baz=36	36.13	331	⇓P		P	11 04 59.9 +0.3
IMW	Indian Meadow comp=Z,8.4nm,1.8s,mb4.4	36.30	332	*e*P		P	11 05 01.1 +0.1
FLWY	Flagg Ranch comp=Z,27nm,1.9s,mb4.9	36.34	333	*e*P		P	11 05 01.6 +0.3
K14A	Jones Ranch, D baz=36	36.35	329	⇑P		P	11 05 01.0 -0.5
RLMT	Red Lodge comp=Z,9.2nm,1.0s,mb4.6	36.56	335	*e*P		P	11 05 02.8 -0.5
NVAR	Mina Array Bea	36.57	319	P		P	11 05 03.8 +0.4
NVAR				PcP	PcP		11 07 25.5 -0.3
NVAR				ScP	ScP		11 11 06.8 -0.9
NVAR	Mina Array Bea comp=Z,1.7nm,0.9s,mb3.9,baz=137,slow=7.5,SNR=11	36.57	319	P		P	11 05 03.8 +0.4
NVAR				PcP	PcP		11 07 25.5 -0.3
NVAR	comp=Z,0.8nm,0.6s,baz=116,slow=4.1,SNR=7.0			ScP	ScP		11 11 06.8 -0.9
LAO	comp=Z,0.4nm,0.6s,baz=141,slow=4.6,SNR=5.0 LASA Array comp=Z,1.8nm,0.4s,mb4.2	36.74	340	*e*P		P	11 05 04.4 -0.4
G18A	Lazy EL Ranch,	36.84	335	⇑P		P	11 05 04.7 -0.9
	baz=37,SNR=7.1						
YMR	Madison River comp=Z,21nm,1.4s,mb4.8	36.92	333	*e*P		P	11 05 07.3 +1.0
J14A	Carey baz=37	37.09	329	⇑P		P	11 05 07.6 -0.1
G17A	Pierce Place, baz=38,SNR=7.7	37.34	334	⇓P		P	11 05 10.6 +0.8
F18A	Big Timber baz=38,SNR=7.2	37.38	336	⇓P		P	11 05 09.9 -0.3
H15A	Lima baz=38,SNR=8.3	37.64	332	⇑P		P	11 05 12.7 +0.3
ULM	Lac du Bonnet comp=Z,2.2nm,0.3s,mb4.3,baz=171,slow=7.9,SNR=4.5	37.65	352	P		P	11 05 09.2 -3.3
ULM				LR	LR		11 21 30.2
HLID	comp=Z,145nm,20.2s,MS3.8,baz=51,slow=38 Hailey baz=38	37.71	329	⇓P		P	11 05 12.9 -0.2
G16A	Moss Hill, Enn baz=38,SNR=7.0	37.73	333	⇓P		P	11 05 13.2 +0.1
F17A	Fitzpatrick Pl baz=38,SNR=16	37.77	335	⇑P		P	11 05 13.5 +0.1
I13A	Wildhorse Cree baz=38	37.82	330	⇑P		P	11 05 13.9 -0.1
MCMT	McKenzie Canyo comp=Z,3.7nm,1.1s,mb4.0	37.89	332	*e*P		P	11 05 15.4 +0.9
BOZ	Bozeman (W) comp=Z,4.7nm,1.0s,mb4.2	37.98	334	*e*P		P	11 05 15.1 -0.1
G15A	Dillon baz=38	37.98	332	⇑P		P	11 05 15.5 +0.2
F16A	Kennard Place, baz=38,SNR=7.0	38.08	334	⇑P		P	11 05 16.3 +0.2
DLMT	Dillon comp=Z,8.9nm,1.2s,mb4.4	38.18	332	*e*P		P	11 05 17.5 +0.6
I12A	Atlanta baz=38	38.24	329	⇓P		P	11 05 17.3 -0.2
E17A	Martinsdale baz=38,SNR=5.6	38.30	335	⇑P		P	11 05 18.0 +0.1
H13A	Challis baz=38,SNR=5.6	38.36	330	⇓P		P	11 05 18.0 -0.4
LRM	Limekiln Ridge	38.47	333	*e*P		P	11 05 19.6 +0.3
D18A	Linhart Farms, baz=39,SNR=11	38.47	337	⇓P		P	11 05 19.1 -0.3
H12A	Diamond D Ranc baz=39	38.65	330	⇑P		P	11 05 20.6 -0.3
E16A	East Helena baz=39,SNR=8.2	38.70	334	⇓P		P	11 05 20.9 -0.3
D17A	Six Diamond Ra baz=39,SNR=15	38.78	336	⇓P		P	11 05 21.8 -0.2
HRY	Holter Researc	38.90	334	*e*P		P	11 05 22.9 -0.1
E15A	Deer Lodge baz=39	39.02	333	⇑P		P	11 05 23.6 -0.4
D16A	Dana Ranch, Ca baz=39,SNR=10	39.04	335	⇓P		P	11 05 24.1 0.0
EGMT	Eagleton comp=Z,9nm,0.8s,mb4.7	39.14	337	⇑P		P	11 05 24.5 -0.5
EGMT	Eagleton comp=Z,13nm,0.8s,mb4.7	39.14	337	*e*P		P	11 05 24.9 -0.1
C17A	Wharram Farm, baz=39,SNR=13	39.20	336	⇓P		P	11 05 25.0 -0.5
F13A	Darby baz=40	39.30	331	⇑P		P	11 05 25.6 -0.7
E14A	Clinton baz=40	39.39	333	⇑P		P	11 05 26.7 -0.4
B18A	Brassley Farm baz=40,SNR=7.1	39.46	338	⇑P		P	11 05 27.1 -0.5
SIV	San Ignacio comp=Z,3.8nm,0.7s,mb4.2,baz=312,slow=12,SNR=14	39.62	136	P		P	11 05 27.9 -1.4
SIV				PcP	PcP		11 07 35.4 -0.2
CHMT	comp=Z,0.6nm,0.3s,baz=214,slow=3.6,SNR=3.6 Chamberlain Mo	39.67	333	*e*P		P	11 05 28.9 -0.4
F12A	Elk City baz=40,SNR=7.5	39.72	331	⇓P		P	11 05 28.7 -1.0
E13A	Victor baz=40,SNR=5.4	39.73	332	⇑P		P	11 05 28.9 -1.0
C16A	Fuhringer Ranc baz=40,SNR=6.8	39.73	336	⇓P		P	11 05 29.1 -0.8
B17A	L&G Farms, Che baz=40	39.76	337	⇑P		P	11 05 29.1 -1.0
MSO	Missoula comp=Z,5.2nm,1.2s,mb4.1	39.91	333	*e*P		P	11 05 30.8 -0.5
D14A	Greenough baz=40	39.91	333	⇑P		P	11 05 30.3 -1.1
A18A	Metzger Ranch, baz=40,SNR=10.0	39.92	338	⇑P		P	11 05 31.1 -0.3
C15A	Salmond Ranch, baz=40,SNR=9.8	40.06	335	⇓P		P	11 05 32.6 -0.1
A17A	Triple J Farms baz=40,SNR=19	40.26	337	⇑P		P	11 05 33.5 -0.7
D13A	Huson baz=40	40.34	333	⇓P		P	11 05 34.3 -0.6
B15A	Bradely Ranch, baz=41,SNR=8.1	40.47	335	⇓P		P	11 05 35.0 -1.0
D12A	Red Ives Fores baz=41	40.72	332	⇓P		P	11 05 36.7 -1.3
A15A	Johnson Ranch, baz=41,SNR=15	41.07	336	⇑P		P	11 05 40.2 -0.7
A14A	Double T Ranch baz=42,SNR=17	41.34	335	⇑P		P	11 05 42.8 -0.4
FFC	Flin Flon comp=Z,6.1nm,1.0s,mb4.3	42.97	349	*e*P		P	11 05 55.3 -1.0
RPN	Rapa Nui comp=Z,161nm,19.5s,MS4.0,baz=278,slow=29	44.64	207	LR	LR		11 19 34.7
JCW	Jim Creek	44.70	329	*e*P		P	11 06 15.0 +4.6
SCHQ	Schefferville comp=Z,4.9nm,0.9s,mb4.3,baz=199,slow=7.7,SNR=4.5	45.12	18	P		P	11 06 10.8 -2.8
SCHQ				LR	LR		11 26 18.6
CFAA	comp=Z,60nm,19.0s,MS3.5,baz=40,slow=38 Coronel Fontan comp=Z,0.2nm,0.6s,mb3.4,baz=297,slow=4.5,SNR=3.1	48.43	157	P		P	11 06 37.6 -2.0
CPUP	Villa Florida comp=Z,62nm,21.1s,MS3.6,baz=56,slow=37	49.51	142	LR	LR		11 28 28.0
YKA	Yellowknife Ar comp=Z,3.9nm,0.8s,mb4.4,baz=151,slow=7.2,SNR=23	52.82	345	P		P	11 07 10.1 -2.2
TAOE	Nuku Hiva Isla comp=Z,173nm,27.8s	55.58	250	*e*LR		LR	11 23 30.5
PLCA	Paso Flores comp=Z,65nm,18.1s,MS3.8,baz=296,slow=32	55.99	163	LR	LR		11 28 21.7
RKT	Rikitea comp=Z,125nm,29.0s	57.83	232	*e*LR	LR		11 24 37.2
ILAR	Bear Island Array comp=Z,3.1nm,1.0s,mb4.3,baz=120,slow=4.6,SNR=24	65.09	336	P	P		11 08 34.8 -2.6
ILAR				LR	LR		11 40 13.2
PPT	comp=Z,56nm,18.3s,MS3.8,baz=21,slow=39 Papeete comp=Z,177nm,27.0s	67.39	245	*e*LR	LR		11 29 00.0
PPT	Papeete comp=Z,53nm,21.7s,MS3.7,baz=60,slow=29	67.39	245	LR	LR		11 30 40.7
ESDC	Sonseca Array comp=Z,39nm,21.4s,MS3.7,baz=210,slow=31	77.77	52	LR	LR		11 37 57.6
DBIC	Dimbokro comp=Z,27nm,20.0s,MS3.6,baz=287,slow=32	82.47	85	LR	LR		11 42 02.4
NOA	NORSAR Array B comp=Z,36nm,21.5s,MS3.7,baz=270,slow=32	83.47	29	LR	LR		11 43 02.5
ARCES	ARCESS Array B comp=Z,1.7nm,0.8s,mb4.3,baz=270,slow=6.2,SNR=3.7	86.07	19	P		P	11 10 34.1 -3.0
TORD	Torodi Ar. Bea comp=Z,48nm,20.4s,MS3.9,baz=115,slow=32	87.41	77	LR	LR		11 44 52.3
FINES	FINESS Array B comp=Z,1.2nm,0.7s,mb4.3,baz=90,slow=7.6,SNR=5.6	90.01	26	P		P	11 10 55.1 -1.0
FINES				LR	LR		11 49 17.8
AKASG	comp=Z,24nm,21.1s,MS3.6,baz=310,slow=34 Malin Array Be comp=Z,28nm,20.0s,MS3.7,baz=230,slow=34	96.75	34	LR	LR		11 52 36.3
MKAR	Makanchi Array comp=Z,0.2nm,0.3s,baz=313,slow=2.7,SNR=6.4	119.96	7	PKP	PKPdf		11 16 43.8 -3.4
HHC	Hu-ho-hao-te	123.29	342	*e*PKP	PKPdf		11 16 50.1 -3.7
HHC				sPKP			11 17 27.4
HHC				PP	PP		11 18 34.8 +1.3
HHC				PKS			11 20 24.7
HHC				SKS	SKSdf		11 23 50.4 -11
HHC				SKKS	SKKSac		11 25 16.1 -12
HHC				SS	SS		11 35 07.8 -6.4
HHC	comp=Z,44nm,4.9s			AMB	AMB		
HHC				LR	LR		
HHC	comp=N,79nm,21.4s,MS4.5			LR	LR		
HHC	comp=E,85nm,20.2s,MS4.5			LR	LR		
WMQ	comp=Z,77nm,15.3s,MS4.5 Urumqi	123.39	3	*e*PKP	PKPdf		11 16 49.6 -4.3
LZH	Lanzhou	129.81	347	*e*PKP	PKPdf		11 16 51.6 -15
LZH				pPKP	pPKPdf		11 17 15.0 -8.7
LZH				sPKP			11 17 26.3
KMI	Kunming	140.56	344	PKP	PKPdf		11 17 27.3 +0.6
POO	Poona	144.25	29	*ex*	PKPdf		11 17 35.0 +1.6
CMAR	Chiang Mai Arr comp=Z,0.8nm,0.4s,baz=336,slow=4.2,SNR=4.2	147.90	346	PKPbc	PKPbc		11 17 38.8 -3.8

BJI 08 11:01:11.6, 32.76N×105.67E, h13km, mb3.8/2, ML3.4/8, Ms3.4/1, Ms7 3.3/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	Chengdu	2.46	222	Pn	Pn	11 01 53.3	+1.9
CD2				Pg	Pg	11 01 58.2	-0.6
CD2				Sg	Sg	11 02 26.0	-4.7
CD2	comp=N,600nm,0.8s			smax			
CD2	comp=E,580nm,0.5s			smax			
XAN	Xi'an	3.00	64	Pn	Pn	11 02 00.7	+1.8
XAN				Sn	Sn	11 02 39.0	+4.3
XAN				Sg	Sg	11 02 48.3	+0.2
XAN	comp=N,140nm,0.6s			smax			
XAN	comp=E,64nm,0.7s			smax			
LZH	Lanzhou	3.65	336	Pn	Pn	11 02 09.1	+1.4
LZH				Pg	Pg	11 02 19.3	-2.1
LZH				Sg	Sg	11 03 02.8	-5.9
LZH	comp=N,230nm,0.8s			smax			
LZH	comp=E,220nm,0.7s			smax			
LZH	comp=E,270nm,4.3s			LR	LR		
LZH	comp=Z,360nm,5.3s			LR	LR		

*ISCJB **08** 11:12:07.7±0.6, 23.60S±0.04×66.56W±0.06, h191km±6km, mb4.0/17, Error ellipse: s-maj=9.5km s-min=6.4km az=170.6*
*NEIC **08** 11:12:08.9±0.7, 23.61S×66.48W, h190km±7km, mb4.1/11, Error ellipse: s-maj=8.8km s-min=7.1km az=69.0*
*IDC **08** 11:12:08.7±1.5, 23.54S×66.49W, h190km±14km, mb3.9/6, mb1 3.8/13, mb1mx3.7/21, mbtmp3.7/13, Error ellipse: s-maj=18.2km s-min=11.4km az=53.0*
*GUC **08** 11:12:12.5±0.7, 23.19S×67.16W, h240km, ML5.0*

ISC 08 11:12:08.3±0.6, 23.60S±0.04×66.52W±0.06, h180km±6km, n45, σ1s11/51, mb4.0/17, 2C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB04	Plate Boundary	3.04	295	⇑*i*P	Pn	11 13 05.4	+8.0
PB04				*i*S	Sn	11 13 45.7	+10
PB04				AML	AML	11 13 50.3	
CEN1	comp=N,2μm,0.4s Los Morros	3.38	273	‖*e*P	Pn	11 13 03.5	+1.8
MECH	Mejillones	3.64	277	⇑*i*P	Pn	11 13 06.6	+1.7
MECH				*i*S	Sn	11 13 48.2	-0.9
MECH				AML	AML	11 13 49.3	
PB01	comp=E,2μm,0.5s Plate Boundary	3.74	312	*e*P	Pn	11 13 07.2	+1.0
PB01				*i*S	Sn	11 13 50.2	-1.2
PB01				AML	AML	11 13 51.6	
HMBC	comp=N,1μm,0.2s Humberston	4.55	316	*e*P	Pn	11 13 16.9	+0.4
HMBC				*e*S	Sn	11 14 06.3	-3.5
PSGC	Pisagua	5.20	319	*e*P	Pn	11 13 24.3	-0.7
PSGC				*e*S	Sn	11 14 19.3	-5.8
MNMC	Miæe Miæ	5.29	327	*e*P	Pn	11 13 27.0	+1.0
MNMC				*e*S	Sn	11 14 23.8	-3.3
LCO	Las Campanas comp=N,77nm,0.3s	6.56	214	*e*Pn	Pn	11 13 42.6	-0.1
LCO				*e*Sn	Sn	11 14 55.5	-1.7
LPAZ	La Paz	7.43	348	P	Pn	11 13 55.9	+1.7
LPAZ				*e*Pn	Pn	11 13 56.4	+2.2
LPAZ				S	Sn	11 15 17.2	-0.6
LPAZ	La Paz comp=N,3.4nm,0.3s,baz=166,slow=7.4,SNR=15	7.43	348	P	Pn	11 13 55.9	+1.7
LPAZ	baz=21,slow=18,SNR=6.5			S	Sn	11 15 17.2	-0.6
CFAA	Coronel Fontan comp=N,0.5nm,0.3s,baz=14,slow=12,SNR=67	8.12	190	P	Pn	11 14 03.1	0.0
CFAA				S	Sn	11 15 28.8	-5.3
CPUP	comp=N,1.3nm,0.3s,baz=285,slow=20,SNR=20 Villa Florida	8.78	110	P	Pn	11 14 12.6	+0.9
SIV	comp=N,0.4nm,0.3s,baz=270,slow=15,SNR=6.6 San Ignacio	9.14	35	P	Pn	11 14 17.2	+0.6
SIV	comp=N,4.4nm,0.3s,baz=225,slow=13,SNR=103			S	Sn	11 15 48.0	-11
NNA	baz=230,slow=17,SNR=3.9 Nana	15.15	318	P	Pn	11 15 33.9	+0.6
NNA	Nana comp=N,1.0nm,0.3s,baz=153,slow=14,SNR=5.0	15.15	318	P	Pn	11 15 33.9	+0.6
PLCA	Paso Flores	17.42	190	*e*P	Pn	11 16 00.4	0.0
PLCA	Paso Flores comp=N,0.9nm,0.3s,baz=7.6,slow=14,SNR=11	17.42	190	P	Pn	11 16 00.8	+0.4
SPB	Sao Paulo comp=N,16nm,0.5s	17.50	94	*e*P	Pn	11 15 58.8	-2.8
ATAH	Atahualpa comp=N,1.8nm,0.3s,baz=110,slow=12,SNR=12	19.95	323	P	P	11 16 25.2	-1.5
JCT	Junction City comp=N,5.5nm,0.8s,mb4.4	62.54	328	*e*P	P	11 22 12.5	-0.5
TXAR	Lajitas Array comp=N,0.5nm,0.5s,mb3.6,baz=150,slow=6.5,SNR=14	63.61	324	P	P	11 22 19.3	-0.8
MNTX	Cornudas Mount comp=N,2.0nm,1.1s,mb3.9	66.37	324	*e*P	P	11 22 36.9	-0.9
QSPA	South Pole Qui comp=N,2.0nm,0.7s,mb4.1	66.61	180	*e*P	P	11 22 40.2	+1.5
DBIC	Dimbokro comp=N,3.3nm,0.5s,mb4.4	67.26	71	*e*P	P	11 22 43.0	-0.8
DBIC	Dimbokro comp=N,4.6nm,0.6s,mb4.5,baz=204,slow=5.6,SNR=6.1	67.26	71	P	P	11 22 41.5	-2.4
ANMO	Albuquerque comp=N,1.9nm,0.7s,mb3.9,baz=145,slow=9.7,SNR=5.4	69.46	326	P	P	11 22 56.6	-0.4
SDCO	Great Sand Dun comp=N,4.8nm,1.3s,mb4.1	71.17	328	*e*P	P	11 23 08.4	+1.0
SMCO	Snowmass comp=N,2.9nm,1.0s,mb4.0	73.01	328	*e*P	P	11 23 19.8	+1.5
SUR	Sutherland	75.63	119	P	P	11 23 33.9	+0.2
SUR	Sutherland comp=N,9.6nm,1.0s,mb4.4,baz=254,slow=5.7,SNR=2.7	75.63	119	P	P	11 23 33.9	+0.2
TORD	Torodi Ar. Bea comp=N,5.3nm,0.5s,mb4.5,baz=256,slow=6.0,SNR=66	76.02	69	P	P	11 23 35.1	-1.0
TSUM	Tsumeb comp=N,3.0nm,0.7s,mb4.0,baz=228,slow=11,SNR=7.3	77.34	106	P	P	11 23 42.7	-0.8
REDW	Red Top Meadow comp=N,2.0nm,0.7s,mb3.9	78.10	329	*e*P	P	11 23 47.8	+0.8
LOHW	Long Hollow comp=N,1.7nm,0.6s,mb3.9	78.17	329	*e*P	P	11 23 48.1	+0.6
NVAR	Mina Array Bea comp=N,0.2nm,0.4s,mb3.1,baz=141,slow=4.6,SNR=4.3	78.50	321	P	P	11 23 49.5	+0.1
HLID	Hailey comp=N,4.0nm,1.0s,mb4.0	79.99	327	*e*P	P	11 23 58.5	+1.2
BOSA	Boshof	80.53	117	P	P	11 24 00.2	-0.5
BOSA	Boshof comp=N,2.9nm,0.6s,mb4.1,baz=234,slow=8.1,SNR=6.8	80.53	117	P	P	11 24 00.2	-0.5
TAM	Tamanrasset comp=N,4.7nm,1.0s,mb4.2	83.82	62	*e*P	P	11 24 17.4	-0.4
ASAR	Alice Springs comp=N,0.1nm,0.3s,baz=116,slow=2.2,SNR=3.1	129.00	204	PKP	PKPdf	11 30 54.2	-1.1
ZALV	Zalesovo Beam	142.84	28	PKP	PKPdf	11 31 16.9	-2.9
ZALV	Zalesovo Beam comp=N,0.8nm,0.4s,baz=316,slow=2.0,SNR=4.0	142.84	28	PKP	PKPdf	11 31 17.0	-2.9
MK31	Makanchi Array	145.94	39	*e*PKPdf	PKPdf	11 31 24.7	-0.8
MK31				*e*PKPbc	PKPbc	11 31 26.9	+0.4
MKAR	Makanchi Array comp=N,2.6nm,0.7s,baz=305,slow=3.4,SNR=29	145.94	39	PKPbc	PKPbc	11 31 26.2	-0.3
CMAR	Chiang Mai Arr comp=N,1.5nm,0.6s,baz=244,slow=5.6,SNR=6.5	165.50	108	PKPab	PKPab	11 32 50.1	-1.2

*NEIC **08** 11:19:21.3, 16.71N×99.77W, h8km, MD3.6(MEX), After MEX.*

MEX 08 11:19:21.3±0.8, 16.72N×99.75W, h8km±4km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACX	Acapulco	0.18	325	*i*P	Pg	11 19 25.2	+0.1
ACX				*i*S	Sg	11 19 29.0	+1.3
ACX	Acapulco	0.18	325	*i*P	Pg	11 19 25.2	+0.1
ACX				*i*S	Sg	11 19 29.0	+1.3
CAIG	El Cayaco	0.59	304	*i*P	Pg	11 19 32.0	-0.8
CAIG				*i*S	Sg	11 19 40.7	+0.1
CAIG	El Cayaco	0.59	304	*i*P	Pg	11 19 32.0	-0.8
CAIG				*i*S	Sg	11 19 40.7	+0.1
MEIG	Mezcala	1.21	6	*i*P	Pb	11 19 40.2	-4.3

PNIG				*e*S	Sn	11 20 05.8	-4.7
PNIG	**Pinotepa**	**1.59**	**101**	*i* P	Pn	11 19 46.5	-3.3
PNIG				*e*S	Sn	11 20 05.8	-4.7
ZIIG	**Zihuatanejo**	**1.86**	**299**	*i* P	Pn	11 19 49.5	-4.1
ZIIG				*e*S	Sn	11 20 11.7	-5.6
ZIIG	**Zihuatanejo**	**1.86**	**299**	*i* P	Pn	11 19 49.5	-4.1
ZIIG				*e*S	Sn	11 20 11.7	-5.6
UTMO	**Huajuapan**	**2.16**	**59**	*i* P	Pn	11 19 55.6	-2.1
UTMO				*i* S	Sn	11 20 21.5	-3.2

NNC ***08*** *11:58:28.5±6.9, 53°.11N×81°.75E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=74.6km s-min=48.1km az=170.0*

IDC 08 11:58:14.8±1.5, 53°.76N×81°.51E, h0km, mb1 2.7/2, mb1mx2.7/26, mbtmp2.7/2, ML2.9/2, 1C, Error ellipse: s-maj=20.6km s-min=12.1km az=174.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**1.97**	**83**	Pg	Pn	11 58 50.4	+1.0
	1.5nm,0.3s,baz=268,slow=15,SNR=30						
ZALV				Lg		11 59 17.8	
	2.5nm,0.3s,baz=273,slow=24,SNR=19						
KURK	**Kurchatov**	**3.53**	**211**	⇑Pn	Pg	11 59 18.6	-3.8
	1.1nm,0.5s						
KURK				Lg		12 00 07.3	
	3.2nm,0.8s						
KURBB	**Kurchatov Arra**	**3.63**	**211**	Pn	Pg	11 59 21.2	-3.2
	0.4nm,0.6s,baz=28,slow=18						
KURBB				Lg		12 00 07.3	
	0.8nm,0.7s						
BVAR	**Borovoye Array**	**6.69**	**268**	Pn	Pn	11 59 53.5	-0.7
	0.4nm,0.3s,baz=79,slow=15,SNR=6.3						
MK31	**Makanchi Array**	**6.99**	**176**	Pn	Pn	12 00 05.0	+6.7
	0.3nm,0.5s,baz=0.0,slow=0.1,SNR=3.5						
MK31				Lg		12 01 48.7	
	0.8nm,0.7s,baz=355,slow=28,SNR=3.5						
MKAR	**Makanchi Array**	**6.99**	**176**	Pn	Pn	11 59 58.8	+0.5
	0.1nm,0.3s,baz=7.8,slow=12,SNR=3.7						
MKAR				Lg		12 01 56.3	
	0.1nm,0.3s,baz=19,slow=30,SNR=4.4						

CSEM ***08*** *11:59:13.1, 35°.91N×29°.90E, h15km, MD3.6, After ISK*

ISK 08 11:59:13.1, 35°.91N×29°.90E, h15km, MD3.6, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELL	**Elmali**	**0.84**	**0**	*e*PG	Pg	11 59 29.6	+0.2
ELL				*e*SG	Sg	11 59 42.0	+1.6
ELL	**Elmali**	**0.84**	**0**	*e*Pg	Pg	11 59 29.6	+0.2
ELL				*e*Sg	Sg	11 59 42.0	+1.5
ANTB	**Antalya**	**1.16**	**31**	*e*PN	Pn	11 59 35.8	+0.9
ANTB				*e*SN	Sn	11 59 51.5	+1.1
ANTB	**Antalya**	**1.16**	**31**	*e*Pn	Pn	11 59 35.8	+1.0
ANTB				*e*Sn	Sn	11 59 51.5	+1.1
GLHS	**Glhisar (BURDU**	**1.29**	**346**	*e*PN	Pn	11 59 37.1	+0.5
GLHS	**Glhisar (BURDU**	**1.29**	**346**	*e*Pn	Pn	11 59 37.1	+0.6
BCK	**Bucak**	**1.65**	**19**	*e*PN	Pn	11 59 42.5	+1.1
BCK	**Bucak**	**1.65**	**19**	*e*Pn	Pn	11 59 42.6	+1.1
YER	**Yerkesik**	**1.79**	**314**	*e*PN	Pn	11 59 43.5	+0.1
YER	**Yerkesik**	**1.79**	**314**	*e*Pn	Pn	11 59 43.5	+0.1
DENT	**Denizli**	**1.97**	**340**	*e*PN	Pn	11 59 46.9	+0.9
DENT	**Denizli**	**1.97**	**340**	*e*Pn	Pn	11 59 46.9	+1.0
DAT	**Datca**	**2.05**	**294**	*e*PN	Pn	11 59 48.0	+1.0
DAT	**Datca**	**2.05**	**294**	*e*Pn	Pn	11 59 48.0	+1.0
MLSB	**Milas**	**2.20**	**310**	*e*PN	Pn	11 59 50.1	+1.0
MLSB	**Milas**	**2.20**	**310**	*e*Pn	Pn	11 59 50.1	+1.0
HDMB	**Hadim**	**2.34**	**62**	*e*PN	Pn	11 59 52.0	+1.1
HDMB	**Hadim**	**2.34**	**62**	*e*Pn	Pn	11 59 52.0	+1.1
KULA	**Kula-Manisa**	**2.79**	**340**	*e*PN	Pn	11 59 58.6	+1.5
KULA	**Kula-Manisa**	**2.79**	**340**	*e*Pn	Pn	11 59 58.6	+1.5
KONT	**Konya--Tatoy**	**2.83**	**43**	*e*PN	Pn	11 59 59.1	+1.3
KONT	**Konya--Tatoy**	**2.83**	**43**	*e*Pn	Pn	11 59 59.1	+1.3
LADK	**Ladik-KONYA**	**3.02**	**40**	*e*PN	Pn	12 00 01.9	+1.6
LADK	**Ladik-KONYA**	**3.02**	**40**	*e*Pn	Pn	12 00 01.9	+1.5
KIZT	**Kizilcal**	**3.36**	**27**	*e*PN	Pn	12 00 06.8	+1.8
KIZT	**Kizilcal**	**3.36**	**27**	*e*Pn	Pn	12 00 06.8	+1.8

NIED ***08*** *12:00:00, 28°.90N×139°.60E, h460km, Mw4.2 Best double couple: M0 2.58000×10^15 NP1:φs 224.00000°, δ81.00000°, λ-99.00000°. NP2:φs 90.00000°, δ13.00000°, λ-44.00000°.*

MOS ***08*** *12:00:10.8±1.0, 28°.85N×139°.24E, h460km, mb4.0/14, Error ellipse: s-maj=21.1km s-min=8.0km az=112.5*

BJI ***08*** *12:00:11.4, 28°.74N×139°.30E, h473km, mB4.4/5, mb4.6/16*

JMA ***08*** *12:00:11.5±0.2, 28°.93N×139°.63E, h476km±3km, M4.1*

IDC ***08*** *12:00:11.6±0.6, 28°.92N×139°.33E, h450km±7km, mb3.4/11, mb1 3.4/16, mb1mx3.3/27, mbtmp3.4/16, Error ellipse: s-maj=18.0km s-min=8.9km az=67.0*

ISCJB ***08*** *12:00:11.4±0.4, 28°.91N±0°.04×139°.54E±0°.07, h473km±4km, mb3.9/25, Error ellipse: s-maj=9.9km s-min=5.6km az=164.1*

NEIC ***08*** *12:00:12.1±0.9, 28°.89N×139°.33E, h458km±9km, mb4.1/6, Error ellipse: s-maj=12.8km s-min=8.3km az=66.0*

ISC 08 12:00:12.5±0.4, 28°.95N±0°.04×139°.57E±0°.07, h466km±4km, n77, σ1§06/91, mb3.9/25, 3C-1D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.96**	**128**	P	**P**	**12 01 20.6**	**0.0**
	71nm,0.3s,baz=336,slow=2.8,SNR=194						
CBIJ				S	**S**	**12 02 14.7**	**-1.1**
	701nm,0.3s,baz=139,slow=22,SNR=76						
CBIJ	**Chichi jima**	**2.96**	**128**	P	**P**	**12 01 20.3**	**-0.3**
CBIJ				*e*S	**S**	**12 02 14.7**	**-1.1**
JHHJ	**Haha-jima-NKT**	**3.27**	**134**	P	**P**	**12 01 22.8**	**0.0**
JHHJ				S	**S**	**12 02 19.2**	**-0.7**
JHJ2	**Mitsune**	**4.15**	**3**	P	**P**	**12 01 30.6**	**+0.8**
JHJ2				*e*S	**S**	**12 02 32.7**	**-0.3**
JHJ	**Hachijo jima 2**	**4.16**	**3**	P	**P**	**12 01 30.2**	**+0.3**
	29nm,0.3s,baz=202,slow=6.4,SNR=60						
JHJ				S	**S**	**12 02 29.0**	**-4.1**
	32nm,0.3s,baz=67,slow=17,SNR=4.9						
TK01	**Tokai 1**	**5.09**	**341**	*e*S	**S**	**12 02 48.8**	**+0.3**
JWZ	**Kozaga**	**5.63**	**325**	P	**P**	**12 01 45.0**	**+1.4**
BSO1	**Boso 1**	**5.81**	**12**	P	**P**	**12 01 45.9**	**+0.5**
BSO1				*e*S	**S**	**12 03 00.2**	**-1.2**
JIE	**Ise**	**5.95**	**337**	P	**P**	**12 01 48.6**	**+1.9**
JIE				S	**S**	**12 03 04.5**	**+0.6**
JOD2	**Odawara 2**	**6.31**	**356**	P	**P**	**12 01 50.4**	**+0.1**
JOD2				S	**S**	**12 03 08.6**	**-1.9**
JTO	**Tosashimizu**	**7.00**	**306**	P	**P**	**12 01 58.6**	**+1.1**
JRY	**Ryogami san**	**7.07**	**356**	P	**P**	**12 01 58.5**	**+0.3**
JRY				*e*S	**S**	**12 03 22.4**	**-2.4**
MJAR	**Matsushiro Arr**	**7.66**	**352**	P	**P**	**12 02 04.0**	**-0.3**
	2.6nm,0.3s,baz=172,slow=9.3,SNR=30						
MJAR				S	**S**	**12 03 31.4**	**-4.7**
	1.1nm,0.3s,baz=106,slow=4.0,SNR=4.3						
MJAR	**Matsushiro Arr**	**7.66**	**352**	P	**P**	**12 02 04.0**	**-0.3**
MJAR				S	**S**	**12 03 31.4**	**-4.8**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MJAR				smax			
	comp=N,1.0nm,0.3s						
MAJO	**Matsushiro**	**7.66**	**352**	*e*P	**P**	**12 02 04.4**	**0.0**
	comp=N,21nm,0.6s						
MAJO				*e*S	**S**	**12 03 36.4**	**+0.2**
MAJO	**Matsushiro**	**7.66**	**352**	*e*P	**P**	**12 02 04.4**	**0.0**
MAJO				*e*S	**S**	**12 03 36.4**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,21nm,0.6s						
MAT	**Matsushiro**	**7.66**	**352**	P	**P**	**12 02 03.9**	**-0.5**
MAT				S	**S**	**12 03 33.9**	**-2.3**
MAT	**Matsushiro**	**7.66**	**352**	P	**P**	**12 02 04.1**	**-0.3**
MAT				*e*S	**S**	**12 03 33.9**	**-2.3**
JHS	**Saijyo**	**8.15**	**319**	P	**P**	**12 02 10.5**	**+0.9**
JHS				S	**S**	**12 03 46.5**	**+0.8**
JSJ	**Shimokoshiki**	**8.94**	**290**	P	**P**	**12 02 18.7**	**+0.6**
JMK	**Ichinoseki**	**10.07**	**7**	P	**P**	**12 02 31.8**	**+1.6**
JMK				*e*S	**S**	**12 04 22.5**	**-1.1**
JOW	**Kunigami**	**10.21**	**261**	P	**P**	**12 02 32.5**	**+0.6**
JTU	**Tsushima**	**10.28**	**305**	P	**P**	**12 02 34.3**	**+1.7**
JOT	**Ohata**	**12.46**	**5**	P	**P**	**12 02 57.8**	**+1.9**
KSRS	**Korea Array**	**12.91**	**314**	P	**P**	**12 03 00.1**	**-0.8**
	comp=Z,2.0nm,0.3s,baz=126,slow=10,SNR=79						
KSRS	**Korea Array**	**12.91**	**314**	P	**P**	**12 03 00.1**	**-0.8**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JKB	**Kayabe**	**12.96**	**5**	P	**P**	**12 03 03.2**	**+1.9**
ASAJ	**Asahikawa**	**15.33**	**8**	P	**P**	**12 03 28.6**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=260,slow=6.4,SNR=7.3						
ASAJ	**Asahikawa**	**15.33**	**8**	P	**P**	**12 03 28.7**	**+2.2**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HABR	**Khabarovsk**	**19.80**	**351**	*e*P	**P**	**12 04 12.0**	**+1.2**
HABR				pmax	pmax		
	comp=N,62nm,2.5s						
HABR				pmax	pmax		
	comp=Z,39nm,1.0s						
HABR				pmax	pmax		
	comp=E,46nm,2.5s						
KLR	**Kul'dur**	**21.12**	**346**	*e*P	**P**	**12 04 19.8**	**-3.0**
BJT	**Baijiatuan**	**22.16**	**306**	*e*P	**P**	**12 04 31.0**	**-1.4**
	comp=E,12nm,0.6s,mb4.6						
BJT	**Baijiatuan**	**22.16**	**306**	*e*P	**P**	**12 04 31.0**	**-1.4**
BJT				pmax	pmax		
	comp=Z,12nm,0.6s						
BJI	**Beijing**	**22.16**	**306**	P	**P**	**12 04 30.5**	**-1.9**
BJI				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.7						
XAN	**Xi'an**	**26.56**	**289**	P	**P**	**12 05 10.5**	**-1.2**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
ULN	**Ulaanbaatar**	**31.39**	**316**	*e*P	**P**	**12 05 53.9**	**+0.3**
	comp=Z,14nm,1.1s,mb4.3						
ULN	**Ulaanbaatar**	**31.39**	**316**	*e*P	**P**	**12 05 53.9**	**+0.3**
ULN				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.3						
SONM	**Songino Array**	**31.78**	**316**	P	**P**	**12 05 56.9**	**-0.1**
	comp=Z,4.7nm,0.6s,mb4.1,baz=125,slow=8.1,SNR=38						
SONM	**Songino Array**	**31.78**	**316**	P	**P**	**12 05 56.9**	**0.0**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YAK	**Yakutsk**	**33.72**	**352**	*e*P	**P**	**12 06 13.0**	**-0.3**
YAK				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.5						
GTA	**Gaotai**	**34.26**	**298**	*e*P	**P**	**12 06 17.5**	**-0.7**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.0						
ZAK	**Zakamensk**	**34.69**	**318**	*e*P	**P**	**12 06 18.3**	**-3.4**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
SEY	**Seymchan**	**35.00**	**10***c*	*i*P	**P**	**12 06 25.6**	**+1.6**
SEY				*i* *PP	pP	12 07 50.9	+3.6
TLY	**Talaya**	**35.04**	**320**	*e*P	**P**	**12 06 25.0**	**+0.4**
	comp=Z,3.2nm,0.6s,mb3.9						
TLY	**Talaya**	**35.04**	**320**	*e*P	**P**	**12 06 24.8**	**+0.2**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.1						
TIXI	**Tiksi**	**43.15**	**355**	*e*P	**P**	**12 07 29.6**	**-0.5**
	comp=Z,2.7nm,0.6s,mb3.9						
TIXI	**Tiksi**	**43.15**	**355**	*e*P	**P**	**12 07 28.6**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.0						
ZALV	**Zalesovo Beam**	**46.57**	**318**	P	**P**	**12 07 56.1**	**-0.7**
	comp=Z,1.3nm,0.5s,mb3.7,baz=101,slow=6.8,SNR=5.0						
ZALV	**Zalesovo Beam**	**46.57**	**318**	P	**P**	**12 07 56.2**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.5						
MK31	**Makanchi Array**	**47.51**	**308**	*e*P	**P**	**12 08 03.3**	**-0.7**
MKAR	**Makanchi Array**	**47.51**	**308**	P	**P**	**12 08 03.4**	**-0.7**
	comp=Z,2.7nm,0.6s,mb3.7,baz=92,slow=9.1,SNR=37						
MKAR				ScP	ScP	12 12 33.0	-1.4
	comp=Z,0.4nm,0.5s,baz=79,slow=4.8,SNR=8.4						
NVS	**Novosibirsk**	**47.63**	**319**	*e*P	**P**	**12 08 04.8**	**0.0**
WRAB	**Tennant Creek**	**48.86**	**187**	*e*P	**P**	**12 08 14.0**	**-0.4**
	comp=Z,4.0nm,0.4s,mb4.1						
WRAB	**Tennant Creek**	**48.86**	**187**	*e*P	**P**	**12 08 14.0**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.1						
KURK	**Kurchatov**	**50.04**	**314**	*e*P	**P**	**12 08 22.2**	**-0.6**
	comp=Z,7.6nm,0.9s,mb4.0						
KURK	**Kurchatov**	**50.04**	**314***c*	*i*P	**P**	**12 08 21.6**	**-1.2**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.0						
ASAR	**Alice Springs**	**52.59**	**187**	P	**P**	**12 08 41.5**	**-0.2**
	comp=Z,1.1nm,0.6s,mb3.4,baz=17,slow=13,SNR=32						
BVAR	**Borovoye Array**	**55.11**	**317**	P	**P**	**12 08 58.9**	**-0.3**
	comp=Z,3.5nm,0.6s,mb3.9,baz=90,slow=8.9,SNR=18						
BVAR	**Borovoye Array**	**55.11**	**317**	P	**P**	**12 08 58.9**	**-0.4**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	**Borovoye**	**55.18**	**317***c*	*i*P	**P**	**12 08 59.2**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb3.9						
STKA	**Stephens Creek**	**60.52**	**178**	P	**P**	**12 09 36.5**	**+0.1**
STKA	**Stephens Creek**	**60.52**	**178**	P	**P**	**12 09 36.5**	**+0.1**
	comp=Z,1.6nm,0.6s,mb3.7,baz=347,slow=6.5,SNR=8.0						
ARU	**Arti**	**61.54**	**321***d*	*i*P	**P**	**12 09 42.6**	**-0.3**
ARU						12 12 04.0	
ARU				S	**S**	**12 17 28.2**	**+0.8**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
AKTK	**Aktyubinsk**	**63.09**	**315**	P	**P**	**12 09 52.8**	**-0.3**
AKTO	**Aktyubinsk**	**63.09**	**315**	P	**P**	**12 09 52.8**	**-0.3**
	comp=Z,3.2nm,0.7s,mb4.0,baz=82,slow=14,SNR=9.3						
AKTO	**Aktyubinsk**	**63.09**	**315**	P	**P**	**12 09 52.8**	**-0.3**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
ARCES	**ARCESS Array B**	**71.03**	**340**	P	**P**	**12 10 42.5**	**+0.7**
	comp=Z,1.7nm,0.6s,mb3.8,baz=82,slow=8.7,SNR=11						
ARCES	**ARCESS Array B**	**71.03**	**340**	P	**P**	**12 10 42.5**	**+0.7**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA	**Yellowknife Ar**	**71.61**	**28**	P	**P**	**12 10 46.6**	**+1.3**
	comp=Z,0.1nm,0.3s,mb2.8,baz=298,slow=6.0,SNR=3.2						
KIV	**Kislovodsk**	**75.09**	**312**	*e*P	**P**	**12 11 05.6**	**-0.1**
KIV				*e*		12 11 15.1	
KIV				*e*SS	SS	12 25 02.4	-3.6
KIV				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
FINES	**FINESS Array B**	**75.26**	**333**	P	**P**	**12 11 06.1**	**-0.2**
	comp=Z,0.7nm,0.4s,mb3.5,baz=93,slow=6.5,SNR=8.6						
FINES	**FINESS Array B**	**75.26**	**333**	P	**P**	**12 11 06.1**	**-0.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NVAR	**Mina Array Bea**	**81.17**	**51**	P	**P**	**12 11 41.4**	**+2.8**
	comp=Z,1.4nm,0.6s,mb3.7,baz=294,slow=5.5,SNR=17						
LPAZ	**La Paz**	**151.58**	**70**	PKPbc	PKPbc	12 19 15.1	+1.4
	comp=Z,1.1nm,0.5s,baz=295,slow=1.7,SNR=6.3						
LPAZ	**La Paz**	**151.58**	**70**	PKIKP	PKPbc	12 19 15.1	+1.3
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PLCA	**Paso Flores**	**152.76**	**124**	PKPbc	PKPbc	12 19 17.1	+1.4
	comp=Z,2.3nm,0.9s,baz=209,slow=19,SNR=3.1						
PLCA	**Paso Flores**	**152.76**	**124**	PKIKP	PKPbc	12 19 17.1	+1.4
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.9s						

IDC 08 12:02:16.2±1.1, 16°.08N×46°.57W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/23, mbtmp3.9/4, MS3.3/6, Ms1 3.3/6, ms1mx3.0/25, Error ellipse: s-maj=38.3km s-min=26.0km az=125.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**38.56**	**214**	P	P	12 09 40.9	0.0
	0.7nm,0.7s,baz=16,slow=5.2,SNR=3.9						
MDT	**Midelt**	**41.37**	**58**	LR	LR	12 24 48.5	
	comp=Z,46nm,18.4s,baz=208,slow=33						
DBIC	**Dimbokro**	**41.87**	**98**	LR	LR	12 24 15.6	
	comp=Z,41nm,19.0s,baz=254,slow=32						
CPUP	**Villa Florida**	**43.44**	**194**	P	P	12 10 21.4	+0.5
	1.8nm,0.7s,baz=15,slow=12,SNR=5.3						
ESDC	**Sonseca Array**	**43.85**	**49**	LR	LR	12 26 18.3	
	comp=Z,30nm,19.3s,baz=195,slow=33						
TORD	**Torodi Ar. Bea**	**46.71**	**87**	P	P	12 10 47.5	+0.1
	1.8nm,0.9s,baz=295,slow=7.2,SNR=6.5						
TORD				LR	LR	12 26 53.7	
	comp=Z,72nm,21.6s,baz=130,slow=32						
TXAR	**Lajitas Array**	**53.83**	**295**	LR	LR	12 34 35.5	
	comp=Z,19nm,21.2s,baz=0.0,slow=36						
NOA	**NORSAR Array B**	**60.66**	**28**	LR	LR	12 33 13.3	
	comp=Z,14nm,21.9s,baz=180,slow=31						
BRTR	**Keskin Array B**	**72.46**	**53**	P	P	12 13 44.6	-0.2
	0.8nm,0.7s,baz=285,slow=2.4,SNR=4.0						
ILAR	**Eielson Array**	**79.93**	**335**	P	P	12 14 27.1	+0.3
	0.8nm,0.7s,baz=75,slow=4.7,SNR=13						

IDC ***08*** *12:14:32.4±0.9, 31°.12N×142°.54E, h0km, mb3.7/8, mb1 3.7/12, mb1mx3.7/25, mbtmp3.6/12, ML3.4/4, MS3.0/1, Ms1 3.0/1, ms1mx2.2/28, Error ellipse: s-maj=25.5km s-min=19.1km az=58.0*

ISCJB ***08*** *12:14:34.6±1.8, 31°.32N±0°.06×142°.5E±0°.1, h23km±14km, mb3.7/8, Error ellipse: s-maj=15.9km s-min=7.2km az=151.9*

JMA ***08*** *12:14:34.3±0.2, 31°.27N×142°.61E, h57km, MS3.7*

NEIC ***08*** *12:14:37.7±0.7, 31°.14N×142°.50E, h35km, MG3.7(JMA), Error ellipse: s-maj=19.7km s-min=12.3km az=49.0*

ISC 08 12:14:36.6±1.9, 31°.31N±0°.06×142°.5E±0°.1, h24km±15km, n25, σ1§07/35, mb3.7/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.89**	**309**	P	**Pn**	**12 15 20.2**	**-0.9**
JHJ	**Hachijo jima 2**	**2.91**	**309**	Pn	**Pn**	**12 15 20.3**	**-1.1**
	7.5nm,0.3s,baz=302,slow=20,SNR=14						
JHJ				Sn	**Sn**	**12 15 55.9**	**+0.2**
	15nm,0.3s,baz=243,slow=22,SNR=7.0						
BSO1	**Boso 1**	**3.57**	**340**	P	**Pn**	**12 15 29.8**	**-0.6**
BSO1				*e*S	**Sn**	**12 16 11.2**	**-0.6**
BSO3	**Boso 3**	**3.86**	**335**	P	**Pn**	**12 15 34.2**	**-0.2**
BSO3				*e*S	**Sn**	**12 16 19.4**	**+0.5**
CBIJ	**Chichi jima**	**4.21**	**184**	Pn	**Pn**	**12 15 36.1**	**-3.1**
	3.2nm,0.3s,baz=266,slow=20,SNR=5.0						
CBIJ				Sn	**Sn**	**12 16 21.1**	**-6.5**
	7.3nm,0.3s,baz=86,slow=23,SNR=3.3						
CBIJ	**Chichi jima**	**4.21**	**184**	P	**Pn**	**12 15 36.6**	**-2.6**
CHOJ	**Chosi**	**4.59**	**343**	P	**Pn**	**12 15 44.2**	**-0.2**
JOD2	**Odawara 2**	**4.86**	**325**	P	**Pn**	**12 15 48.3**	**+0.1**
JOD2				*e*S	**Sn**	**12 16 42.1**	**-1.6**
JHU	**Hanno**	**5.26**	**330**	P	**Pn**	**12 15 53.6**	**0.0**
JHO	**Hitachi**	**5.52**	**344**	P	**Pn**	**12 15 56.8**	**-0.4**
JHO				*e*S	**Sn**	**12 16 57.4**	**-2.5**
JAG	**Ashikaga**	**5.69**	**335**	P	**Pn**	**12 15 59.5**	**-0.1**
JAG				*e*S	**Sn**	**12 17 03.0**	**-1.1**
ONAJ	**Iwakimizuishiy**	**5.94**	**347**	P	**Pn**	**12 16 02.7**	**-0.3**
ONAJ				*e*S	**Sn**	**12 17 06.1**	**-4.2**
MJAR	**Matsushiro Arr**	**6.31**	**327**	Pn	**Pn**	**12 16 09.5**	**+1.4**
	1.7nm,0.3s,baz=80,slow=15,SNR=12						
MJAR				Sn	**Sn**	**12 17 19.0**	**-0.4**
	0.6nm,0.3s,baz=177,slow=5.7,SNR=4.1						
MAJO	**Matsushiro**	**6.31**	**327**	*e*Pn	**Pn**	**12 16 10.1**	**+2.0**
	7.9nm,0.7s						
MAT	**Matsushiro**	**6.31**	**327**	P	**Pn**	**12 16 09.7**	**+1.6**
MAT				S	**Sn**	**12 17 20.3**	**+0.8**
JFY	**Yanaizu**	**6.50**	**340**	P	**Pn**	**12 16 10.7**	**0.0**
KSRS	**Korea Array**	**13.49**	**301**	Pn	**Pn**	**12 17 47.7**	**+1.3**
	0.2nm,0.3s,baz=7.4,slow=17,SNR=4.1						
SONM	**Songino Array**	**31.99**	**311**	P	**P**	**12 21 02.6**	**+1.9**
	1.2nm,0.7s,mb3.8,baz=119,slow=8.4,SNR=6.5						
ZALV	**Zalesovo Beam**	**46.55**	**317**	P	**P**	**12 23 02.7**	**+0.6**
	0.6nm,0.6s,mb3.7,baz=46,slow=7.0,SNR=2.9						
ZALV				LR	LR	12 44 26.8	
	comp=Z,18nm,21.1s,baz=65,slow=38						
MKAR	**Makanchi Array**	**48.08**	**307**	P	**P**	**12 23 14.8**	**+0.6**
	0.6nm,0.7s,mb3.7,baz=93,slow=9.1,SNR=7.6						
ILAR	**Eielson Array**	**53.92**	**30**	P	**P**	**12 23 57.8**	**0.0**
	0.3nm,0.6s,mb3.4,baz=262,slow=6.1,SNR=6.6						
BVAR	**Borovoye Array**	**55.18**	**316**	P	**P**	**12 24 08.1**	**+1.0**
	0.7nm,0.6s,mb3.9,baz=108,slow=9.5,SNR=4.1						
ASAR	**Alice Springs**	**55.28**	**190**	P	**P**	**12 24 05.8**	**-2.2**
	0.4nm,0.6s,mb3.6,baz=5.9,slow=7.3,SNR=12						
NVAR	**Mina Array Bea**	**77.73**	**53**	P	**P**	**12 26 32.5**	**+0.9**
	0.3nm,0.6s,mb3.4,baz=311,slow=6.9,SNR=3.5						
TXAR	**Lajitas Array**	**92.87**	**53**	P	**P**	**12 27 48.1**	**+0.4**
	0.3nm,0.8s,mb3.8,baz=343,slow=3.9,SNR=3.9						

NIED ***08*** *12:18:00, 29°.70N×130°.60E, h35km, Mw4.0 Best double couple: M0 1.18000×10^15 NP1:φs 66.00000°, δ77.00000°, λ83.00000°. NP2:φs 276.00000°, δ15.00000°, λ119.00000°.*

IDC ***08*** *12:18:28.4±4.0, 29°.28N×130°.38E, h0km, mb3.9/5, mb1 3.8/7, mb1mx3.6/26, mbtmp3.7/7, ML3.0/2, MS3.2/2, Ms1 3.2/2, ms1mx2.3/29, Error ellipse: s-maj=82.3km s-min=32.5km az=170.0*

NEIC ***08*** *12:18:34.9, 29°.67N×130°.60E, h41km, MG3.5(JMA), After JMA.*

JMA ***08*** *12:18:34.8±0.1, 29°.67N×130°.60E, h41km±3km, M3.

KDAK	**Kodiak Island**	**14.28**	**58**	Pn		**Pn**	**12 31 53.1**	**+7.0**
KDAK	**Kodiak Island**	**14.28**	**58**	Pn		**Pn**	**12 31 53.1**	**+7.0**
	0.5nm,0.3s,baz=262,slow=9.3,SNR=5.6							
PPLA	**Purkeypile**	**16.41**	**40**	*e*Pn		**Pn**	**12 32 13.9**	**-0.3**
	36nm,1.2s							
ILAR	**Eielson Array**	**19.37**	**38**	P		**Pn**	**12 32 48.4**	**-2.4**
ILAR	**Eielson Array**	**19.37**	**38**	P		**Pn**	**12 32 48.4**	**-2.4**
	0.5nm,0.6s,baz=232,slow=8.2,SNR=12							
EGAK	**Eagle**	**21.63**	**41**	*e*P		**P**	**12 33 14.9**	**+0.8**
	6.4nm,0.8s,mb4.1							
DAWY	**Dawson**	**22.14**	**43**	*e*P		**P**	**12 33 21.5**	**+1.9**
NVAR	**Mina Array Bea**	**41.41**	**86**	P		**P**	**12 36 15.6**	**+5.1**
NVAR	**Mina Array Bea**	**41.41**	**86**	P		**P**	**12 36 15.6**	**+5.1**
	0.6nm,0.7s,mb3.3,baz=286,slow=7.3,SNR=5.7							
TXAR	**Lajitas Array**	**56.50**	**84**	P		**P**	**12 38 06.8**	**+0.4**
TXAR	**Lajitas Array**	**56.50**	**84**	P		**P**	**12 38 06.8**	**+0.4**
	0.4nm,0.7s,mb3.6,baz=301,slow=5.6,SNR=5.1							

IDC 08 12:32:25.1±1.9,**16˚96S**×**178˚83W**,**h513**km±34km,
mb3.4/3,**mb1 3.6**/4,**mb1mx3.2**/16,**mbtmp3.5**/4,**Error ellipse: s-maj=156.8km s-min=20.8km az=154.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.45**	**67**	P	P	12 34 17.7	+1.5
	4.0nm,0.3s,baz=26,slow=22,SNR=6.4						
AFI				S	S	12 35 46.0	-1.3
	0.9nm,0.3s,baz=60,slow=16,SNR=5.5						
STKA	**Stephens Creek**	**38.74**	**240**	P	P	12 39 05.0	-0.1
	2.2nm,0.4s,baz=90,slow=9.4,SNR=14						
ASAR	**Alice Springs**	**44.67**	**253**	P	P	12 39 52.0	-0.2
	15nm,0.5s,baz=87,slow=8.0,SNR=225						
TXAR	**Lajitas Array**	**85.83**	**58**	P	P	12 44 10.7	+0.2
	0.3nm,0.7s,baz=201,slow=6.7,SNR=4.5						

NEIC ***08*** *12:50:46.2*±*0.6,5˚26N*×*94˚10E,h35km,mb4.2/3,Error ellipse: s-maj=16.4km s-min=8.9km az=60.0*
ISCJB ***08*** *12:50:48.7*±*3.1,5˚4N*±*0˚.1*×*94˚4E*±*0˚.2,h74km*±*26km, mb4.1/12,Error ellipse: s-maj=35.9km s-min=11.6km az=150.9*
IDC ***08*** *12:50:49.4*±*4.5,5˚39N*×*94˚39E,h60km*±*40km,mb3.8/7, mb1 3.9/9,mb1mx3.6/25,mbtmp3.8/9,ML4.2/2,Error ellipse: s-maj=48.1km s-min=17.2km az=59.0*
ISC 08 12:50:50.7±2.8,**5˚4N**±0˚.1×**94˚4E**±0˚.2,**h74km**±23km,**n19,** σ0**962/18,mb4.1**/12,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**5.21**	**120**	P	**Pn**	**12 52 06.3**	**+0.2**
	2.6nm,0.3s,baz=318,slow=16,SNR=8.7						
PSI				S	**Sn**	**12 53 04.5**	**-0.3**
	1.3nm,0.3s,baz=206,slow=17,SNR=1.8						
CMAR	**Chiang Mai Arr**	**13.71**	**19**	P	**Pn**	**12 54 01.6**	**-0.2**
	0.8nm,0.3s,baz=208,slow=14,SNR=18						
CHTO	**Chiang Mai**	**14.04**	**18**	*e*Pn	**Pn**	**12 54 06.4**	**+0.1**
	9.6nm,0.9s						
XAN	**Xi'an**	**31.52**	**23**	P	**P**	**12 57 05.1**	**-0.7**
XAN				pP	pP	12 57 12.8	-10
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
MK31	**Makanchi Array**	**42.53**	**348**	*e*P	**P**	**12 58 39.2**	**+0.3**
MKAR	**Makanchi Array**	**42.53**	**348**	P	**P**	**12 58 39.2**	**+0.3**
MKAR	**Makanchi Array**	**42.53**	**348**	P	**P**	**12 58 39.2**	**+0.3**
	comp=Z,3.6nm,0.5s,mb4.4,baz=167,slow=8.0,SNR=51						
SONM	**Songino Array**	**43.51**	**12**	P	**P**	**12 58 46.9**	**+0.2**
	comp=Z,1.5nm,0.7s,mb3.9,baz=193,slow=8.0,SNR=12						
WRAB	**Tennant Creek**	**46.66**	**124**	*e*P	**P**	**12 59 12.7**	**+0.4**
	comp=Z,1.0nm,0.4s,mb3.9						
KURK	**Kurchatov**	**47.05**	**346**	*e*P	**P**	**12 59 15.4**	**+0.7**
	comp=Z,1.5nm,0.3s,mb4.2						
ASAR	**Alice Springs**	**48.17**	**128**	P	**P**	**12 59 24.4**	**+0.5**
	comp=Z,1.0nm,0.7s,mb3.8,baz=304,slow=8.1,SNR=11						
ZALV	**Zalesovo Beam**	**49.02**	**353**	P	**P**	**12 59 30.3**	**+0.4**
	comp=Z,3.3nm,0.3s,mb4.7,baz=178,slow=7.4,SNR=22						
BVAR	**Borovoye Array**	**51.39**	**342**	P	**P**	**12 59 48.4**	**+0.5**
	comp=Z,1.4nm,0.6s,mb4.2,baz=239,slow=40,SNR=6.5						
ABKAR	**Akbulak array**	**52.51**	**332**	*e*P	**P**	**12 59 56.2**	**0.0**
	comp=Z,0.9nm,0.4s,mb4.2						
BRTR	**Keskin Array B**	**64.23**	**312**	P	**P**	**13 01 18.0**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.6,baz=109,slow=7.6,SNR=3.6						
CLL	**Collm**	**80.42**	**321**	*e*P	**P**	**13 02 52.0**	**-2.3**
	comp=Z,5.0nm,0.6s,mb4.5						
CLL				*es*P	pP	13 03 08.0	-6.2
ILAR	**Eielson Array**	**96.92**	**22**	P	**P**	**13 04 13.2**	**-0.5**
	comp=Z,0.2nm,0.5s,mb3.8,baz=301,slow=4.1,SNR=4.9						
TXAR	**Lajitas Array**	**141.34**	**26**	PKP	PKPdf	13 10 13.6	-0.2
	comp=Z,0.2nm,0.5s,baz=15,slow=3.7,SNR=2.5						
LPAZ	**La Paz**	**159.74**	**236**	PKP	PKPdf	13 10 43.0	+0.9
	comp=Z,1.0nm,0.3s,baz=259,slow=4.2,SNR=8.2						

IDC 08 12:54:16.7±2.2,**57˚46S**×**24˚84W**,**h0**km,**mb4.7**/2,
mb1 4.8/2,**mb1mx4.1**/13,**mbtmp4.7**/2,**MS3.5**/3,**Ms1 3.4**/3,
ms1mx3.2/11,**Error ellipse: s-maj=93.0km s-min=29.1km az=179.0,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**15.01**	**158**	*e*P	Pn	12 57 59.9	+10
VNA3	**Neumayer Olymp**	**15.23**	**161**	*e*P	Pn	12 58 02.3	+10
PLCA	**Paso Flores**	**33.52**	**280**	LR	LR	13 12 57.8	
	comp=Z,76nm,20.5s,baz=283,slow=33						
MAW	**Mawson**	**38.24**	**142**	LR	LR	13 14 53.8	
	comp=Z,47nm,21.0s,baz=121,slow=32						
BOSA	**Boshof**	**45.12**	**72**	P	P	13 02 32.9	-1.6
	2.5nm,0.4s,baz=210,slow=22,SNR=9.4						
BOSA				LR	LR	13 17 17.1	
	comp=Z,84nm,20.4s,baz=46,slow=31						
LPAZ	**La Paz**	**52.24**	**304**	P	P	13 03 28.1	-1.3
	7.3nm,0.4s,baz=103,slow=5.0,SNR=45						
TORD	**Torodi Ar. Bea**	**73.69**	**27**	P	P	13 05 53.0	+1.0
	2.1nm,0.6s,baz=197,slow=6.2,SNR=10						
INK	**Inuvik**	**147.71**	**319**	PKPbc	PKPbc	13 14 01.9	+0.5
	1.7nm,0.5s,baz=91,slow=3.3,SNR=8.0						
ILAR	**Eielson Array**	**152.01**	**309**	PKPbc	PKPbc	13 14 12.6	+0.5
	2.2nm,1.0s,baz=144,slow=5.2,SNR=23						
ILAR				PKPab	PKPab	13 14 22.2	+0.6
	1.1nm,0.8s,baz=118,slow=2.5,SNR=6.9						

NEIC ***08*** *13:04:53.4*±*2.4,46˚71N*×*144˚28E,h321km*±*20km,mb3.4/2, Error ellipse: s-maj=112.0km s-min=14.3km az=122.0*
IDC ***08*** *13:04:55.9*±*1.1,46˚41N*×*145˚08E,h333km*±*13km,mb2.7/3, mb1 3.0/7,mb1mx2.7/26,mbtmp2.7/7,Error ellipse: s-maj=75.0km s-min=16.5km az=126.0*
JMA ***08*** *13:04:56.5*±*0.4,45˚87N*×*145˚28E,h348km,M3.4*
ISCJB ***08*** *13:04:57.1*±*0.7,45˚78N*±*0˚.09*×*145˚3E*±*0˚.2,h344km*±*7km, mb3.0/5,Error ellipse: s-maj=20.1km s-min=10.6km az=33.1*
ISC 08 13:04:56.6±0.6,**45˚70N**±0˚.09×**145˚5E**±0˚.2,**h348**km±8km,
n27,σ1**930/35,mb3.0**/5,**Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRA	**Rausu**	**1.79**	**190**	P	**Pn**	**13 05 47.8**	**+1.5**
JTKR	**Abashiri--Toko**	**2.08**	**215**	P	**Pn**	**13 05 49.2**	**+0.9**
JSE	**Soyaes**	**2.21**	**252**	P	**Pn**	**13 05 47.9**	**-1.3**
NEM2	**Nemuro 2**	**2.34**	**176**	P	**Pn**	**13 05 50.3**	**+0.1**
JWK2	**Keihoku**	**2.59**	**263**	P	**Pn**	**13 05 50.7**	**-1.5**
ASAJ	**Asahikawa**	**2.62**	**234**	P	**Pn**	**13 05 52.8**	**+0.2**
	4.7nm,0.3s,baz=345,slow=3.5,SNR=47						
ASAJ				S	**S**	**13 06 39.1**	**+1.7**
	baz=137,slow=34,SNR=2.0						
JKK2	**Kamakawa 2**	**2.70**	**228**	P	**Pn**	**13 05 53.6**	**+0.4**
JAR	**Ashorobuto**	**2.71**	**209**	P	**Pn**	**13 05 54.5**	**+1.2**
JAK	**Akkeshi**	**2.77**	**193**	P	**Pn**	**13 05 54.5**	**+0.7**
JAK				*es*	**S**	**13 06 40.1**	**+0.4**
JFR	**Furan**	**3.30**	**221**	P	**Pn**	**13 05 59.9**	**+1.3**
JCH	**Churui**	**3.46**	**208**	P	**Pn**	**13 06 00.3**	**+0.2**
JCH				*es*	**S**	**13 06 50.2**	**-1.0**
JNBK	**Urakawa-nobuka**	**3.97**	**212**	P	**Pn**	**13 06 05.4**	**+0.3**
JNBK				*es*	**S**	**13 06 59.4**	**-1.0**
ERM	**Erimo**	**4.07**	**206**	*e*Pn	**Pn**	**13 06 07.7**	**+1.6**
ERM				*es*	**S**	**13 07 00.7**	**-1.5**
JKB	**Kayabe**	**5.02**	**222**	P	**Pn**	**13 06 16.4**	**+0.1**
JKB				*es*	**S**	**13 07 18.8**	**-1.9**
JOT	**Ohata**	**5.41**	**219**	P	**Pn**	**13 06 20.7**	**0.0**
JOT				*es*	**S**	**13 07 25.7**	**-3.0**
JOSM	**Okushiri--Mats**	**5.68**	**233**	P	**Pn**	**13 06 23.5**	**-0.2**
JANG	**Nango**	**6.08**	**210**	P	**Pn**	**13 06 29.2**	**+0.9**
JANG				*es*	**S**	**13 07 40.5**	**-2.2**
JOM	**Ohasama**	**6.97**	**208**	*e*S	**S**	**13 08 00.6**	**-0.8**
MJAR	**Matsushiro Arr**	**10.68**	**214**	P	**Pn**	**13 07 26.4**	**+3.7**
	0.4nm,0.3s,baz=7.1,slow=11,SNR=4.3						
PETK	**Petropavlovsk-**	**10.84**	**42**	P	**Pn**	**13 07 21.5**	**-2.8**
PETK	**Petropavlovsk-**	**10.84**	**42**	P	**Pn**	**13 07 21.5**	**-2.8**
	0.1nm,0.3s,baz=226,slow=6.6,SNR=4.6						
KSRS	**Korea Array**	**15.53**	**244**	P	**P**	**13 08 18.6**	**+1.6**
	0.1nm,0.3s,baz=46,slow=11,SNR=5.9						
COLA	**College**	**40.20**	**37**	P	**P**	**13 12 02.3**	**+2.5**
	1.2nm,0.6s,mb3.3						
ILAR	**Eielson Array**	**40.62**	**37**	P	**P**	**13 12 00.1**	**-3.2**
	0.4nm,0.7s,mb2.7,baz=273,slow=7.4,SNR=7.9						
INK	**Inuvik**	**45.31**	**31**	P	**P**	**13 12 35.4**	**-5.1**
	1.5nm,0.8s,mb3.2						
ASAR	**Alice Springs**	**69.84**	**191**	P	**P**	**13 15 34.9**	**+4.7**
	0.1nm,0.4s,mb2.9,baz=12,slow=6.1,SNR=6.9						
TXAR	**Lajitas Array**	**82.50**	**55**	P	**P**	**13 16 41.5**	**+0.5**
	0.1nm,0.4s,mb3.0,baz=295,slow=5.4,SNR=3.8						

MAN 08 13:12:13.7˚53N×**122˚27E**,**h16**km,**mb4.2**,**ML3.0**,**MS2.8**,
1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**0.39**	**49**	*e*P	Pg	13 12 22.2	+1.2
IPIL				*es*	Sg	13 12 28.6	+2.2
ZMPH	**Zamboanga City**	**0.61**	**200**	⇑*i*P	Pg	13 12 25.8	+0.8
ZMPH				*i* S	Sg	13 12 33.8	+0.7
PAGZ	**Pagadian**	**1.15**	**74**	*e*P	Pn	13 12 35.8	+1.4
PAGZ				*es*	Sb	13 12 50.8	+1.7

ISCJB ***08*** *13:12:16.8*±*0.9,31˚45N*±*0˚.02*×*103˚99E*±*0˚.03,h7km*±*5km, mb4.6/51,MS3.5/10,Error ellipse: s-maj=4.1km s-min=3.8km az=1.3*
BJI ***08*** *13:12:19.4,31˚40N*×*104˚09E,h15km,mB4.5/16,mb4.4/23, ML4.5/23,Ms4.1/23,Ms7 3.9/22*
MOS ***08*** *13:12:20.7*±*0.9,31˚42N*×*104˚03E,h33km,mb4.8/32,Error ellipse: s-maj=10.3km s-min=6.2km az=102.0*
NEIC ***08*** *13:12:20.9*±*0.2,31˚49N*×*104˚03E,mb4.6/23,Error ellipse: s-maj=5.2km s-min=4.7km az=74.0*
IDC ***08*** *13:12:23.8*±*3.2,31˚43N*×*103˚99E,h45km*±*30km,mb4.3/15, mb1 4.4/17,mb1mx4.2/27,mbtmp4.3/17,ML3.8/2,MS3.5/8, Ms1 3.5/8,ms1mx3.2/29,Error ellipse: s-maj=19.6km s-min=13.9km az=59.0*
ISC 08 13:12:19.3±0.7,**31˚46N**±0˚.02×**103˚98E**±0˚.03,**h9**km±4km,
h21km±2.9km**:pP-P,n148,**σ1**906/163,mb4.6/51,MS3.5/10,**
6C-2D,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.58**	**199**	Pg	**Pg**	**13 12 31.5**	**+0.9**
CD2				Sg	**Sg**	**13 12 40.0**	**+1.8**
CD2				smax			
	comp=N,14μm,0.6s						
CD2				smax			
	comp=E,20μm,0.6s						
LZH	**Lanzhou**	**4.61**	**359**	⇑Pn	**Pn**	**13 13 35.7**	**+6.6**
LZH				Pg	**Pg**	**13 13 46.8**	**-0.8**
LZH				Sg	**Sg**	**13 14 46.3**	**-1.1**
LZH				smax			
	comp=N,1μm,0.6s						
LZH				smax			
	comp=E,570nm,0.8s						
LZH				LR	LR		
	comp=N,2μm,6.2s						
LZH				LR	LR		
	comp=Z,3μm,7.7s						
ENH	**Enshi**	**4.88**	**103**	*e*Pn	**Pn**	**13 13 34.6**	**+1.8**
ENH				*e*Pg	**Pg**	**13 13 50.6**	**-2.2**
ENH				*es*n	**Sn**	**13 14 28.3**	**-1.2**
ENH				*es*g	**Sg**	**13 14 59.6**	**+3.5**
XAN	**Xi'an**	**4.89**	**57**	Pg	**Pg**	**13 13 49.2**	**-3.8**
XAN				Sn	**Sn**	**13 14 30.9**	**+1.2**
XAN				Sg	**Sg**	**13 14 55.5**	**-0.9**
XAN				smax			
	comp=N,850nm,0.7s						
XAN				smax			
	comp=E,430nm,1.1s						
XAN				LR	LR		
	comp=E,140nm,3.5s						
XAN				LR	LR		
	comp=Z,380nm,9.2s						
GYA	**Guiyang**	**5.51**	**154**	Pn	**Pn**	**13 13 41.9**	**+0.4**
GYA				Sn	**Sn**	**13 14 45.9**	**+0.9**
GYA				Sg	**Sg**	**13 15 06.1**	**-10**
GYA				smax			
	comp=N,1μm,0.7s						
GYA				smax			
	comp=E,990nm,0.8s						
KMI	**Kunming**	**6.41**	**190**	Pn	**Pn**	**13 13 54.5**	**+0.7**
KMI				Sn	**Sn**	**13 15 07.9**	**+0.8**
KMI				smax			
	comp=N,120nm,1.0s						
KMI				smax			
	comp=E,96nm,1.0s						
KMI				LR	LR		
	comp=N,990nm,9.7s						
KMI				LR	LR		
	comp=E,710nm,6.5s						
KMI				LR	LR		
	comp=Z,1μm,12.3s						
GTA	**Gaotai**	**8.62**	**338**	*e*P	**Pn**	**13 14 27.0**	**+2.8**
GTA				pP		13 14 30.8	
GTA				sP		13 14 33.2	
GTA				S	**Sn**	**13 16 03.2**	**+1.7**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,57nm,4.5s						
GTA				LR	LR		
	comp=N,880nm,10.5s						
GTA				LR	LR		
	comp=E,780nm,12.6s						
GTA				LR	LR		
	comp=Z,810nm,13.2s						
WHN	**Wuhan**	**8.95**	**93**	P	**Pn**	**13 14 29.2**	**+0.5**
WHN				LR	LR		
	comp=N,3μm,9.5s						
WHN				LR	LR		
	comp=E,2μm,7.7s						
WHN				LR	LR		
	comp=Z,2μm,7.6s						
HHC	**Hu-ho-hao-te**	**11.19**	**31**	*e*P	**Pn**	**13 15 00.5**	**+1.2**
HHC				pP		13 15 04.7	
HHC				sP		13 15 08.3	
HHC				S	**Sn**	**13 17 04.5**	**+0.1**
HHC				SS		13 17 17.7	
HHC				pmax	pmax		
	comp=Z,17nm,0.7s						
HHC				pmax	pmax		
	comp=Z,46nm,3.9s						
HHC				LR	LR		
	comp=N,760nm,5.3s						
HHC				LR	LR		
	comp=E,310nm,4.7s						
HHC				LR	LR		
	comp=Z,570nm,9.9s						
LSA	**Lhasa**	**11.20**	**264**	*e*Pn	**Pn**	**13 15 02.2**	**+2.7**
GZH	**Guangzhou**	**11.79**	**133**	P	**Pn**	**13 15 01.9**	**-5.6**
GZH				S	**Sn**	**13 17 06.2**	**-13**
GZH				smax			
	comp=N,120nm,1.3s						
GZH				smax			
	comp=E,150nm,1.4s						
TIA	**Tai'an**	**11.91**	**63**	P	**Pn**	**13 15 10.0**	**+0.8**
SHL	**Shillong**	**12.15**	**244**	*e*PKP	**Pn**	**13 15 13.0**	**+0.5**
NJ2	**Nanjing**	**12.68**	**83**	*e*P	**Pn**	**13 15 20.2**	**+0.5**
NJ2				pP		13 15 27.2	
NJ2				PP		13 15 31.9	
NJ2				sP		13 15 33.2	
NJ2				S	**Sn**	**13 17 46.6**	**+5.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,40nm,3.5s						
NJ2				LR	LR		
	comp=N,350nm,11.6s						
NJ2				LR	LR		
	comp=E,870nm,12.2s						
NJ2				LR	LR		
	comp=Z,4μm,11.9s						
BJI	**Beijing**	**13.08**	**46**	P	**Pn**	**13 15 23.6**	**-1.6**
BJI				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BJI				LR	LR		
	comp=N,780nm,4.5s						
BJI				LR	LR		
	comp=E,440nm,4.5s						
BJI				LR	LR		
	comp=Z,91nm,13.7s						
CHTO	**Chiang Mai**	**13.39**	**201**	*e*Pn	**Pn**	**13 15 31.1**	**+1.6**
QIZ	**Qiongzhong**	**13.47**	**155**	P	**Pn**	**13 15 29.9**	**-0.6**
QIZ				S	**Sn**	**13 17 57.9**	**-2.5**
QIZ				pmax	pmax		
	comp=Z,44nm,1.8s						
QIZ				LR	LR		
	comp=N,540nm,9.4s						
QIZ				LR	LR		
	comp=Z,690nm,9.4s						
CM31	**Chiang Mai Arr**	**13.73**	**201**	*e*Pn	**Pn**	**13 15 35.9**	**+1.8**
	comp=Z,34nm,0.7s						
CM31				*e*		13 15 43.9	
CMAR	**Chiang Mai Arr**	**13.73**	**201**	P	**Pn**	**13 15 34.2**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=12,slow=11,SNR=18						
CMAR				LR	LR	13 21 32.8	
	comp=Z,150nm,18.5s,baz=25,slow=40						
TAPN	**Taplejung**	**14.76**	**258**	*e*P	**Pn**	**13 15 47.8**	**-0.3**
ODAN	**Odare**	**15.20**	**257**	*e*P	**Pn**	**13 15 53.9**	**-0.2**
	comp=Z,30nm,0.7s						
RAMN	**Ramite**	**15.82**	**258**	*e*P	**Pn**	**13 16 01.2**	**-1.0**
JIRN	**Jiri**	**15.93**	**261**	*e*P	**Pn**	**13 16 02.9**	**-0.8**
GUN	**Gumba**	**16.12**	**262**	*e*P	**Pn**	**13 16 04.5**	**-1.6**
SONM	**Songino Array**	**16.45**	**6**	P	**Pn**	**13 16 11.0**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=188,slow=14,SNR=14						
SONM				LR	LR	13 23 08.2	
	comp=Z,265nm,19.3s,baz=293,slow=39						
ULN	**Ulaanbaatar**	**16.55**	**7**	Pn	**Pn**	**13 16 12.1**	**+0.7**
	comp=Z,9.1nm,1.0s						
ULN				*e*		13 16 20.1	
ULN	**Ulaanbaatar**	**16.55**	**7**	P	**Pn**	**13 16 12.1**	**+0.7**
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PKI	**Pulchoki**	**16.62**	**261**	*e*P	**Pn**	**13 16 10.9**	**-1.6**
	comp=Z,36nm,0.7s						
PKIN	**Phulchoki**	**16.63**	**261**	*e*P	**Pn**	**13 16 11.2**	**-1.4**
	comp=Z,60nm,0.7s						
KKN	**Kakani**	**16.66**	**262**	*e*P	**Pn**	**13 16 11.6**	**-1.4**
	comp=Z,58nm,0.7s						
SSLB	**Suanglung**	**16.86**	**113**	Pn	**Pn**	**13 16 16.8**	**+1.3**
	comp=Z,46nm,1.0s						
SSLB				*i*		13 16 20.2	
DMN	**Daman**	**16.86**	**262**	*e*P	**Pn**	**13 16 14.0**	**-1.6**
	comp=Z,56nm,0.8s						
GKN	**Gorkha**	**17.15**	**263**	*e*P	**Pn**	**13 16 17.3**	**-1.8**
	comp=Z,80nm,0.8s						
KOLN	**Koldanda**	**18.09**	**263**	*e*P	**Pn**	**13 16 28.5**	**-2.3**
	comp=Z,24nm,0.7s						
ZAK	**Zakamensk**	**18.91**	**359**	*e*P	**Pn**	**13 16 42.9**	**+2.3**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TLY	**Talaya**	**20.20**	**359**	*e*P	**P**	**13 17 00.7**	**+6.6**
TLY				*es*S		13 21 00.2	
TLY				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TLY				MLR	MLR		
	comp=Z,220nm,14.0s,MS3.7						
KSRS	**Korea Array**	**20.60**	**67**	P	**P**	**13 16 59.8**	**+1.2**
	comp=Z,5.6nm,0.8s,baz=253,slow=9.5,SNR=21						
KSRS				LR	LR	13 24 52.9	
	comp=Z,83nm,19.8s,MS3.1,baz=240,slow=36						
KSRS	**Korea Array**	**20.60**	**67**	P	**P**	**13 16 59.8**	**+1.2**
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSRS				MLR	MLR		
	comp=Z,83nm,19.8s,MS3.1						
IRK	**Irkutsk**	**20.76**	**1**	*e*P	**P**	**13 17 02.0**	**+1.8**
IRK				pmax	pmax		
	comp=Z,59nm,0.9s						
CN2	**Changchun**	**20.93**	**48**	*e*P	**P**	**13 17 03.3**	**+1.3**
CN2				*es*	**S**	**13 20 59.0**	**+3.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CN2				pmax	pmax		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=N,200nm,14.0s,MS3.8						
CN2				LR	LR		
	comp=E,200nm,14.0s,MS3.8						
CN2				LR	LR		
	comp=Z,300nm,22.0s						
MK31	**Makanchi Array**	**22.64**	**319**	*e*P	**P**	**13 17 20.6**	**+0.3**
MK31				*e*		13 17 29.3	
MK31	**Makanchi Array**	**22.64**	**319**	*ce*P	**P**	**13 17 21.0**	**+0.6**
MK31				pmax	pmax		
	comp=Z,40nm,1.2s,mb4.7						
MKAR	**Makanchi Array**	**22.64**	**319**	P	**P**	**13 17 21.2**	**+0.8**
	comp=Z,4.4nm,0.7s,mb4.0,baz=116,slow=11,SNR=38						
MKAR				LR	LR	13 26 56.6	
	comp=Z,127nm,19.5s,MS3.4,baz=128,slow=38						
MKAR	**Makanchi Array**	**22.64**	**319**	P	**P**	**13 17 21.2**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,127nm,19.5s						
MDJ	**Mudanjiang**	**23.95**	**50**	P	**P**	**13 17 35.4**	**+1.7**
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,39nm,4.1s						
MDJ				LR	LR		
	comp=N,71nm,14.4s						
MDJ				LR	LR		
	comp=E,110nm,9.6s						
MDJ				LR	LR		
	comp=Z,140nm,11.2s,MS3.7						
MDJ	**Mudanjiang**	**23.95**	**50**	*e*P	**P**	**13 17 34.7**	**+1.1**
	comp=Z,16nm,1.0s,mb4.4						
VLA	**Vladivostok**	**24.95**	**54**	⇑*e*P	**P**	**13 17 42.8**	**0.0**
VLA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
TKM2	**Tokmak 2**	**25.22**	**305**	*e*P	**P**	**13 17 45.5**	**+0.3**
	comp=Z,4.8nm,0.9s,mb4.0						
TKM2	**Tokmak 2**	**25.22**	**305**	*e*P	**P**	**13 17 45.5**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.0						
UCH	**Uchtor**	**25.79**	**303**	*e*Pn	**P**	**13 17 52.3**	**+1.9**
	comp=Z,16nm,1.1s,mb4.5						
AAK	**Ala-Archa**	**25.91**	**304**	LR	LR	13 29 49.2	
	comp=Z,157nm,20.2s,MS3.5,baz=345,slow=40						
ZAA0	**Zalesovo Array**	**26.35**	**334**	*e*P

ABKAR	**Akbulak array**	**37.35**	**311**	*e*P		**P**	**13 19 32.0**	**0.0**
	comp=Z,1.9nm,0.6s,mb4.1								
SVE	**Sverdlovsk**	**39.15**	**323**	*e*P		**P**	**13 19 48.0**	**+1.1**
SVE					pmax	pmax			
	comp=Z,10.0nm,0.7s,mb4.7								
ARU	**Arti**	**40.08**	**322**	*c i*P		**P**	**13 19 55.2**	**+0.5**
ARU				*e*			13 21 29.8		
ARU				*e*PPP			13 21 51.8		
ARU				S		**S**	**13 26 01.5**	**+0.8**
ARU					pmax	pmax			
	comp=Z,10.0nm,0.7s,mb4.7								
TIXI	**Tiksi**	**42.42**	**11**	*e*P		**P**	**13 20 11.7**	**-2.0**
TIXI					pmax	pmax			
	comp=Z,2.0nm,0.8s,mb3.8								
TIXI					MLR	MLR			
	comp=Z,196nm,18.0s,MS4.0								
ZEI	**Tsey**	**48.30**	**301**	*e*P		**P**	**13 21 06.8**	**+6.1**
ZEI					pmax	pmax			
	comp=Z,8.0nm,0.4s,mb5.1								
VRHR	**Novokhopersk**	**49.22**	**312**	*e*P		**P**	**13 21 06.9**	**-0.8**
VRHR					pmax	pmax			
	comp=N,8.0nm,0.4s								
VRHR					pmax	pmax			
	comp=E,7.0nm,0.4s								
VRHR					pmax	pmax			
	comp=Z,6.0nm,0.4s,mb5.0								
KLMR	**Klimovskoe**	**50.71**	**325**	*e*P		**P**	**13 21 18.3**	**-0.6**
KLMR					pmax	pmax			
	comp=Z,28nm,1.4s,mb5.0								
VSR	**Storozhevoye**	**50.76**	**313**	*e*P		**P**	**13 21 18.5**	**-0.9**
VSR					pmax	pmax			
	comp=E,8.0nm,0.6s								
VSR					pmax	pmax			
	comp=Z,8.0nm,0.6s,mb4.8								
VSR					pmax	pmax			
	comp=N,5.0nm,0.3s								
KNA	**Kununurra**	**52.63**	**149**	*e*P		**P**	**13 21 33.1**	**-0.6**
	comp=N,14nm,0.5s,mb5.2								
JOF	**Joensuu**	**54.67**	**328**	*e*P		**P**	**13 21 47.7**	**-0.4**
JOF					pmax	pmax			
	comp=Z,10.0nm,0.5s,mb5.1								
JOF	**Joensuu**	**54.67**	**328**	*e*p		**P**	**13 21 47.7**	**-0.4**
	comp=Z,9.8nm,0.5s,mb5.1								
KEV	**Kevo**	**56.36**	**336**	*e*P		**P**	**13 21 59.3**	**-0.9**
KEV					pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.7								
KEV	**Kevo**	**56.36**	**336**	*e*p		**P**	**13 21 59.3**	**-0.9**
	comp=Z,5.4nm,0.6s,mb4.8								
ARCES	**ARCESS Array B**	**56.89**	**336**	P		**P**	**13 22 03.9**	**-0.1**
	comp=Z,5.5nm,0.7s,mb4.7,baz=85,slow=8.4,SNR=28								
ARCES				PcP		PcP	13 22 58.8	-0.5	
	comp=Z,1.8nm,0.5s,baz=97,slow=5.0,SNR=10								
ARCES	**ARCESS Array B**	**56.89**	**336**	P		**P**	**13 22 03.9**	**-0.1**
ARCES							13 22 58.8		
ARCES					pmax	pmax			
	comp=Z,6.0nm,0.7s								
KAF	**Kangasniemi**	**57.03**	**327**	*e*P		**P**	**13 22 04.2**	**-0.9**
KAF					pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.7								
KAF	**Kangasniemi**	**57.03**	**327**	*e*p		**P**	**13 22 04.2**	**-0.9**
	comp=Z,5.8nm,0.7s,mb4.7,baz=83,slow=6.7								
FINES	**FINESS Array B**	**57.21**	**326**	P		**P**	**13 22 06.3**	**-0.1**
	comp=Z,6.9nm,0.6s,mb4.8,baz=79,slow=7.2,SNR=30								
FINES	**FINESS Array B**	**57.21**	**326**	P		**P**	**13 22 06.3**	**0.0**
FINES					pmax	pmax			
	comp=Z,7.0nm,0.6s								
COEN	**Coen**	**58.77**	**134**	*e*P		**P**	**13 22 17.2**	**-0.7**
WRAB	**Tennant Creek**	**58.83**	**146**	*e*P		**P**	**13 22 17.4**	**-0.8**
	comp=Z,16nm,0.6s,mb5.2								
WRAB	**Tennant Creek**	**58.83**	**146**	*e*P		**P**	**13 22 17.4**	**-0.8**
WRAB					pmax	pmax			
	comp=Z,16nm,0.6s,mb5.2								
WB2	**Warramunga Arr**	**58.84**	**146**	*e*P		**P**	**13 22 17.7**	**-0.6**
ASAR	**Alice Springs**	**61.85**	**149**	P		**P**	**13 22 38.6**	**-0.2**
	comp=Z,4.1nm,0.7s,mb4.6,baz=338,slow=7.0,SNR=29								
ASAR	**Alice Springs**	**61.85**	**149**	P		**P**	**13 22 38.6**	**-0.2**
ASAR					pmax	pmax			
	comp=Z,4.0nm,0.7s								
NOA	**NORSAR Array B**	**64.30**	**327**	P		**P**	**13 22 53.8**	**-0.8**
	comp=Z,3.7nm,0.7s,mb4.5,baz=72,slow=6.8,SNR=12								
NOA	**NORSAR Array B**	**64.30**	**327**	P		**P**	**13 22 53.8**	**-0.8**
NOA					pmax	pmax			
	comp=Z,4.0nm,0.7s								
DPC	**Dobruska-Polom**	**65.09**	**315**	*e*P		**P**	**13 23 00.6**	**+0.6**
DPC	**Dobruska-Polom**	**65.09**	**315**	*e*P		**P**	**13 23 00.6**	**+0.6**
BRG	**Berggiesshubel**	**66.33**	**316**	*e*(P)		**P**	**13 23 13.9**	**+5.9**
	comp=Z,3.8nm,0.8s,mb4.5								
BRG	**Berggiesshubel**	**66.33**	**316**	*e*P		**P**	**13 23 13.9**	**+5.9**
BRG					pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.2								
COLD	**Coldfoot**	**67.19**	**24**	*e*P		**P**	**13 23 12.6**	**-0.5**
	comp=Z,9.6nm,0.9s,mb4.8								
BPAW	**Bear Paw Mtn.**	**68.33**	**27**	*e*P		**P**	**13 23 20.0**	**-0.4**
	comp=Z,6.3nm,0.6s,mb4.8								
PPLA	**Purkeypile**	**68.40**	**29**	*e*P		**P**	**13 23 21.2**	**+0.3**
	comp=Z,11nm,0.6s,mb5.1								
TRF	**Thorofare Moun**	**68.91**	**28**	*e*P		**P**	**13 23 23.9**	**-0.2**
	comp=Z,3.0nm,0.8s,mb4.3								
COLA	**College**	**69.15**	**26**	*e*P		**P**	**13 23 25.2**	**-0.3**
	comp=Z,14nm,0.8s,mb4.9								
COLA					*e*pP	pP	13 23 30.6	+2.1	
COLA	**College**	**69.15**	**26**	*e*P		**P**	**13 23 25.2**	**-0.3**
COLA					*e**PP	pP	13 23 30.7	+2.1	
COLA					pmax	pmax			
	comp=Z,14nm,0.8s,mb4.9								
MCK	**McKinley**	**69.30**	**27**	*e*P		**P**	**13 23 25.3**	**-1.2**
	comp=Z,3.1nm,0.6s,mb4.4								
MCK	**McKinley**	**69.30**	**27**	*e*P		**P**	**13 23 25.3**	**-1.2**
MCK					pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.4								
QLP	**Quilpie**	**69.34**	**142**	*e*P		**P**	**13 23 27.4**	**+0.2**
ILAR	**Eielson Array**	**69.56**	**26**	P		**P**	**13 23 26.9**	**-1.2**
	comp=Z,2.8nm,0.5s,mb4.5,baz=295,slow=4.0,SNR=62								
ILAR	**Eielson Array**	**69.56**	**26**	P		**P**	**13 23 26.9**	**-1.2**
ILAR					pmax	pmax			
	comp=Z,3.0nm,0.5s								
PMR	**Palmer**	**70.28**	**29**	*e*P		**P**	**13 23 31.7**	**-0.9**
	comp=Z,9.7nm,0.8s,mb4.8								
PMR					*e*pP	pP	13 23 36.9	+1.3	
PMR	**Palmer**	**70.28**	**29**	*e*P		**P**	**13 23 31.7**	**-0.8**
PMR					*e**PP	pP	13 23 36.9	+1.3	
PMR					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.8								
KDAK	**Kodiak Island**	**70.60**	**34**	P		**P**	**13 23 34.3**	**-0.2**
	comp=Z,11nm,0.6s,mb5.0,baz=313,slow=2.6,SNR=25								
KDAK	**Kodiak Island**	**70.60**	**34**	*i* P		**P**	**13 23 35.1**	**+0.6**
KMBO	**Kilima Mbogo**	**70.89**	**256**	P		**P**	**13 23 37.0**	**0.0**
	comp=Z,1.7nm,0.4s,mb4.3,baz=38,slow=24,SNR=4.4								
KMBO	**Kilima Mbogo**	**70.89**	**256**	P		**P**	**13 23 37.0**	**0.0**
KMBO					pmax	pmax			
	comp=Z,2.0nm,0.4s								
PAX	**Paxson**	**71.04**	**27**	*e*P		**P**	**13 23 36.0**	**-1.1**
	comp=Z,2.4nm,0.5s,mb4.4								
PAX	**Paxson**	**71.04**	**27**	*e*P		**P**	**13 23 36.0**	**-1.1**
PAX					pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.3								
CDF	**Champ du Feu**	**71.28**	**316**	*e*P		**P**	**13 23 38.5**	**-0.4**
	comp=Z,2.8nm,0.5s,mb4.1								
CDF	**Champ du Feu**	**71.28**	**316**	*e*P		**P**	**13 23 38.5**	**-0.4**
	comp=Z,1.4nm,0.5s,mb4.2								
CDF	**Champ du Feu**	**71.28**	**316**	*e*P		**P**	**13 23 38.5**	**-0.4**
CDF					pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.0								
EGAK	**Eagle**	**71.62**	**24**	*e*P		**P**	**13 23 38.8**	**-1.8**
	comp=Z,2.6nm,0.7s,mb4.3								
MENT	**Mentasta**	**71.73**	**26**	*e*P		**P**	**13 23 40.4**	**-0.9**
INK	**Inuvik**	**71.85**	**19**	P		**P**	**13 23 41.7**	**-0.3**
INK	**Inuvik**	**71.85**	**19**	P		**P**	**13 23 41.7**	**-0.2**
	comp=Z,8.4nm,0.7s,mb4.8,baz=334,slow=7.0,SNR=25								
INK	**Inuvik**	**71.85**	**19**	P		**P**	**13 23 41.7**	**-0.3**
INK					pmax	pmax			
	comp=Z,8.0nm,0.7s								
STKA	**Stephens Creek**	**72.37**	**147**	⇑ *i*P		**P**	**13 23 44.8**	**-0.7**
	comp=Z,4.5nm,0.6s,mb4.6								
STKA	**Stephens Creek**	**72.37**	**147**	P		**P**	**13 23 44.5**	**-0.9**
	comp=Z,5.6nm,0.6s,mb4.7,baz=328,slow=5.7,SNR=15								
BMRM	**Bremner River**	**72.47**	**28**	*e*P		**P**	**13 23 45.9**	**+0.1**
	comp=Z,16nm,0.9s,mb5.0								
DAWY	**Dawson**	**72.66**	**24**	*e*P		**P**	**13 23 46.0**	**-0.9**
LPG	**La Plagne**	**72.92**	**313**	*e*P		**P**	**13 23 49.3**	**+0.5**
	comp=Z,5.6nm,0.5s,mb4.5								
LPG	**La Plagne**	**72.92**	**313**	*e*P		**P**	**13 23 49.3**	**+0.5**
	comp=Z,2.8nm,0.5s,mb4.5								
LPG	**La Plagne**	**72.92**	**313**	*e*P		**P**	**13 23 49.3**	**+0.5**
LPG					pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.5								
LPL	**La Plagne**	**72.93**	**313**	*e*P		**P**	**13 23 49.2**	**+0.4**
	comp=Z,5.2nm,0.4s,mb4.5								
LPL	**La Plagne**	**72.93**	**313**	*e*P		**P**	**13 23 49.2**	**+0.4**
	comp=Z,2.6nm,0.4s,mb4.5								
LPL	**La Plagne**	**72.93**	**313**	*e*P		**P**	**13 23 49.2**	**+0.4**
LPL					pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.6								
ORIF	**Oris-en-Rattie**	**73.74**	**313**	*e*P		**P**	**13 23 55.8**	**+2.2**
	comp=Z,4.5nm,0.6s,mb4.3								
ORIF	**Oris-en-Rattie**	**73.74**	**313**	*e*P		**P**	**13 23 55.8**	**+2.2**
	comp=Z,2.3nm,0.6s,mb4.3								
ORIF	**Oris-en-Rattie**	**73.74**	**313**	*e*P		**P**	**13 23 55.8**	**+2.2**
ORIF					pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.2								
CMSA	**Cobar Meteorol**	**74.08**	**144**	⇑ *i*P		**P**	**13 23 55.8**	**+0.2**
SMF	**Signal de Mont**	**74.17**	**315**	*e*P		**P**	**13 23 56.6**	**+0.5**
TCF	**Toulx Ste Croi**	**75.32**	**315**	*e*P		**P**	**13 24 02.2**	**-0.6**
LASF	**Ste Croix**	**75.42**	**313**	*e*P		**P**	**13 24 03.4**	**+0.1**
CAF	**Calviac**	**76.10**	**314**	*e*P		**P**	**13 24 07.6**	**+0.4**
MTLF	**Montolieu**	**76.81**	**313**	*e*P		**P**	**13 24 11.6**	**+0.3**
SKAG	**Skagway**	**77.07**	**27**	*e*P		**P**	**13 24 12.3**	**-0.2**
	comp=Z,7.2nm,0.9s,mb4.6								
SKAG					*e*pP	pP	13 24 20.3	+4.7	
EPF	**Esparros**	**78.15**	**313**	*e*P		**P**	**13 24 18.5**	**-0.3**
YKA	**Yellowknife Ar**	**81.38**	**17**	P		**P**	**13 24 35.7**	**-0.2**
YKA	**Yellowknife Ar**	**81.38**	**17**	P		**P**	**13 24 35.7**	**-0.2**
	comp=Z,2.8nm,0.5s,mb4.4,baz=329,slow=5.1,SNR=14								
YKA	**Yellowknife Ar**	**81.38**	**17**	P		**P**	**13 24 35.7**	**-0.3**
YKA					pmax	pmax			
	comp=Z,3.0nm,0.5s								
FFC	**Flin Flon**	**91.30**	**15**	*i* P		**P**	**13 25 25.5**	**+0.6**
TORD	**Torodi Ar. Bea**	**93.42**	**288**	P		**P**	**13 25 34.9**	**-0.6**
	comp=Z,1.1nm,0.9s,mb4.3,baz=46,slow=3.1,SNR=2.9								
TXAR	**Lajitas Array**	**114.07**	**26**	PKP		PKiKP	13 30 58.3	-0.9	
	comp=Z,0.2nm,0.6s,baz=33,slow=0.5,SNR=3.7								

DJA 08 13:16:26,2°30N×126°69E,h7km,MLv3.7/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.66**	**156**	P	Pn	13 16 54.7	-0.9
SGSI	**Sangihe**	**1.80**	**320**	P	Pn	13 16 57.4	-0.1
SGSI				S	Sn	13 17 21.3	+0.7
MNI	**Manado**	**2.04**	**245**	P	Pn	13 17 01.0	+0.3
LBMI	**Labuha**	**3.03**	**164**	P	Pn	13 17 15.3	+0.9

*ISCJB **08** 13:50:56.8±0.4,32°.38N±0°.03×105°.49E±0°.04,h10km, mb3.7/6, Error ellipse: s-maj=5.1km s-min=4.7km az=141.5*

*IDC **08** 13:50:57.2±1.2,32°.37N×105°.28E,h0km,mb3.6/4, mb1 3.6/6,mb1mx3.4/25,mbtmp3.5/6,ML3.5/2, Error ellipse: s-maj=45.0km s-min=21.7km az=53.0*

*NEIC **08** 13:50:58.8±0.7,32°.30N×105°.12E,h10km,mb3.9/2, Error ellipse: s-maj=28.7km s-min=11.1km az=49.0*

*BJI **08** 13:50:59.8,32°.44N×105°.42E,h16km,ML3.5/14,Ms3.3/4, Ms? 3.1/4*

ISC 08 13:50:59.1±0.4,32°41N±0°.03×105°40E±0°.04,h10km,n16, σ1s24/30,mb3.7/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.05**	**224**	Pn	**Pn**	**13 51 54.8**	**+3.1**
CD2				Pg	**Pg**	**13 51 38.7**	**+0.4**
CD2				Sn	**Sn**	**13 52 00.7**	**+1.6**
CD2				Sg	**Sg**	**13 52 03.5**	**-1.4**
CD2				smax			
	comp=N,2μm,0.5s						
CD2				smax			
	comp=E,2μm,0.6s						
XAN	**Xi'an**	**3.37**	**60**	Pn	**Pn**	**13 51 54.8**	**+3.1**
XAN				Sn	**Sn**	**13 52 32.9**	**+1.1**
XAN				Sg	**Sg**	**13 52 43.1**	**-4.2**
XAN				smax			
	comp=N,160nm,0.8s						
XAN				smax			
	comp=E,76nm,0.8s						
XAN				LR	LR		
	comp=N,200nm,10.4s						
XAN				LR	LR		
	comp=E,54nm,10.8s						
XAN				LR	LR		
	comp=Z,69nm,6.4s						
LZH	**Lanzhou**	**3.89**	**341**	Pn	**Pn**	**13 51 59.1**	**+0.2**
LZH				Pg	**Pg**	**13 52 07.4**	**-6.2**
LZH				Sn	**Sn**	**13 52 44.8**	**+0.2**
LZH				Sg	**Sg**	**13 52 55.5**	**-8.4**
LZH				smax			
	comp=N,270nm,0.5s						
LZH				smax			
	comp=E,590nm,0.7s						
LZH				LR	LR		
	comp=N,680nm,4.8s						
LZH				LR	LR		
	comp=Z,780nm,5.4s						
ENH	**Enshi**	**4.09**	**120**	Pn	**Pn**	**13 52 04.7**	**+3.0**
ENH				*e*Pb	**Pb**	**13 52 13.7**	**+2.4**
ENH				*e*Pg	**Pg**	**13 52 17.1**	**-0.4**
ENH				*e*Sg	**Sg**	**13 53 09.7**	**-0.9**
GYA	**Guiyang**	**6.03**	**169**	Pn	**Pn**	**13 52 29.6**	**+1.3**
GYA				Sn	**Sn**	**13 53 38.1**	**+0.7**
GYA				Sg	**Sg**	**13 54 00.3**	**-12**
GYA				smax			
	comp=N,60nm,0.6s						
GYA				smax			
	comp=E,70nm,0.8s						
KMI	**Kunming**	**7.62**	**198**	P	**Pb**	**13 53 04.8**	**-6.6**
KMI				pmax	pmax		
	comp=Z,11nm,1.3s						
WHN	**Wuhan**	**7.87**	**101**	P	**Pn**	**13 52 43.5**	**-10**
WHN				S	**Sn**	**13 54 20.2**	**-2.4**
SONM	**Songino Array**	**15.43**	**3**	Pn	**Pn**	**13 54 37.6**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=41,slow=18,SNR=3.0						
KSRS	**Korea Array**	**19.13**	**68**	P	**Pn**	**13 55 23.0**	**0.0**
	comp=Z,0.1nm,0.3s,baz=248,slow=11,SNR=5.7						
MK31	**Makanchi Array**	**22.77**	**316**	P	**P**	**13 56 00.9**	**-0.5**
MKAR	**Makanchi Array**	**22.77**	**316**	P	**P**	**13 56 01.7**	**+0.3**
	comp=Z,0.8nm,0.7s,mb3.2,baz=116,slow=11,SNR=6.2						
ZALV	**Zalesovo Beam**	**26.06**	**332**	P	**P**	**13 56 30.6**	**-1.9**
	comp=Z,0.5nm,0.4s,mb3.4,baz=144,slow=11,SNR=2.7						
ABKAR	**Akbulak array**	**37.66**	**310**	P	**P**	**13 58 12.5**	**-1.6**
	comp=Z,0.3nm,0.4s,mb3.4						
FINES	**FINESS Array B**	**57.11**	**326**	P	**P**	**14 00 45.6**	**+0.3**
	comp=Z,1.8nm,0.8s,mb4.1,baz=98,slow=10,SNR=3.5						
WRAB	**Tennant Creek**	**58.96**	**148**	*e*P	**P**	**14 00 57.3**	**-1.5**
	comp=Z,2.0nm,0.6s,mb4.3						
ASAR	**Alice Springs**	**62.05**	**150**	P	**P**	**14 01 19.7**	**-0.1**
	comp=Z,0.4nm,0.5s,mb3.8,baz=333,slow=6.8,SNR=15						

*BJI **08** 13:58:58.2,36°.53N×70°.55E,h111km,mB4.8/18,mb4.7/32*

*ISCJB **08** 13:59:00.9±0.4,36°.40N±0°.02×71°.11E±0°.03,h113km±4km, mb4.5/65, Error ellipse: s-maj=4.1km s-min=3.1km az=152.4*

*MOS **08** 13:59:02.4±1.0,36°.49N×71°.08E,h123km,mb4.5/33, Error ellipse: s-maj=7.5km s-min=4.5km az=109.2*

*NEIC **08** 13:59:03.5±0.6,36°.45N×71°.10E,h122km±5km,mb4.5/27, Error ellipse: s-maj=6.7km s-min=5.1km az=170.0*

*IDC **08** 13:59:04.8±0.8,36°.43N×71°.07E,h136km±7km,mb4.1/15, mb1 4.4/20,mb1mx4.2/28,mbtmp4.2/20, Error ellipse: s-maj=12.8km s-min=10.7km az=1.0*

*NNC **08** 13:59:07.7±4.5,36°.86N×70°.70E,h185km±37km,mb4.0, mpv5.3, Error ellipse: s-maj=37.3km s-min=29.0km az=30.0*

ISC 08 13:59:02.4±0.3,36°39N±0°.02×71°14E±0°.03,h112km±3km, h126km±4.9km;pP-P,n251,σ1s07/284,mb4.5/65,22C-18D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.52**	**223**	*e*Pn	**Pn**	**13 59 44.2**	**+2.1**
KBL				*e*Sn	**Sn**	**14 00 15.2**	**+2.5**
CEP	**Cherat**	**2.64**	**166**	⇑P	**Pn**	**13 59 47.5**	**+3.8**
CEP				S	**Sn**	**14 00 21.0**	**+5.6**
CHCP	**Chirah Chowk**	**3.23**	**147**	⇑P	**Pn**	**13 59 56.6**	**+5.0**
THW	**Thamme Wali**	**3.62**	**172**	⇑P	**Pn**	**13 59 59.4**	**+2.6**
SRNI	**Srinagar**	**3.80**	**126**	*ex*	x	14 00 07.5	
SRNI				*ex*	x	14 01 09.0	
SARP	**Sargodha**	**4.64**	**164**	⇑P	**Pn**	**14 00 12.3**	**+1.9**
JMU	**Jammu**	**4.80**	**139**	*e*PKP	**Pn**	**14 00 11.5**	**-1.1**
JMU				*e*S	**Sn**	**14 01 05.0**	**-2.1**
KSH	**Kashi**	**4.93**	**49**	P	**Pn**	**14 00 12.4**	**-1.8**
KSH				S	**Sn**	**14 01 04.0**	**-6.1**
KSH				smax			
	comp=N,2μm,0.8s						
KSH				smax			
	comp=E,2μm,0.6s						
DLH	**Dalhousie**	**5.53**	**133**	*e*PKP	**Pn**	**14 00 27.0**	**+4.5**
DLH				*e*S	**Sn**	**14 01 28.0**	**+3.2**
AML	**Almayashu**	**6.06**	**18**	P	**Pn**	**14 00 30.8**	**+1.2**
	SNR=1826						
AML	**Almayashu**	**6.06**	**18**	⇓ *i*Pn	**Pn**	**14 00 30.7**	**+1.2**
	comp=E,1μm,0.4s						
AML				*e*S	**Sn**	**14 01 37.0**	**-0.5**
UCH	**Uchtor**	**6.39**	**23**	P	**Pn**	**14 00 35.1**	**+1.1**
	SNR=155						
UCH	**Uchtor**	**6.39**	**23**	⇓ *i*Pn	**Pn**	**14 00 35.1**	**+1.2**
UCH				*e*Sn	**Sn**	**14 01 44.3**	**-1.1**
KZA	**Kyzart**	**6.51**	**28**	P	**Pn**	**14 00 36.6**	**+1.0**
	SNR=172						
EKS2	**Erkin-Say**	**6.58**	**17**	P	**Pn**	**14 00 37.5**	**+0.9**
	SNR=217						
EKS2	**Erkin-Say**	**6.58**	**17**	⇓ *e*Pn	**Pn**	**14 00 37.5**	**+0.9**
BHK	**Bhakra**	**6.62**	**137**	*e*PKP	**Pn**	**14 00 34.6**	**-2.6**
BHK				*e*S	**Sn**	**14 01 46.0**	**-5.2**
KK31	**Karatay Array**	**6.72**	**356**	P	**Pn**	**14 00 38.2**	**-0.3**
	comp=E,235nm,0.4s,baz=191,slow=15,SNR=1945						
KK31				⇑S	**Sn**	**14 01 49.2**	**-4.3**
	comp=E,117nm,0.5s,baz=186,slow=24,SNR=6.8						
KK31	**Karatay Array**	**6.72**	**356**	*i* PN	**Pn**	**14 00 38.1**	**-0.3**
KK31				pmax	pmax		
	comp=Z,666nm,0.4s						
AAK	**Ala-Archa**	**6.75**	**22**	P	**Pn**	**14 00 40.2**	**+1.3**
	SNR=117						
AAK	**Ala-Archa**	**6.75**	**22**	P	**Pn**	**14 00 40.1**	**+1.3**
AAK				S	**Sn**	**14 01 52.5**	**-1.7**
AAK	**Ala-Archa**	**6.75**	**22**	P	**Pn**	**14 00 40.1**	**+1.3**
	comp=Z,60nm,0.3s,baz=180,slow=3.9,SNR=150						
AAK				S	**Sn**	**14 01 52.5**	**-1.7**
	comp=Z,15nm,0.3s,baz=344,slow=19,SNR=7.7						
AAK	**Ala-Archa**	**6.75**	**22**	*d i*PN	**Pn**	**14 00 39.9**	**+1.1**
AAK				pmax	pmax		
	comp=Z,103nm,0.7s						
SDNR	**Sundarnagar**	**6.87**	**134**	*e*PKP	**Pn**	**14 00 41.5**	**+0.9**
SDNR				*e*S	**Sn**	**14 01 55.5**	**-1.8**
KBK	**Karagaybulak**	**6.91**	**24**	P	**Pn**	**14 00 43.0**	**+2.0**
	SNR=29						
ULHL	**Ulahol**	**7.05**	**33**	P	**Pn**	**14 00 43.8**	**+0.8**
	SNR=44						
CHMS	**Chumysh**	**7.16**	**22**	P	**Pn**	**14 00 45.1**	**+0.7**
	SNR=107						
SMLA	**Simla**	**7.26**	**135**	*i* P	**Pn**	**14 00 46.1**	**+0.2**
SMLA				*i* x	x	14 02 05.6	
SMLA				⇓		14 02 10.2	
	comp=E,6μm,0.2s						
SMLA				⇓		14 02 10.3	
	comp=N,4μm,0.2s						
USP	**Ospenovka**	**7.33**	**20**	P	**Pn**	**14 00 47.1**	**+0.3**
	SNR=121						
TKM2	**Tokmak 2**	**7.37**	**26**	⇑P	**Pn**	**14 00 48.0**	**+0.8**
	comp=N,53nm,0.6s						
TKM2				⇑S	**Sn**	**14 02 12.7**	**+3.5**
	comp=N,74nm,0.7s						
TKM2	**Tokmak 2**	**7.37**	**26**	P	**Pn**	**14 00 48.2**	**+1.0**
	SNR=106						
TKM2	**Tokmak 2**	**7.37**	**26**	*e*PN	**Pn**	**14 00 48.1**	**+0.9**
KLP	**Kalpa**	**7.64**	**127**	*e*PKP	**Pn**	**14 00 50.9**	**0.0**
KLP				*e*S	**Sn**	**14 02 10.3**	**-5.5**
KLP				AML	AML	14 02 26.8	
	comp=N,1μm,0.6s						
KLP				AML	AML	14 02 27.9	
	comp=E,920nm,0.6s						
JOSI	**Joshimath**	**9.12**	**127**	*e*PKP	**Pn**	**14 01 11.4**	**+0.3**
KHET	**Khetri**	**9.18**	**153**	*e*PKP	**Pn**	**14 01 11.4**	**-0.6**
KHET				*e*S	**Sn**	**14 02 47.6**	**-5.9**
KHET				AML	AML	14 02 51.4	
	comp=N,143nm,0.4s						
KHET				AML	AML	14 02 53.4	
	comp=E,206nm,0.7s						
NDI	**New Delhi**	**9.24**	**145**	*e*PKP	**Pn**	**14 01 12.4**	**-0.3**
NDI				*e*S	**Sn**	**14 02 49.4**	**-5.4**
NDI				AML	AML	14 04 16.2	
	comp=N,56nm,0.6s						
NDI				AML	AML	14 04 17.8	
	comp=E,77nm,0.6s						
AYAN	**Aya Nagar**	**9.37**	**146**	*e*PKP	**Pn**	**14 01 13.6**	**-0.8**
AYAN				*e*S	**Sn**	**14 02 50.9**	**-6.9**
KUDL	**Kundal**	**9.38**	**150**	*e*PKP	**Pn**	**14 01 14.2**	**-0.5**
KUDL				*e*S	**Sn**	**14 02 53.1**	**-5.2**
KUDL				AML	AML	14 02 55.0	
	comp=N,93nm,0.5s						
KUDL				AML	AML	14 02 55.0	
	comp=E,146nm,0.5s						
BISR	**Bishrakh**	**9.44**	**144**	*e*S	**Sn**	**14 02 53.6**	**-6.0**
SONA	**Sohna**	**9.54**	**147**	*e*PKP	**Pn**	**14 01 15.9**	**-1.0**
SONA				*e*S	**Sn**	**14 02 56.0**	**-6.2**
SONA				AML	AML	14 03 01.0	
	comp=N,63nm,0.5s						
SONA				AML	AML	14 03 01.3	
	comp=E,114nm,0.4s						
PTH	**Pithoragarh**	**10.22**	**129**	*e*PKP	**Pn

comp=Z,0.2nm,0.3s,baz=212,slow=12,SNR=42
KURK Kurchatov 15.30 18 *de* P **Pn 14 02 28.8 -3.3**
KURK pmax pmax
comp=Z,17nm,1.2s
JIRN Jiri 15.43 120 *e* P **Pn 14 02 34.4 +0.4**
comp=Z,134nm,0.5s
RAMN Ramite 16.16 121 *e* P **Pn 14 02 42.7 -0.3**
comp=Z,62nm,0.5s
VOSK Vostochnaya 16.33 360 ⇓ P **Pn 14 02 42.4 -2.5**
comp=Z,18nm,0.8s
VOSK ⇓S **S 14 05 37.2 -14**
comp=Z,35nm,1.4s
VOSK Vostochnaya 16.33 360 P **Pn 14 02 42.5 -2.4**
VOSK pmax pmax
comp=Z,18nm,0.9s
ZRNK Zerenda 16.63 355 ⇓ P **Pn 14 02 46.1 -2.4**
comp=Z,28nm,1.1s
BVA0 Borovoye Array 16.64 358 P **Pn 14 02 46.9 -1.8**
comp=Z,7.4nm,1.1s,baz=185,slow=14,SNR=227
BVA0 ⇓S **S 14 05 42.9 -11**
comp=Z,2.2nm,0.9s,baz=164,slow=24,SNR=4.0
BVA0 Borovoye Array 16.64 358 *i* P **Pn 14 02 46.8 -1.9**
BVA0 pmax pmax
comp=Z,7.0nm,1.1s
BVAR Borovoye Array 16.64 358 P **Pn 14 02 47.3 -1.4**
comp=Z,1.6nm,0.3s,baz=165,slow=12,SNR=76
BVAR pmax pmax
comp=Z,2.0nm,0.3s
BRVK Borovoye 16.68 358 ⇑ *e* P **Pn 14 02 47.5 -1.7**
comp=Z,49nm,1.1s
BRVK Borovoye 16.68 358 ⇑ *e* P **Pn 14 02 47.6 -1.5**
BRVK pmax pmax
comp=Z,32nm,1.0s
TAPN Taplejung 16.69 118 *e* P **Pn 14 02 51.3 +1.7**
comp=Z,82nm,0.6s
ODAN Odare 16.77 120 *e* P **Pn 14 02 51.2 +0.7**
comp=Z,61nm,0.6s
AKTK Aktyubinsk 16.93 330 P **Pn 14 02 52.0 -0.3**
AKTO Aktyubinsk 16.93 330 P **Pn 14 02 52.0 -0.3**
comp=Z,3.9nm,0.3s,baz=134,slow=13,SNR=74
AKTO Aktyubinsk 16.93 330 P **Pn 14 02 52.0 -0.3**
AKTO pmax pmax
comp=Z,4.0nm,0.3s
LSA Lhasa 18.04 106 P **P 14 03 06.0 +1.2**
LSA S **S 14 06 25.7 -0.1**
LSA LR LR
comp=Z,5μm,3.4s
LSA Lhasa 18.04 106 *e* Pn **Pn 14 03 09.4 +3.6**
comp=Z,16nm,0.6s
LSA Lhasa 18.04 106 *e* P **P 14 03 09.4 +4.6**
LSA pmax pmax
comp=Z,16nm,0.6s
LATR Latur 18.53 164 *ex* x 14 06 05.5
ZAA0 Zalesovo Array 19.97 24 *e* P **P 14 03 25.7 +0.2**
ZAA0 *e*S **S 14 07 05.3 +1.5**
ZALV Zalesovo Beam 19.97 24 P **P 14 03 25.8 +0.3**
comp=Z,23nm,0.3s,baz=224,slow=11,SNR=441
ZALV Zalesovo Beam 19.97 24 P **P 14 03 25.8 +0.3**
ZALV pmax pmax
comp=Z,23nm,0.3s
HYB Hyderabad 20.01 159 *i* P **P 14 03 28.5 +2.2**
HYB *e* 14 03 31.0
NVS Novosibirsk 20.24 21 ⇑ *i* P **P 14 03 29.0 +0.5**
NVS *e**PP 14 03 56.4
NVS *i* PPP 14 04 10.2
NVS *e*S **S 14 07 05.0 -4.2**
NVS pmax pmax
comp=Z,115nm,1.0s
NVS pmax pmax
comp=N,72nm,0.8s
NVS pmax pmax
comp=E,27nm,0.7s
NVS smax
comp=N,43nm,1.5s
NVS smax
comp=E,55nm,1.3s
SHL Shillong 20.76 116 *ex* **P 14 03 39.0 +4.7**
SHL *ex* x 14 07 11.0
KBD Kabd 20.96 257 *e* P **P 14 03 35.8 -0.6**
MIB Mutribah 20.97 259 *e* P **P 14 03 36.1 -0.4**
MIB AMb AMB 14 03 43.4
comp=Z,79nm,1.0s
QRN Al-Qurain 20.98 255 *e* P **P 14 03 35.6 -1.0**
QRN AMb AMB 14 03 39.9
comp=Z,49nm,0.9s
GNI Garni 21.04 288 *e* P **P 14 03 39.0 +1.8**
comp=Z,66nm,1.1s,mb4.9
GNI Garni 21.04 288 *d* *i* P **P 14 03 40.0 +2.8**
GNI pmax pmax
comp=Z,75nm,1.2s
MTA Mtatsminda 21.10 293 P **P 14 03 39.1 +1.3**
TBLG Delisi 21.14 293 P **P 14 03 39.8 +1.5**
RDF Al-Radifah 21.18 256 *e* P **P 14 03 38.2 -0.6**
RDF AMb AMB 14 03 41.8
comp=Z,44nm,0.9s,mb4.8
NAY Al-Naaiem 21.28 257 *e* P **P 14 03 38.9 -1.0**
NAY AMb AMB 14 03 43.3
comp=Z,18nm,0.7s,mb4.5
SVE Sverdlovsk 21.63 344 ⇓ *e* P **P 14 03 43.9 +0.6**
SVE *e*S **S 14 07 36.2 0.0**
SVE pmax pmax
comp=Z,58nm,1.4s,mb4.7
ARU Arti 21.77 341 *e* P **P 14 03 45.5 +0.7**
comp=Z,92nm,0.9s,mb5.1
ARU Arti 21.77 341 *c* *i* P **P 14 03 45.4 +0.6**
ARU *e* 14 04 08.0
ARU *e*PPP 14 04 22.9
ARU S **S 14 07 39.3 +0.4**
ARU SS 14 08 20.8
ARU pmax pmax
comp=Z,125nm,1.2s,mb5.1
ZEI Tsey 21.89 295 *e* P **P 14 03 47.1 +0.9**
ZEI pmax pmax
comp=Z,10.0nm,0.4s,mb4.5
ONI Oni 22.19 295 P **P 14 03 51.1 +1.7**
ONI S sP 14 04 30.4 +5.8
GTA Gaotai 22.79 74 ⇑ P **P 14 03 58.3 +2.8**
GTA pP 14 04 22.0
GTA sP sP 14 04 36.0 +5.0
GTA S **S 14 07 55.9 +0.1**
GTA sS sS 14 08 35.0 +0.2
GTA SS 14 08 47.0
GTA pmax pmax
comp=Z,20nm,0.5s,mb4.7
GTA pmax pmax
comp=Z,50nm,5.1s
KIV Kislovodsk 22.94 298 ⇓ *i* P **P 14 03 57.5 +0.6**
KIV *e**PP 14 04 24.6
KIV pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
ORY Orie 24.82 34 ⇓ *i* P **P 14 04 15.6 +1.7**
ORY *e* 14 04 52.8
SOKR Solikamsk 24.99 343 *c* *i* P **P 14 04 16.8 +1.4**
SOKR pmax pmax
comp=Z,40nm,1.3s,mb4.7
VRHR Novokhopersk 25.68 314 *e* P **P 14 04 22.3 +0.6**
MOY Mondy 26.10 45 *e* P **P 14 04 30.6 +5.1**
LZH Lanzhou 26.31 81 *e* P **P 14 04 34.6 +7.0**
LZH sP sP 14 05 11.5 +6.6
LZH pmax pmax
comp=Z,14nm,1.0s,mb4.3
ZAK Zakamensk 26.98 49 *e* P **P 14 04 33.7 +0.3**
ZAK pmax pmax
comp=Z,4.0nm,1.0s,mb3.9
VORD Divnogorie 27.00 313 *e* P **P 14 04 33.5 -0.1**
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.8s
VORD pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
VSR Storozhevoye 27.16 313 *e* P **P 14 04 34.7 -0.3**
VSR *e**SP sP 14 05 16.3 +3.9
VSR *e*S **S 14 08 59.3 -5.9**
VSR pmax pmax
comp=Z,1.0nm,0.4s,mb3.7
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,4.0nm,0.3s
VSR smax
comp=E,20nm,0.9s
VSR smax
comp=N,6.0nm,0.4s
VSR smax
comp=Z,4.0nm,0.4s
CD2 Chengdu 27.61 92 P **P 14 04 41.1 +1.8**
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.6
CD2 pmax pmax
comp=Z,80nm,5.6s
SONM Songino Array 28.30 55 P **P 14 04 47.1 +1.9**
comp=Z,2.5nm,0.7s,mb3.9,baz=263,slow=9.3,SNR=15
SONM PP PP 14 05 27.4 -24
comp=Z,2.3nm,0.9s,baz=259,slow=9.7,SNR=4.5
SONM Songino Array 28.30 55 P **P 14 04 47.1 +1.9**
SONM 14 05 27.4
SONM pmax pmax
comp=Z,3.0nm,0.7s
KMI Kunming 29.26 104 P **P 14 04 58.0 +4.0**
KMI pP pP 14 05 22.7 +4.2
KMI sP sP 14 05 35.5 +4.0
KMI PP PP 14 05 56.1 -5.9
KMI S **S 14 09 39.7 +1.0**
KMI sS sS 14 10 24.5 +2.9
KMI pmax pmax
comp=Z,7.0nm,0.9s,mb4.3
KMI pmax pmax
comp=Z,79nm,3.3s
KMI LR LR
comp=N,100nm,12.1s
KMI LR LR
comp=E,94nm,17.8s
KMI LR LR
comp=Z,59nm,12.3s
BRTR Keskin Array B 29.58 288 P **P 14 04 57.5 +0.9**
comp=Z,0.8nm,0.6s,mb3.5,baz=103,slow=9.3,SNR=4.4
BRTR PP PP 14 05 39.9 -25
comp=Z,2.9nm,0.7s,baz=95,slow=8.2,SNR=8.1
BRTR Keskin Array B 29.58 288 *i* P **P 14 05 00.8 +4.2**
MOS Moscow 29.82 321 *e* P **P 14 04 58.0 -0.5**
MOS *e* 14 05 38.8
OBN Obninsk 30.09 319 *e* P **P 14 05 01.1 +0.2**
comp=Z,24nm,0.7s,mb4.9
OBN Obninsk 30.09 319 *c* *i* P **P 14 05 01.3 +0.3**
OBN *i* *PP pP 14 05 27.4 +1.8
OBN *e* 14 06 02.1
OBN *e*S **S 14 09 49.0 -2.2**
OBN pmax pmax
comp=Z,28nm,0.6s,mb5.1
CMAR Chiang Mai Arr 30.30 119 P **P 14 05 04.0 +0.8**
comp=Z,2.6nm,0.8s,mb3.9,baz=308,slow=9.0,SNR=9.1
CMAR PP PP 14 05 51.4 -22
comp=Z,1.6nm,0.7s,baz=297,slow=9.0,SNR=4.5
HHC Hu-ho-hao-te 31.69 69 *e* P **P 14 05 16.7 +1.5**
HHC pP pP 14 05 41.2 +1.3
HHC sP sP 14 05 54.5 +1.6
HHC PP PP 14 06 24.5 -4.3
HHC *e*S **S 14 10 16.1 -0.4**
HHC PcS PcS 14 11 50.4 +1.5
HHC pmax pmax
comp=Z,17nm,0.7s,mb4.9
HHC pmax pmax
comp=Z,68nm,4.6s
GYA Guiyang 31.73 98 P **P 14 05 17.8 +2.0**
GYA pP pP 14 05 44.0 +3.5
GYA sP sP 14 05 57.6 +4.2
GYA PP PP 14 06 26.4 -3.1
GYA PcP PcP 14 08 06.8 +2.1
GYA S **S 14 10 17.3 -0.1**
GYA sS sS 14 11 04.2 +3.8
GYA ScP ScP 14 11 38.9 +1.2
GYA PcS PcS 14 11 51.2 +1.7
GYA ScS ScS 14 15 35.0 -1.2
GYA pmax pmax
comp=Z,20nm,0.8s,mb4.9
GYA pmax pmax
comp=Z,110nm,4.8s
ENH Enshi 32.46 90 *e* P **P 14 05 20.9 -1.2**
AKASG Malin Array Be 33.10 309 P **P 14 05 27.2 -0.2**
comp=Z,8.3nm,0.5s,mb4.9,baz=80,slow=7.5,SNR=34
AKASG Malin Array Be 33.10 309 *i* P **P 14 05 27.2 -0.2**
AKASG pmax pmax
comp=Z,8.0nm,0.5s
AKBB Malin Array Si 33.10 309 *e* P **P 14 05 27.0 -0.4**
KIEV Kiev 33.11 309 *e* P **P 14 05 27.1 -0.4**
comp=Z,12nm,0.6s,mb4.9
KIEV Kiev 33.11 309 *e* P **P 14 05 27.1 -0.4**
KIEV pmax pmax
comp=Z,12nm,0.6s,mb4.9
MLR Muntele Rosu 34.93 299 P **P 14 05 43.8 +0.5**
comp=Z,10.0nm,0.8s,mb4.7,baz=48,slow=1.8,SNR=8.3
MLR Muntele Rosu 34.93 299 P **P 14 05 43.8 +0.5**
MLR pmax pmax
comp=Z,10.0nm,0.8s
MLR Muntele Rosu 34.93 299 ‖ *i* P **P 14 05 46.2 +2.9**
BJI Beijing 35.28 70 P PcP 14 08 14.5 0.0
BJI pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
BJI Beijing 35.28 70 P **P 14 05 46.1 -0.3**
BJI pP pP 14 06 11.3 -0.1
BJI sP sP 14 06 24.2 0.0
BJI PP PP 14 07 06.2 -2.3
BJI S **S 14 11 11.5 -0.5**
BJI SS SS 14 13 47.7 -2.1
BJI pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
BJI pmax pmax
comp=Z,38nm,3.7s
BJI LR LR
comp=N,190nm,10.6s
BJI LR LR
comp=E,180nm,9.2s
BJI LR LR
comp=Z,25nm,28.2s
BUR08 Bucovina Ar. S 35.45 303 P **P 14 05 48.3 +0.6**
JOF Joensuu 36.02 330 *e* P **P 14 05 52.3 -0.1**
JOF pmax pmax
comp=Z,32nm,0.4s,mb5.6
JOF Joensuu 36.02 330 *ep* **P 14 05 52.3 -0.1**
comp=Z,32nm,0.4s,mb5.6
SUW Suwalki 37.27 314 *e* P **P 14 06 02.9 -0.2**
comp=Z,32nm,0.8s,mb5.3
SUW Suwalki 37.27 314 *e* P **P 14 06 02.9 -0.2**
SUW pmax pmax
comp=Z,32nm,0.8s,mb5.3
FINES FINESS Array B 37.64 326 P **P 14 06 06.5 +0.4**
comp=Z,21nm,0.7s,mb5.1,baz=114,slow=8.9,SNR=75
FINES LR LR 14 22 24.6
comp=Z,33nm,21.0s,baz=358,slow=37
FINES FINESS Array B 37.64 326 P **P 14 06 06.5 +0.4**
FINES pmax pmax
comp=Z,21nm,0.7s
FINES MLR MLR
comp=Z,33nm,21.0s
KAF Kangasniemi 37.78 327 *e* P **P 14 06 06.7 -0.6**
KAF pmax pmax
comp=Z,13nm,0.7s,mb4.9
KAF Kangasniemi 37.78 327 *ep* **P 14 06 06.7 -0.6**
comp=Z,13nm,0.7s,mb4.9,baz=111,slow=8.5
APA Apatity 37.78 337 ⇑ *i* P **P 14 06 08.0 +0.8**
APA *i* pP 14 06 38.0 +5.6
APA pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
APA MLR MLR
comp=Z,200nm,18.0s
NIE Niedzica 38.72 306 *e* P **P 14 06 17.1 +1.8**
OJC Ojcow 39.06 307 *e* P **P 14 06 18.6 +0.5**
NJ2 Nanjing 39.38 82 *e* P **P 14 06 23.3 +2.3**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
KEV Kevo 40.94 338 *e* P **P 14 06 33.2 -0.2**
KEV pmax pmax
comp=Z,21nm,0.8s,mb5.0
KEV Kevo 40.94 338 *ep* **P 14 06 33.2 -0.2**
comp=Z,21nm,0.8s,mb5.0
ARCES ARCESS Array B 41.29 338 P **P 14 06 37.0 +0.7**
ARCES ARCESS Array B 41.29 338 P **P 14 06 37.0 +0.7**
comp=Z,24nm,0.7s,mb5.1,baz=113,slow=8.9,SNR=121
ARCES ARCESS Array B 41.29 338 P **P 14 06 37.0 +0.7**
ARCES pmax pmax
comp=Z,24nm,0.7s
ARE0 ARCESS Array S 41.29 338 *e* P **P 14 06 36.4 +0.1**
KSP Ksiaz 41.29 308 *e* P **P 14 06 37.4 +0.8**
CN2 Changchun 41.56 62 *e* P **P 14 06 39.0 +0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
BRG Berggiesshubel 42.78 308 *e* P **P 14 06 49.4 +0.8**
comp=Z,12nm,1.3s,mb4.5
BRG *e* 14 07 30.0
comp=Z,9.5nm,1.4s
BRG Berggiesshubel 42.78 308 *e* P **P 14 06 49.4 +0.8**
BRG *e* 14 07 30.0
BRG pmax pmax
comp=Z,7.0nm,1.3s,mb4.2
BRG pmax pmax
comp=Z,6.0nm,1.4s,mb4.1
CUC Castrocucco 43.05 292 *e* P **P 14 06 50.8 -0.1**
comp=Z,5.7nm,0.7s,mb4.4
CLL Collm 43.35 309 ⇑ *i* P **P 14 06 52.9 -0.3**
comp=Z,7.0nm,1.1s,mb4.3
CLL *i* PcP PcP 14 08 39.9 +0.1
CLL Collm 43.35 309 ⇑ *i* P **P 14 06 52.9 -0.3**
CLL *i* 14 08 39.9
CLL pmax pmax
comp=Z,7.0nm,1.1s,mb4.3
YAK Yakutsk 43.99 35 *e* P **P 14 06 57.5 -0.7**
YAK pmax pmax
comp=Z,14nm,0.8s,mb4.7
NB2 NORSAR Subarra 44.54 323 P **P 14 07 02.2 -0.3**
NB2 NORSAR Subarra 44.54 323 P **P 14 07 02.2 -0.3**
NOA NORSAR Array B 44.54 323 P **P 14 07 02.2 -0.3**
NOA PP PP 14 08 41.8 -6.5
NOA NORSAR Array B 44.54 323 P **P 14 07 02.2 -0.3**
comp=Z,43nm,0.7s,mb5.3,baz=96,slow=7.8,SNR=137
NOA PP PP 14 08 41.8 -6.5
comp=Z,2.4nm,0.7s,baz=122,slow=6.9,SNR=4.2
NOA NORSAR Array B 44.54 323 P **P 14 07 02.2 -0.3**
NOA 14 08 41.8
NOA pmax pmax
comp=Z,43nm,0.7s
NAO01 NORSAR Array S 44.68 323 *e* P **P 14 07 03.2 -0.4**
KSRS Korea Array 44.81 71 P **P 14 07 05.7 +0.7**
comp=Z,2.6nm,0.8s,mb4.0,baz=283,slow=6.4,SNR=12
KSRS PcP PcP 14 08 44.1 -1.0
comp=Z,1.6nm,0.9s,baz=290,slow=3.5,SNR=4.5
KSRS Korea Array 44.81 71 P **P 14 07 05.7 +0.7**
KSRS 14 08 44.2
KSRS pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
TIXI Tiksi 45.83 22 *e* P **P 14 07 12.6 0.0**
comp=Z,14nm,1.2s,mb4.6
TIXI Tiksi 45.83 22 *e* P **P 14 07 12.8 +0.2**
TIXI pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
VLA Vladivostok 46.29 62 ⇑ *i* P **P 14 07 17.4 +0.8**
VLA pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
CDF Champ du Feu 47.37 306 *e* P **P 14 07 24.9 0.0**
PGF Pioggiola 47.42 297 *e* P **P 14 07 24.9 -0.6**
HINF Hinteralfeld 47.75 305 *e* P **P 14 07 27.8 -0.1**
HAU Haudompre 48.05 305 *e* P **P 14 07 29.9 -0.3**
SBF Sospel 48.21 300 *e* P **P 14 07 30.6 -0.9**
LPG La Plagne 48.30 302 *e* P **P 14 07 32.2 0.0**
LPL La Plagne 48.31 302 *e* P **P 14 07 32.3 0.0**
MBDF Montbardon 48.47 301 *e* P **P 14 07 33.1 -0.4**
comp=Z,8.3nm,0.5s,mb4.5
MBDF Montbardon 48.47 301 *e* P **P 14 07 33.1 -0.4**
comp=Z,4.2nm,0.5s,mb4.5
MBDF Montbardon 48.47 301 *e* P **P 14 07 33.1 -0.4**
MBDF pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
CABF La Chapelle 48.51 303 *e* P **P 14 07 34.3 +0.5**
GIVF Givet 48.65 308 *e* P **P 14 07 34.7 -0.1**
KBS Kingsbay 48.74 347 *e* P **P 14 07 36.0 +0.8**
comp=Z,34nm,0.9s,mb5.7
KBS Kingsbay 48.74 347 *c* *i* P **P 14 07 35.9 +0.8**
KBS pmax pmax
comp=Z,50nm,1.2s,mb5.3
MEZF Maizieres J'vi 48.80 306 *e* P **P 14 07 36.0 0.0**
ORIF Oris-en-Rattie 49.04 301 *e* P **P 14 07 37.0 -0.8**
comp=Z,3.2nm,0.5s,mb4.2
ORIF Oris-en-Rattie 49.04 301 *e* P **P 14 07 37.0 -0.8**
comp=Z,1.6nm,0.5s,mb4.2
ORIF Oris-en-Rattie 49.04 301 *e* P **P 14 07 37.0 -0.8**
ORIF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
BAIF Baives 49.05 308 *e* P **P 14 07 37.7 -0.1**
comp=Z,6.4nm,0.6s,mb4.5
BAIF Baives 49.05 308 *e* P **P 14 07 37.7 -0.1**
comp=Z,3.2nm,0.6s,mb4.4
BAIF Baives 49.05 308 *e* P **P 14 07 37.7 -0.1**
BAIF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
VIVF Saint-Julien-l 49.88 301 *e* P **P 14 07 44.1 -0.1**
comp=Z,1.5nm,0.8s,mb4.7
VIVF Saint-Julien-l 49.88 301 *e* P **P 14 07 44.1 -0.1**
comp=Z,7.4nm,0.8s,mb4.7
VIVF Saint-Julien-l 49.88 301 *e* P **P 14 07 44.1 -0.1**
VIVF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
SMF Signal de Mont 50.01 304 *e* P **P 14 07 43.4 -1.8**
AVF Avril sur Loir 50.30 304 *e* P **P 14 07 45.9 -1.5**
LASF Ste Croix 50.65 301 *e* P **P 14 07 49.9 -0.1**
BGF Bois d'Agland 50.70 304 *e* P **P 14 07 50.3 0.0**
comp=Z,4.9nm,0.5s,mb4.5
BGF Bois d'Agland 50.70 304 *e* P **P 14 07 50.3 0.0**
comp=Z,2.5nm,0.5s,mb4.5
BGF Bois d'Agland 50.70 304 *e* P **P 14 07 50.3 0.0**
BGF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
TCF Toulx Ste Croi 51.19 304 *e* P **P 14 07 54.0 0.0**
comp=Z,4.1nm,0.6s,mb4.3
TCF Toulx Ste Croi 51.19 304 *e* P **P 14 07 54.0 0.0**
comp=Z,2.0nm,0.6s,mb4.3
TCF Toulx Ste Croi 51.19 304 *e* P **P 14 07 54.0 0.0**
TCF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
MTLF Montolieu 52.00 300 *e* P **P 14 08 00.1 0.0**
comp=Z,3.7nm,0.6s,mb4.3
MTLF Montolieu 52.00 300 *e* P **P 14 08 00.1 0.0**
comp=Z,1.9nm,0.6s,mb4.3
MTLF Montolieu 52.00 300 *e* P **P 14 08 00.1 0.0**
MTLF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
LDF La Druitiere 52.13 307 *e* P **P 14 08 00.0 -1.0**
comp=Z,3.4nm,0.4s,mb4.4
LDF La Druitiere 52.13 307 *e* P **P 14 08 00.0 -1.0**
comp=Z,1.7nm,0.4s,mb4.4
LDF La Druitiere 52.13 307 *e* P **P 14 08 00.0 -1.0**
LDF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
FLN La Foliniere 52.32 307 *e* P **P 14 08 02.4 0.0**
comp=Z,18nm,0.9s,mb4.8
FLN La Foliniere 52.32 307 *e* P **P 14 08 02.4 0.0**
comp=Z,8.8nm,0.9s,mb4.8
FLN La Foliniere 52.32 307 *e* P **P 14 08 02.4 0.0**
FLN pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
GRR Gorron 52.66 307 *e* P **P 14 08 04.5 -0.4**
MFF Saint Martin d 52.68 305 *e* P **P 14 08 05.2 +0.1**
MJAR Matsushiro Arr 52.89 68 P **P 14 08 07.6 +0.8**
comp=Z,3.3nm,0.9s,mb4.4,baz=283,slow=9.8,SNR=8.5
MJAR Matsushiro Arr 52.89 68 P **P 14 08 07.6 +0.8**
MJAR pmax pmax
comp=Z,3.0nm,0.9s
SGMF Saint Gilles 53.79 307 *e* P **P 14 08 13.0 -0.2**
ETSF Etsaut 54.07 300 *e* P **P 14 08 14.9 -0.4**
comp=Z,8.3nm,0.7s,mb4.6
ETSF Etsaut 54.07 300 *e* P **P 14 08 14.9 -0.4**
comp=Z,4.2nm,0.6s,mb4.7
ETSF Etsaut 54.07 300 *e* P **P 14 08 14.9 -0.4**
ETSF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
ROSF Rostrenen 54.22 308 *e* P **P 14 08 16.7 +0.4**
SEY Seymchan 54.44 34 ⇑ *e* P **P 14 08 17.1 -0.6**
DAV Davao City (W) 57.45 107 LR LR 14 35 23.5
comp=Z,3μm,21.7s,baz=228,slow=38
ESDC Sonseca Array 57.61 298 P **P 14 08 38.4 -2.2**
comp=Z,0.8nm,0.6s,mb4.0,baz=53,slow=7.3,SNR=4.8
SUMG Summit 61.20 341 *e* P **P 14 09 05.6 +0.9**
comp=Z,27nm,1.0s,mb5.2
SUMG Summit 61.20 341 *i* P **P 14 09 05.5 +0.7**
comp=Z,21nm,1.0s,mb5.1
SUMG *i* 14 09 48.0
TORD Torodi Ar. Bea 65.83 269 P **P 14 09 33.7 -2.4**
TORD Torodi Ar. Bea 65.83 269 P **P 14 09 33.7 -2.4**
comp=Z,3.9nm,0.5s,mb4.5,baz=50,slow=5.5,SNR=41
INK Inuvik 73.99 9 *e* P **P 14 10 25.3 +0.2**
COLA College 74.55 16 *e* P **P 14 10 28.2 -0.3**
comp=Z,7.7nm,0.9s,mb4.4
COLA College 74.55 16 *e* P **P 14 10 28.2 -0.2**
COLA pmax pmax
comp=Z,8.0nm,0.9s,mb4.5

ILAR	**Eielson Array**	**74.85**	**16**	P	**P**	**14 10 29.6**	**-0.6**	
	comp=Z,2.5nm,1.0s,mb3.9,baz=317,slow=4.9,SNR=25							
ILAR				pP	pP	14 11 02.6	+4.2	
	comp=Z,1.0nm,1.0s,baz=355,slow=4.0,SNR=2.9							
ILAR				PP	PP	14 13 19.0	+0.7	
	comp=Z,1.1nm,1.1s,baz=321,slow=7.8,SNR=4.3							
LIC	**Lamto**	**75.20**	**267**	*e*P	**P**	**14 10 32.9**	**-0.2**	
	comp=Z,31nm,1.0s,mb4.7							
LIC	**Lamto**	**75.20**	**267**	*e*P	**P**	**14 10 32.9**	**-0.2**	
	comp=Z,15nm,1.0s,mb4.7							
DAWY	**Dawson**	**77.00**	**13**	*e*P	**P**	**14 10 42.2**	**-0.2**	
PMR	**Palmer**	**77.03**	**18**	P	**P**	**14 10 40.5**	**-2.2**	
	comp=Z,3.0nm,0.9s,mb4.0							
PMR	**Palmer**	**77.03**	**18**	P	P	**14 10 40.5**	**-2.1**	
PMR				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb4.0							
BOSA	**Boshof**	**77.74**	**220**	P	**P**	**14 10 46.3**	**-0.6**	
	comp=Z,6.1nm,0.8s,mb4.4,baz=64,slow=4.9,SNR=6.7							
BOSA				pP	pP	14 11 21.7	+6.4	
	comp=Z,4.1nm,0.9s,baz=31,slow=5.5,SNR=2.6							
BOSA	**Boshof**	**77.74**	**220**	P	**P**	**14 10 46.3**	**-0.6**	
BOSA				*PP	pP	14 11 21.7	+6.3	
BOSA				pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.3							
YKA	**Yellowknife Ar**	**81.35**	**3**	P	**P**	**14 11 06.2**	**+0.1**	
	comp=Z,4.6nm,0.8s,mb4.4,baz=351,slow=5.7,SNR=11							
YKA				pP	pP	14 11 40.6	+5.9	
	comp=Z,2.0nm,0.7s,baz=349,slow=5.5,SNR=3.0							
YKA	**Yellowknife Ar**	**81.35**	**3**	P	**P**	**14 11 06.2**	**+0.1**	
YKA				*PP	pP	14 11 40.6	+5.9	
YKA				pmax	pmax			
	comp=Z,5.0nm,0.8s							
ASAR	**Alice Springs**	**84.10**	**125**	P	**P**	**14 11 20.0**	**-0.8**	
	comp=Z,2.7nm,0.7s,mb4.2,baz=311,slow=5.1,SNR=37							
ASAR	**Alice Springs**	**84.10**	**125**	P	**P**	**14 11 20.0**	**-0.8**	
ASAR				pmax	pmax			
	comp=Z,3.0nm,0.7s							
FFC	**Flin Flon**	**89.06**	**356**	*e*P	**P**	**14 11 44.4**	**-0.2**	
	comp=Z,2.5nm,0.9s,mb4.2							
FFC	**Flin Flon**	**89.06**	**356**	*i* P	**P**	**14 11 45.5**	**+0.9**	

*IDC **08** 14:00:13.4±3.4,3˚.86S×100˚.24E,h0km,mb3.8/5, mb1 3.9/5,mb1mx3.6/21,mbtmp3.8/5,Error ellipse: s-maj=144.9km s-min=24.1km az=59.0*
*DJA **08** 14:00:13,4˚.25S×100˚.62E,h30km,MLv4.1/13*
*NEIC **08** 14:00:16.9±2.5,4˚.02S×101˚.08E,h35km,mb4.3/1,Error ellipse: s-maj=96.9km s-min=14.3km az=56.0*
ISC 08 14:00:12.3±2.6,4˚.15S±0˚.07×100˚.68E±0˚.07,h13km±19km, n24,σ0°93/26,mb3.9/6,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.97**	**75**	P	**Pn**	**14 00 45.6**	**+0.1**
KSI				S	**Sn**	**14 01 12.5**	**+2.5**
KRJI	**Kerinci**	**2.19**	**21**	P	**Pn**	**14 00 48.6**	**+0.1**
MNAI	**Manna**	**2.27**	**95**	P	**Pn**	**14 00 49.7**	**0.0**
PDSI	**Padang**	**3.23**	**356**	P	**Pn**	**14 01 02.1**	**-0.7**
PDSI				S	**Sn**	**14 01 36.1**	**-5.1**
SISI	**Saibi**	**3.23**	**330**	P	**Pn**	**14 01 02.7**	**-0.1**
SDSI	**Sungai Dareh**	**3.29**	**13**	P	**Pn**	**14 01 03.4**	**-0.2**
LWLI	**Liwa**	**3.47**	**104**	P	**Pn**	**14 01 06.5**	**+0.4**
MDSI	**Maura Dua**	**3.50**	**96**	P	**Pn**	**14 01 06.6**	**+0.1**
PPI	**Padang Panjang**	**3.68**	**356**	P	**Pn**	**14 01 09.6**	**+0.5**
KASI	**Kota Agung**	**4.04**	**110**	P	**Pn**	**14 01 13.8**	**-0.1**
KASI				S	**Sn**	**14 02 01.5**	**+0.4**
KLSI		**4.07**	**98**	P	**Pn**	**14 01 15.1**	**+0.7**
RGRI	**Rengat**	**4.12**	**24**	S	**Sn**	**14 02 00.6**	**-2.7**
MYKOM	**Kota Tinggi**	**6.70**	**28**	P	**Pn**	**14 01 50.8**	**+0.3**
	0.1nm26nm,1.2s							
CISI	**Cisompet, Garu**	**7.86**	**116**	P	**Pn**	**14 02 04.3**	**-2.1**
	0.3nm49nm,1.6s							
TPTI		**8.15**	**335**	P	**Pn**	**14 02 11.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**22.53**	**356**	P	**P**	**14 05 12.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**22.53**	**356**	P	**P**	**14 05 12.7**	**+0.5**
	1.4nm,0.6s,mb3.6,baz=180,slow=7.1,SNR=5.2							
WRAB	**Tennant Creek**	**36.35**	**118**	P	**P**	**14 07 15.6**	**-0.9**
	1.9nm,0.5s,mb4.3							
WB2	**Warramunga Arr**	**36.36**	**118**	*e*P	**P**	**14 07 15.1**	**-1.4**
ASAR	**Alice Springs**	**37.46**	**124**	P	**P**	**14 07 34.0**	**+8.1**
	0.4nm,0.5s,mb3.5,baz=301,slow=7.3,SNR=14							
SONM	**Songino Array**	**52.01**	**5**	P	**P**	**14 09 22.1**	**+0.7**
	1.1nm,0.5s,mb4.0,baz=185,slow=9.5,SNR=5.8							
MKAR	**Makanchi Array**	**53.27**	**344**	P	**P**	**14 09 31.9**	**+1.1**
	0.4nm,0.3s,mb3.8,baz=162,slow=9.0,SNR=4.8							
ZALV	**Zalesovo Beam**	**59.40**	**349**	P	**P**	**14 10 14.6**	**+0.2**
	0.7nm,0.3s,mb4.1,baz=165,slow=6.0,SNR=3.3							
TXAR	**Lajitas Array**	**145.95**	**40**	PKPbc	PKPbc	14 19 53.9	+1.4
	1.0nm,0.9s,baz=245,slow=1.8,SNR=7.9							

*NEIC **08** 14:06:32.0,35˚.90N×22˚.28E,h5km,ML3.3(ATH),After ATH.*
*ATH **08** 14:06:32.0,35˚.90N×22˚.28E,h5km±2km,MD3.7/5,ML3.3*
*ISCJB **08** 14:06:33.5±0.8,35˚.93N±0˚.04×22˚.29E±0˚.05,h10km,Error ellipse: s-maj=7.4km s-min=3.9km az=38.5*
*THE **08** 14:06:33.8,35˚.99N×22˚.24E,h1km±1km,ML3.3/2,Error ellipse: s-maj=3.0km s-min=0.9km az=224.0*
*CSEM **08** 14:06:35.0±0.7,35˚.97N×22˚.38E,h2km,MD3.7,Error ellipse: s-maj=14.8km s-min=7.6km az=34.0*
ISC 08 14:06:33.4±0.8,35˚.92N±0˚.04×22˚.24E±0˚.05,h10km,n65, σ1°27/91,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KYTH	**Kithira**	**0.74**	**61**	*e*Pb	**Pg**	**14 06 46.3**	**-1.4**
KYTH	**Kithira**	**0.74**	**61**	*e*PB	**Pg**	**14 06 46.3**	**-1.4**
KYTH	**Kithira**	**0.74**	**61**	*e*Pb	**Pg**	**14 06 46.3**	**-1.4**
VLI	**Veliai**	**0.98**	**35**	*e*Pb	**Pg**	**14 06 50.8**	**-1.4**
VLI				*e*Sb	**Sg**	**14 07 04.5**	**-0.4**
VLI	**Veliai**	**0.98**	**35**	*e*PB	**Pg**	**14 06 50.8**	**-1.4**
VLI				*e*SB	**Sg**	**14 07 04.5**	**-0.4**
VLI	**Veliai**	**0.98**	**35**	*e*Pb	**Pg**	**14 06 50.8**	**-1.4**
VLI				*e*Sb	**Sg**	**14 07 04.5**	**-0.4**
PYL	**PYLOS**	**1.05**	**338**	*e*PN	**Pg**	**14 06 52.5**	**-1.1**
PYL				*e*SB	**Sb**	**14 07 08.2**	**+0.7**
PYL	**PYLOS**	**1.05**	**338**	P	**Pg**	**14 06 52.5**	**-1.1**
PYL				S	**Sg**	**14 07 06.7**	**-0.6**
PYL	**PYLOS**	**1.05**	**338**	P	**Pg**	**14 06 52.5**	**-1.1**
PYL				S	**Sg**	**14 07 06.7**	**-0.6**
PYL				*e*Sb	**Sb**	**14 07 08.2**	**+0.7**
ITM	**Ithomi**	**1.28**	**349**	*e*Pg	**Pn**	**14 06 56.4**	**-0.9**
ITM				*e*Sb	**Sb**	**14 07 15.4**	**+1.3**
ITM	**Ithomi**	**1.28**	**349**	*e*PG	**Pn**	**14 06 56.4**	**-0.9**
ITM				*e*SB	**Sb**	**14 07 15.4**	**+1.3**
ITM	**Ithomi**	**1.28**	**349**	P	**Pn**	**14 06 56.3**	**-1.1**
ITM	**Ithomi**	**1.28**	**349**	P	**Pn**	**14 06 56.3**	**-1.1**
ITM				*e*Sb	**Sb**	**14 07 15.4**	**+1.3**
VLX	**Vlachokerasia**	**1.45**	**4**	*e*PG	**Pn**	**14 06 59.4**	**-0.3**
VLX				*e*SB	**Sb**	**14 07 19.9**	**+0.9**
VLX	**Vlachokerasia**	**1.45**	**4**	P	**Pn**	**14 06 59.1**	**-0.6**
VLX				S	**Sn**	**14 07 20.0**	**+1.2**
VLX	**Vlachokerasia**	**1.45**	**4**	P	**Pn**	**14 06 59.1**	**-0.6**
VLX				S	**Sn**	**14 07 20.0**	**+1.2**
KARN	**Karanos**	**1.46**	**110**	P	**Pg**	**14 07 00.8**	**-0.6**
KARN				S	**Sg**	**14 07 22.1**	**+1.7**
KARN	**Karanos**	**1.46**	**110**	P	**Pg**	**14 07 00.8**	**-0.6**
KARN				S	**Sg**	**14 07 22.1**	**+1.7**
DID	**Didima**	**1.77**	**27**	*e*PG	**Pg**	**14 07 05.1**	**-2.3**
DID				*e*SN	**Sg**	**14 07 29.8**	**-0.7**
DID	**Didima**	**1.77**	**27**	P	**Pn**	**14 07 04.0**	**-0.1**
DID				S	**Sn**	**14 07 27.8**	**+1.1**
DID	**Didima**	**1.77**	**27**	P	**Pn**	**14 07 04.0**	**-0.1**
DID				S	**Sn**	**14 07 27.8**	**+1.1**
DID				*e*Sn	**Sg**	**14 07 29.8**	**-0.7**
GUR	**Goura**	**2.01**	**2**	*e*PG	**Pb**	**14 07 09.6**	**-0.5**
GUR	**Goura**	**2.01**	**2**	P	**Pb**	**14 07 09.4**	**-0.7**
GUR	**Goura**	**2.01**	**2**	P	**Pb**	**14 07 09.4**	**-0.7**
NAIG	**Nisos Aigina**	**2.09**	**28**	*e*Pg	**Pb**	**14 07 10.8**	**-0.6**
NAIG	**Nisos Aigina**	**2.09**	**28**	*e*PG	**Pb**	**14 07 10.8**	**-0.6**
LTK	**Loutraki**	**2.18**	**15**	*e*PN	**Pb**	**14 07 11.8**	**-1.1**
LTK	**Loutraki**	**2.18**	**15**	P	**Pb**	**14 07 11.9**	**-1.0**
LTK	**Loutraki**	**2.18**	**15**	*e*Pn	**Pb**	**14 07 11.8**	**-1.1**
RLS	**Riolos of Patr**	**2.22**	**344**	*e*Pn	**Pb**	**14 07 13.0**	**-0.6**
RLS				*e*Sn	**Sb**	**14 07 42.7**	**+1.5**
RLS	**Riolos of Patr**	**2.22**	**344**	*e*PN	**Pb**	**14 07 13.0**	**-0.6**
RLS				*e*SN	**Sb**	**14 07 42.7**	**+1.5**
RLS	**Riolos of Patr**	**2.22**	**344**	*e*Pn	**Pb**	**14 07 13.0**	**-0.6**
RLS				*e*Sn	**Sb**	**14 07 42.7**	**+1.5**
VLY	**Voula,Athens**	**2.30**	**32**	*e*PN	**Pb**	**14 07 12.9**	**-2.0**
VLY	**Voula,Athens**	**2.30**	**32**	*e*PN	**Pb**	**14 07 12.9**	**-2.0**
VLY	**Voula,Athens**	**2.30**	**32**	*e*Pn	**Pb**	**14 07 12.9**	**-2.0**
LAKA	**Lakka**	**2.33**	**355**	P	**Pb**	**14 07 14.8**	**-0.6**
LAKA	**Lakka**	**2.33**	**355**	P	**Pb**	**14 07 14.8**	**-0.6**
ATH	**Athens Observa**	**2.37**	**30**	*e*Pn	**Pb**	**14 07 14.5**	**-1.6**
ATH	**Athens Observa**	**2.37**	**30**	*e*PN	**Pb**	**14 07 14.5**	**-1.6**
ATH	**Athens Observa**	**2.37**	**30**	*e*Pn	**Pb**	**14 07 14.5**	**-1.6**
TRIZ	**Trizonia**	**2.44**	**357**	P	**Pb**	**14 07 16.3**	**-1.1**
TRIZ	**Trizonia**	**2.44**	**357**	P	**Pb**	**14 07 16.3**	**-1.1**
KALE	**Kalithea**	**2.47**	**358**	P	**Pb**	**14 07 18.4**	**+0.6**
KALE	**Kalithea**	**2.47**	**358**	P	**Pb**	**14 07 18.4**	**+0.6**
PTL	**Penteli**	**2.49**	**31**	*e*Pn	**Pn**	**14 07 15.3**	**+1.3**
PTL	**Penteli**	**2.49**	**31**	*e*PN	**Pn**	**14 07 15.3**	**+1.3**
PTL	**Penteli**	**2.49**	**31**	*e*Pn	**Pn**	**14 07 15.3**	**+1.3**
EFP	**Efpalio**	**2.52**	**354**	*e*PN	**Pn**	**14 07 16.8**	**+2.5**
EFP	**Efpalio**	**2.52**	**354**	*e*Pn	**Pn**	**14 07 16.8**	**+2.5**
THR5	**Thira Island,**	**2.56**	**78**	P	**Pn**	**14 07 15.3**	**+0.3**
THR5	**Thira Island,**	**2.56**	**78**	P	**Pn**	**14 07 15.3**	**+0.3**
VLS	**Valsamata**	**2.61**	**330**	*e*Pn	**Pn**	**14 07 18.2**	**+2.6**
VLS	**Valsamata**	**2.61**	**330**	*e*PN	**Pn**	**14 07 18.2**	**+2.6**
VLS	**Valsamata**	**2.61**	**330**	P	**Pn**	**14 07 16.2**	**+0.6**
VLS				S	**Sn**	**14 07 47.8**	**+0.4**
VLS	**Valsamata**	**2.61**	**330**	P	**Pn**	**14 07 16.2**	**+0.6**
VLS	**Valsamata**	**2.61**	**330**	*e*Pn	**Pn**	**14 07 18.2**	**+2.6**
VLS				S	**Sn**	**14 07 47.8**	**+0.4**
APE	**Apeiranthos**	**2.89**	**66**	P	**Pn**	**14 07 20.5**	**+1.1**
APE				S	**Sn**	**14 07 55.6**	**+1.4**
APE	**Apeiranthos**	**2.89**	**66**	P	**Pn**	**14 07 20.5**	**+1.1**
APE				S	**Sn**	**14 07 55.6**	**+1.4**
EVR	**Evrytania**	**3.01**	**354**	*e*Pn	**Pn**	**14 07 24.1**	**+3.0**
EVR	**Evrytania**	**3.01**	**354**	*e*PN	**Pn**	**14 07 24.1**	**+3.0**
EVR	**Evrytania**	**3.01**	**354**	*e*Pn	**Pn**	**14 07 24.1**	**+3.0**
AGG	**Agios Georgios**	**3.10**	**1**	*e*Pn	**Pn**	**14 07 24.9**	**+2.6**
AGG	**Agios Georgios**	**3.10**	**1**	*e*PN	**Pn**	**14 07 24.9**	**+2.6**
AGG	**Agios Georgios**	**3.10**	**1**	*e*Pn	**Pn**	**14 07 24.9**	**+2.6**
TIP	**Timpagrande**	**5.43**	**308**	*e*Pn	**Pn**	**14 07 52.4**	**-2.1**

*CSEM **08** 14:07:13.6,60˚.71N×5˚.48E,h0km,ML1.1,After BER*
BER 08 14:07:13.6±2.5,60.71N×5.48E,h0km±11km,MD1.3, ML1.1,Southern Norway

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASK	**Askoy**	**0.27**	**212**	*e*P	Pg	14 07 17.1	-1.6
ASK				*e*S	Sg	14 07 22.0	-0.1
ASK				AML	AML	14 07 22.8	
	comp=Z,11nm,0.1s						
SUE	**Sulen**	**0.49**	**315**	*e*P	Pg	14 07 22.5	-0.6
SUE				*e*S	Sg	14 07 30.4	+0.9
SUE				AML	AML	14 07 31.2	
	comp=Z,9.2nm,0.6s						
SUE	**Sulen**	**0.49**	**315**	*e*P	Pg	14 07 22.5	-0.6
SUE				*e*S	Sg	14 07 30.4	+0.9
SUE	**Sulen**	**0.49**	**315**	*e*P	Pg	14 07 22.5	-0.5
	SNR=90						
SUE				*e*S	Sg	14 07 30.4	+1.0
	comp=Z,9.2nm,0.6s,SNR=90						
HYA	**Hoyanger**	**0.57**	**37**	*e*P	Pg	14 07 23.9	-0.7
HYA				*e*S	Sg	14 07 31.9	-0.1
HYA				AML	AML	14 07 35.5	
	comp=Z,5.6nm,0.1s						
HYA	**Hoyanger**	**0.57**	**37**	*e*P	Pg	14 07 23.9	-0.7
HYA				*e*S	Sg	14 07 31.9	-0.1
HYA	**Hoyanger**	**0.57**	**37**	*e*P	Pg	14 07 23.9	-0.7
	SNR=90						
HYA				*e*S	Sg	14 07 31.9	-0.1
	comp=Z,5.6nm,0.1s,SNR=90						
FOO	**Floro**	**0.92**	**347**	*e*P	Pg	14 07 29.3	-1.8
FOO				*e*S	Sg	14 07 41.1	-1.9
FOO				AML	AML	14 07 42.7	
	comp=Z,18nm,0.5s						
FOO	**Floro**	**0.92**	**347**	*e*P	Pg	14 07 29.3	-1.8
FOO				*e*S	Sg	14 07 41.1	-1.9
FOO	**Floro**	**0.92**	**347**	*e*P	Pg	14 07 29.3	-1.8
	SNR=90						
FOO				*e*S	Sg	14 07 41.1	-1.9
	comp=Z,18nm,0.5s,SNR=90						
ODD1	**Odda**	**0.98**	**144**	*e*P	Pg	14 07 31.4	-1.0
ODD1				*e*S	Sg	14 07 44.1	-1.1
ODD1				AML	AML	14 07 48.1	
	comp=Z,6.1nm,0.1s						
ODD1	**Odda**	**0.98**	**144**	*e*P	Pg	14 07 31.4	-1.0
	SNR=90						
ODD1				*e*S	Sg	14 07 44.1	-1.1
	comp=Z,6.1nm,0.1s,SNR=90						
BLS5	**Blasjo**	**1.38**	**159**	*e*S	Sg	14 07 56.4	-1.5
BLS5				AML	AML	14 07 58.6	
	comp=Z,6.0nm,0.4s						
BLS5	**Blasjo**	**1.38**	**159**	*e*S	Sg	14 07 56.4	-1.5
	comp=Z,6.0nm,0.4s,SNR=50						
KMY	**Karmoy**	**1.51**	**185**	*e*P	Pn	14 07 39.9	-1.9
KMY				*e*S	Sg	14 08 00.7	-1.2
KMY				AML	AML	14 08 03.3	
	comp=Z,5.5nm,0.3s						
KMY	**Karmoy**	**1.51**	**185**	*e*P	Pn	14 07 39.9	-1.9
	SNR=50						
KMY				*e*S	Sg	14 08 00.7	-1.2
	comp=Z,5.5nm,0.3s,SNR=50						

*ISCJB **08** 14:12:29.0±0.6,12˚.72N±0˚.05×88˚.89W±0˚.04,h67km±6km, mb3.8/9,Error ellipse: s-maj=10.4km s-min=4.0km az=30.7*
*CASC **08** 14:12:29.6±2.1,12˚.72N×88˚.93W,h36km±6km,MD4.0, ML4.3,mb4.0(NEIC)*
*NEIC **08** 14:12:32.7±1.1,12˚.87N×88˚.71W,h84km±9km,mb4.0/2, Error ellipse: s-maj=17.8km s-min=11.1km az=213.0*
*IDC **08** 14:12:32.1±1.9,12˚.97N×88˚.59W,h70km±24km,mb3.6/7, mb1 3.8/9,mb1mx3.6/23,mbtmp3.6/9,Error ellipse: s-maj=39.0km s-min=13.5km az=35.0*
ISC 08 14:12:30.2±0.6,12˚.75N±0˚.05×88˚.88W±0˚.04,h61km±6km, n40,σ1°19/51,mb3.8/9,2C,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNVI	**San Vicente**	**0.86**	**3**	*e*P	**Pn**	**14 12 45.0**	**-1.5**
SNVI				*e*S	**Sn**	**14 12 58.1**	**-0.4**
LFRS	**El Faro**	**0.89**	**349**	*e*P	**Pn**	**14 12 45.3**	**-1.6**
BLLM	**Bellamira**	**0.94**	**42**	*i* P	**Pn**	**14 12 46.6**	**-0.8**
BLLM				*e*S	**Sn**	**14 13 01.8**	**+1.6**
SNET	**Serv Nac Est T**	**0.99**	**340**	*e*P	**Pn**	**14 12 46.5**	**-1.7**
SNET				*e*S	**Sn**	**14 12 59.6**	**-1.9**
BOQS	**Boqueron**	**1.06**	**339**	*i* P	**Pn**	**14 12 47.9**	**-1.1**
BOQS				*e*S	**Sn**	**14 13 02.1**	**-0.9**
CNCH	**Conchagua**	**1.15**	**63**	*e*P	**Pn**	**14 12 49.8**	**-0.4**
CNCH				*e*S	**Sn**	**14 13 07.6**	**+2.4**
CAHU	**Cacacuatique**	**1.21**	**33**	*i* P	**Pn**	**14 12 51.3**	**+0.3**
CAHU				*e*S	**Sn**	**14 13 08.6**	**+2.0**
SBLS	**San Blas**	**1.30**	**327**	*e*P	**Pn**	**14 12 51.1**	**-1.2**
SNJE	**San Jose**	**1.32**	**328**	*e*P	**Pn**	**14 12 51.4**	**-1.1**
RBDL	**Robledal**	**1.57**	**330**	*i* P	**Pn**	**14 12 55.6**	**-0.2**
MTO2	**Montecristo 2**	**1.71**	**344**	*i* P	**Pn**	**14 12 57.4**	**-0.3**
CRIN	**San Cristobal**	**1.79**	**91**	*e*P	**Pn**	**14 12 58.9**	**+0.2**
CRIN				*e*S	**Sn**	**14 13 21.2**	**+0.7**
CRIN				AML	AML	14 13 21.9	
	comp=N,3μm,0.3s						
LEON	**Leon**	**1.97**	**99**	*e*P	**Pn**	**14 13 00.2**	**-1.1**
TELN	**Telica**	**2.01**	**94**	*e*P	**Pn**	**14 13 01.8**	**+0.1**
TGUH	**Tegucigalpa,Un**	**2.04**	**50**	*e*Pn	**Pn**	**14 13 01.8**	**-0.4**
TGUH				*e*Sn	**Sn**	**14 13 15.7**	**-1.1**
COPN	**Copaltepe**	**2.31**	**104**	*e*P	**Pn**	**14 13 05.2**	**-0.6**
MOMN	**Momotombo**	**2.31**	**98**	*e*P	**Pn**	**14 13 05.5**	**-0.4**
NBG	**Las Nubes**	**2.32**	**322**	*e*P	**Pn**	**14 13 08.2**	**+2.2**
MRL	**Marmol**	**2.44**	**341**	*e*P	**Pn**	**14 13 08.7**	**+1.1**
CSAN		**2.47**	**103**	*e*P	**Pn**	**14 13 07.7**	**-0.3**
FUG	**Fuego 3**	**2.55**	**312**	*e*S	**Sn**	**14 13 39.5**	**+0.5**
FG6		**2.65**	**313**	*e*P	**Pn**	**14 13 11.4**	**+0.9**
FG6				*e*S	**Sn**	**14 13 41.8**	**+0.2**
TP2	**Tecpan 2**	**2.90**	**315**	*e*P	**Pn**	**14 13 15.7**	**+1.8**
JAT	**Jato**	**3.10**	**301**	*e*P	**Pn**	**14 13 17.4**	**+0.8**
SSN	**San Juan del S**	**3.29**	**116**	*e*P	**Pn**	**14 13 19.3**	**0.0**
JTS	**JuntasAbangare**	**4.56**	**122**	P	**Pn**	**14 13 38.7**	**+2.0**
	comp=N,4.4nm,0.3s,baz=307,slow=22,SNR=9.2						
JTS				S	**Sn**	**14 14 27.5**	**-0.9**
	comp=N,6.7nm,0.3s,baz=295,slow=3.3,SNR=3.3						
CMIG	**Matias Romero**	**7.23**	**307**	P	**Pn**	**14 14 15.7**	**+2.5**
	comp=N,0.4nm,0.3s,baz=83,slow=12,SNR=4.7						
CMIG				S	**Sn**	**14 15 39.1**	**+5.1**
	comp=N,1.0nm,0.3s,baz=19,slow=15,SNR=2.7						
TEIG	**Tepich**	**7.46**	**4**	*e*Pn	**Pn**	**14 14 18.1**	**+1.7**
TXAR	**Lajitas Array**	**21.47**	**323**	P	**P**	**14 17 15.4**	**+1.7**
	comp=N,0.9nm,0.5s,mb3.4,baz=145,slow=11,SNR=18						
TKL	**Tuckaleechee C**	**23.27**	**11**	P	**P**	**14 17 32.1**	**-0.4**
	comp=N,2.3nm,0.6s,mb3.8,baz=182,slow=12,SNR=3.4						
WMOK	**Wichita Mounta**	**23.66**	**339**	*e*P	**P**	**14 17 35.9**	**-0.2**
	comp=N,2.7nm,0.9s,mb3.7						
SADO	**Sadowa**	**32.98**	**13**	P	**P**	**14 18 58.1**	**-1.0**
	comp=N,4.6nm,0.6s,mb4.6,baz=279,slow=5.2,SNR=4.0						
NVAR	**Mina Array Bea**	**36.57**	**320**	P	**P**	**14 19 32.2**	**+2.0**
NVAR				PcP	PcP	14 21 54.9	+2.4
NVAR	**Mina Array Bea**	**36.57**	**320**	P	**P**	**14 19 32.2**	**+2.0**
	comp=N,0.4nm,0.8s,mb3.3,baz=126,slow=9.0,SNR=3.6						
NVAR				PcP	PcP	14 21 54.9	+2.4
	comp=N,0.2nm,0.5s,baz=166,slow=3.1,SNR=4.3						
EGMT	**Eagleton**	**39.24**	**338**	*e*P	**P**	**14 19 53.0**	**+0.4**
	comp=N,6.3nm,1.1s,mb4.3						
SCHQ	**Schefferville**	**45.41**	**18**	P	**P**	**14 20 40.7**	**-1.9**
SCHQ	**Schefferville**	**45.41**	**18**	P	**P**	**14 20 40.7**	**-1.9**
	comp=N,2.3nm,0.9s,mb4.0,baz=216,slow=8.7,SNR=3.7						
YKA	**Yellowknife Ar**	**52.97**	**345**	P	**P**	**14 21 38.9**	**-1.2**
YKA	**Yellowknife Ar**	**52.97**	**345**	P	**P**	**14 21 38.9**	**-1.2**
	comp=N,0.7nm,0.4s,mb3.9,baz=131,slow=8.5,SNR=4.2						
ILAR	**Eielson Array**	**65.19**	**336**	P	**P**	**14 23 03.8**	**-0.9**
	comp=N,0.2nm,0.5s,mb3.4,baz=132,slow=6.2,SNR=4.9						

*IDC **08** 14:17:36.2±0.9,30˚.66N×103˚.27E,h0km,mb3.9/11, mb1 4.0/12,mb1mx3.8/26,mbtmp4.0/12,ML3.5/1,MS2.7/3, Ms1 2.8/3,ms1mx2.4/43,Error ellipse: s-maj=34.8km s-min=17.0km az=52.0*
*NEIC **08** 14:17:37.8±0.5,30˚.74N×103˚.43E,h10km,mb4.2/2,Error ellipse: s-maj=15.4km s-min=9.6km az=67.0*
*ISCJB **08** 14:17:38.7±0.6,30˚.87N±0˚.04×103˚.58E±0˚.05,h28km±5km, mb4.0/12,MS2.6/3,Error ellipse: s-maj=7.3km s-min=6.4km az=25.8*
*BJI **08** 14:17:38.2,30˚.83N×103˚.66E,h13km,mB4.7/3,mb4.1/6, ML3.9/19,Ms3.8/8,Ms7 3.5/7*
ISC 08 14:17:39.3±0.8,30˚.84N±0˚.03×103˚.53E±0˚.04,h16km±5km, n33,σ1°13/43,mb4.0/12,MS2.6/3,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.21**	**70**	Pg	**Pg**	**14 17 43.6**	**-0.6**
CD2				Sg	**Sg**	**14 17 48.2**	**+0.8**
CD2				smax			
	comp=N,17μm,0.4s						
CD2				smax			
	comp=E,34μm,0.8s						
GYA	**Guiyang**	**5.16**	**147**	Pn	**Pn**	**14 18 56.3**	**+0.3**
GYA				Sn	**Sn**	**14 19 56.0**	**+0.8**
GYA				Sg	**Sg**	**14 20 24.6**	**-0.4**
GYA				smax			
	comp=N,200nm,0.8s						
GYA				smax			
	comp=E,240nm,0.8s						
ENH	**Enshi**	**5.17**	**95**	*e*Pn	**Pn**	**14 18 55.8**	**-0.3**
	comp=E,67nm,0.6s						
LZH	**Lanzhou**	**5.24**	**3**	*e*Pn	**Pn**	**14 18 55.2**	**-1.9**
LZH				Pg	**Pg**	**14 19 12.3**	**-7.4**
LZH				Sn	**Sn**	**14 19 58.2**	**+1.0**
LZH				Sg	**Sg**	**14 20 18.8**	**-8.8**
LZH				smax			
	comp=N,300nm,0.7s						
LZH				smax			
	comp=E,110nm,0.8s						
LZH				LR	LR		
	com

comp=Z,2.0nm,0.5s,mb4.4,baz=163,slow=11,SNR=10
NOA NORSAR Array B 64.62 327 P **P** **14 28 14.6 -1.2**
comp=Z,1.1nm,0.6s,mb4.1,baz=75,slow=6.9,SNR=4.7
NOA LR LR 14 58 26.7
comp=Z,6.9nm,19.8s,MS2.9,baz=90,slow=38
CLL Collm 66.92 317 *e*P **P** **14 28 32.0 +1.2**
ILAR Eielson Array 70.29 25 P **P** **14 28 54.3 +2.7**
comp=Z,0.4nm,0.9s,mb3.3,baz=305,slow=5.4,SNR=4.1
STKA Stephens Creek 72.06 147 P **P** **14 29 02.2 -0.5**
comp=Z,1.2nm,0.6s,mb4.0,baz=189,slow=9.4,SNR=3.4

IDC ***08*** *14:43:46.7±0.7,25.4°±41S×70.0°±06E, h0km, mb4.2/20, mb1 4.3/20,mb1mx4.2/30, mbtmp4.2/20,MS4.6/13, Ms1 4.6/13,ms1mx4.4/23,Error ellipse: s-maj=20.9km s-min=17.0km az=177.0*
BJI ***08*** *14:43:47.6,25.6°±66S×69.8°±2E, h33km, mB5.1/10, mb4.7/20, Ms4.9/11,Ms7 4.7/11*
ISCJB ***08*** *14:43:48.5±0.5,25.4°±45S±0.0°±09×70.0°±08E±0.0°±07, h22km, mb4.5/47,MS4.7/18,Error ellipse: s-maj=13.4km s-min=8.8km az=161.6*
NEIC ***08*** *14:43:48.3±0.4,25.4°±41S×70.0°±09E, h10km,mb5.0/19,Error ellipse: s-maj=11.4km s-min=8.0km az=168.0*
GCMT ***08*** *14:43:50.8±0.2,25.0°±04S×69.8°±2E, h12km,MW5.3,Moment Tensor Solution. s43,c56; s93,c166; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{r\phi}$0.00; Best double couple: $M_0$1.00000×10^{17} NP1:$\phi_8$315.00000°,δ33.00000°,λ-132.00000°. NP2: ϕ_s182.00000°,δ66.00000°,λ-66.00000°. Principal axes: T 0.9400, Plg18.0000°, Azm255.0000°; N 0.1100, Plg22.0000°, Azm352.0000°; P -1.0500, Plg61.0000°, Azm129.0000°; Data Used: II IU IC G CN.*

ISC 08 14:43:49.7±3.2,25.4°±43S±0.0°±09×70.0°±03E±0.0°±08, h16km±19km, h23km±2.6km:pP-P,n90,σ0s87/76,mb4.5/47,MS4.7/18, 3C-1D,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABPO	**Ambohimpanom**	**22.03**	**282**	*e*P	**P**	**14 48 43.1**	**-0.5**
	96nm,1.9s,mb4.9						
OPO	**Ambohidratompo**	**22.23**	**283**	P	**P**	**14 48 46.6**	**+0.8**
	14nm,1.1s,mb4.3,baz=109,slow=8.6,SNR=10						
PSI	**Prapat**	**39.65**	**49**	P	**P**	**14 51 23.5**	**+2.6**
PSI				LR	LR	15 03 40.7	
PSI	**Prapat**	**39.65**	**49**	P	**P**	**14 51 23.5**	**+2.6**
	1.6nm,0.4s,mb4.1,baz=203,slow=19,SNR=3.8						
PSI				LR	LR	15 03 40.7	
	comp=Z,1μm,21.4s,MS4.7,baz=265,slow=30						
KMBO	**Kilima Mbogo**	**39.78**	**302**	P	**P**	**14 51 23.1**	**+1.0**
	1.4nm,0.7s,mb3.8,baz=180,slow=24,SNR=8.8						
KMBO				LR	LR	15 03 57.6	
	comp=Z,386nm,21.4s,MS4.2,baz=89,slow=30						
BOSA	**Boshof**	**39.84**	**255**	P	**P**	**14 51 22.3**	**-0.2**
BOSA				LR	LR	15 05 22.6	
BOSA	**Boshof**	**39.84**	**255**	P	**P**	**14 51 22.3**	**-0.2**
	5.0nm,1.0s,mb4.2,baz=67,slow=8.4,SNR=3.9						
BOSA				LR	LR	15 05 22.6	
	comp=Z,2μm,20.8s,MS4.9,baz=107,slow=32						
LBTB	**Lobatse**	**40.06**	**261**	LR	LR	15 06 43.2	
	comp=Z,3μm,18.2s,MS5.1,baz=110,slow=34						
LSZ	**Lusaka**	**40.36**	**276**	P	**P**	**14 51 27.6**	**+0.7**
	1.1nm,0.3s,mb4.0,baz=120,slow=9.0,SNR=7.0						
LSZ				LR	LR	15 06 17.3	
	comp=Z,1μm,19.6s,MS4.8,baz=120,slow=33						
NWAO	**Narrogin (SRO)**	**41.61**	**112**	LR	LR	15 05 58.3	
	comp=Z,1μm,18.1s,MS4.7,baz=272,slow=32						
MAW	**Mawson**	**42.42**	**184**	LR	LR	15 06 53.1	
	comp=Z,750nm,19.0s,MS4.6,baz=3.0,slow=33						
SUR	**Sutherland**	**43.34**	**249**	LR	LR	15 07 03.9	
	comp=Z,3μm,20.6s,MS5.1,baz=80,slow=32						
ATD	**Arta Tunnel**	**45.28**	**321**	LR	LR	15 08 09.8	
	comp=Z,247nm,20.0s,MS4.1,baz=153,slow=32						
CMAR	**Chiang Mai Arr**	**51.91**	**36**	P	**P**	**14 52 57.5**	**-0.2**
	1.6nm,0.8s,mb4.0,baz=237,slow=6.4,SNR=6.3						
CMAR				LR	LR	15 13 01.6	
	comp=Z,464nm,19.2s,MS4.5,baz=215,slow=34						
CHTO	**Chiang Mai**	**52.20**	**35**	P	**P**	**14 52 58.8**	**-1.1**
	9.4nm,1.2s,mb4.6						
MAIT	**Maitri**	**55.92**	**200**	*e*P	**P**	**14 53 26.2**	**-0.2**
ASAR	**Alice Springs**	**57.62**	**103**	P	**P**	**14 53 39.0**	**-0.3**
	1.0nm,0.8s,mb3.9,baz=257,slow=7.0,SNR=16						
LSA	**Lhasa**	**58.44**	**22**	*e*P	**P**	**14 53 46.7**	**+2.1**
	6.3nm,0.9s,mb4.7						
QIZ	**Qiongzhong**	**58.76**	**45**	P	**P**	**14 53 46.6**	**-0.5**
QIZ				S	**S**	**15 01 51.1**	**-0.6**
QIZ				SS	SS	15 05 45.5	+0.1
QIZ				LR	LR		
	comp=N,810nm,19.8s,MS4.9						
QIZ				LR	LR		
	comp=E,290nm,15.8s,MS4.9						
QIZ				LR	LR		
	comp=Z,1μm,17.2s,MS5.0						
WB2	**Warramunga Arr**	**59.11**	**99**	*e*P	**P**	**14 53 49.3**	**-0.4**
KMI	**Kunming**	**59.38**	**35**	P	**P**	**14 53 53.3**	**+2.0**
KMI				S	**S**	**15 02 00.7**	**+1.1**
KMI				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.8						
KMI				pmax	pmax		
	comp=Z,170nm,4.0s						
KMI				LR	LR		
	comp=N,500nm,17.7s,MS4.7						
KMI				LR	LR		
	comp=E,290nm,22.4s,MS4.7						
KMI				LR	LR		
	comp=Z,780nm,21.1s,MS4.8						
KBL	**Kabul**	**59.64**	**359**	*e*P	**P**	**14 53 52.4**	**-0.6**
	comp=Z,22nm,1.4s,mb5.0						
QSPA	**South Pole Qui**	**64.70**	**180**	P	**P**	**14 54 26.3**	**-0.1**
	comp=Z,5.2nm,1.0s,mb4.5,baz=290,slow=2.0,SNR=9.3						
ASF	**Jabal al Asfar**	**65.42**	**329**	P	**P**	**14 54 31.4**	**-0.3**
	comp=Z,2.7nm,0.9s,mb4.3,baz=54,slow=4.1,SNR=9.7						
AML	**Almayashu**	**67.30**	**3**	*e*P	**P**	**14 54 43.0**	**-0.4**
	comp=Z,29nm,1.7s,mb5.0						
UCH	**Uchtor**	**67.44**	**4**	*e*P	**P**	**14 54 43.5**	**-0.8**
	comp=Z,37nm,2.2s,mb5.0						
EKS2	**Erkin-Say**	**67.83**	**3**	*e*P	**P**	**14 54 47.0**	**+0.3**
	comp=Z,30nm,1.8s,mb5.0						
TKM2	**Tokmak 2**	**68.20**	**4**	*e*P	**P**	**14 54 48.2**	**-0.9**
	comp=Z,49nm,1.9s,mb5.2						
LZH	**Lanzhou**	**69.01**	**29**	*e*P	**P**	**14 54 54.5**	**+0.2**
LZH				pP	pP	14 55 01.0	+1.4
LZH				sP	sP	14 55 04.3	+2.7
LZH				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.9						
XAN	**Xi'an**	**69.72**	**34**	P	**P**	**14 54 58.6**	**-0.2**
XAN				pP	pP	14 55 13.8	+10
XAN				pmax	pmax		
	comp=Z,3.0nm,2.1s,mb3.9						
MALT	**Malatya**	**69.98**	**334**	*e*P	**P**	**14 54 59.9**	**-0.4**
	comp=Z,1.1nm,0.6s,mb4.0						
WHN	**Wuhan**	**69.99**	**40**	P	**P**	**14 55 02.3**	**+1.8**
WHN				S	S	15 04 14.0	+3.7
WHN				pmax	pmax		
	comp=Z,230nm,2.2s,mb5.7						
WHN				pmax	pmax		
	comp=Z,670nm,4.5s						
WHN				LR	LR		
	comp=N,780nm,33.2s						
WHN				LR	LR		
	comp=E,620nm,23.7s						
WHN				LR	LR		
	comp=Z,1μm,24.4s						
GTA	**Gaotai**	**70.25**	**24**	P	**P**	**14 55 02.2**	**+0.3**
GTA				pP	pP	14 55 08.1	+0.9
GTA				sP	sP	14 55 11.7	+2.6
GTA				PP	PP	14 57 39.3	+1.5
GTA				S	S	15 04 10.6	-2.4
GTA				pmax	pmax		
	comp=Z,7.0nm,2.1s,mb4.2						
GTA				pmax	pmax		
	comp=Z,76nm,4.2s						
GTA				LR	LR		
	comp=N,280nm,20.4s,MS4.6						
GTA				LR	LR		
	comp=E,220nm,21.3s,MS4.6						
GTA				LR	LR		
	comp=Z,390nm,21.3s,MS4.6						
WMQ	**Urumqi**	**70.79**	**13**	*e*P	**P**	**14 55 05.5**	**+0.4**
WMQ				pP	pP	14 55 15.8	+5.4
WMQ				sP	sP	14 55 19.5	+7.2
WMQ				PcP	PcP	14 55 25.8	+0.1
WMQ				PP	PP	14 57 45.5	+3.1
WMQ				S	S	15 04 18.0	-1.1
WMQ				SKS		15 05 01.1	
WMQ				SS	SS	15 08 53.7	+1.5
WMQ				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8						
WMQ				pmax	pmax		
	comp=Z,210nm,3.6s						
WMQ				LR	LR		
	comp=N,420nm,22.9s,MS4.7						
WMQ				LR	LR		
	comp=E,220nm,20.3s,MS4.7						
WMQ				LR	LR		
	comp=Z,380nm,23.2s,MS4.6						
MK31	**Makanchi Array**	**72.73**	**9**	*e*P	**P**	**14 55 15.2**	**-1.4**
MKAR	**Makanchi Array**	**72.73**	**9**	P	**P**	**14 55 15.8**	**-0.9**
	comp=Z,1.1nm,0.5s,mb4.0,baz=198,slow=6.8,SNR=23						
BR131	**Keskin Array S**	**73.17**	**331**	*e*P	**P**	**14 55 19.3**	**-0.1**
	comp=Z,15nm,1.4s,mb4.7						
BRTR	**Keskin Array B**	**73.17**	**331**	P	**P**	**14 55 19.2**	**-0.2**
	comp=Z,3.7nm,1.1s,mb4.2,baz=145,slow=4.5,SNR=12						
SSE	**Sheshan**	**74.51**	**44**	P	**P**	**14 55 27.8**	**+0.3**
SSE				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
SSE				pmax	pmax		
	comp=Z,110nm,4.4s						
SSE				LR	LR		
	comp=N,170nm,26.4s,MS4.3						
SSE				LR	LR		
	comp=E,120nm,26.9s,MS4.3						
SSE				LR	LR		
	comp=Z,270nm,28.4s,MS4.4						
ABKAR	**Akbulak array**	**74.88**	**353**	*e*P	**P**	**14 55 28.2**	**-1.0**
	comp=Z,28nm,1.4s,mb5.0						
AKTK	**Aktyubinsk**	**76.27**	**352**	P	**P**	**14 55 36.6**	**-0.6**
AKTO	**Aktyubinsk**	**76.27**	**352**	P	**P**	**14 55 36.6**	**-0.6**
	comp=Z,1.7nm,0.6s,mb4.2,baz=152,slow=5.6,SNR=16						
TORD	**Torodi Ar. Bea**	**76.78**	**292**	P	**P**	**14 55 39.7**	**-1.2**
TORD				LR	LR	15 29 29.2	
TORD	**Torodi Ar. Bea**	**76.78**	**292**	P	**P**	**14 55 39.7**	**-1.2**
	comp=Z,7.3nm,1.2s,mb4.5,baz=116,slow=4.6,SNR=15						
TORD				LR	LR	15 29 29.2	
	comp=Z,400nm,18.1s,MS4.8,baz=120,slow=36						
BVAR	**Borovoye Array**	**78.12**	**0**	P	**P**	**14 55 46.7**	**-0.8**
	comp=Z,0.3nm,0.4s,mb3.6,baz=283,slow=35,SNR=3.3						
TAM	**Tamanrasset**	**78.77**	**302**	*e*P	**P**	**14 55 52.5**	**+0.7**
	comp=Z,16nm,1.7s,mb4.7						
SONM	**Songino Array**	**79.92**	**24**	P	**P**	**14 55 58.2**	**+0.7**
	comp=Z,1.1nm,0.8s,mb3.8,baz=217,slow=3.5,SNR=10						
ZAA0	**Zalesovo Array**	**80.07**	**9**	*e*P	**P**	**14 55 56.9**	**-1.3**
ZALV	**Zalesovo Beam**	**80.07**	**9**	P	**P**	**14 55 57.7**	**-0.4**
ZALV	**Zalesovo Beam**	**80.07**	**9**	P	**P**	**14 55 57.7**	**-0.4**
	comp=Z,1.3nm,0.5s,mb4.1,baz=203,slow=4.2,SNR=7.2						
ULN	**Ulaanbaatar**	**80.19**	**24**	*e*P	**P**	**14 55 58.3**	**-0.7**
	comp=Z,11nm,1.3s,mb4.6						
RPZ	**Rata Peaks**	**80.29**	**134**	LR	LR	15 24 06.3	
	comp=Z,244nm,21.4s,MS4.5,baz=349,slow=30						
KIS	**Kishinev**	**81.12**	**333**	*e*UNK		14 56 03.0	
KIS				eL		15 28 08.0	
MLR	**Muntele Rosu**	**81.17**	**330**	P	**P**	**14 56 05.2**	**+0.9**
	comp=Z,9.0nm,1.1s,mb4.6,baz=234,slow=3.8,SNR=17						
ARU	**Arti**	**82.11**	**354**	*e*P	**P**	**14 56 09.4**	**+0.4**
	comp=Z,46nm,1.6s,mb5.2						
ARU	**Arti**	**82.11**	**354**	P	**P**	**14 56 09.8**	**+0.9**
	comp=Z,77nm,1.5s,mb5.4,SNR=5.8						
KSRS	**Korea Array**	**82.88**	**43**	P	**P**	**14 56 13.7**	**+0.2**
	comp=Z,0.5nm,0.5s,mb3.8,baz=142,slow=40,SNR=3.6						
KEST	**Kesra**	**83.57**	**314**	LR	LR	15 34 22.8	
	comp=Z,112nm,19.2s,MS4.3,baz=155,slow=36						
AKASG	**Malin Array Be**	**83.93**	**335**	P	**P**	**14 56 17.0**	**-1.5**
	comp=Z,1.0nm,0.5s,mb4.2,baz=151,slow=4.5,SNR=14						
AKBB	**Malin Array Si**	**83.93**	**335**	*e*P	**P**	**14 56 17.3**	**-1.2**
KOLS	**Kolonicke sedl**	**85.42**	**331**	*e*P	**P**	**14 56 26.9**	**+0.8**
KOLS				*e*	pP	14 56 33.2	+1.7
KOLS	**Kolonicke sedl**	**85.42**	**331**	*e*P	**P**	**14 56 26.9**	**+0.8**
KOLS				*e*pP	pP	14 56 33.2	+1.7
CRVS	**Cervenica-Dubn**	**85.75**	**330**	*e*P	**P**	**14 56 28.5**	**+0.7**
	comp=Z,26nm,1.7s,mb5.2						
CRVS				*e*	pP	14 56 35.0	+1.9
CRVS	**Cervenica-Dubn**	**85.75**	**330**	*e*P	**P**	**14 56 28.5**	**+0.7**
CRVS				*e*pP	pP	14 56 35.0	+1.9
PSZ	**Piszkesteto**	**85.76**	**329**	*e*PcP	PcP	14 56 27.2	-3.4
BUD	**Budapest**	**85.86**	**328**	*e*PcP	PcP	14 56 29.1	-2.0
DZM	**Mont Dzumac**	**86.23**	**113**	*e*SS	SS	15 12 48.9	+4.4
	comp=Z,153nm,24.1s						
DZM				eLR	LR	15 23 53.5	
	comp=Z,733nm,23.6s						
STHS	**Stebnicka Huta**	**86.23**	**331**	*e*P	**P**	**14 56 31.4**	**+1.3**
STHS	**Stebnicka Huta**	**86.23**	**331**	*e*P	**P**	**14 56 31.4**	**+1.3**
VYHS	**Vyhne**	**86.67**	**329**	*e*P	**P**	**14 56 32.0**	**-0.3**
	comp=Z,22nm,1.8s,mb5.1						
VYHS	**Vyhne**	**86.67**	**329**	*e*P	**P**	**14 56 32.0**	**-0.3**
KOLL	**Kolacno**	**86.93**	**329**	*e*P	**P**	**14 56 34.9**	**+1.4**
KOLL	**Kolacno**	**86.93**	**329**	*e*P	**P**	**14 56 34.9**	**+1.4**
OKC	**Ostrava-Krasne**	**87.93**	**329**	*e*P	**P**	**14 56 38.7**	**+0.3**
MORC	**Moravsky Berou**	**88.17**	**329**	*e*P	**P**	**14 56 38.7**	**-0.8**
	comp=Z,7.7nm,1.0s,mb4.4						
VRAC	**Vranov**	**88.29**	**328**	P	**P**	**14 56 39.6**	**-0.5**
	comp=Z,1.1nm,0.4s,mb4.4,baz=69,slow=1.4,SNR=7.3						
DPC	**Dobruska-Polom**	**89.14**	**329**	*e*P	**P**	**14 56 44.9**	**+0.9**
UPC	**Upice**	**89.39**	**329**	*e*P	**P**	**14 56 44.4**	**-0.8**
KHC	**Kasperske Hory**	**89.64**	**327**	*e*P	**P**	**14 56 46.0**	**-0.4**
PRU	**Pruhonice**	**89.74**	**328**	*e*P	**P**	**14 56 47.9**	**+1.1**
DAVOX	**Davos/Dischmat**	**90.05**	**323**	P	**P**	**14 56 47.8**	**-0.6**
	comp=Z,0.7nm,0.4s,mb4.4,baz=179,slow=12,SNR=5.6						
NKC	**Novy Kostel**	**90.91**	**327**	*e*P	**P**	**14 56 53.2**	**+0.9**
CLL	**Collm**	**91.34**	**328**	*i*P	**P**	**14 56 54.1**	**-0.2**
	comp=Z,27nm,2.0s,mb5.2						
CLL	**Collm**	**91.34**	**328**	*i*P	**P**	**14 56 54.1**	**-0.2**
	comp=Z,27nm,2.0s,mb5.2						
CLL				*e*S	S	15 07 54.0	+1.6
CLL				*e*PS	PS	15 08 57.0	-6.3
MDT	**Midelt**	**91.64**	**306**	P	**P**	**14 56 56.9**	**+0.8**
	comp=Z,0.6nm,0.5s,mb4.2,baz=271,slow=23,SNR=4.1						
PPT	**Papeete**	**122.45**	**134**	eLR	LR	15 40 46.6	
	comp=Z,156nm,24.5s						
TAOE	**Nuku Hiva Isla**	**135.01**	**135**	eLR	LR	15 46 42.5	
	comp=Z,190nm,27.3s						
NCB	**Newcomb**	**145.62**	**312**	*e*PKPdf	PKPdf	15 03 26.2	-0.9
LONY	**Lake Ozonia**	**145.62**	**313**	*e*PKPdf	PKPdf	15 03 27.1	0.0
FFC	**Flin Flon**	**150.14**	**351**	*e*PKPdf	PKPdf	15 03 34.0	-0.2
FFC				*e*PKPbc	PKPbc	15 03 38.5	-0.8
FFC				*e*PKPab	PKPab	15 03 45.2	0.0

ISCJB ***08*** *14:45:40.0±0.7,25.3S±0.1×70.2E±0.1, h10km, mb4.2/20, Error ellipse: s-maj=20.5km s-min=17.6km az=3.4*
IDC ***08*** *14:45:40.1±0.8,25.3S×70.0°±06E, h0km, mb4.1/16, mb1 4.2/16,mb1mx4.1/29, mbtmp4.1/16,MS4.3/1, Ms1 4.3/1,ms1mx3.4/24,Error ellipse: s-maj=24.5km s-min=22.2km az=30.0*
NEIC ***08*** *14:45:41.6±0.6,25.0°±30S×70.1°±5E, h10km, mb4.6/4, Error ellipse: s-maj=16.5km s-min=14.2km az=185.0*

ISC 08 14:45:42.0±0.7,25.3S±0.1×70.1E±0.1, h10km, n28, σ0s92/27, mb4.2/20, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**22.28**	**283**	P	**P**	**14 50 40.1**	**+0.7**
	5.6nm,0.9s,mb4.0,baz=110,slow=12,SNR=3.0						
CMAR	**Chiang Mai Arr**	**51.72**	**36**	P	**P**	**14 54 50.5**	**+0.9**
	0.8nm,0.7s,mb3.8,baz=242,slow=5.5,SNR=4.4						
FITZ	**Fitzroy Crossi**	**51.78**	**94**	LR	LR	15 13 52.2	
	comp=Z,299nm,20.0s,baz=278,slow=33						
ASAR	**Alice Springs**	**57.57**	**103**	P	**P**	**14 55 31.9**	**-0.4**
	1.2nm,1.0s,mb3.9,baz=254,slow=6.9,SNR=5.7						
QSPA	**South Pole Qui**	**64.87**	**180**	P	**P**	**14 56 20.6**	**-0.1**
	1.5nm,0.8s,mb4.1,baz=282,slow=5.8,SNR=4.1						
ASF	**Jabal al Asfar**	**65.33**	**329**	P	**P**	**14 56 25.2**	**+0.9**
	1.5nm,0.7s,mb4.2,baz=276,slow=4.8,SNR=3.3						
TKM2	**Tokmak 2**	**68.03**	**4**	*e*P	**P**	**14 56 41.3**	**0.0**
	17nm,1.8s,mb4.8						
MK31	**Makanchi Array**	**72.56**	**9**	*e*P	**P**	**14 57 08.3**	**-0.7**
MKAR	**Makanchi Array**	**72.56**	**9**	P	**P**	**14 57 08.7**	**-0.3**
	1.3nm,0.6s,mb4.0,baz=196,slow=6.4,SNR=11						
MKAR				PP	PP	14 59 54.4	+3.6
	0.4nm,0.9s,baz=188,slow=7.4,SNR=4.0						
BR131	**Keskin Array S**	**73.06**	**331**	*e*P	**P**	**14 57 12.7**	**+0.5**
	1.2nm,0.6s,mb4.0						
BRTR	**Keskin Array B**	**73.06**	**331**	P	**P**	**14 57 13.1**	**+0.9**
	1.6nm,0.7s,mb4.1,baz=165,slow=6.5,SNR=5.5						
ABKAR	**Akbulak array**	**74.73**	**353**	*e*P	**P**	**14 57 20.7**	**-1.0**
	1.5nm,0.6s,mb4.1						
AKTK	**Aktyubinsk**	**76.12**	**352**	P	**P**	**14 57 28.4**	**-1.2**
AKTO	**Aktyubinsk**	**76.12**	**352**	P	**P**	**14 57 28.4**	**-1.2**
	1.1nm,0.6s,mb4.0,baz=160,slow=2.6,SNR=3.9						
TORD	**Torodi Ar. Bea**	**76.80**	**291**	P	**P**	**14 57 32.6**	**-1.7**
	2.1nm,0.9s,mb4.1,baz=103,slow=4.9,SNR=5.7						
BVAR	**Borovoye Array**	**77.95**	**0**	P	**P**	**14 57 39.1**	**-0.8**
	0.9nm,0.6s,mb3.9,baz=163,slow=7.0,SNR=4.4						
SONM	**Songino Array**	**79.73**	**24**	P	**P**	**14 57 49.7**	**-0.1**
	2.1nm,1.1s,mb4.0,baz=195,slow=4.6,SNR=3.7						
ZALV	**Zalesovo Beam**	**79.90**	**9**	P	**P**	**14 57 51.0**	**+0.4**
ZALV	**Zalesovo Beam**	**79.90**	**9**	P	**P**	**14 57 51.0**	**+0.4**
	1.3nm,0.5s,mb4.1,baz=198,slow=3.6,SNR=4.3						
MLR	**Muntele Rosu**	**81.08**	**330**	P	**P**	**14 57 57.6**	**+0.5**
	2.2nm,0.5s,mb4.3,baz=120,slow=20,SNR=5.4						
ARU	**Arti**	**81.96**	**354**	*e*P	**P**	**14 58 01.5**	**+0.1**
	28nm,1.6s,mb4.9						
KSRS	**Korea Array**	**82.70**	**43**	P	**P**	**14 58 08.0**	**+2.1**
	0.5nm,0.9s,mb3.5,baz=157,slow=38,SNR=3.5						
VRAC	**Vranov**	**88.20**	**328**	P	**P**	**14 58 32.0**	**-1.0**
	1.6nm,0.3s,mb4.7,baz=98,slow=14,SNR=4.0						
DPC	**Dobruska-Polom**	**89.04**	**329**	*e*P	**P**	**14 58 37.6**	**+0.7**
KHC	**Kasperske Hory**	**89.55**	**327**	*e*P	**P**	**14 58 38.1**	**-1.2**
PRU	**Pruhonice**	**89.65**	**328**	*e*P	**P**	**14 58 40.7**	**+1.0**
DAVOX	**Davos/Dischmat**	**89.97**	**323**	P	**P**	**14 58 42.8**	**+1.5**
	1.2nm,0.5s,mb4.5,baz=183,slow=20,SNR=2.3						
MDT	**Midelt**	**91.62**	**306**	P	**P**	**14 58 49.8**	**+0.4**
	1.3nm,0.7s,mb4.4,baz=42,slow=3.2,SNR=3.6						

ISCJB ***08*** *14:49:51.5±0.5,25.3S±0.1×70.0°±00E±0.0°±09, h10km, mb4.2/24,Error ellipse: s-maj=14.3km s-min=11.9km az=11.4*
IDC ***08*** *14:49:51.6±0.7,25.3S×69.9°±95E, h0km, mb4.1/18, mb1 4.2/18,mb1mx4.1/28,mbtmp4.1/18,Error ellipse: s-maj=20.9km s-min=17.5km az=14.0*
NEIC ***08*** *14:49:53.1±0.4,25.3S×69.9°±95E, h10km, mb4.9/4,Error ellipse: s-maj=12.9km s-min=8.9km az=195.0*

ISC 08 14:49:53.5±0.5,25.3S±0.1×69.9°±E±0.0°±09, h10km, n32, σ0s65/31, mb4.2/24, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**22.16**	**283**	P	**P**	**14 54 49.9**	**+0.3**
	3.5nm,0.9s,mb3.8,baz=102,slow=7.1,SNR=5.6						
KMBO	**Kilima Mbogo**	**39.68**	**302**	P	**P**	**14 57 27.0**	**+1.0**
	1.5nm,0.8s,mb3.8,baz=180,slow=24,SNR=3.5						
BOSA	**Boshof**	**39.81**	**255**	P	**P**	**14 57 26.8**	**-0.3**
BOSA	**Boshof**	**39.81**	**255**	P	**P**	**14 57 26.8**	**-0.3**
	4.9nm,1.1s,mb4.2,baz=108,slow=14,SNR=3.5						
CMAR	**Chiang Mai Arr**	**51.85**	**36**	P	**P**	**14 59 03.4**	**+1.3**
	2.9nm,0.9s,mb4.2,baz=234,slow=6.3,SNR=10						
FITZ	**Fitzroy Crossi**	**51.92**	**94**	P	**P**	**14 59 03.7**	**+1.0**
	7.9nm,1.0s,mb4.6,baz=232,slow=8.4,SNR=5.0						
MAIT	**Maitri**	**56.00**	**200**	*e*P	**P**	**14 59 32.1**	**+0.3**
MAIT				*e*		14 59 44.5	
ASAR	**Alice Springs**	**57.70**	**103**	P	**P**	**14 59 43.6**	**-0.9**
	1.7nm,1.0s,mb4.0,baz=256,slow=5.8,SNR=8.3						
WB2	**Warramunga Arr**	**59.18**	**99**	*e*P	**P**	**14 59 55.7**	**+0.7**
WRAB	**Tennant Creek**	**59.18**	**99**	*e*P	**P**	**14 59 54.4**	**-0.6**
	14nm,1.1s,mb4.9						
QSPA	**South Pole Qui**	**64.81**	**180**	*e*P	**P**	**15 00 31.5**	**-0.4**
	18nm,1.3s,mb4.9						
QSPA	**South Pole Qui**	**64.81**	**180**	P	**P**	**15 00 31.8**	**0.0**
	6.3nm,1.0s,mb4.6,baz=274,slow=3.0,SNR=12						
ASF	**Jabal al Asfar**	**65.30**	**329**	P	**P**	**15 00 36.7**	**+1.0**
	1.2nm,0.4s,mb4.3,baz=58,slow=14,SNR=4.0						
LZH	**Lanzhou**	**68.95**	**29**	*e*P	**P**	**15 00 58.5**	**-0.2**
LZH				pP	pP	15 01 04.5	+2.5
LZH				sP	sP	15 01 07.2	+4.0
LZH				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.0						
LZH				pmax	pmax		
	comp=Z,82nm,4.5s						
GTA	**Gaotai**	**70.17**	**24**	*e*P	**P**	**15 01 06.9**	**+0.7**
GTA				pP	pP	15 01 10.7	+1.2
GTA				sP	sP	15 01 13.1	+2.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
MK31	**Makanchi Array**	**72.64**	**9**	*e*P	**P**	**15 01 20.2**	**-0.7**
MKAR	**Makanchi Array**	**72.64**	**9**	P	**P**	**15 01 20.2**	**-0.7**
	comp=Z,2.1nm,0.8s,mb4.1,ba

PLCA	**Paso Flores**	**18.09**	**180**	P		**Pn**	**15 18 45.8**	**-6.8**
	comp=N,0.2nm,0.3s,baz=317,slow=16,SNR=3.2							
TORD	**Torodi Ar. Bea**	**78.98**	**71**	P		**P**	**15 26 43.5**	**-0.5**
	comp=N,0.7nm,0.5s,baz=248,slow=6.0,SNR=7.6							
LBTB	**Lobatse**	**85.77**	**115**	LR		LR	15 59 19.7	
	comp=N,230nm,19.7s,MS4.6,slow=32							
URZ	**Urewera**	**92.48**	**227**	LR		LR	16 00 22.3	
	comp=N,557nm,20.3s,MS5.0,baz=251,slow=30							
RPZ	**Rata Peaks**	**93.31**	**220**	LR		LR	16 00 24.0	
	comp=N,1µm,18.7s,MS5.3,baz=268,slow=30							
MKAR	**Makanchi Array**	**147.30**	**36**	PKPbc		PKPbc	15 34 23.1	+0.2
	comp=N,0.3nm,0.7s,baz=321,slow=2.0,SNR=4.4							

*SZGRF **08** 15:22:20.3, 21˝.725×177˚.36E, h33km, South of Fiji Islands*
*ISCJB **08** 15:23:18.5±1.0, 20˚.64S±0˝.06×178˚.21W±0˝.09, h518km±11km, mb4.1/25, Error ellipse: s-maj=13.5km s-min=8.8km az=27.3*
*NEIC **08** 15:23:19.8±1.0, 20˚.52S×178˚.23W, h521km±10km, mb4.0/11, Error ellipse: s-maj=16.1km s-min=9.3km az=137.0*
*IDC **08** 15:23:21.0±2.6, 20˚.73S×178˚.11W, h532km±27km, mb3.6/11, mb1 3.8/12, mb1mx3.6/18, mbtmp3.6/12, Error ellipse: s-maj=17.0km s-min=10.8km az=135.0*

ISC 08 15:23:19.3±0.8, 20.72S±0˝.06×178.12W±0˝.09, h518km±9km, n102, σ0§93/49, mb4.1/25, 13C-8D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.68**	**309**	*i*Pn			**P**	**15 24 43.1**	**-1.5**
MSVF				*e*S			**S**	**15 25 54.8**	**+0.7**
AFI	**Afiamalu**	**9.09**	**43**	P			**P**	**15 25 20.3**	**-7.1**
AFI				S			**S**	**15 26 56.8**	**-16**
AFI	**Afiamalu**	**9.09**	**43**	P			**P**	**15 25 20.3**	**-7.1**
	8.1nm,0.3s,baz=40,slow=6.1,SNR=28								
AFI				S			**S**	**15 26 56.8**	**-16**
	12nm,0.3s,baz=37,slow=22,SNR=9.1								
MWZ	**Matawai**	**17.95**	**191**	*e*PN			**P**	**15 26 58.5**	**+0.3**
URZ	**Urewera**	**17.96**	**192**	*e*P			**P**	**15 27 00.0**	**+1.8**
	33nm,0.4s								
URZ				S			**S**	**15 29 55.7**	**-1.0**
URZ	**Urewera**	**17.96**	**192**	P			**P**	**15 26 58.6**	**+0.4**
	6.2nm,0.3s,baz=296,slow=5.0,SNR=15								
URZ				S			**S**	**15 29 55.7**	**-1.0**
	0.3nm,0.3s,baz=296,slow=22,SNR=2.2								
URZ	**Urewera**	**17.96**	**192**	*e*PN			**P**	**15 26 57.3**	**-0.9**
BKZ	**Black Stump Fm**	**18.96**	**193**	*e*PN			**P**	**15 27 06.7**	**-0.7**
NNZ	**Nelson**	**21.67**	**198**	*e*PN			**P**	**15 27 32.3**	**+0.4**
ARMA	**Armidale**	**28.87**	**244**	*e*P			**P**	**15 28 37.3**	**+1.5**
CTA	**Charters Tower**	**33.36**	**265**	*e*P			**P**	**15 29 14.8**	**+0.3**
	9.2nm,0.3s,mb4.8								
CTAO	**Charters Tower**	**33.36**	**265**	*e*P			**P**	**15 29 14.9**	**+0.4**
	12nm,0.4s,mb4.8								
STKA	**Stephens Creek**	**37.59**	**244**	*e*P			**P**	**15 29 50.5**	**+0.9**
	2.8nm,0.5s,mb4.2								
STKA	**Stephens Creek**	**37.59**	**244**	P			**P**	**15 29 50.7**	**+1.2**
STKA				PcP			PcP	15 31 55.3	+1.4
STKA	**Stephens Creek**	**37.59**	**244**	P			**P**	**15 29 50.7**	**+1.2**
	2.2nm,0.4s,mb4.0,baz=87,slow=12,SNR=10								
STKA				PcP			PcP	15 31 55.3	+1.4
	4.5nm,0.7s,baz=41,slow=3.1,SNR=6.0								
ASAR	**Alice Springs**	**44.36**	**257**	P			**P**	**15 30 44.0**	**+0.5**
	20nm,0.7s,mb4.7,baz=89,slow=8.3,SNR=408								
ASAR				PcP			PcP	15 32 17.3	+0.9
	6.2nm,0.5s,baz=101,slow=3.9,SNR=20								
ASAR				S			**S**	**15 36 40.1**	**0.0**
	1.1nm,0.9s,baz=100,slow=14,SNR=6.4								
WB2	**Warramunga Arr**	**44.45**	**262**	*e*P			**P**	**15 30 43.6**	**-0.6**
WB2				*e*PcP			PcP	15 32 17.6	+0.8
WRAB	**Tennant Creek**	**44.45**	**262**	*e*P			**P**	**15 30 43.0**	**-1.2**
	14nm,1.0s,mb4.5								
KAKA	**Kakadu**	**47.87**	**271**	⇓*i*P			**P**	**15 31 10.1**	**-0.2**
	12nm,0.3s,mb4.9								
FORT	**Forrest**	**49.10**	**247**	*e*P			**P**	**15 31 18.7**	**-0.6**
	14nm,0.5s,mb4.7								
FITZ	**Fitzroy Crossi**	**52.89**	**263**	*e*P			**P**	**15 31 46.9**	**-0.1**
	6.9nm,0.6s,mb4.2								
FITZ	**Fitzroy Crossi**	**52.89**	**263**	P			**P**	**15 31 47.5**	**+0.4**
	2.7nm,0.3s,mb4.0,baz=99,slow=3.7,SNR=25								
KLBR	**Kellerberrin**	**57.86**	**245**	*e*P			**P**	**15 32 21.7**	**+0.2**
	26nm,1.0s,mb4.4								
QSPA	**South Pole Qui**	**69.35**	**180**	*e*P			**P**	**15 33 35.9**	**+1.8**
	6.8nm,0.6s,mb4.3								
MJAR	**Matsushiro Arr**	**70.32**	**324**	P			**P**	**15 33 39.5**	**-1.0**
	1.9nm,0.7s,mb3.8,baz=159,slow=5.9,SNR=5.3								
ISA	**Isabella**	**79.57**	**46**	*e*P			**P**	**15 34 32.2**	**-0.3**
	2.8nm,0.9s,mb3.6								
YBH	**Yreka Blue Hor**	**80.53**	**39**	P			**P**	**15 34 38.3**	**+1.0**
	4.5nm,0.5s,mb4.1,baz=177,slow=1.4,SNR=21								
HUMO	**Hull Mountain**	**80.94**	**38**	*e*P			**P**	**15 34 39.9**	**+0.5**
	1.8nm,0.8s,mb3.5								
NVAR	**Mina Array Bea**	**81.26**	**43**	P			**P**	**15 34 42.0**	**+0.8**
	2.0nm,0.7s,mb3.6,baz=225,slow=9.6,SNR=18								
MAW	**Mawson**	**81.32**	**200**	P			**P**	**15 34 42.4**	**+1.3**
	2.2nm,0.5s,mb3.8,baz=116,slow=4.5,SNR=9.4								
WVOR	**Wild Horse Val**	**83.37**	**40**	*e*P			**P**	**15 34 52.0**	**+0.2**
	2.5nm,0.9s,mb3.7								
BBB	**Bella Bella**	**84.65**	**28**	P			**P**	**15 34 57.7**	**-0.1**
	1.4nm,0.6s,mb3.7,baz=65,slow=11,SNR=4.6								
BMO	**Blue Mountains**	**85.56**	**39**	*e*P			**P**	**15 35 02.0**	**-0.4**
	1.6nm,1.1s,mb3.6								
TRF	**Thorofare Moun**	**86.69**	**12**	*e*P			**P**	**15 35 06.0**	**-1.3**
	4.0nm,0.7s,mb4.2								
TXAR	**Lajitas Array**	**87.27**	**57**	P			**P**	**15 35 11.7**	**+0.8**
	0.8nm,0.5s,mb3.6,baz=210,slow=6.9,SNR=12								
VNA3	**Neumayer Olymp**	**87.93**	**176**	*e*			**P**	**15 35 11.0**	**-2.3**
MCMT	**McKenzie Canyo**	**88.19**	**40**	*e*P			**P**	**15 35 15.5**	**+0.6**
	1.3nm,0.7s,mb3.8								
ILAR	**Eielson Array**	**88.55**	**13**	P			**P**	**15 35 15.1**	**-1.0**
	1.1nm,0.4s,mb4.0,baz=214,slow=5.4,SNR=32								
ILAR				pP			pP	15 37 08.0	-2.6
	1.0nm,1.1s,baz=229,slow=6.3,SNR=5.8								
VNA1	**Neumayer--Stat**	**88.60**	**177**	*e*			**P**	**15 35 14.7**	**-1.7**
IMW	**Indian Meadow**	**88.89**	**42**	*e*P			**P**	**15 35 18.7**	**+0.5**
	1.0nm,0.6s,mb3.8								
DAWY	**Dawson**	**89.70**	**16**	*e*P			**P**	**15 35 21.1**	**-0.3**
EGAK	**Eagle**	**89.84**	**15**	*e*P			**P**	**15 35 21.7**	**-0.3**
	3.1nm,1.0s,mb4.1								
CMAR	**Chiang Mai Arr**	**90.08**	**290**	P			**P**	**15 35 25.6**	**+1.3**
	3.8nm,0.9s,mb4.2,baz=131,slow=2.7,SNR=19								
ZALV	**Zalesovo Beam**	**110.59**	**321**	PKPdf		PKiKP		15 40 51.7	-0.8
ZALV	**Zalesovo Beam**	**110.59**	**321**	PKiKP		PKiKP		15 40 51.7	-0.8
	1.4nm,0.6s,baz=130,slow=0.9,SNR=7.9								
MK31	**Makanchi Array**	**111.27**	**313**	*e*PKPdf		PKiKP		15 40 53.1	-1.0
MKAR	**Makanchi Array**	**111.27**	**313**	PKiKP		PKiKP		15 40 53.3	-0.7
	1.2nm,0.5s,baz=66,slow=0.9,SNR=19								
BVAR	**Borovoye Array**	**119.17**	**320**	PKP		PKPdf		15 41 08.7	-0.3
	4.0nm,0.4s,baz=152,slow=1.8,SNR=22								
ARU	**Arti**	**125.32**	**325**	*e*PKPdf		PKPdf		15 41 20.5	-0.2
ARCES	**ARCESS Array B**	**129.12**	**350**	PKP		PKPdf		15 41 27.8	+0.2
	1.2nm,0.6s,baz=48,slow=1.8,SNR=13								
FINES	**FINESS Array B**	**135.95**	**344**	PKP		PKPdf		15 41 39.0	-1.7
FINES	**FINESS Array B**	**135.95**	**344**	PKP		PKPdf		15 41 39.0	-1.7
	1.7nm,0.6s,baz=50,slow=3.6,SNR=7.8								
NOA	**NORSAR Array B**	**139.19**	**353**	PKhKP		PKPpre		15 41 38.0	
	0.8nm,0.6s,baz=331,slow=2.4,SNR=4.5								
AKASG	**Malin Array Be**	**143.15**	**331**	PKP		PKPdf		15 41 51.4	-2.6
AKASG	**Malin Array Be**	**143.15**	**331**	PKP		PKPdf		15 41 51.4	-2.6
	9.4nm,0.5s,baz=43,slow=4.3,SNR=59								
AKBB	**Malin Array Si**	**143.15**	**331**	*e*PKPdf		PKPdf		15 41 51.1	-2.9
KIEV	**Kiev**	**143.16**	**331**	*e*PKP		PKPdf		15 41 50.7	-3.4
MALT	**Malatya**	**143.97**	**307**	*e*PKPdf		PKPdf		15 41 56.3	+0.4
MALT	**Malatya**	**143.97**	**307**	⇑*i*P		PKPdf		15 41 56.5	+0.6
KWP	**Kalwaria Pacla**	**146.73**	**335**	⇓P		PKPdf		15 42 00.5	+0.3
KWP	**Kalwaria Pacla**	**146.73**	**335**	⇓*i*P		PKPdf		15 42 00.5	+0.3
BR131	**Keskin Array B**	**135.90**	**312**	*e*PKPbc		PKPbc		15 42 03.8	+0.2
BRTR	**Keskin Array B**	**146.90**	**312**	PKPbc		PKPbc		15 42 03.9	+0.2
	7.2nm,0.6s,baz=135,slow=4.7,SNR=34								
KOLS	**Kolonicke sedl**	**147.46**	**335**	*e*PKP		PKPbc		15 42 05.8	+1.0
KOLS				*e*				15 42 09.1	
KOLS	**Kolonicke sedl**	**147.46**	**335**	*e*PKP		PKPbc		15 42 05.8	+1.0
KOLS				*e*				15 42 09.1	
STHS	**Stebnicka Huta**	**147.47**	**336**	*e*PKP		PKPbc		15 42 05.3	+0.5
STHS				*e*				15 42 10.4	
STHS	**Stebnicka Huta**	**147.47**	**336**	*e*PKP		PKPbc		15 42 05.3	+0.5
STHS				*e*				15 42 10.4	
VRI	**Vrincioaia**	**147.69**	**327**	⇓P		PKPbc		15 42 06.2	+0.7
VRI	**Vrincioaia**	**147.69**	**327**	⇓*i*P		PKPbc		15 42 06.2	+0.7
CRVS	**Cervenica-Dubn**	**147.81**	**335**	*e*PKP		PKPbc		15 42 06.6	+0.9
CRVS				*e*				15 42 10.6	
CRVS	**Cervenica-Dubn**	**147.81**	**335**	*e*PKP		PKPbc		15 42 06.6	+0.9
CRVS				*e*				15 42 10.6	
MMAI	**Mount Meron Ar**	**147.82**	**299**	PKPbc		PKPbc		15 42 07.5	+1.3
	15nm,0.4s,baz=75,slow=6.3,SNR=56								
TRPA	**Tarpa**	**147.99**	**334**	⇓*i*P		PKPbc		15 42 06.5	+0.3
CLZ	**Clausthal**	**148.24**	**350**	*e*PKPbc		PKPbc		15 42 07.3	+0.6
CLZ	**Clausthal**	**148.24**	**350**	*e*PKPbc		PKPbc		15 42 07.3	+0.6
UPC	**Upice**	**148.25**	**343**	*i*PKP		PKPbc		15 42 07.1	+0.4
CLL	**Collm**	**148.25**	**347**	*e*PKPbc		PKPbc		15 42 07.1	+0.4
CLL	**Collm**	**148.25**	**347**	⇓*i*P		PKPbc		15 42 07.1	+0.4
CLL	**Collm**	**148.25**	**347**	⇓*i*PKPbc		PKPbc		15 42 07.1	+0.4
	comp=Z,16nm,0.7s								
DPC	**Dobska-Polom**	**148.30**	**342**	*i*PKP		PKPbc		15 42 07.7	+0.8
MLR	**Muntele Rosu**	**148.35**	**327**	⇑P		PKPbc		15 42 07.6	+0.4
MLR	**Muntele Rosu**	**148.35**	**327**	⇑*i*P		PKPbc		15 42 07.6	+0.5
BRG	**Berggiesshubel**	**148.44**	**345**	*e*PKPbc		PKPbc		15 42 07.5	+0.3
BRG	**Berggiesshubel**	**148.44**	**345**	*i* PKP		PKPbc		15 42 07.7	+0.5
	comp=Z,8.7nm,0.7s								
BRG				*e*				15 42 12.5	
	comp=Z,4.3nm,0.7s								
VOIR		**148.84**	**328**	⇑P		PKPbc		15 42 09.3	+1.0
VOIR		**148.84**	**328**	⇑*i*P		PKPbc		15 42 09.3	+0.9
PRU	**Pruhonice**	**149.11**	**344**	*i*PKP		PKPbc		15 42 09.9	+1.0
VYHS	**Vyhne**	**149.12**	**338**	*e*PKP		PKPbc		15 42 09.8	+0.9
VYHS				*e*				15 42 16.2	
VYHS	**Vyhne**	**149.12**	**338**	*e*PKP		PKPbc		15 42 09.8	+0.9
VYHS				*e*				15 42 16.2	
MOX	**Moxa**	**149.16**	**348**	*e*PKPbc		PKPbc		15 42 09.6	+0.6
TANN	**Tannenbergstha**	**149.21**	**347**	*e*PKPbc		PKPbc		15 42 09.5	+0.4
WERD	**Werda**	**149.21**	**347**	*e*PKPbc		PKPbc		15 42 09.6	+0.5
GUNZ	**Gunzen**	**149.28**	**347**	*e*PKPbc		PKPbc		15 42 09.9	+0.6
WERN	**Wernitzgruen**	**149.35**	**347**	*e*PKPbc		PKPbc		15 42 10.3	+0.9
NKC	**Novy Kostel**	**149.38**	**347**	*i*PKP		PKPbc		15 42 10.1	+0.6
KHC	**Kasperske Hory**	**150.15**	**344**	*e*PKPdf		PKPdf		15 42 06.6	+0.9
KHC				*i* PKPbc		PKPbc		15 42 11.9	+0.5
KHC				*e*PKPab		PKPab		15 42 20.1	+0.5
KHC	**Kasperske Hory**	**150.15**	**344**	⇑*i*PKP		PKPbc		15 42 11.8	+0.4
GEC2	**GERESS Array S**	**150.38**	**344**	*e*PKPbc		PKPbc		15 42 12.2	+0.3
GEC2	**GERESS Array S**	**150.38**	**344**	*e*PKPbc		PKPbc		15 42 12.2	+0.3
VTS	**Vitosha**	**151.78**	**325**	⇑P		PKPbc		15 42 15.8	+0.6
VTS	**Vitosha**	**151.78**	**325**	⇑*i*P		PKPbc		15 42 15.9	+0.6
TORD	**Torodi Ar. Bea**	**172.47**	**179**	PKP		PKPdf		15 42 28.8	-0.7
	comp=Z,1.2nm,0.8s,baz=234,slow=0.9,SNR=5.6								
TORD				PKPab		PKPab		15 43 58.5	+0.8
	comp=Z,1.2nm,0.8s,baz=178,slow=4.0,SNR=5.9								

*IDC **08** 15:41:13.4±1.9, 42˚.73N×130˚.01W, h0km, mb3.8/3, mb1 3.9/6, mb1mx3.6/27, mbtmp3.6/6, ML3.0/3, MS3.7/2, Ms1 3.7/2, ms1mx3.0/36, Error ellipse: s-maj=99.5km s-min=23.6km az=28.0*
*NEIC **08** 15:41:17.9±1.4, 43˚.99N×128˚.64W, h10km, mb3.9/5, Error ellipse: s-maj=18.0km s-min=12.7km az=84.0*

ISC 08 15:41:17.7±2.7, 43.96N±0˝.08×128.6W±0˚.1, h8km±19km, n32, σ1§25/34, mb3.8/5, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RNO	**Roman Nose**	**3.54**	**89**	P			**Pn**	**15 42 11.8**	**-1.1**
MPOR	**Mary's Peak**	**3.70**	**80**	P			**Pn**	**15 42 13.3**	**-1.7**
HEBO	**Mount Hebo**	**3.71**	**69**	*e*Pn			**Pn**	**15 42 13.1**	**-2.1**
HEBO				*e*Sn			**Sn**	**15 42 60.0**	**+0.9**
DBO	**Dodson Butte**	**4.01**	**100**	P			**Pn**	**15 42 18.1**	**-1.3**
HSO	**Harness Mounta**	**4.04**	**94**	P			**Pn**	**15 42 19.0**	**-0.8**
HUMO	**Hull Mountain**	**4.36**	**106**	*e*Pn			**Pn**	**15 42 22.8**	**-1.4**
HUMO				*e*Sn			**Sn**	**15 43 14.4**	**-0.8**
IRO	**Indian Ridge**	**4.61**	**87**	P			**Pn**	**15 42 26.1**	**-1.5**
NLWA	**Neilton Lookou**	**4.79**	**43**	*e*Pn			**Pn**	**15 42 29.7**	**-0.3**
NLWA				*e*Sn			**Sn**	**15 43 20.2**	**-5.6**
YBH	**Yreka Blue Hor**	**4.89**	**115**	Pn			**Pn**	**15 42 37.6**	**+6.1**
	0.3nm,0.3s,baz=275,slow=8.5,SNR=18								
YBH				LR			LR	15 44 13.2	
	comp=Z,93nm,19.1s,baz=101,slow=33								
HOOD	**Mount Hood Mea**	**5.17**	**72**	*e*Pn			**Pn**	**15 42 35.0**	**-0.3**
GNW	**Green Mountain**	**5.44**	**46**	Pn			**Pn**	**15 42 38.4**	**-0.5**
	7.4nm,0.7s								
JCW	**Jim Creek**	**6.30**	**45**	*e*Pn			**Pn**	**15 42 51.0**	**+0.2**
RPW	**Rockport**	**6.68**	**45**	*e*Pn			**Pn**	**15 42 56.7**	**+0.7**
	9.4nm,0.5s								
HAWA	**Hanford**	**6.88**	**66**	*e*Pn			**Pn**	**15 42 58.5**	**-0.3**
OD2	**Odessa Site #2**	**7.75**	**60**	*e*Pn			**Pn**	**15 43 10.2**	**-0.5**
	11nm,0.9s								
BMO	**Blue Mountains**	**8.17**	**80**	Pn			**Pn**	**15 43 17.9**	**+1.5**
NEW	**Newport**	**9.08**	**58**	Pn			**Pn**	**15 43 30.3**	**+1.3**
NVAR	**Mina Array Bea**	**9.55**	**122**	Pn			**Pn**	**15 43 38.0**	**+2.6**
	0.0nm,0.3s,baz=289,slow=14,SNR=6.0								
BSMT	**Bassoo Peak**	**10.41**	**63**	Pn			**Pn**	**15 43 49.1**	**+2.0**
LRM	**Limekiln Ridge**	**11.64**	**75**	*e*P			**Pn**	**15 44 05.3**	**+1.4**
SRU	**San Rafael**	**14.40**	**103**	*e*P			**Pn**	**15 44 51.5**	**+10**
PV01	**Paradox Valley**	**16.20**	**104**	*e*P			**Pn**	**15 45 07.7**	**+2.1**
SDCO	**Great Sand Dun**	**18.54**	**102**	*e*P			**Pn**	**15 45 36.5**	**+1.8**
	3.5nm,1.2s								
ANMO	**Albuquerque**	**19.30**	**110**	P			**Pn**	**15 45 44.6**	**+0.6**
	1.8nm,0.8s								
ANMO	**Albuquerque**	**19.30**	**110**	P			**Pn**	**15 45 45.4**	**+1.4**
	0.1nm,0.3s,baz=302,slow=8.5,SNR=2.8								
ECSD	**EROS Data Cent**	**23.03**	**79**	*e*P			**P**	**15 46 20.9**	**-2.2**
	5.5nm,1.0s,mb3.9								
TXAR	**Lajitas Array**	**24.66**	**118**	P			**P**	**15 46 39.1**	**+0.3**
	0.8nm,0.8s,mb3.3,baz=290,slow=7.3,SNR=6.7								
WMOK	**Wichita Mounta**	**24.75**	**102**	*e*P			**P**	**15 46 40.2**	**+0.7**
	7.2nm,0.9s,mb4.2								
KSRS	**Korea Array**	**73.42**	**306**	LR			LR	16 20 58.7	
	comp=Z,269nm,18.3s,baz=39,slow=32								
SONM	**Songino Array**	**76.57**	**325**	P			**P**	**15 53 07.9**	**-0.3**
	1.2nm,1.0s,mb3.8,baz=56,slow=3.5,SNR=4.7								
LPAZ	**La Paz**	**81.45**	**122**	*e*P			**P**	**15 53 34.4**	**-0.9**
	1.4nm,0.8s,mb3.9								
LPAZ	**La Paz**	**81.45**	**122**	P			**P**	**15 53 34.7**	**-0.6**
	1.1nm,0.8s,mb3.9,baz=338,slow=8.1,SNR=4.5								

*PGC **08** 15:41:31.3±5.7, 51˚.54N×131˚.71W, h10km, ML4.2/11, 190km south of Sandspit, Bc Queen Charlotte Islands Region*
*NEIC **08** 15:41:31.3, 51˚.54N×131˚.70W, h10km, mb4.1/24, ML4.2(PGC), After PGC.*
*ISCJB **08** 15:41:33.5±0.4, 51˚.78N±0˝.05×131˚.23W±0˝.08, h10km, mb4.2/23, MS3.5/5, Error ellipse: s-maj=8.9km s-min=3.0km az=135.9*
*BJI **08** 15:41:34.2, 51˚.50N×131˚.70W, h10km, mB4.8/5, mb4.5/10, Ms4.4/2, Ms7 4.1/2*
*IDC **08** 15:41:35.4±0.8, 51˚.83N×131˚.30W, h0km, mb4.0/9, mb1 4.0/15, mb1mx3.9/29, mbtmp3.9/15, ML3.5/6, MS3.5/6, Ms1 3.5/6, ms1mx3.3/34, Error ellipse: s-maj=13.1km s-min=7.9km az=8.0*

ISC 08 15:41:35.2±0.4, 51˚.80N±0˝.04×131˚.24W±0˝.07, h10km, (h15km±1.2km: pP-P), n114, σ1§61/107, mb4.2/23, MS3.5/5, 2D, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BNB	**Barry Inlet**	**0.84**	**338**	⇑P			**Pg**	**15 41 50.3**	**-1.1**
BNB				⇑S			**Sg**	**15 42 00.9**	**-1.5**
DIB	**Dawson Inlet,**	**1.60**	**332**	Pn			**Pn**	**15 42 00.8**	**-2.6**
DIB				Sn			**Sn**	**15 42 24.8**	**+0.6**
DIB	**Dawson Inlet,**	**1.60**	**332**	⇑P			**Pn**	**15 42 00.8**	**-2.7**
BBB	**Bella Bella**	**1.97**	**77**	Pn			**Pn**	**15 42 07.8**	**-0.8**
BBB				Pg			**Pg**	**15 42 13.3**	**+0.4**
BBB				Lg				15 42 38.0	
BBB	**Bella Bella**	**1.97**	**77**	Pn			**Pn**	**15 42 07.8**	**-0.8**
	16nm,0.3s,baz=90,slow=12,SNR=65								
BBB				Pg			**Pg**	**15 42 13.3**	**+0.4**
	98nm,0.3s,baz=91,slow=18,SNR=124								
BBB				Lg				15 42 38.0	
	182nm,0.3s,baz=167,slow=22,SNR=9.6								
BBB	**Bella Bella**	**1.97**	**77**	⇑P			**Pn**	**15 42 07.9**	**-0.6**
BBB				⇑S			**Sn**	**15 42 37.8**	**+4.5**
HOLB	**Holberg**	**2.27**	**119**	⇑P			**Pn**	**15 42 09.1**	**-2.8**
NDB	**Naden**	**2.40**	**335**	⇓P			**Pn**	**15 42 12.0**	**-2.4**
RUBB	**Prince Rupert**	**2.60**	**13**	⇓P			**Pn**	**15 42 17.1**	**-0.1**
PHC	**Port Hardy**	**2.63**	**113**	⇑P			**Pn**	**15 42 14.9**	**-2.7**
BPBC	**Brooks Peninsu**	**2.74**	**125**	⇑P			**Pn**	**15 42 17.4**	**-1.7**
BCBC	**Bella Coola**	**2.83**	**76**	⇑P			**Pn**	**15 42 22.9**	**+2.6**
MAYB	**Maynard**	**2.92**	**117**	⇑P			**Pn**	**15 42 19.4**	**-2.2**
EDB	**Eliza Dome**	**3.24**	**125**	⇑P			**Pn**	**15 42 24.5**	**-1.6**
WOSB	**Woss**	**3.38**	**117**	⇑P			**Pn**	**15 42 26.7**	**-1.1**
NCRB	**Newcastle Ridg**	**3.55**	**111**	⇑P			**Pn**	**15 42 29.2**	**-1.1**
CRAG	**Craig**	**3.85**	**344**	*e*Pn			**Pn**	**15 42 33.0**	**-1.3**
SIT	**Sitka**	**5.79**	**337**	*e*Pn			**Pn**	**15 42 57.4**	**-3.5**
	34nm,0.9s								
PGC	**Sidney**	**5.91**	**119**	*e*Pn			**Pn**	**15 43 02.4**	**-0.3**
DLBC	**Dease Lake**	**6.69**	**5**	*e*Pn			**Pn**	**15 43 15.4**	**+2.0**
DLBC	**Dease Lake**	**6.69**	**5**	Pn			**Pn**	**15 43 16.6**	**+3.2**
	1.3nm,0.3s,baz=191,slow=10,SNR=10								
DLBC				Lg				15 45 06.1	
	2.4nm,0.3s,baz=4.0,slow=1.0,SNR=9.6								
DLBC				LR			LR	15 45 50.9	
	comp=Z,518nm,20.2s,baz=58,slow=38								
SKAG	**Skagway**	**8.02**	**345**	*e*Pn			**Pn**	**15 43 30.6**	**-0.9**
PNL	**Peninsula**	**9.13**	**333**	*e*Pn			**Pn**	**15 43 46.3**	**-0.5**
HYT	**Haines Junctio**	**9.69**	**341**	*e*Pn			**Pn**	**15 43 55.5**	**+1.1**
LNOR	**Lincoln Mounta**	**10.39**	**120**	Pn			**Pn**	**15 44 01.9**	**-2.2**
HUMO	**Hull Mountain**	**10.77**	**145**	Pn			**Pn**	**15 44 05.2**	**-4.2**
EDM	**Edmonton**	**11.00**	**76**	Pn			**Pn**	**15 44 14.6**	**+2.2**
YBH	**Yreka Blue Hor**	**11.63**	**147**	Pn			**Pn**	**15 44 20.1**	**-1.0**
YBH	**Yreka Blue Hor**	**11.63**	**147**	Pn			**Pn**	**15 44 25.2**	**+4.1**
	0.1nm,0.3s,baz=309,slow=8.5,SNR=4.6								
MOD	**Modoc**	**12.39**	**139**	*e*Pn			**Pn**	**15 44 29.0**	**-2.5**
CHMT	**Chamberlain Mo**	**12.69**	**106**	*e*Pn			**Pn**	**15 44 37.5**	**+1.9**
WDC	**Whiskeytown Da**	**12.72**	**148**	Pn			**Pn**	**15 44 36.0**	**0.0**
KDAK	**Kodiak Island**	**13.66**	**304**	Pn			**Pn**	**15 44 49.3**	**+0.6**
	0.2nm,0.3s,baz=111,slow=5.1,SNR=6.1								
YKA	**Yellowknife Ar**	**13.96**	**33**	Pn			**Pn**	**15 44 52.7**	**0.0**
YKA				Pg			Pn	15 45 53.4	+61
YKA				Lg				15 48 55.6	
YKA	**Yellowknife Ar**	**13.96**	**33**	Pn			**Pn**	**15 44 52.7**	**0.0**

NIED ***08*** *15:53:00.41˚.10N×142˚.30E,h47km,Mw5.4 Best double couple: M0 1.30000×10^17 NP1:φ=24.00000°,δ70.00000°, λ.96.00000°. NP2:φ=186.00000°,δ21.00000°,λ.73.00000°.*

BJI ***08*** *15:53:04.5,41˚.02N×142˚.62E,h37km,mB5.3/39,mb5.2/58, Ms4.8/64,Ms7 4.7/57*

NEIC ***08*** *15:53:09.9±0.1,41˚.17N×142˚.19E,h39km,mb5.4/213, MS4.8/165,MW5.4,MW5.3(NIED),Error ellipse: s-maj=4.0km s-min=2.5km az=161.0,Moment Tensor Solution. s41 Moment tensor: Scale 10^17Nm; Mrr=0.98; Mθθ-0.13; Mφφ-0.86; Mrθ0.60; Mφθ-0.02; Mφr1.10; Best double couple: M0 1.60000×10^17 NP1:φ=22.00000°, δ72.00000°,λ.100.00000°. NP2:φ=171.00000°,δ20.00000°, λ61.00000°. Principal axes: T 1.6600, Plg61.0000°, Azm307.0000°; N -0.2300, Plg9.0000°, Azm199.0000°; P -1.4300, Plg26.0000°, Azm104.0000°;*

NEIC Felt at Misawa, Honshu. Recorded [3 JMA] in southwestern Hokkaido. Also recorded [3 JMA] in Aomori and [2 JMA] in Iwate and [1 JMA] in Miyagi, Honshu.

ISCJB ***08*** *15:53:10.8±0.1,41˚.19N±0˚.02×142˚.16E±0˚.02,h58km, mb5.3/307,MS4.9/230 Error ellipse: s-maj=2.5km s-min=1.6km az=154.1*

MOS ***08*** *15:53:10.5±0.8,41˚.27N×142˚.20E,h60km,mb5.6/121, MS4.8/75,Error ellipse: s-maj=8.1km s-min=5.6km az=81.5*

JMA ***08*** *15:53:10.8±0.1,41˚.14N×142˚.28E,h51km±3km,M5.4 Broadband fault plane solution: P waves. NP1: φ±188.00000°,δ18.00000°,λ76.00000°. NP2:φ±22.00000°, δ73.00000°,λ.94.00000°. Principal axes: T Plg62.0000°, Azm299.0000°; N Plg4.0000°, Azm201.0000°; P Plg28.0000°, Azm109.0000°;*

JMA Felt III J1.

IDC ***08*** *15:53:12.4±0.6,41˚.25N×142˚.16E,h62km±4km,mb4.5/27, mb1 4.6/30,mb1mx4.6/31,mbtmp4.5/30,MS4.8/28, Ms1 4.8/28,ms1mx4.7/33 Error ellipse: s-maj=10.4km s-min=8.9km az=101.0*

GCMT ***08*** *15:53:12.9±0.1,41˚.17N×142˚.49E,h56km,MW5.4, Moment Tensor Solution. s83,c161; s13,c15; Moment tensor: Scale 10^17Nm; Mrr 1.39±.03; Mθθ0.05±.03; Mφφ-1.44±.03; Mrθ0.45±.02; Mθφ-0.40±.02; Mφr0.70±.02; Best double couple: M0 1.70000×10^17 NP1:φ=184.00000°, δ32.00000°,λ.73.00000°. NP2:φ=24.00000°,δ60.00000°, λ100.00000°. Principal axes: T 1.6300, Plg73.0000°, Azm319.0000°; N 0.1100, Plg9.0000°, Azm198.0000°; P -1.7400, Plg14.0000°, Azm106.0000°; Data Used: ll IU IC G CN. Surface waves: sta= 96, comp=199, per= 50.*

SZGRF ***08*** *15:53:13.9,42˚.20N×143˚.10E,h33km,mb5.4,MS5.1, Hokkaido, Japan, region*

ISC 08 15:53:12.5±0.1, 41˚.18N±0˚.02×142˚.15E±0˚.02, h60km, h60km±1.2km; pP-P, n1213, σ0 s75/1160, mb5.3/307, MS4.9/230, 397C-225D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
JOT	**Ohata**	**0.85**	**284**	⇓	P	**Pn**	**15 53 28.0**	**-0.6**
JOT					S	**Sn**	**15 53 40.6**	**+0.1**
JTM	**Tenmabayashi**	**0.90**	**245**	⇓	P	**Pn**	**15 53 28.7**	**-0.5**
JTM				*e*	S	**Sn**	**15 53 42.1**	**+0.5**
JANG	**Nango**	**0.93**	**211**	⇓	P	**Pn**	**15 53 28.1**	**-1.5**
JANG					S	**Sn**	**15 53 40.7**	**-1.6**
JKB	**Kayabe**	**1.10**	**311**	⇓	P	**Pn**	**15 53 31.0**	**-0.8**
JKB				*e*	S	**Sn**	**15 53 46.2**	**+0.1**
ERM	**Erimo**	**1.13**	**42**	⇓ *i*	Pn	**Pn**	**15 53 30.3**	**-1.9**
ERM				*e*	Sn	**Sn**	**15 53 47.5**	**+0.6**
JEM	**Erimo**	**1.13**	**42**		P	**Pn**	**15 53 30.1**	**-2.1**
JEM				*e*	S	**Sn**	**15 53 45.4**	**-1.5**
JNBK	**Urakawa-nobuka**	**1.19**	**22**	⇓	P	**Pn**	**15 53 31.7**	**-1.3**
JTH	**Tanohata**	**1.25**	**190**	⇑	P	**Pn**	**15 53 31.0**	**-2.8**
JSI2	**Shiura 2**	**1.32**	**265**	⇓	P	**Pn**	**15 53 34.5**	**-0.2**
JKZ	**Kuzumaki**	**1.34**	**208**	⇓	P	**Pn**	**15 53 34.1**	**-0.9**
JSR	**Shiriuchi**	**1.35**	**286**	⇓	P	**Pn**	**15 53 35.2**	**+0.1**
JSR				*e*	S	**Sn**	**15 53 54.0**	**+1.9**
JAH	**Hinai**	**1.51**	**230**	⇓	P	**Pn**	**15 53 36.8**	**-0.5**
JNB	**Noboribetsu**	**1.54**	**328**	⇓	P	**Pn**	**15 53 36.6**	**-1.0**
JNB					S	**Sn**	**15 53 56.5**	**0.0**
JBT2	**Biratori 2**	**1.61**	**6**	⇓	P	**Pn**	**15 53 37.9**	**-0.7**
MIYJ	**Miyakonagasawa**	**1.62**	**189**	⇑	P	**Pn**	**15 53 36.6**	**-2.1**
JCH	**Churui**	**1.70**	**32**	⇓	P	**Pn**	**15 53 38.4**	**-1.4**
JCH				*e*	S	**Sn**	**15 53 59.9**	**-0.6**
JIW	**Iwasaki**	**1.72**	**251**	⇓	P	**Pn**	**15 53 40.2**	**0.0**
JEW	**Eniwo**	**1.74**	**343**	⇓	P	**Pn**	**15 53 40.1**	**-0.3**
JOM	**Ohasama**	**1.82**	**201**		P	**Pn**	**15 53 40.6**	**-0.9**
JOM				*e*	S	**Sn**	**15 54 02.2**	**-1.3**
JFR	**Furan**	**2.02**	**9**	⇓	P	**Pn**	**15 53 43.5**	**-0.6**
JOG2	**Oga 2**	**2.19**	**236**	⇓	P	**Pn**	**15 53 46.8**	**+0.3**
JIO	**Ouri**	**2.79**	**193**	⇓	P	**Pn**	**15 53 53.3**	**-1.3**
ASAJ	**Asahikawa**	**2.96**	**6**		P	**Pn**	**15 53 57.0**	**0.0**
	169nm,0.3s,baz=219,slow=12,SNR=901							
ASAJ					S	**Sn**	**15 54 29.2**	**-2.0**
	83nm,0.3s,baz=224,slow=25,SNR=6.1							
ASAJ	**Asahikawa**	**2.96**	**6**		P	**Pn**	**15 53 57.0**	**0.0**
ASAJ					S	**Sn**	**15 54 29.3**	**-1.9**
ASAJ					pmax	pmax		
	comp=Z,169nm,0.3s							
ASAJ					smax			
	comp=N,83nm,0.3s							
JYS	**Shirataka**	**3.36**	**209**	⇑	P	**Pn**	**15 54 03.3**	**+0.8**
YUK	**Yuzh-Kuril'sk**	**3.96**	**43**	⇓ *i*	P	**Pn**	**15 54 07.9**	**-2.8**
YUK	**Yuzh-Kuril'sk**	**3.96**	**43**	*d i*	P	**Pn**	**15 54 07.8**	**-2.9**
YUK				*i*	S	**Sn**	**15 54 49.7**	**-6.1**
YUK					pmax	pmax		
	comp=Z,5μm,1.1s							
YUK					pmax	pmax		
	comp=Z,3μm,0.5s							
YUK					pmax	pmax		
	comp=N,3μm,0.6s							
YUK					pmax	pmax		
	comp=E,840nm,0.3s							
YUK					smax			
	comp=N,65μm,1.6s							
YUK					smax			
	comp=E,24μm,0.8s							
YUK					smax			
	comp=N,16μm,0.6s							
YUK					smax			
	comp=E,4μm,0.6s							
YUK					MLR	MLR		
	comp=N,12μm,20.0s							
YUK					MLR	MLR		
	comp=E,16μm,20.0s							
YUK					MLR	MLR		
	comp=Z,11μm,20.0s							
JFY	**Yanaizu**	**4.21**	**208**		P	**Pn**	**15 54 15.3**	**+1.1**
JSD	**Sado**	**4.34**	**225**	⇓	P	**Pn**	**15 54 16.5**	**+0.6**
JHK	**Hiroka**	**4.61**	**213**		P	**Pn**	**15 54 20.8**	**+1.2**
JJN	**Nakama**	**5.11**	**219**	⇑	P	**Pn**	**15 54 28.5**	**+2.0**
MAJO	**Matsushiro**	**5.55**	**215**	⇑ *e*	P	**Pn**	**15 54 33.5**	**+1.0**
MAT	**Matsushiro**	**5.55**	**215**		P	**Pn**	**15 54 34.0**	**+1.5**
MAT					S	**Sn**	**15 55 39.9**	**+4.9**
MAT	**Matsushiro**	**5.55**	**215**		P	**Pn**	**15 54 33.9**	**+1.4**
MJAR	**Matsushiro Arr**	**5.55**	**215**		P	**Pn**	**15 54 34.1**	**+1.6**
	comp=Z,16nm,0.3s,baz=28,slow=13,SNR=160							
MJAR					LR	LR	15 57 06.7	
	comp=Z,7μm,20.1s,baz=35,slow=42							
MJAR	**Matsushiro Arr**	**5.55**	**215**		P	**Pn**	**15 54 34.1**	**+1.6**
MJAR					pmax	pmax		
	comp=Z,16nm,0.3s							
MJAR					MLR	MLR		
	comp=Z,7μm,20.1s							
JNG	**Nsakai**	**5.71**	**215**		P	**Pn**	**15 54 36.1**	**+1.4**
YSS	**Yuzh-Sakhalins**	**5.79**	**4**	⇑ *i*	Pn	**Pn**	**15 54 35.7**	**-0.1**
YSS	**Yuzh-Sakhalins**	**5.79**	**4**	⇑ *i*	P	**Pn**	**15 54 35.0**	**-0.8**
YSS				*i*	S	**Sn**	**15 55 41.0**	**+0.2**
YSS					pmax	pmax		
	comp=N,370nm,1.0s							
YSS					pmax	pmax		
	comp=Z,370nm,1.0s							
YSS					smax			
	comp=E,630μm,1.2s							
YSS					MLR	MLR		
	comp=N,4μm,16.0s							
YSS					MLR	MLR		
	comp=Z,4μm,16.0s							
YSS					MLR	MLR		
	comp=E,4μm,14.0s							
KUR	**Kuril'sk**	**5.82**	**44**	*e*	P	**Pn**	**15 54 33.6**	**-2.6**
KUR				*e*	S	**Sn**	**15 55 36.5**	**-5.0**
KUR					pmax	pmax		
	comp=N,4μm,1.2s							
KUR					pmax	pmax		
	comp=E,3μm,1.2s							
KUR					pmax	pmax		
	comp=Z,10μm,1.2s							
KUR					pmax	pmax		
	comp=N,2μm,1.1s							
KUR					pmax	pmax		
	comp=E,2μm,1.1s							
KUR					pmax	pmax		
	comp=Z,8μm,1.1s							
KUR					smax			
	comp=N,24μm,2.5s							
KUR					smax			
	comp=E,23μm,2.5s							
KUR					smax			
	comp=N,2μm,0.6s							
KUR					smax			
	comp=E,3μm,0.6s							
KUR					MLR	MLR		
	comp=N,10μm,12.0s							
KUR					MLR	MLR		
	comp=E,11μm,12.0s							
KUR					MLR	MLR		
	comp=Z,8μm,12.0s							
JJH	**Hakui**	**5.95**	**226**		P	**Pn**	**15 54 40.2**	**+2.2**
JGN	**Niukaw**	**6.22**	**219**	⇑	P	**Pn**	**15 54 43.7**	**+2.0**
JNY	**Yasuok**	**6.71**	**211**		P	**Pn**	**15 54 48.9**	**+0.5**
JIZS	**Izushimoda**	**6.94**	**203**		P	**Pn**	**15 54 49.2**	**-2.4**
JFM	**Mihama**	**7.43**	**223**		P	**Pn**	**15 55 01.5**	**+3.3**
VLA	**Vladivostok**	**7.86**	**288**	*i*	P	**Pn**	**15 55 04.8**	**+0.7**
VLA	**Vladivostok**	**7.86**	**288**	*d i*	P	**Pn**	**15 55 04.8**	**+0.7**
VLA					pmax	pmax		
	comp=Z,72nm,0.8s							
UGL	**Uglegorsk**	**7.90**	**360**	*e*	P	**Pn**	**15 55 06.0**	**+1.4**
UGL				*e*			15 56 36.0	
UGL					pmax	pmax		
	comp=Z,84nm,0.8s							
UGL					MLR	MLR		
	comp=N,9μm,18.0s							
UGL					MLR	MLR		
	comp=E,8μm,20.0s							
JHJ	**Hachijo jima 2**	**8.26**	**194**		P	**Pn**	**15 55 06.5**	**-3.1**
	comp=E,88nm,0.3s,baz=81,slow=8.7,SNR=41							
JHJ					S	**Sn**	**15 56 35.0**	**-6.4**
	comp=E,20nm,0.3s,baz=70,slow=23,SNR=4.1							
HABR	**Khabarovsk**	**8.87**	**328**	*c i*	P	**Pn**	**15 55 17.9**	**+0.1**
HABR				*e*	S	**Sn**	**15 56 57.8**	**+1.7**
HABR					pmax	pmax		
	comp=Z,72nm,1.2s							
HABR					pmax	pmax		
	comp=N,63nm,1.4s							
HABR					pmax	pmax		
	comp=E,62nm,1.5s							
HABR					MLR	MLR		
	comp=Z,6μm,17.0s							
MDJ	**Mudanjiang**	**9.83**	**295**		P	**Pn**	**15 55 33.6**	**+2.6**
MDJ					pmax	pmax		
	comp=Z,97nm,1.0s							
MDJ					pmax	pmax		
	comp=Z,760nm,7.0s							
MDJ					LR	LR		
	comp=N,2μm,19.9s							
MDJ					LR	LR		
	comp=E,6μm,18.4s							
MDJ					LR	LR		
	comp=Z,9μm,16.9s							
MDJ	**Mudanjiang**	**9.83**	**295**	⇑ *e*	Pn	**Pn**	**15 55 33.4**	**+2.4**
	comp=Z,104nm,1.0s							
KSRS	**Korea Array**	**11.63**	**256**		P	**Pn**	**15 55 58.2**	**+2.6**
	comp=Z,1.7nm,0.3s,baz=67,slow=14,SNR=66							
KSRS					S	**Sn**	**15 58 08.5**	**+4.8**
	comp=Z,0.7nm,0.3s,baz=70,slow=22,SNR=2.7							
KSRS					LR	LR	16 00 10.1	
	comp=Z,5μm,18.2s,baz=73,slow=36							
KSRS	**Korea Array**	**11.63**	**256**		P	**Pn**	**15 55 58.2**	**+2.6**
KSRS					S	**Sn**	**15 58 08.5**	**+4.8**
KSRS					pmax	pmax		
	comp=Z,2.0nm,0.3s							
KSRS					smax			
	comp=N,1.0nm,0.3s							
KSRS					MLR	MLR		
	comp=Z,5μm,18.2s							
INCN	**Inchon**	**12.56**	**258**	*e*	Pn	**Pn**	**15 56 11.8**	**+3.5**
INCN	**Inchon**	**12.56**	**258**	⇑	P	**Pn**	**15 56 12.8**	**+4.5**
SNR=5.2								
CN2	**Changchun**	**12.61**	**288**	*e*	P	**Pn**	**15 56 12.0**	**+3.2**
CN2				*e*	pP		15 56 19.2	
CN2				*e*	sP		15 56 24.0	
CN2				*e*	S	**Sn**	**15 58 42.0**	**+15**
CN2					pmax	pmax		
	comp=Z,10.0nm,1.0s							
CN2					pmax	pmax		
	comp=Z,200nm,3.0s							
CN2					LR	LR		
	comp=N,2μm,19.0s							
CN2					LR	LR		
	comp=E,5μm,19.0s							
CN2					LR	LR		
	comp=Z,2μm,18.0s							
SKR	**Severo-Kuril's**	**13.58**	**41**	*e*	P	**Pn**	**15 56 19.7**	**-2.3**
SKR				*e*	S	**Sn**	**15 58 41.5**	**-10**
SKR					pmax	pmax		
	comp=N,40nm,0.5s							
SKR					pmax	pmax		
	comp=Z,40nm,0.5s							
SKR					smax			
	comp=N,100nm,0.8s							
SKR					smax			
	comp=E,60nm,0.8s							
SKR					MLR	MLR		
	comp=N,2μm,16.0s							
SKR					MLR	MLR		
	comp=E,2μm,16.0s							
SKR					MLR	MLR		
	comp=Z,3μm,16.0s							
SNY	**Shenyang**	**13.94**	**279**	⇑	P	**Pn**	**15 56 28.0**	**+1.1**
SNY					S	**Sn**	**15 59 08.7**	**+8.8**
SNY					pmax	pmax		
	comp=Z,20nm,2.4s							
SNY					pmax	pmax		
	comp=Z,550nm,4.9s							
SNY					LR	LR		
	comp=E,3μm,17.4s							
SNY					LR	LR		
	comp=Z,4μm,27.0s							
CBIJ	**Chichi jima**	**14.04**	**180**		P	**Pn**	**15 56 25.4**	**-3.0**
	comp=Z,4.4nm,0.3s,baz=297,slow=23,SNR=12							
CBIJ					S	**Sn**	**15 58 50.8**	**-12**
DL2	**Dalian**	**15.88**	**269**	⇑ *i*	P	**Pn**	**15 56 52.7**	**+0.6**
DL2					S	**S**	**15 59 49.6**	**-8.7**
DL2					pmax	pmax		
	comp=Z,40nm,0.8s							
DL2					pmax	pmax		
	comp=Z,620nm,5.9s							
DL2					LR	LR		
	comp=N,550nm,20.2s							
DL2					LR	LR		
	comp=E,740nm,23.9s							
DL2					LR	LR		
	comp=Z,1μm,29.2s							
PETK	**Petropavlovsk-**	**15.91**	**36**		P	**Pn**	**15 56 49.0**	**-3.3**
	comp=Z,0.6nm,0.3s,baz=176,slow=13,SNR=14							
PETK	**Petropavlovsk-**	**15.91**	**36**		P	**Pn**	**15 56 49.0**	**-3.3**
PETK					pmax	pmax		
	comp=Z,1.0nm,0.3s							
PET	**Petropavlovsk**	**16.29**	**38**	⇑ *e*	P	**Pn**	**15 56 52.6**	**-4.5**
PET	**Petropavlovsk**	**16.29**	**38**	*e*	P	**Pn**	**15 56 55.4**	**-1.7**
PET				*e*	S	**S**	**15 59 54.5**	**-12**
PET					pmax	pmax		
	comp=Z,56nm,0.9s							
PET					MLR	MLR		
	comp=Z,2μm,20.0s							
HIA	**Hailar**	**17.69**	**305**	*e*	P	**Pn**	**15 57 12.2**	**-2.4**
	comp=Z,29nm,0.8s							
HIA	**Hailar**	**17.69**	**305**	*e*	P	**Pn**	**15 57 12.2**	**-2.3**
HIA					pmax	pmax		
	comp=Z,29nm,0.8s							
CLNS	**Chul'man**	**19.24**	**330**	*e*	P	**Pn**	**15 57 29.4**	**-3.7**
CLNS				*e*	S	**S**	**16 01 07.6**	**+1.4**
CLNS					pmax	pmax		
	comp=Z,21nm,0.8s							
CLNS					pmax	pmax		
	comp=N,19nm,0.9s							
CLNS					pmax	pmax		
	comp=E,13nm,0.9s							
CLNS					smax			
	comp=E,409nm,13.0s							
CLNS					smax			
	comp=N,264nm,11.5s							
CLNS					MLR	MLR		
	comp=N,2μm,21.0s							
CLNS					MLR	MLR		
	comp=Z,1μm,17.0s							
CLNS					MLR	MLR		
	comp=E,991nm,14.0s							
SSE	**Sheshan**	**19.65**	**246**		P	**Pn**	**15 57 36.5**	**-1.7**
SSE					S	**S**	**16 01 12.6**	**-2.1**
SSE					pmax	pmax		
	comp=Z,32nm,0.9s							
SSE					pmax	pmax		
	comp=Z,150nm,4.0s							
SSE					LR	LR		
	comp=N,1μm,19.4s							
SSE					LR	LR		
	comp=E,1μm,19.5s							
SSE					LR	LR		
	comp=Z,2μm,20.8s							
BJI	**Beijing**	**19.73**	**275**		P	**Pn**	**15 57 35.5**	**-3.6**
BJI					S	**S**	**16 01 09.3**	**-7.0**
BJI					pmax	pmax		
	comp=Z,31nm,1.6s							
BJI					pmax	pmax		
	comp=Z,380nm,3.6s							
BJI					LR	LR		
	comp=E,3μm,17.2s							
BJI					LR	LR		
	comp=Z,3μm,26.5s							
BJT	**Baijiatuau**	**19.74**	**275**	⇑ *e*	P	**Pn**	**15 57 34.9**	**-4.3**
	comp=Z,55nm,0.7s							
BJT	**Baijiatuau**	**19.74**	**275**	⇑ *e*	P	**Pn**	**15 57 34.9**	**-4.3**
BJT					pmax	pmax		
	comp=Z,55nm,0.7s							
TIA	**Tai'an**	**20.12**	**264**		P	**P**	**15 57 40.0**	**-1.4**
TIA					S	**S**	**16 01 20.3**	**-3.8**
TIA					LR	LR		
	comp=N,2μm,18.2s,MS4.6							
TIA					LR	LR		
	comp=E,2μm,17.5s,MS4.6							
NJ2	**Nanjing**	**20.75**	**251**	*e*	P	**P**	**15 57 46.7**	**-1.5**
NJ2					pP		15 57 53.8	
NJ2					sP	sP	15 57 58.6	-10
NJ2					PP		15 58 07.9	
NJ2					S	**S**	**16 01 30.0**	**-6.5**
NJ2					pmax	pmax		
	comp=Z,40nm,0.8s							
NJ2					pmax	pmax		
	comp=Z,60nm,4.2s							
NJ2					LR	LR		
	comp=N,2μm,18.5s,MS4.8							
NJ2					LR	LR		
	comp=E,3μm,17.0s,MS4.8							
NJ2					LR	LR		
	comp=Z,7μm,18.9s,MS5.0							
YAK	**Yakutsk**	**22.20**	**344**	⇑ *e*	P	**P**	**15 57 59.2**	**-4.3**
	comp=Z,116nm,0.8s,mb5.4							
YAK					LR	LR		
	comp=Z,2μm,19.0s,MS4.4							
YAK	**Yakutsk**	**22.20**	**344**	*c i*	P	**P**	**15 57 59.2**	**-4.2**
YAK				*e*	*PP		15 58 08.7	
YAK				*e*			15 58 18.4	
YAK				*e*	S	**S**	**16 01 56.3**	**-7.9**
YAK				*e*			16 02 00.9	
YAK				*e*	SS		16 02 22.4	
YAK					pmax	pmax		
	comp=E,81nm,0.9s,mb5.2							
YAK					pmax	pmax		
	comp=E,33nm,1.9s							
YAK					pmax	pmax		
	comp=N,62nm,1.4s							
YAK					smax			
	comp=E,467nm,3.8s							
YAK					smax			
	comp=N,415nm,2.3s							
YAK					MLR	MLR		
	comp=Z,917nm,12.0s,MS4.4							
YAK					MLR	MLR		
	comp=E,247nm,12.0s,MS4.4							
YAK					MLR	MLR		
	comp=N,973nm,14.0s,MS4.4							
SEY	**Seymchan**	**22.62**	**12**	*ce*	P	**P**	**15 58 05.2**	**-2.7**
TATO	**Taipei**	**23.59**	**233**	*e*	P	**P**	**15 58 14.1**	**-3.7**
	comp=N,45nm,0.6s,mb5.1							
TATO					LR	LR		
	comp=Z,2μm,19.0s,MS4.6							
YHNB	**Yeheng**	**23.88**	**233**	*e*	P	**P**	**15 58 17.4**	**-3.1**
	comp=Z,37nm,0.6s,mb5.0							
YHNB					LR	LR		
	comp=Z,2μm,22.0s,MS4.6							
BTO	**Baotou**	**24.23**	**279**	*e*	P	**P**	**15 58 20.6**	**-2.9**
SMY	**Shemya**	**24.47**	**51**	*e*	P	**P**	**15 58 27.2**	**+1.6**
	comp=Z,520nm,1.5s,mb5.7							
SMY				*e*			15 58 41.8	
SMY	**Shemya**	**24.47**	**51**	*e*	P	**P**	**15 58 27.2**	**+1.6**
SMY				*e*			15 58 41.8	
SMY					pmax	pmax		
	comp=Z,520nm,1.5s,mb5.7							
SSLB	**Suanglung**	**24.80**	**232**	*e*	P	**P**	**15 58 27.0**	**-1.9**
	comp=Z,26nm,0.7s,mb4.9							
WHN	**Wuhan**	**24.80**	**254**		P	**P**	**15 58 22.0**	**-6.9**
WHN					S	**S**	**16 02 36.5**	**-11**
WHN					pmax	pmax		
	comp=Z,66nm,1.0s,mb5.1							
WHN					pmax	pmax		
	comp=Z,660nm,12.1s							
WHN					LR	LR		
	comp=N,5μm,17.4s,MS5.3							
WHN					LR	LR		
	comp=E,6μm,16.8s,MS5.3							
WHN					LR	LR		
	comp=Z,7μm,17.6s,MS5.2							
TPUB	**Ta-pu**	**25.36**	**232**		P	**P**	**15 58 33.5**	**-0.4**
	comp=Z,30nm,0.7s,mb4.9							
QZH	**Quanzhou**	**25.41**	**238**	⇑ *i*	P	**P**	**15 58 33.7**	**-0.7**
QZH					S	**S**	**16 02 58.0**	**+1.1**
QZH					pmax	pmax		
	comp=Z,120nm,1.2s,mb5.3							
QZH					pmax	pmax		
	comp=Z,1μm,3.1s							
QZH					LR	LR		
	comp=N,2μm,13.7s,MS4.8							
QZH					LR	LR		
	comp=E,1μm,12.4s,MS4.8							
QZH					LR	LR		
	comp=Z,2μm,25.8s							
TWG	**Pinlang**	**25.47**	**230**	*e*	P	**P**	**15 58 33.0**	**-2.0**
	comp=Z,39nm,0.7s,mb5.0							
ULN	**Ulaanbaatar**	**25.74**	**297**	⇑ *e*	P	**P**	**15 58 36.2**	**-1.0**
	comp=Z,17nm,0.7s,mb4.7							
ULN					LR	LR		
	comp=Z,4μm,19.0s,MS5.0							
ULN	**Ulaanbaatar**	**25.74**	**297**	⇑ *e*	P	**P**	**15 58 36.2**	**-1.0**
ULN					pmax	pmax		
	comp=Z,17nm,0.7s,mb4.7							
ULN					MLR	MLR		
	comp=Z,4μm,19.0s,MS5.0							
ULN	**Ulaanbaatar**	**25.74**	**297**	⇑	P	**P**	**15 58 38.0**	**+0.8**
SNR=18								
SONM	**Songino Array**	**26.18**	**297**		P	**P**	**15 58 40.7**	**-0.5**
	comp=Z,3.6nm,0.5s,mb4.2,baz=113,slow=9.3,SNR=43							
SONM					S	**S**	**16 03 08.3**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=251,slow=40,SNR=2.1							
SONM					LR	LR	16 09 52.5	
	comp=Z,4μm,18.3s,MS5.0,baz=84,slow=38							
SONM	**Songino Array**	**26.18**	**297**		P	**P**	**15 58 40.7**	**-0.5**
SONM					S	**S**	**16 03 08.3**	**-0.4**
SONM					smax			
	comp=N,1.0nm,0.8s							
SONM					MLR	MLR		
	comp=Z,4μm,18.3s							
XAN	**Xi'an**	**27.15**	**266**		P	**P**	**15 58 48.9**	**-1.2**
XAN					pP	pP	15 59 01.2	-3.5
XAN					S	**S**	**16 03 20.4**	**-3.9**
XAN					LR	LR		
	comp=N,340nm,26.4s,MS4.1							
XAN					LR	LR		
	comp=E,600nm,29.4s,MS4.1							
XAN					LR	LR		
	comp=Z,410nm,33.0s,MS3.8							
GUMO	**Guam**	**27.59**	**174**		PFAKE		15 59 10.0	+16
GUMO					LR	LR		
	comp=Z,1μm,22.0s,MS4.5							

GUMO Guam 27.59 174 LR LR 16 09 24.2
comp=Z,1µm,21.4s,MS4.5,baz=37,slow=35
IRK Irkutsk 27.92 306⇑*i*P **P** **15 58 56.6 -0.1**
IRK pmax pmax
comp=Z,148nm,1.6s,mb5.4
TLY Talaya 28.23 305⇑*e*P **P** **15 58 59.7 +0.2**
comp=Z,61nm,1.4s,mb5.0
TLY LR LR
comp=Z,2µm,21.0s,MS4.7
TLY Talaya 28.23 305*c i*P **P** **15 58 59.8 +0.3**
TLY *e*S **S** **16 03 42.1 +1.1**
TLY pmax pmax
comp=Z,46nm,1.4s,mb4.9
TLY MLR MLR
comp=Z,2µm,16.0s,MS4.8
ZAK Zakamensk 28.34 302⇓*i*P **P** **15 59 00.0 -0.5**
ZAK pmax pmax
comp=Z,12nm,1.1s,mb4.4
ENH Enshi 28.51 258 *e*P **P** **15 59 00.7 -1.5**
comp=Z,37nm,0.8s,mb5.2
ENH LR LR
comp=Z,2µm,19.0s,MS4.7
MOY Mondy 29.88 305 *e*P **P** **15 59 14.2 +0.1**
MOY pmax pmax
comp=Z,136nm,3.7s
LZH Lanzhou 30.18 273⇑P **P** **15 59 16.6 -0.4**
LZH pP pP 15 59 25.6 -6.1
LZH sP sP 15 59 29.8 -8.9
LZH PP PP 16 00 15.0 -11
LZH *e*S **S** **16 04 14.7 +2.8**
LZH sS sS 16 04 30.2 -6.7
LZH pmax pmax
comp=Z,24nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,100nm,4.0s
LZH LR LR
comp=E,1µm,16.0s
LZH LR LR
comp=Z,2µm,18.0s,MS4.7
WAKE Wake Island 30.22 129 PFAKE 15 59 30.0 +13
WAKE LR LR
comp=Z,1µm,20.0s,MS4.6
TIXI Tiksi 31.26 352 *e*P **P** **15 59 22.8 -3.3**
comp=Z,28nm,1.4s,mb4.9
TIXI LR LR
comp=Z,827nm,19.0s,MS4.4
TIXI Tiksi 31.26 352 *e*P **P** **15 59 22.9 -3.2**
TIXI *e* 16 00 45.4
TIXI *e*S **S** **16 04 22.6 -5.5**
TIXI pmax pmax
comp=Z,29nm,1.8s,mb4.8
TIXI MLR MLR
comp=Z,599nm,16.0s,MS4.4
GTA Gaotai 32.11 281 P **P** **15 59 33.8 -0.1**
GTA pP pP 15 59 43.9 -4.8
GTA sP sP 15 59 48.2 -7.5
GTA PcP PcP 16 02 23.2 +1.3
GTA S **S** **16 04 43.5 +1.5**
GTA sS sS 16 04 58.8 -8.3
GTA PcS PcS 16 06 07.5 +0.9
GTA pmax pmax
comp=Z,17nm,0.8s,mb4.9
GTA pmax pmax
comp=Z,190nm,6.3s
GTA LR LR
comp=N,1µm,17.7s,MS5.0
GTA LR LR
comp=E,2µm,17.4s,MS5.0
GTA LR LR
comp=Z,3µm,18.3s,MS5.1
CD2 Chengdu 32.46 264⇑P **P** **15 59 35.8 -1.3**
CD2 pP pP 15 59 45.3 -6.5
CD2 sP sP 15 59 49.3 -10
CD2 PP PP 16 00 43.8 -7.4
CD2 PcP PcP 16 02 23.5 +0.5
CD2 S **S** **16 04 46.3 -1.2**
CD2 PcS PcS 16 06 07.4 -0.7
CD2 pmax pmax
comp=Z,20nm,0.7s,mb5.1
CD2 pmax pmax
comp=Z,220nm,4.1s
CD2 LR LR
comp=N,1µm,16.3s,MS4.8
CD2 LR LR
comp=E,1µm,15.1s,MS4.8
CD2 LR LR
comp=Z,1µm,28.0s
GYA Guiyang 32.68 255 P **P** **15 59 38.7 -0.3**
GYA pP pP 15 59 48.2 -5.6
GYA PP PP 16 00 47.0 -6.8
GYA PcP PcP 16 02 25.8 +2.2
GYA S **S** **16 04 50.4 -0.7**
GYA sS sS 16 05 05.7 -11
GYA ScP ScP 16 06 06.5 +4.2
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.1
GYA pmax pmax
comp=Z,190nm,5.2s
GYA LR LR
comp=N,1µm,17.1s,MS4.9
GYA LR LR
comp=E,2µm,18.6s,MS4.9
GYA LR LR
comp=Z,3µm,18.3s,MS5.0
SPIA Saint Paul Isl 34.19 46 *e*P **P** **15 59 51.9 +0.2**
comp=Z,133nm,1.2s,mb5.7
QIZ Qiongzhong 35.30 241 P **P** **16 00 00.8 -1.0**
QIZ PP PP 16 01 23.4 +0.6
QIZ S **S** **16 05 36.2 +4.6**
QIZ sS sS 16 05 49.4 -7.4
QIZ pmax pmax
comp=Z,300nm,4.8s
QIZ LR LR
comp=N,730nm,21.1s,MS4.5
QIZ LR LR
comp=E,290nm,20.6s,MS4.5
QIZ LR LR
comp=Z,960nm,20.6s,MS4.5
QIZ Qiongzhong 35.30 241 PFAKE 16 00 10.0 +8.2
QIZ LR LR
comp=Z,1µm,20.0s,MS4.6
MIDW Midway 35.40 98 PFAKE 16 00 10.0 +7.4
MIDW LR LR
comp=Z,720nm,20.0s,MS4.4
KMI Kunming 36.33 256 P **P** **16 00 10.4 -0.2**
KMI pP pP 16 00 20.9 -4.6
KMI sP sP 16 00 26.2 -6.2
KMI PP PP 16 01 34.3 +0.2
KMI S **S** **16 05 42.9 -4.4**
KMI pmax pmax
comp=Z,37nm,1.0s,mb5.3
KMI pmax pmax
comp=Z,410nm,4.0s
KMI LR LR
comp=N,1µm,17.3s,MS4.9
KMI LR LR
comp=E,1µm,19.3s,MS4.9
KMI LR LR
comp=Z,2µm,18.8s,MS4.9
TNA Tin City 37.01 32 *e*P **P** **16 00 15.4 -0.4**
comp=Z,38nm,1.0s,mb5.2
DAV Davao City (W) 37.03 208 PFAKE 16 00 30.0 +13
DAV LR LR
comp=Z,589nm,20.0s,MS4.4
WMQ Urumqi 39.63 293 P **P** **16 00 39.0 +0.8**
WMQ pP pP 16 00 48.8 -4.4
WMQ sP sP 16 00 52.8 -7.3
WMQ PP PP 16 02 14.4 +4.5
WMQ PcP PcP 16 02 47.0 +2.9
WMQ S **S** **16 06 38.8 +2.0**
WMQ sS sS 16 06 55.0 -7.4
WMQ SS SS 16 09 27.0 -6.6
WMQ ScS ScS 16 10 42.5 +2.4
WMQ pmax pmax
comp=Z,69nm,1.0s,mb5.3
WMQ pmax pmax
comp=Z,620nm,3.2s
WMQ LR LR
comp=N,630nm,19.3s,MS5.0
WMQ LR LR
comp=E,2µm,18.2s,MS5.0
WMQ LR LR
comp=Z,2µm,19.0s,MS5.0
ZAA0 Zalesovo Array 39.66 309⇑*e*P **P** **16 00 37.8 -0.4**
ZAA0 *e*PcP PcP 16 02 42.8 -1.1
ZALV Zalesovo Beam 39.66 309 P **P** **16 00 37.7 -0.5**
ZALV PcP PcP 16 02 43.5 -0.5
ZALV LR LR 16 18 00.9
ZALV Zalesovo Beam 39.66 309 P **P** **16 00 37.7 -0.5**
comp=Z,50nm,0.6s,mb5.4,baz=89,slow=8.1,SNR=87
ZALV PcP PcP 16 02 43.5 -0.5
comp=Z,9.8nm,0.6s,baz=107,slow=3.2,SNR=5.2
ZALV LR LR 16 18 00.9
comp=Z,2µm,18.1s,MS4.9,baz=82,slow=38
ZALV Zalesovo Beam 39.66 309 P **P** **16 00 37.7 -0.5**
ZALV 16 02 43.5
ZALV pmax pmax
comp=Z,50nm,0.6s,mb5.4
ZALV MLR MLR
comp=Z,2µm,18.2s,MS4.9
NVS Novosibirsk 40.50 310⇑*i*P **P** **16 00 45.0 -0.2**
NVS *e*S **S** **16 06 51.1 +1.6**
NVS *e* 16 10 47.9
NVS pmax pmax
comp=Z,244nm,2.0s,mb5.6
NVS pmax pmax
comp=N,60nm,1.8s
NVS pmax pmax
comp=E,212nm,1.9s
NVS smax
comp=E,125nm,2.0s
MYLDM Lahad Datu 41.62 217 P **P** **16 00 58.6 +3.8**
comp=E,873nmcomp=E,50nm,1.1s,mb5.1
TTA Tatalina 41.74 37 *e*P **P** **16 00 54.9 -0.4**
TTA *e* pP 16 01 11.4 +1.0
SVW2 Sparrevohn 41.94 40 *e*P **P** **16 00 57.7 +0.8**
comp=E,41nm,1.2s,mb4.9
KKM Kota Kinabalu 41.95 221 PFAKE 16 01 10.0 +12
KKM LR LR
comp=Z,607nm,20.0s,MS4.5
KKM Kota Kinabalu 41.95 221 P **P** **16 01 02.4 +4.9**
comp=Z,25nm,1.3s,mb4.7
TNTI Ternate 42.38 202 P **P** **16 01 02.6 +1.5**
comp=Z,85nm,1.7s,mb5.1
MK31 Makanchi Array 42.52 298⇑*i*P **P** **16 01 01.7 -0.2**
MK31 Makanchi Array 42.52 298 *i* P **P** **16 01 01.7 -0.2**
MK31 pmax pmax
comp=Z,33nm,0.6s,mb5.2
MKAR Makanchi Array 42.52 298 P **P** **16 01 01.9 0.0**
comp=Z,24nm,0.9s,mb4.9,baz=85,slow=10,SNR=152
MKAR S **S** **16 07 18.6 -1.2**
comp=Z,1.0nm,0.9s,baz=49,slow=13,SNR=2.2
MKAR LR LR 16 19 50.3
comp=Z,2µm,19.4s,MS5.1,baz=82,slow=38
MKAR Makanchi Array 42.52 298 P **P** **16 01 01.9 0.0**
MKAR S **S** **16 07 18.6 -1.1**
MKAR pmax pmax
comp=Z,24nm,0.9s
MKAR smax
comp=N,1.0nm,0.9s
MKAR MLR MLR
comp=Z,2µm,19.4s
LSA Lhasa 42.55 271 P **P** **16 01 00.6 -1.7**
LSA LR LR
comp=E,1µm,29.0s
LSA LR LR
comp=Z,160nm,29.8s,MS3.7
LSA Lhasa 42.55 271⇑*e*P **P** **16 01 03.9 +1.6**
comp=Z,141nm,1.4s,mb5.5
LSA LR LR
comp=Z,2µm,20.0s,MS4.9
LSA Lhasa 42.55 271⇑*e*P **P** **16 01 03.9 +1.6**
LSA pmax pmax
comp=Z,141nm,1.4s,mb5.5
LSA MLR MLR
comp=Z,2µm,20.0s,MS4.9
CHTO Chiang Mai 42.99 252 *e*P **P** **16 01 06.2 +0.3**
comp=Z,19nm,0.6s,mb5.0
CHTO LR LR
comp=Z,848nm,20.0s,MS4.6
CHTO Chiang Mai 42.99 252 *e*P **P** **16 01 06.2 +0.2**
CHTO pmax pmax
comp=Z,19nm,0.6s,mb5.0
CHTO MLR MLR
comp=Z,848nm,20.0s,MS4.6
CM31 Chiang Mai Arr 43.22 252 P **P** **16 01 08.3 +0.5**
comp=Z,9.5nm,0.6s,mb4.7
CM31 LR LR
comp=Z,822nm,19.0s,MS4.7
CMAR Chiang Mai Arr 43.22 252 P **P** **16 01 08.2 +0.4**
comp=Z,4.9nm,0.6s,mb4.4,baz=42,slow=7.1,SNR=17
CMAR LR LR 16 20 47.2
comp=Z,994nm,18.3s,MS4.8,baz=54,slow=38
CMAR Chiang Mai Arr 43.22 252 P **P** **16 01 08.3 +0.4**
CMAR pmax pmax
comp=Z,5.0nm,0.6s
CMAR MLR MLR
comp=Z,994nm,18.3s
RSO Redoubt South 43.35 41 *e*P **P** **16 01 08.2 -0.2**
RSO *e* pP 16 01 25.4 +1.8
OHAK Old Harbor 43.39 46 *e*P **P** **16 01 08.2 -0.6**
comp=Z,421nm,1.7s,mb5.9
KMSI Cibinong 43.63 207 P **P** **16 01 11.4 +0.3**
comp=Z,2µmcomp=Z,167nm,0.9s,mb5.8
KDAK Kodiak Island 43.70 45 *e*P **P** **16 01 10.1 -1.2**
comp=Z,160nm,1.1s,mb5.7
KDAK *e* pP 16 01 26.7 +0.3
KDAK LR LR
comp=Z,1µm,22.0s,MS4.8
KDAK Kodiak Island 43.70 45 P **P** **16 01 10.3 -0.9**
comp=Z,35nm,1.0s,mb5.0,baz=316,slow=2.1,SNR=17
KDAK pP pP 16 01 26.2 -0.3
comp=Z,103nm,1.0s,baz=308,slow=3.5,SNR=19
KDAK Kodiak Island 43.70 45 P **P** **16 01 10.3 -0.9**
KDAK *PP pP 16 01 26.2 -0.3
KDAK pmax pmax
comp=Z,35nm,1.0s,mb5.0
KURK Kurchatov 43.93 305⇑*i*P **P** **16 01 12.8 -0.3**
comp=Z,58nm,0.6s,mb5.5
KURK LR LR
comp=Z,1µm,20.0s,MS4.7
KURK Kurchatov 43.93 305*c i*P **P** **16 01 12.8 -0.4**
KURK pmax pmax
comp=Z,213nm,2.5s,mb5.4
KURK Kurchatov 43.93 305 P **P** **16 01 13.2 +0.1**
SNR=55
BDT Bhumibol Dam 43.98 250 P **P** **16 01 22.0 +8.1**
BPAW Bear Paw Mtn. 43.99 36 *e*P **P** **16 01 13.5 0.0**
comp=Z,53nm,0.9s,mb5.3
SHL Shillong 44.16 265 *e*PKP **P** **16 01 16.0 +0.6**
NST Nakhon Sawan 44.25 248 P **P** **16 01 16.0 -0.1**
COLD Coldfoot 44.29 31⇑*i*P **P** **16 01 15.6 -0.2**
comp=Z,22nm,1.0s,mb4.8
TRF Thorofare Moun 44.33 36 *e*P **P** **16 01 16.1 -0.1**
comp=Z,42nm,1.0s,mb5.1
MRSI Marisa 44.45 210 P **P** **16 01 18.0 +0.3**
comp=Z,621nmcomp=Z,54nm,1.2s,mb5.2
RC01 Rabbit Creek A 44.77 40 *e*P **P** **16 01 18.8 -1.0**
comp=Z,162nm,1.1s,mb5.8
RC01 *e* pP 16 01 34.8 -0.3
MCK McKinley 44.91 36 *e*P **P** **16 01 20.6 -0.2**
comp=Z,121nm,1.1s,mb5.6
MCK McKinley 44.91 36 *e*P **P** **16 01 20.6 -0.2**
MCK pmax pmax
comp=Z,121nm,1.1s,mb5.6
PMR Palmer 45.01 39 *e*P **P** **16 01 20.4 -1.2**
comp=Z,96nm,1.1s,mb5.5
PMR Palmer 45.01 39 *e*P **P** **16 01 20.4 -1.2**
PMR pmax pmax
comp=Z,96nm,1.1s,mb5.5
SEW Seward 45.02 41 *e*P **P** **16 01 20.2 -1.5**
comp=Z,98nm,1.1s,mb5.5
SEW *e* pP 16 01 36.9 -0.1
COLA College 45.31 34⇑*e*P **P** **16 01 23.9 0.0**
comp=Z,182nm,1.0s,mb5.9
COLA LR LR
comp=Z,712nm,22.0s,MS4.6
COLA College 45.31 34⇑*e*P **P** **16 01 23.9 0.0**
COLA pmax pmax
comp=Z,182nm,1.0s,mb5.9
COLA MLR MLR
comp=Z,712nm,22.0s,MS4.6
ILAR Eielson Array 45.73 34 P **P** **16 01 26.8 -0.5**
comp=Z,8.6nm,0.6s,mb4.8,baz=266,slow=5.5,SNR=118
ILAR pP pP 16 01 41.9 -0.7
comp=Z,102nm,1.1s,baz=270,slow=2.9,SNR=29
ILAR LR LR 16 21 19.0
comp=Z,603nm,21.4s,MS4.5,baz=280,slow=37
ILAR Eielson Array 45.73 34 P **P** **16 01 26.8 -0.5**
ILAR *PP pP 16 01 41.9 -0.7
ILAR pmax pmax
comp=Z,9.0nm,0.6s
ILAR MLR MLR
comp=Z,603nm,21.4s
TAPN Taplejung 46.35 270 *e*P **P** **16 01 33.7 +1.0**
comp=Z,133nm,0.9s,mb5.9
PAX Paxson 46.55 37 *e*P **P** **16 01 33.1 -0.6**
comp=Z,31nm,1.0s,mb5.2
PAX Paxson 46.55 37 *e*P **P** **16 01 33.1 -0.6**
PAX pmax pmax
comp=Z,31nm,1.0s,mb5.2
DIV Divide 46.67 39 *e*P **P** **16 01 35.0 +0.3**
comp=Z,175nm,1.0s,mb5.9
DIV *e* pP 16 01 51.4 +1.2
ODAN Odare 46.85 270 *e*P **P** **16 01 37.2 +0.6**
comp=Z,68nm,0.5s,mb5.8
SBUM Sibu 47.04 223 P **P** **16 01 43.6 +5.5**
BMRM Bremner River 47.26 39 *e*P **P** **16 01 39.3 0.0**
comp=Z,169nm,1.2s,mb5.8
BMRM *e* pP 16 01 55.6 +0.9
JIRN Jiri 47.34 272 *e*P **P** **16 01 41.3 +0.9**
comp=Z,118nm,0.5s,mb6.1
MENT Mentasta 47.34 37 *e*P **P** **16 01 40.3 +0.4**
RAMN Ramite 47.40 271 *e*P **P** **16 01 41.4 +0.5**
comp=Z,179nm,0.6s,mb6.2
GUN Gumba 47.44 272 *e*P **P** **16 01 41.8 +0.6**
comp=Z,333nm,0.6s,mb6.5
KKN Kakani 47.95 273 *e*P **P** **16 01 45.6 +0.5**
comp=Z,195nm,0.8s,mb6.2
PKI Pulchoki 47.97 272 *e*P **P** **16 01 45.8 +0.5**
comp=Z,75nm,0.5s,mb6.0
PKIN Phulchoki 47.98 272 *e*P **P** **16 01 46.0 +0.7**
JOHN Johnston Islan 48.04 106 PFAKE 16 02 00.0 +14
JOHN LR LR
comp=Z,1µm,20.0s,MS5.0
ULHL Ulahol 48.08 294 P **P** **16 01 46.3 +0.4**
SNR=19
EGAK Eagle 48.16 34⇑*e*P **P** **16 01 45.6 -0.6**
comp=Z,133nm,1.2s,mb5.8
EGAK *e*sP sP 16 02 02.2 -6.3
EGAK LR LR
comp=Z,567nm,20.0s,MS4.5
DMN Daman 48.18 272 *e*P **P** **16 01 47.4 +0.5**
comp=Z,88nm,0.7s,mb5.9
BVAR Borovoye Array 48.29 310 P **P** **16 01 47.6 +0.3**
comp=Z,21nm,0.5s,mb5.5,baz=68,slow=8.6,SNR=192
BVAR S **S** **16 08 42.2 -0.3**
comp=Z,0.6nm,0.6s,baz=217,slow=34,SNR=4.5
BVAR Borovoye Array 48.29 310 P **P** **16 01 47.6 +0.2**
BVAR S **S** **16 08 42.2 -0.4**
BVAR pmax pmax
comp=Z,21nm,0.5s
BVAR smax
comp=N,1.0nm,0.6s
GKN Gorkha 48.33 273 *e*P **P** **16 01 48.2 +0.2**
comp=N,93nm,0.5s,mb6.0
BRVK Borovoye 48.34 310 P **P** **16 01 48.8 +1.1**
comp=N,250nm,0.8s,mb6.3,SNR=23
BRVK Borovoye 48.34 310⇑*e*P **P** **16 01 47.8 +0.1**
comp=N,35nm,0.8s,mb5.4
BRVK LR LR
comp=Z,2µm,19.0s,MS5.2
BRVK Borovoye 48.34 310*c i*P **P** **16 01 47.7 -0.1**
BRVK pmax pmax
comp=Z,55nm,1.2s,mb5.5
KBK Karagaybulak 48.81 295 P **P** **16 01 52.4 +0.8**
SNR=48
CHMS Chumysh 48.81 296 P **P** **16 01 51.8 +0.3**
SNR=7.1
KZA Kyzart 48.82 295 P **P** **16 01 53.2 +1.6**
SNR=29
KSM Kuching 48.86 224 *e*P **P** **16 01 52.0 -0.2**
comp=Z,24nm,1.0s,mb5.2
KSM LR LR
comp=Z,393nm,21.0s,MS4.4
DAWY Dawson 49.05 35 *e*P **P** **16 01 52.6 -0.4**
AAK Ala-Archa 49.13 295 P **P** **16 01 54.4 +0.4**
SNR=8.2
AAK Ala-Archa 49.13 295⇑*i*P **P** **16 01 54.0 +0.1**
comp=Z,14nm,0.6s,mb5.2
AAK LR LR
comp=Z,2µm,21.0s,MS5.0
AAK Ala-Archa 49.13 295⇑*i*P **P** **16 01 54.0 +0.1**
AAK pmax pmax
comp=Z,14nm,0.6s,mb5.2
AAK MLR MLR
comp=Z,2µm,21.0s,MS5.0
KOLN Koldanda 49.23 274 *e*P **P** **16 01 55.3 +0.3**
comp=Z,76nm,0.6s,mb5.9
UCH Uchtor 49.27 295 P **P** **16 01 56.0 +1.0**
SNR=13
UCH Uchtor 49.27 295 PFAKE 16 02 10.0 +15
UCH LR LR
comp=Z,3µm,22.0s,MS5.3
KSH Kashi 49.34 291⇑*i*P **P** **16 01 59.6 +3.9**
KSH *e*pP pP 16 02 09.7 -1.5
KSH *e*sP sP 16 02 13.5 -4.5
KSH *e*PcP PcP 16 03 22.6 +5.1
KSH *e*PP PP 16 03 53.8 +3.9
KSH *e*ScP ScP 16 07 14.1 +6.6
KSH *e*PcS PcS 16 07 18.0 +4.0
KSH S **S** **16 09 02.3 +4.5**
KSH *e*ScS ScS 16 11 46.2 +4.3
KSH pmax pmax
comp=Z,14nm,0.8s,mb5.0
KSH LR LR
comp=N,2µm,17.6s,MS5.3
KSH LR LR
comp=E,1µm,14.4s,MS5.3
KSH LR LR
comp=Z,2µm,16.6s,MS5.3
EKS2 Erkin-Say 49.60 296 P **P** **16 01 57.8 +0.2**
SNR=28
EKS2 Erkin-Say 49.60 296⇑*i*P **P** **16 01 57.8 +0.2**
comp=Z,81nm,0.5s,mb6.0
EKS2 LR LR
comp=Z,911nm,20.0s,MS4.8
AML Almayashu 49.87 295 P **P** **16 02 00.8 +1.2**
SNR=31
AML Almayashu 49.87 295 PFAKE 16 02 10.0 +10
AML LR LR
comp=Z,2µm,22.0s,MS5.1
PNL Peninsula 50.08 40 *e*P **P** **16 02 00.4 -0.5**
PNL *i* pP 16 02 18.1 +1.7
KAPI Kappang 50.33 210 PFAKE 16 02 20.0 +17
KAPI LR LR
comp=Z,244nm,20.0s,MS4.2
INK Inuvik 50.47 29 P **P** **16 02 03.5 -0.2**
comp=Z,12nm,0.5s,mb5.2,baz=292,slow=7.8,SNR=21
INK pP pP 16 02 18.6 -0.7
comp=Z,56nm,0.7s,baz=297,slow=8.3,SNR=13
INK Inuvik 50.47 29⇑*e*P **P** **16 02 03.6 -0.1**
KULM Kulim 51.46 238 *e*P **P** **16 02 12.5 +0.6**
comp=Z,23nm,0.8s,mb5.2
KULM LR LR
comp=Z,385nm,19.0s,MS4.5
KK31 Karatay Array 51.63 298 *i* P **P** **16 02 12.4 -0.4**
KK31 pmax pmax
comp=Z,17nm,0.5s,mb5.2
SKAG Skagway 52.12 40 *e*P **P** **16 02 17.6 +1.4**
comp=Z,27nm,1.3s,mb5.0
SMLA Simla 52.33 281 *i* x **P** **16 02 17.5 -0.7**
SVE Sverdlovsk 52.48 317⇓*e*P **P** **16 02 19.4 +0.5**
SVE *e*S **S** **16 09 45.3 +4.7**
SVE *e*SS SS 16 13 23.7 +5.1
SVE *e*SSS 16 14 56.8
SVE pmax pmax
comp=Z,116nm,1.9s,mb5.5
SVE MLR MLR
comp=Z,3µm,18.0s,MS5.3
SIT Sitka 52.92 43 *e*P **P** **16 02 21.8 -0.4**
comp=Z,90nm,1.2s,mb5.6
SIT *e*sP sP 16 02 40.2 -4.5
SIT Sitka 52.92 43 *e*P **P** **16 02 21.8 -0.4**
SIT *e**SP sP 16 02 40.2 -4.4
SIT pmax pmax
comp=Z,90nm,1.2s,mb5.6
HNR Honiara 52.96 158 PFAKE 16 02 30.0 +7.1
HNR LR LR
comp=Z,924nm,22.0s,MS4.8
SOKR Solikamsk 53.44 321*c i*P **P** **16 02 25.9 -0.1**
SOKR pmax pmax
comp=Z,60nm,1.6s,mb5.3
SOKR MLR MLR
comp=Z,710nm,20.0s,MS4.7
NDI New Delhi 53.55 278 *ex* **P** **16 02 26.5 -0.7**
ARU Arti 53.69 317⇑*i*P **P** **16 02 27.7 -0.2**

comp=Z,195nm,1.6s,mb5.8
ARU LR LR
comp=Z,3µm,19.0s,MS5.3
ARU Arti 53.69 317 ⇑*i*P **P** **16 02 27.7 -0.1**
ARU pmax pmax
comp=Z,129nm,1.6s,mb5.6
ARU MLR MLR
comp=Z,3µm,18.1s,MS5.4
ARU Arti 53.69 317 P **P** **16 02 27.2 -0.6**
comp=Z,254nm,1.1s,mb6.1,SNR=16
KIP Kipapa 53.73 92 PFAKE 16 02 40.0 +11
KIP LR LR
comp=Z,966nm,21.0s,MS4.8
KAKA Kakadu 54.36 192 *e*P **P** **16 02 32.0 -1.1**
comp=Z,15nm,0.6s,mb5.1
KAKA Kakadu 54.36 192 *e*P **P** **16 02 31.9 -1.2**
comp=Z,200nm,1.3s,mb5.9
CRAG Craig 54.65 44 *e*P **P** **16 02 35.0 +0.1**
comp=Z,4.0nm,0.6s,mb4.6
DLBC Dease Lake 55.05 40⇑*e*P **P** **16 02 38.7 +1.0**
DLBC *e* pP 16 02 55.9 +2.5
AB31 Akbulak array 55.77 308 *i* P **P** **16 02 42.9 -0.1**
AB31 pmax pmax
comp=Z,42nm,0.6s,mb5.7
ABKAR Akbulak array 55.77 308⇑*i*P **P** **16 02 42.9 -0.1**
comp=Z,32nm,0.6s,mb5.5
ALE Alert 55.95 4 P **P** **16 02 43.9 0.0**
comp=Z,145nm,1.5s,mb5.8,SNR=5.2
AKTO Aktyubinsk 56.39 310 LR LR 16 28 16.6
comp=Z,1µm,20.1s,MS5.1,baz=241,slow=37
KBL Kabul 56.55 289⇑*e*P **P** **16 02 47.9 -0.8**
comp=Z,43nm,0.8s,mb5.5
KBL Kabul 56.55 289⇑*e*P **P** **16 02 47.9 -0.9**
KBL pmax pmax
comp=Z,43nm,0.8s,mb5.5
SPITS Spitsbergen Ar 56.58 348 LR LR 16 27 51.1
comp=Z,553nm,21.5s,MS4.6,baz=25,slow=37
POHA Pohakuloa 56.59 92 PFAKE 16 03 00.0 +11
POHA LR LR
comp=Z,2µm,22.0s,MS5.2
KBS Kingsbay 56.68 350 *e*P **P** **16 02 48.9 -0.2**
KBS *es*P sP 16 03 05.7 -6.0
KBS AMB AMB 16 03 06.6
comp=Z,167nm,1.9s,mb5.8
KBS Kingsbay 56.68 350 *e*P **P** **16 02 48.5 -0.6**
KBS LR LR
comp=Z,382nm,20.0s,MS4.5
KBS Kingsbay 56.68 350*c i*P **P** **16 02 49.0 -0.1**
RES Resolute Bay 58.46 15 P **P** **16 02 59.7 -1.9**
RES *e* pP 16 03 18.1 +0.6
RES Resolute Bay 58.46 15 P **P** **16 03 00.6 -1.1**
comp=Z,32nm,0.9s,mb5.3,baz=338,slow=3.6,SNR=7.3
RES pP pP 16 03 17.1 -0.3
comp=Z,60nm,0.8s,baz=310,slow=7.8,SNR=9.7
RES Resolute Bay 58.46 15 P **P** **16 03 00.6 -1.0**
RES *PP pP 16 03 17.2 -0.3
RES pmax pmax
comp=Z,32nm,0.9s,mb5.3
HYB Hyderabad 58.96 266 *i* P **P** **16 03 05.0 -0.9**
APA Apatity 59.17 335⇑*i*P **P** **16 03 05.0 -1.6**
APA *i* pP 16 03 17.0 -5.5
APA *es*S SS 16 15 00.0 -3.4
APA pmax pmax
comp=Z,27nm,1.4s,mb5.1
APA pmax pmax
comp=Z,300nm,9.0s
APA MLR MLR
comp=Z,900nm,21.0s,MS4.9
KEV Kevo 59.79 339 *e*P **P** **16 03 09.9 -0.9**
comp=Z,15nm,0.8s,mb5.1
KEV LR LR
comp=Z,885nm,22.0s,MS4.8
KEV Kevo 59.79 339 *e*P **P** **16 03 09.9 -1.0**
KEV pmax pmax
comp=Z,15nm,0.8s,mb5.1
KEV MLR MLR
comp=Z,885nm,22.0s,MS4.8
KEV Kevo 59.79 339 *e*p **P** **16 03 09.6 -1.3**
comp=Z,14nm,0.7s,mb5.1
YKA Yellowknife Ar 59.96 31 P **P** **16 03 11.6 -0.5**
comp=Z,3.9nm,0.8s,mb4.5,baz=303,slow=6.8,SNR=12
YKA pP pP 16 03 26.7 -1.4
comp=Z,15nm,0.9s,baz=307,slow=6.9,SNR=11
QUE Quetta 60.32 286 *e*P **P** **16 03 15.0 -0.1**
QUE *e*S **S** **16 11 38.0 +13**
ARCES ARCESS Array B 60.34 339 P **P** **16 03 13.8 -0.8**
ARCES LR LR 16 35 23.0
ARCES ARCESS Array B 60.34 339 P **P** **16 03 13.8 -0.8**
comp=Z,1.7nm,0.5s,mb4.4,baz=58,slow=7.4,SNR=36
ARCES LR LR 16 35 23.0
comp=Z,640nm,21.2s,MS4.7,baz=216,slow=42
ARE0 ARCESS Array S 60.34 339 *e*P **P** **16 03 15.2 +0.6**
KLMR Klimovskoe 60.59 327*c i*P **P** **16 03 16.0 -0.4**
KLMR *e* 16 05 26.6
KLMR *e*S **S** **16 11 26.9 -0.8**
KLMR *e*SS SS 16 15 26.4 +0.5
KLMR pmax pmax
comp=Z,113nm,1.9s,mb5.7
KLMR pmax pmax
comp=Z,94nm,6.9s
KLMR MLR MLR
comp=Z,1µm,21.0s,MS5.1
FITZ Fitzroy Crossi 60.93 198 *e*P **P** **16 03 18.2 -1.0**
comp=Z,25nm,1.4s,mb5.2
FITZ Fitzroy Crossi 60.93 198 *e*P **P** **16 03 18.6 -0.6**
comp=Z,12nm,0.9s,mb5.0
FITZ Fitzroy Crossi 60.93 198 P **P** **16 03 18.8 -0.4**
comp=Z,5.5nm,0.8s,mb4.7,baz=18,slow=9.8,SNR=8.6
CTAO Charters Tower 61.07 176 P **P** **16 03 19.9 -0.2**
comp=Z,34nm,1.4s,mb5.3
CTAO LR LR
comp=Z,742nm,19.0s,MS4.9
CTAO Charters Tower 61.07 176 P **P** **16 03 19.9 -0.2**
CTAO pmax pmax
comp=Z,34nm,1.4s,mb5.3
CTAO MLR MLR
comp=Z,742nm,19.0s,MS4.9
WRAB Tennant Creek 61.22 188 P **P** **16 03 20.0 -1.1**
comp=Z,121nm,1.0s,mb6.0,SNR=7.6
WRAB Tennant Creek 61.22 188 *e*P **P** **16 03 19.6 -1.6**
comp=Z,32nm,0.8s,mb5.5
WRAB *e* pP 16 03 38.1 +1.0
WRAB LR LR
comp=Z,880nm,20.0s,MS4.9
WRAB Tennant Creek 61.22 188 *e*P **P** **16 03 19.6 -1.5**
WRAB *e* pP 16 03 38.1 +1.0
WRAB pmax pmax
comp=Z,32nm,0.8s,mb5.5
WRAB MLR MLR
comp=Z,880nm,20.0s,MS4.9
WB2 Warramunga Arr 61.23 188 *e*P **P** **16 03 19.5 -1.7**
KTK1 Kautokeino 61.29 339 *e*P **P** **16 03 20.8 -0.4**
KTK1 *e*pP pP 16 03 32.1 -5.0
KTK1 AMB AMB 16 03 40.4
comp=Z,79nm,2.6s,mb5.4
DAG Danmarks Havn 61.70 355⇓*i*P **P** **16 03 23.0 -0.8**
DAG *i* pP 16 03 38.1 -1.7
DAG pmax pmax
comp=Z,22nm,1.2s,mb5.2
DAG Danmarks Havn 61.70 355⇓*i*P **P** **16 03 23.0 -0.8**
comp=Z,22nm,1.2s,mb5.2
DAG *i* pP 16 03 38.1 -1.7
TRO Tromso 61.99 341 *e*P **P** **16 03 25.4 -0.4**
TRO AMB AMB 16 03 42.5
comp=Z,50nm,1.9s,mb5.3
JOF Joensuu 62.60 331 *e*P **P** **16 03 28.3 -1.6**
JOF pmax pmax
comp=Z,15nm,0.6s,mb5.3
JOF Joensuu 62.60 331 *e*p **P** **16 03 28.3 -1.6**
comp=Z,15nm,0.6s,mb5.3
PGC Sidney 63.10 48 P **P** **16 03 33.1 -0.4**
comp=Z,3.4nm,1.2s,mb4.3
PGC *i* pP 16 03 50.7 +1.1
NLWA Neilton Lookou 63.54 49⇑P **P** **16 03 36.6 +0.2**
baz=63
NLWA ⇓S **S** **16 12 07.4 +2.1**
baz=63
NLWA Neilton Lookou 63.54 49 *e*P **P** **16 03 36.8 +0.4**
comp=Z,105nm,1.0s,mb5.8
NLWA LR LR
comp=Z,664nm,21.0s,MS4.8
A05A Maple Falls 63.67 47⇓P **P** **16 03 36.9 -0.4**
baz=63
GNW Green Mountain 64.04 49 *e*P **P** **16 03 39.6 -0.1**
comp=Z,17nm,1.1s,mb5.0
GNW *i* pP 16 03 57.5 +1.7
E03A Lebam 64.18 50⇑P **P** **16 03 41.1 +0.5**
baz=64
E03A ⇑S **S** **16 12 15.5 +2.3**
baz=64
JCW Jim Creek 64.20 48 *e*P **P** **16 03 40.6 -0.2**
B06A Marblemount 64.27 47⇑P **P** **16 03 41.0 -0.2**
baz=64
RPW Rockport 64.29 47 *e*P **P** **16 03 41.0 -0.3**
comp=Z,16nm,0.9s,mb5.0
MOS Moscow 64.29 323 *e*P **P** **16 03 39.0 -2.2**
MOS *e* 16 04 14.9
MOS *e* 16 06 01.4
MOS pmax pmax
comp=Z,218nm,2.2s,mb5.8
MOS MLR MLR
comp=Z,900nm,17.0s,MS5.0
F03A Seaside 64.52 50⇑P **P** **16 03 43.2 +0.3**
baz=64
D05A Enumclaw 64.72 49⇑P **P** **16 03 44.6 +0.4**
baz=64
D05A ⇑S **S** **16 12 21.0 +1.1**
baz=64
HEBO Mount Hebo 64.80 51 P **P** **16 03 47.7 +3.0**
comp=Z,58nm,1.0s,mb5.6
HEBO *i* pP 16 04 02.7 +1.9
KAF Kangasniemi 64.91 332 *e*P **P** **16 03 43.3 -1.8**
KAF pmax pmax
comp=Z,17nm,0.7s,mb5.2
KAF Kangasniemi 64.91 332 *ep* **P** **16 03 43.3 -1.8**
comp=Z,17nm,0.7s,mb5.2,baz=46,slow=6.2
ASAR Alice Springs 64.96 188 P **P** **16 03 45.2 -0.6**
comp=Z,6.3nm,0.8s,mb4.7,baz=359,slow=4.8,SNR=97
ASAR Alice Springs 64.96 188 P **P** **16 03 45.3 -0.6**
ASAR pmax pmax
comp=Z,6.0nm,0.8s
WRW Wenatchee Ridg 64.97 48 P **P** **16 03 46.3 +0.5**
VRHR Novokhopersk 65.03 317 *e*P **P** **16 03 44.8 -1.3**
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=Z,50nm,0.6s,mb5.7
VRHR pmax pmax
comp=E,7.0nm,0.3s
LON Longmire 65.07 49 *e*P **P** **16 03 46.4 0.0**
comp=E,26nm,0.9s,mb5.3
LON Longmire 65.07 49 *e*P **P** **16 03 46.4 0.0**
LON pmax pmax
comp=Z,26nm,0.9s,mb5.3
STD Studebaker Rid 65.12 50 P **P** **16 03 47.5 +0.7**
OBN Obninsk 65.15 322⇑*e*P **P** **16 03 46.1 -0.7**
OBN LR LR
comp=Z,1µm,19.0s,MS5.1
OBN Obninsk 65.15 322*c i*P **P** **16 03 46.1 -0.7**
OBN *e* pP 16 03 58.4 -4.5
OBN *e* 16 06 09.6
OBN *es*S SS 16 16 38.9 +1.7
OBN pmax pmax
comp=Z,115nm,1.7s,mb5.6
OBN MLR MLR
comp=Z,1µm,18.0s,MS5.1
F04A Amboy 65.18 50⇓P **P** **16 03 47.0 -0.2**
baz=65
F04A ⇓S S 16 12 26.4 +0.9
baz=65
WPW White Pass 65.25 49 P **P** **16 03 48.3 +0.7**
MBWA Marble Bar 65.42 203 *e*P **P** **16 03 48.0 -0.8**
comp=Z,54nm,1.4s,mb5.4
COR Corvallis 65.42 52 P **P** **16 03 49.2 +0.5**
comp=Z,101nm,1.0s,mb5.8
COR *i* pP 16 04 07.2 +2.3
COR LR LR
comp=Z,424nm,21.0s,MS4.6
COR Corvallis 65.42 52 P **P** **16 03 49.2 +0.5**
COR *i* pP 16 04 07.2 +2.3
COR pmax pmax
comp=Z,101nm,1.0s,mb5.8
COR MLR MLR
comp=Z,424nm,21.0s,MS4.6
ETW Entiat 65.42 48 P **P** **16 03 49.0 +0.3**
FINES FINESS Array B 65.43 332 P **P** **16 03 47.9 -0.7**
FINES LR LR 16 34 37.4
FINES FINESS Array B 65.43 332 P **P** **16 03 47.9 -0.7**
comp=Z,24nm,0.7s,mb5.4,baz=53,slow=7.1,SNR=120
FINES LR LR 16 34 37.4
comp=Z,2µm,20.5s,MS5.3,baz=53,slow=38
FINES FINESS Array B 65.43 332 P **P** **16 03 47.9 -0.7**
FINES pmax pmax
comp=Z,24nm,0.7s
FINES MLR MLR
comp=Z,2µm,20.5s
B08A Colville Reser 65.54 46⇑P **P** **16 03 49.2 -0.2**
baz=65
G04A Mullino 65.55 51⇓P **P** **16 03 49.7 +0.1**
baz=65
MOR8 Moi Rana 65.69 339 *e*P **P** **16 03 48.2 -1.9**
MOR8 AMB AMB 16 04 05.5
comp=Z,37nm,1.6s,mb5.2
EDM Edmonton 65.77 40 *e*P **P** **16 03 50.2 -0.7**
EDM *e* pP 16 04 07.5 +0.5
HOOD Mount Hood Mea 65.97 50 *e*P **P** **16 03 52.7 +0.4**
comp=Z,55nm,1.6s,mb5.3
HOOD *i* pP 16 04 10.1 +1.7
H04A Detroit Lake 66.02 51⇓P **P** **16 03 52.7 +0.1**
baz=66
JMIC Jan Mayen 66.17 350 LR LR 16 34 48.0
comp=Z,264nm,20.9s,MS4.4,baz=40,slow=38
VSR Storozhevoye 66.22 318 *e*P **P** **16 03 53.4 -0.4**
VSR *e* 16 06 16.3
VSR *e*S S 16 12 33.6 -4.4
VSR *e*SS SS 16 16 52.2 -1.9
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=Z,50nm,0.6s,mb5.7
VSR pmax pmax
comp=E,5.0nm,0.3s
VSR pmax pmax
comp=Z,110nm,2.9s,mb5.4
VSR pmax pmax
comp=N,30nm,1.0s
VSR pmax pmax
comp=E,20nm,1.0s
VSR smax
comp=E,50nm,2.7s
VSR smax
comp=Z,20nm,2.7s
VSR smax
comp=N,20nm,1.3s
VSR MLR MLR
comp=N,640nm,16.0s,MS5.1
VSR MLR MLR
comp=E,820nm,16.0s,MS5.1
VSR MLR MLR
comp=Z,1µm,16.0s,MS5.3
E07A Sunnyside 66.28 48⇓P **P** **16 03 54.2 -0.1**
baz=66
VORD Divnogorie 66.30 318 *e*P **P** **16 03 54.1 -0.2**
VORD pmax pmax
comp=N,20nm,1.0s
VORD pmax pmax
comp=Z,40nm,1.0s,mb5.4
VORD pmax pmax
comp=E,9.0nm,0.5s
VORD MLR MLR
comp=N,630nm,20.0s,MS5.1
VORD MLR MLR
comp=E,1µm,20.0s,MS5.1
VORD MLR MLR
comp=Z,1µm,20.0s,MS5.2
MAK Makhachkala 66.39 307 *e*P **P** **16 03 53.2 -1.8**
MAK *e* 16 04 22.1
MAK *e* 16 06 23.4
MAK *es*S S 16 12 43.2 +2.8
MAK pmax pmax
comp=Z,366nm,1.9s,mb6.1
MAK MLR MLR
comp=Z,1µm,19.0s,MS5.1
OD2 Odessa Site #2 66.44 47 *e*P **P** **16 03 54.7 -0.5**
comp=Z,102nm,1.0s,mb5.8
C09A Chrisman Ranch 66.44 46⇓P **P** **16 03 55.0 -0.2**
baz=66
D08A Wollman Farm, 66.52 47⇑P **P** **16 03 55.6 -0.2**
baz=66
RSW Rattlesnake Hi 66.53 48 *e*P **P** **16 03 56.4 +0.6**
comp=Z,2.7nm,0.3s,mb4.8
RSW *e* pP 16 04 12.6 +0.6
CROR Criterion Ridg 66.55 50 P **P** **16 03 56.3 +0.3**
SUMG Summit 66.55 0 *e*P **P** **16 03 56.0 +0.4**
comp=Z,67nm,0.9s,mb5.7
SUMG Summit 66.55 0 *i* P **P** **16 03 55.5 -0.1**
comp=Z,53nm,0.8s,mb5.6
SUMG *i* 16 06 20.1
HAWA Hanford 66.56 48 *e*P **P** **16 03 55.9 -0.2**
comp=Z,59nm,1.1s,mb5.5
HAWA *e* pP 16 04 12.6 +0.4
HAWA LR LR
comp=Z,451nm,22.0s,MS4.6
G06A Carlson Farm, 66.60 50⇑P **P** **16 03 56.6 +0.2**
baz=66
F07A Phinny Hill Vi 66.63 49⇓P **P** **16 03 56.9 +0.5**
baz=66
XMAS Kiritimati 66.68 109 P **P** **16 03 55.5 -1.8**
comp=Z,60nm,1.1s,mb5.5
XMAS *e* pP 16 04 08.6 -4.8
XMAS LR LR
comp=Z,2µm,21.0s,MS5.4
EIDS Eidsvold 66.72 171 *e*P **P** **16 03 56.8 -0.4**
comp=Z,13nm,0.8s,mb5.0
HUMO Hull Mountain 66.75 53 *e*P **P** **16 03 57.3 0.0**
comp=Z,40nm,1.3s,mb5.3
HUMO *e* pP 16 04 15.3 +1.8
E08A Dider Farm, El 66.77 48⇑P **P** **16 03 57.5 +0.1**
baz=66
NEW Newport 66.80 46 *e*P **P** **16 03 57.0 -0.5**
comp=Z,45nm,1.1s,mb5.4
NEW LR LR
comp=Z,489nm,21.0s,MS4.7
NEW Newport 66.80 46 *e*P **P** **16 03 57.0 -0.5**
NEW pmax pmax
comp=Z,45nm,1.1s
NEW MLR MLR
comp=Z,489nm,21.0s
DZM Mont Dzumac 66.85 155 *e*S S 16 12 51.7 +5.6
comp=Z,251nm,29.4s
DZM *e*LR LR 16 24 05.1
comp=Z,1µm,23.2s
VIPM Ingram Point 67.04 50 P **P** **16 03 59.4 +0.3**
A12A Yaak River Ran 67.18 44⇑P **P** **16 03 59.8 -0.1**
baz=67
E09A Wood Farm, Sta 67.27 48⇑P **P** **16 04 00.5 -0.1**
baz=67
YBH Yreka Blue Hor 67.40 54 *e*P **P** **16 04 02.1 +0.6**
comp=Z,60nm,1.0s,mb5.6
YBH *e* pP 16 04 19.3 +1.6
YBH LR LR
comp=Z,346nm,21.0s,MS4.5
YBH Yreka Blue Hor 67.40 54 *e*P **P** **16 04 02.1 +0.6**
YBH *e* pP 16 04 19.3 +1.6
YBH pmax pmax
comp=Z,60nm,1.0s
YBH MLR MLR
comp=Z,346nm,21.0s
MSVF Nonsavu 67.40 143 PFAKE 16 04 10.0 +8.4
MSVF LR LR
comp=Z,601nm,21.0s,MS4.8
B12A Libby 67.49 45⇑P **P** **16 04 02.1 +0.1**
baz=67
C11A Tepee Creek (N 67.52 46⇓P **P** **16 04 02.2 +0.1**
baz=67
G08A Pilot Rock 67.53 49⇑P **P** **16 04 02.5 +0.2**
baz=67
LNOR Lincton Mounta 67.57 48 *e*P **P** **16 04 02.2 -0.3**
comp=Z,12nm,1.3s,mb4.8
LNOR *e* pP 16 04 19.8 +1.2
LNOR Lincton Mounta 67.57 48 *e*P **P** **16 04 02.2 -0.3**
LNOR *e* pP 16 04 19.8 +1.1
LNOR pmax pmax
comp=Z,12nm,1.3s,mb4.8
K05A Summer Lake 67.92 52⇑P **P** **16 04 05.6 +0.9**
baz=68
I07A Izee 67.93 50⇓P **P** **16 04 04.8 0.0**
baz=68
C12B Naegeli Ranch, 68.01 45⇑P **P** **16 04 05.6 +0.4**
baz=68
WALA Waterton Lakes 68.02 44 *e*P **P** **16 04 04.8 -0.4**
comp=Z,1.2nm,1.0s,mb3.9
WALA *e* pP 16 04 21.7 +0.3
F10A Beach Ranch, E 68.10 48⇑P **P** **16 04 05.6 -0.2**
baz=68
B13A Whitefish 68.14 44⇓P **P** **16 04 06.3 +0.2**
baz=68
WDC Whiskeytown Da 68.18 55 *e*P **P** **16 04 06.3 -0.1**
comp=Z,74nm,1.1s,mb5.6
WDC *e* pP 16 04 23.3 +0.7
WDC LR LR
comp=Z,330nm,21.0s,MS4.5
WDC Whiskeytown Da 68.18 55 *e*P **P** **16 04 06.3 -0.1**
WDC *e* pP 16 04 23.3 +0.7
WDC pmax pmax
comp=Z,74nm,1.1s,mb5.6
WDC MLR MLR
comp=Z,330nm,21.0s,MS4.5
BSMT Bassoo Peak 68.30 45 *e*P **P** **16 04 06.7 -0.3**
comp=Z,17nm,1.0s,mb5.0
A14A Double T Ranch 68.32 43⇑P **P** **16 04 06.7 -0.4**
baz=68
LTIM Timbered Crate 68.47 54 P **P** **16 04 09.1 +0.9**
D12A Red Ives Fores 68.48 46⇑P **P** **16 04 08.1 -0.1**
baz=68
C13A Hot Springs 68.52 45⇑P **P** **16 04 08.2 -0.1**
baz=68
JTMT Jette 68.63 45 *e*P **P** **16 04 08.4 -0.6**
comp=Z,32nm,1.0s,mb5.2
KIV Kislovodsk 68.65 310⇑*i*P **P** **16 04 10.1 +0.8**
KIV Kislovodsk 68.65 310*c i*P **P** **16 04 10.0 +0.7**
KIV *es*SS SS 16 17 34.4 +2.4
KIV pmax pmax
comp=Z,220nm,1.2s,mb6.0
KIV MLR MLR
comp=Z,900nm,22.0s,MS5.0
ZEI Tsey 68.66 309 *e*P **P** **16 04 08.1 -1.2**
ZEI pmax pmax
comp=Z,38nm,0.9s,mb5.3
A15A Johnson Ranch, 68.68 43⇓P **P** **16 04 08.4 -0.9**
baz=68
YBMT Yellow Bay 68.70 45 *e*P **P** **16 04 09.3 -0.2**
comp=Z,6.0nm,1.1s,mb4.4
BMO Blue Mountains 68.73 49 *e*P **P** **16 04 09.2 -0.5**
comp=Z,31nm,1.1s,mb5.2
BMO *e* pP 16 04 25.6 -0.4
BMO LR LR
comp=Z,336nm,21.0s,MS4.5
E12A Beaver Dam Sad 68.75 46⇑P **P** **16 04 10.0 +0.2**
baz=68
LBCM Butte Creek Ri 68.76 54 P **P** **16 04 10.2 +0.2**
MOD Modoc 68.76 53 *e*P **P** **16 04 10.3 +0.3**
comp=Z,46nm,1.1s,mb5.3
MOD *es*P sP 16 04 27.4 -5.5
MOD LR LR
comp=Z,351nm,20.0s,MS4.6
MTA Mtatsminda 68.76 307 P **P** **16 04 10.3 +0.3**
TBLG Delisi 68.77 307 P **P** **16 04 10.6 +0.5**
TBLG Delisi 68.77 307 P **P** **16 04 10.6 +0.5**
HOPS Hopland 68.78 56 *e*P **P** **16 04 09.9 -0.2**
comp=Z,72nm,1.3s,mb5.4
HOPS *e* pP 16 04 27.3 +0.9
HOPS LR LR
comp=Z,726nm,22.0s,MS4.9
C14A Swan Lake 68.90 45⇑P **P** **16 04 10.8 0.0**
baz=69
SWMT Swartz Lake 68.93 45 *e*P **P** **16 04 10.6 -0.3**
comp=Z,24nm,1.3s,mb5.0
D13A Huson 68.94 45⇑P **P** **16 04 10.6 -0.3**
baz=69
J08A Circle Bar Ran 68.97 50⇓P **P** **16 04 11.7 +0.5**
baz=69
GOR Gori 69.00 308 P **P** **16 04 12.5 +1.0**
B15A Bradely Ranch, 69.18 44⇓P **P** **16 04 12.2 -0.3**
baz=69
A16A West Butte Ran 69.28 43⇑P **P** **16 04 12.2 -0.9**
baz=69
F12A Elk City 69.33 47⇑P **P** **16 04 13.5 +0.1**
baz=69
SLMT Seeley Lake 69.36 45 *e*P **P** **16 04 13.4 -0.3**
comp=Z,61nm,1.1s,mb5.5
SLMT *es*P sP 16 04 29.9 -6.6
MSO Missoula 69.38 45 *e*P **P** **16 04 13.3 -0.5**
comp=Z,32nm,1.2s,mb5.1
MSO LR LR
comp=Z,279nm,22.0s,MS4.5
AFI Afiamalu 69.40 132 PFAKE 16 04 30.0 +16

AFI LR LR
comp=Z,825nm,20.0s,MS5.0
MICGM Minsk 69.41 325 *e*P **P 16 04 11.0 -2.8**
MNK Minsk 69.43 325 *e*P **P 16 04 11.0 -2.9**
WVOR Wild Horse Val 69.43 51 *e*P **P 16 04 14.3 +0.2**
comp=Z,73nm,1.3s,mb5.5
WVOR *e*sP sP 16 04 31.6 -5.5
WVOR LR LR
comp=Z,351nm,21.0s,MS4.6
WVOR Wild Horse Val 69.43 51 *e*P **P 16 04 14.3 +0.2**
WVOR *e**SP sP 16 04 31.6 -5.4
WVOR pmax pmax
comp=Z,73nm,1.3s,mb5.5
WVOR MLR MLR
comp=Z,351nm,21.0s,MS4.6
D14A Greenough 69.45 45 ⇓P **P 16 04 13.8 -0.3**
baz=69
E13A Victor 69.49 46 ⇑P **P 16 04 13.6 -0.8**
baz=69
C15A Salmond Ranch, 69.50 44 ⇑P **P 16 04 14.8 +0.4**
baz=69
B16A M & M Farms, S 69.56 43 ⇓P **P 16 04 14.2 -0.6**
baz=69
NACGM Naroch 69.60 326 *e* **P 16 04 12.0 -2.9**
CHMT Chamberlain Mo 69.69 45 *e*P **P 16 04 14.5 -1.2**
comp=Z,12nm,1.0s,mb4.8
GNI Garni 69.72 306⇑ *i*P **P 16 04 17.4 +1.5**
GNI Garni 69.72 306*c i*P **P 16 04 17.3 +1.4**
GNI pmax pmax
comp=Z,63nm,1.2s
A17A Triple J Farms 69.74 42 ⇓P **P 16 04 15.5 -0.4**
baz=69
F13A Darby 69.81 46 ⇑P **P 16 04 15.6 -0.8**
baz=70
E14A Clinton 69.88 46 ⇑P **P 16 04 16.4 -0.5**
baz=70
C16A Fuhringer Ranc 69.93 44 ⇑P **P 16 04 17.0 -0.1**
baz=70
FFC Flin Flon 69.93 34 P **P 16 04 16.3 -0.7**
comp=Z,86nm,1.0s,mb5.6,SNR=7.2
FFC Flin Flon 69.93 34 *i*P **P 16 04 16.5 -0.5**
FCC Fort Churchill 70.06 27 *e*P **P 16 04 16.6 -1.1**
comp=Z,0.8nm,0.9s
B17A L&G Farms, Che 70.11 43 ⇓P **P 16 04 18.0 -0.1**
baz=70
A18A Metzger Ranch, 70.19 42 ⇑P **P 16 04 17.9 -0.8**
baz=70
H12A Diamond D Ranc 70.30 48 ⇑P **P 16 04 18.8 -0.7**
baz=70
G13A Cobalt 70.30 47 ⇑P **P 16 04 18.6 -0.8**
baz=70
F14A Wisdom 70.33 46 ⇓P **P 16 04 19.1 -0.4**
baz=70
E15A Deer Lodge 70.33 45 ⇓P **P 16 04 19.0 -0.6**
baz=70
MFID Camas Ranch 70.46 49 ⇓P **P 16 04 20.4 0.0**
baz=70
D16A Dana Ranch, Ca 70.52 44 ⇑P **P 16 04 20.5 -0.2**
baz=70
C17A Wharram Farm, 70.55 43 ⇓P **P 16 04 20.3 -0.6**
baz=70
B18A Beardsley Farm 70.56 42 ⇓P **P 16 04 20.5 -0.4**
baz=70
HRY Holter Researc 70.58 45 *e*P **P 16 04 20.6 -0.5**
comp=Z,49nm,1.0s,mb5.4
SOC Sochi 70.58 311*c i*P **P 16 04 21.2 0.0**
SOC *i**PP pP 16 04 33.7 -3.8
SOC *e**SP sP 16 04 40.6 -3.5
SOC *e*S S 16 13 27.0 -3.1
SOC *e**SS sS 16 14 09.3 +12
SOC *e* 16 14 13.6
SOC *e*SSS 16 21 06.2
SOC pmax pmax
comp=Z,41nm,0.6s,mb5.5
SOC MLR MLR
comp=Z,689nm,20.0s,MS4.9
NOA NORSAR Array B 70.60 337 P **P 16 04 20.1 -0.9**
comp=Z,7.8nm,0.6s,mb4.8,baz=37,slow=6.1,SNR=25
NOA LR LR 16 38 19.4
comp=Z,797nm,21.5s,MS4.9,baz=25,slow=38
NOA NORSAR Array B 70.60 337 P **P 16 04 20.1 -0.8**
NOA pmax pmax
comp=Z,8.0nm,0.6s
NOA MLR MLR
comp=Z,797nm,21.5s
I12A Atlanta 70.61 48 ⇑P **P 16 04 21.2 -0.1**
baz=70
H13A Challis 70.62 47 ⇓P **P 16 04 21.1 -0.3**
baz=70
G14A Jackson 70.64 46 ⇓P **P 16 04 20.4 -1.1**
baz=70
WCN Washoe City 70.66 55 ⇑P **P 16 04 22.1 +0.4**
baz=70
E16A East Helena 70.78 45 ⇑P **P 16 04 22.3 0.0**
baz=70
EGMT Eagleton 70.81 43 ⇓P **P 16 04 22.1 -0.4**
baz=70
EGMT Eagleton 70.81 43 *e*P **P 16 04 21.8 -0.6**
comp=Z,86nm,1.1s,mb5.6
EGMT LR LR
comp=Z,494nm,21.0s,MS4.7
LRM Limekiln Ridge 70.82 46 *e*P **P 16 04 22.5 0.0**
comp=Z,564nm,1.1s,mb6.4
D17A Six Diamond Ra 70.90 44 ⇓P **P 16 04 23.0 0.0**
baz=71
L10A Juniper Basin 70.92 51 ⇑P **P 16 04 23.1 -0.1**
baz=71
DLMT Dillon 71.03 46 *e*P **P 16 04 23.6 -0.2**
comp=Z,118nm,1.1s,mb5.7
CMB Columbia Colle 71.04 56 *e*P **P 16 04 24.1 0.0**
comp=Z,108nm,1.3s,mb5.6
CMB *e* pP 16 04 41.1 +0.8
CMB LR LR
comp=Z,501nm,22.0s,MS4.7
CMB Columbia Colle 71.04 56 *e*P **P 16 04 24.1 +0.1**
CMB *e* pP 16 04 41.1 +0.8
CMB pmax pmax
comp=Z,108nm,1.3s,mb5.6
CMB MLR MLR
comp=Z,501nm,22.0s,MS4.7
H14A Leadore 71.08 47 ⇓P **P 16 04 23.6 -0.5**
baz=71
ANN Anapa 71.09 313*c i*P **P 16 04 23.0 -1.2**
ANN *e*S S 16 13 41.1 +5.1
ANN pmax pmax
comp=Z,137nm,1.4s,mb5.7
ANN MLR MLR
comp=Z,811nm,24.0s,MS4.9
I13A Wildhorse Cree 71.11 48 ⇓P **P 16 04 24.5 +0.1**
baz=71
HOQ Hoqain 71.14 285 ⇑P **P 16 04 25.2 +0.3**
SNR=6.1
SAO San Andreas Ge 71.14 57 P **P 16 04 24.1 -0.6**
comp=Z,50nm,1.5s,mb5.2
SAO LR LR
comp=Z,543nm,21.0s,MS4.8
SAO San Andreas Ge 71.14 57 P **P 16 04 24.1 -0.6**
SAO pmax pmax
comp=Z,50nm,1.5s,mb5.2
SAO MLR MLR
comp=Z,543nm,21.0s,MS4.8
HLID Hailey 71.17 48 ⇓P **P 16 04 24.9 +0.2**
baz=71
HLID Hailey 71.17 48 *e*P **P 16 04 24.9 +0.2**
comp=Z,31nm,1.0s,mb5.2
HLID LR LR
comp=Z,384nm,22.0s,MS4.6
G15A Dillon 71.21 46 ⇑P **P 16 04 24.4 -0.6**
baz=71
M10A I.L. Ranch, Tu 71.22 51 ⇑P **P 16 04 25.6 +0.5**
baz=71
MCMT McKenzie Canyo 71.23 47 *e*P **P 16 04 24.8 -0.3**
comp=Z,8.6nm,1.0s,mb4.6
HATD Hatta, Dubai 71.25 287 ⇑P **P 16 04 26.1 +0.6**
SNR=5.7
E17A Martinsdale 71.25 44 ⇑P **P 16 04 25.6 +0.4**
baz=71
L11A Cat Creek Ranc 71.28 50 ⇓P **P 16 04 25.8 +0.4**
baz=71
F16A Kennard Place, 71.28 45 ⇓P **P 16 04 25.2 -0.2**
baz=71
D18A Linhart Farms, 71.33 43 ⇑P **P 16 04 25.6 0.0**
baz=71
BOZ Bozeman (W) 71.37 45 *e*P **P 16 04 26.1 +0.2**
comp=Z,46nm,0.9s,mb5.4
BOZ LR LR
comp=Z,348nm,20.0s,MS4.6
BOZ Bozeman (W) 71.37 45 *e*P **P 16 04 26.1 +0.2**
BOZ pmax pmax
comp=Z,46nm,0.9s,mb5.4
BOZ MLR MLR
comp=Z,348nm,20.0s,MS4.6
ASHO Ashiyiah 71.39 287 ⇓P **P 16 04 26.7 +0.4**
SNR=5.3
AKASG Malin Array Be 71.39 322 P **P 16 04 25.2 -0.7**
comp=Z,7.8nm,0.4s,mb5.0,baz=44,slow=6.2,SNR=72
AKASG LR LR 16 38 22.9
comp=Z,800nm,19.1s,MS5.0,baz=60,slow=38
AKASG Malin Array Be 71.39 322 P **P 16 04 25.2 -0.7**
AKASG pmax pmax
comp=Z,8.0nm,0.4s
AKASG MLR MLR
comp=Z,800nm,19.1s
AKBB Malin Array Si 71.39 322 *e*P **P 16 04 25.1 -0.8**
KIEV Kiev 71.40 322 *e*P **P 16 04 25.0 -1.0**
comp=Z,96nm,1.5s,mb5.5
KIEV *e*pP pP 16 04 37.1 -5.2
KIEV LR LR
comp=Z,915nm,19.0s,MS5.1
KIEV Kiev 71.40 322 *e*P **P 16 04 25.0 -1.0**
KIEV *e**PP pP 16 04 37.1 -5.2
KIEV pmax pmax
comp=Z,96nm,1.5s,mb5.5
KIEV MLR MLR
comp=Z,915nm,19.0s,MS5.1
J13A Cove Ranch, Pi 71.41 48 ⇓P **P 16 04 26.8 +0.6**
baz=71
H15A Lima 71.48 47 ⇓P **P 16 04 26.2 -0.4**
baz=71
BMN Battle Mountai 71.50 52 *e*P **P 16 04 27.5 +0.7**
comp=Z,78nm,1.1s,mb5.5
BMN *i* pP 16 04 44.8 +1.7
BMN LR LR
comp=Z,386nm,22.0s,MS4.6
BMN Battle Mountai 71.50 52 *e*P **P 16 04 27.5 +0.7**
BMN *i* pP 16 04 44.8 +1.7
BMN pmax pmax
comp=Z,78nm,1.1s,mb5.5
BMN MLR MLR
comp=Z,386nm,22.0s,MS4.6
G16A Moss Hill, Enn 71.55 46 ⇓P **P 16 04 27.1 +0.2**
baz=71
L12A House Creek Ra 71.72 50 ⇑P **P 16 04 28.6 +0.5**
baz=71
M11A Holland Ranch, 71.72 51 ⇓P **P 16 04 28.9 +0.8**
baz=72
F17A Fitzpatrick Pl 71.72 45 ⇑P **P 16 04 28.2 +0.2**
baz=71
SUW Suwalki 71.72 327 *e*P **P 16 04 27.2 -0.6**
SUW *e* pP 16 04 39.1 -5.0
SUW LMZ 16 37 52.4
comp=Z,1μm,21.3s
N10A Dunphy 71.74 52 ⇑P **P 16 04 28.4 +0.2**
baz=72
ARQ Aragi 71.86 285 ⇓P **P 16 04 30.3 +1.1**
SNR=7.1
I15A Monteview 71.96 47 ⇓P **P 16 04 29.6 +0.1**
baz=72
O10A Cortez Mining, 72.01 52 ⇑P **P 16 04 30.4 +0.6**
baz=72
G17A Pierce Place, 72.06 45 ⇑P **P 16 04 30.6 +0.5**
baz=72
NVAR Mina Array Bea 72.09 54 P **P 16 04 30.3 0.0**
NVAR pP pP 16 04 47.7 +1.0
NVAR Mina Array Bea 72.09 54 P **P 16 04 30.3 0.0**
comp=Z,8.0nm,0.9s,mb4.7,baz=291,slow=5.9,SNR=55
NVAR pP pP 16 04 47.7 +1.1
comp=Z,55nm,0.9s,baz=298,slow=6.8,SNR=34
N11A Elko Archery C 72.14 51 ⇓P **P 16 04 31.1 +0.6**
baz=72
KONO Kongsberg 72.20 337 PFAKE
KONO LR LR 16 04 40.0 +9.4
comp=Z,872nm,20.0s,MS5.0
F18A Big Timber 72.22 44 ⇓P **P 16 04 31.1 +0.2**
baz=72
M12A Wells 72.24 50 ⇓P **P 16 04 32.0 +0.8**
baz=72
MLAC Mammoth Lakes 72.25 55 ⇓P **P 16 04 32.1 +0.8**
baz=72
GCMT Greycliff 72.32 44 *e*P **P 16 04 31.3 -0.3**
comp=Z,38nm,1.0s,mb5.3
YMR Madison River 72.36 46 *e*P **P 16 04 32.1 +0.2**
comp=Z,48nm,0.9s,mb5.4
YNR Norris Junctio 72.49 46 *e*P **P 16 04 33.2 +0.6**
comp=Z,74nm,1.3s,mb5.5
K14A Jones Ranch, D 72.51 49 ⇓P **P 16 04 33.3 +0.5**
baz=72
N12A Clover Valley, 72.52 51 ⇑P **P 16 04 33.3 +0.4**
baz=72
YFT Old Faithful 72.57 46 *e*P **P 16 04 34.5 +1.3**
comp=Z,67nm,0.9s,mb5.6
I16A Newdale 72.59 47 ⇑P **P 16 04 34.3 +1.1**
baz=72
O11A Cowboy Ranch, 72.62 52 ⇑P **P 16 04 33.4 0.0**
baz=72
G18A Lazy EL Ranch, 72.69 45 ⇓P **P 16 04 33.3 -0.5**
baz=72
STKA Stephens Creek 72.69 180 *e*P **P 16 04 32.5 -1.2**
comp=Z,3.5nm,0.9s,mb4.3
STKA Stephens Creek 72.69 180 P **P 16 04 33.0 -0.8**
comp=Z,2.9nm,0.8s,mb4.3,baz=10,slow=6.3,SNR=3.5
STKA LR LR 16 35 21.6
comp=Z,341nm,20.7s,MS4.6,baz=17,slow=35
M13A Montello 72.71 50 ⇓P **P 16 04 34.3 +0.3**
baz=72
LKWY Lake 72.73 46 *e*P **P 16 04 36.0 +1.9**
comp=Z,53nm,1.0s,mb5.4
LKWY LR LR
comp=Z,365nm,20.0s,MS4.7
LKWY Lake 72.73 46 *e*P **P 16 04 36.0 +1.9**
LKWY pmax pmax
comp=Z,53nm,1.0s,mb5.4
LKWY MLR MLR
comp=Z,365nm,20.0s,MS4.7
H17A Grant Village 72.75 46 ⇑P **P 16 04 35.7 +1.6**
baz=72
FORT Forrest 72.77 193 *e*P **P 16 04 32.7 -1.5**
comp=Z,13nm,0.7s,mb5.0
K15A Arbon 72.79 48 ⇓P **P 16 04 35.2 +0.7**
baz=72
SIM Simferopol' 72.79 315*ce*P **P 16 04 34.5 +0.1**
SIM MLR MLR
comp=Z,1μm,20.0s,MS5.2
L14A Malta 72.81 49 ⇑P **P 16 04 34.9 +0.4**
baz=72
IMW Indian Meadow 72.88 46 *e*P **P 16 04 35.8 +0.8**
comp=Z,52nm,0.9s,mb5.5
FLWY Flagg Ranch 72.89 46 *e*P **P 16 04 35.9 +0.9**
comp=Z,87nm,1.4s,mb5.5
J16A Bone 72.92 47 ⇓P **P 16 04 36.0 +0.8**
baz=73
P11A Circle Ranch, 72.92 52 ⇓P **P 16 04 35.6 +0.3**
baz=73
DCID1 Drake Creek 72.94 47 *e*P **P 16 04 36.2 +0.9**
comp=Z,11nm,0.5s,mb5.0
SMMC Simmler 72.96 58 ⇑P **P 16 04 36.5 +0.9**
baz=73
RLMT Red Lodge 72.97 45 *e*P **P 16 04 35.3 -0.1**
comp=Z,44nm,1.2s,mb5.3
RLMT *e* pP 16 04 52.3 +0.5
RLMT LR LR
comp=Z,452nm,21.0s,MS4.7
TIN Tinemaha 72.99 56 ⇓P **P 16 04 36.3 +0.5**
baz=73
Q10A Clear Creek Ra 73.00 53 ⇑P **P 16 04 36.1 +0.4**
baz=73
N13A Wendover, West 73.01 50 ⇓P **P 16 04 36.2 +0.4**
baz=73
RRI2 Red Ridge 73.03 47 *e*P **P 16 04 36.6 +0.8**
comp=Z,120nm,1.1s,mb5.7
I17A Pilgrim Ck. 73.06 46 ⇓P **P 16 04 37.2 +1.2**
baz=73
O12A Currie 73.07 51 ⇓P **P 16 04 36.7 +0.6**
baz=73
MOOW Moose Ponds 73.08 46 *e*P **P 16 04 36.5 +0.3**
comp=Z,81nm,1.1s,mb5.6
M14A Sheep Mountain 73.09 49 ⇑P **P 16 04 36.9 +0.7**
baz=73
TPAW Teton Pass 73.14 47 *e*P **P 16 04 37.2 +0.7**
comp=Z,84nm,1.2s,mb5.5
VES Vestal, Richgr 73.21 57 ⇑P **P 16 04 36.9 -0.2**
baz=73
K16A Soda Springs 73.22 48 ⇓P **P 16 04 38.0 +1.0**
baz=73
HVU Hansel Valley 73.23 49 *e*P **P 16 04 37.5 +0.4**
comp=Z,57nm,1.0s,mb5.5
HVU Hansel Valley 73.23 49 *e*P **P 16 04 37.5 +0.4**
HVU pmax pmax
comp=Z,57nm,1.0s,mb5.5
LOHW Long Hollow 73.25 46 *e*P **P 16 04 37.6 +0.5**
comp=Z,37nm,1.1s,mb5.2
LOHW *e* pP 16 04 54.1 +0.6
REDW Red Top Meadow 73.28 47 *e*P **P 16 04 37.7 +0.4**
comp=Z,31nm,1.4s,mb5.0
L15A Malad City 73.31 49 ⇓P **P 16 04 37.8 +0.3**
baz=73
J17A Brown Place, J 73.36 47 ⇓P **P 16 04 38.2 +0.5**
baz=73
R10A Warm Springs 73.40 54 ⇑P **P 16 04 38.5 +0.4**
baz=73
Q11A Duckwater 73.44 53 ⇑P **P 16 04 38.3 0.0**
baz=73
S10A Tonopah Range, 73.45 54 ⇑P **P 16 04 38.9 +0.5**
baz=73
CWC Cottonwood Cre 73.47 56 ⇓P **P 16 04 38.9 +0.3**
baz=73
P12A McGill 73.48 52 ⇓P **P 16 04 39.0 +0.5**
baz=73
LAO LASA Array 73.49 42 *e*P **P 16 04 38.1 -0.4**
comp=Z,78nm,1.6s,mb5.4
LAO *e* pP 16 04 52.2 -2.7
LAO LR LR
comp=Z,544nm,22.0s,MS4.8
AHID Auburn Hatcher 73.53 47 P **P 16 04 38.8 0.0**
comp=Z,44nm,1.0s,mb5.3
AHID *e* pP 16 04 54.7 -0.5
AHID LR LR
comp=Z,546nm,21.0s,MS4.8
GRAC Grapevine Rang 73.56 55 ⇑P **P 16 04 39.3 +0.2**
baz=73
N14A Grayback Hills 73.60 50 ⇓P **P 16 04 39.4 +0.2**
baz=73
O13A Hicks Ranch, I 73.60 51 ⇑P **P 16 04 39.6 +0.3**
baz=73
I18A Diamond G Ranc 73.62 46 ⇑P **P 16 04 40.0 +0.7**
baz=73
BORG Borgarnes 73.62 353 PFAKE 16 04 50.0 +11
BORG LR LR
comp=Z,258nm,21.0s,MS4.5
BORG Borgarnes 73.62 353 LR LR 16 40 13.9
comp=Z,121nm,18.6s,MS4.2,baz=130,slow=38
M15A Larsen Ranch, 73.63 49 ⇑P **P 16 04 39.5 +0.1**
baz=73
BGU Big Grassy Mou 73.64 50 *e*P **P 16 04 39.8 +0.3**
comp=Z,26nm,1.0s,mb5.1
K17A Gardner Place, 73.64 47 ⇓P **P 16 04 40.1 +0.6**
baz=73
ISA Isabella 73.71 57 ⇑P **P 16 04 39.4 -0.6**
baz=74
ISA Isabella 73.71 57 *e*P **P 16 04 38.8 -1.2**
comp=Z,52nm,1.4s,mb5.3
ISA *e* pP 16 04 56.4 0.0
ISA Isabella 73.71 57 *e*P **P 16 04 38.8 -1.2**
ISA *e* pP 16 04 56.4 0.0
ISA pmax pmax
comp=Z,52nm,1.4s,mb5.3
SPUT South Promonto 73.73 49 P **P 16 04 40.4 +0.4**
comp=Z,60nm,1.1s,mb5.4
R11A Troy Canyon, C 73.79 53 ⇓P **P 16 04 40.8 +0.4**
baz=74
Q12A Willow Creek R 73.80 52 ⇓P **P 16 04 41.0 +0.5**
baz=74
ARVC Arvin 73.82 57 ⇓P **P 16 04 40.5 -0.1**
baz=74
J18A Kendall Valley 73.83 46 ⇑P **P 16 04 40.9 +0.3**
baz=74
L16A Fish Haven 73.84 48 ⇑P **P 16 04 40.6 0.0**
baz=74
DAC Darwin (Calif) 73.88 56 PFAKE 16 04 50.0 +9.0
DAC LR LR
comp=Z,609nm,21.0s,MS4.9
WAR Warsaw 73.90 327 *e*P **P 16 04 41.6 +0.8**
BSC Santa Cruz Isl 74.02 59 ⇑P **P 16 04 41.9 0.0**
baz=74
P13A Bates Ranch, G 74.02 51 ⇓P **P 16 04 41.9 +0.2**
baz=74
HWUT Hardware Ranch 74.03 48 *e*P **P 16 04 41.9 +0.1**
comp=Z,90nm,1.1s,mb5.6
HWUT LR LR
comp=Z,394nm,20.0s,MS4.7
BSD Bornholm Skovb 74.08 332⇑ *i*P **P 16 04 41.3 -0.5**
BSD pmax pmax
comp=Z,19nm,0.9s,mb5.0
BSD MLR MLR
comp=Z,1μm,21.0s,MS5.2
BSD Bornholm Skovb 74.08 332⇑ *i*P **P 16 04 41.3 -0.5**
comp=Z,19nm,0.9s,mb5.0
BSD *i* 16 07 38.4
BSD
comp=Z,1μm,21.0s
MPMC Manual Prospec 74.08 56 ⇓P **P 16 04 42.5 +0.3**
baz=74
L17A Cokeville 74.10 48 ⇑P **P 16 04 42.4 +0.2**
baz=74
KIS Kishinev 74.13 319 *e*PP PP 16 07 28.0 +0.3
KIS *e*L 16 30 22.0
KIS *e*LQ 16 33 50.0
KIS LRM 16 40 24.0
comp=Z,2μm,18.0s
KIS Kishinev 74.13 319 *e*P **P 16 04 40.0 -2.2**
KIS *e* pP 16 04 52.0 -6.6
KIS *e* 16 05 05.0
KIS *e* 16 07 28.0
KIS MLR MLR
comp=N,700nm,17.0s,MS5.1
KIS MLR MLR
comp=Z,2μm,17.0s,MS5.3
KIS MLR MLR
comp=E,600nm,18.0s,MS5.1
KIS MLR MLR
comp=Z,1μm,18.0s
S11A Rachel 74.14 54 ⇑P **P 16 04 43.3 +0.8**
baz=74
K18A Toltan Ranch, 74.20 47 ⇑P **P 16 04 42.9 +0.1**
baz=74
FURC Furnace Creek, 74.21 55 ⇑P **P 16 04 43.0 +0.1**
baz=74
OSI Osito Adit 74.21 58 ⇓P **P 16 04 43.5 +0.5**
baz=74
DUG Dugway 74.24 50 ⇑P **P 16 04 43.2 +0.2**
baz=74
DUG Dugway 74.24 50 *e*P **P 16 04 43.1 +0.1**
comp=Z,73nm,1.2s,mb5.5
DUG LR LR
comp=Z,354nm,20.0s,MS4.7
DUG Dugway 74.24 50 *e*P **P 16 04 43.1 +0.1**
DUG pmax pmax
comp=Z,73nm,1.2s,mb5.5
DUG MLR MLR
comp=Z,354nm,20.0s,MS4.7
LRMC Laurel Mountai 74.32 57 ⇓P **P 16 04 43.7 +0.1**
baz=74
Q13A Wheeler Ranch, 74.34 52 ⇓P **P 16 04 43.8 +0.2**
baz=74
NOQ North Oquirrh 74.34 50 *e*P **P 16 04 43.6 0.0**
comp=Z,117nm,1.2s,mb5.7
NOQ *e* pP 16 05 00.1 +0.1
MIB Mutribah 74.38 296 *e*P **P 16 04 43.3 -0.7**
MIB AMb AMB 16 04 44.0
comp=Z,62nm,0.7s,mb5.6
LVV L'vov 74.38 324 *e*P **P 16 04 43.0 -0.6**
LVV *e*S S 16 14 12.2 -1.1
LVV *e*SS SS 16 19 04.0 +4.7
LVV MLR MLR
comp=N,400nm,17.0s,MS5.0
LVV MLR MLR
comp=E,500nm,17.0s,MS5.0
LVV MLR MLR
comp=Z,700nm,17.0s,MS5.0
BW06 Boulder Array 74.38 47 PFAKE 16 05 00.0 +16
BW06 LR LR
comp=Z,463nm,22.0s,MS4.7
O15A The Old Anders 74.39 50 ⇑P **P 16 04 44.2 +0.3**
baz=74
R12A Pony Springs, 74.39 53 ⇑P **P 16 04 44.2 +0.2**
baz=74
P14A Drum Mountains 74.49 51 ⇓P **P 16 04 44.7 +0.2**
baz=74
COP Copenhagen 74.49 333⇑ *i*P **P 16 04 44.1 -0.1**
COP MLR MLR
comp=Z,880nm,20.0s,MS5.0

COP Copenhagen 74.49 333⇑*i*P P 16 04 44.1 -0.1
COP
comp=Z,870nm,20.0s
EDW2 Edwards Air Fo 74.51 57 ⇑P P 16 04 44.7 0.0
baz=74
KBD Kabd 74.53 295 *e*P P 16 04 44.4 -0.5
KBD AMb AMB 16 04 46.9
comp=Z,41nm,1.3s,mb5.2
CTU Camp Tracy 74.53 49 *e*P P 16 04 45.9 +1.2
comp=Z,50nm,1.1s,mb5.4
CTU *es*P sP 16 05 01.3 -6.4
U10A Ash Meadows, A 74.57 55 ⇑P P 16 04 44.4 -0.6
baz=74
N16A Rees Ranch, Co 74.58 49 ⇓P P 16 04 45.3 +0.3
baz=74
M17A Scullys Gap (B 74.63 48 ⇓P P 16 04 44.5 -0.7
baz=74
GKP Gorka Klasztor 74.64 329 *e*P P 16 04 45.1 0.0
GKP *e* pP 16 05 01.5 0.0
GKP LMZ 16 37 18.5
comp=Z,700nm,25.9s
L18A Fontenelle, Gr 74.68 47 ⇑P P 16 04 45.4 -0.1
baz=74
MALT Malatya 74.69 308 ⇓P P 16 04 47.1 +1.4
MALT Malatya 74.69 308 P P 16 04 47.5 +1.9
MALT Malatya 74.69 308⇓*i*P P 16 04 47.1 +1.5
DECC Green Verdugo 74.69 58 ⇓P P 16 04 45.2 -0.5
baz=74
S12A Delamar Landin 74.71 53 ⇓P P 16 04 46.4 +0.6
baz=74
T11A Corn Creek, Al 74.73 54 ⇓P P 16 04 46.0 +0.2
baz=74
K19A Absolon Red Bu 74.73 46 ⇑P P 16 04 45.0 -0.8
baz=74
Q14A Sevier Lake (B 74.76 51 ⇓P P 16 04 46.6 +0.6
baz=74
JLU Jordanelle 74.76 49 *e*P P 16 04 46.3 +0.3
comp=Z,39nm,1.1s,mb5.2
RDF Al-Radifah 74.78 295 *e*P P 16 04 45.3 -1.0
RDF AMb AMB 16 04 49.0
comp=Z,120nm,1.4s,mb5.7
NAY Al-Naaiem 74.79 296 *e*P P 16 04 45.5 -0.8
NAY AMb AMB 16 04 47.9
comp=Z,24nm,0.6s,mb5.3
NLU North Lily Min 74.83 50 *e*P P 16 04 46.7 +0.3
comp=Z,38nm,1.0s,mb5.3
NLU *es*P sP 16 05 02.7 -6.8
PASC Pasadena Art C 74.84 58 *e*P P 16 04 46.2 -0.4
PASC *e* pP 16 05 01.5 -1.5
R13A O'Grain Ranch, 74.87 52 ⇑P P 16 04 47.1 +0.4
baz=75
MWC Mount Wilson 74.89 58 P P 16 04 45.5 -1.3
comp=Z,70nm,1.2s,mb5.5
MWC Mount Wilson 74.89 58 P P 16 04 45.5 -1.4
MWC pmax pmax
comp=Z,70nm,1.2s,mb5.5
N17A Moffit Pass 74.89 49 ⇓P P 16 04 46.9 +0.2
baz=75
SHOC Shoshone 74.94 55 ⇓P P 16 04 47.1 0.0
baz=75
L19A Farson 74.94 47 ⇑P P 16 04 46.8 -0.3
baz=75
MUD Monsted U'grnd 74.94 335 *e*P P 16 04 46.4 -0.4
MUD MLR MLR
comp=Z,510nm,20.0s,MS4.8
MUD Monsted U'grnd 74.94 335 *i* P P 16 04 46.4 -0.4
MUD
comp=Z,510nm,20.0s
P15A Leamington 74.96 50 ⇓P P 16 04 47.4 +0.2
baz=75
GSC Goldstone 74.99 56 ⇓P P 16 04 46.7 -0.8
baz=75
GSC Goldstone 74.99 56 *e*P P 16 04 46.9 -0.5
comp=Z,44nm,1.3s,mb5.2
GSC Goldstone 74.99 56 *e*P P 16 04 46.9 -0.5
GSC pmax pmax
comp=Z,44nm,1.3s,mb5.2
O16A Springville 74.99 50 ⇑P P 16 04 47.5 +0.2
baz=75
M18A Lyman 75.00 48 ⇓P P 16 04 47.1 -0.2
baz=75
DAU Daniels Canyon 75.00 49 *e*P P 16 04 47.8 +0.4
comp=Z,45nm,1.2s,mb5.3
DAU Daniels Canyon 75.00 49 *e*P P 16 04 47.8 +0.4
DAU pmax pmax
comp=Z,45nm,1.2s,mb5.3
MPU Maple Canyon 75.04 50 *e*P P 16 04 47.6 0.0
comp=Z,64nm,1.0s,mb5.5
KWP Kalwaria Pacla 75.11 324 *e*P P 16 04 48.7 +0.9
KWP *e* pP 16 05 04.6 +0.3
KWP LMZ 16 40 43.2
comp=Z,1μm,18.2s
KWP Kalwaria Pacla 75.11 324 ⇑P P 16 04 48.5 +0.7
KWP Kalwaria Pacla 75.11 324⇑*i*P P 16 04 48.5 +0.7
K20A Yellowstone Ra 75.12 46 ⇓P P 16 04 46.7 -1.4
baz=75
BFSC Mount Baldy Ra 75.13 58 ⇓P P 16 04 48.0 -0.2
baz=75
RRX Edison Barstow 75.14 57 ⇑P P 16 04 48.4 +0.1
baz=75
U11A Corn Creek 75.15 55 ⇑P P 16 04 48.8 +0.4
baz=75
Q15A Fillmore 75.28 51 ⇑P P 16 04 49.2 +0.2
baz=75
P16A Fountain Green 75.30 50 ⇑P P 16 04 49.3 +0.2
baz=75
S13A Holt Ranch, En 75.33 53 ⇓P P 16 04 49.2 -0.1
baz=75
R14A James Farms, M 75.36 52 ⇓P P 16 04 49.9 +0.4
baz=75
T12A Moapa 75.37 54 ⇑P P 16 04 50.1 +0.5
baz=75
BUR01 Bucovina Ar. S 75.43 321 P P 16 04 50.5 +0.8
O17A Robinson Place 75.44 49 ⇑P P 16 04 50.2 +0.3
baz=75
ARUT Antelope Range 75.45 52 *e*P P 16 04 50.1 +0.1
comp=Z,19nm,1.1s,mb4.9
ARUT *e* pP 16 05 07.9 +1.4
ARUT Antelope Range 75.45 52 *e*P P 16 04 50.1 +0.1
ARUT *e* pP 16 05 07.9 +1.4
ARUT pmax pmax
comp=Z,19nm,1.1s,mb4.9
M19A Rock Springs 75.45 47 ⇓P P 16 04 49.7 -0.2
baz=75
TUQ Turquoise Moun 75.46 56 ⇓P P 16 04 50.2 +0.1
baz=75
V11A Goodsprings 75.50 55 ⇓P P 16 04 50.3 -0.1
baz=75
N18A Larsen Ranch, 75.52 48 ⇑P P 16 04 49.6 -0.7
baz=75
TESR 75.53 320 ⇑P P 16 04 50.4 +0.1
TESR 75.53 320⇑*i*P P 16 04 50.4 +0.1
L20A Wamsutter 75.56 47 ⇑P P 16 04 50.5 -0.1
baz=75
BBRC Big Bear Solar 75.58 57 ⇓P P 16 04 51.0 +0.1
baz=75
HEC Hector,Ludlow 75.59 56 ⇓P P 16 04 50.7 -0.2
baz=75
S14A Cedar City 75.63 52 ⇑P P 16 04 51.1 0.0
baz=75
CCUT Cedar City 75.65 53 *e*P P 16 04 50.9 -0.3
comp=Z,44nm,1.4s,mb5.2
U12A Valley of Fire 75.67 54 ⇓P P 16 04 51.6 +0.3
baz=75
T13A Saint George 75.67 53 ⇑P P 16 04 51.6 +0.3
baz=75
MSU Marysvale 75.72 51 *e*P P 16 04 52.0 +0.5
comp=Z,56nm,1.4s,mb5.3
MSU Marysvale 75.72 51 *e*P P 16 04 52.0 +0.4
MSU pmax pmax
comp=Z,56nm,1.4s,mb5.3
ULM Lac du Bonnet 75.75 34 P P 16 04 50.2 -1.3
comp=Z,2.7nm,0.5s,mb4.4,baz=325,slow=7.2,SNR=5.5
ULM LR LR 16 38 39.4
comp=Z,344nm,21.1s,MS4.6,baz=95,slow=36
TMUT Trail Mountain 75.77 50 *e*P P 16 04 52.4 +0.6
comp=Z,36nm,1.0s,mb5.3
O18A Roosevelt 75.81 49 ⇓P P 16 04 52.1 0.0
baz=76
KOLS Kolonicke sedl 75.81 324 *e*P P 16 04 52.1 +0.2
comp=Z,14nm,1.2s,mb4.8
KOLS Kolonicke sedl 75.81 324 *e*P P 16 04 52.1 +0.2
KOLS pmax pmax
comp=Z,14nm,1.2s,mb4.8
KOLS Kolonicke sedl 75.81 324 *e*P P 16 04 52.1 +0.2
MURC Murrieta 75.83 58 ⇓P P 16 04 51.5 -0.8
baz=76

N19A John Jarvie Ra 75.85 48 ⇑P P 16 04 51.8 -0.5
baz=76
R15A Junction 75.86 51 ⇑P P 16 04 52.9 +0.5
baz=76
STHS Stebnicka Huta 75.91 325 *e*P P 16 04 53.7 +1.3
comp=Z,10.0nm,0.8s,mb4.8
STHS *e* 16 05 01.1
STHS Stebnicka Huta 75.91 325 *e*P P 16 04 53.7 +1.3
STHS *e* 16 05 01.1
STHS pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
STHS Stebnicka Huta 75.91 325 *e*P P 16 04 53.7 +1.3
STHS *e* 16 05 01.1
P17A Butcher Ranch, 75.92 50 ⇓P P 16 04 52.9 +0.2
baz=76
OJC Ojcow 75.93 326 *e*P P 16 04 52.9 +0.4
OJC *e*PcP PcP 16 05 04.4 -0.3
OJC *e*pP pP 16 05 08.9 -0.1
OJC *e*S S 16 14 30.4 0.0
OJC L 16 40 59.9
comp=Z,1.7nm,20.0s
V12A Nelson 75.93 55 ⇓P P 16 04 53.2 +0.3
baz=76
VRI Vrincioaia 75.95 319 P P 16 04 54.3 +1.5
VRI ⇑P pP 16 05 09.8 +0.6
VRI Vrincioaia 75.95 319⇑*i*P pP 16 05 09.8 +0.6
UZH Uzhgorod 76.03 324 *e*P P 16 04 51.3 -1.8
UZH *e*S S 16 14 23.9 -7.7
UZH *e*PS 16 15 10.1
UZH *e*SS SS 16 19 21.6 -2.7
UZH *e*SSS 16 22 37.6
UZH MLR MLR
comp=N,470nm,18.0s,MS5.1
UZH MLR MLR
comp=E,650nm,18.0s,MS5.1
UZH MLR MLR
comp=Z,500nm,18.0s,MS4.9
Q16A Castle Valley 76.04 50 ⇑P P 16 04 54.1 +0.7
baz=76
GMRC Granite Mounta 76.05 56 ⇑P P 16 04 53.8 +0.3
baz=76
P18A Preston Nutter 76.10 49 ⇑P P 16 04 53.9 +0.2
baz=76
L21A Rawlins 76.12 46 ⇓P P 16 04 53.8 0.0
baz=76
T14A Hurricane 76.14 53 ⇓P P 16 04 54.1 +0.1
baz=76
S15A Panguitch 76.16 52 ⇓P P 16 04 54.6 +0.5
baz=76
GRER 76.17 319 P P 16 04 56.6 +2.6
CRVS Cervenica-Dubn 76.20 324 *e*P P 16 04 54.6 +0.5
comp=Z,55nm,2.0s,mb5.1
CRVS Cervenica-Dubn 76.20 324 *e*P P 16 04 54.6 +0.5
CRVS pmax pmax
comp=Z,55nm,2.0s,mb5.1
CRVS Cervenica-Dubn 76.20 324 *e*P P 16 04 54.6 +0.5
W12A Cal Nev Ari 76.20 55 ⇑P P 16 04 54.3 0.0
baz=76
R16A Teasdale 76.28 51 ⇑P P 16 04 55.7 +1.0
baz=76
O19A Miners Draw (B 76.28 48 ⇑P P 16 04 54.3 -0.5
baz=76
SRU San Rafael 76.28 50 ⇓P P 16 04 54.6 -0.2
baz=76
SRU San Rafael 76.28 50 *e*P P 16 04 54.7 0.0
comp=Z,68nm,1.1s,mb5.5
SRU San Rafael 76.28 50 *e*P P 16 04 54.7 -0.1
SRU pmax pmax
comp=Z,68nm,1.1s,mb5.5
TRPA Tarpa 76.29 323⇑*i*P P 16 04 55.2 +0.6
PFO Pinyon Flat Ob 76.30 57 ⇓P P 16 04 54.6 -0.4
baz=76
PFO Pinyon Flat Ob 76.30 57 PFAKE 16 05 10.0 +15
PFO LR LR
comp=Z,713nm,22.0s,MS4.9
NIE Niedzica 76.31 325 *e*P P 16 04 55.7 +1.0
BELC Belle Mtn. Jos 76.34 57 ⇓P P 16 04 54.5 -0.6
baz=76
109C Camp Elliot, M 76.35 58 ⇓P P 16 04 55.2 -0.1
baz=76
M21A Separation Pea 76.37 46 ⇑P P 16 04 55.1 -0.1
baz=76
RSSD Black Hills 76.38 43 *e*P P 16 04 54.5 -0.7
comp=Z,30nm,1.0s,mb5.2
RSSD LR LR
comp=Z,490nm,19.0s,MS4.8
RSSD Black Hills 76.38 43 *e*P P 16 04 54.6 -0.6
RSSD pmax pmax
comp=Z,30nm,1.0s,mb5.2
RSSD MLR MLR
comp=Z,490nm,19.0s,MS4.8
V13A Grand Canyon W 76.38 54 ⇑P P 16 04 55.8 +0.4
baz=76
RWWY Rawlins 76.39 46 *e*P P 16 04 55.1 -0.3
comp=Z,105nm,1.1s,mb5.7
N20A Spence Gulch, 76.40 47 ⇓P P 16 04 55.7 +0.3
baz=76
U14A Mt Trumbull 76.50 53 ⇓P P 16 04 56.8 +0.8
baz=76
Q18A Rafter H Ranch 76.52 50 ⇓P P 16 04 55.9 -0.2
baz=76
BR131 Keskin Array S 76.55 311 *e*P P 16 04 56.2 0.0
comp=Z,3.9nm,0.6s,mb4.5
BR131 LR LR
comp=Z,346nm,19.0s,MS4.7
BRTR Keskin Array B 76.55 311 P P 16 04 56.6 +0.4
comp=Z,5.5nm,0.5s,mb4.7,baz=89,slow=3.8,SNR=31
BRTR LR LR 16 43 28.1
comp=Z,381nm,20.4s,MS4.7,baz=45,slow=39
BRTR Keskin Array B 76.55 311 P P 16 04 56.7 +0.5
BRTR pmax pmax
comp=Z,6.0nm,0.5s
BRTR MLR MLR
comp=Z,381nm,20.4s
RUE Ruedersdorf 76.57 330 *e*P P 16 04 56.4 +0.3
comp=Z,53nm,1.1s,mb5.4
T15A Red Dirt Ranch 76.58 52 ⇓P P 16 04 56.8 +0.3
baz=76
S16A Weppner Ranch, 76.59 52 ⇓P P 16 04 57.0 +0.5
baz=76
MLR Muntele Rosu 76.60 320 ⇓P P 16 04 56.6 +0.2
MLR Muntele Rosu 76.60 320 LR LR 16 42 34.6
comp=Z,1μm,19.3s,MS5.2,baz=44,slow=39
MLR Muntele Rosu 76.60 320 P P 16 04 57.8 +1.4
MLR Muntele Rosu 76.60 320⇓*i*P P 16 04 56.6 +0.2
BSEG Bad Segeberg 76.63 333 *e*P P 16 04 56.7 +0.3
comp=Z,96nm,1.8s,mb5.4
R17A Hanksville Air 76.64 50 ⇓P P 16 04 56.8 0.0
baz=76
NEE2 Needles Airpor 76.70 55 ⇓P P 16 04 56.7 -0.5
baz=76
BAR Barrett 76.76 58 P P 16 04 56.7 -0.9
comp=Z,42nm,1.6s,mb5.1
IRM Iron Mountain 76.77 56 ⇑P P 16 04 57.5 -0.1
baz=76
MONP Monument Peak 76.79 58 ⇓P P 16 04 57.6 -0.1
baz=77
P19A Cripple Cowboy 76.81 49 ⇑P P 16 04 57.4 -0.3
baz=76
N21A Black Mountain 76.86 47 ⇑P P 16 04 57.9 -0.1
baz=77
KSP Ksiaz 76.89 328 *e*P P 16 04 58.3 +0.3
KSP *e* pP 16 05 13.5 -0.9
KSP LMZ 16 41 28.4
comp=Z,1μm,19.8s
KSP Ksiaz 76.89 328 *e*P P 16 04 58.1 +0.2
KSP *e**SP sP 16 05 13.9 -7.1
KSP MLR MLR
comp=Z,2μm,19.8s,MS5.4
O20A White River Ci 76.89 48 ⇓P P 16 04 57.7 -0.5
baz=77
BC3 Big Chuckawall 76.91 57 ⇓P P 16 04 58.5 +0.1
baz=77
OKC Ostrava-Krasne 76.91 327⇑*i*P P 16 04 58.3 +0.2
OKC MLR MLR
comp=Z,1μm,19.8s,MS5.2
OKC Ostrava-Krasne 76.91 327⇑*i*P P 16 04 58.3 +0.2
OKC AMS AMS 16 41 10.0
comp=Z,1μm,19.8s
M22A Cedar Creek Ra 76.93 46 ⇑P P 16 04 58.0 -0.4
baz=77
W13A Hualapai Mount 76.94 55 ⇓P P 16 04 58.5 0.0
baz=77
KECS Kecovo 76.94 324 *e*P P 16 04 58.4 +0.1
comp=Z,4.8nm,1.2s,mb4.3
KECS Kecovo 76.94 324 *e*P P 16 04 58.3 0.0

U15A North Rim 77.03 53 ⇑P P 16 04 59.3 +0.3
baz=77
V14A Boquillas Ranc 77.06 54 ⇑P P 16 04 59.8 +0.6
baz=77
VOIR 77.08 320 ⇑P P 16 05 00.5 +1.4
VOIR 77.08 320⇑*i*P P 16 05 00.5 +1.4
S17A Black Ridge (B 77.11 51 ⇑P P 16 04 59.2 -0.3
baz=77
Q19A Hogan Spring (77.11 49 ⇑P P 16 04 58.9 -0.5
baz=77
T16A Glen Canyon Da 77.13 52 ⇓P P 16 04 59.0 -0.6
baz=77
R18A Canyonlands Na 77.14 50 ⇓P P 16 04 59.2 -0.4
baz=77
DVTC Desert V Tower 77.14 58 ⇑P P 16 04 59.0 -0.7
baz=77
SWSC Sam W. Stewart 77.15 58 ⇓P P 16 04 59.6 -0.2
baz=77
DRGR 77.20 322 P P 16 05 00.4 +0.6
MORC Moravsky Berou 77.21 327 P P 16 05 00.6 +0.9
AGMN Agassiz Nation 77.22 36 *e*P P 16 04 57.7 -2.2
comp=Z,38nm,1.6s,mb5.1
AGMN LR LR
comp=Z,405nm,20.0s,MS4.7
NWAO Narrogin (SRO) 77.23 201 P P 16 04 59.9 0.0
comp=Z,7.2nm,0.9s,mb4.6,baz=30,slow=3.9,SNR=4.3
NWAO LR LR 16 39 10.8
comp=Z,272nm,21.6s,MS4.5,baz=346,slow=36
NWAO Narrogin (SRO) 77.23 201 P P 16 04 59.9 0.0
NWAO pmax pmax
comp=Z,7.0nm,0.9s
NWAO MLR MLR
comp=Z,273nm,21.7s
P20A De Beque 77.24 48 ⇑P P 16 04 59.9 -0.2
baz=77
DPC Dobruska-Polom 77.26 328⇑*i*P P 16 05 00.9 +0.9
DPC *e* pP 16 05 16.5 -0.1
DPC MLR MLR
comp=Z,700nm,19.4s,MS5.0
DPC Dobruska-Polom 77.26 328⇑*i*P P 16 05 00.9 +0.9
DPC *es*P sP 16 05 16.5 -6.6
DPC AMS AMS 16 41 20.0
comp=Z,700nm,19.4s
UPC Upice 77.26 328⇑*i*P P 16 05 00.4 +0.3
UPC *e* 16 05 09.2
UPC *e* pP 16 05 16.7 +0.1
UPC Upice 77.26 328⇑*i*P P 16 05 00.4 +0.3
UPC *e*pP pP 16 05 09.2 -7.4
UPC *es*P sP 16 05 16.7 -6.5
O21A Pagoda 77.27 47 ⇑P P 16 04 59.9 -0.3
baz=77
X13A Yucca 77.31 55 ⇑P P 16 05 00.7 +0.1
baz=77
W14A Seligman 77.36 54 ⇓P P 16 05 01.6 +0.7
baz=77
N22A Wattenberg Ran 77.42 46 ⇑P P 16 05 01.4 +0.3
baz=77
V15A Kaibab Nationa 77.51 53 ⇑P P 16 05 02.5 +0.8
baz=77
T17A Navajo Res., N 77.54 52 ⇑P P 16 05 01.5 -0.4
baz=77
S18A Hurst Farm, Bl 77.55 51 ⇓P P 16 05 01.9 0.0
baz=77
R19A Curley Farm, L 77.57 50 ⇑P P 16 05 02.0 0.0
baz=77
PHWY Pilot Hill 77.61 45 *e*P P 16 05 02.0 -0.2
comp=Z,59nm,1.3s,mb5.4
PHWY *e* pP 16 05 19.1 +0.4
PSZ Piszkesteto 77.63 324 *e*P P 16 05 02.6 +0.5
comp=Z,40nm,1.3s,mb5.2
PSZ *ep*P pP 16 05 13.0 -5.6
PSZ LR LR
comp=Z,1μm,19.0s,MS5.3
PSZ Piszkesteto 77.63 324 P P 16 05 03.3 +1.2
PSZ Piszkesteto 77.63 324⇑*i*P P 16 05 02.8 +0.7
PSZ Piszkesteto 77.63 324⇑*e*P P 16 05 02.8 +0.7
N23A Red Feather La 77.63 46 ⇑P P 16 05 02.6 +0.3
baz=77
VYHS Vyhne 77.65 325 *e*P P 16 05 02.9 +0.7
comp=Z,37nm,1.9s,mb5.0
VYHS Vyhne 77.65 325 *e*P P 16 05 02.9 +0.7
VYHS pmax pmax
comp=Z,37nm,1.9s,mb5.0
VYHS Vyhne 77.65 325 *e*P P 16 05 02.9 +0.7
Q20A Ridgley Place, 77.67 49 ⇑P P 16 05 02.5 -0.1
baz=77
GLA Glamis 77.70 57 ⇑P P 16 05 02.7 -0.1
baz=78
GLA Glamis 77.70 57 *e*P P 16 05 02.2 -0.6
comp=Z,38nm,1.0s,mb5.3
GLA Glamis 77.70 57 *e*P P 16 05 02.3 -0.5
GLA pmax pmax
comp=Z,38nm,1.0s,mb5.3
PV04 Paradox Valley 77.70 50 *e*P P 16 05 03.1 +0.4
PV04 *e* pP 16 05 19.9 +0.7
KOLL Kolacno 77.77 326 *e*P P 16 05 03.6 +0.7
KOLL Kolacno 77.77 326 *e*P P 16 05 03.5 +0.6
BRG Berggiesshubel 77.78 329 *e*P P 16 05 03.1 +0.1
comp=Z,138nm,2.6s,mb5.4
BRG Berggiesshubel 77.78 329 *e*P P 16 05 03.0 0.0
comp=Z,38nm,1.6s,mb5.1
BRG
comp=N,564nm,21.1s
BRG
comp=E,549nm,11.7s
BRG
comp=Z,691nm,21.3s
BRG Berggiesshubel 77.78 329 *e*P P 16 05 03.0 0.0
BRG pmax pmax
comp=Z,23nm,1.6s,mb4.9
BRG MLR MLR
comp=N,338nm,21.1s
BRG MLR MLR
comp=E,329nm,11.7s
BRG MLR MLR
comp=Z,414nm,21.3s,MS4.7
CLL Collm 77.80 330 *e*P P 16 05 02.8 -0.2
comp=Z,100nm,2.0s,mb5.4
CLL Collm 77.80 330⇑*i*P P 16 05 02.7 -0.3
comp=Z,99nm,2.0s,mb5.4
CLL *i* pP pP 16 05 18.0 -1.5
CLL *e*S S 16 14 50.0 -0.7
CLL LR LR
comp=Z,1μm,20.5s,MS5.2
CLL Collm 77.80 330⇑*i*P P 16 05 02.7 -0.3
CLL *i**PP pP 16 05 18.0 -1.5
CLL *e*S S 16 14 50.0 -0.7
CLL pmax pmax
comp=Z,99nm,2.0s,mb5.4
CLL MLR MLR
comp=Z,1μm,20.5s,MS5.2
CLL Collm 77.80 330⇑*i*P P 16 05 02.7 -0.3
comp=Z,99nm,2.0s,mb5.4
CLL *e* 16 05 11.0
CLL *e*PcP PcP 16 05 13.0 +0.2
CLL *i*sP sP 16 05 18.0 -8.1
CLL *i* pP 16 05 22.0 +2.5
CLL *e* 16 06 20.0
CLL *e*PP PP 16 07 55.0 -3.4
CLL *e*S S 16 14 50.0 -0.7
CLL *e*PS 16 15 37.0
CLL *e*(SS) 16 19 24.0
CLL LmV 16 42 00.0
comp=Z,1μm,20.5s
O22A Kremmling 77.81 47 ⇓P P 16 05 03.1 -0.2
baz=78
PVCC Panska Ves 77.82 329⇑*i*P P 16 05 03.7 +0.6
PVCC MLR MLR
comp=Z,800nm,18.7s,MS5.1
PVCC Panska Ves 77.82 329⇑*i*P P 16 05 03.7 +0.6
PVCC AMS AMS 16 42 40.0
comp=Z,800nm,18.7s
Y13A Salome 77.82 56 ⇓P P 16 05 03.7 +0.2
baz=78
W15A Williams 77.88 54 ⇑P P 16 05 04.8 +1.1
baz=78
NRDL Niedersach Rie 77.88 332 *e*P P 16 05 02.5 -1.0
comp=Z,52nm,2.0s,mb5.1
U17A Shonto 77.89 52 ⇑P P 16 05 04.0 +0.1
baz=78
U16A Tuba City 77.92 52 ⇑P P 16 05 04.7 +0.7
baz=78,SNR=8.7
VRAC Vranov 77.96 327 ⇑P P 16 05 04.5 +0.5
VRAC Vranov 77.96 327 P P 16 05 05.0 +1.0
VRAC Vranov 77.96 327⇑*i*P P 16 05 04.5 +0.5
X14A Yava 77.97 55 ⇑P P 16 05 05.0 +0.7

baz=78,SNR=8.8
T18A Mexican Hat 77.99 51 ⇓P P 16 05 04.0 -0.4
baz=78
S19A Harvey Farm, M 78.01 50 ⇑P P 16 05 04.5 0.0
baz=78,SNR=8.8
PV01 Paradox Valley 78.07 50 *e*P P 16 05 04.8 0.0
comp=Z,4µm,1.2s
PV01 *e* pP 16 05 21.8 +0.5
P22A Eagle 78.09 47 ⇓P P 16 05 05.1 +0.3
baz=78,SNR=6.2
O23A Lake Granby, G 78.12 47 ⇓P P 16 05 05.6 +0.6
baz=78
R20A Redvale 78.14 49 ⇑P P 16 05 05.5 +0.3
baz=78,SNR=6.8
Q21A Lamborn Mesa, 78.16 48 ⇑P P 16 05 05.4 +0.1
baz=78,SNR=6.7
112A Yuma 78.19 57 ⇓P P 16 05 05.6 0.0
baz=78
WUAZ Wupatki 78.19 53 ⇓P P 16 05 05.9 +0.4
baz=78
WUAZ Wupatki 78.19 53⇑*e*P P 16 05 05.9 +0.3
comp=Z,61nm,1.0s,mb5.5
WUAZ *es*P sP 16 05 23.4 -5.2
WUAZ LR LR
comp=Z,462nm,21.0s,MS4.8
GZR Gura Zlata 78.20 321 P P 16 05 05.6 +0.2
Y14A Wickenburg 78.25 55 ⇓P P 16 05 06.1 +0.2
baz=78
PRU Pruhonice 78.25 329⇑*i*P P 16 05 06.6 +1.0
PRU *e* 16 05 15.4
PRU *e* pP 16 05 22.9 +0.8
PRU *e*S S 16 14 58.2 +2.5
PRU MLR MLR
comp=Z,700nm,18.1s,MS5.0
PRU Pruhonice 78.25 329⇑*i*P P 16 05 06.6 +1.0
PRU *e*pP pP 16 05 15.4 -6.7
PRU *e*sP sP 16 05 22.9 -5.8
PRU *e*S S 16 14 58.2 +2.5
PRU AMS AMS 16 42 10.0
comp=Z,700nm,18.1s
N24A Carr 78.25 46 ⇑P P 16 05 06.0 +0.2
baz=78
SMCO Snowmass 78.26 48 *e*P P 16 05 05.9 +0.1
comp=Z,51nm,1.1s,mb5.4
SMCO *e* pP 16 05 23.0 +0.6
CLZ Clausthal 78.33 332 *e*P P 16 05 06.0 +0.1
comp=Z,76nm,1.6s,mb5.4
CLZ Clausthal 78.33 332 *e*P P 16 05 06.0 +0.1
CLZ pmax pmax
comp=Z,76nm,1.6s,mb5.4
Z13A Yuma Proving G 78.33 56 ⇓P P 16 05 06.4 0.0
baz=78
BUD Budapest 78.34 325⇑*e*P P 16 05 06.4 +0.3
X15A Humboldt 78.36 54 ⇓P P 16 05 06.9 +0.4
baz=78,SNR=12
W16A Flagstaff 78.38 53 ⇑P P 16 05 07.1 +0.6
baz=78
TREC Trest 78.42 328⇑*i*P P 16 05 07.0 +0.5
TREC *e* 16 05 15.4
TREC MLR MLR
comp=Z,800nm,20.9s,MS5.0
TREC Trest 78.42 328⇑*i*P P 16 05 07.0 +0.5
TREC *e*pP pP 16 05 15.4 -7.7
TREC AMS AMS 16 42 00.0
comp=Z,800nm,20.9s
V17A Tonalea, Kykot 78.47 53 ⇓P P 16 05 07.8 +0.7
baz=78,SNR=25
U18A Rough Rock, Ch 78.48 52 ⇑P P 16 05 07.8 +0.7
baz=78
R21A Cimarron 78.49 49 ⇑P P 16 05 07.7 +0.5
baz=78,SNR=9.4
Q22A Crested Butte, 78.51 48 ⇑P P 16 05 07.6 +0.4
baz=78,SNR=11
113A Mohawk Valley, 78.55 56 ⇑P P 16 05 07.3 -0.2
baz=78
BZS Buzias 78.58 322 P P 16 05 07.7 +0.2
ISCO Idaho Springs 78.58 47 *e*P P 16 05 08.0 +0.4
comp=Z,58nm,1.4s,mb5.3
ISCO *es*P sP 16 05 25.8 -4.9
ISCO LR LR
comp=Z,383nm,21.0s,MS4.7
ISCO Idaho Springs 78.58 47 *e*P P 16 05 08.0 +0.4
ISCO *e**SP sP 16 05 25.8 -4.9
ISCO pmax pmax
comp=Z,58nm,1.4s,mb5.3
ISCO MLR MLR
comp=Z,383nm,21.0s,MS4.7
ZST Bratislava 78.62 326 *e*P P 16 05 08.4 +0.8
comp=Z,70nm,2.1s,mb5.2
ZST Bratislava 78.62 326 *e*P P 16 05 08.4 +0.8
ZST pmax pmax
comp=Z,70nm,2.1s,mb5.2
ZST Bratislava 78.62 326 *e*P P 16 05 08.4 +0.8
O24A Longmont 78.65 46 ⇓P P 16 05 08.2 +0.3
baz=78
Y15A Casa Rosa Ranc 78.66 55 ⇑P P 16 05 08.5 +0.4
baz=78,SNR=9.6
Z14A Wintersburg 78.67 56 ⇑P P 16 05 08.2 0.0
baz=78
N25A Grover 78.69 45 ⇑P P 16 05 07.9 -0.3
baz=78
T19A Beclabito 78.70 51 ⇓P P 16 05 08.9 +0.6
baz=78
TANN Tannenbergstha 78.72 330 *e*P P 16 05 08.1 0.0
comp=Z,90nm,2.4s,mb5.3
MVCO Mesa Verde 78.75 50 ⇓P P 16 05 08.9 +0.4
baz=78
MVCO Mesa Verde 78.75 50 *e*P P 16 05 08.4 -0.1
comp=Z,36nm,1.0s,mb5.2
MVCO *es*P sP 16 05 25.4 -6.2
MVCO LR LR
comp=Z,377nm,21.0s,MS4.7
WERD Werda 78.75 330 *e*P P 16 05 08.1 -0.2
comp=Z,64nm,2.1s,mb5.2
P23A Jefferson 78.75 47 ⇑P P 16 05 09.2 +0.7
baz=78
GUNZ Gunzen 78.81 330 *e*P P 16 05 09.0 +0.4
comp=Z,63nm,2.0s,mb5.2
IBBN Ibbenburen 78.85 333 *e*P P 16 05 08.8 0.0
comp=Z,64nm,1.6s,mb5.3
MOX Moxa 78.85 330 *e*P P 16 05 08.8 0.0
comp=Z,59nm,1.9s,mb5.2
MOX *e* 16 05 17.7
MOX
comp=Z,700nm,21.0s
MOX Moxa 78.85 330 *e*P P 16 05 08.7 -0.1
comp=Z,37nm,1.6s,mb5.1
MOX Moxa 78.85 330 *e*P P 16 05 08.8 0.0
MOX *e* 16 05 17.7
MOX pmax pmax
comp=Z,59nm,1.9s,mb5.2
MOX MLR MLR
comp=Z,700nm,21.0s,MS5.0
WERN Wernitzgruen 78.85 330 *e*P P 16 05 09.3 +0.4
comp=Z,112nm,2.7s,mb5.3
NKC Novy Kostel 78.87 330⇑*i*P P 16 05 08.9 -0.1
NKC *e* 16 05 17.2
NKC *e* pP 16 05 24.3 -1.2
NKC MLR MLR
comp=Z,1µm,23.2s,MS5.1
NKC Novy Kostel 78.87 330⇑*i*P P 16 05 08.9 -0.1
NKC *e*pP pP 16 05 17.2 -8.3
NKC *e*sP sP 16 05 24.3 -7.8
NKC AMS AMS 16 41 40.0
comp=Z,1µm,23.2s
W17A Winslow 78.89 53 ⇓P P 16 05 09.7 +0.3
baz=79
X16A Lo Mia Camp, P 78.89 54 ⇑P P 16 05 10.1 +0.7
baz=79,SNR=9.5
V18A Ganado 78.93 52 ⇓P P 16 05 10.0 +0.5
baz=79,SNR=7.1
U19A Dine' College, 78.96 51 ⇑P P 16 05 10.0 +0.3
baz=79
R22A Saguache, Gunn 79.04 48 ⇓P P 16 05 11.0 +0.8
baz=79,SNR=11
Q23A Hartsel 79.08 47 ⇑P P 16 05 10.5 +0.2
baz=79
114A Black Gap (USA 79.12 56 ⇓P P 16 05 11.2 +0.5
baz=79
P24A Kohler Place, 79.17 46 ⇑P P 16 05 11.3 +0.5
baz=79
O25A Wiggins 79.17 46 ⇑P P 16 05 10.9 +0.1
baz=79
Z15A Gila River Ind 79.21 55 ⇓P P 16 05 11.1 0.0
baz=79
Y16A Circle Bar Ran 79.23 54 ⇓P P 16 05 11.6 +0.4
baz=79,SNR=5.3
U20A Newcomb 79.31 51 ⇓P P 16 05 11.7 +0.1
baz=79
KHC Kasperske Hory 79.32 328⇑*i*P P 16 05 11.9 +0.5
KHC *e* 16 05 20.7
KHC *e* pP 16 05 27.7 -0.3
KHC *e*S S 16 15 08.9 +1.9
KHC MLR MLR
comp=Z,700nm,17.7s,MS5.0
KHC Kasperske Hory 79.32 328⇑*i*P P 16 05 11.9 +0.5
KHC *e*pP pP 16 05 20.7 -7.3
KHC *e*sP sP 16 05 27.7 -6.9
KHC *e*S S 16 15 08.9 +1.9
KHC AMS AMS 16 42 40.0
comp=Z,700nm,17.7s
S22A 4UR Ranch, Cre 79.33 49 ⇓P P 16 05 12.4 +0.7
baz=79,SNR=7.5
X17A Forest Lakes 79.33 54 ⇓P P 16 05 12.8 +1.0
baz=79
EYMN Ely 79.36 33 *e*P P 16 05 09.6 -2.1
comp=Z,34nm,0.9s,mb5.3
EYMN LR LR
comp=Z,479nm,22.0s,MS4.8
Q24A Divide 79.42 47 ⇑P P 16 05 12.3 +0.1
baz=79
W18A Petrified Fore 79.45 52 ⇓P P 16 05 12.8 +0.4
baz=79
ESK Eskdalemuir 79.45 341 PFAKE 16 05 20.0 +8.0
ESK LR LR
comp=Z,478nm,19.0s,MS4.8
V19A Window Rock 79.45 52 ⇓P P 16 05 13.1 +0.7
baz=79
T21A Navajo Lake 79.45 50 ⇓P P 16 05 13.1 +0.7
baz=79
PKSM Moragy 79.48 324 P P 16 05 12.1 -0.3
GEC2 GERESS Array S 79.50 328 *e*P P 16 05 12.7 +0.3
comp=Z,28nm,1.5s,mb5.0
GEC2 GERESS Array S 79.50 328 *e*P P 16 05 12.7 +0.3
GEC2 pmax pmax
comp=Z,28nm,1.5s,mb5.0
115A Sonoran Desert 79.56 56 ⇑P P 16 05 13.2 +0.1
baz=79
P25A Willow Gulch B 79.57 46 ⇓P P 16 05 13.0 0.0
baz=79,SNR=5.9
WET Wettzell 79.58 329 *e*P P 16 05 13.3 +0.4
comp=Z,33nm,1.3s,mb5.1
WET Wettzell 79.58 329 *e*P P 16 05 13.3 +0.4
WET pmax pmax
comp=Z,33nm,1.3s,mb5.1
Z16A Peralta Trail, 79.63 55 ⇓P P 16 05 13.6 +0.2
baz=79
OGNE Ogallala 79.68 44 P P 16 05 12.5 -1.1
comp=Z,148nm,1.2s,mb5.8
OGNE *es*P sP 16 05 30.3 -6.5
OGNE LR LR
comp=Z,248nm,20.0s,MS4.5
214A Organ Pipe Nat 79.69 57 ⇑P P 16 05 14.0 +0.2
baz=80
X18A Snowflake 79.72 53 ⇑P P 16 05 14.3 +0.4
baz=80
V20A Brimhall 79.73 51 ⇓P P 16 05 14.2 +0.2
baz=80
BUG Bochum--Univer 79.74 333 *e*P P 16 05 13.6 -0.1
comp=Z,33nm,1.3s,mb5.1
Y17A Roosevelt 79.74 54 ⇑P P 16 05 14.4 +0.4
baz=80
GRA1 Grafenberg Arr 79.77 330 *e*P P 16 05 14.5 +0.6
comp=Z,54nm,1.3s,mb5.3
GRA1 *e* pP 16 05 29.3 -1.2
GRA1 LR LR
comp=Z,900nm,20.4s,MS5.1
GRF Grafenberg Arr 79.77 330 *e*P P 16 05 14.5 +0.6
comp=Z,54nm,1.3s,mb5.3
GRF *e* pP 16 05 29.3 -1.2
GRF *e*L 16 43 18.4
comp=Z,944nm,20.4s
GRF Grafenberg Arr 79.77 330 *e*P P 16 05 14.5 +0.6
GRF *e* pP 16 05 29.3 -1.2
GRF pmax pmax
comp=Z,54nm,1.3s,mb5.3
GRF MLR MLR
comp=Z,900nm,20.4s,MS5.1
GRF Grafenberg Arr 79.77 330 *e*P P 16 05 14.5 +0.6
GRF *e* pP 16 05 29.3 -1.2
GRF pmax pmax
comp=Z,54nm,1.3s,mb5.3
GRF MLR MLR
comp=Z,900nm,20.4s,MS5.1
U21A Nageezi 79.77 50 ⇑P P 16 05 14.5 +0.4
baz=80,SNR=7.7
T22A Edith 79.80 49 ⇑P P 16 05 15.0 +0.7
baz=80,SNR=11
S23A Nye Farm, Mont 79.83 48 ⇓P P 16 05 14.8 +0.3
baz=80
Q25A Bedland, Calha 79.95 47 ⇓P P 16 05 14.9 -0.2
baz=80,SNR=8.7
R24A Sanders Place, 79.96 48 ⇑P P 16 05 14.4 +0.3
baz=80,SNR=5.4
116A Eloy 79.98 55 ⇓P P 16 05 15.5 +0.1
baz=80
MMAI Mount Meron Ar 80.04 305 P P 16 05 15.7 +0.1
comp=Z,18nm,0.8s,mb5.1,baz=334,slow=5.6,SNR=21
MMAI LR LR 16 44 39.3
comp=Z,683nm,20.4s,MS5.0,baz=75,slow=39
VTS Vitosha 80.07 319 ⇓P P 16 05 16.0 +0.4
VTS Vitosha 80.07 319⇓*i*P P 16 05 16.0 +0.4
SDCO Great Sand Dun 80.08 48 *e*P P 16 05 15.7 -0.2
comp=Z,25nm,1.1s,mb5.0
SDCO *e*PcP PcP 16 05 23.3 +0.2
SDCO *es*P sP 16 05 32.2 -6.7
SDCO LR LR
comp=Z,248nm,20.0s,MS4.5
W20A Ramah 80.18 52 ⇓P P 16 05 16.6 +0.2
baz=80,SNR=7.5
X19A St. Johns 80.19 53 ⇓P P 16 05 17.2 +0.8
baz=80,SNR=23
V21A Milan 80.22 51 ⇑P P 16 05 16.8 +0.3
baz=80
Z17A San Carlos Hig 80.24 54 ⇓P P 16 05 17.2 +0.5
baz=80
U22A Llaves 80.27 50 ⇑P P 16 05 17.6 +0.7
baz=80,SNR=5.9
T23A Casias Ranch, 80.28 49 ⇑P P 16 05 17.3 +0.5
baz=80
S24A Houchin Ranch, 80.32 48 ⇑P P 16 05 17.5 +0.4
baz=80,SNR=10
ECSD EROS Data Cent 80.33 39 *e*P P 16 05 15.6 -1.4
comp=Z,50nm,1.1s,mb5.3
ECSD LR LR
comp=Z,571nm,22.0s,MS4.9
TNS Taunus Mts 80.35 332 *e*P P 16 05 17.1 +0.1
comp=Z,58nm,1.6s,mb5.3
TNS Taunus Mts 80.35 332 *e*P P 16 05 17.1 +0.1
TNS pmax pmax
comp=Z,58nm,1.6s,mb5.3
216A Three Points, 80.51 56 ⇑P P 16 05 18.4 +0.1
baz=80
Y19A Nutrioso 80.53 53 ⇑P P 16 05 19.4 +1.1
baz=80,SNR=7.4
V22A San Miguel Ran 80.56 50 ⇑P P 16 05 18.9 +0.5
baz=80,SNR=5.5
117A Oracle 80.57 55 ⇑P P 16 05 18.6 +0.1
baz=80
X20A Quemado 80.58 52 ⇑P P 16 05 19.6 +1.1
baz=80,SNR=16
Z18A Geronimo 80.65 54 ⇓P P 16 05 19.4 +0.5
baz=80
PERS Pernice 80.68 326 *i*P P 16 05 19.0 +0.2
U23A El Rito 80.69 50 ⇓P P 16 05 19.9 +0.8
baz=80,SNR=8.4
W21A San Fidel 80.69 51 ⇑P P 16 05 19.6 +0.5
baz=80
TUC Tucson 80.72 55 *e*P P 16 05 18.9 -0.5
comp=Z,41nm,1.4s,mb5.2
TUC LR LR
comp=Z,525nm,22.0s,MS4.8
TUC Tucson 80.72 55 *e*P P 16 05 18.9 -0.4
TUC pmax pmax
comp=Z,41nm,1.4s,mb5.2
TUC MLR MLR
comp=Z,525nm,22.0s,MS4.8
TOD Tromm 80.74 331 *e*P P 16 05 19.1 0.0
S25A Robets Cordova 80.74 48 ⇑P P 16 05 18.9 -0.4
baz=80
Z19A T-Link Ranch, 80.98 53 ⇑P P 16 05 21.1 +0.5
baz=81
FUR Furstenfeldbru 81.00 329 *e*P P 16 05 20.9 +0.4
comp=Z,112nm,1.7s,mb5.5
FUR Furstenfeldbru 81.00 329 *e*P P 16 05 20.9 +0.4
FUR pmax pmax
comp=Z,112nm,1.7s,mb5.5
217A Green Valley 81.07 56 ⇓P P 16 05 21.4 +0.2
baz=81
X21A Alamocita Cree 81.07 52 ⇑P P 16 05 21.8 +0.7
baz=81
Y20A Horse Springs, 81.09 53 ⇑P P 16 05 22.1 +0.9
baz=81,SNR=16
V23A Ortiz Mt. (NFS 81.10 50 ⇓P P 16 05 22.6 +1.3
baz=81
T25A Trinidad 81.12 48 ⇓P P 16 05 21.6 +0.2
baz=81,SNR=10
U24A Moreno Valley 81.15 49 ⇑P P 16 05 22.3 +0.7
baz=81
W22A Albuquerque 81.18 51 ⇓P P 16 05 22.3 +0.6
baz=81
SCHQ Schefferville 81.21 16 P P 16 05 20.9 -0.6
SCHQ LR LR 16 44 11.8
SCHQ Schefferville 81.21 16 P P 16 05 20.9 -0.6
comp=Z,8.1nm,0.7s,mb4.8,baz=1.0,slow=7.3,SNR=7.5
SCHQ LR LR 16 44 11.8
comp=Z,254nm,20.3s,MS4.6,baz=324,slow=38
STU Stuttgart 81.29 331 *e*P P 16 05 22.1 +0.1
comp=Z,27nm,1.1s,mb5.1
STU Stuttgart 81.29 331 *e*P P 16 05 21.8 -0.2
comp=Z,26nm,0.9s,mb5.2
STU *es*P sP 16 05 39.1 -6.1
STU Stuttgart 81.29 331 *e*P P 16 05 21.8 -0.2
STU *e**SP sP 16 05 39.1 -6.1
STU pmax pmax
comp=Z,26nm,0.9s,mb5.2
119A Ashpeak Ranch, 81.32 54 ⇓P P 16 05 23.0 +0.5
baz=81
VAY Valandovo 81.33 318 *e*P P 16 05 22.3 -0.1
SKO Skopje 81.40 320 *e*P P 16 05 24.0 +1.3
218A Dragoon 81.41 55 ⇓P P 16 05 23.5 +0.5
baz=81
Y21A Point of Rocks 81.44 52 ⇑P P 16 05 23.9 +0.8
baz=81
VISS Visnje 81.45 326 *i*P P 16 05 22.4 -0.5
LAZ Ladron 81.48 51 P P 16 05 24.1 +0.8
comp=Z,14nm,1.5s,mb4.7
ANMO Albuquerque 81.50 51⇑*e*P P 16 05 23.8 +0.4
comp=Z,37nm,1.1s,mb5.2
ANMO *es*P sP 16 05 41.5 -5.2
ANMO LR LR
comp=Z,332nm,21.0s,MS4.7
ANMO Albuquerque 81.50 51 P P 16 05 23.4 -0.1
comp=Z,7.3nm,1.1s,mb4.5,baz=316,slow=7.8,SNR=17
ANMO Albuquerque 81.50 51⇑*e*P P 16 05 23.8 +0.4
ANMO *e**SP sP 16 05 41.5 -5.1
ANMO pmax pmax
comp=Z,37nm,1.1s
ANMO MLR MLR
comp=Z,332nm,21.0s
Z20A Nine Sixteen R 81.51 53 ⇑P P 16 05 24.2 +0.7
baz=81
BOJS Bojanci 81.52 325 *i*P P 16 05 23.0 -0.3
W23A Warner Place, 81.53 50 ⇓P P 16 05 23.7 +0.1
baz=81
LANF Langenberg 81.62 332 *e*P P 16 05 23.3 -0.5
WLF Walferdange 81.62 333 *e*P P 16 05 23.7 -0.1
comp=Z,100nm,2.0s,mb5.4
WLF Walferdange 81.62 333 PFAKE 16 05 40.0 +16
WLF LR LR
comp=Z,1µm,21.0s,MS5.3
V24A Rampart Ranch, 81.64 49 ⇓P P 16 05 25.0 +0.8
baz=81
U25A Circle Dot Ran 81.65 48 ⇓P P 16 05 24.2 0.0
baz=81,SNR=6.8
GIVF Givet 81.70 334⇑*i*P P 16 05 23.8 -0.4
JAVS Javornik 81.71 326 *i*P P 16 05 23.7 -0.6
COWI Conover 81.81 33 *e*P P 16 05 23.2 -1.6
comp=Z,10nm,0.9s,mb4.8
COWI LR LR
comp=Z,434nm,22.0s,MS4.8
Y22D IRIS PASSCAL I 81.84 52 ⇓P P 16 05 26.1 +0.9
baz=82
219A White Tail Can 81.88 54 ⇑P P 16 05 25.7 +0.3
baz=82
120A U Bar Ranch, L 81.88 54 ⇓P P 16 05 25.8 +0.3
baz=82
Y22A Socorro 81.91 52 ⇓P P 16 05 25.9 +0.3
baz=82
X23A Hourglass Bar 81.92 51 ⇑P P 16 05 26.4 +0.8
baz=82
W24A Lazy 6 Ranch, 81.93 50 ⇓P P 16 05 26.8 +1.1
baz=82,SNR=21
Z21A St. Cloud Mine 81.93 53 ⇓P P 16 05 26.4 +0.7
baz=82
V25A Rancho No Teng 81.94 49 ⇓P P 16 05 26.3 +0.6
baz=82,SNR=9.9
BAIF Baives 81.94 334⇑*i*P P 16 05 25.0 -0.4
comp=Z,68nm,1.5s,mb5.1
BAIF Baives 81.94 334⇑*i*P P 16 05 25.0 -0.4
comp=Z,34nm,1.5s,mb5.0
BAIF Baives 81.94 334⇑*i*P P 16 05 25.0 -0.4
BAIF pmax pmax
comp=Z,34nm,1.5s,mb5.1
KRUS Krusevo 81.95 319 *e*P P 16 05 25.5 -0.2
BNM Barren Site 81.96 51 *e*P P 16 05 25.9 +0.1
comp=Z,33nm,1.0s,mb5.2
BFO Black Forest 81.97 331 *e*P P 16 05 25.5 -0.1
comp=Z,53nm,1.6s,mb5.2
BFO LR LR
comp=Z,528nm,20.0s,MS4.9
BFO Black Forest 81.97 331 *e*P P 16 05 25.5 -0.1
BFO pmax pmax
comp=Z,53nm,1.6s,mb5.2
BFO MLR MLR
comp=Z,528nm,20.0s,MS4.9
TRI Trieste 81.98 326 PFAKE 16 05 40.0 +14
TRI LR LR
comp=Z,1µm,20.0s,MS5.2
SPAK Spaichingen-Ko 81.99 331 *e*P P 16 05 25.9 +0.1
U26A Atchley Ranch, 82.03 48 ⇑P P 16 05 26.1 -0.1
baz=82,SNR=6.5
CDF Champ du Feu 82.29 332⇑*i*P P 16 05 27.1 -0.2
comp=Z,53nm,1.2s,mb5.0
CDF Champ du Feu 82.29 332⇑*i*P P 16 05 27.1 -0.2
comp=Z,27nm,1.2s,mb5.0
CDF Champ du Feu 82.29 332⇑*i*P P 16 05 27.1 -0.2
CDF pmax pmax
comp=Z,27nm,1.2s,mb5.0
319A Douglas 82.29 55 ⇑P P 16 05 27.6 0.0
baz=82
X24A Lazy VL Ranch, 82.37 50 ⇓P P 16 05 28.7 +0.7
baz=82,SNR=5.4
220A Playas Peak, P 82.39 54 ⇑P P 16 05 28.6 +0.5
baz=82
Z22A Elephant Butte 82.39 52 ⇓P P 16 05 28.5 +0.4
baz=82,SNR=12
121A Cookes Peak, D 82.40 53 ⇓P P 16 05 28.9 +0.7
baz=82
V26A Tequesquite Ra 82.44 48 ⇑P P 16 05 28.0 -0.3
baz=82
CBKS Cedar Bluff 82.44 44 P P 16 05 26.2 -2.1
comp=Z,77nm,1.2s,mb5.5
CBKS LR LR
comp=Z,370nm,22.0s,MS4.7
CBKS Cedar Bluff 82.44 44 P P 16 05 26.2 -2.1
CBKS pmax pmax
comp=Z,77nm,1.2s,mb5.5
CBKS MLR MLR
comp=Z,370nm,22.0s,MS4.7
W25A X Bar L Ranch, 82.47 49 ⇓P P 16 05 29.0 +0.5
baz=82,SNR=17
FELD Feldberg im Sc 82.47 331 *e*P P 16 05 28.1 -0.2
ECH Echery 82.49 332 *e*P P 16 05 27.8 -0.6
TIR Tirane 82.64 320 PFAKE 16 05 40.0 +11
TIR LR LR
comp=Z,776nm,19.0s,MS5.1
DAVOX Davos/Dischmat 82.68 329 LR LR 16 44 17.0
comp=Z,546nm,21.3s,MS4.9,baz=84,slow=37
221A Mesquite Ranch 82.77 54 ⇑P P 16 05 30.6 +0.5
baz=82
320A Kipp Ranch, An 82.78 54 ⇑P P 16 05 30.7 +0.5
baz=82
MOF Molkenrain 82.81 331 *e*P P 16 05 29.8 -0.2
Y24A Capitan 82.82 51 ⇓P P 16 05 30.6 +0.3
baz=83,SNR=9.2
Z23A Rita Site, Whi 82.82 52 ⇑P P 16 05 30.4 +0.1
baz=83
X25A Clemmons Ranch 82.84 50 ⇑P P 16 05 30.8 +0.4
baz=83
THEF They Montfort 82.90 332 *e*P P 16 05 29.8 -0.7

HINF Hinteralfeld 82.94 331⇑*i*P P 16 05 30.1 -0.6
comp=Z,18nm,0.9s,mb4.8
HINF Hinteralfeld 82.94 331⇑*i*P P 16 05 30.1 -0.6
comp=Z,8.8nm,0.9s,mb4.8
HINF Hinteralfeld 82.94 331⇑*i*P P 16 05 30.1 -0.6
HINF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
W26A Owens Ranch, T 82.95 49⇑P P 16 05 31.7 +0.7
baz=83
HAU Haudompre 82.96 332⇑*i*P P 16 05 30.3 -0.5
comp=Z,25nm,0.8s,mb5.0
HAU *e*MLR MLR
comp=Z,960nm,22.8s,MS4.8
HAU Haudompre 82.96 332⇑*i*P P 16 05 30.3 -0.5
comp=Z,12nm,0.8s,mb5.0
HAU LR LR
comp=Z,960nm,22.8s,MS5.1
HAU Haudompre 82.96 332⇑*i*P P 16 05 30.3 -0.5
HAU pmax pmax
comp=Z,12nm,0.8s,mb5.0
HAU MLR MLR
comp=Z,960nm,22.8s,MS5.1
MEZF Maizieres J'vi 82.99 333⇑*i*P P 16 05 30.9 -0.1
comp=Z,154nm,1.6s,mb5.5
MEZF Maizieres J'vi 82.99 333⇑*i*P P 16 05 30.9 -0.1
comp=Z,154nm,1.6s,mb5.8
BBS Basel-Blauen 83.00 331 *e*P P 16 05 30.9 -0.1
222A Williams Famil 83.11 53⇓P P 16 05 31.9 0.0
baz=83
123A Bell Site, Whi 83.25 52⇑P P 16 05 32.6 +0.1
baz=83
Y25A Mesa, Roswell 83.26 50⇓P P 16 05 32.5 0.0
baz=83,SNR=7.8
Z24A Sheeppen Canyo 83.28 51⇓P P 16 05 33.0 +0.3
baz=83
X26A CR and CF Fran 83.32 49⇑P P 16 05 33.1 +0.2
baz=83,SNR=7.3
SCIA State Center 83.33 38 *e*P P 16 05 31.9 -1.0
comp=Z,26nm,0.4s,mb5.6
SCIA LR LR
comp=Z,420nm,21.0s,MS4.8
223A Chaparral, Ant 83.59 53⇓P P 16 05 34.5 +0.2
baz=83
X27A F and S Farms, 83.65 49⇑P P 16 05 34.7 +0.1
baz=83
124A Stringfield Ra 83.68 52⇑P P 16 05 34.9 +0.1
baz=83,SNR=8.6
Z25A Roswell 83.70 51⇑P P 16 05 35.2 +0.3
baz=83,SNR=8.5
Y26A Elida 83.76 50⇓P P 16 05 35.3 +0.1
baz=84,SNR=5.1
KSU1 Kansas State U 83.84 42 *e*P P 16 05 33.6 -1.9
comp=Z,22nm,0.8s,mb5.3
KSU1 LR LR
comp=Z,519nm,21.0s,MS4.9
JFWS Jewell Farm 83.89 36 PFAKE 16 05 50.0 +14
JFWS LR LR
comp=Z,763nm,22.0s,MS5.0
224A Cornudas Mount 84.08 52⇓P P 16 05 37.0 +0.2
baz=84,SNR=10
Z26A Caprock 84.14 50⇓P P 16 05 37.2 +0.1
baz=84,SNR=24
Y27A Causey 84.17 49⇑P P 16 05 36.9 -0.4
baz=84,SNR=12
125A Gardner Draw, 84.18 51⇑P P 16 05 37.6 +0.3
baz=84,SNR=14
CABF La Chapelle 84.24 331⇑*i*P P 16 05 37.4 0.0
comp=Z,188nm,1.9s,mb5.6
CABF La Chapelle 84.24 331⇑*i*P P 16 05 37.4 0.0
comp=Z,94nm,1.9s,mb5.6
CABF La Chapelle 84.24 331⇑*i*P P 16 05 37.4 0.0
CABF pmax pmax
comp=Z,94nm,1.9s,mb5.6
AMTX Amarillo 84.28 48 *e*P P 16 05 37.2 -0.6
comp=Z,17nm,1.2s,mb5.0
AMTX *es*P sP 16 05 53.6 -7.5
AMTX LR LR
comp=Z,359nm,19.0s,MS4.8
MSTX Muleshoe 84.33 49⇓P P 16 05 37.6 -0.5
baz=84
MNTX Cornudas Mount 84.43 52 *e*P P 16 05 38.1 -0.5
comp=Z,24nm,1.2s,mb5.2
MNTX *es*P sP 16 05 55.1 -6.8
MNTX LR LR
comp=Z,230nm,21.0s,MS4.5
LOR Lormes 84.47 333⇑*i*P P 16 05 38.1 -0.4
comp=Z,56nm,1.1s,mb5.3,baz=23
LOR *e*MLR MLR
comp=Z,1μm,21.5s,MS5.0
LOR Lormes 84.47 333⇑*i*P P 16 05 38.1 -0.4
comp=Z,28nm,1.1s,mb5.3
LOR LR LR
comp=Z,1μm,21.5s,MS5.3
LOR Lormes 84.47 333⇑*i*P P 16 05 38.1 -0.4
LOR pmax pmax
comp=Z,28nm,1.1s,mb5.3
LOR MLR MLR
comp=Z,1μm,21.5s,MS5.3
225A Deer Hill, Car 84.47 52⇓P P 16 05 39.0 +0.2
baz=84
Z27A Tatum 84.55 50⇓P P 16 05 39.0 -0.2
baz=84,SNR=35
324A Moseley Ranch, 84.56 53⇓P P 16 05 39.0 -0.3
baz=84,SNR=6.8
126A Clayton Basin, 84.56 51⇓P P 16 05 39.1 -0.2
baz=84
FLN La Foliniere 84.56 336⇑*i*P P 16 05 38.2 -0.8
comp=Z,56nm,1.2s,mb5.2
FLN *e*MLR MLR
comp=Z,1μm,22.0s,MS4.9
FLN La Foliniere 84.56 336⇑*i*P P 16 05 38.2 -0.8
comp=Z,28nm,1.2s,mb5.3
FLN LR LR
comp=Z,1μm,22.0s,MS5.2
FLN La Foliniere 84.56 336⇑*i*P P 16 05 38.2 -0.8
FLN pmax pmax
comp=Z,28nm,1.2s,mb5.3
FLN MLR MLR
comp=Z,1μm,22.0s,MS5.2
LDF La Druitiere 84.60 336⇑*i*P P 16 05 38.4 -0.8
comp=Z,9.6nm,0.5s,mb4.8
LDF La Druitiere 84.60 336⇑*i*P P 16 05 38.4 -0.8
comp=Z,4.8nm,0.5s,mb4.9
LDF La Druitiere 84.60 336⇑*i*P P 16 05 38.4 -0.8
LDF pmax pmax
comp=Z,5.0nm,0.5s,mb4.9
GDL2 Guadalupe Moun 84.68 51 *e*P P 16 05 39.7 -0.2
comp=Z,42nm,1.1s,mb5.5
SSF Saint Saulge 84.77 333⇑*i*P P 16 05 39.6 -0.4
comp=Z,22nm,0.9s,mb5.0
SSF Saint Saulge 84.77 333⇑*i*P P 16 05 39.6 -0.4
comp=Z,11nm,0.9s,mb5.0
SSF Saint Saulge 84.77 333⇑*i*P P 16 05 39.6 -0.4
SSF pmax pmax
comp=Z,11nm,0.9s,mb5.0
AQU L'Aquila 84.84 325 *e*P P 16 05 40.2 -0.2
comp=Z,38nm,1.0s,mb5.5
AQU LR LR
comp=Z,2μm,20.0s,MS5.4
AQU L'Aquila 84.84 325 *e*P P 16 05 40.2 -0.3
AQU pmax pmax
comp=Z,38nm,1.0s,mb5.5
AQU MLR MLR
comp=Z,2μm,20.0s,MS5.4
325A Bean Ranch, Si 84.91 52⇑P P 16 05 41.4 +0.3
baz=85
CLNB Carlsbad 84.92 51 *e*P P 16 05 40.5 -0.6
comp=Z,1.0nm,0.2s,mb4.6
127A Arkansas Junct 84.93 50⇑P P 16 05 40.4 -0.7
baz=85
LPL La Plagne 84.93 330⇑*i*P P 16 05 41.2 +0.3
comp=Z,52nm,0.9s,mb5.4
LPL La Plagne 84.93 330⇑*i*P P 16 05 41.2 +0.3
comp=Z,26nm,0.9s,mb5.4
LPL La Plagne 84.93 330⇑*i*P P 16 05 41.2 +0.3
LPL pmax pmax
comp=Z,26nm,0.9s,mb5.4
226A Malaga, Loving 84.94 51⇓P P 16 05 41.2 0.0
baz=85,SNR=6.4
LPG La Plagne 84.94 330⇑*i*P P 16 05 41.3 +0.4
comp=Z,65nm,0.9s,mb5.5
LPG La Plagne 84.94 330⇑*i*P P 16 05 41.3 +0.4
comp=Z,32nm,0.9s,mb5.5
LPG La Plagne 84.94 330⇑*i*P P 16 05 41.3 +0.4
LPG pmax pmax
comp=Z,32nm,0.9s,mb5.5
SMF Signal de Mont 85.01 333⇑*i*P P 16 05 41.0 -0.2
comp=Z,189nm,1.6s,mb5.7

SMF Signal de Mont 85.01 333⇑*i*P P 16 05 41.0 -0.2
comp=Z,95nm,1.6s,mb5.7
SMF Signal de Mont 85.01 333⇑*i*P P 16 05 41.0 -0.2
SMF pmax pmax
comp=Z,95nm,1.6s,mb5.7
GRR Gorron 85.01 336⇑*i*P P 16 05 41.0 -0.2
comp=Z,110nm,1.4s,mb5.5
GRR Gorron 85.01 336⇑*i*P P 16 05 41.0 -0.2
comp=Z,55nm,1.4s,mb5.5
GRR Gorron 85.01 336⇑*i*P P 16 05 41.0 -0.2
GRR pmax pmax
comp=Z,55nm,1.4s,mb5.5
AVF Avril sur Loir 85.05 333⇑*i*P P 16 05 41.3 -0.2
comp=Z,220nm,1.6s,mb5.8
AVF Avril sur Loir 85.05 333⇑*i*P P 16 05 41.3 -0.2
comp=Z,110nm,1.6s,mb5.7
AVF Avril sur Loir 85.05 333⇑*i*P P 16 05 41.3 -0.2
AVF pmax pmax
comp=Z,110nm,1.6s,mb5.7
425A Indio Mountain 85.32 53⇓P P 16 05 43.0 -0.1
baz=85,SNR=12
BGF Bois d'Agland 85.43 333⇑*i*P P 16 05 43.3 0.0
comp=Z,141nm,1.8s,mb5.5
BGF Bois d'Agland 85.43 333⇑*i*P P 16 05 43.3 0.0
comp=Z,70nm,1.8s,mb5.5
BGF Bois d'Agland 85.43 333⇑*i*P P 16 05 43.3 0.0
BGF pmax pmax
comp=Z,70nm,1.8s,mb5.5
227A Bennet, Jal 85.44 51⇓P P 16 05 43.5 -0.2
baz=85
326A Caldwell Ranch 85.54 52⇓P P 16 05 44.1 -0.2
baz=85,SNR=7.0
MBDF Montbardon 85.59 330⇑*i*P P 16 05 43.7 -0.5
comp=Z,63nm,0.9s,mb5.6
MBDF Montbardon 85.59 330⇑*i*P P 16 05 43.7 -0.5
comp=Z,32nm,0.9s,mb5.5
MBDF Montbardon 85.59 330⇑*i*P P 16 05 43.7 -0.5
MBDF pmax pmax
comp=Z,32nm,0.9s,mb5.5
CUC Castrocucco 85.63 322 PFAKE 16 06 00.0 +16
CUC LR LR
comp=Z,442nm,19.0s,MS4.9
SGMF Saint Gilles 85.64 337⇑*i*P P 16 05 44.4 +0.1
comp=Z,120nm,1.3s,mb5.7
SGMF Saint Gilles 85.64 337⇑*i*P P 16 05 44.4 +0.1
comp=Z,60nm,1.3s,mb5.7
SGMF Saint Gilles 85.64 337⇑*i*P P 16 05 44.4 +0.1
SGMF pmax pmax
comp=Z,60nm,1.3s,mb5.7
PLDF La Plantade 85.67 332 *e*P P 16 05 45.7 +1.1
ORIF Oris-en-Rattie 85.76 330⇑*i*P P 16 05 45.1 +0.1
comp=Z,47nm,1.0s,mb5.4
ORIF *e*MLR MLR
comp=Z,699nm,22.0s,MS4.7
ORIF Oris-en-Rattie 85.76 330⇑*i*P P 16 05 45.1 +0.1
comp=Z,24nm,1.0s,mb5.4
ORIF Oris-en-Rattie 85.76 330⇑*i*P P 16 05 45.1 +0.1
ORIF pmax pmax
comp=Z,24nm,1.0s,mb5.4
AGO Saint Agoulin 85.77 333 *e*P P 16 05 45.9 +0.9
ROSF Rostrenen 85.77 338⇑*i*P P 16 05 45.1 +0.1
comp=Z,250nm,1.6s,mb5.9
ROSF Rostrenen 85.77 338⇑*i*P P 16 05 45.1 +0.1
comp=Z,125nm,1.6s,mb5.9
ROSF Rostrenen 85.77 338⇑*i*P P 16 05 45.1 +0.1
ROSF pmax pmax
comp=Z,125nm,1.6s,mb5.9
327A Balmorhea Ranc 85.79 51⇑P P 16 05 45.4 -0.1
baz=86
TIP Timpagrande 85.82 321 *e*P P 16 05 45.0 -0.5
comp=Z,37nm,1.1s,mb5.5
TIP *ep*P pP 16 05 57.1 -5.1
TIP *es*P sP 16 06 02.0 -6.7
TIP LR LR
comp=Z,633nm,19.0s,MS5.0
TCF Toulx Ste Croi 85.88 333⇑*i*P P 16 05 45.7 +0.1
comp=Z,115nm,1.5s,mb5.6
TCF Toulx Ste Croi 85.88 333⇑*i*P P 16 05 45.7 +0.1
comp=Z,58nm,1.5s,mb5.6
TCF Toulx Ste Croi 85.88 333⇑*i*P P 16 05 45.7 +0.1
TCF pmax pmax
comp=Z,58nm,1.5s,mb5.6
SSB Saint Sauveur 85.94 331 *e*P P 16 05 45.9 0.0
426A McDonald Obser 85.98 52⇓P P 16 05 46.0 -0.4
baz=86,SNR=7.8
WMOK Wichita Mounta 85.99 46 *e*P P 16 05 45.6 -0.7
comp=Z,29nm,1.1s,mb5.4
WMOK *es*P sP 16 06 01.9 -7.8
WMOK LR LR
comp=Z,239nm,21.0s,MS4.6
WMOK Wichita Mounta 85.99 46 *e*P P 16 05 45.6 -0.8
WMOK *e**SP sP 16 06 01.9 -7.8
WMOK pmax pmax
comp=Z,29nm,1.1s,mb5.4
WMOK MLR MLR
comp=Z,239nm,21.0s,MS4.6
PPT Papeete 86.00 117 *e*S S 16 16 14.0 -1.8
comp=Z,429nm,27.0s
PPT *e*SS SS 16 21 56.2 +0.8
comp=Z,119nm,26.8s
PPT *e*LR LR 16 32 58.6
comp=Z,2μm,23.0s,baz=318
PPT Papeete 86.00 117 LR LR 16 37 02.1
comp=Z,1μm,19.6s,MS5.2,baz=298,slow=31
PYM Petit Puy Mans 86.07 333 *e*P P 16 05 47.8 +1.2
QUIF Quistinic 86.12 337⇑*i*P P 16 05 46.1 -0.6
comp=Z,155nm,1.4s,mb5.8
QUIF Quistinic 86.12 337⇑*i*P P 16 05 46.1 -0.6
comp=Z,78nm,1.4s,mb5.7
QUIF Quistinic 86.12 337⇑*i*P P 16 05 46.1 -0.6
QUIF pmax pmax
comp=Z,78nm,1.4s,mb5.8
328A Wristen Ranch, 86.19 51⇑P P 16 05 46.6 -0.8
baz=86
HDIL Hopedale 86.20 37 P P 16 05 45.8 -1.5
HDIL LR LR
comp=Z,879nm,22.0s,MS5.1
427A Hayter Ranch, 86.22 52⇓P P 16 05 47.2 -0.4
baz=86,SNR=5.2
VIVF Saint-Julien-l 86.25 331⇑*i*P P 16 05 47.5 0.0
comp=Z,151nm,1.6s,mb5.7
VIVF Saint-Julien-l 86.25 331⇑*i*P P 16 05 47.5 0.0
comp=Z,76nm,1.6s,mb5.7
VIVF Saint-Julien-l 86.25 331⇑*i*P P 16 05 47.5 0.0
VIVF pmax pmax
comp=Z,76nm,1.6s,mb5.7
MFF Saint Martin d 86.38 335⇑*i*P P 16 05 48.2 +0.2
comp=Z,57nm,0.9s,mb5.5
MFF Saint Martin d 86.38 335⇑*i*P P 16 05 48.2 +0.2
comp=Z,28nm,0.9s,mb5.5
MFF Saint Martin d 86.38 335⇑*i*P P 16 05 48.2 +0.2
MFF pmax pmax
comp=Z,29nm,0.9s,mb5.5
FRF La Foret Royal 86.62 329⇑*i*P P 16 05 48.5 -0.8
comp=Z,94nm,1.4s,mb5.5
FRF La Foret Royal 86.62 329⇑*i*P P 16 05 48.5 -0.8
comp=Z,47nm,1.4s,mb5.5
FRF La Foret Royal 86.62 329⇑*i*P P 16 05 48.5 -0.8
FRF pmax pmax
comp=Z,47nm,1.4s,mb5.5
TAOE Nuku Hiva Isla 86.64 105 *e*S S 16 16 27.7 +5.4
comp=Z,158nm,25.3s
TAOE *e*LR LR 16 33 23.9
comp=Z,1μm,21.8s,baz=319
SMRF Simiane la Rot 86.68 330⇑*i*P P 16 05 49.6 +0.1
comp=Z,105nm,1.6s,mb5.5
SMRF Simiane la Rot 86.68 330⇑*i*P P 16 05 49.6 +0.1
comp=Z,105nm,1.6s,mb5.8
626A Big Bend Ranch 86.72 53⇑P P 16 05 49.5 -0.6
baz=86,SNR=7.4
428A Kincaid Ranch, 86.73 51⇑P P 16 05 50.3 +0.3
baz=86,SNR=8.6
LMR La Mourre 86.87 329⇑*i*P P 16 05 49.9 -0.6
comp=Z,172nm,1.6s,mb5.7
LMR La Mourre 86.87 329⇑*i*P P 16 05 49.9 -0.6
comp=Z,86nm,1.6s,mb5.7
LMR La Mourre 86.87 329⇑*i*P P 16 05 49.9 -0.6
LMR pmax pmax
comp=Z,86nm,1.6s,mb5.7
CEL Celeste 86.96 321 *e*P P 16 05 49.5 -1.6
comp=Z,22nm,1.1s,mb5.3
CEL LR LR
comp=Z,613nm,22.0s,MS5.0
RJF Les Rejaudoux 86.97 333⇑*i*P P 16 05 51.2 +0.2
comp=Z,227nm,1.7s,mb5.8
RJF *e*MLR MLR
comp=Z,2μm,22.5s,MS5.0

RJF Les Rejaudoux 86.97 333⇑*i*P P 16 05 51.2 +0.2
comp=Z,113nm,1.7s,mb5.8
RJF LR LR
comp=Z,2μm,22.5s,MS5.3
RJF Les Rejaudoux 86.97 333⇑*i*P P 16 05 51.2 +0.2
RJF pmax pmax
comp=Z,113nm,1.7s,mb5.8
RJF MLR MLR
comp=Z,2μm,22.5s,MS5.3
528A Cox Ranch, San 87.08 52⇑P P 16 05 51.6 -0.2
baz=87,SNR=8.0
CAF Calviac 87.12 333⇑*i*P P 16 05 52.3 +0.6
comp=Z,206nm,1.6s,mb5.8
CAF Calviac 87.12 333⇑*i*P P 16 05 52.3 +0.6
comp=Z,103nm,1.6s,mb5.8
CAF Calviac 87.12 333⇑*i*P P 16 05 52.3 +0.6
CAF pmax pmax
comp=Z,103nm,1.6s,mb5.8
TXAR Lajitas Array 87.16 53 P P **16 05 51.9 -0.2**
TXAR Lajitas Array 87.16 53 P P **16 05 51.9 -0.2**
comp=Z,5.6nm,1.0s,mb4.7,baz=289,slow=3.4,SNR=36
TXAR Lajitas Array 87.16 53 P P **16 05 51.9 -0.3**
TXAR pmax pmax
comp=Z,6.0nm,1.0s
AAM Ann Arbor 87.17 32 PFAKE 16 06 00.0 +8.0
AAM LR LR
comp=Z,334nm,22.0s,MS4.7
LASF Ste Croix 87.22 331⇑*i*P P 16 05 52.5 +0.3
comp=Z,128nm,1.6s,mb5.6
627A Terlingua Ranc 87.24 53⇑P P 16 05 52.2 -0.4
baz=87,SNR=7.2
LFF La Frestale 87.56 334⇑*i*P P 16 05 54.4 +0.6
comp=Z,386nm,1.7s,mb6.0
LFF La Frestale 87.56 334⇑*i*P P 16 05 54.4 +0.6
comp=Z,193nm,1.7s,mb6.1
LFF La Frestale 87.56 334⇑*i*P P 16 05 54.4 +0.6
LFF pmax pmax
comp=Z,193nm,1.7s,mb6.1
FVM French Village 87.74 39 *e*P P 16 05 53.5 -1.3
comp=Z,28nm,1.2s,mb5.4
FVM French Village 87.74 39 *e*P P 16 05 53.5 -1.3
FVM pmax pmax
comp=Z,28nm,1.2s,mb5.4
MTLF Montolieu 88.45 332⇑*i*P P 16 05 58.5 +0.4
comp=Z,28nm,1.2s,mb5.1
MTLF Montolieu 88.45 332⇑*i*P P 16 05 58.5 +0.4
comp=Z,14nm,1.2s,mb5.1
MTLF Montolieu 88.45 332⇑*i*P P 16 05 58.5 +0.4
MTLF pmax pmax
comp=Z,14nm,1.2s,mb5.1
LONY Lake Ozonia 88.45 25 PFAKE 16 06 10.0 +12
LONY LR LR
comp=Z,334nm,20.0s,MS4.8
SIUC Southern Illin 88.53 38 *e*P P 16 05 57.9 -0.6
comp=Z,40nm,0.7s,mb5.9
JCT Junction City 88.59 50 *e*P P 16 05 58.0 -1.0
comp=Z,54nm,1.5s,mb5.7
JCT *es*P sP 16 06 15.3 -7.0
JCT LR LR
comp=Z,429nm,22.0s,MS4.8
JCT Junction City 88.59 50 *e*P P 16 05 58.0 -1.0
JCT *e**SP sP 16 06 15.3 -7.0
JCT pmax pmax
comp=Z,54nm,1.5s,mb5.7
JCT MLR MLR
comp=Z,429nm,22.0s,MS4.8
ERPA Erie 88.76 30 PFAKE 16 06 10.0 +10
ERPA LR LR
comp=Z,286nm,20.0s,MS4.7
MIAR Mount Ida 88.90 43 *e*P P 16 05 59.8 -0.5
comp=Z,30nm,1.1s,mb5.5
MIAR LR LR
comp=Z,324nm,21.0s,MS4.7
MIAR Mount Ida 88.90 43 *e*P P 16 05 59.8 -0.5
MIAR pmax pmax
comp=Z,30nm,1.1s,mb5.5
MIAR MLR MLR
comp=Z,324nm,21.0s,MS4.7
VSL Villasalto 88.92 325 PFAKE 16 06 10.0 +10
VSL LR LR
comp=Z,776nm,21.0s,MS5.1
NCB Newcomb 89.15 25 PFAKE 16 06 10.0 +8.7
NCB LR LR
comp=Z,377nm,21.0s,MS4.8
ACSO Alum Creek Sta 89.19 33 *e*P P 16 06 00.7 -0.9
comp=Z,34nm,0.8s,mb5.7
ACSO LR LR
comp=Z,96nm,20.0s,MS4.2
ATD Arta Tunnel 89.39 285 LR LR 16 49 18.7
comp=Z,300nm,21.9s,MS4.7,baz=31,slow=38
WCI Wyandotte Cave 89.44 36 PFAKE 16 06 10.0 +7.2
WCI LR LR
comp=Z,566nm,22.0s,MS5.0
PKME Peaks-Kenny Pk 89.46 22 PFAKE 16 06 10.0 +7.2
PKME LR LR
comp=Z,370nm,19.0s,MS4.8
WDD Wield Dalam 89.53 320 PFAKE 16 06 10.0 +6.7
WDD LR LR
comp=Z,438nm,21.0s,MS4.9
HBAR Harrisburg 89.57 41 *e*P P 16 06 03.1 -0.3
LBNH Lisbon 89.63 24 PFAKE 16 06 10.0 +6.4
LBNH LR LR
comp=Z,538nm,22.0s,MS4.9
ETSF Etsaut 89.80 334⇑*i*P P 16 06 05.0 +0.6
comp=Z,34nm,0.9s,mb5.4
ETSF Etsaut 89.80 334⇑*i*P P 16 06 05.0 +0.6
comp=Z,17nm,0.9s,mb5.4
ETSF Etsaut 89.80 334⇑*i*P P 16 06 05.0 +0.6
ETSF pmax pmax
comp=Z,17nm,0.9s,mb5.4
BINY Binghamton 90.13 27 PFAKE 16 06 20.0 +14
BINY LR LR
comp=Z,345nm,20.0s,MS4.8
WVT Waverly 90.46 38 P P **16 06 05.3 -2.4**
comp=Z,9.0nm,0.9s,mb5.1
WVT *e* pP 16 06 22.4 -2.1
WVT LR LR
comp=Z,359nm,21.0s,MS4.8
WVT Waverly 90.46 38 P P **16 06 05.3 -2.3**
WVT *e* pP 16 06 22.4 -2.1
WVT pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
WVT MLR MLR
comp=Z,359nm,21.0s,MS4.8
NATX Nacogdoches 90.49 45 PFAKE 16 06 20.0 +12
NATX LR LR
comp=Z,557nm,22.0s,MS5.0
MSEY Mahe Island 90.54 264 PFAKE 16 06 20.0 +12
MSEY LR LR
comp=Z,371nm,20.0s,MS4.8
MCWV Mont Chateau 90.93 31 PFAKE 16 06 20.0 +10
MCWV LR LR
comp=Z,610nm,21.0s,MS5.0
HKT Hockley 91.24 47 PFAKE 16 06 20.0 +8.7
HKT LR LR
comp=Z,374nm,21.0s,MS4.8
KVTX Kingsville 91.89 50 PFAKE 16 06 30.0 +16
KVTX LR LR
comp=Z,354nm,20.0s,MS4.8
KEST Kesra 92.06 323 P P **16 06 14.2 -0.9**
comp=Z,1.6nm,1.0s,mb4.3,baz=18,slow=2.2,SNR=4.2
KEST LR LR 16 52 14.1
comp=Z,396nm,20.2s,MS4.8,baz=354,slow=38
SWET Sewanee 92.09 38 P P **16 06 10.8 -4.4**
VBMS Vicksburg 92.30 42 PFAKE 16 06 30.0 +14
VBMS LR LR
comp=Z,274nm,21.0s,MS4.7
BLA Blacksburg 92.81 33 PFAKE 16 06 30.0 +12
BLA LR LR
comp=Z,446nm,21.0s,MS4.9
CBN Corbin 93.14 30 PFAKE 16 06 30.0 +10
CBN LR LR
comp=Z,439nm,21.0s,MS4.9
LRAL Lakeview Retre 93.38 40 PFAKE 16 06 30.0 +8.8
LRAL LR LR
comp=Z,290nm,21.0s,MS4.7
ESDC Sonseca Array 93.82 334 P P **16 06 22.4 -0.7**
comp=Z,0.5nm,0.4s,mb4.3,baz=1.2,slow=3.7,SNR=4.7
ESDC LR LR 16 56 54.7
comp=Z,425nm,19.0s,MS4.9,baz=35,slow=41
ESLA Sonseca Array 93.82 334 PFAKE 16 06 30.0 +6.9
ESLA LR LR
comp=Z,3μm,20.0s,MS5.8
PAB San Pablo 94.06 335 PFAKE 16 06 40.0 +16
PAB LR LR
comp=Z,681nm,20.0s,MS5.1

MTE	**Manteigas**	**94.26**	**337**	PFAKE			16 06 40.0	+15
MTE				LR	LR			
	comp=Z,389nm,22.0s,MS4.8							
GOGA	**Godfrey**	**94.72**	**37**	PFAKE			16 06 40.0	+13
GOGA				LR	LR			
	comp=Z,361nm,22.0s,MS4.8							
BRAL	**Brewton**	**95.01**	**41**	PFAKE			16 06 40.0	+11
BRAL				LR	LR			
	comp=Z,436nm,21.0s,MS4.9							
CNNC	**Cliffs of the**	**95.53**	**32**	PFAKE			16 06 40.0	+9.0
CNNC				LR	LR			
	comp=Z,412nm,22.0s,MS4.9							
EVO	**Evora**	**96.12**	**337**	*e*P		**P**	**16 06 33.3**	**-0.3**
	comp=Z,52nm,1.4s,mb5.5							
EVO				*e*MLR		MLR		
	comp=Z,514nm,20.2s,MS4.7							
NHSC	**New Hope**	**96.43**	**35**	PFAKE			16 06 50.0	+15
NHSC				LR	LR			
	comp=Z,783nm,19.0s,MS5.2							
SFS	**San Fernando**	**97.47**	**335**	PFAKE			16 06 50.0	+10
SFS				LR	LR			
	comp=Z,2µm,21.0s,MS5.5							
RKT	**Rikitea**	**99.78**	**112**	*e*LR		LR	16 39 13.4	
	comp=Z,1µm,32.8s,baz=301							
DWPF	**Disney**	**100.12**	**38**	PFAKE			16 07 00.0	+8.4
DWPF				LR	LR			
	comp=Z,435nm,21.0s,MS4.9							
KMBO	**Kilima Mbogo**	**101.94**	**279**	PFAKE			16 07 10.0	+10
KMBO				LR	LR			
	comp=Z,277nm,20.0s,MS4.8							
TEIG	**Tepich**	**103.08**	**48**	PFAKE			16 07 20.0	+15
TEIG				LR	LR			
	comp=Z,209nm,21.0s,MS4.6							
TAM	**Tamanrasset**	**104.70**	**319**	PFAKE			16 07 20.0	+8.0
TAM				LR	LR			
	comp=Z,274nm,22.0s,MS4.8							
MBAR	**Mbarara**	**106.40**	**284**	PFAKE			16 11 40.0	+9.1
MBAR				LR	LR			
	comp=Z,649nm,19.0s,MS5.2							
TGUH	**Tegucigalpa,Un**	**108.56**	**51**	PFAKE			16 11 50.0	+15
TGUH				LR	LR			
	comp=Z,317nm,22.0s,MS4.8							
CASY	**Casey**	**109.86**	**193**	PFAKE			16 11 50.0	+14
CASY				LR	LR			
	comp=Z,498nm,19.0s,MS5.1							
GTBY	**Guantanamo Bay**	**110.07**	**37**	PFAKE			16 11 50.0	+12
GTBY				LR	LR			
	comp=Z,481nm,22.0s,MS5.0							
MTDJ	**Mount Denham**	**110.38**	**40**	PFAKE			16 11 50.0	+12
MTDJ				LR	LR			
	comp=Z,250nm,21.0s,MS4.8							
GRTK	**Grand Turk**	**110.40**	**33**	PFAKE			16 11 50.0	+12
GRTK				LR	LR			
	comp=Z,459nm,22.0s,MS5.0							
SDDR	**Presa de Saban**	**112.59**	**34**	PFAKE			16 11 50.0	+7.6
SDDR				LR	LR			
	comp=Z,327nm,22.0s,MS4.9							
JTS	**JuntasAbangare**	**112.91**	**52**	PFAKE			16 11 50.0	+6.9
JTS				LR	LR			
	comp=Z,265nm,22.0s,MS4.8							
TOA0	**Torodi Ar. Sit**	**114.76**	**317**	*e*P		Pdif	16 07 53.9	-2.8
TORD	**Torodi Ar. Bea**	**114.76**	**317**	PKP		PKiKP	16 11 45.6	-1.1
	comp=Z,0.8nm,0.8s,baz=286,slow=1.0,SNR=3.5							
SJG	**San Juan**	**115.44**	**30**	PFAKE			16 12 00.0	+12
SJG				LR	LR			
	comp=Z,336nm,22.0s,MS4.9							
BCIP	**Isla Barro Col**	**116.76**	**48**	PFAKE			16 12 00.0	+9.5
BCIP				LR	LR			
	comp=Z,210nm,19.0s,MS4.8							
ANWB	**Willy Bob**	**117.39**	**26**	PFAKE			16 12 00.0	+8.4
ANWB				LR	LR			
	comp=Z,437nm,22.0s,MS5.0							
LSZ	**Lusaka**	**117.88**	**274**	PFAKE			16 12 00.0	+7.5
LSZ				LR	LR			
	comp=Z,310nm,21.0s,MS4.9							
SBA	**Scott Base**	**119.71**	**174**	PFAKE			16 12 10.0	+16
SBA				LR	LR			
	comp=Z,350nm,22.0s,MS5.0							
FDF	**Fort de France**	**120.34**	**26**	PFAKE			16 12 10.0	+13
FDF				LR	LR			
	comp=Z,289nm,20.0s,MS4.9							
SDV	**Santo Domingo**	**121.77**	**39**	PFAKE			16 12 10.0	+10
SDV				LR	LR			
	comp=Z,164nm,21.0s,MS4.7							
BBGH	**Gun Hill**	**122.35**	**25**	PFAKE			16 12 10.0	+8.8
BBGH				LR	LR			
	comp=Z,898nm,20.0s,MS5.4							
GRGR	**Grenville**	**122.58**	**28**	PFAKE			16 12 10.0	+8.3
GRGR				LR	LR			
	comp=Z,274nm,21.0s,MS4.9							
MAW	**Mawson**	**123.50**	**207**	PKP		PKPdf	16 12 01.5	-0.2
	comp=Z,2.1nm,0.8s,baz=340,slow=6.1,SNR=5.1							
MAW	**Mawson**	**123.50**	**207**	PKIKP		PKPdf	16 12 01.5	-0.2
MAW				pmax		pmax		
	comp=Z,2.0nm,0.8s							
DBIC	**Dimbokro**	**123.59**	**320**	PFAKE			16 12 20.0	+16
DBIC				LR	LR			
	comp=Z,386nm,20.0s,MS5.1							
LIC	**Lamto**	**124.06**	**319**	*e*PKIKP		PKPdf	16 12 01.6	-3.0
	comp=Z,65nm,1.2s							
LIC				*e*MLR		MLR		
	comp=Z,660nm,22.5s,MS4.9							
LIC	**Lamto**	**124.06**	**319**	*e*PKPdf		PKPdf	16 12 01.6	-3.0
LIC				LR	LR			
	comp=Z,330nm,22.5s,MS4.9							
OTAV	**Otavalo**	**124.78**	**52**	PFAKE			16 12 20.0	+14
OTAV				LR	LR			
	comp=Z,150nm,19.0s,MS4.7							
LBTB	**Lobatse**	**125.59**	**266**	PFAKE			16 12 20.0	+13
LBTB				LR	LR			
	comp=Z,436nm,19.0s,MS5.1							
TSUM	**Tsumeb**	**128.25**	**278**	PFAKE			16 12 20.0	+7.7
TSUM				LR	LR			
	comp=Z,297nm,19.0s,MS5.0							
QSPA	**South Pole Qui**	**130.91**	**180**	PKP		PKPdf	16 12 15.3	-0.3
QSPA	**South Pole Qui**	**130.91**	**180**	PKP		PKPdf	16 12 15.3	-0.3
	comp=Z,2.7nm,0.7s,baz=327,slow=0.9,SNR=22							
MAIT	**Maitri**	**141.34**	**204**	*e*PKPdif		PKPdf	16 12 28.8	-6.4
LPAZ	**La Paz**	**143.99**	**55**	PKP		PKPdf	16 12 39.5	-2.0
	comp=Z,3.0nm,1.0s,baz=117,slow=0.5,SNR=8.1							
LPAZ	**La Paz**	**143.99**	**55**	*e*PKIKP		PKPdf	16 12 38.8	-2.7
RCBR	**Riachuelo**	**144.76**	**357**	PFAKE			16 12 50.0	+7.0
RCBR				LR	LR			
	comp=Z,249nm,22.0s,MS4.9							
VNA3	**Neumayer Olymp**	**146.70**	**196**	*e*PKPdf		PKPdf	16 12 42.9	-1.6
VNA1	**Neumayer--Stat**	**146.84**	**198**	*e*PKPdf		PKPdf	16 12 43.9	-0.8
LCO	**Las Campanas**	**150.68**	**76**	*e*PKPbc		PKPbc	16 12 57.5	-0.3
LCO				*e*			16 13 15.2	
LCO				*e*			16 13 22.8	
PLCA	**Paso Flores**	**155.38**	**100**	PKPab		PKPab	16 13 25.4	+0.9
	comp=Z,2.5nm,0.8s,baz=225,slow=9.3,SNR=4.1							
PLCA	**Paso Flores**	**155.38**	**100**	PKP2		PKPab	16 13 25.4	+0.9
PLCA				pmax		pmax		
	comp=Z,3.0nm,0.8s							
SPB	**Sao Paulo**	**160.72**	**28**	PFAKE			16 13 20.0	+14
SPB				LR	LR			
	comp=Z,638nm,20.0s							

*ISCJB **08** 16:01:41.4±0.5,50°.31N±0°.03×18°.78E±0°.03,h0km,Error ellipse: s-maj=4.8km s-min=2.4km az=12.8*
*WAR **08** 16:01:42.7,50°.28N×18°.82E*
*IPEC **08** 16:01:42.6±0.2,50°.31N×18°.80E,h0km±1km,ML2.1/4, Error ellipse: s-maj=2.4km s-min=0.8km az=170.0*
*CSEM **08** 16:01:43.7±0.3,50°.34N×18°.67E,h2km,ML2.7/7,Error ellipse: s-maj=6.3km s-min=3.2km az=5.0*
*PRU **08** 16:01:44.5,50°.30N×18°.69E,h0km*
ISC 08 16:01:42.7±0.5,50°.29N±0°.03×18°.78E±0°.03,h0km,n37, σ1§34/65,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.61**	**222**	*e*PG		**Pg**	**16 01 54.9**	**+0.5**
OKC				*e*SG		**Sg**	**16 02 01.5**	**-0.8**
	comp=Z,34nm,0.7s							
OKC	**Ostrava-Krasne**	**0.61**	**222**	*e*Pg		**Pg**	**16 01 54.8**	**+0.4**
	baz=41							
OKC				Sg		**Sg**	**16 02 01.5**	**-0.8**
	comp=Z,34nm,0.7s							
OJC	**Ojcow**	**0.66**	**96**	*e*Pg		**Pg**	**16 01 55.3**	**-0.1**
OJC				*e*SG		**Sg**	**16 02 03.9**	**0.0**
OJC	**Ojcow**	**0.66**	**96**	*e*Pg		**Pg**	**16 01 55.1**	**-0.3**
	baz=279							
OJC				*e*Sg		**Sg**	**16 02 03.0**	**-0.9**
	baz=279							
MORC	**Moravsky Berou**	**0.95**	**238**	*e*Pg		**Pg**	**16 02 00.9**	**0.0**
	baz=56							
MORC				*e*Sg		**Sg**	**16 02 12.8**	**-0.3**
	comp=Z,34nm,0.6s,baz=56							
LIKS	**Likavka**	**1.26**	**170**	*e*SN		**Sn**	**16 02 27.1**	**+1.9**
LIKS	**Likavka**	**1.26**	**170**	*e*Sn		**Sn**	**16 02 27.1**	**+1.9**
NIE	**Niedzica**	**1.32**	**131**	*e*Pg		**Pg**	**16 02 07.7**	**-0.4**
NIE				*e*Sg		**Sg**	**16 02 25.9**	**+0.7**
NIE	**Niedzica**	**1.32**	**131**	*e*Pg		**Pg**	**16 02 07.7**	**-0.4**
NIE				*e*Sg		**Sg**	**16 02 25.9**	**+0.7**
DPC	**Dobruska-Polom**	**1.57**	**273**	*e*PG		**Pg**	**16 02 11.6**	**-1.3**
DPC				*e*SG		**Sg**	**16 02 31.6**	**-1.7**
	comp=Z,20nm,0.5s							
DPC	**Dobruska-Polom**	**1.57**	**273**	*e*Pn		**Pn**	**16 02 11.7**	**-0.2**
	baz=90							
DPC				Sg		**Sg**	**16 02 31.6**	**-1.7**
	comp=Z,20nm,0.5s							
JAVC	**Velka Javorina**	**1.60**	**207**	*e*Pn		**Pn**	**16 02 12.4**	**+0.1**
JAVC				*e*Sg		**Sg**	**16 02 36.2**	**+2.0**
	comp=Z,22nm,0.9s							
KSP	**Ksiaz**	**1.68**	**290**	*e*Pg		**Pg**	**16 02 15.0**	**+0.1**
KSP				*e*Sg		**Sg**	**16 02 37.8**	**+1.2**
KSP	**Ksiaz**	**1.68**	**290**	*e*Pg		**Pg**	**16 02 15.0**	**+0.1**
KSP				*e*Sg		**Sg**	**16 02 38.2**	**+1.6**
KSP	**Ksiaz**	**1.68**	**290**	*e*Pg		**Pg**	**16 02 15.0**	**+0.1**
KSP				*e*Sg		**Sg**	**16 02 38.2**	**+1.6**
VRAC	**Vranov**	**1.72**	**236**	*e*Pn		**Pn**	**16 02 14.2**	**+0.3**
VRAC				*e*Sg		**Sg**	**16 02 37.4**	**-0.6**
	comp=Z,18nm,0.6s,baz=54							
KOLL	**Kolacno**	**1.73**	**188**	*e*PN		**Pn**	**16 02 16.7**	**+2.7**
KOLL				*e*SN		**Sn**	**16 02 37.4**	**+0.6**
KOLL	**Kolacno**	**1.73**	**188**	*e*Pn		**Pn**	**16 02 16.7**	**+2.7**
KOLL				*e*Sn		**Sn**	**16 02 37.4**	**+0.6**
UPC	**Upice**	**1.78**	**278**	*e*SG		**Sn**	**16 02 38.5**	**+0.4**
UPC	**Upice**	**1.78**	**278**	Sg		**Sn**	**16 02 38.5**	**+0.4**
VYHS	**Vyhne**	**1.80**	**179**	*e*PN		**Pn**	**16 02 17.5**	**+2.5**
VYHS				*e*SN		**Sn**	**16 02 37.1**	**-1.4**
VYHS	**Vyhne**	**1.80**	**179**	*e*Pn		**Pn**	**16 02 17.5**	**+2.5**
VYHS				*e*Sn		**Sn**	**16 02 37.2**	**-1.3**
STHS	**Stebnicka Huta**	**1.82**	**118**	*e*PN		**Pg**	**16 02 17.0**	**-0.6**
STHS				*e*SN		**Sg**	**16 02 42.4**	**+1.2**
STHS	**Stebnicka Huta**	**1.82**	**118**	*e*Pn		**Pg**	**16 02 17.0**	**-0.6**
STHS				*e*Sn		**Sg**	**16 02 42.4**	**+1.2**
KRUC	**Moravsky**	**1.98**	**232**	*e*Pn		**Pn**	**16 02 17.7**	**+0.3**
	baz=50							
KRUC				*e*Sn		**Sn**	**16 02 44.4**	**+1.6**
	comp=Z,8.8nm,0.6s,baz=50							
KECS	**Kecovo**	**2.13**	**148**	*e*PN		**Pg**	**16 02 21.7**	**-1.8**
KECS				*e*SN		**Sg**	**16 02 47.8**	**-3.2**
CRVS	**Cervenica-Dubn**	**2.23**	**127**	*e*PN		**Pg**	**16 02 24.5**	**-1.0**
CRVS				*e*SN		**Sg**	**16 02 52.2**	**-2.2**
CRVS	**Cervenica-Dubn**	**2.23**	**127**	*e*Pn		**Pg**	**16 02 24.5**	**-1.0**
CRVS				*e*Sn		**Sg**	**16 02 52.3**	**-2.1**
KWP	**Kalwaria Pacla**	**2.62**	**103**	*e*Pg		**Pg**	**16 02 33.6**	**+0.6**
KWP	**Kalwaria Pacla**	**2.62**	**103**	*e*Pg		**Pg**	**16 02 33.6**	**+0.6**
KOLS	**Kolonicke sedl**	**2.65**	**120**	*e*PG		**Pg**	**16 02 35.3**	**+1.8**
KOLS				*e*SN		**Sg**	**16 03 02.5**	**-5.3**
KOLS	**Kolonicke sedl**	**2.65**	**120**	*e*Pg		**Pg**	**16 02 35.3**	**+1.8**
KOLS				*e*Sn		**Sg**	**16 03 02.5**	**-5.3**
PRU	**Pruhonice**	**2.74**	**265**	*e*SG		**Sg**	**16 03 08.7**	**-2.1**
	comp=Z,4.8nm,0.5s							
PRU	**Pruhonice**	**2.74**	**265**	Sg		**Sg**	**16 03 08.7**	**-2.1**
	comp=Z,4.8nm,0.5s							
BRG	**Berggiesshubel**	**3.13**	**283**	SG		**Sg**	**16 03 25.0**	**+1.6**
	comp=Z,4.5nm,0.5s							
KHC	**Kasperske Hory**	**3.57**	**253**	*e*PN		**Pn**	**16 02 37.5**	**-1.8**
KHC				*e*PG		**Pg**	**16 02 48.5**	**-2.6**
KHC				*e*SG		**Sg**	**16 03 33.3**	**-4.0**
	comp=Z,5.5nm,0.5s							
CLL	**Collm**	**3.80**	**288**	*e*Sg		**Sg**	**16 03 48.0**	**+3.2**

*IDC **08** 16:07:56.0±1.1,38°.86N×71°.37E,h0km,mb3.8/6, mb1 3.8/12,mb1mx3.6/29,mbtmp3.7/12,ML3.4/6,Error ellipse: s-maj=16.9km s-min=13.2km az=140.0*
*BJI **08** 16:08:01.3,38°.81N×71°.20E,h38km,mb3.7/2,ML3.2/2*
*ISCJB **08** 16:08:03.7±0.9,39°.23N±0°.05×71°.00E±0°.07,h67km±10km, mb3.7/8,Error ellipse: s-maj=10.2km s-min=7.6km az=42.6*
*NEIC **08** 16:08:04.5±1.1,39°.17N×71°.13E,h58km±12km,Error ellipse: s-maj=14.5km s-min=11.7km az=126.0*
ISC 08 16:08:05.1±0.9,39°.23N±0°.06×71°.00E±0°.06,h59km±10km, n32,σ1§14/39,mb3.8/8,1D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
AML	**Almayashu**	**3.55**	**34**	P		**Pn**	**16 08 58.4**	**+0.7**
	SNR=40							
KSH	**Kashi**	**3.86**	**84**	P		**Pn**	**16 08 54.4**	**-7.6**
KSH				S		**Sn**	**16 09 38.9**	**-7.2**
KSH				smax				
	comp=N,97nm,0.6s							
KSH				smax				
	comp=E,94nm,0.5s							
KK31	**Karatay Array**	**3.89**	**355**	Pn		**Pn**	**16 09 05.3**	**+2.9**
	comp=E,13nm,0.5s,baz=177,slow=13,SNR=77							
KK31				||Sn		**Sn**	**16 09 54.7**	**+8.0**
	comp=E,36nm,0.5s,baz=176,slow=24,SNR=8.7							
UCH	**Uchtor**	**4.01**	**41**	P		**Pn**	**16 09 04.3**	**+0.3**
	SNR=40							
UCH	**Uchtor**	**4.01**	**41**	*e*Pn		**Pn**	**16 09 04.2**	**+0.2**
EKS2	**Erkin-Say**	**4.02**	**31**	P		**Pn**	**16 09 05.6**	**+1.5**
	SNR=30							
EKS2	**Erkin-Say**	**4.02**	**31**	*e*Pn		**Pn**	**16 09 05.2**	**+1.1**
KZA	**Kyzart**	**4.30**	**47**	P		**Pn**	**16 09 08.3**	**+0.2**
	SNR=42							
AAK	**Ala-Archa**	**4.31**	**37**	P		**Pn**	**16 09 08.9**	**+0.8**
	SNR=15							
AAK	**Ala-Archa**	**4.31**	**37**	Pn		**Pn**	**16 09 08.4**	**+0.3**
	comp=E,8.0nm,0.3s,baz=189,slow=4.9,SNR=18							
AAK				Sn		**Sn**	**16 10 01.6**	**+4.6**
	comp=E,3.9nm,0.3s,baz=22,slow=19,SNR=9.7							
KBK	**Karagaybulak**	**4.54**	**40**	P		**Pn**	**16 09 12.7**	**+1.4**
	SNR=20							
CHMS	**Chumysh**	**4.71**	**36**	P		**Pn**	**16 09 14.2**	**+0.6**
	SNR=20							
USP	**Ospenovka**	**4.82**	**32**	P		**Pn**	**16 09 15.6**	**+0.5**
	SNR=12							
KBL	**Kabul**	**4.94**	**199**	*e*P		**Pn**	**16 09 16.4**	**-0.3**
ULHL	**Ulahol**	**4.99**	**51**	P		**Pn**	**16 09 15.8**	**-1.6**
	SNR=5.5							
MKAR	**Makanchi Array**	**11.19**	**44**	Pn		**Pn**	**16 10 41.0**	**-1.2**
	comp=E,0.1nm,0.3s,baz=236,slow=13,SNR=6.6							
KURK	**Kurchatov**	**12.68**	**23**	Pn		**Pn**	**16 10 58.5**	**-4.0**
	comp=E,0.0nm,0.3s,baz=202,slow=12,SNR=4.3							
KURK				Lg			16 14 39.0	
	comp=E,0.0nm,0.3s,baz=215,slow=30,SNR=3.9							
AB31	**Akbulak array**	**12.77**	**325**	Pn		**Pn**	**16 11 03.0**	**-0.6**
	comp=E,1.5nm,0.5s,baz=171,slow=9.2,SNR=35							
AB31				Sn		**Sn**	**16 13 24.1**	**+0.1**
	comp=E,5.7nm,0.6s,baz=129,slow=26,SNR=15							
ABKAR	**Akbulak array**	**12.77**	**325**	*e*Pn		**Pn**	**16 11 03.3**	**-0.4**
BVAR	**Borovoye Array**	**13.81**	**358**	Pn		**Pn**	**16 11 16.3**	**-1.4**
	comp=E,0.2nm,0.3s,baz=220,slow=46,SNR=3.3							
BVAR				Sn		**Sn**	**16 13 48.7**	**-0.6**
	comp=E,0.1nm,0.3s,baz=170,slow=26,SNR=5.2							
AKTK	**Aktyubinsk**	**14.48**	**325**	Pn		**Pn**	**16 11 25.8**	**-0.9**
AKTK				Sn		**Sn**	**16 14 05.2**	**-0.4**
AKTO	**Aktyubinsk**	**14.48**	**325**	Pn		**Pn**	**16 11 25.8**	**-0.9**
	comp=E,0.2nm,0.3s,baz=132,slow=15,SNR=3.2							
AKTO				Sn		**Sn**	**16 14 05.2**	**-0.4**
	comp=E,0.2nm,0.3s,baz=356,slow=19,SNR=4.3							
ZALV	**Zalesovo Beam**	**17.47**	**28**	P		**Pn**	**16 12 03.6**	**-0.9**
	comp=E,0.4nm,0.3s,baz=226,slow=11,SNR=6.2							
GTA	**Gaotai**	**22.25**	**80**	*e*P		**P**	**16 12 57.4**	**+0.4**
GTA				pP			16 13 05.1	
GTA				sP		sP	16 13 08.1	-9.3
GTA				pmax		pmax		
	comp=Z,3.0nm,1.0s,mb3.7							
SONM	**Songino Array**	**26.87**	**60**	P		**P**	**16 13 38.3**	**-1.8**
	comp=Z,0.4nm,0.6s,mb3.1,baz=258,slow=11,SNR=2.5							
FINES	**FINESS Array B**	**35.25**	**324**	P		**P**	**16 14 55.5**	**+1.8**
	comp=Z,6.8nm,1.1s,mb4.5,baz=109,slow=7.5,SNR=3.1							
ARCES	**ARCESS Array B**	**38.64**	**336**	P		**P**	**16 15 24.5**	**+2.2**
	comp=Z,1.7nm,0.9s,mb3.8,baz=108,slow=7.8,SNR=3.9							
HFS	**Hagfors**	**40.95**	**320**	P		**P**	**16 15 43.5**	**+1.9**
	comp=Z,1.9nm,0.7s,mb3.8,baz=99,slow=9.6,SNR=4.4							
TORD	**Torodi Ar. Bea**	**65.81**	**267**	P		**P**	**16 18 45.2**	**+0.7**
TORD	**Torodi Ar. Bea**	**65.81**	**267**	P		**P**	**16 18 45.2**	**+0.7**
	comp=Z,0.9nm,0.5s,mb4.0,baz=47,slow=5.4,SNR=6.4							
ILAR	**Eielson Array**	**72.16**	**16**	P		**P**	**16 19 22.8**	**-0.2**
	comp=Z,0.4nm,0.9s,mb3.4,baz=305,slow=3.9,SNR=4.7							
ASAR	**Alice Springs**	**85.81**	**125**	P		**P**	**16 20 35.3**	**-2.9**
	comp=Z,0.4nm,0.8s,mb3.7,baz=316,slow=5.4,SNR=4.2							

*IDC **08** 16:31:11.3±5.4,16°.63S×178°.20W,h0km,mb4.2/3, mb1 4.4/3,mb1mx3.9/15,mbtmp4.2/3,Error ellipse: s-maj=265.6km s-min=34.9km az=136.0*
*ISCJB **08** 16:32:09.5±4.0,17°.3S±0°.9×179°.0W±0°.9,h590km±17km, mb3.8/4,Error ellipse: s-maj=187.3km s-min=36.1km az=139.7*
*NEIC **08** 16:32:09.8±3.0,17°.39S×178°.85W,h583km±11km,mb3.7/1, Error ellipse: s-maj=131.7km s-min=25.2km az=140.0*
ISC 08 16:32:09.9±4.2,17°.4S±1°.0×178°.9W±0°.9,h584km±16km,n6, σ0§39/6,mb3.8/4,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.98**	**263**	*e*Pn		**P**	**16 33 27.5**	**0.0**
STKA	**Stephens Creek**	**38.51**	**240**	P		**P**	**16 38 43.2**	**-0.1**
	1.5nm,0.5s,mb3.8,baz=102,slow=14,SNR=7.0							
WB2	**Warramunga Arr**	**44.30**	**259**	*e*P		**P**	**16 39 29.0**	**-0.2**
WRAB	**Tennant Creek**	**44.30**	**259**	*e*P		**P**	**16 39 29.0**	**-0.2**
	1.5nm,0.5s,mb3.8							
ASAR	**Alice Springs**	**44.53**	**254**	P		**P**	**16 39 31.4**	**+0.5**
	10nm,0.5s,mb4.6,baz=86,slow=8.0,SNR=381							
ILAR	**Eielson Array**	**85.49**	**13**	P		**P**	**16 43 46.2**	**0.0**
	0.2nm,0.4s,mb3.1,baz=224,slow=5.7,SNR=5.5							

*IDC **08** 17:30:08.9±1.3,25°.01N×96°.33E,h0km,mb3.6/5, mb1 3.6/6,mb1mx3.4/26,mbtmp3.5/6,ML3.7/1,Error ellipse: s-maj=68.2km s-min=16.1km az=69.0*
*NEIC **08** 17:30:08.9±8.6,24°.97N×96°.49E,h4km±61km,mb4.0/1, Error ellipse: s-maj=50.3km s-min=10.1km az=60.0*
*BJI **08** 17:30:09.4,24°.78N×96°.13E,h23km,ML3.5/3*
ISC 08 17:30:09.8±2.0,24°.85N±0°.06×96°.26E±0°.06,h11km±14km, n15,σ1§20/20,mb3.6/6,Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
SHL	**Shillong**	**4.03**	**281**	*e*PKP		**Pn**	**17 31 14.0**	**+2.6**
SHL				*e*S		**Sn**	**17 31 59.0**	**+0.4**
KMI	**Kunming**	**5.89**	**86**	Pn		**Pg**	**17 32 04.1**	**+1.5**
KMI				Sn		**Sb**	**17 33 03.0**	**0.0**
KMI				smax				
	comp=N,20nm,1.2s							
KMI				smax				
	comp=E,15nm,1.1s							
KMI				LR		LR		
	comp=N,600nm,9.4s							
KMI				LR		LR		
	comp=E,110nm,8.9s							
CHTO	**Chiang Mai**	**6.51**	**157**	*e*Pn		**Pn**	**17 31 45.8**	**+0.3**
CHTO				*e*Sg		**Sg**	**17 33 32.5**	**-6.2**
LSA	**Lhasa**	**6.63**	**318**	Pn		**Pn**	**17 31 49.4**	**+2.2**
LSA				Sn		**Sn**	**17 33 02.0**	**-0.8**
LSA	**Lhasa**	**6.63**	**318**	*e*Pn		**Pn**	**17 31 50.0**	**+2.8**
	comp=E,3.7nm,0.4s							
CM31	**Chiang Mai Arr**	**6.84**	**158**	*e*Pn		**Pn**	**17 31 49.8**	**-0.2**
	comp=E,4.5nm,0.6s							
CMAR	**Chiang Mai Arr**	**6.84**	**158**	Pn		**Pn**	**17 31 50.1**	**+0.1**
	comp=E,0.3nm,0.3s,baz=335,slow=13,SNR=6.9							
CMAR				Pg		**Pg**	**17 32 17.5**	**-3.2**
	comp=E,0.5nm,0.3s,baz=336,slow=17,SNR=12							
CMAR				Lg			17 33 50.2	
	comp=E,0.4nm,0.3s,baz=338,slow=30,SNR=7.0							
SONM	**Songino Array**	**24.30**	**17**	P		**P**	**17 35 26.8**	**-0.4**
	comp=E,0.2nm,0.5s,mb2.8,baz=187,slow=38,SNR=2.4							
MK31	**Makanchi Array**	**24.58**	**336**	*e*P		**P**	**17 35 28.7**	**-1.0**
MKAR	**Makanchi Array**	**24.58**	**336**	P		**P**	**17 35 29.4**	**-0.3**
	comp=E,1.7nm,0.7s,mb3.7,baz=149,slow=9.2,SNR=15							
KURK	**Kurchatov**	**29.19**	**337**	*e*P		**P**	**17 36 09.9**	**-1.3**
	comp=E,1.4nm,0.6s,mb3.9							
ZAA0	**Zalesovo Array**	**30.29**	**347**	P		**P**	**17 36 15.6**	**-5.3**
ZALV	**Zalesovo Beam**	**30.29**	**347**	P		**P**	**17 36 19.6**	**-1.3**
	comp=E,1.2nm,0.8s,mb3.7,baz=162,slow=6.2,SNR=4.5							
BVAR	**Borovoye Array**	**34.22**	**332**	P		**P**	**17 36 56.0**	**+0.6**
	comp=E,0.6nm,0.4s,mb3.9,baz=144,slow=9.2,SNR=6.2							
ASAR	**Alice Springs**	**60.48**	**140**	P		**P**	**17 40 21.8**	**+1.9**

comp=E,77nm,0.9s
LZH Lanzhou 3.84 339 Pn Pn 17 39 22.0 +1.7
LZH Pg Pg 17 39 32.3 -3.1
LZH Sg Sg 17 40 16.5 -8.6
LZH smax
comp=N,130nm,0.5s
LZH smax
comp=E,290nm,0.5s
LZH LR LR
comp=E,430nm,6.1s
LZH LR LR
comp=Z,540nm,7.3s
GYA Guiyang 6.10 170 Pn Pn 17 39 53.5 +2.1
GYA Sn Sn 17 41 01.7 +0.7
GYA Sg Sg 17 41 24.8 -13
GYA smax
comp=N,40nm,0.8s
GYA smax
comp=E,50nm,0.9s

*NEIC **08** 17:43:29.6, 45°.00S×167°.47E, h86km, ML4.5(WEL), After WEL.*
WEL 08 17:43:30.2±0.3, 45°.00S×167°.52E, h80km±2km, ML4.4/18, 3C-8D, Error ellipse: s-maj=2.3km s-min=1.3km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.44**	**42**	⇑PN	Pn	17 43 43.6	+0.1
MSZ				*e*SN	Sn	17 43 53.3	+0.1
MSZ	**Milford Sound**	**0.44**	**42**	P	Pn	17 43 43.6	+0.1
MSZ				S	Sn	17 43 53.9	+0.7
DCZ	**Deep Cove**	**0.54**	**208**	⇓PN	Pn	17 43 43.8	-0.5
DCZ				SN	Sn	17 43 54.3	-0.4
DCZ	**Deep Cove**	**0.54**	**208**	P	Pn	17 43 43.8	-0.5
MLZ	**Mavora Lakes**	**0.58**	**127**	⇓PN	Pn	17 43 44.4	-0.3
MLZ				SN	Sn	17 43 55.1	-0.3
WHZ	**Wether Hill Ro**	**0.94**	**161**	⇓PN	Pn	17 43 48.3	-0.3
WHZ				SN	Sn	17 44 01.9	-0.3
WHZ	**Wether Hill Ro**	**0.94**	**161**	P	Pn	17 43 48.3	-0.3
WKZ	**Wanaka**	**1.08**	**81**	⇓PN	Pn	17 43 50.4	+0.2
WKZ				SN	Sn	17 44 04.9	-0.2
WKZ	**Wanaka**	**1.08**	**81**	P	Pn	17 43 50.4	+0.2
WKZ				S	Sn	17 44 05.1	-0.1
JCZ	**Jackson Bay**	**1.28**	**44**	⇑PN	Pn	17 43 52.5	-0.3
JCZ	**Jackson Bay**	**1.28**	**44**	P	Pn	17 43 52.5	-0.3
EAZ	**Earnscleugh**	**1.29**	**101**	⇓PN	Pn	17 43 52.8	0.0
EAZ				SN	Sn	17 44 08.9	-0.9
EAZ	**Earnscleugh**	**1.29**	**101**	P	Pn	17 43 52.8	0.0
PYZ	**Puysegur Point**	**1.30**	**206**	PN	Pn	17 43 57.0	+4.0
PYZ				SN	Sn	17 44 13.3	+3.1
TUZ	**Tuapeka**	**1.77**	**123**	PN	Pn	17 43 58.5	-0.5
TUZ	**Tuapeka**	**1.77**	**123**	P	Pn	17 43 58.3	-0.7
APZ	**The Paps**	**1.86**	**170**	PN	Pn	17 43 59.7	-0.5
APZ	**The Paps**	**1.86**	**170**	P	Pn	17 43 59.8	-0.4
SYZ	**Scrubby Hill**	**1.91**	**144**	⇓PN	Pn	17 44 00.5	-0.4
SYZ	**Scrubby Hill**	**1.91**	**144**	P	Pn	17 44 00.5	-0.4
LBZ	**Lake Benmore**	**2.00**	**73**	⇓PN	Pn	17 44 00.9	-1.2
LBZ	**Lake Benmore**	**2.00**	**73**	P	Pn	17 44 00.9	-1.2
FOZ	**Fox Glacier**	**2.12**	**48**	PN	Pn	17 44 03.4	-0.3
FOZ	**Fox Glacier**	**2.12**	**48**	P	Pn	17 44 03.4	-0.3
ODZ	**Otahua Downs**	**2.22**	**92**	⇑PN	Pn	17 44 04.0	-1.0
ODZ	**Otahua Downs**	**2.22**	**92**	P	Pn	17 44 04.0	-1.0
RPZ	**Rata Peaks**	**2.84**	**64**	⇓PN	Pn	17 44 11.4	-2.0
RPZ	**Rata Peaks**	**2.84**	**64**	P	Pn	17 44 11.4	-2.0
WVZ	**Waitaha Valley**	**3.02**	**51**	PN	Pn	17 44 13.6	-2.1
WVZ	**Waitaha Valley**	**3.02**	**51**	P	Pn	17 44 13.7	-2.1
MQZ	**McQueen's Vall**	**3.90**	**72**	PN	Pn	17 44 25.3	-2.5
MQZ	**McQueen's Vall**	**3.90**	**72**	P	Pn	17 44 25.3	-2.5
CRLZ	**Canterbury Las**	**3.93**	**71**	PN	Pn	17 44 25.7	-2.5
CRLZ	**Canterbury Las**	**3.93**	**71**	P	Pn	17 44 25.7	-2.5
LTZ	**Lake Taylor**	**4.09**	**59**	PN	Pn	17 44 27.5	-2.9
LTZ	**Lake Taylor**	**4.09**	**59**	P	Pn	17 44 27.5	-2.8
DSZ	**Denniston Nort**	**4.51**	**45**	PN	Pn	17 44 34.2	-1.9
DSZ	**Denniston Nort**	**4.51**	**45**	P	Pn	17 44 34.2	-1.9
KHZ	**Kahutara**	**5.07**	**62**	PN	Pn	17 44 41.3	-2.5
KHZ	**Kahutara**	**5.07**	**62**	P	Pn	17 44 41.3	-2.4
THZ	**Tophouse**	**5.09**	**52**	PN	Pn	17 44 40.9	-3.0
THZ	**Tophouse**	**5.09**	**52**	P	Pn	17 44 40.9	-3.0
QRZ	**Quartz Range**	**5.56**	**43**	PN	Pn	17 44 48.4	-2.0
NNZ	**Nelson**	**5.72**	**51**	PN	Pn	17 44 49.6	-2.9
TUWZ	**Tuamarina**	**5.90**	**55**	*e*PN	Pn	17 44 53.3	-1.7
PKE	**Pukeiti**	**7.54**	**42**	*e*PN	Pn	17 45 16.9	-0.4
HIZ	**Hauiti**	**8.49**	**43**	*e*PN	Pn	17 45 29.2	-1.1
WCZ	**Waipu Caves**	**10.43**	**32**	*e*PN	Pn	17 45 56.4	-0.4

*IDC **08** 17:54:30.6±0.9, 4°.86N×94°.87E, h0km, mb4.1/10, mb1 4.1/11, mb1mx3.9/24, mbtmp4.1/11, ML3.7/1, Error ellipse: s-maj=33.2km s-min=19.4km az=55.0*
*ISCJB **08** 17:54:39.4±2.2, 4°.94N±0°.08×95°.2E±0°.1, h83km±20km, mb4.2/19, Error ellipse: s-maj=18.8km s-min=12.0km az=160.6*
*NEIC **08** 17:54:39.4±1.7, 4°.89N×95°.02E, h67km±16km, mb4.5/8, Error ellipse: s-maj=16.5km s-min=8.3km az=71.0*
ISC 08 17:54:40.7±2.0, 4°.92N±0°.08×95°.1E±0°.1, h78km±19km, n31, σ0°80/32, mb4.2/19, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.33**	**119**	Pn	**Pn**	**17 55 43.2**	**-0.9**
PSI	**Prapat**	**4.33**	**119**	Pn	**Pn**	**17 55 43.2**	**-0.9**
	3.6nm,0.3s,baz=315,slow=11,SNR=8.2						
KULM	**Kulim**	**5.51**	**86**	*e*Pn	**Pn**	**17 56 00.2**	**+0.1**
	25nm,0.6s						
KULM				*e*Sn	**Sn**	**17 57 01.0**	**-1.2**
CM31	**Chiang Mai Arr**	**13.96**	**15**	*e*Pn	**Pn**	**17 57 58.8**	**+3.8**
	3.7nm,0.4s						
CMAR	**Chiang Mai Arr**	**13.96**	**15**	Pn	**Pn**	**17 57 59.8**	**+4.8**
	1.3nm,0.3s,baz=210,slow=12,SNR=19						
CHTO	**Chiang Mai**	**14.30**	**15**	*e*Pn	**Pn**	**17 58 00.9**	**+1.4**
KSM	**Kuching**	**15.53**	**102**	*e*Pn	**Pn**	**17 58 17.9**	**+2.7**
LSA	**Lhasa**	**24.94**	**352**	*e*P	**P**	**17 59 57.5**	**+0.8**
	2.5nm,0.4s,mb4.0						
GTA	**Gaotai**	**34.60**	**6**	*e*P	**P**	**18 01 22.2**	**+0.1**
GTA				pP	pP	18 01 25.8	-15
GTA				sP	sP	18 01 29.0	-21
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.8						
BJI	**Beijing**	**39.78**	**26**	P	**P**	**18 02 01.6**	**-4.4**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
MK31	**Makanchi Array**	**43.17**	**347**	*e*P	**P**	**18 02 33.3**	**-0.4**
MKAR	**Makanchi Array**	**43.17**	**347**	P	**P**	**18 02 33.7**	**+0.1**
MKAR	**Makanchi Array**	**43.17**	**347**	P	**P**	**18 02 33.7**	**+0.1**
	comp=Z,1.1nm,0.3s,mb4.0,baz=166,slow=8.4,SNR=32						
SONM	**Songino Array**	**43.84**	**11**	P	**P**	**18 02 38.8**	**-0.2**
	comp=Z,0.4nm,0.4s,mb3.5,baz=184,slow=8.7,SNR=3.7						
SONM				PcP	PcP	18 04 25.3	+1.2
	comp=Z,0.5nm,0.6s,baz=182,slow=4.3,SNR=2.9						
WRAB	**Tennant Creek**	**45.78**	**124**	*e*P	**P**	**18 02 54.8**	**0.0**
ASAR	**Alice Springs**	**47.29**	**129**	P	**P**	**18 03 06.7**	**+0.1**
	comp=Z,1.1nm,0.6s,mb3.8,baz=297,slow=7.5,SNR=22						
KURK	**Kurchatov**	**47.70**	**346**	*e*P	**P**	**18 03 09.2**	**-0.1**
	comp=Z,1.5nm,0.6s,mb4.0						
ZAA0	**Zalesovo Array**	**49.60**	**352**	*e*P	**P**	**18 03 23.3**	**-0.5**
ZALV	**Zalesovo Beam**	**49.60**	**352**	P	**P**	**18 03 23.9**	**+0.1**
	comp=Z,2.2nm,0.4s,mb4.5,baz=169,slow=7.1,SNR=18						
BVAR	**Borovoye Array**	**52.09**	**341**	P	**P**	**18 03 42.4**	**-0.1**
	comp=Z,2.2nm,0.6s,mb4.4,baz=141,slow=9.6,SNR=18						
BRVK	**Borovoye**	**52.15**	**341**	*e*P	**P**	**18 03 42.3**	**-0.7**
	comp=Z,4.7nm,1.0s,mb4.5						
YSS	**Yuzh-Sakhalins**	**58.53**	**36**	P	**P**	**18 04 29.2**	**+0.2**
	comp=Z,24nm,1.2s,mb5.1						
BRTR	**Keskin Array B**	**65.11**	**312**	P	**P**	**18 05 12.0**	**-1.3**
	comp=Z,1.4nm,0.7s,mb3.9,baz=122,slow=7.5,SNR=9.0						
AKASG	**Malin Array Be**	**71.08**	**322**	P	**P**	**18 05 49.2**	**-1.2**
	comp=Z,0.4nm,0.4s,mb3.6,baz=95,slow=5.3,SNR=4.2						
LBTB	**Lobatse**	**73.72**	**242**	*e*P	**P**	**18 06 06.9**	**+0.2**
	comp=Z,4.6nm,0.8s,mb4.3						
BOSA	**Boshof**	**74.88**	**239**	*e*P	**P**	**18 06 13.2**	**-0.2**
	comp=Z,3.3nm,0.7s,mb4.2						
BOSA	**Boshof**	**74.88**	**239**	P	**P**	**18 06 13.3**	**-0.1**
	comp=Z,2.1nm,0.6s,mb4.0,baz=42,slow=4.2,SNR=5.0						
FINES	**FINESS Array B**	**75.77**	**332**	P	**P**	**18 06 17.5**	**-0.3**
	comp=Z,3.2nm,0.8s,mb4.1,baz=126,slow=4.9,SNR=7.5						
ARCES	**ARCESS Array B**	**78.37**	**340**	P	**P**	**18 06 32.5**	**+0.2**
	comp=Z,0.9nm,0.5s,mb3.8,baz=97,slow=6.1,SNR=17						
TSUM	**Tsumeb**	**79.91**	**250**	P	**P**	**18 06 42.2**	**+0.6**
	comp=Z,20nm,1.6s,mb4.7						
SBA	**Scott Base**	**90.95**	**168**	*e*P	**P**	**18 07 36.5**	**+1.1**
	comp=Z,4.8nm,1.4s,mb4.4						

MEX 08 17:59:16.4±1.4, 16°.65N×94°.74W, h86km±35km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.55**	**85**	*i* P	Pn	17 59 41.4	-1.2
TGIG				*i* S	Sn	18 00 00.5	-2.0
HUIG	**Huatulco**	**1.58**	**237**	*i* P	Pn	17 59 40.7	-2.3
HUIG				*i* S	Sn	18 00 02.0	-1.1
PCIG		**1.73**	**122**	*i* P	Pn	17 59 43.9	-1.1
PCIG				*i* S	Sn	18 00 05.9	-0.9
VHO	**Vista Hermosa**	**1.96**	**283**	*i* P	Pn	17 59 48.8	+0.9
VHO				*i* S	Sn	18 00 10.3	-1.6
TPIG	**Tehuac#an**	**3.06**	**306**	*i* P	Pn	18 00 07.6	+4.9
TPIG				*i* S	Sn	18 00 37.0	-1.4
UTMO	**Huajuapan**	**3.16**	**292**	*i* P	Pn	18 00 03.8	-0.2
UTMO				*i* S	Sn	18 00 40.0	-0.7
PNIG	**Pinotepa**	**3.26**	**266**	*i* P	Pn	18 00 03.6	-1.7
PNIG				*e*S	Sn	18 00 41.4	-1.8

*ISCJB **08** 18:07:05.2±1.1, 55°.6S±0°.2×144°.5W±0°.3, h10km, mb4.3/7, MS3.7/7, Error ellipse: s-maj=29.2km s-min=24.2km az=27.4*
*IDC **08** 18:07:06.2±0.8, 55°.73S×144°.28W, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.9/12, mbtmp4.1/3, MS3.7/7, Ms1 3.7/7, ms1mx3.4/16, Error ellipse: s-maj=40.1km s-min=29.0km az=3.0*
*NEIC **08** 18:07:07.5±0.8, 55°.61S×144°.49W, h10km, mb4.6/5, Error ellipse: s-maj=25.8km s-min=25.1km az=76.0*
ISC 08 18:07:07.3±1.1, 55°.6S±0°.2×144°.5W±0°.3, h10km, n30, σ1°04/10, mb4.3/7, MS3.7/7, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**27.89**	**200**	*e*P	**P**	**18 12 57.9**	**+1.1**
	3.8nm,1.1s,mb3.9						
TBI	**Tubuai**	**32.41**	**352**	*e*T		18 47 57.5	
	162nm,0.3s						
RKT	**Rikitea**	**33.19**	**16**	*e*LR	LR	18 22 31.4	
	245nm,30.8s						
RKT				*e*T		18 48 48.0	
	13nm,0.2s						
QSPA	**South Pole Qui**	**34.57**	**180**	*e*P	**P**	**18 13 55.4**	**-0.1**
	5.3nm,0.9s,mb4.5						
QSPA	**South Pole Qui**	**34.57**	**180**	P	**P**	**18 13 55.3**	**-0.2**
	3.3nm,0.8s,mb4.3,baz=97,slow=3.9,SNR=8.2						
RAR	**Rarotonga**	**36.18**	**335**	LR	LR	18 25 37.2	
	comp=Z,208nm,21.3s,MS3.9,baz=250,slow=31						
MEH	**Mehetia**	**37.74**	**354**	*e*T		18 54 40.0	
	87nm,0.3s						
PAE	**Paea**	**38.05**	**352**	*e*T		18 54 58.5	
	7.3nm,0.3s						
TIAR	**Tiarei**	**38.14**	**353**	*e*T		18 54 57.3	
	34nm,0.3s						
PPT	**Papeete**	**38.15**	**352**	*e*LR	LR	18 24 53.5	
	242nm,24.8s,baz=188						
PPT	**Papeete**	**38.15**	**352**	LR	LR	18 27 03.3	
	comp=Z,64nm,19.4s,MS3.4,baz=281,slow=31						
PMOR	**Pomariorio Ree**	**40.59**	**355**	*e*T		18 58 06.2	
	9.1nm,0.3s						
AFI	**Afiamalu**	**46.63**	**322**	LR	LR	18 29 09.8	
	comp=Z,113nm,19.7s,MS3.8,baz=200,slow=28						
TAOE	**Nuku Hiva Isla**	**46.74**	**6**	*e*LR	LR	18 28 50.5	
	206nm,24.8s						
PLCA	**Paso Flores**	**49.14**	**105**	LR	LR	18 32 46.0	
	comp=Z,35nm,19.9s,MS3.4,baz=91,slow=31						
VNA3	**Neumayer Olymp**	**49.50**	**162**	*e*	**P**	**18 15 52.1**	**-5.1**
VNA1	**Neumayer~Stat**	**50.25**	**163**	*e*	**P**	**18 15 58.6**	**-4.3**
ASAR	**Alice Springs**	**66.12**	**263**	P	**P**	**18 17 55.3**	**+0.7**
	1.5nm,0.8s,mb4.0,baz=140,slow=5.9,SNR=11						
CPUP	**Villa Florida**	**67.16**	**103**	LR	LR	18 43 11.9	
	comp=Z,48nm,19.5s,MS3.7,baz=356,slow=32						
WRAB	**Tennant Creek**	**68.82**	**266**	P	**P**	**18 18 07.3**	**-4.4**
	3.9nm,0.9s,mb4.3						
LPAZ	**La Paz**	**69.04**	**88**	P	**P**	**18 18 13.4**	**+0.3**
	1.5nm,1.0s,mb3.9,baz=225,slow=1.4,SNR=2.8						
LPAZ				LR	LR	18 41 31.9	
	comp=Z,52nm,21.9s,MS3.7,baz=124,slow=30						
PMG	**Port Moresby**	**70.09**	**283**	*e*P	**P**	**18 18 20.1**	**+0.6**
	30nm,1.0s,mb5.2						
MBWA	**Marble Bar**	**75.98**	**253**	*e*P	**P**	**18 18 52.4**	**-2.1**
	6.9nm,1.1s,mb4.5						
BOSA	**Boshof**	**95.69**	**171**	LR	LR	18 58 34.0	
	comp=Z,79nm,19.4s,MS4.2,baz=334,slow=32						
ILAR	**Eielson Array**	**120.04**	**359**	PKP	PKPdf	18 25 57.5	+1.0
	1.2nm,0.9s,baz=242,slow=1.3,SNR=8.3						
MKAR	**Makanchi Array**	**149.90**	**273**	PKPbc	PKPbc	18 26 56.7	+0.1
MKAR	**Makanchi Array**	**149.90**	**273**	PKPbc	PKPbc	18 26 56.7	+0.1
	2.1nm,0.9s,baz=123,slow=3.3,SNR=18						
ZALV	**Zalesovo Beam**	**151.97**	**287**	PKPbc	PKPbc	18 27 02.6	+1.3
	0.8nm,0.5s,baz=113,slow=3.4,SNR=7.3						
KEST	**Kesra**	**153.29**	**127**	PKPbc	PKPbc	18 27 04.7	-0.1
	1.1nm,0.9s,baz=292,slow=5.4,SNR=3.2						
BVAR	**Borovoye Array**	**159.60**	**277**	PKPab	PKPab	18 27 45.8	+2.3
	1.0nm,0.9s,baz=46,slow=4.3,SNR=4.3						

*SGS **08** 18:13:17.9, 15°.34N×43°.43E, h9km*
*CSEM **08** 18:13:18.1±0.3, 15°.54N×43°.43E, h2km, ML3.5, Error ellipse: s-maj=11.3km s-min=4.5km az=58.0*
*ISCJB **08** 18:13:19.5±1.0, 15°.58N±0°.03×43°.49E±0°.06, h14km±5km, Error ellipse: s-maj=10.3km s-min=3.8km az=152.5*
*DHMR **08** 18:13:19.3±1.3, 15°.50N×43°.54E, h4km±8km, ML3.5*
ISC 08 18:13:18.6±1.4, 15°.55N±0°.03×43°.45E±0°.07, h5km±9km, n18, σ1°05/30, 3C-1D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAJJ	**Hajjah**	**0.20**	**43**	*i* P	**Pg**	**18 13 23.8**	**+1.1**
HAJJ				*i* S	**Sg**	**18 13 26.2**	**+0.8**
HAJJ				AML	AML	18 13 26.6	
	comp=E,7μm,0.3s						
HAJJ	**Hajjah**	**0.20**	**43**	⇑*i* P	**Pg**	**18 13 23.8**	**+1.2**
HAJJ				*i* P	**Sg**	**18 13 26.2**	**+0.8**
	comp=E,3μm,0.3s						
SANA	**San'a**	**0.74**	**102**	*i* P	**Pg**	**18 13 32.1**	**-0.8**
SANA				*i* S	**Sg**	**18 13 40.6**	**-1.9**
SANA				AML	AML	18 13 41.5	
	comp=N,3μm,0.2s						
DHBB	**Dhamar BB**	**1.33**	**137**	*i* P	**Pn**	**18 13 42.7**	**-1.1**
DHBB				*i* S	**Sg**	**18 14 00.5**	**-0.8**
DHBB	**Dhamar BB**	**1.33**	**137**	*i* P	**Pn**	**18 13 42.7**	**-1.1**
DHBB				*i* S	**Sg**	**18 14 00.5**	**-0.8**
JAZS	**Jizan**	**1.60**	**341**	P	**Pn**	**18 13 46.6**	**-0.8**
JAZS	**Jizan**	**1.60**	**341**	P	**Pn**	**18 13 46.6**	**-0.9**
JAZS				S	**Sn**	**18 14 06.7**	**-1.8**
UDYN	**Al 'Udayn**	**1.65**	**162**	⇑*i* P	**Pn**	**18 13 48.4**	**+0.2**
UDYN				*i* S	**Sn**	**18 14 10.9**	**+1.2**
FRSS	**Farasan al Kab**	**1.75**	**313**	P	**Pn**	**18 13 48.7**	**-0.8**
FRSS	**Farasan al Kab**	**1.75**	**313**	P	**Pn**	**18 13 48.7**	**-0.9**
FRSS				S	**Sn**	**18 14 11.1**	**-1.1**
DJNS	**Zahran al Janu**	**2.14**	**2**	P	**Pn**	**18 13 55.2**	**+0.2**
DJNS	**Zahran al Janu**	**2.14**	**2**	P	**Pn**	**18 13 55.2**	**+0.2**
DJNS				S	**Sn**	**18 14 22.5**	**+0.6**
TRBA	**At Turbah**	**2.39**	**164**	⇓*i* P	**Pn**	**18 13 59.0**	**+0.6**
TRBA				*i* S	**Sb**	**18 14 32.3**	**+0.4**
BDHA	**Al Bayda'**	**2.57**	**127**	*i* P	**Pn**	**18 14 02.9**	**+2.0**
BDHA				*i* S	**Sb**	**18 14 36.7**	**-0.5**
BDHA	**Al Bayda'**	**2.57**	**127**	*i* P	**Pn**	**18 14 02.9**	**+2.0**
NAMS	**An Nimas**	**3.79**	**342**	P	**Pn**	**18 14 19.5**	**+1.8**
NAMS	**An Nimas**	**3.79**	**342**	P	**Pn**	**18 14 19.5**	**+1.8**
NAMS				S	**Sn**	**18 15 02.6**	**-0.1**
TATS	**Tathlith**	**3.97**	**0**	P	**Pb**	**18 14 30.0**	**+0.9**

WEL 08 18:31:26.9±0.3, 37°.55S×177°.15E, h132km±2km, ML3.5/6, Error ellipse: s-maj=1.9km s-min=1.7km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.56**	**238**	PN	Pn	18 31 46.5	+0.1
OPRZ				SN	Sn	18 32 01.6	+0.3
URZ	**Urewera**	**0.71**	**183**	PN	Pn	18 31 47.3	-0.2
URZ				SN	Sn	18 32 03.1	-0.1
MWZ	**Matawai**	**0.84**	**159**	PN	Pn	18 31 48.3	-0.1
MWZ				SN	Sn	18 32 05.2	+0.3
MXZ	**Matakaoa Point**	**0.92**	**91**	PN	Pn	18 31 49.1	0.0
PUZ	**Puketiti**	**1.02**	**121**	PN	Pn	18 31 49.9	-0.1
CNGZ	**Carnagh Statio**	**1.25**	**139**	PN	Pn	18 31 52.7	+0.3
KNZ	**Kokohu**	**1.52**	**165**	PN	Pn	18 31 54.9	-0.4
KNZ				*e*SN	Sn	18 32 16.4	-0.7
BKZ	**Black Stump Fm**	**1.69**	**198**	PN	Pn	18 31 56.8	-0.5
MHGZ	**Mahia Peninsul**	**1.71**	**160**	PN	Pn	18 31 57.7	+0.3
MCHZ	**McNeill Hill**	**1.92**	**191**	PN	Pn	18 32 00.2	+0.2
CKHZ	**Cape Kidnapper**	**2.11**	**182**	PN	Pn	18 32 01.8	-0.4
BHHZ	**Black Hill Sta**	**2.12**	**203**	PN	Pn	18 32 01.9	-0.3
KAHZ	**Kahuranaki**	**2.25**	**185**	PN	Pn	18 32 03.5	-0.5
PNHZ	**Pukenui**	**2.48**	**197**	PN	Pn	18 32 05.7	-1.1
PXZ	**Pawanui**	**2.49**	**185**	PN	Pn	18 32 05.8	-1.1
PXZ				SN	Sn	18 32 36.6	-1.2
WPHZ	**Waipukurau**	**2.57**	**192**	PN	Pn	18 32 06.7	-1.3
TSZ	**Takapari Road**	**2.67**	**200**	PN	Pn	18 32 07.8	-1.4
PRHZ	**Porangahau**	**2.74**	**188**	PN	Pn	18 32 08.8	-1.3
POWZ	**Post Office Ro**	**3.04**	**200**	PN	Pn	18 32 12.1	-1.9
BFZ	**Birch Farm**	**3.21**	**192**	PN	Pn	18 32 13.9	-2.2
MRZ	**Mangatainoka R**	**3.34**	**201**	PN	Pn	18 32 15.4	-2.5
MRZ				SN	Sn	18 32 53.8	-3.6
TIWZ	**Tintock**	**3.37**	**197**	*e*PN	Pn	18 32 15.9	-2.4
OGWZ	**Otaki Gorge**	**3.61**	**205**	PN	Pn	18 32 19.0	-2.4
KIW	**Kapiti Island**	**3.74**	**207**	PN	Pn	18 32 20.3	-2.8
MTW	**Mount Morrison**	**3.82**	**199**	PN	Pn	18 32 20.8	-3.4
CAW	**Cannon Point**	**3.90**	**204**	PN	Pn	18 32 22.0	-3.3

*ISK **08** 18:50:57.8, 39°.76N×40°.50E, h5km, MD3.0*
*DDA **08** 18:50:58.6, 39°.77N×40°.48E, h7km±6km, Md3.2*
*ISCJB **08** 18:50:59.8±0.4, 39°.75N±0°.03×40°.49E±0°.03, h10km, Error ellipse: s-maj=4.3km s-min=2.9km az=161.1*
*CSEM **08** 18:50:59.4±0.2, 39°.74N×40°.50E, h2km, MD3.0, Error ellipse: s-maj=6.4km s-min=3.9km az=153.0*
ISC 08 18:50:59.4±0.5, 39°.76N±0°.03×40°.51E±0°.03, h0km±5km, n37, σ0°77/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZM	**Erzurum**	**0.68**	**77**	*e*PG	**Pg**	**18 51 12.3**	**-0.1**
EZM				*e*SG	**Sg**	**18 51 22.6**	**+1.5**
ERZM	**Erzurum**	**0.68**	**77**	*i* P	**Pg**	**18 51 11.5**	**-0.9**
ERZM				*i* S	**Sg**	**18 51 23.8**	**+2.6**
ERZM	**Erzurum**	**0.68**	**77**	*i* P	**Pg**	**18 51 11.5**	**-0.9**
ERZM				*i* S	**Sg**	**18 51 23.8**	**+2.6**
BINT	**Bingol**	**0.88**	**181**	*e*PG	**Pg**	**18 51 15.9**	**-0.3**
BINT	**Bingol**	**0.88**	**181**	*e*Pg	**Pg**	**18 51 15.9**	**-0.4**
EZC	**Erzincan**	**0.89**	**270**	*e*PG	**Pg**	**18 51 15.9**	**-0.6**
EZC				*e*SG	**Sg**	**18 51 29.2**	**+1.2**
BNGL	**BINGOL**	**0.95**	**148**	*i* P	**Pg**	**18 51 16.0**	**-1.5**
KELT	**Kelkit**	**1.04**	**293**	*i* S	**Sg**	**18 51 33.3**	**+0.5**
GUMT	**Gumushane**	**1.05**	**312**	*e*PG	**Pg**	**18 51 19.1**	**-0.6**
GUMT	**Gumushane**	**1.05**	**312**	*e*Pg	**Pg**	**18 51 19.1**	**-0.5**
PTK	**Pertek**	**1.22**	**225**	*e*PN	**Pg**	**18 51 22.2**	**-0.6**
PTK	**Pertek**	**1.22**	**225**	*e*Pn	**Pg**	**18 51 22.2**	**-0.6**
KTUT	**Trabzon**	**1.35**	**336**	*e*PN	**Pn**	**18 51 24.8**	**-0.7**
KTUT	**Trabzon**	**1.35**	**336**	*e*Pn	**Pn**	**18 51 24.8**	**-0.7**
DDEM	**Demirkent**	**1.48**	**40**	*i* P	**Pn**	**18 51 27.7**	**+0.4**
DDEM				*i* S	**Sg**	**18 51 46.8**	**-0.2**
DDEM	**Demirkent**	**1.48**	**40**	*i* P	**Pn**	**18 51 27.7**	**+0.5**
DDEM				*i* S	**Sg**	**18 51 46.8**	**-0.2**
KEMA	**Kemaliye**	**1.63**	**253**	*i* P	**Pn**	**18 51 29.5**	**+0.1**
KEMA				*i* S	**Sn**	**18 51 52.0**	**+1.0**
KEMA	**Kemaliye**	**1.63**	**253**	*i* P	**Pn**	**18 51 29.5**	**+0.2**
KEMA				*i* S	**Sn**	**18 51 52.0**	**+1.0**
SVRC	**Sivrice-ELAZID**	**1.66**	**215**	*e*PN	**Pn**	**18 51 29.4**	**-0.3**
SVRC	**Sivrice-ELAZID**	**1.66**	**215**	*e*Pn	**Pn**	**18 51 29.4**	**-0.4**
ARTV	**Artvin**	**1.79**	**37**	*i* P	**Pn**	**18 51 31.8**	**+0.2**
ARTV				*i* S	**Sn**	**18 51 53.4**	**-1.5**
ARTV	**Artvin**	**1.79**	**37**	*i* P	**Pn**	**18 51 31.8**	**+0.3**
ARTV				*i* S	**Sn**	**18 51 53.4**	**-1.5**
DBOC	**Borcka**	**1.82**	**29**	*i* P	**Pb**	**18 51 33.6**	**+0.1**
DBOC				*i* S	**Sb**	**18 51 56.7**	**0.0**
**

comp=E,1.3nm,0.8s,mb3.4,baz=231,slow=9.4,SNR=11

ULN	**Ulaanbaatar**	**22.44**	**49**	*e*P	**P**	**19 01 45.3**	**-0.9**
KEV	**Kevo**	**45.03**	**336**	P	**P**	**19 05 03.5**	**+0.7**

comp=E,11nm,1.2s,mb4.6

ILAR	**Eielson Array**	**73.02**	**20**	P	**P**	**19 08 15.6**	**-1.4**

comp=E,0.3nm,0.8s,mb3.2,baz=308,slow=4.4,SNR=4.1

TORD	**Torodi Ar. Bea**	**74.43**	**275**	P	**P**	**19 08 23.4**	**-2.7**
TORD	**Torodi Ar. Bea**	**74.43**	**275**	P	**P**	**19 08 23.4**	**-2.7**

comp=E,0.6nm,0.6s,mb3.7,baz=46,slow=5.3,SNR=7.1

ASAR	**Alice Springs**	**76.86**	**132**	P	**P**	**19 08 36.1**	**-3.7**
ASAR	**Alice Springs**	**76.86**	**132**	P	**P**	**19 08 36.1**	**-3.7**

comp=E,0.4nm,0.8s,mb3.4,baz=334,slow=6.2,SNR=3.5

BOSA	**Boshof**	**83.10**	**228**	P	**P**	**19 09 08.4**	**-5.0**

comp=E,4.4nm,0.9s,mb4.5,baz=18,slow=3.2,SNR=3.0

CSEM ***08*** *20:02:07.3, 14.22N×44.28E, h6km, ML3.4, After DHMR*
DHMR 08 20:02:07.3±1.2, 14.22N×44.28E, h7km±9km, ML3.5, 3C-5D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DHBB	**Dhamar BB**	**0.37**	**16**	⇓*i*P	Pg	20 02 14.6	+0.1
DHBB				*i* S	Sg	20 02 19.6	+0.2
DHBB	**Dhamar BB**	**0.37**	**16**	⇓*i*P	Pg	20 02 14.6	+0.1
DHBB				*i* S	Sg	20 02 19.6	+0.3
UDYN	**Al 'Udayn**	**0.39**	**231**	⇑*e*P	Pg	20 02 14.3	-0.7
UDYN				*i* S	Sg	20 02 19.4	-0.8
TRBA	**At Turbah**	**0.99**	**190**	⇓*i*P	Pg	20 02 26.4	+0.1
TRBA				*i* S	Sg	20 02 40.4	+1.1
SANA	**San'a**	**1.17**	**356**	*i* P	Pg	20 02 29.5	-0.2
SANA				*i* S	Sg	20 02 46.5	+1.5
BDHA	**Al Bayda'**	**1.27**	**101**	⇑*i*P	Pn	20 02 31.5	0.0
BDHA				*i* S	Sb	20 02 48.6	+0.5
BDHA	**Al Bayda'**	**1.27**	**101**	⇑*i*P	Pn	20 02 31.5	0.0
BDHA				*i* S	Sb	20 02 48.6	+0.5
HAJJ	**Hajjah**	**1.62**	**336**	⇓*i*P	Pn	20 02 36.3	0.0
HAJJ				AML	AML	20 02 58.0	

comp=Z,638nm,0.2s

HAJJ	**Hajjah**	**1.62**	**336**	⇓*i*P	Pn	20 02 36.3	0.0

JMA 08 20:24:14.6±0.3, 24.11N×140.71E, h0km, M4.7, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**2.84**	**28**	P	Pn	20 25 02.5	+1.3
JHHJ				S	Sn	20 25 37.4	+1.3
CBIJ	**Chichi jima**	**3.26**	**24**	P	Pn	20 25 08.2	+1.2
CBIJ				S	Sn	20 25 48.1	+1.7
BSO4	**Boso 4**	**10.85**	**358**	P	Pn	20 26 53.5	+2.4
BSO4				*e*S	Sn	20 28 56.5	+3.2
JAG	**Ashikaga**	**12.32**	**355**	P	Pn	20 27 12.9	+1.6
JAG				*e*S	Sn	20 29 29.3	-0.1

ISCJB ***08*** *20:40:10.4±0.6, 51.51N±0.03×16.14E±0.03, h0km, Error ellipse: s-maj=4.9km s-min=2.8km az=15.9*
IPEC ***08*** *20:40:11.2±0.3, 51.57N×16.20E, h0km, ML1.8/3, Error ellipse: s-maj=2.0km s-min=1.5km az=34.0*
CSEM ***08*** *20:40:11.8±0.3, 51.52N×16.13E, h2km, ML2.8/5, Error ellipse: s-maj=4.6km s-min=3.7km az=11.0*
PRU ***08*** *20:40:13.9, 51.45N×16.10E, h0km*
WAR ***08*** *20:40:13.4, 51.51N×16.13E, ML2.3, Mining Induced*
ISC 08 20:40:11.8±0.7, 51.52N±0.03×16.15E±0.04, h0km, n29, σ0s78/55, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.68**	**172**	*e*Pg	**Pg**	**20 40 25.8**	**+0.9**
KSP				*e*Sg	**Sg**	**20 40 34.7**	**+1.0**
KSP	**Ksiaz**	**0.68**	**172**	*e*Pg	**Pg**	**20 40 25.8**	**+1.0**
KSP				*e*Sg	**Sg**	**20 40 34.1**	**+0.5**
KSP	**Ksiaz**	**0.68**	**172**	*e*Pg	**Pg**	**20 40 25.4**	**+0.6**

baz=356

KSP				*e*Sg	**Sg**	**20 40 34.1**	**+0.5**
UPC	**Upice**	**1.01**	**185**	*e*PG	**Pg**	**20 40 31.9**	**+0.7**
UPC	**Upice**	**1.01**	**185**	Pg	**Pg**	**20 40 31.9**	**+0.7**
DPC	**Dobruska-Polom**	**1.17**	**175**	*e*PG	**Pg**	**20 40 34.7**	**+0.4**
DPC				*e*SG	**Sg**	**20 40 49.7**	**+0.2**

comp=Z,13nm,0.3s

DPC	**Dobruska-Polom**	**1.17**	**175**	*e*Pg	**Pg**	**20 40 34.5**	**+0.2**

baz=356

DPC				Sg	**Sg**	**20 40 49.7**	**+0.2**

comp=Z,13nm,0.3s

PVCC	**Panska Ves**	**1.41**	**226**	*e*PG	**Pg**	**20 40 38.8**	**0.0**
PVCC				*e*SG	**Sg**	**20 40 57.3**	**+0.3**

comp=Z,55nm,0.3s

PVCC	**Panska Ves**	**1.41**	**226**	Pg	**Pg**	**20 40 38.8**	**0.0**
PVCC				*e*Sg	**Sg**	**20 40 57.2**	**+0.2**

baz=44

BRG	**Berggiesshubel**	**1.53**	**246**	PG	**Pg**	**20 40 41.0**	**-0.2**
BRG				SG	**Sg**	**20 41 01.6**	**+0.6**

comp=Z,19nm,0.3s

PRU	**Pruhonice**	**1.84**	**214**	*e*PN	**Pn**	**20 40 45.8**	**+1.2**
PRU				*e*PG	**Pg**	**20 40 47.1**	**0.0**
PRU				*e*SG	**Sg**	**20 41 11.3**	**+0.4**

comp=Z,13nm,0.3s

PRU	**Pruhonice**	**1.84**	**214**	Pn	**Pn**	**20 40 45.8**	**+1.2**
PRU	**Pruhonice**	**1.84**	**214**	Pg	**Pg**	**20 40 47.1**	**0.0**
MORC	**Moravsky Berou**	**1.95**	**153**	*e*Pn	**Pn**	**20 40 46.2**	**0.0**

baz=335

MORC				*e*Sg	**Sg**	**20 41 13.4**	**-1.2**

comp=Z,7.0nm,0.3s,baz=335

CLL	**Collm**	**1.98**	**265**	*i* Pn	**Pn**	**20 40 46.0**	**-0.6**

comp=Z,3.0nm,0.5s

CLL				*e*Pg	**Pg**	**20 40 49.0**	**-0.8**
CLL				*e*		20 40 51.0	
CLL				*e*Sg	**Sg**	**20 41 16.0**	**+0.5**

comp=Z,17nm,0.6s

OKC	**Ostrava-Krasne**	**2.11**	**142**	*e*SG	**Sg**	**20 41 18.7**	**-0.8**
OKC	**Ostrava-Krasne**	**2.11**	**142**	Sg	**Sg**	**20 41 18.7**	**-0.8**
VRAC	**Vranov**	**2.23**	**173**	*e*Pn	**Pn**	**20 40 50.0**	**0.0**

baz=354

VRAC				*e*Sg	**Sg**	**20 41 22.6**	**-0.8**

comp=Z,6.9nm,0.3s,baz=354

KRUC	**Moravsky**	**2.46**	**176**	*e*Pn	**Pn**	**20 40 53.6**	**+0.4**

baz=357

KRUC				*e*Sg	**Sg**	**20 41 30.0**	**-0.9**

comp=Z,3.2nm,0.3s,baz=357

OJC	**Ojcow**	**2.65**	**118**	*e*Pg	**Pg**	**20 41 02.8**	**+0.2**
OJC				*e*Sg	**Sg**	**20 41 38.2**	**+1.3**
OJC	**Ojcow**	**2.65**	**118**	*e*Pg	**Pg**	**20 41 02.8**	**+0.2**
OJC				*e*Sg	**Sg**	**20 41 38.2**	**+1.3**
NKC	**Novy Kostel**	**2.67**	**243**	*e*PN	**Pn**	**20 40 56.7**	**+0.6**
NKC				*e*PG	**Pg**	**20 41 02.0**	**-1.1**
NKC				*e*SG	**Sg**	**20 41 38.2**	**+0.5**

comp=Z,14nm,0.3s

NKC	**Novy Kostel**	**2.67**	**243**	Pn	**Pn**	**20 40 56.7**	**+0.6**
KHC	**Kasperske Hory**	**2.90**	**216**	*e*PN	**Pn**	**20 40 59.4**	**+0.2**
KHC				*e*PG	**Pg**	**20 41 05.6**	**-1.8**
KHC				*e*SN	**Sn**	**20 41 35.5**	**+0.7**
KHC				*e*SG	**Sg**	**20 41 43.2**	**-1.8**

comp=Z,4.0nm,0.4s

KHC	**Kasperske Hory**	**2.90**	**216**	Pn	**Pn**	**20 40 59.4**	**+0.2**
MOX	**Moxa**	**2.99**	**255**	*e*PG	**Pg**	**20 41 08.5**	**-0.6**
MOX				*e*SG	**Sg**	**20 41 48.8**	**+1.0**
BSD	**Bornholm Skovb**	**3.68**	**349**	*i* P	**Pn**	**20 41 08.7**	**-1.2**
BSD				*i* S	**Sn**	**20 41 49.0**	**-4.9**
STHS	**Stebnicka Huta**	**3.87**	**121**	*e*PG	**Pg**	**20 41 26.5**	**+0.5**
STHS				*e*SG	**Sg**	**20 42 21.0**	**+4.8**
STHS	**Stebnicka Huta**	**3.87**	**121**	*e*Pg	**Pg**	**20 41 26.5**	**+0.5**
STHS				*e*Sg	**Sg**	**20 42 21.0**	**+4.8**

BJI ***08*** *20:40:37.9, 9.00S×119.00E, h80km, mB4.9/15, mb4.8/32, Ms4.6/12, Ms7 4.2/12*
NEIC ***08*** *20:40:41.7±0.4, 8.98S×119.00E, mb4.5/23, Error ellipse: s-maj=15.7km s-min=7.4km az=56.0*
NEIC Felt [III] at Raba, Sumbawa.
ISCJB ***08*** *20:40:42.1±0.3, 9.14S±0.03×118.97E±0.02, h122km±3km, mb4.6/51, Error ellipse: s-maj=5.6km s-min=3.6km az=9.6*
IDC ***08*** *20:40:42.3±0.7, 8.90S×118.96E, h96km±6km, mb4.2/14, mb1 4.3/14, mb1mx4.2/20, mbtmp4.2/14, MS3.7/4, Ms1 3.7/4, ms1mx3.1/18, Error ellipse: s-maj=24.1km s-min=9.7km az=57.0*
DJA ***08*** *20:40:43, 9.23S×118.97E, h80km, mb5.0/34*
ISC 08 20:40:43.4±0.3, 9.12S±0.04×118.97E±0.02, h114km±3km, h80km±3.0km:pP-P, n136, σ1s39/154, mb4.6/50, 1C, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**1.42**	**113**	P	**Pn**	**20 41 07.2**	**-2.3**
WSI				S	**Sn**	**20 41 25.2**	**-4.1**
MMRI	**Maumere**	**3.26**	**82**	P	**Pn**	**20 41 32.9**	**-0.1**
MMRI				S	**Sn**	**20 42 11.7**	**+0.4**
KHKI	**Kahang-Kahang**	**3.41**	**282**	P	**Pn**	**20 41 33.1**	**-1.8**
DNP	**Denpasar**	**3.74**	**276**	P	**Pn**	**20 41 39.4**	**0.0**
IGBI	**Denpasar**	**3.79**	**274**	P	**Pn**	**20 41 38.9**	**-1.1**
IGBI				S	**Sn**	**20 42 24.1**	**+0.2**
SRBI	**Singaraja**	**3.86**	**285**	P	**Pn**	**20 41 39.6**	**-1.3**
SRBI				S	**Sn**	**20 42 23.3**	**-2.2**
BKSI	**Bulukumba**	**3.94**	**17**	P	**Pn**	**20 41 40.3**	**-1.7**
BKSI				S	**Sn**	**20 42 22.6**	**-4.9**
KAPI	**Kappang**	**4.15**	**11**	*e*Pn	**Pn**	**20 41 41.8**	**-3.0**
KAPI				*e*Sn	**Sn**	**20 42 25.4**	**-7.1**
NBBI	**Negara**	**4.37**	**279**	P	**Pn**	**20 41 46.0**	**-1.7**
NBBI				S	**Sn**	**20 42 38.9**	**+1.2**
BBSI	**Bau Bau**	**5.07**	**45**	P	**Pn**	**20 41 57.6**	**+0.3**

0.9nm2μm251nm,0.8s

SPSI	**Sidrap Palu**	**5.18**	**9**	P	**Pn**	**20 41 58.0**	**-0.7**
KMMI	**Kalianget**	**5.37**	**292**	P	**Pn**	**20 42 00.0**	**-1.2**

0.8nm126nm,1.2s

GMJI	**Gumukmas**	**5.53**	**278**	P	**Pn**	**20 42 01.2**	**-2.2**

1.9nm7μm219nm,0.9s

GMJI				S	**Sn**	**20 43 06.9**	**+1.1**

1.9nm7μm219nm,0.9s

TTSI	**Tana Toraja**	**6.09**	**8**	P	**Pn**	**20 42 11.4**	**+0.3**

0.5nm2μm156nm,0.8s

KDI	**Kendari**	**6.28**	**35**	P	**Pn**	**20 42 15.6**	**+2.0**

0.2nm57nm,0.9s

KBKI	**Kotabaru**	**6.42**	**334**	P	**Pn**	**20 42 14.3**	**-1.2**

0.6nm1μm116nm,1.1s

KRKI	**Karangkates**	**6.52**	**278**	P	**Pn**	**20 42 17.3**	**+0.5**
PWJI	**Pagerwojo**	**7.17**	**278**	P	**Pn**	**20 42 26.3**	**+0.6**

1.0nm3μm151nm,0.9s

SJI	**Sawahan**	**7.26**	**280**	P	**Pn**	**20 42 27.4**	**+0.5**

1.1nm3μm132nm,0.6s

NGJI	**Ngawi**	**7.63**	**283**	P	**Pn**	**20 42 33.0**	**+1.0**

1.1nm112nm,1.0s

PCJI	**Pacitan**	**7.76**	**276**	P	**Pn**	**20 42 33.3**	**-0.4**

136nm,0.9s

PCI	**Palu**	**8.20**	**6**	P	**Pn**	**20 42 43.0**	**+3.3**
SMRI	**Semarang**	**8.69**	**283**	P	**Pn**	**20 42 47.3**	**+0.9**

94nm,1.1s

LUWI	**Luwuk**	**8.87**	**25**	P	**Pn**	**20 42 51.0**	**+2.2**

76nm,0.9s

BJII	**Banjamegara**	**9.34**	**280**	P	**Pn**	**20 42 56.5**	**+1.4**

49nm,2.5s

NLAI	**Namlea**	**9.97**	**55**	P	**Pn**	**20 43 07.2**	**+3.5**
MRSI	**Marisa**	**9.98**	**17**	P	**Pn**	**20 43 04.4**	**+0.6**

1μm125nm,1.1s

AAI	**Ambon**	**10.63**	**60**	P	**Pn**	**20 43 13.4**	**+0.8**
KMSI	**Cibinong**	**10.84**	**28**	P	**Pn**	**20 43 18.9**	**+3.5**
FITZ	**Fitzroy Crossi**	**11.03**	**145**	*e*P	**Pn**	**20 43 14.8**	**-3.1**

56nm,0.7s

FITZ				*e*S	**Sn**	**20 45 10.4**	**-8.9**
FITZ	**Fitzroy Crossi**	**11.03**	**145**	*e*Pn	**Pn**	**20 43 14.9**	**-2.9**
FITZ	**Fitzroy Crossi**	**11.03**	**145**	P	**Pn**	**20 43 15.2**	**-2.6**

2.0nm,0.3s,baz=337,slow=7.0,SNR=70

FITZ				S	**Sn**	**20 45 10.4**	**-8.9**

6.5nm,0.3s,baz=185,slow=17,SNR=9.5

FITZ	**Fitzroy Crossi**	**11.03**	**145**	P	**Pn**	**20 43 15.3**	**-2.6**

79nm,0.7s

CISI	**Cisompet, Garu**	**11.15**	**277**	P	**Pn**	**20 43 20.2**	**+0.7**

77nm,1.0s

KNA	**Kunurra**	**11.61**	**126**	P	**Pn**	**20 43 23.4**	**-2.2**

2μm193nm,0.8s

BNDI	**Bandanaira**	**11.77**	**68**	P	**Pn**	**20 43 29.5**	**+1.7**

569nm,1.4s

STKI	**Sintang**	**11.79**	**320**	P	**Pn**	**20 43 29.8**	**+1.8**

50nm,1.6s

MBWA	**Marble Bar**	**11.99**	**177**	*e*P	**Pn**	**20 43 28.2**	**-2.4**
MBWA				*e*S	**Sn**	**20 45 28.1**	**-15**
MBWA	**Marble Bar**	**11.99**	**177**	*e*Pn	**Pn**	**20 43 28.1**	**-2.6**

15nm,0.6s

MBWA				*e*Sn	**Sn**	**20 45 28.7**	**-14**
MNI	**Manado**	**12.01**	**29**	P	**Pn**	**20 43 32.7**	**+1.8**

3μm46nm,1.0s

CBJI	**Citeko**	**12.31**	**282**	P	**Pn**	**20 43 34.3**	**-0.5**

170nm,1.1s

SKJI	**Sukabumi**	**12.47**	**279**	P	**Pn**	**20 43 37.9**	**+0.9**

3μm103nm,0.9s

TNG	**Tangerang**	**12.56**	**283**	P	**Pn**	**20 43 39.7**	**+1.5**

1μm,0.5s

TNG	**Tangerang**	**12.56**	**283**	P	**Pn**	**20 43 40.0**	**+1.8**

759nm,0.5s

SBUM	**Sibu**	**13.32**	**329**	P	**Pn**	**20 43 50.6**	**+2.5**

16nm,0.8s

CGJI	**Cibinong**	**13.39**	**280**	P	**Pn**	**20 43 51.2**	**+2.2**

1μm58nm,1.0s

RBSI	**Rajabasa**	**13.51**	**283**	P	**Pn**	**20 43 53.2**	**+2.6**
KSM	**Kuching**	**13.61**	**320**	*e*Pn	**Pn**	**20 43 56.9**	**+5.0**

38nm,1.0s

KSM	**Kuching**	**13.61**	**320**	P	**Pn**	**20 44 00.6**	**+8.8**
KAKA	**Kakadu**	**13.70**	**106**	*e*P	**Pn**	**20 43 49.7**	**-3.3**

66nm,0.7s

KAKA				*e*S	**Sn**	**20 46 08.6**	**-15**
KAKA	**Kakadu**	**13.70**	**106**	*e*Pn	**Pn**	**20 43 49.7**	**-3.3**

218nm,0.7s

KAKA				*e*Sn	**Sn**	**20 46 12.4**	**-12**
KAKA	**Kakadu**	**13.70**	**106**	P	**Pn**	**20 43 50.3**	**-2.7**

2μm178nm,0.8s

MYLDM	**Lahad Datu**	**14.21**	**358**	P	**Pn**	**20 44 05.9**	**+6.3**
KLSI		**14.80**	**286**	P	**Pn**	**20 44 09.5**	**+2.3**

68nm,1.6s

KKM	**Kota Kinabalu**	**15.31**	**350**	*e*Pn	**Pn**	**20 44 15.4**	**+1.9**

9.7nm,0.6s

KKM	**Kota Kinabalu**	**15.31**	**350**	P	**Pn**	**20 44 17.3**	**+3.8**
MDSI	**Maura Dua**	**15.39**	**286**	P	**Pn**	**20 44 20.9**	**+6.4**
KSI	**Kapahiang**	**17.16**	**287**	P	**Pn**	**20 44 37.7**	**+1.4**

115nm,0.9s

MEEK	**Meekatharra**	**17.43**	**181**	*e*P	**Pn**	**20 44 40.9**	**+1.4**
MEEK				*e*S	**S**	**20 47 38.5**	**-15**
WRAB	**Tennant Creek**	**18.34**	**128**	*e*Pn	**Pn**	**20 44 50.7**	**+0.2**

41nm,0.9s

WRAB				*e*Sn	**Sn**	**20 48 05.3**	**-11**
WRAB	**Tennant Creek**	**18.34**	**128**	P	**P**	**20 44 49.8**	**+0.7**

50nm,1.2s

KRJI	**Kerinci**	**18.76**	**291**	P	**P**	**20 44 55.2**	**+1.4**

327nm,1.0s

SDSI	**Sungai Dareh**	**19.26**	**294**	P	**P**	**20 44 59.5**	**+0.3**

27nm,1.2s

MORW	**Morawa**	**20.04**	**188**	*e*P	**P**	**20 45 09.8**	**+2.4**
MORW				*e*S	**S**	**20 48 39.9**	**-6.6**
ASAR	**Alice Springs**	**20.33**	**137**	P	**P**	**20 45 12.4**	**+1.8**

47nm,0.8s,baz=330,slow=16,SNR=185

ASAR				pP		20 45 32.4	

15nm,0.8s,baz=317,slow=11,SNR=4.3

ASAR				S	**S**	**20 48 56.9**	**+4.6**

6.5nm,0.9s,baz=309,slow=24,SNR=6.6

ASAR				ScP	ScP	20 52 49.0	+3.3

0.8nm,0.5s,baz=343,slow=2.9,SNR=5.7

KULM	**Kulim**	**23.20**	**307**	*e*P	**P**	**20 45 38.7**	**-1.8**
PSI	**Prapat**	**23.23**	**300**	P	**P**	**20 45 38.9**	**-1.9**

9.5nm,0.3s,mb4.6,baz=15,slow=0.8,SNR=6.1

PSI				LR	LR	20 55 43.2	

comp=Z,135nm,18.1s,baz=266,slow=39

COEN	**Coen**	**24.19**	**104**	*e*P	**P**	**20 45 50.3**	**+0.8**
COEN	**Coen**	**24.19**	**104**	*e*Pn	**P**	**20 45 50.1**	**+0.7**

211nm,0.8s

COEN	**Coen**	**24.19**	**104**	P	**P**	**20 45 49.6**	**+0.1**

156nm,1.0s,mb5.3

TPTI		**24.96**	**299**	P	**P**	**20 45 56.4**	**-0.1**
MTSU	**Mount Surprise**	**26.18**	**113**	*e*P	**P**	**20 46 08.8**	**+1.3**

28nm,0.8s,mb4.8

STKA	**Stephens Creek**	**30.88**	**140**	*e*P	**P**	**20 46 51.2**	**+2.1**

6.1nm,0.6s,mb4.5

STKA	**Stephens Creek**	**30.88**	**140**	*e*P	**P**	**20 46 50.6**	**+1.5**

1.4nm,0.6s,mb3.9

STKA	**Stephens Creek**	**30.88**	**140**	P	**P**	**20 46 50.9**	**+1.8**

6.1nm,0.5s,mb4.6,baz=320,slow=8.4,SNR=26

STKA				LR	LR	21 00 17.3	

comp=Z,120nm,19.3s,baz=28,slow=38

CMSA	**Cobar Meteorol**	**33.37**	**136**	*e*P	**P**	**20 47 13.5**	**+2.6**
CMAR	**Chiang Mai Arr**	**33.78**	**324**	P	**P**	**20 47 14.2**	**-0.4**

1.9nm,0.7s,mb4.1,baz=152,slow=6.7,SNR=11

CMAR				ScP	ScP	20 53 28.6	+2.6

1.5nm,0.8s,baz=176,slow=2.5,SNR=7.6

CMAR				LR	LR	21 01 40.3	

comp=Z,55nm,18.6s,baz=149,slow=37

CHTO	**Chiang Mai**	**34.07**	**325**	P	**P**	**20 47 17.4**	**+0.4**

2.6nm,0.8s,mb4.1

GYA	**Guiyang**	**37.33**	**342**	P	**P**	**20 47 45.6**	**+0.8**
GYA				pP	pP	20 48 02.8	-7.6
GYA				sP	sP	20 48 12.9	-10
GYA				PP	PP	20 49 13.2	+0.9
GYA				PcP	PcP	20 50 02.1	+0.3
GYA				S	**S**	**20 53 27.8**	**+3.6**
GYA				ScP	ScP	20 53 42.0	+3.3
GYA				ScS	ScS	20 57 48.3	+1.2
GYA				pmax	pmax		

comp=Z,10.0nm,1.0s,mb4.7

KMI	**Kunming**	**37.53**	**335**	P	**P**	**20 47 46.3**	**-0.2**
KMI				pP	pP	20 48 05.8	-6.3
KMI				sP	sP	20 48 14.5	-11
KMI				PP	PP	20 49 17.5	+2.9
KMI				S	**S**	**20 53 32.2**	**+4.9**
KMI				sS	sS	20 54 03.6	-8.1
KMI				SS	SS	20 56 08.5	-8.3
KMI				pmax	pmax		

comp=Z,5.0nm,1.3s,mb4.2

KMI				pmax	pmax		

comp=Z,57nm,3.8s

KMI				LR	LR		

comp=N,92nm,12.6s

KMI				LR	LR		

comp=E,100nm,16.4s

KMI				LR	LR		

comp=Z,57nm,15.8s

ENH	**Enshi**	**40.21**	**347**	*e*P	**P**	**20 48 08.0**	**-0.8**

comp=Z,6.1nm,0.7s,mb4.5

NJ2	**Nanjing**	**40.94**	**360**	*e*P	**P**	**20 48 14.7**	**-0.1**
NJ2				pmax	pmax		

comp=Z,10.0nm,0.6s,mb4.8

CD2	**Chengdu**	**42.39**	**340**	P	**P**	**20 48 27.1**	**+0.5**
CD2				pP	pP	20 48 45.5	-7.2
CD2				sP	sP	20 48 54.5	-11
CD2				PP	PP	20 50 09.5	+2.3
CD2				S	**S**	**20 54 43.2**	**+3.5**
CD2				sS	sS	20 55 15.1	-10
CD2				SS	SS	20 57 48.7	-4.6
CD2				pmax	pmax		

comp=Z,20nm,0.5s,mb5.1

CD2				pmax	pmax		

comp=Z,120nm,4.6s

LSA	**Lhasa**	**46.98**	**326**	*e*P	**P**	**20 49 03.3**	**+0.2**

comp=Z,7.2nm,0.6s,mb4.6

KSRS	**Korea Array**	**47.08**	**10**	P	**P**	**20 49 03.7**	**0.0**

comp=Z,2.9nm,0.9s,mb4.0,baz=181,slow=7.9,SNR=13

KSRS				pP	pP	20 49 25.5	-4.7

SBA	**Scott Base**	**72.88**	**171**	*e*P		**P**	**20 52 03.0**	**+3.5**
	comp=Z,2.4nm,0.9s,mb4.0								
BVAR	**Borovoye Array**	**74.39**	**332**	P		**P**	**20 52 07.8**	**-0.8**
	comp=Z,3.4nm,0.7s,mb4.2,baz=134,slow=8.5,SNR=22								
BRVK	**Borovoye**	**74.46**	**332**	*e*P		**P**	**20 52 07.6**	**-1.4**
	comp=Z,6.4nm,1.1s,mb4.3								
ABKAR	**Akbulak array**	**77.64**	**325**	*e*P		**P**	**20 52 25.6**	**-1.5**
	comp=Z,10.0nm,0.9s,mb4.5								
KMBO	**Kilima Mbogo**	**81.65**	**270**	*e*P		**P**	**20 52 51.5**	**+1.8**
	comp=Z,5.1nm,1.0s,mb4.3								
KMBO	**Kilima Mbogo**	**81.65**	**270**	P		**P**	**20 52 51.3**	**+1.6**
	comp=Z,4.8nm,0.9s,mb4.3,baz=0.0,slow=20,SNR=11								
ARU	**Arti**	**81.95**	**331**	*e*P		**P**	**20 52 48.0**	**-2.2**
	comp=Z,8.1nm,1.2s,mb4.4								
MALT	**Malatya**	**88.26**	**309**	P		**P**	**20 53 23.5**	**+1.3**
	comp=Z,3.8nm,1.0s,mb4.4								
LSZ	**Lusaka**	**88.39**	**255**	*e*P		**P**	**20 53 25.1**	**+1.8**
	comp=Z,6.4nm,1.1s,mb4.6								
BOSA	**Boshof**	**88.93**	**241**	LR		LR	21 27 34.3		
	comp=Z,71nm,18.8s,baz=354,slow=32								
MMAI	**Mount Meron Ar**	**89.57**	**303**	P		**P**	**20 53 29.6**	**+1.1**
	comp=Z,0.6nm,0.4s,mb4.1,baz=106,slow=4.7,SNR=4.4								
BRTR	**Keskin Array B**	**92.19**	**310**	P		**P**	**20 53 40.0**	**-0.5**
	comp=Z,1.1nm,0.9s,mb4.1,baz=104,slow=5.2,SNR=5.5								
ARCES	**ARCESS Array B**	**99.69**	**339**	P		Pdif	20 54 12.6	-1.7	
	comp=Z,1.3nm,0.9s,baz=88,slow=5.8,SNR=3.9								
TORD	**Torodi Ar. Bea**	**118.45**	**280**	PKP		PKPdf	20 59 18.8	+0.2	
	comp=Z,0.3nm,0.3s,baz=35,slow=2.0,SNR=10								
CPUP	**Villa Florida**	**144.58**	**186**	PKP		PKPdf	21 00 08.9	+1.6	
	comp=Z,1.6nm,0.5s,baz=192,slow=2.3,SNR=6.9								
CPUP				pPKP		pPKPdf	21 00 33.6	-4.6	
	comp=Z,1.6nm,0.7s,baz=155,slow=7.1,SNR=2.1								
LPAZ	**La Paz**	**153.80**	**164**	PKPbc		PKPbc	21 00 32.9	+2.7	
	comp=Z,0.4nm,0.4s,baz=163,slow=3.8,SNR=2.8								
LPAZ				pPKPbc		pPKPbc	21 00 59.0	-2.0	
	comp=Z,0.8nm,0.6s,baz=213,slow=4.5,SNR=2.9								

ISCJB ***08*** *20:54:43.9±0.3,24°.68N±0°.02×121°.73E±0°.02,h12km±2km, Error ellipse: s-maj=3.3km s-min=2.9km az=34.0*
TAP ***08*** *20:54:43.8,24°.68N×121°.72E,h10km,ML2.8,B*
JMA ***08*** *20:54:45.4±0.4,24°.19N×121°.72E,h38km*
ISC 08 20:54:44.1±0.3,24°.67N±0°.02×121°.74E±0°.02,h11km±2km, n35,σ0°74/57,3C-4D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TWE	**Neicheng**	**0.08**	**306**	⇑ *i*	P	**Pg**	**20 54 46.1**	**-0.5**
	baz=323							
TWE				*i*	S	**Sg**	**20 54 47.6**	**-0.8**
	baz=323							
ILA	**Ilan**	**0.09**	**6**	⇑ *i*	P	**Pg**	**20 54 46.7**	**-0.1**
	baz=26							
ILA				*i*	S	**Sg**	**20 54 48.7**	**0.0**
	baz=26							
TWC	**Suao**	**0.12**	**122**	⇓ *i*	P	**Pg**	**20 54 47.4**	**+0.3**
	baz=126							
TWC				*i*	S	**Sg**	**20 54 50.8**	**+1.6**
	baz=126							
ENTT	**Nioudou**	**0.16**	**258**	⇑ *i*	P	**Pg**	**20 54 47.4**	**-0.4**
	baz=252							
ENTT					S	**Sg**	**20 54 49.8**	**-0.4**
	baz=252							
ENA	**Nanau**	**0.24**	**179**	⇓ *i*	P	**Pg**	**20 54 49.3**	**+0.2**
	baz=167							
ENA				*i*	S	**Sg**	**20 54 52.8**	**+0.2**
	baz=167							
TWA	**Mucha**	**0.34**	**335**	⇓ *i*	P	**Pg**	**20 54 51.0**	**+0.1**
	baz=340							
TWA					S	**Sg**	**20 54 55.2**	**-0.2**
	baz=340							
NSK	**Sanguang**	**0.35**	**271**	⇓ *i*	P	**Pg**	**20 54 50.6**	**-0.4**
	baz=269							
NSK				*i*	S	**Sg**	**20 54 54.4**	**-1.3**
	baz=269							
NWF	**Wu-fen Shan**	**0.40**	**6**	P		**Pg**	**20 54 52.3**	**+0.3**
	baz=9.0							
NWF					S	**Sg**	**20 54 57.7**	**+0.4**
	baz=9.0							
TWB1	**Santiao Chiao**	**0.40**	**34**	P		**Pg**	**20 54 52.5**	**+0.4**
	baz=39							
TWB1				*e*S		**Sg**	**20 54 57.5**	**0.0**
	baz=39							
NNS	**Nan Shan**	**0.41**	**235**	*e*P		**Pg**	**20 54 51.6**	**-0.5**
	baz=231							
NNS				*e*S		**Sg**	**20 54 57.3**	**-0.2**
	baz=231							
TAP1	**Taipei**	**0.41**	**332**	*i* P		**Pg**	**20 54 52.6**	**+0.4**
	baz=333							
TAP1				*i* S		**Sg**	**20 54 58.1**	**+0.3**
	baz=333							
TWS1	**Kuangyinshan**	**0.52**	**326**	*i* P		**Pg**	**20 54 55.0**	**+0.8**
	baz=328							
TWS1				*i* S		**Sg**	**20 55 01.7**	**+0.7**
	baz=328							
NCU	**National Centr**	**0.58**	**301**	*e*P		**Pg**	**20 54 55.5**	**+0.1**
	baz=302							
TWD	**Chiawan**	**0.60**	**192**	P		**Pg**	**20 54 56.2**	**+0.4**
	baz=189							
TWD				*e*S		**Sg**	**20 55 03.4**	**-0.4**
	baz=189							
TWY	**Chenhua**	**0.61**	**348**	P		**Pg**	**20 54 55.9**	**-0.1**
	baz=351							
TWY					S	**Sg**	**20 55 03.9**	**-0.2**
	baz=351							
TWT	**Tachien**	**0.66**	**231**	*e*P		**Pg**	**20 54 57.3**	**+0.3**
	baz=239							
TWT				*e*S		**Sg**	**20 55 05.0**	**-0.6**
	baz=239							
NSTT	**Nanjuang**	**0.67**	**267**	*e*P		**Pg**	**20 54 56.9**	**-0.2**
	baz=258							
NSTT				*e*S		**Sg**	**20 55 05.5**	**-0.4**
	baz=258							
WHF	**Hehuan Shan**	**0.68**	**219**	P		**Pg**	**20 54 57.1**	**-0.1**
	baz=208							
WHF					S	**Sg**	**20 55 06.8**	**+0.6**
	baz=208							
HWA	**Hwalien**	**0.70**	**190**	*e*P		**Pg**	**20 54 57.8**	**+0.1**
	baz=193							
HSN	**Hsinchu**	**0.71**	**281**	*e*P		**Pg**	**20 54 57.0**	**-0.9**
	baz=283							
ESL	**Shilin**	**0.90**	**198**	P		**Pg**	**20 55 00.4**	**-1.1**
	baz=187							
ESL				*e*S		**Sg**	**20 55 13.2**	**0.0**
	baz=187							
TWQ1	**Liyutan**	**0.94**	**250**	*e*P		**Pg**	**20 55 02.4**	**+0.3**
	baz=236							
SMLT	**Sun Moon Lake**	**1.10**	**224**	*e*P		**Pb**	**20 55 04.3**	**-0.8**
	baz=229							
TYC	**Yuchr**	**1.11**	**227**	*e*P		**Pb**	**20 55 04.7**	**-0.6**
	baz=224							
YOJ	**Yonaguni jima**	**1.18**	**100**	P		**Pb**	**20 55 06.3**	**-0.1**
YOJ				*e*S		**Sb**	**20 55 21.6**	**-0.1**
TWF1	**Yuli**	**1.38**	**197**	*e*P		**Pn**	**20 55 09.7**	**+0.5**
	baz=194							
YUS	**Yu-Shan**	**1.38**	**212**	*e*P		**Pn**	**20 55 10.2**	**+0.9**
	baz=209							
ALS	**Alishan**	**1.44**	**217**	*e*P		**Pn**	**20 55 11.1**	**+1.1**
	baz=205							
CHN5	**Tsauling**	**1.44**	**222**	*e*P		**Pn**	**20 55 12.5**	**+2.3**
	baz=214							
ELDTW	**Lidau**	**1.62**	**204**	*e*P		**Pn**	**20 55 12.5**	**-0.1**
	baz=187							
WTP	**Ta-pu**	**1.75**	**216**	*e*P		**Pn**	**20 55 17.1**	**+2.7**
	baz=227							
IRIF	**Iriomote-Funau**	**1.85**	**100**	P		**Pn**	**20 55 15.2**	**-0.5**
IRIF				*e*S		**Sn**	**20 55 38.0**	**-1.0**
CHN1	**Nanshi**	**1.85**	**217**	*e*P		**Pn**	**20 55 16.8**	**+1.1**
	baz=227							
JKRS	**Kuro-shima**	**2.12**	**101**	P		**Pn**	**20 55 19.3**	**-0.1**
JKRS				*e*S		**Sn**	**20 55 44.2**	**-1.4**
JIJ	**Ishigaki jima**	**2.21**	**98**	P		**Pn**	**20 55 21.2**	**+0.5**
JIJ				*e*S		**Sn**	**20 55 45.8**	**-2.2**

NEIC ***08*** *21:13:25.3,18°.64N×66°.94W,h13km±2km,* **MD2.8/6,16C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.23**	**224**	⇑ *e*P		Pg	21 13 30.1	-0.3
AGPR				*e*S		Sg	21 13 33.5	-0.3
AGPR	**Aguadilla, PR**	**0.23**	**224**	⇑ *e*P		Pg	21 13 30.1	-0.3
AGPR				*e*S		Sg	21 13 33.5	-0.3
AOPR	**Arecibo Observ**	**0.34**	**148**	⇑ *e*P		Pg	21 13 31.8	-0.5
AOPR				*e*S		Sg	21 13 36.9	0.0
AOPR	**Arecibo Observ**	**0.34**	**148**	⇑ *e*P		Pg	21 13 31.8	-0.5
AOPR				*e*S		Sg	21 13 36.9	0.0
LRS	**Lares**	**0.36**	**165**	⇑ *e*P		Pg	21 13 31.9	-0.6
LRS				*e*S		Sg	21 13 37.1	-0.3
LRS	**Lares**	**0.36**	**165**	⇑ *e*P		Pg	21 13 31.9	-0.6
LRS				*e*S		Sg	21 13 37.9	+0.5
LSP	**Las Mesas**	**0.48**	**197**	⇑ *e*P		Pg	21 13 35.0	+0.2
LSP				*e*S		Sg	21 13 40.9	-0.4
LSP	**Las Mesas**	**0.48**	**197**	⇑ *e*P		Pg	21 13 35.0	+0.2
LSP				*e*S		Sg	21 13 40.9	-0.4
CRPR	**Cabo Rojo, PR**	**0.65**	**194**	⇑ *e*P		Pg	21 13 37.1	-0.8
CRPR				*e*S		Sg	21 13 46.4	-0.2
CRPR	**Cabo Rojo, PR**	**0.65**	**194**	⇑ *e*P		Pg	21 13 37.1	-0.8
CRPR				*e*S		Sg	21 13 46.4	-0.2
CELP	**Cerrillos**	**0.66**	**148**	⇑ *e*P		Pg	21 13 36.7	-1.4
CELP				*e*S		Sg	21 13 45.7	-1.1
CELP	**Cerrillos**	**0.66**	**148**	⇑ *e*P		Pg	21 13 36.7	-1.4
CELP				*e*S		Sg	21 13 45.7	-1.1
OBIP	**Obispado Ponce**	**0.67**	**152**	*e*S		Sg	21 13 45.8	-1.5
OBIP	**Obispado Ponce**	**0.67**	**152**	*e*S		Sg	21 13 45.8	-1.5
SJG	**San Juan**	**0.92**	**125**	*e*S		Sg	21 13 52.0	-3.0
SJG	**San Juan**	**0.92**	**125**	*e*S		Sg	21 13 52.9	-2.1
SJG	**San Juan**	**0.92**	**125**	*e*S		Sg	21 13 52.0	-3.0
SJG				*e*S		Sg	21 13 52.9	-2.1
CBYP	**Canovanas**	**1.09**	**109**	*e*S		Sb	21 13 57.3	-2.9
CBYP	**Canovanas**	**1.09**	**109**	*e*S		Sb	21 13 57.3	-2.9
HUMP	**Col San Antoni**	**1.15**	**115**	⇑ *e*P		Pb	21 13 44.4	-2.6
HUMP				*e*S		Sb	21 13 58.5	-3.4
HUMP	**Col San Antoni**	**1.15**	**115**	⇑ *e*P		Pb	21 13 44.4	-2.6
HUMP				*e*S		Sb	21 13 58.5	-3.4
MTP	**Monte Pirata**	**1.42**	**112**	⇑ *e*P		Pn	21 13 48.3	-2.6
MTP				*e*S		Sn	21 14 05.9	-3.6
MTP	**Monte Pirata**	**1.42**	**112**	⇑ *e*P		Pn	21 13 48.3	-2.6
MTP				*e*S		Sn	21 14 05.9	-3.6

IDC ***08*** *21:36:26.9±2.6,4°.32S×153°.44E,h0km,mb3.8/5, mb1 3.9/5,mb1mx3.7/15,mbtmp3.8/5,MS3.3/1,Ms1 3.3/1, ms1mx2.5/21,Error ellipse: s-maj=87.0km s-min=25.6km az=101.0*
ISCJB ***08*** *21:36:29.0±8.0,4°.4S±0°.2×154°.1E±0°.5,h57km±54km, mb3.8/8,MS3.2/1,Error ellipse: s-maj=91.4km s-min=27.7km az=4.4*
NEIC ***08*** *21:36:31.5±6.4,4°.39S×154°.09E,h63km±41km,mb4.1/3, Error ellipse: s-maj=78.4km s-min=22.0km az=95.0*
ISC 08 21:36:31.6±6.8,4°.4S±0°.2×154°.1E±0°.6,h63km±43km,n10, σ0°94/9,mb3.8/8,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.49**	**234**	*e*Pn		**Pn**	**21 38 31.8**	**-0.1**
	36nm,0.8s							
PMG				*e*Sn		Sx	21 39 58.4	
WRAB	**Tennant Creek**	**24.66**	**230**	*e*P		**P**	**21 41 47.4**	**+0.8**
	3.6nm,0.6s,mb4.1							
ASAR	**Alice Springs**	**27.32**	**224**	P		**P**	**21 42 09.8**	**-0.8**
	0.8nm,0.5s,mb3.5,baz=45,slow=9.1,SNR=17							
STKA	**Stephens Creek**	**29.75**	**202**	P		**P**	**21 42 32.1**	**0.0**
	1.3nm,0.8s,mb3.7,baz=30,slow=15,SNR=3.8							
FITZ	**Fitzroy Crossi**	**30.98**	**242**	P		**P**	**21 42 42.9**	**-0.3**
	3.0nm,0.6s,mb4.3,baz=54,slow=10,SNR=9.0							
FITZ				LR		LR	21 55 48.3	
	comp=Z,51nm,18.0s,baz=304,slow=38							
FORT	**Forrest**	**35.91**	**220**	*e*P		**P**	**21 43 26.6**	**+0.6**
	8.0nm,0.5s,mb4.9							
SONM	**Songino Array**	**66.67**	**327**	P		**P**	**21 47 17.5**	**+1.8**
	0.1nm,0.4s,mb3.2,baz=136,slow=8.5,SNR=2.5							
MKAR	**Makanchi Array**	**80.87**	**319**	P		**P**	**21 48 38.6**	**-0.2**
	0.1nm,0.5s,mb3.0,baz=105,slow=6.3,SNR=2.8							
KURK	**Kurchatov**	**84.24**	**322**	*e*P		**P**	**21 48 54.4**	**-1.9**
	0.8nm,0.7s,mb4.0							
TORD	**Torodi Ar. Bea**	**151.39**	**289**	PKPbc		PKPbc	21 56 24.1	+4.7
	0.7nm,0.6s,baz=66,slow=1.5,SNR=7.1							

ATH ***08*** *21:38:20.2,38°.90N×26°.17E,h24km,MD3.2/3*
ISCJB ***08*** *21:38:20.8±0.5,38°.91N±0°.02×26°.10E±0°.04,h11km±4km, Error ellipse: s-maj=5.0km s-min=3.2km az=155.5*
CSEM ***08*** *21:38:21.2±0.2,38°.89N×26°.11E,h19km,ML2.8/5,Error ellipse: s-maj=4.3km s-min=2.9km az=60.0*
THE ***08*** *21:38:21.4,38°.91N×26°.10E,h9km±1km,ML2.8/5,Error ellipse: s-maj=1.4km s-min=0.6km az=90.0*
ISK ***08*** *21:38:22.4,38°.98N×26°.31E,h8km,MD2.9*
DDA ***08*** *21:38:24.6,38°.87N×26°.57E,h7km±8km,Md3.0*
ISC 08 21:38:21.2±0.5,38°.90N±0°.02×26°.10E±0°.04,h12km±4km, n40,σ0°69/65,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.36**	**329**	P		**Pg**	**21 38 28.4**	**-0.1**
SIGR				S		**Sg**	**21 38 33.6**	**+0.2**
SIGR	**SIGRI**	**0.36**	**329**	P		**Pg**	**21 38 28.4**	**-0.1**
SIGR				S		**Sg**	**21 38 33.6**	**+0.2**
PRK	**Paraskevi**	**0.37**	**21**	*e*PB		**Pg**	**21 38 28.3**	**-0.3**
PRK				*e*SB		**Sg**	**21 38 33.5**	**-0.1**
PRK	**Paraskevi**	**0.37**	**21**	P		**Pg**	**21 38 28.7**	**+0.1**
PRK				S		**Sg**	**21 38 34.4**	**+0.8**
PRK	**Paraskevi**	**0.37**	**21**	*e*Pb		**Pg**	**21 38 28.3**	**-0.3**
PRK	**Paraskevi**	**0.37**	**21**	P		**Pg**	**21 38 28.7**	**+0.1**
PRK				*e*Sb		**Sg**	**21 38 33.5**	**-0.1**
PRK				S		**Sg**	**21 38 34.4**	**+0.8**
CHOS	**Chios island**	**0.51**	**184**	*e*PN		**Pg**	**21 38 30.9**	**-0.3**
CHOS	**Chios island**	**0.51**	**184**	P		**Pg**	**21 38 30.9**	**-0.3**
CHOS				S		**Sg**	**21 38 39.7**	**+1.7**
CHOS	**Chios island**	**0.51**	**184**	P		**Pg**	**21 38 30.9**	**-0.3**
CHOS				S		**Sg**	**21 38 39.7**	**+1.7**
AYVA	**Ayvalik**	**0.61**	**48**	*i* P		**Pg**	**21 38 33.2**	**0.0**
AYVA				*i* S		**Sg**	**21 38 41.7**	**+0.4**
AYVA	**Ayvalik**	**0.61**	**48**	*i* P		**Pg**	**21 38 33.2**	**+0.1**
AYVA				*i* S		**Sg**	**21 38 41.7**	**+0.5**
URLA	**Izmir**	**0.67**	**144**	*i* P		**Pg**	**21 38 32.6**	**-1.5**
URLA				*i* S		**Sg**	**21 38 42.8**	**0.0**
URLA	**Izmir**	**0.67**	**144**	*i* P		**Pg**	**21 38 32.6**	**-1.5**
URLA				*i* S		**Sg**	**21 38 42.8**	**0.0**
BLCB	**Balcova**	**0.90**	**125**	*e*PG		**Pg**	**21 38 38.6**	**+0.1**
BLCB				*e*SG		**Sg**	**21 38 50.8**	**+0.5**
BLCB	**Balcova**	**0.90**	**125**	P		**Pg**	**21 38 38.8**	**+0.3**
BLCB				S		**Sg**	**21 38 51.0**	**+0.7**
BLCB	**Balcova**	**0.90**	**125**	*e*Pg		**Pg**	**21 38 38.6**	**+0.1**
BLCB				*e*Sg		**Sg**	**21 38 50.8**	**+0.5**
EZN	**Ezine**	**0.94**	**11**	*e*PG		**Pg**	**21 38 39.3**	**0.0**
EZN				*e*SG		**Sg**	**21 38 51.2**	**-0.4**
EZN	**Ezine**	**0.94**	**11**	*e*Pg		**Pg**	**21 38 39.3**	**0.0**
EZN				*e*Sg		**Sg**	**21 38 51.2**	**-0.4**
IZM	**Izmir**	**1.04**	**118**	*e*PG		**Pg**	**21 38 41.0**	**-0.2**
KDAG	**Bornova**	**1.04**	**118**	*i* P		**Pb**	**21 38 40.2**	**-1.0**
KDAG	**Bornova**	**1.04**	**118**	*i* P		**Pb**	**21 38 40.2**	**-0.9**
LIA	**Limnos Island**	**1.22**	**325**	*e*PN		**Pn**	**21 38 44.0**	**-0.1**
LIA	**Limnos Island**	**1.22**	**325**	P		**Pn**	**21 38 44.0**	**-0.1**
LIA				S		**Sb**	**21 39 00.5**	**+0.5**
LIA	**Limnos Island**	**1.22**	**325**	P		**Pn**	**21 38 44.0**	**-0.1**
LIA				S		**Sb**	**21 39 00.5**	**+0.5**
AKS	**Akhisar**	**1.34**	**90**	*e*PN		**Pn**	**21 38 45.4**	**-0.3**
AKS	**Akhisar**	**1.34**	**90**	*e*Pn		**Pn**	**21 38 45.4**	**-0.3**
BALY	**Balya**	**1.45**	**54**	*i* P		**Pn**	**21 38 47.2**	**0.0**
BALY				*i* S		**Sn**	**21 39 09.0**	**+2.9**
BALY	**Balya**	**1.45**	**54**	*i* P		**Pn**	**21 38 47.2**	**0.0**
BALY				*i* S		**Sn**	**21 39 09.0**	**+2.9**
BALB	**Balikesir**	**1.57**	**61**	*e*PN		**Pn**	**21 38 48.5**	**-0.3**
BALB	**Balikesir**	**1.57**	**61**	*e*Pn		**Pn**	**21 38 48.6**	**-0.2**
GONE	**Gonen-Balikesi**	**1.68**	**47**	*e*PN		**Pn**	**21 38 50.5**	**+0.2**
GONE	**Gonen-Balikesi**	**1.68**	**47**	*e*Pn		**Pn**	**21 38 50.6**	**+0.2**
AOS	**Alonnisos**	**1.75**	**280**	P		**Pn**	**21 38 50.8**	**-0.5**
AOS				S		**Sn**	**21 39 14.6**	**+1.0**
AOS	**Alonnisos**	**1.75**	**280**	P		**Pn**	**21 38 50.8**	**-0.5**
AOS				S		**Sn**	**21 39 14.6**	**+1.0**
ALN	**Alexandroupoli**	**2.00**	**359**	P		**Pn**	**21 38 54.5**	**-0.2**
ALN				S		**Sn**	**21 39 19.4**	**-0.2**
ALN	**Alexandroupoli**	**2.00**	**359**	P		**Pn**	**21 38 54.5**	**-0.2**
ALN				S		**Sn**	**21 39 19.4**	**-0.2**
OUR	**Ouranopolis**	**2.17**	**312**	P		**Pn**	**21 38 56.4**	**-0.8**
OUR	**Ouranopolis**	**2.17**	**312**	P		**Pn**	**21 38 56.4**	**-0.8**
KAVA	**Kavala**	**2.42**	**330**	P		**Pn**	**21 39 00.1**	**-0.5**
KAVA	**Kavala**	**2.42**	**330**	P		**Pn**	**21 39 00.1**	**-0.5**

BJI ***08*** *21:48:55.4,31°.73N×83°.83E,h11km,mB4.7/27,mb4.7/39, Ms4.5/41,Ms7 4.3/34*

ISCJB ***08*** *21:48:56.8±0.1,31°.93N±0°.02×83°.96E±0°.02,h10km, mb4.5/77,MS4.1/28,Error ellipse: s-maj=3.2km s-min=2.5km az=39.0*
LDG ***08*** *21:48:56.1±0.1,31°.89N×83°.75E,h10km,Mb4.8/13, Ms3.9/8,Error ellipse: s-maj=7.9km s-min=3.4km az=85.0*
IDC ***08*** *21:48:56.4±0.5,31°.83N×84°.00E,h0km,mb4.3/24, mb1 4.4/28,mb1mx4.4/29,mbtmp4.3/28,ML4.0/4,MS3.9/15, Ms1 4.0/15,ms1mx3.6/33,Error ellipse: s-maj=14.4km s-min=11.8km az=34.0*
NEIC ***08*** *21:48:57.7±0.2,31°.81N×83°.93E,h10km,mb4.7/36, MS4.2/4,Error ellipse: s-maj=6.1km s-min=4.1km az=217.0*
DMN ***08*** *21:48:58.1±0.7,32°.22N×83°.89E,h10km,Ml5.0/3,Error ellipse: s-maj=17.1km s-min=10.2km az=22.0*
TEH ***08*** *21:48:58.0,31°.83N×83°.93E,h10km*
MOS ***08*** *21:48:59.4±1.1,31°.82N×83°.93E,h33km,mb4.8/49,Error ellipse: s-maj=9.0km s-min=4.9km az=122.3*
GCMT ***08*** *21:49:02.0±0.4,31°.70N×83°.92E,h21km±1km,MW4.8, Moment Tensor Solution. s16,c17; s58,c93; Moment tensor: Scale 10^{16}Nm; M_{rr}=0.93±.14; $M_{\theta\theta}$-1.32±.09; $M_{\phi\phi}$2.25±.11; $M_{r\theta}$0.48±.18; $M_{r\phi}$ 1.21±.09; $M_{\theta\phi}$0.09±.17; Best double couple: M_o2.30000×10^{16} NP1:ϕ_s334.00000°, δ70.00000°,λ-165.00000°. NP2:ϕ_s239.00000°, δ75.00000°,λ-21.00000°. Principal axes: T 2.6400, Plg4.0000°, Azm287.0000°; N -0.7500, Plg65.0000°, Azm25.0000°; P -1.8900, Plg25.0000°, Azm196.0000°; Data Used: ll IU GN IC.*
NDI ***08*** *21:49:05.1±2.9,31°.67N×83°.64E,h10km,ML4.4, mb4.7(NEIC)*
ISC 08 21:48:58.7±0.1,31°.94N±0°.02×84°.00E±0°.02,h10km,n273, σ1°15/289,mb4.5/76,MS4.1/28,13C-15D,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GKN	**Gorkha**	**3.96**	**172**	*e*Pn		**Pn**	**21 50 01.3**	**+1.8**
PTH	**Pithoragarh**	**4.04**	**235**	*e*PKP		**Pn**	**21 50 03.0**	**+2.5**
PTH				*ex*		x	21 50 57.4	
JOSI	**Joshimath**	**4.05**	**251**	*e*PKP		**Pn**	**21 50 03.4**	**+2.8**
JOSI				*e*S		**Sn**	**21 50 42.8**	**-5.3**
JOSI				AML		AML	21 51 13.6	
	comp=E,2μm,0.8s							
JOSI				AML		AML	21 51 14.9	
	comp=N,2μm,0.8s							
KOLN	**Koldanda**	**4.17**	**185**	*e*Pn		**Pn**	**21 50 03.5**	**+1.1**
KKN	**Kakani**	**4.28**	**165**	*e*Pn		**Pn**	**21 50 05.8**	**+1.9**
GUN	**Gumba**	**4.33**	**157**	*e*Pn		**Pn**	**21 50 06.9**	**+2.3**
DMN	**Daman**	**4.42**	**167**	*e*Pn		**Pn**	**21 50 07.5**	**+1.7**
PKIN	**Phulchoki**	**4.51**	**164**	*e*Pn		**Pn**	**21 50 09.0**	**+1.9**
PKI	**Pulchoki**	**4.52**	**164**	*e*Pn		**Pn**	**21 50 08.9**	**+1.7**
JIRN	**Jiri**	**4.67**	**155**	*e*Pn		**Pn**	**21 50 11.7**	**+2.4**
KLP	**Kalpa**	**4.92**	**267**	*e*PKP		**Pn**	**21 50 14.2**	**+1.5**
KLP				*ex*		x	21 50 35.6	
RAMN	**Ramite**	**5.47**	**155**	*e*Pn		**Pn**	**21 50 21.0**	**+0.8**
RAMN				*e*Sn		**Sn**	**21 51 23.7**	**+0.6**
	comp=N,493nm,0.6s							
TAPN	**Taplejung**	**5.60**	**144**	*e*Pn		**Pn**	**21 50 23.2**	**+1.2**
TAPN				*e*Sn		**Sn**	**21 51 27.4**	**+1.0**
	comp=N,1μm,1.0s							
ODAN	**Odare**	**5.86**	**149**	*e*Pn		**Pn**	**21 50 26.9**	**+1.3**
ODAN				*e*Sn		**Sn**	**21 51 32.9**	**0.0**
	comp=N,520nm,0.7s							
SDNR	**Sundarnagar**	**6.01**	**268**	*ex*		**Pn**	**21 50 27.5**	**-0.1**
SDNR				*ex*		x	21 51 45.5	
KKR	**Kurukshetra**	**6.47**	**254**	*e*PKP		**Pn**	**21 50 34.6**	**+0.6**
BHK	**Bhakra**	**6.49**	**267**	*ex*		**Pn**	**21 50 29.8**	**-4.4**
LSA	**Lhasa**	**6.54**	**108**	Pn		**Pn**	**21 50 33.5**	**-1.5**
LSA				Sg		**Sg**	**21 52 28.0**	**-0.7**
LSA				LR		LR		
	comp=N,1μm,5.6s							
LSA				LR		LR		
	comp=Z,2μm,6.9s							
LSA	**Lhasa**	**6.54**	**108**	*e*Pn		**Pn**	**21 50 38.1**	**+3.2**
	comp=Z,219nm,0.8s							
LSA	**Lhasa**	**6.54**	**108**	*e*P		**Pn**	**21 50 38.2**	**+3.2**
LSA				pmax		pmax		
	comp=Z,219nm,0.8s							
NDI	**New Delhi**	**6.70**	**243**	*e*PKP		**Pn**	**21 50 38.0**	**+0.8**
NDI				*ex*		x	21 51 50.0

MK31 Makanchi Array 14.89 355 *e*Pn **Pn** **21 52 29.6 +0.4**
MKAR Makanchi Array 14.89 355 Pn **Pn** **21 52 29.7 +0.5**
MKAR LR LR 21 59 12.1
MKAR Makanchi Array 14.89 355 Pn **Pn** **21 52 29.7 +0.5**
comp=Z,0.6nm,0.3s,baz=175,slow=13,SNR=53
MKAR LR LR 21 59 12.0
comp=Z,276nm,18.7s,baz=171,slow=41
LATR Latur 15.05 208 *ex* x 21 52 14.4
HYB Hyderabad 15.28 200 *i*P **Pn** **21 52 28.0 -6.5**
POO Poona 16.19 217 *ex* **Pn** **21 52 41.6 -4.8**
POO *ex* x 21 56 41.5
CD2 Chengdu 16.90 88 ⇓P **Pn** **21 52 55.4 +0.1**
CD2 pP pP 21 52 58.9 -1.2
CD2 sP sP 21 53 02.4 +1.0
CD2 PP 21 53 09.7
CD2 S **Sn** **21 56 02.1 -1.0**
CD2 sS sS 21 56 07.7 -10
CD2 SS 21 56 22.5
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,170nm,4.9s
CD2 LR LR
comp=N,2μm,14.5s
CD2 LR LR
comp=E,1μm,11.4s
CD2 LR LR
comp=Z,910nm,11.5s
LZH Lanzhou 16.96 70 *e*P **Pn** **21 52 59.5 +3.5**
LZH pP pP 21 53 02.2 +1.4
LZH sP sP 21 53 03.8 +1.7
LZH PP 21 53 13.5
LZH *e*S **Sn** **21 56 10.0 +5.4**
LZH sS sS 21 56 17.2 -2.0
LZH SS 21 56 29.7
LZH pmax pmax
comp=Z,130nm,1.3s
LZH pmax pmax
comp=Z,240nm,4.0s
LZH LR LR
comp=N,2μm,11.6s
LZH LR LR
comp=Z,3μm,12.2s
KAD Karad 17.07 214 *e*PKP **Pn** **21 52 58.6 +1.1**
KAD *e*S **Sn** **21 56 05.5 -1.8**
KMI Kunming 17.80 108 P **Pn** **21 53 05.5 -1.1**
KMI pP pP 21 53 08.2 -2.0
KMI sP sP 21 53 09.8 -1.7
KMI PP 21 53 17.6
KMI S **Sn** **21 56 22.9 -2.2**
KMI sS sS 21 56 34.0 -2.5
KMI SS 21 56 47.0
KMI pmax pmax
comp=Z,36nm,0.9s
KMI pmax pmax
comp=Z,94nm,3.1s
KMI LR LR
comp=N,290nm,12.8s
KMI LR LR
comp=E,430nm,13.3s
KMI LR LR
comp=Z,400nm,11.7s
CHRT Chiangrai 18.57 127 ⇑P **Pn** **21 53 14.0 -2.1**
comp=Z,253nm,0.8s
CHTO Chiang Mai 18.76 131 *e*P **Pn** **21 53 15.8 -2.6**
comp=Z,12nm,0.7s
CHTO Chiang Mai 18.76 131 *e*P **Pn** **21 53 15.8 -2.6**
CHTO pmax pmax
comp=Z,12nm,0.7s
CM31 Chiang Mai Arr 19.02 131 *e*P **Pn** **21 53 19.0 -2.5**
comp=Z,17nm,0.9s
CMAR Chiang Mai Arr 19.02 131 P **Pn** **21 53 18.8 -2.8**
comp=Z,0.5nm,0.3s,baz=317,slow=11,SNR=16
CMAR ScP ScP 22 01 21.6 -0.2
comp=Z,0.1nm,0.3s,baz=270,slow=3.6,SNR=3.2
CMAR LR LR 22 01 59.8
comp=Z,370nm,20.7s,baz=317,slow=41
KURK Kurchatov 19.18 350 *e*P **Pn** **21 53 22.6 -0.6**
comp=Z,27nm,1.2s
KURK Kurchatov 19.18 350 P **Pn** **21 53 21.7 -1.5**
comp=Z,0.3nm,0.3s,baz=169,slow=10,SNR=42
KURK Kurchatov 19.18 350⇑ *e*P **Pn** **21 53 22.9 -0.3**
KURK pmax pmax
comp=Z,12nm,0.7s
GYA Guiyang 20.51 100 P **P** **21 53 36.4 -0.6**
GYA PP 21 54 01.0
GYA S **S** **21 57 23.6 -3.0**
GYA SS 21 57 49.7
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,50nm,5.7s
GYA LR LR
comp=N,490nm,12.7s,MS4.2
GYA LR LR
comp=E,390nm,10.6s,MS4.2
GYA LR LR
comp=Z,450nm,11.2s,MS4.1
ISRO Mashad 20.75 289 *e*P **P** **21 53 39.7 +0.2**
IMOG Moghan 20.84 288 *e*P **P** **21 53 40.3 -0.2**
XAN Xi'an 21.00 78 P **P** **21 53 44.0 +1.8**
XAN pP 21 53 54.7
XAN pmax pmax
comp=Z,12nm,1.1s
XAN pmax pmax
comp=Z,28nm,9.0s
IAKL Akhelmad 21.35 289 *e*P **P** **21 53 46.2 +0.2**
NST Nakhon Sawan 21.86 134 P **P** **21 53 51.0 -0.7**
ENH Enshi 21.88 88 *e*P **P** **21 53 51.7 0.0**
comp=Z,57nm,1.0s,mb5.0
ISFR Sfrayin 22.00 291 *e*P **P** **21 53 53.5 +0.5**
ZALV Zalesovo Beam 22.00 1 P **P** **21 53 53.4 +0.6**
comp=Z,44nm,0.7s,mb5.0,baz=178,slow=12,SNR=196
ZALV LR LR 22 03 55.7
comp=Z,168nm,18.2s,MS3.5,baz=202,slow=41
ZALV Zalesovo Beam 22.00 1 P **P** **21 53 53.4 +0.6**
ZALV pmax pmax
comp=Z,44nm,0.7s,mb5.0
ZALV MLR MLR
comp=Z,168nm,18.2s,MS3.5
BTO Baotou 22.63 60 *e*P **P** **21 53 58.6 -1.1**
NVS Novosibirsk 22.90 359⇑ *i*P **P** **21 54 02.3 0.0**
NVS *e*S **S** **21 58 10.8 -1.3**
NVS pmax pmax
comp=N,13nm,1.1s
NVS pmax pmax
comp=Z,16nm,1.1s,mb4.4
NVS pmax pmax
comp=E,11nm,1.3s
NVS smax
comp=N,34nm,2.3s
NVS smax
comp=E,37nm,1.7s
BVAR Borovoye Array 23.26 339 P **P** **21 54 07.3 +1.1**
comp=E,3.7nm,0.7s,mb3.9,baz=155,slow=8.0,SNR=27
BVAR PcP PcP 21 57 53.6 +0.1
comp=E,0.5nm,0.6s,baz=142,slow=4.9,SNR=3.2
SONM Songino Array 23.27 41 P **P** **21 54 07.8 +1.5**
comp=E,4.2nm,0.7s,mb4.0,baz=230,slow=9.3,SNR=35
SONM PcP PcP 21 57 54.5 +0.9
comp=E,0.5nm,0.7s,baz=220,slow=3.2,SNR=3.0
SONM ScP ScP 22 01 32.2 +0.5
comp=E,0.4nm,0.8s,baz=196,slow=1.0,SNR=2.6
SONM LR LR 22 04 06.0
comp=E,333nm,20.6s,MS3.8,baz=234,slow=39
BRVK Borovoye 23.32 339 *e*P **P** **21 54 06.5 -0.4**
comp=E,10nm,0.9s,mb4.3
BRVK Borovoye 23.32 339 *ce*P **P** **21 54 08.3 +1.5**
BRVK pmax pmax
comp=Z,6.0nm,0.8s,mb4.1
MOY Mondy 23.32 27 *e*P **P** **21 54 13.3 +6.4**
ZAK Zakamensk 23.33 32 *e*P **P** **21 54 07.3 +0.3**
ULN Ulaanbaatar 23.65 41 *e*P **P** **21 54 11.4 +1.2**
comp=Z,8.6nm,0.9s,mb4.2
ULN Ulaanbaatar 23.65 41 *e*P **P** **21 54 11.4 +1.2**
ULN pmax pmax
comp=Z,9.0nm,0.9s,mb4.2
HHC Hu-ho-hao-te 23.83 60 *e*P **P** **21 54 11.9 0.0**
HHC pP 21 54 15.8
HHC sP sP 21 54 19.2 +3.0
HHC PP 21 54 45.4
HHC *e*S **S** **21 58 24.0 -3.5**
HHC SS 21 59 13.4
HHC pmax pmax
comp=Z,9.0nm,1.1s,mb4.1
HHC pmax pmax
comp=Z,50nm,4.2s
HHC LR LR
comp=N,2μm,12.3s,MS4.7
HHC LR LR
comp=E,640nm,16.7s,MS4.7
HHC LR LR
comp=Z,600nm,14.7s,MS4.2
IBAF Bafgh 24.15 277 *e*P **P** **21 54 14.0 -0.9**
TLY Talaya 24.42 30 *e*P **P** **21 54 19.2 +2.0**
TLY pmax pmax
comp=Z,4.0nm,0.9s,mb3.9
TLY MLR MLR
comp=Z,237nm,22.0s,MS3.6
ABKAR Akbulak array 24.99 321 *e*P **P** **21 54 22.9 +0.5**
comp=Z,8.2nm,0.6s,mb4.4
IMEH Mehriz 24.99 277 *e*P **P** **21 54 21.5 -1.1**
IGLO Ghaloghah 25.30 289 *e*P **P** **21 54 28.2 +2.8**
IKIA Kiasar 25.42 288 *e*P **P** **21 54 27.9 +1.5**
WHN Wuhan 25.95 85 P **P** **21 54 33.0 +1.7**
WHN LR LR
comp=N,2μm,12.6s,MS5.0
WHN LR LR
comp=E,2μm,11.7s,MS5.0
WHN LR LR
comp=Z,1μm,13.3s,MS4.6
QIZ Qiongzhong 26.56 113 P **P** **21 54 36.4 -0.5**
QIZ sP sP 21 54 40.7 -0.5
QIZ S **S** **21 59 12.9 +1.5**
QIZ sS sS 21 59 17.3 +0.8
QIZ LR LR
comp=Z,260nm,9.6s
AKTK Aktyubinsk 26.68 321 P **P** **21 54 37.8 +0.1**
AKTK LR LR 22 05 10.0
AKTO Aktyubinsk 26.68 321 P **P** **21 54 37.8 +0.1**
comp=Z,5.5nm,0.8s,mb4.2,baz=115,slow=10,SNR=13
AKTO LR LR 22 05 10.0
comp=Z,279nm,19.3s,MS3.8,baz=301,slow=36
AKTO Aktyubinsk 26.68 321 P **P** **21 54 37.8 +0.1**
AKTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
AKTO MLR MLR
comp=Z,279nm,19.3s,MS3.8
BJI Beijing 27.15 64 P **P** **21 54 47.0 +5.0**
BJI pmax pmax
comp=Z,13nm,1.2s,mb4.3
BJI pmax pmax
comp=Z,66nm,4.8s
BJI LR LR
comp=N,1μm,18.1s,MS4.6
BJI LR LR
comp=E,230nm,17.1s,MS4.6
NJ2 Nanjing 29.48 80 *e*P **P** **21 55 05.0 +2.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
ARU Arti 30.20 332 *e*P **P** **21 55 09.5 +0.5**
comp=Z,6.4nm,0.7s,mb4.5
ARU Arti 30.20 332 *di*P **P** **21 55 09.3 +0.3**
ARU *e* 21 56 06.1
ARU S **S** **22 00 11.0 +2.9**
ARU SS SS 22 01 44.8 -32
ARU pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
PSI Prapat 32.21 151 LR LR 22 09 55.7
comp=Z,291nm,20.1s,MS4.0,baz=125,slow=39
GNI Garni 32.57 296 *e*P **P** **21 55 32.5 +2.4**
comp=Z,23nm,1.0s,mb5.1
GNI Garni 32.57 296 *de*P **P** **21 55 32.1 +2.0**
GNI pmax pmax
comp=Z,39nm,1.7s
SOKR Solikamsk 33.06 335⇑ *i*P **P** **21 55 38.2 +4.0**
SOKR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
SOKR MLR MLR
comp=Z,260nm,24.0s,MS3.9
ZEI Tsey 33.38 300 *e*P **P** **21 55 37.5 +0.4**
ZEI pmax pmax
comp=Z,8.0nm,0.4s,mb5.0
NACB Ninganchiao 33.94 94 *e*P **P** **21 55 41.0 -1.2**
comp=Z,12nm,0.7s,mb4.9
KIV Kislovodsk 34.38 302 *e*P **P** **21 55 42.9 -2.9**
comp=Z,11nm,1.1s,mb4.7
KIV Kislovodsk 34.38 302⇓ *e*P **P** **21 55 47.2 +1.4**
KIV *e* 21 57 00.1
KIV *e*SS SS 22 03 26.9 -15
KIV pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CN2 Changchun 34.46 58 *e*P **P** **21 55 42.4 -4.1**
CN2 *e*S **S** **22 01 00.7 -14**
CN2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
CN2 LR LR
comp=N,300nm,16.0s,MS4.3
CN2 LR LR
comp=E,400nm,16.0s,MS4.3
CN2 LR LR
comp=Z,300nm,23.0s
KSRS Korea Array 36.28 69 P **P** **21 56 01.5 -0.8**
comp=Z,3.4nm,0.6s,mb4.5,baz=274,slow=9.4,SNR=17
KSRS Korea Array 36.28 69 P **P** **21 56 01.5 -0.8**
KSRS pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
VRHR Novokhopersk 36.42 314 *e*P **P** **21 56 02.6 -0.7**
VRHR pmax pmax
comp=N,6.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
SOC Sochi 36.49 301 *e*P **P** **21 56 04.1 +0.1**
SOC *e* 21 57 26.1
SOC *e* 21 58 21.6
SOC *e*S **S** **22 01 50.1 +4.2**
SOC *e*SS SS 22 04 07.1 -18
SOC pmax pmax
comp=Z,16nm,0.9s,mb5.0
SOC MLR MLR
comp=Z,432nm,20.0s,MS4.2
MALT Malatya 37.51 293 *e*P **P** **21 56 14.2 +1.5**
comp=Z,4.8nm,0.8s,mb4.3
MALT Malatya 37.51 293 *e*P **P** **21 56 14.2 +1.5**
MALT pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
VORD Divnogorie 37.82 313 *e*P **P** **21 56 15.4 +0.3**
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,20nm,0.8s
VORD pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
VSR Storozhevoye 37.95 314 *e*P **P** **21 56 15.8 -0.5**
VSR pmax pmax
comp=Z,4.0nm,0.4s,mb4.5
VSR pmax pmax
comp=N,6.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR MLR MLR
comp=N,110nm,15.0s,MS4.2
VSR MLR MLR
comp=E,260nm,15.0s,MS4.2
VSR MLR MLR
comp=Z,390nm,15.0s,MS4.3
VLA Vladivostok 39.11 59⇑ *e*P **P** **21 56 26.0 -0.1**
VLA pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
ASF Jabal al Asfar 39.67 283 P **P** **21 56 30.8 -0.1**
comp=Z,1.6nm,0.7s,mb3.9,baz=90,slow=10,SNR=2.4
ASF Jabal al Asfar 39.67 283 P **P** **21 56 30.8 -0.1**
ASF pmax pmax
comp=Z,2.0nm,0.7s
OBN Obninsk 40.42 319⇓ *e*P **P** **21 56 36.6 -0.2**
OBN *e* 21 58 10.0
OBN *e*S **S** **22 02 46.6 +1.7**
OBN pmax pmax
comp=Z,22nm,1.2s,mb4.8
MMAI Mount Meron Ar 40.72 285 P **P** **21 56 39.6 0.0**
comp=Z,3.0nm,0.9s,mb3.9,baz=82,slow=10,SNR=2.3
MMAI PcP PcP 21 58 43.8 +2.7
comp=Z,1.0nm,0.6s,baz=72,slow=4.7,SNR=3.2
MMAI LR LR 22 17 28.6
comp=Z,145nm,18.4s,MS3.9,baz=75,slow=42
KLMR Klimovskoe 40.88 328 *e*P **P** **21 56 40.9 +0.3**
KLMR pmax pmax
comp=Z,16nm,1.3s,mb4.5
BR131 Keskin Array S 41.11 295 *e*P **P** **21 56 43.0 +0.2**
comp=Z,3.0nm,0.7s,mb4.0
BRTR Keskin Array B 41.11 295 P **P** **21 56 42.5 -0.3**
comp=Z,3.3nm,0.9s,mb4.0,baz=123,slow=6.1,SNR=12
BRTR LR LR 22 16 36.1
comp=Z,92nm,18.5s,MS3.7,baz=272,slow=40
BRTR Keskin Array B 41.11 295 P **P** **21 56 42.5 -0.3**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BRTR MLR MLR
comp=Z,92nm,18.5s
AKASG Malin Array Be 44.10 312 P **P** **21 57 06.0 -0.8**
comp=Z,4.2nm,0.5s,mb4.4,baz=83,slow=7.7,SNR=22
AKASG Malin Array Be 44.10 312 P **P** **21 57 06.1 -0.8**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKBB Malin Array Si 44.10 312 *e*P **P** **21 57 06.6 -0.3**
KIEV Kiev 44.11 312 *e*P **P** **21 57 03.9 -3.1**
comp=Z,6.6nm,0.8s,mb4.4
KIEV Kiev 44.11 312 *e*P **P** **21 57 03.9 -3.1**
KIEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
JOF Joensuu 45.25 329 *e*P **P** **21 57 16.0 +0.1**
JOF pmax pmax
comp=Z,7.0nm,0.4s,mb4.8
JOF Joensuu 45.25 329 *ep* **P** **21 57 16.0 +0.1**
comp=Z,6.5nm,0.4s,mb4.8
VRI Vrincioaia 45.75 305⇓ *i*P **P** **21 57 21.6 +1.5**
TESR ⇑ *i*P **P** **21 57 20.6 +0.3**
PLOR Plostina 45.80 305⇑ *i*P **P** **21 57 21.6 +1.1**
MLR Muntele Rosu 46.32 304⇓ *i*P **P** **21 57 25.7 +1.1**
TIXI Tiksi 46.35 18 *e*P **P** **21 57 24.4 -0.1**
comp=Z,2.8nm,0.6s,mb4.4
TIXI Tiksi 46.35 18 *e*P **P** **21 57 24.7 +0.2**
TIXI pmax pmax
comp=Z,11nm,1.5s,mb4.6
BURAR Bucovina Array 46.70 307⇓ *i*P **P** **21 57 28.4 +0.8**
BUR08 Bucovina Ar. S 46.71 307 *e*P **P** **21 57 28.1 +0.5**
VOIR 46.95 304⇑ *i*P **P** **21 57 29.1 -0.5**
FINES FINESS Array B 47.26 326 P **P** **21 57 32.0 +0.3**
comp=Z,7.3nm,0.7s,mb4.7,baz=116,slow=6.5,SNR=13
FINES LR LR 22 17 60.0
comp=Z,305nm,20.5s,MS4.2,baz=96,slow=37
FINES FINESS Array B 47.26 326 P **P** **21 57 32.0 +0.3**
FINES pmax pmax
comp=Z,7.0nm,0.7s
FINES MLR MLR
comp=Z,305nm,20.5s
KAF Kangasniemi 47.29 327 *e*P **P** **21 57 35.6 +3.7**
KAF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
KAF Kangasniemi 47.29 327 *ep* **P** **21 57 35.6 +3.7**
comp=Z,7.2nm,0.9s,mb4.6
LVV L'vov 47.41 310 *e*P **P** **21 57 35.8 +2.7**
SUW Suwalki 47.96 316 *e*P **P** **21 57 35.4 -1.9**
comp=Z,26nm,0.8s,mb5.3
SUW Suwalki 47.96 316 *e*P **P** **21 57 35.4 -1.9**
SUW pmax pmax
comp=Z,26nm,0.8s,mb5.3
KWP Kalwaria Pacla 48.28 310 *e*P **P** **21 57 40.3 +0.5**
comp=Z,16nm,1.1s,mb5.0
KWP Kalwaria Pacla 48.28 310 *e*P **P** **21 57 40.3 +0.5**
KWP pmax pmax
comp=Z,16nm,1.1s,mb5.0
KWP Kalwaria Pacla 48.28 310⇓ *i*P **P** **21 57 40.2 +0.4**
DRGR 48.46 306⇓ *i*P **P** **21 57 42.5 +1.3**
KEV Kevo 49.10 337 *e*P **P** **21 57 44.9 -0.9**
KEV pmax pmax
comp=Z,11nm,1.0s,mb4.8
KEV Kevo 49.10 337 *ep* **P** **21 57 44.9 -0.9**
comp=Z,11nm,1.0s,mb4.8
BZS Buzias 49.34 305⇑ *i*P **P** **21 57 48.6 +0.6**
ARCES ARCESS Array B 49.53 337 P **P** **21 57 49.5 +0.4**
comp=Z,3.2nm,0.8s,mb4.4,baz=98,slow=8.6,SNR=15
ARCES LR LR 22 20 08.6
comp=Z,190nm,19.1s,MS4.1,baz=289,slow=38
ARCES ARCESS Array B 49.53 337 P **P** **21 57 49.5 +0.4**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ARCES MLR MLR
comp=Z,190nm,19.1s
ARE0 ARCESS Array S 49.53 337 *e*P **P** **21 57 49.2 +0.1**
OKC Ostrava-Krasne 51.21 311 *e*P **P** **21 58 05.1 +3.0**
OKC MLR MLR
comp=Z,100nm,13.7s,MS4.0
OKC Ostrava-Krasne 51.21 311 *e*P **P** **21 58 05.1 +3.0**
OKC AMS AMS 22 21 50.0
comp=Z,100nm,13.7s
PKSM Moragy 51.32 306⇓ *i*P **P** **21 58 02.8 -0.2**
MORC Moravsky Berou 51.61 311⇑ *i*P **P** **21 58 05.8 +0.7**
VRAC Vranov 52.28 310⇓ *i*P **P** **21 58 11.4 +1.3**
SEY Seymchan 52.31 33 *de*P **P** **21 58 09.7 -0.4**
DPC Dobruska-Polom 52.33 312 *e*P **P** **21 58 11.0 +0.5**
DPC MLR MLR
comp=Z,200nm,12.5s,MS4.4
DPC Dobruska-Polom 52.33 312 *e*P **P** **21 58 11.0 +0.5**
DPC AMS AMS 22 22 20.0
comp=Z,200nm,12.5s
UPC Upice 52.51 312 *e*P **P** **21 58 14.9 +3.1**
UPC Upice 52.51 312 *e*P **P** **21 58 14.9 +3.1**
TREC Trest 53.00 310 AMS AMS 22 24 10.0
comp=Z,200nm,10.5s
PVCC Panska Ves 53.42 312 AMS AMS 22 23 10.0
comp=Z,200nm,13.1s
PRU Pruhonice 53.51 311 *e*P **P** **21 58 23.1 +3.9**
PRU MLR MLR
comp=Z,200nm,14.1s,MS4.3
PRU Pruhonice 53.51 311 *e*P **P** **21 58 23.1 +3.9**
PRU AMS AMS 22 23 00.0
comp=Z,200nm,14.1s
BRG Berggiesshubel 53.77 312 *e*P **P** **21 58 23.1 +2.0**
comp=Z,4.3nm,1.0s,mb4.3
BRG Berggiesshubel 53.77 312 *e*P **P** **21 58 23.1 +2.0**
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
KHC Kasperske Hory 54.26 310 *e*P **P** **21 58 24.7 0.0**
comp=Z,3.7nm,0.9s,mb4.3
KHC Kasperske Hory 54.26 310 *e*P **P** **21 58 24.7 0.0**
KHC pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KHC Kasperske Hory 54.26 310 *e*P **P** **21 58 24.8 +0.1**
KHC AMS AMS 22 24 10.0
comp=Z,200nm,8.6s
CLL Collm 54.30 313 P **P** **21 58 28.0 +3.1**
CLL Collm 54.30 313 *e*(sP) **P** **21 58 28.0 +3.1**
CLL *e*SS SS 22 09 54.0 +10
CLL LmH 22 20 00.0
comp=N,600nm,21.6s
CLL LmH 22 20 00.0
comp=E,100nm,20.9s
CLL LmV 22 25 00.0
comp=Z,300nm,18.5s
NOA NORSAR Array B 54.38 325 P **P** **21 58 24.8 -0.6**
comp=Z,4.9nm,0.7s,mb4.6,baz=87,slow=7.3,SNR=16
NOA LR LR 22 22 29.3
comp=Z,163nm,18.3s,MS4.1,baz=90,slow=37
NOA NORSAR Array B 54.38 325 P **P** **21 58 24.8 -0.6**
NOA pmax pmax
comp=Z,5.0nm,0.7s
NOA MLR MLR
comp=Z,163nm,18.3s
CEL Celeste 54.95 297 *e*P **P** **21 58 26.4 -3.5**
comp=Z,14nm,1.0s,mb4.9
KMBO Kilima Mbogo 55.10 243 *e*P **P** **21 58 31.4 +0.2**
comp=Z,14nm,1.1s,mb4.9
KMBO Kilima Mbogo 55.10 243 P **P** **21 58 31.0 -0.2**
comp=Z,9.4nm,1.1s,mb4.8,baz=359,slow=23,SNR=14
KMBO Kilima Mbogo 55.10 243 P **P** **21 58 31.0 -0.2**
KMBO pmax pmax
comp=Z,9.0nm,1.1s
PETK Petropavlovsk- 55.67 44 P **P** **21 58 34.2 -0.7**
comp=Z,1.7nm,0.8s,mb4.1,baz=265,slow=7.2,SNR=3.1
PETK Petropavlovsk- 55.67 44 P **P** **21 58 34.2 -0.7**
PETK pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
HINF Hinteralfeld 58.91 310 *e*P **P** **21 58 57.5 -0.3**
HAU Haudompre 59.19 310 *e*P **P** **21 58 59.1 -0.6**
HAU *e*MLR MLR
comp=Z,217nm,19.8s,MS4.0
HAU Haudompre 59.19 310 *e*P **P** **21 58 59.1 -0.6**
HAU MLR MLR
comp=Z,220nm,19.8s,MS4.3
SBF Sospel 59.57 305 *e*P **P** **21 59 01.7 -0.8**
comp=Z,197nm,1.3s,mb5.7
SBF Sospel 59.57 305 *e*P **P** **21 59 01.7 -0.8**
comp=Z,99nm,1.3s,mb5.7
SBF Sospel 59.57 305 *e*P **P** **21 59 01.7 -0.8**

SBF pmax pmax
comp=Z,99nm,1.3s,mb5.7
LPG La Plagne 59.59 307 *e*P **P 21 59 01.8 -0.7**
comp=Z,21nm,0.9s,mb4.9
LPG La Plagne 59.59 307 *e*P **P 21 59 01.8 -0.7**
comp=Z,11nm,0.9s,mb4.9
LPG La Plagne 59.59 307 *e*P **P 21 59 01.8 -0.7**
LPG pmax pmax
comp=Z,11nm,0.9s,mb4.9
LPL La Plagne 59.59 307 *e*P **P 21 59 01.9 -0.7**
comp=Z,24nm,0.9s,mb4.9
LPL La Plagne 59.59 307 *e*P **P 21 59 01.9 -0.7**
comp=Z,12nm,0.9s,mb4.9
LPL La Plagne 59.59 307 *e*P **P 21 59 01.9 -0.7**
LPL pmax pmax
comp=Z,12nm,0.9s,mb4.9
CABF La Chapelle 59.73 309 *e*P **P 21 59 02.3 -1.2**
MBAR Mbarara 59.80 248⍰ *e*P **P 21 59 02.9 -1.5**
MEZF Maizieres J'vi 59.90 311 *e*P **P 21 59 04.0 -0.6**
BAIF Baives 60.02 313 *e*P **P 21 59 04.5 -1.0**
KEST Kesra 60.72 296 P **P 21 59 10.2 -0.2**
comp=Z,1.0nm,0.8s,mb4.0,baz=224,slow=23,SNR=4.2
KEST LR LR 22 29 16.5
comp=Z,21nm,18.3s,MS3.3,baz=334,slow=40
LOR Lormes 61.01 310 *e*P **P 21 59 11.4 -0.8**
LOR *e*MLR MLR
comp=Z,208nm,19.5s,MS4.0
LOR Lormes 61.01 310 *e*P **P 21 59 11.4 -0.8**
LOR MLR MLR
comp=Z,210nm,19.5s,MS4.3
SMF Signal de Mont 61.20 309 *e*P **P 21 59 12.4 -1.2**
comp=Z,16nm,1.1s,mb4.8
SMF Signal de Mont 61.20 309 *e*P **P 21 59 12.4 -1.2**
comp=Z,7.8nm,1.0s,mb4.8
SMF Signal de Mont 61.20 309 *e*P **P 21 59 12.4 -1.2**
SMF pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
SSF Saint Saulge 61.30 310 *e*P **P 21 59 13.0 -1.2**
comp=Z,12nm,1.1s,mb4.7
SSF Saint Saulge 61.30 310 *e*P **P 21 59 13.0 -1.2**
comp=Z,6.2nm,1.1s,mb4.7
SSF Saint Saulge 61.30 310 *e*P **P 21 59 13.0 -1.2**
SSF pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
AVF Avril sur Loir 61.48 310 *e*P **P 21 59 14.3 -1.1**
comp=Z,12nm,1.0s,mb4.7
AVF Avril sur Loir 61.48 310 *e*P **P 21 59 14.3 -1.1**
comp=Z,5.8nm,1.0s,mb4.7
AVF Avril sur Loir 61.48 310 *e*P **P 21 59 14.3 -1.1**
AVF pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
BGF Bois d'Agland 61.88 309 *e*P **P 21 59 16.8 -1.4**
LASF Ste Croix 61.98 306 *e*P **P 21 59 18.0 -0.8**
TCF Toulx Ste Croi 62.39 309 *e*P **P 21 59 20.9 -0.6**
comp=Z,9.9nm,1.0s,mb4.6
TCF Toulx Ste Croi 62.39 309 *e*P **P 21 59 20.9 -0.6**
comp=Z,4.9nm,1.0s,mb4.6
TCF Toulx Ste Croi 62.39 309 *e*P **P 21 59 20.9 -0.6**
TCF pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
CAF Calviac 62.92 308 *e*P **P 21 59 24.0 -1.1**
LDF La Druitiere 63.16 312 *e*P **P 21 59 25.8 -0.8**
comp=Z,3.1nm,0.5s,mb4.4
LDF La Druitiere 63.16 312 *e*P **P 21 59 25.8 -0.8**
comp=Z,1.5nm,0.5s,mb4.4
LDF La Druitiere 63.16 312 *e*P **P 21 59 25.8 -0.8**
LDF pmax pmax
comp=Z,2.0nm,0.5s,mb4.5
RJF Les Rejaudoux 63.16 308 *e*P **P 21 59 25.3 -1.4**
RJF *e*MLR MLR
comp=Z,120nm,19.2s,MS3.8
RJF Les Rejaudoux 63.16 308 *e*P **P 21 59 25.3 -1.4**
RJF MLR MLR
comp=Z,120nm,19.3s,MS4.1
FLN La Foliniere 63.33 313 *e*P **P 21 59 27.5 -0.3**
FLN *e*MLR MLR
comp=Z,125nm,19.2s,MS3.8
FLN La Foliniere 63.33 313 *e*P **P 21 59 27.5 -0.3**
FLN MLR MLR
comp=Z,130nm,19.3s,MS4.1
GRR Gorron 63.69 312 *e*P **P 21 59 29.2 -1.0**
FITZ Fitzroy Crossi 63.78 135 P **P 21 59 30.3 -0.8**
comp=Z,2.3nm,1.1s,mb4.1,baz=354,slow=10,SNR=3.5
LFF La Frestale 63.80 308 *e*P **P 21 59 30.2 -0.8**
MFF Saint Martin d 63.83 310 *e*P **P 21 59 29.9 -1.2**
EPF Esparros 64.73 306 *e*P **P 21 59 36.0 -1.1**
SGMF Saint Gilles 64.80 312 *e*P **P 21 59 37.7 +0.2**
ROSF Rostrenen 65.22 313 *e*P **P 21 59 39.9 -0.3**
QUIF Quistinic 65.30 312 *e*P **P 21 59 40.5 -0.2**
ETSF Etsaut 65.40 306 *e*P **P 21 59 39.4 -2.0**
comp=Z,8.0nm,0.9s,mb4.5
ETSF Etsaut 65.40 306 *e*P **P 21 59 39.4 -2.0**
comp=Z,4.0nm,0.9s,mb4.5
ETSF Etsaut 65.40 306 *e*P **P 21 59 39.4 -2.0**
ETSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
SUMG Summit 68.62 344 *e*P **P 22 00 02.7 +1.3**
comp=Z,8.3nm,0.8s,mb4.7
SUMG Summit 68.62 344 *i* P **P 22 00 02.7 +1.3**
comp=Z,9.7nm,0.9s,mb4.7
ESDC Sonseca Array 69.02 304 P **P 22 00 03.7 -0.8**
ESDC LR LR 22 36 22.8
ESDC Sonseca Array 69.02 304 P **P 22 00 03.7 -0.8**
comp=Z,1.7nm,0.8s,mb4.0,baz=55,slow=6.8,SNR=7.3
ESDC LR LR 22 36 22.8
comp=Z,60nm,18.7s,MS3.9,baz=80,slow=41
WRAB Tennant Creek 70.61 130 *e*P **P 22 00 13.3 -1.1**
comp=Z,5.5nm,0.6s,mb4.7
WRAB Tennant Creek 70.61 130 *e*P **P 22 00 13.3 -1.1**
WRAB pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LSZ Lusaka 71.14 238 *e*P **P 22 00 16.9 -0.8**
comp=Z,3.2nm,0.8s,mb4.3
LSZ Lusaka 71.14 238 *e*P **P 22 00 17.0 -0.7**
LSZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
ASAR Alice Springs 73.03 133 P **P 22 00 27.9 -1.0**
comp=Z,1.5nm,0.5s,mb4.1,baz=318,slow=5.8,SNR=16
ASAR Alice Springs 73.03 133 P **P 22 00 27.9 -1.0**
ASAR pmax pmax
comp=Z,2.0nm,0.5s
COLD Coldfoot 73.06 19 *e*P **P 22 00 28.9 +0.4**
comp=Z,4.0nm,0.9s,mb4.3
BPAW Bear Paw Mtn. 75.00 22 *e*P **P 22 00 39.6 -0.3**
comp=Z,2.6nm,0.9s,mb4.2
COLA College 75.41 20 *e*P **P 22 00 41.5 -0.7**
comp=Z,6.2nm,0.7s,mb4.7
COLA College 75.41 20 *e*P **P 22 00 41.6 -0.6**
COLA pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
PPLA Purkeypile 75.45 23 *e*P **P 22 00 42.4 -0.1**
comp=Z,3.7nm,0.8s,mb4.4
ILAR Eielson Array 75.77 20 P **P 22 00 43.9 -0.4**
comp=Z,2.6nm,0.8s,mb4.2,baz=308,slow=4.8,SNR=26
ILAR Eielson Array 75.77 20 P **P 22 00 43.9 -0.4**
ILAR pmax pmax
comp=Z,3.0nm,0.8s
TORD Torodi Ar. Bea 76.71 277 P **P 22 00 48.8 -1.7**
comp=Z,2.0nm,0.7s,mb4.2,baz=47,slow=4.5,SNR=14
DAWY Dawson 78.39 18 *e*P **P 22 00 59.1 0.0**
BOSA Boshof 82.12 229 P **P 22 01 18.2 -1.4**
comp=Z,7.2nm,0.7s,mb4.7,baz=67,slow=4.1,SNR=22
BOSA Boshof 82.12 229 P **P 22 01 18.3 -1.3**
BOSA pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
SKAG Skagway 83.29 19 *e*P **P 22 01 26.4 +1.1**
comp=Z,12nm,1.0s,mb4.9
STKA Stephens Creek 83.63 134 P **P 22 01 26.4 -1.0**
comp=Z,4.3nm,1.1s,mb4.5,baz=350,slow=16,SNR=4.4
YKA Yellowknife Ar 84.71 9 P **P 22 01 31.7 -0.8**
YKA Yellowknife Ar 84.71 9 P **P 22 01 31.7 -0.8**
comp=Z,3.5nm,0.9s,mb4.5,baz=341,slow=5.0,SNR=9.7
YKA Yellowknife Ar 84.71 9 P **P 22 01 31.7 -0.8**
YKA pmax pmax
comp=Z,4.0nm,0.9s
DBIC Dimbokro 85.55 275 P **P 22 01 37.8 +0.2**
comp=Z,4.2nm,0.9s,mb4.7,baz=101,slow=5.2,SNR=3.9
DBIC LR LR 22 44 03.7
comp=Z,132nm,19.0s,MS4.3,baz=42,slow=39
DBIC Dimbokro 85.55 275 P **P 22 01 37.8 +0.2**
DBIC pmax pmax
comp=Z,4.0nm,0.9s
DBIC MLR MLR
comp=Z,132nm,19.0s
SCHQ Schefferville 90.01 344 P **P 22 01 58.4 +0.2**
SCHQ Schefferville 90.01 344 P **P 22 01 58.4 +0.2**
comp=Z,2.6nm,0.8s,mb4.6,baz=324,slow=14,SNR=3.1
FFC Flin Flon 93.54 3 *i* P **P 22 02 15.5 +0.9**
TXAR Lajitas Array 118.63 8 PKP PKPdf 22 07 46.1 -1.2
comp=Z,0.2nm,0.6s,baz=331,slow=3.5,SNR=2.0
SIV San Ignacio 144.54 288 PKP PKPdf 22 08 34.3 -1.7
comp=Z,1.3nm,0.8s,baz=115,slow=5.2,SNR=3.6
CPUP Villa Florida 145.89 269 PKPbc PKPab 22 08 39.6 +0.4
comp=Z,2.5nm,0.6s,baz=65,slow=5.6,SNR=6.7
CPUP Villa Florida 145.89 269 PKP2 PKPab 22 08 39.6 +0.5
CPUP pmax pmax
comp=Z,3.0nm,0.6s
LPAZ La Paz 150.29 295 PKPbc PKPbc 22 08 51.0 +0.3
comp=Z,0.7nm,0.4s,baz=38,slow=3.5,SNR=3.2
LPAZ La Paz 150.29 295 PKIKP PKPbc 22 08 51.0 +0.3
LPAZ pmax pmax
comp=Z,1.0nm,0.4s

RSPR 08 21:50:50.1,19°.99N×70°.45W,h113km±4km,MD3.5/3,2C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDDR	**Presa de Saban**	**1.28**	**218**⍰	*e*P	Pn	21 51 14.1	-0.5
SDDR	**Presa de Saban**	**1.28**	**218**	*e*S	Sn	21 51 32.6	-0.6
GRTK	**Grand Turk**	**1.64**	**337**⍰	*e*P	Pn	21 51 18.4	-0.4
GRTK	**Grand Turk**	**1.64**	**337**	*e*S	Sn	21 51 40.3	-0.3

*UCC **08** 22:01:21.8±0.5,51°.95N×1°.68E,h0km±10km,ML1.9*
*CSEM **08** 22:01:24.4±0.2,51°.81N×1°.77E,h17km±1km,ML2.7/18, Error ellipse: s-maj=3.2km s-min=2.3km az=51.0*
*NEIC **08** 22:01:25.1,51°.89N×1°.73E,h10km,ML2.7(LDG),After LDG.*
*LDG **08** 22:01:25.1±0.1,51°.89N×1°.73E,h10km,Ml2.7/24,Error ellipse: s-maj=1.8km s-min=1.3km az=41.0*

BGS 08 22:01:27.1±0.6,51°.95N×1°.68E,h9km±4km,ML2.2,United Kingdom

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AEU	**East Anglia Un**	**0.73**	**338**	P	Pg	22 01 40.5	-0.6
AEU				S	Sg	22 01 50.5	0.0
AEU				AML	AML	22 01 51.5	
	67nm,0.3s						
AEU				AML	AML	22 01 51.7	
	74nm,0.4s						
AEU	**East Anglia Un**	**0.73**	**338**	*e*P	Pg	22 01 40.5	-0.6
AEU				*e*S	Sg	22 01 50.5	0.0
AEU				AML	AML	22 01 51.5	
	comp=N,67nm,0.3s						
AEU				AML	AML	22 01 51.7	
	comp=E,74nm,0.4s						
AEU	**East Anglia Un**	**0.73**	**338**	P	Pg	22 01 40.5	-0.6
AEU				S	Sg	22 01 50.5	0.0
AEU				AML	AML	22 01 51.5	
	comp=E,67nm,0.3s						
AEU				AML	AML	22 01 51.7	
	comp=E,74nm,0.4s						
AEU	**East Anglia Un**	**0.73**	**338**	*e*P	Pg	22 01 40.5	-0.6
AEU				*e*S	Sg	22 01 50.5	0.0
AEU				AML	AML	22 01 51.5	
	comp=N,67nm,0.3s						
AEU				AML	AML	22 01 51.7	
	comp=E,74nm,0.4s						
AEU	**East Anglia Un**	**0.73**	**338**	P	Pg	22 01 40.5	-0.6
AEU				S	Sg	22 01 50.5	0.0
AEU	**East Anglia Un**	**0.73**	**338**	*e*P	Pg	22 01 40.5	-0.6
AEU				*e*S	Sg	22 01 50.5	-0.1
ELSH	**Elham, Standar**	**0.87**	**203**	P	Pg	22 01 42.6	-1.2
ELSH				S	Sg	22 01 54.6	-0.5
ELSH				AML	AML	22 01 57.7	
	comp=E,88nm,0.5s						
ELSH				AML	AML	22 01 58.0	
	comp=E,93nm,0.6s						
ELSH	**Elham, Standar**	**0.87**	**203**	*e*P	Pg	22 01 42.6	-1.2
ELSH				*e*S	Sg	22 01 54.6	-0.5
ELSH				AML	AML	22 01 57.7	
	comp=E,88nm,0.5s						
ELSH				AML	AML	22 01 58.0	
	comp=N,93nm,0.6s						
ELSH	**Elham, Standar**	**0.87**	**203**	P	Pg	22 01 42.6	-1.2
ELSH				S	Sg	22 01 54.6	-0.5
ELSH				AML	AML	22 01 57.7	
	comp=N,88nm,0.5s						
ELSH				AML	AML	22 01 58.0	
	comp=N,93nm,0.6s						
ELSH	**Elham, Standar**	**0.87**	**203**	*e*P	Pg	22 01 42.6	-1.2
ELSH				*e*S	Sg	22 01 54.6	-0.5
ELSH				AML	AML	22 01 57.7	
	comp=E,88nm,0.5s						
ELSH				AML	AML	22 01 58.0	
	comp=N,93nm,0.6s						
ELSH	**Elham, Standar**	**0.87**	**203**	P	Pg	22 01 42.6	-1.2
ELSH				S	Sg	22 01 54.6	-0.5
AWI1	**Witton**	**0.90**	**351**	P	Pg	22 01 43.2	-1.2
AWI1	**Witton**	**0.90**	**351**	*e*P	Pg	22 01 43.2	-1.2
AWI1	**Witton**	**0.90**	**351**	P	Pg	22 01 43.2	-1.2
AWI1	**Witton**	**0.90**	**351**	*e*P	Pg	22 01 43.2	-1.1
ABA1	**Baconsthorpe**	**1.00**	**341**	P	Pg	22 01 45.1	-1.2
ABA1	**Baconsthorpe**	**1.00**	**341**	*e*P	Pg	22 01 45.1	-1.2
ABA1	**Baconsthorpe**	**1.00**	**341**	P	Pg	22 01 45.1	-1.2
ABA1	**Baconsthorpe**	**1.00**	**341**	*e*P	Pg	22 01 45.1	-1.2
CWF	**Charnwood Fore**	**2.00**	**295**	P	Pn	22 01 58.9	-2.1
CWF				S	Sn	22 02 22.9	-3.2
CWF				AML	AML	22 02 31.6	
	comp=N,12nm,0.4s						
CWF				AML	AML	22 02 31.8	
	comp=N,17nm,0.2s						
CWF	**Charnwood Fore**	**2.00**	**295**	*e*P	Pn	22 01 58.9	-2.1
CWF				*e*S	Sn	22 02 22.9	-3.2
CWF				AML	AML	22 02 31.6	
	comp=E,12nm,0.4s						
CWF				AML	AML	22 02 31.8	
	comp=N,17nm,0.2s						
CWF	**Charnwood Fore**	**2.00**	**295**	P	Pn	22 01 58.9	-2.1
CWF				S	Sn	22 02 22.9	-3.2
CWF				AML	AML	22 02 31.6	
	comp=N,12nm,0.4s						
CWF				AML	AML	22 02 31.8	
	comp=N,17nm,0.2s						
CWF	**Charnwood Fore**	**2.00**	**295**	*e*P	Pn	22 01 58.9	-2.1
CWF				*e*S	Sn	22 02 22.9	-3.2
CWF				AML	AML	22 02 31.6	
	comp=E,12nm,0.4s						
CWF				AML	AML	22 02 31.8	
	comp=N,17nm,0.2s						
CWF	**Charnwood Fore**	**2.00**	**295**	P	Pn	22 01 58.9	-2.1
CWF				S	Sn	22 02 22.9	-3.2
CWF	**Charnwood Fore**	**2.00**	**295**	*e*P	Pn	22 01 58.9	-2.1
CWF				*e*S	Sn	22 02 22.9	-3.2
SWN1	**Swindon**	**2.21**	**260**	AML	AML	22 02 45.6	
	comp=N,32nm,0.7s						
SWN1				AML	AML	22 02 46.8	
	comp=N,40nm,0.6s						
SWN1	**Swindon**	**2.21**	**260**	AML	AML	22 02 45.6	
	comp=E,32nm,0.7s						
SWN1				AML	AML	22 02 46.8	
	comp=N,40nm,0.6s						
SWN1	**Swindon**	**2.21**	**260**	AML	AML	22 02 45.6	
	comp=N,32nm,0.7s						
SWN1				AML	AML	22 02 46.8	
	comp=N,40nm,0.6s						
SWN1	**Swindon**	**2.21**	**260**	AML	AML	22 02 45.6	
	comp=E,32nm,0.7s						
SWN1				AML	AML	22 02 46.8	
	comp=N,40nm,0.6s						
BAIF	**Baives**	**2.48**	**139**	*e*Pg	Pg	22 02 09.6	-4.9
BAIF				*e*Sn	Sn	22 02 30.6	-7.3
BAIF				*e*Sg	Sg	22 02 41.6	-4.9
	comp=N,11nm,0.4s,SNR=1.0						
BAIF	**Baives**	**2.48**	**139**	*e*Pg	Pg	22 02 09.6	-4.9
BAIF				*e*Sn	Sn	22 02 30.6	-7.3
BAIF				*e*Sg	Sg	22 02 41.6	-4.9
	comp=N,11nm,0.4s,SNR=1.0						
BAIF	**Baives**	**2.48**	**139**	*e*Pn	Pn	22 02 02.7	-4.9
BAIF				*e*Pg	Pg	22 02 09.6	-4.9
BAIF				*e*Sn	Sn	22 02 30.6	-7.3
BAIF				*e*Sg	Sg	22 02 41.6	-4.9
BAIF	**Baives**	**2.48**	**139**	*e*Pn	Pn	22 02 02.7	-4.9
	SNR=1.0						
BAIF	**Baives**	**2.48**	**139**	*e*Pg	Pg	22 02 09.6	-4.9
BAIF				*e*Sn	Sn	22 02 30.6	-7.3
BAIF				*e*Sg	Sg	22 02 41.6	-4.9
	comp=N,5.5nm,0.4s,SNR=1.0						
DOU	**Dourbes**	**2.61**	**134**	P	Pn	22 02 04.4	-5.0
DOU				PG	Pg	22 02 12.0	-5.1
DOU				S	Sn	22 02 34.5	-6.7
DOU				SG	Sg	22 02 43.6	-7.3
	comp=Z,11nm,0.4s						
DOU	**Dourbes**	**2.61**	**134**	P	Pn	22 02 04.4	-5.1
GIVF	**Givet**	**2.71**	**132**	*e*Pg	Pg	22 02 14.4	-4.6
	SNR=1.0						
GIVF				*e*Sn	Sn	22 02 36.3	-7.4
	SNR=1.0						
GIVF				*e*Sg	Sg	22 02 48.9	-5.2
	comp=Z,11nm,0.2s,SNR=1.0						
GIVF	**Givet**	**2.71**	**132**	*e*Pg	Pg	22 02 14.4	-4.6
	SNR=1.0						
GIVF				*e*Sn	Sn	22 02 36.3	-7.4
	SNR=1.0						
GIVF				*e*Sg	Sg	22 02 48.9	-5.2
	comp=Z,5.3nm,0.2s,SNR=1.0						
BCLA	**Clavier**	**2.75**	**122**	P	Pn	22 02 06.0	-5.3
BCLA				PG	Pg	22 02 14.1	-5.6
BCLA				S	Sn	22 02 37.5	-7.0
BCLA				SG	Sg	22 02 44.4	-11
	comp=N,5.7nm,0.3s						
BCLA	**Clavier**	**2.75**	**122**	P	Pn	22 02 06.0	-5.3
MCH1	**Michaelchurch**	**2.90**	**273**	P	Pn	22 02 12.5	-0.9
MCH1				S	Sn	22 02 44.1	-4.1
MCH1				AML	AML	22 02 55.9	
	comp=N,8.8nm,0.3s						
MCH1				AML	AML	22 02 56.5	
	comp=N,9.4nm,0.4s						
MCH1	**Michaelchurch**	**2.90**	**273**	*e*P	Pn	22 02 12.5	-0.9
MCH1				*e*S	Sn	22 02 44.1	-4.1
MCH1				AML	AML	22 02 55.9	
	comp=E,8.8nm,0.3s						
MCH1				AML	AML	22 02 56.5	
	comp=N,9.4nm,0.4s						
MCH1	**Michaelchurch**	**2.90**	**273**	P	Pn	22 02 12.5	-0.9
MCH1				S	Sn	22 02 44.1	-4.1
MCH1				AML	AML	22 02 55.9	
	comp=N,8.8nm,0.3s						
MCH1				AML	AML	22 02 56.5	
	comp=N,9.4nm,0.4s						
MCH1	**Michaelchurch**	**2.90**	**273**	*e*P	Pn	22 02 12.5	-0.8
MCH1				*e*S	Sn	22 02 44.1	-4.1
FLN	**La Foliniere**	**3.48**	**204**	*e*Pn	Pn	22 02 17.6	-3.7
	baz=24,SNR=1.0						
FLN				*e*Sn	Sn	22 02 54.8	-7.8
	SNR=1.0						
FLN				*e*Sg	Sg	22 03 13.3	-5.4
	comp=N,6.6nm,0.4s,SNR=1.0						
FLN	**La Foliniere**	**3.48**	**204**	*e*Pn	Pn	22 02 17.6	-3.7
	baz=24,SNR=1.0						
FLN				*e*Sn	Sn	22 02 54.8	-7.8
	SNR=1.0						
FLN				*e*Sg	Sg	22 03 13.3	-5.4
	comp=N,3.3nm,0.4s,SNR=1.0						
LDF	**La Druitiere**	**3.55**	**200**	*e*Pg	Pg	22 02 30.5	-4.6
LDF				*e*Sn	Sn	22 02 56.3	-8.1
	SNR=1.0						
LDF				*e*Sg	Sg	22 03 15.4	-5.7
	comp=N,4.0nm,0.2s,SNR=1.0						
LDF	**La Druitiere**	**3.55**	**200**	*e*Pn	Pn	22 02 17.6	-4.8
LDF				*e*Pg	Pg	22 02 30.5	-4.6
LDF				*e*Sn	Sn	22 02 56.3	-8.1
LDF				*e*Sg	Sg	22 03 15.4	-5.7
LDF	**La Druitiere**	**3.55**	**200**	*e*Pn	Pn	22 02 17.6	-4.8
	SNR=1.0						
LDF	**La Druitiere**	**3.55**	**200**	*e*Pg	Pg	22 02 30.5	-4.6
LDF				*e*Sn	Sn	22 02 56.3	-8.1
	SNR=1.0						
LDF				*e*Sg	Sg	22 03 15.4	-5.7
	comp=N,2.0nm,0.2s,SNR=1.0						
GRR	**Gorron**	**3.92**	**206**	*e*Pn	Pn	22 02 22.6	-4.8
GRR				*e*Sn	Sn	22 03 05.3	-8.2
	SNR=1.0						
GRR				*e*Sg	Sg	22 03 26.9	-6.0
	comp=N,3.1nm,0.2s,SNR=1.0						
GRR	**Gorron**	**3.92**	**206**	*e*Pn	Pn	22 02 22.6	-4.8
GRR				*e*Sn	Sn	22 03 05.3	-8.2
	SNR=1.0						
GRR				*e*Sg	Sg	22 03 26.9	-6.0
	comp=N,1.5nm,0.2s,SNR=1.0						
MEZF	**Maizieres J'vi**	**4.07**	**147**	*e*Pn	Pn	22 02 24.3	-5.2
	baz=332						
MEZF	**Maizieres J'vi**	**4.07**	**147**	*e*Pg	Pg	22 02 39.1	-6.0
	baz=323						
MEZF				*e*Sg	Sg	22 03 30.6	-7.2
	comp=N,4.2nm,0.4s						
MEZF	**Maizieres J'vi**	**4.07**	**147**	*e*Pn	Pn	22 02 24.3	-5.2
MEZF				*e*Pg	Pg	22 02 39.1	-6.0
MEZF				*e*Sg	Sg	22 03 30.6	-7.2
MEZF	**Maizieres J'vi**	**4.07**	**147**	*e*Pn	Pn	22 02 24.3	-5.2
	baz=332						
MEZF	**Maizieres J'vi**	**4.07**	**147**	*e*Pg	Pg	22 02 39.1	-6.0
	baz=323						
MEZF				*e*Sg	Sg	22 03 30.6	-7.2
	comp=N,2.1nm,0.4s						
SFTF	**Sexfontaines**	**4.33**	**149**	*e*Pg	Pg	22 02 43.8	-6.1
	baz=327						
SFTF				*e*Sn	Sn	22 03 14.4	-9.1
SFTF				*e*Sg	Sg	22 03 38.5	-7.4
	comp=N,5.4nm,0.4s						
SFTF	**Sexfontaines**	**4.33**	**149**	*e*Pg	Pg	22 02 43.8	-6.1
	baz=327						
SFTF				*e*Sn	Sn	22 03 14.4	-9.1
SFTF				*e*Sg	Sg	22 03 38.5	-7.4
	comp=N,2.7nm,0.4s						
SGMF	**Saint Gilles**	**4.59**	**218**	*e*Pn	Pn	22 02 32.5	-4.2
	SNR=1.0						
SGMF				*e*Sn	Sn	22 03 21.9	-8.2
	comp=N,3.9nm,0.6s,SNR=1.0						
SGMF	**Saint Gilles**	**4.59**	**218**	*e*Pn	Pn	22 02 32.5	-4.2
	SNR=1.0						
SGMF				*e*Sn	Sn	22 03 21.9	-8.2
	comp=N,2.0nm,0.6s,SNR=1.0						
ROSF	**Rostrenen**	**4.82**	**223**	*e*Pn	Pn	22 02 34.7	-5.1
	SNR=1.0						
ROSF				*e*Sn	Sn	22 03 27.1	-8.6
ROSF	**Rostrenen**	**4.82**	**223**	*e*Pn	Pn	22 02 34.7	-5.1
	SNR=1.0						
ROSF				*e*Sn	Sn	22 03 27.1	-8.6
LOR	**Lormes**	**4.89**	**162**	*e*Pn	Pn	22 02 35.2	-5.6
	baz=351,SNR=1.0						
LOR				*e*Sn	Sn	22 03 28.2	-9.3
	baz=336,SNR=1.0						
LOR				*e*Sg	Sg	22 03 56.7	-7.4
	comp=N,2.0nm,0.2s,SNR=1.0						
LOR	**Lormes**	**4.89**	**162**	*e*Pn	Pn	22 02 35.2	-5.6
	baz=351,SNR=1.0						
LOR				*e*Sn	Sn	22 03 28.2	-9.3
	baz=336,SNR=1.0						
LOR				*e*Sg	Sg	22 03 56.7	-7.4
	comp=N,1.0nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**4.96**	**141**	*e*Pn	Pn	22 02 37.2	-4.6
HAU				*e*Sn	Sn	22 03 30.0	-9.2
HAU				*e*Sg	Sg	22 03 58.6	-7.8
	comp=N,4.1nm,0.3s						
HAU	**Haudompre**	**4.96**	**141**	*e*Pn	Pn	22 02 37.2	-4.6
HAU				*e*Sn	Sn	22 03 30.0	-9.2
HAU				*e*Sg	Sg	22 03 58.6	-7.8
	comp=N,2.0nm,0.3s						
SSF	**Saint Saulge**	**5.03**	**166**	*e*Pn	Pn	22 02 37.7	-5.0
	SNR=1.0						
SSF				*e*Sn	Sn	22 03 31.5	-9.5
	SNR=1.0						
SSF				*e*Sg	Sg	22 04 01.5	-7.1
	comp=N,3.0nm,0.4s						
SSF	**Saint Saulge**	**5.03**	**166**	*e*Pn	Pn	22 02 37.7	-5.0
	SNR=1.0						
SSF				*e*Sn	Sn	22 03 31.5	-9.5
	SNR=1.0						
SSF				*e*Sg	Sg	22 04 01.5	-7.1
	comp=N,1.5nm,0.4s						
CDF	**Champ du Feu**	**5.04**	**132**	*e*Pn	Pn	22 02 38.2	-4.7
	SNR=1.0						
CDF				*e*Sn	Sn	22 03 32.5	-8.7
	SNR=1.0						
CDF				*e*Sg	Sg	22 04 01.6	-7.3
	comp=N,1.2nm,0.4s						
CDF	**Champ du Feu**	**5.04**	**132**	*e*Pn	Pn	22 02 38.2	-4.7
	SNR=1.0						
CDF				*e*Sn	Sn	22 03 32.5	-8.7
	SNR=1.0						
CDF				*e*Sg	Sg	22 04 01.6	-7.3
	comp=N,0.6nm,0.4s						

QUIF	**Quistinic**	**5.11**	**220**	*e*Pn	Pn	22 02 39.5	-4.2
	SNR=1.0						
QUIF				*e*Sn	Sn	22 03 33.7	-9.1
	comp=N,5.8nm,0.7s,SNR=1.0						
QUIF	**Quistinic**	**5.11**	**220**	*e*Pn	Pn	22 02 39.5	-4.2
	SNR=1.0						
QUIF				*e*Sn	Sn	22 03 33.7	-9.1
	comp=N,2.9nm,0.7s,SNR=1.0						
AVF	**Avril sur Loir**	**5.28**	**167**	*e*Pn	Pn	22 02 41.2	-4.9
	SNR=1.0						
AVF				*e*Sn	Sn	22 03 37.5	-9.5
	comp=N,1.6nm,0.5s,SNR=1.0						
AVF				*e*Sg	Sg	22 04 08.4	-8.0
	comp=N,0.7nm,0.3s						
AVF	**Avril sur Loir**	**5.28**	**167**	*e*Pn	Pn	22 02 41.2	-4.9
	SNR=1.0						
AVF				*e*Sn	Sn	22 03 37.5	-9.5
	comp=N,0.8nm,0.5s,SNR=1.0						
AVF				*e*Sg	Sg	22 04 08.4	-8.0
	comp=N,0.3nm,0.3s						
HINF	**Hinteralfeld**	**5.32**	**139**	*e*Pn	Pn	22 02 42.2	-4.4
	SNR=1.0						
HINF				*e*Sg	Sg	22 04 09.7	-8.0
	comp=N,2.2nm,0.3s						
HINF	**Hinteralfeld**	**5.32**	**139**	*e*Pn	Pn	22 02 42.2	-4.4
	SNR=1.0						
HINF				*e*Sg	Sg	22 04 09.7	-8.0
	comp=N,1.1nm,0.3s						
BGF	**Bois d'Agland**	**5.45**	**172**	*e*Pn	Pn	22 02 43.7	-4.7
	SNR=1.0						
BGF				*e*Sn	Sn	22 03 41.1	-10
BGF				*e*Sg	Sg	22 04 14.6	-7.3
	comp=N,8.8nm,0.3s,SNR=1.0						
BGF	**Bois d'Agland**	**5.45**	**172**	*e*Pn	Pn	22 02 43.7	-4.7
	SNR=1.0						
BGF				*e*Sn	Sn	22 03 41.1	-10
BGF				*e*Sg	Sg	22 04 14.6	-7.3
	comp=N,4.4nm,0.3s,SNR=1.0						
MFF	**Saint Martin d**	**5.48**	**193**	*e*Pn	Pn	22 02 44.2	-4.7
	SNR=1.0						
MFF				*e*Sn	Sn	22 03 42.4	-10
	comp=N,4.6nm,0.8s,SNR=1.0						
MFF	**Saint Martin d**	**5.48**	**193**	*e*Pn	Pn	22 02 44.2	-4.7
	SNR=1.0						
MFF				*e*Sn	Sn	22 03 42.4	-10
	comp=N,2.3nm,0.8s,SNR=1.0						
SMF	**Signal de Mont**	**5.49**	**164**	*e*Sn	Sn	22 03 42.6	-10
SMF				*e*Sg	Sg	22 04 15.1	-8.2
	comp=N,1.5nm,0.3s						
SMF	**Signal de Mont**	**5.49**	**164**	*e*Sn	Sn	22 03 42.6	-10
SMF				*e*Sg	Sg	22 04 15.1	-8.2
	comp=N,0.8nm,0.3s						
TCF	**Toulx Ste Croi**	**5.68**	**176**	*e*Pn	Pn	22 02 46.2	-5.3
	SNR=1.0						
TCF				*e*Sn	Sn	22 03 47.1	-10
	SNR=1.0						
TCF				*e*Sg	Sg	22 04 21.6	-7.6
	comp=N,1.4nm,0.3s						
TCF	**Toulx Ste Croi**	**5.68**	**176**	*e*Pn	Pn	22 02 46.2	-5.3
	SNR=1.0						
TCF				*e*Sg	Sg	22 04 21.6	-7.6
	comp=N,0.7nm,0.3s						
CABF	**La Chapelle**	**6.07**	**150**	*e*Pn	Pn	22 02 52.2	-4.7
	SNR=1.0						
CABF				*e*Sn	Sn	22 03 56.5	-10
CABF	**La Chapelle**	**6.07**	**150**	*e*Pn	Pn	22 02 52.2	-4.7
	SNR=1.0						
RJF	**Les Rejaudoux**	**6.65**	**181**	*e*Pn	Pn	22 02 59.6	-5.3
RJF				*e*Sn	Sn	22 04 10.3	-10
RJF	**Les Rejaudoux**	**6.65**	**181**	*e*Pn	Pn	22 02 59.6	-5.3
CAF	**Calviac**	**7.03**	**178**	*e*Pn	Pn	22 03 04.8	-5.4
CAF				*e*Sn	Sn	22 04 19.6	-11
CAF	**Calviac**	**7.03**	**178**	*e*Pn	Pn	22 03 04.8	-5.4
LFF	**La Frestale**	**7.04**	**185**	*e*Pn	Pn	22 03 05.1	-5.2
LFF	**La Frestale**	**7.04**	**185**	*e*Pn	Pn	22 03 05.1	-5.2
ORIF	**Oris-en-Rattie**	**7.57**	**157**	*e*Sn	Sn	22 04 32.6	-11
	comp=N.4.5nm,0.8s,SNR=1.0						
EPF	**Esparros**	**8.97**	**186**	*e*Pn	Pn	22 03 31.9	-4.8
	SNR=1.0						
EPF	**Esparros**	**8.97**	**186**	*e*Pn	Pn	22 03 31.9	-4.8

NIED ***08*** *22:05:00,21.70N×121.50E,h68km,Mw5.2 Best double couple: M₀6.66000×10¹⁶ NP1:φs251.00000°,δ76.00000°, λ-80.00000°. NP2:φs37.00000°,δ17.00000°, λ-123.00000°.*

MOS ***08*** *22:05:11.3±1.0,21.64N×121.51E,h33km,mb5.4/74, MS4.2/14,Error ellipse: s-maj=8.0km s-min=4.4km az=115.7*

DJA ***08*** *22:05:13,22.28N×121.62E,h81km,Mw5.6/30*

TAP ***08*** *22:05:14.8,21.60N×121.40E,h76km,ML5.7,C*

BJI ***08*** *22:05:14.9,21.71N×121.49E,h60km,mB4.9/31,mb4.8/53, ML4.7/6,Ms4.3/52,Ms7 4.1/47*

ISCJB ***08*** *22:05:15.6±0.2,21.61N±0.01×121.46E±0.02,h70km±1km, mb5.1/233,Error ellipse: s-maj=2.6km s-min=1.8km az=13.4*

NEIC ***08*** *22:05:16.0±0.5,21.57N×121.52E,h63km±4km,mb5.1/110, Error ellipse: s-maj=4.6km s-min=4.0km az=106.0*

GCMT ***08*** *22:05:16.7±0.3,21.67N×121.34E,h68km±4km,MW5.0, Moment Tensor Solution. s24,c31; s68,c113; Moment tensor: Scale 10¹⁶Nm; Mrr0.06±.16; Mθθ1.88±.13; Mφφ-1.94±.14; Mrθ2.13±.07; Mθφ0.22±.11; Mφr-1.84±.09; Best double couple: M₀3.40000×10¹⁶ NP1:φs41.00000°, δ34.00000°,λ179.00000°. NP2:φs132.00000°,δ89.00000°, λ56.00000°. Principal axes: T 3.4300, Plg36.0000°, Azm12.0000°; N -0.0500, Plg34.0000°, Azm132.0000°; P -3.3900, Plg35.0000°, Azm251.0000°; Data Used: G IU CN II IC.*

IDC ***08*** *22:05:17.3±1.3,21.62N×121.59E,h75km±9km,mb4.6/21, mb1 4.8/22,mb1mx4.7/25,mbtmp4.6/22,MS4.0/22, Ms1 4.0/22,ms1mx3.9/31 Error ellipse: s-maj=15.3km s-min=11.1km az=65.0*

JMA ***08*** *22:05:17.5±0.2,21.73N×121.54E,h122km,M5.4*

SZGRF ***08*** *22:05:22.2,24.50N×122.50E,h33km,mb5.2,Taiwan region*

MAN ***08*** *22:05:30,20.57N×121.12E,h28km,mb5.6,ML4.6,MS5.0*

ISC 08 22:05:17.1±0.2,21.64N±0.01×121.44E±0.02,h67km±1km, h69km±3.0km:pP-P,n668,σ1§13/738,mb5.1/233,57C-35D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.41**	**15**	⇑	*i*	P	**Pn**	**22 05 27.9**	**-0.9**
	baz=18								
LAY					*e*	S	**Sn**	**22 05 38.0**	**+0.6**
	baz=18								
TSEB	**Hengchuen, Pin**	**0.56**	**297**			P	**Pn**	**22 05 29.6**	**-0.7**
	baz=294								
TWK1	**Hengchun**	**0.66**	**297**	⇑	*i*	P	**Pn**	**22 05 30.2**	**-1.1**
	baz=298								
TWK1					*e*	S	**Sn**	**22 05 40.6**	**-1.3**
	baz=298								
HEN	**Hengchun**	**0.74**	**299**	⇑	*i*	P	**Pn**	**22 05 31.6**	**-0.7**
	baz=294								
HEN					*e*	S	**Sn**	**22 05 43.3**	**-0.3**
	baz=294								
EAST	**Anshuo**	**0.92**	**323**	⇑	*i*	P	**Pn**	**22 05 33.1**	**-1.3**
	baz=333								
ECL	**Taimali**	**1.05**	**335**	⇑	*i*	P	**Pn**	**22 05 34.5**	**-1.6**
	baz=338								
SCZT	**Fangliau**	**1.05**	**314**	⇓	*e*	P	**Pn**	**22 05 35.1**	**-1.0**
	baz=326								
SCZT					*e*	S	**Sn**	**22 05 49.4**	**+0.2**
	baz=326								
TTN	**Taitung**	**1.14**	**346**		*i*	P	**Pn**	**22 05 37.0**	**-0.3**
	baz=340								
TTN					*e*	S	**Sn**	**22 05 53.0**	**+1.6**
	baz=340								
TWP	**Hsiaoliuchiu**	**1.22**	**305**		*e*	P	**Pn**	**22 05 38.3**	**0.0**
	baz=299								
TWG	**Pinlang**	**1.22**	**344**		*e*	Pn	**Pn**	**22 05 36.6**	**-1.7**
TWG					*e*	Sn	**Sn**	**22 05 52.8**	**-0.6**
TWG	**Pinlang**	**1.22**	**344**	⇑	*i*	P	**Pn**	**22 05 36.8**	**-1.5**
	baz=341								
TWG					*e*	S	**Sn**	**22 05 52.3**	**-1.1**
	baz=341								
SSD	**Sandimen**	**1.33**	**326**	⇓	*i*	P	**Pn**	**22 05 38.9**	**-0.8**
	baz=332								
SGLT	**Jiouru**	**1.39**	**321**		*e*	P	**Pn**	**22 05 40.4**	**-0.2**
	baz=324								
KAU	**Kaohsiung**	**1.40**	**312**		*e*	P	**Pn**	**22 05 40.5**	**-0.1**
	baz=304								
CHKT	**Chengkung**	**1.45**	**357**	⇑		P	**Pn**	**22 05 40.4**	**-0.9**
	baz=351								
CHKT						S	**Sn**	**22 05 59.8**	**+0.8**
	baz=351								
TWM1	**Shoushan**	**1.51**	**322**	⇓		P	**Pn**	**22 05 42.1**	**+0.1**
	baz=324								
ELDTW	**Lidau**	**1.59**	**346**			P	**Pn**	**22 05 41.9**	**-1.3**
	baz=351								
SGST	**Jiashian**	**1.64**	**331**	⇓	*i*	P	**Pn**	**22 05 43.5**	**-0.3**
	baz=333								
STYT	**Tauyuan**	**1.64**	**337**	⇓	*i*	P	**Pn**	**22 05 43.6**	**-0.2**
	baz=339								
STYT					*e*	S	**Sn**	**22 06 04.6**	**+1.0**
	baz=339								
TWF1	**Yuli**	**1.71**	**356**	⇑		P	**Pn**	**22 05 43.3**	**-1.4**
	baz=349								
TWF1					*e*	S	**Sn**	**22 06 05.3**	**0.0**
	baz=349								
CHN3	**Shinhua**	**1.74**	**325**	*e*		P	**Pn**	**22 05 44.9**	**-0.3**
	baz=316								
YULB	**Yu-li**	**1.75**	**356**	*e*		Pn	**Pn**	**22 05 43.6**	**-1.6**
YULB				*e*		Sn	**Sn**	**22 06 07.3**	**+1.0**
CHN1	**Nanshi**	**1.75**	**331**	*e*		P	**Pn**	**22 05 44.6**	**-0.7**
	baz=333								
WTP	**Ta-pu**	**1.77**	**335**	⇓	*i*	P	**Pn**	**22 05 45.0**	**-0.5**
	baz=336								
TAI1	**Yung-k'ang**	**1.79**	**321**	*e*		P	**Pn**	**22 05 45.0**	**-0.8**
	baz=312								
TPUB	**Ta-pu**	**1.81**	**336**	*e*		Pn	**Pn**	**22 05 45.4**	**-0.7**
TPUB				*e*		Sn	**Sn**	**22 06 08.4**	**+0.5**
TWK	**Hsinying**	**1.84**	**332**	⇓	*e*	P	**Pn**	**22 05 45.6**	**-0.9**
	baz=334								
EHY	**Hungye**	**1.86**	**357**			P	**Pn**	**22 05 45.8**	**-1.0**
	baz=350								
EHY					*e*	S	**Sn**	**22 06 09.0**	**-0.1**
	baz=350								
YUS	**Yu-Shan**	**1.89**	**346**	⇑		P	**Pn**	**22 05 47.4**	**+0.1**
	baz=337								
YUS					*e*	S	**Sn**	**22 06 12.7**	**+2.9**
	baz=337								
ALS	**Alishan**	**1.95**	**343**	⇓	*i*	P	**Pn**	**22 05 48.2**	**+0.2**
	baz=334								
ALS					*e*	S	**Sn**	**22 06 13.8**	**+2.5**
	baz=334								
CHN8	**Yiju**	**2.04**	**326**	*e*		P	**Pn**	**22 05 47.8**	**-1.5**
	baz=338								
CHN8					*e*	S	**Sn**	**22 06 12.1**	**-1.4**
	baz=338								
TEGC	**Jichi Village**	**2.06**	**3**	*e*		P	**Pn**	**22 05 47.8**	**-1.6**
	baz=9.0								
TEGC					*e*	S	**Sn**	**22 06 15.3**	**+1.3**
	baz=9.0								
CHN5	**Tsauling**	**2.07**	**340**	⇓		P	**Pn**	**22 05 49.0**	**-0.6**
	baz=342								
CHY	**Chiayi**	**2.07**	**333**	*e*		P	**Pn**	**22 05 48.6**	**-1.0**
	baz=335								
CHY					*e*	S	**Sn**	**22 06 13.0**	**-1.2**
	baz=335								
ESL	**Shilin**	**2.16**	**360**			P	**Pn**	**22 05 49.9**	**-0.9**
	baz=354								
ESL					*e*	S	**Sn**	**22 06 15.6**	**-0.9**
	baz=354								
SSLB	**Suanglung**	**2.18**	**348**	*e*		Pn	**Pn**	**22 05 50.6**	**-0.5**
SSLB				*e*		Sn	**Sn**	**22 06 19.1**	**+2.2**
WGK	**Gukeng**	**2.19**	**338**	*e*		P	**Pn**	**22 05 50.1**	**-1.1**
	baz=330								
ESF	**Shoufeng Towns**	**2.22**	**2**	*e*		P	**Pn**	**22 05 48.4**	**-3.2**
	baz=355								
WSF	**Szhu**	**2.28**	**331**	*e*		P	**Pn**	**22 05 50.9**	**-1.6**
	baz=332								
WSF					*e*	S	**Sn**	**22 06 17.8**	**-1.6**
	baz=332								
SMLT	**Sun Moon Lake**	**2.29**	**348**	⇓	*i*	P	**Pn**	**22 05 52.6**	**+0.1**
	baz=338								
WDGT	**Dungji**	**2.30**	**315**	⇓	*e*	P	**Pn**	**22 05 50.6**	**-2.2**
	baz=316								
TYC	**Yuchr**	**2.31**	**347**	⇓	*i*	P	**Pn**	**22 05 52.9**	**-0.1**
	baz=348								
TYC					*e*	S	**Sn**	**22 06 21.4**	**+1.2**
	baz=348								
HWA	**Hwalien**	**2.33**	**4**			P	**Pn**	**22 05 53.1**	**0.0**
	baz=12								
HWA					*e*	S	**Sn**	**22 06 22.3**	**+1.8**
	baz=12								
WNT	**Mingjian**	**2.33**	**343**	⇓		P	**Pn**	**22 05 52.7**	**-0.4**
	baz=344								
WNT					*e*	S	**Sn**	**22 06 20.3**	**-0.3**
	baz=344								
TWD	**Chiawan**	**2.43**	**3**			P	**Pn**	**22 05 54.5**	**0.0**
	baz=354								
TWD					*e*	S	**Sn**	**22 06 23.0**	**-0.1**
	baz=354								
WTCT	**Ta-ch'eng**	**2.46**	**334**	*e*		P	**Pn**	**22 05 53.4**	**-1.5**
	baz=336								
WHF	**Hehuan Shan**	**2.50**	**356**	⇓		P	**Pn**	**22 05 55.8**	**+0.4**
	baz=4.0								
WHF					*e*	S	**Sn**	**22 06 26.2**	**+1.5**
	baz=4.0								
NACB	**Ninganchiao**	**2.52**	**3**	*e*		Pn	**Pn**	**22 05 55.1**	**-0.6**
NACB				*e*		Sn	**Sn**	**22 06 26.1**	**+0.8**
PNG	**Penghu**	**2.59**	**318**	*e*		P	**Pn**	**22 05 54.4**	**-2.3**
	baz=319								
TCU	**Taichung**	**2.59**	**344**	*e*		P	**Pn**	**22 05 56.5**	**-0.2**
	baz=345								
TWT	**Tachien**	**2.61**	**355**	*e*		P	**Pn**	**22 05 57.7**	**+0.8**
	baz=344								
TWT					*e*	S	**Sn**	**22 06 28.6**	**+1.2**
	baz=344								
TWQ1	**Liyutan**	**2.76**	**347**	*e*		P	**Pn**	**22 05 58.7**	**-0.3**
	baz=339								
NNS	**Nan Shan**	**2.79**	**359**			P	**Pn**	**22 06 00.2**	**+0.9**
	baz=5.0								
NNS					*e*	S	**Sn**	**22 06 33.5**	**+1.8**
	baz=5.0								
ENA	**Nanau**	**2.79**	**6**	⇓	*i*	P	**Pn**	**22 05 59.9**	**+0.5**
	baz=351								
ENA					*e*	S	**Sn**	**22 06 33.1**	**+1.3**
	baz=351								
TWC	**Suao**	**2.98**	**7**	⇓	*i*	P	**Pn**	**22 06 03.0**	**+1.0**
	baz=8.0								
TWC						S	**Sn**	**22 06 37.3**	**+0.8**
	baz=8.0								
ENTT	**Nioudou**	**2.99**	**2**	⇓		P	**Pn**	**22 06 02.6**	**+0.5**
	baz=3.0								
ENTT					*e*	S	**Sn**	**22 06 38.0**	**+1.4**
	baz=3.0								
NSTT	**Nanjuang**	**3.00**	**352**	*e*		P	**Pn**	**22 06 02.1**	**-0.2**
	baz=353								
YHNB	**Yeheng**	**3.02**	**359**	*e*		Pn	**Pn**	**22 06 03.1**	**+0.7**
YHNB				*e*		Sn	**Sn**	**22 06 40.0**	**+2.6**
NSK	**Sanguang**	**3.02**	**359**	⇓	*i*	P	**Pn**	**22 06 03.8**	**+1.3**
	baz=350								
NSK					*e*	S	**Sn**	**22 06 39.0**	**+1.5**
	baz=350								
TWE	**Neicheng**	**3.07**	**4**	*e*		P	**Pn**	**22 06 04.0**	**+0.8**
	baz=5.0								
ILA	**Ilan**	**3.12**	**5**	*e*		P	**Pn**	**22 06 05.1**	**+1.2**
	baz=359								
YOJ	**Yonaguni jima**	**3.16**	**27**			P	**Pn**	**22 06 05.1**	**+0.7**
YOJ						S	**Sn**	**22 06 40.7**	**-0.2**
YOJ	**Yonaguni jima**	**3.16**	**27**	*e*		P	**Pn**	**22 06 04.2**	**-0.2**
	baz=34								
YOJ					*e*	S	**Sn**	**22 06 39.2**	**-1.7**
	baz=34								
HSN	**Hsinchu**	**3.17**	**352**	*e*		P	**Pn**	**22 06 06.2**	**+1.5**
	baz=354								
HATJ	**Hateruma jima**	**3.25**	**42**			P	**Pn**	**22 06 06.0**	**+0.4**
HATJ						S	**Sn**	**22 06 43.3**	**+0.3**
TATO	**Taipei**	**3.32**	**1**	*e*		Pn	**Pn**	**22 06 07.2**	**+0.6**
TATO				*e*		Sn	**Sn**	**22 06 46.4**	**+1.6**
TATO	**Taipei**	**3.32**	**1**			Pn	**Pn**	**22 06 08.3**	**+1.7**
	SNR=44								
NCU	**National Centr**	**3.32**	**356**	*e*		P	**Pn**	**22 06 07.1**	**+0.4**
	baz=346								
TWA	**Mucha**	**3.33**	**2**	*e*		P	**Pn**	**22 06 08.3**	**+1.6**
	baz=3.0								
TWA					*e*	S	**Sn**	**22 06 47.0**	**+2.0**
	baz=3.0								
TAP1	**Taipei**	**3.38**	**1**	*e*		P	**Pn**	**22 06 07.5**	**+0.1**
	baz=2.0								
TAP1					*e*	S	**Sn**	**22 06 48.2**	**+1.8**
	baz=2.0								
PIP	**Pasuquin**	**3.39**	**193**	⇓	*i*	P	**Pn**	**22 06 06.7**	**-0.9**
PIP					*e*	S	**Sn**	**22 06 41.0**	**-5.5**
TWB1	**Santiao Chiao**	**3.39**	**8**	⇓	*i*	P	**Pn**	**22 06 09.0**	**+1.4**
	baz=20								
TWB1					*e*	S	**Sn**	**22 06 48.7**	**+2.2**
	baz=20								
IRIF	**Iriomote-Funau**	**3.41**	**38**			P	**Pn**	**22 06 08.3**	**+0.4**
IRIF						S	**Sn**	**22 06 47.7**	**+0.6**
NWF	**Wu-fen Shan**	**3.43**	**5**			P	**Pn**	**22 06 09.8**	**+1.7**
	baz=353								
NWF					*e*	S	**Sn**	**22 06 49.1**	**+1.6**
	baz=353								
SGCP	**Mt. Cagua**	**3.43**	**170**	*e*		P	**Pn**	**22 06 08.9**	**+0.7**
TWS1	**Kuangyinshan**	**3.44**	**360**	*e*		P	**Pn**	**22 06 09.5**	**+1.2**
	baz=348								
TWS1					*e*	S	**Sn**	**22 06 49.6**	**+1.7**
	baz=348								
JKRS	**Kuro-shima**	**3.50**	**42**			P	**Pn**	**22 06 09.8**	**+0.7**
JKRS						S	**Sn**	**22 06 49.5**	**+0.1**
TWY	**Chenhua**	**3.62**	**2**	*e*		P	**Pn**	**22 06 11.8**	**+1.1**
	baz=3.0								
JIJ	**Ishigaki jima**	**3.68**	**42**			P	**Pn**	**22 06 11.7**	**+0.2**
JIJ						S	**Sn**	**22 06 53.3**	**-0.4**
APYP	**Conner**	**3.76**	**183**	*e*		P	**Pn**	**22 06 13.1**	**+0.4**
APYP					*e*	S	**Sn**	**22 06 42.7**	**-13**
SIPP	**Brgy, Tapao**	**3.81**	**194**	⇓	*i*	P	**Pn**	**22 06 11.7**	**-1.7**
SIPP					*e*	S	**Sn**	**22 06 45.5**	**-11**
KNM	**Kinmen**	**3.91**	**316**	*e*		P	**Pn**	**22 06 14.1**	**-0.6**
	baz=315								
KNM					*e*	S	**Sn**	**22 06 57.0**	**-2.3**
	baz=315								
ABRA	**Dolores**	**4.03**	**190**	*e*		P	**Pn**	**22 06 16.2**	**-0.2**
QZH	**Quanzhou**	**4.20**	**322**			P	**Pn**	**22 06 16.0**	**-2.6**
QZH						S	**Sn**	**22 06 56.8**	**-10**
QZH						smax			
	comp=N,2μm,0.6s								
QZH						smax			
	comp=E,1μm,0.5s								
QZH						LR	LR		
	comp=N,2μm,5.2s								
QZH						LR	LR		
	comp=E,3μm,5.6s								
QZH						LR	LR		
	comp=Z,2μm,10.4s								
JTJ	**Tarama**	**4.23**	**45**			P	**Pn**	**22 06 19.2**	**+0.1**
JTJ						S	**Sn**	**22 07 07.3**	**0.0**
PALP	**Palanan**	**4.65**	**168**	*e*		P	**Pn**	**22 06 26.8**	**+2.0**
CAUP	**Cauayan**	**4.69**	**175**	*e*		P	**Pn**	**22 06 27.3**	**+1.9**
JMJ	**Miyako jima 2**	**4.75**	**48**			P	**Pn**	**22 06 26.3**	**+0.2**
JMJ						S	**Sn**	**22 07 19.5**	**-0.4**
JMJ	**Miyako jima 2**	**4.75**	**48**	*e*		P	**Pn**	**22 06 25.7**	**-0.4**
	baz=48								
JMJ					*e*	S	**Sn**	**22 07 17.9**	**-2.0**
	baz=48								
JOGS	**Gusukube**	**4.79**	**49**			P	**Pn**	**22 06 27.0**	**+0.3**
JOGS						S	**Sn**	**22 07 21.2**	**+0.3**
BCPH	**Baguio City Da**	**5.29**	**189**	⇑	*e*	P	**Pn**	**22 06 35.1**	**+1.5**
BCPH					*i*	S	**Sn**	**22 07 31.3**	**-2.1**
BOLP	**Bolinao**	**5.43**	**196**	*e*		P	**Pn**	**22 06 36.3**	**+0.8**
BALP	**Baler**	**5.87**	**179**	*e*		P	**Pn**	**22 06 41.2**	**-0.3**
SCZP	**Santa Cruz**	**6.01**	**194**	*e*		P	**Pn**	**22 06 43.8**	**+0.3**
PCPH	**Palayan**	**6.06**	**183**	⇑	*e*	P	**Pn**	**22 06 44.1**	**+0.1**
JKE	**Kume jima 2**	**6.76**	**45**			P	**Pn**	**22 06 52.4**	**-1.2**
JKE						S	**Sn**	**22 08 06.9**	**-2.2**
POLP	**Polilio Island**	**6.89**	**176**	*e*		P	**Pn**	**22 06 57.7**	**+2.1**
JAGN	**Aguni-jima**	**7.24**	**46**			P	**Pn**	**22 06 59.9**	**-0.2**
JAGN						S	**Sn**	**22 08 20.9**	**+0.1**
NAH1	**Naha**	**7.30**	**50**			S	**Sn**	**22 08 19.8**	**-2.7**
JJT2	**Tamagusuku 2**	**7.30**	**51**	*e*		S	**Sn**	**22 08 22.3**	**-0.3**
TGY	**Tagaytay City**	**7.51**	**184**			P	**Pn**	**22 07 07.6**	**+3.6**
	comp=Z,69nm,0.3s,baz=127,slow=5.0,SNR=3.5								
TGY						S	**Sn**	**22 08 22.0**	**-5.8**
	comp=Z,51nm,0.3s,baz=17,slow=17,SNR=1.8								
GZH	**Guangzhou**	**7.63**	**282**			P	**Pn**	**22 07 02.0**	**-3.6**
GZH						smax			
	comp=N,980nm,0.9s								
GZH						smax			
	comp=E,740nm,1.0s								
GQP	**Guinayangan**	**7.75**	**173**	⇑	*e*	P	**Pn**	**22 07 10.7**	**+3.4**
GQP					*e*	S	**Sn**	**22 08 27.1**	**-6.6**
LUBP	**Lubang**	**7.95**	**188**	*e*		P	**Pn**	**22 07 11.8**	**+1.8**
JIH	**Iheya**	**8.02**	**47**			P	**Pn**	**22 07 09.6**	**-1.2**
JIH						S	**Sn**	**22 08 36.1**	**-3.9**
JOW	**Kunigami**	**8.10**	**49**			P	**Pn**	**22 07 10.6**	**-1.4**
JOW					*e*	S	**Sn**	**22 08 38.5**	**-3.5**
JOW	**Kunigami**	**8.10**	**49**	*e*		P	**Pn**	**22 07 10.2**	**-1.8**
	baz=50								
JTK	**Tokunoshima**	**9.16**	**47**			P	**Pn**	**22 07 24.4**	**-2.1**
JTK					*e*	S	**Sn**	**22 09 04.8**	**-3.3**
JMZ	**Minamidaito 2**	**9.88**	**63**			P	**Pn**	**22 07 34.2**	**-2.1**
JMZ					*e*	S	**Sn**	**22 09 17.6**	**-8.0**
JAM	**Amami Oshima**	**10.01**	**46**			P	**Pn**	**22 07 35.1**	**-3.0**
JAM					*e*	S	**Sn**	**22 09 22.7**	**-6.1**
NJ2	**Nanjing**	**10.62**	**348**	*e*		P	**Pn**	**22 07 44.6**	**-1.8**
NJ2						pP		22 07 51.3	
NJ2						PP		22 07 53.6	
NJ2						S	**Sn**	**22 09 44.2**	**+0.5**
NJ2						sS		22 09 51.9	
NJ2						pmax	pmax		
	comp=Z,30nm,0.7s								
NJ2						pmax	pmax		
	comp=Z,80nm,3.8s								
NJ2						LR	LR		
	comp=N,710nm,9.2s								
NJ2						LR	LR		
	comp=E,840nm,8.3s								
NJ2						LR	LR		
	comp=Z,4μm,8.0s								
JNN	**Nakanoshima**	**11.15**	**41**	*e*		S	**Sn**	**22 09 55.7**	**-1.0**
QIZ	**Qiongzhong**	**11.19**	**259**			P	**Pn**	**22 07 53.0**	**-1.2**
QIZ						pP		22 08 02.8	
QIZ						sP		22 08 10.6	
QIZ

KSRS LR LR 22 16 43.3
comp=E,281nm,18.1s,baz=185,slow=41
KSRS ScP ScP 22 17 20.1 -1.2
comp=E,0.1nm,0.3s,baz=190,slow=2.1,SNR=14
JHS Saijyo 16.80 35 P **Pn 22 09 11.1 +3.2**
UBT Ubonrachathani 16.82 251 ⇑P **Pn 22 09 10.5 +2.2**
DL2 Dalian 17.21 0 P **Pn 22 09 15.9 +3.0**
DL2 pmax pmax
comp=Z,10.0nm,0.7s
DL2 LR LR
comp=N,310nm,19.7s
DL2 LR LR
comp=E,200nm,17.7s
DL2 LR LR
comp=Z,350nm,18.8s
JWZ Kozaga 17.31 44 P **Pn 22 09 15.8 +1.6**
KMI Kunming 17.51 285 P **Pn 22 09 19.7 +2.9**
KMI pP pP 22 09 31.7 +0.7
KMI sP sP 22 09 41.3 +1.8
KMI S **S 22 12 34.1 -1.4**
KMI pmax pmax
comp=Z,23nm,1.6s
KMI pmax pmax
comp=Z,160nm,3.1s
KMI LR LR
comp=N,370nm,11.2s
KMI LR LR
comp=E,430nm,10.1s
KMI LR LR
comp=Z,430nm,11.9s
TSM Tawau 17.59 192 P **Pn 22 09 18.2 +0.5**
JWY Kouya 17.68 42 P **Pn 22 09 20.3 +1.6**
TIY Taiyuan 17.81 336 *e*P **Pn 22 09 18.8 -1.5**
TIY pP pP 22 09 29.8 -4.3
TIY sP sP 22 09 38.6 -4.1
TIY S **S 22 12 34.4 -6.9**
TIY sS sS 22 12 50.8 -13
TIY pmax pmax
comp=Z,600nm,4.7s
TIY LR LR
comp=N,1μm,14.3s
TIY LR LR
comp=E,670nm,11.8s
TIY LR LR
comp=Z,950nm,15.8s
JWT Wachi 18.29 39 P **Pn 22 09 28.5 +2.4**
CD2 Chengdu 18.33 304 ⇑P **Pn 22 09 27.2 +0.6**
CD2 pP pP 22 09 38.6 -1.3
CD2 PP 22 09 44.4
CD2 sP sP 22 09 47.0 -1.5
CD2 S **S 22 12 47.1 -4.4**
CD2 sS sS 22 13 04.8 -10
CD2 SS 22 13 13.0
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 pmax pmax
comp=Z,190nm,4.9s
CD2 LR LR
comp=N,1μm,9.0s
CD2 LR LR
comp=E,1μm,11.4s
CD2 LR LR
comp=Z,740nm,9.8s
JIE Ise 18.49 43 P **Pn 22 09 30.2 +1.6**
BJT Baijiatuau 18.86 347 *e*P **Pn 22 09 31.6 -1.3**
comp=Z,190nm,0.8s
BJT Baijiatuau 18.86 347 *e*P **Pn 22 09 31.7 -1.2**
BJT pmax pmax
comp=Z,190nm,0.8s
BJI Beijing 18.88 347 P **Pn 22 09 31.9 -1.3**
BJI S **S 22 13 01.4 -1.5**
BJI pmax pmax
comp=Z,260nm,0.7s
BJI pmax pmax
comp=Z,350nm,4.3s
BJI LR LR
comp=N,460nm,18.7s
BJI LR LR
comp=E,310nm,18.7s
BJI LR LR
comp=Z,460nm,26.4s
JGM Miyama 19.35 40 P **Pn 22 09 39.2 +0.4**
JSG Sagara 19.62 45 P **Pn 22 09 45.4 +3.3**
CBIJ Chichi jima 19.66 70 P **Pn 22 09 41.9 -0.6**
comp=Z,12nm,0.3s,baz=212,slow=3.0,SNR=11
CBIJ LR LR 22 15 41.9
comp=Z,441nm,20.4s,baz=281,slow=32
CBIJ Chichi jima 19.66 70 P **Pn 22 09 42.4 -0.1**
JGF Kuroka 19.68 42 P **Pn 22 09 42.8 +0.2**
JHJ Hachijo jima 2 19.87 51 P **Pn 22 09 46.0 +1.1**
comp=Z,4.4nm,0.3s,baz=228,slow=5.1,SNR=12
BTM Bintulu 20.05 205 P **P 22 09 45.1 +0.3**
JGN Niukaw 20.06 40 P **P 22 09 46.2 +1.4**
SNY Shenyang 20.21 5 ⇑P **P 22 09 45.0 -1.3**
SNY S **S 22 13 32.5 +3.1**
SNY pmax pmax
comp=Z,17nm,0.6s
SNY pmax pmax
comp=Z,290nm,12.0s
SNY LR LR
comp=E,630nm,13.1s
SNY LR LR
comp=Z,380nm,26.4s
CHRT Chiangrai 20.33 269 ⇓P **P 22 09 49.0 +1.1**
comp=Z,342nm,1.4s
MNI Manado 20.35 170 P **P 22 09 48.0 -0.1**
comp=Z,3μmcomp=Z,252nm,0.9s
JOD2 Odawara 2 20.57 45 P **P 22 09 53.7 +3.4**
MAJO Matsushiro 20.81 41 *e*P **P 22 09 54.0 +1.1**
comp=Z,157nm,1.1s
MAJO Matsushiro 20.81 41 *e*P **P 22 09 54.0 +1.1**
MAJO pmax pmax
comp=Z,157nm,1.1s
MAT Matsushiro 20.81 41 P **P 22 09 55.3 +2.4**
MAT S **S 22 13 38.0 -3.4**
MAT Matsushiro 20.81 41 P **P 22 09 55.4 +2.5**
JRY Ryogami san 20.91 43 P **P 22 09 56.3 +2.3**
NST Nakhon Sawan 21.03 257 P **P 22 09 57.0 +1.5**
comp=Z,92nm,1.0s,mb5.1
LZH Lanzhou 21.04 317 ⇑P **P 22 09 57.4 +2.1**
LZH pP 22 10 06.1
LZH PP 22 10 20.3
LZH S **S 22 13 46.7 +0.9**
LZH sS sS 22 13 59.0 -10
LZH SS 22 14 16.0
LZH ScP ScP 22 17 32.0 +1.1
LZH pmax pmax
comp=Z,43nm,1.2s,mb4.7
LZH pmax pmax
comp=Z,220nm,4.0s
LZH LR LR
comp=N,550nm,13.4s
LZH LR LR
comp=Z,780nm,14.2s
MRSI Marisa 21.04 179 P **P 22 09 57.9 +2.3**
comp=Z,2μmcomp=Z,221nm,0.9s,mb5.5
SBUM Sibu 21.08 206 P **P 22 09 56.1 +0.1**
SBUM Sibu 21.08 206 P **P 22 09 56.3 +0.3**
comp=Z,998nmcomp=Z,82nm,0.8s,mb5.1
KMSI Cibinong 21.09 173 P **P 22 09 56.7 +0.7**
comp=Z,3μmcomp=Z,369nm,0.8s,mb5.7
BTO Baotou 21.25 335 *e*P **P 22 09 55.8 -1.7**
CHTO Chiang Mai 21.29 266 *e*P **P 22 09 59.3 +1.1**
comp=Z,330nm,2.0s,mb5.3
CHTO Chiang Mai 21.29 266 *e*P **P 22 09 59.3 +1.1**
CHTO pmax pmax
comp=Z,330nm,2.0s,mb5.3
CHTO Chiang Mai 21.29 266 P **P 22 09 59.8 +1.6**
SNR=16
CM31 Chiang Mai Arr 21.37 265 *e*P **P 22 10 00.5 +1.5**
CM31 *e*PcP PcP 22 14 00.9 +0.1
CMAR Chiang Mai Arr 21.37 265 P **P 22 10 00.4 +1.4**
comp=Z,25nm,0.8s,mb4.6,baz=74,slow=8.9,SNR=116
CMAR PcP PcP 22 14 01.1 +0.3
comp=Z,3.6nm,0.6s,baz=71,slow=0.5,SNR=19
CMAR ScP ScP 22 17 30.6 -1.4
comp=Z,11nm,0.8s,baz=66,slow=0.9,SNR=38
CMAR LR LR 22 19 33.8
comp=Z,766nm,18.9s,baz=84,slow=40
CMAR Chiang Mai Arr 21.37 265 P **P 22 10 00.4 +1.4**
CMAR 22 14 01.2
TNTI Ternate 21.53 164 P **P 22 10 00.7 -0.1**
comp=Z,3μmcomp=Z,320nm,1.1s,mb5.6
BDT Bhumibol Dam 21.60 262 P **P 22 10 03.0 +1.5**
comp=Z,24nm,0.9s,mb4.5

JSD Sado 21.85 38 P **P 22 10 02.8 -1.2**
CN2 Changchun 22.35 8 *e*P **P 22 10 09.3 +0.1**
CN2 *e*S **S 22 14 07.7 -3.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.3
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,19.0s
CN2 LR LR
comp=E,500nm,19.0s
CN2 LR LR
comp=Z,200nm,21.0s
PCI Palu 22.46 184 P **P 22 10 12.5 +1.8**
comp=Z,2μmcomp=Z,203nm,1.1s,mb5.4
LUWI Luwuk 22.58 177 P **P 22 10 11.3 -0.7**
comp=Z,3μmcomp=Z,323nm,1.3s,mb5.5
KSM Kuching 22.79 210 *e*P **P 22 10 12.3 -1.8**
comp=Z,87nm,0.7s,mb5.2
KSM Kuching 22.79 210 P **P 22 10 13.2 -1.0**
KSM Kuching 22.79 210 P **P 22 10 13.8 -0.4**
comp=Z,1μmcomp=Z,131nm,1.1s,mb5.2
JYA Atsumi 23.06 39 P **P 22 10 15.9 -1.0**
VLA Vladivostok 23.13 20*c*e**P P 22 10 17.4 0.0**
VLA pmax pmax
comp=Z,130nm,1.7s,mb5.0
JMM Marumori 23.24 42 P **P 22 10 17.6 -0.9**
GUMO Guam 23.70 106 *e*P **P 22 10 22.6 -0.4**
comp=Z,132nm,1.1s,mb5.2
GUMO Guam 23.70 106 P **P 22 10 22.6 -0.3**
comp=Z,13nm,0.3s,mb4.8,baz=229,slow=18,SNR=4.1
GUMO LR LR 22 17 57.2
comp=Z,171nm,19.9s,baz=293,slow=32
GUMO Guam 23.70 106 *e*P **P 22 10 22.6 -0.3**
GUMO pmax pmax
comp=Z,132nm,1.1s,mb5.2
MDJ Mudanjiang 23.88 14 P **P 22 10 24.3 0.0**
MDJ pP 22 10 39.0
MDJ sP sP 22 10 46.3 -2.0
MDJ PcS PcS 22 17 39.2 -5.7
MDJ pmax pmax
comp=Z,42nm,0.8s,mb4.8
MDJ pmax pmax
comp=Z,180nm,5.2s
MDJ LR LR
comp=N,270nm,15.1s
MDJ LR LR
comp=E,210nm,17.6s
MDJ LR LR
comp=Z,370nm,16.2s
MDJ Mudanjiang 23.88 14 *e*P **P 22 10 24.1 -0.2**
comp=Z,26nm,0.7s,mb4.7
KTGM Kuala Trenggan 24.03 230 P **P 22 10 25.1 -0.8**
JOM Ohasama 24.57 39 P **P 22 10 29.8 -0.8**
TTSI Tana Toraja 24.59 184 P **P 22 10 30.3 -0.7**
comp=Z,911nmcomp=Z,110nm,0.8s,mb5.3
JTM Tenmabayashi 25.32 37 P **P 22 10 37.5 +0.1**
KBKI Kotabaru 25.32 192 P **P 22 10 40.1 +2.5**
comp=Z,60nm,1.2s,mb4.9
NLAI Namlea 25.34 167 P **P 22 10 38.0 +0.2**
comp=Z,2μmcomp=Z,192nm,0.8s,mb5.6
KDI Kendari 25.47 177 P **P 22 10 41.0 +2.0**
comp=Z,29nm,1.1s,mb4.6
SPSI Sidrap Palu 25.50 184 P **P 22 10 39.9 +0.6**
comp=Z,970nmcomp=Z,72nm,1.3s,mb4.9
GTA Gaotai 25.59 319 ⇑P **P 22 10 40.8 +0.9**
GTA pP pP 22 10 55.2 -0.8
GTA S **S 22 15 04.7 +1.6**
GTA SS 22 16 12.0
GTA ScP ScP 22 17 42.3 -0.7
GTA ScS ScS 22 21 31.0 -1.1
GTA pmax pmax
comp=Z,21nm,1.2s,mb4.4
GTA pmax pmax
comp=Z,120nm,4.2s
GTA LR LR
comp=N,320nm,11.0s
GTA LR LR
comp=E,190nm,15.6s
GTA LR LR
comp=Z,290nm,14.1s
JOT Ohata 25.71 36 P **P 22 10 41.2 +0.2**
KULM Kulim 25.88 234 *e*P **P 22 10 42.8 0.0**
comp=Z,44nm,1.0s,mb4.8
KULM Kulim 25.88 234 P **P 22 10 41.7 -1.1**
KULM Kulim 25.88 234 P **P 22 10 41.7 -1.1**
comp=Z,54nm,1.6s,mb4.7
BNSI Bone 25.91 183 P **P 22 10 44.5 +1.5**
comp=Z,56nm,1.2s,mb4.9
AAI Ambon 26.03 164 P **P 22 10 44.8 +0.8**
comp=Z,133nm,0.8s,mb5.4
JSH Shimam 26.09 32 P **P 22 10 44.0 -0.4**
MYKOM Kota Tinggi 26.13 223 P **P 22 10 44.6 -0.4**
MYKOM Kota Tinggi 26.13 223 P **P 22 10 45.0 0.0**
comp=Z,1μmcomp=Z,108nm,0.9s,mb5.3
IPM Ipoh 26.14 232 P **P 22 10 44.1 -1.0**
IPM Ipoh 26.14 232 P **P 22 10 44.2 -0.9**
comp=Z,2μmcomp=Z,205nm,0.8s,mb5.6
KGM Kluang 26.30 225 P **P 22 10 45.6 -0.9**
KAPI Kappang 26.54 184 *e*P **P 22 10 47.5 -1.2**
comp=Z,409nm,2.2s,mb5.6
FRIM Kepong 26.56 229 P **P 22 10 48.2 -0.7**
BKSI Bulukumba 26.83 183 P **P 22 10 50.0 -1.2**
comp=Z,31nm,1.0s,mb4.8
JEW Emiwo 26.95 34 P **P 22 10 53.9 +1.8**
ERM Erimo 27.30 37 P **P 22 10 59.5 +4.2**
comp=Z,297nm,0.5s,mb6.1,SNR=7.4
ERM Erimo 27.30 37 *e*P **P 22 10 56.4 +1.1**
comp=Z,35nm,0.8s,mb4.9
ERM Erimo 27.30 37*de***P P 22 10 56.4 +1.1**
ERM pmax pmax
comp=Z,50nm,1.7s,mb4.8
JEM Erimo 27.30 37 P **P 22 11 00.0 +4.7**
HIA Hailar 27.60 358 *e*P **P 22 10 56.1 -1.7**
comp=Z,88nm,0.8s,mb5.3
HIA Hailar 27.60 358 *e*P **P 22 10 56.1 -1.7**
HIA pmax pmax
comp=Z,88nm,0.8s
TPI Tanjungpandan 27.75 211 P **P 22 10 59.9 +0.4**
comp=Z,99nm,0.9s,mb5.3
LSA Lhasa 28.39 293 P **P 22 10 55.7 -9.5**
LSA S PcP 22 14 22.6 +6.4
LSA LR LR
comp=E,310nm,15.0s
LSA LR LR
comp=Z,190nm,17.0s
LSA Lhasa 28.39 293 *e*P **P 22 11 07.1 +1.9**
comp=Z,16nm,0.8s,mb4.6
LSA Lhasa 28.39 293 *e*P **P 22 11 07.1 +1.9**
LSA pmax pmax
comp=Z,16nm,0.8s,mb4.6
ASAJ Asahikawa 28.44 33 P **P 22 11 08.2 +2.7**
comp=Z,42nm,0.4s,mb5.3,baz=225,slow=12,SNR=45
ASAJ LR LR 22 21 54.7
comp=Z,358nm,20.6s,baz=331,slow=35
ASAJ Asahikawa 28.44 33 P **P 22 11 08.4 +3.0**
ULN Ulaanbaatar 28.61 340 *e*P **P 22 11 07.0 +0.1**
comp=Z,45nm,0.7s,mb5.2
ULN *e*ScP ScP 22 17 50.0 -1.8
ULN Ulaanbaatar 28.61 340 *e*P **P 22 11 07.0 +0.1**
ULN pmax pmax
comp=Z,45nm,0.7s,mb5.2
ULN Ulaanbaatar 28.61 340 P **P 22 11 07.1 +0.3**
SNR=20
TSI Tuntungan 28.62 234 P **P 22 11 04.6 -2.7**
RGRI Rengat 28.73 223 P **P 22 11 07.4 -0.9**
comp=Z,274nm,0.2s,mb6.5
SONM Songino Array 28.80 339 P **P 22 11 08.4 -0.1**
comp=Z,38nm,0.7s,mb5.1,baz=158,slow=9.3,SNR=79
SONM ScP ScP 22 17 50.8 -1.6
comp=Z,5.1nm,0.9s,baz=157,slow=4.2,SNR=12
SONM LR LR 22 24 08.7
comp=Z,723nm,18.3s,baz=152,slow=39
PSI Prapat 28.81 233 P **P 22 11 09.2 +0.2**
comp=Z,62nm,0.8s,mb5.3,baz=22,slow=5.3,SNR=53
PSI ScP ScP 22 17 51.1 -2.0
comp=Z,12nm,1.0s,baz=284,slow=3.5,SNR=6.1
PSI LR LR 22 21 57.1
comp=Z,289nm,19.3s,baz=34,slow=34
PSI Prapat 28.81 233 P **P 22 11 09.2 +0.2**
PSI 22 17 51.1
HABR Khabarovsk 28.91 19 P **P 22 11 07.5 -2.0**
HABR *e**PP pP 22 11 22.5 -3.2
HABR *e* 22 12 01.7
HABR 22 14 14.8
HABR *e*SS SS 22 17 24.5 -35
HABR *e* 22 21 45.1
HABR MLR MLR
comp=Z,207nm,17.0s
JMBI JAMBI 28.94 219 P **P 22 11 09.8 -0.4**
comp=Z,7μmcomp=Z,207nm,0.7s,mb5.9
BKNI Bangkinang 29.07 226 P **P 22 11 09.7 -1.6**
comp=Z,1μmcomp=Z,172nm,0.9s,mb5.7
MNSI Mandailing Nat 29.72 229 P **P 22 11 16.5 -0.6**
comp=Z,2μmcomp=Z,236nm,0.8s,mb5.9
SDSI Sungai Dareh 29.76 224 P **P 22 11 17.2 -0.2**
comp=Z,41nm,1.0s,mb5.0
TPTI 29.82 236 P **P 22 11 15.9 -2.1**
comp=Z,24nm,1.4s,mb4.6
PPI Padang Panjang 30.07 226 P **P 22 11 20.3 +0.1**
comp=Z,3μmcomp=Z,206nm,1.0s,mb5.7
ABJI Asem Bagus 30.10 194 P **P 22 11 22.2 +1.9**
comp=Z,2μm,0.8s
MMRI Maumere 30.10 178 P **P 22 11 20.5 +0.2**
comp=Z,2μmcomp=Z,238nm,0.9s,mb5.8
SRBI Singaraja 30.17 192 P **P 22 11 22.6 +1.7**
comp=Z,62nm,1.1s,mb5.2
KHKI Kahang-Kahang 30.36 191 P **P 22 11 24.2 +1.5**
comp=Z,105nm,1.2s,mb5.3
PDSI Padang 30.37 225 P **P 22 11 23.1 +0.3**
comp=Z,108nm,1.0s,mb5.4
NGJI Ngawi 30.45 200 P **P 22 11 25.3 +1.9**
comp=Z,98nm,1.0s,mb5.4
SMRI Semarang 30.48 202 P **P 22 11 25.3 +1.5**
comp=Z,94nm,1.1s,mb5.3
NBBI Negara 30.57 193 P **P 22 11 26.3 +1.8**
comp=Z,197nm,1.3s,mb5.7
YSS Yuzh-Sakhalins 30.59 29 *e*P **P 22 11 24.8 +0.4**
comp=Z,52nm,0.9s,mb5.3
YSS Yuzh-Sakhalins 30.59 29⇓*i*P **P 22 11 24.0 -0.4**
YSS *e* 22 11 30.5
KRJI Kerinci 30.63 222 P **P 22 11 24.2 -0.9**
comp=Z,5μmcomp=Z,234nm,0.9s,mb5.9
SJI Sawahan 30.70 199 P **P 22 11 26.3 +0.7**
comp=Z,58nm,1.1s,mb5.2
DNP Denpasar 30.74 192 P **P 22 11 27.9 +1.9**
comp=Z,378nm,1.1s,mb6.1
LHSI Lahat 30.80 217 P **P 22 11 26.6 0.0**
comp=Z,9.5nm,0.8s,mb4.6
KLSI 30.87 214 P **P 22 11 27.6 +0.4**
comp=Z,2μmcomp=Z,259nm,0.9s,mb6.0
IGBI Denpasar 30.89 192 P **P 22 11 29.2 +1.8**
comp=Z,84nm,1.3s,mb5.3
KRKI Karangkates 30.90 198 P **P 22 11 29.1 +1.7**
comp=Z,106nm,1.6s,mb5.3
KLI Kotabumi 30.95 214 P **P 22 11 28.5 +0.6**
comp=Z,2μmcomp=Z,179nm,0.9s,mb5.8
PWJI Pagerwojo 30.96 199 P **P 22 11 27.9 0.0**
comp=Z,96nm,1.0s,mb5.5
MDSI Maura Dua 30.99 215 P **P 22 11 28.3 +0.1**
comp=Z,65nm,0.8s,mb5.4
BJII Banjamegara 31.01 203 P **P 22 11 29.7 +1.3**
comp=Z,71nm,1.4s,mb5.2
TAPN Taplejung 31.15 287 *e*P **P 22 11 30.3 +0.7**
comp=Z,44nm,0.8s,mb5.2
KSI Kapahiang 31.18 219 P **P 22 11 29.6 -0.4**
comp=Z,134nm,1.0s,mb5.6
BLSI Bandar Lampung 31.18 212 P **P 22 11 30.4 +0.4**
SBJI Serang 31.41 210 P **P 22 11 32.6 +0.7**
comp=Z,234nm,0.8s,mb6.0
ODAN Odare 31.42 286 *e*P **P 22 11 32.8 +0.8**
comp=Z,46nm,0.8s,mb5.2
LWLI Liwa 31.50 215 P **P 22 11 33.1 +0.4**
comp=Z,276nm,0.9s,mb6.0
MNAI Manna 31.55 217 P **P 22 11 35.5 +2.3**
comp=Z,390nm,1.6s,mb5.9
SISI Saibi 31.59 227 P **P 22 11 31.9 -1.7**
comp=Z,130nm,1.1s,mb5.6
CMJI Cimerak 31.90 205 P **P 22 11 38.7 +2.5**
CISI Cisompet, Garu 31.95 206 P **P 22 11 36.5 -0.1**
comp=Z,133nm,1.3s,mb5.5
SKJI Sukabumi 31.99 209 P **P 22 11 36.5 -0.6**
comp=Z,108nm,0.7s,mb5.7
ZAK Zakamensk 32.05 338 *e*P **P 22 11 35.4 -1.8**
ZAK pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
CGJI Cibinong 32.05 211 P **P 22 11 36.4 -1.1**
comp=Z,62nm,1.5s,mb5.1
RAMN Ramite 32.12 286 *e*P **P 22 11 39.7 +1.5**
comp=Z,86nm,0.8s,mb5.5
JIRN Jiri 32.52 288 *e*P **P 22 11 42.9 +1.3**
comp=Z,77nm,0.8s,mb5.6
GUN Gumba 32.80 288 *e*P **P 22 11 45.3 +1.2**
comp=Z,101nm,0.9s,mb5.7
TLY Talaya 33.02 340 P **P 22 11 45.4 -0.3**
comp=Z,197nm,0.7s,mb6.0,SNR=6.0
TLY Talaya 33.02 340 *e*P **P 22 11 46.0 +0.3**
comp=Z,22nm,0.7s,mb5.1
TLY Talaya 33.02 340 *e*P **P 22 11 45.3 -0.4**
TLY *e*S **S 22 16 55.9 -3.4**
TLY pmax pmax
comp=Z,22nm,0.7s,mb5.1
TLY MLR MLR
comp=Z,424nm,16.0s
TLY Talaya 33.02 340 P **P 22 11 45.9 +0.2**
SNR=8.3
PKI Pulchoki 33.21 288 *e*P **P 22 11 48.3 +0.7**
comp=Z,64nm,1.1s,mb5.3
PKIN Phulchoki 33.22 288 *e*P **P 22 11 48.8 +1.1**
comp=Z,38nm,0.7s,mb5.3
IRK Irkutsk 33.31 341 *e*P **P 22 11 47.4 -0.8**
IRK pmax pmax
comp=Z,63nm,1.1s,mb5.4
KKN Kakani 33.33 288 *e*P **P 22 11 49.2 +0.5**
comp=Z,51nm,0.9s,mb5.4
DMN Daman 33.48 288 *e*P **P 22 11 50.6 +0.6**
comp=Z,66nm,0.9s,mb5.5
GKN Gorkha 33.91 288 *e*P **P 22 11 53.9 +0.2**
comp=Z,44nm,0.8s,mb5.3
MOY Mondy 33.92 337 *e*P **P 22 11 53.6 +0.1**
MOY pmax pmax
comp=Z,30nm,2.6s,mb4.7
KOLN Koldanda 34.82 288 *e*P **P 22 12 02.1 +0.5**
comp=Z,52nm,0.8s,mb5.4
WMQ Urumqi 35.62 316 P **P 22 12 09.5 +1.3**
WMQ pP pP 22 12 24.7 0.0
WMQ sP sP 22 12 31.8 -0.8
WMQ PP PP 22 13 31.7 +1.5
WMQ PcP PcP 22 14 37.0 +1.4
WMQ S **S 22 17 41.2 +1.7**
WMQ SS SS 22 20 04.1 -13
WMQ ScS ScS 22 22 20.0 -0.6
WMQ pmax pmax
comp=Z,12nm,0.8s,mb4.9
WMQ pmax pmax
comp=Z,230nm,4.0s
WMQ LR LR
comp=N,120nm,18.8s
WMQ LR LR
comp=E,120nm,18.6s
WMQ LR LR
comp=Z,130nm,20.6s
KAKA Kakadu 35.81 161 *e*P **P 22 12 06.3 -3.8**
comp=Z,43nm,0.8s,mb5.4
KAKA Kakadu 35.81 161 *e*P **P 22 12 06.6 -3.5**
comp=Z,141nm,0.8s,mb6.0
KAKA Kakadu 35.81 161 P **P 22 12 06.9 -3.2**
comp=Z,622nmcomp=Z,93nm,0.8s,mb5.8
KNA Kununurra 37.85 168 P **P 22 12 25.2 -2.2**
comp=Z,1μmcomp=Z,130nm,0.8s,mb5.8
FITZ Fitzroy Crossi 39.71 174 *e*P **P 22 12 40.5 -2.5**
comp=Z,30nm,0.9s,mb5.1
FITZ Fitzroy Crossi 39.71 174 *e*P **P 22 12 40.7 -2.3**
comp=Z,13nm,0.5s,mb5.0
FITZ Fitzroy Crossi 39.71 174 P **P 22 12 41.0 -2.0**
comp=Z,52nm,1.0s,mb5.3
PMG Port Moresby 39.87 138 *e*P **P 22 12 42.7 -1.7**
comp=Z,22nm,0.8s,mb5.0
PMG Port Moresby 39.87 138 *e*P **P 22 12 42.7 -1.7**
PMG pmax pmax
comp=Z,22nm,0.8s
MK31 Makanchi Array 40.35 318 *e*P **P 22 12 48.8 +0.8**
MK31 *e*ScP ScP 22 18 32.7 -1.0
MKAR Makanchi Array 40.35 318 P **P 22 12 49.0 +0.9**
MKAR pP pP 22 13 07.2 +2.4
MKAR ScP ScP 22 18 32.6 -1.1
MKAR ScS ScS 22 22 45.9 -1.7
MKAR LR LR 22 30 45.2
MKAR Makanchi Array 40.35 318 P **P 22 12 49.0 +0.9**
comp=Z,13nm,0.6s,mb4.9,baz=108,slow=9.1,SNR=129
MKAR pP pP 22 13 07.2 +2.4
comp=Z,18nm,0.8s,baz=110,slow=9.4,SNR=5.7
MKAR ScP ScP 22 18 32.6 -1.1

comp=Z,3.5nm,0.6s,baz=104,slow=6.2,SNR=20
MKAR ScS ScS 22 22 45.9 -1.7
comp=Z,0.5nm,0.8s,baz=160,slow=4.6,SNR=3.6
MKAR LR LR 22 30 45.2
comp=Z,167nm,19.1s,baz=108,slow=38
MKAR Makanchi Array 40.35 318 P **P** **22 12 49.0 +1.0**
MKAR *PP pP 22 13 07.2 +2.5
MKAR 22 22 45.9
YAK Yakutsk 40.76 6 *eP* **P** **22 12 50.6 -0.6**
comp=Z,31nm,0.6s,mb5.3
YAK Yakutsk 40.76 6 *eP* **P** **22 12 50.4 -0.8**
YAK pmax pmax
comp=Z,31nm,1.0s,mb5.1
YAK pmax pmax
comp=N,17nm,1.6s
COEN Coen 41.31 147 *eP* **P** **22 12 54.9 -1.4**
comp=N,88nm,0.6s,mb5.8
COEN Coen 41.31 147 P **P** **22 12 55.5 -0.7**
comp=N,121nm,0.7s,mb5.8
COCO West Island 41.40 218 P **P** **22 12 58.0 +1.0**
comp=N,200nm,1.7s,mb5.7
PETK Petropavlovsk- 41.86 32 P **P** **22 12 59.5 -0.8**
PETK LR LR 22 30 15.4
PETK Petropavlovsk- 41.86 32 P **P** **22 12 59.5 -0.8**
comp=N,1.3nm,0.4s,mb4.0,baz=215,slow=7.0,SNR=7.5
PETK LR LR 22 30 15.4
comp=N,82nm,18.4s,baz=305,slow=36
PET Petropavlovsk 42.29 33 *eP* **P** **22 13 03.3 -0.5**
PET *eS* **S** **22 19 22.7 +3.1**
PET MLR MLR
comp=Z,200nm,16.0s
ZAA0 Zalesovo Array 42.51 329 *eP* **P** **22 13 05.5 -0.1**
ZAA0 *e*ScP ScP 22 18 39.6 -2.5
ZALV Zalesovo Beam 42.51 329 P **P** **22 13 05.7 +0.1**
comp=Z,38nm,0.4s,mb5.5,baz=116,slow=7.6,SNR=291
ZALV ScP ScP 22 18 39.6 -2.5
comp=Z,2.9nm,0.7s,baz=129,slow=3.6,SNR=6.8
ZALV ScS ScS 22 22 56.9 -3.6
comp=Z,0.7nm,0.5s,baz=122,slow=5.4,SNR=5.4
ZALV LR LR 22 31 41.9
comp=Z,136nm,19.1s,baz=252,slow=37
ZALV Zalesovo Beam 42.51 329 P **P** **22 13 05.7 +0.1**
ZALV 22 22 56.9
KSH Kashi 42.52 305⇑ *iP* **P** **22 13 10.2 +4.3**
KSH pP pP 22 13 25.6 +2.9
KSH sP sP 22 13 32.9 +2.4
KSH PP PP 22 14 52.7 +7.2
KSH *e*PcP PcP 22 15 01.1 +3.6
KSH *e*ScP ScP 22 18 45.4 +2.9
KSH *e*PcS PcS 22 18 51.9 +2.4
KSH S **S** **22 19 29.3 +6.0**
KSH *e*sS sS 22 19 55.9 +4.0
KSH *e*SS SS 22 22 35.4 +0.4
KSH *e*ScS ScS 22 23 03.2 +2.1
KSH pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
KSH pmax pmax
comp=Z,140nm,4.0s
KSH LR LR
comp=N,76nm,6.3s
KSH LR LR
comp=E,93nm,5.6s
KSH LR LR
comp=Z,120nm,6.0s
MBWA Marble Bar 42.57 182 *eP* **P** **22 13 04.2 -2.3**
comp=Z,10.0nm,0.6s,mb4.7
WRAB Tennant Creek 43.20 162 P **P** **22 13 09.0 -2.6**
comp=Z,418nm,0.6s,mb6.3,SNR=50
WRAB Tennant Creek 43.20 162 *eP* **P** **22 13 09.4 -2.1**
comp=Z,33nm,0.6s,mb5.2
WRAB Tennant Creek 43.20 162 *eP* **P** **22 13 09.4 -2.2**
WRAB pmax pmax
comp=Z,33nm,0.6s,mb5.2
WRAB Tennant Creek 43.20 162 P **P** **22 13 09.3 -2.3**
comp=Z,73nm,0.9s,mb5.4
WB2 Warramunga Ar 43.21 162 *eP* **P** **22 13 09.4 -2.3**
NVS Novosibirsk 43.78 329⇑ *iP* **P** **22 13 15.8 -0.1**
NVS *e**PP pP 22 13 32.1 -0.6
NVS *i* 22 14 58.1
NVS *e*S **S** **22 19 40.8 -0.6**
NVS *i* 22 23 03.8
NVS pmax pmax
comp=N,26nm,1.1s
NVS pmax pmax
comp=Z,45nm,1.1s,mb5.1
NVS pmax pmax
comp=E,27nm,1.0s
NVS smax
comp=N,22nm,1.8s
NVS smax
comp=E,68nm,2.0s
UCH Uchtor 44.16 309 *eP* **P** **22 13 21.7 +2.6**
comp=E,16nm,1.2s,mb4.6
KURK Kurchatov 44.20 322 P **P** **22 13 19.0 -0.3**
comp=E,275nm,0.7s,mb6.1,SNR=54
KURK Kurchatov 44.20 322 *eP* **P** **22 13 19.7 +0.4**
comp=E,57nm,1.0s,mb5.2
KURK *e*ScP ScP 22 18 47.1 -2.0
KURK Kurchatov 44.20 322 ScP ScP 22 18 47.6 -1.5
comp=E,3.5nm,0.8s,baz=112,slow=3.6,SNR=7.6
KURK LR LR 22 32 48.9
comp=E,95nm,20.6s,baz=170,slow=37
KURK Kurchatov 44.20 322*c iP* **P** **22 13 19.8 +0.5**
KURK pmax pmax
comp=Z,64nm,1.2s,mb5.2
KURK Kurchatov 44.20 322 P **P** **22 13 20.3 +1.0**
SNR=23
AAK Ala-Archa 44.26 309 ScP ScP 22 18 49.3 -0.2
comp=Z,3.1nm,0.7s,baz=252,slow=5.7,SNR=5.1
AAK LR LR 22 35 26.8
comp=Z,172nm,18.0s,baz=241,slow=41
AAK Ala-Archa 44.26 309*de*P **P** **22 13 21.6 +1.7**
AML Almayashu 44.73 309 *eP* **P** **22 13 25.7 +2.1**
comp=Z,11nm,0.9s,mb4.6
AML *e*ScP ScP 22 18 52.0 +0.5
EKS2 Erkin-Say 44.78 309 *eP* **P** **22 13 25.5 +1.5**
comp=Z,3.3nm,0.6s,mb4.2
EKS2 *e*ScP ScP 22 18 51.9 +0.3
SEY Seymchan 46.28 19⇓ *eP* **P** **22 13 36.6 +1.0**
ASAR Alice Springs 46.64 164 P **P** **22 13 37.4 -1.5**
comp=Z,6.5nm,0.3s,mb4.8,baz=344,slow=6.6,SNR=101
ASAR ScP ScP 22 18 56.8 -2.7
comp=Z,5.1nm,0.8s,baz=353,slow=4.4,SNR=18
ASAR S **S** **22 20 19.9 -3.3**
comp=Z,2.6nm,1.1s,baz=350,slow=16,SNR=5.3
KBL Kabul 47.50 297 *eP* **P** **22 13 46.5 +0.9**
comp=Z,13nm,0.8s,mb4.8
KBL *e*ScP ScP 22 19 02.3 -0.8
KBL Kabul 47.50 297 *eP* **P** **22 13 46.5 +1.0**
KBL pmax pmax
comp=Z,13nm,0.8s,mb4.8
CTA Charters Tower 48.05 148 *eP* **P** **22 13 49.1 -0.7**
comp=Z,7.1nm,0.6s,mb4.7
BVAR Borovoye Array 49.80 322 P **P** **22 14 03.6 +0.7**
comp=Z,16nm,0.5s,mb5.2,baz=107,slow=9.2,SNR=133
PcP PcP 22 15 22.2 -0.5
comp=Z,10nm,0.8s,baz=115,slow=4.1,SNR=5.9
BVAR ScP ScP 22 19 11.4 -1.1
comp=Z,4.9nm,0.8s,baz=108,slow=4.8,SNR=12
BVAR S **S** **22 21 09.3 +2.1**
comp=Z,0.9nm,0.9s,baz=86,slow=8.8,SNR=3.9
BVAR ScS ScS 22 23 44.0 -3.8
comp=Z,1.7nm,0.9s,baz=72,slow=4.7,SNR=7.9
BVAR Borovoye Array 49.80 322 P **P** **22 14 03.6 +0.8**
BVAR 22 15 22.2
BVAR S **S** **22 21 09.3 +2.1**
BVAR 22 23 44.0
BRVK Borovoye 49.87 322 P **P** **22 14 04.6 +1.2**
comp=Z,283nm,0.9s,mb6.2,SNR=56
BRVK Borovoye 49.87 322 *eP* **P** **22 14 04.1 +0.7**
comp=Z,37nm,0.8s,mb5.4
BRVK *e*ScP ScP 22 19 10.6 -2.2
BRVK Borovoye 49.87 322*c iP* **P** **22 14 04.1 +0.7**
BRVK pmax pmax
comp=Z,63nm,1.2s,mb5.4
BRVK Borovoye 49.87 322 P **P** **22 14 04.6 +1.2**
SNR=27
TIXI Tiksi 50.21 3 *eP* **P** **22 14 03.6 -2.1**
comp=Z,8.7nm,0.5s,mb4.9
TIXI Tiksi 50.21 3 *eP* **P** **22 14 04.1 -1.6**
TIXI pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
TIXI MLR MLR
comp=Z,273nm,18.0s
FORT Forrest 52.51 173 *eP* **P** **22 14 21.9 -1.4**
comp=Z,34nm,0.8s,mb5.4
FORT Forrest 52.51 173 *eP* **P** **22 14 22.0 -1.4**
comp=Z,47nm,0.9s,mb5.5
KLBR Kellerberrin 53.05 184⇓ *iP* **P** **22 14 25.7 -1.6**
comp=Z,21nm,0.5s,mb5.4
ABKAR Akbulak array 55.40 316 *eP* **P** **22 14 44.9 +0.7**
comp=Z,4.0nm,0.4s,mb4.8
ABKAR *e*ScP ScP 22 19 35.4 -1.6
SVE Sverdlovsk 56.23 325⇓ *eP* **P** **22 14 50.8 +0.7**
SVE pmax pmax
comp=Z,52nm,0.9s,mb5.6
ABKT Ailbek 56.30 302 P **P** **22 14 52.1 +1.1**
comp=Z,77nm,0.7s,mb5.8,SNR=6.2
STKA Stephens Creek 56.61 159 *eP* **P** **22 14 51.8 -1.2**
comp=Z,25nm,0.6s,mb5.4
STKA Stephens Creek 56.61 159 *eP* **P** **22 14 51.9 -1.2**
comp=Z,5.9nm,0.7s,mb4.7
STKA Stephens Creek 56.61 159 P **P** **22 14 51.9 -1.1**
comp=Z,30nm,0.6s,mb5.5,baz=337,slow=6.8,SNR=100
AKTK Aktyubinsk 56.77 317 P **P** **22 14 54.6 +0.6**
AKTK LR LR 22 41 33.3
AKTO Aktyubinsk 56.77 317 P **P** **22 14 54.6 +0.6**
comp=Z,4.0nm,0.6s,mb4.7,baz=80,slow=8.0,SNR=17
AKTO LR LR 22 41 33.3
comp=Z,90nm,19.7s,baz=270,slow=38
ARU Arti 57.28 324 *eP* **P** **22 14 57.5 -0.1**
comp=Z,30nm,0.3s,mb5.8
ARU Arti 57.28 324*c iP* **P** **22 14 57.7 +0.1**
ARU *PP pP 22 15 15.9 +0.8
ARU *e* 22 15 51.2
ARU *e* 22 17 02.3
ARU PPP 22 18 22.3
ARU S **S** **22 22 51.4 +2.9**
ARU pmax pmax
comp=Z,51nm,1.0s,mb5.5
ARU Arti 57.28 324 P **P** **22 14 57.4 -0.2**
comp=Z,359nm,0.8s,mb6.5,SNR=31
SOKR Solikamsk 58.78 327*c iP* **P** **22 15 08.1 +0.1**
SOKR pmax pmax
comp=Z,30nm,1.4s,mb5.1
ARMA Armidale 59.34 150 *eP* **P** **22 15 10.3 -1.9**
CNB Canberra Magne 62.53 154 *eP* **P** **22 15 33.5 -0.2**
TOO Toolangi 63.10 159 *eP* **P** **22 15 37.1 -0.4**
MAK Makhachkala 64.03 308 *eP* **P** **22 15 38.9 -4.8**
MAK *e* 22 16 12.2
MAK *e*S **S** **22 24 15.9 +1.0**
MAK pmax pmax
comp=Z,191nm,1.9s,mb5.6
MAK MLR MLR
comp=Z,111nm,15.0s
UMR Umm Al-Rimmam 65.98 294 *eP* **P** **22 15 55.9 -0.7**
UMR AMb AMB 22 15 59.6
comp=Z,39nm,1.3s,mb5.1
MIB Mutribah 66.24 294 *eP* **P** **22 15 57.4 -0.9**
MIB AMb AMB 22 15 58.4
comp=Z,31nm,0.6s,mb5.3
RDF Al-Radifah 66.25 293 *eP* **P** **22 15 58.3 0.0**
RDF AMb AMB 22 15 59.3
comp=Z,54nm,0.6s,mb5.5
NAY Al-Naaiem 66.44 293 *eP* **P** **22 15 58.9 -0.7**
NAY AMb AMB 22 15 59.9
comp=Z,27nm,0.7s,mb5.2
ZEI Tsey 66.68 308 *eP* **P** **22 16 00.7 -0.1**
ZEI pmax pmax
comp=Z,28nm,1.4s,mb4.9
VRHR Novokhopersk 67.15 318 *eP* **P** **22 16 03.3 -0.4**
VRHR pmax pmax
comp=E,20nm,0.7s
VRHR pmax pmax
comp=Z,70nm,0.7s,mb5.6
VRHR pmax pmax
comp=N,3.0nm,0.4s
KIV Kislovodsk 67.38 310 P **P** **22 16 06.9 +1.6**
comp=N,149nm,0.8s,mb5.9,SNR=5.7
KIV Kislovodsk 67.38 310 *eP* **P** **22 16 06.3 +1.1**
comp=N,17nm,0.8s,mb4.9
KIV Kislovodsk 67.38 310*c iP* **P** **22 16 06.4 +1.1**
KIV *e* 22 16 30.9
KIV *e* 22 18 31.2
KIV *e*SS SS 22 29 21.6 +5.1
KIV pmax pmax
comp=Z,25nm,1.0s,mb5.0
KIV MLR MLR
comp=Z,100nm,23.0s
KIV Kislovodsk 67.38 310 P **P** **22 16 06.9 +1.6**
SNR=5.6
KLMR Klimovskoe 67.44 328 *eP* **P** **22 16 02.9 -2.4**
KLMR pmax pmax
comp=Z,92nm,1.6s,mb5.4
TTA Tatalina 67.59 29 *eP* **P** **22 16 06.0 -0.3**
comp=Z,8.0nm,0.6s,mb4.7
TTA Tatalina 67.59 29 *eP* **P** **22 16 06.0 -0.2**
TTA pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
SVW2 Sparrevohn 67.93 31 *eP* **P** **22 16 08.3 -0.1**
comp=Z,15nm,0.7s,mb4.9
VORD Divnogorie 68.63 318 *eP* **P** **22 16 12.5 -0.4**
VORD pmax pmax
comp=N,90nm,0.5s
VORD pmax pmax
comp=E,60nm,0.5s
VORD pmax pmax
comp=Z,20nm,0.5s,mb5.2
VSR Storozhevoye 68.67 318 *eP* **P** **22 16 12.9 -0.3**
VSR pmax pmax
comp=N,8.0nm,0.8s
VSR pmax pmax
comp=E,20nm,0.8s
VSR pmax pmax
comp=Z,50nm,0.8s,mb5.4
MOS Moscow 68.96 323 *eP* **P** **22 16 14.4 -0.5**
MOS *e* pP 22 16 35.7 +2.8
MOS pmax pmax
comp=Z,94nm,1.0s,mb5.6
MOS pmax pmax
comp=Z,69nm,0.8s,mb5.5
PPLA Purkeypile 69.34 29 *eP* **P** **22 16 16.9 -0.2**
comp=Z,16nm,0.9s,mb4.9
RSO Redoubt South 69.38 32 *eP* **P** **22 16 17.3 -0.1**
APA Apatity 69.46 336⇓ *iP* **P** **22 16 18.0 +0.2**
APA *i* 22 16 29.0
APA *e* 22 18 50.0
APA *e*S S 22 25 20.0 +0.3
APA *e*PS 22 25 48.0
APA pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
APA MLR MLR
comp=Z,200nm,13.0s
OHAK Old Harbor 69.55 35 *eP* **P** **22 16 17.4 -1.1**
comp=Z,14nm,0.9s,mb4.8
COLD Coldfoot 69.63 25 *eP* **P** **22 16 17.5 -1.3**
comp=Z,10.0nm,1.2s,mb4.5
OBN Obninsk 69.64 322 P **P** **22 16 19.8 +0.7**
comp=Z,336nm,0.7s,mb6.3,SNR=7.8
OBN Obninsk 69.64 322 *eP* **P** **22 16 18.6 -0.5**
comp=Z,71nm,1.0s,mb5.5
OBN Obninsk 69.64 322*c iP* **P** **22 16 18.5 -0.6**
OBN *e* pP 22 16 38.4 +1.2
OBN *e* 22 18 53.8
OBN pmax pmax
comp=Z,78nm,1.2s,mb5.4
OBN MLR MLR
comp=Z,100nm,24.0s
BPAW Bear Paw Mtn. 69.72 28 *eP* **P** **22 16 19.3 -0.1**
comp=Z,32nm,1.3s,mb5.0
KDAK Kodiak Island 69.84 35 P **P** **22 16 19.9 -0.4**
comp=Z,268nm,0.7s,mb6.2,SNR=14
KDAK Kodiak Island 69.84 35 *eP* **P** **22 16 19.6 -0.8**
comp=Z,25nm,0.8s,mb5.1
KDAK Kodiak Island 69.84 35 *i P* **P** **22 16 19.5 -0.8**
TRF Thorofare Moun 70.11 29 *eP* **P** **22 16 21.5 -0.4**
comp=Z,7.5nm,0.7s,mb4.6
MCK McKinley 70.67 28 *eP* **P** **22 16 24.3 -1.0**
comp=Z,37nm,1.0s,mb5.2
MCK McKinley 70.67 28 *eP* **P** **22 16 24.3 -1.0**
MCK pmax pmax
comp=Z,37nm,1.0s,mb5.2
RC01 Rabbit Creek A 70.75 31 *eP* **P** **22 16 24.1 -1.7**
comp=Z,7.0nm,0.6s,mb4.7
ANN Anapa 70.94 311 *eP* **P** **22 16 26.2 -1.1**
ANN *e*S S 22 25 39.3 +1.6
ANN pmax pmax
comp=Z,93nm,1.3s,mb5.5
COLA College 70.94 27 *eP* **P** **22 16 25.9 -1.0**
comp=Z,9.5nm,0.8s,mb4.7
COLA College 70.94 27 *eP* **P** **22 16 25.9 -1.0**
COLA pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
PMR Palmer 70.95 30 *eP* **P** **22 16 25.9 -1.1**
comp=Z,11nm,0.6s,mb4.8
PMR Palmer 70.95 30 *eP* **P** **22 16 25.9 -1.1**
PMR pmax pmax
comp=Z,11nm,0.6s,mb4.9
JOF Joensuu 71.03 331 *eP* **P** **22 16 26.6 -0.9**
JOF pmax pmax
comp=Z,12nm,0.4s,mb5.1
JOF Joensuu 71.03 331 *ep* **P** **22 16 26.6 -0.9**
comp=Z,12nm,0.4s,mb5.1
ILAR Eielson Array 71.36 27 P **P** **22 16 27.6 -1.8**
comp=Z,3.7nm,0.7s,mb4.3,baz=273,slow=5.5,SNR=33
ILAR LR LR 22 50 44.1
comp=Z,44nm,18.2s,baz=298,slow=38
KEV Kevo 71.42 339 *eP* **P** **22 16 29.4 -0.3**
comp=Z,19nm,0.6s,mb5.1
KEV Kevo 71.42 339 *eP* **P** **22 16 29.4 -0.3**
KEV pmax pmax
comp=Z,19nm,0.6s,mb5.1
KEV Kevo 71.42 339 *ep* **P** **22 16 28.8 -0.9**
comp=Z,21nm,0.6s,mb5.2
MALT Malatya 71.61 305 *eP* **P** **22 16 32.7 +1.2**
comp=Z,10nm,0.9s,mb4.7
MALT Malatya 71.61 305 *eP* **P** **22 16 32.7 +1.2**
MALT pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
ARCES ARCESS Array B 71.98 338 P **P** **22 16 32.6 -0.5**
comp=Z,11nm,0.6s,mb4.8,baz=77,slow=6.4,SNR=32
ARE0 ARCESS Array S 71.98 338 *eP* **P** **22 16 32.5 -0.5**
SPITS Spitsbergen Ar 72.01 348 LR LR 22 52 44.7
comp=Z,155nm,19.0s,baz=315,slow=40
PAX Paxson 72.35 29 *eP* **P** **22 16 34.6 -0.8**
comp=Z,11nm,0.9s,mb4.7
PAX Paxson 72.35 29 *eP* **P** **22 16 34.6 -0.8**
PAX pmax pmax
comp=Z,11nm,0.9s,mb4.7
KBS Kingsbay 72.56 349*c iP* **P** **22 16 35.8 -0.6**
KBS pmax pmax
comp=Z,18nm,1.2s,mb4.8
DIV Divide 72.63 31 *eP* **P** **22 16 36.9 -0.2**
comp=Z,39nm,1.2s,mb5.1
SIM Simferopol' 73.20 312 *eP* **P** **22 16 41.0 +0.2**
SIM pmax pmax
comp=Z,18nm,0.9s,mb4.9
BMRM Bremner River 73.22 31 *eP* **P** **22 16 40.2 -0.3**
comp=Z,23nm,0.9s,mb5.0
KAF Kangasniemi 73.47 331 *eP* **P** **22 16 41.1 -1.0**
KAF pmax pmax
comp=Z,14nm,0.7s,mb4.9
KAF Kangasniemi 73.47 331 *ep* **P** **22 16 41.1 -1.0**
comp=Z,14nm,0.7s,mb4.9,baz=70,slow=5.4
PAJU Pajala 73.48 336 P **P** **22 16 35.8 -6.2**
LANU Lannavaara 73.60 337 P **P** **22 16 36.2 -6.5**
EGAK Eagle 73.74 26 *eP* **P** **22 16 42.7 -0.9**
comp=Z,15nm,0.8s,mb4.8
FINES FINESS Array B 73.75 330 P **P** **22 16 43.9 +0.1**
comp=Z,22nm,0.8s,mb5.0,baz=90,slow=7.6,SNR=45
FINES LR LR 22 51 43.9
comp=Z,130nm,21.1s,baz=314,slow=38
AFI Afiamalu 74.42 112 LR LR 22 44 58.8
comp=Z,66nm,18.8s,baz=55,slow=32
SJUU Sjulsmark 74.51 335 P **P** **22 16 48.0 -0.1**
DAWY Dawson 74.69 27 *eP* **P** **22 16 48.3 -0.8**
BR131 Keskin Array S 74.87 307 *eP* **P** **22 16 50.6 0.0**
comp=Z,1.7nm,0.6s,mb4.0
BRTR Keskin Array B 74.87 307 P **P** **22 16 50.7 0.0**
comp=Z,5.2nm,0.9s,mb4.2,baz=116,slow=5.6,SNR=20
BRTR Keskin Array B 74.87 307*ce*P **P** **22 16 51.5 +0.8**
BRTR pmax pmax
comp=Z,5.0nm,0.9s
AKASG Malin Array Be 74.92 319 P **P** **22 16 49.9 -0.8**
AKASG LR LR 22 54 58.3
AKASG Malin Array Be 74.92 319 P **P** **22 16 49.9 -0.8**
comp=Z,7.6nm,0.6s,mb4.6,baz=62,slow=5.7,SNR=28
AKASG LR LR 22 54 58.3
comp=Z,75nm,20.3s,baz=65,slow=40
AKBB Malin Array Si 74.92 319 *eP* **P** **22 16 50.0 -0.7**
KIEV Kiev 74.94 319 *eP* **P** **22 16 49.9 -0.9**
comp=Z,8.7nm,0.6s,mb4.7
KIEV Kiev 74.94 319 *eP* **P** **22 16 49.9 -0.9**
KIEV pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
NACGM Naroch 75.19 323 *e* **P** **22 16 48.0 -4.2**
LILU Lilltraesk 75.28 335 P **P** **22 16 52.2 -0.3**
MMAI Mount Meron Ar 75.35 300 P **P** **22 16 54.2 +0.6**
comp=Z,2.2nm,0.6s,mb4.1,baz=49,slow=8.9,SNR=8.2
MMAI LR LR 22 53 40.6
comp=Z,50nm,18.7s,baz=110,slow=38
INK Inuvik 75.49 22 *eP* **P** **22 16 52.4 -1.3**
comp=Z,31nm,1.1s,mb5.0
INK Inuvik 75.49 22 *eP* **P** **22 16 52.4 -1.2**
INK pmax pmax
comp=Z,31nm,1.1s
PNL Peninsula 76.07 31 *eP* **P** **22 16 56.1 -1.0**
comp=Z,21nm,0.9s,mb4.9
TLCR 76.75 313⇓ *iP* **P** **22 17 01.9 +0.6**
TLCR 76.75 313⇓ *iP* **P** **22 17 01.9 +0.6**
SUW Suwalki 77.46 323 *eP* **P** **22 17 04.9 -0.1**
SUW Suwalki 77.46 323 *eP* **P** **22 17 05.0 -0.1**
comp=Z,88nm,1.0s,mb5.4
SUW Suwalki 77.46 323 *eP* **P** **22 17 05.0 0.0**
SUW pmax pmax
comp=Z,88nm,1.0s,mb5.4
TESR 77.79 315⇑ *iP* **P** **22 17 06.7 -0.3**
VRI Vrincioaia 77.94 315 ⇑P **P** **22 17 09.0 +1.1**
VRI Vrincioaia 77.94 315⇑ *iP* **P** **22 17 09.0 +1.1**
PLOR Plostina 78.00 315 ⇑P **P** **22 17 08.8 +0.6**
PLOR Plostina 78.00 315⇑ *iP* **P** **22 17 08.8 +0.6**
PGOR Pogoanele 78.08 314⇓ *iP* **P** **22 16 59.3 -9.4**
SKAG Skagway 78.08 31 *eP* **P** **22 17 08.7 +0.3**
comp=Z,24nm,0.9s,mb4.9
BURAR Bucovina Array 78.36 317 ⇑P **P** **22 17 10.5 +0.3**
BURAR Bucovina Array 78.36 317⇑ *iP* **P** **22 17 10.5 +0.3**
BUR08 Bucovina Ar. S 78.36 317 *eP* **P** **22 17 10.5 +0.3**
MLR Muntele Rosu 78.58 314 ⇓P **P** **22 17 12.5 +1.0**
MLR Muntele Rosu 78.58 314⇓ *iP* **P** **22 17 12.5 +1.1**
VOIR 79.19 315 ⇑P **P** **22 17 14.8 0.0**
VOIR 79.19 315⇑ *iP* **P** **22 17 14.8 0.0**
KWP Kalwaria Pacla 79.24 319 *eP* **P** **22 17 15.5 +0.5**
KWP Kalwaria Pacla 79.24 319 *eP* **P** **22 17 15.3 +0.4**
comp=Z,23nm,0.7s,mb5.1
KWP Kalwaria Pacla 79.24 319⇑ *iP* **P** **22 17 15.4 +0.5**
BMR Baia Mare 79.44 317 ⇑P **P** **22 17 17.1 +1.0**
BMR Baia Mare 79.44 317⇑ *iP* **P** **22 17 17.1 +1.0**
KOLS Kolonicke sedl 79.75 319 *eP* **P** **22 17 18.1 +0.3**
comp=Z,3.4nm,0.8s,mb4.2
KOLS Kolonicke sedl 79.75 319 *eP* **P** **22 17 18.1 +0.3**
KOLS pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
KOLS Kolonicke sedl 79.75 319 *eP* **P** **22 17 18.1 +0.3**
STHS Stebnicka Huta 80.21 319 *eP* **P** **22 17 20.7 +0.5**
comp=Z,12nm,1.6s,mb4.5
STHS Stebnicka Huta 80.21 319 *eP* **P** **22 17 20.7 +0.5**
STHS pmax pmax
comp=Z,12nm,1.6s,mb4.5
STHS Stebnicka Huta 80.21 319 *eP* **P** **22 17 20.7 +0.5**
DRGR 80.25 316 ⇑P **P** **22 17 21.0 +0.6**
DRGR 80.25 316⇑ *iP* **P** **22 17 21.0 +0.5**
CRVS Cervenica-Dubn 80.26 319 *eP* **P** **22 17 22.3 +1.8**
comp=Z,9.9nm,1.1s,mb4.5
CRVS Cervenica-Dubn 80.26 319 *eP* **P** **22 17 22.3 +1.8**
CRVS pmax pmax
comp=Z,10.0nm,1.1s,mb4.6
CRVS Cervenica-Dubn 80.26 319 *eP* **P** **22 17 22.3 +1.8**
NB2 NORSAR Subarra 80.58 332 P **P** **22 17 21.9 0.0**
comp=Z,3.2nm,0.5s,mb4.4,baz=58,slow=5.6
NOA NORSAR Array B 80.58 332 P **P** **22 17 21.2 -0.7**
comp=Z,4.1nm,0.6s,mb4.5,baz=61,slow=5.3,SNR=17
NOA LR LR 22 56 54.8
comp=Z,265nm,18.1s,baz=55,slow=38
NIE Niedzica 80.77 320 *eP* **P** **22 17 24.3 +1.1**
OJC Ojcow 80.77 320 *i P* **P** **22 17 23.7 +0.5**
NAO01 NORSAR Array S 80.81 332 *eP* **P** **22 17 24.7 +1.5**
DLBC Dease Lake 81.01 30 *eP* **P** **22 17 24.8 +0.5**
KECS Kecovo 81.02 319 *eP* **P** **22 17 25.1 +0.5**
comp=Z,6.9nm,1.3s,mb4.3
KECS Kecovo 81.02 319 *eP* **P** **22 17 25.1 +0.5**
KECS pmax pmax
comp=Z,7.0nm,1.3s,mb4.3
KECS Kecovo 81.02 319 *eP* **P** **22 17 25.1 +0.5**
RES Resolute Bay 81.12 9 *eP* **P** **22 17 23.4 -1.3**
comp=Z,42nm,1.1s,mb5.2
RES Resolute Bay 81.12 9 *eP* **P** **22 17 23.4 -1.2**
RES pmax pmax

comp=Z,42nm,1.1s,mb5.2
BZS Buzias 81.39 316 ⇑P **P 22 17 26.3 -0.2**
BZS Buzias 81.39 316 ⇑*i*P **P 22 17 26.3 -0.3**
VTS Vitosha 81.44 312 ⇑P **P 22 17 27.8 +0.9**
VTS Vitosha 81.44 312 ⇑*i*P **P 22 17 27.8 +0.9**
PSZ Piszkesteto 81.60 318 *e*P **P 22 17 26.6 -1.1**
comp=Z,7.6nm,1.0s,mb4.5
PSZ Piszkesteto 81.60 318 *e*P **P 22 17 26.6 -1.1**
PSZ pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
OKC Ostrava-Krasne 81.90 320 *e*P **P 22 17 29.3 +0.1**
OKC Ostrava-Krasne 81.90 320 *e*P **P 22 17 29.3 +0.1**
VYHS Vyhne 82.03 319 *e*P **P 22 17 30.6 +0.7**
comp=Z,5.2nm,0.8s,mb4.4
VYHS Vyhne 82.03 319 *e*P **P 22 17 30.6 +0.7**
VYHS pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
VYHS Vyhne 82.03 319 *e*P **P 22 17 30.6 +0.7**
KOLL Kolacno 82.25 319 *e*P **P 22 17 32.0 +0.9**
KOLL Kolacno 82.25 319 *e*P **P 22 17 32.0 +0.9**
MORC Moravsky Berou 82.28 321 *e*P **P 22 17 31.5 +0.3**
comp=Z,9.0nm,1.3s,mb4.4
MORC Moravsky Berou 82.28 321 *e*P **P 22 17 31.5 +0.3**
MORC pmax pmax
comp=Z,9.0nm,1.3s,mb4.4
MORC Moravsky Berou 82.28 321 ⇓*i*P **P 22 17 30.4 -0.8**
VAY Valandovo 82.35 311 *e*P **P 22 17 30.1 -1.7**
KSP Ksiaz 82.56 322 *e*P **P 22 17 33.2 +0.5**
KSP Ksiaz 82.56 322 *e*P **P 22 17 33.1 +0.5**
DPC Dobruska-Polom 82.76 321 *e*P **P 22 17 33.5 -0.1**
DPC *e* pP 22 17 47.6 -4.6
DPC MLR MLR
comp=Z,100nm,15.1s
DPC Dobruska-Polom 82.76 321 *e*P **P 22 17 33.5 -0.1**
DPC epP pP 22 17 47.6 -4.6
DPC AMS AMS 22 59 30.0
comp=Z,100nm,15.1s
UPC Upice 82.87 322 *e*P **P 22 17 34.9 +0.7**
UPC Upice 82.87 322 *e*P **P 22 17 34.9 +0.7**
VRAC Vranov 83.04 320 ⇑P **P 22 17 36.0 +0.8**
VRAC Vranov 83.04 320 ⇑*i*P **P 22 17 36.0 +0.9**
ABPO Ambohimpanom 83.07 247 *e*P **P 22 17 35.7 0.0**
comp=Z,13nm,0.8s,mb4.8
ABPO Ambohimpanom 83.07 247 *e*P **P 22 17 35.7 0.0**
ABPO pmax pmax
comp=Z,13nm,0.8s,mb4.8
PKSM Moragy 83.07 317 ⇑P **P 22 17 35.5 +0.1**
PKSM Moragy 83.07 317 ⇑*i*P **P 22 17 35.5 +0.2**
PVCC Panska Ves 83.69 322 *e*P **P 22 17 39.2 +0.8**
PVCC MLR MLR
comp=Z,100nm,15.8s
PVCC Panska Ves 83.69 322 *e*P **P 22 17 39.2 +0.8**
PVCC AMS AMS 23 00 10.0
comp=Z,100nm,15.8s
BRG Berggiesshubel 83.89 323 *e*P **P 22 17 39.5 0.0**
comp=Z,13nm,1.0s,mb4.7
BRG Berggiesshubel 83.89 323 *e*P **P 22 17 39.5 +0.1**
comp=Z,13nm,1.0s,mb4.7
BRG *e* pP 22 17 59.1 +1.1
comp=Z,6.5nm,1.1s
PRU Pruhonice 83.94 322 *e*P **P 22 17 40.8 +1.0**
PRU MLR MLR
comp=Z,100nm,12.7s
PRU Pruhonice 83.94 322 *e*P **P 22 17 40.8 +1.0**
PRU AMS AMS 23 00 10.0
comp=Z,100nm,12.7s
CONA Conrad Observa 84.07 319 *i*PcP PcP 22 17 41.4 -2.8
comp=Z,22nm,1.1s
CLL Collm 84.22 323 *e*P **P 22 17 41.0 -0.1**
comp=Z,21nm,1.0s,mb4.9
CLL Collm 84.22 323 ⇑*i*P **P 22 17 40.9 -0.2**
comp=Z,21nm,1.0s,mb4.9
CLL *e*S S 22 28 01.0 0.0
CLL Collm 84.22 323 ⇑*i*P **P 22 17 40.9 -0.2**
CLL *e*S S 22 28 01.0 0.0
CLL pmax pmax
comp=Z,21nm,1.0s,mb4.9
CLL Collm 84.22 323 ⇑*i*P **P 22 17 40.9 -0.2**
comp=Z,21nm,1.0s,mb4.9
CLL epP pP 22 18 00.0 +0.3
CLL esP sP 22 18 06.0 -1.1
CLL *e*S S 22 28 01.0 0.0
comp=N,100nm,13.0s
CLL L 23 00 00.0
comp=Z,200nm,18.1s
ARSA Arzberg 84.57 319 ⇑*i*P **P 22 17 43.5 +0.5**
comp=Z,11nm,1.1s,mb4.7
KHC Kasperske Hory 84.89 321 *e*P **P 22 17 44.9 +0.4**
comp=Z,13nm,1.1s,mb4.8
KHC Kasperske Hory 84.89 321 *e*P **P 22 17 44.9 +0.3**
KHC pmax pmax
comp=Z,13nm,1.1s,mb4.8
KHC Kasperske Hory 84.89 321 *e*P **P 22 17 44.7 +0.1**
KHC *ex* x 22 17 55.8
KHC AMS AMS 23 00 30.0
comp=Z,100nm,18.1s
TANN Tannenbergstha 84.94 323 *e*P **P 22 17 44.6 -0.2**
comp=Z,6.0nm,0.9s,mb4.5
GEC2 GERESS Array S 84.95 321 *e*P **P 22 17 44.8 -0.1**
comp=Z,12nm,1.0s,mb4.8
GEC2 GERESS Array S 84.95 321 *e*P **P 22 17 44.8 -0.1**
comp=Z,12nm,1.0s,mb4.8
GEC2 pmax pmax
comp=Z,12nm,1.0s,mb4.8
KMBO Kilima Mbogo 85.01 267 *e*P **P 22 17 46.6 +0.8**
comp=Z,6.5nm,0.8s,mb4.6
KMBO Kilima Mbogo 85.01 267 P **P 22 17 46.6 +0.8**
comp=Z,7.5nm,0.8s,mb4.7,baz=360,slow=24,SNR=24
KMBO Kilima Mbogo 85.01 267 *e*P **P 22 17 46.6 +0.8**
KMBO pmax pmax
comp=Z,7.0nm,0.8s
WERD Werda 85.01 323 *e*P **P 22 17 44.9 -0.2**
comp=Z,8.0nm,1.0s,mb4.6
NKC Novy Kostel 85.03 322 *e*P **P 22 17 44.9 -0.3**
NKC Novy Kostel 85.03 322 *e*P **P 22 17 44.9 -0.3**
GUNZ Gunzen 85.04 323 *e*P **P 22 17 45.3 0.0**
comp=Z,12nm,0.9s,mb4.8
SUMG Summit 85.04 354 *e*P **P 22 17 44.8 0.0**
comp=Z,35nm,1.1s,mb5.2
WERN Wernitzgruen 85.05 323 *e*P **P 22 17 45.5 +0.2**
comp=Z,18nm,1.1s,mb4.9
MOA Molln 85.07 320 ⇑*i*PcP PcP 22 17 46.1 -2.5
comp=Z,15nm,0.9s
PERS Pernice 85.09 318 *i* P **P 22 17 45.7 +0.1**
SOKA Soboth 85.13 318 ⇑*i*P **P 22 17 45.9 +0.2**
comp=Z,11nm,0.9s,mb4.8
YKA Yellowknife Ar 85.21 23 P **P 22 17 45.0 -0.9**
YKA PKKPbc PKKPbc 22 35 48.6 -4.1
YKA Yellowknife Ar 85.21 23 P **P 22 17 45.0 -0.9**
comp=Z,6.1nm,0.8s,mb4.6,baz=316,slow=4.8,SNR=32
YKA PKKPbc PKKPbc 22 35 48.6 -4.1
comp=Z,0.8nm,0.5s,baz=136,slow=2.8,SNR=14
NRDL Niedersach Rie 85.23 325 *e*P **P 22 17 44.8 -1.4**
comp=Z,28nm,1.3s,mb5.0
MOX Moxa 85.31 323 *e*P **P 22 17 46.5 -0.1**
comp=Z,16nm,1.5s,mb4.7
MOX
comp=Z,200nm,19.0s
MOX Moxa 85.31 323 *e*P **P 22 17 46.6 0.0**
comp=Z,14nm,1.3s,mb4.7
MOX Moxa 85.31 323 *e*P **P 22 17 46.5 -0.1**
MOX pmax pmax
comp=Z,16nm,1.5s,mb4.7
MOX MLR MLR
comp=Z,200nm,19.0s
CLZ Clausthal 85.41 324 *e*P **P 22 17 47.5 +0.4**
comp=Z,22nm,1.1s,mb5.0
CLZ Clausthal 85.41 324 *e*P **P 22 17 47.5 +0.4**
comp=Z,22nm,1.1s,mb5.0
CLZ Clausthal 85.41 324 *e*P **P 22 17 47.5 +0.4**
CLZ pmax pmax
comp=Z,22nm,1.1s,mb5.0
BOJS Bojanci 85.51 317 *i* P **P 22 17 48.4 +0.7**
VISS Visnje 85.64 318 *i* P **P 22 17 48.7 +0.3**
GRA1 Grafenberg Arr 85.99 322 *e*P **P 22 17 50.3 +0.3**
comp=Z,21nm,1.1s,mb5.0
GRF Grafenberg Arr 85.99 322 *e*P **P 22 17 50.3 +0.3**
comp=Z,21nm,1.1s,mb5.0
GRF Grafenberg Arr 85.99 322 *e*P **P 22 17 50.3 +0.3**
comp=Z,21nm,1.1s,mb5.0
GRF Grafenberg Arr 85.99 322 *e*P **P 22 17 50.3 +0.3**
GRF pmax pmax
comp=Z,21nm,1.1s,mb5.0
GRF Grafenberg Arr 85.99 322 *e*P **P 22 17 50.3 +0.3**
GRF pmax pmax
comp=Z,21nm,1.1s,mb5.0
JAVS Javornik 86.08 318 *i* P **P 22 17 49.8 -0.8**
BUG Bochum--Univer 87.28 325 *e*P **P 22 17 56.2 -0.1**
comp=Z,26nm,1.4s,mb5.0
TIP Timpagrande 87.28 311 *e*P **P 22 17 57.1 +0.5**
comp=Z,13nm,1.3s,mb4.7
WLF Walferdange 88.83 324 *e*P **P 22 18 03.8 +0.1**
comp=Z,43nm,1.4s,mb5.3
WLF Walferdange 88.83 324 *e*P **P 22 18 03.5 -0.2**
comp=Z,32nm,1.3s,mb5.2
WLF Walferdange 88.83 324 *e*P **P 22 18 03.5 -0.2**
WLF pmax pmax
comp=Z,33nm,1.3s,mb5.2
CDF Champ du Feu 88.87 323 *e*P **P 22 18 03.0 -0.9**
comp=Z,11nm,0.8s,mb4.7
CDF Champ du Feu 88.87 323 *e*P **P 22 18 03.0 -0.9**
comp=Z,5.6nm,0.8s,mb4.7
CDF Champ du Feu 88.87 323 *e*P **P 22 18 03.0 -0.9**
CDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
BCLA Clavier 88.87 325 P **P 22 18 04.2 +0.3**
comp=Z,10nm,1.5s,mb4.6
GIVF Givet 89.31 325 *e*P **P 22 18 04.9 -1.0**
HINF Hinteralfeld 89.43 322 *e*P **P 22 18 05.2 -1.3**
DOU Dourbes 89.43 325 P **P 22 18 06.5 +0.1**
comp=Z,12nm,3.0s
OSD Olympics--Snow 89.58 38 P **P 22 18 08.7 +1.4**
HAU Haudompre 89.61 323 *e*P **P 22 18 06.0 -1.4**
comp=Z,10nm,0.8s,mb4.7
HAU *e*MLR MLR
comp=Z,101nm,18.8s
HAU Haudompre 89.61 323 *e*P **P 22 18 06.0 -1.4**
comp=Z,5.1nm,0.8s,mb4.7
HAU LR LR
comp=Z,100nm,18.8s
HAU Haudompre 89.61 323 *e*P **P 22 18 06.0 -1.4**
HAU pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
HAU MLR MLR
comp=Z,100nm,18.8s
BAIF Baives 89.66 325 *e*P **P 22 18 06.5 -1.1**
comp=Z,60nm,1.6s,mb5.2
BAIF Baives 89.66 325 *e*P **P 22 18 06.5 -1.1**
comp=Z,30nm,1.6s,mb5.2
BAIF Baives 89.66 325 *e*P **P 22 18 06.5 -1.1**
BAIF pmax pmax
comp=Z,30nm,1.6s,mb5.2
NLWA Neilton Lookou 89.72 38 *e*P **P 22 18 07.0 -0.8**
comp=Z,19nm,1.2s,mb5.1
MBW Mount Baker 90.06 36 P **P 22 18 09.9 +0.5**
MEZF Maizieres J'vi 90.07 323 *e*P **P 22 18 08.7 -0.8**
comp=Z,38nm,1.2s,mb5.1
MEZF Maizieres J'vi 90.07 323 *e*P **P 22 18 08.7 -0.8**
comp=Z,38nm,1.2s,mb5.4
JCW Jim Creek 90.38 37 *e*P **P 22 18 11.5 +0.6**
comp=Z,29nm,1.1s,mb5.3
BMW Boistfort Moun 90.58 39 P **P 22 18 12.8 +0.9**
HTW Haystack Looko 90.68 37 P **P 22 18 13.0 +0.7**
LPG La Plagne 90.73 320 *e*P **P 22 18 12.2 -0.4**
comp=Z,39nm,1.2s,mb5.1
LPG La Plagne 90.73 320 *e*P **P 22 18 12.2 -0.4**
comp=Z,20nm,1.2s,mb5.1
LPG La Plagne 90.73 320 *e*P **P 22 18 12.2 -0.4**
LPG pmax pmax
comp=Z,20nm,1.2s,mb5.1
LPL La Plagne 90.73 320 *e*P **P 22 18 12.8 +0.2**
PGF Pioggiola 90.88 317 *e*P **P 22 18 12.1 -1.3**
comp=Z,154nm,1.3s,mb5.7
PGF Pioggiola 90.88 317 *e*P **P 22 18 12.1 -1.3**
comp=Z,77nm,1.3s,mb5.7
SBF Sospel 91.18 319 *e*P **P 22 18 13.8 -1.0**
TDL Tradedollar La 91.23 38 P **P 22 18 16.3 +1.4**
LON Longmire 91.25 38 *e*P **P 22 18 15.1 +0.1**
comp=Z,8.9nm,1.1s,mb4.8
LON Longmire 91.25 38 *e*P **P 22 18 15.1 +0.1**
LON pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
LOR Lormes 91.42 323 *e*P **P 22 18 14.4 -1.4**
comp=Z,31nm,1.2s,mb5.0
LOR *e*MLR MLR
comp=Z,71nm,21.2s
LOR Lormes 91.42 323 *e*P **P 22 18 14.4 -1.4**
comp=Z,16nm,1.2s,mb5.0
LOR LR LR
comp=Z,70nm,21.3s
LOR Lormes 91.42 323 *e*P **P 22 18 14.4 -1.4**
LOR pmax pmax
comp=Z,16nm,1.2s,mb5.0
LOR MLR MLR
comp=Z,70nm,21.3s
ETW Entiat 91.60 37 *e*P **P 22 18 16.6 0.0**
comp=Z,15nm,0.9s,mb5.2
EDM Edmonton 91.70 29 *e*P **P 22 18 17.1 +0.1**
SSF Saint Saulge 91.74 323 *e*P **P 22 18 16.0 -1.3**
comp=Z,29nm,1.3s,mb5.0
SSF Saint Saulge 91.74 323 *e*P **P 22 18 16.0 -1.3**
comp=Z,15nm,1.3s,mb5.0
SSF Saint Saulge 91.74 323 *e*P **P 22 18 16.0 -1.3**
SSF pmax pmax
comp=Z,15nm,1.3s,mb5.1
SMF Signal de Mont 91.79 322 *e*P **P 22 18 16.4 -1.1**
comp=Z,52nm,1.3s,mb5.3
SMF Signal de Mont 91.79 322 *e*P **P 22 18 16.4 -1.1**
comp=Z,26nm,1.3s,mb5.3
SMF Signal de Mont 91.79 322 *e*P **P 22 18 16.4 -1.1**
SMF pmax pmax
comp=Z,26nm,1.3s,mb5.3
AVF Avril sur Loir 91.98 323 *e*P **P 22 18 17.2 -1.2**
comp=Z,45nm,1.3s,mb5.2
AVF Avril sur Loir 91.98 323 *e*P **P 22 18 17.2 -1.2**
comp=Z,23nm,1.3s,mb5.2
AVF Avril sur Loir 91.98 323 *e*P **P 22 18 17.2 -1.2**
AVF pmax pmax
comp=Z,23nm,1.3s,mb5.2
HYF Humbligny 92.11 323 *e*P **P 22 18 18.4 -0.6**
VFP Flag Point 92.24 39 P **P 22 18 20.9 +1.2**
BGF Bois d'Agland 92.40 323 *e*P **P 22 18 19.3 -1.1**
OD2 Odessa Site #2 92.61 36 *e*P **P 22 18 21.3 0.0**
comp=Z,6.1nm,1.0s,mb4.9
HUMO Hull Mountain 92.84 42 *e*P **P 22 18 23.1 +0.6**
comp=Z,2.9nm,0.8s,mb4.7
TCF Toulx Ste Croi 92.92 323 *e*P **P 22 18 21.9 -0.8**
comp=Z,22nm,1.2s,mb5.1
TCF Toulx Ste Croi 92.92 323 *e*P **P 22 18 21.9 -0.8**
comp=Z,11nm,1.2s,mb5.1
TCF Toulx Ste Croi 92.92 323 *e*P **P 22 18 21.9 -0.8**
TCF pmax pmax
comp=Z,11nm,1.2s,mb5.1
NEW Newport 92.95 35 *e*P **P 22 18 23.0 +0.1**
comp=Z,12nm,1.1s,mb5.1
NEW Newport 92.95 35 *e*P **P 22 18 23.0 +0.1**
NEW pmax pmax
comp=Z,12nm,1.1s
LASF Ste Croix 93.23 320 *e*P **P 22 18 22.2 -2.0**
comp=Z,22nm,1.2s,mb5.1
YBH Yreka Blue Hor 93.47 42 *e*P **P 22 18 25.4 0.0**
comp=Z,7.9nm,1.3s,mb4.9
YBH Yreka Blue Hor 93.47 42 *e*P **P 22 18 25.4 0.0**
YBH pmax pmax
comp=Z,8.0nm,1.3s
CAF Calviac 93.79 322 *e*P **P 22 18 24.1 -2.7**
RJF Les Rejaudoux 93.89 322 *e*P **P 22 18 26.9 -0.3**
comp=Z,42nm,1.1s,mb5.4
RJF *e*MLR MLR
comp=Z,90nm,22.2s
RJF Les Rejaudoux 93.89 322 *e*P **P 22 18 26.9 -0.3**
comp=Z,21nm,1.1s,mb5.4
RJF LR LR
comp=Z,90nm,22.3s
RJF Les Rejaudoux 93.89 322 *e*P **P 22 18 26.9 -0.3**
RJF pmax pmax
comp=Z,21nm,1.1s,mb5.4
RJF MLR MLR
comp=Z,90nm,22.3s
MFF Saint Martin d 94.04 324 *e*P **P 22 18 26.0 -1.9**
WALA Waterton Lakes 94.12 33 *e*P **P 22 18 28.6 +0.4**
comp=Z,0.5nm,1.1s,mb3.8
BSMT Bassoo Peak 94.44 34 *e*P **P 22 18 30.6 +0.9**
comp=Z,4.6nm,1.1s,mb4.7
MTLF Montolieu 94.62 320 *e*P **P 22 18 28.4 -2.3**
FCC Fort Churchill 94.69 18 *e*P **P 22 18 29.3 -1.3**
comp=Z,0.3nm,1.1s,mb3.6
BMO Blue Mountains 94.91 38 *e*P **P 22 18 32.0 0.0**
comp=Z,0.7nm,0.6s,mb4.3
BMO Blue Mountains 94.91 38 *e*P **P 22 18 32.0 +0.1**
BMO pmax pmax
comp=Z,1.0nm,0.6s,mb4.4
FFC Flin Flon 95.36 24 *e*P **P 22 18 32.4 -1.4**
comp=Z,5.4nm,1.0s,mb4.9
FFC Flin Flon 95.36 24 *i* P **P 22 18 33.3 -0.5**
SLMT Seeley Lake 95.50 34 *e*P **P 22 18 34.6 +0.1**
comp=Z,2.4nm,0.7s,mb4.7
ETSF Etsaut 96.52 321 *e*P **P 22 18 37.2 -2.1**
comp=Z,18nm,1.2s,mb5.1
ETSF Etsaut 96.52 321 *e*P **P 22 18 37.2 -2.1**
comp=Z,9.1nm,1.2s,mb5.1
ETSF Etsaut 96.52 321 *e*P **P 22 18 37.2 -2.1**
ETSF pmax pmax
comp=Z,9.0nm,1.2s,mb5.1
CMB Columbia Colle 97.00 45 *e*P **P 22 18 41.2 -0.4**
comp=Z,8.3nm,1.0s,mb5.1
CMB Columbia Colle 97.00 45 *e*P **P 22 18 41.2 -0.4**
CMB pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
DLMT Dillon 97.19 35 *e*P **P 22 18 40.4 -1.9**
comp=Z,2.3nm,0.9s,mb4.6
HLID Hailey 97.34 37 *e*P **P 22 18 43.6 +0.6**
comp=Z,3.8nm,0.9s,mb4.8
NVAR Mina Array Bea 98.12 43 P **P 22 18 46.0 -0.7**
NVAR Mina Array Bea 98.12 43 P **P 22 18 46.0 -0.7**
comp=Z,1.5nm,0.6s,mb4.7,baz=282,slow=4.9,SNR=9.2
LSZ Lusaka 98.45 257 *e*P **P 22 18 46.9 -1.5**
comp=Z,4.3nm,0.7s,mb5.1
LSZ Lusaka 98.45 257 *e*P **P 22 18 46.9 -1.5**
LSZ pmax pmax
comp=Z,4.0nm,0.7s,mb5.1
MAW Mawson 98.79 199 LR LR 22 57 36.8
comp=Z,38nm,21.2s,baz=233,slow=32
TXAR Lajitas Array 113.25 42 PKiKP PKiKP 22 23 46.3 -1.2
comp=Z,0.3nm,0.5s,baz=267,slow=0.6,SNR=7.2
TXAR SKP 22 27 15.3
comp=Z,0.8nm,1.0s,baz=238,slow=0.4,SNR=5.0
DBIC Dimbokro 120.31 292 PKP PKPdf 22 24 00.1 -1.4
comp=Z,4.0nm,0.6s,baz=51,slow=4.9,SNR=5.4
VNA1 Neumayer--Stat 122.94 198 *e*PKPdf PKPdf 22 24 01.6 -3.2
USHA Ushuaia 146.03 170 PKPbc PKPbc 22 24 49.3 +0.4
comp=Z,13nm,0.9s,baz=180,slow=2.0,SNR=4.2
SDV Santo Domingo 147.43 23 *e*PKPbc PKPbc 22 24 53.0 -1.2
OTAV Otavalo 150.85 44 *e*PKPbc PKPbc 22 25 02.7 -0.1
LPAZ La Paz 169.50 61 PKP PKPdf 22 25 18.9 +1.4
comp=Z,3.4nm,1.1s,baz=270,slow=8.1,SNR=7.1
LPAZ La Paz 169.50 61 *e*PKIKP PKPdf 22 25 18.7 +1.2
CPUP Villa Florida 175.20 193 *e*PKPdf PKPdf 22 25 20.1 +0.3
CPUP Villa Florida 175.20 193 PKPab PKPab 22 26 54.5 -1.2
comp=Z,1.7nm,0.7s,baz=192,slow=6.1,SNR=3.4

*ISCJB **08** 22:10:05.5±0.5, 20°.55S±0°.05×68°.59W±0°.07, h100km±8km, mb4.2/3, Error ellipse: s-maj=11.2km s-min=8.4km az=13.2*
*GUC **08** 22:10:07.6±0.4, 20°.63S×69°.01W, h121km±5km, ML4.1*
*IDC **08** 22:10:10.8±2.7, 20°.53S×68°.33W, h126km±22km, mb3.8/3, mb1 3.6/6, mb1mx3.5/15, mbtmp3.6/6, Error ellipse: s-maj=30.0km s-min=23.5km az=101.0*
*NEIC **08** 22:10:11.4±0.9, 20°.49S×68°.30W, h138km±9km, mb4.0/3, Error ellipse: s-maj=15.5km s-min=8.9km az=95.0*
ISC 08 22:10:06.6±0.5, 20°.57S±0°.05×68°.61W±0°.06, h97km±8km, n23, σ1s05/22, mb4.2/3, 5C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**Plate Boundary**	**0.94**	**240**	⇑*i*P	**Pn**	**22 10 26.6**	**+0.5**
PB01				*i* S	**Sn**	**22 10 41.0**	**+0.1**
PB01				AML	AML	22 10 41.8	
	comp=N,16μm,0.3s						
HMBC	**Humberston**	**1.23**	**284**	⇑*i*P	**Pn**	**22 10 29.2**	**-0.3**
HMBC				*i* S	**Sn**	**22 10 45.8**	**-0.9**
HMBC				AML	AML	22 10 49.9	
	comp=E,4μm,0.3s						
MNMC	**Miaee Miae**	**1.71**	**327**	⇑*i*P	**Pn**	**22 10 37.0**	**+1.7**
MNMC				*i* S	**Sn**	**22 10 59.6**	**+2.5**
MNMC				AML	AML	22 11 00.7	
	comp=E,3μm,0.6s						
PSGC	**Pisagua**	**1.72**	**304**	⇑*i*P	**Pn**	**22 10 35.2**	**-0.3**
PSGC				*i* S	**Sn**	**22 10 55.9**	**-1.5**
PSGC				AML	AML	22 10 58.8	
	comp=N,1μm,0.3s						
PB04	**Plate Boundary**	**1.87**	**206**	AML	AML	22 11 16.7	
	comp=N,1μm,0.5s						
MACH	**Maria Elena**	**1.94**	**213**	⇑*i*P	**Pn**	**22 10 38.2**	**-0.1**
MACH				*i* S	**Sn**	**22 11 01.6**	**-0.7**
CEN1	**Los Morros**	**3.17**	**207**	AML	AML	22 11 53.2	
	comp=E,258nm,0.7s						
LPAZ	**La Paz**	**4.29**	**6**	P	**Pn**	**22 11 14.5**	**+4.8**
LPAZ	**La Paz**	**4.29**	**6**	P	**Pn**	**22 11 14.5**	**+4.8**
	comp=E,1.9nm,0.3s,baz=191,slow=5.2,SNR=34						
SIV	**San Ignacio**	**8.49**	**59**	P	**Pn**	**22 12 07.3**	**+0.5**
	comp=E,2.2nm,0.3s,baz=259,slow=11,SNR=23						
SIV				S	**Sn**	**22 13 39.5**	**-1.4**
	comp=E,0.1nm,0.3s,baz=308,slow=23,SNR=4.6						
LCO	**Las Campanas**	**8.61**	**192**	*e*Pn	**Pn**	**22 12 16.2**	**+7.8**
CPUP	**Villa Florida**	**11.83**	**121**	P	**Pn**	**22 12 52.8**	**+0.6**
	comp=E,0.7nm,0.3s,baz=280,slow=12,SNR=5.1						
TRQA	**Tornquist**	**18.35**	**163**	*e*P	**Pn**	**22 14 14.2**	**-0.4**
	comp=E,4.0nm,0.6s						
PLCA	**Paso Flores**	**20.16**	**184**	P	**P**	**22 14 35.8**	**+2.5**
	comp=E,1.8nm,0.8s,baz=354,slow=11,SNR=3.6						
DBIC	**Dimbokro**	**68.21**	**74**	*e*P	**P**	**22 20 56.3**	**-1.0**
	comp=E,5.4nm,0.7s,mb4.5						
DBIC	**Dimbokro**	**68.21**	**74**	P	**P**	**22 20 56.6**	**-0.7**
	comp=E,3.3nm,0.5s,mb4.5,baz=230,slow=9.4,SNR=9.7						
BOZ	**Bozeman (W)**	**76.61**	**331**	*e*P	**P**	**22 21 45.9**	**-0.6**
	comp=E,1.7nm,0.6s,mb4.0						
BOSA	**Boshof**	**83.64**	**118**	P	**P**	**22 22 25.1**	**+0.2**
	comp=E,2.4nm,0.9s,mb4.0,baz=270,slow=9.1,SNR=3.0						
YKA	**Yellowknife Ar**	**90.41**	**340**	pP	pP	22 23 25.8	+3.6
	comp=E,0.8nm,0.7s,baz=131,slow=5.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**141.00**	**25**	PKP	PKPdf	22 29 25.0	-0.3
	comp=E,0.2nm,0.3s,baz=329,slow=1.7,SNR=2.7						
MK31	**Makanchi Array**	**144.72**	**35**	*e*PKPdf	PKPdf	22 29 31.1	-1.0
MKAR	**Makanchi Array**	**144.72**	**35**	PKP	PKPdf	22 29 31.2	-0.8
	comp=E,0.8nm,0.5s,baz=321,slow=2.8,SNR=29						
MKAR				pPKP	pPKPdf	22 30 02.7	+3.9
	comp=E,0.3nm,0.5s,baz=340,slow=4.7,SNR=2.2						
SONM	**Songino Array**	**152.50**	**7**	PKPbc	PKPbc	22 29 51.8	+0.2
	comp=E,0.3nm,0.5s,baz=336,slow=3.2,SNR=2.3						

*IDC **08** 22:28:42.7±2.0, 8°.22S×117°.49E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.7/20, mbtmp3.8/6, Error ellipse: s-maj=173.4km s-min=20.4km az=57.0*
*ISCJB **08** 22:28:47.2±0.8, 8°.08S±0°.06×117°.79E±0°.05, h44km±9km, mb3.8/7, Error ellipse: s-maj=12.2km s-min=5.5km az=148.0*
*NEIC **08** 22:28:48.5±0.6, 8°.05S×117°.83E, h35km, mb3.6/1, Error ellipse: s-maj=19.1km s-min=10.5km az=62.0*
*DJA **08** 22:28:50, 7°.88S×117°.60E, h53km, MLv4.2/7*
ISC 08 22:28:48.7±0.8, 8°.10S±0°.06×117°.78E±0°.05, h38km±9km, n21, σ0s85/25, mb3.8/7, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHKI	**Kahang-Kahang**	**2.17**	**263**	P	**Pn**	**22 29 22.2**	**-0.1**
SRBI	**Singaraja**	**2.54**	**270**	P	**Pn**	**22 29 26.3**	**-1.2**
SRBI				S	**Sn**	**22 29 53.4**	**-3.8**
DNP	**Denpasar**	**2.61**	**257**	S	**Sn**	**22 30 00.6**	**+1.8**
IGBI	**Denpasar**	**2.70**	**255**	S	**Sn**	**22 30 00.6**	**-0.6**
WSI	**Waingapu**	**2.93**	**122**	P	**Pn**	**22 29 38.1**	**+5.3**
BKSI	**Bulukumba**	**3.61**	**40**	P	**Pn**	**22 29 42.2**	**+0.1**
BKSI				S	**Sn**	**22 30 23.4**	**-0.1**
KAPI	**Kappang**	**3.64**	**33**	*e*Pn	**Pn**	**22 29 41.3**	**-1.2**
KAPI				*e*Sn	**Sn**	**22 30 23.2**	**-1.1**
BNSI	**Bone**	**4.34**	**32**	P	**Pn**	**22 29 54.2**	**+2.0**
BNSI				S	**Sn**	**22 30 42.1**	**+0.5**
MMRI	**Maumere**	**4.44**	**97**	P	**Pn**	**22 29 52.9**	**-0.6**
KBKI	**Kotabaru**	**5.03**	**341**	P	**Pn**	**22 30 01.5**	**-0.2**
TTSI	**Tana Toraja**	**5.42**	**22**	P	**Pn**	**22 30 08.3**	**+1.3**
ASAR	**Alice Springs**	**21.87**	**137**	P	**P**	**22 33 39.0**	**+0.6**
	2.7nm,0.6s,mb3.9,baz=310,slow=9.0,SNR=15						
STKA	**Stephens Creek**	**32.41**	**140**	P	**P**	**22 35 14.9**	**-0.2**
	1.1nm,0.4s,mb4.0,baz=336,slow=10.0,SNR=5.9						
SONM	**Songino Array**	**56.59**	**351**	P	**P**	**22 38 27.7**	**+0.1**
	2.0nm,1.2s,mb4.0,baz=174,slow=8.5,SNR=5.1						
MK31	**Makanchi Array**	**63.12**	**333**	*e*P	**P**	**22 39 13.0**	**+0.6**
MKAR	**Makanchi Array**	**63.12**	**333**	P	**P**	**22 39 12.3**	**-0.1**
MKAR	**Makanchi Array**	**63.12**	**333**	P	**P**	**22 39 12.3**	**-0.1**
	0.7nm,0.5s,mb4.0,baz=152,slow=7.2,SNR=9.9						
KURK	**Kurchatov**	**67.67**	**334**	P	**P**	**22 39 41.5**	**-0.3**
KURK	**Kurchatov**	**67.67**	**334**	P	**P**	**22 39 41.5**	**-0.3**

0.2nm,0.3s,mb3.6,baz=139,slow=7.2,SNR=3.0
ZALV Zalesovo Beam 67.78 340 P P 22 39 41.9 -0.6
0.4nm,0.4s,mb3.8,baz=115,slow=6.7,SNR=2.9
ABKAR Akbulak array 76.14 325 eP P 22 40 32.6 0.0
0.3nm,0.4s,mb3.6

DJA 08 22:40:47.7 94.S × 117.73E, h5km, MLv 4.0/8, Bali Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHKI	**Kahang-Kahang**	**2.14**	**259**	P	Pn	22 41 22.9	-0.5
KHKI				S	Sn	22 41 51.7	+1.3
SRBI	**Singaraja**	**2.50**	**267**	P	Pn	22 41 28.1	-0.2
DNP	**Denpasar**	**2.60**	**253**	P	Pn	22 41 31.6	+1.9
IGBI	**Denpasar**	**2.70**	**251**	P	Pn	22 41 29.9	-1.2
IGBI				S	Sn	22 42 06.1	+1.9
WSI	**Waingapu**	**3.06**	**124**	P	Pn	22 41 36.6	+0.5
BKSI	**Bulukumba**	**3.52**	**43**	P	Pn	22 41 43.2	+0.8
BKSI				S	Sn	22 42 26.4	+1.9
KMMI	**Kalianget**	**3.83**	**283**	P	Pn	22 41 48.8	+2.1
GMJI	**Gumukmas**	**4.26**	**265**	P	Pn	22 41 51.6	-0.9

*ISCJB **08** 22:47:41.2±0.7, 10.41N±0.04×62.29W±0.03, h9km±5km, Error ellipse: s-maj=7.5km s-min=3.9km az=159.8*
*TRN **08** 22:47:42.8, 10.42N×62.17W, h3km, MD2.7*
*NEIC **08** 22:47:42.8, 10.42N×62.17W, h3km, MD2.7(TRN), After TRN.*
*FUNV **08** 22:47:42.7, 10.45N×62.37W, h1km, MW2.9*

ISC 08 22:47:41.0±0.7, 10.41N±0.04×62.29W±0.03, h1km±6km, n22, σ1§02/34, 2C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.24**	**16**	*eP*		**Pg**	**22 47 46.9**	**+1.1**
GUIV				*eS*		**Sg**	**22 47 51.6**	**+2.6**
TCE	**Chacachacare**	**0.60**	**62**	⇑*iP*		**Pg**	**22 47 52.7**	**+0.1**
TCE				*eS*		**Sg**	**22 47 59.3**	**-1.1**
TCE	**Chacachacare**	**0.60**	**62**	⇑*iP*		**Pg**	**22 47 52.7**	**+0.1**
TCE				*eS*		**Sg**	**22 47 59.3**	**-1.1**
GUNV	**Guanoco**	**0.69**	**249**	*eP*		**Pg**	**22 47 54.3**	**+0.1**
GUNV				*eS*		**Sg**	**22 48 05.5**	**+2.3**
TPP	**Pointe-a-Pierr**	**0.83**	**96**	*eP*		**Pg**	**22 47 56.0**	**-1.1**
TPP	**Pointe-a-Pierr**	**0.83**	**96**	*eP*		**Pg**	**22 47 56.0**	**-1.1**
TRN	**Trinidad (W)**	**0.91**	**75**	*eP*		**Pg**	**22 47 58.0**	**-0.4**
TRN	**Trinidad (W)**	**0.91**	**75**	*eP*		**Pg**	**22 47 58.0**	**-0.4**
CRUV	**Carupano**	**0.96**	**286**	*eP*		**Pg**	**22 47 58.8**	**-0.8**
CRUV				*eS*		**Sg**	**22 48 10.0**	**-2.1**
TBH	**Brigand Hill**	**1.21**	**86**	*eP*		**Pg**	**22 48 04.6**	**+0.4**
TBH	**Brigand Hill**	**1.21**	**86**	*eP*		**Pg**	**22 48 04.6**	**+0.4**
ITEV	**Isla Los Testi**	**1.25**	**319**	*eP*		**Pg**	**22 48 04.6**	**-0.5**
ITEV				*eS*		**Sg**	**22 48 21.1**	**-0.1**
TPR	**Prospect**	**1.68**	**63**	*eP*		**Pg**	**22 48 12.3**	**+0.8**
TPR				*eS*		**Sn**	**22 48 32.4**	**-1.3**
TPR	**Prospect**	**1.68**	**63**	*eP*		**Pn**	**22 48 12.3**	**+0.8**
TPR				*eS*		**Sn**	**22 48 32.4**	**-1.3**
ORIV	**Oritupano**	**1.73**	**220**	*eP*		**Pn**	**22 48 13.2**	**+1.0**
ORIV				*eS*		**Sn**	**22 48 36.0**	**+1.1**
GRW	**Mount Saint Ca**	**1.84**	**20**	*eP*		**Pn**	**22 48 14.7**	**+0.9**
GRW	**Mount Saint Ca**	**1.84**	**20**	*eP*		**Pn**	**22 48 14.7**	**+0.9**
TOSP	**Speyside**	**1.94**	**63**	*eP*		**Pn**	**22 48 15.6**	**+0.5**
TOSP				*eS*		**Sn**	**22 48 40.1**	**0.0**
PCRV	**Puerto La Cruz**	**2.32**	**264**	*eP*		**Pn**	**22 48 20.3**	**-0.1**
CUPV	**Cœpira**	**3.46**	**264**	*eP*		**Pn**	**22 48 35.8**	**-0.3**
CAOV	**Caicara del Or**	**5.03**	**233**	*eP*		**Pn**	**22 48 57.2**	**-0.4**
CAOV				*eS*		**Sn**	**22 49 52.5**	**-3.9**
BAUV	**El Baul**	**5.85**	**256**	*eP*		**Pn**	**22 49 08.0**	**-1.0**
BAUV				*eS*		**Sn**	**22 50 10.7**	**-6.1**

*IDC **08** 23:13:51.6±0.6, 48.98N×155.64E, h0km, mb4.1/25, mb1 4.3/25, mb1mx4.3/28, mbtmp4.1/25, MS4.1/22, Ms1 4.1/22, ms1mx3.9/34, Error ellipse: s-maj=18.8km s-min=12.5km az=162.0*
*SKHL **08** 23:13:52.3±1.4, 48.58N×156.54E, h34km±3km, mb5.5/4, mbh5.4/1, Ms4.5/3, msh5.4/3*
*KRSC **08** 23:13:54.0±1.5, 48.93N×156.86E, h5km±5km, ML5.0*
*ISCJB **08** 23:13:56.2±0.6, 48.97N±0.04×155.77E±0.05, h40km±4km, mb4.5/103, MS4.2/39, Error ellipse: s-maj=7.8km s-min=3.5km az=144.8*
*MOS **08** 23:13:56.2±1.4, 49.04N×155.79E, h39km, mb4.8/45, MS4.1/22, Error ellipse: s-maj=7.7km s-min=4.7km az=84.3*
*BJI **08** 23:13:56.3, 48.92N×155.75E, h49km, mB4.7/26, mb4.6/33, Ms4.5/28, Ms7 4.3/28*
*NEIC **08** 23:13:58.6±0.8, 49.00N×155.69E, h46km±7km, mb4.6/57, Error ellipse: s-maj=8.4km s-min=4.5km az=162.0*
*GCMT **08** 23:14:00.7±0.6, 48.82N×156.04E, h33km, MW4.9, Moment Tensor Solution. s20,c26; s52,c74; Moment tensor: Scale 10^16 Nm; Mrr 2.60±.18; Mθθ -0.95±.11; Mφφ -1.65±.11; Mrθ 0.57±.12; Mθφ -0.85±.05; Mφr 0.48±.09; Best double couple: M0 2.50000×10^16 NP1:φs 210.00000°, δ 37.00000°, λ 84.00000°. NP2:φs 38.00000°, δ 53.00000°, λ 94.00000°. Principal axes: T 2.7200, Plg 81.0000°, Azm 328.0000°; N -0.4000, Plg 4.0000°, Azm 215.0000°; P -2.3200, Plg 8.0000°, Azm 125.0000°; Data Used: II IC IU G CN.*

ISC 08 23:13:58.6±0.5, 49.01N±0.04×155.71E±0.05, h44km±3km, h48km±2.3km: pP-P, n281, σ1§96/297, mb4.5/103, MS4.2/39, 5C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.69**	**9**	⇑*iP*		**Pn**	**23 14 25.4**	**-0.2**
SKR				*i*		23 14 39.5	
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				pmax	pmax		
	comp=N,260nm,0.3s						
SKR				pmax	pmax		
	comp=E,150nm,0.3s						
SKR				pmax	pmax		
	comp=N,1μm,2.0s						
SKR				pmax	pmax		
	comp=Z,2μm,2.0s						
SKR				pmax	pmax		
	comp=E,2μm,4.0s						
SKR				smax			
	comp=N,3μm,0.3s						
SKR				smax			
	comp=E,4μm,0.3s						
SKR				smax			
	comp=N,6μm,4.0s						
SKR				smax			
	comp=E,13μm,2.0s						
SKR	**Severo-Kuril's**	**1.69**	**9**	⇑*iP*		**Pn**	**23 14 25.4**	**-0.2**
SKR				⇑*iP*		23 14 25.4	
SKR				AMB	AMB	23 14 27.1	
	comp=E,2μm,4.0s						
SKR				AMB	AMB	23 14 27.1	
	comp=E,1μm,2.0s						
SKR				AMB	AMB	23 14 27.1	
	comp=E,2μm,2.0s						
SKR				AMB	AMB	23 14 27.1	
	comp=E,500nm,0.5s						
SKR				AMB	AMB	23 14 27.1	
	comp=E,260nm,0.2s						
SKR				AMB	AMB	23 14 27.1	
	comp=E,150nm,0.2s						
SKR				*eS*		**Sn**	**23 14 49.5**	**+3.4**
SKR				A		23 14 54.0	
	comp=E,1μm,0.5s						
SKR				A		23 14 54.0	
	comp=E,3μm,0.2s						
SKR				A		23 14 54.0	
	comp=E,4μm,0.2s						
SKR				A		23 14 55.0	
	comp=E,6μm,4.0s						
SKR				A		23 14 55.0	
	comp=E,13μm,2.0s						
SKR				A		23 14 55.0	
	comp=E,6μm,4.0s						
SKR				A		23 14 55.0	
	comp=E,4μm,4.0s						
SKR				A		23 14 55.0	
	comp=E,13μm,2.0s						
SKR				AMS	AMS	23 15 22.0	
	comp=E,9μm,12.0s						
SKR				AMS	AMS	23 15 22.0	
	comp=E,10μm,12.0s						
SKR				AMS	AMS	23 15 22.0	
	comp=E,10μm,12.0s						
SKR				AMS	AMS	23 15 22.0	
	comp=E,10μm,12.0s						
SKR				AMS	AMS	23 15 22.0	
	comp=E,9μm,12.0s						
SKR				AMS	AMS	23 15 22.0	
	comp=E,10μm,12.0s						
ALID	**Alaid**	**1.86**	**357**	*eP*		**Pn**	**23 14 30.0**	**+2.0**
ALID				*i*	S	**Sn**	**23 14 56.2**	**+6.0**
MIPR	**Malaya Ipel'ka**	**3.34**	**11**	*eP*		**Pn**	**23 14 48.7**	**+0.5**
GRL	**Gorelyy**	**3.85**	**22**	*eP*		**Pn**	**23 14 54.5**	**-0.7**
GRL				*i*	S	**Sn**	**23 15 38.1**	**-1.0**
PET	**Petropavlovsk**	**4.43**	**24**	*ePn*		**Pn**	**23 15 02.6**	**-0.5**
PET				*eSn*		**Sn**	**23 15 54.4**	**+1.1**
PET	**Petropavlovsk**	**4.43**	**24**	*eP*		**Pn**	**23 15 02.6**	**-0.5**
PET				*i*	S	**Sn**	**23 15 53.1**	**-0.2**
PET	**Petropavlovsk**	**4.43**	**24**	*ePN*		**Pn**	**23 15 02.4**	**-0.7**
PET				*eS*		**Sn**	**23 15 52.8**	**-0.5**
PET				pmax	pmax		
	comp=Z,96nm,0.5s						
PET				smax			
	comp=E,2μm,2.3s						
PET				smax			
	comp=E,480nm,1.1s						
PET				smax			
	comp=N,759nm,1.2s						
PET				MLR	MLR		
	comp=Z,1μm,12.0s						
PET				MLR	MLR		
	comp=Z,900nm,13.0s						
PET	**Petropavlovsk**	**4.43**	**24**	*eP*		**Pn**	**23 15 02.2**	**-0.9**
AVH	**Avacha**	**4.67**	**23**	*eP*		**Pn**	**23 15 07.4**	**+1.0**
NLC	**Nalytchevo**	**4.75**	**27**	*eP*		**Pn**	**23 15 05.1**	**-2.5**
NLC				*i*	S	**Sn**	**23 15 56.5**	**-4.8**
GNL	**Ganaly**	**4.89**	**16**	*eP*		**Pn**	**23 15 10.6**	**+1.1**
SPN	**Mys Shipunski**	**4.91**	**32**	*eP*		**Pn**	**23 15 08.0**	**-1.8**
SPN				*i*	S	**Sn**	**23 16 02.5**	**-2.8**
KII	**Karymskiy**	**5.55**	**23**	*eP*		**Pn**	**23 15 19.2**	**+0.7**
KII				*i*	S	**Sn**	**23 16 21.7**	**+0.9**
KUR	**Kuril'sk**	**6.55**	**238**	*ePN*		**Pn**	**23 15 32.6**	**+0.3**
KUR				S		**Sn**	**23 16 51.0**	**+5.4**
KUR				pmax	pmax		
	comp=N,2μm,2.0s						
KUR				pmax	pmax		
	comp=E,2μm,2.0s						
KUR				pmax	pmax		
	comp=Z,2μm,2.0s						
KUR				pmax	pmax		
	comp=Z,220nm,0.8s						
KUR				smax			
	comp=N,5μm,4.0s						
KUR				smax			
	comp=E,5μm,4.0s						
KUR				smax			
	comp=N,2μm,1.6s						
KUR				smax			
	comp=E,1μm,1.6s						
KUR	**Kuril'sk**	**6.55**	**238**	*eP*		**Pn**	**23 15 32.6**	**+0.3**
KUR				AMB	AMB	23 15 36.0	
	comp=E,2μm,2.0s						
KUR				AMB	AMB	23 15 50.6	
	comp=E,220nm,0.8s						
KUR				*eS*		**Sn**	**23 16 51.0**	**+5.4**
KUR				A		23 16 59.9	
	comp=E,5μm,4.0s						
KUR				A		23 16 59.9	
	comp=E,4μm,4.0s						
KUR				A		23 17 02.3	
	comp=E,2μm,1.6s						
KUR				A		23 17 02.3	
	comp=E,1μm,1.6s						
MKZ	**Mys Kozlova**	**6.69**	**32**	*eP*		**Pn**	**23 15 31.1**	**-3.0**
MKZ				*i*	S	**Sn**	**23 16 43.0**	**-5.9**
KBTR	**Krutoberegovo**	**8.40**	**28**	*eP*		**Pn**	**23 15 55.2**	**-2.4**
KBTR				*i*	S	**Sn**	**23 17 25.0**	**-6.0**
YUK	**Yuzh-Kuril'sk**	**8.42**	**237**	*ceP*	N	**Pn**	**23 15 57.5**	**-0.4**
YUK				MLR	MLR		
	comp=Z,2μm,17.0s						
YUK				MLR	MLR		
	comp=N,96nm,13.0s						
YUK	**Yuzh-Kuril'sk**	**8.42**	**237**	*eP*		**Pn**	**23 15 57.5**	**-0.4**
YUK				AMB	AMB	23 16 05.3	
	comp=N,210nm,0.6s						
YUK				AMB	AMB	23 16 05.3	
	comp=N,150nm,0.5s						
YUK				AMB	AMB	23 16 05.3	
	comp=N,190nm,0.5s						
YUK				*i*	S	**Sn**	**23 17 31.4**	**-0.1**
YUK				A		23 17 42.7	
	comp=N,140nm,0.5s						
YUK				A		23 17 42.7	
	comp=N,160nm,0.7s						
YUK				AMS	AMS	23 19 11.1	
	comp=N,2μm,17.0s						
YUK				AMS	AMS	23 19 11.1	
	comp=N,3μm,19.0s						
YUK				AMS	AMS	23 19 11.1	
	comp=N,5μm,17.0s						
YUK				AMS	AMS	23 19 11.1	
	comp=N,4μm,17.0s						
TYV	**Tymovskoe**	**8.62**	**287**	*eP*		**Pn**	**23 16 04.0**	**+3.3**
TYV				AMB	AMB	23 16 06.2	
	comp=N,140nm,1.6s						
TYV				AMB	AMB	23 16 06.2	
	comp=N,160nm,1.6s						
TYV				AMB	AMB	23 16 06.2	
	comp=N,18nm,1.0s						
TYV				AMB	AMB	23 16 08.0	
	comp=N,400nm,3.0s						
TYV				AMS	AMS	23 20 23.0	
	comp=N,2μm,14.0s						
TYV				AMS	AMS	23 20 23.0	
	comp=N,4μm,14.0s						
YSS	**Yuzh-Sakhalins**	**8.93**	**262**	*ePn*		**Pn**	**23 16 06.3**	**+1.5**
YSS	**Yuzh-Sakhalins**	**8.93**	**262**	*ePN*		**Pn**	**23 16 08.7**	**+3.8**
YSS				MLR	MLR		
	comp=E,1μm,16.0s						
YSS				MLR	MLR		
	comp=Z,1μm,16.0s						
YSS	**Yuzh-Sakhalins**	**8.93**	**262**	*eP*		**Pn**	**23 16 08.7**	**+3.8**
YSS				*eS*		**Sn**	**23 17 43.2**	**-0.9**
YSS				*eLQ*			23 18 22.0	
YSS				*eLR*	LR		23 18 47.0	
YSS				AMS	AMS		23 19 32.0	
	comp=Z,1μm,16.0s						
YSS				AMS	AMS		23 19 32.0	
	comp=Z,1μm,16.0s						
UGL	**Uglegorsk**	**8.97**	**276**	PN		**Pn**	**23 16 10.0**	**+4.7**
UGL				MLR	MLR		
	comp=E,2μm,15.0s						
UGL				MLR	MLR		
	comp=N,2μm,14.0s						
UGL	**Uglegorsk**	**8.97**	**276**	*eP*		**Pn**	**23 16 10.0**	**+4.7**
UGL				AMS	AMS	23 20 06.0	
	comp=N,2μm,14.0s						
UGL				AMS	AMS	23 20 06.0	
	comp=N,2μm,15.0s						
OKH	**Okha**	**9.20**	**304**	*eL*			23 16 13.8	
OKH				AMS	AMS	23 20 34.0	
	comp=N,2μm,15.0s						
OKH				AMS	AMS	23 20 34.0	
	comp=N,1μm,14.0s						
OKH				AMS	AMS	23 20 34.0	
	comp=N,2μm,12.0s						
ASAJ	**Asahikawa**	**10.27**	**246**	Pn		**Pn**	**23 16 24.6**	**+1.5**
	comp=N,14nm,0.3s,baz=73,slow=14,SNR=26						
ASAJ				LR		LR	23 20 02.0	
	comp=N,1μm,19.6s,baz=80,slow=36						
ASAJ	**Asahikawa**	**10.27**	**246**	PN		**Pn**	**23 16 24.7**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,14nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,1μm,19.6s						
NKL	**Nikolayevsk**	**10.32**	**299**	*eP*		**Pn**	**23 16 22.0**	**-1.9**
NKL				AMB	AMB	23 16 23.5	
	comp=Z,70nm,1.2s						
NKL				*eL*			23 19 26.0	
NKL				AMS	AMS	23 21 24.0	
	comp=Z,400nm,15.0s						
NKL				AMS	AMS	23 21 24.0	
	comp=Z,800nm,15.0s						
NKL				AMS	AMS	23 21 24.0	
	comp=Z,2μm,15.0s						
ERM	**Erimo**	**11.24**	**236**	*ePn*		**Pn**	**23 16 36.5**	**0.0**
ERM	**Erimo**	**11.24**	**236**	*dⅈPN*		**Pn**	**23 16 37.5**	**+1.0**
SMY	**Shemya**	**12.19**	**65**	*ePn*		**Pn**	**23 16 50.3**	**+0.9**
HABR	**Khabarovsk**	**13.64**	**276**	P		**Pn**	**23 17 12.5**	**+3.3**
HABR				*eS*		**Sn**	**23 19 46.3**	**+7.1**
HABR				pmax	pmax		
	comp=Z,44nm,1.7s						
HABR				MLR	MLR		
	comp=Z,1μm,18.0s						
SEY	**Seymchan**	**14.08**	**354**	⇓*eP*		**Pn**	**23 17 16.1**	**+1.1**
VLA	**Vladivostok**	**17.51**	**259**	⇓*eP*		**Pn**	**23 18 02.2**	**+2.9**
VLA				pmax	pmax		
	comp=Z,25nm,1.7s						
MAJO	**Matsushiro**	**17.84**	**232**	*ePn*		**Pn**	**23 18 03.7**	**+0.3**
	comp=Z,35nm,1.5s						
MAJO	**Matsushiro**	**17.84**	**232**	*eP*		**Pn**	**23 18 03.7**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,35nm,1.5s						
MAT	**Matsushiro**	**17.84**	**232**	P		**Pn**	**23 18 03.1**	**-0.3**
MAT				S		**S**	**23 21 31.0**	**+4.7**
ZEA	**Zeya**	**18.32**	**296**	*eP*		**Pn**	**23 18 06.1**	**-3.0**
ZEA				AMB	AMB	23 18 13.8	
	comp=Z,37nm,1.4s						
ZEA				AMB	AMB	23 18 26.0	
	comp=Z,200nm,8.0s						
ZEA				*eS*		**S**	**23 21 45.0**	**+9.3**
ZEA				A		23 21 57.0	
	comp=Z,200nm,6.0s						
MDJ	**Mudanjiang**	**18.37**	**266**	P		**Pn**	**23 18 09.1**	**-0.7**
MDJ				pP		pP	23 18 19.9	0.0
MDJ				sP		sP	23 18 26.7	+1.2
MDJ				S		**S**	**23 21 32.0**	**-4.9**
MDJ				ScP		ScP	23 26 09.9	-0.6
MDJ				PcS		PcS	23 26 16.0	+0.6
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,130nm,9.5s						
MDJ				LR	LR		
	comp=N,550nm,17.1s						
MDJ				LR	LR		
	comp=E,390nm,17.1s						
MDJ				LR	LR		
	comp=Z,530nm,13.4s						
YAK	**Yakutsk**	**19.49**	**322**	*eP*		**Pn**	**23 18 20.8**	**-2.3**
YAK				*eS*		**S**	**23 22 00.6**	**+1.5**
YAK				pmax	pmax		
	comp=Z,25nm,1.0s						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=E,19nm,1.3s						
YAK				smax			
	comp=N,92nm,2.2s						
YAK				smax			
	comp=E,16nm,1.2s						
CLNS	**Chul'man**	**20.02**	**305**	*eP*		**P**	**23 18 29.2**	**+1.8**
CLNS				*e*			23 18 46.0	
CLNS				*eS*		**S**	**23 22 12.9**	**+3.1**
CLNS				*eSS*			23 22 38.1	
CLNS				*e*			23 22 43.9	
CLNS				pmax	pmax		
	comp=Z,36nm,1.1s						
CLNS				pmax	pmax		
	comp=N,27nm,1.3s						
CLNS				pmax	pmax		
	comp=E,28nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,12nm,1.1s						
CLNS				pmax	pmax		
	comp=E,15nm,1.3s						
CLNS				pmax	pmax		
	comp=N,18nm,1.2s						
CLNS				smax			
	comp=E,94nm,12.9s						
CLNS				smax			
	comp=N,83nm,12.2s						
CLNS				MLR	MLR		
	comp=N,347nm,13.0s,MS4.3						
CLNS				MLR	MLR		
	comp=E,791nm,14.0s,MS4.3						
CLNS				MLR	MLR		
	comp=Z,854nm,15.0s,MS4.2						
CN2	**Changchun**	**21.43**	**267**	*eP*		**P**	**23 18 43.8**	**+1.2**
CN2				*eS*		**S**	**23 22 33.8**	**-3.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.5						
CN2				pmax	pmax		
	comp=Z,200nm,10.0s						
CN2				LR	LR		
	comp=N,500nm,16.0s,MS4.1						
CN2				LR	LR		
	comp=E,400nm,16.0s,MS4.1						
CN2				LR	LR		
	comp=Z,300nm,24.0s						
KSRS	**Korea Array**	**23.17**	**251**	P		**P**	**23 19 00.4**	**-0.8**
	comp=Z,4.8nm,0.7s,mb4.0,baz=50,slow=9.4,SNR=24						
KSRS				LR	LR		23 27 43.9	
	comp=Z,438nm,18.3s,MS3.9,baz=301,slow=36						
KSRS	**Korea Array**	**23.17**	**251**	P		**P**	**23 19 00.4**	**-0.8**
KSRS				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
KSRS				MLR	MLR		
	comp=Z,438nm,18.3s,MS3.9						
TNA	**Tin City**	**25.18**	**35**	*eP*		**P**	**23 19 19.8**	**+0.4**
	comp=Z,10nm,0.8s,mb4.4						
TIXI	**Tiksi**	**25.84**	**341**	*eP*		**P**	**23 19 23.0**	**-2.4**
	comp=Z,4.0nm,0.7s,mb4.1						
TIXI	**Tiksi**	**25.84**	**341**	*eP*		**P**	**23 19 22.5**	**-2.9**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.0						
TIXI				MLR	MLR		
	comp=Z,570nm,17.0s,MS4.2						
BJI	**Beijing**	**29.29**	**267**	P		**P**	**23 19 56.6**	**0.0**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
BJI				LR	LR		
	comp=N,430nm,17.1s,MS4.2						
BJI				LR	LR		
	comp=E,240nm,18.3s,MS4.2						
BJI				LR	LR		
	comp=Z,170nm,18.3s,MS3.7						
KDAK	**Kodiak Island**	**31.34**	**54**	P		**P**	**23 20 12.7**	**-1.7**
	comp=Z,3.7nm,0.8s,mb4.3,baz=297,slow=5.3,SNR=4.9						
KDAK	**Kodiak Island**	**31.34**	**54**	P		**P**	**23 20 12.7**	**-1.7**
KDAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
HHC	**Hu-ho-hao-te**	**31.92**	**272**	*eP*		**P**	**23 20 18.8**	**-0.9**
HHC				pP		pP	23 20 30.4	-1.1
HHC				sP		sP	23 20 36.2	-0.6
HHC				PP		PP	23 21 25.2	-7.0
HHC				*eS*		**S**	**23 25 25.0**	**-2.6**
HHC				sS		sS	23 25 45.2	-2.1
HHC				SS		SS	23 27 17.0	-28
HHC				ScS		ScS	23 30 44.2	-2.9
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.5						
HHC				pmax	pmax		
	comp=Z,78nm,5.2s						
HHC				LR	LR		
	comp=N,400nm,14.1s,MS4.4						
HHC				LR	LR		
	comp=E,400nm,14.5s,MS4.4						
HHC				LR	LR		
	comp=Z,370nm,17.2s,MS4.1						
SONM	**Songino Array**	**32.29**	**287**	P		**P**	**23 20 21.7**	**-1.2**
	comp=Z,0.4nm,0.3s,mb3.7,baz=66,slow=8.0,SNR=3.5						
SONM				LR	LR		23 34 48.8	
	comp=Z,716nm,18.9s,MS4.4,baz=81,slow=39						
NJ2	**Nanjing**	**32.34**	**252**	*eP*		**P**	**23 20 25.6**	**+2.1**
NJ2				pP		pP	23 20 37.2	+1.9
NJ2				sP		sP	23 20 42.8	+2.2
NJ2				PP		PP	23 21 34.0	-3.0
NJ2				S		**S**	**23 25 34.1**	**-0.2**
NJ2				sS		sS	23 25 54.2	+0.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
NJ2				pmax	pmax		
	comp=Z,40nm,4.2s						
NJ2				LR	LR		
	comp=N,480nm,15.2s,MS4.4						
NJ2				LR	LR		
	comp=E,250nm,12.2s,MS4.4						
NJ2				LR	LR		
	comp=Z,4μm,14.2s,MS5.2						
TLY	**Talaya**	**32.76**	**295**	*eP*		**P**	**23 20 28.6**	**+1.7**
TLY				*e*			23 21 33.0	

TLY pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
TLY MLR MLR
comp=Z,466nm,14.0s,MS4.3
ZAK Zakamensk 33.36 293 *eP* **P 23 20 31.0 -1.2**
ZAK pmax pmax
comp=Z,2.0nm,1.3s,mb3.9
ILAR Eielson Array 33.69 41 P **P 23 20 33.9 -1.0**
comp=Z,0.9nm,0.7s,mb3.8,baz=260,slow=7.0,SNR=11
DIV Divide 34.42 47 *eP* **P 23 20 41.4 +0.1**
EGAK Eagle 36.14 40 *eP* **P 23 20 55.3 -0.8**
comp=Z,5.3nm,0.7s,mb4.6
INK Inuvik 38.80 34 *eP* **P 23 21 18.6 +0.1**
comp=Z,5.3nm,0.9s,mb4.3
INK Inuvik 38.80 34 P **P 23 21 18.3 -0.2**
comp=Z,1.7nm,0.3s,mb4.2,baz=296,slow=6.8,SNR=4.2
INK Inuvik 38.80 34 P **P 23 21 18.3 -0.2**
INK pmax pmax
comp=Z,2.0nm,0.4s
LZH Lanzhou 39.58 271 *eP* **P 23 21 25.5 +0.1**
LZH pP pP 23 21 37.7 +0.3
LZH sP sP 23 21 44.4 +1.8
LZH pmax pmax
comp=Z,15nm,1.0s,mb4.7
LZH pmax pmax
comp=Z,82nm,5.5s
LZH LR LR
comp=N,630nm,15.4s
LZH LR LR
comp=Z,830nm,17.0s,MS4.6
GTA Gaotai 40.37 278 P **P 23 21 32.0 +0.2**
GTA pP pP 23 21 46.9 +3.0
GTA sP sP 23 21 52.0 +2.9
GTA PP PP 23 23 09.4 +4.2
GTA S **S 23 27 39.0 +2.4**
GTA sS sS 23 27 58.2 +1.5
GTA pmax pmax
comp=Z,5.0nm,1.4s,mb4.0
GTA pmax pmax
comp=Z,75nm,6.6s
GTA LR LR
comp=N,280nm,15.6s,MS4.5
GTA LR LR
comp=E,450nm,14.4s,MS4.5
GTA LR LR
comp=Z,670nm,14.7s,MS4.6
ZALV Zalesovo Beam 42.74 305 P **P 23 21 48.9 -2.1**
comp=Z,0.4nm,0.3s,mb3.6,baz=60,slow=6.7,SNR=4.0
ZALV PcP PcP 23 23 41.8 0.0
comp=Z,0.8nm,0.6s,baz=58,slow=3.7,SNR=5.3
ZALV LR LR 23 40 41.9
comp=Z,169nm,18.0s,MS4.0,baz=241,slow=38
DLBC Dease Lake 42.77 48 P **P 23 21 53.1 +1.9**
comp=Z,1.0nm,0.3s,mb4.1,baz=258,slow=9.3,SNR=3.7
CD2 Chengdu 42.82 265 P **P 23 21 53.3 +1.3**
CD2 pP pP 23 22 05.6 +1.5
CD2 sP sP 23 22 11.0 +1.7
CD2 PP PP 23 23 35.4 +3.6
CD2 PcP PcP 23 23 45.5 +3.0
CD2 S **S 23 28 12.6 -0.5**
CD2 sS sS 23 28 33.3 0.0
CD2 SS SS 23 31 17.4 -7.7
CD2 ScS ScS 23 31 48.3 -0.7
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
CD2 pmax pmax
comp=Z,110nm,4.9s
CD2 LR LR
comp=N,310nm,11.9s
CD2 LR LR
comp=Z,280nm,18.8s
NVS Novosibirsk 43.23 306 *eP* **P 23 21 52.7 -2.3**
GYA Guiyang 43.91 257 P **P 23 22 00.1 -0.8**
GYA pP pP 23 22 12.4 -0.6
GYA sP sP 23 22 17.8 -0.4
GYA PP PP 23 23 43.9 +0.3
GYA S **S 23 28 25.5 -3.6**
GYA sS sS 23 28 46.6 -2.8
GYA SS SS 23 31 34.1 -12
GYA pmax pmax
comp=Z,20nm,0.7s,mb5.0
GYA pmax pmax
comp=Z,60nm,4.2s
GYA LR LR
comp=N,440nm,17.6s,MS4.5
GYA LR LR
comp=E,300nm,18.7s,MS4.5
GYA LR LR
comp=Z,480nm,17.4s,MS4.5
WMQ Urumqi 45.76 290 P **P 23 22 16.5 +1.2**
WMQ pP pP 23 22 28.9 +1.4
WMQ sP sP 23 22 34.2 +1.5
WMQ PcP PcP 23 23 54.8 +2.4
WMQ PP PP 23 24 04.0 +1.2
WMQ ScP ScP 23 27 42.5 +1.0
WMQ S **S 23 28 55.0 -0.5**
WMQ sS sS 23 29 15.9 +0.1
WMQ ScS ScS 23 32 06.2 -1.0
WMQ SS SS 23 32 10.8 -9.0
WMQ pmax pmax
comp=Z,11nm,0.6s,mb5.0
WMQ pmax pmax
comp=Z,95nm,5.0s
WMQ LR LR
comp=N,190nm,17.4s,MS4.2
WMQ LR LR
comp=E,120nm,16.0s,MS4.2
WMQ LR LR
comp=Z,150nm,15.0s,MS4.1
QIZ Qiongzhong 47.34 247 P **P 23 22 26.8 -1.2**
QIZ S **S 23 29 14.4 -4.2**
QIZ pmax pmax
comp=Z,27nm,2.1s,mb4.8
QIZ LR LR
comp=E,140nm,16.9s
QIZ LR LR
comp=Z,280nm,15.7s,MS4.3
KMI Kunming 47.37 260 P **P 23 22 28.3 +0.1**
KMI pP pP 23 22 42.5 +2.0
KMI sP sP 23 22 48.4 +2.8
KMI PP PP 23 24 21.6 +2.0
KMI S **S 23 29 17.5 -1.5**
KMI sS sS 23 29 41.9 +2.5
KMI SS SS 23 32 39.2 -7.6
KMI pmax pmax
comp=Z,13nm,1.0s,mb4.8
KMI pmax pmax
comp=Z,71nm,3.7s
KMI LR LR
comp=N,230nm,17.1s,MS4.4
KMI LR LR
comp=E,280nm,15.8s,MS4.4
KMI LR LR
comp=Z,160nm,17.7s,MS4.0
MK31 Makanchi Array 47.47 297 *eP* **P 23 22 28.1 -0.7**
MKAR Makanchi Array 47.47 297 P **P 23 22 27.6 -1.1**
comp=Z,1.4nm,0.6s,mb4.1,baz=72,slow=8.4,SNR=20
MKAR LR LR 23 43 59.3
comp=Z,469nm,18.2s,MS4.5,baz=36,slow=38
MKAR Makanchi Array 47.47 297 P **P 23 22 27.6 -1.1**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR MLR MLR
comp=Z,469nm,18.2s
KURK Kurchatov 47.59 303 *eP* **P 23 22 28.1 -1.5**
comp=Z,4.2nm,0.8s,mb4.5
KURK Kurchatov 47.59 303 LR LR 23 43 24.0
comp=Z,169nm,21.0s,MS4.0,baz=60,slow=37
KURK Kurchatov 47.59 303*c i* P **P 23 22 27.6 -1.9**
KURK pmax pmax
comp=Z,11nm,1.7s,mb4.6
YKA Yellowknife Ar 48.06 39 P **P 23 22 32.9 -0.1**
YKA Yellowknife Ar 48.06 39 P **P 23 22 32.9 -0.1**
comp=Z,1.3nm,0.8s,mb4.0,baz=301,slow=7.5,SNR=6.7
YKA Yellowknife Ar 48.06 39 P **P 23 22 32.9 -0.2**
YKA pmax pmax
comp=Z,1.0nm,0.8s
RES Resolute Bay 48.13 20 *eP* **P 23 22 33.8 +0.3**
comp=Z,8.6nm,0.9s,mb4.8
RES Resolute Bay 48.13 20 *eP* **P 23 22 33.8 +0.4**
RES pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
BVAR Borovoye Array 50.78 309 P **P 23 22 53.1 -0.8**
comp=Z,2.0nm,0.5s,mb4.3,baz=62,slow=7.9,SNR=16
BVAR Borovoye Array 50.78 309 P **P 23 22 53.1 -0.8**
BVAR pmax pmax
comp=Z,2.0nm,0.5s
BRVK Borovoye 50.82 309 *eP* **P 23 22 53.0 -1.2**
comp=Z,3.1nm,0.7s,mb4.3
BRVK Borovoye 50.82 309‖ *eP* **P 23 22 53.0 -1.2**
BRVK pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
LSA Lhasa 51.90 273 *eP* **P 23 23 04.0 +1.4**
comp=Z,5.4nm,0.6s,mb4.7
LSA Lhasa 51.90 273 *eP* **P 23 23 04.0 +1.4**
LSA pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
CHTO Chiang Mai 54.33 257 *eP* **P 23 23 20.9 +0.2**
comp=Z,14nm,1.1s,mb4.8
CHTO Chiang Mai 54.33 257 *eP* **P 23 23 20.9 +0.3**
CHTO pmax pmax
comp=Z,14nm,1.1s,mb4.8
AAK Ala-Archa 54.40 296 LR LR 23 47 06.2
comp=Z,261nm,21.8s,MS4.3,baz=12,slow=37
ARU Arti 54.53 317 *eP* **P 23 23 20.5 -1.1**
comp=Z,26nm,1.1s,mb5.2
ARU Arti 54.53 317 *eP* **P 23 23 20.5 -1.0**
ARU pmax pmax
comp=Z,26nm,1.1s,mb5.2
CMAR Chiang Mai Arr 54.59 257 P **P 23 23 21.1 -1.5**
comp=Z,2.5nm,0.4s,mb4.6,baz=33,slow=7.5,SNR=8.1
CMAR LR LR 23 48 38.6
comp=Z,169nm,19.0s,MS4.1,baz=144,slow=38
CMAR Chiang Mai Arr 54.59 257 P **P 23 23 21.1 -1.4**
CMAR pmax pmax
comp=Z,3.0nm,0.4s
CMAR MLR MLR
comp=Z,169nm,19.0s
YBH Yreka Blue Hor 55.16 64 P **P 23 23 26.9 +0.6**
comp=Z,0.8nm,0.6s,mb4.0,baz=7.1,slow=8.1,SNR=3.2
YBH LR LR 23 42 26.1
comp=Z,110nm,19.7s,MS3.9,baz=339,slow=31
YBH Yreka Blue Hor 55.16 64 P **P 23 23 26.9 +0.6**
YBH pmax pmax
comp=Z,1.0nm,0.6s
YBH MLR MLR
comp=Z,110nm,19.7s
ARCES ARCESS Array B 56.28 341 P **P 23 23 32.2 -1.7**
comp=Z,0.5nm,0.5s,mb3.8,baz=36,slow=7.7,SNR=4.6
ARCES LR LR 23 54 08.0
comp=Z,234nm,18.3s,MS4.3,baz=221,slow=43
ARCES ARCESS Array B 56.28 341 P **P 23 23 32.3 -1.7**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
ARCES MLR MLR
comp=Z,234nm,18.3s
GUN Gumba 56.54 275 *eP* **P 23 23 36.8 +0.4**
KKN Kakani 57.01 276 *eP* **P 23 23 40.3 +0.5**
comp=Z,13nm,0.6s,mb5.2
DMN Daman 57.25 276 *eP* **P 23 23 42.3 +0.9**
GKN Gorkha 57.29 276 *eP* **P 23 23 41.4 -0.3**
comp=Z,14nm,0.5s,mb5.2
CHMT Chamberlain Mo 57.33 55 *eP* **P 23 23 41.4 -0.4**
comp=Z,0.7nm,0.5s,mb4.0
FFC Flin Flon 57.88 42 *eP* **P 23 23 45.1 -0.4**
comp=Z,5.9nm,1.3s,mb4.5
FFC Flin Flon 57.88 42 *eP* **P 23 23 45.1 -0.4**
FFC pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
KOLN Koldanda 58.13 277 *eP* **P 23 23 46.3 -1.3**
SUMG Summit 58.31 5 *eP* **P 23 23 48.7 +0.5**
comp=Z,9.8nm,0.8s,mb4.9
SUMG Summit 58.31 5 *i* P **P 23 23 47.5 -0.7**
comp=Z,8.3nm,1.0s,mb4.7
ABKAR Akbulak array 58.32 310 *eP* **P 23 23 47.7 -0.9**
comp=Z,3.3nm,0.6s,mb4.5
FCC Fort Churchill 58.41 35 *eP* **P 23 23 49.1 0.0**
comp=Z,0.2nm,1.1s
AKTK Aktyubinsk 58.52 312 P **P 23 23 49.0 -1.0**
AKTO Aktyubinsk 58.52 312 P **P 23 23 49.0 -1.0**
comp=Z,0.6nm,0.3s,mb4.1,baz=61,slow=11,SNR=4.0
AKTO Aktyubinsk 58.52 312 P **P 23 23 49.0 -1.0**
AKTO pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
HLID Hailey 58.81 58 *eP* **P 23 23 52.5 +0.4**
comp=Z,3.4nm,1.2s,mb4.2
BOZ Bozeman (W) 59.01 55 *eP* **P 23 23 53.2 -0.3**
comp=Z,1.7nm,0.6s,mb4.2
BOZ Bozeman (W) 59.01 55 *eP* **P 23 23 53.2 -0.3**
BOZ pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
NVAR Mina Array Bea 59.86 65 P **P 23 23 59.6 +0.1**
comp=Z,0.7nm,0.5s,mb4.0,baz=289,slow=8.2,SNR=3.3
RLMT Red Lodge 60.61 54 *eP* **P 23 24 05.5 +1.0**
comp=Z,7.3nm,1.3s,mb4.7
MOOW Moose Ponds 60.72 56 *eP* **P 23 24 05.5 +0.3**
comp=Z,1.0nm,0.7s,mb4.0
TPAW Teton Pass 60.77 56 *eP* **P 23 24 06.0 +0.4**
comp=Z,2.3nm,0.7s,mb4.4
LOHW Long Hollow 60.88 56 *eP* **P 23 24 07.9 +1.6**
HWUT Hardware Ranch 61.68 58 *eP* **P 23 24 12.0 +0.2**
comp=Z,1.8nm,0.7s,mb4.3
DUG Dugway 61.91 60 *eP* **P 23 24 13.3 0.0**
comp=Z,21nm,1.9s,mb5.0
DUG Dugway 61.91 60 *eP* **P 23 24 13.3 -0.1**
DUG pmax pmax
comp=Z,21nm,1.9s,mb4.9
BW06 Boulder Array 62.02 56 *eP* **P 23 24 13.6 -0.5**
comp=Z,1.3nm,0.6s,mb4.2
FINES FINESS Array B 62.73 335 P **P 23 24 16.9 -1.5**
comp=Z,2.6nm,0.5s,mb4.6,baz=43,slow=5.9,SNR=16
FINES LR LR 23 54 41.5
comp=Z,286nm,19.8s,MS4.4,baz=175,slow=39
FINES FINESS Array B 62.73 335 P **P 23 24 17.0 -1.5**
FINES pmax pmax
comp=Z,3.0nm,0.5s
FINES MLR MLR
comp=Z,286nm,19.8s
KBL Kabul 62.85 292 *eP* **P 23 24 18.3 -1.4**
comp=Z,3.3nm,1.0s,mb4.4
KBL Kabul 62.85 292 *eP* **P 23 24 18.3 -1.4**
KBL pmax pmax
comp=Z,3.0nm,1.0s,mb4.4
ULM Lac du Bonnet 63.67 43 *eP* **P 23 24 25.3 +0.4**
comp=Z,2.1nm,0.6s,mb4.3
ULM Lac du Bonnet 63.67 43 LR LR 23 53 35.4
comp=Z,99nm,20.0s,MS4.0,baz=2.4,slow=37
RSSD Black Hills 64.04 52 *eP* **P 23 24 27.6 +0.2**
comp=Z,3.2nm,0.7s,mb4.5
RSSD Black Hills 64.04 52 *eP* **P 23 24 27.6 +0.2**
RSSD pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
OBN Obninsk 64.42 326 *eP* **P 23 24 27.4 -2.3**
OBN *e* pP 23 24 37.3 -5.1
OBN *eS* **S 23 33 03.0 -1.7**
OBN pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
NOA NORSAR Array B 66.63 342 P **P 23 24 43.7 -0.2**
comp=Z,1.8nm,1.0s,mb4.1,baz=23,slow=6.9,SNR=3.7
NOA LR LR 23 58 25.4
comp=Z,175nm,19.2s,MS4.3,baz=40,slow=40
NOA NORSAR Array B 66.63 342 P **P 23 24 43.7 -0.2**
NOA pmax pmax
comp=Z,2.0nm,1.0s
NOA MLR MLR
comp=Z,175nm,19.2s
ANMO Albuquerque 69.17 61 LR LR 23 51 23.9
comp=Z,62nm,21.5s,MS3.8,baz=127,slow=32
SCHQ Schefferville 70.54 25 P **P 23 25 09.4 +1.0**
comp=Z,3.0nm,1.0s,mb4.2,baz=353,slow=12,SNR=2.6
SCHQ LR LR 00 01 31.2
comp=Z,102nm,18.3s,MS4.1,baz=249,slow=40
AKASG Malin Array Be 70.62 327 P **P 23 25 06.8 -2.2**
comp=Z,0.7nm,0.4s,mb3.9,baz=32,slow=7.2,SNR=4.1
AKASG LR LR 23 59 28.6
comp=Z,146nm,18.5s,MS4.3,baz=10.0,slow=39
AKASG Malin Array Be 70.62 327 P **P 23 25 06.8 -2.1**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG MLR MLR
comp=Z,146nm,18.5s
WRAB Tennant Creek 71.23 201 *eP* **P 23 25 12.2 -0.6**
comp=Z,9.4nm,1.1s,mb4.6
WRAB Tennant Creek 71.23 201 *eP* **P 23 25 12.2 -0.6**
WRAB pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
FITZ Fitzroy Crossi 71.97 210 P **P 23 25 15.9 -1.4**
comp=Z,2.9nm,0.7s,mb4.3,baz=75,slow=2.9,SNR=7.5
MNTX Cornudas Mount 72.14 62 *eP* **P 23 25 17.8 -0.7**
comp=Z,0.6nm,0.6s,mb3.7
WMOK Wichita Mounta 73.62 56 *eP* **P 23 25 25.8 -1.4**
comp=Z,3.2nm,1.0s,mb4.2
WMOK Wichita Mounta 73.62 56 *eP* **P 23 25 25.8 -1.4**
WMOK pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
KWP Kalwaria Pacla 73.75 330 *eP* **P 23 25 27.0 -0.6**
comp=Z,12nm,1.1s,mb4.8
KWP Kalwaria Pacla 73.75 330 *eP* **P 23 25 27.0 -0.7**
KWP pmax pmax
comp=Z,12nm,1.1s,mb4.7
STHS Stebnicka Huta 74.41 331 *eP* **P 23 25 32.5 +1.0**
comp=Z,3.0nm,1.0s,mb4.2
STHS Stebnicka Huta 74.41 331 *eP* **P 23 25 32.5 +1.0**
STHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
STHS Stebnicka Huta 74.41 331 *eP* **P 23 25 32.5 +1.0**
KOLS Kolonicke sedl 74.50 330 *eP* **P 23 25 32.0 0.0**
comp=Z,8.2nm,1.3s,mb4.5
KOLS Kolonicke sedl 74.50 330 *eP* **P 23 25 32.0 0.0**
KOLS pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
KOLS Kolonicke sedl 74.50 330 *eP* **P 23 25 32.0 0.0**
BUR08 Bucovina Ar. S 74.62 328 *eP* **P 23 25 31.9 -0.9**
CRVS Cervenica-Dubn 74.79 331 *eP* **P 23 25 34.4 +0.7**
comp=Z,6.0nm,1.5s,mb4.3
CRVS Cervenica-Dubn 74.79 331 *eP* **P 23 25 34.4 +0.7**
CRVS pmax pmax
comp=Z,6.0nm,1.5s,mb4.3
CRVS Cervenica-Dubn 74.79 331 *eP* **P 23 25 34.4 +0.7**
TXAR Lajitas Array 74.88 63 P **P 23 25 34.0 -0.6**
comp=Z,1.1nm,0.5s,mb4.1,baz=301,slow=4.9,SNR=23
TXAR LR LR 23 59 32.5
comp=Z,49nm,19.3s,MS3.8,baz=185,slow=37
TXAR Lajitas Array 74.88 63 P **P 23 25 34.0 -0.6**
TXAR pmax pmax
comp=Z,1.0nm,0.5s
TXAR MLR MLR
comp=Z,49nm,19.3s
ASAR Alice Springs 74.92 201 P **P 23 25 34.1 -0.5**
comp=Z,0.5nm,0.4s,mb3.8,baz=16,slow=5.5,SNR=10
ASAR Alice Springs 74.92 201 P **P 23 25 34.2 -0.4**
ASAR pmax pmax
comp=Z,1.0nm,0.4s
OKC Ostrava-Krasne 74.99 333 *eP* **P 23 25 35.3 +0.4**
OKC AMS AMS 00 03 20.0
comp=Z,200nm,15.1s
UPC Upice 75.01 335 *eP* **P 23 25 35.2 +0.2**
UPC Upice 75.01 335 *eP* **P 23 25 35.2 +0.2**
DPC Dobruska-Polom 75.07 334 *eP* **P 23 25 35.5 +0.2**
DPC *ep*P pP 23 25 48.4 +0.2
DPC AMS AMS 00 02 30.0
comp=Z,300nm,20.1s
CLL Collm 75.10 337 *i* P **P 23 25 33.5 -2.0**
comp=Z,15nm,1.5s,mb4.7
CLL Collm 75.10 337 *i* P **P 23 25 33.5 -2.0**
CLL pmax pmax
comp=Z,15nm,1.5s,mb4.7
CLL Collm 75.10 337 *i* P **P 23 25 34.8 -0.7**
comp=Z,15nm,1.5s,mb4.7
CLL *i* 23 25 41.2
CLL *es*P sP 23 25 56.0 +2.6
CLL L 00 02 00.0
comp=Z,200nm,19.1s
MORC Moravsky Berou 75.23 333 *eP* **P 23 25 36.3 +0.1**
comp=Z,1.9nm,1.2s,mb4.7
MORC Moravsky Berou 75.23 333 *eP* **P 23 25 36.3 +0.1**
MORC pmax pmax
comp=Z,13nm,1.2s,mb4.7
BRG Berggiesshubel 75.25 336 *eP* **P 23 25 35.9 -0.4**
comp=Z,10nm,1.5s,mb4.5
BRG Berggiesshubel 75.25 336 *eP* **P 23 25 35.9 -0.4**
BRG pmax pmax
comp=Z,6.0nm,1.5s,mb4.3
PVCC Panska Ves 75.39 336 AMS AMS 00 02 10.0
comp=Z,300nm,20.6s
KECS Kecovo 75.47 331 *eP* **P 23 25 44.5 +6.9**
KECS Kecovo 75.47 331 *e* **P 23 25 44.5 +6.9**
PRU Pruhonice 75.89 335 *eP* **P 23 25 40.7 +0.7**
PRU *ex* x 23 25 46.4
PRU AMS AMS 00 02 20.0
comp=Z,300nm,22.5s
VYHS Vyhne 75.98 332 *i* P **P 23 25 40.9 +0.4**
comp=Z,7.6nm,1.5s,mb4.4
VYHS Vyhne 75.98 332 *i* P **P 23 25 40.9 +0.4**
VYHS pmax pmax
comp=Z,8.0nm,1.5s,mb4.4
VYHS Vyhne 75.98 332 *i* P **P 23 25 40.9 +0.4**
KOLL Kolacno 76.03 332 *eP* **P 23 25 41.8 +0.9**
KOLL Kolacno 76.03 332 *eP* **P 23 25 41.8 +0.9**
PSZ Piszkesteto 76.16 331 *eP* **P 23 25 41.6 +0.1**
comp=Z,5.2nm,1.0s,mb4.4
PSZ Piszkesteto 76.16 331 *eP* **P 23 25 41.6 0.0**
PSZ pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
NKC Novy Kostel 76.23 337 *eP* **P 23 25 43.0 +1.1**
NKC Novy Kostel 76.23 337 *eP* **P 23 25 43.0 +1.1**
TREC Trest 76.25 334 *eP* **P 23 25 42.6 +0.5**
TREC AMS AMS 00 03 20.0
comp=Z,200nm,18.4s
ZST Bratislava 76.77 333 *eP* **P 23 25 46.0 +1.0**
comp=Z,20nm,1.8s,mb4.8
ZST Bratislava 76.77 333 *eP* **P 23 25 46.0 +1.0**
ZST pmax pmax
comp=Z,20nm,1.8s,mb4.8
ZST Bratislava 76.77 333 *eP* **P 23 25 46.0 +1.0**
MALT Malatya 76.86 314 *eP* **P 23 25 47.1 +1.4**
comp=Z,7.9nm,1.3s,mb4.5
MALT Malatya 76.86 314 *eP* **P 23 25 47.1 +1.3**
MALT pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
KHC Kasperske Hory 76.93 336 *eP* **P 23 25 45.8 -0.2**
comp=Z,23nm,1.5s,mb4.9
KHC Kasperske Hory 76.93 336 *eP* **P 23 25 45.8 -0.1**
KHC pmax pmax
comp=Z,23nm,1.5s,mb4.9
KHC Kasperske Hory 76.93 336 *eP* **P 23 25 46.2 +0.3**
KHC *ex* x 23 25 52.6
KHC *ep*P pP 23 26 02.5 +3.6
KHC AMS AMS 00 03 10.0
comp=Z,400nm,22.0s
HGN Heimansgroeve 77.29 341 *eP* **P 23 25 47.0 -0.9**
comp=Z,20nm,1.6s,mb4.8
MEM Membach 77.42 341 P **P 23 25 48.9 +0.3**
comp=Z,9.3nm,1.3s,mb4.5
BCLA Clavier 77.75 341 P **P 23 25 50.4 -0.1**
BR131 Keskin Array S 77.91 318 *eP* **P 23 25 51.6 +0.1**
comp=Z,5.1nm,1.0s,mb4.4
BRTR Keskin Array B 77.91 318 P **P 23 25 51.6 0.0**
comp=Z,4.2nm,1.0s,mb4.3,baz=59,slow=3.6,SNR=16
BRTR LR LR 00 09 12.5
comp=Z,71nm,18.3s,MS4.0,baz=270,slow=43
GIVF Givet 78.15 341 *eP* **P 23 25 53.4 +0.7**
DOU Dourbes 78.20 341 P **P 23 25 53.4 +0.4**
comp=Z,10nm,2.1s,mb4.4
BAIF Baives 78.32 342 *eP* **P 23 25 53.7 +0.1**
MIB Mutribah 78.94 303 *eP* **P 23 25 57.0 -0.5**
MIB AMb AMB 23 25 59.2
comp=Z,41nm,1.2s,mb5.2
CDF Champ du Feu 79.19 339 *eP* **P 23 25 58.9 +0.4**
comp=Z,28nm,1.3s,mb4.7
CDF Champ du Feu 79.19 339 *eP* **P 23 25 58.9 +0.4**
comp=Z,14nm,1.3s,mb4.7
CDF Champ du Feu 79.19 339 *eP* **P 23 25 58.9 +0.4**
CDF pmax pmax
comp=Z,14nm,1.3s,mb4.7
ECH Echery 79.41 339 *eP* **P 23 25 55.6 -4.0**
comp=Z,50nm,1.9s,mb5.1
ECH Echery 79.41 339 *eP* **P 23 25 55.6 -4.0**
ECH pmax pmax
comp=Z,50nm,1.9s,mb5.1
NAY Al-Naaiem 79.42 303 *eP* **P 23 25 59.8 -0.3**
NAY AMb AMB 23 26 01.8
comp=Z,25nm,1.2s,mb5.0
RDF Al-Radifah 79.50 302 *eP* **P 23 25 59.5 -1.0**
RDF AMb AMB 23 26 03.4
comp=Z,75nm,1.4s,mb5.4
HAU Haudompre 79.79 340 *eP* **P 23 26 01.9 +0.2**
comp=Z,37nm,1.3s,mb4.9
HAU *e*MLR MLR
comp=Z,100nm,18.2s,MS3.9
HAU Haudompre 79.79 340 *eP* **P 23 26 01.9 +0.2**
comp=Z,18nm,1.3s,mb4.8
HAU LR LR
comp=Z,100nm,18.3s,MS4.2
HAU Haudompre 79.79 340 *eP* **P 23 26 01.9 +0.2**
HAU pmax pmax
comp=Z,18nm,1.3s,mb4.8
HAU MLR MLR

comp=Z,100nm,18.3s,MS4.2
HINF Hinteralfeld 79.85 339 *e*P **P 23 26 02.1 0.0**
TAOE Nuku Hiva Isla 80.29 116 *e*LR LR 23 51 09.6
comp=Z,307nm,22.4s
FLN La Foliniere 80.46 344 *e*P **P 23 26 05.5 +0.2**
comp=Z,75nm,1.5s,mb5.1
FLN *e*MLR MLR
comp=Z,152nm,19.8s,MS4.0
FLN La Foliniere 80.46 344 *e*P **P 23 26 05.5 +0.2**
comp=Z,38nm,1.5s,mb5.1
FLN LR LR
comp=Z,150nm,19.8s,MS4.3
FLN La Foliniere 80.46 344 *e*P **P 23 26 05.5 +0.2**
FLN pmax pmax
comp=Z,38nm,1.5s,mb5.1
FLN MLR MLR
comp=Z,150nm,19.8s,MS4.3
TKL Tuckaleechee C 80.53 45 LR LR 00 01 54.2
comp=Z,82nm,20.8s,MS4.1,baz=311,slow=36
LDF La Druitiere 80.56 344 *e*P **P 23 26 06.6 +0.7**
PMOR Pomariorio Ree 80.88 125 *e*T 00 55 00.8
comp=Z,1.1nm,0.2s
GRR Gorron 80.89 344 *e*P **P 23 26 08.0 +0.4**
comp=Z,34nm,1.1s,mb4.9
GRR Gorron 80.89 344 *e*P **P 23 26 08.0 +0.4**
comp=Z,17nm,1.1s,mb4.9
GRR Gorron 80.89 344 *e*P **P 23 26 08.0 +0.4**
GRR pmax pmax
comp=Z,17nm,1.1s,mb4.9
LOR Lormes 81.04 341 *e*P **P 23 26 08.8 +0.4**
comp=Z,37nm,1.4s,mb4.8
LOR *e*MLR MLR
comp=Z,183nm,19.8s,MS4.1
LOR Lormes 81.04 341 *e*P **P 23 26 08.8 +0.4**
comp=Z,19nm,1.4s,mb4.8
LOR LR LR
comp=Z,180nm,19.8s,MS4.4
LOR Lormes 81.04 341 *e*P **P 23 26 08.8 +0.4**
LOR pmax pmax
comp=Z,19nm,1.4s,mb4.8
LOR MLR MLR
comp=Z,180nm,19.8s,MS4.4
CABF La Chapelle 81.16 339 *e*P **P 23 26 09.8 +0.7**
SGMF Saint Gilles 81.31 346 *e*P **P 23 26 10.4 +0.5**
comp=Z,19nm,0.8s,mb4.8
SGMF Saint Gilles 81.31 346 *e*P **P 23 26 10.4 +0.5**
comp=Z,9.4nm,0.8s,mb4.8
SGMF Saint Gilles 81.31 346 *e*P **P 23 26 10.4 +0.5**
SGMF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
SSF Saint Saulge 81.31 341 *e*P **P 23 26 10.3 +0.4**
ROSF Rostrenen 81.34 346 *e*P **P 23 26 10.7 +0.7**
AVF Avril sur Loir 81.60 341 *e*P **P 23 26 12.0 +0.6**
comp=Z,18nm,1.1s,mb4.6
AVF Avril sur Loir 81.60 341 *e*P **P 23 26 12.0 +0.6**
comp=Z,9.3nm,1.1s,mb4.6
AVF Avril sur Loir 81.60 341 *e*P **P 23 26 12.0 +0.6**
AVF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
SMF Signal de Mont 81.64 341 *e*P **P 23 26 12.3 +0.7**
comp=Z,58nm,1.4s,mb5.0
SMF Signal de Mont 81.64 341 *e*P **P 23 26 12.3 +0.7**
comp=Z,29nm,1.4s,mb5.0
SMF Signal de Mont 81.64 341 *e*P **P 23 26 12.3 +0.7**
SMF pmax pmax
comp=Z,29nm,1.4s,mb5.0
QUIF Quistinic 81.74 346 *e*P **P 23 26 12.9 +0.8**
comp=Z,85nm,1.5s,mb5.1
QUIF Quistinic 81.74 346 *e*P **P 23 26 12.9 +0.8**
comp=Z,42nm,1.5s,mb5.2
QUIF Quistinic 81.74 346 *e*P **P 23 26 12.9 +0.8**
QUIF pmax pmax
comp=Z,42nm,1.5s,mb5.2
BGF Bois d'Agland 81.93 341 *e*P **P 23 26 14.0 +0.8**
LPL La Plagne 82.04 339 *e*P **P 23 26 14.8 +1.0**
comp=Z,17nm,1.0s,mb4.7
LPL La Plagne 82.04 339 *e*P **P 23 26 14.8 +1.0**
comp=Z,8.6nm,1.0s,mb4.6
LPL La Plagne 82.04 339 *e*P **P 23 26 14.8 +1.0**
LPL pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
LPG La Plagne 82.05 339 *e*P **P 23 26 15.3 +1.5**
comp=Z,24nm,1.1s,mb4.8
LPG La Plagne 82.05 339 *e*P **P 23 26 15.3 +1.5**
comp=Z,12nm,1.1s,mb4.7
LPG La Plagne 82.05 339 *e*P **P 23 26 15.3 +1.5**
LPG pmax pmax
comp=Z,12nm,1.1s,mb4.7
PPT Papeete 82.12 128 *e*S S 23 36 31.4 +5.5
comp=Z,390nm,31.8s
PPT *e*LR LR 23 52 02.1
comp=Z,105nm,23.8s
PPT Papeete 82.12 128 LR LR 00 00 52.3
comp=Z,104nm,18.4s,MS4.2,baz=28,slow=34
TCF Toulx Ste Croi 82.32 342 *e*P **P 23 26 16.1 +0.9**
comp=Z,9.4nm,1.0s,mb4.4
TCF Toulx Ste Croi 82.32 342 *e*P **P 23 26 16.1 +0.9**
comp=Z,4.7nm,1.0s,mb4.4
TCF Toulx Ste Croi 82.32 342 *e*P **P 23 26 16.1 +0.9**
TCF pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
MFF Saint Martin d 82.48 343 *e*P **P 23 26 17.2 +1.1**
MMAI Mount Meron Ar 82.59 313 P **P 23 26 17.6 +0.8**
comp=Z,4.1nm,0.6s,mb4.6,baz=40,slow=6.6,SNR=12
MBDF Montbardon 82.77 338 *e*P **P 23 26 18.8 +1.2**
comp=Z,32nm,1.2s,mb4.9
MBDF Montbardon 82.77 338 *e*P **P 23 26 18.8 +1.2**
comp=Z,16nm,1.2s,mb4.9
MBDF Montbardon 82.77 338 *e*P **P 23 26 18.8 +1.2**
MBDF pmax pmax
comp=Z,16nm,1.2s,mb4.9
ORIF Oris-en-Rattie 82.81 339 *e*P **P 23 26 19.1 +1.3**
ORIF *e*MLR MLR
comp=Z,94nm,20.5s,MS3.9
VIVF Saint-Julien-l 83.15 340 *e*P **P 23 26 20.7 +1.2**
RJF Les Rejaudoux 83.40 342 *e*P **P 23 26 20.2 -0.6**
comp=Z,27nm,1.2s,mb4.8
RJF *e*MLR MLR
comp=Z,184nm,19.0s,MS4.2
RJF Les Rejaudoux 83.40 342 *e*P **P 23 26 20.2 -0.6**
comp=Z,13nm,1.2s,mb4.8
RJF LR LR
comp=Z,180nm,19.0s,MS4.5
RJF Les Rejaudoux 83.40 342 *e*P **P 23 26 20.2 -0.6**
RJF pmax pmax
comp=Z,13nm,1.2s,mb4.8
RJF MLR MLR
comp=Z,180nm,19.0s,MS4.5
SBF Sospel 83.42 337 *e*P **P 23 26 21.3 +0.3**
CAF Calviac 83.65 342 *e*P **P 23 26 22.9 +0.8**
LFF La Frestale 83.91 342 *e*P **P 23 26 22.9 -0.5**
MTLF Montolieu 85.13 341 *e*P **P 23 26 29.8 +0.1**
ETSF Etsaut 86.13 343 *e*P **P 23 26 34.6 0.0**
comp=Z,17nm,1.1s,mb4.9
ETSF Etsaut 86.13 343 *e*P **P 23 26 34.6 0.0**
comp=Z,8.4nm,1.1s,mb4.9
ETSF Etsaut 86.13 343 *e*P **P 23 26 34.6 0.0**
ETSF pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
ESDC Sonseca Array 89.88 344 P **P 23 26 53.2 +0.7**
comp=Z,0.2nm,0.5s,mb3.8,baz=317,slow=8.1,SNR=4.7
ESDC LR LR 00 12 21.2
comp=Z,91nm,18.4s,MS4.2,baz=350,slow=39
KEST Kesra 90.48 333 P **P 23 26 56.9 +1.4**
comp=Z,0.8nm,0.6s,mb4.2,baz=351,slow=4.5,SNR=5.7
KEST LR LR 00 10 53.7
comp=Z,56nm,22.0s,MS4.0,baz=334,slow=38
CPUP Villa Florida 145.83 61 PKPbc PKPbc 23 33 32.3 -0.5
comp=Z,0.5nm,0.4s,baz=340,slow=12,SNR=3.5
CPUP Villa Florida 145.83 61 PKP2 PKPbc 23 33 32.3 -0.5
CPUP pmax pmax
comp=Z,1.0nm,0.4s
PLCA Paso Flores 146.63 93 PKPbc PKPbc 23 33 32.7 -2.0
comp=Z,0.6nm,0.4s,baz=236,slow=7.3,SNR=1.8
PLCA Paso Flores 146.63 93 PKP2 PKPbc 23 33 32.7 -2.0
PLCA pmax pmax
comp=Z,1.0nm,0.4s

*DDA **08** 23:27:09.5,38°.38N×42°.44E,h7km±6km,Md3.0*
*ISK **08** 23:27:09.8,38°.20N×42°.50E,h6km,MD2.9*
*CSEM **08** 23:27:09.8±0.3,38°.25N×42°.48E,h2km,MD2.9,Error ellipse: s-maj=11.1km s-min=6.7km az=21.0*
*ISCJB **08** 23:27:10.4±0.5,38°.27N±0°.04×42°.49E±0°.04,h10km,Error ellipse: s-maj=5.9km s-min=4.6km az=5.9*

ISC 08 23:27:10.1±0.7,38°.25N±0°.04×42°.49E±0°.04,h4km±7km, n22,σ0s95/29,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TATV	**Tatvan**	**0.31**	**327**	*i* P	**Pg**	**23 27 13.7**	**-2.5**
TATV				*i* S	**Sg**	**23 27 19.3**	**-1.0**
TATV	**Tatvan**	**0.31**	**327**	*i* P	**Pg**	**23 27 13.7**	**-2.5**
TATV				*i* S	**Sg**	**23 27 19.3**	**-1.0**
VANT	**Van**	**0.64**	**74**	*e*PG	**Pg**	**23 27 22.7**	**+0.3**
VANB	**Van**	**0.79**	**64**	*e*PG	**Pg**	**23 27 25.2**	**-0.1**
VANB	**Van**	**0.79**	**64**	*e*Pg	**Pg**	**23 27 25.2**	**-0.1**
BEST	**Besiri**	**1.02**	**250**	*i* P	**Pg**	**23 27 30.5**	**+0.8**
BEST				*i* S	**Sg**	**23 27 43.9**	**+0.9**
HAKT	**HAKKARI**	**1.19**	**125**	*i* P	**Pg**	**23 27 33.4**	**+0.5**
HAKT				*i* S	**Sg**	**23 27 53.0**	**+4.8**
HAKT	**HAKKARI**	**1.19**	**125**	*i* P	**Pg**	**23 27 33.4**	**+0.5**
CUKT	**Cukurca**	**1.34**	**138**	*e*PN	**Pn**	**23 27 35.0**	**-0.6**
CUKT				*e*SN	**Sn**	**23 27 53.2**	**-0.6**
CUKT	**Cukurca**	**1.34**	**138**	*e*Pn	**Pn**	**23 27 35.0**	**-0.6**
CUKT				*e*Sn	**Sn**	**23 27 53.2**	**-0.6**
AGRB	**Hanur-Agry**	**1.39**	**16**	*e*PN	**Pn**	**23 27 36.9**	**+0.6**
AGRB	**Hanur-Agry**	**1.39**	**16**	*e*Pn	**Pn**	**23 27 36.9**	**+0.6**
CLDR	**Caldiran**	**1.44**	**51**	*e*PN	**Pn**	**23 27 37.0**	**+0.1**
CLDR	**Caldiran**	**1.44**	**51**	*e*Pn	**Pn**	**23 27 37.0**	**+0.1**
MARD	**Mardin**	**1.64**	**236**	*i* P	**Pn**	**23 27 38.2**	**-1.6**
MARD				*i* S	**Sn**	**23 28 00.5**	**-0.9**
BINT	**Bingol**	**1.69**	**293**	*e*PN	**Pn**	**23 27 41.3**	**+0.8**
BINT	**Bingol**	**1.69**	**293**	*e*Pn	**Pn**	**23 27 41.3**	**+0.9**
EZM	**Erzurum**	**1.87**	**333**	*e*PN	**Pn**	**23 27 44.6**	**+1.7**
SVRC	**Sivrice-ELAZID**	**2.50**	**274**	*e*PN	**Pn**	**23 27 51.6**	**-0.1**
SVRC	**Sivrice-ELAZID**	**2.50**	**274**	*e*Pn	**Pn**	**23 27 51.6**	**-0.1**
PTK	**Pertek**	**2.51**	**286**	*e*PN	**Pn**	**23 27 52.5**	**+0.8**
PTK	**Pertek**	**2.51**	**286**	*e*Pn	**Pn**	**23 27 52.5**	**+0.8**

*DDA **08** 23:34:42.0,38°.33N×42°.43E,h7km±3km,Md3.0*
*ISCJB **08** 23:34:43.2±1.0,38°.26N±0°.05×42°.45E±0°.04,h4km±9km, Error ellipse: s-maj=7.8km s-min=5.0km az=179.7*
*CSEM **08** 23:34:43.0±0.3,38°.23N×42°.45E,h2km,MD2.9,Error ellipse: s-maj=9.2km s-min=5.5km az=23.0*
*ISK **08** 23:34:43.4,38°.19N×42°.49E,h12km,MD2.9*

ISC 08 23:34:43.8±0.6,38°.27N±0°.04×42°.46E±0°.04,h8km±6km, n21,σ0s84/29,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TATV	**Tatvan**	**0.29**	**327**	*i* P	**Pg**	**23 34 48.0**	**-1.5**
TATV				*i* S	**Sg**	**23 34 52.2**	**-1.0**
TATV	**Tatvan**	**0.29**	**327**	*i* P	**Pg**	**23 34 48.0**	**-1.4**
TATV				*i* S	**Sg**	**23 34 52.2**	**-1.1**
VANT	**Van**	**0.65**	**76**	*e*PG	**Pg**	**23 34 56.5**	**+0.3**
VANB	**Van**	**0.80**	**65**	*e*PG	**Pg**	**23 34 59.6**	**+0.5**
VANB	**Van**	**0.80**	**65**	*e*Pg	**Pg**	**23 34 59.6**	**+0.5**
BEST	**Besiri**	**1.01**	**249**	*i* P	**Pg**	**23 35 03.4**	**+0.1**
BEST				*i* S	**Sg**	**23 35 17.0**	**+0.6**
HAKT	**HAKKARI**	**1.21**	**125**	*i* P	**Pg**	**23 35 06.3**	**-0.6**
HAKT				*i* S	**Sg**	**23 35 23.9**	**+1.2**
HAKT	**HAKKARI**	**1.21**	**125**	*i* P	**Pg**	**23 35 06.3**	**-0.7**
HAKT				*i* S	**Sg**	**23 35 23.9**	**+1.2**
CUKT	**Cukurca**	**1.36**	**138**	*e*PN	**Pn**	**23 35 07.9**	**-1.1**
CUKT				*e*SN	**Sn**	**23 35 25.8**	**-1.4**
CUKT	**Cukurca**	**1.36**	**138**	*e*Pn	**Pn**	**23 35 07.9**	**-1.1**
CUKT				*e*Sn	**Sn**	**23 35 25.8**	**-1.4**
AGRB	**Hanur-Agry**	**1.37**	**17**	*e*PN	**Pn**	**23 35 09.9**	**+0.8**
AGRB	**Hanur-Agry**	**1.37**	**17**	*e*Pn	**Pn**	**23 35 09.9**	**+0.8**
CLDR	**Caldiran**	**1.43**	**52**	*e*PN	**Pn**	**23 35 10.4**	**+0.4**
CLDR	**Caldiran**	**1.43**	**52**	*e*Pn	**Pn**	**23 35 10.4**	**+0.4**
MARD	**Mardin**	**1.64**	**235**	*i* P	**Pn**	**23 35 12.6**	**-0.2**
MARD				*i* S	**Sn**	**23 35 33.6**	**-0.5**
BINT	**Bingol**	**1.66**	**292**	*e*PN	**Pn**	**23 35 13.9**	**+0.8**
BINT	**Bingol**	**1.66**	**292**	*e*Pn	**Pn**	**23 35 13.9**	**+0.8**
SVRC	**Sivrice-ELAZID**	**2.49**	**274**	*e*PN	**Pn**	**23 35 24.9**	**+0.5**
SVRC	**Sivrice-ELAZID**	**2.49**	**274**	*e*Pn	**Pn**	**23 35 24.9**	**+0.4**
PTK	**Pertek**	**2.49**	**285**	*e*PN	**Pn**	**23 35 25.6**	**+1.1**
PTK	**Pertek**	**2.49**	**285**	*e*Pn	**Pn**	**23 35 25.6**	**+1.1**

*ISCJB **08** 23:56:55.6±0.4,39°.98N±0°.05×76°.00E±0°.10,h10km, mb3.8/8,Error ellipse: s-maj=12.3km s-min=4.1km az=150.8*
*IDC **08** 23:56:55.6±1.6,39°.78N×75°.97E,h0km,mb3.7/7, mb1 3.9/11,mb1mx3.7/25,mbtmp3.7/11,ML3.5/4,MS2.8/2, Ms1 2.8/2,ms1mx2.5/24,Error ellipse: s-maj=24.8km s-min=20.2km az=27.0*
*NEIC **08** 23:56:56.0±1.1,39°.58N×75°.98E,h10km,mb4.3/2,Error ellipse: s-maj=17.2km s-min=11.1km az=188.0*
*NNC **08** 23:56:57.7±7.2,39°.92N×75°.83E,h0km,mb4.1,mpv3.8, Error ellipse: s-maj=86.7km s-min=37.5km az=167.0*
*BJI **08** 23:57:00.5,40°.14N×75°.91E,h30km,mb3.6/1,ML3.6/6, Ms3.6/1*

ISC 08 23:56:57.4±0.4,40°.03N±0°.05×76°.05E±0°.10,h10km,n47, σ1s23/56,mb3.8/8,2C-3D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.52**	**187**	Pg	**Pg**	**23 57 19.1**	**+12**
KSH				Sg	**Sg**	**23 57 33.4**	**+19**
KSH				smax			
	comp=N,1μm,0.4s						
KSH				smax			
	comp=E,1μm,0.5s						
KZA	**Kyzart**	**2.13**	**344**	P	**Pg**	**23 57 38.0**	**-0.3**
	SNR=485						
ULHL	**Ulahol**	**2.21**	**4**	P	**Pg**	**23 57 40.1**	**+0.2**
	SNR=392						
UCH	**Uchtor**	**2.48**	**333**	P	**Pg**	**23 57 42.8**	**-2.1**
	SNR=593						
UCH	**Uchtor**	**2.48**	**333**	*e*Pn	**Pg**	**23 57 42.4**	**-2.6**
UCH				*e*Sn	**Sg**	**23 58 15.9**	**-1.2**
KBK	**Karagaybulak**	**2.75**	**343**	P	**Pg**	**23 57 47.6**	**-2.5**
	SNR=72						
AML	**Almayashu**	**2.75**	**320**	P	**Pg**	**23 57 46.7**	**-3.4**
	SNR=76						
AML	**Almayashu**	**2.75**	**320**	*e*Pn	**Pg**	**23 57 45.8**	**-4.3**
AML				*e*Sn	**Sg**	**23 58 22.6**	**-3.2**
AAK	**Ala-Archa**	**2.85**	**336**	P	**Pg**	**23 57 48.5**	**-3.5**
	SNR=122						
AAK	**Ala-Archa**	**2.85**	**336**	Pn	**Pn**	**23 57 48.8**	**+5.9**
AAK				Pg	**Pg**	**23 57 51.5**	**-0.5**
AAK				Lg		23 58 26.7	
AAK	**Ala-Archa**	**2.85**	**336**	Pn	**Pn**	**23 57 48.8**	**+5.9**
	comp=E,65nm,0.3s,baz=141,slow=7.7,SNR=55						
AAK				Pg	**Pg**	**23 57 51.5**	**-0.5**
	comp=E,65nm,0.3s,baz=154,slow=8.3,SNR=125						
AAK				Lg		23 58 26.7	
	comp=E,70nm,0.3s,baz=34,slow=22,SNR=19						
CHMS	**Chumysh**	**3.12**	**342**	P	**Pg**	**23 57 52.2**	**-4.9**
	SNR=62						
EKS2	**Erkin-Say**	**3.13**	**328**	P	**Pg**	**23 57 52.4**	**-5.1**
	SNR=101						
EKS2	**Erkin-Say**	**3.13**	**328**	*e*Pn	**Pg**	**23 57 52.0**	**-5.4**
EKS2				*e*Sn	**Sg**	**23 58 31.5**	**-6.6**
KNDC	**Almaty**	**3.25**	**12**	↑P	**Pg**	**23 57 55.1**	**-4.7**
	comp=E,92nm,0.6s						
KNDC				↓Lg		23 58 43.1	
	comp=E,261nm,0.5s						
USP	**Ospenovka**	**3.43**	**341**	P	**Pg**	**23 57 56.4**	**-6.8**
	SNR=44						
KK31	**Karatay Array**	**5.16**	**308**	Pn	**Pn**	**23 58 17.8**	**+3.1**
	comp=E,1.7nm,0.6s,baz=135,slow=13,SNR=22						
KK31				↓Pg	**Pg**	**23 58 30.9**	**-5.4**
	comp=E,7.4nm,0.5s,baz=129,slow=17,SNR=29						
KK31				↑Lg		23 59 37.0	
	comp=E,9.8nm,0.5s,baz=123,slow=28,SNR=6.1						
MK31	**Makanchi Array**	**8.14**	**32**	↓Pn	**Pn**	**23 59 01.2**	**+5.6**
	comp=E,1.0nm,0.4s,baz=202,slow=12,SNR=29						
MK31	**Makanchi Array**	**8.14**	**32**	*e*Pn	**Pn**	**23 59 00.7**	**+5.2**
MKAR	**Makanchi Array**	**8.14**	**32**	Pn	**Pn**	**23 59 01.1**	**+5.6**
	comp=E,0.5nm,0.3s,baz=204,slow=15,SNR=25						
MKAR				Lg		00 01 15.9	
	comp=E,0.5nm,0.3s,baz=213,slow=30,SNR=3.5						
KURK	**Kurchatov**	**10.83**	**9**	*e*Pn	**Pn**	**23 59 37.3**	**+4.8**
BVAR	**Borovoye Array**	**13.56**	**345**	Pn	**Pn**	**00 00 09.9**	**+0.3**
	comp=E,0.2nm,0.3s,baz=157,slow=15,SNR=3.9						
BVAR				Sn	**Sn**	**00 02 49.1**	**+8.8**
	baz=148,slow=22,SNR=2.7						
BVAR				Lg		00 04 00.9	
	comp=E,0.2nm,0.3s,baz=161,slow=28,SNR=3.5						
BRVK	**Borovoye**	**13.61**	**345**	*e*Pn	**Pn**	**00 00 16.9**	**+6.5**
	comp=E,5.4nm,0.9s						
KOLN	**Koldanda**	**13.74**	**151**	*e*P	**Pn**	**00 00 12.1**	**-0.1**
	comp=E,7.0nm,0.3s						
GKN	**Gorkha**	**13.94**	**147**	*e*P	**Pn**	**00 00 15.0**	**0.0**
	comp=E,14nm,0.3s						
KKN	**Kakani**	**14.40**	**145**	*e*P	**Pn**	**00 00 21.6**	**+0.3**
DMN	**Daman**	**14.49**	**146**	*e*P	**Pn**	**00 00 22.1**	**-0.4**
	comp=E,12nm,0.4s						
GUN	**Gumba**	**14.57**	**143**	*e*P	**Pn**	**00 00 23.3**	**-0.3**
	comp=E,14nm,0.4s						
PKI	**Pulchoki**	**14.65**	**145**	*e*P	**Pn**	**00 00 24.6**	**-0.1**
ABKAR	**Akbulak array**	**14.69**	**314**	*e*Pn	**Pn**	**00 00 25.4**	**+0.3**
	comp=E,1.2nm,0.6s						
JIRN	**Jiri**	**14.93**	**143**	*e*P	**Pn**	**00 00 28.5**	**0.0**
	comp=E,31nm,0.5s						
ZAA0	**Zalesovo Array**	**15.13**	**20**	*e*Pn	**Pn**	**00 00 35.2**	**+4.2**
ZALV	**Zalesovo Beam**	**15.13**	**20**	Pn	**Pn**	**00 00 33.6**	**+2.5**
	comp=E,0.2nm,0.3s,baz=222,slow=12,SNR=5.2						
ZALV				Sn	**Sn**	**00 03 27.9**	**+9.3**
	comp=E,0.1nm,0.3s,baz=217,slow=22,SNR=2.4						
ZALV				LR	LR	00 06 48.9	
	comp=E,23nm,21.8s,baz=269,slow=38						
RAMN	**Ramite**	**15.72**	**143**	*e*P	**Pn**	**00 00 37.4**	**-1.5**
	comp=E,18nm,0.6s						
TAPN	**Taplejung**	**15.92**	**139**	*e*P	**Pn**	**00 00 39.9**	**-1.7**
	comp=E,11nm,0.6s						
ODAN	**Odare**	**16.17**	**141**	*e*P	**Pn**	**00 00 42.9**	**-1.9**
	comp=E,10nm,0.5s						
AKTK	**Aktyubinsk**	**16.37**	**315**	Pn	**Pn**	**00 00 48.3**	**+1.1**
AKTO	**Aktyubinsk**	**16.37**	**315**	Pn	**Pn**	**00 00 48.3**	**+1.1**
	comp=E,0.2nm,0.3s,baz=114,slow=22,SNR=3.6						
ARU	**Arti**	**20.02**	**331**	*e*P	**P**	**00 01 31.6**	**+1.4**
	comp=E,2.8nm,0.6s						
SONM	**Songino Array**	**23.09**	**60**	P	**P**	**00 02 04.2**	**+1.0**
	comp=E,0.2nm,0.4s,mb2.9,baz=246,slow=10,SNR=2.3						
BRTR	**Keskin Array B**	**32.33**	**283**	P	**P**	**00 03 28.2**	**+1.6**
	comp=E,0.5nm,0.6s,mb3.5,baz=95,slow=7.4,SNR=4.1						
FINES	**FINESS Array B**	**36.95**	**322**	P	**P**	**00 04 07.4**	**+1.1**
	comp=E,2.8nm,0.9s,mb4.1,baz=107,slow=8.9,SNR=4.6						
FINES				LR	LR	00 20 56.0	
	comp=E,29nm,21.4s,baz=81,slow=39						
ARCES	**ARCESS Array B**	**39.52**	**335**	P	**P**	**00 04 28.7**	**+0.8**
	comp=E,2.6nm,1.0s,mb3.9,baz=90,slow=8.5,SNR=5.4						
NACB	**Ninganchiao**	**41.23**	**98**	*e*P	**P**	**00 04 42.0**	**-0.6**
	comp=E,13nm,0.7s,mb4.7						
NOA	**NORSAR Array B**	**44.06**	**321**	P	**P**	**00 05 05.8**	**+0.7**
	comp=E,1.5nm,1.0s,mb3.7,baz=106,slow=5.8,SNR=3.0						
ILAR	**Eielson Array**	**70.25**	**18**	P	**P**	**00 08 10.9**	**+0.7**
	comp=E,0.4nm,0.8s,mb3.4,baz=320,slow=5.5,SNR=6.0						
YKA	**Yellowknife Ar**	**77.46**	**5**	P	**P**	**00 08 53.6**	**+1.1**
	comp=E,1.0nm,0.6s,mb3.9,baz=347,slow=5.8,SNR=8.6						

*IDC **09** 00:01:53.4±0.5,8°.13S×117°.66E,h0km,mb4.7/13, mb1 4.7/14,mb1mx4.6/21,mbtmp4.7/14,ML4.4/1,MS3.7/4, Ms1 3.8/4,ms1mx3.4/19,Error ellipse: s-maj=24.6km s-min=10.9km az=59.0*
*ISCJB **09** 00:01:55.1±1.2,8°.16S±0°.04×117°.75E±0°.04,h20km±8km, mb4.8/48,MS4.0/11,Error ellipse: s-maj=7.7km s-min=4.6km az=36.1*
*DJA **09** 00:01:57,8°.10S×117°.80E,h18km,mb4.9/11*
*NEIC **09** 00:01:59.0±0.9,8°.17S×117°.72E,h39km±9km,mb4.8/27, Error ellipse: s-maj=10.6km s-min=5.4km az=59.0*
NEIC Felt [II] at Sumbawa Besar.
*BJI **09** 00:01:58.4,8°.20S×117°.70E,h38km,mB4.9/22,mb4.9/42, Ms4.6/22,Ms7 4.3/25*

ISC 09 00:01:59.2±0.5,8°.22S±0°.04×117°.73E±0°.03,h36km±5km, h43km±3.5km:pP-P,n121,σ1s18/118,mb4.8/48,MS4.0/11, 2C-1D,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**2.11**	**266**	P	**Pn**	**00 02 29.8**	**-2.2**
IGBI	**Denpasar**	**2.63**	**257**	P	**Pn**	**00 02 38.9**	**-0.2**
IGBI				S	**Sn**	**00 03 14.1**	**+4.3**
WSI	**Waingapu**	**2.92**	**120**	P	**Pn**	**00 02 45.2**	**+2.1**
WSI				S	**Sn**	**00 03 18.2**	**+1.2**
MMRI	**Maumere**	**4.48**	**96**	P	**Pn**	**00 03 04.5**	**-0.1**
MMRI				S	**Sn**	**00 03 55.9**	**+0.4**
UGM	**Wanagama**	**7.14**	**272**	P	**Pn**	**00 03 42.3**	**+1.1**
	0.9nm145nm,1.2s						
SMRI	**Semarang**	**7.32**	**279**	P	**Pn**	**00 03 43.4**	**-0.2**
	0.5nm178nm,0.8s						
PCI	**Palu**	**7.56**	**16**	P	**Pn**	**00 03 43.4**	**-3.6**
	0.3nm67nm,0.8s						
BJII	**Banjamegara**	**8.00**	**276**	P	**Pn**	**00 03 53.3**	**+0.3**
	46nm,1.1s						
KSM	**Kuching**	**12.14**	**322**	*e*Pn	**Pn**	**00 04 56.4**	**+6.6**
FITZ	**Fitzroy Crossi**	**12.48**	**143**	*e*P	**Pn**	**00 04 54.0**	**-0.4**
	31nm,0.4s						
FITZ				*e*S	**Sn**	**00 07 05.9**	**-6.3**
FITZ	**Fitzroy Crossi**	**12.48**	**143**	*e*Pn	**Pn**	**00 04 54.0**	**-0.4**
	20nm,0.6s						
FITZ	**Fitzroy Crossi**	**12.48**	**143**	Pn	**Pn**	**00 04 53.6**	**-0.7**
	1.5nm,0.3s,baz=321,slow=4.9,SNR=26						
FITZ				Sn	**Sn**	**00 07 06.9**	**-5.3**
	4.4nm,0.3s,baz=200,slow=13,SNR=8.6						
FITZ				LR	LR	00 10 34.8	
	comp=Z,366nm,19.4s,baz=328,slow=41						
FITZ	**Fitzroy Crossi**	**12.48**	**143**	P	**Sn**	**00 07 12.1**	**-0.1**
	90nm,1.2s						
FITZ	**Fitzroy Crossi**	**12.48**	**143**	P	**Pn**	**00 04 53.7**	**-0.7**
	68nm,0.8s						
MBWA	**Marble Bar**	**13.01**	**172**	*e*Pn	**Pn**	**00 05 01.5**	**-0.2**
	23nm,0.5s						
MBWA				*e*Sn	**Sn**	**00 07 12.9**	**-12**
MBWA	**Marble Bar**	**13.01**	**172**	P	**Sn**	**00 07 17.5**	**-7.7**
	117nm,1.0s						
KNA	**Kununurra**	**13.13**	**126**	P	**Pn**	**00 05 03.3**	**0.0**
	1μm174nm,0.9s						
KKM	**Kota Kinabalu**	**14.24**	**354**	*e*Pn	**Pn**	**00 05 17.4**	**-1.1**
KAKA	**Kakadu**	**15.14**	**108**	*e*P	**Pn**	**00 05 29.3**	**-1.2**
	26nm,0.5s						
KAKA	**Kakadu**	**15.14**	**108**	*e*Pn	**Pn**	**00 05 29.5**	**-1.0**
	89nm,0.6s						
KAKA				*e*Sn	**Sn**	**00 08 12.3**	**-4.8**
KAKA	**Kakadu**	**15.14**	**108**	P	**Pn**	**00 05 29.3**	**-1.2**
	721nm85nm,0.6s						
MNAI	**Manna**	**15.18**	**284**	P	**Pn**	**00 05 33.3**	**+2.3**
	279nm,1.2s						
DAV	**Davao City (W)**	**17.08**	**27**	LR	LR	00 13 02.0	
	comp=Z,264nm,19.3s,baz=191,slow=39						
PPI	**Padang Panjang**	**18.91**	**293**	P	**Pn**	**00 06 20.0**	**+2.2**
WRAB	**Tennant Creek**	**19.86**	**128**	*e*P	**Pn**	**00 06 27.7

STKA	**Stephens Creek**	**32.35**	**140**	P	**P**	**00 08 26.8**	**+1.6**
	comp=Z,6.8nm,0.6s,mb4.7,baz=316,slow=8.6,SNR=23						
STKA				LR	LR	00 24 12.3	
	comp=Z,143nm,20.9s,MS3.6,baz=207,slow=41						
CHTO	**Chiang Mai**	**32.63**	**326**	*eP*	**P**	**00 08 28.2**	**+0.5**
	comp=Z,9.4nm,0.8s,mb4.8						
CHTO	**Chiang Mai**	**32.63**	**326**	P	**P**	**00 08 31.0**	**+3.2**
	comp=Z,17nm,1.2s,mb4.8						
GYA	**Guiyang**	**36.10**	**343**	*eP*	**P**	**00 09 00.8**	**+3.0**
GYA				pP	pP	00 09 10.6	+2.4
GYA				sP	sP	00 09 16.2	+3.6
GYA				PP	PP	00 10 23.6	+3.2
GYA				PcP	PcP	00 11 24.8	+1.5
GYA				S	**S**	**00 14 36.4**	**+1.5**
GYA				sS	sS	00 14 55.9	+3.7
GYA				ScP	ScP	00 15 07.2	+0.2
GYA				ScS	ScS	00 19 10.5	-2.3
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
GYA				pmax	pmax		
	comp=Z,120nm,4.3s						
GYA				LR	LR		
	comp=N,540nm,16.6s,MS4.5						
GYA				LR	LR		
	comp=E,400nm,17.7s,MS4.5						
GYA				LR	LR		
	comp=Z,580nm,15.4s,MS4.5						
KMI	**Kunming**	**36.21**	**337**	P	**P**	**00 09 02.0**	**+3.3**
KMI				pP	pP	00 09 12.0	+2.9
KMI				sP	sP	00 09 16.9	+3.4
KMI				PP	PP	00 10 25.6	+4.0
KMI				S	**S**	**00 14 39.7**	**+3.1**
KMI				sS	sS	00 14 58.0	+4.1
KMI				SS	SS	00 17 05.2	-11
KMI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
KMI				pmax	pmax		
	comp=Z,40nm,3.2s						
KMI				LR	LR		
	comp=N,130nm,16.8s,MS3.8						
KMI				LR	LR		
	comp=E,97nm,20.7s,MS3.8						
KMI				LR	LR		
	comp=Z,120nm,12.0s						
ARMA	**Armidale**	**38.62**	**129**	*eP*	**P**	**00 09 23.8**	**+4.6**
NJ2	**Nanjing**	**40.05**	**1**	*eP*	**P**	**00 09 32.3**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
CD2	**Chengdu**	**41.14**	**342**	P	**P**	**00 09 40.5**	**+0.5**
CD2				pP	pP	00 09 52.8	+2.2
CD2				sP	sP	00 09 58.2	+3.3
CD2				PP	PP	00 11 19.5	+4.0
CD2				S	**S**	**00 15 51.5**	**+0.6**
CD2				sS	sS	00 16 11.5	+3.2
CD2				SS	SS	00 18 51.2	-3.5
CD2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.8						
CD2				pmax	pmax		
	comp=Z,70nm,4.3s						
CD2				LR	LR		
	comp=Z,270nm,8.0s						
LSA	**Lhasa**	**45.55**	**327**	P	**P**	**00 10 17.0**	**+1.4**
LSA	**Lhasa**	**45.55**	**327**	*eP*	**P**	**00 10 17.1**	**+1.5**
	comp=Z,15nm,0.8s,mb5.0						
LZH	**Lanzhou**	**45.96**	**344**	*eP*	**P**	**00 10 19.8**	**+1.1**
LZH				pP	pP	00 10 35.6	+6.2
LZH				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
LZH				pmax	pmax		
	comp=Z,72nm,4.0s						
LZH				LR	LR		
	comp=N,200nm,13.9s						
LZH				LR	LR		
	comp=Z,190nm,14.6s,MS4.2						
KSRS	**Korea Array**	**46.42**	**11**	P	**P**	**00 10 22.3**	**0.0**
	comp=Z,17nm,1.1s,mb4.9,baz=188,slow=8.5,SNR=35						
BJT	**Baijiatuau**	**48.01**	**358**	*eP*	**P**	**00 10 34.5**	**-0.2**
	comp=Z,8.6nm,0.5s,mb5.0						
BJI	**Beijing**	**48.03**	**358**	P	**P**	**00 10 34.2**	**-0.6**
BJI				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
BJI				pmax	pmax		
	comp=Z,53nm,6.5s						
BJI				LR	LR		
	comp=N,68nm,13.3s,MS4.0						
BJI				LR	LR		
	comp=E,100nm,13.0s,MS4.0						
BJI				LR	LR		
	comp=Z,63nm,18.0s,MS3.6						
MAJO	**Matsushiro**	**48.50**	**22**	*eP*	**P**	**00 10 37.4**	**-1.1**
	comp=Z,5.3nm,0.6s,mb4.8						
HHC	**Hu-ho-hao-te**	**49.15**	**354**	*eP*	**P**	**00 10 45.2**	**+1.8**
HHC				pP	pP	00 10 57.8	+3.7
HHC				sP	sP	00 11 02.8	+4.4
HHC				PP	PP	00 12 39.4	+1.9
HHC				*eS*	**S**	**00 17 46.3**	**0.0**
HHC				sS	sS	00 18 09.2	+5.2
HHC				ScS	ScS	00 20 30.9	-1.8
HHC				SS	SS	00 21 13.3	-4.9
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
HHC				pmax	pmax		
	comp=Z,63nm,4.2s						
HHC				LR	LR		
	comp=N,110nm,13.9s,MS4.1						
HHC				LR	LR		
	comp=E,110nm,15.3s,MS4.1						
HHC				LR	LR		
	comp=Z,100nm,16.3s,MS3.9						
GTA	**Gaotai**	**50.21**	**342**	⇑P	**P**	**00 10 52.8**	**+1.2**
GTA				PP	PP	00 12 51.7	+4.5
GTA				S	**S**	**00 18 01.2**	**0.0**
GTA				SS	SS	00 21 34.1	-1.2
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
GTA				pmax	pmax		
	comp=Z,97nm,5.4s						
GTA				LR	LR		
	comp=N,220nm,13.2s,MS4.5						
GTA				LR	LR		
	comp=E,170nm,11.4s,MS4.5						
GTA				LR	LR		
	comp=Z,230nm,10.8s,MS4.5						
CN2	**Changchun**	**52.24**	**7**	*eP*	**P**	**00 11 07.3**	**+0.6**
CN2				*ep*P	pP	00 11 18.5	+1.0
CN2				*eS*	**S**	**00 18 27.3**	**-1.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,8.0s						
CN2				LR	LR		
	comp=N,300nm,16.0s,MS4.6						
CN2				LR	LR		
	comp=E,300nm,16.0s,MS4.6						
CN2				LR	LR		
	comp=Z,200nm,18.0s,MS4.2						
MDJ	**Mudanjiang**	**53.66**	**10**	P	**P**	**00 11 16.8**	**-0.4**
MDJ				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.3						
MDJ				pmax	pmax		
	comp=Z,37nm,7.3s						
MDJ	**Mudanjiang**	**53.66**	**10**	*eP*	**P**	**00 11 16.3**	**-0.8**
	comp=Z,20nm,0.8s,mb5.1						
ULN	**Ulaanbaatar**	**56.63**	**351**	*eP*	**P**	**00 11 38.9**	**+0.4**
	comp=Z,15nm,0.9s,mb5.0						
SONM	**Songino Array**	**56.70**	**351**	P	**P**	**00 11 39.3**	**+0.3**
	comp=Z,14nm,0.7s,mb5.1,baz=171,slow=8.1,SNR=66						
WMQ	**Urumqi**	**58.51**	**335**	*eP*	**P**	**00 11 52.8**	**+1.0**
WMQ				pP	pP	00 12 04.1	+1.3
WMQ				sP	sP	00 12 08.8	+1.8
WMQ				PP	PP	00 14 04.2	+2.5
WMQ				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
WMQ				pmax	pmax		
	comp=Z,110nm,4.0s						
WMQ				LR	LR		
	comp=N,260nm,22.5s,MS4.5						
WMQ				LR	LR		
	comp=E,340nm,22.6s,MS4.5						
WMQ				LR	LR		
	comp=Z,170nm,16.8s						
TLY	**Talaya**	**60.88**	**350**	*eP*	**P**	**00 12 08.4**	**+0.5**
	comp=Z,19nm,0.9s,mb5.2						
KSH	**Kashi**	**61.23**	**324**	*eP*	**P**	**00 12 16.2**	**+5.6**
KSH				*ep*P	pP	00 12 22.7	+1.1
KSH				*es*P	sP	00 12 34.1	+8.2
KSH				*e*PcP	PcP	00 12 58.3	+5.3
KSH				*e*PP	PP	00 14 33.1	+7.2
KSH				*e*ScP	ScP	00 16 54.3	+2.3
KSH				*e*PcS	PcS	00 16 59.9	+4.1
KSH				*eS*	**S**	**00 20 30.3**	**+2.2**
KSH				*es*S	sS	00 20 52.6	+6.3
KSH				*e*ScS	ScS	00 21 59.5	+0.2
KSH				*e*SS	SS	00 24 32.7	+3.6
KSH				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.5						
KSH				pmax	pmax		
	comp=Z,53nm,2.1s,mb5.3						
KSH				LR	LR		
	comp=N,100nm,4.8s						
KSH				LR	LR		
	comp=E,110nm,6.4s						
KSH				LR	LR		
	comp=Z,81nm,5.1s						
KSH	**Kashi**	**61.23**	**324**	*eP*	**P**	**00 12 09.2**	**-1.4**
KSH				*ep*P	pP	00 12 22.3	+0.7
KSH				*es*P	sP	00 12 27.1	+1.2
KSH				*e*PcP	PcP	00 12 53.3	+0.3
KSH				*e*PP	PP	00 14 25.3	-0.6
KSH				*e*ScP	ScP	00 16 49.1	-2.9
KSH				PcS	PcS	00 16 54.1	-1.7
KSH				*eS*	**S**	**00 20 20.5**	**-7.6**
KSH				*es*S	sS	00 20 43.2	-3.1
KSH				*e*ScS	ScS	00 21 52.4	-6.9
KSH				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.1						
KSH				pmax	pmax		
	comp=Z,60nm,3.5s						
KSH				LR	LR		
	comp=N,37nm,3.6s						
KSH				LR	LR		
	comp=E,68nm,4.3s						
KSH				LR	LR		
	comp=Z,40nm,4.4s						
MK31	**Makanchi Array**	**63.19**	**333**	*eP*	**P**	**00 12 23.4**	**-0.2**
MKAR	**Makanchi Array**	**63.19**	**333**	P	**P**	**00 12 23.0**	**-0.6**
	comp=Z,13nm,0.7s,mb5.2,baz=144,slow=7.5,SNR=120						
KZA	**Kyzart**	**63.34**	**326**	P	**P**	**00 12 26.0**	**+1.4**
	SNR=12						
UCH	**Uchtor**	**63.85**	**325**	P	**P**	**00 12 29.2**	**+1.1**
	SNR=5.6						
UCH	**Uchtor**	**63.85**	**325**	*eP*	**P**	**00 12 28.8**	**+0.7**
	comp=Z,3.8nm,0.8s,mb4.5						
AAK	**Ala-Archa**	**64.12**	**326**	*eP*	**P**	**00 12 30.0**	**+0.1**
	comp=Z,11nm,0.8s,mb4.9						
AAK	**Ala-Archa**	**64.12**	**326**	P	**P**	**00 12 30.6**	**+0.8**
AML	**Almayashu**	**64.25**	**325**	P	**P**	**00 12 30.4**	**-0.2**
	SNR=15						
AML	**Almayashu**	**64.25**	**325**	*eP*	**P**	**00 12 30.4**	**-0.3**
	comp=Z,16nm,1.0s,mb5.0						
USP	**Ospenovka**	**64.54**	**326**	P	**P**	**00 12 32.8**	**+0.2**
	SNR=5.1						
EKS2	**Erkin-Say**	**64.54**	**325**	P	**P**	**00 12 32.8**	**+0.2**
	SNR=9.5						
EKS2	**Erkin-Say**	**64.54**	**325**	*eP*	**P**	**00 12 32.4**	**-0.2**
	comp=Z,11nm,1.0s,mb4.8						
KURK	**Kurchatov**	**67.75**	**334**	*eP*	**P**	**00 12 52.4**	**-0.6**
	comp=Z,9.5nm,1.2s,mb4.7						
ZAA0	**Zalesovo Array**	**67.87**	**340**	*eP*	**P**	**00 12 51.7**	**-2.0**
ZALV	**Zalesovo Beam**	**67.87**	**340**	P	**P**	**00 12 52.1**	**-1.6**
	comp=Z,11nm,0.8s,mb4.9,baz=139,slow=4.4,SNR=42						
MAW	**Mawson**	**69.55**	**200**	*eP*	**P**	**00 13 03.2**	**-0.7**
	comp=Z,1.1nm,0.9s,mb3.8						
MAW	**Mawson**	**69.55**	**200**	P	**P**	**00 13 05.6**	**+1.6**
	comp=Z,3.3nm,0.7s,mb4.4,baz=78,slow=9.1,SNR=14						
BVAR	**Borovoye Array**	**73.02**	**332**	P	**P**	**00 13 23.7**	**-1.5**
	comp=Z,3.6nm,0.7s,mb4.4,baz=139,slow=9.2,SNR=6.7						
BRVK	**Borovoye**	**73.09**	**332**	*eP*	**P**	**00 13 25.3**	**-0.2**
	comp=Z,7.0nm,1.0s,mb4.5						
ABKAR	**Akbulak array**	**76.20**	**325**	*eP*	**P**	**00 13 41.7**	**-2.0**
	comp=Z,8.5nm,0.7s,mb4.8						
AKTK	**Aktyubinsk**	**77.87**	**326**	P	**P**	**00 13 51.4**	**-1.6**
AKTO	**Aktyubinsk**	**77.87**	**326**	P	**P**	**00 13 51.4**	**-1.6**
	comp=Z,5.7nm,0.7s,mb4.6,baz=106,slow=5.3,SNR=19						
SYO	**Syowa Base**	**78.13**	**201**⇑	*eP*	**P**	**00 13 54.0**	**-0.2**
SYO	**Syowa Base**	**78.13**	**201**⇓	*e*PcP	PcP	00 14 01.4	-2.3
TIXI	**Tiksi**	**80.04**	**4**	*eP*	**P**	**00 14 02.6**	**-1.9**
	comp=Z,8.9nm,0.7s,mb4.8						
KMBO	**Kilima Mbogo**	**80.42**	**270**	*eP*	**P**	**00 14 07.6**	**-0.2**
	comp=Z,4.8nm,1.1s,mb4.3						
KMBO	**Kilima Mbogo**	**80.42**	**270**	P	**P**	**00 14 06.9**	**-1.0**
	comp=Z,2.6nm,0.8s,mb4.2,baz=7.5,slow=23,SNR=6.3						
ARU	**Arti**	**80.57**	**331**	*eP*	**P**	**00 14 05.3**	**-2.4**
	comp=Z,1.6nm,0.7s,mb4.1						
MALT	**Malatya**	**86.74**	**309**	*eP*	**P**	**00 14 37.0**	**-2.7**
	comp=Z,1.8nm,0.7s,mb4.4						
LSZ	**Lusaka**	**87.43**	**255**	*eP*	**P**	**00 14 43.4**	**-0.2**
	comp=Z,35nm,1.9s,mb5.3						
BOSA	**Boshof**	**88.28**	**241**	P	**P**	**00 14 46.9**	**-0.5**
	comp=Z,2.4nm,0.8s,mb4.5,baz=107,slow=11,SNR=2.5						
LBTB	**Lobatse**	**88.50**	**245**	*eP*	**P**	**00 14 48.4**	**-0.1**
	comp=Z,3.9nm,0.8s,mb4.7						
CLL	**Collm**	**105.57**	**321**	*e*Pdif	Pdif	00 16 05.0	-0.3
	comp=Z,11nm,1.6s						
TORD	**Torodi Ar. Bea**	**117.09**	**281**	PKP	PKPdf	00 20 39.5	-1.9
TORD	**Torodi Ar. Bea**	**117.09**	**281**	PKP	PKPdf	00 20 39.5	-1.9
	comp=Z,0.8nm,0.8s,baz=13,slow=2.1,SNR=7.6						
NVAR	**Mina Array Bea**	**121.48**	**50**	PKP	PKPdf	00 20 48.6	-0.6
	comp=Z,0.9nm,0.6s,baz=270,slow=2.3,SNR=3.3						
HLID	**Hailey**	**122.62**	**43**	*e*PKPdf	PKPdf	00 20 51.0	-0.2
SNOW	**Snow King Moun**	**125.10**	**42**	*e*PKPdf	PKPdf	00 20 56.9	+0.9
PLCA	**Paso Flores**	**130.70**	**172**	*e*PKPdf	PKPdf	00 21 06.9	+0.1
MNTX	**Cornudas Mount**	**133.65**	**54**	*e*PKPdf	PKPdf	00 21 13.0	+0.4
TRQA	**Tornquist**	**133.97**	**180**	*e*PKPdf	PKPdf	00 21 13.5	+0.5
TXAR	**Lajitas Array**	**135.85**	**56**	PKP	PKPdf	00 21 17.2	+0.4
TXAR	**Lajitas Array**	**135.85**	**56**	PKP	PKPdf	00 21 17.2	+0.4
	comp=Z,0.2nm,0.7s,baz=201,slow=1.7,SNR=5.4						
WVT	**Waverly**	**143.73**	**36**	*e*PKPdf	PKPdf	00 21 26.3	-4.6
MCWV	**Mont Chateau**	**144.96**	**24**	*e*PKPdf	PKPdf	00 21 31.0	-1.9
CPUP	**Villa Florida**	**145.33**	**188**	*e*PKPbc	PKPbc	00 21 33.5	-0.3
CPUP	**Villa Florida**	**145.33**	**188**	PKPbc	PKPbc	00 21 33.3	-0.4
	comp=Z,1.9nm,0.5s,baz=149,slow=1.9,SNR=10						
SWET	**Sewanee**	**145.47**	**35**	*e*PKPbc	PKPbc	00 21 31.3	-2.6
LRAL	**Lakeview Retre**	**146.33**	**39**	*e*PKPbc	PKPbc	00 21 34.3	-2.3
LPAZ	**La Paz**	**154.97**	**167**	*e*PKPbc	PKPbc	00 21 59.2	+1.2
LPAZ	**La Paz**	**154.97**	**167**	PKPbc	PKPbc	00 21 58.7	+0.7
	comp=Z,0.8nm,0.6s,baz=212,slow=1.8,SNR=4.2						

*NEIC **09** 00:08:37.3,29.02S×71.23W,h20km, ML3.9(GUC), After GUC.*

GUC 09 00:08:37.3±0.6, 29.02S×71.23W, h20km±3km, MD4.0, ML3.9, 3C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**0.46**	**89**	*e*Pn	Pb	00 08 44.2	-2.6
LCO				*e*Sn	Sb	00 08 49.2	-4.0
TLL	**Tololo Astrono**	**1.20**	**162**	*i*P	Pn	00 08 59.0	0.0
TLL				*i* S	Sb	00 09 15.0	+0.5
TLL	**Tololo Astrono**	**1.20**	**162**	*i*P	Pn	00 08 59.0	0.0
TLL				*i* S	Sb	00 09 15.0	+0.5
TLL				AML	AML	00 09 18.5	
	comp=E,3μm,0.6s						
OVCH	**Ovalle**	**1.58**	**179**⇑	*i*P	Pn	00 09 04.1	0.0
OVCH				*i* S	Sn	00 09 24.3	+0.3
OVCH	**Ovalle**	**1.58**	**179**⇑	*i*P	Pn	00 09 04.1	0.0
OVCH				*i* S	Sn	00 09 24.3	+0.3
OVCH				AML	AML	00 09 32.0	
	comp=N,3μm,0.6s						
CHNG	**Los Chungos**	**2.86**	**185**⇑	*i*P	Pn	00 09 21.1	-0.6
CHNG				*i* S	Sn	00 09 56.2	+0.6
CHNG				AML	AML	00 10 07.9	
	comp=E,690nm,0.5s						
ROCH	**El Roble**	**3.94**	**177**	*i* P	Pn	00 09 38.1	+1.4
ROCH				*i* S	Sn	00 10 24.6	+2.4
PEL	**Peldehue**	**4.14**	**174**	*e*P	Pn	00 09 40.5	+1.2
PEL				*e*S	Sn	00 10 28.6	+1.6
FCH	**Farellones**	**4.37**	**170**	*i* P	Pn	00 09 44.4	+2.0
FCH				*i* S	Sn	00 10 35.3	+2.6
CLCH	**Cerro Calan**	**4.40**	**172**	*i* P	Pn	00 09 44.2	+1.3
CLCH				*i* S	Sn	00 10 35.1	+1.6
LMEL	**Las Melosas**	**4.89**	**170**	*e*P	Pn	00 09 51.4	+1.8
LMEL				*i* S	Sn	00 10 46.9	+1.3
LMEL	**Las Melosas**	**4.89**	**170**	*e*P	Pn	00 09 51.4	+1.8
LMEL				*i* S	Sn	00 10 46.9	+1.3

*ISCJB **09** 00:10:12.2±2.0,33.47N±0.07×46.0E±0.1,h13km±14km, Error ellipse: s-maj=18.9km s-min=10.7km az=15.0*
*TEH **09** 00:10:12.3,33.57N×45.73E,h16km*
*KISR **09** 00:10:16.0±0.7,32.86N×45.43E,h6km±999km,ML2.6*

ISC 09 00:10:13.2±2.2, 33.51N±0.07×45.9E±0.1, h15km±14km, n10, σ0.96/15, 1C, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGHG	**Ghaleghazi**	**0.99**	**34**⇑	*e*Pg	**Pg**	**00 10 31.1**	**-1.3**
IGHG				*e*Sg	**Sg**	**00 10 45.2**	**-0.3**
IGHG				*e*		00 10 49.0	
	comp=Z,8μm,0.3s						
BHD	**Baghdad**	**1.28**	**260**	*ex*	x	00 10 55.0	
IVIS	**Veis**	**1.29**	**38**	*e*Pn	**Pn**	**00 10 36.2**	**-0.5**
IVIS				*e*Sg	**Sg**	**00 10 54.2**	**-0.7**
IVIS				*e*		00 10 56.8	
	comp=Z,5μm,0.3s						
IKOM	**Komasi**	**1.50**	**63**	*e*Pn	**Pn**	**00 10 40.3**	**+0.7**
IKOM				*e*Sg	**Sg**	**00 11 02.4**	**+0.7**
IKOM				*e*		00 11 03.2	
	comp=Z,5μm,0.2s						
IRAZ	**Razeghan**	**3.84**	**59**	*e*Pn	**Pn**	**00 11 11.9**	**+0.2**
IRAZ				*e*		00 11 26.8	
	comp=Z,301nm,0.3s						
MIB	**Mutribah**	**3.89**	**161**	*e*P	**Pn**	**00 11 13.9**	**+1.4**
MIB				*e*S	**Sn**	**00 11 57.1**	**-0.9**
MIB				AML	AML	00 12 04.2	
	comp=Z,16nm,0.6s						
NAY	**Al-Naaiem**	**4.40**	**164**	*e*P	**Pn**	**00 11 20.1**	**+0.6**
NAY				*e*S	**Sn**	**00 12 08.8**	**-1.6**
NAY				AML	AML	00 12 10.6	
	comp=Z,3.2nm,0.4s						
IKLH	**Kolahrood**	**4.76**	**91**	*e*Pn	**Pn**	**00 11 25.0**	**+0.6**
IKLH				*e*		00 12 50.5	
	comp=Z,94nm,0.3s						
RDF	**Al-Radifah**	**4.78**	**162**	*e*P	**Pn**	**00 11 26.4**	**+1.7**
RDF				*e*S	**Sn**	**00 12 18.9**	**-1.1**
RDF				AML	AML	00 12 21.4	
	comp=Z,16nm,0.5s						
IZEF	**Zefreh**	**5.43**	**95**	*e*Pn	**Pn**	**00 11 34.2**	**+0.5**
IZEF				*e*		00 12 46.8	
	comp=Z,41nm,0.2s						

*IDC **09** 00:18:57.5±1.0,35.02N×81.00E,h0km,mb3.7/8, mb1 3.9/11,mb1mx3.7/25,mbtmp3.7/11,ML3.8/3,MS3.2/6, Ms1 3.2/6,ms1mx2.9/25,Error ellipse: s-maj=27.1km s-min=18.6km az=59.0*
*ISCJB **09** 00:18:58.3±0.4,35.20N±0.04×81.37E±0.09,h10km, mb3.6/12,MS3.2/4,Error ellipse: s-maj=10.8km s-min=4.6km az=157.7*
*BJI **09** 00:18:59.6,35.22N×81.37E,h6km,mB4.4/1,mb4.0/2, ML4.1/5,Ms3.7/2,Ms7 3.5/1*
*NEIC **09** 00:19:00.5±0.7,35.21N×81.43E,h10km,mb3.9/6,Error ellipse: s-maj=13.3km s-min=10.4km az=50.0*

ISC 09 00:19:00.7±0.4, 35.21N±0.04×81.36E±0.09, h10km, n38, σ1.31/36, mb3.6/12, MS3.2/4, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**6.07**	**317**	Pn	**Pn**	**00 20 31.7**	**+1.2**
KSH				Sn	**Sn**	**00 21 47.0**	**+7.0**
KSH				smax			
	comp=N,150nm,0.9s						
KSH				smax			
	comp=E,140nm,1.1s						
KOLN	**Koldanda**	**7.66**	**165**	*e*P	**Pn**	**00 20 50.3**	**-2.0**
GKN	**Gorkha**	**7.71**	**158**	*e*P	**Pn**	**00 20 54.2**	**+1.2**
	comp=E,14nm,0.5s						
KKN	**Kakani**	**8.12**	**155**	*e*P	**Pn**	**00 20 59.9**	**+1.3**
	comp=E,17nm,0.7s						
DMN	**Daman**	**8.22**	**156**	*e*P	**Pn**	**00 21 00.6**	**+0.5**
JIRN	**Jiri**	**8.58**	**150**	*e*P	**Pn**	**00 21 06.9**	**+1.9**
	comp=E,22nm,0.5s						
UCH	**Uchtor**	**8.81**	**325**	*e*Pn	**Pn**	**00 21 09.3**	**+1.3**
AAK	**Ala-Archa**	**9.14**	**326**	Pg	Px	00 21 43.5	
	comp=E,0.7nm,0.3s,baz=160,slow=12,SNR=4.3						
AAK				Lg		00 23 43.1	
	comp=E,0.8nm,0.3s,baz=313,slow=18,SNR=3.2						
AAK				LR	LR	00 24 57.1	
	comp=E,160nm,19.9s,baz=308,slow=39						
AML	**Almayashu**	**9.14**	**321**	*e*Pn	**Pn**	**00 21 15.1**	**+2.5**
	comp=E,12nm,0.8s						
RAMN	**Ramite**	**9.38**	**150**	*e*P	**Pn**	**00 21 15.2**	**-0.7**
	comp=E,39nm,0.8s						
EKS2	**Erkin-Say**	**9.49**	**324**	*e*Pn	**Pn**	**00 21 18.7**	**+1.2**
	comp=E,10nm,0.9s						
ODAN	**Odare**	**9.80**	**147**	*e*P	**Pn**	**00 21 21.4**	**-0.3**
	comp=E,14nm,0.5s						
WMQ	**Urumqi**	**9.89**	**28**	*e*P	Px	00 21 37.0	
KBL	**Kabul**	**10.14**	**270**	*e*Pn	**Pn**	**00 21 27.0**	**+0.6**
	comp=E,9.5nm,0.9s						
MK31	**Makanchi Array**	**11.60**	**3**	*e*Pn	**Pn**	**00 21 46.2**	**+0.1**
MKAR	**Makanchi Array**	**11.60**	**3**	Pn	**Pn**	**00 21 46.1**	**-0.1**
	comp=E,0.5nm,0.3s,baz=181,slow=13,SNR=29						
MKAR				Sn	**Sn**	**00 23 57.9**	**+2.2**
	comp=E,0.2nm,0.3s,baz=196,slow=20,SNR=2.8						
GTA	**Gaotai**	**15.27**	**69**	*e*P	**Pn**	**00 22 44.6**	**+8.3**
GTA				pP	pP	00 22 48.2	+4.2
GTA				sP	sP	00 22 50.8	+5.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	**Kurchatov**	**15.63**	**354**	*e*P	**Pn**	**00 22 38.3**	**-2.5**
	comp=Z,15nm,1.2s						
ZAA0	**Zalesovo Array**	**18.89**	**6**	*e*P	**Pn**	**00 23 22.1**	**+0.4**
ZALV	**Zalesovo Beam**	**18.89**	**6**	P	**Pn**	**00 23 21.5**	**-0.2**
ZALV				LR	LR	00 31 52.5	
ZALV	**Zalesovo Beam**	**18.89**	**6**	P	**Pn**	**00 23 21.5**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=194,slow=10,SNR=15						
ZALV				LR	LR	00 31 52.5	
	comp=Z,33nm,20.7s,baz=250,slow=40						
BVAR	**Borovoye Array**	**19.43**	**340**	P	**Pn**	**00 23 27.2**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=146,slow=12,SNR=9.6						
BRVK	**Borovoye**	**19.49**	**340**	*e*P	**Pn**	**00 23 27.4**	**-1.5**
	comp=Z,5.8nm,0.9s						
ABKAR	**Akbulak array**	**21.08**	**318**	*e*P	**P**	**00 23 44.0**	**-1.0**
	comp=Z,1.8nm,0.6s,mb3.6						
SONM	**Songino Array**	**22.48**	**48**	P	**P**	**00 24 03.6**	**+3.6**
	comp=Z,2.0nm,1.2s,mb3.4,baz=229,slow

LPAZ	**La Paz**	**2.67**	**12**	P		**Pn**	**00 41 41.5**	**+1.8**
LPAZ				S		**Sn**	**00 42 12.8**	**-0.2**
LPAZ	**La Paz**	**2.67**	**12**	P		**Pn**	**00 41 41.5**	**+1.8**
	89nm,0.3s,baz=190,slow=6.1,SNR=2716							
LPAZ				S		**Sn**	**00 42 12.8**	**-0.2**
	9.6nm,0.3s,baz=324,slow=16,SNR=4.1							
SIV	**San Ignacio**	**7.84**	**69**	P		**Pn**	**00 42 46.7**	**-1.3**
	1.2nm,0.3s,baz=270,slow=8.5,SNR=24							
SIV				S		**Sn**	**00 44 08.1**	**-7.4**
	0.4nm,0.3s,baz=258,slow=16,SNR=3.8							
LCO	**Las Campanas**	**10.21**	**190**	*e*Pn		**Pn**	**00 43 18.8**	**-0.6**
NNA	**Nana**	**10.44**	**310**	P		**Pn**	**00 43 21.6**	**-1.0**
	5.2nm,0.3s,baz=133,slow=12,SNR=8.8							
NNA				S		**Sn**	**00 45 10.9**	**-7.1**
	1.4nm,0.3s,baz=216,slow=19,SNR=3.0							
CFAA	**Coronel Fontan**	**12.64**	**178**	P		**Pn**	**00 43 51.5**	**+0.4**
	0.1nm,0.3s,baz=17,slow=14,SNR=5.8							
CPUP	**Villa Florida**	**12.83**	**127**	P		**Pn**	**00 43 53.9**	**+0.2**
	0.4nm,0.3s,baz=290,slow=11,SNR=4.6							
TRQA	**Tornquist**	**19.95**	**164**	*e*P		**P**	**00 45 20.8**	**+3.6**
	2.1nm,0.5s							
OTAV	**Otavalo**	**21.31**	**332**	*e*P		**P**	**00 45 32.3**	**+0.5**
	1.4nm,0.8s,mb3.3							
DUG	**Dugway**	**71.73**	**326**	*e*P		**P**	**00 52 01.8**	**-0.9**
	8.6nm,1.1s,mb4.4							
TORD	**Torodi Ar. Bea**	**76.32**	**71**	P		**P**	**00 52 29.6**	**-0.3**
	1.0nm,0.4s,mb3.8,baz=255,slow=5.6,SNR=25							
YKA	**Yellowknife Ar**	**88.83**	**341**	P		**P**	**00 53 34.5**	**+1.0**
YKA				pP		pP	00 54 17.1	+6.4
YKA	**Yellowknife Ar**	**88.83**	**341**	P		**P**	**00 53 34.5**	**+1.0**
	0.5nm,0.5s,mb3.7,baz=132,slow=4.9,SNR=12							
YKA				pP		pP	00 54 17.0	+6.3
	0.2nm,0.8s,baz=134,slow=4.0,SNR=3.9							

VIE ***09*** *00:43:01.9±0.4,48˚.14N×13˚.20E,h11km±5km, mb1.9/1, ML2.5/4, Error ellipse: s-maj=4.8km s-min=2.5km az=66.0*
5 km NE of Mattighofen
CSEM ***09*** *00:43:02.0±0.1,48˚.18N×13˚.18E,h10km,ML2.7/5, Error ellipse: s-maj=3.3km s-min=2.4km az=135.0*
PRU ***09*** *00:43:05.0,48˚.21N×13˚.79E, h0km*
ISC 09 00:43:02.4±1.5, 48˚20N±0˚.04×13˚3E±0˚.2, h18km±18km, n12, σ0°73/20, 5C-1D, Austria

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MOA	**Molln**	**0.75**	**117**	⇓*i*Pg		**Pg**	**00 43 17.8**	**+0.6**
	2.0nm,0.1s							
MOA				⇑*i*Sg		**Sg**	**00 43 27.1**	**0.0**
	16nm,0.1s							
MOA	**Molln**	**0.75**	**117**	Pg		**Pg**	**00 43 17.8**	**+0.7**
	2.0nm,0.1s							
MOA				Sg		**Sg**	**00 43 27.1**	**0.0**
	16nm,0.1s							
KHC	**Kasperske Hory**	**0.95**	**12**	*e*PN		**Pn**	**00 43 22.2**	**+1.3**
KHC				*e*SG		**Sg**	**00 43 33.5**	**+0.1**
	comp=Z,7.1nm,0.2s							
KHC	**Kasperske Hory**	**0.95**	**12**	Pn		**Pn**	**00 43 22.2**	**+1.3**
KHC				Sg		**Sg**	**00 43 33.5**	**+0.1**
	comp=Z,7.1nm,0.2s							
WATA	**Walderalm**	**1.44**	**234**	⇑*i*Pn		**Pn**	**00 43 27.4**	**-0.1**
	comp=Z,1.7nm,0.1s							
WATA				⇑*i*Sn		**Sn**	**00 43 45.6**	**-0.3**
	comp=Z,6.5nm,0.1s							
WATA	**Walderalm**	**1.44**	**234**	Pn		**Pn**	**00 43 27.4**	**-0.1**
	comp=Z,1.7nm,0.1s							
WATA				Sn		**Sn**	**00 43 45.6**	**-0.3**
	comp=Z,6.5nm,0.1s							
WTTA	**Wattenberg**	**1.45**	**230**	⇑*i*Pn		**Pn**	**00 43 27.6**	**-0.1**
	comp=Z,1.2nm,0.1s							
WTTA				⇑*i*Sn		**Sn**	**00 43 46.0**	**-0.3**
	comp=Z,2.0nm,0.2s							
WTTA	**Wattenberg**	**1.45**	**230**	Pn		**Pn**	**00 43 27.6**	**-0.1**
	comp=Z,1.2nm,0.1s							
WTTA				Sn		**Sn**	**00 43 46.0**	**-0.2**
	comp=Z,2.0nm,0.2s							
PRU	**Pruhonice**	**1.97**	**25**	*e*SG		**Sg**	**00 44 06.4**	**+0.5**
	comp=Z,2.3nm,0.4s							
PRU	**Pruhonice**	**1.97**	**25**	Sg		**Sg**	**00 44 06.4**	**+0.5**
	comp=Z,2.3nm,0.4s							
DPC	**Dobruska-Polom**	**2.94**	**42**	*e*SG		**Sg**	**00 44 34.9**	**-1.8**
DPC	**Dobruska-Polom**	**2.94**	**42**	Sg		**Sg**	**00 44 34.9**	**-1.8**

NIED ***09*** *00:54:00, 42˚.00N×142˚.50E, h56km, Mw4.5 Best double couple: M₀5.72000×10¹⁵ NP1:φs28.00000°, δ68.00000°, λ85.00000°. NP2:φs221.00000°, δ22.00000°, λ102.00000°.*
MOS ***09*** *00:54:34.9±0.8, 42˚.11N×142˚.40E, h57km, mb5.0/81, Error ellipse: s-maj=8.4km s-min=4.5km az=110.9*
BJI ***09*** *00:54:34.2, 41˚.95N×142˚.42E, h60km, mB4.8/21, mb4.8/41, Ms4.2/21, Ms7 3.8/22*
JMA ***09*** *00:54:35.7±0.1, 41˚.97N×142˚.54E, h65km±2km, M4.5*
JMA Felt II J1.
ISCJB ***09*** *00:54:35.5±0.3, 42˚.00N±0˚.03×142˚.46E±0˚.03, h67km±1km, mb4.6/147, Error ellipse: s-maj=4.8km s-min=3.0km az=147.1*
NEIC ***09*** *00:54:36.1±0.6, 42˚.12N×142˚.41E, h55km±6km, mb4.7/81, MW4.4(NIED), Error ellipse: s-maj=7.4km s-min=3.7km az=166.0*
NEIC Recorded [2 JMA] in southwestern Hokkaido. Also recorded [2 JMA] in Aomori, Honshu.
IDC ***09*** *00:54:37.5±0.8, 42˚.04N×142˚.53E, h72km±5km, mb4.3/23, mb1 4.4/25, mb1mx4.3/28, mbtmp4.3/25, MS3.5/10, Ms1 3.5/10, ms1mx3.1/32, Error ellipse: s-maj=12.5km s-min=8.2km az=106.0*
SZGRF ***09*** *00:54:41.0, 43˚.05N×141˚.83E, h33km, mb4.8, Hokkaido, Japan, region*
ISC 09 00:54:36.6±0.3, 42˚01N±0˚.03×142˚48E±0˚.03, h62km±2km, h63km±4.1km: pP-P, n375, σ0°79/397, mb4.7/147, 94C-14D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.34**	**37**	⇑P		**Pn**	**00 54 46.4**	**-0.8**
JNBK				*e*S		**Sn**	**00 54 54.7**	**-0.2**
ERM	**Erimo**	**0.51**	**89**	⇓*i*Pn		**Pn**	**00 54 47.8**	**-1.0**
ERM				*e*Sn		**Sn**	**00 54 56.8**	**-0.9**
JEM	**Erimo**	**0.51**	**89**	⇑P		**Pn**	**00 54 47.9**	**-0.9**
JEM				*e*S		**Sn**	**00 54 57.0**	**-0.7**
JBT2	**Biratori 2**	**0.77**	**354**	⇓P		**Pn**	**00 54 51.5**	**-0.3**
JBT2				*e*S		**Sn**	**00 55 02.9**	**-0.1**
JCH	**Churui**	**0.89**	**47**	⇑P		**Pn**	**00 54 52.7**	**-0.6**
JCH				*e*S		**Sn**	**00 55 05.5**	**-0.2**
JKB	**Kayabe**	**1.08**	**264**	⇓P		**Pn**	**00 54 55.5**	**-0.3**
JKB				*e*S		**Sn**	**00 55 09.8**	**-0.2**
JEW	**Eniwo**	**1.12**	**318**	⇓P		**Pn**	**00 54 56.5**	**+0.2**
JEW				*e*S		**Sn**	**00 55 11.5**	**+0.5**
JFR	**Furan**	**1.16**	**4**	⇓P		**Pn**	**00 54 56.5**	**-0.2**
JNB	**Noboribetsu**	**1.16**	**294**	⇓P		**Pn**	**00 54 56.2**	**-0.6**
JNB				*e*S		**Sn**	**00 55 11.4**	**-0.5**
JOT	**Ohata**	**1.24**	**240**	⇓P		**Pn**	**00 54 57.5**	**-0.3**
JOT				*e*S		**Sn**	**00 55 13.1**	**-0.6**
JOB	**Onbets**	**1.34**	**48**	⇑P		**Pn**	**00 54 59.6**	**+0.4**
JOB				*e*S		**Sn**	**00 55 17.2**	**+1.0**
JAB	**Ashibetsu**	**1.50**	**353**	⇓P		**Pn**	**00 55 01.7**	**+0.3**
JAB				*e*S		**Sn**	**00 55 22.2**	**+2.2**
JYM2	**Yakumo 2**	**1.57**	**275**	⇓P		**Pn**	**00 55 02.1**	**-0.2**
JAR	**Ashorobuto**	**1.60**	**36**	⇑P		**Pn**	**00 55 02.3**	**-0.4**
JTM	**Tenmabayashi**	**1.62**	**221**	⇓P		**Pn**	**00 55 03.0**	**+0.1**
JTM				*e*S		**Sn**	**00 55 23.1**	**+0.4**
ASAJ	**Asahikawa**	**2.11**	**2**	P		**Pn**	**00 55 10.2**	**+0.7**
	405nm,0.3s,baz=209,slow=11,SNR=346							
ASAJ				S		**Sn**	**00 55 35.6**	**+1.0**
	170nm,0.3s,baz=77,slow=22,SNR=21							
ASAJ	**Asahikawa**	**2.11**	**2**	PN		**Pn**	**00 55 10.2**	**+0.7**
ASAJ				S		**Sn**	**00 55 35.6**	**+1.0**
ASAJ				pmax	pmax			
	comp=Z,405nm,0.3s							
ASAJ				smax				
	comp=N,170nm,0.3s							
YSS	**Yuzh-Sakhalins**	**4.95**	**2**	*e*Pn		**Pn**	**00 55 50.4**	**+2.2**
YSS	**Yuzh-Sakhalins**	**4.95**	**2**	⇑*i*PN		**Pn**	**00 55 50.0**	**+1.7**
YSS				*e*S		**Sn**	**00 56 47.0**	**+2.9**
YSS				pmax	pmax			
	comp=Z,120nm,1.0s							
YSS				smax				
	comp=E,50nm,0.9s							
KUR	**Kuril'sk**	**5.07**	**49**	*e*PN		**Pn**	**00 55 50.0**	**+0.1**
KUR				*e*S		**Sn**	**00 56 49.0**	**+1.9**
KUR				pmax	pmax			
	comp=N,90nm,0.7s							
KUR				pmax	pmax			
	comp=Z,190nm,0.7s							
KUR				smax				
	comp=N,2μm,1.6s							
KUR				smax				
	comp=N,380nm,1.0s							
KUR				smax				
	comp=E,230nm,1.0s							
MAJO	**Matsushiro**	**6.38**	**213**	*e*PN		**Pn**	**00 56 09.7**	**+1.7**
MAT	**Matsushiro**	**6.38**	**213**	P		**Pn**	**00 56 09.1**	**+1.1**
MAT				S		**Sn**	**00 57 20.7**	**+1.2**
VLA	**Vladivostok**	**7.89**	**282**	⇑*e*PN		**Pn**	**00 56 27.6**	**-1.0**
VLA				pmax	pmax			
	comp=Z,48nm,1.7s							
HABR	**Khabarovsk**	**8.31**	**324**	*e*PN		**Pn**	**00 56 33.6**	**-0.7**
HABR				pmax	pmax			
	comp=E,32nm,1.8s							
HABR				pmax	pmax			
	comp=N,38nm,1.0s							
HABR				pmax	pmax			
	comp=N,17nm,1.3s							
MDJ	**Mudanjiang**	**9.75**	**290**	P		**Pn**	**00 56 51.5**	**-2.4**
MDJ				pmax	pmax			
	comp=Z,3.0nm,0.5s							
MDJ				pmax	pmax			
	comp=Z,17nm,3.9s							
MDJ				LR	LR			
	comp=Z,190nm,18.7s							
MDJ	**Mudanjiang**	**9.75**	**290**	*e*Pn		**Pn**	**00 56 59.3**	**+5.4**
	comp=Z,17nm,0.8s							
KSRS	**Korea Array**	**12.09**	**253**	P		**Pn**	**00 57 27.9**	**+1.9**
	comp=Z,2.7nm,0.3s,baz=65,slow=14,SNR=21							
KSRS				S		**Sn**	**00 59 47.0**	**+8.0**
	comp=Z,1.5nm,0.3s,baz=66,slow=24,SNR=9.4							
KSRS				LR	LR		01 01 48.1	
	comp=Z,160nm,18.2s,baz=249,slow=35							
KSRS	**Korea Array**	**12.09**	**253**	PN		**Pn**	**00 57 27.9**	**+2.0**
KSRS				S		**Sn**	**00 59 47.0**	**+8.0**
KSRS				pmax	pmax			
	comp=Z,3.0nm,0.3s							
KSRS				smax				
	comp=N,2.0nm,0.3s							
CN2	**Changchun**	**12.62**	**284**	*e*P		**Pn**	**00 57 34.8**	**+1.7**
CN2				*ep*P			00 57 43.0	
CN2				*e*S		**Sn**	**00 59 53.1**	**+1.3**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
CN2				pmax	pmax			
	comp=Z,200nm,4.0s							
CN2				LR	LR			
	comp=N,200nm,21.0s							
CN2				LR	LR			
	comp=E,200nm,21.0s							
CN2				LR	LR			
	comp=Z,200nm,21.0s							
CBIJ	**Chichi jima**	**14.88**	**181**	P		**Pn**	**00 57 58.5**	**-4.9**
	comp=Z,4.3nm,0.3s,baz=295,slow=18,SNR=4.5							
CLNS	**Chul'man**	**18.65**	**329**	*e*P		**Pn**	**00 58 48.3**	**-1.7**
CLNS				pmax	pmax			
	comp=Z,18nm,0.8s							
CLNS				pmax	pmax			
	comp=N,7.0nm,0.9s							
CLNS				pmax	pmax			
	comp=E,6.0nm,0.7s							
BJI	**Beijing**	**19.92**	**273**	P		**Pn**	**00 59 01.0**	**-4.2**
BJI				S		**S**	**01 02 43.5**	**-0.2**
BJI				pmax	pmax			
	comp=Z,41nm,0.9s							
BJI				pmax	pmax			
	comp=Z,77nm,6.0s							
BJI				LR	LR			
	comp=N,100nm,21.0s							
BJI				LR	LR			
	comp=E,120nm,21.9s							
BJI				LR	LR			
	comp=Z,130nm,27.6s							
BJT	**Baijiatuan**	**19.93**	**273**	*e*P		**Pn**	**00 59 01.1**	**-4.2**
	comp=Z,32nm,0.7s							
BJT	**Baijiatuan**	**19.93**	**273**	*e*P		**Pn**	**00 59 01.1**	**-4.2**
BJT				pmax	pmax			
	comp=Z,32nm,0.7s							
TIA	**Tai'an**	**20.47**	**262**	P		**P**	**00 59 07.4**	**-1.7**
TIA				pmax	pmax			
	comp=Z,38nm,1.0s							
NJ2	**Nanjing**	**21.26**	**250**	*e*P		**P**	**00 59 17.8**	**+0.2**
NJ2				pmax	pmax			
	comp=Z,20nm,0.7s,mb4.6							
YAK	**Yakutsk**	**21.46**	**343**	*e*P		pP	00 59 34.9	+1.9
YAK				pmax	pmax			
	comp=Z,30nm,1.1s,mb4.5							
YAK				pmax	pmax			
	comp=N,20nm,1.0s							
YAK				pmax	pmax			
	comp=E,7.0nm,1.3s							
SEY	**Seymchan**	**21.76**	**12**	⇑*i*P		**P**	**00 59 20.0**	**-2.6**
HHC	**Hu-ho-hao-te**	**23.15**	**278**	*e*P		**P**	**00 59 46.9**	**+9.4**
HHC				pP			00 59 57.9	
HHC				sP		sP	01 00 04.0	+5.0
HHC				PP			01 00 18.3	
HHC				*e*S		**S**	**01 03 50.0**	**+6.0**
HHC				sS		sS	01 04 09.2	0.0
HHC				SS			01 04 36.2	
HHC				PcS		PcS	01 07 15.2	+12
HHC				pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.2							
HHC				pmax	pmax			
	comp=Z,73nm,5.0s							
HHC				LR	LR			
	comp=N,81nm,8.8s							
HHC				LR	LR			
	comp=E,96nm,8.9s							
HHC				LR	LR			
	comp=Z,120nm,14.9s							
WHN	**Wuhan**	**25.29**	**252**	P		**P**	**00 59 55.2**	**-1.9**
ULN	**Ulaanbaatar**	**25.59**	**295**	*e*P		**P**	**00 59 60.0**	**+0.3**
	comp=Z,7.9nm,0.7s,mb4.3							
ULN	**Ulaanbaatar**	**25.59**	**295**	*e*P		**P**	**01 00 00.0**	**+0.3**
ULN				pmax	pmax			
	comp=Z,8.0nm,0.7s,mb4.4							
SONM	**Songino Array**	**26.04**	**295**	P		**P**	**01 00 03.8**	**+0.1**
	comp=Z,5.4nm,0.5s,mb4.4,baz=76,slow=8.9,SNR=44							
SONM				PcP		PcP	01 03 30.0	-0.1
	comp=Z,0.7nm,0.7s,baz=106,slow=1.8,SNR=3.5							
SONM				LR		LR	01 11 04.6	
	comp=Z,95nm,19.6s,baz=82,slow=38							
SONM	**Songino Array**	**26.04**	**295**	P		**P**	**01 00 03.8**	**+0.1**
SONM							01 03 30.0	
SONM				pmax	pmax			
	comp=Z,5.0nm,0.5s							
SONM				MLR	MLR			
	comp=Z,95nm,19.6s							
TLY	**Talaya**	**27.96**	**304**	*e*P		**P**	**01 00 21.1**	**+0.1**
TLY				pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.5							
TLY				MLR	MLR			
	comp=Z,89nm,20.0s							
ZAK	**Zakamensk**	**28.12**	**301**	*e*P		**P**	**01 00 22.0**	**-0.4**
ZAK				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.0							
GUMO	**Guam**	**28.39**	**175**	LR		LR	01 10 30.5	
	comp=Z,36nm,20.2s,baz=298,slow=34							
ENH	**Enshi**	**28.93**	**257**	*e*P		**P**	**01 00 28.2**	**-1.6**
	comp=Z,12nm,0.6s,mb4.8							
LZH	**Lanzhou**	**30.39**	**272**	*e*P		**P**	**01 00 40.6**	**-2.1**
LZH				pmax	pmax			
	comp=Z,13nm,1.0s,mb4.6							
GTA	**Gaotai**	**32.20**	**280**	*e*P		**P**	**01 00 58.5**	**-0.1**
GTA				pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.5							
GYA	**Guiyang**	**33.15**	**254**	*e*P		**P**	**01 01 07.6**	**+0.6**
GYA				pP		pP	01 01 22.0	-0.3
GYA				sP		sP	01 01 27.4	-2.2
GYA				PP		PP	01 02 20.3	-2.5
GYA				PcP		PcP	01 03 51.8	+3.1
GYA				S		**S**	**01 06 22.5**	**+0.5**
GYA				sS		sS	01 06 45.0	-3.0
GYA				ScP		ScP	01 07 30.4	+2.9
GYA				ScS		ScS	01 11 30.0	+1.8
GYA				pmax	pmax			
	comp=Z,20nm,0.8s,mb5.1							
GYA				pmax	pmax			
	comp=Z,110nm,4.6s							
GYA				LR	LR			
	comp=N,470nm,16.3s							
GYA				LR	LR			
	comp=E,400nm,17.0s							
GYA				LR	LR			
	comp=Z,480nm,16.6s							
QIZ	**Qiongzhong**	**35.92**	**240**	P		**P**	**01 01 31.4**	**+0.5**
QIZ				S		**S**	**01 07 05.5**	**+0.8**
QIZ				LR		LR		
	comp=Z,29nm,17.7s							
KMI	**Kunming**	**36.77**	**255**	P		**P**	**01 01 39.1**	**+0.9**
KMI				pP		pP	01 01 53.0	-0.6
KMI				sP		sP	01 01 58.8	-2.1
KMI				PP		PP	01 03 05.8	+3.0
KMI				S		**S**	**01 07 20.9**	**+3.2**
KMI				sS		sS	01 07 41.5	-2.4
KMI				pmax	pmax			
	comp=Z,12nm,0.7s,mb4.8							
KMI				pmax	pmax			
	comp=Z,81nm,5.1s							
KMI				LR	LR			
	comp=N,130nm,15.2s							
KMI				LR	LR			
	comp=E,130nm,14.8s							
ZAA0	**Zalesovo Array**	**39.33**	**308**	*e*P		**P**	**01 01 58.9**	**-0.4**
ZALV	**Zalesovo Beam**	**39.33**	**308**	P		**P**	**01 01 59.4**	**0.0**
	comp=E,16nm,0.7s,mb4.9,baz=87,slow=8.1,SNR=76							
ZALV				PcP		PcP	01 04 06.9	+0.2
	comp=E,3.7nm,0.8s,baz=82,slow=3.1,SNR=4.5							
ZALV				pPcP			01 04 27.1	
	comp=E,1.1nm,0.4s,baz=85,slow=3.1,SNR=3.6							
ZALV				LR		LR	01 19 07.0	
	comp=E,44nm,19.2s,baz=72,slow=37							
WMQ	**Urumqi**	**39.54**	**292**	*e*P		**P**	**01 02 02.0**	**+0.7**
WMQ				pP		pP	01 02 14.2	-2.7
WMQ				sP		sP	01 02 19.6	-4.5
WMQ				PP		PP	01 03 37.4	+4.5
WMQ				PcP		PcP	01 04 09.1	+1.5
WMQ				pmax	pmax			
	comp=Z,21nm,0.7s,mb5.0							
WMQ				pmax	pmax			
	comp=Z,130nm,4.5s							
WMQ				LR	LR			
	comp=N,48nm,26.0s							
WMQ				LR	LR			
	comp=E,70nm,20.6s							
WMQ				LR	LR			
	comp=Z,52nm,20.5s							
NVS	**Novosibirsk**	**40.15**	**310**	⇑*i*P		**P**	**01 02 05.9**	**-0.2**
NVS				pmax	pmax			
	comp=E,12nm,0.8s							
NVS				pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.5							
MK31	**Makanchi Array**	**42.35**	**298**	*e*P		**P**	**01 02 24.1**	**-0.2**
MK31	**Makanchi Array**	**42.35**	**298**	*ce*P		**P**	**01 02 23.8**	**-0.5**
MK31				pmax	pmax			
	comp=Z,11nm,0.5s,mb4.7							
MKAR	**Makanchi Array**	**42.35**	**298**	P		**P**	**01 02 24.1**	**-0.2**
	comp=Z,8.2nm,0.5s,mb4.6,baz=83,slow=9.6,SNR=106							
MKAR				PcP		PcP	01 04 16.4	-0.3
	comp=Z,0.8nm,0.5s,baz=67,slow=0.9,SNR=2.8							
MKAR				LR		LR	01 20 59.2	
	comp=Z,30nm,18.9s,baz=166,slow=37							
MKAR	**Makanchi Array**	**42.35**	**298**	P		**P**	**01 02 24.1**	**-0.2**
MKAR							01 04 16.4	
MKAR				pmax	pmax			
	comp=Z,8.0nm,0.5s							
MKAR				MLR	MLR			
	comp=Z,30nm,19.0s							
KDAK	**Kodiak Island**	**42.94**	**45**	P		**P**	**01 02 27.7**	**-1.2**
	comp=Z,1.7nm,0.4s,mb4.1,baz=333,slow=2.8,SNR=5.5							
KDAK	**Kodiak Island**	**42.94**	**45**	*i* P		**P**	**01 02 28.7**	**-0.2**
COLD	**Coldfoot**	**43.45**	**31**	*e*P		**P**	**01 02 32.5**	**-0.4**
	comp=Z,2.9nm,0.9s,mb4.0							
CHTO	**Chiang Mai**	**43.49**	**251**	*e*P		**P**	**01 02 34.4**	**+0.6**
	comp=Z,15nm,0.6s,mb4.9							
CHTO	**Chiang Mai**	**43.49**	**251**	*e*P		**P**	**01 02 34.4**	**+0.6**
CHTO				pmax	pmax			
	comp=Z,15nm,0.6s,mb4.9							
KURK	**Kurchatov**	**43.66**	**304**	*e*P		**P**	**01 02 34.3**	**-0.5**
	comp=Z,22nm,0.6s,mb5.1							
KURK	**Kurchatov**	**43.66**	**304**	P		**P**	**01 02 34.9**	**+0.1**
	comp=Z,24nm,0.5s,mb5.2,baz=72,slow=8.8,SNR=5.8							
KURK	**Kurchatov**	**43.66**	**304**	*c* P		**P**	**01 02 34.3**	**-0.5**
KURK				pmax	pmax			
	comp=Z,22nm,0.7s,mb5.0							
CMAR	**Chiang Mai Arr**	**43.72**	**251**	P		**P**	**01 02 36.6**	**+0.9**
	comp=Z,2.0nm,0.4s,mb4.2,baz=40,slow=6.9,SNR=7.9							
CMAR				PcP		PcP	01 04 22.4	+0.6
	comp=Z,1.4nm,0.5s,baz=34,slow=3.4,SNR=4.6							
CMAR				pPcP			01 04 42.6	
	comp=Z,1.0nm,0.3s,baz=334,slow=2.2,SNR=4.9							
CMAR				LR		LR	01 22 16.2	
	comp=Z,58nm,19.1s,baz=222,slow=38							
MCK	**McKinley**	**44.09**	**37**	*e*P		**P**	**01 02 37.9**	**-0.2**
	comp=Z,2.3nm,0.4s,mb4.3							
MCK	**McKinley**	**44.09**	**37**	P		**P**	**01 02 37.9**	**-0.2**
MCK				pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.2							
COLA	**College**	**44.48**	**35**	*e*P		**P**	**01 02 41.3**	**+0.1**
	comp=Z,9.2nm,0.9s,mb4.5							
COLA	**College**	**44.48**	**35**	*e*P		**P**	**01 02 41.3**	**+0.1**
COLA				pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.5							
ILAR	**Eielson Array**	**44.90**	**35**	P		**P**	**01 02 44.4**	**-0.2**
	comp=Z,2.2nm,0.7s,mb4.1,baz=267,slow=6.2,SNR=27							
ILAR	**Eielson Array**	**44.90**	**35**	P		**P**	**01 02 44.4**	**-0.1**
ILAR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
TAPN	**Taplejung**	**46.60**	**270**	*e*P		**P**	**01 02 59.1**	**+0.7**
	comp=Z,37nm,0.7s,mb5.4							
ODAN	**Odare**	**47.10**	**270**	*e*P		**P**	**01 03 02.9**	**+0.5**
	comp=Z,21nm,0.5s,mb5.3							
JIRN	**Jiri**	**47.56**	**271**	*e*P		**P**	**01 03 05.6**	**-0.3**
	comp=Z,24nm,0.3s,mb5.7							
RAMN	**Ramite**	**47.64**	**270**	*e*P		**P**	**01 03 06.9**	**+0.3**
	comp=Z,64nm,0.7s,mb5.8							
GUN	**Gumba**	**47.66**	**272**	*e*P		**P**	**01 03 07.0**	**+0.3**
	comp=Z,92nm,0.4s							
VOSK	**Vostochnaya**	**47.69**	**309**	P		**P**	**01 03 06.1**	**-0.5**
VOSK				pmax	pmax			
	comp=Z,7.0nm,0.6s,mb4.9							
BVA0	**Borovoye Array**	**47.95**	**309**	*i* P		**P**	**01 03 08.5**	**0.0**
BVA0				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.4							
BVAR	**Borovoye Array**	**47.95**	**309**	P		**P**	**01 03 08.6**	**+0.1**
	comp=Z,14nm,0.4s,mb5.3,baz=76,slow

KSH esP sP 01 03 40.5 -1.6
KSH ePcP PcP 01 04 45.8 +4.8
KSH ePP PP 01 05 17.1 +4.0
KSH eScP ScP 01 08 35.3 +4.6
KSH ePcS PcS 01 08 40.2 +2.7
KSH eS **S** **01 10 25.2 +4.8**
KSH eScS ScS 01 13 07.6 +2.6
KSH eSS SS 01 13 53.6 +1.4
KSH pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
KSH pmax pmax
comp=Z,54nm,5.2s
KSH LR LR
comp=N,93nm,4.7s
KSH LR LR
comp=E,99nm,6.0s
KSH LR LR
comp=Z,94nm,3.8s
KOLN Koldanda 49.43 273 eP **P 01 03 20.9 +0.6**
comp=Z,28nm,0.4s,mb5.6
EKS2 Erkin-Say 49.47 295 P **P 01 03 20.3 0.0**
SNR=22
EKS2 Erkin-Say 49.47 295⇑*iP* **P 01 03 20.3 -0.1**
comp=Z,15nm,0.6s,mb5.2
INK Inuvik 49.62 29 eP **P 01 03 20.2 -0.9**
comp=Z,3.8nm,0.7s,mb4.5
INK Inuvik 49.62 29 P **P 01 03 20.4 -0.8**
comp=Z,2.2nm,0.3s,mb4.6,baz=268,slow=5.2,SNR=17
INK Inuvik 49.62 29 eP **P 01 03 20.2 -0.9**
INK pmax pmax
comp=Z,4.0nm,0.7s
KSM Kuching 49.63 224 eP **P 01 03 23.0 +1.1**
comp=Z,9.6nm,0.6s,mb5.0
AML Almayashu 49.74 295 P **P 01 03 23.4 +1.0**
SNR=17
AML Almayashu 49.74 295⇑*iP* **P 01 03 23.2 +0.8**
comp=Z,11nm,0.8s,mb5.0
HYT Haines Junctio 49.87 39 eP **P 01 03 25.0 +1.9**
KK31 Karatay Array 51.47 297ce*P* **P 01 03 34.9 -0.5**
KK31 pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
SVE Sverdlovsk 52.04 316⇑eP **P 01 03 40.1 +0.6**
SVE pmax pmax
comp=Z,22nm,0.9s,mb5.1
KULM Kulim 52.12 237 eP **P 01 03 41.5 +0.9**
comp=Z,11nm,0.7s,mb4.9
ARU Arti 53.25 316⇑*iP* **P 01 03 47.8 -0.6**
comp=Z,16nm,0.9s,mb4.9
ARU Arti 53.25 316*c iP* **P 01 03 48.1 -0.3**
ARU *PP pP 01 04 01.8 -2.9
ARU *e* 01 05 46.9
ARU S **S** **01 11 17.5 +2.8**
ARU SS SS 01 14 53.3 -1.2
ARU pmax pmax
comp=Z,22nm,1.2s,mb5.0
AB31 Akbulak array 55.45 308ce*P* **P 01 04 04.3 -0.2**
AB31 pmax pmax
comp=Z,4.0nm,0.3s,mb4.9
ABKAR Akbulak array 55.45 308⇑*iP* **P 01 04 04.2 -0.3**
comp=Z,5.9nm,0.5s,mb4.9
SPITS Spitsbergen Ar 55.81 348 LR LR 01 26 41.3
comp=Z,31nm,21.7s,baz=275,slow=34
KBL Kabul 56.51 288 eP **P 01 04 11.7 -0.7**
comp=Z,12nm,0.9s,mb4.9
KBL Kabul 56.51 288 eP **P 01 04 11.7 -0.6**
KBL pmax pmax
comp=Z,12nm,0.9s,mb4.9
RES Resolute Bay 57.59 15 eP **P 01 04 18.1 -1.3**
comp=Z,10nm,0.7s,mb5.0
RES Resolute Bay 57.59 15 eP **P 01 04 18.1 -1.2**
RES pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
APA Apatity 58.52 335⇑eP **P 01 04 27.0 +1.1**
APA MLR MLR
comp=Z,100nm,15.0s
KEV Kevo 59.10 339 eP **P 01 04 29.1 -0.8**
KEV pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
KEV Kevo 59.10 339 e*p* **P 01 04 29.1 -0.8**
comp=Z,2.8nm,0.4s,mb4.7
YKA Yellowknife Ar 59.12 32 P **P 01 04 30.0 -0.1**
comp=Z,1.2nm,0.7s,mb4.1,baz=308,slow=6.7,SNR=9.5
ARCES ARCESS Array B 59.65 339 P **P 01 04 33.0 -0.8**
comp=Z,1.4nm,0.5s,mb4.3,baz=56,slow=7.9,SNR=28
ARCES ARCESS Array B 59.65 339 P **P 01 04 33.0 -0.7**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
ARE0 ARCESS Array S 59.65 339 eP **P 01 04 33.1 -0.6**
KLMR Klimovskoe 60.02 327 eP **P 01 04 34.3 -2.1**
KLMR pmax pmax
comp=Z,15nm,1.5s,mb4.8
JOF Joensuu 61.98 331 eP **P 01 04 48.6 -1.1**
JOF pmax pmax
comp=Z,9.0nm,0.5s,mb5.2
JOF Joensuu 61.98 331 e*p* **P 01 04 48.6 -1.1**
comp=Z,9.0nm,0.5s,mb5.2
KAF Kangasniemi 64.28 332 eP **P 01 05 04.0 -0.9**
KAF pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
KAF Kangasniemi 64.28 332 e*p* **P 01 05 04.0 -0.9**
comp=Z,7.0nm,0.5s,mb5.0
VRHR Novokhopersk 64.59 317 eP **P 01 05 05.7 -1.4**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
OBN Obninsk 64.63 322 eP **P 01 05 06.4 -0.9**
OBN *i* pP 01 05 25.5 +1.5
OBN *e* 01 05 40.1
OBN pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
FINES FINESS Array B 64.81 332 P **P 01 05 06.5 -1.8**
comp=Z,13nm,0.6s,mb5.2,baz=51,slow=7.2,SNR=93
FINES LR LR 01 36 05.3
comp=Z,68nm,18.1s,baz=170,slow=38
FINES FINESS Array B 64.81 332 P **P 01 05 06.5 -1.8**
FINES pmax pmax
comp=Z,13nm,0.6s
FINES MLR MLR
comp=Z,68nm,18.1s
SUMG Summit 65.71 0 eP **P 01 05 14.4 +0.4**
comp=Z,6.3nm,0.7s,mb4.8
SUMG Summit 65.71 0⇑*iP* **P 01 05 14.3 +0.3**
comp=Z,6.9nm,0.7s,mb4.8
VSR Storozhevoye 65.77 318 eP **P 01 05 14.0 -0.7**
VSR pmax pmax
comp=N,8.0nm,0.8s
VSR pmax pmax
comp=E,9.0nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
ASAR Alice Springs 65.82 189 P **P 01 05 13.7 -1.6**
comp=Z,1.0nm,0.6s,mb4.0,baz=359,slow=7.2,SNR=10
ASAR pP pP 01 05 34.5 +2.5
comp=Z,1.8nm,1.0s,baz=7.5,slow=5.3,SNR=5.1
VORD Divnogorie 65.85 318 eP **P 01 05 14.3 -0.9**
VORD pmax pmax
comp=N,3.0nm,0.3s
VORD pmax pmax
comp=E,5.0nm,0.3s
VORD pmax pmax
comp=Z,4.0nm,0.3s,mb4.9
NEW Newport 66.04 46 eP **P 01 05 17.0 +0.5**
comp=Z,1.7nm,0.7s,mb4.2
NEW Newport 66.04 46 eP **P 01 05 17.0 +0.5**
NEW pmax pmax
comp=Z,2.0nm,0.7s
YBH Yreka Blue Hor 66.71 54 eP **P 01 05 22.8 +1.9**
KIV Kislovodsk 68.30 310 eP **P 01 05 31.3 +0.4**
comp=Z,40nm,1.3s,mb5.3
KIV Kislovodsk 68.30 310*d iP* **P 01 05 32.1 +1.2**
KIV *i* pP 01 05 51.5 +3.8
KIV pmax pmax
comp=Z,25nm,1.0s,mb5.2
ZEI Tsey 68.33 308 eP **P 01 05 29.6 -1.5**
ZEI pmax pmax
comp=Z,8.0nm,0.4s,mb5.1
FFC Flin Flon 69.10 34 eP **P 01 05 35.5 -0.1**
comp=Z,6.9nm,0.8s,mb4.6
FFC Flin Flon 69.10 34 *i* P **P 01 05 36.3 +0.6**
FCC Fort Churchill 69.20 28 eP **P 01 05 34.5 -1.8**
comp=Z,0.2nm,0.9s
GNI Garni 69.43 306 eP **P 01 05 39.0 +1.0**
comp=Z,11nm,1.0s,mb4.7
GNI Garni 69.43 306 eP **P 01 05 39.0 +1.0**
GNI pmax pmax
comp=Z,11nm,1.0s
NOA NORSAR Array B 69.92 337 P **P 01 05 40.0 -0.7**
NOA NORSAR Array B 69.92 337 P **P 01 05 40.0 -0.6**
comp=Z,9.5nm,0.7s,mb4.8,baz=37,slow=6.1,SNR=34
NOA NORSAR Array B 69.92 337 P **P 01 05 40.0 -0.6**
NOA pmax pmax
comp=Z,10.0nm,0.7s
LRM Limekiln Ridge 70.06 46 eP **P 01 05 41.7 0.0**
NAO01 NORSAR Array S 70.18 337 eP **P 01 05 41.5 -0.7**
comp=Z,3.6nm,0.6s,mb4.5
DLMT Dillon 70.27 46 eP **P 01 05 44.4 +1.3**
comp=Z,2.4nm,0.6s,mb4.3
HLID Hailey 70.43 49 eP **P 01 05 45.0 +1.0**
AKASG Malin Array Be 70.88 322 P **P 01 05 46.0 -0.6**
comp=Z,5.4nm,0.4s,mb4.8,baz=44,slow=6.0,SNR=39
AKASG Malin Array Be 70.88 322*ce*P **P 01 05 46.0 -0.7**
AKASG pmax pmax
comp=Z,5.0nm,0.4s
AKBB Malin Array Si 70.88 322 eP **P 01 05 45.7 -1.0**
KIEV Kiev 70.89 322⇑*iP* **P 01 05 45.7 -1.1**
comp=Z,12nm,0.8s,mb4.9
KIEV Kiev 70.89 322⇑*iP* **P 01 05 45.7 -1.0**
KIEV pmax pmax
comp=Z,12nm,0.8s,mb4.9
NVAR Mina Array Bea 71.40 55 P **P 01 05 51.0 +0.9**
comp=Z,0.9nm,0.4s,mb4.0,baz=291,slow=5.7,SNR=5.0
HWUT Hardware Ranch 73.30 49 eP **P 01 06 02.2 +0.9**
comp=Z,1.7nm,0.7s,mb4.1
DUG Dugway 73.52 51 eP **P 01 06 04.1 +1.5**
MIB Mutribah 74.23 296 eP **P 01 06 06.0 -0.9**
MIB AMb AMB 01 06 06.7
comp=Z,17nm,0.6s,mb5.1
MALT Malatya 74.37 308⇑*iP* **P 01 06 08.9 +1.2**
comp=Z,12nm,1.1s,mb4.7
MALT Malatya 74.37 308⇑*iP* **P 01 06 08.9 +1.3**
MALT pmax pmax
comp=Z,12nm,1.1s,mb4.7
MALT Malatya 74.37 308⇑*iP* **P 01 06 08.9 +1.3**
KWP Kalwaria Pacla 74.58 324⇑*iP* **P 01 06 08.8 +0.3**
comp=Z,8.7nm,0.4s,mb5.0
KWP Kalwaria Pacla 74.58 324⇑*iP* **P 01 06 08.8 +0.2**
KWP pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
KWP Kalwaria Pacla 74.58 324⇑*iP* **P 01 06 09.0 +0.4**
RDF Al-Radifah 74.65 295 eP **P 01 06 09.5 +0.1**
RDF AMb AMB 01 06 13.2
comp=Z,44nm,1.7s,mb5.1
NAY Al-Naaiem 74.65 296 eP **P 01 06 08.3 -1.1**
NAY AMb AMB 01 06 11.4
comp=Z,22nm,1.9s,mb4.8
BUR08 Bucovina Ar. S 74.91 322⇑*iP* **P 01 06 10.6 0.0**
ULM Lac du Bonnet 74.92 34 eP **P 01 06 10.2 -0.3**
comp=Z,4.5nm,0.8s,mb4.5
ULM Lac du Bonnet 74.92 34 P **P 01 06 10.1 -0.4**
comp=Z,3.7nm,0.6s,mb4.5,baz=319,slow=3.8,SNR=3.9
BURAR Bucovina Array 74.93 321⇑*iP* **P 01 06 10.7 +0.1**
TESR 75.05 320⇑*iP* **P 01 06 11.3 -0.1**
KOLS Kolonicke sedl 75.28 324 eP **P 01 06 12.8 +0.1**
comp=Z,2.7nm,0.7s,mb4.3
KOLS Kolonicke sedl 75.28 324 eP **P 01 06 12.8 +0.1**
KOLS pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
KOLS Kolonicke sedl 75.28 324 eP **P 01 06 12.8 +0.1**
STHS Stebnicka Huta 75.37 325 eP **P 01 06 14.0 +0.9**
comp=Z,5.0nm,0.6s,mb4.6
STHS Stebnicka Huta 75.37 325 eP **P 01 06 14.0 +0.9**
STHS pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
STHS Stebnicka Huta 75.37 325 eP **P 01 06 14.0 +0.9**
OJC Ojcow 75.37 326 eP **P 01 06 13.5 +0.4**
SRU San Rafael 75.56 50 eP **P 01 06 16.1 +1.7**
CRVS Cervenica-Dubn 75.66 324 eP **P 01 06 15.1 +0.3**
comp=Z,4.8nm,1.2s,mb4.3
CRVS Cervenica-Dubn 75.66 324 eP **P 01 06 15.1 +0.3**
CRVS pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
CRVS Cervenica-Dubn 75.66 324 eP **P 01 06 15.1 +0.3**
NIE Niedzica 75.77 325 eP **P 01 06 16.2 +0.8**
TRPA Tarpa 75.77 323⇑*iP* **P 01 06 16.2 +0.8**
MLR Muntele Rosu 76.13 320⇓*iP* **P 01 06 17.6 +0.1**
BR131 Keskin Array S 76.18 311 eP **P 01 06 18.1 +0.1**
comp=Z,3.1nm,0.7s,mb4.3
BRTR Keskin Array B 76.18 311 P **P 01 06 18.2 +0.3**
comp=Z,3.9nm,0.7s,mb4.5,baz=81,slow=3.7,SNR=23
BRTR pP pP 01 06 37.9 +2.8
comp=Z,1.4nm,0.8s,baz=32,slow=7.3,SNR=3.1
BRTR PP PP 01 09 07.9 -1.2
comp=Z,1.1nm,0.8s,baz=64,slow=5.9,SNR=4.9
BRTR Keskin Array B 76.18 311*ce*P **P 01 06 18.2 +0.2**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
KSP Ksiaz 76.31 328 eP **P 01 06 18.6 +0.1**
OKC Ostrava-Krasne 76.35 327 eP **P 01 06 18.9 +0.2**
OKC Ostrava-Krasne 76.35 327 eP **P 01 06 18.9 +0.2**
KECS Kecovo 76.40 325 eP **P 01 06 19.8 +0.8**
comp=Z,2.5nm,0.8s,mb4.2
KECS Kecovo 76.40 325 eP **P 01 06 19.8 +0.8**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KECS Kecovo 76.40 325 eP **P 01 06 19.8 +0.8**
VOIR 76.60 320⇑*iP* **P 01 06 21.2 +1.0**
MORC Moravsky Berou 76.64 327 eP **P 01 06 20.6 +0.3**
comp=Z,10nm,1.0s,mb4.7
MORC Moravsky Berou 76.64 327 eP **P 01 06 20.6 +0.2**
MORC pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MORC Moravsky Berou 76.64 327⇑*iP* **P 01 06 20.7 +0.3**
UPC Upice 76.68 328 eP **P 01 06 20.9 +0.3**
UPC Upice 76.68 328 eP **P 01 06 20.9 +0.3**
DPC Dobruska-Polom 76.68 328 eP **P 01 06 21.1 +0.5**
DPC Dobruska-Polom 76.68 328 eP **P 01 06 21.1 +0.5**
DRGR 76.69 322⇑*iP* **P 01 06 21.0 +0.3**
PSZ Piszkesteto 77.09 324 eP **P 01 06 23.1 +0.2**
comp=Z,4.1nm,0.9s,mb4.4
PSZ Piszkesteto 77.09 324 eP **P 01 06 23.1 +0.2**
PSZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
VYHS Vyhne 77.10 325 eP **P 01 06 23.4 +0.4**
comp=Z,1.7nm,0.8s,mb4.0
VYHS Vyhne 77.10 325 eP **P 01 06 23.4 +0.4**
VYHS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
VYHS Vyhne 77.10 325 eP **P 01 06 23.4 +0.4**
BRG Berggiesshubel 77.19 329 eP **P 01 06 23.3 -0.1**
comp=Z,4.0nm,1.0s,mb4.3
BRG Berggiesshubel 77.19 329 eP **P 01 06 22.9 -0.6**
comp=Z,4.0nm,1.0s,mb4.3
BRG Berggiesshubel 77.19 329 eP **P 01 06 22.9 -0.5**
BRG pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
CLL Collm 77.19 330 eP **P 01 06 23.0 -0.4**
comp=Z,9.0nm,0.8s,mb4.8
CLL Collm 77.19 330⇑*iP* **P 01 06 23.0 -0.4**
comp=Z,9.0nm,0.8s,mb4.8
CLL Collm 77.19 330⇑*iP* **P 01 06 23.0 -0.4**
CLL pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CLL Collm 77.19 330⇑*iP* **P 01 06 23.0 -0.4**
comp=Z,9.0nm,0.8s,mb4.8
KOLL Kolacno 77.22 326 eP **P 01 06 23.9 +0.3**
KOLL Kolacno 77.22 326 eP **P 01 06 23.9 +0.3**
PVCC Panska Ves 77.23 329 eP **P 01 06 24.1 +0.5**
PVCC Panska Ves 77.23 329 eP **P 01 06 24.1 +0.5**
VRAC Vranov 77.39 327⇑*iP* **P 01 06 25.2 +0.6**
SMCO Snowmass 77.52 48 eP **P 01 06 26.5 +1.0**
comp=Z,2.1nm,0.7s,mb4.2
PRU Pruhonice 77.67 329 eP **P 01 06 26.9 +0.8**
PRU Pruhonice 77.67 329 eP **P 01 06 26.9 +0.8**
CLZ Clausthal 77.70 332 eP **P 01 06 26.6 +0.3**
comp=Z,12nm,0.8s,mb4.9
CLZ Clausthal 77.70 332 eP **P 01 06 26.6 +0.3**
CLZ pmax pmax
comp=Z,12nm,0.8s,mb4.9
BZS Buzias 78.07 322⇓*iP* **P 01 06 28.1 -0.4**
TANN Tannenbergstha 78.12 330 eP **P 01 06 28.5 -0.1**
comp=Z,2.0nm,0.9s,mb4.0
WERD Werda 78.15 330 eP **P 01 06 28.5 -0.3**
comp=Z,4.0nm,1.0s,mb4.3
IBBN Ibbenburen 78.21 334 eP **P 01 06 29.0 -0.1**
comp=Z,12nm,0.6s,mb5.0
MOX Moxa 78.24 331 eP **P 01 06 29.1 -0.2**
comp=Z,5.0nm,0.8s,mb4.5
WERN Wernitzgruen 78.25 330 eP **P 01 06 29.2 -0.2**
comp=Z,4.0nm,0.6s,mb4.5
KHC Kasperske Hory 78.73 329⇑*iP* **P 01 06 32.1 +0.1**
comp=Z,5.2nm,0.7s,mb4.6
KHC Kasperske Hory 78.73 329⇑*iP* **P 01 06 32.1 +0.1**
KHC pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KHC Kasperske Hory 78.73 329 eP **P 01 06 32.3 +0.3**
ESK Eskdalemuir 78.74 341 eP **P 01 06 31.5 -0.4**
comp=Z,3.5nm,0.6s,mb4.5
ESK Eskdalemuir 78.74 341 eP **P 01 06 31.5 -0.4**
ESK pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
GEC2 GERESS Array S 78.92 328 eP **P 01 06 33.0 0.0**
WET Wettzell 78.99 329 eP **P 01 06 33.9 +0.5**
comp=Z,5.0nm,0.9s,mb4.4
WET Wettzell 78.99 329 eP **P 01 06 33.9 +0.5**
WET pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
BUG Bochum-Univer 79.11 333 eP **P 01 06 34.0 0.0**
comp=Z,9.0nm,0.9s,mb4.7
GRA1 Grafenberg Arr 79.17 330 eP **P 01 06 34.9 +0.5**
comp=Z,16nm,0.7s,mb5.1
GRF Grafenberg Arr 79.17 330 eP **P 01 06 34.9 +0.5**
comp=Z,16nm,0.7s,mb5.1
GRF Grafenberg Arr 79.17 330 eP **P 01 06 34.9 +0.5**
GRF pmax pmax
comp=Z,16nm,0.7s,mb5.1
GRF Grafenberg Arr 79.17 330 eP **P 01 06 34.9 +0.5**
GRF pmax pmax
comp=Z,16nm,0.7s,mb5.1
SDCO Great Sand Dun 79.34 48 eP **P 01 06 36.0 +0.5**
comp=Z,1.2nm,1.0s,mb3.8
VTS Vitosha 79.60 319⇑*iP* **P 01 06 37.3 +0.4**
TNS Taunus Mts 79.73 332 eP **P 01 06 37.3 -0.1**
MMAI Mount Meron Ar 79.76 305 P **P 01 06 39.0 +1.0**
comp=Z,14nm,0.8s,mb5.0,baz=34,slow=7.6,SNR=12
MEM Membach 80.23 334 P **P 01 06 40.2 +0.1**
SCHQ Schefferville 80.34 17 P **P 01 06 40.4 -0.2**
comp=Z,5.0nm,0.7s,mb4.5,baz=335,slow=4.8,SNR=7.0
FUR Furstenfeldbru 80.41 329 eP **P 01 06 41.4 +0.3**
comp=Z,14nm,0.8s,mb4.9
FUR Furstenfeldbru 80.41 329 eP **P 01 06 41.4 +0.3**
FUR pmax pmax
comp=Z,14nm,0.8s,mb4.9
BCLA Clavier 80.63 334 P **P 01 06 41.9 -0.4**
comp=Z,12nm,2.2s,mb4.5
STU Stuttgart 80.68 331 eP **P 01 06 42.7 +0.2**
comp=Z,12nm,0.8s,mb4.9
STU Stuttgart 80.68 331 eP **P 01 06 42.7 +0.1**
STU pmax pmax
comp=Z,12nm,0.8s,mb4.9
ANMO Albuquerque 80.78 51 eP **P 01 06 44.4 +1.0**
comp=Z,1.5nm,1.0s,mb3.9
ANMO Albuquerque 80.78 51 eP **P 01 06 44.4 +1.0**
ANMO pmax pmax
comp=Z,1.0nm,1.0s
SNF Seneffe 80.88 334 P **P 01 06 43.5 -0.2**
comp=Z,12nm,2.0s,mb4.5
WLF Walferdange 80.99 333 eP **P 01 06 44.5 +0.3**
comp=Z,13nm,1.2s,mb4.4
WLF Walferdange 80.99 333 eP **P 01 06 44.5 +0.3**
WLF pmax pmax
comp=Z,13nm,1.2s,mb4.7
GIVF Givet 81.06 334 eP **P 01 06 44.3 -0.3**
DOU Dourbes 81.14 334 P **P 01 06 44.8 -0.2**
comp=Z,7.3nm,2.1s,mb4.2
BAIF Baives 81.30 334 eP **P 01 06 44.9 -0.9**
BFO Black Forest 81.36 331 eP **P 01 06 46.2 0.0**
CDF Champ du Feu 81.67 332⇑*iP* **P 01 06 47.4 -0.4**
comp=Z,10.0nm,0.8s,mb4.5
CDF Champ du Feu 81.67 332⇑*iP* **P 01 06 47.4 -0.4**
comp=Z,5.0nm,0.8s,mb4.5
CDF Champ du Feu 81.67 332⇑*iP* **P 01 06 47.4 -0.4**
CDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
HINF Hinteralfeld 82.32 332⇑*iP* **P 01 06 50.2 -1.1**
comp=Z,5.4nm,0.6s,mb4.4
HINF Hinteralfeld 82.32 332⇑*iP* **P 01 06 50.2 -1.1**
comp=Z,2.7nm,0.6s,mb4.3
HINF Hinteralfeld 82.32 332⇑*iP* **P 01 06 50.2 -1.1**
HINF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
HAU Haudompre 82.34 332 eP **P 01 06 50.5 -0.9**
comp=Z,7.1nm,0.7s,mb4.4
HAU *e* MLR MLR
comp=Z,47nm,23.0s
HAU Haudompre 82.34 332 eP **P 01 06 50.5 -0.9**
comp=Z,3.5nm,0.7s,mb4.4
HAU LR LR
comp=Z,50nm,23.0s
HAU Haudompre 82.34 332 eP **P 01 06 50.5 -0.9**
HAU pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
HAU MLR MLR
comp=Z,50nm,23.0s
MEZF Maizieres J'vi 82.36 333⇑*iP* **P 01 06 51.1 -0.4**
comp=Z,16nm,1.1s,mb4.6
MEZF Maizieres J'vi 82.36 333⇑*iP* **P 01 06 51.1 -0.4**
comp=Z,16nm,1.1s,mb4.9
CABF La Chapelle 83.62 331 eP **P 01 06 57.5 -0.5**
comp=Z,7.3nm,0.9s,mb4.5
CABF La Chapelle 83.62 331 eP **P 01 06 57.5 -0.5**
comp=Z,3.7nm,0.9s,mb4.5
CABF La Chapelle 83.62 331 eP **P 01 06 57.5 -0.5**
CABF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
MNTX Cornudas Mount 83.73 53 eP **P 01 06 59.7 +0.9**
comp=Z,1.2nm,0.9s,mb4.0
LOR Lormes 83.83 333⇑*iP* **P 01 06 58.4 -0.7**
comp=Z,17nm,0.8s,mb4.9
LOR *e* MLR MLR
comp=Z,44nm,22.5s
LOR Lormes 83.83 333⇑*iP* **P 01 06 58.4 -0.7**
comp=Z,8.4nm,0.8s,mb4.9
LOR LR LR
comp=Z,40nm,22.5s
LOR Lormes 83.83 333⇑*iP* **P 01 06 58.4 -0.7**
LOR pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
LOR MLR MLR
comp=Z,40nm,22.5s
FLN La Foliniere 83.90 336⇑*iP* **P 01 06 58.5 -0.9**
comp=Z,8.6nm,0.6s,mb4.8
FLN *e* MLR MLR
comp=Z,37nm,20.0s
FLN La Foliniere 83.90 336⇑*iP* **P 01 06 58.5 -0.9**
comp=Z,4.3nm,0.6s,mb4.8
FLN LR LR
comp=Z,40nm,20.0s
FLN La Foliniere 83.90 336⇑*iP* **P 01 06 58.5 -0.9**
FLN pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
FLN MLR MLR
comp=Z,40nm,20.0s
LDF La Druitiere 83.94 336 eP **P 01 06 58.5 -1.1**
comp=Z,5.7nm,0.5s,mb4.7
LDF La Druitiere 83.94 336 eP **P 01 06 58.5 -1.1**
comp=Z,2.6nm,0.5s,mb4.7
LDF La Druitiere 83.94 336 eP **P 01 06 58.5 -1.1**
LDF pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
SSF Saint Saulge 84.13 333⇑*iP* **P 01 06 59.9 -0.7**
comp=Z,14nm,0.8s,mb4.8
SSF Saint Saulge 84.13 333⇑*iP* **P 01 06 59.9 -0.7**
comp=Z,6.9nm,0.8s,mb4.8
SSF Saint Saulge 84.13 333⇑*iP* **P 01 06 59.9 -0.7**
SSF pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
AQU L'Aquila 84.30 325 eP **P 01 07 01.9 +0.4**
comp=Z,11nm,0.8s,mb5.0
AQU L'Aquila 84.30 325 eP **P 01 07 01.9 +0.4**
AQU pmax pmax
comp=Z,11nm,0.8s,mb5.0
LPL La Plagne 84.33 330 eP **P 01 07 01.6 0.0**
LPG La Plagne 84.34 330⇑*iP* **P 01 07 01.9 +0.2**
comp=Z,11nm,0.7s,mb4.8
LPG La Plagne 84.34 330⇑*iP* **P 01 07 01.9 +0.2**
comp=Z,5.7nm,0.7s,mb4.8
LPG La Plagne 84.34 330⇑*iP* **P 01 07 01.9 +0.2**
LPG pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
GRR Gorron 84.34 336⇑*iP* **P 01 07 01.1 -0.5**
comp=Z,15nm,0.8s,mb4.9
GRR Gorron 84.34 336⇑*iP* **P 01 07 01.1 -0.5**
comp=Z,7.7nm,0.8s,mb4.9
GRR Gorron 84.34 336⇑*iP* **P 01 07 01.1 -0.5**
GRR pmax pmax

	comp=Z,8.0nm,0.8s,mb4.9								
SMF	**Signal de Mont**	**84.38**	**333**	*e*P		**P**		**01 07 01.3**	**-0.6**
	comp=Z,17nm,0.8s,mb4.9								
SMF	**Signal de Mont**	**84.38**	**333**	*e*P		**P**		**01 07 01.3**	**-0.6**
	comp=Z,8.4nm,0.8s,mb4.9								
SMF	**Signal de Mont**	**84.38**	**333**	*e*P		**P**		**01 07 01.3**	**-0.6**
SMF				pmax		pmax			
	comp=Z,8.0nm,0.8s,mb4.9								
AVF	**Avril sur Loir**	**84.42**	**333** ⇑	*i*P		**P**		**01 07 01.6**	**-0.5**
	comp=Z,24nm,0.6s,mb5.2								
AVF	**Avril sur Loir**	**84.42**	**333** ⇑	*i*P		**P**		**01 07 01.6**	**-0.5**
	comp=Z,12nm,0.6s,mb5.2								
AVF	**Avril sur Loir**	**84.42**	**333** ⇑	*i*P		**P**		**01 07 01.6**	**-0.5**
AVF				pmax		pmax			
	comp=Z,12nm,0.6s,mb5.2								
BGF	**Bois d'Agland**	**84.79**	**333**	*e*P		**P**		**01 07 03.3**	**-0.6**
SGMF	**Saint Gilles**	**84.96**	**337**	*e*P		**P**		**01 07 04.4**	**-0.4**
	comp=Z,5.6nm,0.6s,mb4.5								
SGMF	**Saint Gilles**	**84.96**	**337**	*e*P		**P**		**01 07 04.4**	**-0.4**
	comp=Z,2.8nm,0.6s,mb4.6								
SGMF	**Saint Gilles**	**84.96**	**337**	*e*P		**P**		**01 07 04.4**	**-0.4**
SGMF				pmax		pmax			
	comp=Z,3.0nm,0.6s,mb4.6								
GVD	**Gavdhos**	**84.97**	**313**	*e*P		**P**		**01 07 04.7**	**-0.3**
	comp=Z,70nm,0.8s,mb5.8								
MBDF	**Montbardon**	**84.99**	**330**	*e*P		**P**		**01 07 04.3**	**-0.7**
	comp=Z,5.7nm,0.6s,mb4.6								
MBDF	**Montbardon**	**84.99**	**330**	*e*P		**P**		**01 07 04.3**	**-0.7**
	comp=Z,2.8nm,0.6s,mb4.6								
MBDF	**Montbardon**	**84.99**	**330**	*e*P		**P**		**01 07 04.3**	**-0.7**
MBDF				pmax		pmax			
	comp=Z,3.0nm,0.6s,mb4.6								
ROSF	**Rostrenen**	**85.09**	**338**	*e*P		**P**		**01 07 05.2**	**-0.2**
	comp=Z,39nm,1.1s,mb5.2								
ROSF	**Rostrenen**	**85.09**	**338**	*e*P		**P**		**01 07 05.2**	**-0.2**
	comp=Z,20nm,1.1s,mb5.2								
ROSF	**Rostrenen**	**85.09**	**338**	*e*P		**P**		**01 07 05.2**	**-0.2**
ROSF				pmax		pmax			
	comp=Z,20nm,1.1s,mb5.2								
ORIF	**Oris-en-Rattie**	**85.15**	**331**	*e*P		**P**		**01 07 05.6**	**-0.2**
	comp=Z,14nm,0.8s,mb4.8								
ORIF				*e*MLR		MLR			
	comp=Z,31nm,20.8s								
ORIF	**Oris-en-Rattie**	**85.15**	**331**	*e*P		**P**		**01 07 05.6**	**-0.2**
	comp=Z,7.1nm,0.8s,mb4.8								
ORIF	**Oris-en-Rattie**	**85.15**	**331**	*e*P		**P**		**01 07 05.6**	**-0.2**
ORIF				pmax		pmax			
	comp=Z,7.0nm,0.8s,mb4.8								
WMOK	**Wichita Mounta**	**85.23**	**46**	*e*P		**P**		**01 07 06.2**	**-0.2**
	comp=Z,1.4nm,0.7s,mb4.2								
WMOK	**Wichita Mounta**	**85.23**	**46**	*e*P		**P**		**01 07 06.2**	**-0.2**
WMOK				pmax		pmax			
	comp=Z,1.0nm,0.7s,mb4.0								
TCF	**Toulx Ste Croi**	**85.24**	**334**	*e*P		**P**		**01 07 05.9**	**-0.3**
TIP	**Timpagrande**	**85.33**	**321**	*e*P		**P**		**01 07 06.6**	**-0.2**
	comp=Z,4.5nm,0.8s,mb4.7								
QUIF	**Quistinic**	**85.44**	**338**	*e*P		**P**		**01 07 06.4**	**-0.8**
SBF	**Sospel**	**85.47**	**329**	*e*P		**P**		**01 07 06.9**	**-0.5**
VIVF	**Saint-Julien-l**	**85.64**	**331** ⇑	*i*P		**P**		**01 07 08.0**	**-0.2**
	comp=Z,5.6nm,0.5s,mb4.8								
VIVF	**Saint-Julien-l**	**85.64**	**331** ⇑	*i*P		**P**		**01 07 08.0**	**-0.2**
	comp=Z,2.8nm,0.5s,mb4.8								
VIVF	**Saint-Julien-l**	**85.64**	**331** ⇑	*i*P		**P**		**01 07 08.0**	**-0.2**
VIVF				pmax		pmax			
	comp=Z,3.0nm,0.5s,mb4.8								
MFF	**Saint Martin d**	**85.72**	**335** ⇑	*i*P		**P**		**01 07 08.5**	**-0.1**
	comp=Z,15nm,0.8s,mb5.0								
MFF	**Saint Martin d**	**85.72**	**335** ⇑	*i*P		**P**		**01 07 08.5**	**-0.1**
	comp=Z,7.5nm,0.8s,mb5.0								
MFF	**Saint Martin d**	**85.72**	**335** ⇑	*i*P		**P**		**01 07 08.5**	**-0.1**
MFF				pmax		pmax			
	comp=Z,8.0nm,0.8s,mb5.0								
PGF	**Pioggiola**	**85.97**	**327**	*e*P		**P**		**01 07 09.5**	**-0.4**
FRF	**La Foret Royal**	**86.03**	**329**	*e*P		**P**		**01 07 09.4**	**-0.8**
PPT	**Papeete**	**86.17**	**118**	LR		LR		01 42 01.5	
	comp=Z,94nm,20.9s,baz=300,slow=33								
LMR	**La Mourre**	**86.27**	**329**	*e*P		**P**		**01 07 10.5**	**-0.9**
RJF	**Les Rejaudoux**	**86.34**	**334** ⇑	*i*P		**P**		**01 07 11.6**	**0.0**
	comp=Z,9.0nm,0.8s,mb4.7								
RJF				*e*MLR		MLR			
	comp=Z,38nm,21.2s								
RJF	**Les Rejaudoux**	**86.34**	**334** ⇑	*i*P		**P**		**01 07 11.6**	**0.0**
	comp=Z,4.5nm,0.8s,mb4.8								
RJF				LR		LR			
	comp=Z,40nm,21.3s								
RJF	**Les Rejaudoux**	**86.34**	**334** ⇑	*i*P		**P**		**01 07 11.6**	**0.0**
RJF				pmax		pmax			
	comp=Z,5.0nm,0.8s,mb4.8								
RJF				MLR		MLR			
	comp=Z,40nm,21.3s								
TXAR	**Lajitas Array**	**86.46**	**53**	P		**P**		**01 07 13.3**	**+0.8**
	comp=Z,1.1nm,0.7s,mb4.2,baz=280,slow=3.5,SNR=12								
TXAR				pP		pP		01 07 31.0	+1.1
	comp=Z,1.9nm,1.0s,baz=285,slow=2.5,SNR=5.4								
TXAR	**Lajitas Array**	**86.46**	**53**	P		**P**		**01 07 13.4**	**+0.9**
TXAR				*PP		pP		01 07 31.0	+1.1
TXAR				pmax		pmax			
	comp=Z,1.0nm,0.7s								
CAF	**Calviac**	**86.49**	**333** ⇑	*i*P		**P**		**01 07 12.8**	**+0.4**
	comp=Z,21nm,0.7s,mb5.2								
CAF	**Calviac**	**86.49**	**333** ⇑	*i*P		**P**		**01 07 12.8**	**+0.4**
	comp=Z,11nm,0.7s,mb5.2								
CAF	**Calviac**	**86.49**	**333** ⇑	*i*P		**P**		**01 07 12.8**	**+0.4**
CAF				pmax		pmax			
	comp=Z,11nm,0.7s,mb5.2								
LASF	**Ste Croix**	**86.61**	**331**	*e*P		**P**		**01 07 13.1**	**+0.1**
LFF	**La Frestale**	**86.92**	**334** ⇑	*i*P		**P**		**01 07 14.8**	**+0.3**
	comp=Z,20nm,0.8s,mb5.1								
LFF	**La Frestale**	**86.92**	**334** ⇑	*i*P		**P**		**01 07 14.8**	**+0.3**
	comp=Z,10nm,0.8s,mb5.1								
LFF	**La Frestale**	**86.92**	**334** ⇑	*i*P		**P**		**01 07 14.8**	**+0.3**
LFF				pmax		pmax			
	comp=Z,10.0nm,0.8s,mb5.1								
MTLF	**Montolieu**	**87.83**	**332**	*e*P		**P**		**01 07 19.1**	**+0.2**
EPF	**Esparros**	**88.74**	**333**	*e*P		**P**		**01 07 23.5**	**+0.3**
	comp=Z,3.2nm,0.6s,mb4.5								
EPF	**Esparros**	**88.74**	**333**	*e*P		**P**		**01 07 23.5**	**+0.3**
	comp=Z,1.6nm,0.6s,mb4.5								
EPF	**Esparros**	**88.74**	**333**	*e*P		**P**		**01 07 23.5**	**+0.3**
EPF				pmax		pmax			
	comp=Z,2.0nm,0.6s,mb4.6								
ETSF	**Etsaut**	**89.16**	**334** ⇑	*i*P		**P**		**01 07 25.7**	**+0.5**
	comp=Z,9.5nm,0.7s,mb4.9								
ETSF	**Etsaut**	**89.16**	**334** ⇑	*i*P		**P**		**01 07 25.7**	**+0.5**
	comp=Z,4.8nm,0.7s,mb4.9								
ETSF	**Etsaut**	**89.16**	**334** ⇑	*i*P		**P**		**01 07 25.7**	**+0.5**
ETSF				pmax		pmax			
	comp=Z,5.0nm,0.7s,mb5.0								
SJPF	**Ste Jean**	**89.19**	**334**	*e*P		**P**		**01 07 25.7**	**+0.4**
WVT	**Waverly**	**89.65**	**39**	*e*P		**P**		**01 07 26.7**	**-0.9**
	comp=Z,2.3nm,0.9s,mb4.5								
WVT	**Waverly**	**89.65**	**39**	*e*P		**P**		**01 07 26.7**	**-0.9**
WVT				pmax		pmax			
	comp=Z,2.0nm,0.9s,mb4.5								
ESDC	**Sonseca Array**	**93.17**	**335**	P		**P**		**01 07 43.5**	**-0.3**
	comp=Z,0.8nm,0.9s,mb4.2,baz=21,slow=3.6,SNR=6.5								
ESDC				LR		LR		01 50 20.5	
	comp=Z,43nm,21.3s,baz=25,slow=36								
VNA1	**Neumayer--Stat**	**147.71**	**198**	*e*PKPdf		PKPdf		01 14 10.9	+1.0

*ISK **09** 01:00:43.6, 38˚.22N×25˚.86E, h8km, MD3.4*
*ISCJB **09** 01:00:45.5±0.7, 38˚.26N±0˚.02×26˚.01E±0˚.03, h8km±4km, Error ellipse: s-maj=4.1km s-min=3.8km az=158.2*
*CSEM **09** 01:00:45.2±0.2, 38˚.24N×25˚.99E, h5km, ML2.7/7, Error ellipse: s-maj=4.2km s-min=4.0km az=86.0*
*DDA **09** 01:00:45.6, 38˚.26N×26˚.05E, h7km±4km, Md3.3*
*THE **09** 01:00:46.9, 38˚.30N×26˚.06E, h8km±1km, ML2.7/7, Error ellipse: s-maj=1.7km s-min=0.8km az=67.0*
*ATH **09** 01:00:55.7, 39˚.04N×25˚.73E, h10km, MD2.8/3*

ISC 09 01:00:46.2±0.6, 38˚.27N±0˚.03×26˚.02E±0˚.03, h8km±4km, n81, σ0°97/107, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.12**	**13**	P	**Pg**	**01 00 49.1**	**+0.2**
CHOS				S	**Sg**	**01 00 51.1**	**+0.4**
CHOS	**Chios island**	**0.12**	**13**	P	**Pg**	**01 00 49.1**	**+0.2**
CHOS				S	**Sg**	**01 00 51.1**	**+0.4**
URLA	**Izmir**	**0.46**	**79**	*i* P	**Pg**	**01 00 54.4**	**-0.6**
URLA				*i* S	**Sg**	**01 01 01.5**	**+0.4**
URLA	**Izmir**	**0.46**	**79**	*i* P	**Pg**	**01 00 54.4**	**-0.7**
URLA				*i* S	**Sg**	**01 01 01.5**	**+0.4**
BLCB	**Balcova**	**0.81**	**82**	*e*PG	**Pg**	**01 01 02.3**	**+0.5**
BLCB	**Balcova**	**0.81**	**82**	P	**Pg**	**01 01 01.8**	**+0.1**
BLCB				S	**Sg**	**01 01 13.3**	**+1.0**
BLCB	**Balcova**	**0.81**	**82**	P	**Pg**	**01 01 01.8**	**+0.1**
BLCB	**Balcova**	**0.81**	**82**	*e*Pg	**Pg**	**01 01 02.3**	**+0.6**
BLCB				S	**Sg**	**01 01 13.3**	**+1.0**
SIGR	**SIGRI**	**0.95**	**352**	P	**Pg**	**01 01 04.1**	**-0.3**
SIGR				S	**Sg**	**01 01 16.9**	**+0.2**
SIGR	**SIGRI**	**0.95**	**352**	P	**Pg**	**01 01 04.1**	**-0.3**
SIGR				S	**Sg**	**01 01 16.9**	**+0.2**
IZM	**Izmir**	**0.98**	**82**	*e*PN	**Pn**	**01 01 05.2**	**-1.0**
KDAG	**Bornova**	**0.99**	**82**	*i* P	**Pg**	**01 01 03.9**	**-1.2**
KDAG				*i* S	**Sg**	**01 01 17.8**	**-0.2**
KDAG	**Bornova**	**0.99**	**82**	*i* P	**Pg**	**01 01 03.9**	**-1.2**
KDAG				*i* S	**Sg**	**01 01 17.8**	**-0.2**
PRK	**Paraskevi**	**0.99**	**11**	*e*PB	**Pg**	**01 01 04.8**	**-0.8**
PRK	**Paraskevi**	**0.99**	**11**	P	**Pg**	**01 01 05.0**	**-0.2**
PRK				S	**Sg**	**01 01 18.6**	**+0.5**
PRK	**Paraskevi**	**0.99**	**11**	P	**Pg**	**01 01 05.0**	**-0.2**
PRK				S	**Sg**	**01 01 18.6**	**+0.5**
AYVA	**Ayvalik**	**1.16**	**27**	*i* P	**Pb**	**01 01 07.1**	**-1.3**
AYVA				*i* S	**Sg**	**01 01 24.3**	**+0.8**
AYVA	**Ayvalik**	**1.16**	**27**	*i* P	**Pb**	**01 01 07.1**	**-1.3**
AYVA				*i* S	**Sg**	**01 01 24.3**	**+0.8**
APE	**Apeiranthos**	**1.26**	**198**	*e*PN	**Pn**	**01 01 06.8**	**-3.2**
APE				*e*SN	**Sn**	**01 01 23.8**	**-3.3**
APE	**Apeiranthos**	**1.26**	**198**	P	**Pn**	**01 01 09.0**	**-1.0**
APE				S	**Sb**	**01 01 28.4**	**+1.9**
APE	**Apeiranthos**	**1.26**	**198**	*e*Pn	**Pn**	**01 01 06.8**	**-3.2**
APE	**Apeiranthos**	**1.26**	**198**	P	**Pn**	**01 01 09.0**	**-1.0**
APE				*e*Sn	**Sn**	**01 01 23.8**	**-3.3**
AKS	**Akhisar**	**1.53**	**66**	*e*PN	**Pn**	**01 01 14.1**	**+0.4**
AKS	**Akhisar**	**1.53**	**66**	*e*Pn	**Pn**	**01 01 14.1**	**+0.4**
AKHS	**Akhisar**	**1.53**	**66**	*i* P	**Pn**	**01 01 15.1**	**+1.4**
AKHS	**Akhisar**	**1.53**	**66**	*i* P	**Pn**	**01 01 15.1**	**+1.4**
EZN	**Ezine**	**1.57**	**9**	*e*PN	**Pn**	**01 01 13.0**	**-1.2**
EZN	**Ezine**	**1.57**	**9**	*e*Pn	**Pn**	**01 01 13.0**	**-1.3**
BODT	**Bodrum**	**1.58**	**139**	*e*PN	**Pn**	**01 01 12.4**	**-2.0**
BODT	**Bodrum**	**1.58**	**139**	*e*Pn	**Pn**	**01 01 12.4**	**-2.0**
AYDN	**Tasoluk**	**1.59**	**112**	*i* P	**Pn**	**01 01 14.4**	**-0.1**
AYDN				*i* S	**Sn**	**01 01 37.0**	**+1.8**
AYDN	**Tasoluk**	**1.59**	**112**	*i* P	**Pn**	**01 01 14.4**	**-0.1**
AYDN				*i* S	**Sn**	**01 01 37.0**	**+1.8**
MLSB	**Milas**	**1.70**	**124**	*e*PN	**Pn**	**01 01 15.2**	**-0.8**
MLSB	**Milas**	**1.70**	**124**	*e*Pn	**Pn**	**01 01 15.2**	**-0.8**
LIA	**Limnos Island**	**1.75**	**338**	*e*PB	**Pb**	**01 01 13.8**	**-4.7**
LIA	**Limnos Island**	**1.75**	**338**	P	**Pn**	**01 01 16.2**	**-0.5**
LIA				S	**Sn**	**01 01 39.0**	**-0.2**
LIA	**Limnos Island**	**1.75**	**338**	*e*Pb	**Pb**	**01 01 13.8**	**-4.7**
LIA	**Limnos Island**	**1.75**	**338**	P	**Pn**	**01 01 16.2**	**-0.5**
LIA				S	**Sn**	**01 01 39.0**	**-0.2**
ATHU	**Athens Univers**	**1.79**	**261**	P	**Pn**	**01 01 19.0**	**+1.7**
ATHU				S	**Sn**	**01 01 41.9**	**+1.7**
ATHU	**Athens Univers**	**1.79**	**261**	P	**Pn**	**01 01 19.0**	**+1.7**
AOS	**Alonnisos**	**1.90**	**299**	P	**Pn**	**01 01 18.6**	**-0.2**
AOS	**Alonnisos**	**1.90**	**299**	P	**Pn**	**01 01 18.6**	**-0.2**
GADA	**Gvkgeada**	**1.92**	**357**	*e*PN	**Pn**	**01 01 18.0**	**-1.1**
GADA	**Gvkgeada**	**1.92**	**357**	*e*Pn	**Pn**	**01 01 18.0**	**-1.1**
BALY	**Balya**	**1.92**	**40**	*i* P	**Pn**	**01 01 18.3**	**-0.8**
BALY	**Balya**	**1.92**	**40**	*i* P	**Pn**	**01 01 18.3**	**-0.8**
DAT	**Datca**	**1.98**	**141**	*e*PN	**Pn**	**01 01 18.5**	**-1.3**
DAT	**Datca**	**1.98**	**141**	*e*Pn	**Pn**	**01 01 18.5**	**-1.3**
BALB	**Balikesir**	**1.99**	**46**	*e*PN	**Pn**	**01 01 20.4**	**+0.3**
BALB	**Balikesir**	**1.99**	**46**	*e*Pn	**Pn**	**01 01 20.4**	**+0.4**
KULA	**Kula-Manisa**	**2.09**	**82**	*e*PN	**Pn**	**01 01 21.8**	**+0.5**
KULA	**Kula-Manisa**	**2.09**	**82**	*e*Pn	**Pn**	**01 01 21.8**	**+0.4**
YER	**Yerkesik**	**2.12**	**122**	*e*PN	**Pn**	**01 01 21.5**	**-0.3**
YER	**Yerkesik**	**2.12**	**122**	*e*Pn	**Pn**	**01 01 21.5**	**-0.3**
GELI	**Tayfur-Gelibol**	**2.15**	**9**	*e*PN	**Pn**	**01 01 21.3**	**-1.0**
GELI	**Tayfur-Gelibol**	**2.15**	**9**	*e*Pn	**Pn**	**01 01 21.3**	**-1.0**
LPK	**Lapseki**	**2.17**	**15**	*e*PN	**Pn**	**01 01 22.6**	**0.0**
LPK	**Lapseki**	**2.17**	**15**	*e*Pn	**Pn**	**01 01 22.6**	**0.0**
GONE	**Gonen-Balikesi**	**2.19**	**36**	*e*PN	**Pn**	**01 01 22.3**	**-0.6**
GONE	**Gonen-Balikesi**	**2.19**	**36**	*e*Pn	**Pn**	**01 01 22.3**	**-0.5**
DID	**Didima**	**2.33**	**252**	P	**Pn**	**01 01 24.7**	**0.0**
DID				S	**Sn**	**01 01 54.8**	**+1.3**
DID	**Didima**	**2.33**	**252**	P	**Pn**	**01 01 24.7**	**0.0**
DID				S	**Sn**	**01 01 54.8**	**+1.3**
ERIK	**Erikli-Kesan**	**2.43**	**9**	*e*PN	**Pn**	**01 01 25.4**	**-0.6**
ERIK	**Erikli-Kesan**	**2.43**	**9**	*e*Pn	**Pn**	**01 01 25.4**	**-0.6**
ENEZ	**Enez**	**2.46**	**2**	*e*PN	**Pn**	**01 01 25.8**	**-0.8**
ENEZ	**Enez**	**2.46**	**2**	*e*Pn	**Pn**	**01 01 25.8**	**-0.7**
BNT	**Bandirma**	**2.55**	**35**	*e*PN	**Pn**	**01 01 28.4**	**+0.7**
RKY	**Sarkoy-Tekirda**	**2.57**	**20**	*e*PN	**Pn**	**01 01 28.5**	**+0.5**
RKY	**Sarkoy-Tekirda**	**2.57**	**20**	*e*Pn	**Pn**	**01 01 28.5**	**+0.5**
ALN	**Alexandroupoli**	**2.62**	**0**	P	**Pn**	**01 01 27.9**	**-0.8**
ALN				S	**Sn**	**01 02 00.5**	**-0.2**
ALN	**Alexandroupoli**	**2.62**	**0**	P	**Pn**	**01 01 27.9**	**-0.8**
ALN				S	**Sn**	**01 02 00.5**	**-0.2**
KCTX	**Karacabey (Bur**	**2.69**	**42**	*e*PN	**Pn**	**01 01 30.6**	**+0.9**
KCTX	**Karacabey (Bur**	**2.69**	**42**	*e*Pn	**Pn**	**01 01 30.6**	**+0.9**
MFT	**Murefte**	**2.69**	**21**	*e*PN	**Pn**	**01 01 30.4**	**+0.7**
MFT	**Murefte**	**2.69**	**21**	*e*Pn	**Pn**	**01 01 30.4**	**+0.7**
KHL	**Karahalli**	**2.75**	**88**	*e*PN	**Pn**	**01 01 31.8**	**+1.3**
KHL	**Karahalli**	**2.75**	**88**	*e*Pn	**Pn**	**01 01 31.8**	**+1.3**
ARMT	**Armutlu**	**3.18**	**43**	*e*PN	**Pn**	**01 01 37.7**	**+1.4**
ARMT	**Armutlu**	**3.18**	**43**	*e*Pn	**Pn**	**01 01 37.7**	**+1.4**
YLV	**Yalova**	**3.46**	**47**	*e*PN	**Pn**	**01 01 41.9**	**+1.7**
YLV	**Yalova**	**3.46**	**47**	*e*Pn	**Pn**	**01 01 41.9**	**+1.6**

*ISCJB **09** 01:26:39.6±0.5, 50˚.10N±0˚.03×18˚.38E±0˚.03, h0km, Error ellipse: s-maj=4.4km s-min=3.0km az=10.4*
*CSEM **09** 01:26:40.3±0.3, 50˚.10N×18˚.41E, h1km, ML2.5/8, Error ellipse: s-maj=5.0km s-min=3.5km az=3.0*
*IPEC **09** 01:26:40.6±0.2, 50˚.05N×18˚.47E, h2km±2km, ML1.7/4, Error ellipse: s-maj=2.1km s-min=1.1km az=160.0*
*WAR **09** 01:26:40.4, 50˚.06N×18˚.43E*
*PRU **09** 01:26:41.7, 50˚.06N×18˚.38E, h0km*

ISC 09 01:26:40.9±0.5, 50˚.08N±0˚.03×18˚.39E±0˚.03, h0km, n27, σ1°02/43, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.12**	**272**	*e*Pg	**Pg**	**01 26 44.5**	**+1.3**
RAC				*e*Sg	**Sg**	**01 26 47.6**	**+2.7**
OKC	**Ostrava-Krasne**	**0.29**	**213**	*e*PG	**Pg**	**01 26 46.9**	**+0.6**
OKC				*e*SG	**Sg**	**01 26 50.4**	**+0.4**
	comp=Z,42nm,0.5s						
OKC	**Ostrava-Krasne** baz=44	**0.29**	**213**	*e*Pg	**Pg**	**01 26 46.8**	**+0.5**
OKC				Sg	**Sg**	**01 26 50.4**	**+0.4**
	comp=Z,42nm,0.5s						
MORC	**Moravsky Berou** baz=65	**0.62**	**241**	*e*Pg	**Pg**	**01 26 53.0**	**+0.2**
MORC				*e*Sg	**Sg**	**01 27 01.5**	**+0.6**
	comp=Z,10nm,0.2s,baz=65						
OJC	**Ojcow**	**0.92**	**81**	*e*Pg	**Pg**	**01 26 57.6**	**-0.8**
OJC				*e*Sg	**Sg**	**01 27 10.2**	**-0.1**
OJC	**Ojcow** baz=259	**0.92**	**81**	*e*Pg	**Pg**	**01 26 57.5**	**-0.9**
JAVC	**Velka Javorina** comp=Z,10nm,0.5s	**1.31**	**201**	*e*Sg	**Sg**	**01 27 25.2**	**+2.4**
DPC	**Dobruska-Polom**	**1.35**	**282**	*e*PG	**Pg**	**01 27 06.5**	**-0.3**
DPC				*e*SG	**Sg**	**01 27 25.1**	**+0.7**
	comp=Z,21nm,0.5s						
DPC	**Dobruska-Polom**	**1.35**	**282**	Pg	**Pg**	**01 27 06.5**	**-0.3**
DPC				Sg	**Sg**	**01 27 25.1**	**+0.7**
	comp=Z,21nm,0.5s						
VRAC	**Vranov**	**1.40**	**237**	*e*Pg	**Pg**	**01 27 06.9**	**-0.7**
VRAC				*e*Sg	**Sg**	**01 27 25.5**	**-0.2**
	comp=Z,6.5nm,0.2s,baz=58						
NIE	**Niedzica**	**1.41**	**117**	*e*Pg	**Pg**	**01 27 07.5**	**-0.4**
NIE				*e*Sg	**Sg**	**01 27 26.9**	**+0.7**
KOLL	**Kolacno**	**1.50**	**180**	*e*SN	**Sn**	**01 27 28.9**	**-0.3**
KOLL	**Kolacno**	**1.50**	**180**	*e*Sn	**Sn**	**01 27 28.9**	**-0.3**
KOLL	**Kolacno**	**1.50**	**180**	*e*Sn	**Sn**	**01 27 28.9**	**-0.3**
KSP	**Ksiaz**	**1.54**	**301**	*e*Pg	**Pg**	**01 27 10.6**	**+0.2**
KSP				*e*Sg	**Sg**	**01 27 31.1**	**+0.7**
UPC	**Upice**	**1.58**	**287**	*e*SG	**Sg**	**01 27 32.3**	**+0.6**
UPC	**Upice**	**1.58**	**287**	Sg	**Sg**	**01 27 32.3**	**+0.6**
VYHS	**Vyhne**	**1.61**	**169**	*e*PN	**Pn**	**01 27 10.1**	**-0.4**
VYHS				*e*SN	**Sn**	**01 27 30.8**	**-1.2**
VYHS	**Vyhne**	**1.61**	**169**	*e*Pn	**Pn**	**01 27 10.1**	**-0.4**
VYHS				*e*Sn	**Sn**	**01 27 30.8**	**-1.2**
KRUC	**Moravsky** baz=53	**1.65**	**233**	*e*Pn	**Pn**	**01 27 10.9**	**-0.1**
KRUC				*e*Sg	**Sg**	**01 27 33.1**	**-0.7**
	comp=Z,7.7nm,0.2s,baz=53						
STHS	**Stebnicka Huta**	**1.97**	**109**	*e*PN	**Pn**	**01 27 18.3**	**+2.9**
STHS				*e*SN	**Sn**	**01 27 44.9**	**+4.2**
STHS	**Stebnicka Huta**	**1.97**	**109**	*e*Pn	**Pn**	**01 27 18.3**	**+2.9**

PRU	**Pruhonice**	**2.48**	**269**	*e*SG		**Sg**		**01 27 59.3**	**-1.2**
	comp=Z,2.3nm,0.3s								
PRU	**Pruhonice**	**2.48**	**269**	Sg		**Sg**		**01 27 59.3**	**-1.2**
	comp=Z,2.3nm,0.3s								
BRG	**Berggiesshubel**	**2.95**	**287**	SG		**Sg**		**01 28 14.1**	**-1.4**
	comp=Z,2.5nm,0.5s								
KHC	**Kasperske Hory**	**3.27**	**255**	*e*PN		**Pn**		**01 27 32.0**	**-1.3**
KHC				*e*PG		**Pg**		**01 27 43.5**	**0.0**
KHC				*e*SG		**Sg**		**01 28 24.2**	**-1.6**
	comp=Z,4.3nm,0.4s								
KHC	**Kasperske Hory**	**3.27**	**255**	Pn		**Pn**		**01 27 32.0**	**-1.3**

DJA 09 01:26:56, 0˚.66S×123˚.12E, h73km, MLv3.7/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.52**	**223**	P	Pn	01 27 09.9	+0.7
LUWI				S	Sn	01 27 21.3	+2.3
KMSI	**Cibinong**	**1.50**	**35**	P	Pn	01 27 20.7	-0.4
MRSI	**Marisa**	**1.63**	**314**	P	Pn	01 27 24.3	+1.5
MNI	**Manado**	**2.71**	**39**	P	Pn	01 27 38.1	+0.8
TOLI	**Toli-Toli**	**2.92**	**307**	P	Pn	01 27 40.3	+0.1
KDI	**Kendari**	**3.31**	**189**	P	Pn	01 27 47.2	+1.7
TTSI	**Tana Toraja**	**4.06**	**234**	P	Pn	01 27 54.0	-1.7

*SOF **09** 01:29:03.7, 39˚.48N×25˚.12E, h18km, MD2.6*
*ATH **09** 01:29:04.0, 39˚.28N×23˚.79E, h23km±1km, MD3.2/10*
*ISCJB **09** 01:29:04.5±0.5, 39˚.23N±0˚.03×23˚.87E±0˚.04, h18km±4km, Error ellipse: s-maj=6.3km s-min=4.2km az=31.9*
*CSEM **09** 01:29:04.6±0.1, 39˚.25N×23˚.82E, h12km, ML2.9/6, Error ellipse: s-maj=3.9km s-min=2.5km az=123.0*
*NEIC **09** 01:29:04.0, 39˚.28N×23˚.79E, h23km, MD3.2(ATH), After ATH.*
*THE **09** 01:29:05.2, 39˚.26N×23˚.78E, h9km, ML2.9/6, Error ellipse: s-maj=1.0km s-min=0.6km az=123.0*

ISC 09 01:29:04.6±0.5, 39˚.22N±0˚.03×23˚.84E±0˚.04, h14km±3km, n56, σ0°83/80, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.06**	**148**	P	**Pg**	**01 29 07.7**	**+0.3**
AOS				S	**Sg**	**01 29 09.5**	**+0.1**
AOS	**Alonnisos**	**0.06**	**148**	P	**Pg

TOS	Tosya	1.94	145	ePn		Pn	01 53 43.3	-0.1
BYBT	Boyabat	2.02	125	ePN		Pn	01 53 44.1	-0.3
BYBT	Boyabat	2.02	125	ePn		Pn	01 53 44.1	-0.3
SEV	Sevastopol'	2.07	23	eP		Pn	01 53 45.8	+0.6
SEV				e			01 54 09.9	
SEV	Sevastopol'	2.07	23	eP		Pn	01 53 45.8	+0.6
SEV				eS		Sn	01 54 09.9	-1.2
SGKT	Sivrigoynuk	2.10	190	iP		Pn	01 53 45.0	-0.5
SGKT	Sivrigoynuk	2.10	190	iP		Pn	01 53 45.0	-0.5
BOYT	Boyabat	2.13	124	iP		Pn	01 53 48.1	+2.1
BOYT	Boyabat	2.13	124	iP		Pn	01 53 48.1	+2.1
CANT	Cankiri	2.18	158	ePN		Pn	01 53 47.2	+0.5
YAL	Yalta	2.18	32	⇓iP		Pn	01 53 47.5	+0.8
YAL				i			01 54 12.0	
YAL	Yalta	2.18	32	iP		Pn	01 53 47.5	+0.8
YAL				iS		Sn	01 54 12.9	-1.0
HENT	Hendek	2.20	215	iP		Pn	01 53 45.4	-1.5
HENT	Hendek	2.20	215	iP		Pn	01 53 45.4	-1.5
ELDT	Eldivan	2.24	163	iP		Pg	01 53 47.9	-5.3
ELDT				iS		Sg	01 54 13.4	-8.7
ELDT	Eldivan	2.24	163	iP		Pg	01 53 47.9	-5.2
ELDT				iS		Sg	01 54 13.4	-8.8
MDU	Mudurnu	2.39	205	ePN		Pn	01 53 50.3	+0.7
MDU	Mudurnu	2.39	205	ePn		Pn	01 53 50.3	+0.7
ALU	Alushta	2.44	33	⇓iP		Pn	01 53 51.1	+0.8
ALU				e			01 54 19.2	
ALU	Alushta	2.44	33	iP		Pn	01 53 51.1	+0.8
ALU				eS		Sn	01 54 19.2	-1.1
SIM	Simferopol'	2.57	26	ceP		Pn	01 53 53.4	+1.3
SIM				S		Sn	01 54 23.0	-0.5
SIM				pmax	pmax			
	comp=Z,8.0nm,0.7s							
SIM				MLR	MLR			
	comp=Z,23nm,9.1s							
SIM	Simferopol'	2.57	26	eP		Pn	01 53 53.4	+1.3
	comp=Z,8.0nm,0.7s							
SIM				S		Sn	01 54 23.0	-0.5
	comp=Z,23nm,9.1s							
SPNC	Sapanca-Adapaz	2.58	222	ePN		Pn	01 53 52.2	+0.1
SPNC	Sapanca-Adapaz	2.58	222	ePn		Pn	01 53 52.2	+0.1
CTKT	Corum	2.62	139	iP		Pn	01 53 53.8	+1.1
CTKT	Corum	2.62	139	iP		Pn	01 53 53.8	+1.1
SILT	Sile	2.63	237	ePN		Pn	01 53 52.5	-0.4
SILT	Sile	2.63	237	ePn		Pn	01 53 52.5	-0.4
GULT	Gulveren	2.68	216	ePN		Pn	01 53 54.4	+0.8
GULT	Gulveren	2.68	216	ePn		Pn	01 53 54.4	+0.8
LOD	Lodumlu	2.75	177	ePN		Pn	01 53 55.4	+0.9
LOD	Lodumlu	2.75	177	ePn		Pn	01 53 55.4	+0.9
HRT	Hereke	2.82	231	ePN		Pn	01 53 55.3	-0.2
HRT	Hereke	2.82	231	ePn		Pn	01 53 55.3	-0.2
SUDU	Sudak	2.86	37	⇓iP		Pn	01 53 56.7	+0.6
SUDU				e			01 54 29.3	
SUDU	Sudak	2.86	37	iP		Pn	01 53 56.7	+0.6
SUDU				eS		Sn	01 54 29.3	-1.4
GPA	Golpazari	2.89	216	ePN		Pn	01 53 56.9	+0.5
GPA	Golpazari	2.89	216	ePn		Pn	01 53 56.9	+0.5
CORM	Corum	2.91	147	ePN		Pn	01 53 57.1	+0.4
CORM	Corum	2.91	147	ePn		Pn	01 53 57.1	+0.4
KLYT	Kilyos	2.96	243	ePN		Pn	01 53 57.0	-0.5
KLYT	Kilyos	2.96	243	ePn		Pn	01 53 57.0	-0.4
BR131	Keskin Array S	3.02	164	ePn		Pn	01 53 57.6	-0.6
BR131				ePg		Pg	01 54 05.1	-2.9
BR131				eSg		Sg	01 54 46.5	-0.7
BR131	Keskin Array S	3.02	164	ePn		Pn	01 53 57.6	-0.6
BRTR	Keskin Array B	3.02	164	Pn		Pn	01 53 57.9	-0.3
	comp=Z,1.3nm,0.3s,baz=334,slow=11,SNR=59							
BRTR				Pg		Pg	01 54 04.5	-3.5
	comp=Z,11nm,0.3s,baz=332,slow=16,SNR=112							
BRTR				Sn		Sn	01 54 32.6	-2.0
	comp=Z,6.6nm,0.3s,baz=139,slow=26,SNR=7.5							
BRTR				Lg			01 54 44.8	
	comp=Z,6.7nm,0.3s,baz=347,slow=31,SNR=5.9							
BRTR	Keskin Array B	3.02	164	eP		Pn	01 53 57.9	-0.3
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
BRTR	Keskin Array B	3.02	164	eP		Pn	01 53 57.9	-0.3
	comp=Z,1.0nm,0.3s							
ADVT	Abdulvahap	3.05	225	ePN		Pn	01 53 59.3	+0.6
ADVT	Abdulvahap	3.05	225	ePn		Pn	01 53 59.3	+0.6
BBAL	Bala	3.12	172	iP		Pn	01 54 06.1	+6.5
YLV	Yalova	3.16	230	ePN		Pn	01 54 00.5	+0.4
YLV	Yalova	3.16	230	ePn		Pn	01 54 00.5	+0.4
CAVI	Cavuskoy	3.17	221	ePN		Pn	01 54 00.9	+0.6
CAVI	Cavuskoy	3.17	221	ePn		Pn	01 54 01.0	+0.7
BGKT	Bogazkoy	3.18	244	ePN		Pn	01 53 59.7	-0.7
BGKT	Bogazkoy	3.18	244	ePn		Pn	01 53 59.7	-0.7
SVRH	Sivrihisar-ESK	3.28	194	ePN		Pn	01 54 03.1	+1.3
SVRH	Sivrihisar-ESK	3.28	194	ePn		Pn	01 54 03.1	+1.3
CDAG	Cicekdag	3.31	155	iP		Pn	01 54 02.5	+0.3
CDAG	Cicekdag	3.31	155	iP		Pn	01 54 02.5	+0.3
CTKS	Kestanelik-??a	3.33	246	ePN		Pn	01 54 01.8	-0.7
CTKS	Kestanelik-??a	3.33	246	ePn		Pn	01 54 01.8	-0.7
ESKT	Eskisehir	3.37	203	ePN		Pn	01 54 04.0	+1.0
ESKT	Eskisehir	3.37	203	ePn		Pn	01 54 04.0	+1.0
KAMT	Kaman	3.38	165	ePN		Pn	01 54 04.3	+1.1
KAMT	Kaman	3.38	165	ePn		Pn	01 54 04.3	+1.1
CTYL	Yal??k??y-??at	3.38	251	ePN		Pn	01 54 02.4	-0.8
CTYL	Yal??k??y-??at	3.38	251	ePn		Pn	01 54 02.4	-0.8
ARMT	Armutlu	3.46	234	ePN		Pn	01 54 04.3	+0.1
ARMT	Armutlu	3.46	234	ePn		Pn	01 54 04.3	+0.1
SLVT	Silivri	3.53	248	ePN		Pn	01 54 05.0	-0.2
SLVT	Silivri	3.53	248	ePn		Pn	01 54 05.0	-0.3
MDNY	Mudanya-Bursa	3.57	232	ePN		Pn	01 54 05.8	+0.1
MDNY	Mudanya-Bursa	3.57	232	ePn		Pn	01 54 05.8	0.0
YOZ	Yozgat	3.65	144	ePN		Pn	01 54 07.5	+0.6
YOZ	Yozgat	3.65	144	ePn		Pn	01 54 07.5	+0.6
CVD	Cernavoda	3.69	299	⇑P		Pn	01 54 08.2	+0.7
CVD	Cernavoda	3.69	299	⇑iP		Pn	01 54 08.2	+0.7
CVD	Cernavoda	3.69	299	P		Pn	01 54 08.2	+0.7
TLCR		3.71	315	⇓P		Pn	01 54 07.6	-0.2
TLCR				S		Sn	01 54 48.5	-3.1
TLCR		3.71	315	⇓iP		Pn	01 54 07.6	-0.2
TLCR		3.71	315	S		Sn	01 54 48.5	-3.2
TLCR		3.71	315	P		Pn	01 54 07.6	-0.2
TLCR				S		Sn	01 54 48.5	-3.2
TOKT	Tokat	3.79	126	ePN		Pn	01 54 09.0	+0.2
TOKT	Tokat	3.79	126	ePn		Pn	01 54 09.0	+0.3
KIZT	Kizilcal	3.79	188	ePN		Pn	01 54 10.1	+1.3
KIZT	Kizilcal	3.79	188	ePn		Pn	01 54 10.1	+1.3
KCTX	Karacabey (Bur	3.95	235	ePN		Pn	01 54 11.2	+0.2
KCTX	Karacabey (Bur	3.95	235	ePn		Pn	01 54 11.2	+0.2
ALT	Altintas	4.03	208	ePN		Pn	01 54 13.0	+0.9
ALT	Altintas	4.03	208	ePn		Pn	01 54 13.0	+0.9
CFR	Carcaliu	4.08	310	⇑P		Pn	01 54 12.8	+0.1
CFR	Carcaliu	4.08	310	⇑iP		Pn	01 54 12.8	0.0
CFR	Carcaliu	4.08	310	P		Pn	01 54 12.8	0.0
CFR				S		Sn	01 54 57.9	-2.8
ANN	Anapa	4.14	57	eP		Pn	01 54 13.3	-0.3
ANN				iS		Sn	01 54 58.6	-3.6
ANN				pmax	pmax			
	comp=Z,16nm,0.5s							
ANN				smax				
	comp=N,65nm,0.6s							
ANN				smax				
	comp=E,86nm,0.6s							
ANN	Anapa	4.14	57	eP		Pn	01 54 13.3	-0.3
	comp=E,16nm,0.5s							
ANN				iS		Sn	01 54 58.6	-3.6
SVSK	Karacayir	4.31	128	ePN		Pn	01 54 16.6	+0.6
SVSK	Karacayir	4.31	128	ePn		Pn	01 54 16.6	+0.6
JMB	Yambol	4.42	270	P		Pn	01 54 18.4	+1.0
JMB	Yambol	4.42	270	P		Pn	01 54 18.4	+1.0
PETR		4.92	311	⇓P		Pn	01 54 24.7	+0.4
PETR		4.92	311	⇓iP		Pn	01 54 24.7	+0.4
PETR		4.92	311	⇓P		Pn	01 54 24.7	+0.4
SULR		5.01	296	⇑P		Pn	01 54 26.5	+1.0
SULR		5.01	296	⇑iP		Pn	01 54 26.5	+1.0
SULR		5.01	296	⇑P		Pn	01 54 26.5	+1.0
ALN	Alexandroupoli	5.17	253	P		Pn	01 54 27.0	-0.8
ALN	Alexandroupoli	5.17	253	P		Pn	01 54 27.0	-0.8
VRI	Vrincioaia	5.29	310	⇓P		Pn	01 54 30.7	+1.3
VRI	Vrincioaia	5.29	310	⇓iP		Pn	01 54 30.7	+1.4
VRI	Vrincioaia	5.29	310	P		Pn	01 54 30.7	+1.4
PLOR	Plostina	5.32	309	⇑P		Pn	01 54 31.1	+1.3
PLOR	Plostina	5.32	309	⇑iP		Pn	01 54 31.0	+1.2
PLOR	Plostina	5.32	309	P		Pn	01 54 31.1	+1.3
MLR	Muntele Rosu	5.55	303	⇓P		Pn	01 54 34.0	+1.1
MLR	Muntele Rosu	5.55	303	Pn		Pn	01 54 34.1	+1.2
	comp=E,0.8nm,0.3s,baz=325,slow=19,SNR=13							
MLR				Sn		Sn	01 55 35.6	-1.3
	comp=E,5.6nm,0.3s,baz=142,slow=20,SNR=10.0							
MLR	Muntele Rosu	5.55	303	P		Pn	01 54 34.1	+1.1
MLR							01 55 35.6	
MLR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
MLR				smax				
	comp=N,6.0nm,0.3s							
MLR	Muntele Rosu	5.55	303	⇓iP		Pn	01 54 34.0	+1.0
MLR	Muntele Rosu	5.55	303	⇓P		Pn	01 54 34.0	+1.0
MLR				S		Sn	01 55 35.6	-1.3
	comp=N,6.0nm,0.3s							
TESR		5.73	315	⇑P		Pn	01 54 35.5	+0.1
TESR		5.73	315	⇑iP		Pn	01 54 35.5	+0.1
TESR		5.73	315	S		Sn	01 55 37.3	-3.9
TESR		5.73	315	⇑P		Pn	01 54 35.5	+0.1
PRK	Paraskevi	5.84	237	P		Pn	01 54 37.3	+0.3
PRK	Paraskevi	5.84	237	P		Pn	01 54 37.3	+0.3
PLD	Plovdiv	5.84	267	P		Pn	01 54 36.2	-0.8
PLD	Plovdiv	5.84	267	P		Pn	01 54 36.2	-0.8
VOIR		6.09	300	⇑P		Pn	01 54 41.4	+1.0
VOIR		6.09	300	⇑iP		Pn	01 54 41.4	+1.0
VOIR		6.09	300	P		Pn	01 54 41.4	+1.0
DOPR	Dopca	6.13	305	⇑iP		Pn	01 54 41.4	+0.5
DOPR	Dopca	6.13	305	⇑iP		Pn	01 54 41.4	+0.5
LIA	Limnos Island	6.19	246	P		Pn	01 54 41.6	-0.2
LIA	Limnos Island	6.19	246	P		Pn	01 54 41.6	-0.2
KAVA	Kavala	6.23	257	P		Pn	01 54 41.5	-0.8
KAVA	Kavala	6.23	257	P		Pn	01 54 41.5	-0.8
OUR	Ouranopolis	6.84	253	P		Pn	01 54 49.6	-1.1
OUR	Ouranopolis	6.84	253	P		Pn	01 54 49.6	-1.1
SRS	Serrai	6.86	260	P		Pn	01 54 50.2	-0.8
SRS	Serrai	6.86	260	P		Pn	01 54 50.2	-0.8
VTS	Vitosha	6.90	273	⇓P		Pn	01 54 52.9	+1.4
VTS	Vitosha	6.90	273	P		Pn	01 54 52.5	+1.0
VTS	Vitosha	6.90	273	⇓iP		Pn	01 54 52.9	+1.4
VTS	Vitosha	6.90	273	S		Sn	01 56 05.0	-5.1
VTS	Vitosha	6.90	273	P		Pn	01 54 52.9	+1.4
SOH	Sokhos	7.12	258	P		Pn	01 54 53.6	-0.9
SOH	Sokhos	7.12	258	P		Pn	01 54 53.6	-0.9
BURAR	Bucovina Array	7.19	316	⇓P		Pn	01 54 55.8	+0.3
BURAR	Bucovina Array	7.19	316	⇓iP		Pn	01 54 55.8	+0.3
BURAR	Bucovina Array	7.19	316	⇓P		Pn	01 54 55.8	+0.3
PAIG	Paliouri	7.21	251	P		Pn	01 54 55.0	-0.8
PAIG	Paliouri	7.21	251	P		Pn	01 54 55.0	-0.8
BUR08	Bucovina Ar. S	7.22	316	ePn		Pn	01 54 55.2	-0.6
BUR08				eSn		Sn	01 56 10.9	-7.0
BUR08	Bucovina Ar. S	7.22	316	ePn		Pn	01 54 55.2	-0.6
KIV	Kislovodsk	7.51	76	eP		Pn	01 55 03.6	+3.8
GZR	Gura Zlata	7.57	295	⇑P		Pn	01 55 01.9	+1.2
GZR	Gura Zlata	7.57	295	⇑iP		Pn	01 55 01.9	+1.2
GZR	Gura Zlata	7.57	295	⇑P		Pn	01 55 01.9	+1.2
GRG	Griva	7.77	261	P		Pn	01 55 02.5	-1.0
GRG	Griva	7.77	261	P		Pn	01 55 02.5	-1.0
BOLS	Boljevac	7.83	282	ePn		Pn	01 55 04.6	+0.3
BARS	Barje	7.91	275	ePn		Pn	01 55 06.7	+1.3
DRGR		8.15	304	⇓P		Pn	01 55 08.7	+0.1
DRGR		8.15	304	⇓iP		Pn	01 55 08.7	+0.1
DRGR		8.15	304	P		Pn	01 55 08.7	+0.1
ZEI	Tsey	8.36	85	eP		Pn	01 55 18.4	+6.9
ZEI				pmax	pmax			
	comp=Z,10.0nm,0.5s							
KIEV	Kiev	8.38	345	ePn		Pn	01 55 08.7	-3.1
KIEV				eSn		Sn	01 56 37.8	-8.7
AKASG	Malin Array Be	8.38	345	Pn		Pn	01 55 09.8	-2.0
AKASG				Sn		Sn	01 56 37.7	-8.9
AKASG	Malin Array Be	8.38	345	Pn		Pn	01 55 09.8	-2.0
	comp=Z,3.0nm,0.3s,baz=152,slow=13,SNR=10.0							
AKASG				Sn		Sn	01 56 37.7	-8.9
	comp=Z,5.8nm,0.3s,baz=157,slow=24,SNR=12							
AKASG	Malin Array Be	8.38	345	eP		Pn	01 55 10.9	-0.9
AKASG				pmax	pmax			
	comp=Z,3.0nm,0.3s							
AKASG	Malin Array Be	8.38	345	Pn		Pn	01 55 09.8	-2.0
AKASG	Malin Array Be	8.38	345	eP		Pn	01 55 10.9	-0.9
	comp=Z,3.0nm,0.3s							
BZS	Buzias	8.41	294	⇑P		Pn	01 55 12.3	0.0
BZS	Buzias	8.41	294	⇑iP		Pn	01 55 12.3	0.0
BZS	Buzias	8.41	294	P		Pn	01 55 12.3	0.0
THL	Klokotos Trika	8.53	252	P		Pn	01 55 13.4	-0.5
THL	Klokotos Trika	8.53	252	P		Pn	01 55 13.4	-0.5
AGG	Agios Georgios	8.55	248	P		Pn	01 55 14.1	-0.1
AGG	Agios Georgios	8.55	248	P		Pn	01 55 14.1	-0.1
DIVS	Divibare	9.27	283	P		Pn	01 55 23.5	-0.5
DIVS	Divibare	9.27	283	P		Pn	01 55 23.5	-0.5
DIVS	Divibare	9.27	283	⇓iPn		Pn	01 55 24.0	0.0
KOLS	Kolonicke sedl	9.55	315	ePn		Pn	01 55 28.8	+1.0
KOLS	Kolonicke sedl	9.55	315	ePN		Pn	01 55 28.8	+1.0
KOLS	Kolonicke sedl	9.55	315	eP		Pn	01 55 28.8	+1.0
VSR	Storozhevoye	9.70	25	eP		Pn	01 55 29.7	-0.1
VSR				eS		Sn	01 57 15.4	-3.4
VSR				pmax	pmax			
	comp=N,3.0nm,0.4s							
VSR				pmax	pmax			
	comp=E,2.0nm,0.4s							
VSR				pmax	pmax			
	comp=Z,8.0nm,0.4s							
VSR				smax				
	comp=N,30nm,1.0s							
VSR				smax				
	comp=E,30nm,1.0s							
VSR				smax				
	comp=Z,3.0nm,0.3s							
VSR	Storozhevoye	9.70	25	eP		Pn	01 55 29.7	-0.1
MMAI	Mount Meron Ar	9.87	166	Pn		Pn	01 55 32.5	+0.3
	comp=Z,0.7nm,0.3s,baz=350,slow=13,SNR=2.6							
CRVS	Cervenica-Dubn	9.96	313	ePn		Pn	01 55 34.6	+1.2
CRVS	Cervenica-Dubn	9.96	313	ePN		Pn	01 55 34.5	+1.1
CRVS	Cervenica-Dubn	9.96	313	eP		Pn	01 55 34.6	+1.2
KECS	Kecovo	10.28	309	eSN		Sn	01 57 28.4	-4.8
STHS	Stebnicka Huta	10.38	315	ePn		Pn	01 55 39.5	+0.4
STHS				e			01 57 29.3	
STHS	Stebnicka Huta	10.38	315	ePN		Pn	01 55 39.5	+0.4
STHS				eSN		Sn	01 57 29.3	-6.2
STHS	Stebnicka Huta	10.38	315	eP		Pn	01 55 39.5	+0.4
VRHR	Novokhopersk	10.49	33	eP		Pn	01 55 42.7	+2.1
VRHR				e			01 57 32.4	
VRHR				pmax	pmax			
	comp=E,10.0nm,0.5s							
VRHR				pmax	pmax			
	comp=Z,10.0nm,0.5s							
VRHR				pmax	pmax			
	comp=N,2.0nm,0.2s							
VRHR	Novokhopersk	10.49	33	eP		Pn	01 55 42.7	+2.1
	comp=N,2.0nm,0.2s							
VYHS	Vyhne	11.25	306	ePn		Pn	01 55 54.2	+3.1
VYHS				eSn		Sn	01 57 43.6	-13
VYHS	Vyhne	11.25	306	ePN		Pn	01 55 54.2	+3.1
VYHS				eSN		Sn	01 57 43.6	-13
OBN	Obninsk	12.76	10	iP		Pn	01 56 11.6	-0.1
OBN	Obninsk	12.76	10	iP		Pn	01 56 11.6	-0.1
MBDF	Montbardon	18.74	285	eP		Pn	01 57 24.8	-4.8
	comp=N,26nm,1.2s							
MBDF	Montbardon	18.74	285	eP		Pn	01 57 24.8	-4.8
	comp=N,13nm,1.2s							
MBDF	Montbardon	18.74	285	eP		Pn	01 57 24.8	-4.8
MBDF				pmax	pmax			
	comp=Z,13nm,1.2s							
LPL	La Plagne	18.75	288	eP		Pn	01 57 29.1	-0.6
LPL	La Plagne	18.75	288	eP		Pn	01 57 29.1	-0.6
AKTK	Aktyubinsk	19.11	57	Pn		Pn	01 57 33.3	-0.7
AKTK	Aktyubinsk	19.11	57	P		Pn	01 57 33.3	-0.7
AKTO	Aktyubinsk	19.11	57	Pn		Pn	01 57 33.3	-0.7
	comp=Z,0.3nm,0.3s,baz=272,slow=7.4,SNR=4.9							
FINES	FINESS Array B	19.23	351	Pn		Pn	01 57 30.9	-4.5
	comp=Z,0.3nm,0.3s,baz=163,slow=10.0,SNR=9.7							
KAF	Kangasniemi	19.86	351	eP		Pn	01 57 39.1	-3.8
KAF				pmax	pmax			
	comp=Z,1.0nm,0.4s							
KAF	Kangasniemi	19.86	351	ep		Pn	01 57 39.1	-3.8
	comp=Z,1.2nm,0.4s							
KAF	Kangasniemi	19.86	351	eP		Pn	01 57 39.1	-3.8
	comp=Z,1.0nm,0.4s							
ABKAR	Akbulak array	20.09	61	eP		P	01 57 43.7	-0.2
	comp=Z,0.6nm,0.4s							
ABKAR	Akbulak array	20.09	61	eP		P	01 57 43.7	-0.2
	comp=Z,0.6nm,0.4s							
JOF	Joensuu	20.33	358	eP		P	01 57 46.8	+0.4
JOF				pmax	pmax			
	comp=Z,1.0nm,0.4s							
JOF	Joensuu	20.33	358	ep		P	01 57 46.8	+0.4
	comp=Z,1.1nm,0.4s							
JOF	Joensuu	20.33	358	eP		P	01 57 46.8	+0.4
	comp=Z,1.0nm,0.4s							
SMF	Signal de Mont	20.77	291	eP		P	01 57 51.2	-0.1
SMF	Signal de Mont	20.77	291	eP		P	01 57 51.2	-0.1
LOR	Lormes	20.77	293	eP		P	01 57 51.2	-0.1
LOR	Lormes	20.77	293	eP		P	01 57 51.2	-0.1
HFS	Hagfors	20.97	333	P		P	01 57 53.6	+0.2
	comp=Z,1.2nm,0.5s,baz=140,slow=12,SNR=8.6							
HFS	Hagfors	20.97	333	P		P	01 57 53.6	+0.2
HFS				pmax	pmax			
	comp=Z,1.0nm,0.5s							
HFS	Hagfors	20.97	333	P		P	01 57 53.6	+0.2
	comp=Z,1.0nm,0.5s							
SSF	Saint Saulge	21.00	292	eP		P	01 57 53.8	-0.1
	comp=Z,5.8nm,0.9s,mb3.6							
SSF	Saint Saulge	21.00	292	eP		P	01 57 53.8	-0.1
	comp=Z,2.9nm,0.9s,mb3.6							
SSF	Saint Saulge	21.00	292	eP		P	01 57 53.8	-0.1
SSF				pmax	pmax			
	comp=Z,3.0nm,0.9s,mb3.6							
SSF	Saint Saulge	21.00	292	eP		P	01 57 53.8	-0.1
	comp=Z,2.9nm,0.9s,mb3.6							
AVF	Avril sur Loir	21.11	291	eP		P	01 57 54.8	-0.1
	comp=Z,6.6nm,0.8s,mb3.7							
AVF	Avril sur Loir	21.11	291	eP		P	01 57 54.8	-0.1
	comp=Z,3.3nm,0.8s,mb3.7							
AVF	Avril sur Loir	21.11	291	eP		P	01 57 54.8	-0.1
AVF				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb3.7							
AVF	Avril sur Loir	21.11	291	eP		P	01 57 54.8	-0.1
	comp=Z,3.3nm,0.8s,mb3.7							
ARU	Arti	21.63	41	eP		P	01 58 00.3	-0.1
	comp=Z,3.6nm,0.7s,mb3.9							
ARU	Arti	21.63	41	ciP		P	01 58 00.2	-0.3
ARU				S		S	02 02 00.4	+0.5
ARU				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.1							
ARU	Arti	21.63	41	eP		P	01 58 00.3	-0.2
	comp=Z,3.6nm,0.7s,mb3.9							
TCF	Toulx Ste Croi	21.90	290	eP		P	01 58 01.8	-1.7
TCF	Toulx Ste Croi	21.90	290	eP		P	01 58 01.8	-1.7
NOA	NORSAR Array B	22.47	332	P		P	01 58 09.2	-0.2
	comp=Z,0.8nm,0.6s,mb3.3,baz=140,slow=11,SNR=3.1							
NOA				LR		LR	02 07 47.6	
	comp=Z,11nm,18.8s,baz=140,slow=39							
NOA	NORSAR Array B	22.47	332	P		P	01 58 09.3	-0.1
ESDC	Sonseca Array	27.52	276	P		P	01 58 56.9	-0.1
ESDC	Sonseca Array	27.52	276	P		P	01 58 56.9	-0.1
	comp=Z,0.4nm,0.6s,mb3.2,baz=64,slow=9.2,SNR=4.1							
ESDC	Sonseca Array	27.52	276	P		P	01 58 56.9	-0.1
NVS	Novosibirsk	34.81	52	eP		P	02 00 07.6	+6.5
MK31	Makanchi Array	35.11	66	eP		P	02 00 04.9	+1.2
MK31	Makanchi Array	35.11	66	eP		P	02 00 04.9	+1.2
MKAR	Makanchi Array	35.11	66	P		P	02 00 04.0	+0.3
	comp=Z,1.2nm,0.6s,mb4.0,baz=284,slow=6.7,SNR=13							
MKAR	Makanchi Array	35.11	66	eP		P	02 00 04.9	+1.2
MKAR	Makanchi Array	35.11	66	P		P	02 00 04.0	+0.3
ZALV	Zalesovo Beam	35.77	53	P		P	02 00 08.5	-0.8
ZALV	Zalesovo Beam	35.77	53	P		P	02 00 08.5	-0.8
	comp=Z,1.2nm,0.4s,mb4.2,baz=266,slow=9.7,SNR=6.8							
ZALV	Zalesovo Beam	35.77	53	eP		P	02 00 09.9	+0.5
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.1							
ZALV	Zalesovo Beam	35.77	53	P		P	02 00

KBTR *i* S **Sn** 02 37 10.3 -0.9
MIPR Malaya Ipel'ka 2.80 239 *e*P **Pn** 02 36 41.0 +0.7
BDR Baidarnaya 2.82 6 *e*P **Pn** 02 36 41.6 +1.1
SMKR Semkarok 2.85 9 *e*P **Pn** 02 36 41.0 0.0
SRKR Sorokina 2.90 5 *e*P **Pn** 02 36 42.7 +1.1
BKI Bering 3.40 63 *e*P **Pn** 02 36 46.9 -1.6
BKI *i* S **Sn** 02 37 22.5 -5.0
SKR Severo-Kuril's 4.18 224 *e*PN **Pn** 02 37 01.2 +2.1
SKR pmax pmax
comp=E,50nm,0.5s
SKR pmax pmax
comp=Z,50nm,0.5s
SEY Seymchan 10.16 338⇑ *e*PN **Pn** 02 38 12.9 -7.9
YSS Yuzh-Sakhalins 13.30 246 *e*PN **Pn** 02 39 02.0 -1.7
ASAJ Asahikawa 15.27 238 Pn **Pn** 02 39 31.9 +2.3
comp=Z,0.8nm,0.3s,baz=60,slow=20,SNR=3.7
ASAJ Asahikawa 15.27 238 P **Pn** 02 39 32.0 +2.4
ASAJ pmax pmax
comp=Z,1.0nm,0.3s
YAK Yakutsk 18.27 309 *e*P **Pn** 02 40 05.8 -1.0
YAK pmax pmax
comp=Z,16nm,1.0s
YAK pmax pmax
comp=E,13nm,1.3s
MDJ Mudanjiang 22.13 258 P **P** 02 40 48.0 -0.1
MDJ pmax pmax
comp=Z,3.0nm,0.8s,mb3.8
MDJ pmax pmax
comp=Z,49nm,5.2s
TIXI Tiksi 22.62 334 *e*P **P** 02 40 51.5 -1.5
TIXI pmax pmax
comp=Z,6.0nm,1.8s,mb3.7
MAJO Matsushiro 23.25 231 *e*P **P** 02 41 02.3 +2.4
comp=Z,12nm,0.8s,mb4.4
MAJO Matsushiro 23.25 231 *e*P **P** 02 41 02.3 +2.5
MAJO pmax pmax
comp=Z,12nm,0.8s,mb4.4
MAT Matsushiro 23.25 231 P **P** 02 41 01.8 +2.0
TTA Tatalina 24.05 50 *e*P **P** 02 41 06.6 -0.3
CN2 Changchun 25.02 261 *e*P **P** 02 41 17.7 +1.7
CN2 *e*pP pP 02 41 24.8 -6.0
KDAK Kodiak Island 26.17 62 *e*P **P** 02 41 24.8 -1.4
comp=Z,4.1nm,0.9s,mb4.0
KDAK Kodiak Island 26.17 62 P **P** 02 41 23.8 -2.4
comp=Z,3.2nm,0.8s,mb3.9,baz=315,slow=5.7,SNR=3.8
KDAK Kodiak Island 26.17 62*c**e*P **P** 02 41 28.0 +1.8
MCK McKinley 27.24 49 *e*P **P** 02 41 35.3 -0.4
comp=Z,7.8nm,0.9s,mb4.2
MCK McKinley 27.24 49 *e*P **P** 02 41 35.3 -0.4
MCK pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
COLA College 27.67 46 *e*P **P** 02 41 39.1 -0.6
comp=Z,3.8nm,0.8s,mb4.1
COLA College 27.67 46 *e*P **P** 02 41 39.1 -0.5
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
KSRS Korea Array 27.80 247 P **P** 02 41 41.7 +0.7
comp=Z,0.6nm,0.4s,mb3.6,baz=34,slow=10,SNR=4.8
KSRS LR LR 02 51 05.6
comp=Z,42nm,21.9s,baz=352,slow=33
KSRS Korea Array 27.80 247 P **P** 02 41 41.7 +0.7
KSRS pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
KSRS MLR MLR
comp=Z,42nm,21.9s
ILAR Eielson Array 28.09 46 P **P** 02 41 42.4 -1.0
comp=Z,5.3nm,0.7s,mb4.3,baz=264,slow=8.1,SNR=102
ILAR LR LR 02 52 03.8
comp=Z,28nm,18.3s,baz=302,slow=35
EGAK Eagle 30.53 46 *e*P **P** 02 42 03.6 -1.3
comp=Z,9.6nm,0.7s,mb4.7
DAWY Dawson 31.40 47 *e*P **P** 02 42 12.3 -0.2
BJI Beijing 32.79 264 P **P** 02 42 23.0 -2.0
BJI pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
BJI LR LR
comp=N,67nm,15.5s
BJI LR LR
comp=E,70nm,16.5s
BJI LR LR
comp=Z,23nm,23.9s
HYT Haines Junctio 32.97 53 *e*P **P** 02 42 27.4 +1.0
INK Inuvik 33.12 38 *e*P **P** 02 42 27.1 -0.5
comp=Z,6.2nm,0.7s,mb4.7
INK Inuvik 33.12 38 P **P** 02 42 27.1 -0.5
comp=Z,5.0nm,0.7s,mb4.6,baz=284,slow=4.2,SNR=8.0
INK Inuvik 33.12 38 P **P** 02 42 27.1 -0.5
INK pmax pmax
comp=Z,5.0nm,0.7s
SONM Songino Array 34.09 283 P **P** 02 42 35.5 -0.8
comp=Z,0.7nm,0.6s,mb3.8,baz=56,slow=8.9,SNR=7.3
SONM PcP PcP 02 45 11.7 -0.6
comp=Z,0.4nm,0.6s,baz=48,slow=2.1,SNR=3.2
SONM LR LR 02 57 54.8
comp=Z,57nm,18.3s,baz=108,slow=39
SONM Songino Array 34.09 283 P **P** 02 42 35.5 -0.8
SONM 02 45 11.7
NJ2 Nanjing 36.81 251 *e*P **P** 02 43 01.8 +2.0
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
DLBC Dease Lake 37.36 54 *e*P **P** 02 43 05.7 +1.6
YKA Yellowknife Ar 42.42 43 P **P** 02 43 46.0 0.0
YKA Yellowknife Ar 42.42 43 P **P** 02 43 46.0 0.0
comp=Z,4.1nm,0.6s,mb4.3,baz=298,slow=7.8,SNR=29
YKA Yellowknife Ar 42.42 43 P **P** 02 43 46.0 0.0
YKA pmax pmax
comp=Z,4.0nm,0.6s
RES Resolute Bay 42.56 22 *e*P **P** 02 43 45.6 -1.4
comp=Z,18nm,1.2s,mb4.7
RES Resolute Bay 42.56 22 *e*P **P** 02 43 45.6 -1.4
RES pmax pmax
comp=Z,18nm,1.2s,mb4.7
LZH Lanzhou 42.70 269 *e*P **P** 02 43 52.7 +4.1
LZH pP pP 02 44 01.8 -2.3
LZH sP sP 02 44 05.9 -5.2
LZH pmax pmax
comp=Z,28nm,1.2s,mb4.9
LZH pmax pmax
comp=Z,140nm,5.0s
ZALV Zalesovo Beam 42.71 302 P **P** 02 43 45.0 -3.4
comp=Z,0.6nm,0.5s,mb3.6,baz=46,slow=10,SNR=2.2
ZALV LR LR 03 03 04.3
comp=Z,28nm,18.1s,baz=340,slow=38
ZALV Zalesovo Beam 42.71 302 P **P** 02 43 45.0 -3.4
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
ZALV MLR MLR
comp=Z,28nm,18.1s
NLWA Neilton Lookou 46.23 66 ⇓P **P** 02 44 17.2 +0.7
baz=46
CD2 Chengdu 46.39 264 P **P** 02 44 20.1 +2.1
CD2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
CD2 pmax pmax
comp=Z,120nm,5.5s
WMQ Urumqi 47.08 289 *e*P **P** 02 44 26.0 +2.7
WMQ pP pP 02 44 36.0 -3.0
WMQ sP sP 02 44 40.0 -6.0
WMQ PP PP 02 46 16.0 +1.8
WMQ pmax pmax
comp=Z,14nm,0.8s,mb4.9
WMQ pmax pmax
comp=Z,78nm,5.0s
WMQ LR LR
comp=N,37nm,20.3s
WMQ LR LR
comp=E,45nm,26.0s
WMQ LR LR
comp=Z,38nm,16.0s
KURK Kurchatov 47.68 302 *e*P **P** 02 44 27.1 -0.7
comp=Z,2.5nm,0.5s,mb4.5
KURK Kurchatov 47.68 302 *e*P **P** 02 44 27.1 -0.7
KURK pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
GYA Guiyang 47.99 258 P **P** 02 44 31.8 +1.3
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
B08A Colville Reser 48.05 62 ⇑P **P** 02 44 30.7 0.0
baz=48,SNR=5.3
EDM Edmonton 48.08 54 *e*P **P** 02 44 31.4 +0.5
MK31 Makanchi Array 48.18 295 *e*P **P** 02 44 29.8 -2.0
MKAR Makanchi Array 48.18 295 P **P** 02 44 30.0 -1.8
comp=Z,0.5nm,0.4s,mb3.9,baz=52,slow=6.5,SNR=14
MKAR Makanchi Array 48.18 295 P **P** 02 44 30.0 -1.8
MKAR pmax pmax
comp=Z,1.0nm,0.4s

F07A Phinny Hill Vi 49.28 65 ⇑P **P** 02 44 40.7 +0.4
baz=49
E09A Wood Farm, Sta 49.84 63 ⇓P **P** 02 44 44.7 +0.2
baz=50
C11A Tepee Creek (N 49.98 61 ⇑P **P** 02 44 45.4 -0.1
baz=50
G08A Pilot Rock 50.19 65 ⇑P **P** 02 44 47.1 0.0
baz=50
A13A Flathead Natio 50.23 59 ⇓P **P** 02 44 47.1 -0.3
baz=50
BVAR Borovoye Array 50.24 308 P **P** 02 44 46.0 -1.4
comp=Z,1.0nm,0.5s,mb4.1,baz=72,slow=9.7,SNR=5.0
BVAR Borovoye Array 50.24 308 P **P** 02 44 46.0 -1.4
BVAR pmax pmax
comp=Z,1.0nm,0.5s
WALA Waterton Lakes 50.40 58 *e*P **P** 02 44 48.8 +0.2
comp=Z,0.2nm,0.8s,mb3.2
YBH Yreka Blue Hor 50.46 71 *e*P **P** 02 44 50.0 +0.8
comp=Z,3.5nm,0.9s,mb4.4
YBH Yreka Blue Hor 50.46 71 *e*P **P** 02 44 50.0 +0.8
YBH pmax pmax
comp=Z,3.0nm,0.9s
B13A Whitefish 50.56 59 ⇓P **P** 02 44 49.5 -0.3
baz=50,SNR=5.4
F10A Beach Ranch, E 50.67 63 ⇓P **P** 02 44 50.8 0.0
baz=50
I07A Izee 50.69 66 ⇓P **P** 02 44 50.5 -0.3
baz=50
A14A Double T Ranch 50.70 58 ⇑P **P** 02 44 49.8 -1.1
baz=50
BSMT Bassoo Peak 50.73 60 *e*P **P** 02 44 51.8 +0.6
K05A Summer Lake 50.82 69 ⇓P **P** 02 44 51.5 -0.4
baz=51
C13A Hot Springs 50.95 60 ⇓P **P** 02 44 52.0 -0.9
baz=51
D12A Red Ives Fores 50.96 61 ⇓P **P** 02 44 51.9 -1.0
baz=51
JTMT Jette 51.06 60 *e*P **P** 02 44 54.5 +0.8
YBMT Yellow Bay 51.12 60 *e*P **P** 02 44 54.8 +0.7
E12A Beaver Dam Sad 51.26 62 ⇑P **P** 02 44 54.7 -0.4
baz=51,SNR=5.3
KMI Kunming 51.29 260 P **P** 02 44 57.1 +1.5
KMI pP pP 02 45 08.5 -3.0
KMI sP sP 02 45 13.8 -4.7
KMI pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
C14A Swan Lake 51.32 59 ⇑P **P** 02 44 55.3 -0.2
baz=51,SNR=6.0
SWMT Swartz Lake 51.36 60 *e*P **P** 02 44 56.2 +0.3
BMO Blue Mountains 51.37 64 *e*P **P** 02 44 56.3 +0.4
comp=Z,1.9nm,0.6s,mb4.2
D13A Huson 51.39 61 ⇓P **P** 02 44 55.9 -0.3
baz=51
B15A Bradely Ranch, 51.57 58 ⇓P **P** 02 44 56.7 -0.7
baz=51,SNR=5.0
J08A Circle Bar Ran 51.73 67 ⇑P **P** 02 44 58.8 +0.2
baz=52
SLMT Seeley Lake 51.79 60 *e*P **P** 02 44 59.6 +0.5
MSO Missoula 51.84 61 *e*P **P** 02 44 59.4 0.0
F12A Elk City 51.86 62 P **P** 02 45 00.1 +0.5
baz=52,SNR=5.9
D14A Greenough 51.89 60 ⇓P **P** 02 44 59.7 -0.1
baz=52,SNR=7.8
C15A Salmond Ranch, 51.90 59 ⇓P **P** 02 44 59.6 -0.3
baz=52,SNR=9.9
B16A M & M Farms, S 51.93 58 ⇑P **P** 02 44 59.8 -0.3
baz=52
A17A Triple J Farms 52.08 57 ⇑P **P** 02 45 00.8 -0.5
baz=52,SNR=6.0
CHMT Chamberlain Mo 52.13 60 *e*P **P** 02 45 01.7 0.0
G12A Big Creek, Yel 52.24 63 ⇓P **P** 02 45 02.3 -0.1
baz=52,SNR=6.9
FFC Flin Flon 52.30 47 *e*P **P** 02 45 02.9 +0.1
comp=Z,1.0nm,0.6s,mb3.9
FFC Flin Flon 52.30 47*c**e*P **P** 02 45 03.5 +0.7
C16A Fuhringer Ranc 52.31 58 ⇑P **P** 02 45 02.4 -0.6
baz=52,SNR=5.0
F13A Darby 52.32 62 ⇑P **P** 02 45 02.4 -0.6
baz=52
E14A Clinton 52.34 61 ⇑P **P** 02 45 03.1 -0.1
baz=52
A18A Metzger Ranch, 52.52 56 ⇑P **P** 02 45 03.6 -0.9
baz=52
FCC Fort Churchill 52.73 39 *e*P **P** 02 45 05.0 -0.9
comp=Z,0.2nm,0.8s,mb3.1
ARCES ARCESS Array B 52.75 342 P **P** 02 45 04.1 -1.8
comp=Z,1.9nm,0.9s,mb4.0,baz=36,slow=10,SNR=4.1
ARCES ARCESS Array B 52.75 342 P **P** 02 45 04.1 -1.8
ARCES pmax pmax
comp=Z,2.0nm,1.0s
E15A Deer Lodge 52.77 60 ⇓P **P** 02 45 05.9 -0.5
baz=52,SNR=5.5
G13A Cobalt 52.84 62 ⇑P **P** 02 45 06.5 -0.4
baz=53,SNR=5.8
B18A Beardsley Farm 52.91 57 ⇓P **P** 02 45 06.8 -0.5
baz=53,SNR=9.3
C17A Wharram Farm, 52.92 58 ⇓P **P** 02 45 06.9 -0.6
baz=53,SNR=7.3
D16A Dana Ranch, Ca 52.93 59 ⇓P **P** 02 45 07.3 -0.2
baz=53,SNR=5.8
HRY Holter Researc 53.00 59 *e*P **P** 02 45 09.0 +0.9
BEKR Beckworth 53.04 71 P **P** 02 45 08.8 +0.4
baz=53
MFID Camas Ranch 53.12 65 ⇓P **P** 02 45 09.1 +0.1
baz=53
EGMT Eagleton 53.16 57 ⇑P **P** 02 45 09.3 0.0
baz=53
H13A Challis 53.18 63 ⇑P **P** 02 45 09.2 -0.3
baz=53,SNR=6.5
I12A Atlanta 53.23 64 ⇑P **P** 02 45 10.0 +0.2
baz=53
SUMG Summit 53.24 7 *e*P **P** 02 45 09.4 -0.1
SUMG Summit 53.24 7 *i* P **P** 02 45 09.6 +0.1
comp=Z,7.4nm,0.9s,mb4.6
D17A Six Diamond Ra 53.28 58 ⇑P **P** 02 45 09.5 -0.6
baz=53,SNR=7.8
E17A Martinsdale 53.66 59 ⇑P **P** 02 45 12.4 -0.5
baz=53
I13A Wildhorse Cree 53.69 63 ⇑P **P** 02 45 12.9 -0.2
baz=53,SNR=8.7
G15A Dillon 53.70 61 ⇑P **P** 02 45 12.5 -0.7
baz=53
MCMT McKenzie Canyo 53.74 62 *e*P **P** 02 45 13.4 -0.1
comp=Z,1.5nm,0.9s,mb3.9
WCN Washoe City 53.76 71 ⇑P **P** 02 45 13.8 +0.1
baz=54
HLID Hailey 53.77 64 ⇑P **P** 02 45 14.0 +0.2
baz=54
HLID Hailey 53.77 64 *e*P **P** 02 45 13.8 0.0
comp=Z,1.2nm,0.7s,mb3.9
BOZ Bozeman (W) 53.82 60 ⇓P **P** 02 45 13.5 -0.6
baz=54
L11A Cat Creek Ranc 54.01 66 ⇑P **P** 02 45 15.6 +0.1
baz=54,SNR=7.0
G16A Moss Hill, Enn 54.01 61 ⇓P **P** 02 45 15.2 -0.2
baz=54,SNR=9.6
J13A Cove Ranch, Pi 54.02 64 ⇓P **P** 02 45 15.3 -0.2
baz=54
I14A Mackay 54.04 63 ⇓P **P** 02 45 15.3 -0.4
baz=54
F17A Fitzpatrick Pl 54.14 59 ⇓P **P** 02 45 16.1 -0.3
baz=54
J14A Carey 54.41 64 ⇑P **P** 02 45 17.9 -0.6
baz=54
WAKR Walker 54.49 72 *e*P **P** 02 45 20.6 +1.5
G17A Pierce Place, 54.50 60 ⇑P **P** 02 45 18.7 -0.4
baz=54
F18A Big Timber 54.62 59 ⇓P **P** 02 45 19.5 -0.4
baz=54,SNR=8.8
H16A Russell Place, 54.66 61 ⇑P **P** 02 45 19.8 -0.4
baz=54,SNR=6.8
M12A Wells 54.98 66 ⇓P **P** 02 45 21.7 -0.8
baz=55
F19A Roth Farm, Mol 55.05 59 ⇑P **P** 02 45 22.4 -0.5
baz=55
G18A Lazy EL Ranch, 55.10 59 ⇓P **P** 02 45 22.6 -0.8
baz=55
K14A Jones Ranch, D 55.13 64 ⇓P **P** 02 45 23.3 -0.3
baz=55,SNR=8.8
NVAR Mina Array Bea 55.18 71 P **P** 02 45 25.4 +1.3
NVAR Mina Array Bea 55.18 71 P **P** 02 45 25.4 +1.4
comp=Z,4.7nm,0.7s,mb4.6,baz=298,slow=7.4,SNR=34
H17A Grant Village 55.22 61 ⇑P **P** 02 45 24.1 -0.2
baz=55
N12A Clover Valley, 55.30 67 ⇑P **P** 02 45 25.0 +0.1
baz=55,SNR=8.9
FLWY Flagg Ranch 55.37 61 *e*P **P** 02 45 27.3 +2.0

IMW Indian Meadow 55.38 61 *e*P **P** 02 45 27.1 +1.8
comp=Z,5.6nm,0.9s,mb4.6
P10A Eureka 55.38 69 ⇑P **P** 02 45 25.4 0.0
baz=55
K15A Arbon 55.38 63 ⇑P **P** 02 45 24.6 -0.8
baz=55
RLMT Red Lodge 55.39 59 *e*P **P** 02 45 26.5 +1.1
comp=Z,9.8nm,0.9s,mb4.8
M13A Montello 55.42 66 ⇓P **P** 02 45 25.0 -0.7
baz=55,SNR=5.3
L14A Malta 55.45 64 ⇓P **P** 02 45 25.7 -0.3
baz=55,SNR=12
EKS2 Erkin-Say 55.46 297 *e*P **P** 02 45 25.9 -0.1
comp=Z,1.1nm,0.6s,mb4.1
O11A Cowboy Ranch, 55.47 68 ⇓P **P** 02 45 26.5 +0.4
baz=55
F20A Billings 55.49 58 ⇓P **P** 02 45 25.2 -0.9
baz=55
TPAW Teton Pass 55.65 62 *e*P **P** 02 45 29.1 +1.8
comp=Z,2.7nm,0.7s,mb4.4
LOHW Long Hollow 55.75 61 *e*P **P** 02 45 28.9 +0.9
comp=Z,4.4nm,0.9s,mb4.5
N13A Wendover, West 55.75 66 ⇓P **P** 02 45 28.0 -0.1
baz=56
M14A Sheep Mountain 55.77 65 ⇑P **P** 02 45 28.4 +0.2
baz=56
LAO LASA Array 55.83 56 *e*P **P** 02 45 29.3 +0.7
comp=Z,6.6nm,0.9s,mb4.7
O12A Currie 55.87 67 ⇓P **P** 02 45 28.3 -0.7
baz=56,SNR=12
L15A Malad City 55.93 64 ⇑P **P** 02 45 29.3 -0.1
baz=56
N14A Grayback Hills 56.31 65 ⇑P **P** 02 45 32.2 +0.1
baz=56,SNR=7.3
BGU Big Grassy Mou 56.34 65 *e*P **P** 02 45 32.9 +0.6
comp=Z,1.9nm,0.7s,mb4.2
Q11A Duckwater 56.37 69 ⇓P **P** 02 45 32.1 -0.4
baz=56
R10A Warm Springs 56.40 70 ⇑P **P** 02 45 32.9 +0.1
baz=56
H20A Greybull 56.48 59 ⇑P **P** 02 45 32.4 -0.9
baz=56
S10A Tonopah Range, 56.50 70 ⇓P **P** 02 45 33.5 +0.1
baz=56
N15A Stansbury Isla 56.64 65 ⇓P **P** 02 45 35.1 +0.6
baz=56
HWUT Hardware Ranch 56.65 64 *e*P **P** 02 45 35.9 +1.4
comp=Z,10nm,0.8s,mb4.9
L17A Cokeville 56.67 63 ⇑P **P** 02 45 35.4 +0.8
baz=56
Q12A Willow Creek R 56.69 68 ⇓P **P** 02 45 34.3 -0.5
baz=56
K18A Toltan Ranch, 56.73 62 ⇑P **P** 02 45 35.8 +0.7
baz=56,SNR=9.3
R11A Troy Canyon, C 56.76 69 ⇑P **P** 02 45 35.1 -0.2
baz=56,SNR=7.0
I20A Worland 56.79 60 ⇓P **P** 02 45 34.7 -0.7
baz=56
P13A Bates Ranch, G 56.84 67 ⇓P **P** 02 45 36.7 +0.9
baz=57,SNR=5.2
BW06 Boulder Array 56.89 62 ⇑P **P** 02 45 36.2 0.0
baz=57,SNR=11
BW06 Boulder Array 56.89 62 *e*P **P** 02 45 37.1 +1.0
DUG Dugway 56.97 66 ⇓P **P** 02 45 37.6 +0.8
baz=57,SNR=8.8
DUG Dugway 56.97 66 *e*P **P** 02 45 38.4 +1.6
comp=Z,7.9nm,0.9s,mb4.7
DUG Dugway 56.97 66 *e*P **P** 02 45 38.4 +1.6
DUG pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
JOF Joensuu 57.10 335 *e*P **P** 02 45 36.7 -0.6
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
JOF Joensuu 57.10 335 *e*p **P** 02 45 36.7 -0.6
comp=Z,0.9nm,0.3s,mb4.3
S11A Rachel 57.17 70 ⇓P **P** 02 45 37.8 -0.4
baz=57
Q13A Wheeler Ranch, 57.19 68 ⇓P **P** 02 45 38.4 0.0
baz=57,SNR=7.1
M17A Scullys Gap (B 57.22 63 ⇑P **P** 02 45 38.1 -0.4
baz=57,SNR=6.1
L18A Fontenelle, Gr 57.23 63 ⇑P **P** 02 45 38.3 -0.3
baz=57,SNR=6.9
P14A Drum Mountains 57.26 66 ⇑P **P** 02 45 38.3 -0.5
baz=57
MPMC Manual Prospec 57.32 72 ⇓P **P** 02 45 38.4 -0.9
baz=57
FURC Furnace Creek, 57.38 72 ⇑P **P** 02 45 39.7 0.0
baz=57,SNR=6.3
JLU Jordanelle 57.42 65 *e*P **P** 02 45 40.6 +0.7
L19A Farson 57.46 62 ⇓P **P** 02 45 40.1 -0.2
baz=57
NLU North Lily Min 57.54 65 *e*P **P** 02 45 42.6 +1.8
Q14A Sevier Lake (B 57.58 67 ⇓P **P** 02 45 41.4 +0.3
baz=57,SNR=6.5
K20A Yellowstone Ra 57.60 61 ⇑P **P** 02 45 40.9 -0.3
baz=57
LRMC Laurel Mountai 57.62 73 ⇓P **P** 02 45 42.0 +0.6
baz=57
S12A Delamar Landin 57.69 69 ⇑P **P** 02 45 42.4 +0.5
baz=58,SNR=7.0
P15A Leamington 57.70 66 ⇑P **P** 02 45 42.4 +0.5
baz=58
U10A Ash Meadows, A 57.71 71 ⇓P **P** 02 45 42.2 +0.1
baz=58
T11A Corn Creek, Al 57.75 70 ⇓P **P** 02 45 42.7 +0.4
baz=58,SNR=11
R13A O'Grain Ranch, 57.77 68 ⇓P **P** 02 45 42.3 -0.1
baz=58
EDW2 Edwards Air Fo 57.88 74 ⇑P **P** 02 45 43.7 +0.4
baz=58
L20A Wamsutter 58.06 61 ⇑P **P** 02 45 44.3 -0.1
baz=58,SNR=6.4
O17A Robinson Place 58.09 64 ⇑P **P** 02 45 44.5 -0.1
baz=58
ULM Lac du Bonnet 58.10 47 P **P** 02 45 43.7 -0.9
ULM Lac du Bonnet 58.10 47 P **P** 02 45 43.7 -0.8
comp=Z,2.7nm,0.4s,mb4.7,baz=331,slow=9.4,SNR=3.2
GSC Goldstone 58.25 72 ⇑P **P** 02 45 46.4 +0.6
baz=58
GSC Goldstone 58.25 72 *e*P **P** 02 45 46.7 +0.8
comp=Z,2.4nm,0.7s,mb4.3
GSC Goldstone 58.25 72 *e*P **P** 02 45 46.7 +0.9
GSC pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
S13A Holt Ranch, En 58.26 69 ⇑P **P** 02 45 46.7 +0.8
baz=58
T12A Moapa 58.40 70 ⇑P **P** 02 45 46.7 -0.2
baz=58
N19A John Jarvie Ra 58.42 63 ⇓P **P** 02 45 46.6 -0.4
baz=58
O18A Roosevelt 58.43 64 ⇓P **P** 02 45 47.5 +0.5
baz=58
TMUT Trail Mountain 58.48 65 *e*P **P** 02 45 48.8 +1.4
comp=Z,8.0nm,0.8s,mb4.8
M20A Sweetwater, Wa 58.51 62 ⇑P **P** 02 45 47.0 -0.6
baz=58
BFSC Mount Baldy Ra 58.53 74 ⇓P **P** 02 45 48.0 +0.2
baz=58
K22A Casper 58.54 60 ⇑P **P** 02 45 48.0 +0.2
baz=58
FMP Fort Macarthur 58.55 75 ⇑P **P** 02 45 48.6 +0.7
baz=58
CCUT Cedar City 58.56 68 *e*P **P** 02 45 49.5 +1.6
L21A Rawlins 58.60 61 ⇑P **P** 02 45 47.3 -0.9
baz=58
P17A Butcher Ranch, 58.60 65 ⇓P **P** 02 45 48.1 -0.1
baz=58
T13A Saint George 58.64 69 ⇓P **P** 02 45 48.4 -0.1
baz=58,SNR=6.4
V11A Goodsprings 58.64 71 ⇑P **P** 02 45 48.5 0.0
baz=58
TUQ Turquoise Moun 58.65 72 ⇓P **P** 02 45 48.1 -0.6
baz=58
CMAR Chiang Mai Arr 58.67 258 LR LR 03 15 07.4
comp=Z,43nm,18.6s,baz=24,slow=40
RSSD Black Hills 58.74 57 *e*P **P** 02 45 49.6 +0.5
comp=Z,15nm,0.8s,mb5.1
RSSD Black Hills 58.74 57 *e*P **P** 02 45 49.6 +0.5
RSSD pmax pmax
comp=Z,15nm,0.8s,mb5.1
P18A Preston Nutter 58.76 65 P **P** 02 45 50.0 +0.7
baz=58,SNR=6.3
Q16A Castle Valley 58.77 66 ⇓P **P** 02 45 49.3 -0.2
baz=58
M21A Separation Pea 58.86 61 ⇑P **P** 02 45 49.9 -0.1
baz=59
HEC Hector,Ludlow 58.86 73 ⇑P **P** 02 45 50.6 +0.5

	baz=59									
O19A	**Miners Draw (B**	58.88	63	⇑P		P	02 45 49.7	-0.5		
	baz=59									
N20A	**Spence Gulch,**	58.94	62	⇑P		P	02 45 50.6	0.0		
	baz=59,SNR=12									
SRU	**San Rafael**	58.98	65	⇓P		P	02 45 50.7	-0.2		
	baz=59,SNR=11									
SRU	**San Rafael**	58.98	65	*e*P		P	02 45 51.8	+0.9		
	comp=Z,11nm,0.9s,mb4.9									
SRU	**San Rafael**	58.98	65	*e*P		P	02 45 51.8	+0.9		
SRU				pmax	pmax					
	comp=Z,11nm,0.9s,mb4.9									
KAF	**Kangasniemi**	59.00	337	*e*P		P	02 45 49.8	-0.8		
KAF				pmax	pmax					
	comp=Z,1.0nm,0.5s,mb4.1									
KAF	**Kangasniemi**	59.00	337	*e*p		P	02 45 49.8	-0.8		
	comp=Z,1.3nm,0.5s,mb4.2									
L22A	**Ellis Ranch, M**	59.03	60	⇓P		P	02 45 50.3	-0.9		
	baz=59									
U13A	**Pakoon Wash**	59.04	70	⇓P		P	02 45 51.2	-0.1		
	baz=59									
R16A	**Teasdale**	59.06	66	⇑P		P	02 45 51.3	-0.1		
	baz=59,SNR=6.5									
T14A	**Hurricane**	59.06	69	⇑P		P	02 45 51.4	0.0		
	baz=59									
GMRC	**Granite Mounta**	59.27	72	⇓P		P	02 45 53.2	+0.3		
	baz=59									
L23A	**Garrett**	59.35	60	⇑P		P	02 45 53.0	-0.4		
	baz=59									
R17A	**Hanksville Air**	59.38	66	⇓P		P	02 45 53.7	+0.1		
	baz=59,SNR=6.9									
S16A	**Weppner Ranch,**	59.40	67	⇑P		P	02 45 54.2	+0.4		
	baz=59									
V13A	**Grand Canyon W**	59.44	70	⇑P		P	02 45 54.9	+0.8		
	baz=59,SNR=7.5									
O20A	**White River Ci**	59.46	63	⇑P		P	02 45 54.4	+0.3		
	baz=59,SNR=5.5									
U14A	**Mt Trumbull**	59.47	69	⇓P		P	02 45 55.1	+0.8		
	baz=59,SNR=9.1									
T15A	**Red Dirt Ranch**	59.48	68	⇑P		P	02 45 55.2	+0.8		
	baz=59									
AGMN	**Agassiz Nation**	59.55	49	*e*P		P	02 45 54.0	-0.7		
	comp=Z,5.1nm,0.9s,mb4.5									
FINES	**FINESS Array B**	59.64	337	P		P	02 45 53.9	-1.1		
	comp=Z,2.0nm,0.6s,mb4.3,baz=49,slow=6.5,SNR=11									
FINES	**FINESS Array B**	59.64	337	P		P	02 45 53.9	-1.1		
FINES				pmax	pmax					
	comp=Z,2.0nm,0.6s									
BELC	**Belle Mtn. Jos**	59.65	73	⇑P		P	02 45 56.1	+0.5		
	baz=60									
PFO	**Pinyon Flat Ob**	59.67	74	⇑P		P	02 45 55.8	+0.1		
	baz=60									
Q19A	**Hogan Spring (**	59.77	64	P		P	02 45 56.9	+0.5		
	baz=60,SNR=11									
O21A	**Pagoda**	59.81	62	⇓P		P	02 45 56.9	+0.4		
	baz=60									
109C	**Camp Elliot, M**	59.83	75	⇑P		P	02 45 56.9	+0.1		
	baz=60									
P20A	**De Beque**	59.84	63	⇑P		P	02 45 56.3	-0.5		
	baz=60									
R18A	**Canyonlands Na**	59.84	65	⇓P		P	02 45 56.6	-0.3		
	baz=60,SNR=11									
S17A	**Black Ridge (B**	59.90	67	⇓P		P	02 45 56.8	-0.4		
	baz=60									
N22A	**Wattenberg Ran**	59.91	61	⇑P		P	02 45 56.5	-0.7		
	baz=60									
U15A	**North Rim**	59.96	68	⇑P		P	02 45 57.3	-0.4		
	baz=60									
V14A	**Boquillas Ranc**	60.09	70	⇑P		P	02 45 58.0	-0.5		
	baz=60,SNR=7.8									
N23A	**Red Feather La**	60.11	61	⇑P		P	02 45 57.7	-0.9		
	baz=60,SNR=6.8									
R19A	**Curley Farm, L**	60.26	65	⇑P		P	02 45 59.1	-0.5		
	baz=60									
S18A	**Hurst Farm, Bl**	60.30	66	⇓P		P	02 46 00.4	+0.4		
	baz=60,SNR=7.5									
PV04	**Paradox Valley**	60.37	65	*e*P		P	02 46 01.8	+1.3		
W14A	**Seligman**	60.41	70	⇓P		P	02 46 01.3	+0.6		
	baz=60,SNR=6.1									
V15A	**Kaibab Nationa**	60.47	69	⇑P		P	02 46 01.0	-0.1		
	baz=60,SNR=6.0									
O23A	**Lake Granby, G**	60.62	61	⇑P		P	02 46 02.1	0.0		
	baz=60									
S19A	**Harvey Farm, M**	60.72	65	⇓P		P	02 46 02.6	-0.2		
	baz=60									
Q21A	**Lamborn Mesa,**	60.76	63	⇑P		P	02 46 01.9	-1.2		
	baz=60									
T18A	**Mexican Hat**	60.77	66	⇓P		P	02 46 02.1	-1.1		
	baz=60,SNR=6.5									
U16A	**Tuba City**	60.81	68	⇑P		P	02 46 02.7	-0.7		
	baz=61									
SMCO	**Snowmass**	60.83	63	*e*P		P	02 46 04.4	+0.9		
	comp=Z,6.1nm,1.0s,mb4.7									
X14A	**Yava**	61.06	70	⇓P		P	02 46 05.5	+0.3		
	baz=61									
ISCO	**Idaho Springs**	61.08	61	*e*P		P	02 46 07.1	+1.9		
Q22A	**Crested Butte,**	61.09	63	⇓P		P	02 46 04.6	-0.7		
	baz=61,SNR=6.1									
R21A	**Cimarron**	61.11	64	⇑P		P	02 46 04.8	-0.7		
	baz=61,SNR=7.4									
WUAZ	**Wupatki**	61.13	69	⇓P		P	02 46 06.4	+0.7		
	baz=61									
U18A	**Rough Rock, Ch**	61.29	67	⇓P		P	02 46 07.6	+0.9		
	baz=61									
V17A	**Tonalea, Kykot**	61.37	68	⇑P		P	02 46 08.1	+0.8		
	baz=61									
Y14A	**Wickenburg**	61.38	71	⇑P		P	02 46 07.2	-0.2		
	baz=61									
X15A	**Humboldt**	61.41	70	⇓P		P	02 46 07.6	+0.1		
	baz=61,SNR=5.8									
T19A	**Beclabito**	61.45	66	⇓P		P	02 46 07.9	+0.1		
	baz=61									
MVCO	**Mesa Verde**	61.46	65	⇑P		P	02 46 07.6	-0.2		
	baz=61									
MVCO	**Mesa Verde**	61.46	65	*e*P		P	02 46 09.0	+1.2		
Z13A	**Yuma Proving G**	61.56	72	⇓P		P	02 46 09.0	+0.4		
	baz=61									
Q23A	**Hartsel**	61.63	62	⇓P		P	02 46 08.9	0.0		
	baz=61									
R22A	**Saguache, Gunn**	61.64	63	⇑P		P	02 46 08.9	-0.1		
	baz=61									
P24A	**Kohler Place,**	61.66	61	⇑P		P	02 46 09.3	+0.1		
	baz=61									
Y15A	**Casa Rosa Ranc**	61.75	70	⇑P		P	02 46 10.0	+0.1		
	baz=62									
Z14A	**Wintersburg**	61.84	71	⇓P		P	02 46 10.6	+0.2		
	baz=62									
X16A	**Lo Mia Camp, P**	61.90	69	⇓P		P	02 46 10.2	-0.7		
	baz=62									
S22A	**4UR Ranch, Cre**	61.96	64	⇓P		P	02 46 12.0	+0.8		
	baz=62,SNR=7.4									
114A	**Black Gap (USA**	62.33	72	⇓P		P	02 46 14.0	+0.3		
	baz=62									
Q25A	**Bedland, Calha**	62.45	61	⇑P		P	02 46 14.2	-0.3		
	baz=62									
T22A	**Edith**	62.46	64	⇑P		P	02 46 14.2	-0.3		
	baz=62									
U21A	**Nageezi**	62.49	65	⇑P		P	02 46 15.2	+0.4		
	baz=62,SNR=5.7									
R24A	**Sanders Place,**	62.51	62	⇓P		P	02 46 14.2	-0.6		
	baz=62									
V20A	**Brimhall**	62.52	66	⇓P		P	02 46 14.7	-0.2		
	baz=62									
W19A	**Sanders**	62.52	68	⇓P		P	02 46 15.1	+0.1		
	baz=62									
ECSD	**EROS Data Cent**	62.63	53	*e*P		P	02 46 15.3	-0.3		
	comp=Z,4.7nm,0.8s,mb4.7									
X18A	**Snowflake**	62.65	68	⇑P		P	02 46 16.5	+0.7		
	baz=62									
115A	**Sonoran Desert**	62.73	71	⇓P		P	02 46 17.3	+0.9		
	baz=62									
Y17A	**Roosevelt**	62.77	70	⇑P		P	02 46 17.0	+0.4		
	baz=63									
S24A	**Houchin Ranch,**	62.89	63	⇓P		P	02 46 17.7	+0.2		
	baz=63									
U22A	**Llaves**	62.96	65	⇓P		P	02 46 18.6	+0.7		
	baz=63									
214A	**Organ Pipe Nat**	62.96	72	⇑P		P	02 46 18.5	+0.6		
	baz=63									
V21A	**Milan**	62.96	66	⇓P		P	02 46 18.7	+0.8		
	baz=63									
NOA	**NORSAR Array B**	62.99	344	P		P	02 46 16.5	-1.1		
NOA	**NORSAR Array B**	62.99	344	P		P	02 46 16.5	-1.1		
	comp=Z,1.2nm,0.6s,mb4.2,baz=21,slow=6.7,SNR=5.4									
NOA	**NORSAR Array B**	62.99	344	P		P	02 46 16.5	-1.2		
NOA				pmax	pmax					
	comp=Z,1.0nm,0.6s									
Y18A	**Canyon Day Jun**	63.16	69	⇑P		P	02 46 19.7	+0.4		
	baz=63									
NAO01	**NORSAR Array S**	63.23	344	*e*P		P	02 46 18.5	-0.7		
	comp=Z,3.8nm,0.9s,mb4.5									
V22A	**San Miguel Ran**	63.27	65	⇓P		P	02 46 20.1	+0.2		
	baz=63									
S25A	**Robets Cordova**	63.29	62	⇓P		P	02 46 19.8	-0.2		
	baz=63									
U23A	**El Rito**	63.35	64	⇓P		P	02 46 20.4	-0.1		
	baz=63,SNR=9.4									
X20A	**Quemado**	63.44	67	⇑P		P	02 46 21.1	0.0		
	baz=63									
Y19A	**Nutrioso**	63.46	68	⇑P		P	02 46 21.2	0.0		
	baz=63									
117A	**Oracle**	63.67	70	⇓P		P	02 46 22.8	+0.2		
	baz=64									
216A	**Three Points,**	63.69	71	⇑P		P	02 46 23.3	+0.6		
	baz=64									
T25A	**Trinidad**	63.69	63	⇑P		P	02 46 22.4	-0.3		
	baz=63									
V23A	**Ortiz Mt. (NFS**	63.79	65	⇓P		P	02 46 22.9	-0.5		
	baz=64,SNR=5.5									
X21A	**Alamocita Cree**	63.90	67	⇓P		P	02 46 25.1	+1.0		
	baz=64,SNR=8.3									
Y20A	**Horse Springs,**	63.98	68	⇑P		P	02 46 24.2	-0.4		
	baz=64									
118A	**Homack Ranch,**	64.04	70	⇑P		P	02 46 24.4	-0.6		
	baz=64									
ANMO	**Albuquerque**	64.24	66	*e*P		P	02 46 26.2	-0.1		
	comp=Z,3.4nm,0.9s,mb4.4									
ANMO	**Albuquerque**	64.24	66	*e*P		P	02 46 26.2	-0.1		
ANMO				pmax	pmax					
	comp=Z,3.0nm,0.9s									
U25A	**Circle Dot Ran**	64.25	63	⇑P		P	02 46 24.8	-1.6		
	baz=64									
Z20A	**Nine Sixteen R**	64.45	68	⇑P		P	02 46 27.7	0.0		
	baz=64									
218A	**Dragoon**	64.50	70	⇓P		P	02 46 28.6	+0.5		
	baz=64									
U26A	**Atchley Ranch,**	64.60	63	⇑P		P	02 46 28.6	0.0		
	baz=64									
W24A	**Lazy 6 Ranch,**	64.61	65	⇑P		P	02 46 28.9	+0.2		
	baz=64									
Y22A	**Socorro**	64.73	67	⇓P		P	02 46 29.3	-0.2		
	baz=64									
Z21A	**St. Cloud Mine**	64.81	68	⇓P		P	02 46 30.4	+0.3		
	baz=65									
120A	**U Bar Ranch, L**	64.86	69	⇑P		P	02 46 31.2	+0.8		
	baz=65									
SCHQ	**Schefferville**	64.89	28	P		P	02 46 29.3	-0.9		
	comp=Z,4.1nm,0.7s,mb4.6,baz=13,slow=4.3,SNR=6.7									
219A	**White Tail Can**	64.92	70	⇑P		P	02 46 30.9	+0.1		
	baz=65,SNR=7.2									
318A	**Bisbee**	64.93	71	⇓P		P	02 46 31.2	+0.2		
	baz=65									
V26A	**Tequesquite Ra**	65.03	63	⇑P		P	02 46 31.1	-0.4		
	baz=65									
X24A	**Lazy VL Ranch,**	65.08	65	⇓P		P	02 46 31.4	-0.4		
	baz=65									
W25A	**X Bar L Ranch,**	65.11	64	⇑P		P	02 46 30.5	-1.5		
	baz=65									
Z22A	**Elephant Butte**	65.24	67	⇓P		P	02 46 32.9	0.0		
	baz=65									
319A	**Douglas**	65.38	70	⇑P		P	02 46 34.3	+0.5		
	baz=65									
220A	**Playas Peak, P**	65.40	69	⇑P		P	02 46 34.4	+0.4		
	baz=65									
Y24A	**Capitan**	65.56	66	⇑P		P	02 46 35.2	+0.2		
	baz=65,SNR=10									
122A	**Conniff Cattle**	65.64	68	⇑P		P	02 46 35.8	+0.4		
	baz=65									
X26A	**CR and CF Fran**	65.97	64	⇓P		P	02 46 37.6	+0.1		
	baz=66									
Y25A	**Mesa, Roswell**	65.97	65	⇓P		P	02 46 38.0	+0.4		
	baz=66,SNR=9.3									
Z24A	**Sheeppen Canyo**	66.06	66	⇓P		P	02 46 38.5	+0.3		
	baz=66									
Z25A	**Roswell**	66.44	66	⇑P		P	02 46 40.8	+0.2		
	baz=66									
124A	**Stringfield Ra**	66.49	67	⇓P		P	02 46 40.3	-0.6		
	baz=66									
Y27A	**Causey**	66.82	64	⇓P		P	02 46 42.9	-0.1		
	baz=67,SNR=6.4									
Z26A	**Caprock**	66.85	65	⇑P		P	02 46 43.2	0.0		
	baz=67,SNR=9.1									
224A	**Cornudas Mount**	66.92	67	⇓P		P	02 46 43.5	-0.2		
	baz=67,SNR=6.5									
125A	**Gardner Draw,**	66.95	66	⇓P		P	02 46 43.6	-0.3		
	baz=67									
MSTX	**Muleshoe**	66.96	64	⇓P		P	02 46 43.3	-0.6		
	baz=67									
Z27A	**Tamm**	67.23	65	⇓P		P	02 46 45.7	+0.1		
	baz=67									
225A	**Deer Hill, Car**	67.28	67	⇓P		P	02 46 45.9	0.0		
	baz=67									
MNTX	**Cornudas Mount**	67.29	67	*e*P		P	02 46 46.7	+0.7		
	comp=Z,6.6nm,1.3s,mb4.5									
126A	**Clayton Basin,**	67.31	66	⇑P		P	02 46 45.3	-0.8		
	baz=67									
GDL2	**Guadalupe Moun**	67.46	66	*e*P		P	02 46 47.6	+0.5		
	comp=Z,0.7nm,0.4s,mb4.0									
226A	**Malaga, Loving**	67.71	66	⇑P		P	02 46 47.9	-0.7		
	baz=68									
325A	**Bean Ranch, Si**	67.77	67	⇑P		P	02 46 49.0	-0.1		
	baz=68,SNR=6.3									
GOF	**Gofitskoye**	68.13	317	*e*P		P	02 46 57.5	+6.4		
425A	**Indio Mountain**	68.21	68	⇑P		P	02 46 51.8	0.0		
	baz=68,SNR=7.6									
AKASG	**Malin Array Be**	68.21	329	P		P	02 46 49.6	-1.9		
	comp=Z,1.7nm,0.6s,mb4.2,baz=31,slow=6.7,SNR=4.3									
AKASG	**Malin Array Be**	68.21	329	*e*P		P	02 46 50.2	-1.3		
AKASG				pmax	pmax					
	comp=Z,2.0nm,0.6s									
AKBB	**Malin Array Si**	68.21	329	*e*P		P	02 46 50.7	-0.8		
KIEV	**Kiev**	68.22	329	*e*P		P	02 46 50.6	-1.0		
	comp=Z,2.0nm,0.6s,mb4.3									
KIEV	**Kiev**	68.22	329	*e*P		P	02 46 50.6	-1.0		
KIEV				pmax	pmax					
	comp=Z,2.0nm,0.6s,mb4.3									
326A	**Caldwell Ranch**	68.35	66	⇑P		P	02 46 51.7	-1.0		
	baz=68									
328A	**Wristen Ranch,**	68.93	66	⇑P		P	02 46 56.3	0.0		
	baz=69,SNR=6.6									
427A	**Hayter Ranch,**	69.02	66	⇓P		P	02 46 56.5	-0.4		
	baz=69									
526A	**Mary Lane Ranc**	69.26	67	⇑P		P	02 46 58.4	+0.1		
	baz=69,SNR=7.0									
527A	**Woodward Ranch**	69.45	67	⇑P		P	02 46 59.5	-0.1		
	baz=69,SNR=6.8									
428A	**Kincaid Ranch,**	69.51	66	⇓P		P	02 47 00.7	+0.8		
	baz=69,SNR=16									
626A	**Big Bend Ranch**	69.62	68	⇑P		P	02 47 00.1	-0.5		
	baz=69,SNR=5.5									
528A	**Cox Ranch, San**	69.89	66	⇓P		P	02 47 02.4	+0.2		
	baz=70,SNR=6.8									
TXAR	**Lajitas Array**	70.05	68	P		P	02 47 03.8	+0.6		
	comp=Z,6.2nm,0.6s,mb4.7,baz=299,slow=4.5,SNR=133									
TXAR	**Lajitas Array**	70.05	68	P		P	02 47 03.8	+0.6		
TXAR				pmax	pmax					
	comp=Z,6.0nm,0.6s									
627A	**Terlingua Ranc**	70.11	67	⇓P		P	02 47 03.8	+0.2		
	baz=70									
628A	**Black Gap, Mar**	70.36	67	⇓P		P	02 47 05.2	+0.1		
	baz=70									
KWP	**Kalwaria Pacla**	71.05	333	*e*P		P	02 47 08.8	-0.2		
	comp=Z,11nm,1.1s,mb4.7									
KWP	**Kalwaria Pacla**	71.05	333	*e*P		P	02 47 08.8	-0.2		
KWP				pmax	pmax					
	comp=Z,11nm,1.1s,mb4.7									
PARMO	**Parma**	71.42	53	*e*P		P	02 47 11.0	-0.4		
CLL	**Collm**	71.84	339	⇑*i*P		P	02 47 12.7	-1.0		
	comp=Z,12nm,1.4s,mb4.6									
CLL				*e*S		S	02 56 29.0	-0.2		
CLL	**Collm**	71.84	339	⇑*i*P		P	02 47 12.7	-1.0		
CLL				*e*S		S	02 56 29.0	-0.2		
CLL				pmax	pmax					
	comp=Z,12nm,1.4s,mb4.6									
CLL	**Collm**	71.84	339	⇑*i*P		P	02 47 12.7	-1.0		
	comp=Z,12nm,1.4s,mb4.6									
DPC	**Dobruska-Polom**	72.01	337	*e*P		P	02 47 16.1	+1.4		
DPC	**Dobruska-Polou**	72.01	337	*e*P		P	02 47 16.1	+1.4		
MORC	**Moravsky Berou**	72.25	336	*e*P		P	02 47 16.1	-0.1		
	comp=Z,1.4nm,0.7s,mb4.0									
MORC	**Moravsky Berou**	72.25	336	*e*P		P	02 47 16.1	-0.1		
MORC				pmax	pmax					
	comp=Z,1.0nm,0.7s,mb3.9									
PRU	**Pruhonice**	72.75	338	*e*P		P	02 47 20.2	+1.0		
PRU	**Pruhonice**	72.75	338	*e*P		P	02 47 20.2	+1.0		
KHC	**Kasperske Hory**	73.77	338	*e*P		P	02 47 24.5	-0.7		
KHC	**Kasperske Hory**	73.77	338	*e*P		P	02 47 24.5	-0.7		
CDF	**Champ du Feu**	75.73	342	*e*P		P	02 47 35.8	-0.7		
LOR	**Lormes**	77.43	344	*e*P		P	02 47 44.3	-1.8		
AVF	**Avril sur Loir**	77.97	344	*e*P		P	02 47 47.6	-1.6		
	comp=Z,6.0nm,0.9s,mb4.2									
AVF	**Avril sur Loir**	77.97	344	*e*P		P	02 47 47.6	-1.6		
	comp=Z,3.0nm,0.9s,mb4.2									
AVF	**Avril sur Loir**	77.97	344	*e*P		P	02 47 47.6	-1.6		
AVF				pmax	pmax					
	comp=Z,3.0nm,0.9s,mb4.2									
LPL	**La Plagne**	78.62	342	⇑*i*P		P	02 47 53.4	+0.7		
	comp=Z,22nm,1.2s,mb4.7									
LPL	**La Plagne**	78.62	342	⇑*i*P		P	02 47 53.4	+0.7		
	comp=Z,11nm,1.2s,mb4.7									
LPL	**La Plagne**	78.62	342	⇑*i*P		P	02 47 53.4	+0.7		
LPL				pmax	pmax					
	comp=Z,11nm,1.2s,mb4.7									
LPG	**La Plagne**	78.64	342	⇑*i*P		P	02 47 53.6	+0.8		
	comp=Z,36nm,1.3s,mb4.8									
LPG	**La Plagne**	78.64	342	⇑*i*P		P	02 47 53.6	+0.8		
	comp=Z,18nm,1.3s,mb4.8									
LPG	**La Plagne**	78.64	342	⇑*i*P		P	02 47 53.6	+0.8		
LPG				pmax	pmax					
	comp=Z,18nm,1.3s,mb4.8									
ASAR	**Alice Springs**	80.52	205	P		P	02 48 03.5	+0.4		
	comp=Z,0.9nm,0.8s,mb3.8,baz=13,slow=6.6,SNR=6.3									
ASAR	**Alice Springs**	80.52	205	P		P	02 48 03.5	+0.4		
ASAR				pmax	pmax					
	comp=Z,1.0nm,0.8s									
ESDC	**Sonseca Array**	85.99	348	P		P	02 48 29.6	-1.7		
	comp=Z,0.7nm,0.8s,mb3.9,baz=17,slow=4.6,SNR=3.9									
KEST	**Kesra**	87.47	337	*e*P		P	02 48 39.6	+1.0		
KEST	**Kesra**	87.47	337	P		P	02 48 37.3	-1.3		
	comp=Z,0.8nm,0.7s,mb4.1,baz=324,slow=8.7,SNR=5.0									
QSPA	**South Pole Qui**	143.52	180	PKhKP		PKPpre	02 55 19.7			
	comp=Z,2.4nm,0.7s,baz=281,slow=0.9,SNR=18									
TRQA	**Tornquist**	146.99	79	*e*PKPbc		PKPbc	02 55 32.4	-0.6		

*ISCJB **09** 02:42:39.5±0.3,23.68N±0.01×121.52E±0.02,h11km±2km,*
Error ellipse: s-maj=3.1km s-min=1.9km az=38.6
*TAP **09** 02:42:39.5,23.71N×121.42E,h15km,ML3.7,B*
*JMA **09** 02:42:40.0±0.5,23.66N×121.44E,h78km,M2.8*
ISC 09 02:42:39.7±0.3,23.69N±0.01×121.50E±0.02,h11km±2km,
n57,σ0.82/98,4C-5D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	0.04	66	*i* P	Pg	02 42 43.5	+1.7
	baz=91						
TEGC				*i* S	Sg	02 42 46.4	+3.0
	baz=91						
ESL	**Shilin**	0.14	335	⇓*i*P	Pg	02 42 42.9	0.0
	baz=10.0						
ESL				S	Sg	02 42 44.9	-0.3
	baz=10.0						
ESF	**Shoufeng Towns**	0.18	3	P	Pg	02 42 44.0	+0.3
	baz=27						
ESF				*i* S	Sg	02 42 46.8	+0.5
	baz=27						
EHY	**Hungye**	0.24	221	⇓*i*P	Pg	02 42 44.6	-0.2
	baz=202						
EHY				S	Sg	02 42 48.0	-0.1
	baz=202						
HWA	**Hwalien**	0.30	19	P	Pg	02 42 46.4	+0.6
	baz=26						
HWA				S	Sg	02 42 51.4	+1.4
	baz=26						
TWF1	**Yuli**	0.38	209	⇓*i*P	Pg	02 42 47.0	-0.2
	baz=200						
TWF1				*e*S	Sg	02 42 52.9	+0.5
	baz=200						
TWD	**Chiawan**	0.40	13	*i* P	Pg	02 42 48.1	+0.5
	baz=19						
TWD				S	Sg	02 42 53.1	+0.2
	baz=19						
WHF	**Hehuan Shan**	0.50	335	⇑*i*P	Pg	02 42 49.0	-0.5
	baz=343						
WHF				S	Sg	02 42 55.2	-0.9
	baz=343						
YUS	**Yu-Shan**	0.54	248	⇑*i*P	Pg	02 42 50.3	+0.1
	baz=242						
YUS				S	Sg	02 42 56.8	-0.5
	baz=242						
SMLT	**Sun Moon Lake**	0.58	289	*i* P	Pg	02 42 50.3	-0.6
	baz=290						
CHKT	**Chengkung**

	baz=230								
SGST					*e*S		**Sg**	**02 43 14.2**	**+1.1**
	baz=230								
TWE	**Neicheng**	**1.04**	**9**	P		**Pb**	**02 42 58.8**	**-0.8**
	baz=24								
TWE					*e*S		**Sg**	**02 43 13.3**	**+0.1**
	baz=24								
NSTT	**Nanjuang**	**1.04**	**334**	P		**Pb**	**02 42 59.4**	**-0.3**
	baz=339								
NSTT					S		**Sg**	**02 43 12.2**	**-1.0**
	baz=339								
WTCT	**Ta-ch'eng**	**1.13**	**279**	*e*P		**Pb**	**02 43 00.9**	**-0.2**
	baz=278								
ECL	**Taimali**	**1.20**	**205**	*e*P		**Pn**	**02 43 00.7**	**-1.6**
	baz=183								
CHN8	**Yiju**	**1.23**	**254**	*e*P		**Pn**	**02 43 03.0**	**+0.2**
	baz=252								
CHN8					*e*S		**Sb**	**02 43 19.4**	**+0.7**
	baz=252								
SSD	**Sandimen**	**1.23**	**220**	*e*P		**Pn**	**02 43 01.5**	**-1.3**
	baz=210								
SSD					*e*S		**Sb**	**02 43 19.9**	**+1.1**
	baz=210								
TWA	**Mucha**	**1.29**	**4**	*e*P		**Pn**	**02 43 04.5**	**+1.0**
	baz=20								
NCU	**National Centr**	**1.30**	**348**	*e*P		**Pn**	**02 43 05.0**	**+1.1**
	baz=351								
NCU					*e*S		**Sb**	**02 43 22.3**	**+1.3**
	baz=351								
TWM1	**Shoushan**	**1.31**	**229**	*e*P		**Pn**	**02 43 04.7**	**+0.7**
	baz=211								
TAP1	**Taipei**	**1.34**	**1**	*e*P		**Pn**	**02 43 04.7**	**+0.3**
	baz=21								
TWB1	**Santiao Chiao**	**1.39**	**19**	*e*P		**Pn**	**02 43 04.3**	**-0.6**
	baz=25								
NWF	**Wu-fen Shan**	**1.40**	**11**	*e*P		**Pn**	**02 43 06.0**	**+0.9**
	baz=14								
NWF					*e*S		**Sn**	**02 43 24.1**	**+0.5**
	baz=14								
TWS1	**Kuangyinshan**	**1.41**	**357**	*e*P		**Pn**	**02 43 05.7**	**+0.5**
	baz=20								
TWS1					*e*S		**Sn**	**02 43 25.9**	**+2.2**
	baz=20								
EAST	**Anshuo**	**1.43**	**205**	*e*P		**Pn**	**02 43 04.8**	**-0.8**
	baz=185								
SCZT	**Fangliau**	**1.54**	**212**	*e*P		**Pn**	**02 43 07.3**	**+0.2**
	baz=198								
TWY	**Chenhua**	**1.58**	**3**	*e*P		**Pn**	**02 43 08.7**	**+1.1**
	baz=10.0								
YOJ	**Yonaguni jima**	**1.58**	**61**	P		**Pn**	**02 43 07.6**	**0.0**
YOJ					*e*S		**Sn**	**02 43 28.3**	**+0.2**
YOJ	**Yonaguni jima**	**1.58**	**61**	*e*P		**Pn**	**02 43 08.1**	**+0.4**
	baz=61								
YOJ					*e*S		**Sn**	**02 43 28.1**	**0.0**
	baz=61								
PNG	**Penghu**	**1.79**	**266**	*e*P		**Pn**	**02 43 09.2**	**-1.2**
	baz=267								
PNG					*e*S		**Sn**	**02 43 33.4**	**+0.3**
	baz=267								
IRIF	**Iriomote-Funau**	**2.14**	**72**	P		**Pn**	**02 43 15.6**	**+0.3**
IRIF					*e*S		**Sn**	**02 43 42.6**	**+0.7**
HATJ	**Hateruma jima**	**2.14**	**80**	S		**Sn**	**02 43 41.0**	**-1.0**
JKRS	**Kuro-shima**	**2.36**	**76**	S		**Sn**	**02 43 47.6**	**+0.3**
JIJ	**Ishigaki jima**	**2.51**	**74**	P		**Pn**	**02 43 19.8**	**-0.6**
JIJ					S		**Sn**	**02 43 49.9**	**-1.1**
KNM	**Kinmen**	**2.89**	**285**	*e*P		**Pn**	**02 43 25.7**	**+0.1**
	baz=286								
JTJ	**Tarama**	**3.08**	**71**	*e*S		**Sn**	**02 44 04.7**	**-0.3**

*NEIC **09** 02:59:33.5, 19°.37N×98°.37W, h5km, MD3.4(MEX), After MEX.*

MEX 09 02:59:33.1±1.2, 19°.35N×98°.38W, h4km±6km, MD3.5, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPM	**Popocatepetl**	**0.36**	**220**	*e*P	Pg	02 59 39.2	-0.9
PPM				*e*S	Sg	02 59 45.7	+0.9
PPM	**Popocatepetl**	**0.36**	**220**	*i* P	Pg	02 59 39.2	-0.8
PPM				*i* S	Sg	02 59 45.2	+0.5
IIO	**Organos**	**0.41**	**307**	*i* P	Pg	02 59 40.9	0.0
IIO				*i* S	Sg	02 59 45.9	-0.3
IIO	**Organos**	**0.41**	**307**	*i* P	Pg	02 59 40.9	0.0
IIO				*i* S	Sg	02 59 45.9	-0.3
PTVM	**Pico Tres Padr**	**0.73**	**290**	*e*P	Pg	02 59 46.7	-0.5
PTVM				*i* S	Sg	02 59 56.4	-0.3
PTVM	**Pico Tres Padr**	**0.73**	**290**	*e*P	Pg	02 59 46.7	-0.5
PTVM				*i* S	Sg	02 59 56.4	-0.3
YAIG	**Yautepec**	**0.81**	**234**	*i* P	Pg	02 59 46.9	-1.8
YAIG				*e*S	Sg	02 59 58.9	-0.2
YAIG	**Yautepec**	**0.81**	**234**	*i* P	Pg	02 59 46.9	-1.8
YAIG				*i* S	Sg	02 59 58.4	-0.7
MZVM		**0.82**	**259**	*i* P	Pg	02 59 49.0	+0.2
MZVM				*i* S	Sg	02 59 57.7	-1.7
DEIG	**Demacu**	**1.13**	**327**	*i* P	Pg	02 59 51.9	-2.9
DEIG				*i* S	Sg	03 00 06.5	-3.1
TPIG	**Tehuac#an**	**1.33**	**134**	*i* P	Pn	02 59 54.3	-4.3
TPIG				*i* S	Sg	03 00 11.7	-4.3
PLIG	**Platanillo**	**1.42**	**228**	*i* P	Pn	02 59 58.0	-1.8
PLIG				*i* S	Sb	03 00 14.3	-4.5
PLIG	**Platanillo**	**1.42**	**228**	*i* P	Pn	02 59 57.6	-2.2
PLIG				*i* S	Sb	03 00 14.3	-4.5
MEIG	**Mezcala**	**1.84**	**220**	*i* P	Pn	03 00 02.2	-3.3
MEIG				*e*S	Sn	03 00 25.0	-4.2
VHO	**Vista Hermosa**	**2.75**	**145**	*i* P	Pn	03 00 17.7	-0.4
VHO				*e*S	Sn	03 00 47.6	-4.1
VHO	**Vista Hermosa**	**2.75**	**145**	*i* P	Pn	03 00 17.7	-0.4
VHO				*e*S	Sn	03 00 47.6	-4.1

*SOF **09** 03:25:44.8, 42°.67N×23°.38E, h14km, MD3.0*
*CSEM **09** 03:25:45.0±0.1, 42°.70N×23°.37E, h2km, ML2.7, Error ellipse: s-maj=3.2km s-min=2.5km az=35.0*
*THE **09** 03:25:45.0, 42°.71N×23°.35E, h0km±1km, ML3.0/7, Error ellipse: s-maj=2.0km s-min=1.0km az=8.0*
*SKO **09** 03:25:45.4, 42°.74N×23°.32E, h0km, M2.4, ML2.8*
*BEO **09** 03:25:46.2±0.9, 42°.60N×23°.28E, h11km±3km, ML2.7/4*

ISC 09 03:25:45.4±0.5, 42°.69N±0°.02×23°.35E±0°.03, h1km±4km, n74, σ0°.86/108, 10C-7D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	**Vitosha**	**0.14**	**227**	⇑*i*Pg	**Pg**	**03 25 48.4**	**+0.2**
VTS				*i* Sg	**Sg**	**03 25 50.5**	**+0.4**
VTS	**Vitosha**	**0.14**	**227**	P	**Pg**	**03 25 48.0**	**-0.2**
VTS				S	**Sg**	**03 25 50.4**	**+0.3**
VTS	**Vitosha**	**0.14**	**227**	*i* P	**Pg**	**03 25 48.4**	**+0.2**
VTS	**Vitosha**	**0.14**	**227**	*i* P	**Pg**	**03 25 48.4**	**+0.2**
VTS				S	**Sg**	**03 25 50.4**	**+0.3**
PGB	**Panagyurishte**	**0.62**	**103**	*i* P	**Pg**	**03 25 56.8**	**-0.5**
PGB	**Panagyurishte**	**0.62**	**103**	*i* P	**Pg**	**03 25 56.8**	**-0.5**
MPEP	**Malo Peshtene**	**0.72**	**23**	*i* P	**Pg**	**03 25 59.5**	**+0.2**
ZAPS	**Zavoj**	**0.79**	**318**	⇑*i*Pg	**Pg**	**03 26 01.8**	**+1.3**
ZAPS				*i* Sg	**Sg**	**03 26 13.8**	**+3.1**
KKB	**Krupnik**	**0.85**	**194**	*i* P	**Pg**	**03 26 01.5**	**-0.2**
KKB	**Krupnik**	**0.85**	**194**	*i* P	**Pg**	**03 26 01.5**	**-0.2**
MMB	**Musomiste**	**1.14**	**166**	*i* P	**Pg**	**03 26 07.1**	**-0.1**
MMB	**Musomiste**	**1.14**	**166**	*i* P	**Pg**	**03 26 07.1**	**-0.1**
BARS	**Barje**	**1.14**	**277**	⇑*i*Pg	**Pg**	**03 26 06.6**	**-0.7**
BARS				*i* Sg	**Sg**	**03 26 21.7**	**-0.3**
BARS	**Barje**	**1.14**	**277**	⇑*i*Pg	**Pg**	**03 26 06.6**	**-0.7**
BARS				*i* Sg	**Sg**	**03 26 21.7**	**-0.3**
PLD	**Plovdiv**	**1.16**	**120**	P	**Pn**	**03 26 05.7**	**-3.0**
PLD				S	**Sg**	**03 26 24.2**	**+1.6**
PLD	**Plovdiv**	**1.16**	**120**	*i* P	**Pn**	**03 26 05.0**	**-3.7**
PLD	**Plovdiv**	**1.16**	**120**	P	**Pn**	**03 26 05.7**	**-3.0**
PLD				S	**Sg**	**03 26 24.2**	**+1.6**
RZN	**Rozhen**	**1.43**	**134**	*i* P	**Pn**	**03 26 11.5**	**-0.9**
RZN	**Rozhen**	**1.43**	**134**	*i* P	**Pn**	**03 26 11.5**	**-0.9**
VAY	**Valandovo**	**1.49**	**203**	P	**Pn**	**03 26 12.4**	**-0.8**
VAY				S	**Sb**	**03 26 32.7**	**-0.5**
VAY	**Valandovo**	**1.49**	**203**	*i* Pg	**Pn**	**03 26 12.4**	**-0.8**
VAY				*i* Sg	**Sg**	**03 26 33.8**	**+0.6**
VAY				*e*Lg		03 26 34.4	
	comp=N,164nm,0.7s						
VAY				*e*Lg		03 26 34.6	
	comp=E,137nm,0.5s						
VAY	**Valandovo**	**1.49**	**203**	P	**Pn**	**03 26 12.4**	**-0.8**
VAY				S	**Sb**	**03 26 32.7**	**-0.5**
BOLS	**Boljevac**	**1.53**	**319**	⇓*i*Pn	**Pn**	**03 26 13.8**	**0.0**
BOLS				*i* Sg	**Sg**	**03 26 35.1**	**+0.5**
BOLS	**Boljevac**	**1.53**	**319**	⇓*i*Pn	**Pn**	**03 26 13.8**	**0.0**
BOLS				*i* Sg	**Sg**	**03 26 35.1**	**+0.5**
KNT	**Kendrikon**	**1.56**	**193**	P	**Pn**	**03 26 14.0**	**-0.3**
KNT				S	**Sn**	**03 26 35.0**	**-0.2**
KNT	**Kendrikon**	**1.56**	**193**	P	**Pn**	**03 26 14.0**	**-0.3**
KNT				S	**Sn**	**03 26 35.0**	**-0.2**
SRS	**Serrai**	**1.58**	**173**	P	**Pn**	**03 26 14.0**	**-0.5**
SRS				S	**Sn**	**03 26 35.5**	**-0.1**
SRS	**Serrai**	**1.58**	**173**	P	**Pn**	**03 26 14.0**	**-0.5**
SRS				S	**Sn**	**03 26 35.5**	**-0.1**
SKO	**Skopje**	**1.59**	**244**	*e*Pg	**Pn**	**03 26 14.3**	**-0.4**
SKO				*i* Sg	**Sg**	**03 26 36.3**	**-0.2**
SKO				*e*Lg		03 26 38.0	
	comp=E,33nm,0.3s						
SKO				*e*Lg		03 26 38.9	
	comp=N,44nm,0.3s						
DIM	**Dimitrovgrad**	**1.74**	**111**	*i* P	**Pn**	**03 26 16.5**	**-0.2**
DIM	**Dimitrovgrad**	**1.74**	**111**	*i* P	**Pn**	**03 26 16.5**	**-0.2**
KDZ	**Kurdzhali**	**1.85**	**123**	*i* P	**Pn**	**03 26 17.6**	**-0.7**
KDZ	**Kurdzhali**	**1.85**	**123**	*i* P	**Pn**	**03 26 17.6**	**-0.7**
SOH	**Sokhos**	**1.87**	**180**	P	**Pn**	**03 26 18.6**	**+0.1**
SOH				S	**Sn**	**03 26 43.7**	**+1.1**
SOH	**Sokhos**	**1.87**	**180**	P	**Pn**	**03 26 18.6**	**+0.1**
SOH				S	**Sn**	**03 26 43.7**	**+1.1**
GRG	**Griva**	**1.87**	**203**	P	**Pn**	**03 26 18.2**	**-0.3**
GRG	**Griva**	**1.87**	**203**	P	**Pn**	**03 26 18.2**	**-0.3**
KAVA	**Kavala**	**1.90**	**152**	P	**Pn**	**03 26 18.5**	**-0.4**
KAVA				S	**Sn**	**03 26 45.1**	**+1.6**
KAVA	**Kavala**	**1.90**	**152**	P	**Pn**	**03 26 18.5**	**-0.4**
KAVA				S	**Sn**	**03 26 45.1**	**+1.6**
SZH	**Strazhica**	**1.98**	**72**	*i* P	**Pn**	**03 26 19.8**	**-0.2**
SZH	**Strazhica**	**1.98**	**72**	*i* P	**Pn**	**03 26 19.8**	**-0.2**
KRUS	**Krusevo**	**2.05**	**231**	*i* Pg	**Pn**	**03 26 21.7**	**+0.7**
THE	**Thessaloniki**	**2.08**	**188**	P	**Pn**	**03 26 23.0**	**+1.7**
THE				S	**Sn**	**03 26 49.0**	**+1.2**
THE	**Thessaloniki**	**2.08**	**188**	P	**Pn**	**03 26 23.0**	**+1.7**
THE				S	**Sn**	**03 26 49.0**	**+1.2**
HORT	**Hortiatis**	**2.10**	**185**	P	**Pn**	**03 26 21.4**	**-0.3**
HORT				S	**Sn**	**03 26 49.4**	**+1.0**
HORT	**Hortiatis**	**2.10**	**185**	P	**Pn**	**03 26 21.4**	**-0.3**
HORT				S	**Sn**	**03 26 49.4**	**+1.0**
BIA	**Bitola**	**2.25**	**223**	*i* Pg	**Pb**	**03 26 25.5**	**-1.4**
GRUS	**Gruza**	**2.27**	**303**	*e*Pn	**Pn**	**03 26 23.5**	**-0.5**
GRUS				*i* Sg	**Sg**	**03 26 58.1**	**-0.2**
GRUS	**Gruza**	**2.27**	**303**	*e*Pn	**Pn**	**03 26 23.5**	**-0.5**
GRUS				*i* Sg	**Sg**	**03 26 58.1**	**-0.2**
JMB	**Yambol**	**2.40**	**94**	P	**Pn**	**03 26 25.0**	**-0.7**
JMB				S	**Sn**	**03 26 56.2**	**+0.5**
JMB	**Yambol**	**2.40**	**94**	P	**Pn**	**03 26 25.0**	**-0.7**
JMB				S	**Sn**	**03 26 56.2**	**+0.5**
OUR	**Ouranopolis**	**2.40**	**168**	P	**Pn**	**03 26 24.7**	**-1.1**
OUR	**Ouranopolis**	**2.40**	**168**	P	**Pn**	**03 26 24.7**	**-1.1**
FNA	**Florina**	**2.41**	**218**	P	**Pn**	**03 26 26.0**	**0.0**
FNA				S	**Sn**	**03 26 57.0**	**+0.9**
FNA	**Florina**	**2.41**	**218**	P	**Pn**	**03 26 26.0**	**0.0**
FNA				S	**Sn**	**03 26 57.0**	**+0.9**
LIT	**Litokhoron**	**2.67**	**194**	P	**Pn**	**03 26 28.4**	**-1.1**
LIT	**Litokhoron**	**2.67**	**194**	P	**Pn**	**03 26 28.4**	**-1.1**
ALN	**Alexandroupoli**	**2.69**	**131**	P	**Pn**	**03 26 29.3**	**-0.6**
ALN	**Alexandroupoli**	**2.69**	**131**	P	**Pn**	**03 26 29.3**	**-0.6**
GZR	**Gura Zlata**	**2.73**	**351**	⇓*i*P	**Pb**	**03 26 36.4**	**+1.3**
PAIG	**Paliouri**	**2.77**	**175**	P	**Pn**	**03 26 30.1**	**-0.8**
PAIG	**Paliouri**	**2.77**	**175**	P	**Pn**	**03 26 30.1**	**-0.8**
DIVS	**Divibare**	**2.83**	**301**	⇓*i*Pn	**Pn**	**03 26 30.8**	**-0.8**
DIVS	**Divibare**	**2.83**	**301**	P	**Pn**	**03 26 30.9**	**-0.7**
DIVS				S	**Sn**	**03 27 06.1**	**-0.2**
DIVS	**Divibare**	**2.83**	**301**	P	**Pn**	**03 26 30.9**	**-0.7**
DIVS				S	**Sn**	**03 27 06.1**	**-0.2**
VOIR		**3.01**	**23**	⇑*i*P	**Pn**	**03 26 33.8**	**-0.3**
VOIR		**3.01**	**23**	⇑*i*P	**Pn**	**03 26 33.8**	**-0.3**
BZS	**Buzias**	**3.18**	**337**	⇑*i*P	**Pg**	**03 26 52.7**	**+6.3**
MLR	**Muntele Rosu**	**3.37**	**33**	⇓*i*P	**Pb**	**03 26 45.3**	**-0.5**
PLOR	**Plostina**	**3.95**	**36**	⇓*i*P	**Pn**	**03 26 49.6**	**+2.5**
PLOR	**Plostina**	**3.95**	**36**	⇓*i*P	**Pn**	**03 26 49.6**	**+2.5**
VRI	**Vrincioaia**	**3.99**	**36**	⇑*i*P	**Pn**	**03 26 52.0**	**+4.3**
VRI	**Vrincioaia**	**3.99**	**36**	⇑*i*P	**Pn**	**03 26 52.0**	**+4.3**
DRGR		**4.13**	**354**	⇑*i*P	**Pg**	**03 27 03.9**	**-0.6**

*STR **09** 03:45:59.5±0.7, 51°.75N×17°.25E, h10km, Ml3.7, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*ISCJB **09** 03:46:06.3±0.2, 51°.50N±0°.01×16°.13E±0°.02, h0km, mb3.7/13, Error ellipse: s-maj=2.1km s-min=1.5km az=11.0*
*MOS **09** 03:46:06.8±1.3, 51°.57N×16°.10E, h10km, mb4.2/6, Error ellipse: s-maj=5.8km s-min=3.8km az=85.5*
*CSEM **09** 03:46:07.6±0.1, 51°.54N×16°.18E, h0km, ML3.2/4, Ms3.6, Error ellipse: s-maj=2.8km s-min=2.2km az=14.0*
*LDG **09** 03:46:07.3±0.1, 51°.52N×16°.25E, h1km, Ml4.1/14, Suspected Mining induced.*
*IPEC **09** 03:46:07.0±0.2, 51°.58N×16°.26E, h0km, ML3.2/4, Error ellipse: s-maj=1.5km s-min=1.3km az=12.0*
*NEIC **09** 03:46:08.3±0.3, 51°.54N×16°.08E, h5km, mb3.8/3, ML3.7(STR), ML3.4(BRA), Error ellipse: s-maj=4.8km s-min=3.8km az=175.0*
*IDC **09** 03:46:09.1±0.7, 51°.47N×16°.04E, h0km, mb3.7/9, mb1 3.8/16, mb1mx3.7/27, mbtmp3.7/16, ML3.7/7, MS2.4/1, Ms1 2.5/1, ms1mx1.8/35, Error ellipse: s-maj=11.4km s-min=7.6km az=74.0*
*PRU **09** 03:46:09.3, 51°.46N×16°.15E, h0km, M3.8, Felt In Harrachov*
*BGR **09** 03:46:10.5±0.4, 51°.42N×16°.12E, h1km, ML3.9/6, Error ellipse: s-maj=7.8km s-min=4.4km az=161.0*
*WAR **09** 03:46:10.0, 51°.47N×16°.14E, ML3.3, Mining Induced*
*VIE **09** 03:46:11.2±0.4, 51°.25N×16°.18E, h1km, mb3.1/10, ML3.4/9, Ms3.6/3, Error ellipse: s-maj=3.0km s-min=1.9km az=7.0 60 km WNW of Wroclaw Suspected Mining induced.*
*UPP **09** 03:46:14.7, 51°.86N×15°.60E, h0km, ML2.8, Suspected Mining explosion.*

ISC 09 03:46:07.9±0.2, 51°.52N±0°.01×16°.17E±0°.02, h0km, n312, σ1819/435, mb3.7/13, 17C-21D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**173**	*e*Pg	**Pg**	**03 46 21.6**	**+0.6**
KSP				*e*Sg	**Sg**	**03 46 29.1**	**-0.7**
KSP	**Ksiaz**	**0.69**	**173**	⇓*i*P	**Pg**	**03 46 21.5**	**+0.5**
KSP				*e*		03 46 29.5	
KSP	**Ksiaz**	**0.69**	**173**	*i* Pg	**Pg**	**03 46 21.5**	**+0.5**
KSP				i		03 46 22.8	
KSP				*e*Sg	**Sg**	**03 46 29.1**	**-0.7**
KSP				eL		03 46 33.5	
KSP	**Ksiaz**	**0.69**	**173**	⇓*i*Pg	**Pg**	**03 46 21.5**	**+0.5**
KSP				*e*Sg	**Sg**	**03 46 29.5**	**-0.3**
UPC	**Upice**	**1.02**	**186**	*e*P	**Pg**	**03 46 27.6**	**+0.2**
UPC	**Upice**	**1.02**	**186**	*e*PG	**Pg**	**03 46 27.6**	**+0.2**
UPC	**Upice**	**1.02**	**186**	Pg	**Pg**	**03 46 27.6**	**+0.2**
DPC	**Dobruska-Polom**	**1.18**	**175**	*e*P	**Pg**	**03 46 30.3**	**-0.1**
DPC				*e*		03 46 44.4	
DPC				smax			
	comp=N,381nm,0.4s						
DPC	**Dobruska-Polom**	**1.18**	**175**	*e*PG	**Pg**	**03 46 30.3**	**-0.1**
DPC				*e*SG	**Sg**	**03 46 44.4**	**-1.3**
	comp=Z,381nm,0.4s						
DPC				AMS	AMS	03 46 50.0	
DPC	**Dobruska-Polom**	**1.18**	**175**	*e*P	**Pg**	**03 46 30.3**	**-0.1**
	comp=Z,381nm,0.4s						
DPC				Sg	**Sg**	**03 46 44.4**	**-1.3**
	comp=Z,381nm,0.4s						
PVCC	**Panska Ves**	**1.42**	**226**	*e*P	**Pn**	**03 46 34.9**	**0.0**
PVCC				*e*		03 46 52.7	
PVCC				smax			
	comp=N,690nm,0.3s						
PVCC				MLR	MLR		
	comp=Z,2μm,1.8s						
PVCC	**Panska Ves**	**1.42**	**226**	*e*PG	**Pn**	**03 46 34.9**	**0.0**
PVCC				*e*SG	**Sg**	**03 46 52.7**	**-0.7**
	comp=Z,690nm,0.3s						
PVCC				AMS	AMS	03 47 20.0	
	comp=Z,2μm,1.8s						
PVCC	**Panska Ves**	**1.42**	**226**	*e*Pn	**Pn**	**03 46 34.7**	**-0.2**
	baz=45						
PVCC				Sg	**Sg**	**03 46 52.7**	**-0.7**
	comp=Z,690nm,0.3s						
BRG	**Berggiesshubel**	**1.54**	**246**	*e*Pn	**Pn**	**03 46 36.2**	**-0.4**
	SNR=120						
BRG				*e*Sg	**Sg**	**03 46 57.5**	**+0.1**
BRG	**Berggiesshubel**	**1.54**	**246**	PN	**Pn**	**03 46 36.2**	**-0.4**
BRG				PG	**Pg**	**03 46 37.8**	**+0.4**
BRG				SG	**Sg**	**03 46 57.6**	**+0.2**
	comp=Z,394nm,0.4s						
BRG	**Berggiesshubel**	**1.54**	**246**	P	**Pn**	**03 46 36.2**	**-0.4**
BRG						03 46 57.6	
BRG				smax			
	comp=N,236nm,0.4s						
BRG	**Berggiesshubel**	**1.54**	**246**	Pn	**Pn**	**03 46 36.2**	**-0.4**
	SNR=120						
BRG				S	**Sg**	**03 46 57.6**	**+0.2**
	comp=N,236nm,0.4s						
RUE	**Ruedersdorf**	**1.76**	**304**	*e*Pn	**Pn**	**03 46 39.6**	**0.0**
RUE				*e*Sn	**Sn**	**03 47 00.8**	**-1.9**
RUE	**Ruedersdorf**	**1.76**	**304**	*e*Pn	**Pn**	**03 46 39.6**	**0.0**
RUE				*e*Sn	**Sn**	**03 47 00.8**	**-1.9**
PRU	**Pruhonice**	**1.85**	**215**	*e*P	**Pn**	**03 46 41.0**	**+0.2**
PRU				*e*		03 47 06.2	
PRU				smax			
	comp=N,441nm,0.5s						
PRU				MLR	MLR		
	comp=Z,700nm,3.9s						
PRU	**Pruhonice**	**1.85**	**215**	*e*PN	**Pn**	**03 46 41.0**	**+0.2**
PRU				*e*PG	**Pg**	**03 46 42.8**	**-0.5**
PRU				*e*SG	**Sg**	**03 47 06.2**	**-1.1**
	comp=Z,440nm,0.5s						
PRU				AMS	AMS	03 47 20.0	
	comp=Z,700nm,3.9s						
PRU	**Pruhonice**	**1.85**	**215**	Pn	**Pn**	**03 46 41.0**	**+0.2**
PRU	**Pruhonice**	**1.85**	**215**	Pg	**Pg**	**03 46 42.8**	**-0.5**
PRU				Sg	**Sg**	**03 47 06.2**	**-1.1**
	comp=Z,440nm,0.5s						
GKP	**Gorka Klasztor**	**1.87**	**20**	*e*Pn	**Pn**	**03 46 43.8**	**+2.7**
GKP				*e*Sn	**Sn**	**03 47 11.9**	**+6.6**
GKP	**Gorka Klasztor**	**1.87**	**20**	*e*Pn	**Pn**	**03 46 43.8**	**+2.7**
RAC	**Raciborz**	**1.93**	**137**	*e*Pn	**Pn**	**03 46 41.5**	**-0.4**
RAC				*e*Pg	**Pg**	**03 46 45.2**	**+0.3**
RAC				*e*Sg	**Sg**	**03 47 11.7**	**+1.8**
RAC	**Raciborz**	**1.93**	**137**	*e*Pn	**Pn**	**03 46 41.5**	**-0.4**
MORC	**Moravsky Berou**	**1.96**	**153**	*e*Pn	**Pn**	**03 46 41.6**	**-0.7**
MORC				*e*Pg	**Pg**	**03 46 46.0**	**+0.7**
MORC				*e*Sg	**Sg**	**03 47 10.4**	**-0.2**
MORC	**Moravsky Berou**	**1.96**	**153**	*e*P	**Pn**	**03 46 41.6**	**-0.6**
MORC	**Moravsky Berou**	**1.96**	**153**	*e*Pn	**Pn**	**03 46 42.1**	**-0.1**
MORC	**Moravsky Berou**	**1.96**	**153**	*e*Pg	**Pg**	**03 46 46.0**	**+0.7**
MORC				*e*Sg	**Sg**	**03 47 08.9**	**-1.7**
MORC				*e*S	**Sn**	**03 47 10.4**	**+3.0**
CLL	**Collm**	**1.99**	**265**	*e*Pn	**Pn**	**03 46 42.6**	**-0.2**
	SNR=71						
CLL				*e*Pg	**Pg**	**03 46 45.0**	**-1.1**
CLL				*e*Sg	**Sg**	**03 47 12.5**	**+0.6**
CLL	**Collm**	**1.99**	**265**	*i* Pn	**Pn**	**03 46 42.6**	**-0.2**
CLL				*e*Pg	**Pg**	**03 46 45.0**	**-1.1**
CLL				*e*Sg	**Sg**	**03 47 12.0**	**+0.1**
CLL	**Collm**	**1.99**	**265**	*i* Pn	**Pn**	**03 46 42.6**	**-0.2**
	comp=Z,16nm,0.5s						
CLL				*e*Pg	**Pg**	**03 46 45.0**	**-1.1**
CLL				*i*		03 46 47.2	
CLL				*e*		03 47 02.0	
CLL				*e*Sg	**Sg**	**03 47 12.0**	**+0.1**
	comp=Z,272nm,0.5s						
CLL	**Collm**	**1.99**	**265**	Pn	**Pn**	**03 46 42.6**	**-0.2**
	SNR=71						
OKC	**Ostrava-Krasne**	**2.10**	**142**	*e*SG	**Sg**	**03 47 15.1**	**-0.4**
	comp=Z,182nm,0.5s						
OKC				AMS	AMS	03 47 40.0	
	comp=Z,400nm,3.4s						
OKC	**Ostrava-Krasne**	**2.10**	**142**	*e*Pn	**Pn**	**03 46 43.5**	**-0.8**
	baz=326						
OKC				*e*Sg	**Sg**	**03 47 13.9**	**-1.6**
	baz=326						
VRAC	**Vranov**	**2.23**	**173**	Pn	**Pn**	**03 46 46.2**	**+0.1**
	comp=Z,15nm,0.3s,baz=335,slow=15,SNR=114						
VRAC				Sn	**Sn**	**03 47 17.8**	**+3.4**
	comp=Z,38nm,0.3s,baz=100,slow=16,SNR=8.6						
VRAC	**Vranov**	**2.23**	**173**	P	**Pn**	**03 46 46.2**	**+0.1**
VRAC						03 47 17.8	
VRAC				pmax	pmax		
	comp=Z,15nm,0.3s						
VRAC				smax			
	comp=N,39nm,0.3s						
VRAC	**Vranov**	**2.23**	**173**	P	**Pn**	**03 46 46.2**	**+0.1**
	comp=N,15nm,0.3s						
VRAC				Sn	**Sn**	**03 47 17.8**	**+3.5**
KRUC	**Moravsky**	**2.47**	**177**	*e*Pn	**Pn**	**03 46 49.5**	**+0.2**
	baz=358						
KRUC				*e*Sg	**Sg**	**03 47 26.3**	**-0.8**
	comp=N,124nm,0.6s,baz=358						
TANN	**Tannenbergstha**	**2.59**	**246**	*e*Pn	**Pn**	**03 46 51.4**	**+0.3**
	SNR=

MODS Modra-Piesok 3.23 167 *e*PN **Pn** 03 47 01.2 +1.4
MODS *e* 03 47 10.0
MODS *e* 03 47 53.0
MODS Modra-Piesok 3.23 167 *e*Pn **Pn** 03 47 01.2 +1.4
KOLL Kolacno 3.28 153 *e*Pn **Pn** 03 47 01.3 +0.8
KOLL *e* 03 47 10.9
KOLL *e*Sg **Sg** 03 47 51.3 -1.9
KOLL Kolacno 3.28 153 *e*PN **Pn** 03 47 01.3 +0.8
KOLL *e* 03 47 10.9
KOLL Kolacno 3.28 153 *e*SG **Sg** 03 47 51.3 -1.9
KOLL Kolacno 3.28 153 *e*Pn **Pn** 03 47 01.3 +0.8
KOLL *e*Sg **Sg** 03 47 51.3 -1.9
NIE Niedzica 3.38 127 *e*Pn **Pn** 03 47 02.7 +0.8
NIE *e*Pg **Pg** 03 47 11.5 -1.2
NIE *e* 03 47 53.5
NIE *e*Sg **Sg** 03 47 55.9 -0.6
NIE Niedzica 3.38 127 *e*Pn **Pn** 03 47 02.7 +0.8
ZST Bratislava 3.38 169 *e*Pn **Pn** 03 47 02.5 +0.6
ZST *e* 03 47 11.2
ZST *e*Sg **Sg** 03 47 55.6 -0.9
ZST Bratislava 3.38 169 *e*PN **Pn** 03 47 02.5 +0.6
ZST *e* 03 47 11.1
ZST Bratislava 3.38 169 *e*SG **Sg** 03 47 55.6 -0.9
ZST Bratislava 3.38 169 *e*P **Pn** 03 47 02.5 +0.6
ZST *e*Sg **Sg** 03 47 55.6 -0.9
ASSE Asse, Remlinge 3.46 282 *e*Pn **Pn** 03 47 04.8 +1.8
SNR=3.5
ASSE Asse, Remlinge 3.46 282 Pn **Pn** 03 47 04.8 +1.8
SNR=3.5
VYHS Vyhne 3.49 149 *e*Pn **Pn** 03 47 03.2 -0.1
VYHS *e* 03 47 14.4
VYHS *e*Sg **Sg** 03 47 59.0 -0.8
VYHS Vyhne 3.49 149 *e*PN **Pn** 03 47 03.2 -0.1
VYHS *e* 03 47 14.4
VYHS Vyhne 3.49 149 *e*SG **Sg** 03 47 59.0 -0.8
VYHS Vyhne 3.49 149 *e*Pn **Pn** 03 47 03.2 -0.1
VYHS *e*Sg **Sg** 03 47 59.0 -0.8
CONA Conrad Observa 3.60 183⇓*i*Pn **Pn** 03 47 05.1 +0.1
SNR=31
CONA ⇑*i*Sg **Sg** 03 48 02.0 -1.6
comp=Z,119nm,0.5s
CONA Conrad Observa 3.60 183 Pn **Pn** 03 47 05.1 +0.2
SNR=31
CLZ Clausthal 3.62 277 *e*Pn **Pn** 03 47 07.0 +1.8
SNR=18
CLZ *e*Pg **Pg** 03 47 20.9 +3.7
SNR=2.4
CLZ Clausthal 3.62 277 Pn **Pn** 03 47 07.0 +1.8
SNR=18
GRA1 Grafenberg Arr 3.65 242 Pn **Pn** 03 47 06.1 +0.6
SNR=11
GRF Grafenberg Arr 3.65 242 *e*Pn **Pn** 03 47 06.1 +0.6
SNR=11
GRF *e*Sg **Sg** 03 48 02.4 -2.5
BSD Bornholm Skovb 3.68 349⇑*i*P **Pn** 03 47 05.9 0.0
BSD *i*S **Sn** 03 47 47.0 -2.9
BSD Bornholm Skovb 3.68 349⇑*i*P **Pn** 03 47 05.9 0.0
BSD *i*S **Sn** 03 47 47.0 -2.9
BSD *i*S **Sn** 03 47 47.2 -2.7
BSD Bornholm Skovb 3.68 349 *i*P **Pn** 03 47 05.9 0.0
BSD *i*S **Sn** 03 47 47.2 -2.7
comp=Z,16nm,0.4s,SNR=49
STHS Stebnicka Huta 3.87 121 *e*Pn **Pn** 03 47 09.3 +0.8
STHS *e* 03 47 23.0
STHS Stebnicka Huta 3.87 121 *e*PN **Pn** 03 47 09.3 +0.8
STHS *e* 03 47 23.0
STHS Stebnicka Huta 3.87 121 *e*Pn **Pn** 03 47 09.3 +0.8
NRDL Niedersach Rie 3.87 287 *e*Pn **Pn** 03 47 09.0 +0.4
SNR=7.3
NRDL Niedersach Rie 3.87 287 Pn **Pn** 03 47 09.0 +0.4
SNR=7.3
GTTG Gyttingen 3.87 273 *e*Sg **Sg** 03 48 13.2 +1.0
GTTG Gyttingen 3.87 273 Sg **Sg** 03 48 13.2 +1.0
MOA Molln 3.88 199⇓*i*Pn **Pn** 03 47 09.0 +0.3
SNR=11
MOA ⇑*i*Sg **Sg** 03 48 11.1 -1.3
comp=Z,125nm,0.5s
MOA Molln 3.88 199 Pn **Pn** 03 47 09.0 +0.3
SNR=11
UBBA Unterbreizbach 3.94 262 *e*Pn **Pn** 03 47 10.4 +0.8
SNR=7.3
UBBA *e*Pg **Pg** 03 47 22.8 -0.6
SNR=4.3
UBBA *e*Sg **Sg** 03 48 15.4 +0.8
UBBA Unterbreizbach 3.94 262 Pn **Pn** 03 47 10.4 +0.8
SNR=7.3
KECS Kecovo 4.12 136 *e*Pn **Pn** 03 47 11.7 -0.4
KECS *e* 03 47 28.6
KECS *e*Sg **Sg** 03 48 19.9 -0.4
KECS Kecovo 4.12 136 *e*PN **Pn** 03 47 11.7 -0.4
KECS *e* 03 47 28.6
KECS Kecovo 4.12 136 *e*SG **Sg** 03 48 19.9 -0.4
CRVS Cervenica-Dubn 4.29 126 *e*Pn **Pn** 03 47 15.1 +0.7
CRVS *e* 03 47 31.1
CRVS *e*Sg **Sg** 03 48 25.9 +0.2
CRVS Cervenica-Dubn 4.29 126 *e*PN **Pn** 03 47 15.1 +0.7
CRVS *e* 03 47 31.1
CRVS Cervenica-Dubn 4.29 126 *e*SG **Sg** 03 48 25.9 +0.2
CRVS Cervenica-Dubn 4.29 126 *e*Pn **Pn** 03 47 15.1 +0.7
CRVS *e*Sg **Sg** 03 48 25.9 +0.2
ARSA Arzberg 4.30 186⇓*i*Pn **Pn** 03 47 14.4 0.0
SNR=18
ARSA ⇓*i*Sg **Sg** 03 48 23.8 -2.0
comp=Z,70nm,0.7s
ARSA Arzberg 4.30 186 Pn **Pn** 03 47 14.4 0.0
SNR=18
BSEG Bad Segeberg 4.30 306 *e*Pn **Pn** 03 47 13.9 -0.6
SNR=14
BSEG Bad Segeberg 4.30 306 Pn **Pn** 03 47 13.9 -0.6
SNR=14
PSZ Piszkesteto 4.34 145 *e*Pn **Pn** 03 47 15.6 +0.5
PSZ Piszkesteto 4.34 145 ⇓P **Pn** 03 47 16.2 +1.1
PSZ Piszkesteto 4.34 145 ⇓*i*P **Pn** 03 47 15.9 +0.8
PSZ Piszkesteto 4.34 145⇑*e*Pn **Pn** 03 47 16.0 +0.9
PSZ Piszkesteto 4.34 145 *e*Pn **Pn** 03 47 15.6 +0.5
PSZ Piszkesteto 4.34 145 P **Pn** 03 47 16.2 +1.1
PKSG 4.38 160⇑*e*P **Pn** 03 47 16.4 +0.8
BUD Budapest 4.45 154⇑*e*Pn **Pn** 03 47 14.4 -2.1
KWP Kalwaria Pacla 4.58 112 *e*Pn **Pn** 03 47 18.2 -0.1
KWP *e*Pg **Pg** 03 47 32.5 -3.0
KWP Kalwaria Pacla 4.58 112 *e*Pn **Pn** 03 47 18.2 -0.1
KWP *e*Pg **Pg** 03 47 32.3 -3.2
KWP *e*Sg **Sg** 03 48 28.7 -6.1
KWP Kalwaria Pacla 4.58 112 ⇓*i*P **Pn** 03 47 18.3 0.0
KWP Kalwaria Pacla 4.58 112 *e*Pn **Pn** 03 47 18.2 -0.1
FUR Furstenfeldbru 4.62 225 *e*Pn **Pn** 03 47 19.7 +0.9
SNR=4.6
FUR Furstenfeldbru 4.62 225 Pn **Pn** 03 47 19.7 +0.9
SNR=4.6
KOLS Kolonicke sedl 4.70 121 *e*Pn **Pn** 03 47 20.0 +0.1
KOLS *e* 03 47 40.0
KOLS *e*Sg **Sg** 03 48 36.8 -1.9
KOLS Kolonicke sedl 4.70 121 *e*PN **Pn** 03 47 19.9 0.0
KOLS *e* 03 47 40.0
KOLS Kolonicke sedl 4.70 121 *e*SG **Sg** 03 48 36.8 -1.9
KOLS Kolonicke sedl 4.70 121 *e*Pn **Pn** 03 47 20.0 +0.1
KOLS *e*Sg **Sg** 03 48 36.8 -1.9
COP Copenhagen 4.73 333 *i*P **Pn** 03 47 21.2 +0.9
COP *i*S **Sn** 03 48 13.5 -2.3
COP Copenhagen 4.73 333 *i*P **Pn** 03 47 21.2 +0.9
COP *i*S **Sn** 03 48 13.5 -2.3
COP *i*LG 03 48 47.6
COP Copenhagen 4.73 333 *i*P **Pn** 03 47 21.2 +0.9
COP *i*S **Sn** 03 48 13.6 -2.2
SNR=49
COP *i*Sg **Sg** 03 48 47.7 +8.1
SNR=90
UZH Uzhgorod 4.89 124 *e*P **Pn** 03 47 23.6 +1.0
UZH *e*S **Sn** 03 48 20.6 +0.7
UZH pmax pmax
comp=N,33nm,0.8s
UZH pmax pmax
comp=E,35nm,0.8s
UZH Uzhgorod 4.89 124 *e*P **Pn** 03 47 23.6 +1.0
UZH *e*S **Sn** 03 48 20.6 +0.7
SUW Suwalki 4.94 57 *e*Pn **Pn** 03 47 24.0 +0.8
SUW Suwalki 4.94 57 *e*Pn **Pn** 03 47 24.0 +0.8
PERS Pernice 4.94 188 *i*Pn **Pn** 03 47 24.6 +1.3
PERS Pernice 4.94 188 Pn **Pn** 03 47 24.6 +1.3
TNS Taunus Mts 5.06 258 *e*Pn **Pn** 03 47 25.5 +0.6
SNR=9.7
TNS Taunus Mts 5.06 258 Pn **Pn** 03 47 25.5 +0.6
SNR=9.7

TOD Tromm 5.07 251 P **Pn** 03 47 25.1 0.0
TOD Tromm 5.07 251 P **Pn** 03 47 25.1 0.0
WATA Walderalm 5.15 217⇑*i*Pn **Pn** 03 47 26.9 +0.8
SNR=13
WATA ⇓*i*Sg **Sg** 03 48 54.6 +1.3
comp=E,30nm,0.6s
WATA Walderalm 5.15 217 Pn **Pn** 03 47 26.9 +0.7
SNR=13
WATA Sg **Sg** 03 48 54.6 +1.4
comp=E,30nm,0.6s
WTTA Wattenberg 5.19 217⇑*i*Pn **Pn** 03 47 27.5 +0.9
SNR=12
WTTA Wattenberg 5.19 217 Pn **Pn** 03 47 27.5 +0.8
SNR=12
STU Stuttgart 5.26 241 *e*Pn **Pn** 03 47 27.4 -0.3
STU *e*Sg **Sg** 03 48 53.3 -3.5
STU Stuttgart 5.26 241 *e*Pn **Pn** 03 47 27.4 -0.3
IBBN Ibbenburen 5.27 282 *e*Pn **Pn** 03 47 29.0 +1.3
SNR=3.7
IBBN Ibbenburen 5.27 282 Pn **Pn** 03 47 29.0 +1.3
SNR=3.7
LVV L'vov 5.28 106 *e*P **Pn** 03 47 36.0 +8.0
LVV MLR MLR
comp=N,100nm,20.0s
LVV MLR MLR
comp=E,200nm,20.0s
LVV MLR MLR
comp=Z,100nm,20.0s
MOTA Moosalm 5.33 220⇓*i*Pn **Pn** 03 47 28.6 0.0
SNR=12
MOTA ⇓*i*Sg **Sg** 03 49 00.6 +1.7
comp=Z,41nm,0.6s
TRPA Tarpa 5.34 127⇓*i*P **Pn** 03 47 28.5 -0.3
TRPA Tarpa 5.34 127⇓*i*P **Pn** 03 47 28.5 -0.3
RETA Reutte 5.36 223⇑*i*Pn **Pn** 03 47 29.1 +0.1
SNR=23
RETA ⇓*i*Sg **Sg** 03 49 01.7 +1.8
comp=Z,54nm,0.8s
DOBS Dobrina 5.40 185 *i*Pn **Pn** 03 47 31.1 +1.6
DOBS Dobrina 5.40 185 *i*Pn **Pn** 03 47 31.1 +1.5
VXJU Vaexsjoe 5.46 353 P **Pn** 03 47 30.9 +0.5
VNDS Vrh nad Dolski 5.51 191 *i*Pn **Pn** 03 47 31.8 +0.7
PKSM Moragy 5.56 162 ⇓P **Pn** 03 47 32.8 +1.0
PKSM Moragy 5.56 162 ⇓*i*P **Pn** 03 47 32.8 +1.0
PKSM Moragy 5.56 162 P **Pn** 03 47 32.8 +1.0
VOY Vojsko 5.70 196 *e*Pn **Pn** 03 47 34.0 +0.3
VOY *e* 03 47 55.1
VOY *e* 03 49 04.3
VOY *e* 03 49 15.0
VOY Vojsko 5.70 196 *e*Pn **Pn** 03 47 34.0 +0.3
FETA Feichten 5.74 220⇓*i*Pn **Pn** 03 47 35.0 +0.8
SNR=6.9
WTSB Winterswijk 5.84 278 *e*P **Pn** 03 47 37.1 +1.5
WTSB Winterswijk 5.84 278 *e*S **Sg** 03 49 17.4 +2.1
SPAK Spaichingen-Ko 5.88 237 P **Pn** 03 47 36.1 0.0
SPAK S **Sn** 03 48 55.9 +12
DAVA Damuels 5.90 227⇑*i*Pn **Pn** 03 47 36.4 -0.1
SNR=11
LANF Langenberg 5.94 248 P **Pn** 03 47 36.3 -0.6
BFO Black Forest 5.99 241 *e*Pn **Pn** 03 47 36.6 -1.0
comp=Z,13nm,0.6s
BFO *e*Sg **Sg** 03 49 11.4 -8.6
BFO Black Forest 5.99 241 *e*P **Pn** 03 47 36.6 -1.0
BFO pmax pmax
comp=Z,13nm,0.6s
BFO Black Forest 5.99 241 *e*P **Pn** 03 47 36.6 -1.0
comp=Z,13nm,0.6s
BOJS Bojanci 6.05 186 *i*Pn **Pn** 03 47 39.5 +1.0
BOJS Bojanci 6.05 186 *i*Pn **Pn** 03 47 39.5 +0.9
RUP Ruppelstein 6.08 256 P **Pn** 03 47 39.1 +0.2
DAVOX Davos/Dischmat 6.29 223 Pn **Pn** 03 47 41.6 -0.2
comp=Z,1.0nm,0.3s,baz=19,slow=11,SNR=14
DAVOX Lg 03 49 15.7
comp=Z,1.3nm,0.3s,baz=178,slow=20,SNR=3.9
DAVOX Davos/Dischmat 6.29 223 P **Pn** 03 47 41.6 -0.2
DRGR 6.39 135 ⇑P **Pn** 03 47 43.4 +0.3
DRGR 6.39 135 ⇑*i*P **Pn** 03 47 43.4 +0.2
DRGR 6.39 135 P **Pn** 03 47 43.4 +0.2
FELD Feldberg im Sc 6.43 239 P **Pn** 03 47 43.2 -0.5
MUD Monsted U'grnd 6.43 323 *e*P **Pn** 03 47 48.8 +5.0
MUD Monsted U'grnd 6.43 323 *i*P **Pn** 03 47 48.8 +5.0
MUD *i*S **Sn** 03 48 54.4 -3.4
MUD Monsted U'grnd 6.43 323 *e*P **Pn** 03 47 48.8 +5.0
SNR=46
MUD *i*S **Sn** 03 48 54.4 -3.4
comp=Z,13nm,0.5s,SNR=46
MEM Membach 6.47 266 PN **Pn** 03 47 45.2 +0.9
MEM Membach 6.47 266 Pn **Pn** 03 47 45.2 +0.9
HGN Heimansgroeve 6.49 267 *e*P **Pn** 03 47 45.0 +0.5
HGN Heimansgroeve 6.49 267 *e*S **Sg** 03 49 32.1 -4.0
CDF Champ du Feu 6.53 245 *e*Pn **Pn** 03 47 43.5 -1.5
CDF *e*Sg **Sg** 03 49 33.2 -4.1
comp=Z,117nm,1.0s
CDF Champ du Feu 6.53 245 *e*Pn **Pn** 03 47 43.5 -1.5
CDF *e*Sg **Sg** 03 49 33.2 -4.1
comp=Z,58nm,1.0s
WLF Walferdange 6.64 258 PN **Pn** 03 47 48.2 +1.6
WLF Walferdange 6.64 258 *e*Pn **Pn** 03 47 47.1 +0.5
WLF *e*Sg **Sg** 03 49 38.5 -2.6
WLF Walferdange 6.64 258 *e*P **Pn** 03 47 47.1 +0.5
WLF Walferdange 6.64 258 Pn **Pn** 03 47 48.2 +1.6
ECH Echery 6.70 244 P **Pn** 03 47 47.8 +0.4
MOF Molkenrain 6.92 241 P **Pn** 03 47 50.7 +0.3
BCLA Clavier 6.95 265 PN **Pn** 03 47 51.7 +0.8
BCLA Clavier 6.95 265 Pn **Pn** 03 47 51.7 +0.8
BUR08 Bucovina Ar. S 7.04 120 *e*Pn **Pn** 03 47 52.6 +0.5
BURAR Bucovina Array 7.06 120 ⇑P **Pn** 03 47 52.9 +0.5
BURAR Bucovina Array 7.06 120 ⇑*i*P **Pn** 03 47 52.9 +0.5
BURAR Bucovina Array 7.06 120 ⇑*i*P **Pn** 03 47 52.9 +0.5
HINF Hinteralfeld 7.09 242 *e*Pn **Pn** 03 47 50.6 -2.2
HINF *e*Sg **Sg** 03 49 48.7 -6.8
comp=Z,44nm,0.8s
HINF Hinteralfeld 7.09 242 *e*Pn **Pn** 03 47 50.6 -2.2
HINF *e*Sg **Sg** 03 49 48.7 -6.8
comp=Z,22nm,0.8s
HAU Haudompre 7.27 245 *e*Pn **Pn** 03 47 53.0 -2.2
HAU *e*Sg **Sg** 03 49 55.2 -5.9
comp=Z,47nm,0.9s
HAU Haudompre 7.27 245 *e*Pn **Pn** 03 47 53.0 -2.2
HAU *e*Sg **Sg** 03 49 55.2 -5.9
comp=Z,24nm,0.9s
GIVF Givet 7.33 263 *e*Sg **Sg** 03 49 58.3 -4.8
comp=Z,85nm,1.1s
GIVF Givet 7.33 263 *e*Sg **Sg** 03 49 58.3 -4.8
comp=Z,43nm,1.1s
THEF They Montfort 7.36 247 P **Pn** 03 47 56.2 -0.3
RFYF Reffroy 7.46 251 *e*Sg **Sg** 03 50 02.7 -4.8
comp=Z,88nm,1.2s
RFYF Reffroy 7.46 251 *e*Sg **Sg** 03 50 02.7 -4.8
comp=Z,44nm,1.2s
DOU Dourbes 7.47 264 PN **Pn** 03 47 59.7 +1.7
DOU Dourbes 7.47 264 Pn **Pn** 03 47 59.6 +1.6
MICGM Minsk 7.67 63 *e* **Pg** 03 48 32.0 -2.7
BAIF Baives 7.72 264 *e*Sg **Sg** 03 50 10.4 -5.3
comp=Z,76nm,1.2s
MEZF Maizieres J'vi 7.77 251 *e*Pn **Pn** 03 48 00.1 -2.0
MEZF *e*Sg **Sg** 03 50 12.5 -4.8
comp=Z,88nm,1.2s
MEZF Maizieres J'vi 7.77 251 *e*Pn **Pn** 03 48 00.1 -2.0
MEZF *e*Sg **Sg** 03 50 12.5 -4.8
comp=Z,44nm,1.2s
SFTF Sexfontaines 7.92 250 *e*Pn **Pn** 03 48 01.5 -2.7
SFTF *e*Sg **Sg** 03 50 16.8 -5.3
comp=Z,68nm,1.2s
SFTF Sexfontaines 7.92 250 *e*Pn **Pn** 03 48 01.5 -2.7
SFTF *e*Sg **Sg** 03 50 16.8 -5.3
comp=Z,34nm,1.2s
CABF La Chapelle 8.24 237 *e*Sg **Sg** 03 50 27.0 -5.3
comp=Z,66nm,1.1s
CABF La Chapelle 8.24 237 *e*Sg **Sg** 03 50 27.0 -5.3
comp=Z,33nm,1.1s
KIEV Kiev 8.25 91 *e*Pn **Pn** 03 48 07.9 -0.8
comp=Z,15nm,0.5s
KIEV *e*Pg **Pg** 03 48 35.7 -10
KIEV *e*Sn **Sn** 03 49 38.1 -4.4
KIEV Kiev 8.25 91 *e*P **Pn** 03 48 07.9 -0.8
KIEV *e* 03 49 38.2
KIEV pmax pmax
comp=Z,15nm,0.5s
KIEV Kiev 8.25 91 *e*P **Pn** 03 48 07.9 -0.8
comp=Z,15nm,0.5s
AKASG Malin Array Be 8.26 91 Pn **Pn** 03 48 08.0 -0.8
AKASG Sn **Sn** 03 49 37.1 -5.6
AKASG Malin Array Be 8.26 91 Pn **Pn** 03 48 08.0 -0.8

comp=Z,5.9nm,0.3s,baz=280,slow=12,SNR=16
AKASG Sn **Sn** 03 49 37.1 -5.6
comp=Z,4.1nm,0.3s,baz=38,slow=29,SNR=4.8
AKASG Malin Array Be 8.26 91 P **Pn** 03 48 08.0 -0.8
AKASG 03 49 37.1
AKASG pmax pmax
comp=Z,6.0nm,0.3s
AKASG smax
comp=N,4.0nm,0.3s
AKASG Malin Array Be 8.26 91 P **Pn** 03 48 08.0 -0.8
comp=N,6.0nm,0.3s
AKBB Malin Array Si 8.26 91 *e*Pn **Pn** 03 48 07.8 -1.0
AKBB *e*Pg **Pg** 03 48 35.5 -11
AKBB *e*Sg **Sg** 03 50 24.4 -8.5
AKBB Malin Array Si 8.26 91 *e*P **Pn** 03 48 07.9 -0.9
LPL La Plagne 8.68 230 *e*P **Pn** 03 48 14.8 +0.3
LPL *e*Sg **Sg** 03 50 40.3 -5.9
comp=N,13nm,0.9s
LPL La Plagne 8.68 230 *e*P **Pn** 03 48 14.8 +0.3
LPL *e*Sg **Sg** 03 50 40.3 -5.9
comp=N,6.7nm,0.9s
HFS Hagfors 8.74 352 Pn **Pn** 03 48 14.6 -0.8
comp=N,0.6nm,0.3s,baz=166,slow=14,SNR=32
HFS Sn **Sn** 03 49 50.8 -3.7
comp=N,1.1nm,0.3s,baz=168,slow=24,SNR=5.5
HFS Hagfors 8.74 352 P **Pn** 03 48 14.6 -0.8
HFS 03 49 50.8
HFS pmax pmax
comp=Z,1.0nm,0.3s
HFS smax
comp=N,1.0nm,0.3s
HFS Hagfors 8.74 352 P **Pn** 03 48 14.6 -0.8
comp=N,1.0nm,0.3s
HFS S **Sn** 03 49 50.8 -3.7
comp=N,1.0nm,0.3s
LOR Lormes 9.08 247 *e*Pn **Pn** 03 48 18.7 -1.4
LOR *e*Sg **Sn** 03 50 53.8 +51
comp=N,16nm,0.7s
LOR Lormes 9.08 247 *e*Pn **Pn** 03 48 18.7 -1.4
LOR *e*Sg **Sn** 03 50 53.8 +51
comp=N,7.9nm,0.7s
VSU Vasula 9.22 37⇑*e*P **Pn** 03 48 20.2 -1.8
VSU Vasula 9.22 37 *e*P **Pn** 03 48 20.2 -1.8
MBDF Montbardon 9.25 226 *e*Pn **Pn** 03 48 19.6 -2.8
MBDF Montbardon 9.25 226 *e*P **Pn** 03 48 25.1 +2.7
MBDF Montbardon 9.25 226 *e*P **Pn** 03 48 25.1 +2.7
MBDF Montbardon 9.25 226 *e*Pn **Pn** 03 48 19.6 -2.8
MBDF Montbardon 9.25 226 *e*P **Pn** 03 48 25.1 +2.7
SMF Signal de Mont 9.44 244 *e*Sg Sx 03 51 03.1
comp=N,16nm,0.8s
SMF Signal de Mont 9.44 244 *e*Sg Sx 03 51 03.1
comp=N,7.9nm,0.8s
SBF Sospel 9.66 221 *e*Pn **Pn** 03 48 25.7 -2.3
SBF Sospel 9.66 221 *e*Pn **Pn** 03 48 25.7 -2.3
NAO01 NORSAR Array S 9.79 345 *e*Pn **Pn** 03 48 28.3 -1.5
NOA NORSAR Array B 9.93 346 Pn **Pn** 03 48 30.1 -1.5
comp=N,0.5nm,0.3s,baz=163,slow=12,SNR=16
NOA Sn **Sn** 03 50 17.6 -6.0
comp=N,0.4nm,0.3s,baz=180,slow=9.8,SNR=3.1
NOA NORSAR Array B 9.93 346 P **Pn** 03 48 30.1 -1.5
NOA 03 50 17.6
NOA pmax pmax
comp=Z,1.0nm,0.3s
NOA NORSAR Array B 9.93 346 P **Pn** 03 48 30.1 -1.5
comp=Z,1.0nm,0.3s
FINES FINESS Array B 11.34 25 Pn **Pn** 03 48 49.3 -1.6
FINES Sn **Sn** 03 50 50.7 -7.4
FINES FINESS Array B 11.34 25 Pn **Pn** 03 48 49.3 -1.6
comp=Z,0.8nm,0.3s,baz=209,slow=11,SNR=31
FINES Sn **Sn** 03 50 50.7 -7.4
comp=Z,1.4nm,0.3s,baz=199,slow=20,SNR=8.3
FINES FINESS Array B 11.34 25 P **Pn** 03 48 49.3 -1.6
FINES 03 50 50.7
FINES pmax pmax
comp=Z,1.0nm,0.3s
FINES smax
comp=N,1.0nm,0.3s
FINES FINESS Array B 11.34 25 P **Pn** 03 48 49.3 -1.6
comp=N,1.0nm,0.3s
KAF Kangasniemi 11.96 24 *e*P **Pn** 03 48 58.6 -0.8
KAF Kangasniemi 11.96 24 *e*p **Pn** 03 48 58.6 -0.8
KAF Kangasniemi 11.96 24 *e*P **Pn** 03 48 58.6 -0.8
EKA Eskdalemuir Ar 12.13 296 Pn **Pn** 03 48 58.7 -3.1
comp=N,0.4nm,0.3s,baz=98,slow=14,SNR=8.8
ESK Eskdalemuir 12.16 296 *e*Pn **Pn** 03 49 00.8 -1.3
ESK Eskdalemuir 12.16 296 *e*P **Pn** 03 49 00.8 -1.3
OBN Obninsk 12.71 66 *e*P **Pn** 03 49 06.6 -3.0
OBN Obninsk 12.71 66 *e*P **Pn** 03 49 06.6 -3.0
JOF Joensuu 14.01 30 *e*P **Pn** 03 49 24.8 -2.6
JOF pmax pmax
comp=Z,1.0nm,0.4s
JOF Joensuu 14.01 30 *e*p **Pn** 03 49 24.8 -2.6
comp=Z,1.2nm,0.4s
JOF Joensuu 14.01 30 *e*P **Pn** 03 49 24.8 -2.6
comp=Z,1.0nm,0.4s
VSR Storozhevoye 14.36 82 *e*P **Pn** 03 49 28.1 -4.1
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,2.0nm,0.3s
VSR pmax pmax
comp=Z,4.0nm,0.3s
VRHR Novokhopersk 15.90 82 *e*P **Pn** 03 49 48.2 -4.6
VRHR pmax pmax
comp=Z,10.0nm,0.6s
VRHR pmax pmax
comp=N,1.0nm,0.3s
VRHR pmax pmax
comp=E,3.0nm,0.3s
ESDC Sonseca Array 18.34 238 LR LR 03 58 03.1
comp=E,12nm,18.7s,baz=305,slow=39
ARCES ARCESS Array B 18.60 10 Pn **Pn** 03 50 23.2 -3.3
comp=E,0.7nm,0.3s,baz=192,slow=14,SNR=31
ARCES ARCESS Array B 18.60 10 P **Pn** 03 50 23.2 -3.3
ARCES pmax pmax
comp=Z,1.0nm,0.3s
KEV Kevo 18.99 12 *e*P **Pn** 03 50 29.8 -1.4
KEV pmax pmax
comp=Z,3.0nm,0.4s
KEV Kevo 18.99 12 *e*p **Pn** 03 50 29.8 -1.4
comp=Z,3.1nm,0.4s
KEV Kevo 18.99 12 *e*P **Pn** 03 50 29.8 -1.4
comp=Z,3.0nm,0.4s
KIV Kislovodsk 19.30 103 *e*P **Pn** 03 50 32.8 -2.3
KIV Kislovodsk 19.30 103 *e*P **Pn** 03 50 32.8 -2.3
ARU Arti 25.10 62 *e*P **P** 03 51 34.4 +0.5
comp=Z,1.1nm,0.4s,mb3.9
ARU Arti 25.10 62 *d*⇓*i*P **P** 03 51 34.2 +0.3
ARU 03 52 07.9
ARU S **S** 03 56 02.7 +3.5
ARU SS 03 56 53.8
ARU pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
ARU Arti 25.10 62 *i*P **P** 03 51 34.2 +0.3
comp=Z,7.0nm,1.0s,mb4.3
AKTK Aktyubinsk 26.12 76 P **P** 03 51 44.5 +1.4
AKTK Aktyubinsk 26.12 76 P **P** 03 51 44.5 +1.3
AKTO Aktyubinsk 26.12 76 P **P** 03 51 44.5 +1.4
comp=Z,2.0nm,0.6s,mb3.9,baz=295,slow=13,SNR=5.3
AKTO Aktyubinsk 26.12 76 P **P** 03 51 44.5 +1.3
AKTO pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
ABKAR Akbulak array 27.70 77 *e*P **P** 03 51 57.4 0.0
comp=Z,0.3nm,0.5s,mb3.4
ABKAR Akbulak array 27.70 77 *e*P **P** 03 51 57.4 0.0
comp=Z,0.3nm,0.5s,mb3.4
BVAR Borovoye Array 32.55 66 P **P** 03 52 42.4 +2.1
comp=Z,1.3nm,0.6s,mb4.1,baz=297,slow=6.5,SNR=6.3
BVAR Borovoye Array 32.55 66 P **P** 03 52 42.4 +2.1
BVAR pmax pmax
comp=Z,1.0nm,0.6s
KURK Kurchatov 38.15 66 *e*P **P** 03 53 27.9 -0.5
comp=Z,1.1nm,0.5s,mb3.8
KURK Kurchatov 38.15 66⇓*e*P **P** 03 53 29.0 +0.5
KURK pmax pmax
comp=Z,6.0nm,2.5s,mb3.9
KURK Kurchatov 38.15 66 *e*P **P** 03 53 28.0 -0.5
comp=Z,1.1nm,0.5s,mb3.8
AAK Ala-Archa 39.73 79⇓*e*P **P** 03 53 42.4 +0.5
AAK pmax pmax
comp=Z,5.0nm,2.5s,mb3.7
TORD Torodi Ar. Bea 40.02 202 P **P** 03 53 45.2 +0.7
comp=Z,1.1nm,0.8s,mb3.5,baz=9.2,slow=8.5,SNR=6.5
ZALV Zalesovo Beam 40.16 59 P **P** 03 53 47.0 +1.8
comp=Z,0.7nm,0.4s,mb3.6,baz=310,slow=10,SNR=3.3

MKAR	**Makanchi Array**	**42.18**	**69**	P		**P**	**03 54 03.4**	**+1.5**
	comp=Z,0.2nm,0.2s,mb3.4,baz=315,slow=7.1,SNR=2.5								
SONM	**Songino Array**	**54.88**	**55**	P		**P**	**03 55 42.0**	**+2.3**
	comp=Z,0.4nm,0.7s,mb3.6,baz=301,slow=12,SNR=2.8								
YKA	**Yellowknife Ar**	**59.86**	**336**	P		**P**	**03 56 16.3**	**+1.6**
	comp=Z,0.6nm,0.5s,mb3.9,baz=20,slow=7.8,SNR=14								
YKA	**Yellowknife Ar**	**59.86**	**336**	P		**P**	**03 56 16.3**	**+1.6**
YKA				pmax		pmax			
	comp=Z,1.0nm,0.5s								
YKA	**Yellowknife Ar**	**59.86**	**336**	P		**P**	**03 56 16.3**	**+1.6**
ILAR	**Eielson Array**	**63.30**	**352**	P		**P**	**03 56 40.1**	**+2.3**
	comp=Z,0.1nm,0.6s,mb3.1,baz=350,slow=8.0,SNR=4.3								
TXAR	**Lajitas Array**	**83.73**	**310**	P		**P**	**03 58 40.6**	**+2.0**
	comp=Z,0.2nm,0.6s,mb3.5,baz=70,slow=2.6,SNR=5.7								
TXAR	**Lajitas Array**	**83.73**	**310**	P		**P**	**03 58 40.6**	**+2.0**

*NAO **09** 03:50:37.5±4.7, 78°.38N×8°.24E, ML3.2*
*CSEM **09** 03:50:37.2±0.1, 78°.45N×7°.75E, h20km, ML3.2, Error ellipse: s-maj=2.5km s-min=1.8km az=118.0*

BER 09 03:50:37.0±0.8, 78°.41N×7°.37E, h12km±12km, MD1.7, ML1.8, ML3.2 (NAO), Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.04**	**58**	Pg	Pg	03 50 55.0	-2.0
KBS				Lg		03 51 08.0	
KBS	**Kingsbay**	**1.04**	**58**	*e*P	Pb	03 50 55.0	-1.9
KBS				*e*Sg	Sg	03 51 08.5	-2.1
KBS				AML	AML	03 51 10.1	
	comp=Z,32nm,0.1s						
KBS	**Kingsbay**	**1.04**	**58**	*e*P	Pb	03 50 55.0	-1.9
	SNR=90						
KBS				*e*Sg	Sg	03 51 08.5	-2.1
	comp=Z,32nm,0.1s,SNR=90						
SPA0	**Spitsbergen Ar**	**1.85**	**93**	Pn	Pn	03 51 06.8	-1.6
	baz=279,slow=11						
SPA0				Sn	Sn	03 51 28.8	-2.9
	baz=284,slow=16						
SPA0	**Spitsbergen Ar**	**1.85**	**93**	Pn	Pn	03 51 06.8	-1.6
	baz=279,slow=11,SNR=351						
SPA0				Sn	Sn	03 51 28.8	-2.9
	baz=284,slow=15,SNR=5.1						
HSP	**Hornsund**	**2.25**	**125**	*e*P	Pn	03 51 10.8	-3.1
HSP				*e*S	Sn	03 51 35.1	-6.3

*IDC **09** 04:09:50.7±2.3, 1°.85S×99°.31E, h0km, mb3.8/7, mb1 3.8/7, mb1mx3.6/19, mbtmp3.8/7, MS3.4/1, Ms1 3.4/1, ms1mx2.5/21, Error ellipse: s-maj=81.7km s-min=27.7km az=54.0*
*ISCJB **09** 04:09:53.3±1.6, 1°.8S±0°.3×99°.2E±0°.3, h33km, mb3.9/9, MS3.4/1, Error ellipse: s-maj=52.8km s-min=21.1km az=140.6*
*NEIC **09** 04:09:54.9±1.8, 1°.96S×99°.08E, h35km, mb4.1/3, Error ellipse: s-maj=85.3km s-min=19.7km az=53.0*

ISC 09 04:09:55.8±1.6, 1°.8S±0°.3×99°.3E±0°.3, h35km, n12, σ0s68/10, mb3.9/9, MS3.4/1, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**39.92**	**126**	P	**P**	**04 17 26.9**	**+0.1**
	0.4nm,0.8s,mb3.2,baz=299,slow=8.0,SNR=3.5						
KSRS	**Korea Array**	**47.23**	**31**	P	**P**	**04 18 24.8**	**-0.7**
	0.3nm,0.3s,mb3.7,baz=230,slow=7.5,SNR=3.3						
AAK	**Ala-Archa**	**49.60**	**336**	LR	LR	04 42 50.0	
	comp=Z,36nm,18.8s,MS3.4,baz=231,slow=40						
SONM	**Songino Array**	**49.84**	**6**	P	**P**	**04 18 46.1**	**+0.7**
	2.0nm,1.1s,mb4.1,baz=188,slow=9.7,SNR=7.0						
MKAR	**Makanchi Array**	**50.68**	**345**	P	**P**	**04 18 52.4**	**+0.7**
	1.2nm,0.7s,mb3.9,baz=147,slow=8.4,SNR=11						
KURK	**Kurchatov**	**55.25**	**344**	*e*P	**P**	**04 19 22.5**	**-2.8**
	2.1nm,0.9s,mb4.2						
KURK	**Kurchatov**	**55.25**	**344**	P	**P**	**04 19 25.8**	**+0.5**
	0.4nm,0.2s,mb4.0,baz=169,slow=6.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**56.87**	**350**	P	**P**	**04 19 37.3**	**+0.4**
	1.2nm,0.4s,mb4.3,baz=172,slow=4.5,SNR=7.3						
BVAR	**Borovoye Array**	**59.78**	**340**	P	**P**	**04 19 56.8**	**-0.4**
	0.4nm,0.4s,mb3.9,baz=178,slow=7.2,SNR=2.6						
BRVK	**Borovoye**	**59.85**	**340**	*e*P	**P**	**04 19 57.5**	**-0.2**
	1.6nm,0.6s,mb4.2						
ABKAR	**Akbulak array**	**61.16**	**332**	*e*P	**P**	**04 20 06.5**	**-0.2**
	0.3nm,0.4s,mb3.8						
TXAR	**Lajitas Array**	**144.98**	**36**	PKPbc	PKPdf	04 29 29.4	-0.7
	0.8nm,0.6s,baz=268,slow=1.1,SNR=15						

WEL 09 04:22:40.2±0.3, 40°.53S×173°.18E, h240km±2km, ML3.5/5, 1C, Error ellipse: s-maj=3.6km s-min=2.3km az=0.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QRZ	**Quartz Range**	**0.57**	**239**	⇑PN	Pn	04 23 12.0	-0.1
QRZ				SN	S	04 23 36.2	-1.0
NNZ	**Nelson**	**0.70**	**167**	PN	Pn	04 23 12.6	0.0
NNZ				SN	S	04 23 37.4	-0.7
TUWZ	**Tuamarina**	**1.07**	**147**	PN	Pn	04 23 14.6	+0.1
TUWZ				SN	S	04 23 40.6	-0.9
THZ	**Tophouse**	**1.25**	**189**	PN	Pn	04 23 15.9	+0.2
THZ				SN	S	04 23 43.0	-0.6
BSWZ	**Blackbirch Sta**	**1.29**	**156**	PN	Pn	04 23 16.0	0.0
KIW	**Kapiti Island**	**1.36**	**105**	PN	Pn	04 23 16.5	+0.1
KIW				SN	S	04 23 43.4	-1.5
OGWZ	**Otaki Gorge**	**1.54**	**101**	PN	Pn	04 23 18.0	+0.1
CAW	**Cannon Point**	**1.55**	**112**	PN	Pn	04 23 17.8	0.0
DSZ	**Denniston Nort**	**1.60**	**220**	PN	Pn	04 23 17.8	-0.4
DSZ				SN	S	04 23 46.0	-2.2
HOWZ	**Holdsworth Sta**	**1.81**	**102**	PN	Pn	04 23 19.8	-0.3
MRZ	**Mangatainoka R**	**1.83**	**95**	PN	Pn	04 23 19.8	-0.5
MTW	**Mount Morrison**	**1.87**	**110**	PN	Pn	04 23 20.3	-0.4
POWZ	**Post Office Ro**	**1.98**	**87**	PN	Pn	04 23 21.4	-0.3
TIWZ	**Tintock**	**2.08**	**98**	PN	Pn	04 23 22.3	-0.2
WNVZ	**Wahianoa**	**2.22**	**58**	PN	Pn	04 23 22.9	-1.0
MOVZ	**Moawhango**	**2.28**	**61**	PN	Pn	04 23 23.1	-1.4
DVHZ	**Dannevirke**	**2.29**	**85**	PN	Pn	04 23 24.0	-0.6
LTZ	**Lake Taylor**	**2.35**	**197**	PN	Pn	04 23 24.5	-0.6
PNHZ	**Pukenui**	**2.40**	**76**	PN	Pn	04 23 25.1	-0.5
BHHZ	**Black Hill Sta**	**2.45**	**66**	PN	Pn	04 23 24.8	-1.4
WPHZ	**Waipukurau**	**2.54**	**80**	PN	Pn	04 23 26.8	-0.4
BKZ	**Black Stump Fm**	**2.89**	**63**	PN	Pn	04 23 29.6	-1.4
URZ	**Urewera**	**3.80**	**55**	PN	Pn	04 23 38.3	-3.0
MWZ	**Matawai**	**4.02**	**58**	PN	Pn	04 23 41.3	-2.5
JCZ	**Jackson Bay**	**4.82**	**221**	PN	Pn	04 23 50.8	-2.6

*ISCJB **09** 04:23:34.7±1.1, 36°.31N±0°.05×21°.76E±0°.07, h10km, Error ellipse: s-maj=10.0km s-min=4.9km az=146.3*
*ATH **09** 04:23:34.0, 36°.27N×21°.81E, h13km±1km, MD3.1/8*
*CSEM **09** 04:23:35.4±0.6, 36°.34N×21°.85E, h2km, ML2.4/2, Error ellipse: s-maj=12.3km s-min=6.0km az=55.0*
*THE **09** 04:23:35.4, 36°.36N×21°.77E, h4km±1km, ML2.4/2, Error ellipse: s-maj=2.0km s-min=0.9km az=59.0*

ISC 09 04:23:34.3±1.4, 36°.30N±0°.05×21°.80E±0°.07, h2km±6km, n30, σ1s02/50, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.59**	**355**	*e*Pg	**Pg**	**04 23 45.7**	**-0.1**
PYL				*e*Sb	**Sg**	**04 23 55.3**	**+1.8**
PYL	**PYLOS**	**0.59**	**355**	P	**Pg**	**04 23 45.4**	**-0.4**
PYL				S	**Sg**	**04 23 53.4**	**-0.1**
PYL	**PYLOS**	**0.59**	**355**	P	**Pg**	**04 23 45.4**	**-0.4**
PYL	**PYLOS**	**0.59**	**355**	*e*Pg	**Pg**	**04 23 45.7**	**-0.1**
PYL				S	**Sg**	**04 23 53.4**	**-0.1**
PYL				*e*Sb	**Sg**	**04 23 55.3**	**+1.8**
ITM	**Ithomi**	**0.88**	**7**	*e*PG	**Pg**	**04 23 51.0**	**-0.3**
ITM				*e*SB	**Sb**	**04 24 04.4**	**-0.2**
ITM	**Ithomi**	**0.88**	**7**	P	**Pg**	**04 23 51.0**	**-0.3**
ITM				S	**Sg**	**04 24 02.9**	**+0.2**
ITM	**Ithomi**	**0.88**	**7**	P	**Pg**	**04 23 51.0**	**-0.3**
ITM				S	**Sg**	**04 24 02.9**	**+0.2**
ITM				*e*Sb	**Sb**	**04 24 04.4**	**-0.2**
KYTH	**Kithira**	**1.00**	**91**	*e*PN	**Pn**	**04 23 53.0**	**-2.4**
KYTH	**Kithira**	**1.00**	**91**	*e*Pn	**Pn**	**04 23 53.0**	**-2.4**
VLI	**Veliai**	**1.00**	**65**	*e*PB	**Pb**	**04 23 53.2**	**-1.3**
VLI				*e*SB	**Sb**	**04 24 07.2**	**-0.9**
VLI	**Veliai**	**1.00**	**65**	*e*Pb	**Pb**	**04 23 53.2**	**-1.3**
VLI				*e*Sb	**Sb**	**04 24 07.2**	**-0.9**
VLX	**Vlachokerasia**	**1.16**	**23**	*e*PN	**Pn**	**04 23 56.1**	**-1.5**
VLX				*e*SB	**Sb**	**04 24 13.2**	**+0.5**
VLX	**Vlachokerasia**	**1.16**	**23**	P	**Pg**	**04 23 55.9**	**-0.8**
VLX				S	**Sg**	**04 24 13.0**	**+1.3**
VLX	**Vlachokerasia**	**1.16**	**23**	P	**Pg**	**04 23 55.9**	**-0.8**
VLX				S	**Sg**	**04 24 13.0**	**+1.3**
DID	**Didima**	**1.66**	**43**	*e*PB	**Pb**	**04 24 05.0**	**-0.7**
DID	**Didima**	**1.66**	**43**	P	**Pn**	**04 24 04.9**	**+0.4**
DID				S	**Sn**	**04 24 26.5**	**0.0**
DID	**Didima**	**1.66**	**43**	P	**Pn**	**04 24 04.9**	**+0.4**
DID				S	**Sn**	**04 24 26.5**	**0.0**
GUR	**Goura**	**1.69**	**15**	*e*PN	**Pn**	**04 24 05.5**	**+0.6**
GUR	**Goura**	**1.69**	**15**	P	**Pn**	**04 24 05.2**	**+0.3**
GUR				S	**Sn**	**04 24 26.8**	**-0.3**
GUR	**Goura**	**1.69**	**15**	P	**Pn**	**04 24 05.2**	**+0.3**
GUR	**Goura**	**1.69**	**15**	*e*Pn	**Pn**	**04 24 05.5**	**+0.6**
GUR				S	**Sn**	**04 24 26.8**	**-0.3**
KARN	**Karanos**	**1.94**	**117**	P	**Pn**	**04 24 09.0**	**+0.7**
KARN				S	**Sn**	**04 24 35.1**	**+1.9**
KARN	**Karanos**	**1.94**	**117**	P	**Pn**	**04 24 09.0**	**+0.7**
KARN				S	**Sn**	**04 24 35.1**	**+1.9**
LTK	**Loutraki**	**1.95**	**28**	*e*PN	**Pn**	**04 24 09.6**	**+1.1**
LTK	**Loutraki**	**1.95**	**28**	P	**Pn**	**04 24 10.8**	**+2.3**
LTK	**Loutraki**	**1.95**	**28**	*e*Pn	**Pn**	**04 24 09.6**	**+1.1**
LTK	**Loutraki**	**1.95**	**28**	P	**Pn**	**04 24 10.8**	**+2.3**
VLS	**Valsamata**	**2.11**	**333**	P	**Pn**	**04 24 15.7**	**+5.1**
VLS				S	**Sn**	**04 24 36.5**	**-0.9**
EFP	**Efpalio**	**2.12**	**2**	*e*PN	**Pn**	**04 24 12.1**	**+1.3**
EFP	**Efpalio**	**2.12**	**2**	*e*Pn	**Pn**	**04 24 12.1**	**+1.3**

*ISCJB **09** 04:24:58.0±0.6, 33°.44S±0°.06×68°.16W±0°.04, h10km, mb3.5/3, Error ellipse: s-maj=9.2km s-min=4.3km az=164.6*
*NEIC **09** 04:24:58.2±3.4, 33°.39S×68°.22W, h1km±25km, mb3.9/2, MD4.2(SJA), Error ellipse: s-maj=8.4km s-min=5.7km az=154.0*
NEIC Felt [III] at Mendoza.
*GUC **09** 04:24:59.8±0.7, 33°.51S×68°.24W, h22km±4km, MD4.2, ML4.1*
*IDC **09** 04:25:00.1±1.3, 33°.32S×67°.96W, h0km, mb3.4/2, mb1 3.8/6, mb1mx3.7/16, mbtmp3.6/6, ML4.0/4, Error ellipse: s-maj=34.0km s-min=13.7km az=89.0*

ISC 09 04:24:59.4±0.6, 33°.42S±0°.06×68°.21W±0°.04, h10km, n34, σ0s81/55, mb3.5/3, 9C-5D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMEL	**Las Melosas**	**1.72**	**255**	⇓*i*P	**Pn**	**04 25 28.6**	**-0.8**
LMEL				*i*S	**Sn**	**04 25 50.2**	**-1.1**
LMEL	**Las Melosas**	**1.72**	**255**	⇓*i*P	**Pn**	**04 25 28.6**	**-0.8**
LMEL				*i*S	**Sn**	**04 25 50.2**	**-1.1**
LMEL				AML	AML	04 25 51.5	
	comp=N,3μm,0.3s						
FCH	**Farellones**	**1.75**	**272**	⇓*i*P	**Pn**	**04 25 29.4**	**-0.4**
FCH	**Farellones**	**1.75**	**272**	⇓*i*P	**Pn**	**04 25 29.4**	**-0.4**
SJCH	**San Jose de Ma**	**1.81**	**262**	*e*P	**Pn**	**04 25 30.3**	**-0.3**
SJCH				*i*S	**Sn**	**04 25 52.6**	**-0.9**
SJCH	**San Jose de Ma**	**1.81**	**262**	*e*P	**Pn**	**04 25 30.3**	**-0.3**
SJCH				*i*S	**Sn**	**04 25 52.6**	**-0.9**
SJCH				AML	AML	04 25 55.8	
	comp=N,3μm,0.5s						
CFAA	**Coronel Fontan**	**1.81**	**359**	Pn	**Pn**	**04 25 30.6**	**0.0**
	comp=N,27nm,0.3s,baz=172,slow=18,SNR=697						
CFAA				Lg		04 25 55.3	
	comp=N,44nm,0.3s,baz=288,slow=12,SNR=25						
PCH	**Pirque**	**1.94**	**263**	⇑*i*P	**Pn**	**04 25 32.1**	**-0.2**
PCH				*i*S	**Sn**	**04 25 56.4**	**-0.3**
PCH	**Pirque**	**1.94**	**263**	⇑*i*P	**Pn**	**04 25 32.1**	**-0.2**
PCH				*i*S	**Sn**	**04 25 56.4**	**-0.3**
CLCH	**Cerro Calan**	**1.95**	**270**	⇓*i*P	**Pn**	**04 25 32.4**	**-0.1**
CLCH				*i*S	**Sn**	**04 25 57.2**	**+0.2**
CLCH				AML	AML	04 25 59.6	
	comp=N,4μm,0.8s						
ANTU	**Antumapu**	**2.03**	**265**	*e*P	**Pn**	**04 25 34.0**	**+0.4**
ANTU				*i*S	**Sn**	**04 25 59.2**	**+0.1**
ANTU	**Antumapu**	**2.03**	**265**	*e*P	**Pn**	**04 25 34.0**	**+0.4**
ANTU				*i*S	**Sn**	**04 25 59.2**	**+0.1**
ANTU				AML	AML	04 26 00.8	
	comp=E,4μm,0.4s						
SAN	**Santiago**	**2.05**	**268**	*e*P	**Pn**	**04 25 33.9**	**0.0**
SAN				*e*S	**Sn**	**04 25 59.8**	**+0.2**
SAN	**Santiago**	**2.05**	**268**	*e*P	**Pn**	**04 25 33.9**	**0.0**
SAN				*e*S	**Sn**	**04 25 59.8**	**+0.2**
SAN				AML	AML	04 26 05.0	
	comp=N,1μm,0.4s						
PEL	**Peldehue**	**2.09**	**277**	⇑*i*P	**Pn**	**04 25 34.3**	**-0.2**
PEL				*i*S	**Sn**	**04 26 01.1**	**+0.5**
PEL				AML	AML	04 26 02.0	
	comp=N,2μm,0.3s						
CACH	**El Canelo**	**2.11**	**250**	⇑*i*P	**Pn**	**04 25 34.9**	**+0.1**
CACH				*i*S	**Sn**	**04 26 00.8**	**-0.2**
CACH	**El Canelo**	**2.11**	**250**	⇑*i*P	**Pn**	**04 25 34.9**	**+0.1**
CACH				*i*S	**Sn**	**04 26 00.8**	**-0.2**
JACH	**Jahuel**	**2.13**	**289**	⇑*i*P	**Pn**	**04 25 35.9**	**+0.8**
JACH				*e*S	**Sn**	**04 26 02.8**	**+1.2**
JACH	**Jahuel**	**2.13**	**289**	⇑*i*P	**Pn**	**04 25 35.9**	**+0.8**
JACH				*e*S	**Sn**	**04 26 02.8**	**+1.2**
TACH	**Talagante**	**2.29**	**263**	⇑*i*P	**Pn**	**04 25 36.6**	**-0.7**
TACH				*i*S	**Sn**	**04 26 05.5**	**0.0**
TACH	**Talagante**	**2.29**	**263**	⇑*i*P	**Pn**	**04 25 36.6**	**-0.7**
TACH				*i*S	**Sn**	**04 26 05.5**	**0.0**
ROCH	**El Roble**	**2.39**	**280**	*i*S	**Sn**	**04 26 09.7**	**+1.7**
ROCH				AML	AML	04 26 11.9	
	comp=N,1μm,0.7s						
LCO	**Las Campanas**	**4.88**	**333**	*e*Pn	**Pn**	**04 26 12.9**	**0.0**
LCO				*e*Sn	**Sn**	**04 27 06.5**	**-3.0**
LCO				*e*Lg		04 27 27.2	
TRQA	**Tornquist**	**6.86**	**134**	*e*Pn	**Pn**	**04 26 40.8**	**+0.8**
	comp=N,27nm,0.3s						
PLCA	**Paso Flores**	**7.54**	**194**	*e*Pn	**Pn**	**04 26 58.8**	**+9.5**
	comp=N,6.3nm,0.6s						
PLCA				Pg	**Pg**	**04 27 19.2**	**-4.4**
PLCA				Lg		04 29 01.8	
PLCA	**Paso Flores**	**7.54**	**194**	Pn	**Pn**	**04 26 54.7**	**+5.4**
	comp=N,0.2nm,0.3s,baz=354,slow=19,SNR=3.9						
PLCA				Pg	**Pg**	**04 27 19.2**	**-4.4**
	comp=N,0.7nm,0.3s,baz=16,slow=18,SNR=5.1						
PLCA				Lg		04 29 01.8	
	comp=N,2.8nm,0.3s,baz=328,slow=18,SNR=8.3						
CPUP	**Villa Florida**	**11.79**	**56**	*e*Pn	**Pn**	**04 27 46.9**	**-0.7**
CPUP				Lg		04 31 16.6	
CPUP	**Villa Florida**	**11.79**	**56**	Pn	**Pn**	**04 27 47.0**	**-0.5**
	comp=N,0.5nm,0.3s,baz=235,slow=16,SNR=4.9						
CPUP				Lg		04 31 16.6	
	comp=N,2.3nm,0.3s,baz=131,slow=15,SNR=3.5						
LPAZ	**La Paz**	**17.06**	**0**	*e*P	**Pn**	**04 28 58.4**	**+0.3**
	comp=N,2.6nm,0.7s						
LPAZ	**La Paz**	**17.06**	**0**	Pn	**Pn**	**04 28 58.9**	**+0.8**
	comp=N,0.4nm,0.3s,baz=175,slow=7.9,SNR=18						
SIV	**San Ignacio**	**18.51**	**22**	P	**Pn**	**04 29 14.5**	**-1.5**
	comp=N,0.2nm,0.3s,baz=219,slow=14,SNR=15						
TXAR	**Lajitas Array**	**70.87**	**328**	P	**P**	**04 36 20.0**	**+3.5**
	comp=N,0.1nm,0.6s,mb2.9,baz=162,slow=9.3,SNR=2.4						
WVT	**Waverly**	**71.58**	**343**	*e*P	**P**	**04 36 20.5**	**-0.1**
	comp=N,1.4nm,0.6s,mb4.1						
TORD	**Torodi Ar. Bea**	**81.02**	**68**	P	**P**	**04 37 16.1**	**+1.4**
	comp=N,0.7nm,0.9s,mb3.6,baz=224,slow=4.0,SNR=4.9						

*ISCJB **09** 04:29:45.0±0.8, 51°.49N±0°.04×16°.12E±0°.04, h0km, Error ellipse: s-maj=6.1km s-min=3.0km az=15.5*
*IPEC **09** 04:29:45.3±0.3, 51°.61N×16°.24E, h0km, ML1.8/3, Error ellipse: s-maj=2.1km s-min=1.6km az=35.0*
*CSEM **09** 04:29:46.3±0.2, 51°.52N×16°.09E, h2km, ML3.1/7, Error ellipse: s-maj=4.2km s-min=3.6km az=26.0*
*PRU **09** 04:29:47.9, 51°.47N×16°.11E, h0km*
*WAR **09** 04:29:47.7, 51°.51N×16°.11E, ML2.4, Mining Induced*

ISC 09 04:29:46.7±0.9, 51°.51N±0°.04×16°.12E±0°.04, h0km, n29, σ0s86/49, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**170**	*e*Pg	**Pg**	**04 30 00.1**	**+0.5**
KSP				*e*Sg	**Sg**	**04 30 09.3**	**+1.1**
KSP	**Ksiaz**	**0.67**	**170**	*e*Pg	**Pg**	**04 30 00.1**	**+0.5**
KSP				*e*Sg	**Sg**	**04 30 09.3**	**+1.0**
KSP	**Ksiaz**	**0.67**	**170**	*e*Pg	**Pg**	**04 29 59.9**	**+0.3**
	baz=358						
KSP				*e*Sg	**Sg**	**04 30 09.3**	**+1.0**
UPC	**Upice**	**1.00**	**184**	*e*PG	**Pg**	**04 30 06.1**	**+0.2**
UPC	**Upice**	**1.00**	**184**	Pg	**Pg**	**04 30 06.1**	**+0.2**
DPC	**Dobruska-Polom**	**1.16**	**173**	*e*PG	**Pg**	**04 30 08.9**	**-0.1**
DPC				*e*SG	**Sg**	**04 30 24.4**	**+0.3**
	comp=Z,14nm,0.4s						
DPC	**Dobruska-Polom**	**1.16**	**173**	*e*Pg	**Pg**	**04 30 08.9**	**-0.1**
	baz=358						
DPC				*e*Sg	**Sg**	**04 30 24.5**	**+0.4**
	baz=358						
PVCC	**Panska Ves**	**1.38**	**226**	*e*PG	**Pg**	**04 30 13.4**	**+0.2**
PVCC				*e*SG	**Sg**	**04 30 31.6**	**+0.5**
	comp=Z,39nm,0.2s						
PVCC	**Panska Ves**	**1.38**	**226**	Pg	**Pg**	**04 30 13.4**	**+0.2**
PVCC				Sg	**Sg**	**04 30 31.6**	**+0.5**
	comp=Z,39nm,0.2s						
PRU	**Pruhonice**	**1.82**	**214**	*e*PG	**Pg**	**04 30 21.1**	**-0.5**
PRU				*e*SG	**Sg**	**04 30 45.7**	**+0.6**
	comp=Z,15nm,0.3s						
PRU	**Pruhonice**	**1.82**	**214**	Pg	**Pg**	**04 30 21.1**	**-0.5**
PRU				Sg	**Sg**	**04 30 45.7**	**+0.6**
	comp=Z,15nm,0.3s						
MORC	**Moravsky Berou**	**1.96**	**152**	*e*Pn	**Pn**	**04 30 20.7**	**-0.4**
	baz=336						
MORC				*e*Sg	**Sg**	**04 30 48.1**	**-1.4**
	comp=Z,11nm,0.3s,baz=336						
CLL	**Collm**	**1.96**	**265**	*e*Pg	**Pg**	**04 30 24.0**	**-0.3**
CLL				*e*Sg	**Sg**	**04 30 50.0**	**+0.3**
	comp=Z,16nm,0.8s						
OKC	**Ostrava-Krasne**	**2.11**	**141**	*e*SG	**Sg**	**04 30 52.9**	**-1.6**
OKC	**Ostrava-Krasne**	**2.11**	**141**	Sg	**Sg**	**04 30 52.9**	**-1.6**
VRAC	**Vranov**	**2.22**	**172**	*e*Sg	**Sg**	**04 30 58.1**	**+0.1**
	comp=Z,3.8nm,0.2s,baz=355						
KRUC	**Moravsky**	**2.45**	**176**	*e*Pn	**Pn**	**04 30 28.5**	**+0.6**
	baz=358						
KRUC				*e*Sg	**Sg**	**04 31 05.6**	**+0.1**
	comp=Z,3.6nm,0.3s,baz=358						
NKC	**Novy Kostel**	**2.65**	**243**	*e*PN	**Pn**	**04 30 30.5**	**-0.2**
NKC				*e*PG	**Pg**	**04 30 36.7**	**-0.8**
NKC				*e*SG	**Sg**	**04 31 13.0**	**+1.2**
	comp=Z,16nm,0.3s						
NKC	**Novy Kostel**	**2.65**	**243**	Pn	**Pn**	**04 30 30.5**	**-0.2**
OJC	**Ojcow**	**2.67**	**117**	*e*Pg	**Pg**	**04 30 38.3**	**+0.5**
OJC				*e*Sg	**Sg**	**04 31 13.5**	**+1.2**
OJC	**Ojcow**	**2.67**	**117**	*e*Pg	**Pg**	**04 30 38.3**	**+0.5**
OJC				*e*Sg	**Sg**	**04 31 13.5**	**+1.2**
KHC	**Kasperske Hory**	**2.88**	**215**	*e*PN	**Pn**	**04 30 33.7**	**-0.1**
KHC				*e*PG	**Pg**	**04 30 39.4**	**-2.5**
KHC				*e*SG	**Sg**	**04 31 19.1**	**-0.1**
	comp=Z,4.0nm,0.3s						
KHC	**Kasperske Hory**	**2.88**	**215**	Pn	**Pn**	**04 30 33.7**	**-0.1**
KHC	**Kasperske Hory**	**2.88**	**215**	Pg	**Pg**	**04 30 39.4**	**-2.5**
KHC				Sg	**Sg**	**04 31 19.1**	**-0.1**
	comp=Z,4.0nm,0.3s						
MOX	**Moxa**	**2.97**	**255**	*e*PG	**Pg**	**04 30 42.2**	**-1.3**
MOX				*e*SG	**Sg**	**04 31 22.7**	**+0.7**
KOLL	**Kolacno**	**3.28**	**152**	*e*SG	**Sg**	**04 31 30.8**	**-1.2**
KOLL	**Kolacno**	**3.28**	**152**	*e*Sg	**Sg**	**04 31 30.8**	**-1.2**
STHS	**Stebnicka Huta**	**3.89**	**121**	*e*SG	**Sg**	**04 31 53.0**	**+1.5**
STHS	**Stebnicka Huta**	**3.89**	**121**	*e*Sg	**Sg**	**04 31 53.0**	**+1.5**

*IDC **09** 05:04:24.9±3.1, 51°.20N×178°.87E, h0km, mb3.3/4, mb1 3.6/5, mb1mx3.4/24, mbtmp3.4/5, ML3.8/1, Error ellipse: s-maj=76.2km s-min=34.7km az=1.0*
*ISCJB **09** 05:04:27.9±2.8, 51°.2N±0°.4×178°.8E±0°.1, h31km±9km, mb3.3/4, Error ellipse: s-maj=59.6km s-min=11.7km az=179.8*
*NEIC **09** 05:04:28.9, 51°.21N×178°.81E, h13km, ML2.9(AEIC), After AEIC.*

ISC 09 05:04:29.3±2.6, 51°.3N±0°.4×178°.8E±0°.1, h24km±9km, n10, σ0s95/12, mb3.3/4, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.35**	**70**	P	**Pb**	**05 04 36.6**	**-0.3**
AMKA				S	**Sb**	**05 04 42.2**	**+0.1**
ADK	**Adak**	**2.90**	**76**	P	**Pn**	**05 05 14.5**	**+0.7**
ADK				S	**Sn**	**05 05 49.1**	**+1.3**
FX1	**Attu Island--F**	**3.83**	**297**	P	**Pn**	**05 05 27.7**	**+1.2**
KDAK	**Kodiak Island**	**17.76**	**57**	P	**Pn**	**05 08 31.7**	**-2.9**
KDAK	**Kodiak Island**	**17.76**	**57**	P	**Pn**	**05 08 31.7**	**-2.9**
	0.3nm,0.3s,baz=192,slow=6.7,SNR=4.4						
**ILA

CRVS	**Cervenica-Dubn**	**144.76**	**343**	*e*PKP	PKPdf	05 28 25.7	-0.2
KECS	**Kecovo**	**145.40**	**344**	*e*P	PKPbc	05 28 27.7	+0.7
KECS	**Kecovo**	**145.40**	**344**	*e*PKP	PKPdf	05 28 27.7	+0.6
VRAC	**Vranov**	**145.50**	**349**	PKPbc	PKPbc	05 28 27.3	+0.1
	1.3nm,0.4s,baz=270,slow=2.0,SNR=4.4						
BR131	**Keskin Array S**	**146.59**	**321**	*e*PKPdf	PKPdf	05 28 30.9	+1.6
BRTR	**Keskin Array B**	**146.59**	**321**	PKPbc	PKPbc	05 28 30.5	-0.4
	2.3nm,0.9s,baz=120,slow=2.0,SNR=9.2						

IDC 09 05:20:16.4±3.5, 5°37.S×147°24.E, h173$^{km}_{\pm 31}$, mb3.5/3, mb1 3.7/4, mb1mx3.3/15, mbtmp3.5/4, Error ellipse: s-maj=60.4km s-min=18.3km az=119.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**14.66**	**184**	P	Pn	05 23 36.3	+0.6
	0.4nm,0.3s,baz=7.9,slow=14,SNR=3.8						
ASAR	**Alice Springs**	**22.27**	**214**	P	P	05 24 59.3	-0.3
	4.0nm,0.5s,baz=47,slow=8.5,SNR=79						
ASAR				S	S	05 28 52.8	+0.9
	0.7nm,0.8s,baz=28,slow=22,SNR=5.4						
FITZ	**Fitzroy Crossi**	**24.60**	**237**	P	P	05 25 21.0	+0.1
	3.2nm,0.5s,baz=65,slow=10,SNR=15						
ILAR	**Eielson Array**	**84.81**	**23**	P	P	05 32 30.7	-0.4
	0.2nm,0.5s,baz=265,slow=5.2,SNR=6.1						
TORD	**Torodi Ar. Bea**	**145.16**	**285**	PKPbc	PKPbc	05 39 34.2	-0.1
	baz=71,slow=3.4						

*IDC **09** 06:01:43.8±0.5, 61°.02S×153°.78E, h0^{km}, mb4.8/16, mb1 4.9/16, mb1mx4.9/17, mbtmp4.8/16, MS5.8/13, Ms1 5.8/13, ms1mx5.6/17, Error ellipse: s-maj=20.6km s-min=14.2km az=83.0*

*ISCJB **09** 06:01:44.5±0.3, 61°.00S±0°.05×153°.8E±0°.1, h10^{km}, mb5.3/42, MS5.9/227, Error ellipse: s-maj=9.0km s-min=5.4km az=36.7*

*MOS **09** 06:01:47.4±2.1, 60°.48S×154°.39E, h10^{km}, mb5.4/13, MS5.9/29, Error ellipse: s-maj=35.2km s-min=10.6km az=97.4*

*DJA **09** 06:01:47, 60°.90S×154°.25E, h10^{km}, mb5.8/12*

*NEIC **09** 06:01:48.5±0.3, 60°.65S×153°.77E, h10^{km}, mb5.6/29, MS5.9/197, MW6.5, Error ellipse: s-maj=13.8km s-min=12.3km az=88.0*

*BJI **09** 06:01:49.0, 60°.60S×153°.80E, h10^{km}, mB5.7/18, mb5.7/11, Ms6.2/32, Ms7 6.0/31*

*GCMT **09** 06:02:03.8±0.1, 60°.54S×153°.38E, h16^{km}, MW6.4, Moment Tensor Solution. s116,c272; s99,c203; Moment tensor: Scale 10^{18}Nm; M_{rr}-0.60±.03; $M_{\theta\theta}$4.01±.03; $M_{\phi\phi}$-3.41±.03; $M_{r\theta}$1.40±.09; $M_{\theta\phi}$-3.36±.02; $M_{r\phi}$1.04±.08; Best double couple: M_o5.30000×10^{18} NP1:ϕ_s155.00000°, δ71.00000°, λ-7.00000°. NP2: ϕ_s247.00000°, δ84.00000°, λ-161.00000°; Principal axes: T 5.4500, Plg9.0000°, Azm20.0000°; N -0.2700, Plg70.0000°, Azm264.0000°; P -5.1900, Plg18.0000°, Azm113.0000°; Data Used: II IU CN IC G. Mantle waves from 112 sta. Surface waves: sta=111, comp=251, per=50.*

ISC 09 06:01:46.2±0.4, 61°.01S±0°.05×153°.9E±0°.1, h10^{km}, n485, σ1§19/117, mb5.3/42, MS5.9/227, 13C-20D, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**7.06**	**25**	*e*Pn	**Pn**	**06 03 24.9**	**-4.6**
DRV	**Dumont d'Urvil**	**8.35**	**221**	P	**Pn**	**06 03 52.0**	**+5.0**
APZ	**The Paps**	**16.39**	**36**	PN	**Pn**	**06 05 34.3**	**-1.7**
WHZ	**Wether Hill Ro**	**17.23**	**35**	PN	**Pn**	**06 05 46.3**	**-0.4**
DCZ	**Deep Cove**	**17.40**	**33**	PN	**Pn**	**06 05 49.8**	**+1.0**
TUZ	**Tuapeka**	**17.67**	**39**	PN	**Pn**	**06 05 52.1**	**0.0**
MLZ	**Mavora Lakes**	**17.80**	**35**	PN	**Pn**	**06 05 54.2**	**+0.5**
ODZ	**Otahua Downs**	**18.80**	**39**	*e*P	**Pn**	**06 06 06.2**	**+0.3**
	3µm,1.8s						
ODZ	**Otahua Downs**	**18.80**	**39**	P*	**Pn**	**06 06 05.5**	**-0.4**
MOO	**Moorlands**	**19.04**	**345**	*e*P	**Pn**	**06 06 09.0**	**+0.2**
CASY	**Casey**	**19.62**	**236**	*e*P	**Pn**	**06 06 14.8**	**-0.9**
CASY				*e*S	**Sn**	**06 09 48.9**	**-6.8**
CASY	**Casey**	**19.62**	**236**	*e*P	**Pn**	**06 06 15.1**	**-0.6**
	748nm,1.8s						
RPZ	**Rata Peaks**	**20.12**	**38**	*e*P	**P**	**06 06 22.6**	**+2.6**
	402nm,1.2s						
RPZ				LR	LR	06 12 47.8	
RPZ	**Rata Peaks**	**20.12**	**38**	P	**P**	**06 06 19.2**	**-0.7**
	58nm,0.9s,baz=186,slow=12,SNR=7.4						
RPZ				LR	LR	06 12 47.7	
	comp=Z,92µm,21.1s,MS6.1,baz=192,slow=33						
KHZ	**Kahutara**	**22.08**	**41**	*e*P	**P**	**06 06 41.1**	**+0.1**
	368nm,1.2s,mb5.7						
QRZ	**Quartz Range**	**23.21**	**38**	P*	**P**	**06 06 52.1**	**-0.9**
SNZO	**South Karori**	**23.45**	**42**	PFAKE		06 07 10.0	+14
SNZO				LR	LR		
	comp=Z,35µm,22.0s,MS5.8						
TOO	**Toolangi**	**24.05**	**343**	*e*P	**P**	**06 07 01.9**	**+0.7**
TOO				*e*S	**S**	**06 11 23.0**	**+4.8**
CNB	**Canberra Magne**	**25.88**	**351**	*e*P	**P**	**06 07 18.2**	**+0.4**
CNB				*e*S	**S**	**06 11 57.6**	**+10**
CAN	**Canberra**	**25.90**	**351**	*e*P	**P**	**06 07 18.4**	**+0.4**
	comp=Z,187nm,1.0s,mb5.6						
CAN				LR	LR		
	comp=Z,54µm,19.0s,MS6.1						
CAN	**Canberra**	**25.90**	**351**	*e*P	**P**	**06 07 18.4**	**+0.4**
CAN				pmax	pmax		
	comp=Z,187nm,1.0s,mb5.6						
CAN				MLR	MLR		
	comp=Z,54µm,19.0s,MS6.1						
MIR	**Mirnyy**	**26.47**	**232**	*e*P	**P**	**06 07 21.0**	**-1.9**
MIR				*e*		06 08 26.0	
MIR				*e*S	**S**	**06 12 14.0**	**+18**
MIR				pmax	pmax		
	comp=Z,120nm,2.4s,mb5.0						
MIR				pmax	pmax		
	comp=Z,202nm,2.0s,mb5.3						
MIR				pmax	pmax		
	comp=E,303nm,4.0s						
MIR				smax			
	comp=N,6µm,16.0s						
MIR				smax			
	comp=E,4µm,16.0s						
MIR				MLR	MLR		
	comp=N,16µm,18.0s,MS5.7						
MIR				MLR	MLR		
	comp=E,11µm,18.0s,MS5.7						
MIR				MLR	MLR		
	comp=Z,16µm,18.0s,MS5.6						
URZ	**Urewera**	**27.00**	**43**	*e*P	**P**	**06 07 27.8**	**-0.1**
	comp=Z,49nm,0.9s,mb5.0						
URZ	**Urewera**	**27.00**	**43**	P	**P**	**06 07 27.7**	**-0.2**
	comp=Z,35nm,0.9s,mb4.9,baz=222,slow=6.6,SNR=11						
URZ				LR	LR	06 17 05.2	
	comp=Z,31µm,21.4s,MS5.8,baz=352,slow=34						
QSPA	**South Pole Qui**	**29.08**	**180**	*e*P	**P**	**06 07 48.1**	**+2.0**
	comp=Z,102nm,1.2s,mb5.4						
QSPA				LR	LR		
	comp=Z,7µm,19.0s,MS5.3						
QSPA	**South Pole Qui**	**29.08**	**180**	P	**P**	**06 07 45.6**	**-0.5**
	comp=Z,4.5nm,1.0s,mb4.2,baz=16,slow=3.8,SNR=9.5						
QSPA				LR	LR	06 18 53.8	
	comp=Z,6µm,20.0s,MS5.2,baz=13,slow=35						
STKA	**Stephens Creek**	**30.24**	**339**	*e*P	**P**	**06 07 55.8**	**-1.0**
	comp=Z,43nm,0.9s,mb5.2						
STKA	**Stephens Creek**	**30.24**	**339**	*e*P	**P**	**06 07 56.6**	**-0.2**
	comp=Z,14nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**30.24**	**339**	P	**P**	**06 07 55.0**	**-1.8**
	comp=Z,23nm,0.8s,mb5.0,baz=161,slow=9.8,SNR=19						
STKA				LR	LR	06 18 58.4	
	comp=Z,56µm,18.0s,MS6.2,baz=164,slow=34						
STKA	**Stephens Creek**	**30.24**	**339**	*e*P	**P**	**06 07 56.6**	**-0.2**
STKA				pmax	pmax		
	comp=Z,14nm,1.0s						
ARMA	**Armidale**	**30.63**	**356**	*e*P	**P**	**06 08 00.3**	**0.0**
ARMA	**Armidale**	**30.63**	**356**	*e*P	**P**	**06 08 00.0**	**-0.3**
	comp=Z,66nm,1.0s,mb5.4						
FORT	**Forrest**	**34.71**	**319**	*e*P	**P**	**06 08 35.6**	**-0.4**
	comp=Z,64nm,0.8s,mb5.6						
FORT	**Forrest**	**34.71**	**319**	*e*P	**P**	**06 08 35.6**	**-0.4**
	comp=Z,131nm,0.9s,mb5.9						
EIDS	**Eidsvold**	**35.68**	**356**	*e*P	**P**	**06 08 43.5**	**-0.8**
	comp=Z,51nm,1.1s,mb5.4						
MAW	**Mawson**	**36.56**	**220**	*e*P	**P**	**06 08 50.4**	**-1.0**
	comp=Z,13nm,1.0s,mb4.7						
MAW				*e*S	**S**	**06 14 45.1**	**+12**
MAW	**Mawson**	**36.56**	**220**	*e*P	**P**	**06 08 52.0**	**+0.5**
	comp=Z,9.9nm,1.1s,mb4.5						
MAW				LR	LR		
	comp=Z,22µm,22.0s,MS5.9						
MAW	**Mawson**	**36.56**	**220**	P	**P**	**06 08 50.9**	**-0.5**
	comp=Z,9.1nm,1.1s,mb4.5,baz=110,slow=7.9,SNR=6.9						
MAW				LR	LR	06 23 50.6	
	comp=Z,11µm,21.0s,MS5.6,baz=110,slow=36						
NWAO	**Narrogin (SRO)**	**36.77**	**303**	*e*P	**P**	**06 08 55.5**	**+2.0**
	comp=Z,31nm,1.1s,mb5.1						
NWAO				LR	LR		
	comp=Z,3µm,22.0s,MS5.0						
NWAO	**Narrogin (SRO)**	**36.77**	**303**	P	**P**	**06 08 52.4**	**-1.2**
	comp=Z,15nm,0.9s,mb4.8,baz=146,slow=8.0,SNR=3.8						
NWAO	**Narrogin (SRO)**	**36.77**	**303**	*e*P	**P**	**06 08 55.6**	**+2.0**
NWAO				pmax	pmax		
	comp=Z,31nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,3µm,22.0s						
KLBR	**Kellerberrin**	**37.73**	**305**	*e*P	**P**	**06 09 03.1**	**+1.4**
	comp=Z,75nm,1.2s,mb5.3						
ASAR	**Alice Springs**	**39.80**	**331**	P	**P**	**06 09 18.2**	**-0.9**
	comp=Z,17nm,0.9s,mb4.8,baz=164,slow=8.4,SNR=77						
NOUC	**Port Laguerre**	**39.83**	**18**	*e*P	**P**	**06 09 18.9**	**-0.6**
DZM	**Mont Dzumac**	**39.88**	**18**	*e*P	**P**	**06 09 19.4**	**-0.5**
	comp=Z,364nm,1.1s,mb6.0						
DZM				*e*S	**S**	**06 15 24.5**	**+0.1**
	comp=Z,10µm,28.9s						
DZM				*e*LR	LR	06 20 10.5	
	comp=Z,129µm,26.1s,baz=201						
DZM	**Mont Dzumac**	**39.88**	**18**	*e*P	**P**	**06 09 18.1**	**-1.8**
DZM	**Mont Dzumac**	**39.88**	**18**	*e*P	**P**	**06 09 19.7**	**-0.1**
	comp=Z,160nm,1.0s,mb5.7						
MORW	**Morawa**	**40.64**	**304**	*e*P	**P**	**06 09 29.7**	**+3.6**
MORW				*e*S	**S**	**06 15 39.9**	**+4.2**
CTA	**Charters Tower**	**41.24**	**349**	*e*P	**P**	**06 09 30.9**	**-0.2**
	comp=Z,95nm,0.9s,mb5.4						
CTA				*e*S	**S**	**06 15 49.7**	**+5.1**
CTA	**Charters Tower**	**41.24**	**349**	P	**P**	**06 09 30.7**	**-0.4**
	comp=Z,40nm,0.9s,mb5.1,baz=172,slow=8.9,SNR=20						
CTAO	**Charters Tower**	**41.24**	**349**	*e*P	**P**	**06 09 30.6**	**-0.5**
	comp=Z,150nm,1.0s,mb5.6						
CTAO				LR	LR		
	comp=Z,57µm,21.0s,MS6.4						
CTAO	**Charters Tower**	**41.24**	**349**	*e*P	**P**	**06 09 30.6**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,150nm,1.0s,mb5.6						
CTAO				MLR	MLR		
	comp=Z,57µm,21.0s,MS6.4						
CTAO	**Charters Tower**	**41.24**	**349**	P	**P**	**06 09 29.9**	**-1.2**
	comp=Z,158nm,1.1s,mb5.5						
SYO	**Syowa Base**	**42.07**	**209**	ǁ*e*X		06 09 37.8	
WB2	**Warramunga Arr**	**43.28**	**333**	*e*P	**P**	**06 09 46.1**	**-1.6**
WRAB	**Tennant Creek**	**43.29**	**333**	*e*P	**P**	**06 09 47.1**	**-0.7**
	comp=Z,87nm,1.0s,mb5.4						
WRAB				LR	LR		
	comp=Z,29µm,20.0s,MS6.2						
WRAB	**Tennant Creek**	**43.29**	**333**	*e*P	**P**	**06 09 47.1**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,87nm,1.0s,mb5.4						
WRAB				MLR	MLR		
	comp=Z,29µm,20.0s,MS6.2						
WRAB	**Tennant Creek**	**43.29**	**333**	P	**P**	**06 09 46.9**	**-0.9**
	comp=Z,480nm,1.3s,mb6.1,SNR=12						
WRAB	**Tennant Creek**	**43.29**	**333**	P	**P**	**06 09 46.0**	**-1.8**
	comp=Z,79nm,1.1s,mb5.4						
NVL	**N'lazarevskaya**	**45.84**	**196**	*c i*P	**P**	**06 10 09.0**	**+1.3**
NVL				*e*		06 11 54.1	
NVL				pmax	pmax		
	comp=Z,64nm,1.5s,mb5.3						
MAIT	**Maitri**	**45.85**	**196**	*e*P	**P**	**06 10 13.2**	**+5.5**
MAIT				*e*		06 10 38.3	
PAF	**Port-aux-Franc**	**45.92**	**245**	PFAKE		06 10 20.0	+11
PAF				LR	LR		
	comp=Z,5µm,22.0s,MS5.4						
MBWA	**Marble Bar**	**46.40**	**314**	*e*P	**P**	**06 10 14.0**	**+1.4**
	comp=Z,94nm,1.1s,mb5.6						
MBWA				LR	LR		
	comp=Z,37µm,19.0s,MS6.4						
MBWA	**Marble Bar**	**46.40**	**314**	P	**P**	**06 10 12.2**	**-0.4**
	comp=Z,87nm,1.1s,mb5.6						
MSVF	**Nonsavu**	**46.52**	**32**	PFAKE		06 10 30.0	+16
MSVF				LR	LR		
	comp=Z,19µm,21.0s,MS6.0						
FITZ	**Fitzroy Crossi**	**47.33**	**322**	*e*P	**P**	**06 10 19.8**	**-0.1**
	comp=Z,120nm,0.9s,mb5.8						
FITZ				*e*S	**S**	**06 17 20.1**	**+6.8**
FITZ	**Fitzroy Crossi**	**47.33**	**322**	*e*P	**P**	**06 10 19.9**	**0.0**
	comp=Z,99nm,1.0s,mb5.7						
FITZ	**Fitzroy Crossi**	**47.33**	**322**	P	**P**	**06 10 19.4**	**-0.4**
	comp=Z,24nm,0.9s,mb5.1,baz=176,slow=9.2,SNR=17						
FITZ	**Fitzroy Crossi**	**47.33**	**322**	P	**P**	**06 10 20.2**	**+0.3**
	comp=Z,3µmcomp=Z,193nm,1.1s,mb5.9						
COEN	**Coen**	**47.62**	**346**	*e*P	**P**	**06 10 21.6**	**-0.6**
COEN	**Coen**	**47.62**	**346**	*e*P	**P**	**06 10 21.4**	**-0.7**
	comp=Z,595nm,1.1s,mb6.5						
COEN	**Coen**	**47.62**	**346**	P	**P**	**06 10 21.6**	**-0.6**
	comp=Z,266nm,1.1s,mb6.2						
VNA1	**Neumayer--Stat**	**48.03**	**188**	*e*P	**P**	**06 10 22.3**	**-2.4**
KNA	**Kununurra**	**48.68**	**327**	*e*P	**P**	**06 10 29.6**	**-0.7**
	comp=Z,60nm,0.8s,mb5.7						
KNA	**Kununurra**	**48.68**	**327**	P	**P**	**06 10 29.9**	**-0.4**
	comp=Z,2µmcomp=Z,239nm,0.8s,mb6.3						
KAKA	**Kakadu**	**50.70**	**333**	*e*P	**P**	**06 10 44.9**	**-0.8**
	comp=Z,151nm,1.2s,mb5.8						
KAKA	**Kakadu**	**50.70**	**333**	*e*P	**P**	**06 10 44.6**	**-1.1**
	comp=Z,440nm,1.0s,mb6.3						
RAR	**Rarotonga**	**51.09**	**60**	PFAKE		06 11 00.0	+11
RAR				LR	LR		
	comp=Z,8µm,20.0s,MS5.8						
RAR	**Rarotonga**	**51.09**	**60**	LR	LR	06 30 47.4	
	comp=Z,6µm,18.1s,MS5.7,baz=206,slow=34						
PMSA	**Palmer Station**	**51.36**	**160**	PFAKE		06 11 10.0	+20
PMSA				LR	LR		
	comp=Z,4µm,19.0s,MS5.5						
HNR	**Honiara**	**51.67**	**8**	PFAKE		06 11 00.0	+7.0
HNR				LR	LR		
	comp=Z,57µm,19.0s,MS6.6						
HNR	**Honiara**	**51.67**	**8**	LR	LR	06 29 45.5	
	comp=Z,60µm,18.2s,MS6.7,baz=153,slow=32						
PMG	**Port Moresby**	**51.74**	**352**	*e*P	**P**	**06 10 53.2**	**-0.4**
	comp=Z,108nm,0.9s,mb5.8						
PMG				LR	LR		
	comp=Z,45µm,19.0s,MS6.5						
PMG	**Port Moresby**	**51.74**	**352**	*e*P	**P**	**06 10 52.6**	**-1.0**
PMG	**Port Moresby**	**51.74**	**352**	P	**P**	**06 10 54.2**	**+0.6**
	comp=Z,2µmcomp=Z,127nm,1.4s,mb5.7						
AFI	**Afiamalu**	**53.18**	**43**	PFAKE		06 11 20.0	+16
AFI				LR	LR		
	comp=Z,5µm,20.0s,MS5.6						
FUNA	**Funafuti**	**55.65**	**31**	PFAKE		06 11 30.0	+7.8
FUNA				LR	LR		
	comp=Z,16µm,22.0s,MS6.1						
MMRI	**Maumere**	**57.30**	**322**	P	**P**	**06 11 34.2**	**+0.3**
	comp=Z,2µmcomp=Z,163nm,1.0s,mb6.0						
PPT	**Papeete**	**58.78**	**68**	*e*S	**S**	**06 19 52.2**	**+2.9**
	comp=Z,9µm,28.8s						
PPT				*e*SS	SS	06 23 49.2	+6.9
	comp=Z,7µm,30.2s						
PPT				*e*LQ		06 26 37.5	
	comp=Z,22µm,27.5s						
PPT				*e*LR	LR	06 29 04.4	
	comp=Z,11µm,23.8s,baz=213						
PPT	**Papeete**	**58.78**	**68**	LR	LR	06 31 20.1	
	comp=Z,4µm,20.6s,MS5.5,baz=218,slow=30						
RKT	**Rikitea**	**60.92**	**85**	*e*S	**S**	**06 20 25.5**	**+8.7**
	comp=Z,9µm,32.5s						
RKT				*e*LQ		06 27 31.0	
	comp=Z,5µm,32.5s						
RKT				*e*LR	LR	06 30 00.5	
	comp=Z,15µm,31.8s,baz=208						
NLAI	**Namlea**	**61.11**	**329**	P	**P**	**06 11 59.9**	**-0.4**
KAPI	**Kappang**	**61.48**	**320**	*e*P	**P**	**06 12 05.1**	**+2.3**
	comp=Z,106nm,1.3s,mb5.8						
KAPI				LR	LR		
	comp=Z,16µm,20.0s,MS6.2						
PTCN	**Pitcairn Islan**	**61.65**	**91**	PFAKE		06 12 20.0	+16
PTCN				LR	LR		
	comp=Z,5µm,19.0s,MS5.7						
COCO	**West Island**	**63.76**	**294**	PFAKE		06 12 30.0	+12
COCO				LR	LR		
	comp=Z,8µm,21.0s,MS5.8						
TARA	**Tarawa**	**63.90**	**21**	PFAKE		06 12 30.0	+11
TARA				LR	LR		
	comp=Z,24nm,20.0s						
RPN	**Rapa Nui**	**69.82**	**109**	PFAKE		06 13 10.0	+13
RPN				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
KSM	**Kuching**	**70.71**	**313**	*e*P	**P**	**06 13 04.9**	**+2.8**
	comp=Z,89nm,1.4s,mb5.5						
KSM				LR	LR		
	comp=Z,9µm,20.0s,MS6.0						
TAOE	**Nuku Hiva Isla**	**70.75**	**73**	*e*S	S	06 22 23.4	+6.6
	comp=Z,3µm,27.6s						
TAOE				*e*LQ		06 31 24.5	
	comp=Z,13µm,28.2s						
TAOE				*e*LR	LR	06 34 41.1	
	comp=Z,5µm,22.6s,baz=217						
DAV	**Davao City (W)**	**71.41**	**330**	PFAKE		06 13 20.0	+14
DAV				LR	LR		
	comp=Z,8µm,21.0s,MS6.0						
DAV	**Davao City (W)**	**71.41**	**330**	ǁ*e*P	**P**	**06 13 07.3**	**+1.0**
PLCA	**Paso Flores**	**72.34**	**146**	*e*P	**P**	**06 13 13.2**	**+1.6**
	comp=Z,6.6nm,0.9s,mb4.6						
PLCA				LR	LR		
	comp=Z,3µm,21.0s,MS5.5						
PLCA	**Paso Flores**	**72.34**	**146**	P	**P**	**06 13 10.3**	**-1.3**
	comp=Z,3.9nm,0.7s,mb4.4,baz=257,slow=2.9,SNR=4.6						
PLCA				LR	LR	06 38 48.2	
	comp=Z,3µm,20.3s,MS5.5,baz=204,slow=31						
KKM	**Kota Kinabalu**	**73.02**	**321**	*e*P	**P**	**06 13 15.1**	**-0.8**
	comp=Z,41nm,1.0s,mb5.3						
KKM				LR	LR		
	comp=Z,8µm,20.0s,MS6.0						
XMAS	**Kiritimati**	**73.10**	**52**	PFAKE		06 13 30.0	+14
XMAS				LR	LR		
	comp=Z,7µm,21.0s,MS5.9						
GUMO	**Guam**	**74.70**	**351**	P	**P**	**06 13 24.2**	**-1.4**
	comp=Z,45nm,0.8s,mb5.5,baz=204,slow=12						
GUMO	**Guam**	**74.70**	**351**	P	**P**	**06 13 24.3**	**-1.4**
GUMO				MLR	MLR		
	comp=Z,7µm,19.0s,MS6.0						
RER	**Riviere de l'E**	**75.59**	**253**	PFAKE		06 13 50.0	+19
RER				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
PSI	**Prapat**	**76.30**	**303**	P	**P**	**06 13 33.0**	**-2.0**
	comp=Z,1.3nm,0.3s,mb4.3,baz=228,slow=13,SNR=2.2						
TRQA	**Tornquist**	**77.03**	**152**	PFAKE		06 13 50.0	+11
TRQA				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
KULM	**Kulim**	**77.86**	**305**	*e*P	**P**	**06 13 43.6**	**-0.2**
	comp=Z,83nm,1.3s,mb5.5						
KULM				LR	LR		
	comp=Z,10µm,21.0s,MS6.1						
SUR	**Sutherland**	**79.41**	**219**	PFAKE		06 14 10.0	+18
SUR				LR	LR		
	comp=Z,5µm,22.0s,MS5.8						
DGAR	**Diego Garcia**	**79.41**	**274**	PFAKE		06 14 10.0	+18
DGAR				LR	LR		
	comp=Z,4µm,19.0s,MS5.8						
WAKE	**Wake Island**	**80.67**	**12**	PFAKE		06 14 10.0	+11
WAKE				LR	LR		
	comp=Z,9µm,20.0s,MS6.1						
ABPO	**Ambohimpanom**	**81.34**	**246**	PFAKE		06 14 20.0	+17
ABPO				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
BOSA	**Boshof**	**81.46**	**224**	P	**P**	**06 14 02.2**	**-1.0**
	comp=Z,3.4nm,0.9s,mb4.3,baz=210,slow=8.1,SNR=2.3						
BOSA				LR	LR	06 47 06.8	
	comp=Z,2µm,19.0s,MS5.5,baz=157,slow=33						
TRIS	**Tristan da Cun**	**81.62**	**191**	PFAKE		06 14 20.0	+16
TRIS				LR	LR		
	comp=Z,5µm,21.0s,MS5.8						
JOHN	**Johnston Islan**	**82.82**	**35**	PFAKE		06 14 20.0	+10
JOHN				LR	LR		
	comp=Z,10µm,22.0s,MS6.2						
LCO	**Las Campanas**	**83.25**	**142**	PFAKE		06 14 30.0	+17
LCO				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
LBTB	**Lobatse**	**84.65**	**226**	PFAKE		06 14 30.0	+10
LBTB				LR	LR		
	comp=Z,3µm,22.0s,MS5.6						
QIZ	**Qiongzhong**	**87.24**	**319**	PFAKE		06 14 40.0	+7.5
QIZ				LR	LR		
	comp=Z,5µm,22.0s,MS5.9						
TPUB	**Ta-pu**	**88.22**	**330**	*e*P	**P**	**06 14 39.0**	**+2.0**
	comp=Z,42nm,1.0s,mb5.6						
SSLB	**Suanglung**	**88.61**	**330**	*e*P	**P**	**06 14 39.8**	**+0.9**
	comp=Z,38nm,1.1s,mb5.6						
CPUP	**Villa Florida**	**89.34**	**152**	*e*P	**P**	**06 14 44.1**	**+1.4**
	comp=Z,19nm,1.0s,mb5.4						
CPUP				LR	LR		
	comp=Z,345nm,19.0s,MS4.8						
CPUP	**Villa Florida**	**89.34**	**152**	P	**P**	**06 14 42.8**	**+0.2**
	comp=Z,1.6nm,0.9s,mb4.3,baz=146,slow=3.6,SNR=2.9						
CPUP	**Villa Florida**	**89.34**	**152**	*e*P	**P**	**06 14 44.1**	**+1.5**
CPUP				pmax	pmax		
	comp=Z,19nm,1.0s						
CPUP				MLR	MLR		
	comp=Z,345nm,19.0s						
MSEY	**Mahe Island**	**90.03**	**260**	PFAKE		06 15 00.0	+14
MSEY				LR	LR		
	comp=Z,3µm,22.0s,MS5.7						
POHA	**Pohakuloa**	**90.11**	**47**	PFAKE		06 15 00.0	+14
POHA				LR	LR		
	comp=Z,6µm,21.0s,MS6.0						
QZH	**Quanzhou**	**90.31**	**328**	P	**P**	**06 14 50.0**	**+3.2**
QZH				S	S	06 25 44.1	+3.3
QZH				SS	SS	06 31 44.0	+2.7
QZH				LR	LR		
	comp=N,2µm,13.3s,MS6.0						
QZH				LR	LR		
	comp=E,3µm,15.1s,MS6.0						
QZH				LR	LR		
	comp=Z,10µm,23.9s						
CM31	**Chiang Mai Arr**	**90.53**	**309**	PFAKE		06 15 00.0	+12
CM31				LR	LR		
	comp=Z,6µm,

comp=N,6µm,23.3s,MS6.2
KMI LR LR
comp=E,6µm,19.2s,MS6.2
KMI LR LR
comp=Z,9µm,24.4s
SSE Sheshan 95.58 332 P **P** **06 15 14.0 +3.0**
SSE PP PP 06 19 04.5 +1.9
SSE S S 06 26 30.1 +2.7
SSE SS SS 06 32 58.9 +2.1
SSE pmax pmax
comp=Z,32nm,1.0s,mb5.7
SSE pmax pmax
comp=Z,170nm,8.6s
SSE LR LR
comp=N,3µm,21.8s,MS5.8
SSE LR LR
comp=E,2µm,21.8s,MS5.8
SSE LR LR
comp=Z,4µm,20.0s,MS5.9
LPAZ La Paz 95.97 140 *e*P **P** **06 15 13.1 -0.3**
comp=Z,8.6nm,1.2s,mb5.1
LPAZ LR LR
comp=Z,1µm,22.0s,MS5.3
LPAZ La Paz 95.97 140 P **P** **06 15 12.8 -0.5**
comp=Z,3.0nm,1.0s,mb4.7,baz=190,slow=3.1,SNR=5.3
LPAZ LR LR 06 51 41.9
comp=Z,784nm,18.8s,MS5.2,baz=158,slow=31
LPAZ La Paz 95.97 140 *e*P **P** **06 15 13.1 -0.2**
LPAZ pmax pmax
comp=Z,9.0nm,1.2s
LPAZ MLR MLR
comp=Z,1µm,22.0s
WHN Wuhan 96.75 326 P **P** **06 15 23.5 +7.2**
WHN LR LR
comp=N,3µm,13.6s,MS6.1
WHN LR LR
comp=E,2µm,14.1s,MS6.1
WHN LR LR
comp=Z,10µm,20.2s
NNA Nana 96.97 130 PFAKE 06 15 30.0 +12
NNA LR LR
comp=Z,2µm,19.0s,MS5.6
NJ2 Nanjing 97.04 331 *e*P **P** **06 15 19.8 +2.2**
NJ2 pP pP 06 15 25.0 +4.1
NJ2 sP sP 06 15 28.4 +6.3
NJ2 SKS 06 25 55.0
NJ2 S S 06 26 32.5 -7.4
NJ2 sS sS 06 26 45.5 0.0
NJ2 SS SS 06 33 17.0 -0.4
NJ2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.3
NJ2 pmax pmax
comp=Z,160nm,6.0s
NJ2 LR LR
comp=N,7µm,20.6s,MS6.2
NJ2 LR LR
comp=E,3µm,19.7s,MS6.2
NJ2 LR LR
comp=Z,10µm,20.2s,MS6.3
ENH Enshi 97.88 322 PFAKE 06 15 30.0 +8.6
ENH LR LR
comp=Z,4µm,20.0s,MS5.9
MAJO Matsushiro 98.05 347 PFAKE 06 15 30.0 +8.0
MAJO LR LR
comp=Z,4µm,20.0s,MS5.9
CD2 Chengdu 100.26 318 P Pdif 06 15 35.9 +3.2
CD2 pP 06 15 40.7
CD2 sP 06 15 42.9
CD2 PP PP 06 19 44.3 +5.8
CD2 SKS 06 26 12.9
CD2 S Sdif 06 27 07.0 -1.4
CD2 sS 06 27 15.2
CD2 SS SS 06 34 05.2 +2.6
CD2 pmax pmax
comp=Z,7.0nm,0.5s
CD2 pmax pmax
comp=Z,190nm,8.8s
CD2 LR LR
comp=N,6µm,20.6s,MS6.3
CD2 LR LR
comp=E,10µm,25.5s,MS6.3
CD2 LR LR
comp=Z,6µm,27.0s,MS6.0
KSRS Korea Array 100.39 339 P Pdif 06 15 32.4 -0.9
comp=Z,0.2nm,0.3s,baz=135,slow=4.1,SNR=2.6
KSRS PP PP 06 19 34.2 -5.2
comp=Z,1.2nm,0.9s,baz=170,slow=9.4,SNR=4.2
INCN Inchon 100.64 338 PFAKE 06 15 50.0 +16
INCN LR LR
comp=Z,7µm,21.0s,MS6.1
SHEL Horse Pasture 101.58 200 PFAKE 06 15 50.0 +11
SHEL LR LR
comp=Z,4µm,19.0s,MS6.0
KMBO Kilima Mbogo 101.62 246 PFAKE 06 15 50.0 +11
KMBO LR LR
comp=Z,1µm,19.0s,MS5.4
PAYG Puerto Ayora 101.65 113 PFAKE 06 15 50.0 +11
PAYG LR LR
comp=Z,2µm,21.0s,MS5.6
DL2 Dalian 103.00 335 *e*P Pdif 06 15 44.1 -0.8
DL2 S Sdif 06 27 20.2 -11
DL2 LR LR
comp=N,2µm,21.2s,MS5.8
DL2 LR LR
comp=E,2µm,22.7s,MS5.8
DL2 LR LR
comp=Z,4µm,26.8s,MS5.8
ERM Erimo 103.04 352 PFAKE 06 16 00.0 +15
ERM LR LR
comp=Z,9µm,21.0s,MS6.3
LSA Lhasa 103.68 307 PFAKE 06 16 00.0 +12
LSA LR LR
comp=Z,3µm,20.0s,MS5.8
MBAR Mbarara 104.92 240 PFAKE 06 20 20.0 +12
MBAR LR LR
comp=Z,892nm,22.0s,MS5.3
BJT Baijiatuau 105.28 331 PFAKE 06 16 10.0 +15
BJT LR LR
comp=Z,6µm,20.0s,MS6.1
CN2 Changchun 106.99 339 Pdif Pdif 06 16 07.3 +4.7
CN2 PP PP 06 20 36.8 +8.1
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,4µm,22.0s,MS6.0
CN2 LR LR
comp=E,3µm,22.0s,MS6.0
CN2 LR LR
comp=Z,3µm,23.0s,MS5.8
MDJ Mudanjiang 107.11 342 PFAKE 06 20 20.0 +8.8
MDJ LR LR
comp=Z,6µm,21.0s,MS6.1
HHC Hu-ho-hao-te 107.21 328 *e*Pdif Pdif 06 16 03.4 -0.2
HHC PP PP 06 20 34.2 +3.9
HHC S Sdif 06 27 58.6 -7.8
HHC SS SS 06 35 33.7 -4.4
HHC AMB AMB
comp=Z,280nm,8.0s
HHC LR LR
comp=N,2µm,18.5s,MS6.0
HHC LR LR
comp=E,3µm,19.6s,MS6.0
HHC LR LR
comp=Z,4µm,18.8s,MS6.0
OTAV Otavalo 107.53 124 PFAKE 06 20 30.0 +17
OTAV LR LR
comp=Z,522nm,20.0s,MS5.1
YSS Yuzh-Sakhalins 107.99 352 PFAKE 06 20 30.0 +17
YSS LR LR
comp=Z,2µm,21.0s,MS5.7
GTA Gaotai 109.32 318 PKP PKiKP 06 20 22.7 +7.2
GTA PP PP 06 20 56.5 +11
GTA PKS 06 23 58.2
GTA AMB AMB
comp=Z,240nm,11.0s
GTA LR LR
comp=N,4µm,22.9s,MS6.0
GTA LR LR
comp=E,3µm,22.6s,MS6.0
GTA LR LR
comp=Z,4µm,26.5s,MS5.9
RCBR Riachuelo 112.92 169 PFAKE 06 20 40.0 +17
RCBR LR LR
comp=Z,1µm,19.0s,MS5.5
HIA Hailar 113.32 336 PFAKE 06 20 40.0 +17
HIA LR LR
comp=Z,7µm,20.0s,MS6.2
PET Petropavlovsk 113.75 3 PFAKE 06 20 40.0 +17
PET LR LR
comp=Z,6µm,20.0s,MS6.2
JTS JuntasAbangare 113.76 113 PFAKE 06 20 40.0 +15
JTS LR LR
comp=Z,1µm,19.0s,MS5.5
JTS JuntasAbangare 113.76 113 *i* PKiKP PKiKP 06 20 25.1 +0.3
NIL Nilore 114.56 295 PFAKE 06 20 40.0 +14
NIL LR LR
comp=Z,131nm,20.0s,MS4.5
ULN Ulaanbaatar 114.92 327 PFAKE 06 20 40.0 +14
ULN LR LR
comp=Z,6µm,19.0s,MS6.2
BCIP Isla Barro Col 115.00 119 PFAKE 06 20 40.0 +13
BCIP LR LR
comp=Z,757nm,21.0s,MS5.3
SONM Songino Array 115.06 327 PKP PKiKP 06 20 25.9 -0.2
comp=Z,0.2nm,0.4s,baz=159,slow=4.3,SNR=3.6
SONM PKKPbc PKKPbc 06 31 10.6 +10
comp=Z,0.2nm,0.3s,baz=356,slow=4.5,SNR=3.7
TGUH Tegucigalpa,Un 116.02 109 PFAKE 06 20 40.0 +11
TGUH LR LR
comp=Z,712nm,20.0s,MS5.3
WMQ Urumqi 117.41 312 PKP PKPdf 06 20 34.4 +3.6
WMQ PP PP 06 21 49.4 +6.2
WMQ PKS 06 24 09.8
WMQ SKS SKSdf 06 27 41.6 -0.7
WMQ SKKS SKKSac 06 28 37.9 -4.7
WMQ SS SS 06 37 50.9 -2.7
WMQ AMB AMB
comp=Z,260nm,7.8s
WMQ LR LR
comp=N,8µm,30.0s,MS6.3
WMQ LR LR
comp=E,6µm,32.0s,MS6.3
WMQ LR LR
comp=Z,7µm,28.2s,MS6.1
ZAK Zakamensk 118.23 326 *e*PKIKP PKPdf 06 20 34.6 +2.4
SDV Santo Domingo 118.50 128 PFAKE 06 20 50.0 +16
SDV LR LR
comp=Z,587nm,19.0s,MS5.2
PFO Pinyon Flat Ob 118.59 72 PFAKE 06 20 50.0 +17
PFO LR LR
comp=Z,5µm,20.0s,MS6.1
SAO San Andreas Ge 118.94 66 PFAKE 06 20 50.0 +16
SAO LR LR
comp=Z,3µm,20.0s,MS5.9
TLY Talaya 119.31 327 *e*PKPdf PKPdf 06 20 39.3 +5.1
TLY LR LR
comp=Z,6µm,22.0s,MS6.2
TLY Talaya 119.31 327 *i* PKIKP PKPdf 06 20 43.3 +9.1
TLY *e*PPP 06 24 35.0
TLY *e*SS SS 06 38 22.5 +4.5
TLY pmax pmax
comp=Z,4.0nm,0.6s
TLY MLR MLR
comp=Z,7µm,22.0s,MS6.3
MCCM Marconi Confer 119.46 64 PFAKE 06 20 50.0 +15
MCCM LR LR
comp=Z,3µm,22.0s,MS5.9
HOPS Hopland 120.08 63 PFAKE 06 20 50.0 +14
HOPS LR LR
comp=Z,5µm,22.0s,MS6.1
TUC Tucson 120.18 77 PFAKE 06 20 50.0 +13
TUC LR LR
comp=Z,2µm,20.0s,MS5.8
DAC Darwin (Calif) 120.28 69 PFAKE 06 20 50.0 +13
DAC LR LR
comp=Z,6µm,19.0s,MS6.2
CMB Columbia Colle 120.47 66 PFAKE 06 20 50.0 +13
CMB LR LR
comp=Z,3µm,20.0s,MS5.9
TEIG Tepich 120.91 105 PFAKE 06 20 50.0 +12
TEIG LR LR
comp=Z,818nm,20.0s,MS5.4
TXAR Lajitas Array 121.14 85 PKP PKPdf 06 20 38.0 -0.5
comp=Z,0.4nm,0.9s,baz=104,slow=5.3,SNR=3.6
UCH Uchtor 121.21 301 *e*PKPdf PKPdf 06 20 42.4 +4.2
UCH LR LR
comp=Z,2µm,22.0s,MS5.8
TKM2 Tokmak 2 121.33 303 PFAKE 06 20 50.0 +12
TKM2 LR LR
comp=Z,2µm,20.0s,MS5.8
AML Almayashu 121.47 301 *e*PKPdf PKPdf 06 20 38.3 -0.4
AML LR LR
comp=Z,3µm,21.0s,MS5.9
AAK Ala-Archa 121.55 302 PKP PKPdf 06 20 38.3 -0.6
AAK LR LR
comp=Z,3µm,22.0s,MS5.9
AAK Ala-Archa 121.55 302 PKP PKPdf 06 20 38.3 -0.6
comp=Z,1.8nm,0.3s,baz=253,slow=11,SNR=2.3
AAK Ala-Archa 121.55 302 *c i* PKIKP PKPdf 06 20 38.8 0.0
WDC Whiskeytown Da 121.62 63 PFAKE 06 20 50.0 +11
WDC LR LR
comp=Z,3µm,21.0s,MS6.0
NVAR Mina Array Bea 121.72 67 PKP PKPdf 06 20 39.1 -0.2
comp=Z,0.9nm,0.7s,baz=169,slow=0.9,SNR=3.6
EKS2 Erkin-Say 121.87 301 PFAKE 06 20 50.0 +11
EKS2 LR LR
comp=Z,3µm,21.0s,MS5.9
MK31 Makanchi Array 121.94 310 *e*PKPdf PKPdf 06 20 40.8 +1.4
MKAR Makanchi Array 121.94 310 PKP PKPdf 06 20 37.3 -2.1
comp=Z,0.5nm,0.8s,baz=322,slow=23,SNR=6.8
MNTX Cornudas Mount 122.26 82 *e*PKPdf PKPdf 06 20 41.9 +1.3
MNTX LR LR
comp=Z,2µm,20.0s,MS5.8
KVTX Kingsville 122.47 91 PFAKE 06 21 00.0 +19
KVTX LR LR
comp=Z,2µm,19.0s,MS5.9
YBH Yreka Blue Hor 122.49 62 PFAKE 06 20 50.0 +9.3
YBH LR LR
comp=Z,3µm,19.0s,MS5.9
WUAZ Wupatki 122.53 75 PFAKE 06 21 00.0 +19
WUAZ LR LR
comp=Z,2µm,20.0s,MS5.8
HUMO Hull Mountain 123.10 61 *e*PKPdf PKPdf 06 20 44.2 +2.4
HUMO LR LR
comp=Z,3µm,22.0s,MS5.9
DBIC Dimbokro 123.49 206 PFAKE 06 21 00.0 +16
DBIC LR LR
comp=Z,1µm,22.0s,MS5.5
LAZ Ladron 123.63 79 *e*PKPdf PKPdf 06 20 48.5 +5.4
MOD Modoc 123.67 63 *e*PKPdf PKPdf 06 20 44.9 +2.0
MOD LR LR
comp=Z,3µm,21.0s,MS5.9
BMN Battle Mountai 123.84 67 PFAKE 06 21 00.0 +17
BMN LR LR
comp=Z,3µm,19.0s,MS6.0
JCT Junction City 123.97 88 PFAKE 06 21 00.0 +16
JCT LR LR
comp=Z,2µm,22.0s,MS5.8
MTDJ Mount Denham 124.06 116 PFAKE 06 21 00.0 +16
MTDJ LR LR
comp=Z,955nm,19.0s,MS5.5
YAK Yakutsk 124.11 346 PFAKE 06 21 00.0 +17
YAK LR LR
comp=Z,5µm,22.0s,MS6.2
ANMO Albuquerque 124.40 79 PFAKE 06 21 00.0 +15
ANMO LR LR
comp=Z,3µm,21.0s,MS6.0
COR Corvallis 124.56 59 PFAKE 06 21 00.0 +15
COR LR LR
comp=Z,4µm,20.0s,MS6.0
MVU Marysvale 124.56 72 PFAKE 06 21 00.0 +15
MVU LR LR
comp=Z,3µm,20.0s,MS6.0
MSU Marysvale 124.59 72 *e*PKPdf PKPdf 06 20 49.1 +4.3
GRGR Grenville 124.75 136 PFAKE 06 21 00.0 +14
GRGR LR LR
comp=Z,721nm,20.0s,MS5.3
WVOR Wild Horse Val 124.83 64 *e*PKPdf PKPdf 06 20 47.3 +2.2
WVOR LR LR
comp=Z,3µm,21.0s,MS5.9
MVCO Mesa Verde 125.26 76 PFAKE 06 21 00.0 +14
MVCO LR LR
comp=Z,3µm,22.0s,MS5.9
HKT Hockley 125.47 91 PFAKE 06 21 00.0 +13
HKT LR LR
comp=Z,2µm,19.0s,MS5.9
KDAK Kodiak Island 125.61 32 PFAKE 06 21 00.0 +14
KDAK LR LR
comp=Z,8µm,22.0s,MS6.3
DUG Dugway 125.64 70 PFAKE 06 21 00.0 +13
DUG LR LR
comp=Z,5µm,21.0s,MS6.2
PV01 Paradox Valley 125.97 75 *e*PKPdf PKPdf 06 20 50.4 +3.0
BBGH Gun Hill 126.39 138 PFAKE 06 21 00.0 +11
BBGH LR LR
comp=Z,2µm,20.0s,MS5.7
KURK Kurchatov 126.55 310 PKP PKPdf 06 20 46.7 -1.4
KURK LR LR
comp=Z,3µm,20.0s,MS5.9
NLWA Neilton Lookou 126.58 57 PFAKE 06 21 00.0 +12
NLWA LR LR
comp=Z,3µm,22.0s,MS6.0
GTBY Guantanamo Bay 126.62 118 PFAKE 06 21 00.0 +11
GTBY LR LR
comp=Z,703nm,19.0s,MS5.4
AMTX Amarillo 126.65 83 PFAKE 06 21 00.0 +11
AMTX LR LR
comp=Z,2µm,20.0s,MS5.9
ZALV Zalesovo Beam 126.98 316 PKP PKPdf 06 20 47.7 -1.1
comp=Z,0.3nm,0.3s,baz=101,slow=4.6,SNR=2.0
ZALV PP PP 06 22 51.4 +3.3
comp=Z,0.3nm,0.3s,baz=140,slow=3.2,SNR=2.2
SDCO Great Sand Dun 127.11 78 *e*PKPdf PKPdf 06 20 52.0 +2.4
SDCO LR LR
comp=Z,2µm,19.0s,MS5.8
BMO Blue Mountains 127.34 63 PFAKE 06 21 00.0 +10
BMO LR LR
comp=Z,3µm,20.0s,MS5.9
FDF Fort de France 127.34 136 PFAKE 06 21 10.0 +19
FDF LR LR
comp=Z,586nm,20.0s,MS5.3
HWUT Hardware Ranch 127.34 70 *e*PKPdf PKPdf 06 20 53.6 +3.6
HWUT LR LR
comp=Z,5µm,20.0s,MS6.2
SDDR Presa de Saban 127.39 122 PFAKE 06 21 10.0 +19
SDDR LR LR
comp=Z,766nm,20.0s,MS5.4
NATX Nacogdoches 127.52 91 PFAKE 06 21 00.0 +9.3
NATX LR LR
comp=Z,2µm,19.0s,MS5.8
SMCO Snowmass 127.55 75 *e*PKPdf PKPdf 06 20 53.8 +3.3
HAWA Hanford 127.60 61 PFAKE 06 21 00.0 +10
HAWA LR LR
comp=Z,3µm,21.0s,MS6.0
HLID Hailey 127.60 67 PFAKE 06 21 00.0 +10
HLID LR LR
comp=Z,2µm,21.0s,MS5.8
WMOK Wichita Mounta 127.94 85 PFAKE 06 21 10.0 +19
WMOK LR LR
comp=Z,3µm,19.0s,MS5.9
AHID Auburn Hatcher 128.47 70 PFAKE 06 21 10.0 +18
AHID LR LR
comp=Z,4µm,19.0s,MS6.1
SJG San Juan 128.64 128 PFAKE 06 21 10.0 +17
SJG LR LR
comp=Z,705nm,22.0s,MS5.3
ISCO Idaho Springs 128.69 76 *e*PKPdf PKPdf 06 20 55.2 +2.6
ISCO LR LR
comp=Z,3µm,22.0s,MS5.9
REDW Red Top Meadow 129.05 69 *e*PKPdf PKPdf 06 20 53.0 -0.1
TPAW Teton Pass 129.10 69 *e*PKPdf PKPdf 06 20 56.2 +2.9
BW06 Boulder Array 129.17 71 PFAKE 06 21 10.0 +17
BW06 LR LR
comp=Z,4µm,20.0s,MS6.1
TTA Tatalina 129.31 27 *e*PKPdf PKPdf 06 20 56.1 +3.1
IMW Indian Meadow 129.42 69 *e*PKPdf PKPdf 06 20 56.9 +3.0
GRTK Grand Turk 129.71 121 PFAKE 06 21 10.0 +15
GRTK LR LR
comp=Z,812nm,21.0s,MS5.4
DLMT Dillon 129.81 66 *e*PKPdf PKPdf 06 20 57.7 +3.1
ANWB Willy Bob 129.84 134 PFAKE 06 21 10.0 +15
ANWB LR LR
comp=Z,516nm,20.0s,MS5.2
VBMS Vicksburg 129.91 95 PFAKE 06 21 10.0 +15
VBMS LR LR
comp=Z,1µm,21.0s,MS5.6
NEW Newport 130.08 61 PFAKE 06 21 10.0 +15
NEW LR LR
comp=Z,4µm,21.0s,MS6.1
LKWY Lake 130.19 69 PFAKE 06 21 10.0 +15
LKWY LR LR
comp=Z,5µm,19.0s,MS6.3
LRM Limekiln Ridge 130.23 66 *e*PKPdf PKPdf 06 20 59.1 +3.8
MIAR Mount Ida 130.31 90 PFAKE 06 21 10.0 +14
MIAR LR LR
comp=Z,2µm,21.0s,MS5.7
MSO Missoula 130.35 64 *e*PKPdf PKPdf 06 20 58.3 +2.8
MSO LR LR
comp=Z,2µm,20.0s,MS5.9
BOZ Bozeman (W) 130.47 67 PFAKE 06 21 10.0 +14
BOZ LR LR
comp=Z,3µm,19.0s,MS6.0
BRAL Brewton 130.60 99 PFAKE 06 21 10.0 +13
BRAL LR LR
comp=Z,1µm,22.0s,MS5.6
CBKS Cedar Bluff 130.72 82 PFAKE 06 21 10.0 +14
CBKS LR LR
comp=Z,2µm,20.0s,MS5.9
CHMT Chamberlain Mo 130.72 65 *e*PKPdf PKPdf 06 20 58.8 +2.5
DWPF Disney 130.85 106 PFAKE 06 21 10.0 +13
DWPF LR LR
comp=Z,974nm,20.0s,MS5.5
TRF Thorofare Moun 131.08 30 *e*PKPdf PKPdf 06 20 58.8 +2.4
RLMT Red Lodge 131.13 69 PFAKE 06 21 10.0 +13
RLMT LR LR
comp=Z,3µm,20.0s,MS6.0
OGNE Ogallala 131.28 78 PFAKE 06 21 10.0 +13
OGNE LR LR
comp=Z,3µm,20.0s,MS5.9
BPAW Bear Paw Mtn. 131.47 29 *e*PKPdf PKPdf 06 20 59.1 +2.0
BVAR Borovoye Array 131.51 307 PKP PKPdf 06 20 56.6 -0.9
comp=Z,0.4nm,0.4s,baz=142,slow=7.3,SNR=2.9
BRVK Borovoye 131.58 307 PFAKE 06 21 10.0 +12
BRVK LR LR
comp=Z,3µm,20.0s,MS6.0
MCK McKinley 131.65 30 *e*PKPdf PKPdf 06 21 00.6 +3.1
LRAL Lakeview Retre 132.29 97 PFAKE 06 21 10.0 +10
LRAL LR LR
comp=Z,1µm,20.0s,MS5.7
KSU1 Kansas State U 132.45 84 *e*PKPdf PKPdf 06 21 05.4 +5.6
KSU1 LR LR
comp=Z,3µm,20.0s,MS6.0
RSSD Black Hills 132.78 74 *e*PKPdf PKPdf 06 21 02.7 +2.5
RSSD LR LR
comp=Z,3µm,20.0s,MS6.0
COLA College 132.86 30 PFAKE 06 21 10.0 +10
COLA LR LR
comp=Z,8µm,21.0s,MS6.4
ILAR Eielson Array 133.01 30 PKP PKPdf 06 20 59.6 -0.4
comp=Z,2.0nm,1.1s,baz=235,slow=5.5,SNR=5.1
ILAR SKPbc SKPbc 06 24 27.8 +0.5
comp=Z,0.5nm,0.9s,baz=240,slow=3.0,SNR=2.6
EGMT Eagleton 133.11 66 PFAKE 06 21 10.0 +9.3
EGMT LR LR
comp=Z,3µm,20.0s,MS6.0
GNI Garni 133.12 277 PFAKE 06 21 20.0 +19
GNI LR LR
comp=Z,3µm,22.0s,MS6.0
TIXI Tiksi 133.51 349 *e*PKPdf PKPdf 06 21 03.5 +2.7
TIXI LR LR
comp=Z,5µm,21.0s,MS6.2
TIXI Tiksi 133.51 349 *i* PKIKP PKPdf 06 21 02.6 +1.9
TIXI *e* 06 23 32.4
TIXI pmax pmax
comp=Z,6.0nm,0.9s
LAO LASA Array 133.70 70 PFAKE 06 21 20.0 +18
LAO LR LR
comp=Z,3µm,19.0s,MS6.0
MAK Makhachkala 133.95 282 *e*PKIKP PKPdf 06 21 07.8 +5.4
MAK *e*PPP 06 26 32.3
MAK *e* 06 28 19.3
MAK pmax pmax
comp=Z,209nm,1.1s
GOGA Godfrey 134.29 100 PFAKE 06 21 20.0 +17
GOGA LR LR
comp=Z,2µm,20.0s,MS5.8
WVT Waverly 134.38 94 PFAKE 06 21 20.0 +17
WVT LR LR
comp=Z,1µm,20.0s,MS5.7
EGAK Eagle 134.48 33 PFAKE 06 21 20.0 +17
EGAK LR LR
comp=Z,5µm,22.0s,MS6.2
AKTK Aktyubinsk 134.70 297 PKP PKPdf 06 21 03.6 0.0
AKTO Aktyubinsk 134.70 297 PKP PKPdf 06 21 03.6 0.0
comp=Z,0.7nm,0.3s,baz=146,slow=3.6,SNR=3.1
MALT Malatya 134.75 270 PFAKE 06 21 20.0 +16

MALT LR LR
comp=Z,3µm,22.0s,MS6.0
ZEI Tsey 135.53 279 *e*PKIKP PKPdf 06 21 20.5 +15
ZEI pmax pmax
comp=Z,21nm,1.2s
NHSC New Hope 135.61 104 PFAKE 06 21 20.0 +14
NHSC LR LR
comp=Z,2µm,20.0s,MS5.8
TKL Tuckaleechee C 135.97 98 PKP PKPdf 06 21 06.7 +0.2
comp=Z,3.5nm,1.0s,baz=174,slow=10,SNR=2.6
TAM Tamanrasset 135.99 224 PFAKE 06 21 20.0 +13
TAM LR LR
comp=Z,1µm,19.0s,MS5.6
ECSD EROS Data Cent 136.00 80 PFAKE 06 21 20.0 +14
ECSD LR LR
comp=Z,2µm,22.0s,MS5.9
SCIA State Center 136.26 84 PFAKE 06 21 20.0 +13
SCIA LR LR
comp=Z,3µm,19.0s,MS6.1
WCI Wyandotte Cave 136.79 93 *e*PKPdf PKPdf 06 21 09.9 +2.0
WCI LR LR
comp=Z,2µm,20.0s,MS5.9
KIV Kislovodsk 137.00 279 PFAKE 06 21 20.0 +12
KIV LR LR
comp=Z,2µm,20.0s,MS5.8
KIV Kislovodsk 137.00 279 *e*PKIKP PKPdf 06 21 11.3 +3.2
KIV *i* 06 24 04.4
KIV *e*PS PS 06 34 11.6 -6.0
KIV pmax pmax
comp=Z,7.0nm,1.3s
KIV MLR MLR
comp=Z,2µm,21.0s,MS5.8
HDIL Hopedale 137.14 89 PFAKE 06 21 20.0 +12
HDIL LR LR
comp=Z,3µm,21.0s,MS6.0
GOF Gofitskoye 137.65 281 *e*PKHKP PKPpre 06 20 51.6
SOC Sochi 138.16 276 *i* PKIKP PKPdf 06 21 15.1 +4.8
SOC *e*SS SS 06 42 11.0 -0.3
BR131 Keskin Array S 138.18 267 *e*PKPdf PKPdf 06 21 14.1 +3.6
BR131 LR LR
comp=Z,1µm,21.0s,MS5.6
BRTR Keskin Array B 138.18 267 PKP PKPdf 06 21 10.1 -0.4
comp=Z,0.4nm,0.5s,baz=132,slow=2.1,SNR=2.7
CNNC Cliffs of the 138.44 104 PFAKE 06 21 30.0 +19
CNNC LR LR
comp=Z,2µm,20.0s,MS5.8
JFWS Jewell Farm 138.46 86 PFAKE 06 21 30.0 +19
JFWS LR LR
comp=Z,4µm,21.0s,MS6.2
ARU Arti 138.71 303 *e*PKP PKPdf 06 21 10.2 -0.6
ARU LR LR
comp=Z,4µm,21.0s,MS6.1
ARU Arti 138.71 303 *i* PKIKP PKPdf 06 21 10.3 -0.5
ARU MLR MLR
comp=Z,4µm,22.0s,MS6.1
BLA Blacksburg 138.82 100 PFAKE 06 21 30.0 +18
BLA LR LR
comp=Z,2µm,22.0s,MS5.9
AGMN Agassiz Nation 139.69 76 PFAKE 06 21 30.0 +17
AGMN LR LR
comp=Z,2µm,21.0s,MS5.9
ANN Anapa 140.16 276 *i* PKIKP PKPdf 06 21 20.9 +7.0
ANN *e*SS SS 06 42 43.4 +8.5
ANN *e*SSS 06 47 55.4
ANN pmax pmax
comp=Z,75nm,1.7s
MCWV Mont Chateau 141.03 98 PFAKE 06 21 30.0 +14
MCWV LR LR
comp=Z,4µm,21.0s,MS6.1
CBN Corbin 141.07 102 PFAKE 06 21 30.0 +14
CBN LR LR
comp=Z,2µm,20.0s,MS6.0
YKA Yellowknife Ar 141.20 48 PKP PKPdf 06 21 13.5 -1.7
comp=Z,1.7nm,0.9s,baz=226,slow=2.4,SNR=6.1
AAM Ann Arbor 141.21 92 PFAKE 06 21 30.0 +14
AAM LR LR
comp=Z,3µm,21.0s,MS6.0
FFC Flin Flon 141.29 64 PFAKE 06 21 30.0 +14
FFC LR LR
comp=Z,3µm,20.0s,MS6.1
COWI Conover 141.34 83 *e*PKPdf PKPdf 06 21 19.9 +3.9
COWI LR LR
comp=Z,3µm,22.0s,MS6.0
EYMN Ely 141.52 79 PFAKE 06 21 30.0 +14
EYMN LR LR
comp=Z,3µm,20.0s,MS6.0
SIM Simferopol' 141.88 273 PKHKP PKPpre 06 21 05.7
SIM pmax pmax
comp=Z,60nm,7.9s
BBSR BB Station 141.95 121 PFAKE 06 21 30.0 +12
BBSR LR LR
comp=Z,1µm,22.0s,MS5.7
VRHR Novokhopersk 142.59 286 *e*PKIKP PKPdf 06 21 18.9 +0.9
VRHR pmax pmax
comp=N,4.0nm,0.6s
VRHR pmax pmax
comp=E,9.0nm,0.6s
VRHR pmax pmax
comp=Z,6.0nm,0.6s
ERPA Erie 142.85 95 PFAKE 06 21 30.0 +11
ERPA LR LR
comp=Z,3µm,22.0s,MS6.0
KAVA Kavala 143.58 260 P PKiKP 06 21 25.3 +1.8
KDZ Kurdzhali 143.65 262 *e*P PKPdf 06 21 19.5 -0.7
THL Klokotos Trika 143.66 256 P PKPdf 06 21 15.1 -5.2
VSR Storozhevoye 143.82 285 *e*PKHKP PKPpre 06 21 16.7
VSR pmax pmax
comp=E,9.0nm,1.3s
VSR pmax pmax
comp=Z,10.0nm,1.3s
VSR pmax pmax
comp=N,4.0nm,0.4s
LIT Litokhoron 143.85 257 P PKPdf 06 21 16.9 -3.7
HORT Hortiatis 143.95 258 P PKPdf 06 21 15.3 -5.5
RZN Rozhen 144.02 261 *e*P PKPdf 06 21 22.0 +1.1
WDD Wield Dalam 144.07 244 PFAKE 06 21 40.0 +19
WDD LR LR
comp=Z,2µm,21.0s,MS5.8
SRS Serrai 144.12 259 P PKPdf 06 21 17.1 -4.0
PLD Plovdiv 144.34 262 P PKPdf 06 21 22.5 +1.1
MMB Musomiste 144.42 260 *e*P PKPdf 06 21 18.0 -3.6
KNT Kendrikon 144.49 259 P PKPdf 06 21 18.9 -2.8
GRG Griva 144.56 258 P PKPdf 06 21 20.2 -1.6
SZH Strazhica 144.62 264 *e*P PKPdf 06 21 21.0 -0.9
VAY Valandovo 144.76 259 P PKiKP 06 21 27.4 +1.5
VAY Valandovo 144.76 259 *e*PKP PKPdf 06 21 19.6 -2.5
NEST Nestorio 144.78 256 P PKPdf 06 21 21.7 -0.5
KEK Kerkira 144.82 254 P PKPdf 06 21 14.1 -8.2
BINY Binghamton 144.85 99 *e*PKPdf PKPdf 06 21 21.3 -1.0
BINY LR LR
comp=Z,3µm,22.0s,MS6.0
FNA Florina 144.92 257 P PKPdf 06 21 22.1 -0.4
KKB Krupnik 144.94 260 *e*P PKPdf 06 21 22.7 +0.2
PGB Panagyurishte 144.94 262 *e*P PKPdf 06 21 20.5 -1.9
CFR Carcaliu 144.96 268 ⇑PKIKP PKiKP 06 21 32.6 +6.4
CFR Carcaliu 144.96 268 ⇑*i*P PKiKP 06 21 32.6 +6.4
KRUS Krusevo 145.43 257 *e*PKP PKPdf 06 21 23.4 +0.1
VTS Vitosha 145.43 261 ⇓P PKPab 06 21 27.2 +3.7
VTS Vitosha 145.43 261 P PKPdf 06 21 23.3 0.0
VTS Vitosha 145.43 261 ⇓*i*P PKPab 06 21 27.2 +3.7
VTS Vitosha 145.43 261 *e*P PKPab 06 21 26.4 +2.9
CEL Celeste 145.44 248 *e*PKPdf PKiKP 06 21 29.7 +2.3
CEL LR LR
comp=Z,3µm,22.0s,MS6.0
MPEP Malo Peshtene 145.75 262 *e*P PKiKP 06 21 28.6 +0.7
TIP Timpagrande 145.80 250 PFAKE 06 21 40.0 +16
TIP LR LR
comp=Z,2µm,22.0s,MS5.9
KIS Kishinev 145.93 271 *e*PKP PKPab 06 21 27.0 +1.8
KIS Kishinev 145.93 271 *e*PP PP 06 24 45.0 -2.0
TIR Tirane 146.07 256 *e*PKPdf PKPab 06 21 28.8 +2.9
TIR LR LR
comp=Z,3µm,22.0s,MS6.0
TIR Tirane 146.07 256 P PKiKP 06 21 30.1 +1.5
VRI Vrincioaia 146.14 268 ⇑P PKPdf 06 21 24.6 +0.2
VRI Vrincioaia 146.14 268 ⇑*i*P PKPdf 06 21 24.5 +0.1
KEST Kesra 146.17 238 *e*PKPdf PKPdf 06 21 29.5 +4.7
KEST Kesra 146.17 238 PKPbc PKPbc 06 21 28.2 +2.4
comp=Z,5.4nm,1.0s,baz=311,slow=0.6,SNR=5.2
PLOR Plostina 146.17 268 ⇓PKHKP PKPdf 06 21 24.4 0.0
PLOR Plostina 146.17 268 ⇓*i*P PKPdf 06 21 24.4 0.0
MLR Muntele Rosu 146.25 267 ⇓P PKPdf 06 21 24.2 -0.4
MLR Muntele Rosu 146.25 267 ⇓*i*P PKPdf 06 21 24.2 -0.4
VOIR 146.65 266 ⇓P PKiKP 06 21 30.4 +0.7
VOIR 146.65 266 ⇓*i*P PKiKP 06 21 30.4 +0.7
CUC Castrocucco 146.88 250 PFAKE 06 21 40.0 +14
CUC LR LR
comp=Z,2µm,22.0s,MS5.8
NCB Newcomb 147.03 99 *e*PKPdf PKPbc 06 21 28.7 +0.7
NCB LR LR
comp=Z,2µm,22.0s,MS5.9
FCC Fort Churchill 147.19 63 *e*PKPdf PKPbc 06 21 28.2 +0.2
LONY Lake Ozonia 147.34 98 *e*PKPdf PKPbc 06 21 30.9 +2.0
LONY LR LR
comp=Z,3µm,22.0s,MS6.0
MOS Moscow 147.38 290 *e*PKP2 PKPab 06 21 39.6 +9.0
MOS pmax pmax
comp=Z,100nm,1.4s
MOS pmax pmax
comp=Z,56nm,0.7s
OBN Obninsk 147.49 288 *e*PKPdf PKPdf 06 21 27.9 +1.6
OBN LR LR
comp=Z,3µm,20.0s,MS6.0
OBN Obninsk 147.49 288 ⇑*i*PKIKP PKPdf 06 21 28.2 +1.9
OBN *i* 06 25 05.1
OBN *i* SS SS 06 44 03.2 +4.1
OBN pmax pmax
comp=Z,18nm,1.1s
DIVS Divibare 148.11 259 P PKPdf 06 21 29.3 +1.6
BURAR Bucovina Array 148.12 269 ⇓P PKPbc 06 21 31.1 +0.3
BURAR Bucovina Array 148.12 269 ⇓*i*P PKPbc 06 21 31.1 +0.2
BUR08 Bucovina Ar. S 148.14 269 *e*PKPdf PKPbc 06 21 31.2 +0.2
AKASG Malin Array Be 148.24 277 PKPbc PKPbc 06 21 29.9 -1.2
comp=Z,1.6nm,0.7s,baz=97,slow=2.1,SNR=7.3
AKBB Malin Array Si 148.24 277 *e*PKPdf PKPdf 06 21 29.9 +2.2
KIEV Kiev 148.24 277 *e*PKPdf PKPdf 06 21 29.5 +1.8
KIEV LR LR
comp=Z,3µm,22.0s,MS6.1
LBNH Lisbon 148.34 101 PFAKE 06 21 40.0 +12
LBNH LR LR
comp=Z,3µm,20.0s,MS6.1
BZS Buzias 148.44 263 ⇓P PKPbc 06 21 32.6 +0.8
BZS Buzias 148.44 263 ⇓*i*P PKPbc 06 21 32.6 +0.8
DRGR 148.76 265 ⇓P PKPbc 06 21 31.5 -1.0
DRGR 148.76 265 ⇓*i*P PKPbc 06 21 31.5 -1.1
KLMR Klimovskoe 149.31 299 *e*PKIKP PKPbc 06 21 32.5 -1.0
KLMR pmax pmax
comp=Z,176nm,1.6s
AQU L'Aquila 149.87 250 PFAKE 06 21 40.0 +9.4
AQU LR LR
comp=Z,4µm,22.0s,MS6.1
LVV L'vov 150.19 271 *e*PKIKP PKPdf 06 21 32.6 +1.7
UZH Uzhgorod 150.24 268 *i* PKIKP PKPbc 06 21 36.0 -0.1
UZH *i* 06 21 46.0
UZH *e* 06 25 17.4
UZH *e*PPP 06 28 37.1
PKSM Moragy 150.31 261 ⇓P PKPbc 06 21 35.4 -1.0
PKSM Moragy 150.31 261 ⇓*i*P PKPbc 06 21 35.4 -1.0
PKME Peaks-Kenny Pk 150.35 102 PFAKE 06 21 50.0 +19
PKME LR LR
comp=Z,3µm,21.0s,MS6.0
KOLS Kolonicke sedl 150.45 268 *e*PKIKP PKPab 06 21 48.1 +4.8
KOLS Kolonicke sedl 150.45 268 *e*PKP PKPab 06 21 48.1 +4.8
KWP Kalwaria Pacla 150.71 270 PFAKE 06 21 50.0 +18
KWP LR LR
comp=Z,5µm,22.0s,MS6.3
CRVS Cervenica-Dubn 150.83 267 *e*PKP PKPbc 06 21 41.3 +3.8
CRVS *e* 06 21 51.0
CRVS Cervenica-Dubn 150.83 267 *e*PKP PKPbc 06 21 41.3 +3.8
CRVS *e* 06 21 51.0
PSZ Piszkesteto 150.91 264 *e*PKPab PKPab 06 21 47.5 +2.3
PSZ LR LR
comp=Z,4µm,22.0s,MS6.1
PSZ Piszkesteto 150.91 264 ⇓*i*P PKPab 06 21 52.5 +7.3
PSZ Piszkesteto 150.91 264 *e*PKP PKPab 06 21 51.4 +6.2
KECS Kecovo 151.01 266 *e*PKP PKPbc 06 21 39.1 +1.1
KECS *e* 06 21 48.1
KECS Kecovo 151.01 266 *e*PKP PKPbc 06 21 39.1 +1.1
KECS *e* 06 21 48.1
MICGM Minsk 151.22 282 *e* PKPdf 06 21 35.0 +2.7
MNK Minsk 151.24 281 *e*PKIKP PKPdf 06 21 35.0 +2.7
STHS Stebnicka Huta 151.28 268 *e*PKIKP PKPab 06 21 45.1 -1.6
STHS *e* 06 21 50.4
STHS Stebnicka Huta 151.28 268 *e*PKP PKPab 06 21 45.1 -1.6
STHS *e* 06 21 50.4
BOJS Bojanci 151.41 256 *i* PKP PKPab 06 21 53.9 +6.5
BOJS *e* 06 22 02.7
VYHS Vyhne 151.82 264 *e*PKP PKPbc 06 21 43.6 +3.8
VYHS *e* 06 21 50.8
VYHS Vyhne 151.82 264 *e*PKP PKPbc 06 21 43.6 +3.8
VYHS *e* 06 21 50.8
NACGM Naroch 151.97 281 *e*PKP PKPdf 06 21 31.0 -2.4
JAVS Javornik 152.26 255 *i* PKP PKPab 06 21 52.2 +1.2
JAVS *i* 06 22 03.0
JAVS *i* 06 22 09.5
TRI Trieste 152.26 255 PFAKE 06 21 50.0 +16
TRI LR LR
comp=Z,4µm,22.0s,MS6.2
PERS Pernice 152.30 258 *i* PKP PKPab 06 21 52.4 +1.3
PERS *i* 06 22 01.5
SFS San Fernando 152.38 216 PFAKE 06 21 50.0 +15
SFS LR LR
comp=Z,7µm,21.0s,MS6.4
OJC Ojcow 152.51 268 *e*PKP PKPbc 06 21 46.3 +5.0
RES Resolute Bay 152.71 33 PKPab PKPab 06 21 52.0 0.0
comp=Z,19nm,1.1s,baz=295,slow=7.3,SNR=3.2
CONA Conrad Observa 152.87 260 ⇑*i*sPKiKP PKPab 06 21 53.6 +0.2
comp=Z,15nm,1.4s
OKC Ostrava-Krasne 153.06 266 *e*PKP2 PKPab 06 21 57.7 +3.5
OKC *e* 06 45 12.9
OKC MLR MLR
comp=Z,3µm,21.1s,MS6.1
OKC Ostrava-Krasne 153.06 266 *e*PKPAB PKPab 06 21 57.7 +3.5
OKC *e*SS SS 06 45 12.9 +12
OKC AMS AMS 07 43 00.0
comp=Z,3µm,21.1s
MORC Moravsky Berou 153.32 265 *e*PKPbc PKPbc 06 21 46.3 +3.1
MORC Moravsky Berou 153.32 265 ⇑PKIKP PKPbc 06 21 46.5 +3.4
MORC Moravsky Berou 153.32 265 ⇑*i*P PKPbc 06 21 46.5 +3.4
MOA Molln 153.58 259 ⇑*i*sPKiKP 06 21 54.4
comp=Z,22nm,1.2s
PBDV Barranco-do-Ve 153.59 214 *e*SS SS 06 45 35.8 +30
PBDV *e*LR LR 07 22 36.8
comp=Z,4µm,20.0s
PVAQ Vaqueiros 153.69 214 *e*PKPab PKPab 06 22 03.3 +6.2
PVAQ *e*LR LR 07 24 37.1
comp=Z,3µm,22.0s
PFVI Vila Bisbo 153.73 212 *e*SS SS 06 46 06.7 +59
PFVI *e*LR LR 07 18 15.9
comp=Z,3µm,22.0s
MORF Marmelete 153.85 213 *e*LR LR 07 26 08.0
comp=Z,3µm,20.0s
TREC Trest 153.99 262 *e*PKIKP PKPab 06 21 54.3 -3.8
TREC MLR MLR
comp=Z,4µm,21.7s,MS6.2
TREC Trest 153.99 262 *e*pPKP PKPab 06 21 54.3 -3.8
TREC AMS AMS 07 44 50.0
comp=Z,4µm,21.7s
PCVE Castro Verde 153.99 214 *e*SS SS 06 45 24.4 +14
PCVE *e*LR LR 07 24 47.3
comp=Z,4µm,22.0s
PBAR Barrancos 154.22 216 *e*SS SS 06 45 31.4 +19
PBAR *e*LR LR 07 23 18.2
comp=Z,3µm,22.0s
DPC Dobruska-Polom 154.29 265 *e*PKPAB PKPab 06 21 58.3 -1.1
DPC *e*SS SS 06 45 21.2 +6.8
DPC AMS AMS 07 44 30.0
comp=Z,4µm,20.9s
GEC2 GERESS Array S 154.54 260 *e*PKPab PKPab 06 22 05.9 +5.4
KSP Ksiaz 154.62 266 *e*PKIKP PKPab 06 21 57.0 -3.8
KSP *e* 06 22 04.7
KSP *e*SS SS 06 45 28.9 +11
ESDC Sonseca Array 154.64 223 PKPbc PKPbc 06 21 45.2 -1.1
comp=Z,0.1nm,0.3s,baz=224,slow=3.5,SNR=4.4
ESDC PKPab PKPab 06 21 59.7 -1.4
comp=Z,1.6nm,0.8s,baz=169,slow=1.8,SNR=7.9
ESLA Sonseca Array 154.64 223 PFAKE 06 21 50.0 +12
ESLA LR LR
comp=Z,16µm,21.0s,MS6.8
PAB San Pablo 154.65 222 PFAKE 06 21 50.0 +12
PAB LR LR
comp=Z,3µm,21.0s,MS6.2
KHC Kasperske Hory 154.80 260 *e*PKPab PKPab 06 22 05.5 +3.9
KHC Kasperske Hory 154.80 260 *e*PKP2 PKPab 06 22 05.4 +3.8
KHC *e* 06 45 19.5
KHC MLR MLR
comp=Z,6µm,20.5s,MS6.4
KHC Kasperske Hory 154.80 260 *e*PKPAB PKPab 06 22 05.4 +3.8
KHC *e*pPKP pPKPab 06 22 10.8 +5.9
KHC *e*x x 06 22 22.4
KHC *e*SS SS 06 45 19.5 -0.4
KHC AMS AMS 07 45 40.0
comp=Z,6µm,20.5s
EVO Evora 154.82 215 *e*PKIKP PKPdf 06 21 42.4 +4.3
PRU Pruhonice 154.91 262 *e*PKP2 PKPab 06 22 08.6 +6.6
PRU *e* 06 45 21.2
PRU MLR MLR
comp=Z,5µm,21.6s,MS6.3
PRU Pruhonice 154.91 262 *e*PKPAB PKPab 06 22 08.6 +6.6
PRU *e*SS SS 06 45 21.2 +0.1
PRU AMS AMS 07 45 10.0
comp=Z,5µm,21.6s
PESTR Estremoz 155.02 216 *e*SS SS 06 45 29.5 +7.9
PESTR *e*LR LR 07 19 42.9
comp=Z,3µm,20.0s
PRA Prague 155.02 262 PKP PKPab 06 22 09.0 +6.5
PRA AMS AMS 07 45 00.0
PVCC Panska Ves 155.25 263 AMS AMS 07 45 00.0
comp=Z,4µm,21.0s
LPL La Plagne 155.34 246 *e*PKIKP PKPdf 06 21 42.2 +3.6
comp=Z,45nm,1.4s
FINES FINESS Array B 155.43 294 PKPbc PKPdf 06 21 45.6 +7.4
comp=Z,3.6nm,0.9s,baz=139,slow=30,SNR=4.3
FINES PKPab PKPab 06 22 03.0 -0.9
comp=Z,6.4nm,0.9s,baz=90,slow=4.6,SNR=5.5
PMRV Marv??o 155.48 217 *e*PKPab PKPab 06 22 13.0 +8.3
PMRV *e*SS 06 46 59.0
PMRV *e*LR LR 07 20 34.0
comp=Z,3µm,20.0s
PMAFR Mafra 155.56 213 *e*SS SS 06 46 01.0 +34
PMAFR *e*LR LR 07 23 47.6
comp=Z,4µm,20.0s
BRG Berggiesshubel 155.78 263 PKP PKPab 06 22 05.0 -0.7
BRG *e* 06 22 17.1
comp=Z,19nm,1.4s
BRG PP PP 06 26 02.0 +19
BRG SS SS 06 45 38.0 +7.4
BRG
comp=N,3µm,23.7s
BRG
comp=E,2µm,25.0s
BRG
comp=Z,3µm,22.6s
BRG Berggiesshubel 155.78 263 PKP2 PKPab 06 22 05.0 -0.7
BRG SS SS 06 45 38.0 +7.4
BRG pmax pmax
comp=Z,12nm,1.4s
BRG MLR MLR
comp=N,2µm,23.7s,MS5.9
BRG MLR MLR
comp=E,919nm,25.0s,MS5.9
BRG MLR MLR
comp=Z,2µm,22.6s,MS5.8
NKC Novy Kostel 156.08 261 *e*PKP2 PKPab 06 22 07.8 +0.7
NKC MLR MLR
comp=Z,5µm,22.3s,MS6.3
NKC Novy Kostel 156.08 261 *e*PKPAB PKPab 06 22 07.8 +0.7
NKC *e*pPKP pPKPab 06 22 12.1 +1.7
NKC *e*x x 06 22 18.8
NKC *e*x x 06 45 54.4
NKC AMS AMS 07 43 00.0
comp=Z,5µm,22.3s
SSB Saint Sauveur 156.12 243 PFAKE 06 21 50.0 +10
SSB LR LR
comp=Z,3µm,20.0s,MS6.1
GRF Grafenberg Arr 156.31 258 *e*PKPab PKPab 06 22 13.4 +5.4
GRF *e*SS SS 06 45 46.7 +11
GRF *e*L 07 44 58.1
comp=Z,4µm,21.9s
GRF Grafenberg Arr 156.31 258 *e*PKP2 PKPab 06 22 13.4 +5.4
GRF *e*SS SS 06 45 46.7 +11
MTE Manteigas 156.42 217 *e*SS SS 06 46 13.6 +37
MTE *e*LR LR 07 28 39.0
comp=Z,3µm,24.0s
MTE Manteigas 156.42 217 PFAKE 06 21 50.0 +10
MTE LR LR
comp=Z,3µm,21.0s,MS6.1
CLL Collm 156.51 263 *e*PKP PKPdf 06 21 47.0 +7.1
CLL Collm 156.51 263 *e*pPKPdf PKPdf 06 21 47.0 +7.1
CLL *e*PKPdif PKPdf 06 22 00.0 +20
CLL *e* 06 22 07.0
CLL *i* PKPab PKPab 06 22 14.4 +5.5
comp=Z,40nm,1.9s
CLL *i* 06 22 22.1
CLL *e* 06 22 38.0
CLL *e*PP PP 06 25 53.0 +5.4
comp=Z,17nm,1.5s
CLL *e* 06 36 24.0
CLL *e*PPS 06 39 00.0
CLL *e*SS SS 06 45 45.0 +6.5
CLL *e*PSPS 06 47 12.0
CLL *e*SSS 06 51 30.0
CLL L 07 49 00.0
comp=Z,5µm,19.3s
BFO Black Forest 156.72 253 *e*PKPab PKPab 06 22 15.4 +5.6
BFO Black Forest 156.72 253 PFAKE 06 21 50.0 +10
BFO LR LR
comp=Z,3µm,22.0s,MS6.1
MOX Moxa 156.75 261 *e*PKP PKPab 06 22 02.2 -7.7
comp=Z,29nm,1.6s
MOX
comp=Z,4µm,23.0s
MOX Moxa 156.75 261 *e*PKPab PKPab 06 22 15.3 +5.4
MVO Moncorvo 156.97 219 *e*PKPab PKPab 06 22 15.4 +4.3
MVO *e*SS SS 06 45 55.5 +13
MVO *e*LR LR 07 29 41.0
comp=Z,4µm,20.0s
KEV Kevo 157.00 315 PFAKE 06 21 50.0 +10
KEV LR LR
comp=Z,4µm,22.0s,MS6.2
ECH Echery 157.18 251 PFAKE 06 21 50.0 +9.1
ECH LR LR
comp=Z,3µm,22.0s,MS6.1
ARCES ARCESS Array B 157.51 314 PKPab PKPab 06 22 09.4 -3.3
comp=Z,3.1nm,0.9s,baz=115,slow=4.6,SNR=5.1
SCHQ Schefferville 157.80 88 PFAKE 06 21 50.0 +8.6
SCHQ LR LR
comp=Z,6µm,22.0s,MS6.4
SPITS Spitsbergen Ar 158.22 338 PKPab PKPab 06 22 16.2 +0.6
comp=Z,9.7nm,1.0s,baz=188,slow=7.9,SNR=3.5
KBS Kingsbay 158.59 341 PFAKE 06 21 50.0 +8.2
KBS LR LR
comp=Z,3µm,22.0s,MS6.1
WLF Walferdange 158.68 252 PFAKE 06 22 00.0 +17
WLF LR LR
comp=Z,4µm,20.0s,MS6.3
BJO Bjornoya 158.96 328 AMS AMS 07 34 15.1
comp=Z,5µm,22.4s,MS6.3
TRO Tromso 159.82 314 *e* PKPdf 06 21 45.1 +1.7
TRO *e*SS SS 06 46 19.4 +6.3
TRO AMS AMS 07 33 24.3
comp=Z,4µm,22.1s,MS6.2
NOA NORSAR Array B 162.08 287 PKPab PKPab 06 22 39.9 +7.0
comp=Z,1.0nm,0.8s,baz=101,slow=4.5,SNR=2.8
NAO01 NORSAR Array S 162.18 286 PFAKE 06 22 00.0 +14
NAO01 LR LR
comp=Z,2µm,19.0s
KONO Kongsberg 162.41 281 PFAKE 06 22 00.0 +14
KONO LR LR
comp=Z,4µm,21.0s
DAG Danmarks Havn 163.96 354 ⇑*i*PKP2 PKPab 06 22 42.0 +1.3
DAG pmax pmax
comp=Z,25nm,1.3s
DAG Danmarks Havn 163.96 354 ⇑*i*P PKPab 06 22 42.0 +1.3
comp=Z,25nm,1.3s
BER Bergen 164.68 281 *e*PKPdf PKPdf 06 21 57.5 +8.9
BER AMS AMS 07 35 24.2
comp=Z,4µm,22.0s
FOO Floro 165.10 286 *e*PKPdf PKPdf 06 21 57.7 +8.8
FOO *e*SS SS 06 47 20.7 +12
FOO AMS AMS 07 31 58.3
comp=Z,4µm,28.3s
ESK Eskdalemuir 166.68 255 PFAKE 06 22 00.0 +10
ESK LR LR
comp=Z,4µm,21.0s
SCO Scoresbysund 170.34 352 *e*PKIKP PKPdf 06 21 59.5 +7.2
SCO *e* 06 26 58.5
SCO *i* 06 47 59.1
SCO MLR MLR
comp=Z,3µm,20.0s
SCO Scoresbysund 170.34 352 *i* P PKPdf 06 21 59.5 +7.2
SCO *e* 06 26 58.5

SCO			*i*			06 47 59.1	
SCO			*i*			06 48 43.9	
SCO							
	comp=Z,3µm,20.0s						
BORG	**Borgarnes**	**175.66**	**332**	PFAKE		06 22 10.0	+15
BORG				LR	LR		
	comp=Z,3µm,22.0s						

*IDC **09** 06:19:44.8±2.2, 17°.10S×179°.06W, h517km±32km, mb3.3/5, mb1 3.6/6, mb1mx3.4/13, mbtmp3.3/6, Error ellipse: s-maj=92.0km s-min=16.4km az=150.0*
*ISCJB **09** 06:19:45.6±1.1, 17°.6S±0°.4×178°.7W±0°.3, h555km±12km, mb3.8/8, Error ellipse: s-maj=70.0km s-min=14.9km az=148.9*
*NEIC **09** 06:19:46.3±1.1, 17°.54S×178°.71W, h551km±11km, mb4.1/4, Error ellipse: s-maj=64.4km s-min=14.2km az=150.0*
ISC 09 06:19:46.5±1.1, 17°.6S±0°.4×178°.7W±0°.3, h551km±11km, n26, σ1°.9/14/12, mb3.8/8, 3C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.09**	**266**	*e*Pn	**P**	**06 21 03.6**	**+1.5**
AFI	**Afiamalu**	**7.60**	**63**	*e*Pn	**P**	**06 21 38.4**	**-2.0**
AFI	**Afiamalu**	**7.60**	**63**	P	**P**	**06 21 38.7**	**-1.7**
	5.9nm,0.3s,baz=84,slow=4.5,SNR=7.6						
EIDS	**Eidsvold**	**29.11**	**249**	*e*P	**P**	**06 25 02.7**	**-0.6**
	4.7nm,0.8s,mb4.2						
ARMA	**Armidale**	**29.86**	**239**	*e*P	**P**	**06 25 09.7**	**0.0**
	6.3nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**38.54**	**241**	*e*P	**P**	**06 26 22.1**	**-0.3**
	0.8nm,0.6s,mb3.4						
STKA	**Stephens Creek**	**38.54**	**241**	P	**P**	**06 26 22.2**	**-0.1**
	5.0nm,0.7s,mb4.1,baz=99,slow=5.4,SNR=5.4						
ASAR	**Alice Springs**	**44.60**	**254**	P	**P**	**06 27 09.5**	**-0.8**
	5.9nm,0.5s,mb4.4,baz=87,slow=8.0,SNR=128						
NVAR	**Mina Array Bea**	**79.37**	**44**	P	**P**	**06 30 57.1**	**+1.5**
	0.6nm,0.7s,mb3.0,baz=220,slow=9.5,SNR=4.9						
TRF	**Thorofare Moun**	**83.73**	**12**	*e*P	**P**	**06 31 16.7**	**-0.6**
	3.5nm,0.8s,mb3.9						
ILAR	**Eielson Array**	**85.61**	**13**	P	**P**	**06 31 25.8**	**-0.7**
	0.4nm,0.4s,mb3.4,baz=224,slow=5.2,SNR=20						
TXAR	**Lajitas Array**	**86.06**	**58**	P	**P**	**06 31 31.4**	**+2.0**
	0.5nm,0.7s,mb3.3,baz=205,slow=5.5,SNR=6.3						
MKAR	**Makanchi Array**	**108.68**	**314**	PKiKP	PKiKP	06 37 12.1	-0.9
	0.2nm,0.5s,baz=123,slow=2.4,SNR=3.6						
KIS	**Kishinev**	**142.90**	**328**	*e*PS		06 35 24.0	
KIS				*e*L		07 12 24.0	
KIS				LRM		07 32 38.0	
	2µm,20.0s						
BURAR	**Bucovina Array**	**144.16**	**332**	⇓*i*P	PKPdf	06 38 20.7	+0.9
BRTR	**Keskin Array B**	**144.32**	**315**	PKP	PKPdf	06 38 20.0	-0.4
	1.4nm,0.8s,baz=148,slow=4.3,SNR=7.1						
CLL	**Collm**	**145.05**	**347**	*e*PKPbc	PKPbc	06 38 22.0	0.0
MMAI	**Mount Meron Ar**	**145.70**	**303**	PKPbc	PKPbc	06 38 25.4	+0.9
	2.6nm,0.6s,baz=89,slow=6.1,SNR=3.4						
BAIF	**Baives**	**147.49**	**356**	*e*PKP1	PKPbc	06 38 29.2	+0.4
FLN	**La Foliniere**	**148.84**	**2**	*e*PKP1	PKPbc	06 38 32.1	-0.1
LDF	**La Druitiere**	**149.02**	**2**	⇑*i*PKP1	PKPbc	06 38 32.4	-0.2
	2.5nm,0.3s						
ROSF	**Rostrenen**	**149.07**	**6**	*e*PKP1	PKPbc	06 38 32.5	-0.3
	37nm,1.1s						
GRR	**Gorron**	**149.20**	**3**	*e*PKP1	PKPbc	06 38 33.1	0.0
	2.5nm,0.4s						
HAU	**Haudompre**	**149.35**	**353**	*e*PKP1	PKPbc	06 38 34.2	+0.8
LOR	**Lormes**	**150.29**	**356**	⇑*i*PKP1	PKPbc	06 38 35.9	+0.2
	6.1nm,0.6s						
SSF	**Saint Saulge**	**150.52**	**357**	⇑*i*PKP1	PKPbc	06 38 36.5	+0.3
	3.6nm,0.5s						

*ATH **09** 06:41:50.1, 38°.28N×21°.48E, h17km, MD2.8/3*
*CSEM **09** 06:41:51.9±0.4, 37°.97N×21°.61E, h20km, ML1.8/5, Error ellipse: s-maj=12.0km s-min=4.0km az=167.0*
*ISCJB **09** 06:41:53.0±0.7, 38°.02N±0°.06×21°.58E±0°.04, h20km±6km, Error ellipse: s-maj=10.3km s-min=4.3km az=169.7*
*THE **09** 06:41:53.2, 38°.06N×21°.58E, h16km±1km, ML1.8/5, Error ellipse: s-maj=2.2km s-min=0.7km az=168.0*
ISC 09 06:41:52.8±0.7, 38°.01N±0°.06×21°.59E±0°.03, h19km±4km, n21, σ0°.96/41, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.11**	**296**	*e*PB	**Pg**	**06 41 55.0**	**-1.6**
RLS				*e*SB	**Sg**	**06 41 59.4**	**+0.2**
RLS	**Riolos of Patr**	**0.11**	**296**	*e*Pb	**Pg**	**06 41 55.0**	**-1.6**
RLS				*e*Sb	**Sg**	**06 41 59.4**	**+0.2**
LAKA	**Lakka**	**0.38**	**53**	P	**Pg**	**06 42 00.4**	**-0.4**
LAKA				S	**Sg**	**06 42 06.3**	**+0.1**
LAKA	**Lakka**	**0.38**	**53**	P	**Pg**	**06 42 00.4**	**-0.4**
LAKA				S	**Sg**	**06 42 06.3**	**+0.1**
TRIZ	**Trizonia**	**0.52**	**47**	P	**Pg**	**06 42 02.5**	**-0.8**
TRIZ				S	**Sg**	**06 42 10.4**	**+0.1**
TRIZ	**Trizonia**	**0.52**	**47**	P	**Pg**	**06 42 02.5**	**-0.8**
TRIZ				S	**Sg**	**06 42 10.4**	**+0.1**
KALE	**Kalithea**	**0.58**	**49**	P	**Pg**	**06 42 03.4**	**-0.9**
KALE				S	**Sg**	**06 42 12.8**	**+0.7**
KALE	**Kalithea**	**0.58**	**49**	P	**Pg**	**06 42 03.4**	**-0.9**
KALE				S	**Sg**	**06 42 12.8**	**+0.7**
GUR	**Goura**	**0.60**	**97**	*e*PN	**Pn**	**06 42 05.1**	**-1.2**
GUR				*e*SN	**Sg**	**06 42 15.5**	**+2.7**
GUR	**Goura**	**0.60**	**97**	P	**Pg**	**06 42 05.2**	**+0.5**
GUR				S	**Sg**	**06 42 15.0**	**+2.2**
GUR	**Goura**	**0.60**	**97**	*e*Pn	**Pn**	**06 42 05.1**	**-1.2**
GUR				S	**Sg**	**06 42 15.0**	**+2.2**
GUR				*e*Sn	**Sg**	**06 42 15.5**	**+2.7**
KFL	**Anninata**	**0.64**	**279**	P	**Pg**	**06 42 05.9**	**+0.5**
KFL				S	**Sg**	**06 42 15.3**	**+1.3**
KFL	**Anninata**	**0.64**	**279**	P	**Pg**	**06 42 05.9**	**+0.5**
KFL				S	**Sg**	**06 42 15.3**	**+1.3**
VLS	**Valsamata**	**0.81**	**282**	*e*PN	**Pn**	**06 42 04.1**	**-5.0**
VLS	**Valsamata**	**0.81**	**282**	P	**Pb**	**06 42 07.0**	**-1.1**
VLS				S	**Sb**	**06 42 19.7**	**+1.1**
VLS	**Valsamata**	**0.81**	**282**	*e*Pn	**Pn**	**06 42 04.1**	**-5.0**
VLS	**Valsamata**	**0.81**	**282**	P	**Pb**	**06 42 07.0**	**-1.1**
VLS				S	**Sb**	**06 42 19.7**	**+1.1**
DSF	**Desfina**	**0.84**	**61**	P	**Pb**	**06 42 07.8**	**-0.9**
DSF				S	**Sb**	**06 42 20.9**	**+1.3**
DSF	**Desfina**	**0.84**	**61**	P	**Pb**	**06 42 07.8**	**-0.9**
DSF				S	**Sb**	**06 42 20.9**	**+1.3**
AGG	**Agios Georgios**	**1.17**	**30**	P	**Pn**	**06 42 13.6**	**-0.4**
AGG				S	**Sb**	**06 42 29.1**	**+0.1**
AGG	**Agios Georgios**	**1.17**	**30**	P	**Pn**	**06 42 13.6**	**-0.4**
AGG				S	**Sb**	**06 42 29.1**	**+0.1**

CASC 09 06:52:17.3±2.4, 13°.49N×90°.85W, h13km±9km, MD3.8, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.93**	**15**	*e*P	Pb	06 52 35.4	+0.1
FUG	**Fuego 3**	**0.96**	**1**	*e*P	Pb	06 52 35.2	-0.5
FG6		**1.07**	**358**	*e*P	Pb	06 52 36.9	-0.8
JAT	**Jato**	**1.13**	**317**	*e*P	Pb	06 52 36.4	-2.2
NBG	**Las Nubes**	**1.20**	**24**	*e*P	Pn	06 52 40.4	+0.6
NBG				*e*S	Sb	06 52 57.1	+1.8
RTR	**El Retiro**	**1.24**	**71**	*e*P	Pn	06 52 39.3	-1.0
SBLS	**San Blas**	**1.25**	**73**	*e*P	Pn	06 52 39.6	-0.8
SNJE	**San Jose**	**1.27**	**72**	*e*P	Pn	06 52 39.9	-0.8
RBDL	**Robledal**	**1.29**	**61**	*e*P	Pn	06 52 40.6	-0.4
TP2	**Tecpan 2**	**1.30**	**353**	*e*P	Pn	06 52 40.4	-0.7
TP2				*e*S	Sb	06 52 58.3	+0.1
BOQS	**Boqueron**	**1.55**	**81**	*e*P	Pn	06 52 44.4	-0.2
SNET	**Serv Nac Est T**	**1.59**	**83**	*e*P	Pn	06 52 45.4	+0.3
MTO2	**Montecristo 2**	**1.71**	**58**	*e*P	Pn	06 52 46.7	-0.1
MTO2				*e*S	Sn	06 53 08.9	+0.5
LFRS	**El Faro**	**1.75**	**85**	*e*P	Pn	06 52 46.9	-0.4
LFRS				*e*S	Sn	06 53 09.3	0.0
LBRS	**Las Brisas**	**1.78**	**82**	*e*P	Pn	06 52 47.9	+0.3
MRL	**Marmol**	**1.93**	**35**	*e*P	Pn	06 52 51.6	+1.8
SNVI	**San Vicente**	**1.96**	**86**	*e*P	Pn	06 52 50.8	+0.5
SNVI				*e*S	Sn	06 53 16.1	+1.5
CAHU	**Cacacuatique**	**2.58**	**83**	*e*P	Pn	06 52 59.0	+0.2
CNCH	**Conchagua**	**2.94**	**94**	*e*P	Pn	06 53 03.9	+0.2
CNCH				*e*S	Sn	06 53 39.3	+0.3
TGUH	**Tegucigalpa,Un**	**3.52**	**80**	*e*P	Pn	06 53 12.4	+0.7
TGUH				*e*S	Sn	06 53 57.7	+4.5

*ISCJB **09** 07:00:58.8±1.7, 16°.7S±0°.1×174°.2W±0°.2, h100km±18km, mb4.1/12, Error ellipse: s-maj=29.1km s-min=14.6km az=34.3*
*NEIC **09** 07:01:05.7±0.5, 16°.76S×174°.23W, mb4.1/5, Error ellipse: s-maj=20.9km s-min=12.1km az=121.0*
*IDC **09** 07:01:05.1±1.0, 16°.84S×174°.09W, h144km±8km, mb3.7/7, mb1 3.9/7, mb1mx3.7/14, mbtmp3.7/7, Error ellipse: s-maj=33.9km s-min=16.8km az=130.0*
ISC 09 07:01:00.1±1.7, 16°.7S±0°.1×174°.1W±0°.2, h99km±18km, h149km±4.3km; pP-P, n20, σ0°.79/16, mb4.1/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.58**	**40**	*e*Pn	**Pn**	**07 01 55.2**	**+1.5**
AFI				*e*Sn	**Sn**	**07 02 33.9**	**-1.2**
AFI	**Afiamalu**	**3.58**	**40**	P	**Pn**	**07 01 55.4**	**+1.7**
	30nm,0.3s,baz=65,slow=24,SNR=80						
AFI				S	**Sn**	**07 02 33.6**	**-1.6**
	184nm,0.3s,baz=56,slow=22,SNR=25						
URZ	**Urewera**	**22.82**	**198**	P	**P**	**07 05 54.3**	**-0.5**
	7.0nm,0.5s,mb4.2,baz=7.9,slow=1.4,SNR=6.6						
ARMA	**Armidale**	**34.08**	**240**	*e*P	**P**	**07 07 35.1**	**-0.2**
	4.2nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**42.79**	**241**	P	**P**	**07 08 47.9**	**-0.3**
	3.6nm,0.8s,mb4.2,baz=91,slow=9.8,SNR=4.3						
WRAB	**Tennant Creek**	**48.86**	**258**	*e*P	**P**	**07 09 36.5**	**+0.4**
	2.1nm,0.7s,mb4.2						
ASAR	**Alice Springs**	**49.05**	**253**	P	**P**	**07 09 36.8**	**-0.7**
	18nm,0.5s,mb5.2,baz=86,slow=8.3,SNR=324						
ASAR				pP	pP	07 10 12.2	+11
	1.5nm,0.6s,baz=82,slow=9.6,SNR=1.7						
SBA	**Scott Base**	**61.91**	**185**	*e*P	**P**	**07 11 10.0**	**+1.3**
	2.2nm,0.7s,mb4.3						
QSPA	**South Pole Qui**	**73.36**	**180**	*e*P	**P**	**07 12 20.2**	**-0.4**
	3.7nm,1.0s,mb4.2						
NVAR	**Mina Array Bea**	**75.76**	**42**	P	**P**	**07 12 35.9**	**+0.7**
	1.1nm,0.7s,mb3.7,baz=226,slow=9.9,SNR=8.9						
NVAR				pP	pP	07 13 10.3	+10
	0.5nm,0.7s,baz=233,slow=9.0,SNR=3.2						
KSRS	**Korea Array**	**76.59**	**316**	P	**P**	**07 12 40.5**	**+0.6**
	0.8nm,0.7s,mb3.5,baz=125,slow=6.6,SNR=4.7						
COLA	**College**	**83.76**	**11**	*e*P	**P**	**07 13 17.5**	**-0.2**
	2.3nm,0.8s,mb4.1						
ILAR	**Eielson Array**	**83.84**	**11**	P	**P**	**07 13 18.0**	**-0.2**
	0.2nm,0.4s,mb3.3,baz=215,slow=5.1,SNR=7.5						
ILAR				pP	pP	07 13 55.2	+11
	0.2nm,0.8s,baz=213,slow=6.5,SNR=1.8						
MAW	**Mawson**	**86.35**	**199**	P	**P**	**07 13 30.2**	**-0.7**
	0.7nm,0.7s,mb3.7,baz=132,slow=15,SNR=4.0						
KMBO	**Kilima Mbogo**	**144.33**	**243**	PKP	PKPdf	07 20 25.2	-0.5
	1.8nm,0.6s,baz=360,slow=24,SNR=5.3						
CLL	**Collm**	**145.00**	**352**	*i* PKPbc	PKPbc	07 20 25.5	+0.3
BUR08	**Bucovina Ar. S**	**145.27**	**337**	*e*PKPdf	PKPdf	07 20 27.5	+1.3
BR131	**Keskin Array S**	**146.69**	**319**	*e*PKPbc	PKPbc	07 20 30.9	+0.2
BRTR	**Keskin Array B**	**146.69**	**319**	PKPbc	PKPbc	07 20 31.1	+0.4
	2.6nm,0.7s,baz=142,slow=2.3,SNR=14						
MMAI	**Mount Meron Ar**	**148.80**	**307**	PKPbc	PKPbc	07 20 37.5	+0.9
	3.1nm,0.7s,baz=63,slow=7.6,SNR=3.7						

*NEIC **09** 07:30:55.2, 64°.89N×139°.16W, h35km, ML2.5(PGC), After PGC.*
PGC 09 07:30:55.2±46.0, 64°.89N×139°.16W, h35km, ML2.5/3, 5D, 92km Nne of Dawson, Yt Southern Yukon Territory, Canada, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAWY	**Dawson**	**0.83**	**187**	*e*Pn	Pn	07 31 10.2	-0.1
DAWY				*e*Sn	Sn	07 31 22.3	+1.1
DAWY	**Dawson**	**0.83**	**187**	⇓P	Pn	07 31 10.4	+0.1
DAWY				⇓S	Sn	07 31 21.5	+0.2
EGAK	**Eagle**	**0.86**	**264**	*e*Pn	Pn	07 31 13.4	+2.7
EGAK				*e*Sn	Sn	07 31 28.0	+5.9
MENT	**Mentasta**	**2.81**	**228**	*e*Pn	Pn	07 31 39.6	+2.1
MENT				*e*Sn	Sn	07 32 23.6	+14
PAX	**Paxson**	**3.38**	**238**	*e*Pn	Pn	07 31 49.5	+4.1
PAX				*e*S	Sn	07 32 44.1	+20
INK	**Inuvik**	**4.11**	**31**	⇑Pn	Pn	07 31 54.1	-1.2
INK				⇓Sn	Sn	07 32 38.1	-3.9
HYT	**Haines Junctio**	**4.15**	**169**	⇓Pn	Pn	07 31 57.3	+1.5
HYT				⇓Sg	Sn	07 33 00.6	+18
TRF	**Thorofare Moun**	**5.08**	**259**	*e*Pn	Pn	07 32 13.4	+4.8
	3.1nm,0.7s						

MAN 09 07:31:35, 17°.91N×120°.87E, h10km, mb3.9, ML2.6, MS2.2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**0.30**	**210**	*e*P	Pg	07 31 42.1	+1.1
ABRA				*e*S	Sg	07 31 47.6	+2.6
APYP	**Conner**	**0.36**	**97**	*e*P	Pg	07 31 43.4	+1.3
APYP				*e*S	Sg	07 31 48.1	+1.3
CVP	**Callao Caves**	**0.93**	**103**	⇑*e*P	Pg	07 31 51.8	-1.1
CVP				*i* S	Sg	07 32 09.7	+4.7
BALP	**Baler**	**2.26**	**162**	*e*P	Pn	07 32 15.1	+2.7

WEL 09 07:50:27.6±0.1, 39°.47S×175°.76E, h65km±1km, ML3.7/16, 7D, Error ellipse: s-maj=1.1km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOVZ	**Moawhango**	**0.06**	**354**	⇓P*	Pn	07 50 36.6	-0.4
MOVZ				S*	Sn	07 50 43.2	-0.7
WNVZ	**Wahianoa**	**0.19**	**318**	⇓P*	Pn	07 50 37.4	-0.1
WNVZ				S*	Sn	07 50 44.9	+0.2
TUVZ	**Tukino**	**0.22**	**338**	⇓P*	Pn	07 50 37.6	0.0
TUVZ				S*	Sn	07 50 45.3	+0.3
BHHZ	**Black Hill Sta**	**0.23**	**95**	⇓P*	Pn	07 50 37.4	-0.3
BHHZ				S*	Sn	07 50 44.4	-0.7
TRVZ	**Turoa**	**0.24**	**316**	⇓P*	Pn	07 50 37.9	+0.1
TRVZ				S*	Sn	07 50 47.2	+0.1
MTVZ	**Mangateitei**	**0.24**	**290**	⇓P*	Pn	07 50 37.7	-0.1
MTVZ				S*	Sn	07 50 45.3	+0.2
DRZ	**Dome Shelter**	**0.25**	**322**	P*	Pn	07 50 37.9	+0.1
FWVZ	**Far West T-bar**	**0.27**	**323**	P*	Pn	07 50 37.7	-0.3
WPVZ	**Whakapapa**	**0.31**	**328**	P*	Pn	07 50 38.3	0.0
WPVZ				S*	Sn	07 50 46.6	+0.6
OTVZ	**Oturere**	**0.31**	**346**	P*	Pn	07 50 38.3	0.0
NGZ	**Ngauruhoe**	**0.32**	**337**	P*	Pn	07 50 38.3	0.0
PKVZ	**Pokaka**	**0.37**	**299**	P*	Pn	07 50 38.5	-0.2
WTVZ	**West Tongariro**	**0.38**	**339**	P*	Pn	07 50 38.6	-0.2
TWVZ	**Taurewa**	**0.47**	**328**	P*	Pn	07 50 39.2	-0.5
KATZ	**Kakaramea**	**0.50**	**354**	P*	Pn	07 50 39.7	-0.1
RITZ	**Rihia Road**	**0.50**	**9**	P*	Pn	07 50 39.8	-0.1
PNHZ	**Pukenui**	**0.56**	**143**	PN	Pn	07 50 40.7	+0.2
RATZ	**Rangitukua**	**0.60**	**1**	P*	Pn	07 50 40.6	-0.3
TSZ	**Takapari Road**	**0.61**	**165**	PN	Pn	07 50 41.3	+0.2
TSZ				SN	Sn	07 50 52.3	+1.4
HATZ	**Hinemaiaia**	**0.63**	**24**	P*	Pn	07 50 40.7	-0.6
BKZ	**Black Stump Fm**	**0.64**	**62**	⇓P*	Pn	07 50 41.3	-0.1
BKZ				S*	Sn	07 50 51.2	-0.4
WAZ	**Wanganui**	**0.66**	**244**	PN	Pn	07 50 42.1	+0.4
MCHZ	**McNeill Hill**	**0.72**	**88**	PN	Pn	07 50 43.2	+0.9
WATZ	**Wairara**	**0.76**	**358**	P*	Pn	07 50 42.5	-0.3
WPHZ	**Waipukurau**	**0.79**	**139**	PN	Pn	07 50 43.1	-0.1
WHTZ	**Whakaora**	**0.82**	**11**	P*	Pn	07 50 43.5	0.0
VRZ	**Vera Road**	**0.85**	**294**	P*	Pn	07 50 43.5	-0.4
DVHZ	**Dannevirke**	**0.89**	**160**	PN	Pn	07 50 44.1	-0.3
NMHZ	**Naumai**	**0.89**	**66**	PN	Pn	07 50 45.4	+1.0
KAHZ	**Kahuranaki**	**0.92**	**111**	PN	Pn	07 50 46.9	+2.1
POWZ	**Post Office Ro**	**0.92**	**180**	PN	Pn	07 50 44.7	-0.1
ALRZ	**Allen Road**	**1.01**	**27**	P*	Pn	07 50 45.6	-0.4
PXZ	**Pawanui**	**1.02**	**124**	PN	Pn	07 50 46.0	0.0
RAEZ	**Rainy Point**	**1.07**	**279**	PN	Pn	07 50 47.1	+0.4
PRRZ	**Plateau Road**	**1.09**	**27**	P*	Pn	07 50 46.5	-0.4
HRRZ	**Handcock Road**	**1.15**	**21**	P*	Pn	07 50 47.8	0.0
MHEZ	**Mangahewa**	**1.18**	**289**	PN	Pn	07 50 48.5	+0.3
HIZ	**Hauiti**	**1.19**	**323**	PN	Pn	07 50 47.8	-0.4
MRZ	**Mangatainoka R**	**1.20**	**187**	PN	Pn	07 50 47.8	-0.6
BFZ	**Birch Farm**	**1.27**	**163**	PN	Pn	07 50 48.8	-0.5
RRRZ	**Republican Roa**	**1.27**	**28**	P*	Pn	07 50 49.1	-0.3
DFE	**Dawson Falls**	**1.29**	**276**	PN	Pn	07 50 50.2	+0.7
NEZ	**North Egmont**	**1.30**	**278**	PN	Pn	07 50 50.5	+0.8
TIWZ	**Tintock**	**1.31**	**176**	PN	Pn	07 50 49.3	-0.5
TARZ	**Mount Tarawera**	**1.36**	**26**	P*	Pn	07 50 50.7	+0.2
OGWZ	**Otaki Gorge**	**1.42**	**198**	PN	Pn	07 50 50.8	-0.5
HOWZ	**Holdsworth Sta**	**1.44**	**187**	PN	Pn	07 50 50.7	-0.9
KIW	**Kapiti Island**	**1.54**	**205**	PN	Pn	07 50 52.1	-0.7
URZ	**Urewera**	**1.60**	**42**	P*	Pn	07 50 53.2	-0.5
TMWZ	**Te Maipa**	**1.64**	**177**	PN	Pn	07 50 53.2	-1.0
MTW	**Mount Morrison**	**1.70**	**187**	PN	Pn	07 50 53.6	-1.4
CAW	**Cannon Point**	**1.72**	**198**	PN	Pn	07 50 54.1	-1.2
TOZ	**Tahuroa Road**	**1.75**	**353**	P*	Pn	07 50 55.2	-0.5
TRWZ	**Traveller**	**1.93**	**182**	PN	Pn	07 50 57.0	-1.1
PLWZ	**Palliser**	**2.13**	**190**	PN	Pn	07 50 58.7	-2.1
TUWZ	**Tuamarina**	**2.40**	**215**	PN	Pn	07 51 02.9	-1.6
MKAZ	**Moumakai**	**2.40**	**349**	PN	Pn	07 51 03.4	-1.1
QRZ	**Quartz Range**	**2.82**	**240**	PN	Pn	07 51 08.4	-1.9
THZ	**Tophouse**	**3.16**	**223**	PN	Pn	07 51 13.1	-1.8
DSZ	**Denniston Nort**	**3.77**	**232**	PN	Pn	07 51 22.4	-0.8
LTZ	**Lake Taylor**	**4.23**	**217**	PN	Pn	07 51 26.3	-3.2

*ISCJB **09** 08:29:28.2±0.8, 0°.8S±0°.1×20°.4W±0°.1, h10km, mb4.3/26, Error ellipse: s-maj=20.5km s-min=15.1km az=147.0*
*IDC **09** 08:29:28.5±0.9, 0°.71S×20°.42W, h0km, mb4.1/11, mb1 4.2/12, mb1mx4.0/25, mbtmp4.1/12, ML3.8/1, Error ellipse: s-maj=27.8km s-min=21.3km az=135.0*
*NEIC **09** 08:29:29.4±0.5, 0°.85S×20°.53W, h10km, mb4.5/14, Error ellipse: s-maj=14.9km s-min=8.7km az=144.0*
ISC 09 08:29:30.1±0.8, 0°.8S±0°.1×20°.4W±0°.1, h10km, n46, σ0°.69/46, mb4.3/26, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**16.24**	**252**	*e*P	**Pn**	**08 33 14.4**	**-4.2**
	8.9nm,0.3s						
DBIC	**Dimbokro**	**17.21**	**64**	Pn	**Pn**	**08 33 31.6**	**+0.8**
	0.3nm,0.3s,baz=245,slow=17,SNR=5.4						
DBIC				Sn	**Sn**	**08 36 28.2**	**-14**
	0.3nm,0.3s,baz=127,slow=5.1,SNR=4.5						
TORD	**Torodi Ar. Bea**	**25.94**	**57**	P	**P**	**08 35 01.9**	**-1.0**
TORD	**Torodi Ar. Bea**	**25.94**	**57**	P	**P**	**08 35 01.9**	**-1.0**
	3.9nm,0.9s,mb3.9,baz=250,slow=8.2,SNR=14						
TSUM	**Tsumeb**	**41.47**	**119**	*e*P	**P**	**08 37 23.5**	**+5.9**
	2.8nm,0.3s,mb4.4						
SIV	**San Ignacio**	**42.83**	**247**	P	**P**	**08 37 33.9**	**+5.2**
	0.6nm,0.8s,mb3.4,baz=81,slow=18,SNR=3.6						
ESDC	**Sonseca Array**	**43.02**	**19**	P	**P**	**08 37 30.1**	**+0.3**
	0.4nm,0.4s,mb3.5,baz=204,slow=9.1,SNR=5.5						
LPAZ	**La Paz**	**49.46**	**249**	P	**P**	**08 38 21.8**	**+0.8**
	1.1nm,0.6s,mb4.1,baz=90,slow=1.0,SNR=3.5						
CAF	**Calviac**	**49.73**	**21**	*e*P	**P**	**08 38 22.5**	**0.0**
VIVF	**Saint-Julien-l**	**50.64**	**23**	*e*P	**P**	**08 38 31.5**	**+2.1**
ORIF	**Oris-en-Rattie**	**51.17**	**24**	*e*P	**P**	**08 38 34.2**	**+0.8**
MBDF	**Montbardon**	**51.38**	**25**	*e*P	**P**	**08 38 35.9**	**+0.9**
BOSA	**Boshof**	**51.60**	**127**	P	**P**	**08 38 37.0**	**+0.1**
	3.1nm,0.8s,mb4.3,baz=320,slow=7.9,SNR=2.9						
GRR	**Gorron**	**51.86**	**16**	*e*P	**P**	**08 38 38.3**	**-0.2**
	23nm,1.0s,mb4.8						
GRR	**Gorron**	**51.86**	**16**	*e*P	**P**	**08 38 38.3**	**-0.2**
	11nm,1.0s,mb4.8						
LPG	**La Plagne**	**52.00**	**24**	*e*P	**P**	**08 38 40.6**	**+1.0**
LPL	**La Plagne**	**52.01**	**24**	*e*P	**P**	**08 38 40.6**	**+0.9**
	8.0nm,0.8s,mb4.4						
LPL	**La Plagne**	**52.01**	**24**	*e*P	**P**	**08 38 40.6**	**+0.9**
	4.0nm,0.8s,mb4.4						
SSF	**Saint Saulge**	**52.08**	**21**	*e*P	**P**	**08 38 40.4**	**+0.2**
	9.3nm,0.9s,mb4.4						
SSF	**Saint Saulge**	**52.08**	**21**	*e*P	**P**	**08 38 40.4**	**+0.2**
	4.7nm,0.9s,mb4.4						
LOR	**Lormes**	**52.38**	**21**	*e*P	**P**	**08 38 42.5**	**+0.1**

SJI	**Sawahan**	**1.01**	**35**	P	Pn	09 22 02.5	+0.6
SJI				S	Sn	09 22 17.6	+1.6
YOGI	**Yogyakarta**	**1.16**	**310**	P	Pn	09 22 04.1	+0.3
YOGI				S	Sn	09 22 21.2	+1.8
NGJI	**Ngawi**	**1.22**	**13**	P	Pn	09 22 06.1	+1.5
NGJI				S	Sn	09 22 23.9	+3.1
KRKI	**Karangkates**	**1.31**	**72**	P	Pn	09 22 07.8	+2.0
KRKI				S	Sn	09 22 24.1	+1.2
SMRI	**Semarang**	**1.68**	**334**	P	Pn	09 22 10.7	+0.1
SMRI				S	Sn	09 22 30.8	-0.7
BJII	**Banjamegara**	**1.91**	**310**	P	Pn	09 22 15.9	+2.3
BJII				S	Sn	09 22 39.5	+2.5
GMJI	**Gumukmas**	**2.25**	**83**	P	Pn	09 22 18.8	+0.7
JAGI	**Jajag, Banyuwa**	**2.93**	**88**	P	Pn	09 22 27.9	+0.5
JAGI				S	Sn	09 22 54.2	-7.4
BYJI	**Banyuwangi**	**3.15**	**84**	P	Pn	09 22 31.3	+0.9
BYJI				S	Sn	09 23 07.1	+0.2
CISI	**Cisompet, Garu**	**3.49**	**287**	P	Pn	09 22 36.8	+1.8
CISI				S	Sn	09 23 13.7	-1.5
SRBI	**Singaraja**	**4.01**	**83**	S	Sn	09 23 24.8	-3.1

MEX 09 09:36:20.1±1.2, 14°20.0N×92°50.5W, h12km±181km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.74**	**17**	*i* P	Pg	09 36 32.3	-2.2
THIG				*i* S	Sg	09 36 41.8	-2.4
PCIG		**1.65**	**335**	*i* P	Pn	09 36 46.0	-2.9
PCIG				*e*S	Sn	09 37 04.4	-5.7
TGIG		**2.64**	**347**	*i* P	Pn	09 36 58.7	-3.8
TGIG				*i* S	Sn	09 37 31.2	-3.1

IDC 09 09:37:47.4±1.7, 20°46.5S×173°.60W, h0km, mb3.5/4, mb1 3.9/5, mb1mx3.8/14, mbtmp3.6/5, ML2.1/1, Error ellipse: s-maj=80.2km s-min=29.3km az=145.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.74**	**15**	Pn	Pn	09 39 26.5	-1.2
	2.3nm,0.3s,baz=75,slow=20,SNR=3.9						
AFI				Sn	Sn	09 40 33.2	-12
	2.5nm,0.3s,baz=96,slow=19,SNR=2.5						
ASAR	**Alice Springs**	**48.53**	**256**	P	P	09 46 32.4	-0.2
	0.5nm,0.6s,baz=96,slow=7.4,SNR=9.1						
NVAR	**Mina Array Bea**	**78.22**	**41**	P	P	09 49 49.9	+0.9
	0.7nm,0.7s,baz=223,slow=9.6,SNR=7.2						
TXAR	**Lajitas Array**	**83.60**	**56**	P	P	09 50 17.1	-0.8
	0.1nm,0.5s,baz=202,slow=6.8,SNR=3.5						
ILAR	**Eielson Array**	**87.42**	**11**	P	P	09 50 36.9	+0.8
	0.2nm,0.9s,baz=211,slow=4.7,SNR=4.3						
AKASG	**Malin Array Be**	**144.86**	**335**	PKP	PKPdf	09 57 25.6	-0.7
	0.9nm,0.5s,baz=44,slow=4.2,SNR=5.8						

IDC 09 10:06:30.9±2.3, 9°.75N×92°.35E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.5/22, mbtmp3.7/4, ML4.1/1, Error ellipse: s-maj=77.1km s-min=29.2km az=71.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.76**	**36**	Pn	Pn	10 09 06.5	+0.2
	0.5nm,0.3s,baz=223,slow=15,SNR=7.9						
MKAR	**Makanchi Array**	**37.30**	**349**	P	P	10 13 49.6	-0.1
	0.2nm,0.6s,baz=178,slow=7.7,SNR=2.5						
ASAR	**Alice Springs**	**52.47**	**130**	P	P	10 15 45.2	-0.7
	0.3nm,0.5s,baz=306,slow=7.2,SNR=6.1						
STKA	**Stephens Creek**	**62.68**	**133**	P	P	10 16 58.4	+0.7
	2.8nm,0.9s,baz=308,slow=11,SNR=4.2						

IDC 09 10:15:47.6±1.6, 37°.40S×52°.23E, h0km, mb3.7/1, mb1 3.9/1, mb1mx3.3/18, mbtmp3.7/1, ML3.4/1, MS3.6/3, Ms1 3.6/3, ms1mx3.0/25, Error ellipse: s-maj=82.7km s-min=33.1km az=38.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**19.27**	**345**	P	Pn	10 20 15.1	+0.3
	0.1nm,0.3s,baz=182,slow=8.0,SNR=1.8						
MAW	**Mawson**	**30.85**	**172**	LR	LR	10 31 17.7	
	comp=Z,58nm,21.1s,baz=152,slow=30						
TORD	**Torodi Ar. Bea**	**69.12**	**306**	P	P	10 26 55.3	-0.5
	0.4nm,0.7s,baz=116,slow=8.5,SNR=2.6						
ASAR	**Alice Springs**	**69.69**	**105**	P	P	10 26 59.6	+0.2
	0.5nm,0.6s,baz=232,slow=6.1,SNR=8.2						
CMAR	**Chiang Mai Arr**	**70.86**	**47**	LR	LR	10 52 44.7	
	comp=Z,49nm,21.9s,baz=352,slow=31						
PLCA	**Paso Flores**	**86.25**	**220**	LR	LR	11 04 51.3	
	comp=Z,51nm,18.1s,baz=89,slow=34						
ILAR	**Eielson Array**	**150.33**	**16**	PKPbc	PKPbc	10 35 38.8	-1.0
	0.9nm,0.8s,baz=317,slow=3.1,SNR=10						
TXAR	**Lajitas Array**	**158.36**	**255**	PKP	PKPdf	10 35 48.2	+1.3
	0.2nm,0.8s,baz=150,slow=2.0,SNR=3.4						

MAN 09 10:19:04, 12°.93N×120°.83E, h9km, mb4.3, ML3.1, MS3.0, 2C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.58**	**12**	↑*iP*	Pg	10 19 15.7	+0.4
LUBP	**Lubang**	**0.98**	**325**	*e*P	Pg	10 19 24.1	+1.2
LUBP				*e*S	Sg	10 19 38.2	+2.5
BUSP	**Coron**	**1.10**	**214**	*e*P	Pg	10 19 25.0	-0.2
BOAC	**Boac**	**1.12**	**62**	*e*P	Pg	10 19 25.2	-0.4
BOAC				*e*S	Sg	10 19 42.5	+2.3
TGY	**Tagaytay City**	**1.17**	**5**	↑*iP*	Pb	10 19 30.2	+3.7
OTRP	**Odiongan**	**1.29**	**116**	*e*P	Pn	10 19 27.4	-0.8
GQP	**Guinayangan**	**1.85**	**58**	↓*eP*	Pn	10 19 38.4	+2.4

IDC 09 10:44:39.1±1.3, 10°.24N×91°.77E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.6/22, mbtmp3.7/6, ML4.1/1, Error ellipse: s-maj=42.6km s-min=23.6km az=59.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.72**	**40**	Pn	Pn	10 47 14.6	+0.6
	0.4nm,0.3s,baz=233,slow=14,SNR=3.8						
MKAR	**Makanchi Array**	**37.31**	**349**	P	P	10 51 53.3	+0.4
	0.3nm,0.5s,baz=164,slow=7.2,SNR=4.2						
SONM	**Songino Array**	**39.45**	**16**	P	P	10 52 10.5	-0.5
	0.4nm,0.5s,baz=199,slow=8.8,SNR=3.7						
ASAR	**Alice Springs**	**53.22**	**130**	P	P	10 53 59.7	+0.1
	0.6nm,0.5s,baz=304,slow=7.5,SNR=4.9						
BRTR	**Keskin Array B**	**59.12**	**310**	P	P	10 54 41.7	+0.1
	0.3nm,0.4s,baz=142,slow=5.4,SNR=3.1						
STKA	**Stephens Creek**	**63.43**	**133**	P	P	10 55 10.9	0.0
	2.1nm,0.8s,baz=323,slow=10,SNR=4.0						

*ISCJB **09** 10:56:34.1±0.9, 8°.9S±0°.2×159°.6E±0°.2, h114km±15km, mb4.0/12, Error ellipse: s-maj=44.2km s-min=19.7km az=38.2*
*NEIC **09** 10:56:34.5±1.2, 8°.77S×159°.65E, h106km±16km, mb4.1/1, Error ellipse: s-maj=37.3km s-min=14.1km az=132.0*
*IDC **09** 10:56:34.6±0.7, 8°.86S×159°.75E, h108km±13km, mb3.9/10, mb1 4.0/10, mb1mx3.8/15, mbtmp3.9/10, MS3.7/1, Ms1 3.7/1, ms1mx2.9/16, Error ellipse: s-maj=41.7km s-min=20.4km az=125.0*

ISC 09 10:56:35.1±1.0, 8°.8S±0°.2×159°.7E±0°.2, h110km±15km, n17, σ0°.70/16, mb4.0/12, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.64**	**158**	P	**Pn**	**10 56 52.6**	**-0.3**
	195nm,0.3s,baz=232,slow=1.0,SNR=45						
HNR				S	**Sn**	**10 57 06.5**	**+0.1**
	486nm,0.3s,baz=105,slow=20,SNR=13						
WRAB	**Tennant Creek**	**26.88**	**243**	*e*P	**P**	**11 02 05.5**	**-0.3**
	5.3nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**28.43**	**214**	P	**P**	**11 02 20.4**	**+0.9**
	4.2nm,0.9s,mb4.0,baz=37,slow=15,SNR=5.3						
ASAR	**Alice Springs**	**28.75**	**236**	P	**P**	**11 02 22.0**	**-0.4**
	0.7nm,0.4s,mb3.6,baz=67,slow=10,SNR=16						
URZ	**Urewera**	**33.23**	**155**	LR	LR	11 14 30.0	
	comp=Z,118nm,18.0s,baz=126,slow=32						

KSRS	**Korea Array**	**54.82**	**329**	P	**P**	**11 05 54.4**	**+0.5**
	0.7nm,0.8s,mb3.7,baz=140,slow=8.2,SNR=5.3						
GTA	**Gaotai**	**73.29**	**316**	*e*P	**P**	**11 07 55.8**	**+1.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
SONM	**Songino Array**	**73.44**	**326**	P	**P**	**11 07 56.2**	**+0.9**
	comp=Z,2.6nm,0.7s,mb4.2,baz=137,slow=4.5,SNR=12						
KDAK	**Kodiak Island**	**76.86**	**24**	P	**P**	**11 08 14.9**	**+0.2**
	comp=Z,1.5nm,0.6s,mb3.9,baz=148,slow=9.5,SNR=3.3						
ILAR	**Eielson Array**	**83.42**	**20**	P	**P**	**11 08 49.5**	**-0.3**
	comp=Z,0.6nm,0.4s,mb3.8,baz=245,slow=5.0,SNR=31						
MK31	**Makanchi Array**	**87.88**	**318**	*e*P	**P**	**11 09 12.0**	**-0.3**
MKAR	**Makanchi Array**	**87.88**	**318**	P	**P**	**11 09 12.3**	**+0.1**
MKAR	**Makanchi Array**	**87.88**	**318**	P	**P**	**11 09 12.3**	**+0.1**
	comp=Z,1.7nm,0.6s,mb4.3,baz=99,slow=5.9,SNR=23						
ZALV	**Zalesovo Beam**	**88.33**	**325**	P	**P**	**11 09 12.8**	**-1.4**
	comp=Z,0.6nm,0.4s,mb4.0,baz=128,slow=6.8,SNR=3.9						
YKA	**Yellowknife Ar**	**95.78**	**28**	P	**P**	**11 09 48.9**	**+0.4**
	comp=Z,0.4nm,0.6s,mb4.0,baz=252,slow=4.6,SNR=4.4						
BVAR	**Borovoye Array**	**96.58**	**323**	P	**P**	**11 09 51.1**	**-1.3**
	comp=Z,0.6nm,0.5s,mb4.3,baz=93,slow=7.4,SNR=4.0						
NOA	**NORSAR Array B**	**122.92**	**342**	PKP	PKPdf	11 15 16.7	-1.3
	comp=Z,0.7nm,0.7s,baz=42,slow=2.1,SNR=4.2						

*ISCJB **09** 11:03:38.3±1.3, 20°.82S±0°.08×68°.7W±0°.1, h122km±14km, mb4.1/5, Error ellipse: s-maj=21.7km s-min=13.2km az=7.2*
*NEIC **09** 11:03:39.0±1.0, 20°.82S×68°.68W, h108km±10km, mb4.2/2, Error ellipse: s-maj=16.8km s-min=10.3km az=99.0*
*IDC **09** 11:03:38.8±2.4, 20°.79S×68°.74W, h110km±20km, mb4.4/1, mb1 3.8/4, mb1mx3.6/13, mbtmp3.8/4, Error ellipse: s-maj=29.9km s-min=22.6km az=58.0*

ISC 09 11:03:39.4±1.1, 20°.83S±0°.08×68°.7W±0°.1, h115km±13km, n15, σ0°.81/12, mb4.1/5, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.54**	**6**	P	**Pn**	**11 04 47.4**	**+1.2**
	1.7nm,0.3s,baz=208,slow=6.7,SNR=48						
LCO	**Las Campanas**	**8.35**	**192**	*e*Pn	**Pn**	**11 05 37.3**	**-0.3**
LCO				*e*Sn	**Sn**	**11 07 03.6**	**-6.6**
SIV	**San Ignacio**	**8.66**	**57**	P	**Pn**	**11 05 40.3**	**-1.5**
	2.3nm,0.3s,baz=252,slow=11,SNR=37						
CFAA	**Coronel Fontan**	**10.74**	**178**	P	**Pn**	**11 06 10.1**	**+0.3**
	0.1nm,0.3s,baz=334,slow=14,SNR=3.2						
CPUP	**Villa Florida**	**11.74**	**120**	P	**Pn**	**11 06 23.5**	**+0.3**
	0.4nm,0.3s,baz=276,slow=9.1,SNR=5.3						
TXAR	**Lajitas Array**	**60.22**	**325**	P	**P**	**11 13 34.3**	**-1.2**
	0.3nm,0.9s,mb3.3,baz=153,slow=11,SNR=2.8						
DBIC	**Dimbokro**	**68.32**	**74**	P	**P**	**11 14 29.3**	**+0.6**
	7.1nm,0.8s,mb4.5,baz=195,slow=11,SNR=3.8						
MOOW	**Moose Ponds**	**74.96**	**330**	*e*P	**P**	**11 14 58.9**	**-8.9**
	2.5nm,1.1s,mb3.9						
TORD	**Torodi Ar. Bea**	**76.91**	**70**	P	**P**	**11 15 19.9**	**+0.4**
TORD	**Torodi Ar. Bea**	**76.91**	**70**	P	**P**	**11 15 19.9**	**+0.4**
	6.0nm,0.8s,mb4.4,baz=253,slow=5.5,SNR=18						
FFC	**Flin Flon**	**80.47**	**341**	*e*P	**P**	**11 15 38.3**	**+0.1**
	9.9nm,1.4s,mb4.5						
MK31	**Makanchi Array**	**144.95**	**36**	*e*PKPbc	PKPdf	11 23 04.0	+1.1
MKAR	**Makanchi Array**	**144.95**	**36**	PKP	PKPdf	11 23 04.1	+1.2
MKAR	**Makanchi Array**	**144.95**	**36**	PKP	PKPdf	11 23 04.1	+1.2
	2.2nm,0.8s,baz=316,slow=3.3,SNR=18						
SONM	**Songino Array**	**152.76**	**7**	PKPbc	PKPbc	11 23 22.5	-0.1
	0.2nm,0.4s,baz=336,slow=3.2,SNR=2.8						

*ISCJB **09** 11:06:18.1±1.3, 18°.6S±0°.3×177°.9W±0°.2, h616km±13km, mb3.7/10, Error ellipse: s-maj=60.0km s-min=13.7km az=151.5*
*NEIC **09** 11:06:18.8±1.0, 18°.56S×177°.82W, h610km±8km, mb4.2/5, Error ellipse: s-maj=45.5km s-min=9.5km az=153.0*
*IDC **09** 11:06:18.5±2.1, 18°.36S×177°.99W, h599km±24km, mb3.1/6, mb1 3.3/7, mb1mx3.2/14, mbtmp3.1/7, Error ellipse: s-maj=81.9km s-min=15.6km az=151.0*

ISC 09 11:06:18.8±1.3, 18°.6S±0°.3×177°.8W±0°.2, h608km±12km, n23, σ0°.74/20, mb3.7/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.03**	**282**	*e*P	**P**	**11 07 46.4**	**+1.3**
AFI	**Afiamalu**	**7.46**	**52**	P	**P**	**11 08 12.0**	**-1.4**
AFI	**Afiamalu**	**7.46**	**52**	P	**P**	**11 08 12.0**	**-1.4**
	2.5nm,0.3s,baz=295,slow=21,SNR=4.2						
ARMA	**Armidale**	**30.08**	**241**	*e*P	**P**	**11 11 41.2**	**+0.4**
	1.7nm,0.6s,mb3.9						
CTA	**Charters Tower**	**33.89**	**262**	P	**P**	**11 12 12.8**	**-0.4**
CTA	**Charters Tower**	**33.89**	**262**	P	**P**	**11 12 12.8**	**-0.4**
	4.0nm,1.1s,mb4.0,baz=88,slow=8.13,SNR=5.7						
CTAO	**Charters Tower**	**33.89**	**262**	*e*P	**P**	**11 12 13.2**	**0.0**
	4.0nm,0.5s,mb4.3						
CMSA	**Cobar Meteorol**	**35.30**	**242**	*e*P	**P**	**11 12 24.4**	**-0.3**
QLP	**Quilpie**	**35.81**	**250**	*e*P	**P**	**11 12 28.5**	**-0.5**
COEN	**Coen**	**37.68**	**271**	*e*P	**P**	**11 12 44.8**	**+0.5**
COEN	**Coen**	**37.68**	**271**	*e*P	**P**	**11 12 44.6**	**+0.3**
	71nm,0.8s						
STKA	**Stephens Creek**	**38.79**	**242**	*e*P	**P**	**11 12 53.3**	**+0.2**
	2.1nm,0.4s,mb4.0						
STKA	**Stephens Creek**	**38.79**	**242**	P	**P**	**11 12 53.4**	**+0.3**
	2.7nm,0.4s,mb4.2,baz=54,slow=8.4,SNR=4.7						
WRAB	**Tennant Creek**	**45.05**	**260**	*e*P	**P**	**11 13 41.6**	**-0.6**
	5.2nm,0.4s,mb4.4						
ASAR	**Alice Springs**	**45.14**	**255**	P	**P**	**11 13 42.3**	**-0.6**
	7.0nm,0.6s,mb4.4,baz=89,slow=7.6,SNR=190						
ASAR				PcP	PcP	11 15 09.4	-0.7
	1.0nm,0.7s,baz=97,slow=3.1,SNR=5.8						
FITZ	**Fitzroy Crossi**	**53.47**	**261**	*e*P	**P**	**11 14 43.8**	**-0.2**
	1.5nm,0.6s,mb3.6						
MBWA	**Marble Bar**	**58.45**	**256**	*e*P	**P**	**11 15 18.2**	**0.0**
	10.0nm,0.6s,mb4.1						
NVAR	**Mina Array Bea**	**79.55**	**43**	P	**P**	**11 17 24.9**	**+1.0**
	0.3nm,0.6s,mb2.8,baz=235,slow=5.9,SNR=3.8						
TXAR	**Lajitas Array**	**85.90**	**57**	P	**P**	**11 17 57.1**	**+1.3**
	0.4nm,0.7s,mb3.1,baz=220,slow=5.3,SNR=6.7						
ILAR	**Eielson Array**	**86.45**	**13**	P	**P**	**11 17 56.9**	**-0.7**
	0.1nm,0.4s,mb2.8,baz=240,slow=5.0,SNR=4.4						
ARCES	**ARCESS Array B**	**127.11**	**350**	PKP	PKPdf	11 24 13.3	-0.9
	0.3nm,0.3s,baz=48,slow=1.8,SNR=7.4						
BRTR	**Keskin Array B**	**145.68**	**314**	PKPbc	PKPbc	11 24 50.8	-0.2
	0.5nm,0.5s,baz=48,slow=1.8,SNR=3.6						
DAVOX	**Davos/Dischmat**	**151.21**	**349**	PKPbc	PKPbc	11 25 04.5	0.0
	2.5nm,0.4s,baz=330,slow=8.1,SNR=6.9						

IDC 09 11:11:28.9±5.1, 10°.06S×119°.25E, h0km, mb3.8/2, mb1 3.7/3, mb1mx3.4/15, mbtmp3.6/3, ML3.6/1, Error ellipse: s-maj=505.8km s-min=32.6km az=53.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**19.46**	**136**	P	Pn	11 15 57.4	-1.0
	0.2nm,0.3s,baz=314,slow=13,SNR=9.7						
ASAR				S	Sn	11 19 26.3	-11
	0.1nm,0.3s,baz=315,slow=28,SNR=4.7						
MKAR	**Makanchi Array**	**65.51**	**333**	P	P	11 22 13.7	-0.3
	0.3nm,0.3s,baz=144,slow=7.2,SNR=5.2						
ZALV	**Zalesovo Beam**	**70.11**	**339**	P	P	11 22 43.4	+0.5
	0.5nm,0.3s,baz=131,slow=6.3,SNR=2.9						

*ATH **09** 11:37:51.7, 40°.69N×21°.71E, h3km, MD3.1/4*
*CSEM **09** 11:37:51.7, 40°.69N×21°.71E, h3km, MD3.1, After ATH*
*SKO **09** 11:37:56.4, 40°.24N×21°.73E, h8km, M1.6, ML2.0*
*ISCJB **09** 11:37:58.3±0.9, 40°.33N±0°.06×21°.9E±0°.1, h16km±15km, Error ellipse: s-maj=18.1km s-min=7.7km az=161.4*

ISC 09 11:37:57.7±0.9, 40°.34N±0°.04×21°.9E±0°.1, h18km±9km, n10, σ1°.31/16, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.07**	**240**	*e*PG	**Pg**	**11 37 59.8**	**-1.4**
KZN				*e*SG	**Sg**	**11 38 04.8**	**+1.3**
KZN	**Kozani**	**0.07**	**240**	*e*Pg	**Pg**	**11 37 59.8**	**-1.4**
KZN				*e*Sg	**Sg**	**11 38 04.8**	**+1.3**
LIT	**Litokhoron**	**0.54**	**116**	*e*PG	**Pg**	**11 38 07.6**	**-1.0**
LIT	**Litokhoron**	**0.54**	**116**	*e*Pg	**Pg**	**11 38 07.6**	**-1.0**
THL	**Klokotos Trika**	**0.79**	**171**	*e*PG	**Pg**	**11 38 13.0**	**-0.1**
THL				*e*SB	**Sg**	**11 38 29.5**	**+5.9**
THL	**Klokotos Trika**	**0.79**	**171**	*e*Pg	**Pg**	**11 38 13.0**	**-0.1**
THL				*e*Sb	**Sg**	**11 38 29.5**	**+5.9**
VAY	**Valandovo**	**1.12**	**29**	*e*Pg	**Pg**	**11 38 18.8**	**-0.6**
VAY				*e*Sg	**Sg**	**11 38 36.4**	**+2.4**
VAY				*e*Lg		11 38 38.3	
	comp=E,18nm,0.8s						
VAY				*e*Lg		11 38 41.6	
	comp=N,61nm,1.1s						
KRUS	**Krusevo**	**1.12**	**336**	*e*Pg	**Pg**	**11 38 17.5**	**-1.9**
KRUS				*e*Sg	**Sg**	**11 38 34.8**	**+0.7**
AGG	**Agios Georgios**	**1.37**	**164**	*e*PB	**Pb**	**11 38 24.2**	**+1.4**
AGG	**Agios Georgios**	**1.37**	**164**	*e*Pb	**Pb**	**11 38 24.2**	**+1.4**

*CSEM **09** 11:38:15.8±0.4, 40°.04N×33°.64E, h2km, MD2.9, Error ellipse: s-maj=9.8km s-min=5.2km az=61.0*
*ISCJB **09** 11:38:16.5±1.0, 40°.05N±0°.05×33°.70E±0°.08, h8km±16km, Error ellipse: s-maj=11.9km s-min=5.7km az=149.8*
*DDA **09** 11:38:16.4, 40°.01N×33°.68E, h7km±4km, Md2.9*

ISC 09 11:38:17.2±1.0, 40°.06N±0°.05×33°.69E±0°.08, h14km±14km, n14, σ1°.13/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.47**	**334**	*i* P	**Pg**	**11 38 25.7**	**-0.9**
ELDT				*i* S	**Sg**	**11 38 34.8**	**+1.9**
ELDT	**Eldivan**	**0.47**	**334**	*i* P	**Pg**	**11 38 25.7**	**-0.9**
CDAG	**Cicekdag**	**0.68**	**130**	*i* P	**Pg**	**11 38 29.2**	**-1.3**
CDAG				*i* S	**Sg**	**11 38 39.6**	**+0.1**
CDAG	**Cicekdag**	**0.68**	**130**	*i* P	**Pg**	**11 38 29.2**	**-1.3**
CDAG				*i* S	**Sg**	**11 38 39.6**	**+0.1**
CORM	**Corum**	**0.73**	**81**	*e*PG	**Pg**	**11 38 30.1**	**-1.2**
CORM	**Corum**	**0.73**	**81**	*e*Pg	**Pg**	**11 38 30.1**	**-1.3**
TOS	**Tosya**	**1.00**	**14**	*e*PG	**Pg**	**11 38 35.2**	**-1.4**
TOS	**Tosya**	**1.00**	**14**	*e*Pg	**Pg**	**11 38 35.2**	**-1.4**
CTKT	**Corum**	**1.01**	**56**	*i* P	**Pg**	**11 38 36.7**	**+0.1**
CTKT				*e*S	**Sg**	**11 38 51.2**	**+1.4**
CTKT	**Corum**	**1.01**	**56**	*i* P	**Pg**	**11 38 36.7**	**0.0**
CTKT				*e*S	**Sg**	**11 38 51.2**	**+1.4**
YOZ	**Yozgat**	**1.32**	**108**	*e*PG	**Pg**	**11 38 42.2**	**-0.4**
YOZ	**Yozgat**	**1.32**	**108**	*e*Pg	**Pg**	**11 38 42.2**	**-0.4**
AVNT	**Avonos**	**1.57**	**145**	*i* P	**Pn**	**11 38 45.0**	**+0.4**
AVNT				*e*S	**Sg**	**11 39 09.3**	**+1.6**
AVNT	**Avonos**	**1.57**	**145**	*i* P	**Pn**	**11 38 45.0**	**+0.4**

*NIED **09** 11:54:00, 26°.50N×128°.90E, h20km, Mw5.2 Best double couple: M0 5.98000×10^16 NP1:φ=48.00000°, δ70.00000°, λ100.00000°. NP2:φ=201.00000°, δ22.00000°, λ65.00000°.*
*IDC **09** 11:54:15.3±0.6, 26°.65N×128°.60E, h0km, mb4.5/19, mb1 4.6/20, mb1mx4.5/24, mbtmp4.6/20, ML4.6/1, MS4.7/23, Ms1 4.7/23, ms1mx4.6/27, Error ellipse: s-maj=18.3km s-min=15.8km az=52.0*
*JMA **09** 11:54:16.6±0.2, 26°.49N×128°.88E, h17km±2km, M5.2*
JMA Felt II J1.
*BJI **09** 11:54:16.3, 26°.35N×128°.84E, h35km, mB4.9/33, mb4.7/50, Ms5.1/60, Ms7 4.9/55*
*ISCJB **09** 11:54:17.8±0.6, 26°.51N±0°.02×128°.64E±0°.03, h23km±4km, mb4.9/136, MS5.0/48, Error ellipse: s-maj=4.3km s-min=3.3km az=139.4*
*NEIC **09** 11:54:19.7±1.0, 26°.49N×128°.52E, h25km±6km, mb5.0/77, MW5.1(NIED), Error ellipse: s-maj=7.4km s-min=5.7km az=159.0*
NEIC Felt on Okinawa. Recorded [2 JMA] in the Iheya-retto and on Okinawa and Yoron-jima.
*MOS **09** 11:54:19.5±1.4, 26°.59N×128°.60E, h33km, mb5.1/67, MS5.2/18, Error ellipse: s-maj=8.7km s-min=4.9km az=112.6*
*GCMT **09** 11:54:22.3±0.2, 26°.44N×128°.77E, h25km, MW5.2, Moment Tensor Solution. s50,c70; s74,c128; Moment tensor: Scale 10^16Nm; Mrr3.39±.15; Mθθ-1.30±.11; Mφφ-2.10±.12; Mrθ5.42±.24; Mrφ-2.42±.08; Mθφ5.18±.24; Best double couple: M0 8.40000×10^16 NP1:φ=212.00000°, δ14.00000°, λ76.00000°. NP2:φ=46.00000°, δ77.00000°, λ93.00000°. Principal axes: T 8.0400, Plg58.0000°, Azm320.0000°; N 0.7100, Plg3.0000°, Azm225.0000°; P -8.7600, Plg32.0000°, Azm133.0000°; Data Used: II IU IC G CN.*

ISC 09 11:54:20.2±0.6, 26°.50N±0°.02×128°.58E±0°.02, h27km±4km, h33km±2.7km: pP-P, n389, σ1°.26/414, mb4.9/136, MS5.0/48, 32C-15D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**0.43**	**321**	P	**Pn**	**11 54 28.9**	**-0.4**
JOW				S	**Sb**	**11 54 37.7**	**+2.1**
JIH	**Iheya**	**0.77**	**315**	P	**Pb**	**11 54 34.7**	**-0.2**
JIH				S	**Sb**	**11 54 48.2**	**+3.3**
JJT2	**Tamagusuku 2**	**0.82**	**245**	P	**Pb**	**11 54 36.5**	**+0.6**
JJT2				*e*S	**Sb**	**11 54 51.0**	**+4.4**
NAH1	**Naha**	**0.85**	**250**	P	**Pb**	**11 54 36.8**	**+0.5**
NAH1				S	**Sb**	**11 54 51.5**	**+4.3**
JAGN	**Aguni-jima**	**1.20**	**275**	P	**Pn**	**11 54 42.0**	**+0.9**
JAGN				S	**Sn**	**11 55 00.4**	**+3.9**
JTK	**Tokunoshima**	**1.33**	**14**	P	**Pn**	**11 54 40.1**	**-2.8**
JTK				S	**Sn**	**11 54 56.3**	**-3.4**
JKE	**Kume jima 2**	**1.61**	**264**	P	**Pn**	**11 54 49.6**	**+2.7**
JAM	**Amami Oshima**	**2.12**	**25**	P	**Pn**	**11 54 50.3**	**-3.

comp=Z,6µm,18.1s,baz=175,slow=40
KSRS Korea Array 10.94 357 P Pn 11 56 54.1 -0.8
KSRS pmax pmax
comp=Z,1.0nm,0.3s
KSRS MLR MLR
comp=Z,6µm,18.2s
INCN Inchon 11.08 352 *e*Pn **Pn 11 56 58.7 +1.9**
JHJ Hachijo jima 2 11.75 53 Pn Pn 11 57 03.7 -2.4
comp=Z,14nm,0.3s,baz=66,slow=23,SNR=16
JHJ LR LR 12 01 11.0
comp=Z,2µm,19.2s,baz=244,slow=36
JHJ T 12 09 07.0
comp=Z,30nm,0.3s,baz=70,slow=19,SNR=6.8
CBIJ Chichi jima 12.17 84 Pn Pn 11 57 06.4 -5.4
comp=Z,4.8nm,0.3s,baz=266,slow=19,SNR=5.1
CBIJ LR LR 12 00 55.9
comp=Z,2µm,20.4s,baz=258,slow=33
CBIJ T 12 09 52.9
comp=Z,24nm,0.3s,baz=294,slow=22,SNR=5.5
MAJO Matsushiro 12.95 37 *e*Pn **Pn 11 57 22.7 +0.4**
comp=Z,20nm,0.9s
MAJO Matsushiro 12.95 37 *e*P **Pn 11 57 22.7 +0.4**
MAJO pmax pmax
comp=Z,19nm,0.9s
MAT Matsushiro 12.95 37 P Pn 11 57 22.3 0.0
MAT S **Sn 11 59 49.0 +3.6**
WHN Wuhan 13.14 291 ⇓P **Pn 11 57 29.1 +4.1**
WHN pP 11 57 38.4
WHN LR LR
comp=N,6µm,13.7s
WHN LR LR
comp=E,10µm,13.4s
WHN LR LR
comp=Z,11µm,13.8s
DL2 Dalian 13.68 336 P Pn 11 57 33.2 +0.9
DL2 S **Sn 12 00 03.9 +0.5**
DL2 pmax pmax
comp=Z,230nm,5.9s
DL2 LR LR
comp=N,3µm,14.8s
DL2 LR LR
comp=E,1µm,16.5s
DL2 LR LR
comp=Z,3µm,13.8s
TIA Tai'an 13.76 318 P Pn 11 57 35.4 +2.0
TIA LR LR
comp=N,4µm,16.7s
TIA LR LR
comp=E,5µm,10.8s
SNY Shenyang 15.84 346 ⇑P **Pn 11 58 00.5 -0.7**
SNY S **Sn 12 00 59.1 +3.2**
SNY pmax pmax
comp=Z,8.0nm,0.4s
SNY pmax pmax
comp=Z,1µm,3.5s
SNY LR LR
comp=N,8µm,16.8s
SNY LR LR
comp=Z,6µm,16.1s
BJT Baijiatuau 16.99 326 *e*Pn **Pn 11 58 17.8 +2.0**
comp=Z,48nm,0.6s
BJT Baijiatuau 16.99 326 *e*P **Pn 11 58 17.8 +1.9**
BJT pmax pmax
comp=Z,48nm,0.6s
BJI Beijing 17.00 326 P Pn 11 58 15.5 -0.5
BJI S **Sn 12 01 33.9 +10**
BJI pmax pmax
comp=Z,58nm,0.5s
BJI pmax pmax
comp=Z,990nm,12.6s
BJI LR LR
comp=N,6µm,14.4s
BJI LR LR
comp=E,4µm,13.1s
BJI LR LR
comp=Z,3µm,15.7s
ENH Enshi 17.21 287 *e*Pn **Pn 11 58 21.0 +2.3**
comp=Z,27nm,0.9s
CN2 Changchun 17.45 352 *e*P **Pn 11 58 22.1 +0.5**
CN2 *e*S **Sn 12 01 34.3 -0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,6µm,14.0s
CN2 LR LR
comp=E,2µm,14.0s
CN2 LR LR
comp=Z,800nm,14.0s
TIY Taiyuan 17.64 313 *e*P **Pn 11 58 23.1 -0.8**
TIY pP pP 11 58 33.2 +1.2
TIY pmax pmax
comp=Z,560nm,10.5s
TIY LR LR
comp=N,4µm,13.2s
TIY LR LR
comp=E,4µm,13.7s
TIY LR LR
comp=Z,6µm,14.8s
MDJ Mudanjiang 18.10 2 P Pn 11 58 26.1 -3.4
MDJ pP pP 11 58 34.6 -2.4
MDJ sP sP 11 58 38.7 -1.8
MDJ S **Sn 12 01 53.2 +2.5**
MDJ PcP PcP 12 02 59.7 -3.0
MDJ ScS ScS 12 10 12.7 -4.0
MDJ pmax pmax
comp=Z,5.0nm,0.6s
MDJ LR LR
comp=N,2µm,15.4s
MDJ LR LR
comp=E,1µm,18.3s
MDJ LR LR
comp=Z,2µm,15.4s
XAN Xi'an 18.55 299 P Pn 11 58 34.2 -0.9
XAN pP pP 11 58 44.0 +1.9
XAN sP sP 11 58 48.6 +3.0
XAN sS sS 12 02 19.0 +2.3
XAN pmax pmax
comp=Z,23nm,0.7s
XAN LR LR
comp=N,2µm,15.5s
XAN LR LR
comp=E,1µm,17.7s
XAN LR LR
comp=Z,2µm,14.4s
QIZ Qiongzhong 18.79 251 P Pn 11 58 35.7 -2.5
QIZ pP pP 11 58 44.8 -0.1
QIZ sP sP 11 58 49.3 +0.9
QIZ S **Sn 12 02 05.9 -1.9**
QIZ sS sS 12 02 21.1 -0.7
QIZ pmax pmax
comp=Z,23nm,2.3s
QIZ pmax pmax
comp=Z,290nm,4.5s
QIZ LR LR
comp=N,3µm,20.6s
QIZ LR LR
comp=E,970nm,21.4s
QIZ LR LR
comp=Z,3µm,22.6s
DAV Davao City (W) 19.53 189 LR LR 12 05 43.0
comp=Z,1µm,18.6s,baz=353,slow=35
ERM Erimo 19.57 34 *e*Pn **Pn 11 58 45.6 -1.8**
comp=Z,29nm,0.8s
ERM Erimo 19.57 34 *e*P **Pn 11 58 44.7 -2.7**
ERM pmax pmax
comp=Z,43nm,1.2s
GYA Guiyang 19.62 275 P Pn 11 58 49.0 +1.0
GYA pP pP 11 58 56.8 +2.9
GYA PP 11 59 08.7
GYA S **Sn 12 02 31.2 +3.6**
GYA sS sS 12 02 33.6 -4.7
GYA PcP PcP 12 03 03.3 -2.4
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,750nm,14.9s
GYA LR LR
comp=N,3µm,19.9s
GYA LR LR
comp=E,6µm,14.3s
GYA LR LR
comp=Z,8µm,14.3s
GUMO Guam 19.95 127 *e*P **Pn 11 58 50.2 -1.8**
comp=Z,224nm,1.2s
GUMO Guam 19.95 127 P Pn 11 58 49.8 -2.2
comp=Z,72nm,0.8s,baz=211,slow=3.2,SNR=5.0
GUMO LR LR 12 04 52.9
comp=Z,1µm,19.4s,baz=271,slow=32
GUMO Guam 19.95 127 *e*P **Pn 11 58 50.3 -1.7**
GUMO pmax pmax
comp=Z,223nm,1.2s
HHC Hu-ho-hao-te 20.08 320 *e*P **P 11 58 54.5 +3.0**
HHC pP 11 59 02.8
HHC sP sP 11 59 07.8 +5.5
HHC PP 11 59 14.0
HHC *e*S **S 12 02 32.9 -2.9**
HHC sS sS 12 02 44.6 -2.9
HHC SS 12 03 00.3
HHC PcP PcP 12 03 09.7 +3.4
HHC pmax pmax
comp=Z,15nm,1.1s
HHC pmax pmax
comp=Z,730nm,5.5s
HHC LR LR
comp=N,4µm,15.9s,MS5.0
HHC LR LR
comp=E,3µm,14.9s,MS5.0
HHC LR LR
comp=Z,4µm,16.4s,MS4.9
BTO Baotou 20.85 317 *e*P **P 11 59 00.2 +0.4**
ASAJ Asahikawa 20.92 29 P P 11 58 56.8 -3.8
comp=Z,5.6nm,0.6s,baz=243,slow=9.0,SNR=8.7
ASAJ LR LR 12 07 12.1
comp=Z,3µm,21.8s,MS4.6,baz=236,slow=37
CD2 Chengdu 22.19 287 P P 11 59 15.4 +1.1
CD2 pP 11 59 24.6
CD2 sP sP 11 59 28.7 +3.5
CD2 PP 11 59 41.9
CD2 S **S 12 03 12.0 -5.5**
CD2 sS sS 12 03 26.7 -2.7
CD2 SS 12 03 51.8
CD2 pmax pmax
comp=Z,20nm,0.7s,mb4.7
CD2 pmax pmax
comp=Z,550nm,9.8s
CD2 LR LR
comp=N,4µm,14.2s,MS5.2
CD2 LR LR
comp=E,6µm,14.7s,MS5.2
CD2 LR LR
comp=Z,6µm,14.7s,MS5.1
YUK Yuzh-Kuril'sk 22.40 34*d i*P **P 11 59 19.5 +3.1**
YUK *i* S **12 03 23.7 +2.4**
YUK pmax pmax
comp=N,89nm,3.4s
YUK MLR MLR
comp=E,530nm,15.6s
HABR Khabarovsk 22.52 11 *e*P **P 11 59 15.7 -1.9**
HABR *e**PP 11 59 24.2
HABR *e*SP sP 11 59 28.8 +0.3
HABR PPP 11 59 47.6
HABR *e* 12 03 09.0
HABR *e*S **S 12 03 20.5 -2.9**
HABR *e**SS sS 12 03 34.9 -0.4
HABR *e*SSS 12 04 04.5
HABR *e* 12 10 29.2
HABR pmax pmax
comp=N,20nm,2.2s
HABR pmax pmax
comp=E,29nm,2.3s
HABR pmax pmax
comp=Z,35nm,2.5s,mb4.3
HABR MLR MLR
comp=Z,3µm,18.0s,MS4.7
LZH Lanzhou 23.14 300 *e*P **P 11 59 23.2 -1.2**
LZH pP 11 59 30.0
LZH sP sP 11 59 34.1 -1.2
LZH PP 11 59 53.3
LZH *e*S **S 12 03 29.6 -4.4**
LZH pmax pmax
comp=Z,68nm,1.4s,mb4.9
LZH pmax pmax
comp=Z,370nm,4.4s
LZH LR LR
comp=N,3µm,12.8s
LZH LR LR
comp=Z,5µm,15.4s,MS5.1
KMI Kunming 23.29 272 ⇑P **P 11 59 26.7 +0.7**
KMI sP sP 11 59 40.2 +3.3
KMI PP 11 59 53.7
KMI S **S 12 03 32.8 -3.8**
KMI pmax pmax
comp=Z,26nm,1.3s,mb4.5
KMI pmax pmax
comp=Z,280nm,7.0s
KMI LR LR
comp=N,2µm,15.4s,MS5.2
KMI LR LR
comp=E,6µm,13.0s,MS5.2
KMI LR LR
comp=Z,6µm,13.9s,MS5.2
YSS Yuzh-Sakhalins 23.30 25 *e*P **P 11 59 23.5 -2.4**
comp=Z,157nm,1.1s,mb5.3
YSS Yuzh-Sakhalins 23.30 25⇑ *e*P **P 11 59 22.8 -3.1**
YSS *e* 11 59 38.0
YSS *e* 12 03 32.0
YSS pmax pmax
comp=N,100nm,1.1s
YSS pmax pmax
comp=Z,160nm,1.1s,mb5.4
YSS MLR MLR
comp=Z,1µm,17.0s,MS4.3
YSS MLR MLR
comp=E,600nm,14.0s
KKM Kota Kinabalu 23.51 212 *e*P **P 11 59 28.2 0.0**
comp=E,90nm,2.0s,mb4.8
ULN Ulaanbaatar 27.20 327 *e*P **P 12 00 02.2 +0.7**
comp=E,12nm,0.8s,mb4.5
ULN Ulaanbaatar 27.20 327 *e*P **P 12 00 02.2 +0.7**
ULN pmax pmax
comp=Z,12nm,0.8s,mb4.5
GTA Gaotai 27.23 305 ⇑P **P 12 00 00.3 -1.5**
GTA pP pP 12 00 10.4 +0.6
GTA sP sP 12 00 15.4 +2.3
GTA PP 12 00 47.9
GTA S **S 12 04 37.4 -1.8**
GTA sS sS 12 04 53.2 +0.8
GTA pmax pmax
comp=Z,22nm,0.7s,mb4.8
GTA pmax pmax
comp=Z,190nm,4.8s
GTA LR LR
comp=N,2µm,13.4s,MS5.1
GTA LR LR
comp=E,3µm,14.6s,MS5.1
GTA LR LR
comp=Z,5µm,14.6s,MS5.2
SONM Songino Array 27.50 327 P P 12 00 01.9 -2.3
comp=Z,4.9nm,0.5s,mb4.4,baz=145,slow=9.4,SNR=29
SONM LR LR 12 12 49.5
comp=Z,2µm,18.8s,MS4.8,baz=135,slow=41
SONM Songino Array 27.50 327 P P 12 00 01.9 -2.3
SONM pmax pmax
comp=Z,5.0nm,0.5s
SONM MLR MLR
comp=Z,2µm,18.8s
CHTO Chiang Mai 28.35 261 *e*P **P 12 00 13.1 +1.0**
comp=Z,25nm,1.3s,mb4.7
CHTO Chiang Mai 28.35 261 *e*P **P 12 00 13.1 +1.1**
CHTO pmax pmax
comp=Z,25nm,1.3s,mb4.7
CMAR Chiang Mai Arr 28.48 260 P P 12 00 14.2 +1.0
comp=Z,1.7nm,0.7s,mb3.8,baz=54,slow=8.7,SNR=7.6
CMAR LR LR 12 13 28.9
comp=Z,1µm,18.1s,MS4.6,baz=68,slow=40
TLY Talaya 31.44 330 *e*P **P 12 00 47.1 +8.1**
TLY *e* 12 01 55.0
TLY pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
TLY MLR MLR
comp=Z,2µm,15.0s,MS4.9
SHL Shillong 32.91 277 *e*PKP **P 12 00 52.5 +0.2**
LSA Lhasa 33.08 284 P P 12 00 46.7 -7.0
LSA S **S 12 06 13.4 +2.3**
LSA LR LR
comp=N,2µm,18.8s
LSA LR LR
comp=E,330nm,12.3s
LSA LR LR
comp=Z,2µm,18.2s,MS5.0
LSA Lhasa 33.08 284 *e*P **P 12 00 52.8 -0.9**
comp=Z,9.1nm,0.6s,mb4.9
LSA Lhasa 33.08 284 *e*P **P 12 00 52.8 -0.9**
LSA pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
PET Petropavlovsk 34.71 32 *e*P **P 12 01 05.9 -1.7**
PET *e*S **S 12 06 31.8 -4.0**
PET MLR MLR
comp=Z,800nm,20.0s,MS4.5
YAK Yakutsk 35.54 1 *e*P **P 12 01 14.9 +0.3**
comp=Z,42nm,0.8s,mb5.4
YAK Yakutsk 35.54 1 *e*P **P 12 01 14.3 -0.3**
YAK pmax pmax
comp=Z,42nm,0.9s,mb5.4
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK MLR MLR
comp=Z,973nm,21.0s,MS4.5
YAK MLR MLR
comp=E,1µm,23.0s,MS4.8
YAK MLR MLR
comp=N,1µm,22.0s,MS4.8
TAPN Taplejung 36.33 281 *e*P **P 12 01 22.6 +0.7**
ODAN Odare 36.69 280 *e*P **P 12 01 24.3 -0.6**
comp=N,83nm,0.7s,mb5.7
WMQ Urumqi 37.19 308 P P 12 01 28.0 -1.0
WMQ pP pP 12 01 37.8 +0.7
WMQ sP sP 12 01 41.8 +1.4
WMQ PP PP 12 02 55.5 +1.5
WMQ PcP PcP 12 03 47.9 -0.7
WMQ S **S 12 07 12.2 -1.9**
WMQ sS sS 12 07 28.2 +0.8
WMQ ScP ScP 12 07 31.2 -2.7
WMQ SS SS 12 09 43.7 -14
WMQ ScS ScS 12 11 37.5 -4.0
WMQ pmax pmax
comp=Z,25nm,0.9s,mb5.0
WMQ pmax pmax
comp=Z,100nm,4.5s
WMQ LR LR
comp=N,1µm,20.0s,MS4.9
WMQ LR LR
comp=E,2µm,19.6s,MS4.9
WMQ LR LR
comp=Z,2µm,20.0s,MS4.9
RAMN Ramite 37.37 280 *e*P **P 12 01 29.5 -1.2**
JIRN Jiri 37.62 282 *e*P **P 12 01 33.5 +0.6**
comp=Z,19nm,0.4s,mb5.2
GUN Gumba 37.86 282 *e*P **P 12 01 35.0 +0.1**
comp=Z,33nm,0.4s,mb5.4
PKI Pulchoki 38.32 282 *e*P **P 12 01 38.4 -0.4**
comp=Z,30nm,0.4s,mb5.4
PKIN Phulchoki 38.33 282 *e*P **P 12 01 38.8 0.0**
comp=Z,32nm,0.4s,mb5.4
KKN Kakani 38.41 282 *e*P **P 12 01 39.2 -0.2**
comp=Z,28nm,0.4s,mb5.4
DMN Daman 38.58 282 *e*P **P 12 01 41.0 +0.1**
GKN Gorkha 38.94 283 *e*P **P 12 01 43.8 -0.1**
comp=Z,25nm,0.3s,mb5.4
SEY Seymchan 39.68 17 *e*P **P 12 01 48.6 -1.0**
KOLN Koldanda 39.88 282 *e*P **P 12 01 52.4 +0.6**
comp=Z,28nm,0.6s,mb5.2
MK31 Makanchi Array 41.59 312 *e*P **P 12 02 04.2 -1.4**
MK31 Makanchi Array 41.59 312*ce*P **P 12 02 04.3 -1.3**
MK31 pmax pmax
comp=Z,2.0nm,0.3s,mb4.2
MKAR Makanchi Array 41.59 312 P P 12 02 03.8 -1.8
comp=Z,3.3nm,0.5s,mb4.2,baz=92,slow=11,SNR=29
MKAR PcP PcP 12 04 02.0 -0.4
comp=Z,0.4nm,0.2s,baz=92,slow=4.3,SNR=2.1
MKAR LR LR 12 21 53.5
comp=Z,751nm,18.7s,MS4.6,baz=233,slow=40
MKAR Makanchi Array 41.59 312 P P 12 02 03.8 -1.8
MKAR 12 04 02.0
MKAR pmax pmax
comp=Z,3.0nm,0.5s
MKAR MLR MLR
comp=Z,751nm,18.7s
KNA Kununurra 41.99 180 *e*P **P 12 02 08.9 -0.2**
comp=Z,12nm,0.6s,mb4.7
ZALV Zalesovo Beam 42.23 323 P P 12 02 08.7 -2.0
ZALV PcP PcP 12 04 03.2 -1.2
ZALV Zalesovo Beam 42.23 323 P P 12 02 08.7 -2.0
comp=Z,7.0nm,0.4s,mb4.6,baz=109,slow=8.6,SNR=29
ZALV PcP PcP 12 04 03.2 -1.2
comp=Z,1.7nm,0.4s,baz=98,slow=3.1,SNR=2.5
ZALV Zalesovo Beam 42.23 323 P P 12 02 08.7 -2.0
ZALV 12 04 03.2
ZALV pmax pmax
comp=Z,7.0nm,0.4s,mb4.6
COEN Coen 42.64 159 *e*P **P 12 02 14.1 -0.3**
VIS Vishakhapatnam 42.64 268 *e*PKP **P 12 02 14.8 +0.3**
VIS AMb AMB 12 02 23.2
comp=Z,49nm,1.8s,mb4.9
NVS Novosibirsk 43.42 323 *e*P **P 12 02 14.2 -6.2**
NVS pmax pmax
comp=N,7.0nm,1.4s
NVS pmax pmax
comp=E,20nm,1.4s
NVS pmax pmax
comp=Z,18nm,1.4s,mb4.6
FITZ Fitzroy Crossi 44.42 184 *e*P **P 12 02 28.2 -0.5**
comp=Z,12nm,1.0s,mb4.6
KURK Kurchatov 44.84 316 *e*P **P 12 02 30.0 -1.8**
comp=Z,40nm,1.6s,mb5.0
KURK Kurchatov 44.84 316 LR LR 12 23 08.2
comp=Z,2µm,18.2s,MS5.1,baz=110,slow=39
KURK Kurchatov 44.84 316 *e*P **P 12 02 30.2 -1.6**
KURK pmax pmax
comp=Z,33nm,2.5s,mb4.7
SDNR Sundarnagar 45.08 289 *e*PKP **P 12 02 34.5 +0.5**
TIXI Tiksi 45.19 0 *e*P **P 12 02 32.5 -1.8**
comp=Z,24nm,0.9s,mb5.0
TIXI Tiksi 45.19 0 *e*P **P 12 02 30.8 -3.5**
TIXI pmax pmax
comp=Z,28nm,0.9s,mb5.1
TIXI MLR MLR
comp=Z,1µm,16.0s,MS4.9
ULHL Ulahol 45.27 304 P P 12 02 35.5 +0.2
SNR=9.7
NDI New Delhi 45.29 285 *e*PKP **P 12 02 36.0 +0.3**
KSH Kashi 45.40 300 *e*P **P 12 02 39.3 +2.9**
KSH *ep*P pP 12 02 49.0 +4.4
KSH *es*P sP 12 02 52.7 +4.8
KSH *e*PcP PcP 12 04 17.3 +1.9
KSH *e*PP PP 12 04 26.2 +3.4
KSH *e*ScP ScP 12 08 06.1 -0.3
KSH *e*PcS PcS 12 08 10.1 +0.7
KSH *e*S **S 12 09 19.1 +3.2**
KSH *es*S sS 12 09 35.5 +6.1
KSH *e*ScS ScS 12 12 30.2 -1.1
KSH *e*SS SS 12 12 34.2 -5.5
KSH pmax pmax
comp=Z,22nm,1.7s,mb4.7
KSH LR LR
comp=N,1µm,16.6s,MS5.0
KSH LR LR
comp=E,870nm,12.9s,MS5.0
KSH LR LR
comp=Z,890nm,12.2s,MS4.9
TKM2 Tokmak 2 45.78 305 P **P 12 02 39.1 -0.3**
SNR=15
TKM2 Tokmak 2 45.78 305 *e*P **P 12 02 38.8 -0.5**
comp=Z,30nm,0.8s,mb5.3
TKM2 Tokmak 2 45.78 305 *e*P **P 12 02 38.8 -0.6**
TKM2 pmax pmax
comp=Z,30nm,0.8s,mb5.3
KZA Kyzart 45.99 304 P **P 12 02 42.5 +1.4**
SNR=14
BHPL Bhopal 46.28 278 *e*PKP **P 12 02 43.5 -0.1**
CHMS Chumysh 46.40 305 P **P 12 02 44.3 0.0**
SNR=9.3
WRAB Tennant Creek 46.49 173 *e*P **P 12 02 44.6 -0.5**
comp=Z,22nm,1.1s,mb5.0
WRAB Tennant Creek 46.49 173 *e*P **P 12 02 44.6 -0.5**
WRAB pmax pmax
comp=Z,22nm,1.1s,mb5.0
UCH Uchtor 46.55 304 P **P 12 02 46.5 +1.0**
SNR=50
UCH Uchtor 46.55 304 *e*P **P 12 02 46.5 +1.0**
comp=Z,28nm,0.7s,mb5.3
AAK Ala-Archa 46.58 305 *e*P **P 12 02 45.6 0.0**
comp=Z,7.0nm,0.5s,mb4.8

AAK **Ala-Archa** 46.58 305 LR LR 12 25 55.9
comp=Z,2µm,19.4s,MS5.0,baz=82,slow=41
AAK **Ala-Archa** 46.58 305 eP P **12 02 46.7 +1.0**
AAK pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
EKS2 **Erkin-Say** 47.10 305 P P **12 02 53.0 +3.2**
SNR=9.1
EKS2 **Erkin-Say** 47.10 305 eP P **12 02 49.8 0.0**
comp=Z,9.2nm,0.8s,mb4.8
EKS2 ePcP PcP 12 04 21.5 +0.1
AML **Almayashu** 47.15 304 eP P **12 02 51.0 +0.8**
comp=Z,11nm,0.7s,mb4.9
AML ePcP PcP 12 04 22.2 +0.7
CTA **Charters Tower** 49.38 158 eP P **12 03 07.1 -0.4**
comp=Z,8.7nm,0.9s,mb4.8
CTAO **Charters Tower** 49.38 158 eP P **12 03 07.3 -0.2**
comp=Z,15nm,0.9s,mb5.0
CTAO **Charters Tower** 49.38 158 eP P **12 03 07.3 -0.2**
CTAO pmax pmax
comp=Z,15nm,0.9s,mb5.0
KK31 **Karatay Array** 49.51 305 ceP P **12 03 08.1 -0.3**
KK31 pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
ASAR **Alice Springs** 50.13 174 P P **12 03 13.3 +0.1**
comp=Z,4.1nm,0.7s,mb4.6,baz=6.5,slow=14,SNR=52
ASAR **Alice Springs** 50.13 174 P P **12 03 13.3 +0.1**
ASAR pmax pmax
comp=Z,4.0nm,0.7s
BVAR **Borovoye Array** 50.28 318 P P **12 03 12.1 -1.9**
comp=Z,4.7nm,0.5s,mb4.8,baz=78,slow=7.9,SNR=28
BVAR PcP PcP 12 04 32.4 -0.2
comp=Z,3.3nm,0.5s,baz=127,slow=3.7,SNR=6.2
BVAR **Borovoye Array** 50.28 318 P P **12 03 12.1 -2.0**
BVAR 12 04 32.4
BVAR pmax pmax
comp=Z,5.0nm,0.5s
BRVK **Borovoye** 50.35 318 P P **12 03 13.1 -1.5**
comp=Z,199nm,0.8s,SNR=8.9
BRVK **Borovoye** 50.35 318 eP P **12 03 13.1 -1.5**
comp=Z,30nm,0.9s,mb5.3
BRVK **Borovoye** 50.35 318 eP P **12 03 13.1 -1.5**
BRVK pmax pmax
comp=Z,27nm,1.2s,mb5.2
POO **Poona** 50.86 273 ePKP P **12 03 19.1 +0.2**
POO AMb AMB 12 03 26.7
comp=Z,74nm,1.4s,mb5.4
KAD **Karad** 50.98 271 ePKP P **12 03 19.9 +0.1**
KAD AMb AMB 12 03 23.8
comp=Z,32nm,1.2s,mb5.1
KBL **Kabul** 51.28 294 eP P **12 03 22.9 +1.1**
comp=Z,139nm,1.8s,mb5.6
KBL **Kabul** 51.28 294 eP P **12 03 22.9 +1.0**
KBL pmax pmax
comp=Z,139nm,1.8s,mb5.6
EIDS **Eidsvold** 55.95 155 eP P **12 03 56.3 +0.3**
comp=Z,32nm,1.6s,mb5.1
SVE **Sverdlovsk** 56.24 322⇓ eP P **12 03 59.2 +1.4**
SVE pmax pmax
comp=Z,36nm,1.2s,mb5.3
SVE MLR MLR
comp=Z,3µm,14.0s,MS5.6
AB31 **Akbulak array** 56.69 313 ceP P **12 04 00.1 -1.1**
AB31 pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
ABKAR **Akbulak array** 56.69 313 eP P **12 04 00.3 -0.8**
comp=Z,5.4nm,0.5s,mb4.8
ARU **Arti** 57.38 322 eP P **12 04 04.0 -1.8**
comp=Z,24nm,1.0s,mb5.2
ARU **Arti** 57.38 322 *d iP* P **12 04 04.4 -1.5**
ARU 12 06 09.7
ARU S S 12 15 48.2 -1.8
ARU pmax pmax
comp=Z,23nm,1.2s,mb5.1
ARU MLR MLR
comp=Z,3µm,16.0s,MS5.5
STKA **Stephens Creek** 59.36 167 eP P **12 04 19.0 -0.9**
comp=Z,4.9nm,1.1s,mb4.5
STKA **Stephens Creek** 59.36 167 P P **12 04 19.2 -0.7**
STKA LR LR 12 26 39.0
STKA **Stephens Creek** 59.36 167 P P **12 04 19.2 -0.7**
comp=Z,2.7nm,0.7s,mb4.4,baz=349,slow=10,SNR=4.9
STKA LR LR 12 26 39.0
comp=Z,347nm,20.9s,MS4.5,baz=17,slow=33
TTA **Tatalina** 60.14 31 eP P **12 04 25.6 +0.6**
comp=Z,11nm,1.1s,mb4.8
TTA **Tatalina** 60.14 31 eP P **12 04 25.6 +0.6**
TTA pmax pmax
comp=Z,11nm,1.1s,mb4.8
SVW2 **Sparrevohn** 60.38 33 eP P **12 04 29.0 +2.4**
comp=Z,8.0nm,1.4s,mb4.6
ARMA **Armidale** 60.74 157 eP P **12 04 29.3 -0.1**
ARMA **Armidale** 60.74 157 eP P **12 04 30.9 +1.5**
comp=Z,44nm,1.4s,mb5.4
RSO **Redoubt South** 61.79 33 eP P **12 04 36.9 +0.7**
PPLA **Purkeypile** 61.90 31 eP P **12 04 38.4 +1.5**
comp=Z,13nm,0.8s,mb5.1
KDAK **Kodiak Island** 62.12 36 eP P **12 04 36.9 -1.6**
comp=Z,21nm,1.1s,mb5.2
KDAK **Kodiak Island** 62.12 36 P P **12 04 37.1 -1.3**
comp=Z,5.8nm,0.7s,mb4.8,baz=253,slow=4.5,SNR=8.4
KDAK **Kodiak Island** 62.12 36 ceP P **12 04 38.0 -0.5**
BPAW **Bear Paw Mtn.** 62.35 29 eP P **12 04 39.9 -0.1**
comp=Z,11nm,1.1s,mb4.9
COLD **Coldfoot** 62.49 26 eP P **12 04 40.8 0.0**
comp=Z,12nm,1.2s,mb4.9
TRF **Thorofare Moun** 62.71 30 eP P **12 04 42.4 0.0**
comp=Z,6.5nm,1.0s,mb4.7
MCK **McKinley** 63.29 30 eP P **12 04 46.4 +0.2**
comp=Z,21nm,1.0s,mb5.2
MCK **McKinley** 63.29 30 eP P **12 04 46.4 +0.2**
MCK pmax pmax
comp=Z,21nm,1.0s,mb5.2
YNG **Young** 63.31 162 eP P **12 04 47.1 +0.5**
comp=Z,11nm,1.4s,mb4.8
PMR **Palmer** 63.44 32 eP P **12 04 46.3 -0.9**
comp=Z,23nm,2.1s,mb4.9
PMR **Palmer** 63.44 32 eP P **12 04 46.3 -0.9**
PMR pmax pmax
comp=Z,23nm,2.1s,mb4.9
SEW **Seward** 63.47 34 eP P **12 04 45.6 -1.8**
comp=Z,23nm,1.0s,mb5.3
COLA **College** 63.64 28 eP P **12 04 40.0 -8.4**
comp=Z,5.8nm,0.8s,mb4.7
COLA **College** 63.64 28 eP P **12 04 40.0 -8.4**
COLA pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
ILAR **Eielson Array** 64.06 28 P P **12 04 50.3 -0.9**
comp=Z,1.6nm,0.7s,mb4.2,baz=257,slow=4.4,SNR=12
ILAR LR LR 12 35 52.3
comp=Z,214nm,18.6s,MS4.4,baz=318,slow=39
ILAR **Eielson Array** 64.06 28 P P **12 04 50.3 -0.9**
ILAR pmax pmax
comp=Z,2.0nm,0.7s
ILAR MLR MLR
comp=Z,214nm,18.6s
CNB **Canberra Magne** 64.54 161 eP P **12 04 59.6 +4.9**
PAX **Paxson** 64.94 30 eP P **12 04 56.7 -0.3**
comp=Z,7.7nm,0.9s,mb4.7
PAX **Paxson** 64.94 30 eP P **12 04 56.7 -0.3**
PAX pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
DIV **Divide** 65.11 32 eP P **12 04 58.2 +0.1**
comp=Z,25nm,1.0s,mb5.2
MSVF **Nonsavu** 65.12 127 eP P **12 04 59.0 +0.1**
comp=Z,38nm,1.3s,mb5.3
TOO **Toolangi** 65.68 165 eP P **12 05 07.9 +5.9**
BMRM **Bremner River** 65.69 32 eP P **12 05 00.3 -1.6**
comp=Z,725nm,1.1s
MENT **Mentasta** 65.73 30 P P **12 05 00.3 -1.9**
EGAK **Eagle** 66.47 28 eP P **12 05 07.5 +0.6**
comp=Z,5.8nm,0.9s,mb4.6
KLMR **Klimovskoe** 66.79 328 P P **12 05 07.3 -1.7**
KLMR pmax pmax
comp=Z,15nm,1.2s,mb4.9
DAWY **Dawson** 67.39 28 eP P **12 05 13.1 +0.4**
APA **Apatity** 67.74 336⇑ eP P **12 05 15.6 +0.7**
APA *e* 12 14 10.0
APA pmax pmax
comp=Z,16nm,1.0s,mb5.0
VRHR **Novokhopersk** 68.01 317 eP P **12 05 14.8 -2.1**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VRHR pmax pmax
comp=E,3.0nm,0.3s
PNL **Peninsula** 68.52 33 eP P **12 05 24.7 +4.8**
comp=E,7.6nm,0.8s,mb4.7
INK **Inuvik** 68.53 23 eP P **12 05 22.4 +2.6**
comp=E,15nm,1.3s,mb4.8
INK **Inuvik** 68.53 23 eP P **12 05 22.4 +2.6**
INK pmax pmax
comp=Z,15nm,1.3s
ZEI **Tsey** 68.81 308 eP P **12 05 22.7 +0.7**
ZEI pmax pmax
comp=Z,29nm,1.0s,mb5.2
KBS **Kingsbay** 69.04 349 eP P **12 05 23.7 +0.8**
MOS **Moscow** 69.05 323 eP P **12 05 32.7 +9.4**
MOS e 12 05 49.9
HYT **Haines Junctio** 69.10 32 eP P **12 05 25.3 +1.8**
KEV **Kevo** 69.30 339 eP P **12 05 23.3 -1.3**
comp=Z,7.2nm,0.8s,mb4.7
KEV **Kevo** 69.30 339 eP P **12 05 23.3 -1.3**
KEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KEV **Kevo** 69.30 339 ep P **12 05 23.3 -1.3**
comp=Z,3.7nm,0.5s,mb4.6
KIV **Kislovodsk** 69.31 310 eP P **12 05 28.1 +3.0**
KIV **Kislovodsk** 69.31 310 eP P **12 05 27.0 +1.9**
KIV *i* 12 05 53.0
KIV eS S 12 14 36.8 +6.8
KIV pmax pmax
comp=Z,31nm,1.0s,mb5.2
KIV MLR MLR
comp=Z,900nm,20.0s,MS5.0
VORD **Divnogorie** 69.46 318 eP P **12 05 24.4 -1.5**
VORD *e* 12 05 36.8
VORD pmax pmax
comp=N,8.0nm,0.5s
VORD pmax pmax
comp=E,7.0nm,0.5s
VORD pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
VORD MLR MLR
comp=N,810nm,20.0s,MS5.1
VORD MLR MLR
comp=E,720nm,20.0s,MS5.1
VORD MLR MLR
comp=Z,1µm,20.0s,MS5.2
VSR **Storozhevoye** 69.47 318 eP P **12 05 25.0 -0.9**
VSR *e* 12 05 36.6
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=Z,8.0nm,0.4s,mb5.0
VSR pmax pmax
comp=E,1.0nm,0.2s
VSR MLR MLR
comp=N,590nm,20.0s,MS5.2
VSR MLR MLR
comp=E,1µm,20.0s,MS5.2
VSR MLR MLR
comp=Z,2µm,20.0s,MS5.3
OBN **Obninsk** 69.81 322 eP P **12 05 27.6 -0.4**
comp=Z,14nm,0.5s,mb5.2
OBN **Obninsk** 69.81 322 *d iP* P **12 05 27.6 -0.4**
OBN *i* 12 05 38.4
OBN *i* 12 05 53.2
OBN pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
OBN MLR MLR
comp=Z,2µm,14.0s,MS5.5
ARCES **ARCESS Array B** 69.87 339 P P **12 05 26.9 -1.2**
comp=Z,1.8nm,0.5s,mb4.3,baz=84,slow=7.9,SNR=23
ARCES LR LR 12 41 59.1
comp=Z,886nm,18.2s,MS5.0,baz=246,slow=41
ARE0 **ARCESS Array S** 69.87 339 eP P **12 05 27.2 -0.9**
JOF **Joensuu** 69.96 331 eP P **12 05 27.5 -1.3**
JOF pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
JOF **Joensuu** 69.96 331 ep P **12 05 27.5 -1.3**
comp=Z,8.8nm,0.6s,mb4.9
MIB **Mutribah** 70.24 294 eP P **12 05 31.3 +0.2**
MIB AMb AMB 12 05 36.2
comp=Z,23nm,0.7s,mb5.2
RDF **Al-Radifah** 70.36 293 eP P **12 05 32.0 +0.1**
RDF AMb AMB 12 05 36.9
comp=Z,26nm,0.8s,mb5.2
NAY **Al-Naaiem** 70.51 294 eP P **12 05 32.6 -0.2**
NAY AMb AMB 12 05 37.4
comp=Z,17nm,0.8s,mb5.0
SKAG **Skagway** 70.56 33 eP P **12 05 33.5 +1.0**
comp=Z,14nm,1.0s,mb4.8
SOC **Sochi** 71.47 310 eP P **12 05 36.7 -1.6**
SOC ePPP 12 10 04.1
SOC eS S 12 14 50.4 -4.9
SOC pmax pmax
comp=Z,27nm,0.8s,mb5.2
SOC MLR MLR
comp=Z,905nm,22.0s,MS5.0
KAF **Kangasniemi** 72.42 331 eP P **12 05 42.3 -1.4**
KAF pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
KAF **Kangasniemi** 72.42 331 ep P **12 05 42.3 -1.4**
comp=Z,5.1nm,0.5s,mb4.7
ANN **Anapa** 72.61 312 eP P **12 05 45.6 +0.5**
ANN eS S 12 15 11.3 +3.0
ANN pmax pmax
comp=Z,33nm,1.0s,mb5.2
FINES **FINESS Array B** 72.79 331 P P **12 05 44.6 -1.3**
comp=Z,6.5nm,0.4s,mb4.9,baz=67,slow=5.4,SNR=105
FINES LR LR 12 41 35.6
comp=Z,1µm,20.1s,MS5.1,baz=71,slow=39
FINES **FINESS Array B** 72.79 331 P P **12 05 44.6 -1.3**
FINES pmax pmax
comp=Z,7.0nm,0.4s
FINES MLR MLR
comp=Z,1µm,20.1s
DLBC **Dease Lake** 73.49 33 eP P **12 05 56.7 +6.6**
MALT **Malatya** 74.21 305 eP P **12 05 55.3 +0.7**
MALT **Malatya** 74.21 305⇑ iP P **12 05 55.7 +1.0**
MICGM **Minsk** 74.73 324 e P **12 06 01.0 +3.6**
MNK **Minsk** 74.75 324 eP P **12 06 01.0 +3.5**
SIM **Simferopol'** 74.76 313 P P **12 05 57.0 -0.7**
SIM pmax pmax
comp=Z,68nm,13.0s
SIM MLR MLR
comp=Z,840nm,22.0s,MS5.0
AKASG **Malin Array Be** 75.53 320 P P **12 06 00.5 -1.6**
comp=Z,4.9nm,0.3s,mb4.9,baz=62,slow=6.4,SNR=15
AKASG LR LR 12 41 56.4
comp=Z,3µm,18.9s,MS5.6,baz=65,slow=38
AKASG **Malin Array Be** 75.53 320 P P **12 06 00.5 -1.6**
AKASG pmax pmax
comp=Z,5.0nm,0.3s
AKASG MLR MLR
comp=Z,3µm,18.9s
AKBB **Malin Array Si** 75.53 320 eP P **12 06 00.7 -1.4**
KIEV **Kiev** 75.54 320 eP P **12 06 00.7 -1.5**
comp=Z,13nm,0.5s,mb5.1
KIEV **Kiev** 75.54 320 eP P **12 06 00.7 -1.4**
KIEV pmax pmax
comp=Z,13nm,0.5s,mb5.1
BR131 **Keskin Array S** 77.12 308 eP P **12 06 11.1 -0.2**
BRTR **Keskin Array B** 77.12 308 P P **12 06 10.8 -0.5**
comp=Z,12nm,0.8s,mb4.9,baz=103,slow=4.5,SNR=24
BRTR LR LR 12 44 23.2
comp=Z,348nm,21.9s,MS4.6,baz=230,slow=39
BRTR **Keskin Array B** 77.12 308 ceP P **12 06 10.8 -0.5**
BRTR pmax pmax
comp=Z,12nm,0.8s
SUW **Suwalki** 77.42 324 eP P **12 06 13.2 +0.4**
TLCR 78.10 315 ⇓P P **12 06 16.2 -0.5**
TLCR 78.10 315 ⇓*iP* P **12 06 16.2 -0.5**
YKA **Yellowknife Ar** 78.16 25 P P **12 06 15.7 -0.9**
comp=Z,0.6nm,0.5s,mb3.8,baz=302,slow=5.9,SNR=7.1
YKA **Yellowknife Ar** 78.16 25 P P **12 06 15.7 -0.9**
MMAI **Mount Meron Ar** 78.53 301 P P **12 06 19.6 +0.3**
comp=Z,10nm,0.9s,mb4.7,baz=57,slow=10,SNR=4.5
MMAI LR LR 12 46 41.0
comp=Z,446nm,20.2s,MS4.8,baz=80,slow=40
TESR 78.87 316 ⇑P P **12 06 20.6 -0.3**
TESR 78.87 316 ⇑*iP* P **12 06 20.6 -0.3**
LVV **L'vov** 78.92 320 eP P **12 06 23.0 +1.9**
LVV *e* 12 06 40.2
LVV MLR MLR
comp=Z,2µm,19.0s,MS5.4
LVV MLR MLR
comp=N,500nm,18.0s,MS5.4
LVV MLR MLR
comp=E,2µm,19.0s,MS5.4
VRI **Vrincioaia** 79.11 316 ⇓P P **12 06 22.6 +0.4**
VRI **Vrincioaia** 79.11 316 ⇓*iP* P **12 06 22.6 +0.3**
PLOR **Plostina** 79.17 316 ⇓P P **12 06 22.9 +0.3**
PLOR **Plostina** 79.17 316 ⇓*iP* P **12 06 22.9 +0.3**
NOA **NORSAR Array B** 79.21 334 P P **12 06 21.1 -1.3**
comp=E,6.6nm,0.7s,mb4.7,baz=51,slow=5.5,SNR=16
NOA LR LR 12 45 56.7
comp=E,1µm,18.1s,MS5.2,baz=55,slow=39
NOA **NORSAR Array B** 79.21 334 P P **12 06 21.2 -1.3**
NOA pmax pmax
comp=Z,7.0nm,0.7s
NOA MLR MLR
comp=Z,1µm,18.1s
BUR08 **Bucovina Ar. S** 79.24 318 eP P **12 06 22.5 -0.4**
BURAR **Bucovina Array** 79.24 318 ⇑P P **12 06 22.8 -0.2**
BURAR **Bucovina Array** 79.24 318 ⇑*iP* P **12 06 22.8 -0.1**
KWP **Kalwaria Pacla** 79.76 321 eP P **12 06 26.7 +1.0**
KWP LMZ 12 44 09.8
comp=Z,3µm,20.3s
KWP **Kalwaria Pacla** 79.76 321 eP P **12 06 25.9 +0.2**
comp=Z,21nm,0.6s,mb5.2
KWP **Kalwaria Pacla** 79.76 321 ⇑*iP* P **12 06 25.8 +0.1**
MLR **Muntele Rosu** 79.77 316 ⇑P P **12 06 26.2 +0.3**
MLR **Muntele Rosu** 79.77 316 ⇑*iP* P **12 06 26.2 +0.3**
KOLS **Kolonicke sedl** 80.35 320 eP P **12 06 30.1 +1.2**
comp=Z,5.0nm,1.3s,mb4.3
KOLS **Kolonicke sedl** 80.35 320 eP P **12 06 30.1 +1.2**
KOLS pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
KOLS **Kolonicke sedl** 80.35 320 eP P **12 06 30.1 +1.2**
VOIR 80.36 316 ⇓P P **12 06 29.7 +0.7**
VOIR 80.36 316 ⇓*iP* P **12 06 29.7 +0.7**
STHS **Stebnicka Huta** 80.70 321 eP P **12 06 33.3 +2.6**
comp=Z,6.0nm,1.2s,mb4.4
STHS **Stebnicka Huta** 80.70 321 eP P **12 06 33.3 +2.6**
STHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
STHS **Stebnicka Huta** 80.70 321 eP P **12 06 33.3 +2.6**
SUMG **Summit** 80.79 356 eP P **12 06 30.8 0.0**
SUMG **Summit** 80.79 356 *i* P P **12 06 30.8 0.0**
comp=Z,21nm,0.8s,mb5.1
CRVS **Cervenica-Dubn** 80.83 320 eP P **12 06 33.0 +1.5**
comp=Z,7.5nm,1.4s,mb4.4
CRVS **Cervenica-Dubn** 80.83 320 eP P **12 06 33.0 +1.5**
CRVS pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
CRVS **Cervenica-Dubn** 80.83 320 eP P **12 06 33.0 +1.5**
SCO **Scoresbysund** 81.04 350 *i* P P **12 06 35.7 +3.5**
SCO pmax pmax
comp=Z,13nm,1.1s,mb4.8
SCO **Scoresbysund** 81.04 350 *i* P P **12 06 35.7 +3.5**
comp=Z,13nm,1.1s,mb4.8
OJC **Ojcow** 81.10 322 eP P **12 06 32.8 -0.1**
OJC eSKSac SKSac 12 16 48.6 -1.4
OJC L 12 45 27.0
comp=Z,2.6nm,18.3s
DRGR 81.14 318 ⇑P P **12 06 33.8 +0.6**
DRGR 81.14 318 ⇑*iP* P **12 06 33.8 +0.6**
KECS **Kecovo** 81.60 320 eP P **12 06 36.8 +1.2**
comp=Z,1.7nm,0.7s,mb4.1
KECS *e* 12 06 42.8
KECS **Kecovo** 81.60 320 eP P **12 06 36.8 +1.2**
KECS *e* 12 06 42.8
KECS pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
KECS **Kecovo** 81.60 320 eP P **12 06 36.8 +1.2**
KECS epP pP 12 06 42.8 -1.5
OKC **Ostrava-Krasne** 82.21 322 eP P **12 06 39.6 +0.9**
OKC MLR MLR
comp=Z,2µm,16.9s,MS5.5
OKC **Ostrava-Krasne** 82.21 322 eP P **12 06 39.6 +0.9**
OKC AMS AMS 12 45 50.0
comp=Z,2µm,16.9s
PSZ **Piszkesteto** 82.23 320 ⇓P P **12 06 39.6 +0.7**
PSZ **Piszkesteto** 82.23 320 ⇓*iP* P **12 06 39.6 +0.7**
VYHS **Vyhne** 82.53 321 eP P **12 06 42.3 +1.8**
comp=Z,11nm,1.2s,mb4.8
VYHS **Vyhne** 82.53 321 eP P **12 06 42.3 +1.8**
VYHS pmax pmax
comp=Z,11nm,1.2s,mb4.8
VYHS **Vyhne** 82.53 321 eP P **12 06 42.3 +1.8**
JCW **Jim Creek** 82.55 40 eP P **12 06 41.6 +1.0**
comp=Z,7.5nm,1.0s,mb4.7
MORC **Moravsky Berou** 82.57 322 eP P **12 06 40.4 -0.2**
comp=Z,5.6nm,0.8s,mb4.7
MORC **Moravsky Berou** 82.57 322 eP P **12 06 40.4 -0.2**
MORC pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
MORC **Moravsky Berou** 82.57 322⇑ *iP* P **12 06 40.8 +0.2**
KSP **Ksiaz** 82.66 324 eP P **12 06 40.0 -1.1**
KSP LMZ 12 47 11.6
comp=Z,4µm,17.5s
KSP **Ksiaz** 82.66 324 eP P **12 06 40.3 -0.8**
KSP *e* 12 09 49.2
KSP eS S 12 16 59.7 +2.9
KSP MLR MLR
comp=Z,4µm,19.0s,MS5.8
KOLL **Kolacno** 82.73 321 eP P **12 06 41.8 +0.3**
KOLL **Kolacno** 82.73 321 eP P **12 06 41.8 +0.3**
VTS **Vitosha** 82.89 314 ⇑P P **12 06 43.2 +0.8**
VTS **Vitosha** 82.89 314 ⇑*iP* P **12 06 43.2 +0.8**
DPC **Dobruska-Polom** 82.92 323 eP P **12 06 43.1 +0.7**
DPC MLR MLR
comp=Z,2µm,15.8s,MS5.5
DPC **Dobruska-Polom** 82.92 323 eP P **12 06 43.1 +0.7**
DPC AMS AMS 12 47 10.0
comp=Z,2µm,15.8s
UPC **Upice** 83.00 324 eP P **12 06 43.8 +1.0**
UPC **Upice** 83.00 324 eP P **12 06 43.8 +1.0**
PVCC **Panska Ves** 83.75 324 AMS AMS 12 47 50.0
comp=Z,2µm,15.9s
ETW **Entiat** 83.78 39 eP P **12 06 47.7 +0.8**
BRG **Berggiesshubel** 83.88 325 P P **12 06 46.0 -1.4**
BRG S S 12 17 16.0 +6.9
BRG
comp=N,721nm,17.0s
BRG
comp=E,2µm,20.3s
BRG
comp=Z,2µm,19.4s
TREC **Trest** 83.95 323 AMS AMS 12 47 00.0
comp=Z,2µm,17.6s
PRU **Pruhonice** 84.07 324 eP P **12 06 50.1 +1.7**
PRU MLR MLR
comp=Z,2µm,15.1s,MS5.5
PRU **Pruhonice** 84.07 324 eP P **12 06 50.1 +1.7**
PRU AMS AMS 12 47 40.0
comp=Z,2µm,15.1s
CLL **Collm** 84.11 325⇑ *iP* P **12 06 47.7 -0.8**
comp=Z,13nm,0.9s,mb5.1
CLL eS S 12 17 12.0 +0.6
CLL LR LR
comp=Z,2µm,18.4s,MS5.6
CLL **Collm** 84.11 325⇑ *iP* P **12 06 47.7 -0.8**
CLL eS S 12 17 12.0 +0.6
CLL pmax pmax
comp=Z,13nm,0.9s,mb5.1
CLL MLR MLR
comp=Z,2µm,18.4s,MS5.6
CLL **Collm** 84.11 325⇑ *iP* P **12 06 47.7 -0.8**
comp=Z,13nm,0.9s,mb5.1
CLL *i* sP sP 12 06 58.5 -1.9
CLL *i* sPcP 12 07 01.4
CLL *i* 12 07 07.4
CLL eS S 12 17 12.0 +0.6
comp=N,100nm,15.8s
CLL eS S 12 17 12.0 +0.6
comp=E,300nm,22.1s
CLL eS S 12 17 12.0 +0.6
comp=Z,100nm,14.0s
CLL esPS 12 18 15.0
CLL eSS SS 12 23 00.0 +21
CLL *e* 12 27 36.0
CLL LmH 12 41 00.0
comp=N,1µm,21.3s
CLL LmH 12 41 00.0
comp=E,1µm,20.9s
CLL LmV 12 48 00.0
comp=Z,2µm,18.4s
EDM **Edmonton** 84.21 32 eP P **12 06 50.4 +1.4**
CONA **Conrad Observa** 84.51 321⇑ *iPcP* P **12 06 52.4 +1.8**
comp=Z,19nm,1.1s,mb5.1
HUMO **Hull Mountain** 84.85 45 eP P **12 06 52.9 +0.4**
comp=Z,18nm,1.7s,mb4.9
HAWA **Hanford** 84.89 40 eP P **12 06 58.8 +6.2**

NKC	**Novy Kostel**	**85.03**	**325**		AMS	AMS	12 48 40.0		
	comp=Z,2µm,16.4s								
KHC	**Kasperske Hory**	**85.08**	**323**	*eP*		**P**	**12 06 54.2**	**+0.7**	
	comp=Z,6.9nm,1.1s,mb4.7								
KHC	**Kasperske Hory**	**85.08**	**323**	*eP*		**P**	**12 06 53.4**	**-0.1**	
KHC					MLR	MLR			
	comp=Z,2µm,16.0s,MS5.5								
KHC	**Kasperske Hory**	**85.08**	**323**	*eP*		**P**	**12 06 53.4**	**-0.1**	
KHC					AMS	AMS	12 48 30.0		
	comp=Z,2µm,16.0s								
ARSA	**Arzberg**	**85.08**	**321**	⇑*i*PcP		**P**	**12 06 55.1**	**+1.6**	
	comp=Z,8.2nm,1.4s,mb4.7								
NEW	**Newport**	**85.20**	**38**	*eP*		**P**	**12 06 53.8**	**-0.3**	
	comp=Z,6.6nm,0.7s,mb4.9								
NEW	**Newport**	**85.20**	**38**	*eP*		**P**	**12 06 53.8**	**-0.3**	
NEW					pmax	pmax			
	comp=Z,7.0nm,0.7s								
MOX	**Moxa**	**85.21**	**325**	*eP*		**P**	**12 06 56.9**	**+2.8**	
	comp=Z,9.0nm,1.0s,mb4.8								
MOX				*eS*		S	12 17 28.0	+5.6	
MOX									
	comp=Z,2µm,18.0s								
MOX	**Moxa**	**85.21**	**325**	*eP*		**P**	**12 06 56.9**	**+2.8**	
MOX				*eS*		S	12 17 28.0	+5.6	
MOX					pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.8								
MOX					MLR	MLR			
	comp=Z,2µm,18.0s,MS5.6								
YBH	**Yreka Blue Hor**	**85.47**	**45**	*eP*		**P**	**12 06 56.8**	**+1.3**	
PERS	**Pernice**	**85.66**	**321**	*i* P		**P**	**12 06 59.7**	**+3.3**	
LNOR	**Lincton Mounta**	**85.91**	**40**	*eP*		**P**	**12 06 58.2**	**+0.5**	
GRA1	**Grafenberg Arr**	**85.99**	**325**	*eP*		**P**	**12 07 00.1**	**+2.1**	
	comp=Z,26nm,1.1s,mb5.4								
GRF	**Grafenberg Arr**	**85.99**	**325**	*eP*		**P**	**12 07 00.1**	**+2.1**	
	comp=Z,26nm,1.1s,mb5.4								
GRF	**Grafenberg Arr**	**85.99**	**325**	*eP*		**P**	**12 07 00.1**	**+2.1**	
GRF					pmax	pmax			
	comp=Z,26nm,1.1s,mb5.4								
GRF	**Grafenberg Arr**	**85.99**	**325**	*eP*		**P**	**12 07 00.1**	**+2.1**	
GRF					pmax	pmax			
	comp=Z,26nm,1.1s,mb5.4								
WDC	**Whiskeytown Da**	**86.18**	**46**	*eP*		**P**	**12 06 59.5**	**+0.4**	
	comp=Z,6.0nm,1.1s,mb4.7								
WDC	**Whiskeytown Da**	**86.18**	**46**	*eP*		**P**	**12 06 59.5**	**+0.4**	
WDC					pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.7								
BOJS	**Bojanci**	**86.22**	**320**	*i* P		**P**	**12 07 01.6**	**+2.4**	
VISS	**Visnje**	**86.29**	**320**	*i* P		**P**	**12 07 02.1**	**+2.5**	
WALA	**Waterton Lakes**	**86.45**	**36**	*eP*		**P**	**12 07 01.6**	**+1.3**	
JAVS	**Javornik**	**86.68**	**320**	*i* P		**P**	**12 07 02.5**	**+1.1**	
VOY	**Vojsko**	**86.70**	**321**	*eP*		**P**	**12 07 02.6**	**+1.0**	
VOY				*e*			12 07 05.1		
VOY				*e*			12 07 17.0		
BSMT	**Bassoo Peak**	**86.71**	**37**	*eP*		**P**	**12 07 08.6**	**+7.0**	
MOD	**Modoc**	**86.89**	**44**	*eP*		**P**	**12 07 03.3**	**+0.7**	
BMO	**Blue Mountains**	**87.05**	**41**	*eP*		**P**	**12 07 04.8**	**+1.5**	
WTTA	**Wattenberg**	**87.23**	**323**	⇑*i*PcP		**P**	**12 07 05.5**	**+1.3**	
	comp=Z,14nm,1.0s,mb5.2								
SWMT	**Swartz Lake**	**87.34**	**37**	*eP*		**P**	**12 07 11.1**	**+6.4**	
WVOR	**Wild Horse Val**	**87.63**	**43**	*eP*		**P**	**12 07 06.6**	**+0.5**	
	comp=Z,7.1nm,0.9s,mb4.9								
WVOR	**Wild Horse Val**	**87.63**	**43**	*eP*		**P**	**12 07 06.6**	**+0.4**	
WVOR					pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.9								
SLMT	**Seeley Lake**	**87.78**	**37**	*eP*		**P**	**12 07 06.8**	**0.0**	
MSO	**Missoula**	**87.79**	**38**	*eP*		**P**	**12 07 07.3**	**+0.5**	
	comp=Z,4.5nm,1.1s,mb4.6								
FETA	**Feichten**	**87.87**	**323**	⇑*i*PcP		**P**	**12 07 08.1**	**+0.9**	
	comp=Z,7.6nm,0.9s,mb4.9								
CHMT	**Chamberlain Mo**	**88.11**	**37**	*eP*		**P**	**12 07 08.9**	**+0.6**	
DAVA	**Damuels**	**88.16**	**323**	⇑*i*PcP		**P**	**12 07 09.2**	**+0.6**	
	comp=Z,17nm,0.9s,mb5.3								
FFC	**Flin Flon**	**88.22**	**27**	*eP*		**P**	**12 07 07.7**	**-1.0**	
	comp=Z,15nm,0.8s,mb5.3								
FFC	**Flin Flon**	**88.22**	**27**	*ce*P		**P**	**12 07 09.2**	**+0.5**	
CDF	**Champ du Feu**	**88.81**	**325**	*eP*		**P**	**12 07 10.6**	**-1.0**	
	comp=Z,25nm,1.3s,mb5.1								
CDF	**Champ du Feu**	**88.81**	**325**	*eP*		**P**	**12 07 10.6**	**-1.0**	
	comp=Z,12nm,1.3s,mb5.1								
CDF	**Champ du Feu**	**88.81**	**325**	*eP*		**P**	**12 07 10.6**	**-1.0**	
CDF					pmax	pmax			
	comp=Z,12nm,1.3s,mb5.1								
CMB	**Columbia Colle**	**88.96**	**47**	*eP*		**P**	**12 07 11.9**	**-0.6**	
	comp=Z,5.2nm,0.9s,mb4.9								
CMB	**Columbia Colle**	**88.96**	**47**	*eP*		**P**	**12 07 11.9**	**-0.6**	
CMB					pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.8								
ECH	**Echery**	**89.00**	**325**	*eP*		**P**	**12 07 13.1**	**+0.5**	
	comp=Z,4.0nm,0.9s,mb4.8								
ECH	**Echery**	**89.00**	**325**	*eP*		**P**	**12 07 13.1**	**+0.6**	
ECH					pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.8								
HRY	**Holter Researc**	**89.00**	**37**	*eP*		**P**	**12 07 15.3**	**+2.8**	
LRM	**Limekiln Ridge**	**89.22**	**38**	*eP*		**P**	**12 07 15.0**	**+1.4**	
	comp=Z,28nm,0.8s,mb5.6								
EGMT	**Eagleton**	**89.25**	**35**	*eP*		**P**	**12 07 14.6**	**+0.9**	
DLMT	**Dillon**	**89.42**	**38**	*eP*		**P**	**12 07 14.3**	**-0.2**	
HLID	**Hailey**	**89.49**	**40**	*eP*		**P**	**12 07 15.5**	**+0.6**	
BOZ	**Bozeman (W)**	**89.78**	**38**	*eP*		**P**	**12 07 16.7**	**+0.5**	
	comp=Z,2.5nm,0.8s,mb4.6								
BOZ	**Bozeman (W)**	**89.78**	**38**	*eP*		**P**	**12 07 16.7**	**+0.5**	
BOZ					pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.5								
NVAR	**Mina Array Bea**	**90.10**	**46**	P		**P**	**12 07 18.3**	**+0.5**	
	comp=Z,0.4nm,0.5s,mb4.0,baz=290,slow=5.3,SNR=4.2								
PPT	**Papeete**	**90.68**	**109**	LR		LR	12 42 29.1		
	comp=Z,284nm,20.1s,MS4.7,baz=317,slow=32								
M13A	**Montello**	**90.97**	**42**	P		**P**	**12 07 23.6**	**+1.7**	
	comp=Z,5.7nm,1.1s,mb4.8								
LPL	**La Plagne**	**90.97**	**323**	*eP*		**P**	**12 07 20.4**	**-1.4**	
LPG	**La Plagne**	**90.97**	**323**	*eP*		**P**	**12 07 20.0**	**-1.8**	
	comp=Z,9.5nm,0.9s,mb4.8								
LPG	**La Plagne**	**90.97**	**323**	*eP*		**P**	**12 07 20.0**	**-1.8**	
	comp=Z,4.8nm,0.9s,mb4.8								
LPG	**La Plagne**	**90.97**	**323**	*eP*		**P**	**12 07 20.0**	**-1.8**	
LPG					pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.8								
LKWY	**Lake**	**91.14**	**38**	*eP*		**P**	**12 07 25.9**	**+3.3**	
LKWY				*ep*P		pP	12 07 36.4	+5.0	
FLWY	**Flagg Ranch**	**91.28**	**38**	*ep*P		pP	12 07 32.1	+0.1	
TPAW	**Teton Pass**	**91.52**	**39**	*eP*		**P**	**12 07 24.6**	**+0.2**	
	comp=Z,4.2nm,0.9s,mb4.8								
KMBO	**Kilima Mbogo**	**91.68**	**270**	LR		LR	12 54 39.1		
	comp=Z,161nm,18.2s,MS4.5,baz=89,slow=40								
LAO	**LASA Array**	**91.94**	**34**	*eP*		**P**	**12 07 26.4**	**+0.1**	
	comp=Z,9.2nm,1.0s,mb5.1								
HWUT	**Hardware Ranch**	**92.35**	**41**	*eP*		**P**	**12 07 27.5**	**-0.8**	
	comp=Z,3.3nm,1.1s,mb4.6								
GRR	**Gorron**	**92.79**	**329**	*eP*		**P**	**12 07 27.1**	**-3.0**	
SGMF	**Saint Gilles**	**93.67**	**330**	*eP*		**P**	**12 07 31.5**	**-2.7**	
ROSF	**Rostrenen**	**93.93**	**330**	*eP*		**P**	**12 07 32.4**	**-3.0**	
	comp=Z,41nm,1.1s,mb5.5								
ROSF	**Rostrenen**	**93.93**	**330**	*eP*		**P**	**12 07 32.4**	**-3.0**	
	comp=Z,20nm,1.1s,mb5.5								
ROSF	**Rostrenen**	**93.93**	**330**	*eP*		**P**	**12 07 32.4**	**-3.0**	
ROSF					pmax	pmax			
	comp=Z,20nm,1.1s,mb5.5								
PFO	**Pinyon Flat Ob**	**94.08**	**49**	*eP*		**P**	**12 07 37.5**	**+1.1**	
	comp=Z,8.4nm,1.0s,mb5.1								
PFO	**Pinyon Flat Ob**	**94.08**	**49**	*eP*		**P**	**12 07 37.5**	**+1.1**	
PFO					pmax	pmax			
	comp=Z,8.0nm,1.0s,mb5.1								
KEST	**Kesra**	**95.63**	**314**	LR		LR	12 56 08.1		
	comp=Z,173nm,18.2s,MS4.6,baz=178,slow=39								
SCHQ	**Schefferville**	**97.93**	**9**	LR		LR	12 55 31.0		
	comp=Z,307nm,19.3s,MS4.8,baz=87,slow=38								
SBA	**Scott Base**	**106.53**	**172**	*e*PKPdf		PKiKP	12 12 48.3	+6.7	

*IDC **09** 12:08:44.4±21.0, 10.˝79N×88.˝52W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/17, mbtmp3.7/3, Error ellipse: s-maj=423.2km s-min=68.2km az=6.0*

*ISCJB **09** 12:09:17.1±1.1, 15.˝20N±0.˝05×88.˝47W±0.˝05, h2km±7km, mb3.8/2, Error ellipse: s-maj=8.3km s-min=7.4km az=146.1*

*CASC **09** 12:09:25.7±3.3, 14.˝88N×88.˝50W, h0km±16km, MD3.7*

ISC 09 12:09:18.5±1.1, 15.˝19N±0.˝05×88.˝41W±0.˝05, h6km±7km, n14, σ0s98/20, mb3.8/2, Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTO2	**Montecristo 2**	**1.21**	**230**	*eP*	**Sg**	**12 09 52.8**	**-4.7**
MRL	**Marmol**	**1.25**	**265**	*eP*	**Sg**	**12 10 00.1**	**+1.4**
SNVI	**San Vicente**	**1.62**	**195**	*eP*	**Pg**	**12 09 50.5**	**+0.8**
SNVI				*eS*	**Sg**	**12 10 10.6**	**0.0**
BOQS	**Boqueron**	**1.67**	**211**	*eP*	**Pg**	**12 09 50.3**	**-0.3**
BOQS				*eS*	**Sn**	**12 10 11.2**	**+1.1**
LFRS	**El Faro**	**1.68**	**202**	*eP*	**Pg**	**12 09 50.6**	**-0.1**
LFRS				*eS*	**Sn**	**12 10 09.2**	**-1.0**
BLLM	**Bellamira**	**1.74**	**175**	*eP*	**Pg**	**12 09 52.5**	**+0.6**
NBG	**Las Nubes**	**1.97**	**253**	*eP*	**Pg**	**12 10 00.9**	**+4.6**
CNCH	**Conchagua**	**1.98**	**164**	*eP*	**Pg**	**12 09 56.4**	**-0.1**
FUG	**Fuego 3**	**2.47**	**253**	*eP*	**Pg**	**12 10 03.9**	**-1.9**
FUG				*eS*	**Sg**	**12 10 37.4**	**-0.4**
FG6		**2.48**	**256**	*eP*	**Pg**	**12 10 05.2**	**-0.8**
FG6				*eS*	**Sg**	**12 10 37.9**	**-0.2**
TP2	**Tecpan 2**	**2.56**	**261**	*eP*	**Pg**	**12 10 08.2**	**+0.6**
TP2				*eS*	**Sg**	**12 10 46.4**	**+5.6**
TXAR	**Lajitas Array**	**19.91**	**318**	P	**Pn**	**12 13 53.8**	**+1.3**
	0.8nm,0.7s,baz=138,slow=11,SNR=10						
SCHQ	**Schefferville**	**42.96**	**18**	P	**P**	**12 17 18.6**	**+0.5**
	1.1nm,0.5s,mb3.9,baz=222,slow=14,SNR=2.9						
YKA	**Yellowknife Ar**	**50.74**	**345**	P	**P**	**12 18 16.5**	**-2.4**
	0.6nm,0.7s,mb3.7,baz=141,slow=7.9,SNR=4.9						

*ISCJB **09** 12:10:17.1±1.0, 32.˝70N±0.˝03×105.˝61E±0.˝03, h0km±6km, mb4.4/34, Error ellipse: s-maj=4.9km s-min=4.7km az=177.7*

*IDC **09** 12:10:18.5±0.8, 32.˝71N×105.˝68E, h0km, mb4.2/13, mb1 4.2/16, mb1mx4.1/23, mbtmp4.1/16, ML3.8/3, Error ellipse: s-maj=24.1km s-min=17.9km az=52.0*

*BJI **09** 12:10:20.0, 32.˝64N×105.˝62E, h13km, mB4.7/9, mb4.5/18, ML4.2/21, Ms4.1/15, Ms7 3.9/12*

*NEIC **09** 12:10:20.9±0.3, 32.˝74N×105.˝51E, h10km, mb4.6/16, Error ellipse: s-maj=9.1km s-min=6.5km az=224.0*

*MOS **09** 12:10:21.4±0.9, 32.˝65N×105.˝70E, h33km, mb4.5/21, Error ellipse: s-maj=15.6km s-min=7.7km az=112.9*

ISC 09 12:10:20.0±1.1, 32.˝67N±0.˝03×105.˝53E±0.˝03, h5km±7km, n101, σ1s22/115, mb4.3/34, 8C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.31**	**221**	Pg	Px	12 11 15.7	
CD2				Sg	**Sg**	**12 11 29.2**	**-5.1**
CD2				smax			
	comp=N,6µm,0.8s						
CD2				smax			
	comp=E,8µm,0.6s						
XAN	**Xi'an**	**3.15**	**63**	Pg	**Pb**	**12 11 11.8**	**-4.6**
XAN				Sg	**Sg**	**12 11 58.5**	**-2.6**
XAN				smax			
	comp=N,940nm,1.0s						
XAN				smax			
	comp=E,630nm,1.2s						
XAN				LR	LR		
	comp=N,680nm,6.5s						
XAN				LR	LR		
	comp=E,660nm,8.2s						
XAN				LR	LR		
	comp=Z,810nm,8.4s						
LZH	**Lanzhou**	**3.69**	**338**	⇑Pn	**Pn**	**12 11 19.4**	**+1.8**
LZH				Pg	**Pg**	**12 11 30.8**	**+0.2**
LZH				Sn	**Sn**	**12 12 05.4**	**+4.0**
LZH				Sg	**Sg**	**12 12 15.0**	**-3.4**
LZH				smax			
	comp=N,2µm,0.7s						
LZH				smax			
	comp=E,1µm,0.7s						
LZH				LR	LR		
	comp=N,4µm,4.6s						
LZH				LR	LR		
	comp=Z,5µm,5.5s						
ENH	**Enshi**	**4.14**	**124**	*e*Pn	**Pn**	**12 11 25.8**	**+2.0**
ENH				*e*Sn	**Sn**	**12 12 13.5**	**+0.9**
GYA	**Guiyang**	**6.27**	**171**	Pn	**Pn**	**12 11 53.9**	**+0.8**
GYA				Sn	**Sn**	**12 13 02.0**	**-3.1**
GYA				Sg	**Sb**	**12 13 25.9**	**+1.1**
GYA				smax			
	comp=N,330nm,0.7s						
GYA				smax			
	comp=E,350nm,0.8s						
WHN	**Wuhan**	**7.81**	**103**	Pn	**Pn**	**12 12 14.9**	**+0.6**
WHN				Sn	**Sn**	**12 13 40.9**	**-2.3**
KMI	**Kunming**	**7.91**	**199**	P	**Pn**	**12 12 18.1**	**+2.5**
KMI				S	**Sn**	**12 13 44.6**	**-0.9**
KMI				smax			
	comp=N,55nm,0.7s						
KMI				smax			
	comp=E,60nm,0.6s						
GTA	**Gaotai**	**8.17**	**327**	⇑P	**Pn**	**12 12 20.4**	**+1.3**
GTA				pP		12 12 24.0	
GTA				sP		12 12 26.6	
GTA				S	**Sn**	**12 13 53.5**	**+1.7**
GTA				pmax	pmax		
	comp=Z,15nm,0.7s						
HHC	**Hu-ho-hao-te**	**9.49**	**29**	*eP*	**Pn**	**12 12 35.2**	**-2.1**
HHC				*eS*	**Sn**	**12 14 24.1**	**-0.2**
HHC				pmax	pmax		
	comp=Z,17nm,0.7s						
HHC				pmax	pmax		
	comp=Z,730nm,4.5s						
HHC				LR	LR		
	comp=N,500nm,4.4s						
HHC				LR	LR		
	comp=E,520nm,3.8s						
HHC				LR	LR		
	comp=Z,180nm,4.7s						
NJ2	**Nanjing**	**11.28**	**90**	*eP*	**Pn**	**12 13 08.6**	**+6.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJI	**Beijing**	**11.30**	**46**	P	**Pn**	**12 13 03.0**	**+1.0**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BJI				LR	LR		
	comp=N,260nm,11.8s						
BJI				LR	LR		
	comp=E,410nm,10.8s						
BJI				LR	LR		
	comp=Z,220nm,15.1s						
GZH	**Guangzhou**	**11.78**	**142**	P	**Pn**	**12 13 03.5**	**-5.2**
GZH				S	**Sn**	**12 15 11.6**	**-8.9**
GZH				smax			
	comp=N,36nm,1.4s						
GZH				smax			
	comp=E,61nm,1.4s						
QIZ	**Qiongzhong**	**14.12**	**163**	P	**Pn**	**12 13 40.6**	**-0.1**
SONM	**Songino Array**	**15.16**	**2**	Pn	**Pn**	**12 13 53.5**	**-1.3**
	comp=E,0.2nm,0.3s,baz=186,slow=13,SNR=7.9						
SONM				Lg		12 18 26.4	
	comp=E,0.1nm,0.3s,baz=177,slow=29,SNR=3.4						
CMAR	**Chiang Mai Arr**	**15.34**	**204**	Pn	**Pn**	**12 13 57.2**	**-0.1**
	comp=E,0.2nm,0.3s,baz=15,slow=11,SNR=6.6						
YHNB	**Yeheng**	**16.01**	**116**	*e*Pn	**Pn**	**12 14 08.6**	**+2.6**
	comp=E,35nm,0.8s						
SSLB	**Suanglung**	**16.20**	**119**	*e*Pn	**Pn**	**12 14 13.4**	**+5.0**
	comp=E,29nm,0.9s						
TAPN	**Taplejung**	**16.32**	**256**	*eP*	**Pn**	**12 14 10.1**	**+0.2**
ODAN	**Odare**	**16.78**	**255**	*eP*	**Pn**	**12 14 15.4**	**-0.3**
	comp=E,18nm,0.6s						
RAMN	**Ramite**	**17.38**	**256**	*eP*	**Pn**	**12 14 21.8**	**-1.6**
JIRN	**Jiri**	**17.45**	**258**	*eP*	**Pn**	**12 14 24.4**	**+0.2**
GUN	**Gumba**	**17.62**	**260**	*eP*	**Pn**	**12 14 27.2**	**+0.9**
	comp=E,41nm,0.8s						
ZAK	**Zakamensk**	**17.78**	**355**	*eP*	**Pn**	**12 14 29.9**	**+1.8**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s						
PKI	**Pulchoki**	**18.13**	**259**	*eP*	**Pn**	**12 14 31.0**	**-1.6**
KKN	**Kakani**	**18.16**	**260**	*eP*	**Pn**	**12 14 31.5**	**-1.4**
	comp=Z,32nm,0.8s						
GKN	**Gorkha**	**18.62**	**261**	*eP*	**Pn**	**12 14 37.3**	**-1.3**
	comp=Z,24nm,0.6s						
KSRS	**Korea Array**	**18.93**	**69**	P	**Pn**	**12 14 39.2**	**-3.1**
	comp=Z,0.4nm,0.3s,baz=250,slow=10.0,SNR=21						
CN2	**Changchun**	**19.14**	**49**	*eP*	**Pn**	**12 14 47.0**	**+2.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KOLN	**Koldanda**	**19.56**	**261**	*eP*	**Pn**	**12 14 47.9**	**-2.1**
	comp=Z,23nm,0.7s						
MK31	**Makanchi Array**	**22.66**	**315**	*eP*	**P**	**12 15 22.1**	**+0.1**
MKAR	**Makanchi Array**	**22.66**	**315**	P	**P**	**12 15 22.4**	**+0.5**
	comp=Z,3.0nm,0.5s,mb4.0,baz=116,slow=11,SNR=21						
MKAR				PcP	PcP	12 19 13.1	-1.5
	comp=Z,0.3nm,0.2s,baz=116,slow=3.4,SNR=3.1						
MKAR				ScP	ScP	12 22 51.5	-1.4
	comp=Z,0.2nm,0.2s,baz=123,slow=5.3,SNR=2.8						
KSH	**Kashi**	**24.77**	**294**	*eP*	**P**	**12 15 47.0**	**+4.4**
KSH				*ep*P		12 15 56.4	
KSH				*es*P	sP	12 16 00.3	+16
KSH				*e*S	**S**	**12 20 04.8**	**-0.6**
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
KSH				pmax	pmax		
	comp=Z,51nm,6.3s						
ZALV	**Zalesovo Beam**	**25.89**	**331**	P	**P**	**12 15 52.9**	**+0.3**
	comp=Z,2.2nm,0.6s,mb3.9,baz=128,slow=9.1,SNR=9.2						
ZALV	**Zalesovo Beam**	**25.89**	**331**	P	**P**	**12 15 52.9**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
UCH	**Uchtor**	**26.29**	**300**	*eP*	**P**	**12 15 56.7**	**+0.4**
	comp=Z,7.3nm,1.3s,mb4.0						
KURK	**Kurchatov**	**26.77**	**320**	P	**P**	**12 16 00.9**	**+0.3**
	comp=Z,2.7nm,0.8s,mb3.8,baz=131,slow=9.0,SNR=12						
KURK				PcP	PcP	12 19 22.8	-0.7
	comp=Z,1.6nm,0.7s,baz=112,slow=1.9,SNR=5.6						
KURK	**Kurchatov**	**26.77**	**320**	*ce*P	**P**	**12 16 02.0**	**+1.4**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.1						
AML	**Almayashu**	**26.87**	**300**	*eP*	**P**	**12 16 03.7**	**+2.1**
	comp=Z,5.2nm,1.1s,mb4.0						
BRVK	**Borovoye**	**32.43**	**319**	*eP*	**P**	**12 16 50.3**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.7						
ABKAR	**Akbulak array**	**37.58**	**310**	*eP*	**P**	**12 17 35.6**	**+0.4**
	comp=Z,1.2nm,0.4s,mb4.0						
ARU	**Arti**	**39.97**	**321**	*c iP*	**P**	**12 17 55.1**	**-0.1**
ARU						12 19 27.7	
ARU				S	**S**	**12 23 58.4**	**-2.4**
ARU				SS	SS	12 26 48.0	-9.2
ARU				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.4						
TIXI	**Tiksi**	**40.99**	**11**	*eP*	**P**	**12 18 02.6**	**-0.8**
	comp=Z,4.5nm,0.6s,mb4.3						
TIXI	**Tiksi**	**40.99**	**11**	*eP*	**P**	**12 18 02.6**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
SEY	**Seymchan**	**42.13**	**30**	*ce*P	**P**	**12 18 15.0**	**+2.1**
VSR	**Storozhevoye**	**50.93**	**312**	*eP*	**P**	**12 19 22.5**	**+0.4**
VSR				pmax	pmax		
	comp=N,2.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,5.0nm,0.4s						
VSR				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.9						
OBN	**Obninsk**	**52.15**	**317**	*eP*	**P**	**12 19 31.3**	**+0.2**
OBN				*e*		12 20 41.9	
OBN				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
JOF	**Joensuu**	**54.37**	**327**	*eP*	**P**	**12 19 47.2**	**-0.2**
JOF	**Joensuu**	**54.37**	**327**	*ep*	**P**	**12 19 47.2**	**-0.2**
ARCES	**ARCESS Array B**	**56.34**	**335**	P	**P**	**12 20 01.1**	**-0.3**
	comp=Z,1.4nm,0.6s,mb4.2,baz=78,slow=6.7,SNR=13						
ARCES	**ARCESS Array B**	**56.34**	**335**	P	**P**	**12 20 01.2**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**56.96**	**326**	P	**P**	**12 20 05.0**	**-1.0**
	comp=Z,3.4nm,0.5s,mb4.7,baz=88,slow=6.8,SNR=27						
FINES	**FINESS Array B**	**56.96**	**326**	P	**P**	**12 20 05.0**	**-1.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRTR	**Keskin Array B**	**57.04**	**299**	P	**P**	**12 20 07.2**	**+0.2**
	comp=Z,1.4nm,0.9s,mb4.0,baz=125,slow=8.2,SNR=5.8						
BRTR	**Keskin Array B**	**57.04**	**299**	*ce*P	**P**	**12 20 07.8**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	**Malin Array Be**	**57.21**	**313**	P	**P**	**12 20 06.8**	**-1.1**
	comp=Z,3.2nm,0.5s,mb4.6,baz=69,slow=6.4,SNR=8.0						
AKASG	**Malin Array Be**	**57.21**	**313**	*ce*P	**P**	**12 20 09.0**	**+1.0**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KOLS	**Kolonicke sedl**	**62.02**	**312**	*eP*	**P**	**12 20 42.9**	**+1.7**
KOLS	**Kolonicke sedl**	**62.02**	**312**	*eP*	**P**	**12 20 42.9**	**+1.7**
ASAR	**Alice Springs**	**62.22**	**150**	P	**P**	**12 20 42.3**	**-0.4**
	comp=Z,2.0nm,0.7s,mb4.4,baz=330,slow=7.2,SNR=36						
ASAR	**Alice Springs**	**62.22**	**150**	P	**P**	**12 20 42.3**	**-0.4**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CRVS	**Cervenica-Dubn**	**62.54**	**312**	*eP*	**P**	**12 20 44.2**	**-0.4**
CRVS	**Cervenica-Dubn**	**62.54**	**312**	*eP*	**P**	**12 20 44.2**	**-0.4**
KECS	**Kecovo**	**63.29**	**312**	*eP*	**P**	**12 20 48.5**	**-1.1**
KECS	**Kecovo**	**63.29**	**312**	*eP*	**P**	**12 20 48.5**	**-1.1**
NOA	**NORSAR Array B**	**64.00**	**327**	P	**P**	**12 20 53.2**	**-0.9**
	comp=Z,2.9nm,0.5s,mb4.5,baz=70,slow=6.7,SNR=13						
NOA	**NORS

*ISK **09** 12:34:34.3, 38.91N×26.04E, h2km, MD3.0*
*ATH **09** 12:34:34.5, 38.91N×26.16E, h23km±1km, MD3.1/4*
*DDA **09** 12:34:35.6, 38.88N×26.15E, h7km±1km, Md2.8*
*CSEM **09** 12:34:35.4±0.1, 38.88N×26.04E, h8km, ML2.4/5, Error ellipse: s-maj=3.5km s-min=2.0km az=65.0*
*ISCJB **09** 12:34:35.3±0.6, 38.90N±0.02×26.07E±0.05, h5km±5km, Error ellipse: s-maj=6.2km s-min=3.6km az=158.4*
*NEIC **09** 12:34:35.0, 38.91N×26.01E, h9km, MD3.1(ATH), ML3.4(ISK), After ISK.*
*THE **09** 12:34:35.6, 38.91N×26.07E, h0km±2km, ML2.4/5, Error ellipse: s-maj=2.2km s-min=0.8km az=233.0*

ISC 09 12:34:35.7±0.6, 38.89N±0.03×26.05E±0.05, h8km±4km, n40, σ0°69/64, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
SIGR	**SIGRI**	**0.35**	**335**	P		**Pg**	**12 34 42.8**	**+0.2**
SIGR				S		**Sg**	**12 34 47.8**	**+0.5**
SIGR	**SIGRI**	**0.35**	**335**	P		**Pg**	**12 34 42.8**	**+0.2**
SIGR				S		**Sg**	**12 34 47.8**	**+0.5**
PRK	**Paraskevi**	**0.40**	**26**	*e*Pb		**Pg**	**12 34 42.5**	**-0.9**
PRK				*e*Sb		**Sg**	**12 34 47.8**	**-0.9**
PRK	**Paraskevi**	**0.40**	**26**	*e*PB		**Pg**	**12 34 42.5**	**-0.9**
PRK				*e*SB		**Sg**	**12 34 47.8**	**-0.9**
PRK	**Paraskevi**	**0.40**	**26**	P		**Pg**	**12 34 43.0**	**-0.4**
PRK				S		**Sg**	**12 34 48.8**	**+0.1**
PRK	**Paraskevi**	**0.40**	**26**	*e*Pb		**Pg**	**12 34 42.5**	**-0.9**
PRK	**Paraskevi**	**0.40**	**26**	P		**Pg**	**12 34 43.0**	**-0.4**
PRK				*e*Sb		**Sg**	**12 34 47.8**	**-0.9**
PRK				S		**Sg**	**12 34 48.8**	**+0.1**
CHOS	**Chios island**	**0.50**	**179**	*e*PN		**Pg**	**12 34 45.2**	**-0.2**
CHOS	**Chios island**	**0.50**	**179**	P		**Pg**	**12 34 45.2**	**-0.2**
CHOS				S		**Sg**	**12 34 54.9**	**+2.9**
CHOS	**Chios island**	**0.50**	**179**	P		**Pg**	**12 34 45.2**	**-0.2**
URLA	**Izmir**	**0.68**	**141**	*i* P		**Pg**	**12 34 47.9**	**-0.9**
URLA				*i* S		**Sg**	**12 34 57.0**	**-0.6**
URLA	**Izmir**	**0.68**	**141**	*i* P		**Pg**	**12 34 47.9**	**-0.9**
URLA				*i* S		**Sg**	**12 34 57.0**	**-0.7**
BLCB	**Balcova**	**0.93**	**123**	*e*PG		**Pg**	**12 34 53.1**	**-0.4**
BLCB	**Balcova**	**0.93**	**123**	P		**Pg**	**12 34 53.9**	**+0.4**
BLCB				S		**Sg**	**12 35 06.7**	**+1.2**
BLCB	**Balcova**	**0.93**	**123**	*e*Pg		**Pg**	**12 34 53.1**	**-0.4**
BLCB	**Balcova**	**0.93**	**123**	P		**Pg**	**12 34 53.9**	**+0.4**
BLCB				S		**Sg**	**12 35 06.7**	**+1.2**
BOZC	**Bozcaada**	**0.95**	**0**	*i* P		**Pg**	**12 34 54.0**	**0.0**
BOZC				*i* S		**Sg**	**12 35 07.0**	**+0.7**
EZN	**Ezine**	**0.96**	**13**	*e*PG		**Pg**	**12 34 53.1**	**-1.1**
EZN				*e*SG		**Sg**	**12 35 07.0**	**+0.4**
EZN	**Ezine**	**0.96**	**13**	Pg		**Pg**	**12 34 53.8**	**-0.3**
EZN	**Ezine**	**0.96**	**13**	Pg		**Pg**	**12 34 53.8**	**-0.3**
EZN				*e*Sg		**Sg**	**12 35 07.0**	**+0.4**
LIA	**Limnos Island**	**1.21**	**327**	*e*Pn		**Pb**	**12 34 58.3**	**-0.6**
LIA				*e*Sn		**Sn**	**12 35 15.5**	**0.0**
LIA	**Limnos Island**	**1.21**	**327**	*e*PN		**Pb**	**12 34 58.3**	**-0.6**
LIA				*e*SN		**Sn**	**12 35 15.5**	**0.0**
LIA	**Limnos Island**	**1.21**	**327**	P		**Pb**	**12 34 58.3**	**-0.6**
LIA				S		**Sb**	**12 35 15.2**	**+0.6**
LIA	**Limnos Island**	**1.21**	**327**	P		**Pb**	**12 34 58.3**	**-0.6**
LIA				S		**Sb**	**12 35 15.2**	**+0.6**
LIA				*e*Sn		**Sn**	**12 35 15.5**	**0.0**
GADA	**Gvkgeada**	**1.30**	**355**	*e*PN		**Pn**	**12 34 59.8**	**-0.5**
GADA	**Gvkgeada**	**1.30**	**355**	*e*Pn		**Pn**	**12 34 59.8**	**-0.4**
BALY	**Balya**	**1.49**	**55**	*e*P		**Pn**	**12 35 02.8**	**+0.1**
BALY				*i* S		**Sn**	**12 35 22.7**	**+0.4**
BALY	**Balya**	**1.49**	**55**	*e*P		**Pn**	**12 35 02.8**	**+0.1**
BALY				*i* S		**Sn**	**12 35 22.7**	**+0.4**
GELI	**Tayfur-Gelibol**	**1.54**	**12**	*e*PN		**Pn**	**12 35 03.4**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.54**	**12**	*e*Pn		**Pn**	**12 35 03.4**	**-0.1**
LPK	**Lapseki**	**1.58**	**20**	*e*PN		**Pn**	**12 35 03.9**	**-0.1**
LPK	**Lapseki**	**1.58**	**20**	*e*Pn		**Pn**	**12 35 03.9**	**-0.1**
AOS	**Alonnisos**	**1.71**	**280**	P		**Pn**	**12 35 05.5**	**-0.3**
AOS	**Alonnisos**	**1.71**	**280**	P		**Pn**	**12 35 05.5**	**-0.3**
GONE	**Gonen-Balikesi**	**1.72**	**47**	*e*PN		**Pn**	**12 35 06.2**	**+0.3**
GONE	**Gonen-Balikesi**	**1.72**	**47**	*e*Pn		**Pn**	**12 35 06.2**	**+0.3**
ALN	**Alexandroupoli**	**2.00**	**360**	*e*Pn		**Pn**	**12 35 08.6**	**-1.3**
ALN	**Alexandroupoli**	**2.00**	**360**	*e*PN		**Pn**	**12 35 08.6**	**-1.3**
ALN	**Alexandroupoli**	**2.00**	**360**	P		**Pn**	**12 35 08.8**	**-1.1**
ALN				S		**Sn**	**12 35 36.0**	**+0.8**
ALN	**Alexandroupoli**	**2.00**	**360**	P		**Pn**	**12 35 08.8**	**-1.1**
ALN				S		**Sn**	**12 35 36.0**	**+0.8**

*IDC **09** 12:40:08.5±1.9, 33.04N×91.78E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/22, mbtmp3.5/5, MS3.2/1, Ms1 3.2/1, ms1mx2.7/19, Error ellipse: s-maj=70.6km s-min=25.8km az=69.0*
*ISCJB **09** 12:40:11.1±0.9, 33.46N±0.09×91.7E±0.2, h10km, mb3.3/3, Error ellipse: s-maj=23.1km s-min=8.2km az=27.3*

ISC 09 12:40:13.0±0.9, 33.45N±0.09×91.8E±0.2, h10km, n13, σ0°97/13, mb3.3/3, Qinghai

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
LSA	**Lhasa**	**3.78**	**189**	P		**Pn**	**12 41 10.3**	**-1.0**
LSA				S		**Sn**	**12 42 02.3**	**+6.5**
LSA				LR		LR		
	comp=N,27μm,0.8s							
LSA				LR		LR		
	comp=Z,2μm,0.9s							
JIRN	**Jiri**	**7.53**	**221**	*e*P		**Pn**	**12 42 04.0**	**+1.2**
KKN	**Kakani**	**7.96**	**227**	*e*P		**Pn**	**12 42 08.8**	**+0.1**
PKI	**Pulchoki**	**8.04**	**225**	*e*P		**Pn**	**12 42 10.1**	**+0.2**
DMN	**Daman**	**8.20**	**227**	*e*P		**Pn**	**12 42 11.9**	**-0.1**
	comp=Z,11nm,0.5s							
GKN	**Gorkha**	**8.21**	**231**	*e*P		**Pn**	**12 42 13.1**	**+0.9**
KOLN	**Koldanda**	**9.05**	**233**	*e*P		**Pn**	**12 42 22.4**	**-1.3**
	comp=Z,5.4nm,0.3s							
AAK	**Ala-Archa**	**16.41**	**309**	LR		LR	12 51 09.7	
	comp=Z,77nm,18.5s,baz=149,slow=40							
SONM	**Songino Array**	**18.09**	**33**	P		**Pn**	**12 44 24.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=213,slow=10,SNR=3.6							
KURK	**Kurchatov**	**19.78**	**335**	P		**Pn**	**12 44 42.8**	**-1.9**
	comp=Z,1.3nm,0.2s,baz=145,slow=12,SNR=5.5							
ZALV	**Zalesovo Beam**	**21.08**	**348**	P		**P**	**12 44 58.7**	**+1.4**
	comp=Z,0.3nm,0.2s,mb3.2,baz=165,slow=12,SNR=3.5							
ASAR	**Alice Springs**	**69.53**	**139**	P		**P**	**12 51 17.2**	**-4.7**
	comp=Z,0.5nm,0.7s,mb3.5,baz=328,slow=7.2,SNR=8.0							
ILAR	**Eielson Array**	**71.97**	**23**	P		**P**	**12 51 36.6**	**+0.3**
	comp=Z,0.2nm,0.7s,mb3.1,baz=313,slow=6.0,SNR=3.0							

CASC 09 12:41:14.8±1.1, 12.62N×88.85W, h36km±398km, MD3.7, ML3.2, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
SNVI	**San Vicente**	**0.99**	**1**	*e*P		Pn	12 41 32.2	+0.1
SNVI				*e*S		Sn	12 41 46.0	+1.2
BLLM	**Bellamira**	**1.01**	**36**	*e*P		Pn	12 41 32.9	+0.3
LFRS	**El Faro**	**1.02**	**348**	*e*P		Pn	12 41 32.8	+0.2
LFRS				*e*S		Sn	12 41 46.5	+0.9
BOQS	**Boqueron**	**1.18**	**339**	*e*P		Pn	12 41 35.6	+0.7
BOQS				*e*P			12 41 35.6	
BOQS				*e*S		Sn	12 41 51.0	+1.2
BOQS				AML		AML	12 41 52.6	
	comp=Z,587nm,0.2s							
CNCH	**Conchagua**	**1.19**	**57**	*e*P		Pn	12 41 34.8	-0.2
CNCH				*e*P			12 41 35.3	
CNCH				*e*S		Sn	12 41 51.2	+1.4
CNCH				*e*S		Sn	12 41 51.3	+1.5
CNCH				AML		AML	12 41 56.8	
	comp=Z,320nm,0.5s							
CAHU	**Cacaquatique**	**1.30**	**29**	*e*P		Pn	12 41 36.8	+0.3
CAHU				*e*S		Sn	12 41 53.9	+1.2
SBLS	**San Blas**	**1.43**	**328**	*e*P		Pn	12 41 38.7	+0.5
SBLS				*e*S		Sn	12 41 57.5	+1.8
SNJE	**San Jose**	**1.44**	**329**	*e*P		Pn	12 41 38.8	+0.4
SNJE				*e*S		Sn	12 41 57.2	+1.1
RBDL	**Robledal**	**1.69**	**331**	*e*P		Pn	12 41 43.0	+1.2
CRIN	**San Cristobal**	**1.76**	**87**	*e*P		Pn	12 41 43.4	+0.6
CRIN				*e*S		Sn	12 42 05.8	+1.8
TGUH	**Tegucigalpa,Un**	**2.10**	**47**	*e*P		Pn	12 41 47.8	+0.3
CNGN	**Cerro Negro**	**2.10**	**93**	*e*P		Pn	12 41 47.4	-0.2
COPN	**Copaltepe**	**2.25**	**101**	*e*P		Pn	12 41 49.0	-0.6
COPN				*e*S		Sn	12 42 16.6	+0.5
CSAN		**2.41**	**100**	*e*P		Pn	12 41 52.0	+0.3
CSAN				*e*S		Sn	12 42 19.9	-0.2

MAN 09 13:04:30, 12.81N×120.79E, h30km, mb4.6, ML3.5, MS3.5, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
BUSP	**Coron**	**0.99**	**216**	*e*P		Pn	13 04 49.5	+1.6
BUSP				*e*S		Sn	13 05 01.5	+0.6
LUBP	**Lubang**	**1.06**	**330**	*e*P		Pn	13 04 48.3	-0.5
LUBP				*e*S		Sn	13 05 03.7	+1.1
BOAC	**Boac**	**1.21**	**58**	*e*P		Pn	13 04 49.4	-1.5
OTRP	**Odiongan**	**1.28**	**110**	*e*P		Pn	13 04 52.0	+0.1
AUQP	**San Andres**	**1.90**	**74**	*e*P		Pn	13 05 02.5	+2.0
GQP	**Guinayangan**	**1.94**	**56**	*i*P		Pn	13 05 01.6	+0.7
CUYO	**Cuyo Island**	**1.96**	**174**	*e*P		Pn	13 05 02.3	+1.1
ENPP	**El Nido**	**2.08**	**220**	*e*P		Pn	13 05 04.9	+1.9
BALP	**Baler**	**3.01**	**15**	*e*P		Pn	13 05 17.9	+2.3

CASC 09 13:17:35.0±2.2, 8.38N×82.84W, h0km±11km, MD3.7, 1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
ACR	**Cerro Adams**	**0.42**	**310**	*e*P		Pg	13 17 44.2	+1.0
ACR				*e*S		Sg	13 17 51.5	+2.9
BRU2	**Volcan**	**0.44**	**20**	*i*P		Pg	13 17 45.7	+2.3
BRU2				*e*S		Sg	13 17 53.9	+4.8
TBS2		**0.45**	**24**	*e*P		Pg	13 17 43.4	-0.2
TBS2				*e*S		Sg	13 17 51.6	+2.2
QCR	**Quepos**	**1.67**	**308**	*e*P		Pn	13 18 05.1	-0.5
QCR				*e*S		Sn	13 18 28.0	+0.3
URSC	**Urasca**	**1.72**	**327**	*e*P		Pn	13 18 05.5	-0.6
URSC				*e*S		Sn	13 18 30.8	+1.9
LAJ	**Bijagual**	**1.94**	**319**	*e*P		Pn	13 18 12.6	+3.3
LAJ				*e*S		Sn	13 18 41.4	+7.0
PRS1	**Puriscal**	**2.16**	**318**	*e*P		Pn	13 18 12.5	+0.3
PRS1				*e*S		Sn	13 18 41.3	+1.6
CGA2	**Cerro Gallo 2**	**2.28**	**315**	*e*P		Pn	13 18 15.1	+1.1
CGA2				*e*S		Sn	13 18 45.2	+2.4

*NOU **09** 13:26:18.4±0.9, 20.51S×168.80E, h10km, MD2.7, ML4.2*
*ISCJB **09** 13:26:21.9±1.2, 20.85S±0.2×168.6E±0.2, h33km, mb4.0/5, MS3.3/2, Error ellipse: s-maj=41.5km s-min=8.6km az=137.1*
*IDC **09** 13:26:25.4±1.9, 20.64S×168.50E, h40km±8km, mb3.8/6, mb1 4.0/6, mb1mx3.8/12, mbtmp3.8/6, MS3.4/3, Ms1 3.3/3, ms1mx3.0/16, Error ellipse: s-maj=92.7km s-min=21.7km az=159.0*

ISC 09 13:26:23.0±1.3, 21.10S±0.3×168.8E±0.2, h35km, (h41km±1.0km:pP-P), n13, σ1°19/12, mb4.0/6, MS3.3/2, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
BAYA	**Yate Dam**	**2.10**	**236**	*e*P		**Pn**	**13 26 55.6**	**-0.1**
BAYA				*e*S		**Sn**	**13 27 21.5**	**+0.8**
PLUM	**Mont Dore**	**2.36**	**237**	*e*P		**Pn**	**13 26 58.2**	**-1.0**
DZM	**Mont Dzumac**	**2.42**	**243**	*e*P		**Pn**	**13 26 58.4**	**-1.6**
DZM				AMP			13 27 30.0	
	comp=Z,2μm,3.1s							
NOUC	**Port Laguerre**	**2.55**	**244**	*e*P		**Pn**	**13 27 00.9**	**-0.9**
NOUC				AMP			13 27 32.0	
	comp=Z,143nm,8.5s							
NOUC				*e*S		**Sn**	**13 27 33.3**	**+1.7**
HNR	**Honiara**	**14.28**	**322**	LR		LR	13 34 29.7	
	comp=Z,95nm,18.2s,baz=134,slow=35							
CTA	**Charters Tower**	**21.10**	**268**	P		**P**	**13 31 03.2**	**-1.4**
	comp=Z,1.4nm,0.4s,mb3.7,baz=88,slow=15,SNR=2.6							
CTA				LR		LR	13 37 26.6	
	comp=Z,91nm,21.6s,MS3.1,baz=340,slow=32							
STKA	**Stephens Creek**	**26.57**	**240**	LR		LR	13 40 55.3	
	comp=Z,121nm,21.0s,MS3.4,baz=25,slow=33							
ASAR	**Alice Springs**	**32.31**	**259**	P		**P**	**13 32 49.0**	**+0.1**
	comp=Z,3.8nm,0.8s,mb4.3,baz=80,slow=9.5,SNR=32							
ASAR				pP		pP	13 33 00.0	+1.0
	comp=Z,3.4nm,0.8s,baz=82,slow=9.4,SNR=10							
QSPA	**South Pole Qui**	**69.08**	**180**	pP		pP	13 37 40.0	+4.4
	comp=Z,3.1nm,1.1s,baz=350,slow=3.3,SNR=4.0							
CMAR	**Chiang Mai Arr**	**78.82**	**295**	P		**P**	**13 38 23.6**	**+0.9**
	comp=Z,0.6nm,0.7s,mb3.7,baz=111,slow=5.1,SNR=3.1							
CMAR				pP		pP	13 38 35.0	+1.3
	comp=Z,0.9nm,0.9s,baz=109,slow=4.9,SNR=3.3							
SONM	**Songino Array**	**88.34**	**323**	P		**P**	**13 39 11.9**	**+1.0**
	comp=Z,0.7nm,0.8s,mb4.0,baz=142,slow=4.9,SNR=3.4							
NVAR	**Mina Array Bea**	**90.28**	**49**	P		**P**	**13 39 22.2**	**+2.0**
	comp=Z,1.4nm,0.8s,mb4.3,baz=224,slow=6.3,SNR=11							
NVAR				pP		pP	13 39 34.8	+3.4
	comp=Z,1.0nm,0.7s,baz=224,slow=8.4,SNR=5.8							
ILAR	**Eielson Array**	**92.02**	**17**	P		**P**	**13 39 26.3**	**-1.4**
	comp=Z,0.4nm,0.7s,mb3.9,baz=232,slow=4.4,SNR=5.4							

*ISCJB **09** 13:30:25.8±1.4, 20.33S±0.05×70.97W±0.08, h5km±10km, mb4.0/2, Error ellipse: s-maj=12.4km s-min=8.6km az=6.9*
*IDC **09** 13:30:29.2±1.7, 20.94S×70.50W, h0km, mb4.0/1, mb1 4.1/3, mb1mx3.8/13, mbtmp3.8/3, ML3.5/2, MS3.0/1, Ms1 3.2/1, ms1mx2.4/17, Error ellipse: s-maj=54.5km s-min=37.6km az=136.0*
*GUC **09** 13:30:36.9±0.8, 20.12S×70.54W, h42km±2km, MD4.1, ML3.8*

ISC 09 13:30:29.4±1.5, 20.33S±0.04×70.90W±0.08, h4km±10km, n12, σ1°41/17, mb4.0/2, 1C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
HMBC	**Humberston**	**0.95**	**87**	*i*P		**Pg**	**13 30 49.7**	**+2.1**
HMBC				*i* S		**Sg**	**13 30 59.3**	**-0.7**
PSGC	**Pisagua**	**1.03**	**45**	*i*P		**Pg**	**13 30 49.5**	**+0.3**
PSGC				*i* S		**Sg**	**13 30 59.6**	**-2.9**
PB01	**Plate Boundary**	**1.50**	**119**	*i*P		**Pg**	**13 31 00.6**	**+2.4**
PB01				*i* S		**Sg**	**13 31 18.4**	**+0.7**
PB01				AML		AML	13 31 22.9	
	comp=E,2μm,0.3s							
MNMC	**Miæe Miæ**	**1.71**	**46**	*i*P		**Pn**	**13 31 00.7**	**+0.8**
MNMC				*i* S		**Sn**	**13 31 18.5**	**-3.8**
MNMC				AML		AML	13 31 22.1	
	comp=E,7μm,1.0s							
PB04	**Plate Boundary**	**2.33**	**146**	*e*P		**Pg**	**13 31 11.7**	**-2.5**
PB04				*i* S		**Sg**	**13 31 38.9**	**-5.6**
PB04				AML		AML	13 31 52.2	
	comp=N,862nm,0.7s							
CEN1	**Los Morros**	**3.11**	**168**	*i*P		**Pg**	**13 31 28.4**	**-0.8**
CEN1				*i* S		**Sg**	**13 32 09.2**	**-0.4**
CEN1				AML		AML	13 32 31.8	
	comp=N,100nm,0.9s							
LPAZ	**La Paz**	**4.80**	**34**	Pn		**Pn**	**13 31 49.1**	**+6.6**
	comp=N,0.6nm,0.3s,baz=210,slow=6.0,SNR=24							
LPAZ				Pg		**Pg**	**13 32 01.8**	**+0.3**
	comp=N,1.8nm,0.3s,baz=213,slow=12,SNR=28							
LPAZ				LR		LR	13 33 37.6	
	comp=N,163nm,19.4s,baz=307,slow=37							
SIV	**San Ignacio**	**10.28**	**67**	Pn		**Pn**	**13 32 57.6**	**-0.2**
	comp=N,0.5nm,0.3s,baz=268,slow=10,SNR=14							
TORD	**Torodi Ar. Bea**	**78.73**	**71**	P		**P**	**13 42 32.5**	**-1.1**
	comp=N,1.6nm,0.8s,mb4.0,baz=244,slow=6.2,SNR=7.3							
YKA	**Yellowknife Ar**	**89.48**	**341**	P		**P**	**13 43 30.4**	**+3.2**
	comp=N,0.7nm,0.8s,mb4.0,baz=124,slow=5.1,SNR=5.0							
MKAR	**Makanchi Array**	**145.73**	**33**	PKPbc		PKPbc	13 50 12.1	+2.5
	comp=N,1.6nm,0.8s,baz=322,slow=4.4,SNR=14							
SONM	**Songino Array**	**152.47**	**4**	PKPbc		PKPbc	13 50 27.9	+1.1
	comp=N,0.4nm,0.7s,baz=349,slow=1.5,SNR=2.4							

*ISCJB **09** 13:49:37.5±3.4, 20.28S±0.1×168.6E±0.1, h17km±24km, mb4.1/9, MS3.3/2, Error ellipse: s-maj=28.8km s-min=11.0km az=140.0*
*NOU **09** 13:49:37.6±0.9, 20.42S×168.59E, h10km, MD3.0*
*NEIC **09** 13:49:41.6±0.7, 20.84S×168.63E, h35km, mb4.3/4, Error ellipse: s-maj=26.6km s-min=14.5km az=154.0*
*IDC **09** 13:49:42.7±0.8, 20.83S×168.61E, h45km±7km, mb3.8/7, mb1 4.0/7, mb1mx3.8/13, mbtmp3.7/7, MS3.4/2, Ms1 3.4/2, ms1mx2.7/18, Error ellipse: s-maj=28.9km s-min=21.0km az=155.0*

ISC 09 13:49:37.9±3.5, 20.28S±0.1×168.6E±0.1, h10km±21km, h43km±1.9km:pP-P, n20, σ0°87/19, mb4.1/9, MS3.3/2, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
BAYA	**Yate Dam**	**2.08**	**230**	*e*P		**Pn**	**13 50 12.8**	**-0.1**
BAYA				*e*S		**Sn**	**13 50 38.7**	**-0.3**
PLUM	**Mont Dore**	**2.33**	**231**	*e*P		**Pn**	**13 50 16.2**	**-0.2**
DZM	**Mont Dzumac**	**2.37**	**238**	*e*Pn		**Pn**	**13 50 16.2**	**-0.7**
LASL	**Noumea**	**2.38**	**233**	*e*P		**Pn**	**13 50 17.5**	**+0.4**
LASL				*e*S		**Sn**	**13 50 46.2**	**-0.2**
NOUC	**Port Laguerre**	**2.50**	**239**	*e*P		**Pn**	**13 50 18.4**	**-0.3**
NOUC				AMP			13 50 53.7	
	comp=Z,112nm,5.9s							
CTA	**Charters Tower**	**20.95**	**268**	P		**P**	**13 54 21.3**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=111,slow=9.0,SNR=1.8							
CTA				LR		LR	14 00 45.0	
	comp=Z,92nm,21.6s,MS3.1,baz=240,slow=32							
CTAO	**Charters Tower**	**20.95**	**268**	P		**P**	**13 54 24.1**	**+2.9**
	comp=Z,8.4nm,0.9s							
STKA	**Stephens Creek**	**26.52**	**240**	LR		LR	14 04 40.6	
	comp=Z,97nm,18.0s,MS3.4,baz=206,slow=34							
ASAR	**Alice Springs**	**32.20**	**258**	P		**P**	**13 56 06.8**	**+0.4**
	comp=Z,2.0nm,0.7s,mb4.1,baz=82,slow=8.5,SNR=26							
ASAR				pP		pP	13 56 17.9	+8.5
	comp=Z,3.5nm,0.8s,baz=86,slow=8.9,SNR=11							
SBA	**Scott Base**	**57.09**	**180**	*e*P		**P**	**13 59 25.3**	**+1.3**
	comp=Z,3.4nm,1.0s,mb4.3							
QSPA	**South Pole Qui**	**69.25**	**180**	P		**P**	**14 00 44.8**	**+0.1**
QSPA				pP		pP	14 00 58.3	+11
QSPA	**South Pole Qui**	**69.25**	**180**	P		**P**	**14 00 44.8**	**+0.1**
	comp=Z,2.0nm,0.9s,mb4.0,baz=352,slow=3.1,SNR=5.4							
QSPA				pP		pP	14 00 58.3	+11
	comp=Z,2.0nm,0.9s,baz=9.8,slow=2.3,SNR=4.2							
SONM	**Songino Array**	**88.12**	**323**	P		**P**	**14 02 29.7**	**+1.0**
	comp=Z,0.3nm,0.3s,mb4.0,baz=134,slow=4.2,SNR=3.8							
SONM				pP		pP	14 02 42.5	+10
	comp=Z,0.5nm,0.7s,baz=145,slow=3.5,SNR=2.3							
YBH	**Yreka Blue Hor**	**88.84**	**44**	*e*P		**P**	**14 02 32.7**	**+0.4**
	comp=Z,1.7nm,1.0s,mb4.3							
YBH				*e*			14 02 45.5	
HUMO	**Hull Mountain**	**89.11**	**43**	*e*P		**P**	**14 02 33.9**	**+0.3**
	comp=Z,1.6nm,0.7s,mb4.5							
HUMO				*e*			14 02 46.9	
NVAR	**Mina Array Bea**	**90.28**	**49**	P		**P**	**14 02 39.5**	**+0.4**
	comp=Z,1.5nm,0.7s,mb4.4,baz=225,slow=7.5,SNR=14							
NVAR				pP		pP	14 02 52.7	+10
	comp=Z,1.3nm,0.7s,baz=228,slow=8.9,SNR=9.5							
ILAR	**Eielson Array**	**91.90**	**17**	P		**P**	**14 02 44.1**	**-1.9**
	comp=Z,0.2nm,0.6s,mb3.7,baz=234,slow=5.5,SNR=4.3							
TXAR	**Lajitas Array**	**98.04**	**62**	P		**P**	**14 03 13.1**	**-1.8**
	comp=Z,0.3nm,0.9s,mb3.8,baz=331,slow=7.2,SNR=3.5							
MKAR	**Makanchi Array**	**102.43**	**315**	P		Pdif	14 03 34.6	+0.4
	comp=Z,0.3nm,0.8s,baz=132,slow=2.1,SNR=2.9							
KHC	**Kasperske Hory**	**145.43**	**331**	*e*PKP		PKPdf	14 09 17.5	+1.4

*ISCJB **09** 14:14:28.1±0.6, 32.18N±0.04×105.30E±0.07, h10km, mb3.3/3, Error ellipse: s-maj=8.4km s-min=5.1km az=8.9*
*BJI **09** 14:14:28.5, 32.36N×105.23E, h14km, ML3.6/13, Ms3.2/2, Ms7 3.0/3*
*IDC **09** 14:14:29.7±1.3, 32.40N×105.49E, h0km, mb3.3/3, mb1 3.5/6, mb1mx3.3/24, mbtmp3.4/6, ML3.5/2, Error ellipse: s-maj=37.3km s-min=23.5km az=55.0*

ISC 09 14:14:29.0±0.5, 32.21N±0.03×105.34E±0.05, h10km, n10, σ1°45/18, mb3.3/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
CD2	**Chengdu**	**1.87**	**227**	Pn		**Pn**	**14 15 01.9**	**+0.9**
CD2				Pg		**Pg**	**14 15 04.1**	**-0.8**
CD2				Sg		**Sg**	**14 15 27.7**	**-1.4**
CD2				smax				
	comp=N,4μm,0.5s							
CD2				smax				
	comp=E,6μm,0.6s							
XAN	**Xi'an**	**3.52**	**58**	Pn		**Pn**	**14 15 25.9**	**+2.3**
XAN				Sg		**Sg**	**14 16 20.2**	**-1.7**
XAN				smax				
	comp=N,130nm,0.5s							
XAN				smax				
	comp=E,54nm,0.9s							
XAN				LR		LR		
	comp=N,120nm,6.6s							
XAN				LR		LR		
	comp=E,34nm,9.1s							
XAN				LR		LR		
	comp=Z,64nm,8.0s							
LZH	**Lanzhou**	**4.06**	**343**	Pn		**Pn**	**14 15 30.7**	**-0.4**

MEZF				*e*Sg		**Sg**	**14 20 04.1**	**-0.9**
MEZF	**Maizieres J'vi**	**2.15**	**171**	*e*Pn		**Pn**	**14 19 32.0**	**+1.0**
MEZF				*e*Pg		**Pg**	**14 19 37.4**	**+0.3**
MEZF				*e*Sg		**Sg**	**14 20 04.1**	**-0.9**
MEZF	**Maizieres J'vi**	**2.15**	**171**	*e*Pn		**Pn**	**14 19 32.0**	**+1.0**
MEZF	**Maizieres J'vi**	**2.15**	**171**	*e*Pg		**Pg**	**14 19 37.4**	**+0.3**
MEZF				*e*Sg		**Sg**	**14 20 04.1**	**-0.9**
SFTF	**Sexfontaines**	**2.45**	**172**	*e*Pg		**Pg**	**14 19 42.5**	**-0.2**
SFTF				*e*Sg		**Sg**	**14 20 14.4**	**0.0**
	comp=E,12nm,0.3s							
SFTF	**Sexfontaines**	**2.45**	**172**	*e*Pg		**Pg**	**14 19 42.5**	**-0.2**
SFTF				*e*Sg		**Sg**	**14 20 14.4**	**0.0**
	comp=E,12nm,0.3s							
SFTF	**Sexfontaines**	**2.45**	**172**	*e*Pn		**Pn**	**14 19 35.5**	**+0.5**
SFTF				*e*Pg		**Pg**	**14 19 42.5**	**-0.2**
SFTF				*e*Sg		**Sg**	**14 20 14.4**	**0.0**
SFTF	**Sexfontaines**	**2.45**	**172**	*e*Pn		**Pn**	**14 19 35.5**	**+0.5**
SFTF	**Sexfontaines**	**2.45**	**172**	*e*Pg		**Pg**	**14 19 42.5**	**-0.2**
SFTF				*e*Sg		**Sg**	**14 20 14.4**	**0.0**
	comp=E,5.8nm,0.3s							
CDF	**Champ du Feu**	**2.84**	**140**	*e*Pg		**Pg**	**14 19 49.7**	**-0.5**
CDF				*e*Sg		**Sg**	**14 20 25.9**	**-1.1**
	comp=E,4.5nm,0.3s							
CDF	**Champ du Feu**	**2.84**	**140**	*e*Pg		**Pg**	**14 19 49.7**	**-0.5**
CDF				*e*Sg		**Sg**	**14 20 25.9**	**-1.1**
	comp=E,4.5nm,0.3s							
CDF	**Champ du Feu**	**2.84**	**140**	*e*P		**Pn**	**14 19 43.7**	**+3.3**
CDF				*e*Pg		**Pg**	**14 19 49.7**	**-0.5**
CDF				*e*Sg		**Sg**	**14 20 25.9**	**-1.1**
CDF	**Champ du Feu**	**2.84**	**140**	*e*P		**Pn**	**14 19 43.7**	**+3.3**
CDF	**Champ du Feu**	**2.84**	**140**	*e*Pg		**Pg**	**14 19 49.7**	**-0.5**
CDF				*e*Sg		**Sg**	**14 20 25.9**	**-1.1**
	comp=E,2.2nm,0.3s							
HAU	**Haudompre**	**2.88**	**155**	*e*Pg		**Pg**	**14 19 50.6**	**-0.3**
HAU				*e*Sg		**Sg**	**14 20 28.0**	**-0.1**
	comp=E,3.9nm,0.2s							
HAU	**Haudompre**	**2.88**	**155**	*e*Pg		**Pg**	**14 19 50.6**	**-0.3**
HAU				*e*Sg		**Sg**	**14 20 28.0**	**-0.1**
	comp=E,3.9nm,0.2s							
HAU	**Haudompre**	**2.88**	**155**	*e*Pn		**Pn**	**14 19 41.5**	**+0.6**
HAU				*e*Pg		**Pg**	**14 19 50.6**	**-0.3**
HAU				*e*Sg		**Sg**	**14 20 28.0**	**-0.1**
HAU	**Haudompre**	**2.88**	**155**	*e*Pn		**Pn**	**14 19 41.5**	**+0.6**
HAU	**Haudompre**	**2.88**	**155**	*e*Pg		**Pg**	**14 19 50.6**	**-0.3**
HAU				*e*Sg		**Sg**	**14 20 28.0**	**-0.1**
	comp=E,2.0nm,0.2s							
HINF	**Hinteralfeld**	**3.19**	**151**	*e*Pg		**Pg**	**14 19 56.2**	**-0.7**
HINF				*e*Sn		**Sn**	**14 20 22.0**	**-1.0**
HINF				*e*Sg		**Sg**	**14 20 37.8**	**-0.5**
	comp=E,3.1nm,0.3s							
HINF	**Hinteralfeld**	**3.19**	**151**	*e*Pg		**Pg**	**14 19 56.2**	**-0.7**
HINF				*e*Sn		**Sn**	**14 20 22.0**	**-1.0**
HINF				*e*Sg		**Sg**	**14 20 37.8**	**-0.5**
	comp=E,1.5nm,0.3s							
LOR	**Lormes**	**3.40**	**188**	*e*Pg		**Pg**	**14 19 59.7**	**-1.1**
LOR				*e*Sn		**Sn**	**14 20 27.1**	**-0.8**
LOR				*e*Sg		**Sg**	**14 20 44.3**	**-0.5**
	comp=E,3.9nm,0.3s							
LOR	**Lormes**	**3.40**	**188**	*e*Pn		**Pn**	**14 19 48.6**	**+0.6**
LOR				*e*Pg		**Pg**	**14 19 59.7**	**-1.1**
LOR				*e*Sn		**Sn**	**14 20 27.1**	**-0.8**
LOR				*e*Sg		**Sg**	**14 20 44.3**	**-0.5**
LOR	**Lormes**	**3.40**	**188**	*e*Pn		**Pn**	**14 19 48.6**	**+0.6**
LOR	**Lormes**	**3.40**	**188**	*e*Pg		**Pg**	**14 19 59.7**	**-1.1**
LOR				*e*Sn		**Sn**	**14 20 27.1**	**-0.8**
LOR				*e*Sg		**Sg**	**14 20 44.3**	**-0.5**
	comp=E,2.0nm,0.3s							
SSF	**Saint Saulge**	**3.64**	**191**	*e*Pg		**Pg**	**14 20 04.5**	**-0.9**
SSF				*e*Sg		**Sg**	**14 20 51.7**	**-0.8**
	comp=E,2.3nm,0.3s							
SSF	**Saint Saulge**	**3.64**	**191**	*e*Pg		**Pg**	**14 20 04.5**	**-0.9**
SSF				*e*Sg		**Sg**	**14 20 51.7**	**-0.8**
	comp=E,1.1nm,0.3s							
LDF	**La Druitiere**	**3.66**	**238**	*e*Pn		**Pn**	**14 19 52.0**	**+0.3**
LDF	**La Druitiere**	**3.66**	**238**	*e*Pn		**Pn**	**14 19 52.0**	**+0.3**
FLN	**La Foliniere**	**3.77**	**242**	*e*Pn		**Pn**	**14 19 53.0**	**-0.1**
FLN	**La Foliniere**	**3.77**	**242**	*e*Pn		**Pn**	**14 19 53.0**	**-0.1**
CABF	**La Chapelle**	**4.15**	**165**	*e*Sg		**Sg**	**14 21 07.6**	**-1.3**
	comp=E,1.6nm,0.4s							
CABF	**La Chapelle**	**4.15**	**165**	*e*Sg		**Sg**	**14 21 07.6**	**-1.3**
	comp=E,0.8nm,0.4s							
GRR	**Gorron**	**4.18**	**240**	*e*Pn		**Pn**	**14 19 58.9**	**+0.1**
GRR	**Gorron**	**4.18**	**240**	*e*Pn		**Pn**	**14 19 58.9**	**+0.1**

*NIED **09** 14:21:00,41˙.20N×142˙.20E,h53km,Mw3.5 Best double couple: M◎2.07000×10^14 NP1:φ◈39.00000°,δ75.00000°, λ119.00000°. NP2:φ◈153.00000°,δ33.00000°,λ28.00000°.*
*IDC **09** 14:21:14.4±2.0,41˙.02N×142˙.48E,h61km±17km,mb3.5/6, mb1 3.6/9,mb1mx3.3/25,mbtmp3.6/9,Error ellipse: s-maj=31.7km s-min=12.5km az=104.0*
*ISCJB **09** 14:21:15.7±0.5,41˙.22N±0˙.04×142˙.24E±0˙.05,h70km±5km, mb3.6/6,Error ellipse: s-maj=7.5km s-min=4.5km az=40.3*
*JMA **09** 14:21:16.6±0.1,41˙.24N×142˙.24E,h59km±2km,M3.6*
*NEIC **09** 14:21:18.6±0.8,41˙.43N×142˙.40E,h79km±10km, MG3.6(JMA),Error ellipse: s-maj=23.6km s-min=10.2km az=122.0*

ISC 09 14:21:16.6±0.5,**41˙.22N**±0˙.04×**142˙.25E**±0˙.05,**h62**km±5km, **n24**,σ0◈**63**/36,**mb3.7**/6,**2C-3D**,**Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOT	**Ohata**	**0.92**	**281**	⇓P	**Pn**	**14 21 33.4**	**-0.2**
JOT				*e*S	**Sn**	**14 21 45.8**	**-0.4**
JTM	**Tenmabayashi**	**0.99**	**245**	⇓P	**Pn**	**14 21 34.8**	**+0.2**
JTM				*e*S	**Sn**	**14 21 47.8**	**-0.1**
JANG	**Nango**	**1.01**	**214**	⇑P	**Pn**	**14 21 34.8**	**0.0**
JANG				*e*S	**Sn**	**14 21 48.0**	**-0.3**
ERM	**Erimo**	**1.05**	**40**	*e*Pg	**Pn**	**14 21 35.1**	**-0.2**
ERM				*e*Sn	**Sn**	**14 21 47.8**	**-1.4**
JEM	**Erimo**	**1.05**	**40**	P	**Pn**	**14 21 35.3**	**0.0**
JEM				*e*S	**Sn**	**14 21 49.6**	**+0.4**
JNBK	**Urakawa-nobuka**	**1.13**	**19**	P	**Pn**	**14 21 36.7**	**+0.4**
JKB	**Kayabe**	**1.13**	**307**	⇓P	**Pn**	**14 21 36.1**	**-0.3**
JKB				*e*S	**Sn**	**14 21 50.7**	**-0.4**
JCH	**Churui**	**1.62**	**30**	P	**Pn**	**14 21 43.2**	**+0.3**
JCH				*e*S	**Sn**	**14 22 02.8**	**-0.1**
JEW	**Eniwo**	**1.73**	**340**	P	**Pn**	**14 21 44.6**	**+0.3**
JEW				*e*S	**Sn**	**14 22 05.5**	**+0.2**
JOM	**Ohasama**	**1.89**	**203**	⇑P	**Pn**	**14 21 47.1**	**+0.6**
JOM				*e*S	**Sn**	**14 22 09.6**	**+0.3**
JFR	**Furan**	**1.96**	**7**	P	**Pn**	**14 21 47.9**	**+0.4**
JOSM	**Okushiri--Mats**	**2.25**	**293**	P	**Pn**	**14 21 51.2**	**-0.2**
JOSM				*e*S	**Sn**	**14 22 17.6**	**-0.4**
ASAJ	**Asahikawa**	**2.91**	**5**	P	**Pn**	**14 22 01.1**	**+0.7**
	6.5nm,0.3s,baz=222,slow=9.1,SNR=59						
ASAJ				S	**Sn**	**14 22 37.0**	**+2.9**
	4.7nm,0.3s,baz=324,slow=19,SNR=9.3						
MAJO	**Matsushiro**	**5.63**	**215**	*e*Pn	**Pn**	**14 22 43.2**	**+5.5**
YSS	**Yuzh-Sakhalins**	**5.75**	**3**	Pn	**Pn**	**14 22 38.5**	**-0.6**
JHJ	**Hachijo jima 2**	**8.32**	**194**	P	**Pn**	**14 23 10.1**	**-4.4**
	6.4nm,0.3s,baz=218,slow=22,SNR=5.1						
JHJ				S	**Sn**	**14 24 41.1**	**-5.8**
	1.2nm,0.3s,baz=99,slow=19,SNR=2.3						
KSRS	**Korea Array**	**11.71**	**256**	P	**Pn**	**14 24 01.9**	**+1.1**
	0.1nm,0.3s,baz=67,slow=13,SNR=2.6						
ZALV	**Zalesovo Beam**	**39.69**	**309**	P	**P**	**14 28 42.2**	**-0.1**
ZALV	**Zalesovo Beam**	**39.69**	**309**	P	**P**	**14 28 42.2**	**-0.1**
	1.0nm,0.6s,mb3.7,baz=83,slow=9.4,SNR=5.2						
MKAR	**Makanchi Array**	**42.57**	**298**	P	**P**	**14 29 06.0**	**0.0**
	0.3nm,0.6s,mb3.2,baz=82,slow=10,SNR=4.8						
KURK	**Kurchatov**	**42.97**	**305**	P	**P**	**14 29 17.9**	**+0.7**
	1.0nm,0.4s,mb3.9,baz=78,slow=8.7,SNR=3.2						
ILAR	**Eielson Array**	**45.65**	**34**	P	**P**	**14 29 29.0**	**-1.4**
	0.3nm,0.5s,mb3.5,baz=268,slow=5.8,SNR=5.7						
BVAR	**Borovoye Array**	**48.32**	**310**	P	**P**	**14 29 51.1**	**-0.2**
	0.6nm,0.4s,mb4.0,baz=74,slow=8.8,SNR=4.7						
FINES	**FINESS Array B**	**65.43**	**332**	P	**P**	**14 31 52.0**	**-0.3**
	1.6nm,0.8s,mb4.1,baz=31,slow=8.3,SNR=6.2						

*NEIC **09** 14:23:30.5±1.2,13˙.11N×90˙.93W,h10km,mb3.9/1, MD4.5(MEX),Error ellipse: s-maj=24.0km s-min=10.7km az=201.0*
*IDC **09** 14:23:30.1±3.9,12˙.83N×91˙.22W,h0km,mb3.5/2, mb1 4.1/4,mb1mx3.6/19,mbtmp3.8/4,ML3.8/2,Error ellipse: s-maj=201.7km s-min=28.5km az=37.0*
*ISCJB **09** 14:23:31.0±0.6,13˙.27N±0˙.05×91˙.05W±0˙.03,h10km, mb3.8/2,Error ellipse: s-maj=6.9km s-min=3.6km az=23.2*
*CASC **09** 14:23:35.3±2.3,13˙.42N×90˙.88W,h20km±8km,MD3.8, ML3.5,mb3.9(NEIC)*
*MEX **09** 14:23:37.4±0.5,13˙.09N×91˙.47W,h20km±21km,MD4.5*

ISC 09 14:23:32.3±0.6,**13˙.31N**±0˙.05×**91˙.00W**±0˙.03,**h10**km,**n42**, σ1◈**12**/59,**mb3.8**/2,**1C-4D**,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.14**	**8**	⇓*e*P	**Pb**	**14 23 54.2**	**0.0**
PCG	**Pacaya**	**1.15**	**19**	*e*P	**Pb**	**14 23 54.2**	**+0.1**
JAT	**Jato**	**1.18**	**328**	⇓*e*P	**Pb**	**14 23 56.3**	**+1.5**
FG6		**1.25**	**5**	⇓*e*P	**Pn**	**14 23 55.9**	**+0.1**
NBG	**Las Nubes**	**1.42**	**26**	⇑*e*P	**Pn**	**14 23 59.1**	**+0.9**
NBG				*e*S	**Sn**	**14 24 16.9**	**-0.1**
SBLS	**San Blas**	**1.44**	**68**	*e*P	**Pn**	**14 23 57.4**	**-1.0**
SNJE	**San Jose**	**1.47**	**67**	*e*P	**Pn**	**14 23 57.7**	**-1.1**
TP2	**Tecpan 2**	**1.47**	**359**	⇓*e*P	**Pn**	**14 23 59.8**	**+1.0**
TP2				*e*S	**Sn**	**14 24 16.8**	**-1.2**
RBDL	**Robledal**	**1.51**	**58**	*e*P	**Pn**	**14 23 58.6**	**-0.7**
BOQS	**Boqueron**	**1.73**	**76**	*e*P	**Pn**	**14 24 01.9**	**-0.4**
BOQS				*e*S	**Sn**	**14 24 24.4**	**-0.1**
SNET	**Serv Nac Est T**	**1.76**	**77**	*i*P	**Pn**	**14 24 02.4**	**-0.4**
LFU	**La Fuente**	**1.89**	**76**	*e*P	**Pn**	**14 24 04.9**	**+0.3**
LFRS	**El Faro**	**1.91**	**80**	*e*P	**Pn**	**14 24 05.2**	**+0.3**
MTO2	**Montecristo 2**	**1.93**	**55**	*e*P	**Pn**	**14 24 05.0**	**-0.1**
MTO2				*e*S	**Sn**	**14 24 28.2**	**-1.2**
THIG		**2.01**	**322**	*i*P	**Pn**	**14 24 06.6**	**+0.3**
THIG				*i*S	**Sn**	**14 24 29.9**	**-1.6**
SNVI	**San Vicente**	**2.12**	**82**	*e*P	**Pn**	**14 24 08.3**	**+0.4**
SNVI				AML	AML	14 24 38.3	
	comp=Z,318nm,0.3s						
MRL	**Marmol**	**2.16**	**36**	*e*P	**Pn**	**14 24 09.9**	**+1.6**
MRL				*e*S	**Sn**	**14 24 38.6**	**+3.4**
BLLM	**Bellamira**	**2.69**	**87**	*e*P	**Pn**	**14 24 16.6**	**+1.0**
CAHU	**Cacacuatique**	**2.75**	**80**	*e*P	**Pn**	**14 24 16.5**	**+0.1**
CNCH	**Conchagua**	**3.08**	**90**	*e*P	**Pn**	**14 24 22.0**	**+1.0**
CNCH				*e*S	**Sn**	**14 24 57.0**	**-0.9**
CNCH				AML	AML	14 25 09.7	
	comp=Z,326nm,0.6s						
PCIG		**3.21**	**318**	*e*P	**Pn**	**14 24 22.9**	**+0.1**
PCIG				*i*S	**Sn**	**14 24 58.4**	**-2.7**
TGUH	**Tegucigalpa,Un**	**3.70**	**78**	*e*Pn	**Pn**	**14 24 25.1**	**-4.4**
TGUH	**Tegucigalpa,Un**	**3.70**	**78**	*i*P	**Pn**	**14 24 29.6**	**+0.2**
TGIG		**4.01**	**330**	*i*P	**Pn**	**14 24 36.2**	**+2.4**
TGIG				*i*S	**Sn**	**14 25 20.0**	**-1.0**
COPN	**Copaltepe**	**4.44**	**104**	*i*P	**Pn**	**14 24 40.3**	**+0.5**
CMIG	**Matias Romero**	**5.31**	**316**	Pn	**Pn**	**14 24 52.5**	**+0.8**
	comp=Z,5.9nm,0.3s,baz=137,slow=12,SNR=28						
CMIG				Sn	**Sn**	**14 25 51.2**	**-1.8**
	comp=Z,2.2nm,0.3s,baz=66,slow=20,SNR=3.9						
PCIG		**3.21**	**318**	*e*P	**Pn**	**14 24 22.9**	**+0.1**
PCIG				*i*S	**Sn**	**14 24 58.4**	**-2.7**
HUIG	**Huatulco**	**5.52**	**297**	*i*P	**Pn**	**14 24 53.3**	**-1.2**
HUIG				*i*S	**Sn**	**14 25 51.3**	**-6.8**
HUIG	**Huatulco**	**5.52**	**297**	*i*P	**Pn**	**14 24 53.3**	**-1.2**
HUIG				*i*S	**Sn**	**14 25 51.3**	**-6.8**
JTS	**JuntasAbangare**	**6.64**	**116**	*e*Pn	**Pn**	**14 25 07.6**	**-2.3**
JTS				*e*Sn	**Sn**	**14 26 22.8**	**-2.9**
JTS				Lg		14 26 50.0	
JTS				*e*Sg	**Sg**	**14 26 51.6**	**-14**
JTS	**JuntasAbangare**	**6.64**	**116**	Pn	**Pn**	**14 25 10.0**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=306,slow=9.6,SNR=7.7						
JTS				Lg		14 26 50.0	
	comp=Z,0.3nm,0.3s,baz=162,slow=19,SNR=7.8						
VHO	**Vista Hermosa**	**6.68**	**305**	*i*P	**Pn**	**14 25 11.3**	**+0.8**
VHO				*i*S	**Sn**	**14 26 22.1**	**-4.7**
VHO	**Vista Hermosa**	**6.68**	**305**	*i*P	**Pn**	**14 25 11.3**	**+0.8**
VHO				*i*S	**Sn**	**14 26 22.1**	**-4.7**
TEIG	**Tepich**	**7.36**	**20**	*e*Pn	**Pn**	**14 25 20.5**	**+0.7**
	comp=Z,18nm,0.6s						
TEIG	**Tepich**	**7.36**	**20**	*i*P	**Pn**	**14 25 20.8**	**+1.0**
PNIG	**Pinotepa**	**7.54**	**295**	*i*P	**Pn**	**14 25 18.9**	**-3.4**
PNIG				*i*S	**Sn**	**14 26 41.9**	**-6.1**
PNIG	**Pinotepa**	**7.54**	**295**	*i*P	**Pn**	**14 25 18.9**	**-3.4**
PNIG				*i*S	**Sn**	**14 26 41.9**	**-6.1**
UTMO	**Huajuapan**	**7.95**	**305**	*i*P	**Pn**	**14 25 33.9**	**+5.9**
TXAR	**Lajitas Array**	**19.81**	**326**	P	**Pn**	**14 28 05.4**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=153,slow=12,SNR=14						
SWET	**Sewanee**	**22.29**	**11**	*e*P	**P**	**14 28 30.9**	**+1.2**
MNTX	**Cornudas Mount**	**22.57**	**327**	*e*P	**P**	**14 28 33.3**	**+0.5**
	comp=Z,2.8nm,0.7s,mb3.8						
NVAR	**Mina Array Bea**	**34.82**	**321**	P	**P**	**14 30 26.3**	**+3.0**
	comp=Z,1.0nm,0.7s,mb3.9,baz=133,slow=7.6,SNR=11						
CMAR	**Chiang Mai Arr**	**146.95**	**343**	PKPbc	PKPbc	14 43 14.6	-1.4
	comp=Z,0.7nm,0.6s,baz=350,slow=3.9,SNR=5.6						

*ISCJB **09** 14:24:27.3±1.7,1˙.5N±0˙.3×67˙.0E±0˙.2,h10km,mb3.7/7, Error ellipse: s-maj=43.3km s-min=24.3km az=32.7*
*IDC **09** 14:24:27.8±1.7,1˙.52N×67˙.12E,h0km,mb3.7/7,mb1 3.7/7, mb1mx3.5/21,mbtmp3.7/7,Error ellipse: s-maj=54.3km s-min=29.1km az=48.0*
*NEIC **09** 14:24:29.2±1.1,1˙.49N×67˙.04E,h10km,Error ellipse: s-maj=31.2km s-min=18.9km az=211.0*

ISC 09 14:24:29.3±1.7,**1˙.5N**±0˙.3×**67˙.0E**±0˙.2,**h10**km,**n9**,σ0◈**63**/8, **mb3.7**/7,**Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**35.56**	**60**	P	**P**	**14 31 27.6**	**+0.6**
MKAR	**Makanchi Array**	**47.06**	**14**	P	**P**	**14 33 00.5**	**-0.6**
	0.6nm,0.9s,mb3.5,baz=190,slow=6.0,SNR=4.7						
BRTR	**Keskin Array B**	**48.70**	**326**	P	**P**	**14 33 14.1**	**+0.2**
	0.5nm,0.7s,mb3.7,baz=124,slow=9.4,SNR=3.6						
ZALV	**Zalesovo Beam**	**54.32**	**13**	P	**P**	**14 33 55.1**	**-0.6**
	1.4nm,0.6s,mb4.0,baz=205,slow=6.4,SNR=6.8						
SONM	**Songino Array**	**57.34**	**31**	P	**P**	**14 34 18.1**	**+0.5**
	0.5nm,0.7s,mb3.7,baz=226,slow=7.7,SNR=4.6						
AKASG	**Malin Array Be**	**58.53**	**333**	P	**P**	**14 34 26.9**	**+1.0**
	0.2nm,0.3s,mb3.6,baz=134,slow=5.2,SNR=4.3						
ASAR	**Alice Springs**	**69.53**	**116**	P	**P**	**14 35 38.5**	**-0.2**
	0.7nm,0.8s,mb3.6,baz=286,slow=4.2,SNR=6.8						
ARCES	**ARCESS Array B**	**73.31**	**346**	P	**P**	**14 35 59.9**	**-0.8**
	0.9nm,0.8s,mb3.8,baz=129,slow=7.1,SNR=3.5						
TXAR	**Lajitas Array**	**148.10**	**345**	PKPbc	PKPbc	14 44 16.3	+0.3
	0.7nm,0.9s,baz=70,slow=3.0,SNR=7.9						

*TAP **09** 14:26:21.9,23˙.82N×121˙.62E,h46km,ML3.0,C*
*ISCJB **09** 14:26:22.2±0.3,23˙.79N±0˙.02×121˙.69E±0˙.02,h42km±6km, Error ellipse: s-maj=3.7km s-min=2.4km az=135.7*
*JMA **09** 14:26:22.8±0.4,24˙.11N×121˙.71E,h90km,M2.2*

ISC 09 14:26:22.7±0.3,**23˙.80N**±0˙.02×**121˙.68E**±0˙.02,**h39**km±5km, **n45**,σ0◈**81**/80,**1C-1D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.16**	**235**	*e*P	**Pn**	**14 26 30.9**	**+1.3**
	baz=219						
TEGC				*e*S	**Sn**	**14 26 36.1**	**+1.8**
	baz=219						
HWA	**Hwalien**	**0.19**	**339**	*e*P	**Pn**	**14 26 30.1**	**+0.2**
	baz=359						
ESL	**Shilin**	**0.23**	**274**	*i*P	**Pn**	**14 26 29.5**	**-0.7**
	baz=279						
ESL				*e*S	**Sn**	**14 26 35.1**	**-0.2**
	baz=279						
TWD	**Chiawan**	**0.29**	**345**	*i*P	**Pn**	**14 26 30.5**	**-0.3**
	baz=346						
TWD				*i*S	**Sn**	**14 26 36.6**	**+0.1**
	baz=346						
EHY	**Hungye**	**0.44**	**229**	⇓*i*P	**Pn**	**14 26 31.5**	**-1.1**
	baz=227						
EHY				S	**Sn**	**14 26 38.7**	**-0.8**
	baz=227						
WHF	**Hehuan Shan**	**0.51**	**312**	⇑*i*P	**Pn**	**14 26 32.9**	**-0.8**
	baz=310						
WHF				S	**Sn**	**14 26 40.6**	**-0.7**
	baz=310						
TWF1	**Yuli**	**0.57**	**218**	*i*P	**Pn**	**14 26 33.1**	**-1.3**
	baz=219						
TWF1				S	**Sn**	**14 26 41.5**	**-1.0**
	baz=219						
ENA	**Nanau**	**0.63**	**5**	*e*P	**Pn**	**14 26 34.6**	**-0.6**
ENA				*e*S	**Sn**	**14 26 43.5**	**-0.6**
TWT	**Tachien**	**0.65**	**315**	*e*P	**Pn**	**14 26 34.9**	**-0.6**
	baz=316						
TWT				S	**Sn**	**14 26 43.9**	**-0.6**
	baz=316						
NNS	**Nan Shan**	**0.70**	**336**	*e*P	**Pn**	**14 26 35.5**	**-0.7**
	baz=345						
NNS				*e*S	**Sn**	**14 26 44.9**	**-0.8**
	baz=345						
SMLT	**Sun Moon Lake**	**0.72**	**277**	P	**Pn**	**14 26 36.0**	**-0.4**
	baz=276						
SMLT				S	**Sn**	**14 26 45.5**	**-0.8**
	baz=276						
YUS	**Yu-Shan**	**0.73**	**245**	*e*S	**Sn**	**14 26 45.8**	**-0.9**
	baz=240						
CHKT	**Chengkung**	**0.75**	**203**	*e*P	**Pn**	**14 26 36.1**	**-0.8**
	baz=188						
CHKT				*e*S	**Sn**	**14 26 47.7**	**+0.6**
	baz=188						
TYC	**Yuchr**	**0.76**	**278**	P	**Pn**	**14 26 36.3**	**-0.7**
	baz=280						
TYC				*e*S	**Sn**	**14 26 46.4**	**-0.9**
	baz=280						
TWC	**Suao**	**0.82**	**11**	*e*P	**Pn**	**14 26 37.7**	**-0.1**
	baz=5.0						
TWC				*e*S	**Sn**	**14 26 49.6**	**+0.8**
	baz=5.0						
ALS	**Alishan**	**0.85**	**251**	P	**Pn**	**14 26 38.4**	**+0.1**
	baz=248						
ALS				*e*S	**Sn**	**14 26 49.4**	**-0.1**
	baz=248						
ELDTW	**Lidau**	**0.86**	**225**	P	**Pn**	**14 26 37.3**	**-1.1**
	baz=222						
ELDTW				*e*S	**Sn**	**14 26 48.6**	**-1.1**
	baz=222						
WNT	**Mingjian**	**0.92**	**275**	*e*P	**Pn**	**14 26 39.2**	**+0.1**
	baz=274						
TWE	**Neicheng**	**0.92**	**359**	*e*P	**Pn**	**14 26 38.6**	**-0.6**
	baz=2.0						
TWE				*e*S	**Sn**	**14 26 51.5**	**+0.3**
	baz=2.0						
NSK	**Sanguang**	**0.92**	**341**	P	**Pn**	**14 26 38.8**	**-0.5**
	baz=350						
NSK				*e*S	**Sn**	**14 26 50.3**	**-1.0**
	baz=350						
TCU	**Taichung**	**0.98**	**291**	*e*P	**Pn**	**14 26 40.9**	**+0.8**
	baz=291						
TCU				*e*S	**Sn**	**14 26 53.8**	**+1.1**
	baz=291						
TWQ1	**Liyutan**	**0.99**	**304**	*e*P	**Pn**	**14 26 40.5**	**+0.3**
	baz=304						
TWQ1				*e*S	**Sn**	**14 26 53.9**	**+0.9**
	baz=304						
WGK	**Gukeng**	**1.03**	**264**	*e*S	**Sn**	**14 26 55.2**	**+1.3**
	baz=263						
NSTT	**Nanjuang**	**1.03**	**323**	P	**Pn**	**14 26 40.9**	**+0.1**
	baz=314						
NSTT				S	**Sn**	**14 26 53.7**	**-0.4**
	baz=314						
STYT	**Tauyuan**	**1.06**	**233**	*e*P	**Pn**	**14 26 40.9**	**-0.2**
	baz=230						
STYT				*e*S	**Sn**	**14 26 55.2**	**+0.7**
	baz=230						
TWG	**Pinlang**	**1.12**	**210**	*e*P	**Pn**	**14 26 40.4**	**-1.5**
	baz=197						
TWG				*e*S	**Sn**	**14 26 54.9**	**-1.2**
	baz=197						
WTP	**Ta-pu**	**1.12**	**241**	P	**Pn**	**14 26 42.3**	**+0.4**
	baz=239						
WTP				*e*S	**Sn**	**14 26 57.4**	**+1.2**
	baz=239						
TWK	**Hsinying**	**1.22**	**244**	*e*P	**Pn**	**14 26 43.4**	**+0.2**
	baz=243						
TWK				*e*S	**Sn**	**14 27 00.1**	**+1.6**
	baz=243						
CHN1	**Nanshi**	**1.22**	**240**	P	**Pn**	**14 26 43.8**	**+0.5**
	baz=239						
CHN1				*e*S	**Sn**	**14 26 59.4**	**+0.7**
	baz=239						
SGST	**Jiashian**	**1.23**	**235**	*e*P	**Pn**	**14 26 44.0**	**+0.5**
	baz=233						
SGST				*e*S	**Sn**	**14 27 00.8**	**+1.8**
	baz=233						
TWB1	**Santiao Chiao**	**1.24**	**13**	*e*P	**Pn**	**14 26 43.9**	**+0.4**
	baz=14						
TWB1				*e*S	**Sn**	**14 26 59.5**	**+0.4**
	baz=14						
NWF	**Wu-fen Shan**	**1.27**	**4**	*e*P	**Pn**	**14 26 44.4**	**+0.4**
	baz

	12nm,1.0s								
SBUM	**Sibu**	**15.35**	**253**	P	**Pn**	14 40 11.0	**+2.6**		
	18nm,0.8s								
JAY	**Jayapura**	**16.72**	**124**	P	Px	14 40 47.0			
KSM	**Kuching**	**17.47**	**252**	*e*P	**Pn**	14 40 32.8	**-1.9**		
	6.8nm,0.8s								
KSM	**Kuching**	**17.47**	**252**	P	**Pn**	14 40 33.5	**-1.2**		
	8.9nm,1.5s								
PBKI	**Pangkalan Bun**	**18.05**	**238**	P	**Pn**	14 40 44.6	**+2.9**		
	102nm,1.1s								
KAKA	**Kakadu**	**20.38**	**164**	*e*P	**P**	14 41 05.7	**-0.7**		
KAKA	**Kakadu**	**20.38**	**164**	P	**P**	14 41 06.6	**+0.2**		
	18nm,0.8s								
KNA	**Kununurra**	**22.73**	**175**	P	**P**	14 41 31.8	**+0.5**		
	37nm,0.9s,mb4.7								
FITZ	**Fitzroy Crossi**	**25.02**	**183**	P	**P**	14 41 52.4	**-0.1**		
WB2	**Warramunga Arr**	**27.80**	**165**	*e*P	**P**	14 42 19.1	**+1.6**		
MBWA	**Marble Bar**	**28.91**	**194**	P	**P**	14 42 25.9	**-1.5**		
	13nm,1.2s,mb4.4								
KSRS	**Korea Array**	**30.28**	**2**	LR	LR	14 54 22.3			
	comp=Z,11nm,21.3s,baz=225,slow=35								
ASAR	**Alice Springs**	**31.28**	**168**	P	**P**	14 42 47.2	**-1.0**		
	0.3nm,0.4s,mb3.3,baz=343,slow=7.3,SNR=14								
NWAO	**Narrogin (SRO)**	**40.81**	**193**	*e*P	**P**	14 44 08.0	**-1.5**		
	23nm,1.1s,mb4.9								
STKA	**Stephens Creek**	**41.17**	**161**	P	**P**	14 44 12.3	**-0.1**		
STKA	**Stephens Creek**	**41.17**	**161**	P	**P**	14 44 12.3	**-0.1**		
	0.6nm,0.3s,mb3.9,baz=334,slow=11,SNR=4.6								
MK31	**Makanchi Array**	**54.98**	**324**	*e*P	**P**	14 45 57.9	**-0.8**		
MKAR	**Makanchi Array**	**54.98**	**324**	P	**P**	14 45 59.0	**+0.4**		
	0.4nm,0.6s,mb3.7,baz=120,slow=6.5,SNR=6.7								

ISCJB ***09*** *14:43:48.8±0.7, 47.9°N±0.1°×147.4°E±0.1, h419km±8km, mb3.6/24, Error ellipse: s-maj=21.9km s-min=9.8km az=153.7*

NEIC ***09*** *14:43:49.5±1.1, 47.78°N×147.38°E, h423km±13km, mb3.8/12, Error ellipse: s-maj=19.9km s-min=9.6km az=151.0*

IDC ***09*** *14:43:49.5±1.6, 47.95°N×147.23°E, h412km±19km, mb3.2/12, mb1 3.3/14, mb1mx3.1/25, mbtmp3.1/14, Error ellipse: s-maj=20.5km s-min=12.6km az=150.0*

ISC 09 14:43:49.6±0.7, 47.9°N±0.1°×147.4°E±0.1, h410km±9km**, n37,** σ0≈**83**/37**, mb3.6**/24**, 1C, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
YSS	**Yuzh-Sakhalins**	**3.29**	**254**	i*P*n			**P**	**14 44 56.5**	**+0.6**
YSS				*e*S			**S**	**14 45 50.1**	**+0.3**
ASAJ	**Asahikawa**	**5.07**	**223**	P			**P**	**14 45 11.1**	**-1.7**
	0.5nm,0.3s,baz=219,slow=12,SNR=5.1								
PET	**Petropavlovsk**	**8.80**	**50**	*e*Pn			**P**	**14 45 47.6**	**-5.7**
PET				*e*S			Px	14 47 09.0	
MAJO	**Matsushiro**	**13.25**	**214**	*e*Pn			**P**	**14 46 33.2**	**-9.5**
	3.5nm,0.3s								
KSRS	**Korea Array**	**17.68**	**241**	P			**P**	**14 47 30.4**	**+0.2**
	0.3nm,0.3s,baz=43,slow=11,SNR=24								
BJI	**Beijing**	**23.68**	**262**	P			**P**	**14 48 27.8**	**+1.3**
BJI				pmax			pmax		
	comp=Z,10.0nm,0.6s,mb4.4								
BJT	**Baijiatuau**	**23.69**	**262**	*e*P			**P**	**14 48 27.8**	**+1.1**
	comp=Z,9.9nm,0.6s,mb4.4								
NIKO	**Nikolski**	**27.97**	**63**	*e*P			**P**	**14 49 02.6**	**-1.8**
	comp=Z,107nm,0.9s								
COLD	**Coldfoot**	**36.58**	**35**	*e*P			**P**	**14 50 17.8**	**-0.2**
	comp=Z,2.1nm,0.8s,mb3.5								
MCK	**McKinley**	**37.30**	**41**	P			**P**	**14 50 24.0**	**0.0**
	comp=Z,7.1nm,1.3s,mb3.8								
PMR	**Palmer**	**37.48**	**45**	*e*P			**P**	**14 50 26.1**	**+0.6**
	comp=Z,1.4nm,0.4s,mb3.6								
COLA	**College**	**37.65**	**39**	*e*P			**P**	**14 50 27.4**	**+0.5**
	comp=Z,3.0nm,0.6s,mb3.8								
ILAR	**Eielson Array**	**38.07**	**39**	P			**P**	**14 50 30.6**	**+0.1**
	comp=Z,2.3nm,0.7s,mb3.6,baz=273,slow=8.0,SNR=46								
ZALV	**Zalesovo Beam**	**38.72**	**303**	PcP			PcP	14 52 37.2	-0.5
	comp=Z,0.7nm,0.3s,baz=80,slow=2.8,SNR=4.7								
BMRM	**Bremner River**	**39.74**	**45**	P			**P**	**14 50 44.7**	**+0.6**
	comp=Z,5.0nm,0.9s,mb3.8								
EGAK	**Eagle**	**40.50**	**39**	*e*P			**P**	**14 50 49.8**	**-0.4**
	comp=Z,4.2nm,1.0s,mb3.7								
QIZ	**Qiongzhong**	**41.90**	**240**	P			**P**	**14 50 57.8**	**-4.3**
INK	**Inuvik**	**42.74**	**33**	P			**P**	**14 51 08.0**	**-0.1**
INK	**Inuvik**	**42.74**	**33**	P			**P**	**14 51 08.0**	**-0.1**
	comp=Z,1.1nm,0.3s,mb3.7,baz=320,slow=8.8,SNR=3.3								
MKAR	**Makanchi Array**	**42.91**	**294**	P			**P**	**14 51 09.2**	**-0.5**
MKAR				ScP			ScP	14 56 01.2	-1.4
	comp=Z,0.2nm,0.6s,baz=59,slow=3.9,SNR=2.7								
BRVK	**Borovoye**	**47.10**	**307**	*e*P			**P**	**14 51 41.4**	**-0.6**
	comp=Z,3.1nm,0.9s,mb3.6								
DLBC	**Dease Lake**	**47.53**	**45**	P			**P**	**14 51 47.2**	**+2.0**
	comp=Z,0.9nm,0.7s,mb3.2,baz=284,slow=10,SNR=4.4								
EKS2	**Erkin-Say**	**50.23**	**293**	*e*P			**P**	**14 52 05.9**	**+0.3**
	comp=Z,1.6nm,0.8s,mb3.4								
YKA	**Yellowknife Ar**	**52.26**	**36**	P			**P**	**14 52 19.8**	**-0.4**
	comp=Z,0.9nm,0.5s,mb3.3,baz=302,slow=7.1,SNR=7.0								
YBH	**Yreka Blue Hor**	**60.55**	**59**	P			**P**	**14 53 19.3**	**+1.1**
	comp=Z,0.9nm,0.6s,mb3.4,baz=309,slow=5.0,SNR=4.9								
FINES	**FINESS Array B**	**61.23**	**332**	P			**P**	**14 53 21.7**	**-0.7**
FINES	**FINESS Array B**	**61.23**	**332**	P			**P**	**14 53 21.7**	**-0.7**
	comp=Z,1.1nm,0.5s,mb3.5,baz=30,slow=6.8,SNR=9.0								
FFC	**Flin Flon**	**62.26**	**38**	*e*P			**P**	**14 53 29.2**	**-0.1**
	comp=Z,1.8nm,0.6s,mb3.8								
FCC	**Fort Churchill**	**62.33**	**31**	*e*P			**P**	**14 53 28.7**	**-0.9**
	comp=Z,0.1nm,0.7s								
NVAR	**Mina Array Bea**	**65.26**	**60**	P			**P**	**14 53 49.6**	**+0.7**
	comp=Z,0.9nm,0.7s,mb3.5,baz=294,slow=6.7,SNR=8.9								
NOA	**NORSAR Array B**	**65.76**	**338**	P			**P**	**14 53 50.7**	**-0.9**
	comp=Z,0.5nm,0.5s,mb3.4,baz=38,slow=6.9,SNR=3.1								
AKASG	**Malin Array Be**	**68.32**	**323**	P			**P**	**14 54 06.8**	**-0.8**
	comp=Z,0.7nm,0.5s,mb3.6,baz=40,slow=6.2,SNR=2.7								
WRAB	**Tennant Creek**	**68.56**	**193**	*e*P			**P**	**14 54 05.3**	**-4.2**
	comp=Z,5.3nm,1.0s,mb4.1								
PALK	**Pallekele**	**69.08**	**257**	*e*P			**P**	**14 54 13.2**	**+0.3**
	comp=Z,52nm,1.3s								
ASAR	**Alice Springs**	**72.30**	**193**	P			**P**	**14 54 31.3**	**-0.4**
	comp=Z,0.5nm,0.7s,mb3.1,baz=12,slow=4.8,SNR=6.6								
TXAR	**Lajitas Array**	**80.21**	**57**	P			**P**	**14 55 16.0**	**+0.2**
TXAR	**Lajitas Array**	**80.21**	**57**	P			**P**	**14 55 16.0**	**+0.2**
	comp=Z,1.2nm,0.7s,mb3.6,baz=316,slow=3.8,SNR=16								

ISCJB ***09*** *15:05:18.0±0.6, 24.47°N±0.04°×122.29°E±0.02, h65km±8km, Error ellipse: s-maj=6.6km s-min=3.1km az=168.9*

TAP ***09*** *15:05:17.2, 24.53°N×122.22E, h79km, ML2.9, C*

JMA ***09*** *15:05:17.4±0.2, 24.71°N×122.32E, h73km, M1.8*

ISC 09 15:05:18.5±0.6, 24.48°N±0.04°×122.29°E±0.02, h63km±8km**, n32,** σ0≈**83**/57**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
TWC	**Suao**	**0.42**	**288**	P			**Pn**	**15 05 29.8**	**-0.2**
	baz=284								
TWC				*e*S			**Sn**	**15 05 38.6**	**+0.4**
	baz=284								
ENA	**Nanau**	**0.50**	**264**	P			**Pn**	**15 05 30.8**	**0.0**
	baz=253								
ENA				*e*S			**Sn**	**15 05 40.9**	**+1.3**
	baz=253								
TWE	**Neicheng**	**0.61**	**293**	*e*P			**Pn**	**15 05 32.3**	**+0.3**
	baz=291								
TWE				*e*S			**Sn**	**15 05 41.4**	**-0.5**
	baz=291								
YOJ	**Yonaguni jima**	**0.66**	**91**	P			**Pn**	**15 05 32.4**	**-0.1**
YOJ				*e*S			**Sn**	**15 05 43.4**	**+0.7**
TWD	**Chiawan**	**0.75**	**238**	*e*P			**Pn**	**15 05 33.8**	**+0.3**
	baz=227								
TWD				*e*S			**Sn**	**15 05 44.6**	**+0.1**
	baz=227								
NWF	**Wu-fen Shan**	**0.75**	**322**	*e*S			**Sn**	**15 05 43.9**	**-0.6**
	baz=316								
TWA	**Mucha**	**0.81**	**308**	*e*S			**Sn**	**15 05 44.7**	**-1.3**
	baz=308								
NNS	**Nan Shan**	**0.83**	**268**	*e*P			**Pn**	**15 05 34.1**	**-0.5**
	baz=258								
NNS				*e*S			**Sn**	**15 05 46.4**	**0.0**
	baz=258								
NSK	**Sanguang**	**0.87**	**283**	*e*P			**Pn**	**15 05 34.6**	**-0.4**
	baz=281								
NSK				S			**Sn**	**15 05 46.9**	**-0.3**
	baz=281								
WHF	**Hehuan Shan**	**0.99**	**251**	*i* P			**Pn**	**15 05 36.5**	**0.0**
	baz=246								
WHF				*e*S			**Sn**	**15 05 50.2**	**+0.3**
	baz=246								
TWS1	**Kuangyinshan**	**1.00**	**308**	*e*P			**Pn**	**15 05 36.9**	**+0.2**
	baz=314								
TWS1				*e*S			**Sn**	**15 05 49.9**	**-0.3**
	baz=314								
ESL	**Shilin**	**1.02**	**230**	*e*P			**Pn**	**15 05 36.1**	**-0.9**
	baz=234								
ESL				*e*S			**Sn**	**15 05 49.0**	**-1.7**
	baz=234								
TWT	**Tachien**	**1.04**	**258**	*e*P			**Pn**	**15 05 37.3**	**+0.2**
	baz=254								
TWT				*e*S			**Sn**	**15 05 51.6**	**+0.6**
	baz=254								
NSTT	**Nanjuang**	**1.18**	**278**	*e*P			**Pn**	**15 05 39.2**	**+0.2**
	baz=275								
NSTT				*e*S			**Sn**	**15 05 54.2**	**-0.1**
	baz=275								
EHY	**Hungye**	**1.31**	**223**	*e*P			**Pn**	**15 05 39.4**	**-1.4**
	baz=227								
EHY				*e*S			**Sn**	**15 05 55.8**	**-1.6**
	baz=227								
IRIF	**Iriomote-Funau**	**1.32**	**96**	P			**Pn**	**15 05 40.3**	**-0.6**
IRIF				*e*S			**Sn**	**15 05 57.7**	**0.0**
TWQ1	**Liyutan**	**1.39**	**265**	*e*S			**Sn**	**15 05 59.5**	**+0.2**
	baz=262								
SMLT	**Sun Moon Lake**	**1.40**	**245**	*e*P			**Pn**	**15 05 42.7**	**+0.7**
	baz=236								
SMLT				*e*S			**Sn**	**15 06 01.9**	**+2.4**
	baz=236								
TYC	**Yuchr**	**1.43**	**247**	*e*P			**Pn**	**15 05 42.4**	**+0.1**
	baz=239								
TYC				*e*S			**Sn**	**15 06 00.9**	**+0.7**
	baz=239								
TWF1	**Yuli**	**1.44**	**219**	*e*P			**Pn**	**15 05 41.1**	**-1.4**
	baz=224								
TWF1				*e*S			**Sn**	**15 05 59.4**	**-1.2**
	baz=224								
HATJ	**Hateruma jima**	**1.45**	**107**	P			**Pn**	**15 05 43.1**	**+0.5**
HATJ				*e*S			**Sn**	**15 06 01.6**	**+1.0**
YUS	**Yu-Shan**	**1.57**	**231**	*e*P			**Pn**	**15 05 44.7**	**+0.5**
	baz=222								
YUS				*e*S			**Sn**	**15 06 04.7**	**+1.1**
	baz=222								
JKRS	**Kuro-shima**	**1.59**	**98**	P			**Pn**	**15 05 44.3**	**-0.1**
JKRS				*e*S			**Sn**	**15 06 04.4**	**+0.4**
CHKT	**Chengkung**	**1.61**	**212**	*e*S			**Sn**	**15 06 02.5**	**-2.1**
	baz=200								
ALS	**Alishan**	**1.66**	**235**	*e*P			**Pn**	**15 05 46.3**	**+0.8**
	baz=224								
ALS				*e*S			**Sn**	**15 06 06.8**	**+1.0**
	baz=224								
JIJ	**Ishigaki jima**	**1.69**	**94**	P			**Pn**	**15 05 45.3**	**-0.6**
JIJ				*e*S			**Sn**	**15 06 06.1**	**-0.5**
CHN5	**Tsauling**	**1.71**	**240**	*e*P			**Pn**	**15 05 46.7**	**+0.6**
	baz=247								
CHN5				*e*S			**Sn**	**15 06 08.0**	**+0.9**
	baz=247								
ELDTW	**Lidau**	**1.73**	**222**	*e*P			**Pn**	**15 05 45.0**	**-1.5**
	baz=214								
ELDTW				*e*S			**Sn**	**15 06 06.7**	**-0.8**
	baz=214								
STYT	**Tauyuan**	**1.92**	**227**	*e*P			**Pn**	**15 05 49.4**	**+0.4**
	baz=224								
WTP	**Ta-pu**	**1.96**	**232**	*e*P			**Pn**	**15 05 50.2**	**+0.7**
	baz=228								
CHN1	**Nanshi**	**2.06**	**232**	*e*S			**Sn**	**15 06 17.2**	**+1.7**
	baz=229								
JTJ	**Tarama**	**2.20**	**85**	P			**Pn**	**15 05 52.8**	**0.0**
JTJ				*e*S			**Sn**	**15 06 19.5**	**+0.5**

SZGRF ***09*** *15:18:11.2, 51.42°N×179.66°W, h33km, mb5.4, Andreanof Islands, Aleutian Islands, United States*

ISCJB ***09*** *15:18:12.9±0.1, 51.51°N±0.02°×178.42°W±0.02, h34km, mb5.4/307, MS4.7/75, Error ellipse: s-maj=3.5km s-min=1.5km az=3.7*

MOS ***09*** *15:18:13.1±0.9, 51.60°N×178.38°W, h33km, mb5.5/123, MS4.6/33, Error ellipse: s-maj=9.2km s-min=7.2km az=156.9*

IDC ***09*** *15:18:15.8±1.4, 51.62°N×178.33°W, h46km±11km, mb4.9/24, mb1 5.0/25, mb1mx5.0/27, mbtmp4.9/25, ML5.5/1, MS4.6/29, Ms1 4.6/29, ms1mx4.6/33, Error ellipse: s-maj=15.2km s-min=9.6km az=160.0*

BJI ***09*** *15:18:15.7, 51.79°N×178.55W, h58km, mB5.4/40, mb5.6/58, Ms5.0/55, Ms7 4.8/52*

NEIC ***09*** *15:18:16.9±0.4, 51.50°N×178.44W, h58km±3km, mb5.3/164, MW5.5, MW5.3, ML5.5(AEIC), Error ellipse: s-maj=3.6km s-min=2.0km az=184.0, Moment Tensor Solution. s93 Moment tensor: Scale 10^16 Nm; Mrr 7.44; Mθθ -6.63; Mφφ -0.81; Mrθ 4.60; Mrφ -4.01; Mθφ 3.27; Best double couple: Mo 9.90000×10^16 NP1:φs 58.00000°, δ 63.00000°, λ 84.00000°. NP2:φs 250.00000°, δ 28.00000°, λ 101.00000°. Principal axes: T 9.3000, Plg 71.0000°, Azm 314.0000°; N 1.2000, Plg 4.0000°, Azm 60.0000°; P -10.4000, Plg 17.0000°, Azm 151.0000°;*

GCMT ***09*** *15:18:17.1±0.1, 51.29°N×178.26W, h42km, MW5.4, Moment Tensor Solution. s94,c163; s99,c190; Moment tensor: Scale 10^17 Nm; Mrr 1.14±.02; Mθθ -1.22±.02; Mφφ 0.08±.02; Mrθ 0.44±.02; Mrφ -0.41±.01; Mθφ 0.57±.02; Best double couple: Mo 1.40000×10^17 NP1:φs 273.00000°, δ 36.00000°, λ 122.00000°. NP2:φs 56.00000°, δ 60.00000°, λ 69.00000°. Principal axes: T 1.4100, Plg 68.0000°, Azm 285.0000°; N 0.0600, Plg 18.0000°, Azm 66.0000°; P -1.4700, Plg 13.0000°, Azm 161.0000°; Data Used: II IU IC G CN. Surface waves from 101 sta.*

BGS ***09*** *15:18:17.1±2.6, 51.50°N×178.44W, h58km, mb5.0*

DJA ***09*** *15:18:25, 51.31°N×178.80W, h116km, mb5.4/22*

ISC 09 15:18:15.0±0.1, 51.58°N±0.02°×178.46°W±0.02, h36km**,**
h36km±.5km**: pP-P, n1399,** σ0≈**78**/1391**, mb5.4**/306**, MS4.7**/75**,**
528C-181D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
AMKA	**Amchitka**	**1.42**	**263**	P			**Pn**	**15 18 39.2**	**+1.0**
AMKA				S			**Sn**	**15 18 57.7**	**+2.1**
GSTR	**Great Sitkin T**	**1.57**	**70**	*e*Pn			**Pn**	**15 18 41.5**	**+1.1**
ATKA	**Atka Island**	**2.71**	**75**	P			**Pn**	**15 18 56.4**	**+0.3**
ATKA				S			**Sn**	**15 19 28.6**	**+1.1**
SMY	**Shemya**	**4.73**	**287**	*e*Pn			**Pn**	**15 19 26.3**	**+2.6**
SMY				P				15 19 26.9	
SMY				S			**Sn**	**15 20 22.3**	**+5.2**
SMY				*e*Sn			**Sn**	**15 20 23.8**	**+6.6**
SMY	**Shemya**	**4.73**	**287**	*e*P			**Pn**	**15 19 26.3**	**+2.6**
SMY				S			**Sn**	**15 20 22.3**	**+5.1**
NIKO	**Nikolski**	**6.06**	**73**	*e*Pn			**Pn**	**15 19 43.2**	**+1.3**
NIKO				P				15 19 43.6	
NIKO				*e*Sn			**Sn**	**15 20 41.2**	**-8.7**
SPIA	**Saint Paul Isl**	**7.38**	**37**	P			**Pn**	**15 20 03.8**	**+3.8**
UNV	**Unalaska Valle**	**7.61**	**68**	P			**Pn**	**15 20 05.3**	**+2.1**
AKUT	**Akutan**	**8.09**	**67**	*e*P			**Pn**	**15 20 14.5**	**+4.6**
FALS	**False Pass**	**9.60**	**64**	*e*Pn			**Pn**	**15 20 33.7**	**+3.2**
FALS				*e*Sn			**Sn**	**15 22 15.7**	**-1.3**
SDPT	**Sand Point**	**11.36**	**64**	*e*P			**Pn**	**15 20 56.4**	**+1.9**
	30nm,0.3s								
CHGN	**Chignik**	**12.70**	**60**	*e*P			**Pn**	**15 21 14.0**	**+1.1**
GAMB	**Gambell**	**12.74**	**14**	*e*Pn			**Pn**	**15 21 17.0**	**+3.6**
	308nm,1.2s								
PET	**Petropavlovsk**	**14.07**	**285**	*e*Pn			**Pn**	**15 21 32.2**	**+0.7**
	72nm,1.0s								
PET	**Petropavlovsk**	**14.07**	**285**	*c i*P			**Pn**	**15 21 32.7**	**+1.2**
PET				*e*S			**Sn**	**15 24 09.3**	**+3.1**
PET					pmax		pmax		
	comp=Z,46nm,0.9s								
PET					pmax		pmax		
	comp=Z,600nm,8.1s								
PET					pmax		pmax		
	comp=Z,700nm,6.6s								
PET					MLR		MLR		
	comp=Z,3μm,20.0s								
PET					MLR		MLR		
	comp=Z,3μm,16.0s								
TNA	**Tin City**	**15.02**	**17**	*e*Pn			**Pn**	**15 21 45.0**	**+0.7**
	comp=Z,72nm,1.0s								
TNA				*e*PcP			PcP	15 26 50.7	+0.1
OHAK	**Old Harbor**	**15.65**	**59**	*e*P			**Pn**	**15 21 51.4**	**-1.2**
	comp=Z,25nm,0.3s								
SVW2	**Sparrevohn**	**15.78**	**44**	*e*P			**Pn**	**15 21 57.6**	**+3.4**
	comp=Z,213nm,1.2s								
SKR	**Severo-Kuril's**	**15.97**	**277**	*e*P			**Pn**	**15 21 56.0**	**-0.6**
SKR				*e*S			**Sn**	**15 24 48.5**	**-3.8**
SKR					pmax		pmax		
	comp=Z,1μm,8.0s								
SKR					pmax		pmax		
	comp=Z,110nm,1.0s								
SKR					smax				
	comp=N,40nm,0.5s								
SKR					smax				
	comp=E,40nm,0.5s								
SKR					smax				
	comp=N,2μm,8.0s								
SKR					smax				
	comp=E,1μm,8.0s								
SKR					MLR		MLR		
	comp=N,2μm,20.0s								
SKR					MLR		MLR		
	comp=E,1μm,20.0s								
SKR					MLR		MLR		
	comp=Z,1μm,20.0s								
KDAK	**Kodiak Island**	**16.14**	**57**	*e*Pn			**Pn**	**15 21 56.1**	**-2.6**
KDAK				*e*Sn			**Sn**	**15 24 48.0**	**-8.3**
KDAK				*e*ScP			ScP	15 30 19.2	-4.5
KDAK	**Kodiak Island**	**16.14**	**57**	P			**Pn**	**15 21 56.4**	**-2.3**
	comp=Z,18nm,0.3s,baz=265,slow=6.7,SNR=23								
KDAK					S		**Sn**	**15 24 50.5**	**-5.8**
	comp=Z,1.7nm,0.3s,baz=351,slow=19,SNR=2.6								
KDAK					ScP		ScP	15 30 20.6	-3.1
	comp=Z,0.0nm,0.3s,baz=56,slow=6.3,SNR=4.0								
KDAK	**Kodiak Island**	**16.14**	**57**	*c e*P			**Pn**	**15 21 56.1**	**-2.6**
TTA	**Tatalina**	**16.52**	**38**	*e*P			**Pn**	**15 22 07.6**	**+4.0**
RSO	**Redoubt South**	**16.79**	**48**	*e*P			**Pn**	**15 22 10.1**	**+3.1**
PPLA	**Purkeypile**	**18.02**	**41**	*e*P			**Pn**	**15 22 25.0**	**+2.7**
	comp=Z,44nm,1.0s								
SEW	**Seward**	**18.25**	**51**	*e*P			**Pn**	**15 22 24.7**	**-0.4**
	comp=Z,136nm,0.6s								
SEW				*e*Sn			**Sn**	**15 25 40.5**	**-7.1**
RC01	**Rabbit Creek A**	**18.40**	**48**	*e*P			**Pn**	**15 22 28.1**	**+1.2**
	comp=Z,73nm,0.7s								
RC01				*e*Sn			**Sn**	**15 25 45.0**	**-6.0**
PMR	**Palmer**	**18.84**	**47**	*e*P			**Pn**	**15 22 31.6**	**-0.5**
	comp=Z,9.7nm,0.5s								
PMR	**Palmer**	**18.84**	**47**	*e*P			**Pn**	**15 22 31.6**	**-0.5**
PMR					pmax		pmax		
	comp=Z,10.0nm,0.5s								
TRF	**Thorofare Moun**	**19.04**	**41**	*e*P			**Pn**	**15 22 34.6**	**0.0**
	comp=Z,1μm,1.5s								
TRF				*e*PcP			PcP	15 26 55.8	-1.2
BPAW	**Bear Paw Mtn.**	**19.06**	**38**	*e*P			**Pn**	**15 22 35.8**	**+1.0**
	comp=Z,12nm,1.0s								
SEY	**Seymchan**	**19.24**	**317**	*c e*P			**Pn**	**15 22 38.7**	**+1.7**
MID	**Middleton Isla**	**19.65**	**54**	*e*P			**Pn**	**15 22 42.1**	**+0.2**
	comp=Z,144nm,0.9s								
MID	**Middleton Isla**	**19.65**	**54**	*e*P			**Pn**	**15 22 42.1**	**+0.2**
MID					pmax		pmax		
	comp=Z,144nm,0.9s								
MCK	**McKinley**	**19.71**	**41**	*e*P			**Pn**	**15 22 40.7**	**-1.9**
MCK				*e*S			**S**	**15 26 11.9**	**-9.0**
DIV	**Divide**	**20.26**	**49**	*e*P			**P**	**15 22 46.2**	**-0.8**
DIV				*e*S			**S**	**15 26 26.1**	**-5.9**
COLA	**College**	**20.62**	**38**	*e*P			**P**	**15 22 51.1**	**+0.3**
	comp=Z,118nm,0.8s								
COLA				*e*S			**S**	**15 26 37.4**	**-1.7**
COLA	**College**	**20.62**	**38**	*e*P			**P**	**15 22 51.1**	**+0.3**
COLA				*e*S			**S**	**15 26 37.4**	**-1.6**
COLA					pmax		pmax		
	comp=Z,118nm,0.8s								
BMRM	**Bremner River**	**20.78**	**50**	i*e*P			**P**	**15 22 52.5**	**-0.1**
	comp=Z,116nm,0.7s								
BMRM				*e*S			**S**	**15 26 37.6**	**-4.7**
PAX	**Paxson**	**20.90**	**44**	i*e*P			**P**	**15 22 53.1**	**-0.6**
	comp=Z,38nm,0.6s								
PAX				*e*S			**S**	**15 26 41.5**	**-3.0**
PAX	**Paxson**	**20.90**	**44**	i*e*P			**P**	**15 22 53.1**	**-0.7**
PAX				*e*S			**S**	**15 26 41.5**	**-3.0**
PAX					pmax		pmax		
	comp=Z,38nm,0.6s								
ILAR	**Eielson Array**	**20.95**	**39**	P			**P**	**15 22 51.9**	**-2.5**
ILAR				S			**S**	**15 26 45.1**	**-0.5**
ILAR				PcP			PcP	15 26 59.3	-1.2
ILAR				ScP			ScP	15 30 30.6	-3.6
ILAR				LR			LR	15 31 55.7	
ILAR	**Eielson Array**	**20.95**	**39**	P			**P**	**15 22 51.9**	**-2.5**
	comp=Z,8.8nm,0.4s,baz=241,slow=10.0,SNR=81								
ILAR				S			**S**	**15 26 45.1**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=233,slow=16,SNR=3.3								
ILAR				PcP			PcP	15 26 59.3	-1.2
	comp=Z,14nm,0.5s,baz=293,slow=3.6,SNR=26								
ILAR				ScP			ScP	15 30 30.6	-3.6
	comp=Z,3.2nm,0.6s,baz=275,slow=3.2,SNR=15								
ILAR				LR			LR	15 31 55.7	
	comp=Z,2μm,18.7s,MS4.6,baz=244,slow=39								
ILAR					P3KPbc		

INK LR LR 15 35 54.8
comp=Z,1µm,19.2s,MS4.5,baz=244,slow=39
ERM Erimo 27.68 265 ⇓*iP* **P 15 23 59.7 +0.4**
DLBC Dease Lake 28.07 57 *eP* **P 15 24 01.3 -1.3**
DLBC *ePcP* PcP 15 27 16.1 0.0
DLBC Dease Lake 28.07 57 P **P 15 24 02.0 -0.6**
comp=Z,3.2nm,0.5s,mb4.2,baz=286,slow=6.8,SNR=6.2
DLBC PcP PcP 15 27 15.9 -0.3
comp=Z,8.1nm,0.7s,baz=284,slow=3.8,SNR=4.6
DLBC LR LR 15 34 37.1
comp=Z,943nm,21.9s,MS4.3,baz=318,slow=35
YAK Yakutsk 29.45 311 *eP* **P 15 24 13.8 -1.0**
YAK *ePcP* PcP 15 27 18.8 -0.8
YAK *eScP* ScP 15 30 55.8 -2.5
YAK Yakutsk 29.45 311 *eP* **P 15 24 14.1 -0.7**
YAK *e**PP pP 15 24 28.0 +2.9
YAK *e* 15 25 07.7
YAK *e* 15 27 19.3
YAK *eS* **S 15 29 06.4 +0.2**
YAK *eSS* SS 15 30 35.9 -36
YAK *e* 15 34 49.5
YAK pmax pmax
comp=Z,17nm,1.0s,mb4.7
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK pmax pmax
comp=Z,38nm,1.2s,mb5.0
YAK pmax pmax
comp=N,23nm,1.7s
YAK pmax pmax
comp=E,46nm,2.0s
YAK smax
comp=N,37nm,1.9s
YAK smax
comp=E,34nm,2.2s
YAK MLR MLR
comp=Z,3µm,21.0s,MS4.8
YAK MLR MLR
comp=N,650nm,21.0s,MS4.7
YAK MLR MLR
comp=E,2µm,19.0s,MS4.7
HABR Khabarovsk 29.64 283*c iP* **P 15 24 17.9 +1.2**
HABR *PP pP 15 24 29.1 +2.2
HABR *SP sP 15 24 34.5 +3.2
HABR *e* 15 25 14.1
HABR *ePPP* 15 25 23.7
HABR 15 27 21.2
HABR *eS* **S 15 29 11.3 +1.8**
HABR *e**SS sS 15 29 31.4 +5.0
HABR *eSS* SS 15 30 45.5 -30
HABR *e* 15 31 04.6
HABR *e* 15 34 55.2
HABR pmax pmax
comp=Z,93nm,1.4s,mb5.3
HABR pmax pmax
comp=E,54nm,1.3s
HABR pmax pmax
comp=N,25nm,1.6s
HABR MLR MLR
comp=Z,1µm,20.0s,MS4.6
TIXI Tiksi 30.57 330 ⇑*iP* **P 15 24 24.4 -0.2**
TIXI *ePcP* PcP 15 27 21.9 -0.4
TIXI *eScP* ScP 15 30 59.2 -2.6
TIXI Tiksi 30.57 330 *eP* **P 15 24 24.6 -0.1**
TIXI *e* 15 25 36.4
TIXI pmax pmax
comp=Z,13nm,1.8s,mb4.5
TIXI MLR MLR
comp=Z,3µm,16.0s,MS5.0
BBB Bella Bella 30.58 69 LR LR 15 36 15.7
comp=Z,545nm,18.9s,MS4.2,baz=107,slow=35
MAJO Matsushiro 34.03 261 ⇑*iP* **P 15 24 56.3 +0.9**
MAJO ⇑*iPcP* PcP 15 27 32.2 -0.2
MAT Matsushiro 34.03 261 P **P 15 24 56.3 +1.0**
MAT S **S 15 30 18.0 -0.1**
KIP Kipapa 34.05 144 *eP* **P 15 24 54.8 -0.8**
OBC Olympics--Boni 34.59 74 P **P 15 25 01.7 +1.6**
PGC Sidney 34.70 73 ⇑*iP* **P 15 25 01.4 +0.4**
PGC *e* pP 15 25 11.1 -0.1
MDJ Mudanjiang 34.75 279 P **P 15 25 01.4 -0.1**
MDJ pP pP 15 25 16.0 +4.2
MDJ sP sP 15 25 23.6 +7.5
MDJ PP PP 15 26 20.7 +0.2
MDJ S **S 15 30 27.2 -1.9**
MDJ sS sS 15 30 51.9 +5.7
MDJ ScS ScS 15 35 16.3 -3.5
MDJ pmax pmax
comp=Z,47nm,1.0s,mb5.4
MDJ pmax pmax
comp=Z,190nm,9.0s
MDJ LR LR
comp=N,580nm,24.2s
MDJ LR LR
comp=E,820nm,29.7s
MDJ LR LR
comp=Z,1µm,29.3s
MDJ Mudanjiang 34.75 279 ⇑*iP* **P 15 25 01.0 -0.5**
comp=Z,46nm,0.9s,mb5.4
MDJ *e* 15 25 16.2
MDJ *ePP* PP 15 26 23.9 +3.5
MDJ *ePcP* PcP 15 27 34.6 +0.3
YKA Yellowknife Ar 34.94 47 P **P 15 25 02.3 -0.6**
YKA PcP PcP 15 27 34.7 +0.2
YKA ScP ScP 15 31 14.6 -2.5
YKA Yellowknife Ar 34.94 47 P **P 15 25 02.3 -0.6**
comp=Z,18nm,0.7s,mb5.1,baz=282,slow=8.1,SNR=87
YKA PcP PcP 15 27 34.7 +0.2
comp=Z,22nm,0.8s,baz=288,slow=2.9,SNR=26
YKA ScP ScP 15 31 14.5 -2.5
comp=Z,1.4nm,0.5s,baz=288,slow=3.4,SNR=7.9
YKA Yellowknife Ar 34.94 47 P **P 15 25 02.3 -0.6**
YKA 15 27 34.7
YKA pmax pmax
comp=Z,18nm,0.7s
NLWA Neilton Lookou 35.01 75 ⇑P **P 15 25 04.5 +0.8**
baz=35,SNR=20
NLWA Neilton Lookou 35.01 75 ⇑*iP* **P 15 25 05.1 +1.4**
NLWA *e* pP 15 25 14.9 +0.9
NLWA *ePcP* PcP 15 27 34.4 -0.7
VDB Vedder Mountai 35.33 71 P **P 15 25 07.2 +0.8**
A05A Maple Falls 35.35 71 ⇓P **P 15 25 07.2 +0.6**
baz=35,SNR=42
GNW Green Mountain 35.56 74 ⇑*iP* **P 15 25 09.7 +1.3**
comp=Z,54nm,0.9s,mb5.5
GNW *e* pP 15 25 19.4 +0.7
E03A Lebam 35.60 76 ⇓P **P 15 25 09.1 +0.3**
baz=36,SNR=12
JCW Jim Creek 35.81 73 P **P 15 25 11.6 +1.1**
B06A Marblemount 35.92 72 ⇓P **P 15 25 12.0 +0.5**
baz=36,SNR=15
RPW Rockport 35.94 72 *eP* **P 15 25 11.7 0.0**
HEBO Mount Hebo 36.14 78 *eP* **P 15 25 14.2 +0.8**
D05A Enumclaw 36.24 74 ⇑P **P 15 25 15.5 +1.3**
baz=36,SNR=36
LON Longmire 36.56 75 ⇑*iP* **P 15 25 17.7 +0.8**
WRW Wenatchee Ridg 36.59 73 P **P 15 25 18.3 +1.1**
F04A Amboy 36.59 76 ⇓P **P 15 25 18.2 +0.9**
baz=36,SNR=29
COR Corvallis 36.73 79 ⇑*iP* **P 15 25 19.3 +0.8**
COR *e* pP 15 25 29.5 +0.7
COR *e* 15 25 38.5
COR Corvallis 36.73 79 ⇑*iP* **P 15 25 19.3 +0.8**
COR *e* pP 15 25 29.5 +0.7
G04A Mulino 36.92 77 ⇓P **P 15 25 20.8 +0.8**
baz=37,SNR=16
ASR Mount Adams--S 36.98 75 P **P 15 25 21.6 +1.0**
KEBM Edson Butte 37.01 82 *eP* **P 15 25 21.9 +1.1**
ETW Entiat 37.03 73 P **P 15 25 22.1 +1.1**
B08A Colville Reser 37.27 71 ⇑P **P 15 25 23.7 +0.7**
baz=37,SNR=184
HOOD Mount Hood Mea 37.36 77 ⇑*iP* **P 15 25 24.8 +1.0**
H04A Detroit Lake 37.37 78 ⇑P **P 15 25 24.6 +0.8**
baz=37,SNR=64
CN2 Changchun 37.72 281 *eP* **P 15 25 27.0 +0.1**
CN2 *eS* **S 15 31 11.8 -2.7**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb4.8
CN2 pmax pmax
comp=Z,200nm,10.0s
CN2 LR LR
comp=N,600nm,20.0s,MS4.5
CN2 LR LR
comp=E,600nm,20.0s,MS4.5
CN2 LR LR
comp=Z,200nm,21.0s,MS3.9
E07A Sunnyside 37.83 74 ⇓P **P 15 25 28.0 +0.3**
baz=38,SNR=14
HUMO Hull Mountain 38.00 81 ⇑*iP* **P 15 25 30.1 +0.9**
HUMO *e* pP 15 25 39.4 -0.2
HUMO *e* 15 25 48.9
HUMO *ePcP* PcP 15 27 44.2 +0.1
HUMO *eS* **S 15 31 16.9 -1.9**
HUMO *eScP* ScP 15 31 26.0 -2.7
G06A Carlson Farm, 38.02 76 ⇓P **P 15 25 29.9 +0.5**
baz=38,SNR=22
RSW Rattlesnake Hi 38.06 74 *eP* **P 15 25 30.8 +1.0**
OD2 Odessa Site #2 38.10 72 ⇑*eP* **P 15 25 30.1 +0.1**
OD2 *e* pP 15 25 39.8 -0.5
HAWA Hanford 38.10 74 ⇑*iP* **P 15 25 30.6 +0.6**
HAWA *e* 15 26 43.8
HAWA *eS* **S 15 31 22.7 +2.5**
F07A Phinny Hill Vi 38.11 75 ⇓P **P 15 25 31.0 +0.9**
baz=38,SNR=19
D08A Wollman Farm, 38.14 73 ⇓P **P 15 25 30.4 +0.1**
baz=38,SNR=42
C09A Chrisman Ranch 38.16 71 ⇓P **P 15 25 30.6 +0.1**
baz=38,SNR=57
E08A Dider Farm, El 38.34 73 ⇑P **P 15 25 32.6 +0.6**
baz=38,SNR=18
HIA Hailar 38.41 292 ⇑*iP* **P 15 25 32.7 +0.1**
comp=Z,35nm,0.7s,mb5.2
HIA *ePcP* PcP 15 27 45.5 +0.2
HIA Hailar 38.41 292 ⇑*iP* **P 15 25 32.7 +0.1**
HIA *e* 15 27 45.5
HIA pmax pmax
comp=Z,35nm,0.7s
KHMM Horse Mountain 38.49 84 *eP* **P 15 25 35.0 +1.5**
EDM Edmonton 38.53 61 ⇑*iP* **P 15 25 32.8 -0.8**
NEW Newport 38.61 70 ⇑*iP* **P 15 25 34.4 +0.1**
NEW *e* pP 15 25 43.9 -0.8
NEW *eS* **S 15 31 25.2 -2.8**
YBH Yreka Blue Hor 38.64 82 *eP* **P 15 25 36.2 +1.6**
E09A Wood Farm, Sta 38.87 73 ⇓P **P 15 25 36.6 +0.2**
baz=39,SNR=22
G08A Pilot Rock 39.01 75 P **P 15 25 38.1 +0.4**
baz=39,SNR=35
LNOR Lincton Mounta 39.11 74 *eP* **P 15 25 38.6 +0.1**
A12A Yaak River Ran 39.15 68 ⇑P **P 15 25 39.3 +0.5**
baz=39
K05A Summer Lake 39.21 80 ⇑P **P 15 25 40.9 +1.5**
baz=39,SNR=72
KCPM Cahto Peak 39.28 85 *eP* **P 15 25 40.9 +0.9**
I07A Izee 39.32 77 ⇑P **P 15 25 41.0 +0.8**
baz=39,SNR=109
C11A Tepee Creek (N 39.33 70 ⇑P **P 15 25 40.1 -0.2**
baz=39,SNR=43
WDC Whiskeytown Da 39.40 84 *eP* **P 15 25 41.5 +0.5**
B12A Libby 39.41 69 ⇓P **P 15 25 40.7 -0.3**
baz=39
RES Resolute Bay 39.47 25 *ePcP* PcP 15 27 48.5 +0.2
F10A Beach Ranch, E 39.69 73 ⇑P **P 15 25 43.6 +0.2**
baz=40,SNR=30
C12B Naegeli Ranch, 39.85 70 ⇓P **P 15 25 44.8 +0.2**
baz=40,SNR=17
KSRS Korea Array 39.85 271 P **P 15 25 46.2 +1.4**
comp=Z,57nm,0.8s,mb5.4,baz=57,slow=8.1,SNR=266
KSRS PcP PcP 15 27 49.8 -0.2
comp=Z,6.5nm,0.9s,baz=59,slow=3.7,SNR=6.0
KSRS LR LR 15 41 24.0
comp=Z,307nm,20.4s,MS4.1,baz=54,slow=35
KSRS Korea Array 39.85 271 P **P 15 25 46.2 +1.4**
KSRS 15 27 49.8
KSRS pmax pmax
comp=Z,57nm,0.8s,mb5.3
KSRS MLR MLR
comp=Z,307nm,20.4s,MS4.1
A13A Flathead Natio 39.87 68 ⇑P **P 15 25 44.6 -0.1**
baz=40,SNR=21
HOPS Hopland 40.01 86 *eP* **P 15 25 45.9 -0.1**
comp=Z,79nm,1.2s,mb5.3
MOD Modoc 40.03 80 ⇓*iP* **P 15 25 47.1 +0.9**
WALA Waterton Lakes 40.09 67 ⇑*iP* **P 15 25 46.4 -0.2**
WALA *ePcP* PcP 15 27 50.6 0.0
WALA *eScP* ScP 15 31 33.0 -3.6
B13A Whitefish 40.11 68 P **P 15 25 46.9 +0.1**
baz=40,SNR=31
BSMT Bassoo Peak 40.18 69 ⇑*eP* **P 15 25 47.8 +0.4**
BSMT *e* pP 15 25 57.6 -0.2
BSMT *eScP* ScP 15 31 34.9 -2.2
BMO Blue Mountains 40.23 75 ⇑*iP* **P 15 25 48.2 +0.3**
BMO *e* pP 15 25 58.1 -0.2
D12A Red Ives Fores 40.25 71 ⇓P **P 15 25 47.7 -0.3**
baz=40
J08A Circle Bar Ran 40.34 77 ⇓P **P 15 25 49.4 +0.7**
baz=40,SNR=41
C13A Hot Springs 40.39 69 ⇑P **P 15 25 48.9 -0.2**
baz=40,SNR=81
A14A Double T Ranch 40.42 67 ⇑P **P 15 25 49.2 -0.1**
baz=40,SNR=98
E12A Beaver Dam Sad 40.45 72 ⇓P **P 15 25 49.5 -0.1**
baz=40,SNR=141
JTMT Jette 40.53 69 ⇑*iP* **P 15 25 50.5 +0.2**
JTMT *eScP* ScP 15 31 33.4 -5.0
YBMT Yellow Bay 40.63 69 ⇑*eP* **P 15 25 51.1 0.0**
CIT Chita 40.63 298 *eP* **P 15 25 50.9 -0.2**
CIT *e* 15 26 05.1
CIT *e* 15 27 48.5
INCN Inchon 40.64 272 ⇑*iP* **P 15 25 52.4 +1.1**
INCN Inchon 40.64 272 P **P 15 25 52.9 +1.6**
SNR=12
WVOR Wild Horse Val 40.75 79 ⇑*iP* **P 15 25 52.7 +0.6**
comp=Z,106nm,0.9s,mb5.5
WVOR *e* pP 15 26 02.3 -0.3
WVOR Wild Horse Val 40.75 79 ⇑*iP* **P 15 25 52.7 +0.5**
WVOR *e* pP 15 26 02.3 -0.3
WVOR pmax pmax
comp=Z,106nm,0.9s,mb5.5
D13A Huson 40.76 70 ⇓P **P 15 25 52.0 -0.2**
baz=41,SNR=35
OHCM Honcut 40.79 84 *eP* **P 15 25 52.5 0.0**
B14A Marquette Ranc 40.81 68 ⇑P **P 15 25 52.1 -0.4**
baz=41
A15A Johnson Ranch, 40.81 67 ⇓P **P 15 25 51.6 -0.9**
baz=41,SNR=43
SWMT Swartz Lake 40.81 69 *eP* **P 15 25 51.5 -1.1**
SWMT *eScP* ScP 15 31 35.8 -3.7
C14A Swan Lake 40.83 69 ⇓P **P 15 25 52.7 0.0**
baz=41,SNR=78
F12A Elk City 40.98 72 P **P 15 25 54.3 +0.3**
baz=41,SNR=150
MSO Missoula 41.20 70 ⇑*iP* **P 15 25 55.4 -0.3**
MSO *e* pP 15 26 05.3 -0.9
MSO *eScP* ScP 15 31 42.5 +1.4
B15A Bradely Ranch, 41.24 68 ⇑P **P 15 25 55.4 -0.7**
baz=41,SNR=77
SLMT Seeley Lake 41.25 69 ⇑*eP* **P 15 25 55.7 -0.5**
SLMT *e* pP 15 26 05.3 -1.3
SLMT *ePcP* PcP 15 27 54.1 -0.3
SLMT *eScP* ScP 15 31 42.6 +1.3
E13A Victor 41.25 71 ⇓P **P 15 25 55.7 -0.6**
baz=41,SNR=64
G12A Big Creek, Yel 41.27 73 ⇑P **P 15 25 56.5 +0.1**
baz=41
D14A Greenough 41.32 70 P **P 15 25 56.7 -0.1**
baz=41,SNR=212
A16A West Butte Ran 41.48 66 ⇑P **P 15 25 57.1 -1.0**
baz=41,SNR=49
C15A Salmond Ranch, 41.49 68 P **P 15 25 58.7 +0.6**
baz=41,SNR=186
F13A Darby 41.51 72 P **P 15 25 58.6 +0.3**
baz=41,SNR=76
CHMT Chamberlain Mo 41.56 70 ⇑*eP* **P 15 25 58.4 -0.4**
CHMT *ePcP* PcP 15 27 55.5 +0.1
E14A Clinton 41.68 71 P **P 15 25 59.9 +0.2**
baz=42,SNR=73
B16A M & M Farms, S 41.68 67 ⇑P **P 15 25 59.0 -0.8**
baz=42
H12A Diamond D Ranc 41.87 74 ⇓P **P 15 26 01.1 -0.2**
baz=42,SNR=69
PAHR Pah Rah Range 41.87 82 *eP* **P 15 26 02.1 +0.7**
WCN Washoe City 41.88 83 ⇑P **P 15 26 01.8 +0.3**
baz=42,SNR=15
MFID Camas Ranch 41.91 76 ⇑P **P 15 26 01.9 +0.2**
baz=42,SNR=35
G13A Cobalt 41.95 73 ⇑P **P 15 26 02.1 +0.2**
baz=42,SNR=161
C16A Fuhringer Ranc 41.97 68 ⇑P **P 15 26 01.8 -0.3**
baz=42,SNR=72
A17A Triple J Farms 41.99 66 ⇑P **P 15 26 01.4 -0.8**
baz=42,SNR=104
F14A Wisdom 42.07 71 ⇑P **P 15 26 03.2 +0.3**
baz=42,SNR=46
I12A Atlanta 42.12 75 P **P 15 26 03.9 +0.5**
baz=42,SNR=115
E15A Deer Lodge 42.17 70 ⇓P **P 15 26 03.6 -0.2**
baz=42,SNR=70
H13A Challis 42.22 73 ⇑P **P 15 26 03.9 -0.3**
baz=42,SNR=46
CMB Columbia Colle 42.27 85 *eP* **P 15 26 05.1 +0.4**
CMB *ePcP* PcP 15 27 55.9 -2.0
CMB *eScP* ScP 15 31 48.2 +2.7
CMB Columbia Colle 42.27 85 *eP* **P 15 26 05.1 +0.5**
CMB *e* 15 27 55.9
B17A L&G Farms, Che 42.27 67 ⇓P **P 15 26 03.3 -1.2**
baz=42,SNR=19
L10A Juniper Basin 42.28 78 ⇓P **P 15 26 05.2 +0.5**
baz=42,SNR=19
G14A Jackson 42.32 72 ⇑P **P 15 26 05.0 0.0**
baz=42,SNR=20
ALE Alert 42.39 10 P **P 15 26 06.0 +0.9**
comp=Z,88nm,0.5s,mb5.7,SNR=8.3
SAO San Andreas Ge 42.40 87 *eP* **P 15 26 05.0 -0.7**
comp=Z,42nm,1.3s,mb4.9
SAO San Andreas Ge 42.40 87 *eP* **P 15 26 05.0 -0.7**
SAO pmax pmax
comp=Z,42nm,1.3s,mb4.9
A18A Metzger Ranch, 42.49 65 ⇓P **P 15 26 05.0 -1.3**
baz=42,SNR=7.9
D16A Dana Ranch, Ca 42.49 69 ⇓P **P 15 26 06.1 -0.2**
baz=42,SNR=50
HRY Holter Researc 42.49 69 ⇑*eP* **P 15 26 06.2 -0.2**
M10A I.L. Ranch, Tu 42.55 78 ⇓P **P 15 26 07.5 +0.5**
baz=42,SNR=28
WAKR Walker 42.57 84 *eP* **P 15 26 07.7 +0.6**
LRM Limekiln Ridge 42.61 71 *eP* **P 15 26 07.2 -0.1**
LRM *e* pP 15 26 16.7 -1.1
C17A Wharram Farm, 42.63 68 ⇓P **P 15 26 06.9 -0.5**
baz=42,SNR=53
I13A Wildhorse Cree 42.66 74 ⇓P **P 15 26 07.4 -0.4**
baz=42,SNR=145
L11A Cat Creek Ranc 42.66 77 ⇓P **P 15 26 08.5 +0.7**
baz=42,SNR=71
E16A East Helena 42.68 69 ⇓P **P 15 26 07.7 -0.2**
baz=42,SNR=83
HLID Hailey 42.68 75 ⇑P **P 15 26 07.7 -0.2**
baz=42,SNR=147
HLID Hailey 42.68 75 ⇑*iP* **P 15 26 08.4 +0.5**
HLID *e* pP 15 26 18.3 -0.1
HLID *eScP* ScP 15 31 43.9 -3.1
H14A Leadore 42.72 73 ⇓P **P 15 26 08.4 +0.2**
baz=43,SNR=55
DLMT Dillon 42.77 71 ⇑*iP* **P 15 26 08.1 -0.5**
DLMT *ePcP* PcP 15 27 59.6 +0.2
DLMT *eScP* ScP 15 31 44.9 -2.5
BMN Battle Mountai 42.78 80 ⇑*iP* **P 15 26 09.2 +0.5**
BMN *e* pP 15 26 18.5 -0.7
B18A Beardsley Farm 42.80 66 ⇑P **P 15 26 08.3 -0.5**
baz=43,SNR=39
MCMT McKenzie Canyo 42.91 72 *eP* **P 15 26 09.8 0.0**
comp=Z,26nm,0.5s,mb5.2
J13A Cove Ranch, Pi 42.92 75 P **P 15 26 10.5 +0.6**
baz=43,SNR=100
D17A Six Diamond Ra 42.92 68 ⇑P **P 15 26 08.9 -0.9**
baz=43,SNR=49
G15A Dillon 42.94 72 ⇑P **P 15 26 09.4 -0.7**
baz=43,SNR=76
EGMT Eagleton 43.00 66 ⇑P **P 15 26 10.0 -0.5**
baz=43,SNR=44
EGMT Eagleton 43.00 66 *eP* **P 15 26 09.3 -1.1**
N10A Dunphy 43.05 79 ⇑P **P 15 26 11.4 +0.5**
baz=43,SNR=6.4
I14A Mackay 43.05 74 ⇑P **P 15 26 11.6 +0.7**
baz=43
M11A Holland Ranch, 43.06 78 ⇓P **P 15 26 12.0 +0.9**
baz=43,SNR=41
F16A Kennard Place, 43.11 70 ⇑P **P 15 26 11.0 -0.4**
baz=43,SNR=76
H15A Lima 43.15 72 ⇑P **P 15 26 11.6 -0.1**
baz=43,SNR=40
BOZ Bozeman (W) 43.19 70 ⇓P **P 15 26 12.3 +0.3**
baz=43,SNR=222
BOZ Bozeman (W) 43.19 70 ⇑*iP* **P 15 26 12.2 +0.2**
BOZ *e* pP 15 26 21.8 -0.6
BOZ *eScP* ScP 15 31 45.8 -3.3
BOZ Bozeman (W) 43.19 70 ⇑*iP* **P 15 26 12.2 +0.2**
BOZ *e* pP 15 26 21.8 -0.7
E17A Martinsdale 43.20 69 ⇓P **P 15 26 11.6 -0.5**
baz=43
O10A Cortez Mining, 43.30 80 ⇓P **P 15 26 13.1 +0.1**
baz=43
G16A Moss Hill, Enn 43.31 71 ⇑P **P 15 26 12.9 -0.1**
baz=43,SNR=60
NVAR Mina Array Bea 43.31 83 P **P 15 26 13.7 +0.5**
NVAR PcP PcP 15 28 01.3 -0.2
NVAR ScP ScP 15 31 47.4 -2.3
NVAR Mina Array Bea 43.31 83 P **P 15 26 13.7 +0.5**
comp=Z,20nm,0.8s,mb4.9,baz=291,slow=7.8,SNR=148
NVAR PcP PcP 15 28 01.3 -0.2
comp=Z,6.5nm,0.8s,baz=269,slow=2.8,SNR=3.8
NVAR ScP ScP 15 31 47.4 -2.3
comp=Z,1.7nm,0.7s,baz=300,slow=3.8,SNR=4.4
J14A Carey 43.35 74 ⇑P **P 15 26 14.3 +0.9**
baz=43,SNR=46
D18A Linhart Farms, 43.41 68 ⇑P **P 15 26 14.0 +0.2**
baz=43,SNR=45
N11A Elko Archery C 43.46 79 ⇑P **P 15 26 15.0 +0.8**
baz=43,SNR=6.7
MLAC Mammoth Lakes 43.48 85 ⇑P **P 15 26 14.2 -0.3**
baz=43
I15A Monteview 43.59 73 ⇓P **P 15 26 15.6 +0.4**
baz=43,SNR=32
M12A Wells 43.61 77 ⇑P **P 15 26 15.8 +0.3**
baz=44,SNR=43
F17A Fitzpatrick Pl 43.61 70 ⇓P **P 15 26 15.1 -0.3**
baz=44,SNR=87
E18A Harlowton 43.69 68 ⇑P **P 15 26 16.5 +0.5**
baz=44,SNR=134
P10A Eureka 43.73 81 ⇑P **P 15 26 17.1 +0.7**
baz=44
MTUM Tungsten Hills 43.82 85 *eP* **P 15 26 18.1 +0.9**
FFC Flin Flon 43.85 54 P **P 15 26 17.9 +0.7**
comp=Z,80nm,0.5s,mb5.7,SNR=6.6
FFC Flin Flon 43.85 54 ⇑*eP* **P 15 26 15.5 -1.7**
FFC *ePcP* PcP 15 28 02.7 -0.2
FFC *eScP* ScP 15 31 49.0 -2.6
FFC Flin Flon 43.85 54 *i P* **P 15 26 16.7 -0.5**
N12A Clover Valley, 43.87 78 ⇑P **P 15 26 18.1 +0.6**
baz=44,SNR=47
N12A Clover Valley, 43.87 78 ⇑*iP* **P 15 26 18.3 +0.8**
N12A *e* pP 15 26 28.1 0.0
N12A *e* 15 26 36.8
G17A Pierce Place, 43.89 70 ⇓P **P 15 26 17.9 +0.3**
baz=44,SNR=45
O11A Cowboy Ranch, 43.92 79 ⇑P **P 15 26 18.5 +0.5**
baz=44,SNR=41
H16A Russell Place, 43.93 71 ⇓P **P 15 26 18.1 +0.1**
baz=44,SNR=90
J15A Blackfoot 43.96 74 ⇓P **P 15 26 18.4 +0.1**
baz=44,SNR=66
K14A Jones Ranch, D 44.01 75 ⇓P **P 15 26 19.2 +0.6**
baz=44,SNR=14
M13A Montello 44.10 77 ⇑P **P 15 26 19.8 +0.4**
baz=44,SNR=65
M13A Montello 44.10 77 ⇑*iP* **P 15 26 19.8 +0.4**
M13A *e* pP 15 26 29.2 -0.7
YMR Madison River 44.12 71 ⇑*iP* **P 15 26 19.8 +0.3**
comp=Z,123nm,0.9s,mb5.6
YMR *e* pP 15 26 29.9 -0.2
F18A Big Timber 44.16 69 ⇑P **P 15 26 19.1 -0.8**
baz=44,SNR=44
P11A Circle Ranch, 44.20 80 ⇓P **P 15 26 21.0 +0.7**
baz=44,SNR=24
TIN Tinemaha 44.22 85 ⇑P **P 15 26 21.2 +0.8**
baz=44,SNR=5.1
Q10A Clear Creek Ra 44.25 81 ⇓P **P 15 26 21.2 +0.5**
baz=44,SNR=33
GCMT Greycliff 44.26 69 *eP* **P 15 26 20.8 +0.2**
comp=Z,39nm,0.8s,mb5.2
GCMT *e* 15 28 04.2
I16A Newdale 44.26 72 ⇑P **P 15 26 21.5 +0.9**
baz=44,SNR=22
YNR Norris Junctio 44.26 71 ⇑*iP* **P 15 26 20.6 0.0**
YNR *e* pP 15 26 30.4 -0.7
L14A Malta 44.26 76 ⇑P **P 15 26 21.3 +0.6**
baz=44,SNR=75

K15A	**Arbon**	44.31	75	⇑P		P	15 26 22.1	+1.0	
	baz=44,SNR=108								
YFT	**Old Faithful**	44.32	71	⇑*i*P		P	15 26 22.3	+1.3	
YFT				*e*ScP		ScP	15 31 58.9	+5.2	
N13A	**Wendover, West**	44.37	78	⇑P		P	15 26 21.5	-0.1	
	baz=44,SNR=21								
N13A	**Wendover, West**	44.37	78	⇑*i*P		P	15 26 22.0	+0.4	
N13A				*e*		pP	15 26 31.5	-0.6	
O12A	**Currie**	44.39	79	⇑P		P	15 26 22.3	+0.6	
	baz=44,SNR=156								
VES	**Vestal, Richgr**	44.45	87	⇑P		P	15 26 20.9	-1.3	
	baz=44,SNR=9.4								
H17A	**Grant Village**	44.50	71	P		P	15 26 24.5	+1.9	
	baz=44,SNR=87								
LKWY	**Lake**	44.51	71	⇑*i*P		P	15 26 24.0	+1.4	
LKWY				*e*		pP	15 26 33.8	+0.7	
M14A	**Sheep Mountain**	44.51	76	⇑P		P	15 26 23.2	+0.5	
	baz=44,SNR=28								
J16A	**Bone**	44.52	73	⇑P		P	15 26 23.7	+0.9	
	baz=44								
IMW	**Indian Meadow**	44.57	72	⇑*i*P		P	15 26 23.4	+0.3	
IMW				*e*		pP	15 26 33.2	-0.4	
IMW				*e*ScP		ScP	15 31 53.0	-1.7	
G18A	**Lazy EL Ranch,**	44.58	70	⇓P		P	15 26 22.8	-0.3	
	baz=44,SNR=36								
DCID1	**Drake Creek**	44.60	73	⇑*i*P		P	15 26 23.8	+0.5	
DCID1				*e*		pP	15 26 33.7	-0.1	
FLWY	**Flagg Ranch**	44.60	72	⇑*i*P		P	15 26 24.1	+0.8	
FLWY				*e*		pP	15 26 33.9	0.0	
FLWY				*e*ScP		ScP	15 31 59.5	+4.7	
R10A	**Warm Springs**	44.64	82	⇑P		P	15 26 24.0	+0.3	
	baz=44,SNR=16								
F19A	**Roth Farm, Mol**	44.64	69	⇓P		P	15 26 23.6	-0.1	
	baz=44								
RRI2	**Red Ridge**	44.66	73	⇑*i*P		P	15 26 24.7	+0.9	
RRI2				*e*		pP	15 26 34.4	+0.1	
S10A	**Tonopah Range,**	44.69	83	⇓P		P	15 26 24.2	+0.1	
	baz=45,SNR=91								
HVU	**Hansel Valley**	44.69	76	⇑*i*P		P	15 26 24.6	+0.5	
HVU				*e*		pP	15 26 34.3	-0.4	
CWC	**Cottonwood Cre**	44.70	85	⇓P		P	15 26 24.2	0.0	
	baz=45								
Q11A	**Duckwater**	44.70	81	⇑P		P	15 26 24.4	+0.2	
	baz=45,SNR=63								
MOOW	**Moose Ponds**	44.77	72	⇑*i*P		P	15 26 24.9	+0.2	
MOOW				*e*		pP	15 26 34.5	-0.8	
I17A	**Pilgrim Ck.**	44.77	72	⇑P		P	15 26 25.8	+1.1	
	baz=45,SNR=6.6								
P12A	**McGill**	44.77	80	⇑P		P	15 26 25.3	+0.5	
	baz=45,SNR=63								
GRAC	**Grapevine Rang**	44.78	84	P		P	15 26 25.6	+0.7	
	baz=45,SNR=30								
K16A	**Soda Springs**	44.79	74	P		P	15 26 26.3	+1.4	
	baz=45,SNR=103								
TPAW	**Teton Pass**	44.80	73	⇑*i*P		P	15 26 25.4	+0.5	
TPAW				*e*		pP	15 26 35.2	-0.2	
TPAW				*e*ScP		ScP	15 31 55.2	-0.4	
L15A	**Malad City**	44.80	75	⇓P		P	15 26 25.0	+0.1	
	baz=45,SNR=20								
RLMT	**Red Lodge**	44.86	70	⇑P		P	15 26 25.9	+0.4	
	baz=45,SNR=140								
RLMT	**Red Lodge**	44.86	70	⇑*i*P		P	15 26 25.9	+0.5	
RLMT				*e*		pP	15 26 35.8	-0.2	
REDW	**Red Top Meadow**	44.93	73	⇑*i*P		P	15 26 26.4	+0.4	
REDW				*e*		pP	15 26 36.4	-0.1	
SNOW	**Snow King Moun**	44.93	73	⇑*i*P		P	15 26 26.5	+0.6	
SNOW				*e*		pP	15 26 36.7	+0.2	
LOHW	**Long Hollow**	44.93	72	⇑*i*P		P	15 26 26.3	+0.3	
LOHW				*e*		pP	15 26 36.4	-0.1	
O13A	**Hicks Ranch, I**	44.94	78	⇑P		P	15 26 26.9	+0.8	
	baz=45,SNR=7.1								
ISA	**Isabella**	44.95	86	⇓P		P	15 26 25.4	-0.9	
	baz=45,SNR=20								
ISA	**Isabella**	44.95	86	*e*P		P	15 26 25.5	-0.7	
N14A	**Grayback Hills**	44.99	77	P		P	15 26 27.0	+0.5	
	baz=45,SNR=86								
J17A	**Brown Place, J**	45.01	73	⇑P		P	15 26 27.4	+0.8	
	baz=45,SNR=19								
BGU	**Big Grassy Mou**	45.05	77	⇑*i*P		P	15 26 27.2	+0.3	
	comp=Z,54nm,1.0s,mb5.3								
BGU				*e*		pP	15 26 37.0	-0.5	
R11A	**Troy Canyon, C**	45.05	81	⇓P		P	15 26 27.1	+0.1	
	baz=45,SNR=92								
M15A	**Larsen Ranch,**	45.08	76	⇑P		P	15 26 27.5	+0.3	
	baz=45,SNR=13								
Q12A	**Willow Creek R**	45.09	80	⇑P		P	15 26 27.7	+0.4	
	baz=45,SNR=48								
AHID	**Auburn Hatcher**	45.12	74	⇑*i*P		P	15 26 28.1	+0.5	
AHID				*e*		pP	15 26 37.8	-0.3	
F20A	**Billings**	45.13	68	⇑P		P	15 26 27.5	0.0	
	baz=45								
SPUT	**South Promonto**	45.17	76	⇑*i*P		P	15 26 28.3	+0.4	
SPUT				*e*		pP	15 26 37.9	-0.5	
K17A	**Gardner Place,**	45.24	73	⇑P		P	15 26 28.9	+0.5	
	baz=45,SNR=9.3								
MPMC	**Manual Prospec**	45.31	85	⇑P		P	15 26 28.5	-0.5	
	baz=45,SNR=34								
P13A	**Bates Ranch, G**	45.33	79	P		P	15 26 29.7	+0.5	
	baz=45,SNR=94								
I18A	**Diamond G Ranc**	45.35	72	⇓P		P	15 26 29.7	+0.4	
	baz=45,SNR=25								
L16A	**Fish Haven**	45.37	75	P		P	15 26 30.4	+0.9	
	baz=45,SNR=37								
N15A	**Stansbury Isla**	45.38	77	⇓P		P	15 26 29.1	-0.5	
	baz=45								
S11A	**Rachel**	45.38	82	⇑P		P	15 26 29.3	-0.3	
	baz=45								
FURC	**Furnace Creek,**	45.44	84	⇓P		P	15 26 30.2	+0.1	
	baz=45,SNR=24								
OSI	**Osito Adit**	45.47	88	⇓P		P	15 26 30.2	-0.2	
	baz=45								
OSI	**Osito Adit**	45.47	88	*e*P		P	15 26 30.3	-0.1	
J18A	**Kendall Valley**	45.51	72	P		P	15 26 31.1	+0.5	
	baz=45,SNR=61								
IRK	**Irkutsk**	45.51	303	*e*P		P	15 26 30.2	-0.3	
IRK				pmax		pmax			
	comp=Z,23nm,1.4s,mb4.9								
HWUT	**Hardware Ranch**	45.53	75	*e*P		P	15 26 30.9	+0.2	
BJI	**Beijing**	45.54	282	P		P	15 26 32.0	+1.1	
BJI				pP		pP	15 26 44.3	+2.9	
BJI				sP		sP	15 26 51.8	+6.1	
BJI				PP		PP	15 28 17.8	+0.1	
BJI				S		S	15 33 07.7	-2.6	
BJI				sS		sS	15 33 31.1	+3.4	
BJI				pmax		pmax			
	comp=Z,71nm,1.1s,mb5.5								
BJI				pmax		pmax			
	comp=Z,500nm,10.8s								
BJI				LR		LR			
	comp=N,610nm,21.2s,MS4.6								
BJI				LR		LR			
	comp=E,390nm,21.2s,MS4.6								
BJI				LR		LR			
	comp=Z,980nm,25.4s,MS4.6								
LRMC	**Laurel Mountai**	45.56	86	⇓P		P	15 26 29.8	-1.3	
	baz=45,SNR=6.1								
BJT	**Baijiatuau**	45.56	282	⇑*i*P		P	15 26 32.0	+0.9	
	comp=Z,42nm,0.6s,mb5.5								
BJT	**Baijiatuau**	45.56	282	⇑*i*P		P	15 26 32.0	+1.0	
BJT				pmax		pmax			
	comp=Z,42nm,0.6s								
DUG	**Dugway**	45.62	78	⇓P		P	15 26 32.0	+0.5	
	baz=46,SNR=130								
DUG	**Dugway**	45.62	78	⇑*i*P		P	15 26 32.0	+0.5	
DUG				*e*		pP	15 26 41.5	-0.5	
Q13A	**Wheeler Ranch,**	45.63	80	⇑P		P	15 26 32.1	+0.4	
	baz=46,SNR=53								
L17A	**Cokeville**	45.65	74	⇓P		P	15 26 31.0	-0.7	
	baz=46,SNR=43								
R12A	**Pony Springs,**	45.66	81	⇑P		P	15 26 32.0	+0.1	
	baz=46,SNR=24								
FCC	**Fort Churchill**	45.67	46	⇑*i*P		P	15 26 30.4	-1.3	
LAO	**LASA Array**	45.74	66	⇑*i*P		P	15 26 32.3	-0.1	
	comp=Z,116nm,0.9s,mb5.8								
LAO				*e*		pP	15 26 42.5	-0.4	
LAO				*e*PcP		PcP	15 28 09.9	+0.3	
LAO				*e*ScP		ScP	15 31 56.2	-3.3	
EDW2	**Edwards Air Fo**	45.76	87	⇓P		P	15 26 32.3	-0.3	
	baz=46,SNR=16								
NOQ	**North Oquirrh**	45.76	77	⇑*i*P		P	15 26 33.0	+0.4	
O15A	**The Old Anders**	45.77	77	⇓P		P	15 26 33.4	+0.7	
	baz=46,SNR=28								
U10A	**Ash Meadows, A**	45.80	84	⇓P		P	15 26 33.3	+0.4	
	baz=46,SNR=19								
P14A	**Drum Mountains**	45.83	78	P		P	15 26 33.7	+0.5	
	baz=46,SNR=164								
K18A	**Toltan Ranch,**	45.83	73	⇓P		P	15 26 33.6	+0.4	
	baz=46,SNR=89								
CTU	**Camp Tracy**	45.96	76	*e*P		P	15 26 34.5	+0.3	
S12A	**Delamar Landin**	45.96	82	⇑P		P	15 26 34.7	+0.5	
	baz=46,SNR=65								
T11A	**Corn Creek, Al**	45.96	82	⇓P		P	15 26 34.3	0.0	
	baz=46,SNR=112								
H20A	**Greybull**	45.97	70	⇓P		P	15 26 33.7	-0.5	
	baz=46								
G21A	**Lodge Grass**	46.00	68	⇑P		P	15 26 33.9	-0.5	
	baz=46								
N16A	**Rees Ranch, Co**	46.03	76	⇑P		P	15 26 35.4	+0.6	
	baz=46,SNR=11								
BW06	**Boulder Array**	46.05	73	⇑P		P	15 26 35.0	+0.2	
	baz=46,SNR=227								
BW06	**Boulder Array**	46.05	73	⇑*i*P		P	15 26 34.8	0.0	
	comp=Z,179nm,1.0s,mb6.0								
BW06				*e*		pP	15 26 44.9	-0.5	
Q14A	**Sevier Lake (B**	46.07	79	P		P	15 26 35.8	+0.7	
	baz=46,SNR=164								
PASC	**Pasadena Art C**	46.10	88	*e*P		P	15 26 34.3	-1.0	
PASC				*e*		pP	15 26 44.4	-1.5	
TLY	**Talaya**	46.14	302	*e*P		P	15 26 37.6	+2.2	
TLY				*e*			15 28 27.9		
TLY				*e*PPP			15 29 16.3		
TLY				*e*S		S	15 33 18.4	-0.2	
TLY				pmax		pmax			
	comp=Z,7.0nm,0.8s,mb4.6								
TLY				MLR		MLR			
	comp=Z,576nm,18.0s,MS4.6								
MWC	**Mount Wilson**	46.14	88	⇑*i*P		P	15 26 35.5	-0.2	
MWC				*e*		pP	15 26 45.2	-1.1	
R13A	**O'Grain Ranch,**	46.15	81	⇓P		P	15 26 35.9	+0.2	
	baz=46,SNR=42								
M17A	**Scullys Gap (B**	46.15	75	⇑P		P	15 26 35.6	0.0	
	baz=46,SNR=32								
SHOC	**Shoshone**	46.16	85	⇓P		P	15 26 35.7	-0.1	
	baz=46,SNR=12								
JLU	**Jordanelle**	46.20	76	⇑*i*P		P	15 26 36.2	+0.1	
JLU				*e*		pP	15 26 46.4	-0.3	
I20A	**Worland**	46.20	70	⇓P		P	15 26 35.5	-0.5	
	baz=46								
NLU	**North Lily Min**	46.21	77	⇑*i*P		P	15 26 36.4	+0.2	
NLU				*e*		pP	15 26 46.0	-0.7	
GSC	**Goldstone**	46.22	86	⇑P		P	15 26 36.2	-0.1	
	baz=46,SNR=35								
GSC	**Goldstone**	46.22	86	⇓*i*P		P	15 26 36.0	-0.3	
GSC				*e*		pP	15 26 45.8	-1.1	
L18A	**Fontenelle, Gr**	46.26	74	⇓P		P	15 26 36.8	+0.3	
	baz=46,SNR=30								
P15A	**Leamington**	46.32	78	⇑P		P	15 26 37.5	+0.5	
	baz=46,SNR=60								
ULN	**Ulaanbaatar**	46.36	296	⇑*e*P		P	15 26 37.8	+0.5	
ULN				*e*PcP		PcP	15 28 12.2	+0.5	
ULN	**Ulaanbaatar**	46.36	296	P		P	15 26 38.4	+1.1	
	comp=Z,507nmcomp=Z,25nm,1.1s,mb5.1								
ULN	**Ulaanbaatar**	46.36	296	P		P	15 26 39.0	+1.7	
	SNR=14								
N17A	**Moffit Pass**	46.37	75	⇑P		P	15 26 37.2	-0.2	
	baz=46,SNR=11								
BFSC	**Mount Baldy Ra**	46.38	87	⇓P		P	15 26 37.2	-0.3	
	baz=46,SNR=16								
O16A	**Springville**	46.41	77	⇑P		P	15 26 38.3	+0.6	
	baz=46,SNR=56								
DAU	**Daniels Canyon**	46.43	76	*e*P		P	15 26 38.5	+0.6	
DAU				*e*		pP	15 26 49.8	+1.3	
DAU				*e*S		S	15 33 25.7	+2.7	
K19A	**Absolon Red Bu**	46.43	72	⇑P		P	15 26 37.5	-0.4	
	baz=46,SNR=117								
H21A	**Big Horn, Sher**	46.44	69	⇓P		P	15 26 37.4	-0.5	
	baz=46								
MPU	**Maple Canyon**	46.44	77	⇑*i*P		P	15 26 38.3	+0.3	
MPU				*e*		pP	15 26 48.1	-0.4	
M18A	**Lyman**	46.54	74	⇓P		P	15 26 38.5	-0.2	
	baz=46,SNR=28								
L19A	**Farson**	46.56	73	⇑P		P	15 26 38.6	-0.3	
	baz=46,SNR=58								
S13A	**Holt Ranch, En**	46.59	81	⇑P		P	15 26 39.2	0.0	
	baz=46,SNR=67								
T12A	**Moapa**	46.60	83	⇑P		P	15 26 39.0	-0.3	
	baz=46								
Q15A	**Fillmore**	46.61	79	P		P	15 26 39.9	+0.6	
	baz=46,SNR=58								
R14A	**James Farms, M**	46.66	80	⇑P		P	15 26 39.6	-0.1	
	baz=46								
P16A	**Fountain Green**	46.68	77	⇓P		P	15 26 40.4	+0.6	
	baz=46,SNR=10								
TUQ	**Turquoise Moun**	46.68	85	⇑P		P	15 26 39.4	-0.5	
	baz=47,SNR=12								
ARUT	**Antelope Range**	46.72	81	*e*P		P	15 26 40.1	-0.1	
	comp=Z,21nm,0.6s,mb5.2								
ARUT	**Antelope Range**	46.72	81	*e*P		P	15 26 40.1	-0.1	
ARUT				pmax		pmax			
	comp=Z,21nm,0.6s,mb5.2								
V11A	**Goodsprings**	46.73	84	⇑P		P	15 26 40.3	0.0	
	baz=47,SNR=7.7								
SONM	**Songino Array**	46.75	297	P		P	15 26 41.2	+1.0	
	comp=Z,13nm,0.9s,mb4.9,baz=56,slow=7.8,SNR=58								
SONM				PcP		PcP	15 28 12.6	-0.5	
	comp=Z,31nm,1.0s,baz=96,slow=2.6,SNR=11								
SONM				ScP		ScP	15 32 03.5	-0.2	
	comp=Z,3.6nm,0.8s,baz=43,slow=2.9,SNR=8.0								
SONM				LR		LR	15 47 19.2		
	comp=Z,2μm,19.8s,MS5.1,baz=61,slow=37								
I21A	**Big Trails, Te**	46.77	70	⇓P		P	15 26 40.0	-0.5	
	baz=47								
HEC	**Hector,Ludlow**	46.82	86	⇑P		P	15 26 40.6	-0.4	
	baz=47,SNR=5.2								
K20A	**Yellowstone Ra**	46.83	72	⇑P		P	15 26 40.4	-0.6	
	baz=47,SNR=39								
O17A	**Robinson Place**	46.88	76	⇓P		P	15 26 42.0	+0.6	
	baz=47,SNR=16								
U12A	**Valley of Fire**	46.90	83	⇑P		P	15 26 41.7	+0.1	
	baz=47,SNR=18								
S14A	**Cedar City**	46.90	80	⇑P		P	15 26 41.6	0.0	
	baz=47,SNR=5.8								
CCUT	**Cedar City**	46.91	81	⇑*i*P		P	15 26 42.0	+0.3	
CCUT				*e*		pP	15 26 51.7	-0.6	
T13A	**Saint George**	46.91	82	P		P	15 26 42.2	+0.5	
	baz=47,SNR=72								
ZAK	**Zakamensk**	47.03	301	*e*P		P	15 26 42.4	-0.1	
ZAK				pmax		pmax			
	comp=Z,8.0nm,1.1s,mb4.6								
M19A	**Rock Springs**	47.04	74	⇓P		P	15 26 42.2	-0.4	
	baz=47,SNR=16								
MSU	**Marysvale**	47.04	79	⇑*e*P		P	15 26 43.4	+0.8	
N18A	**Larsen Ranch,**	47.05	75	⇓P		P	15 26 42.4	-0.3	
	baz=47								
MURC	**Murrieta**	47.09	88	⇓P		P	15 26 42.4	-0.7	
	baz=47								
TMUT	**Trail Mountain**	47.14	77	⇑*i*P		P	15 26 44.1	+0.6	
TMUT				*e*		pP	15 26 54.0	-0.1	
V12A	**Nelson**	47.16	84	⇑P		P	15 26 43.7	0.0	
	baz=47,SNR=18								
R15A	**Junction**	47.17	79	P		P	15 26 44.4	+0.7	
	baz=47,SNR=14								
L20A	**Wamsutter**	47.22	73	⇑P		P	15 26 43.7	-0.4	
	baz=47,SNR=15								
U13A	**Pakoon Wash**	47.27	82	⇑P		P	15 26 44.2	-0.2	
	baz=47								
GMRC	**Granite Mounta**	47.27	85	⇓P		P	15 26 44.2	-0.3	
	baz=47,SNR=15								
O18A	**Roosevelt**	47.28	76	⇓P		P	15 26 44.1	-0.4	
	baz=47,SNR=11								
P17A	**Butcher Ranch,**	47.32	77	⇓P		P	15 26 44.4	-0.4	
	baz=47,SNR=78								
TIA	**Tai'an**	47.35	277	P		P	15 26 43.8	-1.3	
TIA				S		S	15 33 32.8	-3.5	
TIA				LR		LR			
	comp=N,630nm,21.6s,MS4.7								
TIA				LR		LR			
	comp=E,610nm,25.0s,MS4.7								
N19A	**John Jarvie Ra**	47.39	74	⇓P		P	15 26 45.2	-0.2	
	baz=47,SNR=20								
T14A	**Hurricane**	47.40	81	⇑P		P	15 26 45.9	+0.4	
	baz=47,SNR=60								
Q16A	**Castle Valley**	47.40	78	⇓P		P	15 26 46.1	+0.7	
	baz=47,SNR=76								
W12A	**Cal Nev Ari**	47.42	84	⇑P		P	15 26 45.7	0.0	
	baz=47								
S15A	**Panguitch**	47.45	80	⇓P		P	15 26 46.4	+0.5	
	baz=47,SNR=5.1								
P18A	**Preston Nutter**	47.52	76	⇓P		P	15 26 46.4	-0.1	
	baz=47,SNR=76								
MOY	**Mondy**	47.53	304	*e*P		P	15 26 46.9	+0.6	
MOY				pmax		pmax			
	comp=Z,26nm,2.2s,mb4.9								
PFO	**Pinyon Flat Ob**	47.55	87	⇓P		P	15 26 46.1	-0.6	
	baz=47,SNR=5.6								
PFO	**Pinyon Flat Ob**	47.55	87	⇑*i*P		P	15 26 45.8	-0.9	
PFO				*e*		pP	15 26 56.0	-1.3	
BELC	**Belle Mtn. Jos**	47.57	86	⇓P		P	15 26 46.2	-0.7	
	baz=47,SNR=13								
R16A	**Teasdale**	47.61	79	⇑P		P	15 26 48.0	+1.0	
	baz=48,SNR=101								
V13A	**Grand Canyon W**	47.62	83	P		P	15 26 47.4	+0.2	
	baz=48,SNR=39								
109C	**Camp Elliot, M**	47.62	88	⇓P		P	15 26 47.4	+0.1	
	baz=48								
M20A	**Sweetwater, Wa**	47.62	73	⇓P		P	15 26 47.4	+0.3	
	baz=48,SNR=66								
SRU	**San Rafael**	47.68	77	⇑P		P	15 26 48.0	+0.4	
	baz=48,SNR=141								
SRU	**San Rafael**	47.68	77	⇑*e*P		P	15 26 47.8	+0.2	
SRU				*e*		pP	15 26 57.3	-0.9	
U14A	**Mt Trumbull**	47.75	82	⇓P		P	15 26 48.3	+0.1	
	baz=48,SNR=33								
O19A	**Miners Draw (B**	47.79	75	⇑P		P	15 26 48.5	0.0	
	baz=48,SNR=73								
L21A	**Rawlins**	47.83	72	⇑P		P	15 26 48.6	-0.1	
	baz=48,SNR=77								
T15A	**Red Dirt Ranch**	47.86	81	⇓P		P	15 26 49.3	+0.3	
	baz=48,SNR=79								
S16A	**Weppner Ranch,**	47.89	79	⇑P		P	15 26 49.8	+0.5	
	baz=48,SNR=100								
K22A	**Casper**	47.91	71	⇑P		P	15 26 48.9	-0.5	
	baz=48								
Q18A	**Rafter H Ranch**	47.92	77	⇑P		P	15 26 49.6	+0.1	
	baz=48,SNR=91								
NEE2	**Needles Airpor**	47.93	85	⇓P		P	15 26 49.7	+0.1	
	baz=48								
N20A	**Spence Gulch,**	47.98	74	⇓P		P	15 26 50.3	+0.4	
	baz=48,SNR=56								
R17A	**Hanksville Air**	47.99	78	⇑P		P	15 26 49.9	-0.1	
	baz=48,SNR=47								
IRM	**Iron Mountain**	48.00	86	P		P	15 26 49.7	-0.4	
	baz=48,SNR=24								
GUMO	**Guam**	48.00	231	⇑*e*P		P	15 26 47.1	-3.3	
	comp=Z,75nm,1.0s,mb5.7								
GUMO	**Guam**	48.00	231	⇑*e*P		P	15 26 47.1	-3.3	
GUMO				pmax		pmax			
	comp=Z,75nm,1.0s,mb5.7								
GUMO	**Guam**	48.00	231	P		P	15 26 48.1	-2.3	
	comp=Z,178nm,1.4s,mb5.9								
BAR	**Barrett**	48.03	88	*e*P		P	15 26 49.5	-0.9	
M21A	**Separation Pea**	48.05	73	⇑P		P	15 26 49.8	-0.6	
	baz=48,SNR=37								
MONP	**Monument Peak**	48.05	88	⇓P		P	15 26 50.1	-0.5	
	baz=48,SNR=9.3								
RWWY	**Rawlins**	48.09	72	⇑*i*P		P	15 26 50.1	-0.6	
RWWY				*e*		pP	15 27 00.3	-1.1	
BC3	**Big Chuckawall**	48.14	86	⇓P		P	15 26 50.3	-1.0	
	baz=48,SNR=10								
W13A	**Hualapai Mount**	48.16	84	P		P	15 26 51.6	+0.1	
	baz=48,SNR=16								
P19A	**Cripple Cowboy**	48.29	76	⇑P		P	15 26 51.5	-0.8	
	baz=48,SNR=19								
U15A	**North Rim**	48.29	81	⇓P		P	15 26 52.8	+0.4	
	baz=48,SNR=119								
V14A	**Boquillas Ranc**	48.30	83	⇑P		P	15 26 52.5	0.0	
	baz=48,SNR=36								
L22A	**Ellis Ranch, M**	48.34	72	⇑P		P	15 26 52.3	-0.4	
	baz=48								
SWSC	**Sam W. Stewart**	48.40	87	⇑P		P	15 26 52.8	-0.5	
	baz=48								
T16A	**Glen Canyon Da**	48.42	80	⇑P		P	15 26 53.0	-0.4	
	baz=48								
O20A	**White River Ci**	48.42	75	P		P	15 26 53.5	+0.1	
	baz=48,SNR=90								
S17A	**Black Ridge (B**	48.43	79	⇑P		P	15 26 53.6	+0.1	
	baz=48,SNR=139								
N21A	**Black Mountain**	48.47	74	⇑P		P	15 26 54.0	+0.3	
	baz=48,SNR=24								
RSSD	**Black Hills**	48.49	68	⇑*i*P		P	15 26 53.0	-0.8	
RSSD				*e*		pP	15 27 03.1	-1.3	
RSSD				*e*PcP		PcP	15 28 18.7	-0.7	
R18A	**Canyonlands Na**	48.51	78	⇓P		P	15 26 53.6	-0.5	
	baz=48,SNR=81								
Q19A	**Hogan Spring (**	48.54	77	P		P	15 26 54.0	-0.3	
	baz=48,SNR=101								
W14A	**Seligman**	48.59	83	⇑P		P	15 26 54.2	-0.5	
	baz=48,SNR=18								
M22A	**Cedar Creek Ra**

Y14A Wickenburg 49.48 84 ⇑P P 15 27 01.1 -0.4
baz=49,SNR=17
PV01 Paradox Valley 49.48 77 eP P 15 27 01.5 0.0
comp=Z,10μm,0.7s
PV01 e pP 15 27 11.6 -0.5
R20A Redvale 49.56 77 P P 15 27 02.2 +0.1
baz=49,SNR=95
Z13A Yuma Proving G 49.56 85 P P 15 27 01.9 -0.2
baz=49,SNR=16
X15A Humboldt 49.59 83 P P 15 27 02.7 +0.3
baz=50,SNR=30
KBS Kingsbay 49.61 357 eP P 15 27 02.7 +0.7
KBS ePP PP 15 29 04.2 +8.2
KBS AMS AMS 15 44 03.3
comp=Z,521nm,28.2s,MS4.4
KBS Kingsbay 49.61 357⇑iP P 15 27 02.6 +0.7
comp=Z,26nm,0.8s,mb5.3
KBS ePcP PcP 15 28 23.1 +0.1
KBS Kingsbay 49.61 357⇑iP P 15 27 02.7 +0.7
KBS e 15 28 23.1
KBS pmax pmax
comp=Z,26nm,0.8s,mb5.3
W16A Flagstaff 49.62 82 P P 15 27 03.5 +0.9
baz=50,SNR=15
M24A Cheyenne 49.64 71 ⇑P P 15 27 02.6 0.0
baz=50
Q21A Lamborn Mesa, 49.64 76 ⇑P P 15 27 02.7 0.0
baz=50,SNR=40
P22A Eagle 49.65 74 P P 15 27 03.0 +0.2
baz=50,SNR=16
V17A Tonalea, Kykot 49.74 81 ⇓P P 15 27 03.9 +0.4
baz=50,SNR=90
O23A Lake Granby, G 49.77 73 ⇓P P 15 27 04.4 +0.7
baz=50,SNR=62
113A Mohawk Valley, 49.78 86 ⇑P P 15 27 03.4 -0.5
baz=50
SMCO Snowmass 49.78 75⇑iP P 15 27 03.7 -0.1
U18A Rough Rock, Ch 49.78 80 P P 15 27 03.9 +0.1
baz=50,SNR=46
Y15A Casa Rosa Ranc 49.88 84 P P 15 27 04.7 +0.1
baz=50,SNR=19
Z14A Wintersburg 49.90 85 ⇑P P 15 27 04.5 -0.2
baz=50
R21A Cimarron 49.95 76 ⇑P P 15 27 05.2 +0.2
baz=50,SNR=37
N24A Carr 50.00 72 ⇓P P 15 27 05.1 -0.3
baz=50
Q22A Crested Butte, 50.02 75 ⇑P P 15 27 05.8 +0.2
baz=50,SNR=59
T19A Beclabito 50.04 79 P P 15 27 05.8 +0.1
baz=50,SNR=181
MVCO Mesa Verde 50.11 78 P P 15 27 06.6 +0.3
baz=50,SNR=48
MVCO Mesa Verde 50.11 78⇑iP P 15 27 05.9 -0.4
MVCO e pP 15 27 15.7 -1.3
X16A Lo Mia Camp, P 50.13 83 ⇓P P 15 27 07.1 +0.6
baz=50,SNR=41
ISCO Idaho Springs 50.21 73⇑iP P 15 27 07.3 +0.3
ISCO e pP 15 27 17.4 -0.2
V18A Ganado 50.21 80 P P 15 27 07.3 +0.3
baz=50,SNR=26
S21A Coal Bank Pass 50.25 77 ⇑P P 15 27 07.8 +0.5
baz=50
U19A Dine' College, 50.27 79 P P 15 27 07.7 +0.1
baz=50,SNR=56
P23A Jefferson 50.34 74 ⇑P P 15 27 07.8 -0.2
baz=50,SNR=10
114A Black Gap (USA 50.34 85 ⇓P P 15 27 08.1 0.0
baz=50,SNR=10
Z15A Gila River Ind 50.43 84 ⇓P P 15 27 08.5 -0.3
baz=50
Y16A Circle Bar Ran 50.46 83 P P 15 27 09.3 +0.3
baz=50,SNR=26
R22A Saguache, Gunn 50.52 76 ⇓P P 15 27 10.3 +0.9
baz=50,SNR=36
AGMN Agassiz Nation 50.55 59 eP P 15 27 07.9 -1.6
X17A Forest Lakes 50.57 82 ⇓P P 15 27 08.7 -1.1
baz=50,SNR=8.0
U20A Newcomb 50.64 79 ⇓P P 15 27 09.9 -0.4
baz=50,SNR=6.3
Q23A Hartsel 50.64 74 ⇓P P 15 27 11.2 +0.9
baz=50,SNR=40
W18A Petrified Fore 50.72 81 ⇓P P 15 27 11.0 +0.1
baz=51,SNR=8.3
V19A Window Rock 50.75 80 ⇓P P 15 27 11.0 -0.1
baz=51,SNR=10
S22A 4UR Ranch, Cre 50.78 76 ⇓P P 15 27 12.1 +0.8
baz=51,SNR=114
115A Sonoran Desert 50.79 85 ⇓P P 15 27 11.4 -0.1
baz=51
P24A Kohler Place, 50.81 73 ⇑P P 15 27 11.5 -0.1
baz=51
T21A Navajo Lake 50.84 77 P P 15 27 12.6 +0.7
baz=51,SNR=19
Z16A Peralta Trail, 50.85 84 P P 15 27 12.2 +0.2
baz=51,SNR=6.7
O25A Wiggins 50.90 72 ⇓P P 15 27 12.2 0.0
baz=51,SNR=11
214A Organ Pipe Nat 50.93 86 ⇑P P 15 27 12.2 -0.4
baz=51,SNR=8.5
W19A Sanders 50.94 80 ⇑P P 15 27 12.9 +0.3
baz=51,SNR=25
X18A Snowflake 50.98 81 ⇓P P 15 27 13.2 +0.3
baz=51,SNR=29
Y17A Roosevelt 50.98 83 P P 15 27 13.2 +0.3
baz=51,SNR=37
Q24A Divide 51.02 74 ⇓P P 15 27 13.4 +0.3
baz=51,SNR=15
V20A Brimhall 51.05 79 P P 15 27 13.5 +0.1
baz=51,SNR=37
U21A Nageezi 51.13 78 ⇓P P 15 27 14.3 +0.3
baz=51,SNR=127
116A Eloy 51.20 85 ⇓P P 15 27 14.6 0.0
baz=51,SNR=5.4
T22A Edith 51.21 77 ⇓P P 15 27 15.2 +0.6
baz=51,SNR=94
P25A Willow Gulch B 51.25 73 ⇑P P 15 27 15.5 +0.6
baz=51,SNR=65
S23A Nye Farm, Mont 51.31 76 ⇓P P 15 27 16.2 +0.8
baz=51,SNR=11
Y18A Canyon Day Jun 51.42 82 ⇑P P 15 27 16.5 +0.3
baz=51,SNR=30
X19A St. Johns 51.45 81 ⇓P P 15 27 16.7 +0.3
baz=51,SNR=14
W20A Ramah 51.47 80 P P 15 27 16.9 +0.3
baz=51,SNR=32
Z17A San Carlos Hig 51.47 83 ⇑P P 15 27 17.1 +0.5
baz=51,SNR=12
R24A Sanders Place, 51.51 75 ⇑P P 15 27 17.4 +0.6
baz=51,SNR=62
V21A Milan 51.55 79 ⇓P P 15 27 17.1 0.0
baz=51,SNR=20
Q25A Bedland, Calha 51.59 73 ⇓P P 15 27 17.5 +0.1
baz=51,SNR=32
SDCO Great Sand Dun 51.59 75⇑iP P 15 27 17.6 +0.2
comp=Z,36nm,0.8s,mb5.3
SDCO e pP 15 27 27.5 -0.6
OGNE Ogallala 51.60 70⇑iP P 15 27 17.7 +0.2
OGNE e pP 15 27 27.5 -0.6
U22A Llaves 51.66 78 P P 15 27 18.5 +0.5
baz=52,SNR=28
T23A Casias Ranch, 51.72 76 ⇓P P 15 27 19.3 +0.8
baz=52,SNR=9.7
216A Three Points, 51.74 85 ⇑P P 15 27 18.2 -0.4
baz=52
Y19A Nutrioso 51.78 81 P P 15 27 19.8 +0.8
baz=52,SNR=14
117A Oracle 51.80 84 P P 15 27 19.1 +0.1
baz=52,SNR=28
S24A Houchin Ranch, 51.83 75 ⇓P P 15 27 19.9 +0.7
baz=52,SNR=48
X20A Quemado 51.86 80 ⇑P P 15 27 18.9 -0.6
baz=52,SNR=112
Z18A Geronimo 51.89 83 ⇑P P 15 27 20.0 +0.3
baz=52,SNR=8.1
V22A San Miguel Ran 51.93 78 ⇑P P 15 27 19.8 -0.2
baz=52,SNR=57
TUC Tucson 51.95 84⇑iP P 15 27 19.6 -0.5
TUC e pP 15 27 29.4 -1.4
W21A San Fidel 52.00 79 ⇓P P 15 27 20.8 +0.3
baz=52,SNR=5.4
U23A El Rito 52.09 77 P P 15 27 22.0 +0.8
baz=52,SNR=51
118A Homack Ranch, 52.23 83 P P 15 27 22.4 +0.2
baz=52,SNR=50
S25A Robets Cordova 52.28 75 ⇓P P 15 27 22.4 -0.2
baz=52,SNR=56

217A Green Valley 52.29 85 ⇓P P 15 27 21.9 -0.8
baz=52
Y20A Horse Springs, 52.36 81 ⇑P P 15 27 23.9 +0.7
baz=52,SNR=55
X21A Alamocita Cree 52.36 80 ⇓P P 15 27 24.0 +0.8
baz=52,SNR=113
V23A Ortiz Mt. (NFS 52.48 78 ⇓P P 15 27 24.9 +0.8
baz=52,SNR=46
W22A Albuquerque 52.51 79 ⇑P P 15 27 24.6 +0.3
baz=52,SNR=7.2
119A Ashpeak Ranch, 52.56 83 ⇑P P 15 27 25.2 +0.5
baz=52
U24A Moreno Valley 52.59 76 ⇑P P 15 27 25.7 +0.8
baz=52,SNR=8.1
218A Dragoon 52.63 84 ⇑P P 15 27 25.1 -0.2
baz=52,SNR=26
T25A Trinidad 52.64 75 P P 15 27 25.8 +0.5
baz=52,SNR=82
YHNB Yeheng 52.64 263 eP P 15 27 24.2 -1.2
comp=Z,34nm,0.8s,mb5.3
Y21A Point of Rocks 52.72 80 ⇓P P 15 27 26.0 +0.1
baz=53,SNR=40
Z20A Nine Sixteen R 52.76 82 ⇑P P 15 27 26.2 +0.1
baz=53,SNR=37
LAZ Ladron 52.79 80 eP P 15 27 26.8 +0.4
comp=Z,30nm,0.8s,mb5.3
LAZ e pP 15 27 37.3 +0.2
X22A Bernardo 52.80 79 ⇑P P 15 27 27.5 +1.0
baz=53
ANMO Albuquerque 52.84 79⇑iP P 15 27 26.5 -0.3
ANMO e pP 15 27 35.9 -1.6
WHN Wuhan 52.86 274⇑iP P 15 27 27.1 +0.2
WHN PcP PcP 15 28 36.3 +0.5
WHN S S 15 34 54.9 +1.8
WHN ScS ScS 15 37 08.6 -5.0
WHN pmax pmax
comp=Z,350nm,0.9s,mb6.3
WHN pmax pmax
comp=Z,690nm,6.2s
WHN LR LR
comp=N,380nm,19.2s,MS4.8
WHN LR LR
comp=E,750nm,16.6s,MS4.8
WHN LR LR
comp=Z,850nm,19.7s,MS4.8
W23A Werner Place, 52.89 78 ⇓P P 15 27 27.3 +0.2
baz=53,SNR=22
ECSD EROS Data Cent 52.95 64⇑iP P 15 27 25.7 -1.8
ECSD ePcP PcP 15 28 35.4 -0.5
318A Bisbee 53.03 84 ⇓P P 15 27 27.6 -0.6
baz=53,SNR=20
LENM Lemitar 53.05 80 eP P 15 27 28.7 +0.4
V24A Rampart Ranch, 53.05 77 ⇓P P 15 27 28.9 +0.6
baz=53,SNR=90
SUMG Summit 53.05 14 eP P 15 27 28.3 +0.5
SUMG ePcP PcP 15 28 35.8 0.0
EYMN Ely 53.08 57⇑iP P 15 27 26.9 -1.4
EYMN e pP 15 27 36.9 -2.2
219A White Tail Can 53.10 83 ⇓P P 15 27 28.6 -0.2
baz=53,SNR=18
120A U Bar Ranch, L 53.12 82 ⇑P P 15 27 28.9 +0.1
baz=53,SNR=29
U25A Circle Dot Ran 53.13 76 ⇓P P 15 27 28.9 0.0
baz=53,SNR=96
LPM Los Pinos Moun 53.16 79 eP P 15 27 29.6 +0.5
Z21A St. Cloud Mine 53.20 81 ⇑P P 15 27 29.8 +0.4
baz=53,SNR=35
Y22A Socorro 53.21 80 ⇓P P 15 27 30.1 +0.6
baz=53,SNR=82
X23A Hourglass Bar 53.25 79 ⇑P P 15 27 29.3 -0.5
baz=53,SNR=8.7
BNM Barren Site 53.27 79⇑iP P 15 27 30.5 +0.6
comp=Z,37nm,0.8s,mb5.4
W24A Lazy 6 Ranch, 53.31 78 ⇓P P 15 27 30.8 +0.6
baz=53,SNR=58
V25A Rancho No Teng 53.37 77 P P 15 27 31.1 +0.5
baz=53,SNR=74
319A Douglas 53.52 84 ⇓P P 15 27 32.1 +0.3
baz=53,SNR=10.0
U26A Atchley Ranch, 53.53 75 P P 15 27 32.1 +0.3
baz=53,SNR=67
SSLB Suanglung 53.55 263⇑iP P 15 27 32.0 -0.1
comp=Z,148nm,0.9s,mb5.9
220A Playas Peak, P 53.62 83 P P 15 27 32.7 +0.2
baz=54,SNR=10
YULB Yu-li 53.63 262⇑iP P 15 27 31.4 -1.2
comp=Z,55nm,0.9s,mb5.5
121A Cookes Peak, D 53.65 82 ⇓P P 15 27 32.8 0.0
baz=54,SNR=31
Z22A Elephant Butte 53.67 81 ⇓P P 15 27 33.3 +0.4
baz=54,SNR=30
X24A Lazy VL Ranch, 53.72 78 P P 15 27 34.0 +0.8
baz=54,SNR=5.6
XAN Xi'an 53.83 281 P P 15 27 35.7 +1.7
XAN pP pP 15 27 47.9 +3.1
XAN PP PP 15 29 36.9 +1.8
XAN pmax pmax
comp=Z,31nm,1.0s,mb5.2
XAN pmax pmax
comp=Z,79nm,12.0s
XAN LR LR
comp=N,310nm,25.8s,MS4.3
XAN LR LR
comp=E,87nm,27.0s,MS4.3
XAN LR LR
comp=Z,140nm,27.3s,MS3.9
W25A X Bar L Ranch, 53.88 77 P P 15 27 34.8 +0.4
baz=54,SNR=78
V26A Tequesquite Ra 53.90 76 P P 15 27 34.6 +0.1
baz=54,SNR=57
320A Kipp Ranch, An 54.01 83 P P 15 27 35.6 +0.2
baz=54,SNR=26
221A Mesquite Ranch 54.01 82 ⇓P P 15 27 35.9 +0.5
baz=54,SNR=7.3
122A Conniff Cattle 54.02 81 ⇑P P 15 27 36.1 +0.6
baz=54,SNR=27
ZALV Zalesovo Beam 54.05 314 P P 15 27 35.9 +0.5
comp=Z,3.3nm,0.6s,mb4.5,baz=32,slow=7.0,SNR=14
ZALV PcP PcP 15 28 40.1 +0.2
comp=Z,34nm,0.7s,baz=54,slow=3.8,SNR=35
ZALV ScP ScP 15 32 34.1 -0.8
comp=Z,2.1nm,0.8s,baz=52,slow=5.7,SNR=4.4
TPUB Ta-pu 54.11 263⇑iP P 15 27 34.7 -1.5
comp=Z,80nm,0.9s,mb5.7
TPUB ePcP PcP 15 28 38.9 -1.7
Z23A Rita Site, Whi 54.11 80 ⇓P P 15 27 36.2 +0.1
baz=54,SNR=20
Y24A Capitan 54.15 79 P P 15 27 36.8 +0.4
baz=54,SNR=192
QZH Quanzhou 54.17 266⇑iP P 15 27 36.8 +0.2
QZH pP pP 15 27 52.7 +5.3
QZH PP PP 15 29 36.2 -2.2
QZH S S 15 35 07.0 -4.1
QZH pmax pmax
comp=Z,290nm,1.2s,mb6.1
QZH pmax pmax
comp=Z,1μm,3.4s
QZH LR LR
comp=Z,990nm,27.5s,MS4.7
NVS Novosibirsk 54.18 315 eP P 15 27 34.2 -2.1
NVS e 15 28 39.6
NVS pmax pmax
comp=Z,29nm,0.9s,mb5.2
NVS pmax pmax
comp=N,20nm,1.4s
X25A Clemmons Ranch 54.22 78 ⇑P P 15 27 37.1 +0.2
baz=54
CBKS Cedar Bluff 54.33 71⇑iP P 15 27 37.3 -0.3
CBKS e pP 15 27 47.3 -1.1
222A Williams Famil 54.37 82 ⇓P P 15 27 38.3 +0.3
baz=54
W26A Owens Ranch, T 54.39 77 ⇓P P 15 27 38.5 +0.4
baz=54
123A Bell Site, Whi 54.52 81 ⇓P P 15 27 39.7 +0.7
baz=54
Z24A Sheeppen Canyo 54.60 79 ⇓P P 15 27 39.7 0.0
baz=54,SNR=48
Y25A Mesa, Roswell 54.61 78 ⇑P P 15 27 39.7 0.0
baz=54,SNR=73
X26A CR and CF Fran 54.72 77 P P 15 27 40.5 0.0
baz=55,SNR=35
W27A Bowe Ranch, En 54.83 76 P P 15 27 41.0 -0.3
baz=55,SNR=14
124A Stringfield Ra 54.97 80 ⇑P P 15 27 41.6 -0.8
baz=55,SNR=31
Z25A Roswell 55.03 79 ⇓P P 15 27 42.6 -0.1
baz=55,SNR=24

Y26A Elida 55.14 78 ⇓P P 15 27 43.0 -0.6
baz=55,SNR=18
224A Cornudas Mount 55.36 81 P P 15 27 45.2 +0.1
baz=55,SNR=53
Z26A Caprock 55.49 78 ⇑P P 15 27 45.8 -0.2
baz=55,SNR=14
125A Gardner Draw, 55.49 79 P P 15 27 46.2 +0.1
baz=55,SNR=72
COWI Conover 55.50 58 eP P 15 27 45.3 -0.7
comp=N,39nm,0.6s,mb5.6
LZH Lanzhou 55.53 286 ⇑P P 15 27 48.1 +1.8
LZH pP pP 15 28 04.4 +7.3
LZH sP sP 15 28 13.2 +12
LZH PcP PcP 15 28 47.3 +1.4
LZH PP PP 15 29 54.4 +4.1
LZH eS S 15 35 28.0 -1.1
LZH sS sS 15 35 50.7 +3.9
LZH SS SS 15 39 11.1 -2.7
LZH pmax pmax
comp=Z,240nm,1.0s,mb6.2
LZH pmax pmax
comp=Z,860nm,4.1s
LZH LR LR
comp=N,2μm,14.6s
LZH LR LR
comp=Z,2μm,16.2s,MS5.4
Y27A Causey 55.57 77 ⇓P P 15 27 46.5 -0.1
baz=55,SNR=19
GTA Gaotai 55.69 292 ⇑P P 15 27 48.7 +1.3
GTA pP pP 15 28 05.4 +7.2
GTA sP sP 15 28 11.4 +9.0
GTA S S 15 35 31.3 +0.2
GTA sS sS 15 35 56.8 +8.0
GTA pmax pmax
comp=Z,150nm,1.0s,mb6.0
GTA pmax pmax
comp=Z,270nm,5.0s
GTA LR LR
comp=N,930nm,19.0s,MS5.0
GTA LR LR
comp=E,720nm,17.5s,MS5.0
GTA LR LR
comp=Z,1μm,19.9s,MS5.0
MNTX Cornudas Mount 55.71 81⇑iP P 15 27 47.2 -0.5
comp=Z,42nm,0.8s,mb5.5
MNTX e pP 15 27 56.9 -1.5
MSTX Muleshoe 55.75 77 P P 15 27 47.5 -0.4
baz=56,SNR=44
225A Deer Hill, Car 55.77 80 P P 15 27 48.3 +0.2
baz=56,SNR=31
AMTX Amarillo 55.79 75⇑iP P 15 27 47.8 -0.4
AMTX e pP 15 27 57.7 -1.2
324A Moseley Ranch, 55.82 81 ⇓P P 15 27 48.0 -0.4
baz=56,SNR=23
126A Clayton Basin, 55.89 79 ⇑P P 15 27 48.8 -0.2
baz=56,SNR=15
Z27A Tatum 55.93 78 ⇓P P 15 27 48.5 -0.7
baz=56,SNR=34
KSU1 Kansas State U 55.97 68⇑iP P 15 27 48.3 -1.1
KSU1 e pP 15 27 58.0 -2.1
KSU1 ePcP PcP 15 28 47.0 -0.6
GDL2 Guadalupe Moun 55.99 80 eP P 15 27 49.5 -0.2
GDL2 e pP 15 27 59.5 -0.9
SCIA State Center 56.04 64⇑iP P 15 27 48.7 -1.2
ENH Enshi 56.06 277⇑iP P 15 27 49.9 -0.3
comp=Z,47nm,0.7s,mb5.6
ENH e 15 28 04.0
325A Bean Ranch, Si 56.19 81 ⇑P P 15 27 50.9 -0.2
baz=56,SNR=76
CLNB Carlsbad 56.24 79 eP P 15 27 50.8 -0.7
comp=Z,7.2nm,0.8s,mb4.8
226A Malaga, Loving 56.24 80 ⇓P P 15 27 51.0 -0.4
baz=56,SNR=40
127A Arkansas Junct 56.28 78 P P 15 27 51.1 -0.6
baz=56,SNR=11
425A Indio Mountain 56.58 81 ⇓P P 15 27 53.8 -0.1
baz=56,SNR=62
227A Bennet, Jal 56.77 79 ⇓P P 15 27 54.1 -1.1
baz=57,SNR=6.3
326A Caldwell Ranch 56.83 80 ⇑P P 15 27 55.0 -0.6
baz=57,SNR=64
JFWS Jewell Farm 57.01 61⇑iP P 15 27 54.8 -2.0
426A McDonald Obser 57.25 81 P P 15 27 58.2 -0.5
baz=57,SNR=68
328A Wristen Ranch, 57.51 79 P P 15 27 59.8 -0.6
baz=57,SNR=55
427A Hayter Ranch, 57.51 80 P P 15 27 59.7 -0.8
baz=57,SNR=28
JMIC Jan Mayen 57.53 4 eP P 15 28 01.5 +1.5
JMIC AMS AMS 15 48 12.7
comp=Z,422nm,19.6s,MS4.5
KEV Kevo 57.56 350 eP P 15 28 00.2 0.0
KEV pmax pmax
comp=Z,4.0nm,0.3s,mb4.9
KEV Kevo 57.56 350 ep P 15 28 00.2 0.0
comp=Z,4.1nm,0.3s,mb4.9
WMOK Wichita Mounta 57.63 74⇑iP P 15 28 00.8 -0.5
WMOK e pP 15 28 10.6 -1.5
526A Mary Lane Ranc 57.64 81 ⇓P P 15 28 01.1 -0.3
baz=58,SNR=61
527A Woodward Ranch 57.88 81 ⇓P P 15 28 02.1 -1.0
baz=58,SNR=40
ARCES ARCESS Array B 57.93 350 P P 15 28 02.5 -0.3
ARCES PcP PcP 15 28 53.9 -0.8
ARCES ScP ScP 15 32 51.1 -0.6
ARCES LR LR 15 55 37.5
ARCES P'P' 15 57 40.8
ARCES ⇑e 15 57 50.5
ARCES ARCESS Array B 57.93 350 P P 15 28 02.5 -0.3
comp=Z,9.5nm,0.4s,mb5.2,baz=19,slow=7.7,SNR=173
ARCES PcP PcP 15 28 53.9 -0.8
comp=Z,32nm,0.8s,baz=24,slow=4.0,SNR=15
ARCES ScP ScP 15 32 51.1 -0.6
comp=Z,3.1nm,1.0s,baz=28,slow=4.1,SNR=3.4
ARCES LR LR 15 55 37.5
comp=Z,463nm,20.7s,MS4.6,baz=196,slow=39
ARCES PKPPKP 15 57 40.8
comp=Z,1.3nm,0.8s,baz=120,slow=2.0,SNR=4.0
ARCES PKP2bc 15 57 50.5
comp=Z,3.7nm,0.8s,baz=193,slow=2.1,SNR=8.7
ARCES ARCESS Array B 57.93 350 P P 15 28 02.5 -0.4
ARCES 15 28 53.9
ARCES pmax pmax
comp=Z,10.0nm,0.4s
ARCES MLR MLR
comp=Z,463nm,20.7s
ARE0 ARCESS Array S 57.93 350⇑iP P 15 28 02.5 -0.4
ARE0 ePcP PcP 15 28 54.2 -0.5
626A Big Bend Ranch 57.97 82 ⇓P P 15 28 02.8 -0.9
baz=58,SNR=68
428A Kincaid Ranch, 58.04 80 ⇓P P 15 28 03.7 -0.5
baz=58,SNR=60
528A Cox Ranch, San 58.37 80 ⇑P P 15 28 05.5 -1.0
baz=58,SNR=56
TXAR Lajitas Array 58.41 82 P P 15 28 06.2 -0.6
TXAR LR LR 15 53 53.5
TXAR P'P' 15 57 35.2
TXAR ⇑e 15 57 57.8
TXAR Lajitas Array 58.41 82 P P 15 28 06.2 -0.6
comp=Z,17nm,0.6s,mb5.3,baz=303,slow=5.0,SNR=333
TXAR LR LR 15 53 53.5
comp=Z,285nm,18.2s,MS4.4,baz=130,slow=37
TXAR PKPPKP 15 57 35.2
comp=Z,0.4nm,0.8s,baz=142,slow=4.9,SNR=4.5
TXAR PKP2bc 15 57 57.8
comp=Z,1.2nm,1.0s,baz=52,slow=6.2,SNR=6.0
TRO Tromso 58.44 353 eP P 15 28 05.7 -0.7
TRO AMB AMB 15 28 08.6
comp=Z,21nm,0.8s,mb5.2
TRO eS S 15 36 02.6 -3.8
627A Terlingua Ranc 58.50 81 ⇓P P 15 28 06.5 -0.9
baz=58,SNR=42
628A Black Gap, Mar 58.78 81 ⇓P P 15 28 08.1 -1.3
baz=59
APA Apatity 58.79 346⇑iP P 15 28 09.6 +0.7
APA pmax pmax
comp=Z,18nm,1.0s,mb5.1
APA MLR MLR
comp=Z,800nm,21.0s,MS4.8
KURK Kurchatov 59.04 314 eP P 15 28 10.0 -0.9
KURK Kurchatov 59.04 314 LR LR 15 55 42.9
comp=Z,1μm,19.0s,MS5.0,baz=35,slow=38
KURK Kurchatov 59.04 314 ceP P 15 28 10.0 -0.8
KURK pmax pmax
comp=Z,29nm,1.0s,mb5.3
KURK Kurchatov 59.04 314 P P 15 28 14.3 +3.5

SNR=13
HDIL Hopedale 59.13 63⇑ *i* P P 15 28 10.6 -1.1
CD2 Chengdu 59.14 282⇑ *i* P P 15 28 12.7 +0.8
CD2 pP pP 15 28 28.7 +6.0
CD2 sP sP 15 28 35.7 +8.8
CD2 PP PP 15 30 25.4 +2.9
CD2 ScP ScP 15 32 54.7 -3.1
CD2 PcS PcS 15 33 01.3 -0.9
CD2 S **S** **15 36 12.9 -3.7**
CD2 sS sS 15 36 40.3 +5.8
CD2 ScS ScS 15 37 53.4 -5.5
CD2 SS SS 15 40 09.2 -1.5
CD2 pmax pmax
comp=Z,180nm,0.8s,mb6.2
CD2 pmax pmax
comp=Z,250nm,6.3s
CD2 LR LR
comp=N,540nm,17.2s,MS4.8
CD2 LR LR
comp=E,450nm,18.1s,MS4.8
CD2 LR LR
comp=Z,690nm,16.8s,MS4.8
WMQ Urumqi 59.41 303 P P 15 28 15.6 +2.1
WMQ pP pP 15 28 31.6 +7.2
WMQ sP sP 15 28 38.6 +10
WMQ PcP PcP 15 29 02.6 +1.6
WMQ PP PP 15 30 29.1 +4.6
WMQ ScP ScP 15 32 56.6 -2.1
WMQ S **S** **15 36 18.2 -1.6**
WMQ sS sS 15 36 45.6 +7.9
WMQ ScS ScS 15 37 56.5 -4.1
WMQ SS SS 15 40 15.3 +1.0
WMQ pmax pmax
comp=Z,33nm,0.8s,mb5.4
WMQ pmax pmax
comp=Z,230nm,5.2s
WMQ LR LR
comp=N,920nm,20.0s,MS5.0
WMQ LR LR
comp=E,930nm,20.9s,MS5.0
WMQ LR LR
comp=Z,1μm,21.6s,MS5.0
SCHQ Schefferville 59.72 39 *e*P P 15 28 14.2 -1.2
SCHQ ePcP PcP 15 29 00.8 -1.2
SCHQ Schefferville 59.72 39 P P 15 28 14.5 -1.0
comp=Z,10nm,0.8s,mb4.9,baz=326,slow=6.9,SNR=16
SCHQ PcP PcP 15 29 01.1 -0.9
comp=Z,18nm,0.6s,baz=334,slow=7.6,SNR=8.3
SCHQ LR LR 15 56 43.5
comp=Z,602nm,18.6s,MS4.8,baz=158,slow=39
SLM Saint Louis 59.93 65⇑ *i* P P 15 28 16.0 -1.2
SLM *e* pP 15 28 25.4 -2.6
JCT Junction City 59.98 78⇑ *i* P P 15 28 16.1 -1.5
JCT *e* pP 15 28 26.3 -2.2
MK31 Makanchi Array 60.08 309 *e*P P 15 28 16.5 -1.6
MK31 *e*PcP PcP 15 29 03.3 -0.3
MK31 Makanchi Array 60.08 309 *i* P P 15 28 16.9 -1.2
MK31 pmax pmax
comp=Z,14nm,0.6s,mb5.2
MKAR Makanchi Array 60.08 309 P P 15 28 16.8 -1.3
MKAR PcP PcP 15 29 03.8 +0.1
MKAR LR LR 15 54 02.8
MKAR P'P' 15 57 36.0
MKAR ⇑*e* 15 57 50.2
MKAR Makanchi Array 60.08 309 P P 15 28 16.8 -1.3
comp=Z,6.9nm,0.4s,mb5.1,baz=40,slow=6.9,SNR=54
MKAR PcP PcP 15 29 03.8 +0.1
comp=Z,5.7nm,0.6s,baz=55,slow=4.0,SNR=6.0
MKAR LR LR 15 54 02.8
comp=Z,468nm,20.8s,MS4.6,baz=37,slow=36
MKAR PKPPKP 15 57 36.0
comp=Z,0.4nm,0.8s,baz=222,slow=1.9,SNR=4.3
MKAR PKP2bc 15 57 50.2
comp=Z,1.2nm,1.0s,baz=262,slow=2.9,SNR=4.6
MKAR Makanchi Array 60.08 309 P P 15 28 16.8 -1.3
MKAR 15 29 03.8
MKAR pmax pmax
comp=Z,7.0nm,0.4s
MKAR MLR MLR
comp=Z,468nm,20.8s
FVM French Village 60.27 65⇑ *i* P P 15 28 18.2 -1.4
comp=Z,91nm,0.6s,mb6.0
FVM *e* pP 15 28 28.2 -2.2
FVM *e*PcP PcP 15 29 04.1 -0.4
GYA Guiyang 60.52 276⇑ *i* P P 15 28 21.6 +0.3
GYA pP pP 15 28 37.7 +5.5
GYA sP sP 15 28 44.7 +8.3
GYA PcP PcP 15 29 03.0 -2.7
GYA PP PP 15 30 39.4 +4.7
GYA S **S** **15 36 35.9 +1.5**
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,70nm,4.7s
GYA LR LR
comp=N,950nm,18.3s,MS5.1
GYA LR LR
comp=E,930nm,21.1s,MS5.1
GYA LR LR
comp=Z,1μm,23.3s,MS5.0
SOKR Solikamsk 60.56 331 *c i* P P 15 28 21.4 +0.3
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
SOKR MLR MLR
comp=Z,1μm,21.0s,MS5.0
MIAR Mount Ida 60.85 70⇑ *i* P P 15 28 22.9 -0.7
MIAR *e* pP 15 28 33.0 -1.4
VOSK Vostochnaya 60.86 319 P P 15 28 22.6 -0.7
VOSK pmax pmax
comp=Z,7.0nm,0.4s,mb5.1
BVAR Borovoye Array 60.88 320 P P 15 28 23.1 -0.3
BVAR PcP PcP 15 29 06.6 -0.2
BVAR LR LR 15 57 34.5
BVAR P'P' 15 57 38.1
BVAR ⇑*e* 15 57 49.2
BVAR Borovoye Array 60.88 320 P P 15 28 23.1 -0.3
comp=Z,13nm,0.5s,mb5.3,baz=50,slow=7.4,SNR=52
BVAR PcP PcP 15 29 06.6 -0.2
comp=Z,12nm,0.5s,baz=38,slow=2.3,SNR=12
BVAR LR LR 15 57 34.5
comp=Z,48nm,18.2s,MS3.7,baz=160,slow=39
BVAR PKPPKP 15 57 38.1
comp=Z,0.3nm,0.3s,baz=222,slow=2.0,SNR=3.7
BVAR PKP2bc 15 57 49.2
comp=Z,1.5nm,0.8s,baz=224,slow=4.0,SNR=6.0
BVAR Borovoye Array 60.88 320 P P 15 28 23.1 -0.3
BVAR 15 29 06.6
BVAR pmax pmax
comp=Z,13nm,0.5s
BVAR MLR MLR
comp=Z,48nm,18.2s
BRVK Borovoye 60.89 320 P P 15 28 23.4 -0.1
comp=Z,143nm,0.5s,mb6.4,SNR=13
BRVK Borovoye 60.89 320⇑ *e*P P 15 28 23.0 -0.5
BRVK *e*PcP PcP 15 29 06.7 -0.1
BRVK Borovoye 60.89 320 *c e*P P 15 28 23.2 -0.3
BRVK pmax pmax
comp=Z,10.0nm,0.5s,mb5.2
BRVK Borovoye 60.89 320 P P 15 28 23.8 +0.2
SNR=6.7
AAM Ann Arbor 60.97 58 *e*P P 15 28 24.3 +0.1
AAM *e*PcP PcP 15 29 07.1 -0.2
OLIL Olney 61.06 63⇑ *i* P P 15 28 23.9 -1.0
OLIL *e* pP 15 28 34.2 -1.6
SIUC Southern Illin 61.15 65 *e*P P 15 28 24.0 -1.5
UALR University of 61.41 69⇑ *i* P P 15 28 26.2 -1.1
UALR *e* pP 15 28 36.3 -1.9
ZRNK Zerenda 61.48 321 *i* P P 15 28 27.4 -0.1
ZRNK pmax pmax
comp=Z,13nm,0.3s,mb5.5
SVE Sverdlovsk 61.54 328⇑ *e*P P 15 28 29.0 +1.2
SVE pmax pmax
comp=Z,23nm,1.1s,mb5.2
SVE MLR MLR
comp=Z,2μm,21.0s,MS5.2
PARMO Parma 61.58 66 *e*P P 15 28 27.6 -0.9
BLO Bloomington 61.63 62⇑ *i* P P 15 28 28.2 -0.5
HBAR Harrisburg 61.84 68⇑ *i* P P 15 28 29.5 -0.7
USIN University of 61.84 64⇑ *i* P P 15 28 29.3 -0.9
USIN *e* pP 15 28 39.5 -1.5
GNAR Gosnell 61.92 67⇑ *i* P P 15 28 29.8 -0.9
GLAT Glass 62.12 66⇑ *i* P P 15 28 31.6 -0.5
GLAT *e* pP 15 28 41.8 -1.2
MOR8 Moi Rana 62.17 354 *e*P P 15 28 30.8 -1.1

NATX Nacogdoches 62.18 73 *e*P P 15 28 31.4 -1.1
comp=Z,47nm,0.6s,mb5.8
NATX *e* 15 28 48.0
UTMT University of 62.31 66 *e*P P 15 28 32.6 -0.8
UTMT *e* pP 15 28 42.2 -2.0
HALT Halls 62.35 66 *e*P P 15 28 31.8 -1.8
WCI Wyandotte Cave 62.42 63⇑ *i* P P 15 28 32.9 -1.2
ARU Arti 62.55 328 *e*P P 15 28 34.7 +0.1
ARU *e* 15 28 48.5
ARU Arti 62.55 328 *c i* P P 15 28 34.8 +0.2
ARU 15 30 52.2
ARU S **S** **15 37 01.9 +2.6**
ARU pmax pmax
comp=Z,23nm,1.0s,mb5.3
ARU MLR MLR
comp=Z,741nm,20.0s,MS4.8
ARU Arti 62.55 328 P P 15 28 34.2 -0.4
comp=Z,163nm,0.9s,mb6.2,SNR=9.6
BORG Borgarnes 62.66 11 LR LR 15 57 52.0
comp=Z,412nm,18.3s,MS4.6,baz=144,slow=38
HKT Hockley 62.76 75 *e*P P 15 28 36.1 -0.4
comp=Z,79nm,1.4s,mb5.7
HKT Hockley 62.76 75 *e*P P 15 28 36.1 -0.4
HKT pmax pmax
comp=Z,79nm,1.4s,mb5.7
ERPA Erie 63.02 56 *e*P P 15 28 37.7 -0.3
WVT Waverly 63.05 65⇑ *i* P P 15 28 37.5 -0.8
WVT *e* pP 15 28 47.5 -1.7
ALLY Alegheny Colle 63.27 56 *e*P P 15 28 40.5 +0.8
JOF Joensuu 63.46 345 *e*P P 15 28 40.4 -0.1
JOF pmax pmax
comp=Z,22nm,0.6s,mb5.5
JOF Joensuu 63.46 345 *e*p P 15 28 40.4 -0.1
comp=Z,22nm,0.6s,mb5.5
KLMR Klimovskoe 63.86 340 *e*P P 15 28 42.1 -1.1
KLMR *e*S **S** **15 37 15.9 +0.4**
KLMR pmax pmax
comp=Z,40nm,1.7s,mb5.2
KLMR MLR MLR
comp=Z,1μm,17.0s,MS5.1
LONY Lake Ozonia 63.89 51⇑ *e*P P 15 28 41.9 -1.8
KMI Kunming 63.91 278 ⇑P P 15 28 44.9 +0.8
KMI pP pP 15 28 59.9 +4.9
KMI sP sP 15 29 06.1 +6.9
KMI PP PP 15 31 04.8 +0.2
KMI S **S** **15 37 15.3 -1.9**
KMI sS sS 15 37 42.4 +7.2
KMI SKS 15 38 31.3
KMI SS SS 15 41 24.1 -1.4
KMI pmax pmax
comp=Z,71nm,0.9s,mb5.7
KMI pmax pmax
comp=Z,360nm,6.6s
KMI LR LR
comp=N,310nm,25.2s,MS4.5
KMI LR LR
comp=E,220nm,24.6s,MS4.5
KMI LR LR
comp=Z,450nm,27.1s,MS4.5
QIZ Qiongzhong 63.98 268 P P 15 28 44.3 -0.4
QIZ pP pP 15 29 00.6 +5.0
QIZ sP sP 15 29 06.9 +7.1
QIZ PP PP 15 31 06.5 +1.1
QIZ S **S** **15 37 18.0 -0.2**
QIZ sS sS 15 37 42.5 +6.3
QIZ pmax pmax
comp=Z,39nm,1.7s,mb5.2
QIZ pmax pmax
comp=Z,190nm,5.7s
QIZ LR LR
comp=N,310nm,22.9s
QIZ LR LR
comp=Z,350nm,19.8s,MS4.5
FRNY Flat Rock 64.20 50 *e*P P 15 28 44.1 -1.7
VBMS Vicksburg 64.30 70 *e*P P 15 28 46.2 -0.4
NCB Newcomb 64.54 51 *e*P P 15 28 47.0 -1.0
SWET Sewanee 64.78 65⇑ *i* P P 15 28 48.7 -0.9
MCWV Mont Chateau 64.88 57⇑ *i* P P 15 28 49.4 -0.9
MCWV *e*PcP PcP 15 29 23.1 -0.2
KAF Kangasniemi 64.96 347 *e*P P 15 28 50.1 -0.3
KAF pmax pmax
comp=Z,27nm,0.6s,mb5.5
KAF Kangasniemi 64.96 347 *e*p P 15 28 50.1 -0.3
comp=Z,27nm,0.6s,mb5.5
BINY Binghamton 64.99 53 *e*P P 15 28 49.6 -1.3
CPCT Cooper Cave 65.40 64⇑ *i* P P 15 28 53.2 -0.5
LBNH Lisbon 65.44 49 *e*P P 15 28 52.5 -1.3
comp=Z,10nm,0.7s,mb5.0
LBNH Lisbon 65.44 49 *e*P P 15 28 52.5 -1.3
LBNH pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
FINES FINESS Array B 65.64 347 P P 15 28 54.0 -0.7
comp=Z,20nm,0.6s,mb5.3,baz=22,slow=7.7,SNR=97
FINES PcP PcP 15 29 24.6 -1.4
comp=Z,18nm,0.7s,baz=15,slow=5.9,SNR=8.4
FINES PKPPKP 15 57 30.3
comp=Z,3.2nm,0.9s,baz=212,slow=9.7,SNR=4.0
FINES LR LR 16 02 22.0
comp=Z,276nm,19.1s,MS4.5,baz=21,slow=40
FINES FINESS Array B 65.64 347 P P 15 28 54.1 -0.7
FINES 15 29 24.7
TKL Tuckaleechee C 65.67 63⇑ *i* P P 15 28 54.7 -0.7
LRAL Lakeview Retre 65.76 67⇑ *i* P P 15 28 54.8 -1.2
PKME Peaks-Kenny Pk 65.89 47 *e*P P 15 28 54.9 -1.8
ULHL Ulahol 66.35 309 P P 15 29 03.2 +3.5
SNR=11
BLA Blacksburg 66.37 60⇑ *i* P P 15 28 58.9 -1.0
comp=Z,65nm,1.0s,mb5.6
BLA *e* pP 15 29 10.0 -0.9
BLA Blacksburg 66.37 60⇑ *i* P P 15 28 58.9 -1.0
BLA *e* pP 15 29 10.0 -0.8
BLA pmax pmax
comp=Z,65nm,1.0s,mb5.6
USP Ospenovka 66.42 310 P P 15 29 02.8 +2.7
SNR=9.5
MVL Millersville 66.44 55 *e*P P 15 29 00.2 0.0
VWCC Virginia Weste 66.58 59 *e*P P 15 29 01.2 0.0
SDMD Soldier's Deli 66.62 56 *e*P P 15 29 00.7 -0.8
KBK Karagaybulak 66.67 310 P P 15 29 02.4 +0.7
SNR=11
AAK Ala-Archa 66.90 310 P P 15 29 06.0 +2.8
SNR=8.1
AAK Ala-Archa 66.90 310⇑ *e*P P 15 29 03.4 +0.1
comp=Z,15nm,0.6s,mb5.2
AAK Ala-Archa 66.90 310⇑ *e*P P 15 29 03.4 +0.2
AAK pmax pmax
comp=Z,15nm,0.6s,mb5.2
AAK Ala-Archa 66.90 310 P P 15 29 05.5 +2.3
SNR=11
PAL Palisades 66.92 53 *e*P P 15 29 02.8 -0.6
KZA Kyzart 66.96 309 P P 15 29 07.5 +3.9
SNR=9.1
FOO Floro 67.14 358 *e*P P 15 29 02.5 -1.9
FOO *e*PP PP 15 31 33.0 +1.1
FOO *e*S S 15 37 59.1 +3.5
BRAL Brewton 67.20 69⇑ *e*P P 15 29 04.5 -0.8
BRAL *e* pP 15 29 14.6 -1.7
UCH Uchtor 67.20 310 P P 15 29 08.5 +3.4
SNR=10
UCH Uchtor 67.20 310 *e*P P 15 29 07.3 +2.2
comp=Z,7.4nm,0.8s,mb4.8
EKS2 Erkin-Say 67.22 310 P P 15 29 07.0 +1.7
SNR=9.5
EKS2 Erkin-Say 67.22 310⇑ *e*P P 15 29 05.4 +0.2
comp=Z,18nm,0.6s,mb5.3
EKS2 *e*PcP PcP 15 29 33.8 +0.8
JSRW J. Sargeant Re 67.36 58 *e*P P 15 29 06.2 0.0
NOA NORSAR Array B 67.47 355 P P 15 29 06.1 -0.4
comp=Z,8.3nm,0.5s,mb5.0,baz=7.2,slow=6.3,SNR=44
NOA PcP PcP 15 29 32.7 -1.0
comp=Z,12nm,0.7s,baz=0.0,slow=4.5,SNR=5.1
NOA LR LR 15 57 25.4
comp=Z,331nm,21.0s,MS4.5,baz=10.0,slow=35
NOA NORSAR Array B 67.47 355 P P 15 29 06.1 -0.4
NOA 15 29 32.7
NOA pmax pmax
comp=Z,8.0nm,0.5s
NOA pmax pmax
comp=Z,12nm,0.7s
GOGA Godfrey 67.49 64⇑ *i* P P 15 29 06.0 -1.0
GOGA *e* pP 15 29 16.2 -1.9
LSA Lhasa 67.58 290⇑ *i* P P 15 29 10.1 +2.4
comp=Z,245nm,0.8s,mb6.3
AML Almayashu 67.67 310 P P 15 29 09.0 +0.9
SNR=12

AB31 Akbulak array 67.91 323 *i* P P 15 29 09.3 -0.2
AB31 pmax pmax
comp=Z,6.0nm,0.3s,mb5.1
ABKAR Akbulak array 67.91 323 *e*P P 15 29 09.2 -0.2
comp=Z,4.2nm,0.3s,mb5.0
ABKAR *e*PcP PcP 15 29 34.8 -0.9
JSC Jenkinsville 68.08 62 *e*P P 15 29 10.7 0.0
JSC *e* pP 15 29 21.5 -0.3
HFS Hagfors 68.21 353 LR LR 15 59 45.9
comp=Z,528nm,20.1s,MS4.8,baz=14,slow=36
BER Bergen 68.35 358 *e*P P 15 29 11.6 -0.4
KK31 Karatay Array 68.41 313 *i* P P 15 29 13.0 +0.3
KK31 pmax pmax
comp=Z,5.0nm,0.3s,mb5.0
KSH Kashi 68.55 307 P P 15 29 17.0 +3.3
KSH *e*pP pP 15 29 33.4 +8.7
KSH *e*sP sP 15 29 40.3 +11
KSH *e*PcP PcP 15 29 42.1 +3.5
KSH *e*PP PP 15 31 51.2 +6.5
KSH *e*ScP 15 33 39.2
KSH *e*PcS 15 33 45.1
KSH *e*S S 15 38 12.9 -0.3
KSH *e*sS sS 15 38 41.1 +10
KSH *e*ScS ScS 15 39 07.1 -3.4
KSH *e*SS SS 15 42 39.2 +2.4
KSH pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
KSH pmax pmax
comp=Z,280nm,4.2s
KSH LR LR
comp=N,790nm,18.2s
KSH LR LR
comp=E,410nm,13.1s
KSH LR LR
comp=Z,360nm,13.3s,MS4.8
TAOE Nuku Hiva Isla 68.63 139 *e*S S 15 38 16.0 +1.5
comp=Z,226nm,28.2s
TAOE *e*LR LR 15 50 00.2
comp=Z,2μm,23.7s,baz=343
TAOE *e*T 16 43 40.0
comp=Z,96nm,0.2s
KONO Kongsberg 68.94 356 *e*P P 15 29 16.3 +0.6
KONO *e*SS SS 15 42 39.4 -2.3
KONO AMS AMS 15 57 02.9
comp=Z,349nm,23.8s,MS4.5
KONO Kongsberg 68.94 356 *e*P P 15 29 15.7 0.0
comp=Z,12nm,0.6s,mb5.0
KONO Kongsberg 68.94 356 *e*P P 15 29 15.7 0.0
KONO pmax pmax
comp=Z,12nm,0.6s,mb5.0
MOS Moscow 68.95 339 *e*P P 15 29 15.0 -0.8
MOS pmax pmax
comp=Z,66nm,0.6s,mb5.7
KDM Kudat 69.01 254 P P 15 29 17.8 +0.9
IMP Imphal 69.55 284 *e*PKP P 15 29 20.0 -0.1
NHSC New Hope 69.55 62⇑ *i* P P 15 29 20.4 +0.4
NHSC *e* pP 15 29 29.8 -1.1
CHRT Chiangrai 69.62 276 ⇑P P 15 29 19.0 -1.6
comp=Z,310nm,1.0s,mb6.2
OBN Obninsk 69.76 339⇑ *i* P P 15 29 20.6 -0.3
OBN Obninsk 69.76 339 *c i* P P 15 29 20.8 -0.1
OBN *i* 15 29 41.2
OBN *i* S S 15 38 26.1 -0.8
OBN pmax pmax
comp=Z,42nm,1.0s,mb5.3
OBN MLR MLR
comp=Z,800nm,17.0s,MS5.0
SDKM Sandakan 69.81 253 P P 15 29 21.8 0.0
KKM Kota Kinabalu 70.08 254⇑ *i* P P 15 29 23.4 0.0
KKM Kota Kinabalu 70.08 254 P P 15 29 23.9 +0.6
SHL Shillong 70.20 286⇑ *i* P P 15 29 24.5 +0.5
MVH1 Achvaich 70.76 3 *e*P P 15 29 27.9 +1.0
CHTO Chiang Mai 70.94 276⇑ *i* P P 15 29 28.2 -0.4
CHTO Chiang Mai 70.94 276 P P 15 29 28.6 0.0
comp=Z,626nmcomp=Z,40nm,1.4s,mb5.2
CHTO Chiang Mai 70.94 276 P P 15 29 29.2 +0.6
SNR=6.2
MCD Coleburn Disti 71.13 3 *e*P P 15 29 29.1 -0.1
MRSI Marisa 71.20 246 P P 15 29 29.3 -0.9
comp=Z,1μmcomp=Z,111nm,0.9s,mb5.8
CM31 Chiang Mai Arr 71.20 276⇑ *i* P P 15 29 30.3 +0.1
CMAR Chiang Mai Arr 71.20 276 P P 15 29 30.6 +0.4
comp=Z,27nm,0.8s,mb5.2,baz=26,slow=6.8,SNR=132
CMAR PcP PcP 15 29 50.8 +0.7
comp=Z,14nm,0.8s,baz=18,slow=4.7,SNR=9.4
CMAR LR LR 16 03 03.2
comp=Z,361nm,19.7s,MS4.6,baz=50,slow=38
CMAR Chiang Mai Arr 71.20 276 P P 15 29 30.6 +0.4
CMAR 15 29 50.8
CMAR pmax pmax
comp=Z,27nm,0.8s
CMAR MLR MLR
comp=Z,361nm,19.7s
MDO Dochfour 71.24 3 *e*P P 15 29 30.5 +0.7
TAPN Taplejung 71.34 290 *e*P P 15 29 32.5 +1.6
comp=Z,1μm,1.0s,mb6.9
PMOR Pomariorio Ree 71.44 149 *e*T 16 47 18.0
comp=Z,78nm,0.3s
ODAN Odare 71.89 290 *e*P P 15 29 35.6 +1.3
comp=Z,330nm,0.9s,mb6.3
GUN Gumba 71.98 292 *e*P P 15 29 36.3 +1.5
LUWI Luwuk 71.98 244 P P 15 29 33.7 -1.2
comp=Z,1μmcomp=Z,154nm,1.1s,mb5.9
JIRN Jiri 71.99 292 *e*P P 15 29 36.6 +1.7
comp=Z,1μm,0.7s,mb6.9
BDT Bhumibol Dam 72.08 275 P P 15 29 36.0 +0.5
comp=Z,22nm,1.0s,mb5.0
VRHR Novokhopersk 72.22 335 *e*P P 15 29 34.5 -1.3
VRHR pmax pmax
comp=E,10.0nm,0.5s
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.3
VRHR pmax pmax
comp=N,10.0nm,0.6s
RAMN Ramite 72.29 291 *e*P P 15 29 37.9 +1.3
comp=N,1μm,0.7s,mb6.9
KKN Kakani 72.42 293 *e*P P 15 29 38.6 +1.2
comp=N,538nm,0.7s,mb6.6
EBH Black Hill 72.46 3 *e*P P 15 29 37.4 +0.2
EAB Aberfoyle 72.49 3 *e*P P 15 29 37.5 +0.2
PKI Pulchoki 72.51 292 *e*P P 15 29 39.0 +1.0
comp=N,512nm,0.8s,mb6.6
PKIN Phulchoki 72.51 292 *e*P P 15 29 39.0 +1.0
comp=N,341nm,0.8s,mb6.3
NST Nakhon Sawan 72.57 273 P P 15 29 37.3 -1.1
GKN Gorkha 72.63 293 *e*P P 15 29 39.5 +0.8
comp=N,729nm,0.9s,mb6.6
DMN Daman 72.65 293 *e*P P 15 29 40.3 +1.5
comp=N,541nm,0.9s,mb6.5
VSR Storozhevoye 72.74 336 *e*P P 15 29 38.8 -0.2
VSR pmax pmax
comp=E,5.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,6.0nm,1.2s
VSR MLR MLR
comp=Z,2μm,21.0s,MS5.3
VSR MLR MLR
comp=N,760nm,19.0s,MS5.1
VSR MLR MLR
comp=E,340nm,16.0s,MS5.1
ESY Stoneypath 72.82 2 *e*P P 15 29 39.3 0.0
EAU Auchinoon 72.86 3 *e*P P 15 29 39.8 +0.2
EBL Broad Law 72.95 3 *e*P P 15 29 41.3 +1.2
SUW Suwalki 73.23 347 *e*P P 15 29 40.7 -1.1
comp=E,44nm,0.7s,mb5.5
SUW Suwalki 73.23 347 *e*P P 15 29 40.7 -1.1
SUW pmax pmax
comp=Z,45nm,0.7s,mb5.5
COEN Coen 73.28 219⇑ *i* P P 15 29 41.0 -1.5
comp=Z,268nm,1.1s,mb6.1
PPT Papeete 73.33 151 *e*S S 15 39 10.6 +1.8
comp=Z,351nm,33.0s
PPT *e*SS SS 15 43 53.3 +1.4
comp=Z,302nm,27.5s
PPT *e*LR LR 15 52 13.6
comp=Z,1μm,28.0s,baz=343
PPT *e*T 16 49 41.1
comp=Z,25nm,0.3s
PPT Papeete 73.33 151 LR LR 15 55 11.9
comp=Z,384nm,19.0s,MS4.7,baz=321,slow=30
TIAR Tiarei 73.39 151 *e*T 16 49 47.1
comp=Z,23nm,0.3s
KOLN Koldanda 73.40 294 *e*P P 15 29 44.3 +1.1
comp=Z,225nm,0.9s,mb6.1

ESK Eskdalemuir 73.40 3 *e*P **P 15 29 40.9 -1.9**
ESK AMB AMB 15 29 52.6
comp=Z,77nm,2.6s,mb5.2
PAE Paea 73.42 151 *e*T 16 49 41.3
comp=Z,2.8nm,0.3s
PCI Palu 73.53 247 P **P 15 29 43.0 -1.1**
comp=Z,709nmcomp=Z,59nm,1.3s,mb5.3
ECK Cauldkaine Hil 73.54 3 *e*P **P 15 29 42.7 -0.9**
SDNR Sundarnagar 74.21 301 *e*PKP **P 15 29 48.5 +0.6**
BTM Bintulu 74.21 255 P **P 15 29 48.1 0.0**
DZM Mont Dzumac 74.52 195 *e*P **P 15 29 49.4 -0.2**
comp=Z,92nm,1.3s,mb5.5
DZM *e*S S 15 39 29.6 +7.6
comp=Z,233nm,27.4s
DZM *e*SS SS 15 44 12.7 +2.8
comp=Z,217nm,29.4s
DZM *e*LR LR 15 52 53.8
comp=Z,1μm,24.9s,baz=27
DZM Mont Dzumac 74.52 195⇑*i*P **P 15 29 48.9 -0.7**
DZM *e* pP 15 29 58.9 -1.8
TEIG Tepich 74.53 77⇑*i*P **P 15 29 49.4 -0.6**
comp=Z,26nm,0.8s,mb5.2
BHK Bhakra 74.57 301 *ex* x 15 29 46.8
BSEG Bad Segeberg 74.60 355 *e*P **P 15 29 50.7 +0.9**
comp=Z,37nm,0.8s,mb5.4
TTSI Tana Toraja 75.29 245 P **P 15 29 53.7 -0.6**
comp=Z,69nm,1.2s,mb5.5
SBUM Sibu 75.33 255 P **P 15 29 55.0 +0.4**
AKASG Malin Array Be 75.42 342 P **P 15 29 53.9 -0.7**
comp=Z,9.5nm,0.3s,mb5.2,baz=20,slow=5.9,SNR=62
AKASG LR LR 16 09 52.5
comp=Z,490nm,18.0s,MS4.8,baz=30,slow=41
AKBB Malin Array Si 75.42 342⇑*i*P **P 15 29 53.9 -0.7**
KIEV Kiev 75.43 342⇑*i*P **P 15 29 53.8 -0.9**
comp=Z,25nm,0.6s,mb5.3
KIEV Kiev 75.43 342⇑*i*P **P 15 29 53.8 -0.9**
KIEV pmax pmax
comp=Z,25nm,0.6s,mb5.3
RUE Ruedersdorf 75.81 352 *e*P **P 15 29 57.0 +0.2**
KBL Kabul 75.88 308⇑*i*P **P 15 29 56.2 -1.3**
SPSI Sidrap Palu 76.07 245 P **P 15 29 56.8 -2.0**
comp=Z,34nm,1.1s,mb5.2
HLM1 Long Mynd 76.21 3 *e*P **P 15 29 57.3 -1.8**
HLM1 AMB AMB 15 29 58.8
comp=Z,57nm,3.0s
NDI New Delhi 76.27 299 *e*PKP **P 15 30 00.0 +0.2**
NDI AMb AMB 15 30 02.9
comp=Z,40nm,1.5s,mb5.1
IBBN Ibbenburen 76.36 356 *e*P **P 15 30 00.6 +0.7**
HTR Trewern Hill 76.64 3 *e*P **P 15 30 00.4 -1.1**
CLZ Clausthal 76.69 354 *e*P **P 15 30 02.5 +0.7**
comp=Z,58nm,0.7s,mb5.6
CLZ Clausthal 76.69 354 *e*P **P 15 30 02.5 +0.7**
CLZ pmax pmax
comp=Z,58nm,0.7s,mb5.6
MCH1 Michaelchurch 76.73 3 *e*P **P 15 30 02.0 0.0**
MCH1 AMB AMB 15 30 02.8
comp=Z,48nm,1.6s,mb5.2
WTSB Winterswijk 76.74 357 *e*P **P 15 30 02.3 +0.2**
comp=Z,33nm,0.7s,mb5.3
KAKA Kakadu 76.83 229 *e*P **P 15 30 02.1 -0.9**
comp=Z,68nm,0.9s,mb5.6
BKSI Bulukumba 76.98 244 P **P 15 30 03.6 -0.3**
comp=Z,969nmcomp=Z,94nm,1.0s,mb5.7
CLL Collm 77.03 353 *e*P **P 15 30 03.4 -0.3**
comp=Z,19nm,0.8s,mb5.1
CLL Collm 77.03 353⇑*i*P **P 15 30 03.2 -0.5**
comp=Z,24nm,1.1s,mb5.0
CLL *i* pP pP 15 30 13.9 -1.0
CLL *e*S S 15 39 48.0 -1.3
CLL LR LR
comp=Z,500nm,21.6s,MS4.8
CLL Collm 77.03 353⇑*i*P **P 15 30 03.2 -0.5**
CLL *i**PP pP 15 30 13.9 -1.0
CLL *e*S S 15 39 48.0 -1.3
CLL pmax pmax
comp=Z,24nm,1.1s,mb5.0
CLL MLR MLR
comp=Z,500nm,21.6s,MS4.8
CLL Collm 77.03 353⇑*i*P **P 15 30 03.2 -0.5**
comp=Z,24nm,1.1s,mb5.0
CLL *i* PcP PcP 15 30 13.9 -0.7
CLL *e*PP PP 15 32 54.0 -2.5
CLL *e*(PP) 15 34 57.0
CLL *e*S S 15 39 48.0 -1.3
CLL *e*PS 15 40 29.0
CLL *e*SS SS 15 44 46.0 +0.7
CLL LmV 16 08 00.0
comp=Z,500nm,21.6s
HGH Gray Hill 77.09 3 *e*P **P 15 30 04.0 -0.1**
LVV L'vov 77.18 345 *e*P **P 15 30 03.8 -0.8**
KSP Ksiaz 77.19 350 *e*P **P 15 30 05.3 +0.7**
KSP Ksiaz 77.19 350 *e*P **P 15 30 04.8 +0.2**
KSP *e*S S 15 39 51.9 +0.8
KSP Ksiaz 77.19 350 *e*S S 15 39 51.9 +0.8
NEUB Neuenburg 77.22 353 *e*P **P 15 30 05.1 +0.3**
BUG Bochum--Univer 77.24 356 *e*P **P 15 30 04.9 0.0**
KSM Kuching 77.25 256⇑*i*P **P 15 30 05.2 -0.3**
KSM Kuching 77.25 256 P **P 15 30 05.8 +0.3**
BRG Berggiesshubel 77.39 352 *e*P **P 15 30 05.5 -0.2**
comp=Z,18nm,0.8s,mb5.0
BRG Berggiesshubel 77.39 352 *e*P **P 15 30 05.4 -0.3**
comp=Z,18nm,0.8s,mb5.1
BRG
comp=N,463nm,23.0s
BRG
comp=E,342nm,20.9s
BRG
comp=Z,406nm,19.9s
BRG Berggiesshubel 77.39 352 *e*P **P 15 30 05.4 -0.3**
BRG pmax pmax
comp=Z,11nm,0.8s,mb4.8
BRG MLR MLR
comp=N,277nm,23.0s,MS4.6
BRG MLR MLR
comp=E,205nm,20.9s,MS4.6
BRG MLR MLR
comp=Z,243nm,19.9s,MS4.5
OJC Ojcow 77.40 348 *e*P **P 15 30 06.0 +0.2**
UPC Upice 77.55 351 *e*P **P 15 30 06.9 +0.2**
UPC Upice 77.55 351 *e*P **P 15 30 06.9 +0.2**
STKI Sintang 77.66 254 P **P 15 30 07.6 -0.2**
comp=Z,5μmcomp=Z,58nm,0.8s,mb5.6
PVCC Panska Ves 77.67 352 *e*P **P 15 30 07.4 +0.1**
PVCC MLR MLR
comp=Z,400nm,18.9s,MS4.8
PVCC Panska Ves 77.67 352 *e*P **P 15 30 07.4 +0.1**
PVCC AMS AMS 16 08 00.0
comp=Z,400nm,18.9s
DPC Dobruska-Polom 77.67 350 *e*P **P 15 30 07.6 +0.3**
DPC *e* 15 40 40.8
DPC MLR MLR
comp=Z,500nm,17.3s,MS4.9
DPC Dobruska-Polom 77.67 350 *e*P **P 15 30 07.6 +0.3**
DPC *e*PS 15 40 40.8
DPC AMS AMS 16 11 20.0
comp=Z,500nm,17.3s
UBBA Unterbreizbach 77.73 355 *e*P **P 15 30 08.1 +0.5**
MAK Makhachkala 77.75 327 *e*P **P 15 30 07.2 -0.7**
MAK *e*S S 15 39 50.5 -6.9
CTA Charters Tower 77.76 214 *e*P **P 15 30 07.4 -0.7**
comp=Z,25nm,1.0s,mb5.1
CTA *e* pP 15 30 18.1 -1.1
CTAO Charters Tower 77.76 214⇑*e*P **P 15 30 06.9 -1.2**
CTAO Charters Tower 77.76 214 P **P 15 30 07.4 -0.7**
comp=Z,44nm,1.5s,mb5.2
MOX Moxa 77.80 353 *e*P **P 15 30 08.1 +0.1**
comp=Z,34nm,1.1s,mb5.2
MOX *e*S S 15 40 01.0 +3.4
MOX
comp=Z,300nm,23.0s
MOX Moxa 77.80 353 *e*P **P 15 30 08.1 +0.1**
MOX *e*S S 15 40 01.0 +3.4
MOX pmax pmax
comp=Z,34nm,1.1s,mb5.2
MOX MLR MLR
comp=Z,300nm,23.0s,MS4.5
WERD Werda 77.94 353 *e*P **P 15 30 09.7 +0.9**
TANN Tannenbergstha 77.96 353 *e*P **P 15 30 09.1 +0.2**
HGN Heimansgroeve 77.97 357 *e*P **P 15 30 09.0 +0.1**
comp=Z,46nm,0.9s,mb5.4
OKC Ostrava-Krasne 77.98 349 *e*P **P 15 30 08.9 -0.1**
OKC MLR MLR
comp=Z,500nm,20.4s,MS4.8
OKC Ostrava-Krasne 77.98 349 *e*P **P 15 30 08.9 -0.1**
OKC AMS AMS 16 06 10.0
comp=Z,500nm,20.4s
STHS Stebnicka Huta 77.99 347 *e*P **P 15 30 09.9 +0.8**
comp=Z,20nm,0.8s,mb5.1
STHS Stebnicka Huta 77.99 347 *e*P **P 15 30 09.9 +0.8**
STHS pmax pmax
comp=Z,20nm,0.8s,mb5.1
STHS Stebnicka Huta 77.99 347 *e*P **P 15 30 09.9 +0.8**
GUNZ Gunzen 78.02 353 *e*P **P 15 30 09.5 +0.2**
ABKT Aibek 78.08 318 P **P 15 30 11.7 +1.9**
comp=Z,129nm,0.8s,mb5.9,SNR=7.9
WERN Wernitzgruen 78.09 353 *e*P **P 15 30 10.1 +0.4**
MORC Moravsky Berou 78.11 349⇑*i*P **P 15 30 09.5 -0.3**
MORC Moravsky Berou 78.11 349⇑*i*P **P 15 30 09.6 -0.2**
NIE Niedzica 78.12 348 *e*P **P 15 30 10.3 +0.5**
MEM Membach 78.12 357 P **P 15 30 10.8 +1.0**
NKC Novy Kostel 78.14 353 *e*P **P 15 30 10.0 +0.1**
NKC Novy Kostel 78.14 353 *e*P **P 15 30 10.0 +0.1**
PRU Pruhonice 78.21 351 *e*P **P 15 30 10.6 +0.3**
PRU *e* 15 40 54.1
PRU MLR MLR
comp=Z,400nm,18.5s,MS4.8
PRU Pruhonice 78.21 351 *e*P **P 15 30 10.6 +0.3**
PRU *e*PS 15 40 54.1
PRU AMS AMS 16 08 20.0
comp=Z,400nm,18.5s
BBSR BB Station 78.25 52 *e*P **P 15 30 10.4 -0.4**
SNF Seneffe 78.26 358 P **P 15 30 10.8 +0.2**
KOLS Kolonicke sedl 78.31 346 *e*P **P 15 30 11.4 +0.5**
comp=Z,20nm,0.7s,mb5.2
KOLS Kolonicke sedl 78.31 346 *e*P **P 15 30 11.4 +0.5**
KOLS pmax pmax
comp=Z,20nm,0.7s,mb5.2
KOLS Kolonicke sedl 78.31 346 *e*P **P 15 30 11.4 +0.5**
BCLA Clavier 78.33 358 P **P 15 30 10.9 -0.1**
KIV Kislovodsk 78.40 331⇑*i*P **P 15 30 11.9 +0.5**
KIV Kislovodsk 78.40 331*c**e*P **P 15 30 12.2 +0.7**
KIV *i* pP 15 30 25.0 +2.3
KIV *e* 15 33 07.1
KIV *i* S S 15 39 58.1 -6.2
KIV *e*SS SS 15 45 12.1 +5.9
KIV pmax pmax
comp=Z,32nm,0.8s,mb5.3
KIV MLR MLR
comp=Z,800nm,20.0s,MS5.0
KIV Kislovodsk 78.40 331 P **P 15 30 12.5 +1.0**
SNR=9.5
TNS Taunus Mts 78.41 355 *e*P **P 15 30 11.7 +0.3**
comp=Z,58nm,0.7s,mb5.6
TNS Taunus Mts 78.41 355 *e*P **P 15 30 11.7 +0.3**
TNS pmax pmax
comp=Z,58nm,0.7s,mb5.6
CRVS Cervenica-Dubn 78.46 347 *e*P **P 15 30 12.1 +0.4**
comp=Z,17nm,0.9s,mb5.0
CRVS Cervenica-Dubn 78.46 347 *e*P **P 15 30 12.1 +0.4**
CRVS pmax pmax
comp=Z,17nm,0.9s,mb5.0
CRVS Cervenica-Dubn 78.46 347 *e*P **P 15 30 12.1 +0.4**
UZH Uzhgorod 78.61 346 *e*P **P 15 30 12.5 0.0**
UZH *e* 15 30 28.7
KTGM Kuala Trenggan 78.64 264 P **P 15 30 13.7 +0.5**
GIVF Givet 78.66 358⇑*i*P **P 15 30 12.8 0.0**
comp=Z,41nm,0.8s,mb5.1
GIVF Givet 78.66 358⇑*i*P **P 15 30 12.8 0.0**
comp=Z,20nm,0.8s,mb5.1
GIVF Givet 78.66 358⇑*i*P **P 15 30 12.8 0.0**
GIVF pmax pmax
comp=Z,20nm,0.8s,mb5.1
DOU Dourbes 78.67 358 P **P 15 30 13.1 +0.2**
VRAC Vranov 78.67 350⇑P **P 15 30 13.0 +0.1**
VRAC Vranov 78.67 350 LR LR 16 05 18.4
comp=Z,427nm,21.6s,MS4.7,baz=5.0,slow=36
VRAC Vranov 78.67 350 P **P 15 30 13.7 +0.8**
VRAC Vranov 78.67 350⇑*i*P **P 15 30 13.0 +0.1**
BAIF Baives 78.72 358⇑*i*P **P 15 30 13.3 +0.2**
comp=Z,70nm,0.8s,mb5.3
BAIF Baives 78.72 358⇑*i*P **P 15 30 13.3 +0.2**
comp=Z,35nm,0.8s,mb5.3
BAIF Baives 78.72 358⇑*i*P **P 15 30 13.3 +0.2**
BAIF pmax pmax
comp=Z,35nm,0.8s,mb5.3
GRA1 Grafenberg Arr 78.77 354 *e*P **P 15 30 14.0 +0.6**
comp=Z,60nm,0.9s,mb5.5
GRF Grafenberg Arr 78.77 354 *e*P **P 15 30 14.0 +0.6**
comp=Z,60nm,0.9s,mb5.5
GRF Grafenberg Arr 78.77 354 *e*P **P 15 30 14.0 +0.6**
GRF pmax pmax
comp=Z,60nm,0.9s,mb5.5
GRF Grafenberg Arr 78.77 354 *e*P **P 15 30 14.0 +0.6**
GRF pmax pmax
comp=Z,60nm,0.9s,mb5.5
TREC Trest 78.80 351 AMS AMS 16 12 10.0
comp=Z,400nm,17.0s
TBI Tubuai 78.83 153 *e*T 16 56 39.8
comp=Z,9.5nm,0.3s
RUP Ruppelstein 78.99 356⇑*e*P **P 15 30 14.9 +0.3**
TOD Tromm 79.00 355 *e*P **P 15 30 14.9 +0.2**
KECS Kecovo 79.01 347 *e*P **P 15 30 15.1 +0.4**
comp=Z,14nm,0.8s,mb4.9
KECS Kecovo 79.01 347 *e*P **P 15 30 15.1 +0.4**
KECS pmax pmax
comp=Z,14nm,0.8s,mb4.9
KECS Kecovo 79.01 347 *e*P **P 15 30 15.1 +0.4**
KIS Kishinev 79.05 341⇑*i*P **P 15 30 14.0 -1.0**
comp=Z,200nm,1.5s,mb5.8
KIS *e*L 15 57 40.0
KIS LRM 16 10 16.0
comp=Z,1μm,17.0s
KIS Kishinev 79.05 341⇑*i*P **P 15 30 14.0 -1.0**
KIS *e* 15 30 20.0
WLF Walferdange 79.06 357 P **P 15 30 15.6 +0.6**
WLF Walferdange 79.06 357 *e*P **P 15 30 15.6 +0.6**
WLF Walferdange 79.06 357⇑*e*P **P 15 30 15.2 +0.2**
BUR08 Bucovina Ar. S 79.10 344⇑*i*P **P 15 30 15.8 +0.6**
ZEI Tsey 79.10 330 *e*P **P 15 30 14.9 -0.4**
ZEI pmax pmax
comp=Z,59nm,1.0s,mb5.5
ANN Anapa 79.12 335 *e*P **P 15 30 14.4 -1.0**
ANN *e**PP pP 15 30 25.1 -1.5
ANN *e*S S 15 40 14.0 +2.1
ANN pmax pmax
comp=Z,21nm,0.7s,mb5.2
BUR01 Bucovina Ar. S 79.12 344 P **P 15 30 16.3 +0.9**
BURAR Bucovina Array 79.12 344⇑P **P 15 30 15.9 +0.6**
BURAR Bucovina Array 79.12 344⇑*i*P **P 15 30 15.9 +0.5**
KHC Kasperske Hory 79.14 352⇑*i*P **P 15 30 15.7 +0.2**
comp=Z,16nm,0.7s,mb5.1
KHC Kasperske Hory 79.14 352⇑*i*P **P 15 30 15.7 +0.2**
KHC pmax pmax
comp=Z,16nm,0.7s,mb5.1
KHC Kasperske Hory 79.14 352 *e*P **P 15 30 15.7 +0.2**
KHC AMS AMS 16 09 10.0
comp=Z,500nm,19.3s
KOLL Kolacno 79.19 349 *e*P **P 15 30 16.1 +0.4**
KOLL Kolacno 79.19 349 *e*P **P 15 30 16.1 +0.4**
WET Wettzell 79.19 352 *e*P **P 15 30 16.0 +0.3**
comp=Z,18nm,1.3s,mb4.8
WET Wettzell 79.19 352 *e*P **P 15 30 16.0 +0.3**
WET pmax pmax
comp=Z,18nm,1.3s,mb4.8
VYHS Vyhne 79.22 348 *e*P **P 15 30 16.3 +0.4**
comp=Z,11nm,1.2s,mb4.7
VYHS Vyhne 79.22 348 *e*P **P 15 30 16.3 +0.4**
VYHS pmax pmax
comp=Z,11nm,1.2s,mb4.7
VYHS Vyhne 79.22 348 *e*P **P 15 30 16.3 +0.4**
BMR Baia Mare 79.35 345 P **P 15 30 17.8 +1.2**
GEC2 GERESS Array S 79.42 352 *e*P **P 15 30 16.9 -0.1**
comp=Z,18nm,0.7s,mb5.1
GEC2 GERESS Array S 79.42 352 *e*P **P 15 30 16.9 -0.1**
GEC2 pmax pmax
comp=Z,18nm,0.7s,mb5.1
SOC Sochi 79.61 333*c**i*P **P 15 30 17.8 -0.3**
SOC *e**PP pP 15 30 29.3 0.0
SOC *e**SP sP 15 30 34.0 +0.5
SOC *e* 15 33 18.4
SOC *e*PPP 15 35 12.2
SOC *e*S S 15 40 19.4 +2.2
SOC *e*SS SS 15 45 35.2 +11
SOC pmax pmax
comp=Z,34nm,0.9s,mb5.3
SOC MLR MLR
comp=Z,1μm,15.0s,MS5.4
PSZ Piszkesteto 79.64 348⇑*e*P **P 15 30 18.7 +0.5**
comp=Z,28nm,1.1s,mb5.1
PSZ Piszkesteto 79.64 348 P **P 15 30 19.3 +1.1**
PSZ Piszkesteto 79.64 348⇑*i*P **P 15 30 19.0 +0.8**
PSZ Piszkesteto 79.64 348⇑*e*P **P 15 30 19.1 +0.9**
LANF Langenberg 79.68 356 *e*P **P 15 30 19.3 +0.9**
ZST Bratislava 79.72 349 *e*P **P 15 30 20.3 +1.7**
comp=Z,25nm,0.7s,mb5.2
ZST Bratislava 79.72 349 *e*P **P 15 30 20.3 +1.7**
ZST pmax pmax
comp=Z,25nm,0.7s,mb5.2
ZST Bratislava 79.72 349 *e*P **P 15 30 20.3 +1.7**
GOR Gori 79.74 329 P **P 15 30 19.8 +0.9**
TBLG Delisi 79.77 329 P **P 15 30 19.8 +0.8**
TBLG Delisi 79.77 329 P **P 15 30 19.9 +0.9**
MTA Mtatsminda 79.78 329 P **P 15 30 19.7 +0.6**
DGRG David-gareji 79.81 328 P **P 15 30 16.0 -3.2**
STU Stuttgart 79.82 355 *e*P **P 15 30 19.1 0.0**
STU Stuttgart 79.82 355 *e*P **P 15 30 18.8 -0.3**
TGUH Tegucigalpa,Un 79.86 80 *e*P **P 15 30 20.5 +0.6**
comp=Z,198nm,1.2s,mb5.9
TESR 79.93 343⇑P **P 15 30 20.0 +0.2**
TESR 79.93 343⇑*i*P **P 15 30 20.0 +0.2**
FLN La Foliniere 80.02 1⇑*i*P **P 15 30 19.9 -0.4**
comp=Z,77nm,0.8s,mb5.4
FLN *e*MLR MLR
comp=Z,362nm,22.2s,MS4.4
FLN La Foliniere 80.02 1⇑*i*P **P 15 30 19.9 -0.4**
comp=Z,39nm,0.8s,mb5.4
FLN LR LR
comp=Z,360nm,22.3s,MS4.7
FLN La Foliniere 80.02 1⇑*i*P **P 15 30 19.9 -0.4**
FLN pmax pmax
comp=Z,39nm,0.8s,mb5.4
FLN MLR MLR
comp=Z,360nm,22.3s,MS4.7
CONA Conrad Observa 80.12 350⇑*i*P **P 15 30 21.4 +0.7**
comp=Z,25nm,0.7s,mb5.3,SNR=34
BUD Budapest 80.18 348⇑*e*P **P 15 30 22.4 +1.2**
LDF La Druitiere 80.20 1⇑*i*P **P 15 30 20.7 -0.5**
comp=Z,49nm,0.6s,mb5.3
LDF La Druitiere 80.20 1⇑*i*P **P 15 30 20.7 -0.5**
comp=Z,24nm,0.6s,mb5.3
LDF La Druitiere 80.20 1⇑*i*P **P 15 30 20.7 -0.5**
LDF pmax pmax
comp=Z,24nm,0.6s,mb5.3
KULM Kulim 80.22 266 *e*P **P 15 30 21.3 -0.5**
comp=Z,23nm,1.0s,mb5.1
KULM Kulim 80.22 266 P **P 15 30 22.1 +0.3**
MEZF Maizieres J'vi 80.25 358⇑*i*P **P 15 30 21.6 +0.1**
comp=Z,66nm,0.9s,mb5.3
MEZF Maizieres J'vi 80.25 358⇑*i*P **P 15 30 21.6 +0.1**
comp=Z,66nm,0.9s,mb5.6
CDF Champ du Feu 80.27 356⇑*i*P **P 15 30 21.4 -0.2**
comp=Z,32nm,0.8s,mb5.0
CDF Champ du Feu 80.27 356⇑*i*P **P 15 30 21.4 -0.2**
comp=Z,16nm,0.8s,mb5.0
CDF Champ du Feu 80.27 356⇑*i*P **P 15 30 21.4 -0.2**
CDF pmax pmax
comp=Z,16nm,0.8s,mb5.0
FUR Furstenfeldbru 80.29 353 *e*P **P 15 30 21.9 +0.2**
comp=Z,69nm,1.4s,mb5.4
FUR Furstenfeldbru 80.29 353 *e*P **P 15 30 21.9 +0.2**
FUR pmax pmax
comp=Z,69nm,1.4s,mb5.4
BFO Black Forest 80.30 355 *e*P **P 15 30 21.7 -0.1**
comp=Z,16nm,0.9s,mb5.0
BFO Black Forest 80.30 355 *e*P **P 15 30 21.7 -0.1**
BFO pmax pmax
comp=Z,16nm,0.9s,mb5.0
DRGR 80.33 345⇓P **P 15 30 22.2 +0.3**
DRGR 80.33 345 P **P 15 30 22.4 +0.4**
DRGR 80.33 345⇓*i*P **P 15 30 22.2 +0.2**
MOA Molln 80.35 351⇑*i*P **P 15 30 22.0 -0.1**
comp=Z,8.7nm,0.7s,mb4.8,SNR=13
ROSF Rostrenen 80.38 3⇑*i*P **P 15 30 22.1 -0.1**
comp=Z,35nm,0.8s,mb5.0
ROSF Rostrenen 80.38 3⇑*i*P **P 15 30 22.1 -0.1**
comp=Z,18nm,0.8s,mb5.0
ROSF Rostrenen 80.38 3⇑*i*P **P 15 30 22.1 -0.1**
ROSF pmax pmax
comp=Z,18nm,0.8s,mb5.0
GRR Gorron 80.39 2⇑*i*P **P 15 30 22.1 -0.2**
comp=Z,63nm,0.8s,mb5.3
GRR Gorron 80.39 2⇑*i*P **P 15 30 22.1 -0.2**
comp=Z,32nm,0.8s,mb5.3
GRR Gorron 80.39 2⇑*i*P **P 15 30 22.1 -0.2**
GRR pmax pmax
comp=Z,32nm,0.8s,mb5.3
BHPL Bhopal 80.41 295 *e*PKP **P 15 30 22.4 -0.3**
BHPL AMb AMB 15 30 26.0
comp=Z,74nm,1.8s,mb5.3
ECH Echery 80.47 356 *e*P **P 15 30 22.7 0.0**
ECH Echery 80.47 356 *e*P **P 15 30 22.5 -0.2**
comp=Z,16nm,0.9s,mb5.0
ECH Echery 80.47 356 *e*P **P 15 30 22.5 -0.2**
ECH pmax pmax
comp=Z,16nm,0.9s,mb5.0
SGMF Saint Gilles 80.49 3⇑*i*P **P 15 30 22.7 -0.1**
comp=Z,53nm,0.7s,mb5.3
SGMF Saint Gilles 80.49 3⇑*i*P **P 15 30 22.7 -0.1**
comp=Z,26nm,0.7s,mb5.3
SGMF Saint Gilles 80.49 3⇑*i*P **P 15 30 22.7 -0.1**
SGMF pmax pmax
comp=Z,26nm,0.7s,mb5.3
THEF They Montfort 80.50 357⇑*e*P **P 15 30 23.3 +0.5**
SPAK Spaichingen-Ko 80.51 355⇑*e*P **P 15 30 23.2 +0.3**
VRI Vrincioaia 80.54 342⇓P **P 15 30 23.8 +0.7**
VRI Vrincioaia 80.54 342 P **P 15 30 24.2 +1.1**
VRI Vrincioaia 80.54 342⇓*i*P **P 15 30 23.8 +0.7**
IPM Ipoh 80.61 265 P **P 15 30 23.3 -0.7**
DOPR Dopca 80.68 343⇓*i*P **P 15 30 25.1 +1.2**
HAU Haudompre 80.71 357⇑*i*P **P 15 30 23.8 -0.2**
comp=Z,42nm,0.7s,mb5.2
HAU *e*MLR MLR
comp=Z,432nm,22.2s,MS4.5
HAU Haudompre 80.71 357⇑*i*P **P 15 30 23.8 -0.2**
comp=Z,21nm,0.7s,mb5.2
HAU LR LR
comp=Z,430nm,22.3s,MS4.8
HAU Haudompre 80.71 357⇑*i*P **P 15 30 23.8 -0.2**
HAU pmax pmax
comp=Z,21nm,0.7s,mb5.2
HAU MLR MLR
comp=Z,430nm,22.3s,MS4.8
FELD Feldberg im Sc 80.77 356⇑*e*P **P 15 30 24.2 -0.1**
TLCR 80.78 341⇑P **P 15 30 24.8 +0.4**
TLCR 80.78 341⇑*i*P **P 15 30 24.8 +0.4**
QUIF Quistinic 80.80 3⇑*i*P **P 15 30 24.3 -0.2**
ARSA Arzberg 80.82 350⇓*i*P **P 15 30 25.2 +0.7**
comp=Z,19nm,0.8s,mb5.1,SNR=15
MOF Molkenrain 80.83 356 *e*P **P 15 30 24.6 0.0**
HINF Hinteralfeld 80.88 356⇑*i*P **P 15 30 24.4 -0.5**
comp=Z,23nm,0.8s,mb4.8
HINF Hinteralfeld 80.88 356⇑*i*P **P 15 30 24.4 -0.5**
comp=Z,11nm,0.8s,mb4.8
HINF Hinteralfeld 80.88 356⇑*i*P **P 15 30 24.4 -0.5**
HINF pmax pmax
comp=Z,11nm,0.8s,mb4.8
CFR Carcaliu 80.92 341⇑P **P 15 30 25.9 +0.7**
CFR Carcaliu 80.92 341⇑*i*P **P 15 30 25.9 +0.7**
MYKOM Kota Tinggi 80.96 261 P **P 15 30 26.4 +0.6**
MLR Muntele Rosu 81.04 343⇑P **P 15 30 26.6 +0.8**
MLR Muntele Rosu 81.04 343 LR LR 16 11 33.2
comp=Z,834nm,20.3s,MS5.1,baz=114,slow=40
MLR Muntele Rosu 81.04 343 P **P 15 30 27.7 +1.9**
MLR Muntele Rosu 81.04 343⇑*i*P **P 15 30 26.6 +0.8**
WATA Walderalm 81.09 353⇑*i*P **P 15 30 26.3 +0.3**
comp=Z,24nm,0.7s,mb5.2,SNR=12
KGM Kluang 81.11 262 P **P 15 30 27.1 +0.5**
MOTA Moosalm 81.12 353⇑*i*P **P 15 30 26.3 +0.1**
comp=Z,20nm,0.8s,mb5.1,SNR=12
NGP Nagpur 81.12 293 *e*PKP **P 15 30 25.9 -0.7**
NGP AMb AMB 15 30 27.1
comp=Z,142nm,1.4s,mb5.7
WTTA Wattenberg 81.16 353⇑*i*P **P 15 30 27.0 +0.7**
comp=Z,45nm,0.6s,mb5.5,SNR=21
EIDS Eidsvold 81.16 208 *e*P **P 15 30 26.0 -0.4**
comp=Z,15nm,0.7s,mb5.0
GNI Garni 81.19 328*c**i*P **P 15 30 28.0 +1.3**
GNI pmax pmax
comp=Z,26nm,1.2s
KBA Koelnbreinsper 81.20 352⇑*i*P **P 15 30 27.7 +1.1**
comp=Z,117nm,0.7s,mb5.9,SNR=17
FRIM Kepong 81.20 264 P **P 15 30 27.1 0.0**
VOIR 81.26 343⇑P **P 15 30 28.0 +1.0**

VOIR 81.26 343 P P 15 30 28.4 +1.5
VOIR 81.26 343⇑*iP* P 15 30 28.0 +1.1
VIS Vishakhapatnam 81.29 287 *e*PKP P 15 30 26.6 -0.9
VIS AMb AMB 15 30 28.5
comp=Z,153nm,1.7s,mb5.6
LOMF Lomont 81.35 356 *e*P P 15 30 28.3 +0.9
SOKA Soboth 81.44 351⇑*iP* P 15 30 28.2 +0.3
comp=Z,50nm,0.7s,mb5.5
FETA Feichten 81.46 354⇑*iP* P 15 30 28.0 0.0
comp=Z,30nm,0.9s,mb5.2,SNR=24
PERS Pernice 81.47 351 *i*P P 15 30 28.6 +0.6
PKSM Moragy 81.48 348 ⇑P P 15 30 27.8 -0.3
PKSM Moragy 81.48 348⇑*iP* P 15 30 27.8 -0.3
LOR Lormes 81.51 358⇑*iP* P 15 30 28.2 -0.1
comp=Z,86nm,1.2s,mb5.3
LOR *e*MLR MLR
comp=Z,519nm,20.5s,MS4.6
LOR Lormes 81.51 358⇑*iP* P 15 30 28.2 -0.1
comp=Z,43nm,1.2s,mb5.3
LOR LR LR
comp=Z,520nm,20.5s,MS4.9
LOR Lormes 81.51 358⇑*iP* P 15 30 28.2 -0.1
LOR pmax pmax
comp=Z,43nm,1.2s,mb5.2
LOR MLR MLR
comp=Z,520nm,20.5s,MS4.9
HYF Humbligny 81.53 359 *e*P P 15 30 28.6 +0.3
TIRR Tirgusor 81.56 341 *e*P P 15 30 28.6 +0.1
comp=Z,8.5nm,0.6s,mb4.8
TIRR Tirgusor 81.56 341 *e*P P 15 30 28.6 +0.1
TIRR pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
ABTA Abfaltersbach 81.60 352⇑*iP* P 15 30 25.9 -2.8
comp=Z,44nm,1.1s,mb5.3,SNR=11
MYKA Terra Mystica 81.62 352⇑*iP* P 15 30 28.7 -0.1
comp=Z,23nm,0.7s,mb5.2
BZS Buzias 81.65 346 ⇓*iP* P 15 30 29.1 +0.1
BZS Buzias 81.65 346 P P 15 30 29.5 +0.5
BZS Buzias 81.65 346⇓*iP* P 15 30 29.1 +0.1
GZR Gura Zlata 81.69 345 ⇑P P 15 30 29.9 +0.7
GZR Gura Zlata 81.69 345⇑*iP* P 15 30 29.9 +0.7
SSF Saint Saulge 81.73 359⇑*iP* P 15 30 29.3 -0.1
comp=Z,55nm,0.9s,mb5.2
SSF Saint Saulge 81.73 359⇑*iP* P 15 30 29.3 -0.1
comp=Z,28nm,0.9s,mb5.2
SSF Saint Saulge 81.73 359⇑*iP* P 15 30 29.3 -0.1
SSF pmax pmax
comp=Z,28nm,0.9s,mb5.2
SULR 81.77 342 ⇑P P 15 30 29.7 +0.1
SULR 81.77 342⇑*iP* P 15 30 29.7 0.0
AVF Avril sur Loir 82.00 359⇑*iP* P 15 30 30.7 -0.1
comp=Z,58nm,0.9s,mb5.2
AVF Avril sur Loir 82.00 359⇑*iP* P 15 30 30.7 -0.1
comp=Z,29nm,0.9s,mb5.2
AVF Avril sur Loir 82.00 359⇑*iP* P 15 30 30.7 -0.1
AVF pmax pmax
comp=Z,29nm,0.9s,mb5.2
CABF La Chapelle 82.11 357⇑*iP* P 15 30 31.6 +0.2
comp=Z,32nm,0.7s,mb5.0
CABF La Chapelle 82.11 357⇑*iP* P 15 30 31.6 +0.2
comp=Z,16nm,0.7s,mb5.0
CABF La Chapelle 82.11 357⇑*iP* P 15 30 31.6 +0.2
CABF pmax pmax
comp=Z,16nm,0.7s,mb5.1
SMF Signal de Mont 82.14 358⇑*iP* P 15 30 31.4 -0.1
comp=Z,94nm,0.9s,mb5.4
SMF Signal de Mont 82.14 358⇑*iP* P 15 30 31.4 -0.1
comp=Z,47nm,0.9s,mb5.4
SMF Signal de Mont 82.14 358⇑*iP* P 15 30 31.4 -0.1
SMF pmax pmax
comp=Z,47nm,0.9s,mb5.4
MFF Saint Martin d 82.19 1⇑*iP* P 15 30 31.9 +0.1
comp=Z,50nm,0.7s,mb5.2
MFF Saint Martin d 82.19 1⇑*iP* P 15 30 31.9 +0.1
comp=Z,25nm,0.7s,mb5.2
MFF Saint Martin d 82.19 1⇑*iP* P 15 30 31.9 +0.1
MFF pmax pmax
comp=Z,25nm,0.7s,mb5.2
VOY Vojsko 82.19 351 *e*P P 15 30 31.7 -0.1
VOY *e* 15 30 34.4
BGF Bois d'Agland 82.24 359⇑*iP* P 15 30 31.9 -0.2
comp=Z,49nm,0.9s,mb5.1
BGF Bois d'Agland 82.24 359⇑*iP* P 15 30 31.9 -0.2
comp=Z,24nm,0.9s,mb5.1
BGF Bois d'Agland 82.24 359⇑*iP* P 15 30 31.9 -0.2
BGF pmax pmax
comp=Z,24nm,0.9s,mb5.1
WRAB Tennant Creek 82.29 224 P P 15 30 31.3 -1.2
comp=Z,166nm,1.1s,mb5.9,SNR=6.9
WRAB Tennant Creek 82.29 224⇑*iP* P 15 30 31.0 -1.5
WRAB Tennant Creek 82.29 224 P P 15 30 31.3 -1.2
comp=Z,37nm,1.2s,mb5.2
WB2 Warramunga Arr 82.30 224⇑*iP* P 15 30 31.1 -1.5
JAVS Javornik 82.31 351 *i*P P 15 30 32.5 0.0
VISS Visnje 82.32 351 *i*P P 15 30 31.6 -0.9
MTDJ Mount Denham 82.50 70⇑*iP* P 15 30 34.0 +0.1
comp=Z,182nm,1.2s,mb5.9
MTDJ *e* pP 15 30 44.8 -0.3
TCF Toulx Ste Croi 82.51 360⇑*iP* P 15 30 33.3 -0.2
comp=Z,38nm,0.8s,mb5.2
TCF Toulx Ste Croi 82.51 360⇑*iP* P 15 30 33.3 -0.2
comp=Z,19nm,0.8s,mb5.2
TCF Toulx Ste Croi 82.51 360⇑*iP* P 15 30 33.3 -0.2
TCF pmax pmax
comp=Z,19nm,0.8s,mb5.2
GTBY Guantanamo Bay 82.58 67⇑*eP* P 15 30 33.6 -0.7
BOJS Bojanci 82.58 350 *i*P P 15 30 33.9 0.0
AKL Akola 82.64 294 *e*PKP P 15 30 35.2 +0.6
AKL AMb AMB 15 30 35.5
comp=Z,99nm,1.1s,mb5.8
AGO Saint Agoulin 82.74 359⇑*eP* P 15 30 36.4 +1.7
PLDF La Plantade 82.82 359⇑*eP* P 15 30 37.0 +1.9
TSI Tuntungan 82.90 267 P P 15 30 35.4 -0.6
comp=Z,214nm,0.8s,mb6.2
PYM Petit Puy Mans 83.04 359⇑*eP* P 15 30 37.8 +1.5
LPL La Plagne 83.18 356⇑*iP* P 15 30 38.0 +1.0
comp=Z,10nm,0.5s,mb4.8
LPL La Plagne 83.18 356⇑*iP* P 15 30 38.0 +1.0
comp=Z,5.3nm,0.5s,mb4.8
LPL La Plagne 83.18 356⇑*iP* P 15 30 38.0 +1.0
LPL pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
SZH Strazhica 83.19 342 *eP* P 15 30 36.8 -0.3
LPG La Plagne 83.20 356⇑*iP* P 15 30 38.3 +1.2
comp=Z,20nm,0.8s,mb4.9
LPG La Plagne 83.20 356⇑*iP* P 15 30 38.3 +1.2
comp=Z,10nm,0.8s,mb4.9
LPG La Plagne 83.20 356⇑*iP* P 15 30 38.3 +1.2
LPG pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
PSI Prapat 83.22 266 LR LR 16 09 21.1
comp=Z,263nm,18.9s,MS4.6,baz=230,slow=37
SSB Saint Sauveur 83.49 358⇑*iP* P 15 30 38.8 +0.2
comp=Z,18nm,0.9s,mb5.1
SSB Saint Sauveur 83.49 358⇑*iP* P 15 30 38.8 +0.2
SSB pmax pmax
comp=Z,17nm,0.9s,mb5.1
RJF Les Rejaudoux 83.50 0 *eP* P 15 30 38.4 -0.2
comp=Z,61nm,0.8s,mb5.3
RJF *e*MLR MLR
comp=Z,654nm,20.8s,MS4.7
RJF Les Rejaudoux 83.50 0 *eP* P 15 30 38.4 -0.2
comp=Z,30nm,0.8s,mb5.4
RJF LR LR
comp=Z,650nm,20.8s,MS5.0
RJF Les Rejaudoux 83.50 0 *eP* P 15 30 38.4 -0.2
RJF pmax pmax
comp=Z,31nm,0.8s,mb5.4
RJF MLR MLR
comp=Z,650nm,20.8s,MS5.0
MPEP Malo Peshtene 83.50 344 *eP* P 15 30 37.9 -0.8
NVLJ Novalja 83.55 350 P P 15 30 38.2 -0.7
LBL Lubilhac 83.56 359⇑*eP* P 15 30 41.0 +2.1
RKT Rikitea 83.58 140 *e*LR LR 15 57 00.9
comp=Z,1μm,29.5s,baz=330
RKT *e*T 17 02 27.8
comp=Z,17nm,0.2s
ORIF Oris-en-Rattie 83.81 357⇑*iP* P 15 30 40.0 -0.2
comp=Z,76nm,1.0s,mb5.5
ORIF *e*MLR MLR
comp=Z,381nm,21.5s,MS4.4
ORIF Oris-en-Rattie 83.81 357⇑*iP* P 15 30 40.0 -0.2
comp=Z,38nm,1.0s,mb5.5
ORIF Oris-en-Rattie 83.81 357⇑*iP* P 15 30 40.0 -0.2
ORIF pmax pmax
comp=Z,38nm,1.0s,mb5.5

BKNI Bangkinang 83.84 263 P P 15 30 40.5 -0.3
comp=Z,2μmcomp=Z,184nm,0.9s,mb6.2
LFF La Frestale 83.86 1 *eP* P 15 30 40.5 0.0
comp=Z,276nm,1.1s,mb6.0
LFF La Frestale 83.86 1 *eP* P 15 30 40.5 0.0
comp=Z,138nm,1.1s,mb6.0
LFF La Frestale 83.86 1 *eP* P 15 30 40.5 0.0
LFF pmax pmax
comp=Z,138nm,1.1s,mb6.0
CAF Calviac 83.88 360 *eP* P 15 30 40.7 +0.1
comp=Z,75nm,0.9s,mb5.5
CAF Calviac 83.88 360 *eP* P 15 30 40.7 +0.1
comp=Z,38nm,0.9s,mb5.5
CAF Calviac 83.88 360 *eP* P 15 30 40.7 +0.1
CAF pmax pmax
comp=Z,38nm,0.9s,mb5.5
VIVF Saint-Julien-l 83.91 358⇑*iP* P 15 30 41.1 +0.4
comp=Z,46nm,1.0s,mb5.3
VIVF Saint-Julien-l 83.91 358⇑*iP* P 15 30 41.1 +0.4
comp=Z,23nm,1.0s,mb5.3
VIVF Saint-Julien-l 83.91 358⇑*iP* P 15 30 41.1 +0.4
VIVF pmax pmax
comp=Z,23nm,1.0s,mb5.3
PWJI Pagerwojo 83.93 249 P P 15 30 39.3 -1.9
comp=Z,116nm,0.9s,mb6.0
MBDF Montbardon 83.97 356⇑*iP* P 15 30 41.7 +0.6
comp=Z,71nm,0.9s,mb5.5
MBDF Montbardon 83.97 356⇑*iP* P 15 30 41.7 +0.6
comp=Z,35nm,0.9s,mb5.5
MBDF Montbardon 83.97 356⇑*iP* P 15 30 41.7 +0.6
MBDF pmax pmax
comp=Z,35nm,0.9s,mb5.5
JTS JuntasAbangare 84.19 81 *eP* P 15 30 41.4 -1.2
PLE Pljevlja 84.21 347⇑*iP* P 15 30 43.1 +0.8
VTS Vitosha 84.34 344 ⇑P P 15 30 42.9 0.0
VTS Vitosha 84.34 344⇑*iP* P 15 30 42.9 -0.1
VTS Vitosha 84.34 344 *eP* P 15 30 42.0 -1.0
HYB Hyderabad 84.34 291⇑*iP* P 15 30 44.0 +0.6
comp=Z,179nm,0.8s,mb6.2
HYB *e* 15 31 10.0
MNSI Mandailing Nat 84.38 264 P P 15 30 41.7 -1.9
comp=Z,53nm,0.8s,mb5.7
UPM Unac-Piva 84.40 347 *eP* P 15 30 42.8 -0.5
SDSI Sungai Dareh 84.58 262 P P 15 30 44.2 -0.4
comp=Z,37nm,1.3s,mb5.3
IVA Berane 84.59 347⇓*iP* P 15 30 45.0 +0.8
IVA Berane 84.59 347⇓*iP* P 15 30 45.1 +0.8
TOUF Mont Tournerai 84.66 356 *eP* P 15 30 45.1 +0.5
AUTN L'Aution 84.67 356 *eP* P 15 30 45.6 +1.0
SAOF Saorge 84.67 356 *eP* P 15 30 44.9 +0.3
LASF Ste Croix 84.71 358⇑*iP* P 15 30 45.0 +0.2
comp=Z,37nm,0.9s,mb5.2
LATR Latur 84.71 293 *e*PKP P 15 30 45.4 +0.1
BRY Bratogost 84.75 348⇓*iP* P 15 30 44.4 -0.6
BRY Bratogost 84.75 348⇓*iP* P 15 30 44.5 -0.5
FITZ Fitzroy Crossi 84.76 232 *eP* P 15 30 45.0 -0.2
comp=Z,105nm,0.8s,mb6.0
FITZ Fitzroy Crossi 84.76 232⇑*iP* P 15 30 44.8 -0.4
comp=Z,63nm,0.9s,mb5.7
SMRF Simiane la Rot 84.76 357⇑*iP* P 15 30 45.8 +0.7
comp=Z,123nm,1.0s,mb5.7
SMRF Simiane la Rot 84.76 357⇑*iP* P 15 30 45.8 +0.7
comp=Z,123nm,1.0s,mb6.0
NKY Niksic 84.77 347⇑*iP* P 15 30 45.0 -0.2
LUCF Luceram 84.78 356⇑*eP* P 15 30 45.4 +0.2
MVIF Mont Vial 84.78 356 *eP* P 15 30 45.4 +0.2
SBF Sospel 84.80 356 *eP* P 15 30 45.0 -0.3
comp=Z,183nm,0.8s,mb5.9
SBF Sospel 84.80 356 *eP* P 15 30 45.0 -0.3
comp=Z,91nm,0.8s,mb6.0
PPI Padang Panjang 84.84 263 P P 15 30 45.0 -0.9
comp=Z,2μmcomp=Z,28nm,1.1s,mb5.3
MALT Malatya 84.85 332⇑*iP* P 15 30 46.5 +0.9
MALT Malatya 84.85 332 P P 15 30 47.0 +1.4
MALT Malatya 84.85 332⇓*iP* P 15 30 46.5 +0.9
MALT Malatya 84.85 332 P P 15 30 46.4 +0.8
comp=Z,605nmcomp=Z,44nm,1.4s,mb5.4
PVY Plav 84.85 346⇑*iP* P 15 30 45.7 +0.2
PVY Plav 84.85 346⇑*iP* P 15 30 45.8 +0.2
BR131 Keskin Array S 84.85 336⇑*iP* P 15 30 45.3 -0.3
comp=Z,24nm,0.7s,mb5.4
BRTR Keskin Array B 84.85 336 P P 15 30 45.8 +0.2
comp=Z,35nm,0.8s,mb5.5,baz=8.4,slow=2.7,SNR=164
BRTR LR LR 16 14 05.8
comp=Z,268nm,19.4s,MS4.6,baz=35,slow=40
BRTR Keskin Array B 84.85 336 *i*P P 15 30 45.9 +0.3
BRTR pmax pmax
comp=Z,35nm,0.8s
KDZ Kurdzhali 84.85 342 *eP* P 15 30 45.8 +0.2
STON Ston 84.89 348 P P 15 30 44.0 -1.7
REVF Revere 84.93 356 *eP* P 15 30 45.9 0.0
CALN Calern 84.94 356 *eP* P 15 30 46.3 +0.3
RZN Rozhen 84.95 343 *eP* P 15 30 44.4 -1.7
KKB Krupnik 85.06 344 *eP* P 15 30 46.5 -0.1
TTG Podgorica 85.11 347⇑*iP* P 15 30 46.6 -0.3
TTG Podgorica 85.11 347⇑*iP* P 15 30 46.7 -0.2
FRF La Foret Royal 85.14 356⇑*iP* P 15 30 46.7 -0.3
comp=Z,93nm,1.0s,mb5.6
FRF La Foret Royal 85.14 356⇑*iP* P 15 30 46.7 -0.3
comp=Z,46nm,1.0s,mb5.6
FRF La Foret Royal 85.14 356⇑*iP* P 15 30 46.7 -0.3
FRF pmax pmax
comp=Z,47nm,1.0s,mb5.6
EPON Pontenova 85.17 6 P P 15 30 46.4 -0.8
comp=Z,62nm,1.4s,mb5.5
HCY Herceg Novi 85.20 347⇓*iP* P 15 30 47.1 -0.2
SKO Skopje 85.23 345 *eP* P 15 30 47.6 +0.1
BUM Brajici-Budva 85.29 347⇑*iP* P 15 30 48.3 +0.5
BUM Brajici-Budva 85.29 347⇑*iP* P 15 30 48.3 +0.6
EARI Arriondas 85.32 5 P P 15 30 47.2 -0.7
comp=Z,33nm,1.1s,mb5.4
LMR La Mourre 85.37 356⇑*iP* P 15 30 48.0 -0.1
comp=Z,95nm,1.0s,mb5.6
LMR La Mourre 85.37 356⇑*iP* P 15 30 48.0 -0.1
comp=Z,48nm,1.0s,mb5.6
LMR La Mourre 85.37 356⇑*iP* P 15 30 48.0 -0.1
LMR pmax pmax
comp=Z,48nm,1.0s,mb5.6
EMAZ Mazaricos 85.41 8 P P 15 30 47.1 -1.2
comp=Z,31nm,1.3s,mb5.3
MTLF Montolieu 85.46 360⇑*iP* P 15 30 48.6 0.0
comp=Z,57nm,1.0s,mb5.3
MTLF Montolieu 85.46 360⇑*iP* P 15 30 48.6 0.0
comp=Z,28nm,1.0s,mb5.3
MTLF Montolieu 85.46 360⇑*iP* P 15 30 48.6 0.0
MTLF pmax pmax
comp=Z,29nm,1.0s,mb5.4
ELAN Lanestosa 85.47 4 P P 15 30 48.7 0.0
comp=Z,36nm,0.6s,mb5.7
KLSI 85.50 257 P P 15 30 47.5 -1.7
comp=Z,116nm,1.1s,mb6.0
SDDR Presa de Saban 85.51 65⇑*eP* P 15 30 48.9 -0.3
STS Santiago 85.51 7 P P 15 30 48.0 -0.8
comp=Z,41nm,1.2s,mb5.5
STS Santiago 85.51 7 P P 15 30 48.0 -0.8
STS pmax pmax
comp=Z,41nm,1.2s,mb5.5
EALK Alkurruntz 85.55 2 P P 15 30 48.1 -0.9
comp=Z,58nm,1.9s,mb5.5
ULC Ulcinj 85.57 347⇑*iP* P 15 30 49.3 +0.1
ULC Ulcinj 85.57 347⇑*iP* P 15 30 49.4 +0.2
SJPF Ste Jean 85.66 2 *eP* P 15 30 48.8 -0.8
comp=Z,15nm,0.7s,mb5.0
SJPF Ste Jean 85.66 2 *eP* P 15 30 48.8 -0.8
comp=Z,7.3nm,0.7s,mb5.0
SJPF Ste Jean 85.66 2 *eP* P 15 30 48.8 -0.8
SJPF pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
MDSI Maura Dua 85.68 257 P P 15 30 47.9 -2.1
comp=Z,49nm,1.5s,mb5.5
VAY Valandovo 85.68 344 *eP* P 15 30 48.9 -0.8
EPF Esparros 85.77 1⇑*iP* P 15 30 49.2 -0.9
comp=Z,34nm,1.2s,mb5.2
EPF Esparros 85.77 1⇑*iP* P 15 30 49.2 -0.9
comp=Z,17nm,1.2s,mb5.2
EPF Esparros 85.77 1⇑*iP* P 15 30 49.2 -0.9
EPF pmax pmax
comp=Z,17nm,1.2s,mb5.2
ASAR Alice Springs 85.78 223 P P 15 30 49.6 -0.6
comp=Z,24nm,0.8s,mb5.5,baz=25,slow=5.6,SNR=195
ASAR PKKPbc PKKPbc 15 48 51.6 +1.0
comp=Z,0.4nm,0.5s,baz=209,slow=1.9,SNR=9.5
ARMA Armidale 85.78 206 *eP* P 15 30 50.7 +0.6
ARMA Armidale 85.78 206⇑*iP* P 15 30 50.4 +0.4
KRUS Krusevo 85.85 345 *eP* P 15 30 50.0 -0.6

AQU L'Aquila 85.88 351⇑*iP* P 15 30 50.4 -0.3
AQU L'Aquila 85.88 351 ⇑P P 15 30 51.2 +0.5
AQU L'Aquila 85.88 351⇑*iP* P 15 30 51.2 +0.5
ETSF Etsaut 85.89 2⇑*iP* P 15 30 50.8 +0.1
comp=Z,38nm,1.0s,mb5.3
ETSF Etsaut 85.89 2⇑*iP* P 15 30 50.8 +0.1
comp=Z,19nm,1.0s,mb5.3
ETSF Etsaut 85.89 2⇑*iP* P 15 30 50.8 +0.1
ETSF pmax pmax
comp=Z,19nm,1.0s,mb5.3
PGF Pioggiola 86.03 354⇑*iP* P 15 30 51.2 -0.2
comp=Z,218nm,0.9s,mb6.1
PGF Pioggiola 86.03 354⇑*iP* P 15 30 51.2 -0.2
comp=Z,109nm,0.9s,mb6.1
ERUA La Rua 86.11 6 P P 15 30 50.2 -1.6
comp=Z,17nm,1.0s,mb5.2
ERUA La Rua 86.11 6 P P 15 30 50.2 -1.6
ERUA pmax pmax
comp=Z,17nm,1.0s,mb5.2
EBIE Bielsa 86.11 1 P P 15 30 52.2 +0.4
comp=Z,10nm,0.7s,mb5.2
POO Poona 86.17 295 *e*PKP P 15 30 52.2 -0.3
EZAM Zamans 86.23 8 P P 15 30 51.8 -0.6
comp=Z,21nm,0.7s,mb5.5
EZAM Zamans 86.23 8 P P 15 30 51.8 -0.6
EZAM pmax pmax
comp=Z,21nm,0.7s,mb5.5
CLLI Llivia 86.32 360 P P 15 30 53.0 +0.2
EJON La Jonquera 86.35 359 P P 15 30 52.7 -0.3
comp=Z,55nm,1.5s,mb5.6
ELOB Lobios 86.56 7 P P 15 30 53.1 -1.0
comp=Z,12nm,0.7s,mb5.2
ECAL Calabor 86.58 6 P P 15 30 52.5 -1.6
comp=Z,28nm,1.8s,mb5.2
PBRG Braganca 86.72 6 *eP* P 15 30 54.3 -0.5
comp=Z,26nm,1.3s,mb5.3
PCAB Cabril 86.72 7 *eP* P 15 30 54.6 -0.2
KAD Karad 86.95 294 *e*PKP P 15 30 55.7 -0.7
CFON Fontmartina 87.04 359 P P 15 30 57.4 +1.1
comp=Z,98nm,2.0s,mb5.7
ESAC San Caprasio 87.06 2 P P 15 30 56.4 -0.2
comp=Z,39nm,0.7s,mb5.7
PVRL Vila Real 87.17 7 *eP* P 15 30 56.7 -0.4
comp=Z,32nm,0.8s,mb5.6
MVO Moncorvo 87.33 6 *eP* P 15 30 57.3 -0.5
comp=Z,28nm,0.9s,mb5.5
MVO *e*LR LR 15 59 14.9
comp=Z,230nm,20.0s
MVO Moncorvo 87.33 6 P P 15 30 57.3 -0.5
EPOB Poblet 87.45 0 P P 15 30 58.4 0.0
comp=Z,24nm,1.0s,mb5.4
PVIS Viseu 87.72 7 *eP* P 15 30 59.1 -0.6
comp=Z,42nm,0.8s,mb5.7
ERTA Horta de San J 87.84 1 P P 15 31 00.5 +0.2
comp=Z,52nm,2.0s,mb5.4
ETOR Torete 87.93 3 P P 15 30 58.9 -1.8
comp=Z,14nm,0.9s,mb5.2
ETOR Torete 87.93 3 P P 15 30 58.9 -1.8
ETOR pmax pmax
comp=Z,14nm,0.9s,mb5.2
GUD Guadarrama 88.02 4 P P 15 31 00.6 -0.5
comp=Z,31nm,0.7s,mb5.6
GUD Guadarrama 88.02 4 P P 15 31 00.6 -0.5
GUD pmax pmax
comp=Z,31nm,0.7s,mb5.7
MTE Manteigas 88.06 7 *eP* P 15 31 00.7 -0.6
comp=Z,36nm,0.7s,mb5.7
MTE *e*LR LR 16 00 32.7
comp=Z,193nm,22.0s
MTE Manteigas 88.06 7⇑*iP* P 15 31 00.4 -0.9
AGP Aguadilla 88.29 62 *eP* P 15 31 03.2 +0.5
EPLA Plasencia 88.49 6 P P 15 31 01.9 -1.4
comp=Z,34nm,0.7s,mb5.7
EPLA Plasencia 88.49 6 P P 15 31 02.0 -1.4
EPLA pmax pmax
comp=Z,34nm,0.7s,mb5.7
AOPR Arecibo Observ 88.55 62 *eP* P 15 31 04.1 +0.1
PCBR Castelo Branco 88.62 7 *eP* P 15 31 03.4 -0.6
comp=Z,22nm,0.6s,mb5.7
CRPR Cabo Rojo, PR 88.63 62⇑*iP* P 15 31 05.5 +1.2
comp=Z,15nm,0.8s,mb5.4
TIP Timpagrande 88.65 348⇑*iP* P 15 31 03.6 -0.5
PTOM Tomar 88.77 8 *eP* P 15 31 04.0 -0.7
comp=Z,31nm,1.1s,mb5.6
CELP Cerrillos 88.87 62 *eP* P 15 31 05.9 +0.4
OBIP Obispado Ponce 88.88 62 *eP* P 15 31 06.0 +0.5
ESDC Sonseca Array 89.00 4 P P 15 31 05.1 -0.6
comp=Z,11nm,0.6s,mb5.3
ESDC Sonseca Array 89.00 4 P P 15 31 05.0 -0.7
comp=Z,11nm,0.6s,mb5.3,baz=351,slow=4.2,SNR=73
ESDC PKKPbc PKKPbc 15 48 40.6 -1.1
comp=Z,0.3nm,0.5s,baz=178,slow=3.0,SNR=5.9
ESDC LR LR 16 13 04.7
comp=Z,235nm,18.9s,MS4.6,baz=60,slow=37
ESLA Sonseca Array 89.00 4⇑*iP* P 15 31 04.7 -1.1
ETOS Mallorca 89.03 359 P P 15 31 06.2 +0.4
comp=Z,78nm,1.4s,mb5.8
PMRV Marv??o 89.03 7 *eP* P 15 31 05.0 -0.9
comp=Z,21nm,1.3s,mb5.3
PMRV *e*LR LR 16 01 20.1
comp=Z,227nm,18.0s
SJG San Juan 89.07 62 *eP* P 15 31 06.0 -0.5
PAB San Pablo 89.11 5⇑*iP* P 15 31 05.1 -1.2
comp=Z,3.6nm,0.6s,mb4.9
PAB San Pablo 89.11 5⇑*iP* P 15 31 05.1 -1.2
PAB pmax pmax
comp=Z,4.0nm,0.6s,mb4.9
RIV Riverview 89.14 205 *eP* P 15 31 06.7 +0.6
ECHE Chera 89.18 2 P P 15 31 06.6 0.0
comp=Z,10nm,0.7s,mb5.3
ECHE Chera 89.18 2 P P 15 31 06.6 0.0
ECHE pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
HUMP Col San Antoni 89.21 61 *eP* P 15 31 07.4 +0.3
PMAFR Mafra 89.35 8 *eP* P 15 31 06.6 -0.8
comp=Z,122nm,2.0s,mb5.9
PMAFR *e*LR LR 16 01 17.3
comp=Z,266nm,22.0s
MTP Monte Pirata 89.41 61⇑*iP* P 15 31 07.8 -0.2
comp=Z,224nm,0.9s,mb6.5
MTP *e* pP 15 31 18.3 -1.1
MIB Mutribah 89.53 321 *eP* P 15 31 07.7 -0.7
MIB AMb AMB 15 31 08.8
comp=Z,87nm,1.0s,mb6.0
STVI Saint Thomas 89.53 61 *eP* P 15 31 08.7 +0.1
PESTR Estremoz 89.58 7 *eP* P 15 31 07.5 -1.0
comp=Z,20nm,1.8s,mb5.1
PESTR *e*LR LR 16 01 34.8
comp=Z,253nm,20.0s
CEL Celeste 89.66 349 *eP* P 15 31 06.5 -2.4
comp=Z,57nm,0.9s,mb5.9
EBAD Badajoz 89.73 7 P P 15 31 06.9 -2.3
comp=Z,7.5nm,0.7s,mb5.1
EVOP Sao Brissos 89.87 8 *eP* P 15 31 10.5 +0.6
EVO Evora 89.88 7 *eP* P 15 31 08.3 -1.6
comp=Z,24nm,1.1s,mb5.2
EVO *e*MLR MLR
comp=Z,442nm,22.5s,MS4.5
EVO Evora 89.88 7 *eP* P 15 31 08.8 -1.1
KBD Kabd 89.95 321 *eP* P 15 31 09.6 -0.8
NAY Al-Naaiem 90.06 321 *eP* P 15 31 09.9 -1.0
NAY AMb AMB 15 31 11.0
comp=Z,28nm,1.0s,mb5.5
EBEN Beniarda 90.08 1 P P 15 31 09.9 -0.9
comp=Z,50nm,2.0s,mb5.5
EVIA Vianos 90.09 3 P P 15 31 09.9 -0.9
comp=Z,17nm,0.8s,mb5.4
EVIA Vianos 90.09 3 P P 15 31 09.9 -1.0
EVIA pmax pmax
comp=Z,17nm,0.8s,mb5.4
ETOB Tobarra 90.11 2 P P 15 31 10.6 -0.4
comp=Z,22nm,0.8s,mb5.5
CDVI St. Croix 90.12 61 *eP* P 15 31 11.6 +0.2
STKA Stephens Creek 90.21 213 *eP* P 15 31 11.1 -0.1
comp=Z,33nm,0.8s,mb5.7
STKA *e* pP 15 31 21.6 -1.0
STKA Stephens Creek 90.21 213⇑*iP* P 15 31 10.8 -0.4
STKA Stephens Creek 90.21 213 P P 15 31 11.3 +0.1
comp=Z,45nm,0.8s,mb5.8,baz=5.4,slow=7.9,SNR=58
STKA LR LR 16 08 12.9
comp=Z,669nm,19.6s,MS5.1,baz=22,slow=33
RDF Al-Radifah 90.23 321 *eP* P 15 31 11.5 -0.2
RDF AMb AMB 15 31 14.4
comp=Z,84nm,0.8s,mb6.1
MBWA Marble Bar 90.30 235 *eP* P 15 31 10.6 -1.3
comp=Z,178nm,1.8s,mb6.1

MBWA	**Marble Bar**	**90.30**	**235**	P		**P**		**15 31 11.2**	**-0.7**
PBAR	**Barrancos**	**90.31**	**7**	*e*P		**P**		**15 31 11.1**	**-0.8**
	comp=Z,31nm,1.6s,mb5.4								
PBAR				*e*LR		LR		16 00 17.1	
	comp=Z,212nm,18.0s								
PBEJ	**Beja**	**90.39**	**7**	*e*P		**P**		**15 31 12.0**	**-0.3**
	comp=Z,22nm,1.2s,mb5.4								
EADA	**Adamuz**	**90.47**	**5**	P		**P**		**15 31 11.1**	**-1.6**
	comp=Z,11nm,0.7s,mb5.3								
EBAN	**Banos Encina**	**90.51**	**4**	P		**P**		**15 31 12.2**	**-0.7**
	comp=Z,9.4nm,0.8s,mb5.2								
EBAN	**Banos Encina**	**90.51**	**4**	P		**P**		**15 31 12.2**	**-0.7**
EBAN				pmax		pmax			
	comp=Z,9.0nm,0.8s,mb5.2								
MESJ	**Messejana**	**90.55**	**8**	*e*P		**P**		**15 31 12.7**	**-0.4**
MMAI	**Mount Meron Ar**	**90.67**	**332**	P		**P**		**15 31 13.4**	**-0.3**
	comp=Z,11nm,0.8s,mb5.2,baz=32,slow=7.2,SNR=18								
MMAI				LR		LR		16 19 10.6	
	comp=Z,432nm,18.5s,MS4.9,baz=335,slow=40								
EMIN	**Mina Concepcio**	**90.74**	**7**	P		**P**		**15 31 12.4**	**-1.6**
	comp=Z,16nm,0.7s,mb5.5								
PCVE	**Castro Verde**	**90.77**	**8**	*e*P		**P**		**15 31 13.1**	**-1.0**
	comp=Z,34nm,1.6s,mb5.4								
PCVE				*e*LR		LR		16 02 32.3	
	comp=Z,271nm,22.0s								
PTEO	**Sao Teotonio**	**90.80**	**8**	*e*P		**P**		**15 31 13.6**	**-0.6**
	comp=Z,57nm,1.3s,mb5.7								
EQES	**Quesada**	**90.90**	**4**	P		**P**		**15 31 13.7**	**-1.0**
	comp=Z,6.3nm,0.8s,mb5.0								
EHUE	**Huescar**	**90.91**	**3**	P		**P**		**15 31 14.4**	**-0.3**
	comp=Z,36nm,1.3s,mb5.5								
EHUE	**Huescar**	**90.91**	**3**	P		**P**		**15 31 14.4**	**-0.3**
EHUE				pmax		pmax			
	comp=Z,36nm,1.3s,mb5.5								
EGRO	**El Granado**	**90.91**	**7**	P		**P**		**15 31 13.2**	**-1.5**
	comp=Z,20nm,0.9s,mb5.5								
EMUR	**La Murta**	**90.92**	**2**	P		**P**		**15 31 12.9**	**-1.8**
	comp=Z,11nm,0.8s,mb5.2								
ASF	**Jabal al Asfar**	**91.00**	**331**	LR		LR		16 19 09.2	
	comp=Z,535nm,18.8s,MS5.0,baz=4.9,slow=40								
CNB	**Canberra Magne**	**91.02**	**206**	*e*P		**P**		**15 31 15.3**	**+0.4**
PVAQ	**Vaqueiros**	**91.02**	**7**	*e*P		**P**		**15 31 14.5**	**-0.7**
	comp=Z,24nm,1.3s,mb5.4								
PVAQ				*e*LR		LR		16 02 11.1	
	comp=Z,237nm,22.0s								
MORF	**Marmelete**	**91.04**	**8**	*e*LR		LR		16 03 39.5	
	comp=Z,378nm,24.0s								
PALK	**Pallekele**	**91.04**	**283**	*i* P		**P**		**15 31 18.0**	**+2.3**
PBDV	**Barranco-do-Ve**	**91.16**	**8**	*e*P		**P**		**15 31 15.3**	**-0.6**
	comp=Z,49nm,1.5s,mb5.6								
PBDV				*e*LR		LR		16 01 37.3	
	comp=Z,297nm,22.0s								
PFVI	**Vila Bisbo**	**91.20**	**8**	*e*P		**P**		**15 31 15.8**	**-0.3**
	comp=Z,70nm,2.0s,mb5.6								
PFVI				*e*LR		LR		16 02 17.0	
	comp=Z,340nm,22.0s								
PFVI	**Vila Bisbo**	**91.20**	**8**	P		**P**		**15 31 14.4**	**-1.7**
ARQ	**Araqi**	**91.22**	**311**	P		**P**		**15 31 15.7**	**-0.7**
	SNR=5.8								
ECOG	**Cogollos-Vega**	**91.41**	**4**	P		**P**		**15 31 16.1**	**-0.9**
	comp=Z,4.5nm,0.5s,mb5.0								
ECOG	**Cogollos-Vega**	**91.41**	**4**	P		**P**		**15 31 16.1**	**-0.9**
ECOG				pmax		pmax			
	comp=Z,5.0nm,0.5s,mb5.1								
ELOJ	**Sierra Loja**	**91.51**	**5**	P		**P**		**15 31 17.3**	**-0.2**
	comp=Z,30nm,1.0s,mb5.6								
ELOJ	**Sierra Loja**	**91.51**	**5**	P		**P**		**15 31 17.3**	**-0.2**
ELOJ				pmax		pmax			
	comp=Z,30nm,1.0s,mb5.6								
ERON	**Agron**	**91.65**	**4**	P		**P**		**15 31 16.5**	**-1.7**
	comp=Z,6.6nm,0.8s,mb5.0								
ESPR	**Espera**	**91.69**	**6**	P		**P**		**15 31 16.5**	**-1.8**
	comp=Z,15nm,0.9s,mb5.3								
EBER	**Berja**	**91.81**	**4**	P		**P**		**15 31 17.5**	**-1.4**
	comp=Z,23nm,1.6s,mb5.2								
EGUA	**Guajares**	**91.85**	**4**	P		**P**		**15 31 18.2**	**-0.9**
	comp=Z,151nm,0.9s,mb6.3								
EMIJ	**Mijas**	**92.06**	**5**	P		**P**		**15 31 18.9**	**-1.1**
	comp=Z,18nm,0.7s,mb5.5								
EJIF	**Jimena Fronter**	**92.13**	**6**	P		**P**		**15 31 19.4**	**-1.0**
	comp=Z,12nm,0.7s,mb5.3								
EJIF	**Jimena Fronter**	**92.13**	**6**	P		**P**		**15 31 19.4**	**-1.0**
EJIF				pmax		pmax			
	comp=Z,12nm,0.7s,mb5.3								
KEST	**Kesra**	**92.79**	**354⇑**	*e*P		**P**		**15 31 22.7**	**-0.8**
KEST	**Kesra**	**92.79**	**354**	P		**P**		**15 31 23.2**	**-0.2**
	comp=Z,5.8nm,0.8s,mb5.0,baz=315,slow=5.2,SNR=13								
TOO	**Toolangi**	**94.22**	**208**	*e*P		**P**		**15 31 29.5**	**-0.1**
FORT	**Forrest**	**94.49**	**224**	*e*P		**P**		**15 31 30.7**	**-0.3**
	comp=Z,21nm,0.7s,mb5.7								
ROSC	**El Rosal**	**94.94**	**76**	LR		LR		16 18 41.0	
	comp=Z,152nm,18.1s,MS4.5,baz=208,slow=38								
OTAV	**Otavalo**	**96.04**	**82**	*e*P		**P**		**15 31 38.7**	**0.0**
LPAZ	**La Paz**	**115.21**	**84**	PKP		PKiKP		15 36 52.0	-0.4
	comp=Z,0.7nm,0.6s,baz=340,slow=3.8,SNR=3.8								
LPAZ				PKKPbc		PKKPbc		15 47 30.1	+4.8
	comp=Z,0.9nm,0.7s,baz=166,slow=8.3,SNR=4.9								
LPAZ	**La Paz**	**115.21**	**84**	PKIKP		PKiKP		15 36 52.1	-0.3
LPAZ								15 47 30.1	
LPAZ				pmax		pmax			
	comp=Z,1.0nm,0.6s								
TORD	**Torodi Ar. Bea**	**115.55**	**360**	PKP		PKPdf		15 36 51.7	-1.5
	comp=Z,9.6nm,0.7s,baz=345,slow=2.4,SNR=50								
TORD				PKKPbc		PKKPbc		15 47 23.1	-1.1
	comp=Z,1.2nm,0.7s,baz=190,slow=2.1,SNR=8.6								
SIV	**San Ignacio**	**119.34**	**78**	PKP		PKPdf		15 36 58.9	-1.5
	comp=Z,2.2nm,0.6s,baz=328,slow=2.1,SNR=9.5								
SIV				PKKPbc		PKKPbc		15 47 11.6	+0.9
	comp=Z,1.3nm,0.7s,baz=122,slow=7.3,SNR=8.2								
KMBO	**Kilima Mbogo**	**121.46**	**317**	PKP		PKPdf		15 37 04.3	-0.3
	comp=Z,9.8nm,0.9s,baz=360,slow=24,SNR=24								
KMBO	**Kilima Mbogo**	**121.46**	**317**	*e*PKIKP		PKPdf		15 37 04.9	+0.3
DBIC	**Dimbokro**	**121.72**	**7**	*e*PKPdf		PKPdf		15 37 03.8	-1.3
DBIC	**Dimbokro**	**121.72**	**7**	PKP		PKPdf		15 37 04.5	-0.7
	comp=Z,32nm,0.6s,baz=347,slow=3.4,SNR=83								
TIC	**Toumodi**	**121.73**	**8**	*e*PKIKP		PKPdf		15 37 04.3	-0.9
	comp=Z,70nm,0.5s								
KIC	**Kosan Boka**	**122.04**	**7**	*e*PKIKP		PKPdf		15 37 04.9	-0.9
	comp=Z,100nm,0.7s								
LIC	**Lamto**	**122.15**	**8**	*e*PKIKP		PKPdf		15 37 05.0	-1.0
	comp=Z,141nm,0.7s								
LIC	**Lamto**	**122.15**	**8⇑**	*i*PKIKP		PKPdf		15 37 05.0	-1.0
	comp=Z,86nm,0.7s								
LIC				*e*MLR		MLR			
	comp=Z,441nm,22.0s,MS4.8								
LIC	**Lamto**	**122.15**	**8⇑**	*i*PKPdf		PKPdf		15 37 05.0	-1.0
LIC				LR		LR			
	comp=Z,220nm,22.0s,MS4.8								
CFAA	**Coronel Fontan**	**126.27**	**97**	PKP		PKPdf		15 37 11.8	-1.4
CFAA	**Coronel Fontan**	**126.27**	**97**	PKP		PKPdf		15 37 11.8	-1.4
	comp=Z,0.3nm,0.5s,baz=273,slow=1.9,SNR=5.2								
CASY	**Casey**	**129.23**	**210**	*e*P		PKPdf		15 37 17.0	-0.8
CASY	**Casey**	**129.23**	**210**	*e*PKPdf		PKPdf		15 37 16.8	-1.0
CASY				*e*SKP				15 40 35.0	
CPUP	**Villa Florida**	**129.36**	**84**	PKP		PKPdf		15 37 18.4	-0.9
CPUP				SKPbc				15 40 37.6	
CPUP	**Villa Florida**	**129.36**	**84**	PKP		PKPdf		15 37 18.4	-0.9
	comp=Z,3.4nm,0.7s,baz=332,slow=2.7,SNR=10								
CPUP				SKPbc				15 40 37.6	
	comp=Z,1.1nm,0.5s,baz=321,slow=7.4,SNR=4.9								
SBA	**Scott Base**	**129.49**	**184**	*e*PKPdf		PKPdf		15 37 17.5	-0.5
SBA				*e*				15 37 29.1	
SBA				*e*SKP				15 40 35.6	
SBA	**Scott Base**	**129.49**	**184**	*e*PKIKP		PKPdf		15 37 17.5	-0.5
SBA				*e*				15 37 29.1	
PLCA	**Paso Flores**	**130.82**	**107**	*e*PKPdf		PKPdf		15 37 20.6	-1.0
PLCA	**Paso Flores**	**130.82**	**107**	PKP		PKPdf		15 37 21.2	-0.4
	comp=Z,5.0nm,0.8s,baz=280,slow=4.0,SNR=8.9								
PLCA				SKPbc		SKPbc		15 40 41.2	-1.5
	comp=Z,1.0nm,0.5s,baz=268,slow=6.3,SNR=2.4								
LSZ	**Lusaka**	**137.98**	**320**	*e*PKPpre		PKPpre		15 37 28.7	
LSZ				*e*PKPdf		PKPdf		15 37 36.0	+0.3
QSPA	**South Pole Qui**	**141.33**	**180**	PKhKP		PKPpre		15 37 32.7	
	comp=Z,3.8nm,0.6s,baz=5.5,slow=1.8,SNR=46								
QSPA				SKP				15 41 10.6	
	comp=Z,11nm,1.0s,baz=17,slow=2.3,SNR=5.0								
PMSA	**Palmer Station**	**144.74**	**137**	PKP		PKPdf		15 37 44.3	-2.0
	comp=Z,44nm,0.9s,baz=298,slow=4.2,SNR=6.9								
TSUM	**Tsumeb**	**145.31**	**333**	*e*PKPdf		PKPdf		15 37 48.5	-0.3
MAW	**Mawson**	**146.77**	**218**	*e*P		PKPdf		15 37 49.4	-0.3
	comp=Z,64nm,0.8s								
MAW	**Mawson**	**146.77**	**218**	PKPbc		PKPbc		15 37 50.6	-0.9
	comp=Z,113nm,0.9s,baz=82,slow=2.9,SNR=120								
MAW	**Mawson**	**146.77**	**218**	*e*PKIKP		PKPdf		15 37 49.0	-0.7
LBTB	**Lobatse**	**147.74**	**316**	*e*PKPbc		PKPbc		15 37 56.2	+0.6
BOSA	**Boshof**	**151.00**	**313**	*e*PKPdf		PKPdf		15 37 57.3	-0.6
BOSA				*e*PKPbc		PKPbc		15 38 03.8	+0.2
BOSA	**Boshof**	**151.00**	**313**	PKP		PKPdf		15 37 57.7	-0.1
	comp=Z,3.8nm,0.6s,baz=339,slow=1.3,SNR=9.8								
BOSA				PKPbc		PKPbc		15 38 03.5	-0.1
	comp=Z,132nm,0.7s,baz=33,slow=2.4,SNR=167								
BOSA	**Boshof**	**151.00**	**313**	PKIKP		PKPdf		15 37 57.7	-0.1
BOSA								15 38 03.5	
BOSA				pmax		pmax			
	comp=Z,4.0nm,0.6s								
MAIT	**Maitri**	**160.18**	**190**	*e*PKPdif		PKPdf		15 38 07.2	-1.5
VNA1	**Neumayer--Stat**	**160.34**	**170**	*e*PKPdf		PKPdf		15 38 04.5	-4.4
VNA1				*e*				15 38 46.1	

NEIC ***09*** *15:31:11.7,52°.11N×175°.42W,h5km,ML3.2(AEIC),After AEIC.*

ISCJB ***09*** *15:31:13.9±0.9,52°.1N±0°.2×175°.39W±0°.10,h33km, mb3.5/4,Error ellipse: s-maj=26.8km s-min=7.9km az=171.3*

IDC ***09*** *15:31:13.7±1.5,52°.55N×175°.59W,h0km,mb3.3/3, mb1 3.7/5,mb1mx3.4/24,mbtmp3.5/5,ML3.8/2,MS3.7/1, Ms1 3.7/1,ms1mx3.2/21,Error ellipse: s-maj=51.6km s-min=27.6km az=158.0*

ISC 09 15:31:15.2±1.8,51°.9N±0°.4×175°.2W±0°.2,h35km,n15, σ1s23/15,mb3.5/4,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.54**	**287**	*e*Pg		**Pn**		**15 31 20.6**	**-5.7**
ATKA	**Atka Island**	**0.69**	**67**	P		**Pn**		**15 31 26.9**	**-1.5**
ATKA				S		**Sn**		**15 31 37.6**	**-0.3**
AMKA	**Amchitka**	**3.45**	**263**	*e*P		**Pn**		**15 32 06.2**	**-0.2**
AKUT	**Akutan**	**6.11**	**65**	Pn		**Pn**		**15 32 48.0**	**+5.1**
SDPT	**Sand Point**	**9.40**	**63**	P		**Pn**		**15 33 29.0**	**+1.1**
	59nm,1.5s								
KDAK	**Kodiak Island**	**14.25**	**57**	*e*Pn		**Pn**		**15 34 33.3**	**-0.9**
KDAK	**Kodiak Island**	**14.25**	**57**	Pn		**Pn**		**15 34 35.5**	**+1.3**
	0.3nm,0.3s,baz=201,slow=17,SNR=3.9								
PAX	**Paxson**	**19.25**	**43**	*e*P		**Pn**		**15 35 36.7**	**-0.6**
ILAR	**Eielson Array**	**19.43**	**38**	P		**Pn**		**15 35 37.8**	**-1.6**
	0.2nm,0.3s,baz=234,slow=8.8,SNR=12								
EGAK	**Eagle**	**21.67**	**41**	*e*P		**P**		**15 36 04.1**	**+1.7**
	4.7nm,0.8s,mb4.0								
DAWY	**Dawson**	**22.18**	**43**	*e*P		**P**		**15 36 10.9**	**+3.1**
LPIG	**La Paz**	**56.03**	**94**	LR		LR		15 59 28.0	
	comp=Z,70nm,21.6s,slow=30								
TXAR	**Lajitas Array**	**56.38**	**84**	P		**P**		**15 40 57.0**	**+4.2**
	0.1nm,0.5s,mb3.1,baz=312,slow=5.4,SNR=2.5								
MKAR	**Makanchi Array**	**61.40**	**310**	P		**P**		**15 41 27.1**	**-0.3**
	0.1nm,0.4s,mb3.3,baz=48,slow=4.3,SNR=3.4								
ASAR	**Alice Springs**	**87.43**	**225**	P		**P**		**15 44 04.7**	**+6.1**
	0.3nm,0.7s,mb3.6,baz=22,slow=5.1,SNR=3.4								

ISCJB ***09*** *15:35:37.7±0.3,45°.09N±0°.02×4°.42E±0°.02,h6km±3km, Error ellipse: s-maj=2.7km s-min=2.2km az=31.0*

CSEM ***09*** *15:35:38.8±0.1,45°.07N×4°.43E,h10km,ML2.3/20,Error ellipse: s-maj=1.6km s-min=1.4km az=22.0*

LDG ***09*** *15:35:39.8±0.0,45°.06N×4°.43E,h3km,Md2.4/1,Ml2.4/23, Error ellipse: s-maj=0.8km s-min=0.6km az=30.0*

STR ***09*** *15:35:40.3±0.3,45°.13N×4°.43E,h5km,Ml2.4,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 09 15:35:38.9±0.3,45°.07N±0°.01×4°.42E±0°.02,h12km±2km, n93,σ0s70/176,France

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SSB	**Saint Sauveur**	**0.23**	**22**	Pg		**Pg**		**15 35 43.9**	**+0.2**
SSB				Sg		**Sg**		**15 35 46.8**	**-0.2**
SSB	**Saint Sauveur**	**0.23**	**22**	Pg		**Pg**		**15 35 43.9**	**+0.2**
SSB				Sg		**Sg**		**15 35 46.8**	**-0.2**
VIVF	**Saint-Julien-l**	**0.28**	**139**	*e*Pg		**Pg**		**15 35 44.9**	**+0.4**
	SNR=1.0								
VIVF				*e*Sg		**Sg**		**15 35 48.6**	**+0.3**
	30nm,0.2s								
VIVF	**Saint-Julien-l**	**0.28**	**139**	*e*Pg		**Pg**		**15 35 44.9**	**+0.4**
	SNR=1.0								
VIVF				*e*Sg		**Sg**		**15 35 48.6**	**+0.3**
	15nm,0.2s								
COLF	**Collangettes**	**0.68**	**312**	Pg		**Pg**		**15 35 52.6**	**+0.5**
COLF				Sg		**Sg**		**15 36 02.6**	**+1.5**
COLF	**Collangettes**	**0.68**	**312**	Pg		**Pg**		**15 35 52.6**	**+0.5**
COLF				Sg		**Sg**		**15 36 02.6**	**+1.5**
LBL	**Lubilhac**	**0.85**	**282**	Pg		**Pg**		**15 35 56.4**	**+1.2**
LBL				Sg		**Sg**		**15 36 07.9**	**+1.6**
LBL	**Lubilhac**	**0.85**	**282**	Pg		**Pg**		**15 35 56.4**	**+1.2**
LBL				Sg		**Sg**		**15 36 07.9**	**+1.6**
ORIF	**Oris-en-Rattie**	**1.05**	**98**	*e*Pg		**Pg**		**15 35 59.3**	**+0.3**
	SNR=1.0								
ORIF	**Oris-en-Rattie**	**1.05**	**98**	*e*Pn		**Pn**		**15 36 00.2**	**+0.8**
	SNR=1.0								
ORIF				*e*Sg		**Sg**		**15 36 13.2**	**+0.6**
	9.0nm,0.4s								
ORIF	**Oris-en-Rattie**	**1.05**	**98**	*e*Pn		**Pn**		**15 36 00.2**	**+0.8**
	SNR=1.0								
ORIF				*e*Sg		**Sg**		**15 36 13.2**	**+0.6**
	9.0nm,0.4s								
ORIF	**Oris-en-Rattie**	**1.05**	**98**	*e*Pg		**Pg**		**15 35 59.3**	**+0.3**
	SNR=1.0								
ORIF	**Oris-en-Rattie**	**1.05**	**98**	*e*Pn		**Pn**		**15 36 00.2**	**+0.8**
	SNR=1.0								
ORIF				*e*Sg		**Sg**		**15 36 13.2**	**+0.6**
	4.5nm,0.4s								
PLDF	**La Plantade**	**1.06**	**328**	Pg		**Pg**		**15 35 59.7**	**+0.3**
PLDF				Sg		**Sg**		**15 36 13.8**	**+0.6**
PLDF	**La Plantade**	**1.06**	**328**	Pg		**Pg**		**15 35 59.7**	**+0.3**
PLDF				Sg		**Sg**		**15 36 13.8**	**+0.6**
LASF	**Ste Croix**	**1.07**	**202**	*e*Pg		**Pg**		**15 35 59.7**	**+0.3**
	SNR=1.0								
LASF				*e*Sg		**Sg**		**15 36 13.2**	**-0.1**
LASF				*e*Sn		**Sn**		**15 36 14.9**	**+0.4**
	21nm,0.2s,SNR=1.0								
LASF	**Ste Croix**	**1.07**	**202**	*e*Pg		**Pg**		**15 35 59.7**	**+0.3**
	SNR=1.0								
LASF				*e*Sg		**Sg**		**15 36 13.2**	**-0.1**
LASF				*e*Sn		**Sn**		**15 36 14.9**	**+0.4**
	10nm,0.2s,SNR=1.0								
PYM	**Petit Puy Mans**	**1.21**	**305**	Pg		**Pg**		**15 36 02.8**	**+0.7**
PYM	**Petit Puy Mans**	**1.21**	**305**	Pg		**Pg**		**15 36 02.8**	**+0.7**
AGO	**Saint Agoulin**	**1.34**	**318**	Pg		**Pg**		**15 36 05.0**	**+0.4**
AGO				Sg		**Sg**		**15 36 22.6**	**+0.6**
AGO	**Saint Agoulin**	**1.34**	**318**	Pg		**Pg**		**15 36 05.0**	**+0.4**
AGO				Sg		**Sg**		**15 36 22.6**	**+0.6**
SMRF	**Simiane la Rot**	**1.37**	**142**	*e*Pg		**Pg**		**15 36 04.9**	**-0.2**
	SNR=1.0								
SMRF				*e*Sg		**Sg**		**15 36 23.1**	**+0.2**
	4.2nm,0.3s								
SMRF	**Simiane la Rot**	**1.37**	**142**	*e*Pg		**Pg**		**15 36 04.9**	**-0.2**
	SNR=1.0								
SMRF				*e*Sg		**Sg**		**15 36 23.1**	**+0.2**
	2.1nm,0.3s								
SMF	**Signal de Mont**	**1.63**	**346**	*e*Pn		**Pn**		**15 36 07.4**	**0.0**
	SNR=1.0								
SMF	**Signal de Mont**	**1.63**	**346**	*e*Pg		**Pg**		**15 36 10.3**	**+0.1**
SMF				*e*Sn		**Sn**		**15 36 28.3**	**-0.1**
SMF				*e*Sg		**Sg**		**15 36 31.5**	**+0.2**
	5.8nm,0.2s								
SMF	**Signal de Mont**	**1.63**	**346**	*e*Pg		**Pg**		**15 36 10.3**	**+0.1**
SMF				*e*Sn		**Sn**		**15 36 28.3**	**-0.1**
SMF				*e*Sg		**Sg**		**15 36 31.5**	**+0.2**
	5.8nm,0.2s								
SMF	**Signal de Mont**	**1.63**	**346**	*e*Pn		**Pn**		**15 36 07.4**	**0.0**
	SNR=1.0								
SMF	**Signal de Mont**	**1.63**	**346**	*e*Pg		**Pg**		**15 36 10.3**	**+0.1**
SMF				*e*Sg		**Sg**		**15 36 31.5**	**+0.2**
	2.9nm,0.2s								
CAF	**Calvac**	**1.68**	**266**	*e*Pn		**Pn**		**15 36 09.3**	**+1.2**
	SNR=1.0								
CAF	**Calvac**	**1.68**	**266**	*e*Pg		**Pg**		**15 36 10.9**	**-0.2**
CAF				*e*Sn		**Sn**		**15 36 29.3**	**-0.2**
	SNR=1.0								
CAF				*e*Sg		**Sg**		**15 36 32.7**	**-0.1**
	5.2nm,0.2s								
CAF	**Calvac**	**1.68**	**266**	*e*Pg		**Pg**		**15 36 10.9**	**-0.2**
CAF				*e*Sn		**Sn**		**15 36 29.3**	**-0.2**
	SNR=1.0								
CAF				*e*Sg		**Sg**		**15 36 32.7**	**-0.1**
	5.2nm,0.2s								
CAF	**Calvac**	**1.68**	**266**	*e*Pn		**Pn**		**15 36 09.3**	**+1.2**
	SNR=1.0								
CAF	**Calvac**	**1.68**	**266**	*e*Pg		**Pg**		**15 36 10.9**	**-0.2**
CAF				*e*Sn		**Sn**		**15 36 29.3**	**-0.2**
	SNR=1.0								
CAF				*e*Sg		**Sg**		**15 36 32.7**	**-0.1**
	2.6nm,0.2s								
LPL	**La Plagne**	**1.69**	**74**	*e*Pn		**Pn**		**15 36 09.0**	**+0.7**
	SNR=1.0								
LPL	**La Plagne**	**1.69**	**74**	*e*Pg		**Pg**		**15 36 11.4**	**+0.1**
	SNR=1.0								
LPL				*e*Sn		**Sn**		**15 36 30.0**	**+0.1**
	SNR=1.0								
LPL				*e*Sg		**Sg**		**15 36 33.6**	**+0.3**
	2.5nm,0.2s								
LPL	**La Plagne**	**1.69**	**74**	*e*Pn		**Pn**		**15 36 09.0**	**+0.7**
	SNR=1.0								
LPL	**La Plagne**	**1.69**	**74**	*e*Pg		**Pg**		**15 36 11.4**	**+0.1**
	SNR=1.0								
LPL				*e*Sn		**Sn**		**15 36 30.0**	**+0.1**
	SNR=1.0								
LPL				*e*Sg		**Sg**		**15 36 33.6**	**+0.3**
	1.2nm,0.2s								
LPG	**La Plagne**	**1.70**	**74**	*e*Pn		**Pn**		**15 36 09.1**	**+0.7**
	SNR=1.0								
LPG	**La Plagne**	**1.70**	**74**	*e*Pg		**Pg**		**15 36 11.1**	**-0.4**
LPG				*e*Sn		**Sn**		**15 36 30.3**	**+0.2**
	SNR=1.0								
LPG				*e*Sg		**Sg**		**15 36 34.0**	**+0.4**
	2.8nm,0.2s,SNR=1.0								
LPG	**La Plagne**	**1.70**	**74**	*e*Pg		**Pg**		**15 36 11.1**	**-0.4**
LPG				*e*Sn		**Sn**		**15 36 30.3**	**+0.2**
	SNR=1.0								
LPG				*e*Sg		**Sg**		**15 36 34.0**	**+0.4**
	2.8nm,0.2s,SNR=1.0								
LPG	**La Plagne**	**1.70**	**74**	*e*Pn		**Pn**		**15 36 09.1**	**+0.7**
	SNR=1.0								
LPG	**La Plagne**	**1.70**	**74**	*e*Pg		**Pg**		**15 36 11.1**	**-0.4**
LPG				*e*Sn		**Sn**		**15 36 30.3**	**+0.2**
	SNR=1.0								
LPG				*e*Sg		**Sg**		**15 36 34.0**	**+0.4**
	1.4nm,0.2s,SNR=1.0								
MBDF	**Montbardon**	**1.71**	**101**	*e*Pg		**Pg**		**15 36 11.6**	**0.0**
MBDF				*e*Sg		**Sg**		**15 36 33.6**	**-0.1**
	2.4nm,0.3s								
MBDF	**Montbardon**	**1.71**	**101**	*e*Pg		**Pg**		**15 36 11.6**	**0.0**
MBDF				*e*Sg		**Sg**		**15 36 33.6**	**-0.1**
	1.2nm,0.3s								
BGF	**Bois d'Agland**	**1.85**	**324**	*e*Pn		**Pn**		**15 36 11.8**	**+1.3**
	SNR=1.0								
BGF	**Bois d'Agland**	**1.85**	**324**	*e*Pg		**Pg**		**15 36 14.7**	**+0.3**
AVF	**Avril sur Loir**	**1.88**	**337**	*e*Pn		**Pn**		**15 36 11.1**	**+0.2**
	SNR=1.0								
AVF	**Avril sur Loir**	**1.88**	**337**	*e*Pg		**Pg**		**15 36 14.7**	**-0.2**
AVF				*e*Sn		**Sn**		**15 36 34.3**	**-0.2**
	SNR=1.0								
AVF				*e*Sg		**Sg**		**15 36 39.0**	**-0.3**
	2.8nm,0.2s,SNR=1.0								
AVF	**Avril sur Loir**	**1.88**	**337**	*e*Pg		**Pg**		**15 36 14.7**	**-0.2**
AVF				*e*Sn		**Sn**		**15 36 34.3**	**-0.2**
	SNR=1.0								
AVF				*e*Sg

LFF	**La Frestale**	**2.61**	**269**	*e*Pg		**Pg**	**15 36 27.8**	**-1.2**
LFF				*e*Sg		**Sg**	**15 37 01.0**	**-1.8**
	4.4nm,0.4s,SNR=1.0							
LFF	**La Frestale**	**2.61**	**269**	*e*Pg		**Pg**	**15 36 27.8**	**-1.2**
SFTF	**Sexfontaines**	**3.17**	**7**	*e*Pn		**Pn**	**15 36 28.6**	**0.0**
SFTF				*e*Sg		**Sg**	**15 37 19.8**	**-0.8**
	3.4nm,0.3s							
SFTF	**Sexfontaines**	**3.17**	**7**	*e*Pn		**Pn**	**15 36 28.6**	**0.0**
SFTF				*e*Sg		**Sg**	**15 37 19.8**	**-0.8**
	1.7nm,0.3s							
HINF	**Hinteralfeld**	**3.23**	**31**	*e*Pn		**Pn**	**15 36 29.2**	**-0.1**
HINF				*e*Sg		**Sg**	**15 37 21.3**	**-1.1**
	2.5nm,0.4s							
HINF	**Hinteralfeld**	**3.23**	**31**	*e*Pn		**Pn**	**15 36 29.2**	**-0.1**
HINF				*e*Sg		**Sg**	**15 37 21.3**	**-1.1**
	1.2nm,0.4s							
HAU	**Haudompre**	**3.23**	**24**	*e*Pg		**Pg**	**15 36 39.8**	**-0.9**
HAU				*e*Sg		**Sg**	**15 37 21.7**	**-0.8**
	3.9nm,0.3s							
HAU	**Haudompre**	**3.23**	**24**	*e*Pg		**Pg**	**15 36 39.8**	**-0.9**
HAU				*e*Sg		**Sg**	**15 37 21.7**	**-0.8**
	2.0nm,0.3s							

IDC 09 16:03:53.6±2.5, 4°01'N×95°81'E, h0km, mb3.5/4, mb1 3.6/6, mb1mx3.4/22, mbtmp3.5/6, ML3.6/2, Error ellipse: s-maj=81.7km s-min=22.4km az=56.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.33**	**111**	Pn	Pn	16 04 46.8	-0.2
	5.7nm,0.3s,baz=327,slow=15,SNR=17						
CMAR	**Chiang Mai Arr**	**14.69**	**12**	Pn	Pn	16 07 24.4	+1.7
	0.1nm,0.3s,baz=198,slow=11,SNR=6.7						
MKAR	**Makanchi Array**	**44.21**	**347**	P	P	16 12 03.7	-0.6
	0.5nm,0.7s,baz=142,slow=7.2,SNR=2.3						
SONM	**Songino Array**	**44.60**	**10**	P	P	16 12 07.7	+0.1
	0.2nm,0.4s,baz=178,slow=7.2,SNR=2.5						
ASAR	**Alice Springs**	**46.20**	**128**	P	P	16 12 20.9	+0.3
	0.5nm,0.5s,baz=303,slow=7.5,SNR=12						
KURK	**Kurchatov**	**48.74**	**346**	P	P	16 12 39.7	-0.3
	0.3nm,0.4s,baz=161,slow=8.1,SNR=2.6						

*THR **09** 16:05:40.5±0.6, 36°.84N×57°.05E, h14km±7km, ML3.8*
*IDC **09** 16:05:40.6±0.9, 36°.87N×56°.92E, h0km, mb3.9/14, mb1 4.1/18, mb1mx4.0/25, mbtmp4.0/18, ML3.8/4, Error ellipse: s-maj=19.0km s-min=14.0km az=174.0*
*ISCJB **09** 16:05:42.8±0.7, 37°.09N±0°.03×56°.94E±0°.03, h29km±6km, mb4.0/20, Error ellipse: s-maj=4.6km s-min=3.4km az=160.8*
*CSEM **09** 16:05:42.3±0.1, 37°.03N×57°.01E, h10km, mb4.2/4, Error ellipse: s-maj=5.6km s-min=3.7km az=170.0*
*TEH **09** 16:05:43.1, 37°.00N×56°.98E, h7km*
*NEIC **09** 16:05:43.1, 37°.00N×56°.98E, h7km, mb4.0/4, ML3.9(THR), MN4.1(TEH), After TEH.*
*MOS **09** 16:05:44.3±2.0, 37°.02N×57°.03E, h33km, mb4.1/13, Error ellipse: s-maj=9.4km s-min=7.5km az=107.7*
*NNC **09** 16:05:45.2±14.0, 37°.27N×57°.20E, h33km±229km, mb3.7, Error ellipse: s-maj=170.3km s-min=54.6km az=82.0*

ISC 09 16:05:42.7±0.5, 37°05N±0°02×57°04E±0°02, h15km±4km, n211, σ1$25/236, mb4.0/20, 11C-4D, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJRD	**Bojnurd**	**0.71**	**24**	*e*Pg	**Pg**	**16 05 57.5**	**+0.9**
ISHV	**Shirvan**	**0.72**	**47**	Pg	**Pg**	**16 05 57.4**	**+0.7**
ISHV	**Shirvan**	**0.72**	**47**	*e*Pg	**Pg**	**16 05 57.5**	**+0.8**
ISHV				*e*		16 06 18.9	
	comp=Z,95μm,0.1s						
ISHV	**Shirvan**	**0.72**	**47**	*e*Pg	**Pg**	**16 05 57.5**	**+0.8**
ISFR	**Sfrayin**	**0.77**	**89**	Pg	**Pg**	**16 05 57.2**	**-0.5**
ISFR	**Sfrayin**	**0.77**	**89**	*e*Pg	**Pg**	**16 05 57.3**	**-0.4**
ISFR				*e*		16 06 13.5	
	comp=Z,52μm,0.1s						
ISFR	**Sfrayin**	**0.77**	**89**	*e*Pg	**Pg**	**16 05 57.3**	**-0.4**
MRVT	**Maraveh tapeh**	**0.97**	**309**	*e*Pg	**Pg**	**16 06 01.4**	**-0.1**
MRVT				*e*Sg	**Sg**	**16 06 16.6**	**+2.4**
MRVT				AML	AML	16 06 21.8	
	comp=E,2μm,0.2s						
MRVT				AML	AML	16 06 27.4	
	comp=N,2μm,0.4s						
IQHU	**Qucahn**	**1.20**	**88**	Pg	**Pg**	**16 06 05.5**	**-0.3**
IQHU	**Qucahn**	**1.20**	**88**	*e*	Sx	16 06 35.1	
	comp=Z,45μm,0.2s						
IQHU				*e*Pg	**Pg**	**16 06 05.6**	**-0.2**
IKRD	**Kardeh**	**1.21**	**103**	*e*Sg	Sx	16 06 47.9	
VAN	**Vannovskaya**	**1.23**	**43**	*e*P	**Pn**	**16 06 08.1**	**+2.6**
VAN	**Vannovskaya**	**1.23**	**43**	*e*P	**Pn**	**16 06 08.1**	**+2.6**
IEMG	**Emamgholi**	**1.34**	**74**	Pg	**Pg**	**16 06 08.3**	**-0.2**
IEMG	**Emamgholi**	**1.34**	**74**	*e*	Sx	16 06 33.4	
	comp=Z,26μm,0.2s						
IEMG				*e*Pg	**Pg**	**16 06 08.4**	**-0.1**
IAKL	**Akhelmad**	**1.45**	**107**	Pn	**Pn**	**16 06 07.8**	**-0.6**
IAKL	**Akhelmad**	**1.45**	**107**	*e*Sg	**Sg**	**16 06 28.1**	**-1.3**
IAKL				*e*Pn	**Pn**	**16 06 07.8**	**-0.6**
IAKL				*e*		16 06 30.3	
	comp=Z,23μm,0.1s						
IPAY	**Payeh**	**1.68**	**110**	Pn	**Pn**	**16 06 12.7**	**+1.1**
IPAY	**Payeh**	**1.68**	**110**	*e*Pn	**Pn**	**16 06 12.8**	**+1.2**
IPAY				*e*Sg	**Sg**	**16 06 36.5**	**-0.3**
IPAY				*e*		16 06 49.8	
	comp=Z,13μm,0.2s						
IPAY	**Payeh**	**1.68**	**110**	*e*Pn	**Pn**	**16 06 12.8**	**+1.2**
IPAY				*e*Sg	**Sg**	**16 06 36.5**	**-0.3**
IMOG	**Moghan**	**2.08**	**116**	Pn	**Pn**	**16 06 18.7**	**+1.7**
IMOG	**Moghan**	**2.08**	**116**	*e*Pn	**Pn**	**16 06 18.8**	**+1.8**
IMOG				*e*Sg	**Sg**	**16 06 48.4**	**-1.1**
IMOG				*e*		16 06 53.3	
	comp=Z,10μm,0.2s						
IMOG	**Moghan**	**2.08**	**116**	*e*Pn	**Pn**	**16 06 18.8**	**+1.8**
IMOG				*e*Sg	**Sg**	**16 06 48.4**	**-1.1**
ISRO	**Mashad**	**2.09**	**110**	*e*Pn	**Pn**	**16 06 18.7**	**+1.5**
ISRO				*e*		16 06 54.7	
	comp=Z,17μm,0.3s						
IMYA	**Miami**	**2.56**	**105**	Pn	**Pn**	**16 06 26.1**	**+2.4**
IMYA	**Miami**	**2.56**	**105**	*e*Pn	**Pn**	**16 06 26.2**	**+2.5**
IMYA				*e*		16 07 21.4	
	comp=Z,5μm,0.4s						
IMYA	**Miami**	**2.56**	**105**	*e*Pn	**Pn**	**16 06 26.2**	**+2.5**
IGLO	**Ghaloghah**	**2.63**	**259**	Pn	**Pn**	**16 06 25.8**	**+1.1**
IGLO	**Ghaloghah**	**2.63**	**259**	*e*Pn	**Pn**	**16 06 25.9**	**+1.2**
IGLO				*e*		16 07 18.5	
	comp=Z,25μm,0.4s						
IGLO	**Ghaloghah**	**2.63**	**259**	*e*Pn	**Pn**	**16 06 25.9**	**+1.2**
IANJ	**Anjilo**	**2.98**	**239**	Pn	**Pn**	**16 06 29.7**	**+0.2**
IANJ	**Anjilo**	**2.98**	**239**	*e*Pn	**Pn**	**16 06 29.7**	**+0.2**
IANJ				*e*		16 07 24.3	
	comp=Z,5μm,0.1s						
IANJ	**Anjilo**	**2.98**	**239**	*e*Pn	**Pn**	**16 06 29.7**	**+0.2**
ISHM	**Shahmirzad**	**3.27**	**249**	Pn	**Pn**	**16 06 33.3**	**-0.1**
ISHM	**Shahmirzad**	**3.27**	**249**	*e*Pn	**Pn**	**16 06 33.4**	**-0.1**
ISHM				*e*		16 07 51.7	
	comp=Z,6μm,0.2s						
ISHM	**Shahmirzad**	**3.27**	**249**	*e*Pn	**Pn**	**16 06 33.4**	**-0.1**
IALA	**Alasht**	**3.54**	**255**	Pn	**Pn**	**16 06 38.2**	**+1.0**
IALA	**Alasht**	**3.54**	**255**	*e*Pn	**Pn**	**16 06 38.2**	**+1.0**
IALA				*e*		16 07 41.2	
	comp=E,10μm,0.2s						
IALA	**Alasht**	**3.54**	**255**	*e*Pn	**Pn**	**16 06 38.2**	**+1.0**
ILAS	**Lasjerd**	**3.70**	**244**	Pn	**Pn**	**16 06 39.3**	**0.0**
ILAS	**Lasjerd**	**3.70**	**244**	*e*Pn	**Pn**	**16 06 39.3**	**0.0**
ILAS				*e*		16 07 47.2	
	comp=Z,3μm,0.2s						
ILAS	**Lasjerd**	**3.70**	**244**	*e*Pn	**Pn**	**16 06 39.3**	**0.0**
IFIR	**Firoozkooh**	**3.73**	**249**	Pn	**Pn**	**16 06 39.7**	**-0.2**
IFIR	**Firoozkooh**	**3.73**	**249**	*e*Pn	**Pn**	**16 06 39.7**	**-0.2**
IFIR				*e*		16 06 53.1	
	comp=Z,4μm,0.2s						
IFIR	**Firoozkooh**	**3.73**	**249**	*e*Pn	**Pn**	**16 06 39.7**	**-0.2**
IPRN	**Peran**	**3.87**	**259**	Pn	**Pn**	**16 06 42.8**	**+1.1**
IPRN	**Peran**	**3.87**	**259**	*e*Pn	**Pn**	**16 06 42.9**	**+1.2**
IPRN				*e*		16 07 49.4	
	comp=Z,7μm,0.2s						
IPRN	**Peran**	**3.87**	**259**	*e*Pn	**Pn**	**16 06 42.9**	**+1.2**
IDMV	**Damavand**	**4.30**	**252**	Pn	**Pn**	**16 06 47.9**	**+0.2**
IDMV	**Damavand**	**4.30**	**252**	*e*Pn	**Pn**	**16 06 48.0**	**+0.3**
IDMV				*e*		16 07 34.5	
	comp=Z,2μm,0.2s						
IDMV	**Damavand**	**4.30**	**252**	*e*Pn	**Pn**	**16 06 48.0**	**+0.3**
DAMV	**Damavand**	**4.33**	**252**	Pn	**Pn**	**16 06 47.0**	**-1.1**
DAMV	**Damavand**	**4.33**	**252**	*e*Pn	**Pn**	**16 06 47.4**	**-0.7**
DAMV				*e*Sg	**Sg**	**16 07 53.2**	**-8.6**
DAMV				AML	AML	16 08 00.4	
	comp=E,113nm,0.5s						
DAMV				AML	AML	16 08 12.1	
	comp=N,109nm,0.5s						
DAMV	**Damavand**	**4.33**	**252**	Pn	**Pn**	**16 06 47.0**	**-1.1**
ITEG	**Tejag**	**4.37**	**161**	*e*Pn	**Pn**	**16 06 49.0**	**+0.3**
ITEG	**Tejag**	**4.37**	**161**	*e*Pn	**Pn**	**16 06 49.0**	**+0.3**
ISFB	**Sefidab**	**4.74**	**237**	Pn	**Pn**	**16 06 53.7**	**0.0**
ISFB	**Sefidab**	**4.74**	**237**	*e*Pn	**Pn**	**16 06 53.7**	**0.0**
ISFB				*e*		16 06 55.0	
	comp=Z,1μm,0.2s						
ISFB	**Sefidab**	**4.74**	**237**	*e*Pn	**Pn**	**16 06 53.7**	**0.0**
IDAH	**Dahanechah**	**4.89**	**151**	*e*Pn	**Pn**	**16 06 55.8**	**+0.1**
IDAH				*e*		16 06 56.8	
	comp=Z,1μm,0.3s						
IDAH	**Dahanechah**	**4.89**	**151**	*e*Pn	**Pn**	**16 06 55.8**	**+0.1**
THKV	**Tehran--Karaj**	**5.09**	**259**	Pn	**Pn**	**16 06 58.0**	**-0.5**
THKV	**Tehran--Karaj**	**5.09**	**259**	*e*Pn	**Pn**	**16 06 58.2**	**-0.3**
THKV				AML	AML	16 08 31.3	
	comp=E,76nm,0.6s						
THKV				AML	AML	16 08 47.9	
	comp=N,83nm,0.7s						
THKV	**Tehran--Karaj**	**5.09**	**259**	Pn	**Pn**	**16 06 58.0**	**-0.5**
ICHK	**Chekchek**	**5.26**	**205**	Pn	**Pn**	**16 07 00.3**	**-0.6**
ICHK	**Chekchek**	**5.26**	**205**	*e*Pn	**Pn**	**16 07 00.4**	**-0.5**
ICHK				*e*		16 08 02.7	
	comp=Z,2μm,0.3s						
ICHK	**Chekchek**	**5.26**	**205**	*e*Pn	**Pn**	**16 07 00.4**	**-0.5**
NASN	**Na'in**	**5.48**	**221**	Pn	**Pn**	**16 07 01.0**	**-2.9**
NASN	**Na'in**	**5.48**	**221**	*e*Pn	**Pn**	**16 07 02.6**	**-1.3**
NASN	**Na'in**	**5.48**	**221**	Pn	**Pn**	**16 07 01.0**	**-2.9**
IBAF	**Bafgh**	**5.58**	**193**	Pn	**Pn**	**16 07 05.2**	**-0.1**
IBAF	**Bafgh**	**5.58**	**193**	*e*Pn	**Pn**	**16 07 05.3**	**0.0**
IBAF				*e*		16 08 48.0	
	comp=Z,997nm,0.3s						
IBAF	**Bafgh**	**5.58**	**193**	*e*Pn	**Pn**	**16 07 05.3**	**0.0**
IZEF	**Zefreh**	**5.67**	**224**	Pn	**Pn**	**16 07 06.1**	**-0.4**
IZEF	**Zefreh**	**5.67**	**224**	*e*Pn	**Pn**	**16 07 06.1**	**-0.4**
IZEF				*e*		16 09 01.5	
	comp=Z,434nm,0.3s						
IZEF	**Zefreh**	**5.67**	**224**	*e*Pn	**Pn**	**16 07 06.1**	**-0.4**
IKLH	**Kolahrood**	**5.82**	**232**	Pn	**Pn**	**16 07 08.3**	**-0.2**
IKLH	**Kolahrood**	**5.82**	**232**	*e*Pn	**Pn**	**16 07 08.3**	**-0.2**
IKLH				*e*		16 08 56.4	
	comp=Z,732nm,0.3s						
IKLH	**Kolahrood**	**5.82**	**232**	*e*Pn	**Pn**	**16 07 08.3**	**-0.2**
IRAZ	**Razeghan**	**5.98**	**256**	Pn	**Pn**	**16 07 10.4**	**-0.3**
IRAZ	**Razeghan**	**5.98**	**256**	*e*Pn	**Pn**	**16 07 10.4**	**-0.3**
IRAZ				*e*		16 07 47.2	
	comp=Z,437nm,0.2s						
IRAZ	**Razeghan**	**5.98**	**256**	*e*Pn	**Pn**	**16 07 10.4**	**-0.3**
IMEH	**Mehriz**	**5.99**	**200**	Pn	**Pn**	**16 07 10.8**	**-0.1**
IMEH	**Mehriz**	**5.99**	**200**	*e*Pn	**Pn**	**16 07 10.9**	**0.0**
IMEH				*e*		16 09 00.3	
	comp=Z,618nm,0.3s						
IMEH	**Mehriz**	**5.99**	**200**	Pn	**Pn**	**16 07 10.8**	**-0.1**
IGAR	**Gharneh**	**6.20**	**223**	*e*Pn	**Pn**	**16 07 13.4**	**-0.3**
IGAR				*e*		16 07 18.2	
	comp=Z,430nm,0.1s						
ASAO	**Ashtian**	**6.22**	**248**	*e*Pn	**Pn**	**16 07 13.0**	**-1.1**
ZNJK	**Zanjan**	**6.71**	**269**	Pn	**Pn**	**16 07 21.0**	**+0.2**
ZNJK	**Zanjan**	**6.71**	**269**	*e*Pn	**Pn**	**16 07 21.4**	**+0.7**
ZNJK	**Zanjan**	**6.71**	**269**	Pn	**Pn**	**16 07 21.0**	**+0.2**
ISRB	**Sarab**	**7.50**	**279**	Pn	**Pn**	**16 07 31.3**	**-0.3**
ISRB	**Sarab**	**7.50**	**279**	*e*Pn	**Pn**	**16 07 31.4**	**-0.2**
ISRB				*e*		16 07 36.8	
	comp=Z,2μm,0.1s						
ISRB	**Sarab**	**7.50**	**279**	*e*Pn	**Pn**	**16 07 31.4**	**-0.2**
IHRS	**Heris**	**8.03**	**282**	Pn	**Pn**	**16 07 38.1**	**-0.7**
IHRS	**Heris**	**8.03**	**282**	*e*Pn	**Pn**	**16 07 38.2**	**-0.6**
IHRS				*e*		16 08 05.4	
	comp=Z,655nm,0.2s						
IAZR	**Azarshahr**	**8.83**	**277**	Pn	**Pn**	**16 07 49.4**	**-0.4**
IAZR	**Azarshahr**	**8.83**	**277**	*e*Pn	**Pn**	**16 07 49.5**	**-0.3**
IAZR	**Azarshahr**	**8.83**	**277**	*e*Pn	**Pn**	**16 07 49.5**	**-0.3**
DGRG	**David-gareji**	**10.06**	**299**	P	**Pn**	**16 08 05.9**	**-0.8**
DGRG				S	**Sn**	**16 09 53.6**	**-5.6**
KBL	**Kabul**	**10.07**	**101**	*e*Pn	**Pn**	**16 08 09.7**	**+2.9**
	comp=Z,4.9nm,0.8s						
KBL	**Kabul**	**10.07**	**101**	*e*P	**Pn**	**16 08 09.7**	**+2.9**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBL	**Kabul**	**10.07**	**101**	*e*Pn	**Pn**	**16 08 09.6**	**+2.8**
	comp=Z,4.9nm,0.8s						
GNI	**Garni**	**10.11**	**292**	*e*Pn	**Pn**	**16 08 11.0**	**+3.6**
GNI	**Garni**	**10.11**	**292**	*e*Pn	**Pn**	**16 08 11.0**	**+3.6**
TBLG	**Delisi**	**10.60**	**300**	*e*P	**Pn**	**16 08 11.3**	**-2.8**
TBLG	**Delisi**	**10.60**	**300**	P	**Pn**	**16 08 11.3**	**-2.8**
TBLG				S	**Sn**	**16 10 04.3**	**-8.3**
GOR	**Gori**	**11.14**	**300**	P	**Pn**	**16 08 20.8**	**-0.6**
GOR				S	**Sn**	**16 10 16.5**	**-9.1**
KK31	**Karatay Array**	**11.95**	**55**	⇑Pn	**Pn**	**16 08 31.6**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=246,slow=14,SNR=8.3						
KK31				⇓Sn	**Sn**	**16 10 45.0**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=236,slow=24,SNR=4.2						
KK31	**Karatay Array**	**11.95**	**55**	Pn	**Pn**	**16 08 31.6**	**-1.0**
	comp=Z,0.4nm,0.3s,SNR=8.3						
AB31	**Akbulak array**	**12.38**	**9**	⇑Pn	**Pn**	**16 08 36.7**	**-1.7**
	comp=Z,3.3nm,0.7s,baz=205,slow=14,SNR=30						
AB31				⇓Sn	**Sn**	**16 10 53.3**	**-2.7**
	comp=Z,6.0nm,0.7s,baz=210,slow=20,SNR=6.6						
ABKAR	**Akbulak array**	**12.38**	**9**	Pn	**Pn**	**16 08 36.5**	**-1.9**
	comp=Z,2.8nm,0.4s						
ABKAR				*e*Sn	**Sn**	**16 10 46.1**	**-10**
ABKAR	**Akbulak array**	**12.38**	**9**	Pn	**Pn**	**16 08 36.5**	**-1.9**
	comp=Z,2.8nm,0.4s						
ABKAR				*e*Sn	**Sn**	**16 10 46.1**	**-10**
KIV	**Kislovodsk**	**12.91**	**307**	*e*Pn	**Pn**	**16 08 45.0**	**-0.7**
	comp=Z,10nm,0.6s						
KIV				*e*Sn	**Sn**	**16 11 03.2**	**-5.8**
KIV	**Kislovodsk**	**12.91**	**307**	*e*P	**Pn**	**16 08 46.7**	**+1.1**
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV	**Kislovodsk**	**12.91**	**307**	*e*Pn	**Pn**	**16 08 45.0**	**-0.6**
	comp=Z,10nm,0.6s						
KIV	**Kislovodsk**	**12.91**	**307**	*e*P	**Pn**	**16 08 46.7**	**+1.1**
	comp=Z,12nm,1.0s						
KIV				*e*Sn	**Sn**	**16 11 03.2**	**-5.8**
AKTK	**Aktyubinsk**	**13.40**	**3**	Pn	**Pn**	**16 08 51.2**	**-1.1**
AKTK				Sn	**Sn**	**16 11 15.2**	**-5.7**
AKTK	**Aktyubinsk**	**13.40**	**3**	Pn	**Pn**	**16 08 51.2**	**-1.1**
AKTK				Sn	**Sn**	**16 11 15.2**	**-5.7**
AKTO	**Aktyubinsk**	**13.40**	**3**	Pn	**Pn**	**16 08 51.2**	**-1.1**
	comp=Z,1.0nm,0.3s,baz=170,slow=13,SNR=14						
AKTO				Sn	**Sn**	**16 11 15.2**	**-5.7**
	comp=Z,0.3nm,0.3s,baz=172,slow=6.2,SNR=3.2						
AKTO	**Aktyubinsk**	**13.40**	**3**	P	**Pn**	**16 08 51.2**	**-1.1**
AKTO						16 11 15.2	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
EKS2	**Erkin-Say**	**14.02**	**61**	*e*Pn	**Pn**	**16 08 59.2**	**-1.5**
EKS2	**Erkin-Say**	**14.02**	**61**	*e*Pn	**Pn**	**16 08 59.2**	**-1.6**
UCH	**Uchtor**	**14.42**	**64**	*e*Pn	**Pn**	**16 09 04.0**	**-2.2**
	comp=Z,3.1nm,0.8s						
UCH	**Uchtor**	**14.42**	**64**	*e*Pn	**Pn**	**16 09 04.0**	**-2.2**
	comp=Z,3.1nm,0.8s						
AAK	**Ala-Archa**	**14.51**	**62**	Pn	**Pn**	**16 09 06.2**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=224,slow=10.0,SNR=2.9						
AAK	**Ala-Archa**	**14.51**	**62**	P	**Pn**	**16 09 06.2**	**-1.3**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK	**Ala-Archa**	**14.51**	**62**	Pn	**Pn**	**16 09 06.2**	**-1.3**
ZRNK	**Zerenda**	**17.97**	**24**	⇑Pn	**Pn**	**16 09 51.8**	**-0.1**
	comp=Z,4.9nm,0.9s						
ZRNK				⇓Sn	**Sn**	**16 13 03.3**	**-8.6**
	comp=Z,3.3nm,0.7s						
VOSK	**Vostochnaya**	**18.47**	**28**	⇑Pn	**Pn**	**16 09 58.0**	**0.0**
	comp=Z,4.6nm,0.7s						
VOSK				⇓Sn	**Sn**	**16 13 17.2**	**-6.7**
	comp=Z,2.2nm,0.7s						
VOSK	**Vostochnaya**	**18.47**	**28**	Pn	**Pn**	**16 09 58.0**	**0.0**
	comp=Z,4.6nm,0.7s						
BRVK	**Borovoye**	**18.49**	**26**	*ce*P	**Pn**	**16 10 00.3**	**+2.1**
BRVK				pmax	pmax		
	comp=Z,11nm,1.2s						
BVA0	**Borovoye Array**	**18.50**	**26**	⇑Pn	**Pn**	**16 09 58.7**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=202,slow=11,SNR=55						
BVA0				⇑Sn	**Sn**	**16 13 20.2**	**-4.5**
	comp=Z,0.5nm,0.9s,baz=224,slow=29,SNR=4.3						
BVAR	**Borovoye Array**	**18.50**	**26**	P	**Pn**	**16 09 58.8**	**+0.5**
	comp=Z,2.4nm,0.3s,baz=210,slow=10,SNR=57						
BVAR				S	**Sn**	**16 13 21.1**	**-3.6**
	comp=Z,0.3nm,0.3s,baz=216,slow=27,SNR=4.6						
BVAR	**Borovoye Array**	**18.50**	**26**	P	**Pn**	**16 09 58.8**	**+0.4**
BVAR				S	**Sn**	**16 13 21.1**	**-3.6**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BVAR	**Borovoye Array**	**18.50**	**26**	P	**Pn**	**16 09 58.8**	**+0.4**
BVAR				S	**Sn**	**16 13 21.1**	**-3.6**
BR131	**Keskin Array S**	**18.53**	**285**	P	**Pn**	**16 09 57.8**	**-1.1**
	comp=Z,2.0nm,0.9s						
BR131	**Keskin Array S**	**18.53**	**285**	P	**Pn**	**16 09 57.8**	**-1.0**
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**18.53**	**285**	P	**Pn**	**16 09 59.9**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=98,slow=11,SNR=5.2						
BRTR	**Keskin Array B**	**18.53**	**285**	*ce*P	**Pn**	**16 10 03.7**	**+4.9**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**18.53**	**285**	P	**Pn**	**16 09 59.8**	**+1.0**
VSR	**Storozhevoye**	**19.04**	**324**	*e*P	**Pn**	**16 10 07.7**	**+2.8**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSR				pmax	pmax		
	comp=N,3.0nm,0.3s						
VSR				pmax	pmax		
	comp=E,3.0nm,0.4s						
ARU	**Arti**	**19.41**	**3**	*e*P	**Pn**	**16 10 08.9**	**-0.5**
	comp=E,7.6nm,0.7s						
ARU	**Arti**	**19.41**	**3**	*c i*P	**Pn**	**16 10 08.5**	**-0.9**
ARU				S	**Sn**	**16 13 38.9**	**-7.8**
ARU				pmax	pmax		
	comp=Z,11nm,1.2s						
ARU	**Arti**	**19.41**	**3**	*e*P	**Pn**	**16 10 08.9**	**-0.5**
	comp=Z,7.6nm,0.7s						
KURK	**Kurchatov**	**20.60**	**42**	*e*P	**P**	**16 10 22.1**	**+1.0**
	comp=Z,3.5nm,0.6s						
KURK	**Kurchatov**	**20.60**	**42**	P	**P**	**16 10 22.4**	**+1.2**
	comp=Z,2.3nm,0.6s,baz=242,slow=12,SNR=18						
KURK	**Kurchatov**	**20.60**	**42**	*ce*P	**P**	**16 10 24.0**	**+2.8**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURK	**Kurchatov**	**20.60**	**42**	*e*P	**P**	**16 10 22.1**	**+0.9**
	comp=Z,3.5nm,0.6s						
MK31	**Makanchi Array**	**21.08**	**55**	Pn	**P**	**16 10 28.1**	**+1.7**
	comp=Z,1.5nm,0.5s,mb3.6,baz=241,slow=9.2,SNR=26						
MK31	**Makanchi Array**	**21.08**	**55**	*e*P	**P**	**16 10 27.9**	**+1.5**
MK31	**Makanchi Array**	**21.08**	**55**	Pn	**P**	**16 10 28.1**	**+1.7**
	comp=Z,1.5nm,0.5s,mb3.6,SNR=26						
MKAR	**Makanchi Array**	**21.08**	**55**	P	**P**	**16 10 28.5**	**+2.1**
	comp=Z,2.7nm,0.7s,mb3.7,baz=242,slow=11,SNR=22						
MKAR	**Makanchi Array**	**21.08**	**55**	P	**P**	**16 10 28.5**	**+2.1**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**21.08**	**55**	P	**P**	**16 10 28.5**	**+2.1**
OBN	**Obninsk**	**22.83**	**329**	*e*P	**P**	**16 10 48.1**	**+3.1**
OBN				*i*		16 11 11.9	
OBN				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.2						
OBN	**Obninsk**	**22.83**	**329**	*e*P	**P**	**16 10 48.1**	**+3.1**
	comp=Z,11nm,1.1s,mb4.2						
AKASG	**Malin Array Be**	**24.08**	**313**	P	**P**	**16 10 57.3**	**-0.1**
	comp=Z,5.7nm,0.9s,mb4.0,baz=110,slow=8.1,SNR=10.0						
AKASG	**Malin Array Be**	**24.08**	**313**	*ce*P	**P**	**16 11 00.2**	**+2.8**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKASG	**Malin Array Be**	**

ellipse: s-maj=30.5km s-min=17.8km az=49.0
*BJI **09** 16:12:35.5, 32°.33N× 105°.16E, h14km, mB4.3/5, mb4.0/7, ML4.0/23, Ms3.8/14, Ms7 3.7/13*
*NEIC **09** 16:12:37.5±2.4, 32°.31N× 104°.99E, h26km±19km, mb4.0/9, Error ellipse: s-maj=10.7km s-min=6.6km az=66.0*

ISC 09 16:12:35.2±0.8, 32°.38N±0°.02× 105°.08E±0°.03, h7km±5km, n45, σ1§18/59, mb3.9/21, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.85**	**218**	Pn	**Pn**	**16 13 08.9**	**+1.6**
CD2				**Pg**	**Pg**	**16 13 10.7**	**0.0**
CD2				Sg	**Sg**	**16 13 35.6**	**+0.9**
CD2				smax			
	comp=N,8μm,0.5s						
CD2				smax			
	comp=E,9μm,0.7s						
XAN	**Xi'an**	**3.62**	**62**	Pn	**Pn**	**16 13 35.5**	**+3.9**
XAN				Pg	**Pg**	**16 13 42.8**	**-1.7**
XAN				Sn	**Sb**	**16 14 24.2**	**+0.6**
XAN				Sg	**Sg**	**16 14 32.5**	**+1.1**
XAN				smax			
	comp=N,540nm,0.7s						
XAN				smax			
	comp=E,180nm,0.6s						
XAN				LR	LR		
	comp=N,600nm,7.3s						
XAN				LR	LR		
	comp=E,200nm,10.7s						
XAN				LR	LR		
	comp=Z,180nm,6.6s						
LZH	**Lanzhou**	**3.84**	**345**	Pn	**Pn**	**16 13 37.7**	**+3.1**
LZH				Pg	**Pg**	**16 13 47.8**	**-0.9**
LZH				Sn	**Sn**	**16 14 23.2**	**+3.2**
LZH				Sg	**Sg**	**16 14 36.9**	**-1.5**
LZH				smax			
	comp=N,1μm,0.6s						
LZH				smax			
	comp=E,2μm,0.6s						
LZH				LR	LR		
	comp=E,2μm,4.0s						
LZH				LR	LR		
	comp=Z,3μm,5.4s						
ENH	**Enshi**	**4.32**	**118**	*e*Pn	**Pn**	**16 13 43.3**	**+2.0**
ENH				*e*S	**Sb**	**16 14 44.9**	**+1.3**
GYA	**Guiyang**	**6.06**	**166**	Pn	**Pn**	**16 14 06.0**	**+0.8**
GYA				Sn	**Sn**	**16 15 11.7**	**-3.1**
GYA				smax			
	comp=N,200nm,0.8s						
GYA				smax			
	comp=E,250nm,0.9s						
KMI	**Kunming**	**7.52**	**196**	Pn	**Pn**	**16 14 25.9**	**+0.7**
KMI				Sn	**Sn**	**16 15 55.0**	**+4.3**
KMI				smax			
	comp=N,27nm,0.9s						
KMI				smax			
	comp=E,25nm,0.8s						
KMI				LR	LR		
	comp=N,150nm,3.8s						
KMI				LR	LR		
	comp=E,230nm,4.2s						
KMI				LR	LR		
	comp=Z,100nm,5.3s						
WHN	**Wuhan**	**8.12**	**101**	P	**Pn**	**16 14 33.3**	**-0.3**
WHN				S	**Sn**	**16 15 59.9**	**-5.8**
WHN				LR	LR		
	comp=N,1μm,5.4s						
WHN				LR	LR		
	comp=E,1μm,5.6s						
WHN				LR	LR		
	comp=Z,510nm,10.4s						
GTA	**Gaotai**	**8.21**	**330**	*e*P	**Pn**	**16 14 35.9**	**+1.2**
GTA				pP		16 14 39.4	
GTA				S	**Sn**	**16 16 08.3**	**+0.5**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				LR	LR		
	comp=N,430nm,9.2s						
GTA				LR	LR		
	comp=E,370nm,10.4s						
GTA				LR	LR		
	comp=Z,480nm,9.8s						
HHC	**Hu-ho-hao-te**	**9.93**	**30**	*e*P	**Pn**	**16 14 57.8**	**-0.4**
HHC				S	**Sn**	**16 16 49.0**	**-0.8**
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,41nm,4.2s						
HHC				LR	LR		
	comp=N,160nm,4.3s						
HHC				LR	LR		
	comp=E,230nm,4.8s						
HHC				LR	LR		
	comp=Z,150nm,5.2s						
LSA	**Lhasa**	**12.24**	**261**	Pn	**Pn**	**16 15 28.8**	**-1.2**
QIZ	**Qiongzhong**	**13.97**	**161**	*e*Pn	**Pn**	**16 15 52.0**	**-1.5**
	comp=Z,24nm,1.3s						
CHTO	**Chiang Mai**	**14.59**	**204**	*e*Pn	**Pn**	**16 15 59.1**	**-3.1**
	comp=Z,8.9nm,1.2s						
CM31	**Chiang Mai Arr**	**14.93**	**203**	*e*Pn	**Pn**	**16 16 07.2**	**+0.5**
	comp=Z,4.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**14.93**	**203**	Pn	**Pn**	**16 16 07.2**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=14,slow=12,SNR=11						
SONM	**Songino Array**	**15.47**	**3**	Pn	**Pn**	**16 16 13.5**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=186,slow=16,SNR=2.7						
ULN	**Ulaanbaatar**	**15.54**	**5**	Pn	**Pn**	**16 16 16.3**	**+1.7**
	comp=Z,4.2nm,0.9s						
KSRS	**Korea Array**	**19.39**	**69**	P	**Pn**	**16 17 02.3**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=253,slow=11,SNR=9.5						
MK31	**Makanchi Array**	**22.60**	**316**	*e*P	**P**	**16 17 36.3**	**+0.1**
MKAR	**Makanchi Array**	**22.60**	**316**	P	**P**	**16 17 37.6**	**+1.4**
	comp=Z,1.2nm,0.7s,mb3.4,baz=120,slow=12,SNR=12						
ZALV	**Zalesovo Beam**	**25.96**	**332**	P	**P**	**16 18 09.5**	**+1.3**
	comp=Z,0.9nm,0.6s,mb3.5,baz=135,slow=9.3,SNR=5.9						
UCH	**Uchtor**	**26.11**	**301**	*e*P	**P**	**16 18 10.4**	**+0.9**
	comp=Z,5.9nm,1.2s,mb4.0						
EKS2	**Erkin-Say**	**26.73**	**302**	P	**P**	**16 18 13.3**	**-1.9**
	comp=Z,1.6nm,0.8s,mb3.6						
KURK	**Kurchatov**	**26.75**	**321**	*e*P	**P**	**16 18 14.7**	**-0.7**
	comp=Z,1.3nm,0.6s,mb3.6						
KURK	**Kurchatov**	**26.75**	**321**	P	**P**	**16 18 16.2**	**+0.9**
	comp=Z,1.3nm,0.7s,mb3.6,baz=125,slow=10.0,SNR=4.8						
KKM	**Kota Kinabalu**	**28.19**	**156**	*e*P	**P**	**16 18 28.0**	**-0.5**
	comp=Z,7.0nm,0.9s,mb4.3						
BVAR	**Borovoye Array**	**32.33**	**320**	P	**P**	**16 19 03.1**	**-1.7**
	comp=Z,0.3nm,0.4s,mb3.5,baz=112,slow=38,SNR=2.8						
ABKAR	**Akbulak array**	**37.47**	**310**	*e*P	**P**	**16 19 50.0**	**+0.8**
	comp=Z,1.6nm,0.7s,mb4.0						
AKTK	**Aktyubinsk**	**38.89**	**312**	P	**P**	**16 20 01.8**	**+0.6**
AKTO	**Aktyubinsk**	**38.89**	**312**	P	**P**	**16 20 01.8**	**+0.6**
	comp=Z,0.5nm,0.5s,mb3.5,baz=107,slow=14,SNR=2.5						
ARU	**Arti**	**39.95**	**321**	*e*P	**P**	**16 20 14.1**	**+4.2**
ARCES	**ARCESS Array B**	**56.44**	**335**	P	**P**	**16 22 17.6**	**+0.6**
	comp=Z,1.3nm,0.7s,mb4.1,baz=92,slow=7.3,SNR=7.3						
BRTR	**Keskin Array B**	**56.84**	**299**	P	**P**	**16 22 20.2**	**-0.2**
	comp=Z,1.0nm,0.8s,mb3.9,baz=81,slow=4.0,SNR=4.2						
FINES	**FINESS Array B**	**56.98**	**326**	P	**P**	**16 22 20.2**	**-0.8**
	comp=Z,1.4nm,0.8s,mb4.0,baz=99,slow=26,SNR=4.8						
AKASG	**Malin Array Be**	**57.13**	**313**	P	**P**	**16 22 20.6**	**-1.7**
	comp=Z,1.0nm,0.5s,mb4.1,baz=67,slow=7.2,SNR=7.3						
WRAB	**Tennant Creek**	**59.08**	**148**	*e*P	**P**	**16 22 35.3**	**-0.9**
	comp=Z,5.4nm,0.7s,mb4.7						
WB2	**Warramunga Arr**	**59.09**	**148**	*e*P	**P**	**16 22 35.5**	**-0.7**
ASAR	**Alice Springs**	**62.16**	**150**	P	**P**	**16 22 57.0**	**-0.1**
	comp=Z,1.2nm,0.7s,mb4.1,baz=336,slow=6.7,SNR=24						
NOA	**NORSAR Array B**	**64.04**	**327**	P	**P**	**16 23 07.9**	**-1.3**
	comp=Z,1.2nm,0.7s,mb4.0,baz=71,slow=6.9,SNR=2.9						
OHAK	**Old Harbor**	**69.24**	**35**	*e*P	**P**	**16 23 39.0**	**-3.6**
	comp=Z,3.7nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**72.63**	**148**	P	**P**	**16 24 02.4**	**-0.9**
	comp=Z,0.2nm,0.4s,mb3.4						
LPG	**La Plagne**	**72.98**	**313**	*e*P	**P**	**16 24 09.9**	**+4.5**
	comp=Z,7.2nm,0.6s,mb4.5						
LPL	**La Plagne**	**72.99**	**313**	*e*P	**P**	**16 24 09.8**	**+4.3**
	comp=Z,6.8nm,0.6s,mb4.4						
ORIF	**Oris-en-Rattie**	**73.81**	**313**	*e*P	**P**	**16 24 14.6**	**+4.3**
YKA	**Yellowknife Ar**	**80.23**	**18**	P	**P**	**16 24 45.7**	**-0.4**
YKA	**Yellowknife Ar**	**80.23**	**18**	P	**P**	**16 24 45.7**	**-0.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=328,slow=5.3,SNR=6.8						

*ISCJB **09** 16:31:33.7±0.9, 32°.50N±0°.03× 105°.29E±0°.04, h8km±6km, mb3.9/14, Error ellipse: s-maj=5.7km s-min=4.6km az=32.0*
*IDC **09** 16:31:34.4±1.0, 32°.44N× 105°.17E, h0km, mb3.7/9, mb1 3.8/12, mb1mx3.7/24, mbtmp3.7/12, ML3.6/2, MS3.5/4, Ms1 3.5/4, ms1mx3.1/26, Error ellipse: s-maj=33.6km s-min=18.8km az=52.0*
*NEIC **09** 16:31:36.0±0.4, 32°.53N× 105°.24E, h10km, mb4.1/5, Error ellipse: s-maj=8.5km s-min=7.5km az=83.0*
*BJI **09** 16:31:36.0, 32°.52N× 105°.37E, h15km, mB4.3/8, mb4.2/12, ML4.2/26, Ms4.2/17, Ms7 3.7/14*

ISC 09 16:31:35.6±1.0, 32°.49N±0°.03× 105°.24E±0°.04, h6km±7km, n39, σ1§05/51, mb3.9/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.02**	**219**	Pn	**Pn**	**16 32 11.0**	**+0.8**
CD2				**Pg**	**Pg**	**16 32 13.6**	**-0.7**
CD2				Sg	**Sg**	**16 32 40.7**	**+0.2**
CD2				smax			
	comp=N,10μm,0.5s						
CD2				smax			
	comp=E,9μm,0.6s						
XAN	**Xi'an**	**3.45**	**62**	Pn	**Pn**	**16 32 30.8**	**+0.9**
XAN				Sg	**Sg**	**16 33 27.4**	**+1.0**
XAN				smax			
	comp=N,920nm,0.9s						
XAN				smax			
	comp=E,400nm,1.0s						
XAN				LR	LR		
	comp=N,2μm,6.8s						
XAN				LR	LR		
	comp=E,440nm,5.1s						
XAN				LR	LR		
	comp=Z,380nm,6.1s						
LZH	**Lanzhou**	**3.77**	**343**	Pn	**Pn**	**16 32 35.7**	**+1.4**
LZH				Pg	**Pg**	**16 32 43.3**	**-4.6**
LZH				Sn	**Sn**	**16 33 20.9**	**+1.9**
LZH				Sg	**Sg**	**16 33 32.6**	**-4.1**
LZH				smax			
	comp=N,890nm,0.7s						
LZH				smax			
	comp=E,2μm,0.8s						
LZH				LR	LR		
	comp=E,2μm,4.5s						
LZH				LR	LR		
	comp=Z,3μm,5.7s						
ENH	**Enshi**	**4.25**	**120**	*e*Pn	**Pn**	**16 32 41.8**	**+0.9**
ENH				*e*Sg	**Sg**	**16 33 47.9**	**-4.3**
GYA	**Guiyang**	**6.14**	**168**	Pn	**Pn**	**16 33 07.5**	**+0.7**
GYA				Sn	**Sn**	**16 34 16.1**	**-1.3**
GYA				Sg	**Sg**	**16 34 47.3**	**-5.4**
GYA				smax			
	comp=N,100nm,0.8s						
GYA				smax			
	comp=E,140nm,0.9s						
GYA				LR	LR		
	comp=N,520nm,4.3s						
GYA				LR	LR		
	comp=E,820nm,4.1s						
GYA				LR	LR		
	comp=Z,320nm,4.4s						
KMI	**Kunming**	**7.66**	**197**	Pn	**Pn**	**16 33 31.0**	**+3.2**
KMI				Sn	**Sn**	**16 34 47.6**	**-7.3**
KMI				smax			
	comp=N,31nm,1.4s						
KMI				smax			
	comp=E,46nm,1.4s						
KMI				LR	LR		
	comp=N,980nm,7.9s						
KMI				LR	LR		
	comp=E,720nm,6.8s						
KMI				LR	LR		
	comp=Z,450nm,8.5s						
WHN	**Wuhan**	**8.02**	**102**	S	**Sn**	**16 35 02.9**	**-0.7**
WHN				LR	LR		
	comp=N,2μm,11.4s						
WHN				LR	LR		
	comp=E,1μm,13.5s						
WHN				LR	LR		
	comp=Z,640nm,14.6s						
GTA	**Gaotai**	**8.19**	**329**	*e*P	**Pn**	**16 33 34.6**	**-0.4**
GTA				S	**Sn**	**16 35 07.0**	**-0.8**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				LR	LR		
	comp=N,650nm,9.8s						
GTA				LR	LR		
	comp=E,810nm,8.9s						
GTA				LR	LR		
	comp=Z,700nm,12.5s						
BTO	**Baotou**	**8.96**	**24**	*e*P	**Pn**	**16 33 43.1**	**-2.5**
BTO				LR	LR		
	comp=N,360nm,8.2s						
BTO				LR	LR		
	comp=E,180nm,7.5s						
HHC	**Hu-ho-hao-te**	**9.76**	**30**	*e*P	**Pn**	**16 33 57.1**	**+0.5**
HHC				pP		16 34 00.3	
HHC				PP		16 34 05.3	
HHC				*e*S	**Sn**	**16 35 46.3**	**-0.2**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,76nm,3.9s						
HHC				LR	LR		
	comp=Z,560nm,5.8s						
BJT	**Baijiatuan**	**11.58**	**46**	Pn	**Pn**	**16 34 20.0**	**-1.4**
LSA	**Lhasa**	**12.39**	**261**	*e*Pn	**Pn**	**16 34 33.4**	**+0.8**
	comp=Z,9.6nm,1.2s						
CHTO	**Chiang Mai**	**14.75**	**204**	*e*Pn	**Pn**	**16 35 05.3**	**+0.5**
	comp=Z,3.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**15.08**	**204**	Pn	**Pn**	**16 35 07.8**	**-1.5**
CMAR				Lg		16 39 42.5	
CMAR				LR	LR	16 41 39.5	
CMAR	**Chiang Mai Arr**	**15.08**	**204**	Pn	**Pn**	**16 35 07.8**	**-1.5**
	baz=8.2,slow=8.1,SNR=3.1						
CMAR				Lg		16 39 42.5	
	comp=Z,0.1nm,0.3s,baz=98,slow=28,SNR=4.0						
CMAR				LR	LR	16 41 39.5	
	comp=Z,67nm,19.6s,baz=345,slow=40						
SONM	**Songino Array**	**15.35**	**3**	Pn	**Pn**	**16 35 11.1**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=186,slow=14,SNR=10						
SONM				Lg		16 39 48.7	
	comp=Z,0.1nm,0.3s,baz=180,slow=28,SNR=3.0						
SONM				LR	LR	16 41 44.0	
	comp=Z,256nm,19.2s,baz=99,slow=40						
ULN	**Ulaanbaatar**	**15.42**	**5**	*e*Pn	**Pn**	**16 35 12.0**	**-1.6**
	comp=Z,4.4nm,0.8s						
ULN				*e*S	**Sn**	**16 37 58.0**	**-6.7**
YHNB	**Yeheng**	**16.16**	**115**	*e*Pn	**Pn**	**16 35 25.1**	**+1.7**
	comp=Z,21nm,1.2s						
KSRS	**Korea Array**	**19.22**	**69**	P	**Pn**	**16 36 01.4**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=253,slow=10,SNR=17						
KSRS				LR	LR	16 43 52.8	
	comp=Z,121nm,19.5s,baz=162,slow=38						
HIA	**Hailar**	**19.97**	**29**	*e*P	**Pn**	**16 36 05.8**	**-4.3**
MDJ	**Mudanjiang**	**22.47**	**50**	P	**P**	**16 36 37.1**	**+1.6**
MK31	**Makanchi Array**	**22.61**	**316**	*e*P	**P**	**16 36 36.7**	**-0.3**
MKAR	**Makanchi Array**	**22.61**	**316**	P	**P**	**16 36 37.0**	**0.0**
MKAR	**Makanchi Array**	**22.61**	**316**	P	**P**	**16 36 37.0**	**0.0**
	comp=Z,1.3nm,0.6s,mb3.5,baz=122,slow=9.2,SNR=19						
ZALV	**Zalesovo Beam**	**25.93**	**332**	P	**P**	**16 37 07.9**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.3,baz=129,slow=12,SNR=4.0						
UCH	**Uchtor**	**26.17**	**301**	*e*P	**P**	**16 37 12.2**	**+1.5**
	comp=Z,5.7nm,1.1s,mb4.0						
AAK	**Ala-Archa**	**26.27**	**302**	LR	LR	16 48 02.0	
	comp=Z,175nm,19.8s,baz=315,slow=38						
KURK	**Kurchatov**	**26.75**	**321**	*e*P	**P**	**16 37 14.8**	**-1.1**
	comp=Z,3.4nm,1.0s,mb3.8						
KURK	**Kurchatov**	**26.75**	**321**	P	**P**	**16 37 15.3**	**-0.6**
	comp=Z,1.2nm,0.9s,mb3.4,baz=136,slow=8.0,SNR=7.7						
KULM	**Kulim**	**27.40**	**190**	P	**P**	**16 37 20.9**	**-1.1**
	comp=Z,3.4nm,0.8s,mb3.9						
BVAR	**Borovoye Array**	**32.33**	**320**	P	**P**	**16 38 05.7**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.4,baz=140,slow=11,SNR=2.6						
ARCES	**ARCESS Array B**	**56.40**	**335**	P	**P**	**16 41 17.2**	**-0.2**
	comp=Z,1.5nm,0.7s,mb4.2,baz=81,slow=7.5,SNR=11						
BRTR	**Keskin Array B**	**56.91**	**299**	P	**P**	**16 41 21.5**	**0.0**
	comp=Z,0.7nm,0.8s,mb3.7,baz=81,slow=7.6,SNR=4.4						
FINES	**FINESS Array B**	**56.97**	**326**	P	**P**	**16 41 21.1**	**-0.5**
	comp=Z,1.1nm,0.7s,mb4.0,baz=81,slow=8.9,SNR=3.5						
AKASG	**Malin Array Be**	**57.15**	**313**	P	**P**	**16 41 22.6**	**-0.4**
	comp=Z,0.7nm,0.4s,mb4.0,baz=70,slow=6.7,SNR=5.3						
ASAR	**Alice Springs**	**62.19**	**150**	P	**P**	**16 41 57.5**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.8,baz=334,slow=6.7,SNR=12						
CDF	**Champ du Feu**	**71.30**	**316**	*e*P	**P**	**16 42 56.7**	**+0.8**
	comp=Z,3.3nm,0.7s,mb4.1						
LPG	**La Plagne**	**73.01**	**313**	*e*P	**P**	**16 43 07.0**	**+0.8**
	comp=Z,5.7nm,0.7s,mb4.3						
LPL	**La Plagne**	**73.01**	**313**	*e*P	**P**	**16 43 06.9**	**+0.7**
	comp=Z,3.4nm,0.6s,mb4.2						

*IDC **09** 16:36:36.9±0.5, 60°.66S× 153°.67E, h0km, mb5.1/15, mb1 5.1/16, mb1mx5.1/17, mbtmp5.1/16, MS5.9/16, Ms1 5.9/16, ms1mx5.9/18, Error ellipse: s-maj=19.9km s-min=13.6km az=81.0*
*ISCJB **09** 16:36:37.5±0.3, 60°.70S±0°.04× 153°.83E±0°.09, h10km, mb5.5/79, MS6.0/154, Error ellipse: s-maj=7.0km s-min=4.6km az=38.5*
*MOS **09** 16:36:38.9±2.1, 60°.37S× 153°.82E, h10km, mb5.5/21, MS6.0/31, Error ellipse: s-maj=26.5km s-min=9.9km az=89.5*
*NEIC **09** 16:36:38.2±0.2, 60°.69S× 153°.83E, h10km, mb5.7/36, MS6.0/121, MW6.3, Error ellipse: s-maj=8.9km s-min=7.2km az=89.0*
*DJA **09** 16:36:40, 60°.68S× 153°.88E, h6km, Mw6.0/32*
*BJI **09** 16:36:43.3, 60°.90S× 153°.18E, h38km, mB5.8/18, mb5.5/13, Ms5.9/28, Ms7 5.6/25*
*GCMT **09** 16:36:46.8±0.1, 60°.83S× 153°.59E, h12km, MW6.3, Moment Tensor Solution. s116,c259; s99,c202; Moment tensor: Scale 10¹⁸Nm; M_{rr}=0.17±.02; $M_{\theta\theta}$=2.80±.02; $M_{\phi\phi}$=-2.63±.02; $M_{r\theta}$=0.28±.05; $M_{\theta\phi}$=-2.49±.02; $M_{r\phi}$=0.28±.05; Best double couple: M_o=3.70000×10¹⁸ NP1:ϕs=156.00000°, δ84.00000°, λ=-3.00000°. NP2: ϕs=246.00000°, δ87.00000°, λ=-174.00000°. Principal axes: T 3.7800, Plg2.0000°, Azm21.0000°; N -0.1400, Plg84.0000°, Azm270.0000°; P -3.6400, Plg6.0000°, Azm111.0000°; Data Used: II IU CN IC G. Mantle waves from 107 sta. Surface waves: sta=111, comp=247, per=50.*

ISC 09 16:36:39.0±0.3, 60°.75S±0°.04× 154°.00E±0°.09, h10km, (h34km±6km: pP-P), n574, σ1§27/187, mb5.5/78, MS6.0/154, 27C-25D, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**6.81**	**25**	*e*P	**Pn**	**16 38 13.6**	**-5.2**
MCQ				*e*S	**Sn**	**16 39 41.6**	**+5.3**
MCQ	**Macquarie Isla**	**6.81**	**25**	*e*P	**Pn**	**16 38 15.2**	**-3.6**
DRV	**Dumont d'Urvil**	**8.57**	**220**	P	**Pn**	**16 38 42.0**	**-0.9**
DRV				L		16 40 00.0	
WHZ	**Wether Hill Ro**	**16.99**	**35**	PN	**Pn**	**16 40 37.5**	**+1.0**
TUZ	**Tuapeka**	**17.44**	**39**	PN	**Pn**	**16 40 42.7**	**+0.6**
MLZ	**Mavora Lakes**	**17.56**	**35**	PN	**Pn**	**16 40 43.8**	**+0.2**
SBA	**Scott Base**	**17.68**	**171⇑**	*e*Pn	**Pn**	**16 40 38.9**	**-6.0**
	7.4nm,0.7s						
SBA				*e*Sn	**Sn**	**16 44 09.4**	**+7.9**
SBA	**Scott Base**	**17.68**	**171⇑**	*e*P	**Pn**	**16 40 38.9**	**-6.0**
SBA				*e*		16 44 09.4	
SBA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ODZ	**Otahua Downs**	**18.57**	**40⇑**	*e*P	**Pn**	**16 40 56.5**	**+0.5**
	comp=Z,1μm,1.5s						
ODZ	**Otahua Downs**	**18.57**	**40**	P*	**Pn**	**16 40 55.6**	**-0.4**
MOO	**Moorlands**	**18.80**	**344**	*e*P	**Pn**	**16 40 56.4**	**-2.4**
MOO				*e*S	**Sn**	**16 44 30.6**	**+1.7**
JCZ	**Jackson Bay**	**18.89**	**35**	P*	**Pn**	**16 41 05.6**	**+5.6**
CASY	**Casey**	**19.81**	**235**	*e*P	**Pn**	**16 41 08.2**	**-2.5**
CASY				*es*P	sP	16 41 29.3	+16
CASY				*e*S	**Sn**	**16 44 46.5**	**-6.4**
CASY	**Casey**	**19.81**	**235⇑**	*e*P	**Pn**	**16 41 08.1**	**-2.7**
	comp=Z,3μm,2.4s						
RPZ	**Rata Peaks**	**19.89**	**39⇑**	*e*P	**Pn**	**16 41 11.8**	**-0.2**
	comp=Z,722nm,1.7s						
RPZ	**Rata Peaks**	**19.89**	**39**	P	**Pn**	**16 41 11.3**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=206,slow=8.8,SNR=18						
RPZ				LR	LR	16 47 11.3	
	comp=Z,63μm,21.3s,baz=190,slow=32						
RPZ	**Rata Peaks**	**19.89**	**39**	P*	**Pn**	**16 41 12.7**	**+0.8**
WVZ	**Waitaha Valley**	**20.38**	**37**	P*	**P**	**16 41 16.5**	**+1.0**
KHZ	**Kahutara**	**21.85**	**42**	*e*P	**P**	**16 41 32.2**	**+0.8**
	comp=Z,356nm,1.4s,mb5.6						
DSZ	**Denniston Nort**	**21.91**	**38**	P*	**P**	**16 41 31.4**	**-0.8**
NNZ	**Nelson**	**22.88**	**40**	P*	**P**	**16 41 42.0**	**-0.5**
QRZ	**Quartz Range**	**22.98**	**38**	P*	**P**	**16 41 40.9**	**-2.5**
SNZO	**South Karori**	**23.23**	**42**	P	**P**	**16 41 47.1**	**+1.0**
	comp=Z,584nm,1.8s,mb5.7						
TOO	**Toolangi**	**23.82**	**343**	*e*P	**P**	**16 41 51.2**	**-0.7**
TOO				*e*S	**S**	**16 46 10.7**	**+3.5**
MRZ	**Mangatainoka R**	**24.10**	**43**	P*	**P**	**16 41 53.7**	**-0.7**
CNB	**Canberra Magne**	**25.63**	**351**	*e*P	**P**	**16 42 07.4**	**-1.0**
CNB				*e*S	**S**	**16 46 47.9**	**+12**
CNB				*e*T		17 07 04.1	
CAN	**Canberra**	**25.65**	**351⇑**	*e*P	**P**	**16 42 08.4**	**-0.2**
	comp=Z,116nm,1.3s,mb5.2						
CAN				LR	LR		
	comp=Z,11μm,20.0s,MS5.4						
CAN	**Canberra**	**25.65**	**351⇑**	*e*P	**P**	**16 42 08.4**	**-0.2**
CAN				pmax	pmax		
	comp=Z,116nm,1.3s,mb5.2						
CAN				MLR	MLR		
	comp=Z,11μm,20.0s,MS5.4						
MIR	**Mirnyy**	**26.67**	**231**	*e*P	**P**	**16 42 19.0**	**+1.5**
MIR				*e*S	**S**	**16 46 56.0**	**+3.8**
MIR				pmax	pmax		
	comp=Z,63nm,1.8s,mb4.8						
MIR				pmax	pmax		
	comp=Z,2μm,10.0s						
MIR				pmax	pmax		
	comp=N,588nm,14.0s						
MIR				pmax	pmax		
	comp=E,2μm,12.0s						
MIR				smax			
	comp=N,22μm,16.0s						
MIR				smax			
	comp=E,13μm,16.0s						
MIR				MLR	MLR		
	comp=N,33μm,18.0s,MS6.1						
MIR				MLR	MLR		
	comp=E,40μm,18.0s,MS6.1						
MIR				MLR	MLR		
	comp=Z,51μm,18.0s,MS6.1						
URZ	**Urewera**	**26.78**	**43**	*e*P	**P**	**16 42 17.9**	**-0.9**
	comp=Z,59nm,1.1s,mb5.0						
URZ	**Urewera**	**26.78**	**43**	P	**P**	**16 42 18.8**	**+0.1**
	comp=Z,44nm,1.1s,mb4.9,baz=238,slow=5.1,SNR=8.8						
URZ				LR	LR	16 51 37.3	
	comp=Z,29μm,21.3s,MS5.8,baz=357,slow=34						
QSPA	**South Pole Qui**	**29.34**	**180⇑**	*e*P	**P**	**16 42 40.3**	**-1.0**
	comp=Z,125nm,1.1s,mb5.5						
QSPA	**South Pole Qui**	**29.34**	**180**	P	**P**	**16 42 42.0**	**+0.7**
	comp=Z,27nm,1.1s,mb4.9,baz=353,slow=3.2,SNR=46						
QSPA				LR	LR	16 53 36.4	
	comp=Z,90μm,21.9s,MS6.3,baz=14,slow=35						
STKA	**Stephens Creek**	**30.02**	**339**	*e*P	**P**	**16 42 46.8**	**-

MAW pmax pmax
comp=Z,20nm,1.4s
KLBR Kellerberrin 37.62 304 *e*P **P 16 43 52.6 -1.0**
comp=Z,94nm,1.5s,mb5.3
KLBR *e*T 17 21 07.1
NOUC Port Laguerre 39.57 18 *e*P **P 16 44 09.9 -0.2**
ASAR Alice Springs 39.59 330 P **P 16 44 07.8 -2.5**
comp=Z,13nm,1.0s,mb4.6,baz=163,slow=8.3,SNR=38
ASAR Alice Springs 39.59 330 P **P 16 44 07.8 -2.5**
ASAR pmax pmax
comp=Z,13nm,1.0s
DZM Mont Dzumac 39.62 18 *e*P **P 16 44 10.8 +0.3**
comp=Z,182nm,1.6s,mb5.6
DZM *e*S **S 16 50 09.5 -3.8**
comp=Z,4µm,31.3s
DZM *e*LR LR 16 54 58.1
comp=Z,68µm,29.4s,baz=200
DZM Mont Dzumac 39.62 18 *e*P **P 16 44 08.9 -1.6**
DZM Mont Dzumac 39.62 18 *e*P **P 16 44 10.0 -0.5**
comp=Z,37nm,0.6s,mb5.3
CTA Charters Tower 40.99 349 *e*P **P 16 44 20.5 -1.4**
comp=Z,40nm,1.1s,mb5.0
CTA *e*S **S 16 50 36.8 +3.0**
CTA Charters Tower 40.99 349 P **P 16 44 20.1 -1.8**
comp=Z,45nm,1.0s,mb5.0,baz=172,slow=11
CTA LR LR 16 59 11.6
comp=Z,12µm,18.7s,MS5.8,baz=177,slow=33
CTA Charters Tower 40.99 349 P **P 16 44 20.1 -1.8**
CTA pmax pmax
comp=Z,45nm,1.0s
CTA MLR MLR
comp=Z,12µm,18.7s
CTAO Charters Tower 40.99 349 *e*P **P 16 44 19.1 -2.8**
comp=Z,132nm,1.3s,mb5.4
CTAO LR LR
comp=Z,10µm,20.0s,MS5.7
CTAO Charters Tower 40.99 349 *e*P **P 16 44 19.1 -2.8**
CTAO pmax pmax
comp=Z,132nm,1.3s,mb5.4
CTAO MLR MLR
comp=Z,10µm,20.0s,MS5.7
CTAO Charters Tower 40.99 349 P **P 16 44 21.3 -0.6**
comp=Z,2µmcomp=Z,106nm,2.0s,mb5.1
CTAO Charters Tower 40.99 349 P **P 16 44 21.6 -0.3**
comp=Z,2µmcomp=Z,106nm,2.0s,mb5.1
SYO Syowa Base 42.32 209⇓ *e*P **P 16 44 31.0 -1.3**
WB2 Warramunga Arr 43.07 332 *e*P **P 16 44 36.0 -2.9**
WRAB Tennant Creek 43.08 332 P **P 16 44 37.0 -2.0**
comp=Z,433nm,1.4s,mb6.0,SNR=8.4
WRAB Tennant Creek 43.08 332 *e*P **P 16 44 35.9 -3.1**
comp=Z,159nm,1.4s,mb5.5
WRAB Tennant Creek 43.08 332 *e*P **P 16 44 35.9 -3.1**
WRAB pmax pmax
comp=Z,159nm,1.4s,mb5.6
WRAB Tennant Creek 43.08 332 P **P 16 44 36.4 -2.6**
comp=Z,2µmcomp=Z,96nm,1.6s,mb5.3
WRAB Tennant Creek 43.08 332 P **P 16 44 38.2 -0.8**
comp=Z,2µmcomp=Z,96nm,1.6s,mb5.3
PAF Port-aux-Franc 46.07 245 PFAKE 16 45 10.0 +7.4
PAF LR LR
comp=Z,8µm,20.0s,MS5.7
NVL N'lazarevskaya 46.11 196⇓ *i*P **P 16 45 01.2 -1.4**
NVL *e* 16 46 41.7
NVL *e*S **S 16 51 47.5 -0.2**
NVL *e**SS sS 16 51 54.8 +2.0
NVL *e* 16 54 59.6
NVL *e*SS SS 16 55 14.2 +2.2
NVL pmax pmax
comp=Z,65nm,1.2s,mb5.4
NVL MLR MLR
comp=Z,64µm,10.0s,MS6.9
MBWA Marble Bar 46.26 313 *e*P **P 16 45 02.5 -1.8**
comp=Z,155nm,1.3s,mb5.8
MBWA Marble Bar 46.26 313 P **P 16 45 02.3 -2.0**
MBWA Marble Bar 46.26 313 P **P 16 45 03.6 -0.7**
comp=Z,115nm,1.9s,mb5.5
MSVF Nonsavu 46.28 33 *e*P **P 16 44 57.2 -7.3**
comp=Z,92nm,1.5s,mb5.5
MSVF LR LR
comp=Z,13µm,22.0s,MS5.8
FITZ Fitzroy Crossi 47.15 322 *e*P **P 16 45 10.0 -1.3**
comp=Z,82nm,1.2s,mb5.5
FITZ *e*S **S 16 52 06.6 +3.0**
FITZ Fitzroy Crossi 47.15 322 *e*P **P 16 45 09.9 -1.4**
comp=Z,134nm,1.4s,mb5.7
FITZ Fitzroy Crossi 47.15 322 LR LR 17 02 20.5
comp=Z,6µm,21.8s,MS5.5,baz=166,slow=33
COEN Coen 47.38 346 *e*P **P 16 45 11.8 -1.3**
comp=Z,641nm,1.3s,mb6.4
COEN *e*PcP PcP 16 46 45.2 +1.5
KAKA Kakadu 50.49 332 *e*P **P 16 45 35.6 -1.4**
comp=Z,83nm,1.1s,mb5.7
KAKA Kakadu 50.49 332 *e*P **P 16 45 35.8 -1.3**
comp=Z,303nm,1.2s,mb6.2
RAR Rarotonga 50.92 60 *e*P **P 16 45 40.6 +0.3**
RAR Rarotonga 50.92 60 LR LR 17 03 02.4
comp=Z,5µm,19.9s,MS5.5,baz=29,slow=31
HNR Honiara 51.41 8 *e*P **P 16 45 41.9 -2.0**
comp=Z,213nm,1.0s,mb6.0
HNR LR LR
comp=Z,18µm,19.0s,MS6.1
HNR Honiara 51.41 8 LR LR 17 04 29.3
comp=Z,17µm,18.5s,MS6.1,baz=150,slow=33
HNR Honiara 51.41 8 *e*P **P 16 45 41.9 -2.0**
HNR pmax pmax
comp=Z,213nm,1.0s,mb6.0
HNR MLR MLR
comp=Z,18µm,19.0s,MS6.1
PMG Port Moresby 51.49 351 *e*P **P 16 45 44.7 +0.1**
comp=Z,59nm,1.0s,mb5.5
PMG Port Moresby 51.49 351 *c i*P **P 16 45 44.8 +0.3**
AFI Afiamalu 52.96 43 PFAKE 16 46 10.0 +15
AFI LR LR
comp=Z,5µm,21.0s,MS5.5
FUNA Funafuti 55.40 31 PFAKE 16 46 20.0 +6.8
FUNA LR LR
comp=Z,12µm,19.0s,MS6.0
WSI Waingapu 56.75 319 P **P 16 46 23.9 +1.0**
comp=Z,144nm,1.1s,mb5.9
MMRI Maumere 57.12 322 P **P 16 46 25.9 +0.4**
comp=Z,3µmcomp=Z,149nm,1.5s,mb5.8
PPT Papeete 58.64 69 *e*S **S 16 54 41.7 +1.3**
comp=Z,13µm,26.8s
PPT *e*SS SS 16 58 40.9 +7.9
comp=Z,7µm,27.2s
PPT *e*LQ 17 01 17.7
comp=Z,30µm,25.5s
PPT *e*LR LR 17 03 46.7
comp=Z,21µm,27.0s,baz=208
PPT Papeete 58.64 69 LR LR 17 06 06.6
comp=Z,µm,18.2s,MS5.7,baz=216,slow=30
KHKI Kahang-Kahang 59.55 315 P **P 16 46 42.8 +0.3**
comp=Z,2µmcomp=Z,65nm,2.2s,mb5.3
SRBI Singaraja 59.95 314 P **P 16 46 47.4 +2.2**
comp=Z,2µmcomp=Z,91nm,1.1s,mb5.7
BBSI Bau Bau 60.00 323 P **P 16 46 47.4 +1.8**
comp=Z,2µmcomp=Z,95nm,1.6s,mb5.6
GMJI Gumukmas 60.41 312 P **P 16 46 48.1 -0.3**
comp=Z,2µmcomp=Z,113nm,1.6s,mb5.7
RKT Rikitea 60.85 85 *e*S **S 16 55 15.1 +6.3**
comp=Z,16µm,30.2s
RKT *e*SS SS 16 59 12.2 +4.7
comp=Z,2µm,33.2s
RKT *e*LQ 17 02 18.6
comp=Z,14µm,28.2s
RKT *e*LR LR 17 04 42.0
comp=Z,43µm,28.8s,baz=209
KRKI Karangkates 60.87 311 P **P 16 46 53.8 +2.2**
comp=Z,244nm,2.3s,mb5.9
BKSI Bulukumba 60.90 321 P **P 16 46 51.7 -0.1**
comp=Z,741nmcomp=Z,34nm,1.3s,mb5.3
NLAI Namlea 60.91 329 P **P 16 46 52.2 +0.4**
comp=Z,2µmcomp=Z,154nm,1.4s,mb5.9
BAKI Biak 60.97 339 P **P 16 46 53.9 +1.7**
comp=Z,3µmcomp=Z,168nm,2.2s,mb5.8
KAPI Kappang 61.31 320 P **P 16 46 53.0 -1.5**
comp=Z,264nm,1.4s,mb6.2,SNR=5.1
KAPI Kappang 61.31 320 *e*P **P 16 46 52.5 -2.1**
comp=Z,71nm,1.2s,mb5.7
KAPI LR LR
comp=Z,7µm,21.0s,MS5.8
KAPI Kappang 61.31 320 P **P 16 46 53.6 -1.0**
comp=Z,50nm,1.2s,mb5.5,baz=242,slow=3.1,SNR=7.3
KAPI Kappang 61.31 320 P **P 16 46 52.9 -1.6**
comp=Z,631nmcomp=Z,25nm,1.4s,mb5.2
KDI Kendari 61.44 324 P **P 16 46 55.5 +0.1**
comp=Z,2µmcomp=Z,65nm,1.4s,mb5.6
SJI Sawahan 61.52 311 P **P 16 46 57.6 +1.6**
comp=Z,3µmcomp=Z,146nm,1.8s,mb5.8
NGJI Ngawi 61.97 311 P Px 16 47 09.7
SPSI Sidrap Palu 62.29 321 P **P 16 47 02.0 +0.8**
comp=Z,2µmcomp=Z,85nm,1.4s,mb5.7
BJII Banjamegara 62.66 309 P Px 16 47 16.0
TTSI Tana Toraja 63.15 321 P **P 16 47 06.8 0.0**
comp=Z,916nmcomp=Z,37nm,1.2s,mb5.4
CISI Cisompet, Garu 63.20 307 P **P 16 47 07.6 +0.4**
comp=Z,2µmcomp=Z,139nm,1.6s,mb5.8
COCO West Island 63.69 294 PFAKE 16 47 20.0 +10
COCO LR LR
comp=Z,7µm,22.0s,MS5.8
LEM Lembang 63.94 307 P **P 16 47 14.3 +2.2**
comp=Z,3µmcomp=Z,202nm,1.8s,mb5.9
KBKI Kotabaru 64.08 317 P **P 16 47 13.8 +0.8**
comp=Z,1µmcomp=Z,68nm,1.6s,mb5.4
TNTI Ternate 64.70 330 P **P 16 47 16.6 -0.4**
comp=Z,2µmcomp=Z,84nm,2.3s,mb5.3
CGJI Cibinong 64.90 305 P **P 16 47 16.6 -1.8**
comp=Z,2µmcomp=Z,89nm,1.4s,mb5.6
KASI Kota Agung 66.37 304 P **P 16 47 31.2 +3.3**
comp=Z,67nm,1.2s,mb5.5
LWLI Liwa 67.01 304 P **P 16 47 32.2 +0.2**
comp=Z,2µmcomp=Z,121nm,1.4s,mb5.7
KLSI 67.03 305 P **P 16 47 32.7 +0.6**
comp=Z,2µmcomp=Z,87nm,1.8s,mb5.5
MDSI Maura Dua 67.44 304 P **P 16 47 35.5 +0.8**
comp=Z,33nm,1.7s,mb5.1
TPI Tanjungpandan 67.65 309 P **P 16 47 35.8 -0.2**
comp=Z,1µmcomp=Z,78nm,1.5s,mb5.5
STKI Sintang 68.84 314 P **P 16 47 44.4 +1.0**
comp=Z,2µmcomp=Z,72nm,1.5s,mb5.4
KSI Kapahiang 68.84 303 P **P 16 47 44.2 +0.7**
comp=Z,3µmcomp=Z,118nm,1.7s,mb5.5
KSM Kuching 70.56 313 *e*P **P 16 47 51.6 -2.5**
comp=Z,80nm,1.3s,mb5.5
KSM LR LR
comp=Z,3µm,20.0s,MS5.5
KSM Kuching 70.56 313 P **P 16 47 54.2 +0.1**
TAOE Nuku Hiva Isla 70.63 73 *e*S S 16 57 07.9 -0.4
comp=Z,5µm,24.9s
TAOE *e*LQ 17 05 51.9
comp=Z,20µm,26.5s
TAOE *e*LR LR 17 09 21.2
comp=Z,11µm,25.1s,baz=221
SBUM Sibu 70.79 315 P **P 16 47 56.6 +1.1**
BTM Bintulu 71.20 316 P **P 16 47 58.9 +0.9**
DAV Davao City (W) 71.20 330 PFAKE 16 48 10.0 +12
DAV LR LR
comp=Z,2µm,19.0s,MS5.5
DAV Davao City (W) 71.20 330⇑ *e*P **P 16 47 57.0 -0.9**
SDSI Sungai Dareh 71.79 303 P **P 16 48 01.0 -0.5**
PDSI Padang 72.20 302 P **P 16 48 04.1 +0.1**
comp=Z,2µmcomp=Z,70nm,1.4s,mb5.4
PLCA Paso Flores 72.53 146 *e*P **P 16 48 05.5 -0.2**
comp=Z,344nm,2.8s,mb5.8
PLCA Paso Flores 72.53 146 P **P 16 48 05.6 -0.1**
comp=Z,18nm,1.1s,mb4.9,baz=190,slow=7.7,SNR=13
PLCA Paso Flores 72.53 146 P **P 16 48 05.6 -0.1**
PLCA pmax pmax
comp=Z,18nm,1.1s
PPI Padang Panjang 72.64 303 P **P 16 48 06.7 +0.1**
comp=Z,1µmcomp=Z,39nm,1.6s,mb5.1
KKM Kota Kinabalu 72.85 320 *e*P **P 16 48 07.0 -0.8**
comp=Z,116nm,1.6s,mb5.6
KKM LR LR
comp=Z,5µm,22.0s,MS5.7
KKM Kota Kinabalu 72.85 320 P **P 16 48 07.7 0.0**
MYKOM Kota Tinggi 73.29 307 P **P 16 48 11.4 +1.0**
KDM Kudat 73.48 321 P **P 16 48 12.0 +0.5**
KGM Kluang 73.70 306 P **P 16 48 13.6 +0.7**
MNSI Mandailing Nat 74.11 302 P **P 16 48 15.1 -0.2**
comp=Z,1µmcomp=Z,41nm,1.7s,mb5.1
GUMO Guam 74.44 351 *e*P **P 16 48 14.5 -2.6**
comp=Z,337nm,1.6s,mb6.0
GUMO LR LR
comp=Z,2µm,21.0s,MS5.3
GUMO Guam 74.44 351 P **P 16 48 15.6 -1.4**
comp=Z,30nm,1.0s,mb5.2,baz=202,slow=24,SNR=4.4
GUMO LR LR 17 16 31.1
comp=Z,1µm,19.5s,MS5.2,baz=180,slow=32
GUMO Guam 74.44 351 P **P 16 48 15.6 -1.5**
GUMO pmax pmax
comp=Z,30nm,1.0s,mb5.2
GUMO MLR MLR
comp=Z,1µm,19.5s,MS5.2
GUMO Guam 74.44 351 P **P 16 48 18.5 +1.4**
comp=Z,3µmcomp=Z,136nm,1.9s,mb5.6
FRIM Kepong 75.49 305 P **P 16 48 23.8 +0.5**
PSI Prapat 76.20 303 P **P 16 48 25.2 -2.1**
comp=Z,16nm,1.1s,mb4.9,baz=206,slow=6.3,SNR=11
PSI Prapat 76.20 303 P **P 16 48 25.2 -2.1**
PSI pmax pmax
comp=Z,16nm,1.1s,mb4.9
IPM Ipoh 76.86 305 P **P 16 48 31.5 +0.4**
TRQA Tornquist 77.23 152 *e*P **P 16 48 30.4 -2.5**
comp=Z,241nm,2.6s,mb5.7
TPTI 77.34 301 P **P 16 48 31.1 -2.6**
comp=Z,820nmcomp=Z,32nm,1.2s,mb5.1
KULM Kulim 77.75 305 *e*P **P 16 48 33.2 -2.8**
comp=Z,119nm,1.4s,mb5.6
KULM LR LR
comp=Z,3µm,21.0s,MS5.6
KULM Kulim 77.75 305 P **P 16 48 36.3 +0.3**
DGAR Diego Garcia 79.44 274 PFAKE 16 49 00.0 +15
DGAR LR LR
comp=Z,4µm,19.0s,MS5.8
SUR Sutherland 79.64 219 *e*P **P 16 48 47.0 +0.7**
comp=Z,205nm,1.6s,mb5.8
LPA La Plata 81.16 154 *de*P **P 16 48 58.0 +3.6**
LPA PKIKP PKiKP 16 54 18.0 -2.0
LPA S S 16 59 07.0 +2.9
LPA SKIKS 17 01 23.0
comp=Z,11µm,18.0s
ABPO Ambohimpanom 81.48 246 PFAKE 16 49 10.0 +14
ABPO LR LR
comp=Z,4µm,20.0s,MS5.8
BOSA Boshof 81.68 224 P **P 16 48 58.3 +1.1**
comp=Z,12nm,0.9s,mb4.8,baz=195,slow=3.3,SNR=7.6
BOSA LR LR 17 23 05.7
comp=Z,9µm,20.5s,MS6.1,baz=158,slow=34
BOSA Boshof 81.68 224 P **P 16 48 58.3 +1.0**
BOSA pmax pmax
comp=Z,12nm,0.9s,mb4.8
BOSA MLR MLR
comp=Z,9µm,20.5s,MS6.1
JOHN Johnston Islan 82.58 35 PFAKE 16 49 10.0 +8.1
JOHN LR LR
comp=Z,4µm,21.0s,MS5.8
LCO Las Campanas 83.43 142 *e*P **P 16 49 06.9 +0.5**
comp=Z,42nm,1.3s,mb5.3
LBTB Lobatse 84.86 226 *e*P **P 16 49 13.5 -0.2**
comp=Z,57nm,1.4s,mb5.5
LBTB Lobatse 84.86 226 *e*P **P 16 49 13.5 -0.3**
LBTB pmax pmax
comp=Z,57nm,1.4s,mb5.5
QIZ Qiongzhong 87.07 319 P **P 16 49 25.8 +1.3**
QIZ pP pP 16 49 35.5 +7.7
QIZ PP PP 16 52 49.1 +0.8
QIZ S S 17 00 01.6 -1.7
QIZ sS sS 17 00 19.6 +11
QIZ SS SS 17 05 45.5 -1.6
QIZ LR LR
comp=N,2µm,27.1s,MS5.4
QIZ LR LR
comp=E,1µm,26.3s,MS5.4
QIZ LR LR
comp=Z,4µm,49.5s
TPUB Ta-pu 88.02 330 *e*P **P 16 49 27.7 -1.3**
comp=Z,55nm,1.2s,mb5.7
CPUP Villa Florida 89.56 152 P **P 16 49 36.5 +0.1**
comp=Z,15nm,1.1s,mb5.2,baz=199,slow=5.6,SNR=8.4
CPUP LR LR 17 26 28.5
comp=Z,17µm,18.2s,MS6.5,baz=177,slow=33
CPUP Villa Florida 89.56 152 *e*P **P 16 49 37.0 +0.5**
CPUP MLR MLR
comp=Z,3µm,19.0s
QZH Quanzhou 90.11 328 P **P 16 49 41.6 +2.9**
QZH S S 17 00 32.2 +0.4
QZH SS SS 17 06 27.3 -4.0
QZH LR LR
comp=N,1µm,12.0s,MS5.7
QZH LR LR
comp=E,550nm,10.8s,MS5.7
QZH LR LR
comp=Z,4µm,20.8s
MSEY Mahe Island 90.11 260 PFAKE 16 49 50.0 +11
MSEY LR LR
comp=Z,7µm,22.0s,MS6.1
CM31 Chiang Mai Arr 90.41 309 *e*P **P 16 49 41.5 +1.2**
CM31 LR LR
comp=Z,3µm,20.0s,MS5.8
CMAR Chiang Mai Arr 90.41 309 P **P 16 49 39.6 -0.7**
comp=Z,4.5nm,1.1s,mb4.7,baz=193,slow=3.7,SNR=15
CMAR LR LR 17 27 27.6
comp=Z,3µm,20.9s,MS5.8,baz=153,slow=34
CMAR Chiang Mai Arr 90.41 309 P **P 16 49 39.6 -0.7**
CMAR pmax pmax
comp=Z,5.0nm,1.1s
CMAR MLR MLR
comp=Z,3µm,20.9s
KIP Kipapa 90.58 44 PFAKE 16 49 50.0 +9.0
KIP LR LR
comp=Z,2µm,20.0s,MS5.6
CHTO Chiang Mai 90.73 309 *e*P **P 16 49 42.0 +0.2**
comp=Z,55nm,1.5s,mb5.7
CHTO LR LR
comp=Z,3µm,20.0s,MS5.8
CHTO Chiang Mai 90.73 309 *e*P **P 16 49 42.0 +0.2**
CHTO pmax pmax
comp=Z,55nm,1.5s,mb5.7
CHTO MLR MLR
comp=Z,3µm,20.0s,MS5.8
CHTO Chiang Mai 90.73 309 P **P 16 49 42.9 +1.1**
comp=Z,27nm,1.6s,mb5.3
LSZ Lusaka 92.82 232 *e*P **P 16 49 52.0 +0.2**
comp=Z,61nm,2.1s,mb5.7
LSZ Lusaka 92.82 232 *e*P **P 16 49 52.0 +0.3**
LSZ pmax pmax
comp=Z,61nm,2.1s,mb5.7
GYA Guiyang 95.03 319⇓ P **P 16 50 02.3 +0.9**
GYA pP pP 16 50 12.9 +8.1
GYA sP sP 16 50 16.8 +11
GYA PP PP 16 53 53.4 +2.2
GYA SKS 17 00 33.7
GYA S S 17 01 11.5 -4.1
GYA sS sS 17 01 28.2 +7.0
GYA SS SS 17 07 39.0 -2.8
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.7
GYA pmax pmax
comp=Z,180nm,5.6s
GYA LR LR
comp=N,2µm,22.3s,MS5.6
GYA LR LR
comp=E,2µm,21.4s,MS5.6
GYA LR LR
comp=Z,2µm,22.9s,MS5.6
KMI Kunming 95.11 315 P **P 16 50 04.3 +2.4**
KMI pP pP 16 50 14.9 +10
KMI sP sP 16 50 19.1 +13
KMI PP PP 16 53 53.2 +1.3
KMI SKS 17 00 35.3
KMI S S 17 01 15.8 -0.7
KMI SS SS 17 07 42.1 -1.0
KMI pmax pmax
comp=Z,9.0nm,2.0s,mb4.8
KMI pmax pmax
comp=Z,180nm,5.0s
KMI LR LR
comp=N,2µm,27.3s,MS5.7
KMI LR LR
comp=E,2µm,22.3s,MS5.7
KMI LR LR
comp=Z,5µm,27.3s,MS5.9
SSE Sheshan 95.37 332 P **P 16 50 05.5 +2.6**
SSE S S 17 01 19.4 +1.0
SSE SS SS 17 07 49.0 +2.4
SSE pmax pmax
comp=Z,12nm,0.8s,mb5.4
SSE pmax pmax
comp=Z,87nm,5.2s
SSE LR LR
comp=N,710nm,28.4s,MS5.3
SSE LR LR
comp=E,1µm,28.4s,MS5.3
SSE LR LR
comp=Z,2µm,19.2s
LPAZ La Paz 96.14 140 P **P 16 50 08.0 +1.0**
LPAZ LR LR 17 24 21.8
LPAZ La Paz 96.14 140 P **P 16 50 08.0 +1.0**
comp=Z,7.3nm,1.1s,mb5.0,baz=198,slow=2.6,SNR=12
LPAZ LR LR 17 24 21.7
comp=Z,12µm,21.6s,MS6.3,baz=165,slow=30
LPAZ La Paz 96.14 140 P **P 16 50 08.0 +1.0**
LPAZ pmax pmax
comp=Z,7.0nm,1.1s
LPAZ MLR MLR
comp=Z,12µm,21.6s
NJ2 Nanjing 96.83 331 *e*P **P 16 50 12.5 +3.0**
NJ2 pP pP 16 50 23.0 +10
NJ2 sP sP 16 50 27.0 +13
NJ2 SKS 17 00 45.0
NJ2 S S 17 01 27.0 -4.0
NJ2 sS sS 17 01 46.0 +9.4
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.3
NJ2 pmax pmax
comp=Z,560nm,6.2s
NJ2 LR LR
comp=N,6µm,26.6s,MS6.0
NJ2 LR LR
comp=E,3µm,25.7s,MS6.0
NJ2 LR LR
comp=Z,8µm,25.2s,MS6.1
NNA Nana 97.11 130 PFAKE 16 50 20.0 +8.7
NNA LR LR
comp=Z,9µm,21.0s,MS6.2
ENH Enshi 97.69 322 *e*P **P 16 50 13.7 +0.2**
comp=Z,11nm,1.1s,mb5.3
ENH LR LR
comp=Z,2µm,20.0s,MS5.5
MAT Matsushiro 97.80 347 P **P 16 50 14.6 +0.8**
MAT S S 17 01 37.0 -2.1
CD2 Chengdu 100.09 318 P Pdif 16 50 26.3 +1.5
CD2 pP 16 50 36.9
CD2 sP 16 50 40.8
CD2 PP PP 16 54 34.8 +4.6
CD2 SKS 17 01 01.2
CD2 S Sdif 17 01 55.3 -4.6
CD2 sS 17 02 13.2
CD2 SS SS 17 08 53.7 +0.5
CD2 pmax pmax
comp=Z,10.0nm,1.1s
CD2 pmax pmax
comp=Z,140nm,4.9s
CD2 LR LR
comp=N,2µm,23.5s,MS5.8
CD2 LR LR
comp=E,2µm,24.5s,MS5.8
CD2 LR LR
comp=Z,2µm,24.0s,MS5.6
INCN Inchon 100.42 338 PFAKE 16 50 40.0 +14
INCN LR LR
comp=Z,2µm,21.0s,MS5.5
XAN Xi'an 101.38 323 P Pdif 16 50 29.3 -1.2
KMBO Kilima Mbogo 101.77 246 PFAKE 16 50 40.0 +7.7
KMBO LR LR
comp=Z,3µm,19.0s,MS5.8
ERM Erimo 102.79 352 PFAKE 16 50 50.0 +13
ERM LR LR
comp=Z,3µm,22.0s,MS5.8
BJT Baijiatuau 105.07 331 PFAKE 16 51 00.0 +13
BJT LR LR
comp=Z,2µm,20.0s,MS5.7
MBAR Mbarara 105.08 240 PFAKE 16 55 10.0 +8.6
MBAR LR LR
comp=Z,478nm,19.0s,MS5.1
BJI Beijing 105.09 331 Pdif Pdif 16 50 48.6 +1.6
BJI PP PP 16 55 09.5 +2.0
BJI SS SS 17 10 04.8 +2.7
BJI AMB AMB
comp=Z,130nm,6.5s
BJI LR LR
comp=N,1µm,20.7s,MS5.7
BJI LR LR
comp=E,2µm,20.0s,MS5.7
BJI LR LR
comp=Z,2µm,45.2s

HIA Hailar 113.09 336 PFAKE 16 55 30.0 +15
HIA LR LR
comp=Z,1µm,20.0s,MS5.5
JTS JuntasAbangare 113.82 113 PFAKE 16 55 30.0 +12
JTS LR LR
comp=Z,15µm,22.0s,MS6.5
SONM Songino Array 114.87 327 PKP PKiKP 16 55 16.7 -2.0
comp=Z,0.2nm,0.7s,baz=108,slow=4.7,SNR=2.6
BCIP Isla Barro Col 115.09 118 PFAKE 16 55 30.0 +10
BCIP LR LR
comp=Z,4µm,20.0s,MS6.1
WMQ Urumqi 117.27 312 PKP PKPdf 16 55 24.7 +1.3
WMQ sPKP 16 55 39.1
WMQ PP PP 16 56 39.7 +4.6
WMQ PKS 16 59 00.1
WMQ SKS SKSdf 17 02 31.9 -3.0
WMQ SKKS SKKSac 17 03 28.7 -5.9
WMQ SS SS 17 12 42.2 -2.4
WMQ AMB AMB
comp=Z,320nm,7.0s
WMQ LR LR
comp=N,3µm,27.0s,MS5.9
WMQ LR LR
comp=E,3µm,32.0s,MS5.9
WMQ LR LR
comp=Z,3µm,28.0s,MS5.8
ZAK Zakamensk 118.04 326 *e*PKIKP PKPdf 16 55 24.4 -0.3
PFO Pinyon Flat Ob 118.47 72 PFAKE 16 55 40.0 +14
PFO LR LR
comp=Z,5µm,20.0s,MS6.1
SAO San Andreas Ge 118.80 66 PFAKE 16 55 40.0 +13
SAO LR LR
comp=Z,3µm,20.0s,MS6.0
TLY Talaya 119.11 327 *i* PKIKP PKPdf 16 55 20.8 -5.9
TLY *e*PPS 17 07 52.5
TLY *e*SS SS 17 13 23.2 +15
TLY pmax pmax
comp=Z,13nm,2.4s
TLY MLR MLR
comp=Z,1µm,23.0s,MS5.5
ISA Isabella 119.23 69 *e*PKPdf PKPdf 16 55 29.5 +2.0
MCCM Marconi Confer 119.30 64 PFAKE 16 55 40.0 +12
MCCM LR LR
comp=Z,3µm,20.0s,MS5.9
HOPS Hopland 119.92 63 PFAKE 16 55 40.0 +11
HOPS LR LR
comp=Z,4µm,20.0s,MS6.0
DAC Darwin (Calif) 120.14 69 PFAKE 16 55 40.0 +11
DAC LR LR
comp=Z,7µm,19.0s,MS6.3
CMB Columbia Colle 120.32 66 PFAKE 16 55 40.0 +11
CMB LR LR
comp=Z,2µm,20.0s,MS5.8
TXAR Lajitas Array 121.08 85 PKKPbc PKKPbc 17 05 37.5 +5.8
comp=Z,0.4nm,0.9s,baz=72,slow=4.1,SNR=3.5
UCH Uchtor 121.11 301 *e*PKPdf PKPdf 16 55 31.8 +1.0
KHMM Horse Mountain 121.18 61 *e*PKPdf PKPdf 16 55 34.0 +3.0
AML Almayashu 121.37 301 *e*PKPdf PKPdf 16 55 30.8 -0.6
AML LR LR
comp=Z,2µm,21.0s,MS5.7
AAK Ala-Archa 121.45 302 PFAKE 16 55 40.0 +8.5
AAK LR LR
comp=Z,2µm,22.0s,MS5.7
WDC Whiskeytown Da 121.46 63 PFAKE 16 55 40.0 +8.4
WDC LR LR
comp=Z,4µm,22.0s,MS6.0
NVAR Mina Array Bea 121.58 67 PKP PKPdf 16 55 31.4 -0.5
comp=Z,1.5nm,0.9s,baz=196,slow=4.9,SNR=5.3
EKS2 Erkin-Say 121.78 301 PFAKE 16 55 40.0 +7.9
EKS2 LR LR
comp=Z,2µm,22.0s,MS5.7
MK31 Makanchi Array 121.80 310 *e*PKPdf PKPdf 16 55 31.2 -0.8
MKAR Makanchi Array 121.80 310 PKP PKPdf 16 55 30.1 -1.9
comp=Z,1.3nm,0.9s,baz=145,slow=4.4,SNR=7.3
MKAR Makanchi Array 121.80 310 PKIKP PKPdf 16 55 30.1 -1.9
MKAR pmax pmax
comp=Z,1.0nm,1.0s
MNTX Cornudas Mount 122.18 82 *e*PKPdf PKPdf 16 55 31.5 -1.8
MNTX LR LR
comp=Z,4µm,21.0s,MS6.0
YBH Yreka Blue Hor 122.33 62 PFAKE 16 55 40.0 +6.8
YBH LR LR
comp=Z,2µm,21.0s,MS5.7
KVTX Kingsville 122.43 91 PFAKE 16 55 40.0 +6.1
KVTX LR LR
comp=Z,22µm,19.0s,MS6.8
HUMO Hull Mountain 122.93 61 *e*PKPdf PKPdf 16 55 35.4 +1.0
HUMO LR LR
comp=Z,2µm,20.0s,MS5.8
MOD Modoc 123.51 63 *e*PKPdf PKPdf 16 55 35.5 0.0
MOD LR LR
comp=Z,3µm,20.0s,MS5.9
BMN Battle Mountai 123.69 67 PFAKE 16 55 50.0 +14
BMN LR LR
comp=Z,2µm,22.0s,MS5.8
DBIC Dimbokro 123.75 206 PFAKE 16 55 50.0 +13
DBIC LR LR
comp=Z,9µm,20.0s,MS6.4
YAK Yakutsk 123.86 346 *e*PKPdf PKPdf 16 55 34.0 -1.5
YAK *i* PKP PKPdf 16 55 38.6 +3.1
YAK Yakutsk 123.86 346 *i* PKIKP PKPdf 16 55 33.9 -1.6
YAK *e*PS PS 17 07 13.4 -3.1
YAK pmax pmax
comp=Z,8.0nm,1.1s
JCT Junction City 123.91 87 PFAKE 16 55 50.0 +13
JCT LR LR
comp=Z,3µm,21.0s,MS6.0
ANMO Albuquerque 124.31 79 PFAKE 16 55 50.0 +13
ANMO LR LR
comp=Z,4µm,19.0s,MS6.1
COR Corvallis 124.39 59 PFAKE 16 55 50.0 +13
COR LR LR
comp=Z,4µm,21.0s,MS6.0
MVU Marysvale 124.44 72 PFAKE 16 55 50.0 +13
MVU LR LR
comp=Z,5µm,20.0s,MS6.2
MSU Marysvale 124.46 72 *e*PKPdf PKPdf 16 55 39.7 +2.3
WVOR Wild Horse Val 124.67 64 *e*PKPdf PKPdf 16 55 37.2 -0.4
OHAK Old Harbor 124.69 32 *e*PKPdf PKPdf 16 55 36.0 -1.2
GRGR Grenville 124.90 136 PFAKE 16 55 50.0 +11
GRGR LR LR
comp=Z,7µm,20.0s,MS6.3
N12A Clover Valley, 125.02 68 *e*PKPdf PKPdf 16 55 38.3 -0.1
MVCO Mesa Verde 125.15 75 *e*PKPdf PKPdf 16 55 38.2 -0.6
KDAK Kodiak Island 125.36 32 PFAKE 16 55 50.0 +12
KDAK LR LR
comp=Z,4µm,22.0s,MS6.0
N13A Wendover, West 125.40 68 *e*PKPpre PKPpre 16 55 33.0
HKT Hockley 125.43 91 PFAKE 16 55 50.0 +10
HKT LR LR
comp=Z,5µm,20.0s,MS6.2
DUG Dugway 125.52 70 *e*PKPdf PKPdf 16 55 40.2 +0.9
DUG LR LR
comp=Z,5µm,20.0s,MS6.2
SRU San Rafael 125.72 73 *e*PKPdf PKPdf 16 55 35.5 -4.3
M13A Montello 125.82 68 *e*PKPdf PKPdf 16 55 37.9 -2.1
PV10 Paradox Valley 125.83 74 *e*PKPdf PKPdf 16 55 40.3 +0.3
PV01 Paradox Valley 125.86 75 *e*PKPdf PKPdf 16 55 40.8 +0.7
PV04 Paradox Valley 125.91 74 *e*PKPdf PKPdf 16 55 39.9 -0.3
BGU Big Grassy Mou 126.00 69 *e*PKPdf PKPdf 16 55 40.1 -0.2
KURK Kurchatov 126.41 310 *e*PKPdf PKPdf 16 55 38.8 -2.0
KURK LR LR
comp=Z,2µm,22.0s,MS5.7
KURK Kurchatov 126.41 310 PKP PKPdf 16 55 39.8 -1.0
comp=Z,1.5nm,1.0s,baz=140,slow=1.9,SNR=8.3
KURK Kurchatov 126.41 310 *i* PKIKP PKPdf 16 55 39.3 -1.4
BBGH Gun Hill 126.55 138 PFAKE 16 55 50.0 +7.8
BBGH LR LR
comp=Z,9µm,21.0s,MS6.4
AMTX Amarillo 126.57 83 PFAKE 16 55 50.0 +8.4
AMTX LR LR
comp=Z,6µm,20.0s,MS6.2
GTBY Guantanamo Bay 126.70 117 PFAKE 16 55 50.0 +7.7
GTBY LR LR
comp=Z,5µm,21.0s,MS6.2
LON Longmire 126.75 59 PKPdf PKPdf 16 55 39.7 -1.8
HVU Hansel Valley 126.79 69 *e*PKPdf PKPdf 16 55 42.3 +0.6
ZALV Zalesovo Beam 126.83 316 PKP PKPdf 16 55 40.0 -1.5
comp=Z,0.6nm,0.8s,baz=204,slow=3.3,SNR=4.6
ZALV PP PP 16 57 43.3 +3.4
comp=Z,3.8nm,1.1s,baz=131,slow=6.1,SNR=4.2
ZALV Zalesovo Beam 126.83 316 PKIKP PKPdf 16 55 40.0 -1.4
ZALV 16 57 43.3
ZALV pmax pmax
comp=Z,4.0nm,1.1s
BMO Blue Mountains 127.18 63 *e*PKPdf PKPdf 16 55 42.1 -0.3
BMO LR LR
comp=Z,2µm,19.0s,MS5.8
HWUT Hardware Ranch 127.21 70 *e*PKPdf PKPdf 16 55 40.9 -1.7
HWUT LR LR
comp=Z,5µm,20.0s,MS6.2
RSW Rattlesnake Hi 127.41 60 *e*PKPdf PKPdf 16 55 43.9 +1.1
HAWA Hanford 127.43 60 *e*PKPdf PKPdf 16 55 42.3 -0.5
HAWA LR LR
comp=Z,2µm,21.0s,MS5.9
SMCO Snowmass 127.44 75 *e*PKPdf PKPdf 16 55 44.5 +1.4
HLID Hailey 127.45 66 PFAKE 16 55 50.0 +7.0
HLID LR LR
comp=Z,2µm,21.0s,MS5.8
NATX Nacogdoches 127.48 91 *e*PKPdf PKPdf 16 55 44.3 +0.8
NATX LR LR
comp=Z,4µm,19.0s,MS6.2
FDF Fort de France 127.50 135 PFAKE 16 55 50.0 +6.1
FDF LR LR
comp=Z,5µm,22.0s,MS6.1
WMOK Wichita Mounta 127.87 85 *e*PKPdf PKPdf 16 55 43.9 -0.2
AHID Auburn Hatcher 128.33 69 PFAKE 16 56 00.0 +15
AHID LR LR
comp=Z,5µm,20.0s,MS6.2
TORD Torodi Ar. Bea 128.35 215 PKP PKPdf 16 55 43.9 -1.7
comp=Z,11nm,1.3s,baz=168,slow=1.9,SNR=11
OD2 Odessa Site #2 128.56 60 *e*PKPdf PKPdf 16 55 45.8 +0.8
ISCO Idaho Springs 128.58 76 *e*PKPdf PKPdf 16 55 45.5 +0.3
ISCO LR LR
comp=Z,4µm,19.0s,MS6.2
RRI2 Red Ridge 128.69 69 *e*PKPdf PKPdf 16 55 45.5 +0.2
REDW Red Top Meadow 128.91 69 *e*PKPdf PKPdf 16 55 46.6 +0.8
TPAW Teton Pass 128.97 69 *e*PKPdf PKPdf 16 55 46.8 +0.9
BW06 Boulder Array 129.04 70 *e*PKPdf PKPdf 16 55 49.2 +3.2
BW06 LR LR
comp=Z,4µm,20.0s,MS6.1
LOHW Long Hollow 129.22 69 *e*PKPdf PKPdf 16 55 47.7 +1.3
MOOW Moose Ponds 129.26 69 *e*PKPdf PKPdf 16 55 45.5 -0.9
IMW Indian Meadow 129.29 68 *e*PKPdf PKPdf 16 55 45.5 -1.0
RWWY Rawlins 129.30 73 *e*PKPdf PKPdf 16 55 44.6 -1.9
FLWY Flagg Ranch 129.54 69 *e*PKPdf PKPdf 16 55 46.1 -0.8
PMR Palmer 129.54 31 *e*PKPdf PKPdf 16 55 43.7 -2.7
DLMT Dillon 129.67 66 *e*PKPdf PKPdf 16 55 44.9 -2.2
GRTK Grand Turk 129.81 121 PFAKE 16 56 00.0 +12
GRTK LR LR
comp=Z,6µm,22.0s,MS6.2
PHWY Pilot Hill 129.83 75 *e*PKPdf PKPdf 16 55 47.4 -0.1
NEW Newport 129.92 61 *e*PKPdf PKPdf 16 55 45.7 -1.8
ANWB Willy Bob 129.99 133 PFAKE 16 56 00.0 +11
ANWB LR LR
comp=Z,5µm,19.0s,MS6.2
LKWY Lake 130.05 68 PFAKE 16 56 00.0 +12
LKWY LR LR
comp=Z,6µm,20.0s,MS6.3
LRM Limekiln Ridge 130.09 66 *e*PKPdf PKPdf 16 55 49.2 +1.3
MSO Missoula 130.20 64 *e*PKPdf PKPdf 16 55 46.1 -2.0
MSO LR LR
comp=Z,2µm,20.0s,MS5.8
BOZ Bozeman (W) 130.32 67 *e*PKPdf PKPdf 16 55 48.7 +0.3
BOZ LR LR
comp=Z,3µm,19.0s,MS6.0
CHMT Chamberlain Mo 130.57 64 PKPdf PKPdf 16 55 48.6 -0.2
BRAL Brewton 130.59 98 PFAKE 16 56 00.0 +11
BRAL LR LR
comp=Z,5µm,20.0s,MS6.2
BSMT Bassoo Peak 130.61 62 *e*PKPdf PKPdf 16 55 47.5 -1.3
CBKS Cedar Bluff 130.63 81 *e*PKPdf PKPdf 16 55 50.0 +0.8
CBKS LR LR
comp=Z,5µm,20.0s,MS6.2
SWMT Swartz Lake 130.69 63 *e*PKPdf PKPdf 16 55 47.2 -1.8
JTMT Jette 130.75 63 *e*PKPdf PKPdf 16 55 49.7 +0.6
DWPF Disney 130.88 106 PFAKE 16 56 00.0 +10
DWPF LR LR
comp=Z,4µm,21.0s,MS6.1
YBMT Yellow Bay 130.96 63 *e*PKPdf PKPdf 16 55 50.4 +0.9
UALR University of 131.06 91 *e*PKPdf PKPdf 16 55 47.2 -2.9
BPAW Bear Paw Mtn. 131.22 29 *e*PKPdf PKPdf 16 55 52.0 +2.5
BVAR Borovoye Array 131.39 307 PKP PKPdf 16 55 49.3 -0.8
comp=Z,1.2nm,0.8s,baz=188,slow=4.5,SNR=5.5
MCK McKinley 131.40 30 *e*PKPdf PKPdf 16 55 51.6 +1.8
BRVK Borovoye 131.46 307 *e*PKPdf PKPdf 16 55 49.6 -0.6
BRVK LR LR
comp=Z,4µm,22.0s,MS6.0
BRVK Borovoye 131.46 307 *i* PKIKP PKPdf 16 55 50.0 -0.3
PAX Paxson 131.64 32 PKPdf PKPdf 16 55 49.0 -1.2
LRAL Lakeview Retre 132.27 97 PFAKE 16 56 00.0 +7.5
LRAL LR LR
comp=Z,3µm,20.0s,MS5.9
KSU1 Kansas State U 132.38 84 *e*PKPdf PKPdf 16 55 51.1 -1.4
KSU1 LR LR
comp=Z,7µm,19.0s,MS6.4
HBAR Harrisburg 132.51 92 *e*PKPdf PKPdf 16 55 52.8 0.0
COLA College 132.61 30 PFAKE 16 56 00.0 +7.9
COLA LR LR
comp=Z,4µm,22.0s,MS6.1
RSSD Black Hills 132.66 73 *e*PKPpre PKPpre 16 55 37.8
ILAR Eielson Array 132.76 30 PKP PKPdf 16 55 53.0 +0.7
comp=Z,1.9nm,1.0s,baz=266,slow=3.8,SNR=5.6
ABKAR Akbulak array 132.91 297 *e*PKPpre PKPpre 16 55 40.1
EGMT Eagleton 132.96 66 PFAKE 16 56 00.0 +6.7
EGMT LR LR
comp=Z,3µm,20.0s,MS6.0
GNI Garni 133.12 277 *e*PKPdf PKPdf 16 55 57.9 +4.1
GNI LR LR
comp=Z,4µm,19.0s,MS6.2
TIXI Tiksi 133.26 349 *e*PKPdf PKPdf 16 55 50.2 -2.9
LAO LASA Array 133.57 69 PFAKE 16 56 10.0 +16
LAO LR LR
comp=Z,3µm,20.0s,MS6.1
EGAK Eagle 134.24 33 PFAKE 16 56 10.0 +15
EGAK LR LR
comp=Z,2µm,20.0s,MS5.8
GOGA Godfrey 134.30 100 *e*Pdif Pdif 16 52 56.3 -0.5
GOGA PKPdf PKPdf 16 55 59.5 +3.2
GOGA LR LR
comp=Z,4µm,22.0s,MS6.1
SWET Sewanee 134.55 96 *e*PKPpre PKPpre 16 52 49.6
MALT Malatya 134.79 271 *e*PKPdf PKPdf 16 55 58.3 +1.2
MALT LR LR
comp=Z,5µm,22.0s,MS6.2
ZEI Tsey 135.53 279 *e*PKIKP PKPdf 16 55 59.6 +1.3
ZEI pmax pmax
comp=Z,7.0nm,0.4s
NHSC New Hope 135.63 103 PFAKE 16 56 10.0 +11
NHSC LR LR
comp=Z,4µm,19.0s,MS6.1
ECSD EROS Data Cent 135.91 79 *e*PKPdf PKPdf 16 55 55.6 -3.4
ECSD LR LR
comp=Z,4µm,19.0s,MS6.2
WCI Wyandotte Cave 136.76 93 *e*PKPpre PKPpre 16 55 56.2
KIV Kislovodsk 137.00 279 *e*PKPdf PKPdf 16 56 00.7 -0.2
KIV LR LR
comp=Z,2µm,19.0s,MS5.9
KIV Kislovodsk 137.00 279 *i* PKIKP PKPdf 16 56 00.4 -0.6
KIV *i* 16 58 42.9
KIV pmax pmax
comp=Z,13nm,1.0s
HDIL Hopedale 137.09 88 PFAKE 16 56 10.0 +8.8
HDIL LR LR
comp=Z,5µm,21.0s,MS6.2
SOC Sochi 138.17 277 *i* PKIKP PKPdf 16 56 09.1 +6.0
SOC *e* 16 58 50.2
BR131 Keskin Array S 138.24 268 PFAKE 16 56 10.0 +6.6
BR131 LR LR
comp=Z,2µm,20.0s,MS5.7
BRTR Keskin Array B 138.24 268 PKP PKPdf 16 56 03.6 +0.2
comp=Z,0.5nm,0.7s,baz=150,slow=10.0,SNR=4.2
JFWS Jewell Farm 138.40 85 PFAKE 16 56 10.0 +6.4
JFWS LR LR
comp=Z,12µm,21.0s,MS6.6
CNNC Cliffs of the 138.46 104 PFAKE 16 56 20.0 +16
CNNC LR LR
comp=Z,6µm,22.0s,MS6.3
ARU Arti 138.60 303 *e*PKPpre PKPpre 16 55 55.6
ARU *i* PKP PKPdf 16 56 05.1 +1.6
ARU LR LR
comp=Z,2µm,22.0s,MS5.8
ARU Arti 138.60 303 *i* PKIKP PKPdf 16 56 05.3 +1.8
BLA Blacksburg 138.82 100 PFAKE 16 56 20.0 +15
BLA LR LR
comp=Z,2µm,19.0s,MS5.9
AGMN Agassiz Nation 139.58 75 PFAKE 16 56 20.0 +14
AGMN LR LR
comp=Z,3µm,21.0s,MS6.0
ANN Anapa 140.18 276 *e*P Pdif 16 53 15.0 -8.0
ANN *i* 16 56 10.6
ANN *e* 16 59 12.7
ANN *e*SS SS 17 17 25.2 -2.8
ANN *e*SSS 17 22 41.3
ANN pmax pmax
comp=Z,40nm,1.2s
ANN pmax pmax
comp=Z,28nm,1.1s
YKA Yellowknife Ar 140.99 48 PKP PKPpre 16 55 57.9
YKA PKP PKPdf 16 56 05.5 -2.2
YKA Yellowknife Ar 140.99 48 PKhKP PKPpre 16 55 57.9
comp=Z,1.3nm,0.9s,baz=228,slow=3.3,SNR=4.3
YKA PKP PKPdf 16 56 05.5 -2.2
comp=Z,1.3nm,0.9s,baz=225,slow=2.9,SNR=4.8
YKA Yellowknife Ar 140.99 48 PKHKP PKPpre 16 55 57.9
YKA 16 56 05.5
YKA pmax pmax
comp=Z,1.0nm,0.9s
YKA pmax pmax
comp=Z,1.0nm,0.9s
MCWV Mont Chateau 141.02 98 PFAKE 16 56 20.0 +12
MCWV LR LR
comp=Z,4µm,20.0s,MS6.2
CBN Corbin 141.08 102 PFAKE 16 56 20.0 +11
CBN LR LR
comp=Z,3µm,20.0s,MS6.1
FFC Flin Flon 141.13 64 PFAKE 16 56 20.0 +12
FFC LR LR
comp=Z,4µm,22.0s,MS6.1
AAM Ann Arbor 141.17 92 PFAKE 16 56 20.0 +11
AAM LR LR
comp=Z,4µm,21.0s,MS6.2
COWI Conover 141.27 83 *e*PKPdf PKPdf 16 56 07.3 -1.4
COWI LR LR
comp=Z,6µm,19.0s,MS6.4
SOKR Solikamsk 141.36 306 *c i*PKIKP PKPdf 16 56 25.0 +17
SOKR 16 59 18.2
SOKR pmax pmax
comp=Z,20nm,1.3s
EYMN Ely 141.43 79 *e*PKPpre PKPpre 16 56 03.9
EYMN LR LR
comp=Z,5µm,19.0s,MS6.3
SIM Simferopol' 141.91 273 PKHKP PKPpre 16 56 04.3
SIM 16 59 14.0
SIM SS SS 17 18 18.3 +30
SIM pmax pmax
comp=Z,57nm,7.1s
BBSR BB Station 142.05 121 PFAKE 16 56 20.0 +9.4
BBSR LR LR
comp=Z,4µm,22.0s,MS6.1
VRHR Novokhopersk 142.56 286 *e*PKIKP PKPdf 16 56 14.1 +3.3
VRHR pmax pmax
comp=Z,10.0nm,1.0s
VRHR pmax pmax
comp=N,9.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.6s
AOS Alonnisos 142.56 258 P PKPdf 16 56 07.0 -4.2
ERPA Erie 142.83 95 PFAKE 16 56 20.0 +8.4
ERPA LR LR
comp=Z,4µm,21.0s,MS6.1
ALN Alexandroupoli 142.85 262 P PKPdf 16 56 11.0 -0.7
XOR Xorichti 143.04 257 P PKPdf 16 56 14.5 +2.4
AGG Agios Georgios 143.18 256 P PKPdf 16 56 10.6 -1.7
PAIG Paliouri 143.25 258 P PKPdf 16 56 17.8 +5.4
VORD Divnogorie 143.57 285 *e*PKHKP PKPpre 16 56 08.5
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.4s
KAVA Kavala 143.67 260 P PKPdf 16 56 09.4 -3.7
KDZ Kurdzhali 143.73 262 *e*P PKPdf 16 56 09.0 -4.2
THL Klokotos Trika 143.76 256 P PKPdf 16 56 10.5 -2.8
VSR Storozhevoye 143.80 285 *e*PKHKP PKPpre 16 56 08.8
VSR *e*SS SS 17 18 05.0 -4.9
VSR pmax pmax
comp=Z,7.0nm,1.0s
VSR pmax pmax
comp=N,3.0nm,0.3s
VSR pmax pmax
comp=E,6.0nm,0.4s
PRD Provadia 143.93 266 *e*P PKPdf 16 56 10.2 -3.3
LIT Litokhoron 143.95 257 P PKPdf 16 56 10.9 -2.8
DIM Dimitrovgrad 143.98 263 *e*P PKPdf 16 56 10.4 -3.2
HORT Hortiatis 144.05 259 P PKPdf 16 56 16.5 +2.7
SRS Serrai 144.21 260 P PKPdf 16 56 11.4 -2.7
TIRR Tirgusor 144.36 268 *e*PKPdf PKPdf 16 56 12.6 -1.6
PLD Plovdiv 144.42 262 P PKPdf 16 56 12.5 -1.9
KZN Kozani 144.46 257 P PKPdf 16 56 13.7 -0.8
MMB Musomiste 144.50 260 *e*P PKPdf 16 56 12.0 -2.6
IGT Igoumenitsa 144.53 255 P PKPdf 16 56 15.2 +0.5
KNT Kendrikon 144.58 259 P PKPdf 16 56 13.3 -1.4
GRG Griva 144.66 258 P PKPdf 16 56 13.7 -1.2
BINY Binghamton 144.85 99 *e*PKPdf PKPdf 16 56 12.0 -3.2
BINY LR LR
comp=Z,4µm,20.0s,MS6.2
VAY Valandovo 144.86 259 *e*PKP PKPdf 16 56 11.9 -3.3
NEST Nestorio 144.89 256 P PKPdf 16 56 15.2 -0.1
KEK Kerkira 144.93 254 P PKPdf 16 56 13.0 -2.4
SRN Sarande 144.97 255 *i* PN PKPdf 16 56 16.9 +1.5
CFR Carcaliu 145.01 269 P PKPbc 16 56 18.5 +3.8
FNA Florina 145.02 257 P PKPbc 16 56 15.8 +0.9
KKB Krupnik 145.03 260 *e*P PKPbc 16 56 18.0 +3.1
KBN Korca 145.17 256 *i* PN PKPbc 16 56 15.9 +0.5
VTS Vitosha 145.52 261 ⇑P PKPdf 16 56 15.8 -0.4
VTS Vitosha 145.52 261 P PKPdf 16 56 19.2 +2.9
VTS Vitosha 145.52 261 ⇑*i*P PKPdf 16 56 15.8 -0.5
VTS Vitosha 145.52 261 *e*P PKPdf 16 56 18.0 +1.7
KRUS Krusevo 145.53 258 *e*PKP PKPdf 16 56 11.8 -4.6
SULR 145.57 266 ⇓P PKPdf 16 56 15.9 -0.4
SULR 145.57 266 ⇓*i*P PKPdf 16 56 15.9 -0.4
CEL Celeste 145.58 248 *e*PKPdf PKPdf 16 56 16.9 +0.3
CEL LR LR
comp=Z,6µm,19.0s,MS6.4
YLE Yale 145.64 103 *e*PKPdf PKPdf 16 56 15.2 -1.3
MPEP Malo Peshtene 145.83 262 *e*P PKPdf 16 56 16.5 -0.3
TIP Timpagrande 145.93 250 *e*PKPbc PKPbc 16 56 11.3 -6.5
KIS Kishinev 145.97 271 *e*PKP PKPdf 16 56 16.0 -0.9
comp=Z,200nm,2.2s
KIS Kishinev 145.97 271 *e*PP PP 16 59 44.0 +3.9
KIS *e*SKP 16 59 50.0
KIS *e*SKS SKSdf 17 03 20.0 -5.3
KIS Kishinev 145.97 271 *e*PKIKP PKPdf 16 56 16.0 -0.9
KIS *e* 16 59 44.0
KIS *e* 17 03 20.0
KIS pmax pmax
comp=Z,240nm,2.2s
KIS MLR MLR
comp=E,2µm,18.0s
KIS MLR MLR
comp=Z,3µm,18.0s,MS6.2
KIS MLR MLR
comp=Z,3µm,19.0s
VRI Vrincioaia 146.20 268 ⇓P PKPab 16 56 21.7 +2.6
VRI Vrincioaia 146.20 268 ⇓*i*P PKPab 16 56 21.7 +2.5
PLOR Plostina 146.22 268 ⇓PKP2 PKPab 16 56 22.3 +3.0
PLOR Plostina 146.22 268 ⇓*i*P PKPab 16 56 22.3 +3.0
MLR Muntele Rosu 146.31 267 ⇓P PKPdf 16 56 18.0 +0.5
MLR Muntele Rosu 146.31 267 ⇓*i*P PKPdf 16 56 18.0 +0.5
KEST Kesra 146.34 238 *e*PKPdf PKPdf 16 56 19.1 +1.2
KEST Kesra 146.34 238 PKPbc PKPbc 16 56 19.7 +0.5
comp=Z,9.0nm,0.9s,baz=124,slow=3.2,SNR=8.4
TRY Troy 146.37 100 *e*PKPab PKPab 16 56 18.3 -1.6
TESR 146.69 269 ⇑P PKPdf 16 56 18.7 +0.6
TESR 146.69 269 ⇑*i*P PKPdf 16 56 18.7 +0.6
PUK Puka 146.70 257 *i* PN PKPdf 16 56 20.0 +1.7
VOIR 146.71 266 ⇑P PKPab 16 56 22.6 +1.4
VOIR 146.71 266 ⇑*i*P PKPab 16 56 22.6 +1.4
BCI Bajram Curri 146.86 258 *i* PN PKPab 16 56 22.7 +0.9
DOPR Dopca 146.93 267 ⇑*i*P PKPab 16 56 25.5 +3.5
CUC Castrocucco 147.01 250 PFAKE 16 56 30.0 +11
CUC LR LR
comp=Z,4µm,19.0s,MS6.2
NCB Newcomb 147.03 98 *e*PKPdf PKPdf 16 56 17.3 -1.5
NCB LR LR
comp=Z,5µm,21.0s,MS6.3
FCC Fort Churchill 147.03 63 *e*PKPdf PKPdf 16 56 18.9 +0.6
MOS Moscow 147.33 290 *e*PKP2 PKPab 16 56 24.4 +1.1
MOS pmax pmax

comp=Z,109nm,1.4s
LONY Lake Ozonia 147.33 97 *e*PKPdf PKPdf 16 56 16.2 -3.0
OBN Obninsk 147.45 289 *e*PKPdf PKPdf 16 56 18.9 -0.2
OBN LR LR
comp=Z,3μm,19.0s,MS6.1
OBN Obninsk 147.45 289 *i* PKP2 PKPab 16 56 21.0 -2.8
OBN pmax pmax
comp=Z,100nm,1.3s
ABSA Djebel Ababsia 147.58 236 P PKPab 16 56 29.4 +4.5
HNH Hanover 147.77 101 *e*PKPdf PKPbc 16 56 20.0 0.0
GZR Gura Zlata 147.79 264 ⇓P PKPbc 16 56 23.7 +0.8
GZR Gura Zlata 147.79 264 ⇓*i*P PKPbc 16 56 23.7 +0.8
CMAH Djebel Manchou 147.91 237 P PKPab 16 56 27.0 +0.9
CASM Aïn Smara 147.97 235 P PKPbc 16 56 24.7 +1.0
FRNY Flat Rock 147.97 98 *e*PKPdf PKPdf 16 56 19.7 -0.6
CKFL Kef-Lekhel 148.00 235 P PKPab 16 56 26.5 0.0
BUR01 Bucovina Ar. S 148.16 269 P PKPbc 16 56 23.8 -0.1
BURAR Bucovina Array 148.16 269 ⇓P PKPbc 16 56 25.6 +1.8
BURAR Bucovina Array 148.16 269 ⇓*i*P PKPbc 16 56 25.6 +1.7
BUR08 Bucovina Ar. S 148.19 269 *e*PKPdf PKPdf 16 56 21.8 +1.2
DIVS Divibare 148.20 260 P PKPdf 16 56 19.5 -1.2
AKASG Malin Array Be 148.25 277 PKPbc PKPbc 16 56 20.5 -3.5
comp=Z,4.7nm,0.9s,baz=91,slow=1.8,SNR=16
AKASG Malin Array Be 148.25 277 PKIKP PKPbc 16 56 20.5 -3.5
AKASG pmax pmax
comp=Z,5.0nm,0.9s
AKBB Malin Array Si 148.25 277 *e*PKPdf PKPdf 16 56 19.1 -1.5
KIEV Kiev 148.26 277 *e*PKPdf PKPdf 16 56 19.7 -0.9
KIEV LR LR
comp=Z,3μm,21.0s,MS6.0
LBNH Lisbon 148.34 100 *e*PKPbc PKPbc 16 56 25.7 +1.3
LBNH LR LR
comp=Z,6μm,21.0s,MS6.4
SET Setif 148.35 233 P PKPab 16 56 31.0 +3.1
BZS Buzias 148.52 263 P PKPdf 16 56 23.8 +2.6
BZS ⇓P 16 56 27.8
BZS Buzias 148.52 263 ⇓PKP2 PKPab 16 56 27.8 -0.6
BZS Buzias 148.52 263 ⇓*i*P PKPab 16 56 27.8 -0.6
AKET Djebel Ketaf 148.81 231 P PKPdf 16 56 22.3 +0.3
DRGR 148.82 266 ⇑P PKPbc 16 56 24.5 -1.1
DRGR 148.82 266 PKP2 PKPbc 16 56 25.6 0.0
DRGR 148.82 266 ⇑*i*P PKPbc 16 56 24.5 -1.1
ADJB Djebel Djouab 149.07 231 P PKPdf 16 56 22.0 -0.4
KLMR Klimovskoe 149.22 299 *e*PKP2 PKPbc 16 56 25.8 -0.3
KLMR pmax pmax
comp=Z,219nm,1.4s
EMHD Djebel Mahouad 149.29 230 P PKPbc 16 56 28.0 +0.9
TRPA Tarpa 149.83 268 ⇓*i*P PKPbc 16 56 27.4 -0.6
AQU L'Aquila 150.00 250 *e*PKPab PKPab 16 56 35.3 +0.9
AQU LR LR
comp=Z,6μm,20.0s,MS6.4
LVV L'vov 150.22 271 *i* PKIKP PKPdf 16 56 22.0 -1.8
LVV MLR MLR
comp=Z,4μm,21.0s,MS6.1
UZH Uzhgorod 150.29 268 *i* PKIKP PKPbc 16 56 27.0 -2.1
UZH *e* 17 00 05.0
PKME Peaks-Kenny Pk 150.37 102 *e*PKPbc PKPbc 16 56 27.4 -2.0
PKSM Moragy 150.40 261 ⇑P PKPbc 16 56 29.2 -0.3
PKSM Moragy 150.40 261 ⇑*i*P PKPbc 16 56 29.2 -0.3
KWP Kalwaria Pacla 150.75 270 *e*PKP PKPbc 16 56 30.2 0.0
KWP *e* 16 56 37.4
KWP Kalwaria Pacla 150.75 270 *e*PKIKP PKPbc 16 56 28.0 -2.2
KWP MLR MLR
comp=Z,5μm,22.0s,MS6.3
KWP Kalwaria Pacla 150.75 270 ⇑*i*P PKPbc 16 56 30.1 -0.1
CRVS Cervenica-Dubn 150.88 268 *e*PKP PKPbc 16 56 29.6 -0.9
CRVS Cervenica-Dubn 150.88 268 *e*PKP PKPbc 16 56 29.6 -0.9
PSZ Piszkesteto 150.98 265 *e*PKPbc PKPdf 16 56 28.3 +3.2
PSZ Piszkesteto 150.98 265 ⇓*i*P PKPbc 16 56 31.0 +0.2
PSZ Piszkesteto 150.98 265 ⇓*e*PKP PKPbc 16 56 31.0 +0.2
KECS Kecovo 151.08 266 *e*PKP PKPbc 16 56 31.5 +0.5
KECS Kecovo 151.08 266 *e*PKP PKPbc 16 56 31.5 +0.5
BUD Budapest 151.11 263 ⇓*e*PKP PKPbc 16 56 33.2 +2.1
MICGM Minsk 151.21 282 *e* PKPbc 16 56 30.0 -1.1
MNK Minsk 151.23 282 *e*PKIKP PKPbc 16 56 30.0 -1.1
STHS Stebnicka Huta 151.33 268 *e*PKP PKPbc 16 56 31.7 +0.2
STHS *e* 16 56 40.1
STHS Stebnicka Huta 151.33 268 *e*PKP PKPbc 16 56 31.7 +0.2
STHS *e* 16 56 40.1
BOJS Bojanci 151.51 256 *e*PKPdf PKPab 16 56 46.2 +5.5
VYHS Vyhne 151.89 265 *e*PKP PKPbc 16 56 33.3 +0.4
VYHS Vyhne 151.89 265 *e*PKP PKPbc 16 56 33.3 +0.4
VISS Visnje 151.93 256 *i* PKPdf PKPab 16 56 45.8 +3.4
NACGM Naroch 151.96 282 *e*PKP PKPbc 16 56 32.0 -0.8
KOLL Kolacno 152.16 264 *e*PKP PKPbc 16 56 35.0 +1.5
KOLL *e* 16 56 45.6
KOLL Kolacno 152.16 264 *e*PKP PKPbc 16 56 35.0 +1.5
KOLL *e* 16 56 45.6
JAVS Javornik 152.37 256 *i* PKPdf PKPab 16 56 45.9 +1.6
PERS Pernice 152.40 258 *i* PKPdf PKPab 16 56 44.9 +0.5
VOY Vojsko 152.55 256 *e*PKPdf PKPab 16 56 50.3 +5.3
VOY *e* 16 57 11.0
VOY *e* 16 57 56.8
OJC Ojcow 152.56 268 *e*PKPdf PKPbc 16 56 33.5 -0.8
OKC Ostrava-Krasne 153.12 266 *e*PKIKP PKPbc 16 56 32.2 -3.4
OKC *e* 16 56 39.2
OKC *e* 17 19 54.2
OKC MLR MLR
comp=Z,4μm,20.2s,MS6.2
OKC Ostrava-Krasne 153.12 266 *e*PKPDF PKPbc 16 56 32.2 -3.4
OKC *e*PKPAB PKPab 16 56 39.2 -8.1
OKC *e*SS SS 17 19 54.2 -0.4
OKC AMS AMS 18 13 20.0
comp=Z,4μm,20.2s
SUW Suwalki 153.21 278 *e*PKP PKPbc 16 56 34.9 -0.7
SUW *e* 16 56 43.4
SUW Suwalki 153.21 278 *e*PKPbc PKPbc 16 56 35.2 -0.4
MORC Moravsky Berou 153.38 265 *e*PKPdf PKPdf 16 56 26.4 -2.1
MORC ⇓P 16 56 33.2
VRAC Vranov 153.54 264 ⇓P PKPbc 16 56 38.6 +2.2
VRAC Vranov 153.54 264 ⇓*i*P PKPbc 16 56 38.6 +2.1
PBDV Barranco-do-Ve 153.84 214 *e*SS SS 17 20 08.7 +7.1
PBDV *e*LQ 17 41 17.7
PBDV *e*LR LR 17 49 01.8
comp=Z,11μm,20.0s
PVAQ Vaqueiros 153.93 215 *e*PKPab PKPab 16 56 56.1 +5.1
PVAQ *e*SS SS 17 20 06.9 +4.3
PVAQ *e*LR LR 17 47 03.6
comp=Z,12μm,20.0s
PFVI Vila Bisbo 153.97 213 *e*SS SS 17 20 06.8 +3.8
PFVI *e*LR LR 17 49 22.5
comp=Z,14μm,16.0s
TREC Trest 154.07 263 AMS AMS 18 10 30.0
comp=Z,5μm,22.5s
MORF Marmelete 154.09 213 *e*PKPab PKPab 16 56 56.7 +5.0
MORF *e*SS SS 17 20 11.6 +7.3
MORF *e*LQ 17 46 18.3
MORF *e*LR LR 17 50 31.8
comp=Z,13μm,18.0s
MORF Marmelete 154.09 213 *e*PKIKP PKPdf 16 56 32.2 +2.2
PCVE Castro Verde 154.23 214 *e*PKPab PKPab 16 56 56.0 +3.7
PCVE *e*SS SS 17 20 09.0 +3.1
PCVE *e*LQ 17 43 46.8
PCVE *e*LR LR 17 49 20.9
comp=Z,12μm,18.0s
PTEO Sao Teotonio 154.34 213 *e*PKPab PKPab 16 56 56.6 +3.8
DPC Dobruska-Polom 154.35 265 *e*PKIKP PKPdf 16 56 27.2 -2.7
DPC *e* 17 20 00.7
DPC MLR MLR
comp=Z,4μm,22.6s,MS6.2
DPC Dobruska-Polom 154.35 265 *e*PKPDF PKPdf 16 56 27.2 -2.7
DPC *e*PKP pPKPdf 16 56 44.7 +11
DPC *e*x x 17 10 42.0
DPC *e*SS SS 17 20 00.7 -7.3
DPC AMS AMS 18 14 20.0
comp=Z,4μm,22.6s
PBAR Barrancos 154.45 216 *e*PKPab PKPab 16 56 56.6 +3.4
PBAR *e*SS SS 17 20 16.7 +8.4
PBAR *e*LQ 17 37 53.8
PBAR *e*LR LR 17 48 46.8
comp=Z,12μm,20.0s
MESJ Messejana 154.47 214 *e*P PKPdf 16 56 32.4 +1.8
MESJ *e*SS SS 17 20 08.7 +0.2
MESJ AMS AMS 18 04 55.5
comp=E,8μm,5.7s
MESJ Messejana 154.47 214 *e*PKIKP PKPdf 16 56 32.3 +1.8
PBEJ Beja 154.55 215 *e*PKPbc PKPbc 16 56 44.0 +5.0
PBEJ Beja 154.55 215 *e*PKPab PKPab 16 56 57.2 +3.5
KSP Ksiaz 154.68 266 *e*PKP PKPbc 16 56 44.8 +5.9
KSP *e* 16 56 56.0
KSP Ksiaz 154.68 266 *e*PKIKP PKPbc 16 56 38.2 -0.7
KSP *e* 16 56 54.1
KSP *e*SS SS 17 20 14.8 +3.2
ESDC Sonseca Array 154.86 223 PKP PKPdf 16 56 30.6 -0.3
ESDC PKPbc PKPbc 16 56 40.0 +0.4
ESDC PKPab PKPab 16 56 54.3 -0.6
ESDC PP PP 17 00 42.4 +12
ESDC Sonseca Array 154.86 223 PKP PKPdf 16 56 30.6 -0.3
comp=E,0.1nm,0.2s,baz=293,slow=1.1,SNR=6.6
ESDC PKPbc PKPbc 16 56 40.0 +0.4
comp=E,0.4nm,0.4s,baz=177,slow=0.7,SNR=6.2
ESDC PKPab PKPab 16 56 54.3 -0.6
comp=E,9.8nm,1.1s,baz=144,slow=2.0,SNR=11
ESDC PP PP 17 00 42.4 +12
comp=E,0.3nm,0.4s,baz=159,slow=6.5,SNR=4.0
ESLA Sonseca Array 154.86 223 *e*PKPbc PKPbc 16 56 37.1 -2.5
ESLA LR LR
comp=Z,32μm,19.0s,MS7.2
PAB San Pablo 154.87 222 *e*PKPab PKPab 16 56 54.2 -0.7
KHC Kasperske Hory 154.88 260 *e*PKPDF PKPdf 16 56 34.9 +4.2
KHC ⇑*e*PKP PKPbc 16 56 43.0 +3.6
KHC *e*PKPAB PKPab 16 56 54.7 -0.1
KHC *ex* x 17 02 36.0
KHC *ex* x 17 19 56.9
KHC AMS AMS 18 10 40.0
comp=Z,5μm,22.7s
PRU Pruhonice 154.99 263 *e*PKIKP PKPdf 16 56 33.2 +2.4
PRU *e* 16 56 57.2
PRU MLR MLR
comp=Z,5μm,18.5s,MS6.3
PRU Pruhonice 154.99 263 *e*PKPDF PKPdf 16 56 33.2 +2.4
PRU ⇑*e*PKP PKPbc 16 56 42.7 +3.1
PRU *e*PKPAB PKPab 16 56 57.2 +2.0
PRU *ex* x 17 10 42.2
PRU *ex* x 17 19 59.6
PRU AMS AMS 18 18 20.0
comp=Z,5μm,18.5s
EVO Evora 155.06 215 *e*PKIKP PKPdf 16 56 34.9 +3.6
comp=Z,69nm,1.4s
EVOP Sao Brissos 155.09 215 *e*P PKPdf 16 56 33.0 +1.7
EVOP *e*SS SS 17 20 13.9 -1.3
EVOP *e*SS SS 17 20 14.8 -0.4
EVOP AMS AMS 18 03 15.7
comp=E,8μm,25.3s
PRA Prague 155.09 263 PKPDF PKPdf 16 56 34.0 +3.1
PRA ⇑PKP PKPdf 16 56 43.0 +12
PRA PKPAB PKPab 16 56 58.0 +2.3
PRA AMS AMS 18 19 00.0
PESTR Estremoz 155.25 216 *e*PKPdf PKPdf 16 56 30.7 -0.8
PESTR Estremoz 155.25 216 *e*PKPab PKPab 16 56 57.0 +0.4
PESTR *e*SS SS 17 20 19.6 +2.6
PESTR *e*LQ 17 41 55.1
PESTR *e*LR LR 17 49 31.8
comp=E,11μm,20.0s
PVCC Panska Ves 155.32 264 *e*SS SS 17 20 15.8 -2.7
PVCC AMS AMS 18 11 00.0
comp=E,5μm,22.2s
FINES FINESS Array B 155.36 295 PKPbc PKPdf 16 56 39.4 +8.5
FINES FINESS Array B 155.36 295 PKPbc PKPdf 16 56 39.4 +8.5
comp=E,3.4nm,0.9s,baz=46,slow=5.5,SNR=4.6
FINES FINESS Array B 155.36 295 PKIKP PKPdf 16 56 39.4 +8.5
FINES pmax pmax
comp=Z,3.0nm,0.9s
ORIF Oris-en-Rattie 155.41 244 *e*PKIKP PKPdf 16 56 34.4 +2.9
comp=Z,54nm,1.6s
LPL La Plagne 155.49 246 *e*PKIKP PKPdf 16 56 34.2 +2.6
comp=Z,41nm,1.3s
LIS Lisbon 155.55 213 *e*P PKPdf 16 56 32.3 +0.4
LIS *e*PP PP 17 00 34.7 +0.1
LIS *e*SS SS 17 20 19.0 -1.1
LIS AMS AMS 18 04 41.7
comp=E,10μm,20.4s
PMRV Marv??o 155.71 217 *e*PKPab PKPab 16 56 59.7 +1.1
PMRV *e*SS SS 17 20 25.3 +3.3
PMRV *e*LQ 17 44 55.3
PMRV *e*LR LR 17 49 21.4
comp=E,10μm,20.0s
PMAFR Mafra 155.81 213 *e*SS SS 17 20 30.1 +7.2
PMAFR *e*LR LR 17 49 59.1
comp=E,11μm,20.0s
BRG Berggiesshubel 155.85 264 *e*PKP PKPab 16 56 48.1 -11
comp=E,5.3nm,1.1s
BRG *e* 16 57 05.3
comp=E,44nm,1.7s
BRG PKS 17 00 31.0
BRG *e* 17 07 36.0
BRG SS SS 17 20 29.0 +4.8
comp=N,1μm,23.3s
BRG
comp=E,3μm,21.6s
BRG
comp=Z,6μm,22.2s
BRG Berggiesshubel 155.85 264 *e*PKIKP PKPab 16 56 48.1 -11
BRG SS SS 17 20 29.0 +4.8
BRG pmax pmax
comp=Z,3.0nm,1.1s
BRG MLR MLR
comp=N,726nm,23.3s,MS5.9
BRG MLR MLR
comp=E,2μm,21.6s,MS5.9
BRG MLR MLR
comp=Z,3μm,22.2s,MS6.1
PCBR Castelo Branco 156.12 217 *e*PKPab PKPab 16 57 01.1 +0.8
NKC Novy Kostel 156.17 261 *e*SS SS 17 20 31.2 +3.6
NKC AMS AMS 18 16 10.0
comp=Z,6μm,19.2s
GRA1 Grafenberg Arr 156.40 259 *e*PKP PKPab 16 56 49.3 -12
GRF Grafenberg Arr 156.40 259 *e*PKP PKPab 16 56 49.3 -12
CLL Collm 156.59 264 *e*PKP PKPdf 16 56 34.0 +1.1
CLL Collm 156.59 264 *e*PKPdf PKPdf 16 56 34.0 +1.1
comp=Z,17nm,1.9s
CLL *e*PKPdiff PKPdf 16 56 47.0 +14
comp=Z,88nm,2.7s
CLL *e*PKPab PKPab 16 57 05.0 +2.9
comp=Z,59nm,1.9s
CLL *e* 16 57 48.0
CLL *e*PP PP 17 00 41.0 +0.2
CLL *e*PPS 17 13 54.0
CLL *e*SS SS 17 20 30.0 -2.1
CLL *e*PSS 17 21 20.0
CLL *e*PSPS 17 22 05.0
CLL *e*(SSS) 17 26 06.0
CLL *e*SSSS 17 30 54.0
CLL *e*SSSrev 17 36 30.0
CLL LmV 18 17 00.0
comp=Z,6μm,20.4s
MTE Manteigas 156.66 218 *e*PKPab PKPab 16 57 04.1 +1.5
MTE *e*SS SS 17 20 39.5 +7.4
MTE *e*LQ 17 45 14.6
MTE *e*LR LR 17 49 31.3
comp=Z,12μm,22.0s
MTE Manteigas 156.66 218 PFAKE 16 56 40.0 +6.7
MTE LR LR
comp=Z,12μm,20.0s,MS6.7
BFO Black Forest 156.84 253 PFAKE 16 56 40.0 +6.7
BFO LR LR
comp=Z,6μm,20.0s,MS6.4
MOX Moxa 156.84 261 *e*PKP PKPdf 16 56 38.3 +5.1
MOX *e* 16 57 04.2
comp=Z,24nm,1.1s
MOX
comp=Z,4μm,19.0s
KEV Kevo 156.85 315 PFAKE 16 56 40.0 +7.3
KEV LR LR
comp=Z,4μm,20.0s,MS6.2
MVO Moncorvo 157.20 219 *e*PKPdf PKPdf 16 56 34.4 +0.4
MVO Moncorvo 157.20 219 *e*PKPab PKPab 16 57 05.2 +0.3
MVO *e*SS SS 17 20 42.2 +4.2
MVO *e*LQ 17 41 33.2
MVO *e*LR LR 17 50 50.7
comp=Z,10μm,20.0s
ECH Echery 157.30 251 PFAKE 16 56 40.0 +6.1
ECH LR LR
comp=Z,5μm,19.0s,MS6.4
ARCES ARCESS Array B 157.36 314 PKPab PKPab 16 57 02.8 -2.1
comp=Z,13nm,1.1s,baz=85,slow=2.6,SNR=11
ARCES ARCESS Array B 157.36 314 PKP2 PKPab 16 57 02.8 -2.1
ARCES pmax pmax
comp=Z,13nm,1.1s
ARE0 ARCESS Array S 157.36 314 *e*PKPab PKPab 16 57 05.2 +0.3
PVRL Vila Real 157.51 218 *e*PKPab PKPab 16 57 08.3 +2.0
PBRG Braganca 157.69 221 *e*PKPab PKPab 16 57 08.5 +1.5
SCHQ Schefferville 157.74 87 PKP PKPdf 16 56 33.5 -0.7
comp=Z,7.1nm,1.3s,baz=243,slow=2.3,SNR=2.0
SCHQ PKPab PKPab 16 57 06.7 -0.3
BSD Bornholm Skovb 157.85 274 *e*PKP2 PKPab 16 57 07.7 +0.3
BSD MLR MLR
comp=Z,7μm,20.0s,MS6.5
BSD Bornholm Skovb 157.85 274 *i* P PKPab 16 57 07.7 +0.3
BSD
comp=Z,7μm,20.0s
PCAB Cabril 158.00 218 *e*PKPab PKPab 16 57 12.3 +3.9
KBS Kingsbay 158.36 341 *e*SS SS 17 20 48.4 -1.6
KBS AMS AMS 18 26 53.6
comp=Z,5μm,20.5s,MS6.3
KBS Kingsbay 158.36 341 PFAKE 16 56 40.0 +5.6
KBS LR LR
comp=Z,6μm,19.0s,MS6.4
BJO Bjornoya 158.76 328 AMS AMS 18 18 42.9
comp=Z,3μm,22.4s,MS6.1
COP Copenhagen 159.36 273 *e*PKP2 PKPab 16 57 16.8 +2.9
COP MLR MLR
comp=Z,2μm,21.0s,MS6.0
COP Copenhagen 159.36 273 *i* P PKPab 16 57 16.8 +2.9
COP *i* 17 21 17.4
COP
comp=Z,2μm,21.0s
TRO Tromso 159.66 315 *e*PKPdf PKPdf 16 56 34.0 -2.1
TRO *e*SS SS 17 21 04.1 -0.3
TRO AMS AMS 18 19 03.2
comp=Z,5μm,25.6s,MS6.2
MUD Monsted U'grnd 161.33 272 *e*PKP2 PKPab 16 57 12.9 -10
MUD MLR MLR
comp=Z,4μm,20.0s
MUD Monsted U'grnd 161.33 272 *i* P PKPab 16 57 12.9 -10
MUD
comp=Z,4μm,20.0s
NSS Namsos 162.34 299 AMS AMS 18 21 27.5
comp=Z,5μm,20.5s
KONO Kongsberg 162.40 282 AMS AMS 18 19 54.9
comp=Z,4μm,19.9s
KONO Kongsberg 162.40 282 PFAKE 16 56 50.0 +11
KONO LR LR
comp=Z,5μm,19.0s
BER Bergen 164.66 282 *e*SS SS 17 22 01.2 +4.4
BER AMS AMS 18 15 27.5
comp=Z,6μm,20.4s
FOO Floro 165.07 287 *e*SS SS 17 22 05.8 +4.8
FOO AMS AMS 18 18 19.3
comp=Z,7μm,20.3s
ESK Eskdalemuir 166.79 256 PFAKE 16 56 50.0 +6.7
ESK LR LR
comp=Z,6μm,20.0s
SUMG Summit 167.19 17 *i* P pPKPdf 16 57 06.0 +19
SUMG *e* SS 17 22 29.2 +7.7
SUMG
comp=Z,9μm,21.0s
JMIC Jan Mayen 167.55 333 *e*SS SS 17 22 26.2 +0.9
JMIC AMS AMS 18 19 03.2
comp=Z,4μm,20.1s
SCO Scoresbysund 170.09 352 *i* P pPKPdf 16 57 09.7 +21
SCO *i* SS 17 22 47.1 -3.3
SCO
comp=Z,7μm,18.0s
BORG Borgarnes 175.45 334 PFAKE 16 57 00.0 +13
BORG LR LR
comp=Z,13μm,19.0s

*IDC **09** 16:42:39.9±0.9, 15°.44S×174°.08W, h0km, mb4.0/8, mb1 4.2/8, mb1mx4.1/14, mbtmp4.0/8, Error ellipse: s-maj=40.4km s-min=21.4km az=140.0*
*NEIC **09** 16:42:40.4±0.8, 15°.40S×173°.92W, h10km, mb4.5/7, Error ellipse: s-maj=39.9km s-min=16.7km az=144.0*
*ISCJB **09** 16:42:43.0±0.7, 15°.4S±0°.2×174°.2W±0°.2, h33km, mb4.1/14, Error ellipse: s-maj=30.1km s-min=15.3km az=138.6*
ISC 09 16:42:45.0±0.7, 15°.4S±0°.2×174°.2W±0°.2, h35km, n19, σ1§10, mb4.1/14, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
AFI	**Afiamalu**	**2.74**	**58**	*e*Pn		**Pn**	**16 43 18.7**	**-7.8**
AFI	**Afiamalu**	**2.74**	**58**	Pn		**Pn**	**16 43 19.1**	**-7.4**
	19nm,0.3s,baz=254,slow=7.1,SNR=22							
STKA	**Stephens Creek**	**43.40**	**240**	*e*P		**P**	**16 50 44.5**	**+0.1**
	10nm,1.6s,mb4.3							
STKA				*e*			16 50 59.3	
STKA	**Stephens Creek**	**43.40**	**240**	P		**P**	**16 50 45.0**	**+0.5**
	3.0nm,0.9s,mb4.0,baz=43,slow=16,SNR=2.8							
ASAR	**Alice Springs**	**49.41**	**252**	P		**P**	**16 51 32.0**	**+0.3**
	4.1nm,0.9s,mb4.5,baz=83,slow=8.8,SNR=22							
MBWA	**Marble Bar**	**62.65**	**254**	P		**P**	**16 53 04.8**	**-1.6**
	18nm,1.2s,mb5.1							
YSS	**Yuzh-Sakhalins**	**73.09**	**331**	P		**P**	**16 54 10.3**	**-1.2**
	20nm,1.4s,mb4.9							
YBH	**Yreka Blue Hor**	**74.03**	**38**	P		**P**	**16 54 18.8**	**+1.6**
	0.3nm,0.4s,mb3.6,baz=219,slow=6.5,SNR=2.9							
QSPA	**South Pole Qui**	**74.67**	**180**	P		**P**	**16 54 21.2**	**+0.8**
	4.7nm,1.1s,mb4.3,baz=180,slow=3.5,SNR=4.8							
NVAR	**Mina Array Bea**	**74.81**	**42**	P		**P**	**16 54 23.1**	**+1.2**
	2.3nm,1.1s,mb4.0,baz=227,slow=9.3,SNR=8.4							
KSRS	**Korea Array**	**75.62**	**316**	P		**P**	**16 54 27.8**	**+1.3**
	2.4nm,1.1s,mb4.0,baz=166,slow=12,SNR=5.1							
MNTX	**Cornudas Mount**	**80.81**	**54**	P		**P**	**16 54 52.2**	**-3.2**
	0.9nm,1.1s,mb3.6							
BPAW	**Bear Paw Mtn.**	**81.21**	**10**	P		**P**	**16 54 56.5**	**-0.2**
	4.1nm,1.4s,mb4.2							
TXAR	**Lajitas Array**	**81.22**	**56**	P		**P**	**16 54 56.3**	**-1.3**
	0.6nm,1.0s,mb3.5,baz=204,slow=7.8,SNR=4.9							
ILAR	**Eielson Array**	**82.57**	**11**	P		**P**	**16 55 03.8**	**0.0**
	0.7nm,0.8s,mb3.8,baz=225,slow=7.7,SNR=6.8							
BOZ	**Bozeman (W)**	**82.86**	**39**	*e*P		**P**	**16 55 05.0**	**-0.9**
	0.5nm,0.8s,mb3.6							
DAWY	**Dawson**	**83.58**	**15**	*e*P		**P**	**16 55 10.2**	**+1.1**
DAWY				*e*			16 55 24.8	
COLD	**Coldfoot**	**84.23**	**9**	*e*P		**P**	**16 55 12.5**	**+0.1**
	9.8nm,1.3s,mb4.8							
COLD				*e*			16 55 26.9	
BRTR	**Keskin Array B**	**145.66**	**320**	PKPbc		PKPbc	**17 02 21.2**	**+1.0**
	0.8nm,0.9s,baz=94,slow=4.3,SNR=2.7							

*IDC **09** 16:50:46.9±1.4, 21°.65N×143°.30E, h302km±13km, mb3.2/12, mb1 3.5/14, mb1mx3.4/23, mbtmp3.3/14, Error ellipse: s-maj=18.8km s-min=11.6km az=78.0*
*ISCJB **09** 16:50:47.3±0.8, 21°.72N±0°.06×143°.2E±0°.2, h315km±8km, mb3.5/11, Error ellipse: s-maj=24.9km s-min=8.4km az=168.3*
*NEIC **09** 16:50:49.3±1.4, 21°.54N×143°.26E, h332km±16km, mb3.8/2, Error ellipse: s-maj=18.3km s-min=12.7km az=70.0*
ISC 09 16:50:47.5±0.8, 21°.69N±0°.06×143°.2E±0°.2, h303km±8km, n21, σ0§75/21, mb3.5/11, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
CBIJ	**Chichi jima**	**5.47**	**350**	P		**Pn**	**16 52 10.4**	**0.0**
	20nm,0.3s,baz=251,slow=5.5,SNR=17							
CBIJ				S		**S**	**16 53 16.4**	**-0.9**
	6.7nm,0.3s,baz=276,slow=23,SNR=6.2							
GUMO	**Guam**	**8.21**	**169**	P		**Pn**	**16 52 44.0**	**+0.3**
	2.7nm,0.3s,baz=111,slow=5.9,SNR=3.9							
GUMO				S		**S**	**16 54 18.3**	**+0.3**
	3.7nm,0.3s,baz=278,slow=22,SNR=7.1							
MAJO	**Matsushiro**	**15.43**	**345**	*e*P		**P**	**16 54 10.7**	**+1.6**
	5.5nm,0.8s							
KSRS	**Korea Array**	**20.54**	**323**	P		**P**	**16 55 04.3**	**+0.6**
	0.8nm,0.6s,baz=147,slow=9.0,SNR=8.0							
CMAR	**Chiang Mai Arr**	**41.61**	**274**	P		**P**	**16 58 07.5**	**+0.7**
	0.5nm,0.5s,mb3.0,baz=88,slow=6.0,SNR=5.8							
ASAR	**Alice Springs**	**45.98**	**192**	P		**P**	**16 58 39.3**	**-1.9**
	0.2nm,0.6s,mb2.6,baz=17,slow=6.6,SNR=7.5							
MBWA	**Marble Bar**	**48.37**	**210**	PFAKE			**16 59 10.0**	**+10**
MBWA				LR		LR		
	comp=Z,19μm,21.0s							
ZALV	**Zalesovo Beam**	**54.24**	**322**	P		**P**	**16 59 41.7**	**-0.7**
ZALV	**Zalesovo Beam**	**54.24**	**322**	P		**P**	**16 59 41.7**	**-0.7**
	comp=Z,0.8nm,0.5s,mb3.3,baz=91,slow=8.2,SNR=3.8							
MKAR	**Makanchi Array**	**54.73**	**313**	P		**P**	**16 59 45.9**	**-0.2**
MKAR				PcP		PcP	17 00 44.2	-0.4
MKAR	**Makanchi Array**	**54.73**	**313**	P		**P**	**16 59 45.9**	**-0.2**
	comp=Z,0.4nm,0.5s,mb3.1,baz=88,slow=9.1,SNR=6.1							
MKAR				PcP		PcP	17 00 44.2	-0.4
	comp=Z,0.4nm,0.6s,baz=64,slow=5.5,SNR=3.6							
KURK	**Kurchatov**	**57.51**	**317**	*e*P		**P**	**17 00 05.4**	**-0.1**
	comp=Z,1.5nm,0.6s,mb3.6							
KURK	**Kurchatov**	**57.51**	**317**	P		**P**	**17 00 05.9**	**+0.4**
	comp=Z,1.9nm,0.5s,mb3.8,baz=91,slow=7.6,SNR=8.2							
ILAR	**Eielson Array**	**62.03**	**27**	P		**P**	**17 00 35.5**	**-0.4**

comp=Z,0.8nm,0.7s,mb3.5,baz=262,slow=5.3,SNR=6.9
BVAR Borovoye Array 62.70 319 P **P** 17 00 40.9 +0.4
comp=Z,2.4nm,0.3s,mb4.2,baz=103,slow=8.0,SNR=17
YKA Yellowknife Ar 76.45 28 P **P** 17 02 04.1 +0.3
YKA Yellowknife Ar 76.45 28 P **P** 17 02 04.1 +0.3
comp=Z,0.8nm,0.4s,mb3.7,baz=291,slow=5.8,SNR=7.3
ARCES ARCESS Array B 78.94 342 P **P** 17 02 17.5 +0.1
comp=Z,1.8nm,0.5s,mb4.0,baz=77,slow=9.2,SNR=16
NVAR Mina Array Bea 83.12 51 P **P** 17 02 40.5 +0.5
comp=Z,0.7nm,0.7s,mb3.6,baz=263,slow=6.1,SNR=6.2
FINES FINESS Array B 83.20 334 P **P** 17 02 39.0 -0.9
comp=Z,1.1nm,0.4s,mb4.1,baz=74,slow=4.6,SNR=20
LPAZ La Paz 149.91 85 PKPbc PKPbc 17 10 00.5 -2.3
comp=Z,0.6nm,0.5s,baz=257,slow=3.2,SNR=3.6

*ISCJB **09** 16:56:39.9±0.5, 37°.89N±0°.03×21°.49E±0°.03, h10km, Error ellipse: s-maj=4.3km s-min=3.2km az=173.1*
*ATH **09** 16:56:39.1, 37°.95N×21°.47E, h27km±2km, MD2.7/8*
*CSEM **09** 16:56:39.8±0.3, 37°.89N×21°.50E, h10km, MD2.7, Error ellipse: s-maj=5.1km s-min=4.0km az=3.0*
*THE **09** 16:56:40.2, 37°.91N×21°.50E, h0km±2km, ML2.1/6, Error ellipse: s-maj=2.7km s-min=0.8km az=205.0*

ISC 09 16:56:40.3±0.6, 37°.88N±0°.03×21°.50E±0°.03, h1km±15km, n40, σ1§08/66, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.18**	**353**		*e*PB		**Pg**	**16 56 44.2**	**+0.4**
RLS	**Riolos of Patr**	**0.18**	**353**		*e*Pb		**Pg**	**16 56 44.3**	**+0.5**
UPR	**University Cam**	**0.47**	**29**		*e*PB		**Pg**	**16 56 48.6**	**-0.6**
UPR	**University Cam**	**0.47**	**29**		P		**Pg**	**16 56 48.7**	**-0.5**
UPR					S		**Sg**	**16 56 55.7**	**+0.4**
UPR	**University Cam**	**0.47**	**29**		P		**Pg**	**16 56 48.7**	**-0.5**
UPR					S		**Sg**	**16 56 55.7**	**+0.4**
LAKA	**Lakka**	**0.53**	**46**		P		**Pg**	**16 56 49.8**	**-0.6**
LAKA					S		**Sg**	**16 56 57.7**	**+0.5**
LAKA	**Lakka**	**0.53**	**46**		P		**Pg**	**16 56 49.8**	**-0.6**
LAKA					S		**Sg**	**16 56 57.7**	**+0.5**
KFL	**Anninata**	**0.60**	**293**		P		**Pg**	**16 56 51.6**	**-0.3**
KFL					S		**Sg**	**16 57 01.5**	**+1.7**
KFL	**Anninata**	**0.60**	**293**		P		**Pg**	**16 56 51.6**	**-0.3**
KFL					S		**Sg**	**16 57 01.5**	**+1.7**
EFP	**Efpalio**	**0.64**	**30**		*e*PN		**Pg**	**16 56 51.4**	**-1.1**
EFP	**Efpalio**	**0.64**	**30**		P		**Pg**	**16 56 51.4**	**-1.1**
EFP					S		**Sg**	**16 57 01.2**	**+0.4**
EFP	**Efpalio**	**0.64**	**30**		P		**Pg**	**16 56 51.4**	**-1.1**
EFP					S		**Sg**	**16 57 01.2**	**+0.4**
TRIZ	**Trizonia**	**0.67**	**43**		P		**Pg**	**16 56 51.9**	**-1.2**
TRIZ					S		**Sg**	**16 57 02.5**	**+0.8**
TRIZ	**Trizonia**	**0.67**	**43**		P		**Pg**	**16 56 51.9**	**-1.2**
TRIZ					S		**Sg**	**16 57 02.5**	**+0.8**
GUR	**Goura**	**0.67**	**85**		*e*PN		**Pg**	**16 56 52.6**	**-0.6**
GUR	**Goura**	**0.67**	**85**		P		**Pg**	**16 56 52.6**	**-0.6**
GUR					S		**Sg**	**16 57 02.8**	**+0.9**
GUR	**Goura**	**0.67**	**85**		P		**Pg**	**16 56 52.6**	**-0.6**
GUR					S		**Sg**	**16 57 02.8**	**+0.9**
KALE	**Kalithea**	**0.72**	**45**		P		**Pg**	**16 56 52.9**	**-1.2**
KALE					S		**Sg**	**16 57 04.1**	**+0.6**
KALE	**Kalithea**	**0.72**	**45**		P		**Pg**	**16 56 52.9**	**-1.2**
KALE					S		**Sg**	**16 57 04.1**	**+0.6**
VLS	**Valsamata**	**0.78**	**293**		*e*PN		**Pg**	**16 56 53.7**	**-1.5**
VLS	**Valsamata**	**0.78**	**293**		P		**Pg**	**16 56 53.9**	**-1.3**
VLS					S		**Sg**	**16 57 06.2**	**+1.0**
VLS	**Valsamata**	**0.78**	**293**		P		**Pg**	**16 56 53.9**	**-1.3**
VLS					S		**Sg**	**16 57 06.2**	**+1.0**
ITM	**Ithomi**	**0.78**	**154**		*e*PN		**Pg**	**16 56 55.6**	**+0.4**
ITM	**Ithomi**	**0.78**	**154**		P		**Pg**	**16 56 55.6**	**+0.4**
ITM	**Ithomi**	**0.78**	**154**		P		**Pg**	**16 56 55.6**	**+0.4**
DSF	**Desfina**	**0.97**	**56**		P		**Pg**	**16 56 57.0**	**-1.9**
DSF					S		**Sg**	**16 57 11.7**	**+0.1**
DSF	**Desfina**	**0.97**	**56**		P		**Pg**	**16 56 57.0**	**-1.9**
DSF					S		**Sg**	**16 57 11.7**	**+0.1**
PYL	**PYLOS**	**1.00**	**169**		*e*PN		**Pg**	**16 57 00.2**	**+0.7**
PYL	**PYLOS**	**1.00**	**169**		P		**Pg**	**16 57 00.1**	**+0.6**
PYL	**PYLOS**	**1.00**	**169**		*e*Pn		**Pg**	**16 57 00.2**	**+0.7**
LKD2	**Lefkada island**	**1.12**	**324**		P		**Pg**	**16 56 59.7**	**-2.1**
LKD2					S		**Sg**	**16 57 18.0**	**+1.6**
LKD2	**Lefkada island**	**1.12**	**324**		P		**Pg**	**16 56 59.7**	**-2.1**
LKD2					S		**Sg**	**16 57 18.0**	**+1.6**
LTK	**Loutraki**	**1.17**	**82**		*e*PN		**Pg**	**16 57 01.4**	**-1.4**
LTK	**Loutraki**	**1.17**	**82**		P		**Pg**	**16 57 01.7**	**-1.1**
LTK					S		**Sg**	**16 57 18.7**	**+0.7**
LTK	**Loutraki**	**1.17**	**82**		*e*Pn		**Pg**	**16 57 01.4**	**-1.4**
LTK	**Loutraki**	**1.17**	**82**		P		**Pg**	**16 57 01.7**	**-1.1**
LTK					S		**Sg**	**16 57 18.7**	**+0.7**
AGG	**Agios Georgios**	**1.32**	**30**		P		**Pg**	**16 57 03.8**	**-1.8**
AGG					S		**Sg**	**16 57 24.0**	**+1.4**
AGG	**Agios Georgios**	**1.32**	**30**		P		**Pg**	**16 57 03.8**	**-1.8**
AGG					S		**Sg**	**16 57 24.0**	**+1.4**
DID	**Didima**	**1.43**	**104**		P		**Pn**	**16 57 07.4**	**0.0**
DID					S		**Sg**	**16 57 28.1**	**+1.8**
DID	**Didima**	**1.43**	**104**		P		**Pn**	**16 57 07.4**	**0.0**
DID					S		**Sg**	**16 57 28.1**	**+1.8**

CASC 09 17:27:43.0±1.3, 13°.30N×89°.96W, h34km±3km, MD3.6, 1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.63**	**32**		*e*P		Pn	17 27 55.8	+0.2
SBLS					*e*S		Sb	17 28 05.8	+1.4
SNJE	**San Jose**	**0.66**	**32**		*e*P		Pn	17 27 56.2	+0.2
RTR	**El Retiro**	**0.67**	**27**		*e*P		Pn	17 27 56.5	+0.4
BOQS	**Boqueron**	**0.79**	**57**		*e*P		Pn	17 27 57.7	-0.1
BOQS					*e*S		Sn	17 28 09.9	+1.5
SNET	**Serv Nac Est T**	**0.81**	**62**		*e*P		Pn	17 27 58.0	+0.1
SNET					*e*S		Sn	17 28 10.1	+1.3
RBDL	**Robledal**	**0.85**	**18**	↓	*e*P		Pn	17 27 59.4	+0.8
LFRS	**El Faro**	**0.93**	**70**		*e*P		Pn	17 27 59.3	-0.4
LFRS					*e*S		Sn	17 28 12.5	+0.6
IXG	**Ixpaco**	**0.99**	**331**		*e*P		Pn	17 28 00.6	+0.1
IXG					*e*S		Sn	17 28 13.8	+0.4
LBRS	**Las Brisas**	**0.99**	**64**		*e*P		Pn	17 28 00.6	0.0
SNVI	**San Vicente**	**1.14**	**74**		*e*P		Pn	17 28 02.6	+0.1
SNVI					*e*S		Sn	17 28 18.3	+1.4
MTO2	**Montecristo 2**	**1.24**	**28**		*e*P		Pn	17 28 04.7	+0.8
FUG	**Fuego 3**	**1.43**	**323**		*e*P		Pn	17 28 06.8	+0.3
FUG					*e*S		Sn	17 28 24.4	+0.3
FG6		**1.54**	**325**		*e*P		Pn	17 28 09.2	+1.1
FG6					*e*S		Sn	17 28 27.8	+0.9
BLLM	**Bellamira**	**1.68**	**85**		*e*P		Pn	17 28 10.1	0.0
CAHU	**Cacacuatique**	**1.77**	**74**		*e*P		Pn	17 28 11.3	+0.1
TP2	**Tecpan 2**	**1.80**	**325**		*e*P		Pn	17 28 13.2	+1.6
TP2					*e*S		Sn	17 28 36.8	+3.6
CNCH	**Conchagua**	**2.07**	**90**		*e*P		Pn	17 28 16.1	+0.7
COPN	**Copaltepe**	**3.47**	**108**		*e*P		Pn	17 28 34.7	+0.1

*IDC **09** 17:29:54.1±2.1, 6°.12S×131°.30E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.7/14, mbtmp3.8/6, ML4.8/2, Error ellipse: s-maj=78.8km s-min=28.5km az=83.0*
*NEIC **09** 17:30:04.9±1.8, 6°.42S×131°.09E, h96km±21km, mb4.3/7, Error ellipse: s-maj=14.9km s-min=10.7km az=190.0*

ISC 09 17:30:02.9±2.2, 6°.4S±0°.1×131°.06E±0°.09, h72km±26km, n21, σ0§90/27, mb4.0/9, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.44**	**168**		*e*Pn		**Pn**	**17 31 38.2**	**+3.1**
	86nm,0.4s								
KAKA					*e*Sn		**Sn**	**17 32 45.5**	**-1.8**
FITZ	**Fitzroy Crossi**	**12.80**	**204**		Pn		**Pn**	**17 33 01.6**	**-0.4**
	13nm,0.3s,baz=38,slow=11,SNR=118								
FITZ					Sn		**Sn**	**17 35 15.5**	**-7.2**
	3.9nm,0.3s,baz=197,slow=17,SNR=7.7								
WRAB	**Tennant Creek**	**13.85**	**167**		*e*Pn		**Pn**	**17 33 15.3**	**-0.6**
WRAB					*e*Sn		**Sn**	**17 35 38.4**	**-10**
COEN	**Coen**	**14.10**	**123**		*e*Pn		**Pn**	**17 33 18.4**	**-0.8**
	68nm,0.5s								
COEN					*e*Sn		**Sn**	**17 35 44.5**	**-10**
PMG	**Port Moresby**	**16.22**	**102**		*e*Pn		**Pn**	**17 33 47.8**	**+1.3**
	18nm,0.8s								
ASAR	**Alice Springs**	**17.41**	**171**		P		**Pn**	**17 34 01.8**	**+0.7**
ASAR					S		**S**	**17 37 07.5**	**-11**
ASAR	**Alice Springs**	**17.41**	**171**		P		**Pn**	**17 34 01.8**	**+0.7**
	0.6nm,0.3s,baz=348,slow=9.3,SNR=37								
ASAR					S		**S**	**17 37 07.5**	**-11**
	1.1nm,0.3s,baz=356,slow=26,SNR=8.1								
MBWA	**Marble Bar**	**18.34**	**216**		*e*Pn		**Pn**	**17 34 13.9**	**+1.5**
	4.1nm,0.5s								
KKM	**Kota Kinabalu**	**19.28**	**309**		*e*P		**Pn**	**17 34 22.6**	**-1.1**
	7.7nm,0.6s								
KSM	**Kuching**	**22.14**	**290**		P		**P**	**17 34 53.4**	**+0.6**
	2.2nm,0.7s,mb3.6								
CMAR	**Chiang Mai Arr**	**40.16**	**309**		P		**P**	**17 37 32.5**	**+0.3**
	1.2nm,0.6s,mb3.9,baz=130,slow=7.5,SNR=9.7								
CHTO	**Chiang Mai**	**40.36**	**309**		*e*P		**P**	**17 37 33.4**	**-0.5**
	3.0nm,0.7s,mb4.2								
SONM	**Songino Array**	**58.20**	**341**		P		**P**	**17 39 49.4**	**0.0**
	0.6nm,0.7s,mb3.8,baz=171,slow=6.3,SNR=4.9								
YAK	**Yakutsk**	**68.21**	**359**		P		**P**	**17 40 54.6**	**-0.7**
	4.6nm,0.6s,mb4.5								
MK31	**Makanchi Array**	**68.29**	**326**		*e*P		**P**	**17 40 56.0**	**-0.2**
MKAR	**Makanchi Array**	**68.29**	**326**		P		**P**	**17 40 56.9**	**+0.7**
MKAR	**Makanchi Array**	**68.29**	**326**		P		**P**	**17 40 56.9**	**+0.7**
	0.9nm,0.4s,mb4.0,baz=114,slow=8.7,SNR=18								
UCH	**Uchtor**	**70.55**	**319**		P		**P**	**17 41 10.0**	**-0.2**
ZALV	**Zalesovo Beam**	**71.50**	**333**		P		**P**	**17 41 15.0**	**-0.7**
	0.3nm,0.3s,mb3.6,baz=116,slow=6.8,SNR=3.6								
BVAR	**Borovoye Array**	**78.11**	**327**		P		**P**	**17 41 54.0**	**+0.1**
	0.3nm,0.5s,mb3.3,baz=137,slow=7.1,SNR=3.0								
GNI	**Garni**	**91.26**	**310**		*e*P		**P**	**17 43 00.8**	**+0.3**
	7.2nm,0.9s,mb4.8								

*NEIC **09** 18:00:06.3, 33°.99S×72°.37W, h37km, ML3.1(GUC), After GUC.*

GUC 09 18:00:06.3±0.6, 33°.99S×72°.37W, h37km±2km, MD3.7, ML3.1, 4C-5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**0.80**	**88**	↓	*i*P		Pn	18 00 20.9	-0.1
LNV					*i* S		Sn	18 00 32.5	+0.8
LNV	**Longovilo**	**0.80**	**88**	↓	*i*P		Pn	18 00 20.9	-0.1
LNV					*i* S		Sn	18 00 32.5	+0.8
IHA	**Instituto Hidr**	**1.14**	**32**		*e*P		Pn	18 00 26.6	+0.8
IHA					*i* S		Sn	18 00 41.9	+1.7
IHA	**Instituto Hidr**	**1.14**	**32**		*e*P		Pn	18 00 26.6	+0.8
IHA					*i* S		Sn	18 00 41.9	+1.7
TACH	**Talagante**	**1.24**	**74**	↓	*i*P		Pn	18 00 27.8	+0.7
TACH	**Talagante**	**1.24**	**74**	↓	*i*P		Pn	18 00 27.8	+0.7
CHCH	**Chadas Angostu**	**1.43**	**88**		*e*P		Pn	18 00 31.0	+1.3
CHCH					*i* S		Sn	18 00 50.2	+2.9
CHCH	**Chadas Angostu**	**1.43**	**88**		*e*P		Pn	18 00 31.0	+1.3
CHCH					*i* S		Sn	18 00 50.2	+2.9
CACH	**El Canelo**	**1.48**	**95**	↑	*i*P		Pn	18 00 32.3	+2.0
CACH					*i* S		Sn	18 00 52.2	+3.8
CACH	**El Canelo**	**1.48**	**95**	↑	*i*P		Pn	18 00 32.3	+2.0
CACH					*i* S		Sn	18 00 52.2	+3.8
ANTU	**Antumapu**	**1.51**	**74**		*e*P		Pn	18 00 32.4	+1.6
ANTU					*i* S		Sn	18 00 51.9	+2.7
ANTU	**Antumapu**	**1.51**	**74**		*e*P		Pn	18 00 32.4	+1.6
ANTU					*i* S		Sn	18 00 51.9	+2.7
ANTU					AML		AML	18 00 56.1	
	comp=E,437nm,0.3s								
ROCH	**El Roble**	**1.53**	**48**		*e*P		Pn	18 00 32.6	+1.6
ROCH					*i* S		Sn	18 00 52.9	+3.2
PCH	**Pirque**	**1.59**	**77**		*e*P		Pn	18 00 33.4	+1.5
PCH					*i* S		Sn	18 00 53.8	+2.6
PCH	**Pirque**	**1.59**	**77**		*e*P		Pn	18 00 33.4	+1.5
PCH					*i* S		Sn	18 00 53.8	+2.6
CLCH	**Cerro Calan**	**1.64**	**69**		*e*P		Pn	18 00 34.1	+1.5
CLCH					*i* S		Sn	18 00 55.1	+2.6
CLCH					AML		AML	18 01 15.4	
	comp=E,321nm,0.7s								
PEL	**Peldehue**	**1.64**	**59**	↓	*i*P		Pn	18 00 34.5	+1.9
PEL					*i* S		Sn	18 00 55.4	+2.8
PEL					AML		AML	18 01 04.1	
	comp=E,649nm,0.7s								
LMEL	**Las Melosas**	**1.81**	**86**	↑	*i*P		Pn	18 00 36.9	+2.0
LMEL					*i* S		Sn	18 00 60.0	+3.3
LMEL	**Las Melosas**	**1.81**	**86**	↑	*i*P		Pn	18 00 36.9	+2.0
LMEL					*i* S		Sn	18 00 60.0	+3.3
LMEL					AML		AML	18 01 03.3	
	comp=N,272nm,0.2s								
FCH	**Farellones**	**1.86**	**70**		*e*P		Pn	18 00 37.6	+2.0
FCH	**Farellones**	**1.86**	**70**		*e*P		Pn	18 00 37.6	+2.0
FCH					AML		AML	18 01 06.7	
	comp=N,245nm,0.6s								

*NEIC **09** 18:04:44.1, 34°.00S×72°.40W, h25km, ML3.2(GUC), After GUC.*

GUC 09 18:04:44.1±0.5, 34°.00S×72°.40W, h25km±30km, MD3.9, ML3.2, 8C-5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**0.83**	**87**	↓	*i*P		Pb	18 04 59.4	-0.4
LNV					*i* S		Sb	18 05 10.2	-0.3
LNV	**Longovilo**	**0.83**	**87**	↓	*i*P		Pb	18 04 59.4	-0.4
LNV					*i* S		Sb	18 05 10.2	-0.3
TACH	**Talagante**	**1.27**	**75**	↓	*i*P		Pn	18 05 05.9	-0.3
TACH	**Talagante**	**1.27**	**75**	↓	*i*P		Pn	18 05 05.9	-0.3
CHCH	**Chadas Angostu**	**1.46**	**88**	↑	*i*P		Pn	18 05 09.2	+0.4
CHCH					*i* S		Sn	18 05 28.1	+1.0
CHCH	**Chadas Angostu**	**1.46**	**88**	↑	*i*P		Pn	18 05 09.2	+0.4
CHCH					*i* S		Sn	18 05 28.1	+1.0
CACH	**El Canelo**	**1.50**	**95**	↑	*i*P		Pn	18 05 10.5	+1.1
CACH					*i* S		Sn	18 05 30.9	+2.7
CACH	**El Canelo**	**1.50**	**95**	↑	*i*P		Pn	18 05 10.5	+1.1
CACH					*i* S		Sn	18 05 30.9	+2.7
ANTU	**Antumapu**	**1.54**	**74**		*e*P		Pn	18 05 10.2	+0.3
ANTU					*i* S		Sn	18 05 30.2	+1.2
ANTU	**Antumapu**	**1.54**	**74**		*e*P		Pn	18 05 10.2	+0.3
ANTU					*i* S		Sn	18 05 30.2	+1.2
ANTU					AML		AML	18 05 34.6	
	comp=E,594nm,0.5s								
ROCH	**El Roble**	**1.55**	**49**		*e*P		Pn	18 05 11.0	+0.9
ROCH					*e*S		Sn	18 05 31.4	+2.0
PCH	**Pirque**	**1.62**	**77**	↑	*i*P		Pn	18 05 11.8	+0.8
PCH					*i* S		Sn	18 05 33.0	+2.0
PCH	**Pirque**	**1.62**	**77**	↑	*i*P		Pn	18 05 11.8	+0.8
PCH					*i* S		Sn	18 05 33.0	+2.0
CLCH	**Cerro Calan**	**1.67**	**69**		*e*P		Pn	18 05 12.3	+0.6
CLCH					*i* S		Sn	18 05 34.6	+2.3
CLCH					AML		AML	18 05 51.0	
	comp=E,328nm,0.7s								
PEL	**Peldehue**	**1.67**	**60**	↓	*i*P		Pn	18 05 12.9	+1.2
PEL					*i* S		Sn	18 05 34.1	+1.8
PEL					AML		AML	18 05 43.0	
	comp=E,843nm,0.4s								
LMEL	**Las Melosas**	**1.84**	**86**	↑	*i*P		Pn	18 05 15.3	+1.3
LMEL					*i* S		Sn	18 05 39.3	+2.8
LMEL	**Las Melosas**	**1.84**	**86**	↑	*i*P		Pn	18 05 15.3	+1.3
LMEL					*i* S		Sn	18 05 39.3	+2.8
FCH	**Farellones**	**1.89**	**70**		*e*P		Pn	18 05 14.1	-0.6
FCH					*i* S		Sn	18 05 38.8	+1.1
FCH					AML		AML	18 05 47.2	
	comp=E,252nm,0.4s								

*ISCJB **09** 18:07:05.6±0.9, 33°.63N±0°.04×141°.13E±0°.07, h55km±9km, mb3.6/3, Error ellipse: s-maj=10.1km s-min=6.2km az=8.7*
*IDC **09** 18:07:06.3±3.4, 33°.51N×141°.18E, h42km±30km, mb3.5/3, mb1 3.6/5, mb1mx3.3/22, mbtmp3.7/5, ML3.6/2, Error ellipse: s-maj=26.6km s-min=14.2km az=43.0*
*JMA **09** 18:07:06.7±0.1, 33°.69N×141°.06E, h52km±4km, MJ3.7*

ISC 09 18:07:06.6±0.9, 33°.63N±0°.04×141°.13E±0°.07, h42km±12km, n20, σ0§78/31, mb3.6/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.03**	**353**		P		**Pn**	**18 07 24.2**	**-0.3**
BSO1					S		**Sn**	**18 07 37.0**	**-0.7**
JHJ2	**Mitsune**	**1.22**	**245**		P		**Pn**	**18 07 27.6**	**+0.5**
JHJ2					S		**Sn**	**18 07 42.5**	**+0.2**
JHJ	**Hachijo jima 2**	**1.24**	**246**		P		**Pn**	**18 07 27.6**	**+0.2**
	744nm,0.3s,baz=64,slow=22,SNR=1794								
JHJ					S		**Sn**	**18 07 41.9**	**-1.0**
	519nm,0.3s,baz=84,slow=24,SNR=11								
BSO3	**Boso 3**	**1.27**	**336**		P		**Pn**	**18 07 27.8**	**-0.1**
BSO3					S		**Sn**	**18 07 43.3**	**-0.5**
JMY	**Miyakejima3**	**1.42**	**288**		P		**Pn**	**18 07 29.5**	**-0.3**
BSO4	**Boso 4**	**1.50**	**334**		P		**Pn**	**18 07 31.7**	**+0.7**
KTR	**Katsuura**	**1.66**	**336**		S		**Sn**	**18 07 52.9**	**-0.2**
JKO	**Kozu shima**	**1.75**	**289**		P		**Pn**	**18 07 34.4**	**0.0**
JKO					S		**Sn**	**18 07 54.6**	**-0.8**
JIM2	**Oshima 3**	**1.78**	**308**		P		**Pn**	**18 07 34.3**	**-0.5**
JIM2					S		**Sn**	**18 07 54.8**	**-1.3**
JIZS	**Izushimoda**	**2.16**	**301**		P		**Pn**	**18 07 40.3**	**+0.3**
JIZS					S		**Sn**	**18 08 05.7**	**+0.2**
JOD2	**Odawara 2**	**2.34**	**314**		P		**Pn**	**18 07 42.4**	**-0.2**
JOD2					S		**Sn**	**18 08 08.7**	**-1.4**
TK04	**Tokai 4**	**2.81**	**286**		P		**Pn**	**18 07 50.0**	**+1.1**
SHZ3	**Shizuoka 3**	**2.81**	**301**		P		**Pn**	**18 07 50.2**	**+1.3**
JYN	**Shimob**	**2.83**	**312**		P		**Pn**	**18 07 49.8**	**+0.5**
JYN					S		**Sn**	**18 08 22.9**	**+0.8**
MAT	**Matsushiro**	**3.77**	**321**		P		**Pn**	**18 08 03.2**	**+1.1**
MAT					S		**Sn**	**18 08 45.6**	**+0.5**
CBIJ	**Chichi jima**	**6.58**	**172**		P		**Pn**	**18 08 39.5**	**-1.2**
	6.7nm,0.3s,baz=75,slow=23,SNR=15								
CBIJ					S		**Sn**	**18 09 48.5**	**-6.0**
	10nm,0.3s,baz=270,slow=21,SNR=6.0								
KSRS	**Korea Array**	**11.41**	**293**		P		**Pn**	**18 09 49.1**	**+2.2**
	0.1nm,0.3s,baz=106,slow=14,SNR=5.2								
SONM	**Songino Array**	**29.62**	**309**		P		**P**	**18 13 07.7**	**+0.1**
	0.1nm,0.3s,mb3.0,baz=118,slow=8.6,SNR=3.5								
MKAR	**Makanchi Array**	**45.80**	**305**		P		**P**	**18 15 23.5**	**-0.5**
	0.3nm,0.2s,mb3.8,baz=90,slow=9.7,SNR=3.8								
ASAR	**Alice Springs**	**57.39**	**188**		P		**P**	**18 16 50.5**	**-0.3**
	0.7nm,0.3s,mb4.1,baz=4.0,slow=6.3,SNR=37								

*IDC **09** 18:25:47.2±1.7, 16°.40N×86°.43W, h0km, mb3.6/3, mb1 4.1/4, mb1mx3.7/17, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=87.8km s-min=29.1km az=65.0*
*NEIC **09** 18:25:48.5±1.7, 15°.68N×86°.75W, h40km, mb3.6/2, Error ellipse: s-maj=57.8km s-min=16.5km az=86.0*
*ISCJB **09** 18:25:49.1±2.6, 15°.89N±0°.07×87°.5W±0°.2, h17km±24km, mb3.6/3, Error ellipse: s-maj=29.8km s-min=6.9km az=162.0*
*CASC **09** 18:25:51.3±1.9, 15°.83N×87°.84W, h37km±29km, MD4.1, ML3.7, mb3.6(NEIC)*

ISC 09 18:25:51.0±3.0, 15°.83N±0°.07×87°.6W±0°.2, h16km±21km, n24, σ1§33/25, mb3.6/3, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**1.79**	**170**		*e*Pn		**Pn**	**18 26 13.7**	**-7.5**
TGUH					*e*Sn		**Sn**	**18 26 35.6**	**-8.0**
CAHU	**Cacacuatique**	**2.13**	**196**		*e*P		**Pn**	**18 26 24.9**	**-1.1**
CNCH	**Conchagua**	**2.55**	**185**		*e*P		**Pn**	**18 26 29.9**	**-1.7**
CNGN	**Cerro Negro**	**3.42**	**165**		*e*P		**Pn**	**18 26 43.6**	**-0.1**
CNGN					*e*S		**Sn**	**18 27 23.6**	**-0.4**
CNGN					AML		AML	18 27 33.9	
	comp=N,342nm,0.6s								
MOMN	**Momotombo**	**3.55**	**163**		*e*P		**Pn**	**18 26 44.8**	**-0.7**
HUEN		**3.74**	**158**		*e*P		**Pn**	**18 26 48.0**	**0.0**
COPN	**Copaltepe**	**3.76**	**165**		*e*P		**Pn**	**18 26 47.3**	**-1.0**
CSAN		**3.80**	**162**		*e*P		**Pn**	**18 26 50.4**	**+1.5**
MGAN	**Managua**	**3.89**	**160**		*e*P		**Pn**	**18 26 51.1**	**+1.0**
MGAN					*e*S		**Sn**	**18 27 35.2**	**-0.3**
TEIG	**Tepich**	**4.42**	**352**		*e*Pn		**Pn**	**18 26 54.8**	**-2.6**
TEIG	**Tepich**	**4.42**	**352**		*e*P		**Pn**	**18 26 55.0**	**-2.4**
CONN	**Concepcion**	**4.65**	**155**		*e*P		**Pn**	**18 27 02.6**	**+2.0**
JTS	**JuntasAbangare**	**6.08**	**155**		Pn		**Pn**	**18 27 21.1**	**+0.9**
	comp=N,1.3nm,0.3s,baz=340,slow=23,SNR=4.8								
JTS					Sn		**Sn**	**18 28 43.5**	**+14**
	comp=N,1.7nm,0.3s,baz=237,slow=15,SNR=5.9								
MIAR	**Mount Ida**	**19.39**	**345**		P		**Pn**	**18 30

comp=N,6.2nm,0.2s
MEZF Maizieres J'vi 2.15 170 *e*Pn **Pn 18 32 16.8 +1.2**
baz=353,SNR=1.0
MEZF Maizieres J'vi 2.15 170 *e*Pg **Pg 18 32 22.1 +0.2**
baz=355
MEZF *e*Sn **Sn 18 32 42.0 +0.3**
SNR=1.0
MEZF *e*Sg **Sg 18 32 50.3 +0.6**
comp=N,13nm,0.3s
MEZF Maizieres J'vi 2.15 170 *e*Pg **Pg 18 32 22.1 +0.2**
baz=355
MEZF *e*Sn **Sn 18 32 42.0 +0.3**
SNR=1.0
MEZF *e*Sg **Sg 18 32 50.3 +0.6**
comp=N,13nm,0.3s
MEZF Maizieres J'vi 2.15 170 *e*Pn **Pn 18 32 16.8 +1.2**
MEZF *e*Pg **Pg 18 32 22.1 +0.2**
MEZF *e*Sn **Sn 18 32 42.0 +0.3**
MEZF *e*Sg **Sg 18 32 50.3 +0.6**
MEZF Maizieres J'vi 2.15 170 *e*Pn **Pn 18 32 16.8 +1.2**
baz=353,SNR=1.0
MEZF Maizieres J'vi 2.15 170 *e*Pg **Pg 18 32 22.1 +0.2**
baz=355
MEZF *e*Sn **Sn 18 32 42.0 +0.3**
SNR=1.0
MEZF *e*Sg **Sg 18 32 50.3 +0.6**
comp=N,6.4nm,0.3s
SFTF Sexfontaines 2.44 172 *e*Pg **Pg 18 32 27.1 -0.4**
baz=357
SFTF *e*Sg **Sg 18 32 59.3 +0.2**
comp=N,9.2nm,0.2s
SFTF Sexfontaines 2.44 172 *e*Pg **Pg 18 32 27.1 -0.4**
baz=357
SFTF *e*Sg **Sg 18 32 59.3 +0.2**
comp=N,4.6nm,0.2s
CDF Champ du Feu 2.85 140 *e*P **Pn 18 32 28.4 +3.1**
SNR=1.0
CDF *e*Sn **Sn 18 32 58.3 -0.8**
SNR=1.0
CDF *e*Sg **Sg 18 33 11.2 -1.1**
comp=N,5.2nm,0.3s,SNR=1.0
CDF Champ du Feu 2.85 140 *e*P **Pn 18 32 28.4 +3.1**
SNR=1.0
CDF *e*Sn **Sn 18 32 58.3 -0.8**
SNR=1.0
CDF *e*Sg **Sg 18 33 11.2 -1.1**
comp=N,2.6nm,0.3s,SNR=1.0
HAU Haudompre 2.88 155 *e*Pn **Pn 18 32 25.8 +0.2**
HAU *e*Pg **Pg 18 32 35.3 -0.5**
HAU Haudompre 2.88 155 *e*Pn **Pn 18 32 25.8 +0.2**
HINF Hinteralfeld 3.20 150 *e*Pg **Pg 18 32 41.3 -0.6**
SNR=1.0
HINF *e*Sn **Sn 18 33 06.9 -0.7**
SNR=1.0
HINF *e*Sg **Sg 18 33 22.5 -0.9**
comp=N,5.5nm,0.4s
HINF Hinteralfeld 3.20 150 *e*Pn **Pn 18 32 30.3 +0.3**
HINF *e*Pg **Pg 18 32 41.3 -0.6**
HINF *e*Sn **Sn 18 33 06.9 -0.7**
HINF *e*Sg **Sg 18 33 22.5 -0.9**
HINF Hinteralfeld 3.20 150 *e*Pn **Pn 18 32 30.3 +0.3**
HINF Hinteralfeld 3.20 150 *e*Pg **Pg 18 32 41.3 -0.6**
SNR=1.0
HINF *e*Sn **Sn 18 33 06.9 -0.7**
SNR=1.0
HINF *e*Sg **Sg 18 33 22.5 -0.9**
comp=N,2.8nm,0.4s
LOR Lormes 3.38 187 *e*Pn **Pn 18 32 33.8 +1.3**
baz=9.6,SNR=1.0
LOR Lormes 3.38 187 *e*Pg **Pg 18 32 44.3 -1.1**
baz=8.5
LOR *e*Sn **Sn 18 33 11.9 -0.2**
SNR=1.0
LOR *e*Sg **Sg 18 33 29.0 -0.1**
comp=N,3.9nm,0.2s,SNR=1.0
LOR Lormes 3.38 187 *e*Pn **Pn 18 32 33.8 +1.3**
LOR *e*Pg **Pg 18 32 44.3 -1.1**
LOR *e*Sn **Sn 18 33 11.9 -0.2**
LOR *e*Sg **Sg 18 33 29.0 -0.1**
LOR Lormes 3.38 187 *e*Pn **Pn 18 32 33.8 +1.3**
baz=9.6,SNR=1.0
LOR Lormes 3.38 187 *e*Pg **Pg 18 32 44.3 -1.1**
baz=8.5
LOR *e*Sn **Sn 18 33 11.9 -0.2**
SNR=1.0
LOR *e*Sg **Sg 18 33 29.0 -0.1**
comp=N,2.0nm,0.2s,SNR=1.0
SSF Saint Saulge 3.62 191 *e*Pn **Pn 18 32 35.8 0.0**
SNR=1.0
SSF *e*Sn **Sn 18 33 17.0 -1.0**
SSF *e*Sg **Sg 18 33 36.2 -0.6**
comp=N,4.6nm,0.5s,SNR=1.0
SSF Saint Saulge 3.62 191 *e*Pn **Pn 18 32 35.8 0.0**
SNR=1.0
SSF *e*Sn **Sn 18 33 17.0 -1.0**
SSF *e*Sg **Sg 18 33 36.2 -0.6**
comp=N,2.3nm,0.5s,SNR=1.0
LDF La Druitiere 3.63 238 *e*Pn **Pn 18 32 37.6 +1.7**
SNR=1.0
LDF *e*Sn **Sn 18 33 17.4 -0.8**
SNR=1.0
LDF *e*Sg **Sg 18 33 36.7 -0.4**
comp=N,4.0nm,0.3s
LDF La Druitiere 3.63 238 *e*Pn **Pn 18 32 37.6 +1.7**
SNR=1.0
LDF *e*Sn **Sn 18 33 17.4 -0.8**
SNR=1.0
LDF *e*Sg **Sg 18 33 36.7 -0.4**
comp=N,2.0nm,0.3s
FLN La Foliniere 3.73 242 *e*Pn **Pn 18 32 38.4 +1.1**
baz=63,SNR=1.0
FLN *e*Sg **Sg 18 33 37.5 -2.9**
comp=N,9.3nm,0.4s,SNR=1.0
FLN La Foliniere 3.73 242 *e*Pn **Pn 18 32 38.4 +1.1**
baz=63,SNR=1.0
FLN *e*Sg **Sg 18 33 37.5 -2.9**
comp=N,4.7nm,0.4s,SNR=1.0
AVF Avril sur Loir 3.90 192 *e*Pg **Pg 18 32 54.7 -0.7**
AVF *e*Sn **Sn 18 33 23.9 -1.2**
comp=N,1.6nm,0.3s,SNR=1.0
AVF Avril sur Loir 3.90 192 *e*Pg **Pg 18 32 54.7 -0.7**
AVF *e*Sn **Sn 18 33 23.9 -1.2**
comp=N,0.8nm,0.3s,SNR=1.0
SMF Signal de Mont 4.00 187 *e*Pn **Pn 18 32 42.3 +1.3**
SNR=1.0
SMF *e*Sn **Sn 18 33 25.0 -2.4**
SNR=1.0
SMF *e*Sg **Sg 18 33 45.0 -4.0**
comp=N,2.2nm,0.2s,SNR=1.0
SMF Signal de Mont 4.00 187 *e*Pn **Pn 18 32 42.3 +1.3**
SNR=1.0
SMF *e*Sn **Sn 18 33 25.0 -2.4**
SNR=1.0
SMF *e*Sg **Sg 18 33 45.0 -4.0**
comp=N,1.1nm,0.2s,SNR=1.0
CABF La Chapelle 4.14 165 *e*Pn **Pn 18 32 44.8 +1.8**
SNR=1.0
CABF *e*Sn **Sn 18 33 28.0 -3.0**
comp=N,3.0nm,0.5s,SNR=1.0
CABF La Chapelle 4.14 165 *e*Pn **Pn 18 32 44.8 +1.8**
SNR=1.0
CABF *e*Sn **Sn 18 33 28.0 -3.0**
comp=N,1.5nm,0.5s,SNR=1.0
GRR Gorron 4.14 240 *e*Sn **Sn 18 33 29.6 -1.4**
comp=N,5.6nm,0.4s,SNR=1.0
GRR Gorron 4.14 240 *e*Sn **Sn 18 33 29.6 -1.4**
comp=N,2.8nm,0.4s,SNR=1.0
BGF Bois d'Agland 4.21 196 *e*Pn **Pn 18 32 46.3 +2.4**
SNR=1.0
BGF *e*Sn **Sn 18 33 30.5 -2.0**
comp=N,5.5nm,0.3s,SNR=1.0
BGF Bois d'Agland 4.21 196 *e*Pn **Pn 18 32 46.3 +2.4**
SNR=1.0
BGF *e*Sn **Sn 18 33 30.5 -2.0**
comp=N,2.8nm,0.3s,SNR=1.0
TCF Toulx Ste Croi 4.59 200 *e*Pn **Pn 18 32 50.3 +1.1**
SNR=1.0
TCF *e*Sn **Sn 18 33 40.6 -1.4**
comp=N,1.4nm,0.3s,SNR=1.0
TCF Toulx Ste Croi 4.59 200 *e*Pn **Pn 18 32 50.3 +1.1**
SNR=1.0
TCF *e*Sn **Sn 18 33 40.6 -1.4**
comp=N,0.7nm,0.3s,SNR=1.0
SGMF Saint Gilles 5.18 246 *e*Pn **Pn 18 32 58.2 +1.0**
SGMF Saint Gilles 5.18 246 *e*Pn **Pn 18 32 58.2 +1.0**
LPG La Plagne 5.34 163 *e*Pn **Pn 18 33 03.4 +4.0**
SNR=1.0
LPG La Plagne 5.34 163 *e*Pn **Pn 18 33 03.4 +4.0**
SNR=1.0
QUIF Quistinic 5.70 245 *e*Pn **Pn 18 33 05.0 +0.6**
SNR=1.0
QUIF Quistinic 5.70 245 *e*Pn **Pn 18 33 05.0 +0.6**
SNR=1.0

*NOU **09** 18:32:37.8±1.3, 14°49S×168°34E, h30km, MD3.9, ML4.9, MS2.4*
*LDG **09** 18:32:41.6±0.2, 14°72S×166°76E, h100km, Mb4.6/3, Error ellipse: s-maj=30.0km s-min=7.8km az=84.0*
*IDC **09** 18:32:43.6±0.6, 14°78S×167°32E, h127km±5km, mb4.4/19, mb1 4.5/20, mb1mx4.4/22, mbtmp4.4/20, Error ellipse: s-maj=13.2km s-min=12.5km az=26.0*
*ISCJB **09** 18:32:44.1±1.0, 14°86S±0°05×167°25E±0°05, h145km±9km, mb4.8/65, Error ellipse: s-maj=8.8km s-min=6.6km az=143.8*
*NEIC **09** 18:32:45.6±1.0, 14°79S×167°24E, h145km±8km, mb5.1/29, Error ellipse: s-maj=7.5km s-min=6.1km az=195.0*
*BJI **09** 18:32:49.1, 14°02S×167°15E, h156km, mB5.0/17, mb4.6/30*
*DJA **09** 18:33:00, 15°01S×166°71E, h252km, mb5.0/27*
ISC 09 18:32:45.0±0.9,**14°85S**±0°05×**167°26E**±0°05,**h138**km±9km, **h157**km±3.3km**:pP-P,n177,**σ**1**°**01**/130,**mb4.8**/65,**3C-1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.22**	**186**	*e*P		**Pn**	**18 34 26.7**	**-1.4**
DZM				AMP			18 36 00.7	
	comp=Z,1μm,3.5s							
DZM	**Mont Dzumac**	**7.22**	**186**	*i*Pn		**Pn**	**18 34 27.1**	**-0.9**
	comp=Z,307nm,0.7s							
DZM				*e*Sn		**Sn**	**18 35 48.8**	**0.0**
NOUC	**Port Laguerre**	**7.27**	**187**	*e*P		**Pn**	**18 34 27.8**	**-0.9**
NOUC				*e*S		**Sn**	**18 35 50.1**	**+0.3**
NOUC				AMP			18 35 55.1	
	comp=Z,46nm,12.0s							
BAYA	**Yate Dam**	**7.27**	**183**	*e*P		**Pn**	**18 34 27.9**	**-0.8**
BAYA				*e*S		**Sn**	**18 35 48.1**	**-1.8**
MVNO	**Noumea**	**7.42**	**186**	*e*P		**Pn**	**18 34 30.9**	**+0.2**
HNR	**Honiara**	**8.95**	**306**	*e*Pn		**Pn**	**18 34 51.5**	**+0.2**
	comp=Z,188nm,0.7s							
HNR				*e*Sn		**Sn**	**18 36 23.5**	**-7.1**
HNR	**Honiara**	**8.95**	**306**	P		**Pn**	**18 34 51.5**	**+0.2**
	comp=Z,27nm,0.3s,baz=203,slow=3.8,SNR=30							
MSVF	**Nonsavu**	**10.74**	**107**	Pn		Px	18 35 25.6	
	comp=Z,353nm,1.0s,SNR=5.3							
MSVF	**Nonsavu**	**10.74**	**107**	*e*Pn		**Pn**	**18 35 17.6**	**+2.4**
	comp=Z,138nm,1.4s							
EIDS	**Eidsvold**	**18.43**	**233**	*e*P		**P**	**18 36 52.0**	**+2.1**
	comp=Z,82nm,0.7s							
AFI	**Afiamalu**	**20.32**	**90**	*e*P		**P**	**18 37 11.1**	**+0.6**
	comp=Z,48nm,0.8s							
AFI	**Afiamalu**	**20.32**	**90**	P		**P**	**18 37 10.8**	**+0.3**
	comp=Z,60nm,1.0s,baz=236,slow=22,SNR=2.3							
PMG	**Port Moresby**	**20.38**	**283**	*e*P		**P**	**18 37 11.7**	**+0.6**
	comp=Z,117nm,1.4s							
CTA	**Charters Tower**	**20.70**	**252**	*e*P		**P**	**18 37 14.8**	**+0.3**
	comp=Z,48nm,0.8s							
CTA	**Charters Tower**	**20.70**	**252**	P		**P**	**18 37 15.5**	**+1.0**
CTA	**Charters Tower**	**20.70**	**252**	P		**P**	**18 37 15.5**	**+1.0**
	comp=Z,62nm,0.8s,baz=78,slow=12,SNR=45							
CTAO	**Charters Tower**	**20.70**	**252**	*e*P		**P**	**18 37 15.1**	**+0.6**
	comp=Z,70nm,0.8s							
CTAO	**Charters Tower**	**20.70**	**252**	P		**P**	**18 37 15.4**	**+0.9**
	comp=Z,909nmcomp=Z,96nm,0.9s							
OUZ	**Omahuta**	**21.07**	**165**	*e*P		**P**	**18 37 19.5**	**+1.3**
	comp=Z,152nm,0.9s,mb5.3							
ARMA	**Armidale**	**21.13**	**220**	*i*P		**P**	**18 37 20.5**	**+1.5**
ARMA	**Armidale**	**21.13**	**220**	*e*P		**P**	**18 37 20.5**	**+1.5**
	comp=Z,26nm,1.2s,mb4.4							
RIV	**Riverview**	**23.86**	**215**	*e*P		**P**	**18 37 47.4**	**+1.7**
URZ	**Urewera**	**24.89**	**161**	*e*P		**P**	**18 37 54.7**	**-0.3**
	comp=Z,34nm,0.8s,mb4.9							
URZ	**Urewera**	**24.89**	**161**	P		**P**	**18 37 54.3**	**-0.7**
	comp=Z,20nm,0.6s,mb4.8,baz=12,slow=7.0,SNR=16							
BKZ	**Black Stump Fm**	**25.55**	**163**	PN		**P**	**18 38 01.2**	**+0.2**
CNB	**Canberra Magne**	**25.96**	**215**	*e*P		**P**	**18 38 06.2**	**+1.5**
SNZO	**South Karori**	**27.14**	**168**	P		**P**	**18 38 17.4**	**+2.2**
	comp=Z,60nm,0.9s,mb5.2							
THZ	**Tophouse**	**27.26**	**171**	PN		**P**	**18 38 15.8**	**-0.4**
STKA	**Stephens Creek**	**28.91**	**230**	*i*P		**P**	**18 38 32.0**	**+0.9**
	comp=Z,31nm,0.6s,mb5.2							
STKA	**Stephens Creek**	**28.91**	**230**	*e*P		**P**	**18 38 32.0**	**+0.9**
	comp=Z,15nm,1.0s,mb4.7							
STKA	**Stephens Creek**	**28.91**	**230**	P		**P**	**18 38 32.5**	**+1.4**
	comp=Z,42nm,0.6s,mb5.3,baz=44,slow=7.6,SNR=90							
STKA				PcP		PcP	18 41 37.1	+0.2
	comp=Z,2.6nm,0.7s,baz=11,slow=7.5,SNR=3.3							
RPZ	**Rata Peaks**	**28.95**	**174**	*e*P		**P**	**18 38 30.8**	**-0.4**
	comp=Z,66nm,0.9s,mb5.4							
RPZ	**Rata Peaks**	**28.95**	**174**	P		**P**	**18 38 31.4**	**+0.1**
	comp=Z,48nm,0.7s,mb5.4,baz=333,slow=2.7,SNR=33							
TUZ	**Tuapeka**	**31.07**	**177**	PN		**P**	**18 38 50.5**	**+0.5**
WRAB	**Tennant Creek**	**31.78**	**256**	*e*P		**P**	**18 38 55.0**	**-1.5**
	comp=Z,16nm,1.1s,mb4.7							
WRAB	**Tennant Creek**	**31.78**	**256**	P		**P**	**18 38 54.6**	**-1.9**
	comp=Z,16nm,1.1s,mb4.7							
RAR	**Rarotonga**	**31.93**	**106**	*e*P		**P**	**18 38 57.5**	**-0.4**
	comp=Z,68nm,1.0s,mb5.3							
RAR	**Rarotonga**	**31.93**	**106**	P		**P**	**18 38 57.2**	**-0.6**
	comp=Z,33nm,0.8s,mb5.1,baz=232,slow=7.1,SNR=4.0							
ASAR	**Alice Springs**	**32.62**	**249**	P		**P**	**18 39 02.8**	**-1.1**
	comp=Z,21nm,0.9s,mb4.9,baz=77,slow=8.9,SNR=124							
ASAR				PcP		PcP	18 41 48.1	+1.2
	comp=Z,0.7nm,0.6s,baz=69,slow=2.2,SNR=4.6							
BAKI	**Biak**	**33.63**	**291**	P		**P**	**18 39 12.1**	**-0.6**
	comp=Z,81nm,1.1s,mb5.4							
KAKA	**Kakadu**	**33.87**	**269**	*e*P		**P**	**18 39 13.7**	**-1.1**
	comp=Z,11nm,0.6s,mb4.8							
KAKA	**Kakadu**	**33.87**	**269**	*e*P		**P**	**18 39 13.2**	**-1.6**
	comp=Z,43nm,0.8s,mb5.2							
TLE	**Tual**	**35.14**	**281**	P		**P**	**18 39 26.0**	**+0.3**
	comp=Z,119nm,2.5s,mb5.1							
GUMO	**Guam**	**35.91**	**321**	P		**P**	**18 39 35.4**	**+3.2**
	comp=Z,78nm,1.7s,mb5.1							
FORT	**Forrest**	**39.23**	**239**	*e*P		**P**	**18 40 00.2**	**+0.1**
	comp=Z,58nm,0.6s,mb5.4							
FORT	**Forrest**	**39.23**	**239**	*e*P		**P**	**18 40 00.1**	**0.0**
	comp=Z,65nm,0.6s,mb5.4							
FITZ	**Fitzroy Crossi**	**39.99**	**259**	*e*P		**P**	**18 40 05.6**	**-0.9**
	comp=Z,36nm,0.8s,mb5.0							
FITZ	**Fitzroy Crossi**	**39.99**	**259**	*e*P		**P**	**18 40 05.9**	**-0.6**
	comp=Z,22nm,0.9s,mb4.8							
FITZ	**Fitzroy Crossi**	**39.99**	**259**	P		**P**	**18 40 06.0**	**-0.5**
	comp=Z,21nm,0.8s,mb4.8,baz=103,slow=7.5,SNR=36							
NLAI	**Namlea**	**41.23**	**282**	P		**P**	**18 40 18.6**	**+1.9**
	comp=Z,76nm,1.3s,mb5.2							
MMRI	**Maumere**	**44.45**	**273**	P		**P**	**18 40 42.4**	**-0.3**
	comp=Z,51nm,1.6s,mb4.9							
BBSI	**Bau Bau**	**44.88**	**277**	P		**P**	**18 40 46.2**	**0.0**
	comp=Z,46nm,1.3s,mb4.9							
MNI	**Manado**	**44.99**	**287**	P		**P**	**18 40 47.1**	**+0.1**
	comp=Z,1μmcomp=Z,76nm,0.9s,mb5.3							
KDI	**Kendari**	**45.26**	**279**	P		**P**	**18 40 48.4**	**-0.8**
	comp=Z,16nm,1.3s,mb4.5							
KMSI	**Cibinong**	**45.46**	**286**	P		**P**	**18 40 50.4**	**-0.3**
	comp=Z,1μmcomp=Z,103nm,1.2s,mb5.3							
MBWA	**Marble Bar**	**45.51**	**255**	*e*P		**P**	**18 40 50.6**	**-0.4**
	comp=Z,67nm,1.1s,mb5.2							
MBWA	**Marble Bar**	**45.51**	**255**	P		**P**	**18 40 51.0**	**0.0**
	comp=Z,63nm,0.9s,mb5.2							
LUWI	**Luwuk**	**46.03**	**283**	P		**P**	**18 40 55.7**	**+0.5**
	comp=Z,47nm,1.2s,mb5.0							
APSI	**Ampana**	**47.13**	**283**	P		**P**	**18 41 03.7**	**-0.1**
KAPI	**Kappang**	**47.72**	**277**	P		**P**	**18 41 08.1**	**-0.2**
	comp=Z,15nm,0.8s,mb4.7,baz=136,slow=6.9,SNR=5.8							
KLBR	**Kellerberrin**	**48.04**	**241**	*e*P		**P**	**18 41 09.9**	**-0.6**
	comp=Z,11nm,0.7s,mb4.6							
NWAO	**Narrogin (SRO)**	**48.68**	**239**	*e*P		**P**	**18 41 14.8**	**-0.7**
	comp=Z,51nm,1.4s,mb5.0							
PCI	**Palu**	**48.84**	**282**	P		**P**	**18 41 17.7**	**+0.8**
	comp=Z,829nmcomp=Z,84nm,1.2s,mb5.2							
KHKI	**Kahang-Kahang**	**50.92**	**271**	P		**P**	**18 41 32.1**	**-0.5**
	comp=Z,40nm,1.2s,mb4.9							
IGBI	**Denpasar**	**51.27**	**271**	P		**P**	**18 41 34.3**	**-1.0**
	comp=Z,117nm,1.1s,mb5.4							
SRBI	**Singaraja**	**51.36**	**271**	P		**P**	**18 41 35.6**	**-0.3**
	comp=Z,65nm,1.1s,mb5.2							
MYLDM	**Lahad Datu**	**52.26**	**289**	P		**P**	**18 41 44.2**	**+1.5**
TSM	**Tawau**	**52.50**	**287**	P		**P**	**18 41 43.5**	**-0.8**
SDKM	**Sandakan**	**53.64**	**289**	P		**P**	**18 41 52.5**	**-0.2**
KDM	**Kudat**	**54.47**	**290**	P		**P**	**18 42 01.9**	**+3.2**
KKM	**Kota Kinabalu**	**54.69**	**289**	*e*P		**P**	**18 42 00.3**	**0.0**
	comp=Z,64nm,1.2s,mb5.2							
KKM	**Kota Kinabalu**	**54.69**	**289**	P		**P**	**18 42 00.9**	**+0.5**
UGM	**Wanagama**	**55.93**	**270**	P		**P**	**18 42 09.5**	**+0.3**
	comp=Z,172nm,2.1s,mb5.5							
BTM	**Bintulu**	**56.57**	**284**	P		**P**	**18 42 14.4**	**+0.7**
STKI	**Sintang**	**57.08**	**280**	P		**P**	**18 42 18.7**	**+1.3**
	comp=Z,28nm,1.4s,mb4.9							
SBUM	**Sibu**	**57.13**	**283**	P		**P**	**18 42 18.1**	**+0.4**
MAJO	**Matsushiro**	**58.01**	**333**	*e*P		**P**	**18 42 21.3**	**-2.1**
MAT	**Matsushiro**	**58.01**	**333**	P		**P**	**18 42 22.1**	**-1.3**
KSM	**Kuching**	**58.62**	**281**	*e*P		**P**	**18 42 28.0**	**-0.2**
	comp=Z,30nm,1.1s,mb5.0							
KSM	**Kuching**	**58.62**	**281**	P		**P**	**18 42 28.4**	**+0.2**
CISI	**Cisompet, Garu**	**58.63**	**270**	P		**P**	**18 42 26.5**	**-1.7**
	comp=Z,68nm,1.3s,mb5.3							
YHNB	**Yeheng**	**59.56**	**311**	*e*P		**P**	**18 42 33.4**	**-0.9**
	comp=Z,33nm,1.1s,mb5.1							
CGJI	**Cibinong**	**60.89**	**271**	P		**P**	**18 42 42.8**	**-0.9**
KASI	**Kota Agung**	**62.30**	**272**	P		**P**	**18 42 51.9**	**-1.2**
	comp=Z,50nm,1.2s,mb5.2							
ASAJ	**Asahikawa**	**62.85**	**340**	P		**P**	**18 42 57.0**	**+0.8**
	comp=Z,6.0nm,0.9s,mb4.4,baz=230,slow=33,SNR=5.1							
MDSI	**Maura Dua**	**62.86**	**273**	P		**P**	**18 42 55.6**	**-1.2**
	comp=Z,1μmcomp=Z,14nm,0.8s,mb4.8							
SBA	**Scott Base**	**63.02**	**180**	*e*P		**P**	**18 42 57.9**	**+1.1**
	comp=Z,35nm,0.8s,mb5.2							
CASY	**Casey**	**63.41**	**202**	*e*P		**P**	**18 42 59.6**	**0.0**
	comp=Z,20nm,0.7s,mb5.0							
KSRS	**Korea Array**	**63.84**	**326**	P		**P**	**18 43 02.2**	**-0.5**
	comp=Z,1.5nm,0.9s,mb3.8,baz=138,slow=6.7,SNR=7.6							
KSRS				pP		pP	18 43 31.6	-4.2
	comp=Z,1.7nm,0.9s,baz=140,slow=6.5,SNR=4.2							
MYKOM	**Kota Tinggi**	**64.87**	**279**	P		**P**	**18 43 10.7**	**+0.7**
YSS	**Yuzh-Sakhalins**	**65.34**	**342**	P		**P**	**18 43 12.6**	**+0.3**
	comp=Z,5.0nm,0.7s,mb4.5							
KGM	**Kluang**	**65.44**	**279**	P		**P**	**18 43 14.3**	**+0.6**
NJ2	**Nanjing**	**65.76**	**316**	*e*P		**P**	**18 43 14.1**	**-1.2**
NJ2					pP	pP	18 43 52.1	+3.5
NJ2					sP	sP	18 44 10.1	+6.6
NJ2					PP	PP	18 45 41.1	-0.9
NJ2					S	S	18 51 46.0	-4.9
NJ2					sS	sS	18 52 54.0	+5.7
NJ2					pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7							
NJ2					pmax	pmax		
	comp=Z,220nm,9.0s							
NJ2					LR	LR		
	comp=N,1μm,22.2s							
NJ2					LR	LR		
	comp=E,1μm,21.2s							
NJ2					LR	LR		
	comp=Z,1μm,22.1s							
KTGM	**Kuala Trenggan**	**66.63**	**283**	P		**P**	**18 43 22.4**	**+1.1**
FRIM	**Kepong**	**67.42**	**280**	P		**P**	**18 43 26.6**	**+0.3**
WHN	**Wuhan**	**68.02**	**312**	P		**P**	**18 43 20.3**	**-9.4**
IPM	**Ipoh**	**68.36**	**281**	P		**P**	**18 43 32.6**	**+0.4**
MDJ	**Mudanjiang**	**68.38**	**332**	P		**P**	**18 43 31.4**	**-0.2**
MDJ					pP	pP	18 44 07.5	+2.4
MDJ					sP	sP	18 44 24.0	+4.1
MDJ					PP	PP	18 46 01.6	-3.0
MDJ					S	S	18 52 18.3	-3.6
MDJ					pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4							
MDJ					LR	LR		
	comp=N,1μm,16.9s							
MDJ					LR	LR		
	comp=E,1μm,18.9s							
MDJ					LR	LR		
	comp=Z,2μm,18.9s							
MNSI	**Mandailing Nat**	**68.68**	**277**	P		**P**	**18 43 33.5**	**-0.7**
	comp=Z,37nm,0.9s,mb5.1							
KULM	**Kulim**	**68.97**	**282**	*e*P		**P**	**18 43 35.6**	**-0.4**
	comp=Z,12nm,1.0s,mb4.6							
KULM	**Kulim**	**68.97**	**282**	P		**P**	**18 43 36.2**	**+0.3**
CN2	**Changchun**	**69.75**	**329**	*e*P		**P**	**18 43 41.3**	**+1.3**
CN2				*e*pP		pP	18 44 20.1	+6.4
CN2				*e*S		S	18 52 36.5	-1.4
CN2				pmax		pmax		
	comp=Z,10.0nm,0.8s,mb4.6							
CN2				pmax		pmax		
	comp=Z,200nm,4.0s							
PSI	**Prapat**	**69.87**	**279**	P		**P**	**18 43 41.0**	**-0.5**
PSI	**Prapat**	**69.87**	**279**	P		**P**	**18 43 41.0**	**-0.5**
	comp=Z,10nm,0.6s,mb4.7,baz=41,slow=6.8,SNR=5.3							
GYA	**Guiyang**	**71.78**	**305**	*e*P		**P**	**18 43 53.2**	**+0.5**
GYA					pP	pP	18 44 31.8	+5.3
GYA					sP	sP	18 44 50.0	+8.7
GYA					PP	PP	18 46 37.4	+3.3
GYA					S	S	18 53 01.0	-1.2
GYA					SKS		18 53 37.9	
GYA					sS	sS	18 54 06.3	+5.8
GYA					pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8							
GYA					pmax	pmax		
	comp=Z,120nm,5.6s							
KMI	**Kunming**	**74.36**	**302**	P		**P**	**18 44 09.4**	**+1.4**
KMI					PP	PP	18 46 58.3	+2.1
KMI					S	S	18 53 31.4	-0.1
KMI					sS	sS	18 54 36.8	+6.7
KMI					pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5							
KMI					pmax	pmax		
	comp=Z,210nm,5.5s							
KMI					LR	LR		
	comp=N,2μm,17.8s							
KMI					LR	LR		
	comp=E,1μm,16.8s							
KMI					LR	LR		
	comp=Z,2μm,15.9s							
CMAR	**Chiang Mai Arr**	**74.99**	**294**	P		**P**	**18 44 12.7**	**+0.9**
	comp=Z,4.6nm,0.9s,mb4.1,baz=129,slow=4.4,SNR=19							
CMAR					pP	pP	18 44 43.8	-2.0
	comp=Z,2.8nm,0.9s,baz=131,slow=4.4,SNR=6.4							
CMAR					sP	sP	18 44 58.3	-2.2
	comp=Z,2.7nm,1.0s,baz=132,slow=5.0,SNR=3.8							
CHTO	**Chiang Mai**	**75.12**	**294**	*e*P		**P**	**18 44 12.2**	**-0.3**
	comp=Z,11nm,1.4s,mb4.3							
HHC	**Hu-ho-hao-te**	**75.67**	**320**	*e*P		**P**	**18 44 16.5**	**+1.4**
HHC					pP	pP	18 44 55.9	+6.6
HHC					sP	sP	18 45 12.6	+8.7
HHC					PP	PP	18 47 09.6	+2.7
HHC				*e*S		S	18 53 43.2	-2.1
HHC					sS	sS	18 54 51.6	+7.4
HHC					pmax	pmax		
	comp=Z,12nm,0.7s,mb4.6							
HHC					pmax	pmax		
	comp=Z,660nm,5.8s							
CD2	**Chengdu**	**76.08**	**308**	P		**P**	**18 44 17.4**	**-0.3**
CD2					pP	pP	18 44 56.7	+4.9
CD2					sP	sP	18 45 14.1	+7.6
CD2					PP	PP	18 47 12.0	+1.4
CD2					S	S	18 53 46.2	-4

ILAR Eielson Array 86.64 18 P **P** **18 45 10.8 -1.8**
comp=Z,1.0nm,0.6s,mb3.8,baz=242,slow=4.8,SNR=23
ILAR pP pP 18 45 45.4 -2.1
comp=Z,1.4nm,0.6s,baz=238,slow=5.1,SNR=5.1
NVAR Mina Array Bea 87.35 49 P **P** **18 45 15.9 -0.7**
comp=Z,0.2nm,0.4s,baz=224,slow=5.0,SNR=3.7
SYO Syowa Base 88.59 197⇑ *e*P **P** **18 45 20.5 -1.5**
WMQ Urumqi 92.81 315 *e*P **P** **18 45 41.0 -1.0**
WMQ pP pP 18 46 21.7 +4.6
WMQ sP sP 18 46 38.0 +6.4
WMQ PP PP 18 49 27.6 +1.3
WMQ pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
WMQ pmax pmax
comp=Z,55nm,4.8s
WMQ LR LR
comp=N,800nm,17.5s
WMQ LR LR
comp=E,600nm,18.0s
WMQ LR LR
comp=Z,680nm,17.0s
MAIT Maitri 92.94 188 *e*P **P** **18 45 41.4 -0.7**
VNA1 Neumayer--Stat 94.66 181 *e*P **P** **18 45 46.9 -3.1**
TXAR Lajitas Array 96.34 61 P **P** **18 45 58.3 -0.2**
comp=Z,0.2nm,0.6s,baz=255,slow=6.3,SNR=3.4
MKAR Makanchi Array 97.29 316 P **P** **18 46 02.1 -0.2**
comp=Z,0.6nm,0.4s,mb4.3,baz=90,slow=6.8,SNR=18
ZALV Zalesovo Beam 97.48 324 P **P** **18 46 01.0 -2.0**
comp=Z,1.4nm,0.7s,mb4.4,baz=117,slow=4.1,SNR=7.6
ARCES ARCESS Array B 120.37 345 PKP PKPdf 18 51 18.8 -0.6
comp=Z,2.4nm,0.6s,baz=100,slow=2.0,SNR=26
FINES FINESS Array B 125.83 338 PKP PKPdf 18 51 30.0 0.0
FINES FINESS Array B 125.83 338 PKP PKPdf 18 51 30.0 0.0
comp=Z,1.3nm,0.7s,baz=356,slow=2.5,SNR=9.3
NOA NORSAR Array B 130.74 345 PKP PKPdf 18 51 39.5 +0.2
comp=Z,0.6nm,0.6s,baz=34,slow=2.1,SNR=4.4
CDF Champ du Feu 142.69 338 *e*PKP1 PKPdf 18 51 58.3 -3.6
HAU Haudompre 143.36 338 *e*PKP1 PKPdf 18 52 00.2 -2.9
MEZF Maizieres J'vi 143.38 340 *e*PKP1 PKPdf 18 52 01.3 -1.8
TIP Timpagrande 144.53 319 *e*PKPdf PKPdf 18 52 04.5 -0.9
CABF La Chapelle 144.64 337 *e*PKP1 PKPdf 18 52 04.8 -0.5
comp=Z,13nm,0.7s
FLN La Foliniere 144.71 346 *e*PKP1 PKPdf 18 52 04.5 -0.9
comp=Z,15nm,0.7s
LDF La Druitiere 144.78 345 *e*PKP1 PKPdf 18 52 05.2 -0.3
comp=Z,11nm,0.6s
LOR Lormes 144.85 340 *e*PKP1 PKPdf 18 52 05.0 -0.7
comp=Z,20nm,1.0s
SSF Saint Saulge 145.15 340 *e*PKP1 PKPbc 18 52 06.2 +0.2
comp=Z,27nm,0.6s
GRR Gorron 145.15 346 *e*PKP1 PKPbc 18 52 05.6 -0.4
comp=Z,32nm,0.7s
HYF Humbligny 145.23 342 *e*PKP1 PKPbc 18 52 06.6 +0.3
LPL La Plagne 145.30 336 *e*PKP1 PKPbc 18 52 07.1 +0.5
comp=Z,36nm,1.0s
LPG La Plagne 145.31 336 *e*PKP1 PKPbc 18 52 07.2 +0.6
comp=Z,28nm,0.8s
SMF Signal de Mont 145.40 340 *e*PKP1 PKPbc 18 52 06.7 -0.1
comp=Z,27nm,0.9s
AVF Avril sur Loir 145.43 340 *e*PKP1 PKPbc 18 52 06.8 -0.1
comp=Z,40nm,1.3s
SGMF Saint Gilles 145.65 348 *e*PKP1 PKPbc 18 52 07.2 -0.3
comp=Z,26nm,0.8s
ROSF Rostrenen 145.71 349 *e*PKP1 PKPbc 18 52 07.3 -0.4
BGF Bois d'Agland 145.80 341 *e*PKP1 PKPbc 18 52 08.0 -0.1
comp=Z,15nm,0.5s
MBDF Montbardon 145.93 335 *e*PKP1 PKPbc 18 52 08.5 0.0
comp=Z,31nm,1.1s
QUIF Quistinic 146.09 348 *e*PKP1 PKPbc 18 52 08.9 0.0
ORIF Oris-en-Rattie 146.13 336 *e*PKP1 PKPbc 18 52 09.4 +0.3
comp=Z,2nm,0.6s
TCF Toulx Ste Croi 146.24 341 *e*PKP1 PKPbc 18 52 09.2 -0.2
comp=Z,10nm,0.7s
SSB Saint Sauveur 146.34 338 *e*PKPbc PKPbc 18 52 10.2 +0.5
SBF Sospel 146.35 333 *e*PKP1 PKPbc 18 52 09.3 -0.5
comp=Z,43nm,0.9s
MFF Saint Martin d 146.64 344 *e*PKP1 PKPbc 18 52 10.4 -0.1
comp=Z,39nm,0.9s
VIVF Saint-Julien-l 146.65 337 *e*PKP1 PKPbc 18 52 09.8 -0.8
comp=Z,12nm,0.7s
PGF Pioggiola 146.66 330 *e*PKP1 PKPbc 18 52 10.3 -0.4
FRF La Foret Royal 146.93 334 *e*PKP1 PKPbc 18 52 10.9 -0.6
comp=Z,68nm,1.2s
SMRF Simiane la Rot 147.04 335 *e*PKP1 PKPbc 18 52 11.2 -0.5
comp=Z,27nm,1.0s
LMR La Mourre 147.18 334 *e*PKP1 PKPbc 18 52 11.9 -0.2
RJF Les Rejaudoux 147.34 341 *e*PKP1 PKPbc 18 52 12.7 +0.2
comp=Z,15nm,0.7s
CAF Calviac 147.50 340 *e*PKP1 PKPbc 18 52 13.2 +0.2
comp=Z,12nm,0.9s
LASF Ste Croix 147.62 337 *e*PKP1 PKPbc 18 52 13.5 +0.2
comp=Z,14nm,0.7s
LFF La Frestale 147.91 342 *e*PKP1 PKPbc 18 52 14.1 0.0
comp=Z,37nm,0.9s
MTLF Montolieu 148.85 339 *e*PKP1 PKPbc 18 52 16.6 0.0
comp=Z,14nm,0.7s
EPF Esparros 149.75 341 *e*PKP1 PKPbc 18 52 19.2 +0.4
comp=Z,10nm,0.8s
SJPF Ste Jean 150.15 343 *e*PKP1 PKPbc 18 52 20.6 +0.8
ETSF Etsaut 150.15 342 *e*PKP1 PKPbc 18 52 21.1 +1.3
comp=Z,14nm,0.6s
DFRA Djebel Bou Aff 152.75 326 P PKPbc 18 52 26.9 +1.0
DFRA Djebel Bou Aff 152.75 326 P PKPbc 18 52 26.9 +1.0
SET Setif 153.26 326 P PKPdf 18 52 23.0 +3.5
SET Setif 153.26 326 P PKPdf 18 52 23.0 +3.5
AKF Akfadou 153.38 328 P PKPdf 18 52 14.3 -5.3
AKF Akfadou 153.38 328 P PKPdf 18 52 14.3 -5.3
ADJB Djebel Djouab 154.32 329 P PKPbc 18 52 32.7 +3.3
ADJB Djebel Djouab 154.32 329 P PKPbc 18 52 32.7 +3.3

*IDC **09** 18:47:52.9±0.5, 8.51N×126.81E, h0km, mb4.6/21, mb1 4.7/22, mb1mx4.7/24, mbtmp4.6/22, ML4.1/1, MS4.5/3, Ms1 4.5/3, ms1mx3.8/27, Error ellipse: s-maj=24.4km s-min=12.1km az=77.0*
*MAN **09** 18:47:54, 8.68N×127.17E, h1km, mb5.6, ML4.6, MS4.9*
*MOS **09** 18:47:56.1±1.0, 8.44N×126.74E, h33km, mb5.2/51, Error ellipse: s-maj=13.5km s-min=5.2km az=119.6*
*BJI **09** 18:47:59.1, 8.53N×126.79E, h58km, mB5.2/18, mb4.8/46, Ms4.9/23, Ms7 4.7/22*
*ISCJB **09** 18:47:59.2±0.5, 8.55N±0.02×126.97E±0.04, h59km±4km, mb4.9/129, MS4.6/13, Error ellipse: s-maj=6.0km s-min=3.9km az=168.4*
*NEIC **09** 18:47:59.6±1.0, 8.42N×126.77E, h48km±9km, mb4.9/60, Error ellipse: s-maj=8.2km s-min=5.1km az=72.0*
*DJA **09** 18:47:59, 8.68N×127.00E, h30km, mb5.0/24*
ISC 09 18:48:01.3±0.5, 8.56N±0.02×126.94E±0.04, h62km±4km, h57km±3.2km:pP-P, n308, σ1§16/319, mb4.9/129, 12C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.36 288**		*e*P		**Pn**	**18 48 22.8**	**-1.5**
MATI	**Mati**	**1.73 203**		*e*P		**Pn**	**18 48 25.5**	**-3.7**
SCPH	**Surigao**	**1.88 311**		*e*P		**Pn**	**18 48 28.9**	**-2.2**
SCPH				*e*S		**Sn**	**18 48 56.0**	**+2.2**
BUKP	**Musuan**	**1.97 250**		*e*P		**Pn**	**18 48 32.3**	**-0.1**
DAV	**Davao City (W)**	**2.00 222**⇑		*i*Pn		**Pn**	**18 48 32.0**	**-0.8**
DAV	**Davao City (W)**	**2.00 222**		Pn		**Pn**	**18 48 32.5**	**-0.3**
	164nm,0.3s,baz=9.4,slow=3.2,SNR=95							
DAV				Sn		**Sn**	**18 49 01.1**	**+4.4**
	208nm,0.3s,baz=248,slow=17,SNR=9.1							
DAV	**Davao City (W)**	**2.00 222**		P		**Pn**	**18 48 33.0**	**+0.2**
CGP	**Cagayan de Oro**	**2.22 268**⇓		*i*P		**Pn**	**18 48 36.9**	**+1.1**
CGP				*i* S		**Sn**	**18 49 06.9**	**+4.7**
KCP	**Kidapawan**	**2.39 230**⇑		*i*P		**Pn**	**18 48 39.7**	**+1.6**
KCP				*i* S		**Sn**	**18 49 12.6**	**+6.3**
CTBH	**Cotabato--PC H**	**2.98 244**⇓		*e*P		**Pn**	**18 48 45.0**	**-1.1**
GSPH	**General Santos**	**3.15 219**		*e*P		**Pn**	**18 48 46.4**	**-2.1**
TBP	**Tagbilaran**	**3.24 291**		*e*P		**Pn**	**18 48 49.2**	**-0.5**
TBP				*e*S		**Sn**	**18 49 32.4**	**+5.3**
OCLP	**Ormoc**	**3.38 317**		*e*P		**Pn**	**18 48 51.1**	**-0.6**
LLP	**Lapu-Lapu**	**3.41 301**⇑		*e*P		**Pn**	**18 48 51.1**	**-1.0**
LLP				*e*S		**Sn**	**18 49 34.5**	**+3.1**
PAGZ	**Pagadian**	**3.59 259**		*e*P		**Pn**	**18 48 59.2**	**+4.8**
IPIL	**Ipil**	**4.39 260**		*e*P		**Pn**	**18 49 08.5**	**+3.1**
CNP	**Catarman**	**4.52 331**		*e*P		**Pn**	**18 49 06.9**	**-0.4**
GUIM	**Jordan**	**4.75 296**		*e*P		**Pn**	**18 49 10.4**	**-0.1**
PVCP	**Virac**	**5.70 332**		*e*P		**Pn**	**18 49 25.1**	**+1.6**
CUYO	**Cuyo Island**	**6.26 292**		*e*P		**Pn**	**18 49 31.9**	**+0.7**
AUQP	**San Andres**	**6.32 319**		*e*P		Px	18 49 44.1	
BOAC	**Boac**	**6.98 315**		*e*P		**Pn**	**18 49 41.8**	**+0.8**
MNI	**Manado**	**7.37 197**		P		**Pn**	**18 49 46.4**	**+0.1**
	0.9nm3µm252nm,0.8s							
BUSP	**Coron**	**7.46 298**		*e*P		**Pn**	**18 49 47.1**	**-0.4**
TNTI	**Ternate**	**7.75 177**		P		**Pn**	**18 49 49.8**	**-1.7**
	1.8nm6µm626nm,1.2s							
POLP	**Polilio Island**	**7.84 322**		*e*P		**Pn**	**18 49 58.8**	**+5.9**
ENPP	**El Nido**	**7.85 290**		*e*P		**Pn**	**18 49 52.5**	**-0.4**
TGY	**Tagaytay City**	**8.06 314**		Pn		**Pn**	**18 49 53.6**	**-2.1**
	20nm,0.3s,baz=155,slow=19,SNR=3.2							
LUBP	**Lubang**	**8.34 309**		*e*P		**Pn**	**18 50 05.6**	**+6.0**
KMSI	**Cibinong**	**8.46 201**		P		**Pn**	**18 50 01.9**	**+0.7**
	6µm581nm,1.1s							
BATP	**Bataraza**	**9.03 272**		*e*P		**Pn**	**18 50 14.4**	**+5.3**
MRSI	**Marisa**	**9.44 212**		P		**Pn**	**18 50 14.0**	**-0.7**
	1µm148nm,0.6s							
CAUP	**Cauayan**	**9.71 330**		*e*P		**Pn**	**18 50 16.3**	**-2.1**
LUWI	**Luwuk**	**10.40 204**		P		**Pn**	**18 50 29.7**	**+1.9**
	3µm284nm,1.1s							
APYP	**Conner**	**10.78 330**		*e*P		**Pn**	**18 50 40.1**	**+7.2**
KKM	**Kota Kinabalu**	**10.92 258**		Pn		**Pn**	**18 50 36.1**	**+1.1**
KKM	**Kota Kinabalu**	**10.92 258**		P		**Pn**	**18 50 37.6**	**+2.7**
KDI	**Kendari**	**13.15 199**		P		**Pn**	**18 51 03.0**	**-2.4**
	28nm,1.4s							
TTSI	**Tana Toraja**	**13.53 212**		P		**Pn**	**18 51 11.5**	**+0.9**
	2µm125nm,1.5s							
SPSI	**Sidrap Palu**	**14.34 210**		P		**Pn**	**18 51 28.7**	**+7.4**
BBSI	**Bau Bau**	**14.61 197**		P		**Pn**	**18 51 31.3**	**+6.5**
KAPI	**Kappang**	**15.27 208**		*e*Pn		**Pn**	**18 51 27.0**	**-6.3**
	39nm,1.0s							
KAPI	**Kappang**	**15.27 208**		Pn		**Pn**	**18 51 29.6**	**-3.7**
	0.7nm,0.3s,baz=61,slow=9.1,SNR=6.1							
KAPI	**Kappang**	**15.27 208**		P		**Pn**	**18 51 34.0**	**+0.7**
	18nm,1.0s							
BKSI	**Bulukumba**	**15.37 206**		P		**Pn**	**18 51 35.1**	**+0.5**
	26nm,1.0s							
SBUM	**Sibu**	**15.85 248**		P		**Pn**	**18 51 41.8**	**+1.1**
TPUB	**Ta-pu**	**15.86 338**		*e*Pn		**Pn**	**18 51 40.8**	**0.0**
	44nm,0.9s							
TPUB				*e*S		**S**	**18 54 42.2**	**-4.6**
KBKI	**Kotabaru**	**15.94 223**		P		**Pn**	**18 51 49.7**	**+7.9**
SSLB	**Suanglung**	**16.19 340**		*e*Pn		**Pn**	**18 51 44.7**	**-0.2**
	17nm,0.8s							
SSLB				*e*S		**S**	**18 54 47.6**	**-6.0**
YHNB	**Yeheng**	**16.88 342**		*e*Pn		**Pn**	**18 51 54.4**	**+0.8**
	24nm,0.8s							
TATO	**Taipei**	**17.14 343**		P		**Pn**	**18 52 01.9**	**+5.2**
	28nm,0.9s							
STKI	**Sintang**	**17.56 242**		P		**Pn**	**18 52 03.4**	**+1.4**
	2µm48nm,1.5s							
MMRI	**Maumere**	**17.71 195**		P		**Pn**	**18 52 07.4**	**+3.6**
	1µm114nm,1.4s							
KSM	**Kuching**	**17.99 248**		*e*Pn		**Pn**	**18 52 09.1**	**+1.8**
	23nm,0.8s							
KSM	**Kuching**	**17.99 248**		P		**Pn**	**18 52 08.6**	**+1.3**
QZH	**Quanzhou**	**18.14 335**⇓		*i*P		**Pn**	**18 52 09.1**	**+0.1**
QZH				pmax	pmax			
	comp=Z,1µm,5.4s							
QZH				LR	LR			
	comp=N,2µm,16.2s							
QZH				LR	LR			
	comp=E,2µm,11.5s							
QZH				LR	LR			
	comp=Z,4µm,18.7s							
GUMO	**Guam 18.29 73**			*e*P		**Pn**	**18 52 08.4**	**-2.6**
	comp=Z,69nm,1.3s							
GUMO	**Guam 18.29 73**			*e*P		**Pn**	**18 52 08.4**	**-2.6**
GUMO				pmax	pmax			
	comp=Z,69nm,1.3s							
QIZ	**Qiongzhong**	**19.57 304**		*e*P		**Pn**	**18 52 23.3**	**-2.9**
	comp=Z,53nm,1.3s							
KAKA	**Kakadu**	**21.82 165**		*e*P		**P**	**18 52 46.7**	**-2.0**
	comp=Z,47nm,0.6s,mb5.1							
KAKA	**Kadu**	**21.82 165**		*e*P		**P**	**18 52 46.4**	**-2.3**
	comp=Z,141nm,0.7s,mb5.5							
TPI	**Tanjungpandan**	**22.27 241**		P		**P**	**18 52 53.9**	**+0.4**
	comp=Z,43nm,1.3s,mb4.7							
SSE	**Sheshan**	**23.06 347**		P		**P**	**18 53 00.2**	**-1.4**
SSE				pmax	pmax			
	comp=Z,49nm,1.0s,mb4.9							
SSE				pmax	pmax			
	comp=Z,590nm,7.0s							
SSE				LR	LR			
	comp=N,1µm,18.1s							
SSE				LR	LR			
	comp=E,1µm,18.1s							
SSE				LR	LR			
	comp=Z,2µm,17.1s							
BJII	**Banjamegara**	**23.32 228**		P		**P**	**18 53 06.0**	**+1.7**
	comp=Z,2µmcomp=Z,70nm,1.7s,mb4.8							
KTGM	**Kuala Trenggan**	**23.84 264**		P		**P**	**18 53 09.8**	**+0.7**
MYKOM	**Kota Tinggi**	**23.94 255**		P		**P**	**18 53 10.5**	**+0.5**
KGM	**Kluang**	**24.38 256**		P		**P**	**18 53 15.1**	**+1.0**
NJ2	**Nanjing**	**24.55 343**		*e*P		**P**	**18 53 15.6**	**+0.2**
NJ2				pmax	pmax			
	comp=Z,20nm,0.9s,mb4.7							
LEM	**Lembang**	**24.58 232**		P		**P**	**18 53 19.6**	**+3.8**
	comp=Z,59nm,1.1s,mb5.0							
WHN	**Wuhan**	**24.84 333**		P		**P**	**18 53 11.5**	**-6.5**
FRIM	**Kepong**	**25.71 260**		P		**P**	**18 53 28.2**	**+2.1**
KLI	**Kotabumi**	**25.74 240**		P		**P**	**18 53 31.1**	**+4.8**
	comp=Z,100nm,1.3s,mb5.2							
KLSI		**25.76 240**		P		**P**	**18 53 26.4**	**-0.1**
	comp=Z,99nm,1.1s,mb5.2							
IPM	**Ipoh**	**26.05 263**		P		**P**	**18 53 30.6**	**+1.4**
SNG	**Songkhla**	**26.10 269**		P		**P**	**18 53 30.0**	**+0.3**
MDSI	**Maura Dua**	**26.13 241**		P		**P**	**18 53 30.9**	**+1.0**
	comp=Z,64nm,1.0s,mb5.1							
GYA	**Guiyang**	**26.21 315**		*e*P		**P**	**18 53 28.9**	**-1.6**
GYA				pP	pP		18 53 44.1	-1.4
GYA				sP	sP		18 53 51.9	-0.9
GYA				PP			18 54 16.0	
GYA				PcP	PcP		18 56 56.5	+0.4
GYA				S	**S**		**18 57 56.6**	**-1.7**
GYA				sS	sS		18 58 21.0	-3.1
GYA				SS			18 59 09.6	
GYA				pmax	pmax			
	comp=Z,20nm,0.8s,mb4.7							
GYA				pmax	pmax			
	comp=Z,120nm,4.3s							
GYA				LR	LR			
	comp=N,630nm,15.3s							
GYA				LR	LR			
	comp=E,510nm,16.4s							
GYA				LR	LR			
	comp=Z,690nm,15.9s							
KULM	**Kulim**	**26.29 265**		*e*P		**P**	**18 53 26.9**	**-4.4**
	comp=Z,44nm,1.0s,mb4.9							
KULM	**Kulim**	**26.29 265**		P		**P**	**18 53 33.3**	**+2.0**
LWLI	**Liwa**	**26.50 240**		P		**P**	**18 53 33.6**	**+0.4**
	comp=Z,2µmcomp=Z,182nm,1.0s,mb5.6							
FITZ	**Fitzroy Crossi**	**26.52 183**		*e*P		**P**	**18 53 32.9**	**-0.4**
	comp=Z,73nm,0.9s,mb5.2							
FITZ	**Fitzroy Crossi**	**26.52 183**		*e*P		**P**	**18 53 32.7**	**-0.6**
	comp=Z,51nm,0.9s,mb5.0							
FITZ	**Fitzroy Crossi**	**26.52 183**		P		**P**	**18 53 32.7**	**-0.6**
	comp=Z,23nm,0.8s,mb4.8,baz=354,slow=5.6,SNR=46							
PMG	**Port Moresby**	**26.91 131**		*e*P		**P**	**18 53 34.3**	**-2.6**
	comp=Z,23nm,0.8s,mb4.8							
PMG	**Port Moresby**	**26.91 131**		*e*P		**P**	**18 53 36.2**	**-0.7**
PMG				pmax	pmax			
	comp=Z,55nm,1.7s							
SDSI	**Sungai Dareh**	**27.11 251**		P		**P**	**18 53 42.5**	**+3.7**
	comp=Z,16nm,1.2s,mb4.5							
NST	**Nakhon Sawan**	**27.12 288**		P		**P**	**18 53 37.4**	**-1.4**
	comp=Z,49nm,1.0s,mb5.0							
PPI	**Padang Panjang**	**27.92 253**		P		**P**	**18 53 50.4**	**+4.4**
	comp=Z,21nm,1.2s,mb4.6							
KMI	**Kunming**	**28.34 308**		P		**P**	**18 53 50.3**	**+0.8**
KMI				pP	pP		18 54 05.4	+0.7
KMI				sP	sP		18 54 12.2	+0.3
KMI				PP	PP		18 54 41.6	-13
KMI				S	**S**		**18 58 32.0**	**+0.1**
KMI				sS	sS		18 58 56.9	-0.8
KMI				SS	SS		18 59 59.1	-35
KMI				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.1							
KMI				pmax	pmax			
	comp=Z,410nm,12.4s							
KMI				LR	LR			
	comp=N,2µm,16.1s							
KMI				LR	LR			
	comp=E,1µm,14.8s							
KMI				LR	LR			
	comp=Z,2µm,16.1s							
PSI	**Prapat**	**28.44 260**		LR		LR	19 06 37.3	
	comp=Z,732nm,20.0s,baz=333,slow=40							
BDT	**Bhumibol Dam**	**28.53 290**		P		**P**	**18 53 53.0**	**+1.6**
KSRS	**Korea Array 28.78 2**			P		**P**	**18 53 52.5**	**-0.9**
	comp=Z,5.3nm,1.0s,mb4.2,baz=182,slow=10,SNR=18							
CM31	**Chiang Mai Arr 28.90 293**			*e*P		**P**	**18 53 54.0**	**-0.6**
	comp=Z,18nm,1.0s,mb4.8							
CMAR	**Chiang Mai Arr 28.90 293**			P		**P**	**18 53 53.0**	**-1.6**
	comp=Z,14nm,1.0s,mb4.6,baz=112,slow=7.2,SNR=42							
CMAR				PcP	PcP		18 57 04.0	+1.3
	comp=Z,0.6nm,0.7s,baz=147,slow=2.4,SNR=2.8							
CHTO	**Chiang Mai 29.00 294**			*e*P		**P**	**18 53 54.4**	**-1.1**
	comp=Z,10nm,0.9s,mb4.5							
CHTO	**Chiang Mai 29.00 294**			*e*P		**P**	**18 53 54.4**	**-1.1**
CHTO				pmax	pmax			
	comp=Z,10.0nm,0.9s,mb4.5							
CHTO	**Chiang Mai 29.00 294**			P		**P**	**18 53 55.3**	**-0.2**
	comp=Z,16nm,1.0s,mb4.7							
WRAB	**Tennant Creek 29.24 166**			*e*P		**P**	**18 53 55.3**	**-2.2**
	comp=Z,18nm,0.9s,mb4.8							
WRAB	**Tennant Creek 29.24 166**			*e*P		**P**	**18 53 55.3**	**-2.2**
WRAB				pmax	pmax			
	comp=Z,18nm,0.9s,mb4.8							
WRAB	**Tennant Creek 29.24 166**			P		**P**	**18 54 02.0**	**+4.5**
	comp=Z,23nm,1.4s,mb4.7							
WB2	**Warramunga Arr 29.25 166**			*e*P		**P**	**18 53 55.6**	**-2.0**
XAN	**Xi'an 30.30 329**			P		**P**	**18 54 04.6**	**-2.3**
XAN				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb3.9							
MBWA	**Marble Bar 30.36 193**			*e*P		**P**	**18 54 06.3**	**-1.2**
	comp=Z,9.7nm,0.7s,mb4.6							
CD2	**Chengdu 31.02 319**			P		**P**	**18 54 14.1**	**+0.9**
CD2				pmax	pmax			
	comp=Z,10.0nm,0.4s,mb5.0							
ASAR	**Alice Springs 32.74 168**			P		**P**	**18 54 27.0**	**-1.4**
	comp=Z,1.5nm,0.4s,mb4.3,baz=350,slow=7.3,SNR=27							
BJT	**Baijiatuao 32.77 345**			*e*P		**P**	**18 54 28.7**	**+0.2**
	comp=Z,16nm,0.5s,mb5.2							
BJT	**Baijiatuao 32.77 345**			*e*P		**P**	**18 54 28.7**	**+0.2**
BJT				pmax	pmax			
	comp=Z,16nm,0.5s							
BJI	**Beijing 32.79 345**			P		**P**	**18 54 28.2**	**-0.5**
BJI				pmax	pmax			
	comp=Z,33nm,1.2s,mb5.1							
CTA	**Charters Tower 34.23 146**			P		**P**	**18 54 41.0**	**-0.5**
	comp=Z,5.5nm,0.8s,mb4.6,baz=314,slow=16,SNR=4.4							
CTAO	**Charters Tower 34.23 146**			*e*P		**P**	**18 54 40.9**	**-0.6**
	comp=Z,29nm,1.3s,mb5.0							
CTAO	**Charters Tower 34.23 146**			*e*P		**P**	**18 54 40.9**	**-0.5**
CTAO				pmax	pmax			
	comp=Z,29nm,1.3s,mb5.0							
LZH	**Lanzhou 34.55 326**			*e*P		**P**	**18 54 44.2**	**+0.2**
LZH				pP	pP		18 54 59.3	0.0
LZH				sP	sP		18 55 04.7	-1.9
LZH				pmax	pmax			
	comp=Z,20nm,1.0s,mb5.0							
LZH				pmax	pmax			
	comp=Z,85nm,4.3s							
HHC	**Hu-ho-hao-te 34.94 339**			*e*P		**P**	**18 54 46.7**	**-0.6**
HHC				pP	pP		18 55 01.8	-0.8
HHC				sP	sP		18 55 08.8	-1.1
HHC				PP	PP		18 56 06.3	-1.3
HHC				*e*S	**S**		**19 00 13.3**	**-1.2**
HHC				sS	sS		19 00 39.3	-1.3
HHC				PcS	PcS		19 01 03.2	-2.2
HHC				SS	SS		19 02 30.8	-18
HHC				pmax	pmax			
	comp=Z,16nm,1.0s,mb4.9							
HHC				pmax	pmax			
	comp=Z,2µm,5.1s							
HHC				LR	LR			
	comp=N,410nm,16.7s							
HHC				LR	LR			
	comp=E,720nm,17.8s							
HHC				LR	LR			
	comp=Z,470nm,15.5s							
CN2	**Changchun 35.13 358**			*e*P		**P**	**18 54 50.8**	**+1.9**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.8							
MDJ	**Mudanjiang 36.00 3**			P		**P**	**18 54 57.5**	**+1.2**
MDJ				pP	pP		18 55 10.7	-1.0
MDJ				sP	sP		18 55 16.7	-2.2
MDJ				pmax	pmax			
	comp=Z,18nm,1.2s,mb4.9							
MDJ	**Mudanjiang 36.00 3**			*e*P		**P**	**18 54 57.2**	**+0.9**
	comp=Z,16nm,0.8s,mb5.0							
SHL	**Shillong 37.37 301**			*e*PKP		**P**	**18 55 09.0**	**+0.7**
ASAJ	**Asahikawa 37.96 18**			P		**P**	**18 55 12.6**	**-0.4**
	comp=Z,7.8nm,0.8s,mb4.5,baz=231,slow=18,SNR=5.9							
FORT	**Forrest 39.12 178**			*e*P		**P**	**18 55 23.0**	**+0.1**
	comp=Z,25nm,0.6s,mb5.1							
GTA	**Gaotai 39.16 326**			⇑P		**P**	**18 55 22.5**	**-0.6**
GTA				pP	pP		18 55 36.1	-2.5
GTA				sP	sP		18 55 42.9	-2.9
GTA				S	**S**		**19 01 18.4**	**-0.3**
GTA				sS	sS		19 01 43.3	-1.7
GTA				pmax	pmax			
	comp=Z,10.0nm,1.1s,mb4.5							
GTA				LR	LR			
	comp=N,730nm,19.0s							
GTA				LR	LR			
	comp=E,620nm,15.8s							
GTA				LR	LR			
	comp=Z,2µm,17.0s							
LSA	**Lhasa 39.56 307**			*e*P		**P**	**18 55 26.5**	**-0.2**
	comp=Z,7.5nm,0.6s,mb4.6							
LSA	**Lhasa 39.56 307**			*e*P		**P**	**18 55 26.5**	**-0.2**
LSA				pmax	pmax			
	comp=Z,7.0nm,0.6s,mb4.6							
HABR	**Khabarovsk 40.37 8**			*e*P		**P**	**18 55 31.8**	**-1.2**
HABR							18 57 07.0	
HABR				*e*S	**S**		**19 01 32.3**	**-4.2**
HABR				*e*S	**S**		**19 01 32.4**	**-4.1**
HABR				*e*SS	SS		19 04 36.5	-1.0
HABR				pmax	pmax			
	comp=Z,85nm,3.2s							

PKI	**Pulchoki**	**43.50**	**301**	*e*P		**P**	**18 55 58.3**	**-0.6**
	comp=Z,43nm,1.0s,mb5.2								
PKIN	**Phulchoki**	**43.52**	**301**	*e*P		**P**	**18 55 58.3**	**-0.7**
	comp=Z,24nm,0.8s,mb5.0								
KKN	**Kakani**	**43.68**	**302**	*e*P		**P**	**18 55 59.7**	**-0.7**
	comp=Z,43nm,1.1s,mb5.1								
DMN	**Daman**	**43.77**	**301**	*e*P		**P**	**18 56 00.7**	**-0.4**
	comp=Z,63nm,0.9s,mb5.3								
GKN	**Gorkha**	**44.28**	**302**	*e*P		**P**	**18 56 05.0**	**-0.2**
CIT	**Chita**	**44.70**	**348**	*e*P		**P**	**18 56 09.4**	**+1.3**
CIT				*e*		pP	18 56 20.5	-3.4
CIT				*e*			18 57 49.8	
CIT				pmax		pmax		
	comp=Z,98nm,1.6s,mb5.4								
KOLN	**Koldanda**	**45.09**	**301**	*e*P		**P**	**18 56 11.3**	**-0.4**
	comp=Z,49nm,0.7s,mb5.5								
ARMA	**Armidale**	**45.43**	**150**	*e*P		**P**	**18 56 15.6**	**+1.4**
ZAK	**Zakamensk**	**46.09**	**339**	*e*P		**P**	**18 56 16.8**	**-2.3**
TLY	**Talaya**	**47.06**	**340**	P		**P**	**18 56 24.5**	**-2.2**
	comp=Z,14nm,0.8s,mb4.9								
TLY	**Talaya**	**47.06**	**340**	*e*P		**P**	**18 56 27.6**	**+0.9**
TLY				*e*			18 56 35.8	
TLY				pmax		pmax		
	comp=Z,15nm,0.9s,mb4.9								
MOY	**Mondy**	**47.97**	**338**	*e*P		**P**	**18 56 34.0**	**+0.3**
MOY				pmax		pmax		
	comp=Z,54nm,1.7s,mb5.3								
CLNS	**Chul'man**	**48.19**	**358**	*e*P		**P**	**18 56 35.8**	**+0.5**
CLNS				pmax		pmax		
	comp=Z,15nm,1.0s,mb5.0								
CLNS				pmax		pmax		
	comp=E,5.0nm,1.0s								
CLNS				pmax		pmax		
	comp=N,12nm,1.3s								
WMQ	**Urumqi**	**48.97**	**323**	P		**P**	**18 56 42.5**	**+0.9**
WMQ				pP		pP	18 56 58.2	+0.6
WMQ				sP		sP	18 57 05.3	+0.6
WMQ				PcP		PcP	18 58 06.0	+1.1
WMQ				PP		PP	18 58 36.8	+1.2
WMQ				pmax		pmax		
	comp=Z,14nm,0.9s,mb5.0								
WMQ				pmax		pmax		
	comp=Z,110nm,4.8s								
WMQ				LR		LR		
	comp=N,800nm,17.2s								
WMQ				LR		LR		
	comp=E,600nm,18.3s								
WMQ				LR		LR		
	comp=Z,660nm,18.6s								
YAK	**Yakutsk**	**53.41**	**2**	*e*P		**P**	**18 57 14.7**	**+0.2**
	comp=Z,28nm,1.0s,mb5.2								
YAK	**Yakutsk**	**53.41**	**2**	*e*P		**P**	**18 57 14.3**	**-0.2**
YAK				pmax		pmax		
	comp=Z,11nm,0.9s,mb4.8								
MK31	**Makanchi Array**	**53.78**	**323**	*e*P		**P**	**18 57 17.1**	**-0.4**
MK31	**Makanchi Array**	**53.78**	**323**	*i* P		**P**	**18 57 17.2**	**-0.3**
MK31				pmax		pmax		
	comp=Z,10.0nm,0.7s,mb4.8								
MKAR	**Makanchi Array**	**53.78**	**323**	P		**P**	**18 57 17.3**	**-0.2**
	comp=Z,5.4nm,0.6s,mb4.7,baz=116,slow=8.2,SNR=70								
MKAR				LR		LR	19 21 18.4		
	comp=Z,379nm,18.6s,baz=235,slow=37								
KSH	**Kashi**	**54.86**	**313**	*e*P		**P**	**18 57 26.1**	**+0.6**
KSH				*e*pP		pP	18 57 45.6	+3.8
KSH				*e*sP		sP	18 57 54.3	+5.5
KSH				*e*PcP		PcP	18 58 27.3	+0.2
KSH				*e*PP		PP	18 59 31.0	+2.0
KSH				*e*ScP		ScP	19 02 17.6	-2.9
KSH				*e*PcS		PcS	19 02 25.5	-1.4
KSH				*e*S		**S**	**19 04 59.8**	**-2.6**
KSH				*e*sS		sS	19 05 32.5	+2.7
KSH				*e*ScS		ScS	19 07 04.2	-5.2
KSH				*e*SS		SS	19 08 43.2	-3.3
KSH				pmax		pmax		
	comp=Z,7.0nm,1.1s,mb4.6								
KSH				pmax		pmax		
	comp=Z,580nm,12.2s								
KSH				LR		LR		
	comp=N,370nm,13.2s								
KSH				LR		LR		
	comp=E,190nm,9.7s								
KSH				LR		LR		
	comp=Z,320nm,13.3s								
KSH	**Kashi**	**54.86**	**313**	*e*P		**P**	**18 57 27.2**	**+1.7**
KSH				*e*pP		pP	18 57 42.9	+1.1
KSH				*e*sP		sP	18 57 50.2	+1.4
KSH				*e*PcP		PcP	18 58 28.4	+1.3
KSH				*e*PP		PP	18 59 31.9	+2.9
KSH				*e*ScP		ScP	19 02 20.4	-0.1
KSH				*e*PcS		PcS	19 02 26.8	-0.1
KSH				*e*S		**S**	**19 05 01.4**	**-1.0**
KSH				*e*sS		sS	19 05 29.7	-0.1
KSH				*e*ScS		ScS	19 07 07.2	-2.2
KSH				*e*SS		SS	19 08 45.1	-1.4
KSH				pmax		pmax		
	comp=Z,6.0nm,1.1s,mb4.5								
KSH				pmax		pmax		
	comp=Z,270nm,8.1s								
KSH				LR		LR		
	comp=N,220nm,15.1s								
KSH				LR		LR		
	comp=E,290nm,13.7s								
KSH				LR		LR		
	comp=Z,270nm,12.2s								
ULHL	**Ulahol**	**55.65**	**316**	P		**P**	**18 57 31.8**	**+0.6**
	SNR=9.3								
KZA	**Kyzart**	**56.28**	**315**	P		**P**	**18 57 36.6**	**+1.0**
	SNR=8.3								
ZALV	**Zalesovo Beam**	**56.44**	**332**	P		**P**	**18 57 35.7**	**-0.8**
	comp=Z,4.0nm,0.4s,mb4.8,baz=121,slow=6.2,SNR=23								
KBK	**Karagaybulak**	**56.69**	**316**	P		**P**	**18 57 40.6**	**+2.0**
	SNR=6.2								
MSVF	**Nonsavu**	**56.84**	**118**	*e*P		**P**	**18 57 41.3**	**+1.3**
	comp=Z,30nm,1.2s,mb5.2								
MSVF	**Nonsavu**	**56.84**	**118**	*e*P		**P**	**18 57 41.3**	**+1.3**
MSVF				pmax		pmax		
	comp=Z,30nm,1.2s,mb5.2								
UCH	**Uchtor**	**56.84**	**315**	P		**P**	**18 57 40.7**	**+1.0**
	SNR=31								
UCH	**Uchtor**	**56.84**	**315**	*e*P		**P**	**18 57 40.1**	**+0.5**
	comp=Z,15nm,0.8s,mb5.1								
UCH	**Uchtor**	**56.84**	**315**	*e*P		**P**	**18 57 40.1**	**+0.5**
UCH				pmax		pmax		
	comp=Z,15nm,0.8s,mb5.1								
USP	**Ospenovka**	**57.22**	**316**	P		**P**	**18 57 42.1**	**-0.2**
	SNR=13								
SEY	**Seymchan**	**57.32**	**14**	*ce*P		**P**	**18 57 44.4**	**+1.8**
AML	**Almayashu**	**57.38**	**315**	P		**P**	**18 57 44.8**	**+1.3**
	SNR=11								
AML	**Almayashu**	**57.38**	**315**	*e*P		**P**	**18 57 44.1**	**+0.7**
	comp=Z,16nm,0.8s,mb5.1								
AML	**Almayashu**	**57.38**	**315**	*e*P		**P**	**18 57 44.2**	**+0.7**
AML				pmax		pmax		
	comp=Z,16nm,0.8s,mb5.1								
EKS2	**Erkin-Say**	**57.50**	**316**	P		**P**	**18 57 45.3**	**+1.0**
	SNR=15								
EKS2	**Erkin-Say**	**57.50**	**316**	*e*P		**P**	**18 57 44.5**	**+0.2**
	comp=Z,9.5nm,0.8s,mb4.9								
EKS2	**Erkin-Say**	**57.50**	**316**	*e*P		**P**	**18 57 44.5**	**+0.2**
EKS2				pmax		pmax		
	comp=Z,10.0nm,0.8s,mb4.9								
NVS	**Novosibirsk**	**57.71**	**332**	*i*P		**P**	**18 57 44.5**	**-1.0**
NVS				*e*S		**S**	**19 05 40.4**	**+0.8**
NVS				pmax		pmax		
	comp=N,31nm,1.3s								
NVS				pmax		pmax		
	comp=E,32nm,1.3s								
NVS				pmax		pmax		
	comp=Z,36nm,1.3s,mb5.2								
NVS				smax					
	comp=N,13nm,2.1s								
NVS				smax					
	comp=E,12nm,1.8s								
KURK	**Kurchatov**	**57.84**	**326**	*e*P		**P**	**18 57 46.0**	**-0.5**
	comp=E,27nm,0.9s,mb5.3								
KURK	**Kurchatov**	**57.84**	**326**	*ce*P		**P**	**18 57 46.6**	**+0.1**
KURK				pmax		pmax		
	comp=Z,42nm,1.2s,mb5.3								
KBL	**Kabul**	**58.84**	**305**	*e*P		**P**	**18 57 53.0**	**-0.9**
	comp=Z,18nm,0.8s,mb5.1								
KBL	**Kabul**	**58.84**	**305**	*e*P		**P**	**18 57 53.0**	**-0.8**
KBL				pmax		pmax		
	comp=Z,18nm,0.8s,mb5.2								
KK31	**Karatay Array**	**59.92**	**315**	*i* P		**P**	**18 58 00.1**	**-1.0**
KK31				pmax		pmax		
	comp=Z,9.0nm,0.5s,mb5.1								
VOSK	**Vostochnaya**	**62.99**	**326**	P		**P**	**18 58 20.0**	**-1.6**
VOSK				pmax		pmax		
	comp=Z,9.0nm,0.6s,mb5.1								
TIXI	**Tiksi**	**63.05**	**1**	*e*P		**P**	**18 58 21.9**	**+0.3**
	comp=Z,25nm,0.9s,mb5.3								
TIXI	**Tiksi**	**63.05**	**1**	*e*P		**P**	**18 58 22.1**	**+0.5**
TIXI				pmax		pmax		
	comp=Z,52nm,1.4s,mb5.5								
BVA0	**Borovoye Array**	**63.44**	**326**	*i* P		**P**	**18 58 23.8**	**-0.8**
BVAR	**Borovoye Array**	**63.44**	**326**	P		**P**	**18 58 24.3**	**-0.3**
	comp=Z,9.7nm,0.7s,mb5.0,baz=111,slow=8.1,SNR=54								
BRVK	**Borovoye**	**63.51**	**326**	*e*P		**P**	**18 58 24.7**	**-0.3**
	comp=Z,41nm,1.1s,mb5.4								
BRVK	**Borovoye**	**63.51**	**326**	*ce*P		**P**	**18 58 25.3**	**+0.2**
BRVK				pmax		pmax		
	comp=Z,33nm,1.0s,mb5.3								
ZRNK	**Zerenda**	**64.19**	**325**	*i* P		**P**	**18 58 28.5**	**-1.0**
ZRNK				pmax		pmax		
	comp=Z,69nm,1.2s,mb5.6								
AB31	**Akbulak array**	**68.60**	**320**	*i* P		**P**	**18 58 57.0**	**-0.7**
AB31				pmax		pmax		
	comp=Z,30nm,1.2s,mb5.1								
ABKAR	**Akbulak array**	**68.60**	**320**	*e*P		**P**	**18 58 57.0**	**-0.8**
	comp=Z,8.3nm,0.7s,mb4.8								
SVE	**Sverdlovsk**	**70.00**	**328**	*e*P		**P**	**18 59 06.1**	**-0.2**
SVE				pmax		pmax		
	comp=Z,42nm,1.1s,mb5.3								
ARU	**Arti**	**71.01**	**327**	*e*P		**P**	**18 59 11.6**	**-0.8**
	comp=Z,15nm,0.6s,mb5.1								
ARU	**Arti**	**71.01**	**327**	*c i*P		**P**	**18 59 12.0**	**-0.4**
ARU							19 01 47.0		
ARU				S		S	19 08 19.5	-4.2	
ARU				pmax		pmax		
	comp=Z,24nm,1.0s,mb5.1								
CASY	**Casey**	**75.60**	**187**	*e*P		**P**	**18 59 37.4**	**-1.8**
	comp=Z,5.8nm,0.9s,mb4.5								
RDF	**Al-Radifah**	**76.65**	**298**	*e*P		**P**	**18 59 45.3**	**-0.8**
RDF				AMb		AMB	18 59 48.4		
	comp=Z,29nm,0.8s,mb5.2								
MIB	**Mutribah**	**76.80**	**299**	*e*P		**P**	**18 59 45.4**	**-1.4**
MIB				AMb		AMB	18 59 48.5		
	comp=Z,40nm,0.7s,mb5.4								
NAY	**Al-Naaiem**	**76.91**	**298**	*e*P		**P**	**18 59 46.0**	**-1.5**
NAY				AMb		AMB	18 59 48.7		
	comp=Z,21nm,0.8s,mb5.1								
OHAK	**Old Harbor**	**77.32**	**33**	*e*P		**P**	**18 59 50.7**	**+1.6**
	comp=Z,9.5nm,0.9s,mb4.7								
KDAK	**Kodiak Island**	**77.74**	**33**	*e*P		**P**	**18 59 53.3**	**+1.9**
	comp=Z,16nm,0.9s,mb5.0								
KDAK	**Kodiak Island**	**77.74**	**33**	*i* P		**P**	**18 59 53.7**	**+2.2**
DGRG	**David-gareji**	**78.08**	**311**	P		**P**	**18 59 53.5**	**-0.3**
MTA	**Mtatsminda**	**78.51**	**311**	P		**P**	**18 59 55.3**	**-0.8**
TBLG	**Delisi**	**78.55**	**311**	*e*P		**P**	**18 59 54.9**	**-1.4**
TBLG	**Delisi**	**78.55**	**311**	P		**P**	**18 59 55.0**	**-1.4**
BPAW	**Bear Paw Mtn.**	**78.89**	**26**	*e*P		**P**	**18 59 59.1**	**+1.4**
	comp=Z,14nm,1.1s,mb4.8								
ZEI	**Tsey**	**79.15**	**312**	*e*P		**P**	**18 59 59.1**	**-0.5**
ZEI				pmax		pmax		
	comp=Z,10.0nm,0.4s,mb5.1								
TRF	**Thorofare Moun**	**79.17**	**27**	*e*P		**P**	**19 00 01.5**	**+2.2**
	comp=Z,10nm,1.0s,mb4.7								
COLD	**Coldfoot**	**79.40**	**23**	*e*P		**P**	**19 00 02.7**	**+2.2**
	comp=Z,5.7nm,0.9s,mb4.5								
SEW	**Seward**	**79.45**	**30**	*e*P		**P**	**19 00 01.8**	**+0.9**
	comp=Z,11nm,1.0s,mb4.7								
PMR	**Palmer**	**79.64**	**29**	*e*P		**P**	**19 00 02.2**	**+0.4**
	comp=Z,9.8nm,0.8s,mb4.8								
PMR	**Palmer**	**79.64**	**29**	*e*P		**P**	**19 00 02.3**	**+0.4**
PMR				pmax		pmax		
	comp=Z,10.0nm,0.8s,mb4.8								
MCK	**McKinley**	**79.78**	**27**	*e*P		**P**	**19 00 03.8**	**+1.2**
	comp=Z,13nm,0.8s,mb4.9								
MCK	**McKinley**	**79.78**	**27**	*e*P		**P**	**19 00 03.8**	**+1.2**
MCK				pmax		pmax		
	comp=Z,13nm,0.8s,mb4.9								
KIV	**Kislovodsk**	**79.99**	**313**	*e*P		**P**	**19 00 04.3**	**+0.2**
KIV	**Kislovodsk**	**79.99**	**313**	*e*P		**P**	**19 00 04.1**	**-0.1**
KIV				pmax		pmax		
	comp=Z,14nm,1.2s,mb4.8								
COLA	**College**	**80.28**	**26**	*e*P		**P**	**19 00 06.7**	**+1.5**
VRHR	**Novokhopersk**	**80.46**	**320**	*e*P		**P**	**19 00 05.9**	**-0.6**
VRHR				pmax		pmax		
	comp=Z,8.0nm,0.6s,mb4.8								
VRHR				pmax		pmax		
	comp=N,30nm,0.7s								
VRHR				pmax		pmax		
	comp=E,6.0nm,0.5s								
ILAR	**Eielson Array**	**80.69**	**26**	P		**P**	**19 00 08.0**	**+0.5**
	comp=E,2.0nm,0.7s,mb4.1,baz=237,slow=5.3,SNR=26								
DIV	**Divide**	**81.26**	**29**	*e*P		**P**	**19 00 12.6**	**+2.1**
	comp=E,14nm,1.1s,mb4.8								
KLMR	**Klimovskoe**	**81.33**	**330**	*e*P		**P**	**19 00 09.0**	**-2.0**
KLMR				pmax		pmax		
	comp=Z,58nm,1.9s,mb5.2								
PAX	**Paxson**	**81.35**	**27**	*e*P		**P**	**19 00 12.3**	**+1.3**
	comp=Z,9.1nm,1.0s,mb4.7								
PAX	**Paxson**	**81.35**	**27**	*e*P		**P**	**19 00 12.3**	**+1.3**
PAX				pmax		pmax		
	comp=Z,9.0nm,1.0s,mb4.7								
BMRM	**Bremner River**	**81.84**	**30**	*e*P		**P**	**19 00 14.0**	**+0.4**
	comp=Z,443nm,0.6s								
VORD	**Divnogorie**	**81.94**	**320**	*e*P		**P**	**19 00 13.5**	**-0.9**
VORD				pmax		pmax		
	comp=E,9.0nm,0.6s								
VORD				pmax		pmax		
	comp=Z,5.0nm,0.6s,mb4.6								
VORD				pmax		pmax		
	comp=N,10.0nm,0.9s								
VSR	**Storozhevoye**	**82.00**	**321**	*e*P		**P**	**19 00 13.4**	**-1.3**
VSR				pmax		pmax		
	comp=Z,6.0nm,0.6s,mb4.7								
VSR				pmax		pmax		
	comp=N,4.0nm,0.4s								
VSR				pmax		pmax		
	comp=E,10.0nm,1.1s								
MENT	**Mentasta**	**82.15**	**27**	*e*P		**P**	**19 00 17.2**	**+2.0**
EGAK	**Eagle**	**83.14**	**26**	*e*P		**P**	**19 00 21.7**	**+1.4**
	comp=E,464nm,0.5s								
OBN	**Obninsk**	**83.26**	**325**	P		**P**	**19 00 22.0**	**+0.8**
OBN	**Obninsk**	**83.26**	**325**	*e*P		**P**	**19 00 21.3**	**+0.2**
OBN				pmax		pmax		
	comp=Z,9.0nm,0.6s,mb5.0								
APA	**Apatity**	**83.50**	**337**	*e*P		**P**	**19 00 23.6**	**+1.4**
APA				pmax		pmax		
	comp=Z,21nm,1.1s,mb5.2								
APA				MLR		MLR		
	comp=Z,400nm,15.0s								
MALT	**Malatya**	**83.60**	**308**	*e*P		**P**	**19 00 23.7**	**+0.5**
	comp=Z,2.6nm,0.7s,mb4.5								
MALT	**Malatya**	**83.60**	**308**	*e*P		**P**	**19 00 23.7**	**+0.4**
MALT				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.5								
MALT	**Malatya**	**83.60**	**308**	P		**P**	**19 00 24.0**	**+0.7**
ANN	**Anapa**	**83.69**	**314**	*e*P		**P**	**19 00 21.1**	**-2.5**
ANN				pmax		pmax		
	comp=Z,18nm,0.9s,mb5.2								
ANN				MLR		MLR		
	comp=N,141nm,17.0s								
ANN				MLR		MLR		
	comp=Z,216nm,17.0s								
DAWY	**Dawson**	**83.98**	**26**	*e*P		**P**	**19 00 27.3**	**+2.7**
PNL	**Peninsula**	**84.53**	**31**	*e*P		**P**	**19 00 30.2**	**+2.7**
	comp=Z,20nm,1.0s,mb5.2								
JOF	**Joensuu**	**85.00**	**333**	*e*P		**P**	**19 00 30.0**	**+0.2**
JOF				pmax		pmax		
	comp=Z,11nm,0.6s,mb5.2								
JOF	**Joensuu**	**85.00**	**333**	*e*p		**P**	**19 00 30.0**	**+0.2**
	comp=Z,11nm,0.6s,mb5.2								
KEV	**Kevo**	**85.46**	**340**	*e*P		**P**	**19 00 33.4**	**+1.4**
KEV	**Kevo**	**85.46**	**340**	*e*p		**P**	**19 00 33.4**	**+1.4**
INK	**Inuvik**	**85.63**	**22**	*e*P		**P**	**19 00 33.6**	**+0.8**
	comp=Z,8.1nm,1.0s,mb4.9								
INK	**Inuvik**	**85.63**	**22**	*e*P		**P**	**19 00 33.6**	**+0.7**
INK				pmax		pmax		
	comp=Z,8.0nm,1.0s								
SIM	**Simferopol'**	**86.01**	**315**	P		**P**	**19 00 34.7**	**-0.6**
SIM				pmax		pmax		
	comp=Z,19nm,0.8s,mb5.4								
ARCES	**ARCESS Array B**	**86.02**	**340**	P		**P**	**19 00 35.5**	**+0.7**
	comp=Z,4.2nm,0.7s,mb4.8,baz=90,slow=7.4,SNR=25								
ARE0	**ARCESS Array S**	**86.02**	**340**	*e*P		**P**	**19 00 35.6**	**+0.9**
MMAI	**Mount Meron Ar**	**86.68**	**303**	P		**P**	**19 00 39.6**	**+0.8**
	comp=Z,3.5nm,0.5s,mb4.8,baz=62,slow=9.8,SNR=7.8								
BR131	**Keskin Array S**	**87.12**	**310**	*e*P		**P**	**19 00 39.4**	**-1.4**
	comp=Z,2.0nm,0.6s,mb4.5								
BRTR	**Keskin Array B**	**87.12**	**310**	P		**P**	**19 00 40.1**	**-0.7**
	comp=Z,1.8nm,0.5s,mb4.6,baz=127,slow=4.6,SNR=15								
BRTR	**Keskin Array B**	**87.12**	**310**	*i* P		**P**	**19 00 40.0**	**-0.8**
BRTR				pmax		pmax		
	comp=Z,2.0nm,0.5s								
KAF	**Kangasniemi**	**87.44**	**332**	*e*P		**P**	**19 00 41.6**	**-0.2**
KAF				pmax		pmax		
	comp=Z,2.0nm,0.5s,mb4.6								
KAF	**Kangasniemi**	**87.44**	**332**	*e*p		**P**	**19 00 41.6**	**-0.2**
	comp=Z,2.1nm,0.5s,mb4.6								
FINES	**FINESS Array B**	**87.70**	**332**	P		**P**	**19 00 42.8**	**-0.3**
	comp=Z,5.9nm,0.4s,mb5.1,baz=83,slow=4.6,SNR=89								
AKASG	**Malin Array Be**	**88.30**	**321**	P		**P**	**19 00 45.2**	**-1.0**
AKASG				LR		LR	19 40 42.3		
AKASG	**Malin Array Be**	**88.30**	**321**	P		**P**	**19 00 45.2**	**-1.0**
	comp=Z,1.7nm,0.5s,mb4.5,baz=65,slow=4.1,SNR=13								
AKASG				LR		LR	19 40 42.3		
	comp=Z,284nm,20.6s,baz=75,slow=36								
KIEV	**Kiev**	**88.31**	**321**	*e*P		**P**	**19 00 44.7**	**-1.5**
	comp=Z,8.3nm,1.1s,mb4.9								
KIEV	**Kiev**	**88.31**	**321**	*e*P		**P**	**19 00 44.7**	**-1.5**
KIEV				pmax		pmax		
	comp=Z,8.0nm,1.1s,mb4.9								
KMBO	**Kilima Mbogo**	**89.85**	**269**	P		**P**	**19 00 54.3**	**0.0**
	comp=Z,0.9nm,0.3s,mb4.5,baz=360,slow=24,SNR=5.6								
SUW	**Suwalki**	**91.11**	**325**	*e*P		**P**	**19 00 57.5**	**-1.8**
	comp=Z,17nm,0.8s,mb5.4								
SUW	**Suwalki**	**91.11**	**325**	*e*P		**P**	**19 00 57.5**	**-1.8**
SUW				pmax		pmax		
	comp=Z,17nm,0.8s,mb5.4								
BUR08	**Bucovina Ar. S**	**91.55**	**319**	*e*P		**P**	**19 01 00.9**	**-0.5**
UZH	**Uzhgorod**	**93.17**	**320**	*i*P		**P**	**19 01 08.0**	**-0.9**
UZH				*i*		pP	19 01 21.6	-4.7
STHS	**Stebnicka Huta**	**93.60**	**321**	*e*P		**P**	**19 01 12.7**	**+1.9**
	comp=Z,4.3nm,1.1s,mb4.8								
STHS	**Stebnicka Huta**	**93.60**	**321**	*e*P		**P**	**19 01 12.7**	**+1.9**
STHS				pmax		pmax		
	comp=Z,4.0nm,1.1s,mb4.8								
STHS	**Stebnicka Huta**	**93.60**	**321**	*e*P		**P**	**19 01 12.7**	**+1.9**
CRVS	**Cervenica-Dubn**	**93.61**	**320**	*e*P		**P**	**19 01 11.2**	**+0.3**
	comp=Z,16nm,1.2s,mb5.3								
CRVS	**Cervenica-Dubn**	**93.61**	**320**	*e*P		**P**	**19 01 11.2**	**+0.3**
CRVS				pmax		pmax		
	comp=Z,16nm,1.2s,mb5.3								
CRVS	**Cervenica-Dubn**	**93.61**	**320**	*e*P		**P**	**19 01 11.2**	**+0.3**
OJC	**Ojcow**	**94.24**	**322**	*e*P		**P**	**19 01 13.6**	**-0.2**
KECS	**Kecovo**	**94.36**	**320**	*e*P		**P**	**19 01 15.1**	**+0.7**
	comp=Z,3.9nm,1.6s,mb4.6								
KECS	**Kecovo**	**94.36**	**320**	*e*P		**P**	**19 01 15.1**	**+0.7**
KECS				pmax		pmax		
	comp=Z,4.0nm,1.6s,mb4.6								
KECS	**Kecovo**	**94.36**	**320**	*e*P		**P**	**19 01 15.1**	**+0.7**
NOA	**NORSAR Array B**	**94.58**	**334**	P		**P**	**19 01 14.2**	**-0.9**
	comp=Z,1.2nm,0.6s,mb4.5,baz=65,slow=4.5,SNR=7.2								
YKA	**Yellowknife Ar**	**95.04**	**24**	P		**P**	**19 01 18.1**	**+1.0**
	comp=Z,0.7nm,0.6s,mb4.2,baz=298,slow=4.3,SNR=7.8								
OKC	**Ostrava-Krasne**	**95.37**	**322**	*e*P		**P**	**19 01 19.2**	**+0.2**
OKC	**Ostrava-Krasne**	**95.37**	**322**	*e*P		**P**	**19 01 19.2**	**+0.2**
VYHS	**Vyhne**	**95.39**	**321**	*e*P		**P**	**19 01 19.0**	**-0.1**
	comp=Z,21nm,2.9s,mb5.0								
VYHS	**Vyhne**	**95.39**	**321**	*e*P		**P**	**19 01 19.0**	**-0.1**
VYHS				pmax		pmax		
	comp=Z,21nm,2.9s,mb5.1								
VYHS	**Vyhne**	**95.39**	**321**	*e*P		**P**	**19 01 19.0**	**-0.1**
MORC	**Moravsky Berou**	**95.76**	**322**	*e*P		**P**	**19 01 20.0**	**-0.8**
	comp=Z,7.4nm,1.3s,mb5.0								
MORC	**Moravsky Berou**	**95.76**	**322**	*e*P		**P**	**19 01 20.0**	**-0.7**
MORC				pmax		pmax		
	comp=Z,7.0nm,1.3s,mb4.9								
KSP	**Ksiaz**	**96.13**	**323**	*e*P		**P**	**19 01 20.6**	**-1.8**
DPC	**Dobruska-Polom**	**96.29**	**323**	*e*P		**P**	**19 01 23.7**	**+0.6**
DPC	**Dobruska-Polom**	**96.29**	**323**	*e*P		**P**	**19 01 23.7**	**+0.6**
UPC	**Upice**	**96.42**	**323**	*e*P		**P**	**19 01 24.4**	**+0.7**
UPC	**Upice**	**96.42**	**323**	*e*P		**P**	**19 01 24.4**	**+0.7**
TREC	**Trest**	**97.18**	**322**	*e*P		**P**	**19 01 27.6**	**+0.4**
TREC	**Trest**	**97.18**	**322**	*e*P		**P**	**19 01 27.6**	**+0.4**
PRU	**Pruhonice**	**97.49**	**323**	*e*P		**P**	**19 01 29.5**	**+0.9**
PRU	**Pruhonice**	**97.49**	**323**	*e*P		**P**	**19 01 29.5**	**+0.9**
BRG	**Berggiesshubel**	**97.49**	**324**	*e*P		**P**	**19 01 25.5**	**-3.0**
	comp=Z,3.8nm,1.0s,mb4.8								
BRG	**Berggiesshubel**	**97.49**	**324**	*e*P		**P**	**19 01 25.5**	**-3.1**
BRG				pmax		pmax		
	comp=Z,2.0nm,1.0s,mb4.5								
CLL	**Collm**	**97.86**	**325**	*i* P		**P**	**19 01 29.8**	**-0.4**
	comp=Z,7.0nm,1.4s,mb5.0								
CLL	**Collm**	**97.86**	**325**	*i* P		**P**	**19 01 29.8**	**-0.4**
CLL				pmax		pmax		
	comp=Z,7.0nm,1.4s,mb5.0								
CLL	**Collm**	**97.86**	**325**	*i* P		**P**	**19 01 29.8**	**-0.4**
	comp=Z,7.0nm,1.4s,mb5.0								
KHC	**Kasperske Hory**	**98.40**	**322**	*e*P		**P**	**19 01 33.1**	**+0.4**
KHC	**Kasperske Hory**	**

mb3.6/3, Error ellipse: s-maj=4.2km s-min=2.4km az=136.7
MOS ***09*** *19:44:19.4±1.0, 53°.15N × 108°.24E, h12km, mb4.5/3, Error ellipse: s-maj=13.2km s-min=7.8km az=61.2*
IDC ***09*** *19:44:20.1±1.4, 53°.15N × 108°.05E, h0km, mb3.3/3, mb1 3.5/6, mb1mx3.3/24, mbtmp3.3/6, ML3.3/3, MS3.2/2, Ms1 3.2/2, ms1mx2.9/17, Error ellipse: s-maj=25.2km s-min=19.1km az=98.0*
NEIC ***09*** *19:44:20.8±0.8, 53°.21N × 108°.21E, h10km, mb3.8/2, Error ellipse: s-maj=13.3km s-min=10.6km az=113.0*
BYKL ***09*** *19:44:21.3±0.3, 53°.13N × 108°.19E*

ISC 09 19:44:20.3±0.3, **53°.16N**±0°.02 × **108°.30E**±0°.03, **h10**km, **n59, s146**/118, **mb3.6/3, 13C-10D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OGRR	**Ongureny**	**0.64**	**319**	⇑*i*Pg	**Pg**	**19 44 33.2**	**+0.5**
OGRR				*e*		19 44 42.0	
OGRR				pmax	pmax		
	comp=Z,1μm,0.4s						
OGRR				smax			
	comp=N,5μm,0.3s						
OGRR	**Ongureny**	**0.64**	**319**	⇑*i*Pg	**Pg**	**19 44 33.2**	**+0.5**
	comp=N,853nm,0.5s						
OGRR				⇓*i*Pg	**Pg**	**19 44 33.2**	**+0.5**
	comp=N,260nm,0.5s						
OGRR				⇑*i*Pg	**Pg**	**19 44 33.2**	**+0.5**
	comp=N,1μm,0.5s						
OGRR				*e*Sg	**Sg**	**19 44 41.6**	**+0.5**
OGRR				Pmax			
	comp=N,985nm,0.4s						
OGRR				Smax			
	comp=N,5μm,0.3s						
SYVR	**Suvo**	**1.14**	**63**	*e*PG	**Pg**	**19 44 42.3**	**+0.2**
SYVR				*e*		19 44 58.4	
SYVR				pmax	pmax		
	comp=Z,244nm,0.3s						
SYVR				smax			
	comp=N,1μm,0.4s						
SYVR	**Suvo**	**1.14**	**63**	⇑*i*Pg	**Pg**	**19 44 42.3**	**+0.2**
	comp=N,72nm,0.7s						
SYVR				⇑*i*Pg	**Pg**	**19 44 42.3**	**+0.2**
	comp=N,80nm,0.7s						
SYVR				⇑*i*Pg	**Pg**	**19 44 42.3**	**+0.2**
	comp=N,169nm,0.7s						
SYVR				*e*Pb	**Pb**	**19 44 43.7**	**+1.7**
SYVR				*e*		19 44 50.0	
SYVR				*e*Sg	**Sg**	**19 44 59.1**	**+2.3**
SYVR				Pmax			
	comp=N,181nm,0.5s						
SYVR				Smax			
	comp=N,1μm,0.6s						
TRG	**Tyrgan**	**1.24**	**252**	⇑*i*PG	**Pg**	**19 44 42.4**	**-1.7**
TRG				*e*		19 44 58.7	
TRG				pmax	pmax		
	comp=Z,290nm,0.1s						
TRG				smax			
	comp=N,3μm,0.3s						
TRG	**Tyrgan**	**1.24**	**252**	⇓*i*Pg	**Pg**	**19 44 42.5**	**-1.6**
	comp=N,74nm,0.5s						
TRG				⇓*i*Pg	**Pg**	**19 44 42.5**	**-1.6**
	comp=N,148nm,0.5s						
TRG				⇑*i*Pg	**Pg**	**19 44 42.5**	**-1.6**
	comp=N,129nm,0.5s						
TRG				*e*		19 44 50.8	
TRG				*i*Sg	**Sg**	**19 44 59.1**	**-1.2**
TRG				*e*Sb	**Sb**	**19 45 02.0**	**+2.1**
TRG				Pmax			
	comp=N,168nm,0.6s						
TRG				Smax			
	comp=N,3μm,0.3s						
UUDB	**Ulan-Yde**	**1.35**	**197**	⇑*i*Pg	**Pg**	**19 44 44.6**	**-1.6**
UUDB				*e*Pb	**Pb**	**19 44 46.0**	**+0.4**
UUDB				*e*Sg	**Sg**	**19 45 02.2**	**-1.4**
UUDB				*e*Sb	**Sb**	**19 45 04.1**	**+1.2**
UUDB				max			
	comp=N,182nm,0.2s						
UUDB				max			
	comp=N,2μm,0.6s						
KAB	**Kabansk**	**1.50**	**223**	*e*Pn	**Pn**	**19 44 47.7**	**+0.6**
KAB				*e*		19 44 51.3	
KAB				*i*Sg	**Sg**	**19 45 07.6**	**-0.7**
KAB				Smax			
	comp=N,2μm,0.4s						
YLYR	**Ulyunkhan**	**2.41**	**43**	*e*PN	**Pn**	**19 45 00.9**	**+1.2**
YLYR				*e*		19 45 04.6	
YLYR				*e*S	**Sn**	**19 45 31.8**	**+2.5**
YLYR				*e*		19 45 37.5	
YLYR				pmax	pmax		
	comp=Z,49nm,0.4s						
YLYR				smax			
	comp=N,217nm,0.6s						
YLYR	**Ulyunkhan**	**2.41**	**43**	⇓*i*Pn	**Pn**	**19 45 00.9**	**+1.2**
	comp=N,13nm,0.4s						
YLYR				⇓*i*Pn	**Pn**	**19 45 00.9**	**+1.2**
	comp=N,10.0nm,0.4s						
YLYR				⇓*i*Pn	**Pn**	**19 45 00.9**	**+1.2**
	comp=N,25nm,0.4s						
YLYR				*i*Pg	**Pg**	**19 45 04.8**	**-1.7**
YLYR				*e*Sg	**Sg**	**19 45 37.8**	**+0.1**
YLYR				Pmax			
	comp=N,63nm,0.9s						
YLYR				Smax			
	comp=N,216nm,0.6s						
LSTR	**Listvyanka**	**2.48**	**240**	⇑*i*PN	**Pn**	**19 45 00.1**	**-0.6**
LSTR				*e*		19 45 04.8	
LSTR				*e*S	**Sn**	**19 45 29.9**	**-1.0**
LSTR				*e*		19 45 34.4	
LSTR				pmax	pmax		
	comp=Z,54nm,0.4s						
LSTR				smax			
	comp=E,271nm,0.4s						
LSTR	**Listvyanka**	**2.48**	**240**	⇑*i*Pn	**Pn**	**19 45 00.1**	**-0.6**
	comp=E,10.0nm,0.5s						
LSTR				⇑*i*Pn	**Pn**	**19 45 00.1**	**-0.6**
	comp=E,28nm,0.5s						
LSTR				⇓*i*Pn	**Pn**	**19 45 00.1**	**-0.6**
	comp=E,23nm,0.5s						
LSTR				*i*Pg	**Pg**	**19 45 04.8**	**-3.0**
LSTR				*e*		19 45 29.1	
LSTR				*e*Sg	**Sg**	**19 45 34.9**	**-5.0**
LSTR				Pmax			
	comp=E,36nm,0.2s						
LSTR				Smax			
	comp=E,296nm,0.5s						
IRK	**Irkutsk**	**2.62**	**251**	*e*PN	**Pn**	**19 45 06.1**	**+3.6**
IRK				*e*		19 45 39.6	
IRK				pmax	pmax		
	comp=Z,77nm,0.2s						
IRK				smax			
	comp=N,2μm,0.4s						
IRK	**Irkutsk**	**2.62**	**251**	*e*	**Pb**	**19 45 09.3**	**+2.1**
IRK				*e*		19 45 29.0	
IRK				*i*Sg	**Sg**	**19 45 39.9**	**-4.3**
IRK				Smax			
	comp=N,2μm,0.5s						
NIZ	**Nizh Angarsk**	**2.72**	**15**	*e*PN	**Pn**	**19 45 05.7**	**+1.7**
NIZ				*e*		19 45 10.2	
NIZ				*e*		19 45 43.9	
NIZ				pmax	pmax		
	comp=Z,39nm,0.4s						
NIZ				smax			
	comp=N,241nm,0.5s						
NIZ	**Nizh Angarsk**	**2.72**	**15**	*e*Pn	**Pn**	**19 45 05.7**	**+1.7**
NIZ				*e*Pg	**Pg**	**19 45 10.3**	**-2.1**
NIZ				*e*Sg	**Sg**	**19 45 46.2**	**-1.4**
NIZ				*e*		19 45 47.9	
NIZ				Pmax			
	comp=N,38nm,0.3s						
NIZ				max			
	comp=N,243nm,0.5s						
TLY	**Talaya**	**3.21**	**244**	*e*Pn	**Pn**	**19 45 09.5**	**-1.2**
TLY				*e*Sg	**Sg**	**19 45 57.5**	**-5.8**
TLY	**Talaya**	**3.21**	**244**	*e*PN	**Pn**	**19 45 09.8**	**-0.9**
TLY				*e*		19 45 16.2	
TLY				*e*S	**Sn**	**19 45 47.5**	**-1.4**
TLY				*e*		19 45 57.5	
TLY				pmax	pmax		
	comp=Z,30nm,0.4s						
TLY				smax			
	comp=N,272nm,0.3s						
TLY	**Talaya**	**3.21**	**244**	*e*Pn	**Pn**	**19 45 09.9**	**-0.8**
TLY				*e*Pg	**Pg**	**19 45 17.3**	**-4.4**
TLY				*i*Sg	**Sg**	**19 45 57.7**	**-5.6**
TLY				Pmax			
	comp=N,30nm,0.5s						
TLY				Smax			
	comp=N,279nm,0.3s						
KMO	**Kumora**	**3.22**	**31**	*e*PN	**Pn**	**19 45 11.6**	**+0.8**
KMO				*e*		19 45 18.3	
KMO				*e*S	**Sn**	**19 45 49.7**	**+0.6**
KMO				*e*		19 45 59.6	
KMO				pmax	pmax		
	comp=Z,110nm,0.4s						
KMO				smax			
	comp=N,274nm,1.4s						
KMO	**Kumora**	**3.22**	**31**	*e*Pn	**Pn**	**19 45 11.8**	**+1.0**
KMO				*e*Pg	**Pg**	**19 45 18.6**	**-3.3**
KMO				*e*		19 45 23.0	
KMO				*i*Sg	**Sg**	**19 46 01.4**	**-2.1**
KMO				max			
	comp=N,108nm,0.4s						
KMO				Smax			
	comp=N,277nm,1.1s						
CIT	**Chita**	**3.40**	**107**	*e*PN	**Pn**	**19 45 13.9**	**+0.6**
CIT				*e*		19 45 21.7	
CIT				*e*S	**Sn**	**19 45 54.3**	**+0.6**
CIT				*e*		19 46 06.9	
CIT				pmax	pmax		
	comp=Z,73nm,0.6s						
CIT				smax			
	comp=E,530nm,0.4s						
CIT	**Chita**	**3.40**	**107**	*e*Pn	**Pn**	**19 45 15.3**	**+2.0**
CIT				*e*Pg	**Pg**	**19 45 22.7**	**-2.7**
CIT				*e*Sn	**Sn**	**19 45 53.8**	**+0.1**
CIT				*e*Sg	**Sg**	**19 46 07.6**	**-1.8**
CIT				Pmax			
	comp=E,88nm,0.3s						
CIT				Smax			
	comp=E,615nm,0.9s						
YOA	**Uoyan**	**3.58**	**32**	*e*PN	**Pb**	**19 45 26.8**	**+3.1**
YOA	**Uoyan**	**3.58**	**32**	*e*Pn	**Pn**	**19 45 08.0**	**-7.8**
YOA				*e*Sg	**Sg**	**19 46 15.4**	**+0.1**
YOA				Smax			
	comp=E,639nm,1.0s						
ARS	**Arshan**	**3.79**	**253**	*e*PN	**Pn**	**19 45 19.3**	**+0.6**
ARS				*e*		19 45 28.6	
ARS	**Arshan**	**3.79**	**253**	⇓*i*Pn	**Pn**	**19 45 19.2**	**+0.5**
ARS				*e*Pg	**Pg**	**19 45 27.9**	**-5.0**
ARS				*e*Sg	**Sg**	**19 46 15.0**	**-7.0**
ARS				Pmax			
	comp=E,102nm,0.5s						
ARS				Smax			
	comp=E,1μm,0.5s						
UKT	**Uakit**	**3.90**	**51**	*e*PN	**Pb**	**19 45 30.8**	**+1.8**
UKT				*e*		19 46 23.0	
UKT				pmax	pmax		
	comp=Z,18nm,0.7s						
UKT				smax			
	comp=N,232nm,1.2s						
UKT	**Uakit**	**3.90**	**51**	⇓*i*Pn	**Pn**	**19 45 21.9**	**+1.8**
UKT				*e*Pg	**Pg**	**19 45 32.6**	**-2.3**
UKT				*e*		19 45 38.2	
UKT				*e*Sg	**Sg**	**19 46 23.5**	**-1.8**
UKT				max			
	comp=N,17nm,0.8s						
UKT				Smax			
	comp=N,231nm,1.4s						
ZAK	**Zakamensk**	**4.17**	**230**	*e*PN	**Pn**	**19 45 24.0**	**0.0**
ZAK				*e*		19 45 35.3	
ZAK				*e*		19 46 29.1	
ZAK				pmax	pmax		
	comp=Z,13nm,0.5s						
ZAK				smax			
	comp=N,86nm,0.6s						
ZAK	**Zakamensk**	**4.17**	**230**	⇓*i*Pn	**Pn**	**19 45 24.0**	**0.0**
ZAK				*e*Pg	**Pg**	**19 45 34.9**	**-5.3**
ZAK				*e*		19 45 40.4	
ZAK				*e*Sg	**Sg**	**19 46 29.4**	**-4.8**
ZAK				max			
	comp=N,9.0nm,0.5s						
ZAK				Smax			
	comp=N,86nm,0.6s						
MOY	**Mondy**	**4.71**	**254**	*e*PN	**Pn**	**19 45 32.7**	**+1.3**
MOY				*e*		19 45 44.6	
MOY				*e*S	**Sn**	**19 46 24.1**	**-1.9**
MOY	**Mondy**	**4.71**	**254**	⇑*i*Pn	**Pn**	**19 45 32.9**	**+1.5**
MOY				*e*Pg	**Pg**	**19 45 44.4**	**-6.1**
MOY				*e*Sn	**Sn**	**19 46 27.0**	**+1.0**
MOY				*i*Sg	**Sg**	**19 46 44.8**	**-6.7**
MOY				*e*		19 46 48.8	
MOY				Pmax			
	comp=N,28nm,1.0s						
MOY				max			
	comp=N,281nm,1.5s						
ULN	**Ulaanbaatar**	**5.36**	**189**	*e*Pn	**Pn**	**19 45 42.5**	**+2.3**
	comp=N,8.8nm,0.4s						
ULN				*e*Sg	**Sg**	**19 47 07.7**	**-4.5**
ULN	**Ulaanbaatar**	**5.36**	**189**	*e*PN	**Pn**	**19 45 42.6**	**+2.4**
ULN				*e*		19 47 07.7	
ULN				pmax	pmax		
	comp=Z,9.0nm,0.4s						
ULN	**Ulaanbaatar**	**5.36**	**189**	*e*Pg	**Pg**	**19 45 56.1**	**-6.7**
ULN				*e*Sg	**Sg**	**19 47 07.0**	**-5.2**
NLYR	**Nelyaty**	**5.43**	**49**	*e*PN	**Pb**	**19 45 59.6**	**+4.5**
NLYR				*e*		19 47 11.2	
NLYR				pmax	pmax		
	comp=Z,16nm,1.3s						
NLYR				smax			
	comp=E,224nm,1.3s						
NLYR	**Nelyaty**	**5.43**	**49**	*e*Pn	**Pn**	**19 45 42.7**	**+1.5**
NLYR				*e*		19 45 46.8	
NLYR				*e*Pg	**Pg**	**19 46 02.2**	**-2.0**
NLYR				*e*Sg	**Sg**	**19 47 13.8**	**-0.6**
NLYR				*e*		19 47 18.4	
NLYR				Pmax			
	comp=E,14nm,0.7s						
NLYR				max			
	comp=E,224nm,1.3s						
SONM	**Songino Array**	**5.47**	**194**	Pn	**Pn**	**19 45 42.1**	**+0.5**
	comp=E,1.2nm,0.3s,baz=7.3,slow=14,SNR=28						
SONM				Pg	**Pg**	**19 45 58.8**	**-6.1**
	comp=E,4.3nm,0.3s,baz=1.3,slow=18,SNR=23						
SONM				Sn	**Sn**	**19 46 45.5**	**+0.9**
	comp=E,3.1nm,0.3s,baz=27,slow=19,SNR=4.6						
SONM				Lg		19 47 10.9	
	comp=E,12nm,0.3s,baz=9.2,slow=30,SNR=17						
SONM				LR	LR	19 48 04.6	
	comp=E,109nm,18.8s,baz=293,slow=41						
SONM	**Songino Array**	**5.47**	**194**	PN	**Pn**	**19 45 42.1**	**+0.4**
SONM						19 45 58.8	
SONM						19 46 45.5	
SONM						19 47 10.9	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				pmax	pmax		
	comp=Z,4.0nm,0.3s						
SONM				smax			
	comp=N,3.0nm,0.3s						
CRS	**Chara**	**6.85**	**53**	*e*PG	**Pg**	**19 46 24.6**	**-6.7**
CRS				*e*		19 47 54.1	
CRS				pmax	pmax		
	comp=Z,14nm,1.3s						
CRS				smax			
	comp=E,113nm,1.3s						
CRS	**Chara**	**6.85**	**53**	*e*	**Pn**	**19 45 55.2**	**-5.4**
CRS				*e*Pg	**Pg**	**19 46 26.5**	**-4.8**
CRS				*e*		19 46 30.1	
CRS				*e*		19 47 27.0	
CRS				*e*Sg	**Sg**	**19 47 56.7**	**-3.2**
CRS				max			
	comp=E,8.0nm,1.2s						
CRS				Smax			
	comp=E,113nm,1.4s						
TUP	**Tupik**	**7.02**	**75**	*e*PN	**Pn**	**19 46 04.6**	**+1.6**
TUP				*e*		19 46 28.1	
TUP				*e*		19 48 01.4	
TUP				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TUP				smax			
	comp=N,223nm,1.0s						
TUP	**Tupik**	**7.02**	**75**	*e*	**Pn**	**19 46 00.6**	**-2.4**
TUP				*e*Pg	**Pg**	**19 46 28.3**	**-6.3**
TUP				*e*Sg	**Sg**	**19 48 01.1**	**-4.4**
TUP				*e*		19 48 08.2	
TUP				Pmax			
	comp=N,12nm,3.3s						
TUP				max			
	comp=N,164nm,1.0s						
HIA	**Hailar**	**8.17**	**114**	*e*	Sx	19 48 09.1	
HIA				*e*Sg	Sx	19 48 35.7	
ZALV	**Zalesovo Beam**	**13.97**	**283**	Pn	**Pn**	**19 47 38.9**	**+0.8**
	comp=N,0.1nm,0.3s,baz=79,slow=11,SNR=2.4						
ZALV				Lg		19 51 33.0	
	comp=N,0.2nm,0.3s,baz=84,slow=27,SNR=6.9						
ZALV	**Zalesovo Beam**	**13.97**	**283**	*e*P	**Pn**	**19 47 45.3**	**+7.3**
MK31	**Makanchi Array**	**17.84**	**260**	*e*Pn	**Pn**	**19 48 29.1**	**+0.7**
MKAR	**Makanchi Array**	**17.84**	**260**	P	**Pn**	**19 48 28.6**	**+0.2**
	comp=N,0.1nm,0.3s,baz=67,slow=10,SNR=7.8						
MKAR				LR	LR	19 55 30.6	
	comp=N,134nm,18.6s,baz=270,slow=38						
MKAR	**Makanchi Array**	**17.84**	**260**	*e*P	**Pn**	**19 48 29.6**	**+1.3**
TIXI	**Tiksi**	**20.64**	**18**	*e*P	**P**	**19 48 59.0**	**-0.5**
	comp=N,2.8nm,0.8s						
TIXI	**Tiksi**	**20.64**	**18**	*e*P	**P**	**19 48 59.0**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSRS	**Korea Array**	**20.80**	**131**	P	**P**	**19 49 05.3**	**+3.9**
	comp=Z,0.8nm,0.7s,baz=332,slow=12,SNR=5.9						
KSRS	**Korea Array**	**20.80**	**131**	*e*P	**P**	**19 49 07.4**	**+5.9**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR	**Borovoye Array**	**22.59**	**285**	P	**P**	**19 49 20.3**	**-0.3**
	comp=Z,0.4nm,0.4s,mb3.2,baz=79,slow=7.7,SNR=3.8						
BVAR	**Borovoye Array**	**22.59**	**285**	*e*P	**P**	**19 49 21.4**	**+0.8**
BRVK	**Borovoye**	**22.65**	**285**	*e*P	**P**	**19 49 20.2**	**-0.9**
	comp=Z,4.3nm,0.8s,mb3.9						
BRVK	**Borovoye**	**22.65**	**285**	*e*P	**P**	**19 49 20.2**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.9						
ILAR	**Eielson Array**	**49.06**	**33**	P	**P**	**19 53 08.0**	**+1.0**
	comp=Z,0.4nm,0.6s,mb3.6,baz=300,slow=5.8,SNR=5.6						

IDC ***09*** *20:15:43.0±4.9, 55°.27N × 162°.35E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.3/22, mbtmp3.6/3, Error ellipse: s-maj=122.5km s-min=42.8km az=15.0*
KRSC ***09*** *20:15:45.9±0.4, 55°.15N × 162°.71E, h24km±24km, ML4.3*
MOS ***09*** *20:15:45.0±1.3, 55°.16N × 162°.83E, h19km, mb4.4/2, Error ellipse: s-maj=21.4km s-min=10.6km az=72.9*
ISCJB ***09*** *20:15:46.0±1.0, 55°.13N±0°.03 × 162°.77E±0°.06, h23km±8km, mb3.6/3, Error ellipse: s-maj=6.2km s-min=4.3km az=29.0*

ISC 09 20:15:46.5±1.5, **55°.16N**±0°.03 × **162°.76E**±0°.06, **h19**km±10km, **n29,** σ**1**§**02**/42, **mb3.6**/3, **1C, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.85**	**225**	*e*P	**Pb**	**20 16 01.0**	**-1.6**
MKZ				*i*S	**Sb**	**20 16 12.2**	**-1.3**
KBTR	**Krutoberegovo**	**1.05**	**2**	*e*P	**Pb**	**20 16 06.0**	**-0.1**
KBTR				*i*S	**Sb**	**20 16 22.1**	**+2.6**
ZLN	**Zelenaya**	**1.40**	**309**	*e*P	**Pn**	**20 16 10.4**	**-0.6**
ZLN				*i*S	**Sn**	**20 16 28.9**	**-0.1**
CIRR	**Tsirk**	**1.49**	**311**	*e*P	**Pn**	**20 16 11.2**	**-1.0**
BZMR	**Bezymyannaya**	**1.51**	**302**	*e*P	**Pn**	**20 16 12.6**	**+0.2**
SMKR	**Semkarok**	**1.60**	**334**	*e*P	**Pn**	**20 16 14.1**	**+0.3**
KRSR	**Krestovskiy**	**1.63**	**311**	*e*P	**Pn**	**20 16 13.2**	**-1.0**
KPT	**Kopyto**	**1.65**	**300**	*e*P	**Pn**	**20 16 14.5**	**0.0**
BDR	**Baidarnaya**	**1.66**	**329**	*e*P	**Pn**	**20 16 14.3**	**-0.3**
KLY	**Klyuchi**	**1.66**	**315**	*e*P	**Pn**	**20 16 12.6**	**-2.0**
KLY				*i*S	**Sn**	**20 16 32.5**	**-2.9**
SRKR	**Sorokina**	**1.75**	**330**	P	**Pn**	**20 16 15.5**	**-0.2**
BKI	**Bering**	**1.84**	**87**	*e*P	**Pn**	**20 16 17.1**	**0.0**
BKI				*i*S	**Sn**	**20 16 39.1**	**-0.8**
KOZR	**Kozyr**	**1.86**	**300**	PN	**Pn**	**20 16 17.9**	**+0.6**
KOZ	**Kozyrevsk**	**1.87**	**300**	*e*P	**Pn**	**20 16 17.9**	**+0.5**
SRDR	**Sredinnyy**	**2.08**	**305**	*e*P	**Pn**	**20 16 20.8**	**+0.5**
SRDR				*i*S	**Sn**	**20 16 47.0**	**+1.4**
KII	**Karymskiy**	**2.23**	**241**	*e*P	**Pn**	**20 16 23.0**	**+0.6**
KII				*i*S	**Sn**	**20 16 49.4**	**0.0**
SPN	**Mys Shipunski**	**2.62**	**219**	*e*P	**Pn**	**20 16 27.6**	**-0.1**
SPN				*i*S	**Sn**	**20 16 58.3**	**-0.7**
NLC	**Nalytchevo**	**2.83**	**227**	*e*P	**Pn**	**20 16 30.3**	**-0.3**
NLC				*i*S	**Sn**	**20 17 02.9**	**-1.2**
AVH	**Avacha**	**3.03**	**233**	*e*P	**Pn**	**20 16 34.4**	**+1.0**
AVH				*i*S	**Sn**	**20 17 09.9**	**+0.8**
GNL	**Ganaly**	**3.17**	**244**	*e*P	**Pn**	**20 16 35.8**	**+0.5**
PET	**Petropavlovsk**	**3.23**	**230**	*e*P	**Pn**	**20 16 36.9**	**+0.8**
PET				*i*S	**Sn**	**20 17 14.0**	**0.0**
PET	**Petropavlovsk**	**3.23**	**230**	⇑*i*PN	**Pn**	**20 16 37.9**	**+1.8**
PET				*e*S	**Sn**	**20 17 15.2**	**+1.2**
PET				pmax	pmax		
	comp=Z,96nm,0.3s						
PET				smax			
	comp=N,282nm,0.5s						
PET				smax			
	comp=E,309nm,0.5s						
GRL	**Gorelyy**	**3.81**	**229**	*e*P	**Pn**	**20 16 45.2**	**+1.1**
GRL				*i*S	**Sn**	**20 17 29.0**	**+0.7**
SKR	**Severo-Kuril's**	**6.02**	**225**	*e*PN	**Pn**	**20 17 17.5**	**+3.1**
ILAR	**Eielson Array**	**26.25**	**48**	P	**P**	**20 21 20.4**	**+0.3**
	comp=E,1.0nm,0.9s,mb3.4,baz=266,slow=7.9,SNR=13						
ILAR	**Eielson Array**	**26.25**	**48**	P	**P**	**20 21 20.4**	**+0.4**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	**FINESS Array B**	**58.83**	**337**	P	**P**	**20 25 41.3**	**-1.8**
	comp=Z,1.3nm,0.8s,mb4.0,baz=44,slow=8.8,SNR=6.9						
FINES	**FINESS Array B**	**58.83**	**337**	P	**P**	**20 25 41.3**	**-1.8**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**68.42**	**70**	P	**P**	**20 26 47.7**	**+0.9**
	comp=Z,0.2nm,0.4s,mb3.5,baz=289,slow=2.8,SNR=3.7						

ISCJB ***09*** *20:49:22.0±0.5, 34°.39N±0°.03 × 25°.68E±0°.07, h33km, Error ellipse: s-maj=8.9km s-min=4.2km az=167.4*
NEIC ***09*** *20:49:22.5, 35°.87N × 25°.93E, h60km, After ATH.*
ATH ***09*** *20:49:22.5, 35°.87N × 25°.93E, h60km±5km*
CSEM ***09*** *20:49:23.4±0.2, 34°.46N × 25°.69E, h40km, ML3.1, Error ellipse: s-maj=11.1km s-min=5.1km az=73.0*
HLW ***09*** *20:49:23.2, 34°.47N × 25°.77E, h35km±48km, Ml3.1*

ISC 09 20:49:23.3±0.5, **34°.45N**±0°.03 × **25°.65E**±0°.07, **h35**km, **n35,** σ**0**§**96**/48, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAST	**Lasithi**	**0.73**	**349**	*e*P	**Pn**	**20 49 38.7**	**+1.6**
LAST	**Lasithi**	**0.73**	**349**	*e*P	**Pn**	**20 49 38.7**	**+1.6**
LAST	**Lasithi**	**0.73**	**349**	*e*P	**Pn**	**20 49 38.7**	**+1.6**
ZKR	**Zakros**	**0.81**	**35**	*e*P	**Pn**	**20 49 38.4**	**+0.1**
ZKR				*e*S	**Sn**	**20 49 50.3**	**+1.2**
ZKR	**Zakros**	**0.81**	**35**	*e*P	**Pn**	**20 49 38.4**	**+0.1**
ZKR				*e*S	**Sn**	**20 49 50.3**	**+1.2**
ZKR	**Zakros**	**0.81**	**35**	*e*P	**Pn**	**20 49 38.4**	**+0.1**
ZKR				*e*S	**Sn**	**20 49 50.3**	**+1.2**
NPS	**Neapolis**	**0.82**	**358**	*e*P	**Pn**	**20 49 36.6**	**-1.7**
NPS				*e*S	**Sn**	**20 49 47.1**	**-2.1**
NPS	**Neapolis**	**0.82**	**358**	*e*P	**Pn**	**20 49 36.6**	**-1.7**
NPS				*e*S	**Sn**	**20 49 47.1**	**-2.1**
NPS	**Neapolis**	**0.82**	**358**	*e*P	**Pn**	**20 49 36.6**	**-1.7**
NPS				*e*S	**Sn**	**20 49 47.1**	**-2.1**
SIVA	**Sivas**	**0.90**	**310**	*e*P	**Pn**	**20 49 44.9**	**+5.5**
SIVA	**Sivas**	**0.90**	**310**	*e*P	**Pn**	**20 49 44.9**	**+5.5**
SIVA	**Sivas**	**0.90**	**310**	*e*P	**Pn**	**20 49 44.9**	**+5.5**
IDI	**Anoyia**	**1.05**	**324**	*e*P	**Pn**	**20 49 41.7**	**+0.2**
IDI	**Anoyia**	**1.05**	**324**	*e*P	**Pn**	**20 49 41.7**	**+0.2**
IDI	**Anoyia**	**1.05**	**324**	*e*P	**Pn**	**20 49 41.7**	**+0.2**
VAM	**Vamos**	**1.53**	**309**	*e*P	**Pn**	**20 49 48.5**	**+0.4**
VA

HMAT	**Matruh**	**3.56**	**160**	P		**Pn**	**20 50 16.4**	**+0.4**
HMAT				S		**Sn**	**20 50 55.8**	**-1.0**
AWBH		**6.71**	**155**	P		**Pn**	**20 50 59.7**	**+0.4**
	baz=155							
AWBH		**6.71**	**155**	P		**Pn**	**20 50 59.7**	**+0.4**
AMAG	**Maghara**	**7.42**	**119**	P		**Pn**	**20 51 07.8**	**-1.2**
	baz=119							
AMAG	**Maghara**	**7.42**	**119**	P		**Pn**	**20 51 07.8**	**-1.3**
HFRF	**Wahat Farafira**	**7.62**	**162**	P		**Pn**	**20 51 11.9**	**0.0**
	baz=162							
HFRF	**Wahat Farafira**	**7.62**	**162**	P		**Pn**	**20 51 11.9**	**0.0**
HDK1	**Dakhla**	**9.45**	**159**	P		**Pn**	**20 51 37.6**	**+0.8**
	baz=159							
HDK1	**Dakhla**	**9.45**	**159**	P		**Pn**	**20 51 37.6**	**+0.7**
HDK2	**Wahat Dakhilah**	**10.49**	**163**	P		**Pn**	**20 51 51.8**	**+0.6**
	baz=163							
HDK2	**Wahat Dakhilah**	**10.49**	**163**	P		**Pn**	**20 51 51.8**	**+0.6**

*IDC **09** 20:51:18.1±1.2, 7.°62S×106.°29E, h0km, mb3.7/10, mb1 3.8/10, mb1mx3.7/18, mbtmp3.7/10, Error ellipse: s-maj=55.4km s-min=17.1km az=52.0*
*NEIC **09** 20:51:23.2±3.8, 7.°72S×106.°24E, h37km±34km, mb4.3/6, Error ellipse: s-maj=30.6km s-min=9.2km az=63.0*
*DJA **09** 20:51:24, 7.°83S×106.°57E, h11km, MLv4.3/20*
*ISCJB **09** 20:51:25.8±0.8, 7.°67S±0.°08×106.°59E±0.°05, h78km±5km, mb3.8/14, Error ellipse: s-maj=14.3km s-min=5.6km az=30.4*

ISC 09 20:51:27.3±0.8, 7.°65S±0.°08×106.°58E±0.°06, h71km±6km, n48, σ1s17/50, mb3.8/14, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.64**	**358**	P	**Pn**	**20 51 39.7**	**-1.9**
SKJI				S	**Sn**	**20 51 51.4**	**-0.7**
SKJI	**Sukabumi**	**0.64**	**358**	P	**Pn**	**20 51 39.0**	**-2.6**
CISI	**Cisompet, Garu**	**1.23**	**86**	P	**Pn**	**20 51 46.1**	**-2.6**
CISI				S	**Sn**	**20 52 02.0**	**-2.8**
CISI	**Cisompet, Garu**	**1.23**	**86**	P	**Pn**	**20 51 46.1**	**-2.6**
	3μm,0.5s						
LEM	**Lembang**	**1.31**	**52**	P	**Pn**	**20 51 49.7**	**-0.1**
LEM	**Lembang**	**1.31**	**52**	P	**Pn**	**20 51 49.3**	**-0.5**
	3μm,0.5s						
CGJI	**Cibinong**	**1.35**	**319**	P	**Pn**	**20 51 48.6**	**-1.7**
TNG	**Tangerang**	**1.47**	**3**	P	**Pn**	**20 51 52.9**	**+1.1**
TNG	**Tangerang**	**1.47**	**3**	P	**Pn**	**20 51 52.3**	**+0.5**
	2μm,0.7s						
TNG	**Tangerang**	**1.47**	**3**	P	**Pn**	**20 51 53.0**	**+1.2**
SBJI	**Serang**	**1.58**	**343**	P	**Pn**	**20 51 53.7**	**+0.3**
SBJI	**Serang**	**1.58**	**343**	P	**Pn**	**20 51 53.3**	**-0.1**
RBSI	**Rajabasa**	**1.97**	**335**	P	**Pn**	**20 51 59.1**	**+0.5**
JCJI	**Jatiwangi**	**2.03**	**56**	P	**Pn**	**20 51 56.4**	**-3.0**
JCJI				S	**Sn**	**20 52 24.9**	**+1.1**
BJII	**Banjamegara**	**3.12**	**84**	P	**Pn**	**20 52 15.4**	**+1.3**
KLSI		**3.46**	**328**	P	**Pn**	**20 52 20.4**	**+1.6**
LWLI	**Liwa**	**3.62**	**316**	P	**Pn**	**20 52 24.0**	**+3.1**
SMRI	**Semarang**	**3.87**	**81**	P	**Pn**	**20 52 24.7**	**+0.3**
UGM	**Wanagama**	**3.92**	**94**	P	**Pn**	**20 52 25.3**	**+0.3**
MDSI	**Maura Dua**	**3.94**	**323**	P	**Pn**	**20 52 26.1**	**+0.7**
PCJI	**Pacitan**	**4.58**	**97**	P	**Pn**	**20 52 33.9**	**-0.2**
TPI	**Tanjungpandan**	**4.97**	**12**	P	**Pn**	**20 52 40.6**	**+1.2**
	0.1nm28nm,0.9s						
SJI	**Sawahan**	**5.14**	**91**	P	**Pn**	**20 52 42.0**	**+0.3**
	0.5nm51nm,1.7s						
PWJI	**Pagerwojo**	**5.19**	**94**	P	**Pn**	**20 52 41.8**	**-0.6**
	0.6nm64nm,1.0s						
KSI	**Kapahiang**	**5.61**	**315**	P	**Pn**	**20 52 50.2**	**+2.0**
	0.5nm3μm52nm,1.1s						
KRKI	**Karangkates**	**5.84**	**95**	P	**Pn**	**20 52 52.0**	**+0.7**
	1.6nm135nm,1.3s						
JAGI	**Jajag, Banyuwa**	**7.54**	**97**	P	**Pn**	**20 53 14.9**	**+0.3**
KKM	**Kota Kinabalu**	**16.65**	**36**	*e*Pn	**Pn**	**20 55 17.8**	**+1.5**
	17nm,1.0s						
MBWA	**Marble Bar**	**18.49**	**138**	*e*Pn	**Pn**	**20 55 38.1**	**-0.5**
FITZ	**Fitzroy Crossi**	**21.27**	**121**	P	**P**	**20 56 10.8**	**+3.0**
	2.4nm,0.8s,mb3.6,baz=244,slow=7.5,SNR=3.6						
CMAR	**Chiang Mai Arr**	**27.01**	**344**	P	**P**	**20 57 01.1**	**-1.6**
	0.7nm,0.6s,mb3.4,baz=180,slow=8.9,SNR=6.2						
ASAR	**Alice Springs**	**30.66**	**124**	P	**P**	**20 57 35.5**	**+0.4**
	0.3nm,0.8s,mb3.0,baz=300,slow=7.9,SNR=3.9						
STKA	**Stephens Creek**	**40.52**	**131**	*e*P	**P**	**20 59 00.6**	**+1.1**
	1.6nm,1.1s,mb3.8						
STKA	**Stephens Creek**	**40.52**	**131**	P	**P**	**20 59 01.2**	**+1.6**
	1.7nm,0.6s,mb4.1,baz=311,slow=9.5,SNR=6.5						
KSRS	**Korea Array**	**49.10**	**23**	P	**P**	**21 00 07.8**	**+0.2**
	0.5nm,0.7s,mb3.6,baz=220,slow=7.3,SNR=5.0						
KBL	**Kabul**	**54.95**	**322**	P	**P**	**21 00 50.5**	**-0.6**
SONM	**Songino Array**	**55.24**	**360**	P	**P**	**21 00 53.4**	**+0.5**
	0.3nm,0.7s,mb3.4,baz=157,slow=7.8,SNR=2.8						
SONM				PcP	PcP	21 01 54.3	+1.3
	0.7nm,0.7s,baz=166,slow=3.0,SNR=5.6						
MK31	**Makanchi Array**	**58.35**	**341**	*e*P	**P**	**21 01 13.6**	**-1.3**
MKAR	**Makanchi Array**	**58.35**	**341**	P	**P**	**21 01 13.8**	**-1.2**
MKAR	**Makanchi Array**	**58.35**	**341**	P	**P**	**21 01 13.8**	**-1.2**
	0.5nm,0.4s,mb3.9,baz=144,slow=7.7,SNR=7.2						
KURK	**Kurchatov**	**62.96**	**340**	P	**P**	**21 01 45.8**	**-0.4**
	2.0nm,0.7s,mb4.2						
ZALV	**Zalesovo Beam**	**64.05**	**346**	P	**P**	**21 01 52.4**	**-0.9**
	0.5nm,0.4s,mb3.7,baz=152,slow=4.3,SNR=3.9						
BVAR	**Borovoye Array**	**67.80**	**337**	P	**P**	**21 02 16.8**	**-0.6**
	0.8nm,0.5s,mb3.9,baz=144,slow=9.4,SNR=7.7						
BRVK	**Borovoye**	**67.86**	**337**	P	**P**	**21 02 16.8**	**-1.0**
	1.9nm,0.6s,mb4.1						
ABKAR	**Akbulak array**	**69.75**	**329**	*e*P	**P**	**21 02 30.0**	**+0.4**
	3.0nm,0.6s,mb4.3						
ARU	**Arti**	**75.02**	**335**	*e*P	**P**	**21 03 00.8**	**-0.1**
	4.1nm,1.0s,mb4.1						
BRTR	**Keskin Array B**	**81.94**	**312**	P	**P**	**21 03 39.5**	**+0.1**
	0.4nm,0.4s,mb3.6,baz=138,slow=6.2,SNR=2.8						
TXAR	**Lajitas Array**	**144.30**	**49**	PKP	PKPdf	21 10 57.0	+1.1
	0.4nm,0.7s,baz=328,slow=0.4,SNR=7.4						

*DDA **09** 21:02:47.8, 38.°38N×42.°90E, h7km±4km, Md3.3*
*ISK **09** 21:02:47.6, 38.°33N×43.°00E, h2km, MD3.4*
*ISCJB **09** 21:02:48.3±0.5, 38.°37N±0.°04×42.°92E±0.°03, h10km, Error ellipse: s-maj=6.0km s-min=3.3km az=165.7*
*CSEM **09** 21:02:48.4±0.3, 38.°35N×43.°00E, h2km, MD3.4, Error ellipse: s-maj=10.5km s-min=7.4km az=170.0*

ISC 09 21:02:48.1±0.6, 38.°35N±0.°04×42.°90E±0.°03, h1km±7km, n34, σ1s24/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANT	**Van**	**0.30**	**76**	*e*PG	**Pg**	**21 02 53.5**	**-0.3**
TVAN	**Van**	**0.44**	**66**	*i* P	**Pg**	**21 02 56.7**	**+0.2**
TVAN				*i* S	**Sg**	**21 03 04.9**	**+2.7**
TVAN	**Van**	**0.44**	**66**	*i* P	**Pg**	**21 02 56.7**	**+0.2**
TVAN				*i* S	**Sg**	**21 03 04.9**	**+2.7**
VANB	**Van**	**0.46**	**57**	*e*PG	**Pg**	**21 02 56.5**	**-0.4**
VANB	**Van**	**0.46**	**57**	*e*Pg	**Pg**	**21 02 56.5**	**-0.4**
TATV	**Tatvan**	**0.52**	**288**	*i* P	**Pg**	**21 02 57.3**	**-0.8**
TATV				*i* S	**Sg**	**21 03 04.1**	**-0.7**
TATV	**Tatvan**	**0.52**	**288**	*i* P	**Pg**	**21 02 57.3**	**-0.8**
TATV				*i* S	**Sg**	**21 03 04.1**	**-0.7**
HAKT	**HAKKARI**	**1.02**	**141**	*i* P	**Pg**	**21 03 07.5**	**-0.1**
HAKT				*i* S	**Sg**	**21 03 27.1**	**+6.4**
HAKT	**HAKKARI**	**1.02**	**141**	*i* P	**Pg**	**21 03 07.5**	**-0.1**
HAKT				*i* S	**Sg**	**21 03 27.1**	**+6.4**
CLDR	**Caldiran**	**1.12**	**45**	*e*PN	**Pg**	**21 03 08.4**	**-1.2**
CLDR				*e*SN	**Sg**	**21 03 25.0**	**+0.8**
CLDR	**Caldiran**	**1.12**	**45**	*e*Pn	**Pg**	**21 03 08.4**	**-1.3**
CLDR				*e*Sn	**Sg**	**21 03 25.0**	**+0.7**
AGRB	**Hanur-Agry**	**1.23**	**3**	*e*PN	**Pn**	**21 03 12.2**	**-0.3**
AGRB	**Hanur-Agry**	**1.23**	**3**	*e*Pn	**Pn**	**21 03 12.2**	**-0.3**
CUKT	**Cukurca**	**1.23**	**153**	*e*PN	**Pn**	**21 03 11.1**	**-1.4**
CUKT	**Cukurca**	**1.23**	**153**	*e*Pn	**Pn**	**21 03 11.1**	**-1.4**
BEST	**Besiri**	**1.36**	**251**	*i* P	**Pg**	**21 03 14.4**	**+0.2**
BEST				*i* S	**Sg**	**21 03 33.3**	**+1.4**
BNGL	**BINGOL**	**1.50**	**294**	*i* P	**Pn**	**21 03 16.4**	**+0.3**
BNGL				*i* S	**Sg**	**21 03 38.7**	**+2.5**
BINT	**Bingol**	**1.96**	**286**	*e*PN	**Pb**	**21 03 24.1**	**-0.5**
BINT	**Bingol**	**1.96**	**286**	*e*Pn	**Pb**	**21 03 24.1**	**-0.5**
EZM	**Erzurum**	**1.96**	**323**	*e*PN	**Pb**	**21 03 23.7**	**-0.9**
MARD	**Mardin**	**1.97**	**239**	*i* P	**Pn**	**21 03 21.8**	**-0.9**
MARD				*i* S	**Sn**	**21 03 48.7**	**+0.7**
KARS	**Kars**	**2.28**	**3**	*e*PN	**Pn**	**21 03 27.5**	**+0.5**
GNI	**Garni**	**2.30**	**38**	*e*PN	**Pn**	**21 03 27.2**	**0.0**
GNI	**Garni**	**2.30**	**38**	*e*Pn	**Pn**	**21 03 27.2**	**0.0**
PTK	**Pertek**	**2.80**	**282**	*e*PN	**Pb**	**21 03 36.5**	**-2.4**
PTK	**Pertek**	**2.80**	**282**	*e*Pn	**Pb**	**21 03 36.5**	**-2.4**
SVRC	**Sivrice-ELAZID**	**2.82**	**272**	*e*Pn	**Pb**	**21 03 36.4**	**-2.9**
SVRC	**Sivrice-ELAZID**	**2.82**	**272**	*e*Pn	**Pb**	**21 03 36.4**	**-2.9**
BCA	**Borcka**	**3.25**	**343**	*e*PN	**Pb**	**21 03 42.1**	**-4.4**
BCA	**Borcka**	**3.25**	**343**	*e*Pn	**Pb**	**21 03 42.1**	**-4.4**
URFA	**Urfa**	**3.35**	**256**	*e*PN	**Pn**	**21 03 43.8**	**+2.1**
URFA	**Urfa**	**3.35**	**256**	*e*Pn	**Pn**	**21 03 43.8**	**+2.2**
MALT	**Malatya**	**3.52**	**271**	*e*PN	**Pn**	**21 03 46.4**	**+2.5**
MALT	**Malatya**	**3.52**	**271**	*e*Pn	**Pn**	**21 03 46.4**	**+2.5**

WEL 09 21:08:03.2±0.8, 35.°84S×178.°02E, h138km±14km, ML3.7/10, Error ellipse: s-maj=17.3km s-min=10.0km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.74**	**173**	PN	Pn	21 08 34.5	+0.1
MXZ				SN	Sn	21 08 58.8	+0.4
PUZ	**Puketiti**	**2.24**	**175**	PN	Pn	21 08 40.2	-0.2
PUZ				SN	Sn	21 09 08.1	-1.0
MWZ	**Matawai**	**2.52**	**189**	PN	Pn	21 08 44.0	+0.1
URZ	**Urewera**	**2.52**	**197**	PN	Pn	21 08 44.6	+0.7
CNGZ	**Carnagh Statio**	**2.65**	**177**	PN	Pn	21 08 45.8	+0.3
KNZ	**Kokohu**	**3.19**	**185**	PN	Pn	21 08 51.4	-1.0
NMHZ	**Naumai**	**3.39**	**196**	PN	Pn	21 08 55.6	+0.4
NMHZ				SN	Sn	21 09 36.6	+1.2
BKZ	**Black Stump Fm**	**3.54**	**200**	PN	Pn	21 08 57.2	+0.2
MCHZ	**McNeill Hill**	**3.75**	**196**	PN	Pn	21 08 59.6	-0.2
BHHZ	**Black Hill Sta**	**3.96**	**203**	*e*PN	Pn	21 09 02.2	-0.3
BFZ	**Birch Farm**	**5.03**	**196**	PN	Pn	21 09 14.4	-2.4
BFZ				SN	Sn	21 10 10.6	-3.5
MRZ	**Mangatainoka R**	**5.18**	**201**	PN	Pn	21 09 15.8	-3.0
MRZ				SN	Sn	21 10 13.7	-4.1
TIWZ	**Tintock**	**5.21**	**198**	PN	Pn	21 09 16.3	-2.8
HOWZ	**Holdsworth Sta**	**5.42**	**201**	PN	Pn	21 09 18.6	-3.4
OGWZ	**Otaki Gorge**	**5.45**	**203**	PN	Pn	21 09 19.6	-2.8
KIW	**Kapiti Island**	**5.58**	**205**	PN	Pn	21 09 21.2	-2.9
CAW	**Cannon Point**	**5.75**	**203**	PN	Pn	21 09 23.2	-3.1
TUWZ	**Tuamarina**	**6.43**	**209**	*e*PN	Pn	21 09 32.8	-2.7
TUWZ				SN	Sn	21 10 43.8	-3.8
THZ	**Tophouse**	**7.14**	**212**	*e*PN	Pn	21 09 42.7	-2.3
THZ				SN	Sn	21 11 01.1	-3.5
MQZ	**McQueen's Vall**	**8.88**	**206**	SN	Sn	21 11 37.2	-9.3

CASC 09 21:08:59.3±2.1, 8.°39N×82.°94W, h0km±8km, MD3.9, 2C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.34**	**319**	*e*P	Pg	21 09 07.2	+1.3
ACR				*e*S	Sg	21 09 13.6	+3.2
BRU2	**Volcan**	**0.47**	**31**	*e*P	Pg	21 09 10.2	+1.9
BRU2				*e*S	Sg	21 09 19.0	+4.6
BRU2				*e*S	Sg	21 09 19.1	+4.7
TBS2		**0.48**	**35**	*e*P	Pg	21 09 04.5	-4.1
TBS2				*e*S	Sg	21 09 13.6	-1.3
CNI	**Changuinola**	**1.10**	**22**	*e*P	Pg	21 09 20.4	0.0
BUS	**Buena Vista**	**1.41**	**325**	*e*P	Pn	21 09 25.5	-0.8
QCR	**Quepos**	**1.59**	**310**	*e*P	Pn	21 09 27.3	-1.4
URSC	**Urasca**	**1.66**	**330**	*e*P	Pn	21 09 29.1	-0.5
LAJ	**Bijagual**	**1.87**	**321**	*e*P	Pn	21 09 36.1	+3.5
PRS1	**Puriscal**	**2.08**	**319**	*e*P	Pn	21 09 35.2	-0.3
PRS1				*e*S	Sn	21 10 06.7	+4.5
CGA2	**Cerro Gallo 2**	**2.21**	**317**	*e*P	Pn	21 09 36.5	-0.7
CGA2				*e*S	Sn	21 10 11.7	+6.5
JTS	**JuntasAbangare**	**2.74**	**314**	*e*P	Pn	21 09 46.7	+2.1

*IDC **09** 21:30:36.2±2.8, 6.°14S×103.°52E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/18, mbtmp3.7/7, Error ellipse: s-maj=62.6km s-min=51.7km az=176.0*
*ISCJB **09** 21:30:45.2±1.3, 5.°9S±0.°1×103.°90E±0.°09, h79km±9km, mb3.6/7, Error ellipse: s-maj=18.9km s-min=11.1km az=35.7*
*DJA **09** 21:30:46, 5.°78S×103.°94E, h79km, MLv3.3/5*

ISC 09 21:30:45.9±1.4, 5.°89S±0.°09×103.°89E±0.°08, h67km±10km, n15, σ0s84/19, mb3.6/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**0.88**	**11**	P	**Pn**	**21 31 02.7**	**-0.1**
LWLI				S	**Sn**	**21 31 17.2**	**+2.0**
KLI	**Kotabumi**	**1.40**	**44**	P	**Pn**	**21 31 08.7**	**-0.8**
KLI				S	**Sn**	**21 31 27.2**	**0.0**
MDSI	**Maura Dua**	**1.42**	**12**	P	**Pn**	**21 31 10.4**	**+0.6**
MDSI				S	**Sn**	**21 31 26.8**	**-0.9**
KLSI		**1.45**	**35**	P	**Pn**	**21 31 10.5**	**+0.3**
KLSI				S	**Sn**	**21 31 27.4**	**-1.1**
RBSI	**Rajabasa**	**1.84**	**89**	P	**Pn**	**21 31 21.2**	**+5.8**
CGJI	**Cibinong**	**1.93**	**112**	P	**Pn**	**21 31 16.9**	**+0.3**
KSI	**Kapahiang**	**2.57**	**330**	P	**Pn**	**21 31 24.2**	**-1.1**
KSI				S	**Sn**	**21 31 55.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**24.68**	**349**	P	**P**	**21 36 01.6**	**+0.9**
	1.0nm,0.8s,mb3.3,baz=180,slow=9.4,SNR=7.9						
KSRS	**Korea Array**	**48.60**	**26**	P	**P**	**21 39 23.6**	**+0.7**
	0.8nm,0.6s,mb3.8,baz=216,slow=7.9,SNR=4.3						
SONM	**Songino Array**	**53.53**	**2**	P	**P**	**21 40 01.2**	**+1.5**
	0.4nm,0.4s,mb3.8,baz=180,slow=10,SNR=4.8						
MKAR	**Makanchi Array**	**55.84**	**342**	P	**P**	**21 40 16.3**	**-0.1**
	0.7nm,0.7s,mb3.8,baz=139,slow=9.4,SNR=9.2						
ZALV	**Zalesovo Beam**	**61.73**	**347**	P	**P**	**21 40 56.5**	**-0.7**
	1.0nm,0.6s,mb4.1,baz=162,slow=5.6,SNR=5.6						
BVAR	**Borovoye Array**	**65.17**	**338**	P	**P**	**21 41 19.2**	**-0.7**
	0.3nm,0.5s,mb3.4,baz=157,slow=7.8,SNR=2.6						
BRTR	**Keskin Array B**	**78.79**	**312**	P	**P**	**21 42 40.9**	**-0.8**
	0.6nm,0.9s,mb3.4,baz=76,slow=6.1,SNR=3.3						
TXAR	**Lajitas Array**	**145.06**	**45**	PKPbc	PKPbc	21 50 16.9	+1.0
	0.5nm,0.7s,baz=172,slow=0.9,SNR=6.1						

*NEIC **09** 21:45:03.2, 17.°24N×100.°36W, h36km, MD3.8(MEX), After MEX.*

MEX 09 21:45:03.2±0.9, 17.°23N×100.°35W, h37km±9km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.20**	**156**	*e*P	Pn	21 45 08.3	-1.9
CAIG				*i* S	Sn	21 45 13.5	-1.5
CAIG	**El Cayaco**	**0.20**	**156**	*e*P	Pn	21 45 08.3	-1.9
CAIG				*i* S	Sn	21 45 13.5	-1.5
ACX	**Acapulco**	**0.59**	**127**	*i* P	Pn	21 45 13.2	-2.0
ACX				*i* S	Sn	21 45 20.5	-3.1
ACX	**Acapulco**	**0.59**	**127**	*i* P	Pn	21 45 13.2	-2.0
ACX				*i* S	Sn	21 45 20.5	-3.1
MEIG	**Mezcala**	**0.98**	**45**	*e*P	Pn	21 45 18.1	-2.4
MEIG				*i* S	Sn	21 45 30.6	-2.7
ZIIG	**Zihuatanejo**	**1.12**	**290**	*e*P	Pn	21 45 20.4	-2.0
ZIIG				*i* S	Sn	21 45 34.9	-1.8
ZIIG	**Zihuatanejo**	**1.12**	**290**	*e*P	Pn	21 45 20.4	-2.0
ZIIG				*i* S	Sn	21 45 34.9	-1.8
PLIG	**Platanillo**	**1.41**	**35**	*i* P	Pn	21 45 25.6	-0.8
PLIG				*i* S	Sn	21 45 42.7	-1.1
PLIG	**Platanillo**	**1.41**	**35**	*i* P	Pn	21 45 25.6	-0.8
PLIG				*i* S	Sn	21 45 42.7	-1.1
PNIG	**Pinotepa**	**2.29**	**111**	*e*P	Pn	21 45 37.0	-1.5
PNIG				*i* S	Sn	21 46 04.2	-1.2
PNIG	**Pinotepa**	**2.29**	**111**	*e*P	Pn	21 45 37.0	-1.5
PNIG				*i* S	Sn	21 46 04.2	-1.2
PPM	**Popocatepetl**	**2.46**	**42**	*e*P	Pn	21 45 40.8	0.0
PPM				*i* S	Sn	21 46 07.8	-1.7
PPM	**Popocatepetl**	**2.46**	**42**	*e*P	Pn	21 45 40.8	0.0
PPM				*i* S	Sn	21 46 07.8	-1.7
UTMO	**Huajuapan**	**2.50**	**76**	*i* P	Pn	21 45 40.4	-1.1
UTMO				*i* S	Sn	21 46 08.4	-2.4

IDC 09 22:31:11.5±1.5, 16.°25S×178.°25W, h0km, mb4.0/5, mb1 4.4/5, mb1mx4.0/12, mbtmp4.0/5, Error ellipse: s-maj=115.2km s-min=23.4km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.58**	**239**	P	P	22 38 44.8	0.0
	2.1nm,0.3s,baz=96,slow=10,SNR=11						
ASAR	**Alice Springs**	**45.41**	**253**	P	P	22 39 32.2	-0.1
	6.9nm,0.6s,baz=86,slow=8.0,SNR=135						
NVAR	**Mina Array Bea**	**78.12**	**44**	P	P	22 43 13.9	+1.3
	0.6nm,0.6s,baz=242,slow=5.8,SNR=5.0						
ILAR	**Eielson Array**	**84.24**	**13**	P	P	22 43 44.1	-0.4
	0.1nm,0.4s,baz=223,slow=6.2,SNR=4.5						
TXAR	**Lajitas Array**	**84.98**	**58**	P	P	22 43 48.8	-0.3
	0.7nm,0.7s,baz=218,slow=5.7,SNR=9.9						

*DDA **09** 23:20:02.6, 35.°77N×31.°07E, h7km±4km, Md3.5*
*IDC **09** 23:20:03.9±2.1, 36.°37N×31.°48E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.3/19, mbtmp3.5/4, ML2.5/2, Error ellipse: s-maj=36.1km s-min=24.3km az=86.0*
*ISK **09** 23:20:03.4, 35.°81N×31.°06E, h9km, MD3.5*
*NEIC **09** 23:20:03.0, 35.°81N×31.°07E, h10km, MD3.5(ISK), ML3.5(NIC), After ISK.*
*ISCJB **09** 23:20:04.7±0.7, 35.°76N±0.°02×31.°08E±0.°03, h26km±7km, mb3.4/3, Error ellipse: s-maj=4.2km s-min=2.9km az=153.8*
*NIC **09** 23:20:04.4±0.3, 36.°41N×31.°34E, h45km, ML3.5, MW3.5*
*CSEM **09** 23:20:04.7±0.1, 35.°82N×31.°09E, h10km, Mw3.5, Error ellipse: s-maj=3.2km s-min=2.2km az=65.0*
*HLW **09** 23:20:07.7, 35.°79N×30.°93E, h35km±43km, Ml3.0*

ISC 09 23:20:05.4±0.6, 35.°82N±0.°02×31.°11E±0.°03, h18km±4km, n124, σ0s99/146, mb3.4/3, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**1.06**	**67**	*i* P	**Pg**	**23 20 24.8**	**-1.2**
GAZI				*i* S	**Sg**	**23 20 39.3**	**-0.7**
GAZI	**Gazipasa**	**1.06**	**67**	*i* P	**Pg**	**23 20 24.8**	**-1.2**
GAZI				*i* S	**Sg**	**23 20 39.3**	**-0.7**
ANTB	**Antalya**	**1.14**	**341**	*e*PN	**Pn**	**23 20 25.6**	**-0.9**
ANTB				*e*SN	**Sn**	**23 20 41.8**	**+0.2**
ANTB	**Antalya**	**1.14**	**341**	*e*Pn	**Pn**	**23 20 25.6**	**-0.9**
ANTB				*e*Sn	**Sn**	**23 20 41.8**	**+0.2**
AKAS	**Kas**	**1.28**	**289**	*i* P	**Pn**	**23 20 26.7**	**-1.8**
AKAS	**Kas**	**1.28**	**289**	*i* P	**Pn**	**23 20 26.7**	**-1.8**
KORT	**Korkueli**	**1.32**	**333**	*i* P	**Pn**	**23 20 28.3**	**-0.8**
KORT				*i* S	**Sg**	**23 20 48.1**	**-0.2**
KORT	**Korkueli**	**1.32**	**333**	*i* P	**Pn**	**23 20 28.3**	**-0.8**
KORT				*i* S	**Sg**	**23 20 48.1**	**-0.2**
ELL	**Elmali**	**1.34**	**314**	*e*PN	**Pn**	**23 20 28.7**	**-0.5**
ELL	**Elmali**	**1.34**	**314**	*e*Pn	**Pn**	**23 20 28.7**	**-0.6**
PPCY	**Paphos**	**1.38**	**132**	P	**Pg**	**23 20 32.6**	**+0.6**
PPCY	**Paphos**	**1.38**	**132**	P	**Pg**	**23 20 32.6**	**+0.6**
ALFC	**Alevga**	**1.39**	**118**	P	**Pn**	**23 20 30.3**	**+0.4**
	29nm,0.2s						
ALFC				S	**Sg**	**23 20 50.8**	**+0.5**
ALFC	**Alevga**	**1.39**	**118**	P	**Pn**	**23 20 30.3**	**+0.4**
	29nm,0.2s						
ALFC				S	**Sg**	**23 20 50.8**	**+0.5**
HDMB	**Hadim**	**1.59**	**44**	*e*PN	**Pb**	**23 20 33.1**	**-1.3**
HDMB	**Hadim**	**1.59**	**44**	*e*Pn	**Pb**	**23 20 33.1**	**-1.3**
LEF	**Lefka**	**1.62**	**115**	*e*PN	**Pb**	**23 20 32.7**	**-2.0**
LEF	**Lefka**	**1.62**	**115**	*e*Pn	**Pb**	**23 20 32.7**	**-2.0**
BCK	**Bucak**	**1.69**	**346**	*e*PN	**Pn**	**23 20 33.9**	**-0.2**
BCK	**Bucak**	**1.69**	**346**	*e*Pn	**Pn**	**23 20 33.9**	**-0.2**
MAMC	**Mammari**	**1.84**	**110**	P	**Pn**	**23 20 35.9**	**-0.3**
MAMC	**Mammari**	**1.84**	**110**	P	**Pn**	**23 20 35.9**	**-0.3**
GLHS	**Glhisar (BURDU**	**1.86**	**316**	*e*PN	**Pn**	**23 20 36.2**	**-0.2**
GLHS	**Glhisar (BURDU**	**1.86**	**316**	*e*Pn	**Pn**	**23 20 36.3**	**-0.1**
GOLH	**Golhisar**	**1.88**	**319**	*i* P	**Pb**	**23 20 37.4**	**-1.9**
GOLH	**Golhisar**	**1.88**	**319**	*i* P	**Pb**	**23 20 37.4**	**-1.9**
CSS	**Prodhromos**	**2.01**	**115**	P	**Pn**	**23 20 38.2**	**-0.3**
	6.1nm,0.3s						
CSS				S	**Sn**	**23 21 05.2

baz=170
HHAG **Hagoal** 5.91 172 P Pn 23 21 33.1 +0.9
HMYD **Mayadein** 6.01 183 P Pn 23 21 34.2 +0.7
baz=182
HMYD **Mayadein** 6.01 183 P Pn 23 21 34.2 +0.6
AYT **Al 'Ayyat** 6.10 180 P Pn 23 21 35.7 +1.0
baz=178
AYT **Al 'Ayyat** 6.10 180 P Pn 23 21 35.7 +1.0
HNAT **Natroun** 6.18 184 P Pn 23 21 36.4 +0.5
baz=183
HNAT **Natroun** 6.18 184 P Pn 23 21 36.4 +0.5
HSAF **As Saff** 6.20 176 P Pn 23 21 36.6 +0.5
baz=174
HSAF **As Saff** 6.20 176 P Pn 23 21 36.6 +0.5
GLL **Jalalah** 6.25 175 P Pn 23 21 37.4 +0.6
baz=173
GLL **Jalalah** 6.25 175 P Pn 23 21 37.4 +0.6
MALT **Malatya** 6.36 65 *e*Pn Pn 23 21 37.3 -1.0
comp=E,2.4nm,0.4s
MALT **Malatya** 6.36 65 *e*Pn Pn 23 21 37.3 -1.0
comp=E,2.4nm,0.4s
SLUM 6.54 230 P Pn 23 21 39.7 -1.1
baz=230
SLUM 6.54 230 P Pn 23 21 39.7 -1.1
HBNS **Bani Suwayf** 6.85 179 P Pn 23 21 46.1 +1.1
baz=177
HBNS **Bani Suwayf** 6.85 179 P Pn 23 21 46.1 +1.0
HKAT **Jabal Katrina** 7.68 161 P Pn 23 21 56.7 +0.3
baz=159
HKAT **Jabal Katrina** 7.68 161 P Pn 23 21 56.7 +0.3
AWBH 7.71 195 P Pn 23 21 56.4 -0.4
baz=194
AWBH 7.71 195 P Pn 23 21 56.4 -0.4
HFRF **Wahat Farafira** 8.97 196 P Pn 23 22 13.6 -0.6
baz=196
HFRF **Wahat Farafira** 8.97 196 P Pn 23 22 13.6 -0.5
FINES **FINESS Array B** 25.84 354 P P 23 25 31.7 -3.8
comp=E,1.2nm,0.8s,mb3.5,baz=161,slow=12,SNR=7.0
ARCES **ARCESS Array B** 33.91 356 P P 23 26 43.9 -3.1
ARCES **ARCESS Array B** 33.91 356 P P 23 26 43.9 -3.0
comp=E,0.4nm,0.5s,mb3.6,baz=173,slow=8.2,SNR=4.3
MKAR **Makanchi Array** 39.34 58 P P 23 27 31.6 -2.0
comp=E,0.2nm,0.6s,mb3.0,baz=288,slow=5.9,SNR=3.9

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*ISCJB **09** 23:22:01.4±0.2,25°.99N±0°.03×59°.41E±0°.03, h10km, mb4.5/95, MS3.2/8, Error ellipse: s-maj=4.3km s-min=3.8km az=2.7*
*IDC **09** 23:22:01.9±0.7,26°.07N×59°.47E, h0km, mb4.2/30, mb1 4.3/30, mb1mx4.3/36, mbtmp4.2/30, MS3.3/8, Ms1 3.3/8, ms1mx3.0/30, Error ellipse: s-maj=15.6km s-min=12.9km az=162.0*
*NEIC **09** 23:22:03.7,26°.08N×59°.51E, h17km, mb4.6/45, ML3.8(THR), MN4.2(TEH), After THR.*
*THR **09** 23:22:03.3±0.3,26°.07N×59°.50E, h14km±5km, ML3.8*
*MOS **09** 23:22:04.7±1.0,26°.06N×59°.49E, h33km, mb4.7/44, Error ellipse: s-maj=7.7km s-min=4.2km az=122.0*
*CSEM **09** 23:22:05.6±0.2,25°.99N×59°.52E, h30km, mb4.5/37, Error ellipse: s-maj=6.3km s-min=5.0km az=142.0*
*TEH **09** 23:22:06.5,25°.93N×59°.60E, h35km*
*OMAN **09** 23:22:07.0±1.4,25°.72N×59°.28E, h19km±102km, Error ellipse: s-maj=24.8km s-min=5.5km az=231.0*
*BJI **09** 23:22:07.4,26°.33N×60°.11E, h17km, mB3.9/1, mb4.7/2, Ms3.9/1, Ms7 3.9/1*

ISC 09 23:22:02.8±0.2,25°.94N±0°.03×59°.46E±0°.03,h10km,n382,
σ1s00/385,mb4.5/95,MS3.2/8,77C-11D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BANOM	**Banah**	2.84	270	P		Pn	23 22 48.8	+0.6
	SNR=79							
BANOM	**Banah**	2.84	270	P		Pn	23 22 48.8	+0.6
	SNR=79							
IBND	**Bandar-abas**	3.01	301	*e*Pn		Pn	23 22 52.3	+1.8
HOQ	**Hoqain**	3.05	220	P		Pn	23 22 50.5	-0.6
	SNR=24							
HOQ	**Hoqain**	3.05	220	⇑P		Pn	23 22 50.5	-0.7
	SNR=24							
SMDO	**Samad**	3.14	204	P		Pn	23 22 53.1	+0.7
	SNR=20							
SMDO	**Samad**	3.14	204	⇓P		Pn	23 22 53.1	+0.8
	SNR=20							
BNDS	**Bandar-Abbas**	3.28	297	Pn		Pn	23 22 56.0	+1.8
BNDS				Sg		Sg	23 23 45.0	-3.1
BNDS	**Bandar-Abbas**	3.28	297	*e*Pn		Pn	23 22 56.1	+1.9
BNDS				AML		AML	23 23 46.8	
	comp=N,222nm,0.6s							
BNDS	**Bandar-Abbas**	3.28	297	Pn		Pn	23 22 56.0	+1.8
BNDS				Sg		Sg	23 23 45.0	-3.1
ASHO	**Ashiyiah**	3.32	249	P		Pn	23 22 54.9	+0.1
	SNR=38							
ASHO	**Ashiyiah**	3.32	249	⇑P		Pn	23 22 54.9	+0.1
	SNR=38							
WBK	**Wadi Bani Khal**	3.35	188	P		Pn	23 22 54.9	-0.3
	SNR=52							
WBK				⇑S		Sn	23 23 32.8	-2.2
JMDO	**Jabal Madar**	3.76	199	P		Pn	23 23 02.1	+1.2
	SNR=27							
JMDO	**Jabal Madar**	3.76	199	⇓P		Pn	23 23 02.1	+1.1
	SNR=27							
ZHSF	**Zahedan**	3.84	17	Pn		Pn	23 23 02.0	+0.1
ZHSF				Sg		Sb	23 23 58.0	+0.9
ZHSF	**Zahedan**	3.84	17	*e*Pn		Pn	23 23 02.4	+0.5
ZHSF				*e*Pg		Pb	23 23 09.9	-0.7
ZHSF				*e*Sg		Sb	23 23 58.6	+1.5
ZHSF	**Zahedan**	3.84	17	Pn		Pn	23 23 02.0	+0.1
ZHSF				Sg		Sb	23 23 58.0	+0.9
KRBR	**Kerman**	4.68	330	Pn		Pn	23 23 14.0	+0.5
KRBR				Sn		Sn	23 24 06.0	-1.8
KRBR	**Kerman**	4.68	330	*e*Pn		Pn	23 23 14.7	+1.2
KRBR				AML		AML	23 24 38.0	
	comp=E,82nm,0.6s							
KRBR				AML		AML	23 25 17.1	
	comp=N,78nm,0.7s							
KRBR	**Kerman**	4.68	330	Pn		Pn	23 23 14.0	+0.5
KRBR				Sn		Sn	23 24 06.0	-1.8
IKOO	**Kooshah**	6.47	357	*e*Pn		Pn	23 23 38.8	+0.7
IKOO				*e*			23 23 49.0	
	comp=N,1μm,0.3s							
IKOO	**Kooshah**	6.47	357	*e*Pn		Pn	23 23 38.8	+0.7
IBAF	**Bafgh**	6.58	330	Pn		Pn	23 23 40.2	+0.6
IBAF	**Bafgh**	6.58	330	*e*		Pn	23 23 43.3	+3.7
	comp=Z,437nm,0.1s							
IBAF	**Bafgh**	6.58	330	Pn		Pn	23 23 40.2	+0.6
ISRV	**Sarvestan**	6.58	303	Pn		Pn	23 23 41.5	+1.8
ISRV	**Sarvestan**	6.58	303	*e*Pn		Pn	23 23 42.1	+2.4
ISRV				*e*			23 23 46.6	
	comp=Z,846nm,0.2s							
ISRV	**Sarvestan**	6.58	303	Pn		Pn	23 23 41.5	+1.8
IPAR	**Pars**	6.87	306	Pn		Pn	23 23 45.4	+1.8
IPAR	**Pars**	6.87	306	*e*Pn		Pn	23 23 45.6	+2.0
IPAR				*e*			23 25 17.2	
	comp=Z,651nm,0.4s							
IPAR	**Pars**	6.87	306	Pn		Pn	23 23 45.4	+1.8
IMEH	**Mehriz**	6.90	323	Pn		Pn	23 23 45.4	+1.5
IMEH	**Mehriz**	6.90	323	*e*Pn		Pn	23 23 45.4	+1.5
IMEH				*e*			23 23 45.7	
	comp=Z,614nm,0.2s							
IMEH	**Mehriz**	6.90	323	*e*Pn		Pn	23 23 45.4	+1.5
ITEG	**Tejag**	6.96	355	*e*Pn		Pn	23 23 44.9	+0.1
ITEG				*e*			23 23 55.2	
	comp=Z,1μm,0.3s							
ITEG	**Tejag**	6.96	355	*e*Pn		Pn	23 23 44.9	+0.1
ICHK	**Chekchek**	7.68	326	Pn		Pn	23 23 55.4	+0.7
ICHK	**Chekchek**	7.68	326	*e*Pn		Pn	23 23 55.5	+0.8
ICHK				*e*			23 23 58.7	
	comp=Z,776nm,0.3s							
ICHK	**Chekchek**	7.68	326	Pn		Pn	23 23 55.4	+0.7
ISAD	**Sadrabad**	7.81	321	Pn		Pn	23 23 58.0	+1.5
ISAD	**Sadrabad**	7.81	321	*e*Pn		Pn	23 23 58.0	+1.5
ISAD				*e*			23 24 02.6	
	comp=Z,594nm,0.3s							
ISAD	**Sadrabad**	7.81	321	*e*Pn		Pn	23 23 58.0	+1.5
IGAR	**Gharneh**	9.13	317	*e*Pn		Pn	23 24 15.8	+1.2
IGAR				*e*			23 24 16.6	
	comp=Z,320nm,0.1s							
IZEF	**Zefreh**	9.30	320	Pn		Pn	23 24 17.5	+0.5
IZEF	**Zefreh**	9.30	320	*e*Pn		Pn	23 24 17.5	+0.5
IZEF				*e*			23 24 20.1	
	comp=Z,142nm,0.2s							
IZEF	**Zefreh**	9.30	320	*e*Pn		Pn	23 24 17.5	+0.5
IPAY	**Payeh**	10.48	358	Pn		Pn	23 24 35.3	+2.2
IPAY	**Payeh**	10.48	358	Pn		Pn	23 24 35.3	+2.2
QRN	**Al-Qurain**	10.63	288	*e*P		Pn	23 24 33.6	-1.6
IAKL	**Akhelmad**	10.64	357	Pn		Pn	23 24 37.0	+1.7
IKRD	**Kardeh**	10.83	356	*e*		Px	23 25 10.4	
	comp=Z,80nm,0.3s							
KBD	**Kabd**	10.92	290	*e*P		Pn	23 24 38.3	-0.9
RDF	**Al-Radifah**	10.99	288	*e*P		Pn	23 24 39.6	-0.5
UMR	**Umm Al-Rimmam**	11.00	292	*e*P		Pn	23 24 39.6	-0.7
UMR				AML		AML	23 26 43.2	
	comp=Z,16nm,0.3s							
MIB	**Mutribah**	11.39	292	*e*P		Pn	23 24 44.9	-0.7
MIB				AML		AML	23 26 49.1	
	comp=Z,16nm,0.5s							
ASAO	**Ashtian**	11.83	319	Pn		Pn	23 24 53.0	+1.5
ASAO	**Ashtian**	11.83	319	*e*Pn		Pn	23 24 53.8	+2.3
ASAO	**Ashtian**	11.83	319	Pn		Pn	23 24 53.0	+1.5
KBL	**Kabul**	11.92	42	*e*Pn		Pn	23 24 54.5	+1.7
	comp=Z,3.7nm,0.6s							
KBL	**Kabul**	11.92	42	*e*P		Pn	23 24 54.5	+1.7
KBL				pmax		pmax		
	comp=Z,4.0nm,0.6s							
KBL	**Kabul**	11.92	42	*e*P		Pn	23 24 54.5	+1.7
	comp=Z,4.0nm,0.6s							
IRAZ	**Razeghan**	12.49	321	Pn		Pn	23 25 01.6	+1.0
IRAZ	**Razeghan**	12.49	321	Pn		Pn	23 25 01.6	+1.0
GNI	**Garni**	18.75	323	*e*Pn		Pn	23 26 23.4	+1.2
GNI	**Garni**	18.75	323	*e*Pn		Pn	23 26 23.4	+1.2
KSH	**Kashi**	19.36	42	P		Pn	23 26 22.0	-7.6
KSH				*e*PP			23 26 41.2	
KSH				*e*S		Sn	23 29 38.9	-28
KSH				*e*SS			23 30 06.2	
KSH				*e*PcS		PcS	23 34 26.0	-1.5
KSH				pmax		pmax		
	comp=Z,40nm,6.3s							
KSH				LR		LR		
	comp=N,220nm,15.0s							
KSH				LR		LR		
	comp=E,130nm,7.6s							
KSH				LR		LR		
	comp=Z,140nm,4.9s							
DGRG	**David-gareji**	19.36	327	P		Pn	23 26 28.5	-1.2
MTA	**Mtatsminda**	19.84	326	P		Pn	23 26 35.5	+0.2
TBLG	**Delisi**	19.89	326	*e*P		Pn	23 26 35.8	-0.1
TBLG	**Delisi**	19.89	326	P		Pn	23 26 35.8	-0.1
TBLG	**Delisi**	19.89	326	*e*P		Pn	23 26 35.8	-0.1
AML	**Almayashu**	19.95	32	*e*P		Pn	23 26 33.7	-2.9
	comp=Z,12nm,0.8s							
AML	**Almayashu**	19.95	32	*e*P		Pn	23 26 33.7	-3.0
AML				pmax		pmax		
	comp=Z,12nm,0.8s							
AML	**Almayashu**	19.95	32	*e*P		Pn	23 26 33.7	-3.0
	comp=Z,12nm,0.8s							
EKS2	**Erkin-Say**	20.40	32	*e*P		P	23 26 38.7	-1.1
	comp=Z,16nm,0.8s							
EKS2	**Erkin-Say**	20.40	32	*e*P		P	23 26 38.7	-1.1
EKS2				pmax		pmax		
	comp=Z,16nm,0.8s							
EKS2	**Erkin-Say**	20.40	32	*e*P		P	23 26 38.7	-1.1
	comp=Z,16nm,0.8s							
UCH	**Uchtor**	20.43	34	*e*P		P	23 26 38.4	-1.7
	comp=Z,636nm,0.8s							
UCH	**Uchtor**	20.43	34	*e*P		P	23 26 38.4	-1.7
	comp=Z,636nm,0.8s							
ASF	**Jabal al Asfar**	20.66	293	P		P	23 26 44.7	+1.9
	comp=Z,9.5nm,0.8s,baz=336,slow=8.9,SNR=14							
ASF				LR		LR	23 36 44.8	
	comp=Z,83nm,20.2s,MS3.1,baz=173,slow=43							
AAK	**Ala-Archa**	20.72	33	P		P	23 26 43.5	+0.2
AAK				LR		LR	23 34 49.2	
AAK	**Ala-Archa**	20.72	33	P		P	23 26 43.5	+0.2
	comp=Z,3.2nm,0.4s,baz=249,slow=4.6,SNR=6.8							
AAK				LR		LR	23 34 49.2	
	comp=Z,58nm,18.5s,MS3.0,baz=268,slow=37							
AAK	**Ala-Archa**	20.72	33	P		P	23 26 43.5	+0.2
ZEI	**Tsey**	21.08	327	*e*P		P	23 26 48.0	+0.8
ZEI				pmax		pmax		
	comp=Z,38nm,1.7s,mb4.5							
ZEI	**Tsey**	21.08	327	*e*P		P	23 26 48.0	+0.8
	comp=Z,38nm,1.7s,mb4.5							
ATD	**Arta Tunnel**	21.24	231	P		P	23 26 51.6	+2.5
	comp=Z,3.8nm,0.5s,mb4.0,baz=49,slow=19,SNR=3.6							
ATD	**Arta Tunnel**	21.24	231	P		P	23 26 51.7	+2.5
MALT	**Malatya**	21.61	310	*e*P		P	23 26 54.9	+2.0
	comp=Z,28nm,0.9s,mb4.7							
MALT	**Malatya**	21.61	310	*e*P		P	23 26 54.9	+2.0
MALT				pmax		pmax		
	comp=Z,28nm,0.9s,mb4.7							
MALT	**Malatya**	21.61	310	*e*P		P	23 26 54.9	+2.0
	comp=Z,28nm,0.9s,mb4.7							
KOLN	**Koldanda**	21.61	80	*e*P		P	23 26 56.4	+3.3
	comp=Z,47nm,0.9s,mb4.9							
MMAI	**Mount Meron Ar**	22.07	294	P		P	23 26 59.5	+1.6
	comp=Z,7.8nm,0.9s,mb4.1,baz=108,slow=11,SNR=6.0							
MMAI				LR		LR	23 37 39.6	
	comp=Z,105nm,20.2s,MS3.2,baz=115,slow=43							
GKN	**Gorkha**	22.53	79	*e*P		P	23 27 03.5	+0.6
	comp=Z,27nm,0.9s,mb4.7							
KIV	**Kislovodsk**	22.55	327	*e*P		P	23 27 02.9	0.0
	comp=Z,54nm,1.1s,mb4.9							
KIV	**Kislovodsk**	22.55	327	*e*P		P	23 27 04.1	+1.2
KIV				pmax		pmax		
	comp=Z,55nm,1.0s,mb4.9							
KIV	**Kislovodsk**	22.55	327	*e*P		P	23 27 02.9	0.0
	comp=Z,54nm,1.1s,mb4.9							
DMN	**Daman**	22.95	80	*e*P		P	23 27 08.3	+0.9
	comp=Z,30nm,0.9s,mb4.7							
KKN	**Kakani**	23.10	80	*e*P		P	23 27 09.5	+0.6
	comp=Z,43nm,0.8s,mb4.9							
PKIN	**Phulchoki**	23.21	80	*e*P		P	23 27 10.5	+0.4
	comp=Z,26nm,0.7s,mb4.8							
PKI	**Pulchoki**	23.22	80	*e*P		P	23 27 10.7	+0.5
	comp=Z,45nm,0.8s,mb5.0							
AB31	**Akbulak array**	23.28	1	*ce*P		P	23 27 09.1	-1.5
AB31				pmax		pmax		
	comp=Z,11nm,0.5s,mb4.5							
AB31	**Akbulak array**	23.28	1	*e*P		P	23 27 09.1	-1.5
	comp=Z,11nm,0.5s,mb4.5							
ABKAR	**Akbulak array**	23.28	1	*e*P		P	23 27 08.9	-1.6
	comp=Z,13nm,0.6s,mb4.5							
ABKAR	**Akbulak array**	23.28	1	*e*P		P	23 27 08.9	-1.7
	comp=Z,13nm,0.6s,mb4.5							
GUN	**Gumba**	23.63	79	*e*P		P	23 27 14.7	+0.3
	comp=Z,112nm,1.4s,mb5.1							
JIRN	**Jiri**	23.91	80	*e*P		P	23 27 17.5	+0.5
	comp=Z,41nm,0.7s,mb5.0							
AKTK	**Aktyubinsk**	24.48	358	P		P	23 27 21.7	-0.2
AKTK				LR		LR	23 38 11.2	
AKTK	**Aktyubinsk**	24.48	358	P		P	23 27 21.7	-0.2
AKTO	**Aktyubinsk**	24.48	358	P		P	23 27 21.7	-0.2
	comp=Z,11nm,0.8s,mb4.3,baz=170,slow=9.2,SNR=38							
AKTO				LR		LR	23 38 11.2	
	comp=Z,74nm,18.8s,MS3.2,baz=173,slow=40							
ODAN	**Odare**	25.02	82	*e*P		P	23 27 27.1	0.0
	comp=Z,62nm,0.9s,mb5.1							
BR131	**Keskin Array S**	25.57	309	*e*P		P	23 27 32.9	+0.9
BR131	**Keskin Array S**	25.57	309	*e*P		P	23 27 32.9	+1.0
BRTR	**Keskin Array B**	25.57	309	P		P	23 27 33.0	+1.1
	comp=Z,8.7nm,0.8s,mb4.3,baz=126,slow=12,SNR=42							
BRTR				PcP		PcP	23 31 03.9	+0.9
	comp=Z,1.4nm,0.7s,baz=141,slow=4.1,SNR=8.2							
BRTR	**Keskin Array B**	25.57	309	P		P	23 27 33.0	+1.1
BRTR	**Keskin Array B**	25.57	309	PcP		PcP	23 31 03.9	+0.9
MK31	**Makanchi Array**	27.59	35	*e*P		P	23 27 50.2	+0.1
MK31	**Makanchi Array**	27.59	35	*e*P		P	23 27 50.2	+0.1
MKAR	**Makanchi Array**	27.59	35	P		P	23 27 50.1	0.0
	comp=Z,0.6nm,0.5s,mb3.5,baz=218,slow=9.9,SNR=9.8							
MKAR				LR		LR	23 41 04.2	
	comp=Z,42nm,20.6s,MS3.0,baz=8,7,slow=42							
MKAR	**Makanchi Array**	27.59	35	P		P	23 27 50.1	0.0
BVAR	**Borovoye Array**	28.27	14	P		P	23 27 55.9	-0.1
	comp=Z,1.4nm,0.4s,mb4.0,baz=208,slow=12,SNR=17							
BVAR				PcP		PcP	23 31 09.7	+0.6
	comp=Z,0.6nm,0.5s,baz=90,slow=1.5,SNR=4.0							
BVAR	**Borovoye Array**	28.27	14	P		P	23 27 55.9	-0.1
BVAR	**Borovoye Array**	28.27	14	PcP		PcP	23 31 09.7	+0.6
BRVK	**Borovoye**	28.27	14	*e*P		P	23 27 55.6	-0.5
	comp=Z,7.3nm,1.0s,mb4.3							
BRVK	**Borovoye**	28.27	14	*ce*P		P	23 27 56.2	+0.1
BRVK				pmax		pmax		
	comp=Z,7.0nm,1.2s,mb4.2							
BRVK	**Borovoye**	28.27	14	*e*P		P	23 27 56.2	+0.1
	comp=Z,7.0nm,1.2s,mb4.2							
VRHR	**Novokhopersk**	28.58	336	*e*P		P	23 27 58.8	0.0
VRHR				pmax		pmax		
	comp=N,7.0nm,0.6s							
VRHR				pmax		pmax		
	comp=Z,6.0nm,0.6s,mb4.5							
VRHR				pmax		pmax		
	comp=E,3.0nm,0.5s							
VRHR	**Novokhopersk**	28.58	336	*e*P		P	23 27 58.8	0.0
KURK	**Kurchatov**	28.77	26	P		P	23 27 59.0	-1.6
	comp=E,1.2nm,0.7s,mb3.7,baz=225,slow=9.0,SNR=5.4							
KURK				LR		LR	23 40 43.5	
	comp=E,42nm,19.1s,MS3.1,baz=170,slow=39							
KURK	**Kurchatov**	28.77	26	*e*P		P	23 28 01.1	+0.5
KURK				pmax		pmax		
	comp=Z,2.0nm,1.2s,mb3.7							
KURK	**Kurchatov**	28.77	26	P		P	23 27 59.0	-1.6
VSR	**Storozhevoye**	29.61	334	*e*P		P	23 28 07.1	-0.9
VSR				pmax		pmax		
	comp=E,3.0nm,0.9s							
VSR				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.2							
VSR				pmax		pmax		
	comp=N,8.0nm,1.1s							
VSR	**Storozhevoye**	29.61	334	*e*P		P	23 28 07.1	-0.9
	comp=N,8.0nm,1.1s,mb4.4							
VRI	**Vrincioaia**	32.81	316	⇑P		P	23 28 38.8	+2.6
VRI	**Vrincioaia**	32.81	316	⇑*i*P		P	23 28 38.8	+2.6
VRI	**Vrincioaia**	32.81	316	⇑*i*P		P	23 28 38.8	+2.6
MLR	**Muntele Rosu**	33.14	315	P		P	23 28 38.4	-0.8
	comp=N,2.2nm,0.7s,mb4.2,baz=107,slow=17,SNR=3.1							
MLR	**Muntele Rosu**	33.14	315	⇓P		P	23 28 41.8	+2.6
MLR	**Muntele Rosu**	33.14	315	⇓*i*P		P	23 28 41.8	+2.6
MLR	**Muntele Rosu**	33.14	315	P		P	23 28 38.4	-0.8
TESR		33.14	317	⇑P		P	23 28 39.4	+0.2
TESR		33.14	317	⇑*i*P		P	23 28 39.4	+0.2
TESR		33.14	317	⇑*i*P		P	23 28 39.4	+0.2
OBN	**Obninsk**	33.62	336	*e*P		P	23 28 42.7	-0.5
OBN				pmax		pmax		
	comp=Z,9.0nm,0.8s,mb4.8							
OBN	**Obninsk**	33.62	336	*e*P		P	23 28 42.7	-0.5
	comp=Z,9.0nm,0.8s,mb4.8							
VOIR		33.70	314	⇑P		P	23 28 45.2	+1.2
VOIR		33.70	314	⇑*i*P		P	23 28 45.2	+1.2
VOIR		33.70	314	P		P	23 28 45.2	+1.2
ZALV	**Zalesovo Beam**	33.71	27	P		P	23 28 43.1	-0.9
	comp=Z,1.2nm,0.3s,mb4.3,baz=225,slow=9.9,SNR=8.5							
NVS	**Novosibirsk**	33.74	25	*e*P		P	23 28 42.8	-1.5
NVS				pmax		pmax		
	comp=N,7.0nm,0.9s							
NVS				pmax		pmax		
	comp=Z,6.0nm,0.9s,mb4.5							
NVS				pmax		pmax		
	comp=E,3.0nm,0.7s							
NVS	**Novosibirsk**	33.74	25	*e*P		P	23 28 42.8	-1.5
AKASG	**Malin Array Be**	33.85	325	P		P	23 28 44.7	-0.6
AKASG	**Malin Array Be**	33.85	325	P		P	23 28 44.7	-0.6
	comp=E,0.9nm,0.4s,mb4.0,baz=125,slow=7.9,SNR=12							
AKASG	**Malin Array Be**	33.85	325	P		P	23 28 44.7	-0.6
VTS	**Vitosha**	33.94	309	⇑P		P	23 28 47.2	+1.0
VTS	**Vitosha**	33.94	309	⇑*i*P		P	23 28 47.2	+1.0
VTS	**Vitosha**	33.94	309	P		P	23 28 47.2	+1.0
BURAR	**Bucovina Array**	34.51	318	⇓P		P	23 28 51.8	+0.7
BURAR	**Bucovina Array**	34.51	318	⇓*i*P		P	23 28 51.8	+0.7
BURAR	**Bucovina Array**	34.51	318	⇓P		P	23 28 51.8	+0.7
DRGR		35.72	315	⇑P		P	23 29 02.2	+0.7
DRGR		35.72	315	⇑*i*P		P	23 29 02.2	+0.7
DRGR		35.72	315	P		P	23 29 02.2	+0.7
BZS	**Buzias**	36.00	313	⇓P		P	23 29 04.4	+0.5
BZS	**Buzias**	36.00	313	⇓*i*P		P	23 29 04.4	+0.5
BZS	**Buzias**	36.00	313	P		P	23 29 04.4	+0.5
CMAR	**Chiang Mai Arr**	37.20	93	P		P	23 29 16.3	+1.8
	comp=E,0.6nm,0.7s,mb3.5,baz=281,slow=9.1,SNR=4.0							
CMAR	**Chiang Mai Arr**	37.20	93	P		P	23 29 16.3	+1.8
CRVS	**Cervenica-Dubn**	37.33	318	*e*P		P	23 29 15.8	+0.6
	comp=E,3.0nm,1.0s,mb4.1							
CRVS	**Cervenica-Dubn**	37.33	318	*e*P		P	23 29 15.8	+0.6
CRVS				pmax		pmax		
	comp=Z,3.0nm,1.0s,mb4.1							
CRVS	**Cervenica-Dubn**	37.33	318	*e*P		P	23 29 15.8	+0.6
CRVS	**Cervenica-Dubn**	37.33	318	*e*P		P	23 29 15.8	+0.6
	comp=Z,3.0nm,1.0s,mb4.1							
KLMR	**Klimovskoe**	37.46	344	*e*P		P	23 29 15.0	-1.2
KLMR				pmax		pmax		
	comp=Z,24nm,1.9s,mb4.7							
KLMR	**Klimovskoe**	37.46	344	*e*P		P	23 29 15.0	-1.2
	comp=Z,24nm,1.9s,mb4.7							
KECS	**Kecovo**	37.76	317	*e*P		P	23 29 20.1	+1.2
	comp=Z,3.5nm,1.1s,mb4.0							
KECS	**Kecovo**	37.76	317	*e*P		P	23 29 20.1	+1.2
KECS				pmax		pmax		
	comp=Z,4.0nm,1.1s,mb4.1							
KECS	**Kecovo**	37.76	317	*e*P		P	23 29 20.1	+1.2
PKSM	**Moragy**	38.16	313	⇑P		P	23 29 22.2	0.0
PKSM	**Moragy**	38.16	313	⇑*i*P		P	23 29 22.2	-0.1
PKSM	**Moragy**	38.16	313	P	

comp=Z,8.0nm,1.1s,mb4.4
CLL Collm 43.27 318 *i* P **P** **23 30 03.8 -0.6**
CLL pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
CLL Collm 43.27 318 *i* P **P** **23 30 03.8 -0.6**
comp=Z,8.0nm,1.1s,mb4.4
CLL *i* sP sP 23 30 10.2 +1.4
CLL *i* 23 30 14.0
CLL Collm 43.27 318 *i* P **P** **23 30 03.8 -0.6**
comp=Z,8.0nm,1.1s,mb4.4
FETA Feichten 43.64 312 ⇓ *i*P **P** **23 30 07.2 -0.2**
comp=Z,12nm,1.0s,mb4.6
FETA Feichten 43.64 312 P **P** **23 30 07.2 -0.2**
comp=Z,12nm,1.0s,mb4.6
RETA Reutte 43.71 313 ⇑ *i*P **P** **23 30 07.1 -0.9**
comp=Z,6.8nm,1.2s,mb4.2
RETA Reutte 43.71 313 P **P** **23 30 07.1 -0.9**
comp=Z,6.8nm,1.2s,mb4.2
DAVOX Davos/Dischmat 44.17 311 P **P** **23 30 11.7 0.0**
comp=Z,6.1nm,0.6s,mb4.5,baz=127,slow=7.2,SNR=26
DAVOX Davos/Dischmat 44.17 311 P **P** **23 30 11.7 0.0**
DAVA Damuels 44.26 312 ⇑ *i*P **P** **23 30 11.9 -0.5**
comp=Z,15nm,0.6s,mb4.9
DAVA Damuels 44.26 312 P **P** **23 30 11.9 -0.5**
comp=Z,15nm,0.6s,mb4.9
SBF Sospel 45.48 307 *e*P **P** **23 30 21.9 -0.3**
comp=Z,29nm,0.8s,mb4.9
SBF Sospel 45.48 307 *e*P **P** **23 30 21.9 -0.3**
comp=Z,15nm,0.8s,mb4.9
SBF Sospel 45.48 307 *e*P **P** **23 30 21.9 -0.3**
SBF pmax pmax
comp=Z,15nm,0.8s,mb4.9
SBF Sospel 45.48 307 *e*P **P** **23 30 21.9 -0.3**
comp=Z,15nm,0.8s,mb4.9
OPO Ambohidratompo 45.82 196 P **P** **23 30 27.4 +2.4**
comp=Z,1.8nm,0.6s,mb4.2,baz=27,slow=7.4,SNR=7.2
OPO Ambohidratompo 45.82 196 P **P** **23 30 27.4 +2.3**
FRF La Foret Royal 46.02 306 ⇑ *i*P **P** **23 30 24.0 -2.5**
comp=Z,12nm,0.9s,mb4.5
FRF La Foret Royal 46.02 306 ⇑ *i*P **P** **23 30 24.0 -2.5**
comp=Z,6.3nm,0.9s,mb4.5
FRF La Foret Royal 46.02 306 ⇑ *i*P **P** **23 30 24.0 -2.5**
FRF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
FRF La Foret Royal 46.02 306 ⇑ *i*P **P** **23 30 24.0 -2.5**
comp=Z,6.2nm,0.9s,mb4.5
MBDF Montbardon 46.03 308 *e*P **P** **23 30 25.9 -0.7**
comp=Z,13nm,0.8s,mb4.6
MBDF Montbardon 46.03 308 *e*P **P** **23 30 25.9 -0.7**
comp=Z,6.4nm,0.8s,mb4.6
MBDF Montbardon 46.03 308 *e*P **P** **23 30 25.9 -0.7**
MBDF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
MBDF Montbardon 46.03 308 *e*P **P** **23 30 25.9 -0.7**
comp=Z,6.4nm,0.8s,mb4.6
LPG La Plagne 46.13 309 *e*P **P** **23 30 26.8 -0.5**
comp=Z,9.8nm,0.7s,mb4.5
LPG La Plagne 46.13 309 *e*P **P** **23 30 26.8 -0.5**
comp=Z,4.9nm,0.7s,mb4.5
LPG La Plagne 46.13 309 *e*P **P** **23 30 26.8 -0.5**
LPG pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
LPG La Plagne 46.13 309 *e*P **P** **23 30 26.8 -0.5**
comp=Z,4.9nm,0.7s,mb4.5
LPL La Plagne 46.15 309 ⇑ *i*P **P** **23 30 26.8 -0.6**
comp=Z,11nm,0.8s,mb4.5
LPL La Plagne 46.15 309 ⇑ *i*P **P** **23 30 26.8 -0.6**
comp=Z,5.4nm,0.8s,mb4.5
LPL La Plagne 46.15 309 ⇑ *i*P **P** **23 30 26.8 -0.6**
LPL pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LPL La Plagne 46.15 309 ⇑ *i*P **P** **23 30 26.8 -0.6**
comp=Z,5.4nm,0.8s,mb4.5
CDF Champ du Feu 46.19 313 *e*P **P** **23 30 26.3 -1.4**
comp=Z,4.6nm,0.8s,mb4.2
CDF Champ du Feu 46.19 313 *e*P **P** **23 30 26.3 -1.4**
comp=Z,2.3nm,0.8s,mb4.2
CDF Champ du Feu 46.19 313 *e*P **P** **23 30 26.3 -1.4**
CDF pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
CDF Champ du Feu 46.19 313 *e*P **P** **23 30 26.3 -1.4**
comp=Z,2.3nm,0.8s,mb4.2
HFS Hagfors 46.29 330 P **P** **23 30 28.1 -0.2**
comp=Z,3.7nm,0.7s,mb4.4,baz=126,slow=7.7,SNR=15
HFS Hagfors 46.29 330 P **P** **23 30 28.1 -0.2**
ORIF Oris-en-Rattie 46.69 308 ⇑ *i*P **P** **23 30 29.9 -1.8**
comp=Z,7.1nm,0.8s,mb4.4
ORIF Oris-en-Rattie 46.69 308 ⇑ *i*P **P** **23 30 29.9 -1.8**
comp=Z,3.5nm,0.8s,mb4.3
ORIF Oris-en-Rattie 46.69 308 ⇑ *i*P **P** **23 30 29.9 -1.8**
ORIF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ORIF Oris-en-Rattie 46.69 308 ⇑ *i*P **P** **23 30 29.9 -1.8**
comp=Z,3.5nm,0.8s,mb4.3
CABF La Chapelle 46.72 311 ⇑ *i*P **P** **23 30 31.7 -0.2**
comp=Z,17nm,0.9s,mb4.7
CABF La Chapelle 46.72 311 ⇑ *i*P **P** **23 30 31.7 -0.2**
comp=Z,8.7nm,0.9s,mb4.7
CABF La Chapelle 46.72 311 ⇑ *i*P **P** **23 30 31.7 -0.2**
CABF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
CABF La Chapelle 46.72 311 ⇑ *i*P **P** **23 30 31.7 -0.2**
comp=Z,8.7nm,0.9s,mb4.7
HAU Haudompre 46.74 312 *e*P **P** **23 30 30.8 -1.2**
comp=Z,5.0nm,0.6s,mb4.3
HAU Haudompre 46.74 312 *e*P **P** **23 30 30.8 -1.2**
comp=Z,7.9nm,0.6s,mb4.3
HAU Haudompre 46.74 312 *e*P **P** **23 30 30.8 -1.2**
HAU pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
HAU Haudompre 46.74 312 *e*P **P** **23 30 30.8 -1.2**
comp=Z,2.5nm,0.6s,mb4.3
VIVF Saint-Julien-l 47.53 308 ⇑ *i*P **P** **23 30 37.6 -0.7**
comp=Z,18nm,0.9s,mb4.8
VIVF Saint-Julien-l 47.53 308 ⇑ *i*P **P** **23 30 37.6 -0.7**
comp=Z,8.9nm,0.9s,mb4.8
VIVF Saint-Julien-l 47.53 308 ⇑ *i*P **P** **23 30 37.6 -0.7**
VIVF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
VIVF Saint-Julien-l 47.53 308 ⇑ *i*P **P** **23 30 37.6 -0.7**
comp=Z,8.9nm,0.9s,mb4.8
SSB Saint Sauveur 47.66 309 *e*P **P** **23 30 38.3 -1.0**
comp=Z,9.3nm,0.8s,mb4.9
SSB Saint Sauveur 47.66 309 *e*P **P** **23 30 38.3 -1.0**
SSB pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
SSB Saint Sauveur 47.66 309 *e*P **P** **23 30 38.3 -1.0**
comp=Z,9.0nm,0.8s,mb4.8
MEZF Maizieres J'vi 47.66 313 *e*P **P** **23 30 38.8 -0.5**
comp=Z,7.0nm,0.7s,mb4.5
MEZF Maizieres J'vi 47.66 313 *e*P **P** **23 30 38.8 -0.5**
comp=Z,7.0nm,0.7s,mb4.8
NB2 NORSAR Subarra 47.78 331 P **P** **23 30 38.9 -1.1**
comp=Z,2.1nm,0.7s,mb4.3,SNR=2.7
NOA NORSAR Array B 47.78 331 P **P** **23 30 39.4 -0.6**
comp=Z,4.4nm,0.9s,mb4.5,baz=118,slow=7.6,SNR=12
NOA NORSAR Array B 47.78 331 P **P** **23 30 39.4 -0.6**
ARCES ARCESS Array B 47.94 345 P **P** **23 30 41.0 -0.1**
comp=Z,6.8nm,0.7s,mb4.8,baz=140,slow=8.5,SNR=26
ARCES ARCESS Array B 47.94 345 P **P** **23 30 41.0 0.0**
ARE0 ARCESS Array S 47.94 345 *e*P **P** **23 30 40.8 -0.2**
ARE0 ARCESS Array S 47.94 345 *e*P **P** **23 30 40.8 -0.2**
GIVF Givet 48.05 315 *e*P **P** **23 30 42.6 +0.4**
LASF Ste Croix 48.07 307 ⇑ *i*P **P** **23 30 42.2 -0.3**
comp=Z,9.1nm,0.6s,mb4.7
SMF Signal de Mont 48.27 310 ⇑ *i*P **P** **23 30 43.3 -0.6**
comp=Z,43nm,0.9s,mb5.2
SMF Signal de Mont 48.27 310 ⇑ *i*P **P** **23 30 43.3 -0.6**
comp=Z,22nm,0.9s,mb5.2
LOR Lormes 48.31 311 ⇑ *i*P **P** **23 30 43.4 -0.9**
comp=Z,8.3nm,0.6s,mb4.7
LOR Lormes 48.31 311 ⇑ *i*P **P** **23 30 43.4 -0.9**
comp=Z,4.2nm,0.6s,mb4.7
LOR Lormes 48.31 311 ⇑ *i*P **P** **23 30 43.4 -0.9**
LOR pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
BAIF Baives 48.44 315 *e*P **P** **23 30 45.8 +0.6**
SSF Saint Saulge 48.53 311 ⇑ *i*P **P** **23 30 45.4 -0.6**
comp=Z,16nm,0.8s,mb4.8
SSF Saint Saulge 48.53 311 ⇑ *i*P **P** **23 30 45.4 -0.6**
comp=Z,7.9nm,0.8s,mb4.8
SSF Saint Saulge 48.53 311 ⇑ *i*P **P** **23 30 45.4 -0.6**
SSF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
AVF Avril sur Loir 48.61 311 ⇑ *i*P **P** **23 30 45.8 -0.8**
comp=Z,8.3nm,0.8s,mb4.5
AVF Avril sur Loir 48.61 311 ⇑ *i*P **P** **23 30 45.8 -0.8**
comp=Z,4.2nm,0.8s,mb4.5
AVF Avril sur Loir 48.61 311 ⇑ *i*P **P** **23 30 45.8 -0.8**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BGF Bois d'Agland 48.94 310 *e*P **P** **23 30 48.6 -0.5**
comp=Z,16nm,0.8s,mb4.8
BGF Bois d'Agland 48.94 310 *e*P **P** **23 30 48.6 -0.5**
comp=Z,7.9nm,0.8s,mb4.8
BGF Bois d'Agland 48.94 310 *e*P **P** **23 30 48.6 -0.5**
BGF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
TAM Tamanrasset 48.95 278 *e*P **P** **23 30 50.7 +1.2**
comp=Z,3.4nm,1.0s,mb4.3
TAM Tamanrasset 48.95 278 *e*P **P** **23 30 50.7 +1.2**
TAM pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
TAM Tamanrasset 48.95 278 *e*P **P** **23 30 50.7 +1.2**
comp=Z,3.4nm,1.0s,mb4.3
HYF Humbligny 49.14 311 *e*P **P** **23 30 50.6 -0.1**
MTLF Montolieu 49.23 306 ⇑ *i*P **P** **23 30 51.7 +0.3**
comp=Z,13nm,0.8s,mb4.7
MTLF Montolieu 49.23 306 ⇑ *i*P **P** **23 30 51.7 +0.3**
comp=Z,6.7nm,0.8s,mb4.7
MTLF Montolieu 49.23 306 ⇑ *i*P **P** **23 30 51.7 +0.3**
MTLF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
TCF Toulx Ste Croi 49.36 310 *e*P **P** **23 30 51.9 -0.5**
comp=Z,12nm,0.7s,mb4.7
TCF Toulx Ste Croi 49.36 310 *e*P **P** **23 30 51.9 -0.5**
comp=Z,6.1nm,0.7s,mb4.7
TCF Toulx Ste Croi 49.36 310 *e*P **P** **23 30 51.9 -0.5**
TCF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
CAF Calviac 49.39 308 ⇑ *i*P **P** **23 30 52.6 0.0**
comp=Z,9.4nm,0.7s,mb4.6
CAF Calviac 49.39 308 ⇑ *i*P **P** **23 30 52.6 0.0**
comp=Z,4.7nm,0.7s,mb4.6
CAF Calviac 49.39 308 ⇑ *i*P **P** **23 30 52.6 0.0**
CAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
RJF Les Rejaudoux 49.79 308 ⇑ *i*P **P** **23 30 55.9 +0.2**
comp=Z,14nm,0.7s,mb4.8
RJF Les Rejaudoux 49.79 308 ⇑ *i*P **P** **23 30 55.9 +0.2**
comp=Z,7.1nm,0.7s,mb4.8
RJF Les Rejaudoux 49.79 308 ⇑ *i*P **P** **23 30 55.9 +0.2**
RJF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
LFF La Frestale 50.33 308 ⇑ *i*P **P** **23 30 59.8 0.0**
comp=Z,23nm,0.8s,mb5.0
LFF La Frestale 50.33 308 ⇑ *i*P **P** **23 30 59.8 0.0**
comp=Z,11nm,0.8s,mb5.0
LFF La Frestale 50.33 308 ⇑ *i*P **P** **23 30 59.8 0.0**
LFF pmax pmax
comp=Z,11nm,0.8s,mb4.9
EPF Esparros 50.60 305 ⇑ *i*P **P** **23 31 01.4 -0.4**
MFF Saint Martin d 51.00 310 *e*P **P** **23 31 04.1 -0.7**
LDF La Druitiere 51.09 313 ⇑ *i*P **P** **23 31 04.5 -1.0**
comp=Z,13nm,0.7s,mb4.7
LDF La Druitiere 51.09 313 ⇑ *i*P **P** **23 31 04.5 -1.0**
comp=Z,6.6nm,0.7s,mb4.7
LDF La Druitiere 51.09 313 ⇑ *i*P **P** **23 31 04.5 -1.0**
LDF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
ETSF Etsaut 51.26 305 *e*P **P** **23 31 07.2 +0.4**
comp=Z,13nm,0.8s,mb4.6
ETSF Etsaut 51.26 305 *e*P **P** **23 31 07.2 +0.4**
comp=Z,6.4nm,0.8s,mb4.6
ETSF Etsaut 51.26 305 *e*P **P** **23 31 07.2 +0.4**
ETSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
FLN La Foliniere 51.34 313 ⇑ *i*P **P** **23 31 06.6 -0.7**
comp=Z,26nm,0.8s,mb4.9
FLN La Foliniere 51.34 313 ⇑ *i*P **P** **23 31 06.6 -0.7**
comp=Z,13nm,0.8s,mb4.9
FLN La Foliniere 51.34 313 ⇑ *i*P **P** **23 31 06.6 -0.7**
FLN pmax pmax
comp=Z,13nm,0.8s,mb4.9
GRR Gorron 51.57 312 *e*P **P** **23 31 08.4 -0.6**
comp=Z,5.3nm,0.5s,mb4.4
GRR Gorron 51.57 312 *e*P **P** **23 31 08.4 -0.6**
comp=Z,2.7nm,0.5s,mb4.4
GRR Gorron 51.57 312 *e*P **P** **23 31 08.4 -0.6**
GRR pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
SJPF Ste Jean 51.75 306 *e*P **P** **23 31 10.0 -0.4**
comp=Z,11nm,0.7s,mb4.6
SJPF Ste Jean 51.75 306 *e*P **P** **23 31 10.0 -0.4**
comp=Z,5.5nm,0.7s,mb4.6
SJPF Ste Jean 51.75 306 *e*P **P** **23 31 10.0 -0.4**
SJPF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
SGMF Saint Gilles 52.70 312 ⇑ *i*P **P** **23 31 16.9 -0.5**
QUIF Quistinic 53.10 312 ⇑ *i*P **P** **23 31 19.6 -0.8**
ROSF Rostrenen 53.18 312 *e*P **P** **23 31 20.4 -0.6**
comp=Z,18nm,0.7s,mb4.8
ROSF Rostrenen 53.18 312 *e*P **P** **23 31 20.4 -0.6**
comp=Z,9.1nm,0.7s,mb4.8
ROSF Rostrenen 53.18 312 *e*P **P** **23 31 20.4 -0.6**
ROSF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
EKA Eskdalemuir Ar 53.58 321 P **P** **23 31 23.6 -0.2**
comp=Z,1.0nm,0.4s,mb4.1,baz=106,slow=8.4,SNR=11
EKA Eskdalemuir Ar 53.58 321 P **P** **23 31 23.5 -0.3**
ESDC Sonseca Array 54.01 301 P **P** **23 31 27.1 -0.1**
comp=Z,0.3nm,0.4s,mb3.5,baz=71,slow=6.9,SNR=11
ESDC Sonseca Array 54.01 301 P **P** **23 31 27.1 -0.1**
MDT Midelt 55.51 293 P **P** **23 31 39.2 +0.9**
comp=Z,1.1nm,0.6s,mb4.0,baz=90,slow=8.5,SNR=4.1
MDT Midelt 55.51 293 P **P** **23 31 39.2 +1.0**
TORD Torodi Ar. Bea 55.51 268 P **P** **23 31 38.4 0.0**
TORD Torodi Ar. Bea 55.51 268 P **P** **23 31 38.4 0.0**
comp=Z,3.8nm,0.6s,mb4.6,baz=63,slow=7.2,SNR=56
SPITS Spitsbergen Ar 55.85 350 P **P** **23 31 39.4 -0.6**
comp=Z,3.1nm,0.5s,mb4.6,baz=126,slow=9.9,SNR=11
SPITS Spitsbergen Ar 55.85 350 P **P** **23 31 39.4 -0.6**
EVO Evora 57.28 301 ⇑ *i*P **P** **23 31 51.3 +0.5**
comp=Z,3.8nm,0.6s,mb4.3
YAK Yakutsk 58.18 31 *e*P **P** **23 31 55.6 -1.0**
comp=Z,10nm,0.4s,mb5.2
YAK Yakutsk 58.18 31 *e*P **P** **23 31 55.6 -1.0**
comp=Z,10nm,0.4s,mb5.2
KSRS Korea Array 58.23 61 LR LR 00 00 01.1
comp=Z,34nm,18.3s,MS3.5,baz=225,slow=39
SCO Scoresbysund 62.94 338 *e*S **S** **23 40 58.6 0.0**
DBIC Dimbokro 64.03 265 *e*P **P** **23 32 37.8 +0.6**
comp=Z,13nm,1.2s,mb4.8
DBIC Dimbokro 64.03 265 P **P** **23 32 37.6 +0.5**
comp=Z,5.1nm,0.9s,mb4.5,baz=359,slow=9.6,SNR=5.3
DBIC Dimbokro 64.03 265 *e*P **P** **23 32 37.8 +0.6**
DBIC pmax pmax
comp=Z,13nm,1.2s
DBIC Dimbokro 64.03 265 *e*P **P** **23 32 37.8 +0.6**
comp=Z,13nm,1.2s,mb4.8
SUMG Summit 67.82 341 *e*P **P** **23 33 01.3 +0.7**
comp=Z,4.5nm,0.8s,mb4.5
SUMG Summit 67.82 341 *e*P **P** **23 33 01.3 +0.7**
SUMG pmax pmax
comp=Z,5.0nm,0.8s
SUMG Summit 67.82 341 *i* P **P** **23 33 01.1 +0.5**
comp=Z,4.9nm,0.9s,mb4.5
SEY Seymchan 68.54 29 *ce*P **P** **23 33 06.1 +0.8**
WRAB Tennant Creek 85.80 114 P **P** **23 34 42.5 -0.3**
WRAB Tennant Creek 85.80 114 P **P** **23 34 42.5 -0.3**
BPAW Bear Paw Mtn. 87.14 13 *e*P **P** **23 34 47.9 -0.8**
comp=Z,5.5nm,1.4s,mb4.6
BPAW Bear Paw Mtn. 87.14 13 *e*P **P** **23 34 47.8 -0.9**
comp=Z,5.4nm,1.4s,mb4.6
ASAR Alice Springs 87.27 118 P **P** **23 34 49.9 -0.1**
comp=Z,1.9nm,0.8s,mb4.4,baz=307,slow=4.5,SNR=16
ASAR Alice Springs 87.27 118 P **P** **23 34 49.8 -0.2**
ILAR Eielson Array 87.29 11 P **P** **23 34 48.0 -1.5**
comp=Z,0.5nm,0.6s,mb3.9,baz=319,slow=4.5,SNR=8.0
ILAR Eielson Array 87.29 11 P **P** **23 34 48.0 -1.4**
YKA Yellowknife Ar 91.75 357 P **P** **23 35 08.7 -1.6**
comp=Z,0.4nm,0.7s,mb3.8,baz=358,slow=5.7,SNR=4.2
YKA Yellowknife Ar 91.75 357 P **P** **23 35 08.7 -1.7**
YKA Yellowknife Ar 91.75 357 P **P** **23 35 08.7 -1.7**
TXAR Lajitas Array 122.70 342 PKP PKPdf 23 40 59.7 +0.3
comp=Z,0.3nm,0.7s,baz=13,slow=1.7,SNR=4.2
TXAR Lajitas Array 122.70 342 PKIKP PKPdf 23 40 59.7 +0.3

*ISCJB **09** 23:34:20.8±0.6,21°.44S±0°.06×65°.73W±0°.08, h295km±10km, mb3.7/3, Error ellipse: s-maj=12.7km s-min=9.5km az=1.4*

*NEIC **09** 23:34:21.4±0.8,21°.41S×65°.70W,h281km±12km,mb3.7/1, Error ellipse: s-maj=16.2km s-min=12.6km az=102.0*
*IDC **09** 23:34:22.6±1.3,21°.23S×65°.57W,h293km±16km,mb3.4/3, mb1 3.5/8,mb1mx3.3/17,mbtmp3.4/8, Error ellipse: s-maj=21.6km s-min=15.8km az=81.0*
*GUC **09** 23:34:23.0±0.8,21°.51S×66°.10W,h290km,ML4.9*
ISC 09 23:34:21.7±0.6,21°.39S±0°.06×65°.72W±0°.08, h284km±10km,n23,σ1°38/34,mb3.7/3,2C,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
PB01	**Plate Boundary**	**3.53**	**275**	*e*P		**Pn**	**23 35 23.0**	**+1.0**
PB01				*i* S		**S**	**23 36 08.9**	**-1.2**
PB01				AML		AML	23 36 10.0	
	comp=N,694nm,0.3s							
PB04	**Plate Boundary**	**3.61**	**255**	⇑ *i*P		**Pn**	**23 35 30.7**	**+7.9**
PB04				*i* S		**S**	**23 36 21.8**	**+10**
MACH	**Maria Elena**	**3.84**	**257**	*e*P		**Pn**	**23 35 26.9**	**+1.6**
MACH				*e*S		**S**	**23 36 14.9**	**-1.2**
HMBC	**Humberston**	**4.05**	**285**	⇑ *i*P		**Pn**	**23 35 27.9**	**+0.2**
HMBC				*i* S		**S**	**23 36 18.3**	**-2.2**
CEN1	**Los Morros**	**4.60**	**244**	*e*P		**Pn**	**23 35 36.7**	**+2.8**
CEN1				*i* S		**S**	**23 36 33.9**	**+2.1**
ANCH	**Antofagasta**	**4.90**	**241**	*e*P		**Pn**	**23 35 35.0**	**-2.5**
ANCH				*i* S		**S**	**23 36 32.2**	**-5.9**
ANCH	**Antofagasta**	**4.90**	**241**	*e*P		**Pn**	**23 35 35.0**	**-2.5**
ANCH				*i* S		**S**	**23 36 32.2**	**-5.9**
LPAZ	**La Paz**	**5.57**	**335**	*e*Pn		**Pn**	**23 35 46.9**	**+1.5**
LPAZ				*e*S		**S**	**23 36 53.1**	**+0.4**
LPAZ	**La Paz**	**5.57**	**335**	P		**Pn**	**23 35 47.2**	**+1.8**
	comp=N,3.5nm,0.3s,baz=148,slow=7.8,SNR=202							
LPAZ				S		**S**	**23 36 52.3**	**-0.4**
	comp=N,1.7nm,0.3s,baz=295,slow=16,SNR=8.2							
SIV	**San Ignacio**	**6.94**	**40**	P		**Pn**	**23 36 01.9**	**-0.3**
	comp=N,9.5nm,0.3s,baz=234,slow=10,SNR=221							
LCO	**Las Campanas**	**8.83**	**210**	*e*Pn		**Pn**	**23 36 24.9**	**-0.4**
LCO				*e*S		**S**	**23 37 52.9**	**-13**
CPUP	**Villa Florida**	**9.12**	**124**	*e*Pn		**Pn**	**23 36 29.5**	**+0.5**
CPUP	**Villa Florida**	**9.12**	**124**	P		**Pn**	**23 36 29.1**	**+0.2**
	comp=N,0.7nm,0.3s,baz=292,slow=12,SNR=9.5							
CFAA	**Coronel Fontan**	**10.42**	**192**	P		**Pn**	**23 36 44.1**	**-0.9**
CFAA				S		**S**	**23 38 33.4**	**-8.6**
CFAA	**Coronel Fontan**	**10.42**	**192**	P		**Pn**	**23 36 44.1**	**-0.9**
	comp=N,0.4nm,0.3s,baz=25,slow=11,SNR=108							
CFAA				S		**S**	**23 38 33.4**	**-8.6**
	comp=N,0.4nm,0.3s,baz=247,slow=18,SNR=12							
NNA	**Nana**	**14.17**	**310**	P		**Pn**	**23 37 32.4**	**+1.6**
NNA	**Nana**	**14.17**	**310**	P		**Pn**	**23 37 32.4**	**+1.6**
	comp=N,1.4nm,0.3s,baz=153,slow=11,SNR=4.3							
PLCA	**Paso Flores**	**19.71**	**191**	*e*P		**P**	**23 38 32.9**	**+2.6**
	comp=N,1.9nm,0.6s							
PLCA	**Paso Flores**	**19.71**	**191**	P		**P**	**23 38 32.9**	**+2.5**
	comp=N,0.4nm,0.3s,baz=14,slow=12,SNR=7.5							
DBIC	**Dimbokro**	**65.86**	**72**	P		**P**	**23 44 36.4**	**-1.2**
	comp=N,3.6nm,0.9s,mb4.1,baz=180,slow=5.1,SNR=2.7							
TORD	**Torodi Ar. Bea**	**74.53**	**69**	P		**P**	**23 45 28.9**	**-1.0**
	comp=N,0.7nm,0.4s,mb3.6,baz=255,slow=5.6,SNR=20							
YKA	**Yellowknife Ar**	**92.10**	**340**	P		**P**	**23 46 58.1**	**-0.2**
	comp=N,0.2nm,0.5s,mb3.3,baz=118,slow=4.4,SNR=3.3							
ASAR	**Alice Springs**	**131.31**	**204**	PKP		PKPdf	23 53 01.0	+0.2
	comp=N,0.3nm,0.6s,baz=131,slow=2.6,SNR=3.4							

*ISCJB **09** 23:42:15.9±0.4,39°.51N±0°.02×23°.89E±0°.04,h11km±4km, Error ellipse: s-maj=5.0km s-min=3.2km az=16.6*
*CSEM **09** 23:42:16.5±0.1,39°.52N×23°.88E,h15km,ML2.1/12, Error ellipse: s-maj=3.4km s-min=2.2km az=102.0*
*THE **09** 23:42:16.9,39°.53N×23°.87E,h12km±1km, ML2.1/12, Error ellipse: s-maj=1.3km s-min=0.7km az=134.0*
*ATH **09** 23:42:16.1,39°.52N×23°.81E,h3km±3km,MD3.1/7*
*NEIC **09** 23:42:16.1,39°.52N×23°.81E,h3km,MD3.1(ATH),After ATH.*
ISC 09 23:42:16.6±0.4,39°.51N±0°.02×23°.87E±0°.04,h14km±3km, n58,σ0°80/91,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
AOS	**Alonnisos**	**0.34**	**178**	P		**Pg**	**23 42 24.4**	**+0.8**
AOS				S		**Sg**	**23 42 29.4**	**+1.2**
AOS	**Alonnisos**	**0.34**	**178**	P		**Pg**	**23 42 24.4**	**+0.8**
AOS				S		**Sg**	**23 42 29.4**	**+1.2**
PAIG	**Paliouri**	**0.44**	**341**	P		**Pg**	**23 42 24.6**	**-0.8**
PAIG				S		**Sg**	**23 42 31.1**	**-0.2**
PAIG	**Paliouri**	**0.44**	**341**	P		**Pg**	**23 42 24.6**	**-0.8**
PAIG				S		**Sg**	**23 42 31.1**	**-0.2**
XOR	**Xorichti**	**0.54**	**255**	P		**Pg**	**23 42 27.9**	**+0.7**
XOR				S		**Sg**	**23 42 36.0**	**+1.5**
XOR	**Xorichti**	**0.54**	**255**	P		**Pg**	**23 42 27.9**	**+0.7**
XOR				S		**Sg**	**23 42 36.0**	**+1.5**
OUR	**Ouranopolis**	**0.83**	**6**	P		**Pg**	**23 42 31.5**	**-1.1**
OUR				S		**Sg**	**23 42 44.8**	**+1.3**
OUR	**Ouranopolis**	**0.83**	**6**	P		**Pg**	**23 42 31.5**	**-1.1**
OUR				S		**Sg**	**23 42 44.8**	**+1.3**
ATAL	**Atalanti**	**1.05**	**219**	P		**Pg**	**23 42 36.4**	**-0.4**
ATAL	**Atalanti**	**1.05**	**219**	P		**Pg**	**23 42 36.4**	**-0.4**
LIA	**Limnos Island**	**1.09**	**69**	*e*Pb		**Pg**	**23 42 37.2**	**-0.3**
LIA				*e*Sb		**Sg**	**23 42 52.5**	**+0.8**
LIA	**Limnos Island**	**1.09**	**69**	*e*PB		**Pg**	**23 42 37.2**	**-0.3**
LIA				*e*SB		**Sg**	**23 42 52.5**	**+0.8**
LIA	**Limnos Island**	**1.09**	**69**	P		**Pg**	**23 42 37.0**	**-0.5**
LIA				S		**Sg**	**23 42 52.6**	**+0.9**
LIA	**Limnos Island**	**1.09**	**69**	P		**Pg**	**23 42 37.0**	**-0.5**
LIA				*e*Sb		**Sg**	**23 42 52.5**	**+0.8**
LKR	**Lokris**	**1.09**	**218**	*e*Pg		**Pg**	**23 42 36.8**	**-0.9**
LKR				*e*Sg		**Sg**	**23 42 51.0**	**-0.9**
LKR	**Lokris**	**1.09**	**218**	*e*PG		**Pg**	**23 42 36.8**	**-0.9**
LKR				*e*SG		**Sg**	**23 42 51.0**	**-0.9**
LKR	**Lokris**	**1.09**	**218**	P		**Pg**	**23 42 37.0**	**-0.7**
LKR				S		**Sg**	**23 42 53.2**	**+1.3**
LKR	**Lokris**	**1.09**	**218**	P		**Pg**	**23 42 37.0**	**-0.7**
LKR				*e*Sg		**Sg**	**23 42 51.0**	**-0.9**
LKR				S		**Sg**	**23 42 53.2**	**+1.3**
LIT	**Litokhoron**	**1.21**	**299**	*e*Pg		**Pn**	**23 42 38.0**	**-1.1**
LIT	**Litokhoron**	**1.21**	**299**	*e*PG		**Pn**	**23 42 38.0**	**-1.1**
LIT	**Litokhoron**	**1.21**	**299**	P		**Pn**	**23 42 38.0**	**-1.1**
LIT	**Litokhoron**	**1.21**	**299**	P		**Pn**	**23 42 38.0**	**-1.1**
HORT	**Hortiatis**	**1.23**	**332**	P		**Pn**	**23 42 38.8**	**-0.6**
HORT				S		**Sb**	**23 42 55.9**	**+0.5**
HORT	**Hortiatis**	**1.23**	**332**	P		**Pn**	**23 42 38.8**	**-0.6**
HORT				S		**Sb**	**23 42 55.9**	**+0.5**
AGG	**Agios Georgios**	**1.29**	**248**	*e*Pb		**Pb**	**23 42 39.8**	**-0.8**
AGG	**Agios Georgios**	**1.29**	**248**	*e*PB		**Pb**	**23 42 39.8**	**-0.8**
AGG	**Agios Georgios**	**1.29**	**248**	P		**Pn**	**23 42 39.7**	**-0.4**
AGG	**Agios Georgios**	**1.29**	**248**	P		**Pn**	**23 42 39.7**	**-0.4**
THE	**Thessaloniki**	**1.31**	**329**	P		**Pn**	**23 42 39.9**	**-0.6**
THE				S		**Sb**	**23 42 57.5**	**-0.3**
THE	**Thessaloniki**	**1.31**	**329**	P		**Pn**	**23 42 39.9**	**-0.6**
THE				S		**Sb**	**23 42 57.5**	**-0.3**
SOH	**Sokhos**	**1.37**	**343**	*e*Pb		**Pb**	**23 42 41.7**	**-0.2**

EFP	**Efpalio**	**1.87**	**235**	P	**Pn**	**23 42 48.4**	**+0.2**
EFP	**Efpalio**	**1.87**	**235**	P	**Pn**	**23 42 48.4**	**+0.2**
PRK	**Paraskevi**	**1.88**	**97**	*e*Pg	**Pg**	**23 42 52.2**	**-0.5**
PRK	**Paraskevi**	**1.88**	**97**	*e*PG	**Pg**	**23 42 52.2**	**-0.5**
PRK	**Paraskevi**	**1.88**	**97**	*e*Pg	**Pg**	**23 42 52.2**	**-0.5**
DID	**Didima**	**2.06**	**194**	P	**Pn**	**23 42 50.9**	**+0.1**
DID	**Didima**	**2.06**	**194**	P	**Pn**	**23 42 50.9**	**+0.1**
FNA	**Florina**	**2.29**	**304**	P	**Pn**	**23 42 54.7**	**+0.8**
FNA	**Florina**	**2.29**	**304**	P	**Pn**	**23 42 54.7**	**+0.8**

*BJI **09** 23:58:26.6, 21′.40S×66°.60W, h224km*
*ISCJB **09** 23:58:27.1±0.5, 21′.43S±0′.04×66°.54W±0′.06, h235km±5km, mb4.5/25, Error ellipse: s-maj=9.1km s-min=6.6km az=176.4*
*NEIC **09** 23:58:27.7±0.8, 21′.42S×66°.56W, h225km±8km, mb4.6/23, Error ellipse: s-maj=10.7km s-min=7.5km az=71.0*
*IDC **09** 23:58:29.2±1.2, 21′.34S×66°.41W, h239km±11km, mb3.9/10, mb1 4.0/16, mb1mx4.0/19, mbtmp4.0/16, Error ellipse: s-maj=14.7km s-min=10.0km az=73.0*
*GUC **09** 23:58:29.1±0.7, 21′.40S×66°.99W, h250km, ML5.4*

ISC 09 23:58:27.9±0.5, **21′.43S**±0′.04×**66°.52W**±0′.06, **h225**km±5km, **n70,σ1§20/73, mb4.5**/25, **1C-8D, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**2.79**	**277**	⇓*i*P	**Pn**	**23 59 17.1**	**+0.5**
PB01				*i* S	**S**	**23 59 53.5**	**-1.3**
PB01				AML	AML	23 59 55.2	
	comp=N,8μm,0.3s						
PB04	**Plate Boundary**	**2.88**	**253**	⇓*i*P	**Pn**	**23 59 24.8**	**+7.3**
MACH	**Maria Elena**	**3.10**	**255**	⇓*i*P	**Pn**	**23 59 20.9**	**+0.9**
MACH				*i* S	**S**	**00 00 00.0**	**-1.0**
HMBC	**Humberston**	**3.35**	**289**	⇓*i*P	**Pn**	**23 59 22.9**	**-0.1**
MNMC	**Miæe Miæ**	**3.68**	**308**	⇓*i*P	**Pn**	**23 59 27.8**	**+0.9**
PSGC	**Pisagua**	**3.84**	**298**	⇓*i*P	**Pn**	**23 59 27.8**	**-0.8**
CEN1	**Los Morros**	**3.92**	**239**	⇑*i*P	**Pn**	**23 59 31.6**	**+1.9**
CEN1				*i* S	**S**	**00 00 19.9**	**+1.4**
MECH	**Mejillones**	**4.00**	**245**	*e*P	**Pn**	**23 59 31.0**	**+0.4**
MECH				*i* S	**S**	**00 00 18.2**	**-1.9**
ANCH	**Antofagasta**	**4.24**	**237**	⇓*i*P	**Pn**	**23 59 30.7**	**-2.7**
ANCH				*i* S	**S**	**00 00 20.2**	**-5.1**
ANCH	**Antofagasta**	**4.24**	**237**	⇓*i*P	**Pn**	**23 59 30.7**	**-2.7**
ANCH				*i* S	**S**	**00 00 20.2**	**-5.1**
LPAZ	**La Paz**	**5.34**	**343**	*e*Pn	**Pn**	**23 59 48.8**	**+1.5**
LPAZ	**La Paz**	**5.34**	**343**	P	**Pn**	**23 59 49.0**	**+1.7**
	comp=M,44nm,0.3s,baz=154,slow=8.0,SNR=1203						
LPAZ				S	**S**	**00 00 50.7**	**+0.5**
	comp=N,10nm,0.3s,baz=318,slow=14,SNR=9.5						
SIV	**San Ignacio**	**7.48**	**45**	P	**Pn**	**00 00 14.9**	**+0.4**
	comp=N,30nm,0.3s,baz=248,slow=12,SNR=762						
SIV				S	Px	00 01 29.3	
	comp=N,1.1nm,0.3s,baz=233,slow=14,SNR=5.6						
LCO	**Las Campanas**	**8.44**	**206**	*e*Pn	**Pn**	**00 00 25.1**	**-1.7**
LCO				*e*S	Px	00 01 42.5	
CPUP	**Villa Florida**	**9.72**	**122**	*e*Pn	**Pn**	**00 00 46.4**	**+3.2**
	comp=M,82nm,0.7s						
CPUP	**Villa Florida**	**9.72**	**122**	P	**Pn**	**00 00 44.1**	**+0.9**
	comp=N,2.0nm,0.3s,baz=289,slow=11,SNR=18						
CFAA	**Coronel Fontan**	**10.25**	**188**	S	**S**	**00 02 37.6**	**-7.2**
	comp=N,1.4nm,0.3s,baz=266,slow=18,SNR=3.5						
NNA	**Nana**	**13.63**	**312**	P	**Pn**	**00 01 33.3**	**+0.9**
	comp=N,4.8nm,0.3s,baz=156,slow=13,SNR=14						
NNA				S	**S**	**00 03 54.1**	**-10**
	comp=N,5.7nm,0.3s,baz=34,slow=22,SNR=6.3						
TRQA	**Tornquist**	**17.03**	**168**	*e*Pn	**Pn**	**00 02 12.2**	**-0.9**
	comp=N,15nm,0.6s						
SPB	**Sao Paulo**	**17.77**	**101**	*e*P	**P**	**00 02 19.8**	**+0.2**
	comp=N,28nm,0.6s						
ATAH	**Atahualpa**	**18.26**	**319**	P	**P**	**00 02 27.4**	**+2.3**
	comp=N,0.6nm,0.3s,baz=143,slow=18,SNR=3.7						
PLCA	**Paso Flores**	**19.55**	**189**	*e*P	**P**	**00 02 38.8**	**+0.2**
	comp=N,12nm,0.6s						
PLCA	**Paso Flores**	**19.55**	**189**	P	**P**	**00 02 38.9**	**+0.4**
	comp=N,2.1nm,0.3s,baz=7.8,slow=9.8,SNR=19						
OTAV	**Otavalo**	**24.48**	**330**	*e*P	**P**	**00 03 28.7**	**+2.0**
	comp=N,9.0nm,1.1s,mb4.3						
ROSC	**El Rosal**	**27.22**	**343**	*e*P	**P**	**00 03 51.7**	**+0.5**
ROSC	**El Rosal**	**27.22**	**343**	P	**P**	**00 03 49.9**	**-1.4**
	comp=N,8.4nm,0.5s,mb4.7,baz=81,slow=19,SNR=3.5						
BCIP	**Isla Barro Col**	**3.10**	**335**	*e*P	**P**	**00 04 43.3**	**+0.4**
	comp=N,20nm,0.6s,mb4.8						
USHA	**Ushuaia**	**33.38**	**182**	P	**P**	**00 04 45.8**	**+0.9**
	comp=N,8.7nm,0.9s,mb4.3,baz=349,slow=9.8,SNR=3.9						
GRGR	**Grenville**	**33.69**	**9**	*e*P	**P**	**00 04 47.1**	**-0.8**
	comp=N,116nm,0.5s						
MVM	**Montagne Vaucl**	**36.18**	**9**	*e*P	**P**	**00 05 08.2**	**-1.1**
FDF	**Fort de France**	**36.32**	**9**	*e*P	**P**	**00 05 09.1**	**-1.3**
	comp=N,199nm,0.6s						
FDF	**Fort de France**	**36.32**	**9**	*e*P	**P**	**00 05 09.1**	**-1.3**
ANWB	**Willy Bay**	**39.13**	**7**	*e*P	**P**	**00 05 30.8**	**-3.0**
	comp=N,193nm,0.6s						
SJG	**San Juan**	**39.30**	**1**	*e*P	**P**	**00 05 32.8**	**-2.4**
	comp=N,30nm,0.5s,mb5.1						
SDDR	**Presa de Saban**	**40.43**	**353**	*e*P	**P**	**00 05 44.9**	**+0.4**
	comp=N,9.5nm,0.4s,mb4.6						
GOGA	**Godfrey**	**56.88**	**343**	P	**P**	**00 07 49.6**	**+0.3**
JSC	**Jenkinsville**	**57.15**	**345**	P	**P**	**00 07 49.5**	**-1.7**
LRAL	**Lakeview Retre**	**57.58**	**340**	*e*P	**P**	**00 07 53.0**	**-1.2**
	comp=N,5.4nm,1.1s,mb4.1						
TKL	**Tuckaleechee C**	**59.08**	**344**	*e*P	**P**	**00 08 03.4**	**-1.2**
SWET	**Sewanee**	**59.27**	**342**	*e*P	**P**	**00 08 05.0**	**-0.9**
WVT	**Waverly**	**60.69**	**340**	*e*P	**P**	**00 08 13.8**	**-1.7**
	comp=N,19nm,0.7s,mb4.8						
MIAR	**Mount Ida**	**61.32**	**335**	*e*P	**P**	**00 08 19.1**	**-0.7**
	comp=N,7.0nm,1.2s,mb4.2						
PARMO	**Parma**	**61.80**	**339**	*e*P	**P**	**00 08 22.5**	**-0.4**
TXAR	**Lajitas Array**	**61.87**	**323**	P	**P**	**00 08 23.4**	**-0.1**
	comp=N,0.5nm,0.6s,baz=146,slow=6.7,SNR=7.9						
FVM	**French Village**	**63.23**	**339**	*e*P	**P**	**00 08 31.1**	**-1.1**
	comp=N,19nm,1.3s,mb4.6						
LIC	**Lamto**	**66.24**	**73**	*e*P	**P**	**00 08 57.2**	**+4.9**
	comp=N,64nm,1.3s,mb5.1						
TIC	**Toumodi**	**66.43**	**72**	*e*P	**P**	**00 08 57.4**	**+3.9**
	comp=N,4.7nm,0.3s,mb4.7						
KIC	**Kosan Boka**	**66.55**	**73**	*e*P	**P**	**00 08 53.7**	**-0.6**
	comp=N,20nm,0.7s,mb4.9						
DBIC	**Dimbokro**	**66.59**	**72**	*e*P	**P**	**00 08 53.7**	**-0.8**
	comp=N,3.7nm,0.6s,mb4.2						
DBIC	**Dimbokro**	**66.59**	**72**	P	**P**	**00 08 53.9**	**-0.7**
	comp=N,6.8nm,0.7s,mb4.4,baz=232,slow=8.2,SNR=20						
ANMO	**Albuquerque**	**67.69**	**325**	*e*P	**P**	**00 09 01.6**	**+0.6**
	comp=N,1.2nm,0.7s,mb3.6						
QSPA	**South Pole Qui**	**68.76**	**180**	*e*P	**P**	**00 09 08.6**	**+1.7**
	comp=N,2.2nm,0.6s,mb4.0						
SDCO	**Great Sand Dun**	**69.34**	**328**	*e*P	**P**	**00 09 12.4**	**+1.3**
	comp=N,30nm,2.6s,mb4.5						
CCUT	**Cedar City**	**73.38**	**323**	*e*P	**P**	**00 09 37.6**	**+2.4**
	comp=N,3.0nm,1.1s,mb3.8						
MSU	**Marysvale**	**73.40**	**324**	*e*P	**P**	**00 09 37.1**	**+1.7**
TORD	**Torodi Ar. Bea**	**75.24**	**69**	P	**P**	**00 09 45.8**	**-0.7**
TORD				pP	pP	00 10 43.0	+3.3
TORD				S	S	00 19 01.7	-5.4
TORD	**Torodi Ar. Bea**	**75.24**	**69**	P	**P**	**00 09 45.8**	**-0.7**
	comp=N,8.6nm,0.3s,mb4.8,baz=256,slow=5.5,SNR=359						
TORD				pP	pP	00 10 43.0	+3.3
	comp=N,3.8nm,0.6s,baz=252,slow=5.7,SNR=5.5						
TORD				S	S	00 19 01.7	-5.4
	comp=N,1.5nm,1.0s,baz=249,slow=12,SNR=3.6						
SCHQ	**Schefferville**	**75.95**	**360**	P	**P**	**00 09 48.8**	**-0.8**
	comp=N,3.6nm,0.6s,mb4.2,baz=164,slow=6.1,SNR=9.4						
NVAR	**Mina Array Bea**	**76.83**	**321**	P	**P**	**00 09 55.9**	**+1.0**
	comp=N,0.1nm,0.3s,baz=123,slow=3.3,SNR=3.0						
RLMT	**Red Lodge**	**76.83**	**330**	*e*P	**P**	**00 09 55.3**	**+0.6**
	comp=N,18nm,2.0s,mb4.3						
HLID	**Hailey**	**78.19**	**327**	*e*P	**P**	**00 10 04.1**	**+1.8**
	comp=M,42nm,2.9s,mb4.6						
BOSA	**Boshof**	**81.51**	**117**	P	**P**	**00 10 21.1**	**+0.5**
	comp=N,3.5nm,0.6s,mb4.2,baz=248,slow=4.3,SNR=10						
LBTB	**Lobatse**	**83.02**	**114**	*e*P	**P**	**00 10 28.5**	**0.0**
	comp=N,47nm,2.0s,mb4.9						
ESDC	**Sonseca Array**	**84.24**	**44**	P	**P**	**00 10 34.6**	**+0.4**
	comp=N,0.3nm,0.5s,baz=247,slow=5.5,SNR=5.0						
YKA	**Yellowknife Ar**	**91.87**	**340**	P	**P**	**00 11 09.8**	**-0.1**
	comp=N,2.4nm,0.6s,mb4.3,baz=128,slow=4.6,SNR=44						
CHGN	**Chignik**	**108.58**	**324**	*e*Pdif	Pdif	00 12 31.7	+6.2
ASAR	**Alice Springs**	**130.96**	**205**	PKP	PKPdf	00 17 13.0	-0.3
	comp=N,0.1nm,0.3s,baz=132,slow=1.7,SNR=3.1						
MKAR	**Makanchi Array**	**144.25**	**38**	PKP	PKPdf	00 17 36.1	-0.7
	comp=N,2.3nm,0.6s,baz=320,slow=3.7,SNR=17						
WMQ	**Urumqi**	**149.08**	**38**	*e*PKPbc	PKPdf	00 17 43.8	-1.2
SONM	**Songino Array**	**153.04**	**11**	PKPbc	PKPbc	00 17 58.3	-0.2
	comp=N,0.4nm,0.3s,baz=349,slow=3.1,SNR=3.4						

*ISK **10** 00:03:10.7, 37′.84N×30°.64E, h8km, MD2.8*
*ISCJB **10** 00:03:11.5±0.7, 37′.84N±0′.03×30°.57E±0′.07, h10km, Error ellipse: s-maj=8.4km s-min=3.9km az=179.5*
*CSEM **10** 00:03:11.7±0.3, 37′.82N×30°.51E, h10km, MD2.8, Error ellipse: s-maj=9.7km s-min=5.0km az=91.0*
*DDA **10** 00:03:12.4, 37′.79N×30′.47E, h7km±6km, Md3.0*

ISC 10 00:03:12.1±0.6, **37′.82N**±0′.03×**30′.52E**±0′.06, **h15**km±8km, **n20,σ1§10/31, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCK	**Bucak**	**0.36**	**172**	*e*Pg	**Pg**	**00 03 18.6**	**-0.7**
BCK				*e*Sg	**Sg**	**00 03 24.6**	**+0.4**
BCK	**Bucak**	**0.36**	**172**	*e*Pg	**Pg**	**00 03 18.6**	**-0.7**
BCK				*e*Sg	**Sg**	**00 03 24.6**	**+0.4**
SHUT	**Suhut-Afyon**	**0.73**	**2**	*e*PG	**Pg**	**00 03 24.8**	**-1.4**
SHUT				*e*SG	**Sg**	**00 03 35.3**	**-0.5**
SHUT	**Suhut-Afyon**	**0.73**	**2**	*e*Pg	**Pg**	**00 03 24.8**	**-1.4**
SHUT				*e*Sg	**Sg**	**00 03 35.3**	**-0.5**
KORT	**Korkueli**	**0.83**	**190**	*e*P	**Pg**	**00 03 26.9**	**-1.1**
KORT				*e*S	**Sg**	**00 03 40.2**	**+1.3**
KORT	**Korkueli**	**0.83**	**190**	*e*P	**Pg**	**00 03 27.0**	**-1.1**
KORT				*e*S	**Sg**	**00 03 40.2**	**+1.3**
KHL	**Karahalli**	**0.94**	**303**	*e*PG	**Pg**	**00 03 30.1**	**0.0**
KHL	**Karahalli**	**0.94**	**303**	*e*Pg	**Pg**	**00 03 30.1**	**0.0**
BOLV	**Bolvadin**	**0.96**	**20**	*e*P	**Pg**	**00 03 31.9**	**+1.4**
BOLV				*e*S	**Sg**	**00 03 46.1**	**+3.1**
BOLV	**Bolvadin**	**0.96**	**20**	*e*P	**Pg**	**00 03 31.9**	**+1.4**
GOLH	**Golhisar**	**0.96**	**233**	*e*P	**Pg**	**00 03 29.0**	**-1.6**
GOLH				*e*S	**Sg**	**00 03 43.7**	**+0.6**
GOLH	**Golhisar**	**0.96**	**233**	*e*P	**Pg**	**00 03 29.0**	**-1.6**
GOLH				*e*S	**Sg**	**00 03 43.7**	**+0.6**
KHAL	**Karahalli**	**0.98**	**304**	*e*P	**Pg**	**00 03 29.7**	**-1.2**
KHAL				*e*S	**Sg**	**00 03 45.4**	**+1.6**
KHAL	**Karahalli**	**0.98**	**304**	*e*P	**Pg**	**00 03 29.7**	**-1.3**
KHAL				*e*S	**Sg**	**00 03 45.4**	**+1.6**
GLHS	**Glhisar (BURDU**	**1.05**	**231**	*e*PN	**Pn**	**00 03 32.9**	**+0.3**
GLHS	**Glhisar (BURDU**	**1.05**	**231**	*e*Pn	**Pn**	**00 03 32.9**	**+0.2**
ELL	**Elmali**	**1.18**	**205**	*e*PN	**Pn**	**00 03 34.9**	**+0.5**
ELL	**Elmali**	**1.18**	**205**	*e*Pn	**Pn**	**00 03 34.9**	**+0.5**
ALT	**Altintas**	**1.27**	**345**	*e*PN	**Pn**	**00 03 35.3**	**-0.4**
ALT	**Altintas**	**1.27**	**345**	*e*Pn	**Pn**	**00 03 35.3**	**-0.4**

*IDC **10** 00:05:55.2±1.8, 40′.12N×77°.34E, h0km, mb3.5/4, mb1 3.6/9, mb1mx3.5/25, mbtmp3.6/9, ML3.2/5, MS3.0/3, Ms1 3.1/3, ms1mx2.6/19, Error ellipse: s-maj=29.0km s-min=19.7km az=151.0*
*BJI **10** 00:05:57.6, 40′.31N×77°.28E, h32km, ML3.8/8, Ms3.5/2, Ms7 3.4/1*
*ISCJB **10** 00:05:58.6±1.5, 40′.25N±0′.06×77°.29E±0′.06, h25km±10km, mb3.5/4, MS3.0/3, Error ellipse: s-maj=10.8km s-min=6.8km az=163.3*
*NNC **10** 00:06:02.1±2.9, 40′.74N×77°.07E, h1km±13km, mb3.8, mpv3.4, Error ellipse: s-maj=23.4km s-min=8.4km az=161.0*
*NEIC **10** 00:06:03.0±1.4, 40′.39N×77°.26E, h54km±13km, Error ellipse: s-maj=17.8km s-min=10.4km az=150.0*

ISC 10 00:06:00.6±1.9, **40′.31N**±0′.06×**77′.18E**±0′.05, **h15**km±14km, **n40,σ1§58/42, mb3.5**/4, **MS3.0**/3, **11C-1D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.22**	**230**	Pg	**Pg**	**00 06 28.4**	**+4.3**
KSH				Sg	**Sg**	**00 06 53.5**	**+13**
KSH				smax			
	comp=N,870nm,0.6s						
KSH				smax			
	comp=E,870nm,0.5s						
ULHL	**Ulahol**	**2.06**	**340**	P	**Pn**	**00 06 34.3**	**-0.3**
	SNR=59						
KZA	**Kyzart**	**2.29**	**321**	P	**Pn**	**00 06 39.3**	**+1.5**
	SNR=31						
UCH	**Uchtor**	**2.78**	**314**	P	**Pn**	**00 06 46.0**	**+1.5**
	SNR=26						
UCH	**Uchtor**	**2.78**	**314**	*e*Pn	**Pn**	**00 06 45.2**	**+0.7**
UCH				*e*S	**Sb**	**00 07 24.1**	**+0.4**
KBK	**Karagaybulak**	**2.88**	**325**	P	**Pn**	**00 06 49.9**	**+4.0**
	SNR=28						
KNDC	**Almaty**	**2.91**	**357**	Pg	**Pn**	**00 06 47.6**	**+1.3**
KNDC				Lg		00 07 29.6	
AAK	**Ala-Archa**	**3.08**	**320**	P	**Pn**	**00 06 53.1**	**+4.5**
	SNR=65						
AAK	**Ala-Archa**	**3.08**	**320**	Pn	**Pn**	**00 06 50.5**	**+1.8**
AAK				Lg		00 07 34.2	
AAK	**Ala-Archa**	**3.08**	**320**	Pn	**Pn**	**00 06 50.5**	**+1.9**
	comp=E,14nm,0.3s,baz=132,slow=12,SNR=70						
AAK				Lg		00 07 34.2	
	comp=E,18nm,0.3s,baz=217,slow=20,SNR=13						
AML	**Almayashu**	**3.20**	**306**	P	**Pn**	**00 06 51.9**	**+1.6**
	SNR=34						
AML	**Almayashu**	**3.20**	**306**	*e*Pn	**Pn**	**00 06 51.7**	**+1.4**
AML				*e*S	**Sn**	**00 07 29.7**	**+1.6**
CHMS	**Chumysh**	**3.25**	**327**	P	**Pn**	**00 06 53.1**	**+2.2**
	SNR=10						
EKS2	**Erkin-Say**	**3.47**	**314**	P	**Pn**	**00 06 57.6**	**+3.5**
	SNR=9.8						
EKS2	**Erkin-Say**	**3.47**	**314**	*e*Pn	**Pn**	**00 06 55.8**	**+1.7**
EKS2				*e*S	**Sb**	**00 07 43.0**	**-0.8**
USP	**Ospenovka**	**3.57**	**327**	P	**Pb**	**00 07 01.4**	**-2.0**
	SNR=98						
KK31	**Karatay Array**	**5.72**	**301**	⇓Pn	**Pn**	**00 07 24.8**	**-0.1**
	comp=E,1.6nm,0.6s,baz=122,slow=13,SNR=17						
KK31				⇑Pg	**Pb**	**00 07 40.2**	**+0.2**
	comp=E,4.9nm,0.6s,baz=138,slow=17,SNR=17						
KK31				Lg		00 08 56.2	
	comp=E,30nm,0.8s,baz=132,slow=26,SNR=7.2						
MK31	**Makanchi Array**	**7.46**	**28**	⇑Pn	**Pn**	**00 07 47.6**	**-1.3**
	comp=E,1.0nm,0.5s,baz=208,slow=14,SNR=4.4						
MK31				⇑Pg	**Pb**	**00 08 13.1**	**+3.3**
	comp=E,2.3nm,0.6s,baz=206,slow=12,SNR=2.7						
MK31				⇑Lg		00 09 45.7	
	comp=E,7.4nm,0.7s,baz=208,slow=27,SNR=3.7						
MK31	**Makanchi Array**	**7.46**	**28**	*e*Pn	**Pn**	**00 07 47.5**	**-1.4**
MK31				*e*S	**Sn**	**00 09 15.2**	**+2.0**
MKAR	**Makanchi Array**	**7.46**	**28**	Pn	**Pn**	**00 07 48.4**	**-0.5**
	comp=E,0.4nm,0.3s,baz=208,slow=16,SNR=18						
MKAR				Sn	**Sn**	**00 09 12.6**	**-0.6**
	comp=E,0.6nm,0.3s,baz=207,slow=24,SNR=3.2						
MKAR				Lg		00 09 50.3	
	comp=E,0.8nm,0.3s,baz=216,slow=27,SNR=4.5						
WMQ	**Urumqi**	**8.57**	**62**	P	**Pn**	**00 08 03.7**	**-0.3**
WMQ				pP		00 08 10.7	
WMQ				sP		00 08 15.6	
WMQ				S	**Sn**	**00 09 41.6**	**+1.2**
WMQ				sS		00 09 52.7	
WMQ				smax			
	comp=N,22nm,1.2s						
WMQ				smax			
	comp=E,22nm,1.3s						
WMQ				LR	LR		
	comp=N,200nm,7.0s						
WMQ				LR	LR		
	comp=E,130nm,7.0s						
WMQ				LR	LR		
	comp=Z,160nm,7.0s						
KBL	**Kabul**	**8.66**	**231**	*e*Pn	**Pn**	**00 08 06.2**	**+0.8**
KURBB	**Kurchatov Arra**	**10.36**	**5**	⇑Lg		00 11 17.7	
	comp=Z,6.3nm,1.1s						
KURK	**Kurchatov**	**10.45**	**5**	⇑Lg		00 11 19.6	
	comp=Z,49nm,1.2s						
VOSK	**Vostochnaya**	**13.12**	**343**	⇑Lg		00 12 45.1	
	comp=Z,16nm,1.1s						
BVA0	**Borovoye Array**	**13.54**	**342**	⇑Lg		00 13 00.1	
	comp=Z,3.2nm,1.1s,baz=151,slow=28,SNR=6.7						
BVAR	**Borovoye Array**	**13.54**	**342**	Pn	**Pn**	**00 09 08.8**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=152,slow=9.5,SNR=3.5						
BVAR				Lg		00 13 00.7	
	comp=Z,0.1nm,0.3s,baz=143,slow=29,SNR=4.0						
BRVK	**Borovoye**	**13.59**	**342**	⇑Lg		00 12 59.6	
	comp=Z,25nm,1.3s						
ZRNK	**Zerenda**	**13.82**	**339**	Pn	**Pn**	**00 09 13.5**	**-2.3**
ZRNK				⇑Lg		00 13 06.8	
	comp=Z,16nm,1.4s						
ZALV	**Zalesovo Beam**	**14.59**	**18**	Pn	**Pn**	**00 09 24.2**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=209,slow=12,SNR=6.0						
ZALV				Lg		00 13 40.0	
	comp=Z,0.1nm,0.3s,baz=194,slow=29,SNR=6.6						
AB31	**Akbulak array**	**15.13**	**312**	⇑P	**Pn**	**00 09 30.1**	**-3.5**
	comp=Z,0.8nm,0.6s,baz=98,slow=17,SNR=5.2						
AKTK	**Aktyubinsk**	**16.80**	**313**	Pn	**Pn**	**00 09 53.0**	**-2.1**
AKTO	**Aktyubinsk**	**16.80**	**313**	Pn	**Pn**	**00 09 53.0**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=108,slow=13,SNR=5.8						
GTA	**Gaotai**	**17.40**	**86**	*e*P	**Pn**	**00 10 05.0**	**+2.3**
GTA				pP	pP	00 10 13.0	+4.9
GTA				sP	sP	00 10 16.6	+6.5
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SONM	**Songino Array**	**22.20**	**60**	P	**P**	**00 10 54.9**	**-1.3**
	comp=Z,1.5nm,1.0s,mb3.4,baz=263,slow=12,SNR=2.7						
SONM				LR	LR	00 20 29.6	
	comp=Z,56nm,18.9s,MS3.0,baz=107,slow=39						
FINES	**FINESS Array B**	**37.27**	**322**	P	**P**	**00 13 09.7**	**-1.7**
	comp=Z,4.2nm,1.1s,mb4.2,baz=101,slow=9.9,SNR=5.3						
KSRS	**Korea Array**	**39.17**	**77**	LR	LR	00 32 26.7	
	comp=Z,21nm,18.2s,MS3.0,baz=235,slow=41						
NOA	**NORSAR Array B**	**44.40**	**321**	LR	LR	00 34 53.0	
	comp=Z,12nm,18.3s,MS2.8,baz=185,slow=39						
TORD	**Torodi Ar. Bea**	**70.59**	**271**	P	**P**	**00 17 13.5**	**-2.0**
	comp=Z,0.5nm,0.8s,mb3.5,baz=48,slow=6.4,SNR=4.1						
YKA	**Yellowknife Ar**	**77.11**	**6**	P	**P**	**00 17 49.4**	**-3.5**
	comp=Z,0.2nm,0.8s,mb3.1,baz=350,slow=6.0,SNR=2.4						

*ISCJB **10** 00:27:47.2±1.9, 35°.5N±0°.1×81°.3E±0°.2, h10km, mb3.3/3, Error ellipse: s-maj=29.9km s-min=11.8km az=24.0*
*IDC **10** 00:27:47.6±2.3, 35°.37N×81°.00E, h0km, mb3.4/3, mb1 3.5/7, mb1mx3.3/24, mbtmp3.5/7, ML3.4/3, MS2.8/1, Ms1 2.8/1, ms1mx2.1/23, Error ellipse: s-maj=44.6km s-min=27.1km az=121.0*
*NEIC **10** 00:27:48.2±1.7, 35°.26N×81°.16E, h10km, Error ellipse: s-maj=24.3km s-min=17.7km az=161.0*
*BJI **10** 00:27:50.2, 35°.49N×81°.57E, h17km, ML3.9/5, Ms3.4/1*

ISC 10 00:27:48.8±1.6, **35°.4N**±0°.1×**81°.3E**±0°.2, **h10**km, **n13,σ1§39/15, mb3.3**/3, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.88**	**316**	Pn	**Pn**	**00 29 21.9**	**+5.9**
KSH				Sn	**Sn**	**00 30 31.3**	**+7.8**
KSH				smax			
	comp=N,79nm,0.6s						
KSH				smax			
	comp=E,82nm,0.6s						
UCH	**Uchtor**	**8.62**	**324**	*e*Pn	**Pn**	**00 29 55.5**	**+2.0**
	comp=E,6.2nm,0.6s						
UCH				*e*S	Sx	00 32 16.7	
AAK	**Ala-Archa**	**8.94**	**326**	Lg		00 32 31.9	
	comp=E,0.7nm,0.3s,baz=2.4,slow=9.4,SNR=4.5						
AAK				LR	LR	00 33 41.8	
	comp=E,55nm,20.4s,baz=31,slow=40						
AML	**Almayashu**	**8.95**	**321**	Pn	**Pn**	**00 29 59.1**	**+1.0**
	comp=E,7.3nm,0.7s						
MK31	**Makanchi Array**	**11.41**	**4**	*e*Pn	**Pn**	**00 30 33.4**	**+1.6**
MK31				*e*Sn	**Sn**	**00 32 39.8**	**+0.5**
MKAR	**Makanchi Array**	**11.41**	**4**	Pn	**Pn**	**00 30 31.0**	**-0.8**
	comp=E,0.3nm,0.3s,baz=181,slow=13,SNR=7.9						
MKAR				Sn	**Sn**	**00 32 37.6**	**-1.7**
	comp=E,0.2nm,0.3s,baz=193,slow=25,SNR=2.8						
MKAR				Lg		00 33 51.5	
	baz=191,slow=29,SNR=2.7						
KURK	**Kurchatov**	**15.43**	**354**	Pn	**Pn**	**00 31 23.9**	**-2.6**
	comp=E,0.0nm,0.3s,baz=174,slow=12,SNR=5.6						
ZALV	**Zalesovo Beam**	**18.72**	**7**	P	**Pn**	**00 32 09.1**	**+1.3**
	comp=E,0.2nm,0.3s,baz=196,slow=11,SNR=4.6						
BVAR	**Borovoye Array**	**19.23**	**340**	P	**Pn**	**00 32 13.4**	**-0.6**
	comp=E,0.1nm,0.3s,baz=142,slow=11,SNR=4.8						

UCH	**Uchtor**	**2.02**	**249**	⇑P	**Pn**	**01 54 06.2**	**+1.5**
	13nm,0.2s,SNR=29						
EKS2	**Erkin-Say**	**2.43**	**264**	⇓P	**Pn**	**01 54 12.2**	**+1.9**
	8.4nm,0.2s,SNR=16						
KK31	**Karatay Array**	**4.79**	**274**	⇓Pg	**Pb**	**01 54 55.2**	**+0.6**
	0.3nm,0.3s,baz=91,slow=15,SNR=15						
KK31				Lg		01 56 01.0	
	3.1nm,0.5s,baz=86,slow=26,SNR=13						
MK31	**Makanchi Array**	**5.33**	**42**	Pg	**Pb**	**01 55 04.5**	**+0.6**
	0.2nm,0.3s,baz=104,slow=15,SNR=6.6						
MK31				⇓Lg		01 56 15.3	
	1.8nm,0.7s,baz=220,slow=24,SNR=5.2						

*ISK **10** 01:54:09.5, 38.00N×29.10E, h12km, MD2.4*
*CSEM **10** 01:54:09.5±0.1, 37.99N×29.10E, h20km, MD2.4, Error ellipse: s-maj=3.0km s-min=1.8km az=108.0*
*ISCJB **10** 01:54:10.3±0.7, 38.01N±0.03×29.09E±0.06, h10km, Error ellipse: s-maj=7.4km s-min=4.5km az=18.1*
*DDA **10** 01:54:10.2, 38.02N×29.10E, h11km±1km, Md2.7*
ISC 10 01:54:10.7±0.7, 38.01N±0.03×29.10E±0.06, h10km, n10, σ0.45/18, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.26**	**191**	*e*PG	**Pg**	**01 54 15.3**	**-0.6**
DENT	**Denizli**	**0.26**	**191**	*e*Pg	**Pg**	**01 54 15.3**	**-0.6**
DNZL	**Cakiroluk**	**0.32**	**187**	*e*P	**Pg**	**01 54 17.1**	**0.0**
DNZL				*e*S	**Sg**	**01 54 21.9**	**+0.6**
DNZL	**Cakiroluk**	**0.32**	**187**	*e*P	**Pg**	**01 54 17.1**	**+0.1**
DNZL				*e*S	**Sg**	**01 54 21.9**	**+0.6**
KHL	**Karahalli**	**0.46**	**47**	*e*PG	**Pg**	**01 54 19.1**	**-0.6**
KHL				*e*SG	**Sg**	**01 54 26.2**	**+0.4**
KHL	**Karahalli**	**0.46**	**47**	*e*Pg	**Pg**	**01 54 19.1**	**-0.6**
KHL				*e*Sg	**Sg**	**01 54 26.2**	**+0.4**
KHAL	**Karahalli**	**0.48**	**41**	*e*P	**Pg**	**01 54 19.9**	**-0.1**
KHAL				*i* S	**Sg**	**01 54 26.6**	**+0.3**
KHAL	**Karahalli**	**0.48**	**41**	*e*P	**Pg**	**01 54 19.9**	**-0.1**
KHAL				*i* S	**Sg**	**01 54 26.6**	**+0.2**
KULA	**Kula-Manisa**	**0.61**	**326**	*e*PG	**Pg**	**01 54 22.1**	**-0.5**
KULA				*e*SG	**Sg**	**01 54 31.1**	**+0.5**
KULA	**Kula-Manisa**	**0.61**	**326**	*e*Pg	**Pg**	**01 54 22.1**	**-0.5**
KULA				*e*Sg	**Sg**	**01 54 31.1**	**+0.5**

IDC 10 01:56:45.4±3.1, 8.15S×118.22E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/18, mbtmp4.0/3, Error ellipse: s-maj=396.7km s-min=28.8km az=55.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**21.54**	**138**	P	P	02 01 36.5	+0.2
	7.3nm,0.6s,baz=313,slow=8.7,SNR=61						
STKA	**Stephens Creek**	**32.09**	**141**	P	P	02 03 14.2	-0.1
	1.5nm,0.4s,baz=336,slow=7.6,SNR=5.5						
MKAR	**Makanchi Array**	**63.35**	**333**	P	P	02 07 16.5	+0.1
	0.2nm,0.5s,baz=134,slow=6.2,SNR=2.8						

*ISCJB **10** 02:11:01.6±0.6, 37.99N±0.03×21.17E±0.03, h2km±5km, Error ellipse: s-maj=5.5km s-min=3.3km az=10.6*
*NEIC **10** 02:11:01.9, 37.99N×21.16E, h9km, MD3.1(ATH), After ATH.*
*ATH **10** 02:11:01.9, 37.99N×21.16E, h9km±6km, MD3.1/8*
*CSEM **10** 02:11:01.7±0.2, 37.99N×21.17E, h8km, MD3.1, Error ellipse: s-maj=3.9km s-min=2.8km az=17.0*
*THE **10** 02:11:02.2, 38.01N×21.18E, h4km±1km, ML2.1/7, Error ellipse: s-maj=1.5km s-min=0.6km az=227.0*
ISC 10 02:11:02.1±0.5, 37.99N±0.03×21.17E±0.03, h7km±4km, n50, σ0.81/84, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.24**	**73**	*e*Pg	**Pg**	**02 11 06.6**	**-0.4**
RLS				*e*Sg	**Sg**	**02 11 10.6**	**+0.4**
RLS	**Riolos of Patr**	**0.24**	**73**	*e*PG	**Pg**	**02 11 06.6**	**-0.4**
RLS				*e*SG	**Sg**	**02 11 10.6**	**+0.4**
RLS	**Riolos of Patr**	**0.24**	**73**	*e*Pg	**Pg**	**02 11 06.6**	**-0.4**
RLS				*e*Sg	**Sg**	**02 11 10.6**	**+0.4**
KFL	**Anninata**	**0.33**	**292**	P	**Pg**	**02 11 08.2**	**-0.3**
KFL				S	**Sg**	**02 11 14.3**	**+1.5**
KFL	**Anninata**	**0.33**	**292**	P	**Pg**	**02 11 08.2**	**-0.3**
KFL				S	**Sg**	**02 11 14.3**	**+1.5**
VLS	**Valsamata**	**0.49**	**293**	*e*Pg	**Pg**	**02 11 11.2**	**-0.5**
VLS				*e*Sb	**Sg**	**02 11 18.9**	**+0.7**
VLS	**Valsamata**	**0.49**	**293**	*e*PG	**Pg**	**02 11 11.2**	**-0.5**
VLS				*e*SB	**Sg**	**02 11 18.9**	**+0.7**
VLS	**Valsamata**	**0.49**	**293**	P	**Pg**	**02 11 11.0**	**-0.7**
VLS				S	**Sg**	**02 11 18.7**	**+0.5**
VLS	**Valsamata**	**0.49**	**293**	*e*Pg	**Pg**	**02 11 11.2**	**-0.5**
VLS				S	**Sg**	**02 11 18.7**	**+0.5**
UPR	**University Cam**	**0.57**	**59**	*e*PB	**Pg**	**02 11 13.0**	**-0.1**
UPR	**University Cam**	**0.57**	**59**	P	**Pg**	**02 11 12.9**	**-0.2**
UPR				S	**Sg**	**02 11 20.9**	**+0.4**
UPR	**University Cam**	**0.57**	**59**	P	**Pg**	**02 11 12.9**	**-0.2**
UPR				S	**Sg**	**02 11 20.9**	**+0.4**
LAKA	**Lakka**	**0.69**	**68**	P	**Pg**	**02 11 14.6**	**-0.7**
LAKA				S	**Sg**	**02 11 24.9**	**+0.6**
LAKA	**Lakka**	**0.69**	**68**	P	**Pg**	**02 11 14.6**	**-0.7**
LAKA				S	**Sg**	**02 11 24.9**	**+0.6**
EFP	**Efpalio**	**0.73**	**53**	*e*PG	**Pg**	**02 11 15.4**	**-0.7**
EFP				*e*SB	**Sg**	**02 11 26.2**	**+0.6**
EFP	**Efpalio**	**0.73**	**53**	P	**Pg**	**02 11 15.2**	**-0.9**
EFP				S	**Sg**	**02 11 26.4**	**+0.8**
EFP	**Efpalio**	**0.73**	**53**	*e*Pg	**Pg**	**02 11 15.4**	**-0.7**
EFP				*e*Sb	**Sg**	**02 11 26.2**	**+0.6**
TRIZ	**Trizonia**	**0.81**	**62**	P	**Pg**	**02 11 17.1**	**-0.5**
TRIZ				S	**Sg**	**02 11 28.4**	**+0.3**
TRIZ	**Trizonia**	**0.81**	**62**	P	**Pg**	**02 11 17.1**	**-0.5**
TRIZ				S	**Sg**	**02 11 28.4**	**+0.3**
KALE	**Kalithea**	**0.86**	**62**	P	**Pg**	**02 11 17.9**	**-0.8**
KALE				S	**Sg**	**02 11 30.3**	**+0.3**
KALE	**Kalithea**	**0.86**	**62**	P	**Pg**	**02 11 17.9**	**-0.8**
KALE				S	**Sg**	**02 11 30.3**	**+0.3**
LKD2	**Lefkada island**	**0.90**	**333**	P	**Pg**	**02 11 18.0**	**-1.3**
LKD2				S	**Sg**	**02 11 33.0**	**+2.0**
LKD2	**Lefkada island**	**0.90**	**333**	P	**Pg**	**02 11 18.0**	**-1.3**
LKD2				S	**Sg**	**02 11 33.0**	**+2.0**
GUR	**Goura**	**0.93**	**93**	*e*PG	**Pg**	**02 11 19.2**	**-0.8**
GUR				*e*SB	**Sg**	**02 11 32.6**	**+0.6**
GUR	**Goura**	**0.93**	**93**	P	**Pg**	**02 11 18.0**	**-2.0**
GUR				S	**Sg**	**02 11 32.9**	**+0.9**
GUR	**Goura**	**0.93**	**93**	P	**Pg**	**02 11 18.0**	**-2.0**
GUR	**Goura**	**0.93**	**93**	*e*Pg	**Pg**	**02 11 19.2**	**-0.8**
GUR				*e*Sb	**Sg**	**02 11 32.6**	**+0.6**
GUR				S	**Sg**	**02 11 32.9**	**+0.9**
ITM	**Ithomi**	**1.01**	**143**	*e*Pn	**Pg**	**02 11 21.5**	**+0.1**
ITM	**Ithomi**	**1.01**	**143**	*e*PN	**Pg**	**02 11 21.5**	**+0.1**
ITM	**Ithomi**	**1.01**	**143**	P	**Pg**	**02 11 21.8**	**+0.4**
ITM	**Ithomi**	**1.01**	**143**	*e*Pn	**Pg**	**02 11 21.5**	**+0.1**
ITM	**Ithomi**	**1.01**	**143**	P	**Pg**	**02 11 21.8**	**+0.4**
EVR	**Evrytania**	**1.05**	**28**	*e*Pb	**Pg**	**02 11 21.8**	**-0.6**
EVR	**Evrytania**	**1.05**	**28**	*e*PB	**Pg**	**02 11 21.8**	**-0.6**
EVR	**Evrytania**	**1.05**	**28**	*e*Pb	**Pg**	**02 11 21.8**	**-0.6**
VLX	**Vlachokerasia**	**1.14**	**122**	P	**Pg**	**02 11 24.5**	**+0.5**
VLX				S	**Sg**	**02 11 39.8**	**+1.0**
VLX	**Vlachokerasia**	**1.14**	**122**	P	**Pg**	**02 11 24.5**	**+0.5**
VLX				S	**Sg**	**02 11 39.8**	**+1.0**
DSF	**Desfina**	**1.15**	**68**	P	**Pg**	**02 11 23.0**	**-1.2**
DSF	**Desfina**	**1.15**	**68**	P	**Pg**	**02 11 23.0**	**-1.2**
PYL	**PYLOS**	**1.18**	**157**	*e*PG	**Pg**	**02 11 24.0**	**-0.8**
PYL	**PYLOS**	**1.18**	**157**	P	**Pg**	**02 11 24.0**	**-0.8**
PYL	**PYLOS**	**1.18**	**157**	P	**Pg**	**02 11 24.0**	**-0.8**
AGG	**Agios Georgios**	**1.38**	**41**	P	**Pn**	**02 11 26.8**	**-1.0**
AGG				S	**Sb**	**02 11 45.7**	**-0.4**
AGG	**Agios Georgios**	**1.38**	**41**	P	**Pn**	**02 11 26.8**	**-1.0**
AGG				S	**Sb**	**02 11 45.7**	**-0.4**
LTK	**Loutraki**	**1.42**	**88**	P	**Pn**	**02 11 28.1**	**-0.3**
LTK				S	**Sb**	**02 11 48.3**	**+1.0**
LTK	**Loutraki**	**1.42**	**88**	P	**Pn**	**02 11 28.1**	**-0.3**
LTK				S	**Sb**	**02 11 48.3**	**+1.0**
IGT	**Igoumenitsa**	**1.68**	**337**	S	**Sn**	**02 11 53.6**	**-0.1**
IGT	**Igoumenitsa**	**1.68**	**337**	S	**Sn**	**02 11 53.6**	**-0.1**
DID	**Didima**	**1.71**	**106**	P	**Pn**	**02 11 32.6**	**+0.2**
DID				S	**Sn**	**02 11 55.4**	**+1.0**
DID	**Didima**	**1.71**	**106**	P	**Pn**	**02 11 32.6**	**+0.2**
DID				S	**Sn**	**02 11 55.4**	**+1.0**

MEX 10 02:21:03.1±0.5, 16.14N×94.28W, h81km±14km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.11**	**113**	*e*P	Pn	02 21 22.0	-1.6
PCIG				*e*S	Sn	02 21 37.5	-1.4
TGIG		**1.28**	**60**	*i* P	Pn	02 21 24.5	-1.1
TGIG				*i* S	Sn	02 21 40.8	-1.8
HUIG	**Huatulco**	**1.79**	**258**	*e*P	Pn	02 21 30.8	-1.5
HUIG				*i* S	Sn	02 21 52.9	-1.6
VHO	**Vista Hermosa**	**2.52**	**292**	*i* P	Pn	02 21 41.5	-0.5
VHO				*i* S	Sn	02 22 10.4	-1.5
PNIG	**Pinotepa**	**3.70**	**274**	*i* P	Pn	02 21 57.8	-0.1
PNIG				*i* S	Sn	02 22 37.4	-3.0
UTMO	**Huajuapan**	**3.76**	**297**	*i* P	Pn	02 21 58.7	-0.1
UTMO				*i* S	Sn	02 22 42.0	0.0

*DDA **10** 02:22:22.0, 38.38N×27.09E, h11km±3km, Md3.0*
*ISCJB **10** 02:22:22.2±0.4, 38.40N±0.02×27.11E±0.03, h7km±3km, Error ellipse: s-maj=3.6km s-min=3.3km az=31.2*
*ISK **10** 02:22:22.1, 38.45N×27.11E, h7km, MD3.0*
*CSEM **10** 02:22:22.5±0.1, 38.41N×27.12E, h8km, ML2.4/2, Error ellipse: s-maj=3.0km s-min=2.6km az=50.0*
*THE **10** 02:22:24.1, 38.44N×27.02E, h3km±2km, ML2.4/2, Error ellipse: s-maj=9.0km s-min=1.1km az=164.0*
ISC 10 02:22:22.5±0.3, 38.40N±0.02×27.11E±0.03, h9km±3km, n50, σ0.79/76, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.05**	**256**	*e*PG	**Pg**	**02 22 24.5**	**0.0**
BLCB	**Balcova**	**0.05**	**256**	P	**Pg**	**02 22 24.7**	**+0.3**
BLCB				S	**Sg**	**02 22 26.3**	**+0.5**
BLCB	**Balcova**	**0.05**	**256**	*e*Pg	**Pg**	**02 22 24.5**	**+0.1**
BLCB	**Balcova**	**0.05**	**256**	P	**Pg**	**02 22 24.7**	**+0.3**
BLCB				S	**Sg**	**02 22 26.3**	**+0.5**
IZM	**Izmir**	**0.12**	**90**	*e*PG	**Pg**	**02 22 25.2**	**-0.2**
URLA	**Izmir**	**0.40**	**265**	*i* P	**Pg**	**02 22 29.1**	**-1.3**
URLA				*i* S	**Sg**	**02 22 35.4**	**-0.4**
URLA	**Izmir**	**0.40**	**265**	*i* P	**Pg**	**02 22 29.1**	**-1.3**
URLA				*i* S	**Sg**	**02 22 35.4**	**-0.3**
GCAM	**G?zelcaml?**	**0.70**	**172**	*i* P	**Pg**	**02 22 35.6**	**-0.5**
GCAM				*i* S	**Sg**	**02 22 45.0**	**-0.3**
GCAM	**G?zelcaml?**	**0.70**	**172**	*i* P	**Pg**	**02 22 35.6**	**-0.5**
GCAM				*i* S	**Sg**	**02 22 45.0**	**-0.3**
AKHS	**Akhisar**	**0.73**	**49**	*i* P	**Pg**	**02 22 37.4**	**+0.7**
AKHS				*i* S	**Sg**	**02 22 46.8**	**+0.5**
AKHS	**Akhisar**	**0.73**	**49**	*i* P	**Pg**	**02 22 37.4**	**+0.7**
AKS	**Akhisar**	**0.73**	**49**	*e*PG	**Pg**	**02 22 36.1**	**-0.6**
AKS				*e*SG	**Sg**	**02 22 46.2**	**0.0**
AKS	**Akhisar**	**0.73**	**49**	*e*Pg	**Pg**	**02 22 36.2**	**-0.5**
CHOS	**Chios island**	**0.82**	**270**	P	**Pg**	**02 22 39.4**	**+1.0**
CHOS				S	**Sg**	**02 22 49.7**	**+0.5**
CHOS	**Chios island**	**0.82**	**270**	P	**Pg**	**02 22 39.4**	**+1.0**
CHOS				S	**Sg**	**02 22 49.7**	**+0.5**
AYDN	**Tasoluk**	**0.96**	**140**	*i* P	**Pg**	**02 22 40.7**	**-0.2**
AYDN				*i* S	**Sg**	**02 22 52.9**	**-0.4**
AYDN	**Tasoluk**	**0.96**	**140**	*i* P	**Pg**	**02 22 40.7**	**-0.2**
AYDN				*i* S	**Sg**	**02 22 52.9**	**-0.5**
AYVA	**Ayvalik**	**0.96**	**341**	*i* P	**Pg**	**02 22 41.1**	**0.0**
AYVA				*i* S	**Sg**	**02 22 53.6**	**0.0**
AYVA	**Ayvalik**	**0.96**	**341**	*i* P	**Pg**	**02 22 41.2**	**+0.1**
AYVA				*i* S	**Sg**	**02 22 53.6**	**-0.1**
PRK	**Paraskevi**	**1.07**	**323**	P	**Pg**	**02 22 43.1**	**0.0**
PRK				S	**Sg**	**02 22 56.8**	**-0.2**
PRK	**Paraskevi**	**1.07**	**323**	P	**Pg**	**02 22 43.1**	**0.0**
PRK				S	**Sg**	**02 22 56.8**	**-0.2**
MLSB	**Milas**	**1.22**	**154**	*e*PN	**Pn**	**02 22 46.7**	**+1.0**
MLSB	**Milas**	**1.22**	**154**	*e*Pn	**Pn**	**02 22 46.7**	**+1.0**
KULA	**Kula-Manisa**	**1.23**	**84**	*e*PN	**Pn**	**02 22 45.5**	**-0.3**
KULA	**Kula-Manisa**	**1.23**	**84**	*e*Pn	**Pn**	**02 22 45.5**	**-0.3**
SIGR	**SIGRI**	**1.27**	**310**	P	**Pn**	**02 22 47.0**	**+0.6**
SIGR				S	**Sb**	**02 23 03.0**	**0.0**
SIGR	**SIGRI**	**1.27**	**310**	P	**Pn**	**02 22 47.0**	**+0.6**
SIGR				S	**Sb**	**02 23 03.0**	**0.0**
BDRM	**Kayabasi**	**1.36**	**168**	*i* P	**Pn**	**02 22 44.8**	**-2.8**
BDRM				*i* S	**Sb**	**02 23 04.6**	**-0.9**
BDRM	**Kayabasi**	**1.36**	**168**	*i* P	**Pn**	**02 22 44.8**	**-2.8**
BDRM				*i* S	**Sb**	**02 23 04.6**	**-0.9**
BALB	**Balikesir**	**1.38**	**26**	*e*PN	**Pn**	**02 22 47.5**	**-0.4**
BALB	**Balikesir**	**1.38**	**26**	*e*Pn	**Pn**	**02 22 47.5**	**-0.4**
BALY	**Balya**	**1.40**	**16**	*i* P	**Pn**	**02 22 47.0**	**-1.2**
BALY				*i* S	**Sn**	**02 23 05.7**	**-1.0**
BALY	**Balya**	**1.40**	**16**	*i* P	**Pn**	**02 22 47.0**	**-1.2**
BALY				*i* S	**Sn**	**02 23 05.7**	**-1.0**
DEMI	**Demirci**	**1.42**	**62**	*i* P	**Pn**	**02 22 49.3**	**+0.9**
DEMI				*i* S	**Sn**	**02 23 07.1**	**0.0**
DEMI	**Demirci**	**1.42**	**62**	*i* P	**Pn**	**02 22 49.3**	**+0.9**
DEMI				*i* S	**Sn**	**02 23 07.1**	**0.0**
EZN	**Ezine**	**1.55**	**337**	*e*PN	**Pn**	**02 22 50.3**	**0.0**
EZN	**Ezine**	**1.55**	**337**	*e*Pn	**Pn**	**02 22 50.3**	**+0.1**
YER	**Yerkesik**	**1.57**	**143**	*e*PN	**Pn**	**02 22 51.7**	**+1.2**
YER	**Yerkesik**	**1.57**	**143**	*e*Pn	**Pn**	**02 22 51.7**	**+1.2**
BOZC	**Bozcaada**	**1.66**	**331**	*i* P	**Pn**	**02 22 54.8**	**+0.5**
BOZC				*i* S	**Sn**	**02 23 12.4**	**-0.7**
GONE	**Gonen-Balikesi**	**1.71**	**15**	*e*PN	**Pn**	**02 22 52.2**	**-0.2**
GONE	**Gonen-Balikesi**	**1.71**	**15**	*e*Pn	**Pn**	**02 22 52.2**	**-0.2**
APE	**Apeiranthos**	**1.82**	**224**	*e*PN	**Pn**	**02 22 55.9**	**+1.9**
APE	**Apeiranthos**	**1.82**	**224**	*e*Pn	**Pn**	**02 22 55.9**	**+1.9**
KHAL	**Karahalli**	**1.88**	**90**	*i* P	**Pg**	**02 22 57.9**	**-0.6**
KHAL				*i* S	**Sn**	**02 23 20.6**	**+2.2**
KHAL	**Karahalli**	**1.88**	**90**	*i* P	**Pg**	**02 22 57.9**	**-0.6**
GELI	**Tayfur-Gelibol**	**2.06**	**346**	*e*PN	**Pn**	**02 22 57.1**	**-0.1**
GELI	**Tayfur-Gelibol**	**2.06**	**346**	*e*Pn	**Pn**	**02 22 57.1**	**-0.1**
LIA	**Limnos Island**	**2.12**	**316**	P	**Pn**	**02 22 58.1**	**+0.1**
LIA	**Limnos Island**	**2.12**	**316**	P	**Pn**	**02 22 58.1**	**+0.1**

*CSEM **10** 02:33:54.3±0.7, 36.86N×27.72E, h2km, MD2.6, Error ellipse: s-maj=15.3km s-min=13.9km az=174.0*
DDA 10 02:33:55.2, 36.86N×27.50E, h6km±4km, Md2.6, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.14**	**155**	*e*PG	Pg	02 33 59.6	+1.5
DAT	**Datca**	**0.14**	**155**	*e*Pg	Pg	02 33 59.7	+1.6
BDRM	**Kayabasi**	**0.21**	**347**	*i* P	Pg	02 33 59.3	-0.2
BDRM				*i* S	Sg	02 34 02.5	+0.1
BDRM	**Kayabasi**	**0.21**	**347**	*i* P	Pg	02 33 59.3	-0.2
BDRM				*i* S	Sg	02 34 02.5	+0.1
BODT	**Bodrum**	**0.26**	**323**	*e*PG	Pg	02 33 59.4	-0.9
BODT	**Bodrum**	**0.26**	**323**	*e*Pg	Pg	02 33 59.4	-0.9
MLSB	**Milas**	**0.49**	**26**	*e*PG	Pg	02 34 04.3	-0.3
MLSB	**Milas**	**0.49**	**26**	*e*Pg	Pg	02 34 04.3	-0.4
AYDN	**Tasoluk**	**0.86**	**20**	*i* P	Pg	02 34 11.0	-0.6
AYDN				*i* S	Sg	02 34 21.9	-0.9
AYDN	**Tasoluk**	**0.86**	**20**	*i* P	Pg	02 34 11.0	-0.7
AYDN				*i* S	Sg	02 34 22.0	-0.8
GCAM	**G?zelcaml?**	**0.87**	**346**	*i* P	Pg	02 34 12.8	+0.8
GCAM	**G?zelcaml?**	**0.87**	**346**	*i* P	Pg	02 34 12.8	+0.9
TURN	**Turunc**	**0.88**	**89**	*i* P	Pg	02 34 06.8	-5.3
TURN				*i* S	Sg	02 34 15.8	-7.8
TURN	**Turunc**	**0.88**	**89**	*i* P	Pg	02 34 06.8	-5.3
TURN				*i* S	Sg	02 34 15.8	-7.8

KRSC 10 03:05:27.6±3.0, 49.51N×155.29E, h153km±83km, ML4.2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.37**	**7**	*e*P	Pn	03 05 56.7	+0.7
MIPR	**Malaya Ipel'ka**	**2.92**	**18**	*e*P	Pn	03 06 16.3	+2.3
GRL	**Gorelyy**	**3.52**	**29**	P	Pn	03 06 25.7	+4.2
SDLR	**Sedlovina**	**4.39**	**29**	P	Pn	03 06 37.0	+4.1
GNL	**Ganaly**	**4.50**	**21**	*e*P	Pn	03 06 37.7	+3.3
SPN	**Mys Shipunski**	**4.66**	**38**	P	Pn	03 06 39.4	+3.0
SPN				*i* S	Sn	03 07 31.7	+1.6
MKZ	**Mys Kozlova**	**6.43**	**36**	*e*P	Pn	03 07 02.0	+2.2
MKZ				*e*S	Sn	03 08 10.9	-1.2
KBTR	**Krutoberegovo**	**8.11**	**31**	P	Pn	03 07 23.6	+1.4

*ISCJB **10** 03:22:32.9±0.5, 11.2N±0.1×85.6W±0.1, h217km±4km, mb3.5/11, Error ellipse: s-maj=26.1km s-min=6.8km az=140.6*
*NEIC **10** 03:22:33.6±1.1, 10.94N×85.29W, h239km±13km, mb3.8/3, Error ellipse: s-maj=39.0km s-min=13.9km az=216.0*
*IDC **10** 03:22:33.4±0.6, 11.13N×85.11W, h220km±11km, mb3.0/7, mb1 3.3/7, mb1mx3.2/18, mbtmp3.0/7, Error ellipse: s-maj=38.5km s-min=19.7km az=27.0*
*CASC **10** 03:22:34.9±1.8, 11.20N×85.63W, h200km±6km, MD3.6, mb3.8(NEIC)*
ISC 10 03:22:33.8±0.5, 11.2N±0.1×85.7W±0.1, h212km±4km, n50, σ0.90/63, mb3.5/11, 9C, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	**San Juan del S**	**0.23**	**302**	*e*P	**Pn**	**03 23 01.3**	**-0.3**
SSN				*e*S	**Sn**	**03 23 23.0**	**-0.3**
CONN	**Concepcion**	**0.38**	**4**	*e*P	**Pn**	**03 23 02.3**	**+0.3**
GBS2	**Las Lilas**	**0.39**	**150**	*i* P	**Pn**	**03 23 01.0**	**-1.0**
GBS2				*i* S	**S**	**03 23 22.8**	**-1.2**
GB1A	**Borinquen Arri**	**0.44**	**145**	*i* P	**Pn**	**03 23 02.5**	**+0.3**
GB1A				*i* S	**S**	**03 23 24.2**	**0.0**
GBS3	**Finca Las Im¨¡**	**0.44**	**154**	*i* P	**Pn**	**03 23 02.1**	**-0.1**
GBS3				*i* S	**S**	**03 23 23.6**	**-0.6**
BUEV	**Buena Vista**	**0.45**	**147**	*i* P	**Pn**	**03 23 02.3**	**+0.1**
LAPC	**Finca la Perla**	**0.46**	**152**	*i* P	**Pn**	**03 23 01.8**	**-0.4**
LAPC				*i* S	**S**	**03 23 23.5**	**-0.8**
GPS1	**Guardaparques**	**0.50**	**143**	*i* P	**Pn**	**03 23 02.5**	**+0.1**
GPS3	**Bodega del ICE**	**0.51**	**146**	*i* P	**Pn**	**03 23 02.5**	**+0.1**
GPS2	**Hotel Rinc¨‡n**	**0.52**	**145**	*i* P	**Pn**	**03 23 02.6**	**+0.2**
NY14	**Universidad de**	**0.54**	**167**	⇑*i* P	**Pn**	**03 23 02.8**	**+0.3**
NY14				*i* S	**S**	**03 23 24.3**	**-0.6**
LIM1	**Limonal**	**0.62**	**140**	*i* P	**Pn**	**03 23 03.1**	**+0.3**
GUAB	**Guayabo de Bag**	**0.63**	**138**	*i* P	**Pn**	**03 23 03.2**	**+0.3**
MESS	**Mesas**	**0.63**	**134**	⇑*i* P	**Pn**	**03 23 03.1**	**+0.3**
COLC	**Colonia**	**0.68**	**139**	*i* P	**Pn**	**03 23 03.5**	**+0.4**
CUI	**Cuipilapa**	**0.71**	**137**	*i* P	**Pn**	**03 23 03.7**	**+0.5**
CUI				*i* S	**S**	**03 23 25.6**	**-0.4**
APON	**Apoyo**	**0.84**	**331**	*e*P	**Pn**	**03 23 04.3**	**+0.5**
A494	**Palo Verde**	**0.88**	**160**	⇑*i* P	**Pn**	**03 23 03.8**	**-0.4**
VCR	**Vista de Mar**	**1.05**	**179**	⇑*i* P	**Pn**	**03 23 06.0**	**+0.8**
JTS	**JuntasAbangare**	**1.12**	**142**	P	**Pn**	**03 23 06.0**	**+0.3**
JTS				S	**S**	**03 23 29.1**	**-1.4**
JTS	**JuntasAbangare**	**1.12**	**142**	P	**Pn**	**03 23 06.0**	**+0.4**
	182nm,0.3s,baz=328,slow=17,SNR=1008						
JTS				S	**S**	**03 23 29.1**	**-1.4**
	259nm,0.3s,baz=318,slow=21,SNR=46						
TISN	**Laguna Tiscapa**	**1.13**	**328**	*e*P	**Pn**	**03 23 06.1**	**+0.4**
CASO	**Castillo**	**1.17**	**129**	*i* P	**Pn**	**03 23 06.8**	**+0.8**
CASO				*i* S	**S**	**03 23 30.6**	**-0.5**
XAVN	**Gruta Xavier**	**1.17**	**326**	*e*P	**Pn**	**03 23 06.1**	**+0.1**
CSAN		**1.25**	**323**	*e*P	**Pn**	**03 23 06.8**	**+0.2**
HUEN		**1.26**	**336**	*e*P	**Pn**	**03 23 06.8**	**+0.1**
COPN	**Copaltepe**	**1.35**	**317**	*e*P	**Pn**	**03 23 07.1**	**-0.3**
JCR	**Jicaral**	**1.42**	**158**	⇑*e*P	**Pn**	**03 23 08.8**	**+0.8**
JCR				*e*S	**S**	**03 23 32.7**	**-2.0**
MOMN	**Momotombo**	**1.50**	**325**	*e*P	**Pn**	**03 23 08.9**	**+0.4**
CGA2	**Cerro Gallo 2**	**1.64**	**135**	⇑*e*P	**Pn**	**03 23 10.8**	**+0.9**
CGA2				*e*S	**S**	**03 23 36.7**	**-1.3**
PRS1	**Puriscal**	**1.77**	**132**	⇑*e*P	**Pn**	**03 23 12.6**	**+1.5**
LAJ	**Bijagual**	**2.00**	**131**	⇑*e*P	**Pn**	**03 23 12.5**	**-0.7**
CRIN	**San Cristobal**	**2.04**	**318**	*e*P	**Pn**	**03 23 13.7**	**+0.1**
QCR	**Quepos**	**2.28**	**140**	⇑*e*P	**Pn**	**03 23 17.9**	**+1.8**
QCR				*e*S	**S**	**03 23 50.8**	**+1.6**
URSC	**Urasca**	**2.28**	**126**	*e*P	**Pn**	**03 23 18.3**	**+2.2**
TGUH	**Tegucigalpa,Un**	**3.27**	**331**

1.5nm,0.2s,SNR=1.0
IZUN Zunzarren 2.02 148 P Pn 03 28 21.9 -0.9
0.5nm,0.2s,SNR=7.9
IZUN S Sn 03 28 46.5 -1.6
1.9nm,0.2s,SNR=7.9
IZUN Zunzarren 2.02 148 P Pn 03 28 21.9 -0.9
0.5nm,0.2s,SNR=7.9
IZUN S Sn 03 28 46.5 -1.6
1.9nm,0.2s,SNR=7.9
IZUN Zunzarren 2.02 148 P Pn 03 28 21.9 -0.9
0.5nm,0.2s,SNR=7.9
IZUN S Sn 03 28 46.5 -1.6
1.9nm,0.2s,SNR=7.9
EARI Arriondas 2.11 233 P Pn 03 28 20.2 -3.8
0.8nm,0.4s,SNR=7.9
EARI S Sn 03 28 39.5 -11
0.5nm,0.2s,SNR=7.9
EARI Arriondas 2.11 233 P Pn 03 28 20.2 -3.8
0.8nm,0.4s,SNR=7.9
EARI S Sn 03 28 39.5 -11
0.5nm,0.2s,SNR=7.9
EARI Arriondas 2.11 233 P Pn 03 28 20.2 -3.9
0.8nm,0.4s,SNR=7.9
ETSF Etsaut 2.39 134 *e*P **Pn 03 28 30.2 +2.3**
ETSF *e*Sn **Sn 03 28 56.6 -0.7**
2.0nm,0.2s
ETSF Etsaut 2.39 134 *e*P **Pn 03 28 30.2 +2.3**
SNR=1.0
ETSF *e*Sn **Sn 03 28 56.6 -0.7**
2.0nm,0.2s
ETSF Etsaut 2.39 134 *e*Pn **Pn 03 28 27.7 -0.2**
ETSF *e*P 03 28 30.2
ETSF *e*Sn **Sn 03 28 56.6 -0.7**
ETSF Etsaut 2.39 134 *e*Pn **Pn 03 28 27.7 -0.2**
ETSF Etsaut 2.39 134 *e*P **Pn 03 28 30.2 +2.3**
SNR=1.0
ETSF *e*Sn **Sn 03 28 56.6 -0.7**
1.0nm,0.2s
MFF Saint Martin d 2.79 43 *e*Pn **Pn 03 28 34.3 +0.9**
SNR=1.0
MFF *e*Sn **Sn 03 29 07.4 +0.3**
5.5nm,0.8s,SNR=1.0
MFF Saint Martin d 2.79 43 *e*Pn **Pn 03 28 34.3 +0.9**
SNR=1.0
MFF *e*Sn **Sn 03 29 07.4 +0.3**
2.8nm,0.8s,SNR=1.0
EPF Esparros 2.81 123 *e*P **Pn 03 28 36.7 +3.0**
SNR=1.0
EPF *e*Sn **Sn 03 29 07.0 -0.7**
2.9nm,0.2s
EPF Esparros 2.81 123 *e*P **Pn 03 28 36.7 +3.0**
SNR=1.0
EPF *e*Sn **Sn 03 29 07.0 -0.7**
2.9nm,0.2s
EPF Esparros 2.81 123 *e*Pn **Pn 03 28 33.6 -0.1**
EPF *e*P 03 28 36.7
EPF *e*Sn **Sn 03 29 07.0 -0.7**
EPF Esparros 2.81 123 *e*Pn **Pn 03 28 33.6 -0.1**
EPF Esparros 2.81 123 *e*P **Pn 03 28 36.7 +3.0**
SNR=1.0
EPF *e*Sn **Sn 03 29 07.0 -0.7**
1.5nm,0.2s
EBIE Bielsa 2.91 130 P **Pn 03 28 37.9 +2.8**
0.6nm,0.1s,SNR=6.6
EBIE S Sn 03 29 12.3 +2.2
1.8nm,0.1s,SNR=12
EBIE Bielsa 2.91 130 P **Pn 03 28 37.9 +2.8**
0.6nm,0.1s,SNR=6.6
EBIE S Sn 03 29 12.3 +2.2
1.8nm,0.1s,SNR=12
RJF Les Rejaudoux 3.21 76 *e*Pn **Pn 03 28 40.0 +0.8**
RJF *e*Sn **Sn 03 29 17.8 +0.3**
3.5nm,0.2s,SNR=1.0
RJF Les Rejaudoux 3.21 76 *e*Pn **Pn 03 28 40.0 +0.8**
RJF *e*Sn **Sn 03 29 17.8 +0.3**
1.8nm,0.2s,SNR=1.0
QUIF Quistinic 3.33 357 *e*Pn **Pn 03 28 40.2 -0.7**
SNR=1.0
QUIF Quistinic 3.33 357 *e*Pn **Pn 03 28 40.2 -0.7**
SNR=1.0
CAF Calviac 3.55 83 *e*Pn **Pn 03 28 45.3 +1.5**
SNR=1.0
CAF *e*Sn **Sn 03 29 24.7 -1.1**
1.9nm,0.4s,SNR=1.0
CAF Calviac 3.55 83 *e*Pn **Pn 03 28 45.3 +1.5**
SNR=1.0
CAF *e*Sn **Sn 03 29 24.7 -1.1**
0.9nm,0.4s,SNR=1.0
SGMF Saint Gilles 3.67 4 *e*Pn **Pn 03 28 45.2 -0.3**
SNR=1.0
SGMF Saint Gilles 3.67 4 *e*Pn **Pn 03 28 45.2 -0.3**
SNR=1.0
CSOR Sort 3.67 126 P **Pn 03 28 47.9 +2.3**
0.4nm,0.2s,SNR=7.9
CSOR S Sn 03 29 30.6 +1.7
1.4nm,0.2s,SNR=7.9
CSOR Sort 3.67 126 P **Pn 03 28 47.9 +2.3**
0.4nm,0.2s,SNR=7.9
CSOR S Sn 03 29 30.6 +1.7
1.4nm,0.2s,SNR=7.9
CSOR Sort 3.67 126 P **Pn 03 28 47.8 +2.2**
0.4nm,0.2s,SNR=7.9
CSOR S Sn 03 29 30.6 +1.7
1.4nm,0.2s,SNR=7.9
ROSF Rostrenen 3.76 356 *e*Pn **Pn 03 28 45.9 -0.8**
ROSF Rostrenen 3.76 356 *e*Pn **Pn 03 28 45.9 -0.8**
MTLF Montolieu 3.90 107 *e*Pn **Pn 03 28 49.3 +0.7**
SNR=1.0
MTLF *e*Sn **Sn 03 29 32.9 -1.5**
2.6nm,0.3s
MTLF Montolieu 3.90 107 *e*Pn **Pn 03 28 49.3 +0.7**
SNR=1.0
MTLF *e*Sn **Sn 03 29 32.9 -1.5**
1.3nm,0.3s
TCF Toulx Ste Croi 3.98 63 *e*Pn **Pn 03 28 49.8 +0.1**
SNR=1.0
TCF *e*Sn **Sn 03 29 34.5 -1.8**
0.9nm,0.2s,SNR=1.0
TCF Toulx Ste Croi 3.98 63 *e*Pn **Pn 03 28 49.8 +0.1**
SNR=1.0
TCF *e*Sn **Sn 03 29 34.5 -1.8**
0.4nm,0.2s,SNR=1.0
CLLI Llivia 4.12 119 P **Pn 03 28 55.1 +3.4**
0.6nm,0.5s,SNR=7.9
CLLI S Sn 03 29 40.7 +0.8
0.5nm,0.2s,SNR=7.9
CLLI Llivia 4.12 119 P **Pn 03 28 55.1 +3.4**
0.6nm,0.5s,SNR=7.9
CLLI S Sn 03 29 40.7 +0.8
0.5nm,0.2s,SNR=7.9
EMIR Miracle 4.19 128 P **Pn 03 28 54.1 +1.4**
0.5nm,0.3s,SNR=7.9
EMIR S Sn 03 29 41.3 -0.4
SNR=7.9
EMIR Miracle 4.19 128 P **Pn 03 28 54.1 +1.4**
0.5nm,0.3s,SNR=7.9
EMIR S Sn 03 29 41.3 -0.4
SNR=7.9
EMIR Miracle 4.19 128 P **Pn 03 28 54.1 +1.4**
0.5nm,0.3s,SNR=7.9
EMIR S Sn 03 29 41.3 -0.4
SNR=7.9
ERTA Horta de San J 4.34 146 S **Sn 03 29 42.1 -3.2**
0.7nm,0.3s,SNR=7.9
ERTA Horta de San J 4.34 146 S **Sn 03 29 42.1 -3.2**
0.7nm,0.3s,SNR=7.9
ERTA Horta de San J 4.34 146 S **Sn 03 29 42.1 -3.2**
0.7nm,0.3s,SNR=7.9
EPOB Poblet 4.36 137 S **Sn 03 29 43.6 -2.1**
0.8nm,0.2s,SNR=7.9
EPOB Poblet 4.36 137 S **Sn 03 29 43.6 -2.1**
0.8nm,0.2s,SNR=7.9
EPOB Poblet 4.36 137 S **Sn 03 29 43.6 -2.1**
0.8nm,0.2s,SNR=7.9
LDF La Druitiere 4.44 25 *e*Pn **Pn 03 28 56.1 +0.1**
LDF La Druitiere 4.44 25 *e*Pn **Pn 03 28 56.1 +0.1**
BGF Bois d'Agland 4.49 62 *e*Sn **Sn 03 29 48.5 -0.4**
2.4nm,0.3s
BGF Bois d'Agland 4.49 62 *e*Sn **Sn 03 29 48.5 -0.4**
2.2nm,0.3s
FLN La Foliniere 4.49 21 *e*Pn **Pn 03 28 56.8 0.0**
FLN La Foliniere 4.49 21 *e*Pn **Pn 03 28 56.8 0.0**
EJON La Jonquera 4.72 115 P **Pn 03 29 00.5 +0.6**
0.9nm,0.3s,SNR=7.9
EJON S Sn 03 29 53.9 -0.8
0.5nm,0.2s,SNR=7.9
EJON La Jonquera 4.72 115 P **Pn 03 29 00.5 +0.6**
0.9nm,0.3s,SNR=7.9
EJON S Sn 03 29 53.9 -0.8
0.5nm,0.2s,SNR=7.9
EJON La Jonquera 4.72 115 P **Pn 03 29 00.5 +0.6**
0.9nm,0.3s,SNR=7.9
EJON S Sn 03 29 53.9 -0.8
0.5nm,0.2s,SNR=7.9
CFON Fontmartina 4.81 124 P **Pn 03 29 02.6 +1.3**
0.5nm,0.2s,SNR=7.9
CFON S Sn 03 29 57.0 0.0
4.8nm,0.2s,SNR=7.9
CFON Fontmartina 4.81 124 P **Pn 03 29 02.6 +1.3**
0.5nm,0.2s,SNR=7.9
CFON S Sn 03 29 57.0 0.0
4.8nm,0.2s,SNR=7.9
CFON Fontmartina 4.81 124 P **Pn 03 29 02.6 +1.4**
0.5nm,0.2s,SNR=7.9
CFON S Sn 03 29 57.0 0.0
4.8nm,0.2s,SNR=7.9
LASF Ste Croix 4.87 94 *e*Pn **Pn 03 29 02.5 +0.5**
SNR=1.0
LASF *e*Sn **Sn 03 29 57.5 -0.9**
2.2nm,0.2s,SNR=1.0
LASF Ste Croix 4.87 94 *e*Pn **Pn 03 29 02.5 +0.5**
SNR=1.0
LASF *e*Sn **Sn 03 29 57.5 -0.9**
1.1nm,0.2s,SNR=1.0
AVF Avril sur Loir 4.90 61 *e*Pn **Pn 03 29 02.8 +0.4**
SNR=1.0
AVF *e*Sn **Sn 03 29 56.8 -2.3**
1.6nm,0.6s,SNR=1.0
AVF Avril sur Loir 4.90 61 *e*Pn **Pn 03 29 02.8 +0.4**
SNR=1.0
AVF *e*Sn **Sn 03 29 56.8 -2.3**
0.8nm,0.6s,SNR=1.0
SMF Signal de Mont 5.15 64 *e*Pn **Pn 03 29 06.8 +0.9**
SMF Signal de Mont 5.15 64 *e*Pn **Pn 03 29 06.8 +0.9**
VIVF Saint-Julien-l 5.40 85 *e*Pn **Pn 03 29 09.9 +0.6**
VIVF *e*Sn **Sn 03 30 10.5 -0.9**
1.9nm,0.4s
VIVF Saint-Julien-l 5.40 85 *e*Pn **Pn 03 29 09.9 +0.6**
VIVF *e*Sn **Sn 03 30 10.5 -0.9**
0.9nm,0.4s
LOR Lormes 5.42 58 *e*Pn **Pn 03 29 10.0 +0.5**
LOR Lormes 5.42 58 *e*Pn **Pn 03 29 10.0 +0.5**

*IDC **10** 03:48:22.6±6.0,25.°64N×59.°96E, h0km, mb3.7/5, mb1 3.7/5, mb1mx3.4/25, mbtmp3.7/5, Error ellipse: s-maj=128.4km s-min=38.5km az=126.0*
ISC 10 03:48:27.4±3.0,25.°9N±0.°3×59.°5E±0.°2, h10km, n7, σ0s70/7, mb3.6/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NAY	**Al-Naaiem**	**11.34**	**290**	*e*P	**Pn**	**03 51 09.1**	**-0.5**
MIB	**Mutribah**	**11.41**	**293**	*e*P	**Pn**	**03 51 10.3**	**-0.2**
AKTO	**Aktyubinsk**	**24.50**	**358**	P	**P**	**03 53 46.0**	**-0.7**
	0.6nm,0.3s,mb3.5,baz=195,slow=6.2,SNR=4.8						
BRTR	**Keskin Array B**	**25.59**	**309**	P	**P**	**03 53 58.5**	**+1.7**
	0.8nm,0.8s,mb3.3,baz=125,slow=11,SNR=6.0						
FINES	**FINESS Array B**	**42.05**	**337**	P	**P**	**03 56 18.9**	**0.0**
	0.9nm,0.4s,mb3.7,baz=133,slow=8.8,SNR=22						
ARCES	**ARCESS Array B**	**47.95**	**345**	P	**P**	**03 57 05.9**	**+0.1**
	1.1nm,0.8s,mb4.0,baz=140,slow=7.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**55.53**	**268**	P	**P**	**03 58 03.0**	**-0.2**
	0.3nm,0.6s,mb3.5,baz=62,slow=7.2,SNR=7.7						

MEX 10 03:55:17.1±0.4,16.°10N×100.°18W, h23km±27km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.83**	**22**	*i* P	Pb	03 55 29.9	-3.0
ACX				*i* S	Sb	03 55 40.1	-3.5
PNIG	**Pinotepa**	**1.99**	**81**	*i* P	Pn	03 55 47.0	-2.4
PNIG				*i* S	Sn	03 56 10.6	-3.0
UTMO	**Huajuapan**	**2.85**	**53**	*i* P	Pn	03 56 00.2	-1.0
UTMO				*i* S	Sn	03 56 31.1	-3.7
PPM	**Popocatepetl**	**3.30**	**26**	*i* P	Pn	03 56 05.4	-1.9
PPM				*i* S	Sn	03 56 44.3	-1.7

*IDC **10** 04:00:48.8±0.9,21.°12S×174.°00E, h0km, mb4.1/7, mb1 4.4/8, mb1mx4.2/13, mbtmp4.1/8, ML3.7/1, MS4.0/10, Ms1 4.0/10, ms1mx3.9/15, Error ellipse: s-maj=36.1km s-min=25.1km az=148.0*
*ISCJB **10** 04:00:52.5±0.7,21.°2S±0.°1×174.°0E±0.°1, h33km, mb4.3/12, MS4.0/7, Error ellipse: s-maj=16.9km s-min=14.1km az=40.5*
*GCMT **10** 04:00:53.8±0.4,20.°94S×174.°06E, h27km±1km, MW5.1, Moment Tensor Solution. s29,c31; s73,c93; Moment tensor: Scale 10^16^Nm; Mrr=0.86±.22; Mθθ=4.09±.18; Mϕϕ=4.95±.20; Mrθ=-0.74±.35; Mθϕ=-1.50±.17; Mϕr=1.97±.30; Best double couple: M0=5.10000×10^16^ NP1:ϕs=37.00000°, δ=72.00000°, λ=7.00000°. NP2:ϕs=305.00000°, δ=83.00000°, λ=162.00000°. Principal axes: T 5.8300, Plg17.0000°, Azm260.0000°; N -1.4400, Plg71.0000°, Azm105.0000°; P -4.3900, Plg8.0000°, Azm352.0000°; Data Used: II IU IC G CN.*
*NEIC **10** 04:00:54.8±3.5,21.°16S×174.°00E, h40km±31km, mb4.6/4 Error ellipse: s-maj=18.5km s-min=11.0km az=212.0*
ISC 10 04:00:54.4±0.7,21.°2S±0.°1×174.°0E±0.°1, h35km, n23, σ0s53/17, mb4.3/12, MS4.0/7, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.12**	**49**	*e*Pn	**Pn**	**04 02 01.6**	**-7.0**
	128nm,1.4s						
AFI	**Afiamalu**	**15.36**	**64**	LR	LR	04 09 04.4	
	comp=Z,816nm,19.6s,baz=2.4,slow=32						
URZ	**Urewera**	**17.27**	**172**	P	**Pn**	**04 04 52.8**	**0.0**
	0.2nm,0.3s,baz=45,slow=2.9,SNR=3.8						
URZ				LR	LR	04 10 40.2	
	comp=Z,263nm,19.5s,baz=311,slow=34						
HNR	**Honiara**	**17.85**	**309**	LR	LR	04 10 45.7	
	comp=Z,281nm,18.6s,baz=142,slow=34						
EIDS	**Eidsvold**	**21.46**	**254**	*e*P	**P**	**04 05 40.5**	**+0.6**
	19nm,1.2s,mb4.3						
RPZ	**Rata Peaks**	**22.64**	**186**	LR	LR	04 13 05.1	
	comp=Z,829nm,19.7s,MS4.2,baz=285,slow=32						
RAR	**Rarotonga**	**24.46**	**95**	LR	LR	04 14 18.1	
	comp=Z,200nm,18.8s,MS3.6,baz=288,slow=33						
CTA	**Charters Tower**	**25.97**	**267**	P	**P**	**04 06 24.1**	**+0.2**
	6.9nm,1.0s,mb4.1,baz=89,slow=12,SNR=3.8						
CTA				LR	LR	04 13 30.3	
	comp=Z,108nm,21.8s,MS3.3,baz=64,slow=29						
PMG	**Port Moresby**	**28.34**	**290**	*e*P	**P**	**04 06 44.5**	**-0.8**
	14nm,0.9s,mb4.6						
COEN	**Coen**	**30.20**	**279**	*e*P	**P**	**04 07 02.1**	**+0.3**
	132nm,1.1s						
STKA	**Stephens Creek**	**30.79**	**243**	LR	LR	04 18 09.7	
	comp=Z,454nm,19.4s,MS4.1,baz=62,slow=34						
PPT	**Papeete**	**34.51**	**90**	*e*S	**S**	**04 12 53.2**	**-13**
	111nm,25.5s						
PPT				*e*LR	LR	04 16 38.4	
	1µm,29.0s,baz=262						
ASAR	**Alice Springs**	**37.06**	**258**	P	**P**	**04 08 00.8**	**-0.6**
	3.2nm,0.9s,mb4.2,baz=87,slow=9.6,SNR=18						
TAOE	**Nuku Hiva Isla**	**45.79**	**82**	*e*S	**S**	**04 15 47.0**	**-7.7**
	107nm,24.4s						
TAOE				*e*LR	LR	04 21 46.2	
	560nm,25.9s						
SBA	**Scott Base**	**56.86**	**182**	*e*P	**P**	**04 10 35.2**	**+0.1**
	4.5nm,0.8s,mb4.5						
KKM	**Kota Kinabalu**	**62.77**	**289**	*e*P	**P**	**04 11 16.6**	**-0.1**
	16nm,1.0s,mb5.1						
QSPA	**South Pole Qui**	**68.92**	**180**	*e*P	**P**	**04 11 54.4**	**-0.8**
	6.6nm,1.1s,mb4.5						
MAW	**Mawson**	**78.32**	**201**	P	**P**	**04 12 50.7**	**+0.1**
	4.0nm,0.9s,mb4.3,baz=134,slow=7.2,SNR=7.2						
MAW				LR	LR	04 41 03.2	
	comp=Z,70nm,21.4s,MS4.0,baz=278,slow=31						
CMAR	**Chiang Mai Arr**	**83.36**	**293**	P	**P**	**04 13 19.1**	**+0.7**
	0.5nm,0.3s,mb4.0,baz=115,slow=4.7,SNR=2.8						
NVAR	**Mina Array Bea**	**86.78**	**47**	P	**P**	**04 13 34.8**	**-0.3**
	0.8nm,1.0s,mb3.9,baz=246,slow=6.6,SNR=4.3						
ILAR	**Eielson Array**	**90.78**	**16**	P	**P**	**04 13 52.9**	**-0.5**
	0.4nm,0.7s,mb3.8,baz=229,slow=6.2,SNR=6.2						
ILAR				LR	LR	04 55 55.4	
	comp=Z,56nm,18.5s,MS4.0,baz=211,slow=36						
TXAR	**Lajitas Array**	**93.79**	**60**	P	**P**	**04 14 09.1**	**+1.0**
	0.4nm,0.9s,mb3.8,baz=189,slow=4.0,SNR=4.6						
TXAR				LR	LR	04 48 33.7	
	comp=Z,113nm,18.3s,MS4.4,baz=5.0,slow=31						
TORD	**Torodi Ar. Bea**	**169.16**	**224**	PKPab	PKPab	04 22 09.2	-1.3
	0.6nm,0.7s,baz=116,slow=3.6,SNR=4.3						

ISC 10 04:13:33.0±0.8,41.°31N±0.°07×43.°89E±0.°05, h10km, n8, σ0s66/12, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOR	**Gori**	**0.70**	**13**	P	**Pg**	**04 13 45.9**	**-0.6**
GOR				S	**Sg**	**04 13 55.9**	**+0.3**
TBLG	**Delisi**	**0.76**	**56**	P	**Pg**	**04 13 47.6**	**-0.1**
TBLG				S	**Sg**	**04 13 57.9**	**+0.2**
MTA	**Mtatsminda**	**0.78**	**60**	P	**Pg**	**04 13 48.0**	**0.0**
MTA				S	**Sg**	**04 13 58.2**	**0.0**
DGRG	**David-gareji**	**1.12**	**82**	P	**Pb**	**04 13 53.2**	**-1.3**
DGRG				S	**Sb**	**04 14 10.0**	**+0.9**
ARTV	**Artvin**	**1.49**	**266**	*i* P	**Pn**	**04 13 58.7**	**-1.1**
DDEM	**Demirkent**	**1.67**	**256**	*i* P	**Pn**	**04 14 02.8**	**+0.5**
DBOC	**Borcka**	**1.68**	**272**	*i* P	**Pn**	**04 14 02.6**	**+0.2**
DBAD	**Bademkaya**	**1.69**	**261**	*i* P	**Pn**	**04 14 03.5**	**+0.9**

*ISCJB **10** 04:14:11.9±1.3,2.°0N±0.°2×66.°9E±0.°2, h10km, mb4.0/12, MS3.8/5, Error ellipse: s-maj=40.9km s-min=21.7km az=34.6*
*IDC **10** 04:14:12.5±1.4,2.°04N×66.°85E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/21, mbtmp3.7/7, MS3.8/5, Ms1 3.8/5, ms1mx3.2/23, Error ellipse: s-maj=47.2km s-min=26.6km az=37.0*
*NEIC **10** 04:14:14.5±1.0,2.°09N×66.°86E, h10km, mb4.2/6, Error ellipse: s-maj=33.5km s-min=17.9km az=217.0*
ISC 10 04:14:14.0±1.3,2.°0N±0.°3×66.°8E±0.°2, h10km, n25, σ0s88/17, mb4.0/12, MS3.8/5, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**32.07**	**88**	LR	LR	04 30 17.4	
	comp=Z,192nm,19.0s,MS3.8,baz=180,slow=30						
CMAR	**Chiang Mai Arr**	**35.47**	**60**	LR	LR	04 32 57.1	
	comp=Z,52nm,20.0s,MS3.3,baz=60,slow=32						
MALT	**Malatya**	**44.53**	**328**	*e*P	**P**	**04 22 26.3**	**+0.4**
	1.6nm,0.7s,mb4.0						
KIV	**Kislovodsk**	**46.95**	**336**	*e*P	**P**	**04 22 46.0**	**+1.0**
	4.5nm,0.3s,mb4.9						
ABKAR	**Akbulak array**	**47.45**	**354**	*e*P	**P**	**04 22 48.7**	**0.0**
	1.6nm,0.9s,mb4.0						
BR131	**Keskin Array S**	**48.16**	**325**	*e*P	**P**	**04 22 54.8**	**+0.3**
	0.7nm,0.6s,mb3.9						
BRTR	**Keskin Array B**	**48.16**	**325**	P	**P**	**04 22 55.0**	**+0.5**
	1.1nm,0.8s,mb4.0,baz=146,slow=12,SNR=6.2						
BOSA	**Boshof**	**50.15**	**229**	LR	LR	04 42 32.8	
	comp=Z,117nm,21.3s,MS3.9,baz=235,slow=34						
ZALV	**Zalesovo Beam**	**53.85**	**13**	P	**P**	**04 23 34.9**	**-2.1**
	0.4nm,0.4s,mb3.8,baz=202,slow=3.1,SNR=2.3						
SONM	**Songino Array**	**56.99**	**31**	P	**P**	**04 24 01.5**	**+1.8**
	0.1nm,0.3s,mb3.3,baz=204,slow=3.2,SNR=2.2						
AKASG	**Malin Array Be**	**57.98**	**333**	P	**P**	**04 24 05.8**	**-0.9**
	1.4nm,0.8s,mb4.0,baz=129,slow=5.8,SNR=5.0						
KIEV	**Kiev**	**57.98**	**333**	*e*P	**P**	**04 24 05.8**	**-0.9**
	2.4nm,0.8s,mb4.3						
CRVS	**Cervenica-Dubn**	**60.70**	**327**	*e*P	**P**	**04 24 25.5**	**-0.1**
CRVS	**Cervenica-Dubn**	**60.70**	**327**	*e*P	**P**	**04 24 25.5**	**-0.1**
STHS	**Stebnicka Huta**	**61.12**	**328**	*e*P	**P**	**04 24 29.1**	**+0.7**
STHS				*e*		04 24 39.8	
STHS	**Stebnicka Huta**	**61.12**	**328**	*e*P	**P**	**04 24 29.1**	**+0.7**
STHS				*e*		04 24 39.8	
MORC	**Moravsky Berou**	**63.32**	**327**	*e*P	**P**	**04 24 42.4**	**-0.8**
	2.8nm,0.9s,mb4.4						
TORD	**Torodi Ar. Bea**	**65.35**	**283**	LR	LR	04 51 29.4	
	comp=Z,36nm,18.6s,MS3.6,baz=100,slow=34						
FINES	**FINESS Array B**	**66.79**	**340**	P	**P**	**04 25 05.5**	**+0.1**
	1.6nm,0.8s,mb4.1,baz=116,slow=6.3,SNR=3.8						
ASAR	**Alice Springs**	**69.93**	**116**	P	**P**	**04 25 25.8**	**-0.1**
	0.4nm,0.9s,mb3.4,baz=302,slow=4.2,SNR=3.4						
ESDC	**Sonseca Array**	**74.00**	**311**	P	**P**	**04 25 50.3**	**+0.3**
	1.6nm,0.7s,mb4.1,baz=88,slow=4.9,SNR=13						
STKA	**Stephens Creek**	**78.15**	**123**	LR	LR	04 55 26.7	
	comp=Z,139nm,18.7s,MS4.3,baz=26,slow=32						
JCT	**Junction City**	**145.28**	**339**	*e*PKPbc	PKPbc	04 33 53.7	+1.3
MNTX	**Cornudas Mount**	**145.68**	**348**	*e*PKPbc	PKPbc	04 33 55.4	+1.7
TXAR	**Lajitas Array**	**147.54**	**344**	PKPbc	PKPbc	04 33 59.6	+0.5
	4.5nm,0.8s,baz=57,slow=2.7,SNR=64						

*ISCJB **10** 04:38:08.1±0.9,32.°40N±0.°03×105.°32E±0.°04, h5km±6km, mb3.7/12, MS3.4/2, Error ellipse: s-maj=5.7km s-min=4.0km az=36.7*
*IDC **10** 04:38:08.8±1.1,32.°45N×105.°42E, h0km, mb3.6/8, mb1 3.8/10, mb1mx3.6/23, mbtmp3.6/10, ML3.8/2, MS3.4/2, Ms1 3.4/2, ms1mx2.7/25, Error ellipse: s-maj=48.1km s-min=21.3km az=63.0*
*NEIC **10** 04:38:09.9±0.4,32.°39N×105.°42E, h10km, mb4.0/5, Error ellipse: s-maj=10.5km s-min=6.1km az=50.0*
*BJI **10** 04:38:09.9,32.°41N×105.°18E, h14km, mB4.6/3, mb4.3/7, ML3.9/21, Ms3.8/14, Ms7 3.6/14*
ISC 10 04:38:09.8±0.9,32.°40N±0.°03×105.°36E±0.°03, h3km±6km, n30, σ1s913/46, mb3.7/12, MS3.4/2, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.02**	**223**	Pn	**Pn**	**04 38 44.1**	**-0.5**
CD2				Pg	**Pb**	**04 38 45.9**	**-1.1**
CD2				Sn	**Sn**	**04 39 10.8**	**+0.6**
CD2				Sg	**Sg**	**04 39 12.9**	**-1.6**
XAN	**Xi'an**	**3.41**	**60**	Pn	**Pn**	**04 39 05.5**	**+1.8**
XAN				Pg	**Pg**	**04 39 14.7**	**-0.3**
XAN				Sn	**Sb**	**04 39 51.1**	**-1.4**
XAN				Sg	**Sg**	**04 40 05.0**	**+5.8**
XAN				smax			
	comp=N,500nm,0.7s						
XAN				smax			
	comp=E,240nm,0.8s						
LZH	**Lanzhou**	**3.89**	**342**	Pn	**Pn**	**04 39 11.4**	**+1.1**
LZH				Pg	**Pb**	**04 39 20.8**	**+1.9**
LZH				Sg	**Sb**	**04 40 08.9**	**+2.5**
LZH				smax			
	comp=N,630nm,0.7s						
LZH				smax			
	comp=E,1µm,0.6s						
LZH				LR	LR		
	comp=N,1µm,5.2s						
LZH				LR	LR		
	comp=Z,2µm,6.2s						
ENH	**Enshi**	**4.12**	**120**	*e*Pg	**Pg**	**04 39 27.3**	**-1.4**
ENH				*e*Sg	**Sg**	**04 40 24.3**	**+2.2**
GYA	**Guiyang**	**6.03**	**169**	Pn	**Pn**	**04 39 41.1**	**+1.4**
GYA				Sn	**Sn**	**04 40 49.9**	**+0.7**
GYA				Sg	**Sb**	**04 41 15.5**	**+7.6**
GYA				smax			
	comp=N,90nm,0.7s						
GYA				smax			
	comp=E,120nm,0.8s						
GYA				LR	LR		
	comp=N,300nm,4.1s						
GYA				LR	LR		
	comp=E,180nm,3.1s						
GYA				LR	LR		
	comp=Z,250nm,3.7s						
KMI	**Kunming**	**7.60**	**198**	Pn	**Pn**	**04 40 01.5**	**+0.1**
KMI				Sn	**Sn**	**04 41 30.3**	**+2.2**
KMI				smax			
	comp=N,29nm,0.6s						
KMI				smax			
	comp=E,26nm,0.5s						
KMI				LR	LR		
	comp=N,260nm,6.3s						
KMI				LR	LR		
	comp=E,260nm,6.1s						
KMI				LR	LR		
	comp=Z,200nm,7.8s						
WHN	**Wuhan**	**7.90**	**101**	P	**Pn**	**04 40 12.5**	**+7.0**
WHN				S	**Sn**	**04 41 32.6**	**-2.7**
WHN				LR	LR		
	comp=N,890nm,4.8s						
WHN				LR	LR		
	comp=E,650nm,5.0s						
WHN				LR	LR		
	comp=Z,440nm,6.6s						
GTA	**Gaotai**	**8.32**	**329**	*e*P	**Pn**	**04 40 13.0**	**+1.8**
GTA				pP		04 40 17.4	

GTA				sP		04 40 19.6				
GTA				S	Sn	**04 41 46.1**	**+0.5**			
GTA				pmax	pmax					
	comp=Z,13nm,0.8s									
GTA				LR	LR					
	comp=N,740nm,10.7s									
GTA				LR	LR					
	comp=E,840nm,9.8s									
GTA				LR	LR					
	comp=Z,910nm,10.4s									
HHC	**Hu-ho-hao-te**	**9.80**	**29**	*e*P	Pn	**04 40 30.4**	**-1.0**			
HHC				PP		04 40 38.4				
HHC				S	Sn	**04 42 21.8**	**-0.1**			
HHC				pmax	pmax					
	comp=Z,16nm,0.6s									
HHC				pmax	pmax					
	comp=Z,68nm,3.7s									
HHC				LR	LR					
	comp=N,170nm,5.9s									
HHC				LR	LR					
	comp=E,360nm,5.1s									
HHC				LR	LR					
	comp=Z,160nm,6.7s									
CMAR	**Chiang Mai Arr**	**15.03**	**204**	Pn	Pn	**04 41 43.0**	**-0.1**			
	comp=Z,0.4nm,0.3s,baz=10,slow=12,SNR=5.0									
SONM	**Songino Array**	**15.44**	**3**	Pn	Pn	**04 41 48.7**	**+0.4**			
	comp=Z,0.1nm,0.3s,baz=186,slow=16,SNR=8.2									
SNY	**Shenyang**	**17.29**	**52**	⇑P	Pn	**04 42 11.1**	**-0.9**			
SNY				S	Sn	**04 45 24.2**	**-0.5**			
SNY				pmax	pmax					
	comp=Z,7.0nm,0.3s									
SNY				LR	LR					
	comp=N,200nm,15.0s									
SNY				LR	LR					
	comp=Z,95nm,10.8s									
KSRS	**Korea Array**	**19.16**	**68**	P	Pn	**04 42 37.1**	**+2.1**			
	comp=Z,0.2nm,0.3s,baz=251,slow=11,SNR=6.2									
CN2	**Changchun**	**19.43**	**48**	*e*P	Pn	**04 42 47.9**	**+10**			
CN2				*es*P	sP	04 42 54.9	+16			
CN2				*e*S	Sn	**04 46 22.7**	**+6.2**			
CN2				pmax	pmax					
	comp=Z,10.0nm,0.6s									
CN2				pmax	pmax					
	comp=Z,200nm,3.0s									
CN2				LR	LR					
	comp=N,700nm,21.0s									
CN2				LR	LR					
	comp=E,400nm,21.0s									
CN2				LR	LR					
	comp=Z,300nm,20.0s									
MK31	**Makanchi Array**	**22.75**	**316**	*e*P	P	**04 43 12.3**	**-0.6**			
MKAR	**Makanchi Array**	**22.75**	**316**	P	P	**04 43 13.4**	**+0.5**			
	comp=Z,0.6nm,0.6s,mb3.2,baz=114,slow=12,SNR=7.4									
TKM2	**Tokmak 2**	**25.68**	**303**	*e*P	P	**04 43 40.4**	**-0.4**			
	comp=Z,1.6nm,0.6s,mb3.7									
ZALV	**Zalesovo Beam**	**26.06**	**332**	P	P	**04 43 43.5**	**-0.6**			
	comp=Z,0.9nm,0.5s,mb3.5,baz=131,slow=8.1,SNR=4.1									
UCH	**Uchtor**	**26.30**	**301**	*e*P	P	**04 43 46.1**	**-0.3**			
	comp=Z,5.4nm,1.3s,mb3.9									
KURK	**Kurchatov**	**26.89**	**321**	*e*P	P	**04 43 50.9**	**-0.7**			
	comp=Z,1.4nm,0.7s,mb3.6									
KURK	**Kurchatov**	**26.89**	**321**	P	P	**04 43 50.8**	**-0.9**			
	comp=Z,0.5nm,0.6s,mb3.2,baz=133,slow=8.7,SNR=2.7									
ABKAR	**Akbulak array**	**37.64**	**310**	*e*P	P	**04 45 25.0**	**-0.8**			
AKTO	**Aktyubinsk**	**39.06**	**312**	LR	LR	05 03 38.6				
	comp=Z,22nm,19.1s,MS3.0,baz=256,slow=39									
ARU	**Arti**	**40.08**	**321**	*e*P	P	**04 45 46.0**	**-0.1**			
	comp=Z,1.6nm,0.5s,mb4.0									
MALT	**Malatya**	**53.85**	**296**	*e*P	P	**04 47 33.2**	**-0.8**			
	comp=Z,0.9nm,0.4s,mb4.0									
ARCES	**ARCESS Array B**	**56.53**	**335**	P	P	**04 47 51.8**	**-1.0**			
	comp=Z,2.0nm,0.8s,mb4.2,baz=84,slow=9.2,SNR=5.9									
FINES	**FINESS Array B**	**57.10**	**326**	P	P	**04 47 56.5**	**-0.5**			
	comp=Z,0.7nm,0.5s,mb3.9,baz=86,slow=7.4,SNR=11									
FINES				LR	LR	05 17 00.7				
	comp=Z,96nm,20.9s,MS3.9,baz=129,slow=41									
ASAR	**Alice Springs**	**62.06**	**150**	P	P	**04 48 31.8**	**+0.1**			
	comp=Z,0.5nm,0.6s,mb3.8,baz=328,slow=6.3,SNR=6.9									
NOA	**NORSAR Array B**	**64.15**	**327**	P	P	**04 48 44.3**	**-0.8**			
	comp=Z,0.5nm,0.5s,mb3.8,baz=71,slow=6.6,SNR=3.4									
YKA	**Yellowknife Ar**	**80.14**	**18**	P	P	**04 50 19.8**	**-1.0**			
	comp=Z,0.2nm,0.5s,mb3.3,baz=328,slow=5.2,SNR=4.9									

NEIC ***10*** *04:45:56.7, 19.31N×65.32W, h111km, MD3.5(RSPR), After RSPR.*

RSPR 10 04:45:56.7, 19.31N×65.32W, h111km±7km, 4C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
STVI	**Saint Thomas**	**1.01**	**160**	⇓*e*P		Pn	04 46 17.8	-0.3
STVI	**Saint Thomas**	**1.01**	**160**	⇓*e*P		Pn	04 46 17.8	-0.3
MTP	**Monte Pirata**	**1.23**	**191**	⇓*e*P		Pn	04 46 19.8	-0.6
MTP				*e*S		Sn	04 46 38.2	-0.2
MTP	**Monte Pirata**	**1.23**	**191**	⇓*e*P		Pn	04 46 19.8	-0.6
MTP				*e*S		Sn	04 46 38.2	-0.2
HUMP	**Col San Antoni**	**1.27**	**204**	⇑*e*P		Pn	04 46 20.5	-0.3
HUMP				*e*S		Sn	04 46 39.1	-0.1
HUMP	**Col San Antoni**	**1.27**	**204**	⇑*e*P		Pn	04 46 20.5	-0.3
HUMP				*e*S		Sn	04 46 39.7	+0.5
SJG	**San Juan**	**1.43**	**214**	⇓*e*P		Pn	04 46 22.8	0.0
SJG	**San Juan**	**1.43**	**214**	⇓*e*P		Pn	04 46 22.8	0.0
AOPR	**Arecibo Observ**	**1.66**	**235**	⇑*e*P		Pn	04 46 25.4	-0.2
AOPR	**Arecibo Observ**	**1.66**	**235**	⇑*e*P		Pn	04 46 25.4	-0.2

IDC ***10*** *05:19:46.8±5.0, 18.90S×174.61W, h75km±44km, mb4.5/14, mb1 4.7/15, mb1mx4.7/16, mbtmp4.5/15, ML5.1/1, MS3.7/7, Ms1 3.7/7, ms1mx3.5/14, Error ellipse: s-maj=22.8km s-min=16.0km az=167.0*

ISCJB ***10*** *05:19:50.3±0.2, 18.92S±0.05×174.69W±0.04, h120km, mb4.8/83, Error ellipse: s-maj=8.2km s-min=3.7km az=155.4*

BJI ***10*** *05:19:50.5, 18.73S×174.31W, h124km, mB5.0/12, mb4.9/21*

NEIC ***10*** *05:19:51.5±0.2, 18.86S×174.68W, mb4.7/54, Error ellipse: s-maj=8.6km s-min=5.4km az=157.0*

GCMT ***10*** *05:19:54.4±0.4, 18.85S×174.06W, h135km±4km, MW5.0, Moment Tensor Solution. s23,c25; s69,c87; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.29±.18; $M_{\theta\theta}$-0.57±.25; $M_{\phi\phi}$1.86±.23; $M_{r\theta}$2.08±.12; $M_{\theta\phi}$-0.09±.27; $M_{\phi r}$2.16±.12; Best double couple: $M_0$3.40000×10^{16} NP1:ϕ_s331.00000°, δ24.00000°, λ-152.00000°. NP2:ϕ_s216.00000°, δ79.00000°, λ-69.00000°. Principal axes: T 3.2000, Plg31.0000°, Azm288.0000°; N 0.4200, Plg21.0000°, Azm31.0000°; P -3.6100, Plg51.0000°, Azm150.0000°; Data Used: II IC IU G.*

DJA ***10*** *05:20:34, 19.86S×176.31W, h465km, mb4.9/21*

ISC 10 05:19:52.0±0.2, 18.94S±0.06×174.65W±0.04, h122km, h122km±.3km: pP-P, n431, σ0.64/365, mb4.8/82, 130C-158D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
AFI	**Afiamalu**	**5.71**	**29**	*e*Pn		Pn	**05 21 05.3**	**-9.3**
	1μm,0.7s							
AFI				*e*Sn		Sn	**05 22 02.0**	**-17**
AFI	**Afiamalu**	**5.71**	**29**	P		Pn	**05 21 05.6**	**-9.0**
	41nm,0.3s,baz=3.5,slow=1.8,SNR=39							
AFI				S		Sn	**05 22 01.5**	**-17**
	255nm,0.3s,baz=242,slow=20,SNR=16							
MSVF	**Nonsavu**	**7.04**	**279**	Pn		Pn	**05 21 26.4**	**-6.1**
	241nm,1.0s							
RAR	**Rarotonga**	**14.16**	**102**	*e*Pn		Pn	**05 23 03.0**	**-4.2**
	91nm,0.6s							
RAR	**Rarotonga**	**14.16**	**102**	P		Pn	**05 23 02.7**	**-4.4**
	8.8nm,0.3s,baz=267,slow=8.8,SNR=22							
RAR				S		Sn	**05 25 26.1**	**-17**
	1.1nm,0.3s,baz=98,slow=14,SNR=2.3							
RAR				LR		LR	05 27 34.1	
	comp=Z,277nm,19.2s,baz=286,slow=33							
NORM	**Noumea**	**17.97**	**256**	*e*P		Pn	**05 23 56.1**	**+2.0**
DZM	**Mont Dzumac**	**17.98**	**257**	*e*P		Pn	**05 23 56.7**	**+2.4**
	165nm,1.1s							
DZM	**Mont Dzumac**	**17.98**	**257**	*e*P		Pn	**05 23 56.0**	**+1.7**
NOUC	**Port Laguerre**	**18.12**	**257**	*e*P		P	**05 23 57.8**	**+3.2**
URZ	**Urewera**	**20.55**	**199**	*e*P		P	**05 24 20.3**	**-0.6**
	26nm,0.6s							
URZ	**Urewera**	**20.55**	**199**	P		P	**05 24 20.1**	**-0.8**
	27nm,0.5s,baz=2.7,slow=3.5,SNR=23							
URZ				S		S	**05 27 55.6**	**-8.4**
	7.5nm,0.8s,baz=4.7,slow=18,SNR=3.8							
PAE	**Paea**	**23.83**	**91**	*e*P		P	**05 24 52.6**	**-1.4**
	32nm,1.3s,mb4.5							
PPT	**Papeete**	**23.84**	**91**	*e*P		P	**05 24 52.7**	**-1.5**
	149nm,1.4s,mb5.1							
PPT	**Papeete**	**23.84**	**91**	LR		LR	05 31 42.2	
	comp=Z,224nm,19.0s,baz=349,slow=30							
TIAR	**Tiarei**	**24.07**	**91**	*e*P		P	**05 24 54.8**	**-1.4**
	102nm,0.9s,mb5.1							
SNZO	**South Karori**	**24.09**	**200**	*e*P		P	**05 24 55.6**	**-0.5**
	150nm,1.5s,mb5.1							
HNR	**Honiara**	**26.35**	**287**	LR		LR	05 34 17.4	
	comp=Z,112nm,20.2s,baz=152,slow=33							
RPZ	**Rata Peaks**	**27.48**	**203**	P		P	**05 25 29.8**	**+3.2**
	24nm,0.7s,mb4.8,baz=304,slow=3.7,SNR=11							
EIDS	**Eidsvold**	**32.32**	**252**	*e*P		P	**05 26 09.1**	**-0.6**
	19nm,0.9s,mb4.8							
ARMA	**Armidale**	**32.59**	**243**	*e*P		P	**05 26 12.6**	**+0.7**
ARMA	**Armidale**	**32.59**	**243**	*e*P		P	**05 26 12.2**	**+0.3**
	12nm,0.8s,mb4.8							
CNB	**Canberra Magne**	**35.71**	**235**	*e*P		P	**05 26 38.9**	**+0.1**
CTA	**Charters Tower**	**36.81**	**262**	*e*P		P	**05 26 48.2**	**-0.2**
	44nm,0.9s,mb5.4							
CTA	**Charters Tower**	**36.81**	**262**	P		P	**05 26 48.7**	**+0.2**
CTA	**Charters Tower**	**36.81**	**262**	P		P	**05 26 48.7**	**+0.2**
	54nm,0.7s,mb5.6,baz=95,slow=10,SNR=51							
CTAO	**Charters Tower**	**36.81**	**262**	*e*P		P	**05 26 48.4**	**-0.1**
	72nm,1.0s,mb5.5							
CTAO	**Charters Tower**	**36.81**	**262**	P		P	**05 26 48.8**	**+0.4**
	75nm,0.9s,mb5.6							
PMG	**Port Moresby**	**38.15**	**279**	P		P	**05 26 58.6**	**-1.1**
	33nm,0.9s,mb5.2							
PMG				*e*PP		PP	05 28 23.4	-6.0
TOO	**Toolangi**	**39.36**	**233**	*e*P		P	**05 27 07.2**	**-2.4**
STKA	**Stephens Creek**	**41.31**	**243**	*e*P		P	**05 27 25.5**	**-0.2**
	12nm,0.9s,mb4.7							
STKA	**Stephens Creek**	**41.31**	**243**	P		P	**05 27 25.6**	**-0.1**
	15nm,0.9s,mb4.8,baz=98,slow=7.9,SNR=12							
WAKE	**Wake Island**	**42.18**	**333**	*e*P		P	**05 27 32.1**	**-0.7**
WRAB	**Tennant Creek**	**47.95**	**260**	*e*P		P	**05 28 17.3**	**-1.3**
	30nm,1.0s,mb5.1							
WRAB	**Tennant Creek**	**47.95**	**260**	P		P	**05 28 17.4**	**-1.2**
	32nm,1.0s,mb5.1							
ASAR	**Alice Springs**	**47.96**	**255**	P		P	**05 28 17.8**	**-0.9**
ASAR				PcP		PcP	05 29 45.5	+0.4
ASAR	**Alice Springs**	**47.96**	**255**	P		P	**05 28 17.8**	**-0.9**
	18nm,0.6s,mb5.1,baz=96,slow=8.1,SNR=298							
ASAR				PcP		PcP	05 29 45.5	+0.4
	3.9nm,0.5s,baz=101,slow=4.6,SNR=7.9							
KAKA	**Kakadu**	**51.13**	**269**	*e*P		P	**05 28 41.9**	**-0.9**
	100nm,0.6s							
KAKA				*e*PcP		PcP	05 29 49.5	-7.3
KAKA	**Kakadu**	**51.13**	**269**	P		P	**05 28 42.1**	**-0.7**
	680nm87nm,0.7s,mb5.9							
GUMO	**Guam**	**51.34**	**306**	P		P	**05 28 43.0**	**-1.2**
	51nm,0.8s,mb5.6,baz=141,slow=8.0,SNR=7.3							
GUMO	**Guam**	**51.34**	**306**	P		P	**05 28 45.7**	**+1.5**
	93nm,1.0s,mb5.8							
FORT	**Forrest**	**52.81**	**245**	*e*P		P	**05 28 54.0**	**-1.0**
	40nm,0.6s,mb5.6							
FORT	**Forrest**	**52.81**	**245**	*e*P		P	**05 28 53.9**	**-1.1**
	56nm,0.7s,mb5.7							
KNA	**Kununurra**	**53.92**	**264**	P		P	**05 29 02.9**	**-0.4**
	1μm111nm,0.6s							
FITZ	**Fitzroy Crossi**	**56.38**	**260**	*e*P		P	**05 29 20.3**	**-0.7**
	6.4nm,0.6s,mb4.8							
LBMI	**Labuha**	**59.52**	**281**	P		P	**05 29 43.2**	**+0.2**
	66nm,1.5s,mb5.5							
SBA	**Scott Base**	**59.65**	**184**	*e*P		P	**05 29 45.5**	**+2.6**
	23nm,0.9s,mb5.2							
TNTI	**Ternate**	**60.17**	**282**	P		P	**05 29 47.2**	**-0.2**
	5μm160nm,0.9s							
MBWA	**Marble Bar**	**61.29**	**256**	*e*P		P	**05 29 54.0**	**-0.9**
	30nm,1.3s,mb5.2							
KLBR	**Kellerberrin**	**61.58**	**244**	*e*P		P	**05 29 54.3**	**-2.4**
NWAO	**Narrogin (SRO)**	**61.89**	**242**	*e*P		P	**05 29 59.0**	**+0.2**
	21nm,1.3s,mb5.0							
MRSI	**Marisa**	**65.10**	**280**	P		P	**05 30 19.7**	**-0.5**
	24nm,1.1s,mb4.9							
SPSI	**Sidrap Palu**	**65.64**	**274**	P		P	**05 30 22.7**	**-1.0**
	21nm,0.8s,mb5.0							
PCI	**Palu**	**66.59**	**277**	P		P	**05 30 31.0**	**+1.3**
	709nm74nm,1.0s,mb5.5							
CASY	**Casey**	**66.72**	**205**	*e*P		P	**05 30 30.2**	**+0.7**
	5.4nm,0.9s,mb4.4							
CASY				*e*pP		pP	05 31 00.1	+0.5
KBKI	**Kotabaru**	**69.25**	**274**	P		P	**05 30 46.6**	**+0.2**
	3μm17nm,1.4s,mb4.7							
MAJO	**Mashiro**	**70.90**	**321**	*e*P		P	**05 30 55.3**	**-0.7**
	18nm,0.7s,mb5.0							
QSPA	**South Pole Qui**	**71.13**	**180**	*e*P		P	**05 30 58.0**	**+1.3**
	32nm,0.8s,mb5.2							
KKM	**Kota Kinabalu**	**72.45**	**283**	*e*P		P	**05 31 05.5**	**-0.3**
	18nm,0.6s,mb5.1							
KKM	**Kota Kinabalu**	**72.45**	**283**	P		P	**05 31 05.6**	**-0.2**
	516nm31nm,0.8s,mb5.2							
PCJI	**Pacitan**	**72.47**	**267**	P		P	**05 31 05.7**	**-0.2**
	98nm,0.8s,mb5.7							
SBUM	**Sibu**	**74.89**	**278**	P		P	**05 31 20.4**	**+0.4**
	12nm,1.0s,mb4.6							
TWG	**Pinlang**	**75.25**	**301**	*e*P		P	**05 31 20.1**	**-1.7**
	18nm,0.6s,mb5.0							
VES	**Vestal, Richgr**	**75.71**	**44**	⇓P		P	**05 31 23.6**	**-0.6**
	baz=76							
BFSC	**Mount Baldy Ra**	**75.73**	**46**	⇓P		P	**05 31 23.7**	**-0.7**
	baz=76							
SSLB	**Suanglung**	**75.80**	**302**	*e*P		P	**05 31 24.5**	**-0.5**
	29nm,0.9s,mb5.0							
MONP	**Monument Peak**	**75.82**	**48**	⇓P		P	**05 31 24.4**	**-0.4**
	baz=76							
TPUB	**Ta-pu**	**75.83**	**301**	*e*P		P	**05 31 24.1**	**-1.1**
	86nm,0.8s,mb5.5							
EDW2	**Edwards Air Fo**	**75.87**	**45**	⇑P		P	**05 31 25.0**	**-0.1**
	baz=76							
EDW2				⇑pP		pP	05 31 55.3	-0.4
	baz=76							
YSS	**Yuzh-Sakhalins**	**75.98**	**331**	*e*P		P	**05 31 26.1**	**+0.6**
	24nm,0.8s,mb5.0							
ISA	**Isabella**	**76.00**	**44**	⇓P		P	**05 31 26.0**	**+0.1**
	baz=76							
ISA	**Isabella**	**76.00**	**44**	*e*P		P	**05 31 25.9**	**+0.1**
	2.8nm,0.8s,mb4.0							
ISA				*e*pP		pP	05 31 55.7	-0.8
CMB	**Columbia Colle**	**76.19**	**41**	*e*P		P	**05 31 26.2**	**-0.7**
	3.8nm,0.9s,mb4.1							
LEM	**Lembang**	**76.25**	**267**	P		P	**05 31 28.5**	**+0.7**
	38nm,1.6s,mb4.9							
KSM	**Kuching**	**76.35**	**276**	*e*P		P	**05 31 28.7**	**+0.3**
	22nm,1.0s,mb4.8							
KSM	**Kuching**	**76.35**	**276**	P		P	**05 31 28.6**	**+0.2**
	22nm,1.1s,mb4.8							
BELC	**Belle Mtn. Jos**	**76.73**	**47**	⇑P		P	**05 31 29.8**	**-0.2**
	baz=77							
MPMC	**Manual Prospec**	**76.89**	**44**	P		P	**05 31 31.2**	**+0.4**
	baz=77,SNR=7.3							
MPMC				⇓pP		pP	05 32 00.9	-0.6
	baz=77							
GSC	**Goldstone**	**76.91**	**45**	⇓P		P	**05 31 30.5**	**-0.5**
	baz=77							
BC3	**Big Chuckawall**	**76.92**	**47**	⇓P		P	**05 31 31.3**	**+0.2**
	baz=77							
MTUM	**Tungsten Hills**	**76.94**	**43**	*e*P		P	**05 31 30.4**	**-0.7**
HEC	**Hector,Ludlow**	**76.96**	**46**	⇓P		P	**05 31 31.2**	**-0.1**
	baz=77							
WAKR	**Walker**	**77.07**	**41**	*e*P		P	**05 31 32.2**	**+0.4**
YBH	**Yreka Blue Hor**	**77.12**	**37**	P		P	**05 31 32.4**	**+0.4**
	2.5nm,0.8s,mb4.0,baz=214,slow=3.1,SNR=11							
YBH				pP		pP	05 32 02.0	-0.7
	3.4nm,0.9s,baz=229,slow=1.8,SNR=3.6							
GMRC	**Granite Mounta**	**77.39**	**46**	⇑P		P	**05 31 33.6**	**-0.1**
	baz=78							
IRM	**Iron Mountain**	**77.40**	**47**	⇑P		P	**05 31 33.9**	**+0.1**
	baz=78							
GRAC	**Grapevine Rang**	**77.51**	**44**	⇓P		P	**05 31 35.0**	**+0.7**
	baz=78							
113A	**Mohawk Valley,**	**77.62**	**49**	⇓P		P	**05 31 34.9**	**-0.1**
	baz=78							
U10A	**Ash Meadows, A**	**77.86**	**45**	⇑P		P	**05 31 36.5**	**+0.3**
	baz=78							
KSRS	**Korea Array**	**77.87**	**317**	P		P	**05 31 37.2**	**+0.9**
	5.8nm,0.8s,mb4.4,baz=134,slow=6.4,SNR=31							
KSRS				pP		pP	05 32 08.3	+1.3
	3.3nm,1.0s,baz=133,slow=6.1,SNR=3.6							
KSRS				LR		LR	06 01 24.2	
	comp=Z,19nm,19.7s,baz=204,slow=32							
Z13A	**Yuma Proving G**	**77.93**	**49**	⇓P		P	**05 31 36.8**	**+0.1**
	baz=78							
Y13A	**Salome**	**78.14**	**48**	⇓P		P	**05 31 37.8**	**0.0**
	baz=78							
W12A	**Cal Nev Ari**	**78.22**	**46**	⇑P		P	**05 31 38.1**	**-0.1**
	baz=78							
V12A	**Nelson**	**78.47**	**46**	⇓P		P	**05 31 39.8**	**+0.2**
	baz=79							
U11A	**Corn Creek**	**78.49**	**45**	⇓P		P	**05 31 40.4**	**+0.7**
	baz=79							
Z14A	**Wintersburg**	**78.52**	**49**	⇓P		P	**05 31 39.9**	**-0.1**
	baz=79							
S10A	**Tonopah Range,**	**78.54**	**43**	⇓P		P	**05 31 39.5**	**-0.4**
	baz=79,SNR=6.2							
S10A				⇑pP		pP	05 32 10.3	-0.5
	baz=79							
MOD	**Modoc**	**78.62**	**38**	*e*P		P	**05 31 39.7**	**-0.6**
	4.2nm,0.9s,mb4.3							
Y14A	**Wickenburg**	**78.78**	**48**	⇑P		P	**05 31 40.6**	**-0.8**
	baz=79							
K05A	**Summer Lake**	**78.80**	**37**	⇑P		P	**05 31 41.4**	**+0.1**
	baz=79							
K05A				⇓pP		pP	05 32 11.7	-0.3
	baz=79							
216A	**Three Points,**	**78.90**	**51**	⇑P		P	**05 31 42.2**	**+0.2**
	baz=79							
S11A	**Rachel**	**78.94**	**44**	⇓P		P	**05 31 42.1**	**0.0**
	baz=79							
R10A	**Warm Springs**	**78.94**	**43**	⇑P		P	**05 31 42.1**	**0.0**
	baz=79,SNR=6.0							
R10A				⇑pP		pP	05 32 13.4	+0.4
	baz=79							
T11A	**Corn Creek, Al**	**79.06**	**44**	⇑P		P	**05 31 43.0**	**+0.2**
	baz=79							
T11A				⇑pP		pP	05 32 13.7	+0.1
	baz=79							
U12A	**Valley of Fire**	**79.07**	**45**	⇓P		P	**05 31 43.2**	**+0.3**
	baz=79,SNR=6.1							
T12A	**Moapa**	**79.11**	**45**	⇑P		P	**05 31 43.4**	**+0.3**
	baz=79							
V13A	**Grand Canyon W**	**79.13**	**46**	⇑P		P	**05 31 42.7**	**-0.5**
	baz=79							
X14A	**Yava**	**79.14**	**48**	⇓P		P	**05 31 43.4**	**0.0**
	baz=79							
X14A				⇑pP		pP	05 32 14.2	0.0
	baz=79							
217A	**Green Valley**	**79.25**	**51**	⇓P		P	**05 31 44.0**	**0.0**
	baz=79,SNR=5.6							
217A				⇓pP		pP	05 32 15.3	+0.5
	baz=79							
Y15A	**Casa Rosa Ranc**	**79.27**	**49**	⇓P		P	**05 31 43.8**	**-0.3**
	baz=79							
Y15A				⇓pP		pP	05 32 14.9	+0.1
	baz=79							
W14A	**Seligman**	**79.40**	**47**	P		P	**05 31 45.4**	**+0.7**
	baz=80,SNR=8.6							
W14A				⇓pP		pP	05 32 16.1	+0.5
	baz=80							
R11A	**Troy Canyon, C**	**79.44**	**43**	⇑P		P	**05 31 44.2**	**-0.7**
	baz=80							
U13A	**Pakoon Wash**	**79.44**	**46**	P		P	**05 31 45.5**	**+0.5**
	baz=80,SNR=8.9							
S12A	**Delamar Landin**	**79.51**	**44**	P		P	**05 31 45.9**	**+0.7**
	baz=80,SNR=5.2							
S12A				⇓pP		pP	05 32 16.5	+0.5
	baz=80							
TUC	**Tucson**	**79.54**	**51**	*e*P		P	**05 31 46.0**	**+0.5**
TUC				*ep*P		pP	05 32 17.0	+0.6
P10A	**Eureka**	**79.60**	**42**	⇑pP		pP	05 32 15.7	-0.8
	baz=80							
Z16A	**Peralta Trail,**	**79.60**	**49**	⇓P		P	**05 31 46.1**	**+0.2**
	baz=80							
V14A	**Boquillas Ranc**	**79.61**	**47**	⇑P		P	**05 31 45.6**	**-0.2**
	baz=80,SNR=9.0							
X15A	**Humboldt**	**79.61**	**48**	⇓P		P	**05 31 46.0**	**+0.1**
	baz=80,SNR=6.9							
Q11A	**Duckwater**	**79.67**	**43**	⇑P		P	**05 31 46.5**	**+0.4**
	baz=80							
Q11A				⇑pP		pP	05 32 16.9	-0.1
	baz=80							
318A	**Bisbee**	**79.70**	**52**	⇓P		P	**05 31 46.6**	**+0.1**
	baz=80,SNR=5.2							
117A	**Oracle**	**79.71**	**50**	⇑P		P	**05 31 46.4**	**-0.1**
	baz=80							
117A				⇓pP		pP	05 32 16.7	-0.6
	baz=80							
T13A	**Saint George**	**79.81**	**45**	⇓P		P	**05 31 47.0**	**+0.1**
	baz=80							
Y16A	**Circle Bar Ran**	**79.84**	**49**	⇓P		P	**05 31 47.6**	**+0.4**
	baz=80							
218A	**Dragoon**	**79.92**	**51**	⇑P		P	**05 31 47.8**	**+0.2**
	baz=80							
U14A	**Mt Trumbull**	**79.98**	**46**	⇓P		P	**05 31 47.7**	**-0.1**
	baz=80,SNR=8.1							
R12A	**Pony Springs,**	**80.06**	**44**	⇓P		P	**05 31 48.6**	**+0.3**
	baz=80,SNR=5.8							
X16A	**Lo Mia Camp, P**	**80.14**	**49**	⇑P		P	**05 31 49.0**	**+0.2**
	baz=80,SNR=7.0							
S13A	**Holt Ranch, En**	**80.15**	**45**	⇓P		P	**05 31 48.8**	**+0.1**
	baz=80						

X18A **Snowflake** 81.26 49 ⇑P P 05 31 55.0 +0.3
baz=81
Q14A **Sevier Lake (B** 81.30 44 ⇓P P 05 31 55.2 +0.4
baz=82
NJ2 **Nanjing** 81.36 308 eP P 05 31 55.6 +0.3
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb5.2
Y19A **Nutrioso** 81.47 50 ⇓P P 05 31 56.5 +0.7
baz=82,SNR=6.1
G08A **Pilot Rock** 81.48 36 ⇓P P 05 31 55.6 0.0
baz=82,SNR=7.8
G08A ⇑pP pP 05 32 26.0 -0.6
baz=82
L11A **Cat Creek Ranc** 81.50 40 ⇑P P 05 31 55.6 -0.2
baz=82
L11A ⇑pP pP 05 32 25.3 -1.5
baz=82
R15A **Junction** 81.54 45 ⇓P P 05 31 57.0 +0.9
baz=82
Z20A **Nine Sixteen R** 81.55 51 ⇓P P 05 31 57.1 +0.8
baz=82,SNR=7.5
221A **Mesquite Ranch** 81.62 52 ⇑P P 05 31 57.9 +1.2
baz=82
X19A **St. Johns** 81.68 49 ⇓P P 05 31 57.8 +0.9
baz=82,SNR=5.9
N13A **Wendover, West** 81.72 42 ⇑P P 05 31 57.0 0.0
baz=82
S16A **Weppner Ranch,** 81.74 46 ⇑P P 05 31 56.7 -0.5
baz=82
MSU **Marysvale** 81.77 45 eP P 05 31 58.4 +1.1
MSU epP pP 05 32 29.2 +1.0
comp=Z,2.1nm,1.0s,mb3.9
V18A **Ganado** 81.86 48 ⇑P P 05 31 58.2 +0.4
baz=82,SNR=5.8
121A **Cookes Peak, D** 81.86 52 ⇓P P 05 31 58.6 +0.7
baz=82
Q15A **Fillmore** 81.89 44 ⇓P P 05 31 58.1 +0.2
baz=82
T17A **Navajo Res., N** 81.91 47 ⇓P P 05 31 58.5 +0.5
baz=82
W19A **Sanders** 81.95 49 ⇑P P 05 31 59.1 +0.7
baz=82
Y20A **Horse Springs,** 82.09 50 ⇑P P 05 31 58.7 -0.3
baz=82,SNR=6.9
R16A **Teasdale** 82.11 45 ⇑P P 05 31 59.2 +0.1
baz=82
BMO **Blue Mountains** 82.15 37 eP P 05 31 58.8 -0.3
comp=Z,2.8nm,1.0s,mb4.0
MFID **Camas Ranch** 82.17 39 ⇓P P 05 31 59.4 +0.1
baz=82
U18A **Rough Rock, Ch** 82.26 47 ⇓P P 05 32 00.6 +0.7
baz=82,SNR=6.4
X20A **Quemado** 82.31 50 ⇓P P 05 32 00.7 +0.5
baz=82
Z21A **St. Cloud Mine** 82.32 51 ⇑P P 05 32 00.7 +0.5
baz=82,SNR=9.5
W20A **Ramah** 82.59 49 ⇑P P 05 32 02.1 +0.5
baz=83,SNR=7.9
T18A **Mexican Hat** 82.62 47 ⇓P P 05 32 02.2 +0.5
baz=83,SNR=30
M14A **Sheep Mountain** 82.62 42 ⇑P P 05 32 01.9 +0.3
baz=83
Y21A **Point of Rocks** 82.65 50 ⇓P P 05 32 01.8 -0.2
baz=83,SNR=7.1
U19A **Dine' College,** 82.66 48 ⇓P P 05 32 02.3 +0.3
baz=83,SNR=10
U19A ⇓pP pP 05 32 33.2 +0.2
baz=83
R17A **Hanksville Air** 82.70 45 ⇑P P 05 32 02.0 -0.1
baz=83,SNR=6.3
X21A **Alamocita Cree** 82.78 50 ⇓P P 05 32 03.3 +0.7
baz=83
I12A **Atlanta** 82.80 39 P P 05 32 02.7 +0.2
baz=83,SNR=5.5
PMR **Palmer** 82.81 12 eP P 05 32 01.2 -0.9
comp=Z,8.0nm,1.0s,mb4.5
Z22A **Elephant Butte** 82.81 51 ⇓P P 05 32 02.8 0.0
baz=83,SNR=7.6
Z22A ⇑pP pP 05 32 34.3 +0.4
baz=83
S18A **Hurst Farm, Bl** 82.81 46 ⇓P P 05 32 02.3 -0.4
baz=83
TMUT **Trail Mountain** 82.82 44 eP P 05 31 57.4 -5.3
comp=Z,7.5nm,0.9s,mb4.5
F10A **Beach Ranch, E** 82.86 36 ⇓P P 05 32 01.9 -0.8
baz=83,SNR=7.0
TTA **Tatalina** 82.91 8 eP P 05 32 02.4 -0.2
CN2 **Changchun** 83.04 321 eP P 05 32 05.5 +1.7
CN2 eSP sP 05 32 51.1 +3.3
CN2 eS S 05 42 13.6 +0.6
CN2 pmax pmax
comp=Z,100nm,0.6s,mb5.8
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,20.0s
CN2 LR LR
comp=E,200nm,20.0s
CN2 LR LR
comp=Z,200nm,19.0s
T19A **Beclabito** 83.05 47 ⇑P P 05 32 03.9 -0.1
baz=83
324A **Moseley Ranch,** 83.09 54 ⇓P P 05 32 04.3 0.0
baz=83,SNR=9.2
DIV **Divide** 83.09 14 eP P 05 32 02.8 -0.8
comp=Z,7.6nm,0.7s,mb4.6
HLID **Hailey** 83.10 39 ⇓P P 05 32 04.2 +0.1
baz=83,SNR=7.3
HLID ⇓pP pP 05 32 34.7 -0.4
baz=83
HLID **Hailey** 83.10 39 eP P 05 32 04.6 +0.5
HLID epP pP 05 32 34.8 -0.4
Y22A **Socorro** 83.13 51 ⇓P P 05 32 05.1 +0.6
baz=83,SNR=6.2
J13A **Cove Ranch, Pi** 83.16 40 ⇓P P 05 32 04.6 +0.2
baz=83,SNR=6.7
J13A ⇑pP pP 05 32 35.5 0.0
baz=83
425A **Indio Mountain** 83.17 54 ⇑P P 05 32 04.9 +0.1
baz=83,SNR=14
SRU **San Rafael** 83.18 45 ⇑P P 05 32 05.0 +0.4
baz=83,SNR=9.3
SRU **San Rafael** 83.18 45 eP P 05 32 05.1 +0.5
comp=Z,4.4nm,0.8s,mb4.3
U20A **Newcomb** 83.18 48 ⇓P P 05 32 04.4 -0.3
baz=83
LAZ **Ladron** 83.22 50 eP P 05 32 05.5 +0.6
comp=Z,2.4nm,1.5s,mb3.8
R18A **Canyonlands Na** 83.23 46 ⇑P P 05 32 04.7 -0.2
baz=83,SNR=7.1
MNTX **Cornudas Mount** 83.28 53 eP P 05 32 05.4 +0.1
comp=Z,8.1nm,1.3s,mb4.4
626A **Big Bend Ranch** 83.29 56 ⇓P P 05 32 05.4 0.0
baz=83,SNR=6.9
224A **Cornudas Mount** 83.35 53 ⇓P P 05 32 06.2 +0.6
baz=84,SNR=9.3
H12A **Diamond D Ranc** 83.40 38 ⇓P P 05 32 05.5 -0.1
baz=84,SNR=5.2
S19A **Harvey Farm, M** 83.43 47 ⇓P P 05 32 06.1 +0.2
baz=84,SNR=7.4
PNL **Peninsula** 83.43 17 eP P 05 32 04.8 -0.6
PNL epP pP 05 32 35.5 -1.0
comp=Z,9.0nm,0.9s,mb4.6
Q18A **Rafter H Ranch** 83.44 45 ⇑P P 05 32 06.0 +0.1
baz=84,SNR=7.8
325A **Bean Ranch, Si** 83.45 54 ⇑P P 05 32 06.1 -0.1
baz=84,SNR=14
G12A **Big Creek, Yel** 83.45 38 ⇓P P 05 32 05.8 0.0
baz=84
G12A ⇓pP pP 05 32 36.5 -0.5
baz=84
I13A **Wildhorse Cree** 83.48 39 ⇑P P 05 32 06.3 +0.3
baz=84
BNM **Barren Site** 83.48 51 eP P 05 32 05.2 -1.1
comp=Z,2.0nm,0.8s,mb4.0
J14A **Carey** 83.51 40 ⇓P P 05 32 06.3 +0.1
baz=84,SNR=12
J14A ⇑pP pP 05 32 36.9 -0.4
baz=84
526A **Mary Lane Ranc** 83.55 55 ⇓P P 05 32 07.0 +0.3
baz=84,SNR=11
TXAR **Lajitas Array** 83.56 56 P P 05 32 07.2 +0.4
comp=Z,4.2nm,1.0s,mb4.2,baz=218,slow=6.9,SNR=32
O17A **Robinson Place** 83.60 44 ⇓P P 05 32 06.8 +0.1
baz=84,SNR=12
O17A ⇓pP pP 05 32 37.4 -0.5
baz=84
R19A **Curley Farm, L** 83.62 46 ⇓P P 05 32 06.9 0.0
baz=84,SNR=8.3
R19A ⇓pP pP 05 32 37.7 -0.3
baz=84
P18A **Preston Nutter** 83.63 44 ⇓P P 05 32 07.3 +0.4
baz=84
124A **Stringfield Ra** 83.68 52 ⇓P P 05 32 07.2 -0.2
baz=84,SNR=7.8
H13A **Challis** 83.76 39 ⇓P P 05 32 07.4 0.0
baz=84
H13A ⇓pP pP 05 32 38.2 -0.4
baz=84
K15A **Arbon** 83.77 41 ⇓P P 05 32 07.3 -0.2
baz=84
HWUT **Hardware Ranch** 83.80 42 eP P 05 32 07.5 -0.2
U21A **Nageezi** 83.82 48 ⇓P P 05 32 08.1 +0.2
baz=84,SNR=13
627A **Terlingua Ranc** 83.83 56 P P 05 32 08.4 +0.2
baz=84,SNR=13
F12A **Elk City** 83.85 37 ⇑P P 05 32 07.0 -0.8
baz=84,SNR=14
F12A ⇑pP pP 05 32 38.3 -0.7
baz=84
426A **McDonald Obser** 83.86 55 ⇓P P 05 32 08.3 0.0
baz=84,SNR=10
I14A **Mackay** 83.89 40 ⇑P P 05 32 08.3 +0.2
baz=84
I14A ⇑pP pP 05 32 38.9 -0.3
baz=84
225A **Deer Hill, Car** 83.89 53 ⇓P P 05 32 09.0 +0.6
baz=84,SNR=10.0
N17A **Moffit Pass** 83.92 43 ⇓P P 05 32 08.2 -0.1
baz=84
Q19A **Hogan Spring (** 83.95 45 ⇓P P 05 32 08.2 -0.3
baz=84
527A **Woodward Ranch** 83.96 55 ⇓P P 05 32 08.4 -0.4
baz=84,SNR=8.6
Z24A **Sheeppen Canyo** 84.03 52 ⇑P P 05 32 09.4 +0.3
baz=84
E12A **Beaver Dam Sad** 84.05 37 ⇓P P 05 32 08.0 -0.8
baz=84
E12A ⇑pP pP 05 32 39.6 -0.4
baz=84
G13A **Cobalt** 84.07 38 ⇑P P 05 32 08.1 -0.9
baz=84
MAW **Mawson** 84.08 199 LR LR 06 05 48.4
comp=Z,52nm,18.5s,baz=139,slow=33
WHN **Wuhan** 84.10 305 P P 05 32 04.0 -5.5
V22A **San Miguel Ran** 84.11 49 ⇑P P 05 32 08.8 -0.6
baz=84
R20A **Redvale** 84.17 46 ⇓P P 05 32 09.5 -0.2
baz=84
T21A **Navajo Lake** 84.18 48 ⇓P P 05 32 09.9 +0.2
baz=84
326A **Caldwell Ranch** 84.19 54 ⇑P P 05 32 09.6 -0.3
baz=84
J15A **Blackfoot** 84.22 40 P P 05 32 10.4 +0.6
baz=84,SNR=9.5
J15A ⇓pP pP 05 32 40.7 -0.2
baz=84
628A **Black Gap, Mar** 84.24 56 ⇑P P 05 32 10.0 -0.2
baz=84
Y24A **Capitan** 84.25 51 P P 05 32 10.9 +0.7
baz=84,SNR=12
125A **Gardner Draw,** 84.26 53 ⇓P P 05 32 10.5 +0.2
baz=84,SNR=5.7
GDL2 **Guadalupe Moun** 84.28 53 eP P 05 32 11.2 +0.8
W23A **Werner Place,** 84.30 50 ⇓P P 05 32 10.9 +0.5
baz=84,SNR=5.8
TRF **Thorofare Moun** 84.30 11 eP P 05 32 08.0 -1.7
comp=Z,5.0nm,0.8s,mb4.4
M17A **Scullys Gap (B** 84.31 43 ⇓P P 05 32 09.4 -0.9
baz=84
M17A ⇓pP pP 05 32 40.7 -0.7
baz=84
H14A **Leadore** 84.32 39 ⇑P P 05 32 10.2 0.0
baz=84,SNR=5.6
S21A **Coal Bank Pass** 84.32 47 ⇓P P 05 32 10.9 +0.5
baz=84
U22A **Llaves** 84.36 49 ⇓P P 05 32 10.4 -0.3
baz=84
226A **Malaga, Loving** 84.42 54 ⇓P P 05 32 10.6 -0.5
baz=85,SNR=8.1
427A **Hayter Ranch,** 84.43 55 ⇑P P 05 32 10.6 -0.6
baz=85,SNR=12
K16A **Soda Springs** 84.44 41 ⇓P P 05 32 09.9 -1.0
baz=85
P19A **Cripple Cowboy** 84.48 45 ⇓P P 05 32 11.1 -0.1
baz=85
Z25A **Roswell** 84.50 52 ⇑P P 05 32 12.3 +0.9
baz=85,SNR=7.3
C11A **Tepee Creek (N** 84.50 35 ⇑P P 05 32 11.0 0.0
baz=85,SNR=6.2
C11A ⇓pP pP 05 32 42.1 -0.2
baz=85
I15A **Monteview** 84.51 40 ⇓P P 05 32 11.1 -0.2
baz=85
I15A ⇓pP pP 05 32 42.2 -0.2
baz=85
V23A **Ortiz Mt. (NFS** 84.55 49 ⇑P P 05 32 12.2 +0.5
baz=85,SNR=8.8
Q20A **Ridgley Place,** 84.60 46 ⇑P P 05 32 11.9 0.0
baz=85,SNR=6.5
G14A **Jackson** 84.61 38 ⇑P P 05 32 12.0 +0.3
baz=85
G14A ⇑pP pP 05 32 42.8 -0.1
baz=85
528A **Cox Ranch, San** 84.61 56 ⇑P P 05 32 12.0 -0.1
baz=85,SNR=8.3
T22A **Edith** 84.63 48 ⇑P P 05 32 12.4 +0.4
baz=85
J16A **Bone** 84.66 41 ⇓P P 05 32 12.5 +0.5
baz=85
J16A ⇓pP pP 05 32 43.3 +0.2
baz=85
M18A **Lyman** 84.67 43 ⇑P P 05 32 11.6 -0.5
baz=85
M18A ⇑pP pP 05 32 43.0 -0.3
baz=85
O19A **Miners Draw (B** 84.71 44 ⇑P P 05 32 11.8 -0.5
baz=85
126A **Clayton Basin,** 84.74 53 ⇑P P 05 32 12.3 -0.3
baz=85,SNR=5.6
MCMT **McKenzie Canyo** 84.74 39 eP P 05 32 12.8 +0.5
comp=Z,2.6nm,1.0s,mb4.1
H15A **Lima** 84.75 39 ⇑P P 05 32 12.4 0.0
baz=85,SNR=5.8
H15A ⇓pP pP 05 32 43.7 +0.1
baz=85
MCK **McKinley** 84.80 11 eP P 05 32 11.7 -0.6
Y25A **Mesa, Roswell** 84.80 52 ⇓P P 05 32 12.9 0.0
baz=85,SNR=11
P20A **De Beque** 84.81 45 ⇓P P 05 32 13.0 +0.2
baz=85
K17A **Gardner Place,** 84.81 42 ⇓P P 05 32 12.1 -0.7
baz=85
K17A ⇑pP pP 05 32 44.0 0.0
baz=85
U23A **El Rito** 84.81 49 ⇑P P 05 32 13.6 +0.6
baz=85,SNR=6.9
R21A **Cimarron** 84.83 47 ⇓P P 05 32 13.7 +0.7
baz=85,SNR=8.9
E13A **Victor** 84.85 37 ⇑P P 05 32 12.4 -0.5
baz=85,SNR=5.3
E13A ⇑pP pP 05 32 43.0 -1.1
baz=85
W24A **Lazy 6 Ranch,** 84.86 50 ⇑P P 05 32 13.4 +0.2
baz=85,SNR=8.8
HYT **Haines Junctio** 84.92 17 eP P 05 32 13.2 +0.3
428A **Kincaid Ranch,** 84.93 55 ⇓P P 05 32 14.1 +0.4
baz=85,SNR=5.6
F14A **Wisdom** 84.97 38 ⇓pP pP 05 32 44.5 -0.2
baz=85
S22A **4UR Ranch, Cre** 85.03 47 ⇓P P 05 32 14.8 +0.8
baz=85,SNR=8.1
Z26A **Caprock** 85.05 53 ⇑P P 05 32 14.0 -0.2
baz=85,SNR=27
I16A **Newdale** 85.05 40 ⇑P P 05 32 14.5 +0.5
baz=85,SNR=8.2
I16A ⇑pP pP 05 32 44.9 -0.2
baz=85,SNR=6.3
D13A **Huson** 85.07 37 ⇑P P 05 32 13.4 -0.6
baz=85
D13A ⇑pP pP 05 32 44.3 -0.8
baz=85
328A **Wristen Ranch,** 85.11 55 ⇓P P 05 32 14.1 -0.5
baz=85,SNR=6.8
G15A **Dillon** 85.14 39 ⇑P P 05 32 14.4 0.0
baz=85,SNR=7.4
G15A ⇓pP pP 05 32 45.0 -0.6
baz=85,SNR=7.9
MENT **Mentasta** 85.15 14 eP P 05 32 13.5 -0.5
REDW **Red Top Meadow** 85.17 41 eP P 05 32 14.3 -0.3
comp=Z,8.3nm,1.3s,mb4.5
REDW epP pP 05 32 45.9 +0.1
TPAW **Teton Pass** 85.18 41 eP P 05 32 14.6 0.0
comp=Z,6.1nm,1.0s,mb4.5
TPAW epP pP 05 32 45.5 -0.3
DLMT **Dillon** 85.18 39 eP P 05 32 14.8 +0.3
comp=Z,5.5nm,0.9s,mb4.5
DLMT epP pP 05 32 45.3 -0.5
E14A **Clinton** 85.24 37 ⇓pP pP 05 32 45.2 -0.8
baz=85
127A **Arkansas Junct** 85.25 53 ⇑P P 05 32 15.0 -0.2
baz=85
J17A **Brown Place, J** 85.26 41 ⇓P P 05 32 15.2 +0.2
baz=85
SNOW **Snow King Moun** 85.29 41 eP P 05 32 15.2 +0.1
comp=Z,7.7nm,1.0s,mb4.6
SNOW epP pP 05 32 46.0 -0.3
K18A **Toltan Ranch,** 85.31 42 ⇓P P 05 32 15.6 +0.3
baz=86,SNR=5.8
K18A ⇓pP pP 05 32 46.0 -0.5
baz=86,SNR=7.0
IMW **Indian Meadow** 85.40 41 eP P 05 32 16.2 +0.5
comp=Z,4.7nm,0.9s,mb4.4
IMW epP pP 05 32 47.1 +0.2
Y26A **Elida** 85.45 52 ⇓P P 05 32 16.2 0.0
baz=86,SNR=6.2
LOHW **Long Hollow** 85.46 41 epP pP 05 32 47.1 -0.1
L19A **Farson** 85.47 43 ⇑P P 05 32 16.2 +0.1
baz=86
L19A ⇑pP pP 05 32 47.0 -0.3
baz=86
Q22A **Crested Butte,** 85.50 46 ⇑P P 05 32 16.5 +0.1
baz=86
LRM **Limekiln Ridge** 85.52 38 eP P 05 32 15.4 -0.8
LRM epP pP 05 32 47.3 -0.2
N20A **Spence Gulch,** 85.55 44 ⇓P P 05 32 16.2 -0.3
baz=86
N20A ⇓pP pP 05 32 47.4 -0.4
baz=86
W25A **X Bar L Ranch,** 85.56 51 ⇑P P 05 32 16.2 -0.5
baz=86,SNR=7.6
SMCO **Snowmass** 85.61 46 eP P 05 32 17.3 +0.4
J18A **Kendall Valley** 85.61 41 P P 05 32 16.7 -0.1
baz=86,SNR=8.7
J18A pP pP 05 32 47.5 -0.5
baz=86,SNR=7.5
H16A **Russell Place,** 85.64 40 ⇑P P 05 32 16.8 -0.1
baz=86,SNR=6.9
H16A pP pP 05 32 48.4 +0.3
baz=86,SNR=7.4
Z27A **Tatum** 85.64 53 ⇓P P 05 32 16.2 -0.9
baz=86,SNR=6.5
FLWY **Flagg Ranch** 85.64 40 eP P 05 32 17.5 +0.6
comp=Z,7.6nm,1.0s,mb4.6
FLWY epP pP 05 32 48.7 +0.6
CHMT **Chamberlain Mo** 85.65 37 eP P 05 32 16.8 -0.1
CHMT epP pP 05 32 47.1 -1.0
BW06 **Boulder Array** 85.68 42 ⇑P P 05 32 16.5 -0.6
baz=86
BW06 ⇓pP pP 05 32 47.5 -0.9
baz=86
BW06 **Boulder Array** 85.68 42 eP P 05 32 16.8 -0.3
BW06 epP pP 05 32 47.3 -1.1
V25A **Rancho No Teng** 85.72 50 ⇓P P 05 32 16.8 -0.7
baz=86
BOZ **Bozeman (W)** 85.91 39 ⇑P P 05 32 18.1 0.0
baz=86,SNR=5.6
BOZ ⇑pP pP 05 32 49.0 -0.4
baz=86
BOZ **Bozeman (W)** 85.91 39 eP P 05 32 18.2 +0.1
comp=Z,3.2nm,0.9s,mb4.2
BOZ epP pP 05 32 48.7 -0.7
Y27A **Causey** 85.93 52 P P 05 32 18.4 -0.2
baz=86,SNR=15
F16A **Kennard Place,** 85.98 39 ⇑pP pP 05 32 49.2 -0.6
baz=86
N21A **Black Mountain** 86.00 45 ⇓P P 05 32 18.9 +0.1
baz=86
COLA **College** 86.04 11 eP P 05 32 17.3 -1.1
comp=Z,15nm,0.8s,mb5.0
COLA epP pP 05 32 50.0 +0.4
IPM **Ipoh** 86.09 276 P P 05 32 20.4 +0.6
comp=Z,20nm,0.9s,mb5.0
S24A **Houchin Ranch,** 86.11 48 ⇓P P 05 32 19.9 +0.6
baz=86
ILAR **Eielson Array** 86.13 12 P P 05 32 17.4 -1.3
comp=Z,2.4nm,0.5s,mb4.4,baz=232,slow=5.4,SNR=37
A13A **Flathead Natio** 86.14 35 ⇑pP pP 05 32 50.3 -0.2
baz=86
MSTX **Muleshoe** 86.25 52 ⇓P P 05 32 20.2 +0.1
baz=86,SNR=13
V26A **Tequesquite Ra** 86.31 50 ⇑P P 05 32 20.2 -0.1
baz=86
X27A **F and S Farms,** 86.31 52 ⇓P P 05 32 20.7 +0.3
baz=86
E16A **East Helena** 86.35 38 ⇓pP pP 05 32 51.5 -0.1
baz=86
HRY **Holter Researc** 86.36 38 eP P 05 32 19.9 -0.4
comp=Z,2.3nm,0.7s,mb4.2
O22A **Kremmling** 86.37 45 ⇓P P 05 32 20.3 -0.3
baz=86
M21A **Separation Pea** 86.52 44 ⇑P P 05 32 20.6 -0.6
baz=87
A14A **Double T Ranch** 86.70 35 ⇑P P 05 32 21.3 -0.6
baz=87
A14A ⇑pP pP 05 32 52.2 -1.0
baz=87
KULM **Kulim** 86.70 277 eP P 05 32 23.8 +0.9
N22A **Wattenberg Ran** 86.73 45 ⇑P P 05 32 22.0 -0.3
baz=87
B15A **Bradely Ranch,** 86.81 36 ⇑P P 05 32 22.8 +0.3
baz=87
BJI **Beijing** 87.04 314 P P 05 32 24.4 +0.6
BJI pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
A15A **Johnson Ranch,** 87.08 36 ⇑P P 05 32 23.2 -0.6
baz=87
JCT **Junction City** 87.09 57 eP P 05 32 24.0 -0.3
N23A **Red Feather La** 87.12 45 ⇓P P 05 32 23.1 -1.1
baz=87
DAWY **Dawson** 87.12 15 eP P 05 32 23.7 0.0
D17A **Six Diamond Ra** 87.26 38 ⇑P P 05 32 24.6 -0.1
baz=87
D17A ⇓pP pP 05 32 55.3 -0.8
baz=87
EGAK **Eagle** 87.32 14 eP P 05 32 24.4 -0.1
comp=Z,34nm,0.6s,mb5.5
L22A **Ellis Ranch, M** 87.33 44 ⇓P P 05 32 25.3 +0.1
baz=88
O24A **Longmont** 87.35 46 ⇓P P 05 32 25.4 0.0
baz=88
E18A **Harlowton** 87.41 39 ⇓pP pP 05 32 56.2 -0.6
baz=88
C17A **Wharram Farm,** 87.47 37 ⇑P P 05 32 25.5 -0.2
baz=88
C17A ⇓pP pP 05 32 56.8 -0.3
baz=88
I21A **Big Trails, Te** 87.63 42 ⇑P P 05 32 26.3 -0.3
baz=88
A16A **West Butte Ran** 87.69 36 ⇑P P 05 32 26.2 -0.5
baz=88
A16A ⇑pP pP 05 32 57.6 -0.5
baz=88
L23A **Garrett** 87.85 44 ⇓P P 05 32 26.8 -0.9
baz=88
PLCA **Paso Flores** 88.02 132 eP P 05 32 29.4 +0.7
comp=Z,24nm,1.6s,mb5.0
PLCA **Paso Flores** 88.02 132 P P 05 32 29.2 +0.5
comp=Z,2.5nm,0.9s,mb4.2,baz=207,slow=2.3,SNR=2.8
PLCA LR LR 06 03 47.7
comp=Z,58nm,18.6s,baz=332,slow=30
A17A **Triple J Farms** 88.19 36 ⇑P P 05 32 28.4 -0.7
baz=88
GYA **Guiyang** 88.65 298 P P 05 32 31.8 0.0
GYA pP pP 05 33 03.7 +0.4
GYA sP sP 05 33 17.5 +1.4
GYA PP PP 05 36 04.3 +1.9
GYA SKS 05 42 48.0
GYA S S 05 43 06.9 -1.7
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,80nm,5.9s

SYO	Syowa Base	88.91	192	||P	P	05 32 30.6	-1.7	
VNA1	Neumayer--Stat	90.14	176		eP	P	05 32 35.9	-2.1	
HHC	Hu-ho-hao-te	90.56	313		eP	P	05 32 40.7	+0.3	
HHC					pP	pP	05 33 13.3	+1.4	
HHC					sP	sP	05 33 26.1	+1.4	
HHC					PP	PP	05 36 18.8	+1.6	
HHC					SKS		05 42 57.2		
HHC					eS	S	05 43 23.0	-2.6	
HHC					sS	sS	05 44 19.3	-0.7	
HHC					SS	SS	05 49 28.8	-1.3	
HHC					pmax	pmax			
	comp=Z,23nm,1.0s,mb5.3								
HHC					pmax	pmax			
	comp=Z,70nm,5.8s								
KMI	Kunming	91.48	296		P	P	05 32 47.9	+2.9	
KMI					pmax	pmax			
	comp=Z,10.0nm,0.6s,mb5.1								
INK	Inuvik	91.97	14		eP	P	05 32 45.3	-1.0	
LCO	Las Campanas	92.53	122		eP	P	05 32 50.7	+0.8	
CMAR	Chiang Mai Arr	92.59	289		P	P	05 32 51.5	+1.1	
	comp=Z,5.3nm,1.0s,mb4.8,baz=102,slow=3.1,SNR=19								
CD2	Chengdu	92.63	302		P	P	05 32 49.5	-0.7	
CD2					pmax	pmax			
	comp=Z,10.0nm,0.5s,mb5.4								
CHTO	Chiang Mai	92.71	289		eP	P	05 32 52.3	+1.4	
	comp=Z,3.5nm,0.8s,mb4.7								
CHTO	Chiang Mai	92.71	289		P	P	05 32 52.4	+1.6	
YKA	Yellowknife Ar	93.80	24		P	P	05 32 54.2	-0.6	
YKA	Yellowknife Ar	93.80	24		P	P	05 32 54.2	-0.6	
	comp=Z,0.9nm,0.9s,mb4.1,baz=233,slow=4.5,SNR=7.6								
LZH	Lanzhou	94.36	307		eP	P	05 32 59.0	+1.0	
LZH					pP	pP	05 33 30.4	+0.8	
LZH					sP	sP	05 33 42.5	+0.1	
LZH					pmax	pmax			
	comp=Z,15nm,1.0s,mb5.3								
ECSD	EROS Data Cent	94.59	45		eP	P	05 32 58.8	-0.1	
SONM	Songino Array	96.67	318		P	P	05 33 08.4	+0.1	
	comp=Z,0.3nm,0.3s,mb4.2,baz=134,slow=4.2,SNR=3.4								
LPAZ	La Paz	99.70	111		P	Pdif	05 33 24.7	+2.8	
	comp=Z,1.2nm,0.9s,baz=180,slow=3.0,SNR=3.3								
LPAZ					LR	LR	06 07 30.6		
	comp=Z,64nm,20.9s,baz=350,slow=29								
ZALV	Zalesovo Beam	111.25	321		PKiKP	PKiKP	05 38 10.1	-1.0	
	comp=Z,0.9nm,0.6s,baz=132,slow=2.1,SNR=3.3								
MK31	Makanchi Array	112.42	314		ePKPdf	PKiKP	05 38 13.5	0.0	
MKAR	Makanchi Array	112.42	314		PKiKP	PKiKP	05 38 13.1	-0.5	
	comp=Z,0.4nm,0.2s,baz=91,slow=2.5,SNR=4.6								
ARCES	ARCESS Array B	127.92	351		PKP	PKPdf	05 38 42.4	-0.3	
	comp=Z,2.2nm,0.8s,baz=9.4,slow=1.2,SNR=14								
FINES	FINESS Array B	135.10	346		PKhKP	PKPpre	05 38 53.4		
	comp=Z,0.9nm,0.6s,baz=231,slow=1.2,SNR=4.4								
FINES					PKP	PKPdf	05 38 57.8	+1.3	
	comp=Z,1.6nm,0.8s,baz=291,slow=1.6,SNR=6.2								
AKASG	Malin Array Be	143.07	335		PKhKP	PKPpre	05 39 06.3		
	comp=Z,0.5nm,0.4s,baz=42,slow=4.0,SNR=4.4								
MALT	Malatya	145.40	311		ePKPdf	PKPbc	05 39 16.9	+0.9	
MALT	Malatya	145.40	311	⇑	iP	PKPbc	05 39 17.0	+1.1	
MALT	Malatya	145.40	311		P	PKPbc	05 39 16.9	+1.0	
KWP	Kalwaria Pacla	146.36	340	⇓	iP	PKPbc	05 39 18.9	+0.4	
STHS	Stebnicka Huta	147.02	341		ePKP	PKPab	05 39 21.9	-0.2	
BUR08	Bucovina Ar. S	147.11	335		ePKPbc	PKPbc	05 39 22.0	+1.4	
BURAR	Bucovina Array	147.12	335	⇑	iP	PKPbc	05 39 21.8	+1.1	
CLL	Collm	147.14	351		i PKPbc	PKPbc	05 39 20.8	+0.2	
	comp=Z,3.0nm,0.5s								
CLL					epPKPbc	pPKPbc	05 39 53.0	-0.2	
UPC	Upice	147.38	347		ePKP	PKPbc	05 39 22.4	+1.1	
TESR		147.39	332	⇓	iP	PKPbc	05 39 20.5	-1.0	
CRVS	Cervenica-Dubn	147.40	340		ePKP	PKPbc	05 39 20.1	-1.3	
CRVS					e		05 39 23.9		
BRG	Berggiesshubel	147.41	350		ePKP	PKPbc	05 39 22.1	+0.7	
	comp=Z,5.5nm,0.9s								
BRG					pPKP	pPKPdf	05 39 54.8	+3.1	
	comp=Z,4.0nm,0.9s								
DPC	Dobruska-Polom	147.46	347		ePKP	PKPbc	05 39 21.5	0.0	
OKC	Ostrava-Krasne	147.51	345		ePKP	PKPbc	05 39 21.3	-0.4	
OKC					ex	x	05 40 13.2		
PVCC	Panska Ves	147.64	349		ePKP	PKPbc	05 39 22.6	+0.6	
PVCC					ex	x	05 40 13.4		
TRPA	Tarpa	147.70	338	⇑	iP	PKPbc	05 39 23.1	+0.8	
MORC	Moravsky Berou	147.72	345	⇓	iP	PKPbc	05 39 22.0	-0.2	
VRI	Vrincioaia	147.85	331	⇑	iP	PKPbc	05 39 23.0	+0.3	
MOX	Moxa	147.97	352		ePKP	PKPab	05 39 26.2	+0.4	
	comp=Z,16nm,1.7s								
BR131	Keskin Array S	148.01	316		ePKPbc	PKPbc	05 39 23.5	+0.1	
BR131					ePKPab	PKPab	05 39 27.3	+0.9	
BRTR	Keskin Array B	148.01	316		PKPbc	PKPbc	05 39 23.4	+0.1	
	comp=Z,12nm,0.8s,baz=70,slow=2.0,SNR=21								
KECS	Kecovo	148.08	341		ePKP	PKPbc	05 39 24.0	+0.8	
KECS					e		05 39 26.9		
PRU	Pruhonice	148.16	349		ePKP	PKPbc	05 39 24.4	+1.0	
NKC	Novy Kostel	148.26	351		ePKP	PKPab	05 39 28.8	+1.8	
VRAC	Vranov	148.38	346	⇓	iP	PKPbc	05 39 23.9	-0.1	
MLR	Muntele Rosu	148.49	332	⇓	iP	PKPbc	05 39 25.3	+0.9	
VYHS	Vyhne	148.56	343		ePKP	PKPbc	05 39 24.3	-0.2	
VYHS					e		05 39 28.8		
DRGR		148.77	337	⇓	iP	PKPbc	05 39 25.1	0.0	
VOIR		148.93	333	⇑	iP	PKPbc	05 39 27.6	+2.1	
KHC	Kasperske Hory	149.16	349		ePKPdf	PKPdf	05 39 20.5	-1.2	
KHC					ePKPbc	PKPbc	05 39 26.4	+0.4	
KHC					ePKPab	PKPab	05 39 31.1	+0.4	
KHC	Kasperske Hory	149.16	349		ePKP	PKPbc	05 39 26.3	+0.3	
KHC					esPKP		05 40 15.3		
FLN	La Foliniere	149.88	8		ePKP1	PKPbc	05 39 26.7	-1.1	
LDF	La Druitiere	150.09	7		ePKP1	PKPbc	05 39 27.1	-1.2	
	comp=Z,3.8nm,0.5s								
BZS	Buzias	150.17	337	⇓	iP	PKPbc	05 39 27.6	-1.0	
GRR	Gorron	150.19	8		ePKP1	PKPbc	05 39 28.5	0.0	
	comp=Z,8.6nm,0.6s								
MEZF	Maizieres J'vi	150.51	0		ePKP1	PKPbc	05 39 29.2	-0.1	
CDF	Champ du Feu	150.56	357		ePKP1	PKPbc	05 39 29.3	-0.1	
	comp=Z,4.5nm,0.6s								
BFO	Black Forest	150.58	356		ePKPdf	PKPdf	05 39 23.0	-1.0	
BFO					ePKPbc	PKPbc	05 39 29.7	+0.2	
BFO					ePKPab	PKPab	05 39 36.8	+0.3	
HAU	Haudompre	150.99	359		ePKP1	PKPbc	05 39 30.2	-0.2	
	comp=Z,15nm,0.7s								
HINF	Hinteralfeld	151.17	358		ePKP1	PKPbc	05 39 30.3	-0.5	
MOTA	Moosalm	151.28	352	⇑	iPKiKP	PKPbc	05 39 32.1	+1.0	
	comp=Z,3.7nm,0.8s								
WTTA	Wattenberg	151.28	351	⇑	iPKiKP	PKPbc	05 39 31.4	+0.3	
	comp=Z,6.4nm,0.5s								
ABTA	Abfaltersbach	151.65	350	⇑	iPKiKP	PKPbc	05 39 31.7	-0.3	
	comp=Z,6.9nm,0.7s								
LOR	Lormes	151.72	2		ePKP1	PKPbc	05 39 31.8	-0.3	
	comp=Z,5.6nm,0.5s								
SSF	Saint Saulge	151.91	3		ePKP1	PKPbc	05 39 32.4	-0.2	
	comp=Z,11nm,0.8s								
MFF	Saint Martin d	152.04	8		ePKP1	PKPbc	05 39 31.7	-1.2	
AVF	Avril sur Loir	152.17	3		ePKP1	PKPbc	05 39 32.5	-0.7	
	comp=Z,5.6nm,0.7s								
BGF	Bois d'Agland	152.38	4		ePKP1	PKPbc	05 39 33.3	-0.3	
	comp=Z,19nm,0.8s								
CABF	La Chapelle	152.39	359		ePKP1	PKPbc	05 39 34.3	+0.6	
	comp=Z,5.5nm,0.6s								
TCF	Toulx Ste Croi	152.60	5		ePKP1	PKPbc	05 39 33.5	-0.6	
	comp=Z,4.8nm,0.5s								
ESDC	Sonseca Array	157.82	19		PKPab	PKPab	05 40 09.3	+1.8	
	comp=Z,0.2nm,0.5s,baz=328,slow=4.5,SNR=6.8								
TORD	Torodi Ar. Bea	173.25	148		PKP	PKPdf	05 39 46.1	-1.6	
	comp=Z,1.2nm,0.8s,baz=354,slow=1.6,SNR=7.2								
TORD					PKPab	PKPab	05 41 15.6	-0.4	
	comp=Z,4.5nm,0.9s,baz=227,slow=4.0,SNR=17								
TORD					PP	PP	05 45 09.2	+2.4	
	comp=Z,1.7nm,1.1s,baz=244,slow=1.6,SNR=5.2								

*NEIC **10** 05:22:18.3,35.76N×21.92E,h16km, MD3.5(ATH), After ATH.*
*CSEM **10** 05:22:18.3,35.76N×21.92E,h16km, MD3.5, After ATH*
ATH 10 05:22:18.3,35.76N±21.92E,h16km±4km,MD3.5/11, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KYTH	Kithira	1.04	60	ePn	Pn	05 22 38.4	+0.1
KYTH	Kithira	1.04	60	ePN	Pn	05 22 38.4	+0.1
KYTH	Kithira	1.04	60	ePn	Pn	05 22 38.4	+0.1
PYL	PYLOS	1.14	353	ePN	Pn	05 22 40.4	+0.8
PYL	PYLOS	1.14	353	ePn	Pn	05 22 40.4	+0.8
VLI	Veliai	1.26	40	ePn	Pn	05 22 41.5	+0.2
VLI	Veliai	1.26	40	ePN	Pn	05 22 41.5	+0.2
VLI	Veliai	1.26	40	ePn	Pn	05 22 41.5	+0.2
ITM	Ithomi	1.42	0	ePn	Pn	05 22 44.2	+0.8
ITM	Ithomi	1.42	0	ePN	Pn	05 22 44.2	+0.8
ITM	Ithomi	1.42	0	ePn	Pn	05 22 44.2	+0.8
VLX	Vlachokerasia	1.65	13	ePN	Pn	05 22 48.4	+1.8
VLX	Vlachokerasia	1.65	13	ePn	Pn	05 22 48.4	+1.8
VAM	Vamos	1.89	100	ePn	Pn	05 22 52.1	+2.2
VAM	Vamos	1.89	100	ePN	Pn	05 22 52.1	+2.2
VAM	Vamos	1.89	100	ePn	Pn	05 22 52.1	+2.2
DID	Didima	2.04	31	ePN	Pn	05 22 55.0	+3.0
DID	Didima	2.04	31	ePn	Pn	05 22 55.0	+3.0
GUR	Goura	2.20	9	ePN	Pn	05 22 57.7	+3.6
GUR	Goura	2.20	9	ePn	Pn	05 22 57.7	+3.6
LTK	Loutraki	2.41	20	ePN	Pn	05 22 55.8	-1.2
LTK	Loutraki	2.41	20	ePn	Pn	05 22 55.8	-1.2
VLY	Voula,Athens	2.57	35	ePb	Pb	05 23 02.3	-1.8
VLY	Voula,Athens	2.57	35	ePB	Pb	05 23 02.2	-1.9
VLY	Voula,Athens	2.57	35	ePb	Pb	05 23 02.3	-1.8
AGG	Agios Georgios	3.27	6	ePN	Pn	05 23 11.2	+2.3
AGG	Agios Georgios	3.27	6	ePN	Pn	05 23 11.2	+2.3
AGG	Agios Georgios	3.27	6	ePn	Pn	05 23 11.2	+2.3

WEL 10 05:43:46.9±0.4,37.73S×176.20E,h174km±5km,ML3.7/7, Error ellipse: s-maj=4.8km s-min=4.5km az=0.0,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	0.89	127	PN	Pn	05 44 13.4	+0.2
URZ				SN	Sn	05 44 33.3	-0.2
MWZ	Matawai	1.21	120	PN	Pn	05 44 15.7	0.0
MWZ				SN	Sn	05 44 37.4	-0.5
RAHZ	Arahi	1.38	150	PN	Pn	05 44 17.5	+0.3
RAHZ				SN	Sn	05 44 40.9	+0.4
NMHZ	Naumai	1.45	161	PN	Pn	05 44 18.5	+0.7
NMHZ				SN	Sn	05 44 42.5	+0.7
BKZ	Black Stump Fm	1.45	171	PN	Pn	05 44 17.4	-0.5
BKZ				SN	Sn	05 44 40.8	-1.1
TWVZ	Taurewa	1.47	204	PN	Pn	05 44 18.1	+0.1
NGZ	Ngauruhoe	1.52	198	PN	Pn	05 44 19.4	+0.9
TUVZ	Tukino	1.59	195	PN	Pn	05 44 19.8	+0.5
WNVZ	Wahianoa	1.66	196	PN	Pn	05 44 20.3	+0.4
MXZ	Matakaoa Point	1.68	85	PN	Pn	05 44 20.2	+0.1
PKVZ	Pokaka	1.69	203	PN	Pn	05 44 20.8	+0.6
MOVZ	Moawhango	1.71	192	PN	Pn	05 44 20.1	-0.3
KNZ	Kokohu	1.73	138	PN	Pn	05 44 20.4	-0.2
MTVZ	Mangateitei	1.75	199	PN	Pn	05 44 21.2	+0.3
CNGZ	Carnagh Station	1.75	116	PN	Pn	05 44 21.4	+0.5
MCHZ	McNeill Hill	1.75	167	PN	Pn	05 44 21.2	+0.3
BHHZ	Black Hill Sta	1.76	183	PN	Pn	05 44 20.4	-0.6
PRGZ	Paritu Road	1.78	132	PN	Pn	05 44 20.9	-0.3
MHGZ	Mahia Peninsul	1.95	137	PN	Pn	05 44 22.8	-0.2
KAHZ	Kahuranaki	2.13	166	PN	Pn	05 44 24.5	-0.4
PNHZ	Pukenui	2.18	180	PN	Pn	05 44 24.6	-1.0
WAZ	Wanganui	2.23	205	PN	Pn	05 44 26.0	-0.2
TSZ	Takapari Road	2.33	184	PN	Pn	05 44 26.1	-1.2
WPHZ	Waipukurau	2.34	175	PN	Pn	05 44 26.2	-1.2
PXZ	Pawanui	2.35	168	PN	Pn	05 44 26.4	-1.1
PXZ				SN	Sn	05 44 56.6	-2.5
PRHZ	Porangahau	2.56	172	PN	Pn	05 44 28.5	-1.4
DVHZ	Dannevirke	2.56	181	PN	Pn	05 44 28.2	-1.7
BFZ	Birch Farm	2.95	179	PN	Pn	05 44 32.4	-2.2
MRZ	Mangatainoka R	2.97	189	PN	Pn	05 44 32.4	-2.4
TIWZ	Tintock	3.05	184	PN	Pn	05 44 33.5	-2.4
OGWZ	Otaki Gorge	3.18	194	PN	Pn	05 44 35.0	-2.4
HOWZ	Holdsworth Sta	3.21	189	PN	Pn	05 44 35.0	-2.8
KIW	Kapiti Island	3.28	197	PN	Pn	05 44 36.0	-2.7
TMWZ	Te Maipa	3.38	184	PN	Pn	05 44 36.2	-3.7
MTW	Mount Morrison	3.46	189	PN	Pn	05 44 37.6	-3.4
CAW	Cannon Point	3.48	194	PN	Pn	05 44 38.2	-3.0
TRWZ	Traveller	3.68	186	PN	Pn	05 44 40.7	-3.1
MSWZ	Moikau Station	3.75	191	PN	Pn	05 44 39.5	-5.1
SNZO	South Karori	3.76	197	PN	Pn	05 44 41.2	-3.4
PLWZ	Palliser	3.90	190	PN	Pn	05 44 42.8	-3.7
TUWZ	Tuamarina	4.08	205	PN	Pn	05 44 45.4	-3.4
NNZ	Nelson	4.11	211	PN	Pn	05 44 45.8	-3.3
QRZ	Quartz Range	4.20	222	PN	Pn	05 44 47.2	-3.2
BSWZ	Blackbirch Sta	4.36	204	ePN	Pn	05 44 49.1	-3.3
THZ	Tophouse	4.76	211	PN	Pn	05 44 54.8	-2.7
KHZ	Kahutara	5.11	203	PN	Pn	05 44 58.2	-3.8
LTZ	Lake Taylor	5.87	210	PN	Pn	05 45 07.7	-4.3

*NEIC **10** 06:00:31.5, 17.94N×101.46W, h16km, MD3.8(MEX), After MEX.*
MEX 10 06:00:31.4±0.8,17.92N×101.50W,h26km±32km,MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	Zihuatanejo	0.32	175	eP	Pb	06 00 36.9	-1.8
ZIIG				i S	Sb	06 00 42.5	-1.2
ZIIG	Zihuatanejo	0.32	175	eP	Pb	06 00 36.9	-1.8
ZIIG				i S	Sb	06 00 42.5	-1.2
MEIG	Mezcala	1.79	90	eP	Pn	06 00 58.9	-1.7
MEIG				i S	Sn	06 01 18.6	-3.8
MMIG	Aquila	1.80	282	i P	Pn	06 00 58.8	-2.0
MMIG				i S	Sn	06 01 19.0	-3.7
ACX	Acapulco	1.88	124	i P	Pn	06 01 02.2	+0.3
ACX	Acapulco	1.88	124	i P	Pn	06 01 02.2	+0.3
PPM	Popocatepetl	2.95	67	i P	Pn	06 01 15.2	-1.4
PPM				i S	Sn	06 01 48.4	-2.9
PPM	Popocatepetl	2.95	67	i P	Pn	06 01 15.2	-1.4
PPM				i S	Sn	06 01 48.4	-2.9
UTMO	Huajuapan	3.52	91	i P	Pn	06 01 23.2	-1.2
UTMO				i S	Sn	06 02 03.0	-2.3
PNIG	Pinotepa	3.56	115	i P	Pn	06 01 22.3	-2.7
PNIG				i S	Sn	06 02 03.7	-2.7
PNIG	Pinotepa	3.56	115	i P	Pn	06 01 22.3	-2.7
PNIG				i S	Sn	06 02 03.7	-2.7

IDC 10 06:03:15.1±3.8,10.94S×166.76E,h0km,mb3.8/3, mb1 4.0/3,mb1mx3.7/12,mbtmpg3.8/3,MS3.6/2,Ms1 3.5/2, ms1mx3.1/10,Error ellipse: s-maj=184.9km s-min=35.9km az=137.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	31.20	224	LR	LR	06 22 04.5	
	comp=Z,106nm,20.2s,baz=26,slow=36						
ASAR	Alice Springs	33.73	244	P	P	06 09 58.6	+0.2
	0.6nm,0.8s,baz=75,slow=9.3,SNR=7.3						
ILAR	Eielson Array	83.10	18	P	P	06 15 42.5	+0.1
	0.7nm,0.8s,baz=228,slow=6.3,SNR=11						
MKAR	Makanchi Array	94.12	317	P	P	06 16 34.8	-0.9
	0.5nm,0.7s,baz=94,slow=4.3,SNR=4.7						
TXAR	Lajitas Array	94.91	61	LR	LR	06 53 06.7	
	comp=Z,22nm,18.1s,baz=175,slow=32						
ESDC	Sonseca Array	150.22	345	PKPbc	PKPbc	06 23 08.9	+0.4
	0.5nm,0.7s,baz=46,slow=3.7,SNR=4.7						

*ATH **10** 06:05:18.0,39.66N×23.78E,h13km±11km,MD3.3/8*
*NEIC **10** 06:05:18.0,39.66N×23.78E,h13km, MD3.3(ATH), After ATH.*
*ISCJB **10** 06:05:19.7±0.6,39.54N±0.03×23.87E±0.04,h9km±6km, Error ellipse: s-maj=5.6km s-min=4.9km az=3.6*
*CSEM **10** 06:05:19.0±0.3,39.53N×23.93E,h15km,ML2.0/4, Error ellipse: s-maj=6.9km s-min=5.4km az=133.0*
*THE **10** 06:05:20.1,39.56N×23.90E,h7km±1km,ML2.0/4, Error ellipse: s-maj=1.5km s-min=0.7km az=160.0*
ISC 10 06:05:20.1±0.5,39.54N±0.03×23.87E±0.04,h13km±5km, n37,σ1905/49,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOS	Alonnisos	0.37	179	P	Pg	06 05 27.6	+0.1
AOS				S	Sg	06 05 33.7	+1.2
AOS	Alonnisos	0.37	179	P	Pg	06 05 27.6	+0.1
PAIG	Paliouri	0.41	339	P	Pg	06 05 27.9	-0.4
PAIG				S	Sg	06 05 34.1	+0.3
PAIG	Paliouri	0.41	339	P	Pg	06 05 27.9	-0.4
PAIG				S	Sg	06 05 34.1	+0.3
XOR	Xorichti	0.56	252	P	Pg	06 05 31.1	+0.2
XOR				S	Sg	06 05 39.6	+1.3
XOR	Xorichti	0.56	252	P	Pg	06 05 31.1	+0.2
XOR				S	Sg	06 05 39.6	+1.3
OUR	Ouranopolis	0.80	6	P	Pg	06 05 35.0	-0.5
OUR				S	Sg	06 05 46.5	+0.6
OUR	Ouranopolis	0.80	6	P	Pg	06 05 35.0	-0.5
OUR				S	Sg	06 05 46.5	+0.6
LIA	Limnos Island	1.07	70	ePn	Pg	06 05 39.3	-1.4
LIA	Limnos Island	1.07	70	ePN	Pg	06 05 39.3	-1.4
LIA	Limnos Island	1.07	70	P	Pb	06 05 39.0	-1.5
LIA				S	Sb	06 05 54.9	+0.5
LIA	Limnos Island	1.07	70	P	Pb	06 05 39.0	-1.5
LIA	Limnos Island	1.07	70	ePn	Pg	06 05 39.3	-1.4
LKR	Lokris	1.12	218	ePb	Pg	06 05 40.2	-1.4
LKR	Lokris	1.12	218	ePB	Pg	06 05 40.2	-1.4
LKR	Lokris	1.12	218	ePb	Pg	06 05 40.2	-1.4
LIT	Litokhoron	1.20	298	ePb	Pn	06 05 38.6	-4.0
LIT	Litokhoron	1.20	298	ePB	Pn	06 05 38.6	-4.0
LIT	Litokhoron	1.20	298	ePb	Pn	06 05 38.6	-4.0
HORT	Hortiatis	1.21	331	P	Pn	06 05 42.0	-0.7
HORT				S	Sb	06 05 59.0	+0.6
HORT	Hortiatis	1.21	331	P	Pn	06 05 42.0	-0.7
HORT				S	Sb	06 05 59.0	+0.6
AGG	Agios Georgios	1.30	247	ePb	Pn	06 05 42.9	-1.1
AGG	Agios Georgios	1.30	247	ePB	Pn	06 05 42.9	-1.1
AGG	Agios Georgios	1.30	247	P	Pn	06 05 44.5	+0.5
AGG	Agios Georgios	1.30	247	ePb	Pn	06 05 42.9	-1.1
AGG	Agios Georgios	1.30	247	P	Pn	06 05 44.5	+0.5
SOH	Sokhos	1.34	343	ePb	Pn	06 05 38.7	-5.8
SOH	Sokhos	1.34	343	ePB	Pn	06 05 38.7	-5.8
THL	Klokotos Trika	1.44	271	ePB	Pn	06 05 44.3	-1.5
THL	Klokotos Trika	1.44	271	ePb	Pn	06 05 44.3	-1.5
KAVA	Kavala	1.53	18	P	Pn	06 05 46.2	-1.0
KAVA				S	Sn	06 06 08.3	+1.3
KAVA	Kavala	1.53	18	P	Pn	06 05 46.2	-1.0
KAVA				S	Sn	06 06 08.3	+1.3
CHOS	Chios island	2.06	123	ePB	Pn	06 05 55.3	+1.0
CHOS	Chios island	2.06	123	ePb	Pn	06 05 55.3	+1.0
ALN	Alexandroupoli	2.15	50	ePg	Pn	06 05 57.6	+2.0
ALN	Alexandroupoli	2.15	50	ePG	Pn	06 05 57.6	+2.0
ALN	Alexandroupoli	2.15	50	ePg	Pn	06 05 57.6	+2.0

IDC 10 06:55:31.6±11.0,23.89S×66.60W,h186km±88km, mb1 2.9/1,mb1mx2.7/12,mbtmpg2.6/1,Error ellipse: s-maj=132.2km s-min=87.2km az=51.0,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	7.70	349	P	Pn	06 57 21.6	+0.6
	0.3nm,0.3s,baz=161,slow=7.7,SNR=17						
LPAZ				S	Sn	06 58 49.4	+1.6
	0.0nm,0.3s,baz=350,slow=15,SNR=3.6						
TORD	Torodi Ar. Bea	76.19	69	P	P	07 06 59.9	+0.1
	0.7nm,1.2s,baz=258,slow=5.9,SNR=4.8						
MKAR	Makanchi Array	146.21	40	PKPbc	PKPbc	07 14 49.2	-0.8
	0.2nm,0.5s,baz=321,slow=3.2,SNR=4.4						

IDC 10 07:09:24.2±8.0,30.68S×177.50W,h0km,mb3.5/1, mb1 3.7/1,mb1mx3.4/11,mbtmp3.5/1,Error ellipse: s-maj=422.6km s-min=50.9km az=157.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.53	267	P	P	07 17 29.8	+0.1
	0.5nm,0.6s,baz=106,slow=7.6,SNR=8.0						
FINES	FINESS Array B	145.55	340	PKPbc	PKPbc	07 29 02.7	-1.0
	1.4nm,0.4s,baz=58,slow=3.9,SNR=26						
NOA	NORSAR Array B	149.09	352	PKPbc	PKPbc	07 29 13.8	+0.1
	0.6nm,0.8s,baz=15,slow=4.3,SNR=3.3						
AKASG	Malin Array Be	151.78	323	PKPbc	PKPbc	07 29 20.0	-0.4
	0.5nm,0.4s,baz=52,slow=3.1,SNR=3.0						

IDC 10 08:11:02.8±2.3,57.36S×25.29W,h0km,mb4.0/2, mb1 4.2/2,mb1mx3.8/13,mbtmpg4.0/2,Error ellipse: s-maj=82.5km s-min=38.3km az=1.0,South Sandwich Islands region

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

6.3nm,0.3s,baz=236,slow=15,SNR=53
CMAR Sn Sn 08 24 56.4 +6.3
5.0nm,0.3s,baz=229,slow=24,SNR=5.4
CMAR LR LR 08 27 28.9
comp=Z,40μm,21.4s,baz=223,slow=42
CMAR P3KP 09 00 20.6
0.2nm,0.3s,baz=42,slow=2.8,SNR=4.4
CMAR Chiang Mai Arr 10.10 42 P **Pn 08 22 57.5 -0.3**
CMAR 08 24 56.4
CHG Chiang Mai 10.36 41 ⇑P **Pn 08 23 01.8 +0.5**
194nm,0.8s
CHTO Chiang Mai 10.36 41 *e*Pn **Pn 08 23 00.7 -0.7**
CHTO Chiang Mai 10.36 41 P **Pn 08 23 01.8 +0.5**
7μm285nm,1.0s
CHTO Chiang Mai 10.36 41 P **Pn 08 23 02.5 +1.1**
7μm285nm,1.0s
CHTO Chiang Mai 10.36 41 P **Pn 08 23 02.3 +0.9**
SNR=31
KULM Kulim 10.43 122 *e*Pn **Pn 08 23 02.9 +0.5**
296nm,1.0s
KULM Kulim 10.43 122 P **Pn 08 23 02.9 +0.5**
KULM Kulim 10.43 122 P **Pn 08 23 03.2 +0.8**
9μm265nm,1.2s
KULM Kulim 10.43 122 P **Pn 08 23 03.3 +0.9**
9μm265nm,1.2s
VIS Vishakhapatnam 10.58 310 *i* P **Pn 08 23 03.2 -1.3**
VIS *i* S **Sn 08 24 51.5 -11**
PSI Prapat 10.79 139 Pn **Pn 08 23 05.3 -2.0**
3.0nm,0.3s,baz=332,slow=9.9,SNR=18
BWNR Bhubaneshwar 10.89 329 *e*PKP **Pn 08 23 08.0 -0.6**
IPM Ipoh 11.19 125 P **Pn 08 23 13.4 +0.6**
IPM Ipoh 11.19 125 P **Pn 08 23 13.6 +0.7**
IPM Ipoh 11.19 125 P **Pn 08 23 11.9 -1.0**
402nm,1.1s
IPM Ipoh 11.19 125 P **Pn 08 23 11.8 -1.1**
402nm,1.1s
MDRS Chennai 11.51 281 *ex* x 08 25 32.9
PALK Pallekele 11.60 252 Pn **Pn 08 23 16.2 -2.2**
3μm,0.5s,SNR=38
PALK Pallekele 11.60 252 *e*Pn **Pn 08 23 16.7 -1.6**
17nm,0.2s
PALK *e*Sn **Sn 08 25 12.7 -14**
PALK Pallekele 11.60 252 *e*P **Pn 08 23 16.7 -1.7**
PALK pmax pmax
comp=Z,17nm,0.2s
PALK Pallekele 11.60 252 P **Pn 08 23 16.6 -1.8**
comp=Z,7μmcomp=Z,533nm,0.8s
PALK Pallekele 11.60 252 P **Pn 08 23 16.7 -1.7**
comp=Z,7μmcomp=Z,533nm,0.8s
PALK Pallekele 11.60 252 P **Pn 08 23 18.8 +0.4**
SNR=21
CHRT Chiangrai 11.67 40 P **Pn 08 23 19.0 -0.3**
comp=Z,2μm,0.9s
CAL Calcutta 11.93 344 *e*PKP **Pn 08 23 21.4 -1.5**
CAL *ex* x 08 25 27.3
FRIM Kepong 12.42 128 P **Pn 08 23 30.0 +0.3**
KTGM Kuala Trenggan 12.54 116 P **Pn 08 23 32.2 +0.9**
MNSI Mandailing Nat 12.75 142 P **Pn 08 23 29.3 -4.9**
comp=Z,5μmcomp=Z,147nm,0.9s
MNSI Mandailing Nat 12.75 142 P **Pn 08 23 29.1 -5.1**
comp=Z,5μmcomp=Z,143nm,0.9s
UBT Ubonrachathani 13.52 71 P **Pn 08 23 53.0 +8.4**
IMP Imphal 13.83 8 *i* P **Pn 08 23 49.0 +0.1**
IMP *i* x x 08 26 18.0
BOK Bokaro 13.90 337 *i* x **Pn 08 23 46.0 -3.8**
BOK *i* S **Sn 08 26 23.0 -0.3**
BKNI Bangkinang 14.03 139 P **Pn 08 23 50.1 -1.5**
comp=Z,272nm,1.2s
PPI Padang Panjang 14.24 143 P **Pn 08 23 48.6 -5.9**
comp=Z,151nm,0.9s
PPI Padang Panjang 14.24 143 P **Pn 08 23 48.6 -5.9**
comp=Z,151nm,0.9s
SISI Saibi 14.24 149 P **Pn 08 23 57.8 +3.3**
comp=Z,10μmcomp=Z,518nm,1.0s
SISI Saibi 14.24 149 P **Pn 08 23 58.4 +3.9**
HYB Hyderabad 14.35 298 *i* P **Pn 08 23 54.0 -1.9**
comp=Z,300nm,1.0s
HYB *e*S **Sn 08 26 34.0 -0.1**
HYB LR LR 08 33 00.0
comp=Z,56nm,16.0s
SHL Shillong 14.46 0 *ex* **Pn 08 23 50.0 -7.5**
SHL *e*S **Sn 08 26 36.5 -0.5**
KGM Kluang 14.50 127 P **Pn 08 23 58.5 +0.5**
PDSI Padang 14.64 144 P **Pn 08 24 00.4 +0.4**
comp=Z,8μmcomp=Z,793nm,0.7s
PDSI Padang 14.64 144 P **Pn 08 23 57.6 -2.4**
comp=Z,8μmcomp=Z,794nm,0.7s
TRD Trivandrum 14.86 262 ⇓*i* x x 08 24 13.9
TRD *i* x x 08 27 16.9
MYKOM Kota Tinggi 15.05 127 P **Pn 08 24 05.8 +0.3**
MYKOM Kota Tinggi 15.05 127 P **Pn 08 24 05.0 -0.5**
comp=Z,8μmcomp=Z,409nm,1.1s
MYKOM Kota Tinggi 15.05 127 P **Pn 08 24 05.0 -0.5**
comp=Z,8μmcomp=Z,409nm,1.1s
RGRI Rengat 15.39 137 P **Pn 08 24 14.8 +4.9**
comp=Z,327nm,1.9s
NGP Nagpur 15.86 311 *e*PKP **Pn 08 24 16.2 +0.1**
NGP AMb AMB 08 24 20.4
comp=Z,423nm,1.0s
KRJI Kerinci 16.18 143 P **Pn 08 24 24.9 +4.8**
comp=Z,2μm,0.9s
ODAN Odare 16.30 346 *e*P **Pn 08 24 17.0 -4.6**
comp=Z,844nm,0.5s
ODAN *e*S **Sn 08 27 13.1 -8.5**
LATR Latur 16.48 298 *e*PKP **Pn 08 24 22.7 -1.3**
LATR *e*PKP 08 24 24.9
LATR AMb AMB 08 24 30.1
comp=Z,855nm,1.6s
LATR *ex* x 08 27 19.6
LATR Latur 16.48 298 *e*PKP x 08 36 16.2
GTK Gangtok 16.50 350 *e*PKP **Pn 08 24 22.0 -2.2**
RAMN Ramite 16.59 343 *e*P **Pn 08 24 21.0 -4.3**
comp=Z,2μm,0.8s
TAPN Taplejung 16.70 347 *e*P **Pn 08 24 21.8 -4.8**
comp=Z,1μm,0.7s
TAPN *e*S **Sn 08 27 23.3 -7.9**
ALBI Allahabad 17.09 328 *e*PKP **Pn 08 24 30.5 -1.0**
AKL Akola 17.18 306 *i* P **Pn 08 24 33.6 +0.9**
AKL *i* x x 08 27 28.0
JIRN Jiri 17.38 343 *e*P **Pn 08 24 31.2 -3.9**
KMI Kunming 17.43 35 ⇓P **Pn 08 24 36.8 +1.0**
KMI sP sP 08 24 42.5 -5.8
KMI S **Sn 08 27 50.7 +1.7**
KMI SS 08 28 12.2
KMI pmax pmax
comp=Z,240nm,0.8s
KMI pmax pmax
comp=Z,6μm,11.3s
KMI LR LR
comp=N,87μm,18.3s
KMI LR LR
comp=E,52μm,13.7s
KMI LR LR
comp=Z,40μm,20.9s
PKI Pulchoki 17.53 341 *e*P **Pn 08 24 32.7 -4.3**
comp=Z,944nm,0.6s
PKIN Phulchoki 17.54 341 *e*P **Pn 08 24 32.7 -4.4**
comp=Z,1μm,0.7s
PKIN *e*S **Sn 08 27 42.8 -8.9**
DMN Daman 17.67 340 *e*P **Pn 08 24 34.2 -4.5**
comp=Z,2μm,0.9s
GUN Gumba 17.70 342 *e*P **Pn 08 24 34.9 -4.2**
comp=Z,1μm,0.6s
KKN Kakani 17.78 341 *e*P **Pn 08 24 35.6 -4.5**
KKN *e*S **Sn 08 27 48.4 -9.0**
GOA Goa 18.07 286 ⇑*e*PKP **Pn 08 24 43.2 -0.5**
GOA *ex* x 08 27 43.8
KSI Kapahiang 18.09 143 P **Pn 08 24 40.8 -3.3**
comp=Z,730nm,1.7s
KSI Kapahiang 18.09 143 P **Pn 08 24 44.7 +0.6**
comp=Z,909nm,0.8s
GKN Gorkha 18.19 339 *e*P **Pn 08 24 41.1 -4.0**
comp=Z,648nm,0.4s
GKN *e*S **Sn 08 27 57.1 -10**
KAD Karad 18.20 292 *e*PKP **Pn 08 24 43.7 -1.7**
KAD AMb AMB 08 25 08.1
comp=Z,530nm,1.6s
BHPL Bhopal 18.34 313 *e*PKP **Pn 08 24 46.1 -0.9**
KOLN Koidanda 18.36 336 *e*P **Pn 08 24 43.5 -3.8**
comp=Z,1μm,0.6s
LSA Lhasa 18.59 358 P **Pn 08 24 46.1 -3.9**
LSA S **Sn 08 28 16.5 -0.6**
LSA LR LR
comp=N,38μm,18.0s
LSA LR LR
comp=E,54μm,15.9s
LSA LR LR
comp=Z,66μm,19.2s
MNCY Minicoy 18.73 263 *i* P **Pn 08 24 50.0 -1.8**
MNCY *i* x x 08 27 33.0
MNAI Manna 18.88 143 P **Pn 08 24 53.5 -0.1**
comp=Z,803nm,1.3s
MNAI Manna 18.88 143 P **Pn 08 24 51.8 -1.8**
comp=Z,803nm,1.3s
HMDM Hanimaadhoo 18.89 259 P **Pn 08 24 55.8 +2.0**
comp=Z,919nm,1.2s
HMDM Hanimaadhoo 18.89 259 P **Pn 08 24 54.3 +0.5**
comp=Z,919nm,1.2s
POO Poona 18.90 295 *e*PKP **Pn 08 24 52.5 -1.4**
POO AMb AMB 08 24 58.1
comp=Z,624nm,1.4s
QIZ Qiongzhong 19.12 63 P **Pn 08 24 56.8 +0.3**
QIZ pP pP 08 25 01.4 -2.0
QIZ sP sP 08 25 04.6 -2.5
QIZ S **Sn 08 28 28.6 -1.5**
QIZ sS sS 08 28 34.6 -8.9
QIZ SS 08 28 55.9
QIZ pmax pmax
comp=Z,45nm,0.8s
QIZ pmax pmax
comp=Z,4μm,11.5s
QIZ LR LR
comp=N,69μm,19.8s
QIZ LR LR
comp=E,8μm,16.1s
QIZ LR LR
comp=Z,45μm,19.3s
QIZ Qiongzhong 19.12 63 *e*P **Pn 08 24 54.9 -1.7**
PPBI Pangkal Pinang 19.35 132 P **Pn 08 24 57.7 -1.5**
comp=Z,233nm,1.2s
PPBI Pangkal Pinang 19.35 132 P **Pn 08 24 57.8 -1.4**
comp=Z,232nm,1.2s
MDSI Maura Dua 19.71 141 P **Pn 08 24 59.4 -4.2**
comp=Z,3μmcomp=Z,115nm,0.8s
MDSI Maura Dua 19.71 141 P **Pn 08 24 58.5 -5.1**
comp=Z,3μmcomp=Z,115nm,0.8s
LWLI Liwa 20.06 142 P **P 08 25 06.8 +1.0**
comp=Z,597nm,0.7s
LWLI Liwa 20.06 142 P **P 08 25 06.6 +0.8**
comp=Z,597nm,0.7s
KLSI 20.22 140 P **P 08 25 05.4 -2.1**
comp=Z,5μmcomp=Z,238nm,1.1s
KLSI 20.22 140 P **P 08 25 03.4 -4.1**
comp=Z,5μmcomp=Z,233nm,1.0s
KSM Kuching 20.66 116 *e*P **P 08 25 10.8 -1.6**
comp=Z,6μm,2.8s
KSM LR LR
comp=Z,29μm,20.0s,MS5.6
KSM Kuching 20.66 116 P **P 08 25 12.6 +0.2**
KSM Kuching 20.66 116 P **P 08 25 11.3 -1.1**
comp=Z,513nm,2.1s
KSM Kuching 20.66 116 P **P 08 25 11.4 -1.0**
comp=Z,513nm,2.1s
KASI Kota Agung 20.72 142 P **P 08 25 09.7 -3.3**
comp=Z,4μmcomp=Z,329nm,0.8s
KASI Kota Agung 20.72 142 P **P 08 25 09.8 -3.2**
comp=Z,4μmcomp=Z,330nm,0.8s
GYA Guiyang 20.78 40 ⇓*i* P **P 08 25 14.0 +0.5**
GYA PP 08 25 35.2
GYA S **S 08 29 00.8 -3.2**
GYA SS 08 29 30.2
GYA pmax pmax
comp=Z,250nm,0.8s
GYA pmax pmax
comp=Z,2μm,8.0s
GYA LR LR
comp=N,31μm,16.0s,MS5.9
GYA LR LR
comp=E,36μm,17.2s,MS5.9
GYA LR LR
comp=Z,50μm,16.3s,MS6.0
TPI Tanjungpandan 20.87 130 P **P 08 25 14.5 -0.1**
comp=Z,6μmcomp=Z,378nm,0.9s
TPI Tanjungpandan 20.87 130 P **P 08 25 14.1 -0.5**
comp=Z,6μmcomp=Z,378nm,0.9s
PTH Pithoragarh 21.38 331 *e*PKP **P 08 25 21.0 +1.1**
PTH *ex* x 08 29 11.2
BHV Bhavnagar 21.66 302 *e*PKP **P 08 25 24.2 +1.2**
SBUM Sibu 21.95 111 P **P 08 25 26.6 +0.3**
SBUM Sibu 21.95 111 P **P 08 25 25.3 -1.0**
comp=Z,428nm,2.4s,mb5.5
SBUM Sibu 21.95 111 P **P 08 25 24.5 -1.8**
comp=Z,428nm,2.4s,mb5.5
NDI New Delhi 22.26 324 *e*PKP **P 08 25 30.0 +0.6**
NDI *e*PKP 08 25 31.5
NDI AMb AMB 08 25 37.1
comp=Z,545nm,1.6s,mb5.8
NDI *ex* x 08 29 27.0
CGJI Cibinong 22.30 141 P **P 08 25 24.5 -5.5**
comp=Z,4μmcomp=Z,157nm,0.7s,mb5.5
CGJI Cibinong 22.30 141 P **P 08 25 24.2 -5.8**
comp=Z,4μmcomp=Z,157nm,0.7s,mb5.5
AJM Ajmer 22.34 316 *e*PKP **P 08 25 31.6 +1.3**
AJM AMb AMB 08 25 41.4
comp=Z,736nm,1.7s,mb5.8
AJM *i* x x 08 29 32.0
STKI Sintang 22.36 118 P **P 08 25 29.9 -0.7**
comp=Z,355nm,1.1s,mb5.7
STKI Sintang 22.36 118 P **P 08 25 29.2 -1.4**
comp=Z,354nm,1.1s,mb5.7
BTM Bintulu 22.47 109 P **P 08 25 31.9 +0.2**
CD2 Chengdu 22.67 27 ⇓*i* P **P 08 25 33.1 -0.7**
CD2 pP 08 25 37.3
CD2 sP sP 08 25 40.1 -5.3
CD2 PP 08 26 01.7
CD2 PcP PcP 08 29 26.3 +0.5
CD2 S **S 08 29 36.1 -4.5**
CD2 sS sS 08 29 43.1 -11
CD2 SS 08 30 18.9
CD2 pmax pmax
comp=Z,780nm,0.8s,mb6.2
CD2 pmax pmax
comp=Z,5μm,9.2s
CD2 LR LR
comp=N,46μm,17.6s
CD2 LR LR
comp=E,63μm,25.0s
CD2 LR LR
comp=Z,34μm,21.5s,MS5.8
COCO West Island 23.59 168 *e*P **P 08 25 45.0 +1.7**
comp=Z,8μm,2.3s,mb6.7
COCO LR LR
comp=Z,27μm,20.0s,MS5.7
COCO West Island 23.59 168 *e*P **P 08 25 45.0 +1.7**
COCO MLR MLR
comp=Z,27μm,20.0s,MS5.7
COCO West Island 23.59 168 P **P 08 25 47.3 +4.0**
comp=Z,861nm,1.6s,mb5.9
COCO West Island 23.59 168 P **P 08 25 47.1 +3.8**
comp=Z,861nm,1.6s,mb5.9
LEM Lembang 23.70 138 P **P 08 25 48.5 +4.2**
comp=Z,120nm,1.0s,mb5.3
GZH Guangzhou 23.77 57 P **P 08 25 49.0 +4.0**
GZH S **S 08 30 01.9 +3.2**
GZH LR LR
comp=N,17μm,16.6s,MS5.9
GZH LR LR
comp=E,28μm,15.7s,MS5.9
GZH LR LR
comp=Z,40μm,17.3s,MS6.0
PBKI Pangkalan Bun 24.00 124 P **P 08 25 46.2 -0.9**
PBKI Pangkalan Bun 24.00 124 P **P 08 25 46.9 -0.2**
HKC Hong Kong Obse 24.13 59 *i* P **P 08 25 52.0 +3.7**
HKC *i* S **S 08 30 10.0 +5.5**
SMLA Simla 24.18 328 *i* P **P 08 25 48.8 +0.2**
SMLA *i* S **S 08 30 06.8 +1.7**
CISI Cisompet, Garu 24.37 139 P **P 08 25 51.3 +0.8**
comp=Z,5μmcomp=Z,84nm,0.8s,mb5.2
CISI Cisompet, Garu 24.37 139 P **P 08 25 44.9 -5.6**
comp=Z,5μmcomp=Z,85nm,0.8s,mb5.2
SDNR Sundarnagar 24.58 328 *e*PKP **P 08 25 52.5 +0.3**
SDNR *ex* x 08 29 23.5
KKM Kota Kinabalu 24.61 100 *e*P **P 08 25 52.3 -0.5**
comp=Z,2μm,1.8s,mb6.3
KKM LR LR
comp=Z,34μm,19.0s,MS5.9
KKM Kota Kinabalu 24.61 100 P **P 08 25 53.0 +0.2**
KKM Kota Kinabalu 24.61 100 P **P 08 25 53.1 +0.3**
comp=Z,446nm,2.2s,mb5.6
KKM Kota Kinabalu 24.61 100 P **P 08 25 52.5 -0.3**
comp=Z,446nm,2.2s,mb5.6
BHK Bhakra 24.80 327 *ex* **P 08 25 50.2 -4.1**
BHK *ex* **S 08 30 22.0 +6.9**
KDM Kudat 25.03 97 P **P 08 25 56.9 +0.3**
ENH Enshi 25.23 38 PFAKE 08 26 10.0 +12
ENH LR LR
comp=Z,47μm,19.0s,MS6.0
BJII Banjamegara 25.48 135 P **P 08 26 02.1 +1.5**
comp=Z,5μmcomp=Z,106nm,1.0s,mb5.3
BJII Banjamegara 25.48 135 P **P 08 25 57.6 -3.0**
comp=Z,5μmcomp=Z,106nm,1.0s,mb5.3
SDKM Sandakan 25.66 100 P **P 08 26 02.4 +0.2**
BATP Bataraza 25.68 93 *e*P **P 08 26 02.6 +0.2**
SMRI Semarang 25.80 133 P **P 08 26 03.6 +0.1**
comp=Z,581nm,1.0s,mb6.1
SMRI Semarang 25.80 133 P **P 08 26 03.2 -0.3**
comp=Z,582nm,1.0s,mb6.1
DLH Dalhousie 25.92 328 *ex* x 08 26 12.0
DLH *ex* x 08 31 03.0
DGAR Diego Garcia 26.59 227 PFAKE 08 26 20.0 +9.3
DGAR LR LR
comp=Z,32μm,19.0s,MS5.9
TSM Tawau 26.65 103 P **P 08 26 11.3 +0.1**
NGJI Ngawi 26.75 132 P **P 08 26 14.3 +2.2**
comp=Z,356nm,0.9s,mb5.9
NGJI Ngawi 26.75 132 P **P 08 26 15.9 +3.8**
comp=Z,356nm,0.9s,mb5.9
MYLDM Lahad Datu 27.03 100 P **P 08 26 14.6 0.0**
comp=Z,460nm,1.9s,mb5.7
MYLDM Lahad Datu 27.03 100 P **P 08 26 14.8 +0.2**
comp=Z,460nm,1.9s,mb5.7
ENPP El Nido 27.08 87 *e*P **P 08 26 15.0 -0.1**
LZH Lanzhou 27.22 22 ⇓P **P 08 26 16.8 +0.7**
LZH pP pP 08 26 19.8 -4.8
LZH sP sP 08 26 21.5 -6.7
LZH PP 08 27 03.3
LZH S **S 08 30 54.1 +0.8**
LZH sS sS 08 31 00.0 -7.4
LZH SS 08 32 10.0
LZH pmax pmax
comp=Z,450nm,1.4s,mb5.8
LZH pmax pmax
comp=Z,1μm,4.3s
LZH LR LR
comp=N,64μm,17.2s
LZH LR LR
comp=Z,84μm,19.0s,MS6.3
SJI Sawahan 27.22 132 P **P 08 26 17.7 +1.3**
comp=Z,4μmcomp=Z,125nm,1.3s,mb5.3
SJI Sawahan 27.22 132 P **P 08 26 17.8 +1.4**
comp=Z,4μmcomp=Z,125nm,1.3s,mb5.3
PWJI Pagerwojo 27.45 133 P **P 08 26 19.0 +0.7**
comp=Z,72nm,1.0s,mb5.2
PWJI Pagerwojo 27.45 133 P **P 08 26 19.8 +1.5**
comp=Z,4μmcomp=Z,72nm,1.0s,mb5.2
XAN Xi'an 27.74 32 P **P 08 26 18.5 -2.3**
XAN pP pP 08 26 28.5 -0.8
XAN sP sP 08 26 33.7 +0.9
XAN S **S 08 30 55.4 -6.1**
XAN pmax pmax
comp=Z,44nm,0.8s,mb5.1
XAN pmax pmax
comp=Z,350nm,12.7s
XAN LR LR
comp=N,31μm,22.6s,MS5.9
XAN LR LR
comp=E,15μm,21.9s,MS5.9
XAN LR LR
comp=Z,11μm,18.4s,MS5.5
BOLP Bolinao 27.79 76 *e*P **P 08 26 22.1 +0.7**
BUSP Coron 27.82 85 *e*P **P 08 26 21.1 -0.5**
LUBP Lubang 27.88 81 *e*P **P 08 26 22.2 -0.1**
KBKI Kotabaru 28.09 119 P **P 08 26 25.4 +1.2**
comp=Z,5μmcomp=Z,148nm,0.9s,mb5.6
KBKI Kotabaru 28.09 119 P **P 08 26 25.2 +1.0**
comp=Z,5μmcomp=Z,149nm,0.9s,mb5.6
BCPH Baguio City Da 28.42 76 ⇓*e*P **P 08 26 26.0 -1.1**
KMMI Kalianget 28.43 128 P **P 08 26 29.2 +2.1**
comp=Z,7μmcomp=Z,210nm,1.7s,mb5.5
KMMI Kalianget 28.43 128 P **P 08 26 28.7 +1.6**
comp=Z,7μmcomp=Z,210nm,1.7s,mb5.5
WHN Wuhan 28.54 44 P **P 08 26 27.6 -0.4**
WHN S **S 08 31 12.2 -2.1**
WHN LR LR
comp=N,16μm,9.4s
WHN LR LR
comp=E,87μm,14.9s
WHN LR LR
comp=Z,120μm,17.4s,MS6.5
TGY Tagaytay City 28.57 81 P **P 08 26 29.1 +0.7**
comp=Z,591nm,0.7s,mb6.4,baz=210,slow=6.4,SNR=10
TGY LR LR 08 38 22.3
comp=Z,72nm,18.4s,baz=89,slow=38
CUYO Cuyo Island 28.66 88 *e*P **P 08 26 29.3 +0.1**
GMJI Gumukmas 28.81 131 P **P 08 26 30.0 -0.6**
comp=Z,3μmcomp=Z,90nm,2.9s,mb5.0
QZH Quanzhou 28.90 58 ⇑*i*P **P 08 26 31.8 +0.5**
QZH S **S 08 31 18.1 -2.0**
QZH pmax pmax
comp=Z,370nm,0.8s,mb6.2
QZH LR LR
comp=N,30μm,15.4s,MS6.3
QZH LR LR
comp=E,45μm,15.6s,MS6.3
QZH LR LR
comp=Z,52μm,17.8s,MS6.2
GTA Gaotai 29.15 13 ⇓P **P 08 26 34.3 +1.0**
GTA pP pP 08 26 37.8 -4.0
GTA sP sP 08 26 40.7 -4.7
GTA PcP PcP 08 29 42.1 +1.6
GTA S **S 08 31 26.6 +3.0**
GTA pmax pmax
comp=Z,500nm,1.2s,mb6.1
GTA pmax pmax
comp=Z,3μm,8.0s
GTA LR LR
comp=N,52μm,19.0s,MS6.3
GTA LR LR
comp=E,36μm,15.8s,MS6.3
GTA LR LR
comp=Z,59μm,20.5s,MS6.2
APYP Conner 29.26 73 *e*P **P 08 26 35.3 +0.8**
JAGI Jajag, Banyuwa 29.47 130 P **P 08 26 37.2 +0.8**
comp=Z,3μmcomp=Z,90nm,0.9s,mb5.5
JAGI Jajag, Banyuwa 29.47 130 P **P 08 26 36.7 +0.3**
comp=Z,3μmcomp=Z,90nm,0.9s,mb5.5
OTRP Odiongan 29.59 84 *e*P **P 08 26 37.8 +0.3**
QUE Quetta 29.97 313 *e*P **P 08 26 44.0 +3.3**
QUE *e*S **S 08 31 48.0 +11**
SRBI Singaraja 30.03 128 P **P 08 26 40.9 -0.5**
comp=Z,9μmcomp=Z,482nm,1.3s,mb6.1
SRBI Singaraja 30.03 128 P **P 08 26 40.6 -0.8**
comp=Z,9μmcomp=Z,482nm,1.3s,mb6.1
PCI Palu 30.27 111 P **P 08 26 43.2 -0.3**
comp=Z,5μmcomp=Z,337nm,1.1s,mb6.0
PCI Palu 30.27 111 P **P 08 26 42.9 -0.6**
comp=Z,5μmcomp=Z,337nm,1.1s,mb6.0
KHKI Kahang-Kahang 30.51 128 P **P 08 26 45.0 -0.6**
comp=Z,6μmcomp=Z,338nm,0.7s,mb6.3
KHKI Kahang-Kahang 30.51 128 P **P 08 26 44.7 -0.9**
comp=Z,6μmcomp=Z,338nm,0.7s,mb6.3
YHNB Yeheng 31.14 60 *e*P **P 08 26 51.3 +0.2**
comp=Z,225nm,0.8s,mb6.0
YHNB LR LR
comp=Z,19μm,20.0s,MS5.8
NACB Ninganchiao 31.16 61 *e*P **P 08 26 52.9 +1.6**
comp=Z,53nm,0.7s,mb5.5
TTSI Tana Toraja 31.16 115 P **P 08 26 52.9 +1.5**
comp=Z,7μmcomp=Z,317nm,2.3s,mb5.7
PAGZ Pagadian 31.28 93 *e*P **P 08 26 54.2 +1.7**
KBL Kabul 31.30 322 *e*P **P 08 26 53.3 +0.9**
comp=Z,79nm,0.8s,mb5.6
KBL Kabul 31.30 322 *e*P **P 08 26 53.3 +0.9**
KBL pmax pmax
comp=Z,79nm,0.8s,mb5.6
TATO Taipei 31.34 60 *e*P **P 08 26 53.6 +0.7**
comp=Z,152nm,0.8s,mb5.9
TATO LR LR
comp=Z,18μm,22.0s,MS5.7
TBP Tagbilaran 31.54 89 *e*P **P 08 26 54.2 -0.4**
SPSI Sidrap Palu 31.55 117 P **P 08 26 54.9 +0.1**
KSH Kashi 31.68 336 ⇓*i*P **P 08 26 54.9 -0.8**
KSH *e*pP pP 08 26 59.3 -4.9
KSH *e*sP sP 08 27 02.3 -5.5
KSH *e*PP PP 08 27 58.7 -8.8
KSH *e*PcP PcP 08 29 48.2 +1.1
KSH S **S 08 32 01.5 -1.8**

KSH sS sS 08 32 09.3 -8.1
KSH *e*ScP ScP 08 33 28.9 +0.3
KSH *e*PcS PcS 08 33 31.1 -0.5
KSH *e*SS SS 08 33 50.2 -30
KSH pmax pmax
comp=Z,37nm,0.6s,mb5.4
KSH pmax pmax
comp=Z,540nm,4.1s
KSH LR LR
comp=N,13µm,14.0s,MS6.1
KSH LR LR
comp=E,28µm,17.8s,MS6.1
KSH LR LR
comp=Z,8µm,9.5s
MRSI Marisa 31.70 107 P **P** **08 26 55.9 -0.2**
comp=Z,6µmcomp=Z,437nm,0.9s,mb6.3
MRSI Marisa 31.70 107 P **P** **08 26 55.6 -0.6**
comp=Z,6µmcomp=Z,437nm,0.9s,mb6.3
KAPI Kappang 32.04 118 P **P** **08 26 58.4 -0.7**
comp=Z,2µm,0.8s,mb6.9,SNR=12
KAPI Kappang 32.04 118 P **P** **08 26 57.6 -1.5**
KAPI LR LR
comp=Z,22µm,20.0s,MS5.8
KAPI Kappang 32.04 118 P **P** **08 26 57.6 -1.5**
comp=Z,124nm,0.8s,mb5.8,baz=297,slow=9.5,SNR=46
TIY Taiyuan 32.38 31 *e*P **P** **08 26 54.7 -7.1**
TIY pP pP 08 26 59.4 -11
TIY sP sP 08 27 02.9 -11
TIY S **S** **08 32 02.6 -12**
TIY sS sS 08 32 09.7 -19
TIY pmax pmax
comp=Z,680nm,5.5s
TIY LR LR
comp=N,14µm,10.2s,MS6.1
TIY LR LR
comp=E,16µm,12.7s,MS6.1
TIY LR LR
comp=Z,34µm,21.4s
BKSI Bulukumba 32.51 119 P **P** **08 27 03.1 -0.1**
comp=Z,9µmcomp=Z,821nm,0.9s,mb6.7
BKSI Bulukumba 32.51 119 P **P** **08 27 03.2 -0.1**
comp=Z,9µmcomp=Z,821nm,0.9s,mb6.7
NJ2 Nanjing 32.54 46 *e*P **P** **08 27 03.9 +0.6**
NJ2 pP pP 08 27 08.3 -3.6
NJ2 pmax pmax
comp=Z,250nm,1.0s,mb6.1
NJ2 pmax pmax
comp=Z,110nm,4.5s
NJ2 LR LR
comp=N,3µm,19.6s
NJ2 LR LR
comp=E,3µm,10.0s
NJ2 LR LR
comp=Z,9µm,18.4s,MS5.5
WMQ Urumqi 32.87 354 P **P** **08 27 06.7 +0.7**
WMQ pP pP 08 27 11.1 -3.5
WMQ sP sP 08 27 13.7 -4.4
WMQ PP PP 08 28 16.7 -4.0
WMQ PcP PcP 08 29 51.1 +0.8
WMQ S **S** **08 32 22.9 +1.2**
WMQ sS sS 08 32 30.2 -5.7
WMQ ScP ScP 08 33 33.6 +1.1
WMQ SS SS 08 34 21.7 -22
WMQ ScS ScS 08 37 32.3 -0.1
WMQ pmax pmax
comp=Z,180nm,1.2s,mb5.9
WMQ pmax pmax
comp=Z,4µm,4.8s
WMQ LR LR
comp=N,29µm,22.0s,MS6.4
WMQ LR LR
comp=E,69µm,20.0s,MS6.4
WMQ LR LR
comp=Z,31µm,23.4s,MS5.9
BUKP Musuan 32.92 93 *e*P **P** **08 27 07.8 +0.9**
LUWI Luwuk 33.02 109 P **P** **08 27 07.7 0.0**
comp=Z,960nm,1.3s,mb6.6
LUWI Luwuk 33.02 109 P **P** **08 27 07.5 -0.2**
comp=Z,960nm,1.3s,mb6.6
DMPH Davao City--Mi 33.48 94 *e*P **P** **08 27 12.2 +0.5**
DAV Davao City (W) 33.55 94 P **P** **08 27 16.1 +3.7**
comp=Z,142nm,0.4s,mb6.2,baz=270,slow=17,SNR=2.9
DAV LR LR 08 42 23.0
comp=Z,11µm,19.2s,MS5.6,baz=85,slow=39
DAV Davao City (W) 33.55 94⇓ *e*P **P** **08 27 11.0 -1.3**
BTO Baotou 33.56 25 *e*P **P** **08 27 11.3 -0.8**
BTO LR LR
comp=N,9µm,18.4s,MS5.7
BTO LR LR
comp=E,7µm,17.1s,MS5.7
KMSI Cibinong 33.59 106 P **P** **08 27 13.1 +0.4**
comp=E,2µm,0.8s,mb7.1
KMSI Cibinong 33.59 106 P **P** **08 27 13.1 +0.4**
comp=E,2µm,0.8s,mb7.1
SSE Sheshan 33.73 49 P **P** **08 27 14.3 +0.6**
SSE pP pP 08 27 17.4 -4.9
SSE PcP PcP 08 29 54.5 +1.5
SSE S **S** **08 32 37.7 +2.3**
SSE sS sS 08 32 42.9 -6.7
SSE pmax pmax
comp=Z,200nm,0.9s,mb6.0
SSE pmax pmax
comp=Z,610nm,9.5s
SSE LR LR
comp=N,1µm,20.0s,MS5.6
SSE LR LR
comp=E,11µm,20.0s,MS5.6
SSE LR LR
comp=Z,31µm,19.3s,MS6.0
TIA Tai'an 33.94 38 P **P** **08 27 15.2 -0.3**
TIA S **S** **08 32 37.5 -1.1**
TIA LR LR
comp=N,34µm,20.1s,MS6.3
TIA LR LR
comp=E,45µm,19.1s,MS6.3
ULHL Ulaho 33.96 339 P **P** **08 27 16.7 +1.2**
SNR=12
KDI Kendari 34.07 114 P **P** **08 27 16.4 -0.5**
comp=E,3µmcomp=E,145nm,1.6s,mb5.7
KDI Kendari 34.07 114 P **P** **08 27 17.0 +0.1**
comp=E,3µmcomp=E,145nm,1.6s,mb5.7
MNI Manado 34.13 104 P **P** **08 27 15.8 -1.6**
comp=E,8µmcomp=E,618nm,0.8s,mb6.6
MNI Manado 34.13 104 P **P** **08 27 17.2 -0.2**
comp=E,8µmcomp=E,618nm,0.8s,mb6.6
KZA Kyzart 34.17 338 P **P** **08 27 18.8 +1.5**
SNR=38
SGSI Sangihe 34.18 100 P **P** **08 27 17.7 -0.2**
comp=E,9µmcomp=E,355nm,2.0s,mb5.9
SGSI Sangihe 34.18 100 P **P** **08 27 19.3 +1.4**
comp=E,9µmcomp=E,355nm,2.0s,mb5.9
HHC Hu-ho-hao-te 34.43 27 *e*P **P** **08 27 19.7 +0.1**
HHC pP pP 08 27 23.7 -4.5
HHC sP sP 08 27 26.8 -5.0
HHC PP PP 08 28 33.8 -4.2
HHC S **S** **08 32 44.3 -1.7**
HHC PcS PcS 08 33 42.4 +1.3
HHC ScS ScS 08 37 40.7 0.0
HHC pmax pmax
comp=Z,120nm,1.1s,mb5.7
HHC pmax pmax
comp=Z,1µm,7.3s
HHC LR LR
comp=N,23µm,16.1s,MS6.2
HHC LR LR
comp=E,23µm,13.8s,MS6.2
HHC LR LR
comp=Z,26µm,16.2s,MS6.0
UCH Uchtor 34.58 337 P **P** **08 27 22.5 +1.6**
SNR=86
UCH Uchtor 34.58 337 *e*P **P** **08 27 22.3 +1.5**
comp=Z,37nm,0.7s,mb5.4
UCH LR LR
comp=Z,57µm,21.0s,MS6.3
AAA Alma-Ata 34.63 341 *i* P **P** **08 27 22.6 +1.3**
AAA *i* S **S** **08 32 51.4 +2.4**
AAA pmax pmax
comp=Z,480nm,3.8s
AAA smax
comp=E,15µm,10.3s
AAA MLR MLR
comp=Z,35µm,18.0s,MS6.1
BBSI Bau Bau 34.72 117 P **P** **08 27 23.5 +1.0**
comp=Z,524nm,1.1s,mb6.4
BBSI Bau Bau 34.72 117 P **P** **08 27 23.5 +1.0**
comp=Z,523nm,1.1s,mb6.4

TKM2 Tokmak 2 34.78 339 P **P** **08 27 23.6 +1.0**
SNR=63
TKM2 Tokmak 2 34.78 339 *e*P **P** **08 27 23.4 +0.8**
comp=Z,69nm,0.8s,mb5.6
TKM2 LR LR
comp=Z,35µm,19.0s,MS6.1
TKM2 Tokmak 2 34.78 339 *e*P **P** **08 27 23.4 +0.8**
TKM2 pmax pmax
comp=Z,69nm,0.8s,mb5.6
TKM2 MLR MLR
comp=Z,35µm,19.0s,MS6.1
KBK Karagaybulak 34.78 338 P **P** **08 27 24.3 +1.7**
SNR=41
AML Almayashu 34.81 336 P **P** **08 27 24.8 +1.9**
SNR=46
AML Almayashu 34.81 336 PFAKE 08 27 30.0 +7.1
AML LR LR
comp=Z,21µm,20.0s,MS5.9
AAK Ala-Archa 34.93 337 P **P** **08 27 25.1 +1.2**
comp=E,881nm,1.3s,mb6.5,SNR=30
AAK Ala-Archa 34.93 337 P **P** **08 27 24.7 +0.7**
SNR=44
AAK Ala-Archa 34.93 337 PFAKE 08 27 30.0 +6.1
AAK LR LR
comp=Z,65µm,20.0s,MS6.4
WSI Waingapu 34.99 125 P **P** **08 27 23.2 -1.6**
comp=Z,2µm,0.8s,mb7.1
WSI Waingapu 34.99 125 P **P** **08 27 23.0 -1.8**
comp=Z,2µm,0.8s,mb7.1
HOQ Hoqain 35.14 295⇓ P **P** **08 27 29.6 +3.7**
SNR=18
CHMS Chumysh 35.15 338 P **P** **08 27 26.7 +0.8**
SNR=45
EKS2 Erkin-Say 35.23 337 P **P** **08 27 28.3 +1.8**
SNR=104
EKS2 Erkin-Say 35.23 337 *e*P **P** **08 27 28.3 +1.8**
comp=Z,190nm,1.0s,mb6.0
EKS2 LR LR
comp=Z,38µm,20.0s,MS6.2
USP Ospenovka 35.47 338 P **P** **08 27 29.5 +0.9**
SNR=108
MMRI Maumere 36.01 122 P **P** **08 27 31.3 -2.3**
comp=Z,9µmcomp=Z,465nm,0.8s,mb6.5
MMRI Maumere 36.01 122 P **P** **08 27 31.8 -1.8**
comp=Z,9µmcomp=Z,465nm,0.8s,mb6.5
BJI Beijing 36.06 33 P **P** **08 27 34.1 +0.4**
BJI PP PP 08 28 56.6 +0.7
BJI S **S** **08 33 10.0 -1.0**
BJI pmax pmax
comp=Z,380nm,0.7s,mb6.4
BJI pmax pmax
comp=Z,2µm,9.7s
BJI LR LR
comp=N,20µm,17.7s,MS6.2
BJI LR LR
comp=E,38µm,19.3s,MS6.2
BJI LR LR
comp=Z,27µm,18.9s,MS6.0
MK31 Makanchi Array 36.55 349 *e*P **P** **08 27 38.2 +0.4**
MK31 Makanchi Array 36.55 349 *i* P **P** **08 27 37.9 +0.1**
MK31 pmax pmax
comp=Z,134nm,0.6s,mb6.0
MKAR Makanchi Array 36.55 349 P **P** **08 27 38.2 +0.4**
MKAR PcP PcP 08 30 02.4 +1.5
MKAR LR LR 08 46 10.5
MKAR Makanchi Array 36.55 349 P **P** **08 27 38.2 +0.4**
comp=Z,145nm,0.6s,mb6.0,baz=169,slow=8.1,SNR=357
MKAR PcP PcP 08 30 02.4 +1.5
comp=Z,11nm,0.6s,baz=152,slow=4.1,SNR=4.4
MKAR LR LR 08 46 10.5
comp=Z,26µm,20.7s,MS6.0,baz=166,slow=42
MKAR Makanchi Array 36.55 349 P **P** **08 27 38.2 +0.4**
MKAR 08 30 02.4
TNTI Ternate 36.74 104 P **P** **08 27 37.8 -2.1**
comp=Z,4µmcomp=Z,163nm,1.4s,mb5.7
TNTI Ternate 36.74 104 P **P** **08 27 38.7 -1.2**
comp=Z,4µmcomp=Z,163nm,1.4s,mb5.7
IBND Bandar-abas 36.94 301 *e*P **P** **08 27 45.5 +4.2**
KK31 Karatay Array 36.94 334 *i* P **P** **08 27 41.6 +0.4**
KK31 pmax pmax
comp=Z,38nm,0.4s,mb5.6
LBMI Labuha 37.31 106 P **P** **08 27 44.8 +0.1**
comp=Z,10µmcomp=Z,391nm,0.9s,mb6.2
LBMI Labuha 37.31 106 P **P** **08 27 45.0 +0.3**
comp=Z,10µmcomp=Z,391nm,0.9s,mb6.2
NLAI Namlea 37.85 110 P **P** **08 27 49.5 +0.2**
comp=Z,5µmcomp=Z,532nm,0.9s,mb6.3
NLAI Namlea 37.85 110 P **P** **08 27 50.5 +1.2**
comp=Z,5µmcomp=Z,532nm,0.9s,mb6.3
IMYA Miami 38.15 317 *e*P **P** **08 27 52.8 +1.3**
DL2 Dalian 38.41 39 P **P** **08 27 54.2 +0.5**
DL2 PP PP 08 29 24.6 +2.7
DL2 S **S** **08 33 48.5 +1.6**
DL2 pmax pmax
comp=Z,70nm,1.0s,mb5.3
DL2 pmax pmax
comp=Z,600nm,9.2s
DL2 LR LR
comp=N,13µm,18.2s,MS5.8
DL2 LR LR
comp=E,7µm,20.4s,MS5.8
DL2 LR LR
comp=Z,14µm,17.1s,MS5.8
ISRO Mashad 38.56 316 *e*P **P** **08 27 55.5 +0.5**
SONM Songino Array 38.68 16 P **P** **08 27 56.4 +0.6**
comp=Z,143nm,1.0s,mb5.7,baz=198,slow=9.1,SNR=69
SONM PcP PcP 08 30 08.5 +1.1
comp=Z,18nm,0.9s,baz=202,slow=4.1,SNR=3.3
SONM LR LR 08 47 08.0
comp=Z,34µm,19.8s,MS6.2,baz=298,slow=41
SONM Songino Array 38.68 16 P **P** **08 27 56.4 +0.6**
SONM 08 30 08.5
ULN Ulaanbaatar 38.89 16 *e*P **P** **08 27 58.0 +0.4**
comp=Z,74nm,0.9s,mb5.4
ULN LR LR
comp=Z,44µm,20.0s,MS6.3
ULN Ulaanbaatar 38.89 16 *e*P **P** **08 27 58.0 +0.5**
ULN pmax pmax
comp=Z,74nm,0.9s,mb5.4
ULN MLR MLR
comp=Z,44µm,20.0s,MS6.3
ULN Ulaanbaatar 38.89 16 P **P** **08 27 57.6 +0.1**
comp=Z,2µmcomp=Z,104nm,0.9s,mb5.6
ULN Ulaanbaatar 38.89 16 P **P** **08 27 57.8 +0.3**
comp=Z,2µmcomp=Z,104nm,0.9s,mb5.6
ULN Ulaanbaatar 38.89 16 P **P** **08 27 58.2 +0.7**
SNR=39
AAI Ambon 39.03 110 P **P** **08 27 58.3 -0.9**
comp=Z,9µmcomp=Z,1µm,0.8s,mb6.6
AAI Ambon 39.03 110 P **P** **08 27 58.4 -0.8**
comp=Z,9µmcomp=Z,1µm,0.8s,mb6.6
IAKL Akhelmad 39.21 316 *e*P **P** **08 28 01.2 +0.8**
MSEY Mahe Island 39.39 249 PFAKE 08 28 10.0 +7.8
MSEY LR LR
comp=Z,16µm,19.0s,MS5.9
IKRD Kardeh 39.46 316 *e*P **P** **08 27 59.2 -3.3**
MSAI Masohi 39.58 109 P **P** **08 28 03.9 +0.1**
comp=Z,8µmcomp=Z,301nm,0.8s,mb6.1
MSAI Masohi 39.58 109 P **P** **08 28 03.6 -0.2**
comp=Z,8µmcomp=Z,301nm,0.8s,mb6.1
ISFR Sfrayin 39.96 316 *e*P **P** **08 28 08.1 +1.5**
GIRL Giralia 40.02 147 *e*P **P** **08 28 07.9 +0.6**
comp=Z,448nm,0.9s,mb6.2
ABKT Ailbek 40.35 317 P **P** **08 28 11.6 +1.8**
comp=Z,1µm,1.3s,mb6.4,SNR=23
ZAK Zakamensk 40.36 11 *e*P **P** **08 28 10.6 +0.9**
ZAK pmax pmax
comp=Z,45nm,1.2s,mb5.1
ISHV Shirvan 40.41 317 *e*P **P** **08 28 12.4 +2.0**
ISRV Sarvestan 40.42 303 *e*P **P** **08 28 11.8 +1.3**
IPAR Pars 40.62 303 *e*P **P** **08 28 14.6 +2.4**
INCN Inchon 40.85 44 *e*P **P** **08 28 13.4 -0.6**
comp=Z,721nm,2.1s,mb5.9
INCN LR LR
comp=Z,54µm,20.0s,MS6.4
INCN Inchon 40.85 44 P **P** **08 28 14.3 +0.3**
SNR=15
KURK Kurchatov 41.04 347 P **P** **08 28 15.5 +0.2**
comp=Z,1µm,1.1s,mb6.5
KURK Kurchatov 41.04 347 *e*P **P** **08 28 15.7 +0.3**
comp=Z,233nm,1.0s,mb5.8
KURK LR LR
comp=Z,30µm,20.0s,MS6.2
KURK Kurchatov 41.04 347 *d i*P **P** **08 28 15.5 +0.2**
KURK pmax pmax
comp=Z,322nm,1.2s,mb5.8
KURK Kurchatov 41.04 347 P **P** **08 28 15.9 +0.6**
SNR=114
MOY Mondy 41.21 9 *e*P **P** **08 28 17.6 +0.9**
MOY pmax pmax
comp=Z,210nm,2.5s,mb5.3
SNY Shenyang 41.40 36⇓ P **P** **08 28 18.2 -0.2**
SNY S **S** **08 34 31.0 -0.5**
SNY pmax pmax
comp=Z,140nm,0.8s,mb5.6
SNY LR LR
comp=N,21µm,18.6s,MS6.2
SNY LR LR
comp=E,18µm,17.4s,MS6.2
SNY LR LR
comp=Z,28µm,18.6s,MS6.2
KSRS Korea Array 41.72 45 P **P** **08 28 20.5 -0.7**
comp=Z,75nm,1.0s,mb5.3,baz=246,slow=8.6,SNR=113
KSRS S **S** **08 34 37.2 +0.7**
KSRS LR LR 08 48 04.1
comp=Z,34µm,19.5s,MS6.2,baz=239,slow=40
IANJ Anjilo 42.09 312 *e*P **P** **08 28 25.3 +1.1**
MBWA Marble Bar 42.13 139 *e*P **P** **08 28 23.8 -0.8**
comp=Z,224nm,1.1s,mb5.7
MBWA LR LR
comp=Z,23µm,20.0s,MS6.0
MBWA Marble Bar 42.13 139 P **P** **08 28 23.7 -0.9**
comp=Z,5µmcomp=Z,259nm,1.2s,mb5.7
MBWA Marble Bar 42.13 139 P **P** **08 28 23.6 -1.0**
comp=Z,5µmcomp=Z,259nm,1.2s,mb5.7
MBWA Marble Bar 42.13 139 P **P** **08 28 24.8 +0.2**
SNR=12
IZEF Zefreh 42.26 307 *e*P **P** **08 28 27.7 +2.1**
IGAR Gharneh 42.31 306 *e*P **P** **08 28 27.3 +1.3**
IRK Irkutsk 42.33 11 *e*P **P** **08 28 26.3 +0.5**
IRK *e* 08 30 07.2
IRK pmax pmax
comp=Z,165nm,1.2s,mb5.5
IKIA Kiasar 42.59 312 *e*P **P** **08 28 31.2 +2.9**
IGLO Ghaloghah 42.61 313 *e*P **P** **08 28 30.6 +2.1**
ISHM Shahmirzad 42.70 312 *e*P **P** **08 28 30.8 +1.6**
IFIR Firoozkooh 43.02 311 *e*P **P** **08 28 33.4 +1.6**
ZAA0 Zalesovo Array 43.18 354 *e*P **P** **08 28 32.6 -0.1**
ZALV Zalesovo Beam 43.18 354 P **P** **08 28 32.7 0.0**
ZALV LR LR 08 50 35.5
ZALV P'P' 09 00 21.7
ZALV Zalesovo Beam 43.18 354 P **P** **08 28 32.7 0.0**
comp=Z,119nm,0.6s,mb5.8,baz=180,slow=8.1,SNR=198
ZALV LR LR 08 50 35.6
comp=Z,19µm,19.2s,MS6.0,baz=177,slow=42
ZALV PKPPKP 09 00 21.7
comp=Z,2.9nm,1.0s,baz=282,slow=2.9,SNR=4.4
IDMV Damavand 43.53 311 *e*P **P** **08 28 37.7 +1.8**
IPRN Peran 43.58 312 *e*P **P** **08 28 38.3 +2.0**
CN2 Changchun 43.70 35 *e*P **P** **08 28 37.2 +0.1**
CN2 *es*P sP 08 28 44.2 -5.2
CN2 *e*S **S** **08 35 07.0 +1.7**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb4.8
CN2 pmax pmax
comp=Z,200nm,10.0s
CN2 LR LR
comp=N,16µm,20.0s,MS6.0
CN2 LR LR
comp=E,12µm,20.0s,MS6.0
TLE Tual 43.96 110 P **P** **08 28 39.3 -0.3**
comp=E,690nm,1.0s,mb6.3
TLE Tual 43.96 110 P **P** **08 28 38.8 -0.8**
comp=E,691nm,1.0s,mb6.3
FITZ Fitzroy Crossi 44.18 131 *e*P **P** **08 28 39.6 -1.7**
comp=E,796nm,1.1s,mb6.4
FITZ *e*S **S** **08 35 00.8 -12**
FITZ Fitzroy Crossi 44.18 131 *e*P **P** **08 28 39.9 -1.4**
comp=E,334nm,0.8s,mb6.1
FITZ Fitzroy Crossi 44.18 131 P **P** **08 28 39.8 -1.4**
comp=E,219nm,0.8s,mb6.0,baz=318,slow=5.4,SNR=155
FITZ LR LR 08 49 18.9
comp=E,14µm,21.1s,MS5.9,baz=303,slow=39
FITZ Fitzroy Crossi 44.18 131 P **P** **08 28 40.5 -0.8**
comp=E,818nm,1.1s,mb6.4
FITZ Fitzroy Crossi 44.18 131 P **P** **08 28 40.1 -1.2**
comp=E,818nm,1.1s,mb6.4
NVS Novosibirsk 44.23 353⇓ *i*P **P** **08 28 40.5 -0.7**
NVS *e*S **S** **08 35 07.1 -5.7**
NVS pmax pmax
comp=N,75nm,0.9s
NVS pmax pmax
comp=Z,117nm,0.9s,mb5.6
NVS pmax pmax
comp=E,43nm,0.7s
NVS smax
comp=N,124nm,2.1s
NVS smax
comp=E,130nm,1.9s
IR3 Iran Long-Peri 44.24 310 *e*P **P** **08 28 42.5 +0.9**
CIT Chita 44.52 19 *e*P **P** **08 28 43.8 +0.2**
CIT *e* 08 28 54.2
CIT pmax pmax
comp=Z,302nm,1.5s,mb5.9
HIA Hailar 44.62 26 PFAKE 08 28 50.0 +5.6
HIA LR LR
comp=Z,16µm,19.0s,MS6.0
VOSK Vostochnaya 44.86 342 P **P** **08 28 46.0 -0.2**
VOSK pmax pmax
comp=Z,128nm,0.8s,mb5.8
KBD Kabd 44.90 300 *e*P **P** **08 28 48.1 +1.2**
KBD AMb AMB 08 28 57.6
comp=Z,160nm,0.9s,mb5.8
RDF Al-Radifah 44.96 300 *e*P **P** **08 28 49.0 +1.5**
RDF AMb AMB 08 28 57.9
comp=Z,313nm,1.7s,mb5.9
KNA Kununurra 45.22 125 P **P** **08 28 47.8 -1.8**
comp=Z,5µmcomp=Z,426nm,0.9s,mb6.3
KNA Kununurra 45.22 125 P **P** **08 28 47.7 -1.9**
comp=Z,5µmcomp=Z,426nm,0.9s,mb6.3
NAY Al-Naaiem 45.30 300 *e*P **P** **08 28 51.0 +0.9**
NAY AMb AMB 08 29 00.6
comp=Z,161nm,0.9s,mb5.9
BVAR Borovoye Array 45.30 342 P **P** **08 28 49.5 -0.2**
comp=Z,57nm,0.8s,mb5.5,baz=142,slow=7.2,SNR=88
MIB Mutribah 45.35 301 *e*P **P** **08 28 51.7 +1.1**
MIB AMb AMB 08 28 56.0
comp=Z,206nm,0.7s,mb6.0
BRVK Borovoye 45.36 342 *e*P **P** **08 28 50.0 -0.2**
BRVK LR LR
comp=Z,19µm,19.0s,MS6.0
BRVK Borovoye 45.36 342 *d i*P **P** **08 28 49.9 -0.3**
BRVK pmax pmax
comp=Z,107nm,1.0s,mb5.6
BRVK Borovoye 45.36 342 P **P** **08 28 50.4 +0.2**
SNR=52
LBOS 45.52 279 *e*P **P** **08 28 55.3 +3.3**
MEEK Meekatharra 45.59 146 *e*P **P** **08 28 51.4 -1.0**
ZRNK Zerenda 45.67 341 *i* P **P** **08 28 52.4 -0.2**
ZRNK pmax pmax
comp=Z,111nm,1.2s,mb5.7
BAKI Biak 45.67 103 P **P** **08 28 52.2 -1.1**
comp=Z,6µmcomp=Z,359nm,1.1s,mb6.2
BAKI Biak 45.67 103 P **P** **08 28 51.8 -1.5**
comp=Z,6µmcomp=Z,359nm,1.1s,mb6.2
MRIV Mauritius Mete 45.93 227 *e*P **P** **08 28 56.8 +1.7**
AB31 Akbulak array 46.39 331 *i* P **P** **08 28 58.9 +0.5**
AB31 Akbulak array 46.39 331 *i* P **P** **08 28 58.8 +0.4**
AB31 pmax pmax
comp=Z,116nm,0.7s,mb5.9
ABKAR Akbulak array 46.39 331 *e*P **P** **08 28 59.0 +0.6**
comp=Z,83nm,0.6s,mb5.8
MDJ Mudanjiang 46.59 37 P **P** **08 29 00.1 +0.1**
MDJ pP pP 08 29 02.9 -5.9
MDJ sP sP 08 29 04.4 -7.9
MDJ S **S** **08 35 48.9 +1.8**
MDJ pmax pmax
comp=Z,36nm,1.1s,mb5.2
MDJ pmax pmax
comp=Z,990nm,10.0s
MDJ LR LR
comp=N,20µm,24.2s,MS6.0
MDJ LR LR
comp=E,12µm,25.0s,MS6.0
MDJ LR LR
comp=Z,22µm,20.0s,MS6.1
MDJ Mudanjiang 46.59 37 PFAKE 08 29 10.0 +10
MDJ LR LR
comp=Z,32µm,19.0s,MS6.3
TRBA At Turbah 46.64 278 *e*P **P** **08 29 03.2 +2.2**
KAKA Kakadu 46.71 119 *e*P **P** **08 28 59.8 -1.6**
comp=Z,69nm,0.6s,mb5.8

KAKA **Kakadu** 46.71 119 *e*P P 08 28 59.2 -2.2
comp=Z,216nm,0.6s,mb6.3
KAKA **Kakadu** 46.71 119 P P 08 28 59.5 -1.9
comp=Z,2μmcomp=Z,213nm,0.7s,mb6.2
IVIS **Veis** 47.11 307 *e*P P 08 29 03.5 -0.8
ILIN **Lien** 47.15 308 *e*P P 08 29 05.4 +0.8
IGHG **Ghaleghazi** 47.27 307 *e*P P 08 29 05.2 -0.3
ISRB **Sarab** 47.64 312 *e*P P 08 29 10.2 +1.8
RER **Riviere de l'E** 47.74 228 *e*P P 08 29 11.7 +2.3
comp=Z,82nm,0.9s,mb5.8
RER LR LR
comp=Z,10μm,19.0s,MS5.8
BHD **Baghdad** 48.70 305 *ex* P 08 29 12.5 -4.2
BHD *ex* x 08 29 23.0
BHD *ex* x 08 30 38.0
BHD *ex* x 08 36 03.0
BHD *ex* x 08 36 15.0
IAZR **Azarshahr** 48.83 311 *e*P P 08 29 17.4 -0.2
MAJO **Matsushiro** 48.85 51 *e*P P 08 29 17.6 -0.1
comp=Z,85nm,0.9s,mb5.8
MAJO LR LR
comp=Z,11μm,20.0s,MS5.9
MAJO **Matsushiro** 48.85 51 *e*P P 08 29 17.6 -0.1
MAJO pmax pmax
comp=Z,85nm,0.9s,mb5.8
MAJO MLR MLR
comp=Z,11μm,20.0s,MS5.9
MAT **Matsushiro** 48.85 51 P P 08 29 17.3 -0.4
MAT S S 08 36 20.0 +0.5
KLBR **Kellerberrin** 49.12 150 *e*P P 08 29 18.8 -1.0
comp=Z,156nm,0.9s,mb6.0
ISHB **Shabestar** 49.31 311 *e*P P 08 29 21.8 +0.5
IMRD **Marand** 49.41 312 *e*P P 08 29 23.0 +1.0
MAK **Makhachkala** 49.86 318 *e*P P 08 29 27.1 +1.7
MAK *e* 08 30 43.1
MAK *e* 08 31 22.1
MAK *e*S S 08 36 30.7 -2.8
MAK *e* 08 39 10.5
MAK *e*SS SS 08 40 00.3 -6.1
MAK *e*SSS 08 41 27.2
MAK pmax pmax
comp=Z,405nm,1.2s,mb6.3
CBIJ **Chichi jima** 49.88 64 LR LR 08 51 03.3
comp=Z,3μm,21.2s,MS5.2,baz=251,slow=37
NWAO **Narrogin (SRO)** 49.98 152 *e*P P 08 29 26.1 -0.2
comp=Z,214nm,1.0s,mb6.1
NWAO *e*PP PP 08 31 24.3 +2.7
NWAO LR LR
comp=Z,16μm,19.0s,MS6.0
NWAO **Narrogin (SRO)** 49.98 152 P P 08 29 25.5 -0.8
comp=Z,65nm,0.6s,mb5.8,baz=322,slow=7.7,SNR=40
NWAO LR LR 08 51 08.5
comp=Z,11μm,20.8s,MS5.9,baz=324,slow=37
NWAO **Narrogin (SRO)** 49.98 152 *e*P P 08 29 26.1 -0.2
NWAO *e* 08 31 24.3
NWAO pmax pmax
comp=Z,214nm,1.0s
NWAO MLR MLR
comp=Z,16μm,19.0s
NWAO **Narrogin (SRO)** 49.98 152 P P 08 29 27.1 +0.8
SNR=9.9
JAY **Jayapura** 50.45 103 P P 08 29 30.1 -0.2
comp=Z,3μmcomp=Z,94nm,1.9s,mb5.5
CUKT **Cukurca** 50.47 310 *e*P P 08 29 28.9 -1.1
GNI **Garni** 50.62 313 *e*P P 08 29 32.9 +1.7
comp=Z,169nm,0.9s,mb6.0
GNI LR LR
comp=Z,6μm,20.0s,MS5.6
GNI **Garni** 50.62 313 *e*P P 08 29 32.9 +1.7
GNI pmax pmax
comp=Z,169nm,0.9s
GNI MLR MLR
comp=Z,6μm,20.0s
DGRG **David-gareji** 50.67 315 P P 08 29 32.3 +0.8
DGRG S S 08 36 42.5 -2.2
CLDR **Caldiran** 50.86 312 *e*P P 08 29 33.8 +0.8
VANB **Van** 51.06 311 *e*P P 08 29 41.0 +6.5
DESE **Dese** 51.16 275 *e*P P 08 29 42.7 +7.1
DESE *e*S S 08 36 53.1 +0.8
MTA **Mtatsminda** 51.17 315 P P 08 29 36.2 +1.0
MTA S S 08 36 54.8 +3.2
TBLG **Delisi** 51.22 315 *e*P P 08 29 36.7 +1.1
TBLG *e*S S 08 36 53.8 +1.4
TBLG **Delisi** 51.22 315 P P 08 29 36.7 +1.1
TBLG S S 08 36 53.8 +1.5
SVE **Sverdlovsk** 51.65 339⇑ *e*P P 08 29 38.9 +0.3
SVE *e* 08 30 49.3
SVE *e*S S 08 36 58.5 +0.7
SVE *e*SSS 08 42 14.4
SVE pmax pmax
comp=Z,197nm,0.9s,mb6.0
SVE MLR MLR
comp=Z,28μm,20.0s,MS6.3
AGRB **Hanur-Agry** 51.68 312 *e*P P 08 29 40.5 +1.4
GOR **Gori** 51.75 315 P P 08 29 32.9 -6.8
GOR S S 08 36 43.2 -16
GUMO **Guam** 51.81 81 *e*P P 08 29 39.6 -0.8
comp=Z,88nm,0.8s,mb5.7
GUMO LR LR
comp=Z,6μm,20.0s,MS5.6
GUMO **Guam** 51.81 81 *e*P P 08 29 39.7 -0.8
GUMO pmax pmax
comp=Z,88nm,0.8s,mb5.7
GUMO MLR MLR
comp=Z,6μm,20.0s,MS5.6
GUMO **Guam** 51.81 81 P P 08 29 39.3 -1.2
comp=Z,140nm,1.6s,mb5.6
GUMO **Guam** 51.81 81 P P 08 29 38.9 -1.6
comp=Z,139nm,1.6s,mb5.6
HABR **Khabarovsk** 51.84 35 *de*P P 08 29 39.6 -0.5
HABR *e**PP pP 08 29 48.3 -0.7
HABR *e**SP sP 08 29 52.2 -0.3
HABR *e* 08 30 50.8
HABR *e* 08 31 37.2
HABR PPP 08 32 38.6
HABR *e*S S 08 37 00.1 -0.6
HABR *e**SS sS 08 37 15.8 +0.5
HABR *e* 08 39 26.1
HABR *e*SS SS 08 40 37.6 0.0
HABR *e*SSS 08 42 17.8
HABR pmax pmax
comp=Z,296nm,1.1s,mb6.1
HABR pmax pmax
comp=Z,261nm,1.1s,mb6.1
HABR pmax pmax
comp=N,60nm,1.1s
HABR pmax pmax
comp=E,108nm,0.9s
HABR MLR MLR
comp=Z,29μm,22.0s,MS6.3
HABR MLR MLR
comp=E,12μm,14.0s
HABR MLR MLR
comp=N,19μm,21.0s
WRAB **Tennant Creek** 51.95 126 *e*P P 08 29 40.7 -0.6
comp=N,155nm,0.6s,mb6.1
WRAB LR LR
comp=Z,32μm,20.0s,MS6.4
WRAB **Tennant Creek** 51.95 126 *e*P P 08 29 40.7 -0.7
WRAB pmax pmax
comp=Z,250nm,0.6s,mb6.3
WRAB MLR MLR
comp=Z,14μm,20.0s,MS6.0
WRAB **Tennant Creek** 51.95 126 P P 08 29 40.0 -1.4
comp=Z,1μm,0.5s,mb7.1
WRAB **Tennant Creek** 51.95 126 P P 08 29 40.5 -0.9
comp=Z,7μmcomp=Z,454nm,0.6s,mb6.5
WRAB **Tennant Creek** 51.95 126 P P 08 29 40.4 -1.0
comp=Z,7μmcomp=Z,454nm,0.6s,mb6.5
KARS **Kars** 51.98 313 *e*P P 08 29 42.4 +1.0
ARU **Arti** 52.12 337 *e*P P 08 29 41.9 -0.1
comp=Z,117nm,1.0s,mb5.8
ARU LR LR
comp=Z,31μm,21.0s,MS6.3
ARU **Arti** 52.12 337 *d i*P P 08 29 42.0 -0.1
ARU *e* 08 30 51.8
ARU *e* 08 31 44.1
ARU *e*PPP 08 32 46.8
ARU S S 08 37 06.1 +1.8
ARU 08 39 30.0
ARU pmax pmax
comp=Z,132nm,1.2s,mb5.7
ARU MLR MLR
comp=Z,28μm,20.0s,MS6.3
ARU **Arti** 52.12 337 P P 08 29 42.8 +0.7
comp=Z,564nm,0.8s,mb6.5,SNR=33
ZEI **Tsey** 52.20 316 *e*P P 08 29 43.4 +0.5
ZEI *e*S S 08 37 10.4 +4.6
ZEI pmax pmax
comp=Z,161nm,1.5s,mb5.7
ZEI pmax pmax
comp=N,46nm,0.7s
ZEI pmax pmax
comp=E,71nm,0.8s
ZEI pmax pmax
comp=Z,1μm,8.0s
ZEI smax
comp=E,3μm,13.0s
ZEI smax
comp=N,4μm,10.0s
FURI **Furi** 52.34 273 *e*P P 08 29 47.8 +3.4
FURI *i*S S 08 37 21.6 +13
CLNS **Chul'man** 52.34 22 *d i*P P 08 29 44.0 +0.2
CLNS *e**PP pP 08 29 52.9 +0.3
CLNS *e* 08 30 53.4
CLNS *e* 08 31 41.4
CLNS *e*PPP 08 32 43.5
CLNS *e*S S 08 37 05.4 -1.9
CLNS *e*SS SS 08 40 34.6 -11
CLNS pmax pmax
comp=Z,188nm,1.2s,mb5.9
CLNS pmax pmax
comp=E,92nm,1.0s
CLNS pmax pmax
comp=N,79nm,1.0s
CLNS pmax pmax
comp=Z,18nm,0.9s,mb5.0
CLNS pmax pmax
comp=N,25nm,1.3s
CLNS pmax pmax
comp=E,23nm,0.9s
CLNS smax
comp=E,760nm,13.5s
CLNS smax
comp=N,994nm,12.1s
CLNS MLR MLR
comp=N,14μm,14.0s,MS6.3
CLNS MLR MLR
comp=E,11μm,14.0s,MS6.3
CLNS MLR MLR
comp=Z,10μm,13.0s,MS6.0
EZM **Erzurum** 52.98 312 *e*P P 08 29 48.0 -0.7
ABPO **Ambohimpanom** 53.14 236 *e*P P 08 29 52.0 +1.8
comp=Z,58nm,0.9s,mb5.5
ABPO LR LR
comp=Z,19μm,19.0s,MS6.2
ABPO **Ambohimpanom** 53.14 236 *e*P P 08 29 52.0 +1.8
ABPO pmax pmax
comp=Z,58nm,0.9s,mb5.5
ABPO MLR MLR
comp=Z,19μm,19.0s,MS6.2
BCA **Borcka** 53.29 314 *e*P P 08 29 51.5 +0.5
KIV **Kislovodsk** 53.47 317 P P 08 29 53.1 +0.8
comp=Z,1μm,0.8s,mb6.9,SNR=18
KIV **Kislovodsk** 53.47 317 *e*P P 08 29 53.3 +1.0
comp=Z,179nm,0.9s,mb6.0
KIV LR LR
comp=Z,8μm,20.0s,MS5.8
KIV **Kislovodsk** 53.47 317 *e*P P 08 29 53.0 +0.7
KIV *e* 08 31 53.0
KIV *e*S S 08 37 25.3 +2.2
KIV *e*SS SS 08 41 01.0 -2.5
KIV pmax pmax
comp=Z,153nm,0.8s,mb6.0
KIV MLR MLR
comp=Z,7μm,17.5s,MS5.8
ASAR **Alice Springs** 53.68 130 P P 08 29 54.0 -0.1
comp=Z,75nm,0.9s,mb5.6,baz=306,slow=6.0,SNR=300
ASAR PcP PcP 08 31 01.4 +1.2
comp=Z,43nm,0.8s,baz=320,slow=3.3,SNR=5.5
ASAR ScP ScP 08 34 56.5 +0.2
comp=Z,6.8nm,0.9s,baz=319,slow=3.7,SNR=4.8
ASAR S S 08 37 21.9 -4.6
comp=Z,9.0nm,0.9s,baz=296,slow=12,SNR=12
ASAR PKPPKP 09 00 04.0
comp=Z,0.8nm,0.8s,baz=144,slow=3.4,SNR=4.6
ASAR **Alice Springs** 53.68 130 P P 08 29 54.0 -0.1
ASAR 08 31 01.4
ASAR S S 08 37 21.9 -4.5
SVRC **Sivrice-ELAZID** 54.05 310 *e*P P 08 29 59.0 +2.3
PTK **Pertek** 54.13 310 *e*P P 08 29 56.5 -0.7
URFA **Urfa** 54.18 308 *e*P P 08 29 54.5 -3.2
FORT **Forrest** 54.21 141 *e*P P 08 29 58.0 +0.2
comp=Z,119nm,0.6s,mb6.0
FORT **Forrest** 54.21 141 *e*P P 08 29 58.1 +0.2
comp=Z,277nm,1.0s,mb6.1
ERM **Erimo** 54.28 46 P P 08 30 01.6 +3.3
comp=Z,333nm,0.5s,mb6.5,SNR=14
ERM **Erimo** 54.28 46 *e*P P 08 29 59.7 +1.5
comp=Z,39nm,0.6s,mb5.5
ERM LR LR
comp=Z,10μm,20.0s,MS5.9
ERM **Erimo** 54.28 46 *e*P P 08 29 59.7 +1.4
ERM pmax pmax
comp=Z,39nm,0.6s,mb5.5
ERM MLR MLR
comp=Z,10μm,20.0s,MS5.9
EZC **Erzincan** 54.40 311 *e*P P 08 29 59.7 +0.5
KTUT **Trabzon** 54.47 313 *e*P P 08 29 55.9 -3.8
GUMT **Gumushane** 54.52 312 *e*P P 08 30 00.4 +0.4
MALT **Malatya** 54.70 309 *e*P P 08 30 03.0 +1.5
MALT **Malatya** 54.70 309 *e*P P 08 30 01.8 +0.4
comp=Z,68nm,1.0s,mb5.6
MALT LR LR
comp=Z,10μm,21.0s,MS5.8
MALT **Malatya** 54.70 309 ⇓ *i*P P 08 30 02.1 +0.7
MALT **Malatya** 54.70 309 P P 08 30 01.9 +0.5
comp=Z,2μmcomp=Z,73nm,1.0s,mb5.7
MALT **Malatya** 54.70 309 P P 08 30 02.1 +0.7
comp=Z,2μmcomp=Z,73nm,1.0s,mb5.7
MYA **Malataya** 54.71 309 *e*P P 08 30 02.0 +0.6
SOKR **Solikamsk** 55.06 339 *d i*P P 08 30 03.9 +0.3
SOKR S S 08 37 43.8 -0.2
SOKR SS SS 08 41 25.7 -2.3
SOKR pmax pmax
comp=Z,130nm,0.9s,mb6.0
SOKR MLR MLR
comp=Z,36μm,27.0s,MS6.3
DARE **Darende-Malaty** 55.34 310 *e*P P 08 30 15.0 +9.0
SOC **Sochi** 55.34 316 *e*P P 08 30 06.6 +0.7
SOC *e**SP sP 08 30 17.7 -0.6
SOC *e* 08 31 05.8
SOC *e* 08 32 08.0
SOC *i*S S 08 37 46.5 -1.9
SOC *e**SS sS 08 38 00.6 -2.5
SOC *e* 08 39 51.3
SOC pmax pmax
comp=Z,32nm,0.5s,mb5.6
SOC MLR MLR
comp=Z,12μm,22.0s,MS5.9
GAZ **Gaziantep** 55.36 308 *e*P P 08 30 06.7 +0.5
KMBO **Kilima Mbogo** 55.58 261 P P 08 30 09.8 +1.6
comp=Z,14nm,0.8s,mb5.0,baz=19,slow=23,SNR=19
KMBO LR LR 08 49 43.6
comp=Z,17μm,21.6s,MS6.1,baz=184,slow=32
KMRS **Kahramanmaras** 55.68 308 *e*P P 08 30 09.0 +0.6
HWQ **Hawqa** 55.77 304 *e*P P 08 30 12.4 +3.2
YSS **Yuzh-Sakhalins** 55.78 40 *e*P P 08 30 09.0 0.0
comp=Z,246nm,0.8s,mb6.3
YSS LR LR
comp=Z,4μm,20.0s,MS5.5
YSS **Yuzh-Sakhalins** 55.78 40 K *i*P P 08 30 08.6 -0.5
YSS *e**SP sP 08 30 19.0 -2.5
YSS *e*PPP 08 33 24.0
YSS *e*S S 08 37 50.0 -4.2
YSS *e*SS SS 08 41 31.0 -8.9
YSS *e*SSS 08 43 42.0
YSS pmax pmax
comp=Z,280nm,1.0s,mb6.2
YSS pmax pmax
comp=Z,1μm,6.0s
YSS MLR MLR
comp=E,13μm,19.0s,MS6.1
YSS MLR MLR
comp=Z,13μm,19.0s,MS6.0
YSS MLR MLR
comp=N,8μm,16.0s,MS6.1
BHL **Bhannes** 55.94 303 *e*P P 08 30 13.7 +3.3
MMAI **Mount Meron Ar** 56.00 302 P P 08 30 11.2 +0.4
comp=N,7.3nm,0.7s,mb4.8,baz=110,slow=8.9,SNR=8.2
MMAI LR LR 08 55 02.7
comp=N,3μm,19.2s,MS5.4,baz=25,slow=37
RSDY **Resadiye-TOKAT** 56.08 311 *e*P P 08 30 10.8 -0.4
SARI **SarD1z-Kayseri** 56.11 309 *e*P P 08 30 10.8 -0.7
SVSK **Karacayir** 56.19 311 *e*P P 08 30 14.9 +2.8
CEYT **Ceyhan** 56.46 307 *e*P P 08 30 14.9 +0.8
KOZT **Kozan** 56.50 308 *e*P P 08 30 14.9 +0.5
COEN **Coen** 56.65 115 *e*P P 08 30 16.0 +0.3
comp=N,3μm,1.9s,mb7.0
COEN **Coen** 56.65 115 P P 08 30 16.3 +0.6
comp=N,9μmcomp=N,351nm,2.3s,mb6.0
COEN **Coen** 56.65 115 P P 08 30 15.8 +0.1
YUK **Yuzh-Kuril'sk** 56.81 44 ⇑ *i*P P 08 30 17.3 +0.9
YUK *i* 08 32 28.3
YUK *i* PPP 08 33 36.1
YUK *e*S S 08 38 09.9 +2.1
YUK pmax pmax
comp=E,1μm,1.9s
YUK pmax pmax
comp=Z,1μm,1.9s,mb6.7
YUK pmax pmax
comp=N,190nm,0.6s
YUK smax
comp=N,1μm,3.0s
YUK MLR MLR
comp=N,10μm,21.0s,MS6.2
YUK MLR MLR
comp=E,21μm,21.0s,MS6.2
YUK MLR MLR
comp=Z,21μm,21.0s,MS6.2
KARA **Karaisali** 57.06 307 *e*P P 08 30 16.3 -2.1
VRHR **Novokhopersk** 57.06 325 *e*P P 08 30 17.6 -0.5
VRHR *e**PP pP 08 30 27.2 +0.2
VRHR *e*S S 08 38 09.7 -1.2
VRHR pmax pmax
comp=Z,130nm,0.5s,mb6.2
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=E,70nm,1.2s
VRHR smax
comp=N,270nm,1.6s
VRHR smax
comp=Z,9.0nm,0.8s
VRHR smax
comp=E,170nm,1.1s
KVT **Kavak** 57.20 312 *e*P P 08 30 18.1 -1.2
ANN **Anapa** 57.29 317 *e*P P 08 30 20.9 +1.1
ANN *e*S S 08 38 13.6 -0.6
ANN pmax pmax
comp=Z,90nm,1.4s,mb5.6
ANN MLR MLR
comp=E,7μm,21.0s
ANN MLR MLR
comp=Z,8μm,21.0s,MS5.8
EREN **Erenkoy** 57.43 305 *e*P P 08 30 28.9 +7.9
YAK **Yakutsk** 57.79 20 *e*P P 08 30 22.7 -0.3
comp=Z,238nm,0.8s,mb6.3
YAK *e*ScP ScP 08 35 17.5 +3.9
YAK LR LR
comp=Z,17μm,22.0s,MS6.1
YAK **Yakutsk** 57.79 20 *d i*P P 08 30 22.2 -0.8
YAK *e**PP pP 08 30 32.2 +0.2
YAK *e* 08 31 12.2
YAK *e* 08 32 31.0
YAK *i*S S 08 38 19.1 -1.1
YAK *e* 08 38 34.9
YAK pmax pmax
comp=Z,192nm,1.0s,mb6.1
YAK pmax pmax
comp=N,81nm,1.1s
YAK pmax pmax
comp=E,94nm,1.1s
YAK pmax pmax
comp=Z,56nm,1.1s,mb5.5
YAK pmax pmax
comp=E,40nm,1.1s
YAK pmax pmax
comp=N,84nm,1.6s
YAK smax
comp=E,490nm,2.3s
YAK smax
comp=N,223nm,2.0s
YAK MLR MLR
comp=Z,16μm,21.0s,MS6.1
YAK MLR MLR
comp=E,14μm,19.0s,MS6.1
YAK MLR MLR
comp=N,5μm,20.0s,MS6.1
LFK **Lefkose** 57.90 305 *e*P P 08 30 26.8 +2.5
IKL **Isikli** 57.94 306 *e*P P 08 30 27.7 +3.1
CORM **Corum** 58.02 311 *e*P P 08 30 22.5 -2.5
VORD **Divnogorie** 58.34 324 *e*P P 08 30 26.5 -0.6
VORD *e*S S 08 38 25.1 -2.6
VORD *e*PS 08 38 40.7
VORD *e*SSS 08 44 44.7
VORD pmax pmax
comp=N,130nm,0.6s
VORD pmax pmax
comp=E,50nm,0.6s
VORD pmax pmax
comp=Z,80nm,0.6s,mb5.9
VORD smax
comp=N,1μm,5.1s
VORD smax
comp=Z,500nm,7.3s
VORD smax
comp=E,1μm,6.8s
VORD MLR MLR
comp=Z,4μm,13.0s,MS5.7
VORD MLR MLR
comp=N,10μm,18.0s,MS6.0
VORD MLR MLR
comp=E,4μm,20.0s,MS6.0
LEF **Lefka** 58.39 304 *e*P P 08 30 32.4 +4.6
SULT **Sultanhani-AKS** 58.44 308 *e*P P 08 30 25.4 -2.7
VSR **Storozhevoye** 58.52 324 *e*P P 08 30 27.6 -0.7
VSR *e**PP pP 08 30 37.6 +0.3
VSR *e*S S 08 38 28.5 -1.5
VSR *e*PS 08 38 43.1
VSR pmax pmax
comp=Z,50nm,0.6s,mb5.7
VSR pmax pmax
comp=N,10.0nm,0.5s
VSR pmax pmax
comp=E,30nm,1.3s
VSR smax
comp=N,2μm,5.3s
VSR smax
comp=Z,260nm,5.3s
VSR smax
comp=E,550nm,4.7s
VSR MLR MLR
comp=Z,12μm,19.0s,MS6.0
VSR MLR MLR
comp=N,8μm,20.0s,MS6.0
VSR MLR MLR
comp=E,6μm,16.0s,MS6.0
PMG **Port Moresby** 58.66 108 *e*P P 08 30 30.2 +0.3
comp=E,243nm,0.8s,mb6.3
PMG LR LR
comp=Z,5μm,20.0s,MS5.7
PMG **Port Moresby** 58.66 108 *e*P P 08 30 30.2 +0.3
PMG pmax pmax
comp=Z,243nm,0.8s
PMG MLR MLR
comp=Z,5μm,20.0s
PMG **Port Moresby** 58.66 108 P P 08 30 30.0 +0.1
comp=Z,6μmcomp=Z,366nm,1.1s,mb6.3
BR131 **Keskin Array S** 58.66 310 *e*P P 08 30 28.5 -1.0
comp=Z,22nm,0.6s,mb5.3
BR131 LR LR
comp=Z,4μm,20.0s,MS5.5
BRTR **Keskin Array B** 58.66 310 P P 08 30 28.3 -1.2
BRTR ⇑ *e* 09 00 19.3
BRTR **Keskin Array B** 58.66 310 P P 08 30 28.3 -1.2
comp=Z,27nm,0.7s,mb5.4,baz=126,slow=7.1,SNR=129
BRTR PKP2bc 09 00 19.3
comp=Z,1.5nm,1.0s,baz=259,slow=1.5,SNR=5.4
VOR **Voronezh** 58.71 325 ⇑ *i*P P 08 30 30.0 +0.4
VOR pmax pmax
comp=Z,300nm,1.4s,mb6.1
CANT **Cankiri** 58.87 311 *e*P P 08 30 31.2 +0.3
BZK **Bozkurt** 58.90 313 *e*P P 08 30 30.0 -1.1
HDMB **Hadim** 59.02 307 *e*P P 08 30 28.9 -3.2
KONT **Konya--Tatoy** 59.29 308 *e*P P 08 30 29.4 -4.5

LADK Ladik-KONYA 59.33 308 *e*P **P** **08 30 34.2 -0.1**
LOD Lodumlu 59.35 310 *e*P **P** **08 30 37.0 +2.7**
SIM Simferopol' 59.59 316*c i*P **P** **08 30 36.0 +0.2**
SIM *e*PPP 08 34 11.0
SIM *i* S **S** **08 38 42.0 -2.1**
SIM pmax pmax
comp=Z,460nm,7.6s
SIM pmax pmax
comp=Z,47nm,0.7s,mb5.6
SIM MLR MLR
comp=Z,13µm,21.6s,MS6.0
KIZT Kizilcal 59.83 309 *e*P **P** **08 30 36.2 -1.4**
SVRH Sivrihisar-ESK 60.21 309 *e*P **P** **08 30 38.8 -1.4**
ANTB Antalya 60.46 306 *e*P **P** **08 30 51.7 +10**
BCK Bucak 60.59 307 *e*P **P** **08 30 45.2 +2.3**
KDZE Karadeniz Ereo 60.63 311 *e*P **P** **08 30 40.3 -2.7**
MDU Mudurnu 60.63 310 *e*P **P** **08 30 40.0 -3.1**
SHUT Suhut-Afyon 60.80 308 *e*P **P** **08 30 43.9 -0.4**
ELL Elmali 61.03 306 *e*P **P** **08 30 48.7 +2.8**
GULT Gulveren 61.15 310 *e*P **P** **08 30 47.6 +1.0**
MOS Moscow 61.22 328 *e*P **P** **08 30 46.4 -0.4**
MOS *e* 08 31 27.3
MOS *e*S **S** **08 38 59.5 -5.1**
MOS pmax pmax
comp=Z,400nm,1.7s,mb6.3
MOS pmax pmax
comp=Z,203nm,1.0s,mb6.2
ALT Altintas 61.22 309 *e*P **P** **08 30 47.5 +0.4**
GLHS Glhisar (BURDU 61.41 306 *e*P **P** **08 30 48.5 +0.1**
OBN Obninsk 61.51 328 P **P** **08 30 48.0 -0.8**
comp=Z,590nm,0.7s,mb6.8,SNR=8.9
OBN Obninsk 61.51 328 *e*P **P** **08 30 48.5 -0.3**
comp=Z,334nm,1.4s,mb6.3
OBN LR LR
comp=Z,14µm,21.0s,MS6.1
OBN Obninsk 61.51 328K *i*P **P** **08 30 48.4 -0.4**
OBN *i* 08 31 01.2
OBN *i* 08 31 30.3
OBN *i* 08 34 41.4
OBN *i* S **S** **08 39 08.2 -0.2**
OBN *i* PS 08 39 23.2
OBN *i* SS SS 08 43 14.5 +4.9
OBN *i* SSS 08 45 50.6
OBN pmax pmax
comp=Z,192nm,1.2s,mb6.1
OBN MLR MLR
comp=Z,13µm,20.0s,MS6.1
CAVI Cavuskoy 61.62 310 *e*P **P** **08 30 51.0 +1.3**
ADVT Abdulvahap 61.73 310 *e*P **P** **08 30 53.4 +2.8**
MBAR Mbarara 61.79 263 PFAKE 08 31 00.0 +8.6
MBAR LR LR
comp=Z,1µm,20.0s,MS5.0
CTA Charters Tower 61.84 120 *e*P **P** **08 30 51.3 -0.3**
comp=Z,106nm,1.4s,mb5.8
CTA *e*S **S** **08 39 11.0 -2.6**
CTAO Charters Tower 61.84 120 *e*P **P** **08 30 52.0 +0.4**
comp=Z,558nm,1.6s,mb6.4
CTAO LR LR
comp=Z,11µm,20.0s,MS6.0
CTAO Charters Tower 61.84 120 *e*P **P** **08 30 52.0 +0.4**
CTAO pmax pmax
comp=Z,558nm,1.6s,mb6.4
CTAO MLR MLR
comp=Z,11µm,20.0s,MS6.0
CTAO Charters Tower 61.84 120 P **P** **08 30 52.3 +0.7**
comp=Z,5µmcomp=Z,219nm,2.0s,mb5.9
HRT Hereke 61.85 310 *e*P **P** **08 30 49.6 -1.8**
SILT Sile 61.93 311 *e*P **P** **08 30 54.5 +2.7**
GEMT Gemlik 62.15 310 *e*P **P** **08 30 52.2 -1.1**
KULA Kula-Manisa 62.26 308 *e*P **P** **08 30 52.5 -1.6**
MDNY Mudanya-Bursa 62.37 310 *e*P **P** **08 30 56.9 +2.1**
ARG Arkhangelos 62.38 305 P **P** **08 30 58.2 +3.2**
KLYT Kilyos 62.40 311 *e*P **P** **08 30 53.4 -1.6**
ARMT Armutlu 62.42 310 *e*P **P** **08 30 54.1 -1.0**
BGKT Bogazkoy 62.58 311 *e*P **P** **08 30 52.2 -4.0**
KLMR Klimovskoe 62.64 334*d i*P **P** **08 30 55.9 -0.3**
KLMR *e* 08 33 11.6
KLMR *e*PPP 08 34 41.5
KLMR *i* S **S** **08 39 22.3 -0.1**
KLMR *e*SS SS 08 43 31.6 +4.6
KLMR pmax pmax
comp=Z,330nm,1.6s,mb6.2
KLMR pmax pmax
comp=Z,1µm,9.6s
KLMR MLR MLR
comp=Z,15µm,20.0s,MS6.2
KCTX Karacabey (Bur 62.75 310 *e*P **P** **08 30 58.3 +0.9**
MLSB Milas 62.79 306 *e*P **P** **08 31 00.4 +2.7**
CTKS Kestanelik-??a 62.79 311 *e*P **P** **08 30 53.0 -4.7**
DAT Datca 62.88 306 *e*P **P** **08 30 56.6 -1.7**
SLVT Silivri 63.01 311 *e*P **P** **08 31 07.5 +8.4**
BALB Balikesir 63.02 309 *e*P **P** **08 30 58.8 -0.3**
PAF Port-aux-Franc 63.05 196 PFAKE 08 31 10.0 +11
PAF LR LR
comp=Z,15µm,21.0s,MS6.1
BODT Bodrum 63.13 306 *e*P **P** **08 30 56.8 -3.2**
GONE Gonen-Balikesi 63.22 309 *e*P **P** **08 30 59.4 -1.1**
TLCR 63.29 315 ⇓P **P** **08 31 00.8 -0.1**
TLCR 63.29 315 ⇓*i*P **P** **08 31 00.8 -0.1**
IZM Izmir 63.33 307 *e*P **P** **08 31 00.4 -0.9**
TIRR Tirgusor 63.43 314 *e*P **P** **08 31 01.7 -0.1**
comp=Z,35nm,0.9s,mb5.5
TIRR Tirgusor 63.43 314 ⇑P **P** **08 31 02.2 +0.4**
TIRR Tirgusor 63.43 314⇑*i*P **P** **08 31 02.2 +0.4**
PSN Preselentsi 63.45 313 *i* P **P** **08 31 03.7 +1.8**
BLCB Balcova 63.50 307 *e*P **P** **08 31 01.1 -1.2**
BLCB Balcova 63.50 307 P **P** **08 31 02.4 0.0**
KIS Kishinev 63.67 317 *e*P **P** **08 31 00.0 -3.3**
comp=Z,2µm,8.0s
KIS Kishinev 63.67 317 *e*PcP PcP 08 31 36.0 -3.4
KIS Kishinev 63.67 317 *e*PP PP 08 33 32.0 +8.5
KIS Kishinev 63.67 317 *e*PcS 08 35 50.0
KIS Kishinev 63.67 317 *i* PS 08 39 40.0
KIS *e*ScS ScS 08 40 50.0 -4.9
KIS *e*SS SS 08 43 40.0 -3.7
KIS *e*SSS 08 46 20.0
KIS LRM 09 01 18.0
comp=Z,12µm,20.0s
KIS Kishinev 63.67 317 *e*P **P** **08 31 00.0 -3.3**
KIS *e* 08 31 36.0
KIS *e* 08 33 32.0
KIS *e*S **S** **08 39 29.0 -6.8**
KIS *e* 08 40 50.0
KIS *e*SS SS 08 43 40.0 -3.7
KIS pmax pmax
comp=Z,2µm,8.0s
KIS MLR MLR
comp=N,5µm,20.0s,MS6.0
KIS MLR MLR
comp=E,9µm,20.0s,MS6.0
KIS MLR MLR
comp=Z,9µm,20.0s,MS6.0
KIS MLR MLR
comp=Z,12µm,20.0s
CFR Carcaliu 63.76 315 ⇑P **P** **08 31 04.1 +0.2**
CFR Carcaliu 63.76 315⇑*i*P **P** **08 31 04.1 +0.1**
ZKR Zakros 63.82 304 P **P** **08 31 05.3 +0.7**
STKA Stephens Creek 63.92 134 *e*P **P** **08 31 05.4 +0.2**
comp=Z,69nm,0.6s,mb5.9
STKA *e*S **S** **08 39 37.0 -2.3**
STKA Stephens Creek 63.92 134 *e*P **P** **08 31 05.4 +0.2**
comp=Z,20nm,0.7s,mb5.3
STKA Stephens Creek 63.92 134 P **P** **08 31 05.5 +0.3**
comp=Z,28nm,0.5s,mb5.5,baz=312,slow=5.9,SNR=62
STKA LR LR 09 03 24.1
comp=Z,7µm,20.0s,MS5.8,baz=295,slow=40
PRD Provadia 63.93 310 *i* P **P** **08 31 05.0 -0.1**
LPK Lapseki 63.97 310 *e*P **P** **08 31 09.7 +4.2**
GELI Tayfur-Gelibol 64.19 310 *e*P **P** **08 31 06.9 0.0**
EDRB Edirne 64.19 311 *e*P **P** **08 31 08.5 +1.7**
ERIK Erikli-Kesan 64.20 310 *e*P **P** **08 31 06.2 -0.7**
PRK Paraskevi 64.20 308 P **P** **08 31 06.4 -0.6**
EZN Ezine 64.23 309 *e*P **P** **08 31 12.0 +4.9**
CHOS Chios island 64.27 307 P **P** **08 31 07.6 +0.1**
AKASG Malin Array Be 64.28 321 P **P** **08 31 06.0 -1.3**
AKASG ⇑*e* 09 00 04.4
AKASG LR LR 09 04 07.3
AKASG Malin Array Be 64.28 321 P **P** **08 31 06.0 -1.3**
comp=Z,20nm,0.6s,mb5.3,baz=91,slow=5.6,SNR=59
AKASG PKP2bc 09 00 04.4
comp=Z,0.3nm,0.3s,baz=296,slow=3.1,SNR=5.5
AKASG LR LR 09 04 07.3
comp=Z,8µm,18.2s,MS6.0,baz=115,slow=41

AKASG Malin Array Be 64.28 321 *i* P **P** **08 31 06.0 -1.3**
AKASG pmax pmax
comp=Z,20nm,0.6s
KIEV Kiev 64.29 321 *e*P **P** **08 31 06.1 -1.3**
comp=Z,32nm,0.8s,mb5.4
KIEV LR LR
comp=Z,8µm,19.0s,MS5.9
KIEV Kiev 64.29 321 *e*P **P** **08 31 06.1 -1.2**
KIEV pmax pmax
comp=Z,31nm,0.8s,mb5.4
KIEV MLR MLR
comp=Z,8µm,19.0s,MS5.9
JMB Yambol 64.40 312 P **P** **08 31 08.9 +0.6**
JMB Yambol 64.40 312 *i* P **P** **08 31 06.9 -1.4**
LAST Lasithi 64.43 304 P **P** **08 31 08.5 -0.1**
ENEZ Enez 64.48 310 *e*P **P** **08 31 13.2 +4.4**
SIGR SIGRI 64.52 308 P **P** **08 31 10.4 +1.3**
APE Apeiranthos 64.55 306 *e*P **P** **08 31 16.9 +7.6**
APE Apeiranthos 64.55 306 ⇑P **P** **08 31 08.6 -0.7**
APE Apeiranthos 64.55 306 P **P** **08 31 08.8 -0.5**
APE Apeiranthos 64.55 306⇑*i*P **P** **08 31 08.6 -0.7**
ALN Alexandroupoli 64.58 310 P **P** **08 31 08.9 -0.5**
GADA Gvkgeada 64.60 309 *e*P **P** **08 31 16.9 +7.3**
TIXI Tiksi 64.63 12 *e*P **P** **08 31 08.2 -1.0**
comp=Z,573nm,1.5s,mb6.4
TIXI LR LR
comp=Z,12µm,19.0s,MS6.1
TIXI Tiksi 64.63 12 ⇓*i*P **P** **08 31 08.2 -1.0**
TIXI *e* 08 33 29.6
TIXI *e*S **S** **08 39 45.1 -1.8**
TIXI pmax pmax
comp=Z,490nm,1.5s,mb6.3
TIXI MLR MLR
comp=N,8µm,21.1s,MS6.0
TIXI MLR MLR
comp=Z,13µm,18.3s,MS6.2
TIXI MLR MLR
comp=E,5µm,18.7s,MS6.0
VRI Vrincioaia 64.86 316 ⇑P **P** **08 31 11.9 +0.7**
VRI Vrincioaia 64.86 316 P **P** **08 31 11.7 +0.5**
VRI Vrincioaia 64.86 316⇑*i*P **P** **08 31 11.9 +0.7**
PLOR Plostina 64.91 316 ⇓*i*P **P** **08 31 12.1 +0.6**
SIVA Sivas 64.96 303 P **P** **08 31 12.7 +0.6**
TESR 65.03 316 ⇑P **P** **08 31 12.4 +0.2**
TESR 65.03 316⇑*i*P **P** **08 31 12.4 +0.1**
LIA Limnos Island 65.11 309 P **P** **08 31 13.3 +0.4**
KDZ Kurdzhali 65.15 311 *i* P **P** **08 31 12.6 -0.5**
SKR Severo-Kuril's 65.32 39 *e*P **P** **08 31 14.0 -0.1**
SKR *e* 08 31 43.0
SKR *e*PS 08 40 15.0
SKR pmax pmax
comp=N,110nm,1.0s
SKR pmax pmax
comp=E,100nm,1.0s
SKR pmax pmax
comp=Z,160nm,1.0s,mb6.0
SKR pmax pmax
comp=N,1µm,10.0s
SKR pmax pmax
comp=E,1µm,10.0s
SKR pmax pmax
comp=Z,2µm,10.0s
SKR MLR MLR
comp=E,12µm,22.0s,MS6.2
SKR MLR MLR
comp=Z,18µm,22.0s,MS6.2
SKR MLR MLR
comp=N,8µm,20.0s,MS6.2
MLR Muntele Rosu 65.34 315 ⇑P **P** **08 31 15.1 +0.8**
MLR Muntele Rosu 65.34 315 P **P** **08 31 14.5 +0.2**
MLR Muntele Rosu 65.34 315⇑*i*P **P** **08 31 15.1 +0.8**
PVL Pavlikeni 65.42 313 *i* P **P** **08 31 14.5 -0.4**
PLD Plovdiv 65.74 311 P **P** **08 31 14.7 -2.2**
PLD Plovdiv 65.74 311 *i* P **P** **08 31 17.1 +0.2**
KAVA Kavala 65.75 310 P **P** **08 31 16.4 -0.6**
DOPR Dopca 65.80 315⇑*i*P **P** **08 31 17.7 +0.4**
VOIR 65.95 315 ⇑P **P** **08 31 17.8 -0.5**
VOIR 65.95 315⇑*i*P **P** **08 31 17.8 -0.4**
ATHU Athens Univers 66.01 307 P **P** **08 31 18.4 -0.4**
AOS Alonnisos 66.04 308 P **P** **08 31 17.8 -1.1**
MICGM Minsk 66.06 325⇑*i*P **P** **08 31 17.0 -1.7**
OUR Ouranopolis 66.08 309 P **P** **08 31 17.1 -2.0**
MNK Minsk 66.08 325⇑*i*P **P** **08 31 17.0 -1.9**
MNK *e*PPP 08 35 26.0
MNK *e*S S 08 40 02.0 -3.2
MNK *e*PS 08 40 36.0
MNK *e*SS SS 08 44 22.0 +1.1
MNK *e*SSS 08 47 20.0
MNK pmax pmax
comp=Z,150nm,1.2s,mb5.9
MNK pmax pmax
comp=N,31µm,20.0s
MNK pmax pmax
comp=E,21µm,20.0s
PGB Panagyurishte 66.19 312 *i* P **P** **08 31 20.6 +0.8**
BUR01 Bucovina Ar. S 66.19 317 P **P** **08 31 20.5 +0.7**
BURAR Bucovina Array 66.19 317 ⇓P **P** **08 31 20.0 +0.2**
BURAR Bucovina Array 66.19 317 P **P** **08 31 20.1 +0.3**
BURAR Bucovina Array 66.19 317 ⇓*i*P **P** **08 31 20.0 +0.2**
BUR08 Bucovina Ar. S 66.21 317 *e*P **P** **08 31 19.7 -0.1**
PAIG Paliouri 66.27 309 P **P** **08 31 19.7 -0.7**
PUL Pulkovo 66.37 331⇑*i*P **P** **08 31 21.3 +0.7**
PUL Pulkovo 66.37 331*c i*P **P** **08 31 21.2 +0.6**
PUL pmax pmax
comp=Z,202nm,0.5s,mb6.4
MMB Musomiste 66.40 311 *i* P **P** **08 31 18.6 -2.6**
DID Didima 66.41 306 P **P** **08 31 20.0 -1.3**
SRS Serrai 66.45 310 P **P** **08 31 20.6 -0.9**
MDB Medias 66.52 316 ⇓*i*P **P** **08 31 23.2 +1.3**
XOR Xorichti 66.59 308 P **P** **08 31 20.8 -1.7**
MPEP Malo Peshtene 66.59 312 *i* P **P** **08 31 19.7 -2.7**
LTK Loutraki 66.66 307 P **P** **08 31 23.1 +0.2**
LKR Lokris 66.68 307 P **P** **08 31 21.7 -1.4**
HORT Hortiatis 66.77 309 P **P** **08 31 22.3 -1.3**
NACGM Naroch 66.78 325 *e*P **P** **08 31 20.0 -3.3**
THE Thessaloniki 66.88 309 P **P** **08 31 23.1 -1.2**
VTS Vitosha 66.89 312 ⇑P **P** **08 31 23.2 -1.2**
VTS Vitosha 66.89 312 P **P** **08 31 23.5 -0.8**
VTS Vitosha 66.89 312⇑*i*P **P** **08 31 23.2 -1.1**
VTS Vitosha 66.89 312 *i* P **P** **08 31 23.4 -0.9**
KKB Krupnik 66.91 311 *i* P **P** **08 31 22.9 -1.5**
KNT Kendrikon 66.98 310 P **P** **08 31 23.8 -1.1**
DSF Desfina 67.03 307 P **P** **08 31 23.4 -1.9**
JOF Joensuu 67.04 334 *e*P **P** **08 31 25.2 +0.4**
JOF pmax pmax
comp=Z,111nm,0.6s,mb6.1
JOF Joensuu 67.04 334 *ep* **P** **08 31 25.2 +0.4**
comp=Z,111nm,0.6s,mb6.1
SEY Seymchan 67.06 26*c i*P **P** **08 31 24.0 -1.0**
VLX Vlachokerasia 67.08 306 P **P** **08 31 24.5 -1.1**
GUR Goura 67.14 307 P **P** **08 31 24.0 -2.0**
LIT Litokhoron 67.19 309 P **P** **08 31 21.2 -5.1**
AGG Agios Georgios 67.23 308 P **P** **08 31 25.2 -1.3**
VAY Valandovo 67.24 310 *e*P **P** **08 31 24.6 -1.9**
GRG Griva 67.33 310 P **P** **08 31 25.6 -1.5**
KALE Kalithea 67.33 307 P **P** **08 31 25.4 -1.8**
LVV L'vov 67.35 319 *e*P **P** **08 31 26.1 -1.0**
LVV *e* 08 34 02.1
LVV *e*S S 08 40 18.5 -2.2
LVV *e*PS 08 40 54.1
BMR Baia Mare 67.35 317 ⇓P **P** **08 31 28.2 +1.1**
BMR Baia Mare 67.35 317 ⇓*i*P **P** **08 31 28.2 +1.1**
PET Petropavlovsk 67.37 37 *e*P **P** **08 31 25.8 -1.3**
comp=Z,25nm,0.7s,mb5.3
PET *e*PcP PcP 08 31 54.4 -0.2
PET LR LR
comp=Z,25µm,20.0s,MS6.4
PET Petropavlovsk 67.37 37*d i*P **P** **08 31 25.9 -1.2**
PET *e* 08 31 54.0
PET *i* S S 08 40 17.5 -3.3
PET *e*PS 08 40 40.5
PET *e*SS SS 08 44 39.5 -1.4
PET *e*SSS 08 47 39.7
PET pmax pmax
comp=Z,47nm,0.7s,mb5.6
PET pmax pmax
comp=Z,800nm,14.0s
PET pmax pmax
comp=Z,1µm,7.6s
PET smax
comp=N,2µm,14.3s
PET smax
comp=N,2µm,12.9s

PET MLR MLR
comp=Z,28µm,21.0s,MS6.5
PET MLR MLR
comp=Z,23µm,19.0s
TRIZ Trizonia 67.39 307 P **P** **08 31 26.3 -1.2**
ITM Ithomi 67.43 306 P **P** **08 31 26.4 -1.4**
LAKA Lakka 67.45 307 P **P** **08 31 26.3 -1.7**
THL Klokotos Trika 67.51 308 P **P** **08 31 24.6 -3.7**
EFP Efpalio 67.52 307 P **P** **08 31 25.1 -3.3**
GZR Gura Zlata 67.53 315 ⇓P **P** **08 31 29.0 +0.7**
GZR Gura Zlata 67.53 315⇓*i*P **P** **08 31 29.0 +0.7**
PYL PYLOS 67.56 305 P **P** **08 31 27.0 -1.7**
DRGR 67.76 316 ⇑P **P** **08 31 30.0 +0.3**
DRGR 67.76 316 P **P** **08 31 29.9 +0.2**
DRGR 67.76 316⇑*i*P **P** **08 31 30.0 +0.3**
KZN Kozani 67.76 309 P **P** **08 31 29.3 -0.5**
TRPA Tarpa 68.06 318 ⇓*i*P **P** **08 31 31.9 +0.3**
FNA Florina 68.09 310 P **P** **08 31 30.4 -1.6**
EIDS Eidsvold 68.09 123 *e*P **P** **08 31 32.4 +0.2**
comp=Z,61nm,1.1s,mb5.5
APA Apatity 68.11 339⇑*i*P **P** **08 31 31.5 -0.1**
APA *i* 08 31 56.3
APA *i* 08 34 09.0
APA *i* S S 08 40 30.0 +0.7
APA *e*PS 08 40 46.0
APA *e* 08 41 10.0
APA *e*SS SS 08 44 56.0 +4.2
APA pmax pmax
comp=Z,130nm,1.0s,mb5.9
APA MLR MLR
comp=Z,26µm,21.0s,MS6.4
SKO Skopje 68.14 311 *e*P **P** **08 31 31.1 -1.1**
BIA Bitola 68.15 310 *e*P **P** **08 31 31.0 -1.3**
KWP Kalwaria Pacla 68.17 319 *e*P **P** **08 31 31.8 -0.4**
KWP *e*pP pP 08 31 43.3 +1.9
KWP *e*PcP PcP 08 32 00.8 +2.8
KWP LMZ 09 06 38.0
comp=Z,9µm,21.2s
KWP Kalwaria Pacla 68.17 319 *e*P **P** **08 31 32.0 -0.2**
comp=Z,128nm,1.0s,mb5.9
KWP LR LR
comp=Z,9µm,21.0s,MS6.0
LSZ Lusaka 68.22 249 *e*P **P** **08 31 34.3 +1.2**
LSZ LR LR
comp=Z,8µm,19.0s,MS6.0
KRUS Krusevo 68.23 310 *e*P **P** **08 31 30.6 -2.3**
UZH Uzhgorod 68.29 318 *e*P **P** **08 31 32.3 -0.7**
UZH *e* 08 32 01.7
UZH *e* 08 34 04.7
UZH *e*S S 08 40 30.9 -1.1
UZH *e*PS 08 40 56.5
UZH MLR MLR
comp=N,8µm,19.0s,MS6.0
UZH MLR MLR
comp=E,4µm,19.0s,MS6.0
UZH MLR MLR
comp=Z,2µm,19.0s,MS5.4
BZS Buzias 68.37 315 ⇑P **P** **08 31 32.9 -0.7**
BZS Buzias 68.37 315⇑*i*P **P** **08 31 32.9 -0.7**
KFL Anninata 68.38 307 P **P** **08 31 32.6 -1.2**
LKD2 Lefkada island 68.52 307 P **P** **08 31 33.4 -1.3**
VLS Valsamata 68.54 307 P **P** **08 31 33.3 -1.5**
SUW Suwalki 68.63 324 *e*P **P** **08 31 34.0 -1.0**
SUW *e*pP pP 08 31 41.2 -2.9
SUW *e*S S 08 40 33.7 -2.1
SUW *e*SKS 08 41 44.4
SUW LMZ 09 03 52.9
comp=Z,9µm,23.0s
SUW Suwalki 68.63 324 *e*P **P** **08 31 34.1 -1.0**
comp=Z,152nm,0.9s,mb5.9
SUW Suwalki 68.63 324⇓*e*P **P** **08 31 34.0 -1.0**
SUW *e**PP pP 08 31 41.2 -3.0
SUW *e*S S 08 40 33.7 -2.1
SUW MLR MLR
comp=Z,9µm,23.0s,MS6.0
IGT Igoumenitsa 68.81 308 P **P** **08 31 34.5 -2.0**
PHP Peshkopia 68.86 310 *i* PN **P** **08 31 35.1 -1.6**
CRVS Cervenica-Dubn 68.87 318 *e*P **P** **08 31 37.1 +0.5**
comp=Z,94nm,1.5s,mb5.5
CRVS *e*S S 08 40 37.1 -1.8
CRVS *e*SS SS 08 45 38.6 +34
CRVS *e* 08 59 52.2
CRVS LR LR
comp=Z,4µm,27.7s,MS5.5
CRVS Cervenica-Dubn 68.87 318 *e*P **P** **08 31 37.1 +0.5**
CRVS *e*S S 08 40 37.1 -1.8
CRVS pmax pmax
comp=Z,94nm,1.5s,mb5.5
CRVS MLR MLR
comp=Z,4µm,27.7s,MS5.5
CRVS Cervenica-Dubn 68.87 318 *e*P **P** **08 31 37.0 +0.4**
CRVS *e*S S 08 40 37.1 -1.8
CRVS *e*SS SS 08 45 38.5 +34
CRVS *e* 08 59 52.2
FINES FINESS Array B 68.88 332 P **P** **08 31 36.1 -0.3**
comp=Z,57nm,0.6s,mb5.7,baz=103,slow=5.1,SNR=210
FINES LR LR 09 07 23.2
comp=Z,11µm,19.5s,MS6.1,baz=106,slow=41
KAF Kangasniemi 68.96 333 *e*P **P** **08 31 37.3 +0.4**
KAF pmax pmax
comp=Z,83nm,0.8s,mb5.7
KAF Kangasniemi 68.96 333 *ep* **P** **08 31 37.3 +0.4**
comp=Z,83nm,0.8s,mb5.7
STHS Stebnicka Huta 69.08 319 *e*P **P** **08 31 37.8 -0.1**
comp=Z,20nm,0.8s,mb5.1
STHS Stebnicka Huta 69.08 319 *e*P **P** **08 31 37.8 -0.1**
STHS pmax pmax
comp=Z,20nm,0.8s,mb5.1
STHS Stebnicka Huta 69.08 319 *e*P **P** **08 31 37.8 -0.1**
SRN Sarande 69.08 308 *i* PN **P** **08 31 38.1 -0.1**
BCI Bajram Curri 69.19 311 *i* PN **P** **08 31 38.7 0.0**
KEK Kerkira 69.23 308 P **P** **08 31 39.0 -0.1**
TIR Tirane 69.27 310 PFAKE 08 31 50.0 +11
TIR LR LR
comp=Z,6µm,22.0s,MS5.8
TIR Tirane 69.27 310 P **P** **08 31 36.3 -3.0**
PVY Plav 69.27 311⇑*i*P **P** **08 31 37.5 -1.8**
PVY Plav 69.27 311⇑*i*P **P** **08 31 37.5 -1.8**
PUK Puka 69.29 311 *i* PN **P** **08 31 37.2 -2.2**
IVA Berane 69.35 312⇑*i*P **P** **08 31 38.0 -1.7**
IVA Berane 69.35 312⇑*i*P **P** **08 31 38.1 -1.7**
DIVS Divibare 69.37 313 P **P** **08 31 39.4 -0.5**
KECS Kecovo 69.46 318 *e*P **P** **08 31 40.2 -0.1**
comp=Z,14nm,0.8s,mb4.9
KECS *e* 09 00 02.0
KECS Kecovo 69.46 318 *e*P **P** **08 31 40.2 -0.1**
KECS pmax pmax
comp=Z,14nm,0.8s,mb4.9
KECS Kecovo 69.46 318 *e*P **P** **08 31 40.2 -0.1**
KECS *e* 09 00 02.0
WAR Warsaw 69.61 322 *e*P **P** **08 31 43.5 +2.4**
WAR *e*pP pP 08 31 54.7 +4.4
WAR *e*S S 08 40 47.4 -0.1
WAR *e*SKS 08 41 57.7
WAR LMZ 09 03 41.3
comp=Z,12µm,22.9s
WAR Warsaw 69.61 322 *e*P **P** **08 31 43.5 +2.3**
WAR *e**PP pP 08 31 54.7 +4.4
WAR *e*S S 08 40 47.4 -0.1
WAR MLR MLR
comp=Z,12µm,22.9s,MS6.1
NIE Niedzica 69.68 319 *e*P **P** **08 31 42.3 +0.6**
TOO Toolangi 69.70 137 *e*P **P** **08 31 43.5 +1.6**
TOO *e*S S 08 40 50.9 +1.9
PLE Pljevlja 69.75 312⇑*i*P **P** **08 31 42.7 +0.5**
ULC Ulcinj 69.77 311⇑*i*P **P** **08 31 42.5 +0.2**
TTG Podgorica 69.79 311⇑*i*P **P** **08 31 43.0 +0.5**
TTG Podgorica 69.79 311⇑*i*P **P** **08 31 43.1 +0.6**
PSZ Piszkesteto 69.79 317 *e*P **P** **08 31 42.0 -0.3**
comp=Z,130nm,1.5s,mb5.6
PSZ LR LR
comp=Z,6µm,22.0s,MS5.8
PSZ Piszkesteto 69.79 317 *e*P **P** **08 31 42.1 -0.3**
PSZ pmax pmax
comp=Z,130nm,1.5s,mb5.6
PSZ MLR MLR
comp=Z,6µm,22.0s,MS5.8
PSZ Piszkesteto 69.79 317⇑*i*P **P** **08 31 43.0 +0.6**
PSZ Piszkesteto 69.79 317⇓*e*P **P** **08 31 41.9 -0.5**
NKY Niksic 70.00 312⇑*i*P **P** **08 31 43.5 -0.3**
BUM Brajici-Budva 70.05 311⇑*i*P **P** **08 31 43.4 -0.7**
UPM Unac-Piva 70.09 312⇑*i*P **P** **08 31 43.9 -0.4**
UPM Unac-Piva 70.09 312⇑*i*P **P** **08 31 44.0 -0.4**

OJC **Ojcow** **70.11 319** *e*P **P** **08 31 43.6 -0.7**
OJC *e*PcP PcP 08 32 05.9 -0.3
OJC *e*S S 08 40 51.7 -1.7
OJC L 09 07 36.4
comp=Z,8.2nm,19.4s
BUD Budapest **70.34 317** *e*P **P** **08 31 45.3 -0.4**
BRY Bratogost **70.34 312**⇑ *i*P **P** **08 31 44.3 -1.6**
BRY Bratogost **70.34 312**⇑ *i*P **P** **08 31 44.4 -1.4**
HCY Herceg Novi **70.35 311**⇑ *i*P **P** **08 31 44.1 -1.8**
HCY Herceg Novi **70.35 311**⇑ *i*P **P** **08 31 44.2 -1.7**
PKSM Moragy **70.49 315** ⇑P **P** **08 31 46.1 -0.6**
PKSM Moragy **70.49 315** P **P** **08 31 46.4 -0.3**
PKSM Moragy **70.49 315**⇑ *i*P **P** **08 31 46.1 -0.6**
VYHS Vyhne **70.55 318** *e*P **P** **08 31 46.8 -0.2**
comp=Z,10nm,1.0s,mb4.7
VYHS *e*S S 08 40 53.0 -5.7
VYHS *e*SS SS 08 45 56.0 +26
VYHS LR LR
comp=Z,3µm,23.8s,MS5.5
VYHS Vyhne **70.55 318** *e*P **P** **08 31 46.8 -0.2**
VYHS *e*S S 08 40 53.0 -5.7
VYHS pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
VYHS MLR MLR
comp=Z,3µm,23.8s,MS5.5
VYHS Vyhne **70.55 318** *e*P **P** **08 31 46.8 -0.2**
VYHS *e*S S 08 40 53.0 -5.7
VYHS *e*SS SS 08 45 56.0 +26
ARMA Armidale **70.68 128** *e*P **P** **08 31 50.0 +1.9**
ARMA *e*S S 08 41 03.8 +3.1
ARMA Armidale **70.68 128** *e*P **P** **08 31 50.0 +2.0**
comp=Z,75nm,0.8s,mb5.7
HNR Honiara **70.73 104** P **P** **08 31 49.2 +0.5**
comp=Z,76nm,0.6s,mb5.8,baz=270,slow=8.1,SNR=3.4
STON Ston **70.96 312** P **P** **08 31 48.4 -1.2**
CAN Canberra **70.98 133** *e*P **P** **08 31 50.4 +0.6**
comp=Z,170nm,1.1s,mb5.9
CAN LR LR
comp=Z,14µm,20.0s,MS6.2
CAN Canberra **70.98 133** *e*P **P** **08 31 50.4 +0.6**
CAN pmax pmax
comp=Z,170nm,1.1s,mb5.9
CAN MLR MLR
comp=Z,14µm,20.0s,MS6.2
RAC Raciborz **71.12 319** *e*P **P** **08 31 50.5 +0.1**
RAC *e*S S 08 41 03.5 -1.7
RAC LR LR
comp=Z,6µm,18.0s,MS5.9
RAC Raciborz **71.12 319** *e*P **P** **08 31 50.5 +0.1**
RAC *e*S S 08 41 03.5 -1.7
KEV Kevo **71.12 341** *e*P **P** **08 31 50.2 +0.1**
comp=Z,17nm,0.7s,mb5.1
KEV LR LR
comp=Z,12µm,21.0s,MS6.2
KEV Kevo **71.12 341** *e*P **P** **08 31 50.2 +0.1**
KEV pmax pmax
comp=Z,66nm,0.7s,mb5.7
KEV MLR MLR
comp=Z,12µm,21.0s,MS6.2
KEV Kevo **71.12 341** *e*p **P** **08 31 50.4 +0.3**
comp=Z,92nm,0.8s,mb5.8
OKC Ostrava-Krasne **71.13 319** *e*P **P** **08 31 50.0 -0.5**
OKC *e* pP 08 32 00.4 +0.7
OKC *e*S S 08 41 05.0 -0.3
OKC MLR MLR
comp=Z,6µm,19.1s,MS5.8
OKC Ostrava-Krasne **71.13 319** *e*P **P** **08 31 50.0 -0.5**
OKC *ex* x 08 32 00.4
OKC *e*S S 08 41 05.0 -0.3
OKC AMS AMS 09 08 00.0
comp=Z,6µm,19.1s
CNB Canberra Magne **71.24 133** *e*P **P** **08 31 51.9 +0.5**
CNB *e*S S 08 41 07.1 +0.1
MORC Moravsky Berou **71.51 319** *e*P **P** **08 31 52.7 -0.2**
comp=Z,63nm,1.0s,mb5.5
MORC Moravsky Berou **71.51 319** *e*P **P** **08 31 52.7 -0.1**
MORC pmax pmax
comp=Z,63nm,1.0s,mb5.5
MORC Moravsky Berou **71.51 319**⇑ *i*P **P** **08 31 53.0 +0.2**
ARCES ARCESS Array B **71.55 340** P **P** **08 31 53.0 +0.4**
comp=Z,54nm,0.6s,mb5.6,baz=94,slow=5.1,SNR=239
ARCES LR LR 09 07 11.8
comp=Z,20µm,20.6s,MS6.4,baz=294,slow=39
ARE0 ARCESS Array S **71.55 340** *e*P **P** **08 31 53.0 +0.3**
TIP Timpagrande **71.57 308** *e*P **P** **08 31 52.1 -1.2**
comp=Z,57nm,1.1s,mb5.4
TIP LR LR
comp=Z,5µm,20.0s,MS5.7
ZST Bratislava **71.68 317** *e*P **P** **08 31 53.6 -0.3**
comp=Z,47nm,1.0s,mb5.4
ZST *e*S SKSac 08 42 01.0 +5.5
ZST *e*SS SS 08 46 53.8 +66
ZST LR LR
comp=Z,1µm,22.0s,MS5.1
ZST Bratislava **71.68 317** *e*P **P** **08 31 53.6 -0.3**
ZST *e*S SKSac 08 42 01.0 +5.5
ZST pmax pmax
comp=Z,47nm,1.0s,mb5.4
ZST MLR MLR
comp=Z,1µm,22.0s,MS5.1
ZST Bratislava **71.68 317** *e*P **P** **08 31 53.6 -0.3**
GKP Gorka Klasztor **72.03 322** *e*P **P** **08 31 56.3 +0.5**
GKP *e*pP pP 08 32 05.3 +0.3
GKP *e*S S 08 41 25.7 +10
GKP LMZ 09 05 22.3
comp=Z,14µm,23.0s
GKP Gorka Klasztor **72.03 322** *e*P **P** **08 31 56.3 +0.5**
GKP *e**PP pP 08 32 05.3 +0.3
GKP MLR MLR
comp=Z,14µm,23.0s,MS6.2
WAKE Wake Island **72.24 73** P **P** **08 31 58.0 +0.2**
comp=Z,149nm,0.9s,mb5.9
WAKE LR LR
comp=Z,3µm,20.0s,MS5.5
CEL Celeste **72.24 307** *e*P **P** **08 31 57.4 0.0**
comp=Z,186nm,1.1s,mb5.9
CEL *e*PP PP 08 34 33.2 -4.9
CEL LR LR
comp=Z,4µm,20.0s,MS5.7
CUC Castrocucco **72.30 309** *e*P **P** **08 31 58.0 +0.2**
comp=Z,49nm,1.1s,mb5.3
CUC LR LR
comp=Z,4µm,21.0s,MS5.7
DPC Dobruska-Polom **72.34 319** *e*P **P** **08 31 57.8 0.0**
DPC *e* 08 32 08.6
DPC *e*S S 08 41 19.3 0.0
DPC MLR MLR
comp=Z,8µm,19.4s,MS6.0
DPC Dobruska-Polom **72.34 319** *e*P **P** **08 31 57.8 0.0**
DPC *ex* x 08 32 08.6
DPC *e*S S 08 41 19.3 0.0
DPC AMS AMS 09 08 30.0
comp=Z,8µm,19.4s
KSP Ksiaz **72.40 320** *e*P **P** **08 31 58.1 0.0**
KSP *e*pP pP 08 32 02.8 -4.5
KSP *e*S S 08 41 18.6 -1.3
KSP *e*SKS 08 42 19.4
KSP LMZ 09 06 45.8
comp=Z,12µm,21.5s
KSP Ksiaz **72.40 320** *e*P **P** **08 31 58.1 0.0**
KSP *e*S S 08 41 17.8 -2.1
KSP *e*SS SS 08 46 04.7 +6.4
CONA Conrad Observa **72.50 317** *i*P **P** **08 31 58.4 -0.3**
comp=Z,22nm,1.0s,mb5.0,SNR=16
UPC Upice **72.55 320** *e*P **P** **08 31 59.2 +0.2**
UPC *e* 08 32 10.1
UPC Upice **72.55 320** *e*P **P** **08 31 59.2 +0.2**
UPC *ex* x 08 32 10.1
ARSA Arzberg **72.69 316** *i*P **P** **08 31 59.9 0.0**
comp=Z,35nm,0.9s,mb5.3,SNR=9.4
TREC Trest **72.82 318** *e*P **P** **08 32 00.7 +0.1**
TREC *e*S S 08 41 23.2 -1.5
TREC MLR MLR
comp=Z,7µm,18.2s,MS6.0
TREC Trest **72.82 318** *e*P **P** **08 32 00.7 +0.1**
TREC *e*S S 08 41 23.2 -1.5
TREC AMS AMS 09 08 50.0
comp=Z,7µm,18.2s
BOJS Bojanci **72.82 314** *i*P **P** **08 31 59.9 -0.8**
PERS Pernice **72.95 315** *i*P **P** **08 32 01.1 -0.4**
SOKA Soboth **73.01 315**⇑ *i*P **P** **08 32 00.9 -1.0**
comp=Z,63nm,1.2s,mb5.4
NVLJ Novalja **73.07 313** P **P** **08 31 56.9 -5.3**
WDD Wield Dalam **73.38 304** PFAKE 08 32 10.0 +5.8

WDD LR LR
comp=Z,5µm,20.0s,MS5.8
MOO Moorlands **73.42 141** *e*P **P** **08 32 05.2 +1.0**
MOO *e*S S 08 41 34.9 +3.2
PRU Pruhonice **73.47 319** *e*P **P** **08 32 04.9 +0.5**
PRU *e* 08 32 16.2
PRU *e*S S 08 41 33.0 +0.9
PRU MLR MLR
comp=Z,7µm,18.6s,MS6.0
PRU Pruhonice **73.47 319** *e*P **P** **08 32 04.9 +0.5**
PRU *e*PCP PcP 08 32 16.2 -4.3
PRU *ex* x 08 34 58.8
PRU *e*S S 08 41 33.0 +0.9
PRU AMS AMS 09 09 00.0
comp=Z,7µm,18.6s
PVCC Panska Ves **73.47 320** *e*P **P** **08 32 04.5 0.0**
PVCC *e* 08 32 15.8
PVCC *e*S S 08 41 32.9 +0.8
PVCC MLR MLR
comp=Z,7µm,19.9s,MS5.9
PVCC Panska Ves **73.47 320** *e*P **P** **08 32 04.5 0.0**
PVCC *ex* x 08 32 15.8
PVCC *e*S S 08 41 32.9 +0.8
PVCC AMS AMS 09 09 00.0
comp=Z,7µm,19.9s
PRA Prague **73.54 319** P **P** **08 32 05.0 +0.1**
PRA S S 08 41 35.0 +2.1
PRA AMS AMS 09 10 00.0
BSD Bornholm Skovb **73.55 324** *i*P **P** **08 32 04.0 -0.8**
comp=Z,67nm,0.8s,mb5.6
BSD *i*S S 08 41 30.4 -2.4
BSD Bornholm Skovb **73.55 324** *i*P **P** **08 32 04.0 -0.8**
BSD *i*S S 08 41 30.4 -2.4
BSD pmax pmax
comp=Z,67nm,0.8s,mb5.6
BSD MLR MLR
comp=Z,8µm,19.0s,MS6.0
BSD Bornholm Skovb **73.55 324** *i*P **P** **08 32 04.0 -0.8**
comp=Z,67nm,0.8s,mb5.6
BSD *i*S S 08 41 30.4 -2.4
BSD
comp=Z,8µm,19.0s
MOA Molln **73.57 317** *i*P **P** **08 32 04.6 -0.5**
comp=Z,43nm,1.2s,mb5.2,SNR=14
JAVS Javornik **73.66 315** *i*P **P** **08 32 05.3 -0.4**
VOY Vojsko **73.78 315** *e*(P) **P** **08 32 05.4 -1.0**
VOY *e* pP 08 32 15.8 +0.2
VOY *e* 08 32 26.2
VOY *e* 08 32 46.4
VOY *e* 08 32 54.2
VOY *e* 08 33 07.7
VOY *e* 08 33 36.2
LBTB Lobatse **73.79 240** *e*P **P** **08 32 08.0 +1.2**
comp=Z,67nm,0.9s,mb5.6
LBTB LR LR
comp=Z,13µm,19.0s,MS6.2
LBTB Lobatse **73.79 240** *e*P **P** **08 32 08.0 +1.2**
LBTB pmax pmax
comp=Z,67nm,0.9s,mb5.6
LBTB MLR MLR
comp=Z,13µm,19.0s,MS6.2
TRO Tromso **73.80 340** *e*P **P** **08 32 05.7 -0.3**
TRO AMB AMB 08 32 22.0
comp=Z,152nm,1.3s,mb5.8
TRO *e*S S 08 41 37.3 +2.2
TRO AMS AMS 09 08 13.3
comp=Z,26µm,21.5s,MS6.5
TRI Trieste **73.87 314** *e*P **P** **08 32 06.4 -0.5**
comp=Z,18nm,0.8s,mb5.0
TRI LR LR
comp=Z,7µm,22.0s,MS5.9
TRI Trieste **73.87 314** *e*P **P** **08 32 06.4 -0.5**
TRI pmax pmax
comp=Z,18nm,0.8s,mb5.0
TRI MLR MLR
comp=Z,7µm,22.0s,MS5.9
BRG Berggiesshubel **73.89 320** *e*P **P** **08 32 07.0 +0.1**
comp=Z,41nm,1.0s,mb5.3
BRG Berggiesshubel **73.89 320** *i*P **P** **08 32 06.7 -0.2**
comp=Z,29nm,0.7s,mb5.3
BRG S S 08 41 36.0 -0.8
BRG *e*PKPPKP 08 59 52.0
comp=Z,11nm,1.6s
BRG
comp=N,7µm,17.4s
BRG
comp=E,6µm,20.4s
BRG
comp=Z,11µm,18.9s
MYKA Terra Mystica **73.97 315**⇓ *i*P **P** **08 32 06.4 -1.0**
comp=Z,31nm,0.9s,mb5.2
GEC2 GERESS Array S **73.97 318** *e*P **P** **08 32 07.4 0.0**
comp=Z,36nm,1.0s,mb5.3
GEC2 GERESS Array S **73.97 318** *e*P **P** **08 32 07.4 0.0**
GEC2 pmax pmax
comp=Z,36nm,1.0s,mb5.3
RUE Ruedersdorf **74.06 322** *e*P **P** **08 32 07.8 -0.1**
RUE Ruedersdorf **74.06 322** *e*P **P** **08 32 07.8 -0.1**
comp=Z,75nm,0.6s,mb5.8
KHC Kasperske Hory **74.06 318** *e*P **P** **08 32 07.6 -0.4**
comp=Z,16nm,0.6s,mb5.1
KHC Kasperske Hory **74.06 318** *e*P **P** **08 32 07.5 -0.5**
KHC *e* pP 08 32 17.4 +0.2
KHC *e*S S 08 41 38.6 -0.2
KHC MLR MLR
comp=Z,6µm,19.2s,MS5.9
KHC Kasperske Hory **74.06 318** *e*P **P** **08 32 07.5 -0.5**
KHC *ex* x 08 32 17.4
KHC *e*S S 08 41 38.6 -0.2
KHC AMS AMS 09 09 40.0
comp=Z,6µm,19.2s
AQU L'Aquila **74.12 311** PFAKE 08 32 20.0 +12
AQU LR LR
comp=Z,5µm,20.0s,MS5.8
KBA Koelnbreinsper **74.18 316**⇑ *i*P **P** **08 32 07.3 -1.4**
comp=Z,23nm,0.9s,mb5.1,SNR=7.7
CLL Collm **74.49 320** *e*P **P** **08 32 10.1 -0.3**
comp=Z,44nm,1.2s,mb5.3
CLL Collm **74.49 320**⇓ *i*P **P** **08 32 09.9 -0.5**
comp=Z,39nm,1.2s,mb5.2
CLL *e*S S 08 41 41.0 -2.6
CLL LR LR
comp=Z,8µm,20.5s,MS6.0
CLL Collm **74.49 320**⇓ *i*P **P** **08 32 09.9 -0.5**
CLL *e*S S 08 41 41.0 -2.6
CLL pmax pmax
comp=Z,39nm,1.2s,mb5.2
CLL MLR MLR
comp=Z,8µm,20.5s,MS6.0
CLL Collm **74.49 320**⇓ *i*P **P** **08 32 09.9 -0.5**
comp=Z,39nm,1.2s,mb5.2
CLL *e*Plp 08 32 21.0
CLL *e* 08 32 55.0
CLL *e*PP PP 08 35 00.0 +3.1
CLL *e*PPP 08 36 49.0
CLL *e*S S 08 41 41.0 -2.6
comp=N,900nm,11.9s
CLL *e*S S 08 41 41.0 -2.6
CLL *e*PS 08 42 26.0
CLL *e*SS SS 08 46 37.0 +6.7
CLL *e*SSS 08 50 12.0
CLL *i* PKPPKPdf 08 59 40.3
CLL L 09 09 00.0
comp=Z,8µm,20.5s
WET Wettzell **74.52 318** *e*P **P** **08 32 10.6 0.0**
TANN Tannenbergstha **74.81 319** *e*P **P** **08 32 12.3 0.0**
NKC Novy Kostel **74.82 319** *e*P **P** **08 32 11.4 -0.9**
NKC *e* 08 32 24.5
NKC *e*S S 08 41 47.1 -0.2
NKC MLR MLR
comp=Z,8µm,20.1s,MS6.0
NKC Novy Kostel **74.82 319** *e*P **P** **08 32 11.4 -0.9**
NKC *e*PCP PcP 08 32 24.5 -1.8
NKC *e*S S 08 41 47.1 -0.2
NKC AMS AMS 09 10 00.0
comp=Z,8µm,20.1s
BJO Bjornoya **74.83 345** *e*P **P** **08 32 11.5 -0.5**
BJO *e*S S 08 41 49.0 +2.4
BJO AMS AMS 09 10 56.6
comp=Z,10µm,19.0s,MS6.1
WERN Wernitzgruen **74.87 319** *e*P **P** **08 32 12.8 +0.2**
MOR8 Moi Rana **74.89 336** *e*P **P** **08 32 11.2 -1.2**
MOR8 AMB AMB 08 32 28.2
comp=Z,77nm,2.3s,mb5.2

GUNZ Gunzen **74.90 319** *e*P **P** **08 32 12.9 +0.1**
WERD Werda **74.91 319** *e*P **P** **08 32 12.8 -0.1**
COP Copenhagen **74.99 325** *i*P **P** **08 32 14.5 +1.3**
comp=Z,39nm,0.8s,mb5.4
COP *i*S S 08 41 50.1 +1.1
COP LR LR
comp=Z,4µm,18.0s,MS5.8
COP Copenhagen **74.99 325** *i*P **P** **08 32 14.5 +1.3**
COP *i*S S 08 41 50.1 +1.1
COP pmax pmax
comp=Z,39nm,0.8s,mb5.4
COP MLR MLR
comp=Z,4µm,18.0s,MS5.8
COP Copenhagen **74.99 325** *i*P **P** **08 32 14.5 +1.3**
comp=Z,39nm,0.8s,mb5.4
COP *i*S S 08 41 50.1 +1.1
COP
comp=Z,4µm,18.0s
NEUB Neuenburg **75.26 320** *e*P **P** **08 32 14.6 -0.3**
WTTA Wattenberg **75.34 316**⇓ *i*P **P** **08 32 14.3 -1.1**
comp=Z,53nm,1.2s,mb5.3,SNR=26
MOX Moxa **75.36 320** *e*P **P** **08 32 15.2 -0.2**
MOX *e*S S 08 41 54.0 +0.8
MOX
comp=Z,6µm,19.0s
MOX Moxa **75.36 320** *e*P **P** **08 32 15.3 -0.1**
comp=Z,24nm,0.7s,mb5.2
BOSA Boshof **75.36 236** *e*P **P** **08 32 16.7 +0.8**
comp=Z,67nm,0.8s,mb5.6
BOSA *e*PcP PcP 08 32 29.7 +0.7
BOSA LR LR
comp=Z,14µm,19.0s,MS6.3
BOSA Boshof **75.36 236** P **P** **08 32 16.5 +0.6**
comp=Z,75nm,0.8s,mb5.7,baz=82,slow=5.6,SNR=87
BOSA LR LR 09 02 31.5
comp=Z,14µm,18.8s,MS6.3,baz=325,slow=33
BOSA Boshof **75.36 236** *e*P **P** **08 32 16.7 +0.9**
BOSA *e* 08 32 29.7
BOSA pmax pmax
comp=Z,67nm,0.8s,mb5.6
BOSA MLR MLR
comp=Z,14µm,19.0s,MS6.3
WATA Walderalm **75.38 316**⇑ *i*P **P** **08 32 14.6 -1.1**
comp=Z,23nm,0.6s,mb5.3,SNR=21
LOF Lofoten **75.47 338** *e*P **P** **08 32 14.9 -0.8**
LOF AMB AMB 08 32 28.3
comp=Z,112nm,1.5s,mb5.6
STOK Stokkvaagen **75.48 336** *e*S S 08 41 57.4 +3.4
GRA1 Grafenberg Arr **75.61 319** *e*P **P** **08 32 17.3 +0.4**
comp=Z,92nm,1.2s,mb5.6
GRA1 *e*S S 08 41 58.8 +2.7
GRA1 *e*SS SS 08 46 52.7 +5.4
GRA1 LR LR
comp=Z,11µm,20.4s,MS6.1
GRF Grafenberg Arr **75.61 319** *e*P **P** **08 32 17.3 +0.4**
comp=Z,92nm,1.2s,mb5.6
GRF *e*S S 08 41 58.8 +2.7
GRF *e*SS SS 08 46 52.7 +5.4
GRF *e*L 09 10 47.7
comp=Z,11µm,20.4s
GRF Grafenberg Arr **75.61 319** *e*P **P** **08 32 17.3 +0.4**
GRF *e*S S 08 41 58.8 +2.7
GRF *e*SS SS 08 46 52.7 +5.4
GRF pmax pmax
comp=Z,92nm,1.2s,mb5.6
GRF MLR MLR
comp=Z,11µm,20.4s,MS6.1
GRF Grafenberg Arr **75.61 319** *e*P **P** **08 32 17.3 +0.4**
GRF *e*S S 08 41 58.8 +2.7
GRF *e*SS SS 08 46 52.7 +5.4
GRF pmax pmax
comp=Z,92nm,1.2s,mb5.6
GRF MLR MLR
comp=Z,11µm,20.4s,MS6.1
MOTA Moosalm **75.70 316**⇓ *i*P **P** **08 32 15.9 -1.6**
comp=Z,38nm,0.9s,mb5.3,SNR=28
NSS Namsos **75.76 334** *e*P **P** **08 32 15.7 -1.8**
NSS *e*S S 08 41 57.6 +0.4
NSS *e*SS SS 08 46 50.6 +1.8
NSS AMS AMS 09 09 13.5
comp=Z,13µm,17.2s,MS6.3
NOA NORSAR Array B **75.88 330** P **P** **08 32 16.0 -2.2**
comp=Z,22nm,0.6s,mb5.3,baz=94,slow=5.7,SNR=89
NOA LR LR 09 12 35.0
comp=Z,10µm,18.5s,MS6.2,baz=85,slow=41
RETA Reutte **75.93 316** *i*P **P** **08 32 17.9 -0.9**
comp=Z,59nm,1.0s,mb5.5,SNR=22
FETA Feichten **75.96 316**⇑ *i*P **P** **08 32 17.7 -1.2**
comp=Z,45nm,0.9s,mb5.4,SNR=21
NAO01 NORSAR Array S **76.03 330** *e*P **P** **08 32 18.5 -0.6**
comp=Z,39nm,0.8s,mb5.4
NAO01 *e*PcP PcP 08 32 30.4 -0.9
NAO01 LR LR
comp=Z,11µm,19.0s,MS6.2
OSL Oslo **76.08 329** *e*P **P** **08 32 19.2 -0.1**
CLZ Clausthal **76.14 321** *e*P **P** **08 32 19.9 0.0**
comp=Z,53nm,0.8s,mb5.5
CLZ Clausthal **76.14 321** *e*P **P** **08 32 19.9 0.0**
CLZ pmax pmax
comp=Z,53nm,0.8s,mb5.5
BSEG Bad Segeberg **76.18 323** *e*P **P** **08 32 20.4 +0.4**
comp=Z,70nm,0.9s,mb5.6
NRDL Niedersach Rie **76.30 321** *e*P **P** **08 32 20.1 -0.7**
UBBA Unterbreizbach **76.38 320** *e*P **P** **08 32 21.3 0.0**
DAVA Damuels **76.54 316** *i*P **P** **08 32 21.8 -0.4**
comp=Z,46nm,0.6s,mb5.6,SNR=30
KONO Kongsberg **76.64 329** *e*P **P** **08 32 22.7 +0.2**
KONO *e*S S 08 42 05.8 -1.2
KONO AMS AMS 09 09 58.9
comp=Z,14µm,17.3s,MS6.3
KONO Kongsberg **76.64 329** *e*P **P** **08 32 22.2 -0.3**
comp=Z,166nm,1.5s,mb5.7
KONO *e*PcP PcP 08 32 34.4 +0.5
KONO LR LR
comp=Z,18µm,20.0s,MS6.4
KONO Kongsberg **76.64 329** *e*P **P** **08 32 22.2 -0.3**
KONO *e* 08 32 34.4
KONO pmax pmax
comp=Z,166nm,1.5s,mb5.7
KONO MLR MLR
comp=Z,18µm,20.0s,MS6.4
SMY Shemya **76.64 38** *e*P **P** **08 32 22.4 -0.3**
comp=Z,383nm,1.3s,mb6.2
SMY Shemya **76.64 38** *e*P **P** **08 32 22.4 -0.3**
SMY pmax pmax
comp=Z,383nm,1.3s,mb6.2
MUD Monsted U'grnd **76.84 326** *i*P **P** **08 32 23.9 +0.2**
comp=Z,61nm,0.9s,mb5.5
MUD *i*S S 08 42 09.1 -0.2
MUD Monsted U'grnd **76.84 326** *i*P **P** **08 32 23.9 +0.2**
MUD *i*S S 08 42 09.1 -0.2
MUD pmax pmax
comp=Z,61nm,0.9s,mb5.5
MUD MLR MLR
comp=Z,6µm,21.0s,MS5.9
MUD Monsted U'grnd **76.84 326** *i*P **P** **08 32 23.9 +0.2**
comp=Z,61nm,0.9s,mb5.5
MUD *i*S S 08 42 09.1 -0.2
MUD
comp=Z,6µm,21.0s
STU Stuttgart **76.95 318** *e*P **P** **08 32 24.8 +0.3**
STU Stuttgart **76.95 318** *e*P **P** **08 32 24.4 -0.1**
comp=Z,41nm,0.8s,mb5.4
STU Stuttgart **76.95 318** *e*P **P** **08 32 24.5 0.0**
STU pmax pmax
comp=Z,41nm,0.8s,mb5.4
SPAK Spaichingen-Ko **77.25 317** *e*P **P** **08 32 26.1 -0.1**
KBS Kingsbay **77.31 349** *e*P **P** **08 32 27.2 +1.2**
KBS AMB AMB 08 32 38.6
comp=Z,94nm,1.1s,mb5.6
KBS *e*S S 08 42 18.6 +4.8
KBS AMS AMS 09 15 39.1
comp=Z,12µm,26.9s,MS6.1
KBS Kingsbay **77.31 349** *e*P **P** **08 32 25.9 -0.1**
comp=Z,98nm,1.2s,mb5.6
KBS *e*PcP PcP 08 32 37.4 +0.9
KBS LR LR
comp=Z,13µm,19.0s,MS6.3
KBS Kingsbay **77.31 349***d* *i*P **P** **08 32 25.4 -0.6**
KBS pmax pmax
comp=Z,80nm,1.2s,mb5.5
MIR Mirnyy **77.37 180** *e*P **P** **08 32 25.0 -1.4**
MIR *i* 08 32 41.0
MIR *e*S S 08 42 09.0 -5.5
MIR pmax pmax

comp=Z,105nm,1.8s,mb5.5
MIR pmax pmax
comp=Z,909nm,4.0s
MIR pmax pmax
comp=N,400nm,6.0s
MIR smax
comp=N,1µm,15.0s
MIR smax
comp=E,1µm,15.0s
PGF Pioggiola 77.37 311 *eP* **P 08 32 25.9 -1.1**
comp=E,33nm,0.8s,mb5.0
PGF Pioggiola 77.37 311 *eP* **P 08 32 25.9 -1.1**
comp=E,16nm,0.8s,mb5.0
PGF Pioggiola 77.37 311 *eP* **P 08 32 25.9 -1.1**
PGF pmax pmax
comp=Z,16nm,0.8s,mb5.0
TNS Taunus Mts 77.39 319 *eP* **P 08 32 27.0 0.0**
comp=Z,38nm,0.7s,mb5.4
TNS Taunus Mts 77.39 319 *eP* **P 08 32 27.0 0.0**
TNS pmax pmax
comp=Z,38nm,0.7s,mb5.4
BFO Black Forest 77.54 317 P **P 08 32 27.9 0.0**
comp=Z,151nm,1.1s,mb5.8,SNR=11
BFO Black Forest 77.54 317 *eP* **P 08 32 27.3 -0.6**
comp=Z,30nm,1.0s,mb5.2
BFO Black Forest 77.54 317 *eP* **P 08 32 27.3 -0.6**
BFO pmax pmax
comp=Z,30nm,1.0s,mb5.2
KEST Kesra 77.58 304 *eP* **P 08 32 28.5 +0.1**
KEST Kesra 77.58 304 P **P 08 32 28.1 -0.3**
comp=Z,17nm,0.9s,mb5.0,baz=208,slow=1.0,SNR=18
MOL Molde 77.66 332 *eS* S 08 42 19.9 +1.8
FELD Feldberg im Sc 77.78 317 *eP* **P 08 32 29.1 -0.1**
LANF Langenberg 77.86 318 *eP* **P 08 32 29.8 +0.2**
LIBD Limburg 78.04 317 *eP* **P 08 32 30.9 +0.3**
BUG Bochum--Univer 78.08 320 *eP* **P 08 32 30.7 -0.1**
comp=Z,32nm,0.9s,mb5.2
BBS Basel-Blauen 78.14 316 *eP* **P 08 32 30.9 -0.3**
CDF Champ du Feu 78.24 317 *eP* **P 08 32 31.0 -0.7**
comp=Z,36nm,0.7s,mb5.1
CDF Champ du Feu 78.24 317 *eP* **P 08 32 31.0 -0.7**
comp=Z,18nm,0.7s,mb5.1
CDF Champ du Feu 78.24 317 *eP* **P 08 32 31.0 -0.7**
CDF pmax pmax
comp=Z,18nm,0.7s,mb5.1
RUP Ruppelstein 78.31 319 *eP* **P 08 32 32.4 +0.3**
CASY Casey 78.32 172 *eP* **P 08 32 31.3 -0.4**
CASY *eS* S 08 42 23.7 -1.1
CASY Casey 78.32 172 *eP* **P 08 32 31.4 -0.3**
comp=Z,156nm,0.9s,mb5.9
CASY LR LR
comp=Z,17µm,21.0s,MS6.3
ECH Echery 78.33 317 *eP* **P 08 32 33.2 +0.9**
ECH Echery 78.33 317 *eP* **P 08 32 32.6 +0.4**
comp=Z,20nm,1.0s,mb5.0
ECH LR LR
comp=Z,6µm,21.0s,MS5.9
ECH Echery 78.33 317 *eP* **P 08 32 32.6 +0.3**
ECH pmax pmax
comp=Z,20nm,1.0s,mb5.0
ECH MLR MLR
comp=Z,6µm,21.0s,MS5.9
SAOF Saorge 78.33 313 *eP* **P 08 32 32.2 -0.2**
MOF Molkenrain 78.37 317 *eP* **P 08 32 33.6 +1.1**
SBF Sospel 78.43 313 *eP* **P 08 32 32.0 -0.9**
comp=Z,99nm,0.9s,mb5.4
SBF Sospel 78.43 313 *eP* **P 08 32 32.0 -0.9**
comp=Z,49nm,0.9s,mb5.4
SBF Sospel 78.43 313 *eP* **P 08 32 32.0 -0.9**
SBF pmax pmax
comp=Z,49nm,0.9s,mb5.4
LUCF Luceram 78.49 313 *eP* **P 08 32 34.2 +1.0**
HINF Hinteralfeld 78.56 317 *eP* **P 08 32 32.7 -0.8**
comp=Z,39nm,0.9s,mb5.0
HINF Hinteralfeld 78.56 317 *eP* **P 08 32 32.7 -0.8**
comp=Z,20nm,0.9s,mb5.0
HINF Hinteralfeld 78.56 317 *eP* **P 08 32 32.7 -0.8**
HINF pmax pmax
comp=Z,20nm,0.9s,mb5.0
LOMF Lomont 78.61 316 *eP* **P 08 32 33.5 -0.3**
MVIF Mont Vial 78.63 313 *eP* **P 08 32 33.9 -0.1**
BER Bergen 78.77 330 *eP* **P 08 32 36.8 +2.3**
BER *eS* S 08 42 31.2 +1.2
BER AMS AMS 09 12 15.4
comp=Z,9µm,19.6s,MS6.1
LPG La Plagne 78.79 314 *eP* **P 08 32 34.6 -0.3**
comp=Z,79nm,0.6s,mb5.5
LPG La Plagne 78.79 314 *eP* **P 08 32 34.6 -0.3**
comp=Z,40nm,0.6s,mb5.5
LPG La Plagne 78.79 314 *eP* **P 08 32 34.6 -0.3**
LPG pmax pmax
comp=Z,39nm,0.6s,mb5.5
LPL La Plagne 78.81 314 *eP* **P 08 32 34.6 -0.3**
comp=Z,110nm,0.6s,mb5.7
LPL La Plagne 78.81 314 *eP* **P 08 32 34.6 -0.3**
comp=Z,55nm,0.6s,mb5.7
LPL La Plagne 78.81 314 *eP* **P 08 32 34.6 -0.3**
LPL pmax pmax
comp=Z,55nm,0.6s,mb5.7
CALN Calern 78.83 313 *eP* **P 08 32 35.2 +0.1**
MBDF Montbardon 78.84 314 *eP* **P 08 32 33.9 -1.2**
comp=Z,94nm,0.9s,mb5.4
MBDF Montbardon 78.84 314 *eP* **P 08 32 33.9 -1.2**
comp=Z,47nm,0.9s,mb5.4
MBDF Montbardon 78.84 314 *eP* **P 08 32 33.9 -1.2**
MBDF pmax pmax
comp=Z,47nm,0.9s,mb5.4
FOO Floro 78.86 331 *eP* **P 08 32 35.3 +0.4**
FOO *eS* S 08 42 30.6 -0.3
FOO AMS AMS 09 10 35.7
comp=Z,13µm,21.1s,MS6.2
HAU Haudompre 78.89 317 *eP* **P 08 32 34.4 -0.9**
comp=Z,110nm,0.8s,mb5.5
HAU *eMLR MLR
comp=Z,7µm,21.0s,MS5.7
HAU Haudompre 78.89 317 *eP* **P 08 32 34.4 -0.9**
comp=Z,55nm,0.8s,mb5.5
HAU LR LR
comp=Z,7µm,21.0s,MS6.0
HAU Haudompre 78.89 317 *eP* **P 08 32 34.4 -0.9**
HAU pmax pmax
comp=Z,55nm,0.8s,mb5.5
HAU MLR MLR
comp=Z,7µm,21.0s,MS6.0
WLF Walferdange 78.90 319 *eP* **P 08 32 35.8 +0.5**
WLF Walferdange 78.90 319 *eP* **P 08 32 35.3 0.0**
comp=Z,26nm,0.8s,mb5.2
WLF LR LR
comp=Z,7µm,21.0s,MS6.0
WLF Walferdange 78.90 319 *eP* **P 08 32 35.3 0.0**
WLF pmax pmax
comp=Z,26nm,0.8s,mb5.2
WLF MLR MLR
comp=Z,7µm,21.0s,MS6.0
MEM Membach 78.93 320 P **P 08 32 36.8 +1.3**
FRF La Foret Royal 79.02 312 *eP* **P 08 32 35.4 -0.8**
comp=Z,81nm,1.0s,mb5.3
FRF La Foret Royal 79.02 312 *eP* **P 08 32 35.4 -0.8**
comp=Z,40nm,1.0s,mb5.3
FRF La Foret Royal 79.02 312 *eP* **P 08 32 35.4 -0.8**
FRF pmax pmax
comp=Z,41nm,1.0s,mb5.3
ABSA Djebel Ababsia 79.04 305 P **P 08 32 37.8 +1.4**
TSUM Tsumeb 79.05 248 *eP* **P 08 32 38.5 +1.7**
comp=Z,6.7nm,0.8s,mb4.6
TSUM LR LR
comp=Z,6µm,19.0s,MS5.9
CMAH Djebel Manchou 79.06 305 P **P 08 32 37.9 +1.4**
THEF They Montfort 79.11 317 *eP* **P 08 32 36.3 -0.2**
LMR La Mourre 79.14 312 *eP* **P 08 32 35.9 -0.9**
comp=Z,69nm,1.1s,mb5.2
LMR La Mourre 79.14 312 *eP* **P 08 32 35.9 -0.9**
comp=Z,34nm,1.1s,mb5.2
LMR La Mourre 79.14 312 *eP* **P 08 32 35.9 -0.9**
LMR pmax pmax
comp=Z,35nm,1.1s,mb5.2
CABF La Chapelle 79.17 316 *eP* **P 08 32 36.6 -0.3**
comp=Z,121nm,1.0s,mb5.5
CABF La Chapelle 79.17 316 *eP* **P 08 32 36.6 -0.3**
comp=Z,60nm,1.0s,mb5.5
CABF La Chapelle 79.17 316 *eP* **P 08 32 36.6 -0.3**
CABF pmax pmax
comp=Z,60nm,1.0s,mb5.5
BCLA Clavier 79.39 319 P **P 08 32 39.2 +1.2**
ORIF Oris-en-Rattie 79.45 314 *eP* **P 08 32 37.4 -1.1**
comp=Z,43nm,0.7s,mb5.2
ORIF *eMLR MLR
comp=Z,10µm,22.5s,MS5.8
ORIF Oris-en-Rattie 79.45 314 *eP* **P 08 32 37.4 -1.1**
comp=Z,21nm,0.7s,mb5.2
ORIF Oris-en-Rattie 79.45 314 *eP* **P 08 32 37.4 -1.1**
ORIF pmax pmax
comp=Z,21nm,0.7s,mb5.2
MEZF Maizieres J'vi 79.71 318 *eP* **P 08 32 38.9 -0.9**
comp=Z,93nm,0.9s,mb5.4
MEZF Maizieres J'vi 79.71 318 *eP* **P 08 32 38.9 -0.9**
comp=Z,93nm,0.9s,mb5.7
GIVF Givet 79.72 319 *eP* **P 08 32 39.2 -0.6**
comp=Z,53nm,0.9s,mb5.2
GIVF Givet 79.72 319 *eP* **P 08 32 39.2 -0.6**
comp=Z,26nm,0.9s,mb5.2
GIVF Givet 79.72 319 *eP* **P 08 32 39.2 -0.6**
GIVF pmax pmax
comp=Z,27nm,0.9s,mb5.2
SMRF Simiane la Rot 79.76 313 *eP* **P 08 32 39.9 -0.3**
comp=Z,64nm,1.0s,mb5.2
SMRF Simiane la Rot 79.76 313 *eP* **P 08 32 39.9 -0.3**
comp=Z,64nm,1.0s,mb5.5
CASM Ain Smara 79.84 305 P **P 08 32 41.8 +1.0**
DOU Dourbes 79.87 319 P **P 08 32 40.4 -0.2**
OCF Saint Nazaire 79.90 314 *eP* **P 08 32 42.2 +1.3**
OG26 St.-Nazaire-De 79.90 314 *eP* **P 08 32 42.2 +1.3**
AMKA Amchitka 79.91 39 *eP* **P 08 32 40.2 -0.6**
comp=Z,53nm,1.0s,mb5.4
CTEI Djebel Teioual 79.93 305 P **P 08 32 41.9 +0.6**
SNF Seneffe 80.03 320 P **P 08 32 41.4 -0.1**
BAIF Baives 80.12 319 *eP* **P 08 32 41.7 -0.3**
comp=Z,76nm,0.9s,mb5.3
BAIF Baives 80.12 319 *eP* **P 08 32 41.7 -0.3**
comp=Z,38nm,0.9s,mb5.3
BAIF Baives 80.12 319 *eP* **P 08 32 41.7 -0.3**
BAIF pmax pmax
comp=Z,38nm,0.9s,mb5.3
DZM Mont Dzumac 80.18 115 *eP* **P 08 32 44.0 +1.2**
comp=Z,235nm,1.7s,mb5.8
DZM *eS* S 08 42 42.3 -4.0
comp=Z,3µm,25.8s
DZM *eSS SS 08 47 51.2 -6.5
comp=Z,4µm,33.0s
DZM *eLR LR 08 57 20.9
comp=Z,11µm,23.8s
SUR Sutherland 80.27 234 *eP* **P 08 32 44.8 +1.7**
comp=Z,59nm,0.8s,mb5.6
SUR LR LR
comp=Z,15µm,22.0s,MS6.3
SUR Sutherland 80.27 234 P **P 08 32 46.2 +3.1**
comp=Z,569nm,0.7s,mb6.6,SNR=9.0
DFRA Djebel Bou Aff 80.30 305 P **P 08 32 44.0 +0.7**
VIVF Saint-Julien-l 80.31 314 *eP* **P 08 32 42.6 -0.6**
comp=Z,146nm,0.9s,mb5.6
VIVF Saint-Julien-l 80.31 314 *eP* **P 08 32 42.6 -0.6**
comp=Z,73nm,0.9s,mb5.6
VIVF Saint-Julien-l 80.31 314 *eP* **P 08 32 42.6 -0.6**
VIVF pmax pmax
comp=Z,73nm,0.9s,mb5.6
SSB Saint Sauveur 80.36 314 *eP* **P 08 32 42.9 -0.5**
SSB Saint Sauveur 80.36 314 *eP* **P 08 32 43.0 -0.4**
comp=Z,36nm,0.6s,mb5.5
SSB LR LR
comp=Z,5µm,22.0s,MS5.8
SSB Saint Sauveur 80.36 314 *eP* **P 08 32 43.0 -0.4**
SSB pmax pmax
comp=Z,36nm,0.6s,mb5.5
SSB MLR MLR
comp=Z,5µm,22.0s,MS5.8
LOR Lormes 80.63 316 *eP* **P 08 32 43.9 -0.9**
comp=Z,137nm,1.0s,mb5.5
LOR *eMLR MLR
comp=Z,7µm,22.0s,MS5.7
LOR Lormes 80.63 316 *eP* **P 08 32 43.9 -0.9**
comp=Z,68nm,1.0s,mb5.5
LOR LR LR
comp=Z,7µm,22.0s,MS6.0
LOR Lormes 80.63 316 *eP* **P 08 32 43.9 -0.9**
LOR pmax pmax
comp=Z,69nm,1.0s,mb5.5
LOR MLR MLR
comp=Z,7µm,22.0s,MS6.0
SMF Signal de Mont 80.71 316 *eP* **P 08 32 44.4 -0.8**
comp=Z,104nm,0.8s,mb5.5
SMF Signal de Mont 80.71 316 *eP* **P 08 32 44.4 -0.8**
comp=Z,52nm,0.8s,mb5.5
SMF Signal de Mont 80.71 316 *eP* **P 08 32 44.4 -0.8**
SMF pmax pmax
comp=Z,52nm,0.8s,mb5.5
SET Setif 80.72 305 P **P 08 32 47.0 +1.5**
SSF Saint Saulge 80.89 316 *eP* **P 08 32 45.5 -0.7**
comp=Z,67nm,0.9s,mb5.3
SSF Saint Saulge 80.89 316 *eP* **P 08 32 45.5 -0.7**
comp=Z,34nm,0.9s,mb5.3
SSF Saint Saulge 80.89 316 *eP* **P 08 32 45.5 -0.7**
SSF pmax pmax
comp=Z,34nm,0.9s,mb5.3
PLDF La Plantade 80.93 315 *eP* **P 08 32 46.7 +0.3**
LASF Le Croix 80.98 313 *eP* **P 08 32 46.6 -0.1**
comp=Z,81nm,0.8s,mb5.4
AVF Avril sur Loir 81.02 316 *eP* **P 08 32 46.0 -0.9**
comp=Z,69nm,0.8s,mb5.3
AVF Avril sur Loir 81.02 316 *eP* **P 08 32 46.0 -0.9**
comp=Z,34nm,0.8s,mb5.3
AVF Avril sur Loir 81.02 316 *eP* **P 08 32 46.0 -0.9**
AVF pmax pmax
comp=Z,35nm,0.8s,mb5.3
MAW Mawson 81.16 191 *eP* **P 08 32 47.2 +0.2**
comp=Z,20nm,0.8s,mb5.1
MAW Mawson 81.16 191 P **P 08 32 47.3 +0.3**
comp=Z,21nm,0.9s,mb5.0,baz=21,slow=6.8,SNR=39
MAW LR LR 09 02 45.2
comp=Z,6µm,21.7s,MS5.9,baz=25,slow=31
AGO Saint Agoulin 81.26 315 *eP* **P 08 32 48.5 +0.3**
LBL Lubilhac 81.28 314 *eP* **P 08 32 48.4 +0.1**
PYM Petit Puy Mans 81.38 315 *eP* **P 08 32 49.0 +0.2**
BGF Bois d'Agland 81.40 316 *eP* **P 08 32 48.4 -0.5**
comp=Z,100nm,0.9s,mb5.4
BGF Bois d'Agland 81.40 316 *eP* **P 08 32 48.4 -0.5**
comp=Z,50nm,0.9s,mb5.4
BGF Bois d'Agland 81.40 316 *eP* **P 08 32 48.4 -0.5**
BGF pmax pmax
comp=Z,50nm,0.9s,mb5.4
HYF Humbligny 81.45 316 *eP* **P 08 32 49.0 -0.2**
ATAF Djebel Tarf 81.67 305 P **P 08 32 53.4 +2.8**
VERF Verneugheol 81.75 315 *eP* **P 08 32 52.4 +1.6**
TCF Toulx Ste Croi 81.87 316 *eP* **P 08 32 51.1 -0.3**
comp=Z,70nm,1.0s,mb5.2
TCF Toulx Ste Croi 81.87 316 *eP* **P 08 32 51.1 -0.3**
comp=Z,35nm,1.0s,mb5.2
TCF Toulx Ste Croi 81.87 316 *eP* **P 08 32 51.1 -0.3**
TCF pmax pmax
comp=Z,35nm,1.0s,mb5.2
EJON La Jonquera 81.88 312 P **P 08 32 51.1 -0.5**
comp=Z,1µm,6.8s
AKET Djebel Ketaf 81.96 305 P **P 08 32 54.8 +2.7**
LRW Lerwick 82.03 330 *eP* **P 08 32 51.4 -0.5**
LRW AMB AMB 08 33 00.5
comp=Z,148nm,2.5s,mb5.5
LRW AMS AMS 09 13 21.8
comp=Z,8µm,20.3s,MS6.1
LRDF Laroque-de-Fa 82.07 312 *eP* **P 08 32 52.6 +0.1**
FILF Fillols 82.11 312 *eP* **P 08 32 53.2 +0.5**
CAF Calviac 82.15 314 *eP* **P 08 32 52.6 -0.3**
comp=Z,38nm,0.8s,mb5.1
CAF Calviac 82.15 314 *eP* **P 08 32 52.6 -0.3**
comp=Z,19nm,0.8s,mb5.1
CAF Calviac 82.15 314 *eP* **P 08 32 52.6 -0.3**
CAF pmax pmax
comp=Z,19nm,0.8s,mb5.1
WAL1 Walls 82.22 330 *eP* **P 08 32 51.8 -1.1**
MTLF Montolieu 82.25 313 *eP* **P 08 32 53.1 -0.4**
comp=Z,94nm,0.8s,mb5.5
MTLF Montolieu 82.25 313 *eP* **P 08 32 53.1 -0.4**
comp=Z,47nm,0.8s,mb5.5
MTLF Montolieu 82.25 313 *eP* **P 08 32 53.1 -0.4**
MTLF pmax pmax
comp=Z,47nm,0.8s,mb5.5
ETOS Mallorca 82.29 309 P **P 08 32 53.9 +0.2**
comp=Z,861nm,3.9s
ADJB Djebel Djouab 82.30 305 P **P 08 32 59.2 +5.3**
CFON Fontmartina 82.31 311 P **P 08 32 54.2 +0.4**
comp=Z,2µm,8.6s
CARF Carcanieres 82.42 312 *eP* **P 08 32 54.2 -0.2**
TAM Tamanrasset 82.44 292 *eP* **P 08 32 56.0 +1.1**
comp=Z,59nm,1.0s,mb5.5
TAM LR LR
comp=Z,6µm,21.0s,MS5.9
TAM Tamanrasset 82.44 292 *eP* **P 08 32 56.0 +1.1**
TAM pmax pmax
comp=Z,59nm,1.0s,mb5.5
TAM MLR MLR
comp=Z,6µm,21.0s,MS5.9
RJF Les Rejaudoux 82.48 315 *eP* **P 08 32 54.6 0.0**
comp=Z,65nm,0.8s,mb5.3
RJF *eMLR MLR
comp=Z,5µm,21.0s,MS5.5
RJF Les Rejaudoux 82.48 315 *eP* **P 08 32 54.6 0.0**
comp=Z,32nm,0.8s,mb5.3
RJF LR LR
comp=Z,5µm,21.0s,MS5.8
RJF Les Rejaudoux 82.48 315 *eP* **P 08 32 54.6 0.0**
RJF pmax pmax
comp=Z,33nm,0.8s,mb5.3
RJF MLR MLR
comp=Z,5µm,21.0s,MS5.8
VALF Valcebollere 82.53 312 *eP* **P 08 32 55.6 +0.7**
ABA Alger-Bouzarea 82.53 306 P **P 08 33 00.1 +5.0**
CLLI Llivia 82.55 312 P **P 08 32 55.0 -0.1**
EMHD Djebel Mahouad 82.68 305 P **P 08 32 57.5 +1.6**
EMIR Miracle 82.96 311 P **P 08 32 57.5 +0.3**
comp=Z,537nm,2.7s,mb6.1
JMIC Jan Mayen 83.01 341 *eP* **P 08 33 00.7 +3.9**
JMIC *eS* S 08 43 16.9 +3.0
JMIC AMS AMS 09 12 36.8
comp=Z,7µm,16.3s,MS6.1
GAMB Gambell 83.05 26 *eP* **P 08 32 57.1 -0.1**
comp=Z,45nm,0.7s,mb5.6
LFF La Frestale 83.08 314 *eP* **P 08 32 57.6 -0.1**
comp=Z,84nm,0.9s,mb5.5
LFF La Frestale 83.08 314 *eP* **P 08 32 57.6 -0.1**
comp=Z,42nm,0.9s,mb5.5
LFF La Frestale 83.08 314 *eP* **P 08 32 57.6 -0.1**
LFF pmax pmax
comp=Z,42nm,0.9s,mb5.5
SALF Salau 83.08 312 *eP* **P 08 32 57.1 -0.7**
LDF La Druitiere 83.11 318 *eP* **P 08 32 57.0 -0.8**
comp=Z,44nm,0.8s,mb5.3
LDF La Druitiere 83.11 318 *eP* **P 08 32 57.0 -0.8**
comp=Z,22nm,0.8s,mb5.2
LDF La Druitiere 83.11 318 *eP* **P 08 32 57.0 -0.8**
LDF pmax pmax
comp=Z,22nm,0.8s,mb5.2
MLS Moulis 83.12 312 *eP* **P 08 32 57.6 -0.4**
CSOR Sort 83.18 312 P **P 08 32 58.0 -0.4**
comp=Z,807nm,4.7s
HPK Haverah Park 83.20 324 *eP* **P 08 32 57.2 -1.0**
HPK AMB AMB 08 33 11.5
comp=Z,159nm,1.9s,mb5.7
HPK AMS AMS 09 13 37.9
comp=Z,10µm,19.3s,MS6.2
CWF Charnwood Fore 83.21 322 *eP* **P 08 32 57.3 -0.9**
CWF AMB AMB 08 33 09.0
comp=Z,64nm,4.3s
CWF AMS AMS 09 12 04.3
comp=Z,7µm,19.0s,MS6.0
KBI1 Birley Grange 83.26 323 *eP* **P 08 32 57.7 -0.8**
FLN La Foliniere 83.32 318 *eP* **P 08 32 58.1 -0.8**
comp=Z,90nm,0.9s,mb5.5
FLN *eMLR MLR
comp=Z,11µm,22.2s,MS5.9
FLN La Foliniere 83.32 318 *eP* **P 08 32 58.1 -0.8**
comp=Z,45nm,0.9s,mb5.5
FLN LR LR
comp=Z,11µm,22.3s,MS6.2
FLN La Foliniere 83.32 318 *eP* **P 08 32 58.1 -0.8**
FLN pmax pmax
comp=Z,45nm,0.9s,mb5.5
FLN MLR MLR
comp=Z,11µm,22.3s,MS6.2
EPOB Poblet 83.37 311 P **P 08 32 59.0 -0.3**
comp=Z,781nm,4.8s
WOL Wolverton 83.39 321 *eP* **P 08 32 58.0 -1.2**
WOL AMB AMB 08 33 00.9
comp=Z,132nm,3.0s
WOL AMS AMS 09 16 44.9
comp=Z,6µm,17.4s,MS6.0
MME1 Meikle Cairn 83.39 327 *eP* **P 08 32 58.8 -0.3**
XAL Allendale 83.39 325 *eP* **P 08 32 59.0 -0.1**
MFF Saint Martin d 83.44 316 *eP* **P 08 32 58.9 -0.6**
comp=Z,106nm,0.8s,mb5.6
MFF Saint Martin d 83.44 316 *eP* **P 08 32 58.9 -0.6**
comp=Z,53nm,0.8s,mb5.6
MFF Saint Martin d 83.44 316 *eP* **P 08 32 58.9 -0.6**
MFF pmax pmax
comp=Z,53nm,0.8s,mb5.6
MCD Coleburn Disti 83.50 327 *eP* **P 08 32 59.1 -0.5**
EIBI Ibiza 83.53 308 P **P 08 33 00.4 +0.2**
comp=Z,2µm,7.9s
GRR Gorron 83.63 318 *eP* **P 08 32 59.7 -0.8**
comp=Z,194nm,1.7s,mb5.7
GRR Gorron 83.63 318 *eP* **P 08 32 59.7 -0.8**
comp=Z,97nm,1.7s,mb5.7
GRR Gorron 83.63 318 *eP* **P 08 32 59.7 -0.8**
GRR pmax pmax
comp=Z,97nm,1.7s,mb5.7
EPF Esparros 83.66 312 *eP* **P 08 32 59.7 -1.1**
comp=Z,25nm,0.9s,mb5.0
EPF Esparros 83.66 312 *eP* **P 08 32 59.7 -1.1**
comp=Z,13nm,0.9s,mb5.0
EPF Esparros 83.66 312 *eP* **P 08 32 59.7 -1.1**
EPF pmax pmax
comp=Z,13nm,0.9s,mb5.1
STNC Stoke 83.69 323 AMS AMS 09 18 46.0
comp=Z,7µm,16.0s,MS6.2
RESF Ens 83.69 312 *eP* **P 08 33 01.7 +0.8**
EBL Broad Law 83.70 325 *eP* **P 08 33 00.6 -0.2**
SWN1 Swindon 83.71 321 AMB AMB 08 33 14.1
comp=Z,170nm,2.2s,mb5.8
SWN1 AMS AMS 09 17 03.5
comp=Z,7µm,15.6s,MS6.1
SWN1 Swindon 83.71 321 AMB AMB 08 33 14.1
comp=Z,170nm,2.2s,mb5.8
SWN1 AMS AMS 09 17 03.5
comp=Z,7µm,15.6s
EDI Edinburgh 83.76 326 *eP* **P 08 33 00.7 -0.3**
EDI AMB AMB 08 33 05.9
comp=Z,98nm,4.1s
EDI AMS AMS 09 19 57.8
comp=Z,8µm,14.9s,MS6.2
EBNR Beni Rached 83.81 306 P **P 08 33 04.0 +2.3**
EBIE Bielsa 83.85 312 P **P 08 33 02.4 +0.7**
comp=Z,437nm,3.9s
ECK Cauldkaine Hil 83.86 325 *eP* **P 08 33 01.2 -0.3**
EBH Black Hill 83.88 326 *eP* **P 08 33 01.4 -0.2**
ESK Eskdalemuir 83.88 325 P **P 08 33 03.8 +2.2**
comp=Z,239nm,1.4s,mb6.1,SNR=15
ESK Eskdalemuir 83.88 325 *eP* **P 08 33 00.5 -1.1**
ESK AMB AMB 08 33 13.7
comp=Z,101nm,4.5s
ESK AMS AMS 09 18 31.6
comp=Z,6µm,15.2s,MS6.1
ESK Eskdalemuir 83.88 325 *eP* **P 08 33 03.0 +1.4**
comp=Z,53nm,1.1s,mb5.6
ESK LR LR
comp=Z,6µm,20.0s,MS6.0
ESK Eskdalemuir 83.88 325 *i* P **P 08 33 03.9 +2.3**
VIEF Viey 83.91 312 *eP* **P 08 33 02.6 +0.5**
EAU Auchinoon 83.92 326 *eP* **P 08 33 01.7 -0.1**
MVH1 Achvaich 83.92 328 *eP* **P 08 33 01.7 -0.1**
DAG Danmarks Havn 83.93 347 *e*Pcr **P 08 33 02.6 +1.1**
comp=Z,52nm,1.3s,mb5.5
DAG LR LR
comp=Z,21µm,22.0s,MS6.5
DAG Danmarks Havn 83.93 347[1] *eP* **P 08 33 02.6 +1.1**
DAG pmax pmax
comp=Z,52nm,1.3s,mb5.5
DAG MLR MLR
comp=N,8µm,22.0s
DAG MLR MLR
comp=Z,21µm,22.0s,MS6.5
DAG Danmarks Havn 83.93 347*b i*P **P 08 33 02.6 +1.1**
comp=Z,52nm,1.3s,mb5.5
DAG
comp=Z,21µm,22.0s
ECHA Ech Chlef 83.96 306 P **P 08 33 06.0 +3.5**
ERTA Horta de San J 83.99 310 P **P 08 33 02.5 0.0**
comp=Z,622nm,3.9s
MDO Dochfour 84.11 327 *eP* **P 08 33 02.9 +0.1**
ETRT Tiaret 84.14 305 P **P 08 33 04.5 +1.1**
REYF Montagne du Re 84.18 313 *eP* **P 08 33 05.3 +1.9**
HLM1 Long Mynd 84.19 322 *eP* **P 08 33 02.5 -0.7**

HLM1 AMB AMB 08 33 12.9
comp=Z,53nm,3.3s

EANR 'Ain N'Sour 84.20 305 P **P** **08 33 05.0 +1.3**
ETSF Etsaut 84.33 312 *eP* **P** **08 33 04.2 0.0**
comp=Z,48nm,0.7s,mb5.4

ETSF Etsaut 84.33 312 *eP* **P** **08 33 04.2 0.0**
comp=Z,24nm,0.7s,mb5.4

ETSF Etsaut 84.33 312 *eP* **P** **08 33 04.2 0.0**
ETSF pmax pmax
comp=Z,24nm,0.7s,mb5.4

EAB Aberfoyle 84.34 326 *eP* **P** **08 33 03.2 -0.8**
JSA Saint Aubin 84.35 319 AMS AMS 09 11 49.0
comp=Z,8µm,23.1s,MS6.0

MCH1 Michaelchurch 84.36 322 *eP* **P** **08 33 03.6 -0.5**
MCH1 AMB AMB 08 33 08.2
comp=Z,62nm,0.9s,mb5.7

MCH1 AMS AMS 09 17 29.2
comp=Z,6µm,18.9s,MS6.0

ESAC San Caprasio 84.46 311 P **P** **08 33 05.0 +0.1**
comp=Z,689nm,3.3s

PGBU Glenifferbraes 84.50 326 AMS AMS 09 13 30.2
comp=Z,6µm,18.9s,MS6.0

PGBU Glenifferbraes 84.50 326 AMS AMS 09 13 30.2
comp=Z,6µm,18.9s

KAC Achnashellach 84.59 327 *eP* **P** **08 33 05.3 +0.1**
LARF Larrau 84.61 313 *eP* **P** **08 33 06.1 +0.5**
WPM1 Penmaenmawr 84.67 323 *eP* **P** **08 33 06.0 +0.3**
EMOS Mosqueruela 84.69 310 P **P** **08 33 06.5 +0.5**
comp=Z,838nm,3.7s

KSB Sheil Bridge 84.72 327 *eP* **P** **08 33 06.1 +0.2**
SGMF Saint Gilles 84.77 318 *eP* **P** **08 33 05.8 -0.5**
comp=Z,108nm,1.3s,mb5.5

SGMF Saint Gilles 84.77 318 *eP* **P** **08 33 05.8 -0.5**
comp=Z,54nm,1.3s,mb5.5

SGMF Saint Gilles 84.77 318 *eP* **P** **08 33 05.8 -0.5**
SGMF pmax pmax
comp=Z,54nm,1.3s,mb5.5

SJPF Ste Jean 84.77 313 *eP* **P** **08 33 06.4 0.0**
comp=Z,44nm,0.8s,mb5.3

SJPF Ste Jean 84.77 313 *eP* **P** **08 33 06.4 0.0**
comp=Z,22nm,0.8s,mb5.3

SJPF Ste Jean 84.77 313 *eP* **P** **08 33 06.4 0.0**
SJPF pmax pmax
comp=Z,22nm,0.8s,mb5.3

RRR Rubha Reidh 84.79 328 *eP* **P** **08 33 06.6 +0.4**
EBEN Beniarda 84.79 308 P **P** **08 33 07.7 +1.0**
comp=Z,854nm,7.8s

GAL1 Galloway 84.81 325 *eP* **P** **08 33 06.1 -0.3**
GAL1 AMB AMB 08 33 12.2
comp=Z,63nm,4.8s

GAL1 AMS AMS 09 21 03.7
comp=Z,8µm,16.2s,MS6.2

KPL Plockton 84.82 327 *eP* **P** **08 33 05.9 -0.4**
KPL AMB AMB 08 33 10.0
comp=Z,138nm,4.3s

KPL AMS AMS 09 16 01.8
comp=Z,11µm,18.7s,MS6.3

WME Myndd Eilian 84.87 323 *eP* **P** **08 33 06.3 -0.4**
WLF1 Llynfaes 84.95 323 *eP* **P** **08 33 07.5 +0.4**
WLF1 AMB AMB 08 33 20.6
comp=Z,335nm,1.9s,mb6.2

WLF1 AMS AMS 09 14 05.2
comp=Z,18µm,21.6s,MS6.4

EALK Alkurruntz 84.96 313 P **P** **08 33 07.6 +0.3**
comp=Z,2µm,6.8s

ELIZ Elizondo 84.98 313 P **P** **08 33 07.7 +0.2**
comp=Z,26nm,1.0s,mb5.3

ELIZ Elizondo 84.98 313 P **P** **08 33 07.7 +0.2**
ELIZ pmax pmax
comp=Z,26nm,1.0s,mb5.3

KAR1 Arisaig 85.00 327 *eP* **P** **08 33 06.9 -0.4**
DRV Dumont d'Urvil 85.04 163 P **P** **08 33 01.0 -6.1**
DRV S S 08 43 32.0 -2.1
DRV R 09 02 00.0

ECHE Chera 85.20 309 P **P** **08 33 09.2 +0.5**
comp=Z,45nm,0.9s,mb5.6

ECHE Chera 85.20 309 P **P** **08 33 09.2 +0.5**
ECHE pmax pmax
comp=Z,45nm,0.9s,mb5.6

ROSF Rostrenen 85.22 318 *eP* **P** **08 33 07.9 -0.7**
comp=Z,133nm,1.4s,mb5.6

ROSF Rostrenen 85.22 318 *eP* **P** **08 33 07.9 -0.7**
comp=Z,66nm,1.4s,mb5.6

ROSF Rostrenen 85.22 318 *eP* **P** **08 33 07.9 -0.7**
ROSF pmax pmax
comp=Z,67nm,1.4s,mb5.6

QUIF Quistinic 85.23 318 *eP* **P** **08 33 07.6 -1.0**
comp=Z,36nm,0.9s,mb5.2

QUIF Quistinic 85.23 318 *eP* **P** **08 33 07.6 -1.0**
comp=Z,18nm,0.9s,mb5.2

QUIF Quistinic 85.23 318 *eP* **P** **08 33 07.6 -1.0**
QUIF pmax pmax
comp=Z,18nm,0.9s,mb5.2

RRH Rhenigidale 85.23 328 *eP* **P** **08 33 08.1 -0.3**
DYA Yadsworthy 85.23 320 AMS AMS 09 15 48.7
comp=Z,6µm,17.4s,MS6.1

KSK Scoval 85.34 328 *eP* **P** **08 33 08.5 -0.5**
HTL Hartland 85.47 321 AMS AMS 09 18 06.0
comp=Z,7µm,21.2s,MS6.0

MIDW Midway 85.57 62 PFAKE 08 33 20.0 +9.2
MIDW LR LR
comp=Z,3µm,22.0s,MS5.7

CART Cartagena 85.59 307 *eP* **P** **08 33 11.0 +0.3**
comp=Z,81nm,1.2s,mb5.8

EMUR La Murta 85.73 308 P **P** **08 33 11.6 +0.3**
comp=Z,1µm,7.2s

ETOR Torete 85.80 311 P **P** **08 33 10.2 -1.4**
comp=Z,27nm,1.8s,mb5.2

ETOR Torete 85.80 311 P **P** **08 33 10.3 -1.3**
ETOR pmax pmax
comp=Z,27nm,1.8s,mb5.2

ETOB Tobarra 85.82 308 P **P** **08 33 12.6 +0.9**
comp=Z,1µm,5.3s

ALE Alert 85.86 357 P **P** **08 33 10.0 -1.1**
comp=Z,234nm,0.7s,mb6.5,SNR=18

CCA1 Carnmenellis 86.10 320 AMS AMS 09 21 16.7
comp=Z,7µm,16.1s,MS6.1

ELAN Lanestosa 86.34 313 P **P** **08 33 13.9 -0.3**
comp=Z,2µm,8.3s

EVIA Vianos 86.55 309 P **P** **08 33 15.7 +0.3**
comp=Z,21nm,0.7s,mb5.5

EVIA Vianos 86.55 309 P **P** **08 33 15.7 +0.3**
EVIA pmax pmax
comp=Z,21nm,0.7s,mb5.5

ENIJ Nijar 86.65 307 P **P** **08 33 15.3 -0.6**
comp=Z,89nm,1.5s,mb5.8

ENIJ Nijar 86.65 307 P **P** **08 33 15.3 -0.6**
ENIJ pmax pmax
comp=Z,89nm,1.5s,mb5.8

EHUE Huescar 86.78 308 P **P** **08 33 16.2 -0.4**
comp=Z,56nm,1.2s,mb5.7

EHUE Huescar 86.78 308 P **P** **08 33 16.2 -0.3**
EHUE pmax pmax
comp=Z,56nm,1.2s,mb5.7

EQES Quesada 87.16 308 P **P** **08 33 19.6 +1.2**
comp=Z,771nm,4.5s

EBER Berja 87.20 307 P **P** **08 33 18.9 +0.4**
comp=Z,680nm,4.2s

GUD Guadarrama 87.39 311 P **P** **08 33 19.5 0.0**
comp=Z,49nm,0.9s,mb5.7

GUD Guadarrama 87.39 311 P **P** **08 33 19.5 +0.1**
GUD pmax pmax
comp=Z,49nm,0.9s,mb5.7

ESDC Sonseca Array 87.46 310 P **P** **08 33 19.5 -0.3**
comp=Z,34nm,1.6s,mb5.3

ESDC Sonseca Array 87.46 310 P **P** **08 33 19.1 -0.7**
comp=Z,5.3nm,0.5s,mb5.0,baz=63,slow=4.1,SNR=65

ESDC PKKPbc PKKPbc 08 51 14.2 +4.2
comp=Z,0.4nm,0.5s,baz=317,slow=1.9,SNR=4.5

ESLA Sonseca Array 87.46 310 *eP* **P** **08 33 19.7 -0.1**
comp=Z,3.1nm,0.9s,mb4.5

ESLA LR LR
comp=Z,16µm,21.0s,MS6.4

EARI Arriondas 87.59 314 P **P** **08 33 20.6 +0.3**
comp=Z,1µm,6.7s

EBAN Banos Encina 87.64 308 P **P** **08 33 20.1 -0.6**
comp=Z,26nm,1.0s,mb5.4

EBAN Banos Encina 87.64 308 P **P** **08 33 20.1 -0.6**
EBAN pmax pmax
comp=Z,26nm,1.0s,mb5.4

ECOG Cogollos-Vega 87.65 307 P **P** **08 33 21.0 +0.2**
comp=Z,25nm,1.2s,mb5.3

ECOG Cogollos-Vega 87.65 307 P **P** **08 33 21.0 +0.2**
ECOG pmax pmax
comp=Z,25nm,1.2s,mb5.3

TORD Torodi Ar. Bea 87.66 283 P **P** **08 33 21.7 +0.5**
comp=Z,17nm,0.8s,mb5.3,baz=88,slow=5.1,SNR=35

TORD PP PP 08 36 50.6 +3.8
comp=Z,5.6nm,0.9s,baz=68,slow=6.5,SNR=4.2

TORD PKKPbc PKKPbc 08 51 10.1 +1.3
comp=Z,1.3nm,0.8s,baz=299,slow=2.1,SNR=8.3

TORD LR LR 09 14 52.0
comp=Z,3µm,19.7s,MS5.7,baz=75,slow=37

SYO Syowa Base 87.74 197 *eP* **P** **08 33 19.9 -0.4**
SYO Syowa Base 87.74 197 *esP* sP 08 33 28.3 -4.8
EGUA Guajares 87.74 307 P **P** **08 33 20.5 -0.7**
comp=Z,364nm,0.8s,mb6.7

PAB San Pablo 87.77 310 *eP* **P** **08 33 21.4 +0.1**
comp=Z,17nm,1.0s,mb5.2

PAB LR LR
comp=Z,3µm,19.0s,MS5.8

PAB San Pablo 87.77 310 *eP* **P** **08 33 21.4 +0.1**
PAB pmax pmax
comp=Z,17nm,1.0s,mb5.2

PAB MLR MLR
comp=Z,3µm,19.0s,MS5.8

ERON Agron 87.89 307 P **P** **08 33 21.4 -0.5**
comp=Z,14nm,0.8s,mb5.3

UNV Unalaska Valle 87.97 35 *eP* **P** **08 33 21.7 -0.2**
comp=Z,32nm,0.9s,mb5.5

UNV *e*PP PP 08 36 46.7 -1.5
ELOJ Sierra Loja 88.14 307 P **P** **08 33 23.2 +0.2**
comp=Z,14nm,1.0s,mb5.1

ELOJ Sierra Loja 88.14 307 P **P** **08 33 23.2 +0.1**
ELOJ pmax pmax
comp=Z,14nm,1.0s,mb5.2

EADA Adamuz 88.25 308 P **P** **08 33 23.7 +0.2**
comp=Z,404nm,3.5s

AKUT Akutan 88.31 35 *eP* **P** **08 33 20.2 -3.3**
comp=Z,190nm,2.0s,mb6.0

EMIJ Mijas 88.75 307 P **P** **08 33 24.8 -1.2**
comp=Z,285nm,3.9s

EPLA Plasencia 88.96 311 P **P** **08 33 26.8 -0.1**
comp=Z,735nm,5.2s

EPLA Plasencia 88.96 311 P **P** **08 33 26.8 -0.1**
EPLA pmax pmax
comp=Z,735nm,5.2s

EPON Pontenova 88.96 314 P **P** **08 33 26.0 -0.8**
comp=Z,426nm,3.6s

ECAL Calabor 89.00 312 P **P** **08 33 28.2 +1.2**
comp=Z,429nm,3.5s

PBRG Braganca 89.04 312 *eP* **P** **08 33 27.9 +0.7**
comp=Z,26nm,1.3s,mb5.4

FUNA Funafuti 89.05 99 PFAKE 08 33 40.0 +12
FUNA LR LR
comp=Z,13µm,20.0s,MS6.3

ERUA La Rua 89.18 313 P **P** **08 33 28.4 +0.5**
comp=Z,47nm,1.8s,mb5.5

ERUA La Rua 89.18 313 P **P** **08 33 28.4 +0.5**
ERUA pmax pmax
comp=Z,47nm,1.8s,mb5.5

EJIF Jimena Fronter 89.32 307 P **P** **08 33 28.4 -0.3**
comp=Z,147nm,1.4s,mb6.1

EJIF Jimena Fronter 89.32 307 P **P** **08 33 28.4 -0.3**
EJIF pmax pmax
comp=Z,147nm,1.4s,mb6.1

MVO Moncorvo 89.40 312 *eP* **P** **08 33 29.7 +0.8**
comp=Z,49nm,1.7s,mb5.6

MVO Moncorvo 89.40 312 *e*PP PP 08 37 10.0 +10
MVO *e*S S 08 44 20.3 +2.9
MVO *e*SS SS 08 50 28.5 +16
MVO *e*LQ 08 57 26.7
MVO *e*LR LR 09 05 04.4
comp=Z,5µm,20.0s

MVO Moncorvo 89.40 312 P **P** **08 33 29.4 +0.5**
FALS False Pass 89.41 34 *eP* **P** **08 33 27.5 -1.1**
comp=Z,47nm,0.8s,mb5.9

ESPR Espera 89.53 307 P **P** **08 33 29.4 -0.2**
comp=Z,415nm,3.4s

BORG Borgarnes 89.65 337 PFAKE 08 33 40.0 +10
BORG LR LR
comp=Z,7µm,20.0s,MS6.1

MSVF Nonsavu 89.77 108 P **P** **08 33 33.0 +2.0**
comp=Z,214nm,0.9s,mb6.5,SNR=8.1

MSVF Nonsavu 89.77 108 *eP* **P** **08 33 32.9 +1.8**
comp=Z,52nm,1.1s,mb5.8

MSVF LR LR
comp=Z,3µm,20.0s,MS5.7

MSVF Nonsavu 89.77 108 P **P** **08 33 33.0 +2.0**
comp=Z,214nm,0.9s,mb6.5,SNR=8.1

RPZ Rata Peaks 89.87 135 *eP* **P** **08 33 31.4 +0.4**
comp=Z,131nm,1.3s,mb6.1

PVRL Vila Real 89.88 312 *eP* **P** **08 33 32.6 +1.5**
comp=Z,56nm,1.8s,mb5.6

SFS San Fernando 89.89 307 PFAKE 08 33 40.0 +8.7
SFS LR LR
comp=Z,7µm,21.0s,MS6.1

EMIN Mina Concepcio 89.95 308 P **P** **08 33 31.8 +0.2**
comp=Z,274nm,2.9s,mb6.1

MTE Manteigas 89.97 311 *eP* **P** **08 33 32.5 +0.9**
comp=Z,81nm,1.7s,mb5.8

MTE Manteigas 89.97 311 *e*PP PP 08 37 16.4 +12
MTE *e*S S 08 44 24.5 +1.8
MTE *e*SS SS 08 50 36.4 +16
MTE *e*LQ 08 57 33.8
MTE *e*LR LR 09 05 29.8
comp=Z,3µm,20.0s

MTE Manteigas 89.97 311 *eP* **P** **08 33 32.2 +0.6**
comp=Z,39nm,0.9s,mb5.7

MTE LR LR
comp=Z,4µm,20.0s,MS5.8

EBAD Badajoz 89.97 309 P **P** **08 33 31.9 +0.2**
comp=Z,672nm,5.4s

ELOB Lobios 89.98 313 P **P** **08 33 32.8 +1.2**
comp=Z,360nm,3.5s

PCAB Cabril 89.99 312 *eP* **P** **08 33 32.2 +0.5**
comp=Z,63nm,1.8s,mb5.6

TTA Tatalina 90.03 25 *eP* **P** **08 33 32.4 +1.0**
PCBR Castelo Branco 90.06 311 *eP* **P** **08 33 32.6 +0.6**
comp=Z,60nm,1.3s,mb5.8

STS Santiago 90.06 314 P **P** **08 33 33.4 +1.4**
comp=Z,43nm,0.8s,mb5.8

STS Santiago 90.06 314 P **P** **08 33 33.4 +1.4**
STS pmax pmax
comp=Z,43nm,0.8s,mb5.8

PMRV Marv??o 90.09 310 *eP* **P** **08 33 33.4 +1.2**
comp=Z,43nm,1.5s,mb5.5

PMRV Marv??o 90.09 310 *e*PP PP 08 37 16.0 +10
PMRV *e*S S 08 44 25.9 +2.0
PMRV *e*SS SS 08 50 32.2 +10
PMRV *e*LQ 08 57 26.5
PMRV *e*LR LR 09 05 19.2
comp=Z,3µm,22.0s

PBAR Barrancos 90.13 309 *eP* **P** **08 33 33.0 +0.6**
comp=Z,117nm,1.5s,mb6.0

PBAR Barrancos 90.13 309 *e*PP PP 08 37 15.2 +9.3
PBAR *e*S S 08 44 29.6 +5.3
PBAR *e*SS SS 08 50 36.5 +13
PBAR *e*LQ 08 57 19.3
PBAR *e*LR LR 09 05 19.7
comp=Z,4µm,20.0s

PVIS Viseu 90.15 311 *eP* **P** **08 33 33.4 +1.0**
comp=Z,57nm,1.5s,mb5.7

COLD Coldfoot 90.25 20 *eP* **P** **08 33 32.5 +0.1**
comp=Z,34nm,1.2s,mb5.5

EMAZ Mazaricos 90.35 314 P **P** **08 33 33.7 +0.4**
comp=Z,193nm,1.6s,mb6.2

EZAM Zamans 90.36 313 P **P** **08 33 33.5 +0.1**
comp=Z,91nm,1.4s,mb5.9

EZAM Zamans 90.36 313 P **P** **08 33 33.5 +0.1**
EZAM pmax pmax
comp=Z,91nm,1.4s,mb5.9

PESTR Estremoz 90.38 310 *eP* **P** **08 33 33.9 +0.3**
comp=Z,36nm,1.6s,mb5.5

PESTR Estremoz 90.38 310 *e*PP PP 08 37 15.4 +7.6
PESTR *e*S S 08 44 23.5 -3.1
PESTR *e*SS SS 08 50 33.2 +6.5
PESTR *e*LQ 08 57 36.8
PESTR *e*LR LR 09 03 23.2
comp=Z,3µm,20.0s

SUMG Summit 90.58 347 *eP* **P** **08 33 34.3 +0.5**
comp=Z,98nm,1.0s,mb6.1

SUMG Summit 90.58 347 *i* P **P** **08 33 34.9 +1.1**
comp=Z,68nm,0.9s,mb6.0

SUMG
comp=Z,7µm,21.0s

EGRO El Granado 90.63 308 P **P** **08 33 34.9 +0.1**
comp=Z,447nm,2.8s,mb6.3

EVO Evora 90.78 309 *eP* **P** **08 33 36.0 +0.5**
comp=Z,60nm,1.0s,mb5.6

EVO *e*MLR MLR
comp=Z,5µm,21.5s,MS5.6

EVO Evora 90.78 309 *eP* **P** **08 33 36.2 +0.7**
comp=Z,32nm,1.0s,mb5.6

EVO Evora 90.78 309 *e*PP PP 08 37 22.8 +12
PBEJ Beja 90.80 309 *eP* **P** **08 33 36.4 +0.9**
comp=Z,56nm,1.2s,mb5.8

PBEJ Beja 90.80 309 *e*PP PP 08 37 23.7 +13
PTOM Tomar 90.81 311 *i* P **P** **08 33 36.5 +1.0**
comp=Z,131nm,2.9s,mb5.8

SDPT Sand Point 90.83 33 *eP* **P** **08 33 35.4 +0.1**
comp=Z,82nm,0.8s,mb6.1

PVAQ Vaqueiros 90.84 308 *eP* **P** **08 33 36.6 +0.9**
comp=Z,106nm,1.7s,mb5.9

PVAQ Vaqueiros 90.84 308 *e*PP PP 08 37 22.2 +11
PVAQ *e*S S 08 44 27.8 -3.1
PVAQ *e*SS SS 08 50 44.7 +11
PVAQ *e*LR LR 09 06 30.4
comp=Z,3µm,20.0s

EVOP Sao Brissos 90.87 309 *eP* **P** **08 33 36.8 +0.9**
EVOP *e*PP PP 08 37 11.5 -0.2
EVOP *e*S SKKSac 08 44 07.4 -13
EVOP *e*S SKKSac 08 44 07.6 -13
EVOP *e*SS SS 08 50 36.4 +2.6
EVOP *e*SS SS 08 50 36.9 +3.2
EVOP AMS AMS 09 22 32.4
comp=Z,3µm,20.6s,MS5.8

EVOP Sao Brissos 90.87 309 *eP* **P** **08 33 36.7 +0.9**
EVOP *e*S SKSac 08 44 07.4 +1.4
SVW2 Sparrevohn 90.98 27 *eP* **P** **08 33 36.9 +1.0**
comp=Z,115nm,1.2s,mb6.1

PCVE Castro Verde 91.03 309 *eP* **P** **08 33 38.2 +1.6**
comp=Z,43nm,1.5s,mb5.6

PCVE Castro Verde 91.03 309 *e*PP PP 08 37 22.1 +9.1
PCVE *e*S S 08 44 35.9 +3.3
PCVE *e*SS SS 08 50 46.4 +10
PCVE *e*LQ 08 57 34.2
PCVE *e*LR LR 09 04 48.2
comp=Z,3µm,20.0s

PBDV Barranco-do-Ve 91.05 308 *eP* **P** **08 33 37.6 +0.9**
comp=Z,107nm,1.5s,mb6.0

PBDV Barranco-do-Ve 91.05 308 *e*PP PP 08 37 22.6 +9.4
PBDV *e*S S 08 44 26.7 -6.1
PBDV *e*SS SS 08 50 41.1 +4.7
PBDV *e*LQ 08 57 33.3
PBDV *e*LR LR 09 04 49.0
comp=Z,3µm,18.0s

MESJ Messejana 91.12 309 *eP* **P** **08 33 38.0 +1.0**
MESJ *e*PP PP 08 37 13.2 -0.5
MESJ *e*S SKSac 08 44 07.8 +0.4
MESJ *e*SS SS 08 50 40.4 +3.0
MESJ AMS AMS 09 22 53.0
comp=E,4µm,20.0s

MESJ Messejana 91.12 309 *eP* **P** **08 33 38.0 +1.0**
MESJ *e*S SKSac 08 44 07.8 +0.4
BPAW Bear Paw Mtn. 91.51 23 *eP* **P** **08 33 38.4 +0.2**
comp=E,1µm,0.5s

CHGN Chignik 91.56 32 *eP* **P** **08 33 37.7 -0.9**
PTEO Sao Teotonio 91.58 309 *eP* **P** **08 33 40.8 +1.6**
comp=E,100nm,1.6s,mb5.9

MORF Marmelete 91.59 308 *eP* **P** **08 33 40.6 +1.4**
comp=E,68nm,1.4s,mb5.8

MORF Marmelete 91.59 308 *e*PP PP 08 37 28.0 +11
MORF *e*S S 08 44 39.7 +2.1
MORF *e*LR LR 09 12 16.2
comp=E,3µm,18.0s

MORF Marmelete 91.59 308 *eP* **P** **08 33 39.7 +0.5**
LIS Lisbon 91.60 310 *eP* **P** **08 33 40.3 +1.1**
LIS *e*PP PP 08 37 17.1 -0.3
LIS *e*S SKSac 08 44 09.9 -0.2
LIS *e*S SKSac 08 44 12.7 +2.5
LIS *e*SS SS 08 50 48.0 +3.8
LIS AMS AMS 09 22 55.6
comp=N,4µm,21.4s

LIS Lisbon 91.60 310 *eP* **P** **08 33 40.3 +1.1**
LIS *e*S SKSac 08 44 09.9 -0.2
PPLA Purkeypile 91.61 24 *eP* **P** **08 33 39.2 +0.5**
comp=N,35nm,0.9s,mb5.7

PMAFR Mafra 91.63 310 *e*PP PP 08 37 28.4 +11
PMAFR *e*S S 08 44 41.9 +3.9
PMAFR *e*SS SS 08 50 56.2 +11
PMAFR *e*LQ 08 58 02.2
PMAFR *e*LR LR 09 06 13.1
comp=N,3µm,18.0s

PFVI Vila Bisbo 91.77 308 *eP* **P** **08 33 41.1 +1.1**
comp=N,68nm,1.5s,mb5.8

PFVI Vila Bisbo 91.77 308 *e*PP PP 08 37 27.9 +9.1
PFVI *e*S S 08 44 38.9 -0.4
PFVI *e*SS SS 08 51 02.5 +16
PFVI *e*LQ 08 58 30.4
PFVI *e*LR LR 09 05 10.8
comp=N,3µm,18.0s

PFVI Vila Bisbo 91.77 308 P **P** **08 33 39.7 -0.4**
SNZO South Karori 91.91 132 PFAKE 08 33 50.0 +10
SNZO LR LR
comp=Z,9µm,20.0s,MS6.2

TRF Thorofare Moun 92.10 23 *eP* **P** **08 33 41.3 +0.3**
comp=Z,32nm,0.8s,mb5.7

TRF *e*PP PP 08 37 19.4 -1.2
COLA College 92.28 22 *eP* **P** **08 33 42.1 +0.3**
comp=Z,27nm,1.1s,mb5.5

COLA *e*PP PP 08 37 22.4 +0.4
COLA LR LR
comp=Z,6µm,21.0s,MS6.0

COLA College 92.28 22 *eP* **P** **08 33 42.1 +0.3**
COLA *e* 08 37 22.4
COLA pmax pmax
comp=Z,27nm,1.1s,mb5.5

COLA MLR MLR
comp=Z,6µm,21.0s,MS6.0

MCK McKinley 92.48 23 *eP* **P** **08 33 42.7 -0.1**
comp=Z,100nm,1.0s,mb6.1

MCK *e*PP PP 08 37 19.6 -3.9
RSO Redoubt South 92.51 27 *eP* **P** **08 33 43.2 +0.3**
comp=Z,122nm,0.7s,mb6.4

ILAR Eielson Array 92.69 22 P **P** **08 33 42.2 -1.5**
comp=Z,13nm,0.7s,mb5.5,baz=293,slow=4.2,SNR=72

ILAR PP PP 08 37 27.9 +2.8
comp=Z,4.7nm,1.0s,baz=306,slow=5.9,SNR=4.4

ILAR PKKP PKKPbc 08 50 56.2 -1.6
comp=Z,0.7nm,0.9s,baz=148,slow=1.1,SNR=6.3

ILAR PKPPKP 08 59 06.2
comp=Z,0.3nm,0.9s,baz=86,slow=1.4,SNR=4.0

ILAR LR LR 09 24 24.8
comp=Z,6µm,18.5s,MS6.1,baz=304,slow=41

ILAR Eielson Array 92.69 22 P **P** **08 33 42.2 -1.5**
ILAR 08 37 27.9
ILAR 08 50 56.2
URZ Urewera 93.07 128 *eP* **P** **08 33 45.2 -0.8**
comp=Z,28nm,0.9s,mb5.7

URZ Urewera 93.07 128 PP PP 08 37 32.9 +3.5
comp=Z,12nm,0.8s,baz=260,slow=4.7,SNR=3.6

PMR Palmer 93.50 25 *eP* **P** **08 33 45.8 -1.7**
comp=Z,38nm,1.6s,mb5.6

PMR Palmer 93.50 25 *eP* **P** **08 33 45.8 -1.7**
PMR pmax pmax
comp=Z,38nm,1.6s,mb5.6

RC01 Rabbit Creek A 93.51 25 *eP* **P** **08 33 47.5 0.0**
comp=Z,165nm,1.2s,mb6.3

OHAK Old Harbor 93.75 30 *eP* **P** **08 33 48.7 0.0**
comp=Z,66nm,0.7s,mb6.2

KDAK Kodiak Island 93.83 29 P **P** **08 33 49.3 +0.2**
comp=Z,418nm,1.0s,mb6.8,SNR=16

KDAK Kodiak Island 93.83 29 *eP* **P** **08 33 49.1 +0.1**
comp=Z,64nm,0.9s,mb6.0

KDAK LR LR
comp=Z,8µm,21.0s,MS6.2

KDAK Kodiak Island 93.83 29 *eP* **P** **08 33 49.2 +0.1**
KDAK pmax pmax
comp=Z,64nm,0.9s,mb6.0

KDAK MLR MLR
comp=Z,8µm,21.0s,MS6.2

KDAK Kodiak Island 93.83 29 *i* P **P** **08 33 50.2 +1.1**
SEW Seward 94.13 26 *eP* **P** **08 33 50.0 -0.4**
comp=Z,65nm,1.1s,mb6.0

PAX Paxson 94.21 23 *eP* **P** **08 33 51.0 +0.2**
comp=Z,207nm,2.0s,mb6.2

RES Resolute Bay 94.36 2 *eP* **P** **08 33 51.5 +0.3**
comp=Z,54nm,1.0s,mb5.9

RES Resolute Bay 94.36 2 *eP* **P** **08 33 51.5 +0.3**
RES pmax pmax
comp=Z,54nm,1.0s,mb5.9

INK Inuvik 94.60 15 *eP* **P** **08 33 51.8 -0.6**

comp=Z,65nm,1.4s,mb5.9
INK Inuvik 94.60 15 *e*P **P** **08 33 51.8 -0.6**
INK pmax pmax
comp=Z,65nm,1.4s
EGAK Eagle 94.68 20 *e*P **P** **08 33 52.5 -0.3**
comp=Z,23nm,1.0s,mb5.5
EGAK LR LR
comp=Z,10µm,19.0s,MS6.3
MENT Mentasta 94.88 22 *e*P **P** **08 33 54.7 +0.9**
JOHN Johnston Islan 94.99 72 PFAKE 08 34 10.0 +15
JOHN LR LR
comp=Z,2µm,21.0s,MS5.6
DIV Divide 95.12 24 *e*P **P** **08 33 55.4 +0.5**
comp=Z,38nm,1.2s,mb5.7
KIC Kosan Boka 95.20 277 *e*P **P** **08 33 58.2 +1.9**
comp=Z,81nm,1.3s,mb6.0
DBIC Dimbokro 95.25 278 *e*P **P** **08 33 57.2 +0.6**
comp=Z,41nm,1.3s,mb5.7
DBIC LR LR
comp=Z,5µm,19.0s,MS6.0
DBIC Dimbokro 95.25 278 P **P** **08 33 56.1 -0.4**
comp=Z,6.9nm,1.0s,mb5.0,baz=100,slow=6.6,SNR=6.7
DBIC LR LR 09 18 53.9
comp=Z,6µm,19.1s,MS6.0,baz=46,slow=37
DBIC Dimbokro 95.25 278 *e*P **P** **08 33 57.2 +0.7**
DBIC pmax pmax
comp=Z,41nm,1.3s
DBIC MLR MLR
comp=Z,5µm,19.0s
TIC Toumodi 95.42 278 *e*P **P** **08 34 01.5 +4.2**
comp=Z,51nm,1.1s,mb5.9
TIC Toumodi 95.42 278 *e*P **P** **08 34 01.5 +4.2**
TIC pmax pmax
comp=Z,51nm,1.1s,mb5.9
LIC Lamto 95.51 277 *e*P **P** **08 34 01.0 +3.3**
comp=Z,80nm,1.4s,mb6.0
BMRM Bremner River 95.68 24 *e*P **P** **08 33 57.9 +0.4**
comp=Z,49nm,0.9s,mb5.5
DAWY Dawson 95.73 20 *e*P **P** **08 33 57.9 +0.2**
MID Middleton Isla 95.82 26 *e*P **P** **08 34 00.4 +2.2**
comp=Z,51nm,1.2s,mb5.8
MID Middleton Isla 95.82 26 *e*P **P** **08 34 00.4 +2.2**
MID pmax pmax
comp=Z,51nm,1.2s,mb5.8
MAIT Maitri 97.08 199 *e*PKP **P** **08 34 05.6 +2.1**
SBA Scott Base 97.56 168 *e*P **P** **08 34 06.0 +0.4**
comp=Z,28nm,1.3s,mb5.6
SBA LR LR
comp=Z,6µm,20.0s,MS6.1
SBA Scott Base 97.56 168 *e*P **P** **08 34 06.0 +0.4**
SBA pmax pmax
comp=Z,28nm,1.3s,mb5.6
SBA MLR MLR
comp=Z,6µm,20.0s,MS6.1
AFI Afiamalu 98.72 103 PFAKE 08 34 20.0 +7.8
AFI LR LR
comp=Z,2µm,21.0s,MS5.6
PMPS Porto Santo 98.85 306 *e*P **P** **08 34 12.1 -0.3**
FUL Funchal 99.44 306 *e*P **P** **08 34 14.2 -0.9**
SHEL Horse Pasture 100.16 256 PFAKE 08 34 30.0 +12
SHEL LR LR
comp=Z,4µm,21.0s,MS5.9
SKAG Skagway 100.23 22 *e*Pdif Pdif 08 34 18.4 +0.4
comp=Z,15nm,1.0s
QSPA South Pole Qui 100.91 180 PFAKE 08 34 30.0 +8.9
QSPA LR LR
comp=Z,11µm,20.0s,MS6.4
DLBC Dease Lake 102.89 21 *e*Pdif Pdif 08 34 30.1 +0.3
YKA Yellowknife Ar 103.88 12 Pdif Pdif 08 34 34.6 +0.4
YKA PP PP 08 38 48.2 -2.4
YKA PKKPbc PKKPbc 08 50 23.8 -2.9
YKA PKKP PKKPbc 08 50 34.9 +8.2
YKA Yellowknife Ar 103.88 12 Pdiff Pdif 08 34 34.6 +0.4
comp=Z,1.1nm,0.8s,baz=330,slow=4.6,SNR=8.1
YKA PP PP 08 38 48.2 -2.3
comp=Z,6.0nm,1.1s,baz=332,slow=7.4,SNR=6.9
YKA PKKPbc PKKPbc 08 50 23.8 -2.9
comp=Z,1.0nm,0.7s,baz=153,slow=3.2,SNR=8.1
YKA PKKP PKKPbc 08 50 34.9 +8.2
comp=Z,1.9nm,0.8s,baz=155,slow=3.5,SNR=4.3
YKA Yellowknife Ar 103.88 12 P Pdif 08 34 34.7 +0.4
YKA 08 38 48.2
KIP Kipapa 104.26 64 PFAKE 08 34 50.0 +14
KIP LR LR
comp=Z,2µm,21.0s,MS5.7
POHA Pohakuloa 106.99 65 PFAKE 08 39 10.0 +11
POHA LR LR
comp=Z,3µm,22.0s,MS5.8
TRIS Tristan da Cun 107.81 235 PFAKE 08 39 10.0 +10
TRIS LR LR
comp=Z,4µm,19.0s,MS6.0
XMAS Kiritimati 109.91 84 PFAKE 08 39 10.0 +5.7
XMAS LR LR
comp=Z,3µm,21.0s,MS5.9
RAR Rarotonga 110.95 109 PFAKE 08 39 20.0 +14
RAR LR LR
comp=Z,3µm,20.0s,MS5.9
SCHQ Schefferville 111.97 347 PKPdf PKiKP 08 39 07.7 +0.7
SCHQ PP PP 08 39 52.4 +2.7
SCHQ PKKPbc PKKPbc 08 49 58.8 -2.3
SCHQ LR LR
comp=Z,14µm,22.0s,MS6.5
SCHQ Schefferville 111.97 347 PKiKP PKiKP 08 39 07.7 +0.7
comp=Z,2.7nm,0.9s,baz=299,slow=1.8,SNR=4.0
SCHQ PP PP 08 39 52.4 +2.7
comp=Z,6.7nm,0.8s,baz=3.7,slow=4.5,SNR=4.3
SCHQ PKKPbc PKKPbc 08 49 58.8 -2.3
comp=Z,3.4nm,0.5s,baz=220,slow=3.5,SNR=11
EDM Edmonton 112.49 16 *e*PKPdf PKiKP 08 39 08.8 +0.8
FFC Flin Flon 113.47 9 PFAKE 08 39 20.0 +10
FFC LR LR
comp=Z,7µm,20.0s,MS6.3
FFC Flin Flon 113.47 9 *i* PKiKP PKiKP 08 39 11.3 +1.4
NLWA Neilton Lookou 113.73 26 PFAKE 08 39 20.0 +9.4
NLWA LR LR
comp=Z,5µm,19.0s,MS6.2
ETW Entiat 115.00 23 *e*PKPdf PKiKP 08 39 14.0 +0.9
A12A Yaak River Ran 115.57 20 ⇑P PKiKP 08 39 14.5 +0.4
baz=115
C09A Chrisman Ranch 115.62 22 ⇑P PKiKP 08 39 14.1 -0.1
baz=115
NEW Newport 115.64 21 *e*PKPdf PKPdf 08 39 14.2 -0.1
NEW LR LR
comp=Z,6µm,20.0s,MS6.2
OD2 Odessa Site #2 115.80 23 *e*PKPdf PKPdf 08 39 15.2 +0.6
A13A Flathead Natio 115.97 19 ⇓P PKiKP 08 39 15.0 +0.1
baz=116
COR Corvallis 116.16 27 PFAKE 08 39 30.0 +15
COR LR LR
comp=Z,4µm,19.0s,MS6.0
RSW Rattlesnake Hi 116.28 24 *e*PKPdf PKPdf 08 39 16.4 +0.9
C11A Tepee Creek (N 116.31 21 ⇑P PKiKP 08 39 16.2 +0.7
baz=116
HAWA Hanford 116.31 24 *e*PKPdf PKPdf 08 39 15.9 +0.3
HAWA LR LR
comp=Z,4µm,20.0s,MS6.1
E08A Dider Farm, El 116.41 23 ⇓P PKiKP 08 39 14.9 -0.8
baz=116
B13A Whitefish 116.44 19 ⇑P PKiKP 08 39 15.9 +0.1
baz=116
A15A Johnson Ranch, 116.45 18 ⇓P PKiKP 08 39 14.9 -0.9
baz=116
H04A Detroit Lake 116.58 26 ⇑P PKPdf 08 39 15.9 -0.2
baz=116
BSMT Bassoo Peak 116.80 20 *e*PKPdf PKPdf 08 39 17.1 +0.6
A16A West Butte Ran 116.81 17 ⇑P PKPdf 08 39 16.5 0.0
baz=116
B14A Marquette Ranc 116.83 18 ⇑P PKPdf 08 39 16.3 -0.3
baz=117
C13A Hot Springs 117.02 20 ⇑P PKPdf 08 39 16.9 0.0
baz=117
YBMT Yellow Bay 117.04 19 *e*PKPdf PKPdf 08 39 15.2 -1.7
JTMT Jette 117.05 19 *e*PKPdf PKPdf 08 39 17.6 +0.6
A17A Triple J Farms 117.07 16 ⇑P PKPdf 08 39 17.1 +0.1
baz=117,SNR=12
B15A Bradely Ranch, 117.09 18 P PKPdf 08 39 16.6 -0.5
baz=117,SNR=15
C14A Swan Lake 117.21 19 ⇓P PKPdf 08 39 16.7 -0.6
baz=117
LNOR Lincton Mounta 117.22 23 *e*PKPdf PKPdf 08 39 17.1 -0.3
B16A M & M Farms, S 117.26 17 ⇓P PKPdf 08 39 17.5 +0.1
baz=117
D12A Red Ives Fores 117.30 21 ⇑P PKPdf 08 39 16.5 -0.9
baz=117
A18A Metzger Ranch, 117.33 16 ⇓P PKPdf 08 39 16.9 -0.5
baz=117,SNR=7.5
SWMT Swartz Lake 117.35 19 *e*PKPdf PKPdf 08 39 17.8 +0.2
G08A Pilot Rock 117.44 24 ⇓P PKPdf 08 39 17.9 0.0
baz=117
F10A Beach Ranch, E 117.54 22 ⇑P PKPdf 08 39 17.9 -0.1
baz=117,SNR=14
C15A Salmond Ranch, 117.56 18 ⇓P PKPdf 08 39 16.8 -1.1
baz=117,SNR=12
D13A Huson 117.56 20 ⇑P PKPdf 08 39 17.0 -0.9
baz=117,SNR=7.2
B17A L&G Farms, Che 117.63 17 ⇑P PKPdf 08 39 17.1 -1.0
baz=117,SNR=8.2
SLMT Seeley Lake 117.75 19 *e*PKPdf PKPdf 08 39 18.3 0.0
SLMT *e*PP PP 08 40 32.0 +1.4
C16A Fuhringer Ranc 117.80 18 ⇑P PKPdf 08 39 17.5 -0.9
baz=118
B18A Beardsley Farm 117.83 16 ⇓P PKPdf 08 39 17.7 -0.7
baz=118
HUMO Hull Mountain 117.85 28 *e*PKPdf PKPdf 08 39 19.1 +0.5
HUMO LR LR
comp=Z,4µm,21.0s,MS6.0
D14A Greenough 117.89 19 ⇓P PKPdf 08 39 18.1 -0.5
baz=118,SNR=7.6
MSO Missoula 117.97 20 *e*PKPdf PKPdf 08 39 18.3 -0.5
MSO *e*PP PP 08 40 33.0 +0.9
MSO LR LR
comp=Z,5µm,20.0s,MS6.2
CHMT Chamberlain Mo 118.12 19 *e*PKPdf PKPdf 08 39 19.0 -0.1
CHMT *e*PP PP 08 40 33.7 +0.6
EGMT Eagleton 118.17 16 ⇓P PKPdf 08 39 18.3 -0.8
baz=118,SNR=19
EGMT Eagleton 118.17 16 *e*PKPdf PKPdf 08 39 19.2 +0.1
EGMT LR LR
comp=Z,7µm,20.0s,MS6.3
I07A Izee 118.21 25 ⇑P PKPdf 08 39 19.2 -0.1
baz=118
E13A Victor 118.22 20 ⇓P PKPdf 08 39 18.8 -0.5
baz=118,SNR=14
C17A Wharram Farm, 118.24 17 P PKPdf 08 39 18.9 -0.3
baz=118,SNR=12
F12A Elk City 118.45 21 ⇑P PKPdf 08 39 19.1 -0.6
baz=116
BMO Blue Mountains 118.45 23 *e*PKPdf PKPdf 08 39 20.1 +0.3
BMO LR LR
comp=Z,4µm,21.0s,MS6.0
E14A Clinton 118.48 20 ⇑P PKPdf 08 39 19.3 -0.5
baz=118
D16A Dana Ranch, Ca 118.55 18 ⇓P PKPdf 08 39 19.8 -0.1
baz=118,SNR=11
YBH Yreka Blue Hor 118.64 29 PFAKE 08 39 30.0 +10
YBH LR LR
comp=Z,3µm,20.0s,MS6.0
D17A Six Diamond Ra 118.70 17 ⇑P PKPdf 08 39 20.2 0.0
baz=118,SNR=11
K05A Summer Lake 118.70 27 ⇑P PKPdf 08 39 20.2 -0.1
baz=118
HRY Holter Researc 118.75 18 *e*PKPdf PKPdf 08 39 20.7 +0.4
D18A Linhart Farms, 118.91 17 ⇑P PKPdf 08 39 20.2 -0.4
baz=119,SNR=11
E16A East Helena 118.95 18 ⇑P PKPdf 08 39 18.9 -1.8
baz=119,SNR=5.6
G12A Big Creek, Yel 118.96 22 ⇑P PKPdf 08 39 19.9 -0.8
baz=119
F14A Wisdom 119.05 20 ⇓P PKPdf 08 39 19.6 -1.3
baz=119
J08A Circle Bar Ran 119.23 25 ⇓P PKPdf 08 39 20.9 -0.4
baz=119
E17A Martinsdale 119.27 18 ⇓P PKPdf 08 39 20.3 -1.0
baz=119,SNR=6.9
LRM Little Elk Ridge 119.34 19 *e*PKPdf PKPdf 08 39 21.2 -0.3
G13A Cobalt 119.38 21 ⇓P PKPdf 08 39 20.4 -1.1
baz=119
E18A Harlowton 119.45 17 ⇑P PKPdf 08 39 21.8 +0.1
baz=119,SNR=6.8
G14A Jackson 119.52 20 ⇓P PKPdf 08 39 22.0 +0.2
baz=119,SNR=17
WDC Whiskeytown Da 119.61 30 *e*PKPdf PKPdf 08 39 22.6 +0.5
WDC LR LR
comp=Z,4µm,21.0s,MS6.0
MOD Modoc 119.62 27 *e*PKPdf PKPdf 08 39 23.0 +0.8
MOD *e*PP PP 08 40 45.8 +2.1
MOD LR LR
comp=Z,4µm,21.0s,MS6.0
H12A Diamond D Ranc 119.63 22 ⇑P PKPdf 08 39 21.7 -0.3
baz=119,SNR=14
F16A Kennard Place, 119.64 19 ⇑P PKPdf 08 39 22.7 +0.7
baz=119
DLMT Dillon 119.70 20 *e*PKPdf PKPdf 08 39 23.4 +1.2
DLMT *e*PP PP 08 40 44.7 +0.6
BOZ Bozeman (W) 119.76 19 P PKPdf 08 39 22.6 +0.3
baz=120,SNR=11
BOZ Bozeman (W) 119.76 19 *e*PKIKP *e* PKPdf 08 39 22.5 +0.2
BOZ 08 40 45.0
BOZ MLR MLR
comp=Z,5µm,22.0s,MS6.1
F17A Fitzpatrick Pl 119.83 18 ⇓P PKPdf 08 39 22.5 +0.1
baz=120,SNR=12
H13A Challis 119.83 21 ⇑P PKPdf 08 39 20.9 -1.5
baz=120,SNR=12
G15A Dillon 119.91 20 ⇑P PKPdf 08 39 22.9 +0.4
baz=120,SNR=8.6
WVOR Wild Horse Val 119.92 26 *e*PKPdf PKPdf 08 39 23.1 +0.5
WVOR LR LR
comp=Z,4µm,22.0s,MS6.0
G16A Moss Hill, Enn 120.08 19 ⇑P PKPdf 08 39 23.5 +0.6
baz=120,SNR=8.5
MCMT McKenzie Canyo 120.09 20 *e*PKPdf PKPdf 08 39 23.6 +0.7
MCMT *e*PP PP 08 40 47.2 +0.5
H14A Leadore 120.10 21 ⇓P PKPdf 08 39 23.0 +0.1
baz=120,SNR=9.8
F18A Big Timber 120.11 17 ⇓P PKPdf 08 39 22.5 -0.5
baz=120,SNR=11
I12A Atlanta 120.18 22 ⇑P PKPdf 08 39 23.4 +0.2
baz=120,SNR=22
GCMT Greycliff 120.23 17 *e*PKPdf PKPdf 08 39 23.5 +0.3
GCMT *e*PP PP 08 40 48.4 +0.7
MFID Camas Ranch 120.24 23 ⇑P PKPdf 08 39 23.0 -0.2
baz=120,SNR=29
LAO LASA Array 120.32 14 *e*PKPdf PKPdf 08 39 24.0 +0.7
LAO LR LR
comp=Z,5µm,20.0s,MS6.2
G17A Pierce Place, 120.33 18 ⇑P PKPdf 08 39 24.6 +1.3
baz=120,SNR=10
H15A Lima 120.35 20 ⇓P PKPdf 08 39 24.0 +0.6
baz=120,SNR=12
PPT Papeete 120.35 104 *e*PS PS 08 50 34.8 -6.9
PPT comp=Z,1µm,31.5s *e*LR LR 09 15 59.1
comp=Z,5µm,23.5s
F19A Roth Farm, Mol 120.38 17 ⇓P PKPdf 08 39 23.1 -0.4
baz=120
I13A Wildhorse Cree 120.45 22 ⇑P PKPdf 08 39 23.9 +0.2
baz=120,SNR=9.4
AGMN Agassiz Nation 120.55 6 *e*PKPdf PKPdf 08 39 22.4 -1.3
AGMN *e*PP PP 08 40 46.9 -2.8
AGMN LR LR
comp=Z,8µm,21.0s,MS6.3
HOPS Hopland 120.56 31 PFAKE 08 39 30.0 +6.0
HOPS LR LR
comp=Z,4µm,20.0s,MS6.0
HLID Hailey 120.64 22 ⇑P PKPdf 08 39 23.9 -0.2
baz=120,SNR=25
HLID Hailey 120.64 22 *e*PKPdf PKPdf 08 39 24.2 +0.2
HLID LR LR
comp=Z,7µm,22.0s,MS6.3
F20A Billings 120.65 16 ⇓P PKPdf 08 39 23.7 -0.3
baz=120
I14A Mackay 120.67 21 ⇓P PKPdf 08 39 24.0 -0.1
baz=120
H16A Russell Place, 120.73 19 ⇑P PKPdf 08 39 24.4 +0.2
baz=120,SNR=8.7
J13A Cove Ranch, Pi 120.87 22 ⇓P PKPdf 08 39 24.0 -0.4
baz=121,SNR=36
I15A Monteview 120.94 20 ⇑P PKPdf 08 39 24.9 +0.3
baz=121,SNR=6.1
RLMT Red Lodge 120.95 17 ⇓P PKPdf 08 39 24.6 0.0
baz=121,SNR=11
RLMT Red Lodge 120.95 17 *e*PKPdf PKPdf 08 39 24.9 +0.3
RLMT LR LR
comp=Z,5µm,22.0s,MS6.1
YFT Old Faithful 121.08 19 *e*PKPdf PKPdf 08 39 27.4 +2.5
L10A Juniper Basin 121.11 24 ⇓P PKPdf 08 39 25.6 +0.6
baz=121,SNR=8.2
LKWY Lake 121.12 18 PFAKE 08 39 40.0 +15
LKWY LR LR
comp=Z,11µm,20.0s,MS6.5
J14A Carey 121.18 21 ⇑P PKPdf 08 39 25.5 +0.5
baz=121,SNR=8.6
H17A Grant Village 121.22 19 ⇓P PKPdf 08 39 26.2 +1.1
baz=121,SNR=7.9
EYMN Ely 121.22 3 *e*PKPdf PKPdf 08 39 24.3 -0.7
EYMN LR LR
comp=Z,10µm,21.0s,MS6.4
MCCM Marconi Confer 121.30 32 PFAKE 08 39 40.0 +15
MCCM LR LR
comp=Z,3µm,21.0s,MS5.9
L11A Cat Creek Ranc 121.33 24 ⇓P PKPdf 08 39 25.2 -0.2
baz=121,SNR=8.8
I16A Newdale 121.39 20 ⇑P PKPdf 08 39 25.6 +0.1
baz=121,SNR=9.1
G21A Lodge Grass 121.43 16 ⇓P PKPdf 08 39 25.4 -0.1
baz=121
PKME Peaks-Kenny Pk 121.44 344 *e*PKPdf PKPdf 08 39 25.8 +0.3
PKME LR LR
comp=Z,5µm,21.0s,MS6.2
J15A Blackfoot 121.49 21 ⇓P PKPdf 08 39 26.3 +0.7
baz=121,SNR=13
IMW Indian Meadow 121.55 19 *e*PKPdf PKPdf 08 39 26.3 +0.5
M10A I.L. Ranch, Tu 121.55 25 ⇓P PKPdf 08 39 25.7 -0.1
baz=121,SNR=10
MOOW Moose Ponds 121.74 19 *e*P PKPdf 08 39 26.5 +0.4
J16A Bone 121.88 20 ⇓P PKPdf 08 39 26.6 +0.2
baz=122,SNR=6.0
H20A Greybull 121.90 17 ⇑P PKPdf 08 39 25.5 -0.9
baz=122
TPAW Teton Pass 121.91 19 *e*PKPdf PKPdf 08 39 27.2 +0.8
LOHW Long Hollow 121.91 19 *e*PKPdf PKPdf 08 39 26.6 +0.2
RRI2 Red Ridge 121.91 20 *e*PKPdf PKPdf 08 39 27.1 +0.6
M11A Holland Ranch, 121.93 24 ⇓P PKPdf 08 39 26.2 -0.3
baz=122,SNR=15
WCN Washoe City 121.94 29 ⇓P PKPdf 08 39 26.8 +0.1
baz=122
K14A Jones Ranch, D 121.98 22 ⇑P PKPdf 08 39 26.5 -0.1
baz=122
SNOW Snow King Moun 122.00 19 *e*PKPdf PKPdf 08 39 27.2 +0.6
REDW Red Top Meadow 122.05 19 *e*PKPdf PKPdf 08 39 27.3 +0.5
I18A Diamond G Ranc 122.08 18 ⇑P PKPdf 08 39 25.6 -1.2
baz=122
K15A Arbon 122.08 21 ⇓P PKPdf 08 39 26.2 -0.6
baz=122,SNR=9.9
J17A Brown Place, J 122.10 19 ⇑P PKPdf 08 39 27.3 +0.5
baz=122,SNR=11
BMN Battle Mountai 122.17 26 *e*PKPdf PKPdf 08 39 27.9 +0.8
BMN LR LR
comp=Z,5µm,22.0s,MS6.1
K16A Soda Springs 122.28 20 ⇓P PKPdf 08 39 27.4 +0.2
baz=122,SNR=6.3
I20A Worland 122.36 17 ⇓P PKPdf 08 39 26.7 -0.6
baz=122
L14A Malta 122.40 22 ⇓P PKPdf 08 39 26.5 -1.0
baz=122,SNR=7.7
J18A Kendall Valley 122.46 19 ⇑P PKPdf 08 39 27.7 +0.2
baz=122,SNR=14
N11A Elko Archery C 122.47 25 ⇓P PKPdf 08 39 28.1 +0.5
baz=122,SNR=6.3
AHID Auburn Hatcher 122.50 20 *e*PKPdf PKPdf 08 39 27.8 +0.2
AHID LR LR
comp=Z,5µm,21.0s,MS6.2
K17A Gardner Place, 122.58 20 ⇑P PKPdf 08 39 27.6 -0.1
baz=122
O10A Cortez Mining, 122.59 26 ⇓P PKPdf 08 39 27.8 -0.1
baz=122
M13A Montello 122.63 23 ⇑P PKPdf 08 39 27.5 -0.4
baz=122,SNR=12
M13A Montello 122.63 23 *e*PKPdf PKPdf 08 39 28.4 +0.5
CMB Columbia Colle 122.64 30 *e*PKPdf PKPdf 08 39 27.9 -0.1
CMB *e*PP PP 08 41 05.9 +1.4
CMB LR LR
comp=Z,3µm,22.0s,MS5.9
I21A Big Trails, Te 122.72 16 ⇓P PKPdf 08 39 27.2 -0.9
baz=122
L15A Malad City 122.73 21 ⇑P PKPdf 08 39 27.8 -0.3
baz=122,SNR=7.3
HVU Hansel Valley 122.79 22 *e*PKPdf PKPdf 08 39 28.8 +0.6
HVU *e*PP PP 08 41 05.3 +0.1
M14A Sheep Mountain 122.82 22 ⇓P PKPdf 08 39 27.6 -0.7
baz=123,SNR=8.6
K18A Toltan Ranch, 122.97 19 P PKPdf 08 39 29.1 +0.6
baz=123,SNR=8.8
BW06 Boulder Array 123.00 19 ⇓P PKPdf 08 39 28.3 -0.3
baz=123,SNR=19
BW06 Boulder Array 123.00 19 PFAKE 08 39 40.0 +11
BW06 LR LR
comp=Z,6µm,20.0s,MS6.3
N13A Wendover, West 123.05 23 ⇓P PKPdf 08 39 28.5 -0.3
baz=123,SNR=14
N13A Wendover, West 123.05 23 *e*PKPdf PKPdf 08 39 29.1 +0.4
LBNH Lisbon 123.05 346 *e*PKPdf PKPdf 08 39 27.4 -1.3
LBNH LR LR
comp=Z,9µm,22.0s,MS6.4
L16A Fish Haven 123.06 21 ⇑P PKPdf 08 39 28.1 -0.6
baz=123
O11A Cowboy Ranch, 123.08 25 ⇓P PKPdf 08 39 28.7 -0.1
baz=123
SAO San Andreas Ge 123.09 32 PFAKE 08 39 40.0 +11
SAO LR LR
comp=Z,2µm,21.0s,MS5.8
COWI Conover 123.13 1 *e*PKPdf PKPdf 08 39 29.0 +0.3
COWI LR LR
comp=Z,10µm,19.0s,MS6.5
P10A Eureka 123.17 26 ⇑P PKPdf 08 39 29.0 0.0
baz=123
K19A Absolon Red Bu 123.17 18 ⇓P PKPdf 08 39 28.3 -0.6
baz=123,SNR=9.2
L17A Cokeville 123.17 20 ⇑P PKPdf 08 39 28.0 -0.9
baz=123,SNR=11
RSSD Black Hills 123.25 14 *e*PKPdf PKPdf 08 39 28.9 -0.1
RSSD LR LR
comp=Z,6µm,22.0s,MS6.2
LONY Lake Ozonia 123.27 348 *e*PKPdf PKPdf 08 39 28.8 -0.3
LONY LR LR
comp=Z,8µm,22.0s,MS6.3
NVAR Mina Array Bea 123.32 28 PKP PKPdf 08 39 30.1 +0.8
comp=Z,17nm,0.7s,baz=298,slow=1.7,SNR=86
NVAR PKKPbc PKKPbc 08 49 28.9 +9.0
comp=Z,0.5nm,0.7s,baz=135,slow=4.5,SNR=4.5
O12A Currie 123.34 24 ⇑P PKPdf 08 39 29.7 +0.4
baz=123,SNR=27
HWUT Hardware Ranch 123.37 21 *e*PKPdf PKPdf 08 39 29.4 +0.1
HWUT LR LR
comp=Z,6µm,21.0s,MS6.3
N14A Grayback Hills 123.44 23 ⇑P PKPdf 08 39 29.9 +0.4
baz=123,SNR=9.4
K20A Yellowstone Ra 123.48 18 ⇑P PKPdf 08 39 28.5 -1.0
baz=123,SNR=6.8
P11A Circle Ranch, 123.53 25 ⇑P PKPdf 08 39 28.8 -0.9
baz=123
L18A Fontenelle, Gr 123.61 19 ⇓P PKPdf 08 39 29.7 -0.1
baz=123,SNR=11
L19A Farson 123.67 19 ⇓P PKPdf 08 39 29.3 -0.5
baz=123,SNR=10
PMSA Palmer Station 123.75 192 PFAKE 08 39 40.0 +11
PMSA LR LR
comp=Z,11µm,21.0s,MS6.5
O13A Hicks Ranch, I 123.76 24 ⇑P PKPdf 08 39 28.6 -1.5
baz=124,SNR=6.8
M17A Scullys Gap (B 123.80 20 ⇑P PKPdf 08 39 29.0 -1.2
baz=124,SNR=14
NCB Newcomb 123.82 348 *e*PKPdf PKPdf 08 39 29.6 -0.5
NCB LR LR
comp=Z,5µm,21.0s,MS6.2
Q10A Clear Creek Ra 123.86 26 ⇑P PKPdf 08 39 30.4 0.0
baz=124,SNR=6.0
P12A McGill 123.95 25 ⇓P PKPdf 08 39 30.3 -0.2
baz=124,SNR=16
K22A Casper 124.00 16 ⇓P PKPdf 08 39 30.0 -0.5
baz=124
M18A Lyman 124.05 20 ⇓P PKPdf 08 39 29.6 -1.0
baz=124
N16A Rees Ranch, Co 124.06 21 ⇓P PKPdf 08 39 30.2 -0.5
baz=124
L20A Wamsutter 124.07 18 ⇓P PKPdf 08 39 29.6 -1.1
baz=124,SNR=6.1
DUG Dugway 124.16 23 ⇑P PKPdf 08 39 30.9 0.0
baz=124,SNR=15
DUG Dugway 124.16 23 *e*PKIKP PKPdf 08 39 31.5 +0.6
DUG MLR MLR
comp=Z,5µm,20.0s,MS6.2
Q11A Duckwater 124.16 26 ⇓P PKPdf 08 39 30.8 -0.1
baz=124,SNR=9.6
N17A Moffit Pass 124.22 21 ⇑P PKPdf 08 39 30.4 -0.6
baz=124,SNR=19
M19A Rock Springs 124.27 19 ⇑P PKPdf 08 39 30.7 -0.4
baz=124,SNR=10.0
JLU Jordanelle 124.30 21 *e*PKPdf PKPdf 08 39 31.1 0.0

GLMI Grayling 124.32 357 PFAKE 08 39 40.0 +8.9
GLMI LR LR
comp=Z,8µm,19.0s,MS6.4
P13A Bates Ranch, G 124.32 24 ⇓P PKPdf 08 39 31.0 -0.2
baz=124,SNR=16
R10A Warm Springs 124.34 27 ⇓P PKPdf 08 39 32.0 +0.7
baz=124,SNR=12
Q12A Willow Creek R 124.34 25 ⇓P PKPdf 08 39 31.5 +0.2
baz=124,SNR=5.8
L21A Rawlins 124.40 17 P PKPdf 08 39 31.1 -0.2
baz=124,SNR=30
S10A Tonopah Range, 124.51 27 ⇑P PKPdf 08 39 31.7 +0.1
baz=124,SNR=35
DAU Daniels Canyon 124.54 21 ℯPKPdf PKPdf 08 39 33.2 +1.6
DAU ℯPP PP 08 41 16.1 -0.9
RCTC Rector, Farmer 124.56 30 ⇓P PKPdf 08 39 32.1 +0.4
baz=124
N18A Larsen Ranch, 124.58 20 ⇓P PKPdf 08 39 32.2 +0.5
baz=124
P14A Drum Mountains 124.58 23 ⇓P PKPdf 08 39 32.4 +0.7
baz=124,SNR=24
M20A Sweetwater, Wa 124.59 18 ⇑P PKPdf 08 39 31.9 +0.3
baz=124
L22A Ellis Ranch, M 124.60 16 ⇓P PKPdf 08 39 32.5 +0.8
baz=124
R11A Troy Canyon, C 124.60 26 ⇓P PKPdf 08 39 32.0 +0.2
baz=124,SNR=34
O16A Springville 124.63 22 ⇑P PKPdf 08 39 31.2 -0.6
baz=124
NLU North Lily Min 124.64 22 ℯPKPdf PKPdf 08 39 32.5 +0.7
RWWY Rawlins 124.70 17 ℯPKPdf PKPdf 08 39 31.9 0.0
L23A Garrett 124.73 16 ⇑P PKPdf 08 39 31.0 -0.9
baz=124
M21A Separation Pea 124.73 17 ⇓P PKPdf 08 39 31.6 -0.3
baz=124,SNR=18
Q13A Wheeler Ranch, 124.75 24 ⇑P PKPdf 08 39 32.8 +0.8
baz=124,SNR=27
MPU Maple Canyon 124.75 22 ℯPKPdf PKPdf 08 39 33.2 +1.1
N19A John Jarvie Ra 124.82 19 ⇑P PKPdf 08 39 31.2 -1.0
baz=124,SNR=10
P15A Leamington 124.90 23 ⇓P PKPdf 08 39 32.5 +0.1
baz=125
O17A Robinson Place 124.91 21 ⇓P PKPdf 08 39 31.9 -0.4
baz=125,SNR=19
SMMC Simmler 124.95 32 ⇑P PKPdf 08 39 33.3 +0.7
baz=125
ECSD EROS Data Cent 124.97 7 ℯPKPdf PKPdf 08 39 31.9 -0.4
ECSD LR LR
comp=Z,8µm,22.0s,MS6.3
VES Vestal, Richgr 125.01 31 ⇑P PKPdf 08 39 32.4 -0.2
baz=125
Q14A Sevier Lake (B 125.02 24 ⇓P PKPdf 08 39 32.8 +0.2
baz=125,SNR=16
CWC Cottonwood Cre 125.03 29 ⇓P PKPdf 08 39 32.5 -0.2
baz=125
R12A Pony Springs, 125.04 25 ⇑P PKPdf 08 39 32.2 -0.5
baz=125
P16A Fountain Green 125.10 22 ⇓P PKPdf 08 39 32.6 -0.1
baz=125,SNR=12
O18A Roosevelt 125.10 20 ⇑P PKPdf 08 39 32.6 -0.1
baz=125,SNR=14
S11A Rachel 125.12 27 ⇑P PKPdf 08 39 33.5 +0.6
baz=125,SNR=20
M22A Cedar Creek Ra 125.14 17 ⇓P PKPdf 08 39 33.3 +0.5
baz=125
N20A Spence Gulch, 125.16 19 ⇑P PKPdf 08 39 32.9 +0.1
baz=125,SNR=17
Q15A Fillmore 125.36 23 ⇑P PKPdf 08 39 32.9 -0.4
baz=125,SNR=25
O19A Miners Draw (B 125.37 20 ⇑P PKPdf 08 39 32.3 -0.9
baz=125,SNR=14
DAC Darwin (Calif) 125.39 29 PFAKE 08 39 40.0 +6.6
DAC LR LR
comp=Z,4µm,21.0s,MS6.1
R13A O'Grain Ranch, 125.43 25 ⇑P PKPdf 08 39 32.2 -1.2
baz=125,SNR=11
ISA Isabella 125.45 30 ⇑P PKPdf 08 39 32.5 -1.0
baz=125
ISA Isabella 125.45 30 ℯPKIKP PKPdf 08 39 33.4 -0.1
N21A Black Mountain 125.46 18 ⇑P PKPdf 08 39 32.9 -0.4
baz=125,SNR=37
TMUT Trail Mountain 125.54 22 ℯPKPdf PKPdf 08 39 34.2 +0.6
S12A Delamar Landin 125.54 26 ⇓P PKPdf 08 39 33.8 +0.2
baz=125,SNR=11
PHWY Pilot Hill 125.55 16 ℯPKPdf PKPdf 08 39 33.2 -0.3
P17A Butcher Ranch, 125.55 21 ⇓P PKPdf 08 39 34.0 +0.4
baz=125,SNR=6.0
M24A Cheyenne 125.56 15 ⇓P PKPdf 08 39 33.1 -0.4
baz=125
FURC Furnace Creek, 125.58 28 ⇑P PKPdf 08 39 34.5 +0.8
baz=125,SNR=5.7
P18A Preston Nutter 125.59 21 ⇓P PKPdf 08 39 34.0 +0.4
baz=125,SNR=22
MPMC Manual Prospec 125.61 29 ⇑P PKPdf 08 39 34.1 +0.3
baz=125,SNR=22
T11A Corn Creek, Al 125.69 27 ⇑P PKPdf 08 39 34.3 +0.3
baz=125
N22A Wattenberg Ran 125.73 17 ⇑P PKPdf 08 39 33.8 -0.1
baz=126
N23A Red Feather La 125.80 17 ⇑P PKPdf 08 39 33.6 -0.4
baz=126
O20A White River Ci 125.81 19 ⇑P PKPdf 08 39 34.1 0.0
baz=126,SNR=27
MVU Marysvale 125.85 23 PFAKE 08 39 40.0 +5.8
MVU LR LR
comp=Z,4µm,20.0s,MS6.1
MSU Marysvale 125.86 23 ℯPKPdf PKPdf 08 39 35.9 +1.7
U10A Ash Meadows, A 125.87 28 ⇑P PKPdf 08 39 35.0 +0.7
baz=126,SNR=11
BINY Binghamton 125.87 349 ℯPKPdf PKPdf 08 39 34.0 -0.2
BINY LR LR
comp=Z,6µm,20.0s,MS6.2
Q16A Castle Valley 125.89 22 ⇑P PKPdf 08 39 34.1 -0.1
baz=126,SNR=16
SRU San Rafael 125.95 21 ⇑P PKPdf 08 39 34.0 -0.4
baz=126
SRU San Rafael 125.95 21 ℯPKIKP PKPdf 08 39 34.6 +0.2
O21A Pagoda 125.97 18 ⇑P PKPdf 08 39 34.0 -0.4
baz=126,SNR=6.0
ARUT Antelope Range 125.98 25 ℯPKPdf PKPdf 08 39 35.1 +0.6
S13A Holt Ranch, En 125.98 25 ⇑P PKPdf 08 39 34.2 -0.3
baz=126,SNR=26
P19A Cripple Cowboy 126.02 20 ⇓P PKPdf 08 39 34.1 -0.4
baz=126,SNR=19
R15A Junction 126.08 23 ⇓P PKPdf 08 39 35.3 +0.6
baz=126,SNR=20
Q18A Rafter H Ranch 126.10 21 ⇓P PKPdf 08 39 34.6 0.0
baz=126,SNR=15
S14A Cedar City 126.12 24 ⇓P PKPdf 08 39 34.9 +0.2
baz=126,SNR=18
N24A Carr 126.15 16 ⇑P PKPdf 08 39 34.6 -0.1
baz=126
CCUT Cedar City 126.22 25 ℯPKPdf PKPdf 08 39 36.3 +1.4
JFWS Jewell Farm 126.29 2 PFAKE 08 39 50.0 +15
JFWS LR LR
comp=Z,8µm,21.0s,MS6.3
U11A Corn Creek 126.30 27 ⇑P PKPdf 08 39 33.4 -1.7
baz=126,SNR=5.5
O22A Kremmling 126.30 17 ⇑P PKPdf 08 39 33.8 -1.2
baz=126,SNR=6.3
SHOC Shoshone 126.31 28 ⇑P PKPdf 08 39 35.4 +0.2
baz=126,SNR=11
R16A Teasdale 126.33 23 ⇓P PKPdf 08 39 35.5 +0.4
baz=126
P20A De Beque 126.33 19 ⇑P PKPdf 08 39 34.1 -1.0
baz=126,SNR=9.3
T12A Moapa 126.34 26 ⇑P PKPdf 08 39 34.8 -0.4
baz=126
O23A Lake Granby, G 126.44 17 ⇓P PKPdf 08 39 34.2 -1.0
baz=126
T13A Saint George 126.44 26 ⇑P PKPdf 08 39 34.5 -0.9
baz=126,SNR=14
R17A Hanksville Air 126.50 22 ⇓P PKPdf 08 39 35.3 -0.1
baz=126,SNR=24
S15A Panguitch 126.51 24 ⇑P PKPdf 08 39 35.2 -0.2
baz=126,SNR=11
Q19A Hogan Spring (126.53 20 ⇓P PKPdf 08 39 35.5 +0.1
baz=126,SNR=20
GSC Goldstone 126.55 29 ⇑P PKPdf 08 39 36.2 +0.6
baz=126,SNR=9.9
GSC Goldstone 126.55 29 ℯPKIKP PKPdf 08 39 37.0 +1.4
ERPA Erie 126.59 352 PFAKE 08 39 50.0 +15
ERPA LR LR
comp=Z,8µm,20.0s,MS6.4
U12A Valley of Fire 126.66 27 ⇓P PKPdf 08 39 35.5 -0.3
baz=126,SNR=7.3
OGNE Ogallala 126.73 13 PFAKE 08 39 50.0 +14
OGNE LR LR
comp=Z,8µm,21.0s,MS6.4
T14A Hurricane 126.75 25 ⇓P PKPdf 08 39 34.8 -1.2
baz=126
P22A Eagle 126.76 18 ⇓P PKPdf 08 39 35.6 -0.3
baz=126,SNR=15
S16A Weppner Ranch, 126.77 23 ⇓P PKPdf 08 39 35.6 -0.3
baz=126
AAM Ann Arbor 126.78 356 PFAKE 08 39 50.0 +14
AAM LR LR
comp=Z,9µm,21.0s,MS6.4
MWC Mount Wilson 126.80 31 ℯPKPdf PKPdf 08 39 37.6 +1.4
R18A Canyonlands Na 126.82 21 ⇓P PKPdf 08 39 35.9 -0.1
baz=127,SNR=11
Q20A Ridgley Place, 126.86 20 ⇓P PKPdf 08 39 34.7 -1.4
baz=127,SNR=14
TUQ Turquoise Moun 126.86 28 ⇑P PKPdf 08 39 36.0 -0.2
baz=127,SNR=6.0
ISCO Idaho Springs 126.91 17 ℯPKPdf PKPdf 08 39 36.2 0.0
ISCO LR LR
comp=Z,7µm,21.0s,MS6.3
U13A Pakoon Wash 126.93 26 ⇓P PKPdf 08 39 34.7 -1.6
baz=127,SNR=10.0
T15A Red Dirt Ranch 127.07 24 ⇓P PKPdf 08 39 36.4 -0.2
baz=127
SMCO Snowmass 127.08 18 ℯPKPdf PKPdf 08 39 37.1 +0.6
SMCO ℯPP PP 08 41 31.9 -1.9
V12A Nelson 127.11 27 ⇑P PKPdf 08 39 37.0 +0.3
baz=127,SNR=13
R19A Curley Farm, L 127.13 21 ⇑P PKPdf 08 39 36.4 -0.2
baz=127,SNR=9.3
SCIA State Center 127.13 5 ℯPKPdf PKPdf 08 39 36.4 -0.2
SCIA LR LR
comp=Z,10µm,19.0s,MS6.5
S17A Black Ridge (B 127.15 23 P PKPdf 08 39 37.1 +0.5
baz=127,SNR=7.4
PV04 Paradox Valley 127.16 20 ℯPKPdf PKPdf 08 39 37.3 +0.6
Q21A Lamborn Mesa, 127.20 19 ⇓P PKPdf 08 39 35.5 -1.2
baz=127,SNR=11
P23A Jefferson 127.23 17 ⇓P PKPdf 08 39 36.4 -0.4
baz=127
U14A Mt Trumbull 127.26 25 ⇓P PKPdf 08 39 35.9 -1.0
baz=127,SNR=10
BBRC Big Bear Solar 127.33 30 ⇑P PKPdf 08 39 38.4 +1.3
baz=127,SNR=5.2
Q22A Crested Butte, 127.39 18 ⇓P PKPdf 08 39 36.6 -0.5
baz=127,SNR=15
V13A Grand Canyon W 127.39 26 ⇑P PKPdf 08 39 37.6 +0.4
baz=127,SNR=18
S18A Hurst Farm, Bl 127.40 22 ⇓P PKPdf 08 39 36.1 -1.1
baz=127,SNR=9.9
T16A Glen Canyon Da 127.45 24 ⇑P PKPdf 08 39 37.3 0.0
baz=127
PV01 Paradox Valley 127.51 20 ℯPKPdf PKPdf 08 39 34.2 -3.2
PV01 ℯPP PP 08 41 37.8 +1.1
GMRC Granite Mounta 127.52 29 ⇓P PKPdf 08 39 37.5 0.0
baz=127,SNR=10
R20A Redvale 127.52 20 ⇑P PKPdf 08 39 37.3 -0.1
baz=127
P25A Willow Gulch B 127.57 16 ⇓P PKPdf 08 39 37.2 -0.2
baz=127
U15A North Rim 127.62 25 ⇑P PKPdf 08 39 37.7 +0.1
baz=127,SNR=14
R21A Cimarron 127.63 19 ⇑P PKPdf 08 39 35.8 -1.8
baz=127,SNR=11
S19A Harvey Farm, M 127.66 21 ⇓P PKPdf 08 39 37.8 +0.1
baz=127,SNR=9.1
Q23A Hartsel 127.67 17 ⇓P PKPdf 08 39 37.2 -0.4
baz=127
T17A Navajo Res., N 127.71 23 ⇑P PKPdf 08 39 37.5 -0.3
baz=128
T18A Mexican Hat 127.94 22 ⇓P PKPdf 08 39 38.4 +0.2
baz=128,SNR=22
V14A Boquillas Ranc 127.96 26 ⇑P PKPdf 08 39 38.2 -0.1
baz=128,SNR=13
BELC Belle Mtn. Jos 128.00 29 ⇑P PKPdf 08 39 38.6 +0.1
baz=128,SNR=7.5
R22A Saguache, Gunn 128.01 19 ⇑P PKPdf 08 39 38.4 0.0
baz=128,SNR=16
W13A Hualapai Mount 128.07 27 ⇑P PKPdf 08 39 38.5 0.0
baz=128,SNR=15
PFO Pinyon Flat Ob 128.09 30 ℯPKPdf PKPdf 08 39 35.9 -2.7
PFO LR LR
comp=Z,3µm,19.0s,MS6.0
Q25A Bedland, Calha 128.11 16 ⇑P PKPdf 08 39 37.4 -1.1
baz=128
U17A Shonto 128.11 23 ⇑P PKPdf 08 39 39.7 +1.1
baz=128
V15A Kaibab Nationa 128.19 25 ⇓P PKPdf 08 39 37.0 -1.8
baz=128,SNR=5.4
S21A Coal Bank Pass 128.20 20 ⇓P PKPdf 08 39 38.1 -0.6
baz=128
IRM Iron Mountain 128.27 29 ⇑P PKPdf 08 39 38.5 -0.4
baz=128,SNR=6.0
W14A Seligman 128.32 26 ⇑P PKPdf 08 39 38.6 -0.4
baz=128,SNR=19
U16A Tuba City 128.33 24 ⇑P PKPdf 08 39 36.7 -2.2
baz=128
MVCO Mesa Verde 128.36 21 ⇓P PKPdf 08 39 37.2 -1.9
baz=128,SNR=7.0
MVCO Mesa Verde 128.36 21 ℯPKPdf PKPdf 08 39 40.0 +1.0
MVCO LR LR
comp=Z,5µm,22.0s,MS6.2
S22A 4UR Ranch, Cre 128.43 19 ⇑P PKPdf 08 39 38.9 -0.3
baz=128,SNR=12
R24A Sanders Place, 128.51 17 ⇓P PKPdf 08 39 39.1 -0.2
baz=128
T19A Beclabito 128.52 21 ⇑P PKPdf 08 39 39.7 +0.4
baz=128,SNR=12
BC3 Big Chuckawall 128.54 29 ⇑P PKPdf 08 39 40.0 +0.5
baz=128,SNR=8.0
U18A Rough Rock, Ch 128.57 22 ⇑P PKPdf 08 39 40.0 +0.5
baz=128,SNR=28
HDIL Hopedale 128.67 1 PFAKE 08 39 50.0 +10
HDIL LR LR
comp=Z,6µm,20.0s,MS6.3
MONP Monument Peak 128.68 31 ⇓P PKPdf 08 39 40.3 +0.6
baz=128
W15A Williams 128.70 25 ⇓P PKPdf 08 39 39.7 0.0
baz=128,SNR=7.3
BAR Barrett 128.72 31 ℯPKPdf PKPdf 08 39 40.8 +1.0
WUAZ Wupatki 128.78 24 ⇑P PKPdf 08 39 40.0 +0.2
baz=128
WUAZ Wupatki 128.78 24 ℯPKPdf PKPdf 08 39 39.9 +0.1
WUAZ LR LR
comp=Z,4µm,20.0s,MS6.0
TAOE Nuku Hiva Isla 128.81 93 ℯSS SS 08 58 59.6 -5.2
comp=Z,6µm,31.6s
TAOE ℯLQ 09 14 38.4
comp=Z,2µm,31.7s
TAOE ℯLR LR 09 19 56.8
comp=Z,8µm,37.0s
SDCO Great Sand Dun 128.84 18 ℯPKPdf PKPdf 08 39 39.8 -0.1
SDCO ℯPP PP 08 41 43.3 -2.1
SDCO LR LR
comp=Z,7µm,20.0s,MS6.4
T21A Navajo Lake 128.89 20 ⇓P PKPdf 08 39 40.0 0.0
baz=129
V17A Tonalea, Kykot 128.92 24 ⇓P PKPdf 08 39 39.9 -0.2
baz=129
U19A Dine' College, 128.93 22 ⇑P PKPdf 08 39 40.0 -0.1
baz=129,SNR=19
SWSC Sam W. Stewart 128.95 30 ⇑P PKPdf 08 39 40.1 -0.2
baz=129
MCWV Mont Chateau 128.99 352 ℯPKPdf PKPdf 08 39 41.0 +0.8
MCWV LR LR
comp=Z,10µm,22.0s,MS6.5
S24A Houchin Ranch, 129.02 17 ⇓P PKPdf 08 39 40.3 0.0
baz=129
X14A Yava 129.04 26 ⇓P PKPdf 08 39 40.6 +0.2
baz=129,SNR=15
T22A Edith 129.08 19 ⇓P PKPdf 08 39 40.6 +0.2
baz=129,SNR=6.2
W16A Flagstaff 129.08 25 ⇓P PKPdf 08 39 41.1 +0.7
baz=129
U20A Newcomb 129.10 21 ⇑P PKPdf 08 39 41.3 +0.8
baz=129,SNR=9.0
Y13A Salome 129.17 28 ⇑P PKPdf 08 39 40.4 -0.3
baz=129,SNR=13
V18A Ganado 129.18 23 ⇑P PKPdf 08 39 40.8 +0.2
baz=129,SNR=16
S25A Robets Cordova 129.23 17 ⇓P PKPdf 08 39 39.6 -1.0
baz=129
CBKS Cedar Bluff 129.26 12 PFAKE 08 39 50.0 +9.3
CBKS LR LR
comp=Z,7µm,20.0s,MS6.3
X15A Humboldt 129.31 26 ⇓P PKPdf 08 39 41.2 +0.3
baz=129,SNR=10
GLA Glamis 129.33 29 ⇓P PKPdf 08 39 41.6 +0.6
baz=129,SNR=5.1
GLA Glamis 129.33 29 ℯPKIKP PKPdf 08 39 42.5 +1.5
T23A Casias Ranch, 129.33 19 ⇓P PKPdf 08 39 40.9 +0.1
baz=129,SNR=14
U21A Nageezi 129.36 20 ⇓P PKPdf 08 39 41.2 +0.2
baz=129,SNR=27
Y14A Wickenburg 129.44 27 ⇓P PKPdf 08 39 42.1 +0.9
baz=129,SNR=16
V19A Window Rock 129.50 22 ⇑P PKPdf 08 39 42.2 +1.0
baz=129,SNR=10
KSU1 Kansas State U 129.52 9 ℯPKPdf PKPdf 08 39 40.4 -0.7
KSU1 LR LR
comp=Z,9µm,19.0s,MS6.5
V20A Brimhall 129.64 21 ⇑P PKPdf 08 39 42.3 +0.8
baz=129,SNR=9.8
U22A Llaves 129.67 20 ⇓P PKPdf 08 39 42.4 +0.9
baz=129,SNR=14
X16A Lo Mia Camp, P 129.70 25 ⇑P PKPdf 08 39 42.6 +0.9
baz=129
Y15A Casa Rosa Ranc 129.72 26 ⇓P PKPdf 08 39 42.9 +1.2
baz=130,SNR=31
T25A Trinidad 129.72 17 ⇓P PKPdf 08 39 42.0 +0.3
baz=129
Z13A Yuma Proving G 129.76 28 ⇓P PKPdf 08 39 42.6 +0.8
baz=130,SNR=8.5
W18A Petrified Fore 129.77 23 ⇑P PKPdf 08 39 42.5 +0.8
baz=130
112A Yuma 129.87 29 ⇑P PKPdf 08 39 43.2 +1.2
baz=130
U23A El Rito 129.93 19 ⇑P PKPdf 08 39 42.4 +0.3
baz=130,SNR=13
Z14A Wintersburg 129.95 27 ⇓P PKPdf 08 39 42.1 0.0
baz=130,SNR=7.6
CBN Corbin 130.00 349 PFAKE 08 39 50.0 +7.9
CBN LR LR
comp=Z,7µm,20.0s,MS6.3
X17A Forest Lakes 130.03 25 ⇓P PKPdf 08 39 41.7 -0.5
baz=130
BLO Bloomington 130.04 358 ℯPKPdf PKPdf 08 39 42.1 0.0
V22A San Miguel Ran 130.08 20 ⇑P PKPdf 08 39 43.1 +0.8
baz=130,SNR=25
U24A Moreno Valley 130.14 18 ⇓P PKPdf 08 39 42.5 0.0
baz=130
Y16A Circle Bar Ran 130.15 26 ⇑P PKPdf 08 39 42.7 +0.2
baz=130
X18A Snowflake 130.21 24 ⇓P PKPdf 08 39 42.9 +0.3
baz=130
W20A Ramah 130.23 22 ⇑P PKPdf 08 39 42.7 +0.1
baz=130,SNR=13
U25A Circle Dot Ran 130.41 17 ⇑P PKPdf 08 39 43.6 +0.7
baz=130
V23A Ortiz Mt. (NFS 130.47 19 ⇓P PKPdf 08 39 43.6 +0.5
baz=130,SNR=12
114A Black Gap (USA 130.49 28 ⇓P PKPdf 08 39 43.8 +0.6
baz=130,SNR=10
OLIL Olney 130.50 360 ℯPKPdf PKPdf 08 39 43.4 +0.3
W21A San Fidel 130.54 21 ⇓P PKPdf 08 39 43.7 +0.5
baz=130,SNR=6.7
X19A St. Johns 130.55 23 ⇓P PKPdf 08 39 43.3 0.0
baz=130,SNR=7.1
Y17A Roosevelt 130.57 25 ⇓P PKPdf 08 39 43.5 +0.2
baz=130
U26A Atchley Ranch, 130.61 17 ⇓P PKPdf 08 39 43.2 -0.2
baz=130
Z16A Peralta Trail, 130.63 26 ⇑P PKPdf 08 39 43.7 +0.3
baz=130
X20A Quemado 130.75 22 ⇑P PKPdf 08 39 41.6 -2.0
baz=130,SNR=5.5
V24A Rampart Ranch, 130.78 18 ⇓P PKPdf 08 39 43.7 0.0
baz=130,SNR=12
115A Sonoran Desert 130.83 27 ⇓P PKPdf 08 39 43.8 0.0
baz=131
Y18A Canyon Day Jun 130.83 24 ⇓P PKPdf 08 39 43.6 -0.2
baz=131
V25A Rancho No Teng 130.87 18 ⇓P PKPdf 08 39 43.8 -0.1
baz=131,SNR=12
WCI Wyandotte Cave 130.97 358 ℯPKPdf PKPdf 08 39 43.9 0.0
WCI LR LR
comp=Z,6µm,19.0s,MS6.3
Y19A Nutrioso 130.98 23 ⇓P PKPdf 08 39 43.9 -0.2
baz=131
Z17A San Carlos Hig 131.07 25 ⇓P PKPdf 08 39 43.4 -0.9
baz=131
X21A Alamocita Cree 131.10 22 ⇓P PKPdf 08 39 44.6 +0.3
baz=131,SNR=11
ANMO Albuquerque 131.10 20 PFAKE 08 39 50.0 +5.7
ANMO LR LR
comp=Z,5µm,20.0s,MS6.2
V26A Tequesquite Ra 131.15 17 ⇓P PKPdf 08 39 44.6 +0.2
baz=131
116A Eloy 131.18 27 ⇓P PKPdf 08 39 44.6 +0.1
baz=131
FVM French Village 131.21 2 ℯPKPdf PKPdf 08 39 45.6 +1.2
W24A Lazy 6 Ranch, 131.21 19 ⇓P PKPdf 08 39 43.0 -1.5
baz=131,SNR=15
USIN University of 131.27 359 ℯPKPdf PKPdf 08 39 44.9 +0.4
USIN ℯPP PP 08 41 59.9 -1.0
X22A Bernardo 131.32 21 ⇓P PKPdf 08 39 44.9 +0.2
baz=131
Y20A Horse Springs, 131.36 22 ⇓P PKPdf 08 39 45.0 +0.2
baz=131
BBSR BB Station 131.36 333 PFAKE 08 39 50.0 +5.1
BBSR LR LR
comp=Z,3µm,20.0s,MS6.0
LAZ Ladron 131.37 21 ℯPKPdf PKPdf 08 39 46.5 +1.7
BLA Blacksburg 131.47 352 PFAKE 08 40 00.0 +15
BLA LR LR
comp=Z,16µm,22.0s,MS6.7
W25A X Bar L Ranch, 131.50 18 ⇑P PKPdf 08 39 45.2 +0.2
baz=131
SIUC Southern Illin 131.51 1 ℯPKPdf PKPdf 08 39 44.8 -0.2
117A Oracle 131.59 26 ⇑P PKPdf 08 39 43.3 -2.0
baz=131
LENM Lemitar 131.64 21 ℯPKPdf PKPdf 08 39 47.5 +2.1
Y22D IRIS PASSCAL I 131.74 21 ⇑P PKPdf 08 39 45.6 +0.1
baz=132
216A Three Points, 131.76 27 ⇓P PKPdf 08 39 45.8 +0.2
baz=132
BNM Barren Site 131.77 21 ℯPKPdf PKPdf 08 39 47.2 +1.6
TUC Tucson 131.79 26 ℯPKPdf PKPdf 08 39 47.9 +2.2
TUC LR LR
comp=Z,3µm,21.0s,MS5.9
118A Homack Ranch, 131.85 25 ⇓P PKPdf 08 39 46.1 +0.3
baz=132
Y22A Socorro 131.85 21 ⇑P PKPdf 08 39 44.6 -1.2
baz=132,SNR=9.3
Z20A Nine Sixteen R 131.98 23 ⇓P PKPdf 08 39 46.0 -0.1
baz=132
W27A Bowe Ranch, En 132.04 16 ⇑P PKPdf 08 39 46.2 +0.2
baz=132
X25A Clemmons Ranch 132.07 18 ⇓P PKPdf 08 39 45.2 -1.0
baz=132,SNR=7.8
Z21A St. Cloud Mine 132.16 22 ⇓P PKPdf 08 39 47.4 +1.1
baz=132,SNR=13
217A Green Valley 132.24 26 ⇓P PKPdf 08 39 45.2 -1.4
baz=132
X26A CR and CF Fran 132.31 18 ⇑P PKPdf 08 39 44.7 -1.9
baz=132
Y24A Capitan 132.38 20 ⇓P PKPdf 08 39 46.3 -0.4
baz=132,SNR=9.2
Z22A Elephant Butte 132.47 21 ⇓P PKPdf 08 39 44.6 -2.3
baz=132,SNR=16
120A U Bar Ranch, L 132.47 24 ⇑P PKPdf 08 39 45.8 -1.2
baz=132
PARMO Parma 132.55 2 ℯPKPdf PKPdf 08 39 47.2 +0.3
AMTX Amarillo 132.58 15 PFAKE 08 40 00.0 +13
AMTX LR LR
comp=Z,6µm,21.0s,MS6.3
Y25A Mesa, Roswell 132.62 19 ⇓P PKPdf 08 39 46.3 -0.9
baz=132,SNR=20
219A White Tail Can 132.70 25 ⇑P PKPdf 08 39 45.6 -1.8
baz=132
Z23A Rita Site, Whi 132.72 21 ⇓P PKPdf 08 39 45.8 -1.6
baz=132
318A Bisbee 132.88 26 ⇓P PKPdf 08 39 45.7 -2.0
baz=133
Z24A Sheeppen Canyo 132.95 20 ⇓P PKPdf 08 39 47.6 -0.2
baz=133,SNR=20
WVT Waverly 133.10 360 ℯPKPdf PKPdf 08 39 49.3 +1.2
WVT ℯPP PP 08 42 11.6 -1.1
WVT LR LR
comp=Z,7µm,22.0s,MS6.3
Y27A Causey 133.12 17 ⇑P PKPdf 08 39 46.1 -2.0
baz=133
MSTX Muleshoe 133.15 17 ⇑P PKPdf 08 39 48.7 +0.5

baz=133
Z25A Roswell 133.21 19 ⇑P PKPdf 08 39 47.4 -0.9
baz=133,SNR=16
319A Douglas 133.24 25 ⇑P PKPdf 08 39 47.8 -0.7
baz=133
221A Mesquite Ranch 133.28 23 ⇑P PKPdf 08 39 49.1 +0.6
baz=133
WMOK Wichita Mounta 133.39 12 PKPdf PKPdf 08 39 45.7 -2.9
WMOK LR LR
comp=Z,7μm,20.0s,MS6.4
Z26A Caprock 133.45 18 ⇑P PKPdf 08 39 49.1 +0.3
baz=133,SNR=16
124A Stringfield Ra 133.50 20 ⇑P PKPdf 08 39 47.6 -1.3
baz=133,SNR=7.6
HBAR Harrisburg 133.62 3 *e*PKPdf PKPdf 08 39 49.4 +0.4
Z27A Tatum 133.64 17 ⇓P PKPdf 08 39 48.2 -0.9
baz=133,SNR=22
CPCT Cooper Cave 133.65 356 *e*PKPdf PKPdf 08 39 48.5 -0.6
125A Gardner Draw, 133.80 19 ⇓P PKPdf 08 39 48.3 -1.2
baz=134,SNR=14
RKT Rikitea 133.86 111 *e*SS SS 09 00 14.7 +8.7
RKT comp=Z,2μm,36.0s
*e*LR LR 09 22 15.3
comp=Z,5μm,39.0s
SWET Sewanee 133.97 357 *e*PKPdf PKPdf 08 39 46.1 -3.6
127A Arkansas Junct 134.19 18 ⇑P PKPdf 08 39 50.1 -0.1
baz=134,SNR=8.3
225A Deer Hill, Car 134.25 20 ⇓P PKPdf 08 39 48.6 -1.7
baz=134,SNR=7.0
UALR University of 134.28 5 *e*PKPdf PKPdf 08 39 50.3 0.0
GDL2 Guadalupe Moun 134.32 19 *e*PKPdf PKPdf 08 39 49.5 -1.0
MIAR Mount Ida 134.39 6 *e*PKPdf PKPdf 08 39 50.0 -0.5
MIAR LR LR
comp=Z,9μm,22.0s,MS6.5
MNTX Cornudas Mount 134.43 21 *e*PKPdf PKPdf 08 39 50.6 0.0
MNTX LR LR
comp=Z,3μm,20.0s,MS6.1
JSC Jenkinsville 134.47 352 *e*PKPdf PKPdf 08 39 51.1 +0.5
226A Malaga, Loving 134.53 19 ⇓P PKPdf 08 39 50.8 0.0
baz=134,SNR=13
324A Moseley Ranch, 134.63 21 ⇑P PKPdf 08 39 50.5 -0.5
baz=134,SNR=6.1
325A Bean Ranch, Si 134.87 20 ⇓P PKPdf 08 39 50.6 -0.9
baz=135,SNR=14
326A Caldwell Ranch 135.25 19 ⇓P PKPdf 08 39 50.6 -1.6
baz=135
425A Indio Mountain 135.40 21 ⇓P PKPdf 08 39 51.0 -1.5
baz=135,SNR=6.9
NHSC New Hope 135.46 350 PFAKE 08 40 00.0 +7.5
NHSC LR LR
comp=Z,11μm,20.0s,MS6.6
328A Wristen Ranch, 135.56 18 ⇓P PKPdf 08 39 51.8 -1.0
baz=135
GOGA Godfrey 135.59 354 *e*PKPdf PKPdf 08 39 53.4 +0.6
GOGA LR LR
comp=Z,7μm,22.0s,MS6.3
426A McDonald Obser 135.84 20 ⇑P PKPdf 08 39 52.3 -1.0
baz=136,SNR=8.8
427A Hayter Ranch, 135.87 19 ⇑P PKPdf 08 39 53.7 +0.4
baz=136,SNR=14
LRAL Lakeview Retre 136.18 359 *e*PKPdf PKPdf 08 39 54.9 +1.0
LRAL *e*PP PP 08 42 29.3 -2.9
LRAL LR LR
comp=Z,7μm,22.0s,MS6.4
428A Kincaid Ranch, 136.21 18 P PKPdf 08 39 54.6 +0.6
baz=136,SNR=12
526A Mary Lane Ranc 136.37 20 P PKPdf 08 39 54.5 +0.2
baz=136,SNR=7.7
527A Woodward Ranch 136.46 20 ⇓P PKPdf 08 39 55.3 +0.8
baz=136
528A Cox Ranch, San 136.70 19 ⇓P PKPdf 08 39 55.5 +0.6
baz=136,SNR=14
626A Big Bend Ranch 136.82 20 ⇓P PKPdf 08 39 55.8 +0.6
baz=137,SNR=8.9
VBMS Vicksburg 136.94 3 PFAKE 08 40 10.0 +15
VBMS LR LR
comp=Z,6μm,20.0s,MS6.3
NATX Nacogdoches 137.01 8 *e*PKPdf PKPdf 08 39 56.5 +1.0
NATX LR LR
comp=Z,9μm,20.0s,MS6.5
627A Terlingua Ranc 137.17 20 P PKPdf 08 39 56.6 +0.8
baz=137,SNR=15
TXAR Lajitas Array 137.18 20 PKP PKPdf 08 39 55.0 -0.8
TXAR PP PP 08 42 44.1 +5.3
TXAR Lajitas Array 137.18 20 PKhKP PKPpre 08 39 44.4
comp=Z,1.1nm,0.6s,baz=344,slow=0.4,SNR=12
TXAR PKP PKPdf 08 39 55.0 -0.8
comp=Z,5.2nm,0.6s,baz=28,slow=0.8,SNR=24
TXAR PP PP 08 42 44.1 +5.3
comp=Z,3.6nm,0.8s,baz=0.7,slow=7.4,SNR=4.9
JCT Junction City 137.25 15 *e*PKPdf PKPdf 08 39 56.1 +0.1
JCT LR LR
comp=Z,8μm,20.0s,MS6.4
628A Black Gap, Mar 137.30 19 ⇑P PKPdf 08 39 56.8 +0.7
baz=137
PTCN Pitcairn Islan 137.95 115 PFAKE 08 40 10.0 +13
PTCN LR LR
comp=Z,8μm,20.0s,MS6.5
BRAL Brewton 138.19 359 *e*PKPdf PKPdf 08 39 56.0 -1.7
BRAL LR LR
comp=Z,9μm,21.0s,MS6.5
HKT Hockley 138.60 10 *e*PKPdf PKPdf 08 39 57.8 -0.7
HKT LR LR
comp=Z,9μm,20.0s,MS6.5
KVTX Kingsville 140.52 14 PFAKE 08 40 10.0 +8.0
KVTX LR LR
comp=Z,7μm,21.0s,MS6.4
DWPF Disney 140.55 351 PFAKE 08 40 10.0 +7.9
DWPF LR LR
comp=Z,5μm,22.0s,MS6.2
ANWB Willy Bob 141.37 317 PFAKE 08 40 10.0 +6.2
ANWB LR LR
comp=Z,3μm,22.0s,MS6.0
BBGH Gun Hill 142.81 309 PFAKE 08 40 20.0 +14
BBGH LR LR
comp=Z,4μm,21.0s,MS6.1
FDF Fort de France 142.96 313 PFAKE 08 40 20.0 +13
FDF LR LR
comp=Z,3μm,20.0s,MS6.0
MTP Monte Pirata 143.45 322 *e*PKPdf PKPdf 08 40 05.1 -2.3
CBYP Canovanas 143.50 323 *e*PKPdf PKPdf 08 40 05.8 -1.7
GRTK Grand Turk 143.59 333 *e*PKPdf PKPdf 08 40 05.2 -2.5
GRTK LR LR
comp=Z,4μm,21.0s,MS6.2
LPA La Plata 143.64 224 *de*PKIKP PKPdf 08 40 14.0 +6.7
SJG San Juan 143.79 323 PKP PKPdf 08 40 06.1 -2.0
comp=Z,45nm,0.8s,baz=65,slow=9.4,SNR=11
SJG San Juan 143.79 323 *e*PKIKP PKPdf 08 40 05.4 -2.6
SJG MLR MLR
comp=Z,3μm,21.0s
SVB Belmont 144.00 311 *e*P PKPdf 08 40 08.2 -0.3
SVB **Belmont 144.00 311** *e*P PKPdf 08 40 08.2 -0.3
AGPR Aguadilla, PR 144.07 324 *e*PKPdf PKPdf 08 40 05.2 -3.3
ICM Isla Caja Muer 144.18 323 *e*PKPdf PKPdf 08 40 04.8 -4.0
TRQA Tornquist 144.30 217 *e*PKPdf PKPdf 08 40 06.0 -2.3
TRQA LR LR
comp=Z,5μm,19.0s,MS6.3
CRPR Cabo Rojo, PR 144.44 324 *e*PKPdf PKPdf 08 40 07.7 -1.4
TOSP Speyside 144.70 308 *e*P PKPdf 08 40 10.3 +0.5
GRSS Sisters 144.89 311 *e*P PKPdf 08 40 09.9 -0.2
GRSS Sisters 144.89 311 *e*P PKPdf 08 40 09.9 -0.2
BOT Bacolet 144.92 308 *e*P PKPdf 08 40 13.5 +3.4
BOT Bacolet 144.92 308 *e*P PKPdf 08 40 13.5 +3.4
TPR Prospect 144.96 308 *e*P PKPdf 08 40 11.4 +1.2
TPR Prospect 144.96 308 *e*P PKPdf 08 40 11.4 +1.2
GRW Mount Saint Ca 145.02 310 *e*P PKPab 08 40 10.5 +1.0
GRW Mount Saint Ca 145.02 310 *e*P PKPab 08 40 10.5 +1.0
GRGR Grenville 145.03 310 *e*PKPdf PKPdf 08 40 09.5 -0.8
GRGR LR LR
comp=Z,3μm,22.0s,MS6.0
TBH Brigand Hill 145.61 307 *e*P PKPdf 08 40 12.1 +0.8
TBH Brigand Hill 145.61 307 *e*P PKPdf 08 40 12.1 +0.8
TRN Trinidad (W) 145.77 308 *e*P PKPdf 08 40 13.2 +1.7
TRN Trinidad (W) 145.77 308 *e*P PKPdf 08 40 13.2 +1.7
SDDR Presa de Saban 145.85 331 *e*PKPdf PKPdf 08 40 12.4 +0.8
SDDR LR LR
comp=Z,5μm,21.0s,MS6.3
TCE Chacachacare 146.01 309 *e*P PKPdf 08 40 16.7 +4.8
TCE Chacachacare 146.01 309 *e*P PKPdf 08 40 16.7 +4.8
TPP Pointe-a-Pierr 146.01 308 *e*P PKPdf 08 40 15.4 +3.4
TPP Pointe-a-Pierr 146.01 308 *e*P PKPdf 08 40 15.4 +3.4
PLCA Paso Flores 146.57 205 PKPbc PKPbc 08 40 13.4 -0.2
comp=Z,28nm,1.0s,baz=134,slow=2.6,SNR=24
PLCA Paso Flores 146.57 205 *e*PKIKP PKPdf 08 40 12.5 +0.3
PLCA MLR MLR
comp=Z,5μm,22.0s
GTBY Guantanamo Bay 146.66 337 *e*PKPbc PKPbc 08 40 14.6 0.0
GTBY LR LR
comp=Z,5μm,21.0s,MS6.3
MOIG Morelia 146.91 23 *i* P PKPdf 08 40 15.8 +2.4
CPUP Villa Florida 147.17 238 PFAKE 08 40 20.0 +6.4
CPUP LR LR
comp=Z,671nm,21.0s,MS5.4
CPUP Villa Florida 147.17 238 PKPbc PKPbc 08 40 14.0 -1.8
comp=Z,16nm,0.6s,baz=81,slow=2.6,SNR=29
PPM Popocatepetl 148.38 19 *e*P PKPdf 08 40 17.2 +1.4
PCRV Puerto La Cruz 148.51 311 PKPbc PKPbc 08 40 17.8 -1.9
comp=Z,67nm,0.5s,baz=188,slow=2.3,SNR=77
PLIG Platanillo 148.71 21 *e*P PKPdf 08 40 16.8 +0.5
TEIG Tepich 148.95 0 PFAKE 08 40 30.0 +13
TEIG LR LR
comp=Z,6μm,22.0s,MS6.3
GWJ Greenwich 148.96 339 ⇑*i*P PKPdf 08 40 18.7 +2.0
GWJ ⇓*i*S PKPab 08 40 33.2 +8.5
STH Stony Hill 148.98 339 ⇑*i*P PKPdf 08 40 21.3 +4.5
HOJ Hope 149.03 339 ⇑*i*P PKPdf 08 40 22.6 +5.7
YHJ Yallahs 149.04 338 ⇑*i*P PKPdf 08 40 21.7 +4.8
MTDJ Mount Denham 149.10 340 *e*PKPbc PKPbc 08 40 21.8 +0.7
MTDJ LR LR
comp=Z,4μm,20.0s,MS6.2
NEJ Negril 149.33 341 ⇑*i*P PKPdf 08 40 22.5 +5.1
MCJ Malvern 149.43 340 ⇓*i*P PKPdf 08 40 22.8 +5.3
PNIG Pinotepa 151.03 20 *i* P PKPbc 08 40 25.1 -0.8
CMIG Matias Romero 151.29 13 PKPbc PKPbc 08 40 26.1 -0.3
comp=Z,56nm,0.8s,baz=355,slow=4.6,SNR=6.6
LMEL Las Melosas 151.95 213 *e*P PKPbc 08 40 28.0 +0.5
FCH Farellones 152.40 214 *e*P PKPbc 08 40 27.5 -1.1
CLCH Cerro Calan 152.48 213 *e*P PKPbc 08 40 29.1 +0.4
SIV San Ignacio 153.20 256 PKP PKPdf 08 40 23.2 -0.1
comp=Z,5.4nm,1.1s,baz=112,slow=6.0,SNR=1.7
SIV PKPbc PKPbc 08 40 29.5 -1.2
comp=Z,10.0nm,0.9s,baz=112,slow=7.2,SNR=3.5
SIV PKPab PKPab 08 40 44.1 +1.6
comp=Z,22nm,0.7s,baz=85,slow=5.6,SNR=9.0
RPN Rapa Nui 154.45 132 PFAKE 08 40 30.0 +5.2
RPN LR LR
comp=Z,3μm,19.0s,MS6.1
TGUH Tegucigalpa,Un 155.07 358 *e*PKPdf PKPdf 08 40 27.3 +1.3
TGUH *e*PKPbc PKPdf 08 40 36.2 +10
TGUH LR LR
comp=Z,3μm,22.0s,MS6.1
LCO Las Campanas 155.77 220 *e*PKPdf PKPdf 08 40 27.7 +1.1
LCO LR LR
comp=Z,5μm,21.0s,MS6.3
BCIP Isla Barro Col 158.29 337 PFAKE 08 40 40.0 +10
BCIP LR LR
comp=Z,3μm,22.0s,MS6.1
JTS JuntasAbangare 158.58 351 PFAKE 08 40 40.0 +9.5
JTS LR LR
comp=Z,5μm,21.0s,MS6.3
JTS JuntasAbangare 158.58 351 PKPab PKPab 08 41 04.1 -1.2
comp=Z,3.3nm,0.7s,baz=342,slow=20,SNR=3.1
ROSC El Rosal 159.05 318 PKP PKPdf 08 40 32.1 +1.0
comp=Z,28nm,1.0s,baz=311,slow=1.7,SNR=21
ROSC PKPab PKPab 08 41 06.7 -0.8
comp=Z,14nm,0.6s,baz=92,slow=18,SNR=3.8
LPAZ La Paz 159.84 253 PKP PKPdf 08 40 32.5 +0.7
comp=Z,7.6nm,0.8s,baz=56,slow=7.3,SNR=26
LPAZ PKPab PKPab 08 41 12.8 +1.8
comp=Z,15nm,0.8s,baz=81,slow=8.0,SNR=7.7
LPAZ La Paz 159.84 253 *e*PKIKP PKPdf 08 40 32.3 +0.4
LPAZ *e* 08 41 13.3
LPAZ MLR MLR
comp=Z,5μm,21.0s
OTAV Otavalo 165.22 319 *e*PKPdf PKPdf 08 40 36.3 -1.1
OTAV *e*PKPab PKPab 08 41 35.2 +0.6
OTAV LR LR
comp=Z,5μm,21.0s
NNA Nana 168.85 264 PKP PKPdf 08 40 39.4 -0.6
NNA PKPab PKPab 08 41 52.3 +1.5
NNA LR LR
comp=Z,4μm,19.0s
NNA Nana 168.85 264 PKP PKPdf 08 40 39.4 -0.6
comp=Z,12nm,0.7s,baz=315,slow=4.3,SNR=4.5
NNA PKPab PKPab 08 41 52.3 +1.5
comp=Z,9.7nm,0.9s,baz=122,slow=11,SNR=1.8
PAYG Puerto Ayora 169.51 12 PFAKE 08 40 50.0 +10
PAYG LR LR
comp=Z,4μm,20.0s
ATAH Atahualpa 169.60 291 PKP PKPdf 08 40 41.9 +1.4
comp=Z,13nm,0.9s,baz=353,slow=2.3,SNR=6.5

*ISCJB **10** 08:29:35.9±0.8, 10°.41N±0°.04×62°.36W±0°.03, h13km±6km, Error ellipse: s-maj=7.4km s-min=3.9km az=159.2*
*FUNV **10** 08:29:36.0, 10°.41N×62°.36W, h1km, MW2.8*
*NEIC **10** 08:29:40.1, 10°.60N×62°.13W, h3km, MD2.9(TRN), After TRN.*
*TRN **10** 08:29:40.1, 10°.60N×62°.13W, h3km, MD2.9(TRN), After TRN.*
ISC 10 08:29:35.7±0.6, 10°.42N±0°.04×62°.35W±0°.03, h6km±6km, n23, σ1°.05/33, 1C-4D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.26**	**28**	*e*P		**Pg**	**08 29 40.8**	**-0.1**
GUIV				*e*S		**Sg**	**08 29 45.8**	**+1.5**
GUNV	**Guanoco**	**0.64**	**247**	⇓*i*P		**Pg**	**08 29 47.4**	**-0.5**
GUNV				*e*S		**Sg**	**08 29 58.3**	**+2.0**
TCE	**Chacachacare**	**0.65**	**64**	⇓*i*P		**Pg**	**08 29 47.9**	**-0.3**
TCE				*e*S		**Sg**	**08 29 52.8**	**-3.9**
TCE	**Chacachacare**	**0.65**	**64**	⇓*i*P		**Pg**	**08 29 47.9**	**-0.3**
TCE				*e*S		**Sg**	**08 29 52.8**	**-3.9**
TPP	**Pointe-a-Pierr**	**0.89**	**96**	*e*P		**Pg**	**08 29 54.9**	**+2.1**
TPP	**Pointe-a-Pierr**	**0.89**	**96**	*e*P		**Pg**	**08 29 54.9**	**+2.1**
CRUV	**Carupano**	**0.91**	**287**	*e*P		**Pg**	**08 29 51.9**	**-1.3**
CRUV				*e*S		**Sg**	**08 30 04.5**	**-0.5**
TRN	**Trinidad (W)**	**0.96**	**76**	*e*P		**Pg**	**08 29 53.2**	**-0.9**
TRN				*e*S		**Sg**	**08 30 04.8**	**-1.8**
TRN	**Trinidad (W)**	**0.96**	**76**	*e*P		**Pg**	**08 29 53.2**	**-0.9**
TRN				*e*S		**Sg**	**08 30 04.8**	**-1.8**
ITEV	**Isla Los Testi**	**1.21**	**321**	⇓*e*P		**Pg**	**08 29 58.3**	**-0.7**
ITEV				*e*S		**Sg**	**08 30 15.1**	**+0.4**
TBH	**Brigand Hill**	**1.26**	**87**	*e*P		**Pg**	**08 30 00.1**	**+0.2**
TBH	**Brigand Hill**	**1.26**	**87**	*e*P		**Pg**	**08 30 00.1**	**+0.2**
ORIV	**Oritupano**	**1.70**	**218**	⇓*e*P		**Pn**	**08 30 06.6**	**+0.7**
ORIV				*e*S		**Sn**	**08 30 28.2**	**+0.2**
TPR	**Prospect**	**1.73**	**63**	*e*P		**Pn**	**08 30 07.7**	**+1.4**
TPR	**Prospect**	**1.73**	**63**	*e*P		**Pn**	**08 30 07.7**	**+1.4**
GRW	**Mount Saint Ca**	**1.86**	**21**	*e*P		**Pn**	**08 30 10.2**	**+2.0**
GRW	**Mount Saint Ca**	**1.86**	**21**	*e*P		**Pn**	**08 30 10.2**	**+2.0**
TOSP	**Speyside**	**1.99**	**64**	*e*P		**Pn**	**08 30 10.4**	**+0.5**
TOSP				*e*S		**Sn**	**08 30 34.0**	**-1.2**
PCRV	**Puerto La Cruz**	**2.26**	**264**	*e*P		**Pn**	**08 30 12.7**	**-1.0**
PRGV	**PARIAGUAN**	**2.80**	**234**	*e*P		**Pn**	**08 30 20.8**	**-0.3**
CUPV	**Cœpira**	**3.40**	**264**	*e*P		**Pn**	**08 30 29.4**	**0.0**
CAOV	**Caicara del Or**	**4.98**	**232**	*e*P		**Pn**	**08 30 50.8**	**-0.4**
BAUV	**El Baul**	**5.80**	**256**	*e*P		**Pn**	**08 31 01.7**	**-0.7**

*ISCJB **10** 08:32:56.0±0.7, 35°.31N±0°.02×31°.45E±0°.03, h2km±6km, Error ellipse: s-maj=4.5km s-min=3.6km az=41.8*
*DDA **10** 08:32:56.9, 35°.38N×31°.48E, h9km±3km, Md3.1*
*NEIC **10** 08:32:57.0, 35°.41N×31°.54E, h5km, ML3.4(ISK), ML3.4(NIC), After ISK.*
*ISK **10** 08:32:57.2, 35°.44N×31°.57E, h5km, ML3.5*
*NIC **10** 08:32:59.0±0.2, 35°.44N×31°.39E, h55km, ML3.4, MW3.5*
*CSEM **10** 08:33:00.4±0.1, 35°.32N×31°.46E, h30km, Mw3.5, Error ellipse: s-maj=4.4km s-min=3.8km az=77.0*
*HLW **10** 08:33:03.3, 35°.12N×31°.50E, h34km±31km, Ml3.0*
ISC 10 08:32:58.0±0.6, 35°.35N±0°.02×31°.48E±0°.03, h8km±4km, n86, σ1°.11/120, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.85**	**123**	P		**Pg**	**08 33 16.6**	**+2.2**
PPCY	**Paphos**	**0.85**	**123**	P		**Pg**	**08 33 16.6**	**+2.2**
ALFC	**Alevga** 59nm,0.2s	**0.94**	**101**	P		**Pg**	**08 33 17.1**	**+1.0**
ALFC				S		**Sg**	**08 33 31.5**	**+3.2**
ALFC	**Alevga** 59nm,0.2s	**0.94**	**101**	P		**Pg**	**08 33 17.1**	**+1.0**
ALFC				S		**Sg**	**08 33 31.5**	**+3.2**
GAZI	**Gazipasa**	**1.12**	**37**	*i* P		**Pg**	**08 33 17.7**	**-1.8**
GAZI				*i* S		**Sg**	**08 33 27.7**	**-6.3**
GAZI	**Gazipasa**	**1.12**	**37**	*i* P		**Pg**	**08 33 17.7**	**-1.8**
GAZI				*i* S		**Sg**	**08 33 27.7**	**-6.3**
LEF	**Lefka**	**1.18**	**101**	*e*Pn		**Pg**	**08 33 19.1**	**-1.6**
LEF				*e*Sn		**Sg**	**08 33 35.6**	**-0.4**
LEF	**Lefka**	**1.18**	**101**	*e*Pn		**Pg**	**08 33 19.1**	**-1.6**
LEF				*e*Sn		**Sg**	**08 33 35.6**	**-0.4**
SZAC	**Souni-Zanaja**	**1.30**	**117**	P		**Pn**	**08 33 22.2**	**-0.3**
SZAC	**Souni-Zanaja**	**1.30**	**117**	P		**Pn**	**08 33 22.2**	**-0.3**
MAMC	**Mammari**	**1.44**	**97**	P		**Pn**	**08 33 24.4**	**0.0**
MAMC	**Mammari**	**1.44**	**97**	P		**Pn**	**08 33 24.4**	**0.0**
CSS	**Prodhromos** 4.2nm,0.3s	**1.57**	**104**	P		**Pn**	**08 33 26.2**	**0.0**
CSS				S		**Sn**	**08 33 47.4**	**+0.7**
CSS	**Prodhromos** 4.2nm,0.3s	**1.57**	**104**	P		**Pn**	**08 33 26.2**	**0.0**
CSS				S		**Sn**	**08 33 47.4**	**+0.7**
LFK	**Lefkose**	**1.68**	**92**	*e*PN		**Pn**	**08 33 28.3**	**+0.5**
LFK	**Lefkose**	**1.68**	**92**	*e*Pn		**Pg**	**08 33 28.3**	**-2.0**
ERMK	**Ermenek**	**1.74**	**42**	*i* P		**Pg**	**08 33 29.2**	**-2.2**
ERMK				*i* S		**Sg**	**08 33 53.1**	**-0.9**
ERMK	**Ermenek**	**1.74**	**42**	*i* P		**Pg**	**08 33 29.2**	**-2.2**
ERMK				*i* S		**Sg**	**08 33 53.1**	**-0.8**
HDMB	**Hadim**	**1.81**	**27**	*e*PN		**Pn**	**08 33 28.7**	**-0.8**
HDMB	**Hadim**	**1.81**	**27**	*e*Pn		**Pn**	**08 33 28.7**	**-0.8**
KORT	**Korkueli**	**1.88**	**331**	*i* P		**Pn**	**08 33 32.2**	**+1.7**
KORT				*i* S		**Sg**	**08 34 06.0**	**+7.5**
KORT	**Korkueli**	**1.88**	**331**	*i* P		**Pn**	**08 33 32.2**	**+1.6**
KORT				*i* S		**Sg**	**08 34 06.0**	**+7.4**
ELL	**Elmali**	**1.89**	**318**	*e*PN		**Pn**	**08 33 31.5**	**+0.9**
ELL	**Elmali**	**1.89**	**318**	*e*Pn		**Pn**	**08 33 31.5**	**+0.9**
IKL	**Isikli**	**2.00**	**63**	*e*PN		**Pn**	**08 33 32.1**	**-0.2**
IKL	**Isikli**	**2.00**	**63**	*e*Pn		**Pn**	**08 33 32.1**	**-0.1**
PHNC	**Paralimni** 5.8nm,0.6s	**2.12**	**99**	P		**Pg**	**08 33 38.9**	**+0.2**
PHNC				S		**Sg**	**08 34 08.5**	**+2.3**
PHNC	**Paralimni** 5.8nm,0.6s	**2.12**	**99**	P		**Pg**	**08 33 38.9**	**+0.2**
PHNC				S		**Sg**	**08 34 08.5**	**+2.3**
BCK	**Bucak**	**2.23**	**342**	*e*PN		**Pn**	**08 33 36.1**	**+0.8**
BCK	**Bucak**	**2.23**	**342**	*e*Pn		**Pn**	**08 33 36.1**	**+0.8**
GOLH	**Golhisar**	**2.44**	**321**	*i* P		**Pn**	**08 33 38.3**	**+0.1**
GOLH				*i* S		**Sg**	**08 34 18.4**	**+2.0**
GOLH	**Golhisar**	**2.44**	**321**	*i* P		**Pn**	**08 33 38.3**	**+0.1**
GOLH				*i* S		**Sg**	**08 34 18.4**	**+2.0**
KONT	**Konya--Tatoy**	**2.69**	**15**	*e*PN		**Pn**	**08 33 41.9**	**+0.2**
KONT	**Konya--Tatoy**	**2.69**	**15**	*e*Pn		**Pn**	**08 33 41.9**	**+0.3**
TURN	**Turunc**	**2.78**	**304**	*i* P		**Pn**	**08 33 45.0**	**+2.1**
TURN				*i* S		**Sn**	**08 34 17.0**	**+0.4**
TURN	**Turunc**	**2.78**	**304**	*i* P		**Pn**	**08 33 45.0**	**+2.1**
TURN				*i* S		**Sn**	**08 34 17.0**	**+0.4**
LADK	**Ladik-KONYA**	**2.94**	**14**	*e*PN		**Pn**	**08 33 45.7**	**+0.6**
LADK	**Ladik-KONYA**	**2.94**	**14**	*e*Pn		**Pn**	**08 33 45.7**	**+0.7**
DNZL	**Cakiroluk**	**3.05**	**321**	*i* P		**Pn**	**08 33 46.3**	**-0.2**
DNZL				*i* S		**Sg**	**08 34 32.9**	**-3.0**
DNZL	**Cakiroluk**	**3.05**	**321**	*i* P		**Pn**	**08 33 46.3**	**-0.3**
DNZL				*i* S		**Sg**	**08 34 32.9**	**-3.0**
SULT	**Sultanhani-AKS**	**3.28**	**29**	*e*PN		**Pn**	**08 33 50.5**	**+0.7**
SULT	**Sultanhani-AKS**	**3.28**	**29**	*e*Pn		**Pn**	**08 33 50.5**	**+0.7**
GULE	**Gulek**	**3.29**	**53**	*i* P		**Pn**	**08 33 51.8**	**+1.9**
GULE				*i* S		**Sn**	**08 34 28.0**	**-1.3**
GULE	**Gulek**	**3.29**	**53**	*i* P		**Pn**	**08 33 51.8**	**+1.9**
GULE				*i* S		**Sn**	**08 34 28.0**	**-1.3**
KHAL	**Karahalli**	**3.41**	**333**	*i* P		**Pn**	**08 33 51.2**	**-0.3**
KHAL				*i* S		**Sn**	**08 34 29.9**	**-2.3**
KHAL	**Karahalli**	**3.41**	**333**	*i* P		**Pn**	**08 33 51.2**	**-0.3**
KHAL				*i* S		**Sn**	**08 34 29.9**	**-2.3**
KARA	**Karaisali**	**3.46**	**56**	*e*PN		**Pn**	**08 33 53.0**	**+0.7**
KARA	**Karaisali**	**3.46**	**56**	*e*Pn		**Pn**	**08 33 53.0**	**+0.7**
KIZT	**Kizilcal**	**3.54**	**5**	*e*PN		**Pn**	**08 33 54.1**	**+0.8**
KIZT	**Kizilcal**	**3.54**	**5**	*e*Pn		**Pn**	**08 33 54.1**	**+0.8**
YURE	**YUREGIR**	**3.68**	**65**	*i* P		**Pn**	**08 33 56.6**	**+1.4**
YURE				*i* S		**Sn**	**08 34 37.8**	**-1.0**
YURE	**YUREGIR**	**3.68**	**65**	*i* P		**Pn**	**08 33 56.6**	**+1.4**
YURE				*i* S		**Sn**	**08 34 37.8**	**-0.9**
AYDN	**Tasoluk**	**3.70**	**310**	*i* P		**Pn**	**08 33 54.6**	**-1.0**
AYDN				*i* S		**Sn**	**08 34 32.7**	**-6.7**
AYDN	**Tasoluk**	**3.70**	**310**	*i* P		**Pn**	**08 33 54.6**	**-1.0**
AYDN				*i* S		**Sn**	**08 34 32.7**	**-6.7**
BHL	**Bhannes**	**3.73**	**112**	*e*P		**Pn**	**08 33 54.7**	**-1.3**
HWQ	**Hawqa**	**3.83**	**105**	*e*P		**Pn**	**08 33 56.9**	**-0.4**
HTY	**Hatay**	**3.87**	**77**	*e*PN		**Pn**	**08 33 58.9**	**+1.0**
HTY	**Hatay**	**3.87**	**77**	*e*Pn		**Pn**	**08 33 58.9**	**+1.0**
RCY	**Rachaya**	**4.04**	**116**	*e*P		**Pn**	**08 33 59.8**	**-0.5**
GDZ	**Gediz**	**4.06**	**338**	*i* P		**Pn**	**08 33 59.3**	**-1.1**
GDZ				*i* S		**Sb**	**08 34 53.6**	**-5.4**
GDZ	**Gediz**	**4.06**	**338**	*i* P		**Pn**	**08 33 59.3**	**-1.2**
GDZ				*i* S		**Sb**	**08 34 53.6**	**-5.4**
KOZT	**Kozan**	**4.10**	**58**	*e*PN		**Pn**	**08 34 02.1**	**+1.0**
KMRS	**Kahramanmaras**	**4.88**	**62**	*e*PN		**Pn**	**08 34 12.7**	**+1.0**
KMRS	**Kahramanmaras**	**4.88**	**62**	*e*Pn		**Pn**	**08 34 12.7**	**+1.0**
AMAG	**Maghara** baz=161	**4.91**	**162**	P		**Pn**	**08 34 11.4**	**-0.8**
AMAG	**Maghara**	**4.91**	**162**	P		**Pn**	**08 34 11.4**	**-0.8**
HBRG	**Burj al 'Arab** baz=198	**4.96**	**197**	P		**Pn**	**08 34 12.5**	**-0.3**
HBRG	**Burj al 'Arab**	**4.96**	**197**	P		**Pn**	**08 34 12.5**	**-0.3**
HHAG	**Hagoal** baz=174	**5.41**	**174**	P		**Pn**	**08 34 18.9**	**0.0**
HHAG				S		**Sn**	**08 35 15.1**	**-6.3**
HHAG	**Hagoal** baz=174	**5.41**	**174**	P		**Pn**	**08 34 18.9**	**-0.1**
HHAG				S		**Sn**	**08 35 15.1**	**-6.3**
KOT	**Kottamia** baz=176	**5.41**	**177**	P		**Pn**	**08 34 18.7**	**-0.4**
KOT				S		**Sn**	**08 35 15.6**	**-6.0**
KOT	**Kottamia** baz=176	**5.41**	**177**	P		**Pn**	**08 34 18.7**	**-0.4**
KOT				S		**Sn**	**08 35 15.6**	**-6.0**
HMYD	**Mayadein** baz=187	**5.57**	**186**	P		**Pn**	**08 34 21.1**	**-0.1**
HMYD	**Mayadein**	**5.57**	**186**	P		**Pn**	**08 34 21.1**	**-0.1**
HMAT	**Matruh** baz=224	**5.61**	**222**	P		**Pn**	**08 34 22.1**	**+0.4**
HMAT	comp=N,10μm,0.4s,logA/T=4.4,baz=224			AMP			08 35 00.0	
HMAT	**Matruh**	**5.61**	**222**	P		**Pn**	**08 34 22.1**	**+0.3**
FYM	**Al Fayyum** baz=185	**5.65**	**184**	P		**Pn**	**08 34 22.4**	**+0.1**
FYM	**Al Fayyum**	**5.65**	**184**	P		**Pn**	**08 34 22.4**	**0.0**
HSAF	**As Saff** baz=179	**5.71**	**179**	P		**Pn**	**08 34 22.5**	**-0.7**
HSAF	**As Saff**	**5.71**	**179**	P		**Pn**	**08 34 22.5**	**-0.7**
HNAT	**Natroun** baz=189	**5.75**	**187**	P		**Pn**	**08 34 23.6**	**-0.1**
HNAT	**Natroun**	**5.75**	**187**	P		**Pn**	**08 34 23.6**	**-0.1**
GLL	**Jalalah** baz=178	**5.76**	**178**	P		**Pn**	**08 34 23.2**	**-0.6**
GLL	**Jalalah**	**5.76**	**178**	P		**Pn**	**08

	22nm,0.9s							
EIDS	**Eidsvold**	**17.86**	**211**	*e*P	**Pn**	08 37 58.4	**+0.5**
EIDS				*e*S	**S**	08 41 10.3	**-9.2**
EIDS	**Eidsvold**	**17.86**	**211**	*e*Pn	**Pn**	08 37 58.4	**+0.5**
	109nm,2.1s						
COEN	**Coen**	**17.93**	**256**	P	**Pn**	08 37 57.7	**-1.1**
	91nm,0.9s						
ARMA	**Armidale**	**22.00**	**202**	*e*P	**P**	08 38 43.0	**+0.5**
	28nm,1.4s,mb4.4						
CAN	**Canberra**	**27.36**	**202**	*e*P	**P**	08 39 34.1	**+1.4**
	14nm,1.0s,mb4.5						
WRAB	**Tennant Creek**	**27.56**	**246**	*e*P	**P**	08 39 34.8	**+0.1**
STKA	**Stephens Creek**	**28.15**	**217**	*e*P	**P**	08 39 40.6	**+0.7**
	5.3nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**28.15**	**217**	P	**P**	08 39 40.8	**+0.9**
	2.2nm,0.5s,mb3.9,baz=49,slow=20,SNR=3.2						
ASAR	**Alice Springs**	**29.20**	**239**	P	**P**	08 39 48.6	**-0.7**
	0.9nm,0.4s,mb3.8,baz=63,slow=11,SNR=6.7						
URZ	**Urewera**	**31.45**	**155**	P	**P**	08 40 10.1	**+1.1**
	12nm,1.1s,mb4.5,baz=346,slow=17,SNR=2.2						
BBOO	**Buckleboo**	**32.25**	**222**	*e*P	**P**	08 40 15.1	**-1.0**
	8.2nm,0.5s,mb4.7						
RPZ	**Rata Peaks**	**34.52**	**167**	P	**P**	08 40 35.1	**-0.6**
	12nm,0.9s,mb4.7,baz=21,slow=5.0,SNR=5.2						
FITZ	**Fitzroy Crossi**	**35.23**	**253**	*e*P	**P**	08 40 41.3	**-0.9**
	7.8nm,0.4s,mb4.9						
FITZ	**Fitzroy Crossi**	**35.23**	**253**	*e*P	**P**	08 40 41.4	**-0.8**
	3.6nm,0.7s,mb4.3						
FITZ	**Fitzroy Crossi**	**35.23**	**253**	P	**P**	08 40 41.3	**-0.9**
	5.4nm,0.6s,mb4.5,baz=91,slow=6.1,SNR=14						
MBWA	**Marble Bar**	**41.19**	**250**	*e*P	**P**	08 41 31.7	**-0.5**
MBWA	**Marble Bar**	**41.19**	**250**	*e*P	**P**	08 41 32.0	**-0.3**
	9.3nm,0.9s,mb4.6						
MEEK	**Meekatharra**	**43.28**	**242**	*e*P	**P**	08 41 49.5	**+0.3**
MORW	**Morawa**	**46.09**	**239**	*e*P	**P**	08 42 11.1	**-0.4**
NWAO	**Narrogin (SRO)**	**46.23**	**234**	*e*P	**P**	08 42 13.4	**+0.9**
	44nm,1.6s,mb4.9						
NWAO	**Narrogin (SRO)**	**46.23**	**234**	P	**P**	08 42 13.3	**+0.7**
	3.7nm,0.6s,mb4.3,baz=103,slow=14,SNR=3.3						
KSRS	**Korea Array**	**56.66**	**329**	P	**P**	08 43 29.4	**-0.9**
	2.1nm,0.7s,mb4.3,baz=138,slow=7.1,SNR=10						
KSRS				pP	pP	08 43 44.9	-2.8
	2.2nm,0.6s,baz=147,slow=8.2,SNR=7.0						
CMAR	**Chiang Mai Arr**	**67.59**	**295**	P	**P**	08 44 44.5	**+0.6**
	1.2nm,0.3s,mb4.2,baz=124,slow=4.6,SNR=4.7						
CMAR				pP	pP	08 44 58.9	-2.9
	4.0nm,0.8s,baz=130,slow=4.3,SNR=2.5						
ULN	**Ulaanbaatar**	**74.96**	**326**	*e*P	**P**	08 45 28.5	**+0.7**
	7.5nm,0.6s,mb4.6						
SONM	**Songino Array**	**75.31**	**325**	P	**P**	08 45 30.1	**+0.3**
	7.9nm,0.6s,mb4.6,baz=137,slow=5.6,SNR=22						
OHAK	**Old Harbor**	**76.85**	**24**	*e*P	**P**	08 45 37.9	**-0.5**
	12nm,0.8s,mb4.7						
KDAK	**Kodiak Island**	**77.52**	**23**	*e*P	**P**	08 45 42.3	**+0.2**
	15nm,0.8s,mb4.8						
RSO	**Redoubt South**	**79.30**	**21**	*e*P	**P**	08 45 51.5	**-0.4**
TTA	**Tatalina**	**79.98**	**18**	*e*P	**P**	08 45 55.5	**0.0**
PMR	**Palmer**	**81.37**	**22**	*e*P	**P**	08 46 02.6	**-0.4**
	11nm,1.0s,mb4.6						
MCK	**McKinley**	**82.84**	**20**	*e*P	**P**	08 46 10.0	**-0.6**
	24nm,1.0s,mb5.0						
MAW	**Mawson**	**83.80**	**202**	P	**P**	08 46 15.2	**-0.4**
	1.1nm,0.7s,mb3.8,baz=90,slow=5.0,SNR=4.0						
COLA	**College**	**83.94**	**20**	*e*P	**P**	08 46 14.9	**-1.3**
	5.5nm,0.8s,mb4.4						
ILAR	**Eielson Array**	**84.19**	**20**	P	**P**	08 46 16.1	**-1.4**
	1.9nm,0.5s,mb4.2,baz=246,slow=5.1,SNR=51						
ILAR				pP	pP	08 46 33.9	-2.1
	1.5nm,0.8s,baz=241,slow=5.1,SNR=3.8						
MENT	**Mentasta**	**84.19**	**22**	*e*P	**P**	08 46 17.9	**+0.3**
EGAK	**Eagle**	**86.18**	**21**	*e*P	**P**	08 46 27.5	**+0.1**
DAWY	**Dawson**	**86.44**	**22**	*e*P	**P**	08 46 28.9	**+0.2**
YBH	**Yreka Blue Hor**	**86.58**	**47**	*e*P	**P**	08 46 31.1	**+1.1**
MWC	**Mount Wilson**	**88.19**	**55**	*e*P	**P**	08 46 37.9	**+0.1**
	6.3nm,1.0s,mb4.6						
MTUM	**Tungsten Hills**	**88.53**	**52**	*e*P	**P**	08 46 40.5	**+1.1**
NVAR	**Mina Array Bea**	**88.98**	**51**	P	**P**	08 46 42.2	**+0.7**
NVAR				pP	pP	08 46 58.5	-1.6
NVAR	**Mina Array Bea**	**88.98**	**51**	P	**P**	08 46 42.2	**+0.7**
	2.0nm,0.8s,mb4.2,baz=236,slow=6.8,SNR=9.9						
NVAR				pP	pP	08 46 58.5	-1.6
	1.1nm,0.7s,baz=239,slow=5.6,SNR=3.4						
WVOR	**Wild Horse Val**	**89.69**	**47**	*e*P	**P**	08 46 45.5	**+0.7**
	14nm,1.3s,mb5.0						
MKAR	**Makanchi Array**	**89.78**	**318**	P	**P**	08 46 44.4	**-0.7**
	1.3nm,0.6s,mb4.2,baz=106,slow=5.1,SNR=5.6						
MKAR				pP	pP	08 47 02.4	-1.2
	0.7nm,0.4s,baz=89,slow=6.0,SNR=2.3						
ZALV	**Zalesovo Beam**	**90.20**	**325**	P	**P**	08 46 46.6	**-0.2**
	0.4nm,0.4s,mb4.0,baz=112,slow=6.4,SNR=2.6						
NEW	**Newport**	**92.09**	**41**	*e*P	**P**	08 46 55.2	**-0.5**
	3.1nm,0.9s,mb4.5						
CCUT	**Cedar City**	**92.61**	**52**	*e*P	**P**	08 46 59.8	**+1.3**
	3.6nm,1.1s,mb4.6						
M13A	**Montello**	**92.72**	**49**	*e*P	**P**	08 46 59.8	**+1.0**
	1.6nm,0.6s,mb4.5						
HLID	**Hailey**	**92.96**	**46**	*e*P	**P**	08 47 01.1	**+1.2**
YKA	**Yellowknife Ar**	**96.31**	**28**	P	**P**	08 47 13.6	**-1.2**
	1.8nm,0.7s,mb4.6,baz=261,slow=4.7,SNR=17						
BVAR	**Borovoye Array**	**98.46**	**322**	P	**P**	08 47 23.0	**-1.7**
	0.6nm,0.7s,mb4.3,baz=77,slow=12,SNR=3.5						
ARCES	**ARCESS Array B**	**114.30**	**344**	PKP	PKiKP	08 52 23.6	-1.7
ARCES				pPKP		08 52 42.2	
ARCES	**ARCESS Array B**	**114.30**	**344**	PKP	PKiKP	08 52 23.6	-1.7
	4.7nm,1.2s,baz=33,slow=2.2,SNR=2.7						
ARCES				pPKP		08 52 42.2	
	2.3nm,0.9s,baz=48,slow=1.8,SNR=2.3						
ESDC	**Sonseca Array**	**147.75**	**338**	PKPbc	PKPbc	08 53 32.4	**+0.9**
	0.2nm,0.6s,baz=1.4,slow=3.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**159.62**	**280**	pPKPab	pPKPab	08 54 38.1	-5.3
	0.8nm,0.9s,baz=53,slow=2.9,SNR=2.7						

NEIC ***10*** *08:52:11.6, 32°.29S×71°.60W, h15km, ML3.1(GUC), After GUC.*

GUC 10 08:52:11.6±0.6, 32°.29S×71°.60W, h15km±791km, MD3.9, ML3.1, 11C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.42**	**12**	⇑*i*P	Pg	08 52 19.8	-0.2
CHNG				*i* S	Sg	08 52 26.2	+0.5
ROCH	**El Roble**	**0.84**	**144**	⇑*i*P	Pb	08 52 27.6	-0.3
ROCH				*i* S	Sg	08 52 39.2	+0.2
ROCH				AML	AML	08 52 41.3	
	comp=N,780nm,0.5s						
JACH	**Jahuel**	**0.93**	**115**	⇑*i*P	Pb	08 52 28.9	-0.6
JACH	**Jahuel**	**0.93**	**115**	⇑*i*P	Pb	08 52 28.9	-0.6
PEL	**Peldehue**	**1.15**	**138**	*e*P	Pn	08 52 31.9	-1.2
PEL				*i* S	Sb	08 52 47.0	-0.8
CLCH	**Cerro Calan**	**1.42**	**141**	⇑*i*P	Pn	08 52 36.4	-0.5
CLCH				*i* S	Sn	08 52 54.4	-0.8
CLCH				AML	AML	08 52 56.8	
	comp=N,507nm,0.3s						
LACH	**Col Las Americ**	**1.46**	**142**	*e*P	Pn	08 52 36.7	-0.8
LACH				*i* S	Sn	08 52 55.8	-0.6
LACH				AML	AML	08 52 56.6	
	comp=E,221nm,0.2s						
TACH	**Talagante**	**1.47**	**158**	⇓*i*P	Pn	08 52 37.0	-0.5
TACH				*i* S	Sn	08 52 55.6	-0.8
TACH	**Talagante**	**1.47**	**158**	⇓*i*P	Pn	08 52 37.0	-0.5
TACH				*i* S	Sn	08 52 55.6	-0.8
ANTU	**Antumapu**	**1.51**	**148**	⇓*i*P	Pn	08 52 37.5	-0.6
ANTU				*i* S	Sn	08 52 57.1	-0.4
ANTU	**Antumapu**	**1.51**	**148**	⇓*i*P	Pn	08 52 37.5	-0.6
ANTU				*i* S	Sn	08 52 57.1	-0.4
ANTU				AML	AML	08 52 59.5	
	comp=N,457nm,0.6s						
FCH	**Farellones**	**1.51**	**133**	⇑*i*P	Pn	08 52 37.9	-0.1
FCH	**Farellones**	**1.51**	**133**	⇑*i*P	Pn	08 52 37.9	-0.1
FCH				AML	AML	08 53 00.8	
	comp=E,739nm,0.2s						
PCH	**Pirque**	**1.61**	**146**	⇑*i*P	Pn	08 52 39.0	-0.5
PCH				*i* S	Sn	08 52 59.8	-0.1
PCH	**Pirque**	**1.61**	**146**	⇑*i*P	Pn	08 52 39.0	-0.5
PCH				*i* S	Sn	08 52 59.8	-0.1
LNV	**Longovilo**	**1.67**	**175**	*e*P	Pn	08 52 39.5	-0.8
LNV				*i* S	Sn	08 53 01.3	0.0
LNV	**Longovilo**	**1.67**	**175**	*e*P	Pn	08 52 39.5	-0.8
LNV				*i* S	Sn	08 53 01.3	0.0
SJCH	**San Jose de Ma**	**1.70**	**142**	*e*P	Pn	08 52 40.6	-0.1
SJCH				S	Sn	08 53 01.6	-0.6
SJCH	**San Jose de Ma**	**1.70**	**142**	*e*P	Pn	08 52 40.6	-0.1
SJCH				*i* S	Sn	08 53 01.6	-0.6
LMEL	**Las Melosas**	**1.94**	**143**	⇑*i*P	Pn	08 52 44.2	+0.2
LMEL	**Las Melosas**	**1.94**	**143**	⇑*i*P	Pn	08 52 44.2	+0.2
LMEL				AML	AML	08 53 10.9	
	comp=N,586nm,0.2s						
CACH	**El Canelo**	**2.00**	**156**	*e*P	Pn	08 52 46.2	+1.3
CACH				*i* S	Sn	08 53 12.5	+2.8
CACH	**El Canelo**	**2.00**	**156**	*e*P	Pn	08 52 46.2	+1.3
CACH				*i* S	Sn	08 53 12.5	+2.8

IDC ***10*** *09:01:11.8±1.0, 10°.80N×91°.64E, h0km, mb4.0/13, mb1 4.0/14, mb1mx3.9/19, mbtmp3.9/14, Error ellipse: s-maj=32.9km s-min=22.5km az=56.0*

NEIC ***10*** *09:01:13.4±0.5, 10°.79N×91°.67E, h10km, mb4.2/3, Error ellipse: s-maj=13.8km s-min=10.5km az=51.0*

ISCJB ***10*** *09:01:15.3±0.7, 10°.9N±0°.1×91°.8E±0°.1, h33km, mb4.0/17, Error ellipse: s-maj=18.3km s-min=14.6km az=141.7*

ISC 10 09:01:17.4±0.7, 10°.8N±0°.1×91°.7E±0°.1, h35km, n21, σ0$62/20, mb4.0/17, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.30**	**42**	Pn	**Pn**	09 03 42.6	**-0.2**
	baz=237,slow=15,SNR=3.6						
GTA	**Gaotai**	**29.36**	**13**	*e*P	**P**	09 07 17.9	**+0.9**
GTA				pP	pP	09 07 24.0	-3.1
GTA				sP	sP	09 07 27.5	-3.8
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
AAK	**Ala-Archa**	**35.07**	**338**	P	**P**	09 08 06.3	**-0.7**
	comp=Z,1.6nm,0.3s,mb4.4,baz=194,slow=12,SNR=3.2						
MK31	**Makanchi Array**	**36.72**	**349**	*e*P	**P**	09 08 21.2	**+0.1**
MKAR	**Makanchi Array**	**36.72**	**349**	P	**P**	09 08 21.3	**+0.2**
	comp=Z,2.3nm,0.6s,mb4.2,baz=164,slow=8.1,SNR=13						
MKAR				PcP	PcP	09 10 42.2	-0.9
	comp=Z,0.2nm,0.3s,baz=188,slow=2.6,SNR=2.8						
SONM	**Songino Array**	**38.90**	**16**	P	**P**	09 08 39.7	**+0.3**
	comp=Z,0.6nm,0.4s,mb3.7,baz=203,slow=11,SNR=4.8						
KURK	**Kurchatov**	**41.20**	**347**	*e*P	**P**	09 08 59.1	**+0.6**
	comp=Z,1.4nm,0.8s,mb3.6						
KURK	**Kurchatov**	**41.20**	**347**	P	**P**	09 08 58.0	**-0.6**
	comp=Z,1.3nm,0.4s,mb3.9,baz=163,slow=7.3,SNR=3.3						
ZALV	**Zalesovo Beam**	**43.36**	**354**	P	**P**	09 09 16.0	**0.0**
	comp=Z,1.4nm,0.3s,mb4.1,baz=176,slow=8.9,SNR=9.7						
BVAR	**Borovoye Array**	**45.45**	**342**	P	**P**	09 09 32.9	**+0.1**
	comp=Z,0.6nm,0.5s,mb3.7,baz=114,slow=7.3,SNR=4.2						
ABKAR	**Akbulak array**	**46.51**	**332**	*e*P	**P**	09 09 41.8	**+0.6**
	comp=Z,2.1nm,0.8s,mb4.1						
WRAB	**Tennant Creek**	**51.92**	**126**	*e*P	**P**	09 10 22.7	**-0.2**
	comp=Z,4.8nm,0.9s,mb4.4						
ASAR	**Alice Springs**	**53.63**	**130**	P	**P**	09 10 36.0	**+0.5**
	comp=Z,1.3nm,0.7s,mb4.0,baz=306,slow=6.7,SNR=11						
BRTR	**Keskin Array B**	**58.71**	**310**	P	**P**	09 11 10.8	**-0.9**
	comp=Z,0.8nm,0.7s,mb3.9,baz=126,slow=7.8,SNR=6.6						
FINES	**FINESS Array B**	**69.00**	**332**	P	**P**	09 12 19.6	**+0.6**
	comp=Z,3.9nm,1.0s,mb4.3,baz=70,slow=16,SNR=5.5						
ARCES	**ARCESS Array B**	**71.69**	**340**	P	**P**	09 12 35.8	**+0.4**
	comp=Z,0.7nm,0.5s,mb3.8,baz=81,slow=7.5,SNR=9.4						
NOA	**NORSAR Array B**	**76.00**	**330**	P	**P**	09 12 59.9	**-0.8**
	comp=Z,0.7nm,0.7s,mb3.7,baz=99,slow=8.2,SNR=2.8						
ESDC	**Sonseca Array**	**87.50**	**310**	P	**P**	09 14 01.5	**-0.3**
	comp=Z,0.2nm,0.5s,mb3.6,baz=63,slow=2.4,SNR=3.1						
TORD	**Torodi Ar. Bea**	**87.61**	**283**	P	**P**	09 14 03.7	**+0.9**
	comp=Z,0.4nm,0.6s,mb3.8,baz=97,slow=3.7,SNR=3.1						
ILAR	**Eielson Array**	**92.90**	**21**	P	**P**	09 14 25.1	**-1.4**
	comp=Z,0.2nm,0.8s,mb3.6,baz=296,slow=4.7,SNR=4.9						
TXAR	**Lajitas Array**	**137.40**	**20**	PKP	PKPdf	09 20 38.1	+0.1
	comp=Z,0.2nm,0.7s,baz=234,slow=0.8,SNR=4.2						

IDC ***10*** *09:16:19.7±0.8, 10°.94N×91°.78E, h0km, mb4.0/14, mb1 4.1/15, mb1mx4.0/22, mbtmp4.0/15, ML4.1/1, Error ellipse: s-maj=27.5km s-min=15.6km az=55.0*

NEIC ***10*** *09:16:21.2±0.4, 10°.91N×91°.78E, h10km, mb4.4/5, Error ellipse: s-maj=14.0km s-min=8.0km az=56.0*

ISC 10 09:16:26.7±3.9, 11°.0N±0°.1×91°.9E±0°.2, h49km±33km, n25, σ0$60/23, mb4.0/18, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.05**	**42**	Pn	**Pn**	09 18 48.3	**-0.2**
	0.5nm,0.3s,baz=236,slow=15,SNR=4.1						
EKS2	**Erin-Say**	**35.29**	**337**	*e*P	**P**	09 23 18.1	**+1.3**
	1.8nm,0.7s,mb4.1						
MK31	**Makanchi Array**	**36.59**	**349**	*e*P	**P**	09 23 28.3	**+0.3**
MKAR	**Makanchi Array**	**36.59**	**349**	P	**P**	09 23 28.3	**+0.3**
	3.4nm,0.5s,mb4.4,baz=169,slow=8.3,SNR=23						
SONM	**Songino Array**	**38.68**	**16**	P	**P**	09 23 46.4	**+0.8**
	1.4nm,0.5s,mb3.9,baz=194,slow=9.2,SNR=7.4						
KURK	**Kurchatov**	**41.08**	**347**	P	**P**	09 24 04.4	**-1.0**
	2.5nm,0.6s,mb4.0						
KURK	**Kurchatov**	**41.08**	**347**	P	**P**	09 24 05.1	**-0.3**
	2.4nm,0.7s,mb4.0,baz=170,slow=7.4,SNR=6.7						
KSRS	**Korea Array**	**41.68**	**45**	P	**P**	09 24 10.3	**-0.3**
	0.5nm,0.5s,mb3.4,baz=246,slow=9.1,SNR=3.3						
ZALV	**Zalesovo Beam**	**43.21**	**354**	P	**P**	09 24 22.6	**-0.1**
	3.0nm,0.5s,mb4.3,baz=176,slow=9.6,SNR=12						
FITZ	**Fitzroy Crossi**	**44.09**	**131**	*e*P	**P**	09 24 29.9	**-0.5**
	5.9nm,0.8s,mb4.4						
FITZ	**Fitzroy Crossi**	**44.09**	**131**	P	**P**	09 24 29.6	**-0.8**
	1.8nm,0.6s,mb4.0,baz=333,slow=4.5,SNR=5.6						
BVAR	**Borovoye Array**	**45.35**	**342**	P	**P**	09 24 39.7	**-0.2**
	0.6nm,0.4s,mb3.7,baz=142,slow=7.5,SNR=6.3						
BVAR				PcP	PcP	09 26 19.0	+0.3
	0.4nm,0.6s,baz=96,slow=4.3,SNR=2.7						
ABKAR	**Akbulak array**	**46.45**	**331**	*e*P	**P**	09 24 49.2	**+0.5**
	3.0nm,0.7s,mb4.3						
WRAB	**Tennant Creek**	**51.86**	**126**	*e*P	**P**	09 25 30.4	**0.0**
	5.1nm,0.5s,mb4.7						
ASAR	**Alice Springs**	**53.59**	**130**	P	**P**	09 25 43.5	**+0.3**
	0.5nm,0.6s,mb3.6,baz=305,slow=7.8,SNR=6.2						
BRTR	**Keskin Array B**	**58.75**	**310**	P	**P**	09 26 18.6	**-1.1**
	1.3nm,0.7s,mb4.1,baz=127,slow=7.4,SNR=8.7						
STKA	**Stephens Creek**	**63.84**	**134**	P	**P**	09 26 55.2	**+0.9**
STKA	**Stephens Creek**	**63.84**	**134**	P	**P**	09 26 55.2	**+0.9**
	2.4nm,1.0s,mb4.2,baz=298,slow=6.3,SNR=2.6						
FINES	**FINESS Array B**	**68.94**	**332**	P	**P**	09 27 26.1	**-0.3**
	2.4nm,0.7s,mb4.2,baz=109,slow=7.2,SNR=9.2						
ARCES	**ARCESS Array B**	**71.60**	**340**	P	**P**	09 27 42.9	**+0.3**
	1.3nm,0.6s,mb4.1,baz=101,slow=5.1,SNR=12						
NOA	**NORSAR Array B**	**75.95**	**330**	P	**P**	09 28 07.4	**-0.7**
	0.4nm,0.6s,mb3.5,baz=95,slow=5.4,SNR=3.4						
TORD	**Torodi Ar. Bea**	**87.76**	**283**	P	**P**	09 29 11.5	**+0.3**
	0.4nm,0.8s,mb3.7,baz=88,slow=4.5,SNR=2.6						
ILAR	**Eielson Array**	**92.67**	**22**	P	**P**	09 29 32.4	**-0.7**
	0.4nm,0.8s,mb3.9,baz=292,slow=4.8,SNR=7.6						
NVAR	**Mina Array Bea**	**123.30**	**28**	PKP	PKPdf	09 35 19.8	+1.2
	0.2nm,0.5s,baz=311,slow=2.0,SNR=3.2						
TXAR	**Lajitas Array**	**137.17**	**20**	PKP	PKPdf	09 35 45.8	+0.6
	0.1nm,0.6s,baz=141,slow=3.0,SNR=3.5						

SZGRF ***10*** *09:27:49.2, 10°.13N×91°.85E, h32km, mb5.5, Andaman Islands, India, region*

ISCJB ***10*** *09:27:55.4±0.1, 11°.04N±0°.02×91°.78E±0°.02, h28km, mb5.3/287, MS4.9/49, Error ellipse: s-maj=3.5km s-min=2.2km az=29.7*

BJI ***10*** *09:27:55.2, 10°.91N×91°.75E, h35km, mB5.4/32, mb5.3/64, Ms5.1/63, Ms7 4.9/55*

MOS ***10*** *09:27:56.3±0.9, 11°.09N×91°.82E, h33km, mb5.6/110, MS5.0/9, Error ellipse: s-maj=6.7km s-min=3.6km az=122.1*

IDC ***10*** *09:27:56.8±2.2, 11°.06N×91°.81E, h25km±13km, mb4.8/25, mb1 4.8/27, mb1mx4.8/28, mbtmp4.8/27, ML4.3/2, MS4.8/21, Ms1 4.8/21, ms1mx4.5/40, Error ellipse: s-maj=14.3km s-min=10.3km az=70.0*

GCMT ***10*** *09:27:57.9±0.2, 11°.05N×91°.80E, h14km±1km, MW5.3, Moment Tensor Solution. s45,c58; s77,c132; Moment tensor: Scale 10^17 Nm; Mrr~0.95±.05; Mθθ~0.22±.03; Mφφ 1.18±.04; Mrθ 0.45±.10; Mrφ 0.33±.03; Mθφ~0.03±.07; Best double couple: M0 1.20000×10^17 NP1:φ=348.00000°, δ49.00000°, λ~127.00000°. NP2:φ=217.00000°, δ53.00000°, λ~56.00000°. Principal axes: T 1.2600, Plg2.0000°, Azm283.0000°; N -0.0700, Plg27.0000°, Azm14.0000°; P -1.1800, Plg63.0000°, Azm189.0000°; Data Used: ll IC G IU CN.*

NEIC ***10*** *09:27:57.4±1.3, 11°.03N×91°.76E, h30km±8km, mb5.3/162 Error ellipse: s-maj=4.1km s-min=3.0km az=209.0*

DJA ***10*** *09:27:58, 10°.99N×91°.87E, h31km, mb5.5/47*

ISC 10 09:27:57.4±0.1, 11°.03N±0°.02×91°.75E±0°.02, h30km, h30km±.6km: pP-P, n743, σ0$92/733, mb5.3/287, MS4.9/49,

21C-35D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BDT	**Bhumibol Dam**	**9.36**	**48**	P	**Pn**	09 30 10.0	**-0.4**
	60nm,1.0s						
NST	**Nakhon Sawan**	**9.37**	**60**	P	**Pn**	09 30 12.8	**+2.2**
SNG	**Songkhla**	**9.55**	**113**	P	**Pn**	09 30 14.0	**+0.9**
	140nm,0.8s						
CM31	**Chiang Mai Arr**	**10.14**	**42**	*e*Pn	**Pn**	09 30 22.4	**+1.3**
CMAR	**Chiang Mai Arr**	**10.14**	**42**	Pn	**Pn**	09 30 20.4	**-0.7**
	1.9nm,0.3s,baz=235,slow=14,SNR=34						
CMAR				Sn	**Sn**	09 32 18.1	**+4.2**
	0.9nm,0.3s,baz=235,slow=30,SNR=4.6						
CHG	**Chiang Mai**	**10.40**	**41**	PG	**Pn**	09 30 25.2	**+0.5**
CHG				SG	Px	09 30 32.1	
CHTO	**Chiang Mai**	**10.40**	**41**	*e*Pn	**Pn**	09 30 23.2	**-1.4**
CHTO	**Chiang Mai**	**10.40**	**41**	Pn	**Pn**	09 30 25.6	**+0.9**
	SNR=5.7						
KULM	**Kulim**	**10.49**	**122**	*e*Pn	**Pn**	09 30 25.5	**-0.4**
	65nm,1.1s						
KULM	**Kulim**	**10.49**	**122**	P	**Pn**	09 30 25.9	**0.0**
VIS	**Vishakhapatnam**	**10.53**	**310**	*e*PKP	**Pn**	09 30 25.3	**-1.1**
VIS				*i* S	**Sn**	09 32 12.6	**-11**
PSI	**Prapat**	**10.83**	**138**	Pn	**Pn**	09 30 31.1	**+0.5**
	0.7nm,0.3s,baz=350,slow=15,SNR=3.5						
BWNR	**Bhubaneshwar**	**10.85**	**329**	*e*PKP	**Pn**	09 30 32.0	**+1.2**
BWNR				*e*x	x	09 32 23.0	
IPM	**Ipoh**	**11.25**	**125**	P	**Pn**	09 30 36.4	**0.0**
MDRS	**Chennai**	**11.44**	**281**	⇑*e*PKP	x	09 30 59.2	
MDRS				*e*S	x	09 32 56.0	
PALK	**Pallekele**	**11.53**	**252**	*e*Pn	**Pn**	09 30 39.8	**-0.4**
	174nm,0.8s						
PALK				*e*Sn	**Sn**	09 32 43.1	**-4.9**
PALK	**Pallekele**	**11.53**	**252**	*i* P	**Pn**	09 30 45.1	**+4.9**
CHRT	**Chiangrai**	**11.71**	**40**	⇑P	**Pn**	09 30 41.5	**-1.1**
	316nm,0.9s						
FRIM	**Kepong**	**12.48**	**128**	P	**Pn**	09 30 53.5	**+0.4**
KTGM	**Kuala Trenggan**	**12.61**	**116**	P	**Pn**	09 30 55.3	**+0.4**
AGT	**Agartala**	**12.80**	**358**	*i* x	x	09 31 02.0	
AGT				*i* x	x	09 32 01.0	
IMP	**Imphal**	**13.84**	**8**	*e*x	x	09 31 17.0	
IMP				*e*x	x	09 33 55.0	
HYB	**Hyderabad**	**14.28**	**298**	*i* P	**Pn**	09 31 17.0	**-0.8**
HYB				*e*S	**Sn**	09 33 55.0	**-0.3**
SHL	**Shillong**	**14.46**	**0**	*e*PKP	**Pn**	09 31 17.0	**-3.2**
SHL				*e*S	**Sn**	09 33 54.0	**-5.6**
KGM	**Kluang**	**14.56**	**127**	P	**Pn**	09 31 21.2	**-0.3**
MYKOM	**Kota Tinggi**	**15.11**	**127**	P	**Pn**	09 31 28.5	**-0.5**
NGP	**Nagpur**	**15.81**	**311**	*e*PKP	**Pn**	09 31 37.4	**-0.6**
NGP				*e*x	x	09 34 19.1	
ODAN	**Odare**	**16.28**	**346**	*e*P	**Pn**	09 31 41.1	**-2.9**
	222nm,0.5s						
LATR	**Latur**	**16.42**	**298**	*e*PKP	**Pn**	09 31 45.6	**-0.3**
LATR				AMb	AMB	09 31 51.3	
	comp=Z,191nm,0.5s

KUDL Kundal 22.25 322 *e*PKP **P** **09 32 50.8 -1.2**
KUDL AMb AMB 09 32 56.2
comp=Z,160nm,1.3s,mb5.3
AJM Ajmer 22.29 316 *i* P **P** **09 32 53.0 +0.6**
AJM *i* x x 09 36 53.0
STKI Sintang 22.42 118 P **P** **09 32 53.0 -1.0**
comp=Z,74nm,1.1s,mb5.0
JOSI Joshimath 22.49 332 *e*PKP **P** **09 32 56.2 +1.7**
BTM Bintulu 22.53 109 P **P** **09 32 55.2 0.0**
KHET Khetri 22.61 321 *e*PKP **P** **09 32 56.9 +1.0**
KHET AMb AMB 09 33 01.2
comp=Z,278nm,1.2s,mb5.6
CD2 Chengdu 22.70 28 ⇓P **P** **09 32 56.1 -0.7**
CD2 pP 09 33 05.3
CD2 sP sP 09 33 09.4 +0.8
CD2 PP 09 33 25.5
CD2 PcP PcP 09 36 48.3 -0.3
CD2 S **S** **09 36 58.5 -5.3**
CD2 sS sS 09 37 13.5 -3.7
CD2 SS 09 37 42.5
CD2 pmax pmax
comp=Z,160nm,1.2s,mb5.3
CD2 pmax pmax
comp=Z,1μm,9.5s
CD2 LR LR
comp=N,3μm,12.9s,MS5.1
CD2 LR LR
comp=E,4μm,14.5s,MS5.1
CD2 LR LR
comp=Z,3μm,14.9s,MS4.9
RTK Rohtak 22.94 324 *ex* pP 09 33 05.5 -1.9
GZH Guangzhou 23.83 57 P **P** **09 33 12.5 +4.3**
GZH S **S** **09 37 28.9 +6.6**
GZH LR LR
comp=N,2μm,18.6s,MS4.8
GZH LR LR
comp=E,2μm,15.5s,MS4.8
GZH LR LR
comp=Z,4μm,16.8s,MS4.9
PBKI Pangkalan Bun 24.06 123 P **P** **09 33 10.4 +0.1**
SMLA Simla 24.14 328 *i* P **P** **09 33 10.7 -0.2**
SMLA AML AML 09 33 12.8
comp=Z,233nm,0.1s
SMLA *i* x x 09 37 32.8
SMLA *i* x x 09 37 34.8
SDNR Sundarnagar 24.54 328 *e*PKP **P** **09 33 16.5 +1.9**
SDNR *ex* x 09 36 32.5
KKM Kota Kinabalu 24.68 100 *e*P **P** **09 33 15.7 -0.4**
comp=Z,87nm,1.2s,mb5.2
KKM Kota Kinabalu 24.68 100 P **P** **09 33 15.1 -1.0**
comp=Z,1μmcomp=Z,72nm,1.5s,mb5.0
BHK Bhakra 24.76 327 *ex* **P** **09 33 14.3 -2.3**
KDM Kudat 25.10 97 P **P** **09 33 19.6 -0.3**
JASL Jaisalmer 25.21 312 *e*PKP **P** **09 33 20.4 -0.4**
SDKM Sandakan 25.73 100 P **P** **09 33 25.0 -0.6**
TSM Tawau 26.72 102 P **P** **09 33 33.9 -0.7**
MYLDM Lahad Datu 27.10 100 P **P** **09 33 37.8 -0.1**
MYLDM Lahad Datu 27.10 100 P **P** **09 33 38.3 +0.3**
comp=Z,142nm,0.9s,mb5.5
LZH Lanzhou 27.25 22 ⇓P **P** **09 33 39.5 +0.5**
LZH pP pP 09 33 44.6 -3.0
LZH PP 09 34 28.0
LZH *e*S **S** **09 38 16.9 +0.5**
LZH sS sS 09 38 29.0 -1.6
LZH SS 09 39 34.2
LZH pmax pmax
comp=Z,97nm,1.2s,mb5.2
LZH pmax pmax
comp=Z,370nm,4.3s
LZH LR LR
comp=E,4μm,14.7s
LZH LR LR
comp=Z,6μm,18.0s,MS5.2
XAN Xi'an 27.77 32 P **P** **09 33 42.2 -1.6**
XAN pP pP 09 33 51.4 -1.0
XAN sP sP 09 33 54.3 -1.7
XAN pmax pmax
comp=Z,13nm,1.0s,mb4.5
XAN LR LR
comp=N,2μm,20.0s,MS4.6
XAN LR LR
comp=E,470nm,17.2s,MS4.6
XAN LR LR
comp=Z,710nm,17.2s,MS4.3
WHN Wuhan 28.59 44 ⇓P **P** **09 33 50.5 -0.6**
WHN S **S** **09 38 40.6 +2.9**
WHN pmax pmax
comp=Z,57nm,0.8s,mb5.3
WHN LR LR
comp=N,4μm,14.0s,MS5.4
WHN LR LR
comp=E,4μm,14.2s,MS5.4
WHN LR LR
comp=Z,9μm,14.9s,MS5.5
QZH Quanzhou 28.96 58 *e*P **P** **09 33 55.1 +0.6**
QZH S **S** **09 38 45.0 +1.3**
QZH LR LR
comp=N,3μm,16.0s,MS5.2
QZH LR LR
comp=E,4μm,14.0s,MS5.2
QZH LR LR
comp=Z,6μm,16.3s,MS5.3
GTA Gaotai 29.16 13 ⇓P **P** **09 33 57.2 +1.1**
GTA pP pP 09 34 06.2 +1.5
GTA sP sP 09 34 10.7 +2.4
GTA PcP PcP 09 37 03.9 +0.7
GTA S **S** **09 38 49.1 +2.6**
GTA sS sS 09 39 03.4 +2.7
GTA pmax pmax
comp=Z,100nm,1.1s,mb5.5
GTA pmax pmax
comp=Z,290nm,4.8s
GTA LR LR
comp=N,1μm,16.6s,MS4.8
GTA LR LR
comp=E,1μm,15.2s,MS4.8
GTA LR LR
comp=Z,1μm,14.9s,MS4.7
QUE Quetta 29.92 313 *e*P **P** **09 34 06.0 +3.1**
QUE *e*S **S** **09 39 05.0 +6.4**
SRBI Singaraja 30.09 128 P **P** **09 34 04.8 +0.2**
comp=Z,124nm,1.4s,mb5.4
TPUB Ta-pu 30.10 62 *e*P **P** **09 34 04.9 +0.3**
comp=Z,35nm,0.8s,mb5.1
PCI Palu 30.33 111 P **P** **09 34 06.2 -0.6**
comp=Z,776nmcomp=Z,55nm,0.9s,mb5.3
TWG Pinlang 30.34 63 *e*P **P** **09 34 08.4 +1.7**
comp=Z,29nm,0.6s,mb5.2
SSLB Suanglung 30.54 62 *e*P **P** **09 34 09.2 +0.7**
comp=Z,75nm,0.9s,mb5.5
KHKI Kahang-Kahang 30.57 128 P **P** **09 34 08.3 -0.5**
comp=Z,56nm,1.3s,mb5.2
YULB Yu-li 30.71 63 *e*P **P** **09 34 11.5 +1.5**
comp=Z,68nm,1.0s,mb5.4
YHNB Yeheng 31.20 60 *e*P **P** **09 34 14.9 +0.6**
comp=Z,96nm,0.9s,mb5.6
NACB Ninganchiao 31.22 61 *e*P **P** **09 34 15.3 +0.8**
comp=Z,20nm,0.8s,mb5.0
TTSI Tana Toraja 31.23 115 P **P** **09 34 15.7 +1.0**
comp=Z,1μmcomp=Z,64nm,1.0s,mb5.4
KBL Kabul 31.25 322 *e*P **P** **09 34 15.6 +1.0**
comp=Z,50nm,0.9s,mb5.3
KBL Kabul 31.25 322 *e*P **P** **09 34 15.6 +0.9**
KBL pmax pmax
comp=Z,50nm,0.9s,mb5.3
TATO Taipei 31.41 60 *e*P **P** **09 34 16.6 +0.5**
comp=Z,90nm,1.2s,mb5.5
KSH Kashi 31.65 336 *e*P **P** **09 34 19.9 +1.8**
KSH *e*pP pP 09 34 25.5 -1.2
KSH *e*sP sP 09 34 27.5 -2.8
KSH *e*PP PP 09 35 23.6 -6.3
KSH *e*PcP PcP 09 37 13.2 +3.5
KSH *e*S **S** **09 39 25.8 +0.3**
KSH *e*sS sS 09 39 33.4 -6.4
KSH *e*SS 09 40 13.4
KSH *e*ScP ScP 09 40 55.2 +4.1
KSH *e*PcS PcS 09 40 56.8 +2.7
KSH *e*ScS ScS 09 44 51.1 +2.1
KSH pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
KSH pmax pmax
comp=Z,560nm,5.9s
KSH LR LR
comp=N,2μm,13.7s,MS5.0
KSH LR LR
comp=E,2μm,17.4s,MS5.0
KSH LR LR
comp=Z,2μm,15.5s,MS4.8
KSH Kashi 31.65 336 ⇓*i*P **P** **09 34 17.3 -0.8**
KSH *e*PP PP 09 35 21.1 -8.8
KSH *e*PcP PcP 09 37 08.9 -0.8
KSH S **S** **09 39 23.5 -2.0**
KSH *e*ScP ScP 09 40 51.1 0.0
KSH *e*PcS PcS 09 40 53.2 -0.9
KSH *e*SS SS 09 41 13.1 -29
KSH *e*ScS ScS 09 44 47.1 -1.9
KSH pmax pmax
comp=Z,24nm,0.8s,mb5.1
KSH pmax pmax
comp=Z,190nm,3.1s
KSH LR LR
comp=N,2μm,13.7s,MS5.0
KSH LR LR
comp=E,2μm,17.4s,MS5.0
KSH LR LR
comp=Z,2μm,17.0s,MS4.8
MRSI Marisa 31.77 107 P **P** **09 34 19.1 -0.3**
comp=Z,671nmcomp=Z,64nm,1.2s,mb5.3
BKSI Bulukumba 32.58 119 P **P** **09 34 26.6 +0.1**
comp=Z,2μmcomp=Z,215nm,1.1s,mb6.0
NJ2 Nanjing 32.59 46 *e*P **P** **09 34 26.5 0.0**
NJ2 pP pP 09 34 33.7 -1.4
NJ2 sP sP 09 34 37.1 -1.6
NJ2 PP PP 09 35 35.5 -4.9
NJ2 pmax pmax
comp=Z,120nm,0.9s,mb5.8
NJ2 pmax pmax
comp=Z,1μm,6.7s
NJ2 LR LR
comp=N,2μm,16.1s,MS5.0
NJ2 LR LR
comp=E,2μm,20.6s,MS5.0
NJ2 LR LR
comp=Z,2μm,18.6s,MS4.9
WMQ Urumqi 32.86 355 P **P** **09 34 32.0 +3.4**
WMQ pP pP 09 34 40.0 +2.7
WMQ sP sP 09 34 44.2 +3.3
WMQ *e*S **S** **09 39 47.5 +3.2**
WMQ SS SS 09 41 46.5 -20
WMQ ScS ScS 09 44 55.0 0.0
WMQ pmax pmax
comp=Z,52nm,1.2s,mb5.3
WMQ pmax pmax
comp=Z,760nm,5.4s
WMQ LR LR
comp=N,2μm,19.5s,MS4.8
WMQ LR LR
comp=E,1μm,19.0s,MS4.8
WMQ LR LR
comp=Z,1μm,20.4s,MS4.6
LUWI Luwuk 33.09 109 P **P** **09 34 31.1 +0.1**
comp=Z,2μmcomp=Z,156nm,0.9s,mb5.9
BTO Baotou 33.59 26 *e*P **P** **09 34 34.3 -0.7**
KMSI Cibinong 33.66 106 P **P** **09 34 36.7 +0.7**
comp=Z,474nm,0.9s,mb6.4
SSE Sheshan 33.78 49 P **P** **09 34 35.4 -1.5**
SSE pP pP 09 34 44.2 -1.3
SSE S **S** **09 39 55.3 -3.6**
SSE pmax pmax
comp=Z,48nm,0.8s,mb5.5
SSE pmax pmax
comp=Z,830nm,12.0s
SSE LR LR
comp=N,2μm,21.0s,MS4.8
SSE LR LR
comp=E,990nm,21.0s,MS4.8
SSE LR LR
comp=Z,2μm,16.3s,MS5.0
KDI Kendari 34.13 114 P **P** **09 34 39.4 -0.7**
comp=Z,320nm,1.0s,mb5.2
KZA Kyzart 34.14 338 P **P** **09 34 41.6 +1.8**
SNR=8.9
MNI Manado 34.20 104 P **P** **09 34 40.8 +0.1**
comp=Z,215nm,0.7s,mb6.2
HHC Hu-ho-hao-te 34.46 27 *e*P **P** **09 34 42.9 +0.3**
HHC pP pP 09 34 49.9 -1.4
HHC sP sP 09 34 53.6 -1.3
HHC PP PP 09 35 58.7 -2.3
HHC *e*S **S** **09 40 07.9 -1.2**
HHC PcS PcS 09 41 03.4 -0.5
HHC SS SS 09 42 21.9 -17
HHC ScS ScS 09 45 02.1 -1.4
HHC pmax pmax
comp=Z,37nm,0.9s,mb5.3
HHC pmax pmax
comp=Z,980nm,5.0s
HHC LR LR
comp=N,1μm,15.6s,MS5.0
HHC LR LR
comp=E,2μm,15.2s,MS5.0
HHC LR LR
comp=Z,3μm,16.8s,MS5.0
UCH Uchtor 34.55 337 P **P** **09 34 45.1 +1.8**
SNR=28
UCH Uchtor 34.55 337 *e*P **P** **09 34 44.9 +1.6**
comp=Z,27nm,0.9s,mb5.2
UCH *e* pP 09 34 53.9 +1.9
TKM2 Tokmak 2 34.75 339 P **P** **09 34 47.7 +2.6**
SNR=16
TKM2 Tokmak 2 34.75 339 *e*P **P** **09 34 46.1 +1.0**
comp=Z,59nm,1.4s,mb5.3
TKM2 Tokmak 2 34.75 339 *e*P **P** **09 34 46.1 +1.0**
TKM2 pmax pmax
comp=Z,59nm,1.4s,mb5.3
KBK Karagaybulak 34.75 338 P **P** **09 34 46.9 +1.8**
SNR=18
AML Almayashu 34.78 336 P **P** **09 34 47.4 +2.0**
SNR=19
AML Almayashu 34.78 336 *e*P **P** **09 34 47.0 +1.7**
comp=Z,217nm,1.4s,mb5.9
AML *e* pP 09 34 56.7 +2.7
AAK Ala-Archa 34.90 338 P **P** **09 34 48.6 +2.2**
comp=Z,372nm,1.4s,mb6.1,SNR=14
AAK Ala-Archa 34.90 338 P **P** **09 34 48.2 +1.8**
SNR=21
AAK Ala-Archa 34.90 338 *e*P **P** **09 34 48.1 +1.8**
comp=Z,136nm,1.4s,mb5.7
AAK Ala-Archa 34.90 338 LR LR 09 51 29.5
comp=Z,3μm,20.6s,MS5.0,baz=144,slow=40
AAK Ala-Archa 34.90 338 *e*P **P** **09 34 48.1 +1.7**
AAK pmax pmax
comp=Z,136nm,1.4s,mb5.7
CHMS Chumysh 35.12 338 P **P** **09 34 49.3 +1.0**
SNR=17
EKS2 Erkin-Say 35.20 337 P **P** **09 34 50.7 +1.7**
SNR=41
EKS2 Erkin-Say 35.20 337 *e*P **P** **09 34 50.4 +1.5**
comp=Z,71nm,0.9s,mb5.6
EKS2 *e* pP 09 35 00.2 +2.6
USP Ospenovka 35.45 338 P **P** **09 34 52.1 +1.0**
SNR=23
MMRI Maumere 36.07 122 P **P** **09 34 54.0 -2.8**
comp=Z,2μmcomp=Z,115nm,1.2s,mb5.7
BJI Beijing 36.09 33 P **P** **09 34 57.2 +0.5**
BJI pP pP 09 35 03.6 -1.8
BJI sP sP 09 35 06.7 -2.3
BJI S **S** **09 40 30.0 -4.2**
BJI SS SS 09 43 03.0 -9.4
BJI pmax pmax
comp=Z,67nm,1.0s,mb5.5
BJI LR LR
comp=N,3μm,18.2s,MS5.2
BJI LR LR
comp=E,2μm,16.9s,MS5.2
BJI LR LR
comp=Z,2μm,17.1s,MS5.0
MK31 Makanchi Array 36.54 349 *e*P **P** **09 35 00.2 -0.1**
MK31 Makanchi Array 36.54 349 *i* P **P** **09 35 00.6 +0.2**
MKAR Makanchi Array 36.54 349 P **P** **09 35 00.8 +0.4**
comp=Z,24nm,0.8s,mb5.1,baz=168,slow=8.1,SNR=84
MKAR LR LR 09 53 29.9
comp=Z,1μm,19.0s,MS4.7,baz=356,slow=42
TNTI Ternate 36.81 104 P **P** **09 35 02.5 -0.7**
comp=Z,60nm,1.1s,mb5.3
KK31 Karatay Array 36.91 334 *i* P **P** **09 35 03.7 +0.1**
KK31 pmax pmax
comp=Z,79nm,0.9s,mb5.5
ASUD Al Ashush, Dub 37.09 296 P **P** **09 35 08.9 +3.5**
SNR=6.4
LBMI Labuha 37.38 106 P **P** **09 35 09.4 +1.4**
comp=Z,85nm,0.8s,mb5.6
NLAI Namlea 37.92 110 P **P** **09 35 13.1 +0.6**
comp=Z,1μmcomp=Z,107nm,0.8s,mb5.6
DL2 Dalian 38.46 39 P **P** **09 35 17.2 +0.5**
DL2 *e*S **S** **09 41 13.0 +2.8**
DL2 pmax pmax
comp=Z,30nm,1.1s,mb4.9
DL2 LR LR
comp=N,1μm,16.5s
DL2 LR LR
comp=Z,1μm,15.0s,MS4.8
SONM Songino Array 38.70 16 P **P** **09 35 19.3 +0.6**
comp=Z,54nm,1.0s,mb5.2,baz=199,slow=8.9,SNR=164
SONM ScP ScP 09 41 16.3 0.0
comp=Z,0.9nm,0.6s,baz=197,slow=4.5,SNR=4.6
SONM LR LR 09 54 17.5
comp=Z,2μm,19.1s,MS5.0,baz=183,slow=41
SONM Songino Array 38.70 16 P **P** **09 35 19.3 +0.7**
SONM 09 41 16.3
ULN Ulaanbaatar 38.91 16 *e*P **P** **09 35 20.8 +0.4**
comp=Z,47nm,1.0s,mb5.2
ULN *e* pP 09 35 29.9 +0.8
ULN Ulaanbaatar 38.91 16 *e*P **P** **09 35 20.8 +0.4**
ULN *e* pP 09 35 30.0 +0.9
ULN pmax pmax
comp=Z,47nm,1.0s,mb5.2
ULN Ulaanbaatar 38.91 16 P **P** **09 35 21.0 +0.6**
comp=Z,951nmcomp=Z,51nm,1.3s,mb5.1
ULN Ulaanbaatar 38.91 16 P **P** **09 35 21.1 +0.8**
SNR=43
AAI Ambon 39.10 110 P **P** **09 35 22.2 -0.3**
comp=Z,260nm,0.8s,mb6.0
ABKT Ailbek 40.30 317 P **P** **09 35 34.3 +2.2**
comp=Z,308nm,1.6s,mb5.8,SNR=9.7
ZAK Zakamensk 40.37 11 ⇑*i*P **P** **09 35 33.0 +0.5**
ZAK pmax pmax
comp=Z,30nm,1.4s,mb4.8
INCN Inchon 40.90 44 *e*P **P** **09 35 37.1 0.0**
comp=Z,155nm,1.4s,mb5.5
INCN *e* pP 09 35 45.2 -0.7
INCN Inchon 40.90 44 P **P** **09 35 46.0 +8.9**
SNR=5.1
KURK Kurchatov 41.02 347 P **P** **09 35 38.7 +0.8**
comp=Z,457nm,1.2s,mb6.0,SNR=38
KURK Kurchatov 41.02 347 *e*P **P** **09 35 38.1 +0.2**
comp=Z,145nm,1.3s,mb5.5
KURK Kurchatov 41.02 347 P **P** **09 35 37.8 -0.1**
comp=Z,66nm,1.1s,mb5.2,baz=162,slow=7.4,SNR=77
KURK PcP PcP 09 37 36.8 -0.7
comp=Z,4.2nm,0.8s,baz=160,slow=3.5,SNR=3.7
KURK ScP ScP 09 41 25.8 +0.5
comp=Z,4.1nm,1.0s,baz=163,slow=3.4,SNR=6.7
KURK LR LR 09 56 10.8
comp=Z,1μm,19.3s,MS4.7,baz=100,slow=41
KURK Kurchatov 41.02 347 *d i*P **P** **09 35 38.3 +0.4**
KURK pmax pmax
comp=Z,168nm,1.7s,mb5.4
KURK Kurchatov 41.02 347 P **P** **09 35 38.7 +0.8**
SNR=45
MOY Mondy 41.22 9 *e*P **P** **09 35 40.2 +0.7**
MOY pmax pmax
comp=Z,76nm,3.0s
SNY Shenyang 41.44 37 ⇓P **P** **09 35 41.3 -0.1**
SNY pmax pmax
comp=Z,59nm,1.2s,mb5.1
SNY LR LR
comp=N,2μm,16.8s,MS5.1
SNY LR LR
comp=E,680nm,16.8s,MS5.1
SNY LR LR
comp=Z,2μm,14.7s,MS5.1
TLY Talaya 41.68 11 P **P** **09 35 44.7 +1.4**
comp=Z,163nm,1.1s,mb5.6,SNR=13
TLY Talaya 41.68 11 *e*P **P** **09 35 44.8 +1.6**
comp=Z,58nm,1.3s,mb5.0
TLY Talaya 41.68 11 *e*P **P** **09 35 44.9 +1.6**
TLY pmax pmax
comp=Z,49nm,1.2s,mb5.0
TLY Talaya 41.68 11 P **P** **09 35 44.9 +1.6**
SNR=22
KSRS Korea Array 41.77 45 P **P** **09 35 43.7 -0.6**
comp=Z,24nm,1.1s,mb4.8,baz=244,slow=8.7,SNR=50
KSRS LR LR 09 55 14.3
comp=Z,1μm,19.4s,MS4.8,baz=242,slow=39
MBWA Marble Bar 42.17 139 *e*P **P** **09 35 46.9 -0.8**
comp=Z,33nm,1.0s,mb4.9
MBWA *e* 09 35 57.8
MBWA Marble Bar 42.17 139 P **P** **09 35 44.9 -2.8**
comp=Z,44nm,1.2s,mb5.0
IRK Irkutsk 42.34 11 *e*P **P** **09 35 47.9 -0.7**
IRK pmax pmax
comp=Z,78nm,1.7s,mb5.1
ZAA0 Zalesovo Array 43.17 354 *e*P **P** **09 35 55.3 -0.1**
ZAA0 *e* pP 09 36 03.0 -1.1
ZALV Zalesovo Beam 43.17 354 P **P** **09 35 55.4 +0.1**
ZALV ScP ScP 09 41 33.0 -0.9
ZALV LR LR 09 57 55.1
ZALV Zalesovo Beam 43.17 354 P **P** **09 35 55.4 +0.1**
comp=Z,8.7nm,0.4s,mb4.9,baz=169,slow=8.5,SNR=71
ZALV ScP ScP 09 41 33.0 -0.9
comp=Z,0.7nm,0.4s,baz=176,slow=5.5,SNR=2.6
ZALV LR LR 09 57 55.1
comp=Z,1μm,18.2s,MS4.8,baz=182,slow=42
CN2 Changchun 43.74 36 *e*P **P** **09 35 59.8 -0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,800nm,21.0s,MS4.8
CN2 LR LR
comp=E,1μm,21.0s,MS4.8
CN2 LR LR
comp=Z,200nm,23.0s,MS4.0
TLE Tual 44.02 110 P **P** **09 36 01.9 -0.9**
comp=Z,189nm,1.0s,mb5.8
NVS Novosibirsk 44.22 353 ⇑*i*P **P** **09 36 03.2 -0.6**
NVS pmax pmax
comp=N,52nm,1.6s
NVS pmax pmax
comp=E,27nm,1.6s
NVS pmax pmax
comp=Z,62nm,1.6s,mb5.1
FITZ Fitzroy Crossi 44.23 131 *e*P **P** **09 36 02.9 -1.5**
comp=Z,150nm,0.8s,mb5.8
FITZ Fitzroy Crossi 44.23 131 *e*P **P** **09 36 03.2 -1.2**
comp=Z,79nm,0.8s,mb5.5
FITZ Fitzroy Crossi 44.23 131 P **P** **09 36 03.3 -1.1**
comp=Z,75nm,0.8s,mb5.5,baz=325,slow=6.1,SNR=132
FITZ LR LR 09 56 22.6
comp=Z,673nm,18.1s,MS4.6,baz=303,slow=39
FITZ Fitzroy Crossi 44.23 131 P **P** **09 36 03.8 -0.6**
comp=Z,210nm,1.0s,mb5.8
CIT Chita 44.55 19 *e*P **P** **09 36 06.2 -0.2**
CIT *e* pP 09 36 14.2 -1.1
CIT *e* 09 36 24.3
CIT pmax pmax
comp=Z,150nm,1.5s,mb5.6
KBD Kabd 44.83 300 *e*P **P** **09 36 09.6 +0.4**
KBD AMb AMB 09 36 11.4
comp=Z,46nm,0.9s,mb5.3
RDF Al-Radifah 44.90 300 *e*P **P** **09 36 10.4 +0.8**
RDF AMb AMB 09 36 12.5
comp=Z,107nm,0.9s,mb5.7
UMR Umm Al-Rimmam 44.91 301 *e*P **P** **09 36 09.9 +0.2**
UMR AMb AMB 09 36 11.6
comp=Z,61nm,1.3s,mb5.3
NAY Al-Naaiem 45.23 300 *e*P **P** **09 36 12.5 +0.2**
NAY AMb AMB 09 36 14.4
comp=Z,45nm,0.7s,mb5.4
BVA0 Borovoye Array 45.27 342 *i* P **P** **09 36 12.0 -0.2**
BVAR Borovoye Array 45.27 342 P **P** **09 36 12.0 -0.2**
comp=Z,12nm,0.9s,mb4.7,baz=150,slow=6.8,SNR=57
BVAR PcP PcP 09 37 55.3 +3.6
comp=Z,4.7nm,0.7s,baz=145,slow=3.0,SNR=1.8
BVAR ScP ScP 09 41 43.3 +0.8
comp=Z,2.9nm,1.0s,baz=147,slow=3.5,SNR=3.6
BVAR Borovoye Array 45.27 342 P **P** **09 36 12.0 -0.2**
BVAR 09 37 55.3
KNA Kununurra 45.28 125 P **P** **09 36 11.5 -1.3**
comp=Z,904nmcomp=Z,123nm,0.9s,mb5.7
MIB Mutribah 45.29 301 *e*P **P** **09 36 13.0 +0.2**
MIB AMb AMB 09 36 16.1
comp=Z,84nm,1.0s,mb5.5
BRVK Borovoye 45.33 342 P **P** **09 36 12.9 +0.2**
comp=Z,147nm,1.4s,mb5.6,SNR=15
BRVK Borovoye 45.33 342 *e*P **P** **09 36 12.9 +0.2**
comp=Z,54nm,1.3s,mb5.2

BRVK Borovoye 45.33 342 *d* iP P 09 36 12.7 0.0
BRVK pmax pmax
comp=Z,43nm,1.2s,mb5.2
BRVK Borovoye 45.33 342 P P **09 36 13.2 +0.5**
SNR=16
BAKI Biak 45.74 103 P P **09 36 15.4 -1.1**
comp=Z,77nm,1.2s,mb5.5
AB31 Akbulak array 46.35 331 *i* P P **09 36 21.4 +0.6**
AB31 pmax pmax
comp=Z,16nm,0.5s,mb5.2
ABKAR Akbulak array 46.35 331 *e*P P **09 36 21.2 +0.4**
comp=Z,64nm,1.0s,mb5.5
MDJ Mudanjiang 46.63 37 P P **09 36 23.5 +0.5**
MDJ sP sP 09 36 32.2 -3.3
MDJ PP PP 09 38 12.7 -0.2
MDJ S S **09 43 13.3 +3.0**
MDJ pmax pmax
comp=Z,30nm,1.7s,mb5.0
MDJ pmax pmax
comp=Z,320nm,9.9s
MDJ LR LR
comp=N,1μm,25.0s,MS4.8
MDJ LR LR
comp=E,610nm,23.8s,MS4.8
MDJ LR LR
comp=Z,1μm,18.9s,MS4.9
KAKA Kakadu 46.77 119 *e*P P **09 36 23.3 -1.3**
comp=Z,14nm,0.6s,mb5.1
KAKA Kakadu 46.77 119 *e*P P **09 36 23.7 -0.8**
KAKA Kakadu 46.77 119 P P **09 36 23.7 -0.9**
comp=Z,369nmcomp=Z,41nm,0.7s,mb5.5
ATD Arta Tunnel 47.92 276 LR LR 09 54 33.0
comp=Z,586nm,18.1s,MS4.6,baz=78,slow=33
AKTO Aktyubinsk 48.07 331 LR LR 09 58 57.5
comp=Z,980nm,19.5s,MS4.8,baz=319,slow=39
MAJO Matsushiro 48.90 51 *e*P P **09 36 40.5 -0.3**
comp=Z,95nm,1.4s,mb5.6
MAJO *e* pP 09 36 49.9 +0.1
MAJO Matsushiro 48.90 51 *e*P P **09 36 40.5 -0.3**
MAJO *e* pP 09 36 49.9 +0.1
MAJO pmax pmax
comp=Z,95nm,1.4s,mb5.6
MAT Matsushiro 48.90 51 P P **09 36 40.3 -0.5**
MAK Makhachkala 49.81 318 *e*P pP 09 36 57.9 +1.3
NWAO Narrogin (SRO) 50.02 152 *e*P P **09 36 47.7 -1.5**
comp=Z,79nm,1.5s,mb5.5
NWAO Narrogin (SRO) 50.02 152 P P **09 36 48.5 -0.7**
comp=Z,16nm,0.7s,mb5.2,baz=318,slow=7.3,SNR=19
NWAO LR LR 09 58 59.6
comp=Z,1μm,19.7s,MS4.9,baz=330,slow=37
NWAO Narrogin (SRO) 50.02 152 *e*P P **09 36 47.7 -1.6**
NWAO pmax pmax
comp=Z,79nm,1.5s
GNI Garni 50.57 313 *e*P P **09 36 54.9 +1.5**
comp=Z,157nm,1.4s,mb5.8
GNI Garni 50.57 313 *e*P P **09 36 54.9 +1.4**
GNI pmax pmax
comp=Z,157nm,1.4s
DGRG David-gareji 50.62 315 P P **09 36 54.9 +1.1**
MTA Mtatsminda 51.12 315 P P **09 36 58.7 +1.1**
TBLG Delisi 51.17 315 *e*P P **09 36 58.9 +1.0**
TBLG Delisi 51.17 315 P P **09 36 59.0 +1.0**
SVE Sverdlovsk 51.62 339⇑ *e*P P **09 37 01.8 +0.7**
SVE pmax pmax
comp=Z,116nm,1.4s,mb5.6
SVE MLR MLR
comp=Z,1μm,19.0s,MS5.0
GOR Gori 51.70 315 P P **09 36 56.9 -5.0**
GUMO Guam 51.88 81 *e*P P **09 37 03.2 -0.4**
comp=Z,21nm,0.6s,mb5.2
GUMO Guam 51.88 81 *e*P P **09 37 03.2 -0.5**
GUMO pmax pmax
comp=Z,21nm,0.6s,mb5.2
HABR Khabarovsk 51.88 35 *e*P P **09 37 02.2 -0.9**
HABR *e**PP pP 09 37 10.5 -1.6
HABR *e**SP sP 09 37 14.6 -1.0
HABR *e* 09 38 13.3
HABR 09 38 58.4
HABR *e*S S **09 44 21.4 -2.5**
HABR *e**SS sS 09 44 37.4 -1.3
HABR 09 46 47.4
HABR *e*SS SS 09 47 58.9 -2.0
HABR *e*SSS 09 49 39.5
HABR MLR MLR
comp=Z,574nm,19.0s,MS4.6
WRAB Tennant Creek 52.01 126 P P **09 37 03.0 -1.5**
comp=Z,215nm,0.5s,mb6.3,SNR=34
WRAB Tennant Creek 52.01 126 *e*P P **09 37 03.4 -1.1**
comp=Z,32nm,0.7s,mb5.4
WRAB Tennant Creek 52.01 126 *e*P P **09 37 03.4 -1.1**
WRAB pmax pmax
comp=Z,32nm,0.7s,mb5.4
WRAB Tennant Creek 52.01 126 P P **09 37 03.7 -0.8**
comp=Z,55nm,0.8s,mb5.6
ARU Arti 52.09 337 *e*P P **09 37 04.4 -0.2**
comp=Z,78nm,1.3s,mb5.5
ARU *e* pP 09 37 14.2 +0.7
ARU Arti 52.09 337 *d* iP P **09 37 04.7 +0.1**
ARU *e* 09 38 12.0
ARU *e* 09 39 06.5
ARU S S **09 44 29.1 +2.6**
ARU SS SS 09 47 53.8 -10
ARU pmax pmax
comp=Z,89nm,1.7s,mb5.4
ARU Arti 52.09 337 P P **09 37 04.9 +0.3**
comp=Z,230nm,1.5s,mb5.9,SNR=7.5
ZEI Tsey 52.15 316 *e*P P **09 37 05.9 +0.7**
ZEI pmax pmax
comp=Z,62nm,1.5s,mb5.3
CLNS Chul'man 52.37 22 *e*P P **09 37 07.0 +0.4**
CLNS pmax pmax
comp=Z,54nm,1.2s,mb5.3
CLNS pmax pmax
comp=E,30nm,1.1s
CLNS pmax pmax
comp=N,29nm,1.1s
CLNS MLR MLR
comp=Z,1μm,12.0s,MS5.1
CLNS MLR MLR
comp=N,960nm,12.0s,MS5.2
CLNS MLR MLR
comp=E,809nm,13.0s,MS5.2
OPO Ambohidratompo 52.89 237 P P **09 37 13.0 +1.9**
comp=E,5.1nm,0.7s,mb4.5,baz=55,slow=6.9,SNR=11
ABPO Ambohimpanom 53.08 236 *e*P P **09 37 14.2 +1.8**
comp=E,79nm,1.4s,mb5.5
ABPO Ambohimpanom 53.08 236 *e*P P **09 37 14.2 +1.7**
ABPO pmax pmax
comp=Z,79nm,1.4s,mb5.5
KIV Kislovodsk 53.42 317 P P **09 37 15.4 +0.8**
comp=Z,447nm,0.8s,mb6.5,SNR=10
KIV Kislovodsk 53.42 317 *e*P P **09 37 14.8 +0.2**
comp=Z,312nm,1.7s,mb6.0
KIV *e* pP 09 37 23.0 -0.7
KIV Kislovodsk 53.42 317 *e*P P **09 37 14.9 +0.3**
KIV *e* pP 09 37 23.0 -0.6
KIV pmax pmax
comp=Z,312nm,1.7s,mb6.0
KIV Kislovodsk 53.42 317 P P **09 37 16.1 +1.5**
SNR=16
ASAR Alice Springs 53.73 130 P P **09 37 16.6 -0.6**
comp=Z,10nm,0.6s,mb4.9,baz=306,slow=6.5,SNR=133
ASAR PcP PcP 09 38 23.1 0.0
comp=Z,5.9nm,0.6s,baz=314,slow=3.3,SNR=5.6
ASAR ScP ScP 09 42 19.5 +0.4
comp=Z,1.1nm,0.9s,baz=322,slow=3.1,SNR=4.6
ASAR S S **09 44 45.9 -3.9**
comp=Z,3.5nm,0.9s,baz=292,slow=12,SNR=14
ASAR Alice Springs 53.73 130 P P **09 37 16.7 -0.5**
ASAR 09 38 23.1
ASAR S S **09 44 45.9 -3.9**
FORT Forrest 54.25 141 *e*P P **09 37 20.4 -0.5**
comp=Z,16nm,0.6s,mb5.1
FORT Forrest 54.25 141 *e*P P **09 37 20.8 -0.1**
comp=Z,17nm,0.6s,mb5.2
ERM Erimo 54.33 46 P P **09 37 22.8 +1.5**
comp=Z,84nm,1.2s,mb5.5,SNR=6.1
ERM Erimo 54.33 46 *e*P P **09 37 22.6 +1.3**
comp=Z,19nm,0.6s,mb5.2
ERM Erimo 54.33 46 *e*P P **09 37 22.6 +1.3**
ERM pmax pmax
comp=Z,19nm,0.6s,mb5.2
MALT Malatya 54.65 309 *e*P P **09 37 24.2 +0.5**
comp=Z,81nm,1.5s,mb5.5
MALT *e* pP 09 37 31.5 -1.2
MALT Malatya 54.65 309 *e*P P **09 37 24.2 +0.5**
MALT *e* pP 09 37 31.5 -1.2
MALT pmax pmax
comp=Z,81nm,1.5s,mb5.5
MALT Malatya 54.65 309 ⇓P P **09 37 24.4 +0.7**
MALT Malatya 54.65 309 ⇓ *i*P P **09 37 24.4 +0.7**
MALT Malatya 54.65 309 P P **09 37 24.4 +0.7**
comp=Z,35nm,1.4s,mb5.2
SOKR Solikamsk 55.03 339 *d* iP P **09 37 26.7 +0.6**
SOKR pmax pmax
comp=Z,90nm,1.6s,mb5.5
SOKR MLR MLR
comp=Z,1μm,18.0s,MS5.1
SOC Sochi 55.29 316 *d* iP P **09 37 27.6 -0.6**
SOC *e**PP pP 09 37 36.7 -0.6
SOC *e*PPP 09 40 40.3
SOC *e*S S **09 45 10.6 +0.3**
SOC pmax pmax
comp=Z,47nm,1.2s,mb5.4
KMBO Kilima Mbogo 55.51 261 P P **09 37 32.0 +1.7**
comp=Z,7.2nm,1.0s,mb4.7,baz=0.1,slow=24,SNR=14
KMBO LR LR 09 58 33.5
comp=Z,1μm,19.6s,MS4.9,baz=270,slow=33
YSS Yuzh-Sakhalins 55.83 40 *e*P P **09 37 32.1 0.0**
YSS *e* pP 09 37 39.5 -1.6
VRHR Novokhopersk 57.02 325 *e*P P **09 37 40.2 -0.3**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,30nm,0.7s
VRHR pmax pmax
comp=Z,70nm,0.7s,mb5.8
YAK Yakutsk 57.81 20 *e*P P **09 37 44.8 -1.0**
comp=Z,90nm,0.9s,mb5.8
YAK *e* pP 09 37 54.3 -0.7
YAK Yakutsk 57.81 20 *e*P P **09 37 45.3 -0.6**
YAK *e**PP pP 09 37 53.4 -1.5
YAK *e* 09 38 32.5
YAK *e* 09 39 54.9
YAK *e*S S **09 45 41.4 -1.7**
YAK *e**SS sS 09 45 55.8 -2.3
YAK *e* 09 47 26.4
YAK pmax pmax
comp=Z,62nm,1.1s,mb5.5
YAK pmax pmax
comp=N,25nm,1.1s
YAK pmax pmax
comp=E,40nm,1.4s
YAK pmax pmax
comp=Z,23nm,1.0s,mb5.2
YAK pmax pmax
comp=E,17nm,1.3s
YAK pmax pmax
comp=N,10.0nm,1.0s
YAK smax
comp=E,183nm,2.2s
YAK smax
comp=N,110nm,1.8s
YAK MLR MLR
comp=Z,1μm,20.0s,MS5.0
YAK MLR MLR
comp=E,645nm,19.0s,MS4.8
YAK MLR MLR
comp=N,335nm,19.0s,MS4.8
VORD Divnogorie 58.30 324 *e*P P **09 37 48.9 -0.6**
VORD *e**PP pP 09 37 58.3 -0.3
VORD *e*S S **09 45 49.2 -0.6**
VORD pmax pmax
comp=N,40nm,1.3s
VORD pmax pmax
comp=Z,60nm,1.3s,mb5.5
VORD pmax pmax
comp=E,30nm,0.7s
VORD smax
comp=N,190nm,3.7s
VORD smax
comp=E,240nm,3.7s
VORD smax
comp=Z,40nm,1.9s
VORD MLR MLR
comp=N,470nm,15.0s,MS4.9
VORD MLR MLR
comp=E,440nm,15.0s,MS4.9
VORD MLR MLR
comp=Z,730nm,15.0s,MS4.9
VSR Storozhevoye 58.47 324 *e*P P **09 37 50.1 -0.6**
VSR *e**PP pP 09 37 59.5 -0.3
VSR *e* 09 38 40.9
VSR *e*S S **09 45 49.3 -2.8**
VSR pmax pmax
comp=N,20nm,1.3s
VSR pmax pmax
comp=E,60nm,1.3s
VSR pmax pmax
comp=Z,70nm,1.3s,mb5.5
VSR smax
comp=N,310nm,4.4s
VSR smax
comp=E,110nm,4.4s
VSR smax
comp=Z,170nm,4.4s
BR131 Keskin Array S 58.61 310 *e*P P **09 37 51.1 -0.7**
comp=Z,11nm,0.7s,mb5.0
BR131 *e* pP 09 37 58.3 -2.7
BRTR Keskin Array B 58.61 310 P P **09 37 50.8 -1.0**
comp=Z,13nm,0.8s,mb5.0,baz=123,slow=7.8,SNR=95
VOR Voronezh 58.66 325 *e*P P **09 37 53.0 +1.0**
VOR pmax pmax
comp=Z,140nm,1.4s,mb5.8
PMG Port Moresby 58.72 108 *e*P P **09 37 53.0 -0.1**
comp=Z,68nm,0.8s,mb5.7
PMG *e* pP 09 38 02.0 -0.2
PMG Port Moresby 58.72 108 *d* iP P **09 37 53.6 +0.6**
PMG pmax pmax
comp=Z,56nm,1.0s
PMG Port Moresby 58.72 108 P P **09 37 53.3 +0.3**
comp=Z,90nm,0.9s,mb5.8
SIM Simferopol' 59.54 316 *d* iP P **09 37 58.0 -0.2**
SIM pmax pmax
comp=Z,23nm,0.9s,mb5.2
MOS Moscow 61.18 328 *e*P P **09 38 06.2 -3.0**
MOS *e* 09 38 49.2
MOS pmax pmax
comp=Z,500nm,2.0s,mb6.3
MOS pmax pmax
comp=Z,191nm,1.4s,mb6.0
OBN Obninsk 61.47 328 *e*P P **09 38 11.5 +0.3**
comp=Z,232nm,1.5s,mb6.1
OBN *e* pP 09 38 21.3 +0.9
OBN Obninsk 61.47 328 *ke*P P **09 38 11.3 +0.1**
OBN *i**PP pP 09 38 21.0 +0.7
OBN *i* 09 38 54.2
OBN *e* 09 40 27.5
OBN *e*S S **09 46 32.3 +1.8**
OBN pmax pmax
comp=Z,300nm,1.9s,mb6.1
OBN pmax pmax
comp=Z,181nm,1.7s,mb5.9
CTA Charters Tower 61.90 120 *e*P P **09 38 14.7 0.0**
comp=Z,21nm,1.5s,mb5.0
CTAO Charters Tower 61.90 120 *e*P P **09 38 14.8 +0.2**
comp=Z,124nm,1.6s,mb5.8
CTAO Charters Tower 61.90 120 *e*P P **09 38 14.8 +0.1**
CTAO pmax pmax
comp=Z,124nm,1.6s,mb5.8
CTAO Charters Tower 61.90 120 P P **09 38 15.6 +0.9**
comp=Z,42nm,1.6s,mb5.3
KLMR Klimovskoe 62.61 334 *e*P P **09 38 17.3 -1.4**
KLMR pmax pmax
comp=Z,155nm,1.5s,mb5.9
KIS Kishinev 63.62 317 *e*P P **09 38 25.0 -0.7**
KIS *e* pP 09 38 34.0 -0.9
STKA Stephens Creek 63.97 134 *e*P P **09 38 27.9 -0.3**
comp=Z,10nm,0.6s,mb5.0
STKA Stephens Creek 63.97 134 P P **09 38 28.3 +0.1**
STKA LR LR 10 09 28.8
STKA Stephens Creek 63.97 134 P P **09 38 28.3 +0.1**
comp=Z,6.4nm,0.5s,mb4.9,baz=302,slow=5.8,SNR=30
STKA LR LR 10 09 28.8
comp=Z,759nm,19.7s,MS4.9,baz=312,slow=39
AKASG Malin Array Be 64.24 321 P P **09 38 28.3 -1.4**
comp=Z,5.9nm,0.6s,mb4.8,baz=91,slow=4.9,SNR=42
AKASG LR LR 10 07 37.3
comp=Z,684nm,21.2s,MS4.8,baz=85,slow=37
AKBB Malin Array Si 64.24 321 *e*P P **09 38 28.7 -1.0**
KIEV Kiev 64.25 321 *e*P P **09 38 28.6 -1.1**
comp=Z,17nm,1.0s,mb5.0
KIEV pmax pmax
comp=Z,17nm,1.0s,mb5.0
JMB Yambol 64.35 312 *i* P P **09 38 26.7 -3.9**
TIXI Tiksi 64.64 12 *e*P P **09 38 30.0 -2.0**
comp=Z,45nm,0.8s,mb5.5
TIXI Tiksi 64.64 12 *e*P P **09 38 31.1 -0.9**
TIXI pmax pmax
comp=Z,93nm,1.6s,mb5.6
VRI Vrincioaia 64.81 316 P P **09 38 34.6 +1.1**
VRI Vrincioaia 64.81 316⇑ *i*P P **09 38 34.0 +0.5**
PLOR Plostina 64.86 316 P P **09 38 34.6 +0.7**
PLOR Plostina 64.86 316 ⇓ *i*P P **09 38 34.4 +0.5**
TESR 64.98 316 P P **09 38 35.1 +0.4**
TESR 64.98 316⇑ *i*P P **09 38 34.9 +0.3**
KDZ Kurdzhali 65.09 311 *i* P P **09 38 34.8 -0.7**
MLR Muntele Rosu 65.29 315 P P **09 38 37.7 +1.1**
MLR Muntele Rosu 65.29 315 ⇓ *i*P P **09 38 37.3 +0.7**
SKR Severo-Kuril's 65.36 39 *e*P P **09 38 36.7 -0.3**
SKR pmax pmax
comp=N,40nm,1.0s
SKR pmax pmax
comp=E,90nm,1.0s
SKR pmax pmax
comp=Z,110nm,1.0s,mb5.8
RZN Rozhen 65.62 311 *i* P P **09 38 36.6 -2.3**
PLD Plovdiv 65.68 311 *i* P P **09 38 38.9 -0.4**
VOIR 65.90 315 ⇓P P **09 38 40.1 -0.5**
VOIR 65.90 315 ⇓ *i*P P **09 38 40.1 -0.5**
MICGM Minsk 66.01 325⇑ *e*P P **09 38 38.0 -3.1**
MNK Minsk 66.04 325⇑ *e*P P **09 38 38.0 -3.3**
MNK pmax pmax
comp=Z,140nm,1.4s,mb5.8
PGB Panagyurishte 66.13 312 *i* P P **09 38 41.2 -0.9**
BUR01 Bucovina Ar. S 66.15 317 P P **09 38 42.8 +0.7**
BURAR Bucovina Array 66.15 317 ⇓P P **09 38 42.7 +0.5**
BURAR Bucovina Array 66.15 317 ⇓ *i*P P **09 38 42.7 +0.6**
BUR08 Bucovina Ar. S 66.16 317 *e*P P **09 38 42.4 +0.2**
MMB Musomiste 66.34 311 *i* P P **09 38 41.8 -1.7**
MPEP Malo Peshtene 66.54 312 *i* P P **09 38 44.4 -0.3**
NACGM Naroch 66.73 325 *e* P P **09 38 42.0 -3.7**
VTS Vitosha 66.84 312⇑ P P **09 38 46.4 -0.3**
VTS Vitosha 66.84 312⇑ *i*P P **09 38 46.4 -0.3**
VTS Vitosha 66.84 312 *i* P P **09 38 46.1 -0.6**
KKB Krupnik 66.85 311 *i* P P **09 38 45.3 -1.5**
JOF Joensuu 67.01 334 *e*P P **09 38 47.9 +0.6**
JOF pmax pmax
comp=Z,62nm,0.9s,mb5.6
JOF Joensuu 67.01 334 *ep* P **09 38 47.9 +0.6**
comp=Z,62nm,0.9s,mb5.6
SEY Seymchan 67.09 26 ⇓ *i*P P **09 38 47.7 -0.2**
VAY Valandovo 67.18 310 *e*P P **09 38 46.9 -1.9**
LVV L'vov 67.30 319 *e*P P **09 38 48.5 -1.0**
BMR Baia Mare 67.30 317 P P **09 38 50.6 +1.1**
PET Petropavlovsk 67.41 37 *e*P P **09 38 48.4 -1.7**
comp=Z,54nm,1.4s,mb5.4
PET *e* pP 09 38 57.9 -1.4
PET Petropavlovsk 67.41 37 *e*P P **09 38 49.2 -0.9**
PET *e* 09 39 14.6
PET pmax pmax
comp=Z,20nm,1.0s,mb5.1
PET MLR MLR
comp=Z,1μm,20.0s,MS5.1
PET MLR MLR
comp=Z,1μm,18.0s
DRGR 67.71 316 P P **09 38 52.6 +0.5**
DRGR 67.71 316⇑ *i*P P **09 38 52.0 -0.1**
TRPA Tarpa 68.01 318⇑ *i*P P **09 38 53.3 -0.6**
SKO Skopje 68.08 311 *e*P P **09 38 53.2 -1.4**
APA Apatity 68.09 339⇑ *i*P P **09 38 54.0 -0.1**
APA *i* 09 39 07.3
APA pmax pmax
comp=Z,90nm,1.3s,mb5.6
APA MLR MLR
comp=Z,1μm,17.0s,MS5.3
BIA Bitola 68.09 310 *e*P P **09 38 52.5 -2.2**
KWP Kalwaria Pacla 68.12 319 *e*P P **09 38 54.9 +0.3**
EIDS Eidsvold 68.15 123 *e*P P **09 38 56.4 +1.1**
comp=Z,28nm,1.5s,mb5.1
LSZ Lusaka 68.16 249 *e*P P **09 38 56.9 +1.5**
comp=Z,18nm,0.9s,mb5.1
LSZ *e* pP 09 39 06.4 +1.8
LSZ Lusaka 68.16 249 *e*P P **09 38 56.9 +1.5**
LSZ *e* pP 09 39 06.4 +1.7
LSZ pmax pmax
comp=Z,17nm,0.9s,mb5.1
LSZ Lusaka 68.16 249 P P **09 38 57.6 +2.2**
SNR=5.4
KRUS Krusevo 68.18 310 *e*P P **09 38 52.7 -2.5**
UZH Uzhgorod 68.24 318 *e*P P **09 38 54.5 -0.9**
UZH *e* pP 09 39 01.5 -3.1
UZH *e* 09 39 10.5
UZH *e* 09 39 27.3
BZS Buzias 68.32 315 P P **09 38 56.1 +0.2**
BZS Buzias 68.32 315⇑ *i*P P **09 38 56.1 +0.2**
SUW Suwalki 68.59 324 *e*P P **09 38 56.6 -0.9**
SUW Suwalki 68.59 324 *e*P P **09 38 56.7 -0.7**
comp=Z,174nm,1.3s,mb5.8
SUW Suwalki 68.59 324 *e*P P **09 38 56.7 -0.8**
SUW pmax pmax
comp=Z,174nm,1.3s,mb5.8
CRVS Cervenica-Dubn 68.82 318 *e*P P **09 38 59.8 +0.8**
comp=Z,49nm,1.4s,mb5.2
CRVS Cervenica-Dubn 68.82 318 *e*P P **09 38 59.8 +0.8**
CRVS pmax pmax
comp=Z,49nm,1.4s,mb5.2
CRVS Cervenica-Dubn 68.82 318 *e*P P **09 38 59.8 +0.8**
FINES FINESS Array B 68.84 332 P P **09 38 58.4 -0.5**
comp=Z,16nm,0.7s,mb5.1,baz=104,slow=8.0,SNR=47
FINES LR LR 10 15 41.4
comp=Z,640nm,18.1s,MS4.9,baz=293,slow=42
KAF Kangasniemi 68.93 333 *e*P P **09 38 59.8 +0.4**
KAF pmax pmax
comp=Z,116nm,1.4s,mb5.6
KAF Kangasniemi 68.93 333 *ep* P **09 38 59.8 +0.4**
comp=Z,116nm,1.4s,mb5.6
STHS Stebnicka Huta 69.03 319 *e*P P **09 39 00.7 +0.4**
comp=Z,7.8nm,1.3s,mb4.5
STHS Stebnicka Huta 69.03 319 *e*P P **09 39 00.7 +0.4**
STHS pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
STHS Stebnicka Huta 69.03 319 *e*P P **09 39 00.7 +0.4**
KECS Kecovo 69.41 318 *e*P P **09 39 02.9 +0.2**
comp=Z,6.2nm,0.9s,mb4.5
KECS Kecovo 69.41 318 *e*P P **09 39 02.9 +0.2**
KECS pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KECS Kecovo 69.41 318 *e*P P **09 39 02.9 +0.2**
NIE Niedzica 69.64 319 *e*P P **09 39 04.7 +0.6**
PSZ Piszkesteto 69.74 317 *e*P P **09 39 04.5 -0.3**
comp=Z,30nm,1.4s,mb5.0
PSZ Piszkesteto 69.74 317 P P **09 39 04.9 +0.1**
PSZ Piszkesteto 69.74 317 ⇓ *i*P P **09 39 04.6 -0.1**
PSZ Piszkesteto 69.74 317 ⇓ *e*P P **09 39 04.4 -0.3**
TOO Toolangi 69.75 137 *e*P P **09 39 07.0 +2.1**
OJC Ojcow 70.06 319 *e*P P **09 39 06.4 -0.3**
BUD Budapest 70.29 317 ⇓ *e*P P **09 39 07.6 -0.5**
PKSM Moragy 70.44 315 P P **09 39 08.8 -0.2**
PKSM Moragy 70.44 315 ⇓ *i*P P **09 39 08.4 -0.7**
VYHS Vyhne 70.50 318 *e*P P **09 39 08.9 -0.5**
comp=Z,19nm,1.7s,mb4.8
VYHS Vyhne 70.50 318 *e*P P **09 39 08.9 -0.5**
VYHS pmax pmax
comp=Z,19nm,1.7s,mb4.8
VYHS Vyhne 70.50 318 *e*P P **09 39 08.9 -0.5**
ARMA Armiale 70.74 128 *e*P P **09 39 06.1 -5.0**
ARMA Armiale 70.74 128 *e*P P **09 39 13.2 +2.1**
comp=Z,21nm,1.0s,mb5.0
OKC Ostrava-Krasne 71.08 319 *e*P P **09 39 13.0 +0.1**
OKC *e* pP 09 39 20.0 -2.2
OKC Ostrava-Krasne 71.08 319 *e*P P **09 39 13.0 +0.1**
OKC *ep*P pP 09 39 20.0 -2.2
KEV Kevo 71.10 341 *e*P P **09 39 12.6 -0.1**
comp=Z,108nm,1.4s,mb5.6
KEV *e* pP 09 39 20.1 -1.8
KEV Kevo 71.10 341 *e*P P **09 39 13.0 +0.4**
KEV pmax pmax
comp=Z,113nm,1.6s,mb5.5
KEV Kevo 71.10 341 *ep* P **09 39 13.0 +0.4**
comp=Z,113nm,1.6s,mb5.5
MORC Moravsky Berou 71.47 319 *e*P P **09 39 15.0 -0.2**
comp=Z,27nm,1.2s,mb5.1
MORC *e* pP 09 39 24.6 +0.1

MORC Moravsky Berou 71.47 319 ⇓P **P** 09 39 15.2 0.0
MORC Moravsky Berou 71.47 319 ⇓*i*P **P** 09 39 15.2 0.0
TIP Timpagrande 71.51 308 *e*P **P** 09 39 15.6 -0.1
comp=Z,45nm,1.7s,mb5.1
ARCES ARCESS Array B 71.52 340 P **P** 09 39 15.3 +0.1
ARCES LR LR 10 13 11.9
ARCES ARCESS Array B 71.52 340 P **P** 09 39 15.3 +0.1
comp=Z,12nm,0.7s,mb4.9,baz=89,slow=7.0,SNR=51
ARCES LR LR 10 13 11.9
comp=Z,1µm,21.4s,MS5.1,baz=292,slow=38
ARE0 ARCESS Array S 71.52 340 *e*P **P** 09 39 15.7 +0.5
ZST Bratislava 71.63 317 *e*P **P** 09 39 16.4 +0.1
comp=Z,94nm,1.8s,mb5.4
ZST Bratislava 71.63 317 *e*P **P** 09 39 16.4 +0.1
ZST pmax pmax
comp=Z,94nm,1.8s,mb5.4
ZST Bratislava 71.63 317 *e*P **P** 09 39 16.4 +0.1
KTK1 Kautokeino 72.13 339 *e*P **P** 09 39 19.0 +0.1
KTK1 AMB AMB 09 39 21.5
comp=Z,132nm,1.9s,mb5.5
KTK1 *e*pP pP 09 39 26.5 -1.6
CEL Celeste 72.18 307 *e*P **P** 09 39 19.5 -0.3
comp=Z,99nm,1.3s,mb5.6
DPC Dobruska-Polom 72.30 319 *e*P **P** 09 39 20.7 +0.5
DPC *e* pP 09 39 28.1 -1.4
DPC Dobruska-Polom 72.30 319 *e*P **P** 09 39 20.7 +0.5
DPC *e*pP pP 09 39 28.1 -1.4
KSP Ksiaz 72.35 320 *e*P **P** 09 39 20.8 +0.3
KSP Ksiaz 72.35 320 *e*P **P** 09 39 20.4 -0.1
KSP *e**PP pP 09 39 27.7 -2.1
CONA Conrad Observa 72.45 317 ⇑*i*P **P** 09 39 20.4 -0.7
comp=Z,23nm,1.6s,mb4.8
UPC Upice 72.50 320 *e*P **P** 09 39 21.7 +0.3
UPC *e* pP 09 39 30.7 0.0
UPC Upice 72.50 320 *e*P **P** 09 39 21.7 +0.3
UPC *e*pP pP 09 39 30.7 0.0
ARSA Arzberg 72.64 316 ⇑*i*P **P** 09 39 22.1 -0.2
comp=Z,40nm,1.6s,mb5.1,SNR=14
BOJS Bojanci 72.77 314 *i* P **P** 09 39 22.6 -0.5
TREC Trest 72.77 318 *e*P **P** 09 39 22.7 -0.3
TREC *e* pP 09 39 32.0 -0.3
TREC Trest 72.77 318 *e*P **P** 09 39 22.7 -0.3
TREC *e*pP pP 09 39 32.0 -0.3
SOKA Soboth 72.96 316 ⇓*i*P **P** 09 39 24.1 -0.1
comp=Z,41nm,1.4s,mb5.2
PDKS Podkum 72.96 315 *i* P **P** 09 39 24.1 -0.2
VISS Visnje 73.06 315 *i* P **P** 09 39 24.1 -0.8
VAE Valguarnera 73.36 306 LR LR 10 13 21.3
comp=Z,540nm,18.6s,MS4.9,baz=76,slow=37
PRU Pruhonice 73.42 319 *e*P **P** 09 39 27.5 +0.7
PRU *e* pP 09 39 36.5 +0.3
PRU Pruhonice 73.42 319 *e*P **P** 09 39 27.5 +0.7
PRU *e*pP pP 09 39 36.5 +0.3
PVCC Panska Ves 73.42 320 *e*P **P** 09 39 27.2 +0.3
PVCC *e* pP 09 39 36.0 -0.2
PVCC Panska Ves 73.42 320 *e*P **P** 09 39 27.2 +0.3
PVCC *e*pP pP 09 39 36.0 -0.2
BSD Bornholm Skovb 73.50 324 *i* P **P** 09 39 34.5 +7.3
BSD pmax pmax
comp=Z,28nm,0.8s,mb5.2
BSD Bornholm Skovb 73.50 324 *i* P **P** 09 39 34.5 +7.3
comp=Z,28nm,0.8s,mb4.2
LBTB Lobatse 73.73 240 *e*P **P** 09 39 29.9 +0.8
comp=Z,30nm,0.9s,mb5.2
LBTB Lobatse 73.73 240 *e*P **P** 09 39 29.9 +0.8
LBTB pmax pmax
comp=Z,30nm,0.9s,mb5.2
VOY Vojsko 73.73 315 *e*P **P** 09 39 28.2 -0.6
VOY *e* pP 09 39 37.6 -0.5
TRO Tromso 73.77 340 *e*P **P** 09 39 28.0 -0.5
TRO AMB AMB 09 39 40.0
comp=Z,59nm,2.2s,mb5.1
BRG Berggiesshubel 73.84 320 *e*P **P** 09 39 29.2 -0.1
comp=Z,77nm,1.7s,mb5.4
BRG Berggiesshubel 73.84 320 *i* P **P** 09 39 29.4 +0.1
comp=Z,75nm,1.7s,mb5.4
BRG *i* pP 09 39 36.6 -2.0
comp=Z,12nm,0.9s
BRG PP PP 09 42 07.2 -6.9
comp=Z,8.0nm,1.3s
MYKA Terra Mystica 73.91 315 ⇓*i*P **P** 09 39 29.3 -0.5
comp=Z,17nm,1.0s,mb4.9
GEC2 GERESS Array S 73.92 318 *e*P **P** 09 39 29.6 -0.2
comp=Z,79nm,1.8s,mb5.3
GEC2 GERESS Array S 73.92 318 *e*P **P** 09 39 29.6 -0.2
GEC2 pmax pmax
comp=Z,79nm,1.8s,mb5.3
RUE Ruedersdorf 74.01 322 *e*P **P** 09 39 30.0 -0.3
RUE Ruedersdorf 74.01 322 *e*P **P** 09 39 30.3 0.0
comp=Z,100nm,1.4s,mb5.6
RUE *e* pP 09 39 40.8 +1.2
KHC Kasperske Hory 74.01 318 *e*P **P** 09 39 29.6 -0.7
comp=Z,7.4nm,0.7s,mb4.7
KHC *e* pP 09 39 39.1 -0.6
KHC Kasperske Hory 74.01 318 *e*P **P** 09 39 29.8 -0.6
KHC *e*pP pP 09 39 37.1 -2.6
KBA Koelnbreinsper 74.12 316 *i* P **P** 09 39 30.6 -0.5
comp=Z,18nm,1.2s,mb4.9,SNR=6.1
CLL Collm 74.45 320 *e*P **P** 09 39 32.3 -0.5
comp=Z,38nm,1.5s,mb5.1
CLL Collm 74.45 320 *i* P **P** 09 39 32.3 -0.5
comp=Z,38nm,1.5s,mb5.1
CLL LR LR
comp=Z,500nm,20.9s,MS4.8
CLL Collm 74.45 320 *i* P **P** 09 39 32.3 -0.5
CLL pmax pmax
comp=Z,38nm,1.5s,mb5.1
CLL MLR MLR
comp=Z,500nm,20.9s,MS4.8
CLL Collm 74.45 320 *i* P **P** 09 39 32.3 -0.5
comp=Z,38nm,1.5s,mb5.1
CLL *i* pP pP 09 39 42.0 -0.2
CLL *i* 09 39 51.2
CLL LmV 10 13 00.0
comp=Z,500nm,20.9s
WET Wettzell 74.47 318 *e*P **P** 09 39 32.9 -0.1
comp=Z,32nm,1.4s,mb5.1
WET Wettzell 74.47 318 *e*P **P** 09 39 32.9 -0.1
WET pmax pmax
comp=Z,32nm,1.4s,mb5.1
TANN Tannenbergstha 74.77 319 *e*P **P** 09 39 34.6 -0.1
NKC Novy Kostel 74.77 319 *e*P **P** 09 39 35.1 +0.3
NKC *e* pP 09 39 44.9 +0.8
NKC Novy Kostel 74.77 319 *e*P **P** 09 39 35.1 +0.3
NKC *e*pP pP 09 39 44.9 +0.8
WERN Wernitzgruen 74.82 319 *e*P **P** 09 39 35.0 0.0
GUNZ Gunzen 74.85 319 *e*P **P** 09 39 35.1 -0.1
comp=Z,48nm,1.6s,mb5.2
WERD Werda 74.87 319 *e*P **P** 09 39 35.0 -0.3
WTTA Wattenberg 75.29 316 ⇓*i*P **P** 09 39 36.7 -1.1
comp=Z,39nm,1.8s,mb5.0
BOSA Boshof 75.30 236 *e*P **P** 09 39 39.2 +1.0
comp=Z,44nm,0.8s,mb5.4
BOSA *e* pP 09 39 48.7 +1.2
BOSA Boshof 75.30 236 P **P** 09 39 39.2 +1.0
comp=Z,34nm,0.8s,mb5.3,baz=78,slow=5.8,SNR=45
BOSA LR LR 10 11 21.4
comp=Z,790nm,18.5s,MS5.0,baz=182,slow=35
BOSA Boshof 75.30 236 *e*P **P** 09 39 39.2 +1.0
BOSA *e* pP 09 39 48.7 +1.2
BOSA pmax pmax
comp=Z,44nm,0.8s,mb5.4
MOX Moxa 75.31 320 *e*P **P** 09 39 37.8 0.0
comp=Z,64nm,1.7s,mb5.3
MOX *e* pP 09 39 46.4 -0.8
MOX Moxa 75.31 320 *e*P **P** 09 39 37.6 -0.2
comp=Z,36nm,1.2s,mb5.2
MOX Moxa 75.31 320 *e*P **P** 09 39 37.8 0.0
MOX *e* pP 09 39 46.4 -0.8
MOX pmax pmax
comp=Z,64nm,1.7s,mb5.3
LOF Lofoten 75.44 338 *e*P **P** 09 39 37.6 -0.6
FUR Furstenfeldbru 75.53 317 *e*P **P** 09 39 38.3 -0.9
comp=Z,46nm,1.5s,mb5.2
FUR Furstenfeldbru 75.53 317 *e*P **P** 09 39 38.3 -0.9
FUR pmax pmax
comp=Z,46nm,1.5s,mb5.2
GRA1 Grafenberg Arr 75.56 319 *e*P **P** 09 39 39.5 +0.2
comp=Z,106nm,1.6s,mb5.5
GRA1 *e*pP pP 09 39 48.6 0.0
GRF Grafenberg Arr 75.56 319 *e*P **P** 09 39 39.5 +0.2
comp=Z,106nm,1.6s,mb5.5
GRF *e*pP pP 09 39 48.6 0.0
GRF Grafenberg Arr 75.56 319 *e*P **P** 09 39 39.5 +0.2
GRF *e**PP pP 09 39 48.6 0.0
GRF pmax pmax
comp=Z,106nm,1.6s,mb5.5
GRF Grafenberg Arr 75.56 319 *e*P **P** 09 39 39.5 +0.2
GRF *e**PP pP 09 39 48.6 0.0
GRF pmax pmax
comp=Z,106nm,1.6s,mb5.5
MOTA Moosalm 75.65 316 ⇑*i*P **P** 09 39 38.9 -1.0
comp=Z,18nm,1.1s,mb4.9,SNR=6.1
NSS Namsos 75.72 334 *e*P **P** 09 39 38.0 -1.9
NSS *e*pP pP 09 39 47.9 -1.4
NOA NORSAR Array B 75.84 330 P **P** 09 39 39.9 -0.8
comp=Z,7.4nm,0.8s,mb4.7,baz=93,slow=5.6,SNR=22
NOA LR LR 10 19 55.9
comp=Z,573nm,18.1s,MS4.9,baz=80,slow=41
RETA Reutte 75.88 316 P **P** 09 39 40.5 -0.7
comp=Z,57nm,1.7s,mb5.2
FETA Feichten 75.91 316 ⇑*i*P **P** 09 39 40.7 -0.7
comp=Z,29nm,1.6s,mb5.0,SNR=11
NAO01 NORSAR Array S 76.00 330 *e*P **P** 09 39 41.0 -0.5
comp=Z,36nm,1.4s,mb5.1
OSL Oslo 76.04 329 *e*P **P** 09 39 42.1 +0.3
CLZ Clausthal 76.09 321 *e*P **P** 09 39 42.1 -0.2
comp=Z,108nm,1.8s,mb5.5
CLZ Clausthal 76.09 321 *e*P **P** 09 39 42.1 -0.2
CLZ pmax pmax
comp=Z,108nm,1.8s,mb5.5
BSEG Bad Segeberg 76.13 323 *e*P **P** 09 39 42.6 +0.1
comp=Z,94nm,1.6s,mb5.5
NRDL Niedersach Rie 76.26 321 *e*P **P** 09 39 42.3 -0.9
SPITS Spitsbergen Ar 76.29 348 P **P** 09 39 43.0 0.0
comp=Z,16nm,0.7s,mb5.1,baz=132,slow=5.8,SNR=21
SPITS LR LR 10 19 40.9
comp=Z,916nm,18.3s,MS5.1,baz=75,slow=41
DAVA Damuels 76.49 316 ⇓*i*P **P** 09 39 44.3 -0.3
comp=Z,37nm,1.2s,mb5.2,SNR=12
DAVOX Davos/Dischmat 76.50 316 LR LR 10 18 53.7
comp=Z,617nm,19.4s,MS4.9,baz=77,slow=40
KONO Kongsberg 76.60 329 *i* P **P** 09 39 44.1 -0.9
SMY Shemya 76.68 38 *e*P **P** 09 39 46.2 +0.6
comp=Z,234nm,1.1s,mb6.0
SMY *e* pP 09 39 54.6 -0.4
SMY Shemya 76.68 38 *e*P **P** 09 39 46.2 +0.6
SMY *e* pP 09 39 54.6 -0.4
SMY pmax pmax
comp=Z,235nm,1.1s,mb6.0
MUD Monsted U'grnd 76.80 326 *i* P **P** 09 39 47.1 +0.9
MUD pmax pmax
comp=Z,18nm,1.2s,mb4.9
MUD MLR MLR
comp=Z,2µm,15.0s,MS5.5
MUD Monsted U'grnd 76.80 326 *i* P **P** 09 39 47.1 +0.9
comp=Z,18nm,1.2s,mb4.9
MUD
comp=Z,2µm,15.0s
STU Stuttgart 76.90 318 *e*P **P** 09 39 46.4 -0.6
STU Stuttgart 76.90 318 *e*P **P** 09 39 46.6 -0.4
comp=Z,55nm,1.4s,mb5.3
STU Stuttgart 76.90 318 *e*P **P** 09 39 46.6 -0.4
STU pmax pmax
comp=Z,55nm,1.4s,mb5.3
TOD Tromm 77.13 319 *e*P **P** 09 39 48.8 +0.6
SPAK Spaichingen-Ko 77.20 317 *e*P **P** 09 39 48.0 -0.6
KBS Kingsbay 77.29 349 *e*P **P** 09 39 48.6 0.0
KBS *e*pP pP 09 39 58.1 +0.1
KBS Kingsbay 77.29 349 *e*P **P** 09 39 48.7 +0.1
comp=Z,22nm,0.9s,mb5.1
KBS Kingsbay 77.29 349 *e*P **P** 09 39 48.7 +0.1
KBS pmax pmax
comp=Z,22nm,0.9s,mb5.1
PGF Pioggiola 77.32 311 *e*P **P** 09 39 48.7 -0.7
comp=Z,104nm,1.5s,mb5.2
PGF Pioggiola 77.32 311 *e*P **P** 09 39 48.7 -0.7
comp=Z,52nm,1.5s,mb5.2
PGF Pioggiola 77.32 311 *e*P **P** 09 39 48.7 -0.7
PGF pmax pmax
comp=Z,52nm,1.5s,mb5.2
TNS Taunus Mts 77.34 319 *e*P **P** 09 39 49.2 -0.2
comp=Z,101nm,1.7s,mb5.5
TNS Taunus Mts 77.34 319 *e*P **P** 09 39 49.2 -0.2
TNS pmax pmax
comp=Z,101nm,1.7s,mb5.5
MIR Mirnyy 77.37 179 ⇓*i*P **P** 09 39 50.2 +1.1
MIR pmax pmax
comp=Z,49nm,1.8s,mb5.1
BFO Black Forest 77.49 317 P **P** 09 39 49.2 -1.1
comp=Z,74nm,1.3s,mb5.5,SNR=6.0
BFO Black Forest 77.49 317 *e*P **P** 09 39 49.4 -0.9
comp=Z,28nm,1.4s,mb5.0
BFO Black Forest 77.49 317 *e*P **P** 09 39 49.4 -0.9
BFO pmax pmax
comp=Z,28nm,1.4s,mb5.0
KEST Kesra 77.52 304 P **P** 09 39 50.7 0.0
baz=34,slow=1.4,SNR=16
IBBN Ibbenburen 77.70 321 *e*P **P** 09 39 51.2 -0.1
comp=Z,63nm,1.3s,mb5.4
FELD Feldberg im Sc 77.73 317 *e*P **P** 09 39 51.2 -0.4
LANF Langenberg 77.81 318 *e*P **P** 09 39 52.1 +0.1
ABH Alteburg 77.94 319 *e*P **P** 09 39 53.2 +0.5
LIBD Limburg 77.99 317 *e*P **P** 09 39 52.9 -0.1
BBS Basel-Blauen 78.09 316 *e*P **P** 09 39 53.6 0.0
CDF Champ du Feu 78.19 317 *e*P **P** 09 39 53.6 -0.6
comp=Z,29nm,1.0s,mb4.8
CDF Champ du Feu 78.19 317 *e*P **P** 09 39 53.6 -0.6
comp=Z,15nm,1.0s,mb4.9
CDF Champ du Feu 78.19 317 *e*P **P** 09 39 53.6 -0.6
CDF pmax pmax
comp=Z,15nm,1.0s,mb4.9
RUP Ruppelstein 78.26 319 *e*P **P** 09 39 54.5 0.0
ECH Echery 78.28 317 *e*P **P** 09 39 53.4 -1.3
MOF Molkenrain 78.32 317 *e*P **P** 09 39 54.2 -0.7
CASY Casey 78.33 172 *e*P **P** 09 39 54.3 -0.1
CASY Casey 78.33 172 *e*P **P** 09 39 54.1 -0.3
comp=Z,48nm,1.7s,mb5.2
SBF Sospel 78.37 313 *e*P **P** 09 39 54.7 -0.6
HINF Hinteralfeld 78.51 317 *e*P **P** 09 39 55.4 -0.5
LPG La Plagne 78.74 314 *e*P **P** 09 39 57.3 0.0
comp=Z,61nm,1.0s,mb5.3
LPG La Plagne 78.74 314 *e*P **P** 09 39 57.3 0.0
comp=Z,40nm,1.0s,mb5.3
LPG La Plagne 78.74 314 *e*P **P** 09 39 57.3 0.0
LPG pmax pmax
comp=Z,40nm,1.0s,mb5.3
LPL La Plagne 78.75 314 *e*P **P** 09 39 57.4 +0.1
comp=Z,59nm,0.8s,mb5.2
LPL La Plagne 78.75 314 *e*P **P** 09 39 57.4 +0.1
comp=Z,29nm,0.8s,mb5.3
LPL La Plagne 78.75 314 *e*P **P** 09 39 57.4 +0.1
LPL pmax pmax
comp=Z,29nm,0.8s,mb5.3
MBDF Montbardon 78.78 314 *e*P **P** 09 39 56.6 -0.9
comp=Z,30nm,0.9s,mb4.9
MBDF Montbardon 78.78 314 *e*P **P** 09 39 56.6 -0.9
comp=Z,15nm,0.9s,mb4.9
MBDF Montbardon 78.78 314 *e*P **P** 09 39 56.6 -0.9
MBDF pmax pmax
comp=Z,15nm,0.9s,mb4.9
HAU Haudompre 78.84 317 *e*P **P** 09 39 57.1 -0.6
comp=Z,58nm,1.0s,mb5.2
HAU Haudompre 78.84 317 *e*P **P** 09 39 57.1 -0.6
comp=Z,29nm,1.0s,mb5.2
HAU Haudompre 78.84 317 *e*P **P** 09 39 57.1 -0.6
HAU pmax pmax
comp=Z,29nm,1.0s,mb5.2
WLF Walferdange 78.85 319 *e*P **P** 09 39 58.0 +0.2
FRF La Foret Royal 78.97 312 *e*P **P** 09 39 58.1 -0.5
comp=Z,92nm,1.4s,mb5.2
FRF La Foret Royal 78.97 312 *e*P **P** 09 39 58.1 -0.5
comp=Z,46nm,1.4s,mb5.2
FRF La Foret Royal 78.97 312 *e*P **P** 09 39 58.1 -0.5
FRF pmax pmax
comp=Z,46nm,1.4s,mb5.2
THEF They Montfort 79.06 317 *e*P **P** 09 39 58.3 -0.7
LMR La Mourre 79.09 312 *e*P **P** 09 39 58.7 -0.5
comp=Z,90nm,1.3s,mb5.2
LMR La Mourre 79.09 312 *e*P **P** 09 39 58.7 -0.5
comp=Z,45nm,1.3s,mb5.2
LMR La Mourre 79.09 312 *e*P **P** 09 39 58.7 -0.5
LMR pmax pmax
comp=Z,45nm,1.3s,mb5.2
CABF La Chapelle 79.12 316 *e*P **P** 09 39 59.3 0.0
comp=Z,142nm,1.5s,mb5.4
CABF La Chapelle 79.12 316 *e*P **P** 09 39 59.3 0.0
comp=Z,71nm,1.5s,mb5.4
CABF La Chapelle 79.12 316 *e*P **P** 09 39 59.3 0.0
CABF pmax pmax
comp=Z,71nm,1.5s,mb5.4
BCLA Clavier 79.34 319 P **P** 09 39 59.6 -0.8
ORIF Oris-en-Rattie 79.40 314 *e*P **P** 09 40 00.1 -0.8
comp=Z,22nm,0.8s,mb4.8
ORIF Oris-en-Rattie 79.40 314 *e*P **P** 09 40 00.1 -0.8
comp=Z,11nm,0.8s,mb4.8
ORIF Oris-en-Rattie 79.40 314 *e*P **P** 09 40 00.1 -0.8
ORIF pmax pmax
comp=Z,11nm,0.8s,mb4.8
MEZF Maizieres J'vi 79.66 318 *e*P **P** 09 40 01.9 -0.3
comp=Z,126nm,1.6s,mb5.3
MEZF Maizieres J'vi 79.66 318 *e*P **P** 09 40 01.9 -0.3
comp=Z,126nm,1.6s,mb5.6
GIVF Givet 79.67 319 *e*P **P** 09 40 01.9 -0.4
comp=Z,18nm,0.7s,mb4.8
GIVF Givet 79.67 319 *e*P **P** 09 40 01.9 -0.4
comp=Z,8.8nm,0.7s,mb4.8
GIVF Givet 79.67 319 *e*P **P** 09 40 01.9 -0.4
GIVF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
SMRF Simiane la Rot 79.70 313 *e*P **P** 09 40 02.7 +0.1
comp=Z,38nm,1.0s,mb5.0
SMRF Simiane la Rot 79.70 313 *e*P **P** 09 40 02.7 +0.1
comp=Z,38nm,1.0s,mb5.3
DOU Dourbes 79.82 319 P **P** 09 40 03.3 +0.2
comp=Z,16nm,2.3s,mb4.5
OCF Saint Nazaire 79.84 314 *e*P **P** 09 40 03.5 +0.2
OG26 St.-Nazaire-De 79.84 314 *e*P **P** 09 40 03.5 +0.2
SNF Seneffe 79.98 320 P **P** 09 40 04.0 0.0
comp=Z,19nm,1.9s,mb4.7
BAIF Baives 80.07 319 *e*P **P** 09 40 04.3 -0.1
comp=Z,60nm,1.2s,mb5.1
BAIF Baives 80.07 319 *e*P **P** 09 40 04.3 -0.1
comp=Z,30nm,1.2s,mb5.1
BAIF Baives 80.07 319 *e*P **P** 09 40 04.3 -0.1
BAIF pmax pmax
comp=Z,30nm,1.2s,mb5.1
SUR Sutherland 80.21 234 *e*P **P** 09 40 07.9 +2.4
comp=Z,28nm,0.8s,mb5.2
VIVF Saint-Julien-l 80.26 314 *e*P **P** 09 40 05.3 -0.3
comp=Z,75nm,1.0s,mb5.3
VIVF Saint-Julien-l 80.26 314 *e*P **P** 09 40 05.3 -0.3
comp=Z,38nm,1.0s,mb5.3
VIVF Saint-Julien-l 80.26 314 *e*P **P** 09 40 05.3 -0.3
VIVF pmax pmax
comp=Z,38nm,1.0s,mb5.3
SSB Saint Sauveur 80.31 314 *e*P **P** 09 40 05.6 -0.2
SSB Saint Sauveur 80.31 314 *e*P **P** 09 40 05.1 -0.7
comp=Z,45nm,1.3s,mb5.2
SSB *e* pP 09 40 14.9 -0.3
SSB Saint Sauveur 80.31 314 *e*P **P** 09 40 05.1 -0.7
SSB *e* pP 09 40 15.0 -0.2
SSB pmax pmax
comp=Z,45nm,1.3s,mb5.2
LOR Lormes 80.58 316 *e*P **P** 09 40 06.7 -0.5
comp=Z,72nm,1.0s,mb5.2
LOR Lormes 80.58 316 *e*P **P** 09 40 06.7 -0.5
comp=Z,36nm,1.0s,mb5.3
LOR Lormes 80.58 316 *e*P **P** 09 40 06.7 -0.5
LOR pmax pmax
comp=Z,36nm,1.0s,mb5.3
SMF Signal de Mont 80.66 316 *e*P **P** 09 40 07.0 -0.6
comp=Z,56nm,1.0s,mb5.1
SMF Signal de Mont 80.66 316 *e*P **P** 09 40 07.0 -0.6
comp=Z,28nm,1.0s,mb5.2
SMF Signal de Mont 80.66 316 *e*P **P** 09 40 07.0 -0.6
SMF pmax pmax
comp=Z,28nm,1.0s,mb5.2
SSF Saint Saulge 80.84 316 *e*P **P** 09 40 08.2 -0.4
comp=Z,137nm,1.6s,mb5.3
SSF Saint Saulge 80.84 316 *e*P **P** 09 40 08.2 -0.4
comp=Z,69nm,1.6s,mb5.3
SSF Saint Saulge 80.84 316 *e*P **P** 09 40 08.2 -0.4
SSF pmax pmax
comp=Z,69nm,1.6s,mb5.3
PLDF La Plantade 80.88 315 *e*P **P** 09 40 08.9 0.0
LASF Ste Croix 80.93 313 *e*P **P** 09 40 09.3 +0.2
comp=Z,74nm,1.1s,mb5.2
AVF Avril sur Loir 80.97 316 *e*P **P** 09 40 08.8 -0.5
comp=Z,38nm,0.9s,mb5.0
AVF Avril sur Loir 80.97 316 *e*P **P** 09 40 08.8 -0.5
comp=Z,19nm,0.9s,mb5.0
AVF Avril sur Loir 80.97 316 *e*P **P** 09 40 08.8 -0.5
AVF pmax pmax
comp=Z,19nm,0.9s,mb5.0
MAW Mawson 81.15 191 *e*P **P** 09 40 10.3 +0.6
comp=Z,5.9nm,0.8s,mb4.6
MAW Mawson 81.15 191 P **P** 09 40 10.4 +0.7
comp=Z,6.8nm,0.7s,mb4.7,baz=11,slow=6.7,SNR=18
AGO Saint Agoulin 81.21 315 *e*P **P** 09 40 10.5 -0.1
LBL Lubilhac 81.23 314 *e*P **P** 09 40 11.1 +0.4
PYM Petit Puy Mans 81.33 315 *e*P **P** 09 40 11.1 -0.2
BGF Bois d'Agland 81.35 316 *e*P **P** 09 40 11.2 -0.1
TCF Toulx Ste Croi 81.82 316 *e*P **P** 09 40 13.8 0.0
comp=Z,127nm,1.5s,mb5.3
TCF Toulx Ste Croi 81.82 316 *e*P **P** 09 40 13.8 0.0
comp=Z,64nm,1.5s,mb5.3
TCF Toulx Ste Croi 81.82 316 *e*P **P** 09 40 13.8 0.0
TCF pmax pmax
comp=Z,64nm,1.5s,mb5.3
EJON La Jonquera 81.83 312 P **P** 09 40 13.4 -0.5
comp=Z,9.1nm,0.9s,mb4.7
CAF Calviac 82.09 314 *e*P **P** 09 40 15.4 +0.1
comp=Z,62nm,1.2s,mb5.1
CAF Calviac 82.09 314 *e*P **P** 09 40 15.4 +0.1
comp=Z,31nm,1.2s,mb5.1
CAF Calviac 82.09 314 *e*P **P** 09 40 15.4 +0.1
CAF pmax pmax
comp=Z,31nm,1.2s,mb5.1
MTLF Montolieu 82.20 313 *e*P **P** 09 40 15.9 0.0
comp=Z,53nm,1.0s,mb5.1
MTLF Montolieu 82.20 313 *e*P **P** 09 40 15.9 0.0
comp=Z,26nm,1.0s,mb5.1
MTLF Montolieu 82.20 313 *e*P **P** 09 40 15.9 0.0
MTLF pmax pmax
comp=Z,26nm,1.0s,mb5.1
ETOS Mallorca 82.24 309 P **P** 09 40 17.1 +1.0
comp=Z,11nm,0.8s,mb4.8
CFON Fontmartina 82.25 311 P **P** 09 40 16.6 +0.4
comp=Z,5.3nm,0.8s,mb4.5
TAM Tamanrasset 82.37 292 *e*P **P** 09 40 18.4 +1.2
comp=Z,58nm,1.4s,mb5.3
TAM *e* pP 09 40 28.3 +1.7
TAM Tamanrasset 82.37 292 *e*P **P** 09 40 18.4 +1.2
TAM *e* pP 09 40 28.3 +1.7
TAM pmax pmax
comp=Z,58nm,1.4s,mb5.3
RJF Les Rejaudoux 82.43 315 *e*P **P** 09 40 17.4 +0.4
comp=Z,46nm,0.9s,mb5.1
RJF Les Rejaudoux 82.43 315 *e*P **P** 09 40 17.4 +0.4
comp=Z,23nm,0.9s,mb5.1
RJF Les Rejaudoux 82.43 315 *e*P **P** 09 40 17.4 +0.4
RJF pmax pmax
comp=Z,23nm,0.9s,mb5.1
VALF Valcebollere 82.47 312 *e*P **P** 09 40 17.8 +0.5
CLLI Llivia 82.49 312 P **P** 09 40 17.7 +0.3
EMIR Miracle 82.90 311 P **P** 09 40 20.0 +0.5
comp=Z,34nm,0.8s,mb5.4
JMIC Jan Mayen 82.98 341 LR LR 10 20 02.8
comp=Z,634nm,21.4s,MS5.0,baz=303,slow=38
LFF La Frestale 83.03 314 *e*P **P** 09 40 20.5 +0.3
comp=Z,68nm,1.2s,mb5.3
LFF La Frestale 83.03 314 *e*P **P** 09 40 20.5 +0.3
comp=Z,34nm,1.2s,mb5.2
LFF La Frestale 83.03 314 *e*P **P** 09 40 20.5 +0.3
LFF pmax pmax
comp=Z,34nm,1.2s,mb5.2
LDF La Druitiere 83.06 318 *e*P **P** 09 40 19.7 -0.6
comp=Z,20nm,0.9s,mb4.8
LDF La Druitiere 83.06 318 *e*P **P** 09 40 19.7 -0.6
comp=Z,9.9nm,0.9s,mb4.8
LDF La Druitiere 83.06 318 *e*P **P** 09 40 19.7 -0.6
LDF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
MLS Moulis 83.06 312 *e*P **P** 09 40 19.7 -0.7
CSOR Sort 83.12 312 P **P** 09 40 20.9 +0.2
comp=Z,13nm,0.9s,mb5.0
FLN La Foliniere 83.27 318 *e*P **P** 09 40 20.9 -0.4
comp=Z,46nm,1.0s,mb5.2
FLN La Foliniere 83.27 318 *e*P **P** 09 40 20.9 -0.4
comp=Z,23nm,1.0s,mb5.2
FLN La Foliniere 83.27 318 *e*P **P** 09 40 20.9 -0.4
FLN pmax pmax
comp=Z,23nm,1.0s,mb5.2
EPOB Poblet 83.32 311 P **P** 09 40 21.5 -0.3
comp=Z,21nm,0.8s,mb5.2
MFF Saint Martin d 83.39 316 *e*P **P** 09 40 21.6 -0.4

comp=Z,72nm,1.0s,mb5.4
MFF Saint Martin d 83.39 316 *e*P **P 09 40 21.6 -0.4**
comp=Z,36nm,1.0s,mb5.4
MFF Saint Martin d 83.39 316 *e*P **P 09 40 21.6 -0.4**
MFF pmax pmax
comp=Z,36nm,1.0s,mb5.4
EIBI Ibiza 83.47 308 P P **09 40 24.9 +2.3**
comp=Z,18nm,0.8s,mb5.2
GRR Gorron 83.58 318 *e*P **P 09 40 22.6 -0.3**
comp=Z,127nm,1.5s,mb5.5
GRR Gorron 83.58 318 *e*P **P 09 40 22.6 -0.3**
comp=Z,64nm,1.5s,mb5.5
GRR Gorron 83.58 318 *e*P **P 09 40 22.6 -0.3**
GRR pmax pmax
comp=Z,63nm,1.5s,mb5.5
EPF Esparros 83.60 312 *e*P **P 09 40 22.4 -0.8**
comp=Z,13nm,0.9s,mb4.7
EPF Esparros 83.60 312 *e*P **P 09 40 22.4 -0.8**
comp=Z,6.3nm,0.9s,mb4.8
EPF Esparros 83.60 312 *e*P **P 09 40 22.4 -0.8**
EPF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
EBIE Bielsa 83.80 312 P P **09 40 24.9 +0.7**
comp=Z,9.5nm,0.8s,mb5.0
ERTA Horta de San J 83.94 310 P P **09 40 25.4 +0.5**
comp=Z,14nm,0.8s,mb5.1
ETSF Etsaut 84.27 312 *e*P **P 09 40 26.9 +0.3**
comp=Z,60nm,1.4s,mb5.2
ETSF Etsaut 84.27 312 *e*P **P 09 40 26.9 +0.3**
comp=Z,30nm,1.4s,mb5.2
ETSF Etsaut 84.27 312 *e*P **P 09 40 26.9 +0.3**
ETSF pmax pmax
comp=Z,30nm,1.4s,mb5.2
ESAC San Caprasio 84.41 311 P P **09 40 27.5 +0.2**
comp=Z,37nm,0.9s,mb5.5
LARF Larrau 84.56 313 *e*P **P 09 40 28.2 +0.1**
EMOS Mosqueruela 84.64 310 P P **09 40 29.9 +1.4**
comp=Z,32nm,0.9s,mb5.5
SGMF Saint Gilles 84.72 318 *e*P **P 09 40 28.4 -0.3**
SJPF Ste Jean 84.72 313 *e*P **P 09 40 29.1 +0.2**
comp=Z,77nm,1.4s,mb5.3
SJPF Ste Jean 84.72 313 *e*P **P 09 40 29.1 +0.2**
comp=Z,38nm,1.4s,mb5.3
SJPF Ste Jean 84.72 313 *e*P **P 09 40 29.1 +0.2**
SJPF pmax pmax
comp=Z,38nm,1.4s,mb5.3
EBEN Beniarda 84.73 308 P P **09 40 30.0 +1.0**
comp=Z,6.8nm,0.9s,mb4.8
EALK Alkurruntz 84.90 313 P P **09 40 29.9 +0.1**
comp=Z,9.7nm,0.9s,mb4.9
ELIZ Elizondo 84.93 313 P P **09 40 30.2 +0.3**
comp=Z,9.3nm,1.0s,mb4.9
ELIZ Elizondo 84.93 313 P P **09 40 30.2 +0.3**
ELIZ pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
ECHE Chera 85.15 309 P P **09 40 32.1 +1.0**
comp=Z,11nm,0.8s,mb5.0
ECHE Chera 85.15 309 P P **09 40 32.1 +1.0**
ECHE pmax pmax
comp=Z,11nm,0.8s,mb5.0
ROSF Rostrenen 85.17 318 *e*P **P 09 40 30.6 -0.4**
QUIF Quistinic 85.18 318 *e*P **P 09 40 30.3 -0.8**
EMUR La Murta 85.67 308 P P **09 40 34.0 +0.3**
comp=Z,5.9nm,1.2s,mb4.7
ETOR Torete 85.74 311 P P **09 40 32.9 -1.1**
comp=Z,5.9nm,0.7s,mb4.9
ETOR Torete 85.74 311 P P **09 40 32.9 -1.1**
ETOR pmax pmax
comp=Z,6.0nm,0.7s,mb4.9
ETOB Tobarra 85.76 308 P P **09 40 35.2 +1.0**
comp=Z,7.1nm,0.9s,mb4.9
ALE Alert 85.85 357 P P **09 40 33.9 +0.1**
comp=Z,104nm,0.7s,mb6.2,SNR=5.6
ELAN Lanestosa 86.28 313 P P **09 40 37.0 +0.4**
comp=Z,8.2nm,0.9s,mb5.0
EVIA Vianos 86.50 309 P P **09 40 39.4 +1.6**
comp=Z,8.0nm,1.0s,mb4.9
EVIA Vianos 86.50 309 P P **09 40 39.4 +1.6**
EVIA pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
ENIJ Nijar 86.59 307 P P **09 40 38.6 +0.3**
comp=Z,6.7nm,0.8s,mb4.9
ENIJ Nijar 86.59 307 P P **09 40 38.6 +0.3**
ENIJ pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
EHUE Huescar 86.73 308 P P **09 40 39.1 +0.2**
comp=Z,6.1nm,0.9s,mb4.8
EHUE Huescar 86.73 308 P P **09 40 39.1 +0.2**
EHUE pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
EQES Quesada 87.10 308 P P **09 40 40.8 0.0**
comp=Z,4.2nm,0.9s,mb4.7
EBER Berja 87.14 307 P P **09 40 41.4 +0.4**
comp=Z,9.4nm,1.1s,mb4.9
GUD Guadarrama 87.34 311 P P **09 40 42.3 +0.5**
comp=Z,11nm,0.8s,mb5.2
GUD Guadarrama 87.34 311 P P **09 40 42.3 +0.4**
GUD pmax pmax
comp=Z,11nm,0.8s,mb5.1
ESDC Sonseca Array 87.40 310 P P **09 40 42.3 +0.1**
comp=Z,2.6nm,0.6s,mb4.6
ESDC Sonseca Array 87.40 310 P P **09 40 41.8 -0.4**
comp=Z,2.9nm,0.7s,mb4.6,baz=62,slow=4.6,SNR=11
ESLA Sonseca Array 87.40 310 *e*P **P 09 40 41.8 -0.4**
comp=Z,7.1nm,1.3s,mb4.7
EBAN Banos Encina 87.58 308 P P **09 40 43.7 +0.6**
comp=Z,9.8nm,1.1s,mb5.0
EBAN Banos Encina 87.58 308 P P **09 40 43.7 +0.6**
EBAN pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
TORD Torodi Ar. Bea 87.59 283 P P **09 40 44.0 +0.4**
TORD PP PP 09 44 08.8 -0.2
TORD PKKPbc PKKPbc 09 58 28.4 -3.2
TORD Torodi Ar. Bea 87.59 283 P P **09 40 44.0 +0.4**
comp=Z,8.3nm,0.8s,mb5.0,baz=85,slow=4.3,SNR=53
TORD PP PP 09 44 08.8 -0.2
comp=Z,4.6nm,1.2s,baz=58,slow=6.6,SNR=5.0
TORD PKKPbc PKKPbc 09 58 28.4 -3.2
comp=Z,0.3nm,0.7s,baz=243,slow=3.9,SNR=4.8
EGUA Guajares 87.68 307 P P **09 40 43.3 -0.3**
comp=Z,95nm,0.8s,mb6.1
PAB San Pablo 87.72 310 *e*P **P 09 40 43.9 +0.2**
comp=Z,17nm,1.6s,mb5.0
PAB San Pablo 87.72 310 *e*P **P 09 40 43.9 +0.2**
PAB pmax pmax
comp=Z,17nm,1.6s,mb5.0
SYO Syowa Base 87.72 197‖ *e*P **P 09 40 42.6 -0.3**
EADA Adamuz 88.19 308 P P **09 40 46.0 0.0**
comp=Z,7.1nm,1.0s,mb4.8
EMIJ Mijas 88.69 307 P P **09 40 46.8 -1.6**
comp=Z,4.9nm,0.7s,mb5.0
EPLA Plasencia 88.90 310 P P **09 40 49.5 +0.2**
comp=Z,7.0nm,1.3s,mb4.8
EPLA Plasencia 88.90 310 P P **09 40 49.5 +0.2**
EPLA pmax pmax
comp=Z,7.0nm,1.3s,mb4.8
EJIF Jimena Fronter 89.26 307 P P **09 40 50.4 -0.6**
comp=Z,13nm,1.1s,mb5.2
EJIF Jimena Fronter 89.26 307 P P **09 40 50.4 -0.7**
EJIF pmax pmax
comp=Z,13nm,1.1s,mb5.2
MVO Moncorvo 89.34 312 *e*P **P 09 40 52.2 +0.8**
comp=Z,26nm,1.9s,mb5.2
MVO Moncorvo 89.34 312 P P **09 40 52.2 +0.8**
ESPR Espera 89.47 307 P P **09 40 51.9 -0.2**
comp=Z,7.0nm,1.2s,mb4.9
BORG Borgarnes 89.62 337 P P **09 40 55.1 +3.0**
comp=Z,20nm,1.1s,mb5.3,baz=78,slow=5.0,SNR=4.0
EMIN Mina Concepcio 89.89 308 P P **09 40 54.1 +0.1**
comp=Z,6.8nm,1.1s,mb4.9
MTE Manteigas 89.91 311 *e*P **P 09 40 55.0 +1.0**
comp=Z,48nm,1.5s,mb5.6
EBAD Badajoz 89.92 309 P P **09 40 54.5 +0.4**
comp=Z,5.7nm,0.7s,mb5.0
ELOB Lobios 89.92 313 P P **09 40 54.9 +0.8**
comp=Z,5.1nm,0.8s,mb4.9
PCBR Castelo Branco 90.00 311 *e*P **P 09 40 55.1 +0.6**
comp=Z,39nm,1.5s,mb5.5
PMRV Marv??o 90.04 310 *e*P **P 09 40 55.5 +0.9**
comp=Z,32nm,1.7s,mb5.4
TTA Tatalina 90.06 25 *e*P **P 09 40 55.3 +1.1**
PBAR Barrancos 90.08 309 *e*P **P 09 40 56.0 +1.2**
comp=Z,80nm,1.7s,mb5.8
PVIS Viseu 90.09 311 *e*P **P 09 40 56.0 +1.1**
comp=Z,32nm,1.7s,mb5.4
EMAZ Mazaricos 90.30 314 P P **09 40 56.5 +0.8**
comp=Z,15nm,0.9s,mb5.3

PESTR Estremoz 90.33 310 *e*P **P 09 40 56.7 +0.7**
comp=Z,22nm,2.4s,mb5.1
SUMG Summit 90.56 347 *e*P **P 09 40 57.1 +0.7**
comp=Z,33nm,0.8s,mb5.7
SUMG *e* pP 09 41 04.6 -1.3
SUMG Summit 90.56 347 *i*P **P 09 40 56.1 -0.3**
comp=Z,34nm,0.9s,mb5.7
EGRO El Granado 90.57 308 P P **09 40 58.0 +0.8**
comp=Z,12nm,0.9s,mb5.2
EVO Evora 90.73 309 *e*P **P 09 40 57.4 -0.5**
comp=Z,26nm,1.1s,mb5.2
EVO Evora 90.73 309 *e*P **P 09 40 58.7 +0.8**
comp=Z,34nm,1.7s,mb5.4
PBEJ Beja 90.75 309 *e*P **P 09 40 59.1 +1.1**
comp=Z,34nm,1.7s,mb5.4
PTOM Tomar 90.75 311 *e*P **P 09 40 59.3 +1.3**
comp=Z,78nm,1.7s,mb5.8
PVAQ Vaqueiros 90.79 308 *e*P **P 09 40 59.1 +0.9**
comp=Z,46nm,1.3s,mb5.7
SDPT Sand Point 90.87 33 *e*P **P 09 40 57.9 -0.2**
comp=Z,29nm,0.7s,mb5.7
SDPT *e* 09 41 04.4
PCVE Castro Verde 90.98 309 *e*P **P 09 41 00.1 +1.1**
comp=Z,32nm,1.8s,mb5.3
PBDV Barranco-do-Ve 90.99 308 *e*P **P 09 41 00.4 +1.3**
comp=Z,68nm,1.7s,mb5.7
SVW2 Sparrevohm 91.02 27 *e*P **P 09 41 00.2 +1.5**
comp=Z,56nm,1.5s,mb5.7
MORF Marmelete 91.53 308 *e*P **P 09 41 02.7 +1.1**
comp=Z,68nm,1.7s,mb5.7
BPAW Bear Paw Mtn. 91.54 23 *e*P **P 09 41 01.4 +0.4**
comp=Z,59nm,1.3s,mb5.8
CHGN Chignik 91.60 32 *e*P **P 09 41 00.1 -1.4**
PPLA Purkeypile 91.64 24 *e*P **P 09 41 01.9 +0.4**
comp=Z,22nm,1.2s,mb5.4
TRF Thorofare Moun 92.13 23 *e*P **P 09 41 00.4 +0.3**
comp=Z,12nm,0.9s,mb5.2
COLA College 92.31 22 *e*P **P 09 41 04.2 -0.4**
comp=Z,4.9nm,0.9s,mb4.8
COLA College 92.31 22 *e*P **P 09 41 04.2 -0.4**
COLA pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
MCK McKinley 92.50 23 *e*P **P 09 41 05.7 +0.1**
comp=Z,32nm,1.3s,mb5.6
MCK McKinley 92.50 23 *e*P **P 09 41 05.7 +0.2**
MCK pmax pmax
comp=Z,32nm,1.3s,mb5.6
RSO Redoubt South 92.54 27 *e*P **P 09 41 06.7 +0.9**
ILAR Eielson Array 92.71 21 P P **09 41 05.4 -1.1**
comp=Z,2.2nm,0.8s,mb4.6,baz=298,slow=4.4,SNR=26
ILAR PP PP 09 44 46.1 -1.9
comp=Z,1.9nm,1.0s,baz=298,slow=7.2,SNR=5.2
ILAR PKKPbc PKKPbc 09 58 25.9 +5.4
comp=Z,0.5nm,1.0s,baz=143,slow=1.6,SNR=4.4
PMR Palmer 93.53 25 *e*P **P 09 41 10.1 -0.2**
comp=Z,9.9nm,0.7s,mb5.3
PMR Palmer 93.53 25 *e*P **P 09 41 10.1 -0.2**
PMR pmax pmax
comp=Z,10.0nm,0.7s,mb5.3
RC01 Rabbit Creek A 93.53 25 *e*P **P 09 41 10.3 0.0**
comp=Z,21nm,0.9s,mb5.6
OHAK Old Harbor 93.78 30 *e*P **P 09 41 11.6 +0.1**
comp=Z,61nm,1.8s,mb5.7
KDAK Kodiak Island 93.86 29 *e*P **P 09 41 12.1 +0.2**
comp=Z,37nm,1.3s,mb5.7
KDAK Kodiak Island 93.86 29 P P **09 41 12.2 +0.3**
comp=Z,9.0nm,0.7s,mb5.3,baz=257,slow=2.5,SNR=7.4
KDAK Kodiak Island 93.86 29 *i*P **P 09 41 12.9 +1.0**
RES Resolute Bay 94.36 2 P P **09 41 14.0 +0.1**
comp=Z,11nm,1.0s,mb5.2,baz=285,slow=5.2,SNR=3.5
INK Inuvik 94.62 15 *e*P **P 09 41 14.9 -0.2**
comp=Z,3.1nm,0.5s,mb5.0
INK Inuvik 94.62 15 P P **09 41 14.9 -0.3**
comp=Z,2.0nm,0.5s,mb4.8,baz=253,slow=2.5,SNR=9.0
INK Inuvik 94.62 15 *e*P **P 09 41 14.9 -0.3**
INK pmax pmax
comp=Z,3.0nm,0.5s
MENT Mentasta 94.91 22 *e*P **P 09 41 16.9 +0.3**
DAWY Dawson 95.75 20 *e*P **P 09 41 20.4 0.0**
YKA Yellowknife Ar 103.90 12 Pdiff Pdiff 09 41 57.5 +0.5
comp=Z,0.3nm,0.8s,baz=332,slow=5.1,SNR=2.9
YKA PP PP 09 46 11.0 -2.3
comp=Z,1.2nm,0.9s,baz=333,slow=7.4,SNR=6.1
YKA Yellowknife Ar 103.90 12 P Pdif 09 41 57.5 +0.5
YKA 09 46 11.1
SCHQ Schefferville 111.95 347 PP PP 09 47 11.2 -1.0
comp=Z,3.6nm,0.9s,baz=40,slow=8.6,SNR=4.3
LAO LaSA Array 120.33 14 *e*PKPdf PKPdf 09 46 46.6 +0.6
HLID Hailey 120.67 22 *e*PKPdf PKPdf 09 46 47.2 +0.4
RLMT Red Lodge 120.97 17 *e*PKPdf PKPdf 09 46 47.8 +0.5
MOOW Moose Ponds 121.76 19 *e*PKPdf PKPdf 09 46 49.4 +0.5
TPAW Teton Pass 121.93 19 *e*PKPdf PKPdf 09 46 50.1 +0.9
LOHW Long Hollow 121.93 19 *e*PKPdf PKPdf 09 46 49.7 +0.5
M13A Montello 122.66 23 *e*PKPdf PKPdf 09 46 51.0 +0.4
RSSD Black Hills 123.27 14 *e*PKPdf PKPdf 09 46 51.6 -0.1
DAU Daniels Canyon 124.56 21 *e*PKPdf PKPdf 09 46 53.7 -0.6
MSU Marysvale 125.89 23 *e*PKPdf PKPdf 09 46 58.5 +1.6
CCUT Cedar City 126.24 25 *e*PKPdf PKPdf 09 46 59.4 +1.8
GSC Goldstone 126.59 29 *e*PKPdf PKPdf 09 46 59.0 +0.7
LAZ Ladron 131.39 21 *e*PKPdf PKPdf 09 47 09.0 +1.5
BNM Barren Site 131.80 21 *e*PKPdf PKPdf 09 47 08.9 +0.6
CPCT Cooper Cave 133.65 356 *e*PKPdf PKPdf 09 47 12.5 +0.7
GDL2 Guadalupe Moun 134.34 19 *e*PKPdf PKPdf 09 47 13.7 +0.5
TXAR Lajitas Array 137.21 20 PKP PKPdf 09 47 18.9 +0.3
comp=Z,1.9nm,0.8s,baz=137,slow=0.9,SNR=17
TXAR PP PP 09 50 03.2 +1.6
comp=Z,0.4nm,0.8s,baz=354,slow=5.4,SNR=3.3
JCT Junction City 137.26 15 *e*PKPdf PKPdf 09 47 18.9 +0.3
AGPR Aguadilla, PR 144.03 324 *e*PKPdf PKPdf 09 47 28.0 -3.2
TRQA Tornquist 144.26 217 *e*PKPdf PKPdf 09 47 28.5 -2.5
CRPR Cabo Rojo, PR 144.40 324 *e*PKPdf PKPdf 09 47 30.5 -1.3
SDDR Presa de Saban 145.81 331 *e*PKPdf PKPdf 09 47 35.2 +0.9
PLCA Paso Flores 146.54 205 PKPbc PKPbc 09 47 36.8 +0.5
comp=Z,14nm,0.8s,baz=144,slow=2.7,SNR=27
CPUP Villa Florida 147.11 238 PKPbc PKPbc 09 47 36.1 -2.2
comp=Z,8.0nm,0.7s,baz=70,slow=3.7,SNR=19
MTDJ Mount Denham 149.07 340 *e*PKPbc PKPbc 09 47 43.9 +0.2
FCH Farellones 152.36 214 *e*P PKPbc 09 47 51.9 +0.8
TGUH Tegucigalpa,Un 155.06 358 *e*PKPdf PKPdf 09 47 48.4 -0.2
ROSC El Rosal 159.00 318 PKP PKPdf 09 47 55.0 +1.2
comp=Z,2.5nm,0.4s,baz=102,slow=16,SNR=6.3
ROSC PKPab PKPab 09 48 31.4 +1.4
comp=Z,4.2nm,0.6s,baz=69,slow=21,SNR=5.9
LPAZ La Paz 159.77 253 PKP PKPdf 09 47 55.5 +1.0
comp=Z,2.0nm,0.7s,baz=82,slow=1.6,SNR=10
LPAZ PKPab PKPab 09 48 34.1 +0.7
comp=Z,5.4nm,0.8s,baz=94,slow=5.7,SNR=11
LPAZ La Paz 159.77 253 *e*PKIKP PKPdf 09 47 55.2 +0.7
LPAZ *e* 09 48 33.6
OTAV Otavalo 165.17 318 *e*PKPdf PKPdf 09 48 00.8 +0.7
OTAV *e*PKPab PKPab 09 48 58.3 +1.3

IDC ***10*** *09:46:05.7±1.4, 10.°75N×91.°56E, h0km, mb3.7/11, mb1 3.8/12, mb1mx3.7/22, mbtmp3.7/12, ML3.6/1, Error ellipse: s-maj=37.3km s-min=24.8km az=46.0*
NEIC ***10*** *09:46:07.4±0.6, 10.°77N×91.°50E, h10km, mb4.2/4, Error ellipse: s-maj=18.6km s-min=9.6km az=51.0*
ISC 10 09:46:12.9±4.2, 10.°9N±0.°2×91.°7E±0.°2, h49km±34km, n19, σ0s70/19, mb3.8/15, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.33**	**42**	Pn	**Pn**	**09 48 38.4**	**-0.2**
	0.1nm,0.3s,baz=235,slow=15,SNR=2.8						
KSM	**Kuching**	**20.74**	**115**	*e*P	**P**	**09 50 50.9**	**+1.1**
	7.2nm,1.0s						
GTA	**Gaotai**	**29.34**	**13**	*e*P	**P**	**09 52 17.4**	**+6.2**
GTA				pP	pP	09 52 22.0	-1.8
GTA				sP	sP	09 52 24.7	-5.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
MKAR	**Makanchi Array**	**36.68**	**349**	P	**P**	**09 53 15.1**	**+0.1**
	comp=Z,0.8nm,0.4s,mb3.9,baz=172,slow=8.2,SNR=5.1						
SONM	**Songino Array**	**38.88**	**16**	P	**P**	**09 53 34.2**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.4,baz=191,slow=6.8,SNR=3.1						
KURK	**Kurchatov**	**41.16**	**347**	P	**P**	**09 53 51.7**	**-0.7**
KURK	**Kurchatov**	**41.16**	**347**	P	**P**	**09 53 51.7**	**-0.7**
	comp=Z,0.5nm,0.3s,mb3.6,baz=173,slow=7.9,SNR=4.5						
KSRS	**Korea Array**	**41.96**	**45**	P	**P**	**09 53 59.0**	**-0.1**
	comp=Z,0.3nm,0.3s,mb3.4,baz=260,slow=8.6,SNR=3.2						
ZALV	**Zalesovo Beam**	**43.32**	**354**	P	**P**	**09 54 09.1**	**-0.8**
	comp=Z,0.8nm,0.4s,mb3.8,baz=182,slow=10,SNR=5.9						
FITZ	**Fitzroy Crossi**	**44.20**	**130**	*e*P	**P**	**09 54 16.8**	**-0.7**
	comp=Z,9.3nm,1.0s,mb4.5						

BVAR Borovoye Array 45.40 342 P **P 09 54 25.3 -1.2**
comp=Z,0.3nm,0.4s,mb3.5,baz=104,slow=6.1,SNR=2.9
ABKAR Akbulak array 46.45 332 *e*P **P 09 54 36.2 +1.3**
comp=Z,0.7nm,0.5s,mb3.9
WRAB Tennant Creek 51.99 126 *e*P **P 09 55 17.7 0.0**
comp=Z,4.3nm,0.7s,mb4.5
ASAR Alice Springs 53.70 130 P **P 09 55 29.6 -0.7**
comp=Z,1.6nm,0.7s,mb4.0,baz=304,slow=7.1,SNR=6.1
BRTR Keskin Array B 58.63 310 P **P 09 56 05.3 +0.1**
comp=Z,0.7nm,0.7s,mb3.8,baz=117,slow=9.2,SNR=5.4
FINES FINESS Array B 68.94 332 P **P 09 57 12.7 0.0**
comp=Z,0.6nm,0.6s,mb3.7,baz=155,slow=7.5,SNR=3.6
ARCES ARCESS Array B 71.64 340 P **P 09 57 29.9 +0.9**
ARCES ARCESS Array B 71.64 340 P **P 09 57 29.9 +0.9**
comp=Z,0.9nm,0.6s,mb3.9,baz=89,slow=6.4,SNR=6.3
ILAR Eielson Array 92.90 21 P **P 09 59 20.7 +0.3**
comp=Z,0.2nm,0.9s,mb3.5,baz=218,slow=5.7,SNR=2.8

BJI ***10*** *10:05:11.7, 83.°70N×113.°50E, h10km, mB5.0/10, mb4.5/24, Ms4.5/6, Ms7 4.4/6*
ISCJB ***10*** *10:05:12.1±0.2, 83.°75N±0.°04×113.°7E±0.°4, h10km, mb4.3/65, Error ellipse: s-maj=7.3km s-min=3.9km az=137.0*
MOS ***10*** *10:05:12.0±1.3, 83.°63N×113.°40E, h10km, mb4.5/24, Error ellipse: s-maj=78.3km s-min=10.5km az=87.7*
IDC ***10*** *10:05:12.2±0.5, 83.°63N×114.°07E, h0km, mb4.0/18, mb1 4.2/19, mb1mx4.1/23, mbtmp4.0/19, ML3.6/1, Error ellipse: s-maj=16.5km s-min=12.3km az=137.0*
NEIC ***10*** *10:05:14.2±0.3, 83.°68N×113.°48E, h10km, mb4.4/35, Error ellipse: s-maj=8.7km s-min=4.5km az=152.0*
ISC 10 10:05:14.1±0.2, 83.°70N±0.°04×113.°9E±0.°4, h10km, (h12km±1.6km:pP-P), n269, σ0s78/268, mb4.3/65, 71C-84D, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**13.90**	**308**	*e*P	**Pn**	**10 08 35.3**	**+4.6**
SPITS	**Spitsbergen Ar**	**14.18**	**303**	Pn	**Pn**	**10 08 32.8**	**-1.7**
	baz=37,slow=13,SNR=3.5						
ARCES	**ARCESS Array B**	**21.33**	**285**	P	**P**	**10 09 59.8**	**-0.9**
	7.0nm,0.8s,mb4.1,baz=13,slow=11,SNR=13						
ARCES	**ARCESS Array B**	**21.33**	**285**	P	**P**	**10 09 59.8**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YAK	**Yakutsk**	**22.09**	**160**	*e*P	**P**	**10 10 06.0**	**-2.8**
YAK				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.4						
YAK				pmax	pmax		
	comp=N,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
APA	**Apatity**	**22.36**	**276**‖	*e*P	Px	10 10 30.0	
APA				*e*S	Sx	10 14 48.8	
APA				pmax	pmax		
	comp=Z,92nm,1.6s,mb5.0						
SEY	**Seymchan**	**22.58**	**132**‖	*i*P	**P**	**10 10 13.8**	**-0.2**
SUMG	**Summit**	**23.33**	**339**	*e*P	**P**	**10 10 24.1**	**+2.3**
COLD	**Coldfoot**	**24.35**	**70**	*e*P	**P**	**10 10 31.5**	**0.0**
	comp=Z,4.3nm,0.7s,mb4.0						
INK	**Inuvik**	**24.93**	**55**	*e*P	**P**	**10 10 37.1**	**+0.4**
	comp=Z,8.0nm,0.6s,mb4.4						
INK	**Inuvik**	**24.93**	**55**	P	**P**	**10 10 38.0**	**+1.3**
	comp=Z,5.7nm,0.8s,mb4.2,baz=354,slow=11,SNR=10						
INK	**Inuvik**	**24.93**	**55**	P	**P**	**10 10 38.0**	**+1.3**
INK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
COLA	**College**	**26.88**	**69**	*e*P	**P**	**10 10 57.4**	**+3.0**
	comp=Z,9.1nm,0.9s,mb4.3						
COLA	**College**	**26.88**	**69**	*e*P	**P**	**10 10 57.4**	**+3.0**
COLA				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.3						
ILAR	**Eielson Array**	**27.08**	**68**	P	**P**	**10 10 57.0**	**+0.9**
	comp=Z,1.4nm,1.0s,mb3.4,baz=343,slow=8.5,SNR=11						
ILAR	**Eielson Array**	**27.08**	**68**	P	**P**	**10 10 57.1**	**+0.9**
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BPAW	**Bear Paw Mtn.**	**27.31**	**72**	*e*P	**P**	**10 10 58.9**	**+0.7**
	comp=Z,6.8nm,1.0s,mb4.1						
EGAK	**Eagle**	**27.65**	**63**	*e*P	**P**	**10 11 03.6**	**+2.3**
	comp=Z,5.0nm,0.9s,mb4.1						
MCK	**McKinley**	**27.88**	**71**	*e*P	**P**	**10 11 07.3**	**+3.9**
	comp=Z,16nm,1.4s,mb4.5						
MCK	**McKinley**	**27.88**	**71**	*e*P	**P**	**10 11 07.3**	**+3.9**
MCK				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.5						
TTA	**Tatalina**	**27.91**	**78**	*e*P	**P**	**10 11 06.2**	**+2.5**
	comp=Z,2.5nm,0.9s,mb3.8						
TTA	**Tatalina**	**27.91**	**78**	*e*P	**P**	**10 11 06.2**	**+2.5**
TTA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
TRF	**Thorofare Moun**	**28.01**	**72**	*e*P	**P**	**10 11 05.0**	**+0.4**
	comp=Z,11nm,1.2s,mb4.4						
PPLA	**Purkeypile**	**28.36**	**74**	*e*P	**P**	**10 11 13.2**	**+5.6**
	comp=Z,7.5nm,1.0s,mb4.3						
DAWY	**Dawson**	**28.52**	**62**	*e*P	**P**	**10 11 09.4**	**+0.4**
FINES	**FINESS Array B**	**29.11**	**279**	P	**P**	**10 11 14.3**	**-0.1**
FINES				PcP	PcP	10 14 20.9	-0.7
FINES	**FINESS Array B**	**29.11**	**279**	P	**P**	**10 11 14.3**	**-0.1**
	comp=Z,2.8nm,0.8s,mb4.0,baz=30,slow=8.7,SNR=6.4						
FINES				PcP	PcP	10 14 20.9	-0.6
	comp=Z,1.3nm,0.7s,baz=36,slow=5.2,SNR=3.4						
FINES	**FINESS Array B**	**29.11**	**279**	P	**P**	**10 11 14.3**	**0.0**
FINES						10 14 20.9	
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZALV	**Zalesovo Beam**	**30.83**	**214**	P	**P**	**10 11 28.8**	**-0.8**
	comp=Z,2.2nm,1.0s,mb3.9,baz=14,slow=8.9,SNR=4.8						
ZALV				PcP	PcP	10 14 25.2	-0.9
	comp=Z,0.6nm,0.5s,baz=270,slow=1.5,SNR=5.2						
ZALV	**Zalesovo Beam**	**30.83**	**214**	P	**P**	**10 11 28.8**	**-0.8**
ZALV						10 14 25.2	
ZALV				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.9						
NOA	**NORSAR Array B**	**31.08**	**293**	P	**P**	**10 11 32.4**	**+0.7**
NOA	**NORSAR Array B**	**31.08**	**293**	P	**P**	**10 11 32.4**	**+0.7**
	comp=Z,0.8nm,0.7s,mb3.7,baz=11,slow=8.7,SNR=2.5						
NOA	**NORSAR Array B**	**31.08**	**293**	P	**P**	**10 11 32.4**	**+0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HYT	**Haines Junctio**	**31.88**	**62**	*e*P	**P**	**10 11 40.8**	**+2.0**
YKA	**Yellowknife Ar**	**32.19**	**41**	P	**P**	**10 11 40.5**	**-1.0**
YKA	**Yellowknife Ar**	**32.19**	**41**	P	**P**	**10 11 40.5**	**-1.0**
	comp=Z,1.3nm,1.0s,mb3.7,baz=356,slow=8.8,SNR=4.9						
YKA	**Yellowknife Ar**	**32.19**	**41**	P	**P**	**10 11 40.5**	**-1.0**
YKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BRVK	**Borovoye**	**32.79**	**230**	*e*P	**P**	**10 11 47.2**	**+0.4**
	comp=Z,2.5nm,0.8s,mb4.2						
BRVK	**Borovoye**	**32.79**	**230**	*d*P	**P**	**10 11 47.0**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
BVAR	**Borovoye Array**	**32.81**	**230**	P	**P**	**10 11 46.5**	**-0.5**
	comp=Z,2.1nm,0.8s,mb4.1,baz=16,slow=7.7,SNR=11						
BVAR				PcP	PcP	10 14 31.7	+0.2
	comp=Z,1.3nm,0.6s,baz=0.0,slow=1.6,SNR=5.6						
BVAR	**Borovoye Array**	**32.81**	**230**	P	**P**	**10 11 46.5**	**-0.5**
BVAR						10 14 31.7	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**34.46**	**220**	*e*P	**P**	**10 12 00.8**	**-0.6**
	comp=Z,1.6nm,0.6s,mb4.1						
KURK	**Kurchatov**	**34.46**	**220**	P	**P**	**10 12 01.4**	**+0.1**
	comp=Z,1.0nm,0.5s,mb4.0,baz=23,slow=7.0,SNR=4.8						
KURK				PcP	PcP	10 14 35.6	-0.5
	comp=Z,1.8nm,0.8s,baz=2.7,slow=2.6,SNR=4.6						
KURK	**Kurchatov**	**34.46**	**220**	*ce*P	**P**	**10 12 00.7**	**-0.7**
KURK		

comp=E,5.0nm,0.5s
VSR pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
MKAR Makanchi Array 38.12 216 P **P** 10 12 31.3 -1.3
comp=Z,3.4nm,0.8s,mb4.2,baz=1.5,slow=7.0,SNR=15
MKAR PcP PcP 10 14 46.4 -0.8
comp=Z,0.4nm,0.2s,baz=357,slow=2.4,SNR=3.7
MKAR Makanchi Array 38.12 216 P **P** 10 12 31.3 -1.3
MKAR 10 14 46.4
MKAR pmax pmax
comp=Z,3.0nm,0.8s
AKASG Malin Array Be 39.32 272 P **P** 10 12 42.4 -0.3
comp=Z,1.1nm,0.5s,mb3.9,baz=11,slow=8.9,SNR=5.7
AKASG Malin Array Be 39.32 272 P **P** 10 12 42.4 -0.3
AKASG pmax pmax
comp=Z,1.0nm,0.5s
MDJ Mudanjiang 39.50 162 P **P** 10 12 43.5 -0.8
MDJ pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
MDJ pmax pmax
comp=Z,300nm,13.3s
CN2 Changchun 40.20 167 *e*P **P** 10 12 50.9 +0.9
WMQ Urumqi 40.76 209 *e*P **P** 10 12 56.5 +1.8
WMQ pP pP 10 13 01.0 +3.2
WMQ sP sP 10 13 03.5 +4.5
WMQ PP PP 10 14 34.1 +5.8
WMQ pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
WMQ pmax pmax
comp=Z,58nm,4.2s
SCHQ Schefferville 41.69 1 P **P** 10 13 02.3 +0.1
comp=Z,2.6nm,0.5s,mb4.1,baz=346,slow=6.9,SNR=18
HHC Hu-ho-hao-te 43.01 183 *e*P **P** 10 13 12.1 -1.0
HHC pP pP 10 13 16.3 +0.1
HHC sP sP 10 13 19.0 +1.6
HHC PP PP 10 14 54.2 +1.6
HHC *e*S **S** **10 19 35.3 -2.7**
HHC SS SS 10 22 40.0 -10
HHC pmax pmax
comp=Z,17nm,0.9s,mb4.8
HHC pmax pmax
comp=Z,200nm,6.3s
HHC LR LR
comp=N,140nm,16.7s
HHC LR LR
comp=E,370nm,20.2s
HHC LR LR
comp=Z,140nm,16.7s
BJI Beijing 43.82 177 P **P** 10 13 19.7 +0.1
BJI pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
KIV Kislovodsk 44.51 257 *e*P **P** 10 13 26.4 +1.3
comp=Z,11nm,1.0s,mb4.7
KIV Kislovodsk 44.51 257 *e*P **P** 10 13 26.4 +1.3
KIV pmax pmax
comp=Z,11nm,1.0s,mb4.6
GTA Gaotai 44.65 196 *e*P **P** 10 13 31.6 +5.3
GTA pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
ZEI Tsey 45.55 256 *e*P **P** 10 13 34.0 +0.6
ZEI pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
A13A Flathead Natio 45.68 43 ⇓P **P** 10 13 34.0 -0.3
baz=46
A14A Double T Ranch 45.71 43 ⇑P **P** 10 13 33.5 -1.1
baz=46
A15A Johnson Ranch, 45.76 42 ⇓P **P** 10 13 34.6 -0.4
baz=46
B08A Colville Reser 45.86 48 ⇑P **P** 10 13 35.0 -0.8
baz=46
A16A West Butte Ran 45.87 41 ⇑P **P** 10 13 34.6 -1.3
baz=46
A17A Triple J Farms 45.94 40 ⇓P **P** 10 13 35.4 -1.0
baz=46
NEW Newport 46.13 46 *e*P **P** 10 13 37.2 -0.7
comp=Z,6.4nm,1.1s,mb4.5
NEW Newport 46.13 46 *e*P **P** 10 13 37.2 -0.7
NEW pmax pmax
comp=Z,6.0nm,1.1s
B13A Whitefish 46.23 44 ⇑P **P** 10 13 38.7 0.0
baz=46
B15A Bradely Ranch, 46.43 42 ⇓P **P** 10 13 39.4 -0.9
baz=46
B17A L&G Farms, Che 46.58 40 ⇓P **P** 10 13 40.9 -0.5
baz=46
JTMT Jette 46.87 44 *e*P **P** 10 13 44.1 +0.4
C13A Hot Springs 46.91 44 ⇑P **P** 10 13 43.9 -0.1
baz=47
C15A Salmond Ranch, 46.97 42 ⇓P **P** 10 13 44.1 -0.4
baz=47
SWMT Swartz Lake 47.12 43 *e*P **P** 10 13 45.4 -0.3
C17A Wharram Farm, 47.24 40 ⇑P **P** 10 13 46.3 -0.3
baz=47
SLMT Seeley Lake 47.43 43 *e*P **P** 10 13 48.8 +0.7
D12A Red Ives Fores 47.48 45 ⇑P **P** 10 13 48.3 -0.1
baz=47
D13A Huson 47.50 44 ⇓P **P** 10 13 48.7 0.0
baz=47
D14A Greenough 47.59 43 ⇑P **P** 10 13 49.0 -0.3
baz=47
D18A Linhart Farms, 47.74 40 ⇑P **P** 10 13 50.7 +0.2
baz=48
CHMT Chamberlain Mo 47.77 43 *e*P **P** 10 13 52.0 +1.2
comp=Z,1.5nm,0.9s,mb4.0
MSO Missoula 47.81 43 *e*P **P** 10 13 50.5 -0.5
comp=Z,2.5nm,0.8s,mb4.3
LZH Lanzhou 47.86 191 *e*P **P** 10 13 51.5 -0.1
LZH pP pP 10 13 54.6 -0.1
LZH sP sP 10 13 56.0 +0.1
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.9
HRY Holter Researc 48.08 41 *e*P **P** 10 13 53.0 -0.1
E12A Beaver Dam Sad 48.09 45 ⇓P **P** 10 13 52.3 -1.0
baz=48
E13A Victor 48.17 44 ⇓P **P** 10 13 53.1 -0.8
baz=48
E16A East Helena 48.27 41 ⇓P **P** 10 13 54.3 -0.3
baz=48
E15A Deer Lodge 48.30 42 ⇓P **P** 10 13 54.2 -0.7
baz=48,SNR=6.7
E18A Harlowton 48.36 40 ⇓P **P** 10 13 54.8 -0.5
baz=48,SNR=5.9
E17A Martinsdale 48.40 41 ⇑P **P** 10 13 54.7 -0.9
baz=48
LAO LASA Array 48.49 36 *e*P **P** 10 13 56.9 +0.5
comp=Z,12nm,1.0s,mb4.9
F12A Elk City 48.77 45 ⇓P **P** 10 13 57.5 -1.0
baz=49,SNR=9.3
LRM Limekiln Ridge 48.92 42 *e*P **P** 10 14 00.3 +0.7
G08A Pilot Rock 48.94 48 ⇓P **P** 10 13 59.9 +0.1
baz=49
F17A Fitzpatrick Pl 48.97 40 ⇑P **P** 10 13 59.7 -0.3
baz=49
F18A Big Timber 49.03 40 ⇑P **P** 10 14 00.4 -0.1
baz=49
F19A Roth Farm, Mol 49.14 39 ⇓P **P** 10 14 01.4 +0.1
baz=49
GCMT Greycliff 49.15 40 *e*P **P** 10 14 01.9 +0.6
comp=Z,4.8nm,0.9s,mb4.5
BOZ Bozeman (W) 49.15 41 ⇓P **P** 10 14 01.4 0.0
baz=49,SNR=7.0
BOZ Bozeman (W) 49.15 41 *e*P **P** 10 14 02.4 +1.0
DLMT Dillon 49.37 42 *e*P **P** 10 14 04.1 +1.1
comp=Z,5.5nm,1.3s,mb4.4
G12A Big Creek, Yel 49.39 45 ⇓P **P** 10 14 03.7 +0.5
baz=49
BMO Blue Mountains 49.51 47 *e*P **P** 10 14 05.0 +0.9
G13A Cobalt 49.51 44 ⇓P **P** 10 14 04.3 +0.2
baz=49
G15A Dillon 49.57 42 ⇓P **P** 10 14 03.6 -1.0
baz=49
G18A Lazy EL Ranch, 49.63 40 ⇓P **P** 10 14 04.6 -0.5
baz=50
BRTR Keskin Array B 49.68 266 P **P** 10 14 06.2 +0.7
comp=Z,1.7nm,0.8s,mb4.1,baz=6.5,slow=5.0,SNR=7.4
BRTR Keskin Array B 49.68 266 P **P** 10 14 06.2 +0.7
BRTR pmax pmax
comp=Z,2.0nm,0.8s
MCMT McKenzie Canyo 49.88 43 *e*P **P** 10 14 08.2 +1.3
comp=Z,2.0nm,1.1s,mb4.1
H12A Diamond D Ranc 50.00 45 ⇓P **P** 10 14 07.1 -0.7
baz=50
H13A Challis 50.03 44 ⇓P **P** 10 14 08.5 +0.4
baz=50,SNR=15
H14A Leadore 50.05 43 ⇓P **P** 10 14 08.5 +0.2
baz=50
I07A Izee 50.09 49 ⇑P **P** 10 14 08.4 -0.1
baz=50
H15A Lima 50.10 42 ⇓P **P** 10 14 09.0 +0.3
baz=50
H16A Russell Place, 50.12 41 ⇓P **P** 10 14 09.0 +0.2
baz=50
H17A Grant Village 50.48 41 ⇓P **P** 10 14 13.1 +1.7
baz=50,SNR=6.4
H21A Big Horn, Sher 50.49 37 ⇓P **P** 10 14 11.5 -0.1
baz=50
I13A Wildhorse Cree 50.69 44 P **P** 10 14 14.2 +1.1
baz=50,SNR=8.8
I14A Mackay 50.73 43 ⇑P **P** 10 14 13.8 +0.4
baz=51
I12A Atlanta 50.73 45 ⇑P **P** 10 14 13.0 -0.4
baz=51
J08A Circle Bar Ran 50.90 48 ⇓P **P** 10 14 15.4 +0.7
baz=51
I16A Newdale 50.93 42 ⇑P **P** 10 14 15.5 +0.6
baz=51
IMW Indian Meadow 50.94 41 *e*P **P** 10 14 17.1 +2.0
comp=Z,2.8nm,0.8s,mb4.2
MFID Camas Ranch 51.05 46 ⇑P **P** 10 14 15.6 -0.2
baz=51
I20A Worland 51.09 38 ⇑P **P** 10 14 15.8 -0.3
baz=51
MOOW Moosose Ponds 51.11 41 *e*P **P** 10 14 17.0 +0.8
comp=Z,3.3nm,1.0s,mb4.2
RSSD Black Hills 51.19 35 *e*P **P** 10 14 17.1 +0.2
comp=Z,10nm,1.1s,mb4.7
RSSD Black Hills 51.19 35 *e*P **P** 10 14 17.1 +0.3
RSSD pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
I21A Big Trails, Te 51.28 38 ⇓P **P** 10 14 17.2 -0.4
baz=51
J14A Carey 51.32 43 ⇑P **P** 10 14 18.2 +0.3
baz=51
J15A Blackfoot 51.33 42 ⇑P **P** 10 14 17.2 -0.7
baz=51
TPAW Teton Pass 51.35 41 *e*P **P** 10 14 19.9 +1.8
comp=Z,5.7nm,1.1s,mb4.4
REDW Red Top Meadow 51.48 41 *e*P **P** 10 14 20.4 +1.4
comp=Z,2.9nm,1.1s,mb4.1
NJ2 Nanjing 51.81 175 *e*P **P** 10 14 22.1 +0.5
NJ2 pmax pmax
comp=Z,30nm,0.6s,mb5.4
K14A Jones Ranch, D 52.12 43 ⇑P **P** 10 14 23.2 -0.6
baz=52
K19A Absolon Red Bu 52.16 39 ⇓P **P** 10 14 23.6 -0.5
baz=52
BW06 Boulder Array 52.17 40 ⇓P **P** 10 14 22.9 -1.3
baz=52
K20A Yellowstone Ra 52.36 39 ⇑P **P** 10 14 25.2 -0.4
baz=52
K22A Casper 52.49 37 ⇑P **P** 10 14 25.8 -0.7
baz=52
L17A Cokeville 52.74 41 ⇓P **P** 10 14 28.5 +0.1
baz=53
M11A Holland Ranch, 53.03 46 ⇑P **P** 10 14 30.9 +0.4
baz=53
L21A Rawlins 53.12 38 ⇓P **P** 10 14 31.0 -0.2
baz=53,SNR=6.1
M14A Sheep Mountain 53.15 44 ⇓P **P** 10 14 31.3 -0.1
baz=53
M13A Melllo 53.23 44 *e*P **P** 10 14 33.2 +1.2
comp=Z,6.8nm,1.0s,mb4.5
RWWY Rawlins 53.40 38 *e*P **P** 10 14 33.3 0.0
M21A Separation Pea 53.47 38 ⇓P **P** 10 14 33.6 -0.2
baz=53
ESDC Sonseca Array 53.69 302 P **P** 10 14 35.3 -0.1
comp=Z,3.0nm,0.9s,mb4.2,baz=5.6,slow=8.2,SNR=15
ESLA Sonseca Array 53.69 302 *e*P **P** 10 14 36.6 +1.2
comp=Z,1.3nm,1.0s,mb3.8
PAB San Pablo 53.85 302 *e*P **P** 10 14 38.2 +1.6
comp=Z,10nm,1.0s,mb4.7
PAB San Pablo 53.85 302 *e*P **P** 10 14 38.2 +1.6
PAB pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
N19A John Jarvie Ra 54.06 40 ⇓P **P** 10 14 38.0 -0.1
baz=54
N20A Spence Gulch, 54.18 39 ⇑P **P** 10 14 39.2 +0.2
baz=54,SNR=6.8
O12A Currie 54.27 45 ⇑P **P** 10 14 39.8 +0.2
baz=54
N23A Red Feather La 54.28 37 ⇓P **P** 10 14 39.6 -0.1
baz=54
O11A Cowboy Ranch, 54.33 46 ⇑P **P** 10 14 39.9 -0.2
baz=54
N24A Carr 54.41 36 ⇓P **P** 10 14 40.6 -0.1
baz=54
O18A Roosevelt 54.62 41 ⇑P **P** 10 14 42.4 +0.2
baz=54
WCN Washoe City 54.82 50 ⇓P **P** 10 14 43.1 -0.5
baz=55
O20A White River Ci 54.88 39 ⇓P **P** 10 14 43.9 -0.2
baz=55
O22A Kremmling 54.97 37 ⇓P **P** 10 14 45.2 +0.5
baz=55,SNR=7.7
P13A Bates Ranch, G 55.13 44 ⇑P **P** 10 14 45.9 0.0
baz=55
P19A Cripple Cowboy 55.33 40 ⇓P **P** 10 14 46.7 -0.6
baz=55
P22A Eagle 55.52 38 ⇑P **P** 10 14 49.0 +0.3
baz=55
Q11A Duckwater 55.61 46 ⇓P **P** 10 14 50.1 +0.7
baz=55
Q14A Sevier Lake (B 55.65 44 ⇓P **P** 10 14 50.1 +0.4
baz=56
Q15A Fillmore 55.71 43 ⇓P **P** 10 14 50.3 +0.2
baz=56
SRU San Rafael 55.73 41 ⇓P **P** 10 14 50.5 +0.2
baz=56
P25A Willow Gulch B 55.77 35 ⇓P **P** 10 14 50.8 +0.3
baz=56
P23A Jefferson 55.80 37 ⇑P **P** 10 14 52.0 +1.3
baz=56
Q16A Castle Valley 55.88 42 ⇑P **P** 10 14 51.6 +0.3
baz=56
R11A Troy Canyon, C 56.11 46 ⇓P **P** 10 14 53.0 +0.1
baz=56
MSU Marysvale 56.21 43 *e*P **P** 10 14 54.6 +0.9
comp=Z,3.5nm,0.8s,mb4.4
MSU Marysvale 56.21 43 *e*P **P** 10 14 54.6 +0.9
MSU pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
KEST Kesra 56.27 289 P **P** 10 14 55.7 +1.6
comp=Z,5.8nm,0.9s,mb4.6,baz=294,slow=2.4,SNR=13
Q25A Bedland, Calha 56.36 35 ⇓P **P** 10 14 54.1 -0.7
baz=56
R13A O'Brain Ranch, 56.40 45 ⇑P **P** 10 14 54.9 -0.1
baz=56
R17A Hanksville Air 56.41 41 ⇑P **P** 10 14 55.0 -0.1
baz=56
R16A Teasdale 56.48 42 ⇓P **P** 10 14 56.4 +0.7
baz=56
R19A Curley Farm, L 56.64 40 ⇓P **P** 10 14 57.0 +0.2
baz=56
R21A Cimarron 56.68 38 ⇓P **P** 10 14 57.5 +0.4
baz=56
S11A Rachel 56.79 46 ⇓P **P** 10 14 58.2 +0.4
baz=57
R20A Redvale 56.80 39 P **P** 10 14 58.5 +0.6
baz=57,SNR=5.7
PV01 Paradox Valley 56.84 39 *e*P **P** 10 14 59.0 +0.8
comp=Z,1μm,1.0s
R22A Saguache, Gunn 56.88 38 ⇓P **P** 10 14 58.9 +0.5
baz=57
R24A Sanders Place, 56.98 36 ⇑P **P** 10 14 59.1 -0.1
baz=57
S13A Holt Ranch, En 57.00 45 ⇓P **P** 10 14 58.5 -0.8
baz=57
S16A Weppner Ranch, 57.04 42 ⇑P **P** 10 14 59.4 -0.1
baz=57
S17A Black Ridge (B 57.18 42 ⇑P **P** 10 15 00.4 -0.2
baz=57
S18A Hurst Farm, Bl 57.19 41 ⇑P **P** 10 15 00.5 -0.1
baz=57
S19A Harvey Farm, M 57.19 40 ⇓P **P** 10 15 00.6 0.0
baz=57,SNR=6.1
T11A Corn Creek, Al 57.24 46 ⇑P **P** 10 15 00.5 -0.5
baz=57
S22A 4UR Ranch, Cre 57.35 38 ⇓P **P** 10 15 02.4 +0.6
baz=57,SNR=7.4
S21A Coal Bank Pass 57.37 39 ⇓P **P** 10 15 02.0 +0.1
baz=57
GYA Guiyang 57.41 188 P **P** 10 15 04.8 +2.5
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
SDCO Great Sand Dun 57.44 37 *e*P **P** 10 15 02.5 +0.1
comp=Z,4.0nm,0.9s,mb4.5
T13A Saint George 57.56 45 ⇓P **P** 10 15 03.1 -0.2
baz=57
T14A Hurricane 57.58 44 ⇓P **P** 10 15 03.5 +0.1
baz=57
T15A Red Dirt Ranch 57.68 43 ⇑P **P** 10 15 04.5 +0.4
baz=58
T18A Mexican Hat 57.74 41 ⇓P **P** 10 15 04.6 +0.1
baz=58
MVCO Mesa Verde 57.77 40 ⇓P **P** 10 15 04.6 -0.1
baz=58
MVCO Mesa Verde 57.77 40 *e*P **P** 10 15 05.6 +0.9
comp=Z,10nm,1.1s,mb4.8
T17A Navajo Res., N 57.81 42 ⇑P **P** 10 15 04.7 -0.4
baz=58
T22A Edith 58.07 38 ⇑P **P** 10 15 06.8 0.0
baz=58
T19A Beclabito 58.11 40 ⇓P **P** 10 15 07.0 -0.1
baz=58
T23A Casias Ranch, 58.11 37 ⇑P **P** 10 15 06.7 -0.4
baz=58
U13A Pakoon Wash 58.15 45 ⇑P **P** 10 15 05.7 -1.7
baz=58
U14A Mt Trumbull 58.21 44 ⇓P **P** 10 15 07.2 -0.7
baz=58
MPMC Manual Prospec 58.23 48 ⇓P **P** 10 15 08.9 +0.9
baz=58
U21A Nageezi 58.60 39 ⇑P **P** 10 15 11.0 +0.4
baz=58
U16A Tuba City 58.64 42 ⇑P **P** 10 15 10.9 +0.1
baz=58
U22A Llaves 58.71 38 ⇑P **P** 10 15 11.9 +0.6
baz=58
U24A Moreno Valley 58.78 37 ⇑P **P** 10 15 12.3 +0.5
baz=59
U23A El Rito 58.80 37 ⇑P **P** 10 15 12.1 +0.1
baz=59,SNR=8.3
KMI Kunming 58.81 192 P **P** 10 15 15.7 +3.6
KMI pP pP 10 15 18.2 +2.9
KMI sP sP 10 15 19.2 +2.6
KMI pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
U25A Circle Dot Ran 58.85 36 P **P** 10 15 12.2 -0.1
baz=59,SNR=10
U26A Atchley Ranch, 58.90 35 ⇓P **P** 10 15 11.8 -0.8
baz=59
V14A Boquillas Ranc 59.00 44 ⇓P **P** 10 15 13.5 +0.1
baz=59
V18A Ganado 59.16 41 ⇓P **P** 10 15 14.4 -0.1
baz=59
V22A San Miguel Ran 59.17 38 ⇑P **P** 10 15 13.6 -0.9
baz=59
V20A Brimhall 59.17 40 ⇓P **P** 10 15 13.3 -1.2
baz=59
V17A Tonalea, Kykot 59.18 42 ⇑P **P** 10 15 14.5 -0.1
baz=59
V25A Rancho No Teng 59.40 36 ⇑P **P** 10 15 15.5 -0.6
baz=59
V24A Rampart Ranch, 59.46 37 ⇓P **P** 10 15 15.8 -0.8
baz=59
V26A Tequesquite Ra 59.49 35 ⇑P **P** 10 15 14.9 -1.8
baz=59,SNR=5.7
W23A Werner Place, 59.97 37 ⇑P **P** 10 15 20.1 0.0
baz=60
W24A Lazy 6 Ranch, 59.97 37 ⇓P **P** 10 15 20.1 0.0
baz=60
X13A Yucca 59.97 45 ⇑P **P** 10 15 19.6 -0.5
baz=60
W25A X Bar L Ranch, 60.02 36 ⇑P **P** 10 15 19.4 -1.0
baz=60
X18A Snowflake 60.33 41 ⇑P **P** 10 15 22.5 0.0
baz=60
X20A Quemado 60.42 40 ⇓P **P** 10 15 24.0 +0.8
baz=60
X17A Forest Lakes 60.46 42 ⇓P **P** 10 15 23.6 +0.2
baz=60
X19A St. Johns 60.48 41 ⇓P **P** 10 15 23.4 -0.1
baz=60
X21A Alamocita Cree 60.57 39 ⇓P **P** 10 15 23.9 -0.2
baz=60
LAZ Ladron 60.66 38 *e*P **P** 10 15 25.1 +0.4
comp=Z,1.6nm,1.1s,mb4.1
Y14A Wickenburg 60.69 44 ⇑P **P** 10 15 24.7 -0.3
baz=60
WMOK Wichita Mounta 60.84 31 *e*P **P** 10 15 25.3 -0.7
comp=Z,6.0nm,1.2s,mb4.6
WMOK Wichita Mounta 60.84 31 *e*P **P** 10 15 25.3 -0.7
WMOK pmax pmax
comp=Z,6.0nm,1.2s,mb4.6
Y21A Point of Rocks 61.01 39 ⇓P **P** 10 15 27.2 +0.1
baz=61
Y20A Horse Springs, 61.06 40 ⇓P **P** 10 15 27.4 -0.1
baz=61
Y27A Causey 61.43 35 ⇑P **P** 10 15 29.1 -0.9
baz=61
Z22A Elephant Butte 61.81 38 ⇓P **P** 10 15 32.5 0.0
baz=62
Z25A Roswell 61.93 36 ⇑P **P** 10 15 32.3 -1.1
baz=62
Z26A Caprock 61.99 36 ⇑P **P** 10 15 32.8 -1.0
baz=62
124A Stringfield Ra 62.46 37 ⇓P **P** 10 15 37.2 +0.2
baz=62
125A Gardner Draw, 62.55 36 ⇓P **P** 10 15 37.0 -0.6
baz=62
GDL2 Guadalupe Moun 63.03 36 *e*P **P** 10 15 39.7 -1.1
comp=Z,1.7nm,0.8s,mb4.2
324A Moseley Ranch, 63.71 37 ⇓P **P** 10 15 44.9 -0.3
baz=64
326A Caldwell Ranch 63.93 36 ⇓P **P** 10 15 45.9 -0.8
baz=64
425A Indio Mountain 64.39 37 ⇑P **P** 10 15 49.5 -0.2
baz=64,SNR=9.3
426A McDonald Obser 64.57 36 ⇑P **P** 10 15 50.0 -0.9
baz=64
428A Kincaid Ranch, 64.60 35 ⇑P **P** 10 15 50.9 -0.2
baz=64,SNR=6.1
JCT Junction City 65.02 32 *e*P **P** 10 15 52.8 -1.1
comp=Z,7.7nm,0.9s,mb4.7
JCT Junction City 65.02 32 *e*P **P** 10 15 52.8 -1.1
JCT pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
528A Cox Ranch, San 65.16 35 ⇑P **P** 10 15 54.3 -0.4
baz=65,SNR=6.0
526A Mary Lane Ranc 65.17 36 ⇑P **P** 10 15 53.9 -1.0
baz=65
CMAR Chiang Mai Arr 65.54 196 P **P** 10 15 56.0 -1.3
comp=Z,1.3nm,0.8s,mb4.0,baz=354,slow=9.1,SNR=6.7
CMAR Chiang Mai Arr 65.54 196 P **P** 10 15 56.0 -1.3
CMAR pmax pmax
comp=Z,1.0nm,0.8s
626A Big Bend Ranch 65.67 36 ⇑P **P** 10 15 57.5 -0.6
baz=66
628A Black Gap, Mar 65.82 35 ⇓P **P** 10 15 58.2 -0.9
baz=66
627A Terlingua Ranc 65.82 35 ⇑P **P** 10 15 58.4 -0.7
baz=66
TXAR Lajitas Array 65.92 36 P **P** 10 15 58.9 -0.8
TXAR Lajitas Array 65.92 36 P **P** 10 15 58.9 -0.8
comp=Z,1.5nm,0.6s,mb4.2,baz=20,slow=4.8,SNR=27
TXAR Lajitas Array 65.92 36 P **P** 10 15 58.9 -0.8
TXAR pmax pmax
comp=Z,2.0nm,0.6s
TORD Torodi Ar. Bea 79.40 293 P **P** 10 17 20.1 +0.2
comp=Z,5.3nm,0.7s,mb4.6,baz=356,slow=6.2,SNR=39
MAW Mawson 153.05 221 PKPbc PKPbc 10 25 07.6 -1.9
comp=Z,2.2nm,0.8s,baz=14,slow=3.3,SNR=5.0
MAW PKPab PKPab 10 25 20.4 -0.7
comp=Z,2.0nm,0.8s,baz=309,slow=9.3,SNR=4.0

*ISCJB **10** 10:07:42.4±0.4, 15°.49N±0°.05×120°.66E±0°.09, h186km±4km, mb3.8/10, Error ellipse: s-maj=14.3km s-min=7.4km az=174.4*
*MAN **10** 10:07:42, 15°.55N×120°.60E, h175km, mb5.0, ML4.0, MS4.1*
*NEIC **10** 10:07:43.5±0.5, 15°.45N×120°.94E, h193km±5km, mb4.5/5, Error ellipse: s-maj=15.7km s-min=6.4km az=83.0*
*IDC **10** 10:07:43.7±0.8, 15°.43N×120°.91E, h193km±9km, mb3.5/10, mb1 3.6/10, mb1mx3.4/20, mbtmp3.4/10, Error ellipse: s-maj=29.6km s-min=14.9km az=66.0*
ISC 10 10:07:43.3±0.4, **15°.49N**±0°.05×**120°.68E**±0°.09, **h180**km±4km, **n30**, σ**0s95**/31, **mb3.8**/11, **1C**, **Luzon**

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

SCZP	**Santa Cruz**	**0.80**	**291**	*e*P	**Sn**	**10 08 28.1**	**-1.8**
BCPH	**Baguio City Da**	**0.89**	**354**⇑	*e*P	**Pn**	**10 08 09.0**	**-1.3**
BALP	**Baler**	**0.90**	**74**	*e*P	**Pn**	**10 08 10.4**	**+0.2**
BOLP	**Bolinao**	**1.16**	**320**	*e*P	**Pn**	**10 08 11.5**	**-0.7**
TGY	**Tagaytay City**	**1.40**	**170**	P	**Pn**	**10 08 15.4**	**+1.0**
	24nm,0.3s,baz=291,slow=22,SNR=3.7						
TGY				S	**Sn**	**10 08 40.0**	**+1.5**
	40nm,0.3s,baz=221,slow=20,SNR=7.8						
POLP	**Polillo Island**	**1.43**	**122**	*e*P	**Pn**	**10 08 15.2**	**+0.6**
LUBP	**Lubang**	**1.79**	**194**	*e*P	**Pn**	**10 08 18.6**	**+0.3**
CAUP	**Cauayan**	**1.81**	**37**	*e*P	**Pn**	**10 08 18.8**	**+0.3**
ABRA	**Dolores**	**2.15**	**1**	*e*P	**Pn**	**10 08 20.7**	**-1.3**
BUSP	**Coron**	**3.50**	**188**	*e*P	**Pn**	**10 08 38.2**	**+0.1**
PVCP	**Virac**	**3.85**	**119**	*e*P	**Pn**	**10 08 42.5**	**-0.1**
ENPP	**El Nido**	**4.43**	**196**	*e*P	**Pn**	**10 08 49.7**	**-0.2**
TPUB	**Ta-pu**	**7.77**	**360**	*e*Pn	**Pn**	**10 09 33.8**	**+0.2**
	29nm,0.8s						
YULB	**Yu-li**	**7.88**	**4**	*e*Pn	**Pn**	**10 09 36.0**	**+1.0**
SSLB	**Suanglung**	**8.26**	**2**	*e*Pn	**Pn**	**10 09 40.5**	**+0.6**
	14nm,0.7s						
YHNB	**Yeheng**	**9.16**	**4**	*e*Pn	**Pn**	**10 09 52.4**	**+0.6**
	27nm,0.9s						
CMAR	**Chiang Mai Arr**	**21.00**	**281**	P	**P**	**10 12 14.7**	**+1.9**
	1.7nm,0.7s,mb3.5,baz=95,slow=7,9,SNR=9.7						
KSRS	**Korea Array**	**22.80**	**15**	P	**P**	**10 12 29.9**	**-0.5**
	1.9nm,0.8s,mb3.6,baz=191,slow=9.1,SNR=7.6						
SONM	**Songino Array**	**34.35**	**343**	P	**P**	**10 14 13.0**	**+0.3**
	0.4nm,0.5s,mb3.4,baz=148,slow=11,SNR=2.5						
WRAB	**Tennant Creek**	**37.68**	**159**	*e*P	**P**	**10 14 39.3**	**-2.0**
	2.5nm,0.7s,mb4.0						
ASAR	**Alice Springs**	**41.00**	**161**	P	**P**	**10 15 07.1**	**-1.7**
	1.9nm,0.4s,mb4.0,baz=340,slow=7.0,SNR=41						
MKAR	**Makanchi Array**	**44.60**	**323**	P	**P**	**10 15 38.5**	**+1.0**
	2.1nm,0.7s,mb3.9,baz=130,slow=9.0,SNR=10						
ZALV	**Zalesovo Beam**	**47.48**	**332**	P	**P**	**10 15 59.6**	**-0.1**
	1.6nm,0.6s,mb3.8,baz=133,slow=8.3,SNR=5.8						
KURK	**Kurchatov**	**48.71**	**325**	*e*P	**P**	**10 16 09.7**	**+0.4**
	9.6nm,0.7s,mb4.5						
KURK	**Kurchatov**	**48.71**	**325**	P	**P**	**10 16 10.0**	**+0.7**
	4.9nm,0.6s,mb4.3,baz=118,slow=9.0,SNR=26						
BVAR	**Borovoye Array**	**54.30**	**325**	P	**P**	**10 16 51.4**	**+0.7**
BVAR	**Borovoye Array**	**54.30**	**325**	P	**P**	**10 16 51.4**	**+0.7**
	0.4nm,0.4s,mb3.5,baz=76,slow=6.1,SNR=3.4						
FINES	**FINESS Array B**	**78.72**	**331**	P	**P**	**10 19 24.9**	**-0.5**
	2.0nm,0.9s,mb3.8,baz=79,slow=5.2,SNR=8.7						
NOA	**NORSAR Array B**	**85.67**	**333**	P	**P**	**10 20 00.5**	**-1.0**
NOA	**NORSAR Array B**	**85.67**	**333**	P	**P**	**10 20 00.5**	**-1.0**
	1.6nm,0.7s,mb3.9,baz=70,slow=4.6,SNR=5.9						

IDC 10 10:34:12.1±1.2, 10.74N×91.61E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.6/22, mbtmp3.8/8, ML4.1/1, Error ellipse: s-maj=43.3km s-min=20.1km az=59.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.45**	**42**	Pn	Pn	10 36 41.7	-1.5
	0.4nm,0.3s,baz=214,slow=13,SNR=4.2						
MKAR	**Makanchi Array**	**36.79**	**349**	P	P	10 41 21.1	-0.4
	0.3nm,0.3s,baz=200,slow=13,SNR=4.4						
SONM	**Songino Array**	**39.01**	**16**	P	P	10 41 41.2	+1.0
	1.2nm,0.8s,baz=195,slow=8.1,SNR=2.9						
ZALV	**Zalesovo Beam**	**43.43**	**354**	P	P	10 42 16.3	-0.2
	0.6nm,0.3s,baz=169,slow=8.4,SNR=2.7						
FITZ	**Fitzroy Crossi**	**44.16**	**130**	P	P	10 42 22.4	-0.4
	2.4nm,0.9s,baz=315,slow=7.1,SNR=2.2						
ASAR	**Alice Springs**	**53.66**	**130**	P	P	10 43 36.0	+0.3
	0.2nm,0.7s,baz=306,slow=7.0,SNR=3.2						
BRTR	**Keskin Array B**	**58.68**	**310**	P	P	10 44 11.4	-0.1
	0.6nm,0.8s,baz=109,slow=6.7,SNR=3.8						
ARCES	**ARCESS Array B**	**71.74**	**340**	P	P	10 45 36.0	+0.3
	1.8nm,0.9s,baz=78,slow=8.5,SNR=3.7						

WEL 10 10:34:19.0±0.2, 39.77S×174.24E, h140km±2km, ML3.6/12, 3D, Error ellipse: s-maj=1.1km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DFE	**Dawson Falls**	**0.45**	**346**	PN	Pn	10 34 38.7	-0.2
NRZ	**Ngariki Road**	**0.49**	**331**	PN	Pn	10 34 39.1	0.0
RAEZ	**Rainy Point**	**0.49**	**14**	PN	Pn	10 34 38.9	-0.2
NEZ	**North Egmont**	**0.51**	**347**	PN	Pn	10 34 39.0	-0.2
NWEZ	**Newall Road**	**0.57**	**329**	PN	Pn	10 34 39.6	0.0
NWEZ				SN	Sn	10 34 54.4	-0.7
WAZ	**Wanganui**	**0.57**	**89** ⇓	PN	Pn	10 34 39.7	+0.2
WAZ				SN	Sn	10 34 54.9	-0.2
DREZ	**Durham Road**	**0.58**	**357**	PN	Pn	10 34 39.4	-0.2
DREZ				SN	Sn	10 34 53.9	-1.3
PKE	**Pukeiti**	**0.60**	**341**	PN	Pn	10 34 39.6	-0.2
MHEZ	**Mangahewa**	**0.69**	**5**	PN	Pn	10 34 40.4	+0.1
MHEZ				SN	Sn	10 34 55.5	-0.9
VRZ	**Vera Road**	**0.75**	**32** ⇓	PN	Pn	10 34 40.3	-0.5
PKVZ	**Pokaka**	**0.98**	**61** ⇓	PN	Pn	10 34 42.4	-0.1
MTVZ	**Mangateitei**	**1.02**	**69**	PN	Pn	10 34 42.8	-0.1
DRZ	**Dome Shelter**	**1.13**	**65**	PN	Pn	10 34 44.3	+0.4
FWVZ	**Far West T-bar**	**1.13**	**64**	PN	Pn	10 34 43.9	-0.1
WNVZ	**Wahianoa**	**1.14**	**68**	PN	Pn	10 34 44.1	+0.1
WPVZ	**Whakapapa**	**1.15**	**61**	PN	Pn	10 34 44.2	0.0
TWVZ	**Taurewa**	**1.16**	**54**	PN	Pn	10 34 43.9	-0.3
TUVZ	**Tukino**	**1.20**	**66**	PN	Pn	10 34 44.8	+0.2
NGZ	**Ngauruhoe**	**1.21**	**61**	PN	Pn	10 34 44.5	-0.1
KIW	**Kapiti Island**	**1.21**	**155**	PN	Pn	10 34 44.5	-0.1
MOVZ	**Moawhango**	**1.22**	**73**	PN	Pn	10 34 44.4	-0.5
WTVZ	**West Tongariro**	**1.23**	**59**	PN	Pn	10 34 44.9	0.0
OTVZ	**Oturere**	**1.25**	**62**	PN	Pn	10 34 45.3	+0.1
OGWZ	**Otaki Gorge**	**1.27**	**146**	PN	Pn	10 34 45.4	+0.1
KRVZ	**Karewarewa**	**1.27**	**59**	PN	Pn	10 34 45.2	-0.2
POWZ	**Post Office Ro**	**1.33**	**119**	PN	Pn	10 34 45.9	0.0
HIZ	**Hauiti**	**1.34**	**21**	PN	Pn	10 34 45.8	-0.2
TSZ	**Takapari Road**	**1.35**	**103**	PN	Pn	10 34 45.8	-0.4
MRZ	**Mangatainoka R**	**1.36**	**132**	PN	Pn	10 34 46.2	-0.1
BHHZ	**Black Hill Sta**	**1.43**	**79**	PN	Pn	10 34 46.2	-0.8
CAW	**Cannon Point**	**1.48**	**155**	PN	Pn	10 34 47.6	+0.1
RATZ	**Rangitukua**	**1.49**	**53**	PN	Pn	10 34 48.1	+0.5
HOWZ	**Holdsworth Sta**	**1.49**	**140**	PN	Pn	10 34 47.6	-0.1
PNHZ	**Pukenui**	**1.51**	**96**	PN	Pn	10 34 48.2	+0.4
DVHZ	**Dannevirke**	**1.57**	**110**	PN	Pn	10 34 48.3	-0.2
WEL	**Wellington**	**1.57**	**165**	PN	Pn	10 34 48.4	0.0
SNZO	**South Karori**	**1.58**	**167**	PN	Pn	10 34 48.6	-0.1
NNZ	**Nelson**	**1.59**	**204**	PN	Pn	10 34 48.7	-0.1
TIWZ	**Tintock**	**1.61**	**129**	PN	Pn	10 34 49.0	+0.1
TUWZ	**Tuamarina**	**1.68**	**188**	PN	Pn	10 34 49.4	-0.3
QRZ	**Quartz Range**	**1.69**	**230**	PN	Pn	10 34 49.4	-0.4
MTW	**Mount Morrison**	**1.69**	**146**	PN	Pn	10 34 49.7	-0.2
WPHZ	**Waipukurau**	**1.72**	**101**	PN	Pn	10 34 50.2	+0.1
BFZ	**Birch Farm**	**1.79**	**121**	PN	Pn	10 34 49.8	-1.1
MSWZ	**Moikau Station**	**1.82**	**155**	PN	Pn	10 34 51.2	-0.1
TMWZ	**Te Maipa**	**1.84**	**137**	PN	Pn	10 34 51.5	0.0
BKZ	**Black Stump Fm**	**1.84**	**72**	PN	Pn	10 34 51.1	-0.5
PAWZ	**Paruwai Farm**	**1.85**	**151**	PN	Pn	10 34 51.6	-0.1
PRHZ	**Porangahau**	**1.90**	**106**	PN	Pn	10 34 52.5	+0.2
PLWZ	**Palliser**	**1.96**	**157**	PN	Pn	10 34 52.7	-0.3
BSWZ	**Blackbirch Sta**	**1.97**	**188**	PN	Pn	10 34 53.3	+0.2
TRWZ	**Traveller**	**1.97**	**146**	PN	Pn	10 34 52.8	-0.2
KAHZ	**Kahuranaki**	**2.03**	**92**	PN	Pn	10 34 54.0	+0.2
PXZ	**Pawanui**	**2.03**	**98**	PN	Pn	10 34 53.7	-0.1
THZ	**Tophouse**	**2.24**	**207**	PN	Pn	10 34 56.3	-0.1
URZ	**Urewera**	**2.69**	**57**	PN	Pn	10 35 00.8	-1.2
KHZ	**Kahutara**	**2.70**	**191**	PN	Pn	10 35 01.9	-0.2
DSZ	**Dennistone Nort**	**2.71**	**222**	PN	Pn	10 35 02.0	-0.2
MHGZ	**Mahia Peninsul**	**2.90**	**79**	PN	Pn	10 35 03.9	-0.8
MWZ	**Matawai**	**2.93**	**62**	PN	Pn	10 35 04.3	-0.7
LTZ	**Lake Taylor**	**3.36**	**206**	PN	Pn	10 35 10.6	+0.1
MQZ	**McQueen's Vall**	**4.11**	**196**	PN	Pn	10 35 17.9	-2.5
ODZ	**Otahua Downs**	**5.91**	**206**	PN	Pn	10 35 43.1	-1.1

*IDC **10** 10:38:56.6±1.0, 10.74N×91.46E, h0km, mb3.8/10, mb1 3.8/11, mb1mx3.7/22, mbtmp3.7/11, MS4.2/1, Ms1 4.2/1, ms1mx3.0/30, Error ellipse: s-maj=40.1km s-min=17.2km az=58.0*
*NEIC **10** 10:38:58.1±0.5, 10.74N×91.47E, h10km, mb4.1/2, Error ellipse: s-maj=15.6km s-min=9.2km az=57.0*
*ISCJB **10** 10:38:59.8±0.8, 10.8N±0.1×91.6E±0.1, h33km, mb3.8/11, Error ellipse: s-maj=23.0km s-min=13.5km az=147.0*
ISC 10 10:39:02.0±0.8, 10.8N±0.1×91.5E±0.1, h35km, n15, σ0.9 39/14, mb3.8/11, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.46**	**42**	Pn	**Pn**	**10 41 29.6**	**+0.1**
	baz=239,slow=14,SNR=1.5						
MKAR	**Makanchi Array**	**36.74**	**349**	P	**P**	**10 46 05.9**	**+0.1**
	1.2nm,0.6s,mb3.9,baz=171,slow=8.0,SNR=7.8						
SONM	**Songino Array**	**38.99**	**16**	P	**P**	**10 46 24.8**	**0.0**
	0.4nm,0.5s,mb3.4,baz=203,slow=10,SNR=3.1						
KURK	**Kurchatov**	**41.21**	**348**	*e*P	**P**	**10 46 42.8**	**-0.4**
	3.0nm,1.2s,mb3.8						
KURK	**Kurchatov**	**41.21**	**348**	P	**P**	**10 46 42.4**	**-0.8**
	1.7nm,0.9s,mb3.6,baz=90,slow=2.9,SNR=6.0						
ZALV	**Zalesovo Beam**	**43.38**	**354**	P	**P**	**10 47 01.1**	**+0.2**
	0.7nm,0.4s,mb3.7,baz=172,slow=12,SNR=4.4						
FITZ	**Fitzroy Crossi**	**44.23**	**130**	P	**P**	**10 47 08.1**	**-0.1**
	1.6nm,0.8s,mb3.8,baz=336,slow=9.8,SNR=3.6						
BVAR	**Borovoye Array**	**45.44**	**342**	P	**P**	**10 47 17.2**	**-0.1**
	0.3nm,0.4s,mb3.5,baz=170,slow=9.6,SNR=3.0						
NWAO	**Narrogin (SRO)**	**49.90**	**152**	LR	LR	11 08 39.9	
	comp=Z,240nm,21.2s,baz=130,slow=36						
WRAB	**Tennant Creek**	**52.03**	**126**	*e*P	**P**	**10 48 08.3**	**-0.1**
	2.2nm,0.6s,mb4.3						
ASAR	**Alice Springs**	**53.74**	**130**	P	**P**	**10 48 21.2**	**+0.2**
	0.4nm,0.8s,mb3.4,baz=316,slow=7.8,SNR=5.1						
ASAR				PcP	PcP	10 49 26.9	+0.1
	0.2nm,0.6s,baz=320,slow=3.7,SNR=2.3						
BRTR	**Keskin Array B**	**58.60**	**310**	P	**P**	**10 48 55.8**	**+0.3**
BRTR	**Keskin Array B**	**58.60**	**310**	P	**P**	**10 48 55.8**	**+0.3**
	0.6nm,0.7s,mb3.7,baz=114,slow=7.6,SNR=4.0						
FINES	**FINESS Array B**	**68.96**	**332**	P	**P**	**10 50 02.6**	**-0.7**
	1.5nm,0.8s,mb4.0,baz=115,slow=12,SNR=2.9						
ARCES	**ARCESS Array B**	**71.68**	**340**	P	**P**	**10 50 20.7**	**+0.8**
	2.2nm,1.0s,mb4.0,baz=74,slow=6.7,SNR=4.1						

*IDC **10** 10:43:49.7±0.9, 10.95N×91.74E, h0km, mb3.8/11, mb1 3.9/13, mb1mx3.8/21, mbtmp3.8/13, ML3.5/2, MS3.4/1, Ms1 3.6/1, ms1mx2.7/31, Error ellipse: s-maj=26.2km s-min=19.8km az=54.0*
*BJI **10** 10:43:51.3, 10.70N×92.50E, h7km, mb4.3/9, Ms4.5/1, Ms7 4.3/1*
*NEIC **10** 10:43:51.2±0.6, 10.87N×91.79E, h10km, mb4.3/4, Error ellipse: s-maj=12.9km s-min=12.3km az=86.0*
*ISCJB **10** 10:43:53.5±1.5, 10.83N±0.06×91.81E±0.06, h41km±15km, mb4.0/17, Error ellipse: s-maj=10.7km s-min=10.2km az=135.9*
ISC 10 10:43:56.2±1.1, 10.84N±0.06×91.76E±0.06, h48km±11km, n38, σ1.9 07/37, mb4.0/17, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.28**	**42**	*e*Pn	**Pn**	**10 46 20.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**10.28**	**42**	Pn	**Pn**	**10 46 16.8**	**-4.4**
	0.1nm,0.3s,baz=240,slow=14,SNR=3.2						
CMAR				Sn	**Sn**	**10 48 15.2**	**+0.1**
	0.2nm,0.3s,baz=241,slow=28,SNR=5.1						
CMAR				LR	LR	10 50 46.1	
	comp=Z,201nm,18.9s,baz=220,slow=41						
PSI	**Prapat**	**10.69**	**138**	Pn	**Pn**	**10 46 26.7**	**-0.2**
PSI	**Prapat**	**10.69**	**138**	Pn	**Pn**	**10 46 26.7**	**-0.2**
	0.4nm,0.3s,baz=312,slow=14,SNR=2.5						
PALK	**Palelede**	**11.48**	**253**	*e*Pn	**Pn**	**10 46 36.7**	**-0.9**
SHL	**Shillong**	**14.65**	**0**	*e*PKP	**Pn**	**10 47 25.5**	**+4.9**
TAPN	**Taplejung**	**16.86**	**348**	*e*P	**Pn**	**10 47 47.5**	**-1.4**
	34nm,0.7s						
PKI	**Pulchoki**	**17.68**	**341**	*e*P	**Pn**	**10 47 59.6**	**+0.5**
PKIN	**Phulchoki**	**17.69**	**341**	*e*P	**Pn**	**10 47 59.8**	**+0.6**
DMN	**Daman**	**17.82**	**340**	*e*P	**Pn**	**10 48 01.7**	**+1.0**
GKN	**Gorkha**	**18.34**	**340**	*e*P	**Pn**	**10 48 07.4**	**+0.3**
	28nm,0.6s						
KOLN	**Koldanda**	**18.51**	**337**	*e*P	**Pn**	**10 48 09.2**	**+0.1**
	28nm,0.5s						
LSA	**Lhasa**	**18.78**	**358**	*e*P	**Pn**	**10 48 14.2**	**+1.8**
KSM	**Kuching**	**20.64**	**116**	*e*P	**P**	**10 48 34.1**	**+2.1**
	22nm,1.3s						
GYA	**Guiyang**	**20.96**	**40**	P	**P**	**10 48 34.3**	**-1.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ENH	**Enshi**	**25.42**	**38**	*e*P	**P**	**10 49 17.9**	**-1.6**
	comp=Z,23nm,0.5s,mb5.0						
LZH	**Lanzhou**	**27.42**	**22**	*e*P	**P**	**10 49 42.5**	**+5.1**
LZH				pP	pP	10 49 47.5	-2.4
LZH				sP	sP	10 49 50.0	-5.7
LZH				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.4						
GTA	**Gaotai**	**29.35**	**13**	P	**P**	**10 49 55.7**	**+1.2**
GTA				pP	pP	10 50 00.7	-6.4
GTA				sP	sP	10 50 04.2	-8.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
AAK	**Ala-Archa**	**35.08**	**338**	P	**P**	**10 50 47.7**	**+3.1**
	comp=Z,2.2nm,0.3s,mb4.6,baz=223,slow=8.1,SNR=4.1						
MKAR	**Makanchi Array**	**36.72**	**349**	P	**P**	**10 50 58.7**	**0.0**
MKAR	**Makanchi Array**	**36.72**	**349**	P	**P**	**10 50 58.7**	**0.0**
	comp=Z,0.6nm,0.3s,mb3.9,baz=166,slow=8.1,SNR=5.5						
SONM	**Songino Array**	**38.88**	**16**	P	**P**	**10 51 14.5**	**-2.4**
	comp=Z,0.8nm,0.6s,mb3.6,baz=190,slow=7.2,SNR=4.0						
KURK	**Kurchatov**	**41.20**	**347**	*e*P	**P**	**10 51 38.5**	**+2.4**
	comp=Z,7.0nm,1.1s,mb4.2						
KURK	**Kurchatov**	**41.20**	**347**	P	**P**	**10 51 34.4**	**-1.7**
	comp=Z,1.3nm,0.8s,mb3.6,baz=18,slow=34,SNR=4.7						
KSRS	**Korea Array**	**41.90**	**45**	P	**P**	**10 51 41.0**	**-1.0**
	comp=Z,0.5nm,0.5s,mb3.5,baz=240,slow=9.7,SNR=3.7						
ZALV	**Zalesovo Beam**	**43.35**	**354**	P	**P**	**10 51 53.0**	**-0.6**
	comp=Z,0.7nm,0.4s,mb3.8,baz=167,slow=7.0,SNR=4.1						
BVAR	**Borovoye Array**	**45.45**	**342**	P	**P**	**10 52 10.1**	**-0.3**
	comp=Z,1.0nm,0.7s,mb3.7,baz=142,slow=12,SNR=4.3						
ABKAR	**Akbulak array**	**46.52**	**332**	*e*P	**P**	**10 52 19.7**	**+0.9**
	comp=Z,1.3nm,0.6s,mb4.0						
ASAR	**Alice Springs**	**53.61**	**130**	P	**P**	**10 53 13.8**	**+0.8**
	comp=Z,2.8nm,0.8s,mb4.2,baz=329,slow=6.5,SNR=2.4						
BRTR	**Keskin Array B**	**58.73**	**310**	P	**P**	**10 53 49.0**	**-0.3**
	comp=Z,1.1nm,0.7s,mb4.0,baz=134,slow=8.8,SNR=3.8						
FINES	**FINESS Array B**	**69.01**	**332**	P	**P**	**10 54 56.5**	**0.0**
FINES	**FINESS Array B**	**69.01**	**332**	P	**P**	**10 54 56.5**	**0.0**
	comp=Z,1.3nm,0.9s,mb3.9,baz=80,slow=12,SNR=3.0						
ARCES	**ARCESS Array B**	**71.70**	**340**	P	**P**	**10 55 12.4**	**-0.4**
	comp=Z,1.9nm,0.9s,mb4.0,baz=88,slow=8.6,SNR=6.3						
TORD	**Torodi Ar. Bea**	**87.64**	**283**	P	**P**	**10 56 39.5**	**-0.7**
TORD	**Torodi Ar. Bea**	**87.64**	**283**	P	**P**	**10 56 39.5**	**-0.7**
	comp=Z,0.4nm,0.8s,mb3.7,baz=96,slow=4.0,SNR=3.2						
ILAR	**Eielson Array**	**92.88**	**21**	P	**P**	**10 57 04.1**	**+0.4**
	comp=Z,0.2nm,0.7s,mb3.6,baz=293,slow=4.5,SNR=4.2						
NVAR	**Mina Array Bea**	**123.52**	**28**	PKP	PKPdf	11 02 50.6	+1.8
	comp=Z,0.6nm,0.6s,baz=318,slow=2.0,SNR=5.0						
TXAR	**Lajitas Array**	**137.38**	**20**	PKP	PKPdf	11 03 16.2	+1.0
	comp=Z,0.2nm,0.7s,baz=352,slow=1.8,SNR=3.0						

*NEIC **10** 10:47:15.1±1.4, 7.62S×127.59E, h150km±13km, mb4.5/10, Error ellipse: s-maj=13.3km s-min=8.6km az=55.0*
*ISCJB **10** 10:47:16.4±0.5, 7.76S±0.04×127.61E±0.06, h182km±6km, mb4.4/24, Error ellipse: s-maj=9.9km s-min=4.9km az=155.6*
*IDC **10** 10:47:16.6±2.6, 7.60S×127.51E, h162km±24km, mb3.9/12, mb1 4.0/13, mb1mx3.9/19, mbtmp3.9/13, Error ellipse: s-maj=22.0km s-min=10.9km az=67.0*
*DJA **10** 10:47:17, 7.84S×127.56E, h137km, mb4.9/12*
ISC 10 10:47:17.2±0.5, 7.76S±0.04×127.59E±0.06, h171km±7km, n67, σ1.9 09/67, mb4.4/24, 2C-1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**3.96**	**36**	P	**Pn**	**10 48 17.1**	**-0.5**
AAI	**Ambon**	**4.09**	**6**	P	**Pn**	**10 48 19.6**	**+0.3**
NLAI	**Namlea**	**4.52**	**354**	P	**Pn**	**10 48 26.0**	**+1.2**
TLE	**Tual**	**5.53**	**68**	P	**Pn**	**10 48 38.3**	**+0.3**
	0.8nm144nm,1.6s						
KAKA	**Kakadu**	**6.85**	**136**	*e*P	**Pn**	**10 48 54.1**	**-1.3**
	762nm,0.6s						
KAKA	**Kakadu**	**6.85**	**136**	*e*Pn	**Pn**	**10 48 54.6**	**-0.8**
	1μm,0.6s						
KAKA				*e*Sn	**Sn**	**10 50 09.0**	**-3.8**
KAKA	**Kakadu**	**6.85**	**136**	P	**Pn**	**10 48 54.7**	**-0.7**
	19nm1μm,0.6s						
LBMI	**Labuha**	**7.08**	**359**	P	**Pn**	**10 48 58.8**	**+0.4**
	0.2nm56nm,0.9s						
BKSI	**Bulukumba**	**7.80**	**288**	P	**Pn**	**10 49 07.8**	**-0.2**
	0.1nm16nm,1.0s						
KNA	**Kununurra**	**8.02**	**172**	P	**Pn**	**10 49 09.9**	**-1.0**
	2.8nm7μm534nm,0.9s						
TNTI	**Ternate**	**8.48**	**358**	P	**Pn**	**10 49 17.3**	**+0.3**
	45nm,1.9s						
MNI	**Manado**	**9.55**	**343**	P	**Pn**	**10 49 32.2**	**+1.2**
	174nm,0.9s						
MRSI	**Marisa**	**9.94**	**325**	P	**Pn**	**10 49 36.9**	**+0.8**
	23nm,1.0s						
FITZ	**Fitzroy Crossi**	**10.45**	**190** ⇓	*i*P	**Pn**	**10 49 40.2**	**-2.6**
	59nm,0.4s						
FITZ				*e*S	**Sn**	**10 51 28.3**	**-11**
FITZ	**Fitzroy Crossi**	**10.45**	**190**	*e*Pn	**Pn**	**10 49 40.2**	**-2.6**
FITZ				S	**Sn**	**10 51 31.6**	**-7.4**
FITZ				*e*Sn	**Sn**	**10 51 31.8**	**-7.1**
FITZ	**Fitzroy Crossi**	**10.45**	**190**	P	**Pn**	**10 49 40.5**	**-2.3**
	11nm,0.3s,baz=36,slow=11,SNR=131						
FITZ				S	**Sn**	**10 51 31.6**	**-7.4**
	8.0nm,0.3s,baz=84,slow=21,SNR=9.6						
FITZ	**Fitzroy Crossi**	**10.45**	**190**	P	**Pn**	**10 49 40.6**	**-2.2**
	103nm,0.7s						
SGSI	**Sangihe**	**11.56**	**350**	P	**Pn**	**10 49 56.7**	**-0.6**
	3μm173nm,0.6s						
WRAB	**Tennant Creek**	**13.76**	**152**	*e*Pn	**Pn**	**10 50 23.1**	**-2.2**
	35nm,0.6s						
WRAB				*e*Sn	**Sn**	**10 52 52.5**	**-5.8**
WRAB	**Tennant Creek**	**13.76**	**152**	P	**Pn**	**10 50 23.8**	**-1.5**
	67nm,1.0s						
MBWA	**Marble Bar**	**15.33**	**209**	*e*P	**Pn**	**10 50 47.2**	**+2.4**
	14nm,0.6s						
MBWA				*e*S	**S**	**10 53 25.8**	**-10**
COEN	**Coen**	**16.49**	**113**	*e*P	**Pn**	**10 50 59.6**	**+0.6**
	75nm,0.6s						
COEN				*e*S	**S**	**10 53 53.0**	**-9.2**
COEN	**Coen**	**16.49**	**113**	P	**Pn**	**10 51 00.5**	**+1.5**
ASAR	**Alice Springs**	**16.93**	**160**	P	**Pn**	**10 51 05.0**	**+0.7**
	8.3nm,0.3s,baz=342,slow=12,SNR=386						
ASAR				S	**S**	**10 54 08.3**	**-3.0**
	1.0nm,0.3s,baz=327,slow=19,SNR=7.4						
KSM	**Kuching**	**19.53**	**297**	*e*P	**P**	**10 51 31.8**	**+0.1**
	7.2nm,0.6s						
CTA	**Charters Tower**	**21.84**	**126**	*e*P	**P**	**10 51 58.3**	**+2.0**
	4.4nm,1.0s,mb3.8						
CTA	**Charters Tower**	**21.84**	**126**	P	**P**	**10 51 57.2**	**+0.9**
	7.1nm,1.0s,mb4.0,baz=227,slow=10,SNR=3.9						
TGY	**Tagaytay City**	**22.70**	**343**	P	**P**	**10 52 03.5**	**-1.0**
	103nm,0.3s,baz=157,slow=15,SNR=3.8						
FORT	**Forrest**	**22.90**	**179**	*e*P	**P**	**10 52 07.6**	**+1.4**
	36nm,0.6s,mb5.0						
FORT				*e*S	S	10 56 27.6	+25
FORT	**Forrest**	**22.90**	**179**	*e*P	**P**	**10 52 07.7**	**+1.5**
	41nm,0.7s,mb5.0						
KLBR	**Kellerberrin**	**25.42**	**200**	*e*P	**P**	**10 52 29.9**	**+0.8**
	11nm,0.6s,mb4.6						
NWAO	**Narrogin (SRO)**	**26.82**	**200**	*e*P	**P**	**10 52 43.1**	**+1.5**
	13nm,0.8s,mb4.6						
NWAO	**Narrogin (SRO)**	**26.82**	**200**	P	**P**	**10 52 43.0**	**+1.4**

ellipse: s-maj=27.0km s-min=18.5km az=51.0
*NEIC **10** 11:18:54.6±2.6, 10°.93N×91°.68E, h28km±19km, mb4.5/2, Error ellipse: s-maj=9.5km s-min=8.9km az=179.0*

ISC 10 11:18:53.9±3.4, **10°.91N**±0°.07×**91°.64E**±0°.07, **h25**km±24km, **n27**, σ0°**91**/29, **mb3.9**/14, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.31**	**42**	Pn	**Pn**	**11 21 20.1**	**-0.2**
	0.2nm,0.3s,baz=236,slow=16,SNR=4.1						
CMAR				Sn	**Sn**	**11 23 15.2**	**+0.2**
	0.5nm,0.3s,baz=232,slow=31,SNR=4.7						
PALK	**Pallekele**	**11.38**	**252**	*e*Pn	**Pn**	**11 21 36.3**	**+1.3**
PALK				*e*Sn	**Sn**	**11 23 38.5**	**-3.0**
PKI	**Pulchoki**	**17.58**	**341**	*e*P	**Pn**	**11 22 57.6**	**+0.3**
PKIN	**Phulchoki**	**17.59**	**341**	*e*P	**Pn**	**11 22 57.3**	**-0.1**
	9.7nm,0.5s						
PKIN	**Phulchoki**	**17.59**	**341**	*e*P	**Pn**	**11 22 57.9**	**+0.5**
	12nm,0.4s						
DMN	**Daman**	**17.71**	**341**	*e*P	**Pn**	**11 22 58.4**	**-0.5**
	17nm,0.6s						
GUN	**Gumba**	**17.76**	**343**	*e*P	**Pn**	**11 23 01.0**	**+1.6**
KKN	**Kakani**	**17.82**	**341**	*e*P	**Pn**	**11 23 00.8**	**+0.5**
GKN	**Gorkha**	**18.23**	**340**	*e*P	**Pn**	**11 23 04.2**	**-1.1**
	9.2nm,0.3s						
KOLN	**Koldanda**	**18.39**	**337**	*e*P	**Pn**	**11 23 05.2**	**-2.1**
MKAR	**Makanchi Array**	**36.63**	**349**	P	**P**	**11 25 58.2**	**0.0**
MKAR	**Makanchi Array**	**36.63**	**349**	P	**P**	**11 25 58.2**	**0.0**
	0.9nm,0.4s,mb3.9,baz=175,slow=8.2,SNR=6.1						
SONM	**Songino Array**	**38.84**	**16**	P	**P**	**11 26 17.6**	**+0.7**
	0.5nm,0.4s,mb3.6,baz=215,slow=9.4,SNR=3.2						
KSRS	**Korea Array**	**41.94**	**45**	P	**P**	**11 26 41.0**	**-1.6**
	0.3nm,0.5s,mb3.2,baz=241,slow=8.7,SNR=2.8						
ZALV	**Zalesovo Beam**	**43.27**	**354**	P	**P**	**11 26 53.3**	**+0.1**
	0.9nm,0.4s,mb3.9,baz=167,slow=5.2,SNR=3.4						
FITZ	**Fitzroy Crossi**	**44.24**	**130**	*e*P	**P**	**11 27 01.4**	**-0.2**
	5.8nm,0.8s,mb4.4						
FITZ	**Fitzroy Crossi**	**44.24**	**130**	P	**P**	**11 27 00.6**	**-0.9**
	4.7nm,0.7s,mb4.3,baz=342,slow=9.6,SNR=5.2						
BVAR	**Borovoye Array**	**45.35**	**342**	P	**P**	**11 27 09.6**	**-0.3**
	0.4nm,0.3s,mb3.7,baz=162,slow=5.1,SNR=6.3						
WRAB	**Tennant Creek**	**52.03**	**126**	*e*P	**P**	**11 28 01.8**	**0.0**
	2.1nm,0.3s,mb4.5						
ASAR	**Alice Springs**	**53.75**	**130**	P	**P**	**11 28 14.4**	**0.0**
	0.4nm,0.4s,mb3.7,baz=308,slow=7.6,SNR=17						
BRTR	**Keskin Array B**	**58.59**	**310**	P	**P**	**11 28 48.5**	**-0.4**
	1.3nm,0.7s,mb4.0,baz=124,slow=8.3,SNR=9.1						
FINES	**FINESS Array B**	**59.89**	**332**	P	**P**	**11 29 56.0**	**-0.3**
	1.9nm,0.8s,mb4.1,baz=123,slow=8.2,SNR=6.4						
ARCES	**ARCESS Array B**	**71.59**	**340**	P	**P**	**11 30 13.2**	**+0.5**
	1.6nm,0.9s,mb4.0,baz=90,slow=7.3,SNR=9.7						
ESDC	**Sonseca Array**	**87.39**	**310**	P	**P**	**11 31 40.0**	**+0.7**
	0.1nm,0.4s,mb3.4,baz=71,slow=4.4,SNR=3.1						
TORD	**Torodi Ar. Bea**	**87.51**	**283**	P	**P**	**11 31 41.7**	**+1.4**
TORD	**Torodi Ar. Bea**	**87.51**	**283**	P	**P**	**11 31 41.7**	**+1.4**
	0.7nm,0.7s,mb4.0,baz=85,slow=4.6,SNR=3.7						
ILAR	**Eielson Array**	**92.86**	**21**	P	**P**	**11 32 04.7**	**+0.4**
	0.2nm,0.8s,mb3.6,baz=298,slow=4.7,SNR=2.6						

IDC 10 11:28:21.8±2.0, **10°.92N**×**91°.71E**, **h0**km, **mb3.6**/5, **mb1 3.7**/6, **mb1mx3.4**/23, **mbtmp3.6**/6, **ML3.9**/1, **Error ellipse: s-maj=66.6km s-min=22.0km az=67.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.24**	**42**	Pn	Pn	11 30 50.3	+0.1
	0.3nm,0.3s,baz=237,slow=15,SNR=3.2						
MKAR	**Makanchi Array**	**36.63**	**349**	P	P	11 35 29.4	-0.5
	0.3nm,0.2s,baz=160,slow=8.8,SNR=3.7						
SONM	**Songino Array**	**38.81**	**16**	P	P	11 35 48.2	-0.1
	0.3nm,0.3s,baz=184,slow=4.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**43.27**	**354**	P	P	11 36 25.5	+0.6
	0.7nm,0.3s,baz=176,slow=8.7,SNR=3.4						
FITZ	**Fitzroy Crossi**	**44.20**	**130**	P	P	11 36 32.7	-0.2
	1.1nm,0.7s,baz=318,slow=11,SNR=3.1						
ASAR	**Alice Springs**	**53.70**	**130**	P	P	11 37 45.8	0.0
	0.2nm,0.6s,baz=308,slow=7.6,SNR=5.0						

IDC 10 11:29:59.5±1.6, **10°.91N**×**91°.86E**, **h0**km, **mb3.8**/6, **mb1 3.8**/7, **mb1mx3.5**/23, **mbtmp3.7**/7, **Error ellipse: s-maj=46.6km s-min=21.9km az=65.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.16**	**42**	Pn	Pn	11 32 26.8	+0.1
	baz=233,slow=14,SNR=2.5						
CMAR				Sn	Sn	11 34 22.6	+1.1
	0.1nm,0.3s,baz=226,slow=30,SNR=2.6						
MKAR	**Makanchi Array**	**36.67**	**349**	P	P	11 37 08.0	+0.1
	2.4nm,0.7s,baz=166,slow=7.8,SNR=11						
SONM	**Songino Array**	**38.78**	**16**	P	P	11 37 26.0	+0.3
	0.3nm,0.4s,baz=219,slow=3.8,SNR=3.8						
ZALV	**Zalesovo Beam**	**43.29**	**354**	P	P	11 38 02.5	-0.4
	0.9nm,0.4s,baz=178,slow=10,SNR=6.0						
FITZ	**Fitzroy Crossi**	**44.08**	**131**	P	P	11 38 09.3	-0.4
	1.9nm,0.7s,baz=322,slow=10.0,SNR=3.0						
BVAR	**Borovoye Array**	**45.41**	**342**	P	P	11 38 20.0	+0.2
	0.8nm,0.8s,baz=134,slow=6.2,SNR=3.1						
ASAR	**Alice Springs**	**53.59**	**130**	P	P	11 39 22.8	+0.1
	0.2nm,0.5s,baz=309,slow=6.7,SNR=3.9						

*GRAL **10** 11:30:45.8±0.3, 33°.43N×36°.56E, h76km±14km, MD3.1*
*NSSC **10** 11:30:46, 33°.68N×36°.55E, h0km±1km*
*ISCJB **10** 11:30:47.1±0.9, 33°.67N±0°.04×36°.59E±0°.06, h10km±18km, Error ellipse: s-maj=9.4km s-min=5.7km az=158.6*
*CSEM **10** 11:30:47.1±0.4, 33°.65N×36°.62E, h2km, Mc1.2, Error ellipse: s-maj=7.2km s-min=4.9km az=87.0*

ISC 10 11:30:47.7±0.9, **33°.65N**±0°.04×**36°.59E**±0°.07, **h16**km±12km, **n16**, σ0°**93**/29, **10D, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QASN	**Qassioun**	**0.28**	**247**	⇓P	**Pg**	**11 30 52.0**	**-1.7**
QASN				⇑S	**Sg**	**11 30 57.0**	**-0.8**
QASN	**Qassioun**	**0.28**	**247**	⇓*i*P	**Pg**	**11 30 52.8**	**-0.9**
QASN				⇑*i*S	**Sg**	**11 30 57.6**	**-0.2**
TOTH	**TOTAH**	**0.31**	**205**	⇓P	**Pg**	**11 30 54.0**	**-0.2**
TOTH				⇑S	**Sg**	**11 30 59.0**	**+0.3**
TOTH	**TOTAH**	**0.31**	**205**	⇓*i*P	**Pg**	**11 30 54.1**	**-0.1**
TOTH				⇑*i*S	**Sg**	**11 30 59.7**	**+1.0**
BRBR	**Barbar**	**0.58**	**246**	⇑P	**Pg**	**11 30 58.0**	**-1.1**
BRBR				⇓S	**Sg**	**11 31 07.0**	**+0.2**
BRBR	**Barbar**	**0.58**	**246**	⇑*i*P	**Pg**	**11 30 58.6**	**-0.5**
BRBR				⇓*i*S	**Sg**	**11 31 08.0**	**+1.2**
RCY	**Rachaya**	**0.66**	**256**	*e*P	**Pg**	**11 30 59.7**	**-0.9**
RCY				*e*S	**Sg**	**11 31 10.2**	**+0.8**
RCY	**Rachaya**	**0.66**	**256**	*e*P	**Pg**	**11 30 59.7**	**-0.9**
RCY				*e*S	**Sg**	**11 31 10.2**	**+0.8**
BHL	**Bhannes**	**0.82**	**289**	*e*P	**Pg**	**11 31 02.8**	**-0.8**
BHL				*e*S	**Sg**	**11 31 15.2**	**+0.8**
BHL	**Bhannes**	**0.82**	**289**	*e*P	**Pg**	**11 31 02.8**	**-0.8**
BHL				*e*S	**Sg**	**11 31 15.2**	**+0.8**
HWQ	**Hawqa**	**0.82**	**320**	*e*P	**Pg**	**11 31 03.9**	**+0.1**
HWQ	**Hawqa**	**0.82**	**320**	*e*P	**Pg**	**11 31 03.9**	**+0.2**
SALA	**Sala**	**0.94**	**172**	⇑P	**Pg**	**11 31 05.0**	**-0.9**
SALA				⇑S	**Sg**	**11 31 21.0**	**+2.8**
SALA	**Sala**	**0.94**	**172**	⇑*i*P	**Pg**	**11 31 05.2**	**-0.7**
BIDA	**Albida**	**1.38**	**351**	⇓P	**Pn**	**11 31 12.0**	**-0.3**
BIDA				⇓S	**Sg**	**11 31 33.0**	**+0.7**
BIDA	**Albida**	**1.38**	**351**	⇓*i*P	**Pn**	**11 31 12.9**	**+0.6**
BIDA				⇓*i*S	**Sg**	**11 31 33.1**	**+0.8**

*BJI **10** 11:48:05.4, 10°.58N×91°.94E, h22km, mb4.3/6, Ms4.0/1, Ms7 3.9/1*
*IDC **10** 11:48:06.1±0.6, 10°.87N×91°.78E, h0km, mb4.0/16, mb1 4.1/17, mb1mx4.0/24, mbtmp4.0/17, ML3.9/1, Error ellipse: s-maj=24.9km s-min=14.0km az=60.0*
*ISCJB **10** 11:48:09.0±0.5, 10°.76N±0°.07×91°.74E±0°.07, h33km, mb4.1/22, Error ellipse: s-maj=9.6km s-min=9.2km az=41.8*
*NEIC **10** 11:48:09.0±3.1, 10°.86N×91°.82E, h18km±19km, mb4.2/7, Error ellipse: s-maj=7.6km s-min=6.3km az=46.0*

ISC 10 11:48:08.5±5.2, **10°.85N**±0°.07×**91°.82E**±0°.08, **h15**km±33km, **n34**, σ0°**63**/33, **mb4.0**/22, **1C, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.23**	**42**	Pn	**Pn**	**11 50 34.8**	**-0.1**
	0.3nm,0.3s,baz=235,slow=15,SNR=4.8						
CMAR				Sn	**Sn**	**11 52 35.9**	**+6.5**
	baz=236,slow=29,SNR=4.3						
PALK	**Pallekele**	**11.54**	**253**	*e*Pn	**Pn**	**11 50 52.7**	**-0.3**
PALK				*e*Sn	**Sn**	**11 52 52.6**	**-9.0**
KSM	**Kuching**	**20.59**	**116**	*e*P	**P**	**11 52 47.1**	**-0.1**
	3.7nm,0.7s						
ENH	**Enshi**	**25.37**	**38**	*e*P	**P**	**11 53 33.9**	**-1.4**
	16nm,0.7s,mb4.7						
GTA	**Gaotai**	**29.32**	**13**	⇑P	**P**	**11 54 12.0**	**+1.4**
GTA				pP	pP	11 54 15.5	+0.4
GTA				sP	sP	11 54 18.8	+1.8
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
EKS2	**Erkin-Say**	**35.38**	**337**	*e*P	**P**	**11 55 04.8**	**+1.1**
	comp=Z,1.8nm,0.9s,mb4.0						
MK31	**Makanchi Array**	**36.72**	**349**	*e*P	**P**	**11 55 15.5**	**+0.4**
MKAR	**Makanchi Array**	**36.72**	**349**	P	**P**	**11 55 15.1**	**0.0**
	comp=Z,1.7nm,0.6s,mb4.0,baz=163,slow=8.0,SNR=14						
SONM	**Songino Array**	**38.85**	**16**	P	**P**	**11 55 33.6**	**+0.6**
	comp=Z,0.7nm,0.3s,mb3.8,baz=196,slow=7.4,SNR=6.8						
KURK	**Kurchatov**	**41.20**	**347**	*e*P	**P**	**11 55 52.1**	**-0.5**
	comp=Z,3.1nm,0.9s,mb3.9						
KURK	**Kurchatov**	**41.20**	**347**	P	**P**	**11 55 51.1**	**-1.5**
	comp=Z,0.9nm,0.3s,mb3.8,baz=161,slow=7.7,SNR=5.4						
ZALV	**Zalesovo Beam**	**43.34**	**354**	P	**P**	**11 56 09.8**	**-0.1**
	comp=Z,1.7nm,0.5s,mb4.1,baz=178,slow=10,SNR=10						
FITZ	**Fitzroy Crossi**	**44.07**	**130**	*e*P	**P**	**11 56 16.1**	**-0.3**
	comp=Z,6.1nm,0.8s,mb4.4						
FITZ	**Fitzroy Crossi**	**44.07**	**130**	P	**P**	**11 56 16.0**	**-0.3**
	comp=Z,2.4nm,0.6s,mb4.1,baz=340,slow=6.9,SNR=11						
BVAR	**Borovoye Array**	**45.46**	**342**	P	**P**	**11 56 27.0**	**+0.1**
	comp=Z,0.5nm,0.5s,mb3.6,baz=133,slow=12,SNR=3.1						
ABKAR	**Akbulak array**	**46.54**	**332**	*e*P	**P**	**11 56 36.0**	**+0.6**
	comp=Z,1.1nm,0.4s,mb4.1						
AKTK	**Aktyubinsk**	**48.25**	**332**	P	**P**	**11 56 48.8**	**-0.1**
AKTO	**Aktyubinsk**	**48.25**	**332**	P	**P**	**11 56 48.8**	**-0.1**
	comp=Z,0.8nm,0.5s,mb4.0,baz=101,slow=15,SNR=3.1						
WRAB	**Tennant Creek**	**51.85**	**126**	*e*P	**P**	**11 57 16.8**	**+0.2**
	comp=Z,4.9nm,0.6s,mb4.6						
ASAR	**Alice Springs**	**53.57**	**130**	P	**P**	**11 57 29.6**	**+0.3**
	comp=Z,2.6nm,0.7s,mb4.2,baz=307,slow=6.6,SNR=28						
ASAR				PcP	PcP	11 58 36.2	+0.3
	comp=Z,1.0nm,0.7s,baz=313,slow=3.7,SNR=5.2						
BRTR	**Keskin Array B**	**58.77**	**310**	P	**P**	**11 58 05.3**	**-0.9**
	comp=Z,0.8nm,0.8s,mb3.8,baz=117,slow=7.1,SNR=4.6						
STKA	**Stephens Creek**	**59.81**	**134**	P	**P**	**11 58 40.8**	**+0.3**
	comp=Z,3.0nm,0.9s,mb4.3,baz=288,slow=9.6,SNR=1.9						
FINES	**FINESS Array B**	**69.02**	**332**	P	**P**	**11 59 13.4**	**+0.1**
	comp=Z,1.9nm,1.0s,mb4.0,baz=123,slow=5.1,SNR=3.4						
ARCES	**ARCESS Array B**	**71.70**	**340**	P	**P**	**11 59 29.8**	**+0.2**
ARCES	**ARCESS Array B**	**71.70**	**340**	P	**P**	**11 59 29.8**	**+0.2**
	comp=Z,1.6nm,0.7s,mb4.0,baz=96,slow=6.2,SNR=7.1						
BOSA	**Boshof**	**75.26**	**237**	P	**P**	**11 59 52.4**	**+1.1**
	comp=Z,5.3nm,1.1s,mb4.4,baz=37,slow=5.1,SNR=3.2						
NOA	**NORSAR Array B**	**76.03**	**330**	P	**P**	**11 59 54.7**	**-0.4**
NOA	**NORSAR Array B**	**76.03**	**330**	P	**P**	**11 59 54.7**	**-0.4**
	comp=Z,0.7nm,0.8s,mb3.6,baz=98,slow=5.1,SNR=2.9						
ESDC	**Sonseca Array**	**87.56**	**310**	P	**P**	**12 00 55.5**	**-0.9**
	comp=Z,0.1nm,0.3s,mb3.6,baz=92,slow=3.6,SNR=4.2						
TORD	**Torodi Ar. Bea**	**87.70**	**283**	P	**P**	**12 00 57.0**	**-0.4**
	comp=Z,0.4nm,0.8s,mb3.7,baz=88,slow=3.1,SNR=2.4						
ILAR	**Eielson Array**	**92.85**	**22**	P	**P**	**12 01 19.9**	**-0.6**
	comp=Z,0.4nm,0.7s,mb3.9,baz=297,slow=4.1,SNR=3.6						
NVAR	**Mina Array Bea**	**123.47**	**28**	PKP	PKPdf	12 07 05.7	-0.1
	comp=Z,0.5nm,0.6s,baz=282,slow=2.9,SNR=4.9						
CMIG	**Matias Romero**	**151.46**	**14**	PKPbc	PKPbc	12 08 02.5	-0.5
CMIG	**Matias Romero**	**151.46**	**14**	PKPbc	PKPbc	12 08 02.5	-0.5
	comp=Z,2.1nm,0.8s,baz=333,slow=6.8,SNR=3.9						

*ISCJB **10** 11:49:39.0±0.3, 44°.19N±0°.01×7°.05E±0°.02, h10km, Error ellipse: s-maj=2.6km s-min=1.9km az=149.8*
*CSEM **10** 11:49:39.2±0.1, 44°.19N×7°.16E, h20km, ML2.6/16, Error ellipse: s-maj=2.1km s-min=1.4km az=70.0*
*STR **10** 11:49:40.2±0.1, 44°.18N×7°.13E, h5km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*ROM **10** 11:49:40.3±0.4, 44°.24N×7°.16E, h10km, Md2.4/4, Ml2.1/4, Error ellipse: s-maj=5.1km s-min=1.6km az=43.0*
*NEIC **10** 11:49:40.1, 44°.18N×7°.15E, h10km, ML2.7(LDG), ML2.5(STR), After LDG.*
*LDG **10** 11:49:40.1±0.1, 44°.18N×7°.15E, h10km, Md2.7/2, Ml2.7/10, Error ellipse: s-maj=1.5km s-min=0.8km az=50.0*

ISC 10 11:49:39.7±0.3, **44°.19N**±0°.01×**7°.09E**±0°.02, **h10**km, **n64**, σ0°**80**/128, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STV	**Sant Anna di V**	**0.18**	**71**	Pg	**Pg**	**11 49 43.6**	**0.0**
STV				Sg	**Sg**	**11 49 46.1**	**-0.1**
	2µm,0.1s						
STV	**Sant Anna di V**	**0.18**	**71**	Pg	**Pg**	**11 49 43.6**	**0.0**
STV				Sg	**Sg**	**11 49 46.1**	**-0.1**
	2µm,0.1s						
TOUF	**Mont Tournerai**	**0.21**	**146**	Pg	**Pg**	**11 49 44.2**	**+0.2**
TOUF				Sg	**Sg**	**11 49 47.3**	**+0.3**
TOUF	**Mont Tournerai**	**0.21**	**146**	Pg	**Pg**	**11 49 44.2**	**+0.2**
TOUF				Sg	**Sg**	**11 49 47.3**	**+0.3**
MVIF	**Mont Vial**	**0.29**	**171**	Pg	**Pg**	**11 49 45.9**	**+0.3**
MVIF				Sg	**Sg**	**11 49 50.1**	**+0.6**
MVIF	**Mont Vial**	**0.29**	**171**	Pg	**Pg**	**11 49 45.9**	**+0.3**
MVIF				Sg	**Sg**	**11 49 50.1**	**+0.6**
AUTN	**L'Aution**	**0.31**	**128**	Pg	**Pg**	**11 49 45.9**	**0.0**
AUTN				Sg	**Sg**	**11 49 50.1**	**0.0**
AUTN	**L'Aution**	**0.31**	**128**	Pg	**Pg**	**11 49 45.9**	**0.0**
AUTN				Sg	**Sg**	**11 49 50.1**	**0.0**
PZZ	**Stroppo**	**0.32**	**4**	Pg	**Pg**	**11 49 46.5**	**+0.4**
PZZ				Sg	**Sg**	**11 49 51.0**	**+0.6**
	166nm,0.4s						
PZZ	**Stroppo**	**0.32**	**4**	Pg	**Pg**	**11 49 46.5**	**+0.4**
PZZ				Sg	**Sg**	**11 49 51.0**	**+0.6**
	166nm,0.4s						
DOI	**San Damiano**	**0.34**	**20**	Pg	**Pg**	**11 49 46.7**	**+0.3**
DOI				Sg	**Sg**	**11 49 51.3**	**+0.4**
	291nm,0.2s						
DOI	**San Damiano**	**0.34**	**20**	Pg	**Pg**	**11 49 46.7**	**+0.3**
DOI				Sg	**Sg**	**11 49 51.3**	**+0.4**
	291nm,0.2s						
LUCF	**Luceram**	**0.35**	**148**	Pg	**Pg**	**11 49 46.7**	**+0.1**
LUCF				Sg	**Sg**	**11 49 51.4**	**+0.2**
LUCF	**Luceram**	**0.35**	**148**	Pg	**Pg**	**11 49 46.7**	**+0.1**
LUCF				Sg	**Sg**	**11 49 51.4**	**+0.2**
SURF	**Saint Ours**	**0.35**	**326**	Pg	**Pg**	**11 49 47.6**	**+0.9**
SURF	**Saint Ours**	**0.35**	**326**	Pg	**Pg**	**11 49 47.6**	**+0.9**
SAOF	**Saorge**	**0.39**	**121**	Pg	**Pg**	**11 49 47.2**	**-0.2**
SAOF				Sg	**Sg**	**11 49 52.7**	**+0.1**
SAOF	**Saorge**	**0.39**	**121**	Pg	**Pg**	**11 49 47.2**	**-0.2**
SAOF				Sg	**Sg**	**11 49 52.7**	**+0.1**
SBF	**Sospel**	**0.41**	**142**	*e*Pg	**Pg**	**11 49 47.7**	**0.0**
SBF				*e*Sg	**Sg**	**11 49 52.5**	**-0.7**
	163nm,0.2s,SNR=1.0						
SBF	**Sospel**	**0.41**	**142**	*e*Pg	**Pg**	**11 49 47.7**	**0.0**
SBF				*e*Sg	**Sg**	**11 49 52.5**	**-0.7**
	82nm,0.2s,SNR=1.0						
CALN	**Calern**	**0.46**	**198**	Pg	**Pg**	**11 49 49.3**	**+0.7**
CALN				Sg	**Sg**	**11 49 55.6**	**+0.9**
CALN	**Calern**	**0.46**	**198**	Pg	**Pg**	**11 49 49.3**	**+0.7**
CALN				Sg	**Sg**	**11 49 55.6**	**+0.9**
REVF	**Revere**	**0.49**	**156**	Pg	**Pg**	**11 49 49.4**	**+0.1**
REVF				Sg	**Sg**	**11 49 55.6**	**-0.1**
REVF	**Revere**	**0.49**	**156**	Pg	**Pg**	**11 49 49.4**	**+0.1**
REVF				Sg	**Sg**	**11 49 55.6**	**-0.1**
MBDF	**Montbardon**	**0.59**	**337**	*e*Pg	**Pg**	**11 49 51.2**	**+0.1**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**11 50 00.2**	**+1.4**
	50nm,0.4s,SNR=1.0						
MBDF	**Montbardon**	**0.59**	**337**	*e*Pg	**Pg**	**11 49 51.2**	**+0.1**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**11 50 00.2**	**+1.4**
	25nm,0.4s,SNR=1.0						
FRF	**La Foret Royal**	**0.70**	**207**	*e*Pn	**Pg**	**11 49 54.4**	**+1.1**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**11 50 02.6**	**+0.1**
	54nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**0.70**	**207**	*e*Pn	**Pg**	**11 49 54.4**	**+1.1**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**11 50 02.6**	**+0.1**
	54nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**0.70**	**207**	*e*Pg	**Pg**	**11 49 53.2**	**-0.1**
FRF				*e*Pn	**Pg**	**11 49 54.4**	**+1.1**
FRF				*e*Sg	**Sg**	**11 50 02.6**	**+0.1**
FRF	**La Foret Royal**	**0.70**	**207**	*e*Pg	**Pg**	**11 49 53.2**	**-0.1**
FRF	**La Foret Royal**	**0.70**	**207**	*e*Pn	**Pg**	**11 49 54.4**	**+1.1**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**11 50 02.6**	**+0.1**
	27nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**0.95**	**206**	*e*Pg	**Pg**	**11 49 58.0**	**0.0**
LMR				*e*Sg	**Sg**	**11 50 10.0**	**-0.3**
	76nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**0.95**	**206**	*e*Pg	**Pg**	**11 49 58.0**	**0.0**
LMR				*e*Sg	**Sg**	**11 50 10.0**	**-0.3**
	76nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**0.95**	**206**	*e*Pn	**Pg**	**11 49 57.6**	**-0.4**
LMR				*e*Pg	**Pg**	**11 49 58.0**	**0.0**
LMR				*e*Sg	**Sg**	**11 50 10.0**	**-0.3**
LMR	**La Mourre**	**0.95**	**206**	*e*Pn	**Pg**	**11 49 57.6**	**-0.4**
	SNR=1.0						
LMR	**La Mourre**	**0.95**	**206**	*e*Pg	**Pg**	**11 49 58.0**	**0.0**
LMR				*e*Sg	**Sg**	**11 50 10.0**	**-0.3**
	38nm,0.2s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.11**	**260**	*e*Pg	**Pg**	**11 50 02.0**	**+0.9**
	SNR=1.0						
SMRF				*e*Sn	**Sg**	**11 50 15.7**	**+0.2**
SMRF				*e*Sg	**Sg**	**11 50 17.2**	**+1.7**
	46nm,0.2s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.11**	**260**	*e*Pg	**Pg**	**11 50 02.0**	**+0.9**
	SNR=1.0						
SMRF				*e*Sn	**Sg**	**11 50 15.7**	**+0.2**
SMRF				*e*Sg	**Sg**	**11 50 17.2**	**+1.7**
	23nm,0.2s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.13**	**311**	*e*Pg	**Pg**	**11 50 02.6**	**+1.1**
ORIF				*e*Sn	**Sg**	**11 50 16.5**	**+0.3**
	17nm,0.2s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.13**	**311**	*e*Pg	**Pg**	**11 50 02.6**	**+1.1**
ORIF				*e*Sn	**Sg**	**11 50 16.5**	**+0.3**
	17nm,0.2s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.13**	**311**	*e*Pn	**Pg**	**11 50 01.1**	**-0.4**
ORIF				*e*Pg	**Pg**	**11 50 02.6**	**+1.1**
ORIF				*e*Sn	**Sg**	**11 50 16.5**	**+0.3**
ORIF	**Oris-en-Rattie**	**1.13**	**311**	*e*Pn	**Pg**	**11 50 01.1**	**-0.4**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.13**	**311**	*e*Pg	**Pg**	**11 50 02.6**	**+1.1**
ORIF				*e*Sn	**Sg**	**11 50 16.5**	**+0.3**
	8.4nm,0.2s,SNR=1.0						
LPG	**La Plagne**	**1.33**	**350**	*e*Pg	**Pg**	**11 50 04.9**	**-0.4**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**11 50 22.0**	**-0.6**
	17nm,0.5s,SNR=1.0						
LPG	**La Plagne**	**1.33**	**350**	*e*Pg	**Pg**	**11 50 04.9**	**-0.4**
LPG				*e*Sg	**Sg**	**11 50 22.0**	**-0.6**
	8.4nm,0.5s,SNR=1.0						
LPL	**La Plagne**	**1.35**	**349**	*e*Pg	**Pg**	**11 50 05.3**	**-0.4**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**11 50 23.7**	**+0.4**
	9.0nm,0.3s						
LPL	**La Plagne**	**1.35**	**349**	*e*Pg	**Pg**	**11 50 05.3**	**-0.4**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**11 50 23.7**	**+0.4**
	4.5nm,0.3s						
VIVF	**Saint-Julien-l**	**1.85**	**292**	*e*Pn	**Pn**	**11 50 11.8**	**+0.3**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**11 50 33.8**	**-1.2**
	SNR=1.0						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**1.05**	**43**	*e*P	**Pn**	**12 01 36.4**	**+0.7**
COPN	**Copaltepe**	**1.05**	**24**	||*e*P	**Pn**	**12 01 35.5**	**-0.2**
COPN				*e*S	**Sb**	**12 01 50.2**	**+0.9**
CSAN		**1.13**	**32**	*e*P	**Pn**	**12 01 36.4**	**-0.5**
XAVN	**Gruta Xavier**	**1.16**	**37**	*e*P	**Pn**	**12 01 37.1**	**-0.1**
SSN	**San Juan del S**	**1.16**	**86**	||*e*P	**Pn**	**12 01 36.7**	**-0.5**
SSN				*e*S	**Sn**	**12 01 52.8**	**+0.4**
APON	**Apoyo**	**1.18**	**54**	*e*P	**Pn**	**12 01 37.0**	**-0.5**
TISN	**Laguna Tiscapa**	**1.19**	**39**	*e*P	**Pn**	**12 01 37.2**	**-0.4**
LEON	**Leon**	**1.20**	**7**	*e*P	**Pn**	**12 01 37.6**	**-0.2**
MGAN	**Managua**	**1.21**	**40**	*e*P	**Pn**	**12 01 37.6**	**-0.2**
MOMN	**Momotombo**	**1.28**	**22**	*e*S	**Sn**	**12 01 56.8**	**+1.4**
CNGN	**Cerro Negro**	**1.32**	**14**	*e*P	**Pn**	**12 01 38.9**	**-0.5**
CNGN				*e*S	**Sn**	**12 01 56.4**	**+0.1**
TELN	**Telica**	**1.40**	**8**	*e*P	**Pn**	**12 01 41.4**	**+0.9**
CONN	**Concepcion**	**1.42**	**76**	*e*P	**Pn**	**12 01 40.3**	**-0.5**
CRIN	**San Cristobal**	**1.48**	**359**	*e*P	**Pn**	**12 01 41.5**	**-0.1**
NY14	**Universidad de**	**1.58**	**111**	*i* P	**Pn**	**12 01 42.3**	**-0.7**
GBS2	**Las Lilas**	**1.60**	**103**	*i* P	**Pn**	**12 01 42.6**	**-0.6**
GBS2				*i* S	**Sn**	**12 02 04.9**	**+1.8**
GB1A	**Borinquen Arri**	**1.65**	**104**	*i* P	**Pn**	**12 01 43.5**	**-0.5**
CNCH	**Conchagua**	**2.19**	**339**	*e*P	**Pn**	**12 01 50.0**	**-1.4**
CNCH				*e*S	**Sn**	**12 02 16.7**	**-1.2**
JTS	**JuntasAbangare**	**2.24**	**114**	*e*Pn	**Pn**	**12 01 52.6**	**+0.5**
JTS	**JuntasAbangare**	**2.24**	**114**	Pn	**Pn**	**12 01 52.2**	**0.0**
	11nm,0.3s,baz=316,slow=18,SNR=35						
JTS				Sn	**Sn**	**12 02 18.8**	**-0.3**
	15nm,0.3s,baz=345,slow=9.7,SNR=6.6						
JTS	**JuntasAbangare**	**2.24**	**114**	*e*P	**Pn**	**12 01 56.1**	**+4.0**
TGUH	**Tegucigalpa,Un**	**2.83**	**355**	*e*Pn	**Pn**	**12 02 00.9**	**+0.6**
TGUH	**Tegucigalpa,Un**	**2.83**	**355**	*e*P	**Pn**	**12 02 00.5**	**+0.2**
LFRS	**El Faro**	**3.11**	**321**	*e*P	**Pn**	**12 02 03.0**	**-1.0**
LFRS				*e*S	**Sn**	**12 02 39.2**	**-1.3**
CMIG	**Matias Romero**	**9.59**	**308**	Pn	**Pn**	**12 03 35.1**	**+2.0**
	0.4nm,0.3s,baz=141,slow=9.5,SNR=8.9						
ROSC	**El Rosal**	**14.07**	**116**	LR	LR	12 09 25.3	
	comp=Z,117nm,21.7s,baz=46,slow=35						
ATAH	**Atahualpa**	**20.16**	**154**	LR	LR	12 12 08.1	
	comp=Z,158nm,21.8s,baz=128,slow=32						
HKT	**Hockley**	**20.36**	**338**	*e*P	**P**	**12 05 52.1**	**+0.8**
	24nm,1.6s						
LRAL	**Lakeview Retre**	**21.72**	**0**	*e*P	**P**	**12 06 06.7**	**+0.7**
	8.7nm,0.9s,mb4.2						
GOGA	**Godfrey**	**22.33**	**8**	*e*P	**P**	**12 06 12.3**	**-0.3**
	9.7nm,0.8s,mb4.3						
JCT	**Junction City**	**22.54**	**330**	P	**P**	**12 06 16.6**	**+1.8**
	15nm,1.4s,mb4.2						
JSC	**Jenkinsville**	**23.56**	**12**	*e*P	**P**	**12 06 24.7**	**-0.7**
TXAR	**Lajitas Array**	**23.79**	**322**	P	**P**	**12 06 27.9**	**+0.4**
	3.0nm,0.8s,mb3.8,baz=135,slow=10,SNR=41						
TXAR				PcP	PcP	12 10 13.8	+3.0
	0.9nm,0.9s,baz=141,slow=4.8,SNR=5.8						
SWET	**Sewanee**	**23.91**	**2**	*e*P	**P**	**12 06 27.9**	**-0.7**
MIAR	**Mount Ida**	**23.98**	**347**	*e*P	**P**	**12 06 28.1**	**-1.1**
	7.6nm,0.8s,mb4.2						
CPCT	**Cooper Cave**	**24.23**	**5**	*e*P	**P**	**12 06 31.6**	**+0.1**
TKL	**Tuckaleechee C**	**24.51**	**6**	P	**P**	**12 06 32.7**	**-1.4**
TKL	**Tuckaleechee C**	**24.51**	**6**	P	**P**	**12 06 32.7**	**-1.4**
	6.0nm,0.8s,mb4.2,baz=171,slow=12,SNR=10.0						
WVT	**Waverly**	**24.82**	**358**	*e*P	**P**	**12 06 35.0**	**-1.8**
	1.7nm,0.8s,mb3.6						
WMOK	**Wichita Mounta**	**25.75**	**337**	*e*P	**P**	**12 06 46.5**	**+1.2**
	29nm,1.6s,mb4.5						
MNTX	**Cornudas Mount**	**26.51**	**323**	*e*P	**P**	**12 06 53.9**	**+1.6**
	2.1nm,0.8s,mb3.7						
ANMO	**Albuquerque**	**29.51**	**326**	P	**P**	**12 07 19.0**	**0.0**
	0.9nm,0.7s,mb3.6,baz=173,slow=6.3,SNR=4.9						
SDCO	**Great Sand Dun**	**31.18**	**331**	*e*P	**P**	**12 07 34.8**	**+1.0**
	20nm,2.5s,mb4.5						
MVCO	**Mesa Verde**	**32.29**	**327**	*e*P	**P**	**12 07 44.2**	**+0.7**
	3.0nm,0.8s,mb4.2						
PV01	**Paradox Valley**	**33.02**	**328**	*e*P	**P**	**12 07 50.9**	**+1.0**
PV04	**Paradox Valley**	**33.38**	**328**	*e*P	**P**	**12 07 53.1**	**0.0**
PV10	**Paradox Valley**	**33.44**	**328**	*e*P	**P**	**12 07 53.4**	**-0.2**
	84nm,0.8s						
ECSD	**EROS Data Cent**	**33.45**	**347**	*e*P	**P**	**12 07 51.3**	**-2.2**
	7.2nm,0.8s,mb4.7						
SRU	**San Rafael**	**34.77**	**327**	*e*P	**P**	**12 08 05.4**	**+0.4**
	3.5nm,0.9s,mb4.3						
HWUT	**Hardware Ranch**	**37.14**	**329**	*e*P	**P**	**12 08 25.5**	**+0.2**
	3.7nm,0.6s,mb4.4						
REDW	**Red Top Meadow**	**38.11**	**331**	*e*P	**P**	**12 08 33.7**	**+0.2**
	21nm,1.8s,mb4.6						
SNOW	**Snow King Moun**	**38.14**	**332**	*e*P	**P**	**12 08 34.2**	**+0.4**
	4.0nm,0.8s,mb4.2						
TPAW	**Teton Pass**	**38.25**	**332**	*e*P	**P**	**12 08 35.1**	**+0.4**
	2.3nm,0.8s,mb4.0						
NVAR	**Mina Array Bea**	**38.90**	**320**	P	**P**	**12 08 41.0**	**+0.7**
NVAR				PcP	PcP	12 10 52.2	+1.3
NVAR	**Mina Array Bea**	**38.90**	**320**	P	**P**	**12 08 41.0**	**+0.7**
	0.7nm,0.7s,mb3.5,baz=131,slow=7.6,SNR=6.0						
NVAR				PcP	PcP	12 10 52.2	+1.3
	1.0nm,0.7s,baz=144,slow=3.5,SNR=6.2						
HLID	**Hailey**	**40.00**	**329**	*e*P	**P**	**12 08 50.0**	**+0.7**
	2.2nm,0.9s,mb3.9						
MCMT	**McKenzie Canyo**	**40.16**	**331**	*e*P	**P**	**12 08 51.5**	**+0.8**
	1.2nm,0.9s,mb3.6						
SCHQ	**Scheefferville**	**46.34**	**16**	P	**P**	**12 09 36.0**	**-4.4**
	2.9nm,0.8s,mb4.2,baz=221,slow=8.1,SNR=3.4						
YKA	**Yellowknife Ar**	**54.90**	**345**	P	**P**	**12 10 43.0**	**-1.9**
YKA	**Yellowknife Ar**	**54.90**	**345**	P	**P**	**12 10 43.0**	**-1.9**
	1.4nm,0.8s,mb4.0,baz=136,slow=7.9,SNR=8.7						
ILAR	**Eielson Array**	**67.31**	**336**	P	**P**	**12 12 08.0**	**-1.1**
	0.6nm,0.8s,mb3.7,baz=104,slow=3.8,SNR=6.2						
CN2	**Changchun**	**117.78**	**334**	*e*PKP	PKPdf	12 19 54.6	-6.5
KSRS	**Korea Array**	**121.53**	**328**	PKP	PKPdf	12 20 08.8	+0.3
	0.6nm,0.8s,baz=307,slow=0.3,SNR=5.0						
WMQ	**Urumqi**	**125.02**	**5**	*e*PKP	PKPdf	12 20 13.1	-1.9
HHC	**Hu-ho-hao-te**	**125.42**	**343**	*e*PKP	PKPdf	12 20 15.3	-0.6
HHC				sPKP		12 20 29.8	
HHC				PP	PP	12 22 08.8	+3.5
HHC				PKS		12 23 50.7	
HHC				SKS	SKSdf	12 27 22.4	-4.1
HHC				SKKS	SKKSac	12 28 56.4	-7.1
HHC				SS	SS	12 38 59.5	-2.0
HHC				AMB	AMB		
	comp=Z,30nm,4.3s						
HHC				LR	LR		
	comp=N,210nm,17.8s						
HHC				LR	LR		
	comp=E,160nm,19.0s						
HHC				LR	LR		
	comp=Z,120nm,19.0s						
NJ2	**Nanjing**	**130.35**	**331**	*e*PKP	PKPdf	12 20 27.4	+1.8
ASAR	**Alice Springs**	**139.18**	**247**	PKhKP	PKPpre	12 20 42.2	
	comp=Z,1.1nm,1.2s,baz=48,slow=1.4,SNR=3.5						
CMAR	**Chiang Mai Arr**	**149.93**	**349**	PKPbc	PKPbc	12 21 05.4	-0.4
	comp=Z,1.5nm,0.6s,baz=345,slow=4.0,SNR=8.1						

IDC ***10*** *12:20:51.0±0.6, 10°.88N×91°.70E, h0km, mb4.0/17, mb1 4.1/19, mb1mx4.0/25, mbtmp4.0/19, ML3.7/2, Error ellipse: s-maj=21.2km s-min=13.9km az=59.0*

NEIC ***10*** *12:20:52.6±0.4, 10°.88N×91°.73E, h10km, mb4.3/5, Error ellipse: s-maj=10.3km s-min=8.1km az=51.0*

ISCJB ***10*** *12:20:53.9±0.4, 10°.81N±0°.07×91°.66E±0°.08, h33km, mb4.1/21, Error ellipse: s-maj=11.8km s-min=8.5km az=142.0*

ISC 10 12:20:56.2±0.4,**10°.84N**±0°.07×**91°.68E**±0°.07,**h35**km,**n42, σ0s91/39,mb4.1/21,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.33**	**42**	Pn	**Pn**	**12 23 17.9**	**-4.0**
	0.1nm,0.3s,baz=223,slow=31,SNR=4.0						
PSI	**Prapat**	**10.75**	**138**	Pn	**Pn**	**12 23 25.9**	**-1.8**
PSI	**Prapat**	**10.75**	**138**	Pn	**Pn**	**12 23 25.9**	**-1.8**
	1.0nm,0.3s,baz=121,slow=2.1,SNR=4.6						
BWNR	**Bhubaneshwar**	**10.97**	**330**	*ex*	**Pn**	**12 23 29.0**	**-1.7**
BWNR				*ex*	**Sn**	**12 25 40.0**	**+7.8**
PALK	**Pallekele**	**11.40**	**253**	*e*Pn	**Pn**	**12 23 35.9**	**-0.8**
KSM	**Kuching**	**20.71**	**115**	*e*P	**P**	**12 25 35.3**	**+1.6**
	12nm,1.0s						
KSM	**Kuching**	**20.71**	**115**	P	**P**	**12 25 36.2**	**+2.5**
	2µm158nm,1.1s						
JOSI	**Joshimath**	**22.62**	**332**	*ex*	**P**	**12 25 58.0**	**+3.9**
GTA	**Gaotai**	**29.36**	**13**	*e*P	**P**	**12 26 56.7**	**+0.8**
GTA				pP	pP	12 27 01.7	-4.2
GTA				sP	sP	12 27 04.8	-5.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
AAK	**Ala-Archa**	**35.04**	**338**	P	**P**	**12 27 46.5**	**+0.8**
	comp=Z,2.0nm,0.5s,mb4.3,baz=319,slow=15,SNR=2.3						
EKS2	**Erkin-Say**	**35.34**	**337**	*e*P	**P**	**12 27 49.9**	**+1.7**
	comp=Z,3.9nm,0.8s,mb4.4						
MKAR	**Makanchi Array**	**36.71**	**349**	P	**P**	**12 27 59.9**	**+0.1**
	comp=Z,1.5nm,0.7s,mb3.9,baz=163,slow=7.1,SNR=7.8						
SONM	**Songino Array**	**38.90**	**16**	P	**P**	**12 28 18.2**	**-0.1**
	comp=Z,0.9nm,0.6s,mb3.7,baz=200,slow=7.1,SNR=5.6						
KURK	**Kurchatov**	**41.18**	**347**	*e*P	**P**	**12 28 36.8**	**-0.4**
	comp=Z,2.6nm,0.9s,mb3.9						
KURK	**Kurchatov**	**41.18**	**347**	P	**P**	**12 28 36.8**	**-0.4**
	comp=Z,1.4nm,0.8s,mb3.6,baz=165,slow=7.6,SNR=5.5						
KSRS	**Korea Array**	**41.95**	**45**	P	**P**	**12 28 42.7**	**-1.1**
	comp=Z,1.9nm,1.1s,mb3.6,baz=242,slow=8.3,SNR=4.1						
ZALV	**Zalesovo Beam**	**43.34**	**354**	P	**P**	**12 28 54.3**	**-0.5**
	comp=Z,0.9nm,0.4s,mb3.9,baz=168,slow=7.6,SNR=4.6						
FITZ	**Fitzroy Crossi**	**44.17**	**130**	*e*P	**P**	**12 29 01.9**	**-0.1**
	comp=Z,5.1nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**44.17**	**130**	P	**P**	**12 29 02.1**	**+0.1**
	comp=Z,4.5nm,0.5s,mb4.5,baz=313,slow=4.3,SNR=22						
ABKAR	**Akbulak array**	**46.48**	**332**	*e*P	**P**	**12 29 20.6**	**+0.7**
	comp=Z,92nm,1.0s						
AKTK	**Aktyubinsk**	**48.20**	**332**	P	**P**	**12 29 33.3**	**+0.1**
AKTO	**Aktyubinsk**	**48.20**	**332**	P	**P**	**12 29 33.3**	**+0.1**
	comp=Z,1.0nm,0.5s,mb4.1,baz=113,slow=19,SNR=4.0						
WRAB	**Tennant Creek**	**51.96**	**126**	*e*P	**P**	**12 30 02.3**	**+0.1**
	comp=Z,60nm,0.6s						
WRAB	**Tennant Creek**	**51.96**	**126**	P	pP	12 30 11.1	-1.6
	comp=Z,591nm,0.6s,SNR=7.9						
ABPO	**Ambohimpanom**	**52.92**	**236**	*e*P	**P**	**12 30 10.9**	**+1.6**
	comp=Z,11nm,1.3s,mb4.6						
ASAR	**Alice Springs**	**53.67**	**130**	P	**P**	**12 30 15.2**	**+0.4**
	comp=Z,1.6nm,0.6s,mb4.1,baz=305,slow=7.1,SNR=32						
KMBO	**Kilima Mbogo**	**55.41**	**261**	P	**P**	**12 30 28.2**	**+0.6**
KMBO	**Kilima Mbogo**	**55.41**	**261**	P	**P**	**12 30 28.2**	**+0.6**
	comp=Z,0.4nm,0.2s,mb4.0,baz=360,slow=24,SNR=2.9						
BRTR	**Keskin Array B**	**58.67**	**310**	P	**P**	**12 30 49.9**	**-0.4**
	comp=Z,1.2nm,0.7s,mb4.8,baz=117,slow=7.1,SNR=5.1						
STKA	**Stephens Creek**	**63.90**	**134**	P	**P**	**12 31 25.2**	**-0.5**
	comp=Z,2.3nm,0.6s,mb4.4,baz=334,slow=6.2,SNR=4.4						
AKASG	**Malin Array Be**	**64.33**	**321**	P	**P**	**12 31 27.2**	**-1.1**
	comp=Z,0.2nm,0.3s,mb3.7,baz=82,slow=6.8,SNR=4.0						
FINES	**FINESS Array B**	**68.97**	**332**	P	**P**	**12 31 57.3**	**-0.4**
	comp=Z,2.0nm,0.8s,mb4.1,baz=117,slow=11,SNR=4.8						
ARCES	**ARCESS Array B**	**71.67**	**340**	P	**P**	**12 32 13.8**	**-0.2**
ARCES	**ARCESS Array B**	**71.67**	**340**	P	**P**	**12 32 13.8**	**-0.2**
	comp=Z,3.6nm,1.1s,mb4.2,baz=91,slow=5.2,SNR=5.9						
BOSA	**Boshof**	**75.14**	**236**	P	**P**	**12 32 34.7**	**-0.6**
BOSA	**Boshof**	**75.14**	**236**	P	**P**	**12 32 34.7**	**-0.6**
	comp=Z,4.9nm,0.9s,mb4.4,baz=163,slow=5.9,SNR=3.2						
TORD	**Torodi Ar. Bea**	**87.56**	**283**	P	**P**	**12 33 41.7**	**+0.3**
TORD	**Torodi Ar. Bea**	**87.56**	**283**	P	**P**	**12 33 41.7**	**+0.3**
	comp=Z,0.7nm,0.7s,mb4.0,baz=96,slow=4.6,SNR=4.1						
ILAR	**Eielson Array**	**92.91**	**21**	P	**P**	**12 34 05.8**	**+0.4**
	comp=Z,0.2nm,0.6s,mb3.7,baz=350,slow=5.1,SNR=4.1						
TXAR	**Lajitas Array**	**137.40**	**20**	PKP	PKPdf	12 40 19.2	+2.3
	comp=Z,0.1nm,0.5s,baz=129,slow=1.8,SNR=3.6						
PLCA	**Paso Flores**	**146.34**	**205**	PKPbc	PKPbc	12 40 35.0	+1.4
	comp=Z,3.0nm,0.9s,baz=96,slow=11,SNR=3.1						
CPUP	**Villa Florida**	**146.95**	**238**	PKPbc	PKPbc	12 40 37.2	+1.4
	comp=Z,0.3nm,0.4s,baz=37,slow=1.6,SNR=2.8						

BJI ***10*** *12:21:07.6, 10°.77N×91°.61E, h14km, mB5.5/33, mb5.0/57, Ms5.7/70, MS7 5.4/57*

IDC ***10*** *12:21:09.3±0.5, 11°.00N×91°.86E, h0km, mb4.7/26, mb1 4.7/28, mb1mx4.7/29, mbtmp4.7/28, ML4.0/2, MS5.4/3, Ms1 5.4/3, ms1mx4.3/10, Error ellipse: s-maj=15.4km s-min=11.9km az=74.0*

ISCJB ***10*** *12:21:10.7±0.7, 11°.04N±0°.02×91°.74E±0°.02, h14km±4km, mb5.3/269, MS5.4/242, Error ellipse: s-maj=4.4km s-min=3.0km az=31.6*

NEIC ***10*** *12:21:11.8±0.2, 10°.95N×91°.71E, h13km, mb5.4/158, MS5.4/182, MW5.6, Error ellipse: s-maj=6.1km s-min=4.4km az=209.0, Moment Tensor Solution. s65 Moment tensor: Scale 10^17 Nm; Mrr=0.80; Mθθ=0.40; Mφφ=1.20; Mrθ=0.24; Mrφ=1.14; Mθφ=-2.29; Best double couple: Mo=2.80000×10^17 NP1:♎=246.00000°, δ=28.00000°, λ=-22.00000°. NP2:♎=355.00000°, δ=80.00000°, λ=-117.00000°. Principal axes: T 2.9100, Plg=29.0000°, Azm=106.0000°; N -0.2900, Plg=26.0000°, Azm=0.0000°; P -2.6200, Plg=48.0000°, Azm=236.0000°;*

MOS ***10*** *12:21:13.5±1.1, 11°.09N×91°.79E, h33km, mb5.6/114, MS5.3/83 Error ellipse: s-maj=8.0km s-min=3.7km az=120.9*

SZGRF ***10*** *12:21:13.7, 10°.53N×91°.50E, h33km, mb5.4, Andaman Islands, India, region*

GCMT ***10*** *12:21:19.1±0.1, 11°.12N×91°.84E, h12km, MW5.7, Moment Tensor Solution. s84,c157; s48,c54; Moment tensor: Scale 10^17 Nm; Mrr=2.73±.04; Mθθ=0.74±.04; Mφφ=3.47±.04; Mrθ=2.22±.11; Mrφ=0.78±.03; Mθφ=-1.47±.10; Best double couple: Mo=4.20000×10^17 NP1:♎=218.00000°, δ=44.00000°, λ=-40.00000°. NP2:♎=339.00000°, δ=64.00000°, λ=-126.00000°. Principal axes: T 3.8200, Plg=11.0000°, Azm=94.0000°; N 0.6900, Plg=32.0000°, Azm=357.0000°; P -4.5100, Plg=56.0000°, Azm=201.0000°; Data Used: II IU IC G CN. Surface waves: sta= 90, comp=186, per= 50.*

DJA ***10*** *12:21:20, 11°.57N×91°.97E, h44km, mb5.3/41*

ISC 10 12:21:14.3±0.7,**11°.04N**±0°.02×**91°.75E**±0°.02,**h27**km±4km, **h15**km±.9km:**pP-P,n938,σ1s22/824,mb5.3**/269,**MS5.4**/242, **40C-19D,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.15**	**58**	*e*PKP	**Pn**	**12 21 33.0**	**-1.7**
BDT	**Bhumibol Dam**	**9.36**	**48**	P	**Pn**	**12 23 18.5**	**-8.9**
	67nm,0.9s						
NST	**Nakhon Sawan**	**9.37**	**60**	P	**Pn**	**12 23 33.0**	**+5.4**
TPTI		**9.42**	**145**	P	**Pn**	**12 23 31.9**	**+3.5**
	2µm120nm,1.3s						
SNG	**Songkhla**	**9.56**	**113**	P	**Pn**	**12 23 36.0**	**+5.7**
	320nm,1.0s						
CM31	**Chiang Mai Arr**	**10.14**	**42**	*e*Pn	**Pn**	**12 23 39.6**	**+1.4**
CMAR	**Chiang Mai Arr**	**10.14**	**42**	Pn	**Pn**	**12 23 34.5**	**-3.7**
	0.3nm,0.3s,baz=234,slow=15,SNR=7.2						
CMAR				Sn	**Sn**	**12 25 30.6**	**-0.4**
	0.7nm,0.3s,baz=238,slow=26,SNR=2.7						
CHG	**Chiang Mai**	**10.39**	**41**	||P	**Pn**	**12 23 42.1**	**+0.4**
	82nm,0.5s						
CHTO	**Chiang Mai**	**10.39**	**41**	*e*Pn	**Pn**	**12 23 42.1**	**+0.4**
CHTO	**Chiang Mai**	**10.39**	**41**	P	**Pn**	**12 23 42.3**	**+0.6**
	2µm99nm,1.2s						
CHTO	**Chiang Mai**	**10.39**	**41**	Pn	**Pn**	**12 23 49.0**	**+7.3**
	SNR=12						
KULM	**Kulim**	**10.50**	**122**	*e*Pn	**Pn**	**12 23 42.2**	**-1.0**
	58nm,0.8s						
KULM				*e*Sn	**Sn**	**12 25 34.7**	**-5.3**
KULM	**Kulim**	**10.50**	**122**	P	**Pn**	**12 23 43.8**	**+0.7**
KULM	**Kulim**	**10.50**	**122**	P	**Pn**	**12 23 47.2**	**+4.1**
	2µm74nm,1.0s						
VIS	**Vishakhapatnam**	**10.52**	**310**	*i* P	**Pn**	**12 23 43.0**	**-0.4**
VIS				*i* S	**Sn**	**12 25 30.4**	**-10**
PSI	**Prapat**	**10.85**	**138**	Pn	**Pn**	**12 23 44.9**	**-3.0**
	1.5nm,0.3s,baz=340,slow=13,SNR=4.9						
IPM	**Ipoh**	**11.27**	**125**	P	**Pn**	**12 23 54.1**	**+0.5**
IPM	**Ipoh**	**11.27**	**125**	P	**Pn**	**12 23 51.3**	**-2.3**
	2µm185nm,1.1s						
MDRS	**Chennai**	**11.43**	**281**	||*e*PKP	x	12 24 10.7	
MDRS				*e*S	x	12 26 16.2	
PALK	**Pallekele**	**11.53**	**252**	*e*Pn	**Pn**	**12 23 54.2**	**-3.1**
	409nm,1.1s						
PALK				*e*Sn	**Sn**	**12 25 51.4**	**-14**
PALK	**Pallekele**	**11.53**	**252**	*e*P	**Pn**	**12 23 54.2**	**-3.0**
PALK				pmax	pmax		
	comp=Z,409nm,1.1s						
PALK	**Pallekele**	**11.53**	**252**	P	**Pn**	**12 24 02.8**	**+5.6**
	comp=Z,2µmcomp=Z,165nm,1.0s						
CHRT	**Chiangrai**	**11.70**	**40**	P	**Pn**	**12 23 52.0**	**-7.6**
	comp=Z,342nm,1.0s						
CAL	**Calcutta**	**11.89**	**344**	*e*PKP	x	12 24 24.1	
CAL				*e*S	**Sn**	**12 26 18.5**	**+4.4**
FRIM	**Kepong**	**12.49**	**128**	P	**Pn**	**12 24 10.8**	**+0.4**
KTGM	**Kuala Trenggan**	**12.62**	**116**	P	**Pn**	**12 24 13.2**	**+1.1**
AGT	**Agartala**	**12.78**	**358**	*ex*	**Pn**	**12 24 08.0**	**-6.3**
MNSI	**Mandailing Nat**	**12.81**	**142**	P	**Pn**	**12 24 22.2**	**+7.4**
	comp=Z,3µmcomp=Z,50nm,1.2s						
IMP	**Imphal**	**13.82**	**8**	*e*PKP	**Pn**	**12 24 24.0**	**-4.6**
IMP				*ex*	x	12 26 54.0	
HYB	**Hyderabad**	**14.27**	**298**	*i* P	**Pn**	**12 24 34.5**	**-0.2**
HYB				*e*		12 24 40.0	
HYB				*e*S	**Sn**	**12 27 12.0**	**-0.2**
HYB				LR	LR	12 37 40.0	
	comp=Z,15nm,12.0s						
SISI	**Saibi**	**14.29**	**149**	P	pP	12 24 48.1	-1.1
	comp=Z,177nm,1.7s						
PPI	**Padang Panjang**	**14.30**	**142**	P	**Pn**	**12 24 40.7**	**+5.6**
	comp=Z,3µmcomp=Z,40nm,1.9s						
SHL	**Shillong**	**14.45**	**0**	*ex*	**Pn**	**12 24 30.0**	**-7.1**
SHL				*ex*	x	12 27 06.5	
KGM	**Kluang**	**14.57**	**127**	P	**Pn**	**12 24 38.7**	**-0.1**
PDSI	**Padang**	**14.70**	**143**	P	**Pn**	**12 24 44.1**	**+3.5**
	comp=Z,2µmcomp=Z,233nm,0.7s						
TRD	**Trivandrum**	**14.79**	**262**	||*i* /x	x	12 25 01.9	
TRD				*i* x	x	12 27 57.9	
MYKOM	**Kota Tinggi**	**15.12**	**127**	P	**Pn**	**12 24 46.0**	**-0.3**
MYKOM	**Kota Tinggi**	**15.12**	**127**	P	**Pn**	**12 24 50.0**	**+3.7**
	comp=Z,2µmcomp=Z,84nm,1.5s						
SDSI	**Sungai Dareh**	**15.30**	**140**	P	**Pn**	**12 24 56.0**	**+7.4**
	comp=Z,1µmcomp=Z,38nm,0.8s						
NGP	**Nagpur**	**15.80**	**311**	*e*PKP	**Pn**	**12 24 55.0**	**0.0**
ODAN	**Odare**	**16.26**	**346**	*e*P	**Pn**	**12 24 59.1**	**-1.8**
LATR	**Latur**	**16.41**	**298**	*ex*	**Pn**	**12 25 00.7**	**-2.2**
LATR				*ex*	x	12 27 52.5	
RAMN	**Ramite**	**16.55**	**344**	*e*P	**Pn**	**12 25 03.3**	**-1.3**
	comp=Z,466nm,0.7s						
TAPN	**Taplejung**	**16.66**	**347**	*e*P	**Pn**	**12 25 03.3**	**-2.7**
AKL	**Akola**	**17.11**	**306**	*i* P	**Pn**	**12 25 11.3**	**-0.3**
AKL				*ex*	x	12 25 13.4	
	comp=Z,46nm,0.7s						
AKL				*i* x	x	12 28 08.2	
JIRN	**Jiri**	**17.34**	**343**	*e*P	**Pn**	**12 25 13.3**	**-1.2**
KMI	**Kunming**	**17.46**	**35**	P	**Pn**	**12 25 16.9**	**+0.9**
KMI				pP	pP	12 25 22.2	-2.1
KMI				sP	sP	12 25 24.0	-3.7
KMI				PP		12 25 34.1	
KMI				S	**Sn**	**12 28 34.4**	**+4.8**
KMI				sS	sS	12 28 38.4	-10
KMI				SS		12 28 55.7	
KMI				pmax	pmax		
	comp=Z,30nm,1.4s						
KMI				pmax	pmax		
	comp=Z,1µm,4.9s						
KMI				LR	LR		
	comp=N,22µm,15.3s						
KMI				LR	LR		
	comp=E,16µm,15.0s						
KMI				LR	LR		
	comp=Z,18µm,16.8s						
PKI	**Pulchoki**	**17.49**	**341**	*e*P	**Pn**	**12 25 15.3**	**-1.1**
DMN	**Daman**	**17.62**	**340**	*e*P	**Pn**	**12 25 16.8**	**-1.2**
GUN	**Gumba**	**17.66**	**343**	*e*P	**Pn**	**12 25 17.1**	**-1.4**
KKN	**Kakani**	**17.74**	**341**	*e*P	**Pn**	**12 25 17.5**	**-1.9**
KAD	**Karad**	**18.13**	**292**	*e*PKP	**Pn**	**12 25 25.6**	**+1.3**
KAD				AMb	AMB	12 25 34.0	
	comp=Z,157nm,1.0s						
GKN	**Gorkha**	**18.15**	**339**	*e*P	**Pn**	**12 25 22.4**	**-2.0**
KSI	**Kapahiang**	**18.15**	**143**	P	**Pn**	**12 25 26.7**	**+2.1**
	comp=Z,247nm,0.9s						
BHPL	**Bhopal**	**18.27**	**313**	*e*PKP	**Pn**	**12 25 25.1**	**-0.9**
BHPL				AMb	AMB	12 25 35.3	
	comp=Z,193nm,1.0s						
**

comp=Z,8μm,19.0s,MS5.2
GZH Guangzhou 23.83 57 P **P** **12 26 29.4 +4.0**
GZH S **S** **12 30 50.1 +10**
GZH LR LR
comp=N,12μm,19.8s,MS4.4
GZH LR LR
comp=E,2μm,15.9s,MS5.4
GZH LR LR
comp=Z,9μm,15.6s,MS5.4
KLP Kalpa 23.91 331 *e*PKP **P** **12 26 26.6 +0.5**
KLP AMb AMB 12 26 39.7
comp=Z,191nm,1.0s,mb5.5
SMLA Simla 24.13 328 *i* P **P** **12 26 27.9 -0.1**
SMLA *i* x x 12 30 52.7
HKC Hong Kong Obse 24.19 60 P **P** **12 26 30.0 +1.3**
HKC S **S** **12 30 51.0 +5.5**
CISI Cisompet, Garu 24.43 138 P pP 12 26 41.9 +3.1
comp=Z,124nm,0.5s
SDNR Sundarnagar 24.52 328 *ex* **P** **12 26 34.5 +2.9**
SDNR *ex* x 12 31 01.1
KKM Kota Kinabalu 24.69 100 *e*P **P** **12 26 36.7 +3.3**
comp=Z,190nm,1.5s,mb5.4
KKM LR LR
comp=Z,6μm,19.0s,MS5.1
KKM Kota Kinabalu 24.69 100 P **P** **12 26 33.4 +0.1**
KKM Kota Kinabalu 24.69 100 P **P** **12 26 39.2 +5.9**
comp=Z,3μmcomp=Z,83nm,1.7s,mb5.0
BHK Bhakra 24.75 327 *ex* **P** **12 26 36.2 +2.5**
KDM Kudat 25.11 97 P **P** **12 26 37.0 -0.2**
BJII Banjamegara 25.55 135 P pP 12 26 52.8 +3.8
comp=Z,43nm,1.9s
SDKM Sandakan 25.73 100 P **P** **12 26 42.5 -0.3**
DGAR Diego Garcia 26.55 227 PFAKE 12 27 00.0 +10
DGAR LR LR
comp=Z,5μm,19.0s,MS5.1
TSM Tawau 26.73 102 P **P** **12 26 51.4 -0.5**
MYLDM Lahad Datu 27.10 100 P **P** **12 26 54.8 -0.4**
MYLDM Lahad Datu 27.10 100 P **P** **12 26 59.8 +4.6**
comp=Z,2μmcomp=Z,172nm,1.5s,mb5.4
LZH Lanzhou 27.24 22 ⇑P **P** **12 26 56.4 +0.3**
LZH pP pP 12 26 59.7 -4.4
LZH sP sP 12 27 01.4 -6.0
LZH PP 12 27 44.0
LZH S **S** **12 31 36.0 +2.4**
LZH SS 12 32 52.0
LZH pmax pmax
comp=Z,39nm,1.2s,mb4.8
LZH pmax pmax
comp=Z,120nm,4.0s
LZH LR LR
comp=E,13μm,15.8s
LZH LR LR
comp=Z,19μm,19.6s,MS5.7
XAN Xi'an 27.76 32 P **P** **12 26 58.9 -2.0**
XAN pP pP 12 27 08.3 -0.5
XAN PP 12 27 48.5
XAN S **S** **12 31 42.5 +0.5**
XAN pmax pmax
comp=Z,7.0nm,1.1s,mb4.2
XAN LR LR
comp=N,6μm,18.8s,MS5.3
XAN LR LR
comp=E,3μm,17.5s,MS5.3
XAN LR LR
comp=Z,2μm,20.0s,MS4.7
BCPH Baguio City Da 28.49 76 ⇓*e*P **P** **12 27 10.0 +2.4**
WHN Wuhan 28.58 44 ⇑P **P** **12 27 07.5 -0.7**
WHN S **S** **12 31 48.3 -6.7**
WHN LR LR
comp=N,6μm,9.6s
WHN LR LR
comp=E,18μm,16.5s
WHN LR LR
comp=Z,22μm,18.2s,MS5.8
QZH Quanzhou 28.96 58 ⇑*i* P **P** **12 27 06.4 -5.2**
QZH S **S** **12 31 46.1 -15**
QZH LR LR
comp=N,7μm,15.3s,MS5.6
QZH LR LR
comp=E,8μm,13.7s,MS5.6
QZH LR LR
comp=Z,15μm,16.3s,MS5.7
GTA Gaotai 29.15 13 ⇓P **P** **12 27 13.6 +0.4**
GTA pP pP 12 27 16.8 -4.3
GTA sP sP 12 27 20.4 -4.0
GTA S **S** **12 32 07.3 +3.6**
GTA sS sS 12 32 13.2 -3.6
GTA pmax pmax
comp=Z,38nm,1.2s,mb5.0
GTA pmax pmax
comp=Z,1μm,4.2s
GTA LR LR
comp=N,5μm,16.7s,MS5.4
GTA LR LR
comp=E,6μm,15.2s,MS5.4
GTA LR LR
comp=Z,6μm,19.0s,MS5.2
QUE Quetta 29.91 313 *e*P **P** **12 27 23.0 +3.0**
QUE *e*S **S** **12 32 25.0 +9.2**
TPUB Ta-pu 30.10 62 *e*P **P** **12 27 24.4 +2.6**
comp=Z,28nm,0.9s,mb5.0
SRBI Singaraja 30.10 128 P **P** **12 27 23.6 +1.7**
comp=Z,168nm,1.2s,mb5.7
PCI Palu 30.34 111 P **P** **12 27 28.4 +4.3**
comp=Z,2μmcomp=Z,90nm,1.2s,mb5.4
SSLB Suanglung 30.54 62 *e*P **P** **12 27 25.6 0.0**
comp=Z,49nm,0.8s,mb5.4
KHKI Kahang-Kahang 30.58 128 P **P** **12 27 33.2 +7.1**
comp=Z,75nm,0.9s,mb5.5
YULB Yu-li 30.71 63 *e*P **P** **12 27 29.1 +1.9**
comp=Z,33nm,0.8s,mb5.2
YHNB Yeheng 31.20 60 *e*P **P** **12 27 33.6 +2.1**
comp=Z,72nm,1.0s,mb5.5
YHNB LR LR
comp=Z,7μm,20.0s,MS5.3
KBL Kabul 31.24 322 *e*P **P** **12 27 32.8 +1.1**
comp=Z,29nm,0.9s,mb5.1
KBL Kabul 31.24 322 *e*P **P** **12 27 32.8 +1.1**
KBL pmax pmax
comp=Z,29nm,0.9s,mb5.1
TATO Taipei 31.40 60 *e*P **P** **12 27 35.4 +2.1**
comp=Z,57nm,1.0s,mb5.4
TATO LR LR
comp=Z,7μm,19.0s,MS5.3
SPSI Sidrap Palu 31.62 117 P **P** **12 27 41.5 +6.2**
comp=Z,1μmcomp=Z,66nm,1.6s,mb5.2
KSH Kashi 31.64 336 P **P** **12 27 34.1 -1.0**
KSH *e*pP pP 12 27 38.5 -4.6
KSH *e*sP sP 12 27 41.3 -5.1
KSH *e*PP PP 12 28 34.2 -13
KSH S **S** **12 32 33.7 -9.0**
KSH pmax pmax
comp=Z,70nm,2.5s,mb5.0
KSH LR LR
comp=N,3μm,15.6s,MS5.5
KSH LR LR
comp=E,7μm,15.3s,MS5.5
KSH LR LR
comp=Z,5μm,15.5s,MS5.3
MRSI Marisa 31.78 107 P **P** **12 27 40.8 +4.1**
comp=Z,1μmcomp=Z,77nm,1.2s,mb5.4
TIY Taiyuan 32.41 32 *e*P **P** **12 27 45.9 +4.0**
TIY pP pP 12 27 49.5 -0.4
TIY sP sP 12 27 52.6 -0.6
TIY S **S** **12 33 01.4 +6.7**
TIY LR LR
comp=N,10μm,15.2s,MS5.7
TIY LR LR
comp=E,6μm,13.1s,MS5.7
TIY LR LR
comp=Z,8μm,12.8s,MS5.6
BKSI Bulukumba 32.59 119 P **P** **12 27 42.6 -1.2**
comp=Z,2μmcomp=Z,221nm,1.2s,mb6.0
NJ2 Nanjing 32.59 46 *e*P **P** **12 27 43.5 -0.1**
NJ2 pP pP 12 27 47.9 -3.7
NJ2 S **S** **12 32 58.0 +0.3**
NJ2 sS sS 12 33 06.0 -4.9
NJ2 pmax pmax
comp=Z,30nm,0.8s,mb5.3
NJ2 pmax pmax
comp=Z,200nm,5.3s
NJ2 LR LR
comp=N,12μm,16.6s,MS5.7
NJ2 LR LR
comp=E,9μm,18.9s,MS5.7
NJ2 LR LR
comp=Z,6μm,18.7s,MS5.3
WMQ Urumqi 32.85 355 P **P** **12 27 47.7 +2.0**
WMQ pP pP 12 27 52.1 -1.6
WMQ sP sP 12 27 54.7 -2.3
WMQ PP PP 12 28 58.2 -2.1
WMQ PcP PcP 12 30 31.5 +1.3
WMQ S **S** **12 33 04.6 +3.1**
WMQ sS sS 12 33 11.9 -2.7
WMQ ScP ScP 12 34 14.1 +1.5
WMQ SS SS 12 35 04.3 -19
WMQ ScS ScS 12 38 12.8 +0.4
WMQ pmax pmax
comp=Z,58nm,1.1s,mb5.4
WMQ pmax pmax
comp=Z,1μm,4.3s
WMQ LR LR
comp=N,4μm,19.6s,MS5.3
WMQ LR LR
comp=E,4μm,18.5s,MS5.3
WMQ LR LR
comp=Z,3μm,20.7s,MS5.0
LUWI Luwuk 33.10 109 P **P** **12 27 53.0 +4.7**
comp=Z,3μmcomp=Z,240nm,1.4s,mb5.9
BTO Baotou 33.58 26 *e*P **P** **12 27 49.9 -2.2**
BTO S **S** **12 33 06.1 -6.8**
BTO LR LR
comp=N,2μm,11.8s,MS5.1
BTO LR LR
comp=E,2μm,15.2s,MS5.1
DAV Davao City (W) 33.63 94 PFAKE 12 28 00.0 +7.1
DAV LR LR
comp=Z,3μm,19.0s,MS5.0
DAV Davao City (W) 33.63 94 ⇑*e*P **P** **12 27 56.5 +3.6**
KMSI Cibinong 33.66 106 P **P** **12 27 58.2 +5.0**
comp=Z,5μmcomp=Z,575nm,1.0s,mb6.5
SSE Sheshan 33.78 49 P **P** **12 27 44.2 -10**
SSE S **S** **12 33 20.1 +3.9**
SSE SS SS 12 35 54.7 +12
SSE pmax pmax
comp=Z,31nm,0.7s,mb5.3
SSE pmax pmax
comp=Z,760nm,10.2s
SSE LR LR
comp=N,7μm,18.5s,MS5.5
SSE LR LR
comp=E,5μm,18.4s,MS5.5
SSE LR LR
comp=Z,5μm,13.8s,MS5.4
TIA Tai'an 33.98 38 P **P** **12 27 54.7 -1.0**
TIA S **S** **12 33 23.5 +4.3**
TIA LR LR
comp=N,8μm,16.5s,MS5.6
TIA LR LR
comp=E,7μm,16.7s,MS5.6
KZA Kyzart 34.12 338 P **P** **12 27 58.8 +2.0**
SNR=10
KDI Kendari 34.15 114 P **P** **12 28 02.8 +5.4**
comp=E,60nm,1.3s,mb5.4
MNI Manado 34.21 104 P **P** **12 28 02.5 +4.5**
comp=E,3μmcomp=E,177nm,1.1s,mb5.9
HHC Hu-ho-hao-te 34.45 27 *e*P **P** **12 27 59.5 -0.2**
HHC pP pP 12 28 03.3 -4.4
HHC sP sP 12 28 06.7 -4.3
HHC PP PP 12 29 15.8 -2.2
HHC PcP PcP 12 30 34.3 -0.5
HHC S **S** **12 33 26.8 +0.4**
HHC PcS PcS 12 34 19.8 -1.3
HHC SS SS 12 35 39.0 -17
HHC ScS ScS 12 38 19.0 -1.9
HHC pmax pmax
comp=Z,33nm,1.3s,mb5.1
HHC LR LR
comp=N,4μm,13.1s,MS5.7
HHC LR LR
comp=E,8μm,15.5s,MS5.7
HHC LR LR
comp=Z,7μm,15.3s,MS5.5
UCH Uchtor 34.53 337 P **P** **12 28 02.0 +1.6**
SNR=7.3
UCH Uchtor 34.53 337 *e*P **P** **12 28 01.8 +1.4**
comp=Z,20nm,1.0s,mb5.0
UCH LR LR
comp=Z,8μm,20.0s,MS5.4
AAA Alma-Ata 34.59 341 *i* P **P** **12 28 02.5 +1.6**
AAA *e*S **S** **12 33 32.3 +3.8**
AAA pmax pmax
comp=Z,300nm,1.9s,mb5.9
AAA smax
comp=E,3μm,8.8s
AAA MLR MLR
comp=Z,4μm,15.0s,MS5.3
TKM2 Tokmak 2 34.73 339 P **P** **12 28 04.5 +2.4**
SNR=6.7
TKM2 Tokmak 2 34.73 339 *e*P **P** **12 28 04.3 +2.1**
comp=Z,48nm,1.1s,mb5.3
TKM2 LR LR
comp=Z,7μm,21.0s,MS5.4
TKM2 Tokmak 2 34.73 339 *e*P **P** **12 28 04.3 +2.2**
TKM2 pmax pmax
comp=Z,48nm,1.1s,mb5.3
TKM2 MLR MLR
comp=Z,7μm,21.0s,MS5.4
KBK Karagaybulak 34.74 338 P **P** **12 28 04.0 +1.8**
SNR=11
AML Almayashu 34.77 336 P **P** **12 28 09.5 +7.1**
SNR=7.4
AML Almayashu 34.77 336 *e*P **P** **12 28 04.3 +1.9**
comp=Z,136nm,1.1s,mb5.8
AML LR LR
comp=Z,2μm,19.0s,MS5.0
BBSI Bau Bau 34.80 117 P **P** **12 28 09.9 +6.9**
comp=Z,2μmcomp=Z,142nm,1.4s,mb5.7
AAK Ala-Archa 34.89 338 P **P** **12 28 05.0 +1.6**
comp=Z,336nm,1.1s,mb6.2,SNR=15
AAK Ala-Archa 34.89 338 P **P** **12 28 05.3 +1.9**
SNR=12
AAK Ala-Archa 34.89 338 P **P** **12 28 03.2 -0.3**
comp=Z,4.8nm,0.4s,mb4.8,baz=156,slow=4.6,SNR=17
AAK Ala-Archa 34.89 338 P **P** **12 28 03.2 -0.2**
AAK MLR MLR
comp=Z,10μm,21.0s,MS5.5
BSY Bisya 34.95 294 P **P** **12 28 11.6 +7.3**
SNR=6.6
WSI Waingapu 35.06 125 P pP 12 28 18.1 +4.8
CHMS Chumysh 35.11 338 P **P** **12 28 06.2 +0.9**
SNR=11
EKS2 Erkin-Say 35.19 337 P **P** **12 28 07.8 +1.8**
SNR=9.1
EKS2 Erkin-Say 35.19 337 *e*P **P** **12 28 07.5 +1.5**
comp=Z,49nm,0.9s,mb5.4
EKS2 LR LR
comp=Z,7μm,20.0s,MS5.4
USP Ospenovka 35.43 338 P **P** **12 28 09.2 +1.1**
SNR=8.3
BJI Beijing 36.09 33 P **P** **12 28 13.7 -0.1**
BJI S **S** **12 33 57.8 +6.3**
BJI pmax pmax
comp=Z,34nm,1.3s,mb5.1
BJI pmax pmax
comp=Z,1μm,8.7s
BJI LR LR
comp=N,7μm,15.8s,MS5.7
BJI LR LR
comp=E,9μm,17.9s,MS5.7
BJI LR LR
comp=Z,7μm,18.7s,MS5.5
MK31 Makanchi Array 36.52 349 *e*P **P** **12 28 17.8 +0.4**
MKAR Makanchi Array 36.52 349 P **P** **12 28 17.1 -0.3**
MKAR LR LR 12 47 23.7
MKAR Makanchi Array 36.52 349 P **P** **12 28 17.1 -0.3**
comp=Z,9.3nm,0.7s,mb4.7,baz=159,slow=7.8,SNR=4.5
MKAR LR LR 12 47 23.7
comp=Z,4μm,19.9s,MS5.1,baz=168,slow=43
KK31 Karatay Array 36.89 334 *i* P **P** **12 28 21.2 +0.6**
KK31 pmax pmax
comp=Z,109nm,1.3s,mb5.5
ASUD Al Ashush, Dub 37.08 296 P **P** **12 28 30.1 +7.6**
SNR=9.1
DL2 Dalian 38.45 39 P **P** **12 28 31.8 -2.1**
DL2 S **S** **12 34 27.5 0.0**
DL2 pmax pmax
comp=Z,50nm,1.6s,mb5.0
DL2 pmax pmax
comp=Z,470nm,8.4s
DL2 LR LR
comp=N,3μm,19.3s,MS5.2
DL2 LR LR
comp=E,2μm,20.5s,MS5.2
DL2 LR LR
comp=Z,3μm,16.5s,MS5.2
SONM Songino Array 38.69 16 P **P** **12 28 34.7 -1.0**
comp=Z,13nm,0.9s,mb4.6,baz=206,slow=7.2,SNR=28
ULN Ulaanbaatar 38.90 16 *e*P **P** **12 28 37.8 +0.3**
comp=Z,38nm,0.9s,mb5.1
ULN LR LR
comp=Z,5μm,19.0s,MS5.4
ULN Ulaanbaatar 38.90 16 *e*P **P** **12 28 37.8 +0.3**
ULN pmax pmax
comp=Z,38nm,0.9s,mb5.1
ULN MLR MLR
comp=Z,5μm,19.0s,MS5.4
ULN Ulaanbaatar 38.90 16 P **P** **12 28 37.7 +0.2**
SNR=29
MSEY Mahe Island 39.33 248 PFAKE 12 28 50.0 +8.4
MSEY LR LR
comp=Z,2μm,21.0s,MS4.9
ABKT Ailbek 40.28 317 P **P** **12 28 51.4 +2.2**
comp=Z,457nm,1.5s,mb6.0,SNR=12
ZAK Zakamensk 40.36 11 *e*P **P** **12 28 50.2 +0.6**
ZAK pmax pmax
comp=Z,13nm,1.7s,mb4.4
INCN Inchon 40.89 44 *e*P **P** **12 28 56.7 +2.4**
comp=Z,241nm,1.7s,mb5.5
INCN LR LR
comp=Z,8μm,20.0s,MS5.6
KURK Kurchatov 41.00 347 P **P** **12 28 55.6 +0.7**
comp=Z,396nm,1.1s,mb6.0,SNR=11
KURK Kurchatov 41.00 347 *e*P **P** **12 28 55.0 +0.1**
comp=Z,74nm,1.0s,mb5.3
KURK LR LR
comp=Z,5μm,19.0s,MS5.4
KURK Kurchatov 41.00 347 P **P** **12 28 54.6 -0.3**
comp=Z,38nm,1.0s,mb5.0,baz=164,slow=6.7,SNR=34
KURK PcP PcP 12 30 54.0 -0.7
comp=Z,5.8nm,0.8s,baz=164,slow=8.5,SNR=2.2
KURK ScP ScP 12 34 47.2 +4.4
comp=Z,2.1nm,0.7s,baz=168,slow=4.0,SNR=5.9
KURK Kurchatov 41.00 347*c i*P **P** **12 28 54.9 0.0**
KURK pmax pmax
comp=Z,93nm,1.7s,mb5.1
KURK MLR MLR
comp=Z,5μm,22.0s,MS5.3
KURK Kurchatov 41.00 347 P **P** **12 28 55.6 +0.7**
SNR=33
MOY Mondy 41.21 9 *e*P **P** **12 28 58.0 +1.4**
MOY pmax pmax
comp=Z,125nm,3.2s
SNY Shenyang 41.43 37 ⇓P **P** **12 28 57.7 -0.9**
SNY S **S** **12 35 13.5 +1.5**
SNY pmax pmax
comp=Z,86nm,1.4s,mb5.2
SNY LR LR
comp=N,5μm,15.0s,MS5.7
SNY LR LR
comp=E,5μm,14.7s,MS5.7
SNY LR LR
comp=Z,6μm,11.4s,MS5.7
TLY Talaya 41.67 11 P **P** **12 29 01.5 +1.1**
comp=Z,119nm,1.0s,mb5.5,SNR=6.9
TLY Talaya 41.67 11 *e*P **P** **12 29 01.7 +1.3**
comp=Z,276nm,2.3s,mb5.5
TLY LR LR
comp=Z,3μm,19.0s,MS5.2
TLY Talaya 41.67 11 *e*P **P** **12 29 01.6 +1.2**
TLY *e* 12 30 55.9
TLY *e*S **S** **12 35 22.6 +7.3**
TLY pmax pmax
comp=Z,53nm,1.5s,mb5.0
TLY MLR MLR
comp=Z,4μm,17.0s,MS5.4
TLY Talaya 41.67 11 P **P** **12 29 02.2 +1.8**
SNR=15
KSRS Korea Array 41.77 45 P **P** **12 28 60.0 -1.5**
comp=Z,3.5nm,0.6s,mb4.1,baz=244,slow=8.9,SNR=18
MBWA Marble Bar 42.19 139 *e*P **P** **12 29 02.5 -2.5**
comp=Z,68nm,1.4s,mb5.1
MBWA LR LR
comp=Z,3μm,20.0s,MS5.2
IRK Irkutsk 42.33 11 *e*P **P** **12 29 05.6 -0.1**
IRK *e* 12 30 54.3
IRK pmax pmax
comp=Z,77nm,1.7s,mb5.1
ZAA0 Zalesovo Array 43.15 354 *e*P **P** **12 29 11.9 -0.5**
ZALV Zalesovo Beam 43.15 354 P **P** **12 29 12.2 -0.2**
comp=Z,7.7nm,0.4s,mb4.8,baz=170,slow=9.0,SNR=24
CN2 Changchun 43.73 36 *e*P **P** **12 29 10.9 -6.3**
CN2 *e*sP sP 12 29 17.9 -11
CN2 PP PP 12 30 45.1 -14
CN2 *e*S **S** **12 35 36.8 -9.1**
CN2 SS SS 12 38 50.0 -12
CN2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
CN2 pmax pmax
comp=Z,200nm,10.0s
CN2 LR LR
comp=N,4μm,21.0s,MS5.4
CN2 LR LR
comp=E,3μm,21.0s,MS5.4
CN2 LR LR
comp=Z,200nm,24.0s,MS3.9
NVS Novosibirsk 44.21 353 *e*P **P** **12 29 19.8 -1.1**
NVS *e*S **S** **12 35 51.2 -1.3**
NVS pmax pmax
comp=Z,200nm,2.8s,mb5.3
NVS pmax pmax
comp=N,139nm,2.4s
NVS smax
comp=N,95nm,2.7s
NVS smax
comp=E,91nm,2.5s
FITZ Fitzroy Crossi 44.25 131 *e*P **P** **12 29 19.4 -2.3**
comp=E,207nm,0.7s,mb6.0
FITZ *e*S **S** **12 35 52.1 -1.9**
FITZ Fitzroy Crossi 44.25 131 *e*P **P** **12 29 18.8 -2.9**
comp=E,17nm,0.5s,mb5.0
FITZ Fitzroy Crossi 44.25 131 P **P** **12 29 19.2 -2.5**
comp=E,18nm,0.6s,mb5.0,baz=320,slow=3.9,SNR=35
CIT Chita 44.53 19 *e*P **P** **12 29 23.1 -0.4**
CIT *e* 12 29 35.9
VOSK Vostochnaya 44.82 342 P **P** **12 29 25.5 -0.3**
VOSK pmax pmax
comp=Z,50nm,0.9s,mb5.3
RDF Al-Radifah 44.88 300 *e*P **P** **12 29 27.4 +0.7**
RDF AMb AMB 12 29 34.7
comp=Z,152nm,1.4s,mb5.6
UMR Umm Al-Rimmam 44.90 301 *e*P **P** **12 29 27.4 +0.6**
UMR AMb AMB 12 29 34.6
comp=Z,110nm,1.0s,mb5.6
NAY Al-Naaiem 45.22 300 *e*P **P** **12 29 29.3 -0.2**
BVA0 Borovoye Array 45.26 342 P **P** **12 29 29.7 +0.4**
BVAR Borovoye Array 45.26 342 P **P** **12 29 28.6 -0.7**
comp=Z,3.5nm,0.5s,mb4.5,baz=144,slow=8.6,SNR=21
BVAR PcP PcP 12 31 14.3 +5.4
comp=Z,5.6nm,1.0s,baz=173,slow=2.4,SNR=3.6
MIB Mutribah 45.28 301 *e*P **P** **12 29 30.2 +0.4**
MIB AMb AMB 12 29 37.8
comp=Z,164nm,1.1s,mb5.8
BRVK Borovoye 45.32 342 *e*P **P** **12 29 30.1 +0.4**
comp=Z,33nm,0.9s,mb5.2
BRVK LR LR
comp=Z,3μm,20.0s,MS5.3
BRVK Borovoye 45.32 342*d i*P **P** **12 29 29.8 0.0**
BRVK pmax pmax
comp=Z,32nm,1.2s,mb5.0
BRVK MLR MLR
comp=Z,3μm,16.0s,MS5.4
BRVK Borovoye 45.32 342 P **P** **12 29 30.0 +0.2**
SNR=18
ZRNK Zerenda 45.63 341 *i* P **P** **12 29 31.5 -0.7**
ZRNK pmax pmax
comp=Z,21nm,0.7s,mb5.2
MEEK Meekatharra 45.65 146 *e*P **P** **12 29 30.4 -2.4**
MEEK *e*S **S** **12 36 11.1 -3.0**
MORW Morawa 46.26 150 *e*P **P** **12 29 36.2 -1.3**
AB31 Akbulak array 46.34 331 *i* P **P** **12 29 38.6 +0.7**
AB31 pmax pmax
comp=Z,26nm,0.7s,mb5.3
ABKAR Akbulak array 46.34 331 *e*P **P** **12 29 38.4 +0.5**
comp=Z,14nm,0.4s,mb5.2
MDJ Mudanjiang 46.62 37 P **P** **12 29 40.2 0.0**
MDJ PP PP 12 31 29.5 -0.4

MDJ PcS PcS 12 35 08.6 +0.1
MDJ S **S** **12 36 31.3 +3.7**
MDJ pmax pmax
comp=Z,19nm,2.0s,mb4.7
MDJ pmax pmax
comp=Z,860nm,13.0s
MDJ LR LR
comp=N,4μm,18.8s,MS5.5
MDJ LR LR
comp=E,3μm,21.0s,MS5.5
MDJ LR LR
comp=Z,6μm,18.8s,MS5.6
KAKA Kakadu 46.78 119 *e*P **P** **12 29 36.8 -5.1**
comp=Z,24nm,0.6s,mb5.3
KAKA Kakadu 46.78 119 *e*P **P** **12 29 43.4 +1.6**
comp=Z,67nm,0.7s,mb5.7
AKTK Aktyubinsk 48.06 331 P **P** **12 29 51.4 +0.1**
AKTO Aktyubinsk 48.06 331 P **P** **12 29 51.4 +0.1**
comp=Z,11nm,0.8s,mb4.9,baz=112,slow=9.5,SNR=13
MAJO Matsushiro 48.90 51 *e*P **P** **12 29 57.6 -0.4**
comp=Z,143nm,1.9s,mb5.7
MAJO LR LR
comp=Z,3μm,19.0s,MS5.3
MAJO Matsushiro 48.90 51 *e*P **P** **12 29 57.6 -0.4**
MAJO pmax pmax
comp=Z,143nm,1.9s,mb5.7
MAJO MLR MLR
comp=Z,3μm,19.0s,MS5.3
MAT Matsushiro 48.90 51 P **P** **12 29 55.6 -2.4**
MAT S **S** **12 37 03.0 +2.8**
KLBR Kellerberrin 49.17 150 *e*P **P** **12 29 57.6 -2.5**
comp=Z,47nm,0.9s,mb5.5
MAK Makhachkala 49.80 318 *e*P **P** **12 30 02.3 -2.5**
MAK *e* 12 31 26.0
MAK *e* 12 32 06.2
MAK *e*S **S** **12 37 12.2 -0.5**
MAK pmax pmax
comp=Z,411nm,1.3s,mb6.3
NWAO Narrogin (SRO) 50.03 152 *e*P **P** **12 30 05.0 -1.6**
comp=Z,24nm,0.8s,mb5.3
NWAO LR LR
comp=Z,2μm,21.0s,MS5.2
NWAO Narrogin (SRO) 50.03 152 *e*P **P** **12 30 05.0 -1.6**
NWAO pmax pmax
comp=Z,24nm,0.8s
NWAO MLR MLR
comp=Z,2μm,21.0s
GNI Garni 50.55 313 *e*P **P** **12 30 12.8 +2.2**
comp=Z,195nm,1.3s,mb5.9
GNI LR LR
comp=Z,2μm,22.0s,MS5.0
GNI Garni 50.55 313⇑ *i*P **P** **12 30 12.5 +1.9**
GNI pmax pmax
comp=Z,160nm,1.2s
GNI MLR MLR
comp=Z,2μm,22.0s
DGRG David-gareji 50.61 315 P **P** **12 30 11.9 +1.0**
MTA Mtatsminda 51.10 315 P **P** **12 30 16.1 +1.4**
TBLG Delisi 51.15 315 *e*P **P** **12 30 16.0 +0.9**
TBLG Delisi 51.15 315 P **P** **12 30 16.0 +1.0**
SVE Sverdlovsk 51.61 339⇓ *e*P **P** **12 30 18.6 +0.4**
SVE *e*S **S** **12 37 43.1 +5.7**
SVE *e* 12 40 10.0
SVE pmax pmax
comp=Z,90nm,1.1s,mb5.6
SVE MLR MLR
comp=Z,5μm,18.0s,MS5.6
GOR Gori 51.69 315 P pP 12 30 28.9 +1.6
HABR Khabarovsk 51.87 35*c**e*P **P** **12 30 17.8 -2.5**
HABR *e**PP pP 12 30 27.1 -1.5
HABR *e**SP sP 12 30 31.2 -0.6
HABR *e*S **S** **12 37 36.3 -4.9**
HABR *e**SS sS 12 37 52.3 -2.5
HABR 12 40 04.9
HABR *e*SS SS 12 41 12.2 -5.9
HABR *e*SSS 12 42 49.9
HABR MLR MLR
comp=N,2μm,16.0s,MS5.6
HABR MLR MLR
comp=Z,5μm,20.0s,MS5.5
HABR MLR MLR
comp=E,5μm,20.0s,MS5.6
GUMO Guam 51.88 81 PFAKE 12 30 30.0 +9.1
GUMO LR LR
comp=Z,2μm,20.0s,MS5.0
WRAB Tennant Creek 52.02 126 *e*P **P** **12 30 21.5 -0.3**
comp=Z,66nm,0.7s,mb5.7
WRAB LR LR
comp=Z,2μm,22.0s,MS5.2
WRAB Tennant Creek 52.02 126 *e*P **P** **12 30 21.5 -0.3**
WRAB pmax pmax
comp=Z,66nm,0.7s,mb5.7
WRAB MLR MLR
comp=Z,2μm,22.0s,MS5.2
ARU Arti 52.07 337 *e*P **P** **12 30 21.6 0.0**
comp=Z,29nm,0.8s,mb5.3
ARU LR LR
comp=Z,7μm,19.0s,MS5.7
ARU Arti 52.07 337 *e*P **P** **12 30 21.6 -0.1**
ARU pmax pmax
comp=Z,29nm,0.8s,mb5.3
ARU MLR MLR
comp=Z,7μm,19.0s,MS5.7
ARU Arti 52.07 337 P **P** **12 30 21.6 -0.1**
comp=Z,218nm,0.9s,mb6.1,SNR=6.7
ZEI Tsey 52.13 316 *e*P **P** **12 30 25.6 +3.3**
ZEI *e*S **S** **12 37 54.9 +10**
ZEI pmax pmax
comp=Z,26nm,0.6s,mb5.3
CLNS Chul'man 52.36 22 *e*P **P** **12 30 23.0 -0.8**
CLNS *e**PP pP 12 30 30.8 -1.2
CLNS *e* 12 31 32.5
CLNS *e* 12 32 20.1
CLNS *e*PPP 12 33 22.2
CLNS *e*S **S** **12 37 46.6 -1.0**
CLNS pmax pmax
comp=Z,21nm,1.1s,mb5.0
CLNS pmax pmax
comp=N,8.0nm,1.0s
CLNS pmax pmax
comp=E,9.0nm,1.1s
CLNS pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
CLNS pmax pmax
comp=N,10.0nm,1.1s
CLNS pmax pmax
comp=E,7.0nm,0.9s
CLNS smax
comp=N,611nm,13.1s
CLNS smax
comp=E,571nm,13.6s
CLNS MLR MLR
comp=N,3μm,14.0s,MS5.5
CLNS MLR MLR
comp=E,2μm,14.0s,MS5.5
CLNS MLR MLR
comp=Z,6μm,14.0s,MS5.8
OPO Ambohidratompo 52.89 237 P **P** **12 30 27.2 -1.1**
comp=Z,2.6nm,0.8s,mb4.2,baz=2.8,slow=10.0,SNR=4.7
ABPO Ambohimpanom 53.09 236 *e*P **P** **12 30 31.7 +1.9**
comp=Z,108nm,1.4s,mb5.6
ABPO LR LR
comp=Z,3μm,19.0s,MS5.4
ABPO Ambohimpanom 53.09 236 *e*P **P** **12 30 31.7 +2.0**
ABPO pmax pmax
comp=Z,107nm,1.4s,mb5.6
ABPO MLR MLR
comp=Z,3μm,19.0s,MS5.4
KIV Kislovodsk 53.40 317 P **P** **12 30 33.3 +1.6**
comp=Z,597nm,0.9s,mb6.5,SNR=9.3
KIV Kislovodsk 53.40 317 *e*P **P** **12 30 32.8 +1.0**
comp=Z,126nm,1.0s,mb5.8
KIV LR LR
comp=Z,1μm,22.0s,MS4.9
KIV Kislovodsk 53.40 317 *e*P **P** **12 30 32.8 +1.1**
KIV pmax pmax
comp=Z,126nm,1.0s,mb5.8
KIV MLR MLR
comp=Z,1μm,22.0s,MS4.9
KIV Kislovodsk 53.40 317 P **P** **12 30 33.2 +1.5**
SNR=19
ASAR Alice Springs 53.75 130 P **P** **12 30 33.0 -1.5**
comp=Z,13nm,0.8s,mb4.9,baz=307,slow=6.6,SNR=32
ASAR PcP PcP 12 31 46.1 +5.8
comp=Z,9.2nm,0.6s,baz=310,slow=3.6,SNR=6.0
ASAR S **S** **12 38 01.7 -5.8**
comp=Z,1.7nm,1.0s,baz=297,slow=12,SNR=6.2
FORT Forrest 54.27 141 *e*P **P** **12 30 34.7 -3.5**
comp=Z,30nm,0.6s,mb5.4
FORT Forrest 54.27 141 *e*P **P** **12 30 34.4 -3.8**
comp=Z,32nm,0.6s,mb5.4
ERM Erimo 54.32 46 PFAKE 12 30 50.0 +12
ERM LR LR
comp=Z,3μm,20.0s,MS5.3
MALT Malatya 54.63 309 *e*P **P** **12 30 41.5 +0.7**
comp=Z,74nm,1.3s,mb5.5
MALT LR LR
comp=Z,2μm,20.0s,MS5.1
MALT Malatya 54.63 309 *e*P **P** **12 30 41.6 +0.8**
MALT pmax pmax
comp=Z,74nm,1.3s,mb5.6
MALT MLR MLR
comp=Z,2μm,20.0s,MS5.1
SOKR Solikamsk 55.02 339*d* *i*P **P** **12 30 47.9 +4.7**
SOKR S **S** **12 38 27.9 +4.3**
SOKR pmax pmax
comp=Z,50nm,1.0s,mb5.5
SOKR MLR MLR
comp=Z,6μm,24.0s,MS5.5
SOC Sochi 55.28 316 *e*P **P** **12 30 46.4 +1.0**
SOC *e**PP pP 12 30 55.0 +1.3
SOC *e**SP sP 12 30 59.3 +2.4
SOC *e*PPP 12 32 50.1
SOC *e*S **S** **12 38 27.0 -0.6**
SOC *e* 12 40 28.6
SOC pmax pmax
comp=Z,60nm,1.1s,mb5.5
SOC MLR MLR
comp=Z,2μm,21.0s,MS5.2
KMBO Kilima Mbogo 55.51 261 *e*P **P** **12 30 48.9 +1.4**
comp=Z,49nm,1.5s,mb5.3
KMBO LR LR
comp=Z,3μm,21.0s,MS5.3
KMBO Kilima Mbogo 55.51 261 P **P** **12 30 48.2 +0.7**
comp=Z,6.5nm,1.1s,mb4.6,baz=360,slow=24,SNR=7.3
KMBO Kilima Mbogo 55.51 261 *e*P **P** **12 30 48.9 +1.4**
KMBO pmax pmax
comp=Z,49nm,1.5s
KMBO MLR MLR
comp=Z,3μm,21.0s
KMBO Kilima Mbogo 55.51 261 P **P** **12 30 54.5 +7.0**
SNR=9.0
YSS Yuzh-Sakhalins 55.82 40 *e*P **P** **12 30 49.0 -0.2**
comp=Z,42nm,0.8s,mb5.5
YSS LR LR
comp=Z,846nm,19.0s,MS4.8
YSS Yuzh-Sakhalins 55.82 40⇓ *e*P **P** **12 30 47.8 -1.4**
YSS *e**SP sP 12 30 59.0 -1.8
YSS *e*S **S** **12 38 32.0 -2.8**
YSS *e*PS 12 38 47.0
YSS *e*SS SS 12 42 21.0 +0.4
YSS pmax pmax
comp=Z,50nm,0.9s,mb5.5
YSS MLR MLR
comp=N,4μm,15.0s,MS5.8
YSS MLR MLR
comp=Z,3μm,15.0s,MS5.5
YSS MLR MLR
comp=E,3μm,14.0s,MS5.8
YUK Yuzh-Kuril'sk 56.85 44 *e*P **P** **12 31 04.7 +8.1**
YUK *e*S **S** **12 38 52.8 +4.3**
YUK pmax pmax
comp=Z,180nm,7.0s
YUK pmax pmax
comp=E,60nm,4.0s
YUK pmax pmax
comp=Z,40nm,4.0s
YUK smax
comp=N,320nm,8.0s
YUK smax
comp=E,180nm,8.0s
VRHR Novokhopersk 57.01 325 *e*P **P** **12 31 01.4 +3.8**
VRHR pmax pmax
comp=N,70nm,1.0s
VRHR pmax pmax
comp=E,130nm,1.0s
VRHR pmax pmax
comp=Z,130nm,1.0s,mb5.9
ANN Anapa 57.23 317 *e*P **P** **12 30 58.8 -0.5**
ANN *e*S **S** **12 38 52.1 -1.3**
ANN pmax pmax
comp=Z,75nm,1.3s,mb5.6
YAK Yakutsk 57.80 20 *e*P **P** **12 31 02.4 -0.6**
comp=Z,60nm,0.8s,mb5.7
YAK LR LR
comp=Z,4μm,20.0s,MS5.5
YAK Yakutsk 57.80 20 *e*P **P** **12 31 01.7 -1.3**
YAK *e**PP pP 12 31 13.4 +2.0
YAK *e* 12 31 51.7
YAK *e* 12 33 10.5
YAK *e*S **S** **12 38 58.6 -1.8**
YAK *e**SS sS 12 39 15.1 +0.9
YAK *e* 12 40 50.4
YAK *e*SS SS 12 42 47.5 -3.7
YAK *e*SSS 12 45 15.9
YAK pmax pmax
comp=Z,47nm,1.4s,mb5.3
YAK pmax pmax
comp=E,11nm,1.1s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK pmax pmax
comp=Z,30nm,2.0s,mb5.0
YAK pmax pmax
comp=E,23nm,1.6s
YAK pmax pmax
comp=N,11nm,1.9s
YAK smax
comp=E,378nm,2.3s
YAK smax
comp=N,243nm,2.0s
YAK MLR MLR
comp=Z,3μm,13.0s,MS5.5
YAK MLR MLR
comp=N,3μm,14.0s,MS5.6
YAK MLR MLR
comp=E,2μm,13.0s,MS5.6
VORD Divnogorie 58.28 324 *e*P **P** **12 31 10.7 +4.1**
VORD *e*S **S** **12 39 11.8 +4.7**
VORD pmax pmax
comp=N,50nm,0.7s
VORD pmax pmax
comp=E,90nm,0.7s
VORD pmax pmax
comp=Z,50nm,0.7s,mb5.7
VORD smax
comp=N,380nm,3.0s
VORD smax
comp=Z,150nm,3.0s
VORD smax
comp=E,110nm,0.9s
VORD MLR MLR
comp=E,2μm,18.0s
VORD MLR MLR
comp=Z,3μm,18.0s,MS5.5
VSR Storozhevoye 58.46 324 *e*P **P** **12 31 11.1 +3.3**
VSR *e*S **S** **12 39 14.1 +4.7**
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=Z,50nm,0.8s,mb5.6
VSR pmax pmax
comp=E,10.0nm,0.4s
VSR smax
comp=E,290nm,3.6s
VSR smax
comp=Z,100nm,3.6s
VSR smax
comp=N,100nm,2.4s
VSR MLR MLR
comp=N,2μm,22.0s,MS5.3
VSR MLR MLR
comp=E,1μm,22.0s,MS5.3
VSR MLR MLR
comp=Z,2μm,22.0s,MS5.2
BR131 Keskin Array S 58.59 310 *e*P **P** **12 31 08.1 -0.9**
comp=Z,17nm,0.8s,mb5.1
BR131 LR LR
comp=Z,980nm,21.0s,MS4.9
BRTR Keskin Array B 58.59 310 P **P** **12 31 08.0 -1.0**
comp=Z,5.7nm,0.7s,mb4.7,baz=124,slow=7.2,SNR=17
VOR Voronezh 58.65 325 *e*P **P** **12 31 11.0 +1.9**
VOR pmax pmax
comp=Z,200nm,1.2s,mb6.0
PMG Port Moresby 58.73 108 *e*P **P** **12 31 09.9 -0.4**
PMG LR LR
comp=Z,1μm,21.0s,MS5.0
SIM Simferopol' 59.52 316 *e*P **P** **12 31 16.0 +0.7**
SIM *e*S **S** **12 39 19.0 -4.4**
SIM pmax pmax
comp=Z,48nm,0.9s,mb5.5
SIM pmax pmax
comp=Z,320nm,11.8s
SIM MLR MLR
comp=Z,1μm,18.1s,MS5.1
MOS Moscow 61.16 328 *e*P **P** **12 31 24.1 -2.2**
MOS *e* 12 31 37.4
MOS *e* 12 32 05.0
MOS *e*S **S** **12 39 42.2 -1.8**
MOS pmax pmax
comp=Z,300nm,2.4s,mb6.0
MOS pmax pmax
comp=Z,175nm,1.2s,mb6.1
OBN Obninsk 61.46 328 P **P** **12 31 28.8 +0.5**
comp=Z,522nm,0.9s,mb6.7,SNR=5.5
OBN Obninsk 61.46 328 *e*P **P** **12 31 28.4 +0.1**
comp=Z,63nm,0.8s,mb5.8
OBN LR LR
comp=Z,2μm,22.0s,MS5.3
OBN Obninsk 61.46 328*k* *e*P **P** **12 31 28.5 +0.2**
OBN *i* 12 31 40.6
OBN *e* 12 32 08.1
OBN *e* 12 35 19.6
OBN *i*S **S** **12 39 48.1 +0.3**
OBN *i*PS 12 40 03.1
OBN *e*SS SS 12 43 46.4 -2.4
OBN *i*SSS 12 46 25.7
OBN pmax pmax
comp=Z,92nm,1.2s,mb5.8
CTA Charters Tower 61.91 120 *e*P **P** **12 31 30.6 -1.4**
comp=Z,15nm,0.9s,mb5.1
CTA *e*S **S** **12 39 59.3 +4.7**
CTAO Charters Tower 61.91 120 PFAKE 12 31 40.0 +8.0
CTAO LR LR
comp=Z,2μm,21.0s,MS5.2
KLMR Klimovskoe 62.60 334 *e*P **P** **12 31 35.5 -0.3**
KLMR *e*S **S** **12 40 03.2 +1.2**
KLMR pmax pmax
comp=Z,144nm,1.5s,mb5.9
KLMR pmax pmax
comp=Z,376nm,9.3s
KLMR MLR MLR
comp=Z,3μm,19.0s,MS5.5
TIRR Tirgusor 63.37 314⇑⇑ *e*P **P** **12 31 32.7 -8.6**
TIRR Tirgusor 63.37 314⇑ *i*P **P** **12 31 32.7 -8.6**
KIS Kishinev 63.61 317 *e*P **P** **12 31 40.0 -2.8**
KIS *e*S **S** **12 40 17.0 +1.9**
KIS Kishinev 63.61 317 *e*P **P** **12 31 40.0 -2.8**
KIS *e* 12 31 54.0
KIS *e* 12 34 10.0
KIS *e*S **S** **12 40 17.0 +1.9**
KIS *e*PS 12 40 32.0
KIS *e* 12 44 22.0
KIS MLR MLR
comp=E,2μm,20.0s,MS5.3
KIS MLR MLR
comp=Z,2μm,20.0s,MS5.2
KIS MLR MLR
comp=N,2μm,18.0s,MS5.3
KIS MLR MLR
comp=Z,2μm,20.0s
STKA Stephens Creek 63.98 134 *e*P **P** **12 31 44.2 -1.3**
comp=Z,21nm,0.6s,mb5.3
STKA *e*S **S** **12 40 19.8 -0.4**
STKA Stephens Creek 63.98 134 *e*P **P** **12 31 44.6 -0.9**
comp=Z,5.3nm,0.7s,mb4.7
STKA Stephens Creek 63.98 134 P **P** **12 31 44.0 -1.5**
comp=Z,5.7nm,0.6s,mb4.8,baz=298,slow=5.8,SNR=3.1
PRK Paraskevi 64.13 308 P **P** **12 31 46.3 -0.1**
CHOS Chios Island 64.20 307 P **P** **12 31 47.6 +0.7**
AKASG Malin Array Be 64.22 321 P **P** **12 31 45.6 -1.2**
comp=Z,12nm,0.9s,mb4.9,baz=90,slow=4.8,SNR=21
AKBB Malin Array Si 64.22 321 *e*P **P** **12 31 46.3 -0.5**
KIEV Kiev 64.23 321 *e*P **P** **12 31 46.2 -0.7**
comp=Z,23nm,0.9s,mb5.2
KIEV LR LR
comp=Z,1μm,20.0s,MS5.1
KIEV Kiev 64.23 321 *e*P **P** **12 31 46.2 -0.7**
KIEV pmax pmax
comp=Z,23nm,0.9s,mb5.2
KIEV MLR MLR
comp=Z,1μm,20.0s,MS5.1
JMB Yambol 64.34 312 *i*P **P** **12 31 47.6 -0.1**
TIXI Tiksi 64.63 12 *e*P **P** **12 31 48.3 -0.9**
comp=Z,46nm,1.0s,mb5.5
TIXI LR LR
comp=Z,3μm,19.0s,MS5.5
TIXI Tiksi 64.63 12 *e*P **P** **12 31 47.8 -1.3**
TIXI *e* 12 34 12.6
TIXI *e*S **S** **12 40 25.1 -1.9**
TIXI pmax pmax
comp=Z,69nm,1.5s,mb5.5
TIXI MLR MLR
comp=Z,2μm,16.0s,MS5.5
VRI Vrincioaia 64.80 316⇑⇑ *e*P **P** **12 31 51.2 +0.5**
VRI Vrincioaia 64.80 316⇑ *i*P **P** **12 31 51.2 +0.5**
PLOR Plostina 64.85 316⇑⇑ *e*P **P** **12 31 51.7 +0.7**
PLOR Plostina 64.85 316⇑ *i*P **P** **12 31 51.7 +0.7**
SIVA Sivas 64.89 303 P **P** **12 31 51.5 0.0**
SZH Strazhica 64.93 313 *i*P **P** **12 31 53.9 +2.3**
TESR 64.97 316⇑⇑ *e*P **P** **12 31 51.8 0.0**
TESR 64.97 316⇑ *i*P **P** **12 31 51.8 0.0**
MLR Muntele Rosu 65.27 315⇓⇓ *e*P **P** **12 31 54.5 +0.7**
MLR Muntele Rosu 65.27 315⇓ *i*P **P** **12 31 54.5 +0.7**
SKR Severo-Kuril's 65.36 39 *e*P **P** **12 31 58.0 +3.8**
SKR *e* 12 32 23.0
SKR *e* 12 34 25.0
SKR *e*S S 12 40 38.0 +1.4
SKR pmax pmax
comp=Z,290nm,1.4s,mb6.1
SKR pmax pmax
comp=Z,1μm,8.0s
SKR pmax pmax
comp=E,900nm,10.0s
SKR smax
comp=N,1μm,12.0s
SKR smax
comp=E,1μm,12.0s
SKR MLR MLR
comp=N,2μm,18.0s,MS5.5
SKR MLR MLR
comp=E,2μm,18.0s,MS5.5
SKR MLR MLR
comp=Z,3μm,18.0s,MS5.6
RZN Rozhen 65.61 311 *i*P **P** **12 31 59.5 +3.5**
KARN Karanos 65.65 304 P **P** **12 31 54.2 -2.2**
PLD Plovdiv 65.67 311 P **P** **12 31 56.3 -0.1**
KAVA Kavala 65.68 310 P **P** **12 31 57.1 +0.6**
VOIR 65.89 315⇓⇓ *e*P **P** **12 31 56.6 -1.2**
VOIR 65.89 315⇓ *i*P **P** **12 31 56.6 -1.1**
ATHU Athens Univers 65.94 307 P **P** **12 32 03.2 +5.0**
MICGM Minsk 66.00 325 *e* **P** **12 31 56.0 -2.3**
MNK Minsk 66.03 325 *e*P **P** **12 31 56.0 -2.4**
BURAR Bucovina Array 66.13 317⇑⇑ *e*P **P** **12 31 59.6 +0.3**
BURAR Bucovina Array 66.13 317⇑ *i*P **P** **12 31 59.6 +0.3**
BUR08 Bucovina Ar. S 66.15 317 *e*P **P** **12 31 59.2 -0.1**
PAIG Paliouri 66.20 309 P **P** **12 32 00.4 +0.6**
PUL Pulkovo 66.32 331 *e*P **P** **12 32 02.1 +1.9**
PUL pmax pmax
comp=Z,184nm,1.0s,mb6.1
PUL MLR MLR
comp=Z,3μm,21.0s,MS5.5
MMB Musomiste 66.33 311 *i*P **P** **12 32 02.7 +2.0**
DID Didima 66.34 306 P **P** **12 31 57.3 -3.5**
SRS Serrai 66.38 310 P **P** **12 32 02.6 +1.6**
LTK Loutraki 66.59 307 P **P** **12 32 00.5 -1.9**
NACGM Naroch 66.72 325 *e*P **P** **12 32 04.0 +1.1**
VTS Vitosha 66.83 312⇑⇑ *e*P **P** **12 32 03.4 -0.4**
VTS Vitosha 66.83 312 P **P** **12 32 03.5 -0.3**
VTS Vitosha 66.83 312⇑ *i*P **P** **12 32 03.4 -0.4**
VTS Vitosha 66.83 312 *i*P **P** **12 32 03.0 -0.8**
KKB Krupnik 66.84 311 *i*P **P** **12 32 03.0 -0.9**
KNT Kendrikon 66.91 310 P **P** **12 32 02.7 -1.7**
DSF Desfina 66.96 307 P **P** **12 32 02.8 -2.0**
JOF Joensuu 66.99 334 *e*P **P** **12 32 04.8 +0.3**
JOF pmax pmax

comp=Z,110nm,0.9s,mb5.9
JOF Joensuu 66.99 334 *e*P **P** **12 32 04.8 +0.3**
comp=Z,110nm,0.9s,mb5.9
GUR Goura 67.08 307 P **P** **12 32 03.8 -1.7**
SEY Seymchan 67.08 26*d* *i*P **P** **12 32 03.8 -1.2**
VAY Valandovo 67.17 310 *e*P **P** **12 32 05.1 -0.9**
GRG Griva 67.26 310 P **P** **12 32 05.2 -1.4**
KALE Kalithea 67.27 307 P **P** **12 32 04.8 -1.9**
LVV L'vov 67.29 319 *e*P **P** **12 32 05.3 -1.3**
LVV *e* 12 34 34.3
LVV *e*S S 12 40 57.9 -2.2
LVV *e*PS 12 41 23.9
ITM Ithomi 67.36 306 P **P** **12 32 06.2 -1.1**
LAKA Lakka 67.38 307 P **P** **12 32 03.6 -3.8**
PET Petropavlovsk 67.40 37 PFAKE 12 32 20.0 +13
PET LR LR
comp=Z,3μm,19.0s,MS5.5
PET Petropavlovsk 67.40 37 *e*S S 12 41 00.8 -0.5
PET *e*PS 12 41 24.6
PET pmax pmax
comp=Z,400nm,10.5s
PET pmax pmax
comp=Z,400nm,11.3s
PET pmax pmax
comp=Z,21nm,0.7s,mb5.3
PET MLR MLR
comp=Z,3μm,19.0s,MS5.6
PET MLR MLR
comp=Z,3μm,17.0s
THL Klokotos Trika 67.44 308 P **P** **12 32 05.5 -2.3**
PYL PYLOS 67.49 305 P **P** **12 32 06.5 -1.6**
DRGR 67.69 316 ⇓*i*P **P** **12 32 09.2 -0.1**
DRGR 67.69 316 ⇓*i*P **P** **12 32 09.2 0.0**
TRPA Tarpa 67.99 318 *i*P **P** **12 32 12.2 +1.1**
FNA Florina 68.02 310 P **P** **12 32 14.4 +3.0**
SKO Skopje 68.07 311 *e*P **P** **12 32 08.1 -3.6**
APA Apatity 68.07 339⇑*i*P **P** **12 32 13.6 +2.4**
APA *i* S S 12 41 13.0 +4.1
APA *e* 12 42 08.0
APA pmax pmax
comp=Z,120nm,1.2s,mb5.8
APA pmax pmax
comp=Z,700nm,10.0s
APA MLR MLR
comp=Z,5μm,22.0s,MS5.7
BIA Bitola 68.08 310 *e*P **P** **12 32 10.1 -1.7**
KWP Kalwaria Pacla 68.11 319 *e*P **P** **12 32 12.0 +0.2**
KWP *e*pP pP 12 32 16.0 -4.2
KWP LMZ 13 07 11.5
comp=Z,1μm,21.3s
KWP Kalwaria Pacla 68.11 319 *e*P **P** **12 32 12.5 +0.7**
comp=Z,37nm,0.8s,mb5.5
KWP LR LR
comp=Z,1μm,21.0s,MS5.2
KWP Kalwaria Pacla 68.11 319 *e*P **P** **12 32 12.5 +0.7**
KWP pmax pmax
comp=Z,37nm,0.8s,mb5.5
KWP MLR MLR
comp=Z,1μm,21.0s,MS5.2
LSZ Lusaka 68.16 249 *e*P **P** **12 32 13.6 +0.9**
comp=Z,66nm,1.4s,mb5.5
LSZ LR LR
comp=Z,3μm,19.0s,MS5.5
LSZ Lusaka 68.16 249 *e*P **P** **12 32 13.6 +1.0**
LSZ pmax pmax
comp=Z,66nm,1.4s,mb5.5
LSZ MLR MLR
comp=Z,3μm,19.0s,MS5.5
LSZ Lusaka 68.16 249 P **P** **12 32 18.9 +6.3**
SNR=6.8
KRUS Krusevo 68.17 310 *e*P **P** **12 32 08.8 -3.5**
EIDS Eidsvold 68.17 123 *e*P **P** **12 32 14.9 +2.4**
comp=Z,32nm,1.3s,mb5.2
UZH Uzhgorod 68.23 318 *e*P **P** **12 32 11.3 -1.2**
UZH *e* 12 32 24.3
UZH *e* 12 32 35.7
UZH *e*S S 12 41 08.3 -3.1
UZH *e*PS 12 41 46.9
UZH *e*SSS 12 48 35.9
UZH MLR MLR
comp=N,1μm,20.0s,MS5.3
UZH MLR MLR
comp=E,1μm,20.0s,MS5.3
UZH MLR MLR
comp=Z,600nm,20.0s,MS4.8
BZS Buzias 68.30 315⇑P **P** **12 32 13.0 0.0**
BZS Buzias 68.30 315⇑*i*P **P** **12 32 13.0 -0.1**
LKD2 Lefkada island 68.45 307 P **P** **12 32 18.3 +4.2**
VLS Valsamata 68.47 307 P **P** **12 32 12.7 -1.6**
SUW Suwalki 68.57 324 *e*P **P** **12 32 14.3 -0.3**
SUW *e*pP pP 12 32 17.9 -5.2
SUW LMZ 13 06 50.2
comp=Z,2μm,20.4s
SUW Suwalki 68.57 324 *e*P **P** **12 32 14.6 0.0**
comp=Z,174nm,1.1s,mb5.9
IGT Igoumenitsa 68.74 308 P **P** **12 32 14.8 -1.1**
CRVS Cervenica-Dubn 68.81 318 *e*P **P** **12 32 16.6 +0.4**
comp=Z,58nm,1.2s,mb5.4
CRVS *e*S S 12 41 28.5 +10
CRVS Cervenica-Dubn 68.81 318 *e*P **P** **12 32 16.6 +0.4**
CRVS pmax pmax
comp=Z,58nm,1.2s,mb5.4
CRVS Cervenica-Dubn 68.81 318 *e*P **P** **12 32 16.6 +0.4**
CRVS *e*S S 12 41 28.5 +10
FINES FINESS Array B 68.83 332 P **P** **12 32 15.2 -0.9**
comp=Z,9.5nm,0.9s,mb4.7,baz=110,slow=6.8,SNR=13
FINES LR LR 13 09 05.4
comp=Z,2μm,18.4s,MS5.5,baz=108,slow=42
KAF Kangasniemi 68.91 333 *e*P **P** **12 32 17.2 +0.6**
KAF pmax pmax
comp=Z,98nm,1.2s,mb5.6
KAF Kangasniemi 68.91 333 *e*p **P** **12 32 17.2 +0.6**
comp=Z,98nm,1.2s,mb5.6
STHS Stebnicka Huta 69.02 319 *e*P **P** **12 32 19.6 +2.1**
comp=Z,15nm,1.0s,mb4.9
STHS *e* 12 32 22.7
STHS Stebnicka Huta 69.02 319 *e*P **P** **12 32 19.6 +2.1**
STHS pmax pmax
comp=Z,15nm,1.0s,mb4.9
STHS Stebnicka Huta 69.02 319 *e*P **P** **12 32 19.6 +2.1**
STHS *e*pP pP 12 32 22.6 -3.4
TIR Tirane 69.20 310 PFAKE 12 32 30.0 +11
TIR LR LR
comp=Z,1μm,21.0s,MS5.1
DIVS Divibare 69.31 313 P **P** **12 32 19.6 +0.2**
KECS Kecovo 69.40 318 *e*P **P** **12 32 20.1 +0.3**
comp=Z,11nm,0.9s,mb4.8
KECS *e* 12 32 23.9
KECS Kecovo 69.40 318 *e*P **P** **12 32 20.1 +0.3**
KECS pmax pmax
comp=Z,11nm,0.9s,mb4.8
KECS Kecovo 69.40 318 *e*P **P** **12 32 20.1 +0.3**
KECS *e*pP pP 12 32 23.9 -4.5
NIE Niedzica 69.62 319 *e*P **P** **12 32 22.1 +0.9**
PSZ Piszkesteto 69.73 317 *e*P **P** **12 32 22.3 +0.4**
comp=Z,32nm,1.1s,mb5.2
PSZ ⇑P 12 32 26.0
PSZ LR LR
comp=Z,1μm,19.0s,MS5.2
PSZ Piszkesteto 69.73 317 *e*P **P** **12 32 22.3 +0.4**
PSZ pmax pmax
comp=Z,32nm,1.1s,mb5.2
PSZ MLR MLR
comp=Z,1μm,19.0s,MS5.2
PSZ Piszkesteto 69.73 317⇑*i*P **P** **12 32 26.0 +4.1**
PSZ Piszkesteto 69.73 317⇑*e*P **P** **12 32 22.3 +0.4**
TOO Toolangi 69.77 137 *e*P **P** **12 32 27.9 +5.7**
TOO *e*S S 12 41 35.0 +5.2
OJC Ojcow 70.05 319 *e*P **P** **12 32 24.0 +0.2**
OJC *e* 12 32 27.5
OJC *e*S S 12 41 40.8 +8.0
OJC L 13 08 11.6
comp=Z,1.5nm,18.1s
BUD Budapest 70.27 317⇑*e*P **P** **12 32 28.5 +3.3**
PKSM Moragy 70.43 315 ⇑P **P** **12 32 23.0 -3.2**
PKSM Moragy 70.43 315⇑*i*P **P** **12 32 23.0 -3.2**
VYHS Vyhne 70.49 318 *e*P **P** **12 32 26.7 +0.1**
comp=Z,8.8nm,1.1s,mb4.6
VYHS *e*PP pP 12 32 30.7 -4.4
VYHS *e*S S 12 41 42.5 +4.4
VYHS LR LR
comp=Z,500nm,24.1s,MS4.7
VYHS Vyhne 70.49 318 *e*P **P** **12 32 26.7 +0.1**
VYHS *e*S S 12 41 42.5 +4.4
VYHS pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
VYHS MLR MLR
comp=Z,500nm,24.1s,MS4.7
VYHS Vyhne 70.49 318 *e*P **P** **12 32 26.7 +0.1**
VYHS *e*pP pP 12 32 30.7 -4.4
VYHS *e*S S 12 41 42.5 +4.4
ARMA Armidale 70.75 128 *e*P **P** **12 32 28.9 +0.5**
ARMA *e*S S 12 41 49.4 +7.8
ARMA Armidale 70.75 128 *e*P **P** **12 32 28.8 +0.4**
comp=Z,25nm,0.9s,mb5.2
HNR Honiara 70.81 104 PFAKE 12 32 40.0 +11
HNR LR LR
comp=Z,1μm,19.0s,MS5.1
CAN Canberra 71.05 133 PFAKE 12 32 40.0 +10
CAN LR LR
comp=Z,2μm,20.0s,MS5.4
OKC Ostrava-Krasne 71.07 319 *e*P **P** **12 32 30.6 +0.6**
OKC *e*S S 12 41 50.9 +6.2
OKC MLR MLR
comp=Z,1μm,16.2s,MS5.2
OKC Ostrava-Krasne 71.07 319 *e*P **P** **12 32 30.6 +0.6**
OKC *e*pP pP 12 32 34.0 -4.6
OKC *e*S S 12 41 50.9 +6.2
OKC AMS AMS 13 08 40.0
comp=Z,1μm,16.2s
KEV Kevo 71.08 341 *e*P **P** **12 32 30.2 +0.4**
comp=Z,50nm,1.0s,mb5.4
KEV LR LR
comp=Z,3μm,19.0s,MS5.5
KEV Kevo 71.08 341 *e*P **P** **12 32 30.0 +0.2**
KEV pmax pmax
comp=Z,57nm,1.2s,mb5.4
KEV Kevo 71.08 341 *e*p **P** **12 32 30.0 +0.2**
comp=Z,57nm,1.2s,mb5.4
MORC Moravsky Berou 71.45 319 *e*P **P** **12 32 31.7 -0.7**
comp=Z,23nm,0.9s,mb5.1
MORC Moravsky Berou 71.45 319 *e*P **P** **12 32 31.7 -0.7**
MORC pmax pmax
comp=Z,23nm,0.9s,mb5.1
MORC Moravsky Berou 71.45 319⇑*i*P **P** **12 32 33.8 +1.4**
TIP Timpagrande 71.50 308 *e*P **P** **12 32 32.3 -0.5**
comp=Z,40nm,1.3s,mb5.2
TIP LR LR
comp=Z,909nm,21.0s,MS5.0
ARCES ARCESS Array B 71.51 340 P **P** **12 32 32.5 +0.2**
comp=Z,4.6nm,0.5s,mb4.7,baz=93,slow=6.1,SNR=31
ARCES LR LR 13 07 21.0
comp=Z,5μm,21.2s,MS5.7,baz=294,slow=39
ARE0 ARCESS Array S 71.51 340 *e*P **P** **12 32 32.8 +0.5**
ZST Bratislava 71.62 317 *e*P **P** **12 32 34.1 +0.7**
comp=Z,57nm,1.4s,mb5.3
ZST *e* 12 32 38.2
ZST *e* 12 42 36.1
ZST LR LR
comp=Z,900nm,13.1s,MS5.2
ZST Bratislava 71.62 317 *e*P **P** **12 32 34.1 +0.7**
ZST *e* 12 42 36.1
ZST pmax pmax
comp=Z,57nm,1.4s,mb5.3
ZST MLR MLR
comp=Z,900nm,13.1s,MS5.2
ZST Bratislava 71.62 317 *e*P **P** **12 32 34.1 +0.7**
ZST *e*pP pP 12 32 38.2 -3.8
ZST *e* 12 42 36.1
GKP Gorka Klasztor 71.97 323 *e*P **P** **12 32 39.0 +3.6**
GKP LMZ 13 06 06.1
comp=Z,3μm,24.1s
CEL Celeste 72.17 307 *e*P **P** **12 32 38.5 +1.5**
comp=Z,139nm,1.3s,mb5.7
CEL LR LR
comp=Z,682nm,20.0s,MS4.9
CUC Castrocucco 72.23 309 PFAKE 12 32 50.0 +13
CUC LR LR
comp=Z,820nm,21.0s,MS5.0
DPC Dobruska-Polom 72.28 319 *e*P **P** **12 32 37.6 +0.3**
DPC *e*S S 12 42 03.3 +4.6
DPC MLR MLR
comp=Z,1μm,17.6s,MS5.1
DPC Dobruska-Polom 72.28 319 *e*P **P** **12 32 37.6 +0.3**
DPC *e*pP pP 12 32 41.8 -4.1
DPC *e*S S 12 42 03.3 +4.6
DPC AMS AMS 13 10 40.0
comp=Z,1μm,17.6s
WAKE Wake Island 72.31 73 PFAKE 12 32 50.0 +12
WAKE LR LR
comp=Z,922nm,19.0s,MS5.1
KSP Ksiaz 72.33 320 *e*P **P** **12 32 38.3 +0.7**
KSP *e*pP pP 12 32 41.9 -4.3
KSP LMZ 13 05 51.2
comp=Z,2μm,23.8s
KSP Ksiaz 72.33 320 *e*P **P** **12 32 37.0 -0.6**
KSP *e*S S 12 42 05.0 +5.7
KSP *e*SS SS 12 46 41.9 +4.4
KSP MLR MLR
comp=Z,2μm,23.8s,MS5.4
UPC Upice 72.49 320 *e*P **P** **12 32 38.5 -0.1**
UPC Upice 72.49 320 *e*P **P** **12 32 38.5 -0.1**
UPC *e*pP pP 12 32 43.2 -3.9
BOJS Bojanci 72.75 314 *i*P **P** **12 32 39.4 -0.9**
BOJS *i* 12 32 44.3
TREC Trest 72.75 318 *e*P **P** **12 32 39.9 -0.3**
TREC MLR MLR
comp=Z,1μm,26.9s,MS5.1
TREC Trest 72.75 318 *e*P **P** **12 32 39.9 -0.3**
TREC *e*pP pP 12 32 44.1 -4.6
TREC AMS AMS 13 08 10.0
comp=Z,1μm,26.9s
PERS Pernice 72.89 315 *e*P **P** **12 32 41.2 +0.2**
PERS *i* 12 32 45.4
SOKA Soboth 72.94 315⇑*i*P **P** **12 32 41.8 +0.4**
comp=Z,53nm,1.2s,mb5.3
VISS Visnje 73.05 315 *i*P **P** **12 32 41.2 -0.8**
VISS *i* 12 32 45.3
WDD Wield Dalam 73.30 304 PFAKE 12 33 00.0 +16
WDD LR LR
comp=Z,565nm,19.0s,MS4.9
PRU Pruhonice 73.40 319 *e*P **P** **12 32 45.0 +1.0**
PRU *e*S S 12 42 15.4 +3.9
PRU MLR MLR
comp=Z,1μm,14.7s,MS5.2
PRU Pruhonice 73.40 319 *e*P **P** **12 32 45.0 +1.0**
PRU *e*pP pP 12 32 49.1 -3.5
PRU *e*S S 12 42 15.4 +3.9
PRU AMS AMS 13 14 00.0
comp=Z,1μm,14.7s
PVCC Panska Ves 73.41 320 *e*P **P** **12 32 44.3 +0.3**
PVCC MLR MLR
comp=Z,1μm,17.1s,MS5.2
PVCC Panska Ves 73.41 320 *e*P **P** **12 32 44.3 +0.3**
PVCC *e*pP pP 12 32 48.4 -4.2
PVCC AMS AMS 13 11 30.0
comp=Z,1μm,17.1s
PRA Prague 73.48 319 P **P** **12 32 46.0 +1.6**
PRA S S 12 41 16.0 -56
PRA AMS AMS 13 15 00.0
BSD Bornholm Skovb 73.49 324 *e*P **P** **12 32 48.4 +4.0**
BSD MLR MLR
comp=Z,1μm,20.0s,MS5.2
BSD Bornholm Skovb 73.49 324 *i*P **P** **12 32 48.4 +4.0**
BSD *i*S S 12 42 20.4 +8.1
BSD
comp=Z,1μm,20.0s
MOA Molln 73.50 317⇑*i*P **P** **12 32 44.5 -0.1**
comp=Z,26nm,1.2s,mb5.0,SNR=8.8
VOY Vojsko 73.72 315 *e*P **P** **12 32 45.4 -0.5**
VOY *e* 12 32 49.3
VOY *e* 12 33 46.4
LBTB Lobatse 73.73 240 *e*P **P** **12 32 45.2 -1.1**
comp=Z,79nm,1.3s,mb5.5
LBTB LR LR
comp=Z,2μm,20.0s,MS5.4
LBTB Lobatse 73.73 240 *e*P **P** **12 32 45.2 -1.2**
LBTB pmax pmax
comp=Z,79nm,1.3s,mb5.5
LBTB MLR MLR
comp=Z,2μm,20.0s,MS5.4
TRO Tromso 73.75 340 *e*P **P** **12 32 51.4 +5.7**
TRO *e*S S 12 42 19.2 +4.4
TRO AMS AMS 13 08 31.7
comp=Z,5μm,22.6s,MS5.7
TRI Trieste 73.80 314 PFAKE 12 33 00.0 +14
TRI LR LR
comp=Z,852nm,22.0s,MS5.0
BRG Berggiesshubel 73.82 320 *e*P **P** **12 32 46.2 -0.2**
comp=Z,58nm,1.6s,mb5.3
BRG Berggiesshubel 73.82 320 *e*P **P** **12 32 47.0 +0.5**
comp=Z,20nm,1.3s,mb4.9
BRG *i* 12 32 50.5
comp=Z,31nm,1.1s
BRG *e*PCP PcP 12 33 02.2 +0.3
comp=Z,18nm,1.0s
BRG S S 12 42 29.0 +13
BRG
comp=N,1μm,16.0s
BRG
comp=E,862nm,17.7s
BRG
comp=Z,2μm,18.3s
BRG Berggiesshubel 73.82 320 *e*P **P** **12 32 47.0 +0.6**
BRG *e* 12 33 02.2
BRG pmax pmax
comp=Z,12nm,1.3s,mb4.7
BRG MLR MLR
comp=N,858nm,16.0s,MS5.2
BRG MLR MLR
comp=E,516nm,17.7s,MS5.2
BRG MLR MLR
comp=Z,1μm,18.3s,MS5.2
GEC2 GERESS Array S 73.91 318 *e*P **P** **12 32 46.5 -0.5**
comp=Z,26nm,0.9s,mb5.2
GEC2 GERESS Array S 73.91 318 *e*P **P** **12 32 46.5 -0.5**
GEC2 pmax pmax
comp=Z,26nm,0.9s,mb5.2
RUE Ruedersdorf 74.00 322 *e*P **P** **12 32 47.0 -0.4**
comp=Z,88nm,1.0s,mb5.6
RUE Ruedersdorf 74.00 322 *e*P **P** **12 32 48.4 +1.0**
comp=Z,85nm,1.0s,mb5.6
KHC Kasperske Hory 74.00 318 *e*P **P** **12 32 47.4 -0.1**
comp=Z,16nm,1.0s,mb4.9
KHC Kasperske Hory 74.00 318 *e*P **P** **12 32 47.0 -0.5**
KHC *e*S S 12 42 22.0 +3.7
KHC MLR MLR
comp=Z,1μm,17.0s,MS5.2
KHC Kasperske Hory 74.00 318 *e*P **P** **12 32 47.0 -0.5**
KHC *e*pP pP 12 32 51.2 -4.9
KHC *e*S S 12 42 22.0 +3.7
KHC AMS AMS 13 10 20.0
comp=Z,1μm,17.0s
AQU L'Aquila 74.06 311 PFAKE 12 33 00.0 +12
AQU LR LR
comp=Z,948nm,20.0s,MS5.1
CLL Collm 74.43 320 *e*P **P** **12 32 49.2 -0.8**
comp=Z,34nm,1.2s,mb5.2
CLL Collm 74.43 320 *i*P **P** **12 32 50.0 0.0**
comp=Z,35nm,1.2s,mb5.2
CLL *e*S S 12 42 28.0 +5.0
CLL LR LR
comp=Z,1μm,18.7s,MS5.2
CLL Collm 74.43 320 *i*P **P** **12 32 50.0 0.0**
CLL *e*S S 12 42 28.0 +5.0
CLL pmax pmax
comp=Z,35nm,1.2s,mb5.2
CLL MLR MLR
comp=Z,1μm,18.7s,MS5.2
CLL Collm 74.43 320 *i*P **P** **12 32 50.0 0.0**
comp=Z,20nm,1.4s,mb4.8
CLL *i*P(2) 12 32 53.5
comp=Z,35nm,1.2s
CLL *e*Plp pP 12 32 56.0 -2.6
comp=Z,500nm,12.0s
CLL *e* 12 33 35.0
CLL *e*PP PP 12 35 40.0 +3.7
CLL *e*PPP 12 37 27.0
CLL *e*S S 12 42 28.0 +5.0
CLL *e*PS 12 43 01.0
CLL *e*(SS) 12 47 54.0
CLL *e*SSS 12 50 41.0
CLL L 13 10 00.0
comp=Z,1μm,18.7s
WET Wettzell 74.46 318 *e*P **P** **12 32 49.7 -0.5**
comp=Z,44nm,1.5s,mb5.2
WET Wettzell 74.46 318 *e*P **P** **12 32 49.7 -0.5**
WET pmax pmax
comp=Z,44nm,1.5s,mb5.2
ABTA Abfaltersbach 74.68 316⇑*i*pP **P** **12 32 54.1 +2.6**
comp=Z,19nm,1.1s,mb4.9,SNR=6.9
TANN Tannenbergstha 74.75 319 *e*P **P** **12 32 51.5 -0.4**
NKC Novy Kostel 74.76 319 *e*P **P** **12 32 52.9 +1.0**
NKC MLR MLR
comp=Z,1μm,16.2s,MS5.3
NKC Novy Kostel 74.76 319 *e*P **P** **12 32 52.9 +1.0**
NKC *e*pP pP 12 32 56.3 -4.2
NKC AMS AMS 13 12 20.0
comp=Z,1μm,16.2s
WERN Wernitzgruen 74.81 319 *e*P **P** **12 32 52.0 -0.2**
GUNZ Gunzen 74.83 319 *e*P **P** **12 32 52.1 -0.2**
comp=Z,40nm,1.3s,mb5.2
MOR8 Moi Rana 74.84 336 *e*P **P** **12 32 52.4 +0.4**
MOR8 *e*pP pP 12 32 56.0 -4.7
WERD Werda 74.85 319 *e*P **P** **12 32 52.0 -0.4**
COP Copenhagen 74.94 325 *e*P **P** **12 32 59.2 +6.4**
COP MLR MLR
comp=Z,740nm,18.0s,MS5.0
COP Copenhagen 74.94 325 *i*P **P** **12 32 59.2 +6.4**
COP *i*S S 12 42 40.0 +11
COP
comp=Z,730nm,18.0s
WTTA Wattenberg 75.28 316⇑*i*P **P** **12 32 54.6 -0.3**
comp=Z,42nm,1.2s,mb5.2,SNR=7.5
MOX Moxa 75.30 320 *e*P **P** **12 32 54.7 -0.3**
comp=Z,41nm,1.3s,mb5.2
MOX *e*S S 12 42 40.0 +7.3
MOX
comp=Z,1μm,17.0s
MOX Moxa 75.30 320 *e*P **P** **12 32 54.6 -0.4**
comp=Z,42nm,1.2s,mb5.2
MOX Moxa 75.30 320 *e*P **P** **12 32 54.7 -0.3**
MOX *e*S S 12 42 40.0 +7.3
MOX pmax pmax
comp=Z,41nm,1.3s,mb5.2
MOX MLR MLR
comp=Z,1μm,17.0s,MS5.3
BOSA Boshof 75.31 236 *e*P **P** **12 32 55.7 +0.2**
comp=Z,89nm,1.2s,mb5.6
BOSA LR LR
comp=Z,2μm,20.0s,MS5.5
BOSA Boshof 75.31 236 P **P** **12 32 55.9 +0.4**
comp=Z,18nm,0.9s,mb5.0,baz=82,slow=5.8,SNR=15
BOSA Boshof 75.31 236 *e*P **P** **12 32 55.7 +0.3**
BOSA pmax pmax
comp=Z,89nm,1.2s,mb5.6
BOSA MLR MLR
comp=Z,2μm,20.0s,MS5.5
LOF Lofoten 75.43 338 *e*P **P** **12 32 55.2 -0.2**
LOF *e*pP pP 12 33 00.0 -4.0
FUR Furstenfeldbru 75.52 317 *e*P **P** **12 32 55.4 -0.9**
comp=Z,29nm,1.1s,mb5.1
FUR Furstenfeldbru 75.52 317 *e*P **P** **12 32 55.4 -0.9**
FUR pmax pmax
comp=Z,29nm,1.1s,mb5.1
GRA1 Grafenberg Arr 75.55 319 *e*P **P** **12 32 56.4 0.0**
comp=Z,44nm,1.0s,mb5.3
GRF Grafenberg Arr 75.55 319 *e*P **P** **12 32 56.4 0.0**
comp=Z,44nm,1.0s,mb5.3
GRF Grafenberg Arr 75.55 319 *e*P **P** **12 32 56.4 0.0**
GRF pmax pmax
comp=Z,44nm,1.0s,mb5.3
GRF Grafenberg Arr 75.55 319 *e*P **P** **12 32 56.4 0.0**
GRF pmax pmax
comp=Z,44nm,1.0s,mb5.3
MOTA Moosalm 75.64 316⇓*i*P **P** **12 32 56.0 -1.0**
comp=Z,24nm,0.8s,mb5.2,SNR=11
NSS Namsos 75.71 334 *e*P **P** **12 33 01.6 +4.5**
NSS AMB AMB 12 33 03.9
comp=Z,53nm,0.7s,mb5.6
NSS *e*S S 12 42 42.7 +5.9
NB2 NORSAR Subarra 75.83 330 P **P** **12 32 57.7 -0.1**
baz=93,slow=5.3
NB2 NORSAR Subarra 75.83 330 P **P** **12 32 57.7 -0.1**
NB2 NORSAR Subarra 75.83 330 P **P** **12 32 57.7 -0.1**
NOA NORSAR Array B 75.83 330 P **P** **12 32 57.9 0.0**
comp=Z,22nm,0.9s,mb5.1,baz=94,slow=5.5,SNR=23
RETA Reutte 75.87 316⇓*i*P **P** **12 32 57.4 -1.0**
comp=Z,44nm,1.2s,mb5.3
FETA Feichten 75.90 316⇑*i*P **P** **12 32 57.8 -0.7**
comp=Z,40nm,1.0s,mb5.3
NAO01 NORSAR Array S 75.98 330 *e*P **P** **12 33 01.8 +3.1**
comp=Z,22nm,0.9s,mb5.1
NAO01 LR LR

comp=Z,2µm,19.0s,MS5.5
OSL Oslo 76.03 329 *e*P **P 12 32 59.6 +0.6**
CLZ Clausthal 76.08 321 *e*P **P 12 32 59.0 -0.5**
comp=Z,35nm,0.9s,mb5.3
CLZ Clausthal 76.08 321 *e*P **P 12 32 59.0 -0.5**
CLZ pmax pmax
comp=Z,35nm,0.9s,mb5.3
BSEG Bad Segeberg 76.12 323 *e*P **P 12 32 59.5 -0.1**
comp=Z,96nm,1.6s,mb5.5
DAVA Damuels 76.47 316 ⇑ *i*P **P 12 33 01.5 -0.3**
comp=Z,47nm,0.8s,mb5.4,SNR=17
KONO Kongsberg 76.59 329 *e*P **P 12 33 10.2 +8.0**
KONO *e*S S 12 42 48.9 +2.3
KONO AMS AMS 13 11 02.7
comp=Z,2µm,22.9s,MS5.4
KONO Kongsberg 76.59 329 *e*P **P 12 33 03.6 +1.5**
comp=Z,47nm,1.2s,mb5.3
KONO LR LR
comp=Z,3µm,21.0s,MS5.6
KONO Kongsberg 76.59 329 *e*P **P 12 33 03.6 +1.4**
KONO pmax pmax
comp=Z,47nm,1.2s,mb5.3
KONO MLR MLR
comp=Z,3µm,21.0s,MS5.6
MUD Monsted U'grnd 76.78 326 *i*P **P 12 33 11.0 +7.7**
MUD *i*S S 12 43 00.0 +11
MUD MLR MLR
comp=Z,1µm,17.0s,MS5.3
MUD Monsted U'grnd 76.78 326 *i*P **P 12 33 11.0 +7.7**
MUD *i*S S 12 43 00.0 +11
MUD
comp=Z,1µm,17.0s
STU Stuttgart 76.89 318 *e*P **P 12 33 03.9 -0.2**
comp=Z,29nm,0.9s,mb5.2
STU Stuttgart 76.89 318 *e*P **P 12 33 03.8 -0.3**
comp=Z,19nm,0.8s,mb5.1
STU Stuttgart 76.89 318 *e*P **P 12 33 03.8 -0.3**
STU pmax pmax
comp=Z,19nm,0.8s,mb5.1
KBS Kingsbay 77.28 349 *e*P **P 12 33 11.0 +5.3**
KBS *e*S S 12 42 57.5 +3.9
KBS AMS AMS 13 16 45.4
comp=Z,3µm,18.2s,MS5.6
KBS Kingsbay 77.28 349 *e*P **P 12 33 06.4 +0.6**
comp=Z,27nm,1.0s,mb5.1
KBS LR LR
comp=Z,3µm,19.0s,MS5.7
KBS Kingsbay 77.28 349 *i*P **P 12 33 05.1 -0.7**
KBS pmax pmax
comp=Z,43nm,1.7s,mb5.1
TNS Taunus Mts 77.33 319 *e*P **P 12 33 06.1 -0.4**
MIR Mirnyy 77.38 179 *e*P **P 12 33 06.0 -0.4**
MIR pmax pmax
comp=Z,30nm,1.2s,mb5.1
BFO Black Forest 77.48 317 *e*P **P 12 33 06.4 -1.0**
comp=Z,41nm,1.4s,mb5.2
BFO Black Forest 77.48 317 *e*P **P 12 33 06.4 -1.0**
BFO pmax pmax
comp=Z,41nm,1.4s,mb5.2
KEST Kesra 77.51 304 *e*P **P 12 33 08.7 +0.8**
KEST Kesra 77.51 304 P **P 12 33 07.9 0.0**
comp=Z,9.6nm,1.1s,mb4.7,baz=322,slow=4.6,SNR=6.9
IBBN Ibbenburen 77.69 321 *e*P **P 12 33 08.2 -0.3**
comp=Z,65nm,1.2s,mb5.4
FELD Feldberg im Sc 77.72 317 *e*P **P 12 33 08.7 -0.1**
LANF Langenberg 77.80 318 *e*P **P 12 33 09.2 0.0**
LANF Langenberg 77.80 318 *e*P **P 12 33 09.2 0.0**
LANF Langenberg 77.80 318 *e*P **P 12 33 09.2 0.0**
CDF Champ du Feu 78.18 317 *e*P **P 12 33 09.9 -1.4**
comp=Z,32nm,1.0s,mb4.9
CDF Champ du Feu 78.18 317 *e*P **P 12 33 09.9 -1.4**
comp=Z,16nm,1.0s,mb4.9
CDF Champ du Feu 78.18 317 *e*P **P 12 33 09.9 -1.4**
CDF pmax pmax
comp=Z,16nm,1.0s,mb4.9
SAOF Saorge 78.27 313 *e*P **P 12 33 14.1 +2.2**
SAOF Saorge 78.27 313 *e*P **P 12 33 14.1 +2.2**
SAOF Saorge 78.27 313 *e*P **P 12 33 14.1 +2.2**
ECH Echery 78.27 317 *e*P **P 12 33 11.5 -0.3**
ECH Echery 78.27 317 *e*P **P 12 33 11.7 -0.1**
comp=Z,12nm,1.3s,mb4.7
ECH LR LR
comp=Z,1µm,20.0s,MS5.2
ECH Echery 78.27 317 *e*P **P 12 33 11.7 -0.1**
ECH pmax pmax
comp=Z,12nm,1.3s,mb4.7
ECH MLR MLR
comp=Z,1µm,20.0s,MS5.2
MOF Molkenrain 78.31 317 *e*P **P 12 33 12.0 0.0**
CASY Casey 78.34 172 *e*P **P 12 33 10.4 -1.3**
CASY Casey 78.34 172 *e*P **P 12 33 10.3 -1.4**
comp=Z,28nm,1.2s,mb5.1
CASY LR LR
comp=Z,2µm,20.0s,MS5.5
SBF Sospel 78.36 313 *e*P **P 12 33 11.0 -1.4**
comp=Z,84nm,1.2s,mb5.2
SBF Sospel 78.36 313 *e*P **P 12 33 11.0 -1.4**
comp=Z,42nm,1.2s,mb5.2
SBF Sospel 78.36 313 *e*P **P 12 33 11.0 -1.4**
SBF pmax pmax
comp=Z,42nm,1.2s,mb5.2
HINF Hinteralfeld 78.50 317 *e*P **P 12 33 11.6 -1.5**
comp=Z,18nm,0.9s,mb4.7
HINF Hinteralfeld 78.50 317 *e*P **P 12 33 11.6 -1.5**
comp=Z,8.9nm,0.9s,mb4.7
HINF Hinteralfeld 78.50 317 *e*P **P 12 33 11.6 -1.5**
HINF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LOMF Lomont 78.55 316 *e*P **P 12 33 13.4 0.0**
LOMF Lomont 78.55 316 *e*P **P 12 33 13.4 0.0**
LOMF Lomont 78.55 316 *e*P **P 12 33 13.4 0.0**
MVIF Mont Vial 78.56 313 *e*P **P 12 33 15.9 +2.4**
BER Bergen 78.72 330 *e*P **P 12 33 18.0 +4.0**
BER *e*S S 12 43 13.6 +3.9
BER *e*SS SS 12 48 22.6 +8.8
BER AMS AMS 13 15 41.1
comp=Z,2µm,16.3s,MS5.6
LPG La Plagne 78.73 314 *e*P **P 12 33 13.6 -0.8**
comp=Z,75nm,1.0s,mb5.3
LPG La Plagne 78.73 314 *e*P **P 12 33 13.6 -0.8**
comp=Z,38nm,1.0s,mb5.3
LPG La Plagne 78.73 314 *e*P **P 12 33 13.6 -0.8**
LPG pmax pmax
comp=Z,38nm,1.0s,mb5.3
LPL La Plagne 78.74 314 *e*P **P 12 33 13.7 -0.8**
comp=Z,111nm,1.0s,mb5.5
LPL La Plagne 78.74 314 *e*P **P 12 33 13.7 -0.8**
comp=Z,55nm,1.0s,mb5.4
LPL La Plagne 78.74 314 *e*P **P 12 33 13.7 -0.8**
LPL pmax pmax
comp=Z,55nm,1.0s,mb5.4
MBDF Montbardon 78.77 314 *e*P **P 12 33 13.0 -1.7**
comp=Z,40nm,0.8s,mb5.1
MBDF Montbardon 78.77 314 *e*P **P 12 33 13.0 -1.7**
comp=Z,20nm,0.8s,mb5.1
MBDF Montbardon 78.77 314 *e*P **P 12 33 13.0 -1.7**
MBDF pmax pmax
comp=Z,20nm,0.8s,mb5.1
FOO Floro 78.81 331 *e*P **P 12 33 20.1 +5.5**
FOO AMS AMS 13 12 42.0
comp=Z,3µm,18.7s,MS5.6
HAU Haudompre 78.82 317 *e*P **P 12 33 13.5 -1.4**
comp=Z,84nm,1.0s,mb5.3
HAU *e*MLR MLR
comp=Z,1µm,21.0s,MS5.0
HAU Haudompre 78.82 317 *e*P **P 12 33 13.5 -1.4**
comp=Z,42nm,1.0s,mb5.3
HAU LR LR
comp=Z,1µm,21.0s,MS5.3
HAU Haudompre 78.82 317 *e*P **P 12 33 13.5 -1.4**
HAU pmax pmax
comp=Z,42nm,1.0s,mb5.3
HAU MLR MLR
comp=Z,1µm,21.0s,MS5.3
WLF Walferdange 78.84 319 *e*P **P 12 33 15.0 +0.1**
WLF Walferdange 78.84 319 PFAKE 12 33 30.0 +15
WLF LR LR
comp=Z,1µm,20.0s,MS5.2
MEM Membach 78.87 320 P **P 12 33 15.7 +0.6**
FRF La Foret Royal 78.95 312 *e*P **P 12 33 14.3 -1.4**
comp=Z,115nm,1.2s,mb5.4
FRF La Foret Royal 78.95 312 *e*P **P 12 33 14.3 -1.4**
comp=Z,57nm,1.2s,mb5.4
FRF La Foret Royal 78.95 312 *e*P **P 12 33 14.3 -1.4**
FRF pmax pmax
comp=Z,57nm,1.2s,mb5.4
CMAH Djebel Manchou 78.98 305 P **P 12 33 16.5 +0.5**
TSUM Tsumeb 78.99 248 *e*P **P 12 33 17.2 +0.8**
comp=Z,30nm,1.3s,mb5.1
TSUM LR LR
comp=Z,2µm,19.0s,MS5.4
THEF They Montfort 79.05 317 *e*P **P 12 33 15.9 -0.2**
THEF They Montfort 79.05 317 *e*P **P 12 33 15.9 -0.2**
THEF They Montfort 79.05 317 *e*P **P 12 33 15.9 -0.2**
LMR La Mourre 79.07 312 *e*P **P 12 33 14.9 -1.5**
comp=Z,54nm,1.2s,mb5.1
LMR La Mourre 79.07 312 *e*P **P 12 33 14.9 -1.5**
comp=Z,27nm,1.2s,mb5.0
LMR La Mourre 79.07 312 *e*P **P 12 33 14.9 -1.5**
LMR pmax pmax
comp=Z,27nm,1.2s,mb5.0
CABF La Chapelle 79.10 316 *e*P **P 12 33 15.7 -0.8**
comp=Z,136nm,1.3s,mb5.4
CABF La Chapelle 79.10 316 *e*P **P 12 33 15.7 -0.8**
comp=Z,68nm,1.3s,mb5.4
CABF La Chapelle 79.10 316 *e*P **P 12 33 15.7 -0.8**
CABF pmax pmax
comp=Z,68nm,1.3s,mb5.4
BCLA Clavier 79.33 319 P **P 12 33 17.5 -0.1**
BCLA AP pP 12 33 21.6 -4.7
ORIF Oris-en-Rattie 79.39 314 *e*P **P 12 33 16.5 -1.6**
comp=Z,25nm,0.8s,mb4.9
ORIF *e*MLR MLR
comp=Z,2µm,21.2s,MS5.1
ORIF Oris-en-Rattie 79.39 314 *e*P **P 12 33 16.5 -1.6**
comp=Z,13nm,0.8s,mb4.9
ORIF Oris-en-Rattie 79.39 314 *e*P **P 12 33 16.5 -1.6**
ORIF pmax pmax
comp=Z,13nm,0.8s,mb4.9
MEZF Maizieres J'vi 79.65 318 *e*P **P 12 33 18.2 -1.2**
comp=Z,41nm,0.9s,mb5.0
MEZF Maizieres J'vi 79.65 318 *e*P **P 12 33 18.2 -1.2**
comp=Z,41nm,0.9s,mb5.4
GIVF Givet 79.66 319 *e*P **P 12 33 18.2 -1.2**
comp=Z,28nm,0.9s,mb4.9
GIVF Givet 79.66 319 *e*P **P 12 33 18.2 -1.2**
comp=Z,14nm,0.9s,mb4.9
GIVF Givet 79.66 319 *e*P **P 12 33 18.2 -1.2**
GIVF pmax pmax
comp=Z,14nm,0.9s,mb4.9
SMRF Simiane la Rot 79.69 313 *e*P **P 12 33 19.0 -0.7**
comp=Z,55nm,1.1s,mb5.1
SMRF Simiane la Rot 79.69 313 *e*P **P 12 33 19.0 -0.7**
comp=Z,55nm,1.1s,mb5.4
CASM Ain Smara 79.77 305 P **P 12 33 23.4 +3.1**
DOU Dourbes 79.81 319 P **P 12 33 20.4 +0.2**
comp=Z,18nm,3.1s
CTEI Djebel Teioual 79.86 305 P **P 12 33 26.3 +5.5**
SNF Seneffe 79.97 320 AP pP 12 33 25.7 -4.0
BAIF Baives 80.06 319 *e*P **P 12 33 20.6 -1.0**
comp=Z,89nm,1.1s,mb5.3
BAIF Baives 80.06 319 *e*P **P 12 33 20.6 -1.0**
comp=Z,44nm,1.1s,mb5.3
BAIF Baives 80.06 319 *e*P **P 12 33 20.6 -1.0**
BAIF pmax pmax
comp=Z,44nm,1.1s,mb5.3
SUR Sutherland 80.22 234 *e*P **P 12 33 23.6 +0.9**
comp=Z,27nm,0.8s,mb5.2
SUR LR LR
comp=Z,3µm,20.0s,MS5.6
DFRA Djebel Bou Aff 80.23 305 P **P 12 33 29.0 +6.2**
VIVF Saint-Julien-l 80.25 314 *e*P **P 12 33 21.6 -1.1**
comp=Z,71nm,0.8s,mb5.3
VIVF Saint-Julien-l 80.25 314 *e*P **P 12 33 21.6 -1.1**
comp=Z,35nm,0.8s,mb5.3
VIVF Saint-Julien-l 80.25 314 *e*P **P 12 33 21.6 -1.1**
VIVF pmax pmax
comp=Z,35nm,0.8s,mb5.3
DZM Mont Dzumac 80.25 115 *e*S S 12 43 21.3 -5.9
comp=Z,1µm,24.3s
DZM *e*SS SS 12 48 29.1 -10
comp=Z,2µm,27.2s
DZM *e*LR LR 12 58 19.4
comp=Z,2µm,24.0s
SSB Saint Sauveur 80.30 314 *e*P **P 12 33 22.2 -0.8**
SSB Saint Sauveur 80.30 314 *e*P **P 12 33 22.2 -0.8**
comp=Z,31nm,0.9s,mb5.2
SSB LR LR
comp=Z,848nm,19.0s,MS5.1
SSB Saint Sauveur 80.30 314 *e*P **P 12 33 22.2 -0.8**
SSB pmax pmax
comp=Z,31nm,0.9s,mb5.2
SSB MLR MLR
comp=Z,848nm,19.0s,MS5.1
LOR Lormes 80.56 316 *e*P **P 12 33 23.1 -1.3**
comp=Z,97nm,1.0s,mb5.4
LOR *e*MLR MLR
comp=Z,1µm,22.2s,MS5.0
LOR Lormes 80.56 316 *e*P **P 12 33 23.1 -1.3**
comp=Z,49nm,1.0s,mb5.4
LOR LR LR
comp=Z,1µm,22.3s,MS5.3
LOR Lormes 80.56 316 *e*P **P 12 33 23.1 -1.3**
LOR pmax pmax
comp=Z,49nm,1.0s,mb5.4
LOR MLR MLR
comp=Z,1µm,22.3s,MS5.3
SMF Signal de Mont 80.64 316 *e*P **P 12 33 23.4 -1.4**
comp=Z,52nm,0.9s,mb5.2
SMF Signal de Mont 80.64 316 *e*P **P 12 33 23.4 -1.4**
comp=Z,26nm,0.9s,mb5.2
SMF Signal de Mont 80.64 316 *e*P **P 12 33 23.4 -1.4**
SMF pmax pmax
comp=Z,26nm,0.9s,mb5.2
SSF Saint Saulge 80.83 316 *e*P **P 12 33 24.6 -1.2**
comp=Z,71nm,1.2s,mb5.2
SSF Saint Saulge 80.83 316 *e*P **P 12 33 24.6 -1.2**
comp=Z,36nm,1.2s,mb5.2
SSF Saint Saulge 80.83 316 *e*P **P 12 33 24.6 -1.2**
SSF pmax pmax
comp=Z,36nm,1.2s,mb5.2
PLDF La Plantade 80.87 315 *e*P **P 12 33 26.5 +0.5**
PLDF La Plantade 80.87 315 *e*P **P 12 33 26.0 0.0**
PLDF La Plantade 80.87 315 *e*P **P 12 33 26.0 0.0**
LASF Ste Croix 80.91 313 *e*P **P 12 33 25.6 -0.7**
comp=Z,97nm,1.0s,mb5.4
AVF Avril sur Loir 80.96 316 *e*P **P 12 33 25.1 -1.4**
comp=Z,54nm,1.0s,mb5.1
AVF Avril sur Loir 80.96 316 *e*P **P 12 33 25.1 -1.4**
comp=Z,27nm,1.0s,mb5.1
AVF Avril sur Loir 80.96 316 *e*P **P 12 33 25.1 -1.4**
AVF pmax pmax
comp=Z,27nm,1.0s,mb5.1
MAW Mawson 81.16 191 *e*P **P 12 33 26.6 -0.4**
comp=Z,6.5nm,0.8s,mb4.6
MAW *e*S SKSac 12 43 47.0 +3.2
MAW Mawson 81.16 191 *e*P **P 12 33 26.6 -0.3**
comp=Z,5.8nm,1.3s,mb4.3
MAW LR LR
comp=Z,2µm,19.0s,MS5.5
MAW Mawson 81.16 191 P **P 12 33 26.0 -1.0**
comp=Z,3.6nm,0.7s,mb4.4,baz=27,slow=7.2,SNR=8.5
LBL Lubilhac 81.21 314 *e*P **P 12 33 27.7 -0.2**
AKF Akfadou 81.27 306 P **P 12 33 29.9 +1.6**
PYM Petit Puy Mans 81.32 315 *e*P **P 12 33 28.4 0.0**
PYM Petit Puy Mans 81.32 315 *e*P **P 12 33 28.4 0.0**
PYM Petit Puy Mans 81.32 315 *e*P **P 12 33 28.4 0.0**
BGF Bois d'Agland 81.33 316 *e*P **P 12 33 27.5 -1.0**
ATAF Djebel Tarf 81.59 305 P **P 12 33 33.1 +3.0**
TCF Toulx Ste Croi 81.80 316 *e*P **P 12 33 30.0 -1.0**
comp=Z,105nm,1.4s,mb5.3
TCF Toulx Ste Croi 81.80 316 *e*P **P 12 33 30.0 -1.0**
comp=Z,53nm,1.4s,mb5.3
TCF Toulx Ste Croi 81.80 316 *e*P **P 12 33 30.0 -1.0**
TCF pmax pmax
comp=Z,53nm,1.4s,mb5.3
EJON La Jonquera 81.81 312 P **P 12 33 33.1 +2.0**
comp=Z,52nm,1.3s,mb5.3
AKET Djebel Ketaf 81.89 305 P **P 12 33 32.9 +1.2**
LRDF Laroque-de-Fa 82.00 312 *e*P **P 12 33 31.1 -1.0**
LRDF Laroque-de-Fa 82.00 312 *e*P **P 12 33 31.1 -1.0**
FILF Fillols 82.04 312 *e*P **P 12 33 32.7 +0.4**
FILF Fillols 82.04 312 *e*P **P 12 33 32.7 +0.4**
CAF Calviac 82.08 314 *e*P **P 12 33 31.7 -0.8**
comp=Z,63nm,1.0s,mb5.2
CAF Calviac 82.08 314 *e*P **P 12 33 31.7 -0.8**
comp=Z,32nm,1.0s,mb5.2
CAF Calviac 82.08 314 *e*P **P 12 33 31.7 -0.8**
CAF pmax pmax
comp=Z,32nm,1.0s,mb5.2
MTLF Montolieu 82.19 313 *e*P **P 12 33 32.2 -0.8**
comp=Z,57nm,0.9s,mb5.2
MTLF Montolieu 82.19 313 *e*P **P 12 33 32.2 -0.8**
comp=Z,28nm,0.9s,mb5.2
MTLF Montolieu 82.19 313 *e*P **P 12 33 32.2 -0.8**
MTLF pmax pmax
comp=Z,28nm,0.9s,mb5.2
ETOS Mallorca 82.22 309 P **P 12 33 34.2 +0.9**
comp=Z,326nm,3.1s
ADJB Djebel Djouab 82.23 305 P **P 12 33 33.7 +0.3**
CFON Fontmartina 82.24 311 P **P 12 33 35.6 +2.2**
comp=Z,62nm,1.5s,mb5.3
TAM Tamanrasset 82.36 292 *e*P **P 12 33 35.2 +0.9**
comp=Z,47nm,1.1s,mb5.3
TAM LR LR
comp=Z,2µm,22.0s,MS5.5
TAM Tamanrasset 82.36 292 *e*P **P 12 33 35.2 +0.8**
TAM pmax pmax
comp=Z,47nm,1.1s,mb5.3
TAM MLR MLR
comp=Z,2µm,22.0s,MS5.5
RJF Les Rejaudoux 82.42 315 *e*P **P 12 33 33.8 -0.4**
comp=Z,138nm,1.3s,mb5.4
RJF *e*MLR MLR
comp=Z,1µm,21.2s,MS4.9
RJF Les Rejaudoux 82.42 315 *e*P **P 12 33 33.8 -0.4**
comp=Z,69nm,1.3s,mb5.4
RJF LR LR
comp=Z,1µm,21.3s,MS5.2
RJF Les Rejaudoux 82.42 315 *e*P **P 12 33 33.8 -0.4**
RJF pmax pmax
comp=Z,69nm,1.3s,mb5.4
RJF MLR MLR
comp=Z,1µm,21.3s,MS5.2
VALF Valcebollere 82.46 312 *e*P **P 12 33 34.5 0.0**
VALF Valcebollere 82.46 312 *e*P **P 12 33 34.5 0.0**
CLLI Llivia 82.48 312 P **P 12 33 33.3 -1.3**
EMIR Miracle 82.89 311 P **P 12 33 39.0 +2.3**
comp=Z,407nm,3.8s
JMIC Jan Mayen 82.97 341 AMS AMS 13 13 17.0
comp=Z,2µm,19.1s,MS5.4
LFF La Frestale 83.01 314 *e*P **P 12 33 36.7 -0.6**
comp=Z,70nm,1.2s,mb5.3
LFF La Frestale 83.01 314 *e*P **P 12 33 36.7 -0.6**
comp=Z,35nm,1.2s,mb5.3
LFF La Frestale 83.01 314 *e*P **P 12 33 36.7 -0.6**
LFF pmax pmax
comp=Z,35nm,1.2s,mb5.3
LDF La Druitiere 83.05 318 *e*P **P 12 33 36.0 -1.4**
comp=Z,18nm,0.7s,mb4.9
LDF La Druitiere 83.05 318 *e*P **P 12 33 36.0 -1.4**
comp=Z,9.3nm,0.7s,mb4.9
LDF La Druitiere 83.05 318 *e*P **P 12 33 36.0 -1.4**
LDF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
MLS Moulis 83.05 312 *e*P **P 12 33 36.9 -0.7**
MLS Moulis 83.05 312 *e*P **P 12 33 36.9 -0.7**
CSOR Sort 83.11 312 P **P 12 33 37.8 -0.1**
comp=Z,387nm,5.4s
FLN La Foliniere 83.26 318 *e*P **P 12 33 37.1 -1.4**
comp=Z,61nm,1.1s,mb5.3
FLN *e*MLR MLR
comp=Z,1µm,18.2s,MS5.0
FLN La Foliniere 83.26 318 *e*P **P 12 33 37.1 -1.4**
comp=Z,30nm,1.1s,mb5.2
FLN LR LR
comp=Z,1µm,18.3s,MS5.3
FLN La Foliniere 83.26 318 *e*P **P 12 33 37.1 -1.4**
FLN pmax pmax
comp=Z,30nm,1.1s,mb5.2
FLN MLR MLR
comp=Z,1µm,18.3s,MS5.3
EPOB Poblet 83.31 311 P **P 12 33 38.8 -0.2**
comp=Z,100nm,1.8s,mb5.5
MFF Saint Martin d 83.37 316 *e*P **P 12 33 37.9 -1.2**
comp=Z,60nm,0.8s,mb5.4
MFF Saint Martin d 83.37 316 *e*P **P 12 33 37.9 -1.2**
comp=Z,30nm,0.8s,mb5.4
MFF Saint Martin d 83.37 316 *e*P **P 12 33 37.9 -1.2**
MFF pmax pmax
comp=Z,30nm,0.8s,mb5.4
EIBI Ibiza 83.46 308 P **P 12 33 39.9 +0.2**
comp=Z,191nm,2.6s,mb5.7
GRR Gorron 83.57 318 *e*P **P 12 33 38.9 -1.2**
comp=Z,74nm,1.5s,mb5.3
GRR Gorron 83.57 318 *e*P **P 12 33 38.9 -1.2**
comp=Z,37nm,1.5s,mb5.3
GRR Gorron 83.57 318 *e*P **P 12 33 38.9 -1.2**
GRR pmax pmax
comp=Z,37nm,1.5s,mb5.3
EPF Esparros 83.59 312 *e*P **P 12 33 38.9 -1.4**
comp=Z,25nm,1.3s,mb4.9
EPF Esparros 83.59 312 *e*P **P 12 33 38.9 -1.4**
comp=Z,12nm,1.3s,mb4.9
EPF Esparros 83.59 312 *e*P **P 12 33 38.9 -1.4**
EPF pmax pmax
comp=Z,13nm,1.3s,mb4.9
RESF Ens 83.62 312 *e*P **P 12 33 41.3 +0.8**
RESF Ens 83.62 312 *e*P **P 12 33 41.3 +0.8**
EBIE Bielsa 83.79 312 P **P 12 33 43.0 +1.7**
comp=Z,68nm,1.9s,mb5.5
ESK Eskdalemuir 83.82 325 PFAKE 12 33 50.0 +8.8
ESK LR LR
comp=Z,1µm,19.0s,MS5.2
ERTA Horta de San J 83.92 310 P **P 12 33 45.0 +2.9**
comp=Z,69nm,1.8s,mb5.5
ETSF Etsaut 84.26 312 *e*P **P 12 33 43.2 -0.6**
comp=Z,42nm,0.9s,mb5.3
ETSF Etsaut 84.26 312 *e*P **P 12 33 43.2 -0.6**
comp=Z,21nm,0.9s,mb5.3
ETSF Etsaut 84.26 312 *e*P **P 12 33 43.2 -0.6**
ETSF pmax pmax
comp=Z,21nm,0.9s,mb5.3
ESAC San Caprasio 84.39 311 P **P 12 33 46.4 +1.9**
comp=Z,48nm,0.8s,mb5.7
LARF Larrau 84.55 313 *e*P **P 12 33 45.6 +0.4**
LARF Larrau 84.55 313 *e*P **P 12 33 45.6 +0.4**
EMOS Mosqueruela 84.62 310 P **P 12 33 46.0 +0.3**
comp=Z,192nm,1.5s,mb6.0
SGMF Saint Gilles 84.71 318 *e*P **P 12 33 44.7 -1.2**
comp=Z,68nm,1.8s,mb5.6
SGMF Saint Gilles 84.71 318 *e*P **P 12 33 44.7 -1.2**
comp=Z,97nm,1.8s,mb5.6
SGMF Saint Gilles 84.71 318 *e*P **P 12 33 44.7 -1.2**
SGMF pmax pmax
comp=Z,97nm,1.8s,mb5.6
SJPF Ste Jean 84.71 313 *e*P **P 12 33 45.5 -0.5**
comp=Z,59nm,1.3s,mb5.3
SJPF Ste Jean 84.71 313 *e*P **P 12 33 45.5 -0.5**
comp=Z,30nm,1.3s,mb5.3
SJPF Ste Jean 84.71 313 *e*P **P 12 33 45.5 -0.5**
SJPF pmax pmax
comp=Z,30nm,1.3s,mb5.3
EBEN Beniarda 84.72 308 P **P 12 33 46.5 +0.3**
comp=Z,155nm,3.2s
EALK Alkurrunta 84.89 313 P **P 12 33 48.5 +1.6**
comp=Z,204nm,4.2s
ELIZ Elizondo 84.92 313 P **P 12 33 47.3 +0.3**
comp=Z,39nm,1.7s,mb5.3
ELIZ Elizondo 84.92 313 P **P 12 33 47.3 +0.2**
ELIZ pmax pmax
comp=Z,39nm,1.7s,mb5.3
DRV Dumont d'Urvil 85.08 163 S S 12 44 13.0 -1.6
DRV R 13 03 00.0
ECHE Chera 85.13 309 P **P 12 33 49.1 +0.8**
comp=Z,22nm,0.8s,mb5.3
ECHE Chera 85.13 309 P **P 12 33 49.1 +0.8**
ECHE pmax pmax
comp=Z,23nm,0.8s,mb5.4
ROSF Rostrenen 85.16 318 *e*P **P 12 33 46.9 -1.3**
comp=Z,125nm,1.5s,mb5.5
ROSF Rostrenen 85.16 318 *e*P **P 12 33 46.9 -1.3**
comp=Z,63nm,1.5s,mb5.5
ROSF Rostrenen 85.16 318 *e*P **P 12 33 46.9 -1.3**
ROSF pmax pmax
comp=Z,63nm,1.5s,mb5.5
QUIF Quistinic 85.17 318 *e*P **P 12 33 46.8 -1.4**
comp=Z,304nm,1.9s,mb5.8
QUIF Quistinic 85.17 318 *e*P **P 12 33 46.8 -1.4**
comp=Z,152nm,1.9s,mb5.8
MIDW Midway 85.63 62 PFAKE 12 34 00.0 +9.0
MIDW LR LR
comp=Z,645nm,20.0s,MS5.0
EMUR La Murta 85.66 308 P **P 12 33 53.8 +2.9**
comp=Z,333nm,3.8s
ETOR Torete 85.73 311 P **P 12 33 53.0 +1.8**
comp=Z,12nm,2.5s,mb4.7
ETOB Tobarra 85.75 308 P **P 12 33 55.7 +4.4**
comp=Z,419nm,3.8s

ELAN Lanestosa 86.27 313 P **P** 12 33 56.6 +2.8
comp=Z,114nm,2.9s,mb5.6
EVIA Vianos 86.48 309 P **P** 12 33 55.7 +0.7
comp=Z,51nm,1.4s,mb5.6
EVIA Vianos 86.48 309 P **P** 12 33 55.7 +0.7
EVIA pmax pmax
comp=Z,51nm,1.4s,mb5.6
EHUE Huescar 86.72 308 P **P** 12 33 56.0 -0.1
comp=Z,46nm,1.4s,mb5.5
EHUE Huescar 86.72 308 P **P** 12 33 56.0 -0.1
EHUE pmax pmax
comp=Z,46nm,1.4s,mb5.5
EQES Quesada 87.09 308 P **P** 12 34 00.1 +2.1
comp=Z,134nm,2.4s,mb5.8
EBER Berja 87.13 307 P **P** 12 33 58.0 -0.1
comp=Z,195nm,3.0s
GUD Guadarrama 87.33 311 P **P** 12 33 59.2 +0.1
comp=Z,29nm,0.8s,mb5.5
GUD Guadarrama 87.33 311 P **P** 12 33 59.2 +0.2
GUD pmax pmax
comp=Z,29nm,0.8s,mb5.6
SCO Scoresbysund 87.33 342 *i* P sP 12 34 11.0 +0.7
SCO
comp=Z,2μm,20.0s
ESDC Sonseca Array 87.39 310 P **P** 12 33 58.5 -0.9
comp=Z,14nm,1.4s,mb5.0
ESDC Sonseca Array 87.39 310 P **P** 12 33 59.8 +0.4
comp=Z,3.0nm,0.9s,mb4.5,baz=63,slow=4.3,SNR=9.4
ESLA Sonseca Array 87.39 310 *e*P **P** 12 33 59.6 +0.3
comp=Z,2.4nm,1.0s,mb4.4
ESLA LR LR
comp=Z,3μm,20.0s,MS5.8
EBAN Banos Encina 87.57 308 P **P** 12 34 00.5 +0.3
comp=Z,30nm,1.7s,mb5.2
EBAN Banos Encina 87.57 308 P **P** 12 34 00.5 +0.2
EBAN pmax pmax
comp=Z,30nm,1.7s,mb5.2
TORD Torodi Ar. Bea 87.59 283 P **P** 12 34 00.8 0.0
TORD PP PP 12 37 26.8 +0.7
TORD Torodi Ar. Bea 87.59 283 P **P** 12 34 00.8 0.0
comp=Z,5.2nm,1.0s,mb4.7,baz=85,slow=4.3,SNR=16
TORD PP PP 12 37 26.8 +0.7
comp=Z,3.7nm,1.0s,baz=74,slow=7.7,SNR=4.5
EGUA Guajares 87.67 307 P **P** 12 34 01.3 +0.5
comp=Z,198nm,0.8s,mb6.4
PAB San Pablo 87.71 310 *e*P **P** 12 34 01.3 +0.4
comp=Z,8.3nm,0.9s,mb5.0
PAB LR LR
comp=Z,635nm,20.0s,MS5.0
PAB San Pablo 87.71 310 *e*P **P** 12 34 01.3 +0.4
PAB pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
PAB MLR MLR
comp=Z,635nm,20.0s,MS5.0
SYO Syowa Base 87.73 197 *e*PcP PcP 12 34 03.6 +1.5
SYO Syowa Base 87.73 197 *e*pP pP 12 34 05.2 -3.8
EADA Adamuz 88.18 308 P **P** 12 34 05.9 +2.8
comp=Z,215nm,4.1s
EMIJ Mijas 88.68 307 P **P** 12 34 08.1 +2.5
comp=Z,175nm,4.0s
EPLA Plasencia 88.89 310 P **P** 12 34 04.3 -2.1
comp=Z,154nm,3.4s
EPLA Plasencia 88.89 310 P **P** 12 34 04.3 -2.2
EPLA pmax pmax
comp=Z,154nm,3.4s
FUNA Funafuti 89.13 99 PFAKE 12 34 20.0 +12
FUNA LR LR
comp=Z,9μm,19.0s,MS6.2
EJIF Jimena Fronter 89.25 307 P **P** 12 34 07.8 -0.4
comp=Z,88nm,1.7s,mb5.8
EJIF Jimena Fronter 89.25 307 P **P** 12 34 07.8 -0.4
EJIF pmax pmax
comp=Z,88nm,1.7s,mb5.8
MVO Moncorvo 89.33 312 *e*P **P** 12 34 09.3 +0.8
comp=Z,21nm,1.3s,mb5.3
MVO *e*S S 12 45 03.7 +6.8
MVO *e*SS SS 12 51 11.2 +20
MVO *e*LR LR 13 05 19.8
comp=Z,631nm,18.0s
MVO Moncorvo 89.33 312 P **P** 12 34 09.0 +0.5
ESPR Espera 89.46 307 P **P** 12 34 12.4 +3.2
comp=Z,181nm,2.8s,mb5.9
PVRL Vila Real 89.81 312 *e*P **P** 12 34 10.8 0.0
comp=Z,23nm,1.4s,mb5.3
SFS San Fernando 89.82 307 PFAKE 12 34 20.0 +9.1
SFS LR LR
comp=Z,1μm,20.0s,MS5.4
MSVF Nonsavu 89.84 108 *e*P **P** 12 34 11.2 -0.1
comp=Z,11nm,1.2s,mb5.1
MSVF LR LR
comp=Z,744nm,20.0s,MS5.1
EMIN Mina Concepcio 89.88 308 P **P** 12 34 14.0 +2.9
comp=Z,183nm,2.9s,mb5.9
MTE Manteigas 89.90 311 *e*P **P** 12 34 11.4 +0.2
comp=Z,30nm,1.6s,mb5.4
MTE *e*S S 12 45 11.4 +9.2
MTE *e*SS SS 12 51 19.7 +20
MTE *e*LR LR 13 05 51.0
comp=Z,660nm,20.0s
MTE Manteigas 89.90 311 *e*P **P** 12 34 11.7 +0.5
comp=Z,25nm,1.1s,mb5.5
MTE LR LR
comp=Z,824nm,20.0s,MS5.2
EBAD Badajoz 89.90 309 P **P** 12 34 09.2 -2.1
comp=Z,124nm,3.6s
ELOB Lobios 89.91 313 P **P** 12 34 13.0 +1.8
comp=Z,58nm,1.5s,mb5.7
PCBR Castelo Branco 89.99 311 *e*P **P** 12 34 12.7 +1.1
comp=Z,36nm,1.4s,mb5.5
STS Santiago 90.00 314 P **P** 12 34 15.6 +4.0
comp=Z,151nm,1.9s,mb6.0
PMRV Marv??o 90.03 310 *e*S S 12 45 12.4 +9.0
PMRV *e*SS SS 12 51 20.6 +19
PMRV *e*LR LR 13 05 44.2
comp=Z,617nm,20.0s
TTA Tatalina 90.05 25 *e*P **P** 12 34 12.0 +0.6
PBAR Barrancos 90.06 309 *e*P **P** 12 34 12.6 +0.6
comp=Z,87nm,1.3s,mb5.9
PBAR *e*S S 12 45 08.7 +4.9
PBAR *e*SS SS 12 51 18.6 +16
PBAR *e*LR LR 13 05 47.1
comp=Z,882nm,18.0s
PVIS Viseu 90.08 311 *e*P **P** 12 34 13.8 +1.8
comp=Z,30nm,1.4s,mb5.4
COLD Coldfoot 90.26 20 *e*P **P** 12 34 11.1 -1.2
comp=Z,7.2nm,1.0s,mb5.0
EMAZ Mazaricos 90.28 314 P **P** 12 34 13.6 +0.7
comp=Z,200nm,2.8s,mb6.0
EZAM Zamans 90.29 313 P **P** 12 34 14.9 +1.9
comp=Z,32nm,1.0s,mb5.6
EZAM Zamans 90.29 313 P **P** 12 34 14.9 +1.9
EZAM pmax pmax
comp=Z,32nm,1.0s,mb5.6
PESTR Estremoz 90.31 310 *e*P **P** 12 34 13.0 -0.2
comp=Z,23nm,1.5s,mb5.3
PESTR *e*S S 12 45 00.3 -5.8
PESTR *e*SS SS 12 51 21.7 +16
PESTR *e*LR LR 13 05 53.7
comp=Z,597nm,20.0s
SUMG Summit 90.55 347 *e*P **P** 12 34 14.6 +1.0
comp=Z,46nm,1.0s,mb5.8
SUMG Summit 90.55 347 *i* P **P** 12 34 21.6 +8.1
SUMG
comp=Z,1μm,19.0s
EGRO El Granado 90.56 308 P **P** 12 34 11.7 -2.7
comp=Z,217nm,3.8s
EVO Evora 90.72 309 *e*P **P** 12 34 13.5 -1.6
comp=Z,37nm,1.2s,mb5.3
EVO *e*MLR MLR
comp=Z,873nm,20.8s,MS4.9
EVO Evora 90.72 309 *e*P **P** 12 34 19.8 +4.7
comp=Z,26nm,1.5s,mb5.3
PBEJ Beja 90.73 309 *e*P **P** 12 34 16.1 +1.0
comp=Z,38nm,1.2s,mb5.6
PTOM Tomar 90.74 311 *e*P **P** 12 34 17.8 +2.7
comp=Z,75nm,1.3s,mb5.9
PVAQ Vaqueiros 90.77 308 *e*P **P** 12 34 16.9 +1.6
comp=Z,59nm,1.5s,mb5.7
PVAQ *e*S S 12 45 04.4 -6.0
PVAQ *e*SS SS 12 51 23.3 +11
PVAQ *e*LR LR 13 05 31.3
comp=Z,563nm,18.0s
EVOP Sao Brissos 90.80 309 *e*PP PP 12 37 51.6 +0.5
EVOP *e*SS SS 12 51 15.6 +2.7
EVOP AMS AMS 13 23 34.3
comp=Z,626nm,21.5s,MS5.0
PCVE Castro Verde 90.96 309 *e*S S 12 45 19.7 +7.6
PCVE *e*LR LR 13 06 57.4
comp=Z,575nm,20.0s
PBDV Barranco-do-Ve 90.98 308 *e*P **P** 12 34 17.5 +1.2
comp=Z,79nm,1.3s,mb5.9
PBDV *e*S S 12 45 21.8 +10
PBDV *e*LR LR 13 05 34.0
comp=Z,647nm,18.0s
SVW2 Sparrevohn 91.00 27 *e*P **P** 12 34 16.4 +0.5
comp=Z,53nm,1.6s,mb5.6
MESJ Messejana 91.05 309 *e*PP PP 12 37 52.2 -0.8
MESJ AMS AMS 13 23 31.1
comp=Z,912nm,18.9s,MS5.2
MESJ Messejana 91.05 309 *e*PP PP 12 37 52.2 -0.8
MESJ A 13 23 31.1
comp=Z,912nm,18.9s
MORF Marmelete 91.52 308 *e*S S 12 45 25.3 +8.1
MORF *e*LR LR 13 13 00.5
comp=Z,620nm,18.0s
BPAW Bear Paw Mtn. 91.53 23 *e*P **P** 12 34 18.0 -0.3
comp=Z,43nm,1.2s,mb5.7
PMAFR Mafra 91.57 310 *e*S S 12 45 21.9 +4.4
PMAFR *e*SS SS 12 51 43.9 +20
PMAFR *e*LR LR 13 06 48.2
comp=Z,543nm,18.0s
CHGN Chignik 91.59 32 *e*P **P** 12 34 18.9 +0.2
PPLA Purkeypile 91.63 24 *e*P **P** 12 34 19.3 +0.6
comp=Z,19nm,1.0s,mb5.4
PFVI Vila Bisbo 91.70 308 *e*S S 12 45 29.4 +11
PFVI *e*LR LR 13 06 49.1
comp=Z,565nm,18.0s
PFVI Vila Bisbo 91.70 308 P **P** 12 34 17.4 -2.2
SNZO South Karori 91.97 132 PFAKE 12 34 30.0 +9.3
SNZO LR LR
comp=Z,2μm,21.0s,MS5.6
TRF Thorofare Moun 92.12 23 *e*P **P** 12 34 20.8 -0.2
comp=Z,17nm,0.9s,mb5.4
COLA College 92.30 22 *e*P **P** 12 34 22.1 +0.3
comp=Z,8.4nm,1.0s,mb5.0
COLA LR LR
comp=Z,2μm,19.0s,MS5.5
COLA College 92.30 22 *e*P **P** 12 34 22.1 +0.3
COLA pmax pmax
comp=Z,8.0nm,1.0s,mb5.0
COLA MLR MLR
comp=Z,2μm,19.0s,MS5.5
MCK McKinley 92.49 23 *e*P **P** 12 34 21.8 -1.0
comp=Z,29nm,1.1s,mb5.5
MCK McKinley 92.49 23 *e*P **P** 12 34 21.8 -0.9
MCK pmax pmax
comp=Z,29nm,1.1s,mb5.5
ILAR Eielson Array 92.70 21 P **P** 12 34 22.7 -1.0
comp=Z,1.3nm,0.7s,mb4.5,baz=300,slow=4.3,SNR=15
ILAR PP PP 12 38 08.0 +2.9
comp=Z,0.9nm,0.8s,baz=296,slow=6.6,SNR=4.8
PMR Palmer 93.52 25 *e*P **P** 12 34 26.8 -0.7
comp=Z,20nm,1.0s,mb5.5
PMR Palmer 93.52 25 *e*P **P** 12 34 26.8 -0.7
PMR pmax pmax
comp=Z,20nm,1.0s,mb5.5
RC01 Rabbit Creek A 93.52 25 *e*P **P** 12 34 27.9 +0.3
comp=Z,34nm,1.2s,mb5.7
OHAK Old Harbor 93.77 30 *e*P **P** 12 34 28.4 -0.3
comp=Z,35nm,1.7s,mb5.5
KDAK Kodiak Island 93.85 29 *e*P **P** 12 34 29.1 0.0
comp=Z,70nm,1.5s,mb5.9
KDAK LR LR
comp=Z,2μm,19.0s,MS5.6
KDAK Kodiak Island 93.85 29 P **P** 12 34 28.3 -0.8
comp=Z,5.1nm,0.9s,mb4.9,baz=238,slow=5.4,SNR=3.3
KDAK Kodiak Island 93.85 29 *e*P **P** 12 34 29.1 0.0
KDAK pmax pmax
comp=Z,70nm,1.5s,mb5.9
KDAK MLR MLR
comp=Z,2μm,19.0s,MS5.6
SEW Seward 94.15 26 *e*P **P** 12 34 29.8 -0.6
comp=Z,23nm,1.1s,mb5.5
RES Resolute Bay 94.34 2 P **P** 12 34 30.4 -0.6
comp=Z,4.2nm,0.7s,mb5.0,baz=244,slow=7.1,SNR=2.3
INK Inuvik 94.60 15 *e*P **P** 12 34 32.6 +0.2
comp=Z,12nm,1.1s,mb5.2
INK Inuvik 94.60 15 P **P** 12 34 31.5 -0.9
comp=Z,1.0nm,0.6s,mb4.5,baz=104,slow=3.6,SNR=4.7
INK Inuvik 94.60 15 *e*P **P** 12 34 32.6 +0.2
INK pmax pmax
comp=Z,12nm,1.1s
EGAK Eagle 94.69 20 PFAKE 12 34 40.0 +7.2
EGAK LR LR
comp=Z,2μm,19.0s,MS5.6
MENT Mentasta 94.90 22 *e*P **P** 12 34 33.7 -0.1
JOHN Johnston Islan 95.06 72 PFAKE 12 34 50.0 +14
JOHN LR LR
comp=Z,706nm,20.0s,MS5.1
DBIC Dimbokro 95.17 278 P **P** 12 34 41.2 +5.1
comp=Z,12nm,1.1s,mb5.2,baz=80,slow=3.5,SNR=5.7
DBIC Dimbokro 95.17 278 P **P** 12 34 41.3 +5.2
DBIC MLR MLR
comp=Z,1μm,19.0s
BMRM Bremner River 95.70 24 *e*P **P** 12 34 37.6 +0.1
comp=Z,28nm,1.1s,mb5.6
DAWY Dawson 95.74 20 *e*P **P** 12 34 37.6 0.0
MAIT Maitri 97.07 199 *e*PKP **P** 12 34 49.3 +5.9
SBA Scott Base 97.59 168 *e*P **P** 12 34 45.6 -0.1
comp=Z,33nm,1.9s,mb5.5
SBA LR LR
comp=Z,1μm,19.0s,MS5.5
SBA Scott Base 97.59 168 *e*P **P** 12 34 45.6 -0.1
SBA pmax pmax
comp=Z,33nm,1.9s,mb5.5
SBA MLR MLR
comp=Z,1μm,19.0s,MS5.5
QSPA South Pole Qui 100.92 180 PFAKE 12 35 10.0 +8.9
QSPA LR LR
comp=Z,2μm,20.0s,MS5.7
YKA Yellowknife Ar 103.88 12 PP PP 12 39 33.0 +2.5
comp=Z,0.4nm,0.8s,baz=70,slow=18,SNR=3.0
POHA Pohakuloa 107.05 65 PFAKE 12 39 50.0 +11
POHA LR LR
comp=Z,663nm,21.0s,MS5.2
SCHQ Schefferville 111.94 347 PFAKE 12 40 00.0 +13
SCHQ LR LR
comp=Z,2μm,22.0s,MS5.7
FFC Flin Flon 113.47 9 PFAKE 12 40 00.0 +10
FFC LR LR
comp=Z,1μm,22.0s,MS5.5
NLWA Neilton Lookou 113.75 26 PFAKE 12 40 00.0 +9.4
NLWA LR LR
comp=Z,1μm,19.0s,MS5.5
NEW Newport 115.65 21 PFAKE 12 40 10.0 +16
NEW LR LR
comp=Z,1μm,20.0s,MS5.5
COR Corvallis 116.18 27 PFAKE 12 40 10.0 +15
COR LR LR
comp=Z,1μm,20.0s,MS5.5
HAWA Hanford 116.32 24 PFAKE 12 40 10.0 +14
HAWA LR LR
comp=Z,789nm,20.0s,MS5.3
HUMO Hull Mountain 117.87 28 *e*PKPdf PKPdf 12 39 58.7 +0.1
HUMO LR LR
comp=Z,1μm,22.0s,MS5.4
MSO Missoula 117.98 20 *e*PKPdf PKPdf 12 39 58.1 -0.6
MSO LR LR
comp=Z,1μm,19.0s,MS5.5
EGMT Eagleton 118.17 16 *e*PKPdf PKPdf 12 39 58.5 -0.5
EGMT LR LR
comp=Z,1μm,20.0s,MS5.5
BMO Blue Mountains 118.47 23 PFAKE 12 40 10.0 +10
BMO LR LR
comp=Z,772nm,20.0s,MS5.3
WDC Whiskeytown Da 119.64 30 PFAKE 12 40 10.0 +7.9
WDC LR LR
comp=Z,744nm,20.0s,MS5.3
MOD Modoc 119.64 27 *e*PKPdf PKPdf 12 40 02.4 +0.3
MOD LR LR
comp=Z,1μm,20.0s,MS5.5
DLMT Dillon 119.71 20 *e*PKPdf PKPdf 12 40 03.0 +0.9
BOZ Bozeman (W) 119.77 19 PFAKE 12 40 10.0 +7.8
BOZ LR LR
comp=Z,899nm,20.0s,MS5.4
WVOR Wild Horse Val 119.94 26 *e*PKPdf PKPdf 12 40 02.8 +0.1
WVOR LR LR
comp=Z,607nm,20.0s,MS5.2
LAO LASA Array 120.32 14 *e*PKPdf PKPdf 12 40 03.5 +0.3
LAO LR LR
comp=Z,2μm,20.0s,MS5.6
PPT Papeete 120.43 104 *e*PP PP 12 41 29.4 -1.6
comp=Z,150nm,24.0s
PPT Papeete 120.43 104 *e*PS PS 12 51 21.3 -1.0
comp=Z,322nm,25.0s
PPT *e*LR LR 13 16 51.1
comp=Z,770nm,22.2s
AGMN Agassiz Nation 120.54 6 PFAKE 12 40 20.0 +16
AGMN LR LR
comp=Z,2μm,19.0s,MS5.7
HOPS Hopland 120.59 31 PFAKE 12 40 20.0 +16
HOPS LR LR
comp=Z,873nm,20.0s,MS5.4
HLID Hailey 120.66 22 *e*PKPdf PKPdf 12 40 04.1 +0.1
HLID LR LR
comp=Z,1μm,21.0s,MS5.5
RLMT Red Lodge 120.96 17 PFAKE 12 40 20.0 +15
RLMT LR LR
comp=Z,2μm,19.0s,MS5.7
LKWY Lake 121.13 18 PFAKE 12 40 20.0 +15
LKWY LR LR
comp=Z,3μm,20.0s,MS5.9
EYMN Ely 121.21 3 PFAKE 12 40 20.0 +15
EYMN LR LR
comp=Z,1μm,20.0s,MS5.6
MCCM Marconi Confer 121.33 32 PFAKE 12 40 20.0 +15
MCCM LR LR
comp=Z,628nm,20.0s,MS5.3
PKME Peaks-Kenny Pk 121.40 344 PFAKE 12 40 20.0 +15
PKME LR LR
comp=Z,1μm,20.0s,MS5.5
TPAW Teton Pass 121.92 19 *e*PKPdf PKPdf 12 40 08.0 +1.6
LOHW Long Hollow 121.92 19 *e*PKPdf PKPdf 12 40 06.4 -0.1
SNOW Snow King Moun 122.01 19 *e*PKPdf PKPdf 12 40 06.7 +0.1
REDW Red Top Meadow 122.06 19 *e*PKPdf PKPdf 12 40 06.6 -0.1
BMN Battle Mountai 122.19 26 PFAKE 12 40 20.0 +13
BMN LR LR
comp=Z,631nm,19.0s,MS5.3
AHID Auburn Hatcher 122.52 20 PFAKE 12 40 20.0 +12
AHID LR LR
comp=Z,1μm,19.0s,MS5.5
BW06 Boulder Array 123.01 19 PFAKE 12 40 20.0 +11
BW06 LR LR
comp=Z,1μm,21.0s,MS5.5
LBNH Lisbon 123.02 346 PFAKE 12 40 20.0 +11
LBNH LR LR
comp=Z,1μm,21.0s,MS5.6
SAO San Andreas Ge 123.12 32 PFAKE 12 40 20.0 +11
SAO LR LR
comp=Z,545nm,19.0s,MS5.2
COWI Conover 123.12 1 PFAKE 12 40 20.0 +11
COWI LR LR
comp=Z,1μm,19.0s,MS5.6
LONY Lake Ozonia 123.23 348 PFAKE 12 40 20.0 +11
LONY LR LR
comp=Z,1μm,22.0s,MS5.5
RSSD Black Hills 123.26 14 *e*PKPdf PKPdf 12 40 12.1 +3.1
RSSD LR LR
comp=Z,1μm,19.0s,MS5.6
NVAR Mina Array Bea 123.34 28 PKP PKPdf 12 40 09.9 +0.6
comp=Z,2.2nm,0.6s,baz=302,slow=1.7,SNR=19
HWUT Hardware Ranch 123.39 21 *e*PKPdf PKPdf 12 40 07.6 -1.7
HWUT LR LR
comp=Z,1μm,21.0s,MS5.5
PMSA Palmer Station 123.75 192 PFAKE 12 40 20.0 +11
PMSA LR LR
comp=Z,2μm,19.0s,MS5.8
NCB Newcomb 123.78 348 PFAKE 12 40 20.0 +10
NCB LR LR
comp=Z,1μm,21.0s,MS5.6
DUG Dugway 124.17 23 *e*PKPdf PKPdf 12 40 10.5 -0.3
DUG LR LR
comp=Z,841nm,19.0s,MS5.4
GLMI Grayling 124.30 357 PFAKE 12 40 20.0 +9.0
GLMI LR LR
comp=Z,2μm,19.0s,MS5.8
DAU Daniels Canyon 124.55 21 *e*PKPdf PKPdf 12 40 11.4 -0.1
ECSD EROS Data Cent 124.96 7 *e*PKPdf PKPdf 12 40 11.2 -1.0
ECSD LR LR
comp=Z,1μm,20.0s,MS5.5
DAC Darwin (Calif) 125.41 29 PFAKE 12 40 30.0 +17
DAC LR LR
comp=Z,830nm,21.0s,MS5.4
PHWY Pilot Hill 125.56 16 *e*PKPdf PKPdf 12 40 12.3 -1.1
BINY Binghamton 125.84 349 *e*PKPdf PKPdf 12 40 14.0 0.0
BINY LR LR
comp=Z,1μm,21.0s,MS5.5
MVU Marysvale 125.87 23 PFAKE 12 40 30.0 +16
MVU LR LR
comp=Z,709nm,19.0s,MS5.4
MSU Marysvale 125.88 23 *e*PKPdf PKPdf 12 40 15.2 +1.1
JFWS Jewell Farm 126.28 2 PFAKE 12 40 30.0 +15
JFWS LR LR
comp=Z,1μm,20.0s,MS5.6
ERPA Erie 126.56 352 PFAKE 12 40 30.0 +15
ERPA LR LR
comp=Z,2μm,20.0s,MS5.7
GSC Goldstone 126.58 29 *e*PKPdf PKPdf 12 40 15.8 +0.2
OGNE Ogallala 126.73 13 PFAKE 12 40 30.0 +14
OGNE LR LR
comp=Z,1μm,19.0s,MS5.7
AAM Ann Arbor 126.76 356 PFAKE 12 40 30.0 +14
AAM LR LR
comp=Z,2μm,21.0s,MS5.7
ISCO Idaho Springs 126.91 17 PFAKE 12 40 30.0 +14
ISCO LR LR
comp=Z,2μm,21.0s,MS5.7
SMCO Snowmass 127.08 18 *e*PKPdf PKPdf 12 40 16.4 0.0
SCIA State Center 127.12 5 PFAKE 12 40 30.0 +14
SCIA LR LR
comp=Z,2μm,19.0s,MS5.7
RCBR Riachuelo 128.01 271 PFAKE 12 40 30.0 +11
RCBR LR LR
comp=Z,883nm,20.0s,MS5.4
PFO Pinyon Flat Ob 128.11 30 PFAKE 12 40 30.0 +11
PFO LR LR
comp=Z,652nm,19.0s,MS5.3
MVCO Mesa Verde 128.38 21 PFAKE 12 40 30.0 +11
MVCO LR LR
comp=Z,1μm,20.0s,MS5.6
HDIL Hopedale 128.66 1 PFAKE 12 40 30.0 +11
HDIL LR LR
comp=Z,1μm,22.0s,MS5.5
WUAZ Wupatki 128.79 24 PFAKE 12 40 30.0 +10
WUAZ LR LR
comp=Z,612nm,20.0s,MS5.3
SDCO Great Sand Dun 128.85 18 PFAKE 12 40 30.0 +10
SDCO LR LR
comp=Z,2μm,20.0s,MS5.7
TAOE Nuku Hiva Isla 128.89 93 *e*SS SS 12 59 43.1 -2.7
comp=Z,1μm,33.2s
TAOE *e*LR LR 13 20 49.9
comp=Z,2μm,36.7s
MCWV Mont Chateau 128.96 352 PFAKE 12 40 30.0 +10
MCWV LR LR
comp=Z,1μm,21.0s,MS5.6
CBKS Cedar Bluff 129.26 12 PFAKE 12 40 30.0 +9.4
CBKS LR LR
comp=Z,1μm,19.0s,MS5.7
KSU1 Kansas State U 129.51 8 *e*PKPdf PKPdf 12 40 21.2 +0.2
KSU1 LR LR
comp=Z,1μm,21.0s,MS5.5
CBN Corbin 129.97 349 PFAKE 12 40 30.0 +8.0
CBN LR LR
comp=Z,2μm,22.0s,MS5.7
WCI Wyandotte Cave 130.96 358 PFAKE 12 40 40.0 +16
WCI LR LR
comp=Z,1μm,19.0s,MS5.5
ANMO Albuquerque 131.12 20 PFAKE 12 40 40.0 +16
ANMO LR LR
comp=Z,1μm,20.0s,MS5.7
BBSR BB Station 131.31 333 PFAKE 12 40 40.0 +15
BBSR LR LR
comp=Z,599nm,20.0s,MS5.3
LAZ Ladron 131.38 21 *e*PKPdf PKPdf 12 40 26.3 +1.5
LAZ *e*SKPbc SKPbc 12 43 54.0 +5.9
BLA Blacksburg 131.45 352 PFAKE 12 40 40.0 +15
BLA LR LR
comp=Z,2μm,22.0s,MS5.8
BNM Barren Site 131.79 21 *e*PKPdf PKPdf 12 40 26.4 +0.8
BNM *e*SKPbc SKPbc 12 43 53.6 +4.0
TUC Tucson 131.81 26 *e*PKPdf PKPdf 12 40 26.6 +1.0
TUC *e*SKPbc SKPbc 12 43 52.9 +3.2
TUC LR LR
comp=Z,559nm,20.0s,MS5.3
AMTX Amarillo 132.59 15 PFAKE 12 40 40.0 +13
AMTX LR LR
comp=Z,1μm,20.0s,MS5.7

WVT	**Waverly**	**133.09**	**360**	*e*PKPdf	PKPdf	12 40 27.1	-0.9		
WVT				LR	LR				
	comp=Z,2µm,20.0s,MS5.7								
WMOK	**Wichita Mounta**	**133.39**	**12**	*e*PKPdf	PKPdf	12 40 26.9	-1.6		
WMOK				*e*PP	PP	12 42 55.9	+1.3		
WMOK				*e*SKPbc	SKPbc	12 43 56.9	+1.7		
WMOK				LR	LR				
	comp=Z,1µm,19.0s,MS5.6								
WMOK	**Wichita Mounta**	**133.39**	**12**	*e*PKIKP	PKPdf	12 40 26.9	-1.7		
WMOK				*e*		12 42 55.9			
WMOK				MLR	MLR				
	comp=Z,1µm,19.0s,MS5.6								
CPCT	**Cooper Cave**	**133.63**	**356**	*e*PKPdf	PKPdf	12 40 29.9	+0.9		
RKT	**Rikitea**	**133.94**	**111**	*e*LR	LR	13 23 11.2			
	comp=Z,1µm,37.5s								
MIAR	**Mount Ida**	**134.39**	**6**	*e*PKPdf	PKPdf	12 40 30.0	-0.4		
MIAR				*e*SKPbc	SKPbc	12 44 01.4	+2.9		
MIAR				LR	LR				
	comp=Z,1µm,19.0s,MS5.7								
JSC	**Jenkinsville**	**134.44**	**352**	*e*PKPdf	PKPdf	12 40 30.1	-0.4		
MNTX	**Cornudas Mount**	**134.45**	**21**	*e*PKPdf	PKPdf	12 40 32.2	+1.5		
MNTX				*e*SKPab		12 44 04.1			
MNTX				LR	LR				
	comp=Z,848nm,20.0s,MS5.5								
NHSC	**New Hope**	**135.43**	**350**	PFAKE		12 40 40.0	+7.6		
NHSC				LR	LR				
	comp=Z,1µm,20.0s,MS5.7								
GOGA	**Godfrey**	**135.56**	**354**	PFAKE		12 40 40.0	+7.3		
GOGA				LR	LR				
	comp=Z,2µm,22.0s,MS5.7								
LRAL	**Lakeview Retre**	**136.16**	**358**	PFAKE		12 40 50.0	+16		
LRAL				LR	LR				
	comp=Z,1µm,20.0s,MS5.6								
VBMS	**Vicksburg**	**136.93**	**3**	PFAKE		12 40 50.0	+15		
VBMS				LR	LR				
	comp=Z,1µm,19.0s,MS5.7								
NATX	**Nacogdoches**	**137.00**	**8**	PFAKE		12 40 50.0	+15		
NATX				LR	LR				
	comp=Z,2µm,19.0s,MS5.9								
TXAR	**Lajitas Array**	**137.19**	**20**	PKP	PKPdf	12 40 35.3	-0.5		
	comp=Z,1.2nm,0.7s,baz=351,slow=1.6,SNR=6.8								
TXAR				PP	PP	12 43 30.4	+12		
	comp=Z,2.5nm,1.1s,baz=345,slow=3.0,SNR=5.7								
JCT	**Junction City**	**137.25**	**15**	*e*PKPdf	PKPdf	12 40 36.1	+0.2		
JCT				LR	LR				
	comp=Z,987nm,20.0s,MS5.5								
BRAL	**Brewton**	**138.18**	**358**	PFAKE		12 40 50.0	+12		
BRAL				LR	LR				
	comp=Z,2µm,19.0s,MS5.8								
HKT	**Hockley**	**138.60**	**10**	PFAKE		12 40 50.0	+12		
HKT				LR	LR				
	comp=Z,2µm,20.0s,MS5.8								
KVTX	**Kingsville**	**140.52**	**14**	PFAKE		12 40 50.0	+8.1		
KVTX				LR	LR				
	comp=Z,966nm,19.0s,MS5.6								
DWPF	**Disney**	**140.53**	**351**	PFAKE		12 40 50.0	+8.1		
DWPF				LR	LR				
	comp=Z,1µm,22.0s,MS5.5								
ANWB	**Willy Bob**	**141.31**	**317**	PFAKE		12 41 00.0	+16		
ANWB				LR	LR				
	comp=Z,803nm,22.0s,MS5.4								
BBGH	**Gun Hill**	**142.74**	**309**	PFAKE		12 41 00.0	+14		
BBGH				LR	LR				
	comp=Z,1µm,19.0s,MS5.6								
FDF	**Fort de France**	**142.89**	**313**	PFAKE		12 41 00.0	+14		
FDF				LR	LR				
	comp=Z,605nm,20.0s,MS5.4								
GRTK	**Grand Turk**	**143.54**	**333**	PFAKE		12 41 00.0	+13		
GRTK				LR	LR				
	comp=Z,744nm,20.0s,MS5.5								
SJG	**San Juan**	**143.74**	**323**	*e*PKPdf	PKPdf	12 40 48.0	+0.1		
SJG				LR	LR				
	comp=Z,664nm,22.0s,MS5.4								
TRQA	**Tornquist**	**144.26**	**217**	*e*PKPdf	PKPdf	12 40 45.3	-3.0		
TRQA				LR	LR				
	comp=Z,1µm,19.0s,MS5.7								
CRPR	**Cabo Rojo, PR**	**144.38**	**324**	*e*PKPdf	PKPdf	12 40 47.8	-1.2		
GRGR	**Grenville**	**144.96**	**310**	PFAKE		12 41 00.0	+10		
GRGR				LR	LR				
	comp=Z,503nm,20.0s,MS5.3								
SDDR	**Presa de Saban**	**145.80**	**331**	*e*PKPdf	PKPdf	12 40 52.2	+0.8		
SDDR				LR	LR				
	comp=Z,1µm,22.0s,MS5.6								
SOR	**Soroa**	**145.99**	**351**	*e*	PKPdf	12 40 51.1	-0.6		
MGV	**Manicaragua**	**146.07**	**346**	*e*	PKPdf	12 40 52.8	+1.0		
PLCA	**Paso Flores**	**146.55**	**205**	PKPbc	PKPbc	12 40 53.0	-0.5		
	comp=Z,7.6nm,0.8s,baz=157,slow=3.1,SNR=9.8								
GTBY	**Guantanamo Bay**	**146.62**	**337**	PFAKE		12 41 00.0	+7.2		
GTBY				LR	LR				
	comp=Z,716nm,20.0s,MS5.5								
RCC	**Rio Carpintero**	**146.78**	**338**	*e*	PKPdf	12 40 53.4	+0.3		
CPUP	**Villa Florida**	**147.11**	**238**	PKPbc	PKPbc	12 40 54.4	-1.2		
	comp=Z,6.4nm,0.8s,baz=92,slow=5.3,SNR=11								
TEIG	**Tepich**	**148.93**	**0**	*e*PKPdf	PKPdf	12 40 57.6	+1.0		
TEIG				LR	LR				
	comp=Z,754nm,21.0s,MS5.5								
MTDJ	**Mount Denham**	**149.06**	**340**	*e*PKPbc	PKPbc	12 41 00.5	-0.4		
MTDJ				*e*PKPab	PKPab	12 41 05.5	+0.5		
MTDJ				LR	LR				
	comp=Z,887nm,19.0s,MS5.6								
SDV	**Santo Domingo**	**153.56**	**318**	PFAKE		12 41 10.0	+6.1		
SDV				LR	LR				
	comp=Z,367nm,22.0s,MS5.2								
TGUH	**Tegucigalpa,Un**	**155.05**	**358**	PFAKE		12 41 20.0	+14		
TGUH				LR	LR				
	comp=Z,759nm,20.0s,MS5.5								
LCO	**Las Campanas**	**155.74**	**220**	PFAKE		12 41 20.0	+14		
LCO				LR	LR				
	comp=Z,1µm,21.0s,MS5.6								
BCIP	**Isla Barro Col**	**158.25**	**337**	PFAKE		12 41 20.0	+10		
BCIP				LR	LR				
	comp=Z,535nm,20.0s,MS5.4								
JTS	**JuntasAbangare**	**158.56**	**351**	PFAKE		12 41 20.0	+10		
JTS				LR	LR				
	comp=Z,1µm,21.0s,MS5.7								
ROSC	**El Rosal**	**158.99**	**318**	PKPbc	PKPdf	12 41 17.4	+6.4		
	comp=Z,18nm,1.0s,baz=72,slow=23,SNR=7.3								
ROSC				PKPab	PKPab	12 41 54.7	+7.5		
	comp=Z,17nm,0.8s,baz=293,slow=22,SNR=5.0								
LPAZ	**La Paz**	**159.77**	**253**	*e*PKPdf	PKPdf	12 41 11.7	0.0		
LPAZ				*e*PKPdif	PKPdf	12 41 24.7	+13		
LPAZ				*e*PKPab	PKPab	12 41 53.3	+2.6		
LPAZ				LR	LR				
	comp=Z,826nm,20.0s,MS5.6								
LPAZ	**La Paz**	**159.77**	**253**	PKP	PKPdf	12 41 11.9	+0.2		
	comp=Z,1.2nm,0.8s,baz=90,slow=1.1,SNR=4.8								
LPAZ				PKPab	PKPab	12 41 54.9	+4.2		
	comp=Z,16nm,1.0s,baz=71,slow=5.4,SNR=13								
OTAV	**Otavalo**	**165.15**	**318**	*e*PKPdf	PKPdf	12 41 18.7	+1.4		
OTAV				*e*PKPab	PKPab	12 42 16.1	+2.0		
OTAV				LR	LR				
	comp=Z,803nm,20.0s								
NNA	**Nana**	**168.78**	**264**	PFAKE		12 41 30.0	+10		
NNA				LR	LR				
	comp=Z,1µm,22.0s								
PAYG	**Puerto Ayora**	**169.51**	**11**	PFAKE		12 41 30.0	+10		
PAYG				LR	LR				
	comp=Z,821nm,19.0s								

*MOS **10** 12:30:12.9±1.4,49˚.05N×156˚.17E,h22km,mb4.2/1,Error ellipse: s-maj=99.9km s-min=19.1km az=76.5*

*KRSC **10** 12:30:12.2±0.7,49˚.00N×156˚.24E,h10km±10km,ML4.2*

ISC 10 12:30:16.8±2.1,49˚.1N±0˚.1×155˚.8E±0˚.2,h35km,n10, σ1§05/15,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.64**	**7**	*e*PN	**Pn**	**12 30 42.4**	**-0.7**
SKR				*i* S	**Sn**	**12 31 02.0**	**-1.0**
SKR				pmax	pmax		
	comp=N,40nm,0.4s						
SKR				pmax	pmax		
	comp=Z,40nm,0.4s						
SKR				pmax	pmax		
	comp=E,50nm,0.2s						
SKR				smax			
	comp=N,260nm,0.2s						
SKR				smax			
	comp=E,360nm,0.2s						
ALID	**Alaid**	**1.82**	**355**	*e*P	**Pn**	**12 30 44.7**	**-0.9**
ALID				*i* S	**Sn**	**12 31 07.9**	**+0.4**
MIPR	**Malaya Ipel'ka**	**3.28**	**10**	P	**Pn**	**12 31 05.9**	**+0.2**
GRL	**Gorelyy**	**3.78**	**21**	P	**Pn**	**12 31 13.9**	**+1.3**
PET	**Petropavlovsk**	**4.36**	**23**	*e*P	**Pn**	**12 31 20.9**	**+0.4**
PET				*e*S	**Sn**	**12 32 11.8**	**+1.8**
PET	**Petropavlovsk**	**4.36**	**23**	*e*PN	**Pn**	**12 31 20.9**	**+0.4**
PET				*e*S	**Sn**	**12 32 14.3**	**+4.3**
PET				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PET				smax			
	comp=N,30nm,0.4s						
SDLR	**Sedlovina**	**4.65**	**23**	P	**Pn**	**12 31 25.2**	**+0.7**
GNL	**Ganaly**	**4.83**	**15**	*e*P	**Pn**	**12 31 28.9**	**+1.9**
SPN	**Mys Shipunski**	**4.84**	**32**	P	**Pn**	**12 31 25.9**	**-1.2**
SPN				*i* S	**Sn**	**12 32 21.4**	**-0.4**
MKZ	**Mys Kozlova**	**6.62**	**31**	*e*P	**Pn**	**12 31 50.0**	**-1.5**

IDC 10 12:33:58.8±2.9,10˚.88N×91˚.77E,h0km,mb3.9/4, mb1 4.0/4,mb1mx3.6/21,mbtmp3.9/4,Error ellipse: s-maj=125.1km s-min=23.3km az=67.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**36.69**	**349**	P	P	12 41 07.3	0.0
	0.6nm,0.7s,baz=156,slow=8.6,SNR=2.8						
SONM	**Songino Array**	**38.84**	**16**	P	P	12 41 25.6	+0.1
	0.7nm,0.7s,baz=210,slow=8.6,SNR=3.6						
FITZ	**Fitzroy Crossi**	**44.13**	**130**	P	P	12 42 09.2	-0.1
	4.9nm,0.8s,baz=318,slow=7.7,SNR=7.7						
ASAR	**Alice Springs**	**53.63**	**130**	P	P	12 43 22.2	0.0
	1.0nm,0.7s,baz=304,slow=6.5,SNR=13						
ASAR				PcP	PcP	12 44 28.8	-0.1
	0.8nm,0.7s,baz=322,slow=3.5,SNR=6.6						

*IDC **10** 12:37:54.0±0.8, 10˚.87N×91˚.62E, h0km, mb3.9/13, mb1 4.0/14,mb1mx3.9/22,mbtmp3.9/14,ML3.8/1, Error ellipse: s-maj=26.0km s-min=16.4km az=58.0*

*NEIC **10** 12:37:55.5±0.4, 10˚.88N×91˚.64E, h10km, mb4.5/5, Error ellipse: s-maj=13.1km s-min=7.9km az=51.0*

*ISCJB **10** 12:37:56.6±0.6, 10˚.79N±0˚.08×91˚.60E±0˚.08, h33km, mb3.9/17, Error ellipse: s-maj=11.3km s-min=10.7km az=145.2*

ISC 10 12:37:58.7±0.6,10˚.76N±0˚.08×91˚.53E±0˚.08,h35km,n25, σ0§84/24,mb3.9/17,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.49**	**42**	Pn	**Pn**	**12 40 24.4**	**-2.1**
	0.2nm,0.3s,baz=229,slow=13,SNR=4.3						
CMAR				Sn	**Sn**	**12 42 24.2**	**+1.4**
	0.1nm,0.3s,baz=238,slow=27,SNR=5.0						
KSM	**Kuching**	**20.80**	**115**	*e*P	**P**	**12 42 37.3**	**+0.1**
	15nm,1.0s						
GTA	**Gaotai**	**29.47**	**13**	*e*P	**P**	**12 44 00.6**	**+1.3**
GTA				pP	pP	12 44 04.3	-5.1
GTA				sP	sP	12 44 07.4	-6.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
MKAR	**Makanchi Array**	**36.76**	**349**	P	**P**	**12 45 01.9**	**-0.8**
	comp=Z,1.0nm,0.7s,mb3.8,baz=164,slow=7.2,SNR=7.3						
SONM	**Songino Array**	**39.02**	**16**	P	**P**	**12 45 22.1**	**+0.4**
	comp=Z,2.2nm,0.9s,mb3.9,baz=205,slow=6.6,SNR=3.9						
KURK	**Kurchatov**	**41.23**	**348**	*e*P	**P**	**12 45 39.0**	**-1.1**
	comp=Z,1.8nm,0.5s,mb4.0						
KURK	**Kurchatov**	**41.23**	**348**	P	**P**	**12 45 39.6**	**-0.5**
	comp=Z,0.4nm,0.3s,mb3.6,baz=171,slow=7.7,SNR=3.7						
KSRS	**Korea Array**	**42.11**	**45**	P	**P**	**12 45 47.0**	**-0.6**
	comp=Z,0.5nm,0.8s,mb3.2,baz=238,slow=9.0,SNR=2.7						
ZALV	**Zalesovo Beam**	**43.41**	**354**	P	**P**	**12 45 57.4**	**-0.4**
	comp=Z,1.0nm,0.4s,mb3.9,baz=190,slow=7.3,SNR=3.3						
FITZ	**Fitzroy Crossi**	**44.23**	**130**	*e*P	**P**	**12 46 04.8**	**-0.1**
	comp=Z,12nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**44.23**	**130**	P	**P**	**12 46 05.0**	**+0.2**
	comp=Z,3.7nm,0.7s,mb4.2,baz=318,slow=5.6,SNR=11						
BVAR	**Borovoye Array**	**45.46**	**342**	P	**P**	**12 46 13.9**	**-0.3**
	comp=Z,0.5nm,0.6s,mb3.5,baz=23,slow=9.4,SNR=3.4						
ABKAR	**Akbulak array**	**46.49**	**332**	*e*P	**P**	**12 46 22.8**	**+0.4**
	comp=Z,3.2nm,0.9s,mb4.2						
AKTK	**Aktyubinsk**	**48.20**	**332**	P	**P**	**12 46 35.7**	**+0.1**
AKTO	**Aktyubinsk**	**48.20**	**332**	P	**P**	**12 46 35.7**	**+0.1**
	comp=Z,0.8nm,0.5s,mb4.0,baz=105,slow=12,SNR=3.1						
WRAB	**Tennant Creek**	**52.02**	**126**	*e*P	**P**	**12 47 04.9**	**-0.2**
	comp=Z,9.9nm,0.7s,mb4.8						
ASAR	**Alice Springs**	**53.73**	**130**	P	**P**	**12 47 17.8**	**+0.2**
	comp=Z,0.6nm,0.4s,mb3.9,baz=306,slow=7.7,SNR=24						
ASAR				PcP	PcP	12 48 24.4	+0.9
	comp=Z,0.8nm,0.7s,baz=310,slow=2.6,SNR=5.3						
BRTR	**Keskin Array B**	**58.61**	**310**	P	**P**	**12 47 52.4**	**+0.1**
	comp=Z,1.2nm,0.8s,mb4.0,baz=120,slow=7.1,SNR=6.3						
FINES	**FINESS Array B**	**68.98**	**332**	P	**P**	**12 48 59.9**	**-0.2**
FINES	**FINESS Array B**	**68.98**	**332**	P	**P**	**12 48 59.9**	**-0.2**
	comp=Z,1.5nm,0.9s,mb3.9,baz=104,slow=8.0,SNR=4.1						
ARCES	**ARCESS Array B**	**71.70**	**340**	P	**P**	**12 49 16.9**	**+0.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=84,slow=6.2,SNR=6.5						
TORD	**Torodi Ar. Bea**	**87.44**	**283**	P	**P**	**12 50 45.8**	**+2.5**
	comp=Z,0.6nm,0.7s,mb3.9,baz=134,slow=3.2,SNR=3.9						
ILAR	**Eielson Array**	**93.04**	**21**	P	**P**	**12 51 07.7**	**-0.7**
	comp=Z,0.2nm,0.8s,mb3.6,baz=297,slow=4.0,SNR=3.1						
TXAR	**Lajitas Array**	**137.53**	**20**	PKP	PKPdf	12 57 20.2	+0.7
	comp=Z,0.3nm,0.8s,baz=264,slow=2.5,SNR=3.7						
CPUP	**Villa Florida**	**146.78**	**238**	PKPbc	PKPbc	12 57 40.3	+2.5
	comp=Z,0.6nm,0.5s,baz=342,slow=4.9,SNR=3.8						

*IDC **10** 12:43:53.1±1.2, 10˚.76S×166˚.63E, h0km, mb4.5/9, mb1 4.6/10,mb1mx4.4/15,mbtmp4.5/10,MS4.2/2, Ms1 4.2/2,ms1mx3.5/23,Error ellipse: s-maj=42.3km s-min=21.8km az=139.0*

*ISCJB **10** 12:44:03.1±1.9, 10˚.63S±0˚.09×166˚.23E±0˚.05, h74km±17km, mb4.5/36, Error ellipse: s-maj=14.3km s-min=8.8km az=2.6*

*NEIC **10** 12:44:04.9±1.1, 10˚.59S×166˚.22E, h79km±10km, mb4.6/18, Error ellipse: s-maj=9.3km s-min=6.6km az=162.0*

*BJI **10** 12:44:05.6, 10˚.13S×166˚.29E, h80km, mB4.8/8, mb4.7/26, Ms5.5/8, Ms7 5.1/8*

ISC 10 12:44:04.7±1.6,10˚.64S±0˚.09×166˚.29E±0˚.05,h75km±15km, h86km±3.1km:pP-P,n136,σ0§66/119,mb4.5/36,30C-37D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.36**	**280**	Pn	**Pn**	**12 45 35.0**	**-0.9**
	baz=78,slow=14,SNR=2.3						
HNR				LR	LR	12 46 58.1	
	comp=Z,320nm,20.1s,baz=271,slow=28						
MSVF	**Nonsavu**	**13.40**	**123**	*e*Pn	**Pn**	**12 47 13.4**	**+1.7**
EIDS	**Eidsvold**	**20.55**	**223**	*e*P	**P**	**12 48 37.7**	**+0.3**
	18nm,0.8s						
CTA	**Charters Tower**	**21.46**	**242**	P	**P**	**12 48 46.0**	**-1.2**
CTA	**Charters Tower**	**21.46**	**242**	P	**P**	**12 48 46.0**	**-1.2**
	6.4nm,0.9s,mb4.0,baz=65,slow=12,SNR=4.7						
CTAO	**Charters Tower**	**21.46**	**242**	*e*P	**P**	**12 48 46.4**	**-0.8**
	21nm,1.2s,mb4.3						
ARMA	**Armidale**	**23.94**	**213**	*e*P	**P**	**12 49 12.3**	**+0.3**
	24nm,1.2s,mb4.4						
WRAB	**Tennant Creek**	**32.11**	**249**	*e*P	**P**	**12 50 24.2**	**-1.0**
	24nm,1.4s,mb4.7						
ASAR	**Alice Springs**	**33.45**	**243**	P	**P**	**12 50 35.8**	**-1.0**
	6.4nm,0.8s,mb4.5,baz=76,slow=10,SNR=48						
ASAR				PcP	PcP	12 53 15.8	-0.9
	1.5nm,0.9s,baz=61,slow=4.2,SNR=6.3						
FITZ	**Fitzroy Crossi**	**40.00**	**255**	*e*P	**P**	**12 51 31.8**	**-0.8**
	10nm,1.1s,mb4.6						
FITZ	**Fitzroy Crossi**	**40.00**	**255**	P	**P**	**12 51 32.0**	**-0.6**
	7.3nm,0.7s,mb4.6,baz=92,slow=7.5,SNR=18						
KSRS	**Korea Array**	**59.85**	**325**	P	**P**	**12 54 02.6**	**0.0**
	3.2nm,1.0s,mb4.3,baz=145,slow=6.9,SNR=12						
KSRS				PcP	PcP	12 54 48.8	+0.3
	1.9nm,1.0s,baz=129,slow=6.1,SNR=4.7						
NJ2	**Nanjing**	**62.11**	**315**	*e*P	**P**	**12 54 19.6**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.4						
MDJ	**Mudanjiang**	**64.25**	**332**	P	**P**	**12 54 32.1**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.5						
CN2	**Changchun**	**65.67**	**329**	*e*P	**P**	**12 54 42.0**	**+0.8**
CN2				*e*pP	pP	12 55 06.5	+5.8
CN2				*e*S	S	13 03 19.2	-2.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
SBA	**Scott Base**	**67.20**	**180**	*e*P	**P**	**12 54 50.1**	**-0.4**
	comp=Z,7.1nm,1.0s,mb4.5						
BJI	**Beijing**	**68.51**	**321**	P	**P**	**12 54 59.5**	**+0.3**
BJI				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8						
GYA	**Guiyang**	**68.64**	**304**	*e*P	**P**	**12 55 01.0**	**+0.7**
GYA				pP	pP	12 55 22.4	+2.4
GYA				sP	sP	12 55 32.0	+3.8
GYA				PP	PP	12 57 34.2	+1.3
GYA				ScP		12 59 20.8	
GYA				S	S	13 03 55.0	-2.7
GYA				sS	sS	13 04 31.2	+0.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
XAN	**Xi'an**	**70.25**	**312**	P	**P**	**12 55 10.1**	**0.0**
XAN				pP	pP	12 55 31.2	+1.4
XAN				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.0						
KMI	**Kunming**	**71.37**	**301**	P	**P**	**12 55 17.4**	**+0.3**
KMI				pP	pP	12 55 39.1	+2.2
KMI				sP	sP	12 55 48.7	+3.6
KMI				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.2						
HHC	**Hu-ho-hao-te**	**71.87**	**319**	*e*P	**P**	**12 55 21.7**	**+1.9**
HHC				pP	pP	12 55 42.9	+3.3
HHC				sP	sP	12 55 50.6	+2.8
HHC				PP	PP	12 58 03.6	+3.1
HHC				*e*S	S	13 04 34.8	-0.1
HHC				sS	sS	13 05 09.4	+0.9
HHC				SS	SS	13 09 13.8	+0.8
HHC				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.0						
HHC				LR	LR		
	comp=N,1µm,14.1s						
HHC				LR	LR		
	comp=E,3µm,15.7s						
HHC				LR	LR		
	comp=Z,2µm,15.5s						
CMAR	**Chiang Mai Arr**	**72.44**	**293**	P	**P**	**12 55 24.5**	**+0.8**
	comp=Z,0.8nm,0.4s,mb3.9,baz=107,slow=3.4,SNR=6.9						
CD2	**Chengdu**	**72.79**	**307**	P	**P**	**12 55 26.1**	**+0.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
CD2				pmax	pmax		
	comp=Z,80nm,5.0s						
LZH	**Lanzhou**	**74.89**	**312**	*e*P	**P**	**12 55 39.6**	**+2.0**
LZH				pP	pP	12 56 04.5	+7.0
LZH				sP	sP	12 56 11.1	+5.4
LZH				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
ULN	**Ulaanbaatar**	**78.29**	**324**	*e*P	**P**	**12 55 57.5**	**+1.0**
	comp=Z,9.0nm,0.9s,mb4.5						
BILL	**Bilibino**	**78.48**	**360**	*e*P	**P**	**12 55 56.8**	**-0.3**
	comp=Z,6.0nm,0.9s,mb4.3						
SONM	**Songino Array**	**78.66**	**324**	P	**P**	**12 55 58.6**	**0.0**
	comp=Z,3.5nm,0.9s,mb4.2,baz=136,slow=6.1,SNR=19						
SONM				LR	LR	13 30 19.9	
	comp=Z,928nm,19.7s,baz=99,slow=35						
TTA	**Tatalina**	**78.89**	**17**	*e*P	**P**	**12 55 58.9**	**-0.6**
GTA	**Gaotai**	**79.17**	**314**	*e*P	**P**	**12 56 03.1**	**+1.5**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
PMR	**Palmer**	**80.00**	**20**	*e*P	**P**	**12 56 04.0**	**-1.5**
	comp=Z,6.1nm,1.3s,mb4.3						
COLA	**College**	**82.74**	**18**	*e*P	**P**	**12 56 18.4**	**-1.6**
	comp=Z,3.5nm,0.8s,mb4.2						
MENT	**Mentasta**	**82.77**	**21**	*e*P	**P**	**12 56 19.7**	**-0.5**
ILAR	**Eielson Array**	**82.96**	**18**	P	**P**	**12 56 19.7**	**-1.5**
	comp=Z,2.6nm,0.8s,mb4.1,baz=230,slow=5.7,SNR=30						
EGAK	**Eagle**	**84.82**	**20**	*e*P	**P**	**12 56 30.2**	**-0.4**
	comp=Z,16nm,1.1s,mb4.8						
DAWY	**Dawson**	**84.99**	**21**	*e*P	**P**	**12 56 31.3**	**-0.2**
V13A	**Grand Canyon W**	**87.97**	**53**	⇓P	**P**	**12 56 45.8**	**-0.9**
	baz=88						
U13A	**Pakoon Wash**	**88.13**	**53**	⇑P	**P**	**12 56 47.9**	**+0.4**
	baz=88						
T13A	**Saint George**	**88.32**	**52**	⇓P	**P**	**12 56 48.2**	**-0.1**
	baz=88						
S13A	**Holt Ranch, En**	**88.50**	**51**	⇓P	**P**	**12 56 49.3**	**+0.1**
	baz=89						
X14A	**Yava**	**88.50**	**55**	⇓P	**P**	**12 56 49.3**	**+0.1**
	baz=89						
W14A	**Seligman**	**88.52**	**54**	⇑P	**P**	**12 56 49.5**	**+0.1**
	baz=89						
R13A	**O'Grain Ranch,**	**88.57**	**51**	⇓P	**P**	**12 56 49.5**	**0.0**
	baz=89						
V14A	**Boquillas Ranc**	**88.61**	**54**	⇑P	**P**	**12 56 50.1**	**+0.4**
	baz=89						
U14A	**Mt Trumbull**	**88.74**	**53**	⇓P	**P**	**12 56 50.5**	**+0.1**
	baz=89,SNR=7.1						
Y15A	**Casa Rosa Ranc**	**88.83**	**55**	P	**P**	**12 56 50.8**	**-0.1**
	baz=89,SNR=6.3						
P13A	**Bates Ranch, G**	**88.85**	**50**	⇑P	**P**	**12 56 50.6**	**-0.2**
	baz=89						
ARUT	**Antelope Range**	**88.87**	**51**	*e*P	**P**	**12 56 51.0**	**0.0**
	comp=Z,9.3nm,1.4s,mb4.6						
CCUT	**Cedar City**	**88.88**	**52**	*e*P	**P**	**12 56 51.3**	**+0.4**
	comp=Z,6.6nm,1.3

H14A	**Leadore**	**90.61**	**45**	⇓P		**P**	**12 56 58.8**	**-0.1**
	baz=91							
Y18A	**Canyon Day Jun**	**90.65**	**56**	⇑P		**P**	**12 57 00.1**	**+0.7**
	baz=91							
T17A	**Navajo Res., N**	**90.73**	**53**	⇓P		**P**	**12 56 59.7**	**+0.1**
	baz=91,SNR=5.5							
X18A	**Snowflake**	**90.88**	**55**	⇑P		**P**	**12 57 00.6**	**+0.2**
	baz=91							
219A	**White Tail Can**	**90.92**	**58**	⇓P		**P**	**12 57 00.7**	**+0.1**
	baz=91							
H15A	**Lima**	**91.11**	**45**	⇑P		**P**	**12 57 00.5**	**-0.7**
	baz=91							
R17A	**Hanksville Air**	**91.11**	**51**	⇓P		**P**	**12 57 00.5**	**-0.9**
	baz=91,SNR=8.6							
C14A	**Swan Lake**	**91.14**	**42**	⇓P		**P**	**12 57 01.6**	**+0.3**
	baz=91							
V18A	**Ganado**	**91.14**	**54**	⇓P		**P**	**12 57 02.2**	**+0.6**
	baz=91							
DLMT	**Dillon**	**91.32**	**44**	*e*P		**P**	**12 57 01.4**	**-0.7**
	comp=Z,4.4nm,1.1s,mb4.5							
G15A	**Dillon**	**91.35**	**44**	⇑P		**P**	**12 57 01.9**	**-0.4**
	baz=92							
O17A	**Robinson Place**	**91.48**	**50**	⇓P		**P**	**12 57 02.6**	**-0.4**
	baz=92,SNR=5.8							
T18A	**Mexican Hat**	**91.49**	**53**	⇓P		**P**	**12 57 03.5**	**+0.3**
	baz=92							
S18A	**Hurst Farm, Bl**	**91.51**	**52**	⇓P		**P**	**12 57 02.8**	**-0.5**
	baz=92							
LRM	**Limekiln Ridge**	**91.53**	**44**	*e*P		**P**	**12 57 03.1**	**-0.1**
B14A	**Marquette Ranc**	**91.59**	**41**	⇑P		**P**	**12 57 02.1**	**-1.2**
	baz=92							
R18A	**Canyonlands Na**	**91.73**	**51**	⇓P		**P**	**12 57 04.1**	**-0.2**
	baz=92,SNR=5.3							
G16A	**Moss Hill, Enn**	**91.83**	**44**	⇓P		**P**	**12 57 04.4**	**-0.2**
	baz=92							
U19A	**Dine' College,**	**91.84**	**54**	⇓P		**P**	**12 57 04.8**	**0.0**
	baz=92							
C15A	**Salmond Ranch,**	**91.89**	**42**	⇑P		**P**	**12 57 03.9**	**-0.8**
	baz=92							
BOZ	**Bozeman (W)**	**92.05**	**44**	⇑P		**P**	**12 57 05.4**	**-0.2**
	baz=92							
BOZ	**Bozeman (W)**	**92.05**	**44**	*e*P		**P**	**12 57 05.7**	**+0.2**
	comp=Z,2.7nm,1.0s,mb4.4							
F16A	**Kennard Place,**	**92.08**	**44**	⇓P		**P**	**12 57 05.5**	**-0.2**
	baz=92							
A15A	**Johnson Ranch,**	**92.09**	**41**	⇓P		**P**	**12 57 05.6**	**-0.1**
	baz=92							
H16A	**Russell Place,**	**92.10**	**45**	⇓P		**P**	**12 57 06.2**	**+0.4**
	baz=92							
E16A	**East Helena**	**92.22**	**43**	⇑P		**P**	**12 57 05.6**	**-0.7**
	baz=92							
D16A	**Dana Ranch, Ca**	**92.42**	**43**	⇓P		**P**	**12 57 05.8**	**-1.4**
	baz=92							
C16A	**Fuhringer Ranc**	**92.46**	**42**	⇓P		**P**	**12 57 07.1**	**-0.3**
	baz=93							
C17A	**Wharram Farm,**	**93.07**	**42**	⇓P		**P**	**12 57 09.9**	**-0.3**
	baz=93							
U21A	**Nageezi**	**93.09**	**54**	⇓P		**P**	**12 57 10.2**	**-0.4**
	baz=93							
S21A	**Coal Bank Pass**	**93.22**	**52**	⇓P		**P**	**12 57 11.3**	**+0.2**
	baz=93							
A17A	**Triple J Farms**	**93.39**	**41**	⇓P		**P**	**12 57 11.7**	**0.0**
	baz=94							
E18A	**Harlowton**	**93.41**	**43**	⇑P		**P**	**12 57 12.1**	**+0.3**
	baz=94							
ZALV	**Zalesovo Beam**	**93.54**	**324**	P		**P**	**12 57 10.8**	**-1.4**
ZALV	**Zalesovo Beam**	**93.54**	**324**	P		**P**	**12 57 10.8**	**-1.4**
	comp=Z,4.1nm,0.9s,mb4.8,baz=114,slow=3.7,SNR=13							
MK31	**Makanchi Array**	**93.59**	**317**	*e*P		**P**	**12 57 12.7**	**0.0**
MKAR	**Makanchi Array**	**93.59**	**317**	P		**P**	**12 57 12.5**	**-0.2**
	comp=Z,6.6nm,0.9s,mb5.0,baz=99,slow=5.5,SNR=23							
T22A	**Edith**	**93.79**	**53**	⇑P		**P**	**12 57 13.8**	**0.0**
	baz=94							
B18A	**Beardsley Farm**	**93.87**	**42**	⇓P		**P**	**12 57 13.8**	**-0.1**
	baz=94							
224A	**Cornudas Mount**	**94.05**	**58**	⇑P		**P**	**12 57 15.0**	**-0.1**
	baz=94							
BVAR	**Borovoye Array**	**101.96**	**322**	P		Pdif	12 57 48.4	-1.8
	comp=Z,0.5nm,0.5s,baz=116,slow=3.4,SNR=4.0							
ARCES	**ARCESS Array B**	**116.08**	**346**	PKP		PKPdf	13 02 37.3	-1.3
	comp=Z,1.1nm,0.7s,baz=129,slow=3.3,SNR=7.5							
ORIF	**Oris-en-Rattie**	**141.92**	**337**	*e*PKP1		PKPdf	13 03 24.4	-3.8
	comp=Z,1.5nm,1.2s							
VIVF	**Saint-Julien-I**	**142.42**	**338**	*e*PKP1		PKPdf	13 03 25.6	-3.4
	comp=Z,18nm,1.1s							
CAF	**Calviac**	**143.24**	**341**	*e*PKP1		PKPdf	13 03 29.5	-1.0
	comp=Z,15nm,1.1s							
LASF	**Ste Croix**	**143.38**	**339**	*e*PKP1		PKPdf	13 03 28.0	-2.8
	comp=Z,26nm,1.1s							
MTLF	**Montolieu**	**144.60**	**340**	*e*PKP1		PKPdf	13 03 32.3	-0.6
	comp=Z,74nm,1.3s							
EPF	**Esparros**	**145.49**	**342**	*e*PKP1		PKPbc	13 03 33.5	-1.1
SJPF	**Ste Jean**	**145.87**	**344**	*e*PKP1		PKPbc	13 03 35.1	-0.7
ETSF	**Etsaut**	**145.88**	**343**	*e*PKP1		PKPbc	13 03 35.4	-0.4
	comp=Z,20nm,0.9s							
KEST	**Kesra**	**147.41**	**324**	*e*PKPbc		PKPbc	13 03 40.6	+0.1
KEST	**Kesra**	**147.41**	**324**	PKPbc		PKPbc	13 03 41.0	+0.4
	comp=Z,4.5nm,0.9s,baz=260,slow=2.0,SNR=10							
ESDC	**Sonseca Array**	**149.82**	**345**	PKP		PKPdf	13 03 40.3	-1.5
	comp=Z,0.3nm,0.7s,baz=139,slow=32,SNR=3.9							
ESDC				PKPbc		PKPbc	13 03 46.5	-0.1
	comp=Z,2.7nm,0.9s,baz=22,slow=2.4,SNR=16							
ESLA	**Sonseca Array**	**149.82**	**345**	*e*PKPbc		PKPbc	13 03 45.2	-1.4
PAB	**San Pablo**	**150.03**	**345**	*e*PKPbc		PKPbc	13 03 46.8	-0.3
EVO	**Evora**	**151.76**	**351**	*e*PKP1		PKPbc	13 03 50.3	-0.9
	comp=Z,27nm,1.2s							
TORD	**Torodi Ar. Bea**	**164.72**	**281**	PKP		PKPdf	13 04 01.1	0.0
	comp=Z,0.7nm,0.8s,baz=242,slow=3.2,SNR=3.8							
TORD				PKPab		PKPab	13 04 57.8	+0.8
	comp=Z,1.6nm,1.2s,baz=257,slow=5.9,SNR=4.2							

IDC ***10*** *12:58:59.6±0.6, 10°.98N×91°.78E, h0km, mb4.3/20, mb1 4.3/21, mb1mx4.2/26, mbtmp4.3/21, ML4.3/1, Error ellipse: s-maj=21.3km s-min=13.3km az=59.0*

BJI ***10*** *12:59:00.0, 10°.76N×91°.89E, h28km, mB5.2/4, mb4.5/16, Ms5.1/2, Ms7 4.8/2*

ISCJB ***10*** *12:59:02.8±0.4, 11°.01N±0°.07×91°.88E±0°.06, h33km, mb4.2/33, Error ellipse: s-maj=9.8km s-min=8.7km az=11.2*

NEIC ***10*** *12:59:02.2±2.5, 10°.98N×91°.76E, h17km±15km, mb4.4/12, Error ellipse: s-maj=6.5km s-min=5.7km az=220.0*

ISC 10 12:59:02.9±3.0, 10°.97N±0°.07×91°.78E±0°.07, h22km±21km, n62, σ0°61/59, mb4.2/33, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.17**	**42**	*e*Pn		**Pn**	**Pn**	**13 01 28.2**	**+0.5**
CMAR	**Chiang Mai Arr**	**10.17**	**42**	Pn		**Pn**	**Pn**	**13 01 27.5**	**-0.2**
	0.7nm,0.3s,baz=239,slow=15,SNR=10								
CHTO	**Chiang Mai**	**10.43**	**41**	*e*Pn		**Pn**	**Pn**	**13 01 30.4**	**-0.8**
	3.1nm,0.7s								
PALK	**Pallekele**	**11.53**	**252**	*e*Pn		**Pn**	**Pn**	**13 01 46.0**	**-0.4**
KSM	**Kuching**	**20.68**	**116**	*e*P		**P**	**P**	**13 03 42.6**	**+1.0**
	15nm,1.0s								
XAN	**Xi'an**	**27.81**	**32**	P		**P**	**P**	**13 04 49.8**	**-0.8**
XAN				pP		pP	pP	13 05 00.0	+2.9
XAN				pmax		pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0								
GTA	**Gaotai**	**29.21**	**13**	*e*P		**P**	**P**	**13 05 04.1**	**+1.1**
GTA				pP		pP	pP	13 05 07.6	-1.9
GTA				sP		sP	sP	13 05 10.6	-1.6
GTA				pmax		pmax	pmax		
	comp=Z,13nm,1.2s,mb4.5								
AAK	**Ala-Archa**	**34.96**	**338**	P		**P**	**P**	**13 05 54.0**	**+0.6**
	comp=Z,1.5nm,0.3s,mb4.4,baz=133,slow=9.3,SNR=4.1								
MK31	**Makanchi Array**	**36.60**	**349**	*e*P		**P**	**P**	**13 06 07.8**	**+0.5**
MKAR	**Makanchi Array**	**36.60**	**349**	P		**P**	**P**	**13 06 07.9**	**+0.5**
	comp=Z,6.6nm,0.7s,mb4.6,baz=167,slow=8.3,SNR=31								
SONM	**Songino Array**	**38.75**	**16**	P		**P**	**P**	**13 06 26.1**	**+0.6**
	comp=Z,6.0nm,0.9s,mb4.3,baz=199,slow=8.4,SNR=27								
ULN	**Ulaanbaatar**	**38.96**	**16**	*e*P		**P**	**P**	**13 06 27.4**	**+0.2**
	comp=Z,1.5nm,0.4s,mb4.1								
KURK	**Kurchatov**	**41.08**	**347**	*e*P		**P**	**P**	**13 06 44.9**	**0.0**
	comp=Z,8.5nm,1.0s,mb4.3								
KURK	**Kurchatov**	**41.08**	**347**	P		**P**	**P**	**13 06 44.7**	**-0.1**
	comp=Z,4.8nm,0.8s,mb4.2,baz=164,slow=7.4,SNR=15								
KSRS	**Korea Array**	**41.80**	**45**	P		**P**	**P**	**13 06 50.5**	**-0.5**
	comp=Z,3.8nm,1.0s,mb4.0,baz=247,slow=9.3,SNR=11								
ZALV	**Zalesovo Beam**	**43.23**	**354**	P		**P**	**P**	**13 07 02.4**	**+0.1**
	comp=Z,4.7nm,0.5s,mb4.5,baz=175,slow=9.8,SNR=20								
FITZ	**Fitzroy Crossi**	**44.18**	**130**	*e*P		**P**	**P**	**13 07 09.3**	**-1.1**
	comp=Z,13nm,0.8s,mb4.7								
FITZ	**Fitzroy Crossi**	**44.18**	**130**	P		**P**	**P**	**13 07 09.9**	**-0.6**
	comp=Z,9.1nm,0.7s,mb4.6,baz=322,slow=5.2,SNR=27								
BVAR	**Borovoye Array**	**45.33**	**342**	P		**P**	**P**	**13 07 18.8**	**-0.4**
	comp=Z,1.2nm,0.5s,mb4.0,baz=139,slow=7.0,SNR=8.6								
BRVK	**Borovoye**	**45.39**	**342**	*e*P		**P**	**P**	**13 07 19.8**	**+0.1**
	comp=Z,2.4nm,0.5s,mb4.3								
ABKAR	**Akbulak array**	**46.41**	**332**	*e*P		**P**	**P**	**13 07 28.7**	**+0.9**
	comp=Z,1.0nm,0.4s,mb4.1								
WRAB	**Tennant Creek**	**51.96**	**126**	*e*P		**P**	**P**	**13 08 10.3**	**-0.4**
	comp=Z,6.1nm,0.6s,mb4.7								
ASAR	**Alice Springs**	**53.68**	**130**	P		**P**	**P**	**13 08 23.2**	**-0.1**
	comp=Z,2.9nm,0.7s,mb4.3,baz=306,slow=6.6,SNR=34								
ASAR				PcP		PcP		13 09 29.7	+0.1
	comp=Z,2.2nm,0.7s,baz=313,slow=3.1,SNR=11								
BRTR	**Keskin Array B**	**58.66**	**310**	P		**P**	**P**	**13 08 58.1**	**-0.6**
	comp=Z,1.5nm,0.7s,mb4.1,baz=123,slow=8.4,SNR=10.0								
STKA	**Stephens Creek**	**63.92**	**134**	P		**P**	**P**	**13 09 34.8**	**+0.4**
	comp=Z,2.1nm,0.8s,mb4.2,baz=346,slow=13,SNR=6.1								
AKASG	**Malin Array Be**	**64.29**	**321**	P		**P**	**P**	**13 09 35.9**	**-0.7**
	comp=Z,0.4nm,0.3s,mb3.9,baz=85,slow=5.0,SNR=4.9								
FINES	**FINESS Array B**	**68.90**	**332**	P		**P**	**P**	**13 10 06.0**	**+0.2**
	comp=Z,2.9nm,0.7s,mb4.3,baz=114,slow=8.7,SNR=9.3								
ARCES	**ARCESS Array B**	**71.58**	**340**	P		**P**	**P**	**13 10 22.8**	**+0.7**
	comp=Z,1.7nm,0.5s,mb4.2,baz=92,slow=6.9,SNR=30								
HFS	**Hagfors**	**74.62**	**329**	P		**P**	**P**	**13 10 39.7**	**-0.5**
	comp=Z,2.8nm,0.9s,mb4.2,baz=147,slow=8.3,SNR=4.4								
BOSA	**Boshof**	**75.29**	**236**	P		**P**	**P**	**13 10 46.5**	**+1.8**
BOSA	**Boshof**	**75.29**	**236**	P		**P**	**P**	**13 10 46.5**	**+1.8**
	comp=Z,2.8nm,0.8s,mb4.3,baz=108,slow=1.5,SNR=4.3								
NOA	**NORSAR Array B**	**75.91**	**330**	P		**P**	**P**	**13 10 46.2**	**-1.4**
	comp=Z,1.0nm,0.9s,mb3.7,baz=60,slow=6.5,SNR=3.5								
SPITS	**Spitsbergen Ar**	**76.35**	**348**	P		**P**	**P**	**13 10 50.9**	**+1.0**
	comp=Z,2.6nm,0.6s,mb4.4,baz=126,slow=20,SNR=5.2								
KEST	**Kesra**	**77.57**	**304**	P		**P**	**P**	**13 10 57.9**	**+0.3**
	comp=Z,1.4nm,0.9s,mb3.9,baz=220,slow=6.9,SNR=3.1								
CDF	**Champ du Feu**	**78.25**	**317**	*e*P		**P**	**P**	**13 11 00.5**	**-0.6**
SBF	**Sospel**	**78.43**	**313**	*e*P		**P**	**P**	**13 11 01.4**	**-0.8**
LPG	**La Plagne**	**78.80**	**314**	*e*P		**P**	**P**	**13 11 04.3**	**+0.1**
LPL	**La Plagne**	**78.81**	**314**	*e*P		**P**	**P**	**13 11 04.3**	**+0.1**
	comp=Z,6.6nm,0.7s,mb4.4								
LPL	**La Plagne**	**78.81**	**314**	*e*P		**P**	**P**	**13 11 04.3**	**+0.1**
	comp=Z,3.3nm,0.7s,mb4.4								
HAU	**Haudompre**	**78.89**	**317**	*e*P		**P**	**P**	**13 11 04.2**	**-0.4**
VIVF	**Saint-Julien-I**	**80.32**	**314**	*e*P		**P**	**P**	**13 11 12.3**	**-0.1**
	comp=Z,13nm,1.0s,mb4.5								
VIVF	**Saint-Julien-I**	**80.32**	**314**	*e*P		**P**	**P**	**13 11 12.3**	**-0.1**
	comp=Z,6.6nm,1.0s,mb4.5								
LOR	**Lormes**	**80.63**	**316**	*e*P		**P**	**P**	**13 11 13.5**	**-0.6**
SMF	**Signal de Mont**	**80.71**	**316**	*e*P		**P**	**P**	**13 11 13.9**	**-0.6**
LASF	**Ste Croix**	**80.98**	**313**	*e*P		**P**	**P**	**13 11 16.2**	**+0.2**
	comp=Z,6.1nm,0.8s,mb4.3								
AVF	**Avril sur Loir**	**81.03**	**316**	*e*P		**P**	**P**	**13 11 15.7**	**-0.5**
	comp=Z,6.5nm,1.0s,mb4.2								
AVF	**Avril sur Loir**	**81.03**	**316**	*e*P		**P**	**P**	**13 11 15.7**	**-0.5**
	comp=Z,3.3nm,1.0s,mb4.2								
CAF	**Calviac**	**82.15**	**314**	*e*P		**P**	**P**	**13 11 22.4**	**+0.2**
MTLF	**Montolieu**	**82.25**	**313**	*e*P		**P**	**P**	**13 11 22.8**	**0.0**
	comp=Z,3.6nm,0.7s,mb4.1								
MTLF	**Montolieu**	**82.25**	**313**	*e*P		**P**	**P**	**13 11 22.8**	**0.0**
	comp=Z,1.8nm,0.7s,mb4.1								
RJF	**Les Rejaudoux**	**82.48**	**315**	*e*P		**P**	**P**	**13 11 24.3**	**+0.4**
MFF	**Saint Martin d**	**83.44**	**316**	*e*P		**P**	**P**	**13 11 28.5**	**-0.4**
	comp=Z,13nm,0.9s,mb4.6								
MFF	**Saint Martin d**	**83.44**	**316**	*e*P		**P**	**P**	**13 11 28.5**	**-0.4**
	comp=Z,6.4nm,0.9s,mb4.7								
GRR	**Gorron**	**83.64**	**318**	*e*P		**P**	**P**	**13 11 29.5**	**-0.3**
ETSF	**Etsaut**	**84.33**	**312**	*e*P		**P**	**P**	**13 11 34.0**	**+0.5**
SJPF	**Ste Jean**	**84.77**	**313**	*e*P		**P**	**P**	**13 11 36.2**	**+0.5**
TORD	**Torodi Ar. Bea**	**87.63**	**283**	P		**P**	**P**	**13 11 50.8**	**+0.5**
	comp=Z,0.9nm,0.8s,mb4.0,baz=106,slow=4.4,SNR=4.5								
ILAR	**Eielson Array**	**92.75**	**21**	P		**P**	**P**	**13 12 12.4**	**-0.9**
	comp=Z,2.0nm,0.7s,mb4.2,baz=297,slow=4.8,SNR=11								
PMR	**Palmer**	**93.57**	**25**	*e*P		**P**	**P**	**13 12 17.1**	**0.0**
NVAR	**Mina Array Bea**	**123.39**	**28**	PKP		PKPdf	PKPdf	13 18 00.3	+1.5
	comp=Z,0.9nm,0.6s,baz=306,slow=2.0,SNR=8.1								
TXAR	**Lajitas Array**	**137.25**	**20**	PKP		PKPdf	PKPdf	13 18 26.2	+0.9
	comp=Z,0.3nm,0.5s,baz=263,slow=1.1,SNR=6.9								
CPUP	**Villa Florida**	**147.10**	**238**	PKPbc		PKPbc	PKPbc	13 18 45.4	+0.4
	comp=Z,0.3nm,0.3s,baz=131,slow=2.2,SNR=4.4								

IDC 10 12:59:34.1±1.2, 11°.20N×91°.34E, h0km, mb4.2/8, mb1 4.2/8, mb1mx3.9/22, mbtmp4.2/8, MS4.7/1, Ms1 4.7/1, ms1mx3.5/23, Error ellipse: s-maj=65.1km s-min=18.7km az=59.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.30**	**349**	P		P	P	13 06 39.7	+0.4
	2.6nm,0.7s,baz=167,slow=8.8,SNR=6.0								
KURK	**Kurchatov**	**40.77**	**348**	P		P	P	13 07 15.7	-1.1
	3.2nm,1.1s,baz=165,slow=6.6,SNR=5.7								
ZALV	**Zalesovo Beam**	**42.96**	**354**	P		P	P	13 07 34.5	-0.2
	1.4nm,0.4s,baz=170,slow=8.6,SNR=4.2								
FITZ	**Fitzroy Crossi**	**44.65**	**130**	P		P	P	13 07 49.5	+0.7
	5.4nm,0.8s,baz=331,slow=10,SNR=3.3								
BVAR	**Borovoye Array**	**44.99**	**342**	P		P	P	13 07 51.0	-0.1
	1.2nm,0.6s,baz=157,slow=8.0,SNR=4.7								
ASAR	**Alice Springs**	**54.15**	**130**	P		P	P	13 09 02.2	+0.8
	1.4nm,0.6s,baz=306,slow=6.9,SNR=3.8								
STKA	**Stephens Creek**	**64.38**	**133**	P		P	P	13 10 10.5	-1.6
	2.8nm,0.8s,baz=0.2,slow=4.3,SNR=3.1								
ARCES	**ARCESS Array B**	**71.22**	**340**	P		P	P	13 10 54.8	+0.1
	0.8nm,0.5s,baz=93,slow=6.7,SNR=6.5								
TORD	**Torodi Ar. Bea**	**87.16**	**283**	P		P	P	13 12 23.1	+0.2
	0.7nm,0.8s,baz=78,slow=3.1,SNR=3.3								
TORD				LR		LR	LR	13 49 20.0	
	comp=Z,424nm,19.8s,baz=90,slow=34								

DJA ***10*** *13:01:16, 11°.58N×90°.66E, h4km, mb4.7/13*

BJI ***10*** *13:01:27.5, 10°.71N×91°.74E, h10km, mB5.3/32, mb4.8/55, Ms5.2/54, Ms7 4.9/47*

ISCJB ***10*** *13:01:29.7±0.9, 10°.94N±0°.03×91°.79E±0°.02, h10km±5km, mb5.0/190, MS4.9/33, Error ellipse: s-maj=4.9km s-min=3.7km az=32.5*

IDC ***10*** *13:01:29.7±0.4, 11°.01N×91°.84E, h0km, mb4.8/27, mb1 4.8/29, mb1mx4.8/30, mbtmp4.7/29, ML4.1/2, MS4.7/9, Ms1 4.7/9, ms1mx4.5/16, Error ellipse: s-maj=15.0km s-min=10.3km az=66.0*

NEIC ***10*** *13:01:31.6±0.1, 10°.99N×91°.79E, h10km, mb5.1/106, MS4.9/1, Error ellipse: s-maj=5.0km s-min=3.8km az=214.0*

SZGRF ***10*** *13:01:32.1, 10°.85N×92°.52E, h33km, mb5.0, Andaman Islands, India, region*

MOS ***10*** *13:01:33.1±0.8, 10°.99N×91°.84E, h33km, mb5.2/91, MS5.0/10, Error ellipse: s-maj=8.2km s-min=4.3km az=122.5*

GCMT ***10*** *13:01:35.6±0.2, 11°.04N×91°.94E, h12km, MW5.3, Moment Tensor Solution. s49,c72; s84,c136; Moment tensor: Scale 10^17^Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mrφ0.00; Mθφ0.00; Best double couple: Mo1.00000×10^17^ NP1:φ±218.00000°, δ30.00000°, λ-36.00000°. NP2: φ±341.00000°, δ73.00000°, λ-115.00000°. Principal axes: T 0.9700, Plg24.0000°, Azm290.0000°; N 0.1300, Plg24.0000°, Azm349.0000°; P -1.1000, Plg55.0000°, Azm219.0000°; Data Used: ll IU IC G CN.*

ISC 10 13:01:33.9±0.8, 10°.97N±0°.02×91°.81E±0°.02, h25km±5km, h22km±1.8km: pP-P, n486, σ0°96/478, mb5.0/190, MS4.9/33, 29C-15D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TPTI		**9.33**	**145**	P		**Pn**	**Pn**	**13 03 42.5**	**-4.4**
	37nm,1.1s								
CM31	**Chiang Mai Arr**	**10.15**	**42**	*e*Pn		**Pn**	**Pn**	**13 03 58.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**10.15**	**42**	Pn		**Pn**	**Pn**	**13 03 57.8**	**-0.3**
	0.5nm,0.3s,baz=238,slow=16,SNR=7.0								
CMAR				Sn			**Sn**	**13 05 49.1**	**-2.1**
	0.3nm,0.3s,baz=234,slow=29,SNR=4.9								
CMAR				LR		LR	LR	13 08 24.5	
	comp=Z,3μm,19.3s,baz=224,slow=41								
CMAR	**Chiang Mai Arr**	**10.15**	**42**	P		**Pn**	**Pn**	**13 03 57.8**	**-0.3**
CMAR								13 05 49.1	
CHTO	**Chiang Mai**	**10.41**	**41**	*e*Pn		**Pn**	**Pn**	**13 03 59.1**	**-2.6**
KULM	**Kulim**	**10.41**	**122**	*e*P		**Pn**	**Pn**	**13 04 02.2**	**+0.4**
	32nm,0.8s								
KULM	**Kulim**	**10.41**	**122**	P		**Pn**	**Pn**	**13 04 02.7**	**+1.0**
	1μm62nm,1.2s								
VIS	**Vishakhapatnam**	**10.60**	**310**	*i* P		**Pn**	**Pn**	**13 04 02.7**	**-1.7**
PSI	**Prapat**	**10.76**	**138**	Pn		**Pn**	**Pn**	**13 04 06.1**	**-0.3**
	1.1nm,0.3s,baz=321,slow=16,SNR=5.3								
IPM	**Ipoh**	**11.18**	**125**	P		**Pn**	**Pn**	**13 04 11.4**	**-0.8**
	74nm,1.9s								
MDRS	**Chennai**	**11.50**	**282**	*ex*		x	x	13 04 24.2	
MDRS				*ex*		x	x	13 06 30.2	
PALK	**Pallekele**	**11.56**	**252**	*e*P		**Pn**	**Pn**	**13 04 18.9**	**+1.4**
	166nm,1.0s								
PALK	**Pallekele**	**11.56**	**252**	*e*P		**Pn**	**Pn**	**13 04 18.9**	**+1.4**
PALK				pmax		pmax			
	comp=Z,166nm,1.0s								
CAL	**Calcutta**	**11.97**	**344**	*ex*		x	x	13 06 46.0	
CAL				*ex*		x	x	13 08 07.3	
SISI	**Saibi**	**14.20**	**149**	P		**Pn**	**Pn**	**13 05 03.3**	**+10**
PPI	**Padang Panjang**	**14.21**	**143**	P		**Pn**	**Pn**	**13 04 56.2**	**+2.6**
	comp=Z,28nm,1.1s								
HYB	**Hyderabad**	**14.35**	**298**	*i* P		**Pn**	**Pn**	**13 04 56.0**	**+0.4**
HYB				*eS*		**Sn**	**Sn**	**13 07 34.0**	**-0.1**
SHL	**Shillong**	**14.52**	**0**	*ex*		x	x	13 05 12.0	
PDSI	**Padang**	**14.61**	**143**	P		**Pn**	**Pn**	**13 04 59.7**	**+0.6**
	comp=Z,128nm,1.0s								
MYKOM	**Kota Tinggi**	**15.04**	**127**	P		**Pn**	**Pn**	**13 05 04.2**	**-0.7**
	comp=Z,39nm,1.3s								
SDSI	**Sungai Dareh**	**15.21**	**140**	P		**Pn**	**Pn**	**13 05 10.6**	**+3.4**
	comp=Z,22nm,0.8s								
NGP	**Nagpur**	**15.88**	**311**	*e*PKP		**Pn**	**Pn**	**13 05 14.7**	**-1.2**
NGP				*ex*		x	x	13 05 41.9	
	comp=Z,109nm,1.2s								
NGP				*ex*		x	x	13 08 01.2	
ODAN	**Odare**	**16.34**	**346**	*e*P		**Pn**	**Pn**	**13 05 21.5**	**-0.3**
	comp=Z,34nm,0.4s								
LATR	**Latur**	**16.49**	**298**	*e*PKP		**Pn**	**Pn**	**13 05 22.1**	**-1.6**
LATR				AMb		AMB	AMB	13 05 27.8	
	comp=Z,72nm,1.5s								
LATR				*ex*		x	x	13 08 13.7	
RAMN	**Ramite**	**16.64**	**344**	*e*P		**Pn**	**Pn**	**13 05 25.2**	**-0.3**
	comp=Z,145nm,0.6s								
TAPN	**Taplejung**	**16.74**	**347**	*e*P		**Pn**	**Pn**	**13 05 26.2**	**-0.6**
	comp=Z,91nm,0.8s								
JIRN	**Jiri**	**17.42**	**343**	*e*P		**Pn**	**Pn**	**13 05 35.8**	**+0.5**
	comp=Z,15nm,0.3s								
KMI	**Kunming**	**17.48**	**35**	P		**Pn**	**Pn**	**13 05 37.5**	**+1.4**
KMI				pP		pP	pP	13 05 39.0	-4.9
KMI				sP		sP	sP	13 05 40.0	-7.1
KMI				PP				13 05 53.1	
KMI				S		**Sn**	**Sn**	**13 08 52.4**	**+2.3**
KMI				SS				13 09 14.1	
KMI				pmax		pmax	pmax		
	comp=Z,17nm,1.

LZH pP pP 13 07 19.8 -3.9
LZH sP sP 13 07 22.2 -4.6
LZH PP 13 08 03.0
LZH *e*S **S** **13 11 54.0 -0.4**
LZH SS 13 13 09.2
LZH pmax pmax
comp=Z,54nm,1.5s,mb4.9
LZH pmax pmax
comp=Z,220nm,4.5s
LZH LR LR
comp=E,2μm,14.4s
LZH LR LR
comp=Z,4μm,19.9s
WHN Wuhan 28.59 44 P **P** **13 07 36.5 +8.3**
WHN S **S** **13 12 16.3 +1.1**
WHN LR LR
comp=N,5μm,16.6s,MS5.3
WHN LR LR
comp=E,3μm,11.8s,MS5.3
WHN LR LR
comp=Z,7μm,15.8s,MS5.4
GTA Gaotai 29.21 13 *e*P **P** **13 07 34.6 +1.1**
GTA pP pP 13 07 38.2 -2.7
GTA sP sP 13 07 41.2 -2.8
GTA PcP PcP 13 10 42.9 +2.4
GTA S **S** **13 12 26.0 +1.4**
GTA SS SS 13 13 56.2 -33
GTA pmax pmax
comp=Z,20nm,0.8s,mb4.9
GTA pmax pmax
comp=Z,400nm,4.8s
GTA LR LR
comp=N,2μm,16.4s,MS4.9
GTA LR LR
comp=E,1μm,16.3s,MS4.9
GTA LR LR
comp=Z,1μm,14.3s,MS4.7
SSLB Suanglung 30.52 61 *e*P **P** **13 07 45.1 -0.2**
comp=Z,9.6nm,0.6s,mb4.8
YHNB Yeheng 31.18 60 *e*P **P** **13 07 52.2 +1.0**
comp=Z,48nm,1.3s,mb5.2
KBL Kabul 31.33 322 *e*P **P** **13 07 52.0 -0.4**
comp=Z,15nm,0.9s,mb4.8
KBL Kabul 31.33 322 *e*P **P** **13 07 52.0 -0.4**
KBL pmax pmax
comp=Z,15nm,0.9s,mb4.8
KSH Kashi 31.72 336 P **P** **13 07 55.1 -0.7**
KSH *e*pP pP 13 07 59.7 -3.5
KSH *e*sP sP 13 08 02.0 -4.2
KSH *e*PP PP 13 08 58.5 -9.2
KSH *e*PcP PcP 13 10 48.5 +1.4
KSH *e*S **S** **13 13 00.9 -3.2**
KSH *e*ScP ScP 13 14 30.2 +1.2
KSH *e*PcS PcS 13 14 31.6 +0.1
KSH *e*SS SS 13 14 48.3 -32
KSH *e*ScS ScS 13 18 26.2 -0.8
KSH pmax pmax
comp=Z,13nm,0.7s,mb4.9
KSH pmax pmax
comp=Z,150nm,7.4s
KSH LR LR
comp=N,2μm,14.6s,MS4.9
KSH LR LR
comp=E,1μm,13.3s,MS4.9
KSH LR LR
comp=Z,2μm,13.9s,MS4.9
NJ2 Nanjing 32.59 46 *e*P **P** **13 08 04.2 +0.7**
NJ2 pP pP 13 08 08.6 -2.3
NJ2 sP sP 13 08 11.2 -2.8
NJ2 PP PP 13 09 12.6 -4.8
NJ2 S **S** **13 13 17.0 -0.9**
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
NJ2 pmax pmax
comp=Z,930nm,10.1s
NJ2 LR LR
comp=N,3μm,16.4s,MS5.2
NJ2 LR LR
comp=E,3μm,18.8s,MS5.2
NJ2 LR LR
comp=Z,2μm,15.4s,MS4.9
WMQ Urumqi 32.92 355 P **P** **13 08 08.4 +2.2**
WMQ pP pP 13 08 16.4 +2.8
WMQ sP sP 13 08 20.6 +3.9
WMQ *e*S **S** **13 13 23.9 +1.2**
WMQ SS SS 13 15 22.9 -22
WMQ ScS ScS 13 18 31.4 -1.5
WMQ pmax pmax
comp=Z,58nm,1.1s,mb5.4
WMQ pmax pmax
comp=Z,1μm,4.1s
WMQ LR LR
comp=N,1μm,21.7s,MS4.8
WMQ LR LR
comp=E,1μm,17.0s,MS4.8
WMQ LR LR
comp=Z,910nm,23.4s
SSE Sheshan 33.78 49 P **P** **13 08 11.1 -2.8**
SSE pmax pmax
comp=Z,17nm,0.6s,mb5.2
SSE pmax pmax
comp=Z,370nm,12.0s
SSE LR LR
comp=N,2μm,20.1s,MS4.9
SSE LR LR
comp=E,1μm,20.3s,MS4.9
SSE LR LR
comp=Z,2μm,14.6s
HHC Hu-ho-hao-te 34.49 27 *e*P **P** **13 08 21.5 +1.6**
HHC pP pP 13 08 25.7 -1.6
HHC sP sP 13 08 29.0 -1.4
HHC PP PP 13 09 37.2 -1.1
HHC *e*S **S** **13 13 47.4 +0.4**
HHC sS sS 13 13 54.9 -4.3
HHC SS SS 13 15 57.9 -19
HHC ScS ScS 13 18 41.6 +0.4
HHC pmax pmax
comp=Z,14nm,1.0s,mb4.8
HHC pmax pmax
comp=Z,460nm,4.4s
HHC LR LR
comp=N,2μm,13.3s,MS5.1
HHC LR LR
comp=E,1μm,12.2s,MS5.1
HHC LR LR
comp=Z,2μm,15.8s,MS4.9
UCH Uchtor 34.62 337 *e*P **P** **13 08 22.7 +1.7**
comp=Z,13nm,0.9s,mb4.8
TKM2 Tokmak 2 34.82 339 P **P** **13 08 23.4 +0.7**
comp=Z,6.2nm,0.6s,mb4.7
TKM2 Tokmak 2 34.82 339 P **P** **13 08 23.5 +0.8**
TKM2 pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
AML Almayashu 34.85 336 *e*P **P** **13 08 25.1 +2.0**
comp=Z,77nm,1.2s,mb5.5
AAK Ala-Archa 34.97 337 *e*P **P** **13 08 25.5 +1.5**
comp=Z,47nm,1.3s,mb5.3
AAK Ala-Archa 34.97 337 P **P** **13 08 24.3 +0.3**
comp=Z,3.9nm,0.4s,mb4.7,baz=158,slow=5.1,SNR=12
AAK Ala-Archa 34.97 337 *e*P **P** **13 08 25.5 +1.5**
AAK pmax pmax
comp=Z,47nm,1.3s,mb5.3
EKS2 Erkin-Say 35.27 337 *e*P **P** **13 08 27.2 +0.6**
comp=Z,30nm,1.0s,mb5.2
BJI Beijing 36.11 33 P **P** **13 08 34.4 +0.5**
BJI S **S** **13 14 16.3 +4.3**
BJI pmax pmax
comp=Z,29nm,0.8s,mb5.3
BJI LR LR
comp=N,2μm,14.9s,MS5.2
BJI LR LR
comp=E,2μm,17.1s,MS5.2
BJI LR LR
comp=Z,2μm,18.2s,MS4.9
MK31 Makanchi Array 36.60 349 *e*P **P** **13 08 38.0 0.0**
MK31 Makanchi Array 36.60 349 *ce*P **P** **13 08 37.7 -0.3**
MK31 pmax pmax
comp=Z,29nm,0.9s,mb5.1
MKAR Makanchi Array 36.60 349 P **P** **13 08 37.9 -0.1**
comp=Z,13nm,0.6s,mb4.9,baz=168,slow=8.0,SNR=52
PcP PcP
MKAR 13 11 00.7 -0.2
comp=Z,2.5nm,0.6s,baz=216,slow=3.9,SNR=6.4
KK31 Karatay Array 36.98 334 *ce*P **P** **13 08 41.4 +0.2**
KK31 pmax pmax
comp=Z,57nm,1.1s,mb5.3

SONM Songino Array 38.74 16 P **P** **13 08 56.4 +0.3**
comp=Z,5.3nm,0.6s,mb4.5,baz=199,slow=10,SNR=18
ULN Ulaanbaatar 38.95 16 *e*P **P** **13 08 58.4 +0.6**
comp=Z,15nm,1.0s,mb4.7
ULN Ulaanbaatar 38.95 16 *e*P **P** **13 08 58.4 +0.6**
ULN pmax pmax
comp=Z,15nm,1.0s,mb4.7
ABKT Ailbek 40.37 317 P **P** **13 09 11.3 +1.5**
comp=Z,135nm,0.8s,mb5.7,SNR=5.8
ZAK Zakamensk 40.42 11 *e*P **P** **13 09 11.4 +1.4**
ZAK *e* 13 11 19.9
ZAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
KURK Kurchatov 41.08 347 P **P** **13 09 15.1 -0.4**
comp=Z,218nm,1.2s,mb5.7,SNR=6.9
KURK Kurchatov 41.08 347 *e*P **P** **13 09 15.2 -0.2**
comp=Z,56nm,1.2s,mb5.1
KURK Kurchatov 41.08 347 P **P** **13 09 13.9 -1.6**
comp=Z,16nm,1.0s,mb4.6,baz=165,slow=7.5,SNR=22
KURK PcP PcP 13 11 15.2 +0.4
comp=Z,5.0nm,0.8s,baz=162,slow=2.6,SNR=5.0
KURK ScP ScP 13 15 03.7 +0.5
comp=Z,1.2nm,0.8s,baz=172,slow=3.3,SNR=3.7
KURK Kurchatov 41.08 347 *d*iP **P** **13 09 15.8 +0.3**
KURK pmax pmax
comp=Z,21nm,1.0s,mb4.7
MOY Mondy 41.27 9 *e*P **P** **13 09 25.0 +8.1**
MOY pmax pmax
comp=Z,40nm,4.0s
SNY Shenyang 41.45 36 ⇑P **P** **13 09 18.2 -0.4**
SNY pmax pmax
comp=Z,24nm,2.0s,mb4.5
SNY LR LR
comp=N,1μm,15.9s,MS5.1
SNY LR LR
comp=E,2μm,14.4s,MS5.1
SNY LR LR
comp=Z,2μm,15.6s,MS5.0
TLY Talaya 41.73 11 *e*P **P** **13 09 20.9 +0.2**
comp=Z,11nm,1.0s,mb4.4
TLY *e* pP 13 09 29.1 +0.9
TLY Talaya 41.73 11 *e*P **P** **13 09 23.3 +2.6**
TLY pmax pmax
comp=Z,14nm,1.1s,mb4.5
KSRS Korea Array 41.78 45 P **P** **13 09 20.7 -0.7**
comp=Z,5.8nm,1.0s,mb4.2,baz=242,slow=7.9,SNR=14
KSRS LR LR 13 29 01.4
comp=Z,1μm,18.8s,MS4.8,baz=240,slow=40
MBWA Marble Bar 42.10 139 *e*P **P** **13 09 22.3 -1.8**
MBWA Marble Bar 42.10 139 *e*P **P** **13 09 23.0 -1.1**
comp=Z,22nm,1.0s,mb4.7
IRK Irkutsk 42.38 11 *e*P **P** **13 09 29.6 +3.5**
IRK *e* 13 09 44.8
IRK pmax pmax
comp=Z,32nm,2.2s,mb4.6
ZAA0 Zalesovo Array 43.23 354 *e*P **P** **13 09 32.5 -0.4**
ZALV Zalesovo Beam 43.23 354 P **P** **13 09 32.7 -0.2**
comp=Z,7.3nm,0.3s,mb4.8,baz=178,slow=10,SNR=33
ZALV LR LR 13 32 02.7
comp=Z,768nm,18.1s,MS4.6,baz=350,slow=42
CN2 Changchun 43.75 35 *e*P **P** **13 09 33.4 -3.9**
CN2 *e*S **S** **13 16 03.1 -3.2**
CN2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,1μm,20.0s,MS4.9
CN2 LR LR
comp=E,1μm,20.0s,MS4.9
CN2 LR LR
comp=Z,200nm,18.0s,MS4.1
FITZ Fitzroy Crossi 44.16 131 *e*P **P** **13 09 39.6 -1.3**
comp=Z,86nm,0.6s,mb5.7
FITZ Fitzroy Crossi 44.16 131 P **P** **13 09 39.9 -1.0**
comp=Z,30nm,0.7s,mb5.2,baz=310,slow=4.2,SNR=35
FITZ PcP PcP 13 11 26.7 +1.0
comp=Z,6.7nm,0.5s,baz=273,slow=5.4,SNR=4.7
NVS Novosibirsk 44.28 353 *e*P **P** **13 09 40.9 -0.5**
NVS pmax pmax
comp=N,64nm,2.2s
NVS pmax pmax
comp=Z,59nm,2.2s,mb4.9
QRN Al-Qurain 44.61 300 *e*P **P** **13 09 44.8 +0.4**
QRN AMb AMB 13 09 47.0
comp=Z,37nm,0.9s,mb5.2
RDF Al-Radifah 44.97 300 *e*P **P** **13 09 48.1 +0.8**
RDF AMb AMB 13 09 52.9
comp=Z,41nm,0.6s,mb5.5
NAY Al-Naaiem 45.31 300 *e*P **P** **13 09 50.0 0.0**
NAY AMb AMB 13 09 52.0
comp=Z,28nm,0.7s,mb5.2
BVAR Borovoye Array 45.34 342 P **P** **13 09 48.8 -1.1**
comp=Z,4.3nm,0.5s,mb4.5,baz=141,slow=9.2,SNR=16
BVAR PcP PcP 13 11 29.8 +0.7
comp=Z,2.2nm,0.6s,baz=173,slow=6.2,SNR=3.7
MIB Mutribah 45.36 301 *e*P **P** **13 09 50.5 0.0**
MIB AMb AMB 13 09 52.7
comp=Z,40nm,0.8s,mb5.3
BRVK Borovoye 45.40 342 *e*P **P** **13 09 50.3 0.0**
comp=Z,10nm,0.8s,mb4.7
BRVK Borovoye 45.40 342 *e*P **P** **13 09 51.1 +0.8**
BRVK pmax pmax
comp=Z,24nm,1.7s,mb4.8
MEEK Meekatharra 45.56 146 *e*P **P** **13 09 51.5 -0.4**
AB31 Akbulak array 46.43 331 *ce*P **P** **13 09 59.2 +0.7**
AB31 pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
ABKAR Akbulak array 46.43 331 *e*P **P** **13 09 58.5 +0.1**
comp=Z,7.7nm,0.5s,mb4.9
MDJ Mudanjiang 46.64 37 P **P** **13 10 03.4 +3.2**
MDJ PcP PcP 13 11 35.5 +1.7
MDJ S **S** **13 16 54.4 +6.4**
MDJ pmax pmax
comp=Z,9.0nm,1.6s,mb4.5
MDJ pmax pmax
comp=Z,340nm,11.5s
MDJ LR LR
comp=N,1μm,19.8s
MDJ LR LR
comp=Z,2μm,19.8s,MS5.0
KAKA Kakadu 46.70 119 *e*P **P** **13 10 00.5 -0.6**
comp=Z,16nm,0.7s,mb5.0
KAKA Kakadu 46.70 119 *e*P **P** **13 09 59.6 -1.4**
comp=Z,43nm,0.6s,mb5.6
MAJO Matsushiro 48.90 51 *e*P **P** **13 10 16.7 -1.1**
comp=Z,20nm,1.2s,mb5.0
MAJO Matsushiro 48.90 51 *e*P **P** **13 10 16.7 -1.2**
MAJO pmax pmax
comp=Z,20nm,1.2s,mb5.0
MAT Matsushiro 48.90 51 P **P** **13 10 17.8 -0.1**
KLBR Kellerberrin 49.08 150 *e*P **P** **13 10 18.5 -0.8**
comp=Z,28nm,0.9s,mb5.3
NWAO Narrogin (SRO) 49.94 152 *e*P **P** **13 10 25.4 -0.4**
comp=Z,102nm,0.9s,mb5.8
NWAO Narrogin (SRO) 49.94 152 *e*P **P** **13 10 25.3 -0.5**
comp=Z,70nm,1.5s,mb5.5
NWAO Narrogin (SRO) 49.94 152 P **P** **13 10 24.4 -1.4**
comp=Z,18nm,0.6s,mb5.3,baz=332,slow=7.2,SNR=15
NWAO Narrogin (SRO) 49.94 152 *e*P **P** **13 10 25.3 -0.5**
NWAO pmax pmax
comp=Z,70nm,1.5s
GNI Garni 50.65 313 *e*P **P** **13 10 31.3 +0.2**
comp=Z,39nm,1.1s,mb5.2
GNI Garni 50.65 313 *d*iP **P** **13 10 31.7 +0.6**
GNI pmax pmax
comp=Z,39nm,1.2s
DGRG David-gareji 50.70 315 P **P** **13 10 32.1 +0.7**
MTA Mtatsminda 51.19 315 P **P** **13 10 36.4 +1.2**
TBLG Delisi 51.24 315 *e*P **P** **13 10 35.4 -0.2**
TBLG Delisi 51.24 315 P **P** **13 10 35.4 -0.2**
SVE Sverdlovsk 51.70 339 ⇓*e*P **P** **13 10 39.7 +1.0**
SVE *e*S **S** **13 17 53.4 -5.2**
SVE pmax pmax
comp=Z,46nm,1.2s,mb5.3
SVE MLR MLR
comp=Z,1μm,19.0s,MS5.0
HABR Khabarovsk 51.89 35 P **P** **13 10 39.6 -0.7**
HABR *e**PP pP 13 10 48.1 +0.1
HABR PPP 13 13 38.2
HABR S **S** **13 18 00.5 -1.1**
HABR *e**SS sS 13 18 16.1 +1.9
HABR *e* 13 20 26.5
HABR SSS 13 23 19.7
HABR pmax pmax
comp=Z,41nm,2.5s,mb4.9

HABR MLR MLR
comp=Z,1μm,20.0s,MS5.0
WRAB Tennant Creek 51.93 126 P **P** **13 10 40.2 -0.8**
comp=Z,605nm,0.6s,SNR=26
WRAB Tennant Creek 51.93 126 *e*P **P** **13 10 40.3 -0.7**
comp=Z,57nm,0.6s,mb5.7
WRAB Tennant Creek 51.93 126 *e*P **P** **13 10 40.3 -0.7**
WRAB pmax pmax
comp=Z,57nm,0.6s,mb5.7
ARU Arti 52.16 337 *e*P **P** **13 10 42.5 +0.3**
comp=Z,31nm,1.2s,mb5.1
ARU Arti 52.16 337 *d*iP **P** **13 10 41.4 -0.8**
ARU 13 11 51.4
ARU *e* 13 12 38.8
ARU PPP 13 13 44.3
ARU S **S** **13 18 04.2 -0.8**
ARU 13 20 28.1
ARU SS SS 13 21 40.2 -2.3
ARU pmax pmax
comp=Z,25nm,1.7s,mb4.9
ARU MLR MLR
comp=Z,2μm,18.0s,MS5.2
ZEI Tsey 52.22 316 *e*P **P** **13 10 45.1 +2.2**
ZEI pmax pmax
comp=Z,18nm,0.6s,mb5.2
CLNS Chul'man 52.40 22 *e*P **P** **13 10 45.1 +1.2**
CLNS pmax pmax
comp=N,5.0nm,0.9s
CLNS pmax pmax
comp=E,11nm,0.9s
CLNS pmax pmax
comp=Z,12nm,0.9s,mb4.8
CLNS MLR MLR
comp=E,413nm,14.0s,MS5.1
CLNS MLR MLR
comp=Z,1μm,12.0s,MS5.1
CLNS MLR MLR
comp=N,1μm,14.0s,MS5.1
OPO Ambohidratompo 52.90 237 P **P** **13 10 49.5 +1.2**
comp=N,1.5nm,0.7s,mb4.0,baz=79,slow=5.2,SNR=2.5
OPO PcP PcP 13 11 58.9 +1.7
comp=N,3.4nm,0.8s,baz=49,slow=3.2,SNR=4.0
ABPO Ambohimpanom 53.09 236 *e*P **P** **13 10 51.7 +2.1**
comp=N,42nm,1.4s,mb5.2
ABPO Ambohimpanom 53.09 236 *e*P **P** **13 10 51.7 +2.1**
ABPO pmax pmax
comp=Z,42nm,1.4s,mb5.2
KIV Kislovodsk 53.49 317 *e*P **P** **13 10 52.9 +0.7**
comp=Z,35nm,0.7s,mb5.4
KIV Kislovodsk 53.49 317 *e*P **P** **13 10 52.9 +0.7**
KIV pmax pmax
comp=Z,35nm,0.7s,mb5.4
ASAR Alice Springs 53.66 130 P **P** **13 10 53.4 -0.4**
comp=Z,20nm,0.8s,mb5.1,baz=309,slow=6.4,SNR=48
ASAR PcP PcP 13 12 00.3 +0.4
comp=Z,9.1nm,0.8s,baz=311,slow=3.0,SNR=6.6
ASAR ScP ScP 13 15 56.3 -0.1
comp=Z,1.8nm,1.1s,baz=316,slow=2.6,SNR=5.2
ASAR Alice Springs 53.66 130 P **P** **13 10 53.4 -0.3**
ASAR 13 12 00.4
FORT Forrest 54.18 141 *e*P **P** **13 10 58.1 +0.7**
comp=Z,26nm,0.7s,mb5.3
FORT Forrest 54.18 141 *e*P **P** **13 10 57.7 +0.3**
comp=Z,38nm,0.8s,mb5.4
MALT Malatya 54.72 309 *e*P **P** **13 11 01.2 -0.1**
comp=Z,30nm,1.5s,mb5.1
MALT Malatya 54.72 309 *e*P **P** **13 11 01.2 -0.1**
MALT pmax pmax
comp=Z,30nm,1.5s,mb5.1
MALT Malatya 54.72 309 ⇑*i*P **P** **13 11 02.2 +0.9**
SOKR Solikamsk 55.10 339 *e*P **P** **13 11 05.1 +1.4**
SOKR pmax pmax
comp=Z,40nm,1.7s,mb5.2
SOKR MLR MLR
comp=Z,1μm,19.0s,MS5.0
KMBO Kilima Mbogo 55.55 261 *e*P **P** **13 11 08.6 +0.8**
comp=Z,12nm,1.2s,mb4.8
KMBO Kilima Mbogo 55.55 261 P **P** **13 11 08.7 +1.0**
comp=Z,6.8nm,1.0s,mb4.6,baz=180,slow=24,SNR=7.9
KMBO Kilima Mbogo 55.55 261 *e*P **P** **13 11 08.6 +0.9**
KMBO pmax pmax
comp=Z,11nm,1.2s
YSS Yuzh-Sakhalins 55.84 40 *e*P **P** **13 11 09.1 -0.1**
comp=Z,22nm,0.9s,mb5.2
YSS Yuzh-Sakhalins 55.84 40 ⇑*i*P **P** **13 11 08.5 -0.7**
YSS *e* pP 13 11 16.0 -0.9
YSS MLR MLR
comp=Z,1μm,13.0s,MS5.1
YSS MLR MLR
comp=N,1μm,15.0s,MS5.2
YSS MLR MLR
comp=E,1μm,14.0s,MS5.2
VRHR Novokhopersk 57.09 325 *e*P **P** **13 11 18.1 0.0**
VRHR pmax pmax
comp=Z,20nm,0.6s,mb5.3
VRHR pmax pmax
comp=N,6.0nm,0.8s
VRHR pmax pmax
comp=E,6.0nm,0.4s
YAK Yakutsk 57.85 20 *e*P **P** **13 11 22.5 -0.7**
comp=E,24nm,0.7s,mb5.3
YAK Yakutsk 57.85 20 *e*P **P** **13 11 22.2 -1.0**
YAK *e**PP pP 13 11 33.4 +2.4
YAK *e* 13 12 11.3
YAK *e* 13 13 35.8
YAK *e*S **S** **13 19 20.0 -1.1**
YAK *e* 13 21 10.9
YAK pmax pmax
comp=Z,17nm,0.9s,mb5.1
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=N,6.0nm,1.0s
YAK pmax pmax
comp=Z,24nm,1.7s,mb5.0
YAK pmax pmax
comp=N,12nm,1.4s
YAK pmax pmax
comp=E,14nm,1.6s
YAK smax
comp=E,103nm,2.3s
YAK smax
comp=N,57nm,2.0s
YAK MLR MLR
comp=Z,774nm,14.0s,MS5.0
YAK MLR MLR
comp=N,776nm,18.0s,MS5.0
YAK MLR MLR
comp=E,512nm,14.0s,MS5.0
VSR Storozhevoye 58.55 324 *e*P **P** **13 11 27.9 -0.4**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VSR pmax pmax
comp=N,4.0nm,0.7s
VSR pmax pmax
comp=E,6.0nm,0.5s
PMG Port Moresby 58.66 108 *e*P **P** **13 11 31.0 +1.3**
BR131 Keskin Array S 58.68 310 *e*P **P** **13 11 27.8 -1.7**
BRTR Keskin Array B 58.68 310 P **P** **13 11 27.8 -1.7**
comp=E,5.8nm,0.7s,mb4.7,baz=124,slow=7.7,SNR=27
BRTR LR LR 13 39 16.6
comp=E,311nm,19.9s,MS4.4,baz=204,slow=39
SIM Simferopol' **59.61 316** *e*P **P** **13 11 36.0 +0.2**
SIM pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
BBOO Buckleboo 60.64 138 *e*P **P** **13 11 42.9 0.0**
comp=Z,19nm,1.0s,mb5.2
MOS Moscow 61.25 328 *e*P **P** **13 11 46.8 0.0**
MOS *e* 13 12 28.7
MOS *e*S **S** **13 20 05.3 +0.1**
MOS pmax pmax
comp=Z,54nm,0.9s,mb5.7
OBN Obninsk 61.55 328 P **P** **13 11 50.0 +1.2**
OBN *i* 13 12 00.2
OBN *i* 13 12 31.9
OBN *e*S **S** **13 20 08.1 -0.9**
OBN *i* 13 20 19.6
OBN pmax pmax
comp=Z,53nm,1.7s,mb5.4
CTA Charters Tower 61.83 120 *e*P **P** **13 11 51.6 +0.3**
comp=Z,14nm,1.2s,mb5.0
CTA Charters Tower 61.83 120 LR LR 13 40 57.4
comp=Z,687nm,19.8s,MS4.8,baz=289,slow=38
CTAO Charters Tower 61.83 120 *e*P **P** **13 11 51.2 -0.1**
comp=Z,40nm,1.3s,mb5.4
CTAO Charters Tower 61.83 120 *e*P **P** **13 11 51.2 -0.1**

CTAO pmax pmax
comp=Z,40nm,1.3s,mb5.4
KLMR Klimovskoe 62.68 334 *eP* **P 13 11 56.5 +0.2**
KLMR pmax pmax
comp=Z,76nm,1.9s,mb5.5
QLP Quilpie 63.13 127 *eP* **P 13 12 00.6 +0.8**
TIRR Tirgusor 63.45 314 ⇑*P* **P 13 12 01.6 -0.2**
TIRR Tirgusor 63.45 314 ⇑*iP* **P 13 12 01.6 -0.2**
STKA Stephens Creek 63.90 134 *eP* **P 13 12 05.1 +0.3**
comp=Z,14nm,0.8s,mb5.0
STKA Stephens Creek 63.90 134 *eP* **P 13 12 04.7 -0.1**
comp=Z,4.9nm,0.9s,mb4.5
STKA Stephens Creek 63.90 134 P **P 13 12 04.0 -0.8**
comp=Z,7.0nm,0.5s,mb5.0,baz=314,slow=5.5,SNR=19
STKA PcP PcP 13 12 38.9 -1.5
comp=Z,14nm,1.1s,baz=283,slow=8.8,SNR=2.8
STKA LR LR 13 41 00.4
comp=Z,698nm,21.6s,MS4.8,baz=299,slow=37
AKASG Malin Array Be 64.31 321 P **P 13 12 05.7 -1.6**
comp=Z,4.1nm,0.6s,mb4.6,baz=89,slow=5.1,SNR=13
AKASG PcP PcP 13 12 40.8 -1.0
comp=Z,0.4nm,0.2s,baz=94,slow=4.4,SNR=4.9
AKASG LR LR 13 42 15.8
comp=Z,612nm,21.6s,MS4.8,baz=95,slow=38
AKASG Malin Array Be 64.31 321 P **P 13 12 05.7 -1.6**
AKASG 13 12 40.8
TIXI Tiksi 64.69 12 *eP* **P 13 12 08.7 -0.7**
TIXI pmax pmax
comp=Z,46nm,1.9s,mb5.2
TIXI MLR MLR
comp=Z,587nm,16.0s,MS4.9
VRI Vrincioaia 64.89 316 ⇑*iP* **P 13 12 11.9 +0.8**
PLOR Plostina 64.94 316 ⇑*P* **P 13 12 11.7 +0.2**
PLOR Plostina 64.94 316 ⇑*iP* **P 13 12 11.7 +0.2**
TESR 65.06 316 ⇑*P* **P 13 12 11.6 -0.7**
TESR 65.06 316 ⇑*iP* **P 13 12 11.6 -0.6**
MLR Muntele Rosu 65.36 315 ⇑*P* **P 13 12 14.3 +0.1**
MLR Muntele Rosu 65.36 315 ⇑*iP* **P 13 12 14.3 +0.1**
VOIR 65.98 315 ⇓*P* **P 13 12 18.3 +0.1**
VOIR 65.98 315 ⇓*iP* **P 13 12 18.3 +0.1**
MICGM Minsk 66.09 325 *e* **P 13 12 17.0 -1.7**
MNK Minsk 66.11 325 *eP* **P 13 12 17.0 -1.9**
BURAR Bucovina Array 66.22 317 ⇑*P* **P 13 12 19.7 0.0**
BURAR Bucovina Array 66.22 317 ⇑*iP* **P 13 12 19.7 0.0**
BUR08 Bucovina Ar. S 66.24 317 *eP* **P 13 12 19.3 -0.5**
VTS Vitosha 66.92 312 ⇓*P* **P 13 12 23.9 -0.3**
VTS Vitosha 66.92 312 ⇓*iP* **P 13 12 24.0 -0.2**
JOF Joensuu 67.08 334 *eP* **P 13 12 25.4 +0.5**
JOF pmax pmax
comp=Z,33nm,0.8s,mb5.4
JOF Joensuu 67.08 334 *ep* **P 13 12 25.4 +0.5**
comp=Z,33nm,0.8s,mb5.4
SEY Seymchan 67.12 26 ⇓*iP* **P 13 12 24.9 -0.2**
VAY Valandovo 67.26 310 *eP* **P 13 12 26.3 -0.2**
LVV L'vov 67.38 319 *eP* **P 13 12 26.9 -0.1**
PET Petropavlovsk 67.42 37 *eP* **P 13 12 27.3 0.0**
PET pmax pmax
comp=Z,12nm,0.9s,mb4.9
PET MLR MLR
comp=Z,800nm,18.0s,MS5.0
DRGR 67.78 316 ⇑*P* **P 13 12 29.3 -0.4**
DRGR 67.78 316 ⇑*iP* **P 13 12 29.3 -0.4**
APA Apatity 68.16 339 ⇓*iP* **P 13 12 31.5 -0.1**
APA pmax pmax
comp=Z,26nm,1.0s,mb5.2
APA MLR MLR
comp=Z,1μm,21.0s,MS5.2
LSZ Lusaka 68.18 249 *eP* **P 13 12 32.8 +0.1**
comp=Z,66nm,2.0s,mb5.3
LSZ Lusaka 68.18 249 *eP* **P 13 12 32.8 +0.1**
LSZ pmax pmax
comp=Z,66nm,2.0s,mb5.3
KRUS Krusevo 68.25 310 *eP* **P 13 12 29.4 -3.3**
BZS Buzias 68.39 315 ⇓*P* **P 13 12 32.5 -1.0**
BZS Buzias 68.39 315 ⇓*iP* **P 13 12 32.5 -1.0**
SUW Suwalki 68.66 324 P **P 13 12 34.3 -0.7**
comp=Z,44nm,1.0s,mb5.3
SUW Suwalki 68.66 324 P **P 13 12 34.3 -0.7**
SUW pmax pmax
comp=Z,44nm,1.0s,mb5.3
CRVS Cervenica-Dubn 68.90 318 *eP* **P 13 12 37.1 +0.5**
comp=Z,13nm,1.2s,mb4.7
CRVS Cervenica-Dubn 68.90 318 *eP* **P 13 12 37.1 +0.5**
CRVS pmax pmax
comp=Z,13nm,1.2s,mb4.7
CRVS Cervenica-Dubn 68.90 318 *eP* **P 13 12 37.1 +0.5**
FINES FINESS Array B 68.92 332 P **P 13 12 35.4 -1.1**
comp=Z,15nm,0.9s,mb4.9,baz=106,slow=6.5,SNR=22
KAF Kangasniemi 69.00 333 *eP* **P 13 12 37.2 +0.2**
KAF pmax pmax
comp=Z,37nm,1.2s,mb5.2
KAF Kangasniemi 69.00 333 *ep* **P 13 12 37.2 +0.2**
comp=Z,37nm,1.2s,mb5.2
STHS Stebnicka Huta 69.11 319 *eP* **P 13 12 40.4 +2.5**
comp=Z,5.7nm,0.9s,mb4.5
STHS Stebnicka Huta 69.11 319 *eP* **P 13 12 40.4 +2.5**
STHS pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
STHS Stebnicka Huta 69.11 319 *eP* **P 13 12 40.4 +2.5**
KECS Kecovo 69.49 318 *eP* **P 13 12 41.4 +1.1**
comp=Z,4.0nm,0.9s,mb4.3
KECS Kecovo 69.49 318 *eP* **P 13 12 41.4 +1.1**
KECS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KECS Kecovo 69.49 318 *eP* **P 13 12 41.4 +1.1**
PSZ Piszkesteto 69.82 317 ⇑*P* **P 13 12 42.2 -0.1**
PSZ Piszkesteto 69.82 317 ⇑*iP* **P 13 12 42.2 -0.1**
OJC Ojcow 70.14 319 *eP* **P 13 12 44.1 -0.1**
VYHS Vyhne 70.58 318 *eP* **P 13 12 46.9 -0.1**
comp=Z,3.8nm,1.2s,mb4.2
VYHS Vyhne 70.58 318 *eP* **P 13 12 46.9 -0.1**
ARMA Armidale 70.66 128 *eP* **P 13 12 49.4 +1.6**
OKC Ostrava-Krasne 71.16 319 *eP* **P 13 12 50.1 -0.4**
OKC *e* pP 13 12 56.4 -2.0
OKC Ostrava-Krasne 71.16 319 *eP* **P 13 12 50.1 -0.4**
OKC *epP* pP 13 12 56.4 -2.0
KEV Kevo 71.17 341 *eP* **P 13 12 50.9 +0.8**
KEV Kevo 71.17 341 *ep* **P 13 12 50.9 +0.8**
MORC Moravsky Berou 71.54 319 *eP* **P 13 12 52.9 +0.1**
comp=Z,18nm,1.3s,mb4.8
MORC Moravsky Berou 71.54 319 *eP* **P 13 12 52.9 +0.1**
MORC pmax pmax
comp=Z,18nm,1.3s,mb4.8
MORC Moravsky Berou 71.54 319 ⇑*iP* **P 13 12 53.3 +0.5**
TIP Timpagrande 71.59 308 P **P 13 12 53.5 +0.3**
comp=Z,28nm,1.4s,mb5.0
ARCES ARCESS Array B 71.59 340 P **P 13 12 52.3 -0.4**
comp=Z,6.4nm,0.6s,mb4.7,baz=90,slow=6.9,SNR=54
ZST Bratislava 71.71 317 *eP* **P 13 12 54.3 +0.5**
comp=Z,12nm,1.2s,mb4.7
ZST Bratislava 71.71 317 *eP* **P 13 12 54.3 +0.5**
ZST pmax pmax
comp=Z,12nm,1.2s,mb4.7
ZST Bratislava 71.71 317 *eP* **P 13 12 54.3 +0.5**
DPC Dobruska-Polom 72.37 319 *eP* **P 13 12 57.7 0.0**
DPC *e* pP 13 13 03.4 -2.3
DPC Dobruska-Polom 72.37 319 *eP* **P 13 12 57.7 0.0**
DPC *epP* pP 13 13 03.4 -2.3
KSP Ksiaz 72.42 320 *eP* **P 13 12 58.1 0.0**
CONA Conrad Observa 72.52 317 ⇑*iP* **P 13 12 59.9 +1.2**
comp=Z,7.2nm,1.0s,mb4.6
UPC Upice 72.58 320 *eP* **P 13 12 53.1 -5.9**
UPC *e* pP 13 12 59.6 -7.3
UPC Upice 72.58 320 *eP* **P 13 12 59.6 +0.6**
ARSA Arzberg 72.72 316 ⇑*iP* **P 13 12 59.3 -0.6**
comp=Z,7.9nm,0.9s,mb4.6
BOJS Bojanci 72.84 314 *iP* **P 13 13 00.1 -0.5**
PERS Pernice 72.97 315 *iP* **P 13 13 00.8 -0.6**
SOKA Soboth 73.03 316 ⇑*iP* **P 13 13 01.0 -0.8**
comp=Z,15nm,1.2s,mb4.8
VISS Visnje 73.14 315 *iP* **P 13 13 01.4 -1.0**
PRU Pruhonice 73.49 319 *eP* **P 13 13 05.1 +0.7**
PRU *e* pP 13 13 11.8 -0.6
PRU Pruhonice 73.49 319 *eP* **P 13 13 05.1 +0.7**
PRU *ex* x 13 13 11.8
PVCC Panska Ves 73.50 320 *eP* **P 13 13 04.7 +0.3**
PVCC Panska Ves 73.50 320 *eP* **P 13 13 04.7 +0.3**
JAVS Javornik 73.69 315 *iP* **P 13 13 06.1 +0.5**
LBTB Lobatse 73.75 240 *eP* **P 13 13 07.4 +1.1**
comp=Z,14nm,0.8s,mb4.9
LBTB Lobatse 73.75 240 *eP* **P 13 13 07.4 +1.1**
LBTB pmax pmax
comp=Z,14nm,0.8s,mb4.9
BRG Berggiesshubel 73.91 320 *eP* **P 13 13 07.2 +0.3**
comp=Z,13nm,0.9s,mb4.9
BRG Berggiesshubel 73.91 320 *eP* **P 13 13 07.2 +0.3**
BRG pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
GEC2 GERESS Array S 74.00 318 *eP* **P 13 13 07.9 +0.5**
comp=Z,8.0nm,0.8s,mb4.7
GEC2 GERESS Array S 74.00 318 *eP* **P 13 13 07.9 +0.5**
GEC2 pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
KHC Kasperske Hory 74.09 318 *eP* **P 13 13 07.6 -0.3**
comp=Z,5.7nm,0.8s,mb4.5
KHC Kasperske Hory 74.09 318 *eP* **P 13 13 07.5 -0.4**
KHC *e* pP 13 13 14.2 -1.7
KHC Kasperske Hory 74.09 318 *eP* **P 13 13 07.5 -0.4**
KHC *epP* pP 13 13 14.2 -1.7
CLL Collm 74.52 320 *eP* **P 13 13 10.7 +0.3**
comp=Z,21nm,1.5s,mb4.8
CLL Collm 74.52 320 ⇓*iP* **P 13 13 09.8 -0.6**
comp=Z,22nm,1.5s,mb4.9
CLL LR LR
comp=Z,600nm,20.0s,MS4.9
CLL Collm 74.52 320 ⇓*iP* **P 13 13 09.8 -0.6**
CLL pmax pmax
comp=Z,22nm,1.5s,mb4.9
CLL MLR MLR
comp=Z,600nm,20.0s,MS4.9
CLL Collm 74.52 320 ⇓*iP* **P 13 13 09.8 -0.6**
comp=Z,22nm,1.5s,mb4.9
CLL *i* (sP) sP 13 13 16.3 -5.0
CLL *e* 13 13 25.0
CLL *ePP* PP 13 15 55.0 -1.9
CLL Lm 13 47 00.0
comp=Z,600nm,20.0s
WET Wettzell 74.55 318 *eP* **P 13 13 11.2 +0.6**
comp=Z,18nm,1.5s,mb4.8
WET Wettzell 74.55 318 *eP* **P 13 13 11.2 +0.6**
WET pmax pmax
comp=Z,18nm,1.5s,mb4.8
HFS Hagfors 74.64 329 P **P 13 13 10.6 -0.3**
comp=Z,9.9nm,0.7s,mb4.8,baz=106,slow=3.2,SNR=14
WERN Wernitzgruen 74.89 319 *eP* **P 13 13 12.9 +0.3**
GUNZ Gunzen 74.92 319 *eP* **P 13 13 13.6 +0.9**
comp=Z,23nm,1.5s,mb4.9
WERD Werda 74.94 319 *eP* **P 13 13 12.5 -0.3**
comp=Z,25nm,1.8s,mb4.8
BOSA Boshof 75.31 236 *eP* **P 13 13 16.6 +1.2**
comp=Z,28nm,1.0s,mb5.2
BOSA Boshof 75.31 236 P **P 13 13 16.5 +1.2**
comp=Z,26nm,1.0s,mb5.1,baz=64,slow=7.5,SNR=16
BOSA Boshof 75.31 236 *eP* **P 13 13 16.6 +1.2**
BOSA pmax pmax
comp=Z,28nm,1.0s,mb5.2
MOX Moxa 75.39 320 *eP* **P 13 13 14.6 -0.8**
comp=Z,14nm,1.3s,mb4.7
MOX Moxa 75.39 320 *eP* **P 13 13 15.6 +0.2**
comp=Z,7.0nm,0.8s,mb4.6
MOX Moxa 75.39 320 *eP* **P 13 13 14.6 -0.8**
MOX pmax pmax
comp=Z,14nm,1.3s,mb4.7
GRA1 Grafenberg Arr 75.64 319 *eP* **P 13 13 17.1 +0.3**
comp=Z,59nm,1.6s,mb5.3
GRF Grafenberg Arr 75.64 319 *eP* **P 13 13 17.1 +0.3**
comp=Z,59nm,1.6s,mb5.3
GRF Grafenberg Arr 75.64 319 *eP* **P 13 13 17.1 +0.3**
GRF pmax pmax
comp=Z,59nm,1.6s,mb5.3
GRF Grafenberg Arr 75.64 319 *eP* **P 13 13 17.1 +0.3**
GRF pmax pmax
comp=Z,59nm,1.6s,mb5.3
MOTA Moosalm 75.73 316 ⇑*iP* **P 13 13 15.8 -1.6**
comp=Z,12nm,1.1s,mb4.7
NOA NORSAR Array B 75.92 330 P **P 13 13 17.0 -1.2**
comp=Z,6.1nm,0.7s,mb4.6,baz=93,slow=5.7,SNR=20
RETA Reutte 75.96 316 ⇑*iP* **P 13 13 18.3 -0.5**
comp=Z,10nm,0.8s,mb4.8
CLZ Clausthal 76.17 321 *eP* **P 13 13 19.8 -0.1**
comp=Z,15nm,0.8s,mb5.0
CLZ Clausthal 76.17 321 *eP* **P 13 13 19.8 -0.1**
CLZ pmax pmax
comp=Z,15nm,0.8s,mb5.0
BSEG Bad Segeberg 76.21 323 *eP* **P 13 13 20.2 +0.2**
comp=Z,33nm,1.2s,mb5.1
NRDL Niedersach Rie 76.33 321 *eP* **P 13 13 20.8 0.0**
comp=Z,27nm,1.5s,mb5.0
SPITS Spitsbergen Ar 76.35 348 P **P 13 13 20.6 +0.1**
comp=Z,16nm,0.7s,mb5.0,baz=106,slow=4.2,SNR=12
DAVA Damuels 76.56 316 ⇑*iP* **P 13 13 22.3 +0.1**
comp=Z,20nm,1.2s,mb4.9
KBS Kingsbay 77.36 349 *eP* **P 13 13 27.7 +1.6**
TNS Taunus Mts 77.42 319 *eP* **P 13 13 27.4 +0.5**
comp=Z,39nm,1.7s,mb5.1
TNS Taunus Mts 77.42 319 *eP* **P 13 13 27.4 +0.5**
TNS pmax pmax
comp=Z,39nm,1.7s,mb5.1
BFO Black Forest 77.57 317 *eP* **P 13 13 28.1 +0.3**
comp=Z,7.0nm,1.0s,mb4.5
BFO Black Forest 77.57 317 *eP* **P 13 13 28.1 +0.3**
BFO pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KEST Kesra 77.60 304 *eP* **P 13 13 27.3 -1.0**
KEST Kesra 77.60 304 P **P 13 13 27.2 -1.0**
comp=Z,4.3nm,0.9s,mb4.4,baz=256,slow=1.6,SNR=8.8
CDF Champ du Feu 78.27 317 *eP* **P 13 13 30.8 -0.9**
comp=Z,20nm,1.1s,mb4.7
CDF Champ du Feu 78.27 317 *eP* **P 13 13 30.8 -0.9**
comp=Z,9.8nm,1.1s,mb4.7
CDF Champ du Feu 78.27 317 *eP* **P 13 13 30.8 -0.9**
CDF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
CASY Casey 78.27 172 *eP* **P 13 13 31.1 -0.1**
comp=Z,5.0nm,0.8s,mb4.5
SBF Sospel 78.45 313 *eP* **P 13 13 31.8 -1.0**
comp=Z,29nm,0.9s,mb4.9
SBF Sospel 78.45 313 *eP* **P 13 13 31.8 -1.0**
comp=Z,14nm,0.9s,mb4.9
SBF Sospel 78.45 313 *eP* **P 13 13 31.8 -1.0**
SBF pmax pmax
comp=Z,15nm,0.9s,mb4.9
HINF Hinteralfeld 78.59 317 *eP* **P 13 13 32.5 -1.0**
LPG La Plagne 78.82 314 *eP* **P 13 13 34.5 -0.3**
comp=Z,22nm,0.8s,mb4.8
LPG La Plagne 78.82 314 *eP* **P 13 13 34.5 -0.3**
comp=Z,11nm,0.8s,mb4.8
LPG La Plagne 78.82 314 *eP* **P 13 13 34.5 -0.3**
LPG pmax pmax
comp=Z,11nm,0.8s,mb4.8
LPL La Plagne 78.83 314 *eP* **P 13 13 34.5 -0.4**
comp=Z,31nm,0.8s,mb5.0
LPL La Plagne 78.83 314 *eP* **P 13 13 34.5 -0.4**
comp=Z,15nm,0.8s,mb5.0
LPL La Plagne 78.83 314 *eP* **P 13 13 34.5 -0.4**
LPL pmax pmax
comp=Z,15nm,0.8s,mb5.0
MBDF Montbardon 78.86 314 *eP* **P 13 13 33.7 -1.4**
comp=Z,15nm,0.8s,mb4.7
MBDF Montbardon 78.86 314 *eP* **P 13 13 33.7 -1.4**
comp=Z,7.5nm,0.8s,mb4.7
MBDF Montbardon 78.86 314 *eP* **P 13 13 33.7 -1.4**
MBDF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
HAU Haudompre 78.91 317 *eP* **P 13 13 34.4 -0.9**
comp=Z,35nm,0.9s,mb5.0
HAU Haudompre 78.91 317 *eP* **P 13 13 34.4 -0.9**
comp=Z,18nm,0.9s,mb5.0
HAU Haudompre 78.91 317 *eP* **P 13 13 34.4 -0.9**
HAU pmax pmax
comp=Z,18nm,0.9s,mb5.0
TSUM Tsumeb 79.02 248 LR LR 13 45 49.6
comp=Z,413nm,19.6s,MS4.8,baz=319,slow=34
FRF La Foret Royal 79.04 312 *eP* **P 13 13 35.3 -0.8**
comp=Z,43nm,1.3s,mb4.9
FRF La Foret Royal 79.04 312 *eP* **P 13 13 35.3 -0.8**
comp=Z,22nm,1.3s,mb4.9
FRF La Foret Royal 79.04 312 *eP* **P 13 13 35.3 -0.8**
FRF pmax pmax
comp=Z,21nm,1.3s,mb4.9
LMR La Mourre 79.16 312 *eP* **P 13 13 35.8 -0.9**
comp=Z,42nm,1.2s,mb4.9
LMR La Mourre 79.16 312 *eP* **P 13 13 35.8 -0.9**
comp=Z,21nm,1.2s,mb4.9
LMR La Mourre 79.16 312 *eP* **P 13 13 35.8 -0.9**
LMR pmax pmax
comp=Z,21nm,1.2s,mb4.9
CABF La Chapelle 79.19 316 *eP* **P 13 13 36.5 -0.3**
comp=Z,66nm,1.3s,mb5.1
CABF La Chapelle 79.19 316 *eP* **P 13 13 36.5 -0.3**
comp=Z,33nm,1.3s,mb5.1
CABF La Chapelle 79.19 316 *eP* **P 13 13 36.5 -0.3**
CABF pmax pmax
comp=Z,33nm,1.3s,mb5.1
ORIF Oris-en-Rattie 79.48 314 *eP* **P 13 13 37.3 -1.1**
comp=Z,11nm,0.8s,mb4.5
ORIF Oris-en-Rattie 79.48 314 *eP* **P 13 13 37.3 -1.1**
comp=Z,5.3nm,0.8s,mb4.5
ORIF Oris-en-Rattie 79.48 314 *eP* **P 13 13 37.3 -1.1**
ORIF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MEZF Maizieres J'vi 79.74 318 *eP* **P 13 13 39.1 -0.7**
comp=Z,40nm,1.2s,mb4.9
MEZF Maizieres J'vi 79.74 318 *eP* **P 13 13 39.1 -0.7**
comp=Z,40nm,1.2s,mb5.2
GIVF Givet 79.75 319 *eP* **P 13 13 39.2 -0.6**
SMRF Simiane la Rot 79.78 313 *eP* **P 13 13 39.8 -0.3**
comp=Z,11nm,0.8s,mb4.8
SMRF Simiane la Rot 79.78 313 *eP* **P 13 13 39.8 -0.3**
comp=Z,11nm,0.8s,mb4.8
BAIF Baives 80.15 319 *eP* **P 13 13 41.6 -0.3**
comp=Z,18nm,0.9s,mb4.7
BAIF Baives 80.15 319 *eP* **P 13 13 41.6 -0.3**
comp=Z,8.9nm,0.9s,mb4.7
BAIF Baives 80.15 319 *eP* **P 13 13 41.6 -0.3**
BAIF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
VIVF Saint-Julien-l 80.34 314 *eP* **P 13 13 42.5 -0.6**
comp=Z,38nm,1.0s,mb5.0
VIVF Saint-Julien-l 80.34 314 *eP* **P 13 13 42.5 -0.6**
comp=Z,19nm,1.0s,mb5.0
VIVF Saint-Julien-l 80.34 314 *eP* **P 13 13 42.5 -0.6**
VIVF pmax pmax
comp=Z,19nm,1.0s,mb5.0
SSB Saint Sauveur 80.39 314 *eP* **P 13 13 42.6 -0.8**
comp=Z,12nm,0.8s,mb4.9
SSB Saint Sauveur 80.39 314 *eP* **P 13 13 42.6 -0.7**
SSB pmax pmax
comp=Z,12nm,0.8s,mb4.9
LOR Lormes 80.65 316 *eP* **P 13 13 43.8 -0.9**
comp=Z,34nm,1.0s,mb4.9
LOR Lormes 80.65 316 *eP* **P 13 13 43.8 -0.9**
comp=Z,17nm,1.0s,mb4.9
LOR Lormes 80.65 316 *eP* **P 13 13 43.8 -0.9**
LOR pmax pmax
comp=Z,17nm,1.0s,mb4.9
SMF Signal de Mont 80.73 316 *eP* **P 13 13 44.1 -1.1**
comp=Z,25nm,0.8s,mb4.9
SMF Signal de Mont 80.73 316 *eP* **P 13 13 44.1 -1.1**
comp=Z,12nm,0.8s,mb4.9
SMF Signal de Mont 80.73 316 *eP* **P 13 13 44.1 -1.1**
SMF pmax pmax
comp=Z,12nm,0.8s,mb4.9
SSF Saint Saulge 80.92 316 *eP* **P 13 13 45.4 -0.7**
comp=Z,11nm,0.8s,mb4.5
SSF Saint Saulge 80.92 316 *eP* **P 13 13 45.4 -0.7**
comp=Z,5.6nm,0.8s,mb4.5
SSF Saint Saulge 80.92 316 *eP* **P 13 13 45.4 -0.7**
SSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
LASF Ste Croix 81.00 313 *eP* **P 13 13 46.3 -0.4**
comp=Z,36nm,0.9s,mb5.0
AVF Avril sur Loir 81.05 316 *eP* **P 13 13 45.9 -1.0**
comp=Z,24nm,0.9s,mb4.8
AVF Avril sur Loir 81.05 316 *eP* **P 13 13 45.9 -1.0**
comp=Z,12nm,0.9s,mb4.8
AVF Avril sur Loir 81.05 316 *eP* **P 13 13 45.9 -1.0**
AVF pmax pmax
comp=Z,12nm,0.9s,mb4.8
MAW Mawson 81.10 191 *eP* **P 13 13 46.3 -0.3**
comp=Z,2.9nm,1.2s,mb4.1
MAW Mawson 81.10 191 P **P 13 13 46.6 +0.1**
comp=Z,5.2nm,0.8s,mb4.5,baz=348,slow=5.5,SNR=11
MAW LR LR 13 46 10.6
comp=Z,574nm,18.8s,MS5.0,baz=22,slow=33
BGF Bois d'Agland 81.42 316 *eP* **P 13 13 48.4 -0.4**
TCF Toulx Ste Croi 81.89 316 *eP* **P 13 13 50.9 -0.4**
comp=Z,69nm,1.6s,mb5.0
TCF Toulx Ste Croi 81.89 316 *eP* **P 13 13 50.9 -0.4**
comp=Z,34nm,1.6s,mb5.0
TCF Toulx Ste Croi 81.89 316 *eP* **P 13 13 50.9 -0.4**
TCF pmax pmax
comp=Z,34nm,1.6s,mb5.0
CAF Calviac 82.17 314 *eP* **P 13 13 52.6 -0.2**
comp=Z,18nm,1.1s,mb4.6
CAF Calviac 82.17 314 *eP* **P 13 13 52.6 -0.2**
comp=Z,9.3nm,1.1s,mb4.6
CAF Calviac 82.17 314 *eP* **P 13 13 52.6 -0.2**
CAF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
MTLF Montolieu 82.27 313 *eP* **P 13 13 53.0 -0.4**
comp=Z,26nm,0.8s,mb4.9
MTLF Montolieu 82.27 313 *eP* **P 13 13 53.0 -0.4**
comp=Z,13nm,0.8s,mb4.9
MTLF Montolieu 82.27 313 *eP* **P 13 13 53.0 -0.4**
MTLF pmax pmax
comp=Z,13nm,0.8s,mb4.9
TAM Tamanrasset 82.44 292 *eP* **P 13 13 55.3 +0.6**
comp=Z,16nm,0.9s,mb5.0
TAM Tamanrasset 82.44 292 *eP* **P 13 13 55.3 +0.6**
TAM pmax pmax
comp=Z,16nm,0.9s,mb5.0
RJF Les Rejaudoux 82.50 315 *eP* **P 13 13 54.5 -0.1**
comp=Z,34nm,1.0s,mb5.0
RJF Les Rejaudoux 82.50 315 *eP* **P 13 13 54.5 -0.1**
comp=Z,17nm,1.0s,mb5.0
RJF Les Rejaudoux 82.50 315 *eP* **P 13 13 54.5 -0.1**
RJF pmax pmax
comp=Z,17nm,1.0s,mb5.0
CLLI Llivia 82.57 312 P **P 13 13 55.0 +0.1**
EMIR Miracle 82.98 311 P **P 13 13 57.1 0.0**
comp=Z,24nm,0.6s,mb5.4
LFF La Frestale 83.10 314 *eP* **P 13 13 57.5 -0.2**
comp=Z,36nm,1.1s,mb5.0
LFF La Frestale 83.10 314 *eP* **P 13 13 57.5 -0.2**
comp=Z,18nm,1.0s,mb5.0
LFF La Frestale 83.10 314 *eP* **P 13 13 57.5 -0.2**
LFF pmax pmax
comp=Z,18nm,1.0s,mb5.1
LDF La Druitiere 83.14 318 *eP* **P 13 13 56.9 -0.9**
comp=Z,14nm,0.8s,mb4.7
LDF La Druitiere 83.14 318 *eP* **P 13 13 56.9 -0.9**
comp=Z,6.8nm,0.8s,mb4.7
LDF La Druitiere 83.14 318 *eP* **P 13 13 56.9 -0.9**
LDF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
CSOR Sort 83.20 312 P **P 13 13 58.7 +0.5**
comp=Z,16nm,1.0s,mb5.0
FLN La Foliniere 83.35 318 *eP* **P 13 13 58.1 -0.8**
comp=Z,18nm,0.8s,mb4.9
FLN La Foliniere 83.35 318 *eP* **P 13 13 58.1 -0.8**
comp=Z,8.9nm,0.8s,mb4.8
FLN La Foliniere 83.35 318 *eP* **P 13 13 58.1 -0.8**
FLN pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
EPOB Poblet 83.39 311 P **P 13 13 59.6 +0.3**
comp=Z,29nm,0.8s,mb5.3
MFF Saint Martin d 83.46 316 *eP* **P 13 13 58.7 -0.8**
comp=Z,25nm,0.8s,mb5.0
MFF Saint Martin d 83.46 316 *eP* **P 13 13 58.7 -0.8**
comp=Z,12nm,0.8s,mb5.0
MFF Saint Martin d 83.46 316 *eP* **P 13 13 58.7 -0.8**
MFF pmax pmax
comp=Z,12nm,0.8s,mb5.0
GRR Gorron 83.66 318 *eP* **P 13 13 59.5 -0.9**
comp=Z,39nm,1.1s,mb5.2
GRR Gorron 83.66 318 *eP* **P 13 13 59.5 -0.9**
comp=Z,20nm,1.1s,mb5.2
GRR Gorron 83.66 318 *eP* **P 13 13 59.5 -0.9**
GRR pmax pmax
comp=Z,20nm,1.1s,mb5.2
EPF Esparros 83.68 312 *eP* **P 13 13 59.6 -1.1**
EBIE Bielsa 83.88 312 P **P 13 14 02.5 +0.8**
comp=Z,7.5nm,0.8s,mb4.9
ERTA Horta de San J 84.01 310 P **P 13 14 02.9 +0.5**
comp=Z,29nm,1.1s,mb5.3
ETSF Etsaut 84.35 312 *eP* **P 13 14 04.0 -0.1**
comp=Z,14nm,0.9s,mb4.8
ETSF Etsaut 84.35 312 *eP* **P 13 14 04.0 -0.1**
comp=Z,6.8nm,0.9s,mb4.8
ETSF Etsaut 84.35 312 *eP* **P 13 14 04.0 -0.1**
ETSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
ESAC San Caprasio 84.48 311 P **P 13 14 04.9 +0.1**
comp=Z,34nm,0.9s,mb5.5
EMOS Mosqueruela 84.71 310 P **P 13 14 06.6 +0.6**

	comp=Z,35nm,1.0s,mb5.4								
SJPF	**Ste Jean**	**84.80**	**313**	*e*P		**P**	**13 14 06.3**	**-0.1**
	comp=Z,7.1nm,0.6s,mb4.7								
SJPF	**Ste Jean**	**84.80**	**313**	*e*P		**P**	**13 14 06.3**	**-0.1**
	comp=Z,3.5nm,0.6s,mb4.7								
SJPF	**Ste Jean**	**84.80**	**313**	*e*P		**P**	**13 14 06.3**	**-0.1**
SJPF				pmax	pmax				
	comp=Z,4.0nm,0.6s,mb4.7								
ECHE	**Chera**	**85.22**	**309**	P		**P**	**13 14 08.2**	**-0.3**
	comp=Z,9.3nm,0.8s,mb5.0								
ECHE	**Chera**	**85.22**	**309**	P		**P**	**13 14 08.2**	**-0.4**
ECHE				pmax	pmax				
	comp=Z,9.0nm,0.8s,mb5.0								
ROSF	**Rostrenen**	**85.25**	**318**	*e*P		**P**	**13 14 07.9**	**-0.6**
	comp=Z,95nm,1.4s,mb5.4								
ROSF	**Rostrenen**	**85.25**	**318**	*e*P		**P**	**13 14 07.9**	**-0.6**
	comp=Z,47nm,1.4s,mb5.4								
ROSF	**Rostrenen**	**85.25**	**318**	*e*P		**P**	**13 14 07.9**	**-0.6**
ROSF				pmax	pmax				
	comp=Z,47nm,1.4s,mb5.4								
EHUE	**Huescar**	**86.80**	**308**	P		**P**	**13 14 16.7**	**+0.3**
	comp=Z,7.8nm,0.9s,mb4.9								
EHUE	**Huescar**	**86.80**	**308**	P		**P**	**13 14 16.7**	**+0.3**
EHUE				pmax	pmax				
	comp=Z,8.0nm,0.9s,mb5.0								
EBER	**Berja**	**87.22**	**307**	P		**P**	**13 14 19.2**	**+0.8**
	comp=Z,5.3nm,0.6s,mb5.0								
GUD	**Guadarrama**	**87.42**	**311**	P		**P**	**13 14 20.0**	**+0.6**
	comp=Z,10nm,0.8s,mb5.1								
GUD	**Guadarrama**	**87.42**	**311**	P		**P**	**13 14 20.0**	**+0.6**
GUD				pmax	pmax				
	comp=Z,11nm,0.8s,mb5.1								
ESDC	**Sonseca Array**	**87.48**	**310**	P		**P**	**13 14 19.6**	**-0.1**
	comp=Z,2.1nm,0.7s,mb4.5,baz=62,slow=4.3,SNR=18								
ESLA	**Sonseca Array**	**87.48**	**310**	*e*P		**P**	**13 14 19.5**	**-0.2**
TORD	**Torodi Ar. Bea**	**87.66**	**283**	P		**P**	**13 14 21.4**	**+0.4**
	comp=Z,4.7nm,0.7s,mb4.8,baz=84,slow=4.4,SNR=20								
SYO	**Syowa Base**	**87.68**	**197**⇑	*e*P		**P**	**13 14 20.2**	**+0.3**
ESPR	**Espera**	**89.55**	**307**	P		**P**	**13 14 30.0**	**+0.5**
	comp=Z,22nm,1.5s,mb5.3								
BORG	**Borgarnes**	**89.70**	**337**	P		**P**	**13 14 32.6**	**+3.0**
	comp=Z,6.8nm,0.9s,mb5.0,baz=359,slow=4.9,SNR=3.9								
EBAD	**Badajoz**	**89.99**	**309**	P		**P**	**13 14 32.0**	**+0.5**
	comp=Z,11nm,1.0s,mb5.2								
ELOB	**Lobios**	**90.00**	**313**	P		**P**	**13 14 30.7**	**-0.8**
	comp=Z,10nm,1.2s,mb5.0								
PCBR	**Castelo Branco**	**90.08**	**311**	*e*P		**P**	**13 14 32.9**	**+1.0**
	comp=Z,16nm,1.3s,mb5.1								
TTA	**Tatalina**	**90.09**	**25**	*e*P		**P**	**13 14 32.6**	**+1.2**
PBAR	**Barrancos**	**90.15**	**309**	*e*P		**P**	**13 14 33.4**	**+1.1**
	comp=Z,32nm,1.3s,mb5.5								
SUMG	**Summit**	**90.62**	**347**	*e*P		**P**	**13 14 34.9**	**+1.1**
	comp=Z,17nm,0.9s,mb5.4								
SUMG	**Summit**	**90.62**	**347**	*i* P		**P**	**13 14 36.1**	**+2.3**
	comp=Z,12nm,0.9s,mb5.2								
EVO	**Evora**	**90.81**	**309**	*e*P		**P**	**13 14 34.4**	**-1.0**
	comp=Z,6.4nm,0.6s,mb4.8								
PBEJ	**Beja**	**90.82**	**309**	*e*P		**P**	**13 14 36.2**	**+0.8**
	comp=Z,19nm,1.5s,mb5.2								
PTOM	**Tomar**	**90.83**	**311**	*e*P		**P**	**13 14 36.9**	**+1.5**
	comp=Z,28nm,1.2s,mb5.5								
PVAQ	**Vaqueiros**	**90.86**	**308**	*e*P		**P**	**13 14 36.3**	**+0.7**
	comp=Z,24nm,1.3s,mb5.4								
PBDV	**Barranco-do-Ve**	**91.07**	**308**	*e*P		**P**	**13 14 37.8**	**+1.2**
	comp=Z,38nm,1.7s,mb5.5								
BPAW	**Bear Paw Mtn.**	**91.57**	**23**	*e*P		**P**	**13 14 39.0**	**+0.7**
	comp=Z,7.0nm,0.7s,mb5.1								
PPLA	**Purkeypile**	**91.67**	**24**	*e*P		**P**	**13 14 40.4**	**+1.6**
	comp=Z,12nm,1.0s,mb5.2								
TRF	**Thorofare Moun**	**92.16**	**23**	*e*P		**P**	**13 14 43.0**	**+2.0**
	comp=Z,4.5nm,0.8s,mb4.8								
RSO	**Redoubt South**	**92.57**	**27**	*e*P		**P**	**13 14 43.2**	**+0.2**
ILAR	**Eielson Array**	**92.74**	**22**	P		**P**	**13 14 43.4**	**-0.4**
	comp=Z,2.2nm,0.7s,mb4.7,baz=298,slow=4.5,SNR=29								
PMR	**Palmer**	**93.56**	**25**	*e*P		**P**	**13 14 47.3**	**-0.3**
	comp=Z,7.7nm,1.0s,mb5.1								
PMR	**Palmer**	**93.56**	**25**	*e*P		**P**	**13 14 47.3**	**-0.3**
PMR				pmax	pmax				
	comp=Z,8.0nm,1.0s,mb5.1								
OHAK	**Old Harbor**	**93.80**	**30**	*e*P		**P**	**13 14 48.7**	**-0.1**
	comp=Z,9.2nm,0.6s,mb5.4								
KDAK	**Kodiak Island**	**93.88**	**29**	*i* P		**P**	**13 14 50.9**	**+1.8**
SEW	**Seward**	**94.18**	**26**	*e*P		**P**	**13 14 50.6**	**+0.1**
INK	**Inuvik**	**94.66**	**15**	P		**P**	**13 14 52.4**	**-0.1**
	comp=Z,1.5nm,0.6s,mb4.6,baz=22,slow=8.2,SNR=3.2								
MENT	**Mentasta**	**94.94**	**22**	*e*P		**P**	**13 14 55.0**	**+1.1**
DBIC	**Dimbokro**	**95.24**	**278**	P		**P**	**13 14 55.7**	**-0.6**
	comp=Z,2.3nm,0.7s,mb4.7,baz=2.3,slow=4.8,SNR=3.8								
DAWY	**Dawson**	**95.78**	**20**	*e*P		**P**	**13 14 58.9**	**+1.2**
EGMT	**Eagleton**	**118.23**	**16**	*e*PKPdf	PKPdf		13 20 19.8	+0.7
MOD	**Modoc**	**119.68**	**27**	PKPdf	PKPdf		13 20 23.5	+1.4
LAO	**LASA Array**	**120.38**	**14**	PKPdf	PKPdf		13 20 24.4	+1.2
HLID	**Hailey**	**120.70**	**22**	*e*PKPdf	PKPdf		13 20 25.1	+1.1
LOHW	**Long Hollow**	**121.97**	**19**	*e*PKPdf	PKPdf		13 20 27.8	+1.4
SNOW	**Snow King Moun**	**122.05**	**19**	*e*PKPdf	PKPdf		13 20 27.6	+1.1
REDW	**Red Top Meadow**	**122.11**	**19**	*e*PKPdf	PKPdf		13 20 27.5	+0.8
NVAR	**Mina Array Bea**	**123.38**	**28**	PKP	PKPdf		13 20 29.7	+0.5
	comp=Z,4.6nm,0.7s,baz=306,slow=1.6,SNR=23								
ECSD	**EROS Data Cent**	**125.02**	**7**	*e*PKPdf	PKPdf		13 20 32.0	-0.2
MSU	**Marysvale**	**125.92**	**23**	*e*PKPdf	PKPdf		13 20 36.2	+2.0
BINY	**Binghamton**	**125.92**	**349**	*e*PKPdf	PKPdf		13 20 35.9	-0.1
SMCO	**Snowmass**	**127.13**	**18**	*e*PKPdf	PKPdf		13 20 38.1	+1.7
ANMO	**Albuquerque**	**131.16**	**20**	*e*PKPdf	PKPdf		13 20 46.5	+2.3
LAZ	**Ladron**	**131.43**	**21**	*e*PKPdf	PKPdf		13 20 47.9	+3.1
BNM	**Barren Site**	**131.83**	**21**	*e*PKPdf	PKPdf		13 20 47.6	+2.1
GDL2	**Guadalupe Moun**	**134.37**	**19**	*e*PKPdf	PKPdf		13 20 51.8	+1.4
MIAR	**Mount Ida**	**134.45**	**6**	*e*PKPdf	PKPdf		13 20 51.7	+1.3
MNTX	**Cornudas Mount**	**134.49**	**21**	*e*PKPdf	PKPdf		13 20 52.0	+1.4
TXAR	**Lajitas Array**	**137.24**	**20**	PKP	PKPdf		13 20 56.9	+1.1
	comp=Z,0.8nm,0.5s,baz=202,slow=0.4,SNR=16								
JCT	**Junction City**	**137.31**	**15**	*e*PKPdf	PKPdf		13 20 57.2	+1.3
CRPR	**Cabo Rojo, PR**	**144.47**	**324**	*e*PKPdf	PKPdf		13 21 08.4	-0.7
SDDR	**Presa de Saban**	**145.89**	**331**	*e*PKPdf	PKPdf		13 21 12.6	+1.1
CPUP	**Villa Florida**	**147.12**	**238**	PKPbc	PKPbc		13 21 15.8	+0.3
	comp=Z,6.2nm,0.6s,baz=82,slow=4.3,SNR=12								
TEIG	**Tepich**	**149.00**	**0**	*e*PKPbc	PKPbc		13 21 22.0	+1.3
ROSC	**El Rosal**	**159.08**	**318**	PKP	PKPdf		13 21 32.7	+1.7
	comp=Z,2.9nm,0.3s,baz=240,slow=22,SNR=3.7								
ROSC				PKPab	PKPab		13 22 09.0	+1.5	
	comp=Z,5.1nm,0.4s,baz=103,slow=22,SNR=3.5								
LPAZ	**La Paz**	**159.80**	**253**	PKP	PKPdf		13 21 32.7	+1.0
	comp=Z,1.7nm,1.0s,baz=75,slow=4.5,SNR=5.4								
LPAZ				PKPab	PKPab		13 22 12.3	+1.6	
	comp=Z,9.7nm,1.1s,baz=90,slow=3.6,SNR=9.9								
LPAZ	**La Paz**	**159.80**	**253**	*e*PKIKP	PKPdf		13 21 32.7	+1.0

*NOU **10** 13:23:36.3±1.4,20°.80S×168°.53E,h10km,MD2.5,ML3.8*
*ISCJB **10** 13:23:39.4±0.8,21°.2S±0°.1×168°.49E±0°.09,h33km, mb4.3/8, Error ellipse: s-maj=18.9km s-min=7.5km az=147.9*
*NEIC **10** 13:23:40.5±0.8,21°.26S×168°.31E,mb4.5/1, Error ellipse: s-maj=19.7km s-min=18.4km az=52.0*
*IDC **10** 13:23:40.1±1.3,21°.35S×168°.39E,h23km±5km,mb4.0/4, mb1 4.1/4,mb1mx3.8/11,mbtmp4.0/4, Error ellipse: s-maj=36.4km s-min=33.8km az=77.0*

ISC 10 13:23:41.4±0.8,21°.2S±0°.1×168°.42E±0°.09,h35km, (h23km±2.1km:pP-P),n22,σ1°00/24,mb4.3/8,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BAYA	**Yate Dam**	**1.71**	**236**	*e*P		**Pn**	**13 24 07.0**	**-1.8**
BAYA				*e*S		**Sn**	**13 24 29.4**	**-0.1**
BAYA				AMP			13 24 30.1	
	comp=Z,194nm,0.7s							
LASL	**Noumea**	**2.03**	**239**	*e*P		**Pn**	**13 24 11.9**	**-1.2**
LASL				*e*S		**Sn**	**13 24 38.6**	**+1.4**
LASL				AMP			13 24 39.5	
	comp=Z,3μm,0.0s							
DZM	**Mont Dzumac**	**2.03**	**244**	*e*P		**Pn**	**13 24 11.5**	**-1.7**
DZM				*e*S		**Sn**	**13 24 37.3**	**-0.1**
DZM				AMP			13 24 48.5	
	comp=Z,9μm,1.6s							
DZM	**Mont Dzumac**	**2.03**	**244**	*e*Pn		**Pn**	**13 24 11.5**	**-1.7**
NORM	**Noumea**	**2.07**	**240**	*e*P		**Pn**	**13 24 12.3**	**-1.4**
NORM				*e*S		**Sn**	**13 24 39.3**	**+1.0**
NORM				AMP			13 24 42.1	
	comp=Z,1μm,2.4s							
NOUC	**Port Laguerre**	**2.16**	**245**	*e*P		**Pn**	**13 24 13.7**	**-1.3**
NOUC				*e*S		**Sn**	**13 24 41.4**	**+0.8**
NOUC				AMP			13 24 57.8	
	comp=Z,420nm,0.7s							
ARMA	**Armidale**	**17.67**	**235**	*e*P		**Pn**	**13 27 49.1**	**+4.3**
RMQ	**Roma**	**18.73**	**250**	*e*P		**Pn**	**13 28 07.1**	**+9.2**
	comp=Z,20nm,1.4s							
CTA	**Charters Tower**	**20.77**	**269**	pP	pP		13 28 24.8	-4.0
	comp=Z,3.3nm,0.8s,baz=131,slow=15,SNR=2.2							
QLP	**Quilpie**	**22.74**	**252**	*e*P		**P**	**13 28 41.5**	**+1.0**
CMSA	**Cobar Meteorol**	**22.78**	**238**	*e*P		**P**	**13 28 41.9**	**+1.0**
MTSU	**Mount Surprise**	**22.90**	**273**	*e*P		**P**	**13 28 42.4**	**+0.1**
	comp=Z,46nm,1.1s,mb4.8							
PMG	**Port Moresby**	**29.59**	**297**	P		**P**	**13 28 49.0**	**-0.3**
STKA	**Stephens Creek**	**26.18**	**240**	*e*P		**P**	**13 29 19.5**	**+6.7**
	comp=Z,3.9nm,0.9s,mb3.9							
STKA	**Stephens Creek**	**26.18**	**240**	pP	pP		13 29 18.3	-4.4
	comp=Z,5.3nm,0.9s,baz=62,slow=14,SNR=3.4							
ASAR	**Alice Springs**	**31.95**	**259**	P		**P**	**13 30 03.5**	**-0.7**
	comp=Z,1.0nm,0.6s,mb3.8,baz=93,slow=11,SNR=27							
ASAR				pP	pP		13 30 10.3	-3.9
	comp=Z,4.8nm,0.9s,baz=86,slow=9.6,SNR=22							
FITZ	**Fitzroy Crossi**	**40.32**	**267**	*e*P		**P**	**13 31 15.5**	**-0.3**
	comp=Z,13nm,0.8s,mb4.7							
SBA	**Scott Base**	**56.70**	**180**	*e*P		**P**	**13 33 21.9**	**+0.8**
	comp=Z,4.8nm,0.9s,mb4.5							
QSPA	**South Pole Qui**	**68.86**	**180**	P		**P**	**13 34 42.1**	**+0.2**
	comp=Z,3.4nm,0.8s,mb4.4,baz=32,slow=1.6,SNR=8.5							
CMAR	**Chiang Mai Arr**	**78.62**	**295**	P		**P**	**13 35 41.5**	**+1.5**
	comp=Z,1.9nm,0.7s,mb4.1,baz=133,slow=4.4,SNR=12							
CMAR				pP	pP		13 35 49.8	-1.3
	comp=Z,1.0nm,0.8s,baz=176,slow=5.1,SNR=4.5							
SONM	**Songino Array**	**88.33**	**323**	P		**P**	**13 36 29.8**	**+0.5**
	comp=Z,0.9nm,0.9s,mb4.0,baz=134,slow=4.3,SNR=4.1							
SONM				pP	pP		13 36 37.2	-3.2
	comp=Z,0.9nm,0.8s,baz=143,slow=5.2,SNR=4.1							
ARCES	**ARCESS Array B**	**126.75**	**345**	PKP	PKPdf		13 42 40.7	+0.2
	comp=Z,1.0nm,0.5s,baz=83,slow=1.0,SNR=12							
ARCES				pPKP	pPKPdf		13 42 48.0	-3.9
	comp=Z,0.7nm,0.5s,baz=96,slow=3.7,SNR=1.4							

*ISCJB **10** 13:24:51.2±0.8,61°.2S±0°.2×26°.5W±0°.4,h10km,mb4.0/5, Error ellipse: s-maj=32.4km s-min=15.5km az=138.4*
*IDC **10** 13:24:54.1±3.2,60°.64S×26°.67W,h0km,mb4.0/4, mb1 4.1/4,mb1mx3.9/12,mbtmp4.0/4, Error ellipse: s-maj=94.8km s-min=31.0km az=177.0*
*NEIC **10** 13:24:55.5±2.2,60°.69S×26°.61W,h10km, Error ellipse: s-maj=68.5km s-min=23.5km az=178.0*

ISC 10 13:24:53.5±0.8,61°.1S±0°.2×26°.5W±0°.4,h10km,n10, σ0°82/9,mb4.0/5,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**12.05**	**150**	*e*P		**Pn**	**13 27 44.9**	**-0.1**
TRQA	**Tornquist**	**31.92**	**300**	*e*P		**P**	**13 31 19.7**	**+0.8**
CFAA	**Coronel Fontan**	**40.09**	**298**	P		**P**	**13 32 28.9**	**+0.1**
	0.2nm,0.3s,mb3.3,baz=148,slow=7.0,SNR=10							
CPUP	**Villa Florida**	**40.55**	**315**	*e*P		**P**	**13 32 31.0**	**-1.7**
	11nm,0.4s,mb4.8							
CPUP	**Villa Florida**	**40.55**	**315**	P		**P**	**13 32 30.6**	**-2.0**
	1.1nm,0.3s,mb3.9,baz=140,slow=6.8,SNR=8.9							
LPAZ	**La Paz**	**53.69**	**308**	P		**P**	**13 34 15.7**	**+0.5**
	1.1nm,0.5s,mb4.1,baz=137,slow=6.0,SNR=15							
DBIC	**Dimbokro**	**69.68**	**23**	P		**P**	**13 36 03.8**	**+0.7**
	2.9nm,0.8s,mb4.3,baz=147,slow=9.0,SNR=3.8							
TORD	**Torodi Ar. Bea**	**77.34**	**28**	P		**P**	**13 36 47.7**	**-0.4**
TORD	**Torodi Ar. Bea**	**77.34**	**28**	P		**P**	**13 36 47.7**	**-0.4**
	1.1nm,0.4s,mb4.2,baz=198,slow=6.3,SNR=16							
ILAR	**Eielson Array**	**153.52**	**304**	PKPbc		PKPbc	13 44 51.8	+1.4
	0.8nm,1.1s,baz=146,slow=1.3,SNR=5.0							

*IDC **10** 13:36:00.4±1.2,10°.82N×91°.71E,h0km,mb3.8/7, mb1 3.8/8,mb1mx3.6/23,mbtmp3.7/8,ML3.3/1, Error ellipse: s-maj=43.7km s-min=20.2km az=58.0*
*NEIC **10** 13:36:02.0±0.6,10°.82N×91°.72E,h10km,mb4.2/2, Error ellipse: s-maj=17.3km s-min=10.3km az=58.0*
*ISCJB **10** 13:36:03.5±0.8,10°.9N±0°.1×91°.8E±0°.2,h33km,mb3.9/9, Error ellipse: s-maj=23.5km s-min=13.9km az=147.8*

ISC 10 13:36:05.6±0.8,10°.9N±0°.1×91°.8E±0°.2,h35km,n12, σ0°28/11,mb3.9/9,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.26**	**42**	Pn		**Pn**	**13 38 30.4**	**0.0**
	0.1nm,0.3s,baz=236,slow=15,SNR=4.1							
MKAR	**Makanchi Array**	**36.72**	**349**	P		**P**	**13 43 09.4**	**0.0**
	1.2nm,0.6s,mb3.9,baz=165,slow=8.8,SNR=6.7							
SONM	**Songino Array**	**38.87**	**16**	P		**P**	**13 43 27.1**	**-0.4**
	0.3nm,0.3s,mb3.4,baz=145,slow=5.3,SNR=3.3							
KURK	**Kurchatov**	**41.19**	**347**	*e*P		**P**	**13 43 47.0**	**+0.2**
	5.5nm,1.5s,mb4.0							
ZALV	**Zalesovo Beam**	**43.34**	**354**	P		**P**	**13 44 04.3**	**+0.1**
	0.9nm,0.5s,mb3.8,baz=160,slow=9.0,SNR=3.1							
FITZ	**Fitzroy Crossi**	**44.10**	**130**	P		**P**	**13 44 10.7**	**-0.1**
	2.5nm,0.9s,mb3.9,baz=233,slow=19,SNR=5.4							
ABKAR	**Akbulak array**	**46.52**	**332**	*e*P		**P**	**13 44 29.2**	**-0.3**
WRAB	**Tennant Creek**	**51.89**	**126**	*e*P		**P**	**13 45 10.9**	**-0.1**
	2.0nm,0.5s,mb4.3							
ASAR	**Alice Springs**	**53.60**	**130**	P		**P**	**13 45 23.9**	**+0.2**
	0.5nm,0.8s,mb3.5,baz=302,slow=7.2,SNR=11							
BRTR	**Keskin Array B**	**58.73**	**310**	P		**P**	**13 45 59.9**	**-0.3**
	0.7nm,0.6s,mb3.9,baz=116,slow=9.8,SNR=4.5							
ARCES	**ARCESS Array B**	**71.69**	**340**	P		**P**	**13 47 24.2**	**+0.6**
	2.0nm,0.9s,mb4.0,baz=90,slow=4.9,SNR=4.8							
TXAR	**Lajitas Array**	**137.37**	**20**	PKP	PKPdf		13 55 28.4	+2.2
	0.0nm,0.3s,baz=270,slow=3.6,SNR=2.5							

*ISCJB **10** 13:40:55.7±2.4,25°.5N±0°.3×59°.8E±0°.2,h10km,mb3.7/6, Error ellipse: s-maj=49.5km s-min=25.3km az=152.2*
*IDC **10** 13:40:56.7±6.9,25°.64N×59°.82E,h0km,mb3.8/3, mb1 3.8/3,mb1mx3.3/23,mbtmp3.8/3, Error ellipse: s-maj=143.5km s-min=48.5km az=124.0*
*NEIC **10** 13:40:57.8±1.9,25°.59N×59°.84E,h10km,mb4.0/2, Error ellipse: s-maj=40.8km s-min=20.2km az=153.0*
*CSEM **10** 13:40:57.8,25°.59N×59°.84E,h10km,mb4.0/2,After NEIC*

ISC 10 13:40:58.1±2.4,25°.6N±0°.3×59°.9E±0°.3,h10km,n11, σ0°22/11,mb3.7/6,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ABKAR	**Akbulak array**	**23.59**	**0**	*e*P		**P**	**13 46 09.1**	**+0.1**
	0.7nm,0.5s,mb3.4							
ABKAR	**Akbulak array**	**23.59**	**0**	*e*P		**P**	**13 46 09.1**	**0.0**
	0.7nm,0.5s,mb3.4							
BRTR	**Keskin Array B**	**26.05**	**309**	P		**P**	**13 46 31.7**	**+0.1**
	0.6nm,0.5s,mb3.4,baz=119,slow=10,SNR=5.0							
BRTR	**Keskin Array B**	**26.05**	**309**	P		**P**	**13 46 31.7**	**+0.1**
TLY	**Talaya**	**42.07**	**40**	*e*P		**P**	**13 48 49.9**	**0.0**
	6.6nm,0.8s,mb4.3							
TLY	**Talaya**	**42.07**	**40**	*e*P		**P**	**13 48 49.9**	**0.0**
	6.6nm,0.8s,mb4.3							
FINES	**FINESS Array B**	**42.46**	**337**	P		**P**	**13 48 52.5**	**-0.5**
	0.8nm,0.4s,mb3.7,baz=132,slow=8.8,SNR=12							
FINES	**FINESS Array B**	**42.46**	**337**	P		**P**	**13 48 52.5**	**-0.4**
ARCES	**ARCESS Array B**	**48.34**	**345**	P		**P**	**13 49 39.7**	**+0.3**
	0.8nm,0.6s,mb3.9,baz=130,slow=8.4,SNR=4.3							
ARCES	**ARCESS Array B**	**48.34**	**345**	P		**P**	**13 49 39.7**	**+0.3**
TORD	**Torodi Ar. Bea**	**55.86**	**269**	P		**P**	**13 50 36.2**	**0.0**
	0.4nm,0.6s,mb3.7,baz=64,slow=6.5,SNR=3.7							

IDC 10 13:47:12.1±3.6,10°.88N×91°.61E,h0km,mb3.6/4, mb1 3.7/4,mb1mx3.4/22,mbtmp3.6/4,Error ellipse: s-maj=144.1km s-min=23.9km az=66.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**36.65**	**349**	P		P	13 54 20.3	-0.1
	0.6nm,0.8s,baz=139,slow=9.5,SNR=2.6							
SONM	**Songino Array**	**38.88**	**16**	P		P	13 54 39.4	+0.2
	0.5nm,0.7s,baz=198,slow=8.3,SNR=4.5							
FITZ	**Fitzroy Crossi**	**44.25**	**130**	P		P	13 55 23.5	-0.1
	2.9nm,1.0s,baz=327,slow=2.9,SNR=5.7							
ASAR	**Alice Springs**	**53.75**	**130**	P		P	13 56 36.5	0.0
	0.2nm,0.5s,baz=308,slow=7.4,SNR=9.9							

IDC 10 13:51:03.3±3.9,10°.56N×91°.11E,h0km,mb3.6/3, mb1 3.7/3,mb1mx3.3/21,mbtmp3.6/3,Error ellipse: s-maj=145.9km s-min=28.6km az=68.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**36.88**	**350**	P		P	13 58 13.4	-0.1
	0.6nm,0.7s,baz=166,slow=8.4,SNR=4.2							
SONM	**Songino Array**	**39.33**	**16**	P		P	13 58 34.3	+0.2
	0.4nm,0.6s,baz=210,slow=5.0,SNR=2.3							
ASAR	**Alice Springs**	**53.92**	**130**	P		P	14 00 28.9	0.0
	0.7nm,0.7s,baz=307,slow=7.2,SNR=12							

HLW 10 14:03:07.9,31°.17N×35°.31E,h8km±28km,Ml2.9,Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AMAG	**Maghara**	**1.88**	**254**	P		Pn	14 03 39.9	-0.4
	baz=255							
HBST	**Basata**	**2.01**	**195**	P		Pn	14 03 42.2	+0.2
	baz=195							
HBST				AMP			14 04 00.0	
	comp=N,120μm,0.4s,logA/T=5.5,baz=195							
HDHB	**Dhahab**	**2.51**	**194**	P		Pn	14 03 48.5	-0.4
	baz=194							
HKAT	**Jabal Katrina**	**2.87**	**204**	P		Pn	14 03 53.3	-0.7
	baz=204							
TR2		**3.10**	**207**	P		Pn	14 03 55.4	-1.6
	baz=207							

*CSEM **10** 14:14:28.6±0.8,35°.20N×33°.25E,h50km±8km,Mw2.6, Error ellipse: s-maj=16.4km s-min=8.1km az=131.0*
*ISCJB **10** 14:14:29.4±1.3,35°.16N±0°.07×33°.18E±0°.07,h50km±11km, Error ellipse: s-maj=12.1km s-min=9.0km az=147.3*
*NEIC **10** 14:14:29.4,35°.11N×33°.16E,h51km,MG2.6(NIC),After NIC.*
*NIC **10** 14:14:29.4±0.3,35°.11N×33°.16E,h51km,ML2.6,MW2.6*
*ISK **10** 14:14:30.4,35°.37N×33°.12E,h14km,MD2.6*

ISC 10 14:14:29.6±1.3,35°.15N±0°.07×33°.18E±0°.08,h49km±12km, n19,σ0°44/29,3C,Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MAMC	**Mammari**	**0.04**	**59**⇑	*i*P		**Pn**	**14 14 37.7**	**+0.6**
MAMC	**Mammari**	**0.04**	**59**⇑	*i*P		**Pn**	**14 14 37.7**	**+0.6**
MAMC	**Mammari**	**0.04**	**59**⇑	*i*P		**Pn**	**14 14 37.7**	**+0.6**
CSS	**Prodhromos**	**0.23**	**146**	P		**Pn**	**14 14 37.7**	**-0.3**
	4.3nm,0.1s							
CSS				S		**Sn**	**14 14 44.6**	**+0.7**
CSS	**Prodhromos**	**0.23**	**146**	P		**Pn**	**14 14 37.7**	**-0.3**
	4.3nm,0.1s							
CSS				S		**Sn**	**14 14 44.6**	**+0.7**
LEF	**Lefka**	**0.24**	**263**	*e*PG		**Pn**	**14 14 37.7**	**-0.3**
LEF				*e*SG		**Sn**	**14 14 43.4**	**-0.7**
LEF	**Lefka**	**0.24**	**263**	*e*Pg		**Pn**	**14 14 37.7**	**-0.3**
LEF				*e*Sg		**Sn**	**14 14 43.4**	**-0.6**
LFK	**Lefkose**	**0.32**	**66**	*e*PG		**Pn**	**14 14 38.0**	**-0.8**
LFK	**Lefkose**	**0.32**	**66**	*e*Pg		**Pn**	**14 14 38.0**	**-0.8**
SZAC	**Souni-Zanaja**	**0.46**	**212**	P		**Pn**	**14 14 40.0**	**-0.3**
SZAC				S		**Sn**	**14 14 48.0**	**+0.1**
SZAC	**Souni-Zanaja**	**0.46**	**212**	P		**Pn**	**14 14 40.0**	**-0.3**

SKR					pmax	pmax		
	comp=N,450nm,0.3s							
SKR					pmax	pmax		
	comp=E,700nm,0.3s							
SKR					pmax	pmax		
	comp=Z,2μm,0.3s							
SKR					smax			
	comp=N,11μm,2.0s							
SKR					smax			
	comp=E,15μm,2.0s							
GRL	**Gorelyy**	**1.20**	**26**	*i* P		**Pn**	14 28 54.3	+0.5
GRL				*i* S		**Sn**	14 29 11.0	-0.5
ALID	**Alaid**	**1.21**	**240**	*i* P		**Pn**	14 28 54.0	+0.1
ALID				*i* S		**Sn**	14 29 10.7	-0.9
PET	**Petropavlovsk**	**1.79**	**29**	*eP*		**Pn**	14 29 00.1	-0.6
PET	**Petropavlovsk**	**1.79**	**29**	*i* P		**Pn**	14 29 00.9	+0.2
PET				*i* S		**Sn**	14 29 22.9	-0.9
PET	**Petropavlovsk**	**1.79**	**29**	⇑*i* PN		**Pn**	14 29 00.7	0.0
PET				*eS*		**Sn**	14 29 24.3	+0.5
PET				pmax	pmax			
	comp=Z,85nm,0.6s							
PET				smax				
	comp=N,600nm,1.5s							
PET				smax				
	comp=N,479nm,0.6s							
PET				smax				
	comp=E,329nm,0.6s							
AVH	**Avacha**	**2.02**	**27**	*i* P		**Pn**	14 29 05.2	+1.6
AVH				*i* S		**Sn**	14 29 30.0	+1.0
NLC	**Nalytchevo**	**2.14**	**37**	*eP*		**Pn**	14 29 04.5	-0.7
NLC				*i* S		**Sn**	14 29 28.2	-3.6
GNL	**Ganaly**	**2.27**	**11**	*i* P		**Pn**	14 29 08.2	+1.4
SPN	**Mys Shipunski**	**2.37**	**46**	*eP*		**Pn**	14 29 08.0	-0.1
SPN				*i* S		**Sn**	14 29 35.0	-2.0
KII	**Karymskiy**	**2.90**	**27**	P		**Pn**	14 29 17.3	+2.3
KII				*i* S		**Sn**	14 29 50.7	+1.3
MKZ	**Mys Kozlova**	**4.12**	**40**	*i* P		**Pn**	14 29 30.4	-0.8
MKZ				*i* S		**Sn**	14 30 14.5	-3.9
KBTR	**Krutoberegovo**	**5.79**	**33**	*eP*		**Pn**	14 29 53.9	+0.2
ASAJ	**Asahikawa**	**12.27**	**239**	P		**Pn**	14 31 23.6	+2.4
	comp=E,1.0nm,0.3s,baz=61,slow=5.5,SNR=20							
ASAJ	**Asahikawa**	**12.27**	**239**	PN		**Pn**	14 31 23.6	+2.4
ASAJ				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ERM	**Erimo**	**13.48**	**231**	*e*PN		**Pn**	14 31 35.9	-1.2
YAK	**Yakutsk**	**18.27**	**316**	*eP*		**P**	14 32 35.0	0.0
	comp=Z,20nm,0.6s							
YAK	**Yakutsk**	**18.27**	**316**	*eP*		**P**	14 32 34.7	-0.3
YAK				pmax	pmax			
	comp=Z,10.0nm,0.9s							
YAK				pmax	pmax			
	comp=N,3.0nm,0.8s							
YAK				pmax	pmax			
	comp=E,6.0nm,1.1s							
CLNS	**Chul'man**	**19.55**	**299**	*eP*		**P**	14 32 53.0	+4.0
CLNS				pmax	pmax			
	comp=N,11nm,0.9s							
CLNS				pmax	pmax			
	comp=Z,14nm,1.0s							
CLNS				pmax	pmax			
	comp=E,11nm,1.1s							
MAJO	**Matsushiro**	**20.15**	**230**	*eP*		**P**	14 32 56.5	+0.8
	comp=E,6.4nm,0.5s							
MAJO	**Matsushiro**	**20.15**	**230**	*eP*		**P**	14 32 56.6	+0.9
MAJO				pmax	pmax			
	comp=Z,6.0nm,0.5s							
MAT	**Matsushiro**	**20.15**	**230**	P		**P**	14 32 56.6	+0.9
HIA	**Hailar**	**23.83**	**280**	*eP*		**P**	14 33 32.5	-0.5
	comp=Z,5.7nm,0.5s,mb4.2							
HIA	**Hailar**	**23.83**	**280**	*eP*		**P**	14 33 32.5	-0.5
HIA				pmax	pmax			
	comp=Z,6.0nm,0.5s							
KSRS	**Korea Array**	**24.96**	**247**	P		**P**	14 33 42.9	-0.5
	comp=Z,1.3nm,0.8s,mb3.4,baz=47,slow=9.0,SNR=6.4							
ILAR	**Eielson Array**	**31.21**	**43**	P		**P**	14 34 37.8	-0.9
	comp=Z,0.4nm,0.8s,mb3.2,baz=262,slow=7.6,SNR=5.6							
ILAR				pP	pP		14 35 00.9	-2.2
	comp=Z,0.3nm,0.8s,baz=283,slow=5.5,SNR=2.7							
SONM	**Songino Array**	**32.56**	**284**	P		**P**	14 34 52.4	+1.6
	comp=Z,0.3nm,0.4s,mb3.5,baz=64,slow=9.2,SNR=3.6							
ZALV	**Zalesovo Beam**	**42.16**	**303**	PcP		PcP	14 38 03.5	-0.2
	comp=Z,0.8nm,0.5s,baz=116,slow=3.4,SNR=4.2							
YKA	**Yellowknife Ar**	**45.55**	**41**	P		**P**	14 36 38.0	-0.5
YKA	**Yellowknife Ar**	**45.55**	**41**	P		**P**	14 36 38.0	-0.5
	comp=Z,1.2nm,0.9s,mb3.6,baz=299,slow=7.4,SNR=3.7							
YKA	**Yellowknife Ar**	**45.55**	**41**	P		**P**	14 36 38.0	-0.5
YKA				pmax	pmax			
	comp=Z,1.0nm,0.9s							
KURK	**Kurchatov**	**47.08**	**302**	*eP*		**P**	14 36 49.2	-1.4
	comp=Z,2.7nm,0.4s,mb4.3							
KURK				pP	pP		14 37 17.1	+0.7
KURK				ScP	ScP		14 42 04.6	+0.5
KURK	**Kurchatov**	**47.08**	**302**	P		**P**	14 36 50.6	-0.1
	comp=Z,1.5nm,0.5s,mb4.0,baz=60,slow=7.4,SNR=7.9							
KURK				pP	pP		14 37 17.1	+0.7
	comp=Z,2.5nm,0.8s,baz=63,slow=8.0,SNR=7.4							
KURK				ScP	ScP		14 42 04.6	+0.5
	comp=Z,0.2nm,0.3s,baz=55,slow=4.0,SNR=3.5							
MK31	**Makanchi Array**	**47.25**	**295**	*eP*		**P**	14 36 51.5	-0.5
MKAR	**Makanchi Array**	**47.25**	**295**	P		**P**	14 36 51.6	-0.5
	comp=Z,1.5nm,0.5s,mb4.0,baz=58,slow=6.9,SNR=25							
MKAR				pP	pP		14 37 15.4	-2.4
	comp=Z,0.7nm,0.5s,baz=62,slow=14,SNR=3.4							
MKAR	**Makanchi Array**	**47.25**	**295**	P		**P**	14 36 51.6	-0.5
MKAR				*PP	pP		14 37 15.5	-2.4
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.5s							
BVAR	**Borovoye Array**	**50.00**	**308**	P		**P**	14 37 11.8	-1.2
	comp=Z,1.0nm,0.5s,mb4.0,baz=61,slow=6.7,SNR=6.3							
BVAR				pP	pP		14 37 38.6	-0.4
	comp=Z,1.0nm,0.5s,baz=52,slow=7.7,SNR=3.7							
BVAR				PcP	PcP		14 38 31.3	+0.1
	comp=Z,0.8nm,0.6s,baz=83,slow=4.9,SNR=5.1							
BVAR	**Borovoye Array**	**50.00**	**308**	P		**P**	14 37 11.8	-1.2
BVAR				*PP	pP		14 37 38.6	-0.4
BVAR							14 38 31.3	
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
CMAR	**Chiang Mai Arr**	**56.10**	**257**	P		**P**	14 37 59.8	+1.6
	comp=Z,1.3nm,0.5s,mb4.2,baz=30,slow=7.2,SNR=9.7							
CMAR	**Chiang Mai Arr**	**56.10**	**257**	P		**P**	14 37 59.8	+1.7
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
NVAR	**Mina Array Bea**	**57.98**	**67**	P		**P**	14 38 11.5	+0.3
	comp=Z,1.0nm,0.5s,mb4.1,baz=297,slow=7.6,SNR=10							
FINES	**FINESS Array B**	**60.88**	**336**	P		**P**	14 38 28.8	-1.9
	comp=Z,1.2nm,0.9s,mb3.9,baz=19,slow=6.5,SNR=6.1							
FINES	**FINESS Array B**	**60.88**	**336**	P		**P**	14 38 28.8	-1.9
FINES				pmax	pmax			
	comp=Z,1.0nm,0.9s							
NOA	**NORSAR Array B**	**64.58**	**342**	P		**P**	14 38 54.1	-1.1
	comp=Z,0.3nm,0.4s,mb3.5,baz=15,slow=5.4,SNR=2.9							
TXAR	**Lajitas Array**	**72.92**	**64**	P		**P**	14 39 48.7	+1.2
	comp=Z,2.4nm,0.7s,mb4.2,baz=298,slow=4.4,SNR=37							
TXAR	**Lajitas Array**	**72.92**	**64**	P		**P**	14 39 48.7	+1.2
TXAR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
ASAR	**Alice Springs**	**77.58**	**202**	P		**P**	14 40 14.6	+0.7
	comp=Z,0.3nm,0.4s,mb3.4,baz=15,slow=5.1,SNR=22							
ESDC	**Sonseca Array**	**87.75**	**346**	P		**P**	14 41 06.1	-0.5
	comp=Z,0.2nm,0.4s,mb3.5,baz=22,slow=3.4,SNR=8.7							
KEST	**Kesra**	**88.69**	**334**	P		**P**	14 41 11.1	-0.1
	comp=Z,0.7nm,0.6s,mb3.9,baz=246,slow=20,SNR=5.6							

WEL 10 14:29:18.4±0.6, 38°21'S×176°13'E, h152km±5km, ML3.5/9, 1C, Error ellipse: s-maj=4.3km s-min=4.1km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
URZ	**Urewera**	**0.77**	**94**	PN	Pn	14	29	41.4	-0.2
URZ				SN	Sn	14	29	59.0	-0.2
BKZ	**Black Stump Fm**	**1.00**	**164**	⇑PN	Pn	14	29	43.2	-0.1
BKZ				SN	Sn	14	30	01.5	-0.9
RAHZ	**Arahi**	**1.03**	**134**	PN	Pn	14	29	44.1	+0.6
RAHZ				SN	Sn	14	30	03.3	+0.5
NMHZ	**Naumai**	**1.03**	**149**	PN	Pn	14	29	44.4	+0.8
WPVZ	**Whakapapa**	**1.09**	**205**	PN	Pn	14	29	44.4	+0.3
MWZ	**Matawai**	**1.10**	**97**	PN	Pn	14	29	44.2	0.0
TUVZ	**Tukino**	**1.12**	**199**	PN	Pn	14	29	44.7	+0.3
FWVZ	**Far West T-bar**	**1.14**	**203**	PN	Pn	14	29	44.6	+0.1
BHHZ	**Black Hill Sta**	**1.28**	**182**	PN	Pn	14	29	45.5	-0.4
MTVZ	**Mangateitei**	**1.28**	**204**	PN	Pn	14	29	45.9	0.0
MCHZ	**McNeill Hill**	**1.31**	**161**	PN	Pn	14	29	46.6	+0.4
VRZ	**Vera Road**	**1.41**	**229**	PN	Pn	14	29	47.6	+0.4
KAHZ	**Kahuranaki**	**1.69**	**160**	PN	Pn	14	29	49.9	-0.2
PNHZ	**Pukenui**	**1.70**	**178**	PN	Pn	14	29	49.4	-0.8
WAZ	**Wanganui**	**1.79**	**210**	PN	Pn	14	29	50.7	-0.5
WPHZ	**Waipukurau**	**1.87**	**173**	PN	Pn	14	29	51.2	-0.9
DVHZ	**Dannevirke**	**2.09**	**179**	PN	Pn	14	29	53.1	-1.5
POWZ	**Post Office Ro**	**2.20**	**187**	PN	Pn	14	29	54.3	-1.6
BFZ	**Birch Farm**	**2.47**	**178**	PN	Pn	14	29	57.3	-1.9
MRZ	**Mangatainoka R**	**2.49**	**190**	PN	Pn	14	29	57.3	-2.1
TIWZ	**Tintock**	**2.57**	**184**	PN	Pn	14	29	58.4	-2.1
OGWZ	**Otaki Gorge**	**2.71**	**196**	PN	Pn	14	29	59.9	-2.2
HOWZ	**Holdsworth Sta**	**2.73**	**190**	PN	Pn	14	29	59.8	-2.6
KIW	**Kapiti Island**	**2.81**	**199**	PN	Pn	14	30	00.8	-2.7
TMWZ	**Te Maipa**	**2.90**	**184**	PN	Pn	14	30	01.9	-2.6
MTW	**Mount Morrison**	**2.99**	**189**	PN	Pn	14	30	02.5	-3.1
CAW	**Cannon Point**	**3.01**	**196**	PN	Pn	14	30	03.1	-2.8
MSWZ	**Moikau Station**	**3.27**	**192**	PN	Pn	14	30	05.9	-3.3
PLWZ	**Palliser**	**3.42**	**191**	PN	Pn	14	30	07.7	-3.5
TUWZ	**Tuamarina**	**3.63**	**207**	PN	Pn	14	30	10.6	-3.2
NNZ	**Nelson**	**3.68**	**214**	PN	Pn	14	30	11.3	-3.2
QRZ	**Quartz Range**	**3.82**	**226**	PN	Pn	14	30	12.4	-3.9

*ISCJB **10** 14:40:18.8±0.9, 24°22'S×67°04'W×0°09, h200km, Error ellipse: s-maj=11.6km s-min=5.6km az=170.3*
*IDC **10** 14:40:20.2×1.7, 24°22'S×67°07'W, h185km±21km, mb1 3.0/3, mb1mx2.9/14, mbtmp2.8/3, Error ellipse: s-maj=41.7km s-min=15.1km az=89.0*
*NEIC **10** 14:40:21.9±0.9, 24°20'S×67°54'W, h210km±12km, mb3.7/1, Error ellipse: s-maj=18.7km s-min=13.4km az=80.0*
*GUC **10** 14:40:21.7±0.9, 23°95'S×67°17'W, h200km, ML4.4*

ISC 10 14:40:20.3±0.9, 24°15'S±0°05×67°14'W±0°09, h200km, n16, σ1°30/24, 6C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
PB04	**Plate Boundary**	**2.86**	**310**	⇑*i* P	**Pn**	**14**	**41**	**15.2**	**+6.9**
PB04				*i* S	**Sn**	**14**	**41**	**56.6**	**+11**
PB04				AML	AML	14	41	59.9	
	comp=E,347nm,0.6s								
ANCH	**Antofagasta**	**3.03**	**278**	⇑*i* P	**Pn**	**14**	**41**	**09.5**	**-0.9**
ANCH				*i* S	**Sn**	**14**	**41**	**47.8**	**-1.6**
ANCH	**Antofagasta**	**3.03**	**278**	⇑*i* P	**Pn**	**14**	**41**	**09.5**	**-0.9**
ANCH				*i* S	**Sn**	**14**	**41**	**47.8**	**-1.6**
MACH	**Maria Elena**	**3.10**	**308**	*eP*	**Pn**	**14**	**41**	**13.1**	**+2.0**
MACH				*i* S	**Sn**	**14**	**41**	**52.1**	**+1.3**
MECH	**Mejillones**	**3.21**	**288**	⇑*i* P	**Pn**	**14**	**41**	**14.8**	**+2.3**
MECH				*i* S	**Sn**	**14**	**41**	**54.8**	**+1.6**
MECH				AML	AML	14	42	02.4	
	comp=E,436nm,0.4s								
HMBC	**Humberston**	**4.62**	**326**	⇑*i* P	**Pn**	**14**	**41**	**29.5**	**-0.4**
HMBC				*i* S	**Sn**	**14**	**42**	**22.8**	**-1.8**
PSGC	**Pisagua**	**5.31**	**328**	*eP*	**Pn**	**14**	**41**	**37.5**	**-1.3**
PSGC				*i* S	**Sn**	**14**	**42**	**37.1**	**-3.4**
MNMC	**Miæe Miæ**	**5.49**	**335**	⇑*i* P	**Pn**	**14**	**41**	**41.3**	**+0.2**
MNMC				*i* S	**Sn**	**14**	**42**	**43.9**	**-0.9**
CFAA	**Coronel Fontan**	**7.50**	**187**	P	**Pn**	**14**	**42**	**06.7**	**-0.3**
	comp=E,0.1nm,0.3s,baz=21,slow=14,SNR=12								
CFAA				S	**Sn**	**14**	**43**	**26.9**	**-4.8**
	comp=E,0.2nm,0.3s,baz=145,slow=16,SNR=9.7								
LPAZ	**La Paz**	**7.87**	**353**	*e*Pn	**Pn**	**14**	**42**	**13.1**	**+1.1**
LPAZ				S	**Sn**	**14**	**43**	**41.5**	**+0.6**
LPAZ	**La Paz**	**7.87**	**353**	P	**Pn**	**14**	**42**	**13.0**	**+1.0**
	comp=E,1.2nm,0.3s,baz=149,slow=8.6,SNR=41								
LPAZ				S	**Sn**	**14**	**43**	**41.5**	**+0.6**
	comp=E,0.1nm,0.3s,baz=251,slow=24,SNR=3.0								
CPUP	**Villa Florida**	**9.14**	**106**	P	**Pn**	**14**	**42**	**34.9**	**+6.5**
	comp=E,0.6nm,0.3s,baz=256,slow=12,SNR=4.2								
PLCA	**Paso Flores**	**16.79**	**189**	*eP*	**P**	**14**	**44**	**02.1**	**-0.6**
	comp=E,3.2nm,1.0s								
ZALV	**Zalesovo Beam**	**143.58**	**28**	PKP	PKPdf	14	59	31.2	+0.4
ZALV	**Zalesovo Beam**	**143.58**	**28**	PKP	PKPdf	14	59	31.2	+0.4
	comp=E,0.6nm,0.3s,baz=336,slow=6.6,SNR=5.2								
MKAR	**Makanchi Array**	**146.72**	**40**	PKPbc	PKPbc	14	59	40.6	+2.2
	comp=E,0.7nm,0.4s,baz=281,slow=3.8,SNR=4.6								

*IDC **10** 14:49:41.5±0.9, 51°92N×166°21W, h0km, mb3.9/14, mb1 4.1/15, mb1mx3.9/27, mbtmp3.9/15, ML3.5/1, Error ellipse: s-maj=24.3km s-min=18.0km az=4.0*
*ISCJB **10** 14:49:42.3±2.0, 52°07'N±0°06×166°15'W±0°07, h12km±13km, mb4.0/15, Error ellipse: s-maj=9.7km s-min=7.3km az=3.2*
*NEIC **10** 14:49:43.6±3.4, 52°08'N×166°17'W, h9km±20km, mb4.0/2, ML3.4(AEIC), ML3.2(PMR), Error ellipse: s-maj=13.3km s-min=6.3km az=168.0*

ISC 10 14:49:44.0±2.4, 52°15'N±0°06×166°21'W±0°07, h8km±15km, n37, σ0°80/39, mb4.0/15, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
OKFG	**Magazine Ridge**	**1.64**	**321**	P	**Pn**	**14**	**50**	**12.6**	**-0.5**
OKFG				S	**Sn**	**14**	**50**	**34.4**	**+0.1**
UNV	**Unalaska Valle**	**1.71**	**354**	P	**Pn**	**14**	**50**	**13.8**	**-0.4**
UNV				S	**Sn**	**14**	**50**	**36.5**	**+0.3**
NIKO	**Nikolski**	**1.82**	**298**	P	**Pn**	**14**	**50**	**15.2**	**-0.4**
NIKO				S	**Sn**	**14**	**50**	**37.4**	**-1.3**
AKUT	**Akutan**	**2.01**	**7**	*e*Pn	**Pn**	**14**	**50**	**17.8**	**-0.4**
AKLV	**Akutan Long Va**	**2.03**	**4**	P	**Pn**	**14**	**50**	**17.3**	**-1.1**
AKGG	**Akutan Green G**	**2.06**	**4**	P	**Pn**	**14**	**50**	**18.3**	**-0.6**
FALS	**False Pass**	**3.19**	**30**	P	**Pn**	**14**	**50**	**34.2**	**-0.2**
SDPT	**Sand Point**	**4.68**	**44**	P	**Pn**	**14**	**50**	**54.3**	**-0.5**
ATKA	**Atka Island**	**4.92**	**274**	P	**Pn**	**14**	**50**	**58.4**	**+0.2**
SPIA	**Saint Paul Isl**	**5.56**	**337**	P	**Pn**	**14**	**51**	**07.6**	**+0.6**
GSTR	**Great Sitkin T**	**6.07**	**273**	*e*Pn	**Pn**	**14**	**51**	**15.6**	**+1.6**
CHGN	**Chignik**	**6.18**	**45**	*eP*	**Pn**	**14**	**51**	**15.0**	**-0.5**
KDAK	**Kodiak Island**	**9.65**	**49**	Pn	**Pn**	**14**	**52**	**03.1**	**+0.1**
	0.5nm,0.3s,baz=201,slow=12,SNR=3.2								
BPAW	**Bear Paw Mtn.**	**14.38**	**28**	*eP*	**Pn**	**14**	**53**	**07.7**	**+0.2**
	3.1nm,0.7s								
ILAR	**Eielson Array**	**16.10**	**31**	Pn	**Pn**	**14**	**53**	**29.4**	**-0.9**
	0.1nm,0.3s,baz=222,slow=11,SNR=7.1								
COLD	**Coldfoot**	**17.05**	**21**	*eP*	**Pn**	**14**	**53**	**45.0**	**+2.5**
	7.3nm,0.8s								
DAWY	**Dawson**	**18.35**	**39**	*eP*	**Pn**	**14**	**53**	**59.2**	**+0.7**
DLBC	**Dease Lake**	**21.34**	**59**	P	**P**	**14**	**54**	**32.4**	**+1.2**
	0.6nm,0.6s,mb3.1,baz=265,slow=5.5,SNR=3.3								
INK	**Inuvik**	**22.49**	**32**	P	**P**	**14**	**54**	**43.2**	**-0.2**
	5.3nm,0.7s,mb4.1,baz=242,slow=13,SNR=10								
NVAR	**Mina Array Bea**	**35.71**	**93**	P	**P**	**14**	**56**	**42.6**	**-0.2**
	0.3nm,0.6s,mb3.4,baz=308,slow=7.8,SNR=3.3								
TXAR	**Lajitas Array**	**50.80**	**91**	P	**P**	**14**	**58**	**43.5**	**-1.3**
TXAR	**Lajitas Array**	**50.80**	**91**	P	**P**	**14**	**58**	**43.5**	**-1.3**
	1.6nm,0.6s,mb4.1,baz=297,slow=5.5,SNR=34								
ULN	**Ulaanbaatar**	**52.71**	**302**	*eP*	**P**	**14**	**58**	**58.5**	**-0.3**
	1.9nm,0.3s,mb4.5								
SONM	**Songino Array**	**53.07**	**303**	P	**P**	**14**	**59**	**01.3**	**-0.1**
	0.4nm,0.4s,mb3.7,baz=50,slow=6.4,SNR=5.1								
ARCES	**ARCESS Array B**	**58.33**	**355**	P	**P**	**14**	**59**	**38.8**	**-0.1**
	1.9nm,0.8s,mb4.2,baz=46,slow=8.7,SNR=4.4								
KURK	**Kurchatov**	**63.81**	**320**	*eP*	**P**	**15**	**00**	**16.6**	**+0.3**
	0.8nm,0.6s,mb3.9								
KURK	**Kurchatov**	**63.81**	**320**	P	**P**	**15**	**00**	**17.1**	**+0.8**
	0.4nm,0.4s,mb3.8,baz=57,slow=6.9,SNR=5.8								
BVAR	**Borovoye Array**	**65.00**	**326**	P	**P**	**15**	**00**	**24.7**	**+0.7**
	1.4nm,0.7s,mb4.1,baz=60,slow=8.8,SNR=11								
MKAR	**Makanchi Array**	**65.35**	**315**	P	**P**	**15**	**00**	**26.3**	**-0.1**
	0.9nm,0.6s,mb4.0,baz=46,slow=6.9,SNR=6.6								
FINES	**FINESS Array B**	**66.34**	**354**	P	**P**	**15**	**00**	**32.6**	**+0.1**
	1.8nm,0.6s,mb4.2,baz=35,slow=7.0,SNR=7.7								
NOA	**NORSAR Array B**	**67.15**	**1**	P	**P**	**15**	**00**	**38.2**	**+0.5**
NOA	**NORSAR Array B**	**67.15**	**1**	P	**P**	**15**	**00**	**38.2**	**+0.5**
	1.6nm,0.7s,mb4.2,baz=0.1,slow=6.1,SNR=5.5								
AKTK	**Aktyubinsk**	**71.15**	**332**	P	**P**	**15**	**01**	**03.6**	**+0.9**
AKTO	**Aktyubinsk**	**71.15**	**332**	P	**P**	**15**	**01**	**03.6**	**+0.9**
	0.6nm,0.6s,mb3.7,baz=359,slow=7.7,SNR=3.5								
BRTR	**Keskin Array B**	**86.89**	**345**	P	**P**	**15**	**02**	**29.4**	**+0.3**
	0.6nm,0.7s,mb4.0,baz=5.7,slow=2.9,SNR=3.7								
ASAR	**Alice Springs**	**91.77**	**233**	P	**P**	**15**	**02**	**49.8**	**-2.3**
	0.9nm,1.0s,mb4.1,baz=27,slow=4.5,SNR=11								
MAW	**Mawson**	**151.90**	**218**	PKPbc	PKPbc	15	09	34.8	-3.1
	0.9nm,0.7s,baz=84,slow=9.2,SNR=2.9								

*IDC **10** 14:57:37.5±1.7, 10°66N×91°19E, h0km, mb3.9/6, mb1 3.9/7, mb1mx3.6/21, mbtmp3.7/7, ML3.6/1, Error ellipse: s-maj=65.6km s-min=21.2km az=71.0*
*NEIC **10** 14:57:38.2±1.1, 10°57N×91°07E, h10km, mb4.5/1, Error ellipse: s-maj=29.9km s-min=13.8km az=74.0*
*ISCJB **10** 14:57:40.5±1.2, 10°6N±0°1×91°3E±0°2, h33km, mb3.9/7, Error ellipse: s-maj=32.8km s-min=15.1km az=163.8*

ISC 10 14:57:42.3±1.2, 10°6N±0°1×91°2E±0°2, h35km, n10, σ0°73/10, mb3.9/7, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
CMAR	**Chiang Mai Arr**	**10.84**	**43**	Pn	**Pn**	**15**	**00**	**15.5**	**+0.5**
	0.1nm,0.3s,baz=236,slow=18,SNR=3.4								
MKAR	**Makanchi Array**	**36.84**	**350**	P	**P**	**15**	**04**	**48.0**	**+0.9**
MKAR	**Makanchi Array**	**36.84**	**350**	P	**P**	**15**	**04**	**48.0**	**+0.9**
	0.6nm,0.4s,mb3.8,baz=177,slow=8.4,SNR=6.4								
SONM	**Songino Array**	**39.26**	**16**	P	**P**	**15**	**05**	**06.4**	**-1.0**
	0.9nm,0.8s,mb3.5,baz=197,slow=9.9,SNR=6.0								
ZALV	**Zalesovo Beam**	**43.52**	**355**	P	**P**	**15**	**05**	**42.3**	**0.0**
	0.6nm,0.4s,mb3.6,baz=190,slow=13,SNR=3.5								
WRAB	**Tennant Creek**	**52.23**	**125**	*eP*	**P**	**15**	**06**	**49.8**	**-0.5**
	4.2nm,0.7s,mb4.5								
WB2	**Warramunga Arr**	**52.24**	**125**	*eP*	**P**	**15**	**06**	**49.8**	**-0.5**
ASAR	**Alice Springs**	**53.91**	**130**	P	**P**	**15**	**07**	**02.8**	**+0.1**
	1.3nm,0.7s,mb4.0,baz=303,slow=7.2,SNR=23								
ASAR				PcP	PcP	15	08	09.3	+1.5
	0.6nm,0.6s,baz=314,slow=4.0,SNR=8.6								
STKA	**Stephens Creek**	**64.11**	**133**	P	**P**	**15**	**08**	**14.4**	**+1.2**
	2.4nm,0.9s,mb4.2,baz=296,slow=9.6,SNR=3.0								
ILAR	**Eielson Array**	**93.30**	**21**	P	**P**	**15**	**10**	**52.4**	**-0.8**
	0.2nm,0.7s,mb3.7,baz=310,slow=4.8,SNR=4.1								

*ISCJB **10** 14:58:36.6±1.0, 34°93N±0°07×23°68E±0°05, h59km±10km, Error ellipse: s-maj=12.8km s-min=5.2km az=22.4*
*CSEM **10** 14:58:37.6±0.2, 34°91N×23°68E, h40km, MD3.5, Error ellipse: s-maj=4.8km s-min=1.8km az=25.0*
*THE **10** 14:58:37.7, 34°94N×23°68E, h48km±4km, Error ellipse: s-maj=4.4km s-min=1.2km az=34.0*
*ATH **10** 14:58:37.2, 35°02N×23°76E, h59km±5km, MD3.5/17*
*NEIC **10** 14:58:37.2±3.5, 35°02N×23°76E, h59km, MD3.5/ATH), After ATH.*

ISC 10 14:58:37.5±1.0, 34°90N±0°07×23°68E±0°05, h44km±20km, n72, σ0°44/88, Crete

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
KARN	**Karanos**	**0.53**	**21**	*eP*	**Pn**	**14**	**58**	**48.4**	**-0.4**
KARN	**Karanos**	**0.53**	**21**	P	**Pn**	**14**	**58**	**48.0**	**-0.8**
KARN				S	**Sn**	**14**	**58**	**57.0**	**+0.1**
KARN	**Karanos**	**0.53**	**21**	*eP*	**Pn**	**14**	**58**	**48.4**	**-0.4**
KARN				S	**Sn**	**14**	**58**	**57.0**	**+0.1**
VAM	**Vamos**	**0.66**	**40**	*eP*	**Pn**	**14**	**58**	**50.2**	**-0.3**
VAM	**Vamos**	**0.66**	**40**	*eP*	**Pn**	**14**	**58**	**50.2**	**-0.3**
VAM	**Vamos**	**0.66**	**40**	*eP*	**Pn**	**

comp=Z,0.6nm,0.3s,mb3.8,baz=193,slow=13,SNR=2.9
FITZ Fitzroy Crossi 44.04 130 P **P** 15 14 42.7 -0.4
comp=Z,3.0nm,0.6s,mb4.2,baz=328,slow=6.0,SNR=22
BVAR Borovoye Array 45.54 342 P **P** 15 14 55.2 +0.6
comp=Z,0.6nm,0.8s,mb3.6,baz=152,slow=9.9,SNR=4.1
ABKAR Akbulak array 46.60 332 *eP* **P** 15 15 01.6 -1.5
comp=Z,0.7nm,0.5s,mb3.9
AKTK Aktyubinsk 48.32 332 P **P** 15 15 16.9 +0.5
AKTO Aktyubinsk 48.32 332 P **P** 15 15 16.9 +0.5
comp=Z,1.2nm,0.9s,mb3.9,baz=97,slow=8.1,SNR=2.8
WRAB Tennant Creek 51.83 126 *eP* **P** 15 15 43.0 -0.5
comp=Z,3.2nm,0.5s,mb4.5
ASAR Alice Springs 53.54 130 P **P** 15 15 56.1 0.0
comp=Z,1.6nm,0.7s,mb4.1,baz=305,slow=7.2,SNR=30
ASAR PcP PcP 15 17 02.8 -0.2
comp=Z,0.6nm,0.6s,baz=313,slow=3.2,SNR=6.3
BRTR Keskin Array B 58.80 310 P **P** 15 16 33.4 -0.2
comp=Z,0.2nm,0.4s,mb3.5,baz=78,slow=7.5,SNR=2.6
STKA Stephens Creek 63.77 134 *eP* **P** 15 17 07.7 +0.4
STKA Stephens Creek 63.77 134 P **P** 15 17 07.8 +0.5
comp=Z,2.0nm,0.6s,mb4.3,baz=304,slow=7.3,SNR=4.0
FINES FINESS Array B 69.09 332 P **P** 15 17 43.2 +2.2
comp=Z,2.2nm,0.9s,mb4.1,baz=68,slow=11,SNR=4.2
ARCES ARCESS Array B 71.78 340 P **P** 15 17 58.0 +0.7
comp=Z,1.5nm,1.0s,mb3.9,baz=108,slow=7.8,SNR=3.6
NOA NORSAR Array B 76.09 330 P **P** 15 18 22.2 -0.4
comp=Z,0.8nm,0.8s,mb3.7,baz=129,slow=6.8,SNR=3.1
ILAR Eielson Array 92.95 22 P **P** 15 19 49.6 +1.5
comp=Z,0.2nm,0.7s,mb3.7,baz=298,slow=4.1,SNR=3.7
NVAR Mina Array Bea 123.58 28 PKP PKPdf 15 25 33.3 +0.1
comp=Z,0.3nm,0.6s,baz=280,slow=1.6,SNR=3.0

*IDC **10** 15:28:54.7±0.9, 10.77N×91.65E, h0km, mb3.9/12, mb1 4.0/13, mb1mx3.8/23, mbtmp3.9/13, ML3.7/1, Error ellipse: s-maj=34.3km s-min=16.1km az=59.0*
*NEIC **10** 15:28:56.5±0.5, 10.82N×91.71E, h10km, mb4.3/1, Error ellipse: s-maj=17.3km s-min=9.2km az=60.0*
*ISCJB **10** 15:28:57.6±0.6, 10.77N±0.08×91.67E±0.09, h33km, mb3.9/13, Error ellipse: s-maj=13.2km s-min=11.2km az=4.0*

ISC 10 15:28:59.6±0.6, 10.73N±0.08×91.59E±0.09, h35km, n21, σ0.68/21, mb3.9/13, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.46**	**42**	Pn		**Pn**		**15 31 24.6**	**-2.6**
CMAR				Sn		**Sn**		**15 33 24.3**	**+1.0**
CMAR	**Chiang Mai Arr**	**10.46**	**42**	Pn		**Pn**		**15 31 24.6**	**-2.6**
	0.2nm,0.3s,baz=218,slow=21,SNR=3.2								
CMAR				Sn		**Sn**		**15 33 24.3**	**+1.0**
	baz=237,slow=30,SNR=4.2								
MK31	**Makanchi Array**	**36.80**	**349**	*eP*		**P**		**15 36 04.1**	**+0.1**
MKAR	**Makanchi Array**	**36.80**	**349**	P		**P**		**15 36 04.0**	**0.0**
	2.0nm,0.6s,mb4.2,baz=169,slow=8.2,SNR=12								
SONM	**Songino Array**	**39.02**	**16**	P		**P**		**15 36 22.5**	**-0.3**
	0.3nm,0.5s,mb3.3,baz=185,slow=8.7,SNR=3.2								
KURK	**Kurchatov**	**41.27**	**348**	*eP*		**P**		**15 36 41.5**	**+0.2**
KURK	**Kurchatov**	**41.27**	**348**	P		**P**		**15 36 40.8**	**-0.6**
	0.5nm,0.5s,mb3.4,baz=167,slow=7.1,SNR=5.2								
ZALV	**Zalesovo Beam**	**43.44**	**354**	P		**P**		**15 36 58.4**	**-0.6**
ZALV	**Zalesovo Beam**	**43.44**	**354**	P		**P**		**15 36 58.4**	**-0.6**
	1.5nm,0.4s,mb4.1,baz=173,slow=8.9,SNR=9.4								
FITZ	**Fitzroy Crossi**	**44.16**	**130**	P		**P**		**15 37 05.2**	**-0.1**
	1.5nm,0.7s,mb3.9,baz=321,slow=7.2,SNR=5.3								
BVAR	**Borovoye Array**	**45.50**	**342**	P		**P**		**15 37 15.7**	**+0.2**
	0.6nm,0.5s,mb3.8,baz=141,slow=9.6,SNR=4.0								
WRAB	**Tennant Creek**	**51.96**	**126**	*eP*		**P**		**15 38 06.2**	**+0.5**
	1.5nm,0.4s,mb4.3								
ASAR	**Alice Springs**	**53.67**	**130**	P		**P**		**15 38 18.4**	**+0.3**
ASAR	**Alice Springs**	**53.67**	**130**	P		**P**		**15 38 18.4**	**+0.3**
	0.5nm,0.7s,mb3.6,baz=304,slow=6.3,SNR=13								
BRTR	**Keskin Array B**	**58.67**	**310**	P		**P**		**15 38 53.6**	**-0.1**
	0.8nm,0.7s,mb3.9,baz=128,slow=7.9,SNR=6.2								
STKA	**Stephens Creek**	**63.88**	**133**	P		**P**		**15 39 28.7**	**-0.3**
	2.1nm,0.9s,mb4.2,baz=95,slow=12,SNR=4.2								
FINES	**FINESS Array B**	**69.03**	**332**	P		**P**		**15 40 02.0**	**+0.5**
	2.6nm,0.8s,mb4.2,baz=65,slow=9.8,SNR=5.2								
ARCES	**ARCESS Array B**	**71.74**	**340**	P		**P**		**15 40 18.7**	**+0.8**
	1.6nm,0.8s,mb4.0,baz=96,slow=7.4,SNR=7.5								
ILAR	**Eielson Array**	**93.04**	**21**	P		**P**		**15 42 09.2**	**-0.2**
	0.2nm,0.7s,mb3.7,baz=297,slow=6.0,SNR=3.4								
NVAR	**Mina Array Bea**	**123.68**	**28**	PKP		PKPdf		15 47 56.4	+2.3
	0.1nm,0.3s,baz=288,slow=0.9,SNR=2.5								
TXAR	**Lajitas Array**	**137.53**	**20**	PKP		PKPdf		15 48 23.3	+2.8
	0.1nm,0.5s,baz=284,slow=3.6,SNR=2.4								

*ISCJB **10** 15:29:44.9±0.8, 32.33N±0.04×104.96E±0.09, h10km, mb3.6/5, MS3.2/2, Error ellipse: s-maj=11.9km s-min=4.9km az=18.7*
*IDC **10** 15:29:44.3±9.6, 31.78N×104.47E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.5/20, mbtmp3.6/6, MS3.3/2, Ms1 3.3/2, ms1mx2.6/22, Error ellipse: s-maj=231.9km s-min=35.1km az=11.0*
*BJI **10** 15:29:48.0, 32.15N×105.01E, h15km, mb3.7/1, ML3.4/10, Ms3.1/2, Ms7 3.0/2*

ISC 10 15:29:46.7±0.6, 32.26N±0.04×105.00E±0.05, h10km, n11, σ1.12/16, mb3.6/5, MS3.2/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.71**	**219**	Pn		**Pn**		**15 30 16.5**	**0.0**
CD2				Pg		**Pg**		**15 30 17.8**	**-1.7**
CD2				Sn		**Sn**		**15 30 39.7**	**+1.3**
CD2				Sg		**Sg**		**15 30 41.1**	**-0.6**
CD2				smax					
	comp=N,2μm,0.6s								
XAN	**Xi'an**	**3.74**	**61**	Pg		**Pg**		**15 30 57.5**	**-0.9**
XAN				Sn		**Sb**		**15 31 40.3**	**+2.1**
XAN				Sg		**Sg**		**15 31 45.6**	**-1.3**
XAN				smax					
	comp=N,110nm,0.7s								
XAN				smax					
	comp=E,49nm,1.0s								
XAN				LR		LR			
	comp=N,120nm,9.3s								
XAN				LR		LR			
	comp=E,22nm,6.3s								
XAN				LR		LR			
	comp=Z,52nm,7.5s								
LZH	**Lanzhou**	**3.94**	**346**	Pn		**Pn**		**15 30 50.4**	**+3.2**
LZH				Pg		**Pg**		**15 31 00.8**	**-1.3**
LZH				Sg		**Sg**		**15 31 52.6**	**-0.5**
LZH				smax					
	comp=N,170nm,0.6s								
LZH				smax					
	comp=E,280nm,0.8s								
KSRS	**Korea Array**	**19.50**	**68**	P		**Pn**		**15 34 19.8**	**+4.6**
	comp=E,1.1nm,0.9s,baz=253,slow=13,SNR=4.7								
MKAR	**Makanchi Array**	**22.64**	**316**	P		**P**		**15 34 48.7**	**+1.0**
	comp=E,0.3nm,0.3s,mb3.2,baz=118,slow=12,SNR=4.6								
ZALV	**Zalesovo Beam**	**26.04**	**332**	P		**P**		**15 35 20.2**	**+0.3**
	comp=E,0.5nm,0.4s,mb3.4,baz=155,slow=7.9,SNR=2.7								
KURK	**Kurchatov**	**26.80**	**321**	LR		LR		15 47 32.2	
	comp=E,21nm,18.0s,MS2.7,baz=255,slow=40								
BVAR	**Borovoye Array**	**32.38**	**320**	P		**P**		**15 36 17.2**	**+0.9**
	comp=E,0.3nm,0.5s,mb3.4,baz=134,slow=8.3,SNR=2.2								
GNI	**Garni**	**48.45**	**297**	LR		LR		15 59 16.6	
	comp=E,85nm,18.8s,MS3.8,slow=37								
ARCES	**ARCESS Array B**	**56.52**	**336**	P		**P**		**15 39 28.9**	**+0.2**
	comp=E,1.5nm,0.9s,mb4.0,baz=73,slow=7.6,SNR=3.2								
FINES	**FINESS Array B**	**57.04**	**326**	P		**P**		**15 39 32.2**	**-0.3**
	comp=E,0.8nm,0.7s,mb3.9,baz=94,slow=9.8,SNR=4.7								

MAN 10 16:10:11, 8.48N×124.16E, h23km, mb4.0, ML2.8, MS2.5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CGP	**Cagayan de Oro**	**0.53**	**92**	*i* P			Pb	16 10 23.1	+1.5
CGP				*i* S			Sb	16 10 30.7	+1.8
PAGZ	**Pagadian**	**0.99**	**231**	*eP*			Pb	16 10 29.3	-0.3
PAGZ				*eS*			Sb	16 10 36.9	-5.3
BUKP	**Musuan**	**1.07**	**124**	*eP*			Pn	16 10 32.1	+1.5
BUKP				*eS*			Sb	16 10 45.8	+1.3
TBP	**Tagbilaran**	**1.24**	**346**	*eP*			Pn	16 10 33.2	+0.2
IPIL	**Ipil**	**1.72**	**247**	*eP*			Pn	16 10 40.8	+1.3
IPIL				*eS*			Sn	16 10 50.4	-10

*NEIC **10** 16:20:22.0, 17.07N×99.99W, h2km, MD3.5(MEX), After MEX.*

MEX 10 16:20:22.3±0.8, 16.98N×100.03W, h17km±19km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.20**	**125**	*i* P			Pg	16 20 25.6	-1.5
ACX				*i* S			Sg	16 20 29.4	-1.1
ACX	**Acapulco**	**0.20**	**125**	*i* P			Pg	16 20 25.6	-1.5
ACX				*i* S			Sg	16 20 28.9	-1.5
CAIG	**El Cayaco**	**0.24**	**286**	*eP*			Pg	16 20 26.5	-1.3
CAIG				*i* S			Sg	16 20 31.2	-0.3
CAIG	**El Cayaco**	**0.24**	**286**	*eP*			Pg	16 20 26.5	-1.3
CAIG				*i* S			Sg	16 20 31.2	-0.3
MEIG	**Mezcala**	**1.01**	**23**	*eP*			Pb	16 20 38.1	-3.3
MEIG				*i* S			Sb	16 20 50.8	-3.7
ZIIG	**Zihuatanejo**	**1.50**	**295**	*i* P			Pn	16 20 47.1	-1.3
ZIIG				*i* S			Sn	16 21 04.3	-3.4
ZIIG	**Zihuatanejo**	**1.50**	**295**	*i* P			Pn	16 20 46.4	-2.0
ZIIG				*i* S			Sn	16 21 01.7	-6.0
PNIG	**Pinotepa**	**1.92**	**108**	*eP*			Pn	16 20 52.4	-1.7
PNIG				*i* S			Sn	16 21 14.7	-3.1
PNIG	**Pinotepa**	**1.92**	**108**	*eP*			Pn	16 20 52.5	-1.6
PNIG				*eS*			Sn	16 21 15.1	-2.7
UTMO	**Huajuapan**	**2.29**	**68**	*i* P			Pn	16 20 56.3	-2.9
UTMO				*i* S			Sn	16 21 23.6	-3.4
PPM	**Popocatepetl**	**2.46**	**33**	*i* P			Pn	16 21 04.1	+2.5
PPM	**Popocatepetl**	**2.46**	**33**	*i* P			Pn	16 20 59.2	-2.4
PPM				*i* S			Sn	16 21 28.1	-3.2

*IDC **10** 16:53:58.6±1.1, 4.31S×134.15E, h0km, mb3.8/5, mb1 4.1/8, mb1mx3.9/14, mbtmp3.9/8, ML4.1/3, MS3.6/6, Ms1 3.6/6, ms1mx3.1/23, Error ellipse: s-maj=53.4km s-min=22.2km az=74.0*
*NEIC **10** 16:54:03.8±0.6, 4.40S×134.20E, h35km, mb4.5/4, Error ellipse: s-maj=20.1km s-min=9.8km az=80.0*
*ISCJB **10** 16:54:05.6±3.1, 4.62S±0.10×133.9E±0.1, h68km±31km, mb3.8/9, Error ellipse: s-maj=18.0km s-min=16.3km az=6.2*

ISC 10 16:54:06.8±2.9, 4.6S±0.1×134.0E±0.1, h64km±30km, n28, σ1.11/27, mb3.9/9, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.21**	**191**	*eP*		**Pn**		**16 56 03.6**	**+0.4**
	12nm,0.3s								
KAKA				*eS*		**Sn**		**16 57 33.8**	**-0.7**
KAKA	**Kakadu**	**8.21**	**191**	*eP*		**Pn**		**16 56 03.6**	**+0.4**
	46nm,0.4s								
KNA	**Kununurra**	**12.22**	**205**	*eP*		**Pn**		**16 56 57.7**	**-0.4**
	62nm,1.1s								
KNA				*eS*		**Sn**		**16 59 12.8**	**0.0**
COEN	**Coen**	**12.95**	**136**	*eP*		**Pn**		**16 57 01.9**	**-6.2**
WB2	**Warramunga Arr**	**15.25**	**179**	*eP*		**Pn**		**16 57 37.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**15.72**	**211**	*eP*		**Pn**		**16 57 44.0**	**-0.5**
	5.3nm,0.4s								
FITZ				*eS*		Sx		17 00 32.8	
FITZ	**Fitzroy Crossi**	**15.72**	**211**	Pn		**Pn**		**16 57 43.8**	**-0.6**
	0.5nm,0.3s,baz=48,slow=13,SNR=18								
FITZ				Sn		Sx		17 00 33.0	
	0.5nm,0.3s,baz=0.0,slow=2.0,SNR=5.6								
FITZ				LR		LR		17 05 21.8	
	comp=Z,120nm,18.1s,baz=281,slow=43								
MTSU	**Mount Surprise**	**16.80**	**144**	*eP*		**Pn**		**16 57 59.5**	**+1.6**
	32nm,0.7s								
ASAR	**Alice Springs**	**18.95**	**180**	P		**Pn**		**16 58 25.8**	**+1.6**
ASAR				S		Sx		17 01 48.9	
ASAR	**Alice Springs**	**18.95**	**180**	P		**Pn**		**16 58 25.8**	**+1.6**
	0.4nm,0.3s,baz=6.5,slow=11,SNR=50								
ASAR				S		Sx		17 01 48.9	
	0.2nm,0.3s,baz=4.1,slow=27,SNR=4.8								
CTA	**Charters Tower**	**19.46**	**143**	*eP*		**Pn**		**16 58 28.7**	**-1.5**
	5.6nm,0.6s								
CTA	**Charters Tower**	**19.46**	**143**	P		**Pn**		**16 58 28.8**	**-1.4**
	0.5nm,0.3s,baz=317,slow=14,SNR=9.8								
CTA				LR		LR		17 06 40.8	
	comp=Z,179nm,20.0s,baz=230,slow=39								
CTAO	**Charters Tower**	**19.46**	**143**	*eP*		**Pn**		**16 58 28.6**	**-1.6**
	14nm,1.0s								
MBWA	**Marble Bar**	**21.53**	**219**	*eP*		**P**		**16 58 54.6**	**+3.8**
MBWA	**Marble Bar**	**21.53**	**219**	*eP*		**P**		**16 58 54.7**	**+3.9**
	21nm,1.0s,mb4.5								
QLP	**Quilpie**	**23.94**	**157**	*eP*		**P**		**16 59 15.6**	**+0.5**
CMAR	**Chiang Mai Arr**	**41.48**	**305**	P		**P**		**17 01 49.6**	**+1.8**
	0.4nm,0.7s,mb3.2,baz=120,slow=7.2,SNR=2.8								
KSRS	**Korea Array**	**42.23**	**353**	LR		LR		17 17 18.4	
	comp=Z,48nm,19.3s,baz=195,slow=33								
SONM	**Songino Array**	**57.58**	**338**	P		**P**		**17 03 49.3**	**-0.6**
	0.4nm,0.8s,mb3.5,baz=145,slow=5.3,SNR=3.2								
SONM				LR		LR		17 29 08.5	
	comp=Z,32nm,18.6s,baz=77,slow=37								
YAK	**Yakutsk**	**66.53**	**358**	*eP*		**P**		**17 04 52.1**	**+2.5**
	6.6nm,0.7s,mb4.8								
MKAR	**Makanchi Array**	**68.52**	**325**	P		**P**		**17 05 02.5**	**0.0**
MKAR	**Makanchi Array**	**68.52**	**325**	P		**P**		**17 05 02.5**	**0.0**
	0.8nm,0.5s,mb3.9,baz=119,slow=7.6,SNR=7.4								
ZALV	**Zalesovo Beam**	**71.30**	**332**	P		**P**		**17 05 17.6**	**-1.8**
	0.9nm,0.7s,mb3.8,baz=120,slow=5.8,SNR=3.5								
BVAR	**Borovoye Array**	**78.24**	**326**	P		**P**		**17 05 59.2**	**-0.4**
	0.9nm,0.7s,mb3.8,baz=126,slow=7.5,SNR=6.5								
BRVK	**Borovoye**	**78.31**	**326**	*eP*		**P**		**17 05 59.6**	**-0.3**
	4.9nm,1.1s,mb4.3								
KDAK	**Kodiak Island**	**85.11**	**31**	LR		LR		17 40 22.4	
	comp=Z,56nm,20.7s,baz=135,slow=33								
ILAR	**Eielson Array**	**89.49**	**25**	P		**P**		**17 06 55.5**	**-1.1**
	0.2nm,0.7s,mb3.6,baz=267,slow=5.4,SNR=2.6								
INK	**Inuvik**	**95.16**	**22**	LR		LR		17 50 37.9	
	comp=Z,33nm,20.0s,baz=343,slow=36								

*IDC **10** 17:15:37.6±1.5, 2.53N×95.75E, h0km, mb4.0/8, mb1 4.0/10, mb1mx3.8/21, mbtmp4.0/10, ML3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.6/22, Error ellipse: s-maj=42.6km s-min=21.5km az=46.0*
*ISCJB **10** 17:15:40.7±0.9, 2.6N±0.1×95.77E±0.1, h33km, mb4.1/14, Error ellipse: s-maj=18.0km s-min=11.4km az=36.9*
*NEIC **10** 17:15:43.0±0.7, 2.57N×95.82E, h35km, mb4.0/5, Error ellipse: s-maj=14.8km s-min=9.1km az=220.0*

ISC 10 17:15:43.0±0.9, 2.6N±0.1×95.8E±0.1, h35km, n22, σ0.76/22, mb4.1/14, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.11**	**86**	Pn		**Pn**		**17 16 30.4**	**+0.7**
	3.8nm,0.3s,baz=290,slow=7.3,SNR=15								
KULM	**Kulim**	**5.53**	**61**	*eP*		**Pn**		**17 17 03.1**	**+0.2**
	63nm,0.8s								
CMAR	**Chiang Mai Arr**	**16.09**	**11**	Pn		**Pn**		**17 19 25.8**	**-0.9**
	0.3nm,0.3s,baz=200,slow=12,SNR=23								
CHTO	**Chiang Mai**	**16.43**	**11**	*eP*		**Pn**		**17 19 29.3**	**-1.8**
	2.4nm,0.8s								
FITZ	**Fitzroy Crossi**	**35.84**	**126**	*eP*		**P**		**17 22 38.4**	**-1.3**
GTA	**Gaotai**	**36.85**	**5**	*eP*		**P**		**17 22 48.0**	**0.0**
GTA				pmax		pmax			
	comp=Z,4.0nm,0.8s,mb4.3								
BJT	**Baijiatuau**	**41.60**	**24**	*eP*		**P**		**17 23 29.1**	**+1.5**
	comp=Z,7.7nm,0.6s,mb4.5								
BJI	**Beijing**	**41.62**	**24**	P		**P**		**17 23 29.0**	**+1.2**
BJI				pmax		pmax			
	comp=Z,18nm,0.8s,mb4.8								
ASAR	**Alice Springs**	**45.32**	**127**	P		**P**		**17 23 57.8**	**-0.1**
	comp=Z,0.4nm,0.5s,mb3.5,baz=300,slow=7.9,SNR=15								
KSRS	**Korea Array**	**45.54**	**36**	P		**P**		**17 23 58.5**	**-1.0**
	comp=Z,1.0nm,0.8s,mb3.8,baz=235,slow=9.1,SNR=5.6								
KSRS				LR		LR		17 44 41.6	
	comp=Z,26nm,19.1s,baz=211,slow=38								
MK31	**Makanchi Array**	**45.60**	**347**	*eP*		**P**		**17 24 00.5**	**+0.7**
MKAR	**Makanchi Array**	**45.60**	**347**	P		**P**		**17 24 00.2**	**+0.5**
	comp=Z,1.9nm,0.5s,mb4.3,baz=162,slow=7.6,SNR=15								
SONM	**Songino Array**	**46.01**	**10**	P		**P**		**17 24 03.2**	**+0.2**
	comp=Z,1.5nm,0.6s,mb4.1,baz=189,slow=9.5,SNR=15								
KURK	**Kurchatov**	**50.13**	**346**	*eP*		**P**		**17 24 34.8**	**0.0**
	comp=Z,2.3nm,1.0s,mb4.2								
ZAA0	**Zalesovo Array**	**52.01**	**352**	*eP*		**P**		**17 24 48.2**	**-0.6**
ZALV	**Zalesovo Beam**	**52.01**	**352**	P		**P**		**17 24 49.1**	**+0.3**
ZALV	**Zalesovo Beam**	**52.01**	**352**	P		**P**		**17 24 49.1**	**+0.3**
	comp=Z,1.7nm,0.5s,mb4.2,baz=170,slow=6.5,SNR=11								
BVAR	**Borovoye Array**	**54.52**	**341**	P		**P**		**17 25 07.2**	**0.0**
	comp=Z,1.1nm,0.6s,mb4.1,baz=141,slow=9.6,SNR=7.7								
BRVK	**Borovoye**	**54.58**	**341**	*eP*		**P**		**17 25 07.4**	**-0.3**
	comp=Z,1.8nm,0.6s,mb4.3								
ABKAR	**Akbulak array**	**55.67**	**332**	*eP*		**P**		**17 25 15.6**	**0.0**
	comp=Z,0.3nm,0.4s,mb3.7								
FINES	**FINESS Array B**	**78.16**	**333**	P		**P**		**17 27 38.4**	**-0.1**
	comp=Z,1.3nm,0.9s,mb3.9,baz=99,slow=8.6,SNR=2.9								
ARCES	**ARCESS Array B**	**80.79**	**340**	P		**P**		**17 27 53.2**	**+0.6**
	comp=Z,3.5nm,1.0s,mb4.2,baz=96,slow=6.2,SNR=7.0								

*NEIC **10** 17:26:54.5, 15.49N×96.40W, h7km, MD4.0(MEX), After MEX.*

MEX 10 17:26:54.7±0.6, 15.50N×96.40W, h6km±7km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.39**	**47**	*eP*			Pg	17 27 01.7	-0.5
HUIG				*i* S			Sg	17 27 07.6	+0.3
HUIG	**Huatulco**	**0.39**	**47**	*eP*			Pg	17 27 01.7	-0.5
HUIG				*i* S			Sg	17 27 07.6	+0.3
VHO	**Vista Hermosa**	**1.59**	**348**	*i* P			Pn	17 27 19.6	-3.9
VHO				*i* S			Sn	17 27 38.7	-5.7
VHO	**Vista Hermosa**	**1.59**	**348**	*i* P			Pn	17 27 19.6	-3.9
VHO				*i* S			Sn	17 27 38.7	-5.7
OXX	**Oaxaca**	**1.60**	**349**	*i* P			Pn	17 27 21.3	-2.2
OXX				*i* S			Sn	17 27 40.2	-4.3
OXX	**Oaxaca**	**1.60**	**349**	*i* P			Pn	17 27 21.3	-2.2
OXX				*i* S			Sn	17 27 40.2	-4.3
PNIG	**Pinotepa**	**1.88**	**298**	*i* P			Pn	17 27 24.3	-3.1
PNIG				*i* S			Sn	17 27 46.5	-5.0
PNIG	**Pinotepa**	**1.88**	**298**	*i* P			Pn	17 27 24.3	-3.1
PNIG				*i* S			Sn	17 27 46.5	-5.0
UTMO	**Huajuapan**	**2.68**	**330**	*i* P			Pn	17 27 35.8	-2.5
UTMO				*i* S			Sn	17 28 06.6	-4.5
TPIG	**Tehuac#an**	**3.04**	**343**	*i* P			Pn	17 27 40.4	-3.0
TPIG				*i* S			Sn	17 28 16.3	-3.9
PCIG		**3.07**	**86**	*i* P			Pn	17 27 40.8	-3.0
PCIG				*i* S			Sn	17 28 16.9	-4.0
TGIG		**3.40**	**68**	*i* P			Pn	17 27 45.2	-3.0
TGIG				*i* S			Sn	17 28 26.2	-2.6

*IDC **10** 17:27:54.0±0.9, 46.49N×155.26E, h0km, mb3.7/13, mb1 3.9/14, mb1mx3.8/23, mbtmp3.7/14, ML3.6/1, MS2.5/1, Ms1 2.5/1, ms1mx2.2/30, Error ellipse: s-maj=25.6km s-min=17.5km az=161.0*
*ISCJB **10** 17:27:57.2±0.8, 46.5N±0.1×155.1E±0.1, h33km, mb3.8/14, Error ellipse: s-maj=17.8km s-min=11.6km az=143.0*
*MOS **10** 17:27:58.4±2.0, 46.60N×155.05E, h46km, mb4.2/7, Error ellipse: s-maj=17.2km s-min=11.9km az=82.9*
*NEIC **10** 17:27:59.6±0.8, 46.69N×155.30E, h35km, mb4.0/1, Error ellipse: s-maj=19.9km s-min=14.2km az=151.0*

ISC 10 17:27:59.3±0.8, 46.5N±0.1×155.1E±0.1, h35km, n28, σ0.72/29, mb3.8/14, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.25**	**9**	*e*PN		**Pn**		**17 29 01.2**	**-0.2**
SKR				pmax		pmax			
	comp=Z,20nm,0.5s								
SKR				pmax		pmax			
	comp=N,30nm,0.2s								
PET	**Petropavlovsk**	**6.92**	**18**	*eP*		**Pn**		**17 29 33.1**	**-5.1**
	comp=N,8.6nm,0.8s								
PET				*eS*		**Sn**		**17 30 47.3**	**-8.4**
PET	**Petropavlovsk**	**6.92**	**18**	*e*PN		**Pn**		**17 29 33.6**	**-4.6**
PET				pmax		pmax			
	comp=Z,11nm,0.5s								
ASAJ	**Asahikawa**	**9.14**	**259**	Pn		**Pn**		**17 30 07.7**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=151,slow=15,SNR=7.5								
ASAJ				LR		LR		17 34 36.1	
	comp=Z,24nm,18.1s,baz=351,slow=44								
ERM	**Erimo**	**9.68**	**247**	*i* PN		**Pn**		**17 30 14.6**	**-1.4**
YAK	**Yakutsk**	**21.30**	**326**	*eP*		**P**		**17 32 42.1**	**-0.4**
KSRS	**Korea Array**	**22.06**	**256**	P		**P**		**17 32 51.8**	**+0.8**
	comp=Z,0.8nm,0.6s,mb3.4,baz=51,slow=9.7,SNR=3.0								
ILAR	**Eielson Array**	**35.89**	**38**	P		**P**		**17 34 54.4**	**-1.1**
	comp=Z,0.2nm,0.6s,mb3.2,baz=243,slow=7.4,SNR=6.2								
ZALV	**Zalesovo Beam**	**43.88**	**307**	P		**P**		**17 36 01.7**	**-0.3**
	comp=Z,0.6nm,0.5s,mb3.6,baz=60,slow=8.8,SNR=3.8		

IDC ***10*** *17:37:14.2±1.7,54.°09N×156.°59W,h0km,mb3.7/6, mb1 3.8/9,mb1mx3.6/24,mbtmp3.7/9,ML3.8/3,Error ellipse: s-maj=34.9km s-min=30.7km az=5.0*

NEIC ***10*** *17:37:17.3±4.5,54.°44N×156.°69W,h10km±29km, ML3.2(AEIC),Error ellipse: s-maj=22.1km s-min=8.3km az=160.0*

ISCJB ***10*** *17:37:19.0±0.9,54.°60N±0.°09×156.°66W±0.°09,h33km, mb3.7/7,Error ellipse: s-maj=14.1km s-min=5.4km az=157.2*

ISC 10 17:37:20.8±2.4,54.°8N±0.°1×156.°9W±0.°1,h17km±18km,n24, σ0§99/27,mb3.8/7,South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHGN	**Chignik**	**1.76**	**331**	P	**Pn**	**17 37 50.4**	**-0.1**
SDPT	**Sand Point**	**2.15**	**287**	P	**Pn**	**17 37 55.2**	**-0.7**
SDPT				S	**Sn**	**17 38 23.0**	**+0.8**
OHAK	**Old Harbor**	**3.17**	**38**	P	**Pn**	**17 38 09.3**	**-0.5**
OHAK				S	**Sn**	**17 38 45.2**	**-1.9**
KDAK	**Kodiak Island**	**3.84**	**37**	P	**Pn**	**17 38 17.7**	**-1.3**
KDAK				S	**Sn**	**17 39 03.8**	**0.0**
KDAK	**Kodiak Island**	**3.84**	**37**	Pn	**Pn**	**17 38 18.3**	**-0.7**
	1.5nm,0.3s,baz=239,slow=11,SNR=9.1						
AKLV	**Akutan Long Va**	**5.34**	**267**	P	**Pn**	**17 38 39.2**	**-0.4**
UNV	**Unalaska Valle**	**5.72**	**265**	P	**Pn**	**17 38 43.9**	**-0.9**
SEW	**Seward**	**6.67**	**34**	P	**Pn**	**17 38 58.6**	**+0.8**
RC01	**Rabbit Creek A**	**7.38**	**28**	*eP*	**Pn**	**17 39 07.6**	**+0.1**
SML	**Sawmill**	**8.35**	**29**	P	**Pn**	**17 39 21.8**	**+0.9**
RAGM	**Ragged Mountai**	**8.62**	**44**	P	**Pn**	**17 39 25.8**	**+1.1**
SCM	**Sheep Creek Mo**	**8.67**	**31**	P	**Pn**	**17 39 26.2**	**+0.9**
PNL	**Peninsula**	**10.65**	**56**	P	**Pn**	**17 39 52.1**	**-0.3**
ILAR	**Eielson Array**	**11.20**	**22**	Pn	**Pn**	**17 39 57.4**	**-2.5**
	0.3nm,0.3s,baz=216,slow=13,SNR=16						
INK	**Inuvik**	**17.37**	**30**	P	**Pn**	**17 41 24.1**	**+2.2**
	0.3nm,0.3s,baz=210,slow=13,SNR=4.2						
TXAR	**Lajitas Array**	**45.55**	**102**	P	**P**	**17 45 33.5**	**-6.0**
	0.2nm,0.5s,mb3.3,baz=290,slow=5.7,SNR=4.6						
MDJ	**Mudanjiang**	**46.55**	**289**	P	**P**	**17 45 46.0**	**-1.2**
MDJ				pmax	pmax		
	comp=Z,3.0nm,1.8s,mb3.9						
MDJ				pmax	pmax		
	comp=Z,21nm,3.9s						
ARCES	**ARCESS Array B**	**55.98**	**359**	P	**P**	**17 46 57.6**	**+0.1**
	comp=Z,1.3nm,0.9s,mb3.9,baz=22,slow=7.8,SNR=5.5						
SONM	**Songino Array**	**56.19**	**306**	P	**P**	**17 47 00.6**	**+1.3**
SONM	**Songino Array**	**56.19**	**306**	P	**P**	**17 47 00.6**	**+1.3**
	comp=Z,0.4nm,0.4s,mb3.8,baz=44,slow=4.6,SNR=4.4						
SONM	**Songino Array**	**56.19**	**306**	P	**P**	**17 47 00.6**	**+1.3**
FINES	**FINESS Array B**	**64.10**	**358**	P	**P**	**17 47 53.9**	**+0.6**
	comp=Z,1.3nm,0.8s,mb4.0,baz=5.7,slow=7.7,SNR=8.1						
BVAR	**Borovoye Array**	**65.67**	**331**	P	**P**	**17 48 03.9**	**+0.2**
	comp=Z,0.4nm,0.6s,mb3.6,baz=50,slow=7.8,SNR=2.7						
AKASG	**Malin Array Be**	**74.77**	**356**	P	**P**	**17 48 59.1**	**-0.3**
	comp=Z,0.4nm,0.4s,mb3.7,baz=355,slow=5.2,SNR=3.3						

IDC ***10*** *17:40:27.7±1.6,45.°86N×154.°99E,h0km,mb3.9/8, mb1 4.1/9,mb1mx3.8/22,mbtmp3.9/9,ML2.7/1,Error ellipse: s-maj=49.0km s-min=20.9km az=177.0*

MOS ***10*** *17:40:31.4±2.4,46.°35N×155.°12E,h34km,mb4.2/9,Error ellipse: s-maj=11.7km s-min=11.1km az=69.5*

ISCJB ***10*** *17:40:32.3±1.0,46.°3N±0.°1×155.°1E±0.°1,h33km,mb3.9/13, Error ellipse: s-maj=21.0km s-min=10.2km az=148.4*

NEIC ***10*** *17:40:34.4±1.0,46.°19N×155.°07E,h35km,mb4.1/2,Error ellipse: s-maj=25.4km s-min=13.2km az=148.0*

ISC 10 17:40:35.0±1.0,46.°4N±0.°1×155.°1E±0.°1,h35km,n33, σ0§91/34,mb3.9/13,1D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.39**	**9**	*e*PN	**Pn**	**17 41 35.2**	**-3.8**
SKR				pmax	pmax		
	comp=N,10.0nm,0.5s						
SKR				pmax	pmax		
	comp=Z,20nm,0.5s						
KUR	**Kuril'sk**	**5.18**	**260**	*e*PN	**Pn**	**17 41 49.8**	**-0.1**
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**6.92**	**254**	*e*PN	**Pn**	**17 42 14.1**	**+0.2**
PET	**Petropavlovsk**	**7.07**	**18**	*e*P	**Pn**	**17 42 09.0**	**-6.8**
	comp=Z,6.2nm,0.3s						
PET	**Petropavlovsk**	**7.07**	**18**	*e*PN	**Pn**	**17 42 09.7**	**-6.1**
PET				pmax	pmax		
	comp=Z,10.0nm,0.4s						
YSS	**Yuzh-Sakhalins**	**8.51**	**279**	*e*PN	**Pn**	**17 42 36.8**	**+1.1**
ASAJ	**Asahikawa**	**9.10**	**260**	Pn	**Pn**	**17 42 38.6**	**-5.1**
	comp=Z,0.1nm,0.3s,baz=49,slow=20,SNR=1.8						
ERM	**Erimo**	**9.61**	**247**	*e*P	**Pn**	**17 42 50.7**	**0.0**
ERM	**Erimo**	**9.61**	**247**	*e*PN	**Pn**	**17 42 50.5**	**-0.2**
MAJO	**Matsushiro**	**15.98**	**238**	P	**Pn**	**17 44 13.8**	**-3.2**
YAK	**Yakutsk**	**21.40**	**326**	*e*P	**P**	**17 45 18.5**	**-0.9**
KSRS	**Korea Array**	**22.01**	**256**	P	**P**	**17 45 21.4**	**-4.6**
	comp=Z,0.4nm,0.6s,mb3.0,baz=56,slow=11,SNR=4.1						
HIA	**Hailar**	**23.79**	**290**	*e*P	**P**	**17 45 45.5**	**+1.3**
ZALV	**Zalesovo Beam**	**43.95**	**307**	P	**P**	**17 48 37.1**	**-1.1**
	comp=Z,0.6nm,0.5s,mb3.6,baz=58,slow=8.5,SNR=4.0						
ZALV	**Zalesovo Beam**	**43.95**	**307**	*e*P	**P**	**17 48 37.8**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
MKAR	**Makanchi Array**	**48.34**	**299**	P	**P**	**17 49 12.4**	**-0.4**
	comp=Z,0.3nm,0.3s,mb3.9,baz=64,slow=7.7,SNR=2.4						
KURK	**Kurchatov**	**48.72**	**305**	*e*P	**P**	**17 49 15.7**	**0.0**
	comp=Z,1.2nm,0.5s,mb4.2						
KURK	**Kurchatov**	**48.72**	**305**	*e*P	**P**	**17 49 15.7**	**0.0**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
BVAR	**Borovoye Array**	**52.16**	**310**	P	**P**	**17 49 41.7**	**0.0**
	comp=Z,0.8nm,0.5s,mb4.0,baz=66,slow=7.0,SNR=6.6						
BVAR	**Borovoye Array**	**52.16**	**310**	P	**P**	**17 49 41.7**	**0.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**52.20**	**310**	*e*P	**P**	**17 49 41.2**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
ARU	**Arti**	**56.23**	**318**	*d i*P	**P**	**17 50 10.7**	**-0.5**
ARU				*e*		17 52 14.9	
ARU				S	**S**	**17 58 03.1**	**+5.1**
ARU				SS	SS	18 01 44.3	+0.1
ARU				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
ARCES	**ARCESS Array B**	**58.67**	**342**	P	**P**	**17 50 27.8**	**-0.4**
	comp=Z,4.6nm,1.2s,mb4.4,baz=44,slow=7.2,SNR=3.6						
ARCES	**ARCESS Array B**	**58.67**	**342**	P	**P**	**17 50 27.8**	**-0.4**
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ABKAR	**Akbulak array**	**59.73**	**311**	*e*P	**P**	**17 50 35.5**	**-0.3**
	comp=Z,0.6nm,0.4s,mb4.0						
NVAR	**Mina Array Bea**	**61.40**	**63**	P	**P**	**17 50 47.7**	**+0.3**
NVAR	**Mina Array Bea**	**61.40**	**63**	P	**P**	**17 50 47.7**	**+0.3**
	comp=Z,0.2nm,0.3s,mb3.7,baz=292,slow=6.2,SNR=5.1						
FINES	**FINESS Array B**	**64.98**	**336**	P	**P**	**17 51 11.7**	**+1.0**
	comp=Z,1.5nm,0.5s,mb4.3,baz=33,slow=7.4,SNR=19						
FINES	**FINESS Array B**	**64.98**	**336**	P	**P**	**17 51 11.7**	**+1.0**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NOA	**NORSAR Array B**	**69.04**	**342**	P	**P**	**17 51 38.8**	**+2.3**
	comp=Z,0.7nm,0.7s,mb3.7,baz=23,slow=6.0,SNR=3.2						
NOA	**NORSAR Array B**	**69.04**	**342**	P	**P**	**17 51 38.8**	**+2.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**76.49**	**62**	P	**P**	**17 52 21.1**	**-0.1**
	comp=Z,1.2nm,0.5s,mb4.1,baz=301,slow=4.2,SNR=24						
TXAR	**Lajitas Array**	**76.49**	**62**	P	**P**	**17 52 21.2**	**-0.1**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

ISCJB ***10*** *17:57:14.9±0.8,33.°2N±0.°1×92.°2E±0.°2,h10km,mb3.7/3, Error ellipse: s-maj=19.4km s-min=13.1km az=60.7*

IDC ***10*** *17:57:15.2±1.3,33.°22N×92.°12E,h0km,mb3.7/3, mb1 3.9/5,mb1mx3.7/20,mbtmp3.7/5,ML3.5/1,MS3.7/1, Ms1 3.8/1,ms1mx2.7/14,Error ellipse: s-maj=43.2km s-min=25.1km az=60.0*

NEIC ***10*** *17:57:20.3±2.6,33.°20N×92.°28E,h37km±33km,mb4.5/1, Error ellipse: s-maj=19.3km s-min=13.1km az=60.0*

ISC 10 17:57:16.8±0.8,33.°2N±0.°1×92.°2E±0.°2,h10km,n8,σ0§65/7, mb3.7/3,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.88**	**156**	Pn	**Pn**	**18 00 59.9**	**-0.6**
	0.1nm,0.3s,baz=336,slow=14,SNR=6.2						
SONM	**Songino Array**	**18.15**	**32**	P	**Pn**	**18 01 29.5**	**+0.7**
	baz=214,slow=12,SNR=5.5						
KBL	**Kabul**	**19.24**	**280**	P	**Pn**	**18 01 42.8**	**+0.6**
	31nm,1.0s						
ZAA0	**Zalesovo Array**	**21.40**	**348**	*e*P	**P**	**18 02 04.3**	**-0.1**
ZALV	**Zalesovo Beam**	**21.40**	**348**	P	**P**	**18 02 03.2**	**-1.2**
	0.3nm,0.3s,mb3.1,baz=168,slow=10,SNR=2.9						
BRTR	**Keskin Array B**	**46.80**	**296**	P	**P**	**18 05 46.5**	**-0.1**
	0.6nm,0.7s,mb3.6,baz=101,slow=4.6,SNR=3.8						
ARCES	**ARCESS Array B**	**51.18**	**336**	LR	LR	18 27 59.5	
	comp=Z,79nm,19.1s,baz=280,slow=36						
ASAR	**Alice Springs**	**69.13**	**139**	P	**P**	**18 08 23.8**	**+0.5**
	2.9nm,0.6s,mb4.4,baz=324,slow=6.4,SNR=7.1						

BJI ***10*** *17:57:18.6,32.°86N×92.°40E,h10km,mB4.9/5,mb4.6/9, ML4.5/2,Ms4.4/11,Ms7 4.2/11*

ISCJB ***10*** *17:57:21.6±0.4,33.°20N±0.°04×92.°07E±0.°06,h10km, mb4.0/13,Error ellipse: s-maj=7.8km s-min=5.9km az=14.6*

IDC ***10*** *17:57:21.6±0.9,33.°16N×91.°98E,h0km,mb4.0/12, mb1 4.1/16,mb1mx4.1/23,mbtmp4.0/16,ML3.6/4,Error ellipse: s-maj=27.9km s-min=16.2km az=45.0*

NEIC ***10*** *17:57:23.9±4.3,33.°16N×92.°05E,h14km±27km,mb4.1/4, Error ellipse: s-maj=14.1km s-min=8.5km az=55.0*

GCMT ***10*** *17:57:27.4±0.4,33.°13N×92.°20E,h23km±1km,MW4.8, Moment Tensor Solution. s15,c18; s51,c88; Moment tensor: Scale 10^16Nm; Mrr=1.38±.20; Mθθ=0.45±.11; Mϕϕ=1.83±.13; Mrθ=0.23±.19; Mθϕ=1.19±.09; Mϕr=0.29±.15; Best double couple: M=2.00000×10^16 NP1:ϕs=49.00000°, δ=49.00000°,λ=-51.00000°. NP2:ϕs=179.00000°,δ=54.00000°, λ=-126.00000°. Principal axes: T 2.3500, Plg3.0000°, Azm293.0000°; N -0.7900, Plg28.0000°, Azm201.0000°; P -1.5600, Plg62.0000°, Azm28.0000°; Data Used: II IU IC G CN.*

ISC 10 17:57:23.8±0.4,33.°21N±0.°04×92.°08E±0.°06,h10km,n42, σ1§10/43,mb4.0/13,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.59**	**193**	Pg	**Pn**	**17 58 18.7**	**-0.7**
LSA				smax			
	comp=N,3μm,0.9s						
LSA				smax			
	comp=E,2μm,0.5s						
ODAN	**Odare**	**7.52**	**214**	*e*P	**Pn**	**17 59 16.3**	**+2.9**
	comp=E,12nm,0.4s						
KKN	**Kakani**	**7.97**	**229**	*e*P	**Pn**	**17 59 20.5**	**+0.9**
	comp=E,23nm,0.6s						
PKI	**Pulchoki**	**8.04**	**227**	*e*P	**Pn**	**17 59 22.0**	**+1.3**
	comp=E,34nm,0.5s						
DMN	**Daman**	**8.21**	**229**	*e*P	**Pn**	**17 59 24.3**	**+1.4**
	comp=E,25nm,0.6s						
GKN	**Gorkha**	**8.25**	**233**	*e*P	**Pn**	**17 59 23.4**	**0.0**
	comp=E,39nm,0.5s						
GTA	**Gaotai**	**8.79**	**43**	*e*P	**Pn**	**17 59 32.4**	**+1.6**
GTA				pP		17 59 35.8	
GTA				sP		17 59 38.7	
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,79nm,5.1s						
GTA				LR	LR		
	comp=N,1μm,10.1s						
GTA				LR	LR		
	comp=E,930nm,12.5s						
GTA				LR	LR		
	comp=Z,1μm,11.0s						
KOLN	**Koldanda**	**9.10**	**236**	*e*P	**Pn**	**17 59 33.2**	**-1.9**
	comp=Z,26nm,0.7s						
WMQ	**Urumqi**	**11.14**	**343**	P	**Pn**	**18 00 09.1**	**+6.1**
WMQ				pP		18 00 16.6	
WMQ				pmax	pmax		
	comp=Z,31nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.4s						
WMQ				LR	LR		
	comp=N,1μm,11.0s						
WMQ				LR	LR		
	comp=E,2μm,10.6s						
WMQ				LR	LR		
	comp=Z,2μm,12.0s						
KMI	**Kunming**	**12.31**	**128**	P	**Pn**	**18 00 18.8**	**-0.3**
KMI				S	**Sn**	**18 02 25.0**	**-11**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.6s						
KMI				LR	LR		
	comp=N,1μm,8.1s						
KMI				LR	LR		
	comp=E,540nm,10.2s						
KMI				LR	LR		
	comp=Z,720nm,9.2s						
MK31	**Makanchi Array**	**15.48**	**334**	*e*P	**Pn**	**18 01 01.7**	**-0.4**
MKAR	**Makanchi Array**	**15.48**	**334**	Pn	**Pn**	**18 01 00.7**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=141,slow=14,SNR=12						
CMAR	**Chiang Mai Arr**	**15.93**	**156**	Pn	**Pn**	**18 01 06.6**	**-1.4**
CMAR	**Chiang Mai Arr**	**15.93**	**156**	Pn	**Pn**	**18 01 06.6**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=330,slow=14,SNR=7.3						
UCH	**Uchtor**	**16.53**	**308**	*e*P	**Pn**	**18 01 17.8**	**+2.1**
	comp=Z,23nm,0.9s						
AAK	**Ala-Archa**	**16.74**	**309**	Pn	**Pn**	**18 01 15.2**	**-3.0**
AAK	**Ala-Archa**	**16.74**	**309**	Pn	**Pn**	**18 01 15.2**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=180,slow=8.1,SNR=2.3						
SONM	**Songino Array**	**18.17**	**32**	P	**Pn**	**18 01 37.4**	**+1.4**
SONM	**Songino Array**	**18.17**	**32**	P	**Pn**	**18 01 37.4**	**+1.4**
	comp=Z,1.0nm,0.3s,baz=212,slow=12,SNR=43						
ULN	**Ulaanbaatar**	**18.50**	**33**	*e*P	**Pn**	**18 01 40.5**	**+0.6**
	comp=Z,4.8nm,0.6s						
KURK	**Kurchatov**	**20.10**	**334**	P	**P**	**18 01 58.3**	**+1.0**
	comp=Z,8.4nm,0.8s						
ZAA0	**Zalesovo Array**	**21.37**	**348**	*e*P	**P**	**18 02 11.1**	**0.0**
ZALV	**Zalesovo Beam**	**21.37**	**348**	P	**P**	**18 02 10.4**	**-0.6**
ZALV	**Zalesovo Beam**	**21.37**	**348**	P	**P**	**18 02 10.4**	**-0.6**
	comp=Z,4.7nm,0.8s,mb3.9,baz=159,slow=11,SNR=18						
BVAR	**Borovoye Array**	**25.18**	**328**	P	**P**	**18 02 48.2**	**-0.9**
	comp=Z,2.2nm,0.7s,mb3.8,baz=134,slow=12,SNR=12						
BRVK	**Borovoye**	**25.25**	**328**	*e*P	**P**	**18 02 50.2**	**+0.4**
ABKAR	**Akbulak array**	**28.72**	**314**	*e*P	**P**	**18 03 21.7**	**+0.6**
	comp=Z,3.0nm,0.8s,mb4.1						
KSRS	**Korea Array**	**29.44**	**71**	P	**P**	**18 03 27.6**	**+0.1**
	comp=Z,0.5nm,0.6s,mb3.4,baz=274,slow=9.0,SNR=3.6						
BRTR	**Keskin Array B**	**46.73**	**296**	P	**P**	**18 05 53.2**	**+0.3**
BRTR	**Keskin Array B**	**46.73**	**296**	P	**P**	**18 05 53.2**	**+0.3**
	comp=Z,1.8nm,0.8s,mb4.0,baz=119,slow=5.3,SNR=8.2						
AKASG	**Malin Array Be**	**48.40**	**311**	P	**P**	**18 06 04.9**	**-0.9**
	comp=Z,1.3nm,0.6s,mb4.2,baz=77,slow=7.0,SNR=5.2						
FINES	**FINESS Array B**	**50.07**	**325**	P	**P**	**18 06 16.3**	**-2.0**
	comp=Z,1.6nm,0.9s,mb4.0,baz=96,slow=9.6,SNR=5.6						
ARCES	**ARCESS Array B**	**51.13**	**336**	P	**P**	**18 06 26.8**	**+0.5**
ARCES	**ARCESS Array B**	**51.13**	**336**	P	**P**	**18 06 26.8**	**+0.5**
	comp=Z,1.2nm,0.5s,mb4.1,baz=96,slow=8.7,SNR=12						
NOA	**NORSAR Array B**	**57.25**	**325**	P	**P**	**18 07 10.2**	**-0.9**
	comp=Z,0.8nm,0.7s,mb3.9,baz=99,slow=3.9,SNR=4.6						
ASAR	**Alice Springs**	**69.19**	**139**	P	**P**	**18 08 30.6**	**0.0**
ASAR	**Alice Springs**	**69.19**	**139**	P	**P**	**18 08 30.6**	**0.0**
	comp=Z,3.7nm,0.7s,mb4.4,baz=330,slow=6.0,SNR=51						
ILAR	**Eielson Array**	**72.11**	**23**	P	**P**	**18 08 47.8**	**-0.2**
	comp=Z,1.8nm,0.9s,mb4.0,baz=299,slow=5.4,SNR=23						
STKA	**Stephens Creek**	**79.83**	**139**	P	**P**	**18 09 31.8**	**-0.6**
STKA	**Stephens Creek**	**79.83**	**139**	P	**P**	**18 09 31.8**	**-0.5**
	comp=Z,2.7nm,1.0s,mb4.1,baz=306,slow=13,SNR=3.2						
YKA	**Yellowknife Ar**	**82.24**	**12**	P	**P**	**18 09 44.7**	**-0.1**
YKA	**Yellowknife Ar**	**82.24**	**12**	P	**P**	**18 09 44.7**	**-0.1**
	comp=Z,1.0nm,0.8s,mb3.8,baz=340,slow=5.3,SNR=4.0						

IDC ***10*** *18:16:33.4±1.3,15.°97N×146.°36E,h0km,mb3.8/5, mb1 3.9/6,mb1mx3.6/20,mbtmp3.8/6,ML3.4/1,Error ellipse: s-maj=49.3km s-min=20.6km az=107.0*

ISCJB ***10*** *18:16:38.3±3.8,15.°9N±0.°2×146.°5E±0.°3,h52km±34km, mb3.8/5,Error ellipse: s-maj=48.7km s-min=26.5km az=17.5*

NEIC ***10*** *18:16:41.1±3.7,15.°80N×146.°41E,h61km±33km,Error ellipse: s-maj=47.8km s-min=28.7km az=89.0*

ISC 10 18:16:39.8±4.0,15.°9N±0.°2×146.°6E±0.°3,h50km±36km,n8, σ1§06/10,mb3.8/5,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.79**	**216**	*e*P	**Pn**	**18 17 21.3**	**-0.6**
GUMO				Sn	**Sn**	**18 17 55.3**	**+0.8**
GUMO	**Guam**	**2.79**	**216**	Pn	**Pn**	**18 17 20.7**	**-1.3**
	6.5nm,0.3s,baz=106,slow=6.1,SNR=9.4						
GUMO				Sn	**Sn**	**18 17 55.3**	**+0.8**
	26nm,0.3s,baz=344,slow=22,SNR=9.3						
ASAR	**Alice Springs**	**41.19**	**198**	P	**P**	**18 24 19.4**	**-0.2**
	0.3nm,0.8s,mb3.0,baz=17,slow=13,SNR=5.9						
MK31	**Makanchi Array**	**61.03**	**315**	*e*P	**P**	**18 26 49.5**	**+1.2**
MKAR	**Makanchi Array**	**61.03**	**315**	P	**P**	**18 26 48.4**	**+0.1**
	0.4nm,0.4s,mb3.9,baz=88,slow=8.4,SNR=12						
ILAR	**Eielson Array**	**65.82**	**26**	P	**P**	**18 27 21.1**	**+1.5**
	0.2nm,0.4s,mb3.5,baz=253,slow=5.8,SNR=8.8						
BVAR	**Borovoye Array**	**69.18**	**321**	P	**P**	**18 27 40.3**	**-0.7**
	0.8nm,0.4s,mb4.0,baz=110,slow=6.9,SNR=6.0						
FINES	**FINESS Array B**	**89.79**	**336**	P	**P**	**18 29 31.0**	**-1.8**
	2.4nm,0.9s,mb4.5,baz=66,slow=4.8,SNR=7.3						

ISCJB ***10*** *18:40:13.8±0.3,6.°79N±0.°03×72.°87W±0.°03,h175km±3km, mb4.5/89,Error ellipse: s-maj=5.2km s-min=4.4km az=158.1*

NEIC ***10*** *18:40:14.4±0.4,6.°74N×72.°91W,h166km±4km,mb4.6/83, Error ellipse: s-maj=4.6km s-min=4.1km az=64.0*

NEIC Felt at Bogota.

IDC ***10*** *18:40:15.1±1.1,6.°72N×72.°97W,h170km±10km,mb4.0/12, mb1 4.2/17,mb1mx4.0/24,mbtmp4.0/17,Error ellipse: s-maj=15.1km s-min=10.1km az=71.0*

FUNV ***10*** *18:40:16.5,6.°91N×73.°01W,h164km,MW5.0*

ISC 10 18:40:14.7±0.3,6.°79N±0.°03×72.°87W±0.°03,h166km±3km, n497,σ0§69/509,mb4.5/89,174C-145D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.20**	**27**	↑*iP*	**Pn**	**18 40 43.5**	**+0.7**
CAPV				*eS*	**Sn**	**18 41 03.2**	**-1.1**
ROSC	**El Rosal**	**2.41**	**217**	P	**Pn**	**18 40 55.3**	**-0.2**
	1μm,0.3s,baz=292,slow=17,SNR=565						
ROSC				S	**Sn**	**18 41 26.8**	**-0.4**
	826nm,0.3s,baz=87,slow=21,SNR=6.8						
SOCV	**Socops**	**2.49**	**53**	↑*eP*	**Pn**	**18 40 58.2**	**+1.6**
SOCV				*eS*	**Sn**	**18 41 28.5**	**-0.3**
VIGV	**El Vigia**	**2.53**	**36**	↑*iP*	**Pn**	**18 40 58.0**	**+1.0**
VIGV				*eS*	**Sn**	**18 41 27.7**	**-2.0**
SDV	**Santo Domingo**	**3.04**	**47**	*e*Pn	**Pn**	**18 41 04.9**	**+1.6**
SDV				*eS*	**Sn**	**18 41 41.0**	**+0.1**
ELOV	**Elorza**	**3.37**	**86**	↓*eP*	**Pn**	**18 41 09.6**	**+2.2**
ELOV				*eS*	**Sn**	**18 41 49.1**	**+0.8**
VIRV	**Villa del Rosa**	**3.72**	**7**	↑*iP*	**Pn**	**18 41 10.3**	**-1.6**
VIRV				*eS*	**Sn**	**18 41 51.5**	**-4.8**
QARV	**Quebrada Arrib**	**4.11**	**34**	↑*iP*	**Pn**	**18 41 17.9**	**+1.0**
QARV				*eS*	**Sn**	**18 42 01.3**	**-4.1**
SANV	**Sanarito**	**4.26**	**51**	*eP*	**Pn**	**18 41 19.7**	**+0.9**
SANV				*eS*	**Sn**	**18 42 06.7**	**-2.1**
CURV	**Curarigua**	**4.31**	**42**	↑*eP*	**Pn**	**18 41 20.0**	**+0.6**
CURV				*eS*	**Sn**	**18 42 06.6**	**-3.3**
DABV	**Dabajuro**	**4.66**	**28**	↑*iP*	**Pn**	**18 41 24.5**	**+0.4**
DABV				*eS*	**Sn**	**18 42 14.0**	**-4.2**
TEPV	**Terepaima**	**4.82**	**49**	↑*iP*	**Pn**	**18 41 26.9**	**+0.8**
TEPV				*eS*	**Sn**	**18 42 18.8**	**-3.0**
SIQV	**Siquisique**	**4.89**	**38**	↑*iP*	**Pn**	**18 41 27.2**	**+0.3**
SIQV				*eS*	**Sn**	**18 42 18.8**	**-4.7**
BAUV	**El Baul**	**5.24**	**66**	*eP*	**Pn**	**18 41 31.6**	**0.0**
MAPV	**Macapo**	**5.31**	**55**	↑*eP*	**Pn**	**18 41 33.3**	**+0.8**
JACV	**Jacura**	**5.85**	**43**	*eP*	**Pn**	**18 41 39.4**	**-0.2**
JACV				*eS*	**Sn**	**18 42 40.4**	**-5.7**
IMOV	**Isla Los Monje**	**5.87**	**19**	*eP*	**Pn**	**18 41 39.0**	**-0.8**
MONV	**Montecano**	**5.88**	**29**	↑*eP*	**Pn**	**18 41 39.0**	**-1.0**
MONV				*eS*	**Sn**	**18 42 39.9**	**-7.0**
TURV	**Turiamo**	**6.16**	**53**	*eP*	**Pn**	**18 41 43.5**	**-0.3**
TURV				*eS*	**Sn**	**18 42 48.9**	**-4.7**
CAOV	**Caicara del Or**	**6.52**	**85**	↓*eP*	**Pn**	**18 41 48.8**	**+0.3**
MERV	**Las Mercedes**	**6.95**	**69**	*eP*	**Pn**	**18 41 54.4**	**+0.2**
BCIP	**Isla Barro Col**	**7.29**	**289**	*eP*	**Pn**	**18 41 53.1**	**-5.6**
	64nm,0.6s						
CUPV	**Cœpira**	**7.72**	**65**	*eP*	**Pn**	**18 42 04.4**	**0.0**
PRGV	**PARIAGUAN**	**8.38**	**76**	*eP*	**Pn**	**18 42 13.8**	**+0.6**
OTAV	**Otavalo**	**8.56**	**221**	*eP*	**Pn**	**18 42 13.0**	**-2.5**
	30nm,0.6s						
PCRV	**Puerto La Cruz**	**8.81**	**67**	P	**Pn**	**18 42 20.5**	**+1.7**
	6.5nm,0.3s,baz=239,slow=5.8,SNR=32						
PCRV				S	**Sn**	**18 43 55.6**	**-1.5**
	3.9nm,0.3s,baz=270,slow=15,SN

426A McDonald Obser 37.64 313 P P 18 47 13.4 -0.4
baz=38,SNR=36
227A Bennet, Jal 37.87 316 ⇓P P 18 47 15.0 -0.7
baz=38
326A Caldwell Ranch 37.96 314 ⇑P P 18 47 15.7 -0.7
baz=38,SNR=6.5
127A Arkansas Junct 38.29 316 ⇓P P 18 47 18.2 -1.0
baz=38
425A Indio Mountain 38.40 313 P P 18 47 19.8 -0.4
baz=38,SNR=24
CFAA Coronel Fontan 38.43 174 P P 18 47 19.8 -0.5
comp=E,0.1nm,0.4s,baz=320,slow=8.0,SNR=3.7
226A Malaga, Loving 38.46 315 ⇓P P 18 47 20.3 -0.4
baz=38,SNR=9.0
AMTX Amarillo 38.54 321 eP P 18 47 20.8 -0.4
comp=E,34nm,0.8s,mb5.0
Z27A Tatum 38.57 317 P P 18 47 20.5 -1.0
baz=39,SNR=62
KSU1 Kansas State U 38.64 330 eP P 18 47 20.3 -1.7
comp=E,31nm,0.7s,mb5.0
MSTX Muleshoe 38.67 318 ⇑P P 18 47 20.2 -2.1
baz=39,SNR=11
325A Bean Ranch, Si 38.70 313 ⇓P P 18 47 21.9 -0.8
baz=39,SNR=17
GDL2 Guadalupe Moun 38.72 315 eP P 18 47 22.8 0.0
comp=E,3.8nm,0.5s,mb4.3
Y27A Causey 38.88 318 ⇑P P 18 47 23.0 -1.1
baz=39,SNR=12
RCBR Riachuelo 38.96 108 P P 18 47 26.7 +1.6
225A Deer Hill, Car 39.00 314 ⇑P P 18 47 24.9 -0.2
baz=39,SNR=20
Z26A Caprock 39.06 317 ⇓P P 18 47 24.3 -1.4
baz=39
JFWS Jewell Farm 39.11 340 eP P 18 47 25.4 -0.5
comp=E,29nm,0.7s,mb5.0
324A Moseley Ranch, 39.11 313 ⇑P P 18 47 25.3 -0.7
baz=39,SNR=39
MNTX Cornudas Mount 39.17 314 eP P 18 47 25.9 -0.6
comp=E,17nm,0.8s,mb4.7
125A Gardner Draw, 39.18 315 ⇑P P 18 47 26.1 -0.5
baz=39,SNR=33
X27A F and S Farms, 39.30 319 ⇑P P 18 47 25.2 -2.3
baz=39,SNR=6.9
Y26A Elida 39.34 318 ⇑P P 18 47 26.3 -1.6
baz=39,SNR=12
SCIA State Center 39.36 336 eP P 18 47 27.6 -0.3
comp=E,18nm,0.5s,mb5.0
224A Cornudas Mount 39.48 314 ⇓P P 18 47 29.0 0.0
baz=40,SNR=73
W27A Bowe Ranch, En 39.53 320 ⇑P P 18 47 27.6 -1.9
baz=40,SNR=18
Z25A Roswell 39.58 316 ⇑P P 18 47 28.9 -0.9
baz=40,SNR=33
X26A CR and CF Fran 39.70 318 ⇓P P 18 47 30.1 -0.8
baz=40,SNR=26
124A Stringfield Ra 39.77 315 ⇓P P 18 47 28.8 -2.7
baz=40,SNR=13
Y25A Mesa, Roswell 39.93 317 ⇓P P 18 47 31.5 -1.3
baz=40,SNR=17
W26A Owens Ranch, T 40.00 319 ⇑P P 18 47 32.8 -0.5
baz=40,SNR=6.4
Z24A Sheeppen Canyo 40.05 316 ⇑P P 18 47 33.8 +0.1
baz=40,SNR=8.7
223A Chaparral, Ant 40.09 313 ⇑P P 18 47 33.2 -1.0
baz=40
123A Bell Site, Whi 40.30 314 ⇓P P 18 47 35.0 -0.8
baz=40
Y24A Capitan 40.44 316 ⇓P P 18 47 36.8 -0.2
baz=40,SNR=36
V26A Tequesquite Ra 40.45 320 ⇑P P 18 47 35.8 -1.2
baz=40,SNR=9.4
W25A X Bar L Ranch, 40.53 319 ⇓P P 18 47 37.6 -0.1
baz=41,SNR=30
Z23A Rita Site, Whi 40.62 315 ⇓P P 18 47 37.9 -0.5
baz=41,SNR=8.0
222A Williams Famil 40.63 313 ⇑P P 18 47 38.0 -0.6
baz=41,SNR=6.9
U26A Atchley Ranch, 40.79 321 ⇑P P 18 47 38.3 -1.5
baz=41,SNR=9.2
X24A Lazy VL Ranch, 40.80 317 ⇑P P 18 47 40.7 +0.8
baz=41
V25A Rancho No Teng 41.01 319 ⇑P P 18 47 40.9 -0.7
baz=41,SNR=17
221A Mesquite Ranch 41.08 312 ⇓P P 18 47 42.4 +0.2
baz=41,SNR=5.5
Z22A Elephant Butte 41.13 314 ⇑P P 18 47 42.8 +0.2
baz=41,SNR=7.1
W24A Lazy 6 Ranch, 41.15 318 ⇓P P 18 47 40.7 -2.1
baz=41,SNR=9.1
U25A Circle Dot Ran 41.22 320 ⇑P P 18 47 40.9 -2.4
baz=41,SNR=8.4
121A Cookes Peak, D 41.35 313 ⇑P P 18 47 45.0 +0.6
baz=41,SNR=8.1
V24A Rampart Ranch, 41.37 319 ⇓P P 18 47 45.2 +0.7
baz=42,SNR=24
BNM Barren Site 41.38 316 eP P 18 47 44.6 -0.1
comp=E,3.0nm,0.7s,mb4.0
Y22A Socorro 41.50 315 ⇑P P 18 47 45.4 -0.3
baz=42
220A Playas Peak, P 41.58 312 ⇓P P 18 47 46.5 +0.2
baz=42,SNR=19
W23A Werner Place, 41.62 317 ⇑P P 18 47 46.8 +0.2
baz=42
LENM Lemitar 41.63 316 eP P 18 47 46.8 +0.1
comp=E,5.4nm,0.8s,mb4.2
Z21A St. Cloud Mine 41.66 314 ⇑P P 18 47 47.3 +0.3
baz=42,SNR=10.0
T25A Trinidad 41.67 321 ⇓P P 18 47 47.1 +0.2
baz=42,SNR=10
ANMO Albuquerque 41.71 317 eP P 18 47 47.4 0.0
comp=E,4.3nm,0.8s,mb4.1
U24A Moreno Valley 41.78 320 ⇑P P 18 47 47.6 -0.2
baz=42,SNR=5.4
X22A Bernardo 41.84 316 ⇓P P 18 47 48.3 -0.1
baz=42
LAZ Ladron 41.87 316 eP P 18 47 49.3 +0.6
comp=E,15nm,1.1s,mb4.5
319A Douglas 41.89 311 ⇑P P 18 47 48.8 0.0
baz=42,SNR=13
120A U Bar Ranch, L 41.97 312 ⇓P P 18 47 49.8 +0.3
baz=42,SNR=15
V23A Ortiz Mt. (NFS 41.98 318 ⇓P P 18 47 50.6 +1.1
baz=42,SNR=5.2
S25A Robets Cordova 42.02 322 ⇑P P 18 47 50.0 +0.2
baz=42,SNR=19
Y21A Point of Rocks 42.03 315 ⇓P P 18 47 50.0 0.0
baz=42,SNR=8.2
219A White Tail Can 42.17 311 ⇓P P 18 47 51.2 +0.1
baz=42,SNR=9.8
Z20A Nine Sixteen R 42.23 313 ⇓P P 18 47 51.1 -0.5
baz=42,SNR=7.4
ECSD EROS Data Cent 42.28 334 eP P 18 47 50.5 -1.3
comp=E,7.6nm,0.4s,mb4.7
U23A El Rito 42.32 319 ⇓P P 18 47 49.9 -2.4
baz=42,SNR=10
X21A Alamocita Cree 42.35 315 ⇓P P 18 47 53.0 +0.5
baz=42,SNR=24
318A Bisbee 42.46 310 ⇓P P 18 47 53.6 +0.1
baz=42,SNR=16
Y20A Horse Springs, 42.48 314 ⇓P P 18 47 54.3 +0.8
baz=42,SNR=18
S24A Houchin Ranch, 42.48 321 ⇓P P 18 47 54.0 +0.4
baz=43,SNR=16
V22A San Miguel Ran 42.56 318 P P 18 47 54.9 +0.8
baz=43,SNR=8.8
119A Ashpeak Ranch, 42.57 312 ⇑P P 18 47 54.4 +0.1
baz=43,SNR=5.9
W21A San Fidel 42.61 316 ⇑P P 18 47 55.2 +0.6
baz=43,SNR=5.8
T23A Casias Ranch, 42.64 320 ⇑P P 18 47 55.1 +0.2
baz=43,SNR=6.3
SDCO Great Sand Dun 42.73 321 eP P 18 47 56.3 +0.8
comp=E,10nm,0.7s,mb4.6
218A Dragoon 42.75 311 ⇓P P 18 47 56.3 +0.5
baz=43,SNR=28
R24A Sanders Place, 42.79 322 ⇑P P 18 47 56.7 +0.7
baz=43,SNR=21
X20A Quemado 42.90 315 ⇓P P 18 47 57.9 +0.9
baz=43,SNR=14
V21A Milan 42.99 317 ⇑P P 18 47 57.9 +0.3
baz=43
118A Homack Ranch, 43.00 312 ⇓P P 18 47 58.1 +0.3
baz=43,SNR=19
S23A Nye Farm, Mont 43.02 321 ⇑P P 18 47 58.6 +0.8
baz=43
P25A Willow Gulch B 43.04 324 ⇑P P 18 47 58.6 +0.6
baz=43,SNR=5.9
Y19A Nutrioso 43.13 314 ⇑P P 18 48 00.2 +1.4
baz=43,SNR=9.0
T22A Edith 43.19 319 ⇓P P 18 47 59.4 +0.2
baz=43,SNR=7.3
W20A Ramah 43.21 316 ⇓P P 18 48 00.1 +0.7
baz=43,SNR=5.3
217A Green Valley 43.24 310 ⇓P P 18 47 59.3 -0.4
baz=43,SNR=13
Z18A Geronimo 43.27 312 ⇓P P 18 48 00.4 +0.5
baz=43,SNR=5.8
Q24A Divide 43.27 323 ⇓P P 18 47 59.4 -0.5
baz=43
U21A Nageezi 43.35 318 ⇑P P 18 48 00.7 +0.2
baz=43,SNR=6.5
X19A St. Johns 43.40 314 ⇑P P 18 48 01.5 +0.5
baz=44,SNR=14
TUC Tucson 43.46 311 eP P 18 48 01.2 -0.2
comp=E,9.0nm,0.8s,mb4.5
117A Oracle 43.54 311 P P 18 48 02.4 +0.3
baz=44,SNR=18
V20A Brimhall 43.55 317 ⇓P P 18 48 01.7 -0.4
baz=44,SNR=5.4
S22A 4UR Ranch, Cre 43.57 320 ⇑P P 18 48 02.4 +0.1
baz=44,SNR=19
T21A Navajo Lake 43.59 319 ⇑P P 18 48 02.4 0.0
baz=44,SNR=5.4
Y18A Canyon Day Jun 43.60 313 ⇑P P 18 48 03.0 +0.4
baz=44,SNR=11
Q23A Hartsel 43.65 322 ⇑P P 18 48 03.3 +0.4
baz=44
Z17A San Carlos Hig 43.69 312 ⇑P P 18 48 03.1 -0.2
baz=44,SNR=8.3
R22A Saguache, Gunn 43.81 321 ⇑P P 18 48 04.8 +0.7
baz=44,SNR=5.8
W19A Sanders 43.82 315 ⇓P P 18 48 04.7 +0.4
baz=44,SNR=6.6
X18A Snowflake 43.92 314 ⇑P P 18 48 05.1 0.0
baz=44,SNR=8.8
P23A Jefferson 43.95 323 P P 18 48 06.4 +1.2
baz=44,SNR=8.6
EYMN Ely 43.98 342 eP P 18 48 04.8 -0.5
comp=E,21nm,0.6s,mb5.0
W18A Petrified Fore 44.06 315 ⇓P P 18 48 06.8 +0.6
baz=44
ISCO Idaho Springs 44.08 323 eP P 18 48 07.1 +0.8
comp=E,11nm,0.9s,mb4.5
S21A Coal Bank Pass 44.14 319 ⇑P P 18 48 07.0 +0.2
baz=44,SNR=8.1
Y17A Roosevelt 44.15 313 ⇑P P 18 48 07.6 +0.6
baz=44
116A Eloy 44.26 311 ⇓P P 18 48 07.7 -0.2
baz=44,SNR=9.5
Q22A Crested Butte, 44.29 321 ⇑P P 18 48 08.7 +0.8
baz=44,SNR=18
U19A Dine' College, 44.32 317 ⇑P P 18 48 08.0 -0.2
baz=44,SNR=5.6
N24A Carr 44.32 325 ⇓P P 18 48 09.1 +1.0
baz=44
MVCO Mesa Verde 44.34 318 ⇓P P 18 48 08.7 +0.2
baz=44,SNR=5.5
MVCO Mesa Verde 44.34 318 eP P 18 48 08.7 +0.2
comp=E,5.2nm,0.5s,mb4.4
R21A Cimarron 44.40 320 ⇑P P 18 48 07.9 -0.9
baz=45,SNR=6.0
X17A Forest Lakes 44.43 313 ⇑P P 18 48 10.0 +0.8
baz=44,SNR=11
T19A Beclabito 44.48 318 ⇓P P 18 48 09.4 -0.2
baz=45,SNR=10
V18A Ganado 44.51 316 ⇓P P 18 48 09.9 +0.1
baz=45
SMCO Snowmass 44.52 322 eP P 18 48 10.4 +0.6
comp=E,3.4nm,0.6s,mb4.2
O23A Lake Caraibay, G 44.52 323 ⇓P P 18 48 10.7 +0.9
baz=45,SNR=5.4
P22A Eagle 44.64 322 ⇓P P 18 48 10.6 -0.2
baz=45,SNR=13
Y16A Circle Bar Ran 44.70 312 ⇓P P 18 48 11.7 +0.4
baz=45,SNR=13
115A Sonoran Desert 44.72 311 ⇑P P 18 48 11.3 -0.2
baz=45,SNR=9.2
R20A Redvale 44.82 320 ⇑P P 18 48 13.0 +0.8
baz=45,SNR=18
U18A Rough Rock, Ch 44.84 316 ⇓P P 18 48 12.4 0.0
baz=45,SNR=12
214A Organ Pipe Nat 44.84 309 ⇑P P 18 48 12.5 0.0
baz=45,SNR=8.6
O22A Kremmling 44.87 323 ⇑P P 18 48 12.8 +0.3
baz=45,SNR=34
X16A Lo Mia Camp, P 44.93 313 ⇑P P 18 48 13.5 +0.3
baz=45,SNR=16
Z15A Gila River Ind 44.93 311 ⇓P P 18 48 13.1 -0.1
baz=45
PHWY Pilot Hill 44.96 325 eP P 18 48 13.6 +0.4
comp=E,5.1nm,0.7s,mb4.3
N23A Red Feather La 44.97 324 ⇑P P 18 48 14.1 +0.7
baz=45,SNR=13
V17A Tonalea, Kykot 45.06 315 ⇑P P 18 48 14.6 +0.4
baz=45,SNR=23
S19A Harvey Farm, M 45.06 319 ⇓P P 18 48 13.7 -0.4
baz=45,SNR=9.3
Q20A Ridge Place, 45.21 320 ⇓P P 18 48 15.3 +0.1
baz=45,SNR=23
N22A Wattenberg Ran 45.21 324 ⇑P P 18 48 16.0 +0.8
baz=45,SNR=5.1
T18A Mexican Hat 45.22 317 ⇓P P 18 48 15.0 -0.4
baz=45,SNR=12
114A Black Gap (USA 45.24 310 P P 18 48 16.1 +0.6
baz=45,SNR=7.0
W16A Flagstaff 45.33 314 ⇓P P 18 48 16.7 +0.5
baz=45,SNR=10
Y15A Casa Rosa Ranc 45.37 312 ⇓P P 18 48 16.6 0.0
baz=45,SNR=6.7
WUAZ Wupatki 45.42 315 ⇑P P 18 48 17.3 +0.4
baz=46,SNR=32
WUAZ Wupatki 45.42 315 eP P 18 48 17.4 +0.4
comp=E,35nm,0.9s,mb5.0
R19A Curley Farm, L 45.45 319 ⇑P P 18 48 17.5 +0.3
baz=46
O21A Pagoda 45.45 322 ⇑P P 18 48 17.5 +0.3
baz=46,SNR=11
X15A Humboldt 45.54 313 ⇓P P 18 48 18.2 +0.2
baz=46,SNR=15
Z14A Wintersburg 45.55 311 ⇓P P 18 48 18.3 +0.2
baz=46,SNR=11
U16A Tuba City 45.56 315 ⇓P P 18 48 18.2 +0.2
baz=46,SNR=5.1
P20A De Beque 45.59 321 ⇓P P 18 48 18.6 +0.4
baz=46
S18A Hurst Farm, Bl 45.60 318 ⇑P P 18 48 17.4 -1.0
baz=46,SNR=9.9
L23A Garrett 45.63 326 ⇓P P 18 48 18.5 0.0
baz=46
AGMN Agassiz Nation 45.74 339 eP P 18 48 18.9 -0.4
comp=E,9.7nm,0.6s,mb4.6
T17A Navajo Res., N 45.78 317 ⇑P P 18 48 19.6 -0.2
baz=46
N21A Black Mountain 45.82 323 ⇓P P 18 48 20.1 +0.1
baz=46,SNR=11
Q19A Hogan Spring (45.83 320 ⇑P P 18 48 20.1 0.0
baz=46,SNR=26
Y14A Wickenburg 45.86 312 P P 18 48 20.6 +0.2
baz=46,SNR=23
O20A White River Ci 45.88 322 ⇓P P 18 48 20.5 +0.1
baz=46,SNR=8.3
W15A Williams 45.89 314 ⇑P P 18 48 21.5 +0.8
baz=46
R18A Canyonlands Na 45.92 319 ⇓P P 18 48 20.4 -0.4
baz=46,SNR=9.0
L22A Ellis Ranch, M 45.99 325 ⇑P P 18 48 22.2 +0.9
baz=46,SNR=5.9
X14A Yava 46.01 312 ⇑P P 18 48 22.1 +0.4
baz=46,SNR=12
Z13A Yuma Proving G 46.02 310 ⇑P P 18 48 21.6 -0.2
baz=46,SNR=18
P19A Cripple Cowboy 46.04 321 ⇑P P 18 48 21.7 -0.1
baz=46,SNR=5.6
RSSD Black Hills 46.10 329 eP P 18 48 22.2 +0.1
comp=E,3.1nm,0.6s,mb4.1
S17A Black Ridge (B 46.11 317 ⇑P P 18 48 22.4 +0.1
baz=46
V15A Kaibab Nationa 46.13 314 ⇑P P 18 48 23.2 +0.6
baz=46,SNR=42
M21A Separation Pea 46.25 324 ⇑P P 18 48 22.8 -0.6
baz=46,SNR=6.9
N20A Spence Gulch, 46.31 323 ⇓P P 18 48 23.7 -0.2
baz=46,SNR=15
Y13A Salome 46.41 311 ⇑P P 18 48 25.2 +0.4
baz=46,SNR=12
K22A Casper 46.44 326 ⇑P P 18 48 25.1 +0.3
baz=46
Q18A Rafter H Ranch 46.47 319 P P 18 48 25.5 +0.3
baz=47,SNR=7.7
R17A Hanksville Air 46.47 318 ⇑P P 18 48 25.1 0.0
baz=46,SNR=19
L21A Rawlins 46.48 324 ⇓P P 18 48 24.8 -0.4
baz=47
W14A Seligman 46.50 313 ⇓P P 18 48 25.6 +0.2
baz=47,SNR=11
O19A Miners Draw (B 46.52 321 ⇑P P 18 48 25.2 -0.2
baz=47,SNR=13
U15A North Rim 46.52 315 P P 18 48 26.6 +1.0
baz=47,SNR=26
M20A Sweetwater, Wa 46.66 323 ⇑P P 18 48 26.8 +0.2
baz=47,SNR=6.4
S16A Weppner Ranch, 46.69 317 ⇑P P 18 48 26.9 0.0
baz=47,SNR=12
V14A Boquillas Ranc 46.71 314 ⇓P P 18 48 27.8 +0.7
baz=47,SNR=18
SRU San Rafael 46.73 319 ⇑P P 18 48 26.7 -0.5
baz=47,SNR=13
SRU San Rafael 46.73 319 eP P 18 48 26.9 -0.3
comp=E,16nm,1.0s,mb4.6
X13A Yucca 46.76 312 ⇑P P 18 48 27.6 +0.1
baz=47
P18A Preston Nutter 46.84 320 ⇑P P 18 48 28.1 +0.1
baz=47,SNR=11
GLA Glamis 46.85 310 ⇑P P 18 48 28.4 +0.2
baz=47,SNR=6.8
GLA Glamis 46.85 310 eP P 18 48 28.1 0.0
comp=E,17nm,0.8s,mb4.7
T15A Red Dirt Ranch 46.87 316 ⇓P P 18 48 28.5 +0.1
baz=47,SNR=7.6
N19A John Jarvie Ra 46.90 322 ⇑P P 18 48 28.0 -0.4
baz=47,SNR=13
R16A Teasdale 46.91 318 ⇓P P 18 48 28.9 +0.3
baz=47,SNR=26
W13A Hualapai Mount 47.03 313 ⇓P P 18 48 29.4 -0.1
baz=47
Q16A Castle Valley 47.05 319 P P 18 48 29.9 +0.3
baz=47,SNR=7.9
O18A Roosevelt 47.05 321 ⇓P P 18 48 29.7 +0.1
baz=47
P17A Butcher Ranch, 47.07 320 ⇑P P 18 48 29.3 -0.4
baz=47,SNR=12
U14A Mt Trumbull 47.14 315 P P 18 48 31.2 +0.9
baz=47,SNR=14
S15A Panguitch 47.19 317 ⇓P P 18 48 30.7 -0.1
baz=47
M19A Rock Springs 47.25 323 ⇑P P 18 48 30.7 -0.4
baz=47
N18A Larsen Ranch, 47.25 322 ⇓P P 18 48 30.9 -0.3
baz=47,SNR=5.4
PLCA Paso Flores 47.33 178 P P 18 48 30.1 -1.6
comp=E,3.4nm,1.0s,mb3.9,baz=330,slow=9.4,SNR=2.5
T14A Hurricane 47.38 315 ⇑P P 18 48 32.6 +0.4
baz=47,SNR=15
R15A Junction 47.41 317 ⇓P P 18 48 33.0 +0.6
baz=48
V13A Grand Canyon W 47.45 314 ⇓P P 18 48 32.7 0.0
baz=48,SNR=13
O17A Robinson Place 47.47 320 ⇓P P 18 48 33.2 +0.3
baz=48,SNR=26
K20A Yellowstone Ra 47.48 324 ⇓P P 18 48 32.7 -0.1
baz=48,SNR=15
MSU Marysvale 47.50 318 eP P 18 48 33.7 +0.6
comp=E,16nm,0.7s,mb4.8
SWSC Sam W. Stewart 47.54 309 ⇓P P 18 48 33.9 +0.3
baz=48
IRM Iron Mountain 47.55 311 ⇓P P 18 48 33.0 -0.6
baz=48,SNR=10
BC3 Big Chuckawall 47.57 310 ⇑P P 18 48 33.5 -0.3
baz=48,SNR=6.7
I21A Big Trails, Te 47.62 326 ⇑P P 18 48 33.2 -0.8
baz=48
U13A Pakoon Wash 47.69 314 ⇓P P 18 48 35.0 +0.4
baz=48,SNR=13
L19A Farson 47.73 323 ⇑P P 18 48 34.8 0.0
baz=48,SNR=12
P16A Fountain Green 47.74 319 ⇑P P 18 48 35.8 +0.8
baz=48
M18A Lyman 47.76 322 ⇑P P 18 48 34.8 -0.2
baz=48,SNR=5.9
S14A Cedar City 47.79 316 ⇓P P 18 48 35.3 0.0
baz=48,SNR=5.6
CCUT Cedar City 47.82 316 eP P 18 48 35.9 +0.3
comp=E,5.4nm,1.0s,mb4.1
K19A Absolon Red Bu 47.87 324 P P 18 48 35.7 -0.2
baz=48,SNR=14
Q15A Fillmore 47.88 318 ⇓P P 18 48 36.1 0.0
baz=48,SNR=7.9
DAU Daniels Canyon 47.92 320 eP P 18 48 36.9 +0.6
comp=E,15nm,0.8s,mb4.7
T13A Saint George 47.94 315 P P 18 48 37.4 +0.9
baz=48,SNR=13
MPU Maple Canyon 47.94 320 eP P 18 48 36.7 +0.2
comp=E,19nm,1.0s,mb4.7
N17A Moffit Pass 47.95 321 ⇓P P 18 48 37.1 +0.6
baz=48,SNR=6.7
O16A Springville 47.96 320 P P 18 48 37.1 +0.4
baz=48,SNR=10.0
ARUT Antelope Range 47.99 316 eP P 18 48 37.2 +0.3
comp=E,5.7nm,0.4s,mb4.5
MONP Monument Peak 48.01 309 ⇓P P 18 48 37.5 +0.4
baz=48
V12A Nelson 48.02 313 ⇓P P 18 48 37.0 -0.2
baz=48,SNR=17
H21A Big Horn, Sher 48.02 327 ⇓P P 18 48 36.8 -0.2
baz=48
L18A Fontenelle, Gr 48.03 323 P P 18 48 37.5 +0.4
baz=48,SNR=27
BELC Belle Mtn. Jos 48.13 310 P P 18 48 38.1 +0.1
baz=48,SNR=7.3
M17A Scullys Gap (B 48.15 322 ⇓P P 18 48 37.7 -0.3
baz=48,SNR=12
SCHQ Schefferville 48.15 5 P P 18 48 39.0 +1.2
comp=E,18nm,0.6s,mb4.9,baz=192,slow=6.7,SNR=43
SCHQ ScP ScP 18 53 40.6 -1.0
comp=E,3.6nm,0.7s,baz=99,slow=2.4,SNR=6.0
I20A Worland 48.17 326 ⇓P P 18 48 37.9 -0.2
baz=48
S13A Holt Ranch, En 48.18 316 P P 18 48 39.4 +1.1
baz=48,SNR=20
NLU North Lily Min 48.19 319 eP P 18 48 38.9 +0.4
comp=E,11nm,1.1s,mb4.4
GMRC Granite Mounta 48.20 311 ⇑P P 18 48 38.7 +0.2
baz=48
BW06 Boulder Array 48.25 324 ⇓P P 18 48 38.5 -0.3
baz=48,SNR=16
N16A Rees Ranch, Co 48.30 321 ⇑P P 18 48 39.9 +0.7
baz=48,SNR=8.4
H20A Greybull 48.45 327 ⇑P P 18 48 39.1 -1.2
baz=48
K18A Toltan Ranch, 48.46 323 P P 18 48 41.0 +0.7
baz=49,SNR=7.2
Q14A Sevier Lake (B 48.48 318 ⇓P P 18 48 41.3 +0.7
baz=48,SNR=24
V11A Goodsprings 48.49 313 ⇑P P 18 48 41.1 +0.3
baz=48,SNR=8.8
G21A Lodge Grass 48.50 328 ⇑P P 18 48 40.3 -0.3
baz=49
R13A O'Grain Ranch, 48.54 316 P P 18 48 41.8 +0.6
baz=49,SNR=12
O15A The Old Anders 48.62 319 ⇓P P 18 48 41.5 -0.2
baz=49
L17A Cokeville 48.64 322 ⇑P P 18 48 41.6 -0.2
baz=49,SNR=40
P14A Drum Mountains 48.65 318 ⇑P P 18 48 41.9 0.0
baz=49,SNR=8.4
TUQ Turquoise Moun 48.67 312 ⇑P P 18 48 42.6 +0.4
baz=49
HEC Hector,Ludlow 48.72 311 ⇑P P 18 48 42.7 +0.1
baz=49
HWUT Hardware Ranch 48.78 321 eP P 18 48 42.5 -0.4
comp=E,8.7nm,0.6s,mb4.6
J18A Kendall Valley 48.79 324 ⇑P P 18 48 42.6 -0.3
baz=49,SNR=20
DUG Dugway 48.80 319 ⇓P P 18 48 43.2 +0.2
baz=49,SNR=13
DUG Dugway 48.80 319 eP P 18 48 43.2 +0.2
comp=E,7.4nm,0.6s,mb4.5
L16A Fish Haven 48.93 322 ⇓P P 18 48 43.8 -0.2
baz=49,SNR=6.3
Q13A Wheeler Ranch, 48.96 317 ⇓P P 18 48 44.8 +0.4
baz=49,SNR=20
T11A Corn Creek, Al 48.97 315 ⇑P P 18 48 44.4 0.0
baz=49,SNR=5.9
I18A Diamond G Ranc 48.97 325 P P 18 48 44.4 +0.1
baz=49,SNR=11

LAO	**LASA Array**	**48.99**	**330**	*eP*	**P**	**18 48 44.0**	**-0.4**
	comp=E,3.8nm,0.3s,mb4.5							
R12A	**Pony Springs,**	**49.05**	**316**	⇓P	**P**	**18 48 44.6**	**-0.4**
	baz=49,SNR=9.1							
SHOC	**Shoshone**	**49.13**	**312**	⇓P	**P**	**18 48 46.4**	**+0.7**
	baz=49							
P13A	**Bates Ranch, G**	**49.21**	**318**	⇑P	**P**	**18 48 46.8**	**+0.6**
	baz=49,SNR=19							
M15A	**Larsen Ranch,**	**49.25**	**321**	⇓P	**P**	**18 48 46.0**	**-0.4**
	baz=49							
GSC	**Goldstone**	**49.27**	**312**	P	**P**	**18 48 47.0**	**+0.3**
	baz=49,SNR=14							
J17A	**Brown Place, J**	**49.28**	**324**	⇑P	**P**	**18 48 46.9**	**+0.2**
	baz=49,SNR=17							
BGU	**Big Grassy Mou**	**49.33**	**320**	*eP*	**P**	**18 48 47.0**	**0.0**
	comp=E,21nm,0.6s,mb5.0							
REDW	**Red Top Meadow**	**49.37**	**324**	*eP*	**P**	**18 48 47.5**	**+0.2**
	comp=E,33nm,1.0s,mb4.9							
SNOW	**Snow King Moun**	**49.37**	**324**	P	**P**	**18 48 47.7**	**+0.4**
	comp=E,10nm,0.5s,mb4.7							
LOHW	**Long Hollow**	**49.37**	**324**	*eP*	**P**	**18 48 47.2**	**-0.1**
	comp=E,9.6nm,0.6s,mb4.6							
F20A	**Billings**	**49.38**	**328**	⇓P	**P**	**18 48 47.1**	**-0.2**
	baz=50							
N14A	**Grayback Hills**	**49.39**	**320**	P	**P**	**18 48 47.7**	**+0.2**
	baz=50,SNR=27							
U10A	**Ash Meadows, A**	**49.40**	**313**	⇓P	**P**	**18 48 48.1**	**+0.5**
	baz=49							
K16A	**Soda Springs**	**49.49**	**323**	⇓P	**P**	**18 48 48.7**	**+0.4**
	baz=50							
TPAW	**Teton Pass**	**49.50**	**324**	*eP*	**P**	**18 48 48.4**	**+0.1**
	comp=E,14nm,0.8s,mb4.7							
L15A	**Malad City**	**49.51**	**321**	⇓P	**P**	**18 48 47.7**	**-0.7**
	baz=50,SNR=17							
S11A	**Rachel**	**49.53**	**315**	⇑P	**P**	**18 48 48.9**	**+0.3**
	baz=50							
O13A	**Hicks Ranch, I**	**49.53**	**318**	⇑P	**P**	**18 48 48.9**	**+0.3**
	baz=50							
MOOW	**Moose Ponds**	**49.53**	**324**	*eP*	**P**	**18 48 48.3**	**-0.2**
	comp=E,7.2nm,0.8s,mb4.3							
RLMT	**Red Lodge**	**49.55**	**326**	⇓P	**P**	**18 48 47.2**	**-1.5**
	baz=50,SNR=7.8							
RLMT	**Red Lodge**	**49.55**	**326**	*eP*	**P**	**18 48 48.4**	**-0.2**
	comp=E,4.5nm,0.4s,mb4.5							
Q12A	**Willow Creek R**	**49.55**	**317**	⇑P	**P**	**18 48 48.9**	**+0.1**
	baz=50,SNR=8.3							
HVU	**Hansel Valley**	**49.63**	**321**	*eP*	**P**	**18 48 48.8**	**-0.5**
	comp=E,6.0nm,0.6s,mb4.4							
RRI2	**Red Ridge**	**49.63**	**323**	*eP*	**P**	**18 48 49.5**	**+0.2**
	comp=E,22nm,0.6s,mb5.0							
IMW	**Indian Meadow**	**49.73**	**324**	*eP*	**P**	**18 48 50.1**	**+0.1**
	comp=E,9.0nm,0.6s,mb4.6							
R11A	**Troy Canyon, C**	**49.74**	**316**	⇓P	**P**	**18 48 50.2**	**0.0**
	baz=50,SNR=18							
J16A	**Bone**	**49.76**	**323**	⇑P	**P**	**18 48 50.1**	**-0.2**
	baz=50,SNR=25							
FURC	**Furnace Creek,**	**49.80**	**313**	⇑P	**P**	**18 48 50.2**	**-0.6**
	baz=50,SNR=7.1							
P12A	**McGill**	**49.82**	**317**	⇑P	**P**	**18 48 51.8**	**+1.0**
	baz=50							
G18A	**Lazy EL Ranch,**	**49.83**	**327**	⇓P	**P**	**18 48 50.7**	**0.0**
	baz=50,SNR=7.7							
F19A	**Roth Farm, Mol**	**49.84**	**327**	⇑P	**P**	**18 48 50.9**	**+0.1**
	baz=50							
M14A	**Sheep Mountain**	**49.84**	**320**	⇑P	**P**	**18 48 50.5**	**-0.4**
	baz=50,SNR=24							
K15A	**Arbon**	**49.98**	**322**	P	**P**	**18 48 52.1**	**+0.1**
	baz=50,SNR=8.7							
EDW2	**Edwards Air Fo**	**49.99**	**310**	P	**P**	**18 48 52.1**	**-0.1**
	baz=50,SNR=5.6							
LRMC	**Laurel Mountai**	**50.00**	**311**	⇑P	**P**	**18 48 51.9**	**-0.3**
	baz=50,SNR=5.1							
Q11A	**Duckwater**	**50.02**	**316**	⇓P	**P**	**18 48 52.1**	**-0.2**
	baz=50,SNR=13							
I16A	**Newdale**	**50.04**	**324**	⇑P	**P**	**18 48 53.0**	**+0.6**
	baz=50,SNR=14							
N13A	**Wendover, West**	**50.05**	**319**	⇓P	**P**	**18 48 53.1**	**+0.6**
	baz=50							
N13A	**Wendover, West**	**50.05**	**319**	*eP*	**P**	**18 48 52.7**	**+0.2**
	comp=E,9.4nm,0.6s,mb4.6							
L14A	**Malta**	**50.06**	**321**	⇓P	**P**	**18 48 51.9**	**-0.7**
	baz=50,SNR=10.0							
MPMC	**Manual Prospec**	**50.09**	**312**	⇑P	**P**	**18 48 52.3**	**-0.6**
	baz=50							
O12A	**Currie**	**50.10**	**318**	⇑P	**P**	**18 48 53.0**	**+0.1**
	baz=50,SNR=12							
GCMT	**Greycliff**	**50.19**	**327**	*eP*	**P**	**18 48 53.5**	**0.0**
	comp=E,12nm,0.9s,mb4.5							
S10A	**Tonopah Range,**	**50.25**	**315**	⇓P	**P**	**18 48 54.6**	**+0.5**
	baz=50,SNR=13							
F18A	**Big Timber**	**50.28**	**327**	P	**P**	**18 48 54.4**	**+0.2**
	baz=50,SNR=24							
M13A	**Montello**	**50.29**	**320**	⇑P	**P**	**18 48 53.9**	**-0.4**
	baz=50,SNR=28							
M13A	**Montello**	**50.29**	**320**	*eP*	**P**	**18 48 54.2**	**-0.1**
	comp=E,17nm,0.7s,mb4.8							
K14A	**Jones Ranch, D**	**50.30**	**322**	⇓P	**P**	**18 48 53.8**	**-0.5**
	baz=50							
J15A	**Blackfoot**	**50.33**	**323**	⇓P	**P**	**18 48 54.2**	**-0.3**
	baz=50,SNR=6.9							
H16A	**Russell Place,**	**50.40**	**325**	⇑P	**P**	**18 48 55.5**	**+0.4**
	baz=50							
GRAC	**Grapevine Rang**	**50.40**	**313**	⇓P	**P**	**18 48 55.9**	**+0.7**
	baz=50							
P11A	**Circle Ranch,**	**50.43**	**317**	⇓P	**P**	**18 48 54.6**	**-0.8**
	baz=50							
G17A	**Pierce Place,**	**50.48**	**326**	⇑P	**P**	**18 48 56.0**	**+0.3**
	baz=51							
Q10A	**Clear Creek Ra**	**50.53**	**316**	⇑P	**P**	**18 48 56.7**	**+0.6**
	baz=51,SNR=6.0							
O11A	**Cowboy Ranch,**	**50.64**	**318**	⇓P	**P**	**18 48 56.7**	**-0.3**
	baz=51,SNR=13							
ISA	**Isabella**	**50.66**	**311**	P	**P**	**18 48 57.3**	**+0.1**
I15A	**Monteview**	**50.70**	**324**	⇓P	**P**	**18 48 56.9**	**-0.5**
	baz=51							
F17A	**Fitzpatrick Pl**	**50.80**	**326**	⇑P	**P**	**18 48 58.2**	**+0.2**
	baz=51,SNR=11							
E18A	**Harlowton**	**50.81**	**328**	⇑P	**P**	**18 48 57.8**	**-0.3**
	baz=51,SNR=14							
BSC	**Santa Cruz Isl**	**50.91**	**309**	⇑P	**P**	**18 48 59.6**	**+0.6**
	baz=51							
J14A	**Carey**	**50.94**	**322**	⇓P	**P**	**18 48 59.6**	**+0.4**
	baz=51,SNR=21							
P10A	**Eureka**	**50.94**	**317**	⇑P	**P**	**18 48 59.1**	**-0.1**
	baz=51,SNR=6.9							
G16A	**Moss Hill, Enn**	**51.03**	**325**	⇓P	**P**	**18 49 00.2**	**+0.4**
	baz=51,SNR=13							
TIN	**Tinemaha**	**51.05**	**313**	⇑P	**P**	**18 49 01.2**	**+1.2**
	baz=51							
H15A	**Lima**	**51.15**	**324**	⇓P	**P**	**18 49 01.8**	**+1.1**
	baz=51,SNR=16							
D18A	**Linhart Farms,**	**51.15**	**328**	⇑P	**P**	**18 49 01.0**	**+0.3**
	baz=51							
BOZ	**Bozeman (W)**	**51.18**	**326**	⇑P	**P**	**18 49 00.4**	**-0.4**
	baz=51,SNR=10							
BOZ	**Bozeman (W)**	**51.18**	**326**	*eP*	**P**	**18 49 00.4**	**-0.5**
	comp=E,8.8nm,0.8s,mb4.2							
VES	**Vestal, Richgr**	**51.19**	**311**	⇑P	**P**	**18 49 01.6**	**+0.5**
	baz=51,SNR=6.2							
E17A	**Martinsdale**	**51.25**	**327**	⇓P	**P**	**18 49 01.6**	**+0.2**
	baz=51,SNR=17							
F16A	**Kennard Place,**	**51.26**	**326**	⇑P	**P**	**18 49 01.3**	**-0.1**
	baz=51							
O10A	**Cortez Mining,**	**51.28**	**317**	⇑P	**P**	**18 49 02.2**	**+0.4**
	baz=51							
M11A	**Holland Ranch,**	**51.37**	**319**	⇓P	**P**	**18 49 01.6**	**-0.8**
	baz=51							
G15A	**Dillon**	**51.38**	**325**	⇓P	**P**	**18 49 02.8**	**+0.4**
	baz=52,SNR=7.9							
J13A	**Cove Ranch, Pi**	**51.38**	**322**	⇓P	**P**	**18 49 02.0**	**-0.4**
	baz=52,SNR=10							
MCMT	**McKenzie Canyo**	**51.39**	**324**	*eP*	**P**	**18 49 03.3**	**+0.9**
	comp=E,4.0nm,0.6s,mb4.2							
DLMT	**Dillon**	**51.56**	**325**	*eP*	**P**	**18 49 04.0**	**+0.3**
	comp=E,9.8nm,1.1s,mb4.3							
H14A	**Leadore**	**51.57**	**324**	⇑P	**P**	**18 49 04.5**	**+0.7**
	baz=52,SNR=5.9							
D17A	**Six Diamond Ra**	**51.59**	**328**	⇑P	**P**	**18 49 03.9**	**0.0**
	baz=52,SNR=6.9							
HLID	**Hailey**	**51.62**	**322**	P	**P**	**18 49 04.5**	**+0.3**
	baz=52,SNR=16							
HLID	**Hailey**	**51.62**	**322**	*eP*	**P**	**18 49 04.3**	**+0.1**
	comp=E,6.8nm,0.7s,mb4.4							
I13A	**Wildhorse Cree**	**51.63**	**323**	P	**P**	**18 49 04.8**	**+0.5**
	baz=52,SNR=17							
EGMT	**Eagleton**	**51.66**	**329**	P	**P**	**18 49 04.7**	**+0.2**
	baz=52,SNR=7.2							
EGMT	**Eagleton**	**51.66**	**329**	*eP*	**P**	**18 49 04.5**	**+0.1**
	comp=E,6.6nm,0.6s,mb4.4							
NVAR	**Mina Array Bea**	**51.68**	**315**	P	**P**	**18 49 05.0**	**+0.3**
	comp=E,5.8nm,0.7s,mb4.3,baz=124,slow=7.1,SNR=41							
NVAR				PcP	PcP	18 50 16.8	+0.8
	comp=E,1.3nm,0.4s,baz=136,slow=3.4,SNR=4.9							
L11A	**Cat Creek Ranc**	**51.72**	**320**	P	**P**	**18 49 05.3**	**+0.4**
	baz=52,SNR=19							
E16A	**East Helena**	**51.74**	**327**	⇑P	**P**	**18 49 05.3**	**+0.3**
	baz=52							
B18A	**Beardsley Farm**	**51.92**	**329**	P	**P**	**18 49 06.7**	**+0.4**
	baz=52,SNR=25							
C17A	**Wharram Farm,**	**51.94**	**328**	⇑P	**P**	**18 49 06.5**	**+0.1**
	baz=52							
D16A	**Dana Ranch, Ca**	**51.98**	**327**	⇑P	**P**	**18 49 06.8**	**0.0**
	baz=52,SNR=8.7							
H13A	**Challis**	**52.07**	**323**	⇓P	**P**	**18 49 07.5**	**0.0**
	baz=52,SNR=6.1							
L10A	**Juniper Basin**	**52.14**	**319**	⇑P	**P**	**18 49 08.1**	**+0.1**
	baz=52,SNR=11							
I12A	**Atlanta**	**52.18**	**322**	⇑P	**P**	**18 49 07.9**	**-0.5**
	baz=52,SNR=27							
E15A	**Deer Lodge**	**52.21**	**326**	⇓P	**P**	**18 49 08.1**	**-0.4**
	baz=52,SNR=12							
F14A	**Wisdom**	**52.26**	**325**	⇑P	**P**	**18 49 07.7**	**-1.2**
	baz=52,SNR=5.8							
A18A	**Metzger Ranch,**	**52.30**	**330**	⇓P	**P**	**18 49 08.7**	**-0.4**
	baz=52,SNR=12							
G13A	**Cobalt**	**52.35**	**324**	⇑P	**P**	**18 49 09.2**	**-0.3**
	baz=52							
MFID	**Camas Ranch**	**52.41**	**321**	⇓P	**P**	**18 49 10.3**	**+0.2**
	baz=52,SNR=14							
H12A	**Diamond D Ranc**	**52.42**	**323**	⇓P	**P**	**18 49 09.7**	**-0.4**
	baz=52,SNR=23							
C16A	**Fuhringer Ranc**	**52.56**	**328**	⇑P	**P**	**18 49 10.9**	**-0.1**
	baz=53							
E14A	**Clinton**	**52.68**	**325**	⇓P	**P**	**18 49 11.6**	**-0.3**
	baz=53,SNR=6.2							
A17A	**Triple J Farms**	**52.74**	**329**	⇑P	**P**	**18 49 12.3**	**0.0**
	baz=53,SNR=10							
C15A	**Salmond Ranch,**	**53.00**	**327**	⇑P	**P**	**18 49 14.3**	**0.0**
	baz=53,SNR=6.3							
G12A	**Big Creek, Yel**	**53.02**	**323**	⇓P	**P**	**18 49 12.8**	**-1.7**
	baz=53							
WCN	**Washoe City**	**53.08**	**315**	⇓P	**P**	**18 49 14.9**	**-0.2**
	baz=53							
MSO	**Missoula**	**53.17**	**326**	*eP*	**P**	**18 49 15.1**	**-0.5**
	comp=E,4.4nm,1.1s,mb4.1							
A16A	**West Butte Ran**	**53.20**	**329**	⇓P	**P**	**18 49 15.1**	**-0.6**
	baz=53,SNR=7.8							
B15A	**Bradely Ranch,**	**53.30**	**328**	⇑P	**P**	**18 49 15.7**	**-0.8**
	baz=53							
F12A	**Elk City**	**53.32**	**324**	⇓P	**P**	**18 49 16.5**	**-0.2**
	baz=53,SNR=12							
C14A	**Swan Lake**	**53.61**	**327**	⇓P	**P**	**18 49 18.0**	**-0.8**
	baz=54							
D13A	**Huson**	**53.61**	**326**	⇑P	**P**	**18 49 18.4**	**-0.4**
	baz=54,SNR=10							
WVOR	**Wild Horse Val**	**53.72**	**319**	*eP*	**P**	**18 49 19.3**	**-0.4**
	comp=E,5.9nm,0.5s,mb4.6							
A15A	**Johnson Ranch,**	**53.80**	**328**	⇑P	**P**	**18 49 19.7**	**-0.4**
	baz=54,SNR=13							
E12A	**Beaver Dam Sad**	**53.86**	**324**	⇓P	**P**	**18 49 20.3**	**-0.3**
	baz=54							
C13A	**Hot Springs**	**54.02**	**326**	⇓P	**P**	**18 49 22.0**	**+0.3**
	baz=54,SNR=6.9							
J08A	**Circle Bar Ran**	**54.05**	**320**	⇓P	**P**	**18 49 21.9**	**-0.2**
	baz=54							
D12A	**Red Ives Fores**	**54.09**	**325**	⇓P	**P**	**18 49 22.1**	**-0.2**
	baz=54							
A14A	**Double T Ranch**	**54.16**	**328**	⇓P	**P**	**18 49 22.4**	**-0.3**
	baz=54							
BSMT	**Basoo Peak**	**54.23**	**326**	*eP*	**P**	**18 49 23.8**	**+0.5**
	comp=E,14nm,1.2s,mb4.6							
B13A	**Whitefish**	**54.36**	**327**	⇑P	**P**	**18 49 24.0**	**-0.2**
	baz=54							
C12B	**Naegeli Ranch,**	**54.53**	**326**	⇑P	**P**	**18 49 25.3**	**-0.1**
	baz=55,SNR=13							
MOD	**Modoc**	**54.58**	**318**	*eP*	**P**	**18 49 25.4**	**-0.5**
	comp=E,3.4nm,0.7s,mb4.2							
F10A	**Beach Ranch, E**	**54.60**	**323**	⇑P	**P**	**18 49 25.3**	**-0.6**
	baz=55,SNR=14							
A13A	**Flathead Natio**	**54.66**	**328**	⇑P	**P**	**18 49 26.5**	**+0.2**
	baz=55							
B12A	**Libby**	**55.03**	**327**	⇑P	**P**	**18 49 29.4**	**+0.5**
	baz=55							
C11A	**Tepee Creek (N**	**55.04**	**326**	⇑P	**P**	**18 49 29.2**	**+0.1**
	baz=55							
I07A	**Izee**	**55.05**	**320**	P	**P**	**18 49 29.0**	**-0.2**
	baz=55,SNR=16							
G08A	**Pilot Rock**	**55.30**	**322**	P	**P**	**18 49 31.0**	**0.0**
	baz=55,SNR=30							
A12A	**Yaak River Ran**	**55.33**	**327**	⇑P	**P**	**18 49 31.5**	**+0.4**
	baz=55,SNR=11							
K05A	**Summer Lake**	**55.33**	**318**	⇓P	**P**	**18 49 31.3**	**+0.1**
	baz=55							
E09A	**Wood Farm, Sta**	**55.42**	**323**	⇑P	**P**	**18 49 31.6**	**-0.2**
	baz=56							
YBH	**Yreka Blue Hor**	**56.13**	**316**	*eP*	**P**	**18 49 35.2**	**-1.8**
	comp=E,4.0nm,0.5s,mb4.5							
D08A	**Wollman Farm,**	**56.16**	**324**	⇑P	**P**	**18 49 36.9**	**-0.1**
	baz=56							
C09A	**Chrisman Ranch**	**56.16**	**325**	⇑P	**P**	**18 49 36.9**	**-0.1**
	baz=56,SNR=8.2							
F07A	**Phinny Hill Vi**	**56.18**	**322**	⇑P	**P**	**18 49 37.4**	**+0.1**
	baz=56							
OD2	**Odessa Site #2**	**56.20**	**324**	*eP*	**P**	**18 49 36.8**	**-0.6**
	comp=E,3.3nm,0.6s,mb4.3							
G06A	**Carlson Farm,**	**56.31**	**321**	P	**P**	**18 49 39.0**	**+0.9**
	baz=56,SNR=8.0							
EDM	**Edmonton**	**56.77**	**332**	*eP*	**P**	**18 49 40.6**	**-0.6**
HOOD	**Mount Hood Mea**	**56.98**	**321**	*eP*	**P**	**18 49 43.6**	**+0.6**
	comp=E,20nm,0.7s,mb5.0							
H04A	**Detroit Lake**	**57.04**	**320**	⇓P	**P**	**18 49 43.0**	**-0.3**
	baz=57,SNR=7.1							
B08A	**Colville Reser**	**57.06**	**325**	⇓P	**P**	**18 49 42.9**	**-0.5**
	baz=57							
ETW	**Entiat**	**57.26**	**324**	*eP*	**P**	**18 49 44.9**	**0.0**
	comp=E,11nm,0.7s,mb4.8							
F04A	**Kinboy**	**57.74**	**321**	⇑P	**P**	**18 49 47.6**	**-0.6**
	baz=58							
D05A	**Enumclaw**	**58.05**	**323**	⇑P	**P**	**18 49 50.3**	**0.0**
	baz=58							
RPW	**Rockport**	**58.37**	**324**	*eP*	**P**	**18 49 51.1**	**-1.4**
	comp=E,2.3nm,0.4s,mb4.4							
F03A	**Seaside**	**58.45**	**321**	⇑P	**P**	**18 49 53.9**	**+0.8**
	baz=58							
E03A	**Lebam**	**58.72**	**321**	⇓P	**P**	**18 49 55.7**	**+0.6**
	baz=59							
NLWA	**Neilton Lookou**	**59.28**	**322**	*eP*	**P**	**18 49 59.5**	**+0.6**
	comp=E,12nm,0.8s,mb4.8							
YKA	**Yellowknife Ar**	**63.38**	**340**	P	**P**	**18 50 25.7**	**-0.3**
	comp=E,10nm,0.6s,mb4.9,baz=133,slow=6.7,SNR=82							
TIC	**Toumodi**	**67.33**	**86**	*eP*	**P**	**18 50 50.1**	**-2.3**
	comp=E,2.3nm,0.2s,mb4.6							
LIC	**Lamto**	**67.36**	**86**	*eP*	**P**	**18 50 51.2**	**-1.4**
	comp=E,52nm,1.9s,mb5.0							
DLBC	**Basse Lake**	**67.47**	**331**	*eP*	**P**	**18 50 52.5**	**+0.1**
DBIC	**Dimbokro**	**67.49**	**86**	P	**P**	**18 50 54.0**	**+0.6**
	comp=E,1.6nm,0.5s,mb4.1,baz=273,slow=3.3,SNR=11							
KIC	**Kosan Boka**	**67.63**	**86**	*eP*	**P**	**18 50 52.5**	**-1.8**
	comp=E,43nm,1.5s,mb5.0							
SUMG	**Summit**	**68.97**	**11**	*i* P	**P**	**18 51 02.4**	**+0.9**
	comp=E,6.3nm,0.7s,mb4.5							
INK	**Inuvik**	**73.14**	**340**	P	**P**	**18 51 26.9**	**+0.2**
	comp=E,4.5nm,0.6s,mb4.4,baz=122,slow=5.3							
EGAK	**Eagle**	**74.72**	**336**	*eP*	**P**	**18 51 36.2**	**+0.3**
	comp=E,7.0nm,0.2s,mb4.9							
BMRM	**Bremner River**	**75.27**	**331**	*eP*	**P**	**18 51 39.9**	**+0.8**
	comp=E,15nm,1.1s,mb4.5							
ILAR	**Eielson Array**	**77.10**	**335**	P	**P**	**18 51 49.1**	**-0.3**
	comp=E,2.0nm,0.7s,mb3.8,baz=110,slow=4.4,SNR=32							
ILAR				PP	PP	18 54 43.3	-1.8
	comp=E,0.4nm,0.8s,baz=106,slow=5.1,SNR=5.6							
RC01	**Rabbit Creek A**	**77.75**	**331**	*eP*	**P**	**18 51 53.0**	**0.0**
TRF	**Thorofare Moun**	**78.34**	**333**	*eP*	**P**	**18 51 56.4**	**+0.2**
	comp=E,4.9nm,0.8s,mb4.2							
BPAW	**Bear Paw Mtn.**	**78.74**	**334**	*eP*	**P**	**18 51 58.5**	**0.0**
	comp=E,4.6nm,0.4s,mb4.5							
COLD	**Coldfoot**	**78.88**	**337**	*eP*	**P**	**18 52 00.2**	**+1.1**
	comp=E,4.3nm,1.0s,mb4.0							
PPLA	**Purkeypile**	**79.12**	**333**	*eP*	**P**	**18 52 00.9**	**+0.4**
	comp=E,26nm,0.3s,mb5.3							
RSO	**Redoubt South**	**79.14**	**330**	*eP*	**P**	**18 52 00.7**	**0.0**
NOA	**NORSAR Array B**	**81.23**	**29**	P	**P**	**18 52 13.4**	**+1.5**
	comp=E,0.7nm,0.6s,mb3.4,baz=258,slow=5.8,SNR=3.2							
ARCES	**ARCESS Array B**	**86.62**	**20**	P	**P**	**18 52 39.3**	**+0.3**
	comp=E,0.9nm,0.6s,mb3.8,baz=269,slow=3.5,SNR=8.7							
ZALV	**Zalesovo Beam**	**116.64**	**15**	PKP	PKPdf	18 58 39.0	0.0
	comp=E,1.5nm,0.4s,baz=302,slow=1.9,SNR=8.3							
MKAR	**Makanchi Array**	**122.27**	**20**	PKP	PKPdf	18 58 50.0	-0.1
	comp=E,1.0nm,0.4s,baz=304,slow=2.3,SNR=14							
SONM	**Songino Array**	**125.61**	**1**	PKP	PKPdf	18 58 57.1	+0.6
	comp=E,0.6nm,0.4s,baz=282,slow=1.2,SNR=7.4							
STKA	**Stephens Creek**	**139.31**	**228**	PKhKP	PKPpre	18 59 15.2	
	comp=E,2.1nm,0.8s,baz=173,slow=8.1,SNR=2.8							
CTA	**Charters Tower**	**139.84**	**247**	PKhKP	PKPpre	18 59 16.4	
	comp=E,2.2nm,0.8s,baz=166,slow=4.2,SNR=2.3							
ASAR	**Alice Springs**	**149.29**	**234**	PKP	PKPdf	18 59 39.7	-0.5
	comp=E,6.5nm,0.5s,baz=117,slow=2.4,SNR=104							
ASAR				PKPbc	PKPbc	18 59 43.5	-1.1
	comp=E,6.8nm,0.5s,baz=117,slow=3.5,SNR=110							
CMAR	**Chiang Mai Arr**	**153.65**	**18**	PKP	PKPdf	18 59 47.1	+0.3
	comp=E,0.5nm,0.6s,baz=293,slow=2.8,SNR=5.6							
CMAR				PKPbc	PKPbc	18 59 55.4	+0.6
	comp=E,2.0nm,0.5s,baz=319,slow=3.1,SNR=26							

MOS ***10*** *18:47:37.1±0.8, 15°.73N×146°.74E, h33km, mb5.0/9, Error ellipse: s-maj=19.2km s-min=9.8km az=114.4*

ISCJB ***10*** *18:47:39.6±1.8, 15°.84N±0°.07×146°.70E±0°.09, h48km±16km, mb4.4/40, MS3.9/20, Error ellipse: s-maj=14.6km s-min=11.1km az=12.5*

BJI ***10*** *18:47:40.4, 16°.26N×146°.92E, h45km, mB4.8/9, mb4.6/13, Ms4.5/7, Ms7 4.1/7*

NEIC ***10*** *18:47:42.5±1.6, 15°.69N×146°.71E, h66km±15km, mb4.5/12, Error ellipse: s-maj=11.7km s-min=10.8km az=79.0*

IDC ***10*** *18:47:42.3±2.1, 15°.80N×146°.65E, h59km±20km, mb4.0/21, mb1 4.1/23, mb1mx4.1/27, mbtmp4.0/23, ML4.3/2, MS3.9/16, Ms1 3.9/16, ms1mx3.7/27, Error ellipse: s-maj=17.2km s-min=13.8km az=111.0*

ISC 10 18:47:40.8±1.6, 15°.81N±0°.07×146°.75E±0°.09, h45km±15km, h36km±5.5km:pP-P,n81,σ1s03/66,mb4.4/40,MS3.9/20,4C, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.86**	**220**	P	**Pn**	**18 48 23.3**	**-0.6**
	32nm,0.3s,baz=127,slow=3.9,SNR=18						
GUMO				S	**Sn**	**18 48 58.0**	**+0.9**
	128nm,0.3s,baz=52,slow=20,SNR=10						
GUMO				LR	LR	18 49 35.5	
	comp=Z,2μm,18.7s,baz=77,slow=41						
GUMO	**Guam**	**2.86**	**220**	P	**Pn**	**18 48 23.4**	**-0.5**
GUMO				S	**Sn**	**18 48 58.0**	**+0.9**
JHJ	**Hachijo jima 2**	**18.36**	**341**	P	**Pn**	**18 51 50.6**	**-1.4**
	5.5nm,0.3s,baz=94,slow=23,SNR=6.8						
MAJO	**Matsushiro**	**22.01**	**341**	*eP*	**P**	**18 52 32.3**	**+1.1**
	5.7nm,0.6s,mb4.2						
MAJO	**Matsushiro**	**22.01**	**341**	*eP*	**P**	**18 52 32.3**	**+1.1**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.2						
MAT	**Matsushiro**	**22.01**	**341**	P	**P**	**18 52 29.8**	**-1.4**
MAT				*e*S	sP	18 52 54.2	+6.4
DAV	**Davao City (W)**	**22.47**	**250**	LR	LR	18 59 50.4	
	comp=Z,207nm,19.1s,MS3.6,baz=11,slow=32						
SSLB	**Suanglung**	**25.50**	**292**	*eP*	**P**	**18 53 07.3**	**+2.2**
	comp=Z,18nm,0.9s,mb4.6						
KSRS	**Korea Array**	**27.25**	**326**	P	**P**	**18 53 19.3**	**-1.5**
	comp=Z,1.9nm,0.8s,mb3.7,baz=148,slow=9.2,SNR=9.2						
SSE	**Sheshan**	**27.86**	**308**	P	**P**	**18 53 25.4**	**-0.9**
SSE				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6						
SSE				pmax	pmax		
	comp=Z,63nm,6.6s						
SSE				LR	LR		
	comp=N,130nm,24.3s,MS3.6						
SSE				LR	LR		
	comp=E,170nm,24.4s,MS3.6						
SSE				LR	LR		
	comp=Z,240nm,17.7s						
HNR	**Honiara**	**28.28**	**152**	LR	LR	19 03 03.8	
	comp=Z,226nm,21.7s,MS3.7,baz=73,slow=32						
ASAJ	**Asahikawa**	**28.44**	**354**	P	**P**	**18 53 32.5**	**+1.3**
	comp=Z,6.9nm,0.7s,mb4.4,baz=196,slow=12,SNR=6.7						
FITZ	**Fitzroy Crossi**	**39.59**	**213**	*eP*	**P**	**18 55 07.6**	**-0.4**
	comp=Z,8.9nm,1.0s,mb4.5						
ASAR	**Alice Springs**	**41.19**	**198**	P	**P**	**18 55 20.1**	**-1.1**

KDAK	**Kodiak Island**	**61.24**	**32**	P	**P**	**18 57 52.5**	**+1.5**
	comp=Z,3.9nm,0.9s,mb4.5,baz=277,slow=8.1,SNR=3.6						
NVS	**Novosibirsk**	**62.02**	**324**	*eP*	**P**	**18 57 55.7**	**-0.7**
BPAW	**Bear Paw Mtn.**	**63.90**	**26**	*eP*	**P**	**18 58 09.9**	**+1.2**
KURK	**Kurchatov**	**64.09**	**319**	*eP*	**P**	**18 58 09.6**	**-0.6**
KURK				LR	LR	19 27 17.9	
KURK	**Kurchatov**	**64.09**	**319**	P	**P**	**18 58 10.0**	**-0.2**
	comp=Z,20nm,0.8s,mb5.2,baz=97,slow=7.0,SNR=21						
KURK				LR	LR	19 27 17.9	
	comp=Z,115nm,19.1s,MS4.1,baz=135,slow=37						
KURK	**Kurchatov**	**64.09**	**319**	*c iP*	**P**	**18 58 09.9**	**-0.3**
KURK				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
PALK	**Pallekele**	**65.05**	**271**	*i* P	**P**	**18 58 12.3**	**-4.8**
KSH	**Kashi**	**65.37**	**307**	P	**P**	**18 58 22.1**	**+3.3**
KSH				*e*pP	pP	18 58 32.3	+0.6
KSH				*e*sP	sP	18 58 36.3	-0.6
KSH				*e*PcP	PcP	18 58 51.2	+0.6
KSH				*e*PP	PP	19 00 51.0	+8.1
KSH				*e*ScP		19 02 50.3	
KSH				*e*PcS		19 02 54.2	
KSH				*e*S	S	19 07 09.9	+10
KSH				*e*sS	sS	19 07 27.7	+6.2
KSH				*e*ScS	ScS	19 08 13.1	+2.4
KSH				*e*SS	SS	19 11 20.5	+7.1
KSH				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
KSH				pmax	pmax		
	comp=Z,56nm,4.5s						
KSH				LR	LR		
	comp=N,71nm,7.1s						
KSH				LR	LR		
	comp=E,96nm,5.8s						
KSH				LR	LR		
	comp=Z,87nm,4.4s						
ILAR	**Eielson Array**	**65.80**	**25**	P	**P**	**18 58 20.6**	**-0.5**
	comp=Z,0.8nm,0.7s,mb3.9,baz=260,slow=5.7,SNR=12						
ILAR				LR	LR	19 24 58.5	
	comp=Z,100nm,20.2s,MS4.0,baz=276,slow=34						
UCH	**Uchtor**	**66.46**	**310**	*eP*	**P**	**18 58 27.3**	**+1.6**
	comp=Z,6.9nm,1.0s,mb4.6						
UCH	**Uchtor**	**66.46**	**310**	*eP*	**P**	**18 58 27.3**	**+1.6**
UCH				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
AAK	**Ala-Archa**	**66.47**	**310**	LR	LR	19 30 05.7	
	comp=Z,91nm,18.1s,MS4.0,baz=176,slow=38						
BVAR	**Borovoye Array**	**69.34**	**321**	P	**P**	**18 58 43.3**	**-0.3**
	comp=Z,6.7nm,0.6s,mb4.7,baz=103,slow=7.1,SNR=53						
BRVK	**Borovoye**	**69.40**	**321**	*eP*	**P**	**18 58 43.5**	**-0.5**
	comp=Z,9.2nm,0.9s,mb4.7						
BRVK	**Borovoye**	**69.40**	**321**	*c iP*	**P**	**18 58 43.8**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
PPT	**Papeete**	**70.97**	**115**	*e*LR	LR	19 20 39.3	
	comp=Z,103nm,22.0s						
PPT	**Papeete**	**70.97**	**115**	LR	LR	19 25 26.4	
	comp=Z,144nm,19.4s,MS4.2,baz=164,slow=32						
INK	**Inuvik**	**71.64**	**23**	P	**P**	**18 58 56.9**	**-0.4**
	comp=Z,2.3nm,0.9s,mb4.1,baz=227,slow=11,SNR=3.2						
DLBC	**Dease Lake**	**73.15**	**33**	P	**P**	**18 59 08.2**	**+1.6**
	comp=Z,4.1nm,1.1s,mb4.3,baz=254,slow=8.6,SNR=6.5						
SVE	**Sverdlovsk**	**74.81**	**325**	*eP*	**P**	**18 59 16.6**	**+0.3**
SVE				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
ARU	**Arti**	**76.00**	**325**	*eP*	**P**	**18 59 22.9**	**-0.2**
	comp=Z,5.1nm,0.8s,mb4.5						
ARU	**Arti**	**76.00**	**325**	*c iP*	**P**	**18 59 22.7**	**-0.4**
ARU				*e*		19 02 12.9	
ARU				S	S	19 09 09.0	+6.3
ARU				SS	SS	19 14 05.1	+9.4
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
ABKAR	**Akbulak array**	**76.14**	**318**	*eP*	**P**	**18 59 23.0**	**-1.0**
	comp=Z,1.4nm,0.4s,mb4.2						
TAOE	**Nuku Hiva Isla**	**76.40**	**103**	*e*LR	LR	19 23 09.7	
	comp=Z,174nm,22.2s						
AKTK	**Aktyubinsk**	**77.19**	**319**	P	**P**	**18 59 28.9**	**-1.0**
AKTO	**Aktyubinsk**	**77.19**	**319**	P	**P**	**18 59 28.9**	**-1.0**
	comp=Z,0.9nm,0.6s,mb3.9,baz=81,slow=16,SNR=3.6						
YBH	**Yreka Blue Hor**	**80.06**	**49**	P	**P**	**18 59 45.8**	**-0.2**
	comp=Z,1.6nm,0.9s,mb4.0,baz=264,slow=19,SNR=2.9						
YKA	**Yellowknife Ar**	**80.07**	**28**	P	**P**	**18 59 45.7**	**+0.2**
	comp=Z,1.2nm,0.8s,mb3.9,baz=284,slow=5.1,SNR=5.0						
YKA	**Yellowknife Ar**	**80.07**	**28**	P	**P**	**18 59 45.7**	**+0.2**
NVAR	**Mina Array Bea**	**84.13**	**52**	P	**P**	**19 00 08.7**	**+1.4**
	comp=Z,0.9nm,0.7s,mb4.0,baz=269,slow=5.7,SNR=6.7						
ARCES	**ARCESS Array B**	**85.54**	**342**	P	**P**	**19 00 13.1**	**-0.7**
	comp=Z,5.9nm,0.8s,mb4.9,baz=38,slow=6.1,SNR=14						
MCMT	**McKenzie Canyo**	**86.19**	**45**	P	**P**	**19 00 18.3**	**+0.8**
	comp=Z,0.9nm,0.7s,mb4.1						
BOZ	**Bozeman (W)**	**86.74**	**43**	P	**P**	**19 00 19.8**	**-0.4**
	comp=Z,7.3nm,1.4s,mb4.7						
BOZ	**Bozeman (W)**	**86.74**	**43**	P	**P**	**19 00 19.8**	**-0.4**
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.7						
OBN	**Obninsk**	**88.24**	**327**	P	**P**	**19 00 26.0**	**-1.2**
OBN				*e*	pP	19 00 37.5	-3.2
OBN				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.5						
FINES	**FINESS Array B**	**89.92**	**336**	P	**P**	**19 00 33.4**	**-1.6**
	comp=Z,1.6nm,0.5s,mb4.6,baz=48,slow=5.2,SNR=15						
FINES				LR	LR	19 46 08.0	
	comp=Z,53nm,18.3s,MS4.0,baz=331,slow=39						
SMCO	**Snowmass**	**92.26**	**48**	*eP*	**P**	**19 00 45.3**	**-1.0**
	comp=Z,1.6nm,0.5s,mb4.6						
AKASG	**Malin Array Be**	**94.24**	**326**	LR	LR	19 47 48.4	
	comp=Z,43nm,19.0s,MS3.9,baz=65,slow=38						
NOA	**NORSAR Array B**	**95.62**	**340**	P	**P**	**19 00 59.9**	**-1.4**
	comp=Z,1.3nm,0.8s,mb4.4,baz=48,slow=4.8,SNR=3.0						
NOA				LR	LR	19 49 59.5	
	comp=Z,30nm,18.8s,MS3.8,baz=20,slow=39						
BRTR	**Keskin Array B**	**96.84**	**314**	P	**P**	**19 01 07.1**	**-0.2**
	comp=Z,0.3nm,0.6s,mb3.9,baz=46,slow=4.2,SNR=3.0						
TXAR	**Lajitas Array**	**98.62**	**56**	PKKPbc	PKKPbc	19 17 44.0	-0.5
	comp=Z,0.2nm,0.7s,baz=145,slow=3.1,SNR=4.1						
TXAR				LR	LR	19 42 05.9	
	comp=Z,69nm,19.0s,MS4.2,baz=185,slow=33						
DBIC	**Dimbokro**	**144.09**	**306**	*e*PKP	PKPdf	19 07 10.7	-1.9
DBIC				PKP	PKPdf	19 07 11.0	-1.6
DBIC	**Dimbokro**	**144.09**	**306**	PKP	PKPdf	19 07 11.0	-1.6
	comp=Z,3.4nm,0.7s,baz=25,slow=4.9,SNR=6.1						
KIC	**Kosan Boka**	**144.19**	**306**	*e*PKP2	PKPdf	19 07 11.1	-1.7
	comp=Z,10.0nm,0.6s						
TIC	**Toumodi**	**144.23**	**306**	*e*PKP2	PKPdf	19 07 10.1	-2.8
	comp=Z,6.0nm,0.2s						
LIC	**Lamto**	**144.50**	**306**	*e*PKP2	PKPdf	19 07 09.9	-3.4
	comp=Z,36nm,1.2s						
LPAZ	**La Paz**	**146.50**	**96**	PKPbc	PKPbc	19 07 18.9	+0.8
	comp=Z,0.9nm,0.7s,baz=341,slow=2.0,SNR=6.6						
SIV	**San Ignacio**	**153.25**	**94**	PKPbc	PKPbc	19 07 34.5	-0.2
	comp=Z,0.7nm,0.9s,baz=290,slow=18,SNR=2.9						

*IDC **10** 19:13:05.9±1.2, 11.°01N×91.°91E, h0km, mb3.9/9, mb1 3.9/10, mb1mx3.7/22, mbtmp3.8/10, ML3.1/1, Error ellipse: s-maj=44.7km s-min=19.1km az=67.0*
*NEIC **10** 19:13:07.0±0.5, 11.°01N×91.°85E, h10km, mb4.7/1, Error ellipse: s-maj=13.4km s-min=11.1km az=133.0*
*ISCJB **10** 19:13:08.1±0.6, 10.°91N±0.°09×91.°7E±0.°1, h33km, mb4.0/12, Error ellipse: s-maj=15.3km s-min=13.5km az=169.0*

ISC 10 19:13:10.5±0.6, 10.°95N±0.°09×91.°8E±0.°1, h35km, n18, σ0s84/17, mb4.0/12, 1C, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.18**	**42**	Pn		**Pn**	**19 15 30.7**	**-3.6**
	0.0nm,0.3s,baz=240,slow=15,SNR=3.0							
PALK	**Pallekele**	**11.53**	**252**	*eP*		**Pn**	**19 15 52.2**	**-0.5**
PALK				S		**Sn**	19 17 46.9	**-13**
ENH	**Enshi**	**25.32**	**38**	*eP*		**P**	**19 18 33.3**	**-0.7**
	11nm,0.6s,mb4.6							
GTA	**Gaotai**	**29.23**	**13**	*eP*		**P**	**19 19 10.4**	**+1.4**
GTA				pP		pP	19 19 14.1	-5.0
GTA				sP		sP	19 19 17.0	-6.3
GTA				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.2							
MK31	**Makanchi Array**	**36.62**	**349**	*eP*		**P**	**19 20 12.6**	**-0.7**
MKAR	**Makanchi Array**	**36.62**	**349**	P		**P**	**19 20 14.3**	**+0.9**
MKAR	**Makanchi Array**	**36.62**	**349**	P		**P**	**19 20 14.3**	**+0.9**
	comp=Z,1.0nm,0.7s,mb3.7,baz=163,slow=7.9,SNR=8.0							
SONM	**Songino Array**	**38.77**	**16**	P		**P**	**19 20 32.3**	**+0.8**
	comp=Z,1.2nm,0.9s,mb3.6,baz=198,slow=9.2,SNR=7.4							
KURK	**Kurchatov**	**41.09**	**347**	P		**P**	**19 20 50.3**	**-0.5**
	comp=Z,0.8nm,0.2s,mb3.9,baz=172,slow=8.0,SNR=2.1							
KSRS	**Korea Array**	**41.81**	**45**	P		**P**	**19 20 56.1**	**-0.8**
	comp=Z,0.7nm,0.8s,mb3.4,baz=233,slow=9.3,SNR=4.7							
ZALV	**Zalesovo Beam**	**43.24**	**354**	P		**P**	**19 21 07.4**	**-0.8**
	comp=Z,0.7nm,0.6s,mb3.5,baz=183,slow=8.9,SNR=3.7							
FITZ	**Fitzroy Crossi**	**44.17**	**130**	*i* P		**P**	**19 21 15.9**	**-0.3**
	comp=Z,11nm,0.6s,mb4.8							
ASAR	**Alice Springs**	**53.67**	**130**	P		**P**	**19 22 29.4**	**+0.3**
	comp=Z,1.6nm,0.7s,mb4.1,baz=306,slow=6.7,SNR=22							
ASAR				PcP		PcP	19 23 35.7	+0.6
	comp=Z,1.0nm,0.7s,baz=312,slow=3.6,SNR=8.0							
STKA	**Stephens Creek**	**63.91**	**134**	P		**P**	**19 23 40.6**	**+0.6**
	comp=Z,1.9nm,0.7s,mb4.2,baz=315,slow=7.1,SNR=3.7							
ARCES	**ARCESS Array B**	**71.60**	**340**	P		**P**	**19 24 29.1**	**+1.2**
	comp=Z,1.5nm,0.8s,mb4.0,baz=88,slow=7.5,SNR=3.8							
ILAR	**Eielson Array**	**92.77**	**21**	P		**P**	**19 26 18.8**	**-0.3**
	comp=Z,0.2nm,0.5s,mb3.8,baz=297,slow=6.6,SNR=3.6							
NVAR	**Mina Array Bea**	**123.41**	**28**	PKP	PKPdf		19 32 04.9	+0.5
	comp=Z,0.5nm,0.7s,baz=328,slow=3.2,SNR=3.6							
TXAR	**Lajitas Array**	**137.27**	**20**	PKP	PKPdf		19 32 31.8	+0.9
	comp=Z,0.1nm,0.5s,baz=177,slow=1.5,SNR=2.9							

KRSC 10 19:20:18.2±0.7, 53.°67N×163.°38E, h44km±34km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**1.32**	**313**	*eP*		Pn	19 20 41.5	+1.4
MKZ				*e*S		Sn	19 20 58.2	+1.8
BKI	**Bering**	**2.16**	**44**	*e*S		Sn	19 21 16.1	-1.0
NLC	**Nalytchevo**	**2.47**	**260**	P		Pn	19 20 56.8	+1.0
NLC				*e*S		Sn	19 21 24.2	-0.5
KBTR	**Krutoberegovo**	**2.56**	**353**	P		Pn	19 20 58.0	+0.8
KBTR				S		Sn	19 21 27.8	+0.7
AVH	**Avacha**	**2.80**	**264**	P		Pn	19 21 02.4	+1.9
GNL	**Ganaly**	**3.23**	**273**	*eP*		Pn	19 21 09.0	+2.6

*TAP **10** 19:31:48.1, 24.°02N×122.°54E, h21km, ML2.9, D*
*JMA **10** 19:31:48.7±0.3, 24.°12N×122.°50E, h27km, M2.3*

ISC 10 19:31:47.0±0.5, 23.°96N±0.°03×122.°55E±0.°02, h1km±4km, n33, σ0s80/48, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.65**	**40**	P		**Pg**	**19 32 00.0**	**+0.4**
YOJ				S		**Sg**	**19 32 07.8**	**-0.3**
ENA	**Nanau**	**0.87**	**302**	P		**Pg**	**19 32 04.0**	**+0.2**
	baz=300							
ENA				*e*S		**Sg**	**19 32 16.5**	**+1.4**
	baz=300							
TWD	**Chiawan**	**0.88**	**278**	P		**Pg**	**19 32 04.5**	**+0.6**
	baz=275							
TWC	**Suao**	**0.91**	**315**	P		**Pg**	**19 32 04.3**	**-0.2**
	baz=307							
TWC				*e*S		**Sg**	**19 32 15.2**	**-1.1**
	baz=307							
ESL	**Shilin**	**1.03**	**262**	P		**Pg**	**19 32 06.3**	**-0.5**
	baz=260							
TWE	**Neicheng**	**1.11**	**313**	*eP*		**Pg**	**19 32 07.8**	**-0.5**
	baz=313							
TWE				*e*S		**Sg**	**19 32 22.9**	**+0.3**
	baz=313							
IRIF	**Iriomote-Funau**	**1.14**	**71**	P		**Pg**	**19 32 08.7**	**-0.2**
IRIF				*e*S		**Sg**	**19 32 24.6**	**+0.9**
HATJ	**Hateruma jima**	**1.15**	**85**	P		**Pg**	**19 32 09.6**	**+0.5**
HATJ				*e*S		**Sg**	**19 32 25.5**	**+1.4**
TWB1	**Santiao Chiao**	**1.16**	**334**	*eP*		**Pg**	**19 32 09.7**	**+0.3**
	baz=341							
NNS	**Nan Shan**	**1.18**	**294**	P		**Pg**	**19 32 09.7**	**+0.1**
	baz=292							
NNS				S		**Sg**	**19 32 25.4**	**+0.6**
	baz=292							
WHF	**Hehuan Shan**	**1.19**	**279**	P		**Pg**	**19 32 09.6**	**-0.2**
	baz=262							
WHF				*e*S		**Sg**	**19 32 25.5**	**+0.3**
	baz=262							
EHY	**Hungye**	**1.21**	**248**	*eP*		**Pg**	**19 32 09.7**	**-0.6**
	baz=246							
EHY				*e*S		**Sg**	**19 32 25.5**	**-0.5**
	baz=246							
TWF1	**Yuli**	**1.30**	**242**	P		**Pg**	**19 32 10.9**	**-1.0**
	baz=240							
NSK	**Sanguang**	**1.30**	**304**	P		**Pg**	**19 32 11.7**	**-0.3**
	baz=302							
NSK				*e*S		**Sg**	**19 32 28.4**	**-0.4**
	baz=302							
NWF	**Wu-fen Shan**	**1.31**	**328**	*eP*		**Pg**	**19 32 11.3**	**-0.8**
	baz=343							
NWF				*e*S		**Sg**	**19 32 29.2**	**0.0**
	baz=343							
TWA	**Mucha**	**1.34**	**319**	*eP*		**Pn**	**19 32 13.6**	**+0.7**
	baz=330							
TWA				*e*S		**Sg**	**19 32 29.8**	**-0.5**
	baz=330							
JKRS	**Kuro-shima**	**1.36**	**78**	P		**Pn**	**19 32 13.0**	**-0.1**
JIJ	**Ishigaki jima**	**1.51**	**74**	P		**Pn**	**19 32 14.2**	**-0.9**
JIJ				*e*S		**Sn**	**19 32 33.6**	**-1.8**
SMLT	**Sun Moon Lake**	**1.51**	**267**	P		**Pn**	**19 32 14.9**	**-0.2**
	baz=255							
YUS	**Yu-Shan**	**1.54**	**253**	*eP*		**Pn**	**19 32 15.4**	**-0.1**
	baz=251							
TYC	**Yuchr**	**1.55**	**268**	*eP*		**Pn**	**19 32 14.9**	**-0.8**
	baz=267							
NSTT	**Nanjuang**	**1.56**	**296**	P		**Pn**	**19 32 16.1**	**+0.3**
	baz=294							
NSTT				*e*S		**Sn**	**19 32 36.7**	**0.0**
	baz=294							
ELDTW	**Lidau**	**1.60**	**242**	*eP*		**Pn**	**19 32 14.6**	**-1.8**
	baz=240							
ALS	**Alishan**	**1.66**	**255**	P		**Pn**	**19 32 17.2**	**0.0**
	baz=253							
TWQ1	**Liyutan**	**1.67**	**284**	*eP*		**Pn**	**19 32 18.1**	**+0.8**
	baz=269							
TWG	**Pinlang**	**1.77**	**230**	*eP*		**Pn**	**19 32 17.7**	**-1.0**
	baz=241							
WGK	**Gukeng**	**1.84**	**262**	*eP*		**Pn**	**19 32 20.0**	**+0.3**
	baz=260							
WTP	**Ta-pu**	**1.91**	**249**	*eP*		**Pn**	**19 32 21.1**	**+0.4**
	baz=247							
SGST	**Jiashian**	**2.00**	**245**	*eP*		**Pn**	**19 32 23.4**	**+1.4**
	baz=243							
CHN1	**Nanshi**	**2.01**	**248**	*eP*		**Pn**	**19 32 23.2**	**+1.2**
	baz=246							
CHN1				*e*S		**Sn**	**19 32 50.0**	**+2.2**
	baz=246							
TWK	**Hsinying**	**2.01**	**250**	*eP*		**Pn**	**19 32 22.1**	**+0.1**
	baz=249							
SSD	**Sandimen**	**2.14**	**236**	*eP*		**Pn**	**19 32 24.8**	**+1.1**
	baz=227							
EAST	**Anshuo**	**2.22**	**225**	*eP*		**Pn**	**19 32 23.7**	**-1.1**
	baz=224							

MAN 10 19:38:12, 8.°44N×127.°15E, h27km, mb4.3, ML3.1, MS2.9, 2C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.60**	**289**	*eP*		Pn	19 38 39.4	+0.9
BUTP				*e*S		Sn	19 38 58.0	-0.3
MATI	**Mati**	**1.73**	**211**	*eP*		Pn	19 38 41.5	+1.2
MATI				*e*S		Sn	19 39 03.0	+1.5
SCPH	**Surigao**	**2.11**	**309**	*e*P		Pn	19 38 47.0	+1.4
DMPH	**Davao City--Mi**	**2.11**	**230**	*e*P		Pn	19 38 51.5	+6.0
BUKP	**Musuan**	**2.14**	**255**	*e*P		Pn	19 38 49.7	+3.7
BUKP				*e*S		Sn	19 39 10.4	-1.2
CGP	**Cagayan de Oro**	**2.43**	**271**	*e*P		Pn	19 38 56.6	+6.6
CGP				*e*S		Sn	19 39 20.0	+1.2

IDC 10 20:05:46.2±3.2, 0.°49S×132.°50E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.5/17, mbtmp3.9/3, Error ellipse: s-maj=219.0km s-min=28.4km az=71.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**23.08**	**177**	P		P	20 10 54.8	+1.1
	3.5nm,0.8s,baz=354,slow=9.3,SNR=28							
STKA	**Stephens Creek**	**32.38**	**165**	P		P	20 12 16.5	-1.2
	3.4nm,0.8s,baz=338,slow=10,SNR=4.5							
MKAR	**Makanchi Array**	**64.30**	**324**	P		P	20 16 23.8	+0.3
	0.2nm,0.5s,baz=125,slow=6.1,SNR=3.6							

*GUC **10** 20:22:16.9±1.0, 23.°95S×67.°33W, h186km±58km, ML4.2*
*NEIC **10** 20:22:16.9±0.8, 24.°22S×67.°71W, h188km±9km, MG4.2(GUC), Error ellipse: s-maj=15.5km s-min=11.4km az=71.0*
*ISCJB **10** 20:22:18.6±0.8, 23.°91S±0.°06×67.°38W±0.°09, h199km±10km, mb3.2/2, Error ellipse: s-maj=13.7km s-min=9.1km az=173.5*
*IDC **10** 20:22:21.2±2.2, 23.°78S×67.°14W, h206km±20km, mb3.1/2, mb1 3.3/6, mb1mx3.2/16, mbtmp3.0/6, Error ellipse: s-maj=32.4km s-min=16.8km az=71.0*

ISC 10 20:22:18.5±0.8, 23.°96S±0.°06×67.°35W±0.°09, h190km±11km, n24, σ1s34/32, mb3.4/2, 6C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.59**	**310**	*i* P		**Pn**	**20 23 08.1**	**+5.2**
PB04				*i* S		**Sn**	**20 23 47.5**	**+10**
PB04				AML		AML	20 23 49.6	
	comp=N,293nm,0.6s							
CEN1	**Los Morros**	**2.67**	**282**	*i* P		**Pn**	**20 23 05.2**	**+1.4**
CEN1				*i* S		**Sn**	**20 23 41.3**	**+2.4**
CEN1				AML		AML	20 23 44.5	
	comp=E,454nm,0.8s							
ANCH	**Antofagasta**	**2.81**	**275**	*i* P		**Pn**	**20 23 01.4**	**-4.0**
ANCH				*i* S		**Sn**	**20 23 37.8**	**-4.2**
ANCH	**Antofagasta**	**2.81**	**275**	*i* P		**Pn**	**20 23 01.4**	**-4.0**
ANCH				*i* S		**Sn**	**20 23 37.8**	**-4.2**
MACH	**Maria Elena**	**2.83**	**308**	*i* P		**Pn**	**20 23 06.2**	**+0.6**
MACH				*i* S		**Sn**	**20 23 43.0**	**+0.7**
MECH	**Mejillones**	**2.97**	**286**	*i* P		**Pn**	**20 23 07.1**	**-0.1**
MECH				*i* S		**Sn**	**20 23 45.0**	**-0.2**
MECH				AML		AML	20 23 52.6	
	comp=N,475nm,0.4s							
PB01	**Plate Boundary**	**3.51**	**325**	*i* P		**Pn**	**20 23 14.0**	**+0.1**
PB01				*i* S		**Sn**	**20 23 57.5**	**+0.3**
PB01				AML		AML	20 24 00.7	
	comp=E,136nm,0.3s							
HMBC	**Humberston**	**4.36**	**327**	*i* P		**Pn**	**20 23 23.4**	**-1.1**
HMBC				*i* S		**Sn**	**20 24 15.6**	**-0.7**
PSGC	**Pisagua**	**5.05**	**329**	*e*P		**Pn**	**20 23 31.8**	**-1.6**
PSGC				*e*S		**Sn**	**20 24 30.9**	**-1.4**
MNMC	**Miæe Miæ**	**5.24**	**336**	*e*P		**Pn**	**20 23 35.7**	**-0.2**
MNMC				*i* S		**Sn**	**20 24 37.4**	**+0.7**
LCO	**Las Campanas**	**5.86**	**210**	*e*P		**Pn**	**20 23 36.3**	**-7.4**
LPAZ	**La Paz**	**7.67**	**354**	*e*P		**Pn**	**20 24 08.8**	**+1.3**
LPAZ				S		**Sn**	**20 25 34.2**	**+0.2**
LPAZ	**La Paz**	**7.67**	**354**	P		**Pn**	**20 24 09.1**	**+1.6**
	comp=E,0.9nm,0.3s,baz=154,slow=5.8,SNR=33							
LPAZ				S		**Sn**	**20 25 34.2**	**+0.2**
	comp=E,0.1nm,0.3s,baz=22,slow=19,SNR=2.9							
CPUP	**Villa Florida**	**9.38**	**107**	P		**Pn**	**20 24 31.9**	**+2.0**
	comp=E,1.0nm,0.3s,baz=260,slow=9.6,SNR=7.4							
SIV	**San Ignacio**	**9.88**	**38**	P		**Pn**	**20 24 33.9**	**-2.6**
	comp=E,0.2nm,0.3s,baz=232,slow=15,SNR=4.1							
TRQA	**Tornquist**	**14.78**	**163**	P		**Pn**	**20 25 35.4**	**-3.0**
PLCA	**Paso Flores**	**16.94**	**188**	P		**Pn**	**20 26 07.3**	**+2.9**
PLCA	**Paso Flores**	**16.94**	**188**	P		**Pn**	**20 26 07.3**	**+2.9**
	comp=E,0.1nm,0.3s,baz=0.0,slow=8.1,SNR=3.3							
TKL	**Tuckaleechee C**	**61.30**	**345**	P		**P**	**20 32 13.4**	**-0.4**
	comp=E,0.6nm,0.3s,mb3.9,baz=122,slow=9.5,SNR=2.7							
TXAR	**Lajitas Array**	**63.46**	**325**	P		**P**	**20 32 30.3**	**+2.1**
	comp=E,0.1nm,0.6s,mb2.9,baz=137,slow=8.0,SNR=2.6							
ASAR	**Alice Springs**	**128.35**	**205**	PKP	PKPdf		20 41 02.0	-1.0
	comp=E,0.3nm,0.7s,baz=145,slow=1.5,SNR=4.9							
ZALV	**Zalesovo Beam**	**143.51**	**28**	PKP	PKPdf		20 41 28.4	-1.6
ZALV	**Zalesovo Beam**	**143.51**	**28**	PKP	PKPdf		20 41 28.4	-1.6
	comp=E,0.8nm,0.5s,baz=275,slow=2.4,SNR=5.0							
MKAR	**Makanchi Array**	**146.70**	**39**	PKPbc	PKPbc		20 41 38.0	+0.3
	comp=E,1.2nm,0.5s,baz=312,slow=3.1,SNR=17							

*NEIC **10** 20:40:51.0±2.7, 18.°49S×169.°26E, h244km±34km, mb3.3/1, Error ellipse: s-maj=86.0km s-min=13.3km az=158.0*
*IDC **10** 20:40:58.4±15.0, 18.°52S×169.°14E, h318km±151km, mb3.6/6, mb1 3.8/6, mb1mx3.5/12, mbtmp3.6/6, Error ellipse: s-maj=71.6km s-min=50.7km az=151.0*

ISC 10 20:40:51.6±2.7, 18.°6S±0.°6×169.°3E±0.°2, h246km±34km, n11, σ1s04/10, mb3.8/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.36**	**217**	*eP*		**Pn**	**20 41 58.3**	**-1.1**
MSVF	**Nonsavu**	**8.38**	**85**	*eP*		**Pn**	**20 42 50.5**	**+0.8**
EIDS	**Eidsvold**	**18.17**	**245**	*eP*		**P**	**20 44 47.5**	**+1.2**
CTA	**Charters Tower**	**21.78**	**262**

RAHZ	Arahi	1.12	103	PN	Pn	20 46 31.8	+0.7
URZ	Urewera	1.19	70	PN	Pn	20 46 31.0	-0.7
RAEZ	Rainy Point	1.19	238	PN	Pn	20 46 32.0	+0.4
WAZ	Wanganui	1.22	207	PN	Pn	20 46 31.8	-0.2
PNHZ	Pukenui	1.30	163	PN	Pn	20 46 32.7	-0.1
NEZ	North Egmont	1.38	244	PN	Pn	20 46 33.9	+0.4
TSZ	Takapari Road	1.40	172	⇑PN	Pn	20 46 33.6	-0.2
PKE	Pukeiti	1.43	248	PN	Pn	20 46 34.2	+0.2
KAHZ	Kahuranaki	1.45	141	PN	Pn	20 46 34.6	+0.4
MWZ	Matawai	1.48	78	PN	Pn	20 46 34.2	-0.3
WPHZ	Waipukurau	1.51	158	PN	Pn	20 46 34.8	-0.1
KNZ	Kokohu	1.58	103	PN	Pn	20 46 35.8	+0.2
PXZ	Pawanui	1.64	147	PN	Pn	20 46 36.1	-0.1
DVHZ	Dannevirke	1.67	167	PN	Pn	20 46 35.9	-0.6
POWZ	Post Office Ro	1.72	178	PN	Pn	20 46 36.4	-0.7
PRGZ	Paritu Road	1.73	99	PN	Pn	20 46 37.2	+0.1
PRHZ	Porangahau	1.75	156	PN	Pn	20 46 37.2	-0.2
MHGZ	Mahia Peninsul	1.79	106	PN	Pn	20 46 38.2	+0.3
CNGZ	Carnagh Statio	1.98	85	PN	Pn	20 46 40.2	+0.2
MRZ	Mangatainoka R	1.99	183	PN	Pn	20 46 38.9	-1.2
BFZ	Birch Farm	2.05	168	PN	Pn	20 46 39.9	-0.9
TIWZ	Tintock	2.11	176	PN	Pn	20 46 40.5	-1.0
OGWZ	Otaki Gorge	2.18	190	PN	Pn	20 46 41.1	-1.2
HOWZ	Holdsworth Sta	2.23	183	PN	Pn	20 46 41.4	-1.5
KIW	Kapiti Island	2.27	195	PN	Pn	20 46 41.8	-1.6
MXZ	Matakaoa Point	2.34	63	PN	Pn	20 46 43.9	-0.4
TMWZ	Te Maipa	2.44	177	PN	Pn	20 46 43.8	-1.6
CAW	Cannon Point	2.48	191	PN	Pn	20 46 44.2	-1.7
MTW	Mount Morrison	2.49	183	PN	Pn	20 46 44.1	-1.9
DUWZ	D'Urville Isla	2.53	212	PN	Pn	20 46 44.6	-1.9
WEL	Wellington	2.71	195	PN	Pn	20 46 46.7	-2.0
PAWZ	Paruwai Farm	2.72	184	PN	Pn	20 46 46.7	-2.1
TRWZ	Traveller	2.73	180	PN	Pn	20 46 47.0	-1.9
SNZO	South Karori	2.75	196	PN	Pn	20 46 46.9	-2.3
MSWZ	Moikau Station	2.76	187	PN	Pn	20 46 47.2	-2.2
TCW	Tory Channel	2.76	203	PN	Pn	20 46 47.4	-2.0
PLWZ	Palliser	2.92	186	PN	Pn	20 46 48.8	-2.5
TUWZ	Tuamarina	3.07	205	PN	Pn	20 46 50.7	-2.5
NNZ	Nelson	3.11	214	PN	Pn	20 46 51.1	-2.5
QRZ	Quartz Range	3.25	228	PN	Pn	20 46 52.6	-2.9
BSWZ	Blackbirch Sta	3.34	204	PN	Pn	20 46 54.1	-2.6
THZ	Tophouse	3.76	214	PN	Pn	20 46 59.0	-3.0
KHZ	Kahutara	4.09	203	PN	Pn	20 47 03.5	-2.8
DSZ	Denniston Nort	4.28	223	PN	Pn	20 47 05.4	-3.4
LTZ	Lake Taylor	4.86	211	PN	Pn	20 47 12.4	-4.0
ODZ	Otahua Downs	7.40	209	PN	Pn	20 47 45.4	-4.7

IDC ***10*** *20:47:22.8±1.0, 46°.42N×155°.16E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.7/22, mbtmp3.8/8, ML3.4/1, Error ellipse: s-maj=30.5km s-min=22.9km az=2.0*

NEIC ***10*** *20:47:24.5±0.7, 46°.46N×155°.11E, h10km, mb4.0/2, Error ellipse: s-maj=18.6km s-min=13.0km az=162.0*

ISCJB ***10*** *20:47:25.9±0.9, 46°.4N±0°.2×155°.0E±0°.1, h33km, mb3.8/10, Error ellipse: s-maj=23.0km s-min=12.3km az=157.8*

MOS ***10*** *20:47:26.3±1.5, 46°.62N×154°.95E, h38km, mb4.0/5, Error ellipse: s-maj=20.7km s-min=17.4km az=57.0*

ISC 10 20:47:28.3±0.9, 46°.4N±0°.2×155°.0E±0°.1, h35km, n20, σ0s54/20, mb3.8/10, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	4.32	9	eP	Pn	20 48 25.2	-6.2
KUR	Kuril'sk	5.14	259	ePN	Pn	20 48 42.2	-0.5
KUR				pmax	pmax		
	comp=Z,80nm,0.6s						
ASAJ	Asahikawa	9.06	260	Pn	Pn	20 49 36.8	+0.3
	comp=Z,0.4nm,0.3s,baz=223,slow=8.9,SNR=4.1						
ERM	Erimo	9.59	247	eP	Pn	20 49 43.7	0.0
KSRS	Korea Array	21.98	256	P	P	20 52 24.1	+5.1
	comp=Z,1.4nm,0.9s,mb3.4,baz=52,slow=12,SNR=5.3						
ZALV	Zalesovo Beam	43.87	307	P	P	20 55 30.4	-0.4
	comp=Z,0.3nm,0.3s,mb3.5,baz=66,slow=6.7,SNR=3.1						
MKAR	Makanchi Array	48.26	298	P	P	20 56 04.8	-0.6
	comp=Z,0.2nm,0.5s,mb3.5,baz=71,slow=8.8,SNR=6.2						
MKAR				PcP	PcP	20 57 31.6	-0.4
	comp=Z,0.3nm,0.7s,baz=72,slow=5.2,SNR=3.0						
KURK	Kurchatov	48.64	305	eP	P	20 56 08.1	-0.2
	comp=Z,0.8nm,0.5s,mb4.0						
KURK	Kurchatov	48.64	305	eP	P	20 56 08.1	-0.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
BVAR	Borovoye Array	52.08	310	P	P	20 56 34.6	+0.3
	comp=Z,0.5nm,0.4s,mb3.8,baz=57,slow=7.3,SNR=5.2						
BVAR	Borovoye Array	52.08	310	P	P	20 56 34.6	+0.3
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ABKAR	Akbulak array	59.64	311	eP	P	20 57 28.6	+0.2
	comp=Z,0.6nm,0.5s,mb3.9						
NVAR	Mina Array Bea	61.41	63	P	P	20 57 40.5	-0.2
	comp=Z,0.7nm,0.8s,mb3.9,baz=309,slow=7.1,SNR=3.7						
FINES	FINESS Array B	64.89	336	P	P	20 58 04.7	+1.3
FINES	FINESS Array B	64.89	336	P	P	20 58 04.7	+1.3
	comp=Z,0.8nm,0.4s,mb4.1,baz=31,slow=7.1,SNR=18						
FINES	FINESS Array B	64.89	336	P	P	20 58 04.7	+1.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	72.34	200	P	P	20 58 50.8	+0.5
	comp=Z,0.5nm,0.8s,mb3.5,baz=36,slow=8.0,SNR=3.5						
ASAR	Alice Springs	72.34	200	P	P	20 58 50.8	+0.6
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	Lajitas Array	76.50	62	P	P	20 59 13.9	-0.6
	comp=Z,1.5nm,0.5s,mb4.2,baz=306,slow=4.7,SNR=16						
TXAR	Lajitas Array	76.50	62	P	P	20 59 13.9	-0.7
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						

IDC ***10*** *20:51:31.7±1.1, 14°.40N×92°.70W, h0km, mb4.0/11, mb1 4.2/13, mb1mx4.1/22, mbtmp4.0/13, ML3.9/2, MS3.4/8, Ms1 3.4/8, ms1mx3.1/31, Error ellipse: s-maj=45.5km s-min=15.2km az=49.0*

CASC ***10*** *20:51:31.2±2.1, 13°.70N×93°.24W, h105km±92km, MD4.1, mb4.5(NEIC)*

ISCJB ***10*** *20:51:32.6±1.5, 14°.22N±0°.04×93°.11W±0°.03, h11km±10km, mb4.1/26, MS3.5/7, Error ellipse: s-maj=6.9km s-min=4.6km az=16.0*

NEIC ***10*** *20:51:33.1±3.8, 14°.18N×92°.92W, h12km±23km, mb4.2/19, MD4.5(MEX), Error ellipse: s-maj=12.8km s-min=8.5km az=209.0*

MEX ***10*** *20:51:34.3±0.6, 14°.09N×93°.24W, h18km±21km, MD4.4*

ISC 10 20:51:34.4±1.7, 14°.26N±0°.04×93°.02W±0°.03, h11km±11km, n188, σ1s03/202, mb4.1/25, MS3.5/7, 56C-53D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.97	48	eP	Pb	20 51 53.4	+0.2
THIG				i S	Sb	20 52 08.1	+2.1
JAT	Jato	1.34	87	eP	Pn	20 52 00.4	+1.4
PCIG		1.45	352	eP	Pn	20 51 58.4	-2.1
PCIG				i S	Sn	20 52 17.9	-1.6
TP2	Tecpan 2	2.00	75	eP	Pn	20 52 09.8	+1.7
FG6		2.09	82	eP	Pn	20 52 10.0	+0.7
FUG	Fuego 3	2.11	85	eP	Pn	20 52 09.6	-0.1
FUG				eS	Sn	20 52 40.6	+4.6
IXG	Ixpaco	2.48	92	eP	Pn	20 52 15.2	+0.4
SCX	San Cristobal	2.49	8	i P	Pn	20 52 16.8	+2.0
SCX				i S	Sn	20 52 47.0	+1.9
SCX	San Cristobal	2.49	8	i P	Pn	20 52 14.8	0.0
SCX				i S	Sn	20 52 46.0	+0.9
TGIG		2.50	358	eP	Pn	20 52 14.8	-0.2
TGIG				i S	Sn	20 52 44.9	-0.7
NBG	Las Nubes	2.61	83	eP	Pn	20 52 18.5	+2.1
RBDL	Robledal	3.23	92	eP	Pn	20 52 24.8	-0.2
RTR	El Retiro	3.29	96	eP	Pn	20 52 24.4	-1.5
MRL	Marmol	3.31	76	eP	Pn	20 52 27.8	+1.6
CMIG	Matias Romero	3.34	328	Pn	Pn	20 52 25.2	-1.4
CMIG				Sn	Sn	20 53 07.1	+0.9
CMIG	Matias Romero	3.34	328	Pn	Pn	20 52 25.2	-1.4
	28nm,0.3s,baz=158,slow=13,SNR=297						
CMIG				Sn	Sn	20 53 07.1	+0.9
	60nm,0.3s,baz=296,slow=23,SNR=7.4						
HUIG	Huatulco	3.34	297	eP	Pn	20 52 22.5	-4.1
HUIG				i S	Sn	20 53 00.5	-5.8
HUIG	Huatulco	3.34	297	eP	Pn	20 52 21.7	-4.8
HUIG				i S	Sn	20 52 56.0	-10
BOQS	Boqueron	3.66	98	eP	Pn	20 52 28.6	-2.4
LFRS	El Faro	3.89	99	eP	Pn	20 52 30.9	-3.2
LFRS				eS	Sn	20 53 15.6	-4.2
VHO	Vista Hermosa	4.54	308	i P	Pn	20 52 42.0	-1.0
VHO				i S	Sn	20 53 34.2	-1.7
VHO	Vista Hermosa	4.54	308	i P	Pn	20 52 40.0	-3.0
VHO				i S	Sn	20 53 30.4	-5.5
SCIG	Sabancuy	5.00	20	i P	Pn	20 52 49.9	+0.6
PNIG	Pinotepa	5.37	294	eP	Pn	20 52 51.8	-2.6
PNIG				i S	Sn	20 53 51.9	-4.4
PNIG	Pinotepa	5.37	294	eP	Pn	20 52 48.8	-5.7
PNIG				i S	Sn	20 53 48.9	-7.4
UTMO	Huajuapan	5.81	308	i P	Pn	20 52 56.8	-3.8
UTMO				i S	Sn	20 54 02.0	-5.2
TPIG	Tehuac#an	5.87	315	i P	Pn	20 52 57.3	-4.1
TPIG				i S	Sn	20 54 03.7	-5.0
LVIG	Laguna Verde	6.33	330	i P	Pn	20 53 05.3	-2.4
LVIG				i S	Sn	20 54 18.3	-1.7
LVIG	Laguna Verde	6.33	330	i P	Pn	20 53 05.3	-2.4
LVIG				i S	Sn	20 54 18.3	-1.7
PPM	Popocatepetl	7.19	312	i P	Pn	20 53 18.9	-0.7
PPM				i S	Sn	20 54 41.3	+0.1
PPM	Popocatepetl	7.19	312	i P	Pn	20 53 18.9	-0.7
PPM				i S	Sn	20 54 41.3	+0.1
TEIG	Tepich	7.46	37	eP	Pn	20 53 22.9	-0.3
	64nm,0.4s						
ZIIG	Zihuatanejo	8.78	293	i P	Pn	20 53 41.0	-0.3
ZIIG	Zihuatanejo	8.78	293	i P	Pn	20 53 41.0	-0.3
JCT	Junction City	17.31	340	eP	Pn	20 55 28.9	-7.1
	6.7nm,0.8s						
628A	Black Gap, Mar	17.69	331	⇓P	Pn	20 55 40.8	+0.1
	baz=16						
627A	Terlingua Ranc	17.91	329	⇓P	Pn	20 55 44.5	+1.0
	baz=16,SNR=23						
TXAR	Lajitas Array	17.95	328	P	Pn	20 55 44.0	+0.1
	0.1nm,0.3s,baz=146,slow=12,SNR=16						
TXAR				LR	LR	21 03 53.6	
	comp=Z,36nm,21.1s,baz=5.0,slow=41						
626A	Big Bend Ranch	18.36	328	⇑P	Pn	20 55 50.3	+1.3
	baz=16,SNR=19						
527A	Woodward Ranch	18.58	330	⇑P	Pn	20 55 52.3	+0.5
	baz=17,SNR=6.2						
428A	Kincaid Ranch,	18.64	333	⇑P	Pn	20 55 51.5	-0.9
	baz=17						
526A	Mary Lane Ranc	18.75	329	⇑P	Pn	20 55 54.1	+0.3
	baz=17						
426A	McDonald Obser	19.22	330	⇓P	Pn	20 55 58.2	-1.2
	baz=17,SNR=11						
328A	Wristen Ranch,	19.26	334	⇓P	Pn	20 55 59.6	-0.4
	baz=17						
326A	Caldwell Ranch	19.73	331	⇑P	Pn	20 56 04.9	-0.6
	baz=18						
425A	Indio Mountain	19.79	328	⇑P	Pn	20 56 04.7	-1.5
	baz=18,SNR=8.7						
227A	Bennet, Jal	20.01	334	⇑P	P	20 56 06.7	-0.4
	baz=18						
MIAR	Mount Ida	20.20	359	eP	P	20 56 08.1	-1.1
	16nm,1.0s						
325A	Bean Ranch, Si	20.25	329	⇑P	P	20 56 10.2	+0.5
	baz=18						
324A	Moseley Ranch,	20.57	328	⇓P	P	20 56 13.0	-0.2
	baz=19,SNR=7.5						
127A	Arkansas Junct	20.61	335	⇑P	P	20 56 12.8	-0.8
	baz=19						
ROSC	El Rosal	20.64	115	P	P	20 56 12.3	-1.8
	4.3nm,0.6s,baz=97,slow=19,SNR=1.9						
GDL2	Guadalupe Moun	20.65	332	eP	P	20 56 14.8	+0.7
	11nm,0.9s						
225A	Deer Hill, Car	20.79	331	⇑P	P	20 56 15.4	-0.2
	baz=19,SNR=5.8						
126A	Clayton Basin,	20.87	333	⇓P	P	20 56 15.8	-0.7
	baz=19						
GOGA	Godfrey	20.95	23	eP	P	20 56 15.3	-2.0
	12nm,1.0s						
WMOK	Wichita Mounta	21.04	347	eP	P	20 56 18.7	+0.4
	2.4nm,0.8s,mb3.6						
224A	Comudas Mount	21.10	329	⇓P	P	20 56 18.4	-0.6
	baz=19,SNR=5.7						
Z27A	Tatum	21.11	336	P	P	20 56 18.7	-0.4
	baz=19,SNR=22						
125A	Gardner Draw,	21.17	332	⇓P	P	20 56 19.4	-0.3
	baz=19,SNR=16						
Z26A	Caprock	21.39	334	⇑P	P	20 56 21.7	-0.3
	baz=20,SNR=5.1						
124A	Stringfield Ra	21.58	330	⇑P	P	20 56 24.0	0.0
	baz=20,SNR=12						
Y27A	Causey	21.59	337	⇑P	P	20 56 23.4	-0.9
	baz=20						
Z25A	Roswell	21.72	333	⇑P	P	20 56 24.8	-0.8
	baz=20,SNR=7.0						
SWET	Sewanee	21.82	16	P	P	20 56 25.9	-0.7
AMTX	Amarillo	21.97	341	eP	P	20 56 27.3	-1.0
	25nm,0.9s,mb4.7						
Z24A	Sheeppen Canyo	22.05	332	⇓P	P	20 56 29.6	+0.4
	baz=20,SNR=15						
Y25A	Mesa, Roswell	22.25	334	⇓P	P	20 56 30.5	-0.8
	baz=20						
WVT	Waverly	22.27	11	P	P	20 56 29.4	-2.0
	2.8nm,0.7s,mb3.8						
Z23A	Rita Site, Whi	22.41	330	⇓P	P	20 56 32.6	-0.3
	baz=21						
X26A	CR and CF Fran	22.43	336	⇑P	P	20 56 32.5	-0.7
	baz=20						
220A	Playas Peak, P	22.58	324	⇑P	P	20 56 35.8	+1.0
	baz=21,SNR=5.9						
Y24A	Capitan	22.58	332	⇓P	P	20 56 35.0	+0.2
	baz=21,SNR=7.8						
W27A	Bowe Ranch, En	22.61	338	⇓P	P	20 56 33.8	-1.2
	baz=21,SNR=8.8						
121A	Cookes Peak, D	22.64	326	⇓P	P	20 56 36.6	+1.2
	baz=21,SNR=6.4						
Z22A	Elephant Butte	22.77	329	⇑P	P	20 56 36.8	+0.1
	baz=21						
TKL	Tuckaleechee C	22.87	20	P	P	20 56 35.3	-2.5
	0.6nm,0.4s,mb3.4,baz=189,slow=13,SNR=2.2						
TKL				LR	LR	21 07 15.5	
	comp=Z,64nm,19.4s,MS3.1,baz=159,slow=42						
219A	White Tail Can	23.07	323	⇑P	P	20 56 40.6	+0.5
	baz=21						
318A	Bisbee	23.12	321	⇓P	P	20 56 41.9	+1.4
	baz=21						
Z21A	St. Cloud Mine	23.17	327	⇓P	P	20 56 41.8	+0.7
	baz=21						
W25A	X Bar L Ranch,	23.27	336	⇑P	P	20 56 41.1	-1.0
	baz=21,SNR=9.3						
Y22A	Socorro	23.31	330	⇑P	P	20 56 43.4	+0.8
	baz=22,SNR=5.2						
BNM	Barren Site	23.32	330	eP	P	20 56 43.8	+1.2
	8.6nm,1.3s,mb4.0						
Z20A	Nine Sixteen R	23.52	326	⇓P	P	20 56 44.7	0.0
	baz=22						
218A	Dragoon	23.52	321	⇓P	P	20 56 45.5	+0.7
	baz=22						
119A	Ashpeak Ranch,	23.66	324	⇓P	P	20 56 46.7	+0.7
	baz=22						
W24A	Lazy 6 Ranch,	23.66	334	⇑P	P	20 56 45.4	-0.6
	baz=22,SNR=6.0						
Y21A	Point of Rocks	23.73	329	⇓P	P	20 56 47.2	+0.6
	baz=22						
217A	Green Valley	23.86	320	⇓P	P	20 56 48.5	+0.7
	baz=22						
V25A	Rancho No Teng	23.88	336	⇓P	P	20 56 46.4	-1.5
	baz=22						
ANMO	Albuquerque	23.90	332	P	P	20 56 48.2	0.0
ANMO	Albuquerque	23.90	332	P	P	20 56 48.2	0.0
	2.0nm,0.8s,mb3.6,baz=144,slow=8.1,SNR=9.5						
118A	Homack Ranch,	23.95	323	⇑P	P	20 56 49.4	+0.7
	baz=22						
Y20A	Horse Springs,	24.01	327	⇓P	P	20 56 48.6	-0.6
	baz=22,SNR=7.4						
U26A	Atchley Ranch,	24.04	338	⇑P	P	20 56 48.5	-1.0
	baz=22,SNR=6.5						
V24A	Rampart Ranch,	24.04	335	⇑P	P	20 56 48.5	-1.0
	baz=22						
X21A	Alamocita Cree	24.13	329	⇑P	P	20 56 49.7	-0.6
	baz=22,SNR=7.7						
TUC	Tucson	24.21	321	eP	P	20 56 52.5	+1.4
	3.4nm,0.8s,mb3.8						
U25A	Circle Dot Ran	24.29	337	⇓P	P	20 56 51.5	-0.3
	baz=22						
Z18A	Geronimo	24.31	323	⇑P	P	20 56 54.0	+2.1
	baz=22						
117A	Oracle	24.36	321	⇑P	P	20 56 54.0	+1.5
	baz=23						
V23A	Ortiz Mt. (NFS	24.44	333	⇓P	P	20 56 53.6	+0.5
	baz=23						
Y19A	Nutrioso	24.52	326	⇓P	P	20 56 54.0	+0.1
	baz=23						
X20A	Quemado	24.56	328	⇑P	P	20 56 55.1	+0.8
	baz=23						
Y18A	Canyon Day Jun	24.81	324	⇑P	P	20 56 57.5	+1.0
	baz=23						
X19A	St. Johns	24.89	327	⇓P	P	20 56 58.8	+1.6
	baz=23						
V22A	San Miguel Ran	24.91	332	⇑P	P	20 56 57.8	+0.4
	baz=23						
U23A	El Rito	24.94	334	⇓P	P	20 56 58.8	+1.1
	baz=23						
T25A	Trinidad	24.95	338	⇑P	P	20 56 56.8	-0.9
	baz=23,SNR=9.6						
S25A	Robets Cordova	25.42	339	⇑P	P	20 57 01.6	-0.4
	baz=24,SNR=7.0						
T23A	Casias Ranch,	25.48	335	⇑P	P	20 57 02.4	-0.1
	baz=24						
U21A	Nageezi	25.67	332	⇑P	P	20 57 05.9	+1.6
	baz=24						
S24A	Houchin Ranch,	25.69	337	⇑P	P	20 57 04.8	+0.4
	baz=24						
ATAH	Atahualpa	25.74	145	LR	LR	21 05 03.4	
	comp=Z,76nm,21.5s,MS3.2,baz=9.8,slow=32						
T22A	Edith	25.82	334	⇓P	P	20 57 07.3	+1.6
	baz=24						
SDCO	Great Sand Dun	25.89	337	eP	P	20 57 06.6	+0.4
	3.2nm,1.0s,mb3.8						
X16A	Lo Mia Camp, P	26.08	324	⇑P	P	20 57 08.8	+0.8
	baz=24						
T21A	Navajo Lake	26.08	333	⇑P	P	20 57 10.6	+2.6
	baz=24						
S22A	4UR Ranch, Cre	26.41	335	⇓P	P	20 57 14.0	+3.0
	baz=24						
X15A	Humboldt	26.59	323	⇓P	P	20 57 13.8	+1.1
	baz=25						
Y13A	Salome	27.11	320	⇓P	P	20 57 17.8	+0.5
	baz=25						
S19A	Harvey Farm, M	27.43	331	⇓P	P	20 57 24.5	+4.4
	baz=26						
P23A	Jefferson	27.45	338	⇑P	P	20 57 20.2	0.0
	baz=26						
PV01	Paradox Valley	27.49	333	eP	P	20 57 21.8	+1.1
	283nm,1.0s						
V15A	Kaibab Nationa	27.50	325	⇓P	P	20 57 21.1	+0.3
	baz=26						
V14A	Boquillas Ranc	27.90	323	⇑P	P	20 57 25.0	+0.6
	baz=26						
U15A	North Rim	28.01	325	⇑P	P	20 57 26.4	+1.0
	baz=26						
V13A	Grand Canyon W	28.57	323	⇑P	P	20 57 31.2	+0.9
	baz=27						
ECSD	EROS Data Cent	29.53	355	eP	P	20 57 35.8	-3.0
	1.9nm,0.6s,mb4.0						
O12A	Currie	32.14	328	⇑P	P	20 58 03.1	+1.2
	baz=30						
M14A	Sheep Mountain	32.38	331	⇓P	P	20 58 03.9	-0.1
	baz=30						
O11A	Cowboy Ranch,	32.52	327	⇓P	P	20 58 06.0	+0.8
	baz=31						
M13A	Montello	32.66	330	⇑P	P	20 58 07.3	+0.8
	baz=31						
M13A	Montello	32.66	330	eP	P	20 58 07.4	+0.9
	1.6nm,0.8s,mb4.0						
I18A	Diamond G Ranc	32.68	337	⇓P	P	20 58 06.8	+0.2
	baz=31						
H20A	Greybull	32.72	340	⇑P	P	20 58 06.3	-0.6
	baz=31						
J17A	Brown Place, J	32.74	336	⇑P	P	20 58 07.8	+0.7
	baz=31						
L14A	Malta	32.74	332	⇑P	P	20 58 07.0	-0.2
	baz=31						
SNOW	Snow King Moun	32.84	336	eP	P	20 58 08.8	+0.9
	14nm,0.9s,mb4.9						
NVAR	Mina Array Bea	32.85	322	P	P	20 58 09.3	+1.1
NVAR	Mina Array Bea	32.85	322	P	P	20 58 09.3	+1.1
	2.8nm,0.7s,mb4.3,baz=134,slow=8.6,SNR=27						
LOHW	Long Hollow	32.91	336	eP	P	20 58 08.3	-0.3
	4.8nm,1.1s,mb4.3						
IMW	Indian Meadow	33.27	336	eP	P	20 58 12.2	+0.4
	1.9nm,0.4s,mb4.4						
RLMT	Red Lodge	33.71	339	⇑P	P	20 58 14.8	-0.7
	baz=32						
L11A	Cat Creek Ranc	34.05	329	⇑P	P	20 58 18.3	-0.2
	baz=32						
F19A	Roth Farm, Mol	34.24	340	⇓P	P	20 58 19.4	-0.8
	baz=32						
HLID	Hailey	34.48	332	⇓P	P	20 58 22.4	+0.2
	baz=33						
HLID	Hailey	34.48	332	eP	P	20 58 22.1	-0.2
	1.1nm,0.9s,mb3.8						
F18A	Big Timber	34.54	339	⇓P	P	20 58 22.5	-0.3
	baz=33						
H15A	Lima	34.56	335	⇓P	P	20 58 24.2	+1.3
	baz=33						
I13A	Wildhorse Cree	34.62	333	⇑P	P	20 58 24.6	+1.1
	baz=33						
MCMT	McKenzie Canyo	34.81	335	eP	P	20 58 26.3	+1.1
	2.6nm,0.8s,mb4.2						
H14A	Leadore	34.86	334	⇓P	P	20 58 25.8	+0.2
	baz=33						
F17A	Fitzpatrick Pl	34.88	338	⇓P	P	20 58 25.5	-0.1
	baz=33,SNR=11						
G15A	Dillon	34.95	336	⇑P	P	20 58 27.4	+1.1
	baz=33,SNR=6.1						
I12A	Atlanta	34.99	332	⇑P	P	20 58 27.0	+0.4
	baz=33						
BOZ	Bozeman (W)	35.01	337	⇓P	P	20 58 27.0	+0.2
	baz=33						
DLMT	Dillon	35.15	336	eP	P	20 58 28.6	+0.5
	5.2nm,1.2s,mb4.3						
E18A	Harlowton	35.19	340	⇑P	P	20 58 27.9	-0.

KRSC 10 21:20:55.9±0.1, 54°45N×162°69E, h34km±23km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.57**	**281**	*i*	P		Pn	21 21 07.0	-0.6
MKZ					*e*S		Sb	21 21 14.8	-0.8
KBTR	**Krutoberegovo**	**1.76**	**2**	*i*	P		Pn	21 21 23.8	-0.2
KBTR					*e*S		Sn	21 21 44.3	-0.9
BZGR	**Bezymyannyi-Gr**	**1.88**	**323**	*e*	P		Pn	21 21 27.6	+2.0
BZGR					*e*S		Sn	21 21 51.2	+3.1
ZLN	**Zelenaya**	**1.91**	**326**		P		Pn	21 21 27.8	+1.9
KII	**Karymskiy**	**1.95**	**259**		P		Pn	21 21 27.6	+1.1
KII					*e*S		Sn	21 21 50.9	+1.2
BKI	**Bering**	**2.04**	**67**	*e*	P		Pn	21 21 28.3	+0.5
BKI					*e*S		Sn	21 21 51.1	-1.0
KPT	**Kopyto**	**2.08**	**318**		P		Pn	21 21 29.6	+1.3
KPT					S		Sn	21 21 55.2	+2.3
SPN	**Mys Shipunski**	**2.08**	**231**		P		Pn	21 21 28.6	+0.2
SPN					*e*S		Sn	21 21 52.2	-0.9
KRSR	**Krestovskiy**	**2.15**	**326**		P		Pn	21 21 31.4	+2.2
KRSR					S		Sn	21 21 57.6	+3.0
KLY	**Klyuchi**	**2.20**	**329**	*e*	P		Pn	21 21 31.4	+1.4
KLY					*e*S		Sn	21 21 58.1	+2.2
KOZ	**Kozyrevsk**	**2.28**	**316**		P		Pn	21 21 33.8	+2.7
KOZ					S		Sn	21 22 01.5	+3.6
NLC	**Nalytchevo**	**2.36**	**238**	*e*	S		Sn	21 22 01.3	+1.4
SRDR	**Sredinnyy**	**2.53**	**319**		P		Pn	21 21 36.4	+2.0
SRDR					S		Sn	21 22 06.0	+2.0
AVH	**Avacha**	**2.62**	**245**	*i*	P		Pn	21 21 37.8	+2.0
AVH					*e*S		Sn	21 22 08.8	+2.4
PET	**Petropavlovsk**	**2.79**	**241**		S		Sn	21 22 12.3	+1.8
GNL	**Ganaly**	**2.90**	**257**	*e*	P		Pn	21 21 42.2	+2.7
GNL					S		Sn	21 22 16.0	+2.8

*IDC **10** 21:22:17.4±0.8, 15°.91N×146°.75E, h0km, mb3.8/11, mb1 4.0/12, mb1mx3.9/21, mbtmp3.8/12, ML3.5/1, MS3.6/6, Ms1 3.6/6, ms1mx3.2/22, Error ellipse: s-maj=25.2km s-min=18.7km az=114.0*

*ISCJB **10** 21:22:20.7±2.6, 15°.87N±0°.08×146°.8E±0°.1, h35km±23km, mb4.0/18, MS3.6/5, Error ellipse: s-maj=18.3km s-min=13.6km az=174.7*

*NEIC **10** 21:22:22.5±1.8, 15°.85N×146°.77E, h35km±16km, mb4.2/8, Error ellipse: s-maj=11.8km s-min=8.5km az=70.0*

ISC 10 21:22:21.7±5.5, 15°.85N±0°.07×146°.8E±0°.1, h29km±38km, n37, σ0°.71/35, mb4.0/18, MS3.6/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.90**	**220**	*e*	Pn		**Pn**	**21 23 06.0**	**0.0**
GUMO					*e*Sn		**Sn**	**21 23 40.3**	**+0.4**
GUMO					LR		LR	21 24 18.2	
GUMO	**Guam**	**2.90**	**220**		Pn		**Pn**	**21 23 05.3**	**-0.7**
	7.2nm,0.3s,baz=42,slow=15,SNR=4.8								
GUMO					Sn		**Sn**	**21 23 39.5**	**-0.5**
	28nm,0.3s,baz=204,slow=21,SNR=6.2								
GUMO					LR		LR	21 24 18.2	
	comp=Z,612nm,18.5s,baz=162,slow=41								
MAJO	**Matsushiro**	**21.97**	**341**	*e*	P		**P**	**21 27 13.2**	**-0.1**
	1.7nm,0.4s,mb3.8								
DAV	**Davao City (W)**	**22.51**	**250**		LR		LR	21 34 43.4	
	comp=Z,86nm,19.0s,MS3.2,baz=217,slow=33								
PMG	**Port Moresby**	**25.09**	**179**		P		**P**	**21 27 44.1**	**0.0**
YULB	**Yu-li**	**25.11**	**291**		P		**P**	**21 27 44.0**	**-0.3**
YHNB	**Yeheng**	**25.35**	**294**	*e*	P		**P**	**21 27 46.5**	**+0.1**
SSLB	**Suanglung**	**25.51**	**292**		P		**P**	**21 27 48.1**	**+0.2**
TPUB	**Ta-pu**	**25.69**	**291**		P		**P**	**21 27 49.5**	**0.0**
HNR	**Honiara**	**28.30**	**152**		LR		LR	21 37 34.8	
	comp=Z,112nm,18.4s,MS3.2,baz=274,slow=32								
ENH	**Enshi**	**37.00**	**299**	*e*	P		**P**	**21 29 29.6**	**+0.7**
FITZ	**Fitzroy Crossi**	**39.64**	**213**	*e*	P		**P**	**21 29 50.9**	**-0.3**
	2.5nm,0.7s,mb4.0								
FITZ	**Fitzroy Crossi**	**39.64**	**213**		P		**P**	**21 29 51.1**	**0.0**
	5.5nm,1.1s,mb4.2,baz=76,slow=5.2,SNR=5.5								
HIA	**Hailar**	**39.94**	**332**	*e*	P		**P**	**21 29 52.6**	**-0.7**
ASAR	**Alice Springs**	**41.24**	**198**		P		**P**	**21 30 04.2**	**0.0**
	0.3nm,0.8s,mb3.0,baz=12,slow=12,SNR=4.1								
CM31	**Chiang Mai Arr**	**45.67**	**280**	*e*	P		**P**	**21 30 40.4**	**+0.1**
CMAR	**Chiang Mai Arr**	**45.67**	**280**		P		**P**	**21 30 41.4**	**+1.1**
	0.8nm,0.8s,mb3.7,baz=146,slow=3.4,SNR=6.2								
CMAR					LR		LR	21 47 13.0	
	comp=Z,54nm,18.8s,MS3.5,baz=260,slow=33								
SONM	**Songino Array**	**46.01**	**323**		P		**P**	**21 30 42.7**	**+0.3**
	0.8nm,1.0s,mb3.6,baz=136,slow=8.8,SNR=2.7								
TLY	**Talaya**	**49.48**	**326**	*e*	P		**P**	**21 31 10.7**	**+1.4**
ZALV	**Zalesovo Beam**	**60.89**	**323**		P		**P**	**21 32 29.9**	**-1.8**
	1.1nm,0.8s,mb4.0,baz=97,slow=6.1,SNR=5.3								
MK31	**Makanchi Array**	**61.18**	**315**	*e*	P		**P**	**21 32 33.7**	**0.0**
MKAR	**Makanchi Array**	**61.18**	**315**		P		**P**	**21 32 34.5**	**+0.9**
	1.0nm,0.4s,mb4.3,baz=90,slow=8.4,SNR=33								
KURK	**Kurchatov**	**64.07**	**319**	*e*	P		**P**	**21 32 52.8**	**-0.1**
	6.1nm,1.0s,mb4.6								
ILAR	**Eielson Array**	**65.75**	**26**		P		**P**	**21 33 03.1**	**-0.5**
	0.3nm,0.4s,mb3.7,baz=244,slow=6.1,SNR=11								
ILAR					LR		LR	21 59 40.6	
	comp=Z,55nm,18.6s,MS3.8,baz=284,slow=34								
AML	**Almayashu**	**67.06**	**309**	*e*	P		**P**	**21 33 12.0**	**-0.4**
	4.1nm,0.3s,mb4.9								
BVAR	**Borovoye Array**	**69.32**	**321**		P		**P**	**21 33 25.9**	**-0.4**
	2.0nm,0.5s,mb4.3,baz=106,slow=7.3,SNR=22								
BRVK	**Borovoye**	**69.38**	**321**	*e*	P		**P**	**21 33 27.1**	**+0.4**
	1.4nm,0.4s,mb4.2								
KBL	**Kabul**	**71.21**	**302**	*e*	P		**P**	**21 33 38.6**	**+0.3**
	1.1nm,0.8s,mb3.8								
INK	**Inuvik**	**71.59**	**23**		P		**P**	**21 33 39.5**	**-0.5**
ARU	**Arti**	**75.97**	**325**	*e*	P		**P**	**21 34 05.5**	**-0.4**
	1.1nm,0.5s,mb4.0								
ABKAR	**Akbulak array**	**76.12**	**318**	*e*	P		**P**	**21 34 06.2**	**-0.6**
	0.8nm,0.4s,mb4.0								
YKA	**Yellowknife Ar**	**80.02**	**28**		P		**P**	**21 34 29.3**	**+1.2**
YKA	**Yellowknife Ar**	**80.02**	**28**		P		**P**	**21 34 29.3**	**+1.2**
	0.6nm,0.7s,mb3.6,baz=282,slow=3.7,SNR=4.0								
NVAR	**Mina Array Bea**	**84.08**	**52**		P		**P**	**21 34 51.2**	**+1.1**
	0.3nm,0.7s,mb3.5,baz=302,slow=8.4,SNR=1.5								
FINES	**FINESS Array B**	**89.89**	**336**		P		**P**	**21 35 15.9**	**-1.9**
	0.8nm,0.5s,mb4.3,baz=54,slow=4.3,SNR=14								
TXAR	**Lajitas Array**	**98.58**	**56**		LR		LR	22 21 38.9	
	comp=Z,31nm,18.0s,MS3.9,baz=180,slow=36								
LPAZ	**La Paz**	**146.48**	**96**		PKPbc		PKPbc	21 42 01.8	+0.8
	0.3nm,0.4s,baz=348,slow=3.2,SNR=4.8								

*NEIC **10** 22:37:12.2±1.6, 10°.51S×161°.42E, h38km±13km, mb4.3/6, Error ellipse: s-maj=12.2km s-min=7.5km az=93.0*

*ISCJB **10** 22:37:15.4±2.1, 10°.61S±0°.08×161°.4E±0°.1, h82km±16km, mb3.9/13, Error ellipse: s-maj=19.8km s-min=12.5km az=1.3*

*IDC **10** 22:37:15.7±3.2, 10°.60S×161°.42E, h71km±26km, mb3.7/8, mb1 3.9/8, mb1mx3.8/15, mbtmp3.7/8, MS3.6/3, Ms1 3.5/3, ms1mx3.2/17, Error ellipse: s-maj=30.8km s-min=21.3km az=73.0*

ISC 10 22:37:16.4±2.0, 10°.58S±0°.07×161°.4E±0°.1, h76km±16km, n31, σ0°60/31, mb3.9/13, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.81**	**309**	*e*	Pn		**Pn**	**22 37 40.0**	**-5.6**
HNR					*e*Sn		**Sn**	**22 38 08.7**	**+0.8**
HNR					LR		LR	22 38 35.2	
HNR	**Honiara**	**1.81**	**309**		P		**Pn**	**22 37 44.0**	**-1.6**
	32nm,0.3s,baz=252,slow=12,SNR=5.8								
HNR					S		**Sn**	**22 38 08.7**	**+0.8**
	236nm,0.3s,baz=40,slow=21,SNR=8.7								
HNR					LR		LR	22 38 35.2	
	comp=Z,456nm,20.1s,baz=133,slow=43								
CTA	**Charters Tower**	**17.37**	**235**		P		**Pn**	**22 41 18.2**	**+4.3**
	1.2nm,0.3s,baz=66,slow=14,SNR=13								
CTA					LR		LR	22 47 24.3	
	comp=Z,102nm,18.3s,baz=229,slow=35								
CTAO	**Charters Tower**	**17.37**	**235**	*e*	Pn		**Pn**	**22 41 14.2**	**+0.3**
AFI	**Afiamalu**	**26.44**	**100**		LR		LR	22 51 14.1	
	comp=Z,107nm,21.1s,baz=155,slow=32								
STKA	**Stephens Creek**	**28.00**	**218**	*e*	P		**P**	**22 43 00.0**	**-0.1**
STKA	**Stephens Creek**	**28.00**	**218**		LR		LR	22 54 16.1	
	comp=Z,189nm,18.0s,baz=27,slow=36								
GUMO	**Guam**	**29.06**	**325**	*e*	P		**P**	**22 43 09.5**	**-0.2**
ASAR	**Alice Springs**	**29.23**	**240**		P		**P**	**22 43 10.6**	**-0.6**
	0.4nm,0.7s,mb3.1,baz=65,slow=10,SNR=4.9								
URZ	**Urewera**	**30.97**	**155**		P		**P**	**22 43 26.3**	**-0.1**
	2.7nm,0.5s,mb4.2,baz=278,slow=18,SNR=2.8								
FITZ	**Fitzroy Crossi**	**35.37**	**254**	*e*	P		**P**	**22 44 05.1**	**+0.1**
	4.0nm,1.0s,mb4.2								
MBWA	**Marble Bar**	**41.30**	**250**	*e*	P		**P**	**22 44 54.7**	**0.0**
	1.6nm,0.6s,mb4.0								
KAPI	**Kappang**	**41.58**	**274**	*e*	P		**P**	**22 44 56.7**	**-0.4**
KKM	**Kota Kinabalu**	**47.90**	**288**	*e*	P		**P**	**22 45 47.5**	**+0.1**
	2.2nm,0.4s,mb4.3								
MAJO	**Matsushiro**	**51.69**	**336**		P		**P**	**22 46 14.6**	**-1.1**
CASY	**Casey**	**65.30**	**200**		P		**P**	**22 47 49.3**	**-0.7**
SBA	**Scott Base**	**67.32**	**179**	*e*	P		**P**	**22 48 03.6**	**+0.8**
	5.2nm,1.1s,mb4.3								
CMAR	**Chiang Mai Arr**	**68.00**	**295**		P		**P**	**22 48 08.8**	**+0.7**
	0.6nm,0.3s,mb3.8,baz=124,slow=5.6,SNR=4.0								
SONM	**Songino Array**	**75.79**	**325**		P		**P**	**22 48 55.0**	**+0.9**
	1.3nm,0.7s,mb3.8,baz=146,slow=5.1,SNR=7.1								
YAK	**Yakutsk**	**76.49**	**345**		P		**P**	**22 48 57.5**	**-0.2**
TLY	**Talaya**	**79.39**	**328**		P		**P**	**22 49 14.2**	**+0.2**
QSPA	**South Pole Qui**	**79.42**	**180**	*e*	P		**P**	**22 49 13.8**	**0.0**
	3.7nm,0.9s,mb4.2								
PMR	**Palmer**	**81.65**	**22**	*e*	P		**P**	**22 49 25.7**	**-0.2**
MAW	**Mawson**	**83.53**	**202**	*e*	P		**P**	**22 49 36.2**	**+0.5**
	0.5nm,0.6s,mb3.5								
MAW	**Mawson**	**83.53**	**202**		P		**P**	**22 49 36.1**	**+0.4**
	2.9nm,0.6s,mb4.3,baz=81,slow=7.5,SNR=10								
COLA	**College**	**84.23**	**19**		P		**P**	**22 49 39.3**	**+0.2**
ILAR	**Eielson Array**	**84.48**	**20**		P		**P**	**22 49 39.8**	**-0.7**
	0.3nm,0.6s,mb3.3,baz=236,slow=5.0,SNR=8.1								
NVAR	**Mina Array Bea**	**89.03**	**51**		P		**P**	**22 50 04.2**	**+1.0**
	0.7nm,0.7s,mb3.8,baz=238,slow=5.8,SNR=3.7								
MK31	**Makanchi Array**	**90.26**	**318**	*e*	P		**P**	**22 50 08.9**	**+0.2**
MKAR	**Makanchi Array**	**90.26**	**318**		P		**P**	**22 50 08.0**	**-0.7**
MKAR	**Makanchi Array**	**90.26**	**318**		P		**P**	**22 50 08.0**	**-0.7**
	0.2nm,0.4s,mb3.6,baz=99,slow=6.2,SNR=7.5								

*ISK **10** 22:41:07.7, 38°.00N×29°.08E, h7km, MD2.8*

*ISCJB **10** 22:41:08.3±0.5, 38°.00N±0°.02×29°.09E±0°.04, h4km±7km, Error ellipse: s-maj=5.7km s-min=3.9km az=13.9*

*DDA **10** 22:41:08.2, 38°.00N×29°.10E, h7km±3km, Md2.9*

*CSEM **10** 22:41:08.3±0.1, 37°.99N×29°.10E, h8km, MD2.8, Error ellipse: s-maj=3.2km s-min=2.4km az=97.0*

ISC 10 22:41:08.7±0.4, 38°.00N±0°.02×29°.09E±0°.04, h5km±7km, n26, σ0°60/41, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.25**	**190**	*e*	PG		**Pg**	**22 41 13.3**	**-0.3**
DENT	**Denizli**	**0.25**	**190**	*e*	Pg		**Pg**	**22 41 13.3**	**-0.3**
DNZL	**Cakiroluk**	**0.31**	**186**	*i*	P		**Pg**	**22 41 14.6**	**-0.1**
DNZL				*i*	S		**Sg**	**22 41 20.2**	**+1.3**
DNZL	**Cakiroluk**	**0.31**	**186**	*i*	P		**Pg**	**22 41 14.6**	**-0.2**
DNZL				*i*	S		**Sg**	**22 41 20.2**	**+1.3**
KHL	**Karahalli**	**0.47**	**47**	*e*	PG		**Pg**	**22 41 17.5**	**-0.1**
KHL				*e*	SG		**Sg**	**22 41 24.4**	**+0.6**
KHL	**Karahalli**	**0.47**	**47**	*e*	Pg		**Pg**	**22 41 17.5**	**-0.2**
KHL				*e*	Sg		**Sg**	**22 41 24.4**	**+0.6**
KHAL	**Karahalli**	**0.48**	**41**	*i*	P		**Pg**	**22 41 17.8**	**-0.2**
KHAL				*i*	S		**Sg**	**22 41 24.7**	**+0.4**
KHAL	**Karahalli**	**0.48**	**41**	*i*	P		**Pg**	**22 41 17.8**	**-0.2**
KHAL				*i*	S		**Sg**	**22 41 24.7**	**+0.4**
KULA	**Kula-Manisa**	**0.61**	**327**	*e*	PG		**Pg**	**22 41 19.9**	**-0.5**
KULA				*e*	SG		**Sg**	**22 41 28.8**	**+0.4**
KULA	**Kula-Manisa**	**0.61**	**327**	*e*	Pg		**Pg**	**22 41 19.9**	**-0.6**
KULA				*e*	Sg		**Sg**	**22 41 28.8**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.91**	**159**	*e*	PG		**Pg**	**22 41 25.7**	**-0.4**
GLHS				*e*	SG		**Sg**	**22 41 38.5**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.91**	**159**	*e*	Pg		**Pg**	**22 41 25.7**	**-0.3**
GLHS				*e*	Sg		**Sg**	**22 41 38.5**	**+0.7**
AYDN	**Tasoluk**	**1.02**	**251**	*i*	P		**Pg**	**22 41 27.7**	**-0.5**
AYDN				*i*	S		**Sg**	**22 41 41.1**	**-0.3**
AYDN	**Tasoluk**	**1.02**	**251**	*i*	P		**Pg**	**22 41 27.7**	**-0.5**
YER	**Yerkesik**	**1.08**	**217**	*e*	PG		**Pg**	**22 41 28.6**	**-0.8**
YER	**Yerkesik**	**1.08**	**217**	*e*	Pg		**Pg**	**22 41 28.6**	**-0.7**
DEMI	**Demirci**	**1.08**	**344**	*i*	P		**Pg**	**22 41 28.9**	**-0.4**
DEMI				*i*	S		**Sg**	**22 41 43.2**	**-0.1**
DEMI	**Demirci**	**1.08**	**344**	*i*	P		**Pg**	**22 41 29.0**	**-0.4**
DEMI				*i*	S		**Sg**	**22 41 43.2**	**-0.2**
SHUT	**Suhut-Afyon**	**1.27**	**64**	*e*	PN		**Pn**	**22 41 32.8**	**-0.3**
SHUT	**Suhut-Afyon**	**1.27**	**64**	*e*	Pn		**Pn**	**22 41 32.8**	**-0.3**
BCK	**Bucak**	**1.30**	**114**	*e*	PN		**Pn**	**22 41 33.0**	**-0.5**
BCK	**Bucak**	**1.30**	**114**	*e*	Pn		**Pn**	**22 41 33.0**	**-0.5**
ALT	**Altintas**	**1.32**	**37**	*e*	PN		**Pn**	**22 41 33.1**	**-0.6**
ALT	**Altintas**	**1.32**	**37**	*e*	Pn		**Pn**	**22 41 33.1**	**-0.6**
AKHS	**Akhisar**	**1.33**	**312**	*i*	P		**Pn**	**22 41 34.3**	**+0.4**
AKHS				*i*	S		**Sb**	**22 41 52.9**	**+1.4**
AKHS	**Akhisar**	**1.33**	**312**	*i*	P		**Pn**	**22 41 34.3**	**+0.4**
AKHS				*i*	S		**Sb**	**22 41 52.9**	**+1.5**

KRSC 10 22:45:29.2±1.1, 53°.30N×162°.94E, h40km±40km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**1.45**	**331**	*e*	P		Pn	22 45 54.7	+1.9
MKZ					*e*S		Sn	22 46 13.2	+2.6
SPN	**Mys Shipunski**	**1.77**	**265**	*e*	P		Pn	22 45 58.4	+1.2
SPN					*e*S		Sn	22 46 19.5	+1.1
NLC	**Nalytchevo**	**2.17**	**268**	*e*	P		Pn	22 46 03.9	+1.2
NLC					*e*S		Sn	22 46 29.5	+1.3
KII	**Karymskiy**	**2.20**	**291**	*e*	P		Pn	22 46 05.3	+2.1
KII					*e*S		Sn	22 46 31.7	+2.5
AVH	**Avacha**	**2.52**	**271**	*e*	P		Pn	22 46 09.9	+2.3
AVH					*e*S		Sn	22 46 39.1	+2.0
PET	**Petropavlovsk**	**2.60**	**266**		P		Pn	22 46 10.7	+2.1
PET					S		Sn	22 46 40.9	+2.0
BKI	**Bering**	**2.61**	**42**	*e*	S		Sn	22 46 37.4	-1.8
KBTR	**Krutoberegovo**	**2.92**	**359**	*e*	P		Pn	22 46 13.9	+0.9
GNL	**Ganaly**	**3.01**	**280**	*e*	P		Pn	22 46 17.2	+2.9
GNL					*e*S		Sn	22 46 52.1	+3.0
MIPR	**Malaya Ipel'ka**	**3.89**	**257**		P		Pn	22 46 29.2	+2.8

*ISCJB **10** 22:53:53.3±1.2, 32°.30N±0°.02×91°.96E±0°.03, h4km±8km, mb4.4/39, MS4.0/17, Error ellipse: s-maj=4.9km s-min=4.1km az=174.5*

*IDC **10** 22:53:54.2±0.6, 32°.28N×91°.95E, h0km, mb4.3/20, mb1 4.4/23, mb1mx4.3/28, mbtmp4.3/23, ML3.4/2, MS3.9/17, Ms1 4.0/17, ms1mx3.9/23, Error ellipse: s-maj=20.2km s-min=14.6km az=44.0*

*BJI **10** 22:53:54.8, 32°.22N×91°.98E, h12km, mB4.8/12, mb4.7/23, ML4.5/3, Ms4.7/25, Ms7 4.3/20*

*NEIC **10** 22:53:55.6±0.2, 32°.26N×91°.93E, h10km, mb4.6/28, Error ellipse: s-maj=5.0km s-min=3.6km az=220.0*

*MOS **10** 22:53:57.2±0.9, 32°.22N×91°.92E, h33km, mb4.7/26, Error ellipse: s-maj=10.7km s-min=6.5km az=108.0*

*GCMT **10** 22:53:58.9±0.3, 32°.16N×92°.02E, h19km±1km, MW4.9, Moment Tensor Solution. s13,c15; s63,c100; Moment tensor: Scale 10^16Nm; Mrr-0.65±.14; Mθθ-1.64±.09; Mϕϕ2.29±.11; Mrθ-0.42±.22; Mθϕ1.16±.08; Mϕr0.53±.20; Best double couple: M0 2.40000×10^16 NP1:ϕ59.00000°, δ71.00000°, λ-10.00000°. NP2:ϕ152.00000°, δ81.00000°, λ-160.00000°. Principal axes: T 2.6600, Plg7.0000°, Azm284.0000°; N -0.5000, Plg68.0000°, Azm176.0000°; P -2.1600, Plg20.0000°, Azm17.0000°; Data Used: II IU G IC CN.*

ISC 10 22:53:55.8±1.3, 32°.32N±0°.03×91°.96E±0°.03, h7km±8km, n132, σ0°96/138, mb4.4/39, MS4.0/17, 5C-3D, Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**2.71**	**195**		Pg		**Pg**	**22 54 02.9**	**-4.7**
LSA					Sg		**Sg**	**22 55 20.9**	**-1.8**
TAPN	**Taplejung**	**6.18**	**218**	*e*	P		**Pn**	**22 55 29.3**	**+1.9**
	41nm,0.4s								
SHL	**Shillong**	**6.73**	**181**	*e*	PKP		**Pn**	**22 55 36.0**	**+0.9**
SHL					*e*S		**Sn**	**22 56 53.0**	**+1.0**
ODAN	**Odare**	**6.74**	**217**	*e*	P		**Pn**	**22 55 36.4**	**+1.2**
	63nm,0.5s								
JIRN	**Jiri**	**6.83**	**229**	*e*	P		**Pn**	**22 55 37.8**	**+1.5**
	55nm,0.4s								
GUN	**Gumba**	**6.86**	**232**	*e*	P		**Pn**	**22 55 37.8**	**+1.0**
	148nm,0.5s								
RAMN	**Ramite**	**7.10**	**222**	*e*	P		**Pn**	**22 55 40.7**	**+0.6**
	165nm,0.5s								
KKN	**Kakani**	**7.34**	**234**	*e*	P		**Pn**	**22 55 43.8**	**+0.4**
	56nm,0.4s								
PKI	**Pulchoki**	**7.39**	**232**	*e*	P		**Pn**	**22 55 44.7**	**+0.6**
PKIN	**Phulchoki**	**7.40**	**232**	*e*	P		**Pn**	**22 55 45.0**	**+0.8**
DMN	**Daman**	**7.57**	**233**	*e*	P		**Pn**	**22 55 47.0**	**+0.4**
	84nm,0.7s								
GKN	**Gorkha**	**7.66**	**238**	*e*	P		**Pn**	**22 55 47.5**	**-0.3**
	110nm,0.6s								
IMP	**Imphal**	**7.71**	**166**	*e*	PKP		**Pn**	**22 55 49.0**	**+0.5**
IMP					*e*S		**Sn**	**22 57 18.0**	**+1.9**
KOLN	**Koldanda**	**8.54**	**240**	*e*	P		**Pn**	**22 55 59.2**	**-0.7**
	44nm,0.5s								
GTA	**Gaotai**	**9.52**	**40**	⇓	P		**Pn**	**22 56 16.1**	**+2.9**
GTA					pP			22 56 20.0	
GTA					sP			22 56 23.1	
GTA					S		**Sn**	**22 58 13.8**	**+13**
GTA					sS			22 58 18.3	
GTA					pmax	pmax			
	comp=Z,23nm,1.5s								
GTA					pmax	pmax			
	comp=Z,150nm,4.8s								
GTA					LR	LR			
	comp=N,4μm,13.1s								
GTA					LR	LR			
	comp=E,3μm,13.1s								
GTA					LR	LR			
	comp=Z,1μm,10.4s								
LZH	**Lanzhou**	**10.53**	**66**		P		**Pn**	**22 56 34.4**	**+7.2**
LZH					pP			22 56 37.5	
LZH					sP			22 56 39.2	
LZH					S		**Sn**	**22 58 26.7**	**+1.3**
LZH					SS			22 58 45.0	
LZH					pmax	pmax			
	comp=Z,13nm,1.0s								
LZH					pmax	pmax			
	comp=Z,57nm,4.3s								
LZH					LR	LR			
	comp=E,2μm,7.0s								
LZH					LR	LR			
	comp=Z,3μm,9.2s								
KMI	**Kunming**	**11.87**	**124**		P		**Pn**	**22 56 46.1**	**+0.6**
KMI					S		**Sn**	**22 59 03.7**	**+5.5**
KMI					LR	LR			
	comp=N,4μm,10.9s								
KMI					LR	LR			
	comp=E,3μm,10.9s								
KMI					LR	LR			
	comp=Z,920nm,14.7s								
WMQ	**Urumqi**	**11.96**	**345**	*e*	P		**Pn**	**22 56 48.0**	**+1.4**
XAN	**Xi'an**	**14.31**	**79**		P		**Pn**	**22 57 19.1**	**+0.3**
XAN					pP		pP	22 57 28.5	+0.4
XAN					S		**Sn**	**22 59 56.6**	**-1.3**
XAN					SS			23 00 17.3	
XAN					pmax	pmax			
	comp=Z,3.0nm,1.0s								
XAN					LR	LR			
	comp=N,2μm,21.2s								
XAN					LR	LR			
	comp=E,240nm,14.7s								
XAN					LR	LR			
	comp=Z,210nm,17.4s								
CHTO	**Chiang Mai**	**14.85**	**153**	*e*	Pn		**Pn**	**22 57 24.7**	**-1.5**
	comp=Z,6.6nm,1.0s								
CHTO	**Chiang Mai**	**14.85**	**153**	*e*	P		**Pn**	**22 57 24.7**	**-1.5**
CHTO					pmax	pmax			
	comp=Z,7.0nm,1.0s								
ENH	**Enshi**	**15.13**	**93**	*e*	Pn		**Pn**	**22 57 30.5**	**+0.6**
	comp=Z,35nm,0.8s								
CM31	**Chiang Mai Arr**	**15.17**	**154**	*e*	Pn		**Pn**	**22 57 29.5**	**-1.1**
CMAR	**Chiang Mai Arr**	**15.17**	**154**		Pn		**Pn**	**22 57 28.8**	**-1.8**
	baz=330,slow=12,SNR=11								
CMAR					LR		LR	23 03 07.6	
	comp=Z,145nm,20.4s,baz=332,slow=37								
MK31	**Makanchi Array**	**16.24**	**336**	*e*	Pn		**Pn**	**22 57 44.4**	**+0.1**
MK31					*e*Sn		**Sn**	**23 00 45.9**	**+1.3**
MKAR	**Makanchi Array**	**16.24**	**336**		Pn		**Pn**	**22 57 43.6**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=137,slow=13,SNR=13								
UCH	**Uchtor**	**17.01**	**310**

BRVK	**Borovoye**	**25.95**	**329**	*e*P		**P**		**22 59 28.2**	**-0.4**
	comp=Z,19nm,1.2s,mb4.5								
BRVK	**Borovoye**	**25.95**	**329**	*i* P		**P**		**22 59 28.7**	**+0.1**
BRVK				pmax	pmax				
	comp=Z,14nm,1.0s,mb4.5								
HIA	**Hailar**	**26.78**	**43**	*e*P		**P**		**22 59 36.1**	**-0.1**
SNY	**Shenyang**	**26.83**	**60**	⇓P		**P**		**22 59 37.5**	**+0.8**
SNY				S		**S**		**23 04 12.1**	**-1.1**
SNY				pmax	pmax				
	comp=Z,19nm,1.2s,mb4.5								
SNY				LR	LR				
	comp=N,310nm,9.9s								
SNY				LR	LR				
	comp=E,660nm,15.3s								
SNY				LR	LR				
	comp=Z,530nm,14.1s,MS4.2								
ABKAR	**Akbulak array**	**29.26**	**315**	*e*P		**P**		**22 59 57.8**	**-0.6**
	comp=Z,1.2nm,0.8s,mb3.7								
KSRS	**Korea Array**	**29.82**	**70**	P		**P**		**23 00 03.3**	**-0.2**
	comp=Z,3.7nm,0.7s,mb4.2,baz=274,slow=8.9,SNR=14								
KSRS				LR	LR			23 13 43.2	
	comp=Z,182nm,18.7s,MS3.7,baz=270,slow=40								
KSRS	**Korea Array**	**29.82**	**70**	P		**P**		**23 00 03.3**	**-0.2**
KSRS				pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.3								
KSRS				MLR	MLR				
	comp=Z,182nm,18.7s,MS3.7								
AKTO	**Aktyubinsk**	**30.88**	**316**	LR	LR			23 13 54.9	
	comp=Z,479nm,20.8s,MS4.1,baz=286,slow=39								
ARU	**Arti**	**33.37**	**326**	*e*P		**P**		**23 00 34.4**	**0.0**
	comp=Z,3.1nm,0.7s,mb4.3								
ARU	**Arti**	**33.37**	**326**	*e*P		**P**		**23 00 34.4**	**0.0**
ARU				pmax	pmax				
	comp=Z,3.0nm,0.7s,mb4.3								
MAJO	**Matsushiro**	**38.10**	**71**	*e*P		**P**		**23 01 15.1**	**-0.2**
	comp=Z,3.3nm,0.4s,mb4.4								
MAJO	**Matsushiro**	**38.10**	**71**	*e*P		**P**		**23 01 15.1**	**-0.2**
MAJO				pmax	pmax				
	comp=Z,3.0nm,0.4s,mb4.4								
GNI	**Garni**	**38.50**	**295**	P		**P**		**23 01 18.5**	**-0.1**
MALT	**Malatya**	**43.58**	**293**	P		**P**		**23 01 59.6**	**-0.9**
OBN	**Obninsk**	**44.62**	**318**	P		**P**		**23 02 08.1**	**-0.4**
BR131	**Keskin Array S**	**47.02**	**296**	*e*P		**P**		**23 02 27.7**	**-0.1**
	comp=Z,1.2nm,0.7s,mb3.9								
BRTR	**Keskin Array B**	**47.02**	**296**	P		**P**		**23 02 27.2**	**-0.5**
	comp=Z,1.2nm,0.8s,mb3.9,baz=100,slow=6.4,SNR=9.4								
BRTR				LR	LR			23 25 39.8	
	comp=Z,92nm,20.2s,MS3.7,baz=190,slow=40								
BRTR	**Keskin Array B**	**47.02**	**296**	*ce*P		**P**		**23 02 31.2**	**+3.4**
BRTR				pmax	pmax				
	comp=Z,1.0nm,0.7s								
MMAI	**Mount Meron Ar**	**47.11**	**287**	LR	LR			23 24 36.7	
	comp=Z,124nm,21.0s,MS3.9,baz=85,slow=39								
SEY	**Seymchan**	**48.37**	**32**	*ce*P		**P**		**23 02 38.8**	**+0.9**
AKASG	**Malin Array Be**	**48.90**	**311**	P		**P**		**23 02 40.3**	**-1.9**
	comp=Z,1.5nm,0.6s,mb4.2,baz=86,slow=6.2,SNR=7.0								
AKASG	**Malin Array Be**	**48.90**	**311**	*ce*P		**P**		**23 02 41.4**	**-0.8**
AKASG				pmax	pmax				
	comp=Z,2.0nm,0.6s								
FINES	**FINESS Array B**	**50.73**	**325**	P		**P**		**23 02 55.3**	**-0.6**
	comp=Z,1.4nm,0.8s,mb4.0,baz=102,slow=10,SNR=2.7								
FINES				LR	LR			23 25 11.0	
	comp=Z,183nm,19.6s,MS4.1,baz=101,slow=37								
FINES	**FINESS Array B**	**50.73**	**325**	P		**P**		**23 02 55.3**	**-0.6**
FINES				pmax	pmax				
	comp=Z,1.0nm,0.8s								
FINES				MLR	MLR				
	comp=Z,183nm,19.6s								
MLR	**Muntele Rosu**	**51.66**	**305**	P		**P**		**23 03 04.1**	**+1.0**
	comp=Z,4.0nm,0.9s,mb4.3,baz=86,slow=7.6,SNR=5.7								
MLR	**Muntele Rosu**	**51.66**	**305**	P		**P**		**23 03 04.1**	**+1.0**
MLR				pmax	pmax				
	comp=Z,4.0nm,0.9s								
ARCES	**ARCESS Array B**	**51.90**	**336**	P		**P**		**23 03 04.7**	**+0.2**
	comp=Z,0.9nm,0.4s,mb4.0,baz=102,slow=8.2,SNR=11								
ARCES				LR	LR			23 27 22.9	
	comp=Z,201nm,18.1s,MS4.2,baz=281,slow=39								
ARCES	**ARCESS Array B**	**51.90**	**336**	P		**P**		**23 03 04.7**	**+0.2**
ARCES				pmax	pmax				
	comp=Z,1.0nm,0.4s								
ARCES				MLR	MLR				
	comp=Z,201nm,18.1s								
KWP	**Kalwaria Pacla**	**53.18**	**311**	*e*P		**P**		**23 03 14.6**	**+0.2**
	comp=Z,14nm,1.1s,mb4.8								
KWP	**Kalwaria Pacla**	**53.18**	**311**	*e*P		**P**		**23 03 14.6**	**+0.3**
KWP				pmax	pmax				
	comp=Z,14nm,1.1s,mb4.8								
MORC	**Moravsky Berou**	**56.45**	**311**	*e*P		**P**		**23 03 38.0**	**0.0**
	comp=Z,5.9nm,1.3s,mb4.5								
MORC	**Moravsky Berou**	**56.45**	**311**	*e*P		**P**		**23 03 38.0**	**-0.1**
MORC				pmax	pmax				
	comp=Z,6.0nm,1.3s,mb4.5								
HFS	**Hagfors**	**56.85**	**324**	P		**P**		**23 03 39.9**	**-0.7**
	comp=Z,3.6nm,0.7s,mb4.5,baz=105,slow=9.3,SNR=6.7								
HFS	**Hagfors**	**56.85**	**324**	P		**P**		**23 03 39.9**	**-0.8**
HFS				pmax	pmax				
	comp=Z,4.0nm,0.7s								
NOA	**NORSAR Array B**	**57.92**	**325**	P		**P**		**23 03 47.0**	**-1.2**
	comp=Z,3.3nm,0.9s,mb4.4,baz=81,slow=7.1,SNR=4.8								
NOA				LR	LR			23 30 32.0	
	comp=Z,189nm,20.8s,MS4.2,baz=90,slow=38								
NOA	**NORSAR Array B**	**57.92**	**325**	P		**P**		**23 03 47.0**	**-1.2**
NOA				pmax	pmax				
	comp=Z,3.0nm,0.9s								
NOA				MLR	MLR				
	comp=Z,189nm,20.8s								
KMBO	**Kilima Mbogo**	**61.40**	**248**	*e*P		**P**		**23 04 12.8**	**-0.2**
	comp=Z,7.2nm,1.5s,mb4.6								
KMBO	**Kilima Mbogo**	**61.40**	**248**	P		**P**		**23 04 13.3**	**+0.4**
	comp=Z,0.8nm,0.6s,mb4.1,baz=1,slow=23,SNR=3.7								
KMBO	**Kilima Mbogo**	**61.40**	**248**	*e*P		**P**		**23 04 12.8**	**-0.1**
KMBO				pmax	pmax				
	comp=Z,7.0nm,1.5s								
DAVOX	**Davos/Dischmat**	**62.18**	**310**	P		**P**		**23 04 17.2**	**-0.5**
	comp=Z,1.0nm,0.7s,mb4.1,baz=131,slow=11,SNR=3.2								
LPG	**La Plagne**	**64.66**	**309**	*e*P		**P**		**23 04 34.2**	**+0.1**
LPL	**La Plagne**	**64.66**	**309**	*e*P		**P**		**23 04 34.2**	**0.0**
	comp=Z,29nm,1.5s,mb4.8								
LPL	**La Plagne**	**64.66**	**309**	*e*P		**P**		**23 04 34.2**	**0.0**
	comp=Z,14nm,1.5s,mb4.8								
LPL	**La Plagne**	**64.66**	**309**	*e*P		**P**		**23 04 34.2**	**0.0**
LPL				pmax	pmax				
	comp=Z,14nm,1.5s,mb4.8								
SSF	**Saint Saulge**	**66.17**	**312**	*e*P		**P**		**23 04 42.9**	**-1.0**
	comp=Z,13nm,1.2s,mb4.5								
SSF	**Saint Saulge**	**66.17**	**312**	*e*P		**P**		**23 04 42.9**	**-1.0**
	comp=Z,6.7nm,1.2s,mb4.5								
SSF	**Saint Saulge**	**66.17**	**312**	*e*P		**P**		**23 04 42.9**	**-1.0**
SSF				pmax	pmax				
	comp=Z,7.0nm,1.2s,mb4.6								
KEST	**Kesra**	**66.55**	**298**	LR	LR			23 39 12.4	
	comp=Z,40nm,19.8s,MS3.6,baz=236,slow=41								
EKA	**Eskdalemuir Ar**	**66.82**	**322**	P		**P**		**23 04 47.6**	**-0.3**
	comp=Z,0.6nm,0.5s,mb3.9,baz=72,slow=5.5,SNR=3.6								
EKA	**Eskdalemuir Ar**	**66.82**	**322**	P		**P**		**23 04 47.6**	**-0.3**
EKA				pmax	pmax				
	comp=Z,1.0nm,0.5s								
TCF	**Toulx Ste Croi**	**67.30**	**311**	*e*P		**P**		**23 04 50.5**	**-0.6**
	comp=Z,34nm,1.4s,mb4.9								
TCF	**Toulx Ste Croi**	**67.30**	**311**	*e*P		**P**		**23 04 50.5**	**-0.6**
	comp=Z,17nm,1.4s,mb4.9								
TCF	**Toulx Ste Croi**	**67.30**	**311**	*e*P		**P**		**23 04 50.5**	**-0.6**
TCF				pmax	pmax				
	comp=Z,17nm,1.4s,mb4.9								
ASAR	**Alice Springs**	**68.59**	**139**	P		**P**		**23 04 59.1**	**-0.4**
	comp=Z,2.2nm,0.8s,mb4.1,baz=327,slow=6.3,SNR=20								
ASAR	**Alice Springs**	**68.59**	**139**	P		**P**		**23 04 59.1**	**-0.4**
ASAR				pmax	pmax				
	comp=Z,2.0nm,0.8s								
COLD	**Coldfoot**	**70.35**	**21**	*e*P		**P**		**23 05 09.3**	**-0.5**
	comp=Z,16nm,1.0s,mb4.9								
BPAW	**Bear Paw Mtn.**	**72.01**	**24**	*e*P		**P**		**23 05 19.4**	**-0.4**
	comp=Z,7.8nm,1.1s,mb4.5								
PPLA	**Purkeypile**	**72.31**	**26**	*e*P		**P**		**23 05 22.8**	**+1.1**
	comp=Z,39nm,1.5s,mb5.1								
COLA	**College**	**72.58**	**23**	*e*P		**P**		**23 05 23.1**	**-0.1**
	comp=Z,17nm,0.9s,mb5.0								
COLA	**College**	**72.58**	**23**	*e*P		**P**		**23 05 23.1**	**-0.2**
COLA				pmax	pmax				
	comp=Z,17nm,0.9s,mb5.0								
ILAR	**Eielson Array**	**72.96**	**23**	P		**P**		**23 05 25.7**	**+0.2**
	comp=Z,6.7nm,0.9s,mb4.6,baz=297,slow=5.0,SNR=70								
ILAR				PP	PP			23 07 57.8	-10
	comp=Z,0.3nm,0.8s,baz=312,slow=8.4,SNR=4.5								
ILAR				LR	LR			23 43 12.6	
	comp=Z,101nm,19.0s,MS4.1,baz=3.1,slow=40								
INK	**Inuvik**	**74.14**	**16**	*e*P		**P**		**23 05 31.6**	**-0.8**
	comp=Z,12nm,1.0s,mb4.8								
PMR	**Palmer**	**74.24**	**26**	*e*P		**P**		**23 05 32.3**	**-0.8**
	comp=Z,10nm,1.0s,mb4.7								
PMR	**Palmer**	**74.24**	**26**	*e*P		**P**		**23 05 32.3**	**-0.8**
PMR				pmax	pmax				
	comp=Z,10.0nm,1.0s,mb4.7								
ESDC	**Sonseca Array**	**74.28**	**307**	LR	LR			23 41 06.8	
	comp=Z,65nm,18.9s,MS3.9,baz=355,slow=38								
DAWY	**Dawson**	**75.80**	**21**	*e*P		**P**		**23 05 42.6**	**+0.5**
BMRM	**Bremner River**	**76.30**	**25**	*e*P		**P**		**23 05 44.8**	**-0.2**
	comp=Z,11nm,1.0s,mb4.7								
STKA	**Stephens Creek**	**79.23**	**139**	P		**P**		**23 06 00.6**	**-1.0**
	comp=Z,0.9nm,0.4s,mb4.1,baz=288,slow=12,SNR=3.1								
STKA				LR	LR			23 43 46.6	
	comp=Z,98nm,21.1s,MS4.1,baz=200,slow=38								
YKA	**Yellowknife Ar**	**83.13**	**12**	P		**P**		**23 06 21.6**	**-0.3**
	comp=Z,3.7nm,0.9s,mb4.4,baz=335,slow=4.9,SNR=16								
TORD	**Torodi Ar. Bea**	**83.31**	**281**	P		**P**		**23 06 22.9**	**-0.8**
	comp=Z,2.6nm,1.0s,mb4.2,baz=38,slow=3.8,SNR=11								
TORD				LR	LR			23 47 34.5	
	comp=Z,106nm,19.1s,MS4.2,baz=70,slow=39								
LBTB	**Lobatse**	**85.17**	**237**	P		**P**		**23 06 32.2**	**-0.7**
BOSA	**Boshof**	**87.65**	**234**	P		**P**		**23 06 43.7**	**-1.3**
DBIC	**Dimbokro**	**92.20**	**279**	P		**P**		**23 07 06.0**	**-0.8**
DBIC				LR	LR			23 53 51.9	
DBIC	**Dimbokro**	**92.20**	**279**	P		**P**		**23 07 06.0**	**-0.8**
	comp=Z,7.5nm,1.1s,mb4.9,baz=62,slow=8.1,SNR=3.6								
DBIC				LR	LR			23 53 51.9	
	comp=Z,85nm,18.4s,MS4.2,baz=50,slow=39								
DBIC	**Dimbokro**	**92.20**	**279**	P		**P**		**23 07 06.0**	**-0.8**
DBIC				pmax	pmax				
	comp=Z,8.0nm,1.1s								
DBIC				MLR	MLR				
	comp=Z,85nm,18.5s								
FFC	**Flin Flon**	**92.48**	**8**	*e*P		**P**		**23 07 06.6**	**-0.7**
	comp=Z,5.3nm,0.9s,mb4.9								
FFC	**Flin Flon**	**92.48**	**8**	*i* P		**P**		**23 07 07.6**	**+0.3**
TXAR	**Lajitas Array**	**116.91**	**15**	PKP		PKPdf		23 12 41.3	-0.3
	comp=Z,0.1nm,0.6s,baz=316,slow=6.3,SNR=3.3								
CPUP	**Villa Florida**	**152.62**	**275**	PKPbc		PKPbc		23 13 54.0	+0.6
	comp=Z,0.7nm,0.5s,baz=62,slow=4.8,SNR=3.6								

IDC ***10*** *22:54:01.4±0.9,36.°19N×23.°11E,h0km,mb4.0/13, mb1 4.1/18,mb1mx4.0/30,mbtmp4.0/18,ML3.8/4,Error ellipse: s-maj=18.7km s-min=14.6km az=155.0*
ATH ***10*** *22:54:02.2,35.°97N×23.°14E,h17km±2km,MD3.9/36, ML3.9*
NEIC ***10*** *22:54:02.2,35.°98N×23.°14E,h17km,mb3.9/7, ML3.9(ATH),After ATH.*
CSEM ***10*** *22:54:04.9±0.2,35.°82N×22.°97E,h40km,mb4.0/10,Error ellipse: s-maj=6.0km s-min=3.5km az=40.0*
MOS ***10*** *22:54:04.6±1.5,35.°98N×23.°12E,h33km,mb4.3/15,Error ellipse: s-maj=7.4km s-min=3.8km az=94.6*
HLW ***10*** *22:54:10.4,35.°68N×23.°64E,h34km±22km,Ml3.4*
ISC 10 22:54:02.0±0.6,35.°88N±0.°02×23.°00E±0.°03,h6km±3km, n320,σ1$37/349,mb3.9/15,11C-18D,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h	m s	ISC
KYTH	**Kithira**	**0.41**	**4**	*e*Pb		**Pg**	**22 54 09.4**		**-0.5**
KYTH	**Kithira**	**0.41**	**4**	*e*PB		**Pg**	**22 54 09.4**		**-0.5**
KYTH	**Kithira**	**0.41**	**4**	*e*Pb		**Pg**	**22 54 09.4**		**-0.5**
VLI	**Veliai**	**0.84**	**357**	*e*Pn		**Pg**	**22 54 17.6**		**-0.6**
VLI				*e*Sn		**Sg**	**22 54 28.6**		**-0.5**
VLI	**Veliai**	**0.84**	**357**	*e*PN		**Pg**	**22 54 17.6**		**-0.6**
VLI	**Veliai**	**0.84**	**357**	*e*Pn		**Pg**	**22 54 17.6**		**-0.6**
VLI				*e*Sn		**Sg**	**22 54 28.6**		**-0.5**
KARN	**Karanos**	**0.89**	**122**	*e*PN		**Pg**	**22 54 18.5**		**-0.5**
KARN	**Karanos**	**0.89**	**122**	*e*Pn		**Pg**	**22 54 18.5**		**-0.5**
VAM	**Vamos**	**1.08**	**115**	*e*Pn		**Pg**	**22 54 22.5**		**-0.3**
VAM				*e*Sn		**Sg**	**22 54 37.7**		**+0.8**
VAM	**Vamos**	**1.08**	**115**	*e*PN		**Pg**	**22 54 22.5**		**-0.3**
VAM	**Vamos**	**1.08**	**115**	*e*Pn		**Pg**	**22 54 22.5**		**-0.3**
VAM				*e*Sn		**Sg**	**22 54 37.7**		**+0.8**
PYL	**PYLOS**	**1.44**	**315**	*e*PB		**Pn**	**22 54 28.0**		**-0.5**
PYL				*e*SN		**Sg**	**22 54 50.5**		**+2.3**
PYL	**PYLOS**	**1.44**	**315**	*e*Pb		**Pn**	**22 54 28.0**		**-0.5**
PYL				*e*Sn		**Sg**	**22 54 50.5**		**+2.3**
ITM	**Ithomi**	**1.56**	**327**	*e*Pn		**Pg**	**22 54 30.8**		**-1.2**
ITM				*e*Sn		**Sg**	**22 54 52.2**		**0.0**
ITM	**Ithomi**	**1.56**	**327**	*e*PN		**Pg**	**22 54 30.8**		**-1.2**
ITM				*e*SN		**Sg**	**22 54 52.2**		**0.0**
ITM	**Ithomi**	**1.56**	**327**	*e*Pn		**Pg**	**22 54 30.8**		**-1.2**
ITM				*e*Sn		**Sg**	**22 54 52.2**		**0.0**
VLX	**Vlachokerasia**	**1.57**	**342**	*e*PN		**Pg**	**22 54 30.8**		**-1.4**
VLX				*e*SN		**Sg**	**22 54 51.2**		**-1.4**
VLX	**Vlachokerasia**	**1.57**	**342**	*e*Pn		**Pg**	**22 54 30.8**		**-1.4**
VLX				*e*Sn		**Sg**	**22 54 51.2**		**-1.4**
DID	**Didima**	**1.64**	**7**	*e*PN		**Pb**	**22 54 30.8**		**-1.8**
DID				*e*SN		**Sb**	**22 54 51.9**		**-1.6**
DID	**Didima**	**1.64**	**7**	*e*Pn		**Pb**	**22 54 30.8**		**-1.8**
DID				*e*Sn		**Sb**	**22 54 51.9**		**-1.6**
IDI	**Anoyia**	**1.65**	**110**	*e*Pn		**Pn**	**22 54 31.8**		**+0.3**
IDI	**Anoyia**	**1.65**	**110**	*e*PN		**Pn**	**22 54 31.8**		**+0.3**
IDI	**Anoyia**	**1.65**	**110**	*e*Pn		**Pn**	**22 54 31.8**		**+0.3**
SIVA	**Sivas**	**1.71**	**120**	*e*Pn		**Pg**	**22 54 33.5**		**-1.3**
SIVA	**Sivas**	**1.71**	**120**	*e*PN		**Pg**	**22 54 33.5**		**-1.3**
SIVA	**Sivas**	**1.71**	**120**	*e*Pn		**Pg**	**22 54 33.5**		**-1.3**
NAIG	**Nisos Aigina**	**1.92**	**12**	*e*Pn		**Pn**	**22 54 34.5**		**-0.7**
NAIG	**Nisos Aigina**	**1.92**	**12**	*e*PN		**Pn**	**22 54 34.5**		**-0.7**
NAIG	**Nisos Aigina**	**1.92**	**12**	*e*Pn		**Pn**	**22 54 34.5**		**-0.7**
VLY	**Voula,Athens**	**2.07**	**18**	*e*Pn		**Pn**	**22 54 36.3**		**-1.0**
VLY	**Voula,Athens**	**2.07**	**18**	*e*PN		**Pn**	**22 54 36.3**		**-1.0**
VLY	**Voula,Athens**	**2.07**	**18**	*e*Pn		**Pn**	**22 54 36.3**		**-1.0**
GUR	**Goura**	**2.12**	**346**	*e*Pn		**Pn**	**22 54 38.9**		**+0.9**
GUR	**Goura**	**2.12**	**346**	*e*Pn		**Pn**	**22 54 38.9**		**+0.9**
LTK	**Loutraki**	**2.14**	**359**	*e*PN		**Pn**	**22 54 38.2**		**-0.1**
LTK	**Loutraki**	**2.14**	**359**	*e*Pn		**Pn**	**22 54 38.2**		**-0.1**
LAST	**Lasithi**	**2.15**	**109**	*e*Pn		**Pn**	**22 54 38.3**		**0.0**
LAST	**Lasithi**	**2.15**	**109**	*e*PN		**Pn**	**22 54 38.3**		**0.0**
LAST	**Lasithi**	**2.15**	**109**	*e*Pn		**Pn**	**22 54 38.3**		**0.0**
ATH	**Athens Observa**	**2.17**	**15**	*e*Pn		**Pn**	**22 54 37.9**		**-0.7**
ATH				*e*Sn		**Sn**	**22 55 03.8**		**-2.0**
ATH	**Athens Observa**	**2.17**	**15**	*e*PN		**Pn**	**22 54 37.9**		**-0.7**
ATH				*e*SN		**Sn**	**22 55 03.8**		**-2.0**
ATH	**Athens Observa**	**2.17**	**15**	*e*Pn		**Pn**	**22 54 37.9**		**-0.7**
ATH				*e*Sn		**Sn**	**22 55 03.8**		**-2.0**
NPS	**Neapolis**	**2.22**	**105**	*e*Pn		**Pn**	**22 54 39.0**		**-0.3**
NPS	**Neapolis**	**2.22**	**105**	*e*PN		**Pn**	**22 54 39.0**		**-0.3**
NPS	**Neapolis**	**2.22**	**105**	*e*Pn		**Pn**	**22 54 39.0**		**-0.3**
PTL	**Penteli**	**2.28**	**17**	*e*Pn		**Pn**	**22 54 39.2**		**-0.9**
PTL	**Penteli**	**2.28**	**17**	*e*PN		**Pn**	**22 54 39.2**		**-0.9**
PTL	**Penteli**	**2.28**	**17**	*e*Pn		**Pn**	**22 54 39.2**		**-0.9**
APE	**Apeiranthos**	**2.36**	**59**	*e*Pb		**Pn**	**22 54 39.9**		**-1.4**
APE				P		**Pb**	**22 54 43.8**		**-1.1**
APE	**Apeiranthos**	**2.36**	**59**	*e*PB		**Pn**	**22 54 39.9**		**-1.4**
APE	**Apeiranthos**	**2.36**	**59**	*e*Pb		**Pn**	**22 54 39.9**		**-1.4**
UPR	**University Cam**	**2.59**	**338**	*e*PN		**Pn**	**22 54 45.2**		**+0.8**
UPR	**University Cam**	**2.59**	**338**	*e*Pn		**Pn**	**22 54 45.2**		**+0.8**
EFP	**Efpalio**	**2.69**	**341**	*e*PB		**Pb**	**22 54 48.8**		**-1.7**
EFP	**Efpalio**	**2.69**	**341**	*e*Pb		**Pb**	**22 54 48.8**		**-1.7**
ZKR	**Zakros**	**2.73**	**105**	*e*Pb		**Pn**	**22 54 47.2**		**+0.8**
ZKR	**Zakros**	**2.73**	**105**	*e*PB		**Pn**	**22 54 47.2**		**+0.8**
ZKR	**Zakros**	**2.73**	**105**	*e*Pb		**Pn**	**22 54 47.2**		**+0.8**
LKR	**Lokris**	**2.77**	**0**	*e*Pn		**Pn**	**22 54 46.5**		**-0.4**
LKR	**Lokris**	**2.77**	**0**	*e*PN		**Pn**	**22 54 46.5**		**-0.4**
LKR	**Lokris**	**2.77**	**0**	*e*Pn		**Pn**	**22 54 46.5**		**-0.4**
VLS	**Valsamata**	**3.00**	**321**	*e*Pn		**Pn**	**22 54 50.4**		**+0.4**
VLS	**Valsamata**	**3.00**	**321**	*e*PN		**Pn**	**22 54 50.4**		**+0.4**
VLS	**Valsamata**	**3.00**	**321**	*e*Pn		**Pn**	**22 54 50.4**		**+0.4**
EVR	**Evrytania**	**3.18**	**343**	*e*Pb		**Pn**	**22 54 55.5**		**+3.0**
EVR	**Evrytania**	**3.18**	**343**	*e*PB		**Pn**	**22 54 55.5**		**+3.0**
EVR	**Evrytania**	**3.18**	**343**	*e*Pb		**Pn**	**22 54 55.5**		**+3.0**
AGG	**Agios Georgios**	**3.19**	**351**	*e*Pn		**Pn**	**22 54 53.5**		**+0.9**
AGG	**Agios Georgios**	**3.19**	**351**	*e*PN		**Pn**	**22 54 53.5**		**+0.9**
AGG	**Agios Georgios**	**3.19**	**351**	*e*Pn		**Pn**	**22 54 53.5**		**+0.9**
KARP	**Karpathos**	**3.40**	**94**	*e*Pn		**Pn**	**22 54 54.9**		**-0.7**
KARP	**Karpathos**	**3.40**	**94**	*e*PN		**Pn**	**22 54 54.9**		**-0.7**
KARP	**Karpathos**	**3.40**	**94**	*e*Pn		**Pn**	**22 54 54.9**		**-0.7**
XOR	**Xorichti**	**3.49**	**2**	P		**Pn**	**22 54 58.9**		**+2.2**
XOR	**Xorichti**	**3.49**	**2**	P		**Pn**	**22 54 58.9**		**+2.2**
CHOS	**Chios island**	**3.50**	**43**	*e*PN		**Pn**	**22 54 56.0**		**-0.9**
CHOS	**Chios island**	**3.50**	**43**	*e*Pn		**Pn**	**22 54 56.0**		**-0.9**
THL	**Klokotos Trika**	**3.76**	**348**	*e*PN		**Pn**	**22 55 02.3**		**+1.8**
THL	**Klokotos Trika**	**3.76**	**348**	*e*Pn		**Pn**	**22 55 02.3**		**+1.8**
SIGR	**SIGRI**	**4.03**	**33**	P		**Pn**	**22 55 05.9**		**+1.7**
SIGR	**SIGRI**	**4.03**	**33**	P		**Pn**	**22 55 05.9**		**+1.7**
PAIG	**Paliouri**	**4.08**	**7**	P		**Pn**	**22 55 05.1**		**+0.2**
PAIG	**Paliouri**	**4.08**	**7**	P		**Pn**	**22 55 05.1**		**+0.2**
JAN	**Janina**	**4.14**	**336**	*e*Pn		**Pn**	**22 55 07.4**		**+1.7**
JAN	**Janina**	**4.14**	**336**	*e*PN		**Pn**	**22 55 07.4**		**+1.7**
JAN	**Janina**	**4.14**	**336**	*e*Pn		**Pn**	**22 55 07.4**		**+1.7**
ARG	**Arkhangelos**	**4.17**	**84**	P		**Pn**	**22 55 07.5**		**+1.4**
ARG	**Arkhangelos**	**4.17**	**84**	P		**Pn**	**22 55 07.5**		**+1.4**
IGT	**Igoumenitsa**	**4.22**	**331**	P		**Pn**	**22 55 07.1**		**+0.3**
IGT	**Igoumenitsa**	**4.22**	**331**	P		**Pn**	**22 55 07.1**		**+0.3**
PRK	**Paraskevi**	**4.25**	**37**	*e*Pn		**Pn**	**22 55 05.6**		**-1.6**
PRK	**Paraskevi**	**4.25**	**37**	*e*PN		**Pn**	**22 55 05.6**		**-1.6**
PRK	**Paraskevi**	**4.25**	**37**	*e*Pn		**Pn**	**22 55 05.6**		**-1.6**
LIA	**Limnos Island**	**4.37**	**23**	*e*Pn		**Pn**	**22 55 08.1**		**-0.8**
LIA	**Limnos Island**	**4.37**	**23**	*e*PN		**Pn**	**22 55 08.1**		**-0.8**
LIA	**Limnos Island**	**4.37**	**23**	*e*Pn		**Pn**	**22 55 08.1**		**-0.8**
OUR	**Ouranopolis**	**4.52**	**10**	P		**Pn**	**22 55 11.3**		**+0.4**
OUR	**Ouranopolis**	**4.52**	**10**	P		**Pn**	**22 55 11.3**		**+0.4**
KZN	**Kozani**	**4.53**	**348**	*e*Pn		**Pn**	**22 55 13.0**		**+2.0**
KZN	**Kozani**	**4.53**	**348**	*e*PN		**Pn**	**22 55 13.0**		**+2.0**
KZN	**Kozani**	**4.53**	**348**	*e*Pn		**Pn**	**22 55 13.0**		**+2.0**
KEK	**Kerkira**	**4.59**	**327**	P		**Pn**	**22 55 12.5**		**+0.6**
KEK	**Kerkira**	**4.59**	**327**	P		**Pn**	**22 55 12.5**		**+0.6**
HORT	**Hortiatis**	**4.71**	**1**	P		**Pn**	**22 55 15.0**		**+1.4**
HORT	**Hortiatis**	**4.71**	**1**	P		**Pn**	**22 55 15.0**		**+1.4**
SLUM		**4.75**	**156**	P		**Pn**	**22 55 14.6**		**+0.5**
	baz=162								
SLUM				S		**Sn**	**22 56 03.3**		**-6.1**
	baz=162								
SLUM		**4.75**	**156**	P		**Pn**	**22 55 14.6**		**+0.6**
SLUM				S		**Sn**	**22 56 03.3**		**-6.1**
SOH	**Sokhos**	**4.95**	**3**	*e*Pn		**Pn**	**22 55 18.9**		**+2.1**
SOH	**Sokhos**	**4.95**	**3**	*e*PN		**Pn**	**22 55 18.9**		**+2.1**
SOH	**Sokhos**	**4.95**	**3**	*e*Pn		**Pn**	**22 55 18.9**		**+2.1**
FNA	**Florina**	**5.06**	**346**	P		**Pn**

MALT	**Malatya**	**12.56**	**74**	P		**Pn**	**22 57 03.3**	**+2.2**			
VYHS	**Vyhne**	**12.98**	**348**	*e*Pn		**Pn**	**22 57 06.7**	**-0.1**			
VYHS				*e*			22 59 27.5				
VYHS	**Vyhne**	**12.98**	**348**	*e*PN		**Pn**	**22 57 06.7**	**-0.1**			
VYHS	**Vyhne**	**12.98**	**348**	*e*SN		**Sn**	**22 59 27.5**	**-3.9**			
VYHS	**Vyhne**	**12.98**	**348**	*e*P		**Pn**	**22 57 06.7**	**-0.1**			
CRVS	**Cervenica-Dubn**	**13.07**	**356**	*e*Pn		**Pn**	**22 57 08.8**	**+0.8**			
CRVS				*e*			22 59 28.2				
CRVS	**Cervenica-Dubn**	**13.07**	**356**	*e*PN		**Pn**	**22 57 08.8**	**+0.8**			
CRVS	**Cervenica-Dubn**	**13.07**	**356**	*e*SN		**Sn**	**22 59 28.2**	**-5.4**			
CRVS	**Cervenica-Dubn**	**13.07**	**356**	*e*P		**Pn**	**22 57 08.8**	**+0.8**			
NIE	**Niedzica**	**13.68**	**353**	*e*P		**Pn**	**22 57 26.2**	**+10**			
VRAC	**Vranov**	**14.22**	**343**	Pn		**Pn**	**22 57 21.9**	**-1.9**			
	baz=173,slow=8.1,SNR=2.1										
VRAC	**Vranov**	**14.22**	**343**	⇑*i*P		**Pn**	**22 57 26.4**	**+2.6**			
OKC	**Ostrava-Krasne**	**14.39**	**347**	*e*P		**Pn**	**22 57 32.1**	**+6.0**			
OKC	**Ostrava-Krasne**	**14.39**	**347**	*e*P		**Pn**	**22 57 32.1**	**+6.0**			
OKC	**Ostrava-Krasne**	**14.39**	**347**	*e*P		**Pn**	**22 57 32.1**	**+6.0**			
TREC	**Trest**	**14.49**	**340**	*e*P		**Pn**	**22 57 33.9**	**+6.4**			
TREC	**Trest**	**14.49**	**340**	*e*P		**Pn**	**22 57 33.9**	**+6.4**			
TREC	**Trest**	**14.49**	**340**	*e*P		**Pn**	**22 57 33.9**	**+6.4**			
OJC	**Ojcow**	**14.52**	**352**	*e*P		**Pn**	**22 57 34.6**	**+6.7**			
OJC	**Ojcow**	**14.52**	**352**	*e*P		**Pn**	**22 57 34.6**	**+6.7**			
DAVOX	**Davos/Dischmat**	**14.67**	**322**	Pn		**Pn**	**22 57 32.2**	**+2.3**			
	comp=N,0.2nm,0.3s,baz=154,slow=19,SNR=4.4										
DAVOX				Sn		**Sn**	**23 00 05.7**	**-7.0**			
	comp=N,0.3nm,0.3s,baz=331,slow=19,SNR=3.9										
DAVOX	**Davos/Dischmat**	**14.67**	**322**	Pn		**Pn**	**22 57 32.2**	**+2.3**			
KHC	**Kasperske Hory**	**14.94**	**335**	*e*P		**Pn**	**22 57 35.2**	**+1.6**			
KHC	**Kasperske Hory**	**14.94**	**335**	*e*P		**Pn**	**22 57 35.2**	**+1.6**			
KHC				*e*pP		pP	22 57 39.0	-2.0			
WET	**Wettzell**	**15.20**	**334**	*e*P		**Pn**	**22 57 41.6**	**+4.6**			
WET	**Wettzell**	**15.20**	**334**	*e*P		**Pn**	**22 57 41.6**	**+4.6**			
DPC	**Dobruska-Polom**	**15.26**	**344**	*e*P		**Pn**	**22 57 39.3**	**+1.5**			
DPC				MLR		MLR					
	comp=Z,100nm,12.3s										
DPC	**Dobruska-Polom**	**15.26**	**344**	*e*P		**Pn**	**22 57 39.3**	**+1.5**			
DPC				*e*pP		pP	22 57 42.6	-1.9			
DPC				AMS		AMS	23 05 20.0				
	comp=Z,100nm,12.3s										
PRU	**Pruhonice**	**15.39**	**339**	*e*P		**Pn**	**22 57 44.0**	**+4.5**			
PRU	**Pruhonice**	**15.39**	**339**	*e*P		**Pn**	**22 57 44.0**	**+4.5**			
PRU	**Pruhonice**	**15.39**	**339**	*e*P		**Pn**	**22 57 44.0**	**+4.5**			
UPC	**Upice**	**15.47**	**343**	*e*P		**Pn**	**22 57 44.9**	**+4.3**			
UPC	**Upice**	**15.47**	**343**	*e*P		**Pn**	**22 57 44.9**	**+4.3**			
UPC				*e*pP		pP	22 57 49.2	+2.2			
UPC	**Upice**	**15.47**	**343**	*e*P		**Pn**	**22 57 44.9**	**+4.3**			
AKASG	**Malin Array Be**	**15.49**	**15**	Pn		**Pn**	**22 57 37.6**	**-3.2**			
	comp=Z,1.1nm,0.3s,baz=205,slow=11,SNR=4.7										
AKASG	**Malin Array Be**	**15.49**	**15**	P		**Pn**	**22 57 37.6**	**-3.2**			
AKASG				pmax		pmax					
	comp=Z,1.0nm,0.3s										
GRA1	**Grafenberg Arr**	**16.26**	**332**	*e*P		**Pn**	**22 57 53.8**	**+3.0**			
	comp=Z,8.0nm,0.7s										
GRA1	**Grafenberg Arr**	**16.26**	**332**	*e*P		**Pn**	**22 57 53.8**	**+3.0**			
	comp=Z,8.0nm,0.7s										
GRF	**Grafenberg Arr**	**16.26**	**332**	*e*P		**Pn**	**22 57 53.8**	**+3.0**			
	comp=Z,8.0nm,0.7s										
GRF	**Grafenberg Arr**	**16.26**	**332**	*e*P		**Pn**	**22 57 53.8**	**+3.0**			
GRF				pmax		pmax					
	comp=Z,8.0nm,0.7s										
GRF	**Grafenberg Arr**	**16.26**	**332**	*e*P		**Pn**	**22 57 53.8**	**+3.0**			
GRF				pmax		pmax					
	comp=Z,8.0nm,0.7s										
GRF	**Grafenberg Arr**	**16.26**	**332**	*e*P		**Pn**	**22 57 53.8**	**+3.0**			
	comp=Z,8.0nm,0.7s										
BRG	**Berggiesshubel**	**16.35**	**339**	*e*P		**Pn**	**22 57 47.8**	**-4.2**			
	comp=Z,7.5nm,1.6s										
BRG				*e*			22 57 53.9				
	comp=Z,2.8nm,0.9s										
BRG				*e*			23 03 51.2				
	comp=Z,2.2nm,0.9s										
BRG											
	comp=N,187nm,13.4s										
BRG											
	comp=E,174nm,12.3s										
BRG											
	comp=Z,349nm,20.1s										
BFO	**Black Forest**	**16.50**	**323**	*e*P		**Pn**	**22 57 53.9**	**0.0**			
BFO	**Black Forest**	**16.50**	**323**	*e*P		**Pn**	**22 57 53.9**	**0.0**			
CLL	**Collm**	**17.01**	**338**	P		**Pn**	**22 58 03.0**	**+2.6**			
CLL	**Collm**	**17.01**	**338**	*e*sP		**Pn**	**22 58 03.0**	**+2.6**			
	comp=Z,6.0nm,1.1s										
CLL	**Collm**	**17.01**	**338**	P		**Pn**	**22 58 03.0**	**+2.6**			
HAU	**Haudompre**	**17.29**	**320**	*e*P		**Pn**	**22 58 04.9**	**+1.1**			
	comp=Z,14nm,0.9s										
HAU	**Haudompre**	**17.29**	**320**	*e*P		**Pn**	**22 58 04.9**	**+1.1**			
	comp=Z,7.0nm,0.9s										
HAU	**Haudompre**	**17.29**	**320**	*e*P		**Pn**	**22 58 04.9**	**+1.1**			
HAU				pmax		pmax					
	comp=Z,7.0nm,0.9s										
HAU	**Haudompre**	**17.29**	**320**	*e*P		**Pn**	**22 58 04.9**	**+1.1**			
	comp=Z,7.0nm,0.9s										
GNI	**Garni**	**17.65**	**69**	P		**Pn**	**22 58 09.3**	**+0.9**			
	comp=Z,0.1nm,0.3s,baz=347,slow=14,SNR=3.1										
GNI	**Garni**	**17.65**	**69**	P		**Pn**	**22 58 09.3**	**+0.9**			
VORD	**Divnogorie**	**19.11**	**33**	*e*P		**Pn**	**22 58 26.1**	**0.0**			
VORD				pmax		pmax					
	comp=Z,3.0nm,0.9s										
VORD				pmax		pmax					
	comp=N,20nm,1.3s										
VORD				pmax		pmax					
	comp=E,20nm,0.8s										
VORD	**Divnogorie**	**19.11**	**33**	*e*P		**Pn**	**22 58 26.1**	**0.0**			
	comp=E,20nm,1.3s										
VSR	**Storozhevoye**	**19.23**	**32**	*e*P		**Pn**	**22 58 27.6**	**0.0**			
VSR				pmax		pmax					
	comp=Z,3.0nm,0.6s										
VSR				pmax		pmax					
	comp=N,3.0nm,0.4s										
VSR				pmax		pmax					
	comp=E,5.0nm,0.5s										
VSR	**Storozhevoye**	**19.23**	**32**	*e*P		**Pn**	**22 58 27.6**	**0.0**			
	comp=E,3.0nm,0.4s										
ETSF	**Etsaut**	**19.48**	**298**	*e*P		**Pn**	**22 58 30.9**	**+0.3**			
	comp=E,15nm,1.1s										
ETSF	**Etsaut**	**19.48**	**298**	*e*P		**Pn**	**22 58 30.9**	**+0.3**			
	comp=E,7.3nm,1.1s										
ETSF	**Etsaut**	**19.48**	**298**	*e*P		**Pn**	**22 58 30.9**	**+0.3**			
ETSF				pmax		pmax					
	comp=Z,7.0nm,1.1s										
SJPF	**Ste Jean**	**20.00**	**299**	*e*P		**P**	**22 58 35.1**	**-0.1**			
	comp=Z,8.2nm,0.8s										
SJPF	**Ste Jean**	**20.00**	**299**	*e*P		**P**	**22 58 35.1**	**-0.1**			
	comp=Z,4.1nm,0.8s										
SJPF	**Ste Jean**	**20.00**	**299**	*e*P		**P**	**22 58 35.1**	**-0.1**			
SJPF				pmax		pmax					
	comp=Z,4.0nm,0.8s										
SJPF	**Ste Jean**	**20.00**	**299**	*e*P		**P**	**22 58 35.1**	**-0.1**			
	comp=Z,4.1nm,0.8s										
BSEG	**Bad Segeberg**	**20.11**	**338**	*e*P		**P**	**22 58 34.9**	**-1.4**			
BSEG	**Bad Segeberg**	**20.11**	**338**	*e*P		**P**	**22 58 34.9**	**-1.4**			
VRHR	**Novokhopersk**	**20.26**	**36**	*e*P		**P**	**22 58 38.2**	**+0.3**			
VRHR				pmax		pmax					
	comp=Z,10.0nm,0.6s										
VRHR				pmax		pmax					
	comp=N,10.0nm,0.7s										
VRHR				pmax		pmax					
	comp=E,8.0nm,0.5s										
VRHR	**Novokhopersk**	**20.26**	**36**	*e*P		**P**	**22 58 38.2**	**+0.3**			
	comp=E,10.0nm,0.7s										
LDF	**La Druitiere**	**21.22**	**314**	*e*P		**P**	**22 58 45.3**	**-3.0**			
	comp=E,5.1nm,0.6s,mb3.8										
LDF	**La Druitiere**	**21.22**	**314**	*e*P		**P**	**22 58 45.3**	**-3.0**			
	comp=E,2.5nm,0.6s,mb3.7										
LDF	**La Druitiere**	**21.22**	**314**	*e*P		**P**	**22 58 45.3**	**-3.0**			
LDF				pmax		pmax					
	comp=Z,3.0nm,0.6s,mb3.8										
LDF	**La Druitiere**	**21.22**	**314**	*e*P		**P**	**22 58 45.3**	**-3.0**			
	comp=Z,2.5nm,0.6s,mb3.7										
FLN	**La Foliniere**	**21.51**	**314**	*e*P		**P**	**22 58 47.8**	**-3.7**			
	comp=Z,24nm,0.9s,mb4.3										
FLN	**La Foliniere**	**21.51**	**314**	*e*P		**P**	**22 58 47.8**	**-3.7**			
	comp=Z,12nm,0.9s,mb4.3										
FLN	**La Foliniere**	**21.51**	**314**	*e*P		**P**	**22 58 47.8**	**-3.7**			
FLN				pmax		pmax					
	comp=Z,12nm,0.9s,mb4.3										
ESDC	**Sonseca Array**	**21.61**	**288**	P		**P**	**22 58 51.3**	**-1.4**			
	comp=Z,1.7nm,0.8s,mb3.5,baz=81,slow=10,SNR=10										
ESDC	**Sonseca Array**	**21.61**	**288**	P		**P**	**22 58 51.3**	**-1.4**			
MDT	**Midelt**	**22.97**	**270**	P		**P**	**22 59 07.1**	**-0.1**			
	comp=Z,2.6nm,0.8s,mb3.7,baz=89,slow=7.1,SNR=5.8										
MDT	**Midelt**	**22.97**	**270**	P		**P**	**22 59 07.1**	**-0.1**			
HFS	**Hagfors**	**25.01**	**349**	P		**P**	**22 59 24.2**	**-2.1**			
	comp=Z,3.3nm,0.5s,mb4.2,baz=155,slow=12,SNR=31										
HFS	**Hagfors**	**25.01**	**349**	P		**P**	**22 59 24.2**	**-2.1**			
HFS				pmax		pmax					
	comp=Z,3.0nm,0.5s										
HFS	**Hagfors**	**25.01**	**349**	P		**P**	**22 59 24.2**	**-2.1**			
	comp=Z,3.0nm,0.5s,mb4.1										
FINES	**FINESS Array B**	**25.66**	**3**	P		**P**	**22 59 29.6**	**-2.7**			
	comp=Z,4.8nm,0.8s,mb4.1,baz=173,slow=9.8,SNR=13										
FINES	**FINESS Array B**	**25.66**	**3**	P		**P**	**22 59 29.6**	**-2.6**			
FINES				pmax		pmax					
	comp=Z,5.0nm,0.8s										
FINES	**FINESS Array B**	**25.66**	**3**	P		**P**	**22 59 29.6**	**-2.6**			
	comp=Z,5.0nm,0.8s,mb4.1										
NB2	**NORSAR Subarra**	**26.28**	**347**	P		**P**	**22 59 36.3**	**-1.5**			
	comp=Z,1.5nm,0.7s,mb3.6,SNR=5.0										
NOA	**NORSAR Array B**	**26.28**	**347**	P		**P**	**22 59 36.0**	**-1.8**			
	comp=Z,1.4nm,0.7s,mb3.6,baz=158,slow=12,SNR=7.8										
NOA	**NORSAR Array B**	**26.28**	**347**	P		**P**	**22 59 36.1**	**-1.7**			
NOA				pmax		pmax					
	comp=Z,1.0nm,0.7s										
NOA	**NORSAR Array B**	**26.28**	**347**	P		**P**	**22 59 36.1**	**-1.7**			
	comp=Z,1.0nm,0.7s,mb3.5										
EKA	**Eskdalemuir Ar**	**26.45**	**326**	P		**P**	**22 59 38.5**	**-0.8**			
	comp=Z,8.6nm,0.7s,mb4.4,baz=124,slow=8.8,SNR=22										
EKA	**Eskdalemuir Ar**	**26.45**	**326**	P		**P**	**22 59 38.6**	**-0.8**			
EKA				pmax		pmax					
	comp=Z,9.0nm,0.7s										
EKA	**Eskdalemuir Ar**	**26.45**	**326**	P		**P**	**22 59 38.5**	**-0.9**			
TORD	**Torodi Ar. Bea**	**29.66**	**226**	P		**P**	**23 00 11.7**	**+3.2**			
	comp=Z,0.7nm,0.6s,mb3.5,baz=38,slow=7.2,SNR=6.4										
ARCES	**ARCESS Array B**	**33.74**	**2**	P		**P**	**23 00 41.2**	**-2.6**			
ARCES	**ARCESS Array B**	**33.74**	**2**	P		**P**	**23 00 41.2**	**-2.6**			
	comp=Z,2.4nm,0.6s,mb4.3,baz=179,slow=9.7,SNR=23										
ARCES	**ARCESS Array B**	**33.74**	**2**	P		**P**	**23 00 41.2**	**-2.6**			
ARCES				pmax		pmax					
	comp=Z,2.0nm,0.6s										
ARCES	**ARCESS Array B**	**33.74**	**2**	P		**P**	**23 00 41.2**	**-2.6**			
	comp=Z,2.0nm,0.6s,mb4.2										
DBIC	**Dimbokro**	**38.69**	**228**	P		**P**	**23 01 31.1**	**+4.4**			
	comp=Z,2.3nm,0.8s,mb4.0,baz=13,slow=9.0,SNR=4.0										
DBIC	**Dimbokro**	**38.69**	**228**	P		**P**	**23 01 31.1**	**+4.4**			
DBIC				pmax		pmax					
	comp=Z,2.0nm,0.8s										
KURK	**Kurchatov**	**42.11**	**51**	P		**P**	**23 01 52.4**	**-2.3**			
	comp=Z,1.1nm,0.4s,mb3.8,baz=112,slow=10,SNR=12										
KURK	**Kurchatov**	**42.11**	**51**	P		**P**	**23 01 52.4**	**-2.2**			
KURK				pmax		pmax					
	comp=Z,1.0nm,0.4s,mb3.8										
KURK	**Kurchatov**	**42.11**	**51**	P		**P**	**23 01 52.4**	**-2.2**			
	comp=Z,1.0nm,0.4s,mb3.8										
MKAR	**Makanchi Array**	**44.86**	**57**	P		**P**	**23 02 15.4**	**-1.5**			
	comp=Z,2.2nm,0.6s,mb4.2,baz=271,slow=7.7,SNR=25										
MKAR	**Makanchi Array**	**44.86**	**57**	P		**P**	**23 02 15.4**	**-1.5**			
MKAR				pmax		pmax					
	comp=Z,2.0nm,0.6s										
ZALV	**Zalesovo Beam**	**45.79**	**47**	P		**P**	**23 02 21.5**	**-2.7**			
	comp=Z,1.1nm,0.4s,mb4.1,baz=269,slow=9.0,SNR=6.7										
ZALV	**Zalesovo Beam**	**45.79**	**47**	P		**P**	**23 02 21.5**	**-2.7**			
ZALV				pmax		pmax					
	comp=Z,1.0nm,0.4s,mb4.1										
ZALV	**Zalesovo Beam**	**45.79**	**47**	P		**P**	**23 02 21.5**	**-2.7**			
	comp=Z,1.0nm,0.4s,mb4.1										
YKA	**Yellowknife Ar**	**76.22**	**341**	P		**P**	**23 05 49.2**	**-1.5**			
	comp=Z,0.5nm,0.6s,mb3.6,baz=32,slow=5.5,SNR=4.1										
YKA	**Yellowknife Ar**	**76.22**	**341**	P		**P**	**23 05 49.2**	**-1.6**			
YKA				pmax		pmax					
	comp=Z,1.0nm,0.6s										
YKA	**Yellowknife Ar**	**76.22**	**341**	P		**P**	**23 05 49.2**	**-1.6**			
	comp=Z,1.0nm,0.6s,mb3.9										

*BGS **11** 00:09:33.8±2.5,52˚.47N×159˚.99W,h33km±999km,mb5.1*
*ISCJB **11** 00:09:33.3±0.7,53˚.69N±0˚.02×163˚.54W±0˚.02,h10km±4km, mb5.1/309,MS5.0/78,Error ellipse: s-maj=3.4km s-min=1.9km az=13.7*
*IDC **11** 00:09:34.9±2.7,53˚.66N×163˚.60W,h13km±16km,mb4.7/30, mb1 4.8/33,mb1mx4.7/36,mbtmp4.7/33,ML4.3/3,MS4.9/24, Ms1 4.9/24,ms1mx4.8/30,Error ellipse: s-maj=15.5km s-min=10.4km az=168.0*
*NEIC **11** 00:09:36.9±0.1,53˚.68N×163˚.56W,h23km,mb5.1/193, MS4.9/7,MW5.2,ML4.7(AEIC),Error ellipse: s-maj=3.0km s-min=1.7km az=188.0,Moment Tensor Solution. s69 Moment tensor: Scale 10^16^Nm; Mrr=3.66; Mθθ=-5.86; Mφφ=2.20; Mrθ=4.81; Mrφ=-2.74; Mθφ=2.22; Best double couple: M=7.90000×10^16^ NP1:φ=62.00000°,δ=69.00000°, λ=78.00000°. NP2:φ=272.00000°,δ=24.00000°,λ=118.00000°. Principal axes: T 6.0000, Plg64.0000°, Azm312.0000°; N 2.9100, Plg10.0000°, Azm66.0000°; P -8.9000, Plg22.0000°, Azm161.0000°;*
*BJI **11** 00:09:36.3,53˚.83N×164˚.26W,h23km,mB5.1/36, mb5.2/66,Ms5.4/65,Ms7 5.0/60*
*MOS **11** 00:09:36.5±0.9,53˚.65N×163˚.62W,h33km,mb5.4/131, MS5.0/27,Error ellipse: s-maj=7.5km s-min=3.7km az=90.7*
*GCMT **11** 00:09:40.1±0.2,53˚.36N×163˚.62W,h26km±1km,MW5.3, Moment Tensor Solution. s72,c119; s84,c155; Moment tensor: Scale 10^17^Nm; Mrr=0.00; Mθθ=0.00; Mφφ=0.00; Mrθ=0.00; Mrφ=0.00; Mθφ=0.00; Best double couple: M=1.30000×10^17^ NP1:φ=268.00000°,δ=18.00000°, λ=118.00000°. NP2:φ=59.00000°,δ=74.00000°,λ=81.00000°. Principal axes: T 1.1100, Plg60.0000°, Azm317.0000°; N 0.4500, Plg8.0000°, Azm61.0000°; P -1.5600, Plg28.0000°, Azm156.0000°; Data Used: II IU IC G CN.*
*SZGRF **11** 00:09:40.1,54˚.30N×163˚.66W,h33km,mb5.4,MS4.9, Unimak Island, Alaska, United States, region*

ISC 11 00:09:36.7±0.7,53˚.69N±0˚.02×163˚.57W±0˚.02,h21km±4km, h31km±.7km:pP-P,n1118,σ0.69/1140,mb5.1/309,MS5.0/78, 314C-183D,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
FALS	**False Pass**	**1.17**	**4**	*e*Pn	**Pn**	**00 09**	**58.8**	**+1.0**	
FALS				*e*Sn	**Sn**	**00 10**	**18.4**	**+5.3**	
AKA	**Akutan**	**1.38**	**290**	P	**Pn**	**00 10**	**01.6**	**+1.0**	
AKUT	**Akutan**	**1.38**	**290**	P	**Pn**	**00 10**	**01.5**	**+0.9**	
AKUT				S	**Sn**	**00 10**	**21.7**	**+3.6**	
AKLV	**Akutan Long Va**	**1.49**	**289**	P	**Pn**	**00 10**	**02.1**	**0.0**	
AKGG	**Akutan Green G**	**1.52**	**290**	P	**Pn**	**00 10**	**02.8**	**+0.2**	
AKGG				S	**Sn**	**00 10**	**24.9**	**+3.2**	
UNV	**Unalaska Valle**	**1.75**	**276**	P	**Pn**	**00 10**	**05.7**	**-0.1**	
UNV				S	**Sn**	**00 10**	**29.7**	**+2.4**	
SDPT	**Sand Point**	**2.45**	**46**	P	**Pn**	**00 10**	**15.3**	**-0.1**	
SDPT				S	**Sn**	**00 10**	**46.7**	**+2.0**	
NIKO	**Nikolski**	**3.25**	**259**	P	**Pn**	**00 10**	**26.1**	**-0.2**	
CHGN	**Chignik**	**3.96**	**47**	*e*Pn	**Pn**	**00 10**	**36.1**	**0.0**	
SPIA	**Saint Paul Isl**	**5.16**	**315**	P	**Pn**	**00 10**	**54.7**	**+2.1**	
ATKA	**Atka Island**	**6.59**	**261**	*e*Pn	**Pn**	**00 11**	**12.1**	**-0.2**	
OHAK	**Old Harbor**	**6.83**	**55**	*e*P	**Pn**	**00 11**	**14.4**	**-1.1**	
KDAK	**Kodiak Island**	**7.43**	**52**	*e*Pn	**Pn**	**00 11**	**22.6**	**-1.1**	
KDAK				S	**Sb**	**00 13**	**10.4**	**-2.4**	
KDAK	**Kodiak Island**	**7.43**	**52**	Pn	**Pn**	**00 11**	**22.0**	**-1.7**	
	4.4nm,0.3s,baz=233,slow=6.2,SNR=35								
KDAK	**Kodiak Island**	**7.43**	**52**	*i* P	**Pn**	**00 11**	**21.8**	**-1.9**	
GSTR	**Great Sitkin T**	**7.72**	**263**	*e*Pn	**Pn**	**00 11**	**29.2**	**+1.4**	
SVW2	**Sparrevohn**	**8.58**	**27**	*e*P	**Pn**	**00 11**	**40.8**	**+1.4**	
RSO	**Redoubt South**	**8.97**	**37**	*e*Pn	**Pn**	**00 11**	**44.7**	**-0.2**	
SEW	**Seward**	**10.03**	**45**	*e*Pn	**Pn**	**00 11**	**59.2**	**-0.2**	
	80nm,1.0s								
SEW				*e*Sn	**Sn**	**00 13**	**49.5**	**-1.6**	
TTA	**Tatalina**	**10.07**	**20**	*e*P	**Pn**	**00 12**	**01.2**	**+1.3**	
RC01	**Rabbit Creek A**	**10.50**	**40**	*e*Pn	**Pn**	**00 12**	**05.2**	**-0.5**	
	90nm,1.2s								
RC01				*e*Sn	**Sn**	**00 14**	**00.2**	**-2.4**	
AMKA	**Amchitka**	**10.69**	**264**	*e*P	**Pn**	**00 12**	**08.4**	**0.0**	
	111nm,0.4s								
GAMB	**Gambell**	**10.95**	**341**	*e*Pn	**Pn**	**00 12**	**12.6**	**+0.7**	
	133nm,1.2s								
PPLA	**Purkeypile**	**10.98**	**28**	*e*Pn	**Pn**	**00 12**	**14.5**	**+2.2**	
	41nm,0.9s								
PMR	**Palmer**	**11.05**	**38**	*e*P	**Pn**	**00 12**	**14.1**	**+0.9**	
	5.0nm,0.3s								
PMR	**Palmer**	**11.05**	**38**	*e*P	**Pn**	**00 12**	**14.1**	**+0.9**	
PMR				pmax	pmax				
	comp=Z,5.0nm,0.3s								
MID	**Middleton Isla**	**11.09**	**52**	*e*P	**Pn**	**00 12**	**13.1**	**-0.7**	
	comp=Z,31nm,0.4s								
MID	**Middleton Isla**	**11.09**	**52**	*e*P	**Pn**	**00 12**	**13.1**	**-0.7**	
MID				pmax	pmax				
	comp=Z,31nm,0.4s								
TRF	**Thorofare Moun**	**11.96**	**30**	*e*Pn	**Pn**	**00 12**	**26.5**	**+0.8**	
	comp=Z,158nm,0.8s								
TRF				Sn	**Sn**	**00 14**	**37.4**	**-0.8**	
TNA	**Tin City**	**12.10**	**351**	*e*Pn	**Pn**	**00 12**	**27.4**	**-0.3**	
TNA				*e*Sn	**Sn**	**00 14**	**40.4**	**-1.4**	
DIV	**Divide**	**12.12**	**45**	*e*Pn	**Pn**	**00 12**	**26.4**	**-1.4**	
DIV				*e*Sn	**Sn**	**00 14**	**39.7**	**-2.3**	
BPAW	**Bear Paw Mtn.**	**12.27**	**27**	⇑*e*Pn	**Pn**	**00 12**	**30.5**	**+0.7**	
	comp=Z,108nm,1.3s								
BPAW				*e*Sn	**Sn**	**00 14**	**46.5**	**+0.7**	
BMRM	**Bremner River**	**12.54**	**47**	*e*Pn	**Pn**	**00 12**	**32.8**	**-0.7**	
	comp=Z,153nm,1.0s								
BMRM				*e*Sn	**Sn**	**00 14**	**52.1**	**-0.2**	
MCK	**McKinley**	**12.58**	**31**	*e*Pn	**Pn**	**00 12**	**35.0**	**+0.9**	
	comp=Z,102nm,1.2s								
MCK				*e*Sn	**Sn**	**00 14**	**55.1**	**+1.8**	
MCK	**McKinley**	**12.58**	**31**	*e*P	**Pn**	**00 12**	**35.0**	**+0.9**	
MCK				*e*		00 14	55.1		
MCK				pmax	pmax				
	comp=Z,103nm,1.2s								
PAX	**Paxson**	**13.25**	**38**	*e*Pn	**Pn**	**00 12**	**41.0**	**-2.3**	
SMY	**Shemya**	**13.41**	**275**	*e*Pn	**Pn**	**00 12**	**45.2**	**-0.4**	
	comp=Z,236nm,1.4s								
SMY	**Shemya**	**13.41**	**275**	*e*P	**Pn**	**00 12**	**45.2**	**-0.3**	
SMY				pmax	pmax				
	comp=Z,236nm,1.4s								
COLA	**College**	**13.74**	**29**	*e*Pn	**Pn**	**00 12**	**49.6**	**-0.3**	
	comp=Z,79nm,1.2s								
COLA				Sn	**Sn**	**00 15**	**25.6**	**+4.0**	
COLA	**College**	**13.74**	**29**	*e*P	**Pn**	**00 12**	**49.6**	**-0.3**	
COLA						00 15	25.6		
COLA				pmax	pmax				
	comp=Z,79nm,1.2s								
MENT	**Mentasta**	**13.89**	**40**	Pn	**Pn**	**00 12**	**52.8**	**+0.9**	
ILAR	**Eielson Array**	**13.95**	**31**	Pn	**Pn**	**00 12**	**50.1**	**-2.7**	
	comp=Z,0.4nm,0.3s,baz=230,slow=12,SNR=23								
ILAR				LR	LR	00 18	51.2		
	comp=Z,13μm,18.1s,baz=235,slow=40								
PNL	**Peninsula**	**14.52**	**56**	⇑*e*Pn	**Pn**	**00 12**	**59.7**	**-0.8**	
	comp=Z,167nm,0.8s								
PNL				*e*Sn	**Sn**	**00 15**	**41.5**	**+0.8**	
COLD	**Coldfoot**	**15.04**	**20**	⇑*e*Pn	**Pn**	**00 13**	**07.1**	**-0.4**	
	comp=Z,170nm,1.2s								
COLD				*e*Sn	**Sn**	**00 15**	**54.1**	**+0.9**	
HYT	**Haines Junctio**	**15.72**	**53**	*e*Pn	**Pn**	**00 13**

VFP	**Flag Point**	28.23	90	P		P	00 15 28.8 +0.9
E07A	**Sunnyside**	28.54	86	⇓P		P	00 15 30.7 +0.2
	baz=28						
G06A	**Carlson Farm,**	28.77	89	⇑P		P	00 15 32.9 +0.3
	baz=29,SNR=5.6						
RSW	**Rattlesnake Hi**	28.78	87	*e*P		P	00 15 33.6 +0.9
	comp=Z,74nm,1.1s,mb5.3						
OD2	**Odessa Site #2**	28.80	84	P		P	00 15 33.2 +0.4
HAWA	**Hanford**	28.82	87	*e*P		P	00 15 33.3 +0.3
	comp=Z,36nm,0.9s,mb5.1						
F07A	**Phinny Hill Vi**	28.84	88	⇑P		P	00 15 33.6 +0.4
	baz=29,SNR=5.6						
D08A	**Wollman Farm,**	28.84	85	⇑P		P	00 15 33.1 -0.1
	baz=29,SNR=7.8						
C09A	**Chrisman Ranch**	28.86	83	⇑P		P	00 15 33.2 -0.2
	baz=29						
HUMO	**Hull Mountain**	28.89	96	*e*P		P	00 15 34.5 +0.8
	comp=Z,15nm,1.2s,mb4.6						
HUMO				*e*PcP		PcP	00 18 42.6 +0.2
REDWA	**Red Mountain**	28.92	87	P		P	00 15 34.8 +0.9
E08A	**Dider Farm, El**	29.05	86	⇑P		P	00 15 34.9 -0.1
	baz=29						
VIPM	**Ingram Point**	29.18	91	P		P	00 15 37.2 +0.9
NEW	**Newport**	29.32	82	*e*P		P	00 15 37.4 0.0
	comp=Z,14nm,0.9s,mb4.7						
NEW	**Newport**	29.32	82	*e*P		P	00 15 37.4 0.0
NEW				pmax		pmax	
	comp=Z,14nm,0.9s						
EDM	**Edmonton**	29.40	70	*e*P		P	00 15 38.0 -0.2
YBH	**Yreka Blue Hor**	29.56	97	P		P	00 15 41.0 +1.4
	comp=Z,3.5nm,0.8s,mb4.1,baz=267,slow=5.9,SNR=6.8						
YBH				LR		LR	00 24 26.2
	comp=Z,3µm,21.7s,MS4.9,baz=302,slow=30						
YBH	**Yreka Blue Hor**	29.56	97	*e*P		P	00 15 40.3 +0.6
E09A	**Wood Farm, Sta**	29.58	85	⇓P		P	00 15 39.7 0.0
	baz=30,SNR=9.5						
G08A	**Pilot Rock**	29.74	88	⇑P		P	00 15 41.2 0.0
	baz=30,SNR=14						
LNOR	**Lincton Mounta**	29.83	87	*e*P		P	00 15 42.1 +0.1
	comp=Z,34nm,1.2s,mb5.0						
LNOR	**Lincton Mounta**	29.83	87	*e*P		P	00 15 42.1 +0.1
LNOR				pmax		pmax	
	comp=Z,34nm,1.2s,mb5.0						
A12A	**Yaak River Ran**	29.86	79	⇑P		P	00 15 42.1 -0.1
	baz=30						
C11A	**Tepee Creek (N**	30.03	82	⇑P		P	00 15 43.3 -0.5
	baz=30						
K05A	**Summer Lake**	30.04	94	⇑P		P	00 15 44.7 +0.8
	baz=30,SNR=10						
I07A	**Izee**	30.08	90	⇓P		P	00 15 44.8 +0.5
	baz=30,SNR=26						
B12A	**Libby**	30.12	80	⇓P		P	00 15 44.5 0.0
	baz=30						
WDC	**Whiskeytown Da**	30.38	99	*e*P		P	00 15 47.6 +0.7
	comp=Z,9.0nm,1.3s,mb4.3						
WDC	**Whiskeytown Da**	30.38	99	*e*P		P	00 15 47.6 +0.7
WDC				pmax		pmax	
	comp=Z,9.0nm,1.3s,mb4.3						
F10A	**Beach Ranch, E**	30.40	86	⇑P		P	00 15 47.1 0.0
	baz=30,SNR=10.0						
C12B	**Naegeli Ranch,**	30.55	81	⇓P		P	00 15 48.1 -0.2
	baz=30						
A13A	**Flathead Natio**	30.59	79	⇑P		P	00 15 48.0 -0.7
	baz=30						
B13A	**Whitefish**	30.82	80	⇑P		P	00 15 50.7 0.0
	baz=31						
WALA	**Waterton Lakes**	30.82	78	*e*P		P	00 15 51.4 +0.7
	comp=Z,0.2nm,1.1s						
MOD	**Modoc**	30.88	95	*e*P		P	00 15 51.7 +0.3
	comp=Z,47nm,1.3s,mb5.2						
MOD				*e*PP		PP	00 17 01.4 +0.4
BSMT	**Bassoo Peak**	30.89	81	*e*P		P	00 15 51.7 +0.4
	comp=Z,16nm,1.1s,mb4.8						
BSMT				*e*PcP		PcP	00 18 48.2 +0.8
D12A	**Red Ives Fores**	30.95	82	⇓P		P	00 15 51.8 -0.1
	baz=31						
BMO	**Blue Mountains**	30.96	87	*e*P		P	00 15 52.4 +0.4
	comp=Z,18nm,1.2s,mb4.8						
C13A	**Hot Springs**	31.10	81	⇑P		P	00 15 52.9 -0.3
	baz=31						
J08A	**Circle Bar Ran**	31.11	91	⇑P		P	00 15 53.3 0.0
	baz=31						
A14A	**Double T Ranch**	31.15	78	⇑P		P	00 15 53.4 -0.2
	baz=31						
E12A	**Beaver Dam Sad**	31.15	84	⇑P		P	00 15 53.6 -0.1
	baz=31						
JTMT	**Jette**	31.23	81	*e*P		P	00 15 54.7 +0.3
	comp=Z,12nm,1.1s,mb4.7						
YBMT	**Yellow Bay**	31.34	80	P		P	00 15 55.2 0.0
D13A	**Huson**	31.46	82	⇑P		P	00 15 56.5 +0.1
	baz=31						
SWMT	**Swartz Lake**	31.52	81	*e*P		P	00 15 57.2 +0.3
	comp=Z,11nm,1.2s,mb4.5						
SWMT				*e*PcP		PcP	00 18 49.0 -0.2
B14A	**Marquette Ranc**	31.52	79	⇓P		P	00 15 57.0 +0.1
	baz=31						
C14A	**Swan Lake**	31.54	80	⇓P		P	00 15 57.0 0.0
	baz=31						
A15A	**Johnson Ranch,**	31.55	78	⇓P		P	00 15 56.5 -0.6
	baz=31						
WVOR	**Wild Horse Val**	31.55	92	*e*P		P	00 15 57.7 +0.5
	comp=Z,47nm,1.3s,mb5.2						
WVOR				*e*PcP		PcP	00 18 49.5 +0.1
WVOR	**Wild Horse Val**	31.55	92	*e*P		P	00 15 57.7 +0.5
WVOR				*e*			00 18 49.5
WVOR				pmax		pmax	
	comp=Z,47nm,1.3s,mb5.2						
F12A	**Elk City**	31.69	85	⇓P		P	00 15 58.4 0.0
	baz=32,SNR=19						
MSO	**Missoula**	31.90	82	*e*P		P	00 16 00.3 +0.1
	comp=Z,12nm,1.2s,mb4.6						
MSO				*e*PcP		PcP	00 18 49.1 -1.1
SLMT	**Seeley Lake**	31.95	81	*e*P		P	00 16 00.9 +0.2
	comp=Z,26nm,1.5s,mb4.9						
SLMT				*e*PcP		PcP	00 18 50.3 0.0
E13A	**Victor**	31.95	83	⇓P		P	00 16 00.7 0.0
	baz=32						
B15A	**Bradely Ranch,**	31.96	79	⇓P		P	00 16 00.4 -0.3
	baz=32						
G12A	**Big Creek, Yel**	31.98	86	⇓P		P	00 16 00.9 -0.1
	baz=32						
D14A	**Greenough**	32.02	81	⇓P		P	00 16 01.4 0.0
	baz=32,SNR=6.9						
C15A	**Salmond Ranch,**	32.20	79	⇑P		P	00 16 03.0 +0.1
	baz=32,SNR=15						
A16A	**West Butte Ran**	32.22	77	⇑P		P	00 16 02.6 -0.4
	baz=32						
CHMT	**Chamberlain Mo**	32.26	81	*e*P		P	00 16 03.6 +0.2
	comp=Z,8.2nm,1.1s,mb4.5						
CHMT				*e*PcP		PcP	00 18 51.8 +0.6
E14A	**Clinton**	32.38	82	⇓P		P	00 16 04.3 -0.2
	baz=32						
B16A	**M & M Farms, S**	32.41	78	⇑P		P	00 16 04.2 -0.5
	baz=32						
H12A	**Diamond D Ranc**	32.58	86	⇓P		P	00 16 06.1 -0.2
	baz=32,SNR=11						
MFID	**Camas Ranch**	32.65	89	⇑P		P	00 16 06.9 +0.1
	baz=32,SNR=17						
C16A	**Fuhringer Ranc**	32.69	79	⇓P		P	00 16 06.9 -0.2
	baz=33						
A17A	**Triple J Farms**	32.74	76	⇓P		P	00 16 07.1 -0.4
	baz=33						
F14A	**Wisdom**	32.77	83	⇑P		P	00 16 07.6 -0.3
	baz=33						
I12A	**Atlanta**	32.84	87	⇑P		P	00 16 08.6 +0.1
	baz=33						
WCN	**Washoe City**	32.84	98	⇓P		P	00 16 08.4 -0.2
	baz=33						
E15A	**Deer Lodge**	32.88	82	⇓P		P	00 16 08.6 -0.2
	baz=33,SNR=7.6						
H13A	**Challis**	32.93	86	⇑P		P	00 16 09.0 -0.2
	baz=33,SNR=14						
B17A	**L&G Farms, Che**	33.00	78	⇑P		P	00 16 09.6 -0.3
	baz=33						
G14A	**Jackson**	33.02	84	⇑P		P	00 16 09.8 -0.3
	baz=33						
L10A	**Juniper Basin**	33.05	91	⇓P		P	00 16 10.6 +0.2
	baz=33,SNR=12						
D16A	**Dana Ranch, Ca**	33.20	80	⇓P		P	00 16 11.4 -0.2
	baz=33						
A18A	**Metzger Ranch,**	33.24	76	⇑P		P	00 16 10.5 -1.4
	baz=33						
M10A	**I.L. Ranch, Tu**	33.35	92	⇑P		P	00 16 13.3 +0.4
	baz=33,SNR=12						
I13A	**Wildhorse Cree**	33.38	87	⇓P		P	00 16 13.4 +0.2
	baz=33,SNR=16						
HLID	**Hailey**	33.40	87	⇓P		P	00 16 13.7 +0.3
	baz=33,SNR=18						
HLID	**Hailey**	33.40	87	*e*P		P	00 16 13.8 +0.4
	comp=Z,23nm,1.0s,mb5.1						
H14A	**Leadore**	33.43	85	⇓P		P	00 16 13.7 +0.1
	baz=33,SNR=8.4						
L11A	**Cat Creek Ranc**	33.43	90	⇓P		P	00 16 14.1 +0.5
	baz=33,SNR=57						
TIXI	**Tiksi**	33.44	328	*e*P		P	00 16 12.6 -0.9
	comp=Z,26nm,0.9s,mb5.2						
TIXI	**Tiksi**	33.44	328	*e*P		P	00 16 11.7 -1.8
TIXI				*e*			00 16 22.8
TIXI				*e*			00 17 24.2
TIXI				*e*S		S	00 21 31.8 -1.5
TIXI				pmax		pmax	
	comp=Z,26nm,1.4s,mb5.0						
TIXI				MLR		MLR	
	comp=Z,6µm,18.0s,MS5.3						
B18A	**Beardsley Farm**	33.54	77	⇓P		P	00 16 14.0 -0.6
	baz=33						
MCMT	**McKenzie Canyo**	33.62	84	*e*P		P	00 16 15.3 +0.1
	comp=Z,12nm,1.1s,mb4.8						
MCMT				*e*PcP		PcP	00 18 56.2 +1.2
BMN	**Battle Mountai**	33.62	94	*e*P		P	00 16 15.9 +0.6
	comp=Z,5.6nm,0.8s,mb4.5						
BMN				*e*PP		PP	00 17 31.8 +0.4
BMN	**Battle Mountai**	33.62	94	*e*P		P	00 16 15.9 +0.6
BMN				*e*			00 17 31.8
BMN				pmax		pmax	
	comp=Z,6.0nm,0.8s,mb4.6						
D17A	**Six Diamond Ra**	33.64	79	⇑P		P	00 16 15.1 -0.4
	baz=34						
J13A	**Cove Ranch, Pi**	33.64	87	⇑P		P	00 16 16.0 +0.5
	baz=34,SNR=23						
G15A	**Dillon**	33.64	83	⇑P		P	00 16 15.5 0.0
	baz=34,SNR=6.5						
RES	**Resolute Bay**	33.64	27	*e*P		P	00 16 14.0 -1.2
EGMT	**Eagleton**	33.74	77	⇓P		P	00 16 15.6 -0.7
	baz=34						
EGMT	**Eagleton**	33.74	77	*e*P		P	00 16 16.8 +0.5
	comp=Z,21nm,0.9s,mb5.1						
EGMT				*e*PcP		PcP	00 18 56.0 +0.7
F16A	**Kennard Place,**	33.81	82	⇑P		P	00 16 16.7 -0.2
	baz=34						
M11A	**Holland Ranch,**	33.85	91	⇓P		P	00 16 18.1 +0.7
	baz=34,SNR=6.3						
H15A	**Lima**	33.85	84	⇓P		P	00 16 17.4 0.0
	baz=34,SNR=6.7						
N10A	**Dunphy**	33.87	93	⇑P		P	00 16 17.8 +0.3
	baz=34						
BOZ	**Bozeman (W)**	33.89	82	⇓P		P	00 16 17.5 -0.1
	baz=34						
BOZ	**Bozeman (W)**	33.89	82	*e*P		P	00 16 18.2 +0.7
	comp=Z,8.4nm,1.1s,mb4.6						
BOZ				*e*PcP		PcP	00 18 55.8 +0.1
BOZ	**Bozeman (W)**	33.89	82	*e*P		P	00 16 18.3 +0.7
BOZ				*e*			00 18 55.8
BOZ				pmax		pmax	
	comp=Z,8.0nm,1.1s,mb4.6						
E17A	**Martinsdale**	33.90	80	⇓P		P	00 16 18.0 +0.2
	baz=34						
YUK	**Yuzh-Kuril'sk**	33.97	274	*e*P		P	00 16 09.0 -9.4
YUK				pmax		pmax	
	comp=N,230nm,1.0s						
YUK				pmax		pmax	
	comp=Z,290nm,1.0s,mb6.2						
YUK				pmax		pmax	
	comp=E,36nm,0.5s						
YUK				pmax		pmax	
	comp=Z,370nm,1.0s,mb6.3						
YUK				MLR		MLR	
	comp=N,600nm,20.0s,MS4.6						
YUK				MLR		MLR	
	comp=E,1µm,20.0s,MS4.6						
YUK				MLR		MLR	
	comp=Z,850nm,20.0s,MS4.5						
G16A	**Moss Hill, Enn**	34.01	83	⇑P		P	00 16 18.4 -0.3
	baz=34						
J14A	**Carey**	34.07	87	⇑P		P	00 16 20.1 +0.8
	baz=34,SNR=6.2						
D18A	**Linhart Farms,**	34.13	79	⇑P		P	00 16 20.2 +0.5
	baz=34,SNR=12						
O10A	**Cortez Mining,**	34.14	94	⇑P		P	00 16 19.8 -0.1
	baz=34						
YSS	**Yuzh-Sakhalins**	34.21	281	*e*P		P	00 16 20.3 -0.1
	comp=Z,40nm,0.9s,mb5.3						
YSS	**Yuzh-Sakhalins**	34.21	281	*e*P		P	00 16 20.0 -0.4
YSS				*e**SP		sP	00 16 35.0 +5.6
YSS				*e*PPP			00 17 58.0
YSS				*e*S		S	00 21 47.0 +1.4
YSS				*e*SSS			00 24 20.0
YSS				pmax		pmax	
	comp=Z,30nm,1.0s,mb5.2						
N11A	**Elko Archery C**	34.26	92	⇑P		P	00 16 20.1 -0.8
	baz=34						
NVAR	**Mina Array Bea**	34.27	98	P		P	00 16 21.7 +0.7
NVAR				ScP		ScP	00 22 40.3 -0.2
NVAR	**Mina Array Bea**	34.27	98	P		P	00 16 21.7 +0.7
	comp=Z,4.4nm,0.8s,mb4.4,baz=295,slow=8.1,SNR=21						
NVAR				ScP		ScP	00 22 40.3 -0.2
	comp=Z,0.6nm,0.7s,baz=297,slow=3.4,SNR=3.6						
I15A	**Monteview**	34.30	85	⇑P		P	00 16 21.0 -0.2
	baz=34						
F17A	**Fitzpatrick Pl**	34.32	81	⇓P		P	00 16 21.3 0.0
	baz=34						
E18A	**Harlowton**	34.40	80	⇑P		P	00 16 22.0 0.0
	baz=34						
MLAC	**Mammoth Lakes**	34.49	99	⇓P		P	00 16 23.5 +0.6
	baz=34						
P10A	**Eureka**	34.59	95	⇑P		P	00 16 23.8 +0.1
	baz=34						
G17A	**Pierce Place,**	34.59	82	⇓P		P	00 16 22.9 -0.7
	baz=34						
H16A	**Russell Place,**	34.63	83	⇓P		P	00 16 23.9 -0.2
	baz=34						
J15A	**Blackfoot**	34.67	86	⇑P		P	00 16 24.4 0.0
	baz=35,SNR=7.9						
K14A	**Jones Ranch, D**	34.73	88	⇓P		P	00 16 24.0 -1.0
	baz=35						
O11A	**Cowboy Ranch,**	34.74	93	⇑P		P	00 16 24.8 -0.2
	baz=35						
M13A	**Montello**	34.86	90	⇓P		P	00 16 25.3 -0.8
	baz=35,SNR=11						
M13A	**Montello**	34.86	90	*e*P		P	00 16 25.9 -0.2
	comp=Z,30nm,1.1s,mb5.1						
F18A	**Big Timber**	34.87	80	⇓P		P	00 16 25.2 -0.9
	baz=35						
YAK	**Yakutsk**	34.95	311	*e*P		P	00 16 25.5 -1.1
	comp=Z,29nm,0.8s,mb5.3						
YAK	**Yakutsk**	34.95	311	*e*P		P	00 16 23.7 -2.9
YAK				*e**PP		pP	00 16 32.6 -0.4
YAK				*e*			00 17 42.1
YAK				*e*		PcP	00 18 57.2 -1.3
YAK				*e*S		S	00 21 50.5 -6.2
YAK				*e*SS		SS	00 24 11.0 -17
YAK				*e*SSS			00 24 31.0
YAK				*e*		ScS	00 26 44.4 -1.3
YAK				pmax		pmax	
	comp=Z,19nm,0.8s,mb5.1						
YAK				pmax		pmax	
	comp=E,12nm,1.2s						
YAK				pmax		pmax	
	comp=Z,13nm,0.5s,mb5.1						
YAK				smax			
	comp=N,28nm,1.9s						
YAK				smax			
	comp=E,73nm,3.4s						
YAK				MLR		MLR	
	comp=E,3µm,15.0s,MS5.2						
YAK				MLR		MLR	
	comp=Z,4µm,16.0s,MS5.2						
YAK				MLR		MLR	
	comp=N,1µm,11.0s,MS5.2						
I16A	**Newdale**	34.96	85	⇓P		P	00 16 26.1 -0.8
	baz=35						
YNR	**Norris Junctio**	34.96	83	*e*P		P	00 16 28.3 +1.4
	comp=N,30nm,1.0s,mb5.2						
L14A	**Malta**	35.00	89	⇓P		P	00 16 27.3 +0.1
	baz=35,SNR=12						
FFC	**Flin Flon**	35.02	63	*e*P		P	00 16 27.1 -0.2
	comp=N,8.6nm,0.9s,mb4.7						
FFC	**Flin Flon**	35.02	63	*e*P		P	00 16 27.1 -0.2
FFC				pmax		pmax	
	comp=Z,9.0nm,0.9s,mb4.7						
K15A	**Arbon**	35.03	87	⇑P		P	00 16 27.2 -0.4
	baz=35,SNR=11						
P11A	**Circle Ranch,**	35.05	94	⇑P		P	00 16 28.0 +0.3
	baz=35						
Q10A	**Clear Creek Ra**	35.14	96	⇑P		P	00 16 28.8 +0.4
	baz=35,SNR=10						
N13A	**Wendover, West**	35.15	91	⇓P		P	00 16 29.0 +0.4
	baz=35,SNR=10.0						
N13A	**Wendover, West**	35.15	91	*e*P		P	00 16 29.3 +0.8
	comp=Z,60nm,1.0s,mb5.5						
N13A				PcP		PcP	00 19 01.7 +2.2
O12A	**Currie**	35.19	92	⇑P		P	00 16 28.8 -0.1
	baz=35						
J16A	**Bone**	35.23	86	⇑P		P	00 16 28.7 -0.5
	baz=35						
M14A	**Sheep Mountain**	35.26	89	⇓P		P	00 16 29.8 +0.2
	baz=35,SNR=10						
IMW	**Indian Meadow**	35.27	84	*e*P		P	00 16 30.7 +1.1
	comp=Z,14nm,1.0s,mb4.9						
G18A	**Lazy EL Ranch,**	35.28	81	⇓P		P	00 16 29.4 -0.3
	baz=35						
DCID1	**Drake Creek**	35.30	85	*e*P		P	00 16 30.6 +0.7
FLWY	**Flagg Ranch**	35.31	84	*e*P		P	00 16 30.4 +0.6
	comp=Z,20nm,1.1s,mb5.0						
RRI2	**Red Ridge**	35.36	85	*e*P		P	00 16 31.2 +0.8
	comp=Z,26nm,1.1s,mb5.1						
RRI2				*e*PcP		PcP	00 19 00.1 +0.1
HVU	**Hansel Valley**	35.43	89	*e*P		P	00 16 31.3 +0.3
	comp=Z,22nm,0.9s,mb5.1						
HVU				*e*PcP		PcP	00 19 01.1 +0.8
HVU	**Hansel Valley**	35.43	89	*e*P		P	00 16 31.3 +0.3
HVU				*e*			00 19 01.1
HVU				pmax		pmax	
	comp=Z,22nm,0.9s,mb5.1						
MOOW	**Moose Ponds**	35.47	84	*e*P		P	00 16 31.3 0.0
	comp=Z,11nm,1.3s,mb4.6						
TPAW	**Teton Pass**	35.50	85	*e*P		P	00 16 32.4 +0.8
	comp=Z,19nm,1.1s,mb4.9						
TPAW				PcP		PcP	00 19 05.0 +4.6
K16A	**Soda Springs**	35.51	86	⇓P		P	00 16 32.6 +1.0
	baz=35,SNR=8.1						
L15A	**Malad City**	35.53	88	⇑P		P	00 16 32.0 +0.1
	baz=35,SNR=8.3						
R10A	**Warm Springs**	35.55	96	⇑P		P	00 16 32.1 +0.1
	baz=36						
Q11A	**Duckwater**	35.56	95	⇑P		P	00 16 32.4 +0.3
	baz=36,SNR=8.7						
RLMT	**Red Lodge**	35.56	81	⇑P		P	00 16 32.3 +0.2
	baz=35,SNR=6.3						
RLMT	**Red Lodge**	35.56	81	*e*P		P	00 16 31.6 -0.5
	comp=Z,28nm,1.2s,mb5.1						
RLMT				PP		PP	00 17 53.1 +0.3
VES	**Vestal, Richgr**	35.57	102	⇓P		P	00 16 32.3 0.0
	baz=36						
P12A	**McGill**	35.60	93	⇑P		P	00 16 32.8 +0.3
	baz=36,SNR=20						
S10A	**Tonopah Range,**	35.62	97	⇑P		P	00 16 32.8 +0.2
	baz=36,SNR=18						
SNOW	**Snow King Moun**	35.63	85	*e*P		P	00 16 33.6 +0.9
	comp=Z,11nm,1.0s,mb4.7						
REDW	**Red Top Meadow**	35.63	85	*e*P		P	00 16 33.1 +0.4
	comp=Z,23nm,1.2s,mb5.0						
REDW				*e*PcP		PcP	00 19 01.2 +0.4
LOHW	**Long Hollow**	35.63	84	*e*P		P	00 16 33.6 +0.8
	comp=Z,9.1nm,1.0s,mb4.7						
J17A	**Brown Place, J**	35.72	85	⇑P		P	00 16 33.3 -0.1
	baz=36						
O13A	**Hicks Ranch, I**	35.73	92	⇓P		P	00 16 33.6 0.0
	baz=36						
CWC	**Cottonwood Cre**	35.74	100	⇑P		P	00 16 33.8 +0.1
	baz=36						
N14A	**Grayback Hills**	35.76	90	⇑P		P	00 16 34.0 +0.2
	baz=36,SNR=21						
GRAC	**Grapevine Rang**	35.78	99	⇑P		P	00 16 34.2 +0.2
	baz=36						
BGU	**Big Grassy Mou**	35.80	90	*e*P		P	00 16 34.3 +0.1
	comp=Z,50nm,1.3s,mb5.3						
BGU				*e*PcP		PcP	00 19 03.9 +2.5
BGU				*e*ScP		ScP	00 22 46.1 +0.1
M15A	**Larsen Ranch,**	35.82	89	⇑P		P	00 16 34.4 0.0
	baz=36,SNR=14						
ASAJ	**Asahikawa**	35.86	277	P		P	00 16 34.1 -0.5
	comp=Z,68nm,1.0s,mb5.5,baz=36,slow=5.9,SNR=13						
ASAJ				LR		LR	00 29 29.8
	comp=Z,1µm,21.0s,MS4.6,baz=262,slow=33						
SPUT	**South Promonto**	35.91	89	*e*P		P	00 16 35.5 +0.4
	comp=Z,11nm,1.0s,mb4.7						
Q12A	**Willow Creek R**	35.93	94	⇑P		P	00 16 35.7 +0.4
	baz=36,SNR=18						
R11A	**Troy Canyon, C**	35.93	95	⇑P		P	00 16 35.4 +0.1
	baz=36,SNR=26						
K17A	**Gardner Place,**	35.95	86	⇑P		P	00 16 35.4 -0.1
	baz=36						
I18A	**Diamond G Ranc**	36.05	84	⇓P		P	00 16 36.0 -0.2
	baz=36						
ISA	**Isabella**	36.05	101	⇓P		P	00 16 35.9 -0.5
	baz=36						
ISA	**Isabella**	36.05	101	*e*P		P	00 16 36.5 +0.2
	comp=Z,14nm,1.0s,mb4.8						
ISA	**Isabella**	36.05	101	*e*P		P	00 16 36.5 +0.1
ISA				pmax		pmax	
	comp=Z,14nm,1.0s,mb4.8						
L16A	**Fish Haven**	36.09	87	⇑P		P	00 16 37.0 +0.3
	baz=36,SNR=5.6						
N15A	**Stansbury Isla**	36.13	90	⇑P		P	00 16 36.9 -0.1
	baz=36						
P13A	**Bates Ranch, G**	36.14	93	⇓P		P	00 16 37.3 +0.1
	baz=36,SNR=27						
J18A	**Kendall Valley**	36.21	85	⇑P		P	00 16 37.6 -0.1
	baz=36						
ARVC	**Arvin**	36.22	102	⇑P		P	00 16 38.1 +0.3
	baz=36						
HWUT	**Hardware Ranch**	36.26	88	*e*P		P	00 16 38.3 +0.2
	comp=Z,8.4nm,0.9s,mb4.7						
S11A	**Rachel**	36.30	96	⇓P		P	00 16 39.0 +0.5
	baz=36						
MPMC	**Manual Prospec**	36.35	100	⇓P		P	00 16 39.1 +0.2
	baz=36						
L17A	**Cokeville**	36.37	87	⇑P		P	00 16 39.0 0.0
	baz=36,SNR=5.4						
DUG	**Dugway**	36.39	91	⇑P		P	00 16 39.2 0.0
	baz=36,SNR=33						
DUG	**Dugway**	36.39	91	*e*P		P	00 16 39.8 +0.6
	comp=Z,60nm,1.2s,mb5.4						
DUG				*e*PcP		PcP	00 19 03.3 +0.1
DUG	**Dugway**	36.39	91	*e*P		P	00 16 39.8 +0.6
DUG				*e*			00 19 03.3
DUG				pmax		pmax	
	comp=Z,60nm,1.2s,mb5.4						
FUR

O16A	**Springville**	37.16	90	⇓P		P	00 16 45.9	+0.1
	baz=37								
SHOC	**Shoshone**	37.17	99	⇓P		P	00 16 45.8	-0.1
	baz=37								
DAU	**Daniels Canyon**	37.18	89	*e*P		P	00 16 46.4	+0.5
	comp=Z,33nm,1.1s,mb5.1								
DAU	**Daniels Canyon**	37.18	89	*e*P		P	00 16 46.4	+0.5
DAU				pmax		pmax			
	comp=Z,33nm,1.1s,mb5.1								
MPU	**Maple Canyon**	37.20	90	*e*P		P	00 16 44.9	-1.3
	comp=Z,26nm,1.3s,mb4.9								
MPU				*e*PcP		PcP	00 19 06.2	+0.6
M18A	**Lyman**	37.26	87	⇓P		P	00 16 46.4	-0.2
	baz=37								
L19A	**Farson**	37.27	86	⇑P		P	00 16 46.4	-0.2
	baz=37								
GSC	**Goldstone**	37.28	100	⇓P		P	00 16 46.6	-0.2
	baz=37,SNR=7.7								
GSC	**Goldstone**	37.28	100	*e*P		P	00 16 47.0	+0.2
	comp=Z,28nm,1.1s,mb5.0								
GSC				*e*PcP		PcP	00 19 05.8	-0.2
GSC	**Goldstone**	37.28	100	*e*P		P	00 16 47.0	+0.2
GSC				*e*			00 19 05.8		
GSC				pmax		pmax			
	comp=Z,28nm,1.1s,mb5.0								
FCC	**Fort Churchill**	37.37	54	*e*P		P	00 16 49.2	+1.9
	comp=Z,1.5nm,1.0s								
Q15A	**Fillmore**	37.41	92	⇓P		P	00 16 47.6	-0.3
	baz=37								
P16A	**Fountain Green**	37.45	91	⇓P		P	00 16 48.2	0.0
	baz=37								
S13A	**Holt Ranch, En**	37.46	95	⇓P		P	00 16 48.5	+0.2
	baz=37,SNR=15								
BFSC	**Mount Baldy Ra**	37.53	102	⇓P		P	00 16 49.0	0.0
	baz=38								
K20A	**Yellowstone Ra**	37.53	84	⇓P		P	00 16 48.4	-0.5
	baz=37								
ARUT	**Antelope Range**	37.57	94	*e*P		P	00 16 49.5	+0.2
	comp=Z,40nm,1.3s,mb5.0								
ARUT				*e*PP		PP	00 18 15.2	+0.2
ARUT	**Antelope Range**	37.57	94	*e*P		P	00 16 49.5	+0.2
ARUT				*e*			00 18 15.2		
ARUT				pmax		pmax			
	comp=Z,40nm,1.3s,mb5.0								
O17A	**Robinson Place**	37.62	89	⇑P		P	00 16 49.7	0.0
	baz=38								
S14A	**Cedar City**	37.75	94	⇑P		P	00 16 50.6	-0.2
	baz=38								
CCUT	**Cedar City**	37.77	94	*e*P		P	00 16 52.0	+1.0
	comp=Z,38nm,1.4s,mb4.9								
T13A	**Saint George**	37.81	96	⇑P		P	00 16 51.2	-0.1
	baz=38,SNR=13								
MSU	**Marysvale**	37.85	92	*e*P		P	00 16 52.6	+1.0
	comp=Z,18nm,1.2s,mb4.7								
MSU				*e*PcP		PcP	00 19 08.1	+0.5
MSU	**Marysvale**	37.85	92	*e*P		P	00 16 52.6	+1.0
MSU				*e*			00 19 08.1		
MSU				pmax		pmax			
	comp=Z,18nm,1.2s,mb4.7								
HABR	**Khabarovsk**	37.85	288	*ce*P		P	00 16 50.0	-1.5
HABR				*PP		pP	00 17 00.2	+2.2
HABR				*e*			00 18 16.8		
HABR				*e*			00 19 06.0		
HABR				*e*S		S	00 22 39.2	-2.0
HABR				*e*			00 22 54.0		
HABR				*e*SS		SS	00 25 22.4	-5.0
HABR				*e*			00 27 00.1		
HABR				pmax		pmax			
	comp=Z,91nm,1.1s,mb5.4								
HABR				pmax		pmax			
	comp=N,40nm,1.4s								
HABR				pmax		pmax			
	comp=E,59nm,1.1s								
HABR				MLR		MLR			
	comp=Z,2μm,21.0s,MS4.9								
HEC	**Hector,Ludlow**	37.88	100	⇑P		P	00 16 51.8	-0.2
	baz=38								
TMUT	**Trail Mountain**	37.91	91	*e*P		P	00 16 52.8	+0.6
	comp=Z,46nm,1.1s,mb5.1								
L20A	**Wamsutter**	37.93	85	⇑P		P	00 16 52.2	0.0
	baz=38								
R15A	**Junction**	37.98	93	⇑P		P	00 16 52.7	0.0
	baz=38								
O18A	**Roosevelt**	38.01	88	⇑P		P	00 16 53.2	+0.2
	baz=38,SNR=7.0								
P17A	**Butcher Ranch,**	38.08	90	⇑P		P	00 16 53.4	-0.1
	baz=38								
N19A	**John Jarvie Ra**	38.11	87	⇓P		P	00 16 53.3	-0.6
	baz=38								
V12A	**Nelson**	38.13	98	⇑P		P	00 16 54.1	0.0
	baz=38,SNR=5.4								
Q16A	**Castle Valley**	38.18	91	⇑P		P	00 16 54.6	+0.2
	baz=38,SNR=18								
U13A	**Pakoon Wash**	38.18	96	⇓P		P	00 16 54.8	+0.3
	baz=38,SNR=13								
T14A	**Hurricane**	38.27	95	⇓P		P	00 16 55.4	+0.2
	baz=38,SNR=9.2								
P18A	**Preston Nutter**	38.27	89	⇑P		P	00 16 55.3	+0.1
	baz=38,SNR=17								
S15A	**Panguitch**	38.28	93	⇑P		P	00 16 55.9	+0.6
	baz=38,SNR=5.7								
GMRC	**Granite Mounta**	38.31	100	⇑P		P	00 16 55.3	-0.2
	baz=38								
M20A	**Sweetwater, Wa**	38.33	85	⇓P		P	00 16 54.9	-0.7
	baz=38								
R16A	**Teasdale**	38.41	92	⇑P		P	00 16 56.7	+0.4
	baz=38,SNR=15								
W12A	**Cal Nev Ari**	38.41	99	⇑P		P	00 16 56.2	-0.2
	baz=38								
SRU	**San Rafael**	38.44	90	⇑P		P	00 16 56.6	0.0
	baz=38,SNR=15								
SRU	**San Rafael**	38.44	90	*e*P		P	00 16 56.4	-0.2
	comp=Z,64nm,1.3s,mb5.2								
SRU	**San Rafael**	38.44	90	*e*P		P	00 16 56.4	-0.2
SRU				pmax		pmax			
	comp=Z,64nm,1.3s,mb5.2								
O19A	**Miners Draw (B**	38.52	88	⇑P		P	00 16 57.0	-0.2
	baz=38,SNR=12								
L21A	**Rawlins**	38.53	84	⇑P		P	00 16 56.8	-0.5
	baz=38,SNR=12								
V13A	**Grand Canyon W**	38.55	97	⇓P		P	00 16 57.7	+0.1
	baz=38,SNR=6.4								
ALE	**Alert**	38.58	12	P		P	00 16 57.9	+0.6
	comp=Z,204nm,1.1s,mb5.8,SNR=11								
U14A	**Mt Trumbull**	38.64	96	⇑P		P	00 16 58.6	+0.3
	baz=39,SNR=13								
BELC	**Belle Mtn. Jos**	38.66	101	⇓P		P	00 16 59.1	+0.6
	baz=39								
Q18A	**Rafter H Ranch**	38.68	90	⇓P		P	00 16 58.6	0.0
	baz=39,SNR=28								
N20A	**Spence Gulch,**	38.69	86	⇓P		P	00 16 58.7	0.0
	baz=39,SNR=8.4								
S16A	**Weppner Ranch,**	38.71	93	⇑P		P	00 16 59.4	+0.5
	baz=39,SNR=15								
T15A	**Red Dirt Ranch**	38.71	94	⇑P		P	00 16 59.0	+0.1
	baz=39								
M21A	**Separation Pea**	38.75	85	⇑P		P	00 16 59.1	0.0
	baz=39								
R17A	**Hanksville Air**	38.78	91	⇑P		P	00 16 59.2	-0.3
	baz=39,SNR=20								
RWWY	**Rawlins**	38.79	84	*e*P		P	00 16 58.8	-0.8
	comp=Z,20nm,1.0s,mb4.8								
109C	**Camp Elliot, M**	38.82	103	⇓P		P	00 16 59.5	-0.3
	baz=39								
P19A	**Cripple Cowboy**	39.02	88	⇓P		P	00 17 01.3	-0.2
	baz=39								
L22A	**Ellis Ranch, M**	39.04	83	⇓P		P	00 17 00.8	-0.8
	baz=39								
IRM	**Iron Mountain**	39.05	100	⇓P		P	00 17 01.6	-0.1
	baz=39,SNR=8.2								
W13A	**Hualapai Mount**	39.13	98	⇑P		P	00 17 02.4	0.0
	baz=39								
O20A	**White River Ci**	39.15	87	⇓P		P	00 17 02.0	-0.5
	baz=39,SNR=8.0								
U15A	**North Rim**	39.16	95	⇓P		P	00 17 03.0	+0.3
	baz=39,SNR=17								
N21A	**Black Mountain**	39.18	86	⇑P		P	00 17 02.3	-0.5
	baz=39								
CLNS	**Chul'man**	39.18	304	*e*P		P	00 17 02.3	-0.3
CLNS				pmax		pmax			
	comp=Z,25nm,0.9s,mb4.9								
CLNS				pmax		pmax			
	comp=E,22nm,1.0s								
CLNS				pmax		pmax			
	comp=N,11nm,1.0s								
CLNS				MLR		MLR			
	comp=E,2μm,17.0s,MS5.2								
CLNS				MLR		MLR			
	comp=N,2μm,17.0s,MS5.2								
CLNS				MLR		MLR			
	comp=Z,3μm,17.0s,MS5.2								
RSSD	**Black Hills**	39.20	79	*e*P		P	00 17 03.8	+0.9
	comp=Z,13nm,0.9s,mb4.7								
RSSD				*e*PcP		PcP	00 19 11.9	+0.2
RSSD	**Black Hills**	39.20	79	*e*P		P	00 17 03.8	+0.9
RSSD				*e*			00 19 11.9		
RSSD				pmax		pmax			
	comp=Z,13nm,0.9s,mb4.7								
MONP	**Monument Peak**	39.21	103	⇑P		P	00 17 03.1	0.0
	baz=39								
V14A	**Boquillas Ranc**	39.22	97	⇑P		P	00 17 03.2	0.0
	baz=39,SNR=7.1								
BC3	**Big Chuckawall**	39.23	101	⇑P		P	00 17 03.0	-0.3
	baz=39								
S17A	**Black Ridge (B**	39.24	92	⇓P		P	00 17 03.4	+0.1
	baz=39,SNR=10								
T16A	**Glen Canyon Da**	39.26	94	⇑P		P	00 17 03.2	-0.3
	baz=39								
KLR	**Kul'dur**	39.30	291	*e*P		P	00 16 56.8	-6.9
KLR				*e*S		S	00 22 52.0	-11
KLR				*e*SS		SS	00 25 50.0	-6.5
KLR				pmax		pmax			
	comp=Z,45nm,1.6s,mb5.0								
KLR				MLR		MLR			
	comp=N,1μm,16.0s								
M22A	**Cedar Creek Ra**	39.33	84	⇓P		P	00 17 03.9	-0.2
	baz=39								
P20A	**De Beque**	39.46	88	⇓P		P	00 17 04.9	-0.2
	baz=39								
W14A	**Seligman**	39.53	97	⇓P		P	00 17 05.8	+0.1
	baz=39,SNR=6.9								
SWSC	**Sam W. Stewart**	39.54	102	⇑P		P	00 17 05.5	-0.4
	baz=40								
O21A	**Pagoda**	39.55	86	⇑P		P	00 17 05.5	-0.4
	baz=39								
V15A	**Kaibab Nationa**	39.65	96	⇓P		P	00 17 07.2	+0.5
	baz=40,SNR=23								
T17A	**Navajo Res., N**	39.66	93	⇑P		P	00 17 07.4	+0.6
	baz=40,SNR=7.7								
R19A	**Curley Farm, L**	39.72	90	⇑P		P	00 17 06.9	-0.4
	baz=40								
N22A	**Wattenberg Ran**	39.79	85	⇑P		P	00 17 07.4	-0.4
	baz=40								
Q20A	**Ridgley Place,**	39.87	89	⇓P		P	00 17 08.0	-0.5
	baz=40								
PV04	**Paradox Valley**	39.87	90	*e*P		P	00 17 08.0	-0.5
GLA	**Glamis**	40.02	101	⇑P		P	00 17 10.1	+0.2
	baz=40								
N23A	**Red Feather La**	40.03	85	⇓P		P	00 17 09.8	0.0
	baz=40,SNR=6.5								
W15A	**Williams**	40.03	96	⇑P		P	00 17 10.1	+0.2
	baz=40								
U16A	**Tuba City**	40.05	94	⇑P		P	00 17 09.7	-0.4
	baz=40,SNR=10.0								
Y13A	**Salome**	40.07	99	⇑P		P	00 17 10.4	+0.2
	baz=40								
O22A	**Kremmling**	40.13	86	⇓P		P	00 17 10.3	-0.4
	baz=40,SNR=9.2								
S19A	**Harvey Farm, M**	40.16	91	⇓P		P	00 17 10.2	-0.7
	baz=40,SNR=8.6								
X14A	**Yava**	40.16	98	⇑P		P	00 17 10.8	-0.2
	baz=40,SNR=7.7								
PV01	**Paradox Valley**	40.24	90	*e*P		P	00 17 11.6	0.0
	comp=N,2μm,0.8s								
R20A	**Redvale**	40.31	90	⇑P		P	00 17 11.7	-0.5
	baz=40,SNR=10								
WUAZ	**Wupatki**	40.33	95	⇑P		P	00 17 12.8	+0.4
	baz=40								
WUAZ	**Wupatki**	40.33	95	*e*P		P	00 17 12.3	-0.1
	comp=N,29nm,0.9s,mb5.0								
Q21A	**Lamborn Mesa,**	40.37	88	⇓P		P	00 17 12.3	-0.4
	baz=40,SNR=7.9								
Y14A	**Wickenburg**	40.46	98	⇓P		P	00 17 13.2	-0.3
	baz=40,SNR=7.5								
O23A	**Lake Granby, G**	40.48	85	⇑P		P	00 17 13.6	+0.1
	baz=40,SNR=5.9								
SMCO	**Snowmass**	40.51	87	*e*P		P	00 17 14.9	+1.0
	comp=N,21nm,1.3s,mb4.6								
SMCO				*e*PcP		PcP	00 19 15.6	-0.4
W16A	**Flagstaff**	40.52	96	⇑P		P	00 17 14.2	+0.2
	baz=40,SNR=11								
X15A	**Humboldt**	40.53	97	⇓P		P	00 17 14.1	+0.1
	baz=40,SNR=6.7								
V17A	**Tonalea, Kykot**	40.60	95	⇓P		P	00 17 14.8	+0.2
	baz=40,SNR=12								
Z13A	**Yuma Proving G**	40.60	100	⇓P		P	00 17 14.4	-0.3
	baz=40,SNR=7.5								
U18A	**Rough Rock, Ch**	40.61	93	⇑P		P	00 17 14.2	-0.4
	baz=40								
R21A	**Cimarron**	40.69	89	⇓P		P	00 17 15.0	-0.3
	baz=41,SNR=8.1								
N24A	**Carr**	40.70	84	⇓P		P	00 17 15.1	-0.3
	baz=41								
Q22A	**Crested Butte,**	40.75	88	⇑P		P	00 17 15.7	-0.2
	baz=41,SNR=6.4								
113A	**Mohawk Valley,**	40.85	100	⇑P		P	00 17 16.6	-0.1
	baz=41								
Y15A	**Casa Rosa Ranc**	40.85	98	⇑P		P	00 17 16.7	0.0
	baz=41								
MVCO	**Mesa Verde**	40.89	91	⇓P		P	00 17 16.6	-0.4
	baz=41,SNR=5.4								
MVCO	**Mesa Verde**	40.89	91	*e*P		P	00 17 16.6	-0.4
	comp=N,13nm,0.8s,mb4.6								
Z14A	**Wintersburg**	40.90	99	⇑P		P	00 17 17.3	+0.1
	baz=41								
ISCO	**Idaho Springs**	40.92	86	*e*P		P	00 17 18.0	+0.8
	comp=N,10.0nm,1.1s,mb4.4								
ISCO				*e*PcP		PcP	00 19 17.8	+0.4
ISCO	**Idaho Springs**	40.92	86	*e*P		P	00 17 18.0	+0.8
ISCO				*e*			00 19 17.8		
ISCO				pmax		pmax			
	comp=Z,10.0nm,1.1s,mb4.4								
X16A	**Lo Mia Camp, P**	41.05	96	⇓P		P	00 17 18.5	+0.2
	baz=41								
P23A	**Jefferson**	41.06	86	⇓P		P	00 17 18.8	+0.5
	baz=41,SNR=8.4								
U19A	**Dine' College,**	41.09	92	⇑P		P	00 17 18.3	-0.3
	baz=41								
R22A	**Saguache, Gunn**	41.25	88	⇓P		P	00 17 19.9	0.0
	baz=41,SNR=15								
Q23A	**Hartsel**	41.36	87	⇑P		P	00 17 20.6	-0.2
	baz=41								
114A	**Black Gap (USA**	41.38	99	⇓P		P	00 17 20.8	-0.2
	baz=41,SNR=8.1								
Y16A	**Circle Bar Ran**	41.40	97	⇑P		P	00 17 21.3	0.0
	baz=41,SNR=6.0								
AGMN	**Agassiz Nation**	41.49	69	*e*P		P	00 17 20.6	-1.2
	comp=Z,53nm,1.1s,mb5.1								
S22A	**4UR Ranch, Cre**	41.53	89	⇓P		P	00 17 22.0	-0.2
	baz=41,SNR=14								
W18A	**Petrified Fore**	41.57	94	⇑P		P	00 17 22.7	+0.1
	baz=42								
V19A	**Window Rock**	41.57	93	⇓P		P	00 17 22.5	-0.2
	baz=42								
O25A	**Wiggins**	41.60	84	⇓P		P	00 17 22.4	-0.4
	baz=42								
T21A	**Navajo Lake**	41.61	90	⇓P		P	00 17 22.3	-0.6
	baz=42								
Z16A	**Peralta Trail,**	41.81	98	⇓P		P	00 17 24.6	0.0
	baz=42								
X18A	**Snowflake**	41.85	95	⇑P		P	00 17 25.0	+0.1
	baz=42,SNR=5.8								
V20A	**Brimhall**	41.86	92	⇓P		P	00 17 24.7	-0.3
	baz=42,SNR=5.5								
Y17A	**Roosevelt**	41.91	97	⇑P		P	00 17 25.5	+0.1
	baz=42								
U21A	**Nageezi**	41.91	91	⇑P		P	00 17 25.5	0.0
	baz=42,SNR=39								
P25A	**Willow Gulch B**	41.96	85	⇓P		P	00 17 25.7	0.0
	baz=42,SNR=5.4								
T22A	**Edith**	41.97	90	⇑P		P	00 17 25.9	+0.1
	baz=42,SNR=18								
214A	**Organ Pipe Nat**	41.99	100	⇓P		P	00 17 25.9	-0.2
	baz=42								
116A	**Eloy**	42.20	99	⇑P		P	00 17 27.3	-0.5
	baz=42								
R24A	**Sanders Place,**	42.23	87	⇓P		P	00 17 27.4	-0.6
	baz=42								
Q25A	**Bedland, Calha**	42.30	86	⇓P		P	00 17 28.6	+0.1
	baz=42								
W20A	**Ramah**	42.30	93	⇑P		P	00 17 28.5	-0.1
	baz=42,SNR=9.5								
X19A	**St. Johns**	42.31	95	⇓P		P	00 17 28.7	0.0
	baz=42,SNR=7.3								
SDCO	**Great Sand Dun**	42.32	88	*e*P		P	00 17 28.2	-0.5
	comp=Z,17nm,1.2s,mb4.5								
Y18A	**Canyon Day Jun**	42.33	96	⇓P		P	00 17 29.1	+0.3
	baz=42,SNR=8.5								
V21A	**Milan**	42.35	92	⇑P		P	00 17 29.2	+0.3
	baz=42								
Z17A	**San Carlos Hig**	42.41	97	⇑P		P	00 17 29.5	+0.1
	baz=42								
U22A	**Llaves**	42.43	90	⇑P		P	00 17 29.7	+0.1
	baz=42,SNR=10.0								
T23A	**Casias Ranch,**	42.47	89	⇓P		P	00 17 30.0	+0.1
	baz=42								
S24A	**Houchin Ranch,**	42.56	88	⇓P		P	00 17 30.7	0.0
	baz=42,SNR=14								
Y19A	**Nutrioso**	42.66	95	⇓P		P	00 17 31.7	+0.1
	baz=43								
X20A	**Quemado**	42.70	94	⇓P		P	00 17 32.2	+0.3
	baz=43								
V22A	**San Miguel Ran**	42.71	91	⇓P		P	00 17 31.6	-0.3
	baz=43,SNR=6.5								
117A	**Oracle**	42.77	98	⇑P		P	00 17 32.4	0.0
	baz=43,SNR=5.6								
W21A	**San Fidel**	42.81	92	⇑P		P	00 17 32.4	-0.3
	baz=43								
U23A	**El Rito**	42.85	90	⇓P		P	00 17 33.0	-0.1
	baz=43,SNR=16								
TUC	**Tucson**	42.93	98	*e*P		P	00 17 33.7	0.0
	comp=Z,14nm,1.2s,mb4.6								
TUC				*e*PcP		PcP	00 19 24.2	+0.1
TUC	**Tucson**	42.93	98	*e*P		P	00 17 33.7	0.0
TUC				*e*			00 19 24.2		
TUC				pmax		pmax			
	comp=Z,14nm,1.2s,mb4.6								
Z19A	**T-Link Ranch,**	43.12	96	⇓P		P	00 17 35.6	+0.3
	baz=43								
MDJ	**Mudanjiang**	43.13	286	P		P	00 17 33.3	-1.9
MDJ				pP		pP	00 17 42.3	+0.5
MDJ				sP		sP	00 17 46.1	+1.8
MDJ				PP		PP	00 19 12.9	-2.4
MDJ				PcP		PcP	00 19 22.8	-1.8
MDJ				ScP		ScP	00 23 11.4	-2.8
MDJ				PcS		PcS	00 23 15.4	-1.5
MDJ				S		S	00 23 55.2	-4.9
MDJ				ScS		ScS	00 27 32.0	-1.9
MDJ				pmax		pmax			
	comp=Z,7.0nm,0.7s,mb4.5								
MDJ				pmax		pmax			
	comp=Z,110nm,9.5s								
MDJ				LR		LR			
	comp=N,1μm,22.3s								
MDJ				LR		LR			
	comp=E,920nm,27.4s								
MDJ				LR		LR			
	comp=Z,2μm,24.0s,MS4.9								
118A	**Homack Ranch,**	43.17	97	⇓P		P	00 17 35.8	+0.1
	baz=43,SNR=6.6								
X21A	**Alamocita Cree**	43.20	93	⇓P		P	00 17 35.6	-0.2
	baz=43,SNR=29								
MAJO	**Matsushiro**	43.21	271	*e*P		P	00 17 35.4	-0.6
	comp=Z,87nm,1.0s,mb5.4								
MAJO	**Matsushiro**	43.21	271	*e*P		P	00 17 35.4	-0.6
MAJO				pmax		pmax			
	comp=Z,87nm,1.0s,mb5.4								
MAT	**Matsushiro**	43.21	271	P		P	00 17 35.7	-0.3
MAT				S		S	00 24 07.0	+5.5
MJAR	**Matsushiro Arr**	43.21	271	LR		LR	00 35 36.5	
	comp=Z,1μm,20.0s,MS4.8,baz=75,slow=36								
Y20A	**Horse Springs,**	43.22	94	⇑P		P	00 17 35.6	-0.4
	baz=43,SNR=10								
V23A	**Ortiz Mt. (NFS**	43.25	91	⇓P		P	00 17 36.9	+0.6
	baz=43,SNR=6.3								
217A	**Green Valley**	43.29	99	⇓P		P	00 17 36.8	+0.1
	baz=43								
U24A	**Moreno Valley**	43.34	89	⇑P		P	00 17 37.3	+0.3
	baz=43								
T25A	**Trinidad**	43.37	88	⇓P		P	00 17 37.3	+0.1
	baz=43,SNR=16								
119A	**Ashpeak Ranch,**	43.48	96	⇑P		P	00 17 38.5	+0.4
	baz=43								
Y21A	**Point of Rocks**	43.56	94	⇓P		P	00 17 39.3	+0.5
	baz=44,SNR=9.0								
218A	**Dragoon**	43.60	98	⇑P		P	00 17 39.3	+0.1
	baz=44								
LAZ	**Ladron**	43.61	93	*e*P		P	00 17 39.3	+0.1
	comp=Z,23nm,1.7s,mb4.6								
LAZ				*e*PP		PP	00 19 22.1	+1.5
X22A	**Bernardo**	43.61	93	⇓P		P	00 17 39.5	+0.3
	baz=44								
ANMO	**Albuquerque**	43.63	92	*e*P		P	00 17 39.6	+0.2
	comp=Z,14nm,1.2s,mb4.6								
ANMO				*e*PcP		PcP	00 19 26.5	+0.1
ANMO				*e*ScP		ScP	00 23 16.7	+0.3
ANMO	**Albuquerque**	43.63	92	*e*P		P	00 17 39.6	+0.2
ANMO				*e*			00 19 26.5	
ANMO				pmax		pmax			
	comp=Z,14nm,1.2s								
Z20A	**Nine Sixteen R**	43.65	95	⇑P		P	00 17 39.6	+0.1
	baz=44,SNR=9.0								
W23A	**Werner Place,**	43.67	91	⇓P		P	00 17 39.7	0.0
	baz=44								
ECSD	**EROS Data Cent**	43.73	75	*e*P		P	00 17 38.7	-1.3
	comp=Z,22nm,1.1s,mb4.8								
V24A	**Rampart Ranch,**	43.81	90	⇑P		P	00 17 40.6	-0.2
	baz=44,SNR=9.1								
U25A	**Circle Dot Ran**	43.87	88	⇓P		P	00 17 41.1	-0.1
	baz=44,SNR=11								
LENM	**Lemitar**	43.87	93	*e*P		P	00 17 41.7	+0.4
	comp=Z,17nm,1.2s,mb4.7								
Y22D	**IRIS PASSCAL I**	43.97	93	⇓P		P	00 17 42.4	+0.3
	baz=44								
318A	**Bisbee**	44.02	98	⇓P		P	00 17 42.4	-0.1
	baz=44,SNR=6.3								
120A	**U Bar Ranch, L**	44.03	96	⇑P		P	00 17 42.5	-0.1
	baz=44								
Y22A	**Socorro**	44.04	93

comp=Z,25nm,0.7s
Z25A Roswell 45.83 92 ⇑P **P 00 17 56.5 -0.5**
baz=46
X27A F and S Farms, 45.84 89 ⇓P **P 00 17 56.6 -0.4**
baz=46
Y26A Elida 45.91 91 ⇑P **P 00 17 57.3 -0.3**
baz=46
CN2 Changchun 45.99 288 *e*P **P 00 17 57.3 -0.7**
CN2 *e*pP pP 00 18 06.8 +2.2
CN2 *e*S **S 00 24 37.9 -3.7**
CN2 SS SS 00 27 54.5 -12
CN2 pmax pmax
comp=Z,30nm,0.8s,mb5.3
CN2 pmax pmax
comp=Z,200nm,7.0s
CN2 LR LR
comp=N,1μm,20.0s,MS5.0
CN2 LR LR
comp=E,1μm,20.0s,MS5.0
CN2 LR LR
comp=Z,1μm,20.0s,MS4.9
224A Cornudas Mount 46.21 94 ⇓P **P 00 17 59.6 -0.3**
baz=46,SNR=15
Z26A Caprock 46.28 91 ⇓P **P 00 17 59.9 -0.5**
baz=46,SNR=5.6
125A Gardner Draw, 46.31 92 ⇑P **P 00 18 00.5 -0.2**
baz=46
Y27A Causey 46.33 90 ⇑P **P 00 18 00.5 -0.4**
baz=46
MSTX Muleshoe 46.51 90 ⇑P **P 00 18 01.9 -0.3**
baz=46
MNTX Cornudas Mount 46.56 94 *e*P **P 00 18 02.3 -0.4**
comp=Z,8.7nm,1.0s,mb4.6
225A Deer Hill, Car 46.60 93 ⇑P **P 00 18 02.6 -0.4**
baz=46,SNR=6.4
KSU1 Kansas State U 46.68 80 P **P 00 18 02.9 -0.6**
KSU1 *e*PcP PcP 00 19 36.6 -0.3
324A Moseley Ranch, 46.68 94 ⇑P **P 00 18 03.1 -0.5**
baz=47,SNR=5.2
126A Clayton Basin, 46.69 92 ⇑P **P 00 18 03.2 -0.5**
baz=47,SNR=7.6
Z27A Tatum 46.70 91 ⇑P **P 00 18 03.7 0.0**
baz=47
GDL2 Guadalupe Moun 46.80 93 *e*P **P 00 18 04.6 0.0**
comp=Z,2.0nm,0.7s,mb4.2
325A Bean Ranch, Si 47.04 94 ⇑P **P 00 18 06.0 -0.4**
baz=47,SNR=18
226A Malaga, Loving 47.06 93 ⇑P **P 00 18 06.0 -0.5**
baz=47,SNR=6.2
425A Indio Mountain 47.45 94 ⇓P **P 00 18 09.4 -0.2**
baz=47,SNR=13
KBS Kingsbay 47.61 1 *e*P **P 00 18 10.9 +0.6**
KBS *e*pP pP 00 18 18.1 +1.2
KBS *e*S **S 00 25 09.2 +5.1**
KBS AMS AMS 00 39 55.2
comp=Z,1μm,20.0s,MS4.8
KBS Kingsbay 47.61 1 *e*P **P 00 18 10.2 -0.1**
comp=Z,78nm,1.0s,mb5.7
KBS *e*PP PP 00 20 01.4 -0.1
KBS Kingsbay 47.61 1*c i*P **P 00 18 10.2 -0.1**
KBS pmax pmax
comp=Z,62nm,1.2s,mb5.5
JFWS Jewell Farm 47.87 72 *e*P **P 00 18 11.7 -1.1**
comp=Z,38nm,0.9s,mb5.4
JFWS *e*PcP PcP 00 19 41.1 +0.1
JFWS Jewell Farm 47.87 72 *e*P **P 00 18 11.7 -1.0**
JFWS *e* 00 19 41.1
JFWS pmax pmax
comp=Z,38nm,0.9s,mb5.4
DAG Danmarks Havn 47.91 10⇓*i*P **P 00 18 11.9 -0.8**
DAG pmax pmax
comp=Z,25nm,0.6s,mb5.4
DAG Danmarks Havn 47.91 10⇓*i*P **P 00 18 11.9 -0.8**
comp=Z,25nm,0.6s,mb5.4
SNY Shenyang 48.30 287 ⇑P **P 00 18 16.3 +0.2**
SNY S **S 00 25 16.3 +1.7**
SNY pmax pmax
comp=Z,40nm,1.4s,mb5.3
SNY LR LR
comp=N,420nm,24.5s,MS4.9
SNY LR LR
comp=E,1μm,20.6s,MS4.9
SNY LR LR
comp=Z,2μm,18.1s,MS5.0
328A Wristen Ranch, 48.31 92 ⇓P **P 00 18 15.9 -0.4**
baz=48
427A Hayter Ranch, 48.34 93 ⇑P **P 00 18 16.3 -0.3**
baz=48
WMOK Wichita Mounta 48.34 86 *e*P **P 00 18 15.9 -0.6**
comp=Z,19nm,0.9s,mb5.1
WMOK *e*PcP PcP 00 19 42.8 -0.1
WMOK Wichita Mounta 48.34 86 *e*P **P 00 18 15.9 -0.6**
WMOK *e* 00 19 42.8
WMOK pmax pmax
comp=Z,19nm,0.9s,mb5.1
SUMG Summit 48.43 19 *e*P **P 00 18 17.4 +0.7**
comp=Z,55nm,0.9s,mb5.6
SUMG Summit 48.43 19 *i* P **P 00 18 17.7 +1.0**
comp=Z,58nm,0.9s,mb5.6
526A Mary Lane Ranc 48.51 94 ⇓P **P 00 18 17.3 -0.5**
baz=48,SNR=8.3
KSRS Korea Array 48.69 280 P **P 00 18 19.6 +0.5**
comp=Z,18nm,0.9s,mb5.1,baz=55,slow=6.9,SNR=48
KSRS LR LR 00 38 32.7
comp=Z,624nm,20.2s,MS4.6,baz=51,slow=36
527A Woodward Ranch 48.73 94 ⇓P **P 00 18 19.0 -0.5**
baz=49,SNR=8.3
428A Kincaid Ranch, 48.86 93 ⇓P **P 00 18 20.3 -0.2**
baz=49,SNR=8.0
528A Cox Ranch, San 49.21 93 ⇓P **P 00 18 22.6 -0.6**
baz=49,SNR=9.4
TXAR Lajitas Array 49.29 95 P **P 00 18 23.6 -0.3**
comp=Z,2.9nm,0.5s,mb4.6,baz=304,slow=5.5,SNR=48
TXAR ScP ScP 00 23 39.3 -0.9
comp=Z,2.2nm,1.1s,baz=270,slow=2.5,SNR=6.4
TXAR LR LR 00 37 47.2
comp=Z,900nm,18.8s,MS4.8,baz=10.0,slow=34
627A Terlingua Ranc 49.37 94 ⇑P **P 00 18 24.1 -0.3**
baz=49
INCN Inchon 49.42 281 *e*P **P 00 18 24.6 -0.1**
628A Black Gap, Mar 49.64 94 ⇓P **P 00 18 26.1 -0.4**
baz=50
HDIL Hopedale 49.95 73 *e*P **P 00 18 26.4 -2.3**
comp=Z,119nm,0.7s,mb6.0
JCT Junction City 50.75 90 *e*P **P 00 18 33.4 -1.5**
comp=Z,30nm,1.0s,mb5.2
JCT Junction City 50.75 90 *e*P **P 00 18 33.4 -1.5**
JCT pmax pmax
comp=Z,30nm,1.0s,mb5.2
FVM French Village 51.02 77 *e*P **P 00 18 35.9 -1.0**
comp=Z,25nm,1.0s,mb5.1
FVM *e*PP PP 00 20 33.4 +0.2
FVM French Village 51.02 77 *e*P **P 00 18 35.9 -1.0**
FVM *e* 00 20 33.4
FVM pmax pmax
comp=Z,25nm,1.0s,mb5.1
DL2 Dalian 51.36 285 P **P 00 18 38.8 -0.6**
DL2 S **S 00 25 55.6 -1.7**
DL2 pmax pmax
comp=Z,20nm,0.7s,mb5.2
DL2 pmax pmax
comp=Z,160nm,5.7s
DL2 LR LR
comp=N,610nm,22.2s,MS4.7
DL2 LR LR
comp=E,510nm,21.4s,MS4.7
DL2 LR LR
comp=Z,840nm,22.0s,MS4.7
MIAR Mount Ida 51.56 82 *e*P **P 00 18 39.5 -1.4**
comp=Z,19nm,1.0s,mb5.0
MIAR Mount Ida 51.56 82 *e*P **P 00 18 39.6 -1.3**
MIAR pmax pmax
comp=Z,19nm,1.0s,mb5.0
IRK Irkutsk 51.67 308 *e*P **P 00 18 40.2 -1.3**
IRK *e* 00 20 40.5
IRK pmax pmax
comp=Z,58nm,1.2s,mb5.4
OLIL Olney 51.85 74 *e*P **P 00 18 43.3 +0.2**
comp=Z,41nm,0.8s,mb5.4
SIUC Southern Illin 51.91 76 *e*P **P 00 18 42.9 -0.6**
SCHQ Schefferville 52.02 47 P **P 00 18 43.3 -0.8**
comp=Z,7.5nm,0.7s,mb4.7,baz=304,slow=7.1,SNR=12
SCHQ LR LR 00 43 38.8
comp=Z,2μm,19.6s,MS5.2,baz=314,slow=39
PARMO Parma 52.32 77 *e*P **P 00 18 44.2 -2.4**
TLY Talaya 52.33 308 P **P 00 18 46.1 -0.3**
comp=Z,178nm,1.2s,mb5.9,SNR=7.7
TLY Talaya 52.33 308 *e*P **P 00 18 46.1 -0.3**
comp=Z,55nm,1.0s,mb5.4
TLY Talaya 52.33 308 *e*P **P 00 18 46.5 +0.1**
TLY *e* sP 00 18 56.7 +1.1
TLY *e*S **S 00 26 26.3 +16**
TLY pmax pmax
comp=Z,42nm,1.2s,mb5.2
TLY MLR MLR
comp=Z,2μm,17.0s,MS5.3
BLO Bloomington 52.45 73 *e*P **P 00 18 45.5 -2.0**
comp=Z,32nm,1.0s,mb5.2
BLO *e*PcP PcP 00 19 57.2 -0.7
BLO Bloomington 52.45 73 *e*P **P 00 18 45.5 -2.0**
BLO *e* 00 19 57.2
BLO pmax pmax
comp=Z,32nm,1.0s,mb5.2
USIN University of 52.63 75 *e*P **P 00 18 48.1 -0.7**
comp=Z,71nm,0.8s,mb5.7
ULN Ulaanbaatar 53.22 303 *e*P **P 00 18 52.6 -0.5**
comp=Z,27nm,0.9s,mb5.2
ULN PcP PcP 00 20 00.6 -0.1
ULN Ulaanbaatar 53.22 303 *e*P **P 00 18 52.6 -0.5**
ULN 00 20 00.6
ULN pmax pmax
comp=Z,27nm,0.9s,mb5.2
ULN Ulaanbaatar 53.22 303 P **P 00 18 53.0 -0.1**
comp=Z,468nmcomp=Z,36nm,1.1s,mb5.2
ZAK Zakamensk 53.37 307 *e* **P 00 18 53.4 -0.7**
ZAK *e* pP 00 19 03.1 +2.3
ZAK Zakamensk 53.37 307 *e*P **P 00 18 44.4 -10**
HKT Hockley 53.49 88 *e*P **P 00 18 55.2 -0.1**
comp=Z,31nm,1.4s,mb5.0
HKT Hockley 53.49 88 *e*P **P 00 18 55.2 -0.1**
HKT pmax pmax
comp=Z,31nm,1.4s,mb5.0
MOY Mondy 53.57 310 *e*P **P 00 18 55.8 +0.2**
MOY pmax pmax
comp=Z,19nm,3.1s
SONM Songino Array 53.57 303 P **P 00 18 55.9 +0.2**
comp=Z,23nm,1.0s,mb5.1,baz=50,slow=6.5,SNR=89
SONM PcP PcP 00 20 03.2 +1.2
comp=Z,5.6nm,0.9s,baz=36,slow=1.4,SNR=2.5
SONM ScP ScP 00 24 00.8 +2.5
comp=Z,1.2nm,0.9s,baz=35,slow=5.3,SNR=4.5
SONM Songino Array 53.57 303 P **P 00 18 55.9 +0.3**
SONM 00 20 03.2
BJI Beijing 53.67 290 P **P 00 18 56.1 -0.4**
BJI sP sP 00 19 08.1 +2.4
BJI PP PP 00 20 58.7 +1.6
BJI S **S 00 26 27.9 -1.0**
BJI sS sS 00 26 43.2 +3.3
BJI pmax pmax
comp=Z,34nm,0.9s,mb5.3
BJI pmax pmax
comp=Z,190nm,9.2s
BJI LR LR
comp=N,1μm,21.0s,MS5.1
BJI LR LR
comp=E,1μm,21.0s,MS5.1
BJI LR LR
comp=Z,1μm,19.7s,MS4.9
BJT Baijiatuao 53.69 290 *e*P **P 00 18 56.0 -0.6**
comp=Z,23nm,0.6s,mb5.3
BJT Baijiatuao 53.69 290 *e*P **P 00 18 56.0 -0.6**
BJT pmax pmax
comp=Z,23nm,0.6s
WVT Waverly 53.80 76 *e*P **P 00 18 56.0 -1.5**
comp=Z,47nm,1.1s,mb5.3
WVT Waverly 53.80 76 *e*P **P 00 18 56.0 -1.5**
WVT pmax pmax
comp=Z,47nm,1.1s,mb5.3
JMIC Jan Mayen 54.35 10 *e*S **S 00 26 38.2 +0.9**
JMIC AMS AMS 00 44 23.8
comp=Z,896nm,19.3s,MS4.8
VBMS Vicksburg 55.00 82 *e*P **P 00 19 06.3 0.0**
SWET Sewanee 55.54 76 *e*P **P 00 19 09.6 -0.6**
SWET *e*PcP PcP 00 20 10.0 +0.2
HHC Hu-ho-hao-te 55.66 294 *e*P **P 00 19 11.2 +0.3**
HHC pP pP 00 19 21.1 +3.6
HHC sP sP 00 19 25.1 +5.0
HHC PcP PcP 00 20 11.6 +1.4
HHC PP PP 00 21 16.1 +1.3
HHC S **S 00 26 50.3 -5.3**
HHC sS sS 00 27 08.3 +1.7
HHC ScS ScS 00 28 54.6 -3.9
HHC SS SS 00 30 35.7 -4.6
HHC pmax pmax
comp=Z,38nm,1.1s,mb5.3
HHC LR LR
comp=N,1μm,14.5s,MS5.2
HHC LR LR
comp=E,1μm,15.0s,MS5.2
HHC LR LR
comp=Z,600nm,17.8s,MS4.7
NCB Newcomb 55.87 61 *e*P **P 00 19 12.8 +0.5**
comp=Z,9.2nm,0.9s,mb4.8
BINY Binghamton 56.17 63 *e*P **P 00 19 14.8 +0.2**
comp=Z,21nm,1.3s,mb5.0
CPCT Cooper Cave 56.19 75 *e*P **P 00 19 13.3 -1.5**
TKL Tuckaleechee C 56.47 74 *e*P **P 00 19 15.9 -0.8**
TKL *e*PcP PcP 00 20 13.6 +0.2
LRAL Lakeview Retre 56.48 79 *e*P **P 00 19 14.8 -2.0**
comp=Z,9.0nm,0.9s,mb4.8
KEV Kevo 56.62 356 *e*P **P 00 19 16.4 -1.0**
comp=Z,25nm,0.8s,mb5.3
KEV Kevo 56.62 356 *e*P **P 00 19 16.4 -0.9**
KEV pmax pmax
comp=Z,25nm,0.8s,mb5.3
KEV Kevo 56.62 356 *e*p **P 00 19 15.6 -1.7**
comp=Z,17nm,0.6s,mb5.2
BTO Baotou 56.66 295 *e*P **P 00 19 18.6 +0.5**
GUMO Guam 56.83 246 P **P 00 19 18.0 -1.5**
comp=Z,19nm,0.3s,mb5.6,baz=292,slow=16,SNR=2.7
ARCES ARCESS Array B 56.91 356 P **P 00 19 18.5 -0.8**
ARCES LR LR 00 45 52.5
ARCES ARCESS Array B 56.91 356 P **P 00 19 18.5 -0.8**
comp=Z,6.9nm,0.7s,mb4.8,baz=12,slow=8.2,SNR=63
ARCES LR LR 00 45 52.5
comp=Z,1μm,18.1s,MS5.1,baz=174,slow=38
ARE0 ARCESS Array S 56.91 356 *e*P **P 00 19 18.4 -1.0**
ARE0 *e*PcP PcP 00 20 15.1 +0.6
TRO Tromso 56.97 359 *e*P **P 00 19 19.8 0.0**
TRO *e*S **S 00 27 13.5 +1.2**
TRO AMS AMS 00 42 23.8
comp=Z,948nm,20.6s,MS4.9
SSE Sheshan 57.11 279 P **P 00 19 19.4 -1.9**
SSE pP pP 00 19 28.6 +0.6
SSE S **S 00 27 12.9 -2.2**
SSE sS sS 00 27 28.7 +2.6
SSE ScS ScS 00 29 06.4 -2.9
SSE pmax pmax
comp=Z,56nm,1.1s,mb5.5
SSE pmax pmax
comp=Z,210nm,9.3s
SSE LR LR
comp=N,380nm,16.0s,MS4.7
SSE LR LR
comp=E,290nm,16.0s,MS4.7
SSE LR LR
comp=Z,560nm,27.8s
BLA Blacksburg 57.27 70 *e*P **P 00 19 21.6 -0.7**
comp=Z,26nm,0.9s,mb5.3
BLA Blacksburg 57.27 70 *e*P **P 00 19 21.6 -0.8**
BLA pmax pmax
comp=Z,26nm,0.9s,mb5.3
TIY Taiyuan 57.38 291 *e*P **P 00 19 22.7 -0.5**
TIY pP pP 00 19 32.1 +2.2
TIY sP sP 00 19 37.0 +4.5
TIY S **S 00 27 14.6 -4.0**
TIY sS sS 00 27 24.7 -4.9
TIY pmax pmax
comp=Z,58nm,0.6s,mb5.8
TIY LR LR
comp=N,1μm,14.3s,MS5.1
TIY LR LR
comp=E,540nm,16.0s,MS5.1
TIY LR LR
comp=Z,1μm,21.8s
NJ2 Nanjing 57.78 281 *e*P **P 00 19 26.0 -0.1**
NJ2 pP pP 00 19 34.9 +2.1
NJ2 sP sP 00 19 39.6 +4.3
NJ2 PP PP 00 21 37.9 +4.0
NJ2 S **S 00 27 24.0 +0.1**
NJ2 pmax pmax
comp=Z,30nm,0.9s,mb5.3
NJ2 pmax pmax
comp=Z,120nm,9.9s
NJ2 LR LR
comp=N,590nm,13.1s,MS5.0
NJ2 LR LR
comp=E,770nm,16.1s,MS5.0
NJ2 LR LR
comp=Z,650nm,13.7s,MS4.9
GOGA Godfrey 58.26 76 *e*P **P 00 19 26.9 -2.5**
comp=Z,16nm,1.2s,mb4.9
GOGA Godfrey 58.26 76 *e*P **P 00 19 26.9 -2.5**
GOGA pmax pmax
comp=Z,16nm,1.2s,mb4.9
APA Apatity 58.39 352⇑*e*P **P 00 19 30.5 +0.7**
APA pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
APA MLR MLR
comp=Z,2μm,16.0s,MS5.3
NVS Novosibirsk 58.65 321⇑*i*P **P 00 19 30.6 -1.2**
NVS pmax pmax
comp=Z,22nm,1.2s,mb5.1
NVS pmax pmax
comp=E,31nm,1.3s
ZAA0 Zalesovo Array 58.74 320 *e*P **P 00 19 32.1 -0.4**
ZAA0 *e*PP PP 00 21 40.0 -1.9
ZALV Zalesovo Beam 58.74 320 P **P 00 19 31.9 -0.5**
comp=E,8.0nm,0.7s,mb4.9,baz=37,slow=7.1,SNR=38
ZALV PcP PcP 00 20 21.1 -1.0
comp=E,3.9nm,0.6s,baz=57,slow=5.3,SNR=2.7
ZALV LR LR 00 47 48.1
comp=E,2μm,18.0s,MS5.2,baz=250,slow=39
ZALV Zalesovo Beam 58.74 320 P **P 00 19 31.9 -0.5**
ZALV 00 20 21.1
JSC Jenkinsville 58.89 73 *e*P **P 00 19 33.6 -0.2**
NHSC New Hope 60.36 74 *e*P **P 00 19 43.1 -0.8**
WHN Wuhan 61.50 284 P **P 00 19 51.0 -0.7**
WHN S **S 00 28 09.0 -2.9**
WHN pmax pmax
comp=Z,96nm,1.4s,mb5.7
WHN pmax pmax
comp=Z,390nm,10.5s
WHN LR LR
comp=N,1μm,17.4s,MS5.3
WHN LR LR
comp=E,1μm,13.8s,MS5.3
WHN LR LR
comp=Z,2μm,17.3s,MS5.2
XAN Xi'an 62.01 290 P **P 00 19 54.8 -0.3**
XAN pP pP 00 20 04.7 +2.9
XAN sP sP 00 20 10.4 +6.0
XAN PcP PcP 00 20 34.7 -0.8
XAN PP PP 00 22 12.4 +1.1
XAN ScP ScP 00 24 31.3 -4.5
XAN PcS PcS 00 24 35.4 -3.2
XAN S **S 00 28 18.6 +0.4**
XAN ScS ScS 00 29 40.7 -4.9
XAN pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
XAN pmax pmax
comp=Z,37nm,9.3s
XAN LR LR
comp=N,750nm,18.8s,MS4.9
XAN LR LR
comp=E,370nm,18.6s,MS4.9
XAN LR LR
comp=Z,460nm,19.1s,MS4.7
SOKR Solikamsk 62.53 338*c i*P **P 00 19 57.6 -0.6**
SOKR pmax pmax
comp=Z,60nm,1.1s,mb5.6
SSLB Suanglung 62.67 273 *e*P **P 00 19 58.9 -0.7**
comp=Z,57nm,0.9s,mb5.7
GTA Gaotai 62.92 300 ⇑P **P 00 20 00.9 -0.2**
GTA pP pP 00 20 09.6 +1.7
GTA sP sP 00 20 13.4 +3.0
GTA PP PP 00 22 21.5 +2.4
GTA S **S 00 28 29.2 -0.4**
GTA sS sS 00 28 45.0 +4.3
GTA pmax pmax
comp=Z,27nm,1.3s,mb5.2
GTA pmax pmax
comp=Z,180nm,6.0s
GTA LR LR
comp=N,2μm,16.3s,MS5.4
GTA LR LR
comp=E,1μm,17.0s,MS5.4
GTA LR LR
comp=Z,2μm,16.7s,MS5.4
JOF Joensuu 63.15 352 *e*P **P 00 20 00.8 -1.4**
JOF pmax pmax
comp=Z,19nm,1.3s,mb5.1
JOF Joensuu 63.15 352 *ep* **P 00 20 00.8 -1.4**
comp=Z,19nm,1.3s,mb5.1
QZH Quanzhou 63.20 276⇑*i*P **P 00 20 02.6 -0.6**
QZH S **S 00 28 34.1 +0.7**
QZH LR LR
comp=N,2μm,18.0s
QZH LR LR
comp=E,590nm,9.6s
QZH LR LR
comp=Z,740nm,20.6s,MS4.8
LZH Lanzhou 63.28 295 ⇑P **P 00 20 03.8 +0.3**
LZH pP pP 00 20 12.5 +2.2
LZH sP sP 00 20 16.3 +3.5
LZH PP PP 00 22 23.0 +0.6
LZH S **S 00 28 34.0 -0.1**
LZH sS sS 00 28 49.1 +3.9
LZH SS SS 00 32 37.0 -2.9
LZH pmax pmax
comp=Z,75nm,1.0s,mb5.8
LZH pmax pmax
comp=Z,220nm,4.1s
LZH LR LR
comp=E,2μm,15.5s
LZH LR LR
comp=Z,2μm,16.1s,MS5.4
KURK Kurchatov 63.63 321 *e*P **P 00 20 05.3 -0.3**
comp=Z,116nm,1.1s,mb5.8
KURK Kurchatov 63.63 321*c i*P **P 00 20 05.5 -0.1**
KURK pmax pmax
comp=Z,55nm,1.2s,mb5.5
SVE Sverdlovsk 64.08 335⇓*e*P **P 00 20 08.4 -0.1**
SVE *e*PPP 00 24 06.1
SVE *e*S **S 00 28 32.2 -11**
SVE pmax pmax
comp=Z,79nm,1.1s,mb5.7
SVE MLR MLR
comp=Z,2μm,16.0s,MS5.4
KAF Kangasniemi 64.28 355 *e*P **P 00 20 08.9 -0.8**
KAF pmax pmax
comp=Z,32nm,1.0s,mb5.3
KAF Kangasniemi 64.28 355 *ep* **P 00 20 08.9 -0.8**
comp=Z,32nm,1.0s,mb5.3,baz=1.9,slow=6.7
KLMR Klimovskoe 64.33 348 *e*P **P 00 20 08.5 -1.6**
KLMR *e*S **S 00 28 46.0 -0.5**
KLMR pmax pmax
comp=Z,54nm,1.4s,mb5.4
ENH Enshi 64.49 287 *e*P **P 00 20 11.4 -0.2**
comp=Z,76nm,1.0s,mb5.7
ENH *e*PcP PcP 00 20 46.0 +0.3
BVA0 Borovoye Array 64.58 327 P **P 00 20 11.6 -0.2**
BVA0 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BVAR Borovoye Array 64.58 327 P **P 00 20 11.9 +0.1**
comp=Z,27nm,0.7s,mb5.4,baz=45,slow=6.5,SNR=162
BVAR PKKP 00 40 33.3
comp=Z,0.5nm,0.6s,baz=50,slow=8.0,SNR=4.0
BRVK Borovoye 64.58 327 *e*P **P 00 20 12.4 +0.6**
comp=Z,56nm,0.9s,mb5.6
BRVK Borovoye 64.58 327*c i*P **P 00 20 11.2 -0.6**
BRVK pmax pmax
comp=Z,57nm,1.2s,mb5.5
ARU Arti 64.95 336 *e*P **P 00 20 14.1 -0.1**
comp=Z,72nm,1.0s,mb5.7
ARU Arti 64.95 336*c i*P **P 00 20 13.7 -0.5**
ARU *e* PcP 00 20 46.8 -0.3
ARU *e* PP 00 22 37.3 +0.8
ARU PPP 00 24 08.7
ARU S **S 00 28 53.6 -0.6**
ARU SS SS 00 33 09.7 +4.8
ARU pmax pmax
comp=Z,62nm,1.2s,mb5.5
ARU MLR MLR
comp=Z,2μm,17.0s,MS5.3
ARU Arti 64.95 336 P **P 00 20 13.0 -1.2**
comp=Z,274nm,0.5s,mb6.5,SNR=19

FINES FINESS Array B 64.96 355 P P 00 20 13.8 -0.4
FINES LR LR 00 51 01.0
FINES FINESS Array B 64.96 355 P P 00 20 13.8 -0.4
comp=Z,14nm,0.7s,mb5.1,baz=28,slow=8.6,SNR=37
FINES LR LR 00 51 01.0
comp=Z,1μm,18.8s,MS5.1,baz=9.1,slow=38
ZRNK Zerenda 65.08 328 P P 00 20 15.2 +0.1
ZRNK pmax pmax
comp=Z,82nm,0.9s,mb5.8
MK31 Makanchi Array 65.36 316 eP P 00 20 15.8 -1.2
MK31 ePcP PcP 00 20 49.2 +0.2
MK31 Makanchi Array 65.36 316 i P P 00 20 16.2 -0.8
MK31 pmax pmax
comp=Z,14nm,0.7s,mb5.1
MKAR Makanchi Array 65.36 316 P P 00 20 16.2 -0.8
MKAR LR LR 00 52 13.6
MKAR Makanchi Array 65.36 316 P P 00 20 16.2 -0.8
comp=Z,12nm,0.8s,mb5.0,baz=48,slow=6.1,SNR=72
MKAR LR LR 00 52 13.6
comp=Z,1μm,18.7s,MS5.0,baz=29,slow=39
WMQ Urumqi 65.39 311 P P 00 20 17.8 +0.6
WMQ pP pP 00 20 28.1 +4.1
WMQ sP sP 00 20 32.0 +5.4
WMQ PcP PcP 00 20 49.8 +0.6
WMQ ScP 00 24 48.8
WMQ S S 00 28 57.8 -2.2
WMQ sS sS 00 29 14.6 +3.4
WMQ ScS ScS 00 30 06.8 -4.3
WMQ SS SS 00 33 12.4 -0.1
WMQ pmax pmax
comp=Z,32nm,0.9s,mb5.3
WMQ pmax pmax
comp=Z,230nm,5.0s
WMQ LR LR
comp=N,2μm,18.6s,MS5.3
WMQ LR LR
comp=E,1μm,20.5s,MS5.3
WMQ LR LR
comp=Z,580nm,18.0s,MS4.8
TAOE Nuku Hiva Isla 65.39 154 eLR LR 00 39 46.8
comp=Z,809nm,24.1s
NB2 NORSAR Subarra 65.54 3 P P 00 20 18.1 +0.2
comp=Z,28nm,1.0s,mb5.2,baz=358,slow=6.9
NOA NORSAR Array B 65.54 3 P P 00 20 18.0 +0.1
comp=Z,9.6nm,0.8s,mb4.9,baz=358,slow=6.5,SNR=21
NOA LR LR 00 50 06.5
comp=Z,557nm,20.7s,MS4.8,baz=5.0,slow=37
NAO01 NORSAR Array S 65.73 3 P P 00 20 20.6 +1.5
PUL Pulkovo 66.34 352 i P P 00 20 23.4 +0.3
PUL pmax pmax
comp=Z,47nm,0.4s,mb5.9
KONO Kongsberg 66.88 4 e S 00 29 26.7 +9.0
KONO Kongsberg 66.88 4 eP P 00 20 26.1 -0.4
comp=Z,66nm,1.3s,mb5.5
KONO ePcP PcP 00 20 55.0 0.0
KONO Kongsberg 66.88 4 eP P 00 20 26.1 -0.4
KONO e 00 20 55.0
KONO pmax pmax
comp=Z,66nm,1.3s,mb5.5
CD2 Chengdu 67.23 291 P P 00 20 29.7 +0.5
CD2 pP pP 00 20 40.0 +4.0
CD2 sP sP 00 20 43.9 +5.4
CD2 PP PP 00 22 59.1 +2.0
CD2 ScP 00 24 57.5
CD2 S S 00 29 20.9 -1.8
CD2 sS sS 00 29 36.4 +2.5
CD2 ScS ScS 00 30 20.9 -4.8
CD2 SS SS 00 33 40.1 -1.5
CD2 pmax pmax
comp=Z,70nm,0.7s,mb5.8
CD2 pmax pmax
comp=Z,250nm,5.1s
CD2 LR LR
comp=N,730nm,18.6s,MS5.2
CD2 LR LR
comp=E,1μm,17.1s,MS5.2
CD2 LR LR
comp=Z,1μm,20.6s,MS5.0
GZH Guangzhou 67.71 279 P P 00 20 28.6 -3.7
GZH S S 00 29 24.8 -3.8
GZH LR LR
comp=Z,850nm,16.8s,MS5.0
KPL Plockton 67.87 13 eP P 00 20 32.8 0.0
KPL AMB AMB 00 20 47.8
comp=Z,156nm,3.5s
MCD Coleburn Disti 67.93 11 eP P 00 20 32.9 -0.3
MDO Dochfour 67.94 12 eP P 00 20 33.1 -0.2
GYA Guiyang 69.00 286⇑ iP P 00 20 40.3 -0.1
GYA pP pP 00 20 50.2 +3.0
GYA PP PP 00 23 14.8 +2.3
GYA ScP 00 25 05.8
GYA S S 00 29 45.2 +1.3
GYA sS sS 00 29 56.6 +1.5
GYA SKS 00 30 32.8
GYA SS SS 00 34 07.5 -1.6
GYA pmax pmax
comp=Z,80nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,160nm,5.6s
GYA LR LR
comp=N,860nm,19.8s,MS5.0
GYA LR LR
comp=E,290nm,18.6s,MS5.0
GYA LR LR
comp=Z,590nm,21.4s,MS4.8
EAB Aberfoyle 69.16 12 eP P 00 20 40.2 -0.7
MOS Moscow 69.55 347 eP P 00 20 41.8 -1.5
MOS e 00 21 05.4
MOS pmax pmax
comp=Z,100nm,1.0s,mb5.7
MOS pmax pmax
comp=Z,66nm,1.2s,mb5.4
EAU Auchinoon 69.61 12 eP P 00 20 43.9 +0.2
EBL Broad Law 69.73 12 eP P 00 20 44.7 +0.3
ESK Eskdalemuir 70.16 12 i P P 00 20 48.7 +1.6
TGY Tagaytay City 70.17 267 P P 00 20 47.8 0.0
comp=Z,87nm,0.4s,mb6.0,baz=211,slow=5.1,SNR=3.1
OBN Obninsk 70.29 348 eP P 00 20 46.3 -1.6
comp=Z,22nm,0.6s,mb5.3
OBN Obninsk 70.29 348 i P P 00 20 47.2 -0.7
OBN e pP 00 20 55.1 +0.4
OBN eS S 00 29 55.3 -3.0
OBN eSS SS 00 34 27.4 -0.1
OBN pmax pmax
comp=Z,54nm,1.2s,mb5.3
OBN MLR MLR
comp=Z,1μm,17.0s,MS5.1
ECK Cauldkaine Hil 70.30 12 eP P 00 20 47.8 -0.2
GAL1 Galloway 70.41 13 eP P 00 20 47.6 -1.0
GAL1 AMB AMB 00 20 49.6
comp=Z,69nm,3.7s
AKTK Aktyubinsk 70.51 333 P P 00 20 49.5 +0.1
AKTO Aktyubinsk 70.51 333 P P 00 20 49.5 +0.1
comp=Z,46nm,0.9s,mb5.4,baz=28,slow=5.6,SNR=117
AB31 Akbulak array 71.05 332 P P 00 20 52.6 0.0
AB31 pmax pmax
comp=Z,17nm,0.5s,mb5.2
ABKAR Akbulak array 71.05 332 eP P 00 20 52.4 -0.2
comp=Z,22nm,0.6s,mb5.3
ABKAR e 00 21 00.9
USP Ospenovka 71.38 319 P P 00 20 55.2 +0.5
SNR=17
NACGM Naroch 71.44 354 e P 00 20 51.0 -3.9
CHMS Chumysh 71.51 319 P P 00 20 56.2 +0.7
SNR=20
KBK Karagaybulak 71.72 319 P P 00 20 57.7 +0.9
SNR=15
MICGM Minsk 71.76 353 e P 00 20 55.0 -1.8
MNK Minsk 71.76 353 eP P 00 20 55.0 -1.8
AAK Ala-Archa 71.92 319 P P 00 20 58.9 +0.9
SNR=10
AAK Ala-Archa 71.92 319 P P 00 20 58.4 +0.4
comp=Z,14nm,0.7s,mb5.0,baz=117,slow=3.2,SNR=15
PPT Papeete 71.98 166 eS S 00 30 13.5 -5.0
comp=Z,2μm,27.8s
PPT eLR LR 00 42 45.5
comp=Z,1μm,22.5s,baz=352
PPT Papeete 71.98 166 LR LR 00 50 12.1
comp=Z,692nm,18.5s,MS5.0,baz=335,slow=34
EKS2 Erkin-Say 72.18 319 P P 00 21 00.8 +1.3
SNR=16
EKS2 Erkin-Say 72.18 319 eP P 00 20 59.7 +0.2
comp=Z,71nm,0.9s,mb5.6
UCH Uchtor 72.26 319 P P 00 21 01.2 +1.2
SNR=8.1
UCH Uchtor 72.26 319 eP P 00 21 00.7 +0.7
comp=Z,22nm,1.1s,mb5.0
UCH ePP PP 00 23 38.4 -1.7
KMI Kunming 72.26 288 P P 00 21 00.3 0.0
KMI pP pP 00 21 09.6 +2.5
KMI sP sP 00 21 13.7 +4.1
KMI PcP PcP 00 21 19.7 +1.4
KMI PP PP 00 23 41.7 +1.1
KMI S S 00 30 18.8 -3.1
KMI sS sS 00 30 33.6 +0.4
KMI SKS 00 30 57.7
KMI ScS ScS 00 31 00.1 -5.4
KMI SS SS 00 34 58.2 -1.1
KMI pmax pmax
comp=Z,16nm,0.9s,mb5.0
KMI LR LR
comp=N,950nm,18.8s,MS5.2
KMI LR LR
comp=E,1μm,20.4s,MS5.2
KMI LR LR
comp=Z,920nm,19.6s,MS5.1
KBI1 Birley Grange 72.38 11 eP P 00 21 00.3 -0.2
SUW Suwalki 72.52 356 eP P 00 21 00.7 -0.7
SUW Suwalki 72.52 356 eP P 00 21 01.6 +0.3
comp=Z,40nm,0.8s,mb5.4
SUW Suwalki 72.52 356 eP P 00 21 01.6 +0.3
SUW pmax pmax
comp=Z,40nm,0.8s,mb5.4
BSEG Bad Segeberg 72.62 4 eP P 00 21 02.5 +0.5
comp=Z,42nm,1.3s,mb5.2
BSEG Bad Segeberg 72.62 4 eP P 00 21 02.5 +0.5
BSEG pmax pmax
comp=Z,42nm,1.3s,mb5.2
AML Almayashu 72.66 319 P P 00 21 03.9 +1.5
SNR=15
AML Almayashu 72.66 319 eP P 00 21 03.8 +1.4
QIZ Qiongzhong 72.90 279 P P 00 21 04.2 0.0
QIZ S S 00 30 28.7 -0.7
QIZ sS sS 00 30 44.6 +3.9
QIZ pmax pmax
comp=Z,31nm,1.7s,mb5.0
QIZ pmax pmax
comp=Z,240nm,9.8s
QIZ LR LR
comp=N,480nm,16.5s,MS5.0
QIZ LR LR
comp=E,340nm,15.9s,MS5.0
QIZ LR LR
comp=Z,470nm,17.1s,MS4.8
HLM1 Long Mynd 72.94 12 eP P 00 21 02.5 -1.4
HLM1 AMB AMB 00 21 22.9
comp=Z,69nm,5.8s
KK31 Karatay Array 73.03 322 i P P 00 21 04.1 -0.5
KK31 pmax pmax
comp=Z,25nm,0.7s,mb5.2
VOR Voronezh 73.23 345 P P 00 21 04.0 -1.6
VOR pmax pmax
comp=Z,100nm,1.2s,mb5.6
HTR Trewern Hill 73.32 13 eP P 00 21 06.3 +0.2
GKP Gorka Klasztor 73.41 359 eP P 00 21 06.4 -0.2
VRHR Novokhopersk 73.47 344 eP P 00 21 05.3 -1.7
VRHR pmax pmax
comp=N,20nm,0.9s
VRHR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VRHR pmax pmax
comp=E,5.0nm,0.4s
VSR Storozhevoye 73.74 345 eP P 00 21 07.6 -1.0
VSR eS S 00 30 36.3 -1.7
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,9.0nm,1.0s
VSR pmax pmax
comp=E,8.0nm,0.9s
VSR smax
comp=N,180nm,4.1s
VSR smax
comp=Z,190nm,5.3s
VSR smax
comp=E,140nm,5.0s
VSR MLR MLR
comp=N,680nm,16.0s,MS5.1
VSR MLR MLR
comp=Z,680nm,16.0s,MS5.0
VSR MLR MLR
comp=E,540nm,20.0s,MS5.1
KSH Kashi 73.96 316 P P 00 21 14.0 +3.9
KSH eqP pP 00 21 24.6 +7.6
KSH esP sP 00 21 28.5 +9.0
KSH ePP PP 00 24 01.1 +6.5
KSH eS S 00 30 43.2 +2.3
KSH esS sS 00 31 00.2 +8.0
KSH eSKS 00 31 14.0
KSH eScS ScS 00 31 18.1 -0.6
KSH eSS SS 00 35 30.2 +5.8
KSH pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
KSH pmax pmax
comp=Z,34nm,1.1s,mb5.2
KSH LR LR
comp=N,160nm,7.7s
KSH LR LR
comp=E,340nm,11.8s
KSH LR LR
comp=Z,450nm,12.7s,MS5.0
VORD Divnogorie 73.96 345 eP P 00 21 09.1 -0.8
VORD pmax pmax
comp=Z,30nm,1.0s,mb5.2
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,20nm,0.6s
VORD MLR MLR
comp=Z,760nm,15.0s,MS5.1
VORD MLR MLR
comp=N,780nm,17.0s,MS5.1
VORD MLR MLR
comp=E,540nm,18.0s,MS5.1
IBBN Ibbenburen 74.12 6 eP P 00 21 11.2 +0.4
comp=Z,72nm,1.2s,mb5.5
WTSB Winterswijk 74.41 6⇑ eP P 00 21 12.5 0.0
comp=Z,31nm,1.1s,mb5.2
CLZ Clausthal 74.72 4 eP P 00 21 14.9 +0.6
comp=Z,64nm,1.4s,mb5.4
CLZ Clausthal 74.72 4 eP P 00 21 14.9 +0.6
CLZ pmax pmax
comp=Z,64nm,1.4s,mb5.4
LSA Lhasa 74.94 300 P P 00 21 17.2 +1.3
LSA S S 00 30 45.4 -6.7
LSA LR LR
comp=N,770nm,16.6s,MS5.3
LSA LR LR
comp=E,970nm,17.6s,MS5.3
LSA LR LR
comp=Z,2μm,17.6s,MS5.4
CLL Collm 75.33 2 eP P 00 21 17.7 -0.2
comp=Z,23nm,1.0s,mb5.1
CLL Collm 75.33 2⇑ iP P 00 21 17.6 -0.3
comp=Z,23nm,1.0s,mb5.1
CLL eS S 00 31 04.0 +8.2
CLL LR LR
comp=Z,500nm,18.3s,MS4.8
CLL Collm 75.33 2⇑ iP P 00 21 17.6 -0.3
comp=Z,23nm,1.0s,mb5.1
CLL e(pP) pP 00 21 26.0 +1.3
CLL esP sP 00 21 28.0 +0.7
CLL eS S 00 31 01.0 +5.2
CLL ePS 00 31 34.0
CLL ePPS 00 31 45.0
CLL eSS SS 00 36 00.0 +16
CLL LmV 01 01 00.0
comp=Z,500nm,18.3s
PMG Port Moresby 75.38 231 P P 00 21 19.3 +0.7
comp=Z,26nm,0.9s,mb5.2
PMG Port Moresby 75.38 231 P P 00 21 19.3 +0.7
PMG pmax pmax
comp=Z,26nm,0.9s
AKASG Malin Array Be 75.43 352 P P 00 21 17.4 -1.0
comp=Z,18nm,0.6s,mb5.2,baz=8.4,slow=5.5,SNR=57
AKASG LR LR 01 00 15.0
comp=Z,1μm,18.4s,MS5.2,baz=10.0,slow=40
AKBB Malin Array Si 75.43 352 eP P 00 21 17.4 -1.0
KIEV Kiev 75.43 352 eP P 00 21 17.0 -1.5
comp=Z,31nm,0.9s,mb5.2
KIEV Kiev 75.43 352 eP P 00 21 17.0 -1.5
KIEV pmax pmax
comp=Z,31nm,0.9s,mb5.2
HGN Heimansgroeve 75.54 7⇑ eP P 00 21 19.2 +0.1
comp=Z,40nm,1.5s,mb5.1
SNF Seneffe 75.67 8 P P 00 21 20.2 +0.4
comp=Z,22nm,1.7s,mb4.8
MEM Membach 75.70 7 P P 00 21 20.2 +0.2
comp=Z,28nm,1.5s,mb5.0
BRG Berggiesshubel 75.79 2 eP P 00 21 20.5 0.0
comp=Z,32nm,1.5s,mb5.0
BRG Berggiesshubel 75.79 2 eP P 00 21 20.4 -0.1
comp=Z,20nm,1.1s,mb5.0
BRG S S 00 31 06.0 +5.2
BRG SS SS 00 36 08.0 +17
BRG ePKPPKP 00 48 19.6
comp=Z,15nm,1.8s
BRG
comp=N,586nm,18.6s
BRG
comp=E,302nm,18.9s
BRG
comp=Z,638nm,16.7s
BRG Berggiesshubel 75.79 2 eP P 00 21 20.4 -0.1
BRG S S 00 31 06.0 +5.2
BRG MLR MLR
comp=N,9μm,18.6s,MS6.1
BRG MLR MLR
comp=E,351nm,18.9s,MS6.1
BRG MLR MLR
comp=Z,181nm,16.7s,MS4.5
KSP Ksiaz 75.84 0 eP P 00 21 20.9 +0.1
KSP Ksiaz 75.84 0 eP P 00 21 19.5 -1.3
KSP eS S 00 31 01.9 +0.5
BCLA Clavier 75.84 7 P P 00 21 20.3 -0.5
comp=Z,29nm,1.8s,mb4.9
MOX Moxa 75.96 3 eP P 00 21 21.5 0.0
comp=Z,53nm,1.5s,mb5.2
MOX
comp=Z,400nm,19.0s
MOX Moxa 75.96 3 eP P 00 21 21.7 +0.2
comp=Z,56nm,1.6s,mb5.2
MOX Moxa 75.96 3 eP P 00 21 21.5 0.0
MOX pmax pmax
comp=Z,53nm,1.5s,mb5.2
MOX MLR MLR
comp=Z,400nm,19.0s,MS4.8
DOU Dourbes 76.11 8 P P 00 21 22.0 -0.3
comp=Z,16nm,2.0s,mb4.6
BAIF Baives 76.11 8⇑ iP P 00 21 22.6 +0.3
comp=Z,53nm,1.0s,mb5.1
BAIF Baives 76.11 8⇑ iP P 00 21 22.6 +0.3
comp=Z,26nm,1.0s,mb5.1
BAIF Baives 76.11 8⇑ iP P 00 21 22.6 +0.3
BAIF pmax pmax
comp=Z,26nm,1.0s,mb5.1
GIVF Givet 76.12 8⇑ iP P 00 21 22.6 +0.2
comp=Z,106nm,1.4s,mb5.3
GIVF Givet 76.12 8⇑ iP P 00 21 22.6 +0.2
comp=Z,53nm,1.4s,mb5.3
GIVF Givet 76.12 8⇑ iP P 00 21 22.6 +0.2
GIVF pmax pmax
comp=Z,53nm,1.4s,mb5.3
PVCC Panska Ves 76.14 1 eP P 00 21 22.7 +0.2
PVCC MLR MLR
comp=Z,800nm,18.1s,MS5.1
PVCC Panska Ves 76.14 1⇑ eP P 00 21 22.7 +0.2
PVCC AMS AMS 01 04 40.0
comp=Z,800nm,18.1s
UPC Upice 76.17 0 eP P 00 21 23.2 +0.5
UPC Upice 76.17 0⇑ eP P 00 21 23.2 +0.5
TANN Tannenbergstha 76.21 3 eP P 00 21 23.4 +0.5
comp=Z,30nm,1.6s,mb5.0
TNS Taunus Mts 76.24 5 eP P 00 21 23.3 +0.2
comp=Z,38nm,1.0s,mb5.3
TNS Taunus Mts 76.24 5 eP P 00 21 23.3 +0.2
TNS pmax pmax
comp=Z,38nm,1.0s,mb5.3
SDDR Presa de Saban 76.26 77 eP P 00 21 24.4 +0.7
comp=Z,9.8nm,0.7s,mb4.8
DPC Dobruska-Polom 76.33 0 eP P 00 21 24.0 +0.4
DPC eS S 00 31 05.2 -1.7
DPC MLR MLR
comp=Z,500nm,17.1s,MS4.9
DPC Dobruska-Polom 76.33 0 eP P 00 21 24.0 +0.4
DPC eS S 00 31 05.2 -1.7
DPC AMS AMS 01 04 10.0
comp=Z,500nm,17.1s
OJC Ojcow 76.42 358 eP P 00 21 24.1 0.0
ABH Alteburg 76.53 6 eP P 00 21 25.1 +0.4
WLF Walferdange 76.65 7 P P 00 21 25.8 +0.4
comp=Z,31nm,1.6s,mb5.0
WLF Walferdange 76.65 7 eP P 00 21 25.7 +0.3
comp=Z,76nm,1.5s,mb5.4
WLF Walferdange 76.65 7 eP P 00 21 24.9 -0.5
comp=Z,56nm,1.4s,mb5.3
WLF Walferdange 76.65 7 eP P 00 21 24.9 -0.5
WLF pmax pmax
comp=Z,57nm,1.4s,mb5.3
LVV L'vov 76.67 355 eP P 00 21 25.5 0.0
LVV MLR MLR
comp=N,600nm,18.0s,MS5.0
LVV MLR MLR
comp=E,300nm,18.0s,MS5.0
LVV MLR MLR
comp=Z,800nm,18.0s,MS5.1
RUP Ruppelstein 76.68 6 eP P 00 21 25.8 +0.2
PRU Pruhonice 76.68 1⇑ iP P 00 21 26.3 +0.7
PRU eS S 00 31 14.2 +3.5
PRU MLR MLR
comp=Z,700nm,17.4s,MS5.0
PRU Pruhonice 76.68 1⇑ iP P 00 21 26.3 +0.7
PRU eS S 00 31 14.2 +3.5
PRU AMS AMS 01 04 50.0
comp=Z,700nm,17.4s
OKC Ostrava-Krasne 76.84 359 eP P 00 21 26.6 +0.2
OKC eS S 00 31 24.3 +12
OKC MLR MLR
comp=Z,600nm,17.0s,MS5.0
OKC Ostrava-Krasne 76.84 359⇑ eP P 00 21 26.6 +0.2
OKC eXS sS 00 31 24.3 +0.6
OKC AMS AMS 01 05 40.0
comp=Z,600nm,17.0s
TOD Tromm 76.88 5 eP P 00 21 27.2 +0.5
GRA1 Grafenberg Arr 76.90 3 eP P 00 21 27.4 +0.6
comp=Z,57nm,1.2s,mb5.4
GRA1 LR LR
comp=Z,500nm,18.7s,MS4.9
GRF Grafenberg Arr 76.90 3 eP P 00 21 27.4 +0.6
comp=Z,57nm,1.2s,mb5.4
GRF eL 01 02 44.7
comp=Z,546nm,18.7s
GRF Grafenberg Arr 76.90 3 eP P 00 21 27.4 +0.6
GRF pmax pmax
comp=Z,57nm,1.2s,mb5.4
GRF MLR MLR
comp=Z,500nm,18.7s,MS4.9
MORC Moravsky Berou 76.90 359 eP P 00 21 26.5 -0.4
comp=Z,12nm,1.0s,mb4.8
MORC ePP PP 00 24 18.2 -0.9
MORC Moravsky Berou 76.90 359 eP P 00 21 26.5 -0.3
MORC e 00 24 18.2
MORC pmax pmax
comp=Z,12nm,1.0s,mb4.8
MORC Moravsky Berou 76.90 359 P P 00 21 27.3 +0.5
MORC Moravsky Berou 76.90 359⇑ iP P 00 21 27.2 +0.4
KWP Kalwaria Pacla 76.92 356 eP P 00 21 27.5 +0.6
KWP Kalwaria Pacla 76.92 356 eP P 00 21 27.0 +0.1
comp=Z,69nm,0.9s,mb5.6
KWP Kalwaria Pacla 76.92 356 eP P 00 21 27.0 +0.1
KWP pmax pmax
comp=Z,69nm,0.9s,mb5.6
KWP Kalwaria Pacla 76.92 356⇓ iP P 00 21 27.7 +0.8
FLN La Foliniere 76.92 11 eP P 00 21 26.7 -0.3
comp=Z,85nm,1.3s,mb5.2
FLN eMLR MLR
comp=Z,1μm,20.8s,MS4.8
FLN La Foliniere 76.92 11 eP P 00 21 26.7 -0.3
comp=Z,42nm,1.3s,mb5.2
FLN LR LR
comp=Z,1μm,20.8s,MS5.1
FLN La Foliniere 76.92 11 eP P 00 21 26.7 -0.3
FLN pmax pmax
comp=Z,42nm,1.3s,mb5.2
FLN MLR MLR
comp=Z,1μm,20.8s,MS5.1
ROSF Rostrenen 76.98 13 eP P 00 21 27.3 0.0

comp=Z,91nm,1.4s,mb5.2
ROSF Rostrenen 76.98 13 *e*P **P 00 21 27.3 0.0**
comp=Z,46nm,1.4s,mb5.2
ROSF Rostrenen 76.98 13 *e*P **P 00 21 27.3 0.0**
ROSF pmax pmax
comp=Z,46nm,1.4s,mb5.2
LDF La Druitiere 77.13 11⇑*i*P **P 00 21 27.8 -0.3**
comp=Z,18nm,0.9s,mb4.7
LDF La Druitiere 77.13 11⇑*i*P **P 00 21 27.8 -0.3**
comp=Z,8.9nm,0.9s,mb4.7
LDF La Druitiere 77.13 11⇑*i*P **P 00 21 27.8 -0.3**
LDF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
SGMF Saint Gilles 77.16 13 *e*P **P 00 21 28.3 0.0**
comp=Z,146nm,1.4s,mb5.4
SGMF Saint Gilles 77.16 13 *e*P **P 00 21 28.3 0.0**
comp=Z,73nm,1.4s,mb5.4
SGMF Saint Gilles 77.16 13 *e*P **P 00 21 28.3 0.0**
SGMF pmax pmax
comp=Z,73nm,1.4s,mb5.4
STHS Stebnicka Huta 77.19 357 *e*P **P 00 21 29.7 +1.3**
comp=Z,18nm,0.7s,mb5.1
STHS Stebnicka Huta 77.19 357 *e*P **P 00 21 29.7 +1.3**
STHS pmax pmax
comp=Z,18nm,0.7s,mb5.1
STHS Stebnicka Huta 77.19 357 *e*P **P 00 21 29.7 +1.3**
NIE Niedzica 77.21 357 *e*P **P 00 21 29.2 +0.6**
GRR Gorron 77.25 12 *e*P **P 00 21 28.8 0.0**
comp=Z,84nm,1.4s,mb5.2
GRR Gorron 77.25 12 *e*P **P 00 21 28.8 0.0**
comp=Z,42nm,1.4s,mb5.2
GRR Gorron 77.25 12 *e*P **P 00 21 28.8 0.0**
GRR pmax pmax
comp=Z,42nm,1.4s,mb5.2
VRAC Vranov 77.38 360⇑P **P 00 21 30.0 +0.5**
VRAC Vranov 77.38 360⇑*i*P **P 00 21 30.0 +0.5**
TREC Trest 77.39 1 *e*P **P 00 21 29.7 +0.2**
TREC MLR MLR
comp=Z,900nm,16.8s,MS5.2
TREC Trest 77.39 1⇑*e*P **P 00 21 29.7 +0.2**
TREC AMS AMS 01 04 40.0
comp=Z,900nm,16.8s
QUIF Quistinic 77.41 13 *e*P **P 00 21 29.6 -0.1**
LANF Langenberg 77.44 6 *e*P **P 00 21 30.3 +0.4**
WET Wettzell 77.50 2 *e*P **P 00 21 30.8 +0.6**
comp=Z,22nm,1.3s,mb4.9
WET Wettzell 77.50 2 *e*P **P 00 21 30.8 +0.6**
WET pmax pmax
comp=Z,22nm,1.3s,mb4.9
KHC Kasperske Hory 77.53 2 *e*P **P 00 21 30.5 +0.2**
comp=Z,23nm,1.0s,mb5.1
KHC Kasperske Hory 77.53 2⇑*i*P **P 00 21 31.0 +0.7**
KHC *e*S S 00 31 18.6 -1.3
KHC MLR MLR
comp=Z,900nm,19.2s,MS5.1
KHC Kasperske Hory 77.53 2⇑*i*P **P 00 21 31.0 +0.7**
KHC *e*S S 00 31 18.6 -1.3
KHC AMS AMS 01 05 20.0
comp=Z,900nm,19.2s
CRVS Cervenica-Dubn 77.69 357 *e*P **P 00 21 31.9 +0.6**
comp=Z,48nm,2.0s,mb5.1
CRVS Cervenica-Dubn 77.69 357 *e*P **P 00 21 31.9 +0.6**
CRVS pmax pmax
comp=Z,48nm,2.0s,mb5.1
CRVS Cervenica-Dubn 77.69 357 *e*P **P 00 21 31.9 +0.6**
MEZF Maizieres J'vi 77.73 8⇑*i*P **P 00 21 31.8 +0.3**
comp=Z,86nm,1.4s,mb5.2
MEZF Maizieres J'vi 77.73 8⇑*i*P **P 00 21 31.8 +0.3**
comp=Z,86nm,1.4s,mb5.5
STU Stuttgart 77.73 5 *e*P **P 00 21 31.4 -0.1**
comp=Z,17nm,0.9s,mb5.0
STU Stuttgart 77.73 5 *e*P **P 00 21 31.4 -0.1**
STU pmax pmax
comp=Z,17nm,0.9s,mb5.0
GEC2 GERESS Array S 77.81 2 *e*P **P 00 21 32.3 +0.4**
comp=Z,14nm,1.0s,mb4.8
GEC2 GERESS Array S 77.81 2 *e*P **P 00 21 32.3 +0.4**
GEC2 pmax pmax
comp=Z,14nm,1.0s,mb4.8
UZH Uzhgorod 77.93 356 *e*P **P 00 21 32.2 -0.4**
UZH *e* 00 21 46.4
UZH *e*S S 00 31 18.0 -6.3
CDF Champ du Feu 77.98 6⇑*i*P **P 00 21 33.1 +0.2**
comp=Z,30nm,1.1s,mb4.8
CDF Champ du Feu 77.98 6⇑*i*P **P 00 21 33.1 +0.2**
comp=Z,15nm,1.1s,mb4.8
CDF Champ du Feu 77.98 6⇑*i*P **P 00 21 33.1 +0.2**
CDF pmax pmax
comp=Z,15nm,1.1s,mb4.8
THEF They Montfort 78.07 7⇑*e*P **P 00 21 33.8 +0.4**
KOLL Kolacno 78.09 359 *e*P **P 00 21 34.3 +0.8**
KOLL Kolacno 78.09 359 *e*P **P 00 21 34.3 +0.8**
BFO Black Forest 78.12 6 *e*P **P 00 21 33.9 +0.2**
comp=Z,49nm,1.6s,mb5.2
BFO Black Forest 78.12 6 *e*P **P 00 21 33.9 +0.2**
BFO pmax pmax
comp=Z,49nm,1.6s,mb5.2
KECS Kecovo 78.14 357 *e*P **P 00 21 34.3 +0.5**
comp=Z,9.9nm,0.9s,mb4.7
KECS Kecovo 78.14 357 *e*P **P 00 21 34.3 +0.5**
KECS pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KECS Kecovo 78.14 357 *e*P **P 00 21 34.3 +0.5**
ECH Echery 78.17 6⇑*e*P **P 00 21 34.2 +0.3**
ECH Echery 78.17 6 *e*P **P 00 21 34.0 +0.1**
comp=Z,23nm,0.9s,mb5.1
ECH Echery 78.17 6 *e*P **P 00 21 34.0 +0.1**
ECH pmax pmax
comp=Z,23nm,0.9s,mb5.1
VYHS Vyhne 78.17 358 *e*P **P 00 21 34.6 +0.7**
comp=Z,22nm,1.5s,mb4.9
VYHS Vyhne 78.17 358 *e*P **P 00 21 34.6 +0.7**
VYHS pmax pmax
comp=Z,22nm,1.5s,mb4.9
VYHS Vyhne 78.17 358 *e*P **P 00 21 34.6 +0.7**
HAU Haudompre 78.32 7⇑*i*P **P 00 21 34.9 +0.1**
comp=Z,31nm,0.9s,mb5.0
HAU *e*MLR MLR
comp=Z,938nm,22.5s,MS4.8
HAU Haudompre 78.32 7⇑*i*P **P 00 21 34.9 +0.1**
comp=Z,15nm,0.9s,mb4.9
HAU LR LR
comp=Z,940nm,22.5s,MS5.1
HAU Haudompre 78.32 7⇑*i*P **P 00 21 34.9 +0.1**
HAU pmax pmax
comp=Z,15nm,0.9s,mb4.9
HAU MLR MLR
comp=Z,940nm,22.5s,MS5.1
SPAK Spaichingen-Ko 78.38 5⇑*e*P **P 00 21 35.5 +0.4**
TRPA Tarpa 78.42 356⇓*i*P **P 00 21 36.3 +1.0**
FUR Furstenfeldbru 78.42 4 *e*P **P 00 21 35.9 +0.6**
comp=Z,53nm,1.5s,mb5.2
FUR Furstenfeldbru 78.42 4 *e*P **P 00 21 35.9 +0.6**
FUR pmax pmax
comp=Z,53nm,1.5s,mb5.2
ZST Bratislava 78.49 360 *e*P **P 00 21 36.7 +1.0**
comp=Z,17nm,0.9s,mb5.0
ZST Bratislava 78.49 360 *e*P **P 00 21 36.7 +1.0**
ZST pmax pmax
comp=Z,17nm,0.9s,mb5.0
ZST Bratislava 78.49 360 *e*P **P 00 21 36.7 +1.0**
MOF Molkenrain 78.53 6⇑*e*P **P 00 21 36.0 +0.1**
HINF Hinteralfeld 78.54 7⇑*i*P **P 00 21 36.0 0.0**
comp=Z,68nm,1.3s,mb5.1
HINF Hinteralfeld 78.54 7⇑*i*P **P 00 21 36.0 0.0**
comp=Z,34nm,1.3s,mb5.1
HINF Hinteralfeld 78.54 7⇑*i*P **P 00 21 36.0 0.0**
HINF pmax pmax
comp=Z,34nm,1.3s,mb5.1
FELD Feldberg im Sc 78.56 6 *e*P **P 00 21 36.3 +0.2**
TAPN Taplejung 78.60 301 *e*P **P 00 21 36.9 +0.2**
comp=Z,120nm,1.0s,mb5.8
MYLDM Lahad Datu 78.70 263 P sP 00 21 53.8 +7.0
comp=Z,34nm,1.6s
PSZ Piszkesteto 78.72 358 *e*P **P 00 21 37.5 +0.5**
comp=Z,31nm,1.1s,mb5.2
PSZ Piszkesteto 78.72 358 *e*P **P 00 21 37.5 +0.5**
PSZ pmax pmax
comp=Z,31nm,1.1s,mb5.2
PSZ Piszkesteto 78.72 358⇓*i*P **P 00 21 37.7 +0.7**
PSZ Piszkesteto 78.72 358⇓*e*P **P 00 21 38.0 +1.0**
HYF Humbligny 78.73 10⇑*i*P **P 00 21 37.5 +0.4**
CONA Conrad Observa 78.76 0 *i* P **P 00 21 37.9 +0.7**
comp=Z,32nm,1.7s,mb5.0,SNR=22
BUR08 Bucovina Ar. S 78.77 354 *e*P **P 00 21 37.1 -0.2**
BUR01 Bucovina Ar. S 78.80 354 P **P 00 21 38.3 +0.9**
BURAR Bucovina Array 78.80 354⇓P **P 00 21 37.3 -0.1**
BURAR Bucovina Array 78.80 354⇓*i*P **P 00 21 37.3 -0.1**
BMR Baia Mare 78.83 355⇓P **P 00 21 38.4 +0.8**
BMR Baia Mare 78.83 355⇓*i*P **P 00 21 38.4 +0.8**
LOR Lormes 78.85 9⇑*i*P **P 00 21 37.8 +0.1**
comp=Z,60nm,1.1s,mb5.1
LOR *e*MLR MLR
comp=Z,703nm,18.2s,MS4.7
LOR Lormes 78.85 9⇑*i*P **P 00 21 37.8 +0.1**
comp=Z,30nm,1.1s,mb5.1
LOR LR LR
comp=Z,700nm,18.3s,MS5.0
LOR Lormes 78.85 9⇑*i*P **P 00 21 37.8 +0.1**
LOR pmax pmax
comp=Z,30nm,1.1s,mb5.1
LOR MLR MLR
comp=Z,700nm,18.3s,MS5.0
LOMF Lomont 79.00 7 *e*P **P 00 21 39.0 +0.5**
SSF Saint Saulge 79.02 9⇑*i*P **P 00 21 38.8 +0.1**
comp=Z,32nm,0.9s,mb4.9
SSF Saint Saulge 79.02 9⇑*i*P **P 00 21 38.8 +0.1**
comp=Z,16nm,0.9s,mb5.0
SSF Saint Saulge 79.02 9⇑*i*P **P 00 21 38.8 +0.1**
SSF pmax pmax
comp=Z,16nm,0.9s,mb5.0
GUN Gumba 79.07 302 *e*P **P 00 21 39.8 +0.6**
comp=Z,133nm,0.7s,mb6.0
RETA Reute 79.08 4⇑*i*P **P 00 21 39.2 +0.2**
comp=Z,26nm,1.6s,mb4.9,SNR=11
MFF Saint Martin d 79.09 12⇑*i*P **P 00 21 39.3 +0.3**
comp=Z,58nm,1.0s,mb5.2
MFF Saint Martin d 79.09 12⇑*i*P **P 00 21 39.3 +0.3**
comp=Z,29nm,1.0s,mb5.2
MFF Saint Martin d 79.09 12⇑*i*P **P 00 21 39.3 +0.3**
MFF pmax pmax
comp=Z,29nm,1.0s,mb5.2
JIRN Jiri 79.12 302 *e*P **P 00 21 40.4 +0.9**
KIS Kishinev 79.14 351 *e*P **P 00 21 36.0 -3.3**
KIS *e*S S 00 31 35.0 -2.3
KIS LRM 00 57 20.0
comp=Z,900nm,18.0s
KIS Kishinev 79.14 351 *e*P **P 00 21 36.0 -3.3**
KIS *e* 00 21 50.0
KIS *e* 00 24 45.0
KIS *e*S S 00 31 35.0 -2.3
KIS MLR MLR
comp=Z,1μm,18.0s,MS5.2
KIS MLR MLR
comp=N,700nm,17.0s
KIS MLR MLR
comp=Z,900nm,18.0s
ODAN Odare 79.17 301 *e*P **P 00 21 39.8 0.0**
comp=Z,78nm,1.1s,mb5.6
BUD Budapest 79.18 358⇑*e*P **P 00 21 40.4 +0.9**
MOTA Moosalm 79.24 4⇑*i*P **P 00 21 40.3 +0.5**
comp=Z,23nm,0.9s,mb5.1,SNR=24
WATA Walderalm 79.27 3⇑*i*P **P 00 21 40.6 +0.6**
comp=Z,29nm,1.1s,mb5.1,SNR=15
AVF Avril sur Loir 79.28 9⇑*i*P **P 00 21 40.0 0.0**
comp=Z,21nm,0.8s,mb4.8
AVF Avril sur Loir 79.28 9⇑*i*P **P 00 21 40.0 0.0**
comp=Z,10nm,0.8s,mb4.8
AVF Avril sur Loir 79.28 9⇑*i*P **P 00 21 40.0 0.0**
AVF pmax pmax
comp=Z,11nm,0.8s,mb4.8
WTTA Wattenberg 79.34 3 *i* P **P 00 21 41.2 +0.8**
comp=Z,30nm,0.9s,mb5.2,SNR=34
KKM Kota Kinabalu 79.36 266 *e*P **P 00 21 40.7 -0.3**
comp=Z,53nm,1.1s,mb5.4
KKM Kota Kinabalu 79.36 266 P sP 00 21 55.0 +4.6
comp=Z,47nm,1.2s
CHTO Chiang Mai 79.38 287 *e*P **P 00 21 40.4 -0.6**
comp=Z,9.0nm,0.8s,mb4.8
CHTO Chiang Mai 79.38 287 *e*P **P 00 21 40.4 -0.6**
CHTO pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
CHTO Chiang Mai 79.38 287 P **P 00 21 40.5 -0.5**
comp=Z,14nm,1.4s,mb4.7
ARSA Arzberg 79.43 1 *i* P **P 00 21 41.7 +0.8**
comp=Z,18nm,1.0s,mb5.0,SNR=11
BGF Bois d'Agland 79.46 9⇑*i*P **P 00 21 41.1 +0.1**
comp=Z,95nm,1.5s,mb5.2
BGF Bois d'Agland 79.46 9⇑*i*P **P 00 21 41.1 +0.1**
comp=Z,47nm,1.5s,mb5.2
BGF Bois d'Agland 79.46 9⇑*i*P **P 00 21 41.1 +0.1**
BGF pmax pmax
comp=Z,47nm,1.5s,mb5.2
SMF Signal de Mont 79.47 9⇑*i*P **P 00 21 41.1 0.0**
comp=Z,50nm,0.9s,mb5.1
SMF Signal de Mont 79.47 9⇑*i*P **P 00 21 41.1 0.0**
comp=Z,25nm,0.9s,mb5.1
SMF Signal de Mont 79.47 9⇑*i*P **P 00 21 41.1 0.0**
SMF pmax pmax
comp=Z,25nm,0.9s,mb5.1
KKN Kakani 79.47 303 *e*P **P 00 21 41.8 +0.4**
comp=Z,207nm,1.2s,mb6.0
RAMN Ramite 79.50 301 *e*P **P 00 21 41.8 +0.2**
comp=Z,238nm,1.0s,mb6.1
FETA Feichten 79.55 4 *i* P **P 00 21 42.3 +0.8**
comp=Z,38nm,1.2s,mb5.2,SNR=36
KBA Koenbreinsper 79.57 2 *i* P **P 00 21 42.9 +1.2**
comp=Z,76nm,1.1s,mb5.5,SNR=10
PKI Pulchoki 79.59 303 *e*P **P 00 21 42.3 +0.2**
comp=Z,185nm,1.2s,mb5.9
PKIN Phulchowki 79.59 303 *e*P **P 00 21 42.3 +0.2**
comp=Z,106nm,0.9s,mb5.8
GKN Gorkha 79.62 303 *e*P **P 00 21 42.5 +0.3**
comp=Z,98nm,0.8s,mb5.8
TCF Toulx Ste Croi 79.66 10⇑*i*P **P 00 21 42.1 -0.1**
comp=Z,20nm,1.3s,mb4.9
TCF Toulx Ste Croi 79.66 10⇑*i*P **P 00 21 42.1 -0.1**
comp=Z,20nm,1.3s,mb4.9
TCF Toulx Ste Croi 79.66 10⇑*i*P **P 00 21 42.1 -0.1**
TCF pmax pmax
comp=Z,20nm,1.3s,mb4.9
CM31 Chiang Mai Arr 79.67 287 *e*P **P 00 21 42.3 -0.3**
comp=Z,18nm,0.8s,mb5.1
CM31 *e*PP PP 00 24 42.5 -0.7
CMAR Chiang Mai Arr 79.67 287 P **P 00 21 42.5 -0.1**
comp=Z,23nm,1.0s,mb5.0,baz=16,slow=5.4,SNR=56
CMAR LR LR 00 58 40.8
comp=Z,643nm,20.9s,MS5.0,baz=37,slow=37
CABF La Chapelle 79.69 7⇑*i*P **P 00 21 43.0 +0.7**
comp=Z,57nm,1.1s,mb5.1
CABF La Chapelle 79.69 7⇑*i*P **P 00 21 43.0 +0.7**
comp=Z,28nm,1.1s,mb5.1
CABF La Chapelle 79.69 7⇑*i*P **P 00 21 43.0 +0.7**
CABF pmax pmax
comp=Z,28nm,1.1s,mb5.1
DMN Daman 79.71 303 *e*P **P 00 21 43.2 +0.5**
comp=Z,231nm,1.2s,mb6.0
KLP Kalpa 79.71 310 *e*PKP **P 00 21 42.8 +0.1**
DRGR 79.75 356⇑P **P 00 21 42.8 +0.2**
DRGR 79.75 356⇑*i*P **P 00 21 42.8 +0.2**
DZM Mont Dzumac 79.78 208 *e*S S 00 31 40.0 -4.4
comp=Z,155nm,24.4s
DZM *e*LR LR 00 46 35.2
comp=Z,1μm,22.1s
TESR 79.80 353⇓P **P 00 21 42.6 -0.3**
TESR 79.80 353⇓*i*P **P 00 21 42.6 -0.3**
ABTA Abfaltersbach 79.88 3⇑*i*P **P 00 21 43.6 +0.3**
comp=Z,25nm,1.1s,mb5.1,SNR=15
JOSI Joshimath 79.94 309 *e*PKP **P 00 21 43.4 -0.5**
SOKA Soboth 80.00 1⇓*i*P **P 00 21 44.5 +0.5**
comp=Z,47nm,1.3s,mb5.3
MYKA Terra Mystica 80.03 2⇑*i*P **P 00 21 44.4 +0.3**
comp=Z,13nm,1.0s,mb4.8
PERS Pernice 80.04 1 *i* P **P 00 21 44.6 +0.4**
PERS *i* 00 21 56.2
MAK Makhachkala 80.10 337 *e*P **P 00 21 44.7 +0.1**
MAK *e* 00 21 56.2
MAK *e* 00 24 43.7
MAK *e*PPP 00 26 43.0
MAK *e*S S 00 31 45.3 -2.3
MAK pmax pmax
comp=Z,285nm,1.6s,mb6.0
KIV Kislovodsk 80.16 341 P **P 00 21 46.8 +1.9**
comp=Z,149nm,0.7s,mb6.0,SNR=6.8
KIV Kislovodsk 80.16 341 *e*P **P 00 21 44.3 -0.6**
comp=Z,51nm,1.0s,mb5.4
KIV Kislovodsk 80.16 341 *e*P **P 00 21 45.6 +0.7**
KIV *e*S S 00 31 47.8 -0.4
KIV *e*SSS 00 40 25.6
KIV pmax pmax
comp=Z,29nm,1.1s,mb5.1
ANN Anapa 80.25 345 *e**PP **P 00 21 44.8 -0.6**
KOLN Koldanda 80.32 304 *e*P **P 00 21 46.1 +0.1**
comp=Z,81nm,1.0s,mb5.6
RKT Rikitea 80.39 153 *e*S S 00 31 44.2 -6.6
comp=Z,491nm,23.8s
RKT *e*LR LR 00 46 39.4
comp=Z,968nm,31.2s,baz=346
VRI Vrincioaia 80.43 353⇓P **P 00 21 46.1 -0.2**
VRI Vrincioaia 80.43 353⇓*i*P **P 00 21 46.1 -0.2**
PLOR Plostina 80.45 353⇓P **P 00 21 46.2 -0.2**
PLOR Plostina 80.45 353⇓*i*P **P 00 21 46.2 -0.2**
PKSM Moragy 80.46 358⇑P **P 00 21 46.5 0.0**
PKSM Moragy 80.46 358⇑*i*P **P 00 21 46.5 +0.1**
RJF Les Rejaudoux 80.56 11 *e*P **P 00 21 47.0 0.0**
comp=Z,26nm,1.1s,mb4.8
RJF *e*MLR MLR
comp=Z,949nm,20.5s,MS4.8
RJF Les Rejaudoux 80.56 11 *e*P **P 00 21 47.0 0.0**
comp=Z,13nm,1.1s,mb4.8
RJF LR LR
comp=Z,950nm,20.5s,MS5.1
RJF Les Rejaudoux 80.56 11 *e*P **P 00 21 47.0 0.0**
RJF pmax pmax
comp=Z,13nm,1.1s,mb4.8
RJF MLR MLR
comp=Z,950nm,20.5s,MS5.1
LJU Ljubljana 80.63 1 *i* P **P 00 21 47.0 -0.4**
LJU *i* 00 22 01.8
VOY Vojsko 80.63 2 *e*P **P 00 21 47.2 -0.2**
VOY *e* pP 00 21 54.8 +0.5
JAVS Javornik 80.77 2 *i* P **P 00 21 47.7 -0.4**
JAVS *i* pP 00 21 55.6 +0.5
LPL La Plagne 80.82 7⇑*i*P **P 00 21 49.8 +1.4**
comp=Z,32nm,1.2s,mb4.8
LPL La Plagne 80.82 7⇑*i*P **P 00 21 49.8 +1.4**
comp=Z,16nm,1.2s,mb4.8
LPL La Plagne 80.82 7⇑*i*P **P 00 21 49.8 +1.4**
LPL pmax pmax
comp=Z,16nm,1.2s,mb4.8
LFF La Frestale 80.83 11 *e*P **P 00 21 48.8 +0.3**
comp=Z,46nm,1.1s,mb5.0
LFF La Frestale 80.83 11 *e*P **P 00 21 48.8 +0.3**
comp=Z,23nm,1.1s,mb5.0
LFF La Frestale 80.83 11 *e*P **P 00 21 48.8 +0.3**
LFF pmax pmax
comp=Z,23nm,1.1s,mb5.0
LPG La Plagne 80.84 7⇑*i*P **P 00 21 50.1 +1.6**
comp=Z,32nm,1.0s,mb4.9
LPG La Plagne 80.84 7⇑*i*P **P 00 21 50.1 +1.6**
comp=Z,16nm,1.0s,mb4.9
LPG La Plagne 80.84 7⇑*i*P **P 00 21 50.1 +1.6**
LPG pmax pmax
comp=Z,16nm,1.0s,mb4.9
MLR Muntele Rosu 80.86 353⇓P **P 00 21 49.2 +0.6**
MLR Muntele Rosu 80.86 353⇓*i*P **P 00 21 49.3 +0.7**
SSB Saint Sauveur 80.88 8 *e*P **P 00 21 49.0 +0.3**
comp=Z,13nm,1.0s,mb4.8
SSB Saint Sauveur 80.88 8 *e*P **P 00 21 49.0 +0.2**
SSB pmax pmax
comp=Z,13nm,1.0s,mb4.8
BZS Buzias 80.97 356⇓P **P 00 21 49.5 +0.3**
BZS Buzias 80.97 356⇓*i*P **P 00 21 49.5 +0.3**
VOIR 80.97 354⇓P **P 00 21 49.7 +0.5**
VOIR 80.97 354⇓*i*P **P 00 21 49.7 +0.5**
CAF Calviac 80.99 10⇑*i*P **P 00 21 49.6 +0.3**
KBL Kabul 81.05 318 *e*P **P 00 21 48.4 -1.4**
comp=Z,19nm,1.0s,mb5.0
KBL Kabul 81.05 318 *e*P **P 00 21 48.4 -1.4**
KBL pmax pmax
comp=Z,19nm,1.0s,mb5.0
ZEI Tsey 81.06 340 *e*P **P 00 21 47.5 -2.2**
ZEI pmax pmax
comp=Z,63nm,1.4s,mb5.3
SOC Sochi 81.07 343*c i*P **P 00 21 49.7 -0.1**
SOC *e**PP pP 00 21 58.1 +1.4
SOC *e**SP sP 00 22 01.9 +2.7
SOC *e*S S 00 31 56.9 -0.8
SOC *e*SS SS 00 37 12.5 +1.6
SOC *e*SSS 00 40 35.3
SOC pmax pmax
comp=Z,35nm,0.8s,mb5.3
GZR Gura Zlata 81.14 355⇑P **P 00 21 50.4 +0.2**
GZR Gura Zlata 81.14 355⇑*i*P **P 00 21 50.3 +0.2**
BOJS Bojanci 81.18 1 *i* P **P 00 21 50.5 +0.2**
BOJS *i* 00 22 02.7
VIVF Saint-Julien-l 81.32 8⇑*i*P **P 00 21 51.5 +0.4**
comp=Z,66nm,1.3s,mb5.1
VIVF Saint-Julien-l 81.32 8⇑*i*P **P 00 21 51.5 +0.4**
comp=Z,33nm,1.3s,mb5.1
VIVF Saint-Julien-l 81.32 8⇑*i*P **P 00 21 51.5 +0.4**
VIVF pmax pmax
comp=Z,33nm,1.3s,mb5.1
ORIF Oris-en-Rattie 81.35 8⇑*i*P **P 00 21 52.1 +0.8**
comp=Z,24nm,0.9s,mb4.8
ORIF *e*MLR MLR
comp=Z,738nm,20.2s,MS4.7
ORIF Oris-en-Rattie 81.35 8⇑*i*P **P 00 21 52.1 +0.8**
comp=Z,12nm,0.9s,mb4.8
ORIF Oris-en-Rattie 81.35 8⇑*i*P **P 00 21 52.1 +0.8**
ORIF pmax pmax
comp=Z,12nm,0.9s,mb4.8
MBDF Montbardon 81.61 7⇑*i*P **P 00 21 54.1 +1.5**
comp=Z,53nm,0.8s,mb5.2
MBDF Montbardon 81.61 7⇑*i*P **P 00 21 54.1 +1.5**
comp=Z,26nm,0.8s,mb5.2
MBDF Montbardon 81.61 7⇑*i*P **P 00 21 54.1 +1.5**
MBDF pmax pmax
comp=Z,27nm,0.8s,mb5.2
TIRR Tirgusor 81.69 351 *e*P **P 00 21 52.9 -0.2**
TIRR Tirgusor 81.69 351⇑*i*P **P 00 21 52.9 -0.1**
GOR Gori 81.77 340 P **P 00 21 54.3 +1.0**
TBLG Delisi 81.88 339 *e*P **P 00 21 55.0 +0.9**
TBLG Delisi 81.88 339 P **P 00 21 55.1 +1.0**
ABKT Ailbek 81.90 328 P **P 00 21 55.5 +1.2**
comp=Z,98nm,1.0s,mb5.7,SNR=7.6
MTA Mtatsminda 81.91 339 P **P 00 21 55.0 +0.7**
DGRG David-gareji 82.01 338 P **P 00 21 55.0 +0.2**
LASF Ste Croix 82.02 9 *e*P **P 00 21 55.4 +0.6**
comp=Z,53nm,1.5s,mb5.0
SMRF Simiane la Rot 82.27 8⇑*i*P **P 00 21 57.2 +1.1**
comp=Z,51nm,1.1s,mb5.0
SMRF Simiane la Rot 82.27 8⇑*i*P **P 00 21 57.2 +1.1**
comp=Z,51nm,1.1s,mb5.4
TOUF Mont Tournerai 82.35 7 *e*P **P 00 21 57.4 +0.9**
AUTN L'Aution 82.39 7 *e*P **P 00 21 57.7 +1.0**
SJPF Ste Jean 82.39 13 *e*P **P 00 21 56.6 -0.1**
comp=Z,16nm,1.1s,mb4.6
SJPF Ste Jean 82.39 13 *e*P **P 00 21 56.6 -0.1**
comp=Z,7.8nm,1.1s,mb4.5
SJPF Ste Jean 82.39 13 *e*P **P 00 21 56.6 -0.1**
SJPF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
SAOF Saorge 82.40 6 *e*P **P 00 21 57.4 +0.6**
MVIF Mont Vial 82.46 7 *e*P **P 00 21 57.7 +0.6**
LUCF Luceram 82.48 7 *e*P **P 00 21 57.5 +0.3**
SBF Sospel 82.52 7⇑*i*P **P 00 21 57.7 +0.3**
comp=Z,90nm,0.9s,mb5.5
SBF Sospel 82.52 7⇑*i*P **P 00 21 57.7 +0.3**
comp=Z,45nm,0.9s,mb5.5
SBF Sospel 82.52 7⇑*i*P **P 00 21 57.7 +0.3**
SBF pmax pmax
comp=Z,45nm,0.9s,mb5.5
DIVS Divibare 82.54 357 P **P 00 21 57.5 0.0**
MTLF Montolieu 82.58 10⇑*i*P **P 00 21 58.1 +0.4**
comp=Z,44nm,1.2s,mb5.1
MTLF Montolieu 82.58 10⇑*i*P **P 00 21 58.1 +0.4**
comp=Z,22nm,1.2s,mb5.1
MTLF Montolieu 82.58 10⇑*i*P **P 00 21 58.1 +0.4**
MTLF pmax pmax
comp=Z,22nm,1.2s,mb5.1
NDI New Delhi 82.60 309 *e*PKP **P 00 21 58.4 +0.3**
NDI AMb AMB 00 22 12.3
comp=Z,43nm,1.4s,mb5.3
REVF Revere 82.64 7 *e*P **P 00 21 58.5 +0.5**
EPF Esparros 82.67 12 *e*P **P 00 21 58.6 +0.4**
comp=Z,35nm,1.4s,mb4.9
EPF Esparros 82.67 12 *e*P **P 00 21 58.6 +0.4**
comp=Z,18nm,1.4s,mb4.9
EPF Esparros 82.67 12 *e*P **P 00 21 58.6 +0.4**
EPF pmax pmax
comp=Z,18nm,1.4s,mb4.9
ETSF Etsaut 82.69 13 *e*P **P 00 21 58.9 +0.6**
comp=Z,33nm,1.1s,mb5.0
ETSF Etsaut 82.69 13 *e*P **P 00 21 58.9 +0.6**
comp=Z,16nm,1.1s,mb5.0
ETSF Etsaut 82.69 13 *e*P **P 00 21 58.9 +0.6**

ETSF					pmax	pmax			
	comp=Z,16nm,1.1s,mb5.0								
FRF	**La Foret Royal**	**82.76**		**7**⇑	*i*P	**P**	**00 21 59.1**	**+0.4**	
	comp=Z,42nm,1.1s,mb5.1								
FRF	**La Foret Royal**	**82.76**		**7**⇑	*i*P	**P**	**00 21 59.1**	**+0.4**	
	comp=Z,21nm,1.1s,mb5.1								
FRF	**La Foret Royal**	**82.76**		**7**⇑	*i*P	**P**	**00 21 59.1**	**+0.4**	
FRF					pmax	pmax			
	comp=Z,21nm,1.1s,mb5.1								
AYAN	**Aya Nagar**	**82.81**	**309**		*e*PKP	**P**	**00 21 58.5**	**-0.7**	
AYAN					AMb	AMB	00 22 00.1		
	comp=Z,10nm,0.4s,mb5.2								
PBRG	**Braganca**	**82.81**	**17**		*e*P	**P**	**00 22 00.4**	**+1.4**	
	comp=Z,24nm,2.0s,mb4.9								
LMR	**La Mourre**	**82.98**		**7**⇑	*i*P	**P**	**00 22 00.2**	**+0.4**	
	comp=Z,38nm,1.1s,mb5.0								
LMR	**La Mourre**	**82.98**		**7**⇑	*i*P	**P**	**00 22 00.2**	**+0.4**	
	comp=Z,19nm,1.1s,mb5.0								
LMR	**La Mourre**	**82.98**		**7**⇑	*i*P	**P**	**00 22 00.2**	**+0.4**	
LMR					pmax	pmax			
	comp=Z,19nm,1.1s,mb5.0								
ARTV	**Artvin**	**82.98**	**341**		*i*P	**P**	**00 21 58.6**	**-1.2**	
SONA	**Sohna**	**83.03**	**309**	⇓	*i*P	**P**	**00 22 01.4**	**+1.1**	
SZH	**Strazhica**	**83.08**	**353**		*e*P	**P**	**00 21 58.0**	**-2.3**	
PVRL	**Vila Real**	**83.15**	**18**		*e*P	**P**	**00 22 01.8**	**+1.1**	
	comp=Z,43nm,1.6s,mb5.2								
MVO	**Moncorvo**	**83.38**	**18**		*e*P	**P**	**00 22 03.6**	**+1.7**	
	comp=Z,30nm,1.9s,mb5.0								
MVO					*e*S	S	00 32 29.6	+8.1	
MVO					eLQ		00 46 49.8		
MVO					eLR	LR	00 52 29.5		
	comp=Z,849nm,18.0s								
KUDL	**Kundal**	**83.39**	**310**		*e*PKP	**P**	**00 21 60.0**	**-2.2**	
KUDL					AMb	AMB	00 22 02.5		
	comp=Z,32nm,0.7s,mb5.4								
GNI	**Garni**	**83.40**	**339**		P	**P**	**00 22 03.6**	**+1.6**	
	comp=Z,7.9nm,0.7s,mb4.8,baz=13,slow=5.4,SNR=10								
GNI	**Garni**	**83.40**	**339**	*c*	*i*P	**P**	**00 22 03.2**	**+1.2**	
GNI					pmax	pmax			
	comp=Z,25nm,1.2s								
DIGO	**Kars**	**83.43**	**340**		*i*P	**P**	**00 22 01.9**	**-0.3**	
AGRA	**Agra**	**83.49**	**308**		*e*PKP	**P**	**00 22 01.7**	**-1.0**	
PVIS	**Viseu**	**83.66**	**18**		*e*P	**P**	**00 22 04.1**	**+0.7**	
	comp=Z,57nm,1.6s,mb5.5								
KHET	**Khetri**	**83.76**	**310**		*i*P	**P**	**00 22 03.4**	**-0.7**	
KHET					AMb	AMB	00 22 05.0		
	comp=Z,26nm,0.9s,mb5.4								
VTS	**Vitosha**	**83.92**	**355**	⇑	P	**P**	**00 22 04.3**	**-0.3**	
VTS	**Vitosha**	**83.92**	**355**	⇑	*i*P	**P**	**00 22 04.3**	**-0.3**	
VTS	**Vitosha**	**83.92**	**355**		*i*P	**P**	**00 22 03.5**	**-1.1**	
PGF	**Pioggiola**	**83.92**	**6**		*e*P	**P**	**00 22 05.3**	**+0.6**	
	comp=Z,112nm,1.1s,mb5.6								
PGF	**Pioggiola**	**83.92**	**6**		*e*P	**P**	**00 22 05.3**	**+0.6**	
	comp=Z,56nm,1.1s,mb5.6								
PGF	**Pioggiola**	**83.92**	**6**		*e*P	**P**	**00 22 05.3**	**+0.6**	
PGF					pmax	pmax			
	comp=Z,56nm,1.1s,mb5.6								
MTE	**Manteigas**	**84.03**	**18**		*e*P	**P**	**00 22 06.5**	**+1.2**	
	comp=Z,47nm,1.9s,mb5.3								
MTE					*e*S	S	00 32 31.1	+3.0	
MTE					eLQ		00 47 23.2		
MTE					eLR	LR	00 51 41.1		
	comp=Z,450nm,18.0s								
MTE	**Manteigas**	**84.03**	**18**		*e*P	**P**	**00 22 05.5**	**+0.3**	
	comp=Z,35nm,1.4s,mb5.3								
AQU	**L'Aquila**	**84.30**	**2**		*e*P	**P**	**00 22 07.3**	**+0.7**	
	comp=Z,31nm,0.9s,mb5.4								
AQU	**L'Aquila**	**84.30**	**2**		*e*P	**P**	**00 22 07.3**	**+0.7**	
AQU					pmax	pmax			
	comp=Z,31nm,0.9s,mb5.4								
PLD	**Plovdiv**	**84.31**	**354**		P	**P**	**00 22 06.6**	**-0.1**	
PLD	**Plovdiv**	**84.31**	**354**		P	**P**	**00 22 06.6**	**-0.1**	
ERBA	**Erbaa**	**84.38**	**345**		*i*P	**P**	**00 22 08.4**	**+1.3**	
TTSI	**Tana Toraja**	**84.54**	**257**		P	sP	00 22 22.1	+4.5	
	comp=Z,28nm,1.4s								
PCBR	**Castelo Branco**	**84.58**	**18**		*e*P	**P**	**00 22 09.1**	**+1.0**	
	comp=Z,37nm,1.5s,mb5.3								
SBUM	**Sibu**	**84.60**	**267**		P	sP	00 22 21.0	+3.0	
	comp=Z,434nmcomp=Z,20nm,2.2s								
SKO	**Skopje**	**84.61**	**356**		*e*P	**P**	**00 22 07.8**	**-0.4**	
PTOM	**Tomar**	**84.62**	**19**		*e*P	**P**	**00 22 09.9**	**+1.6**	
	comp=Z,60nm,1.3s,mb5.6								
RZN	**Rozhen**	**84.73**	**354**		*e*P	**P**	**00 22 07.7**	**-1.1**	
MMB	**Musomiste**	**84.89**	**355**		*e*P	**P**	**00 22 09.2**	**-0.4**	
PMRV	**Marv??o**	**85.00**	**18**		*e*P	**P**	**00 22 11.9**	**+1.7**	
	comp=Z,22nm,1.3s,mb5.1								
PMRV					*e*S	S	00 32 40.3	+2.5	
PMRV					eLQ		00 48 19.4		
PMRV					eLR	LR	00 52 21.4		
	comp=Z,502nm,18.0s								
PMAFR	**Mafra**	**85.09**	**20**		*e*S	S	00 32 39.5	+0.8	
PMAFR					eLR	LR	00 53 24.0		
	comp=Z,735nm,18.0s								
SCER	**sogukcermik**	**85.12**	**344**		*i*P	**P**	**00 22 11.1**	**+0.3**	
CTA	**Charters Tower**	**85.21**	**226**		P	**P**	**00 22 10.7**	**-0.6**	
	comp=Z,2.0nm,0.5s,mb4.5,baz=0.0,slow=7.1,SNR=2.4								
RDO	**Rodhopi**	**85.21**	**353**		P	**P**	**00 22 11.8**	**+0.6**	
RDO	**Rodhopi**	**85.21**	**353**		P	**P**	**00 22 11.8**	**+0.6**	
VAY	**Valandovo**	**85.22**	**355**		P	**P**	**00 22 11.2**	**0.0**	
VAY	**Valandovo**	**85.22**	**355**		P	**P**	**00 22 11.2**	**0.0**	
VAY	**Valandovo**	**85.22**	**355**		*e*P	**P**	**00 22 11.1**	**-0.1**	
KRUS	**Krusevo**	**85.22**	**356**		*e*P	**P**	**00 22 10.7**	**-0.5**	
ESDC	**Sonseca Array**	**85.36**	**16**		P	**P**	**00 22 11.8**	**-0.2**	
	comp=Z,2.3nm,0.7s,mb4.4,baz=342,slow=4.6,SNR=14								
ESDC					LR	LR	01 02 31.4		
	comp=Z,526nm,20.9s,MS4.9,baz=335,slow=37								
ESLA	**Sonseca Array**	**85.36**	**16**		*e*P	**P**	**00 22 13.0**	**+1.1**	
	comp=Z,7.5nm,1.2s,mb4.7								
KNT	**Kendrikon**	**85.36**	**355**		P	**P**	**00 22 12.3**	**+0.4**	
KNT	**Kendrikon**	**85.36**	**355**		P	**P**	**00 22 12.3**	**+0.4**	
SRS	**Serrai**	**85.36**	**355**		P	**P**	**00 22 12.2**	**+0.2**	
SRS	**Serrai**	**85.36**	**355**		P	**P**	**00 22 12.2**	**+0.2**	
PAB	**San Pablo**	**85.42**	**16**		*e*P	**P**	**00 22 12.1**	**-0.1**	
	comp=Z,20nm,1.4s,mb5.0								
PAB	**San Pablo**	**85.42**	**16**		*e*P	**P**	**00 22 12.1**	**-0.2**	
PAB					pmax	pmax			
	comp=Z,20nm,1.4s,mb5.0								
KEMA	**Kemaliye**	**85.47**	**343**		*i*P	**P**	**00 22 13.0**	**+0.4**	
PESTR	**Estremoz**	**85.51**	**19**		*e*S	S	00 32 44.9	+2.1	
PESTR					eLQ		00 46 13.4		
PESTR					eLR	LR	00 52 32.7		
	comp=Z,646nm,18.0s								
BIA	**Bitola**	**85.57**	**356**		*e*P	**P**	**00 22 12.4**	**-0.6**	
GRG	**Griva**	**85.59**	**355**		P	**P**	**00 22 13.4**	**+0.3**	
GRG	**Griva**	**85.59**	**355**		P	**P**	**00 22 13.4**	**+0.3**	
BR131	**Keskin Array S**	**85.78**	**347**		*e*P	**P**	**00 22 14.4**	**+0.3**	
	comp=Z,20nm,0.8s,mb5.4								
BRTR	**Keskin Array B**	**85.78**	**347**		P	**P**	**00 22 14.4**	**+0.3**	
	comp=Z,12nm,0.8s,mb5.2,baz=40,slow=2.6,SNR=84								
BRTR					PKPPKP		00 48 29.9		
	comp=Z,0.3nm,0.6s,baz=174,slow=4.3,SNR=4.3								
BRTR					LR	LR	01 05 12.9		
	comp=Z,498nm,20.5s,MS4.9,baz=8.3,slow=39								
BRTR	**Keskin Array B**	**85.78**	**347**	*c*	*e*P	**P**	**00 22 14.3**	**+0.2**	
BRTR					pmax	pmax			
	comp=Z,12nm,0.8s								
BORA	**Eskisehir**	**86.02**	**349**		*i*P	**P**	**00 22 15.2**	**-0.1**	
BKSI	**Bulukumba**	**86.21**	**256**		P	sP	00 22 30.9	+5.0	
	comp=Z,23nm,1.3s								
PBAR	**Barrancos**	**86.28**	**18**		*e*P	**P**	**00 22 17.8**	**+1.2**	
	comp=Z,18nm,0.9s,mb5.3								
PBAR					*e*S	S	00 32 50.5	+0.1	
PBAR					eLQ		00 47 57.6		
PBAR					eLR	LR	00 52 15.0		
	comp=Z,632nm,16.0s								
BEST	**Besiri**	**86.29**	**341**		*i*P	**P**	**00 22 17.3**	**+0.7**	
MALT	**Malatya**	**86.41**	**343**		*e*P	**P**	**00 22 18.0**	**+0.8**	
	comp=Z,23nm,1.2s,mb5.3								
MALT	**Malatya**	**86.41**	**343**		*e*P	**P**	**00 22 18.0**	**+0.8**	
MALT					pmax	pmax			
	comp=Z,23nm,1.2s,mb5.3								
MALT	**Malatya**	**86.41**	**343**	⇑	*i*P	**P**	**00 22 18.5**	**+1.3**	
MALT	**Malatya**	**86.41**	**343**		P	**P**	**00 22 18.5**	**+1.3**	
	comp=Z,359nmcomp=Z,15nm,1.2s,mb5.1								
KSM	**Kuching**	**86.52**	**268**		*e*P	**P**	**00 22 18.6**	**+0.6**	
	comp=Z,44nm,1.1s,mb5.6								
PCVE	**Castro Verde**	**86.61**	**19**		*e*S	S	00 32 54.8	+1.1	
PCVE					eLQ		00 50 03.6		
PCVE					eLR	LR	00 55 02.9		
	comp=Z,678nm,18.0s								
MORF	**Marmelete**	**86.81**	**20**		*e*S	S	00 33 01.9	+6.3	
MORF					eLR	LR	00 55 16.5		
	comp=Z,810nm,18.0s								
PVAQ	**Vaqueiros**	**86.90**	**19**		*e*S	S	00 32 59.2	+2.7	
PVAQ					eLQ		00 49 29.2		
PVAQ					*e*P		00 51 31.0		
PVAQ					eLR	LR	00 53 24.4		
	comp=Z,476nm,18.0s								
OTAV	**Otavalo**	**86.91**	**94**		*e*P	**P**	**00 22 19.4**	**-0.5**	
	comp=Z,4.4nm,0.8s,mb4.7								
PFVI	**Vila Bisbo**	**86.94**	**20**		*e*S	S	00 33 00.6	+3.7	
PFVI					eLR	LR	00 54 11.8		
	comp=Z,725nm,16.0s								
PBDV	**Barranco-do-Ve**	**87.01**	**19**		*e*S	S	00 33 00.2	+2.6	
PBDV					eLR	LR	00 53 46.0		
	comp=Z,843nm,18.0s								
BHPL	**Bhopal**	**87.12**	**306**		*i*P	**P**	**00 22 20.0**	**-0.9**	
TIP	**Timpagrande**	**87.50**	**360**		*e*P	**P**	**00 22 22.9**	**+0.4**	
NGP	**Nagpur**	**88.11**	**304**		*ex*	**P**	**00 22 23.7**	**-2.0**	
AKL	**Akola**	**89.48**	**305**		*e*PKP	**P**	**00 22 32.1**	**-0.1**	
AKL					AMb	AMB	00 22 35.6		
	comp=Z,49nm,1.7s,mb5.5								
KEST	**Kesra**	**90.73**	**6**		*e*P	**P**	**00 22 37.6**	**-0.2**	
KEST	**Kesra**	**90.73**	**6**		P	**P**	**00 22 37.5**	**-0.2**	
	comp=Z,0.4nm,0.5s,baz=270,slow=3.0,SNR=3.7								
HYB	**Hyderabad**	**91.51**	**302**		*i*P	**P**	**00 22 41.0**	**-0.6**	
HYB					*e*		00 22 54.0		
MMAI	**Mount Meron Ar**	**92.10**	**344**		P	**P**	**00 22 43.5**	**-0.6**	
	comp=Z,0.6nm,0.4s,mb4.3,baz=61,slow=7.8,SNR=4.1								
MMAI					LR	LR	01 13 38.0		
	comp=Z,328nm,18.2s,MS4.8,baz=5.0,slow=42								
PSI	**Prapat**	**92.21**	**278**		P	**P**	**00 22 44.9**	**-0.1**	
	comp=Z,3.2nm,0.5s,mb5.0,baz=321,slow=6.5,SNR=3.1								
PSI					LR	LR	01 05 28.6		
	comp=Z,279nm,19.3s,MS4.7,baz=318,slow=36								
FITZ	**Fitzroy Crossi**	**95.56**	**244**		P	**P**	**00 22 48.5**	**-2.4**	
	comp=Z,3.5nm,0.8s,mb4.8								
SDSI	**Sungai Dareh**	**93.72**	**273**		P	sP	00 23 06.2	+4.9	
ASAR	**Alice Springs**	**93.98**	**235**		P	**P**	**00 22 52.0**	**-0.6**	
	comp=Z,1.2nm,0.9s,mb4.3,baz=30,slow=4.4,SNR=6.2								
STKA	**Stephens Creek**	**97.53**	**225**		LR	LR	01 05 40.7		
	comp=Z,308nm,18.1s,MS4.8,baz=25,slow=34								
TORD	**Torodi Ar. Bea**	**112.25**	**16**		PKPdf	PKiKP	00 28 09.3	-1.4	
TORD					PKKPbc	PKKPbc	00 38 59.0	0.0	
TORD					PKKP	PKKPdf	00 39 15.3	-2.0	
TORD	**Torodi Ar. Bea**	**112.25**	**16**		PKiKP	PKiKP	00 28 09.3	-1.4	
	comp=Z,0.4nm,0.5s,baz=336,slow=3.0,SNR=12								
TORD					PKKPbc	PKKPbc	00 38 59.0	0.0	
	comp=Z,1.2nm,0.9s,baz=125,slow=1.9,SNR=4.2								
TORD					PKKP	PKKPdf	00 39 15.3	-2.0	
	comp=Z,0.5nm,0.6s,baz=166,slow=2.1,SNR=5.1								
DBIC	**Dimbokro**	**117.24**	**24**		PKP	PKPdf	00 28 19.0	-1.4	
	comp=Z,2.1nm,0.9s,baz=172,slow=7.8,SNR=5.8								
KMBO	**Kilima Mbogo**	**124.85**	**334**		PKP	PKPdf	00 28 35.6	+0.5	
	comp=Z,2.7nm,0.8s,baz=180,slow=24,SNR=5.8								
QSPA	**South Pole Qui**	**143.46**	**180**		*e*PKPdf	PKPdf	00 29 04.8	-2.8	
TSUM	**Tsumeb**	**145.56**	**358**		*e*PKPdf	PKPdf	00 29 12.8	-0.3	
LBTB	**Lobatse**	**150.55**	**343**		*e*PKPbc	PKPbc	00 29 26.3	-0.2	
MAW	**Mawson**	**154.11**	**219**		PKPbc	PKPbc	00 29 31.9	-1.2	
	comp=Z,4.0nm,0.8s,baz=77,slow=6.2,SNR=4.5								
MAW					PKPab	PKPab	00 29 44.9	-2.1	
	comp=Z,12nm,1.1s,baz=278,slow=0.4,SNR=9.9								
BOSA	**Boshof**	**154.12**	**342**		PKPbc	PKPbc	00 29 32.2	-2.2	
	comp=Z,5.5nm,0.9s,baz=9.8,slow=2.3,SNR=7.1								
BOSA					PKPab	PKPab	00 29 47.0	-1.1	
	comp=Z,8.8nm,0.8s,baz=56,slow=1.1,SNR=5.7								

IDC 11 00:18:32.2±1.2, 0°33N×126°15E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.8/20, mbtmp4.0/6, Error ellipse: s-maj=161.6km s-min=18.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**25.01**	**163**	P	P	00 23 58.9	+0.9
	4.3nm,0.7s,baz=353,slow=16,SNR=25						
STKA	**Stephens Creek**	**35.21**	**157**	P	P	00 25 27.5	-0.9
	2.8nm,1.0s,baz=333,slow=14,SNR=2.4						
SONM	**Songino Array**	**50.33**	**343**	P	P	00 27 31.3	+0.5
	0.5nm,0.4s,baz=171,slow=9.5,SNR=3.9						
MKAR	**Makanchi Array**	**60.03**	**327**	P	P	00 28 40.5	-0.4
	1.1nm,0.5s,baz=119,slow=8.0,SNR=18						
ZALV	**Zalesovo Beam**	**63.35**	**334**	P	P	00 29 03.7	+0.6
	0.3nm,0.4s,baz=137,slow=3.0,SNR=2.9						
AKTO	**Aktyubinsk**	**75.96**	**322**	P	P	00 30 20.8	-0.2
	1.9nm,0.6s,baz=102,slow=6.2,SNR=8.0						

*ISCJB **11** 00:29:54.4±2.1, 53°.36N±0°.07×163°.41W±0°.07, h15km±15km, mb3.2/2, Error ellipse: s-maj=12.7km s-min=6.2km az=164.5*
*NEIC **11** 00:29:55.8, 53°.40N×163°.45W, h24km, ML3.2(AEIC), After AEIC.*
*IDC **11** 00:30:00.0±5.6, 53°.30N×162°.06W, h0km, mb3.3/2, mb1 3.6/4, mb1mx3.3/25, mbtmp3.2/4, ML2.9/2, Error ellipse: s-maj=103.1km s-min=37.8km az=94.0*
ISC 11 00:29:54.5±2.4, 53°.42N±0°.09×163°.50W±0°.07, h10km±18km, n13, σ0s85/21, mb3.2/2, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FALS	**False Pass**	**1.44**	**2**	P	**Pn**	**00 30 20.2**	**-0.3**
FALS				S	**Sn**	**00 30 39.9**	**+0.5**
AKUT	**Akutan**	**1.52**	**299**	P	**Pn**	**00 30 21.9**	**+0.2**
AKUT				S	**Sn**	**00 30 42.8**	**+1.3**
AKLV	**Akutan Long Va**	**1.63**	**298**	P	**Pn**	**00 30 22.6**	**-0.7**
AKLV				S	**Sn**	**00 30 43.8**	**-0.5**
AKGG	**Akutan Green G**	**1.67**	**299**	P	**Pn**	**00 30 23.2**	**-0.5**
UNV	**Unalaska Valle**	**1.84**	**285**	P	**Pn**	**00 30 26.3**	**+0.3**
UNV				*e*Sn	**Sn**	**00 30 48.9**	**-0.3**
UNV				S	**Sn**	**00 30 49.7**	**+0.4**
SDPT	**Sand Point**	**2.62**	**41**	P	**Pn**	**00 30 36.6**	**-0.1**
NIKO	**Nikolski**	**3.25**	**264**	P	**Pn**	**00 30 46.5**	**+1.1**
NIKO				Sn	**Sn**	**00 31 22.5**	**-1.7**
CHGN	**Chignik**	**4.12**	**44**	*e*Pn	**Pn**	**00 30 57.0**	**-0.3**
CHGN				*e*Sn	**Sn**	**00 31 44.6**	**-0.8**
KDAK	**Kodiak Island**	**7.57**	**50**	Pn	**Pn**	**00 31 43.2**	**-1.4**
	0.3nm,0.3s,baz=318,slow=6.7,SNR=7.2						
KDAK				Sn	**Sn**	**00 33 01.5**	**-8.9**
	baz=155,slow=17,SNR=4.2						
ILAR	**Eielson Array**	**14.16**	**30**	Pn	**Pn**	**00 33 15.4**	**+0.7**
	0.0nm,0.3s,baz=222,slow=1.1,SNR=3.0						
YKA	**Yellowknife Ar**	**26.84**	**51**	P	**P**	**00 35 36.2**	**+1.6**
YKA	**Yellowknife Ar**	**26.84**	**51**	P	**P**	**00 35 36.2**	**+1.6**
	0.3nm,0.5s,mb3.1,baz=271,slow=8.8,SNR=4.2						
TXAR	**Lajitas Array**	**49.23**	**95**	P	**P**	**00 38 43.4**	**+0.5**
	0.2nm,0.6s,mb3.4,baz=300,slow=5.7,SNR=5.3						

*ISCJB **11** 00:39:37.6±0.6, 10°.87N±0°.04×62°.40W±0°.03, h84km±7km, Error ellipse: s-maj=7.2km s-min=5.2km az=173.2*
*FUNV **11** 00:39:39.5, 10°.92N×62°.36W, h72km, MW2.9*
*TRN **11** 00:39:41.5, 10°.77N×62°.02W, h82km, MD3.1*
ISC 11 00:39:38.6±0.6, 10°.88N±0°.04×62°.40W±0°.03, h78km±7km, n20, σ0s97/33, 5D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.29**	**142**	*e*P	**Pn**	**00 39 50.9**	**+0.3**
GUIV				*e*S	**Sn**	**00 39 59.5**	**0.0**
TCE	**Chacachacare**	**0.66**	**105**	⇓*e*P	**Pn**	**00 39 53.2**	**-0.5**
TCE				*e*S	**Sn**	**00 40 03.8**	**-1.1**
CRUV	**Carupano**	**0.84**	**256**	⇓*i*P	**Pn**	**00 39 56.7**	**+1.1**
CRUV				*e*S	**Sn**	**00 40 08.3**	**-0.1**
ITEV	**Isla Los Testi**	**0.86**	**304**	⇓*i*P	**Pn**	**00 39 56.5**	**+0.6**
ITEV				*e*S	**Sn**	**00 40 08.6**	**-0.2**
GUNV	**Guanoco**	**0.89**	**217**	*e*P	**Pn**	**00 39 58.1**	**+1.9**
GUNV				*e*S	**Sn**	**00 40 10.3**	**+1.0**
TRN	**Trinidad (W)**	**1.01**	**103**	⇓*e*P	**Pn**	**00 39 56.9**	**-0.7**
TRN				*e*S	**Sn**	**00 40 06.9**	**-4.9**
TBH	**Brigand Hill**	**1.37**	**106**	⇓*e*P	**Pn**	**00 40 01.3**	**-0.8**
TOSP	**Speyside**	**1.88**	**77**	*e*P	**Pn**	**00 40 07.3**	**-1.5**
TOSP				*e*S	**Sn**	**00 40 27.3**	**-4.5**
ORIV	**Oritupano**	**2.05**	**209**	*e*P	**Pn**	**00 40 12.3**	**+1.2**
PCRV	**Puerto La Cruz**	**2.30**	**253**	*e*P	**Pn**	**00 40 15.4**	**+0.9**
PCRV				*e*S	**Sn**	**00 40 40.8**	**-1.2**
IBAV	**Isla La Blanqu**	**2.33**	**294**	*e*P	**Pn**	**00 40 15.1**	**+0.2**
IBAV				*e*S	**Sn**	**00 40 41.5**	**-1.2**
SVB	**Belmont**	**2.63**	**25**	*e*S	**Sn**	**00 40 51.4**	**+1.4**
RIOV	**Rio Grande**	**2.85**	**168**	*e*P	**Pn**	**00 40 22.0**	**+0.1**
PRGV	**PARIAGUAN**	**3.05**	**227**	*e*P	**Pn**	**00 40 25.1**	**+0.5**
PRGV				*e*S	**Sn**	**00 40 59.6**	**-0.5**
GURV	**El Guri**	**3.17**	**192**	*e*P	**Pn**	**00 40 27.2**	**+1.0**
CUPV	**Cœpira**	**3.43**	**257**	*e*P	**Pn**	**00 40 30.7**	**+1.0**
CUPV				*e*S	**Sn**	**00 41 08.6**	**-0.7**
MERV	**Las Mercedes**	**4.16**	**248**	*e*P	**Pn**	**00 40 39.4**	**-0.3**
MERV				*e*S	**Sn**	**00 41 24.8**	**-2.4**
LUEV	**Luepa**	**5.08**	**169**	*e*P	**Pn**	**00 40 52.2**	**-0.2**
CAOV	**Caicara del Or**	**5.24**	**228**	*e*P	**Pn**	**00 40 54.4**	**0.0**
CAOV				*e*S	**Sn**	**00 41 50.3**	**-3.2**
BAUV	**El Baul**	**5.88**	**251**	*e*P	**Pn**	**00 41 03.5**	**+0.3**

*NNC **11** 00:55:08.4±2.5, 39°.46N×75°.19E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=25.3km s-min=11.1km az=145.0*
ISC 11 00:55:08.7±4.0, 39°.4N±0°.3×75°.6E±0°.2, h8km±51km, n13, σ0s51/16, 4C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZA	**Kyzart**	**2.70**	**355**	P	**Pn**	**00 55 51.7**	**-0.7**
	SNR=10						
ULHL	**Ulahol**	**2.91**	**10**	P	**Pn**	**00 55 55.2**	**0.0**
	SNR=28						
UCH	**Uchtor**	**2.95**	**345**	P	**Pn**	**00 55 55.5**	**-0.3**
	SNR=24						
AML	**Almayashu**	**3.09**	**333**	P	**Pn**	**00 55 58.2**	**+0.4**
	SNR=25						
KBK	**Karagaybulak**	**3.30**	**352**	P	**Pn**	**00 56 00.5**	**-0.2**
	SNR=28						
AAK	**Ala-Archa**	**3.35**	**346**	P	**Pn**	**00 56 01.0**	**-0.3**
	SNR=11						
TKM2	**Tokmak 2**	**3.54**	**0**	⇑	Pn	**Pn**	**00 56 03.6**	**-0.2**
	12nm,0.6s						
TKM2				⇑	Sn	**Sn**	**00 56 45.6**	**-0.2**
	52nm,0.6s						
TKM2	**Tokmak 2**	**3.54**	**0**	P		**Pn**	**00 56 03.8**	**-0.1**
	SNR=6.4						
EKS2	**Erkin-Say**	**3.54**	**338**	P		**Pn**	**00 56 05.1**	**+1.1**
	SNR=12						
CHMS	**Chumysh**	**3.66**	**351**	P		**Pn**	**00 56 05.5**	**-0.2**
	SNR=12						
USP	**Ospenovka**	**3.96**	**349**	P		**Pn**	**00 56 09.3**	**-0.5**
	SNR=33						
KNDC	**Almaty**	**3.97**	**15**	⇑	Pn	**Pn**	**00 56 10.5**	**+0.6**
	13nm,0.3s						
KNDC				⇓	Sn	**Sn**	**00 57 00.6**	**+3.9**
	86nm,0.7s						
KK31	**Karatay Array**	**5.32**	**316**		Pn	**Pn**	**00 56 28.3**	**-0.1**
	0.5nm,0.3s,baz=134,slow=13,SNR=9.4						
KK31				⇑	Pg	**Pb**	**00 56 42.2**	**+0.2**
	0.9nm,0.3s,baz=134,slow=17,SNR=6.0						
KK31				⇓	Lg		00 57 47.6	
	3.5nm,0.5s,baz=133,slow=27,SNR=8.7						

*ISCJB **11** 01:03:03.3±1.1, 40°.06N±0°.03×17°.66E±0°.07, h10km, Error ellipse: s-maj=7.8km s-min=4.4km az=4.1*
*ROM **11** 01:03:03.1±0.4, 40°.08N×17°.69E, h4km, Md2.3/6, Ml2.2/5, Error ellipse: s-maj=4.3km s-min=2.1km az=84.0*
*CSEM **11** 01:03:03.3±0.5, 40°.06N×17°.64E, h40km, ML3.3/5, Error ellipse: s-maj=9.2km s-min=4.7km az=97.0*
ISC 11 01:03:03.4±1.2, 40°.06N±0°.03×17°.72E±0°.07, h10km, n17, σ0s98/34, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAR1	**Taranto**	**0.57**	**325**	*e*Pg

*CSEM **11** 01:41:40.1±0.1, 39.20N×26.70E, h5km, MD3.1, Error ellipse: s-maj=3.2km s-min=1.4km az=57.0*
*DDA **11** 01:41:40.5, 39.21N×26.77E, h8km±4km, Md3.1*
ISC 11 01:41:40.4±0.6, **39.20N**±0.03×**26.71E**±0.05, **h6**km±5km, **n32**, σ0**54**/46, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.11**	**351**	*i* P		**Pg**	**01 41 42.9**	**+0.2**
AYVA				*i* S		**Sg**	**01 41 44.9**	**+0.7**
AYVA	**Ayvalik**	**0.11**	**351**	*i* P		**Pg**	**01 41 42.9**	**+0.2**
AYVA				*i* S		**Sg**	**01 41 44.9**	**+0.6**
EZN	**Ezine**	**0.69**	**335**	*e*PG		**Pg**	**01 41 53.5**	**-0.1**
EZN				*e*SG		**Sg**	**01 42 03.0**	**+0.3**
EZN	**Ezine**	**0.69**	**335**	*e*Pg		**Pg**	**01 41 53.5**	**-0.2**
EZN				*e*Sg		**Sg**	**01 42 03.0**	**+0.4**
BLCB	**Balcova**	**0.86**	**162**	*e*PG		**Pg**	**01 41 56.3**	**-0.5**
BLCB				*e*SG		**Sg**	**01 42 08.3**	**+0.3**
BLCB	**Balcova**	**0.86**	**162**	*e*Pg		**Pg**	**01 41 56.3**	**-0.5**
BLCB				*e*Sg		**Sg**	**01 42 08.3**	**+0.4**
BALY	**Balya**	**0.89**	**52**	*i* P		**Pg**	**01 41 56.6**	**-0.8**
BALY				*i* S		**Sg**	**01 42 09.7**	**+0.8**
BALY	**Balya**	**0.89**	**52**	*i* P		**Pg**	**01 41 56.6**	**-0.8**
BALY				*i* S		**Sg**	**01 42 09.7**	**+0.8**
IZM	**Izmir**	**0.91**	**152**	*e*PG		**Pg**	**01 41 57.5**	**-0.4**
IZM				*e*SG		**Sg**	**01 42 10.3**	**+0.5**
IZM	**Izmir**	**0.91**	**152**	*e*Pg		**Pg**	**01 41 57.5**	**-0.4**
IZM				*e*Sg		**Sg**	**01 42 10.3**	**+0.6**
AKHS	**Akhisar**	**0.92**	**110**	*i* P		**Pg**	**01 41 58.0**	**0.0**
AKHS				*i* S		**Sg**	**01 42 10.0**	**+0.1**
AKHS	**Akhisar**	**0.92**	**110**	*i* P		**Pg**	**01 41 58.0**	**0.0**
AKHS				*i* S		**Sg**	**01 42 10.0**	**+0.1**
BALB	**Balikesir**	**1.00**	**64**	*e*PG		**Pg**	**01 41 59.2**	**-0.5**
BALB	**Balikesir**	**1.00**	**64**	*e*Pg		**Pg**	**01 41 59.2**	**-0.5**
GONE	**Gonen-Balikesi**	**1.13**	**41**	*e*PN		**Pg**	**01 42 00.8**	**-1.3**
GONE	**Gonen-Balikesi**	**1.13**	**41**	*e*Pn		**Pg**	**01 42 00.8**	**-1.3**
GADA	**Gvkgeada**	**1.17**	**328**	*e*PN		**Pn**	**01 42 02.8**	**-0.6**
GADA	**Gvkgeada**	**1.17**	**328**	*e*Pn		**Pn**	**01 42 02.8**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.21**	**351**	*e*PN		**Pn**	**01 42 03.8**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.21**	**351**	*e*Pn		**Pn**	**01 42 03.8**	**0.0**
ERIK	**Erikli-Kesan**	**1.47**	**354**	*e*PN		**Pn**	**01 42 07.8**	**+0.3**
ERIK	**Erikli-Kesan**	**1.47**	**354**	*e*Pn		**Pn**	**01 42 07.8**	**+0.3**
DEMI	**Demirci**	**1.57**	**95**	*i* P		**Pn**	**01 42 09.4**	**+0.6**
DEMI				*i* S		**Sn**	**01 42 29.9**	**+0.5**
DEMI	**Demirci**	**1.57**	**95**	*i* P		**Pn**	**01 42 09.4**	**+0.6**
DEMI				*i* S		**Sn**	**01 42 29.9**	**+0.5**
ENEZ	**Enez**	**1.59**	**345**	*e*PN		**Pn**	**01 42 09.1**	**0.0**
ENEZ	**Enez**	**1.59**	**345**	*e*Pn		**Pn**	**01 42 09.1**	**0.0**
KCTX	**Karacabey (Bur**	**1.65**	**50**	*e*PN		**Pn**	**01 42 09.2**	**-0.8**
KCTX	**Karacabey (Bur**	**1.65**	**50**	*e*Pn		**Pn**	**01 42 09.2**	**-0.8**
KULA	**Kula-Manisa**	**1.67**	**114**	*e*PN		**Pn**	**01 42 10.1**	**-0.1**
KULA	**Kula-Manisa**	**1.67**	**114**	*e*Pn		**Pn**	**01 42 10.1**	**-0.1**
EDRB	**Edirne**	**2.64**	**1**	*e*PN		**Pn**	**01 42 24.2**	**+0.7**
EDRB	**Edirne**	**2.64**	**1**	*e*Pn		**Pn**	**01 42 24.2**	**+0.7**

*NIED **11** 01:41:00, 27.00N×126.60E, h5km, Mw3.7 Best double couple: M0=4.36000×10^14 NP1:φs=80.00000°, δ=71.00000°, λ=-60.00000°. NP2:φs=200.00000°, δ=35.00000°, λ=-145.00000°.*
JMA 11 01:41:44.9±0.3, **26.96N×126.56E, h7**km±4km, **M3.8, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.66**	**162**	P		Pg	01 41 57.6	-0.1
JKE				*e*S		Sg	01 42 06.3	0.0
JAGN	**Aguni-jima**	**0.71**	**121**	P		Pg	01 41 58.6	0.0
JAGN				S		Sg	01 42 08.0	+0.1
JIH	**Iheya**	**1.26**	**86**	P		Pn	01 42 08.0	-0.9
JIH				S		Sb	01 42 25.1	-0.2
NAH1	**Naha**	**1.26**	**126**	P		Pn	01 42 08.6	-0.3
NAH1				S		Sb	01 42 24.8	-0.6
JJT2	**Tamagusuku 2**	**1.34**	**127**	P		Pn	01 42 10.2	+0.1
JJT2				S		Sb	01 42 27.9	+0.1
JOW	**Kunigami**	**1.54**	**94**	P		Pn	01 42 11.8	-0.9
JOW				S		Sn	01 42 32.3	-0.6
JTK	**Tokunoshima**	**2.28**	**68**	P		Pn	01 42 25.7	+2.8

CASC 11 01:49:13.6±1.0, **12.58N×88.32W, h36**km±999km, **MD3.5, ML3.3, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.84**	**34**	*e*P		Pn	01 49 29.0	0.0
CNCH				*e*S		Sn	01 49 41.3	+1.2
VSM	**San Miguel**	**0.85**	**3**	*e*P		Pn	01 49 29.7	+0.6
VSM				*e*S		Sn	01 49 41.5	+1.2
BLLM	**Bellamira**	**0.86**	**5**	*e*P		Pn	01 49 29.2	-0.1
BLLM				*e*S		Sn	01 49 41.5	+0.8
SNVI	**San Vicente**	**1.15**	**334**	*e*P		Pn	01 49 33.2	0.0
SNVI				*e*S		Sn	01 49 48.5	+0.8
CAHU	**Cacacuatique**	**1.19**	**5**	*e*P		Pn	01 49 34.1	+0.3
CAHU				*e*S		Sn	01 49 50.7	+1.9
CRIN	**San Cristobal**	**1.25**	**84**	*e*P		Pn	01 49 34.6	+0.1
LFRS	**El Faro**	**1.27**	**325**	*e*P		Pn	01 49 35.0	+0.1
LFRS				*e*S		Sn	01 49 51.3	+0.6
LBRS	**Las Brisas**	**1.35**	**329**	*e*P		Pn	01 49 36.3	+0.3
BOQS	**Boqueron**	**1.48**	**321**	*e*P		Pn	01 49 38.1	+0.3
BOQS				*e*S		Sn	01 49 56.7	+0.7
CNGN	**Cerro Negro**	**1.58**	**93**	*e*P		Pn	01 49 39.1	-0.1
CNGN				*e*S		Sn	01 49 58.8	+0.4
CNGN				AML		AML	01 49 59.6	
	comp=E,232nm,0.3s							
COPN	**Copaltepe**	**1.73**	**103**	*e*P		Pn	01 49 40.8	-0.4
SBLS	**San Blas**	**1.79**	**315**	*e*P		Pn	01 49 43.5	+1.6
TGUH	**Tegucigalpa,Un**	**1.79**	**35**	*e*P		Pn	01 49 42.4	+0.4
TGUH				*e*S		Sn	01 50 04.0	+0.5
TGUH				AML		AML	01 50 08.1	
	comp=E,612nm,0.4s							
CSAN		**1.89**	**102**	*e*P		Pn	01 49 43.7	+0.3

IDC 11 02:07:22.1±2.3, **5.62S×147.34E, h0**km, **mb3.5**/2, **mb1 3.8**/2, **mb1mx3.4**/14, **mbtmp3.5**/2, **Error ellipse: s-maj=159.7km s-min=34.8km az=120.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**22.12**	**214**	P		P	02 12 19.8	+0.5
	1.2nm,0.4s,baz=51,slow=9.3,SNR=21							
ILAR	**Eielson Array**	**85.00**	**23**	P		P	02 19 59.6	+0.5
	0.3nm,0.7s,baz=269,slow=4.8,SNR=4.4							
TORD	**Torodi Ar. Bea**	**145.32**	**285**	PKPbc		PKPbc	02 27 01.2	-1.6
	0.2nm,0.6s,baz=68,slow=4.2,SNR=4.2							

*ISCJB **11** 02:16:55.5±1.1, 31.61N×104.38E±0.08, h7km±8km, mb3.4/4, Error ellipse: s-maj=11.6km s-min=6.4km az=11.2*
*IDC **11** 02:16:55.7±1.3, 31.69N×104.27E, h0km, mb3.5/4, mb1 3.7/6, mb1mx3.4/25, mbtmp3.6/6, ML4.0/2, Error ellipse: s-maj=59.9km s-min=21.4km az=65.0*
*BJI **11** 02:16:59.9, 31.69N×104.03E, h15km, ML3.5/13*
ISC 11 02:16:57.6±1.0, **31.62N**±0.03×**104.29E**±0.07, **h8**km±8km, **n10**, σ1**9**/**11**/15, **mb3.4**/4, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.84**	**213**	Pg		**Pg**	**02 17 13.8**	**+0.1**
CD2				Sg		**Sg**	**02 17 24.9**	**+0.2**
CD2				smax				
	comp=N,900nm,0.7s							
LZH	**Lanzhou**	**4.47**	**355**	*e*Pg		**Pb**	**02 18 18.9**	**+2.6**
LZH				Sg		**Sb**	**02 19 10.2**	**-0.2**
LZH				smax				
	comp=N,62nm,0.8s							
LZH				smax				
	comp=E,63nm,0.6s							
XAN	**Xi'an**	**4.58**	**57**	Pn		**Pn**	**02 18 08.7**	**+1.6**
XAN				Pg		**Pg**	**02 18 24.5**	**-0.9**
XAN				smax				
	comp=N,100nm,0.9s							
XAN				smax				
	comp=E,53nm,0.8s							
GYA	**Guiyang**	**5.54**	**157**	Pn		**Pn**	**02 18 26.1**	**+5.8**
GYA				Sn		**Sn**	**02 19 24.5**	**+0.3**
GYA				Sg		**Sg**	**02 19 54.7**	**-0.9**
GYA				smax				
	comp=N,60nm,0.8s							
GYA				smax				
	comp=E,60nm,0.8s							
CMAR	**Chiang Mai Ar**	**13.97**	**202**	Pn		**Pn**	**02 20 17.1**	**+1.4**
	comp=E,0.4nm,0.3s,baz=12,slow=9.2,SNR=3.6							
SONM	**Songino Array**	**16.28**	**5**	Pn		**Pn**	**02 20 46.8**	**+0.5**
	comp=E,0.3nm,0.3s,baz=183,slow=10,SNR=3.0							
MKAR	**Makanchi Array**	**22.70**	**318**	P		**P**	**02 21 58.8**	**-0.7**
	comp=E,0.4nm,0.4s,mb3.2,baz=122,slow=13,SNR=7.4							
ZALV	**Zalesovo Beam**	**26.33**	**334**	P		**P**	**02 22 32.5**	**-1.1**
	comp=E,1.3nm,0.7s,mb3.6,baz=127,slow=9.8,SNR=6.8							
KURK	**Kurchatov**	**26.93**	**323**	P		**P**	**02 22 36.7**	**-2.4**
	comp=E,0.3nm,0.4s,mb3.1,baz=122,slow=8.8,SNR=4.0							
ASAR	**Alice Springs**	**61.85**	**149**	P		**P**	**02 27 17.1**	**-0.1**
	comp=E,0.2nm,0.5s,mb3.5,baz=336,slow=6.6,SNR=3.7							

*IDC **11** 02:20:07.8±1.1, 10.93N×91.75E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.6/24, mbtmp3.8/8, ML4.0/1, Error ellipse: s-maj=41.0km s-min=18.5km az=62.0*
*NEIC **11** 02:20:09.6±0.6, 10.98N×91.82E, h10km, Error ellipse: s-maj=13.9km s-min=11.5km az=141.0*
ISC 11 02:20:12.9±4.8, **11.0N**±0.1×**91.8E**±0.1, **h33**km±37km, **n9**, σ0**37**/10, **mb3.8**/7, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.14**	**42**	Pn		**Pn**	**02 22 36.1**	**0.0**
	0.4nm,0.3s,baz=238,slow=14,SNR=3.0							
PALK	**Pallekele**	**11.57**	**252**	*e*Pn		**Pn**	**02 22 55.9**	**0.0**
PALK				*e*S		**Sn**	**02 24 53.5**	**-11**
MKAR	**Makanchi Array**	**36.59**	**349**	P		**P**	**02 27 16.1**	**+0.3**
	0.9nm,0.6s,mb3.8,baz=172,slow=8.6,SNR=8.6							
SONM	**Songino Array**	**38.73**	**16**	P		**P**	**02 27 34.0**	**+0.1**
	0.6nm,0.6s,mb3.5,baz=204,slow=8.9,SNR=4.8							
KURK	**Kurchatov**	**41.07**	**347**	P		**P**	**02 27 52.4**	**-0.9**
	0.3nm,0.3s,mb3.4,baz=148,slow=8.8,SNR=3.1							
ZALV	**Zalesovo Beam**	**43.22**	**354**	P		**P**	**02 28 11.2**	**+0.5**
	1.1nm,0.5s,mb3.8,baz=178,slow=11,SNR=3.0							
ASAR	**Alice Springs**	**53.66**	**130**	P		**P**	**02 29 31.6**	**0.0**
	1.6nm,0.7s,mb4.1,baz=305,slow=6.8,SNR=17							
ASAR				PcP		PcP	02 30 38.2	+0.4
	0.9nm,0.6s,baz=313,slow=4.1,SNR=7.0							
BRTR	**Keskin Array B**	**58.68**	**310**	P		**P**	**02 30 07.3**	**0.0**
	0.2nm,0.5s,mb3.4,baz=93,slow=5.8,SNR=2.5							
STKA	**Stephens Creek**	**63.90**	**134**	P		**P**	**02 30 42.6**	**0.0**
	1.3nm,0.6s,mb4.2,baz=330,slow=3.5,SNR=3.8							

*NEIC **11** 02:27:12.7, 18.16N×64.33W, h132km, MD3.0(RSPR), After RSPR.*
*TRN **11** 02:27:12.3, 17.62N×64.45W, h5km*
RSPR 11 02:27:12.7, 18.16N×64.33W, h132km±1km, **MD3.0**/3, **6C, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.37**	**314**	*e*P		Pn	02 27 31.1	-0.3
TBVI				*e*S		Sn	02 27 45.5	-0.1
TBVI	**Tortola**	**0.37**	**314**	*e*P		Pn	02 27 31.1	-0.3
TBVI				*e*S		Sn	02 27 45.5	-0.1
STVI	**Saint Thomas**	**0.62**	**288**	*e*P		Pn	02 27 32.5	-0.3
STVI				*e*S		Sn	02 27 47.8	-0.2
STVI	**Saint Thomas**	**0.62**	**288**	*e*P		Pn	02 27 32.5	-0.3
STVI				*e*S		Sn	02 27 47.8	-0.2
MTP	**Monte Pirata**	**1.16**	**267**	*e*P		Pn	02 27 37.1	-0.3
MTP	**Monte Pirata**	**1.16**	**267**	*e*Pn		Pn	02 27 36.8	-0.5
MTP				*e*S		Sn	02 27 56.2	+0.1
MTP	**Monte Pirata**	**1.16**	**267**	*e*P		Pn	02 27 37.7	+0.3
MTP				*e*S		Sn	02 27 56.2	+0.1
HUMP	**Col San Antoni**	**1.44**	**270**	*e*S		Sn	02 28 01.3	-0.1
HUMP	**Col San Antoni**	**1.44**	**270**	*e*S		Sn	02 28 01.3	-0.1
CBYP	**Canovanas**	**1.45**	**275**	*e*Pn		Pn	02 27 40.2	-0.3
CBYP				*e*S		Sn	02 28 01.4	-0.2
CBYP	**Canovanas**	**1.45**	**275**	*e*S		Sn	02 28 01.8	+0.2

*ISCJB **11** 02:28:50.3±0.7, 20.05S×166.81E±0.2, h10km, mb4.0/13, MS4.0/11, Error ellipse: s-maj=21.4km s-min=17.8km az=22.9*
*IDC **11** 02:28:50.6±0.8, 20.05S×166.73E, h0km, mb3.9/12, mb1 4.0/12, mb1mx3.9/24, mbtmp3.9/12, MS3.9/11, Ms1 3.9/11, ms1mx3.5/30, Error ellipse: s-maj=25.7km s-min=23.2km az=133.0*
*NEIC **11** 02:28:52.1±0.5, 20.03S×166.73E, h10km, mb4.3/1, Error ellipse: s-maj=15.7km s-min=13.1km az=113.0*
ISC 11 02:28:52.2±0.7, **20.0S**±0.1×**66.7E**±0.2, **h10**km, **n22**, σ0**57**/16, **mb4.0**/13, **MS4.0**/11, **Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**38.21**	**255**	P		**P**	**02 36 12.7**	**+0.2**
	3.5nm,0.9s,mb4.1,baz=134,slow=14,SNR=3.5							
BOSA	**Boshof**	**38.59**	**249**	LR		LR	02 49 49.4	
	comp=Z,160nm,18.0s,MS3.9,baz=38,slow=33							
MAW	**Mawson**	**47.62**	**182**	P		**P**	**02 37 28.2**	**+0.2**
	1.0nm,0.7s,mb4.0,baz=267,slow=5.2,SNR=3.6							
MAW				LR		LR	02 52 22.5	
	comp=Z,105nm,18.5s,MS3.8,baz=181,slow=30							
CMAR	**Chiang Mai Arr**	**49.62**	**42**	P		**P**	**02 37 44.6**	**+0.6**
	0.8nm,0.3s,mb4.2,baz=240,slow=7.1,SNR=3.2							
CMAR				LR		LR	02 55 37.4	
	comp=Z,189nm,19.5s,MS4.1,baz=214,slow=32							
ASAR	**Alice Springs**	**61.94**	**107**	P		**P**	**02 39 11.7**	**-1.0**
	0.6nm,0.7s,mb3.8,baz=267,slow=6.0,SNR=6.0							
BRTR	**Keskin Array B**	**67.00**	**333**	P		**P**	**02 39 45.4**	**+0.1**
	1.3nm,1.1s,mb3.9,baz=134,slow=5.3,SNR=6.2							
STKA	**Stephens Creek**	**67.18**	**117**	LR		LR	03 04 02.5	
	comp=Z,139nm,18.9s,MS4.2,baz=205,slow=31							
MKAR	**Makanchi Array**	**67.98**	**11**	LR		LR	03 08 00.7	
	comp=Z,71nm,21.7s,MS3.9,baz=192,slow=35							
ABKAR	**Akbulak array**	**69.24**	**355**	*e*P		**P**	**02 39 58.5**	**-0.6**
	1.8nm,0.8s,mb4.0							
KURK	**Kurchatov**	**71.22**	**8**	P		**P**	**02 40 11.4**	**+0.3**
	1.6nm,0.7s,mb4.1,baz=202,slow=6.2,SNR=3.6							
TORD	**Torodi Ar. Bea**	**71.97**	**292**	LR		LR	03 10 53.1	
	comp=Z,40nm,19.4s,MS3.7,baz=200,slow=35							
BVAR	**Borovoye Array**	**72.82**	**2**	P		**P**	**02 40 20.6**	**-0.1**
	0.3nm,0.4s,mb3.5,baz=171,slow=10,SNR=3.6							
DBIC	**Dimbokro**	**75.19**	**283**	LR		LR	03 11 27.0	
	comp=Z,81nm,19.2s,MS4.0,baz=86,slow=34							
ZAA0	**Zalesovo Array**	**75.31**	**11**	*e*P		**P**	**02 40 34.8**	**-0.5**
ZALV	**Zalesovo Beam**	**75.31**	**11**	P		**P**	**02 40 34.5**	**-0.8**
ZALV	**Zalesovo Beam**	**75.31**	**11**	P		**P**	**02 40 34.5**	**-0.8**
	0.8nm,0.6s,mb3.9,baz=207,slow=6.2,SNR=4.7							
ZALV				LR		LR	03 12 42.7	
	comp=Z,37nm,20.1s,MS3.7,baz=44,slow=35							
SONM	**Songino Array**	**76.35**	**26**	P		**P**	**02 40 42.3**	**+0.9**
	2.7nm,0.9s,mb4.2,baz=204,slow=5.8,SNR=5.6							
SONM				LR		LR	03 13 22.8	
	comp=Z,80nm,18.7s,MS4.1,baz=174,slow=35							
AKASG	**Malin Array Be**	**77.79**	**337**	P		**P**	**02 40 49.0**	**-0.4**
AKASG	**Malin Array Be**	**77.79**	**337**	P		**P**	**02 40 49.0**	**-0.4**
	0.8nm,0.5s,mb3.9,baz=145,slow=4.9,SNR=7.3							
KSRS	**Korea Array**	**81.12**	**45**	LR		LR	03 16 38.9	
	comp=Z,75nm,18.6s,MS4.1,baz=74,slow=35							
MJAR	**Matsushiro Arr**	**87.78**	**50**	P		**P**	**02 41 42.7**	**+1.0**
	0.7nm,0.3s,mb4.3,baz=204,slow=2.7,SNR=3.8							
MJAR				LR		LR	03 19 10.8	
	comp=Z,56nm,19.1s,MS4.0,baz=230,slow=34							
ESDC	**Sonseca Array**	**88.66**	**313**	P		**P**	**02 41 45.8**	**0.0**
	0.3nm,0.6s,mb3.8,baz=93,slow=5.5,SNR=3.5							

*ISCJB **11** 02:32:19.5±0.5, 28.74N±0.05×139.6E±0.1, h434km±6km, mb3.5/11, Error ellipse: s-maj=18.8km s-min=6.7km az=165.8*
*IDC **11** 02:32:19.7±0.8, 28.77N×139.60E, h420km±9km, mb3.3/11, mb1 3.4/13, mb1mx3.2/23, mbtmp3.3/13, Error ellipse: s-maj=16.3km s-min=13.0km az=77.0*
*JMA **11** 02:32:21.3±0.3, 28.88N×140.06E, h433km±5km, M3.6*
*NEIC **11** 02:32:21.5±1.6, 28.75N×139.53E, h440km±17km, MG3.6(JMA), Error ellipse: s-maj=17.4km s-min=14.8km az=95.0*
ISC 11 02:32:20.6±0.5, **28.80N**±0.05×**139.7E**±0.1, **h426**km±6km, **n26**, σ1**9**/**16**/30, **mb3.5**/11, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.76**	**127**	P		**P**	**02 33 23.8**	**-0.3**
	80nm,0.3s,baz=13,slow=3.4,SNR=65							
CBIJ				S		**S**	**02 34 14.6**	**-0.8**
	173nm,0.3s,baz=278,slow=22,SNR=36							
CBIJ	**Chichi jima**	**2.76**	**127**	P		**P**	**02 33 24.3**	**+0.3**
CBIJ				S		**S**	**02 34 14.5**	**-0.9**
JHHJ	**Haha-jima-NKT**	**3.07**	**134**	P		**P**	**02 33 26.7**	**+0.3**
JHHJ				S		**S**	**02 34 19.3**	**-0.3**
BSO1	**Boso 1**	**5.94**	**10**	P		**P**	**02 33 54.7**	**+1.4**
BSO1				*e*S		**S**	**02 35 07.6**	**-1.4**
BSO3	**Boso 3**	**6.03**	**6**	P		**P**	**02 33 55.9**	**+1.7**
BSO3				*e*S		**S**	**02 35 09.2**	**-1.5**
JIE	**Ise**	**6.14**	**336**	P		**P**	**02 33 58.3**	**+2.9**
BSO4	**Boso 4**	**6.20**	**5**	*e*S		**S**	**02 35 13.3**	**-0.7**
JHU	**Hanno**	**7.04**	**357**	S		**S**	**02 35 28.8**	**-1.9**
JRY	**Ryogami san**	**7.23**	**355**	P		**P**	**02 34 08.9**	**+1.8**
JRY				*e*S		**S**	**02 35 34.3**	**-0.1**
JWT	**Wachi**	**7.43**	**332**	P		**P**	**02 34 12.5**	**+3.2**
JHO	**Hitachi**	**7.83**	**5**	P		**P**	**02 34 14.4**	**+0.8**
MAJO	**Matsushiro**	**7.83**	**351**	Pn		**P**	**02 34 15.1**	**+1.4**
KSRS	**Korea Array**	**13.11**	**314**	P		**P**	**02 35 11.4**	**-0.3**
	0.3nm,0.3s,baz=127,slow=10,SNR=7.1							
SONM	**Songino Array**	**31.98**	**316**	P		**P**	**02 38 09.9**	**+0.5**
	1.1nm,0.4s,mb3.5,baz=119,slow=9.1,SNR=7.4							
MKAR	**Makanchi Array**	**47.71**	**308**	P		**P**	**02 40 15.2**	**-1.5**
	1.3nm,0.7s,mb3.4,baz=94,slow=8.0,SNR=6.7							
KURK	**Kurchatov**	**50.24**	**314**	P		**P**	**02 40 34.6**	**-0.9**
	2.7nm,0.5s,mb3.8,baz=93,slow=8.8,SNR=6.0							
ASAR	**Alice Springs**	**52.46**	**187**	P		**P**	**02 40 51.7**	**-0.3**
	1.2nm,0.6s,mb3.3,baz=18,slow=13,SNR=25							
BVAR	**Borovoye Array**	**55.32**	**317**	P		**P**	**02 41 11.5**	**-0.6**
	0.9nm,0.4s,mb3.3,baz=85,slow=6.1,SNR=4.0							
ILAR	**Eielson Array**	**57.29**	**29**	P		**P**	**02 41 25.1**	**-0.4**
	0.6nm,0.4s,mb3.3,baz=252,slow=5.6,SNR=21							
NWAO	**Narrogin (SRO)**	**64.99**	**201**	P		**P**	**02 42 15.4**	**-1.5**
	3.8nm,0.6s,mb4.2,baz=45,slow=7.9,SNR=4.0							
YKA	**Yellowknife Ar**	**71.68**	**28**	P		**P**	**02 42 57.2**	**-0.3**
	0.3nm,0.5s,mb3.1,baz=298,slow=5.3,SNR=3.7							
FINES	**FINESS Array B**	**75.45**	**333**	P		**P**	**02 43 18.7**	**-0.4**
	1.2nm,0.8s,mb3.6,baz=72,slow=6.2,SNR=4.1							
NVAR	**Mina Array Bea**	**81.17**	**51**	P		**P**	**02 43 51.8**	**+1.3**
	0.9nm,0.5s,mb3.7,baz=288,slow=5.4,SNR=8.0							
TXAR	**Lajitas Array**	**96.30**	**52**	P		**P**	**02 45 03.6**	**+1.2**
	0.2nm,0.6s,mb3.5,baz=311,slow=4.0,SNR=4.0							
LPAZ	**La Paz**	**151.51**	**70**	PKPbc		PKPbc	02 51 27.0	+1.1
LPAZ	**La Paz**	**151.51**	**70**	PKPbc		PKPbc	02 51 27.0	+1.1
	0.5nm,0.8s,baz=323,slow=2.6,SNR=3.2							

*ISCJB **11** 02:36:32.3±0.4, 31.55N±0.05×138.39E±0.08, h388km±4km, mb3.5/16, Error ellipse: s-maj=10.6km s-min=8.0km az=159.9*
*JMA **11** 02:36:32.6±0.4, 31.60N×138.37E, h396km±4km, M3.7*
*NEIC **11** 02:36:33.5±0.7, 31.57N×138.20E, h378km±7km, mb3.6/2, Error ellipse: s-maj=10.8km s-min=8.6km az=92.0*
*IDC **11** 02:36:34.0±0.7, 31.58N×138.17E, h382km±7km, mb3.3/15, mb1 3.4/19, mb1mx3.3/27, mbtmp3.3/19, Error ellipse: s-maj=17.5km s-min=11.5km az=77.0*
ISC 11 02:36:34.1±0.6, **31.65N**±0.07×**138.31E**±0.08, **h384**km±4km, **n46**, σ0**81**/58, **mb3.5**/16, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.92**	**40**	P		**Pn**	**02 37 27.9**	**-0.1**
	49nm,0.3s,baz=172,slow=5.3,SNR=12							
JHJ				S		**S**	**02 38 13.6**	**+2.1**
	32nm,0.3s,baz=270,slow=20,SNR=3.0							
JHJ2	**Mitsune**	**1.94**	**41**	P		**Pn**	**02 37 28.0**	**0.0**
TK02	**Tokai 2**	**2.34**	**349**	P		**Pn**	**02 37 31.5**	**+0.8**
JKO	**Kozu shima**	**2.62**	**15**	P		**Pn**	**02 37 33.2**	**+0.3**
JIE	**Ise**	**3.05**	**334**	P		**Pn**	**02 37 37.0**	**+0.7**
JIE				S		**S**	**02 38 26.5**	**-0.2**
JKN2	**Miekihoku**	**3.10**	**327**	P		**Pn**	**02 37 36.9**	**+0.1**
HMMJ	**Hamamatsu 2**	**3.23**	**351**	P		**Pn**	**02 37 38.8**	**+0.9**
HMMJ				S		**S**	**02 38 29.9**	**+0.3**
JOD2	**Odawara 2**	**3.66**	**10**	P		**Pn**	**02 37 41.6**	**-0.2**
JOD2				S		**S**	**02 38 36.9**	**+0.3**
JAO	**Obara**	**3.71**	**347**	P		**Pn**	**02 37

PYL	**PYLOS**	**0.80**	**356**	P	**Pg**	**02 45 22.9**	**-0.7**
PYL	**PYLOS**	**0.80**	**356**	P	**Pg**	**02 45 22.9**	**-0.7**
KYTH	**Kithira**	**1.01**	**79**	*e*Pb	**Pg**	**02 45 27.8**	**+0.2**
KYTH	**Kithira**	**1.01**	**79**	*e*PB	**Pg**	**02 45 27.8**	**+0.2**
KYTH	**Kithira**	**1.01**	**79**	*e*Pb	**Pg**	**02 45 27.8**	**+0.2**
ITM	**Ithomi**	**1.09**	**5**	*e*Pb	**Pg**	**02 45 28.4**	**-0.6**
ITM				*e*Sb	**Sg**	**02 45 44.7**	**+1.5**
ITM	**Ithomi**	**1.09**	**5**	*e*PB	**Pg**	**02 45 28.4**	**-0.6**
ITM				*e*SB	**Sg**	**02 45 44.7**	**+1.5**
ITM	**Ithomi**	**1.09**	**5**	P	**Pg**	**02 45 28.4**	**-0.6**
ITM	**Ithomi**	**1.09**	**5**	P	**Pg**	**02 45 28.4**	**-0.6**
ITM				*e*Sb	**Sg**	**02 45 44.7**	**+1.5**
VLI	**Veliai**	**1.10**	**55**	*e*Pg	**Pg**	**02 45 28.8**	**-0.5**
VLI	**Veliai**	**1.10**	**55**	*e*PG	**Pg**	**02 45 28.8**	**-0.5**
VLI	**Veliai**	**1.10**	**55**	*e*Pg	**Pg**	**02 45 28.8**	**-0.5**
VLX	**Vlachokerasia**	**1.35**	**20**	*e*PG	**Pn**	**02 45 32.8**	**+0.1**
VLX	**Vlachokerasia**	**1.35**	**20**	P	**Pn**	**02 45 32.7**	**0.0**
VLX				S	**Sn**	**02 45 48.1**	**-2.5**
VLX	**Vlachokerasia**	**1.35**	**20**	*e*Pg	**Pn**	**02 45 32.8**	**+0.1**
VLX				S	**Sn**	**02 45 48.1**	**-2.5**
DID	**Didima**	**1.82**	**39**	*e*PG	**Pn**	**02 45 41.1**	**+2.0**
DID	**Didima**	**1.82**	**39**	P	**Pn**	**02 45 41.1**	**+2.0**
DID				S	**Sn**	**02 46 02.9**	**+0.9**
DID	**Didima**	**1.82**	**39**	P	**Pn**	**02 45 41.1**	**+2.0**
DID				S	**Sn**	**02 46 02.9**	**+0.9**
GUR	**Goura**	**1.89**	**13**	*e*PN	**Pn**	**02 45 39.1**	**-1.0**
GUR	**Goura**	**1.89**	**13**	P	**Pb**	**02 45 42.2**	**-0.2**
GUR				S	**Sn**	**02 46 04.3**	**+0.5**
GUR	**Goura**	**1.89**	**13**	*e*Pn	**Pn**	**02 45 39.1**	**-1.0**
GUR	**Goura**	**1.89**	**13**	P	**Pb**	**02 45 42.2**	**-0.2**
GUR				S	**Sn**	**02 46 04.3**	**+0.5**
LTK	**Loutraki**	**2.14**	**25**	*e*PG	**Pg**	**02 45 49.0**	**0.0**
LTK	**Loutraki**	**2.14**	**25**	*e*Pg	**Pg**	**02 45 49.0**	**0.0**
NAIG	**Nisos Aigina**	**2.14**	**39**	*e*Pn	**Pb**	**02 45 46.2**	**-0.5**
NAIG	**Nisos Aigina**	**2.14**	**39**	*e*PN	**Pb**	**02 45 46.2**	**-0.5**
NAIG	**Nisos Aigina**	**2.14**	**39**	*e*Pn	**Pb**	**02 45 46.2**	**-0.5**
VLS	**Valsamata**	**2.29**	**335**	*e*Pn	**Pb**	**02 45 47.7**	**-1.6**
VLS	**Valsamata**	**2.29**	**335**	*e*PN	**Pb**	**02 45 47.7**	**-1.6**
VLS	**Valsamata**	**2.29**	**335**	*e*Pn	**Pb**	**02 45 47.7**	**-1.6**
EFP	**Efpalio**	**2.33**	**2**	*e*PN	**Pb**	**02 45 49.5**	**-0.4**
EFP	**Efpalio**	**2.33**	**2**	*e*Pn	**Pb**	**02 45 49.5**	**-0.4**
VLY	**Voula,Athens**	**2.37**	**42**	*e*Pn	**Pb**	**02 45 49.5**	**-1.1**
VLY	**Voula,Athens**	**2.37**	**42**	*e*PN	**Pb**	**02 45 49.5**	**-1.1**
VLY	**Voula,Athens**	**2.37**	**42**	*e*Pn	**Pb**	**02 45 49.5**	**-1.1**
PTL	**Penteli**	**2.55**	**40**	*e*Pg	**Pb**	**02 45 54.2**	**+0.5**
PTL	**Penteli**	**2.55**	**40**	*e*PG	**Pb**	**02 45 54.2**	**+0.5**
PTL	**Penteli**	**2.55**	**40**	*e*Pg	**Pb**	**02 45 54.2**	**+0.5**
LKR	**Lokris**	**2.72**	**20**	*e*Pb	**Pn**	**02 45 53.0**	**+1.5**
LKR	**Lokris**	**2.72**	**20**	*e*PB	**Pn**	**02 45 53.0**	**+1.5**
LKR	**Lokris**	**2.72**	**20**	*e*Pb	**Pn**	**02 45 53.0**	**+1.5**
EVR	**Evrytania**	**2.82**	**0**	*e*Pn	**Pb**	**02 45 56.7**	**-1.6**
EVR	**Evrytania**	**2.82**	**0**	*e*PN	**Pb**	**02 45 56.7**	**-1.6**
EVR	**Evrytania**	**2.82**	**0**	*e*Pn	**Pb**	**02 45 56.7**	**-1.6**
AGG	**Agios Georgios**	**2.95**	**8**	*e*Pn	**Pb**	**02 45 59.1**	**-1.5**
AGG	**Agios Georgios**	**2.95**	**8**	*e*PN	**Pb**	**02 45 59.1**	**-1.5**
AGG	**Agios Georgios**	**2.95**	**8**	*e*Pn	**Pb**	**02 45 59.1**	**-1.5**
THL	**Klokotos Trika**	**3.47**	**3**	*e*PN	**Pn**	**02 46 04.1**	**+2.3**
THL	**Klokotos Trika**	**3.47**	**3**	*e*Pn	**Pn**	**02 46 04.1**	**+2.3**
JAN	**Janina**	**3.63**	**348**	*e*Pn	**Pn**	**02 46 07.0**	**+2.9**
JAN	**Janina**	**3.63**	**348**	*e*PN	**Pn**	**02 46 07.0**	**+2.9**
JAN	**Janina**	**3.63**	**348**	*e*Pn	**Pn**	**02 46 07.0**	**+2.9**
KEK	**Kerkira**	**3.94**	**337**	*e*Pn	**Pn**	**02 46 10.4**	**+2.1**
KEK	**Kerkira**	**3.94**	**337**	*e*PN	**Pn**	**02 46 10.4**	**+2.1**
KEK	**Kerkira**	**3.94**	**337**	*e*Pn	**Pn**	**02 46 10.4**	**+2.1**
KZN	**Kozani**	**4.21**	**360**	*e*Pn	**Pn**	**02 46 09.1**	**-2.8**
KZN	**Kozani**	**4.21**	**360**	*e*PN	**Pn**	**02 46 09.1**	**-2.8**
TIP	**Timpagrande**	**5.05**	**309**	*e*Pn	**Pn**	**02 46 25.0**	**+1.4**
TIP	**Timpagrande**	**5.05**	**309**	*e*PN	**Pn**	**02 46 25.0**	**+1.5**
CEL	**Celeste**	**5.19**	**296**	*e*Pn	**Pn**	**02 46 27.3**	**+1.8**
CEL				*e*S	**Sn**	**02 47 24.2**	**-1.0**
CEL	**Celeste**	**5.19**	**296**	*e*Pn	**Pn**	**02 46 27.3**	**+1.8**
STON	**Ston**	**7.47**	**336**	*e*Pn	**Pn**	**02 46 54.7**	**-2.1**
STON				Sn	**Sn**	**02 48 14.9**	**-6.5**

GUC 11 02:45:50.2±1.0, 23°.95S×67°.58W, h220km, ML4.1, 1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.43**	**313**	*e*P	Pn	02 46 41.6	+6.9
PB04				*e*S	S	02 47 20.2	+11
PB04				AML	AML	02 47 23.4	
	comp=N,313nm,0.4s						
CEN1	**Los Morros**	**2.47**	**282**	⇓*i*P	Pn	02 46 38.4	+3.4
CEN1				*e*S	S	02 47 15.4	+5.3
MACH	**Maria Elena**	**2.66**	**311**	*e*P	Pn	02 46 39.3	+2.2
MACH				*e*S	S	02 47 16.6	+2.6
MECH	**Mejillones**	**2.77**	**287**	*e*P	Pn	02 46 40.1	+1.8
MECH				*e*S	S	02 47 17.4	+1.4
MECH				AML	AML	02 47 25.1	
	comp=E,250nm,0.5s						
PB01	**Plate Boundary**	**3.39**	**328**	*e*P	Pn	02 46 47.5	+2.1
PB01				*e*S	S	02 47 31.6	+2.6
PB01				AML	AML	02 47 37.8	
	comp=N,136nm,0.2s						
PSGC	**Pisagua**	**4.93**	**331**	*e*P	Pn	02 47 06.3	+2.0
PSGC				*e*S	S	02 48 04.6	+1.5

*ISK **11** 03:12:52.7, 39°.76N×27°.91E, h5km, MD2.4*
*ISCJB **11** 03:12:53.6±0.6, 39°.75N±0°.03×27°.93E±0°.05, h4km±9km, Error ellipse: s-maj=6.6km s-min=4.6km az=176.0*
*CSEM **11** 03:12:53.8±0.1, 39°.74N×27°.91E, h2km, MD2.4, Error ellipse: s-maj=2.6km s-min=1.9km az=73.0*
*DDA **11** 03:12:53.6, 39°.75N×27°.93E, h7km±5km, Md2.8*

ISC 11 03:12:54.0±0.5, 39°.76N±0°.03×27°.92E±0°.04, h7km±8km, n20, σ0°68/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.12**	**194**	*e*PG	**Pg**	**03 12 55.7**	**-0.9**
BALB	**Balikesir**	**0.12**	**194**	*e*Pg	**Pg**	**03 12 55.7**	**-0.9**
BALY	**Balya**	**0.23**	**266**	*i* P	**Pg**	**03 12 58.0**	**-0.5**
BALY				*i* S	**Sg**	**03 13 01.6**	**-0.1**
BALY	**Balya**	**0.23**	**266**	*i* P	**Pg**	**03 12 58.0**	**-0.6**
BALY				*i* S	**Sg**	**03 13 01.6**	**-0.1**
GONE	**Gonen-Balikesi**	**0.34**	**328**	*e*PG	**Pg**	**03 13 00.5**	**-0.2**
GONE				*e*SG	**Sg**	**03 13 06.0**	**+0.9**
GONE	**Gonen-Balikesi**	**0.34**	**328**	*e*Pg	**Pg**	**03 13 00.5**	**-0.2**
GONE				*e*Sg	**Sg**	**03 13 06.0**	**+0.8**
KCTX	**Karacabey (Bur**	**0.61**	**33**	*e*PG	**Pg**	**03 13 05.5**	**-0.3**
KCTX				*e*SG	**Sg**	**03 13 14.7**	**+1.0**
KCTX	**Karacabey (Bur**	**0.61**	**33**	*e*Pg	**Pg**	**03 13 05.5**	**-0.3**
KCTX				*e*Sg	**Sg**	**03 13 14.7**	**+1.0**
AKHS	**Akhisar**	**0.88**	**185**	*i* P	**Pg**	**03 13 10.2**	**-0.7**
AKHS				*i* S	**Sg**	**03 13 24.0**	**+1.7**
AKHS	**Akhisar**	**0.88**	**185**	*i* P	**Pg**	**03 13 10.2**	**-0.7**
AKHS				*i* S	**Sg**	**03 13 24.0**	**+1.7**
DEMI	**Demirci**	**0.94**	**139**	*i* P	**Pg**	**03 13 12.0**	**-0.1**
DEMI				*i* S	**Sg**	**03 13 24.6**	**+0.2**
DEMI	**Demirci**	**0.94**	**139**	*i* P	**Pg**	**03 13 12.0**	**-0.1**
DEMI				*i* S	**Sg**	**03 13 24.6**	**+0.2**
ULDT	**Uludag**	**1.01**	**67**	*i* P	**Pg**	**03 13 12.7**	**-0.7**
ULDT				*i* S	**Sg**	**03 13 26.7**	**+0.1**
ULDT	**Uludag**	**1.01**	**67**	*i* P	**Pg**	**03 13 12.7**	**-0.7**
ULDT				*i* S	**Sg**	**03 13 26.7**	**+0.1**
ARMT	**Armutlu**	**1.08**	**42**	*e*PN	**Pn**	**03 13 14.9**	**-0.6**
ARMT	**Armutlu**	**1.08**	**42**	*e*Pn	**Pn**	**03 13 14.9**	**-0.7**
KULA	**Kula-Manisa**	**1.37**	**155**	*e*PN	**Pn**	**03 13 20.3**	**+0.9**
KULA	**Kula-Manisa**	**1.37**	**155**	*e*Pn	**Pn**	**03 13 20.3**	**+0.8**
GDZ	**Gediz**	**1.38**	**118**	*i* P	**Pn**	**03 13 19.6**	**0.0**
GDZ				*i* S	**Sb**	**03 13 37.6**	**-0.3**
GDZ	**Gediz**	**1.38**	**118**	*i* P	**Pn**	**03 13 19.6**	**0.0**
GDZ				*i* S	**Sb**	**03 13 37.6**	**-0.3**

IDC 11 04:11:56.0±2.0, 7°.80S×120°.48E, h219km±17km, mb3.2/3, mb1 3.2/5, mb1mx3.1/21, mbtmp3.2/5, Error ellipse: s-maj=107.7km s-min=11.8km az=58.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.86**	**345**	P	Pn	04 12 44.7	-0.4
	11nm,0.3s,baz=171,slow=8.3,SNR=20						
FITZ	**Fitzroy Crossi**	**11.41**	**154**	P	Pn	04 14 31.4	-1.5
	0.2nm,0.3s,baz=324,slow=14,SNR=8.5						
FITZ				S	S	04 16 28.9	-12
	0.5nm,0.3s,baz=179,slow=18,SNR=9.0						
ASAR	**Alice Springs**	**20.37**	**142**	P	P	04 16 17.2	+1.2
	0.6nm,0.4s,baz=315,slow=9.3,SNR=12						
ASAR				S	S	04 19 52.0	+0.1
	0.9nm,0.8s,baz=330,slow=22,SNR=6.9						
MKAR	**Makanchi Array**	**64.08**	**332**	P	P	04 22 06.7	+0.2
	0.4nm,0.5s,baz=151,slow=6.8,SNR=7.0						
ZALV	**Zalesovo Beam**	**68.46**	**338**	P	P	04 22 34.1	-0.1
	0.8nm,0.4s,baz=122,slow=4.8,SNR=4.4						

*ISCJB **11** 04:33:21.8±0.3, 49°.94N±0°.03×170°.02W±0°.05, h32km, mb4.2/32, MS3.1/2, Error ellipse: s-maj=5.6km s-min=4.3km az=137.3*
*NEIC **11** 04:33:22.0, 49°.98N×170°.27W, h25km, mb4.3/20, ML3.9(AEIC), After AEIC.*
*IDC **11** 04:33:21.9±0.6, 49°.52N×170°.29W, h33km±3km, mb3.8/16, mb1 4.0/17, mb1mx3.9/28, mbtmp3.8/17, ML3.8/1, MS3.0/3, Ms1 3.1/3, ms1mx2.7/30, Error ellipse: s-maj=19.3km s-min=13.1km az=11.0*

ISC 11 04:33:23.6±0.3, 49°.93N±0°.03×170°.09W±0°.05, h34km, h34km±.7km; pP-P, n247, σ0°72/252, mb4.2/32, MS3.1/2, 82C-94D, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**3.14**	**14**	P	**Pn**	**04 34 09.7**	**-1.0**
NIKO				S	**Sn**	**04 34 47.2**	**+0.3**
ATKA	**Atka Island**	**3.45**	**313**	P	**Pn**	**04 34 13.4**	**-1.4**
ATKA				S	**Sn**	**04 34 53.0**	**-1.4**
GSTR	**Great Sitkin T**	**4.35**	**302**	*e*Pn	**Pn**	**04 34 26.0**	**-1.2**
UNV	**Unalaska Valle**	**4.51**	**28**	*e*Pn	**Pn**	**04 34 29.3**	**0.0**
UNV				*e*S	**Sn**	**04 35 17.1**	**-3.4**
AKLV	**Akutan Long Va**	**4.95**	**29**	P	**Pn**	**04 34 36.3**	**+1.0**
AKUT	**Akutan**	**4.98**	**31**	*e*Pn	**Pn**	**04 34 36.3**	**+0.4**
AKUT				*e*S	**Sn**	**04 35 31.8**	**-0.4**
FALS	**False Pass**	**6.40**	**37**	*e*Pn	**Pn**	**04 34 56.0**	**+0.7**
	71nm,0.4s						
FALS				*e*S	**Sn**	**04 36 09.5**	**+2.3**
AMKA	**Amchitka**	**6.90**	**286**	*e*P	**Pn**	**04 34 59.6**	**-2.6**
SDPT	**Sand Point**	**7.97**	**43**	*e*Pn	**Pn**	**04 35 17.1**	**+0.2**
SDPT				*e*S	**Sn**	**04 36 43.6**	**-2.1**
CHGN	**Chignik**	**9.48**	**43**	*e*Pn	**Pn**	**04 35 38.2**	**+0.7**
CHGN				*e*Sn	**Sn**	**04 37 18.4**	**-4.2**
SMY	**Shemya**	**10.29**	**292**	*e*Pn	**Pn**	**04 35 46.0**	**-2.6**
OHAK	**Old Harbor**	**12.35**	**47**	*e*Pn	**Pn**	**04 36 16.2**	**-0.5**
KDAK	**Kodiak Island**	**12.95**	**46**	Pn	**Pn**	**04 36 24.3**	**-0.6**
	2.0nm,0.3s,baz=232,slow=6.7,SNR=22						
KDAK				Sn	**Sn**	**04 38 45.3**	**-2.4**
	0.4nm,0.3s,baz=161,slow=21,SNR=3.1						
SEW	**Seward**	**15.54**	**41**	*e*Pn	**Pn**	**04 36 58.6**	**-1.2**
	10nm,0.9s						
SEW				*e*S	**Sn**	**04 39 41.0**	**-10**
BPAW	**Bear Paw Mtn.**	**17.49**	**29**	*e*Pn	**Pn**	**04 37 26.7**	**+2.3**
	28nm,1.1s						
BMRM	**Bremner River**	**18.06**	**43**	*e*Pn	**Pn**	**04 37 32.6**	**+1.1**
	13nm,0.9s						
PAX	**Paxson**	**18.69**	**36**	*e*P	**Pn**	**04 37 38.0**	**-1.2**
	4.6nm,0.7s						
ILAR	**Eielson Array**	**19.25**	**31**	P	**Pn**	**04 37 46.1**	**+0.2**
	0.1nm,0.3s,baz=229,slow=9.6,SNR=18						
ILAR				LR	LR	04 46 11.2	
	comp=Z,26nm,20.1s,baz=160,slow=39						
COLD	**Coldfoot**	**20.03**	**23**	*e*P	**P**	**04 37 56.8**	**+3.6**
	7.2nm,0.9s						
EGAK	**Eagle**	**21.27**	**35**	*e*P	**P**	**04 38 11.3**	**+4.7**
	14nm,0.8s,mb4.3						
DAWY	**Dawson**	**21.61**	**38**	*e*P	**P**	**04 38 14.0**	**+3.9**
DLBC	**Dease Lake**	**24.61**	**54**	P	**P**	**04 38 42.8**	**+2.6**
	5.1nm,0.7s,mb4.2,baz=288,slow=7.7,SNR=13						
INK	**Inuvik**	**25.66**	**31**	*e*P	**P**	**04 38 51.7**	**+2.0**
INK				PcP	PcP	04 42 18.4	-0.8
INK	**Inuvik**	**25.66**	**31**	P	**P**	**04 38 51.6**	**+1.9**
	3.5nm,0.8s,mb4.0,baz=250,slow=10,SNR=6.9						
INK				PcP	PcP	04 42 18.4	-0.8
	0.7nm,0.7s,baz=70,slow=4.4,SNR=4.1						
BBB	**Bella Bella**	**26.21**	**69**	LR	LR	04 47 41.1	
	comp=Z,33nm,18.5s,MS2.9,baz=34,slow=32						
YKA	**Yellowknife Ar**	**32.23**	**46**	P	**P**	**04 39 49.5**	**+1.3**
	1.0nm,0.7s,mb3.8,baz=264,slow=7.7,SNR=3.5						
YBH	**Yreka Blue Hor**	**33.53**	**86**	P	**P**	**04 40 01.2**	**+1.5**
	1.5nm,0.7s,mb4.0,baz=226,slow=3.6,SNR=3.8						
YBH				pP	pP	04 40 11.0	+1.4
	1.8nm,0.8s,baz=319,slow=5.6,SNR=3.9						
K05A	**Summer Lake**	**34.20**	**83**	⇑P	**P**	**04 40 07.0**	**+1.5**
	baz=34						
I07A	**Izee**	**34.43**	**80**	⇓P	**P**	**04 40 08.3**	**+0.8**
	baz=34,SNR=6.5						
D12A	**Red Ives Fores**	**35.71**	**73**	⇓P	**P**	**04 40 18.6**	**+0.1**
	baz=36						
WVOR	**Wild Horse Val**	**35.79**	**82**	*e*P	**P**	**04 40 19.7**	**+0.5**
	6.1nm,1.1s,mb4.4						
E12A	**Beaver Dam Sad**	**35.85**	**74**	⇑P	**P**	**04 40 19.9**	**+0.1**
	baz=36						
F12A	**Elk City**	**36.34**	**75**	⇑P	**P**	**04 40 24.5**	**+0.5**
	baz=36						
B14A	**Marquette Ranc**	**36.44**	**70**	⇓P	**P**	**04 40 25.3**	**+0.6**
	baz=36						
WCN	**Washoe City**	**36.73**	**87**	⇓P	**P**	**04 40 28.2**	**+1.0**
	baz=37						
D14A	**Greenough**	**36.84**	**72**	⇓P	**P**	**04 40 28.4**	**+0.3**
	baz=37						
B15A	**Bradely Ranch,**	**36.89**	**70**	⇓P	**P**	**04 40 28.5**	**0.0**
	baz=37						
C15A	**Salmond Ranch,**	**37.09**	**71**	⇓P	**P**	**04 40 31.2**	**+1.0**
	baz=37						
H12A	**Diamond D Ranc**	**37.15**	**77**	⇑P	**P**	**04 40 31.1**	**+0.2**
	baz=37						
A16A	**West Butte Ran**	**37.20**	**68**	⇓P	**P**	**04 40 30.8**	**-0.5**
	baz=37						
I12A	**Atlanta**	**37.34**	**78**	⇑P	**P**	**04 40 32.8**	**+0.4**
	baz=37						
L10A	**Juniper Basin**	**37.35**	**81**	⇑P	**P**	**04 40 33.2**	**+0.6**
	baz=37						
B16A	**M & M Farms, S**	**37.36**	**69**	⇓P	**P**	**04 40 32.4**	**-0.2**
	baz=37						
A17A	**Triple J Farms**	**37.74**	**68**	⇓P	**P**	**04 40 35.7**	**-0.1**
	baz=38						
L11A	**Cat Creek Ranc**	**37.77**	**80**	⇓P	**P**	**04 40 36.6**	**+0.6**
	baz=38						
HLID	**Hailey**	**37.91**	**78**	⇓P	**P**	**04 40 38.1**	**+0.8**
	baz=38						
I13A	**Wildhorse Cree**	**37.92**	**77**	⇓P	**P**	**04 40 38.1**	**+0.7**
	baz=38						
M11A	**Holland Ranch,**	**38.12**	**82**	⇓P	**P**	**04 40 39.7**	**+0.6**
	baz=38						
J13A	**Cove Ranch, Pi**	**38.15**	**78**	⇑P	**P**	**04 40 39.7**	**+0.5**
	baz=38						
NVAR	**Mina Array Bea**	**38.15**	**87**	P	**P**	**04 40 39.6**	**+0.3**
	0.5nm,0.5s,mb3.5,baz=284,slow=9.7,SNR=6.2						
NVAR				PcP	PcP	04 42 52.5	-1.1
	0.6nm,0.8s,baz=289,slow=3.0,SNR=3.6						
H15A	**Lima**	**38.51**	**75**	⇓P	**P**	**04 40 42.3**	**0.0**
	baz=38						
B18A	**Beardsley Farm**	**38.53**	**68**	⇑P	**P**	**04 40 42.2**	**-0.3**
	baz=38,SNR=6.5						
BOZ	**Bozeman (W)**	**38.65**	**73**	⇑P	**P**	**04 40 43.5**	**0.0**
	baz=39						
BOZ	**Bozeman (W)**	**38.65**	**73**	*e*P	**P**	**04 40 43.4**	**0.0**
EGMT	**Eagleton**	**38.71**	**69**	⇑P	**P**	**04 40 43.7**	**-0.2**
	baz=39						
O11A	**Cowboy Ranch,**	**38.91**	**83**	⇓P	**P**	**04 40 46.4**	**+0.7**
	baz=39						
Q10A	**Clear Creek Ra**	**39.16**	**85**	⇑P	**P**	**04 40 48.8**	**+1.0**
	baz=39						
VES	**Vestal, Richgr**	**39.17**	**91**	⇑P	**P**	**04 40 47.5**	**-0.4**
	baz=39						
O12A	**Currie**	**39.42**	**82**	⇓P	**P**	**04 40 50.6**	**+0.6**
	baz=39						
L14A	**Malta**	**39.43**	**79**	⇓P	**P**	**04 40 50.6**	**+0.5**
	baz=39						
N13A	**Wendover, West**	**39.45**	**81**	⇓P	**P**	**04 40 50.8**	**+0.6**
	baz=39						
R10A	**Warm Springs**	**39.52**	**86**	⇑P	**P**	**04 40 51.2**	**+0.4**
	baz=40						
S10A	**Tonopah Range,**	**39.55**	**87**	⇓P	**P**	**04 40 51.2**	**+0.1**
	baz=40,SNR=6.1						
Q11A	**Duckwater**	**39.62**	**85**	⇑P	**P**	**04 40 52.5**	**+0.8**
	baz=40						
M14A	**Sheep Mountain**	**39.65**	**80**	⇑P	**P**	**04 40 52.6**	**+0.8**
	baz=40						
P12A	**McGill**	**39.75**	**84**	⇑P	**P**	**04 40 53.4**	**+0.7**
	baz=40						
R11A	**Troy Canyon, C**	**39.95**	**85**	⇑P	**P**	**04 40 53.9**	**-0.5**
	baz=40						
Q12A	**Willow Creek R**	**40.05**	**84**	⇑P	**P**	**04 40 55.5**	**+0.3**
	baz=40						
K16A	**Soda Springs**	**40.06**	**77**	⇑P	**P**	**04 40 55.3**	**0.0**
	baz=40						
FURC	**Furnace Creek,**	**40.23**	**89**	⇓P	**P**	**04 40 56.3**	**-0.4**
	baz=40						
P13A	**Bates Ranch, G**	**40.34**	**83**	⇓P	**P**	**04 40 57.8**	**+0.3**
	baz=40						
RLMT	**Red Lodge**	**40.36**	**73**	⇑P	**P**	**04 40 57.3**	**-0.4**
	baz=40						
DUG	**Dugway**	**40.69**	**81**	⇓P	**P**	**04 41 01.1**	**+0.6**
	baz=41						
DUG	**Dugway**	**40.69**	**81**	*e*P	**P**	**04 40 59.7**	**-0.9**
	4.5nm,1.1s,mb4.0						
J18A	**Kendall Valley**	**40.85**	**76**	⇑P	**P**	**04 41 01.9**	**+0.1**
	baz=41						
P14A	**Drum Mountains**	**40.87**	**82**	⇓P	**P**	**04 41 02.1**	**+0.1**
	baz=41						
GSC	**Goldstone**	**40.97**	**90**	⇑P	**P**	**04 41 03.3**	**+0.4**
	baz=41						
GSC	**Goldstone**	**40.97**	**90**	*e*P	**P**	**04 41 02.1**	**-0.7**
Q14A	**Sevier Lake (B**	**41.07**	**83**	⇓P	**P**	**04 41 03.8**	**+0.2**
	baz=41,SNR=11						
M17A	**Scullys Gap (B**	**41.36**	**78**	⇑P	**P**	**04 41 05.7**	**-0.3**
	baz=41						
BW06	**Boulder Array**	**41.37**	**76**	⇓P	**P**	**04 41 05.6**	**-0.5**
	baz=41						
S13A	**Holt Ranch, En**	**41.51**	**85**	⇓P	**P**	**04 41 07.3**	**+0.1**
	baz=42						
V11A	**Goodsprings**	**41.53**	**88**	⇓P	**P**	**04 41 07.8**	**+0.3**
	baz=42						
N17A	**Moffit Pass**	**41.54**	**79**	⇓P	**P**	**04 41 07.4**	**-0.2**
	baz=42						
U12A	**Valley of Fire**	**41.75**	**87**	⇓P	**P**	**04 41 09.5**	**+0.3**
	baz=42						
T13A	**Saint George**	**41.81**	**86**	⇑P	**P**	**04 41 09.6**	**-0.1**
	baz=42						
CCUT	**Cedar City**	**41.85**	**85**	*e*P	**P**	**04 41 10.5**	**+0.4**
	7.6nm,1.3s,mb4.2						
V12A	**Nelson**	**41.97**	**88**	⇓P	**P**	**04 41 11.2**	**+0.1**
	baz=42						
GMRC	**Granite Mounta**	**42.03**	**90**	⇓P	**P**	**04 41 11.6**	**0.0**
	baz=42						
U13A	**Pakoon Wash**	**42.13**	**87**	⇓P	**P**	**04 41 12.6**	**+0.2**
	baz=42,SNR=7.6						
R15A	**Junction**	**42.16**	**83**	⇑P	**P**	**04 41 12.3**	**-0.2**
	baz=42						
PFO	**Pinyon Flat Ob**	**42.25**	**92**	⇓P	**P**	**04 41 12.8**	**-0.6**
	baz=42						
BELC	**Belle Mtn. Jos**	**42.30**	**91**	⇓P	**P**	**04 41 13.7**	**-0.1**
	baz=42						
T14A	**Hurricane**	**42.31**	**85**	⇓P	**P**	**04 41 14.4**	**+0.6**
	baz=42						
P17A	**Butcher Ranch,**	**42.42**	**81**	⇓P	**P**	**04 41 15.1**	**+0.4**
	baz=42						
V13A	**Grand Canyon W**	**42.46**	**87**	⇑P	**P**	**04 41 14.8**	**-0.2**
	baz=42						
Q16A	**Castle Valley**	**42.46**	**82**	⇓P	**P**	**04 41 15.5**	**+0.5**
	baz=42,SNR=10						
R16A	**Teasdale**	**42.63**	**83**	⇓P	**P**	**04 41 16.4**	**0.0**
	baz=43						
U14A	**Mt Trumbull**	**42.63**	**86**	⇓P	**P**	**04 41 16.6**	**+0.1**
	baz=43						
P18A	**Preston Nutter**	**42.65**	**80**	⇑P	**P**	**04 41 17.1**	**+0.5**
	baz=43,SNR=9.2						
SRU	**San Rafael**	**42.76**	**81**	⇑P	**P**	**04 41 17.5**	**0.0**
	baz=43						
SRU	**San Rafael**	**42.76**	**81**	*e*P	**P**	**04 41 17.4**	**0.0**
	3.9nm,0.9s,mb4.1						
T15A	**Red Dirt Ranch**	**42.79**	**85**	⇑P	**P**	**04 41 18.2**	**+0.4**
	baz=43,SNR=6.9						
CBIJ	**Chichi jima**	**42.84**	**256**	LR	LR	04 55 50.8	
	comp=Z,38nm,19

T21A	Navajo Lake	45.92	82	⇓P		P	04 41 42.6	-0.1
	baz=46								
116A	Eloy	45.98	89	⇑P		P	04 41 43.4	+0.1
	baz=46								
V20A	Brimhall	46.04	84	⇑P		P	04 41 43.6	-0.1
	baz=46								
U21A	Nageezi	46.18	82	⇓P		P	04 41 44.7	-0.1
	baz=46,SNR=11								
Y18A	Canyon Day Jun	46.29	87	⇓P		P	04 41 46.2	+0.5
	baz=46								
T22A	Edith	46.31	81	⇑P		P	04 41 46.0	+0.3
	baz=46,SNR=6.4								
X19A	St. Johns	46.36	86	⇑P		P	04 41 46.3	+0.1
	baz=46								
P25A	Willow Gulch B	46.56	77	⇓P		P	04 41 48.1	+0.4
	baz=46								
117A	Oracle	46.60	89	⇓P		P	04 41 48.2	+0.1
	baz=47								
U22A	Llaves	46.72	82	⇓P		P	04 41 48.9	-0.2
	baz=47								
AGMN	Agassiz Nation	46.73	62	*e*P		P	04 41 47.8	-1.2
	6.1nm,0.9s,mb4.5								
X20A	Quemado	46.80	85	⇑P		P	04 41 50.0	+0.3
	baz=47,SNR=6.1								
V22A	San Miguel Ran	46.97	82	⇑P		P	04 41 50.8	-0.2
	baz=47								
118A	Homack Ranch,	47.05	88	⇓P		P	04 41 51.8	+0.1
	baz=47								
U23A	El Rito	47.18	81	⇑P		P	04 41 52.6	0.0
	baz=47,SNR=7.0								
Y20A	Horse Springs,	47.27	85	⇓P		P	04 41 53.7	+0.3
	baz=47								
X21A	Alamocita Cree	47.32	84	⇑P		P	04 41 53.6	-0.1
	baz=47								
V23A	Ortiz Mt. (NFS	47.54	82	⇑P		P	04 41 55.4	-0.1
	baz=48								
Z20A	Nine Sixteen R	47.64	86	⇓P		P	04 41 56.2	-0.1
	baz=48								
Y21A	Point of Rocks	47.66	85	⇓P		P	04 41 56.7	+0.3
	baz=48								
LAZ	Ladron	47.76	84	*e*P		P	04 41 57.4	+0.2
	2.4nm,1.1s,mb4.1								
X22A	Bernardo	47.78	84	⇑P		P	04 41 57.5	+0.2
	baz=48								
318A	Bisbee	47.82	89	⇑P		P	04 41 57.6	0.0
	baz=48								
T25A	Trinidad	47.82	79	⇑P		P	04 41 57.2	-0.4
	baz=48								
ANMO	Albuquerque	47.85	83	P		P	04 41 57.6	-0.3
	2.3nm,0.9s,mb4.2,baz=314,slow=9.6,SNR=7.7								
219A	White Tail Can	47.93	88	⇑P		P	04 41 58.8	+0.3
	baz=48								
V24A	Rampart Ranch,	48.13	81	⇑P		P	04 42 00.1	+0.1
	baz=48,SNR=7.5								
Y22A	Socorro	48.17	84	⇑P		P	04 42 00.4	+0.1
	baz=48,SNR=8.1								
BNM	Barren Site	48.25	84	*e*P		P	04 42 00.6	-0.4
	2.1nm,0.7s,mb4.3								
U25A	Circle Dot Ran	48.27	80	⇓P		P	04 42 00.7	-0.4
	baz=48								
W24A	Lazy 6 Ranch,	48.37	82	⇓P		P	04 42 01.6	-0.2
	baz=48								
220A	Playas Peak, P	48.46	88	⇑P		P	04 42 02.1	-0.5
	baz=48,SNR=5.6								
V25A	Rancho No Teng	48.48	81	⇑P		P	04 42 02.6	-0.1
	baz=48								
121A	Cookes Peak, D	48.53	86	⇑P		P	04 42 03.0	-0.1
	baz=48								
Z22A	Elephant Butte	48.60	85	⇑P		P	04 42 03.9	+0.2
	baz=49								
U26A	Atchley Ranch,	48.70	80	⇓P		P	04 42 04.3	0.0
	baz=49								
W25A	X Bar L Ranch,	48.97	81	⇓P		P	04 42 06.2	-0.3
	baz=49,SNR=6.7								
V26A	Tequesquite Ra	49.04	80	⇓P		P	04 42 06.4	-0.6
	baz=49,SNR=6.2								
Z24A	Sheeppen Canyo	49.58	84	⇑P		P	04 42 10.7	-0.5
	baz=50								
Y25A	Mesa, Roswell	49.63	83	⇑P		P	04 42 11.2	-0.4
	baz=50								
124A	Stringfield Ra	49.93	85	⇑P		P	04 42 13.6	-0.2
	baz=50								
Y26A	Elida	50.19	82	⇓P		P	04 42 15.5	-0.3
	baz=50								
224A	Cornudas Mount	50.29	85	⇓P		P	04 42 16.6	+0.1
	baz=50								
125A	Gardner Draw,	50.47	84	⇑P		P	04 42 17.8	-0.1
	baz=50								
Z26A	Caprock	50.51	83	⇓P		P	04 42 17.5	-0.7
	baz=50,SNR=5.1								
MNTX	Cornudas Mount	50.62	86	*e*P		P	04 42 18.4	-0.7
	2.3nm,0.8s,mb4.2								
Y27A	Causey	50.64	82	⇓P		P	04 42 18.6	-0.5
	baz=51								
225A	Deer Hill, Car	50.72	85	⇓P		P	04 42 19.7	0.0
	baz=51								
324A	Moseley Ranch,	50.73	86	⇓P		P	04 42 19.4	-0.5
	baz=51								
MSTX	Muleshoe	50.83	81	⇑P		P	04 42 19.7	-0.9
	baz=51								
126A	Clayton Basin,	50.88	84	⇓P		P	04 42 20.3	-0.7
	baz=51								
Z27A	Tatum	50.97	82	⇑P		P	04 42 21.0	-0.6
	baz=51								
325A	Bean Ranch, Si	51.10	86	⇓P		P	04 42 22.1	-0.6
	baz=51,SNR=6.5								
226A	Malaga, Loving	51.21	84	⇑P		P	04 42 22.9	-0.5
	baz=51								
425A	Indio Mountain	51.48	86	⇑P		P	04 42 25.1	-0.4
	baz=52,SNR=6.6								
326A	Caldwell Ranch	51.78	85	⇓P		P	04 42 27.0	-0.7
	baz=52,SNR=6.4								
426A	McDonald Obser	52.17	86	⇓P		P	04 42 30.2	-0.5
	baz=52								
SONM	Songino Array	52.19	302	P		P	04 42 31.2	+0.7
	0.3nm,0.4s,mb3.6,baz=67,slow=4.8,SNR=3.0								
SONM				pP		pP	04 42 41.1	+0.2
	0.6nm,0.7s,baz=42,slow=9.4,SNR=2.6								
SONM				PcP		PcP	04 43 41.1	-0.7
	0.4nm,0.4s,baz=125,slow=2.3,SNR=3.9								
SONM				pPcP			04 43 51.8		
	0.6nm,0.5s,baz=60,slow=3.4,SNR=4.1								
427A	Hayter Ranch,	52.46	85	⇑P		P	04 42 31.7	-1.1
	baz=52								
328A	Wristen Ranch,	52.49	84	⇑P		P	04 42 31.8	-1.2
	baz=52								
526A	Mary Lane Ranc	52.54	86	⇓P		P	04 42 32.9	-0.5
	baz=52								
527A	Woodward Ranch	52.79	86	⇓P		P	04 42 34.2	-1.1
	baz=53								
626A	Big Bend Ranch	52.85	87	⇑P		P	04 42 34.7	-1.0
	baz=53,SNR=5.6								
428A	Kincaid Ranch,	53.00	85	⇓P		P	04 42 36.0	-0.8
	baz=53,SNR=5.4								
TXAR	Lajitas Array	53.30	87	P		P	04 42 37.8	-1.2
	3.1nm,0.7s,mb4.3,baz=301,slow=5.3,SNR=47								
TXAR				pP		pP	04 42 48.6	-0.7
	1.8nm,0.8s,baz=296,slow=7.5,SNR=7.0								
627A	Terlingua Ranc	53.40	86	⇑P		P	04 42 38.7	-1.1
	baz=53,SNR=7.1								
628A	Black Gap, Mar	53.70	86	⇑P		P	04 42 40.8	-1.2
	baz=54,SNR=10.0								
ARCES	ARCESS Array B	60.30	354	P		P	04 43 28.6	+0.5
	0.7nm,0.6s,mb3.9,baz=17,slow=6.6,SNR=7.4								
ARCES				pP		pP	04 43 39.2	+0.6
	1.2nm,0.5s,baz=25,slow=6.2,SNR=3.5								
MKAR	Makanchi Array	65.16	314	P		P	04 44 00.2	-0.6
	0.5nm,0.6s,mb3.7,baz=65,slow=6.3,SNR=4.7								
MKAR				pP		pP	04 44 09.7	-1.7
	0.7nm,0.7s,baz=52,slow=6.9,SNR=5.4								
BVAR	Borovoye Array	65.43	325	P		P	04 44 03.4	+1.0
	1.0nm,0.4s,mb4.2,baz=35,slow=11,SNR=4.9								
BVAR				pP		pP	04 44 13.5	+0.5
	2.2nm,0.6s,baz=58,slow=11,SNR=4.6								
GYA	Guiyang	66.03	283	*e*P		P	04 44 08.9	+2.2
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s,mb4.8								
FINES	FINESS Array B	68.22	352	P		P	04 44 22.6	+2.5
	comp=Z,1.5nm,0.7s,mb4.1,baz=38,slow=5.8,SNR=2.9								
FINES				pP		pP	04 44 31.2	+0.5
	comp=Z,2.5nm,0.8s,baz=7.8,slow=11,SNR=2.9								
NOA	NORSAR Array B	69.38	359	P		P	04 44 28.8	+1.5
	comp=Z,1.6nm,0.9s,mb4.0,baz=2.3,slow=6.5,SNR=2.7								
NOA				pP		pP	04 44 38.5	+0.6
	comp=Z,1.5nm,0.9s,baz=359,slow=4.8,SNR=3.4								
AKASG	Malin Array Be	78.40	348	P		P	04 45 20.1	-0.1
	comp=Z,1.0nm,0.4s,mb4.1,baz=16,slow=5.6,SNR=4.3								
AKASG				pP		pP	04 45 30.5	-0.5
	comp=Z,3.3nm,0.5s,baz=15,slow=5.6,SNR=9.4								
LDF	La Druitiere	81.48	7	*e*P		P	04 45 37.1	+0.2
	comp=Z,5.0nm,0.5s,mb4.4								
LDF	La Druitiere	81.48	7	*e*P		P	04 45 37.1	+0.2
	comp=Z,2.5nm,0.5s,mb4.4								
HAU	Haudompre	82.40	2	*e*P		P	04 45 41.4	-0.3
HINF	Hinteralfeld	82.60	2	*e*P		P	04 45 42.6	-0.2
LOR	Lormes	83.04	4	*e*P		P	04 45 45.0	-0.1
SSF	Saint Saulge	83.23	4	*e*P		P	04 45 46.7	+0.6
MFF	Saint Martin d	83.46	7	*e*P		P	04 45 47.9	+0.7
	comp=Z,23nm,1.1s,mb4.8								
MFF	Saint Martin d	83.46	7	*e*P		P	04 45 47.9	+0.7
	comp=Z,11nm,1.1s,mb4.8								
AVF	Avril sur Loir	83.50	5	*e*P		P	04 45 48.0	+0.6
	comp=Z,5.7nm,0.7s,mb4.4								
AVF	Avril sur Loir	83.50	5	*e*P		P	04 45 48.0	+0.6
	comp=Z,2.8nm,0.7s,mb4.4								
SMF	Signal de Mont	83.66	4	*e*P		P	04 45 48.9	+0.6
	comp=Z,6.5nm,0.7s,mb4.6								
SMF	Signal de Mont	83.66	4	*e*P		P	04 45 48.9	+0.6
	comp=Z,3.3nm,0.7s,mb4.6								
CABF	La Chapelle	83.78	3	*e*P		P	04 45 50.1	+1.2
	comp=Z,16nm,0.8s,mb4.9								
CABF	La Chapelle	83.78	3	*e*P		P	04 45 50.1	+1.2
	comp=Z,7.8nm,0.8s,mb4.9								
TCF	Toulx Ste Croi	83.93	5	*e*P		P	04 45 50.2	+0.5
BRTR	Keskin Array B	88.31	342	P		P	04 46 11.8	+0.4
	comp=Z,0.5nm,0.7s,mb3.9,baz=35,slow=3.5,SNR=3.2								
BRTR				pP		pP	04 46 22.3	0.0
	comp=Z,0.5nm,0.5s,baz=42,slow=2.0,SNR=3.1								
ASAR	Alice Springs	88.47	230	P		P	04 46 08.0	-4.1
	comp=Z,0.8nm,0.9s,mb4.0,baz=32,slow=3.9,SNR=5.2								
ASAR				pP		pP	04 46 19.1	-3.9
	comp=Z,0.8nm,0.8s,baz=37,slow=4.8,SNR=3.4								
TORD	Torodi Ar. Bea	116.78	9	PKP		PKPdf	04 52 02.2	-2.3
	comp=Z,2.0nm,0.6s,baz=327,slow=2.0,SNR=4.1								
TORD				pPKP		pPKPdf	04 52 13.2	-2.6
	comp=Z,0.3nm,0.6s,baz=8.6,slow=3.9,SNR=2.6								
MAW	Mawson	148.66	216	PKPbc		PKPbc	04 53 02.7	-2.8
	comp=Z,3.1nm,0.9s,baz=277,slow=2.0,SNR=5.6								
MAW				pPKPbc		pPKPbc	04 53 13.4	-3.3
	comp=Z,1.9nm,0.9s,baz=90,slow=6.6,SNR=3.1								

IDC ***11*** *04:50:02.9±2.4, 12°.54N×88°.19W, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.6/20, mbtmp3.7/6, ML3.2/2, MS3.2/5, Ms1 3.2/5, ms1mx2.9/25, Error ellipse: s-maj=56.9km s-min=27.9km az=35.0*

ISCJB ***11*** *04:50:04.7±0.7, 12°.10N±0°.05×88°.46W±0°.05, h42km±7km, mb3.9/10, MS3.1/4, Error ellipse: s-maj=11.3km s-min=4.4km az=38.9*

CASC ***11*** *04:50:04.9±2.3, 12°.21N×88°.43W, h19km±9km, MD4.3, mb4.2(NEIC)*

NEIC ***11*** *04:50:07.0±1.6, 12°.24N×88°.31W, h42km±15km, mb4.2/6, Error ellipse: s-maj=26.1km s-min=14.8km az=212.0*

ISC 11 04:50:06.7±0.7, 12°22'N±0'.07×88°38'W±0'.06, h39km±8km, n48, σ1s03/50, mb3.9/10, MS3.1/4, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
CNCH	Conchagua	1.18	27	*e*P		Pn	04 50 26.6	0.0
VSM	San Miguel	1.20	5	*e*P		Pn	04 50 27.1	+0.1
BLLM	Bellamira	1.22	6	*e*P		Pn	04 50 27.0	-0.3
CRIN	San Cristobal	1.38	70	*e*P		Pn	04 50 29.7	+0.3
CRIN				*e*S		Sn	04 50 50.4	+3.9
SNVI	San Vicente	1.46	342	*e*P		Pn	04 50 29.6	-0.8
LEON	Leon	1.46	82	*e*P		Pn	04 50 29.2	-1.3
LFRS	El Faro	1.55	334	*e*P		Pn	04 50 31.1	-0.6
CAHU	Cacacuatique	1.55	6	*e*P		Pn	04 50 32.1	+0.3
LBRS	Las Brisas	1.64	337	*e*P		Pn	04 50 32.7	-0.4
CNGN	Cerro Negro	1.66	80	*e*P		Pn	04 50 34.1	+0.8
BOQS	Boqueron	1.74	330	*e*P		Pn	04 50 33.8	-0.7
BOQS				*e*S		Sn	04 50 56.7	+1.2
COPN	Copaltepe	1.75	91	*e*P		Pn	04 50 33.5	-0.9
MOMN	Momotombo	1.80	84	*e*P		Pn	04 50 34.7	-0.6
CSAN		1.91	91	*e*P		Pn	04 50 36.7	0.0
XAVN	Gruta Xavier	2.00	92	*e*P		Pn	04 50 37.7	-0.4
SBLS	San Blas	2.02	323	*e*P		Pn	04 50 36.9	-1.3
SNJE	San Jose	2.03	324	*e*P		Pn	04 50 37.7	-0.7
SNJE				*e*S		Sn	04 51 04.6	+2.1
TISN	Laguna Tiscapa	2.06	92	*e*P		Pn	04 50 38.5	-0.3
RTR	El Retiro	2.08	324	*e*P		Pn	04 50 38.8	-0.3
MGAN	Managua	2.08	92	*e*P		Pn	04 50 38.7	-0.4
TGUH	Tegucigalpa,Un	2.12	30	*e*Pn		Pn	04 50 40.2	+0.6
TGUH	Tegucigalpa,Un	2.12	30	*e*P		Pn	04 50 39.3	-0.3
TGUH				*e*S		Sn	04 51 07.8	+3.1
HUEN		2.16	87	*e*P		Pn	04 50 39.5	-0.7
RBDL	Robledal	2.27	326	*e*P		Pn	04 50 41.7	0.0
JTS	JuntasAbangare	3.87	119	*e*Pn		Pn	04 51 03.5	-0.2
JTS				Sn		Sn	04 51 48.2	+0.3
JTS	JuntasAbangare	3.87	119	Pn		Pn	04 51 04.7	+1.1
	1.5nm,0.3s,baz=312,slow=17,SNR=9.0							
JTS				Sn		Sn	04 51 48.2	+0.3
	2.0nm,0.3s,baz=90,slow=20,SNR=3.9							
JCR	Jicaral	3.98	126	*e*P		Px	04 51 18.3	
PRS1	Puriscal	4.57	119	*e*P		Pn	04 51 17.5	+4.2
LAJ	Bijagual	4.79	119	*e*P		Pn	04 51 15.0	-1.4
URSC	Urasca	5.10	117	*e*P		Pn	04 51 23.1	+2.5
BUS	Buena Vista	5.25	120	*e*P		Pn	04 51 23.8	+1.1
ACR	Cerro Adams	6.23	124	*e*P		Pn	04 51 37.9	+1.8
CMIG	Matias Romero	7.94	308	Pn		Pn	04 51 59.4	-0.3
	0.4nm,0.3s,baz=165,slow=16,SNR=8.0							
CMIG				Sn		Sn	04 53 35.0	+6.7
	0.1nm,0.3s,baz=26,slow=23,SNR=1.5							
ROSC	El Rosal	15.69	117	LR		LR	05 00 12.0	
	comp=Z,59nm,21.3s,baz=24,slow=39							
ATAH	Atahualpa	21.64	152	LR		LR	05 01 37.8	
	comp=Z,72nm,20.3s,MS3.1,baz=172,slow=32							
TXAR	Lajitas Array	22.19	322	P		P	04 55 00.5	+0.9
TXAR	Lajitas Array	22.19	322	P		P	04 55 00.5	+0.9
	1.0nm,0.8s,mb3.3,baz=142,slow=10,SNR=13							
MIAR	Mount Ida	22.72	349	*e*P		P	04 55 05.2	+0.1
	9.1nm,1.1s,mb4.1							
TKL	Tuckaleechee C	23.70	9	P		P	04 55 14.3	-0.7
	3.3nm,0.9s,mb3.8,baz=205,slow=12,SNR=4.0							
TKL				LR		LR	05 06 00.5	
	comp=Z,47nm,21.2s,MS2.9,baz=164,slow=41							
WMOK	Wichita Mounta	24.33	339	*e*P		P	04 55 20.3	-0.5
	17nm,1.8s,mb4.2							
AMTX	Amarillo	25.59	334	*e*P		P	04 55 32.7	+0.4
	16nm,1.2s,mb4.4							
SDCO	Great Sand Dun	29.68	332	*e*P		P	04 56 11.0	+2.2
	2.9nm,1.2s,mb3.9							
LPAZ	La Paz	34.69	144	LR		LR	05 10 53.8	
	comp=Z,51nm,19.2s,MS3.3,baz=80,slow=36							
AGMN	Agassiz Nation	36.50	352	*e*P		P	04 57 06.6	-1.5
	2.5nm,0.6s,mb4.2							
MCMT	McKenzie Canyo	38.65	332	*e*P		P	04 57 29.4	+3.0
	1.4nm,1.2s,mb3.6							
SCHQ	Schefferville	45.76	17	P		P	04 58 22.5	-1.6
	2.5nm,0.8s,mb4.2,baz=218,slow=11,SNR=3.1							
CPUP	Villa Florida	48.78	142	LR		LR	05 19 30.5	
	comp=Z,32nm,19.2s,MS3.3,baz=164,slow=36							
ILAR	Eielson Array	65.86	336	P		P	05 00 47.7	-0.3
	0.4nm,1.0s,mb3.4,baz=113,slow=5.9,SNR=5.2							

IDC ***11*** *05:18:59.8±4.2, 28°.07N×62°.81E, h0km, mb3.4/3, mb1 3.4/3, mb1mx3.2/25, mbtmp3.4/3, Error ellipse: s-maj=120.1km s-min=33.5km az=143.0*

ISCJB ***11*** *05:19:02.8±0.6, 28°.0N±0°.2×62°.9E±0°.1, h33km, mb3.5/3, Error ellipse: s-maj=27.9km s-min=6.7km az=144.5*

OMAN ***11*** *05:20:16.4±99.0, 24°.96N×56°.98E, h28km±66km, Error ellipse: s-maj=196.7km s-min=17.0km az=249.0*

CSEM ***11*** *05:20:16.4, 24°.96N×56°.98E, h28km, After OMAN*

ISC 11 05:19:05.7±0.6, 28°.1N±0°.2×62°.8E±0°.1, h35km, n17, σ0s86/17, mb3.5/3, 2C, Southwestern Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BANOM	Banah	6.22	251	P		Pn	05 20 36.5	+1.5
	SNR=26							
BANOM	Banah	6.22	251	⇑P		Pn	05 20 36.5	+1.5
	SNR=26							
HOQ	Hoqain	6.71	229	P		Pn	05 20 40.2	-1.6
	SNR=15							
HOQ	Hoqain	6.71	229	P		Pn	05 20 40.2	-1.6
	SNR=15							
HOQ	Hoqain	6.71	229	⇑P		Pn	05 20 40.2	-1.6
	SNR=15							
ASHO	Ashiyiah	6.97	242	S		Pn	05 20 45.3	0.0
	SNR=17							
ASHO	Ashiyiah	6.97	242	S		Pn	05 20 45.3	0.0
	SNR=17							
BSYO	Bisya	7.36	225	P		Pn	05 20 51.2	+0.5
	SNR=9.8							
BSYO	Bisya	7.36	225	P		Pn	05 20 51.2	+0.5
	SNR=9.8							
BSY	Bisya	7.38	225	P		Pn	05 20 51.2	+0.3
	SNR=9.8							
THW	Thamme Wali	8.99	57	P		Pn	05 21 12.9	-0.1
SARP	Sargodha	9.33	64	P		Pn	05 21 16.6	-1.1
CEP	Cherat	9.65	52	P		Pn	05 21 22.7	+0.7
CHCP	Chirah Chowk	10.53	56	P		Pn	05 21 35.2	+1.2
MKAR	Makanchi Array	24.10	34	P		P	05 24 17.5	-0.4
	0.2nm,0.5s,mb2.8,baz=216,slow=8.4,SNR=4.4							
ARCES	ARCESS Array B	46.71	343	P		P	05 27 30.2	-0.5
	1.7nm,1.0s,mb3.9,baz=152,slow=7.9,SNR=3.6							
TORD	Torodi Ar. Bea	58.59	269	P		P	05 28 58.6	-0.7
	0.5nm,0.5s,mb3.8,baz=57,slow=6.7,SNR=14							

ISCJB ***11*** *05:23:27.5±0.6, 20°.0S±0°.1×66°.5E±0°.1, h10km, mb4.1/19, MS4.0/13, Error ellipse: s-maj=19.4km s-min=15.0km az=161.0*

IDC ***11*** *05:23:27.6±0.7, 19°.96S×66°.54E, h0km, mb4.1/16, mb1 4.2/16, mb1mx4.1/24, mbtmp4.1/16, MS3.9/13, Ms1 3.9/13, ms1mx3.8/22, Error ellipse: s-maj=23.5km s-min=18.9km az=168.0*

NEIC ***11*** *05:23:29.1±0.5, 19°.99S×66°.50E, h10km, mb4.6/2, Error ellipse: s-maj=15.5km s-min=13.1km az=161.0*

GCMT ***11*** *05:23:34.9±0.3, 19°.80S×66°.66E, h14km±1km, MW4.9, Moment Tensor Solution. s20,c29; s59,c82; Moment tensor: Scale 10¹⁶Nm; Mrr=2.61±.22; Mθθ 0.52±.12; Mϕϕ 2.09±.15; Mrθ 1.27±.33; Mrϕ -1.25±.10; Mθϕ 0.84±.30; Best double couple: M₀3.10000×10¹⁶ NP1:ϕ308.00000°, δ49.00000°, λ-125.00000°. NP2:ϕ175.00000°, δ52.00000°, λ-57.00000°. Principal axes: T 2.7800, Plg1.0000°, Azm242.0000°; N 0.5500, Plg26.0000°, Azm332.0000°; P -3.3400, Plg64.0000°, Azm149.0000°; Data Used: IC II IU G CN.*

ISC 11 05:23:29.4±0.6, 20°.0S±0°.1×66°.5E±0°.1, h10km, n31, σ0s77/23, mb4.1/19, MS4.0/13, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KMBO	Kilima Mbogo	34.19	300	P		P	05 30 14.2	-1.1
	0.6nm,0.4s,mb3.8,baz=360,slow=24,SNR=1.4							
LBTB	Lobatse	38.03	255	P		P	05 30 49.1	+1.0
	4.8nm,1.0s,mb4.2,baz=153,slow=7.8,SNR=3.1							
BOSA	Boshof	38.42	249	LR		LR	05 43 39.8	
	comp=Z,251nm,20.9s,MS4.0,baz=100,slow=32							
MAW	Mawson	47.68	182	LR		LR	05 47 16.0	
	comp=Z,81nm,20.0s,MS3.7,baz=165,slow=30							
CMAR	Chiang Mai Arr	49.70	42	P		P	05 32 22.8	+0.9
	5.3nm,1.0s,mb4.5,baz=244,slow=7.5,SNR=4.7							
CMAR				LR		LR	05 50 17.6	
	comp=Z,201nm,19.9s,MS4.1,baz=197,slow=32							
SHL	Shillong	51.54	30	*e*PKP		P	05 32 31.0	-4.7
MMAI	Mount Meron Ar	60.49	330	LR		LR	05 55 30.0	
	comp=Z,33nm,21.6s,MS3.4,baz=160,slow=32							
ASAR	Alice Springs	62.16	107	P		P	05 33 50.7	-0.6
	1.1nm,0.9s,mb4.0,baz=245,slow=8.7,SNR=2.6							
AAK	Ala-Archa	62.72	7	LR		LR	06 00 12.7	
	comp=Z,113nm,19.1s,MS4.1,baz=306,slow=35							
GTA	Gaotai	66.77	28	*e*P		P	05 34 22.5	+1.5
GTA				pP		pP	05 34 26.9	+2.7
GTA				sP		sP	05 34 29.6	+4.1
GTA				pmax		pmax		
	comp=Z,3.0nm,1.0s,mb4.3							
BRTR	Keskin Array B	66.84	333	P		P	05 34 22.1	+0.7
BRTR				LR		LR	06 02 00.4	
BRTR	Keskin Array B	66.84	333	P		P	05 34 22.1	+0.7
	comp=Z,1.2nm,0.9s,mb3.9,baz=159,slow=7.9,SNR=6.3							
BRTR				LR		LR	06 02 00.4	
	comp=Z,27nm,18.5s,MS3.5,baz=342,slow=35							
STKA	Stephens Creek	67.40	117	LR		LR	05 58 29.2	
	comp=Z,157nm,21.7s,MS4.2,baz=206,slow=31							
MK31	Makanchi Array	67.96	12	*e*P		P	05 34 28.9	+0.6
MKAR	Makanchi Array	67.96	12	P		P	05 34 28.2	-0.1
	comp=Z,1.6nm,0.9s,mb4.0,baz=190,slow=4.9,SNR=7.9							
ABKAR	Akbulak array	69.16	355	*e*P		P	05 34 35.6	-0.1
	comp=Z,2.8nm,0.8s,mb4.2							
QSPA	South Pole Qui	70.14	180	P		P	05 34 41.7	+0.1
	comp=Z,2.5nm,1.1s,mb4.

LUWI	**Luwuk**	**10.20**	**266**	P		**Pn**	**05 27 05.3 -2.3**
	1µm118nm,1.2s						
KDI	**Kendari**	**10.92**	**251**	P		**Pn**	**05 27 18.2 +0.7**
	43nm,1.3s						
KAKA	**Kakadu**	**12.29**	**182**	*e*P		**Pn**	**05 27 34.3 -1.9**
	41nm,0.6s						
KAKA				*e*S		**Sn**	**05 29 44.8 -7.1**
KAKA	**Kakadu**	**12.29**	**182**	*e*Pn		**Pn**	**05 27 34.4 -1.8**
	110nm,0.6s						
KAKA				*e*Sn		**Sn**	**05 29 44.8 -7.1**
KAKA	**Kakadu**	**12.29**	**182**	P		**Pn**	**05 27 34.9 -1.3**
	880nm106nm,0.7s						
SPSI	**Sidrap Palu**	**13.65**	**255**	P		**Pn**	**05 27 53.1 -1.6**
	606nm44nm,1.3s						
BKSI	**Bulukumba**	**13.72**	**249**	P		**Pn**	**05 27 55.8 0.0**
	33nm,1.0s						
KAPI	**Kappang**	**13.97**	**250**	Pn		**Pn**	**05 28 01.3 +2.2**
KAPI				LR		LR	05 32 47.4
KAPI	**Kappang**	**13.97**	**250**	Pn		**Pn**	**05 28 01.3 +2.2**
	1.2nm,0.3s,baz=78,slow=4.1,SNR=11						
KAPI				LR		LR	05 32 47.4
	comp=Z,220nm,21.4s,baz=209,slow=35						
KAPI	**Kappang**	**13.97**	**250**	P		**Pn**	**05 28 01.8 +2.7**
	307nm19nm,1.2s						
MYLDM	**Lahad Datu**	**15.44**	**291**	P		**Pn**	**05 28 18.7 +0.2**
	1µm35nm,1.4s						
KNA	**Kununurra**	**15.85**	**195**	*e*P		**Pn**	**05 28 20.9 -2.9**
	96nm,0.6s						
KNA				*e*S		S	05 31 08.5 -23
KNA	**Kununurra**	**15.85**	**195**	P		**Pn**	**05 28 20.6 -3.2**
	4µm541nm,0.7s						
GUMO	**Guam**	**18.20**	**40**	LR		LR	05 35 03.2
	comp=Z,199nm,19.4s,baz=277,slow=34						
KHKI	**Kahang-Kahang**	**19.02**	**245**	P		**Pn**	**05 29 01.5 -1.6**
	58nm,1.4s						
FITZ	**Fitzroy Crossi**	**19.05**	**202**	*e*P		**Pn**	**05 29 01.4 -1.9**
	17nm,0.6s						
FITZ				*e*S		**S**	**05 32 23.2 -13**
FITZ	**Fitzroy Crossi**	**19.05**	**202**	*e*P		**Pn**	**05 29 00.7 -2.6**
FITZ				P			05 29 00.7
FITZ				S		**S**	**05 32 23.7 -12**
FITZ				LR		LR	05 37 07.8
FITZ	**Fitzroy Crossi**	**19.05**	**202**	P		**Pn**	**05 29 00.7 -2.6**
	0.8nm,0.3s,baz=43,slow=12,SNR=28						
FITZ				S		**S**	**05 32 23.7 -12**
	0.5nm,0.3s,baz=139,slow=12,SNR=4.5						
FITZ				LR		LR	05 37 07.8
	comp=Z,126nm,19.0s,baz=22,slow=40						
FITZ	**Fitzroy Crossi**	**19.05**	**202**	P		**Pn**	**05 29 00.1 -3.2**
	47nm,1.1s						
SBUM	**Sibu**	**20.91**	**278**	P		**P**	**05 29 23.3 +0.8**
	25nm,1.4s						
STKI	**Sintang**	**21.47**	**271**	P		**P**	**05 29 28.8 +0.2**
	34nm,0.8s,mb4.7						
KSM	**Kuching**	**22.71**	**275**	P		**P**	**05 29 41.7 -0.1**
	27nm,1.4s,mb4.5						
ASAR	**Alice Springs**	**23.20**	**178**	P		**P**	**05 29 46.7 0.0**
	21nm,1.0s,mb4.5,baz=358,slow=9.0,SNR=87						
CTA	**Charters Tower**	**23.55**	**147**	*e*P		**P**	**05 29 51.2 +1.1**
	9.9nm,1.0s,mb4.2						
CTA	**Charters Tower**	**23.55**	**147**	P		**P**	**05 29 51.3 +1.2**
	9.9nm,0.8s,mb4.3,baz=333,slow=11,SNR=7.8						
CTAO	**Charters Tower**	**23.55**	**147**	*e*P		**P**	**05 29 51.5 +1.4**
	18nm,1.1s,mb4.4						
CTAO	**Charters Tower**	**23.55**	**147**	P		**P**	**05 29 51.7 +1.6**
	18nm,1.9s,mb4.2						
MBWA	**Marble Bar**	**24.38**	**211**	*e*P		**P**	**05 29 58.7 +1.0**
MBWA	**Marble Bar**	**24.38**	**211**	*e*P		**P**	**05 29 57.4 -0.4**
	124nm,1.8s,mb5.0						
MBWA	**Marble Bar**	**24.38**	**211**	P		**P**	**05 29 57.7 0.0**
	38nm,1.5s,mb4.6						
CBIJ	**Chichi jima**	**28.70**	**17**	LR		LR	05 40 35.9
	comp=Z,94nm,18.0s,MS3.4,baz=123,slow=33						
FORT	**Forrest**	**30.62**	**188**	*e*P		**P**	**05 30 54.0 +0.5**
	5.7nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**32.41**	**166**	*e*P		**P**	**05 31 08.6 -0.7**
	9.8nm,0.7s,mb4.8						
STKA	**Stephens Creek**	**32.41**	**166**	P		**P**	**05 31 08.9 -0.4**
	12nm,0.6s,mb4.9,baz=338,slow=7.7,SNR=27						
STKA				LR		LR	05 45 45.9
	comp=Z,314nm,18.9s,MS4.0,baz=206,slow=39						
PSI	**Prapat**	**34.15**	**275**	P		**P**	**05 31 23.4 -1.4**
	4.8nm,0.6s,mb4.6,baz=94,slow=2.3,SNR=7.7						
ARMA	**Armidale**	**34.78**	**151**	*e*P		**P**	**05 31 31.0 +1.1**
MJAR	**Matsushiro Arr**	**37.03**	**7**	LR		LR	05 43 42.8
	comp=Z,164nm,21.9s,MS3.8,baz=165,slow=31						
KSRS	**Korea Array**	**37.90**	**353**	P		**P**	**05 31 57.0 +0.5**
	0.4nm,0.4s,mb3.5,baz=174,slow=12,SNR=3.6						
KSRS				LR		LR	05 45 48.8
	comp=Z,80nm,18.4s,MS3.6,baz=172,slow=34						
CMAR	**Chiang Mai Arr**	**38.28**	**301**	P		**P**	**05 31 59.6 -0.3**
	5.4nm,0.9s,mb4.3,baz=123,slow=7.3,SNR=22						
CMAR				PcP		PcP	05 34 15.1 +1.6
	0.7nm,0.5s,baz=144,slow=3.2,SNR=4.7						
CHTO	**Chiang Mai**	**38.44**	**302**	*e*P		**P**	**05 32 00.6 -0.7**
	9.2nm,1.1s,mb4.4						
BJI	**Beijing**	**43.01**	**341**	P		**P**	**05 32 38.5 -0.2**
BJI				pmax		pmax	
	comp=Z,15nm,0.8s,mb4.8						
BJI				LR		LR	
	comp=N,76nm,12.3s,MS4.0						
BJI				LR		LR	
	comp=E,100nm,16.8s,MS4.0						
BJI				LR		LR	
	comp=Z,39nm,27.5s						
LZH	**Lanzhou**	**45.23**	**326**	*e*P		**P**	**05 32 57.5 +0.9**
LZH				pmax		pmax	
	comp=Z,20nm,1.3s,mb4.8						
GTA	**Gaotai**	**49.84**	**326**	*e*P		**P**	**05 33 32.6 +0.3**
GTA				pmax		pmax	
	comp=Z,6.0nm,1.1s,mb4.5						
TAPN	**Taplejung**	**51.42**	**306**	*e*P		**P**	**05 33 44.4 0.0**
ODAN	**Odare**	**51.48**	**305**	*e*P		**P**	**05 33 44.7 -0.2**
	comp=Z,36nm,0.9s,mb5.3						
ULN	**Ulaanbaatar**	**53.04**	**338**	*e*P		**P**	**05 33 57.2 +1.2**
	comp=Z,3.7nm,0.8s,mb4.4						
ULN	**Ulaanbaatar**	**53.04**	**338**	P		**P**	**05 33 56.9 +0.9**
GUN	**Gumba**	**53.13**	**306**	*e*P		**P**	**05 33 56.9 -0.2**
	comp=Z,49nm,0.9s,mb5.5						
SONM	**Songino Array**	**53.26**	**338**	P		**P**	**05 33 58.3 +0.6**
	comp=Z,1.9nm,0.9s,mb4.0,baz=154,slow=8.7,SNR=11						
PKI	**Pulchoki**	**53.38**	**305**	*e*P		**P**	**05 33 58.6 -0.3**
KKN	**Kakani**	**53.57**	**306**	*e*P		**P**	**05 33 59.9 -0.4**
	comp=Z,36nm,0.9s,mb5.3						
DMN	**Daman**	**53.64**	**305**	*e*P		**P**	**05 34 00.1 -0.8**
	comp=Z,43nm,1.0s,mb5.3						
GKN	**Gorkha**	**54.18**	**305**	*e*P		**P**	**05 34 04.1 -0.7**
KOLN	**Koldanda**	**54.94**	**305**	*e*P		**P**	**05 34 10.4 +0.1**
	comp=Z,51nm,0.8s,mb5.6						
WMQ	**Urumqi**	**59.64**	**323**	*e*P		**P**	**05 34 42.0 -1.2**
WMQ				pP		pP	05 34 52.0 -4.2
WMQ				sP		sP	05 34 56.0 -5.5
WMQ				pmax		pmax	
	comp=Z,22nm,1.0s,mb5.1						
WMQ				pmax		pmax	
	comp=Z,100nm,4.0s						
WMQ				LR		LR	
	comp=N,110nm,24.0s						
WMQ				LR		LR	
	comp=Z,95nm,22.3s,MS3.9						
MK31	**Makanchi Array**	**64.46**	**324**	*e*P		**P**	**05 35 16.0 +0.6**
MKAR	**Makanchi Array**	**64.46**	**324**	P		**P**	**05 35 15.7 +0.3**
	comp=Z,2.2nm,0.5s,mb4.4,baz=111,slow=8.9,SNR=33						
ZALV	**Zalesovo Beam**	**67.07**	**331**	P		**P**	**05 35 31.7 -0.4**
	comp=Z,1.5nm,0.5s,mb4.3,baz=115,slow=6.5,SNR=3.9						
KURK	**Kurchatov**	**68.53**	**326**	*e*P		**P**	**05 35 42.0 +0.7**
	comp=Z,3.2nm,0.3s,mb4.7						
BVAR	**Borovoye Array**	**74.12**	**326**	P		**P**	**05 36 14.8 -0.3**
	comp=Z,6.0nm,1.0s,mb4.5,baz=128,slow=6.4,SNR=14						
PPT	**Papeete**	**77.96**	**108**	LR		LR	06 05 27.2
	comp=Z,114nm,20.9s,MS4.2,baz=135,slow=31						
ABKAR	**Akbulak array**	**79.22**	**320**	*e*P		**P**	**05 36 43.8 -0.2**
	comp=Z,1.8nm,0.7s,mb4.1						
MAW	**Mawson**	**82.17**	**201**	P		**P**	**05 37 00.5 +1.1**
	comp=Z,1.4nm,0.7s,mb4.0,baz=83,slow=3.5,SNR=3.5						
MAW				LR		LR	06 08 34.9
	comp=Z,71nm,18.2s,MS4.1,baz=356,slow=32						
ILAR	**Eielson Array**	**86.11**	**25**	P		**P**	**05 37 18.8 -0.7**
	comp=Z,0.8nm,0.6s,mb4.2,baz=259,slow=4.7,SNR=10						
QSPA	**South Pole Qui**	**89.58**	**180**	P		**P**	**05 37 36.9 +1.1**
QSPA	**South Pole Qui**	**89.58**	**180**	P		**P**	**05 37 36.9 +1.1**
	comp=Z,1.2nm,0.8s,mb4.3,baz=310,slow=2.4,SNR=7.2						
TORD	**Torodi Ar. Bea**	**130.07**	**287**	PKP		PKPdf	05 43 49.6 0.0
	comp=Z,0.7nm,0.8s,baz=52,slow=1.6,SNR=4.1						
CPUP	**Villa Florida**	**151.69**	**160**	PKPbc		PKPbc	05 44 34.6 +0.7
	comp=Z,2.6nm,0.7s,baz=197,slow=1.2,SNR=8.8						
LPAZ	**La Paz**	**153.43**	**129**	PKP		PKPdf	05 44 33.2 +2.8
	comp=Z,0.6nm,0.8s,baz=296,slow=2.8,SNR=2.9						
LPAZ				PKPbc		PKPbc	05 44 40.7 +2.6
	comp=Z,0.7nm,0.8s,baz=262,slow=7.6,SNR=4.0						
LPAZ				PKPab		PKPab	05 44 53.9 +3.6
	comp=Z,2.1nm,0.7s,baz=228,slow=4.7,SNR=9.5						

IDC 11 05:30:57.5±7.0, 0.67S×132.58E, h191km±75km, mb3.3/3, mb1 3.5/4, mb1mx3.2/19, mbtmp3.3/4, Error ellipse: s-maj=53.3km s-min=18.2km az=92.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
FITZ	**Fitzroy Crossi**	**18.61**	**201**	P		P	05 35 00.6	-0.1
	0.2nm,0.3s,baz=356,slow=15,SNR=4.9							
FITZ				S		S	05 38 23.5	+0.7
	0.1nm,0.3s,baz=79,slow=22,SNR=2.0							
ASAR	**Alice Springs**	**22.89**	**177**	P		P	05 35 45.1	+0.4
	2.0nm,0.6s,baz=355,slow=11,SNR=6.5							
STKA	**Stephens Creek**	**32.19**	**166**	P		P	05 37 07.2	-0.3
	1.4nm,0.5s,baz=330,slow=12,SNR=3.6							
MKAR	**Makanchi Array**	**64.50**	**324**	P		P	05 41 13.9	+0.1
	0.3nm,0.5s,baz=105,slow=8.0,SNR=4.6							

*ISCJB **11** 06:04:48.3±0.3, 24.04N±0.02×121.75E±0.02, h55km±4km, Error ellipse: s-maj=3.7km s-min=2.3km az=42.3*
*TAP **11** 06:04:48.5, 24.05N×121.73E, h57km, ML3.6, D*
*JMA **11** 06:04:48.5±0.2, 24.25N×121.79E, h84km, M2.6*

ISC 11 06:04:48.8±0.3, 24.04N±0.02×121.74E±0.02, h53km±4km, n51, σ0.965/96, 4C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
TWD	**Chiawan**	**0.14**	**285**	⇑*i* P		**Pn**	**06 04 57.0**	**-0.2**
	baz=284							
TWD				*i* S		**Sn**	**06 05 03.4**	**+0.3**
	baz=284							
HWA	**Hwalien**	**0.14**	**242**	*i* P		**Pn**	**06 04 57.3**	**+0.2**
	baz=234							
HWA				*i* S		**Sn**	**06 05 03.6**	**+0.6**
	baz=234							
ESF	**Shoufeng Towns**	**0.27**	**231**	*e*S		**Sn**	**06 05 04.7**	**+0.1**
	baz=228							
ESL	**Shilin**	**0.36**	**231**	*i* P		**Pn**	**06 04 58.1**	**-0.7**
	baz=227							
ESL				S		**Sn**	**06 05 05.2**	**-0.8**
	baz=227							
ENA	**Nanau**	**0.38**	**0**	P		**Pn**	**06 04 59.0**	**-0.1**
	baz=2.0							
ENA				S		**Sn**	**06 05 06.6**	**+0.3**
	baz=2.0							
WHF	**Hehuan Shan**	**0.45**	**283**	⇑*i* P		**Pn**	**06 04 59.6**	**-0.1**
	baz=282							
WHF				S		**Sn**	**06 05 07.5**	**+0.1**
	baz=282							
NNS	**Nan Shan**	**0.52**	**320**	⇑*i* P		**Pn**	**06 05 00.0**	**-0.5**
	baz=320							
NNS				S		**Sn**	**06 05 08.5**	**-0.4**
	baz=320							
TWT	**Tachien**	**0.56**	**292**	P		**Pn**	**06 05 01.0**	**+0.1**
	baz=290							
TWT				S		**Sn**	**06 05 09.6**	**-0.1**
	baz=290							
TWC	**Suao**	**0.57**	**10**	P		**Pn**	**06 05 01.4**	**+0.3**
	baz=12							
TWC				S		**Sn**	**06 05 10.8**	**+0.8**
	baz=12							
ENTT	**Nioudou**	**0.61**	**345**	⇑*i* P		**Pn**	**06 05 01.1**	**-0.5**
	baz=346							
ENTT				S		**Sn**	**06 05 10.4**	**-0.5**
	baz=346							
EHY	**Hungye**	**0.66**	**216**	P		**Pn**	**06 05 01.0**	**-1.2**
	baz=213							
EHY				*e*S		**Sn**	**06 05 10.4**	**-1.4**
	baz=213							
TWE	**Neicheng**	**0.68**	**354**	P		**Pn**	**06 05 02.1**	**-0.3**
	baz=356							
TWE				S		**Sn**	**06 05 12.2**	**-0.1**
	baz=356							
ILA	**Ilan**	**0.72**	**1**	*e*P		**Pn**	**06 05 05.5**	**+2.6**
	baz=2.0							
NSK	**Sanguang**	**0.72**	**331**	*i* P		**Pn**	**06 05 02.5**	**-0.5**
	baz=331							
NSK				S		**Sn**	**06 05 12.4**	**-0.9**
	baz=331							
SMLT	**Sun Moon Lake**	**0.79**	**258**	*i* P		**Pn**	**06 05 04.0**	**+0.2**
	baz=257							
SMLT				*e*S		**Sn**	**06 05 15.1**	**+0.4**
	baz=257							
TWF1	**Yuli**	**0.80**	**211**	*e*P		**Pn**	**06 05 02.8**	**-1.2**
	baz=209							
TWF1				*e*S		**Sn**	**06 05 14.7**	**-0.3**
	baz=209							
TYC	**Yuchr**	**0.82**	**260**	P		**Pn**	**06 05 04.3**	**+0.1**
	baz=259							
TYC				*e*S		**Sn**	**06 05 15.7**	**+0.2**
	baz=259							
NSTT	**Nanjuang**	**0.89**	**311**	P		**Pn**	**06 05 05.0**	**-0.2**
	baz=311							
NSTT				*e*S		**Sn**	**06 05 17.2**	**0.0**
	baz=311							
YUS	**Yu-Shan**	**0.91**	**233**	*e*P		**Pn**	**06 05 05.9**	**+0.5**
	baz=231							
YUS				*e*S		**Sn**	**06 05 18.3**	**+0.7**
	baz=231							
TWQ1	**Liyutan**	**0.93**	**289**	*e*P		**Pn**	**06 05 05.2**	**-0.5**
	baz=288							
TWQ1				*e*S		**Sn**	**06 05 17.7**	**-0.5**
	baz=288							
TWA	**Mucha**	**0.94**	**351**	*e*P		**Pn**	**06 05 05.5**	**-0.4**
	baz=352							
TWA				*e*S		**Sn**	**06 05 18.7**	**+0.3**
	baz=352							
TCU	**Taichung**	**0.98**	**276**	*e*P		**Pn**	**06 05 06.0**	**-0.3**
	baz=275							
TCU				*e*S		**Sn**	**06 05 18.6**	**-0.7**
	baz=275							
WNT	**Mingjian**	**0.98**	**261**	*e*P		**Pn**	**06 05 07.0**	**+0.7**
	baz=259							
TWB1	**Santiao Chiao**	**0.99**	**13**	P		**Pn**	**06 05 06.4**	**-0.1**
	baz=14							
TWB1				*e*S		**Sn**	**06 05 20.4**	**+1.0**
	baz=14							
CHKT	**Chengkung**	**1.00**	**200**	*e*P		**Pn**	**06 05 06.2**	**-0.5**
	baz=198							
CHKT				*e*S		**Sn**	**06 05 20.1**	**+0.3**
	baz=198							
ALS	**Alishan**	**1.01**	**238**	*i* P		**Pn**	**06 05 07.4**	**+0.7**
	baz=237							
ALS				*e*S		**Sn**	**06 05 20.7**	**+0.7**
	baz=237							
NWF	**Wu-fen Shan**	**1.02**	**2**	*e*P		**Pn**	**06 05 06.8**	**-0.2**
	baz=2.0							
NWF				*e*S		**Sn**	**06 05 20.7**	**+0.4**
	baz=2.0							
NCU	**National Centr**	**1.05**	**331**	P		**Pn**	**06 05 07.7**	**+0.3**
	baz=331							
NCU				*e*S		**Sn**	**06 05 21.7**	**+0.7**
	baz=331							
CHN5	**Tsauling**	**1.07**	**246**	P		**Pn**	**06 05 07.9**	**+0.3**
	baz=244							
CHN5				S		**Sn**	**06 05 22.9**	**+1.5**
	baz=244							
ELDTW	**Lidau**	**1.08**	**218**	P		**Pn**	**06 05 06.7**	**-1.0**
	baz=216							
ELDTW				*e*S		**Sn**	**06 05 21.3**	**-0.3**
	baz=216							
TWS1	**Kuangyinshan**	**1.09**	**344**	*e*P		**Pn**	**06 05 07.6**	**-0.3**
	baz=345							
TWS1				*e*S		**Sn**	**06 05 21.9**	**-0.1**
	baz=345							
WGK	**Gukeng**	**1.14**	**252**	*e*P		**Pn**	**06 05 08.6**	**+0.1**
	baz=251							
WGK				*e*S		**Sn**	**06 05 22.9**	**-0.2**
	baz=251							
YOJ	**Yonaguni jima**	**1.23**	**70**	P		**Pn**	**06 05 09.6**	**-0.1**
YOJ				S		**Sn**	**06 05 25.5**	**+0.2**
STYT	**Tauyuan**	**1.26**	**226**	*e*S		**Sn**	**06 05 26.5**	**+0.5**
	baz=224							
WTP	**Ta-pu**	**1.30**	**233**	*e*P		**Pn**	**06 05 11.1**	**+0.4**
	baz=231							
WTP				*e*S		**Sn**	**06 05 27.7**	**+0.6**
	baz=231							
CHY	**Chiayi**	**1.32**	**246**	*e*P		**Pn**	**06 05 10.6**	**-0.3**
	baz=245							
CHY				*e*S		**Sn**	**06 05 27.1**	**-0.4**
	baz=245							
TWG	**Pinlang**	**1.36**	**207**	*e*P		**Pn**	**06 05 11.2**	**-0.4**
	baz=205							
TWG				*e*S		**Sn**	**06 05 27.9**	**-0.6**
	baz=205							
TWK	**Hsinying**	**1.39**	**236**	⇓*e*P		**Pn**	**06 05 12.1**	**+0.3**
	baz=235							
TWK				*e*S		**Sn**	**06 05 28.8**	**-0.3**
	baz=235							
CHN1	**Nanshi**	**1.40**	**233**	*e*P		**Pn**	**06 05 12.8**	**+0.7**
	baz=231							
CHN1				*e*S		**Sn**	**06 05 30.0**	**+0.5**
	baz=231							
SGST	**Jiashian**	**1.43**	**228**	*e*P		**Pn**	**06 05 12.4**	**0.0**
	baz=227							
SGST				*e*S		**Sn**	**06 05 30.0**	**-0.1**
	baz=227							
CHN8	**Yiju**	**1.56**	**244**	*e*P		**Pn**	**06 05 14.6**	**+0.3**
	baz=243							
CHN8				*e*S		**Sn**	**06 05 35.3**	**+1.9**
	baz=243							
ECL	**Taimali**	**1.61**	**207**	*e*P		**Pn**	**06 05 15.0**	**+0.1**
	baz=205							
ECL				*e*S		**Sn**	**06 05 34.9**	**+0.4**
	baz=205							
SSD	**Sandimen**	**1.65**	**218**	*e*P		**Pn**	**06 05 16.3**	**+0.9**
	baz=217							
SSD				*e*S		**Sn**	**06 05 35.2**	**-0.2**
	baz=217							
IRIF	**Iriomote-Funau**	**1.84**	**81**	P		**Pn**	**06 05 17.9**	**-0.1**
IRIF				S		**Sn**	**06 05 40.1**	**0.0**
EAST	**Anshuo**	**1.85**	**207**	*e*P		**Pn**	**06 05 18.1**	**0.0**
	baz=205							
EAST				*e*S		**Sn**	**06 05 40.7**	**+0.4**
	baz=205							
HATJ	**Hateruma jima**	**1.89**	**89**	S		**Sn**	**06 05 41.9**	**+0.6**
SCZT	**Fangliau**	**1.96**	**212**	*e*P		**Pn**	**06 05 20.4**	**+0.8**
	baz=211							
PNG	**Penghu**	**2.06**	**257**	*e*P		**Pn**	**06 05 19.1**	**-1.9**
	baz=256							
PNG				*e*S		**Sn**	**06 05 42.8**	**-2.6**
	baz=256							
JKRS	**Kuro-shima**	**2.08**	**84**	P		**Pn**	**06 05 21.6**	**+0.3**
JKRS				S		**Sn**	**06 05 46.7**	**+0.6**
JIJ	**Ishigaki jima**	**2.22**	**81**	P		**Pn**	**06 05 22.9**	**-0.3**
JIJ				S		**Sn**	**06 05 48.4**	**-1.0**
JTJ	**Tarama**	**2.77**	**77**	P		**Pn**	**06 05 30.7**	**0.0**
JTJ				S		**Sn**	**06 06 02.2**	**-0.7**

*IDC **11** 06:19:06.3±1.1, 10.91N×91.70E, h0km, mb3.9/8, mb1 3.9/9, mb1mx3.7/23, mbtmp3.8/9, ML3.3/1, Error ellipse: s-maj=32.4km s-min=24.0km az=56.0*
*NEIC **11** 06:19:07.7±0.8, 10.89N×91.69E, h10km, mb4.0/3, Error ellipse: s-maj=16.6km s-min=15.1km az=186.0*
*ISCJB **11** 06:19:09.7±1.0, 11.0N±0.1×91.7E±0.1, h33km, mb3.9/12, Error ellipse: s-maj=20.5km s-min=17.5km az=1.5*

ISC 11 06:19:11.8±1.0, 11.0N±0.1×91.7E±0.1, h35km, n17, σ0.967/16, mb3.9/12, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
CMAR	**Chiang Mai Arr**	**10.21**	**42**	Pn		**Pn**	**06 21 36.9**	**+1.1**
	0.1nm,0.3s,baz=240,slow=15,SNR=3.5							
ENH	**Enshi**	**25.34**	**38**	*e*P		**P**	**06 24 34.6**	**-0.9**
	8.8nm,0.5s,mb4.5							
MK31	**Makanchi Array**	**36.62**	**349**	*e*P		**P**	**06 26 15.1**	**+0.4**
MKAR	**Makanchi Array**	**36.62**	**349**	P		**P**	**06 26 14.6**	**-0.1**
MKAR	**Makanchi Array**	**36.62**	**349**	P		**P**	**06 26 14.6**	**-0.1**
	2.1nm,0.6s,mb4.1,baz=168,slow=8.1,SNR=21							
SONM	**Songino Array**	**38.78**	**16**	P		**P**	**06 26 33.1**	**+0.2**
	2.3nm,1.0s,mb3.9,baz=199,slow=8.1,SNR=8.6							
KURK	**Kurchatov**	**41.09**	**347**	*e*P		**P**	**06 26 51.0**	**-1.0**
	1.3nm,0.8s,mb3.6							
ZALV	**Zalesovo Beam**	**43.24**	**354**	P		**P**	**06 27 09.4**	**-0.2**
	1.9nm,0.5s,mb4.1,baz=175,slow=9.9,SNR=7.5							
ABKAR	**Akbulak array**	**46.42**	**332**	*e*P		**P**	**06 27 35.7**	**+0.8**
	0.7nm,0.5s,mb3.9							
AKTK	**Aktyubinsk**	**48.14**	**332**	P		**P**	**06 27 48.3**	**0.0**
AKTO	**Aktyubinsk**	**48.14**	**332**	P		**P**	**06 27 48.3**	**0.0**
	0.5nm,0.4s,mb3.9,baz=111,slow=8.6,SNR=3.7							
ASAR	**Alice Springs**	**53.69**	**130**	P		**P**	**06 28 30.7**	**+0.3**
	0.2nm,0.4s,mb3.4,baz=309,slow=6.6,SNR=4.0							
BRTR	**Keskin Array B**	**58.65**	**310**	P		**P**	**06 29 05.6**	**-0.2**
	0.2nm,0.4s,mb3.5,baz=126,slow=7.3,SNR=3.4							
ARCES	**ARCESS Array B**	**71.59**	**340**	P		**P**	**06 30 29.8**	**+0.6**
	1.6nm,0.6s,mb4.1,baz=95,slow=6.7,SNR=10							
TORD	**Torodi Ar. Bea**	**87.60**	**283**	P		**P**	**06 31 57.6**	**+0.5**
	0.5nm,1.0s,mb3.7,baz=67,slow=2.7,SNR=2.8							
ILAR	**Eielson Array**	**92.79**	**21**	P		**P**	**06 32 18.8**	**-1.5**
	0.2nm,0.7s,mb3.7,baz=321,slow=2.3,SNR=3.9							
NVAR	**Mina Array Bea**	**123.43**	**28**	PKP		PKPdf	06 38 05.8	+0.1
	0.3nm,0.6s,baz=331,slow=3.5,SNR=3.0							

MAN 11 06:32:28, 8.85N×126.29E, h33km, mb4.4, ML3.3, MS3.1, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BUTP	**Butuan**	**0.67**	**280**	*e*P		Pn	06 32 42.8	+1.7
BUTP				*e*S		Sb	06 32 51.5	+1.1
SCPH	**Surigao**	**1.21**	**320**	⇓*e*P		Pn	06 32 49.0	+0.3
BUKP	**Musuan**	**1.55**	**231**	*e*P		Pn	06 32 53.7	+0.4
BUKP				*e*S		Sn	06 33 07.4	-4

JMA 11 07:03:40.7±0.2, 26°33N×140°81E, h0km, M4.3, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**1.26**	**76**	P	Pg	07 04 04.8	-0.1
JHHJ				S	Sg	07 04 21.8	+0.5
CBIJ	**Chichi jima**	**1.45**	**58**	P	Pn	07 04 07.8	-0.3
CBIJ				S	Sg	07 04 26.8	-0.4
BSO1	**Boso 1**	**8.30**	**1**	P	Pn	07 05 39.7	-2.6
BSO3	**Boso 3**	**8.45**	**358**	P	Pn	07 05 41.8	-2.5
BSO3				eS	Sn	07 07 17.9	-2.5

LDG ***11*** *07:19:23.6±0.3, 10°.59N×64°.29W, h10km, Mb5.2/39, Ms4.2/9, Error ellipse: s-maj=23.7km s-min=5.7km az=110.0*

ISCJB ***11*** *07:19:24.9±0.1, 10°.53N±0°.02×64°.21W±0°.01, h10km, mb5.0/255, MS4.4/30, Error ellipse: s-maj=2.4km s-min=1.4km az=174.7*

IDC ***11*** *07:19:24.8±0.4, 10°.43N×64°.08W, h0km, mb4.6/24, mb1 4.8/26, mb1mx4.8/28, mbtmp4.6/26, MS4.4/18, Ms1 4.4/18, ms1mx4.2/28, Error ellipse: s-maj=11.8km s-min=6.6km az=144.0*

NEIC ***11*** *07:19:26.4, 10°.51N×64°.17W, h13km, mb5.1/207, MS4.5/4, MW5.2(CAR), After CAR.*

NEIC About 50 buildings slightly damaged in eastern Venezuela. Felt at Cariaco, Cumana, El Morro de Barcelona, Puerto La Cruz and by people in tall buildings at Caracas.

FUNV ***11*** *07:19:26.4, 10°.52N×64°.17W, h14km, MW5.2*

TRN ***11*** *07:19:26.2, 10°.52N×64°.23W, h24km, MD5.1*

BJI ***11*** *07:19:26.4, 10°.50N×64°.20W, h23km, mB5.2/13, Ms5.0/12, Ms7 4.8/17*

GCMT ***11*** *07:19:30.8±0.2, 10°.61N×64°.17W, h15km±1km, MW5.2, Moment Tensor Solution. s52,c70; s84,c146; Moment tensor: Scale 10^16Nm; Mrr-0.72±.15; Mθθ0.23±.14; Mϕϕ0.49±.16; Mrθ0.82±.41; Mrϕ-6.72±.14; Mθϕ-2.54±.56; Best double couple: M0 7.20000×10^16 NP1:ϕ89.90.00000°, δ70.00000°, λ177.00000°. NP2:ϕ181.00000°, δ88.00000°, λ20.00000°. Principal axes: T 7.7600, Plg16.0000°, Azm47.0000°; N -1.1400, Plg70.0000°, Azm187.0000°; P -6.6200, Plg12.0000°, Azm313.0000°; Data Used: II IU G CN IC.*

SZGRF ***11*** *07:19:30.1, 10°.35N×64°.33W, h33km, mb5.2, Near coast of Venezuela*

ISC 11 07:19:26.4±0.1, 10°.47N±0°.02×64°.18W±0°.01, h10km, n976, σ0.98/1019, mb5.0/255, MS4.4/30, 260C-198D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCRV	**Puerto La Cruz**	**0.53**	**237**	⇑eP	**Pg**	**07 19 35.9**	**-0.8**
PCRV				eS	**Sg**	**07 19 44.3**	**+0.5**
PCRV	**Puerto La Cruz**	**0.53**	**237**	Pg	**Pg**	**07 19 35.9**	**-0.8**
	7μm,0.3s,baz=61,slow=6.9						
PCRV				Lg		07 19 44.0	
	10μm,0.3s,baz=38,slow=1.7,SNR=15						
PCRV	**Puerto La Cruz**	**0.53**	**237**	⇑eP	**Pg**	**07 19 35.9**	**-0.8**
PCRV				eS	**Sg**	**07 19 44.3**	**+0.5**
PCRV	**Puerto La Cruz**	**0.53**	**237**	⇑eP	**Pg**	**07 19 35.9**	**-0.8**
PCRV				eS	**Sg**	**07 19 44.3**	**+0.5**
CRUV	**Carupano**	**0.95**	**77**	⇑eP	**Pg**	**07 19 43.7**	**-1.1**
CRUV				eS	**Sg**	**07 19 57.9**	**+0.6**
CRUV	**Carupano**	**0.95**	**77**	eS	**Sg**	**07 19 57.9**	**+0.6**
CRUV	**Carupano**	**0.95**	**77**	⇑eP	**Pg**	**07 19 43.7**	**-1.1**
CRUV				eS	**Sg**	**07 19 57.9**	**+0.6**
GUNV	**Guanoco**	**1.26**	**104**	⇓eP	**Pn**	**07 19 49.8**	**-0.3**
GUNV	**Guanoco**	**1.26**	**104**	⇓eP	**Pn**	**07 19 49.8**	**-0.3**
GUNV	**Guanoco**	**1.26**	**104**	⇓eP	**Pn**	**07 19 49.8**	**-0.3**
GUNV				eS	**Sb**	**07 20 06.6**	**+0.1**
ITEV	**Isla Los Testi**	**1.36**	**49**	⇑eP	**Pn**	**07 19 49.2**	**-2.3**
ITEV				eS	**Sb**	**07 20 07.3**	**-2.1**
ITEV	**Isla Los Testi**	**1.36**	**49**	⇑eP	**Pn**	**07 19 49.2**	**-2.3**
ITEV				eS	**Sb**	**07 20 07.3**	**-2.1**
ITEV	**Isla Los Testi**	**1.36**	**49**	⇑eP	**Pn**	**07 19 49.2**	**-2.3**
ITEV				eS	**Sb**	**07 20 07.3**	**-2.1**
ORIV	**Oritupano**	**1.58**	**151**	*e*P	**Pn**	**07 19 54.3**	**-0.3**
ORIV	**Oritupano**	**1.58**	**151**	*e*P	**Pn**	**07 19 54.3**	**-0.3**
ORIV	**Oritupano**	**1.58**	**151**	*e*P	**Pn**	**07 19 54.3**	**-0.3**
ORIV				eS	**Sn**	**07 20 14.7**	**-0.4**
CUPV	**Cœpira**	**1.63**	**256**	⇑eP	**Pn**	**07 19 55.1**	**-0.1**
CUPV				eS	**Sn**	**07 20 15.6**	**-0.7**
CUPV	**Cœpira**	**1.63**	**256**	⇑eP	**Pn**	**07 19 55.1**	**-0.1**
CUPV				eS	**Sn**	**07 20 15.6**	**-0.7**
PRGV	**PARIAGUAN**	**1.75**	**195**	⇑eP	**Pn**	**07 19 57.1**	**+0.1**
PRGV	**PARIAGUAN**	**1.75**	**195**	⇑eP	**Pn**	**07 19 57.1**	**+0.1**
PRGV				eS	**Sn**	**07 20 19.1**	**-0.2**
GUIV	**Guiria**	**1.94**	**84**	⇑eP	**Pn**	**07 19 58.3**	**-1.1**
GUIV	**Guiria**	**1.94**	**84**	⇑eP	**Pn**	**07 19 58.3**	**-1.1**
GUIV	**Guiria**	**1.94**	**84**	⇑eP	**Pn**	**07 19 58.3**	**-1.1**
GUIV				eS	**Sn**	**07 20 22.5**	**-1.3**
ORCV	**Isla La Orchil**	**2.38**	**304**	⇓eP	**Pn**	**07 20 02.7**	**-2.9**
ORCV				eS	**Sn**	**07 20 31.4**	**-3.5**
ORCV	**Isla La Orchil**	**2.38**	**304**	⇓eP	**Pn**	**07 20 02.7**	**-2.9**
ORCV				eS	**Sn**	**07 20 31.3**	**-3.6**
TCE	**Chacachacare**	**2.40**	**84**	*e*P	**Pn**	**07 20 05.9**	**+0.1**
TCE				eS	**Sn**	**07 20 33.7**	**-1.6**
TCE	**Chacachacare**	**2.40**	**84**	*e*P	**Pn**	**07 20 05.9**	**+0.1**
TCE				eS	**Sn**	**07 20 33.7**	**-1.6**
MERV	**Las Mercedes**	**2.41**	**240**	⇑eP	**Pn**	**07 20 05.6**	**-0.3**
MERV	**Las Mercedes**	**2.41**	**240**	⇑eP	**Pn**	**07 20 05.6**	**-0.3**
MERV	**Las Mercedes**	**2.41**	**240**	⇑eP	**Pn**	**07 20 05.6**	**-0.3**
MERV				eS	**Sn**	**07 20 33.4**	**-2.1**
ALNG	**Atlantic LNG**	**2.47**	**96**	*e*P	**Pn**	**07 20 06.6**	**-0.2**
ALNG				eS	**Sn**	**07 20 35.1**	**-1.9**
ALNG	**Atlantic LNG**	**2.47**	**96**	*e*P	**Pn**	**07 20 06.6**	**-0.2**
ALNG				eS	**Sn**	**07 20 35.1**	**-1.9**
BUAY	**Buenos Aires**	**2.48**	**98**	*e*P	**Pn**	**07 20 07.5**	**+0.5**
BUAY	**Buenos Aires**	**2.48**	**98**	*e*P	**Pn**	**07 20 07.5**	**+0.5**
SIPA	**Siparia**	**2.65**	**97**	*e*P	**Pn**	**07 20 10.0**	**+0.7**
SIPA	**Siparia**	**2.65**	**97**	*e*P	**Pn**	**07 20 10.0**	**+0.7**
TPP	**Pointe-a-Pierr**	**2.69**	**93**	*e*P	**Pn**	**07 20 09.4**	**-0.4**
TPP	**Pointe-a-Pierr**	**2.69**	**93**	*e*P	**Pn**	**07 20 09.4**	**-0.4**
TRN	**Trinidad (W)**	**2.74**	**86**	*e*P	**Pn**	**07 20 10.3**	**-0.2**
TRN				eS	**Sn**	**07 20 41.2**	**-2.5**
TRN	**Trinidad (W)**	**2.74**	**86**	*e*P	**Pn**	**07 20 10.3**	**-0.2**
TRN				eS	**Sn**	**07 20 41.2**	**-2.5**
GURV	**El Guri**	**2.90**	**158**	*e*P	**Pn**	**07 20 11.3**	**-1.4**
GURV				eS	**Sn**	**07 20 45.3**	**-2.3**
GURV	**El Guri**	**2.90**	**158**	eS	**Sn**	**07 20 45.3**	**-2.3**
GURV	**El Guri**	**2.90**	**158**	*e*P	**Pn**	**07 20 11.3**	**-1.4**
GURV				eS	**Sn**	**07 20 45.3**	**-2.3**
GRGR	**Grenville**	**2.98**	**56**	*e*Pn	**Pn**	**07 20 12.2**	**-1.6**
GRGR				eSn	**Sn**	**07 20 49.1**	**-0.6**
GRW	**Mount Saint Ca**	**2.99**	**56**	*e*P	**Pn**	**07 20 12.6**	**-1.3**
GRW				eS	**Sn**	**07 20 47.5**	**-2.4**
GRW	**Mount Saint Ca**	**2.99**	**56**	*e*P	**Pn**	**07 20 12.6**	**-1.3**
GRW				eS	**Sn**	**07 20 47.5**	**-2.4**
GRHS	**Sauteurs**	**3.04**	**55**	*e*P	**Pn**	**07 20 12.9**	**-1.7**
GRHS	**Sauteurs**	**3.04**	**55**	*e*P	**Pn**	**07 20 12.9**	**-1.7**
TBH	**Brigand Hill**	**3.06**	**89**	*e*P	**Pn**	**07 20 15.2**	**+0.3**
TBH				eS	**Sn**	**07 20 48.6**	**-3.1**
TBH	**Brigand Hill**	**3.06**	**89**	*e*P	**Pn**	**07 20 15.2**	**+0.3**
TBH				eS	**Sn**	**07 20 49.6**	**-2.1**
GRSS	**Sisters**	**3.11**	**54**	⇑eP	**Pn**	**07 20 13.8**	**-1.8**
GRSS				eS	**Sn**	**07 20 49.3**	**-3.6**
GRSS	**Sisters**	**3.11**	**54**	⇑eP	**Pn**	**07 20 13.8**	**-1.8**
GRSS				eS	**Sn**	**07 20 49.3**	**-3.6**
GRIC	**Isle de Caille**	**3.12**	**54**	*e*P	**Pn**	**07 20 14.2**	**-1.6**
GRIC				eS	**Sn**	**07 20 50.5**	**-2.7**
RIOV	**Rio Grande**	**3.34**	**135**	⇓eP	**Pn**	**07 20 17.8**	**-0.9**
RIOV				eS	**Sn**	**07 20 55.5**	**-3.0**
RIOV	**Rio Grande**	**3.34**	**135**	⇓eP	**Pn**	**07 20 17.8**	**-0.9**
RIOV				eS	**Sn**	**07 20 55.5**	**-3.0**
RIOV	**Rio Grande**	**3.34**	**135**	⇓eP	**Pn**	**07 20 17.8**	**-0.9**
RIOV				eS	**Sn**	**07 20 55.5**	**-3.0**
TPR	**Prospect**	**3.42**	**78**	*e*P	**Pn**	**07 20 19.4**	**-0.5**
TPR	**Prospect**	**3.42**	**78**	*e*P	**Pn**	**07 20 19.4**	**-0.5**
BOT	**Bacolet**	**3.48**	**78**	*e*P	**Pn**	**07 20 21.0**	**+0.4**
BOT	**Bacolet**	**3.48**	**78**	*e*P	**Pn**	**07 20 21.0**	**+0.4**
TURV	**Turiamo**	**3.60**	**270**	⇓eP	**Pn**	**07 20 20.7**	**-1.6**
TURV	**Turiamo**	**3.60**	**270**	⇓eP	**Pn**	**07 20 20.7**	**-1.6**
TURV	**Turiamo**	**3.60**	**270**	⇓eP	**Pn**	**07 20 20.7**	**-1.6**
TOSP	**Speyside**	**3.68**	**77**	⇑eP	**Pn**	**07 20 23.1**	**-0.3**
TOSP				eS	**Sn**	**07 21 03.9**	**-2.9**
CAOV	**Caicara del Or**	**3.77**	**214**	⇑*i*P	**Pn**	**07 20 23.5**	**-1.2**
CAOV				eS	**Sn**	**07 21 05.5**	**-3.5**
CAOV	**Caicara del Or**	**3.77**	**214**	⇑*i*P	**Pn**	**07 20 23.5**	**-1.2**
CAOV				eS	**Sn**	**07 21 05.5**	**-3.5**
SVB	**Belmont**	**4.00**	**46**	⇑eP	**Pn**	**07 20 26.4**	**-1.4**
SVB				eS	**Sn**	**07 21 11.6**	**-3.3**
SVB	**Belmont**	**4.00**	**46**	⇑eP	**Pn**	**07 20 26.4**	**-1.4**
SVB				eS	**Sn**	**07 21 11.6**	**-3.3**
SVV	**Soufriere Volc**	**4.06**	**45**	*e*P	**Pn**	**07 20 27.5**	**-1.1**
SVV				eS	**Sn**	**07 21 13.6**	**-2.6**
SVV	**Soufriere Volc**	**4.06**	**45**	*e*P	**Pn**	**07 20 27.5**	**-1.1**
SVV				eS	**Sn**	**07 21 13.6**	**-2.6**
SSV	**Crater Summit**	**4.08**	**46**	*e*P	**Pn**	**07 20 28.5**	**-0.4**
SSV				eS	**Sn**	**07 21 13.1**	**-3.7**
SSV	**Crater Summit**	**4.08**	**46**	*e*P	**Pn**	**07 20 28.5**	**-0.4**
SSV				eS	**Sn**	**07 21 13.1**	**-3.7**
BAUV	**El Baul**	**4.09**	**249**	⇑eP	**Pn**	**07 20 27.9**	**-1.3**
BAUV	**El Baul**	**4.09**	**249**	⇑eP	**Pn**	**07 20 27.9**	**-1.3**
BAUV	**El Baul**	**4.09**	**249**	⇑eP	**Pn**	**07 20 27.9**	**-1.3**
MAPV	**Macapo**	**4.26**	**262**	⇑eP	**Pn**	**07 20 30.5**	**-0.8**
MCLT	**Moule a Chique**	**4.52**	**44**	⇓eP	**Pn**	**07 20 33.1**	**-1.9**
MCLT				eS	**Sn**	**07 21 24.1**	**-3.5**
MCLT	**Moule a Chique**	**4.52**	**44**	⇓eP	**Pn**	**07 20 33.1**	**-1.9**
MCLT				eS	**Sn**	**07 21 24.1**	**-3.5**
JACV	**Jacura**	**4.61**	**278**	⇓eP	**Pn**	**07 20 34.9**	**-1.3**
JACV	**Jacura**	**4.61**	**278**	⇓eP	**Pn**	**07 20 34.9**	**-1.3**
JACV	**Jacura**	**4.61**	**278**	⇓eP	**Pn**	**07 20 34.9**	**-1.3**
SLW	**Petit Monier**	**4.75**	**42**	*e*P	**Pn**	**07 20 36.9**	**-1.2**
TEPV	**Terepaima**	**4.96**	**265**	*e*P	**Pn**	**07 20 39.7**	**-1.2**
TEPV	**Terepaima**	**4.96**	**265**	*e*P	**Pn**	**07 20 39.7**	**-1.2**
BIM	**Bigot**	**5.04**	**37**	*e*P	**Pn**	**07 20 40.3**	**-1.9**
FDF	**Fort de France**	**5.17**	**35**	⇑ePn	**Pn**	**07 20 42.2**	**-1.8**
FDF				eSn	**Sn**	**07 21 39.7**	**-4.0**
FDF	**Fort de France**	**5.17**	**35**	⇑eP	**Pn**	**07 20 42.3**	**-1.7**
MVM	**Montagne Vaucl**	**5.18**	**38**	⇑eP	**Pn**	**07 20 42.7**	**-1.4**
BBGH	**Gun Hill**	**5.25**	**59**	ePn	**Pn**	**07 20 45.8**	**+0.7**
LUEV	**Luepa**	**5.33**	**149**	⇓eP	**Pn**	**07 20 44.2**	**-1.8**
LUEV				eS	**Sn**	**07 21 42.6**	**-4.9**
LUEV	**Luepa**	**5.33**	**149**	eS	**Sn**	**07 21 42.6**	**-4.9**
LUEV	**Luepa**	**5.33**	**149**	⇓eP	**Pn**	**07 20 44.2**	**-1.8**
LUEV				eS	**Sn**	**07 21 42.6**	**-4.9**
SANV	**Sanarito**	**5.36**	**260**	*e*P	**Pn**	**07 20 45.2**	**-1.3**
SANV	**Sanarito**	**5.36**	**260**	*e*P	**Pn**	**07 20 45.2**	**-1.3**
SANV	**Sanarito**	**5.36**	**260**	*e*P	**Pn**	**07 20 45.2**	**-1.3**
DSHT	**Scott's Head**	**5.46**	**30**	⇓eP	**Pn**	**07 20 46.6**	**-1.3**
DSHT				eS	**Sn**	**07 21 46.5**	**-4.2**
DSHT	**Scott's Head**	**5.46**	**30**	⇓eP	**Pn**	**07 20 46.6**	**-1.3**
DSHT				eS	**Sn**	**07 21 46.5**	**-4.2**
DPMT	**Pointe Michel**	**5.50**	**30**	*e*P	**Pn**	**07 20 47.0**	**-1.4**
DPMT	**Pointe Michel**	**5.50**	**30**	*e*P	**Pn**	**07 20 47.0**	**-1.4**
DSTT	**Stowe**	**5.52**	**30**	⇑eP	**Pn**	**07 20 47.2**	**-1.5**
DSTT				eS	**Sn**	**07 21 47.8**	**-4.5**
DSTT	**Stowe**	**5.52**	**30**	⇑eP	**Pn**	**07 20 47.2**	**-1.5**
DSTT				eS	**Sn**	**07 21 47.8**	**-4.5**
SIQV	**Siquisique**	**5.53**	**272**	*e*P	**Pn**	**07 20 47.0**	**-1.9**
SIQV	**Siquisique**	**5.53**	**272**	*e*P	**Pn**	**07 20 47.0**	**-1.9**
MDN	**Morne-Daniel**	**5.54**	**29**	*e*P	**Pn**	**07 20 47.6**	**-1.4**
MDN				eS	**Sn**	**07 21 47.7**	**-5.0**
MDN	**Morne-Daniel**	**5.54**	**29**	*e*P	**Pn**	**07 20 47.6**	**-1.4**
MDN				eS	**Sn**	**07 21 47.7**	**-5.0**
DLPL	**La Plaine**	**5.62**	**30**	*e*P	**Pn**	**07 20 48.6**	**-1.5**
DLPL				eS	**Sn**	**07 21 50.5**	**-4.3**
CURV	**Curarigua**	**5.71**	**266**	⇑eP	**Pn**	**07 20 50.3**	**-1.0**
CURV	**Curarigua**	**5.71**	**266**	⇑eP	**Pn**	**07 20 50.1**	**-1.2**
DWS	**Wesley**	**5.79**	**29**	*e*P	**Pn**	**07 20 51.2**	**-1.3**
DWS				eS	**Sn**	**07 21 53.8**	**-5.2**
DWS	**Wesley**	**5.79**	**29**	*e*P	**Pn**	**07 20 51.2**	**-1.3**
DWS				eS	**Sn**	**07 21 53.8**	**-5.2**
MONV	**Montecano**	**5.87**	**285**	*e*P	**Pn**	**07 20 51.0**	**-2.5**
MONV	**Montecano**	**5.87**	**285**	*e*P	**Pn**	**07 20 51.0**	**-2.5**
TBG	**Guadaloupe-3**	**5.90**	**25**	*e*P	**Pn**	**07 20 52.6**	**-1.3**
HMG	**Houelmont**	**5.99**	**24**	*e*P	**Pn**	**07 20 53.8**	**-1.4**
SCG	**Saint Claude**	**6.04**	**24**	*e*P	**Pn**	**07 20 54.6**	**-1.3**
PHG	**Guadaloupe-2**	**6.04**	**24**	*e*P	**Pn**	**07 20 55.0**	**-1.0**
PAYV	**Puerto Ayacuch**	**6.08**	**215**	*e*P	**Pn**	**07 20 55.4**	**-1.1**
PAYV	**Puerto Ayacuch**	**6.08**	**215**	*e*P	**Pn**	**07 20 55.4**	**-1.1**
MGG	**Marie-Galante**	**6.09**	**27**	*e*P	**Pn**	**07 20 55.7**	**-0.9**
LZG	**Guadaloupe-1**	**6.11**	**22**	*e*P	**Pn**	**07 20 55.4**	**-1.4**
QARV	**Quebrada Arrib**	**6.25**	**268**	*e*P	**Pn**	**07 20 56.2**	**-2.5**
QARV	**Quebrada Arrib**	**6.25**	**268**	*e*P	**Pn**	**07 20 56.2**	**-2.5**
ELOV	**Elorza**	**6.27**	**237**	⇑eP	**Pn**	**07 20 57.8**	**-1.3**
ELOV	**Elorza**	**6.27**	**237**	⇑*i*P	**Pn**	**07 20 57.3**	**-1.7**
DABV	**Dabajuro**	**6.36**	**275**	*e*P	**Pn**	**07 20 57.5**	**-2.7**
DABV	**Dabajuro**	**6.36**	**275**	*e*P	**Pn**	**07 20 57.5**	**-2.7**
SEG	**Port Louis**	**6.45**	**24**	*e*P	**Pn**	**07 21 00.7**	**-0.8**
SDV	**Santo Domingo**	**6.55**	**257**	*e*Pn	**Pn**	**07 21 01.9**	**-1.0**
	210km,0.9s						
IMOV	**Isla Los Monje**	**6.85**	**287**	*e*P	**Pn**	**07 21 04.3**	**-2.7**
SOCV	**Socops**	**6.93**	**252**	⇑eP	**Pn**	**07 21 06.3**	**-1.9**
SOCV	**Socops**	**6.93**	**252**	⇑eP	**Pn**	**07 21 06.3**	**-1.9**
SKI	**Saint Kitts**	**6.97**	**11**	*e*P	**Pn**	**07 21 07.6**	**-1.0**
SKI				eS	**Sn**	**07 22 20.2**	**-7.8**
VIGV	**El Vigia**	**7.26**	**258**	*e*P	**Pn**	**07 21 10.5**	**-2.2**
VIGV	**El Vigia**	**7.26**	**258**	*e*P	**Pn**	**07 21 10.5**	**-2.2**
CDVI	**St. Croix**	**7.26**	**356**	*e*Pn	**Pn**	**07 21 13.0**	**+0.2**
ANWB	**Willy Bob**	**7.53**	**18**	*e*Pn	**Pn**	**07 21 15.3**	**-1.1**
	350nm,0.6s						
MTP	**Monte Pirata**	**7.70**	**350**	*e*Pn	**Pn**	**07 21 14.7**	**-4.0**
	64nm,0.7s						
ICM	**Isla Caja Muer**	**7.72**	**343**	*e*Pn	**Pn**	**07 21 17.4**	**-1.6**
HUMP	**Col San Antoni**	**7.80**	**348**	*e*Pn	**Pn**	**07 21 19.3**	**-0.8**
SJG	**San Juan**	**7.84**	**346**	*e*Pn	**Pn**	**07 21 20.2**	**-0.3**
SJG				Sn	**Sn**	**07 22 38.8**	**-11**
SJG				LR	LR	07 24 12.5	
SJG	**San Juan**	**7.84**	**346**	Pn	**Pn**	**07 21 20.3**	**-0.3**
	3.5nm,0.3s,baz=160,slow=15,SNR=4.5						
SJG				Sn	**Sn**	**07 22 38.8**	**-11**
	21nm,0.3s,baz=359,slow=19,SNR=9.2						
SJG				LR	LR	07 24 12.5	
	comp=Z,5μm,19.4s,baz=179,slow=36						
STVI	**Saint Thomas**	**7.88**	**355**	*e*Pn	**Pn**	**07 21 18.1**	**-3.0**
OBIP	**Obispado Ponce**	**7.89**	**343**	*e*Pn	**Pn**	**07 21 21.1**	**-0.2**
CELP	**Cerrillos**	**7.91**	**343**	*e*Pn	**Pn**	**07 21 20.0**	**-1.6**
CBYP	**Canovanas**	**7.93**	**348**	*e*Pn	**Pn**	**07 21 21.5**	**-0.3**
	37nm,0.5s						
CRPR	**Cabo Rojo, PR**	**8.02**	**340**	*e*Pn	**Pn**	**07 21 21.1**	**-1.9**
CRPR				eSn	**Sn**	**07 22 48.7**	**-5.1**
VIRV	**Villa del Rosa**	**8.09**	**271**	*e*P	**Pn**	**07 21 21.9**	**-2.1**
VIRV	**Villa del Rosa**	**8.09**	**271**	*e*P	**Pn**	**07 21 21.6**	**-2.4**
LSP	**Las Mesas**	**8.16**	**340**	*e*Pn	**Pn**	**07 21 25.2**	**+0.2**
MPR	**Mayaguez**	**8.22**	**340**	*e*Pn	**Pn**	**07 21 24.0**	**-1.8**
AOPR	**Arecibo Observ**	**8.22**	**343**	*e*Pn	**Pn**	**07 21 24.5**	**-1.3**
AGP	**Aguadilla**	**8.40**	**340**	*e*Pn	**Pn**	**07 21 29.0**	**+0.7**
CAPV	**Capacho**	**8.43**	**253**	⇑eP	**Pn**	**07 21 27.0**	**-1.8**
CAPV	**Capacho**	**8.43**	**253**	⇑eP	**Pn**	**07 21 26.6**	**-2.2**
AGPR	**Aguadilla, PR**	**8.45**	**341**	*e*Pn	**Pn**	**07 21 28.1**	**-0.8**
	210nm,0.9s						
SDDR	**Presa de Saban**	**10.90**	**322**	*e*Pn	**Pn**	**07 22 03.4**	**+0.8**
SDDR				eSn	**Sn**	**07 23 59.6**	**-5.1**
ROSC	**El Rosal**	**11.49**	**242**	Pn	**Pn**	**07 22 10.5**	**-0.3**
	5.5nm,0.3s,baz=78,slow=5.4,SNR=39						
ROSC				Sn	**Sn**	**07 24 20.4**	**+1.1**
	2.8nm,0.3s,baz=73,slow=22,SNR=0.9						
ROSC				Lg		07 25 36.6	
	1.8nm,0.3s,baz=56,slow=18,SNR=2.4						
ROSC				LR	LR	07 27 02.1	
	comp=Z,10μm,19.0s,baz=26,slow=40						
MASC	**Masc**	**13.67**	**316**	*e*	**Pn**	**07 22 41.2**	**+0.7**
GTBY	**Guantanamo Bay**	**14.12**	**313**	*e*Pn	**Pn**	**07 22 48.4**	**+1.7**
HOJ	**Hope**	**14.30**	**303**	*i* P	**Pn**	**07 22 51.5**	**+2.5**
GWJ	**Greenwich**	**14.31**	**303**	⇓*i*P	**Pn**	**07 22 49.7**	**+0.4**
STH	**Stony Hill**	**14.38**	**303**	*i* P	**Pn**	**07 22 50.6**	**+0.4**
MTDJ	**Mount Denham**	**15.05**	**302**	*e*Pn	**Pn**	**07 23 00.3**	**+0.9**
	169nm,0.9s						
BCIP	**Isla Barro Col**	**15.48**	**267**	*e*Pn	**Pn**	**07 23 01.2**	**-3.8**
	128nm,0.8s						
OTAV	**Otavalo**	**17.45**	**235**	*e*P	**Pn**	**07 23 30.4**	**+0.2**
	211nm,1.3s						
MGV	**Manicaragua**	**19.06**	**309**	*e*	**Pn**	**07 23 48.0**	**-1.8**
JTS	**JuntasAbangare**	**20.43**	**271**	*e*P	**P**	**07 24 06.1**	**+2.0**
	212nm,1.8s						
JTS	**JuntasAbangare**	**20.43**	**271**	P	**P**	**07 24 05.3**	**+1.1**
	16nm,0.8s,baz=79,slow=6.4,SNR=8.1						
JTS				LR	LR	07 32 43.8	
	comp=Z,1μm,20.3s,MS4.2,baz=80,slow=39						
ATAH	**Atahualpa**	**22.49**	**220**	P	**P**	**07 24 27.0**	**+0.7**
	34nm,0.7s,mb4.9,baz=35,slow=4.0,SNR=21						
ATAH				S	**S**	**07 28 31.0**	**-2.6**
	16nm,1.0s,baz=68,slow=22,SNR=2.2						
ATAH				Lg		07 30 53.5	
	20nm,1.0s,baz=17,slow=5.9,SNR=4.0						
ATAH				LR	LR	07 34 21.9	
	comp=Z,3μm,19.3s,MS4.7,baz=17,slow=40						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**22.84**	**281**	*e*P	**P**	**07 24 31.8**	**+1.8**
	152nm,1.1s,mb5.3						
TEIG	**Tepich**	**25.15**	**296**	*e*P	**P**	**07 24 53.3**	**+1.3**
	47nm,0.8s,mb5.1						
NNA	**Nana**	**25.61**	**210**	P	**P**	**07 24 56.0**	**-0.2**
	437nm,0.9s,mb6.0,SNR=6.4						
NNA	**Nana**	**25.61**	**210**	*e*P	**P**	**07 24 56.2**	**+0.1**
	96nm,1.1s,mb5.2						
NNA	**Nana**	**25.61**	**210**	P	**P**	**07 24 56.4**	**+0.2**
	36nm,0.8s,mb5.0,baz=9.5,slow=7.9,SNR=20						
NNA				Lg		07 32 56.0	
	3.7nm,0.4s,baz=94,slow=13,SNR=1.6						
NNA				LR	LR	07 35 59.2	
	comp=Z,2μm,19.5s,MS4.7,baz=154,slow=39						
SIV	**San Ignacio**	**26.47**	**173**	P	**P**	**07 25 03.9**	**0.0**
	15nm,0.6s,mb4.7,baz=17,slow=10,SNR=29						
SIV				Lg		07 33 08.5	
	22nm,0.9s,baz=36,slow=21,SNR=3.5						
LPAZ	**La Paz**	**26.87**	**188**	*e*P	**P**	**07 25 08.6**	**+1.1**
	18nm,0.9s,mb4.6						
LPAZ	**La Paz**	**26.87**	**188**	P	**P**	**07 25 08.5**	**+1.0**
	7.9nm,1.0s,mb4.2,baz=356,slow=6.0,SNR=20						
LPAZ				Lg		07 33 26.7	
	32nm,1.0s,baz=330,slow=14,SNR=4.5						
GOGA	**Godfrey**	**28.90**	**325**	*e*P	**P**	**07 25 25.2**	**-0.4**
	8.6nm,0.9s,mb4.5						
CMIG	**Matias Romero**	**30.51**	**286**	P	**P**	**07 25 39.6**	**-0.5**
	3.8nm,0.7s,mb4.3,baz=99,slow=7.0,SNR=6.4						
CMIG				LR	LR	07 39 59.6	
	comp=Z,916nm,19.5s,MS4.4,baz=239,slow=40						
LRAL	**Lakeview Retre**	**30.74**	**320**	*e*P	**P**	**07 25 42.7**	**+0.8**
	11nm,1.1s,mb4.6						
TKL	**Tuckaleechee C**	**30.75**	**328**	P	**P**	**07 25 42.1**	**+0.1**
	3.1nm,0.9s,mb4.1,baz=144,slow=10,SNR=3.2						
TKL				LR	LR	07 37 03.5	
	comp=Z,592nm,21.7s,MS4.2,baz=135,sl

baz=43,SNR=24
125A **Gardner Draw,** 43.28 307 ⇑P P 07 27 28.9 +0.5
baz=43,SNR=19
X26A **CR and CF Fran** 43.35 310 ⇑P P 07 27 28.3 -0.7
baz=43
ECSD **EROS Data Cent** 43.44 326 *e*P P 07 27 28.5 -1.1
7.1nm,0.9s,mb4.4
324A **Moseley Ranch,** 43.51 305 ⇑P P 07 27 30.3 0.0
baz=44,SNR=42
MNTX **Cornudas Mount** 43.52 305 *e*P P 07 27 30.3 -0.1
13nm,0.9s,mb4.7
W26A **Owens Ranch, T** 43.54 311 ⇑P P 07 27 30.2 -0.3
baz=44
Z25A **Roswell** 43.55 308 ⇑P P 07 27 30.8 +0.1
baz=44,SNR=13
224A **Cornudas Mount** 43.76 306 ⇓P P 07 27 32.6 +0.3
baz=44,SNR=37
Y25A **Mesa, Roswell** 43.77 309 ⇓P P 07 27 31.9 -0.6
baz=44,SNR=11
V26A **Tequesquite Ra** 43.85 312 ⇓P P 07 27 33.1 +0.1
baz=44,SNR=40
EYMN **Ely** 43.85 334 *e*P P 07 27 32.1 -0.7
7.5nm,0.8s,mb4.5
124A **Stringfield Ra** 43.92 307 ⇑P P 07 27 34.5 +0.9
baz=44,SNR=13
X25A **Clemmons Ranch** 43.98 309 ⇑P P 07 27 33.8 -0.3
baz=44
Z24A **Sheeppen Canyo** 44.07 308 ⇑P P 07 27 35.6 +0.7
baz=44,SNR=46
U26A **Atchley Ranch,** 44.07 312 ⇓P P 07 27 34.4 -0.4
baz=44,SNR=28
W25A **X Bar L Ranch,** 44.11 310 ⇓P P 07 27 35.2 +0.1
baz=44,SNR=9.3
SCHQ **Schefferville** 44.30 358 P P 07 27 37.5 +1.2
13nm,0.6s,mb4.8,baz=172,slow=6.6,SNR=26
Y24A **Capitan** 44.35 308 ⇑P P 07 27 37.3 +0.3
baz=44,SNR=19
223A **Chaparral, Ant** 44.46 305 ⇑P P 07 27 37.6 -0.4
baz=44
V25A **Rancho No Teng** 44.48 311 ⇓P P 07 27 37.9 -0.2
baz=44,SNR=79
123A **Bell Site, Whi** 44.53 306 ⇑P P 07 27 38.6 0.0
baz=44
U25A **Circle Dot Ran** 44.56 312 ⇑P P 07 27 38.8 +0.1
baz=45,SNR=32
X24A **Lazy VL Ranch,** 44.59 309 ⇑P P 07 27 39.1 +0.1
baz=45
Z23A **Rita Site, Whi** 44.73 307 ⇑P P 07 27 39.3 -0.8
baz=45
W24A **Lazy 6 Ranch,** 44.82 310 ⇓P P 07 27 41.2 +0.5
baz=45,SNR=28
T25A **Trinidad** 44.88 313 ⇓P P 07 27 41.6 +0.4
baz=45,SNR=23
V24A **Rampart Ranch,** 44.92 311 ⇓P P 07 27 42.4 +0.8
baz=45,SNR=29
222A **Williams Famil** 45.03 305 ⇑P P 07 27 42.6 +0.1
baz=45
OGNE **Ogallala** 45.08 319 *e*P P 07 27 42.5 -0.2
18nm,0.8s,mb5.0
122A **Conniff Cattle** 45.14 306 ⇑P P 07 27 43.4 0.0
baz=45
X23A **Hourglass Bar** 45.17 309 ⇑P P 07 27 44.2 +0.6
baz=45,SNR=24
Z22A **Elephant Butte** 45.30 307 ⇓P P 07 27 44.3 -0.3
baz=45
BNM **Barren Site** 45.35 308 *e*P P 07 27 45.5 +0.5
7.4nm,0.9s,mb4.5
W23A **Werner Place,** 45.36 310 ⇑P P 07 27 45.7 +0.6
baz=45,SNR=30
LPM **Los Pinos Moun** 45.41 308 *e*P P 07 27 47.9 +2.4
ANMO **Albuquerque** 45.52 309 *e*P P 07 27 47.0 +0.7
14nm,0.8s,mb5.0
Y22A **Socorro** 45.54 308 ⇑P P 07 27 46.7 +0.2
baz=46
221A **Mesquite Ranch** 45.54 305 ⇓P P 07 27 46.7 +0.1
baz=46
Y22D **IRIS PASSCAL I** 45.55 308 ⇑P P 07 27 46.5 -0.1
baz=46
Q25A **Bedland, Calha** 45.56 315 ⇑P P 07 27 47.0 +0.4
baz=46
V23A **Ortiz Mt. (NFS** 45.61 310 ⇓P P 07 27 47.7 +0.7
baz=46,SNR=34
S24A **Houchin Ranch,** 45.67 313 ⇑P P 07 27 47.9 +0.4
baz=46,SNR=29
121A **Cookes Peak, D** 45.71 306 ⇑P P 07 27 47.0 -0.9
baz=46,SNR=13
P25A **Willow Gulch B** 45.78 316 ⇓P P 07 27 48.9 +0.5
baz=46
LAZ **Ladron** 45.84 308 *e*P P 07 27 49.8 +1.0
17nm,1.2s,mb4.9
U23A **El Rito** 45.84 311 ⇓P P 07 27 49.6 +0.7
baz=46,SNR=46
R24A **Sanders Place,** 45.85 314 ⇓P P 07 27 49.6 +0.7
baz=46,SNR=13
W22A **Albuquerque** 45.87 309 ⇑P P 07 27 48.6 -0.5
baz=46
Z21A **St. Cloud Mine** 45.88 307 ⇓P P 07 27 49.5 +0.3
baz=46,SNR=27
SDCO **Great Sand Dun** 45.92 313 *e*P P 07 27 49.7 +0.2
19nm,0.9s,mb5.0
320A **Kipp Ranch, An** 45.95 304 ⇑P P 07 27 50.1 +0.3
baz=46
T23A **Casias Ranch,** 46.02 312 ⇑P P 07 27 50.6 +0.4
baz=46,SNR=19
O25A **Wiggins** 46.04 317 ⇓P P 07 27 49.7 -0.7
baz=46
AGMN **Agassiz Nation** 46.11 331 *e*P P 07 27 50.3 -0.5
8.5nm,0.8s,mb4.7
Y21A **Point of Rocks** 46.11 308 ⇓P P 07 27 50.9 -0.2
baz=46,SNR=14
220A **Playas Peak, P** 46.12 304 ⇑P P 07 27 50.8 -0.3
baz=46,SNR=14
Q24A **Divide** 46.21 315 ⇑P P 07 27 51.0 -0.8
baz=46
V22A **San Miguel Ran** 46.22 310 ⇑P P 07 27 50.9 -0.9
baz=46
S23A **Nye Farm, Mont** 46.27 313 ⇑P P 07 27 51.5 -0.7
baz=46
X21A **Alamocita Cree** 46.35 308 ⇑P P 07 27 51.7 -1.2
baz=46,SNR=24
N25A **Grover** 46.35 318 ⇓P P 07 27 52.9 +0.1
baz=46
U22A **Llaves** 46.35 311 ⇑P P 07 27 53.6 +0.7
baz=46,SNR=64
120A **U Bar Ranch, L** 46.40 305 ⇓P P 07 27 53.0 -0.3
baz=46
W21A **San Fidel** 46.48 309 ⇓P P 07 27 54.1 +0.2
baz=46
Z20A **Nine Sixteen R** 46.54 306 ⇑P P 07 27 54.5 +0.1
baz=46,SNR=16
319A **Douglas** 46.58 303 ⇑P P 07 27 55.0 +0.2
baz=47,SNR=30
Y20A **Horse Springs,** 46.63 307 ⇑P P 07 27 56.2 +1.1
baz=47,SNR=7.3
T22A **Edith** 46.64 312 ⇑P P 07 27 55.7 +0.6
baz=47,SNR=11
Q23A **Hartsel** 46.66 315 ⇑P P 07 27 55.1 -0.2
baz=47
O24A **Longmont** 46.69 316 ⇓P P 07 27 55.1 -0.4
baz=47
219A **White Tail Can** 46.74 304 ⇓P P 07 27 55.8 -0.2
baz=47
P23A **Jefferson** 46.87 315 ⇑P P 07 27 56.4 -0.6
baz=47,SNR=6.4
S22A **4UR Ranch, Cre** 46.88 313 ⇑P P 07 27 56.8 -0.2
baz=47,SNR=20
N24A **Carr** 46.89 317 ⇓P P 07 27 56.7 -0.3
baz=47
ISCO **Idaho Springs** 46.91 316 *e*P P 07 27 58.2 +1.0
16nm,1.0s,mb4.9
X20A **Quemado** 46.94 308 ⇓P P 07 27 57.2 -0.4
baz=47
U21A **Nageezi** 46.97 311 ⇑P P 07 27 58.5 +0.8
baz=47,SNR=41
119A **Ashpeak Ranch,** 47.00 305 ⇓P P 07 27 56.8 -1.3
baz=47
R22A **Saguache, Gunn** 47.03 313 ⇑P P 07 27 58.9 +0.7
baz=47,SNR=8.9
Z19A **T-Link Ranch,** 47.13 306 ⇓P P 07 27 58.4 -0.7
baz=47
W20A **Ramah** 47.14 309 ⇓P P 07 27 59.7 +0.6
baz=47,SNR=15
318A **Bisbee** 47.18 303 ⇑P P 07 27 59.2 -0.3
baz=47,SNR=21
O23A **Lake Granby, G** 47.30 316 ⇑P P 07 28 00.2 -0.1
baz=47,SNR=21
Y19A **Nutrioso** 47.34 307 ⇓P P 07 28 00.7 +0.1
baz=47,SNR=35

V20A **Brimhall** 47.35 309 ⇑P P 07 28 00.8 0.0
baz=47,SNR=6.9
218A **Dragoon** 47.37 304 ⇑P P 07 28 00.8 -0.1
baz=47,SNR=14
Q22A **Crested Butte,** 47.40 314 ⇓P P 07 28 00.9 -0.2
baz=47,SNR=19
PHWY **Pilot Hill** 47.50 318 *e*P P 07 28 02.2 +0.5
5.0nm,0.8s,mb4.5
118A **Homack Ranch,** 47.50 305 ⇓P P 07 28 01.4 -0.6
baz=48
X19A **St. Johns** 47.52 307 ⇑P P 07 28 02.5 +0.4
baz=48,SNR=6.9
S21A **Coal Bank Pass** 47.55 312 ⇑P P 07 28 02.2 0.0
baz=48,SNR=14
SMCO **Snowmass** 47.58 314 *e*P P 07 28 04.0 +1.5
20nm,0.8s,mb5.2
U20A **Newcomb** 47.60 310 ⇑P P 07 28 02.7 +0.1
baz=48
P22A **Eagle** 47.61 315 ⇓P P 07 28 03.0 +0.3
baz=48,SNR=13
R21A **Cimarron** 47.65 313 ⇑P P 07 28 03.5 +0.5
baz=48,SNR=35
Z18A **Geronimo** 47.69 305 ⇑P P 07 28 02.3 -1.1
baz=48
O22A **Kremmling** 47.71 316 ⇑P P 07 28 03.3 -0.1
baz=48,SNR=11
V19A **Window Rock** 47.76 309 ⇑P P 07 28 03.8 -0.1
baz=48
W19A **Sanders** 47.82 308 ⇑P P 07 28 03.1 -1.2
baz=48
Q21A **Lamborn Mesa,** 47.86 314 ⇑P P 07 28 03.2 -1.5
baz=48
MVCO **Mesa Verde** 47.89 311 ⇓P P 07 28 04.1 -0.8
baz=48,SNR=21
MVCO **Mesa Verde** 47.89 311 *e*P P 07 28 06.1 +1.2
40nm,1.3s,mb5.3
Y18A **Canyon Day Jun** 47.90 306 ⇓P P 07 28 05.1 +0.1
baz=48,SNR=6.0
N22A **Wattenberg Ran** 47.93 317 ⇑P P 07 28 05.2 0.0
baz=48,SNR=14
217A **Green Valley** 47.95 304 ⇑P P 07 28 05.7 +0.3
baz=48,SNR=19
RSSD **Black Hills** 48.01 322 *e*P P 07 28 05.7 0.0
3.9nm,0.8s,mb4.5
X18A **Snowflake** 48.06 307 ⇓P P 07 28 06.5 +0.2
baz=48,SNR=20
TUC **Tucson** 48.07 304 *e*P P 07 28 07.4 +1.0
17nm,1.1s,mb5.0
U19A **Dine' College,** 48.09 310 ⇓P P 07 28 06.4 -0.1
baz=48,SNR=29
W18A **Petrified Fore** 48.09 308 ⇓P P 07 28 06.0 -0.5
baz=48
Z17A **San Carlos Hig** 48.10 306 ⇓P P 07 28 06.6 0.0
baz=48,SNR=9.1
117A **Oracle** 48.10 305 ⇓P P 07 28 06.7 +0.1
baz=48,SNR=26
T19A **Beclabito** 48.14 311 ⇑P P 07 28 06.9 0.0
baz=48,SNR=45
R20A **Redvale** 48.18 313 ⇓P P 07 28 07.0 -0.1
baz=48,SNR=56
PV01 **Paradox Valley** 48.30 312 *e*P P 07 28 09.3 +1.3
5um,1.1s
M22A **Cedar Creek Ra** 48.30 317 ⇑P P 07 28 07.6 -0.4
baz=48
TRQA **Tornquist** 48.31 178 *e*P P 07 28 07.5 -0.5
8.7nm,1.0s,mb4.7
O21A **Pagoda** 48.37 315 ⇑P P 07 28 08.0 -0.6
baz=48
Q20A **Ridgley Place,** 48.42 313 ⇓P P 07 28 08.1 -0.9
baz=48,SNR=15
V18A **Ganado** 48.44 309 ⇓P P 07 28 08.5 -0.6
baz=48
L22A **Ellis Ranch, M** 48.49 318 ⇑P P 07 28 09.2 -0.2
baz=48
Y17A **Roosevelt** 48.51 306 ⇑P P 07 28 09.7 -0.1
baz=48,SNR=30
216A **Three Points,** 48.53 304 ⇑P P 07 28 09.3 -0.7
baz=48
S19A **Harvey Farm, M** 48.56 312 ⇓P P 07 28 10.1 0.0
baz=49,SNR=46
U18A **Rough Rock, Ch** 48.63 310 ⇓P P 07 28 10.8 +0.1
baz=49,SNR=13
N21A **Black Mountain** 48.64 316 ⇓P P 07 28 10.5 -0.1
baz=49,SNR=13
PV04 **Paradox Valley** 48.64 313 *e*P P 07 28 11.8 +1.1
X17A **Forest Lakes** 48.68 307 ⇑P P 07 28 09.7 -1.3
baz=49,SNR=31
P20A **De Beque** 48.71 314 ⇑P P 07 28 10.5 -0.8
baz=49,SNR=6.5
PV10 **Paradox Valley** 48.73 312 *e*P P 07 28 12.1 +0.7
386nm,1.0s,mb6.4
W17A **Winslow** 48.83 308 ⇑P P 07 28 11.3 -0.9
baz=49
RWWY **Rawlins** 48.84 317 *e*P P 07 28 12.9 +0.7
16nm,1.1s,mb5.0
R19A **Curley Farm, L** 48.86 312 ⇑P P 07 28 11.4 -0.9
baz=49,SNR=7.1
O20A **White River Ci** 48.87 315 ⇑P P 07 28 12.0 -0.5
baz=49
Z16A **Peralta Trail,** 48.88 305 ⇓P P 07 28 11.2 -1.4
baz=49,SNR=11
116A **Eloy** 48.88 304 ⇑P P 07 28 12.1 -0.5
baz=49
T18A **Mexican Hat** 48.89 311 ⇓P P 07 28 12.6 0.0
baz=49,SNR=29
V17A **Tonalea, Kykot** 49.07 308 ⇑P P 07 28 13.7 -0.4
baz=49,SNR=20
Y16A **Circle Bar Ran** 49.07 306 ⇓P P 07 28 14.0 -0.1
baz=49,SNR=29
Q19A **Hogan Spring (** 49.12 313 ⇓P P 07 28 14.8 +0.4
baz=49,SNR=14
S18A **Hurst Farm, Bl** 49.18 311 ⇑P P 07 28 14.1 -0.7
baz=49,SNR=25
N20A **Spence Gulch,** 49.18 316 ⇑P P 07 28 14.6 -0.2
baz=49,SNR=8.8
P19A **Cripple Cowboy** 49.18 314 ⇓P P 07 28 14.4 -0.4
baz=49,SNR=9.0
X16A **Lo Mia Camp, P** 49.20 307 ⇑P P 07 28 15.3 +0.2
baz=49,SNR=26
R18A **Canyonlands Na** 49.36 312 ⇓P P 07 28 15.3 -0.8
baz=49,SNR=40
M20A **Sweetwater, Wa** 49.41 317 ⇓P P 07 28 16.2 -0.4
baz=49,SNR=17
Z15A **Gila River Ind** 49.45 305 ⇓P P 07 28 17.0 0.0
baz=49
W16A **Flagstaff** 49.48 307 ⇑P P 07 28 16.6 -0.6
baz=50
WUAZ **Wupatki** 49.48 308 ⇓P P 07 28 17.0 -0.2
baz=50,SNR=19
WUAZ **Wupatki** 49.48 308 *e*P P 07 28 18.7 +1.5
34nm,1.0s,mb5.3
U16A **Tuba City** 49.50 309 ⇑P P 07 28 17.5 +0.2
baz=50,SNR=36
T17A **Navajo Res., N** 49.53 310 ⇑P P 07 28 18.1 +0.5
baz=50,SNR=19
O19A **Miners Draw (B** 49.55 315 ⇓P P 07 28 17.3 -0.3
baz=50,SNR=15
214A **Organ Pipe Nat** 49.63 303 ⇓P P 07 28 17.7 -0.7
baz=50,SNR=12
L20A **Wamsutter** 49.74 317 ⇓P P 07 28 18.7 -0.4
baz=50,SNR=12
S17A **Black Ridge (B** 49.75 311 ⇓P P 07 28 19.6 +0.3
baz=50,SNR=65
Y15A **Casa Rosa Ranc** 49.77 306 ⇑P P 07 28 19.4 0.0
baz=50,SNR=29
Q18A **Rafter H Ranch** 49.80 313 ⇑P P 07 28 19.7 +0.2
baz=50,SNR=28
N19A **John Jarvie Ra** 49.83 315 ⇓P P 07 28 19.0 -0.8
baz=50,SNR=13
X15A **Humboldt** 49.85 307 ⇓P P 07 28 19.4 -0.6
baz=50,SNR=22
114A **Black Gap (USA** 49.89 304 ⇓P P 07 28 20.3 -0.1
baz=50,SNR=25
R17A **Hanksville Air** 49.97 312 ⇑P P 07 28 21.1 +0.3
baz=50,SNR=28
K20A **Yellowstone Ra** 50.03 318 ⇑P P 07 28 21.2 0.0
baz=50
T16A **Glen Canyon Da** 50.06 310 ⇓P P 07 28 22.2 +0.6
baz=50,SNR=15
M19A **Rock Springs** 50.08 316 ⇓P P 07 28 21.6 0.0
baz=50
W15A **Williams** 50.08 307 ⇑P P 07 28 21.0 -0.7
baz=50
P18A **Preston Nutter** 50.08 314 ⇓P P 07 28 22.0 +0.3
baz=50,SNR=78
SRU **San Rafael** 50.08 313 ⇓P P 07 28 21.5 -0.2
baz=50,SNR=44
SRU **San Rafael** 50.08 313 *e*P P 07 28 22.2 +0.5

36nm,1.0s,mb5.4
Z14A **Wintersburg** 50.10 305 ⇑P P 07 28 21.9 0.0
baz=50
O18A **Roosevelt** 50.16 314 ⇓P P 07 28 22.5 +0.2
baz=50
V15A **Kaibab Nationa** 50.20 308 ⇓P P 07 28 23.2 +0.6
baz=50,SNR=30
Y14A **Wickenburg** 50.31 306 ⇓P P 07 28 23.8 +0.3
baz=50,SNR=21
X14A **Yava** 50.36 306 ⇓P P 07 28 24.2 +0.3
baz=50,SNR=30
P17A **Butcher Ranch,** 50.38 313 ⇓P P 07 28 23.6 -0.3
baz=50,SNR=44
S16A **Weppner Ranch,** 50.38 311 ⇓P P 07 28 23.4 -0.5
baz=50,SNR=27
K19A **Absolon Red Bu** 50.44 318 ⇑P P 07 28 23.9 -0.4
baz=50,SNR=18
L19A **Farson** 50.47 317 ⇑P P 07 28 24.4 -0.2
baz=50,SNR=33
U15A **North Rim** 50.48 309 ⇓P P 07 28 24.4 -0.3
baz=50,SNR=28
Q16A **Castle Valley** 50.48 312 ⇓P P 07 28 24.5 -0.2
baz=50,SNR=12
R16A **Teasdale** 50.48 311 ⇓P P 07 28 25.2 +0.5
baz=50,SNR=55
113A **Mohawk Valley,** 50.62 304 ⇑P P 07 28 25.4 -0.5
baz=51
Z13A **Yuma Proving G** 50.64 304 ⇑P P 07 28 25.5 -0.5
baz=51,SNR=21
O17A **Robinson Place** 50.65 314 ⇑P P 07 28 26.0 +0.1
baz=51,SNR=52
TMUT **Trail Mountain** 50.65 313 *e*P P 07 28 27.4 +1.4
28nm,0.9s,mb5.2
M18A **Lyman** 50.67 316 ⇓P P 07 28 25.6 -0.4
baz=51,SNR=13
LAO **LASA Array** 50.67 323 *e*P P 07 28 25.1 -0.9
12nm,0.8s,mb4.9
W14A **Seligman** 50.73 307 ⇓P P 07 28 26.9 +0.3
baz=51,SNR=21
T15A **Red Dirt Ranch** 50.73 310 ⇓P P 07 28 26.9 +0.3
baz=51,SNR=68
L18A **Fontenelle, Gr** 50.85 316 ⇑P P 07 28 27.8 +0.4
baz=51,SNR=14
V14A **Boquillas Ranc** 50.87 308 ⇑P P 07 28 28.1 +0.4
baz=51,SNR=25
BW06 **Boulder Array** 50.88 318 ⇑P P 07 28 27.1 -0.6
baz=51,SNR=39
BW06 **Boulder Array** 50.88 318 *e*P P 07 28 26.9 -0.7
S15A **Panguitch** 50.93 310 ⇓P P 07 28 28.6 +0.4
baz=51,SNR=12
Y13A **Salome** 50.93 305 ⇑P P 07 28 28.1 -0.1
baz=51,SNR=24
N17A **Moffit Pass** 51.00 315 ⇑P P 07 28 28.3 -0.4
baz=51,SNR=20
R15A **Junction** 51.05 311 ⇓P P 07 28 29.4 +0.4
baz=51,SNR=11
MSU **Marysvale** 51.08 311 *e*P P 07 28 30.6 +1.4
P16A **Fountain Green** 51.09 313 ⇓P P 07 28 29.9 +0.6
baz=51,SNR=8.0
DAU **Daniels Canyon** 51.10 314 *e*P P 07 28 30.0 +0.7
M17A **Scullys Gap (B** 51.10 316 ⇓P P 07 28 30.1 +0.8
baz=51,SNR=6.4
K18A **Toltan Ranch,** 51.15 317 ⇑P P 07 28 29.7 0.0
baz=51,SNR=38
U14A **Mt Trumbull** 51.16 309 ⇑P P 07 28 30.4 +0.6
baz=51,SNR=23
O16A **Springville** 51.19 314 ⇓P P 07 28 30.2 +0.2
baz=51
MPU **Maple Canyon** 51.22 313 *e*P P 07 28 31.0 +0.8
38nm,1.3s,mb5.2
112A **Yuma** 51.23 303 ⇓P P 07 28 30.1 -0.4
baz=51
PLCA **Paso Flores** 51.28 186 *e*P P 07 28 30.3 -0.3
22nm,1.2s,mb5.0
PLCA **Paso Flores** 51.28 186 P P 07 28 30.1 -0.5
7.5nm,0.8s,mb4.7,baz=7.8,slow=9.8,SNR=15
PLCA LR LR 07 49 28.3
comp=Z,454nm,18.5s,MS4.5,baz=201,slow=35
T14A **Hurricane** 51.28 309 ⇑P P 07 28 30.8 +0.1
baz=51
JLU **Jordanelle** 51.30 314 *e*P P 07 28 32.5 +1.6
31nm,0.9s,mb5.2
W13A **Hualapai Mount** 51.32 307 ⇑P P 07 28 31.5 +0.4
baz=51,SNR=26
J18A **Kendall Valley** 51.38 318 ⇑P P 07 28 32.0 +0.6
baz=51,SNR=40
Q15A **Fillmore** 51.39 312 ⇑P P 07 28 31.6 0.0
baz=51,SNR=33
N16A **Rees Ranch, Co** 51.40 315 ⇓P P 07 28 31.7 +0.1
baz=51,SNR=16
I18A **Diamond G Ranc** 51.46 318 ⇑P P 07 28 31.8 -0.2
baz=52,SNR=18
L17A **Cokeville** 51.49 316 ⇑P P 07 28 32.1 -0.1
baz=52,SNR=10
NLU **North Lily Min** 51.51 313 *e*P P 07 28 33.6 +1.2
20nm,0.9s,mb5.1
P15A **Leamington** 51.52 313 ⇓P P 07 28 32.2 -0.3
baz=52,SNR=6.8
CTU **Camp Tracy** 51.55 314 *e*P P 07 28 36.0 +3.2
43nm,1.0s,mb5.3
GLA **Glamis** 51.55 304 ⇓P P 07 28 32.9 0.0
baz=52
GLA **Glamis** 51.55 304 *e*P P 07 28 33.6 +0.7
24nm,0.9s,mb5.1
S14A **Cedar City** 51.56 310 ⇑P P 07 28 33.2 +0.3
baz=52
V13A **Grand Canyon W** 51.61 308 ⇑P P 07 28 33.4 +0.1
baz=52,SNR=37
CCUT **Cedar City** 51.65 310 *e*P P 07 28 35.0 +1.5
12nm,1.1s,mb4.7
RLMT **Red Lodge** 51.75 320 ⇑P P 07 28 33.6 -0.6
baz=52,SNR=23
RLMT **Red Lodge** 51.75 320 *e*P P 07 28 34.7 +0.6
14nm,0.8s,mb5.0
U13A **Pakoon Wash** 51.76 308 ⇓P P 07 28 34.4 0.0
baz=52,SNR=31
HWUT **Hardware Ranch** 51.77 315 *e*P P 07 28 34.6 +0.3
36nm,0.9s,mb5.3
ARUT **Antelope Range** 51.78 310 *e*P P 07 28 35.6 +1.1
30nm,1.0s,mb5.2
K17A **Gardner Place,** 51.79 317 ⇑P P 07 28 34.6 +0.1
baz=52,SNR=7.9
NOQ **North Oquirrh** 51.80 314 *e*P P 07 28 31.1 -3.5
20nm,0.8s,mb5.1
L16A **Fish Haven** 51.84 316 ⇑P P 07 28 35.2 +0.3
baz=52,SNR=14
T13A **Saint George** 51.90 309 ⇑P P 07 28 35.8 +0.5
baz=52,SNR=19
J17A **Brown Place, J** 51.90 318 ⇑P P 07 28 35.3 0.0
baz=52,SNR=33
O15A **The Old Anders** 51.91 313 ⇑P P 07 28 36.0 +0.5
baz=52
AHID **Auburn Hatcher** 51.91 317 *e*P P 07 28 36.5 +1.1
25nm,0.9s,mb5.1
LOHW **Long Hollow** 51.94 318 *e*P P 07 28 35.2 -0.4
19nm,1.0s,mb5.0
SNOW **Snow King Moun** 51.97 318 *e*P P 07 28 36.7 +0.8
25nm,1.1s,mb5.0
REDW **Red Top Meadow** 51.99 318 *e*P P 07 28 36.0 0.0
42nm,1.3s,mb5.2
G18A **Lazy EL Ranch,** 52.02 320 ⇓P P 07 28 36.3 +0.1
baz=52,SNR=14
S13A **Holt Ranch, En** 52.03 310 ⇑P P 07 28 36.8 +0.5
baz=52,SNR=28
Q14A **Sevier Lake (B** 52.05 312 ⇓P P 07 28 37.0 +0.5
baz=52,SNR=34
I17A **Pilgrim Ck.** 52.05 318 ⇑P P 07 28 37.3 +0.9
baz=52
IRM **Iron Mountain** 52.08 305 ⇓P P 07 28 36.7 -0.1
baz=52,SNR=29
MOOW **Moose Ponds** 52.09 318 *e*P P 07 28 39.2 +2.6
21nm,1.7s,mb4.8
P14A **Drum Mountains** 52.10 312 ⇓P P 07 28 37.3 +0.5
baz=52
TPAW **Teton Pass** 52.11 318 *e*P P 07 28 36.7 -0.2
15nm,1.0s,mb4.9
DUG **Dugway** 52.12 313 ⇓P P 07 28 37.3 +0.2
baz=52,SNR=42
DUG **Dugway** 52.12 313 *e*P P 07 28 37.8 +0.8
37nm,0.9s,mb5.3
W12A **Cal Nev Ari** 52.16 307 ⇑P P 07 28 37.6 +0.3
baz=52,SNR=32
BC3 **Big Chuckawall** 52.20 305 ⇑P P 07 28 37.7 0.0
baz=52,SNR=13
V12A **Nelson** 52.26 307 ⇑P P 07 28 38.7 +0.6
baz=52,SNR=24
H17A **Grant Village** 52.26 319 ⇓P P 07 28 38.3 +0.4
baz=52

K16A **Soda Springs** 52.27 317 ⇑P P 07 28 37.8 -0.2
baz=52,SNR=7.2
IMW **Indian Meadow** 52.28 318 eP P 07 28 38.0 -0.1
7.1nm,0.8s,mb4.7
R13A **O'Grain Ranch,** 52.30 310 ⇑P P 07 28 37.6 -0.7
baz=52,SNR=13
RRI2 **Red Ridge** 52.30 317 eP P 07 28 38.6 +0.3
12nm,0.9s,mb4.8
GCMT **Greycliff** 52.31 321 eP P 07 28 38.0 -0.3
11nm,0.9s,mb4.8
DCID1 **Drake Creek** 52.31 318 eP P 07 28 39.5 +1.1
44nm,1.1s,mb5.3
M15A **Larsen Ranch,** 52.33 315 ⇑P P 07 28 38.6 +0.1
baz=52
F18A **Big Timber** 52.39 321 ⇑P P 07 28 38.5 -0.3
baz=52,SNR=50
T12A **Moapa** 52.43 309 ⇑P P 07 28 38.8 -0.5
baz=52
J16A **Bone** 52.46 317 ⇑P P 07 28 39.3 -0.2
baz=52,SNR=13
L15A **Malad City** 52.49 316 ⇓P P 07 28 39.0 -0.7
baz=52,SNR=60
BGU **Big Grassy Mou** 52.54 314 eP P 07 28 40.0 -0.1
50nm,1.0s,mb5.4
Q13A **Wheeler Ranch,** 52.58 311 ⇑P P 07 28 40.7 +0.3
baz=53,SNR=97
N14A **Grayback Hills** 52.62 314 ⇑P P 07 28 40.6 -0.1
baz=53,SNR=6.9
I16A **Newdale** 52.63 318 ⇓P P 07 28 40.7 0.0
baz=53,SNR=38
GMRC **Granite Mounta** 52.65 306 ⇑P P 07 28 40.8 -0.2
baz=53,SNR=12
HVU **Hansel Valley** 52.67 315 eP P 07 28 40.5 -0.5
22nm,0.9s,mb5.1
BELC **Belle Mtn. Jos** 52.73 305 ⇓P P 07 28 41.4 -0.2
baz=53
V11A **Goodsprings** 52.74 307 ⇓P P 07 28 41.9 +0.3
baz=53,SNR=12
P13A **Bates Ranch, G** 52.74 312 ⇓P P 07 28 42.0 +0.4
baz=53,SNR=55
G17A **Pierce Place,** 52.77 320 ⇑P P 07 28 42.8 +1.1
baz=53,SNR=10
S12A **Delamar Landin** 52.79 310 ⇓P P 07 28 41.5 -0.5
baz=53
E18A **Harlowton** 52.82 322 ⇓P P 07 28 41.4 -0.7
baz=53,SNR=5.5
MONP **Monument Peak** 52.82 303 ⇑P P 07 28 42.1 -0.2
baz=53,SNR=5.2
H16A **Russell Place,** 52.82 319 ⇑P P 07 28 41.8 -0.3
baz=53,SNR=6.0
R12A **Pony Springs,** 52.82 310 ⇑P P 07 28 42.1 -0.1
baz=53,SNR=36
K15A **Arbon** 52.85 316 ⇑P P 07 28 41.9 -0.5
baz=53,SNR=20
U11A **Corn Creek** 52.86 308 ⇓P P 07 28 41.9 -0.7
baz=53
O13A **Hicks Ranch, I** 52.94 313 ⇑P P 07 28 43.2 +0.1
baz=53,SNR=5.7
M14A **Sheep Mountain** 52.97 315 ⇑P P 07 28 42.7 -0.5
baz=53,SNR=22
F17A **Fitzpatrick Pl** 52.98 321 ⇓P P 07 28 42.6 -0.6
baz=53,SNR=36
BAR **Barrett** 52.98 303 eP P 07 28 44.7 +1.2
20nm,1.3s,mb4.9
PFO **Pinyon Flat Ob** 53.01 304 ⇓P P 07 28 43.7 0.0
baz=53
TUQ **Turquoise Moun** 53.02 307 ⇓P P 07 28 43.2 -0.6
baz=53
D18A **Linhart Farms,** 53.05 322 ⇓P P 07 28 42.6 -1.1
baz=53,SNR=5.9
J15A **Blackfoot** 53.06 317 ⇑P P 07 28 43.5 -0.5
baz=53,SNR=36
L14A **Malta** 53.09 315 ⇓P P 07 28 43.6 -0.5
baz=53,SNR=36
HEC **Hector,Ludlow** 53.19 306 ⇓P P 07 28 45.7 +0.7
baz=53
Q12A **Willow Creek R** 53.21 311 ⇓P P 07 28 45.2 +0.1
baz=53,SNR=27
K14A **Jones Ranch, D** 53.24 316 ⇓P P 07 28 44.9 -0.3
baz=53,SNR=60
FCC **Fort Churchill** 53.25 341 P P 07 28 43.2 -1.8
0.7nm,0.8s,mb3.6
FFC **Flin Flon** 53.28 334 eP P 07 28 45.1 -0.2
18nm,1.1s,mb4.9
I15A **Monteview** 53.34 318 ⇑P P 07 28 46.1 +0.2
baz=53,SNR=18
N13A **Wendover, West** 53.35 314 ⇑P P 07 28 46.1 0.0
baz=53,SNR=8.4
N13A **Wendover, West** 53.35 314 eP P 07 28 46.7 +0.6
22nm,0.9s,mb5.1
E17A **Martinsdale** 53.35 321 ⇑P P 07 28 45.9 0.0
baz=53,SNR=9.7
109C **Camp Elliot, M** 53.38 303 ⇑P P 07 28 46.3 -0.2
baz=53
P12A **McGill** 53.40 312 ⇑P P 07 28 46.0 -0.5
baz=53,SNR=18
G16A **Moss Hill, Enn** 53.40 319 ⇓P P 07 28 45.3 -1.1
baz=53,SNR=10
EGMT **Eagleton** 53.42 323 ⇑P P 07 28 47.2 +0.7
baz=53
SHOC **Shoshone** 53.42 307 ⇓P P 07 28 47.2 +0.5
baz=53
BOZ **Bozeman (W)** 53.47 320 ⇑P P 07 28 46.4 -0.5
baz=54,SNR=38
BOZ **Bozeman (W)** 53.47 320 eP P 07 28 46.5 -0.3
16nm,0.9s,mb5.0
S11A **Rachel** 53.48 309 ⇑P P 07 28 47.3 +0.2
baz=54
M13A **Montello** 53.49 314 ⇑P P 07 28 46.6 -0.6
baz=54,SNR=7.2
M13A **Montello** 53.49 314 eP P 07 28 47.8 +0.7
36nm,1.0s,mb5.2
F16A **Kennard Place,** 53.53 320 ⇑P P 07 28 46.6 -0.7
baz=54,SNR=20
BBRC **Big Bear Solar** 53.53 305 ⇓P P 07 28 47.7 +0.1
baz=54
O12A **Currie** 53.54 313 ⇓P P 07 28 47.0 -0.5
baz=54,SNR=24
R11A **Troy Canyon, C** 53.56 310 ⇑P P 07 28 47.2 -0.5
baz=54,SNR=32
D17A **Six Diamond Ra** 53.56 322 ⇓P P 07 28 47.2 -0.4
baz=54,SNR=13
U10A **Ash Meadows, A** 53.59 308 ⇓P P 07 28 47.9 -0.1
baz=54,SNR=5.1
B18A **Beardsley Farm** 53.61 324 ⇓P P 07 28 47.9 0.0
baz=54,SNR=11
MURC **Murrieta** 53.61 304 ⇓P P 07 28 47.8 -0.3
baz=54
GSC **Goldstone** 53.69 306 ⇓P P 07 28 48.9 +0.3
baz=54
GSC **Goldstone** 53.69 306 eP P 07 28 50.0 +1.4
35nm,1.4s,mb5.1
H15A **Lima** 53.69 318 ⇑P P 07 28 48.6 +0.1
baz=54,SNR=32
Q11A **Duckwater** 53.76 311 ⇑P P 07 28 49.0 -0.1
baz=54,SNR=21
J14A **Carey** 53.76 317 ⇑P P 07 28 49.2 +0.2
baz=54,SNR=42
G15A **Dillon** 53.82 319 ⇓P P 07 28 48.9 -0.6
baz=54,SNR=13
C17A **Wharram Farm,** 53.83 323 ⇑P P 07 28 48.1 -1.4
baz=54,SNR=9.5
E16A **East Helena** 53.89 321 ⇑P P 07 28 49.0 -0.9
baz=54
A18A **Metzger Ranch,** 53.91 324 ⇓P P 07 28 49.3 -0.8
baz=54,SNR=9.8
DLMT **Dillon** 53.97 319 eP P 07 28 50.7 +0.2
36nm,1.2s,mb5.2
FURC **Furnace Creek,** 54.02 308 ⇑P P 07 28 50.8 -0.3
baz=54
D16A **Dana Ranch, Ca** 54.03 322 ⇓P P 07 28 50.5 -0.5
baz=54,SNR=7.7
P11A **Circle Ranch,** 54.05 312 ⇓P P 07 28 51.8 +0.5
baz=54
HRY **Holter Researc** 54.06 321 eP P 07 28 51.0 -0.2
LRM **Limekiln Ridge** 54.07 320 eP P 07 28 53.2 +1.9
R10A **Warm Springs** 54.08 310 ⇑P P 07 28 52.1 +0.6
baz=54,SNR=12
BFSC **Mount Baldy Ra** 54.12 305 ⇓P P 07 28 52.1 +0.2
baz=54
O11A **Cowboy Ranch,** 54.16 312 ⇓P P 07 28 52.3 +0.3
baz=54
B17A **L&G Farms, Che** 54.16 323 ⇓P P 07 28 51.8 -0.1
baz=54,SNR=7.0
H14A **Leadore** 54.16 318 ⇑P P 07 28 53.0 +1.0
baz=54,SNR=9.5
S10A **Tonopah Range,** 54.20 309 ⇑P P 07 28 52.7 +0.3
baz=54,SNR=24

J13A **Cove Ranch, Pi** 54.23 317 ⇓P P 07 28 52.1 -0.4
baz=54,SNR=22
Q10A **Clear Creek Ra** 54.31 311 ⇑P P 07 28 52.6 -0.6
baz=54,SNR=16
I13A **Wildhorse Cree** 54.39 317 ⇑P P 07 28 53.9 +0.3
baz=54,SNR=74
MPMC **Manual Prospec** 54.41 307 ⇓P P 07 28 53.5 -0.5
baz=54
A17A **Triple J Farms** 54.41 324 ⇑P P 07 28 53.8 +0.1
baz=54,SNR=14
LRMC **Laurel Mountai** 54.43 306 ⇓P P 07 28 53.1 -1.0
baz=54
N11A **Elko Archery C** 54.43 313 ⇓P P 07 28 53.2 -0.8
baz=54,SNR=6.0
E15A **Deer Lodge** 54.44 320 ⇑P P 07 28 54.0 0.0
baz=54,SNR=12
HLID **Hailey** 54.46 317 ⇓P P 07 28 54.1 -0.1
baz=54,SNR=51
HLID **Hailey** 54.46 317 eP P 07 28 54.3 +0.2
23nm,0.9s,mb5.1
G14A **Jackson** 54.48 319 ⇑P P 07 28 54.0 -0.3
baz=54
EDW2 **Edwards Air Fo** 54.53 305 ⇓P P 07 28 54.5 -0.4
baz=54
PASC **Pasadena Art C** 54.53 305 eP P 07 28 54.8 -0.1
85nm,1.0s,mb5.7
GRAC **Grapevine Rang** 54.55 308 ⇑P P 07 28 54.7 -0.2
baz=54,SNR=12
CIS **Catalina Islan** 54.55 304 ⇑P P 07 28 53.5 -1.5
baz=54
SCI **San Clemente I** 54.59 303 ⇓P P 07 28 54.6 -0.7
baz=55
F14A **Wisdom** 54.65 320 ⇓P P 07 28 55.9 +0.4
baz=55,SNR=13
M11A **Holland Ranch,** 54.67 314 ⇑P P 07 28 55.9 +0.2
baz=55,SNR=63
H13A **Challis** 54.73 318 ⇑P P 07 28 55.9 -0.2
baz=55,SNR=14
B16A **M & M Farms, S** 54.75 323 ⇓P P 07 28 55.8 -0.4
baz=55
O10A **Cortez Mining,** 54.82 312 ⇑P P 07 28 55.5 -1.3
baz=55
L11A **Cat Creek Ranc** 54.89 315 ⇓P P 07 28 56.9 -0.4
baz=55,SNR=24
A16A **West Butte Ran** 54.94 324 ⇓P P 07 28 57.7 +0.2
baz=55,SNR=8.8
CWC **Cottonwood Cre** 54.97 307 ⇑P P 07 28 56.7 -1.2
baz=55
E14A **Clinton** 54.97 320 ⇓P P 07 28 57.7 -0.1
baz=55,SNR=12
C15A **Salmond Ranch,** 55.01 322 ⇑P P 07 28 57.7 -0.3
baz=55,SNR=11
I12A **Atlanta** 55.03 317 ⇑P P 07 28 57.8 -0.4
baz=55,SNR=42
CHMT **Chamberlain Mo** 55.03 321 eP P 07 28 58.2 -0.1
OSI **Osito Adit** 55.06 305 ⇑P P 07 28 56.8 -1.9
baz=55
OSI **Osito Adit** 55.06 305 eP P 07 29 02.9 +4.2
31nm,1.3s,mb5.2
ISA **Isabella** 55.09 306 ⇓P P 07 28 57.5 -1.4
baz=55
ISA **Isabella** 55.09 306 eP P 07 29 00.4 +1.5
106nm,2.5s,mb5.4
H12A **Diond D Ranc** 55.12 318 ⇓P P 07 28 58.8 -0.1
baz=55,SNR=11
B15A **Bradely Ranch,** 55.22 323 ⇓P P 07 28 59.6 +0.1
baz=55
M10A **I.L. Ranch, Tu** 55.23 314 ⇑P P 07 28 59.6 -0.2
baz=55
ARVC **Arvin** 55.26 306 ⇑P P 07 29 00.1 0.0
baz=55
D14A **Greenough** 55.26 321 ⇓P P 07 29 00.3 +0.5
baz=55,SNR=14
SLMT **Seeley Lake** 55.32 321 eP P 07 29 00.7 +0.4
L10A **Juniper Basin** 55.36 314 ⇑P P 07 29 00.7 -0.1
baz=55,SNR=40
MFID **Camas Ranch** 55.37 316 ⇓P P 07 29 00.7 0.0
baz=55,SNR=7.1
BMN **Battle Mountai** 55.39 312 eP P 07 29 01.6 +0.7
16nm,1.0s,mb5.0
E13A **Victor** 55.42 320 ⇑P P 07 29 01.3 +0.2
baz=55,SNR=11
MSO **Missoula** 55.42 320 eP P 07 29 01.1 0.0
A15A **Johnson Ranch,** 55.62 323 ⇑P P 07 29 02.3 -0.1
baz=56,SNR=15
VES **Vestal, Richgr** 55.62 306 ⇑P P 07 29 02.4 -0.3
baz=56
NVAR **Mina Array Bea** 55.63 310 P P 07 29 03.8 +1.0
7.1nm,0.8s,mb4.7,baz=105,slow=6.5,SNR=42
B14A **Marquette Ranc** 55.66 322 ⇓P P 07 29 02.9 +0.1
baz=56,SNR=6.7
C14A **Swan Lake** 55.70 322 ⇓P P 07 29 03.3 +0.3
baz=56
SWMT **Swartz Lake** 55.74 321 eP P 07 29 03.7 +0.4
F12A **Elk City** 55.84 319 ⇑P P 07 29 04.1 +0.1
baz=56,SNR=23
RCTC **Rector, Farmer** 55.84 307 ⇑P P 07 29 04.3 0.0
baz=56
D13A **Huson** 55.86 321 ⇓P P 07 29 03.0 -1.1
baz=56,SNR=30
A14A **Double T Ranch** 56.02 323 ⇑P P 07 29 04.6 -0.7
baz=56
C13A **Hot Springs** 56.17 321 ⇓P P 07 29 05.5 -0.9
baz=56,SNR=12
SMMC **Simmler** 56.23 306 ⇑P P 07 29 06.5 -0.6
baz=56
PFVI **Vila Bisbo** 56.27 52 eLR LR 07 45 41.0
206nm,20.0s
WALA **Waterton Lakes** 56.35 323 eP P 07 29 07.2 -0.4
0.2nm,0.9s
PMAFR **Mafra** 56.36 50 eLR LR 07 45 52.3
273nm,20.0s
BSMT **Bassoo Peak** 56.37 321 eP P 07 29 09.6 +1.7
B13A **Whitefish** 56.39 322 ⇑P P 07 29 07.2 -0.7
baz=56
D12A **Red Ives Fores** 56.40 320 ⇓P P 07 29 07.4 -0.7
baz=56
MORF **Marmelete** 56.44 52 eP P 07 29 11.9 +3.3
102nm,1.7s,mb5.6
WAKR **Walker** 56.52 309 eP P 07 29 10.9 +1.9
A13A **Flathead Natio** 56.59 323 ⇓P P 07 29 08.5 -0.9
baz=57,SNR=6.2
BMO **Blue Mountains** 56.86 317 eP P 07 29 10.9 -0.5
18nm,1.0s,mb5.0
WCN **Washoe City** 56.95 310 ⇓P P 07 29 12.2 0.0
baz=57
PBDV **Barranco-do-Ve** 56.99 52 eLR LR 07 45 54.9
277nm,18.0s
PCVE **Castro Verde** 56.99 52 eP P 07 29 14.3 +1.8
62nm,1.4s,mb5.4
WVOR **Wild Horse Val** 57.00 314 eP P 07 29 12.5 +0.1
15nm,1.0s,mb5.0
B12A **Libby** 57.11 322 ⇑P P 07 29 12.7 -0.4
baz=57
CMB **Columbia Colle** 57.13 309 eP P 07 29 14.3 +0.9
9.7nm,1.4s,mb4.6
J08A **Circle Bar Ran** 57.17 315 ⇓P P 07 29 13.3 -0.3
baz=57
PVAQ **Vaqueiros** 57.19 52 eP P 07 29 17.2 +3.3
57nm,1.6s,mb5.3
PVAQ eLR LR 07 46 05.4
234nm,18.0s
F10A **Beach Ranch, E** 57.20 318 ⇑P P 07 29 13.9 +0.1
baz=57,SNR=12
PBEJ **Beja** 57.21 51 eP P 07 29 14.6 +0.6
73nm,2.0s,mb5.4
EVO **Evora** 57.22 51 eP P 07 29 13.9 -0.1
185nm,1.5s,mb5.6
EVO eMLR MLR
comp=Z,443nm,22.2s,MS4.2
EVO **Evora** 57.22 51 eP P 07 29 17.0 +3.0
comp=Z,82nm,1.6s,mb5.5
A12A **Yaak River Ran** 57.34 322 ⇓P P 07 29 14.2 -0.5
baz=57,SNR=6.5
EGRO **El Granado** 57.40 52 P P 07 29 17.6 +2.3
comp=Z,106nm,1.7s,mb5.6
PESTR **Estremoz** 57.62 51 eP P 07 29 19.8 +2.9
comp=Z,141nm,1.8s,mb5.7
PESTR eLR LR 07 46 24.7
comp=Z,295nm,20.0s
EZAM **Zamans** 57.65 46 P P 07 29 18.9 +1.9
comp=Z,36nm,0.7s,mb5.5
EMAZ **Mazaricos** 57.68 46 P P 07 29 18.4 +1.2
comp=Z,29nm,1.2s,mb5.2
PVIS **Viseu** 57.84 48 eP P 07 29 18.9 +0.5
comp=Z,56nm,1.3s,mb5.4
LNOR **Lincton Mounta** 57.86 318 eP P 07 29 18.5 +0.1
PBAR **Barrancos** 57.88 51 eP P 07 29 19.4 +0.7
comp=Z,83nm,1.6s,mb5.5
PBAR eLR LR 07 46 00.1
comp=Z,243nm,20.0s
PMRV **Marv??o** 57.90 50 eP P 07 29 18.7 -0.1
comp=Z,49nm,1.3s,mb5.4
EDM **Edmonton** 57.93 328 eP P 07 29 18.4 -0.4
PCBR **Castelo Branco** 57.94 49 eP P 07 29 19.7 +0.6
comp=Z,53nm,1.1s,mb5.5
STS **Santiago** 57.96 46 P P 07 29 21.1 +1.9
comp=Z,24nm,0.7s,mb5.3
NEW **Newport** 57.97 321 eP P 07 29 17.9 -1.3
comp=Z,17nm,0.8s,mb5.1
E09A **Wood Farm, Sta** 57.98 319 ⇓P P 07 29 18.9 -0.4
baz=58
PCAB **Cabril** 58.01 47 eP P 07 29 22.1 +2.5
comp=Z,57nm,1.7s,mb5.3
MTE **Manteigas** 58.02 49 eP P 07 29 20.1 +0.4
comp=Z,63nm,1.5s,mb5.4
MTE eLR LR 07 46 25.4
comp=Z,253nm,18.0s
MTE **Manteigas** 58.02 49 eP P 07 29 18.0 -1.7
comp=Z,15nm,0.7s,mb5.1
ELOB **Lobios** 58.03 47 P P 07 29 19.8 +0.1
comp=Z,41nm,1.6s,mb5.2
EBAD **Badajoz** 58.03 51 P P 07 29 21.6 +1.8
comp=Z,59nm,1.7s,mb5.3
MOD **Modoc** 58.04 313 eP P 07 29 20.2 +0.5
comp=Z,7.8nm,0.7s,mb4.8
EMIN **Mina Concepcio** 58.08 52 P P 07 29 20.9 +0.7
comp=Z,40nm,1.0s,mb5.4
I07A **Izee** 58.10 316 ⇑P P 07 29 19.8 -0.3
baz=58,SNR=58
G08A **Pilot Rock** 58.11 317 ⇓P P 07 29 19.4 -0.8
baz=58,SNR=7.3
PVRL **Vila Real** 58.12 48 eP P 07 29 20.9 +0.6
comp=Z,19nm,1.6s,mb5.5
OHCM **Honcut** 58.26 310 eP P 07 29 22.7 +1.3
C09A **Chrisman Ranch** 58.52 320 ⇓P P 07 29 22.4 -0.6
baz=58
ESPR **Espera** 58.53 53 P P 07 29 26.4 +3.1
comp=Z,116nm,1.8s,mb5.6
TIC **Toumodi** 58.56 89 eP P 07 29 20.6 -3.3
comp=Z,7.7nm,0.3s,mb5.3
E08A **Dider Farm, El** 58.57 319 ⇑P P 07 29 22.9 -0.5
baz=59
MVO **Moncorvo** 58.59 48 eP P 07 29 24.1 +0.5
comp=Z,86nm,1.5s,mb5.6
MVO **Moncorvo** 58.59 48 P P 07 29 23.8 +0.2
LIC **Lamto** 58.61 89 eP P 07 29 23.2 -1.1
comp=Z,48nm,1.5s,mb5.3
LIC **Lamto** 58.61 89 eP P 07 29 23.4 -0.9
comp=Z,46nm,1.4s,mb5.0
LIC eMLR MLR
comp=Z,425nm,22.5s,MS4.2
LIC **Lamto** 58.61 89 eP P 07 29 23.4 -0.9
comp=Z,23nm,1.4s,mb5.0
LIC LR LR
comp=Z,210nm,22.5s,MS4.2
OD2 **Odessa Site #2** 58.65 320 eP P 07 29 23.6 -0.4
K05A **Summer Lake** 58.68 314 ⇓P P 07 29 23.5 -0.7
baz=59,SNR=19
DBIC **Dimbokro** 58.72 89 eP P 07 29 24.1 -0.9
comp=Z,12nm,1.1s,mb4.8
DBIC **Dimbokro** 58.72 89 P P 07 29 24.5 -0.5
comp=Z,2.8nm,0.5s,mb4.6,baz=274,slow=6.0,SNR=5.9
EJIF **Jimena Fronter** 58.76 54 P P 07 29 27.5 +2.6
comp=Z,21nm,0.8s,mb5.2
ERUA **La Rua** 58.83 47 P P 07 29 27.8 +2.5
comp=Z,20nm,0.6s,mb5.3
HAWA **Hanford** 58.85 318 eP P 07 29 25.4 0.0
comp=Z,40nm,1.4s,mb5.2
KIC **Kosan Boka** 58.88 89 eP P 07 29 24.4 -1.7
comp=Z,37nm,1.1s,mb5.3
RSW **Rattlesnake Hi** 58.89 318 eP P 07 29 25.4 -0.1
PBRG **Braganca** 58.96 47 eP P 07 29 28.4 +2.2
comp=Z,56nm,1.8s,mb5.3
VIPM **Ingram Point** 58.99 316 P P 07 29 26.8 +0.5
ECAL **Calabor** 59.00 47 P P 07 29 27.9 +1.4
comp=Z,65nm,1.6s,mb5.4
EPLA **Plasencia** 59.03 49 P P 07 29 27.6 +0.9
comp=Z,71nm,1.5s,mb5.5
EPON **Pontenova** 59.07 46 P P 07 29 28.1 +1.2
comp=Z,35nm,0.9s,mb5.4
HOG **Hogback Mounta** 59.13 313 P P 07 29 28.6 +1.2
G06A **Carlson Farm,** 59.22 317 ⇑P P 07 29 27.8 -0.1
baz=59,SNR=14
WDC **Whiskeytown Da** 59.34 311 eP P 07 29 29.1 +0.3
comp=Z,15nm,1.3s,mb4.9
B08A **Colville Reser** 59.38 321 ⇑P P 07 29 28.2 -0.8
baz=59,SNR=9.8
YBH **Yreka Blue Hor** 59.73 312 eP P 07 29 29.7 -1.8
comp=Z,19nm,1.3s,mb5.0
EADA **Adamuz** 59.78 52 P P 07 29 34.1 +2.2
comp=Z,42nm,1.5s,mb5.2
TBM **Table Mountain** 59.79 319 P P 07 29 32.0 +0.2
ELOJ **Sierra Loja** 59.93 53 P P 07 29 34.4 +1.5
comp=Z,143nm,1.7s,mb5.7
HOOD **Mount Hood Mea** 59.93 317 eP P 07 29 34.0 +1.2
comp=Z,30nm,1.0s,mb5.3
H04A **Detroit Lake** 60.12 316 ⇑P P 07 29 33.4 -0.7
baz=60,SNR=12
HUMO **Hull Mountain** 60.12 313 eP P 07 29 34.2 +0.1
comp=Z,6.4nm,0.8s,mb4.7
ERON **Agron** 60.18 53 P P 07 29 35.9 +1.2
comp=Z,28nm,0.8s,mb5.3
PAB **San Pablo** 60.22 50 eP P 07 29 34.7 -0.3
comp=Z,36nm,1.0s,mb5.4
WPW **White Pass** 60.26 318 P P 07 29 35.4 +0.3
KHMM **Horse Mountain** 60.29 311 eP P 07 29 37.6 +2.3
comp=Z,23nm,0.9s,mb5.2
EBAN **Banos Encina** 60.39 52 P P 07 29 37.5 +1.3
comp=Z,20nm,1.2s,mb5.0
ECOG **Cogollos-Vega** 60.41 53 P P 07 29 37.5 +1.2
comp=Z,30nm,0.6s,mb5.5
EARI **Arriondas** 60.43 46 P P 07 29 37.6 +1.3
comp=Z,69nm,1.7s,mb5.4
LON **Longmire** 60.45 318 eP P 07 29 35.1 -1.3
comp=Z,8.8nm,1.2s,mb4.7
G04A **Mulino** 60.46 316 ⇓P P 07 29 35.7 -0.8
baz=60
ESDC **Sonseca Array** 60.54 50 P P 07 29 37.6 +0.5
ESDC **Sonseca Array** 60.54 50 P P 07 29 37.5 +0.4
comp=Z,16nm,0.6s,mb5.3,baz=263,slow=7.3,SNR=34
ESLA **Sonseca Array** 60.54 50 eP P 07 29 37.3 +0.1
comp=Z,2.6nm,0.6s,mb4.5
GUD **Guadarrama** 60.59 49 P P 07 29 37.1 -0.3
comp=Z,29nm,0.8s,mb5.5
EALB **Alboran** 60.62 55 P P 07 29 39.1 +1.4
comp=Z,258nm,1.6s,mb6.1
D05A **Enumclaw** 60.70 319 ⇑P P 07 29 37.1 -1.0
baz=61,SNR=5.1
RPW **Rockport** 60.78 320 eP P 07 29 37.4 -1.2
B06A **Marblemount** 60.78 320 ⇓P P 07 29 38.6 0.0
baz=61
EBER **Berja** 60.88 54 P P 07 29 41.1 +1.6
comp=Z,342nm,1.9s,mb6.2
EQES **Quesada** 60.89 53 P P 07 29 41.8 +2.3
comp=Z,60nm,1.4s,mb5.5
JCW **Jim Creek** 60.97 320 eP P 07 29 38.5 -1.4
EHUE **Huescar** 61.26 53 P P 07 29 43.0 +0.9
comp=Z,26nm,0.9s,mb5.4
A05A **Maple Falls** 61.31 321 ⇑P P 07 29 41.9 -0.3
baz=61,SNR=5.3
GNW **Green Mountain** 61.35 319 eP P 07 29 41.3 -1.2
comp=Z,5.2nm,1.2s,mb4.5
F03A **Seaside** 61.38 317 ⇓P P 07 29 42.5 -0.3
baz=61
ENIJ **Nijar** 61.43 54 P P 07 29 43.7 +0.5
comp=Z,32nm,1.4s,mb5.3
E03A **Lebam** 61.55 318 ⇑P P 07 29 43.3 -0.6
baz=62,SNR=8.6
ELAN **Lanestosa** 61.68 46 P P 07 29 46.7 +2.0
comp=Z,28nm,1.6s,mb5.1
NLWA **Neilton Lookou** 61.98 318 ⇑P P 07 29 46.9 +0.1
baz=62
NLWA **Neilton Lookou** 61.98 318 eP P 07 29 47.0 +0.3
comp=Z,10nm,0.7s,mb5.1
PGC **Sidney** 62.07 320 eP P 07 29 46.5 -0.8
comp=Z,1.6nm,1.0s,mb4.1
ETOR **Torete** 62.19 49 P P 07 29 48.2 -0.1
comp=Z,24nm,1.1s,mb5.2
ETOB **Tobarra** 62.21 52 P P 07 29 51.0 +2.6
comp=Z,34nm,1.1s,mb5.4
EMUR **La Murta** 62.32 53 P P 07 29 50.8 +1.6
comp=Z,14nm,0.7s,mb5.2
QUIF **Quistinic** 62.99 41 eP P 07 29 53.0 -0.5
ROSF **Rostrenen** 63.03 41 eP P 07 29 53.2 -0.5
comp=Z,38nm,0.8s,mb5.3

ROSF Rostrenen 63.03 41 *e*P **P 07 29 53.2 -0.5**
comp=Z,19nm,0.8s,mb5.3
YKA Yellowknife Ar 63.20 336 P **P 07 29 54.1 -0.5**
comp=Z,19nm,0.7s,mb5.3,baz=112,slow=7.1,SNR=21
SJPF Ste Jean 63.23 47 *e*P **P 07 29 55.4 +0.2**
comp=Z,68nm,1.0s,mb5.5
SJPF Ste Jean 63.23 47 *e*P **P 07 29 55.4 +0.2**
comp=Z,34nm,1.0s,mb5.4
SGMF Saint Gilles 63.47 41 *e*P **P 07 29 56.2 -0.5**
ETSF Etsaut 63.67 47 *e*P **P 07 29 58.4 +0.3**
comp=Z,19nm,0.9s,mb4.8
ETSF Etsaut 63.67 47 *e*P **P 07 29 58.4 +0.3**
comp=Z,9.4nm,0.9s,mb4.8
REYF Montagne du Re 63.82 47 *e*P **P 07 30 01.7 +2.6**
SUMG Summit 63.96 8 *e*P **P 07 30 00.5 +1.1**
comp=Z,74nm,0.8s,mb5.8
SUMG Summit 63.96 8 *i* P **P 07 30 00.4 +1.0**
comp=Z,54nm,0.8s,mb5.6
EBIE Bielsa 64.14 48 P **P 07 30 01.1 -0.1**
comp=Z,14nm,0.6s,mb5.2
EPF Esparros 64.34 47 *e*P **P 07 30 02.6 +0.1**
comp=Z,44nm,0.7s,mb5.3
EPF Esparros 64.34 47 *e*P **P 07 30 02.6 +0.1**
comp=Z,22nm,0.7s,mb5.3
TORD Torodi Ar. Bea 64.38 80 P **P 07 30 01.8 -1.4**
comp=Z,8.6nm,0.7s,mb4.9,baz=281,slow=5.9,SNR=27
GRR Gorron 64.60 41 *e*P **P 07 30 03.4 -0.7**
comp=Z,99nm,1.2s,mb5.4
GRR Gorron 64.60 41 *e*P **P 07 30 03.4 -0.7**
comp=Z,50nm,1.2s,mb5.4
MFF Saint Martin d 64.68 43 *e*P **P 07 30 04.1 -0.6**
comp=Z,152nm,1.6s,mb5.5
MFF Saint Martin d 64.68 43 *e*P **P 07 30 04.1 -0.6**
comp=Z,76nm,1.6s,mb5.5
CSOR Sort 64.81 48 P **P 07 30 08.5 +2.9**
comp=Z,45nm,1.2s,mb5.4
SALF Salau 64.92 48 *e*P **P 07 30 09.3 +3.0**
FLN La Foliniere 64.93 41 *e*P **P 07 30 05.6 -0.6**
comp=Z,33nm,0.7s,mb5.2
FLN *e*MLR MLR
comp=Z,338nm,21.2s,MS4.2
FLN La Foliniere 64.93 41 *e*P **P 07 30 05.6 -0.6**
comp=Z,16nm,0.7s,mb5.2
FLN LR LR
comp=Z,340nm,21.3s,MS4.5
LFF La Frestale 64.97 45 *e*P **P 07 30 06.0 -0.5**
comp=Z,68nm,1.1s,mb5.3
LFF La Frestale 64.97 45 *e*P **P 07 30 06.0 -0.5**
comp=Z,34nm,1.1s,mb5.3
LDF La Druitiere 65.13 41 *e*P **P 07 30 06.7 -0.8**
comp=Z,23nm,1.1s,mb4.8
LDF La Druitiere 65.13 41 *e*P **P 07 30 06.7 -0.8**
comp=Z,12nm,1.1s,mb4.8
CLLI Llivia 65.44 48 P **P 07 30 10.2 +0.5**
RJF Les Rejaudoux 65.57 45 *e*P **P 07 30 09.8 -0.7**
comp=Z,67nm,1.3s,mb5.2
RJF *e*MLR MLR
comp=Z,432nm,20.8s,MS4.3
RJF Les Rejaudoux 65.57 45 *e*P **P 07 30 09.8 -0.7**
comp=Z,34nm,1.3s,mb5.2
RJF LR LR
comp=Z,430nm,20.8s,MS4.6
MTLF Montolieu 65.75 47 *e*P **P 07 30 10.9 -0.8**
comp=Z,37nm,0.9s,mb5.1
MTLF Montolieu 65.75 47 *e*P **P 07 30 10.9 -0.8**
comp=Z,19nm,0.9s,mb5.1
FILF Fillols 65.89 48 *e*P **P 07 30 14.3 +1.8**
CAF Calviac 65.89 45 *e*P **P 07 30 12.0 -0.5**
comp=Z,25nm,0.7s,mb5.0
CAF Calviac 65.89 45 *e*P **P 07 30 12.0 -0.5**
comp=Z,13nm,0.7s,mb5.1
TCF Toulx Ste Croi 66.22 44 *e*P **P 07 30 13.8 -0.8**
PYM Petit Puy Mans 66.68 45 *e*P **P 07 30 19.4 +1.8**
BGF Bois d'Agland 66.70 44 *e*P **P 07 30 16.7 -1.0**
comp=Z,39nm,1.1s,mb5.0
BGF Bois d'Agland 66.70 44 *e*P **P 07 30 16.7 -1.0**
comp=Z,19nm,1.1s,mb5.0
AGO Saint Agoulin 66.81 44 *e*P **P 07 30 21.2 +2.8**
MENF Mencas 67.00 39 *e*P **P 07 30 20.0 +0.5**
LASF Ste Croix 67.03 47 *e*P **P 07 30 19.3 -0.6**
comp=Z,84nm,1.6s,mb5.2
AVF Avril sur Loir 67.08 44 *e*P **P 07 30 18.8 -1.3**
PLDF La Plantade 67.14 44 *e*P **P 07 30 22.3 +1.8**
SSF Saint Saulge 67.23 43 *e*P **P 07 30 19.9 -1.2**
comp=Z,12nm,0.9s,mb4.6
SSF Saint Saulge 67.23 43 *e*P **P 07 30 19.9 -1.2**
comp=Z,6.0nm,0.9s,mb4.6
SMF Signal de Mont 67.39 44 *e*P **P 07 30 21.1 -1.0**
comp=Z,60nm,1.3s,mb5.2
SMF Signal de Mont 67.39 44 *e*P **P 07 30 21.1 -1.0**
comp=Z,30nm,1.3s,mb5.2
TAM Tamanrasset 67.40 70 *e*P **P 07 30 23.2 +0.7**
comp=Z,10nm,1.1s,mb4.8
LOR Lormes 67.50 43 *e*P **P 07 30 21.3 -1.5**
comp=Z,22nm,0.7s,mb5.0
LOR *e*MLR MLR
comp=Z,232nm,21.5s,MS4.1
LOR Lormes 67.50 43 *e*P **P 07 30 21.3 -1.5**
comp=Z,11nm,0.7s,mb5.0
LOR LR LR
comp=Z,230nm,21.5s,MS4.4
VIVF Saint-Julien-l 67.72 46 *e*P **P 07 30 24.1 -0.1**
comp=Z,28nm,0.9s,mb5.0
VIVF Saint-Julien-l 67.72 46 *e*P **P 07 30 24.1 -0.1**
comp=Z,14nm,0.9s,mb5.0
BAIF Baives 68.19 40 *e*P **P 07 30 25.7 -1.4**
comp=Z,21nm,0.8s,mb4.9
BAIF Baives 68.19 40 *e*P **P 07 30 25.7 -1.4**
comp=Z,11nm,0.8s,mb4.9
SMRF Simiane la Rot 68.25 47 *e*P **P 07 30 27.6 +0.1**
comp=Z,37nm,1.1s,mb5.0
SMRF Simiane la Rot 68.25 47 *e*P **P 07 30 27.6 +0.1**
comp=Z,37nm,1.1s,mb5.3
DOU Dourbes 68.45 40 P **P 07 30 29.6 +1.0**
MEZF Maizieres J'vi 68.49 42 *e*P **P 07 30 27.8 -1.1**
comp=Z,67nm,0.7s,mb5.5
MEZF Maizieres J'vi 68.49 42 *e*P **P 07 30 27.8 -1.1**
comp=Z,67nm,0.7s,mb5.8
ORIF Oris-en-Rattie 68.58 46 *e*P **P 07 30 29.6 0.0**
comp=Z,15nm,0.9s,mb4.6
ORIF *e*MLR MLR
comp=Z,225nm,20.8s,MS4.1
ORIF Oris-en-Rattie 68.58 46 *e*P **P 07 30 29.6 0.0**
comp=Z,7.6nm,0.9s,mb4.6
DLBC Dease Lake 68.58 329 *e*P **P 07 30 30.4 +1.1**
GIVF Givet 68.59 40 *e*P **P 07 30 28.3 -1.3**
comp=Z,51nm,1.0s,mb5.1
GIVF Givet 68.59 40 *e*P **P 07 30 28.3 -1.3**
comp=Z,26nm,1.0s,mb5.1
LMR La Mourre 68.86 48 *e*P **P 07 30 30.6 -0.8**
comp=Z,30nm,1.1s,mb4.8
LMR La Mourre 68.86 48 *e*P **P 07 30 30.6 -0.8**
comp=Z,15nm,1.1s,mb4.8
CABF La Chapelle 68.92 44 *e*P **P 07 30 30.7 -1.0**
comp=Z,20nm,0.8s,mb4.8
CABF La Chapelle 68.92 44 *e*P **P 07 30 30.7 -1.0**
comp=Z,9.8nm,0.8s,mb4.8
BCLA Clavier 68.95 40 P **P 07 30 30.8 -0.9**
FRF La Foret Royal 68.98 47 *e*P **P 07 30 31.2 -0.9**
comp=Z,20nm,0.8s,mb4.8
FRF La Foret Royal 68.98 47 *e*P **P 07 30 31.2 -0.9**
comp=Z,10.0nm,0.8s,mb4.8
THEF They Montfort 69.06 42 *e*P **P 07 30 33.9 +1.4**
MBDF Montbardon 69.18 46 *e*P **P 07 30 33.3 -0.1**
comp=Z,21nm,1.0s,mb4.7
MBDF Montbardon 69.18 46 *e*P **P 07 30 33.3 -0.1**
comp=Z,11nm,1.0s,mb4.7
LPL La Plagne 69.24 45 *e*P **P 07 30 33.8 +0.1**
comp=Z,36nm,0.7s,mb5.1
LPL La Plagne 69.24 45 *e*P **P 07 30 33.8 +0.1**
comp=Z,18nm,0.7s,mb5.1
LPG La Plagne 69.25 45 *e*P **P 07 30 33.9 +0.1**
comp=Z,52nm,0.9s,mb5.2
LPG La Plagne 69.25 45 *e*P **P 07 30 33.9 +0.1**
comp=Z,26nm,0.9s,mb5.2
HAU Haudompre 69.28 43 *e*P **P 07 30 32.5 -1.4**
HAU *e*MLR MLR
comp=Z,266nm,19.8s,MS4.2
HAU Haudompre 69.28 43 *e*P **P 07 30 32.5 -1.4**
HAU LR LR
comp=Z,270nm,19.8s,MS4.5
MVIF Mont Vial 69.38 47 *e*P **P 07 30 37.9 +3.3**
WLF Walferdange 69.38 41 *e*P **P 07 30 35.9 +1.5**
TOUF Mont Tournerai 69.45 47 *e*P **P 07 30 37.1 +2.0**
LOMF Lomont 69.52 43 *e*P **P 07 30 38.1 +2.7**
CRAG Craig 69.54 325 *e*P **P 07 30 36.1 +0.8**
SBF Sospel 69.58 47 *e*P **P 07 30 35.0 -0.8**
comp=Z,42nm,0.9s,mb5.0
SBF Sospel 69.58 47 *e*P **P 07 30 35.0 -0.8**
comp=Z,21nm,0.9s,mb5.1
AUTN L'Aution 69.58 47 *e*P **P 07 30 37.1 +1.3**
HINF Hinteralfeld 69.59 43 *e*P **P 07 30 34.3 -1.5**
comp=Z,22nm,0.7s,mb4.9
HINF Hinteralfeld 69.59 43 *e*P **P 07 30 34.3 -1.5**
comp=Z,11nm,0.7s,mb4.8
SAOF Saorge 69.67 47 *e*P **P 07 30 38.2 +1.8**
MOF Molkenrain 69.78 43 *e*P **P 07 30 37.7 +0.7**
ECH Echery 69.84 42 *e*P **P 07 30 38.5 +1.2**
CDF Champ du Feu 69.94 42 *e*P **P 07 30 36.6 -1.4**
comp=Z,15nm,0.5s,mb4.9
CDF Champ du Feu 69.94 42 *e*P **P 07 30 36.6 -1.4**
comp=Z,7.5nm,0.5s,mb4.9
RUP Ruppelstein 69.96 41 *e*P **P 07 30 39.5 +1.4**
BBS Basel-Blauen 69.99 43 *e*P **P 07 30 39.4 +1.1**
ABH Alteburg 70.30 41 *e*P **P 07 30 41.6 +1.5**
BUG Bochum--Univer 70.33 39 *e*P **P 07 30 41.7 +1.4**
comp=Z,28nm,1.2s,mb5.1
LANF Langenberg 70.36 42 *e*P **P 07 30 42.0 +1.5**
FELD Feldberg im Sc 70.37 43 *e*P **P 07 30 41.6 +1.0**
PGF Pioggiola 70.62 49 *e*P **P 07 30 41.3 -0.9**
comp=Z,30nm,0.7s,mb5.0
PGF Pioggiola 70.62 49 *e*P **P 07 30 41.3 -0.9**
comp=Z,15nm,0.7s,mb5.0
KEST Kesra 70.62 56 *e*P **P 07 30 42.9 +0.5**
KEST Kesra 70.62 56 P **P 07 30 43.3 +0.9**
comp=Z,4.7nm,0.9s,mb4.4,baz=216,slow=1.9,SNR=13
KEST LR LR 07 57 02.9
comp=Z,69nm,21.3s,MS3.9,baz=248,slow=32
IBBN Ibbenburen 70.75 38 *e*P **P 07 30 44.3 +1.5**
comp=Z,38nm,1.0s,mb5.3
TNS Taunus Mts 70.92 40 *e*P **P 07 30 45.3 +1.4**
comp=Z,38nm,0.7s,mb5.4
SIT Sitka 71.04 327 *e*P **P 07 30 45.6 +1.1**
comp=Z,24nm,1.1s,mb5.0
SKAG Skagway 71.49 329 *e*P **P 07 30 47.9 +0.8**
DAVA Damuels 71.58 44 ⇑*i*pP **P 07 30 49.8 +1.8**
comp=Z,20nm,0.7s,mb5.2
ALE Alert 72.06 0 P **P 07 30 49.7 -0.6**
comp=Z,508nm,0.9s,mb6.5,SNR=18
FETA Feichten 72.13 44 ⇑*i*pP **P 07 30 53.1 +1.8**
comp=Z,22nm,0.7s,mb5.2,SNR=10
RETA Reutte 72.19 43 ⇑*i*pP **P 07 30 53.1 +1.5**
comp=Z,16nm,1.2s,mb4.8
CLZ Clausthal 72.30 39 *e*P **P 07 30 53.7 +1.5**
comp=Z,15nm,0.8s,mb5.0
MOTA Moosalm 72.41 44 ⇓*i*pP **P 07 30 54.2 +1.3**
comp=Z,9.5nm,0.6s,mb4.9
BSEG Bad Segeberg 72.48 37 *e*P **P 07 30 54.6 +1.4**
comp=Z,14nm,0.9s,mb4.9
GRA1 Grafenberg Arr 72.65 41 *e*P **P 07 30 55.7 +1.4**
comp=Z,104nm,2.1s,mb5.4
GRF Grafenberg Arr 72.65 41 *e*P **P 07 30 55.7 +1.4**
comp=Z,104nm,2.1s,mb5.4
WATA Walderalm 72.73 44 ⇑*i*pP **P 07 30 56.1 +1.2**
comp=Z,6.6nm,0.5s,mb4.8
INK Inuvik 72.75 339 *e*P **P 07 30 54.0 -0.6**
comp=Z,12nm,0.8s,mb4.9
WTTA Wattenberg 72.77 44 ⇑*i*pP **P 07 30 56.5 +1.4**
comp=Z,23nm,1.3s,mb4.9
HYT Haines Junctio 72.80 331 *e*P **P 07 30 57.8 +2.7**
MOX Moxa 72.97 40 *e*P **P 07 30 57.4 +1.2**
comp=Z,112nm,3.3s
ABTA Abfaltersbach 73.34 44 ⇑*i*pP **P 07 30 59.7 +1.2**
comp=Z,15nm,0.8s,mb4.9
NKC Novy Kostel 73.48 41 *e*P **P 07 31 00.3 +1.1**
TANN Tannenbergstha 73.50 40 *e*P **P 07 31 00.8 +1.5**
PNL Peninsula 73.57 329 *e*P **P 07 30 59.8 +0.3**
comp=Z,3µm,1.2s
WET Wettzell 73.70 42 *e*P **P 07 31 01.8 +1.3**
comp=Z,9.0nm,0.9s,mb4.7
NOA NORSAR Array B 73.84 29 P **P 07 31 03.0 +1.9**
comp=Z,3.5nm,0.7s,mb4.4,baz=263,slow=6.0,SNR=8.5
NOA LR LR 08 00 44.2
comp=Z,118nm,18.2s,MS4.2,baz=270,slow=34
CLL Collm 73.89 40 *e*P **P 07 31 03.0 +1.4**
comp=Z,14nm,0.9s,mb4.9
CLL Collm 73.89 40 *i* P **P 07 31 02.7 +1.1**
comp=Z,15nm,1.0s,mb4.9
CLL Collm 73.89 40 *i* P **P 07 31 02.7 +1.1**
comp=Z,15nm,1.0s,mb4.9
CLL *i* PcP PcP 07 31 18.0 +0.9
CLL *e*(SS) 07 45 48.0
CLL L 08 00 00.0
comp=Z,200nm,21.3s
KBA Koelnbreinsper 73.92 44 ⇑*i*pP **P 07 31 03.2 +1.3**
comp=Z,34nm,1.1s,mb5.2,SNR=15
MYKA Terra Mystica 74.11 44 ⇑*i*pP **P 07 31 04.2 +1.2**
comp=Z,39nm,1.8s,mb5.0
KHC Kasperske Hory 74.16 42 *e*P **P 07 31 04.0 +0.8**
comp=Z,28nm,1.4s,mb5.0
KHC Kasperske Hory 74.16 42 *e*P **P 07 31 04.3 +1.1**
DAWY Dawson 74.19 334 *e*P **P 07 31 03.5 +0.4**
GEC2 GERESS Array S 74.22 42 *e*P **P 07 31 04.9 +1.3**
comp=Z,20nm,0.9s,mb5.0
JAVS Javornik 74.39 45 *i* P **P 07 31 03.8 -0.8**
JAVS *i* pP 07 31 06.4 -1.5
BRG Berggiesshubel 74.46 40 *e*P **P 07 31 06.5 +1.5**
comp=Z,14nm,0.9s,mb4.9
BRG Berggiesshubel 74.46 40 *i* P **P 07 31 06.3 +1.4**
comp=Z,14nm,0.8s,mb4.9
BRG SS SS 07 45 21.0 -5.2
BRG
comp=N,135nm,15.5s
BRG
comp=E,127nm,16.2s
BRG
comp=Z,277nm,22.6s
MOA Molln 74.57 43 *i* pP pP 07 31 06.8 -2.2
comp=Z,25nm,1.4s,SNR=9.1
PRU Pruhonice 74.81 41 *e*P **P 07 31 09.0 +2.0**
PRU AMS AMS 07 59 50.0
comp=Z,200nm,17.9s
PVCC Panska Ves 74.85 40 *e*P **P 07 31 08.5 +1.3**
PVCC AMS AMS 08 01 10.0
comp=Z,300nm,14.8s
VISS Visnje 74.93 45 *i* P **P 07 31 09.3 +1.5**
EGAK Eagle 75.05 334 *e*P **P 07 31 08.3 +0.2**
comp=Z,24nm,0.9s,mb5.1
PERS Pernice 75.13 44 *i* P **P 07 31 08.7 -0.2**
BOJS Bojanci 75.22 46 *i* P **P 07 31 11.3 +1.9**
TREC Trest 75.41 42 *e*P **P 07 31 11.8 +1.3**
ARSA Arzberg 75.41 44 ⇑*i*P **P 07 31 10.2 -0.3**
comp=Z,76nm,0.5s,mb5.9,SNR=53
UPC Upice 75.77 40 *e*P **P 07 31 14.1 +1.6**
DPC Dobruska-Polom 75.97 41 *e*P **P 07 31 13.0 -0.6**
DPC *e*pP pP 07 31 15.3 -1.6
DPC AMS AMS 08 01 40.0
comp=Z,200nm,19.5s
MENT Mentasta 75.98 332 *e*P **P 07 31 14.1 +0.6**
VRAC Vranov 76.14 42 ⇑*i*P **P 07 31 16.2 +1.6**
BMRM Bremner River 76.27 330 *e*P **P 07 31 15.8 +0.6**
comp=Z,16nm,0.9s,mb5.0
ZST Bratislava 76.48 43 *e*P **P 07 31 18.5 +1.9**
comp=Z,86nm,2.0s,mb5.3
ZST Bratislava 76.48 43 *e*P **P 07 31 18.5 +1.9**
MODS Modra-Piesok 76.59 43 *e*P **P 07 31 19.2 +2.0**
MODS Modra-Piesok 76.59 43 *e*P **P 07 31 19.2 +2.0**
MORC Moravsky Berou 76.75 41 *e*P **P 07 31 18.1 0.0**
comp=Z,39nm,1.7s,mb5.1
MORC Moravsky Berou 76.75 41 ⇑*i*P **P 07 31 19.9 +1.8**
PAX Paxson 76.78 332 *e*P **P 07 31 18.3 +0.3**
comp=Z,7.7nm,1.0s,mb4.6
RKT Rikitea 76.85 243 *e*LR LR 07 55 11.0
comp=Z,474nm,32.2s
OKC Ostrava-Krasne 77.14 41 *e*P **P 07 31 22.1 +1.8**
KOLL Kolacno 77.34 42 *e*P **P 07 31 23.2 +1.8**
KOLL Kolacno 77.34 42 *e*P **P 07 31 23.1 +1.7**
ILAR Eielson Array 77.49 334 P **P 07 31 23.2 +1.2**
comp=Z,3.2nm,0.8s,mb4.3,baz=106,slow=4.8,SNR=29
ILAR PP PP 07 34 14.3 -2.1
comp=Z,0.2nm,0.3s,baz=93,slow=6.3,SNR=4.7
ILAR LR LR 08 07 07.2
comp=Z,564nm,19.5s,MS4.9,baz=270,slow=37
PKSM Moragy 77.57 45 ⇑P **P 07 31 24.6 +1.8**
PKSM Moragy 77.57 45 ⇑*i*P **P 07 31 24.6 +1.8**
VYHS Vyhne 77.63 43 *e*P **P 07 31 24.6 +1.5**
comp=Z,14nm,1.6s,mb4.7
VYHS Vyhne 77.63 43 *e*P **P 07 31 24.6 +1.5**
TAOE Nuku Hiva Isla 77.99 259 *e*S S 07 41 12.6 -7.3
comp=Z,151nm,25.7s
TAOE *e*LQ 07 52 32.1
comp=Z,576nm,36.2s
TAOE *e*LR LR 07 55 45.2
comp=Z,479nm,25.7s
OJC Ojcow 78.20 41 *e*P **P 07 31 28.1 +1.9**
PSZ Piszkesteto 78.36 43 ⇑*e*P **P 07 31 28.8 +1.7**
MCK McKinley 78.37 333 *e*P **P 07 31 26.9 +0.1**
comp=Z,9.0nm,1.0s,mb4.7
PMR Palmer 78.47 331 *e*P **P 07 31 26.6 -0.9**
comp=Z,6.1nm,0.9s,mb4.5
SEW Seward 78.65 329 *e*P **P 07 31 29.1 +0.6**
comp=Z,38nm,0.9s,mb5.3
KECS Kecovo 78.72 42 *e*P **P 07 31 31.1 +2.0**
comp=Z,4.4nm,0.8s,mb4.4
KECS Kecovo 78.72 42 *e*P **P 07 31 31.1 +2.0**
COLD Coldfoot 78.88 337 *e*P **P 07 31 31.4 +1.8**
comp=Z,4.9nm,1.1s,mb4.3
TRF Thorofare Moun 78.97 333 *e*P **P 07 31 30.5 +0.3**
comp=Z,13nm,0.9s,mb4.8
STHS Stebnicka Huta 79.17 42 *e*P **P 07 31 34.4 +2.8**
comp=Z,10nm,1.5s,mb4.5
STHS Stebnicka Huta 79.17 42 *e*P **P 07 31 34.4 +2.8**
BPAW Bear Paw Mtn. 79.27 333 *e*P **P 07 31 32.3 +0.5**
comp=Z,9.9nm,0.9s,mb4.7
CRVS Cervenica-Dubn 79.34 42 *e*P **P 07 31 34.8 +2.3**
comp=Z,11nm,1.0s,mb4.7
CRVS Cervenica-Dubn 79.34 42 *e*P **P 07 31 34.8 +2.3**
BZS Buzias 79.68 45 ⇑P **P 07 31 36.7 +2.3**
BZS Buzias 79.68 45 ⇑*i*P **P 07 31 36.7 +2.3**
PPLA Purkeypile 79.86 332 *e*P **P 07 31 35.5 +0.5**
comp=Z,26nm,1.2s,mb5.0
KWP Kalwaria Pacla 80.11 41 ⇑P **P 07 31 35.6 -1.0**
KWP Kalwaria Pacla 80.11 41 ⇑*i*P **P 07 31 35.6 -1.1**
ARCES ARCESS Array B 80.17 21 P **P 07 31 36.3 -0.2**
comp=Z,4.7nm,0.9s,mb4.4,baz=299,slow=1.2,SNR=7.7
ARCES LR LR 08 01 42.6
comp=Z,92nm,19.7s,MS4.1,baz=96,slow=32
RSO Redoubt South 80.28 330 *e*P **P 07 31 38.7 +1.4**
OHAK Old Harbor 80.81 327 *e*P **P 07 31 39.6 -0.6**
comp=Z,18nm,0.9s,mb5.0
FINES FINESS Array B 81.02 29 P **P 07 31 39.4 -1.9**
comp=Z,4.9nm,0.8s,mb4.5,baz=323,slow=2.9,SNR=7.9
FINES LR LR 08 02 28.2
comp=Z,109nm,19.6s,MS4.2,baz=88,slow=32
TTA Tatalina 81.60 332 *e*P **P 07 31 46.4 +2.0**
comp=Z,8.4nm,1.0s,mb4.6
BUR08 Bucovina Ar. S 81.95 43 *e*P **P 07 31 46.8 +0.3**
BURAR Bucovina Array 81.96 43 ⇓P **P 07 31 48.7 +2.2**
BURAR Bucovina Array 81.96 43 ⇓*i*P **P 07 31 48.7 +2.1**
MLR Muntele Rosu 82.72 45 ⇑P **P 07 31 52.4 +1.7**
MLR Muntele Rosu 82.72 45 ⇑*i*P **P 07 31 52.3 +1.7**
CHGN Chignik 83.72 326 *e*P **P 07 31 54.9 -0.7**
AKASG Malin Array Be 84.14 40 P **P 07 31 56.7 -1.1**
comp=Z,2.4nm,0.7s,mb4.4,baz=268,slow=4.3,SNR=11
AKASG LR LR 08 06 29.3
comp=Z,188nm,18.9s,MS4.5,baz=285,slow=34
TSUM Tsumeb 85.75 110 *e*P **P 07 32 05.7 -0.8**
comp=Z,6.9nm,0.8s,mb4.9
PPT Papeete 88.78 252 *e*LR LR 08 00 45.5
comp=Z,204nm,23.8s
PPT Papeete 88.78 252 LR LR 08 07 31.5
comp=Z,173nm,18.1s,MS4.5,baz=87,slow=32
BRTR Keskin Array B 89.33 50 P **P 07 32 24.0 +0.6**
comp=Z,1.4nm,0.8s,mb4.3,baz=253,slow=3.8,SNR=7.1
BOSA Boshof 94.44 118 P **P 07 32 46.6 -0.6**
comp=Z,2.9nm,0.9s,mb4.7,baz=316,slow=3.1,SNR=4.3
BOSA LR LR 08 14 51.3
comp=Z,252nm,18.9s,MS4.7,baz=277,slow=35
MAIT Maitri 95.22 161 *e*PKP **P 07 32 49.5 -0.3**
MKAR Makanchi Array 115.61 25 PKP PKPdf 07 38 08.8 -0.2
comp=Z,0.2nm,0.8s,baz=245,slow=3.0,SNR=3.3
WMQ Urumqi 120.22 23 *e*PKP PKPdf 07 38 17.6 -0.5
WMQ LR LR
comp=N,220nm,24.6s
WMQ LR LR
comp=Z,180nm,23.8s,MS4.6
SONM Songino Array 121.36 7 PKP PKPdf 07 38 21.1 +0.9
comp=Z,0.2nm,0.3s,baz=211,slow=1.7,SNR=2.4
SONM PP PP 07 39 52.3 +2.4
comp=Z,3.3nm,1.3s,baz=339,slow=3.8,SNR=6.1
MDJ Mudanjiang 123.78 348 PKP PKPdf 07 38 22.3 -2.6
MDJ PP PP 07 40 04.9 -1.4
MDJ PKS 07 41 58.6
MDJ SKS SKSdf 07 45 31.7 -5.4
MDJ SS SS 07 56 48.8 -5.3
MDJ AMB AMB
comp=Z,62nm,7.3s
MDJ LR LR
comp=N,94nm,24.5s,MS4.6
MDJ LR LR
comp=E,110nm,22.2s,MS4.6
MDJ LR LR
comp=Z,120nm,28.9s
CN2 Changchun 125.29 351 *e*PKP PKPdf 07 38 26.8 -1.0
HHC Hu-ho-hao-te 128.79 4 *e*PKP PKPdf 07 38 32.5 -2.1
HHC sPKP 07 38 46.6
HHC PP PP 07 40 39.6 +0.1
HHC PKS 07 42 07.9
HHC SKS SKSdf 07 45 39.1 -7.5
HHC SKKS SKKSac 07 47 26.7 -12
HHC AMB AMB
comp=Z,54nm,4.1s
HHC LR LR
comp=Z,110nm,20.2s,MS4.5
BJI Beijing 129.75 360 PKP PKPdf 07 38 33.9 -2.5
BJI SS SS 07 58 08.1 -0.4
BJI LR LR
comp=N,160nm,21.2s,MS4.8
BJI LR LR
comp=E,140nm,21.7s,MS4.8
BJI LR LR
comp=Z,140nm,25.8s,MS4.5
KSRS Korea Array 131.00 347 SKPbc SKPbc 07 42 05.1 +1.6
comp=Z,0.4nm,0.3s,baz=356,slow=4.9,SNR=5.4
LZH Lanzhou 132.34 13 *e*PKP PKPdf 07 38 39.9 -1.6
LZH sPKP 07 38 52.9
LZH SS SS 07 58 37.0 -3.5
LZH AMB AMB
comp=Z,57nm,4.6s
LZH LR LR
comp=N,160nm,17.0s
LZH LR LR
comp=Z,260nm,18.3s,MS5.0
CD2 Chengdu 137.26 15 PKP PKPdf 07 38 49.4 -1.4
CD2 sPKP 07 39 03.7
CD2 PP PP 07 41 36.3 +2.4
CD2 PKS 07 42 24.1
CD2 SKS SKSdf 07 45 54.7 -7.4
CD2 SKKS SKKSac 07 48 23.2 -7.2
CD2 SS SS 07 59 36.0 -3.8
CD2 AMB AMB
comp=Z,110nm,4.7s
CD2 LR LR
comp=E,230nm,34.3s
CD2 LR LR
comp=Z,180nm,19.6s
NJ2 Nanjing 137.62 356 *e*PKP PKPdf 07 38 50.2 -1.3
GYA Guiyang 142.24 13 PKP PKPdf 07 38 57.9 -2.1
GYA sPKP 07 39 11.8
GYA PP PP 07 42 06.0 +1.5
GYA PKS 07 42 33.0
GYA SKKS SKKSac 07 48 52.3 -7.3
GYA SS SS 08 00 33.9 -4.2
GYA AMB AMB
comp=Z,120nm,7.9s
GYA LR LR
comp=N,140nm,24.8s,MS4.7
GYA LR LR
comp=E,120nm,25.6s,MS4.7
GYA LR LR
comp=Z,130nm,22.4s,MS4.6
KMI Kunming 142.40 20 PKP PKPdf 07 38 59.1 -1.2
KMI sPKP 07 39 12.7
KMI PP PP 07 42 10.3 +4.7
KMI SKKS SKKSac 07 48 54.9 -5.8
KMI SS SS 08 00 37.2 -3.1
KMI AMB AMB
comp=Z,42nm,3.5s
KMI LR LR
comp=Z,150nm,19.5s,MS4.8
CMAR Chiang Mai Arr 146.78 30 PKPbc PKPbc 07 39 08.5 -1.2
comp=Z,1.4nm,0.3s,baz=312,slow=4.9,SNR=9.3
CMAR SKP 07 42 42.8
comp=Z,0.8nm,0.5s,baz=328,slow=3.2,SNR=3.0
STKA Stephens Creek 148.03 224 PKP PKPdf 07 39 09.6 -0.1
comp=Z,3.9nm,0.8s,baz=122,slow=3.9,SNR=5.6
STKA PKPbc PKPbc 07 39 12.5 -0.4
comp=Z,3.9nm,0.8s,baz=129,slow=5.4,SNR=5.4

CTA	**Charters Tower**	**149.17**	**248**	PKP	PKPdf	07 39 11.5	-0.4
	comp=Z,1.1nm,0.3s,baz=227,slow=7.9,SNR=2.1						
CTA				PKPbc	PKPbc	07 39 16.5	+0.4
	comp=Z,5.0nm,0.6s,baz=96,slow=9.2,SNR=5.1						
ASAR	**Alice Springs**	**158.33**	**230**	PKP	PKPdf	07 39 25.7	+0.9
	comp=Z,1.0nm,1.0s,baz=113,slow=2.4,SNR=3.0						
ASAR				PKPab	PKPab	07 40 02.5	+3.5
	comp=Z,0.8nm,0.8s,baz=115,slow=3.8,SNR=5.2						
ASAR				SKP		07 42 54.7	
	comp=Z,1.0nm,0.9s,baz=120,slow=4.2,SNR=3.5						

*ISCJB **11** 07:25:17.9±0.5, 3°.62N±0°.09×97°.72E±0°.07, h136km±6km, mb3.7/9, Error ellipse: s-maj=14.5km s-min=11.3km az=6.3*
*IDC **11** 07:25:17.2±2.1, 3°.47N×97°.54E, h119km±20km, mb3.6/9, mb1 3.6/10, mb1mx3.5/22, mbtmp3.6/10, Error ellipse: s-maj=45.4km s-min=19.6km az=58.0*
*NEIC **11** 07:25:18.2±1.6, 3°.57N×97°.63E, h126km±15km, Error ellipse: s-maj=29.1km s-min=14.3km az=75.0*
*DJA **11** 07:25:20, 3°.60N×97°.73E, h114km, MLv3.7/4*

ISC 11 07:25:19.2±0.5, 3°.65N±0°.08×97°.76E±0°.06, h130km±6km, n21, σ0°83/23, mb3.7/9, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPTI		**0.69**	**236**	P	**Pn**	**07 25 39.7**	**+0.2**
TPTI				S	**Sn**	**07 25 54.4**	**-0.5**
TSI	**Tuntungan**	**0.82**	**100**	P	**Pn**	**07 25 40.9**	**+0.4**
PSI	**Prapat**	**1.44**	**126**	P	**Pn**	**07 25 47.1**	**+0.5**
PSI				S	**Sn**	**07 26 07.2**	**-0.3**
PSI	**Prapat**	**1.44**	**126**	P	**Pn**	**07 25 47.1**	**+0.5**
	6.3nm,0.3s,baz=280,slow=11,SNR=23						
PSI				S	**Sn**	**07 26 07.2**	**-0.3**
	12nm,0.3s,baz=156,slow=22,SNR=12						
KULM	**Kulim**	**3.31**	**60**	*e*Pn	**Pn**	**07 26 10.2**	**+0.4**
KULM				*e*Sn	**Sn**	**07 26 46.9**	**-2.1**
KULM	**Kulim**	**3.31**	**60**	P	**Pn**	**07 26 10.4**	**+0.5**
IPM	**Ipoh**	**3.36**	**76**	P	**Pn**	**07 26 11.9**	**+1.4**
MNSI	**Mandailing Nat**	**3.37**	**147**	P	**Pn**	**07 26 10.5**	**-0.2**
CMAR	**Chiang Mai Arr**	**14.76**	**4**	P	**Pn**	**07 28 41.9**	**+0.3**
	0.4nm,0.3s,baz=200,slow=15,SNR=9.5						
ASAR	**Alice Springs**	**44.47**	**129**	P	**P**	**07 33 17.2**	**-0.4**
	0.4nm,0.5s,mb3.3,baz=301,slow=7.8,SNR=8.5						
SONM	**Songino Array**	**44.64**	**8**	P	**P**	**07 33 19.3**	**+0.7**
	0.4nm,0.3s,mb3.5,baz=190,slow=9.5,SNR=3.5						
MKAR	**Makanchi Array**	**45.02**	**345**	P	**P**	**07 33 21.8**	**+0.1**
	0.5nm,0.4s,mb3.5,baz=161,slow=8.3,SNR=13						
ZALV	**Zalesovo Beam**	**51.25**	**350**	P	**P**	**07 34 09.5**	**+0.2**
ZALV	**Zalesovo Beam**	**51.25**	**350**	P	**P**	**07 34 09.5**	**+0.2**
	3.9nm,0.3s,mb4.5,baz=165,slow=6.9,SNR=21						
BVAR	**Borovoye Array**	**54.14**	**340**	P	**P**	**07 34 30.6**	**-0.1**
	1.6nm,0.5s,mb4.0,baz=143,slow=10,SNR=9.9						
BRTR	**Keskin Array B**	**67.90**	**312**	P	**P**	**07 36 03.2**	**-0.7**
	0.5nm,0.4s,mb3.6,baz=135,slow=7.7,SNR=2.7						
AKASG	**Malin Array Be**	**73.67**	**322**	P	**P**	**07 36 36.0**	**-2.6**
	0.6nm,0.4s,mb3.6,baz=108,slow=4.8,SNR=3.5						
FINES	**FINESS Array B**	**78.10**	**332**	P	**P**	**07 37 04.1**	**+0.6**
	0.8nm,0.3s,mb3.8,baz=100,slow=5.8,SNR=5.7						
ARCES	**ARCESS Array B**	**80.43**	**340**	P	**P**	**07 37 16.6**	**+0.6**
	1.1nm,0.8s,mb3.5,baz=99,slow=6.3,SNR=6.7						
TXAR	**Lajitas Array**	**141.30**	**31**	PKP	PKPpre	07 44 29.7	
TXAR				PKP	PKPdf	07 44 34.9	-0.3
TXAR	**Lajitas Array**	**141.30**	**31**	PKhKP	PKPpre	07 44 29.7	
	0.0nm,0.4s,baz=286,slow=8.0,SNR=3.9						
TXAR				PKP	PKPdf	07 44 34.9	-0.3
	0.1nm,0.3s,baz=165,slow=1.1,SNR=3.9						

*IDC **11** 07:48:15.5±1.7, 34°.84S×179°.59E, h0km, mb4.1/2, mb1 4.2/2, mb1mx3.8/12, mbtmp4.1/2, Error ellipse: s-maj=60.4km s-min=42.4km az=41.0*
*NEIC **11** 07:48:41.5, 35°.32S×178°.92E, h232km, MG4.6(WEL), After WEL.*
*WEL **11** 07:48:41.5±0.5, 35°.30S×178°.99E, h225km±6km, ML4.6/20, Error ellipse: s-maj=5.4km s-min=4.9km az=90.0*

ISC 11 07:48:44.8±1.6, 35°.8S±0°.1×178°.9E±0°.2, h269km±7km, n105, σ0°81/109, mb3.7/2, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.80**	**196**	PN	**Pn**	**07 49 25.2**	**-1.9**
MXZ				SN	**S**	**07 49 57.9**	**-2.7**
MXZ	**Matakaoa Point**	**1.80**	**196**	P	**Pn**	**07 49 25.2**	**-1.9**
MXZ				S	**S**	**07 49 57.9**	**-2.7**
PUZ	**Puketiti**	**2.30**	**194**	PN	**Pn**	**07 49 30.7**	**-0.7**
PUZ				SN	**S**	**07 50 08.2**	**-0.2**
PUZ	**Puketiti**	**2.30**	**194**	P	**Pn**	**07 49 30.7**	**-0.7**
PUZ				S	**S**	**07 50 08.2**	**-0.2**
CNGZ	**Carnagh Statio**	**2.71**	**192**	PN	**Pn**	**07 49 35.8**	**+0.5**
MWZ	**Matawai**	**2.74**	**204**	PN	**Pn**	**07 49 35.7**	**+0.1**
MWZ				SN	**S**	**07 50 18.3**	**+2.2**
MWZ	**Matawai**	**2.74**	**204**	P	**Pn**	**07 49 35.7**	**0.0**
MWZ				S	**S**	**07 50 18.3**	**+2.2**
KUZ	**Kuaotunu**	**2.75**	**250**	PN	**Pn**	**07 49 32.7**	**-3.2**
KUZ	**Kuaotunu**	**2.77**	**250**	P	**Pn**	**07 49 33.5**	**-3.4**
OPRZ	**Ohinepanea**	**2.77**	**223**	PN	**Pn**	**07 49 35.4**	**-0.6**
URZ	**Urewera**	**2.83**	**211**	PN	**Pn**	**07 49 35.9**	**-0.7**
URZ				SN	**S**	**07 50 18.9**	**+1.1**
URZ	**Urewera**	**2.83**	**211**	P	**Pn**	**07 49 35.9**	**-0.7**
RRRZ	**Republican Roa**	**3.16**	**217**	PN	**Pn**	**07 49 40.9**	**+0.9**
PRGZ	**Paritu Road**	**3.19**	**195**	PN	**Pn**	**07 49 41.0**	**+0.6**
HRRZ	**Handcock Road**	**3.32**	**219**	PN	**Pn**	**07 49 40.5**	**-1.2**
KNZ	**Kokohu**	**3.33**	**197**	PN	**Pn**	**07 49 42.2**	**+0.3**
KNZ	**Kokohu**	**3.33**	**197**	P	**Pn**	**07 49 42.2**	**+0.3**
PRRZ	**Plateau Road**	**3.35**	**217**	PN	**Pn**	**07 49 42.3**	**+0.3**
MHGZ	**Mahia Peninsul**	**3.41**	**194**	PN	**Pn**	**07 49 43.8**	**+1.0**
RAHZ	**Arahi**	**3.41**	**205**	PN	**Pn**	**07 49 43.2**	**+0.5**
ALRZ	**Allen Road**	**3.42**	**217**	PN	**Pn**	**07 49 43.0**	**+0.1**
NMHZ	**Naumai**	**3.67**	**207**	PN	**Pn**	**07 49 46.4**	**+0.8**
BKZ	**Black Stump Fm**	**3.85**	**210**	PN	**Pn**	**07 49 48.1**	**+0.4**
BKZ	**Black Stump Fm**	**3.85**	**210**	P	**Pn**	**07 49 48.1**	**+0.5**
MCHZ	**McNeill Hill**	**4.02**	**206**	PN	**Pn**	**07 49 50.2**	**+0.7**
HIZ	**Hauiti**	**4.22**	**229**	PN	**Pn**	**07 49 53.3**	**+1.5**
HIZ	**Hauiti**	**4.22**	**229**	P	**Pn**	**07 49 53.3**	**+1.5**
OTVZ	**Oturere**	**4.22**	**217**	PN	**Pn**	**07 49 52.4**	**+0.5**
NGZ	**Ngauruhoe**	**4.26**	**218**	PN	**Pn**	**07 49 53.0**	**+0.7**
NGZ	**Ngauruhoe**	**4.26**	**218**	P	**Pn**	**07 49 53.0**	**+0.7**
KAHZ	**Kahuranaki**	**4.28**	**202**	PN	**Pn**	**07 49 53.3**	**+0.8**
BHHZ	**Black Hill Sta**	**4.30**	**211**	PN	**Pn**	**07 49 52.8**	**0.0**
TUVZ	**Tukino**	**4.31**	**216**	PN	**Pn**	**07 49 53.5**	**+0.7**
TUVZ	**Tukino**	**4.31**	**216**	P	**Pn**	**07 49 53.5**	**+0.6**
WPVZ	**Whakapapa**	**4.31**	**218**	PN	**Pn**	**07 49 53.6**	**+0.7**
FWVZ	**Far West T-bar**	**4.35**	**217**	PN	**Pn**	**07 49 53.7**	**+0.4**
FWVZ	**Far West T-bar**	**4.35**	**217**	P	**Pn**	**07 49 53.7**	**+0.4**
MTVZ	**Mangateitei**	**4.49**	**217**	PN	**Pn**	**07 49 55.5**	**+0.5**
PXZ	**Pawanui**	**4.50**	**201**	PN	**Pn**	**07 49 55.2**	**+0.1**
PNHZ	**Pukenui**	**4.61**	**207**	PN	**Pn**	**07 49 56.5**	**+0.1**
WPHZ	**Waipukurau**	**4.66**	**204**	PN	**Pn**	**07 49 57.6**	**+0.6**
PRHZ	**Porangahau**	**4.78**	**202**	PN	**Pn**	**07 49 59.1**	**+0.6**
TSZ	**Takapari Road**	**4.83**	**208**	PN	**Pn**	**07 49 59.2**	**+0.2**
TSZ	**Takapari Road**	**4.83**	**208**	P	**Pn**	**07 49 59.2**	**+0.2**
DVHZ	**Dannevirke**	**4.96**	**205**	PN	**Pn**	**07 50 00.5**	**-0.1**
WAZ	**Wanganui**	**5.01**	**218**	PN	**Pn**	**07 50 02.2**	**+1.0**
WAZ	**Wanganui**	**5.01**	**218**	P	**Pn**	**07 50 02.2**	**+1.0**
POWZ	**Post Office Ro**	**5.19**	**208**	PN	**Pn**	**07 50 03.5**	**+0.2**
BFZ	**Birch Farm**	**5.28**	**203**	PN	**Pn**	**07 50 04.7**	**+0.3**
BFZ	**Birch Farm**	**5.28**	**203**	P	**Pn**	**07 50 04.7**	**+0.3**
TIWZ	**Tintock**	**5.49**	**205**	PN	**Pn**	**07 50 07.2**	**+0.3**
MRZ	**Mangatainoka R**	**5.50**	**208**	PN	**Pn**	**07 50 06.5**	**-0.5**
MRZ	**Mangatainoka R**	**5.50**	**208**	P	**Pn**	**07 50 06.5**	**-0.5**
HOWZ	**Holdsworth Sta**	**5.72**	**207**	PN	**Pn**	**07 50 09.5**	**-0.3**
TMWZ	**Te Maipa**	**5.78**	**204**	PN	**Pn**	**07 50 10.8**	**+0.3**
OGWZ	**Otaki Gorge**	**5.79**	**210**	PN	**Pn**	**07 50 10.2**	**-0.4**
KIW	**Kapiti Island**	**5.93**	**211**	PN	**Pn**	**07 50 12.0**	**-0.3**
KIW	**Kapiti Island**	**5.93**	**211**	P	**Pn**	**07 50 12.0**	**-0.4**
MTW	**Mount Morrison**	**5.96**	**206**	PN	**Pn**	**07 50 12.3**	**-0.4**
MTW	**Mount Morrison**	**5.96**	**206**	P	**Pn**	**07 50 12.3**	**-0.4**
CAW	**Cannon Point**	**6.08**	**209**	PN	**Pn**	**07 50 13.5**	**-0.6**
CAW	**Cannon Point**	**6.08**	**209**	P	**Pn**	**07 50 13.5**	**-0.6**
TRWZ	**Traveller**	**6.11**	**204**	PN	**Pn**	**07 50 14.9**	**+0.4**
PAWZ	**Paruwai Farm**	**6.18**	**205**	PN	**Pn**	**07 50 15.4**	**0.0**
PAWZ	**Paruwai Farm**	**6.18**	**205**	P	**Pn**	**07 50 15.4**	**0.0**
MSWZ	**Moikau Station**	**6.27**	**206**	PN	**Pn**	**07 50 16.3**	**-0.2**
MSWZ	**Moikau Station**	**6.27**	**206**	P	**Pn**	**07 50 16.3**	**-0.2**
DUWZ	**D'Urville Isla**	**6.33**	**217**	PN	**Pn**	**07 50 16.4**	**-0.9**
WEL	**Wellington**	**6.34**	**210**	PN	**Pn**	**07 50 17.0**	**-0.4**
WEL	**Wellington**	**6.34**	**210**	P	**Pn**	**07 50 17.0**	**-0.4**
SNZO	**South Karori**	**6.39**	**210**	PN	**Pn**	**07 50 17.2**	**-0.8**
SNZO	**South Karori**	**6.39**	**210**	P	**Pn**	**07 50 17.2**	**-0.8**
PLWZ	**Palliser**	**6.41**	**206**	PN	**Pn**	**07 50 18.0**	**-0.2**
BHW	**Baring Head**	**6.41**	**209**	PN	**Pn**	**07 50 17.7**	**-0.5**
BHW	**Baring Head**	**6.41**	**209**	P	**Pn**	**07 50 17.7**	**-0.5**
TUWZ	**Tuamarina**	**6.82**	**213**	PN	**Pn**	**07 50 22.4**	**-0.9**
NNZ	**Nelson**	**6.92**	**217**	PN	**Pn**	**07 50 23.4**	**-1.1**
NNZ	**Nelson**	**6.92**	**217**	P	**Pn**	**07 50 23.4**	**-1.1**
BSWZ	**Blackbirch Sta**	**7.08**	**212**	PN	**Pn**	**07 50 26.1**	**-0.4**
BSWZ	**Blackbirch Sta**	**7.08**	**212**	P	**Pn**	**07 50 26.1**	**-0.4**
QRZ	**Quartz Range**	**7.08**	**223**	PN	**Pn**	**07 50 26.1**	**-0.5**
QRZ	**Quartz Range**	**7.08**	**223**	P	**Pn**	**07 50 26.1**	**-0.5**
THZ	**Tophouse**	**7.56**	**217**	PN	**Pn**	**07 50 31.4**	**-1.2**
THZ	**Tophouse**	**7.56**	**217**	P	**Pn**	**07 50 31.4**	**-1.2**
KHZ	**Kahutara**	**7.79**	**211**	PN	**Pn**	**07 50 35.2**	**-0.2**
DSZ	**Denniston Nort**	**8.11**	**221**	PN	**Pn**	**07 50 39.0**	**-0.4**
DSZ	**Denniston Nort**	**8.11**	**221**	P	**Pn**	**07 50 39.0**	**-0.4**
LTZ	**Lake Taylor**	**8.65**	**215**	PN	**Pn**	**07 50 45.1**	**-0.9**
LTZ	**Lake Taylor**	**8.65**	**215**	P	**Pn**	**07 50 45.1**	**-1.0**
MQZ	**McQueen's Vall**	**9.23**	**210**	PN	**Pn**	**07 50 52.6**	**-0.8**
MQZ	**McQueen's Vall**	**9.23**	**210**	P	**Pn**	**07 50 52.6**	**-0.7**
WVZ	**Waitaha Valley**	**9.61**	**219**	PN	**Pn**	**07 50 58.1**	**-0.1**
WVZ	**Waitaha Valley**	**9.61**	**219**	P	**Pn**	**07 50 58.1**	**-0.1**
FOZ	**Fox Glacier**	**10.50**	**220**	PN	**Pn**	**07 51 07.6**	**-1.6**
FOZ	**Fox Glacier**	**10.50**	**220**	P	**Pn**	**07 51 07.6**	**-1.6**
LBZ	**Lake Benmore**	**10.85**	**215**	PN	**Pn**	**07 51 13.6**	**0.0**
ODZ	**Otahua Downs**	**11.15**	**212**	PN	**Pn**	**07 51 18.6**	**+1.3**
ODZ	**Otahua Downs**	**11.15**	**212**	P	**Pn**	**07 51 18.6**	**+1.3**
WKZ	**Wanaka**	**11.74**	**217**	PN	**Pn**	**07 51 24.4**	**-0.2**
WKZ	**Wanaka**	**11.74**	**217**	P	**Pn**	**07 51 24.4**	**-0.1**
ASAR	**Alice Springs**	**40.61**	**275**	P	**P**	**07 56 01.0**	**+2.1**
	1.7nm,0.5s,mb3.6,baz=115,slow=7.8,SNR=41						
MAW	**Mawson**	**66.32**	**202**	P	**P**	**07 59 12.4**	**+8.2**
	1.3nm,0.7s,mb3.8,baz=135,slow=5.7,SNR=4.5						
FINES	**FINESS Array B**	**149.17**	**335**	PKPbc	PKPbc	08 08 02.4	+1.9
	0.8nm,0.5s,baz=60,slow=3.9,SNR=5.2						
DBIC	**Dimbokro**	**150.76**	**172**	PKPbc	PKPbc	08 08 12.7	+6.9
	1.1nm,0.5s,baz=181,slow=3.8,SNR=3.4						
TORD	**Torodi Ar. Bea**	**157.27**	**187**	PKPab	PKPab	08 08 48.7	+7.4
	0.2nm,0.4s,baz=168,slow=3.9,SNR=4.7						

*ISCJB **11** 07:49:08.3±0.7, 41°.66N±0°.02×23°.79E±0°.04, h2km±5km, Error ellipse: s-maj=5.0km s-min=3.7km az=155.9*
*CSEM **11** 07:49:08.9±0.2, 41°.65N×23°.80E, h10km, ML2.3/6, Error ellipse: s-maj=3.9km s-min=2.9km az=69.0*
*SKO **11** 07:49:10.0, 41°.69N×23°.71E, h2km*
*BEO **11** 07:49:09.3±1.5, 41°.62N×23°.84E, h15km±6km, ML2.5/2*
*THE **11** 07:49:09.2, 41°.64N×23°.79E, h9km±1km, ML2.3/6, Error ellipse: s-maj=1.7km s-min=0.9km az=277.0*

ISC 11 07:49:09.2±0.7, 41°.65N±0°.03×23°.80E±0°.04, h10km±5km, n23, σ0°62/46, 3C, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRS	**Serrai**	**0.55**	**196**	P	**Pg**	**07 49 19.9**	**0.0**
SRS				S	**Sg**	**07 49 28.2**	**+1.0**
SRS	**Serrai**	**0.55**	**196**	P	**Pg**	**07 49 19.9**	**0.0**
SRS				S	**Sg**	**07 49 28.2**	**+1.0**
KNT	**Kendrikon**	**0.83**	**235**	P	**Pg**	**07 49 24.6**	**-0.6**
KNT				S	**Sg**	**07 49 35.9**	**-0.2**
KNT	**Kendrikon**	**0.83**	**235**	P	**Pg**	**07 49 24.6**	**-0.6**
KNT				S	**Sg**	**07 49 35.9**	**-0.2**
KAVA	**Kavala**	**0.84**	**140**	P	**Pg**	**07 49 24.9**	**-0.6**
KAVA				S	**Sg**	**07 49 37.0**	**+0.5**
KAVA	**Kavala**	**0.84**	**140**	P	**Pg**	**07 49 24.9**	**-0.6**
KAVA				S	**Sg**	**07 49 37.0**	**+0.5**
SOH	**Sokhos**	**0.89**	**202**	P	**Pg**	**07 49 25.9**	**-0.4**
SOH				S	**Sg**	**07 49 38.2**	**+0.3**
SOH	**Sokhos**	**0.89**	**202**	P	**Pg**	**07 49 25.9**	**-0.4**
SOH				S	**Sg**	**07 49 38.2**	**+0.3**
VAY	**Valandovo**	**0.98**	**251**	P	**Pg**	**07 49 28.4**	**+0.4**
VAY				S	**Sg**	**07 49 41.1**	**+0.4**
VAY	**Valandovo**	**0.98**	**251**	*e*Pg	**Pg**	**07 49 26.7**	**-1.3**
VAY				*e*Sg	**Sg**	**07 49 39.7**	**-1.0**
VAY	**Valandovo**	**0.98**	**251**	P	**Pg**	**07 49 28.4**	**+0.4**
VAY				S	**Sg**	**07 49 41.1**	**+0.4**
VTS	**Vitosha**	**1.04**	**335**	*i*Pg	**Pg**	**07 49 28.0**	**-1.2**
VTS				*i*Sg	**Sg**	**07 49 44.0**	**+1.3**
VTS	**Vitosha**	**1.04**	**335**	P	**Pg**	**07 49 27.8**	**-1.4**
VTS				S	**Sg**	**07 49 44.1**	**+1.4**
VTS	**Vitosha**	**1.04**	**335**	P	**Pg**	**07 49 27.8**	**-1.4**
VTS				*i*Sg	**Sg**	**07 49 44.0**	**+1.3**
HORT	**Hortiatis**	**1.18**	**207**	P	**Pb**	**07 49 31.2**	**-0.4**
HORT				S	**Sb**	**07 49 47.2**	**+0.4**
HORT	**Hortiatis**	**1.18**	**207**	P	**Pb**	**07 49 31.2**	**-0.4**
HORT				S	**Sb**	**07 49 47.2**	**+0.4**
OUR	**Ouranopolis**	**1.32**	**174**	P	**Pn**	**07 49 33.2**	**-0.5**
OUR				S	**Sb**	**07 49 51.1**	**+0.1**
OUR	**Ouranopolis**	**1.32**	**174**	P	**Pn**	**07 49 33.2**	**-0.5**
OUR				S	**Sb**	**07 49 51.1**	**+0.1**
RDO	**Rodhopi**	**1.40**	**110**	P	**Pn**	**07 49 34.9**	**+0.1**
RDO				S	**Sn**	**07 49 53.2**	**-0.1**
RDO	**Rodhopi**	**1.40**	**110**	P	**Pn**	**07 49 34.9**	**+0.1**
RDO				S	**Sn**	**07 49 53.2**	**-0.1**
ZAPS	**Zavoj**	**1.84**	**332**	*e*Pn	**Pn**	**07 49 40.7**	**-0.1**
ZAPS				*e*Sn	**Sn**	**07 50 04.3**	**+0.2**
BARS	**Barje**	**1.88**	**309**	*i*Pn	**Pn**	**07 49 42.3**	**+0.9**
BARS				*e*Sn	**Sn**	**07 50 04.8**	**-0.3**
BARS	**Barje**	**1.88**	**309**	*i*Pn	**Pn**	**07 49 42.3**	**+0.9**
BARS				*e*Sn	**Sn**	**07 50 04.8**	**-0.3**

*ISCJB **11** 08:15:35.3±1.1, 18°.1S±0°.2×178°.0W±0°.1, h478km±17km, mb3.8/10, Error ellipse: s-maj=30.4km s-min=13.0km az=139.3*
*IDC **11** 08:15:36.1±1.6, 18°.19S×177°.88W, h478km±20km, mb3.2/7, mb1 3.4/8, mb1mx3.3/14, mbtmp3.2/8, Error ellipse: s-maj=25.3km s-min=12.7km az=136.0*
*NEIC **11** 08:15:36.5±1.1, 18°.13S×177°.98W, h484km±13km, Error ellipse: s-maj=23.4km s-min=11.8km az=139.0*

ISC 11 08:15:36.0±1.1, 18°.1S±0°.2×178°.0W±0°.1, h475km±17km, n23, σ0°72/17, mb3.8/10, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.27**	**56**	P	**P**	**08 17 25.2**	**+1.0**
	4.4nm,0.3s,baz=284,slow=22,SNR=6.9						
AFI				S	**S**	**08 18 52.2**	**-0.7**
	4.5nm,0.3s,baz=214,slow=24,SNR=4.9						
URZ	**Urewera**	**20.51**	**191**	*e*P	**P**	**08 19 39.9**	**-0.6**
	4.4nm,0.3s						
URZ	**Urewera**	**20.51**	**191**	P	**P**	**08 19 39.4**	**-1.2**
	3.9nm,0.3s,baz=357,slow=4.4,SNR=13						
ARMA	**Armidale**	**30.21**	**240**	*e*P	**P**	**08 21 07.7**	**+0.9**
CTA	**Charters Tower**	**33.84**	**261**	*e*P	**P**	**08 21 37.5**	**-0.5**
	11nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**38.91**	**242**	*e*P	**P**	**08 22 20.4**	**+0.5**
	5.9nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**38.91**	**242**	P	**P**	**08 22 20.7**	**+0.8**
	6.7nm,0.5s,mb4.3,baz=97,slow=9.4,SNR=25						
BBOO	**Buckleboo**	**43.68**	**241**	*i*P	**P**	**08 22 58.1**	**+0.2**
	6.1nm,0.3s,mb4.5						
ASAR	**Alice Springs**	**45.15**	**254**	P	**P**	**08 23 09.2**	**-0.2**
	19nm,0.5s,mb4.8,baz=90,slow=8.5,SNR=487						
KAKA	**Kakadu**	**48.02**	**269**	*e*P	**P**	**08 23 30.4**	**-1.0**
	16nm,0.6s,mb4.5						
KAKA	**Kakadu**	**48.02**	**269**	*e*P	**P**	**08 23 30.7**	**-0.7**
	19nm,0.4s,mb4.8						
MJAR	**Matsushiro Arr**	**68.35**	**323**	P	**P**	**08 25 48.9**	**-0.3**
	1.1nm,0.5s,mb3.7,baz=161,slow=5.9,SNR=6.3						
KSRS	**Korea Array**	**75.16**	**318**	P	**P**	**08 26 29.4**	**+0.5**
	1.0nm,0.5s,mb3.6,baz=116,slow=5.8,SNR=5.2						
NVAR	**Mina Array Bea**	**79.28**	**44**	P	**P**	**08 26 52.6**	**+1.1**
	0.2nm,0.6s,mb2.8,baz=219,slow=7.0,SNR=2.8						
TXAR	**Lajitas Array**	**85.74**	**57**	P	**P**	**08 27 24.6**	**+0.1**
	0.2nm,0.8s,mb2.8,baz=216,slow=4.5,SNR=2.4						
ILAR	**Eielson Array**	**86.01**	**13**	P	**P**	**08 27 23.8**	**-1.0**
	0.1nm,0.4s,mb2.8,baz=225,slow=5.1,SNR=5.4						
BVAR	**Bonvoye Array**	**117.30**	**321**	PKP	PKPdf	08 33 25.4	-1.1
	1.5nm,0.4s,baz=114,slow=2.3,SNR=5.3						
AKTK	**Aktyubinsk**	**125.32**	**319**	PKP	PKPdf	08 33 41.5	-0.6
AKTO	**Aktyubinsk**	**125.32**	**319**	PKP	PKPdf	08 33 41.5	-0.6
	0.8nm,0.7s,baz=78,slow=9.3,SNR=3.4						
ARCES	**ARCESS Array B**	**126.61**	**350**	PKP	PKPdf	08 33 43.2	-0.8
	1.8nm,0.8s,baz=46,slow=3.5,SNR=4.3						
BR131	**Keskin Array S**	**145.25**	**315**	*e*PKPbc	PKPbc	08 34 20.0	-0.1
BRTR	**Keskin Array B**	**145.25**	**315**	PKPbc	PKPbc	08 34 19.4	-0.7
	2.8nm,0.6s,baz=139,slow=4.6,SNR=14						
MMAI	**Mount Meron Ar**	**146.63**	**303**	PKPbc	PKPbc	08 34 24.4	+0.2
	2.7nm,0.5s,baz=60,slow=4.9,SNR=5.3						

*TRN **11** 08:16:45.3, 10°.99N×60°.32W, h57km, MD3.2*
*NEIC **11** 08:16:45.3, 10°.99N×60°.32W, h57km, MD3.2(TRN), After TRN.*
*ISCJB **11** 08:16:49.6±0.9, 11°.16N±0°.05×60°.97W±0°.07, h51km±10km, Error ellipse: s-maj=12.6km s-min=5.8km az=27.0*
*FUNV **11** 08:16:58.1, 10°.95N×61°.27W, h63km, MW2.9*

ISC 11 08:16:51.2±0.9, 11°.15N±0°.04×60°.96W±0°.07, h41km±13km, n28, σ1°58/44, 8D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPR	**Prospect**	**0.18**	**79**	⇓*e*P	**Pn**	**08 16 57.4**	**-1.1**
TPR				*e*S	**Sn**	**08 17 05.0**	**+1.4**
TPR	**Prospect**	**0.18**	**79**	⇓*e*P	**Pn**	**08 16 57.4**	**-1.1**
TPR				*e*S	**Sn**	**08 17 05.0**	**+1.4**
BOT	**Bacolet**	**0.24**	**86**	⇓*e*P	**Pn**	**08 16 56.5**	**-2.5**
BOT				*e*S	**Sn**	**08 17 04.6**	**+0.3**
BOT	**Bacolet**	**0.24**	**86**	⇓*e*P	**Pn**	**08 16 56.5**	**-2.5**
BOT				*e*S	**Sn**	**08 17 04.6**	**+0.3**
TOSP	**Speyside**	**0.44**	**71**	*e*P	**Pn**	**08 16 55.4**	**-5.9**
TOSP				*e*S	**Sn**	**08 17 03.9**	**-4.4**
TRN	**Trinidad (W)**	**0.66**	**221**	*e*P	**Pn**	**08 17 04.8**	**+0.7**
TRN	**Trinidad (W)**	**0.66**	**221**	*e*P	**Pn**	**08 17 04.8**	**+0.7**
TBH	**Brigand Hill**	**0.67**	**189**	⇓*e*P	**Pn**	**08 17 02.3**	**-2.1**
TBH				*e*S	**Sn**	**08 17 13.4**	**-0.3**
TBH	**Brigand Hill**	**0.67**	**189**	⇓*e*P	**Pn**	**08 17 02.3**	**-2.1**
TBH				*e*S	**Sn**	**08 17 13.4**	**-0.3**
TCE	**Chacachacare**	**0.90**	**240**	⇓*e*P	**Pn**	**08 17 10.0**	**+2.6**
TCE	**Chacachacare**	**0.90**	**240**	⇓*e*P	**Pn**	**08 17 10.0**	**+2.6**
GRW	**Mount Saint Ca**	**1.22**	**326**	*e*P	**Pn**	**08 17 13.8**	**+2.0**
GRW	**Mount Saint Ca**	**1.22**	**326**	*e*P	**Pn**	**08 17 13.8**	**+2.0**
GUIV	**Guiria**	**1.34**	**248**	*e*P	**Pn**	**08 17 15.5**	**+2.1**
GUIV				*e*S	**Sn**	**08 17 28.4**	**-1.6**
SVB	**Belmont**	**2.13**	**352**	*e*P	**Pn**	**08 17 22.9**	**-1.4**
SVB				*e*S	**Sn**	**08 17 51.3**	**+1.7**
SVB	**Belmont**	**2.13**	**352**	*e*P	**Pn**	**08

SCLL	Scilla	1.09	160		Pg		Pn	08 45 21.8	-1.5
	92nm,0.4s								
SCLL	Scilla	1.09	160		Pg		Pn	08 45 21.8	-1.5
	92nm,0.4s								
SCHR	S. Chirico Rap	1.12	35	⇑	*i*Pg		Pn	08 45 24.5	+1.2
	69nm,0.7s								
SCHR	S. Chirico Rap	1.12	35	⇑	*i*Pg		Pn	08 45 24.5	+1.2
	69nm,0.7s								
MCEL	Monticello	1.13	23	⇑	*i*Pg		Pn	08 45 24.4	+1.1
	254nm,0.4s								
MCEL	Monticello	1.13	23	⇑	*i*Pg		Pn	08 45 24.4	+1.1
	254nm,0.4s								
MSCL	Scilla	1.14	157		Pg		Pn	08 45 23.2	-0.3
MSCL					Sg		S	08 45 53.3	-1.6
	626nm,0.4s								
MSCL	Scilla	1.14	157		Pg		Pn	08 45 23.2	-0.3
MSCL					Sg		S	08 45 53.3	-1.6
	626nm,0.4s								
CEL	Celeste	1.15	153		*e*Pn		Pn	08 45 22.9	-0.7
CEL					*e*Sn		S	08 45 52.2	-2.8
CEL	Celeste	1.15	153		Pg		Pn	08 45 22.9	-0.7
CEL					Sg		S	08 45 53.0	-2.0
	503nm,0.3s								
CEL	Celeste	1.15	153		Pg		Pn	08 45 22.9	-0.7
CEL					Sg		S	08 45 53.0	-2.0
	503nm,0.3s								
SERS	Sersale	1.16	102	⇓	*i*Pg		Pn	08 45 23.9	+0.3
	143nm,0.3s								
SERS	Sersale	1.16	102	⇓	*i*Pg		Pn	08 45 23.9	+0.3
	143nm,0.3s								
TIP	Timpagrande	1.19	95		*e*Pn		Pn	08 45 24.1	+0.4
TIP	Timpagrande	1.19	95	⇓	*i*Pg		Pn	08 45 24.2	+0.5
TIP					Sg		S	08 45 53.9	-1.4
	368nm,1.1s								
TIP	Timpagrande	1.19	95	⇓	*i*Pg		Pn	08 45 24.2	+0.5
TIP					Sg		S	08 45 53.9	-1.4
	368nm,1.1s								
CDRU	Civita di Ruta	1.21	3	⇑	*i*Pg		Pn	08 45 24.3	+0.6
	35nm,0.4s								
CDRU	Civita di Ruta	1.21	3	⇑	*i*Pg		Pn	08 45 24.3	+0.6
	35nm,0.4s								
ORI	Oriolo Calabro	1.22	50	⇓	*i*Pg		Pn	08 45 24.6	+0.8
	260nm,0.4s								
ORI	Oriolo Calabro	1.22	50	⇓	*i*Pg		Pn	08 45 24.6	+0.8
	260nm,0.4s								
PLAC	Placanica	1.26	131	⇓	*i*Pg		Pn	08 45 24.2	0.0
PLAC					Sg		S	08 45 54.1	-2.0
	526nm,0.7s								
PLAC	Placanica	1.26	131	⇓	*i*Pg		Pn	08 45 24.2	0.0
PLAC					Sg		S	08 45 54.1	-2.0
	526nm,0.7s								
SGO	Sicignano	1.28	3	⇑	*i*Pg		Pn	08 45 24.0	-0.2
	195nm,0.7s								
SGO	Sicignano	1.28	3	⇑	*i*Pg		Pn	08 45 24.0	-0.2
	195nm,0.7s								
MTTG	Motta San Giov	1.33	164	⇓	*i*Pg		Pn	08 45 24.7	0.0
	265nm,0.5s								
MTTG	Motta San Giov	1.33	164	⇓	*i*Pg		Pn	08 45 24.7	0.0
	265nm,0.5s								
MMME	Mongiuffi-Meli	1.35	179		Pg		Pn	08 45 25.1	+0.3
	169nm,0.4s								
MMME	Mongiuffi-Meli	1.35	179		Pg		Pn	08 45 25.1	+0.3
	169nm,0.4s								
LADO	San Nicola del	1.36	89		Pg		Pn	08 45 24.9	+0.2
	295nm,0.5s								
LADO	San Nicola del	1.36	89		Pg		Pn	08 45 24.9	+0.2
	295nm,0.5s								
SOI	Samo	1.37	152	⇓	*i*Pg		Pn	08 45 24.7	-0.2
SOI					Sg		S	08 45 55.4	-2.0
	220nm,0.4s								
SOI	Samo	1.37	152	⇓	*i*Pg		Pn	08 45 24.7	-0.2
SOI					Sg		S	08 45 55.4	-2.0
	220nm,0.4s								
PTRP	Pietrapertosa	1.39	27		Pg		Pn	08 45 25.7	+0.8
	195µm,28.0s								
PTRP	Pietrapertosa	1.39	27		Pg		Pn	08 45 25.7	+0.8
	195µm,28.0s								
CRAC	Craco	1.42	40	⇑	*i*Pg		Pn	08 45 25.4	+0.3
	164nm,0.3s								
CRAC	Craco	1.42	40	⇑	*i*Pg		Pn	08 45 25.4	+0.3
	164nm,0.3s								
MPAZ	Palizzi	1.46	155		Pg		Pn	08 45 25.3	-0.2
	351nm,0.3s								
MPAZ	Palizzi	1.46	155		Pg		Pn	08 45 25.3	-0.2
	351nm,0.3s								
MRLC	Muro Lucano	1.48	8		Pg		Pn	08 45 26.1	+0.6
	36nm,0.4s								
MRLC	Muro Lucano	1.48	8		Pg		Pn	08 45 26.1	+0.6
	36nm,0.4s								
MCRV	Calabrutti - M	1.50	358	⇑	*i*Pg		Pn	08 45 26.4	+0.8
	56nm,0.6s								
MCRV	Calabrutti - M	1.50	358	⇑	*i*Pg		Pn	08 45 26.4	+0.8
	56nm,0.6s								
ACER	Acerenza	1.60	20	⇑	*i*Pg		Pn	08 45 26.1	-0.1
	76nm,0.7s								
ACER	Acerenza	1.60	20	⇑	*i*Pg		Pn	08 45 26.1	-0.1
	76nm,0.7s								
GIB	Gibilmanna	1.60	216	⇓	*i*Pg		Pn	08 45 25.7	-0.7
	65nm,0.3s								
GIB	Gibilmanna	1.60	216	⇓	*i*Pg		Pn	08 45 25.7	-0.7
	65nm,0.3s								
GALF	Gagliano Caste	1.66	199		Pg		Pn	08 45 27.9	+1.1
	368nm,0.5s								
GALF	Gagliano Caste	1.66	199		Pg		Pn	08 45 27.9	+1.1
	368nm,0.5s								
VULT	Monte Vulture	1.69	10	⇑	*i*Pg		Pn	08 45 27.3	+0.4
	77nm,0.6s								
VULT	Monte Vulture	1.69	10	⇑	*i*Pg		Pn	08 45 27.3	+0.4
	77nm,0.6s								
ECNV	Catenanuova	1.73	194		Pg		Pn	08 45 28.9	+1.5
	209nm,0.5s								
ECNV	Catenanuova	1.73	194		Pg		Pn	08 45 28.9	+1.5
	209nm,0.5s								
CAFE	Carife	1.74	0	⇑	*i*Pg		Pn	08 45 28.2	+0.9
	25nm,0.6s								
CAFE	Carife	1.74	0	⇑	*i*Pg		Pn	08 45 28.2	+0.9
	25nm,0.6s								
MATE	Matera	1.77	39	⇑	*i*Pg		Pn	08 45 26.9	-0.6
	86nm,0.8s								
MATE	Matera	1.77	39	⇑	*i*Pg		Pn	08 45 26.9	-0.6
	86nm,0.8s								
SGTA	Sant Agata di	1.85	3	⇑	*i*Pg		Pn	08 45 28.8	+0.7
	72nm,0.5s								
SGTA	Sant Agata di	1.85	3	⇑	*i*Pg		Pn	08 45 28.8	+0.7
	72nm,0.5s								
SG1	Sgolgore (BA)	1.91	35		*i* P		Pn	08 45 28.3	-0.3
VAE	Valguarnera	1.92	200		P		Pn	08 45 25.7	-3.1
VAE	Valguarnera	1.92	200		P		Pn	08 45 25.7	-3.1
	2.3nm,0.3s,baz=0.0,slow=20,SNR=2.6								
MRVN	Minervino Murg	1.92	22	⇑	*i*Pg		Pn	08 45 28.2	-0.5
	20nm,0.5s								
MRVN	Minervino Murg	1.92	22	⇑	*i*Pg		Pn	08 45 28.2	-0.5
	20nm,0.5s								
AMUR	Altamura	1.93	33	⇑	*i*Pg		Pn	08 45 28.3	-0.5
	40nm,0.8s								
AMUR	Altamura	1.93	33	⇑	*i*Pg		Pn	08 45 28.3	-0.5
	40nm,0.8s								
PSB1	Pescosannita	1.96	351	⇑	*i*Pg		Pn	08 45 29.7	+0.7
	77nm,1.2s								
PSB1	Pescosannita	1.96	351	⇑	*i*Pg		Pn	08 45 29.7	+0.7
	77nm,1.2s								
CDT	Castel del Mon	1.96	24		*i* P		Pn	08 45 28.6	-0.4
HAGA	Augusta	2.00	182	⇓	*i*Pg		Pn	08 45 29.1	-0.4
	72nm,0.5s								
HAGA	Augusta	2.00	182	⇓	*i*Pg		Pn	08 45 29.1	-0.4
	72nm,0.5s								
HCRL	Carlentini	2.00	185	⇓	*i*Pg		Pn	08 45 29.6	+0.1
	133nm,0.4s								
HCRL	Carlentini	2.00	185	⇓	*i*Pg		Pn	08 45 29.6	+0.1
	133nm,0.4s								
TAR1	Taranto	2.01	51		*e*P		Pn	08 45 27.7	-1.7
AGST	Augusta-Monte	2.02	180	⇓	*i*Pg		Pn	08 45 29.1	-0.6
	87nm,0.8s								
AGST	Augusta-Monte	2.02	180	⇓	*i*Pg		Pn	08 45 29.1	-0.6
	87nm,0.8s								
CORL	Corleone	2.05	228		Pg		Pn	08 45 30.4	+0.5
	81nm,0.6s								
CORL	Corleone	2.05	228		Pg		Pn	08 45 30.4	+0.5
	81nm,0.6s								
NOCI	Noci	2.06	43		Pg		Pn	08 45 29.4	-0.4
	83nm,0.7s								
NOCI	Noci	2.06	43		Pg		Pn	08 45 29.4	-0.4
	83nm,0.7s								
SSY	Sortino	2.13	183	⇓	*i*Pg		Pn	08 45 30.5	-0.1
	310nm,0.2s								
SSY	Sortino	2.13	183	⇓	*i*Pg		Pn	08 45 30.5	-0.1
	310nm,0.2s								
HVZN	Vizzini	2.14	191	⇓	*i*Pg		Pn	08 45 31.1	+0.4
	345nm,0.5s								
HVZN	Vizzini	2.14	191	⇓	*i*Pg		Pn	08 45 31.1	+0.4
	345nm,0.5s								
RAFF	Raffo Rosso	2.17	199	⇓	*i*Pg		Pn	08 45 31.3	+0.4
	53nm,0.3s								
RAFF	Raffo Rosso	2.17	199	⇓	*i*Pg		Pn	08 45 31.3	+0.4
	53nm,0.3s								
SGG	Gregorio Mates	2.20	343	⇑	*i*Pg		Pn	08 45 31.9	+0.9
	68nm,0.6s								
SGG	Gregorio Mates	2.20	343	⇑	*i*Pg		Pn	08 45 31.9	+0.9
	68nm,0.6s								
BAI	Bari	2.21	34		*i* P		Pn	08 45 30.8	-0.3
VAGA	Valle Agricola	2.26	341	⇑	*i*Pg		Pn	08 45 32.4	+0.9
	41nm,0.4s								
VAGA	Valle Agricola	2.26	341	⇑	*i*Pg		Pn	08 45 32.4	+0.9
	41nm,0.4s								
PE1	Pezze di Greco	2.27	47		*e*P		Pn	08 45 31.2	-0.4
BSSO	Busso	2.31	348		Pg		Pn	08 45 33.2	+1.2
	67nm,0.7s								
BSSO	Busso	2.31	348		Pg		Pn	08 45 33.2	+1.2
	67nm,0.7s								
HMDC	Modica	2.35	189	⇓	*i*Pg		Pn	08 45 33.0	+0.5
HMDC	Modica	2.35	189	⇓	*i*Pg		Pn	08 45 33.0	+0.5
RGNG	Rignano Grg	2.40	6	⇑	*i*Pg		Pn	08 45 31.4	-1.4
RGNG	Rignano Grg	2.40	6	⇑	*i*Pg		Pn	08 45 31.4	-1.4
MIDA	Miranda	2.47	343	⇑	*i*Pg		Pn	08 45 34.5	+1.1
	93nm,0.7s								
MIDA	Miranda	2.47	343	⇑	*i*Pg		Pn	08 45 34.5	+1.1
	93nm,0.7s								
CERA	Filignano	2.49	339	⇑	*i*Pg		Pn	08 45 34.2	+0.6
	45nm,0.8s								
CERA	Filignano	2.49	339	⇑	*i*Pg		Pn	08 45 34.2	+0.6
	45nm,0.8s								
RNI2	Rionero Sannit	2.55	342	⇑	*i*Pg		Pn	08 45 35.8	+1.6
	77nm,0.5s								
RNI2	Rionero Sannit	2.55	342	⇑	*i*Pg		Pn	08 45 35.8	+1.6
	77nm,0.5s								
SDI	San Donato	2.65	336	⇑	*i*Pg		Pn	08 45 34.9	-0.3
	57nm,0.7s								
SDI	San Donato	2.65	336	⇑	*i*Pg		Pn	08 45 34.9	-0.3
	57nm,0.7s								
POFI	Posta Fibreno	2.69	335	⇑	*i*Pg		Pn	08 45 36.2	+0.7
	23nm,0.5s								
POFI	Posta Fibreno	2.69	335	⇑	*i*Pg		Pn	08 45 36.2	+0.7
	23nm,0.5s								
VVLD	Villa Vallelon	2.86	335	⇑	*i*Pg		Pn	08 45 37.8	+0.6
	32nm,0.5s								
VVLD	Villa Vallelon	2.86	335	⇑	*i*Pg		Pn	08 45 37.8	+0.6
	32nm,0.5s								
INTR	Introdacqua	2.91	340	⇑	*i*Pg		Pn	08 45 38.6	+1.0
	69nm,0.8s								
INTR	Introdacqua	2.91	340	⇑	*i*Pg		Pn	08 45 38.6	+1.0
	69nm,0.8s								
AQU	L'Aquila	3.37	336		*e*Pn		Pn	08 45 38.8	-3.6
KEK	Kerkira	3.56	82		*e*P		Pn	08 45 45.2	+0.7
STON	Ston	4.04	27		P		Pn	08 45 48.5	-1.2
STON	Ston	4.04	27		*i* P		Pn	08 45 48.4	-1.3
VLS	Valsamata	4.33	103		*e*P		Pn	08 45 54.2	+1.1
NVLJ	Novalja	5.28	357		P		Pn	08 46 04.4	+0.3
NVLJ	Novalja	5.28	357		*i* P		Pn	08 46 04.3	+0.2
AGG	Agios Georgios	5.52	90		*e*P		Pn	08 46 09.8	+2.7
PYL	PYLOS	5.66	113		*e*P		Pn	08 46 09.9	+1.1
ITM	Ithomi	5.67	110		*e*P		Pn	08 46 11.1	+2.2
BOJS	Bojanci	6.22	0		*i* P		Pn	08 46 15.7	+0.4
BOJS					*i* S		S	08 47 27.9	-1.0
BOJS	Bojanci	6.22	0		*i* P		Pn	08 46 15.7	+0.4
BOJS					*i* S		S	08 47 27.9	-1.0
KNDS	Knezji Dol	6.27	355		*i* P		Pn	08 46 15.6	-0.4
KNDS					*i* S		S	08 47 29.9	-0.2
KNDS	Knezji Dol	6.27	355		*i* P		Pn	08 46 15.6	-0.4
KNDS					*i* S		S	08 47 29.9	-0.2
VISS	Visnje	6.52	358		*i* P		Pn	08 46 19.4	+0.4
VISS					*i* S		S	08 47 33.1	-2.6
VISS	Visnje	6.52	358		*i* P		Pn	08 46 19.4	+0.4
VISS					*i* S		S	08 47 33.1	-2.5
NAIG	Nisos Aigina	6.65	101		*e*P		Pn	08 46 22.5	+1.8
KYTH	Kithira	6.87	113		*e*P		Pn	08 46 26.6	+3.2
SBF	Sospel	7.42	311		*e*P		Pn	08 46 31.8	+1.7
	17nm,0.6s								
SBF	Sospel	7.42	311		*e*P		Pn	08 46 31.8	+1.7
ABTA	Abfaltersbach	7.72	346	⇓	*i*Pn		Pn	08 46 33.5	-0.2
	12nm,0.7s								
ABTA	Abfaltersbach	7.72	346		Pn		Pn	08 46 33.5	-0.2
	12nm,0.7s								
MBDF	Montbardon	8.32	314		*e*P		Pn	08 46 42.9	+1.7
	19nm,0.6s								
MBDF	Montbardon	8.32	314		*e*P		Pn	08 46 42.9	+1.7
	9.6nm,0.6s								
WTTA	Wattenberg	8.39	343	⇑	*i*Pn		Pn	08 46 44.7	+2.7
	17nm,0.5s								
FETA	Feichten	8.40	338	⇓	*i*Pn		Pn	08 46 44.1	+2.0
	11nm,0.5s								
FETA	Feichten	8.40	338		Pn		Pn	08 46 44.1	+1.9
	11nm,0.5s								
DAVOX	Davos/Dischmat	8.45	334		P		Pn	08 46 39.6	-3.1
	4.4nm,0.3s,baz=160,slow=18,SNR=12								
WATA	Walderalm	8.48	343	⇑	*i*Pn		Pn	08 46 45.2	+2.1
	43nm,0.6s								
WATA	Walderalm	8.48	343		Pn		Pn	08 46 45.2	+2.1
	43nm,0.6s								
MOA	Molln	8.59	356	⇑	*i*Pn		Pn	08 46 44.6	+0.1
	3.0nm,0.4s								
MOA	Molln	8.59	356		Pn		Pn	08 46 44.6	+0.1
	3.0nm,0.4s								
MOTA	Moosalm	8.60	341	⇓	*i*Pn		Pn	08 46 46.4	+1.9
	7.4nm,0.6s								
MOTA	Moosalm	8.60	341		Pn		Pn	08 46 46.4	+1.8
	7.4nm,0.6s								
SMRF	Simiane la Rot	8.62	306		*e*P		Pn	08 46 48.5	+3.7
SMRF	Simiane la Rot	8.62	306		*e*P		Pn	08 46 48.5	+3.7
LPG	La Plagne	8.82	317		*e*P		Pn	08 46 48.4	+1.0
	19nm,0.6s								
LPG	La Plagne	8.82	317		*e*P		Pn	08 46 48.4	+1.0
	9.4nm,0.6s								
LPL	La Plagne	8.85	317		*e*P		Pn	08 46 48.4	+0.7
	17nm,0.6s								
LPL	La Plagne	8.85	317		*e*P		Pn	08 46 48.4	+0.7
	8.4nm,0.6s								
DAVA	Damuels	8.90	336	⇑	*i*Pn		Pn	08 46 48.6	+0.3
	7.8nm,0.5s								
DAVA	Damuels	8.90	336		Pn		Pn	08 46 48.6	+0.3
	7.8nm,0.5s								
ORIF	Oris-en-Rattie	8.94	312		*e*P		Pn	08 46 50.1	+1.2
	7.7nm,0.5s								
ORIF	Oris-en-Rattie	8.94	312		*e*P		Pn	08 46 50.1	+1.2
	3.8nm,0.5s								
KHC	Kasperske Hory	9.91	354		*e*Pn		Pn	08 46 60.0	-0.9
	2.2nm,0.6s								
KHC	Kasperske Hory	9.91	354		*e*Pn		Pn	08 47 00.0	-0.8
	2.2nm,0.6s								
CABF	La Chapelle	9.92	321		*e*P		Pn	08 46 59.4	-1.6
	33nm,0.5s								
CABF	La Chapelle	9.92	321		*e*P		Pn	08 46 59.4	-1.6
	16nm,0.5s								
CABF	La Chapelle	9.92	321		*e*P		Pn	08 46 59.4	-1.6
	16nm,0.5s								
VRAC	Vranov	10.07	5		P		Pn	08 46 59.1	-3.7
	0.8nm,0.3s,baz=187,slow=12,SNR=4.3								
BFO	Black Forest	10.32	333		*e*Pn		Pn	08 47 05.2	-0.7
	10nm,0.6s								
BFO	Black Forest	10.32	333		*e*Pn		Pn	08 47 05.2	-0.7
	10nm,0.6s								
HINF	Hinteralfeld	10.47	327		*e*P		Pn	08 47 04.4	-3.3
	4.8nm,0.3s								
HINF	Hinteralfeld	10.47	327		*e*P		Pn	08 47 04.4	-3.3
	2.4nm,0.3s								
ECH	Echery	10.66	329		*e*Pn		Pn	08 47 08.7	-1.3
	13nm,0.9s								
ECH	Echery	10.66	329		*e*Pn		Pn	08 47 08.7	-1.4
	13nm,0.9s								
HAU	Haudompre	10.83	326		*e*P		Pn	08 47 10.4	-1.7
	3.3nm,0.3s								
HAU	Haudompre	10.83	326		*e*P		Pn	08 47 10.4	-1.7
	4.2nm,0.3s								
SMF	Signal de Mont	11.12	315		*e*P		Pn	08 47 13.4	-2.3
	11nm,0.4s								
SMF	Signal de Mont	11.12	315		*e*P		Pn	08 47 13.4	-2.3
	5.7nm,0.4s								
CAF	Calviac	11.28	304		*e*P		Pn	08 47 20.0	+2.2
	6.4nm,0.6s								
CAF	Calviac	11.28	304		*e*P		Pn	08 47 20.0	+2.2
	3.2nm,0.6s								
CAF	Calviac	11.28	304		*e*P		Pn	08 47 20.0	+2.2
	3.2nm,0.6s								
AVF	Avril sur Loir	11.47	315		*e*P		Pn	08 47 20.7	+0.6
	3.1nm,0.3s								
AVF	Avril sur Loir	11.47	315		*e*P		Pn	08 47 20.7	+0.6
	1.5nm,0.3s								
LOR	Lormes	11.50	318		*e*P		Pn	08 47 17.6	-2.7
	5.7nm,0.6s								
LOR	Lormes	11.50	318		*e*P		Pn	08 47 17.6	-2.7
	2.8nm,0.6s								
SSF	Saint Saulge	11.55	316		*e*P		Pn	08 47 19.8	-1.3
	3.4nm,0.4s								
SSF	Saint Saulge	11.55	316		*e*P		Pn	08 47 19.8	-1.3
	1.7nm,0.4s								
SSF	Saint Saulge	11.55	316		*e*P		Pn	08 47 19.8	-1.3
	1.7nm,0.4s								
BRG	Berggiesshubel	11.62	356		*e*P		Pn	08 47 22.2	+0.3
	5.8nm,0.9s								
BRG					*e*			08 47 25.1	
	7.0nm,0.9s								
RJF	Les Rejaudoux	11.80	305		*e*P		Pn	08 47 25.8	+1.7
	7.1nm,0.6s								
RJF	Les Rejaudoux	11.80	305		*e*P		Pn	08 47 25.8	+1.7
	3.5nm,0.6s								
RJF	Les Rejaudoux	11.80	305		*e*P		Pn	08 47 25.8	+1.7
	3.5nm,0.6s								
EPF	Esparros	11.83	293		*e*P		Pn	08 47 26.4	+1.9
EPF	Esparros	11.83	293		*e*P		Pn	08 47 26.4	+1.9
EPF	Esparros	11.83	293		*e*P		Pn	08 47 26.4	+1.9
CLL	Collm	12.12	353		*i* (P)		Pn	08 47 28.8	+0.8
LFF	La Frestale	12.15	302		*e*P		Pn	08 47 29.9	+1.5
LFF	La Frestale	12.15	302		*e*P		Pn	08 47 29.9	+1.5
LFF	La Frestale	12.15	302		*e*P		Pn	08 47 29.9	+1.5
ETSF	Etsaut	12.45	292		*e*P		Pn	08 47 32.9	+0.9
ETSF	Etsaut	12.45	292		*e*P		Pn	08 47 32.9	+0.9
ETSF	Etsaut	12.45	292		*e*P		Pn	08 47 32.9	+0.9
SJPF	Ste Jean	12.97	292		*e*P		Pn	08 47 38.5	+0.1
	8.6nm,0.7s								
SJPF	Ste Jean	12.97	292		*e*P		Pn	08 47 38.5	+0.1
	4.3nm,0.7s								
SJPF	Ste Jean	12.97	292		*e*P		Pn	08 47 38.5	+0.1
	4.3nm,0.7s								
MFF	Saint Martin d	13.42	308		*e*P		Pn	08 47 43.4	-0.3
	5.0nm,0.5s								
MFF	Saint Martin d	13.42	308		*e*P		Pn	08 47 43.4	-0.3
	2.5nm,0.5s								
MFF	Saint Martin d	13.42	308		*e*P		Pn	08 47 43.4	-0.3
	2.5nm,0.5s								
BRTR	Keskin Array B	14.22	82		P		Pn	08 47 57.7	+4.2
	0.1nm,0.3s,baz=313,slow=9.3,SNR=2.4								
BRTR	Keskin Array B	14.22	82		P		Pn	08 47 57.7	+4.2
LDF	La Druitiere	14.43	315		*e*P		Pn	08 47 54.3	-1.5
	25nm,0.5s								
LDF	La Druitiere	14.43	315		*e*P		Pn	08 47 54.3	-1.5
	13nm,0.5s								
LDF	La Druitiere	14.43	315		*e*P		Pn	08 47 54.3	-1.5
	13nm,0.5s								
FLN	La Foliniere	14.72	315		*e*P		Pn	08 47 56.9	-2.4
	34nm,0.7s								
FLN	La Foliniere	14.72	315		*e*P		Pn	08 47 56.9	-2.4
	17nm,0.7s								
FLN	La Foliniere	14.72	315		*e*P		Pn	08 47 56.9	-2.4
	17nm,0.7s								
GRR	Gorron	14.73	313		*e*P		Pn	08 47 57.2	-2.1
	4.7nm,0.4s								
GRR	Gorron	14.73	313		*e*P		Pn	08 47 57.2	-2.1
	2.3nm,0.4s								
GRR	Gorron	14.73	313		*e*P		Pn	08 47 57.2	-2.1
	2.3nm,0.4s								
AKASG	Malin Array Be	15.08	36		P		Pn	08 48 02.6	-0.8
	1.6nm,0.3s,baz=230,slow=11,SNR=7.2								
AKASG	Malin Array Be	15.08	36		P		Pn	08 48 02.7	-0.8
SGMF	Saint Gilles	15.64	311		*e*P		Pn	08 48 07.3	-2.8
	3.4nm,0.3s								
SGMF	Saint Gilles	15.64	311		*e*P		Pn	08 48 07.3	-2.8
	1.7nm,0.3s								
SGMF	Saint Gilles	15.64	311		*e*P		Pn	08 48 07.3	-2.8
	1.7nm,0.3s								
ROSF	Rostrenen	16.10	310		*e*P		P	08 48 12.5

az=158.7
IDC ***11*** *09:10:12.3±2.4,6°.67N×73°.10W, h178km±23km, mb3.1/4, mb1 3.5/6, mb1mx3.2/20, mbtmp3.3/6, Error ellipse: s-maj=40.4km s-min=29.4km az=84.0*

ISC 11 09:10:13.2±0.8, 7°.15N±0°.07×72°.91W±0°.06, h172km±7km, n26, σ0s96/38, mb3.4/4, 3C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**0.93**	**39**⇓	*e*P	**Pn**	**09 10 39.5**	**0.0**
CAPV				*e*S	**Sn**	**09 11 00.2**	**+0.4**
VIGV	**El Vigia**	**2.27**	**42**⇑	*e*P	**Pn**	**09 10 53.9**	**+1.1**
VIGV				*e*S	**Sn**	**09 11 24.6**	**+1.1**
SOCV	**Socops**	**2.33**	**61**	*e*P	**Pn**	**09 10 54.1**	**+0.8**
SOCV				*e*S	**Sn**	**09 11 25.6**	**+1.1**
ROSC	**El Rosal**	**2.68**	**212**	P	**Pn**	**09 10 51.5**	**-6.1**
	112nm,0.3s,baz=348,slow=2.2,SNR=621						
ROSC				S	**Sn**	**09 11 22.6**	**-9.4**
	114nm,0.3s,baz=105,slow=17,SNR=12						
VIRV	**Villa del Rosa**	**3.37**	**8**⇑	*e*P	**Pn**	**09 11 06.0**	**-0.1**
VIRV				*e*S	**Sn**	**09 11 45.9**	**-1.4**
ELOV	**Elorza**	**3.40**	**92**	*e*P	**Pn**	**09 11 05.6**	**-0.8**
QARV	**Quebrada Arrib**	**3.85**	**38**	*e*P	**Pn**	**09 11 12.9**	**+0.8**
QARV				*e*S	**Sn**	**09 11 58.0**	**-0.1**
CURV	**Curarigua**	**4.08**	**45**	*e*P	**Pn**	**09 11 15.6**	**+0.6**
CURV				*e*S	**Sn**	**09 12 03.6**	**+0.3**
SANV	**Sanarito**	**4.08**	**55**	*e*P	**Pn**	**09 11 15.6**	**+0.6**
SANV				*e*S	**Sn**	**09 12 03.4**	**+0.1**
DABV	**Dabajuro**	**4.37**	**31**	*e*P	**Pn**	**09 11 18.7**	**-0.1**
DABV				*e*S	**Sn**	**09 12 08.8**	**-1.4**
TEPV	**Terepaima**	**4.62**	**52**	*e*P	**Pn**	**09 11 22.3**	**+0.2**
TEPV				*e*S	**Sn**	**09 12 15.9**	**0.0**
SIQV	**Siquisique**	**4.64**	**41**⇑	*e*P	**Pn**	**09 11 23.1**	**+0.8**
SIQV				*e*S	**Sn**	**09 12 15.7**	**-0.7**
BAUV	**El Baul**	**5.14**	**69**	*e*P	**Pn**	**09 11 27.9**	**-1.0**
MAPV	**Macapo**	**5.15**	**58**	*e*P	**Pn**	**09 11 29.3**	**+0.4**
IMOV	**Isla Los Monje**	**5.54**	**21**	*e*P	**Pn**	**09 11 34.2**	**+0.1**
MONV	**Montecano**	**5.59**	**31**	*e*P	**Pn**	**09 11 34.9**	**+0.2**
MONV				*e*S	**Sn**	**09 12 36.2**	**-2.5**
TURV	**Turiamo**	**5.99**	**56**	*e*P	**Pn**	**09 11 39.2**	**-0.7**
TURV				*e*S	**Sn**	**09 12 45.0**	**-3.2**
CAOV	**Caicara del Or**	**6.54**	**88**	*e*P	**Pn**	**09 11 45.0**	**-2.2**
CUPV	**Cœpira**	**7.61**	**67**	*e*P	**Pn**	**09 12 00.9**	**-0.4**
PCRV	**Puerto La Cruz**	**8.71**	**69**	*e*P	**Pn**	**09 12 15.6**	**-0.4**
JTS	**JuntasAbangare**	**12.31**	**286**	P	**Pn**	**09 13 01.3**	**-1.5**
	0.2nm,0.3s,baz=127,slow=20,SNR=2.6						
TXAR	**Lajitas Array**	**36.41**	**311**	P	**P**	**09 17 01.3**	**0.0**
	0.3nm,0.4s,mb3.2,baz=123,slow=9.0,SNR=6.4						
SCHQ	**Schefferville**	**47.80**	**5**	P	**P**	**09 18 35.5**	**+2.5**
	2.9nm,0.6s,mb4.1,baz=211,slow=7.0,SNR=6.7						
NVAR	**Mina Array Bea**	**51.41**	**314**	P	**P**	**09 19 01.0**	**+0.4**
	0.1nm,0.4s,mb2.8,baz=125,slow=7.8,SNR=2.5						
YKA	**Yellowknife Ar**	**63.03**	**340**	P	**P**	**09 20 22.0**	**+0.4**
	0.3nm,0.5s,mb3.4,baz=131,slow=6.4,SNR=4.1						
ASAR	**Alice Springs**	**149.47**	**235**	PKPbc	PKPbc	09 29 39.8	-3.0
	0.5nm,0.7s,baz=121,slow=3.5,SNR=6.5						

IDC 11 09:15:17.9±1.7, 5°.68S×130°.52E, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.7/15, mbtmp3.9/3, Error ellipse: s-maj=94.9km s-min=36.6km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**18.18**	**170**	P	Pn	09 19 31.6	-0.2
	0.6nm,0.3s,baz=345,slow=10.0,SNR=71						
MKAR	**Makanchi Array**	**67.42**	**326**	P	P	09 26 15.4	+0.2
	0.5nm,0.4s,baz=121,slow=7.6,SNR=8.4						
ILAR	**Eielson Array**	**91.94**	**25**	P	P	09 28 28.1	0.0
	0.1nm,0.7s,baz=262,slow=2.7,SNR=4.2						

ISK ***11*** *09:49:13.4, 36°.97N×27°.62E, h6km, MD2.9*
ISCJB ***11*** *09:49:13.8±0.4, 36°.95N±0°.02×27°.60E±0°.03, h9km±3km, Error ellipse: s-maj=4.2km s-min=3.7km az=173.4*
CSEM ***11*** *09:49:13.9±0.2, 36°.93N×27°.61E, h10km, MD2.9, Error ellipse: s-maj=3.6km s-min=3.4km az=70.0*
DDA ***11*** *09:49:13.8, 36°.95N×27°.61E, h25km±1km, Md2.9*
NEIC ***11*** *09:49:14.1, 36°.90N×27°.58E, h29km, MD3.0(ATH), After ATH.*
ATH ***11*** *09:49:14.1, 36°.90N×27°.58E, h29km±6km, MD3.0/5*

ISC 11 09:49:14.2±0.4, 36°.94N±0°.02×27°.60E±0°.03, h9km±3km, n56, σ0s80/84, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.21**	**184**	PG	**Pg**	**09 49 18.8**	**+0.2**
DAT				*e*SG	**Sg**	**09 49 22.6**	**+1.1**
DAT	**Datca**	**0.21**	**184**	*i* Pg	**Pg**	**09 49 18.8**	**+0.2**
DAT				*e*Sg	**Sg**	**09 49 22.6**	**+1.1**
BODT	**Bodrum**	**0.26**	**298**	PG	**Pg**	**09 49 19.0**	**-0.5**
BODT				*e*SG	**Sg**	**09 49 23.3**	**+0.3**
BODT	**Bodrum**	**0.26**	**298**	*i* Pg	**Pg**	**09 49 19.0**	**-0.5**
BODT				*e*Sg	**Sg**	**09 49 23.3**	**+0.3**
MLSB	**Milas**	**0.38**	**22**	*e*PG	**Pg**	**09 49 20.7**	**-1.0**
MLSB				*e*SG	**Sg**	**09 49 26.1**	**-0.8**
MLSB	**Milas**	**0.38**	**22**	*e*Pg	**Pg**	**09 49 20.7**	**-1.0**
MLSB				*e*Sg	**Sg**	**09 49 26.1**	**-0.7**
YER	**Yerkesik**	**0.58**	**70**	*e*PG	**Pg**	**09 49 24.5**	**-1.0**
YER				*e*SG	**Sg**	**09 49 32.8**	**-0.3**
YER	**Yerkesik**	**0.58**	**70**	*e*Pg	**Pg**	**09 49 24.5**	**-1.0**
YER				*e*Sg	**Sg**	**09 49 32.8**	**-0.3**
AYDN	**Tasoluk**	**0.75**	**17**	*i* P	**Pg**	**09 49 28.4**	**-0.3**
AYDN				*i* S	**Sg**	**09 49 38.6**	**0.0**
AYDN	**Tasoluk**	**0.75**	**17**	*i* P	**Pg**	**09 49 28.4**	**-0.4**
AYDN				*i* S	**Sg**	**09 49 38.6**	**0.0**
TURN	**Turunc**	**0.81**	**94**	*i* P	**Pg**	**09 49 24.3**	**-5.5**
TURN				*i* S	**Sg**	**09 49 32.6**	**-7.7**
GCAM	**G?zelcaml?**	**0.81**	**339**	*i* P	**Pg**	**09 49 30.3**	**+0.5**
GCAM				*i* S	**Sg**	**09 49 41.5**	**+1.0**
GCAM	**G?zelcaml?**	**0.81**	**339**	*i* P	**Pg**	**09 49 30.3**	**+0.4**
GCAM				*i* S	**Sg**	**09 49 41.5**	**+1.0**
ARG	**Arkhangelos**	**0.84**	**149**	*e*PN	**Pg**	**09 49 30.1**	**-0.3**
ARG	**Arkhangelos**	**0.84**	**149**	*e*PN	**Pg**	**09 49 30.1**	**-0.3**
ARG	**Arkhangelos**	**0.84**	**149**	*e*Pn	**Pg**	**09 49 30.1**	**-0.3**
SMG	**Samos**	**0.98**	**322**	*e*Pn	**Pg**	**09 49 33.5**	**+0.5**
SMG	**Samos**	**0.98**	**322**	*e*PN	**Pg**	**09 49 33.5**	**+0.5**
SMG	**Samos**	**0.98**	**322**	*e*Pn	**Pg**	**09 49 33.5**	**+0.5**
DNZL	**Cakiroluk**	**1.38**	**57**	*i* P	**Pn**	**09 49 40.1**	**+0.6**
DNZL				*i* S	**Sb**	**09 49 59.4**	**+1.7**
DNZL	**Cakiroluk**	**1.38**	**57**	*i* P	**Pn**	**09 49 40.1**	**+0.6**
DNZL				*i* S	**Sb**	**09 49 59.4**	**+1.7**
DENT	**Denizli**	**1.40**	**54**	*e*PN	**Pn**	**09 49 39.7**	**-0.2**
DENT	**Denizli**	**1.40**	**54**	*e*Pn	**Pn**	**09 49 39.7**	**-0.2**
KARP	**Karpathos**	**1.44**	**194**	*e*Pn	**Pn**	**09 49 40.0**	**-0.3**
KARP				*e*Sn	**Sn**	**09 49 57.8**	**-1.4**
KARP	**Karpathos**	**1.44**	**194**	*e*PN	**Pn**	**09 49 40.0**	**-0.3**
KARP				*e*SN	**Sn**	**09 49 57.8**	**-1.4**
KARP	**Karpathos**	**1.44**	**194**	*e*Pn	**Pn**	**09 49 40.0**	**-0.3**
KARP				*e*Sn	**Sn**	**09 49 57.8**	**-1.4**
IZM	**Izmir**	**1.48**	**350**	*e*PN	**Pn**	**09 49 40.7**	**-0.3**
IZM	**Izmir**	**1.48**	**350**	*e*Pn	**Pn**	**09 49 40.7**	**-0.3**
BLCB	**Balcova**	**1.51**	**343**	*e*PN	**Pn**	**09 49 41.2**	**-0.2**
BLCB	**Balcova**	**1.51**	**343**	*e*Pn	**Pn**	**09 49 41.2**	**-0.2**
GLHS	**Glhisar (BURDU**	**1.54**	**81**	*e*PN	**Pn**	**09 49 41.7**	**0.0**
GLHS	**Glhisar (BURDU**	**1.54**	**81**	*e*Pn	**Pn**	**09 49 41.7**	**0.0**
GOLH	**Golhisar**	**1.60**	**79**	*i* P	**Pn**	**09 49 41.4**	**-1.2**
GOLH				*i* S	**Sn**	**09 50 04.8**	**+1.6**
GOLH	**Golhisar**	**1.60**	**79**	*i* P	**Pn**	**09 49 41.4**	**-1.2**
GOLH				*i* S	**Sn**	**09 50 04.8**	**+1.5**
URLA	**Izmir**	**1.62**	**331**	*i* P	**Pn**	**09 49 44.6**	**+1.6**
URLA				*i* S	**Sn**	**09 50 03.7**	**-0.3**
URLA	**Izmir**	**1.62**	**331**	*i* P	**Pn**	**09 49 44.6**	**+1.6**
URLA				*i* S	**Sn**	**09 50 03.7**	**-0.3**
APE	**Apeiranthos**	**1.66**	**275**	*e*PN	**Pn**	**09 49 44.5**	**+1.1**
APE	**Apeiranthos**	**1.66**	**275**	*e*Pn	**Pn**	**09 49 43.1**	**-0.3**
APE	**Apeiranthos**	**1.66**	**275**	*e*PN	**Pn**	**09 49 43.1**	**-0.3**
APE	**Apeiranthos**	**1.66**	**275**	*e*Pn	**Pn**	**09 49 43.1**	**-0.3**
AKAS	**Kas**	**1.76**	**113**	*i* P	**Pn**	**09 49 45.3**	**+0.5**
AKAS				*i* S	**Sn**	**09 50 11.0**	**+3.6**
AKAS	**Kas**	**1.76**	**113**	*i* P	**Pn**	**09 49 45.3**	**+0.5**
AKAS				*i* S	**Sn**	**09 50 11.0**	**+3.6**
KULA	**Kula-Manisa**	**1.78**	**28**	*e*PN	**Pn**	**09 49 44.9**	**-0.2**
KULA	**Kula-Manisa**	**1.78**	**28**	*e*Pn	**Pn**	**09 49 44.9**	**-0.2**
ELL	**Elmali**	**1.86**	**95**	*e*PN	**Pn**	**09 49 46.4**	**+0.1**
ELL	**Elmali**	**1.86**	**95**	*e*Pn	**Pn**	**09 49 46.4**	**+0.2**
CHOS	**Chios island**	**1.89**	**320**	*e*PN	**Pn**	**09 49 46.5**	**-0.1**
CHOS	**Chios island**	**1.89**	**320**	*e*Pn	**Pn**	**09 49 46.5**	**-0.1**
AKHS	**Akhisar**	**1.94**	**5**	*i* P	**Pn**	**09 49 51.3**	**+4.0**
AKHS				*i* S	**Sn**	**09 50 11.0**	**-0.8**
AKHS	**Akhisar**	**1.94**	**5**	*i* P	**Pn**	**09 49 51.3**	**+4.0**
AKHS				*i* S	**Sn**	**09 50 11.0**	**-0.8**
AKS	**Akhisar**	**1.94**	**5**	*e*PN	**Pn**	**09 49 47.8**	**+0.5**
AKS	**Akhisar**	**1.94**	**5**	*e*Pn	**Pn**	**09 49 47.8**	**+0.5**
KHL	**Karahalli**	**2.06**	**47**	*e*PN	**Pn**	**09 49 49.0**	**+0.1**
KHL	**Karahalli**	**2.06**	**47**	*e*Pn	**Pn**	**09 49 49.0**	**+0.1**
KHAL	**Karahalli**	**2.07**	**46**	*i* P	**Pn**	**09 49 47.6**	**-1.5**
KHAL				*i* S	**Sn**	**09 50 15.1**	**+0.1**
KHAL	**Karahalli**	**2.07**	**46**	*i* P	**Pn**	**09 49 47.6**	**-1.5**
KHAL				*i* S	**Sn**	**09 50 15.1**	**+0.1**

IDC ***11*** *09:49:53.8±1.9, 53°.46N×163°.69W, h0km, mb3.5/6, mb1 3.6/8, mb1mx3.5/25, mbtmp3.5/8, ML3.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/26, Error ellipse: s-maj=43.0km s-min=23.0km az=171.0*
NEIC ***11*** *09:49:55.3, 53°.34N×163°.39W, h23km, mb3.4/1, ML3.5(AEIC), After AEIC.*
ISCJB ***11*** *09:49:56.1±1.1, 53°.4N±0°.1×163°.38W±0°.07, h33km, mb3.5/5, Error ellipse: s-maj=16.2km s-min=5.5km az=176.2*

ISC 11 09:49:59.0±1.1, 53°.5N±0°.1×163°.45W±0°.07, h35km, n18, σ1s10/23, mb3.5/5, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.36**	**1**	P	**Pn**	**09 50 21.1**	**-0.3**
AKUT	**Akutan**	**1.52**	**296**	P	**Pn**	**09 50 23.1**	**-0.5**
AKUT				S	**Sn**	**09 50 43.3**	**+1.2**
AKGG	**Akutan Green G**	**1.66**	**296**	P	**Pn**	**09 50 24.4**	**-1.2**
AKGG				S	**Sn**	**09 50 46.0**	**+0.3**
UNV	**Unalaska Valle**	**1.85**	**282**	*e*Pn	**Pn**	**09 50 26.9**	**-1.3**
UNV				*e*Sn	**Sn**	**09 50 51.5**	**+1.2**
SDPT	**Sand Point**	**2.54**	**42**	*e*Pn	**Pn**	**09 50 37.4**	**-0.2**
SDPT				*e*Sn	**Sn**	**09 51 10.5**	**+3.2**
KDAK	**Kodiak Island**	**7.49**	**51**	Pn	**Pn**	**09 51 44.7**	**-0.9**
KDAK				Sn	**Sn**	**09 53 04.0**	**-5.2**
KDAK	**Kodiak Island**	**7.49**	**51**	Pn	**Pn**	**09 51 44.7**	**-0.9**
	0.4nm,0.3s,baz=219,slow=8.2,SNR=4.8						
KDAK				Sn	**Sn**	**09 53 04.0**	**-5.2**
	0.3nm,0.3s,baz=300,slow=20,SNR=7.1						
ILAR	**Eielson Array**	**14.08**	**30**	Pn	**Pn**	**09 53 14.2**	**-1.4**
	baz=232,slow=11,SNR=2.4						
COLD	**Coldfoot**	**15.19**	**20**	*e*Pn	**Pn**	**09 53 29.3**	**-1.2**
	1.1nm,0.6s						
DAWY	**Dawson**	**16.23**	**40**	*e*Pn	**Pn**	**09 53 44.3**	**+0.3**
INK	**Inuvik**	**20.45**	**32**	P	**P**	**09 54 34.5**	**+1.5**
	1.2nm,0.9s,baz=229,slow=8.4,SNR=3.8						
YKA	**Yellowknife Ar**	**26.77**	**51**	P	**P**	**09 55 36.2**	**+1.1**
	0.7nm,0.8s,mb3.3,baz=271,slow=9.6,SNR=3.5						
YBH	**Yreka Blue Hor**	**29.47**	**97**	LR	LR	10 05 33.8	
	comp=Z,45nm,18.4s,baz=359,slow=32						
TXAR	**Lajitas Array**	**49.20**	**95**	P	**P**	**09 58 45.0**	**+1.4**
TXAR	**Lajitas Array**	**49.20**	**95**	P	**P**	**09 58 45.0**	**+1.4**
	0.2nm,0.5s,mb3.4,baz=302,slow=6.0,SNR=3.6						
SONM	**Songino Array**	**53.74**	**303**	P	**P**	**09 59 16.1**	**-1.1**
	0.9nm,0.9s,mb3.7,baz=46,slow=8.5,SNR=5.0						
BVAR	**Borovoye Array**	**64.78**	**327**	P	**P**	**10 00 34.4**	**+1.0**
	0.7nm,0.6s,mb3.9,baz=20,slow=4.6,SNR=4.2						
MKAR	**Makanchi Array**	**65.54**	**317**	P	**P**	**10 00 37.7**	**-0.8**
	0.3nm,0.7s,mb3.4,baz=50,slow=4.5,SNR=3.1						

NNC 11 09:54:25.5±9.8, 37°.90N×71°.20E, h0km, mb3.8, mpv3.4, 3C, Error ellipse: s-maj=81.3km s-min=74.3km az=25.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.22**	**354**	Pn	Pn	09 55 48.9	+4.1
	2.0nm,0.5s,baz=181,slow=14,SNR=20						
KK31				Sn	Sn	09 56 52.0	+6.3
	5.5nm,0.5s,baz=177,slow=24,SNR=13						
TKM2	**Tokmak 2**	**6.03**	**32**	⇑Pn	Pn	09 55 51.8	-4.1
	3.1nm,0.6s						
TKM2				⇑Sn	Sn	09 57 06.9	+1.3
	2.9nm,0.7s						
AB31	**Akbulak array**	**13.96**	**328**	⇑P	Pn	09 57 43.0	-1.4
	0.6nm,0.4s,baz=284,slow=80,SNR=11						

IDC ***11*** *10:10:04.6±1.4, 12°.24N×125°.95E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/20, mbtmp3.8/6, MS2.9/2, Ms1 2.9/2, ms1mx2.6/22, Error ellipse: s-maj=67.3km s-min=24.1km az=66.0*
ISCJB ***11*** *10:10:08.1±1.0, 12°.30N±0°.07×125°.9E±0°.1, h33km, mb3.7/6, Error ellipse: s-maj=16.4km s-min=9.2km az=161.4*
MAN ***11*** *10:10:08, 12°.34N×125°.67E, h9km, mb4.5, ML3.4, MS3.3*

ISC 11 10:10:10.4±1.0, 12°.25N±0°.07×125°.7E±0°.1, h35km, n13, σ0s82/13, mb3.7/6, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.70**	**203**	*e*P	**Pn**	**10 10 22.6**	**-1.2**
CNP	**Catarman**	**1.06**	**284**	*e*P	**Pn**	**10 10 28.6**	**-0.3**
OCP	**Ormoc**	**1.61**	**223**	*e*P	**Pn**	**10 10 37.1**	**+0.8**
PVCP	**Virac**	**2.03**	**312**	*e*P	**Pn**	**10 10 41.4**	**-0.7**
PVCP				*e*S	**Sn**	**10 11 05.7**	**-0.7**
TBP	**Tagbilaran**	**3.12**	**216**	*e*P	**Pn**	**10 10 58.0**	**+0.8**
TBP				*e*S	**Sn**	**10 11 43.0**	**+10**
GUMO	**Guam**	**18.71**	**84**	LR	LR	10 20 39.9	
	comp=Z,24nm,20.6s,baz=78,slow=34						
CBIJ	**Chichi jima**	**21.38**	**44**	LR	LR	10 22 11.1	
	comp=Z,43nm,18.6s,baz=90,slow=34						
CMAR	**Chiang Mai Arr**	**26.53**	**287**	P	**P**	**10 15 45.6**	**+0.6**
	0.5nm,0.4s,mb3.4,baz=83,slow=8.1,SNR=4.3						
ASAR	**Alice Springs**	**36.58**	**167**	P	**P**	**10 17 12.1**	**-1.1**
	0.3nm,0.6s,mb3.3,baz=349,slow=7.3,SNR=9.2						
MKAR	**Makanchi Array**	**50.14**	**322**	P	**P**	**10 19 03.7**	**+1.4**
	0.8nm,0.5s,mb4.0,baz=108,slow=8.2,SNR=1.6						
ZALV	**Zalesovo Beam**	**52.65**	**331**	P	**P**	**10 19 20.8**	**-0.1**
	0.4nm,0.4s,mb3.7,baz=112,slow=6.4,SNR=1.9						
KURK	**Kurchatov**	**54.15**	**325**	P	**P**	**10 19 32.9**	**+0.9**
	1.0nm,0.6s,mb3.9,baz=122,slow=6.7,SNR=2.4						
ARCES	**ARCESS Array B**	**82.17**	**340**	P	**P**	**10 22 27.0**	**-0.4**
	0.7nm,0.6s,mb3.8,baz=82,slow=7.4,SNR=5.5						

DJA 11 10:24:17, 1°.32N×126°.61E, h21km, MLv3.8/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.93**	**126**	P	Pb	10 24 34.6	+0.1
MNI	**Manado**	**1.77**	**274**	P	Pn	10 24 47.0	+0.5
LBMI	**Labuha**	**2.14**	**155**	P	Pn	10 24 52.0	+0.5
SGSI	**Sangihe**	**2.59**	**335**	P	Pn	10 24 58.7	+1.0
NLAI	**Namlea**	**4.55**	**174**	P	Pn	10 25 26.2	+1.5

ISCJB ***11*** *10:32:13.9±0.6, 39°.37N±0°.02×21°.75E±0°.05, h6km±5km, Error ellipse: s-maj=5.9km s-min=3.1km az=0.1*
ATH ***11*** *10:32:14.7, 39°.35N×21°.84E, h21km±1km, MD3.0/9*
NEIC ***11*** *10:32:14.7, 39°.35N×21°.84E, h21km, MD3.0(ATH), After ATH.*
CSEM ***11*** *10:32:14.6±0.2, 39°.37N×21°.76E, h20km, MD3.0, Error ellipse: s-maj=6.8km s-min=3.4km az=89.0*
THE ***11*** *10:32:14.2, 39°.36N×21°.77E, h8km±2km, ML2.3/9, Error ellipse: s-maj=2.1km s-min=0.5km az=103.0*

ISC 11 10:32:14.5±0.5, 39°.37N±0°.02×21°.75E±0°.05, h10km±5km, n43, σ0s81/69, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THL	**Klokotos Trika**	**0.28**	**46**	*e*PB	**Pg**	**10 32 20.2**	**0.0**
THL				*e*SB	**Sg**	**10 32 25.4**	**+1.3**
THL	**Klokotos Trika**	**0.28**	**46**	P	**Pg**	**10 32 20.2**	**0.0**
THL				S	**Sg**	**10 32 24.4**	**+0.3**
THL	**Klokotos Trika**	**0.28**	**46**	*e*Pb	**Pg**	**10 32 20.3**	**+0.1**
THL				S	**Sg**	**10 32 24.4**	**+0.3**
THL				*e*Sb	**Sg**	**10 32 25.4**	**+1.3**
EVR	**Evrytania**	**0.45**	**174**	*e*Pb	**Pg**	**10 32 23.1**	**-0.2**
EVR				*e*Sb	**Sg**	**10 32 30.3**	**+1.0**
EVR	**Evrytania**	**0.45**	**174**	*e*PB	**Pg**	**10 32 23.1**	**-0.2**
EVR				*e*SB	**Sg**	**10 32 30.3**	**+1.0**
EVR	**Evrytania**	**0.45**	**174**	*e*Pb	**Pg**	**10 32 23.1**	**-0.2**
EVR				*e*Sb	**Sg**	**10 32 30.3**	**+1.0**
AGG	**Agios Georgios**	**0.57**	**127**	*e*Pn	**Pg**	**10 32 25.5**	**0.0**
AGG	**Agios Georgios**	**0.57**	**127**	*e*PN	**Pg**	**10 32 25.5**	**0.0**
AGG	**Agios Georgios**	**0.57**	**127**	P	**Pg**	**10 32 25.3**	**-0.2**
AGG				S	**Sg**	**10 32 33.7**	**+0.8**
AGG	**Agios Georgios**	**0.57**	**127**	*e*Pn	**Pg**	**10 32 25.5**	**0.0**
AGG				S	**Sg**	**10 32 33.7**	**+0.8**
LIT	**Litokhoron**	**0.93**	**38**	P	**Pg**	**10 32 30.6**	**-1.8**
LIT				S	**Sg**	**10 32 45.0**	**+0.5**
LIT	**Litokhoron**	**0.93**	**38**	P	**Pg**	**10 32 30.6**	**-1.8**
LIT				S	**Sg**	**10 32 45.0**	**+0.5**
KZN	**Kozani**	**0.94**	**1**	*e*Pb	**Pg**	**10 32 32.4**	**-0.2**
KZN	**Kozani**	**0.94**	**1**	*e*PB	**Pg**	**10 32 32.4**	**-0.2**
KZN	**Kozani**	**0.94**	**1**	P	**Pg**	**10 32 31.6**	**-1.0**
KZN				S	**Sg**	**10 32 45.3**	**+0.5**
KZN	**Kozani**	**0.94**	**1**	P	**Pg**	**10 32 31.6**	**-1.0**
KZN	**Kozani**	**0.94**	**1**	*e*Pb	**Pg**	**10 32 32.4**	**-0.2**
KZN				S	**Sg**	**10 32 45.3**	**+0.5**
EFP	**Efpalio**	**0.95**	**173**	*e*PB	**Pg**	**10 32 32.0**	**-0.7**
EFP				*e*SN	**Sg**	**10 32 45.7**	**+0.7**
EFP	**Efpalio**	**0.95**	**173**	P	**Pg**	**10 32 31.4**	**-1.3**
EFP				S	**Sg**	**10 32 45.7**	**+0.7**
EFP	**Efpalio**	**0.95**	**173**	P	**Pg**	**10 32 31.4**	**-1.3**
EFP	**Efpalio**	**0.95**	**173**	*e*Pb	**Pg**	**10 32 32.0**	**-0.7**
EFP				S	**Sg**	**10 32 45.7**	**+0.7**
KALE	**Kalithea**	**1.02**	**163**	P	**Pg**	**10 32 33.1**	**-1.0**
KALE				S	**Sg**	**10 32 47.5**	**+0.1**
KALE	**Kalithea**	**1.02**	**163**	P	**Pg**	**10 32 33.1**	**-1.0**
KALE				S	**Sg**	**10 32 47.5**	**+0.1**
LKD2	**Lefkada island**	**1.03**	**236**	P	**Pg**	**10 32 34.2**	**-0.1**
LKD2	**Lefkada island**	**1.03**	**236**	P	**Pg**	**10 32 34.2**	**-0.1**
TRIZ	**Trizonia**	**1.03**	**166**	P	**Pg**	**10 32 33.1**	**-1.2**
TRIZ				S	**Sg**	**10 32 47.9**	**+0.2**
TRIZ	**Trizonia**	**1.03**	**166**	P	**Pg**	**10 32 33.1**	**-1.2**
TRIZ				S	**Sg**	**10 32 47.9**	**+0.2**
XOR	**Xorichti**	**1.12**	**90**	P	**Pb**	**10 32 34.8**	**-1.1**
XOR				S	**Sg**	**10 32 50.9**	**+0.4**
XOR	**Xorichti**	**1.12**	**90**	P	**Pb**	**10 32 34.8**	**-1.1**
XOR				S	**Sg**	**10 32 50.9**	**+0.4**
DSF	**Desfina**	**1.13**	**147**	P	**Pb**	**10 32 35.0**	**-1.1**
DSF				S	**Sg**	**10 32 51.4**	**+0.5**
DSF	**Desfina**	**1.13**	**147**	P	**Pb**	**10 32 35.0**	**-1.1**
DSF				S	**Sg**	**10 32 51.4**	**+0.5**
FNA	**Florina**	**1.44**	**349**	P	**Pn**	**10 32 40.1**	**-0.5**
FNA				S	**Sn**	**10 33 00.0**	**+0.4**
FNA	**Florina**	**1.44**	**349**	P	**Pn**	**10 32 40.1**	**-0.5**
FNA				S	**Sn**	**10 33 00.0**	**+0.4**
GUR	**Goura**	**1.50**	**162**	*e*PN	**Pn**	**10 32 41.3**	**-0.1**
GUR	**Goura**	**1.50**	**162**	*e*Pn	**Pn**	**10 32 41.3**	**-0.1**
KEK	**Kerkira**	**1.55**	**284**	*e*Pn	**Pn**	**10 32 44.5**	**+2.4**
KEK	**Kerkira**	**1.55**	**284**	*e*PN	**Pn**	**10 32 44.5**	**+2.4**
LTK	**Loutraki**	**1.65**	**144**	*e*PN	**Pn**	**10 32 43.7**	**+0.3**
LTK	**Loutraki**	**1.65**	**144**	*e*Pn	**Pn**	**10 32 43.7**	**+0.3**
DID	**Didima**	**2.19**	**147**	*e*PB	**Pn**	**10 32 50.9**	**0.0**
VLY	**Voula,Athens**	**2.20**	**133**	*e*Pn	**Pn**	**10 32 51.5**	**+0.5**
VLY	**Voula,Athens**	**2.20**	**133**	*e*PN	**Pn**	**10 32 51.5**	**+0.5**
VLY	**Voula,Athens**	**2.20**	**133**	*e*Pn	**Pn**	**10 32 51.5**	**+0.5**

NEIC ***11*** *10:49:27.4, 56°.30N×152°.32W, h9km, ML3.4(AEIC), After AEIC.*
ISCJB ***11*** *10:49:31.0±0.8, 56°.70N±0°.07×152°.2W±0°.1, h33km, mb3.6/5, Error ellipse: s-maj=11.0km s-min=

Ms1 3.6/7,ms1mx3.3/29,Error ellipse: s-maj=19.6km s-min=13.8km az=92.0
*MOS **11** 11:24:29.3±0.9,24°.34N×142°.74E,h33km,mb4.9/15,Error ellipse: s-maj=16.5km s-min=8.1km az=113.6*
*ISCJB **11** 11:24:30.5±1.6,24°.56N±0°.07×142°.85E±0°.07, h36km±12km,mb4.6/52,MS3.6/10,Error ellipse: s-maj=12.5km s-min=9.6km az=42.5*
*BJI **11** 11:24:30.2,24°.40N×142°.80E,h43km,mB4.6/7,mb4.5/14, Ms4.0/4,Ms7 3.8/7*
*JMA **11** 11:24:30.5±0.5,25°.64N×144°.54E,h0km,M4.5*
*NEIC **11** 11:24:32.2±2.0,24°.38N×142°.84E,h44km±16km,mb4.6/14, MW4.7(NIED),Error ellipse: s-maj=14.1km s-min=10.5km az=129.0*

ISC 11 11:24:30.6±1.7**,24°.41N**±0°.04×**142°.95E**±0°.07**,h30**km±11km**, n104,**σ1§12/110**,mb4.6**/52**,MS3.6**/10**,4C-1D,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**2.32**	**343**	P	**Pn**	**11 25 11.3**	**+4.5**
CBIJ	**Chichi jima**	**2.77**	**346**	Pn	**Pn**	**11 25 14.3**	**+1.4**
	5.4nm,0.3s,baz=107,slow=19,SNR=6.3						
CBIJ	**Chichi jima**	**2.77**	**346**	P	**Pn**	**11 25 14.0**	**+1.1**
CBIJ				*e*S	**Sn**	**11 25 46.6**	**+1.3**
JHJ	**Hachijo jima 2**	**9.12**	**343**	LR	LR	11 30 15.7	
	comp=Z,550nm,18.6s,baz=242,slow=38						
BSO1	**Boso 1**	**10.36**	**351**	P	**Pn**	**11 26 56.0**	**-1.1**
BSO3	**Boso 3**	**10.57**	**349**	P	**Pn**	**11 26 57.6**	**-2.5**
BSO3				*e*S	**Sn**	**11 28 57.1**	**-0.4**
JIM2	**Oshima 3**	**10.72**	**344**	P	**Pn**	**11 27 03.1**	**+1.0**
JIM2				*e*S	**Sn**	**11 28 57.3**	**-3.8**
BSO4	**Boso 4**	**10.79**	**348**	P	**Pn**	**11 27 04.1**	**+1.1**
JOD2	**Odawara 2**	**11.33**	**344**	P	**Pn**	**11 27 11.5**	**+1.1**
JHU	**Hanno**	**11.84**	**345**	P	**Pn**	**11 27 17.2**	**-0.2**
JHU				*e*S	**Sn**	**11 29 23.4**	**-5.1**
JRY	**Ryogami san**	**12.09**	**344**	P	**Pn**	**11 27 20.7**	**-0.1**
JRY				*e*S	**Sn**	**11 29 31.7**	**-2.8**
JHO	**Hitachi**	**12.34**	**351**	P	**Pn**	**11 27 23.4**	**-0.8**
JHO				*e*S	**Sn**	**11 29 34.7**	**-5.9**
JAG	**Ashikaga**	**12.35**	**347**	P	**Pn**	**11 27 23.3**	**-1.1**
JAG				*e*S	**Sn**	**11 29 32.6**	**-8.4**
MJAR	**Matsushiro Arr**	**12.77**	**342**	Pn	**Pn**	**11 27 30.4**	**+0.4**
	0.6nm,0.3s,baz=168,slow=15,SNR=4.8						
MAJO	**Matsushiro**	**12.77**	**342**	*e*P	**Pn**	**11 27 30.9**	**+0.9**
KSRS	**Korea Array**	**18.28**	**319**	P	**Pn**	**11 28 42.3**	**+0.4**
	0.3nm,0.3s,baz=127,slow=11,SNR=22						
KSRS				LR	LR	11 35 32.5	
	comp=Z,145nm,18.7s,baz=148,slow=36						
ASAJ	**Asahikawa**	**19.67**	**359**	P	**Pn**	**11 28 58.3**	**-0.3**
	0.1nm,0.3s,baz=227,slow=18,SNR=2.9						
SSLB	**Suanglung**	**20.09**	**273**	*e*P	**P**	**11 29 04.1**	**+2.3**
	36nm,0.8s						
YSS	**Yuzh-Sakhalins**	**22.50**	**360**	*e*P	sP	11 29 40.0	+0.6
NJ2	**Nanjing**	**22.52**	**295**	*e*P	**P**	**11 29 25.1**	**-2.9**
NJ2				pP		11 29 34.2	
NJ2				sP	sP	11 29 38.0	-1.8
NJ2				PP		11 29 52.8	
NJ2				S	**S**	**11 33 26.0**	**-7.8**
NJ2				sS	sS	11 33 42.0	-4.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
NJ2				pmax	pmax		
	comp=Z,50nm,5.6s						
NJ2				LR	LR		
	comp=N,140nm,12.2s						
NJ2				LR	LR		
	comp=E,370nm,19.8s						
NJ2				LR	LR		
	comp=Z,240nm,14.0s,MS3.8						
HABR	**Khabarovsk**	**24.82**	**347**	P	**P**	**11 29 49.5**	**-0.5**
HABR				*SP	sP	11 30 01.3	-0.9
HABR				*e*		11 30 21.0	
HABR				*e*		11 33 22.5	
HABR				S	**S**	**11 34 10.7**	**0.0**
HABR				*SS	sS	11 34 25.4	+0.5
HABR				*e*SS		11 34 59.6	
HABR				*e*		11 40 47.4	
HABR				MLR	MLR		
	comp=Z,163nm,20.0s,MS3.5						
WHN	**Wuhan**	**26.06**	**290**	P	**P**	**11 30 03.5**	**+2.0**
WHN				S	**S**	**11 34 32.6**	**+1.8**
WHN				LR	LR		
	comp=Z,330nm,19.3s,MS3.9						
KLR	**Kul'dur**	**26.29**	**343**	*e*P	**P**	**11 30 00.0**	**-3.3**
QIZ	**Qiongzhong**	**31.17**	**267**	P	**P**	**11 30 41.6**	**-5.5**
QIZ				S	**S**	**11 35 44.6**	**-6.8**
QIZ				LR	LR		
	comp=Z,61nm,20.1s,MS3.3						
LZH	**Lanzhou**	**35.51**	**298**	*e*P	**P**	**11 31 33.5**	**+8.7**
LZH				pP	pP	11 31 40.0	+6.5
LZH				sP	sP	11 31 43.5	+6.3
LZH				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.9						
KMI	**Kunming**	**36.42**	**280**	P	**P**	**11 31 33.7**	**+0.9**
KMI				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
SONM	**Songino Array**	**37.15**	**318**	P	**P**	**11 31 37.2**	**-1.5**
	comp=Z,0.8nm,0.6s,mb3.8,baz=129,slow=10,SNR=4.7						
SONM				LR	LR	11 47 14.3	
	comp=Z,115nm,18.9s,MS3.7,baz=330,slow=37						
HNR	**Honiara**	**37.50**	**152**	LR	LR	11 44 04.2	
	comp=Z,62nm,21.4s,MS3.4,baz=178,slow=31						
YAK	**Yakutsk**	**38.67**	**350**	*e*P	**P**	**11 31 51.4**	**+0.1**
YAK				pmax	pmax		
	comp=E,8.0nm,1.6s						
YAK				pmax	pmax		
	comp=N,13nm,1.3s						
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
GTA	**Gaotai**	**39.17**	**303**	*e*P	**P**	**11 31 56.4**	**+0.6**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
ZAK	**Zakamensk**	**40.10**	**321**	*e*P	**P**	**11 31 54.8**	**-8.5**
CHTO	**Chiang Mai**	**41.16**	**271**	*e*P	**P**	**11 32 12.3**	**-0.2**
	comp=Z,5.5nm,0.8s,mb4.2						
CHTO	**Chiang Mai**	**41.16**	**271**	*e*P	**P**	**11 32 12.4**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
CM31	**Chiang Mai Arr**	**41.26**	**271**	*e*P	**P**	**11 32 13.8**	**+0.5**
	comp=Z,5.3nm,0.6s,mb4.3						
CMAR	**Chiang Mai Arr**	**41.26**	**271**	P	**P**	**11 32 13.6**	**+0.3**
	comp=Z,4.7nm,0.6s,mb4.3,baz=63,slow=7.5,SNR=32						
CMAR				LR	LR	11 48 19.7	
	comp=Z,84nm,19.5s,MS3.6,baz=95,slow=35						
FITZ	**Fitzroy Crossi**	**45.49**	**203**	P	**P**	**11 32 46.3**	**-1.1**
	comp=Z,2.8nm,0.5s,mb4.4,baz=24,slow=10,SNR=24						
SHL	**Shillong**	**46.07**	**283**	*e*PKP	**P**	**11 32 52.0**	**0.0**
ASAR	**Alice Springs**	**48.58**	**191**	P	**P**	**11 33 09.8**	**-1.6**
	comp=Z,1.0nm,0.6s,mb4.0,baz=8.8,slow=6.2,SNR=32						
TAPN	**Taplejung**	**49.45**	**286**	*e*P	**P**	**11 33 19.1**	**+0.9**
ODAN	**Odare**	**49.81**	**285**	*e*P	**P**	**11 33 21.4**	**+0.4**
	comp=Z,40nm,0.8s,mb5.5						
JIRN	**Jiri**	**50.73**	**287**	*e*P	**P**	**11 33 29.1**	**+1.2**
	comp=Z,49nm,0.6s,mb5.6						
GUN	**Gumba**	**50.95**	**287**	*e*P	**P**	**11 33 31.0**	**+1.4**
	comp=Z,24nm,0.5s,mb5.4						
ZALV	**Zalesovo Beam**	**51.98**	**320**	P	**P**	**11 33 36.0**	**-0.8**
	comp=Z,3.3nm,0.5s,mb4.5,baz=103,slow=7.5,SNR=19						
GKN	**Gorkha**	**52.02**	**287**	*e*P	**P**	**11 33 37.8**	**+0.2**
	comp=Z,15nm,0.7s,mb5.1						
MK31	**Makanchi Array**	**52.74**	**311**	*e*P	**P**	**11 33 41.8**	**-0.8**
MKAR	**Makanchi Array**	**52.74**	**311**	P	**P**	**11 33 41.9**	**-0.7**
	comp=Z,2.0nm,0.6s,mb4.2,baz=90,slow=8.9,SNR=12						
KOLN	**Koldanda**	**52.97**	**287**	*e*P	**P**	**11 33 44.0**	**-0.6**
	comp=Z,18nm,0.8s,mb5.0						
KURK	**Kurchatov**	**55.37**	**316**	*e*P	**P**	**11 34 00.3**	**-1.4**
	comp=Z,3.6nm,0.7s,mb4.5						
KURK	**Kurchatov**	**55.37**	**316**	*c i*P	**P**	**11 34 00.5**	**-1.2**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
KURK				MLR	MLR		
	comp=Z,106nm,19.0s,MS3.9						
STKA	**Stephens Creek**	**55.98**	**181**	P	**P**	**11 34 05.2**	**-0.9**
	comp=Z,3.9nm,0.6s,mb4.7,baz=6.1,slow=7.1,SNR=16						
STKA	**Stephens Creek**	**55.98**	**181**	*e*P	**P**	**11 34 04.9**	**-1.3**
KDAK	**Kodiak Island**	**56.12**	**36**	P	**P**	**11 34 09.4**	**+2.4**
	comp=Z,5.3nm,1.1s,mb4.5,baz=252,slow=17,SNR=3.5						
KSH	**Kashi**	**57.57**	**302**	*e*P	**P**	**11 34 21.1**	**+3.5**
KSH				*e*pP	pP	11 34 31.8	+5.0
KSH				*e*sP	sP	11 34 35.1	+4.8
KSH				*e*PP	PP	11 36 31.1	+5.8
KSH				*e*ScP	ScP	11 39 08.7	0.0
KSH				*e*PcS	PcS	11 39 12.6	+0.7
KSH				*e*S	**S**	**11 42 17.7**	**+4.0**
KSH				*e*sS	sS	11 42 34.3	+5.6
KSH				*e*ScS	ScS	11 44 04.5	-0.6
KSH				*e*SS	SS	11 46 10.4	+6.7
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
KSH				pmax	pmax		
	comp=Z,40nm,5.5s						
KSH				LR	LR		
	comp=Z,120nm,5.2s						
COCO	**West Island**	**57.88**	**236**	*e*P	**P**	**11 34 19.9**	**-0.1**
TRF	**Thorofare Moun**	**58.08**	**29**	*e*P	**P**	**11 34 22.9**	**+2.1**
	comp=Z,2.8nm,0.8s,mb4.3						
PMR	**Palmer**	**58.35**	**31**	*e*P	**P**	**11 34 21.2**	**-1.4**
	comp=Z,4.9nm,1.2s,mb4.4						
PMR	**Palmer**	**58.35**	**31**	*e*P	**P**	**11 34 21.2**	**-1.5**
PMR				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
UCH	**Uchtor**	**58.40**	**306**	*e*P	**P**	**11 34 23.8**	**+0.5**
	comp=Z,2.0nm,0.6s,mb4.3						
UCH	**Uchtor**	**58.40**	**306**	*e*P	**P**	**11 34 23.8**	**+0.4**
UCH				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
COLD	**Coldfoot**	**58.80**	**25**	*e*P	**P**	**11 34 25.4**	**-0.3**
AML	**Almayashu**	**59.02**	**306**	*e*P	**P**	**11 34 28.0**	**+0.4**
	comp=Z,2.2nm,0.5s,mb4.4						
AML	**Almayashu**	**59.02**	**306**	*e*P	**P**	**11 34 28.0**	**+0.4**
AML				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
ILAR	**Eielson Array**	**59.75**	**28**	P	**P**	**11 34 33.5**	**+1.2**
	comp=Z,0.7nm,0.7s,mb3.8,baz=258,slow=5.4,SNR=13						
BVAR	**Borovoye Array**	**60.50**	**319**	P	**P**	**11 34 37.3**	**-0.3**
	comp=Z,11nm,0.5s,mb5.2,baz=94,slow=8.2,SNR=50						
BRVK	**Borovoye**	**60.56**	**319**	*e*P	**P**	**11 34 36.5**	**-1.6**
	comp=Z,16nm,1.1s,mb5.1						
BRVK	**Borovoye**	**60.56**	**319**	*c i*P	**P**	**11 34 37.6**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,16nm,1.2s,mb5.0						
KK31	**Karatay Array**	**61.23**	**307**	*c e*P	**P**	**11 34 42.4**	**-0.4**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.8						
PNL	**Peninsula**	**63.07**	**34**	*e*P	**P**	**11 34 48.6**	**-6.2**
	comp=Z,3.6nm,0.6s,mb4.7						
INK	**Inuvik**	**65.19**	**24**	P	**P**	**11 35 10.3**	**+1.7**
	comp=Z,2.2nm,0.6s,mb4.3,baz=293,slow=6.4,SNR=5.6						
ARU	**Arti**	**66.97**	**323**	*e*P	**P**	**11 35 18.5**	**-1.7**
	comp=Z,27nm,1.3s,mb5.1						
ARU	**Arti**	**66.97**	**323**	*d i*P	**P**	**11 35 19.7**	**-0.6**
ARU				S	S	11 44 12.9	+1.4
ARU				SS	SS	11 48 28.6	-1.2
ARU				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.9						
AB31	**Akbulak array**	**67.47**	**315**	*c e*P	**P**	**11 35 22.7**	**-0.9**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
ABKAR	**Akbulak array**	**67.47**	**315**	*e*P	**P**	**11 35 22.4**	**-1.2**
	comp=Z,6.8nm,0.8s,mb4.7						
AKTO	**Aktyubinsk**	**68.45**	**317**	LR	LR	12 07 37.3	
	comp=Z,44nm,18.9s,MS3.7,baz=322,slow=38						
YKA	**Yellowknife Ar**	**74.18**	**28**	P	**P**	**11 36 05.7**	**+1.7**
	comp=Z,1.9nm,0.7s,mb4.1,baz=294,slow=5.9,SNR=5.3						
YKA	**Yellowknife Ar**	**74.18**	**28**	P	**P**	**11 36 05.7**	**+1.6**
KEV	**Kevo**	**75.74**	**341**	*e*P	**P**	**11 36 13.2**	**+0.2**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
KEV	**Kevo**	**75.74**	**341**	*ep*	**P**	**11 36 13.2**	**+0.2**
	comp=Z,6.4nm,0.6s,mb4.7						
ARCES	**ARCESS Array B**	**76.30**	**341**	P	**P**	**11 36 17.7**	**+1.5**
	comp=Z,5.1nm,0.6s,mb4.6,baz=74,slow=7.6,SNR=24						
JOF	**Joensuu**	**77.79**	**334**	*e*P	**P**	**11 36 24.8**	**+0.1**
JOF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
JOF	**Joensuu**	**77.79**	**334**	*ep*	**P**	**11 36 24.8**	**+0.1**
	comp=Z,12nm,1.0s,mb4.8						
OBN	**Obninsk**	**79.13**	**326**	*e*P	**P**	**11 36 32.2**	**0.0**
OBN				*e*		11 46 30.8	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
BMO	**Blue Mountains**	**79.69**	**45**	*e*P	**P**	**11 36 31.8**	**-3.7**
	comp=Z,1.1nm,0.8s,mb3.8						
WVOR	**Wild Horse Val**	**79.78**	**48**	*e*P	**P**	**11 36 32.4**	**-3.6**
KAF	**Kangasniemi**	**80.19**	**335**	*e*P	**P**	**11 36 38.4**	**+0.6**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
KAF	**Kangasniemi**	**80.19**	**335**	*ep*	**P**	**11 36 38.4**	**+0.6**
	comp=Z,5.7nm,0.5s,mb4.8,baz=61,slow=5.1						
FINES	**FINESS Array B**	**80.66**	**334**	P	**P**	**11 36 40.7**	**+0.3**
	comp=Z,3.9nm,0.6s,mb4.5,baz=67,slow=4.8,SNR=18						
NVAR	**Mina Array Bea**	**81.64**	**52**	P	**P**	**11 36 46.6**	**+0.6**
	comp=Z,0.6nm,0.9s,mb3.5,baz=291,slow=5.4,SNR=3.9						
MIB	**Mutribah**	**82.78**	**299**	*e*P	**P**	**11 36 51.6**	**-0.6**
MIB				AMb	AMB	11 36 52.8	
	comp=Z,20nm,0.6s,mb5.3						
RDF	**Al-Radifah**	**82.96**	**298**	*e*P	**P**	**11 36 53.3**	**+0.1**
RDF				AMb	AMB	11 36 54.3	
	comp=Z,18nm,0.6s,mb5.3						
NAY	**Al-Naaiem**	**83.08**	**299**	*e*P	**P**	**11 36 53.0**	**-0.8**
NAY				AMb	AMB	11 36 55.2	
	comp=Z,11nm,0.6s,mb5.1						
FFC	**Flin Flon**	**83.65**	**32**	*i*P	**P**	**11 37 00.0**	**+3.8**
AKASG	**Malin Array Be**	**85.19**	**324**	P	**P**	**11 37 03.7**	**-0.4**
AKASG	**Malin Array Be**	**85.19**	**324**	P	**P**	**11 37 03.7**	**-0.4**
	comp=Z,4.6nm,0.7s,mb4.8,baz=51,slow=4.9,SNR=7.4						
KIEV	**Kiev**	**85.20**	**324**	*e*P	**P**	**11 37 02.2**	**-1.9**
	comp=Z,4.9nm,0.6s,mb4.8						
KIEV	**Kiev**	**85.20**	**324**	*e*P	**P**	**11 37 02.2**	**-1.9**
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8						
NOA	**NORSAR Array B**	**86.36**	**339**	P	**P**	**11 37 09.6**	**0.0**
	comp=Z,2.4nm,0.7s,mb4.5,baz=47,slow=4.6,SNR=4.5						
BRTR	**Keskin Array B**	**88.34**	**313**	P	**P**	**11 37 19.1**	**-0.5**
	comp=Z,2.5nm,0.8s,mb4.5,baz=86,slow=2.5,SNR=13						
BRTR				LR	LR	12 21 44.1	
	comp=Z,22nm,18.6s,MS3.6,baz=293,slow=39						
DPC	**Dobruska-Polom**	**91.89**	**329**	*e*P	**P**	**11 37 36.0**	**0.0**
DPC	**Dobruska-Polom**	**91.89**	**329**	*e*P	**P**	**11 37 36.0**	**0.0**
ESK	**Eskdalemuir**	**95.49**	**341**	*i*P	**P**	**11 37 47.8**	**-4.6**
TXAR	**Lajitas Array**	**96.64**	**54**	P	**P**	**11 38 02.4**	**+4.2**
	comp=Z,0.2nm,0.7s,mb3.7,baz=262,slow=0.6,SNR=2.4						
TORD	**Torodi Ar. Bea**	**126.86**	**310**	PKP	PKPdf	11 43 31.8	-0.5
	comp=Z,0.5nm,0.9s,baz=36,slow=0.3,SNR=2.9						
LPAZ	**La Paz**	**149.81**	**80**	PKPbc	PKPbc	11 44 20.9	+2.5
	comp=Z,3.3nm,0.7s,baz=253,slow=0.7,SNR=12						

*DDA **11** 11:38:08.2,38°.49N×43°.27E,h8km±1km,Md3.0*
*ISCJB **11** 11:38:09.8±0.6,38°.52N±0°.04×43°.34E±0°.06,h8km±4km, Error ellipse: s-maj=8.4km s-min=5.3km az=24.6*
*CSEM **11** 11:38:09.0±0.2,38°.47N×43°.41E,h8km,MD2.4,Error ellipse: s-maj=5.9km s-min=4.1km az=116.0*
*ISK **11** 11:38:09.4,38°.51N×43°.38E,h3km,MD2.4*

ISC 11 11:38:10.0±0.7**,38°.51N**±0°.04×**43°.35E**±0°.06**,h9**km±5km**, n13,**σ1§04/24**,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TVAN	**Van**	**0.05**	**67**	*i*P	**Pg**	**11 38 11.0**	**-0.7**
TVAN				*i*S	**Sg**	**11 38 13.3**	**+0.3**
TVAN	**Van**	**0.05**	**67**	*i*P	**Pg**	**11 38 11.0**	**-0.8**
TVAN				*i*S	**Sg**	**11 38 13.4**	**+0.3**
VANB	**Van**	**0.09**	**22**	PG	**Pg**	**11 38 11.7**	**-0.6**
VANB	**Van**	**0.09**	**22**	*i*Pg	**Pg**	**11 38 11.7**	**-0.6**
VANT	**Van**	**0.11**	**216**	*e*PG	**Pg**	**11 38 12.4**	**-0.1**
VANT				*e*SG	**Sg**	**11 38 14.8**	**+0.5**
CLDR	**Caldiran**	**0.78**	**35**	*e*PG	**Pg**	**11 38 24.8**	**-0.1**
CLDR				*e*SG	**Sg**	**11 38 36.1**	**+1.1**
CLDR	**Caldiran**	**0.78**	**35**	*e*Pg	**Pg**	**11 38 24.8**	**-0.1**
CLDR				*e*Sg	**Sg**	**11 38 36.1**	**+1.1**
TATV	**Tatvan**	**0.85**	**270**	*i*P	**Pg**	**11 38 23.5**	**-2.7**
TATV				*i*S	**Sg**	**11 38 38.5**	**+1.3**
TATV	**Tatvan**	**0.85**	**270**	*i*P	**Pg**	**11 38 23.5**	**-2.7**
TATV				*i*S	**Sg**	**11 38 38.5**	**+1.3**
HAKT	**HAKKARI**	**0.99**	**163**	*i*P	**Pg**	**11 38 27.2**	**-1.8**
HAKT				*i*S	**Sg**	**11 38 43.4**	**+1.6**
HAKT	**HAKKARI**	**0.99**	**163**	*i*P	**Pg**	**11 38 27.2**	**-1.8**
HAKT				*i*S	**Sg**	**11 38 43.4**	**+1.5**
AGRB	**Hanur-Agry**	**1.10**	**346**	*e*PN	**Pn**	**11 38 31.5**	**-0.1**
AGRB				*e*SN	**Sn**	**11 38 47.1**	**+0.2**
AGRB	**Hanur-Agry**	**1.10**	**346**	*e*Pn	**Pn**	**11 38 31.5**	**-0.1**
AGRB				*e*Sn	**Sn**	**11 38 47.1**	**+0.2**

*ISCJB **11** 11:49:50.7±0.3,31°.53N±0°.03×104°.19E±0°.05,h10km, mb4.0/16,MS2.8/3,Error ellipse: s-maj=6.7km s-min=4.7km az=9.1*
*IDC **11** 11:49:51.3±1.1,31°.62N×104°.18E,h0km,mb3.9/10, mb1 4.1/12,mb1mx3.9/23,mbtmp3.9/12,ML3.6/2,MS3.0/4, Ms1 3.0/4,ms1mx2.7/29,Error ellipse: s-maj=30.6km s-min=20.7km az=50.0*
*NEIC **11** 11:49:53.2±0.5,31°.61N×104°.04E,h10km,mb4.1/7,Error ellipse: s-maj=11.7km s-min=7.8km az=81.0*
*BJI **11** 11:49:54.8,31°.55N×104°.20E,h19km,mB4.5/2,mb4.4/4, ML4.1/19,Ms3.9/5,Ms7 3.6/7*

ISC 11 11:49:52.7±0.3**,31°.55N**±0°.03×**104°.16E**±0°.05**,h10**km**,n39,** σ1§07/47**,mb4.0**/16**,MS2.8**/3**,Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LZH	**Lanzhou**	**4.53**	**357**	*e*Pn	**Pb**	**11 51 08.8**	**-3.6**
LZH				Pg	**Pg**	**11 51 18.0**	**-1.6**
LZH				Sn	**Sn**	**11 51 59.9**	**+5.7**
LZH				Sg	**Sg**	**11 52 12.9**	**-5.4**
LZH				smax			
	comp=N,170nm,1.0s						
LZH				smax			
	comp=E,110nm,0.9s						
LZH				LR	LR		
	comp=E,940nm,5.3s						
LZH				LR	LR		
	comp=Z,1μm,6.4s						
XAN	**Xi'an**	**4.71**	**57**	Pn	**Pn**	**11 51 05.1**	**+1.2**
XAN				Sn	**Sn**	**11 51 58.0**	**-0.6**
XAN				Sg	**Sg**	**11 52 21.7**	**-2.4**
XAN				smax			
	comp=N,360nm,0.9s						
XAN				smax			
	comp=E,250nm,0.9s						
XAN				LR	LR		
	comp=N,330nm,8.7s						
XAN				LR	LR		
	comp=E,110nm,8.8s						
XAN				LR	LR		
	comp=Z,110nm,10.9s						
ENH	**Enshi**	**4.75**	**104**	*e*Pn	**Pn**	**11 51 09.0**	**+4.7**
GYA	**Guiyang**	**5.52**	**156**	Pn	**Pn**	**11 51 20.5**	**+5.5**
GYA				Sn	**Sn**	**11 52 19.5**	**+0.9**
GYA				Sg	**Sg**	**11 52 48.7**	**-1.4**
GYA				smax			
	comp=N,280nm,0.7s						
GYA				smax			
	comp=E,300nm,0.8s						
KMI	**Kunming**	**6.52**	**191**	Pn	**Pb**	**11 51 38.8**	**-7.5**
KMI				Sn	**Sn**	**11 52 42.4**	**-0.8**
KMI				smax			
	comp=N,77nm,0.7s						
KMI				smax			
	comp=E,91nm,0.7s						
KMI				LR	LR		
	comp=N,370nm,12.2s						
KMI				LR	LR		
	comp=E,510nm,7.3s						
GTA	**Gaotai**	**8.61**	**337**	*e*P	**Pn**	**11 52 06.9**	**+10**
GTA				pP		11 52 10.1	
GTA				sP		11 52 13.0	
GTA				S	**Sn**	**11 53 39.4**	**+5.0**
GTA				sS		11 53 43.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA				LR	LR		
	comp=N,380nm,10.7s						
GTA				LR	LR		
	comp=E,290nm,11.6s						
GTA				LR	LR		
	comp=Z,410nm,11.9s						
WHN	**Wuhan**	**8.80**	**94**	P	**Pn**	**11 52 04.5**	**+4.6**
WHN				LR	LR		
	comp=Z,580nm,15.9s						
HHC	**Hu-ho-hao-te**	**11.03**	**31**	*e*P	**Pn**	**11 52 32.1**	**+1.5**
HHC				S	**Sn**	**11 54 36.0**	**+2.0**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,52nm,3.5s						
HHC				LR	LR		
	comp=N,170nm,4.1s						
HHC				LR	LR		
	comp=E,250nm,3.8s						
HHC				LR	LR		
	comp=Z,100nm,3.8s						
CHTO	**Chiang Mai**	**13.53**	**202**	*e*P	**Pn**	**11 53 02.9**	**-1.9**
	comp=Z,8.9nm,1.1s						
CM31	**Chiang Mai Arr**	**13.86**	**201**	*e*P	**Pn**	**11 53 11.2**	**+1.9**
	comp=Z,3.4nm,0.6s						
CMAR	**Chiang Mai Arr**	**13.86**	**201**	Pn	**Pn**	**11 53 11.4**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=13,slow=10,SNR=7.0						
SONM	**Songino Array**	**16.36**	**5**	Pn	**Pn**	**11 53 41.8**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=188,slow=13,SNR=9.0						
SONM				LR	LR	12 00 39.0	
	comp=Z,120nm,18.1s,baz=353,slow=40						
KSRS	**Korea Array**	**20.42**	**67**	P	**P**	**11 54 30.6**	**+0.6**
	comp=Z,1.9nm,0.6s,baz=253,slow=10,SNR=9.1						
KSRS				LR	LR	12 02 03.2	
	comp=Z,28nm,21.7s,MS2.6,baz=255,slow=36						
CN2	**Changchun**	**20.75**	**48**	*e*P	**P**	**11 54 35.3**	**+1.8**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
MK31	**Makanchi Array**	**22.68**	**318**	*e*P	**P

*NEIC **11** 12:54:35.2,25°.75N×59°.67E,h18km,mb4.7/46, MN4.3(TEH),After TEH.*
*MOS **11** 12:54:37.5±0.8,26°.06N×59°.47E,h33km,mb4.8/61,Error ellipse: s-maj=8.4km s-min=4.7km az=119.7*
*TEH **11** 12:54:38.3,25°.90N×59°.59E,h28km*
*CSEM **11** 12:54:38.7±0.2,26°.02N×59°.59E,h30km,mb4.4/31,Ms3.4, Error ellipse: s-maj=8.4km s-min=5.1km az=157.0*

ISC 11 12:54:35.5±0.3,25°.94N±0°.04×59°.50E±0°.03,h10km,n313, σ0991/315,mb4.6/90,MS3.4/8,55C-8D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
BANOM	**Banah**	2.88	270	P		Pn	12 55 22.1	+0.6
	SNR=92							
BANOM	**Banah**	2.88	270	⇓P		Pn	12 55 22.1	+0.6
	SNR=92							
IBND	**Bandar-abas**	3.05	300	*e*Pn		Pn	12 55 25.4	+1.7
IBND				*e*Pn		Pn	12 55 25.9	+2.2
IBND				*e*Sg		Sg	12 56 16.2	+2.8
IBND				*e*			12 57 05.0	
	comp=Z,21μm,0.6s							
IBND	**Bandar-abas**	3.05	300	*e*Pn		Pn	12 55 25.9	+2.2
BNDS	**Bandar-Abbas**	3.32	297	*e*Pn		Pn	12 55 28.9	+1.5
BNDS				AML		AML	12 56 29.9	
	comp=N,217nm,0.7s							
WBK	**Wadi Bani Khal**	3.35	188	⇑P		Pn	12 55 27.6	-0.3
	SNR=16							
ARQ	**Araqi**	3.75	227	P		Pn	12 55 36.3	+2.9
	SNR=62							
ARQ	**Araqi**	3.75	227	⇓P		Pn	12 55 36.3	+2.9
	SNR=62							
JMDO	**Jabal Madar**	3.77	200	P		Pn	12 55 34.8	+1.1
	SNR=15							
JMDO	**Jabal Madar**	3.77	200	⇓P		Pn	12 55 34.8	+1.1
	SNR=15							
ZHSF	**Zahedan**	3.83	17	*e*Pn		Pn	12 55 35.0	+0.5
KRBR	**Kerman**	4.71	330	*e*Pn		Pn	12 55 49.1	+2.6
KRBR				Sn		Sn	12 56 44.7	+3.6
KRBR				*e*Sg		Sg	12 57 07.1	+0.5
KRBR				AML		AML	12 57 29.8	
	comp=N,105nm,0.8s							
KRBR				AML		AML	12 57 30.2	
	comp=E,83nm,0.7s							
IKOO	**Kooshah**	6.48	356	*e*Pn		Pn	12 56 11.2	+0.3
IKOO				*e*			12 56 21.1	
	comp=Z,1μm,0.2s							
IKOO	**Kooshah**	6.48	356	*e*Pn		Pn	12 56 11.2	+0.3
IBAF	**Bafgh**	6.61	329	*e*Pn		Pn	12 56 13.6	+0.9
IBAF				*e*			12 56 15.3	
	comp=Z,453nm,0.1s							
IBAF	**Bafgh**	6.61	329	*e*Pn		Pn	12 56 13.6	+0.9
ISRV	**Sarvestan**	6.62	303	*e*Pn		Pn	12 56 13.8	+0.9
ISRV				*e*			12 56 18.6	
	comp=Z,1μm,0.2s							
ISRV	**Sarvestan**	6.62	303	*e*Pn		Pn	12 56 13.8	+0.9
IDAH	**Dahanechah**	6.79	3	*e*Pn		Pn	12 56 15.8	+0.7
IDAH				*e*			12 56 25.9	
	comp=Z,640nm,0.2s							
IDAH	**Dahanechah**	6.79	3	*e*Pn		Pn	12 56 15.8	+0.7
IPAR	**Pars**	6.91	306	*e*Pn		Pn	12 56 18.2	+1.4
IPAR				*e*			12 57 41.4	
	comp=Z,961nm,0.4s							
IPAR	**Pars**	6.91	306	*e*Pn		Pn	12 56 18.2	+1.4
IMEH	**Mehriz**	6.93	323	*e*Pn		Pn	12 56 18.2	+1.2
IMEH				*e*			12 56 18.5	
	comp=Z,742nm,0.2s							
IMEH	**Mehriz**	6.93	323	*e*Pn		Pn	12 56 18.2	+1.2
ITEG	**Tejag**	6.97	355	*e*Pn		Pn	12 56 18.4	+0.8
ITEG				*e*			12 56 36.8	
	comp=Z,1μm,0.3s							
ITEG	**Tejag**	6.97	355	*e*Pn		Pn	12 56 18.4	+0.8
ICHK	**Chekchek**	7.71	326	*e*Pn		Pn	12 56 28.9	+1.2
ICHK				*e*			12 56 29.3	
	comp=Z,949nm,0.3s							
ICHK	**Chekchek**	7.71	326	*e*Pn		Pn	12 56 28.9	+1.2
ISAD	**Sadrabad**	7.84	321	*e*Pn		Pn	12 56 30.2	+0.7
ISAD				*e*			12 56 38.6	
	comp=Z,554nm,0.3s							
ISAD	**Sadrabad**	7.84	321	*e*Pn		Pn	12 56 30.2	+0.7
QRN	**Al-Qurain**	10.67	288	*e*P		Pn	12 57 07.3	-1.1
QRN				AML		AML	12 59 03.0	
	comp=Z,23nm,0.3s							
KBD	**Kabd**	10.96	290	*e*P		Pn	12 57 11.4	-1.0
RDF	**Al-Radifah**	11.03	288	*e*P		Pn	12 57 12.5	-0.8
UMR	**Umm Al-Rimmam**	11.04	292	*e*P		Pn	12 57 12.8	-0.7
UMR				AML		AML	12 59 13.9	
	comp=Z,20nm,0.4s							
NAY	**Al-Naaiem**	11.37	290	*e*P		Pn	12 57 16.8	-1.1
NAY				AML		AML	12 59 20.8	
	comp=Z,10nm,0.7s							
MIB	**Mutribah**	11.43	292	*e*P		Pn	12 57 18.0	-0.8
MIB				AML		AML	12 59 21.9	
	comp=Z,24nm,0.5s							
KBL	**Kabul**	11.89	42	*e*Pn		Pn	12 57 25.2	+0.1
	comp=Z,5.5nm,0.6s							
KBL	**Kabul**	11.89	42	*e*P		Pn	12 57 25.2	+0.1
KBL				pmax		pmax		
	comp=Z,5.0nm,0.6s							
KBL	**Kabul**	11.89	42	*e*P		Pn	12 57 25.2	+0.1
	comp=Z,5.0nm,0.6s							
GNI	**Garni**	18.78	323	P		Pn	12 58 55.4	+0.2
	comp=Z,1.8nm,0.3s,baz=305,slow=1.3,SNR=6.9							
GNI	**Garni**	18.78	323	*i* P		Pn	12 58 58.3	+3.1
GNI				pmax		pmax		
	comp=Z,14nm,0.7s							
GNI	**Garni**	18.78	323	P		Pn	12 58 55.4	+0.2
KSH	**Kashi**	19.33	41	*e*P		Pn	12 58 56.1	-5.8
KSH				*ep*P		pP	12 59 04.1	+0.4
KSH				*es*P		sP	12 59 08.4	+3.4
KSH				*e*PP			12 59 12.3	
KSH				*e*S		Sn	13 02 20.8	-18
KSH				*es*S		sS	13 02 33.3	-11
KSH				*e*SS			13 02 46.1	
KSH				*e*PcP		PcP	13 03 22.1	-0.9
KSH				*e*ScP		ScP	13 06 54.0	-5.1
KSH				*e*PcS		PcS	13 06 58.3	-1.8
KSH				*e*ScS		ScS	13 10 34.1	-6.7
KSH				pmax		pmax		
	comp=Z,7.0nm,0.4s							
KSH				pmax		pmax		
	comp=Z,77nm,5.6s							
KSH				LR		LR		
	comp=N,610nm,10.8s							
KSH				LR		LR		
	comp=E,910nm,13.4s							
KK31	**Karatay Array**	19.35	25	*i* P		Pn	12 58 58.8	-3.3
KK31				pmax		pmax		
	comp=Z,3.0nm,0.6s							
KK31	**Karatay Array**	19.35	25	*i* P		Pn	12 58 58.8	-3.3
	comp=Z,3.0nm,0.6s							
AML	**Almayashu**	19.94	32	P		Pn	12 59 06.7	-2.4
	SNR=16							
AML	**Almayashu**	19.94	32	*e*P		Pn	12 59 06.8	-2.3
	comp=Z,15nm,0.6s							
AML	**Almayashu**	19.94	32	*e*P		Pn	12 59 06.8	-2.3
	comp=Z,15nm,0.6s							
EKS2	**Erkin-Say**	20.38	31	P		P	12 59 12.2	-0.1
	SNR=25							
EKS2	**Erkin-Say**	20.38	31	*e*P		P	12 59 11.8	-0.5
	comp=Z,25nm,0.8s							
EKS2	**Erkin-Say**	20.38	31	*e*P		P	12 59 11.8	-0.5
	comp=Z,25nm,0.8s							
UCH	**Uchtor**	20.41	33	P		P	12 59 12.4	-0.2
	SNR=9.2							
UCH	**Uchtor**	20.41	33	*e*P		P	12 59 12.4	-0.2
	comp=Z,6.1nm,0.8s							
UCH	**Uchtor**	20.41	33	*e*P		P	12 59 12.4	-0.2
	comp=Z,6.1nm,0.8s							
KZA	**Kyzart**	20.67	35	P		P	12 59 15.8	+0.4
	SNR=9.6							
ASF	**Jabal al Asfar**	20.70	293	P		P	12 59 17.7	+1.9
	comp=Z,8.5nm,0.7s,baz=323,slow=6.5,SNR=12							
ASF	**Jabal al Asfar**	20.70	293	P		P	12 59 17.7	+1.9
ASF				pmax		pmax		
	comp=Z,9.0nm,0.7s							
AAK	**Ala-Archa**	20.70	33	P		P	12 59 16.1	+0.3
	comp=Z,4.4nm,0.5s,baz=220,slow=4.6,SNR=8.1							
AAK				LR		LR	13 08 08.0	
	comp=Z,105nm,18.0s,MS3.2,baz=224,slow=39							
AAK	**Ala-Archa**	20.70	33	P		P	12 59 16.1	+0.3
	comp=Z,4.0nm,0.5s							
CHMS	**Chumysh**	21.10	32	P		P	12 59 20.0	-0.1
	SNR=6.3							
ZEI	**Tsey**	21.11	327	*e*P		P	12 59 20.6	+0.5
ZEI				pmax		pmax		
	comp=Z,50nm,1.5s,mb4.6							
ZEI	**Tsey**	21.11	327	*e*P		P	12 59 20.6	+0.5
	comp=Z,50nm,1.5s,mb4.6							
USP	**Ospenovka**	21.19	32	P		P	12 59 20.9	-0.1
	SNR=6.2							
TKM2	**Tokmak 2**	21.46	34	P		P	12 59 23.5	-0.5
	SNR=9.5							
TKM2	**Tokmak 2**	21.46	34	*e*P		P	12 59 23.3	-0.7
	comp=Z,9.7nm,1.0s,mb4.1							
TKM2	**Tokmak 2**	21.46	34	*e*P		P	12 59 23.3	-0.7
TKM2				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.1							
TKM2	**Tokmak 2**	21.46	34	*e*P		P	12 59 23.3	-0.7
	comp=Z,9.7nm,1.0s,mb4.1							
MALT	**Malatya**	21.64	310	*e*P		P	12 59 28.0	+2.0
	comp=Z,29nm,0.9s,mb4.7							
MALT	**Malatya**	21.64	310	*e*P		P	12 59 28.0	+2.1
MALT				pmax		pmax		
	comp=Z,29nm,0.9s,mb4.7							
MALT	**Malatya**	21.64	310	*e*P		P	12 59 28.0	+2.1
	comp=Z,29nm,0.9s,mb4.7							
GKN	**Gorkha**	22.49	79	*e*P		P	12 59 36.1	+1.0
	comp=Z,22nm,0.8s,mb4.7							
KIV	**Kislovodsk**	22.58	327	*e*P		P	12 59 37.2	+1.3
	comp=Z,70nm,1.1s,mb5.0							
KIV	**Kislovodsk**	22.58	327	*e*P		P	12 59 36.0	+0.1
KIV				pmax		pmax		
	comp=Z,70nm,1.1s,mb5.0							
KIV	**Kislovodsk**	22.58	327	*e*P		P	12 59 36.0	+0.1
	comp=Z,70nm,1.1s,mb5.0							
DMN	**Daman**	22.91	80	*e*P		P	12 59 41.0	+1.4
	comp=Z,42nm,1.1s,mb4.8							
KKN	**Kakani**	23.06	80	*e*P		P	12 59 42.3	+1.1
	comp=Z,32nm,0.7s,mb4.9							
PKI	**Pulchoki**	23.18	80	*e*P		P	12 59 43.5	+1.1
	comp=Z,30nm,0.6s,mb4.9							
AB31	**Akbulak array**	23.28	1	P		P	12 59 41.9	-1.4
AB31				pmax		pmax		
	comp=Z,19nm,0.6s,mb4.7							
AB31	**Akbulak array**	23.28	1	P		P	12 59 41.9	-1.4
	comp=Z,19nm,0.6s,mb4.7							
ABKAR	**Akbulak array**	23.28	1	*e*P		P	12 59 42.2	-1.1
	comp=Z,19nm,0.6s,mb4.7							
ABKAR	**Akbulak array**	23.28	1	*e*P		P	12 59 42.2	-1.1
	comp=Z,19nm,0.6s,mb4.7							
GUN	**Gumba**	23.59	79	*e*P		P	12 59 47.3	+0.7
	comp=Z,52nm,0.8s,mb5.0							
JIRN	**Jiri**	23.87	80	*e*P		P	12 59 50.0	+0.8
	comp=Z,24nm,0.7s,mb4.7							
AKTK	**Aktyubinsk**	24.49	358	P		P	12 59 54.6	0.0
AKTK				LR		LR	13 10 45.1	
AKTK	**Aktyubinsk**	24.49	358	P		P	12 59 54.6	0.0
	comp=Z,14nm,0.8s,mb4.4							
AKTO	**Aktyubinsk**	24.49	358	P		P	12 59 54.6	0.0
	comp=Z,14nm,0.8s,mb4.5,baz=171,slow=8.8,SNR=46							
AKTO				LR		LR	13 10 45.1	
	comp=Z,77nm,19.6s,MS3.2,baz=355,slow=40							
ODAN	**Odare**	24.98	82	*e*P		P	13 00 02.0	+2.6
	comp=Z,53nm,0.9s,mb5.0							
BR131	**Keskin Array S**	25.61	309	*e*P		P	13 00 05.6	+0.7
	comp=Z,14nm,0.9s,mb4.5							
BR131	**Keskin Array S**	25.61	309	*e*P		P	13 00 05.6	+0.7
	comp=Z,14nm,0.9s,mb4.5							
BRTR	**Keskin Array B**	25.61	309	P		P	13 00 05.8	+0.9
	comp=Z,11nm,0.8s,mb4.4,baz=125,slow=11,SNR=42							
BRTR				PcP		PcP	13 03 36.1	+0.4
	comp=Z,1.7nm,0.6s,baz=148,slow=5.6,SNR=4.9							
BRTR	**Keskin Array B**	25.61	309	*ce*P		P	13 00 05.8	+0.9
BRTR				pmax		pmax		
	comp=Z,11nm,0.8s							
BRTR	**Keskin Array B**	25.61	309	*e*P		P	13 00 05.8	+0.9
	comp=Z,11nm,0.8s,mb4.4							
MK31	**Makanchi Array**	27.57	35	*e*P		P	13 00 22.7	+0.1
MK31	**Makanchi Array**	27.57	35	*e*P		P	13 00 22.7	+0.1
MK31				pmax		pmax		
	comp=Z,1.0nm,0.5s,mb3.7							
MK31	**Makanchi Array**	27.57	35	*e*P		P	13 00 22.7	+0.1
	comp=Z,1.0nm,0.5s,mb3.7							
MKAR	**Makanchi Array**	27.57	35	P		P	13 00 23.5	+0.9
	comp=Z,1.2nm,0.6s,mb3.7,baz=217,slow=9.9,SNR=12							
MKAR				LR		LR	13 11 40.0	
	comp=Z,90nm,20.6s,MS3.3,baz=347,slow=37							
MKAR	**Makanchi Array**	27.57	35	P		P	13 00 23.5	+0.9
	comp=Z,1.0nm,0.6s,mb3.6							
BVA0	**Borovoye Array**	28.26	14	*i* P		P	13 00 28.4	-0.3
BVA0				pmax		pmax		
	comp=Z,1.0nm,0.9s,mb3.5							
BVA0	**Borovoye Array**	28.26	14	*i* P		P	13 00 28.4	-0.3
	comp=Z,1.0nm,0.9s,mb3.5							
BVAR	**Borovoye Array**	28.26	14	P		P	13 00 28.7	0.0
	comp=Z,2.7nm,0.6s,mb4.1,baz=165,slow=6.2,SNR=13							
BVAR	**Borovoye Array**	28.26	14	P		P	13 00 28.7	0.0
BVAR				pmax		pmax		
	comp=Z,3.0nm,0.6s							
BVAR	**Borovoye Array**	28.26	14	P		P	13 00 28.7	0.0
BRVK	**Borovoye**	28.27	14	*e*P		P	13 00 28.6	-0.1
	comp=Z,3.7nm,1.0s,mb4.4							
BRVK	**Borovoye**	28.27	14⇓	*e*P		P	13 00 29.0	+0.3
BRVK				pmax		pmax		
	comp=Z,11nm,1.2s,mb4.4							
BRVK				MLR		MLR		
	comp=Z,80nm,15.0s,MS3.4							
BRVK	**Borovoye**	28.27	14	*e*P		P	13 00 28.6	-0.1
	comp=Z,9.7nm,1.0s,mb4.4							
KURK	**Kurchatov**	28.76	26	P		P	13 00 32.2	-0.9
	comp=Z,1.1nm,0.5s,mb3.8,baz=225,slow=8.5,SNR=6.6							
KURK	**Kurchatov**	28.76	26⇓	*e*P		P	13 00 32.7	-0.4
KURK				pmax		pmax		
	comp=Z,3.0nm,1.2s,mb3.9							
KURK	**Kurchatov**	28.76	26	P		P	13 00 32.2	-0.9
ARU	**Arti**	30.48	359	*i* P		P	13 00 48.6	+0.4
ARU				*e*			13 01 47.3	
ARU				S		S	13 05 49.3	+0.1
ARU				SS		SS	13 07 25.4	-34
ARU				pmax		pmax		
	comp=Z,8.0nm,1.7s,mb4.2							
ARU	**Arti**	30.48	359	*i* P		P	13 00 48.6	+0.4
	comp=Z,8.0nm,1.7s,mb4.2							
ARU				S		S	13 05 49.3	+0.1
MLR	**Muntele Rosu**	33.18	315	P		P	13 01 13.5	+1.4
	comp=Z,3.7nm,0.8s,mb4.4,baz=9.8,slow=3.2,SNR=4.4							
MLR	**Muntele Rosu**	33.18	315	P		P	13 01 13.5	+1.4
MLR				pmax		pmax		
	comp=Z,4.0nm,0.8s							
MLR	**Muntele Rosu**	33.18	315	P		P	13 01 13.5	+1.4
OBN	**Obninsk**	33.65	336	⇓*e*P		P	13 01 16.4	+0.3
OBN				*e*			13 02 31.1	
OBN				*e*			13 03 53.5	
OBN				pmax		pmax		
	comp=Z,8.0nm,0.6s,mb4.8							
OBN	**Obninsk**	33.65	336	*e*P		P	13 01 16.4	+0.3
	comp=Z,8.0nm,0.6s,mb4.8							
ZAA0	**Zalesovo Array**	33.70	27	*e*P		P	13 01 15.7	-0.8
ZAA0	**Zalesovo Array**	33.70	27	*e*P		P	13 01 15.7	-0.8
ZALV	**Zalesovo Beam**	33.70	27	P		P	13 01 15.9	-0.7
	comp=Z,1.8nm,0.3s,mb4.4,baz=226,slow=10,SNR=10							
ZALV				PcP		PcP	13 03 56.0	-0.1
	comp=Z,1.7nm,0.8s,baz=235,slow=5.2,SNR=4.2							
ZALV				LR		LR	13 16 21.2	
	comp=Z,29nm,21.5s,MS3.0,baz=60,slow=39							
ZALV	**Zalesovo Beam**	33.70	27	P		P	13 01 15.9	-0.6
ZALV							13 03 56.0	
ZALV				pmax		pmax		
	comp=Z,2.0nm,0.3s,mb4.5							
ZALV				pmax		pmax		
	comp=Z,2.0nm,0.8s,mb4.1							
ZALV				MLR		MLR		
	comp=Z,29nm,21.5s,MS3.0							
NVS	**Novosibirsk**	33.73	25	*e*P		P	13 01 16.0	-0.9
NVS	**Novosibirsk**	33.73	25	*e*P		P	13 01 16.0	-0.9
AKASG	**Malin Array Be**	33.88	325	P		P	13 01 16.9	-1.3
AKASG	**Malin Array Be**	33.88	325	P		P	13 01 16.9	-1.3
	comp=Z,1.1nm,0.4s,mb4.1,baz=129,slow=7.8,SNR=12							
AKASG	**Malin Array Be**	33.88	325	P		P	13 01 16.9	-1.3
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.4s							
AKASG	**Malin Array Be**	33.88	325	P		P	13 01 16.9	-1.3
KIEV	**Kiev**	33.89	325	*e*P		P	13 01 17.9	-0.4
	comp=Z,11nm,1.0s,mb4.8							
KIEV	**Kiev**	33.89	325	*e*P		P	13 01 17.9	-0.3
KIEV				pmax		pmax		
	comp=Z,11nm,1.0s,mb4.7							
KIEV	**Kiev**	33.89	325	*e*P		P	13 01 17.9	-0.3
	comp=Z,11nm,1.0s,mb4.8							
GTA	**Gaotai**	36.20	58	*e*P		P	13 01 39.8	+1.4
GTA				pP		pP	13 01 44.1	+2.7
GTA				sP		sP	13 01 46.4	+3.7
GTA				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.3							
CMAR	**Chiang Mai Arr**	37.16	93	PcP		PcP	13 04 08.0	+1.0
	comp=Z,0.8nm,0.7s,baz=286,slow=5.7,SNR=4.2							
CRVS	**Cervenica-Dubn**	37.37	318	*e*P		P	13 01 48.9	+0.7
	comp=Z,5.8nm,1.5s,mb4.2							
CRVS	**Cervenica-Dubn**	37.37	318	*e*P		P	13 01 48.9	+0.7
CRVS				pmax		pmax		
	comp=Z,6.0nm,1.5s,mb4.2							
CRVS	**Cervenica-Dubn**	37.37	318	*e*P		P	13 01 48.9	+0.7
CRVS	**Cervenica-Dubn**	37.37	318	*e*P		P	13 01 48.9	+0.7
	comp=Z,5.8nm,1.5s,mb4.2							
KLMR	**Klimovskoe**	37.48	344	*e*P		P	13 01 47.2	-1.8
KLMR				pmax		pmax		
	comp=Z,39nm,1.9s,mb4.9							
KLMR	**Klimovskoe**	37.48	344	*e*P		P	13 01 47.2	-1.8
	comp=Z,39nm,1.9s,mb4.9							
STHS	**Stebnicka Huta**	37.71	319	*e*P		P	13 01 50.9	-0.1
	comp=Z,2.2nm,0.9s,mb3.9							
STHS	**Stebnicka Huta**	37.71	319	*e*P		P	13 01 50.9	-0.1
STHS				pmax		pmax		
	comp=Z,2.0nm,0.9s,mb3.9							
STHS	**Stebnicka Huta**	37.71	319	*e*P		P	13 01 50.9	-0.1
STHS	**Stebnicka Huta**	37.71	319	*e*P		P	13 01 50.9	-0.1
	comp=Z,2.2nm,0.9s,mb3.9							
KECS	**Kecovo**	37.80	317	*e*P		P	13 01 52.5	+0.7
	comp=Z,3.5nm,1.1s,mb4.0							
KECS	**Kecovo**	37.80	317	*e*P		P	13 01 52.5	+0.7
KECS				pmax		pmax		
	comp=Z,4.0nm,1.1s,mb4.1							
KECS	**Kecovo**	37.80	317	*e*P		P	13 01 52.5	+0.7
VYHS	**Vyhne**	38.82	316	*e*P		P	13 02 00.6	+0.2
	comp=Z,4.3nm,1.2s,mb4.0							
VYHS	**Vyhne**	38.82	316	*e*P		P	13 02 00.6	+0.2
VYHS				pmax		pmax		
	comp=Z,4.0nm,1.2s,mb4.0							
VYHS	**Vyhne**	38.82	316	*e*P		P	13 02 00.5	+0.1
VYHS	**Vyhne**	38.82	316	*e*P		P	13 02 00.6	+0.2
	comp=Z,4.3nm,1.2s,mb4.0							
OJC	**Ojcow**	38.89	319	*e*P		P	13 02 01.1	+0.1
OJC	**Ojcow**	38.89	319	*e*P		P	13 02 01.1	+0.1
KOLL	**Kolacno**	39.12	316	*e*P		P	13 02 02.8	-0.1
KOLL	**Kolacno**	39.12	316	*e*P		P	13 02 02.8	-0.1
KOLL	**Kolacno**	39.12	316	*e*P		P	13 02 02.8	-0.1
DPC	**Dobruska-Polom**	41.01	318	*e*P		P	13 02 18.1	-0.5
DPC	**Dobruska-Polom**	41.01	318	*e*P		P	13 02 18.1	-0.5
DPC	**Dobruska-Polom**	41.01	318	*e*P		P	13 02 18.1	-0.5
ZAK	**Zakamensk**	41.38	42	*e*P		P	13 02 21.9	+0.3
ZAK				pmax		pmax		
	comp=Z,2.0nm,0.9s,mb3.8							
ZAK	**Zakamensk**	41.38	42	*e*P		P	13 02 21.9	+0.3
	comp=Z,2.0nm,0.9s,mb3.8							
JOF	**Joensuu**	41.41	341	*e*P		P	13 02 19.7	-2.0
JOF				pmax		pmax		
	comp=Z,10.0nm,1.4s,mb4.2							
JOF	**Joensuu**	41.41	341	*ep*		P	13 02 19.7	-2.0
	comp=Z,10nm,1.4s,mb4.3							
JOF	**Joensuu**	41.41	341	*e*P		P	13 02 19.7	-2.0
	comp=Z,10.0nm,1.4s,mb4.2							
MOA	**Molln**	41.53	314	⇑*i*P		P	13 02 22.5	-0.4
	comp=Z,8.1nm,0.8s,mb4.4							
MOA	**Molln**	41.53	314	P		P	13 02 22.5	-0.4
	comp=Z,8.1nm,0.8s,mb4.4							
TLY	**Talaya**	42.04	40	*e*P		P	13 02 29.1	+2.1
TLY				pmax		pmax		
	comp=Z,5.0nm,0.7s,mb4.2							
TLY				MLR		MLR		
	comp=Z,41nm,15.0s,MS3.4							
TLY	**Talaya**	42.04	40	*e*P		P	13 02 29.1	+2.1
	comp=Z,41nm,15.0s							
FINES	**FINESS Array B**	42.05	337	P		P	13 02 26.9	0.0
FINES	**FINESS Array B**	42.05	337	P		P	13 02 26.9	0.0
	comp=Z,5.5nm,0.4s,mb4.6,baz=134,slow=8.9,SNR=58							
FINES	**FINESS Array B**	42.05	337	P		P	13 02 26.9	-0.1
FINES				pmax		pmax		
	comp=Z,6.0nm,0.4s							
FINES	**FINESS Array B**	42.05	337	P		P	13 02 26.9	-0.1
	comp=Z,6.0nm,0.4s,mb4.6							
KHC	**Kasperske Hory**	42.32	316	*e*P		P	13 02 28.7	-0.7
KHC	**Kasperske Hory**	42.32	316	*e*P		P	13 02 28.7	-0.7
KHC	**Kasperske Hory**	42.32	316	*e*P		P	13 02 28.7	-0.7
KAF	**Kangasniemi**	42.42	338	*e*P		P	13 02 28.8	-1.2
KAF				pmax		pmax		
	comp=Z,8.0nm,1.2s,mb4.2							
KAF	**Kangasniemi**	42.42	338	*ep*		P	13 02 28.8	-1.2
	comp=Z,8.3nm,1.2s,mb4.2							
KAF	**Kangasniemi**	42.42	338	*e*P		P	13 02 28.8	-1.2
	comp=Z,8.0nm,1.2s,mb4.2							
SONM	**Songino Array**	42.61

comp=Z,3.5nm,0.6s,mb4.5
ORIF Oris-en-Rattie 46.72 308 *e*P **P** **13 03 02.9 -1.7**
ORIF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
CABF La Chapelle 46.76 311 *e*P **P** **13 03 03.8 -1.1**
comp=Z,28nm,1.0s,mb4.8
CABF La Chapelle 46.76 311 *e*P **P** **13 03 03.8 -1.1**
comp=Z,14nm,1.0s,mb4.9
CABF La Chapelle 46.76 311 *e*P **P** **13 03 03.8 -1.1**
CABF pmax pmax
comp=Z,14nm,1.0s,mb4.8
HAU Haudompre 46.77 312 *e*P **P** **13 03 03.8 -1.2**
comp=Z,7.6nm,0.7s,mb4.5
HAU Haudompre 46.77 312 *e*P **P** **13 03 03.8 -1.2**
comp=Z,3.8nm,0.7s,mb4.4
HAU Haudompre 46.77 312 *e*P **P** **13 03 03.8 -1.2**
HAU pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
SMRF Simiane la Rot 46.86 307⇑*i*P **P** **13 03 06.2 +0.5**
comp=Z,5.4nm,0.7s,mb4.3
SMRF Simiane la Rot 46.86 307⇑*i*P **P** **13 03 06.2 +0.5**
comp=Z,5.4nm,0.7s,mb4.6
VIVF Saint-Julien-l 47.57 308⇑*i*P **P** **13 03 10.5 -0.8**
comp=Z,14nm,0.7s,mb4.8
VIVF Saint-Julien-l 47.57 308⇑*i*P **P** **13 03 10.5 -0.8**
comp=Z,7.3nm,0.7s,mb4.8
VIVF Saint-Julien-l 47.57 308⇑*i*P **P** **13 03 10.5 -0.8**
VIVF pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
NOA NORSAR Array B 47.81 331 P **P** **13 03 12.2 -0.6**
comp=Z,3.9nm,0.9s,mb4.5,baz=120,slow=7.4,SNR=8.6
NOA NORSAR Array B 47.81 331 P **P** **13 03 12.2 -0.6**
NOA pmax pmax
comp=Z,4.0nm,0.9s
ARCES ARCESS Array B 47.95 345 P **P** **13 03 13.8 -0.1**
ARCES ARCESS Array B 47.95 345 P **P** **13 03 13.8 0.0**
comp=Z,8.4nm,0.7s,mb4.9,baz=141,slow=8.8,SNR=27
ARCES ARCESS Array B 47.95 345 P **P** **13 03 13.8 0.0**
ARCES pmax pmax
comp=Z,8.0nm,0.7s
GIVF Givet 48.09 315 *e*P **P** **13 03 15.6 +0.5**
comp=Z,36nm,1.0s,mb5.0
GIVF Givet 48.09 315 *e*P **P** **13 03 15.6 +0.5**
comp=Z,18nm,1.0s,mb5.1
GIVF Givet 48.09 315 *e*P **P** **13 03 15.6 +0.5**
GIVF pmax pmax
comp=Z,18nm,1.0s,mb5.1
LASF Ste Croix 48.11 307 *e*P **P** **13 03 15.1 -0.3**
comp=Z,16nm,0.7s,mb4.8
SMF Signal de Mont 48.30 310⇑*i*P **P** **13 03 16.3 -0.6**
comp=Z,42nm,0.8s,mb5.2
SMF Signal de Mont 48.30 310⇑*i*P **P** **13 03 16.3 -0.6**
comp=Z,21nm,0.8s,mb5.2
SMF Signal de Mont 48.30 310⇑*i*P **P** **13 03 16.3 -0.6**
SMF pmax pmax
comp=Z,21nm,0.8s,mb5.2
LOR Lormes 48.35 311⇑*i*P **P** **13 03 16.4 -0.8**
comp=Z,8.9nm,0.6s,mb4.7
LOR Lormes 48.35 311⇑*i*P **P** **13 03 16.4 -0.8**
comp=Z,4.4nm,0.6s,mb4.7
LOR Lormes 48.35 311⇑*i*P **P** **13 03 16.4 -0.8**
LOR pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
BAIF Baives 48.47 315 *e*P **P** **13 03 17.8 -0.3**
SSF Saint Saulge 48.57 311⇑*i*P **P** **13 03 18.4 -0.5**
comp=Z,22nm,0.8s,mb4.9
SSF Saint Saulge 48.57 311⇑*i*P **P** **13 03 18.4 -0.5**
comp=Z,11nm,0.8s,mb4.9
SSF Saint Saulge 48.57 311⇑*i*P **P** **13 03 18.4 -0.5**
SSF pmax pmax
comp=Z,11nm,0.8s,mb4.9
AVF Avril sur Loir 48.65 311⇑*i*P **P** **13 03 18.7 -0.8**
comp=Z,8.1nm,0.8s,mb4.5
AVF Avril sur Loir 48.65 311⇑*i*P **P** **13 03 18.7 -0.8**
comp=Z,4.1nm,0.8s,mb4.5
AVF Avril sur Loir 48.65 311⇑*i*P **P** **13 03 18.7 -0.8**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BGF Bois d'Agland 48.98 310⇑*i*P **P** **13 03 21.6 -0.5**
comp=Z,16nm,0.7s,mb4.8
BGF Bois d'Agland 48.98 310⇑*i*P **P** **13 03 21.6 -0.5**
comp=Z,7.9nm,0.7s,mb4.8
BGF Bois d'Agland 48.98 310⇑*i*P **P** **13 03 21.6 -0.5**
BGF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
MTLF Montolieu 49.27 306⇑*i*P **P** **13 03 24.7 +0.4**
comp=Z,12nm,0.7s,mb4.7
MTLF Montolieu 49.27 306⇑*i*P **P** **13 03 24.7 +0.4**
comp=Z,5.9nm,0.7s,mb4.7
MTLF Montolieu 49.27 306⇑*i*P **P** **13 03 24.7 +0.4**
MTLF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
TCF Toulx Ste Croi 49.40 310⇑*i*P **P** **13 03 25.0 -0.3**
comp=Z,11nm,0.6s,mb4.8
TCF Toulx Ste Croi 49.40 310⇑*i*P **P** **13 03 25.0 -0.3**
comp=Z,5.3nm,0.6s,mb4.8
TCF Toulx Ste Croi 49.40 310⇑*i*P **P** **13 03 25.0 -0.3**
TCF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
CAF Calviac 49.43 308⇑*i*P **P** **13 03 25.6 +0.1**
comp=Z,14nm,0.8s,mb4.7
CAF Calviac 49.43 308⇑*i*P **P** **13 03 25.6 +0.1**
comp=Z,6.8nm,0.8s,mb4.7
CAF Calviac 49.43 308⇑*i*P **P** **13 03 25.6 +0.1**
CAF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
RJF Les Rejaudoux 49.83 308⇑*i*P **P** **13 03 28.8 +0.2**
comp=Z,20nm,0.7s,mb4.9
RJF Les Rejaudoux 49.83 308⇑*i*P **P** **13 03 28.8 +0.2**
comp=Z,10nm,0.7s,mb5.0
RJF Les Rejaudoux 49.83 308⇑*i*P **P** **13 03 28.8 +0.2**
RJF pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
LFF La Frestale 50.37 308 *e*P **P** **13 03 32.8 +0.1**
MFF Saint Martin d 51.04 310 *e*P **P** **13 03 36.9 -0.8**
comp=Z,28nm,1.1s,mb4.8
MFF Saint Martin d 51.04 310 *e*P **P** **13 03 36.9 -0.8**
comp=Z,14nm,1.1s,mb4.8
MFF Saint Martin d 51.04 310 *e*P **P** **13 03 36.9 -0.8**
MFF pmax pmax
comp=Z,14nm,1.1s,mb4.8
LDF La Druitiere 51.13 313⇑*i*P **P** **13 03 37.5 -0.9**
comp=Z,14nm,0.6s,mb4.8
LDF La Druitiere 51.13 313⇑*i*P **P** **13 03 37.5 -0.9**
comp=Z,7.1nm,0.6s,mb4.8
LDF La Druitiere 51.13 313⇑*i*P **P** **13 03 37.5 -0.9**
LDF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
ETSF Etsaut 51.30 305 *e*P **P** **13 03 40.2 +0.4**
comp=Z,18nm,0.9s,mb4.7
ETSF Etsaut 51.30 305 *e*P **P** **13 03 40.2 +0.4**
comp=Z,8.8nm,0.9s,mb4.7
ETSF Etsaut 51.30 305 *e*P **P** **13 03 40.2 +0.4**
ETSF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
FLN La Foliniere 51.38 313⇑*i*P **P** **13 03 39.5 -0.7**
comp=Z,33nm,0.8s,mb5.0
FLN La Foliniere 51.38 313⇑*i*P **P** **13 03 39.5 -0.7**
comp=Z,16nm,0.8s,mb5.0
FLN La Foliniere 51.38 313⇑*i*P **P** **13 03 39.5 -0.7**
FLN pmax pmax
comp=Z,16nm,0.8s,mb5.0
GRR Gorron 51.61 312 *e*P **P** **13 03 41.3 -0.6**
comp=Z,13nm,0.7s,mb4.7
GRR Gorron 51.61 312 *e*P **P** **13 03 41.3 -0.6**
comp=Z,6.3nm,0.7s,mb4.7
GRR Gorron 51.61 312 *e*P **P** **13 03 41.3 -0.6**
GRR pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
NJ2 Nanjing 51.72 69 *e*P **P** **13 03 41.4 -1.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
SJPF Ste Jean 51.78 306 *e*P **P** **13 03 43.8 +0.4**
comp=Z,16nm,0.8s,mb4.7
SJPF Ste Jean 51.78 306 *e*P **P** **13 03 43.8 +0.4**
comp=Z,7.9nm,0.8s,mb4.7
SJPF Ste Jean 51.78 306 *e*P **P** **13 03 43.8 +0.4**
SJPF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SGMF Saint Gilles 52.73 312⇑*i*P **P** **13 03 49.9 -0.4**
comp=Z,28nm,0.9s,mb4.9
SGMF Saint Gilles 52.73 312⇑*i*P **P** **13 03 49.9 -0.4**
comp=Z,14nm,0.9s,mb4.9
SGMF Saint Gilles 52.73 312⇑*i*P **P** **13 03 49.9 -0.4**
SGMF pmax pmax
comp=Z,14nm,0.9s,mb4.9
QUIF Quistinic 53.13 312⇑*i*P **P** **13 03 52.6 -0.7**
comp=Z,13nm,0.6s,mb4.7
QUIF Quistinic 53.13 312⇑*i*P **P** **13 03 52.6 -0.7**
comp=Z,6.3nm,0.6s,mb4.7
QUIF Quistinic 53.13 312⇑*i*P **P** **13 03 52.6 -0.7**
QUIF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
ROSF Rostrenen 53.21 312 *e*P **P** **13 03 53.2 -0.7**
comp=Z,40nm,1.0s,mb5.0
ROSF Rostrenen 53.21 312 *e*P **P** **13 03 53.2 -0.7**
comp=Z,20nm,1.0s,mb5.0
ROSF Rostrenen 53.21 312 *e*P **P** **13 03 53.2 -0.7**
ROSF pmax pmax
comp=Z,20nm,1.0s,mb5.0
EKA Eskdalemuir Ar 53.61 321 P **P** **13 03 56.0 -0.6**
comp=Z,1.1nm,0.4s,mb4.1,baz=106,slow=8.2,SNR=9.4
EKA Eskdalemuir Ar 53.61 321 P **P** **13 03 56.1 -0.6**
EKA pmax pmax
comp=Z,1.0nm,0.4s
TORD Torodi Ar. Bea 55.55 268 P **P** **13 04 11.2 -0.2**
comp=Z,6.0nm,0.8s,mb4.7,baz=61,slow=7.0,SNR=39
SPITS Spitsbergen Ar 55.87 350 P **P** **13 04 12.8 0.0**
comp=Z,5.8nm,0.6s,mb4.8,baz=118,slow=10,SNR=8.9
SPITS Spitsbergen Ar 55.87 350 P **P** **13 04 12.8 +0.1**
SPITS pmax pmax
comp=Z,6.0nm,0.6s
KBS Kingsbay 57.03 350⇓*e*P **P** **13 04 21.0 0.0**
KBS pmax pmax
comp=Z,30nm,2.5s,mb4.9
KSRS Korea Array 58.20 61 P **P** **13 04 29.6 -0.3**
comp=Z,2.0nm,0.7s,mb4.3,baz=278,slow=7.9,SNR=11
KSRS LR LR 13 32 35.2
comp=Z,50nm,18.9s,MS3.6,baz=285,slow=39
KSRS Korea Array 58.20 61 P **P** **13 04 29.6 -0.3**
KSRS pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KSRS MLR MLR
comp=Z,50nm,18.9s,MS3.6
KLR Kul'dur 59.44 46 *e*P **P** **13 04 34.2 -4.1**
DBIC Dimbokro 64.07 265 P **P** **13 05 10.5 +0.4**
DBIC Dimbokro 64.07 265 P **P** **13 05 10.5 +0.4**
comp=Z,3.0nm,0.7s,mb4.5,baz=46,slow=12,SNR=6.2
DBIC Dimbokro 64.07 265 P **P** **13 05 10.5 +0.4**
DBIC pmax pmax
comp=Z,3.0nm,0.7s
KIC Kosan Boka 64.10 264 *e*P **P** **13 05 10.7 +0.4**
comp=Z,11nm,0.8s,mb5.0
TIC Toumodi 64.23 265 *e*P **P** **13 05 11.3 +0.2**
comp=Z,6.8nm,0.5s,mb4.9
TIC Toumodi 64.23 265 *e*P **P** **13 05 11.3 +0.2**
TIC pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
LIC Lamto 64.42 264 *e*P **P** **13 05 12.6 +0.3**
comp=Z,23nm,1.1s,mb5.1
ASAR Alice Springs 87.23 118 P **P** **13 07 22.6 +0.2**
comp=Z,2.0nm,0.8s,mb4.4,baz=306,slow=4.8,SNR=33
ASAR Alice Springs 87.23 118 P **P** **13 07 22.6 +0.2**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
ASAR Alice Springs 87.23 118 P **P** **13 07 22.6 +0.2**
ILAR Eielson Array 87.29 11 P **P** **13 07 20.9 -1.1**
comp=Z,0.8nm,0.6s,mb4.1,baz=321,slow=4.9,SNR=16
ILAR Eielson Array 87.29 11 P **P** **13 07 21.0 -1.1**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
ILAR Eielson Array 87.29 11 P **P** **13 07 21.0 -1.1**
comp=Z,1.0nm,0.6s,mb4.2
NVAR Mina Array Bea 115.94 358 PKP PKPdf 13 13 20.4 +1.6
comp=Z,0.3nm,0.6s,baz=5.7,slow=0.9,SNR=3.6
NVAR Mina Array Bea 115.94 358 PKIKP PKPdf 13 13 20.4 +1.6
TXAR Lajitas Array 122.72 343 PKP PKPdf 13 13 32.5 +0.4
comp=Z,0.3nm,0.7s,baz=190,slow=1.9,SNR=4.2
TXAR Lajitas Array 122.72 343 PKIKP PKPdf 13 13 32.5 +0.4

IDC 11 12:57:42.1±1.3, 25.78N×60.04E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/23, mbtmp3.8/5, Error ellipse: s-maj=41.8km s-min=30.3km az=38.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRTR	**Keskin Array B**	**26.08**	**309**	P	P	13 03 17.4	-0.1
	1.8nm,0.8s,baz=130,slow=12,SNR=4.5						
FINES	**FINESS Array B**	**42.38**	**337**	P	P	13 05 38.4	+0.5
	1.8nm,0.4s,baz=134,slow=8.3,SNR=14						
ARCES	**ARCESS Array B**	**48.23**	**344**	P	P	13 06 24.9	+0.8
	0.4nm,0.6s,baz=119,slow=4.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**56.04**	**269**	P	P	13 07 23.0	-0.2
	0.9nm,0.5s,baz=64,slow=7.0,SNR=8.6						
ASAR	**Alice Springs**	**86.72**	**118**	P	P	13 10 28.9	+0.6
	0.2nm,0.9s,baz=301,slow=4.8,SNR=2.7						
ILAR	**Eielson Array**	**87.34**	**11**	P	P	13 10 28.9	-1.7
	0.5nm,1.0s,baz=287,slow=3.6,SNR=4.7						

IDC 11 13:27:41.4±3.4, 16.04S×112.48W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.9/12, mbtmp3.9/3, Error ellipse: s-maj=126.6km s-min=34.5km az=36.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**42.53**	**97**	P	P	13 35 39.8	+0.7
	1.2nm,0.4s,baz=250,slow=7.3,SNR=9.5						
NVAR	**Mina Array Bea**	**54.45**	**354**	P	P	13 37 09.9	-0.7
	0.7nm,0.8s,baz=176,slow=9.6,SNR=5.8						
ILAR	**Eielson Array**	**84.73**	**346**	P	P	13 40 18.6	+1.8
	0.9nm,0.9s,baz=147,slow=4.4,SNR=11						
MKAR	**Makanchi Array**	**146.97**	**341**	PKPbc	PKPbc	13 47 24.0	-2.0
	0.6nm,0.5s,baz=22,slow=3.3,SNR=7.6						

*ISK **11** 13:28:20.6,39.91N×33.55E, h5km, MD2.7*
*ISCJB **11** 13:28:22.5±0.5, 39.95N±0.03×33.54E±0.04, h8km±5km, Error ellipse: s-maj=5.1km s-min=4.1km az=39.0*
*DDA **11** 13:28:22.4,39.99N×33.57E, h7km±2km, Ml3.2*
*CSEM **11** 13:28:22.5±0.2,39.96N×33.54E, h10km, MD2.7, Error ellipse: s-maj=4.6km s-min=4.1km az=143.0*
ISC 11 13:28:23.0±0.5, 39.95N±0.03×33.54E±0.03, h11km±4km, n27, σ0s90/45, 2C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBAL	**Bala**	**0.52**	**218**	⇑*i*P	**Pg**	**13 28 33.2**	**+0.1**
BBAL				*i* S	**Sg**	**13 28 41.5**	**+1.5**
BBAL	**Bala**	**0.52**	**218**	*i* P	**Pg**	**13 28 33.2**	**+0.1**
BBAL				*i* S	**Sg**	**13 28 41.5**	**+1.5**
ELDT	**Eldivan**	**0.55**	**351**	*e*P	**Pg**	**13 28 33.1**	**-0.6**
ELDT				*e*S	**Sg**	**13 28 41.5**	**+0.7**
ELDT	**Eldivan**	**0.55**	**351**	*e*P	**Pg**	**13 28 33.1**	**-0.6**
ELDT				*e*S	**Sg**	**13 28 41.5**	**+0.6**
LOD	**Lodumlu**	**0.60**	**264**	*e*PG	**Pg**	**13 28 33.3**	**-1.4**
LOD				*e*SG	**Sg**	**13 28 42.6**	**+0.1**
LOD	**Lodumlu**	**0.60**	**264**	*e*Pg	**Pg**	**13 28 33.3**	**-1.4**
LOD				*e*Sg	**Sg**	**13 28 42.7**	**+0.2**
CANT	**Cankiri**	**0.66**	**5**	*e*PG	**Pg**	**13 28 35.2**	**-0.6**
CANT				*e*SG	**Sg**	**13 28 45.8**	**+1.4**
CDAG	**Cicekdag**	**0.72**	**117**	⇑*i*P	**Pg**	**13 28 36.7**	**-0.3**
CDAG				*i* S	**Sg**	**13 28 46.7**	**+0.3**
CDAG	**Cicekdag**	**0.72**	**117**	*i* P	**Pg**	**13 28 36.7**	**-0.3**
CDAG				*i* S	**Sg**	**13 28 46.7**	**+0.3**
CORM	**Corum**	**0.87**	**74**	*e*PG	**Pg**	**13 28 38.5**	**-1.3**
CORM				*e*SG	**Sg**	**13 28 51.5**	**+0.4**
CORM	**Corum**	**0.87**	**74**	*e*Pg	**Pg**	**13 28 38.5**	**-1.3**
CORM				*e*Sg	**Sg**	**13 28 51.5**	**+0.4**
CTKT	**Corum**	**1.17**	**55**	*e*P	**Pb**	**13 28 43.9**	**-1.3**
CTKT				*e*S	**Sb**	**13 28 59.6**	**-0.7**
CTKT	**Corum**	**1.17**	**55**	*e*P	**Pb**	**13 28 43.9**	**-1.3**
CTKT				*e*S	**Sb**	**13 28 59.6**	**-0.7**
YOZ	**Yozgat**	**1.41**	**102**	*e*PN	**Pn**	**13 28 48.1**	**-0.4**
YOZ				*e*SN	**Sn**	**13 29 08.0**	**+1.0**
YOZ	**Yozgat**	**1.41**	**102**	*e*Pn	**Pn**	**13 28 48.1**	**-0.4**
YOZ				*e*Sn	**Sn**	**13 29 08.0**	**+1.0**
SAFT	**Safranbolu**	**1.44**	**334**	*e*PN	**Pn**	**13 28 49.3**	**+0.3**
SAFT	**Safranbolu**	**1.44**	**334**	*e*Pn	**Pn**	**13 28 49.3**	**+0.3**
AVNT	**Avonos**	**1.55**	**138**	*e*P	**Pn**	**13 28 52.5**	**+2.0**
AVNT				*e*S	**Sn**	**13 29 15.4**	**+4.8**
AVNT	**Avonos**	**1.55**	**138**	*e*P	**Pn**	**13 28 52.5**	**+2.0**
BALT	**Daday**	**1.59**	**356**	⇓*i*P	**Pn**	**13 28 51.6**	**+0.6**
BALT				*i* S	**Sn**	**13 29 11.9**	**+0.5**
BALT	**Daday**	**1.59**	**356**	*i* P	**Pn**	**13 28 51.6**	**+0.6**
BALT				*i* S	**Sn**	**13 29 11.9**	**+0.5**
SVRH	**Sivrihisar-ESK**	**1.63**	**253**	*e*PN	**Pn**	**13 28 51.4**	**-0.3**
SVRH	**Sivrihisar-ESK**	**1.63**	**253**	*e*Pn	**Pn**	**13 28 51.4**	**-0.2**
KIZT	**Kizilcal**	**1.67**	**231**	*e*PN	**Pn**	**13 28 50.8**	**-1.3**
KIZT	**Kizilcal**	**1.67**	**231**	*e*Pn	**Pn**	**13 28 50.8**	**-1.3**
SULT	**Sultanhani-AKS**	**1.75**	**181**	*e*PN	**Pn**	**13 28 52.5**	**-0.7**
SULT	**Sultanhani-AKS**	**1.75**	**181**	*e*Pn	**Pn**	**13 28 52.6**	**-0.6**

*ISCJB **11** 13:49:44.7±1.7, 37.15N±0.07×38.78E±0.08, h4km±7km, Error ellipse: s-maj=13.4km s-min=6.9km az=138.6*
*ISK **11** 13:49:45.1, 37.18N×38.84E, h7km, MD3.0*
*CSEM **11** 13:49:45.0±0.5, 37.16N×38.80E, h5km, MD3.0, Error ellipse: s-maj=9.5km s-min=5.5km az=144.0*
*DDA **11** 13:49:49.4, 37.24N×38.44E, h6km±5km, Md2.8*
ISC 11 13:49:45.0±1.7, 37.15N±0.07×38.78E±0.08, h5km±6km, n16, σ0s52/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URFA	**Urfa**	**0.30**	**7**	*e*PG	**Pg**	**13 49 50.5**	**-0.3**
URFA				*e*SG	**Sg**	**13 49 55.2**	**+0.5**
URFA	**Urfa**	**0.30**	**7**	*e*Pg	**Pg**	**13 49 50.5**	**-0.3**
URFA				*e*Sg	**Sg**	**13 49 55.2**	**+0.5**
ATAB	**Bozova**	**0.50**	**310**	*e*P	**Pg**	**13 49 54.3**	**-0.3**
ATAB				*e*S	**Sg**	**13 50 01.0**	**-0.2**
ATAB	**Bozova**	**0.50**	**310**	*e*P	**Pg**	**13 49 54.3**	**-0.4**
ATAB				*e*S	**Sg**	**13 50 01.0**	**-0.2**
GZT	**Gaziantep**	**0.99**	**283**	*e*P	**Pg**	**13 50 03.8**	**-0.2**
GZT				*e*S	**Sg**	**13 50 12.3**	**-4.5**
MALT	**Malatya**	**1.20**	**347**	*e*PN	**Pn**	**13 50 08.1**	**-0.2**
MALT				*e*SN	**Sn**	**13 50 24.5**	**-0.4**
MALT	**Malatya**	**1.20**	**347**	*e*Pn	**Pn**	**13 50 08.1**	**-0.2**
MALT				*e*Sn	**Sn**	**13 50 24.5**	**-0.4**
MYA	**Malatya**	**1.21**	**347**	*e*PN	**Pn**	**13 50 08.3**	**-0.2**
MYA	**Malatya**	**1.21**	**347**	*e*Pn	**Pn**	**13 50 08.3**	**-0.2**
SVRC	**Sivrice-ELAZID**	**1.30**	**19**	*e*PN	**Pn**	**13 50 09.7**	**-0.1**
SVRC				*e*SN	**Sn**	**13 50 27.0**	**-0.4**
SVRC	**Sivrice-ELAZID**	**1.30**	**19**	*e*Pn	**Pn**	**13 50 09.7**	**-0.1**
SVRC				*e*Sn	**Sn**	**13 50 27.0**	**-0.5**
AKCD	**Akcadag**	**1.33**	**330**	*e*P	**Pn**	**13 50 10.9**	**+0.7**
AKCD				*e*S	**Sb**	**13 50 28.2**	**+0.4**
AKCD	**Akcadag**	**1.33**	**330**	*e*P	**Pn**	**13 50 10.9**	**+0.7**
AKCD				*e*S	**Sb**	**13 50 28.2**	**+0.4**
KUZU	**Kuzuini**	**1.41**	**255**	*e*P	**Pn**	**13 50 16.8**	**+5.5**
KUZU				*e*S	**Sb**	**13 50 29.6**	**-0.5**
KMRS	**Kahramanmaras**	**1.54**	**284**	*e*PN	**Pn**	**13 50 14.3**	**+1.3**
KMRS	**Kahramanmaras**	**1.54**	**284**	*e*Pn	**Pn**	**13 50 14.3**	**+1.3**

*ISCJB **11** 13:54:01.6±1.2, 13.7N±0.2×121.2E±0.3, h184km±6km, mb3.3/6, Error ellipse: s-maj=53.5km s-min=24.6km az=153.6*
*NEIC **11** 13:54:02.4±1.0, 13.58N×121.08E, h174km±8km, mb3.6/1, Error ellipse: s-maj=32.1km s-min=16.1km az=62.0*
*IDC **11** 13:54:02.6±1.0, 13.57N×121.12E, h177km±5km, mb3.0/5, mb1 3.1/5, mb1mx2.9/21, mbtmp3.0/5, Error ellipse: s-maj=43.5km s-min=20.1km az=63.0*
ISC 11 13:54:02.9±1.1, 13.6N±0.2×121.1E±0.3, h179km±7km, n7, σ0s71/8, mb3.3/6, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.56**	**347**	P	**Pn**	**13 54 26.8**	**-1.0**
	33nm,0.3s,baz=176,slow=12,SNR=5.2						
TGY				S	**Sn**	**13 54 47.7**	**+0.7**
	59nm,0.3s,baz=319,slow=18,SNR=8.9						
CMAR	**Chiang Mai Arr**	**21.81**	**286**	P	**P**	**13 58 41.1**	**0.0**
	1.5nm,0.9s,mb3.4,baz=98,slow=8.1,SNR=9.0						
SONM	**Songino Array**	**36.30**	**343**	P	**P**	**14 00 49.5**	**+0.4**
	0.6nm,0.5s,mb3.5,baz=164,slow=10,SNR=4.4						
ASAR	**Alice Springs**	**39.06**	**161**	P	**P**	**14 01 12.8**	**+0.2**
	0.7nm,1.1s,mb3.2,baz=337,slow=7.8,SNR=4.5						
MKAR	**Makanchi Array**	**46.36**	**324**	P	**P**	**14 02 11.4**	**+0.3**
	0.1nm,0.3s,mb3.0,baz=126,slow=7.3,SNR=2.7						
ZALV	**Zalesovo Beam**	**49.35**	**333**	P	**P**	**14 02 33.3**	**-0.6**
	0.3nm,0.3s,mb3.4,baz=116,slow=6.6,SNR=3.0						
KURK	**Kurchatov**	**50.51**	**326**	*e*P	**P**	**14 02 42.7**	**0.0**
	1.1nm,0.7s,mb3.6						

*IDC **11** 14:00:35.8±1.3, 1.14S×127.23E, h0km, mb4.1/8, mb1 4.1/8, mb1mx3.9/21, mbtmp4.1/8, Error ellipse: s-maj=173.5km s-min=18.8km az=67.0*
*ISCJB **11** 14:00:37.1±2.7, 1.05S±0.04×127.16E±0.07, h15km±17km, mb4.0/9, Error ellipse: s-maj=11.5km s-min=6.1km az=171.4*
*DJA **11** 14:00:38, 1.02S×127.24E, h16km, MLv3.9/5*
*NEIC **11** 14:00:41.0±0.8, 1.18S×127.23E, h35km, mb3.9/1, Error ellipse: s-maj=102.0km s-min=10.8km az=67.0*
ISC 11 14:00:36.7±2.3, 1.09S±0.05×127.2E±0.1, h2km±15km, n18, σ0s64/22, mb4.0/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**0.56**	**37**	P	**Pg**	**14 00 47.3**	**-0.2**
LBMI				S	**Sg**	**14 00 54.9**	**+0.1**
TNTI	**Ternate**	**1.86**	**6**	P	**Pn**	**14 01 10.5**	**+0.9**
NLAI	**Namlea**	**2.14**	**182**	P	**Pn**	**14 01 13.5**	**0.0**
NLAI				S	**Sn**	**14 01 41.7**	**+1.0**
AAI	**Ambon**	**2.78**	**158**	P	**Pn**	**14 01 23.1**	**+0.8**
AAI				S	**Sn**	**14 01 56.5**	**-0.1**
MSAI	**Masohi**	**2.86**	**142**	P	**Pn**	**14 01 23.2**	**-0.2**
MSAI				S	**Sn**	**14 01 58.6**	**+0.2**
ASAR	**Alice Springs**	**23.38**	**164**	P	**P**	**14 05 45.1**	**-1.9**
	1.2nm,0.5s,mb3.6,baz=346,slow=11,SNR=26						
STKA	**Stephens Creek**	**33.52**	**157**	P	**P**	**14 07 17.2**	**-0.7**
STKA	**Stephens Creek**	**33.52**	**157**	P	**P**	**14 07 17.2**	**-0.7**
	1.8nm,0.6s,mb4.2,baz=347,slow=8.4,SNR=5.3						
SONM	**Songino Array**	**51.98**	**342**	P	**P**	**14 09 47.7**	**+0.3**
	0.8nm,0.6s,mb3.8,baz=162,slow=8.9,SNR=4.9						
MK31	**Makanchi Array**	**61.76**	**327**	*e*P	**P**	**14 10 57.2**	**+0.4**
MKAR	**Makanchi Array**	**61.76**	**327**	P	**P**	**14 10 57.5**	**+0.7**
	1.1nm,0.5s,mb4.3,baz=125,slow=9.0,SNR=15						
ZALV	**Zalesovo Beam**	**65.06**	**334**	P	**P**	**14 11 17.5**	**-1.1**
	0.4nm,0.4s,mb3.8,baz=104,slow=4.7,SNR=4.8						
KURK	**Kurchatov**	**66.03**	**329**	P	**P**	**14 11 24.8**	**-0.1**
KURK	**Kurchatov**	**66.03**	**329**	P	**P**	**14 11 24.8**	**-0.1**
	3.7nm,0.6s,mb4.6,baz=128,slow=5.8,SNR=4.2						
BVAR	**Borovoye Array**	**71.58**	**328**	P	**P**	**14 11 59.5**	**0.0**
	1.5nm,0.7s,mb4.0,baz=126,slow=7.5,SNR=7.6						
ABKAR	**Akbulak array**	**76.15**	**322**	*e*P	**P**	**14 12 26.0**	**-0.3**
	0.9nm,0.7s,mb3.8						
AKTK	**Aktyubinsk**	**77.69**	**322**	P	**P**	**14 12 34.9**	**-0.1**
AKTO	**Aktyubinsk**	**77.69**	**322**	P	**P**	**14 12 34.9**	**-0.1**
	1.5nm,0.4s,mb4.3,baz=99,slow=5.6,SNR=6.9						

*IDC **11** 14:01:27.2±1.9, 22.91N×93.56E, h0km, mb4.4/3, mb1 4.4/3, mb1mx3.5/24, mbtmp4.4/3, ML3.4/1, MS3.6/3, Ms1 3.6/3, ms1mx3.1/25, Error ellipse: s-maj=101.2km s-min=17.1km az=54.0*
ISC 11 14:01:33.6±1.2, 23.16N±0.08×94.15E±0.07, h10km, n18, σ1s91/28, mb4.0/3, MS3.6/3, 1D, Myanmar-India border region

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

PKIN				*e*Sn		**Sn**	**14 05 26.2**	**-0.2**
	44nm,0.5s								
KKN	**Kakani**	**9.24**	**302**	*e*Pn		**Pn**	**14 03 51.4**	**+4.4**
KKN				*e*Sn		**Sn**	**14 05 30.4**	**-0.7**
DMN	**Daman**	**9.30**	**300**	*e*Pn		**Pn**	**14 03 52.6**	**+4.8**
DMN				*e*Sn		**Sn**	**14 05 32.8**	**+0.3**
	51nm,0.5s								
GKN	**Gorkha**	**9.85**	**301**	*e*Pn		**Pn**	**14 03 59.3**	**+4.0**
GKN				*e*Sn		**Sn**	**14 05 45.2**	**-0.7**
	60nm,0.3s								
MKAR	**Makanchi Array**	**25.44**	**341**	P		**P**	**14 06 57.7**	**-3.8**
	2.8nm,0.5s,mb4.1,baz=147,slow=10.0,SNR=32								
MKAR				LR		LR	14 18 44.7		
	comp=Z,121nm,18.9s,MS3.4,baz=183,slow=41								
KURK	**Kurchatov**	**30.05**	**340**	P		**P**	**14 07 38.0**	**-4.7**
	0.4nm,0.3s,mb3.7,baz=153,slow=9.6,SNR=2.8								
ATD	**Arta Tunnel**	**50.09**	**266**	LR		LR	14 28 06.8		
	comp=Z,38nm,21.4s,MS3.4,baz=272,slow=32								
ASAR	**Alice Springs**	**60.48**	**138**	P		**P**	**14 11 39.8**	**-4.2**
	1.4nm,0.7s,mb4.1,baz=321,slow=6.9,SNR=31								
TORD	**Torodi Ar. Bea**	**87.14**	**283**	LR		LR	14 56 42.6		
	comp=Z,77nm,20.8s,MS4.1,baz=150,slow=38								

ISCJB ***11*** *14:10:16.2±0.3,35°.03N×0°.04×81°.21E±0°.03,h10km, mb4.1/30,MS3.8/16,Error ellipse: s-maj=5.2km s-min=3.8km az=3.8*

LDG ***11*** *14:10:16.4±0.4,35°.02N×80°.98E,h10km,Mb4.8/11, Ms3.6/6,Error ellipse: s-maj=22.1km s-min=7.3km az=164.0*

IDC ***11*** *14:10:17.4±0.7,35°.17N×81°.13E,h0km,mb3.9/14, mb1 4.1/18,mb1mx4.0/25,mbtmp4.0/18,ML3.7/4,MS3.8/8, Ms1 3.9/8,ms1mx3.5/23,Error ellipse: s-maj=19.9km s-min=14.3km az=33.0*

BJI ***11*** *14:10:17.4,35°.04N×81°.21E,h15km,mB4.6/13,mb4.3/24, ML4.9/2,Ms4.2/22,Ms7 4.0/21*

NEIC ***11*** *14:10:18.5±0.4,35°.05N×81°.16E,h10km,mb4.4/11, MS3.8/2,Error ellipse: s-maj=8.5km s-min=7.4km az=207.0*

MOS ***11*** *14:10:20.6±1.1,35°.20N×81°.10E,h33km,mb4.4/17,Error ellipse: s-maj=11.2km s-min=5.8km az=114.9*

NNC ***11*** *14:10:24.8±4.9,35°.88N×82°.19E,h0km,mb4.2,mpv4.8, Error ellipse: s-maj=48.0km s-min=42.9km az=163.0*

ISC 11 14:10:18.7±0.3,35°.15N±0°.03×81°.24E±0°.03,h10km,n123, σ1§12/131,mb4.1/30,MS3.8/16,7C-6D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SDNR	**Sundarnagar**	**5.10**	**226**	*e*PKP			**Pn**	**14 11 36.9**	**+1.7**
BHK	**Bhakra**	**5.50**	**229**	*ex*			**Pg**	**14 12 03.4**	**-0.6**
KSH	**Kashi**	**6.05**	**318**	Pn		Pn	**Pn**	**14 11 50.8**	**+2.6**
KSH				Sn		Sn	**Sn**	**14 12 56.4**	**-1.1**
KSH				smax					
	comp=N,450nm,0.9s								
KSH				smax					
	comp=E,350nm,0.9s								
CHCP	**Chirah Chowk**	**6.76**	**260**	P			**Pn**	**14 11 59.7**	**+1.7**
CEP	**Cherat**	**7.82**	**263**	P			**Pn**	**14 12 12.4**	**-0.1**
UCH	**Uchtor**	**8.81**	**325**	P			**Pn**	**14 12 28.9**	**+2.8**
	SNR=31								
UCH	**Uchtor**	**8.81**	**325**	*e*P			**Pn**	**14 12 28.8**	**+2.8**
	comp=E,500nm,0.6s								
TKM2	**Tokmak 2**	**8.91**	**332**	⇑Pn			**Pn**	**14 12 35.9**	**+8.4**
	comp=E,22nm,0.8s								
TKM2				⇑Pg			Pn	14 13 03.8	+36
	comp=E,57nm,0.9s								
TKM2				⇑Lg				14 15 04.7	
	comp=E,69nm,0.9s								
TKM2	**Tokmak 2**	**8.91**	**332**	P			**Pn**	**14 12 30.7**	**+3.2**
	SNR=16								
TKM2	**Tokmak 2**	**8.91**	**332**	*e*P			**Pn**	**14 12 30.6**	**+3.1**
	comp=E,71nm,1.1s								
TKM2	**Tokmak 2**	**8.91**	**332**	*e*P			**Pn**	**14 12 30.6**	**+3.1**
TKM2				pmax		pmax			
	comp=Z,71nm,1.1s								
AML	**Almayashu**	**9.13**	**322**	P			**Pn**	**14 12 33.3**	**+2.8**
	SNR=17								
AML	**Almayashu**	**9.13**	**322**	*e*P			**Pn**	**14 12 33.0**	**+2.5**
	comp=Z,38nm,0.7s								
AAK	**Ala-Archa**	**9.13**	**327**	*e*P			**Pn**	**14 12 33.1**	**+2.6**
	comp=Z,122nm,1.0s								
AAK	**Ala-Archa**	**9.13**	**327**	Pn			**Pn**	**14 12 32.6**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=233,slow=3.0,SNR=6.5								
AAK				Pg			Pn	14 13 07.3	+37
	comp=Z,1.5nm,0.3s,baz=150,slow=16,SNR=19								
AAK				Lg				14 14 59.6	
	comp=Z,1.2nm,0.3s,baz=149,slow=18,SNR=3.1								
AAK				LR			LR	14 16 28.6	
	comp=Z,502nm,18.5s,baz=133,slow=41								
FRU	**Bishkek**	**9.24**	**328**	*e*P			**Pn**	**14 12 36.0**	**+4.0**
FRU				pmax		pmax			
	comp=Z,400nm,2.2s								
CHMS	**Chumysh**	**9.32**	**329**	P			**Pn**	**14 12 36.5**	**+3.4**
	SNR=5.6								
EKS2	**Erkin-Say**	**9.49**	**324**	P			**Pn**	**14 12 38.9**	**+3.5**
	SNR=7.0								
EKS2	**Erkin-Say**	**9.49**	**324**	*e*P			**Pn**	**14 12 38.1**	**+2.8**
	comp=Z,44nm,0.9s								
WMQ	**Urumqi**	**9.99**	**28**	P			**Pn**	**14 12 46.0**	**+3.8**
WMQ				pP				14 12 53.1	
WMQ				PP				14 12 54.6	
WMQ				sP				14 12 57.9	
WMQ				S			**Sn**	**14 14 40.3**	**+6.0**
WMQ				sS				14 14 51.4	
WMQ				SS				14 14 53.8	
WMQ				PcP		PcP		14 18 52.7	-0.6
WMQ				pmax		pmax			
	comp=Z,23nm,0.7s								
WMQ				pmax		pmax			
	comp=Z,120nm,4.1s								
WMQ				LR		LR			
	comp=N,2μm,15.5s								
WMQ				LR		LR			
	comp=E,2μm,17.2s								
WMQ				LR		LR			
	comp=Z,1μm,12.1s								
KBL	**Kabul**	**10.05**	**270**	*e*P			**Pn**	**14 12 42.2**	**-0.8**
	comp=Z,16nm,0.6s								
KBL	**Kabul**	**10.05**	**270**	*e*P			**Pn**	**14 12 42.3**	**-0.8**
KBL				pmax		pmax			
	comp=Z,16nm,0.6s								
KK31	**Karatay Array**	**11.50**	**317**	⇓Pn			Px	14 13 14.2	
	comp=Z,3.2nm,0.8s,baz=124,slow=12,SNR=15								
KK31				⇓Lg				14 16 25.7	
	comp=Z,54nm,1.5s								
MK31	**Makanchi Array**	**11.66**	**4**	Pn			**Pn**	**14 13 05.0**	**-0.1**
	comp=Z,9.8nm,0.7s,baz=184,slow=12,SNR=60								
MK31				⇑Sn			**Sn**	**14 15 11.9**	**-3.4**
	comp=Z,20nm,0.9s,baz=187,slow=22,SNR=4.1								
MKAR	**Makanchi Array**	**11.66**	**4**	Pn			**Pn**	**14 13 05.2**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=180,slow=12,SNR=23								
MKAR	**Makanchi Array**	**11.66**	**4**	P			**Pn**	**14 13 05.3**	**+0.2**
MKAR				pmax		pmax			
	comp=Z,1.0nm,0.3s								
BHPL	**Bhopal**	**12.32**	**197**	*ex*			**Pn**	**14 13 13.8**	**-0.5**
GTA	**Gaotai**	**15.38**	**68**	*e*P			**Pn**	**14 13 57.0**	**+1.3**
GTA				pP			pP	14 14 00.8	-2.5
GTA				sP			sP	14 14 03.0	-1.6
GTA				S			**Sn**	**14 16 47.1**	**+1.0**
GTA				sS			sS	14 16 53.4	-13
GTA				pmax		pmax			
	comp=Z,5.0nm,0.9s								
GTA				pmax		pmax			
	comp=Z,59nm,3.6s								
GTA				LR		LR			
	comp=N,450nm,15.8s								
GTA				LR		LR			
	comp=E,400nm,12.8s								
GTA				LR		LR			
	comp=Z,490nm,12.2s								
KURK	**Kurchatov**	**15.67**	**354**	P			**Pn**	**14 14 01.1**	**+1.6**
	comp=Z,39nm,1.1s								
KURK	**Kurchatov**	**15.67**	**354**	⇑*e*P			**Pn**	**14 13 57.7**	**-1.8**
KURK				pmax		pmax			
	comp=Z,23nm,1.0s								
LZH	**Lanzhou**	**18.40**	**81**	*e*P			**Pn**	**14 14 35.4**	**+1.5**
LZH				pP			pP	14 14 42.7	+6.0
LZH				sP			sP	14 14 48.8	+11
LZH				*e*S			**Sn**	**14 17 57.0**	**-2.4**
LZH				sS			sS	14 18 10.3	+1.8
LZH				SS				14 18 23.1	
LZH				pmax		pmax			
	comp=Z,19nm,1.2s								
LZH				pmax		pmax			
	comp=Z,87nm,4.8s								
LZH				LR		LR			
	comp=N,440nm,10.3s								
LZH				LR		LR			
	comp=Z,560nm,11.7s								
ZAA0	**Zalesovo Array**	**18.96**	**7**	P			**Pn**	**14 14 40.1**	**-0.5**
ZALV	**Zalesovo Beam**	**18.96**	**7**	P			**Pn**	**14 14 39.5**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=194,slow=11,SNR=28								
ZALV	**Zalesovo Beam**	**18.96**	**7**	P			**Pn**	**14 14 39.6**	**-1.0**
ZALV				pmax		pmax			
	comp=Z,1.0nm,0.3s								
VOSK	**Vostochnaya**	**19.02**	**341**	⇓Pn			**Pn**	**14 14 42.5**	**+1.1**
	comp=Z,0.3nm,0.4s								
VOSK				⇓Sn			**Sn**	**14 18 13.4**	**-0.8**
	comp=Z,7.6nm,1.4s								
VOSK				⇑Lg				14 20 18.1	
	comp=Z,18nm,1.2s								
CD2	**Chengdu**	**19.34**	**96**	P			**Pn**	**14 14 45.1**	**-0.2**
CD2				pP			pP	14 14 53.2	+6.2
CD2				sP			sP	14 14 57.7	+9.4
CD2				PP				14 15 02.7	
CD2				S			**Sn**	**14 18 16.5**	**-5.6**
CD2				sS			sS	14 18 28.1	+0.9
CD2				SS				14 18 42.0	
CD2				pmax		pmax			
	comp=Z,10.0nm,0.7s								
CD2				pmax		pmax			
	comp=Z,70nm,4.1s								
CD2				LR		LR			
	comp=N,1μm,12.5s								
CD2				LR		LR			
	comp=E,850nm,8.4s								
CD2				LR		LR			
	comp=Z,830nm,8.5s								
BVA0	**Borovoye Array**	**19.46**	**340**	Pn			**Pn**	**14 14 46.2**	**-0.3**
	comp=Z,2.3nm,0.9s,baz=143,slow=11,SNR=55								
BVAR	**Borovoye Array**	**19.46**	**340**	P			**Pn**	**14 14 45.8**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=144,slow=10,SNR=25								
BVAR	**Borovoye Array**	**19.46**	**340**	P			**Pn**	**14 14 45.8**	**-0.7**
BVAR				pmax		pmax			
	comp=Z,1.0nm,0.3s								
BRVK	**Borovoye**	**19.52**	**340**	*e*P			**Pn**	**14 14 46.2**	**-1.0**
	comp=Z,12nm,0.8s								
BRVK	**Borovoye**	**19.52**	**340**	⇑*e*P			**Pn**	**14 14 47.0**	**-0.2**
BRVK				pmax		pmax			
	comp=Z,27nm,1.2s								
BRVK				MLR		MLR			
	comp=Z,245nm,17.0s								
NVS	**Novosibirsk**	**19.74**	**3**	*e*P			**Pn**	**14 14 48.3**	**-1.6**
NVS				*e*				14 18 26.5	
NVS				pmax		pmax			
	comp=Z,20nm,1.5s								
NVS				pmax		pmax			
	comp=N,14nm,1.3s								
ZRNK	**Zerenda**	**19.80**	**338**	⇓Pn			**Pn**	**14 14 49.7**	**-0.9**
	comp=N,9.1nm,0.8s								
ZRNK				⇓Lg				14 20 39.9	
	comp=N,12nm,1.4s								
ABKAR	**Akbulak array**	**21.06**	**319**	*e*P			**P**	**14 15 01.8**	**-1.0**
	comp=N,7.8nm,0.6s,mb4.2								
KMI	**Kunming**	**21.07**	**112**	P			**P**	**14 15 01.8**	**-1.3**
KMI				pP				14 15 11.5	
KMI				sP			sP	14 15 15.7	+8.5
KMI				PP				14 15 25.4	
KMI				S			**S**	**14 18 48.8**	**-8.8**
KMI				sS			sS	14 19 04.3	+2.1
KMI				SS				14 19 22.1	
KMI				pmax		pmax			
	comp=Z,7.0nm,1.0s,mb4.0								
KMI				LR		LR			
	comp=N,240nm,8.7s								
KMI				LR		LR			
	comp=E,260nm,11.2s								
KMI				LR		LR			
	comp=Z,310nm,11.7s,MS3.9								
ZAK	**Zakamensk**	**22.09**	**40**	*e*P			**P**	**14 15 15.2**	**+1.3**
ZAK				*e*				14 20 11.9	
ZAK				pmax		pmax			
	comp=Z,3.0nm,1.3s,mb3.6								
SONM	**Songino Array**	**22.59**	**48**	P			**P**	**14 15 21.9**	**+2.8**
	comp=Z,7.2nm,1.1s,mb4.0,baz=244,slow=8.4,SNR=21								
SONM				LR			LR	14 24 39.5	
	comp=Z,281nm,19.2s,MS3.7,baz=245,slow=38								
SONM	**Songino Array**	**22.59**	**48**	P			**P**	**14 15 21.9**	**+2.7**
SONM				pmax		pmax			
	comp=Z,7.0nm,1.1s								
SONM				MLR		MLR			
	comp=Z,281nm,19.2s								
AKTK	**Aktyubinsk**	**22.75**	**319**	P			**P**	**14 15 21.4**	**+0.5**
AKTO	**Aktyubinsk**	**22.75**	**319**	P			**P**	**14 15 21.4**	**+0.5**
	comp=Z,5.4nm,0.8s,mb4.0,baz=121,slow=12,SNR=4.9								
AKTO	**Aktyubinsk**	**22.75**	**319**	P			**P**	**14 15 21.4**	**+0.5**
AKTO				pmax		pmax			
	comp=Z,5.0nm,0.8s,mb4.0								
CMAR	**Chiang Mai Arr**	**22.87**	**132**	P			**P**	**14 15 24.1**	**+1.6**
	comp=Z,6.8nm,0.8s,mb4.1,baz=311,slow=11,SNR=17								
CMAR	**Chiang Mai Arr**	**22.87**	**132**	P			**P**	**14 15 24.1**	**+1.7**
CMAR				pmax		pmax			
	comp=Z,7.0nm,0.9s								
ULN	**Ulaanbaatar**	**23.00**	**49**	P			**P**	**14 15 25.0**	**+1.4**
	comp=Z,6.3nm,0.8s,mb4.1								
ULN	**Ulaanbaatar**	**23.00**	**49**	P			**P**	**14 15 25.0**	**+1.4**
ULN				pmax		pmax			
	comp=Z,6.0nm,0.8s,mb4.1								
HHC	**Hu-ho-hao-te**	**24.49**	**68**	*e*P			**P**	**14 15 37.2**	**-0.8**
HHC				pP				14 15 46.2	
HHC				sP			sP	14 15 51.2	+8.9
HHC				PP				14 16 14.8	
HHC				*e*S			**S**	**14 19 52.5**	**-5.8**
HHC				sS			sS	14 20 07.0	+3.8
HHC				SS				14 20 47.5	
HHC				PcS		PcS		14 22 55.5	-0.7
HHC				pmax		pmax			
	comp=Z,10.0nm,0.7s,mb4.3								
HHC				pmax		pmax			
	comp=Z,80nm,3.9s								
HHC				LR		LR			
	comp=N,190nm,9.1s								
HHC				LR		LR			
	comp=E,280nm,10.0s								
HHC				LR		LR			
	comp=Z,110nm,11.0s,MS3.6								
ARU	**Arti**	**26.29**	**331**	*e*P			**P**	**14 15 54.8**	**+0.6**
	comp=Z,9.8nm,1.1s,mb4.2								
ARU	**Arti**	**26.29**	**331**	*e*P			**P**	**14 15 54.8**	**+0.7**
ARU				pmax		pmax			
	comp=Z,10.0nm,1.1s,mb4.3								
QIZ	**Qiongzhong**	**29.96**	**115**	P			**P**	**14 16 24.9**	**-2.4**
QIZ				S			**S**	**14 21 20.1**	**-4.9**
QIZ				pmax		pmax			
	comp=Z,54nm,1.9s,mb5.0								
QIZ				LR		LR			
	comp=Z,230nm,17.1s,MS3.9								
KSRS	**Korea Array**	**37.40**	**72**	P			**P**	**14 17 33.0**	**+1.2**
	comp=Z,0.4nm,0.7s,mb3.4,baz=270,slow=40,SNR=3.0								
KSRS				LR			LR	14 33 49.2	
	comp=Z,140nm,19.6s,MS3.8,baz=109,slow=38								
BRTR	**Keskin Array B**	**37.73**	**291**	P			**P**	**14 17 34.5**	**0.0**
	comp=Z,1.2nm,0.9s,mb3.6,baz=93,slow=6.3,SNR=5.7								
BRTR	**Keskin Array B**	**37.73**	**291**	P			**P**	**14 17 34.6**	**+0.1**
BRTR				pmax		pmax			
	comp=Z,1.0nm,0.9s								
MDJ	**Mudanjiang**	**37.80**	**61**	P			**P**	**14 17 33.7**	**-1.4**
MDJ				pP			pP	14 17 42.1	+3.9
MDJ				sP			sP	14 17 46.2	+6.7
MDJ				PP			PP	14 19 00.0	-1.3
MDJ				PcP			PcP	14 19 50.0	-1.6
MDJ				S			**S**	**14 23 22.4**	**-3.5**
MDJ				ScP			ScP	14 23 34.8	-4.4
MDJ				PcS			PcS	14 23 38.4	-1.8
MDJ				SS			SS	14 26 07.1	-4.5
MDJ				ScS			ScS	14 27 44.6	-3.3
MDJ				pmax		pmax			
	comp=Z,4.0nm,0.6s,mb4.3								
MDJ				pmax		pmax			
	comp=Z,17nm,4.3s								
MDJ				LR		LR			
	comp=N,120nm,13.3s,MS4.0								
MDJ				LR		LR			
	comp=E,150nm,17.5s,MS4.0								
MDJ				LR		LR			
	comp=Z,180nm,15.4s,MS4.0								
AKASG	**Malin Array Be**	**40.27**	**309**	P			**P**	**14 17 54.3**	**-1.4**
	comp=Z,0.5nm,0.4s,mb3.6,baz=76,slow=8.5,SNR=5.8								
AKASG	**Malin Array Be**	**40.27**	**309**	P			**P**	**14 17 54.3**	**-1.4**
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.4s								
FINES	**FINESS Array B**	**43.32**	**325**	P			**P**	**14 18 20.6**	**+0.1**
	comp=Z,1.4nm,0.6s,mb3.9,baz=118,slow=15,SNR=6.0								
FINES	**FINESS Array B**	**43.32**	**325**	P			**P**	**14 18 20.6**	**+0.1**
FINES				pmax		pmax			
	comp=Z,1.0nm,0.6s								
MJAR	**Matsushiro Arr**	**45.61**	**71**	P			**P**	**14 18 39.2**	**0.0**
MJAR				LR		LR		14 39 44.7	
MJAR	**Matsushiro Arr**	**45.61**	**71**	P			**P**	**14 18 39.2**	**+0.1**
	comp=Z,0.7nm,0.8s,mb3.6,baz=273,slow=7.2,SNR=4.2								
MJAR				LR			LR	14 39 44.7	
	comp=Z,38nm,20.4s,MS3.3,baz=190,slow=39								
MJAR	**Matsushiro Arr**	**45.61**	**71**	P			**P**	**14 18 39.2**	**0.0**
MJAR				pmax		pmax			
	comp=Z,1.0nm,0.8s								
MJAR				MLR		MLR			
	comp=Z,38nm,20.4s								
ARCES	**ARCESS Array B**	**45.67**	**336**	P			**P**	**14 18 39.3**	**+0.1**
	comp=Z,4.7nm,1.1s,mb4.3,baz=17,slow=29,SNR=7.0								
ARCES				LR			LR	14 39 00.1	
	comp=Z,325nm,19.9s,MS4.3,baz=278,slow=38								
ARCES	**ARCESS Array B**	**45.67**	**336**	P			**P**	**14 18 39.3**	**+0.1**
ARCES				pmax		pmax			
	comp=Z,5.0nm,1.1s								
ARCES				MLR		MLR			
	comp=Z,325nm,19.9s								
BRG	**Berggiesshubel**	**49.93**	**310**	*e*P			**P**	**14 19 12.8**	**+0.4**
	comp=Z,6.5nm,0.9s,mb4.7								
BRG									
	comp=N,155nm,20.7s								
BRG									
	comp=E,134nm,18.2s								
BRG									
	comp=Z,215nm,16.9s								
BRG	**Berggiesshubel**	**49.93**	**310**	*e*P			**P**	**14 19 12.8**	**+0.4**
BRG				pmax		pmax			
	comp=Z,4.0nm,0.9s,mb4.5								
BRG				MLR		MLR			
	comp=N,4μm,20.7s								
BRG				MLR		MLR			
	comp=E,93nm,18.2s								
BRG				MLR		MLR			
	comp=Z,80nm,16.9s,MS3.8								
NOA	**NORSAR Array B**	**50.44**	**324**	P			**P**	**14 19 16.4**	**+0.2**
	comp=Z,1.3nm,0.8s,mb4.0,baz=237,slow=15,SNR=3.7								
NOA	**NORSAR Array B**	**50.44**	**324**	P			**P**	**14 19 16.4**	**+0.2**
NOA				pmax		pmax			
	comp=Z,1.0nm,0.8s								
HINF	**Hinterlafeld**	**55.11**	**308**	*e*P			**P**	**14 19 50.5**	**-0.4**
HAU	**Haudompre**	**55.38**	**308**	*e*P			**P**	**14 19 52.5**	**-0.4**
HAU				*e*MLR		MLR			
	comp=Z,107nm,18.8s,MS3.6								
HAU	**Haudompre**	**55.38**	**308**	*e*P			**P**	**14 19 52.5**	**-0.4**
HAU				MLR		MLR			
	comp=Z,110nm,18.8s,MS4.0								
LPG	**La Plagne**	**55.84**	**305**	*e*P			**P**	**14 19 56.5**	**+0.3**
	comp=Z,13nm,0.7s,mb4.7								
LPG	**La Plagne**	**55.84**	**305**	*e*P			**P**	**14 19 56.5**	**+0.3**
	comp=Z,6.4nm,0.7s,mb4.8								
LPG	**La Plagne**	**55.84**	**305**	*e*P			**P**	**14 19 56.5**	**+0.3**
LPG				pmax		pmax			
	comp=Z,6.0nm,0.7s,mb4.7								
LPL	**La Plagne**	**55.85**	**305**	*e*P			**P**	**14 19 56.5**	**+0.3**
	comp=Z,11nm,0.7s,mb4.7								
LPL	**La Plagne**	**55.85**	**305**	*e*P			**P**	**14 19 56.5**	**+0.3**
	comp=Z,5.6nm,0.7s,mb4.7								
LPL	**La Plagne**	**55.85**	**305**	*e*P			**P**	**14 19 56.5**	**+0.3**
LPL				pmax		pmax			
	comp=Z,6.0nm,0.7s,mb4.7								
MBDF	**Montbardon**	**56.06**	**304**	*e*P			**P**	**14 19 57.5**	**-0.3**
	comp=Z,6.5nm,0.9s,mb4.4								
MBDF	**Montbardon**	**56.06**	**304**	*e*P			**P**	**14 19 57.5**	**-0.3**
	comp=Z,3.3nm,0.9s,mb4.4								
MBDF	**Montbardon**	**56.06**	**304**	*e*P			**P**	**14 19 57.5**	**-0.3**
MBDF				pmax		pmax			
	comp=Z,3.0nm,0.9s,mb4.3								
FRF	**La Foret Royal**	**56.51**	**303**	*e*P			**P**	**14 20 00.4**	**-0.6**
	comp=Z,26nm,1.0s,mb4.9								
FRF	**La Foret Royal**	**56.51**	**303**	*e*P			**P**	**14 20 00.4**	**-0.6**
	comp=Z,13nm,1.0s,mb4.9								
FRF	**La Foret Royal**	**56.51**	**303**	*e*P			**P**	**14 20 00.4**	**-0.6**
FRF				pmax		pmax			
	comp=Z,13nm,1.0s,mb4.9								
ORIF	**Oris-en-Rattie**	**56.60**	**305**	*e*P			**P**	**14 20 01.6**	**0.0**
ORIF				*e*MLR		MLR			
	comp=Z,167nm,22.5s,MS3.8								
LOR	**Lormes**	**57.21**	**308**	*e*P			**P**	**14 20 05.0**	**-0.9**
LOR				*e*MLR		MLR			
	comp=Z,200nm,22.8s,MS3.9								
LOR	**Lormes**	**57.21**	**308**	*e*P			**P**	**14 20 05.0**	**-0.9**
LOR				MLR		MLR			
	comp=Z,200nm,22.8s,MS4.2								
SMF	**Signal de Mont**	**57.41**	**307**	*e*P			**P**	**14 20 06.4**	**-1.0**
SSF	**Saint Saulge**	**57.50**	**308**	*e*P			**P**	**14 20 07.1**	**-0.9**
AVF	**Avril sur Loir**	**57.69**	**307**	*e*P			**P**	**14 20 08.6**	**-0.7**
	comp=Z,5.7nm,0.8s,mb4.4								
AVF	**Avril sur Loir**	**57.69**	**307**	*e*P			**P**	**14 20 08.6**	**-0.7**
	comp=Z,2.8nm,0.8s,mb4.3								
AVF	**Avril sur Loir**	**57.69**	**307**	*e*P			**P**	**14 20 08.6**	**-0.7**
AVF				pmax		pmax			
	comp=Z,3.0nm,0.8s,mb4.4								
LASF	**Ste Croix**	**58.25**	**304**	*e*P			**P**	**14 20 13.0**	**-0.3**
TCF	**Toulx Ste Croi**	**58.60**	**307**	*e*P			**P**	**14 20 15.4**	**-0.3**
CAF	**Calviac**	**59.16**	**306**	*e*P			**P**	**14 20 19.4**	**-0.2**
	comp=Z,5.8nm,0.7s,mb4.4								
CAF	**Calviac**	**59.16**	**306**	*e*P			**P**	**14 20 19.4**	**-0.2**
	comp=Z,2.9nm,0.7s,mb4.4								
CAF	**Calviac**	**59.16**	**306**	*e*P			**P**	**14 20 19.4**	**-0.2**
CAF				pmax		pmax			
	comp=Z,3.0nm,0.7s,mb4.4								
LDF	**La Druitiere**	**59.32**	**310**	*e*P			**P**	**14 20 19.8**	**-0.8

	47nm,0.3s							
BART	**Pico Bartolome**	**0.80**	**101**	*e*P	Pg	14 29 11.4	-3.0
BART				*e*S	Sg	14 29 20.9	-4.0
BART	**Pico Bartolome**	**0.80**	**101**	*e*P	Pg	14 29 11.4	-3.0
BART				*e*S	Sg	14 29 20.9	-4.0
ADH	**Angra Heroismo**	**1.11**	**311**	*e*P	Pb	14 29 15.7	-4.5
ADH				*e*S	Sb	14 29 28.5	-6.1
ADH				A		14 29 30.0	
	89nm,0.1s						
ADH	**Angra Heroismo**	**1.11**	**311**	*e*P	Pb	14 29 15.7	-4.5
ADH				*e*S	Sb	14 29 28.5	-6.1
PSMA	**Santa Maria**	**1.24**	**138**	*e*P	Pn	14 29 17.7	-4.4
PSMA				*e*S	Sb	14 29 31.6	-6.6
PSMA				A		14 29 34.7	
	38nm,0.2s						
PSMN	**Pico do Norte,**	**1.27**	**136**	*e*P	Pn	14 29 18.1	-4.4
PSMN				*e*S	Sb	14 29 32.0	-7.0
PSMN	**Pico do Norte,**	**1.27**	**136**	*e*P	Pn	14 29 18.1	-4.4
PSMN				*e*S	Sb	14 29 32.0	-7.0
PID	**Ribeirinha**	**1.63**	**289**	*e*P	Pn	14 29 23.5	-3.9
PID	**Ribeirinha**	**1.63**	**289**	*e*P	Pn	14 29 23.5	-3.9
PMAN	**Manadas**	**1.67**	**295**	*e*S	Sn	14 29 42.2	-7.2
PMAN				A		14 29 43.3	
	27nm,0.3s						
PMAN	**Manadas**	**1.67**	**295**	*e*S	Sn	14 29 42.2	-7.2
ROSA	**Rosais**	**1.82**	**296**	*e*P	Pn	14 29 25.5	-4.5
ROSA				*e*S	Sn	14 29 45.5	-7.4
ROSA	**Rosais**	**1.82**	**296**	*e*P	Pn	14 29 25.5	-4.5
ROSA				*e*S	Sn	14 29 45.5	-7.4
PICO	**Pico**	**1.87**	**288**	*e*P	Pn	14 29 27.4	-3.4
PICO				*e*S	Sn	14 29 47.4	-6.9
PICO	**Pico**	**1.87**	**288**	*e*P	Pn	14 29 27.4	-3.4
PICO				*e*S	Sn	14 29 47.4	-6.9
PCAN	**Candelaria**	**1.91**	**287**	*e*S	Sn	14 29 47.6	-7.6
PCAN				A		14 29 49.7	
	41nm,0.3s						
PCAN	**Candelaria**	**1.91**	**287**	*e*S	Sn	14 29 47.6	-7.6
CALA	**Caldeira**	**2.10**	**289**	*e*P	Sn	14 29 54.2	-5.8
PCED	**Cedros**	**2.12**	**290**	*e*P	Sn	14 29 54.1	-6.3

IDC ***11*** *14:50:52.8±2.8, 17°.88S×168°.75E, h0km, mb4.0/5, mb1 4.2/5, mb1mx4.0/13, mbtmp4.0/5, Error ellipse: s-maj=100.0km s-min=31.3km az=134.0*

NEIC ***11*** *14:51:05.1±1.2, 18°.05S×168°.70E, h100km, Error ellipse: s-maj=40.4km s-min=14.6km az=115.0*

NOU ***11*** *14:51:06.4±0.6, 17°.98S×168°.57E, h30km, MD3.0, ML3.2*

ISCJB ***11*** *14:51:08.5±2.0, 18°.5S±0°.3×168°.8E±0°.4, h151km±30km, mb3.7/5, Error ellipse: s-maj=75.1km s-min=20.2km az=39.2*

ISC 11 14:51:08.9±2.0, 18°.5S±0°.3×168°.8E±0°.4, h141km±29km, n16, σ0°62/22, mb3.7/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.10**	**206**	*e*P	**Pn**	**14 52 10.6**	**+0.5**
BAYA				*e*S	**Sn**	**14 52 57.8**	**0.0**
DZM	**Mont Dzumac**	**4.22**	**211**	*e*P	**Pn**	**14 52 11.5**	**-0.4**
DZM				*e*S	**Sn**	**14 53 00.7**	**-0.2**
DZM				AMP		14 53 02.9	
	comp=Z,3μm,5.2s						
DZM	**Mont Dzumac**	**4.22**	**211**	*e*P	**Pn**	**14 52 11.6**	**-0.2**
DZM				*e*S	**Sn**	**14 52 59.3**	**-1.6**
PLUM	**Mont Dore**	**4.31**	**208**	*e*P	**Pn**	**14 52 13.4**	**+0.5**
PLUM				*e*S	**Sn**	**14 53 03.4**	**+0.6**
LASL	**Noumea**	**4.32**	**209**	*e*P	**Pn**	**14 52 13.3**	**+0.2**
NOUC	**Port Laguerre**	**4.32**	**213**	*e*P	**Pn**	**14 52 13.4**	**+0.3**
NOUC				*e*S	**Sn**	**14 53 02.8**	**-0.3**
NOUC				AMP		14 53 07.0	
	comp=Z,91nm,2.5s						
NORM	**Noumea**	**4.34**	**210**	*e*P	**Pn**	**14 52 13.6**	**+0.2**
NORM				*e*S	**Sn**	**14 53 03.1**	**-0.4**
MVNO	**Noumea**	**4.39**	**210**	*e*P	**Pn**	**14 52 14.4**	**+0.3**
MVNO				*e*S	**Sn**	**14 53 04.3**	**-0.6**
STKA	**Stephens Creek**	**27.93**	**236**	P	**P**	**14 56 47.5**	**+1.6**
STKA	**Stephens Creek**	**27.93**	**236**	P	**P**	**14 56 47.5**	**+1.6**
	comp=Z,2.7nm,0.8s,mb4.0,baz=60,slow=8.8,SNR=6.7						
ASAR	**Alice Springs**	**32.93**	**255**	P	**P**	**14 57 29.7**	**-0.3**
	comp=Z,3.6nm,0.7s,mb4.2,baz=81,slow=9.1,SNR=56						
CMAR	**Chiang Mai Arr**	**77.81**	**294**	P	**P**	**15 02 51.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**77.81**	**294**	P	**P**	**15 02 51.5**	**+0.4**
	comp=Z,1.4nm,0.8s,mb3.6,baz=132,slow=4.1,SNR=8.4						
SONM	**Songino Array**	**86.35**	**323**	P	**P**	**15 03 34.1**	**-0.8**
	comp=Z,0.7nm,0.5s,mb3.6,baz=141,slow=5.0,SNR=5.1						
ILAR	**Eielson Array**	**89.61**	**17**	P	**P**	**15 03 49.1**	**-0.9**
	comp=Z,0.2nm,0.7s,mb3.2,baz=226,slow=4.7,SNR=4.1						
DAVOX	**Davos/Dischmat**	**146.86**	**333**	PKPbc	PKPbc	15 10 35.2	+0.7
	comp=Z,2.5nm,0.5s,baz=220,slow=4.1,SNR=6.7						

NIED ***11*** *14:53:00.2±1.4, 40°.40N×121°.00E, h8km, MW4.0 Best double couple: M0 9.90000×10^14 NP1:φs=4.00000°, δ81.00000°, λ122.00000°. NP2:φs=109.00000°, δ33.00000°, λ17.00000°.*

IDC ***11*** *14:53:26.5±0.9, 21°.22N×121°.33E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.7/22, mbtmp3.7/9, ML3.7/1, MS3.1/3, Ms1 3.2/3, ms1mx2.8/26, Error ellipse: s-maj=33.7km s-min=18.5km az=67.0*

ISCJB ***11*** *14:53:27.1±4.8, 21°.2N±0°.1×121°.2E±0°.2, h17km±35km, mb3.6/8, MS3.1/2, Error ellipse: s-maj=24.5km s-min=19.4km az=163.1*

NEIC ***11*** *14:53:27.9±0.8, 21°.26N×121°.29E, h10km, MG3.6(JMA), Error ellipse: s-maj=23.0km s-min=11.6km az=88.0*

ISC 11 14:53:26.9±7.2, 21°.2N±0°.1×121°.3E±0°.1, h2km±46km, n16, σ0°85/15, mb3.6/8, MS3.1/2, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.61**	**354**	*e*P	**Pn**	**14 53 52.5**	**-3.8**
TPUB	**Ta-pu**	**2.16**	**345**	*e*P	**Pn**	**14 54 03.5**	**-0.4**
YULB	**Yu-li**	**2.17**	**1**	*e*P	**Pn**	**14 54 05.0**	**+0.9**
SSLB	**Suanglung**	**2.58**	**354**	*e*P	**Pn**	**14 54 08.9**	**-0.7**
NACB	**Ninganchiao**	**2.97**	**6**	*e*P	**Pn**	**14 54 15.0**	**-0.1**
YHNB	**Yeheng**	**3.45**	**2**	*e*P	**Pn**	**14 54 21.5**	**-0.1**
KSRS	**Korea Array**	**17.20**	**18**	P	**Pn**	**14 57 29.2**	**+1.0**
	0.2nm,0.3s,baz=200,slow=11,SNR=7.1						
CBIJ	**Chichi jima**	**19.97**	**69**	LR	LR	15 03 44.9	
	comp=Z,49nm,21.1s,baz=114,slow=31						
CMAR	**Chiang Mai Arr**	**21.16**	**266**	P	**P**	**14 58 13.3**	**-0.1**
	0.5nm,0.6s,mb3.0,baz=74,slow=9.4,SNR=5.6						
CMAR				LR	LR	15 06 37.8	
	comp=Z,76nm,21.6s,MS3.0,baz=95,slow=37						
SONM	**Songino Array**	**29.14**	**339**	P	**P**	**14 59 28.6**	**-0.5**
	0.5nm,0.4s,mb3.6,baz=157,slow=8.0,SNR=4.3						
MKAR	**Makanchi Array**	**40.55**	**318**	P	**P**	**15 01 07.5**	**0.0**
	0.8nm,0.4s,mb3.7,baz=106,slow=9.4,SNR=9.4						
ZALV	**Zalesovo Beam**	**42.79**	**329**	P	**P**	**15 01 25.5**	**-0.3**
	1.5nm,0.6s,mb3.9,baz=122,slow=9.0,SNR=9.4						
ZALV				LR	LR	15 19 55.3	
	comp=Z,24nm,19.7s,MS3.1,baz=236,slow=37						
ASAR	**Alice Springs**	**46.27**	**164**	P	**P**	**15 01 53.2**	**-0.7**
	0.3nm,0.4s,mb3.6,baz=345,slow=7.0,SNR=8.3						
BVAR	**Borovoye Array**	**50.03**	**322**	P	**P**	**15 02 24.7**	**+2.0**
	0.5nm,0.4s,mb3.9,baz=229,slow=43,SNR=2.9						
STKA	**Stephens Creek**	**56.27**	**159**	P	**P**	**15 03 09.6**	**+0.8**
	1.4nm,0.7s,mb4.1,baz=359,slow=13,SNR=6.2						
ILAR	**Eielson Array**	**71.83**	**27**	P	**P**	**15 04 49.5**	**-1.2**
	0.3nm,0.8s,mb3.3,baz=293,slow=6.6,SNR=5.5						

IDC ***11*** *15:29:45.3±1.3, 31°.17N×103°.76E, h0km, mb3.4/5, mb1 3.5/6, mb1mx3.4/23, mbtmp3.5/6, ML3.4/1, MS3.2/1, Ms1 3.2/1, ms1mx2.3/19, Error ellipse: s-maj=42.5km s-min=21.7km az=51.0*

BJI ***11*** *15:29:47.5, 31°.16N×103°.66E, h24km, ML3.5/16*

NEIC ***11*** *15:29:49.9±0.9, 31°.49N×103°.75E, h10km, Error ellipse: s-maj=18.8km s-min=13.8km az=64.0*

ISC 11 15:29:46.6±0.9, 31°.27N±0°.03×103°.80E±0°.05, h5km±6km, n16, σ1°20/23, mb3.3/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.36**	**186**	Pg	**Pg**	**15 29 52.7**	**-0.8**
CD2				Sg	**Sg**	**15 29 58.7**	**+0.6**
CD2				smax			
	comp=N,6μm,0.4s						
LZH	**Lanzhou**	**4.81**	**0**	*e*Pg	**Pg**	**15 31 17.8**	**-0.9**
LZH				Sg	**Sb**	**15 32 14.5**	**+5.0**
LZH				smax			
	comp=N,36nm,0.5s						
LZH				smax			
	comp=E,45nm,0.6s						
ENH	**Enshi**	**4.99**	**100**	*e*P	**Pn**	**15 31 05.4**	**+3.2**
	comp=E,41nm,0.5s						
ENH				*e*S	**Sn**	**15 32 02.0**	**+1.7**
XAN	**Xi'an**	**5.13**	**56**	Pn	**Pn**	**15 31 03.7**	**-0.4**
XAN				Pg	**Pb**	**15 31 18.6**	**+1.8**
XAN				Sn	**Sn**	**15 32 02.6**	**-1.0**
XAN				Sg	**Sg**	**15 32 29.5**	**-1.8**
XAN				smax			
	comp=N,71nm,0.8s						
XAN				smax			
	comp=E,32nm,0.8s						
GYA	**Guiyang**	**5.41**	**152**	Pn	**Pn**	**15 31 06.9**	**-1.0**
GYA				Sn	**Sn**	**15 32 08.9**	**-1.7**
GYA				Sg	**Sg**	**15 32 41.2**	**+0.9**
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,50nm,0.9s						
CMAR	**Chiang Mai Arr**	**13.49**	**200**	Pn	**Pn**	**15 33 05.0**	**+6.2**
CMAR	**Chiang Mai Arr**	**13.49**	**200**	Pn	**Pn**	**15 33 05.0**	**+6.2**
	comp=E,0.1nm,0.3s,baz=3.9,slow=8.5,SNR=6.9						
SONM	**Songino Array**	**16.66**	**6**	Pn	**Pn**	**15 33 43.1**	**+2.2**
	comp=E,0.1nm,0.3s,baz=183,slow=11,SNR=5.1						
KSRS	**Korea Array**	**20.82**	**66**	P	**P**	**15 34 28.9**	**-0.1**
	comp=E,1.3nm,0.8s,baz=257,slow=9.6,SNR=6.7						
MK31	**Makanchi Array**	**22.69**	**319**	*e*P	**P**	**15 34 49.4**	**+0.5**
MKAR	**Makanchi Array**	**22.69**	**319**	P	**P**	**15 34 49.7**	**+0.8**
	comp=E,0.7nm,0.6s,mb3.3,baz=122,slow=11,SNR=8.8						
ZALV	**Zalesovo Beam**	**26.46**	**334**	P	**P**	**15 35 23.8**	**-0.6**
ZALV	**Zalesovo Beam**	**26.46**	**334**	P	**P**	**15 35 23.8**	**-0.6**
	comp=E,0.3nm,0.3s,mb3.3,baz=144,slow=10,SNR=3.6						
KURK	**Kurchatov**	**26.96**	**323**	P	**P**	**15 35 28.5**	**-0.5**
	comp=E,1.1nm,1.0s,mb3.3,baz=127,slow=11,SNR=6.8						
MJAR	**Matsushiro Arr**	**28.94**	**70**	LR	LR	15 48 42.3	
	comp=E,38nm,18.3s,baz=70,slow=39						
ASAR	**Alice Springs**	**61.76**	**149**	P	**P**	**15 40 05.5**	**-0.8**
	comp=E,0.2nm,0.5s,mb3.5,baz=338,slow=6.9,SNR=9.6						

GUC 11 15:35:38.6±0.7, 20°.88S×69°.36W, h116km±8km, ML3.5, 3C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.77**	**320**	↑*i*P	Pn	15 35 59.1	+0.9
HMBC				*i* S	Sn	15 36 14.2	+1.3
HMBC				AML	AML	15 36 14.8	
	comp=N,2μm,0.2s						
MACH	**Maria Elena**	**1.36**	**196**	*e*P	Pn	15 36 05.3	+1.1
MACH				*i* S	Sn	15 36 25.3	+1.6
PB04	**Plate Boundary**	**1.39**	**185**	*e*P	Pn	15 36 08.6	+4.1
PB04				*e*S	Sn	15 36 30.6	+6.4
PSGC	**Pisagua**	**1.46**	**330**	↑*i*P	Pn	15 36 06.0	+0.7
PSGC				*i* S	Sn	15 36 26.7	+1.0
PSGC				AML	AML	15 36 29.7	
	comp=E,407nm,0.4s						
MNMC	**Miæe Miæ**	**1.75**	**353**	↑*i*P	Pn	15 36 09.7	+0.9
MNMC				*e*S	Sn	15 36 33.6	+1.8
MNMC				AML	AML	15 36 35.1	
	comp=E,747nm,0.1s						

ATH ***11*** *15:48:11.6, 38°.07N×26°.57E, h30km±1km, MD3.2/4*

THE ***11*** *15:48:11.9, 38°.09N×26°.62E, h9km±1km, ML2.9/2, Error ellipse: s-maj=2.0km s-min=0.9km az=16.0*

ISCJB ***11*** *15:48:12.0±0.6, 38°.09N±0°.02×26°.58E±0°.04, h2km±5km, Error ellipse: s-maj=4.8km s-min=3.3km az=161.1*

CSEM ***11*** *15:48:12.3±0.2, 38°.12N×26°.59E, h15km, MD3.1, Error ellipse: s-maj=5.7km s-min=4.4km az=61.0*

DDA ***11*** *15:48:12.6, 38°.12N×26°.65E, h14km±2km, Md3.1*

ISC 11 15:48:12.5±0.5, 38°.10N±0°.02×26°.59E±0°.04, h8km±5km, n29, σ1°07/54, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.26**	**1**	*i* P	**Pg**	**15 48 16.7**	**-0.9**
URLA				*i* S	**Sg**	**15 48 21.1**	**0.0**
URLA	**Izmir**	**0.26**	**1**	*i* P	**Pg**	**15 48 16.7**	**-0.9**
URLA				*i* S	**Sg**	**15 48 21.1**	**0.0**
SMG	**Samos**	**0.44**	**153**	*e*PB	**Pg**	**15 48 21.5**	**+0.5**
SMG				*e*SB	**Sg**	**15 48 27.5**	**+0.7**
SMG	**Samos**	**0.44**	**153**	*e*Pb	**Pg**	**15 48 21.5**	**+0.5**
SMG				*e*Sb	**Sg**	**15 48 27.5**	**+0.7**
BLCB	**Balcova**	**0.46**	**51**	P	**Pg**	**15 48 21.2**	**-0.1**
BLCB				S	**Sg**	**15 48 27.0**	**-0.3**
BLCB	**Balcova**	**0.46**	**51**	P	**Pg**	**15 48 21.2**	**-0.1**
BLCB				S	**Sg**	**15 48 27.0**	**-0.3**
CHOS	**Chios island**	**0.51**	**304**	*e*PN	**Pg**	**15 48 22.5**	**+0.2**
CHOS				*e*SN	**Sg**	**15 48 30.8**	**+1.8**
CHOS	**Chios island**	**0.51**	**304**	P	**Pg**	**15 48 22.5**	**+0.2**
CHOS				S	**Sg**	**15 48 30.1**	**+1.1**
CHOS	**Chios island**	**0.51**	**304**	P	**Pg**	**15 48 22.5**	**+0.2**
CHOS				S	**Sg**	**15 48 30.1**	**+1.1**
KDAG	**Bornova**	**0.61**	**60**	*i* P	**Pg**	**15 48 23.0**	**-1.3**
KDAG	**Bornova**	**0.61**	**60**	*i* P	**Pg**	**15 48 23.0**	**-1.3**
GCAM	**G?zelcaml?**	**0.65**	**128**	*i* P	**Pg**	**15 48 25.5**	**+0.5**
GCAM				*i* S	**Sg**	**15 48 34.8**	**+1.3**
GCAM	**G?zelcaml?**	**0.65**	**128**	*i* P	**Pg**	**15 48 25.5**	**+0.5**
GCAM				*i* S	**Sg**	**15 48 34.8**	**+1.4**
AYDN	**Tasoluk**	**1.11**	**113**	*i* P	**Pg**	**15 48 33.0**	**-0.8**
AYDN				*i* S	**Sg**	**15 48 47.5**	**-0.8**
AYDN	**Tasoluk**	**1.11**	**113**	*i* P	**Pg**	**15 48 33.0**	**-0.8**
AYDN				*i* S	**Sg**	**15 48 47.5**	**-0.8**
PRK	**Paraskevi**	**1.17**	**348**	*e*PN	**Pn**	**15 48 34.0**	**-1.1**
PRK	**Paraskevi**	**1.17**	**348**	P	**Pn**	**15 48 33.9**	**-1.0**
PRK				S	**Sb**	**15 48 50.1**	**-0.1**
PRK	**Paraskevi**	**1.17**	**348**	P	**Pb**	**15 48 33.9**	**-1.0**
PRK				S	**Sb**	**15 48 50.1**	**-0.1**
AYVA	**Ayvalik**	**1.21**	**4**	*i* P	**Pb**	**15 48 35.3**	**-0.2**
AYVA				*i* S	**Sb**	**15 48 53.4**	**+2.1**
AYVA	**Ayvalik**	**1.21**	**4**	*i* P	**Pb**	**15 48 35.3**	**-0.3**
AKHS	**Akhisar**	**1.23**	**51**	*i* P	**Pn**	**15 48 36.5**	**+0.5**
AKHS				*i* S	**Sb**	**15 48 50.7**	**-1.3**
AKHS	**Akhisar**	**1.23**	**51**	*i* P	**Pn**	**15 48 36.5**	**+0.5**
AKHS				*i* S	**Sb**	**15 48 50.7**	**-1.4**
BDRM	**Kayabasi**	**1.24**	**146**	*i* P	**Pn**	**15 48 36.1**	**+0.1**
BDRM				*i* S	**Sb**	**15 48 53.2**	**+1.1**
BDRM	**Kayabasi**	**1.24**	**146**	*i* P	**Pn**	**15 48 36.1**	**+0.1**
BDRM				*i* S	**Sb**	**15 48 53.2**	**+1.1**
APE	**Apeiranthos**	**1.33**	**220**	*e*PN	**Pn**	**15 48 35.6**	**-1.7**
APE	**Apeiranthos**	**1.33**	**220**	P	**Pn**	**15 48 35.7**	**-1.6**
APE				S	**Sb**	**15 48 53.3**	**-1.5**
APE	**Apeiranthos**	**1.33**	**220**	P	**Pn**	**15 48 35.7**	**-1.5**
APE				S	**Sb**	**15 48 53.3**	**-1.5**
BOZC	**Bozcaada**	**1.79**	**347**	*i* P	**Pn**	**15 48 44.6**	**+1.1**
BOZC				*i* P		15 48 44.6	
BOZC				*i* S	**Sn**	**15 49 10.2**	**+3.7**
BOZC				*i* S	**Sn**	**15 49 10.2**	**+3.7**
BALY	**Balya**	**1.82**	**26**	*i* P	**Pn**	**15 48 46.4**	**+2.3**
BALY				*i* S	**Sn**	**15 49 11.6**	**+4.3**

IDC ***11*** *16:27:23.2±0.9, 3°.04S×147°.38E, h0km, mb3.9/13, mb1 4.1/14, mb1mx4.1/16, mbtmp3.9/14, ML3.4/1, MS4.3/17, Ms1 4.3/17, ms1mx4.1/26, Error ellipse: s-maj=31.1km s-min=16.5km az=100.0*

ISCJB ***11*** *16:27:27.7±2.5, 3°.06S±0°.08×147°.2E±0°.1, h38km±22km, mb4.0/18, MS4.3/18, Error ellipse: s-maj=18.8km s-min=13.3km az=3.2*

NEIC ***11*** *16:27:28.3±0.5, 3°.09S×147°.36E, h35km, mb4.8/1, Error ellipse: s-maj=17.4km s-min=9.1km az=104.0*

GCMT ***11*** *16:27:30.9±0.2, 2°.98S×147°.42E, h16km±1km, MW5.1, Moment Tensor Solution. s49,c67; s89,c145; Moment tensor: Scale 10^16 Nm; Mrr 0.62±.12; Mθθ -0.84±.11; Mφφ 0.22±.12; Mrθ -2.15±.35; Mθφ 5.08±.10; Mφr -1.12±.33; Best double couple: M0 5.70000×10^16 NP1:φs 175.00000°, δ67.00000°, λ169.00000°. NP2:φs 269.00000°, δ80.00000°, λ23.00000°. Principal axes: T 5.8100, Plg24.0000°, Azm134.0000°; N -0.2600, Plg64.0000°, Azm292.0000°; P -5.5400, Plg9.0000°, Azm40.0000°; Data Used: II IU IC G CN.*

ISC 11 16:27:30.3±2.5, 3°.10S±0°.08×147°.2E±0°.1, h49km±24km, n41, σ1°07/30, mb4.0/18, MS4.3/18, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**11.50**	**200**	*e*P	**Pn**	**16 30 05.4**	**-6.5**
MTSU	**Mount Surprise**	**15.21**	**191**	*e*P	**Pn**	**16 31 06.2**	**+4.2**
	38nm,1.0s						
GUMO	**Guam**	**16.74**	**352**	LR	LR	16 36 12.3	
	comp=Z,490nm,20.9s,baz=167,slow=32						
CTA	**Charters Tower**	**16.91**	**183**	Pn	**Pn**	**16 31 21.8**	**-1.8**
	0.1nm,0.3s,baz=13,slow=15,SNR=1.8						
KAKA	**Kakadu**	**17.45**	**236**	*e*P	**Pn**	**16 31 29.7**	**-0.7**
	21nm,0.6s						
KAKA	**Kakadu**	**17.45**	**236**	*e*P	**Pn**	**16 31 30.6**	**+0.3**
	60nm,0.7s						
KNA	**Kununurra**	**22.08**	**234**	*e*P	**P**	**16 32 19.2**	**-2.2**
	6.4nm,0.7s,mb4.2						
RMQ	**Roma**	**23.30**	**176**	*e*P	**P**	**16 32 35.0**	**+0.8**
	60nm,1.5s,mb4.8						
QLP	**Quilpie**	**23.52**	**187**	*e*P	**P**	**16 32 37.3**	**+1.1**
DAV	**Davao City (W)**	**23.83**	**295**	LR	LR	16 42 03.0	
	comp=Z,797nm,18.3s,MS4.2,baz=109,slow=37						
ASAR	**Alice Springs**	**24.15**	**211**	P	**P**	**16 32 42.6**	**+0.6**
	9.5nm,1.1s,mb4.2,baz=43,slow=6.5,SNR=54						
FITZ	**Fitzroy Crossi**	**25.86**	**233**	*e*P	**P**	**16 32 58.4**	**+0.8**
	24nm,1.6s,mb4.5						
FITZ	**Fitzroy Crossi**	**25.86**	**233**	P	**P**	**16 32 58.6**	**+1.0**
	6.5nm,0.9s,mb4.1,baz=69,slow=6.1,SNR=11						
FITZ				LR	LR	16 44 12.8	
	comp=Z,1μm,18.1s,MS4.5,baz=56,slow=39						
DZM	**Mont Dzumac**	**26.55**	**137**	*e*S	**S**	**16 37 28.3**	**-6.7**
	271nm,22.4s						
DZM				*e*LR	LR	16 39 41.0	
	3μm,25.1s						
STKA	**Stephens Creek**	**29.11**	**190**	P	**P**	**16 33 26.8**	**+0.2**
	1.5nm,0.9s,mb3.7,baz=320,slow=17,SNR=2.1						
STKA				LR	LR	16 45 51.5	
	comp=Z,789nm,20.0s,MS4.3,baz=8.6,slow=38						
FORT	**Forrest**	**32.94**	**211**	*e*P	**P**	**16 33 59.9**	**-0.4**
	11nm,0.7s,mb4.9						
MJAR	**Matsushiro Arr**	**40.32**	**349**	P	**P**	**16 35 01.8**	**-1.2**
	0.3nm,0.4s,mb3.3,baz=132,slow=22,SNR=3.5						
MJAR				LR	LR	16 49 46.1	
	comp=Z,123nm,18.2s,MS3.8,baz=195,slow=33						
AFI	**Afiamalu**	**41.89**	**107**	LR	LR	16 50 54.5	
	comp=Z,417nm,18.0s,MS4.4,baz=244,slow=34						
KSRS	**Korea Array**	**44.15**	**338**	P	**P**	**16 35 34.1**	**-0.1**
	1.2nm,0.7s,mb3.7,baz=160,slow=8.3,SNR=5.9						
KSRS				LR	LR	16 52 16.0	
	comp=Z,361nm,18.9s,MS4.3,baz=149,slow=34						
URZ	**Urewera**	**44.40**	**146**	LR	LR	16 51 45.0	
	comp=Z,733nm,20.8s,MS4.6,baz=133,slow=33						
RPZ	**Rata Peaks**	**45.64**	**156**	LR	LR	16 52 15.9	
	comp=Z,247nm,21.3s,MS4.1,baz=287,slow=33						
KMI	**Kunming**	**51.44**	**306**	P	**P**	**16 36 31.8**	**+0.9**
KMI				S	**S**	**16 43 45.3**	**-2.3**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
KMI				LR	LR		
	comp=N,180nm,17.2s,MS4.3						
KMI				LR	LR		
	comp=E,210nm,21.9s,MS4.3						
KMI				LR	LR		
	comp=Z,330nm,24.2s,MS4.3						
XAN	**Xi'an**	**51.61**	**319**	P	**P**	**16 36 32.3**	**+0.2**
XAN				S	**S**	**16 43 48.9**	**-0.8**
XAN				LR	LR		
	comp=N,190nm,16.9s						
XAN				LR	LR		
	comp=E,68nm,23.1s						
XAN				LR	LR		
	comp=Z,120nm,20.0s,MS3.9						
CMAR	**Chiang Mai Arr**	**52.11**	**296**	P	**P**	**16 36 36.8**	**+0.7**
	comp=Z,0.6nm,0.7s,mb3.6,baz=123,slow=6.6,SNR=6.2						
CMAR				LR	LR	16 56 39.2	
	comp=Z,112nm,19.7s,MS3.9,baz=241,slow=34						
GTA	**Gaotai**	**60.67**	**319**	*e*P	**P**	**16 37 39.4**	**+2.7**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
SONM	**Songino Array**	**61.99**	**330**	P	**P**	**16 37 46.9**	**+1.4**
SONM				LR	LR	17 02 56.7	
SONM	**Songino Array**	**61.99**	**330**	P	**P**	**16 37 46.9**	**+1.4**
	comp=Z,0.5nm,0.8s,mb3.7,baz=158,slow=4.7,SNR=2.7						
SONM				LR	LR	17 02 56.7	
	comp=Z,272nm,20.2s,MS4.4,baz=128,slow=34						
PPT	**Papeete**	**63.56**	**108**	*e*LR	LR	16 56 43.6	
	comp=Z,266nm,25.2s						
PPT	**Papeete**	**63.56**	**108**	LR	LR	17 03 22.0	
	comp=Z,120nm,18.5s,MS4.1,baz=272,slow=34						
TAOE	**Nuku Hiva Isla**	**72.39**	**98**	*e*LR	LR	17 00 53.2	
	comp=Z,179nm,24.5s						
MKAR	**Makanchi Array**	**75.41**	**320**	P	**P**	**16 39 09.5**	**+0.5**
	comp=Z,0.3nm,0.2s,mb3.8,baz=87,slow=8.1,SNR=3.1						
MKAR				LR	LR	17 11 32.4	
	comp=Z,170nm,18.6s,MS4.4,baz=245,slow=35						
ZALV	**Zalesovo Beam**	**76.69**	**327**	P	**P**	**16 39 14.8**	**-1.3**
	comp=Z,0.3nm,0.3s,mb3.7,baz=93,slow=7.2,SNR=2.7						
ZALV				LR	LR	17 12 54.8	
	comp=

IDC 11 16:51:15.0±1.6, 2°46'S×146°46'E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/15, mbtmp3.8/4, MS3.5/4, Ms1 3.5/4, ms1mx3.1/27, Error ellipse: s-maj=81.0km s-min=28.7km az=119.0, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**16.03**	**354**	LR	LR	16 59 46.9	
	comp=Z,108nm,21.8s,baz=73,slow=32						
ASAR	**Alice Springs**	**24.33**	**209**	P	P	16 56 34.5	0.0
	1.2nm,0.4s,baz=37,slow=7.3,SNR=81						
FITZ	**Fitzroy Crossi**	**25.66**	**231**	P	P	16 56 46.8	+0.1
	2.0nm,1.0s,baz=52,slow=13,SNR=2.3						
FITZ				LR	LR	17 07 59.9	
	comp=Z,97nm,18.3s,baz=66,slow=39						
STKA	**Stephens Creek**	**29.61**	**188**	P	P	16 57 22.1	+0.1
	3.4nm,1.1s,baz=24,slow=12,SNR=2.9						
KSRS	**Korea Array**	**43.28**	**338**	LR	LR	17 15 56.2	
	comp=Z,45nm,19.0s,baz=150,slow=34						
RPZ	**Rata Peaks**	**46.52**	**155**	LR	LR	17 14 30.1	
	comp=Z,138nm,19.2s,baz=31,slow=30						
ILAR	**Eielson Array**	**82.47**	**23**	P	P	17 03 39.1	+0.1
	0.6nm,0.9s,baz=246,slow=5.6,SNR=5.3						

IDC 11 16:56:26.3±3.4, 21°78'N×143°93'E, h162km±29km, mb3.1/6, mb1 3.2/7, mb1mx3.1/22, mbtmp3.1/7, Error ellipse: s-maj=30.0km s-min=22.5km az=97.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.52**	**344**	P	Pn	16 57 45.3	-1.5
	1.4nm,0.3s,baz=234,slow=19,SNR=2.9						
CBIJ				S	Sn	16 58 51.4	+1.5
	2.9nm,0.3s,baz=219,slow=14,SNR=3.1						
KSRS	**Korea Array**	**20.87**	**322**	P	P	17 00 56.7	+1.1
	1.0nm,0.5s,baz=153,slow=9.2,SNR=7.7						
SONM	**Songino Array**	**39.72**	**320**	P	P	17 03 42.7	0.0
	0.2nm,0.5s,baz=115,slow=9.7,SNR=3.4						
ASAR	**Alice Springs**	**46.21**	**193**	P	P	17 04 35.5	+0.3
	0.2nm,0.7s,baz=12,slow=6.9,SNR=5.0						
MKAR	**Makanchi Array**	**55.15**	**313**	P	P	17 05 41.4	-0.5
	0.3nm,0.2s,baz=94,slow=8.0,SNR=3.6						
KDAK	**Kodiak Island**	**57.74**	**35**	P	P	17 06 01.2	+1.2
	1.3nm,0.4s,baz=220,slow=5.8,SNR=4.0						
ILAR	**Eielson Array**	**61.65**	**27**	P	P	17 06 25.6	-1.0
	0.5nm,0.8s,baz=258,slow=4.5,SNR=6.2						

*IDC **11** 17:11:02.3±0.9, 10°.34S×161°.28E, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.2/17, mbtmp4.2/11, MS3.4/2, Ms1 3.4/2, ms1mx2.7/20, Error ellipse: s-maj=27.2km s-min=19.4km az=124.0*

*ISCJB **11** 17:11:09.1±2.8, 10°.23S±0°.09×161°.1E±0°.2, h56km±20km, mb4.2/15, Error ellipse: s-maj=28.4km s-min=12.7km az=16.4*

*NEIC **11** 17:11:09.2±2.7, 10°.22S×161°.19E, h44km±21km, mb4.2/3, Error ellipse: s-maj=27.7km s-min=12.1km az=113.0*

ISC 11 17:11:09.8±2.7, 10°.22S±0°.08×161°.2E±0°.2, h47km±21km, n26, σ0°.91/27, mb4.2/15, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.43**	**303**	Pn	**Pn**	**17 11 32.1**	**-1.2**
	632nm,0.3s,baz=152,slow=4.8,SNR=476						
HNR				Sn	**Sn**	**17 11 51.0**	**+0.1**
	888nm,0.3s,baz=236,slow=20,SNR=17						
HNR				LR	LR	17 11 57.7	
	comp=Z,484nm,20.2s,baz=71,slow=35						
CTA	**Charters Tower**	**17.41**	**234**	*e*P	**Pn**	**17 15 10.8**	**+1.5**
	10.0nm,0.9s						
CTA	**Charters Tower**	**17.41**	**234**	P	**Pn**	**17 15 10.2**	**+0.9**
	0.2nm,0.3s,baz=62,slow=13,SNR=8.7						
CTA				LR	LR	17 20 35.3	
	comp=Z,181nm,20.1s,baz=230,slow=33						
CTAO	**Charters Tower**	**17.41**	**234**	*e*P	**Pn**	**17 15 10.6**	**+1.3**
	19nm,1.0s						
MTSU	**Mount Surprise**	**18.12**	**242**	*e*P	**Pn**	**17 15 19.2**	**+1.1**
	46nm,1.2s						
RMQ	**Roma**	**19.99**	**214**	*e*P	**Pn**	**17 15 41.6**	**+1.2**
	31nm,1.1s						
STKA	**Stephens Creek**	**28.15**	**217**	P	**P**	**17 16 57.3**	**-0.3**
STKA				*e*P		17 16 58.4	
STKA	**Stephens Creek**	**28.15**	**217**	P	**P**	**17 16 57.3**	**-0.4**
	1.4nm,0.5s,mb3.8,baz=28,slow=11,SNR=4.7						
ASAR	**Alice Springs**	**29.23**	**239**	P	**P**	**17 17 06.2**	**-1.1**
	0.9nm,0.6s,mb3.6,baz=61,slow=10,SNR=23						
BBOO	**Buckleboo**	**32.26**	**222**	*e*P	**P**	**17 17 33.9**	**0.0**
	8.1nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	**35.27**	**253**	*e*P	**P**	**17 17 59.3**	**-1.0**
	6.9nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**35.27**	**253**	P	**P**	**17 17 59.3**	**-1.0**
	3.4nm,0.7s,mb4.4,baz=74,slow=4.9,SNR=9.9						
MBWA	**Marble Bar**	**41.23**	**250**	*e*P	**P**	**17 18 49.8**	**-0.6**
MBWA	**Marble Bar**	**41.23**	**250**	*e*P	**P**	**17 18 49.8**	**-0.7**
	3.3nm,0.6s,mb4.1						
MEEK	**Meekatharra**	**43.31**	**242**	*e*P	**P**	**17 19 06.3**	**-1.0**
KSRS	**Korea Array**	**56.74**	**329**	P	**P**	**17 20 48.7**	**-0.1**
	1.0nm,0.6s,mb4.0,baz=140,slow=7.0,SNR=7.0						
KSRS				LR	LR	17 41 39.3	
	comp=Z,20nm,18.6s,baz=225,slow=32						
CMAR	**Chiang Mai Arr**	**67.67**	**295**	P	**P**	**17 22 02.8**	**+0.3**
	0.3nm,0.6s,mb3.5,baz=127,slow=5.7,SNR=2.7						
ULN	**Ulaanbaatar**	**75.03**	**326**	*e*P	**P**	**17 22 47.4**	**+1.1**
	3.7nm,0.9s,mb4.3						
GTA	**Gaotai**	**75.27**	**315**	*e*P	**P**	**17 22 51.2**	**+3.3**
GTA				pP	pP	17 22 56.9	-4.8
GTA				sP	sP	17 22 59.9	-7.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
SONM	**Songino Array**	**75.38**	**325**	P	**P**	**17 22 49.2**	**+0.9**
	comp=Z,1.5nm,0.6s,mb4.1,baz=138,slow=5.3,SNR=12						
KDAK	**Kodiak Island**	**77.53**	**23**	P	**P**	**17 23 01.2**	**+0.9**
KDAK	**Kodiak Island**	**77.53**	**23**	P	**P**	**17 23 01.2**	**+0.9**
	comp=Z,5.6nm,0.7s,mb4.6,baz=296,slow=2.8,SNR=5.7						
MAW	**Mawson**	**83.78**	**202**	P	**P**	**17 23 32.6**	**-1.1**
	comp=Z,4.3nm,0.7s,mb4.7,baz=94,slow=9.2,SNR=13						
ILAR	**Eielson Array**	**84.21**	**20**	P	**P**	**17 23 35.4**	**-0.4**
	comp=Z,0.5nm,0.4s,mb4.0,baz=247,slow=4.9,SNR=15						
NVAR	**Mina Array Bea**	**88.96**	**51**	P	**P**	**17 23 58.9**	**-0.7**
	comp=Z,1.2nm,0.7s,mb4.3,baz=235,slow=6.0,SNR=4.4						
MKAR	**Makanchi Array**	**89.86**	**318**	P	**P**	**17 24 03.5**	**0.0**
	comp=Z,0.3nm,0.3s,mb4.2,baz=84,slow=7.8,SNR=3.5						

IDC 11 17:14:26.4±2.0, 10°.79N×91°.69E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.6/23, mbtmp3.9/6, Error ellipse: s-maj=91.4km s-min=20.1km az=62.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.76**	**349**	P	P	17 21 35.5	0.0
	1.1nm,0.6s,baz=165,slow=9.0,SNR=8.5						
SONM	**Songino Array**	**38.94**	**16**	P	P	17 21 54.1	+0.1
	1.8nm,1.2s,baz=201,slow=7.9,SNR=6.1						
ZALV	**Zalesovo Beam**	**43.39**	**354**	P	P	17 22 30.5	0.0
	0.8nm,0.4s,baz=162,slow=6.5,SNR=5.2						
FITZ	**Fitzroy Crossi**	**44.13**	**130**	P	P	17 22 36.9	-0.1
	1.4nm,0.7s,baz=303,slow=5.7,SNR=5.9						
ASAR	**Alice Springs**	**53.63**	**130**	P	P	17 23 50.0	0.0
	0.8nm,0.9s,baz=306,slow=7.4,SNR=11						
ARCES	**ARCESS Array B**	**71.72**	**340**	P	P	17 25 50.0	0.0
ARCES	**ARCESS Array B**	**71.72**	**340**	P	P	17 25 50.0	0.0
	1.2nm,0.8s,baz=83,slow=7.6,SNR=3.4						

*ISCJB **11** 17:37:11.7±0.5, 30°.07N±0°.06×139°.1E±0°.1, h437km±6km, mb3.6/14, Error ellipse: s-maj=19.7km s-min=8.2km az=162.8*

*IDC **11** 17:37:12.0±0.8, 30°.01N×138°.88E, h419km±12km, mb3.3/12, mb1 3.3/16, mb1mx3.1/27, mbtmp3.3/16, Error ellipse: s-maj=33.4km s-min=10.3km az=72.0*

*NEIC **11** 17:37:13.0±1.3, 30°.05N×138°.67E, h424km±13km, mb3.9/2, Error ellipse: s-maj=35.6km s-min=16.8km az=79.0*

*JMA **11** 17:37:13.5±0.2, 30°.04N×139°.04E, h415km, M3.3*

ISC 11 17:37:12.9±0.5, 30°.13N±0°.06×139°.2E±0°.1, h435km±6km, n40, σ0°.99/49, mb3.6/14, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.02**	**10**	P	**P**	**17 38 20.2**	**+1.4**
JHJ2				S	**S**	**17 39 11.3**	**-1.1**
JHJ	**Hachijo jima 2**	**3.03**	**9**	P	**P**	**17 38 19.9**	**+1.1**
	15nm,0.3s,baz=243,slow=24,SNR=23						
JHJ				S	**S**	**17 39 12.2**	**-0.1**
	19nm,0.3s,baz=244,slow=23,SNR=8.3						
CBIJ	**Chichi jima**	**4.01**	**138**	P	**P**	**17 38 26.9**	**-0.2**
	18nm,0.3s,baz=280,slow=23,SNR=18						
CBIJ				S	**S**	**17 39 25.0**	**-2.5**
	52nm,0.3s,baz=102,slow=23,SNR=25						
CBIJ	**Chichi jima**	**4.01**	**138**	P	**P**	**17 38 26.8**	**-0.4**
CBIJ				S	**S**	**17 39 25.5**	**-2.0**
BSO1	**Boso 1**	**4.76**	**18**	P	**P**	**17 38 34.6**	**+0.6**
BSO1				S	**S**	**17 39 39.6**	**-0.6**
JKN2	**Miekihoku**	**4.79**	**330**	P	**P**	**17 38 34.7**	**+0.4**
BSO3	**Boso 3**	**4.79**	**13**	P	**P**	**17 38 36.9**	**+2.6**
BSO3				*e*S	**S**	**17 39 40.1**	**-0.7**
HMMJ	**Hamamatsu 2**	**4.88**	**346**	P	**P**	**17 38 36.0**	**+0.9**
BSO4	**Boso 4**	**4.95**	**11**	*e*S	**S**	**17 39 42.3**	**-1.2**
JOD2	**Odawara 2**	**5.12**	**359**	P	**P**	**17 38 38.9**	**+1.4**
JOD2				S	**S**	**17 39 45.7**	**-1.0**
JNY	**Yasuok**	**5.34**	**348**	P	**P**	**17 38 40.7**	**+1.0**
JAO	**Obara**	**5.38**	**343**	P	**P**	**17 38 41.9**	**+1.8**
JHU	**Hanno**	**5.71**	**1**	P	**P**	**17 38 42.7**	**-0.8**
JHU				S	**S**	**17 39 53.8**	**-3.7**
JRY	**Ryogami san**	**5.88**	**358**	P	**P**	**17 38 45.8**	**+0.6**
JAG	**Ashikaga**	**6.29**	**2**	P	**P**	**17 38 48.9**	**-0.5**
MJAR	**Matsushiro Arr**	**6.45**	**353**	P	**P**	**17 38 51.0**	**-0.2**
	2.1nm,0.3s,baz=192,slow=7.8,SNR=18						
MAJO	**Matsushiro**	**6.45**	**353**	*e*P	**P**	**17 38 51.9**	**+0.7**
	12nm,0.6s						
MAT	**Matsushiro**	**6.45**	**353**	P	**P**	**17 38 51.6**	**+0.4**
MAT				S	**S**	**17 40 10.8**	**-0.9**
JHO	**Hitachi**	**6.57**	**10**	P	**P**	**17 38 53.3**	**+0.9**
JHS	**Saijyo**	**7.06**	**315**	P	**P**	**17 38 57.8**	**+0.1**
KSRS	**Korea Array**	**11.88**	**311**	P	**P**	**17 39 49.0**	**-1.4**
	0.1nm,0.3s,baz=185,slow=29,SNR=4.8						
ZALV	**Zalesovo Beam**	**45.48**	**318**	P	**P**	**17 44 50.1**	**-1.1**
	0.5nm,0.3s,mb3.3,baz=85,slow=9.6,SNR=4.1						
MKAR	**Makanchi Array**	**46.53**	**308**	P	**P**	**17 44 58.5**	**-0.9**
MKAR	**Makanchi Array**	**46.53**	**308**	P	**P**	**17 44 58.5**	**-0.9**
	0.3nm,0.3s,mb3.0,baz=83,slow=10,SNR=6.3						
ASAR	**Alice Springs**	**53.72**	**186**	P	**P**	**17 45 53.1**	**+0.5**
	0.4nm,0.5s,mb2.9,baz=358,slow=5.4,SNR=30						
BVAR	**Borovoye Array**	**54.04**	**316**	P	**P**	**17 45 54.4**	**-0.2**
	2.7nm,0.4s,mb3.8,baz=94,slow=7.5,SNR=19						
ABKAR	**Akbulak array**	**61.11**	**313**	*e*P	**P**	**17 46 42.2**	**-0.9**
	0.9nm,0.4s,mb3.5						
AKTK	**Aktyubinsk**	**62.03**	**314**	P	**P**	**17 46 49.0**	**-0.3**
AKTO	**Aktyubinsk**	**62.03**	**314**	P	**P**	**17 46 49.0**	**-0.3**
	1.5nm,0.6s,mb3.7,baz=94,slow=9.5,SNR=5.1						
SPITS	**Spitsbergen Ar**	**66.93**	**349**	P	**P**	**17 47 22.0**	**+1.9**
	3.4nm,0.7s,mb4.1,baz=69,slow=29,SNR=8.4						
ARCES	**ARCESS Array B**	**69.81**	**340**	P	**P**	**17 47 39.3**	**+1.5**
	1.0nm,0.4s,mb3.7,baz=72,slow=9.1,SNR=15						
JOF	**Joensuu**	**71.20**	**333**	*e*p	**P**	**17 47 45.9**	**-0.2**
	1.9nm,0.4s,mb4.0						
KAF	**Kangasniemi**	**73.60**	**333**	*e*p	**P**	**17 47 59.0**	**-1.1**
FINES	**FINESS Array B**	**74.07**	**333**	P	**P**	**17 48 03.2**	**+0.4**
FINES	**FINESS Array B**	**74.07**	**333**	P	**P**	**17 48 03.2**	**+0.4**
	1.2nm,0.3s,mb4.0,baz=65,slow=4.9,SNR=15						
AKASG	**Malin Array Be**	**78.62**	**322**	P	**P**	**17 48 27.2**	**-1.0**
	0.2nm,0.4s,mb3.1,baz=50,slow=5.4,SNR=5.0						
HFS	**Hagfors**	**79.60**	**336**	P	**P**	**17 48 32.8**	**-0.4**
	1.2nm,0.6s,mb3.7,baz=120,slow=5.3,SNR=7.2						
NOA	**NORSAR Array B**	**79.82**	**337**	P	**P**	**17 48 34.9**	**+0.5**
NOA	**NORSAR Array B**	**79.82**	**337**	P	**P**	**17 48 34.9**	**+0.5**
	0.9nm,0.6s,mb3.6,baz=45,slow=5.0,SNR=3.1						
BRTR	**Keskin Array B**	**82.03**	**311**	P	**P**	**17 48 46.0**	**-0.3**
	0.8nm,0.6s,mb3.6,baz=108,slow=4.0,SNR=6.7						

*ISCJB **11** 17:58:35.7±0.5, 51°.52N±0°.03×6°.47E±0°.04, h0km, Error ellipse: s-maj=5.1km s-min=2.7km az=136.1*

*LDG **11** 17:58:36.6±0.1, 51°.54N×6°.49E, h1km, Ml2.7/10, Error ellipse: s-maj=2.5km s-min=1.8km az=177.0, Suspected Mining induced.*

*CSEM **11** 17:58:36.5±0.3, 51°.51N×6°.52E, h1km, ML2.8/7, Error ellipse: s-maj=6.0km s-min=4.0km az=130.0*

*NEIC **11** 17:58:36.6, 51°.54N×6°.49E, h1km, ML2.7(LDG), After LDG.*

*BNS **11** 17:58:37.7±1.2, 51°.51N×6°.58E, h1km, ML2.1*

*BGR **11** 17:58:38.4±0.4, 51°.52N×6°.66E, h1km, ML2.4/1, Error ellipse: s-maj=6.7km s-min=4.4km az=113.0*

*BUG **11** 17:58:38.5, 51°.47N×6°.66E, h1km, ML1.9*

*UCC **11** 17:58:38.0±0.6, 51°.45N×6°.72E, h5km±4km, ML1.9*

ISC 11 17:58:36.6±0.5, 51°.49N±0°.02×6°.50E±0°.04, h0km, n64, σ1°.17/98, 3C-1D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRHE	**Rheinberg**	**0.05**	**63**	Pg	**Pg**	**17 58 37.6**	**+0.1**
BRHE				Sg	**Sg**	**17 58 38.7**	**+0.5**
BRHE	**Rheinberg**	**0.05**	**63**	Pg	**Pg**	**17 58 37.6**	**+0.1**
BRHE				Sg	**Sg**	**17 58 38.7**	**+0.5**
LAUG	**Laupendahl**	**0.31**	**117**	*e*Pg	**Pg**	**17 58 42.6**	**0.0**
LAUG	**Laupendahl**	**0.31**	**117**	Pg	**Pg**	**17 58 42.6**	**0.0**
BUG	**Bochum--Univer**	**0.48**	**96**	*e*Pg	**Pg**	**17 58 46.7**	**+0.8**
BUG				Sg	**Sg**	**17 58 52.7**	**+0.6**
WTSB	**Winterswijk**	**0.51**	**21**	*e*Pg	**Pg**	**17 58 46.4**	**0.0**
	SNR=4.3						
WTSB				*e*Sg	**Sg**	**17 58 52.3**	**-0.7**
WTSB	**Winterswijk**	**0.51**	**21**	*e*Pg	**Pg**	**17 58 46.3**	**-0.1**
	12nm,0.4s						
WTSB				*e*Sg	**Sg**	**17 58 52.5**	**-0.4**
WTSB	**Winterswijk**	**0.51**	**21**	Pg	**Pg**	**17 58 46.4**	**0.0**
	SNR=4.3						
WTSB				Sg	**Sg**	**17 58 52.3**	**-0.7**
BNS	**Bensberg**	**0.68**	**141**	*e*Pg	**Pg**	**17 58 50.4**	**+0.8**
BNS	**Bensberg**	**0.68**	**141**	Pg	**Pg**	**17 58 50.4**	**+0.8**
HOBG	**Hohbusch**	**0.73**	**134**	*e*Pg	**Pg**	**17 58 50.9**	**+0.3**
HOBG	**Hohbusch**	**0.73**	**134**	Pg	**Pg**	**17 58 50.9**	**+0.3**
HGN	**Heimansgroeve**	**0.81**	**206**	*e*Pg	**Pg**	**17 58 54.6**	**+2.5**
	SNR=14						
HGN				*e*Sg	**Sg**	**17 59 07.7**	**+5.0**
HGN	**Heimansgroeve**	**0.81**	**206**	*e*Pg	**Pg**	**17 58 54.6**	**+2.4**
	15nm,0.1s						
HGN				*e*Sg	**Sg**	**17 59 05.1**	**+2.4**
HGN	**Heimansgroeve**	**0.81**	**206**	*ex*	**Sg**	**17 59 07.7**	**+5.0**
HGN	**Heimansgroeve**	**0.81**	**206**	Pg	**Pg**	**17 58 54.6**	**+2.5**
	SNR=14						
HGN				*e*Sg	**Sg**	**17 59 05.1**	**+2.4**
DREG	**Dreilaegerbach**	**0.85**	**192**	*e*Pg	**Pg**	**17 58 53.6**	**+0.8**
DREG	**Dreilaegerbach**	**0.85**	**192**	Pg	**Pg**	**17 58 53.6**	**+0.8**
KLL	**Kalltalsperre**	**0.86**	**188**	*e*Pg	**Pg**	**17 58 54.5**	**+1.5**
KLL	**Kalltalsperre**	**0.86**	**188**	Pg	**Pg**	**17 58 54.5**	**+1.5**
STB	**Steinbach**	**0.93**	**166**	*e*Pg	**Pg**	**17 58 55.4**	**+1.1**
STB				*e*Sg	**Sg**	**17 59 08.2**	**+1.9**
STB	**Steinbach**	**0.93**	**166**	Pg	**Pg**	**17 58 55.4**	**+1.1**
STB				Sg	**Sg**	**17 59 08.2**	**+1.9**
MEM	**Membach**	**0.94**	**200**	⇓P	**Pg**	**17 58 55.8**	**+1.2**
MEM				S	**Sg**	**17 59 08.7**	**+2.0**
MEM	**Membach**	**0.94**	**200**	P	**Pg**	**17 58 55.7**	**+1.2**
MEM				S	**Sg**	**17 59 08.6**	**+1.9**
IBBN	**Ibbenburen**	**1.13**	**43**	*e*Sg	**Sg**	**17 59 12.9**	**+0.1**
IBBN	**Ibbenburen**	**1.13**	**43**	Sg	**Sg**	**17 59 12.9**	**+0.1**
HILG	**Hillesheim**	**1.21**	**175**	*e*Pg	**Pg**	**17 59 00.5**	**+0.8**
HILG	**Hillesheim**	**1.21**	**175**	Pg	**Pg**	**17 59 00.5**	**+0.8**
BCLA	**Clavier**	**1.31**	**216**	⇑P	**Pg**	**17 59 03.0**	**+1.2**
BCLA				S	**Sg**	**17 59 20.0**	**+1.2**
	comp=N,13nm,0.0s						
BCLA	**Clavier**	**1.31**	**216**	P	**Pg**	**17 59 02.9**	**+1.1**
BCLA				S	**Sg**	**17 59 20.0**	**+1.2**
KOE	**Koeppel**	**1.32**	**143**	*e*Pg	**Pg**	**17 59 02.2**	**+0.3**
KOE	**Koeppel**	**1.32**	**143**	Pg	**Pg**	**17 59 02.2**	**+0.3**
BGG	**Burgeitz**	**1.39**	**157**	*e*Pg	**Pg**	**17 59 03.0**	**-0.3**
BGG	**Burgeitz**	**1.39**	**157**	Pg	**Pg**	**17 59 03.0**	**-0.3**
GIVF	**Givet**	**1.75**	**218**	*e*Pg	**Pg**	**17 59 09.7**	**-0.5**
GIVF				*e*Sg	**Sg**	**17 59 32.8**	**0.0**
	comp=N,31nm,0.3s						
GIVF	**Givet**	**1.75**	**218**	*e*Pg	**Pg**	**17 59 09.7**	**-0.5**
GIVF				*e*Sg	**Sg**	**17 59 32.8**	**0.0**
	comp=N,15nm,0.3s						
TNS	**Taunus Mts**	**1.77**	**135**	*e*Pg	**Pg**	**17 59 10.2**	**-0.3**
	SNR=4.6						
TNS				*e*Sg	**Sg**	**17 59 31.8**	**-1.7**
TNS	**Taunus Mts**	**1.77**	**135**	Pg	**Pg**	**17 59 10.2**	**-0.3**
	SNR=4.6						
TNS				Sg	**Sg**	**17 59 31.8**	**-1.7**
WLF	**Walferdange**	**1.84**	**187**	⇑P	**Pn**	**17 59 12.5**	**+3.1**
WLF				S	**Sn**	**17 59 34.3**	**+0.9**
	comp=N,13nm,0.3s						
WLF	**Walferdange**	**1.84**	**187**	P	**Pn**	**17 59 12.5**	**+3.1**
WLF				S	**Sn**	**17 59 34.3**	**+0.9**
	comp=N,13nm,0.3s						
DOU	**Dourbes**	**1.85**	**222**	⇑P	**Pn**	**17 59 09.8**	**+0.3**
DOU				S	**Sn**	**17 59 34.0**	**+0.4**
	comp=E,8.7nm,0.3s						
DOU	**Dourbes**	**1.85**	**222**	P	**Pn**	**17 59 09.8**	**+0.3**
DOU				S	**Sn**	**17 59 33.9**	**+0.4**
	comp=E,8.7nm,0.3s						
BAIF	**Baives**	**2.04**	**226**	*e*P	**Pn**	**17 59 12.9**	**+0.7**
BAIF				*e*Sg	**Sg**	**17 59 41.4**	**-0.8**
	comp=E,13nm,0.4s						
BAIF	**Baives**	**2.04**	**226**	*e*P	**Pn**	**17 59 12.9**	**+0.7**
BAIF				*e*Sg	**Sg**	**17 59 41.4**	**-0.8**
	comp=E,6.3nm,0.4s						
CLZ	**Clausthal**	**2.44**	**80**	*e*Pg	**Pg**	**17 59 22.4**	**-0.9**
	SNR=2.6						
CLZ				*e*Sg	**Sg**	**17 59 51.5**	**-3.4**
CLZ	**Clausthal**	**2.44**	**80**	Pg	**Pg**	**17 59 22.4**	**-0.9**
	SNR=2.6						
RFYF	**Reffroy**	**2.94**	**193**	*e*Sg	**Sg**	**18 00 10.7**	**-0.4**
	comp=E,9.9nm,0.2s						
RFYF	**Reffroy**	**2.94**	**193**	*e*Sg	**Sg**	**18 00 10.7**	**-0.4**
	comp=E,4.9nm,0.2s						
CDF	**Champ du Feu**	**3.12**	**170**	*e*Pg	**Pg**	**17 59 35.4**	**-1.0**
CDF				*e*Sg	**Sg**	**18 00 15.6**	**-1.3**
	comp=E,3.8nm,0.4s						
CDF	**Champ du Feu**	**3.12**	**170**	*e*Pn	**Pn**	**17 59 25.6**	**-1.4**
CDF				*e*Pg	**Pg**	**17 59 35.4**	**-1.0**
CDF				*e*Sg	**Sg**	**18 00 15.6**	**-1.3**
CDF	**Champ du Feu**	**3.12**	**170**	*e*Pn	**Pn**	**17 59 25.6**	**-1.4**
CDF	**Champ du Feu**	**3.12**	**170**	*e*Pg	**Pg**	**17 59 35.4**	**-1.0**
CDF				*e*Sg	**Sg**	**18 00 15.6**	**-1.3**
	comp=E,1.9nm,0.4s						
MEZF	**Maizieres J'vi**	**3.14**	**198**	*e*Sg	**Sg**	**18 00 16.4**	**-0.9**
	comp=E,10nm,0.4s						
MEZF	**Maizieres J'vi**	**3.14**	**198**	*e*Sg	**Sg**	**18 00 16.4**	**-0.9**
	comp=E,5.2nm,0.4s						
SFTF	**Sexfontaines**	**3.42**	**197**	*e*Sg	**Sg**	**18 00 25.3**	**-1.2**
	comp=E,5.7nm,0.3s						
SFTF	**Sexfontaines**	**3.42**	**197**	*e*Sg	**Sg**	**18 00 25.3**	**-1.2**
	comp=E,2.8nm,0.3s						
HAU	**Haudompre**	**3.49**	**182**	*e*Sg	**Sg**	**18 00 27.8**	**-0.9**
	comp=E,6.0nm,0.3s						
HAU	**Haudompre**	**3.49**	**182**	*e*Sg	**Sg**	**18 00 27.8**	**-0.9**
	comp=E,3.0nm,0.3s						
LOR	**Lormes**	**4.57**	**203**	*e*Pn	**Pn**	**17 59 45.2**	**-1.7**
LOR				*e*Sg	**Sg**	**18 01 01.2**	**-2.0**
	comp=E,2.7nm,0.3s						
LOR	**Lormes**	**4.57**	**203**	*e*Pn	**Pn**	**17 59 45.2**	**-1.7**
LOR				*e*Sg	**Sg**	**18 01 01.2**	**-2.0**
	comp=E,1.4nm,0.3s						
SSF	**Saint Saulge**	**4.85**	**205**	*e*Pn	**Pn**	**17 59 49.5**	**-1.2**
SSF				*e*Sg	**Sg**	**18 01 09.8**	**-2.5**
	comp=E,2.9nm,0.4s						
SSF	**Saint Saulge**	**4.85**	**205**	*e*Pn	**Pn**	**17 59 49.5**	**-1.2**
SSF				*e*Sg	**Sg**	**18 01 09.8**	**-2.5**
FLN	**La Foliniere**	**5.26**	**241**	*e*Pn	**Pn**	**17 59 54.4**	**-1.9**
	baz=59						
FLN	**La Foliniere**	**5.26**	**241**	*e*Pn	**Pn**	**17 59 54.4**	**-1.9**

*ISCJB **11** 17:59:26.4±0.5, 51°.47N±0°.03×6°.49E±0°.04, h0km, Error ellipse: s-maj=4.7km s-min=2.7km az=39.6*

*CSEM **11** 17:59:27.3±0.3, 51°.50N×6°.52E, h1km, ML2.7/9, Error ellipse: s-maj=5.7km s-min=3.9km az=131.0*

*LDG **11** 17:59:27.1±0.3, 51°.56N×6°.53E, h1km, Ml2.6/10, Error ellipse: s-maj=4.3km s-min=2.5km az=167.0, Suspected Mining induced.*

*NEIC **11** 17:59:27.1, 51°.56N×6°.53E, h1km, ML2.6(LDG), After LDG.*

*UCC **11** 17:59:28.5±0.9, 51°.59N×6°.32E, h8km±3km, ML1.9*

*BGR **11** 17:59:28.0±1.0, 51°.48N×6°.58E, h1km, ML2.1/4, Error ellipse: s-maj=12.2km s-min=5.6km az=117.0*

*BNS **11** 17:59:28.2±1.2, 51°.51N×6°.58E, h1km, ML2

	comp=N,2.2nm,0.4s							
CDF	**Champ du Feu**	**3.13**	**170**	*e*Sg		**Sg**	**18 01 06.9**	**-0.8**
	comp=N,1.1nm,0.4s							
MEZF	**Maizieres J'vi**	**3.14**	**198**	*e*Sg		**Sg**	**18 01 07.2**	**-0.9**
	comp=N,8.2nm,0.4s							
MEZF	**Maizieres J'vi**	**3.14**	**198**	*e*Sg		**Sg**	**18 01 07.2**	**-0.9**
	comp=N,4.1nm,0.4s							
SFTF	**Sexfontaines**	**3.43**	**197**	*e*Sn		**Sn**	**18 00 59.8**	**-3.3**
SFTF				*e*Sg		**Sg**	**18 01 16.7**	**-0.6**
	comp=N,4.0nm,0.3s							
SFTF	**Sexfontaines**	**3.43**	**197**	*e*Sn		**Sn**	**18 00 59.8**	**-3.3**
SFTF				*e*Sg		**Sg**	**18 01 16.7**	**-0.6**
	comp=N,2.0nm,0.3s							
HAU	**Haudompre**	**3.50**	**182**	*e*Sg		**Sg**	**18 01 18.7**	**-0.8**
	comp=N,3.3nm,0.3s							
HAU	**Haudompre**	**3.50**	**182**	*e*Sg		**Sg**	**18 01 18.7**	**-0.8**
	comp=N,1.6nm,0.3s							
LOR	**Lormes**	**4.57**	**203**	*e*Pn		**Pn**	**18 00 36.0**	**-1.5**
	baz=29							
LOR				*e*Sg		**Sg**	**18 01 52.7**	**-1.3**
	comp=N,2.6nm,0.4s							
LOR	**Lormes**	**4.57**	**203**	*e*Pn		**Pn**	**18 00 36.0**	**-1.5**
	baz=29							
LOR				*e*Sg		**Sg**	**18 01 52.7**	**-1.3**
	comp=N,1.3nm,0.4s							
SSF	**Saint Saulge**	**4.85**	**205**	*e*Pn		**Pn**	**18 00 40.1**	**-1.3**
SSF				*e*Sg		**Sg**	**18 02 01.2**	**-1.8**
	comp=N,1.6nm,0.2s							
SSF	**Saint Saulge**	**4.85**	**205**	*e*Pn		**Pn**	**18 00 40.1**	**-1.3**
SSF				*e*Sg		**Sg**	**18 02 01.2**	**-1.8**
	comp=N,0.8nm,0.2s							

CASC 11 18:00:13.9±3.3, 12°40N×88°79W, h0km±7km, MD4.0, 5C-4D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSM	**San Miguel**	**1.14**	**26**	*e*P	Pg	18 00 34.8	-1.0
VSM				*e*P		18 00 35.5	
BLLM	**Bellamira**	**1.17**	**27**	*e*P	Pg	18 00 34.9	-1.4
BLLM				*e*S	Sg	18 00 53.3	+1.7
SNVI	**San Vicente**	**1.21**	**358**	*e*P	Pg	18 00 37.3	+0.2
SNVI				*e*S	Sg	18 00 56.5	+3.6
LFRS	**El Faro**	**1.25**	**348**	*e*P	Pg	18 00 38.4	+0.6
LFRS				*e*S	Sg	18 00 58.3	+4.2
CNCH	**Conchagua**	**1.28**	**47**↑	*e*P	Pg	18 00 36.1	-2.3
CAHU	**Cacacuatique**	**1.48**	**22**↑	*e*P	Pn	18 00 36.3	-5.5
CNGN	**Cerro Negro**	**2.05**	**87**	*e*P	Pn	18 00 47.4	-2.2
CNGN				*e*S	Sn	18 01 18.9	+3.0
COPN	**Copaltepe**	**2.16**	**95**	*e*P	Pn	18 00 50.5	-0.6
MOMN	**Momotombo**	**2.20**	**89**	*e*P	Pn	18 00 50.5	-1.2
CSAN		**2.33**	**95**	*e*P	Pn	18 00 52.8	-0.7
IXG	**Ixpaco**	**2.40**	**318**	*e*P	Pn	18 00 54.0	-0.4
IXG				*e*S	Sn	18 01 28.4	+3.8
CRUN	**El Crucero**	**2.47**	**99**	*e*P	Pn	18 00 54.7	-0.7
MRL	**Marmol**	**2.79**	**342**↓	*e*P	Pn	18 00 54.2	-5.7
FUG	**Fuego 3**	**2.85**	**316**	*e*P	Pn	18 00 59.9	-0.8
FUG				*e*S	Sn	18 01 38.8	+3.1
FG6		**2.96**	**317**	*e*S	Sn	18 01 38.8	+0.4
SSN	**San Juan del S**	**3.08**	**110**	*e*P	Pn	18 01 04.4	+0.6
TP2	**Tecpan 2**	**3.21**	**318**	*e*P	Pn	18 01 04.5	-1.1
TP2				*e*S	Sn	18 01 46.2	+1.5
JAT	**Jato**	**3.36**	**305**	*e*P	Pn	18 01 08.5	+0.8
NY14	**Universidad de**	**3.63**	**118**	*i*P	Pn	18 01 14.2	+2.7
LAPC	**Finca la Perla**	**3.67**	**116**	*i*P	Pn	18 01 12.5	+0.6
GPS1	**Guardaparques**	**3.74**	**115**	*i*P	Pn	18 01 14.0	+1.1
VCR	**Vista de Mar**	**3.83**	**126**↓	*e*P	Pn	18 01 17.8	+3.5
LIM1	**Limonal**	**3.86**	**116**	*i*P	Pn	18 01 15.4	+0.8
MESS	**Mesas**	**3.89**	**115**	*i*P	Pn	18 01 15.0	0.0
JTS	**JuntasAbangare**	**4.31**	**119**	*e*P	Pn	18 01 21.4	+0.7
JCR	**Jicaral**	**4.41**	**125**↓	*e*P	Pn	18 01 24.9	+2.8
JCR				*e*S	Sn	18 02 14.7	+0.5
CGA2	**Cerro Gallo 2**	**4.86**	**119**	*e*P	Pn	18 01 29.5	+1.2
PRS1	**Puriscal**	**5.01**	**118**↑	*e*P	Pn	18 01 31.8	+1.4
LAJ	**Bijagual**	**5.23**	**118**↓	*e*P	Pn	18 01 31.2	-2.2
URSC	**Urasca**	**5.54**	**117**↑	*e*P	Pn	18 01 37.6	0.0
ACR	**Cerro Adams**	**6.66**	**123**↑	*e*P	Pn	18 01 53.9	+0.7

NIED ***11*** *18:07:00, 46°.50N×152°.90E, h5km, Mw3.8 Best double couple: M0 5.83000×10^14 NP1:φs=229.00000°, δ=76.00000°, λ=136.00000°. NP2:φs=333.00000°, δ=48.00000°, λ=20.00000°.*
IDC ***11*** *18:07:56.6±1.8, 46°.54N×153°.01E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.7/23, mbtmp3.8/10, ML3.4/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/40, Error ellipse: s-maj=46.2km s-min=25.4km az=154.0*
MOS ***11*** *18:08:01.5±2.2, 46°.24N×152°.66E, h45km, mb4.1/5, Error ellipse: s-maj=21.6km s-min=16.7km az=53.6*
ISCJB ***11*** *18:08:03.6±2.0, 46°.3N±0°.2×152°.7E±0°.2, h70km±14km, mb3.7/8, Error ellipse: s-maj=38.2km s-min=10.0km az=44.0*

ISC 11 18:08:06.1±1.7, 46°.2N±0°.2×152°.7E±0°.2, h76km±11km, n21, σ1§20/20, mb3.7/8, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**4.99**	**26**	*e*PN	**Pn**	**18 09 20.5**	**+2.2**
SKR				*e*S	**Sn**	**18 10 14.0**	**-0.6**
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
SKR				smax			
	comp=N,30nm,0.5s						
SKR				smax			
	comp=E,50nm,0.5s						
ASAJ	**Asahikawa**	**7.45**	**257**	Pn	**Pn**	**18 09 51.8**	**-0.2**
	comp=E,0.6nm,0.3s,baz=194,slow=19,SNR=6.7						
ASAJ	**Asahikawa**	**7.45**	**257**	PN	**Pn**	**18 09 51.8**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**8.06**	**242**↑	*e*PN	**Pn**	**18 09 58.4**	**-1.9**
KSRS	**Korea Array**	**20.37**	**253**	P	**P**	**18 12 38.6**	**+2.2**
	comp=Z,0.9nm,0.8s,baz=46,slow=11,SNR=4.7						
SONM	**Songino Array**	**31.23**	**290**	LR	LR	18 27 51.5	
	comp=Z,27nm,18.9s,baz=249,slow=38						
ZALV	**Zalesovo Beam**	**42.68**	**306**	P	**P**	**18 15 53.8**	**-1.0**
	comp=Z,0.5nm,0.5s,mb3.5,baz=126,slow=2.0,SNR=3.3						
ZALV	**Zalesovo Beam**	**42.68**	**306**	P	**P**	**18 15 53.8**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
MKAR	**Makanchi Array**	**46.92**	**298**	P	**P**	**18 16 28.6**	**-0.1**
	comp=Z,1.3nm,0.8s,mb3.7,baz=64,slow=5.5,SNR=6.6						
MKAR	**Makanchi Array**	**46.92**	**298**	*e*P	**P**	**18 16 28.5**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVAR	**Borovoye Array**	**50.96**	**310**	P	**P**	**18 16 58.9**	**-0.6**
	comp=Z,0.5nm,0.5s,mb3.9,baz=86,slow=7.6,SNR=5.5						
BVAR	**Borovoye Array**	**50.96**	**310**	*e*P	**P**	**18 16 58.8**	**-0.6**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**51.97**	**256**	P	**P**	**18 17 09.3**	**+1.9**
	comp=Z,0.4nm,0.5s,mb3.7,baz=31,slow=8.2,SNR=4.6						
AKTO	**Aktyubinsk**	**58.85**	**312**	LR	LR	18 45 52.5	
	comp=Z,62nm,18.2s,baz=184,slow=39						
FINES	**FINESS Array B**	**64.38**	**335**	P	**P**	**18 18 33.3**	**-0.1**
	comp=Z,1.3nm,0.5s,mb4.0,baz=37,slow=7.6,SNR=6.9						
FINES	**FINESS Array B**	**64.38**	**335**	P	**P**	**18 18 33.3**	**-0.1**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	**NORSAR Array B**	**68.61**	**341**	P	**P**	**18 19 00.7**	**+0.3**
	comp=Z,0.8nm,0.8s,mb3.6,baz=27,slow=6.3,SNR=4.0						
NOA	**NORSAR Array B**	**68.61**	**341**	P	**P**	**18 19 00.7**	**+0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	**71.81**	**326**	P	**P**	**18 19 20.0**	**0.0**
	comp=Z,1.8nm,0.5s,mb4.2,baz=34,slow=6.4,SNR=6.6						
AKASG	**Malin Array Be**	**71.81**	**326**	*e*P	**P**	**18 19 20.0**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
TXAR	**Lajitas Array**	**77.99**	**60**	P	**P**	**18 19 54.8**	**-1.3**
	comp=Z,0.3nm,0.6s,mb3.2,baz=298,slow=5.1,SNR=4.2						

IDC ***11*** *18:20:59.0±0.7, 54°.11N×163°.81E, h0km, mb4.1/20, mb1 4.2/21, mb1mx4.2/26, mbtmp4.1/21, ML3.4/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/29, Error ellipse: s-maj=22.1km s-min=12.3km az=158.0*
BJI ***11*** *18:21:01.4, 54°.10N×163°.70E, h35km, mB4.3/6, mb4.4/13, Ms3.5/1, Ms7 3.3/1*
ISCJB ***11*** *18:21:02.0±1.3, 54°.01N±0°.03×163°.73E±0°.04, h33km±9km, mb4.2/41, MS3.5/5, Error ellipse: s-maj=4.7km s-min=3.8km az=164.6*

KRSC ***11*** *18:21:02.0±0.8, 54°.02N×163°.74E, h43km±33km, ML4.7*
MOS ***11*** *18:21:02.4±1.5, 54°.06N×163°.73E, h33km, mb4.4/20, Error ellipse: s-maj=9.7km s-min=7.9km az=86.4*
NEIC ***11*** *18:21:04.4±0.5, 54°.09N×163°.73E, h35km, mb4.6/18, Error ellipse: s-maj=15.5km s-min=6.6km az=171.0*

ISC 11 18:21:02.6±1.4, 54°.02N±0°.03×163°.71E±0°.04, h23km±10km, h29km±2.2km: pP-P, n111, σ1§10/126, mb4.2/41, MS3.5/5, 4C-3D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**1.28**	**296**	*i*P	**Pn**	**18 21 25.1**	**0.0**
MKZ				*i*S	**Sn**	**18 21 42.2**	**+0.7**
BKI	**Bering**	**1.77**	**47**	*i*P	**Pn**	**18 21 28.4**	**-3.5**
BKI				*i*S	**Sn**	**18 21 47.5**	**-6.2**
KBTR	**Krutoberegovo**	**2.25**	**347**	*i*P	**Pn**	**18 21 36.3**	**-2.2**
KBTR				*i*S	**Sn**	**18 22 01.8**	**-3.7**
SPN	**Mys Shipunski**	**2.38**	**249**	P	**Pn**	**18 21 39.6**	**-0.6**
SPN				*i*S	**Sn**	**18 22 06.6**	**-2.1**
KII	**Karymskiy**	**2.51**	**272**	*i*P	**Pn**	**18 21 42.3**	**+0.3**
KII				*i*S	**Sn**	**18 22 11.6**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**2.59**	**319**	*i*P	**Pn**	**18 21 43.8**	**+0.7**
BZGR				*i*S	**Sn**	**18 22 14.6**	**+0.7**
ZLN	**Zelenaya**	**2.61**	**321**	*i*P	**Pn**	**18 21 44.0**	**+0.7**
ZLN				*i*S	**Sn**	**18 22 14.0**	**-0.3**
NLC	**Nalytchevo**	**2.73**	**254**	*i*P	**Pn**	**18 21 44.7**	**-0.4**
NLC				*i*S	**Sn**	**18 22 15.9**	**-1.5**
KPT	**Kopyto**	**2.80**	**316**	*i*P	**Pn**	**18 21 46.9**	**+0.9**
KPT				*i*S	**Sn**	**18 22 20.3**	**+1.3**
KRSR	**Krestovskiy**	**2.85**	**322**	*i*P	**Pn**	**18 21 46.8**	**+0.2**
KRSR				*i*S	**Sn**	**18 22 19.8**	**-0.4**
KLY	**Klyuchi**	**2.89**	**324**	*i*P	**Pn**	**18 21 46.3**	**-0.9**
KLY				*i*S	**Sn**	**18 22 19.2**	**-2.0**
KOZR	**Kozyr**	**3.00**	**315**	PN	**Pn**	**18 21 49.6**	**+0.8**
KOZR				S	**Sn**	**18 22 24.1**	**+0.1**
KOZ	**Kozyrevsk**	**3.01**	**314**	*i*P	**Pn**	**18 21 49.6**	**+0.8**
KOZ				*i*S	**Sn**	**18 22 24.1**	**0.0**
SRKR	**Sorokina**	**3.01**	**332**	*i*P	**Pn**	**18 21 49.2**	**+0.3**
SRKR				*i*S	**Sn**	**18 22 23.1**	**-1.2**
AVH	**Avacha**	**3.05**	**258**	*i*P	**Pn**	**18 21 49.9**	**+0.5**
AVH				*i*S	**Sn**	**18 22 25.0**	**-0.2**
PET	**Petropavlovsk**	**3.18**	**254**	*e*P	**Pn**	**18 21 50.6**	**-0.5**
PET	**Petropavlovsk**	**3.18**	**254**	P	**Pn**	**18 21 51.5**	**+0.4**
PET				*i*S	**Sn**	**18 22 26.9**	**-1.4**
PET	**Petropavlovsk**	**3.18**	**254**↑	*i*PN	**Pn**	**18 21 50.9**	**-0.2**
PET				*e*S	**Sn**	**18 22 27.2**	**-1.1**
PET				pmax	pmax		
	comp=Z,86nm,0.6s						
PET				smax			
	comp=E,392nm,0.6s						
PET				smax			
	comp=N,509nm,0.6s						
SRDR	**Sredinnyy**	**3.25**	**317**	*i*P	**Pn**	**18 21 52.8**	**+0.7**
SRDR				*i*S	**Sn**	**18 22 29.6**	**-0.4**
GNL	**Ganaly**	**3.43**	**267**	*e*P	**Pn**	**18 21 56.0**	**+1.4**
GNL				*i*S	**Sn**	**18 22 36.0**	**+1.5**
GRL	**Gorelyy**	**3.69**	**249**	P	**Pn**	**18 21 57.8**	**-0.3**
GRL				*i*S	**Sn**	**18 22 38.8**	**-2.0**
MIPR	**Malaya Ipel'ka**	**4.53**	**250**	P	**Pn**	**18 22 10.9**	**+1.1**
MIPR				*i*S	**Sn**	**18 23 01.3**	**-0.4**
SKR	**Severo-Kuril's**	**5.72**	**237**	*e*PN	**Pn**	**18 22 32.2**	**+6.1**
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
ALID	**Alaid**	**5.90**	**241**	P	**Pn**	**18 22 28.9**	**+0.4**
ASAJ	**Asahikawa**	**16.95**	**243**	P	**Pn**	**18 24 57.3**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=135,slow=31,SNR=4.1						
ERM	**Erimo**	**18.17**	**237**↓	*e*P	**Pn**	**18 25 11.2**	**-2.0**
HABR	**Khabarovsk**	**18.70**	**264**	*e*P	**Pn**	**18 25 18.3**	**-1.3**
HABR				*e*		18 28 47.8	
HABR				pmax	pmax		
	comp=E,23nm,1.6s						
HABR				pmax	pmax		
	comp=N,14nm,2.5s						
HABR				pmax	pmax		
	comp=Z,22nm,1.2s						
YAK	**Yakutsk**	**19.52**	**308**	*e*P	**Pn**	**18 25 26.2**	**-3.1**
	comp=Z,36nm,0.7s						
YAK	**Yakutsk**	**19.52**	**308**	*c*eP	**Pn**	**18 25 26.2**	**-3.1**
YAK				pmax	pmax		
	comp=E,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,28nm,0.9s						
TTA	**Tatalina**	**22.51**	**51**	*e*P	**P**	**18 26 01.3**	**+1.1**
	comp=Z,9.1nm,1.2s,mb4.1						
TTA	**Tatalina**	**22.51**	**51**	*e*P	**P**	**18 26 01.3**	**+1.1**
TTA				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.1						
TIXI	**Tiksi**	**23.20**	**333**	*e*P	**P**	**18 26 09.1**	**+1.7**
KDAK	**Kodiak Island**	**24.47**	**63**	P	**P**	**18 26 17.6**	**-1.9**
	comp=Z,1.8nm,0.5s,mb3.8,baz=257,slow=8.2,SNR=3.8						
KDAK	**Kodiak Island**	**24.47**	**63**	P	**P**	**18 26 17.6**	**-1.9**
KDAK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.8						
BPAW	**Bear Paw Mtn.**	**24.83**	**48**	*e*P	**P**	**18 26 21.5**	**-1.2**
	comp=Z,5.9nm,0.9s,mb4.1						
MJAR	**Matsushiro Arr**	**24.83**	**236**	P	**P**	**18 26 23.8**	**+0.8**
	comp=Z,3.7nm,0.9s,mb3.9,baz=30,slow=8.9,SNR=14						
MJAR	**Matsushiro Arr**	**24.83**	**236**	P	**P**	**18 26 23.8**	**+0.8**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAJO	**Matsushiro**	**24.83**	**236**	*e*P	**P**	**18 26 24.6**	**+1.6**
MAT	**Matsushiro**	**24.83**	**236**	P	**P**	**18 26 24.3**	**+1.3**
COLD	**Coldfoot**	**25.45**	**41**	*e*P	**P**	**18 26 27.1**	**-1.3**
	comp=Z,4.7nm,0.8s,mb4.1						
ILAR	**Eielson Array**	**26.62**	**47**	P	**P**	**18 26 37.5**	**-1.5**
	comp=Z,2.0nm,0.6s,mb3.8,baz=256,slow=7.5,SNR=25						
ILAR				PcP	PcP	18 30 00.8	-1.5
	comp=Z,0.2nm,0.5s,baz=265,slow=3.4,SNR=4.1						
ILAR				LR	LR	18 37 25.2	
	comp=Z,42nm,19.9s,MS3.0,baz=344,slow=37						
ILAR	**Eielson Array**	**26.62**	**47**	P	**P**	**18 26 37.5**	**-1.5**
ILAR						18 30 00.8	
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ILAR				MLR	MLR		
	comp=Z,42nm,19.9s						
KSRS	**Korea Array**	**29.56**	**251**	P	**P**	**18 27 07.2**	**+1.7**
	comp=Z,1.5nm,0.8s,mb3.8,baz=51,slow=8.9,SNR=8.3						
KSRS	**Korea Array**	**29.56**	**251**	P	**P**	**18 27 07.2**	**+1.8**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
INK	**Inuvik**	**31.81**	**39**	P	**P**	**18 27 24.0**	**-0.9**
	comp=Z,1.7nm,0.7s,mb4.0,baz=254,slow=4.7,SNR=4.1						
INK	**Inuvik**	**31.81**	**39**	P	**P**	**18 27 24.0**	**-0.9**
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	**35.78**	**284**	P	**P**	**18 27 58.6**	**-1.0**
SONM				LR	LR	18 42 36.2	
SONM	**Songino Array**	**35.78**	**284**	P	**P**	**18 27 58.6**	**-1.0**
	comp=Z,0.3nm,0.6s,mb3.4,baz=52,slow=8.7,SNR=4.1						
SONM				LR	LR	18 42 36.2	
	comp=Z,48nm,19.4s,MS3.3,baz=231,slow=36						
SONM	**Songino Array**	**35.78**	**284**	P	**P**	**18 27 58.6**	**-1.0**
YKA	**Yellowknife Ar**	**41.01**	**44**	P	**P**	**18 28 42.7**	**-0.7**
YKA	**Yellowknife Ar**	**41.01**	**44**	P	**P**	**18 28 42.7**	**-0.7**
	comp=Z,3.1nm,0.8s,mb4.0,baz=296,slow=7.6,SNR=5.8						
YKA	**Yellowknife Ar**	**41.01**	**44**	P	**P**	**18 28 42.7**	**-0.7**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZALV	**Zalesovo Beam**	**44.08**	**304**	P	**P**	**18 29 07.3**	**-1.2**
	comp=Z,0.5nm,0.4s,mb3.6,baz=67,slow=8.2,SNR=3.9						
ZALV	**Zalesovo Beam**	**44.08**	**304**	P	**P**	**18 29 07.3**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
NVS	**Novosibirsk**	**44.35**	**305**	*e*P	**P**	**18 29 10.5**	**-0.1**
GTA	**Gaotai**	**44.63**	**278**	P	**P**	**18 29 13.5**	**+0.5**
GTA				pP	pP	18 29 22.4	+2.4
GTA				sP	sP	18 29 26.6	+3.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.1						
KURK	**Kurchatov**	**49.06**	**303**	*e*P	**P**	**18 29 46.8**	**-0.7**
	comp=Z,10nm,0.7s,mb5.0						
KURK	**Kurchatov**	**49.06**	**303**	LR	LR	18 52 53.0	
	comp=Z,53nm,19.6s,MS3.5,baz=55,slow=39						
KURK	**Kurchatov**	**49.06**	**303**	*d*P	**P**	**18 29 47.3**	**-0.2**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
KURK				MLR	MLR		
	comp=Z,62nm,16.0s,MS3.7						
MK31	**Makanchi Array**	**49.68**	**297**	*e*P	**P**	**18 29 51.8**	**-0.5**
MKAR	**Makanchi Array**	**49.68**	**297**	P	**P**	**18 29 51.5**	**-0.8**
	comp=Z,3.3nm,0.9s,mb4.4,baz=47,slow=5.4,SNR=14						
MKAR	**Makanchi Array**	**49.68**	**297**	*i*P	**P**	**18 29 51.5**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MOD	**Modoc**	**49.92**	**71**	*e*P	**P**	**18 29 54.4**	**+0.2**
	comp=Z,2.8nm,1.0s,mb4.2						
BVAR	**Borovoye Array**	**51.48**	**310**	P	**P**	**18 30 06.6**	**+0.7**
	comp=Z,3.5nm,0.7s,mb4.4,baz=54,slow=7.7,SNR=25						
BVAR	**Borovoye Array**	**51.48**	**310**	P	**P**	**18 30 06.6**	**+0.8**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRVK	**Borovoye**	**51.51**	**310**	*e*P	**P**	**18 30 06.5**	**+0.5**
	comp=Z,8.5nm,0.8s,mb4.7						
BRVK	**Borovoye**	**51.51**	**310**	*c i*P	**P**	**18 30 06.9**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
BRVK				MLR	MLR		
	comp=Z,51nm,15.0s,MS3.7						
MCMT	**McKenzie Canyo**	**52.04**	**64**	*e*P	**P**	**18 30 09.7**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.6						
SVE	**Sverdlovsk**	**53.06**	**318**↑	*e*P	**P**	**18 30 19.3**	**+1.8**
SVE				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
YFT	**Old Faithful**	**53.35**	**63**	*e*P	**P**	**18 30 21.1**	**+1.2**
	comp=Z,6.3nm,0.6s,mb4.7						
NVAR	**Mina Array Bea**	**53.41**	**73**	P	**P**	**18 30 20.4**	**+0.1**
	comp=Z,2.0nm,0.8s,mb4.1,baz=294,slow=7.6,SNR=16						
IMW	**Indian Meadow**	**53.68**	**63**	*e*P	**P**	**18 30 23.3**	**+1.1**
	comp=Z,3.6nm,0.8s,mb4.3						
RLMT	**Red Lodge**	**53.71**	**61**	*e*P	**P**	**18 30 22.5**	**+0.1**
	comp=Z,9.3nm,0.9s,mb4.7						
ARU	**Arti**	**54.15**	**319**	*e*P	**P**	**18 30 26.8**	**+1.3**
	comp=Z,24nm,0.9s,mb5.1						
ARU				*e*		18 30 35.4	
ARU	**Arti**	**54.15**	**319**	*d i*P	**P**	**18 30 26.9**	**+1.4**
ARU				*e*PP	pP	18 30 35.8	+3.2
ARU				*e*		18 31 27.8	
ARU				*e*		18 32 27.3	
ARU				S	**S**	**18 38 04.3**	**+3.7**
ARU				SS	SS	18 41 45.2	+3.6
ARU				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
EKS2	**Erkin-Say**	**56.93**	**298**	*e*P	**P**	**18 30 47.2**	**+1.5**
	comp=Z,6.9nm,1.0s,mb4.6						
AML	**Almayashu**	**57.35**	**298**	*e*P	**P**	**18 30 50.7**	**+2.0**
	comp=Z,3.0nm,0.9s,mb4.3						
AGMN	**Agassiz Nation**	**58.02**	**51**	*e*P	**P**	**18 30 53.1**	**-0.1**
	comp=Z,12nm,0.9s,mb4.9						
ABKAR	**Akbulak array**	**58.81**	**312**	*e*P	**P**	**18 30 59.8**	**+1.1**
	comp=Z,12nm,1.1s,mb4.8						
ISCO	**Idaho Springs**	**59.38**	**64**	*e*P	**P**	**18 31 04.3**	**+1.4**
	comp=Z,1.3nm,0.6s,mb4.1						
ISCO	**Idaho Springs**	**59.38**	**64**	*e*P	**P**	**18 31 04.3**	**+1.5**
ISCO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
FINES	**FINESS Array B**	**60.10**	**338**	P	**P**	**18 31 07.7**	**+0.2**
	comp=Z,2.2nm,0.8s,mb4.3,baz=46,slow=8.2,SNR=5.6						
FINES	**FINESS Array B**	**60.10**	**338**	P	**P**	**18 31 07.7**	**+0.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**60.47**	**261**	P	**P**	**18 31 12.3**	**+1.7**
	comp=Z,3.1nm,0.7s,mb4.4,baz=26,slow=6.8,SNR=7.0						
CMAR	**Chiang Mai Arr**	**60.47**	**261**	P	**P**	**18 31 12.3**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ECSD	**EROS Data Cent**	**61.04**	**55**	*e*P	**P**	**18 31 12.3**	**-1.8**
	comp=Z,5.8nm,1.0s,mb4.7						
NOA	**NORSAR Array B**	**63.23**	**345**	P	**P**	**18 31 27.3**	**-1.2**
NOA	**NORSAR Array B**	**63.23**	**345**	P	**P**	**18 31 27.3**	**-1.2**
	comp=Z,1.2nm,0.8s,mb4.1,baz=18,slow=7.0,SNR=2.9						
NOA	**NORSAR Array B**	**63.23**	**345**	P	**P**	**18 31 27.3**	**-1.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SCHQ	**Schefferville**	**63.80**	**30**	P	**P**	**18 31 31.5**	**-0.9**
SCHQ	**Schefferville**	**63.80**	**30**	P	**P**	**18 31 31.5**	**-0.9**
	comp=Z,1.6nm,0.7s,mb4.2,baz=356,slow=14,SNR=3.1						
WMOK	**Wichita Mounta**	**66.77**	**63**	*e*P	**P**	**18 31 51.8**	**-0.2**
	comp=Z,6.

PSI Prapat 32.68 89 P **P** **18 39 00.3 -0.2**
PSI LR LR 18 50 39.7
PSI Prapat 32.68 89 P **P** **18 39 00.3 -0.2**
comp=Z,1.5nm,0.3s,mb4.3,baz=244,slow=11,SNR=2.5
PSI LR LR 18 50 39.7
comp=Z,356nm,18.3s,MS4.1,baz=23,slow=34
MNSI Mandailing Nat 33.40 92 P **P** **18 39 08.5 +1.6**
comp=Z,19nm,1.3s,mb4.8
SHL Shillong 33.63 45 *e*PKP **P** **18 39 10.0 +1.3**
SDSI Sungai Dareh 35.39 95 P **P** **18 39 26.3 +2.3**
comp=Z,13nm,1.9s,mb4.5
CMAR Chiang Mai Arr 35.72 62 P **P** **18 39 27.4 +0.5**
comp=Z,0.3nm,0.5s,mb3.5,baz=251,slow=10,SNR=4.6
CMAR PcP PcP 18 41 54.9 -0.2
comp=Z,0.7nm,0.8s,baz=212,slow=4.3,SNR=4.9
CMAR LR LR 18 53 00.3
comp=Z,255nm,18.6s,MS4.0,baz=255,slow=35
CMAR Chiang Mai Arr 35.72 62 P **P** **18 39 27.4 +0.5**
CMAR 18 41 54.9
CHTO Chiang Mai 35.86 61 P **P** **18 39 33.7 +5.7**
comp=Z,11nm,1.9s,mb4.5
LSA Lhasa 35.87 39 P **P** **18 39 29.0 +1.1**
RGRI Rengat 36.23 94 P **P** **18 39 38.6 +7.3**
KSH Kashi 37.80 12 P **P** **18 39 41.1 -3.1**
KSH *ep*P pP 18 39 50.8 +3.5
KSH *es*P sP 18 39 54.9 +6.3
KSH *e*PP PP 18 41 08.5 -2.1
KSH *e*S **S** **18 45 25.5 -10**
KSH *es*S sS 18 45 41.1 +0.9
KSH *e*ScP ScP 18 45 44.6 -4.1
KSH *e*PcS PcS 18 45 47.8 -1.7
KSH *e*ScS ScS 18 49 50.6 -6.8
KSH pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
KSH pmax pmax
comp=Z,93nm,4.4s
KSH LR LR
comp=N,200nm,8.8s
KSH LR LR
comp=E,140nm,9.2s
KSH LR LR
comp=Z,120nm,5.5s
UCH Uchtor 40.14 10 *e*P **P** **18 40 05.1 +1.2**
comp=Z,12nm,1.6s,mb4.4
ASF Jabal al Asfar 40.30 320 P **P** **18 40 07.6 +2.3**
comp=Z,1.1nm,0.5s,mb3.8,baz=298,slow=2.0,SNR=5.3
EKS2 Erkin-Say 40.45 9 *e*P **P** **18 40 08.6 +2.2**
comp=Z,12nm,1.3s,mb4.5
AAK Ala-Archa 40.54 9 P **P** **18 40 08.9 +1.8**
comp=Z,1.2nm,0.3s,mb4.0,baz=253,slow=9.2,SNR=4.5
KMI Kunming 41.69 54 P **P** **18 40 18.4 +1.5**
KMI pmax pmax
comp=Z,7.0nm,1.7s,mb4.0
KMI LR LR
comp=N,180nm,16.2s,MS4.2
KMI LR LR
comp=E,180nm,16.2s,MS4.2
KMI LR LR
comp=Z,190nm,16.6s,MS4.0
MMAI Mount Meron Ar 41.81 320 P **P** **18 40 19.7 +2.0**
comp=Z,3.5nm,0.8s,mb4.1,baz=101,slow=7.7,SNR=4.1
MMAI LR LR 18 57 07.0
comp=Z,86nm,18.4s,MS3.7,baz=110,slow=35
GNI Garni 42.13 335 P **P** **18 40 22.0 +1.8**
comp=Z,5.2nm,0.9s,mb4.2,baz=184,slow=21,SNR=5.5
GNI Garni 42.13 335‖ *e*P **P** **18 40 23.2 +3.0**
GNI pmax pmax
comp=Z,42nm,2.5s
GNI MLR MLR
comp=Z,76nm,24.0s
MALT Malatya 43.68 328 P **P** **18 40 37.1 +4.2**
comp=Z,3.6nm,1.5s,mb3.9
QIZ Qiongzhong 45.68 66 P **P** **18 40 46.6 -2.5**
QIZ S **S** **18 47 29.0 -3.5**
QIZ pmax pmax
comp=Z,14nm,1.6s,mb4.6
QIZ LR LR
comp=N,270nm,19.9s,MS4.3
QIZ LR LR
comp=E,210nm,23.1s,MS4.3
QIZ LR LR
comp=Z,360nm,21.9s,MS4.3
KIV Kislovodsk 46.15 336 *e*P **P** **18 40 54.3 +1.9**
KIV pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
KIV MLR MLR
comp=Z,33nm,15.0s,MS3.4
MKAR Makanchi Array 46.19 15 P **P** **18 40 51.4 -1.2**
MKAR LR LR 19 01 03.3
MKAR Makanchi Array 46.19 15 P **P** **18 40 51.4 -1.2**
comp=Z,1.5nm,0.9s,mb3.9,baz=208,slow=5.9,SNR=4.8
MKAR LR LR 19 01 03.3
comp=Z,125nm,21.2s,MS3.8,baz=193,slow=37
MKAR Makanchi Array 46.19 15*c e*P **P** **18 40 52.7 +0.1**
MKAR pmax pmax
comp=Z,20nm,0.9s
ABKAR Akbulak array 46.78 354 *e*P **P** **18 40 57.7 +0.4**
comp=Z,10nm,1.1s,mb4.7
BRTR Keskin Array B 47.31 326 P **P** **18 41 03.1 +1.5**
comp=Z,1.4nm,0.8s,mb3.9,baz=133,slow=10,SNR=9.9
BRTR PcP PcP 18 42 32.3 -0.2
comp=Z,0.6nm,0.9s,baz=127,slow=3.3,SNR=3.7
BRTR Keskin Array B 47.31 326*c e*P **P** **18 41 04.0 +2.4**
GTA Gaotai 47.69 35 *e*P **P** **18 41 05.3 +0.7**
GTA pP pP 18 41 09.8 +2.1
GTA sP sP 18 41 12.4 +3.4
GTA pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
GTA pmax pmax
comp=Z,54nm,3.6s
GTA LR LR
comp=N,98nm,14.3s,MS4.0
GTA LR LR
comp=E,67nm,14.3s,MS4.0
GTA LR LR
comp=Z,120nm,13.1s,MS4.0
LBTB Lobatse 48.00 233 P **P** **18 41 07.9 +0.7**
comp=Z,3.9nm,0.9s,mb4.5,baz=90,slow=6.6,SNR=5.1
LZH Lanzhou 48.14 42 *e*P **P** **18 41 13.6 +5.5**
LZH pmax pmax
comp=Z,16nm,1.2s,mb4.9
AKTK Aktyubinsk 48.16 353 P **P** **18 41 08.3 +0.3**
AKTO Aktyubinsk 48.16 353 P **P** **18 41 08.3 +0.3**
comp=Z,7.3nm,0.9s,mb4.7,baz=167,slow=8.0,SNR=19
KURK Kurchatov 49.07 10*d i*P **P** **18 41 15.1 +0.1**
KURK pmax pmax
comp=Z,11nm,1.7s,mb4.6
KURK MLR MLR
comp=Z,137nm,24.0s,MS3.9
BOSA Boshof 50.07 229 P **P** **18 41 24.1 +1.1**
comp=Z,8.4nm,0.9s,mb4.8,baz=73,slow=6.3,SNR=11
BOSA LR LR 19 00 22.8
comp=Z,285nm,18.1s,MS4.3,baz=60,slow=33
BVAR Borovoye Array 50.37 3 P **P** **18 41 25.5 +0.7**
comp=Z,0.2nm,0.3s,mb3.6,baz=167,slow=7.4,SNR=4.8
BVAR PcP PcP 18 42 41.4 -1.9
comp=Z,1.3nm,1.0s,baz=209,slow=8.0,SNR=6.9
BRVK Borovoye 50.40 3‖ *e*P **P** **18 41 25.3 +0.2**
BRVK pmax pmax
comp=Z,6.0nm,1.7s,mb4.3
BRVK MLR MLR
comp=Z,108nm,17.0s,MS3.9
XAN Xi'an 50.60 47 P **P** **18 41 26.5 -0.5**
XAN pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
VORD Divnogorie 53.26 339 *e*P **P** **18 41 46.5 +0.1**
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
VORD pmax pmax
comp=E,20nm,0.8s
WHN Wuhan 53.28 53 P **P** **18 41 48.0 +1.0**
WHN S **S** **18 49 21.5 +2.8**
WHN pmax pmax
comp=Z,30nm,1.0s,mb5.2
WHN LR LR
comp=N,220nm,22.1s
WHN LR LR
comp=E,510nm,31.1s
WHN LR LR
comp=Z,470nm,18.5s,MS4.6
ZAA0 Zalesovo Array 53.41 14 *e*P **P** **18 41 46.2 -1.4**
ZALV Zalesovo Beam 53.41 14 P **P** **18 41 46.4 -1.2**
ZALV LR LR 19 04 10.9
ZALV Zalesovo Beam 53.41 14 P **P** **18 41 46.4 -1.2**
comp=Z,3.1nm,0.8s,mb4.3,baz=223,slow=5.9,SNR=16
ZALV LR LR 19 04 10.9
comp=Z,103nm,21.7s,MS3.9,baz=65,slow=36
VSR Storozhevoye 53.51 339 *e*P **P** **18 41 48.0 -0.3**
VSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,1.4s
NVS Novosibirsk 53.89 12 *e*P **P** **18 41 49.8 -1.2**
NVS pmax pmax
comp=Z,30nm,1.9s,mb4.9
NVS pmax pmax
comp=N,20nm,1.4s
ARU Arti 54.01 355 *e*P **P** **18 41 51.5 -0.3**
comp=N,36nm,1.8s,mb5.0
ARU Arti 54.01 355*c i*P **P** **18 41 52.2 +0.3**
ARU *e* 18 43 51.3
ARU S **S** **18 49 25.9 -1.8**
ARU SS SS 18 53 01.6 -7.7
ARU pmax pmax
comp=Z,18nm,1.7s,mb4.7
SVE Sverdlovsk 54.24 356 *e*P **P** **18 41 53.9 +0.3**
BKSI Bulukumba 54.43 98 P **P** **18 41 54.8 -0.9**
SUR Sutherland 55.28 227 P **P** **18 42 03.2 +1.6**
comp=Z,7.9nm,0.9s,mb4.8,baz=89,slow=4.6,SNR=5.4
SONM Songino Array 56.80 31 P **P** **18 42 12.8 +0.6**
comp=Z,6.1nm,1.2s,mb4.5,baz=225,slow=6.5,SNR=26
SONM LR LR 19 06 27.0
comp=Z,332nm,21.4s,MS4.4,baz=223,slow=36
ZAK Zakamensk 56.98 27 *e*P **P** **18 42 13.1 -0.2**
ZAK pmax pmax
comp=Z,2.0nm,1.4s,mb4.0
AKASG Malin Array Be 57.16 333 P **P** **18 42 13.2 -1.4**
comp=Z,0.3nm,0.5s,mb3.6,baz=125,slow=6.0,SNR=7.0
AKASG PcP PcP 18 43 08.0 -1.3
comp=Z,0.3nm,0.5s,baz=93,slow=3.9,SNR=5.3
ULN Ulaanbaatar 57.16 32 *e*P **P** **18 42 14.8 +0.1**
comp=Z,21nm,1.8s,mb4.9
ULN Ulaanbaatar 57.16 32 *e*P **P** **18 42 14.8 +0.1**
ULN pmax pmax
comp=Z,21nm,1.8s,mb4.9
ULN Ulaanbaatar 57.16 32 ⇑P **P** **18 42 16.3 +1.6**
SNR=5.8
NJ2 Nanjing 57.42 53 *e*P **P** **18 42 12.2 -4.6**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
OBN Obninsk 57.60 340‖ *e*P **P** **18 42 18.7 +1.0**
OBN *e* 18 43 11.2
OBN *es*S SS 18 54 07.9 +2.1
OBN pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
OBN MLR MLR
comp=Z,100nm,24.0s,MS3.8
MOS Moscow 57.77 341 *e*P **P** **18 42 17.9 -0.9**
MOS *e* 18 43 07.4
MOS *e* 18 44 26.3
MOS pmax pmax
comp=Z,35nm,0.7s,mb5.5
TLY Talaya 58.05 26 *e*P **P** **18 42 21.7 +0.8**
TLY *es*S **S** **18 50 21.3 -0.3**
TLY pmax pmax
comp=Z,13nm,1.9s,mb4.6
TLY MLR MLR
comp=Z,154nm,19.0s,MS4.1
BJI Beijing 58.52 44 P **P** **18 42 24.2 -0.2**
BJI S **S** **18 50 34.1 +5.9**
BJI pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
BJI LR LR
comp=N,140nm,16.6s,MS4.3
BJI LR LR
comp=E,110nm,16.6s,MS4.3
BJI LR LR
comp=Z,85nm,18.9s,MS3.9
CRVS Cervenica-Dubn 59.86 328 *e*P **P** **18 42 34.2 +0.7**
comp=Z,7.7nm,1.5s,mb4.5
CRVS *ep*P pP 18 42 42.0 +5.3
CRVS Cervenica-Dubn 59.86 328 *e*P **P** **18 42 34.2 +0.7**
CRVS pmax pmax
comp=Z,8.0nm,1.5s,mb4.5
CRVS Cervenica-Dubn 59.86 328 *e*P **P** **18 42 34.2 +0.7**
CRVS *ep*P pP 18 42 42.0 +5.3
STHS Stebnicka Huta 60.28 328 *e*P **P** **18 42 37.7 +1.3**
comp=Z,3.5nm,1.1s,mb4.3
STHS Stebnicka Huta 60.28 328 *e*P **P** **18 42 37.7 +1.3**
STHS pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
STHS Stebnicka Huta 60.28 328 *e*P **P** **18 42 37.7 +1.3**
VYHS Vyhne 61.07 326 *e*P **P** **18 42 41.1 -0.7**
comp=Z,12nm,1.8s,mb4.7
VYHS Vyhne 61.07 326 *e*P **P** **18 42 41.1 -0.7**
VYHS pmax pmax
comp=Z,12nm,1.8s,mb4.7
VYHS Vyhne 61.07 326 *e*P **P** **18 42 41.1 -0.7**
KLMR Klimovskoe 61.55 346 *e*P **P** **18 42 42.8 -2.0**
KLMR pmax pmax
comp=Z,40nm,1.2s,mb5.4
KEST Kesra 61.93 309 P **P** **18 42 49.4 +1.5**
comp=Z,0.8nm,0.8s,mb3.9,baz=140,slow=5.2,SNR=4.0
TREC Trest 63.37 325 *e*P **P** **18 42 57.1 -0.1**
TREC Trest 63.37 325 *e*P **P** **18 42 57.1 -0.1**
DPC Dobruska-Polom 63.45 327 *e*P **P** **18 42 57.6 -0.1**
DPC Dobruska-Polom 63.45 327 *e*P **P** **18 42 57.6 -0.1**
KHC Kasperske Hory 64.39 325 *e*P **P** **18 43 03.2 -0.7**
KHC Kasperske Hory 64.39 325 *e*P **P** **18 43 03.2 -0.7**
PGF Pioggiola 64.52 317 *e*P **P** **18 43 04.4 -0.5**
comp=Z,24nm,1.0s,mb4.9
PGF Pioggiola 64.52 317 *e*P **P** **18 43 04.4 -0.5**
comp=Z,12nm,1.0s,mb4.9
PGF Pioggiola 64.52 317 *e*P **P** **18 43 04.4 -0.5**
PGF pmax pmax
comp=Z,12nm,1.0s,mb4.9
TORD Torodi Ar. Bea 64.60 283 P **P** **18 43 06.2 +0.3**
comp=Z,2.2nm,1.2s,mb4.1,baz=72,slow=5.0,SNR=7.0
TORD LR LR 19 11 07.3
comp=Z,174nm,18.4s,MS4.3,baz=120,slow=36
HIA Hailar 64.97 36 *e*P **P** **18 43 08.0 +0.2**
comp=Z,22nm,1.3s,mb5.0
HIA Hailar 64.97 36 *e*P **P** **18 43 08.0 +0.3**
HIA pmax pmax
comp=Z,22nm,1.3s
BRG Berggiesshubel 65.02 326 *e*P **P** **18 43 07.4 -0.6**
comp=Z,3.2nm,0.9s,mb4.3
BRG Berggiesshubel 65.02 326 *e*P **P** **18 43 07.4 -0.6**
BRG pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
NKC Novy Kostel 65.55 325 *e*P **P** **18 43 11.8 +0.3**
NKC Novy Kostel 65.55 325 *e*P **P** **18 43 11.8 +0.3**
CLL Collm 65.75 327 *e*P **P** **18 43 13.0 +0.3**
comp=Z,27nm,1.7s,mb5.0
CLL Collm 65.75 327 *e*P **P** **18 43 13.0 +0.3**
CLL pmax pmax
comp=Z,11nm,1.7s,mb4.6
CLL Collm 65.75 327 *e*P **P** **18 43 13.0 +0.3**
comp=Z,27nm,1.7s,mb5.0
FINES FINESS Array B 66.01 340 P **P** **18 43 13.2 -1.0**
comp=Z,4.5nm,1.0s,mb4.4,baz=145,slow=7.0,SNR=5.3
FINES LR LR 19 13 29.3
comp=Z,54nm,20.0s,MS3.8,baz=290,slow=37
SBF Sospel 66.06 317 *e*P **P** **18 43 14.4 -0.5**
comp=Z,27nm,1.0s,mb4.9
SBF Sospel 66.06 317 *e*P **P** **18 43 14.4 -0.5**
comp=Z,14nm,1.0s,mb4.9
SBF Sospel 66.06 317 *e*P **P** **18 43 14.4 -0.5**
SBF pmax pmax
comp=Z,14nm,1.0s,mb5.0
KSRS Korea Array 66.17 50 P **P** **18 43 14.0 -1.7**
comp=Z,0.9nm,0.9s,mb3.8,baz=264,slow=6.2,SNR=5.3
KSRS LR LR 19 14 33.2
comp=Z,165nm,19.1s,MS4.3,baz=76,slow=38
FRF La Foret Royal 66.49 317 *e*P **P** **18 43 16.9 -0.7**
comp=Z,63nm,1.6s,mb5.1
FRF La Foret Royal 66.49 317 *e*P **P** **18 43 16.9 -0.7**
comp=Z,31nm,1.6s,mb5.1
FRF La Foret Royal 66.49 317 *e*P **P** **18 43 16.9 -0.7**
FRF pmax pmax
comp=Z,31nm,1.6s,mb5.1
LMR La Mourre 66.51 317 *e*P **P** **18 43 16.6 -1.2**
comp=Z,70nm,1.6s,mb5.2
LMR La Mourre 66.51 317 *e*P **P** **18 43 16.6 -1.2**
comp=Z,35nm,1.6s,mb5.1
LMR La Mourre 66.51 317 *e*P **P** **18 43 16.6 -1.2**
LMR pmax pmax
comp=Z,35nm,1.6s,mb5.1
LPG La Plagne 67.10 319 *e*P **P** **18 43 21.1 -0.4**
LPL La Plagne 67.12 319 *e*P **P** **18 43 21.2 -0.4**
comp=Z,26nm,1.3s,mb4.8
LPL La Plagne 67.12 319 *e*P **P** **18 43 21.2 -0.4**
comp=Z,13nm,1.3s,mb4.8
LPL La Plagne 67.12 319 *e*P **P** **18 43 21.2 -0.4**
LPL pmax pmax
comp=Z,13nm,1.3s,mb4.8
ORIF Oris-en-Rattie 67.47 318 *e*P **P** **18 43 23.5 -0.4**
comp=Z,28nm,1.4s,mb4.8
ORIF Oris-en-Rattie 67.47 318 *e*P **P** **18 43 23.5 -0.4**
comp=Z,14nm,1.4s,mb4.8
ORIF Oris-en-Rattie 67.47 318 *e*P **P** **18 43 23.5 -0.4**
ORIF pmax pmax
comp=Z,14nm,1.4s,mb4.8
CDF Champ du Feu 67.84 322 *e*P **P** **18 43 23.5 -2.6**
comp=Z,77nm,1.8s,mb5.1
CDF Champ du Feu 67.84 322 *e*P **P** **18 43 23.5 -2.6**
comp=Z,38nm,1.8s,mb5.1
CDF Champ du Feu 67.84 322 *e*P **P** **18 43 23.5 -2.6**
CDF pmax pmax
comp=Z,39nm,1.8s,mb5.1
CABF La Chapelle 67.93 320 *e*P **P** **18 43 25.5 -1.2**
comp=Z,62nm,1.5s,mb5.1
CABF La Chapelle 67.93 320 *e*P **P** **18 43 25.5 -1.2**
comp=Z,31nm,1.5s,mb5.1
CABF La Chapelle 67.93 320 *e*P **P** **18 43 25.5 -1.2**
CABF pmax pmax
comp=Z,31nm,1.5s,mb5.1
LASF Ste Croix 68.57 317 *e*P **P** **18 43 29.4 -1.4**
comp=Z,97nm,1.7s,mb5.2
MEZF Maizieres J'vi 69.25 321 *e*P **P** **18 43 33.6 -1.3**
MDJ Mudanjiang 69.44 43 P **P** **18 43 33.2 -2.9**
comp=Z,47nm,1.6s,mb5.2
LOR Lormes 69.59 320 *e*P **P** **18 43 35.3 -1.7**
comp=Z,46nm,1.6s,mb4.9
LOR Lormes 69.59 320 *e*P **P** **18 43 35.3 -1.7**
comp=Z,23nm,1.6s,mb4.8
LOR Lormes 69.59 320 *e*P **P** **18 43 35.3 -1.7**
LOR pmax pmax
comp=Z,23nm,1.6s,mb4.9
SSF Saint Saulge 69.75 320 *e*P **P** **18 43 36.5 -1.5**
comp=Z,32nm,1.5s,mb4.7
SSF Saint Saulge 69.75 320 *e*P **P** **18 43 36.5 -1.5**
comp=Z,16nm,1.5s,mb4.7
SSF Saint Saulge 69.75 320 *e*P **P** **18 43 36.5 -1.5**
SSF pmax pmax
comp=Z,16nm,1.5s,mb4.7
AVF Avril sur Loir 69.76 319 *e*P **P** **18 43 36.0 -2.1**
comp=Z,48nm,1.7s,mb4.9
AVF Avril sur Loir 69.76 319 *e*P **P** **18 43 36.0 -2.1**
comp=Z,24nm,1.7s,mb4.8
AVF Avril sur Loir 69.76 319 *e*P **P** **18 43 36.0 -2.1**
AVF pmax pmax
comp=Z,24nm,1.7s,mb4.8
BGF Bois d'Agland 70.02 319 *e*P **P** **18 43 39.6 -0.1**
MAW Mawson 70.09 181 LR LR 19 06 55.3
comp=Z,145nm,20.4s,MS4.2,baz=102,slow=30
BAIF Baives 70.32 323 *e*P **P** **18 43 40.6 -0.9**
ASAR Alice Springs 70.76 116 P **P** **18 43 43.3 -1.4**
comp=Z,2.3nm,1.0s,mb4.0,baz=283,slow=5.5,SNR=11
KIC Kosan Boka 70.79 276 *e*P **P** **18 43 46.5 +1.4**
comp=Z,55nm,1.6s,mb5.2
DBIC Dimbokro 70.90 276 P **P** **18 43 45.7 -0.1**
DBIC LR LR 19 14 50.6
DBIC Dimbokro 70.90 276 P **P** **18 43 45.7 -0.1**
comp=Z,4.2nm,0.9s,mb4.3,baz=66,slow=4.5,SNR=4.3
DBIC LR LR 19 14 50.6
comp=Z,100nm,19.0s,MS4.1,baz=71,slow=36
TIC Toumodi 71.06 276 *e*P **P** **18 43 47.0 +0.2**
comp=Z,3.8nm,0.2s,mb4.9
TIC Toumodi 71.06 276 *e*P **P** **18 43 47.0 +0.2**
TIC pmax pmax
comp=Z,4.0nm,0.2s,mb5.0
LIC Lamto 71.07 276 *e*P **P** **18 43 48.4 +1.6**
comp=Z,34nm,1.5s,mb5.1
ETSF Etsaut 71.33 315 *e*P **P** **18 43 45.5 -2.3**
comp=Z,53nm,1.6s,mb4.9
ETSF Etsaut 71.33 315 *e*P **P** **18 43 45.5 -2.3**
comp=Z,26nm,1.6s,mb4.9
ETSF Etsaut 71.33 315 *e*P **P** **18 43 45.5 -2.3**
ETSF pmax pmax
comp=Z,27nm,1.6s,mb4.9
NOA NORSAR Array B 71.44 335 P **P** **18 43 47.5 -0.6**
comp=Z,2.2nm,0.8s,mb4.1,baz=114,slow=6.6,SNR=3.7
SJPF Ste Jean 71.85 315 *e*P **P** **18 43 47.8 -3.1**
comp=Z,80nm,1.5s,mb5.1
SJPF Ste Jean 71.85 315 *e*P **P** **18 43 47.8 -3.1**
comp=Z,40nm,1.5s,mb5.1
SJPF Ste Jean 71.85 315 *e*P **P** **18 43 47.8 -3.1**
SJPF pmax pmax
comp=Z,40nm,1.5s,mb5.1
KLR Kul'dur 72.23 39 *e*P **P** **18 43 47.8 -5.3**
ESDC Sonseca Array 73.13 311 P **P** **18 43 59.1 +0.5**
comp=Z,0.5nm,0.4s,mb3.8,baz=86,slow=5.1,SNR=9.0
MJAR Matsushiro Ar 74.02 53 P **P** **18 44 02.2 -1.8**
comp=Z,0.5nm,0.5s,mb3.7,baz=267,slow=11,SNR=5.5
MJAR LR LR 19 17 57.4
comp=Z,64nm,18.9s,MS3.9,baz=150,slow=37
YAK Yakutsk 75.51 26 *i* P **P** **18 44 11.7 -0.3**
YSS Yuzh-Sakhalins 78.92 43 *e*P **P** **18 44 28.0 -3.5**
STKA Stephens Creek 79.01 123 *e*P **P** **18 44 31.2 -1.1**
comp=Z,5.7nm,1.6s,mb4.2
STKA Stephens Creek 79.01 123 P **P** **18 44 30.3 -2.0**
STKA LR LR 19 16 12.8
STKA Stephens Creek 79.01 123 P **P** **18 44 30.3 -2.0**
comp=Z,2.9nm,0.8s,mb4.2,baz=247,slow=4.0,SNR=4.5
STKA LR LR 19 16 12.8
comp=Z,114nm,21.8s,MS4.2,baz=206,slow=33
TIXI Tiksi 79.16 17 *e*P **P** **18 44 32.1 -0.2**
NVL N'lazarevskaya 81.36 196 *e*P **P** **18 44 45.0 +0.8**
NVL pmax pmax
comp=Z,19nm,1.4s,mb4.8
SEY Seymchan 85.95 27 *i* P **P** **18 45 08.0 +0.1**
HNR Honiara 94.11 99 LR LR 19 25 19.2
comp=Z,69nm,19.6s,MS4.1,baz=243,slow=34
DZM Mont Dzumac 100.46 112 *e*LR LR 18 47 15.1
comp=Z,183nm,32.8s
PPT Papeete 141.87 115 *e*LR LR 18 52 24.9
comp=Z,155nm,25.0s
JCT Junction City 144.49 339 *e*P PKPdf 18 52 03.6 -1.5
OTAV Otavalo 144.56 274 *e*P PKPdf 18 52 06.6 +0.9
MNTX Cornudas Mount 144.96 347 *e*P PKPdf 18 52 05.6 -0.3
TUC Tucson 145.16 356 *e*P PKPbc 18 52 06.9 +1.2
TXAR Lajitas Array 146.79 344 PKPbc PKPbc 18 52 10.9 +0.1
comp=Z,4.7nm,0.8s,baz=56,slow=2.9,SNR=46

IDC 11 18:33:03.9±1.3, 15.03S×172.91W, h0km, mb4.3/3, mb1 4.4/3, mb1mx3.9/15, mbtmp4.3/3, Error ellipse: s-maj=76.6km s-min=23.1km az=140.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.56**	**45**	Pn		Pn	18 33 32.3	-0.6
	192nm,0.3s,baz=188,slow=2.6,SNR=223							
AFI				Sn		Sn	18 33 48.4	-5.5
	1μm,0.3s,baz=47,slow=21,SNR=48							
STKA	**Stephens Creek**	**44.63**	**240**	P		P	18 41 18.1	-0.2
	2.2nm,0.6s,baz=74,slow=8.7,SNR=6.0							
ASAR	**Alice Springs**	**50.67**	**252**	P		P	18 42 04.8	-0.7
	1.7nm,0.6s,baz=89,slow=7.6,SNR=51							
MAW	**Mawson**	**88.29**	**198**	P		P	18 45 57.2	+0.2
	2.3nm,1.0s,baz=120,slow=6.0,SNR=6.7							
BRTR	**Keskin Array B**	**146.16**	**322**	PKPbc		PKPbc	18 52 47.1	+0.8
	1.1nm,1.0s,baz=98,slow=2.5,SNR=5.1							

*ISCJB **11** 18:40:08.8±1.6, 24.82S±0.09×176.99W±0.09, h116km±14km, mb4.5/16, Error ellipse: s-maj=15.7km s-min=11.8km az=149.9*
*IDC **11** 18:40:08.1±4.8, 24.61S×177.03W, h94km±41km, mb4.1/9, mb1 4.3/11, mb1mx4.2/18, mbtmp4.2/11, MS3.1/3, Ms1 3.1/3, ms1mx2.7/21, Error ellipse: s-maj=25.7km s-min=19.0km az=148.0*
*NEIC **11** 18:40:10.0±1.3, 24.78S×176.95W, h115km±11km, mb4.8/9, Error ellipse: s-maj=12.8km s-min=9.7km az=150.0*
ISC 11 18:40:09.9±1.4, 24.80S±0.0×176.96W±0.0, h112km±13km, n102, s0°96/35, mb4.5/16, 16C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.43**	**326**	*e*P		Pn	18 42 09.8	+0.5

81nm,0.9s
AFI Afiamalu 11.88 25 P **Pn 18 42 46.7 -9.0**
3.6nm,0.3s,baz=197,slow=19,SNR=3.8
AFI S Sn 18 44 43.1 -23
baz=235,slow=19,SNR=2.1
URZ Urewera 14.34 199 P **Pn 18 43 27.1 -0.5**
2.8nm,0.3s,baz=0.0,slow=4.0,SNR=9.2
URZ S **Sn 18 45 53.9 -12**
1.3nm,0.3s,baz=172,slow=14,SNR=7.7
URZ LR LR 18 48 36.9
comp=Z,67nm,19.8s,baz=142,slow=35
DZM Mont Dzumac 15.48 277 *e*P **Pn 18 43 42.0 -0.1**
DZM Mont Dzumac 15.48 277 *e*P **Pn 18 43 42.4 +0.3**
32nm,0.8s
RAR Rarotonga 16.22 81 P **Pn 18 43 50.9 -0.3**
RAR S S 18 46 34.0 -23
RAR LR LR 18 48 05.3
RAR Rarotonga 16.22 81 P **Pn 18 43 50.9 -0.3**
3.7nm,0.3s,baz=239,slow=3.8,SNR=3.5
RAR S S 18 46 34.0 -23
3.0nm,0.3s,baz=109,slow=16,SNR=3.9
RAR LR LR 18 48 05.3
comp=Z,92nm,19.9s,baz=286,slow=29
RAR T 18 59 42.2
5.9nm,0.3s,baz=75,slow=6.4,SNR=5.7
HNR Honiara 26.78 301 LR LR 18 53 29.5
comp=Z,46nm,20.4s,baz=156,slow=30
EIDS Eidsvold 28.92 262 *e*P **P 18 45 59.2 +0.7**
CTA Charters Tower 34.26 270 *e*P **P 18 46 45.8 +0.5**
16nm,0.5s,mb5.1
CTA Charters Tower 34.26 270 P **P 18 46 45.9 +0.5**
20nm,0.6s,mb5.2,baz=97,slow=11,SNR=32
CTAO Charters Tower 34.26 270 *e*P **P 18 46 45.6 +0.3**
18nm,0.6s,mb5.1
STKA Stephens Creek 36.99 249 *e*P **P 18 47 09.2 +0.6**
STKA Stephens Creek 36.99 249 P **P 18 47 08.4 -0.1**
4.6nm,1.1s,mb4.3,baz=88,slow=11,SNR=8.1
TAOE Nuku Hiva Isla 38.47 72 *e*LR LR 18 58 04.3
89nm,25.5s
ASAR Alice Springs 44.63 261 P **P 18 48 10.6 -0.8**
20nm,1.1s,mb4.8,baz=92,slow=6.9,SNR=172
ASAR PcP PcP 18 49 52.6 +0.2
1.7nm,0.8s,baz=116,slow=5.2,SNR=5.2
KAKA Kakadu 49.15 275 *e*P **P 18 48 45.0 -1.7**
5.1nm,0.4s,mb4.8
KAKA Kakadu 49.15 275 *e*P **P 18 48 45.9 -0.8**
FITZ Fitzroy Crossi 53.52 265 *e*P **P 18 49 19.3 0.0**
31nm,0.8s,mb5.4
FITZ Fitzroy Crossi 53.52 265 *e*P **P 18 49 18.8 -0.5**
18nm,0.8s,mb5.2
MBWA Marble Bar 57.95 260 *e*P **P 18 49 49.5 -1.4**
CASY Casey 60.53 206 *e*P **P 18 50 07.8 -0.1**
CASY Casey 60.53 206 *e*P **P 18 50 08.1 +0.2**
2.9nm,0.4s,mb4.7
MJAR Matsushiro Arr 74.23 324 P **P 18 51 32.3 -2.2**
0.8nm,0.4s,mb3.8,baz=154,slow=6.0,SNR=4.8
MAW Mawson 77.86 200 *e*P **P 18 51 56.5 +1.7**
6.0nm,0.8s,mb4.4
MAW Mawson 77.86 200 P **P 18 51 56.5 +1.7**
6.7nm,0.8s,mb4.5,baz=128,slow=6.2,SNR=20
NVAR Mina Array Bea 83.50 42 P **P 18 52 26.6 +1.5**
1.2nm,0.7s,mb3.8,baz=223,slow=8.6,SNR=7.1
KDAK Kodiak Island 84.76 13 P **P 18 52 31.4 +0.4**
KDAK Kodiak Island 84.76 13 P **P 18 52 31.4 +0.4**
3.2nm,0.7s,mb4.4,baz=192,slow=5.5,SNR=3.3
TTA Tatalina 89.00 9 *e*P **P 18 52 51.6 +0.2**
10nm,1.3s,mb4.7
ENH Enshi 89.24 304 P **P 18 52 54.8 +1.4**
BMRM Bremner River 89.41 15 *e*P **P 18 52 53.8 +0.4**
5.8nm,0.7s,mb4.7
TRF Thorofare Moun 90.44 12 *e*P **P 18 52 57.8 -0.4**
4.9nm,0.7s,mb4.8
CHMT Chamberlain Mo 91.58 38 *e*P **P 18 53 02.4 -1.5**
4.1nm,0.9s,mb4.7
ILAR Eielson Array 92.28 12 P **P 18 53 06.0 -0.6**
0.8nm,0.6s,mb4.1,baz=220,slow=4.4,SNR=10
CMAR Chiang Mai Arr 92.44 289 P **P 18 53 09.8 +1.2**
1.7nm,0.8s,mb4.3,baz=134,slow=3.1,SNR=12
ZALV Zalesovo Beam 114.41 320 PKP PKiKP 18 58 34.9 -1.2
ZALV Zalesovo Beam 114.41 320 PKP PKiKP 18 58 34.9 -1.2
0.6nm,0.3s,baz=264,slow=10,SNR=4.2
MKAR Makanchi Array 114.81 312 PKP PKiKP 18 58 36.4 -0.7
0.7nm,0.6s,baz=228,slow=1.4,SNR=10
KURK Kurchatov 117.77 316 *e*PKPdf PKPdf 18 58 40.3 -2.4
KBL Kabul 122.72 296 *e*PKPdf PKPdf 18 58 53.5 +0.7
BVAR Borovoye Array 122.95 318 PKP PKPdf 18 58 52.3 -0.3
1.1nm,0.4s,baz=93,slow=3.0,SNR=12
BRVK Borovoye 123.01 318 *e*PKPdf PKPdf 18 58 51.9 -0.8
KEV Kevo 132.85 349 *ep* PKPdf 18 59 19.3 +8.3
4.8nm,0.8s
ARCES ARCESS Array B 133.31 349 PKP PKPdf 18 59 09.4 -2.4
ARCES ARCESS Array B 133.31 349 PKP PKPdf 18 59 09.5 -2.4
1.4nm,0.8s,baz=48,slow=1.8,SNR=7.2
JOF Joensuu 137.50 341 *ep* PKPdf 18 59 28.1 +8.3
5.0nm,0.5s
KAF Kangasniemi 139.53 343 *ep* PKPdf 18 59 31.3 +7.7
3.2nm,0.5s
FINES FINESS Array B 140.15 343 PKP PKPpre 18 59 16.7
FINES PKP PKPdf 18 59 26.1 +1.4
FINES FINESS Array B 140.15 343 PKhKP PKPpre 18 59 16.7
1.4nm,0.6s,baz=350,slow=2.3,SNR=5.7
FINES PKP PKPdf 18 59 26.1 +1.4
1.0nm,0.5s,baz=177,slow=3.4,SNR=7.7
NOA NORSAR Array B 143.34 353 PKhKP PKPpre 18 59 26.4
1.0nm,0.6s,baz=18,slow=2.8,SNR=7.0
MALT Malatya 147.19 303 *e*PKPbc PKPbc 18 59 41.2 +1.0
MALT Malatya 147.19 303 ⇑*i*P PKPdf 18 59 41.2 +3.4
MALT Malatya 147.19 303 P PKPdf 18 59 41.1 +3.3
AKASG Malin Array Be 147.20 329 PKPbc PKPbc 18 59 38.8 -1.0
5.5nm,0.5s,baz=42,slow=4.2,SNR=28
AKBB Malin Array Si 147.20 329 *e*PKPdf PKPdf 18 59 38.9 +1.5
KIEV Kiev 147.22 329 *e*PKPdf PKPdf 18 59 38.9 +1.5
BR131 Keskin Array S 150.33 308 *e*PKPbc PKPbc 18 59 48.2 +0.1
BRTR Keskin Array B 150.33 308 PKPbc PKPbc 18 59 48.0 -0.2
5.0nm,0.9s,baz=51,slow=4.9,SNR=3.6
MMAI Mount Meron Ar 150.60 294 PKPbc PKPbc 18 59 49.8 +0.8
9.9nm,0.6s,baz=74,slow=6.2,SNR=23
BUR08 Bucovina Ar. S 151.22 328 *e*PKPbc PKPbc 18 59 50.6 +0.7
BURAR Bucovina Array 151.24 328 ⇓*i*P PKPbc 18 59 51.3 +1.3
TIRR Tirgusor 151.55 320 ⇑*i*P PKPbc 18 59 51.2 +0.4
STHS Stebnicka Huta 151.61 335 *e*PKP PKPbc 18 59 51.7 +0.9
STHS *e* 18 59 58.8
STHS Stebnicka Huta 151.61 335 *e* PKPbc 18 59 51.7 +0.9
STHS *e* PKPab 18 59 58.8 -0.9
VRI Vrincioaia 151.64 324 ⇑*i*P PKPbc 18 59 50.8 -0.2
CRVS Cervenica-Dubn 151.94 334 *e*PKP PKPbc 18 59 52.2 +0.7
CRVS *e* 18 59 59.5
CRVS Cervenica-Dubn 151.94 334 *e* PKPbc 18 59 52.2 +0.7
CRVS *e* PKPab 18 59 59.5 -1.6
MLR Muntele Rosu 152.30 324 ⇑*i*P PKPbc 18 59 52.6 +0.1
OKC Ostrava-Krasne 152.38 339 ⇑*e*PKP PKPbc 18 59 53.1 +0.6
OKC *e*PKPAB PKPab 19 00 00.3 -2.6
UPC Upice 152.44 342 ⇑*e*PKP PKPbc 18 59 53.2 +0.6
UPC *e*PKPAB PKPab 19 00 00.6 -2.6
CLL Collm 152.45 346 ⇑*i*P PKPbc 18 59 53.1 +0.5
CLL *i* 19 00 01.0
CLL Collm 152.45 346 ⇑*i*PKPbc PKPbc 18 59 53.1 +0.5
comp=Z,7.0nm,0.7s
CLL *i* PKPab PKPab 19 00 01.0 -2.2
comp=Z,20nm,0.7s
DPC Dobruska-Polom 152.50 341 ⇑*e*PKP PKPbc 18 59 53.4 +0.7
DPC *e*PKPAB PKPab 19 00 00.2 -3.2
MORC Moravsky Berou 152.63 339 *e*PKPbc PKPbc 18 59 52.3 -0.7
MORC Moravsky Berou 152.63 339 ⇑*i*P PKPbc 18 59 53.0 0.0
BRG Berggiesshubel 152.65 345 *e*PKP PKPbc 18 59 53.2 +0.2
comp=Z,8.2nm,1.0s
BRG *i* 19 00 01.1
comp=Z,18nm,0.6s
KECS Kecovo 152.66 334 *e*PKP PKPab 19 00 01.6 -2.6
KECS Kecovo 152.66 334 *e* PKP PKPab 19 00 01.6 -2.6
VOIR 152.81 325 ⇑*i*P PKPdf 18 59 53.7 +7.3
DRGR 153.01 329 ⇑*i*P PKPdf 18 59 54.3 +7.7
VYHS Vyhne 153.28 336 *e*PKP PKPab 19 00 07.2 +0.4
VYHS Vyhne 153.28 336 *e* PKPab 19 00 02.3 -4.5
VYHS *e* PKPab 19 00 07.3 +0.5
VYHS Vyhne 153.28 336 *e* PKPab 19 00 02.3 -4.5
GZR Gura Zlata 154.00 327 ⇑*i*P PKPbc 18 59 54.4 -1.8
KHC Kasperske Hory 154.35 344 *e*PKPbc PKPbc 18 59 56.4 -0.4
KHC Kasperske Hory 154.35 344 ⇑*e*PKP PKPbc 18 59 56.2 -0.6
KHC *ex* x 19 00 05.0
KHC *e*PKPAB PKPab 19 00 11.2 -0.1
BZS Buzias 154.40 329 ⇑*i*P PKPbc 19 00 00.8 +3.8
PKSM Moragy 155.24 334 ⇑*i*P PKPdf 18 59 58.6 +8.9
FLN La Foliniere 155.92 6 *e*PKP2 PKPab 19 00 17.3 -0.7
LDF La Druitiere 156.12 5 *e*PKP2 PKPab 19 00 18.0 -0.8
comp=Z,2.6nm,0.5s
HAU Haudompre 156.69 354 *e*PKP2 PKPab 19 00 20.9 -0.4
HINF Hinteralfeld 156.83 353 *e*PKP2 PKPab 19 00 22.1 +0.2
SSF Saint Saulge 157.78 359 *e*PKP2 PKPab 19 00 25.7 -0.3
comp=Z,9.8nm,0.9s
AVF Avril sur Loir 158.06 359 *e*PKP2 PKPab 19 00 26.7 -0.5
SMF Signal de Mont 158.19 359 *e*PKP2 PKPab 19 00 27.3 -0.5
comp=Z,5.2nm,0.7s
LPL La Plagne 159.12 353 *e*PKP2 PKPab 19 00 32.5 +0.6
LPG La Plagne 159.13 353 *e*PKP2 PKPab 19 00 32.7 +0.7
ORIF Oris-en-Rattie 159.80 354 *e*PKP2 PKPab 19 00 35.1 +0.2
LFF La Frestale 159.82 5 *e*PKP2 PKPab 19 00 34.0 -1.0
KEST Kesra 167.82 335 PKPab PKPab 19 01 09.2 -1.2
comp=Z,4.7nm,1.4s,baz=338,slow=11,SNR=3.8
TORD Torodi Ar. Bea 168.34 173 PKP PKPdf 19 00 03.7 -0.4
comp=Z,1.7nm,0.9s,baz=282,slow=0.6,SNR=7.8
TORD PKPab PKPab 19 01 13.4 +0.4
comp=Z,0.9nm,0.7s,baz=177,slow=3.1,SNR=4.9

MAN 11 18:40:21.4±44.4N×125.87E, h41km, mb4.8, ML3.7, MS3.7, 2D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.87**	**331**	⇓*e*P	Pn	18 40 50.7	+0.1
GSPH				*e*S	Sn	18 41 00.7	-12
MATI	**Mati**	**2.52**	**9**	*e*P	Pn	18 41 00.7	+1.3
KCP	**Kidapawan**	**2.67**	**343**	⇓*e*P	Pn	18 41 04.5	+3.0
KCP				*i* S	Sn	18 41 24.3	-8.2
BUKP	**Musuan**	**3.51**	**347**	*e*P	Pn	18 41 14.1	+1.0
PAGZ	**Pagadian**	**4.19**	**324**	*e*P	Pn	18 41 24.5	+2.0
IPIL	**Ipil**	**4.67**	**316**	*e*P	Pn	18 41 31.3	+2.3

IDC ***11*** *19:07:47.2±0.8, 0.28S×133.01E, h0km, mb3.9/10, mb1 4.1/11, mb1mx4.0/20, mbtmp4.0/11, ML4.2/1, MS3.5/6, Ms1 3.5/6, ms1mx3.1/25, Error ellipse: s-maj=35.4km s-min=15.0km az=75.0*
NEIC ***11*** *19:07:49.5±11.0, 0.29S×133.04E, h16km±71km, mb4.5/4, Error ellipse: s-maj=25.7km s-min=14.7km az=73.0*
ISCJB ***11*** *19:07:54.9±0.8, 0.57S±0.05×132.97E±0.05, h8km±10km, mb3.9/14, Error ellipse: s-maj=9.1km s-min=7.9km az=168.7*
DJA ***11*** *19:07:54, 0.39S×133.04E, h30km, mb5.1/12*

ISC 11 19:07:55.9±0.8, 0.54S±0.06×132.98E±0.05, h78km±10km, n38, σ1°33/41, mb3.9/14, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAKI	**Biak**	**3.19**	**102**	P	**Pn**	**19 08 41.5**	**-2.3**
BAKI				S	**Sn**	**19 09 21.9**	**+1.1**
BNDI	**Bandanaira**	**5.01**	**218**	P	**Pn**	**19 09 09.9**	**+1.2**
	3.1nm782nm,1.1s						
TLE	**Tual**	**5.07**	**183**	P	**Pn**	**19 09 11.6**	**+2.1**
	1.6nm524nm,0.9s						
AAI	**Ambon**	**5.72**	**237**	P	**Pn**	**19 09 18.4**	**+0.1**
	2.2nm7µm556nm,0.8s						
TNTI	**Ternate**	**5.76**	**283**	P	**Pn**	**19 09 16.5**	**-2.5**
	0.2nm49nm,0.9s						
NLAI	**Namlea**	**6.46**	**245**	P	**Pn**	**19 09 28.0**	**-0.5**
	3.9nm676nm,0.7s						
KDI	**Kendari**	**10.90**	**252**	P	**Pn**	**19 10 29.8**	**+0.7**
	20nm,1.8s						
MRSI	**Marisa**	**11.09**	**275**	P	**Pn**	**19 10 31.8**	**+0.1**
	21nm,1.1s						
BBSI	**Bau Bau**	**11.50**	**244**	P	**Pn**	**19 10 37.8**	**+0.5**
	32nm,1.2s						
KAKA	**Kakadu**	**12.11**	**183**	*e*P	**Pn**	**19 10 44.8**	**-0.7**
	26nm,0.6s						
KAKA				*e*S	**Sn**	**19 12 55.8**	**-2.9**
KAKA	**Kakadu**	**12.11**	**183**	*e*P	**Pn**	**19 10 44.9**	**-0.6**
	89nm,0.6s						
KAKA				*e*S	**Sn**	**19 12 55.7**	**-3.0**
SPSI	**Sidrap Palu**	**13.63**	**255**	P	**Pn**	**19 11 05.7**	**-0.3**
	372nm25nm,0.9s						
BKSI	**Bulukumba**	**13.69**	**249**	P	**Pn**	**19 11 09.6**	**+2.9**
	21nm,0.9s						
KAPI	**Kappang**	**13.94**	**251**	LR	LR	19 16 20.2	
	comp=Z,101nm,18.2s,baz=309,slow=36						
KNA	**Kununurra**	**15.68**	**195**	*e*P	**Pn**	**19 11 31.4**	**-0.9**
	70nm,0.6s						
KNA				*e*S	**S**	**19 14 17.9**	**-18**
KNA	**Kununurra**	**15.68**	**195**	P	**Pn**	**19 11 31.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**18.89**	**202**	*e*P	**Pn**	**19 12 10.6**	**-1.0**
	8.6nm,0.6s						
FITZ				*e*S	**S**	**19 15 31.9**	**-9.0**
FITZ	**Fitzroy Crossi**	**18.89**	**202**	P	**Pn**	**19 12 10.8**	**-0.9**
	0.6nm,0.3s,baz=39,slow=11,SNR=14						
FITZ				LR	LR	19 19 40.1	
	comp=Z,98nm,18.7s,baz=24,slow=37						
ASAR	**Alice Springs**	**23.01**	**178**	P	**P**	**19 12 57.4**	**+3.0**
	10nm,0.7s,mb4.2,baz=5.8,slow=12,SNR=80						
CTA	**Charters Tower**	**23.37**	**147**	P	**P**	**19 13 00.4**	**+2.7**
	3.4nm,0.7s,mb3.8,baz=9.8,slow=15,SNR=1.9						
CTA				LR	LR	19 23 22.7	
	comp=Z,153nm,19.8s,baz=241,slow=40						
CTAO	**Charters Tower**	**23.37**	**147**	*e*P	**P**	**19 13 02.5**	**+4.8**
MBWA	**Marble Bar**	**24.24**	**211**	*e*P	**P**	**19 13 09.7**	**+4.1**
	30nm,1.3s,mb4.5						
STKA	**Stephens Creek**	**32.22**	**166**	*e*P	**P**	**19 14 18.2**	**+1.5**
	4.5nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**32.22**	**166**	*e*P	**P**	**19 14 17.6**	**+0.9**
STKA				LR	LR	19 28 20.8	
STKA	**Stephens Creek**	**32.22**	**166**	P	**P**	**19 14 18.6**	**+1.9**
	4.6nm,0.8s,mb4.3,baz=343,slow=6.5,SNR=7.0						
STKA				LR	LR	19 28 20.8	
	comp=Z,107nm,21.8s,baz=204,slow=38						
MJAR	**Matsushiro Arr**	**37.21**	**7**	P	**P**	**19 14 57.9**	**-1.8**
MJAR				LR	LR	19 26 52.6	
MJAR	**Matsushiro Arr**	**37.21**	**7**	P	**P**	**19 14 57.9**	**-1.8**
	0.3nm,0.3s,mb3.7,baz=179,slow=7.0,SNR=3.7						
MJAR				LR	LR	19 26 52.6	
	comp=Z,79nm,20.9s,baz=155,slow=31						
KSRS	**Korea Array**	**38.09**	**353**	LR	LR	19 28 59.2	
	comp=Z,55nm,18.4s,baz=352,slow=34						
CMAR	**Chiang Mai Arr**	**38.41**	**301**	P	**P**	**19 15 09.8**	**-0.3**
	0.9nm,0.9s,mb3.6,baz=122,slow=7.2,SNR=6.8						
BJT	**Baijiatuan**	**43.19**	**341**	*e*P	**P**	**19 15 48.9**	**-0.2**
	6.0nm,0.6s,mb4.5						
SONM	**Songino Array**	**53.45**	**338**	P	**P**	**19 17 07.3**	**-0.6**
SONM	**Songino Array**	**53.45**	**338**	P	**P**	**19 17 07.3**	**-0.5**
	0.4nm,0.6s,mb3.6,baz=148,slow=8.2,SNR=4.7						
MKAR	**Makanchi Array**	**64.63**	**324**	P	**P**	**19 18 26.2**	**+1.0**
	1.0nm,0.7s,mb3.8,baz=111,slow=8.5,SNR=15						
ZALV	**Zalesovo Beam**	**67.25**	**331**	P	**P**	**19 18 42.2**	**+0.3**
	0.5nm,0.4s,mb3.7,baz=141,slow=7.9,SNR=3.3						
KURK	**Kurchatov**	**68.70**	**326**	*e*P	**P**	**19 18 48.7**	**-2.4**
	3.0nm,0.9s,mb4.1						
BVAR	**Borovoye Array**	**74.30**	**326**	P	**P**	**19 19 25.4**	**+0.7**
	1.5nm,0.8s,mb3.8,baz=115,slow=7.4,SNR=8.1						
BRVK	**Borovoye**	**74.37**	**326**	*e*P	**P**	**19 19 26.2**	**+1.1**
	5.7nm,1.3s,mb4.1						
ILAR	**Eielson Array**	**86.27**	**25**	P	**P**	**19 20 29.0**	**+0.3**
	0.4nm,0.8s,mb3.4,baz=276,slow=4.0,SNR=7.1						

KRSC 11 19:14:01.1±0.7, 53.26N×158.03E, h184km±33km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOK	**Koryaka**	**0.36**	**85**	*i* P	Pn	19 14 27.3	+1.5
AVH	**Avacha**	**0.42**	**89**	*e*P	Pn	19 14 27.3	+1.3
GNL	**Ganaly**	**0.44**	**353**	*i* P	Pn	19 14 27.0	+1.0
NLC	**Nalytchevo**	**0.80**	**96**	*e*P	Pn	19 14 29.2	+1.4
NLC				*i* S	Sn	19 14 50.0	+1.7
SPN	**Mys Shipunski**	**1.21**	**97**	P	Pn	19 14 31.7	+0.9
SPN				*i* S	Sn	19 14 53.5	-0.1
MIPR	**Malaya Ipel'ka**	**1.25**	**219**	P	Pn	19 14 31.0	-0.2
MKZ	**Mys Kozlova**	**2.54**	**58**	*e*P	Pn	19 14 45.7	+1.3
MKZ				*i* S	Sn	19 15 17.7	-0.4
KBTR	**Krutoberegovo**	**4.05**	**41**	P	Pn	19 15 05.7	+2.9

WEL 11 19:15:31.5±0.3, 37.13S×177.13E, h151km±3km, ML3.6/5, Error ellipse: s-maj=3.9km s-min=3.1km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.03**	**115**	PN	Pn	19 15 56.7	+0.1
MXZ				SN	Sn	19 16 16.0	+0.2
URZ	**Urewera**	**1.13**	**181**	PN	Pn	19 15 57.5	0.0
URZ				SN	Sn	19 16 17.7	+0.2
MWZ	**Matawai**	**1.25**	**166**	PN	Pn	19 15 58.6	0.0
MWZ				SN	Sn	19 16 19.8	+0.4
PUZ	**Puketiti**	**1.30**	**137**	PN	Pn	19 15 59.0	-0.1
PUZ				SN	Sn	19 16 19.3	-1.0
CNGZ	**Carnagh Statio**	**1.60**	**148**	PN	Pn	19 16 02.5	+0.3
PRGZ	**Paritu Road**	**1.89**	**162**	*e*PN	Pn	19 16 05.1	-0.2
KNZ	**Kokohu**	**1.94**	**167**	PN	Pn	19 16 05.3	-0.6
NMHZ	**Naumai**	**1.99**	**187**	*e*PN	Pn	19 16 07.0	+0.5
BKZ	**Black Stump Fm**	**2.10**	**194**	PN	Pn	19 16 07.2	-0.6
MHGZ	**Mahia Peninsul**	**2.11**	**163**	PN	Pn	19 16 07.8	-0.1
FWVZ	**Far West T-bar**	**2.46**	**210**	*e*PN	Pn	19 16 12.1	0.0
KAHZ	**Kahuranaki**	**2.67**	**184**	PN	Pn	19 16 13.7	-1.1
PNHZ	**Pukenui**	**2.88**	**194**	PN	Pn	19 16 15.3	-2.0
PXZ	**Pawanui**	**2.91**	**184**	PN	Pn	19 16 16.0	-1.7
WPHZ	**Waipukurau**	**2.98**	**190**	PN	Pn	19 16 16.9	-1.7
TSZ	**Takapari Road**	**3.07**	**197**	PN	Pn	19 16 17.5	-2.2
PRHZ	**Porangahau**	**3.16**	**187**	PN	Pn	19 16 18.7	-2.2
BFZ	**Birch Farm**	**3.62**	**191**	PN	Pn	19 16 23.7	-3.1
MRZ	**Mangatainoka R**	**3.73**	**198**	PN	Pn	19 16 24.9	-3.3
TIWZ	**Tintock**	**3.77**	**195**	PN	Pn	19 16 25.6	-3.2
OGWZ	**Otaki Gorge**	**3.99**	**202**	PN	Pn	19 16 28.1	-3.4
TCW	**Tory Channel**	**4.65**	**208**	*e*PN	Pn	19 16 35.4	-4.7
TUWZ	**Tuamarina**	**4.96**	**209**	PN	Pn	19 16 39.7	-4.6
NNZ	**Nelson**	**5.02**	**214**	*e*PN	Pn	19 16 41.1	-4.0
THZ	**Tophouse**	**5.67**	**214**	*e*PN	Pn	19 16 49.4	-4.3
KHZ	**Kahutara**	**5.96**	**207**	PN	Pn	19 16 52.9	-4.7
LTZ	**Lake Taylor**	**6.77**	**212**	PN	Pn	19 17 03.3	-5.0

ISCJB ***11*** *20:08:06.6±0.6, 51.41N±0.03×16.11E±0.03, h0km, Error ellipse: s-maj=4.7km s-min=2.6km az=13.2*
WAR ***11*** *20:08:08.9, 51.50N×16.09E, ML2.6, Mining Induced*
CSEM ***11*** *20:08:08.4±0.4, 51.45N×16.08E, h2km, ML3.3/9, Error ellipse: s-maj=6.1km s-min=3.5km az=2.0*
IPEC ***11*** *20:08:08.3±0.3, 51.49N×16.45E, h0km, ML2.1/4, Error ellipse: s-maj=3.6km s-min=2.0km az=86.0*
PRU ***11*** *20:08:09.2, 51.42N×16.09E, h0km*
VIE ***11*** *20:08:10.2±0.5, 51.28N×16.06E, h0km, mb2.0/2, ML2.7/4, Error ellipse: s-maj=3.4km s-min=3.1km az=172.0 69 km WNW of Wroclaw Suspected Mining induced.*

ISC 11 20:08:07.7±0.6, 51.48N±0.03×16.08E±0.03, h0km, n41, σ1°01/70, 2C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.65**	**168**	*e*Pg	**Pg**	**20 08 21.1**	**+0.9**
KSP				*e*Sg	**Sg**	**20 08 30.1**	**+1.5**
KSP	**Ksiaz**	**0.65**	**168**	*i* Pg	**Pg**	**20 08 21.1**	**+0.9**
KSP				*e*Sg	**Sg**	**20 08 30.1**	**+1.5**
KSP	**Ksiaz**	**0.65**	**168**	*e*Pg	**Pg**	**20 08 21.0**	**+0.8**
	baz=8.8						
KSP				*e*Sg	**Sg**	**20 08 30.1**	**+1.5**
UPC	**Upice**	**0.97**	**183**	*e*PG	**Pg**	**20 08 27.1**	**+0.8**
UPC	**Upice**	**0.97**	**183**	Pg	**Pg**	**20 08 27.1**	**+0.8**
DPC	**Dobruska-Polom**	**1.14**	**172**	*e*PG	**Pg**	**20 08 29.9**	**+0.4**
DPC				*e*SG	**Sg**	**20 08 44.5**	**+0.2**
	comp=Z,59nm,0.4s						
DPC	**Dobruska-Polom**	**1.14**	**172**	Pg	**Pg**	**20 08 29.9**	**+0.4**
DPC				*e*Sg	**Sg**	**20 08 44.4**	**+0.1**
	baz=4.1						
PVCC	**Panska Ves**	**1.35**	**226**	*e*PG	**Pg**	**20 08 33.5**	**0.0**
PVCC				*e*SG	**Sg**	**20 08 51.1**	**+0.1**
	comp=Z,141nm,0.3s						
PVCC	**Panska Ves**	**1.35**	**226**	Pg	**Pg**	**20 08 33.5**	**0.0**
PVCC				Sg	**Sg**	**20 08 51.1**	**+0.1**
	comp=Z,141nm,0.3s						
PRU	**Pruhonice**	**1.78**	**214**	*e*PG	**Pg**	**20 08 42.1**	**+0.2**
PRU				*e*SG	**Sg**	**20 09 05.8**	**+0.8**
	comp=Z,33nm,0.4s						
PRU	**Pruhonice**	**1.78**	**214**	Pg	**Pg**	**20 08 42.1**	**+0.2**
PRU				Sg	**Sg**	**20 09 05.8**	**+0.8**
	comp=Z,33nm,0.4s						
CLL	**Collm**	**1.94**	**266**	*i* Pn	**Pn**	**20 08 41.2**	**-0.7**
CLL				*e*Pg	**Pg**	**20 08 44.0**	**-0.8**
CLL				*e*		20 08 48.0	
CLL				*e*Sg	**Sg**	**20 09 11.0**	**+1.1**
	comp=Z,13nm,0.3s						
MORC	**Moravsky Berou**	**1.94**	**151**	*e*Pn	**Pn**	**20 08 41.5**	**-0.4**
	baz=338						
MORC				*e*Sg	**Sg**	**20 09 06.1**	**-3.9**
OKC	**Ostrava-Krasne**	**2.10**	**141**	*e*PG	**Pg**	**20 08 46.4**	**-1.6**
OKC	**Ostrava-Krasne**	**2.10**	**141**	Pg	**Pg**	**20 08 46.4**	**-1.6**
VRAC	**Vranov**	**2.20**	**171**	*e*Pn	**Pn**	**20 08 45.9**	**+0.5**
	baz=358						
VRAC				*e*Sg	**Sg**	**20 09 17.6**	**-0.7**
	comp=Z,9.1nm,0.3s,baz=358						
KRUC	**Moravsky**	**2.43**	**175**	*e*Pn	**Pn**	**20 08 49.4**	**+0.8**
	baz=0.9						
KRUC				*e*Sg	**Sg**	**20 09 23.6**	**-2.1**
	comp=Z,7.5nm,0.3s,baz=0.9						
NKC	**Novy Kostel**	**2.62**	**243**	*e*PN	**Pn**	**20 08 51.9**	**+0.7**
NKC				*e*PG	**Pg**	**20 08 57.1**	**-0.8**
NKC				*e*SG	**Sg**	**20 09 33.2**	**+1.4**
	comp=Z,31nm,0.3s						
NKC	**Novy Kostel**	**2.62**	**243**	Pn	**Pn**	**20 08 51.9**	**+0.7**
OJC	**Ojcow**	**2.67**	**117**	*e*Pg	**Pg**	**20 08 58.3**	**-0.6**
OJC				*e*Sg	**Sg**	**20 09 33.7**	**+0.2**
OJC	**Ojcow**	**2.67**	**117**	*e*Pg	**Pg**	**20 08 58.3**	**-0.6**
OJC				*e*Sg	**Sg**	**20 09 33.7**	**+0.2**
JAVC	**Velka Javorina**	**2.81**	**158**	*e*Sg	**Sg**	**20 09 38.1**	**0.0**
	comp=Z,10nm,0.6s						
KHC	**Kasperske Hory**	**2.85**	**215**	*e*PN	**Pn**	**20 08 54.2**	**-0.1**
KHC				*e*PG	**Pg**	**20 08 59.6**	**-2.6**
KHC				*e*SN	**Sn**	**20 09 28.2**	**-1.1**
KHC				*e*SG	**Sg**	**20 09 38.0**	**-1.1**
	comp=Z,11nm,0.5s		

IBND Bandar-abas 0.42 213 *e*Sg **Sg 20 09 14.1 +0.5**
IBND ⇓*e*Pg **Pg 20 09 08.5 +0.3**
IBND ⇑*e*Pg **Pg 20 09 08.7 +0.5**
IBND *e* 20 09 25.7
comp=Z,66μm,0.1s
IBND *e* 20 09 25.9
comp=Z,9μm,0.2s
BNDS Bandar-Abbas 0.68 234 *e*Pg **Pg 20 09 13.0 -0.2**
BNDS Bandar-Abbas 0.68 234 *e*Pg **Pg 20 09 13.0 -0.2**
BNDS AML AML 20 09 30.6
comp=N,4μm,0.4s
BNDS Bandar-Abbas 0.68 234 *e*Pg **Pg 20 09 13.0 -0.2**
BANOM Banah 1.92 193 P **Pn 20 09 33.3 -0.3**
SNR=138
BANOM Banah 1.92 193 ⇑P **Pn 20 09 33.3 -0.3**
SNR=138
KRBR Kerman 2.17 359 *e*Pn **Pn 20 09 38.0 +0.9**
KRBR Kerman 2.17 359 *e*Pg **Pg 20 09 39.0 -2.8**
KRBR *e*Sg **Sg 20 10 08.8 -1.2**
KRBR AML AML 20 10 15.0
comp=N,1μm,0.3s
KRBR AML AML 20 10 16.5
comp=E,1μm,0.6s
KRBR Kerman 2.17 359 *e*Pn **Pn 20 09 38.0 +0.9**
NAZ Nazwa, Dubai 2.98 200 P **Pn 20 09 48.9 +0.7**
SNR=7.4
NAZ Nazwa, Dubai 2.98 200 ⇓P **Pn 20 09 48.9 +0.8**
SNR=7.4
ASHO Ashiyiah 3.17 192 P **Pn 20 09 51.0 +0.2**
SNR=41
ASHO Ashiyiah 3.17 192 ⇓P **Pn 20 09 51.0 +0.1**
SNR=41
ASUD Al Ashush, Dub 3.42 203 P **Pn 20 09 54.8 +0.5**
SNR=92
ASUD Al Ashush, Dub 3.42 203 ⇓P **Pn 20 09 54.8 +0.5**
SNR=92
ISRV Sarvestan 3.60 297 *e*Pn **Pn 20 09 56.6 -0.1**
ISRV *e*Sg **Sg 20 10 54.9 -0.9**
ISRV *e* 20 11 22.9
comp=Z,2μm,0.4s
ISRV Sarvestan 3.60 297 *e*Pn **Pn 20 09 56.6 -0.1**
IPAR Pars 3.87 303 *e*Pn **Pn 20 10 01.7 +1.3**
IPAR *e*Sg **Sg 20 11 04.6 +0.2**
IPAR *e* 20 11 23.1
comp=Z,2μm,0.4s
IPAR Pars 3.87 303 *e*Pn **Pn 20 10 01.7 +1.3**
IBAF Bafgh 3.92 344 *e*Pn **Pn 20 10 02.1 +0.9**
IBAF *e* 20 11 09.4
comp=Z,2μm,0.5s
IBAF Bafgh 3.92 344 *e*Pn **Pn 20 10 02.1 +0.9**
ZHSF Zahedan 3.93 62 *e*Pn **Pn 20 10 04.8 +3.5**
ZHSF *e*Sg **Sg 20 11 06.8 +0.3**
IMEH Mehriz 4.05 333 *e*Pn **Pn 20 10 04.9 +2.0**
IMEH *e* 20 11 27.7
comp=Z,2μm,0.5s
IMEH Mehriz 4.05 333 *e*Pn **Pn 20 10 04.9 +2.0**
SMDO Samad 4.86 166 P **Pn 20 10 14.2 +0.2**
SNR=7.4
SMDO Samad 4.86 166 ⇑P **Pn 20 10 14.2 +0.2**
SNR=7.4
ICHK Chekchek 4.89 336 *e*Pn **Pn 20 10 15.9 +1.5**
ICHK *e* 20 12 15.7
comp=Z,897nm,0.3s
ICHK Chekchek 4.89 336 *e*Pn **Pn 20 10 15.9 +1.5**
ISAD Sadrabad 4.91 327 *e*Pn **Pn 20 10 16.7 +2.0**
ISAD *e* 20 12 00.0
comp=Z,970nm,0.4s
ISAD Sadrabad 4.91 327 *e*Pn **Pn 20 10 16.7 +2.0**
IKOO Kooshah 4.99 22 *e*Pn **Pn 20 10 20.9 +5.1**
IKOO *e* 20 12 02.8
comp=Z,1μm,0.4s
IKOO Kooshah 4.99 22 *e*Pn **Pn 20 10 20.9 +5.1**
ITEG Tejag 5.35 18 *e*Pn **Pn 20 10 25.3 +4.5**
ITEG *e* 20 12 06.9
comp=Z,945nm,0.3s
ITEG Tejag 5.35 18 *e*Pn **Pn 20 10 25.3 +4.5**
IDAH Dahanechah 5.59 28 *e*Pn **Pn 20 10 29.0 +4.9**
IDAH *e* 20 11 03.1
comp=Z,530nm,0.3s
IDAH Dahanechah 5.59 28 *e*Pn **Pn 20 10 29.0 +4.9**
NASN Na'in 6.06 326 *e*Pn **Pn 20 10 30.6 +0.1**
IGAR Gharneh 6.16 319 *e*Pn **Pn 20 10 32.8 +0.9**
IGAR *e* 20 10 34.2
comp=Z,509nm,0.1s
IZEF Zefreh 6.38 324 *e*Pn **Pn 20 10 34.9 0.0**
IZEF *e* 20 10 39.4
comp=Z,189nm,0.1s
IZEF Zefreh 6.38 324 *e*Pn **Pn 20 10 34.9 0.0**
IKLH Kolahrood 7.10 322 *e*Pn **Pn 20 10 45.7 +0.9**
IKLH *e* 20 10 49.4
comp=Z,210nm,0.1s
IKLH Kolahrood 7.10 322 *e*Pn **Pn 20 10 45.7 +0.9**
RDF Al-Radifah 8.22 280 *e*P **Pn 20 10 58.0 -2.2**
RDF AML AML 20 12 28.3
comp=Z,30nm,0.4s
ISHM Shahmirzad 8.52 340 *e*Pn **Pn 20 11 06.3 +2.0**
ISHM *e* 20 12 00.7
comp=Z,122nm,0.3s
ISHM Shahmirzad 8.52 340 *e*Pn **Pn 20 11 06.3 +2.0**
NAY Al-Naaiem 8.53 282 *e*P **Pn 20 11 01.8 -2.6**
NAY AML AML 20 12 36.2
comp=Z,8.0nm,0.4s
MIB Mutribah 8.53 286 *e*P **Pn 20 11 01.9 -2.5**
MIB AML AML 20 12 34.3
comp=Z,23nm,0.6s
IDMV Damavand 8.75 334 *e*Pn **Pn 20 11 10.2 +2.8**
IDMV Damavand 8.75 334 *e*Pn **Pn 20 11 10.2 +2.8**
ISRO Mashad 8.78 14 *e*Sg Sx 20 13 46.7
IPAY Payeh 8.82 12 *e*Pn **Pn 20 11 12.9 +4.5**
IPAY *e* 20 11 42.6
comp=Z,52nm,0.2s
IGLO Ghaloghah 9.03 345 *e*Pn **Pn 20 11 13.5 +2.2**
IGLO *e* 20 14 09.7
comp=Z,244nm,0.5s
IGLO Ghaloghah 9.03 345 *e*Pn **Pn 20 11 13.5 +2.2**
IKRD Kardeh 9.07 9 *e*Pn **Pn 20 11 18.7 +6.9**
IKRD *e* 20 14 38.7
comp=Z,74nm,0.0s
IRAZ Razeghan 9.57 324 *e*Pn **Pn 20 11 18.9 +0.2**
IRAZ *e* 20 11 33.0
comp=Z,97nm,0.1s
IRAZ Razeghan 9.57 324 *e*Pn **Pn 20 11 18.9 +0.2**
GNI Garni 15.84 324 Pn **Pn 20 12 44.6 +0.6**
comp=Z,0.1nm,0.3s,baz=162,slow=20,SNR=2.1
GNI Garni 15.84 324 Pn **Pn 20 12 44.6 +0.6**
ASF Jabal al Asfar 17.78 289 P **Pn 20 13 07.0 -1.5**
comp=Z,0.3nm,0.3s,baz=142,slow=12,SNR=3.4
ASF LR LR 20 21 26.6
comp=Z,39nm,20.3s,baz=88,slow=42
ZEI Tsey 18.24 328 *e*P Px 20 13 27.8
ZEI pmax pmax
comp=Z,10.0nm,0.5s
MMAI Mount Meron Ar 19.16 291 P **Pn 20 13 23.4 -2.0**
comp=Z,0.3nm,0.3s,baz=101,slow=15,SNR=2.7
EKS2 Erkin-Say 20.25 39 *e*P **P 20 13 35.5 -0.8**
comp=Z,5.0nm,1.0s
EKS2 Erkin-Say 20.25 39 *e*P **P 20 13 35.5 -0.8**
comp=Z,5.0nm,1.0s
UCH Uchtor 20.38 40 *e*P **P 20 13 37.7 0.0**
comp=Z,3.9nm,0.6s
UCH Uchtor 20.38 40 *e*P **P 20 13 37.7 -0.1**
comp=Z,3.9nm,0.6s
AAK Ala-Archa 20.63 40 P **P 20 13 40.6 +0.2**
comp=Z,1.7nm,0.3s,baz=255,slow=12,SNR=2.0
AAK LR LR 20 22 53.5
comp=Z,49nm,18.0s,MS2.9,baz=24,slow=40
AAK Ala-Archa 20.63 40 P **P 20 13 40.7 +0.2**
comp=Z,2.0nm,0.3s
ATD Arta Tunnel 20.81 222 LR LR 20 22 06.3
comp=Z,33nm,21.2s,MS2.7,baz=231,slow=38
ABKAR Akbulak array 21.56 6 *e*P **P 20 13 48.7 -1.8**
comp=Z,3.6nm,0.6s,mb4.0
ABKAR Akbulak array 21.56 6 *e*P **P 20 13 48.7 -1.8**
comp=Z,3.6nm,0.6s,mb4.0
BRTR Keskin Array B 22.56 308 P **P 20 14 00.2 -1.0**
comp=Z,2.3nm,0.7s,mb3.7,baz=126,slow=13,SNR=13
BRTR Keskin Array B 22.56 308 P **P 20 14 00.3 -0.9**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
AKTK Aktyubinsk 22.62 2 P **P 20 14 00.8 -1.0**
AKTK LR LR 20 24 39.9
AKTK Aktyubinsk 22.62 2 P **P 20 14 00.8 -1.0**
comp=Z,63nm,18.2s
AKTO Aktyubinsk 22.62 2 P **P 20 14 00.8 -1.0**
comp=Z,3.0nm,0.5s,mb4.0,baz=175,slow=10.0,SNR=20
AKTO LR LR 20 24 39.9
comp=Z,63nm,18.1s,MS3.1,baz=350,slow=42
AKTO Aktyubinsk 22.62 2 P **P 20 14 00.8 -1.0**
AKTO pmax pmax
comp=Z,3.0nm,0.5s,mb4.0
AKTO MLR MLR
comp=Z,63nm,18.2s,MS3.1
BVAR Borovoye Array 27.14 18 P **P 20 14 42.8 -1.4**
comp=Z,1.0nm,0.6s,mb3.5,baz=215,slow=7.0,SNR=6.1
BVAR Borovoye Array 27.14 18 P **P 20 14 42.8 -1.4**
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 27.14 18 P **P 20 14 42.8 -1.4**
MKAR Makanchi Array 27.57 40 P **P 20 14 47.6 -0.5**
comp=Z,0.2nm,0.2s,mb3.3,baz=224,slow=6.8,SNR=3.0
AKASG Malin Array Be 30.97 325 P **P 20 15 16.0 -2.3**
AKASG Malin Array Be 30.97 325 P **P 20 15 16.0 -2.3**
comp=Z,0.5nm,0.4s,mb3.7,baz=129,slow=8.6,SNR=3.9
AKASG Malin Array Be 30.97 325 P **P 20 15 16.0 -2.3**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 33.23 30 P **P 20 15 36.0 -2.1**
comp=Z,1.4nm,0.3s,mb4.4,baz=228,slow=8.6,SNR=13
ZALV Zalesovo Beam 33.23 30 P **P 20 15 36.0 -2.1**
ZALV pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
GTA Gaotai 37.33 61 *e*P **P 20 16 15.1 +1.5**
GTA pP pP 20 16 18.1 +3.3
GTA sP sP 20 16 21.1 +5.8
GTA pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
KHC Kasperske Hory 39.30 315 *e*P **P 20 16 34.0 +4.0**
KHC Kasperske Hory 39.30 315 *e*pP pP 20 16 34.0 +2.8
FINES FINESS Array B 39.39 337 P **P 20 16 28.7 -1.9**
comp=Z,2.5nm,1.1s,mb3.9,baz=120,slow=8.2,SNR=4.2
FINES FINESS Array B 39.39 337 P **P 20 16 28.7 -1.9**
FINES pmax pmax
comp=Z,3.0nm,1.1s
MOTA Moosalm 40.45 311 ⇓*i*P **P 20 16 36.4 -3.2**
comp=Z,1.5nm,0.5s,mb4.0
FETA Feichten 40.63 311 ⇑*i*P **P 20 16 38.3 -2.9**
comp=Z,4.4nm,0.7s,mb4.2
KEST Kesra 40.79 293 P **P 20 16 40.6 -2.0**
comp=Z,0.3nm,0.5s,mb3.2,baz=68,slow=11,SNR=3.9
DAVA Damueli 41.26 311 ⇑*i*P **P 20 16 43.1 -3.1**
comp=Z,6.2nm,0.6s,mb4.4
MBDF Montbardon 43.02 307 *e*P **P 20 17 03.8 +3.1**
MBDF Montbardon 43.02 307 *e*P **P 20 17 03.8 +3.1**
LPG La Plagne 43.12 308 *e*P **P 20 17 04.3 +2.8**
LPG La Plagne 43.12 308 *e*P **P 20 17 04.3 +2.8**
LPL La Plagne 43.14 308 *e*P **P 20 17 03.6 +2.0**
LPL La Plagne 43.14 308 *e*P **P 20 17 03.6 +2.0**
SONM Songino Array 43.14 49 P **P 20 17 02.2 +0.5**
comp=Z,2.0nm,0.6s,mb3.0,baz=288,slow=5.9,SNR=2.6
SONM Songino Array 43.14 49 P **P 20 17 02.2 +0.6**
CABF La Chapelle 43.71 309 *e*P **P 20 17 07.5 +1.2**
CABF La Chapelle 43.71 309 *e*P **P 20 17 07.5 +1.2**
NOA NORSAR Array B 45.01 331 P **P 20 17 13.4 -3.0**
comp=Z,0.5nm,0.7s,mb3.5,baz=119,slow=7.5,SNR=2.5
NOA NORSAR Array B 45.01 331 P **P 20 17 13.4 -3.0**
NOA pmax pmax
comp=Z,1.0nm,0.7s
SMF Signal de Mont 45.26 309 *e*P **P 20 17 20.4 +1.8**
comp=Z,6.1nm,0.8s,mb4.2
SMF Signal de Mont 45.26 309 *e*P **P 20 17 20.4 +1.8**
comp=Z,3.0nm,0.8s,mb4.2
SMF Signal de Mont 45.26 309 *e*P **P 20 17 20.4 +1.8**
SMF pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
SMF Signal de Mont 45.26 309 *e*P **P 20 17 20.4 +1.8**
comp=Z,3.0nm,0.8s,mb4.2
SSF Saint Saulge 45.52 310 *e*P **P 20 17 21.8 +1.1**
SSF Saint Saulge 45.52 310 *e*P **P 20 17 21.8 +1.1**
ARCES ARCESS Array B 45.53 345 P **P 20 17 18.8 -1.6**
comp=Z,1.7nm,0.9s,mb4.0,baz=131,slow=9.7,SNR=5.0
ARCES ARCESS Array B 45.53 345 P **P 20 17 18.8 -1.6**
ARCES pmax pmax
comp=Z,2.0nm,0.9s
AVF Avril sur Loir 45.60 309 *e*P **P 20 17 23.2 +1.8**
comp=Z,5.0nm,0.8s,mb4.2
AVF Avril sur Loir 45.60 309 *e*P **P 20 17 23.2 +1.8**
comp=Z,2.5nm,0.8s,mb4.2
AVF Avril sur Loir 45.60 309 *e*P **P 20 17 23.2 +1.8**
AVF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
AVF Avril sur Loir 45.60 309 *e*P **P 20 17 23.2 +1.8**
comp=Z,2.5nm,0.8s,mb4.2
BGF Bois d'Agland 45.93 309 *e*P **P 20 17 25.6 +1.6**
BGF Bois d'Agland 45.93 309 *e*P **P 20 17 25.6 +1.6**
TCF Toulx Ste Croi 46.35 309 *e*P **P 20 17 29.0 +1.7**
TCF Toulx Ste Croi 46.35 309 *e*P **P 20 17 29.0 +1.7**
ESDC Sonseca Array 51.02 300 P **P 20 18 04.3 +0.9**
comp=Z,0.2nm,0.3s,mb3.5,baz=69,slow=8.0,SNR=2.8
ESDC Sonseca Array 51.02 300 P **P 20 18 04.3 +1.0**
TORD Torodi Ar. Bea 53.23 266 P **P 20 18 16.5 -3.6**
TORD Torodi Ar. Bea 53.23 266 P **P 20 18 16.5 -3.6**
comp=Z,0.8nm,0.5s,mb4.0,baz=62,slow=7.8,SNR=19
KSRS Korea Array 59.40 61 P **P 20 19 03.0 -0.9**
comp=Z,0.4nm,0.5s,mb3.7,baz=284,slow=4.9,SNR=3.4
KSRS Korea Array 59.40 61 P **P 20 19 03.0 -0.9**
DBIC Dimbokro 61.88 262 P **P 20 19 18.4 -2.7**
DBIC Dimbokro 61.88 262 P **P 20 19 18.4 -2.7**
comp=Z,3.5nm,0.9s,mb4.5,baz=7.5,slow=11,SNR=3.1
DBIC Dimbokro 61.88 262 P **P 20 19 18.4 -2.7**
DBIC pmax pmax
comp=Z,4.0nm,0.9s
ASAR Alice Springs 90.23 117 P **P 20 22 00.8 -1.4**
comp=Z,0.2nm,0.7s,mb3.6,baz=311,slow=4.6,SNR=3.2
ASAR Alice Springs 90.23 117 P **P 20 22 00.8 -1.4**

STKA Stephens Creek 29.18 190 P **P 20 47 32.2 -1.0**
STKA LR LR 20 59 46.4
STKA Stephens Creek 29.18 190 P **P 20 47 32.2 -1.0**
4.0nm,1.0s,mb4.1,baz=80,slow=16,SNR=6.5
STKA LR LR 20 59 46.4
comp=Z,618nm,20.5s,MS4.2,baz=6.4,slow=38
TGY Tagaytay City 31.27 304 P **P 20 47 51.8 0.0**
109nm,0.3s,baz=165,slow=12,SNR=3.1
FORT Forrest 33.07 211 *e*P **P 20 48 07.1 -0.4**
23nm,0.8s,mb5.2
MJAR Matsushiro Arr 40.31 349 P **P 20 49 08.0 -1.1**
2.2nm,0.9s,mb3.9,baz=170,slow=8.4,SNR=7.2
MJAR LR LR 21 04 40.0
comp=Z,168nm,18.0s,MS3.9,baz=200,slow=34
KSRS Korea Array 44.17 338 P **P 20 49 40.4 -0.3**
1.6nm,0.8s,mb3.8,baz=151,slow=8.5,SNR=7.5
KSRS LR LR 21 06 21.5
comp=Z,291nm,18.5s,MS4.2,baz=9.1,slow=34
BJI Beijing 51.55 329 P **P 20 50 38.2 +0.4**
BJI S **S 20 57 59.6 +0.3**
BJI pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
BJI LR LR
comp=N,220nm,21.1s,MS4.2
BJI LR LR
comp=E,170nm,22.2s,MS4.2
BJI LR LR
comp=Z,210nm,25.0s,MS4.1
KMI Kunming 51.55 306 P **P 20 50 41.0 +2.9**
KMI pmax pmax
comp=Z,7.0nm,1.9s,mb4.3
KMI LR LR
comp=N,140nm,16.3s,MS4.3
KMI LR LR
comp=E,170nm,17.4s,MS4.3
KMI LR LR
comp=Z,230nm,19.0s,MS4.2
CMAR Chiang Mai Arr 52.24 296 P **P 20 50 44.6 +1.2**
comp=Z,1.4nm,0.9s,mb3.9,baz=124,slow=6.2,SNR=7.1
CMAR LR LR 21 14 42.6
comp=Z,80nm,18.3s,MS3.8,baz=276,slow=38
LZH Lanzhou 56.26 318 *e*P **P 20 51 13.5 +1.1**
LZH pmax pmax
comp=Z,20nm,1.3s,mb5.0
GTA Gaotai 60.75 319 *e*P **P 20 51 44.2 +0.5**
GTA pmax pmax
comp=Z,2.0nm,1.0s,mb4.2
ULN Ulaanbaatar 61.73 330 *e*P **P 20 51 49.2 -0.9**
comp=Z,2.8nm,1.0s,mb4.3
SONM Songino Array 62.04 330 P **P 20 51 52.6 +0.4**
comp=Z,1.0nm,1.0s,mb3.9,baz=132,slow=2.1,SNR=5.4
SONM LR LR 21 17 02.1
comp=Z,188nm,18.7s,MS4.3,baz=129,slow=34
PPT Papeete 63.41 108 *e*LR LR 21 10 51.2
comp=Z,189nm,25.0s
PPT Papeete 63.41 108 LR LR 21 11 30.2
comp=Z,111nm,21.9s,MS4.0,baz=336,slow=28
MKAR Makanchi Array 75.49 320 P **P 20 53 16.7 +0.6**
comp=Z,0.3nm,0.2s,mb3.8,baz=96,slow=5.8,SNR=4.9
MKAR LR LR 21 26 24.0
comp=Z,108nm,18.2s,MS4.2,baz=242,slow=36
ZALV Zalesovo Beam 76.74 327 P **P 20 53 23.3 +0.2**
ZALV LR LR 21 26 60.0
ZALV Zalesovo Beam 76.74 327 P **P 20 53 23.3 +0.2**
comp=Z,0.3nm,0.3s,mb3.7,baz=116,slow=3.4,SNR=4.6
ZALV LR LR 21 26 60.0
comp=Z,120nm,19.4s,MS4.2,baz=249,slow=36
TTA Tatalina 78.21 23 *e*P **P 20 53 31.4 +0.3**
comp=Z,6.8nm,1.3s,mb4.4
KURK Kurchatov 79.09 323 *e*P **P 20 53 34.1 -2.1**
comp=Z,4.7nm,1.2s,mb4.3
AML Almayashu 80.02 314 *e*P **P 20 53 42.9 +1.4**
comp=Z,11nm,1.4s,mb4.6
MCK McKinley 81.40 24 *e*P **P 20 53 48.2 -0.2**
comp=Z,7.4nm,0.9s,mb4.6
ILAR Eielson Array 82.64 23 P **P 20 53 53.7 -1.2**
comp=Z,2.2nm,0.7s,mb4.3,baz=255,slow=5.1,SNR=23
ILAR LR LR 21 25 13.4
comp=Z,82nm,21.1s,MS4.1,baz=301,slow=32
BVAR Borovoye Array 84.62 324 P **P 20 54 04.2 -1.2**
comp=Z,1.5nm,0.7s,mb4.2,baz=103,slow=6.4,SNR=10
EGAK Eagle 84.94 24 *e*P **P 20 54 06.0 -0.7**
comp=Z,3.2nm,0.9s,mb4.5
MAW Mawson 85.09 203 LR LR 21 31 35.1
comp=Z,137nm,20.5s,MS4.3,baz=254,slow=35
DAWY Dawson 85.46 25 *e*P **P 20 54 09.6 +0.3**
NVAR Mina Array Bea 95.27 52 P **P 20 54 57.0 +0.9**
comp=Z,2.0nm,1.0s,mb4.5,baz=259,slow=6.7,SNR=8.5
TORD Torodi Ar. Bea 144.62 288 PKP PKPdf 21 01 07.9 -1.8
comp=Z,4.2nm,0.9s,baz=75,slow=3.0,SNR=15

IDC ***11*** *20:41:29.3±0.9, 3.°09S×147.°47E, h0km, mb4.2/12, mb1 4.3/13, mb1mx4.3/16, mbtmp4.1/13, ML3.5/1, MS4.1/13, Ms1 4.1/13, ms1mx4.0/17, Error ellipse: s-maj=29.9km s-min=16.6km az=98.0*

GCMT ***11*** *20:41:35.8±0.2, 3.°03S×147.°46E, h20km±1km, MW5.0, Moment Tensor Solution. s33,c43; s86,c129; Moment tensor: Scale 10¹⁶Nm; Mrr1.30±.14; Mθθ0.26±.12; Mϕϕ-1.56±.15; Mrθ-0.64±.22; Mθϕ4.10±.10; Mϕr-0.45±.22; Best double couple: Mo4.30000×10¹⁶ NP1:ϕ185.00000°, δ77.00000°, λ168.00000°. NP2:ϕ278.00000°, δ78.00000°, λ13.00000°. Principal axes: T 3.7900, Plg17.0000°, Azm141.0000°; N 1.0500, Plg73.0000°, Azm320.0000°; P -4.8500, Plg1.0000°, Azm51.0000°; Data Used: II IC IU G CN.*

NEIC ***11*** *20:41:36.1±2.0, 3.°11S×147.°26E, h45km±19km, mb4.6/9 Error ellipse: s-maj=15.4km s-min=12.8km az=91.0*

ISC 11 20:41:30.3±4.2, 3.°05S±0.°07×147.°4E±0.°1, h2km±26km, n44, σ1$06/38, mb4.3/24, MS4.2/14, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.31**	**182**	*e*P		**Pn**	**20 43 06.5**	**+2.1**
	41nm,0.8s							
COEN	**Coen**	**11.60**	**201**	*e*P		**Pn**	**20 44 17.7**	**+0.6**
	118nm,0.7s							
GUMO	**Guam**	**16.72**	**352**	LR		LR	20 50 16.8	
	comp=Z,435nm,21.1s,baz=172,slow=31							
CTA	**Charters Tower**	**16.96**	**184**	Pn		**Pn**	**20 45 26.8**	**-2.1**
	0.1nm,0.3s,baz=2.7,slow=15,SNR=2.5							
KAKA	**Kakadu**	**17.62**	**236**	*e*P		**Pn**	**20 45 36.0**	**-1.1**
	44nm,0.6s							
KAKA	**Kakadu**	**17.62**	**236**	*e*P		**Pn**	**20 45 36.1**	**-1.0**
	159nm,0.7s							
EIDS	**Eidsvold**	**22.47**	**171**	P		**P**	**20 46 31.4**	**+0.4**
	453nm,2.8s,mb5.4							
QLP	**Quilpie**	**23.59**	**187**	*e*P		**P**	**20 46 43.8**	**+1.1**
DAV	**Davao City (W)**	**23.96**	**295**	LR		LR	20 56 26.2	
	comp=Z,386nm,18.4s,MS3.9,baz=155,slow=37							
ASAR	**Alice Springs**	**24.28**	**211**	P		**P**	**20 46 49.3**	**+0.2**
	17nm,0.9s,mb4.5,baz=42,slow=6.6,SNR=86							
FITZ	**Fitzroy Crossi**	**26.02**	**233**	*e*P		**P**	**20 47 03.2**	**-1.8**
	42nm,1.0s,mb4.9							
FITZ	**Fitzroy Crossi**	**26.02**	**233**	*e*P		**P**	**20 47 02.2**	**-2.9**
FITZ				LR		LR	20 58 09.6	
FITZ	**Fitzroy Crossi**	**26.02**	**233**	P		**P**	**20 47 04.2**	**-0.8**
	24nm,1.0s,mb4.7,baz=60,slow=7.7,SNR=16							
FITZ				LR		LR	20 58 09.6	
	comp=Z,2μm,19.2s,MS4.7,baz=56,slow=38							
DZM	**Mont Dzumac**	**26.46**	**137**	*e*LR		LR	20 53 51.7	
	2μm,26.1s							
STKA	**Stephens Creek**	**29.18**	**190**	*e*P		**P**	**20 47 32.2**	**-1.0**
	4.6nm,1.4s,mb4.0							

NEIC ***11*** *20:50:30.3, 17.°70N×101.°11W, h63km, MD4.0(MEX), After MEX.*

MEX 11 20:50:29.9±0.4, 17.°74N×101.°11W, h66km±6km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.36**	**249**	*i*P		**Pn**	20 50 39.5	-1.6
ZIIG				*i*S		Sn	20 50 47.7	-1.6
ZIIG	**Zihuatanejo**	**0.36**	**249**	*i*P		**Pn**	20 50 39.5	-1.6
ZIIG				*i*S		Sn	20 50 47.7	-1.6
CAIG	**El Cayaco**	**1.06**	**130**	*i*P		**Pn**	20 50 47.7	-1.2
CAIG				*i*S		Sn	20 51 01.3	-1.8
CAIG	**El Cayaco**	**1.06**	**130**	*i*P		**Pn**	20 50 47.7	-1.2
CAIG				*i*S		Sn	20 51 01.3	-1.8
MEIG	**Mezcala**	**1.43**	**82**	*e*P		**Pn**	20 50 52.7	-1.1
MEIG				*i*S		Sn	20 51 09.3	-2.5
ACX	**Acapulco**	**1.47**	**126**	*e*P		**Pn**	20 50 53.9	-0.5
ACX				*i*S		Sn	20 51 07.6	-5.2
ACX	**Acapulco**	**1.47**	**126**	*e*P		**Pn**	20 50 52.1	-2.3
ACX				*i*S		Sn	20 51 09.6	-3.2
MOIG	**Morelia**	**1.93**	**358**	*i*P		**Pn**	20 50 59.2	-1.3
MOIG				*i*S		Sn	20 51 22.3	-1.5
MOIG	**Morelia**	**1.93**	**358**	*i*P		**Pn**	20 50 59.2	-1.3
MOIG				*i*S		Sn	20 51 22.3	-1.5
MMIG	**Aquila**	**2.20**	**285**	*i*P		**Pn**	20 51 03.3	-0.9
MMIG				*i*S		Sn	20 51 28.4	-1.9
PPM	**Popocatepetl**	**2.70**	**60**	*e*P		**Pn**	20 51 10.6	-0.4
PPM				*i*S		Sn	20 51 41.9	-0.6
PPM	**Popocatepetl**	**2.70**	**60**	*e*P		**Pn**	20 51 10.6	-0.4
PPM				*i*S		Sn	20 51 41.9	-0.6
PNIG	**Pinotepa**	**3.15**	**115**	*i*P		**Pn**	20 51 17.1	0.0
PNIG				*i*S		Sn	20 51 52.9	-0.7
PNIG	**Pinotepa**	**3.15**	**115**	*i*P		**Pn**	20 51 16.1	-1.0
PNIG				*i*S		Sn	20 51 51.4	-2.1
UTMO	**Huajuapan**	**3.15**	**88**	*i*P		**Pn**	20 51 17.3	+0.2
UTMO				*i*S		Sn	20 51 52.1	-1.4

SZGRF ***11*** *21:29:06.5, 20.°38S×177.°58W, h33km, Fiji Islands region*
DJA ***11*** *21:29:50, 20.°37S×177.°37W, h421km, mb5.2/14*
IDC ***11*** *21:30:02.9±1.4, 20.°52S×177.°94W, h533km±16km, mb4.1/16, mb1 4.2/19, mb1mx4.2/22, mbtmp4.1/19, Error ellipse: s-maj=13.5km s-min=11.2km az=124.0*
NEIC ***11*** *21:30:03.9±0.2, 20.°44S×178.°03W, mb4.6/29, Error ellipse: s-maj=9.4km s-min=6.3km az=144.0*
ISCJB ***11*** *21:30:04.3±0.6, 20.°63S±0.°05×178.°03W±0.°06, h562km±7km, mb4.6/53, Error ellipse: s-maj=8.8km s-min=7.5km az=32.6*

ISC 11 21:30:04.4±0.6, 20.°56S±0.°05×177.°97W±0.°05, h550km±6km, h551km±7.9km; pP-P, n155, σ0$99/99, mb4.6/53, 10C-4D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.70**	**306**	*e*P		**P**	**21 31 33.3**	**+1.5**
MSVF				*e*S		**S**	**21 32 43.3**	**+0.3**
AFI	**Afiamalu**	**8.87**	**43**	P		**P**	**21 32 08.1**	**-2.8**
	42nm,0.3s,baz=13,slow=1.9,SNR=65							
AFI				S		**S**	**21 33 46.5**	**-8.2**
	22nm,0.3s,baz=170,slow=18,SNR=6.5							
DZM	**Mont Dzumac**	**14.61**	**261**	*e*P		**P**	**21 33 09.4**	**-0.4**
	44nm,0.8s							
DZM	**Mont Dzumac**	**14.61**	**261**	*e*P		**P**	**21 33 09.2**	**-0.7**
DZM	**Mont Dzumac**	**14.61**	**261**	*e*P		**P**	**21 33 09.7**	**-0.1**
	24nm,0.6s							
DZM				*e*S		**S**	**21 35 43.6**	**+1.0**
OUZ	**Omahuta**	**16.39**	**205**	*e*P		**P**	**21 33 29.0**	**+1.7**
	109nm,0.9s							
OUZ				*e*S		**S**	**21 36 15.9**	**+3.0**
RAR	**Rarotonga**	**17.02**	**95**	P		**P**	**21 33 33.3**	**0.0**
	1.4nm,0.3s,baz=267,slow=5.2,SNR=5.1							

URZ Urewera 18.14 193 *e*P **P** 21 33 41.5 -1.9
URZ *e*S **S** 21 36 45.3 +3.7
URZ Urewera 18.14 193 P **P** 21 33 41.3 -2.1
44nm,0.3s,baz=349,slow=2.6,SNR=81
URZ S **S** 21 36 35.8 -5.9
1.3nm,0.3s,baz=37,slow=20,SNR=6.9
URZ Urewera 18.14 193 P* **P** 21 33 40.9 -2.5
OTVZ Oturere 19.33 195 *e*P* **P** 21 33 54.0 -0.2
BHHZ Black Hill Sta 19.55 194 *e*P* **P** 21 33 54.4 -1.7
BFZ Birch Farm 20.65 193 P* **P** 21 34 05.0 -1.1
THZ Tophouse 22.51 198 P* **P** 21 34 22.6 -0.2
LTZ Lake Taylor 23.63 198 P* **P** 21 34 31.3 -1.5
HNR Honiara 24.00 294 P **P** 21 34 26.3 -10
70nm,0.3s,mb5.7,baz=73,slow=19,SNR=4.6
RPZ Rata Peaks 24.84 199 *e*P **P** 21 34 42.8 -0.7
RPZ Rata Peaks 24.84 199 P **P** 21 34 42.5 -1.0
34nm,0.6s,mb5.2,baz=35,slow=2.1,SNR=26
FOZ Fox Glacier 25.15 201 P* **P** 21 34 44.9 -1.4
ARMA Armidale 29.07 244 *e*P **P** 21 35 22.0 +1.2
CNB Canberra Magne 32.22 236 *e*P **P** 21 35 48.7 +1.0
CTA Charters Tower 33.52 264 ⇓/P **P** 21 35 59.2 +0.3
40nm,0.3s,mb5.4
CTA Charters Tower 33.52 264 P **P** 21 35 59.2 +0.2
CTA Charters Tower 33.52 264 P **P** 21 35 59.2 +0.2
64nm,0.5s,mb5.4,baz=91,slow=10,SNR=96
CTAO Charters Tower 33.52 264 *e*P **P** 21 35 59.1 +0.1
43nm,0.4s,mb5.3
CTAO Charters Tower 33.52 264 P **P** 21 35 59.1 +0.2
95nm,0.7s,mb5.5
PMG Port Moresby 35.39 283 *e*P **P** 21 36 14.4 -0.2
129nm,0.9s,mb5.5
PMG Port Moresby 35.39 283 P **P** 21 36 14.4 -0.2
1µm159nm,1.0s,mb5.5
TOO Toolangi 35.89 234 *e*P **P** 21 36 19.0 +0.5
COEN Coen 37.62 274 P **P** 21 36 33.3 +0.3
233nm,0.8s,mb5.8
STKA Stephens Creek 37.79 244 *e*P **P** 21 36 34.8 +0.6
14nm,0.5s,mb4.8
STKA Stephens Creek 37.79 244 P **P** 21 36 34.8 +0.6
17nm,0.5s,mb4.8,baz=89,slow=9.5,SNR=74
BBOO Buckleboo 42.55 244 *e*P **P** 21 37 12.1 -0.1
39nm,0.6s,mb5.1
ASAR Alice Springs 44.53 257 P **P** 21 37 27.9 +0.1
13nm,0.4s,mb4.8,baz=93,slow=7.9,SNR=300
ASAR pP pP 21 38 58.6 -8.5
3.3nm,0.7s,baz=87,slow=8.3,SNR=2.5
ASAR S **S** 21 43 21.8 -1.8
23nm,0.7s,baz=94,slow=16,SNR=61
KAKA Kakadu 48.01 271 *e*P **P** 21 37 53.4 -0.7
27nm,0.4s,mb5.1
KAKA Kakadu 48.01 271 *e*P **P** 21 37 53.2 -0.9
79nm,0.4s,mb5.6
KAKA Kakadu 48.01 271 P **P** 21 37 53.6 -0.5
1µm101nm,0.8s,mb5.4
BAKI Biak 48.79 287 P **P** 21 38 00.4 +0.4
1µm133nm,1.0s,mb5.4
FORT Forrest 49.30 247 *e*P **P** 21 38 02.9 -0.6
19nm,0.6s,mb4.8
FORT Forrest 49.30 247 *e*P **P** 21 38 03.2 -0.3
33nm,0.8s,mb4.9
GUMO Guam 49.87 310 P **P** 21 38 07.5 -0.3
51nm,0.5s,mb5.2,baz=26,slow=23,SNR=4.1
KNA Kununurra 50.66 266 P **P** 21 38 13.6 -0.1
1µm101nm,0.6s,mb5.3
FITZ Fitzroy Crossi 53.05 262 P **P** 21 38 30.8 -0.1
9.2nm,0.4s,mb4.4,baz=99,slow=8.1
FITZ S **S** 21 45 18.7 -1.4
1.7nm,0.7s,baz=278,slow=18,SNR=3.7
TNTI Ternate 57.51 285 P **P** 21 39 01.9 0.0
117nm,1.0s,mb5.1
SBA Scott Base 57.81 184 *e*P **P** 21 39 06.5 +3.6
25nm,1.4s,mb4.3
NWAO Narrogin (SRO) 58.37 243 P **P** 21 39 07.6 +0.1
NWAO Narrogin (SRO) 58.37 243 P **P** 21 39 07.6 +0.1
6.2nm,0.8s,mb3.9,baz=110,slow=11
KMSI Cibinong 60.51 283 P **P** 21 39 27.0 +5.0
MRSI Marisa 62.34 282 P **P** 21 39 34.2 +0.2
20nm,1.0s,mb4.5
PCI Palu 63.74 280 P **P** 21 39 44.4 +1.4
549nm78nm,0.9s,mb5.1
CASY Casey 63.92 205 P **P** 21 39 43.2 0.0
12nm,0.6s,mb4.5
MYLDM Lahad Datu 67.38 285 P PcP 21 40 20.4 -8.0
QSPA South Pole Qui 69.51 180 *e*P **P** 21 40 18.9 +1.5
14nm,0.7s,mb4.6
QSPA *e*pP pP 21 42 16.0 +5.7
QSPA South Pole Qui 69.51 180 P **P** 21 40 18.8 +1.4
14nm,0.7s,mb4.6,baz=38,slow=0.9,SNR=96
MJAR Matsushiro Arr 70.28 324 P **P** 21 40 21.8 -0.8
17nm,0.6s,mb4.7,baz=160,slow=6.2,SNR=24
MAJO Matsushiro 70.28 324 *e*P **P** 21 40 22.0 -0.7
30nm,0.9s,mb4.8
MAJO *e*pP pP 21 42 16.7 +0.7
STKI Sintang 71.85 277 P **P** 21 40 33.3 +0.9
2µm29nm,0.9s,mb4.7
TWG Pinlang 73.44 303 *e*P **P** 21 40 39.2 -2.2
31nm,0.6s,mb4.9
KSM Kuching 73.45 278 *e*P **P** 21 40 40.6 -1.1
15nm,0.6s,mb4.6
KSM Kuching 73.45 278 P **P** 21 40 42.0 +0.3
45nm,0.8s,mb4.9
SSLB Suanglung 74.03 303 *e*P **P** 21 40 43.3 -1.4
16nm,0.6s,mb4.6
TPUB Ta-pu 74.04 303 *e*P **P** 21 40 43.3 -1.4
95nm,0.8s,mb5.3
YHNB Yeheng 74.17 304 *e*P **P** 21 40 44.7 -0.8
33nm,0.8s,mb4.8
KSRS Korea Array 76.95 319 P **P** 21 41 00.9 +0.3
6.6nm,0.7s,mb4.2,baz=141,slow=6.5,SNR=25
MDSI Maura Dua 77.08 270 P **P** 21 41 00.3 -1.6
KSI Kapahiang 78.84 270 P **P** 21 41 11.0 -0.4
2µm68nm,0.8s,mb5.0
YBH Yreka Blue Hor 80.32 39 *e*P **P** 21 41 20.1 +1.7
7.8nm,0.8s,mb4.1
GLA Glamis 80.44 49 *e*P **P** 21 41 20.0 +0.7
3.8nm,0.8s,mb3.8
MDJ Mudanjiang 80.59 325 P **P** 21 41 20.2 +0.5
MDJ pmax pmax
comp=Z,17nm,1.0s,mb4.4
MDJ pmax pmax
comp=Z,43nm,4.1s
MDJ Mudanjiang 80.59 325 *e*P **P** 21 41 18.4 -1.3
comp=Z,19nm,1.1s,mb4.4
HUMO Hull Mountain 80.72 38 *e*P **P** 21 41 20.4 -0.1
comp=Z,8.9nm,1.1s,mb4.1
NVAR Mina Array Bea 81.05 43 P **P** 21 41 23.2 +1.0
comp=Z,4.9nm,0.8s,mb4.0,baz=224,slow=9.0,SNR=32
MAW Mawson 81.52 200 P **P** 21 41 24.7 +0.4
comp=Z,4.0nm,0.9s,mb3.8,baz=133,slow=6.6,SNR=9.0
MOD Modoc 81.84 40 *e*P **P** 21 41 25.6 -0.7
comp=Z,11nm,1.0s,mb4.3
WHN Wuhan 82.51 306 P **P** 21 41 30.0 +0.1
TUC Tucson 82.99 52 *e*P **P** 21 41 33.4 +1.1
comp=Z,2.0nm,0.8s,mb3.7
WVOR Wild Horse Val 83.16 40 *e*P **P** 21 41 32.8 -0.1
comp=Z,7.6nm,1.1s,mb4.1
BMO Blue Mountains 85.34 38 *e*P **P** 21 41 43.8 +0.3
comp=Z,2.0nm,0.8s,mb3.7
BJI Beijing 85.96 315 P **P** 21 41 46.4 -0.2
BJI pmax pmax
comp=Z,11nm,0.7s,mb4.6
ENH Enshi 86.10 304 *e*P **P** 21 41 48.1 +0.6
comp=Z,66nm,1.3s,mb5.1
HLID Hailey 86.35 41 *e*P **P** 21 41 49.1 +0.7
comp=Z,7.5nm,1.5s,mb4.1
TRF Thorofare Moun 86.50 12 *e*P **P** 21 41 47.7 -0.9
comp=Z,4.4nm,0.7s,mb4.2
TXAR Lajitas Array 87.06 57 P **P** 21 41 53.4 +1.3
comp=Z,2.8nm,0.8s,mb3.9,baz=215,slow=7.1,SNR=28
MCMT McKenzie Canyo 87.98 40 *e*P **P** 21 41 56.9 +0.9
comp=Z,3.5nm,1.1s,mb4.0
ILAR Eielson Array 88.37 13 P **P** 21 41 56.2 -1.1
comp=Z,1.1nm,0.4s,mb4.0,baz=217,slow=5.4,SNR=19
ILAR pP pP 21 43 54.8 -2.8
comp=Z,0.4nm,1.0s,baz=183,slow=11,SNR=2.1
DLMT Dillon 88.41 40 P **P** 21 41 58.6 +0.6
comp=Z,5.4nm,1.3s,mb4.1
KMI Kunming 89.41 297 P **P** 21 42 04.7 +1.6
KMI pmax pmax
comp=Z,14nm,1.0s,mb4.8
COLD Coldfoot 89.93 10 *e*P **P** 21 42 04.2 -0.3
CMAR Chiang Mai Arr 90.17 290 P **P** 21 42 07.8 +1.1
comp=Z,6.6nm,0.8s,mb4.5,baz=113,slow=2.9,SNR=52
CMAR PP PP 21 45 50.9 +0.2
comp=Z,2.0nm,1.0s,baz=128,slow=5.8,SNR=6.9
CHTO Chiang Mai 90.29 290 *e*P **P** 21 42 07.7 +0.3
comp=Z,7.4nm,0.6s,mb4.7
CHTO Chiang Mai 90.29 290 P **P** 21 42 08.3 +0.9
SONM Songino Array 95.82 319 P **P** 21 42 31.3 -0.6
comp=Z,0.6nm,0.7s,mb4.0,baz=126,slow=3.1,SNR=5.0
SONM PP PP 21 46 29.0 -4.6
comp=Z,1.7nm,1.1s,baz=126,slow=4.4,SNR=5.9
ZALV Zalesovo Beam 110.56 321 PKPdf PKiKP 21 47 32.7 -1.6
ZALV PP PP 21 48 23.0 +1.4
ZALV Zalesovo Beam 110.56 321 PKiKP PKiKP 21 47 32.7 -1.5
comp=Z,1.2nm,0.6s,baz=148,slow=1.5,SNR=6.6
ZALV PP PP 21 48 23.0 +1.4
comp=Z,0.6nm,0.6s,baz=96,slow=5.8,SNR=4.1
MKAR Makanchi Array 111.26 313 PKiKP PKiKP 21 47 34.5 -1.3
comp=Z,0.6nm,0.3s,baz=54,slow=1.2,SNR=9.0
BVAR Borovoye Array 119.15 320 PKP PKPdf 21 47 49.8 -1.0
comp=Z,2.4nm,0.4s,baz=117,slow=1.0,SNR=17
BVAR PP PP 21 49 21.4 +0.3
comp=Z,1.3nm,0.8s,baz=106,slow=5.3,SNR=4.2
ABKAR Akbulak array 126.15 317 *e*PKPdf PKPdf 21 48 03.8 -0.5
ARCES ARCESS Array B 128.99 350 PKP PKPdf 21 48 08.7 -0.5
comp=Z,2.0nm,0.7s,baz=72,slow=1.5,SNR=9.2
FINES FINESS Array B 135.84 344 PKhKP PKPpre 21 48 10.0
comp=Z,2.7nm,1.0s,baz=350,slow=7.7,SNR=3.8
FINES PKP PKPdf 21 48 19.9 -2.4
comp=Z,0.8nm,0.4s,baz=75,slow=2.4,SNR=8.0
FINES SKPbc SKPbc 21 51 03.2 +0.6
comp=Z,1.6nm,0.9s,baz=64,slow=6.3,SNR=3.4
NOA NORSAR Array B 139.05 353 PKhKP PKPpre 21 48 18.7
comp=Z,1.1nm,0.8s,baz=21,slow=2.5,SNR=4.1
NOA SKPbc SKPbc 21 51 12.2 +0.5
comp=Z,2.0nm,0.8s,baz=14,slow=4.3,SNR=4.0
SUW Suwalki 142.91 339 *e*PKP PKPdf 21 48 32.5 -2.8
AKASG Malin Array Be 143.08 331 PKhKP PKPpre 21 48 32.2
comp=Z,14nm,0.5s,baz=43,slow=4.2,SNR=69
AKASG SKPbc SKPbc 21 51 21.8 -0.6
comp=Z,0.4nm,0.3s,baz=38,slow=2.7,SNR=5.0
MALT Malatya 143.99 307 *e*PKP PKPdf 21 48 37.1 -0.6
MALT Malatya 143.99 307 PKP PKPdf 21 48 37.4 -0.3
BSEG Bad Segeberg 146.09 351 *e*PKPbc PKPbc 21 48 42.7 -0.1
KWP Kalwaria Pacla 146.65 335 *e*PKPbc PKPbc 21 48 44.1 -0.3
BRTR Keskin Array B 146.90 312 PKPbc PKPbc 21 48 44.5 -1.0
comp=Z,5.6nm,0.7s,baz=131,slow=4.7,SNR=36
OJC Ojcow 147.23 339 *e*PKP PKPbc 21 48 45.5 -0.5
STHS Stebnicka Huta 147.38 337 *e*PKP PKPbc 21 48 46.8 +0.4
STHS *e* 21 48 51.5
STHS Stebnicka Huta 147.38 337 *e*PKP PKPbc 21 48 46.8 +0.4
STHS *e* 21 48 51.5
CRVS Cervenica-Dubn 147.72 336 *e*PKP PKPbc 21 48 47.6 +0.3
CRVS *e* 21 48 51.9
CRVS Cervenica-Dubn 147.72 336 *e*PKP PKPbc 21 48 47.6 +0.3
CRVS *e* 21 48 51.9
NIE Niedzica 147.72 337 *e*PKP PKPbc 21 48 47.5 +0.2
KSP Ksiaz 147.76 343 *e*PKP PKPbc 21 48 47.4 +0.1
MMAI Mount Meron Ar 147.87 300 PKPbc PKPbc 21 48 48.2 -0.1
comp=Z,12nm,0.6s,baz=73,slow=6.2,SNR=34
OKC Ostrava-Krasne 148.10 340⇑*e*PKP PKPdf 21 48 46.1 +1.9
OKC *e*PKPAB PKPab 21 48 53.1 0.0
CLZ Clausthal 148.11 350 *e*PKPbc PKPbc 21 48 48.3 +0.1
CLL Collm 148.13 347 *e*PKPbc PKPbc 21 48 48.3 0.0
CLL Collm 148.13 347 ⇓/PKP PKPbc 21 48 47.9 -0.4
CLL */* PKP PKPab 21 48 52.1 -1.1
CLL *e*pPKP pPKPdf 21 51 00.0 +6.7
UPC Upice 148.14 343⇑*e*PKP PKPbc 21 48 48.1 -0.2
UPC *e*PKPAB PKPab 21 48 53.5 +0.2
DPC Dobruska-Polom 148.19 343⇑*e*PKP PKPbc 21 48 48.7 +0.2
DPC *e*PKPAB PKPab 21 48 53.7 +0.2
BRG Berggiesshubel 148.33 346 *e*PKPbc PKPbc 21 48 48.8 0.0
BRG Berggiesshubel 148.33 346 */* PKP PKPbc 21 48 48.5 -0.2
comp=Z,9.0nm,0.7s
BRG *e* 21 48 53.4
comp=Z,9.9nm,0.8s
KECS Kecovo 148.44 336 *e*PKP PKPbc 21 48 49.4 +0.3
KECS *e* 21 48 54.7
KECS Kecovo 148.44 336 *e*PKP PKPbc 21 48 49.4 +0.3
KECS *e* 21 48 54.7
PVCC Panska Ves 148.50 345⇑*e*PKP PKPbc 21 48 49.2 0.0
PVCC *e*PKPAB PKPab 21 48 54.2 -0.5
BUG Bochum--Univer 148.91 354 *e*PKPbc PKPbc 21 48 50.1 -0.1
PRU Pruhonice 149.00 344⇑*e*PKP PKPbc 21 48 50.8 +0.3
PRU *e*PKPAB PKPab 21 48 57.2 +0.4
VYHS Vyhne 149.03 338 *e*PKP PKPbc 21 48 50.6 0.0
VYHS *e* 21 48 57.3
VYHS Vyhne 149.03 338 *e*PKP PKPbc 21 48 50.6 0.0
VYHS *e* 21 48 57.3
MOX Moxa 149.04 348 *e*PKP PKPbc 21 48 50.4 -0.1
comp=Z,13nm,1.2s
MOX Moxa 149.04 348 *e*PKPbc PKPbc 21 48 50.5 0.0
TANN Tannenbergstha 149.09 347 *e*PKPbc PKPbc 21 48 50.5 -0.2
KOLL Kolacno 149.11 339 *e*PKP PKPbc 21 48 51.1 +0.3
KOLL Kolacno 149.11 339 *e*PKP PKPbc 21 48 51.1 +0.3
NKC Novy Kostel 149.26 347⇑*e*PKP PKPbc 21 48 50.3 -0.8
NKC *e*PKPAB PKPab 21 48 57.0 -0.9
ZST Bratislava 149.87 340 *e*PKP PKPab 21 48 58.4 -2.1
ZST Bratislava 149.87 340 *e*PKP PKPab 21 48 58.3 -2.2
TNS Taunus Mts 149.97 352 *e*PKPbc PKPbc 21 48 53.1 +0.3
GRA1 Grafenberg Arr 150.03 348 *e*PKPbc PKPbc 21 48 53.2 +0.3
GRA1 *e*PKPab PKPab 21 49 00.9 -0.2
GRF Grafenberg Arr 150.03 348 *e*PKPbc PKPbc 21 48 53.2 +0.3
GRF *e*PKPab PKPab 21 49 00.9 -0.2
KHC Kasperske Hory 150.03 345 *e*PKPbc PKPbc 21 48 52.8 -0.2
KHC *e*PKPab PKPab 21 49 00.6 -0.6
KHC Kasperske Hory 150.03 345⇑*e*PKP PKPbc 21 48 52.9 -0.1
KHC *e*PKPAB PKPab 21 49 01.0 -0.3
WET Wettzell 150.19 346 *e*PKPbc PKPbc 21 48 53.5 +0.2
GEC2 GERESS Array S 150.27 344 *e*PKPbc PKPbc 21 48 53.5 0.0
CONA Conrad Observa 150.50 341⇑/PKiKP PKiKP 21 48 54.2 -0.4
comp=Z,7.3nm,0.7s
MOA Molln 151.03 343 ⇓/PKPbc PKPbc 21 48 54.8 -0.5
comp=Z,3.3nm,0.6s
SOKA Soboth 151.87 341 ⇓/PKPbc PKPbc 21 48 56.2 -1.0
comp=Z,4.1nm,1.1s
PERS Pernice 151.88 341 */* PKPbc PKPbc 21 48 56.1 -1.1
PERS */* 21 49 08.7
MOTA Moosalm 152.28 347⇑/PKPbc PKPbc 21 48 56.8 -1.3
comp=Z,3.1nm,1.0s
ABTA Abfaltersbach 152.51 344⇑/PKPbc PKPbc 21 48 57.7 -1.0
comp=Z,5.5nm,0.6s
VISS Visnje 152.71 340 */* PKPbc PKPbc 21 48 58.4 -0.7
VISS */* 21 49 11.5
BOJS Bojanci 152.84 339 */* PKPbc PKPbc 21 48 59.0 -0.4
BOJS *e* 21 49 13.7
JAVS Javornik 152.87 341 */* PKPbc PKPbc 21 49 00.3 +0.9
JAVS */* 21 49 11.9
TORD Torodi Ar. Bea 172.62 177 PKPab PKPab 21 50 40.3 -0.1
comp=Z,0.5nm,0.6s,baz=177,slow=3.6,SNR=3.7

WEL 11 21:53:09.9±0.5, 38°.43S×176°.03E, h153km±3km, ML3.5/8, Error ellipse: s-maj=3.1km s-min=2.2km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTVZ	**Oturere**	**0.78**	**201**	PN	Pn	21 53 33.9	+0.6
TWVZ	**Taurewa**	**0.79**	**216**	*e*PN	Pn	21 53 33.3	0.0
BKZ	**Black Stump Fm**	**0.82**	**154**	PN	Pn	21 53 33.9	+0.3
BKZ				SN	Sn	21 53 51.7	0.0
URZ	**Urewera**	**0.87**	**79**	PN	Pn	21 53 33.6	-0.3
URZ				SN	Sn	21 53 51.7	-0.5
FWVZ	**Far West T-bar**	**0.90**	**204**	PN	Pn	21 53 34.5	+0.3
WNVZ	**Wahianoa**	**0.96**	**200**	PN	Pn	21 53 35.0	+0.3
RAHZ	**Arahi**	**0.96**	**121**	*e*PN	Pn	21 53 35.2	+0.6
BHHZ	**Black Hill Sta**	**1.05**	**179**	PN	Pn	21 53 35.5	0.0
MCHZ	**McNeill Hill**	**1.14**	**153**	PN	Pn	21 53 37.3	+1.1
MWZ	**Matawai**	**1.18**	**86**	PN	Pn	21 53 36.7	+0.1
MWZ				SN	Sn	21 53 56.8	-0.1
VRZ	**Vera Road**	**1.21**	**235**	PN	Pn	21 53 36.8	-0.1
KNZ	**Kokohu**	**1.41**	**115**	PN	Pn	21 53 39.2	+0.4
KNZ				SN	Sn	21 54 00.9	-0.1
CKHZ	**Cape Kidnapper**	**1.47**	**147**	PN	Pn	21 53 40.2	+0.7
PNHZ	**Pukenui**	**1.49**	**175**	PN	Pn	21 53 39.4	-0.1
KAHZ	**Kahuranaki**	**1.51**	**154**	PN	Pn	21 53 40.3	+0.5
WAZ	**Wanganui**	**1.55**	**211**	PN	Pn	21 53 39.9	-0.3
TSZ	**Takapari Road**	**1.63**	**182**	PN	Pn	21 53 40.7	-0.3
MHGZ	**Mahia Peninsul**	**1.64**	**117**	PN	Pn	21 53 41.4	+0.3
WPHZ	**Waipukurau**	**1.66**	**169**	PN	Pn	21 53 41.3	-0.1
PXZ	**Pawanui**	**1.72**	**158**	PN	Pn	21 53 42.2	+0.1
DVHZ	**Dannevirke**	**1.87**	**177**	PN	Pn	21 53 43.0	-0.7
PRHZ	**Porangahau**	**1.89**	**166**	PN	Pn	21 53 43.7	-0.2
POWZ	**Post Office Ro**	**1.97**	**186**	PN	Pn	21 53 43.9	-0.9
BFZ	**Birch Farm**	**2.25**	**176**	PN	Pn	21 53 47.1	-1.1
MRZ	**Mangatainoka R**	**2.25**	**189**	PN	Pn	21 53 46.8	-1.4
MRZ				SN	Sn	21 54 14.8	-2.9
TIWZ	**Tintock**	**2.34**	**183**	PN	Pn	21 53 48.0	-1.2
OGWZ	**Otaki Gorge**	**2.47**	**195**	PN	Pn	21 53 49.2	-1.6
OGWZ				SN	Sn	21 54 19.1	-3.4
HOWZ	**Holdsworth Sta**	**2.50**	**189**	PN	Pn	21 53 49.2	-1.8
KIW	**Kapiti Island**	**2.58**	**199**	PN	Pn	21 53 50.0	-2.0
MTW	**Mount Morrison**	**2.75**	**188**	PN	Pn	21 53 52.0	-2.2
CAW	**Cannon Point**	**2.77**	**195**	PN	Pn	21 53 52.4	-2.2
TRWZ	**Traveller**	**2.98**	**185**	PN	Pn	21 53 54.9	-2.1
PAWZ	**Paruwai Farm**	**2.98**	**189**	PN	Pn	21 53 54.7	-2.4
MSWZ	**Moikau Station**	**3.04**	**191**	PN	Pn	21 53 55.3	-2.6
SNZO	**South Karori**	**3.05**	**199**	PN	Pn	21 53 55.2	-2.8
TCW	**Tory Channel**	**3.09**	**205**	PN	Pn	21 53 55.8	-2.6
TCW				SN	Sn	21 54 31.9	-4.2
BHW	**Baring Head**	**3.10**	**196**	PN	Pn	21 53 55.7	-2.9
PLWZ	**Palliser**	**3.19**	**190**	PN	Pn	21 53 57.0	-2.8
TUWZ	**Tuamarina**	**3.40**	**208**	PN	Pn	21 53 59.5	-2.9
NNZ	**Nelson**	**3.45**	**215**	PN	Pn	21 53 60.0	-3.1
QRZ	**Quartz Range**	**3.61**	**227**	PN	Pn	21 54 01.3	-3.8
THZ	**Tophouse**	**4.10**	**215**	PN	Pn	21 54 08.1	-3.4
THZ				SN	Sn	21 54 56.0	-3.4
KHZ	**Kahutara**	**4.41**	**205**	PN	Pn	21 54 12.1	-3.4
LTZ	**Lake Taylor**	**5.20**	**212**	PN	Pn	21 54 21.7	-4.3
ODZ	**Otahua Downs**	**7.74**	**210**	PN	Pn	21 54 54.6	-5.1

ECX 11 21:59:54.8±0.7, 30°.98N×115°.23W, h6km, MD3.3, ML3.5, 4C-2D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	**San Pedro Mart**	**0.21**	**289**⇑	*e*P	Pg	21 59 58.8	-0.2
SPX				*e*S	Sg	22 00 02.4	+0.5
SPX				*e*		22 00 02.6	
	comp=N,3µm,0.1s						
SPX				*e*		22 00 02.7	
	comp=E,5µm,0.1s						
RDX	**Rancho Dawling**	**1.13**	**327**⇑	*e*P	Pg	22 00 14.6	-1.8
RDX				*e*S	Sg	22 00 30.1	-1.0
RDX				⇓*e*		22 00 31.6	
	comp=N,2µm,0.5s						
ECNX	**Esteban Cantu**	**1.35**	**300**	*e*P	Pn	22 00 18.6	-1.6
ECNX				*e*S	Sb	22 00 36.7	-1.5
CPBX	**Cerro Prieto**	**1.44**	**357**⇓	*e*P	Pn	22 00 21.6	+0.2
PBX	**Punta Banda**	**1.49**	**301**	*e*P	Pn	22 00 21.0	-1.1
PBX				*e*S	Sn	22 00 40.6	-1.3
PBX				⇑*e*		22 00 48.2	
	comp=N,453nm,1.0s						
RMX	**La Rumorosa**	**1.78**	**336**	*e*P	Pn	22 00 24.9	-1.2
RMX				*e*S	Sn	22 00 48.9	0.0
CBX	**Cerro Bola**	**1.81**	**318**⇑	*e*P	Pn	22 00 26.3	-0.2
CBX				*e*S	Sn	22 00 49.6	-0.1

CSEM 11 22:09:27.2±0.7, 37°.03N×10°.90W, h30km, ML2.6/10, Error ellipse: s-maj=12.1km s-min=9.0km az=43.0
MDD 11 22:09:29.6±1.8, 37°.35N×10°.68W, h0km, mb3.5/2, Error ellipse: s-maj=17.2km s-min=10.6km az=48.0, PRIMO
INMG 11 22:09:31.0±1.2, 36°.78N×10°.79W, h31km, ML1.9, Error ellipse: s-maj=18.1km s-min=10.2km az=135.0

ISC 11 22:09:27.6±1.3, 37°.12N±0°.06×10°.74W±0°.08, h10km, n62, σ1°38/99, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.53**	**89**	*e*Pn	**Pn**	**22 09 55.4**	**+0.4**
PFVI				*e*Sn	**Sn**	**22 10 14.6**	**-0.3**
PFVI				A		22 10 15.7	
	6.3nm,0.1s						
PFVI	**Vila Bisbo**	**1.53**	**89**	Pn	**Pn**	**22 09 55.3**	**+0.3**
	5.2nm,0.1s,SNR=7.9						
PFVI				Sn	**Sn**	**22 10 14.2**	**-0.8**
	10nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**1.53**	**89**	Pn	**Pn**	**22 09 55.3**	**+0.3**
	5.2nm,0.1s,SNR=7.9						
PFVI				Sn	**Sn**	**22 10 14.2**	**-0.8**
	10nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**1.53**	**89**	P	**Pn**	**22 09 55.3**	**+0.3**
	5.2nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**22 10 14.2**	**-0.7**
	10nm,0.1s,SNR=7.9						
PFVI				*e*Sn	**Sn**	**22 10 14.6**	**-0.3**
	6.3nm,0.1s						
PTEO	**Sao Teotonio**	**1.67**	**75**	*e*Pn	**Pn**	**22 09 58.8**	**+2.0**
PTEO				*e*Sn	**Sn**	**22 10 19.2**	**+1.0**
PTEO				A		22 10 23.0	
	5.2nm,0.6s						
PTEO	**Sao Teotonio**	**1.67**	**75**	Pn	**Pn**	**22 09 58.8**	**+2.0**
PTEO				Sn	**Sn**	**22 10 19.2**	**+1.0**
	2.6nm,0.6s						
PTEO	**Sao Teotonio**	**1.67**	**75**	Pn	**Pn**	**22 09 58.8**	**+2.0**
PTEO				Sn	**Sn**	**22 10 19.2**	**+1.0**
	2.6nm,0.6s						
MORF	**Marmelete**	**1.68**	**83**	*e*Pn	**Pn**	**22 09 59.5**	**+2.5**
MORF				*e*Sn	**Sn**	**22 10 18.9**	**+0.3**
MORF				A		22 10 23.0	
	7.3nm,0.4s						
MORF	**Marmelete**	**1.68**	**83**	Pn	**Pn**	**22 09 59.5**	**+2.5**
MORF				Sn	**Sn**	**22 10 18.9**	**+0.3**
	7.3nm,0.4s						
MORF	**Marmelete**	**1.68**	**83**	Pn	**Pn**	**22 09 59.5**	**+2.5**
MORF				Sn	**Sn**	**22 10 18.9**	**+0.3**
	7.3nm,0.4s						
PMAFR	**Mafra**	**2.17**	**32**	*e*Sn	**Sn**	**22 10 32.5**	**+1.9**
PMAFR				A		22 10 35.3	
	7.3nm,0.5s						
PMAFR	**Mafra**	**2.17**	**32**	Pn	**Pn**	**22 10 01.0**	**-2.7**
	1.0nm,0.1s,SNR=6.2						
PMAFR				Sn	**Sn**	**22 10 27.6**	**-3.0**
	1.5nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**2.17**	**32**	Pn	**Pn**	**22 10 01.0**	**-2.7**
	1.0nm,0.1s,SNR=6.2						
PMAFR				Sn	**Sn**	**22 10 27.6**	**-3.0**
	1.5nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**2.17**	**32**	*e*Sn	**Sn**	**22 10 32.5**	**+1.9**
	7.3nm,0.5s						
PCVE	**Castro Verde**	**2.21**	**76**	*e*Pn	**Pn**	**22 10 06.2**	**+1.8**
PCVE				*e*Sn	**Sn**	**22 10 32.4**	**+0.6**
PCVE				A		22 10 39.8	
	2.4nm,0.8s						
PCVE	**Castro Verde**	**2.21**	**76**	Pn	**Pn**	**22 10 06.2**	**+1.8**
PCVE				Sn	**Sn**	**22 10 32.4**	**+0.6**
	2.4nm,0.8s						
PCVE	**Castro Verde**	**2.21**	**76**	Pn	**Pn**	**22 10 06.2**	**+1.8**
PCVE				Sn	**Sn**	**22 10 32.4**	**+0.6**
	2.4nm,0.8s						
PBDV	**Barranco-do-Ve**	**2.25**	**86**	*e*Sn	**Sn**	**22 10 33.2**	**+0.6**
PBDV	**Barranco-do-Ve**	**2.25**	**86**	Sn	**Sn**	**22 10 33.2**	**+0.6**
PBDV	**Barranco-do-Ve**	**2.25**	**86**	Sn	**Sn**	**22 10 33.2**	**+0.6**
PBDV	**Barranco-do-Ve**	**2.25**	**86**	*e*Sn	**Sn**	**22 10 33.2**	**+0.6**
MOE	**Montemor**	**2.36**	**53**	*e*Sn	**Sn**	**22 10 36.9**	**+1.6**
**M

	0.2nm,0.1s,SNR=7.9								
EMIN					Sn		Sn	22 10 55.9	-2.7
	0.1nm,0.1s,SNR=7.9								
EMIN	**Mina Concepcio**	**3.31**	**77**		Pn		Pn	22 10 19.1	-0.3
	0.2nm,0.1s,SNR=7.9								
EMIN					Sn		Sn	22 10 55.9	-2.7
	0.1nm,0.1s,SNR=7.9								
EMIN	**Mina Concepcio**	**3.31**	**77**		P		Pn	22 10 19.1	-0.2
	0.2nm,0.1s,SNR=7.9								
EMIN					S		Sn	22 10 55.9	-2.8
	0.1nm,0.1s,SNR=7.9								
EBAD	**Badajoz**	**3.37**	**60**		Pn		Pn	22 10 19.1	-1.2
	0.3nm,0.2s,SNR=7.9								
EBAD					Sn		Sn	22 10 56.8	-3.6
	0.8nm,0.1s,SNR=7.9								
EBAD	**Badajoz**	**3.37**	**60**		Pn		Pn	22 10 19.1	-1.2
	0.3nm,0.2s,SNR=7.9								
EBAD					Sn		Sn	22 10 56.8	-3.6
	0.8nm,0.1s,SNR=7.9								
EBAD	**Badajoz**	**3.37**	**60**		P		Pn	22 10 19.1	-1.2
	0.3nm,0.2s,SNR=7.9								
PMRV	**Marv??o**	**3.50**	**48**		*e*Pn		Pn	22 10 22.6	+0.5
PMRV					*e*Sn		Sn	22 11 03.7	+0.1
PMRV					A			22 11 05.5	
	2.3nm,0.5s								
PMRV	**Marv??o**	**3.50**	**48**		Pn		Pn	22 10 22.6	+0.5
PMRV	**Marv??o**	**3.50**	**48**		Pn		Pn	22 10 22.6	+0.5
PMRV	**Marv??o**	**3.50**	**48**		*e*Pn		Pn	22 10 22.6	+0.5
PMRV					*e*Sn		Sn	22 11 03.7	+0.1
	2.3nm,0.5s								
ESPR	**Espera**	**3.92**	**92**		Pn		Pn	22 10 27.6	-0.2
	0.4nm,0.1s,SNR=7.9								
ESPR					Sn		Sn	22 11 13.0	-0.9
	0.4nm,0.2s,SNR=7.9								
ESPR	**Espera**	**3.92**	**92**		Pn		Pn	22 10 27.6	-0.2
	0.4nm,0.1s,SNR=7.9								
ESPR					Sn		Sn	22 11 13.0	-0.9
	0.4nm,0.2s,SNR=7.9								
ESPR	**Espera**	**3.92**	**92**		P		Pn	22 10 27.6	-0.2
	0.4nm,0.1s,SNR=7.9								
ESPR					S		Sn	22 11 13.0	-0.9
	0.4nm,0.2s,SNR=7.9								
PVIS	**Viseu**	**4.22**	**31**		*e*Sn		Sn	22 11 21.5	+0.2
PVIS	**Viseu**	**4.22**	**31**		*e*Sn		Sn	22 11 21.5	+0.2
MVO	**Moncorvo**	**4.97**	**34**		*e*Sn		Sn	22 11 38.8	-0.8
MVO					A			22 11 41.7	
	2.5nm,0.6s								
MVO	**Moncorvo**	**4.97**	**34**		Pn		Pn	22 10 41.0	-1.1
	0.1nm,0.1s,SNR=7.9								
MVO					Sn		Sn	22 11 34.9	-4.8
	0.2nm,0.1s,SNR=7.9								
MVO	**Moncorvo**	**4.97**	**34**		Pn		Pn	22 10 41.0	-1.1
	0.1nm,0.1s,SNR=7.9								
MVO					Sn		Sn	22 11 34.9	-4.8
	0.2nm,0.1s,SNR=7.9								
MVO	**Moncorvo**	**4.97**	**34**		P		Pn	22 10 41.0	-1.2
	0.1nm,0.1s,SNR=7.9								
MVO					*e*Sn		Sn	22 11 38.8	-0.8
	2.5nm,0.6s								
EADA	**Adamuz**	**5.00**	**76**		Pn		Pn	22 10 42.3	-0.4
	0.3nm,0.2s,SNR=7.9								
EADA					Sn		Sn	22 11 37.8	-2.8
	0.2nm,0.2s,SNR=7.9								
EADA	**Adamuz**	**5.00**	**76**		Pn		Pn	22 10 42.3	-0.4
	0.3nm,0.2s,SNR=7.9								
EADA					Sn		Sn	22 11 37.8	-2.8
	0.2nm,0.2s,SNR=7.9								
EADA	**Adamuz**	**5.00**	**76**		P		Pn	22 10 42.3	-0.4
	0.3nm,0.2s,SNR=7.9								
EADA					S		Sn	22 11 37.8	-2.8
	0.2nm,0.2s,SNR=7.9								
ELOB	**Lobios**	**5.18**	**23**		Pn		Pn	22 10 43.5	-1.6
	0.1nm,0.1s,SNR=7.9								
ELOB					Sn		Sn	22 11 38.4	-6.5
	0.3nm,0.2s,SNR=5.6								
ELOB	**Lobios**	**5.18**	**23**		Pn		Pn	22 10 43.5	-1.6
	0.1nm,0.1s,SNR=7.9								
ELOB					Sn		Sn	22 11 38.4	-6.5
	0.3nm,0.2s,SNR=5.6								
ELOB	**Lobios**	**5.18**	**23**		P		Pn	22 10 43.5	-1.6
	0.1nm,0.1s,SNR=7.9								

*BJI **11** 22:32:26.3, 7.˝18S×130.˝23E, h26km, mB4.8/5, mb4.9/20*
*IDC **11** 22:32:27.2±0.6, 6.˝88S×130.˝04E, h0km, mb4.4/10, mb1 4.6/12, mb1mx4.4/18, mbtmp4.5/12, ML4.8/2, Error ellipse: s-maj=28.3km s-min=14.2km az=73.0*
*NEIC **11** 22:32:35.2±0.7, 6.˝95S×130.˝01E, h66km±6km, mb4.8/17, Error ellipse: s-maj=8.2km s-min=4.9km az=63.0*
*ISCJB **11** 22:32:39.1±0.5, 7.˝14S±0.˝03×130.˝13E±0.˝04, h128km±5km, mb4.7/38, Error ellipse: s-maj=6.4km s-min=5.1km az=161.3*
*DJA **11** 22:32:41, 7.˝19S×130.˝22E, h102km, mb5.0/10*

ISC 11 22:32:40.2±0.4,**7.˝14S**±0.˝03×**130.˝14E**±0.˝04,**h121**km±4km, **n119,**σ1°**14**/107,**mb4.8**/38,**2C,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.61**	**355**	P	**Pn**	**22 33 19.9**	**-1.7**
BNDI				S	**Sn**	**22 33 55.4**	**+2.1**
TLE	**Tual**	**2.98**	**60**	P	**Pn**	**22 33 26.5**	**+0.2**
TLE				S	**Sn**	**22 34 02.4**	**+0.5**
NLAI	**Namlea**	**4.92**	**322**	P	**Pn**	**22 33 53.9**	**+1.7**
KAKA	**Kakadu**	**5.98**	**158**	⇑*i*P	**Pn**	**22 34 06.4**	**0.0**
	238nm,0.4s						
KAKA				*e*S	**Sn**	**22 35 09.5**	**-4.2**
KAKA	**Kakadu**	**5.98**	**158**	*e*Pn	**Pn**	**22 34 06.2**	**-0.3**
	652nm,0.5s						
KAKA				*e*Sn	**Sn**	**22 35 12.8**	**-0.9**
KAKA	**Kakadu**	**5.98**	**158**	P	**Pn**	**22 34 06.6**	**+0.2**
	4.9nm576nm,0.6s						
BBSI	**Bau Bau**	**7.70**	**282**	P	**Pn**	**22 34 30.8**	**+1.0**
	0.4nm1µm124nm,1.3s						
MMRI	**Maumere**	**7.97**	**259**	P	**Pn**	**22 34 32.5**	**-0.9**
KDI	**Kendari**	**8.13**	**292**	P	**Pn**	**22 34 35.1**	**-0.5**
	29nm,1.2s						
TNTI	**Ternate**	**8.33**	**340**	P	**Pn**	**22 34 37.3**	**-1.0**
BAKI	**Biak**	**8.38**	**45**	P	**Pn**	**22 34 38.6**	**-0.4**
	3µm313nm,0.7s						
KNA	**Kununurra**	**8.66**	**189**	*e*P	**Pn**	**22 34 41.1**	**-1.6**
	66nm,0.3s						
KNA				*e*S	**Sn**	**22 36 11.2**	**-7.5**
KNA	**Kununurra**	**8.66**	**189**	P	**Pn**	**22 34 41.4**	**-1.3**
	5µm366nm,0.8s						
WSI	**Waingapu**	**10.06**	**255**	P	**Pn**	**22 34 59.1**	**-2.5**
	696nm,0.5s						
BKSI	**Bulukumba**	**10.12**	**280**	P	**Pn**	**22 35 03.6**	**+1.1**
	35nm,1.0s						
KAPI	**Kappang**	**10.55**	**281**	*e*Pn	**Pn**	**22 35 00.8**	**-7.3**
KAPI	**Kappang**	**10.55**	**281**	Pn	**Pn**	**22 35 09.5**	**+1.4**
	1.3nm,0.3s,baz=56,slow=8.7,SNR=4.5						
SPSI	**Sidrap Palu**	**10.80**	**286**	P	**Pn**	**22 35 17.1**	**+5.6**
TTSI	**Tana Toraja**	**11.06**	**291**	P	**Pn**	**22 35 20.2**	**+5.3**
MRSI	**Marisa**	**11.15**	**312**	P	**Pn**	**22 35 17.3**	**+1.2**
FITZ	**Fitzroy Crossi**	**11.75**	**202**	*e*P	**Pn**	**22 35 19.6**	**-4.4**
	27nm,0.3s						
FITZ				*e*S	**Sn**	**22 37 20.2**	**-13**
FITZ	**Fitzroy Crossi**	**11.75**	**202**	Pn	**Pn**	**22 35 19.7**	**-4.3**
	5.1nm,0.3s,baz=37,slow=9.8,SNR=56						
FITZ				Sn	**Sn**	**22 37 20.2**	**-13**
	14nm,0.3s,baz=69,slow=23,SNR=11						
PCI	**Palu**	**12.00**	**301**	P	**Pn**	**22 35 30.7**	**+3.3**
	39nm,0.9s						
KBKI	**Kotabaru**	**14.43**	**285**	P	**Pn**	**22 36 02.9**	**+4.0**
COEN	**Coen**	**14.49**	**119**	*e*P	**Pn**	**22 35 59.7**	**+0.1**
COEN				*e*S	**Sn**	**22 38 27.9**	**-12**
SRBI	**Singaraja**	**14.83**	**265**	P	**Pn**	**22 36 07.3**	**+3.4**
DAV	**Davao City (W)**	**14.83**	**342**	Pn	**Pn**	**22 35 58.0**	**-6.0**
ASAR	**Alice Springs**	**16.82**	**168**	P	**Pn**	**22 36 28.2**	**-0.3**
	2.3nm,0.3s,baz=349,slow=14,SNR=47						
ASAR				ScP	**S**	**22 39 29.1**	**-7.1**
	3.2nm,0.3s,baz=356,slow=27,SNR=12						
ASAR				ScP	ScP	22 44 35.6	+2.5
	0.5nm,0.3s,baz=352,slow=2.0,SNR=4.8						
MYLDM	**Lahad Datu**	**16.88**	**316**	P	Px	22 36 42.7	
PMG	**Port Moresby**	**16.99**	**99**	*e*P	**Pn**	**22 36 30.8**	**+0.2**
	16nm,0.6s						
MBWA	**Marble Bar**	**17.19**	**215**	*e*P	**Pn**	**22 36 32.0**	**-1.1**
MBWA				*e*S	**S**	**22 39 29.0**	**-16**
MBWA	**Marble Bar**	**17.19**	**215**	*e*Pn	**Pn**	**22 36 31.7**	**-1.3**
	62nm,1.0s						
MBWA				*e*Sn	**Sn**	**22 39 28.2**	**-17**
MBWA	**Marble Bar**	**17.19**	**215**	P	**Pn**	**22 36 33.1**	**0.0**
	54nm,0.9s						
SJI	**Sawahan**	**18.23**	**267**	P	**P**	**22 36 44.2**	**0.0**

KKM	**Kota Kinabalu**	**19.10**	**313**	*e*P		**P**		**22 36 51.5**	**-2.1**
CTA	**Charters Tower**	**20.24**	**131**	P		**P**		**22 37 06.8**	**+0.7**
	3.3nm,0.8s,baz=303,slow=11,SNR=2.0								
SBUM	**Sibu**	**20.27**	**297**	P		**P**		**22 37 07.6**	**+1.3**
KSM	**Kuching**	**21.56**	**293**	*e*P		**P**		**22 37 16.9**	**-3.3**
MEEK	**Meekatharra**	**22.28**	**208**	*e*P		**P**		**22 37 28.5**	**+0.9**
TGY	**Tagaytay City**	**23.00**	**337**	P		**P**		**22 37 33.2**	**-1.4**
	109nm,0.4s,mb5.5,baz=122,slow=7.6,SNR=7.7								
FORT	**Forrest**	**23.60**	**184**	*e*P		**P**		**22 37 42.5**	**+2.5**
	30nm,0.6s,mb4.8								
FORT	**Forrest**	**23.60**	**184**	*e*P		**P**		**22 37 42.4**	**+2.4**
	45nm,0.9s,mb4.8								
FORT				*e*S		**S**		**22 41 58.6**	**+13**
STKA	**Stephens Creek**	**26.83**	**158**	*e*P		**P**		**22 38 12.6**	**+3.3**
	4.0nm,1.3s,mb3.8								
STKA	**Stephens Creek**	**26.83**	**158**	P		**P**		**22 38 12.5**	**+3.2**
	2.3nm,0.5s,mb3.9,baz=323,slow=10,SNR=5.8								
KLBR	**Kellerberrin**	**26.94**	**204**	*e*P		**P**		**22 38 12.4**	**+2.1**
	7.2nm,0.5s,mb4.5								
NWAO	**Narrogin (SRO)**	**28.32**	**203**	*e*P		**P**		**22 38 25.5**	**+2.9**
NWAO	**Narrogin (SRO)**	**28.32**	**203**	P		**P**		**22 38 25.4**	**+2.8**
	4.3nm,0.6s,mb4.2,baz=13,slow=7.0,SNR=5.0								
NACB	**Ninganchiao**	**32.22**	**345**	P		**P**		**22 38 55.1**	**-1.9**
PSI	**Prapat**	**32.69**	**287**	P		**P**		**22 38 59.4**	**-1.9**
PSI	**Prapat**	**32.69**	**287**	P		**P**		**22 38 59.4**	**-1.9**
	4.5nm,0.3s,mb4.7,baz=155,slow=5.3,SNR=4.2								
CMAR	**Chiang Mai Arr**	**39.93**	**310**	P		**P**		**22 40 02.2**	**-0.5**
	4.3nm,0.7s,mb4.4,baz=137,slow=7.3,SNR=38								
CMAR				PcP		PcP		22 42 08.3	+2.3
	1.0nm,0.6s,baz=158,slow=2.8,SNR=6.7								
CHTO	**Chiang Mai**	**40.14**	**310**	*e*P		**P**		**22 40 03.4**	**-1.1**
	3.2nm,0.6s,mb4.3								
WHN	**Wuhan**	**40.41**	**339**	P		**P**		**22 40 06.4**	**-0.2**
ENH	**Enshi**	**42.15**	**333**	*e*P		**P**		**22 40 19.4**	**-1.5**
	15nm,0.8s,mb4.8								
MJAR	**Matsushiro Arr**	**44.10**	**9**	P		**P**		**22 40 35.3**	**-1.2**
	5.0nm,0.6s,mb4.4,baz=186,slow=9.4,SNR=19								
MAJO	**Matsushiro**	**44.11**	**9**	*e*P		**P**		**22 40 35.5**	**-0.9**
	6.4nm,0.7s,mb4.5								
KSRS	**Korea Array**	**44.41**	**357**	P		**P**		**22 40 38.9**	**0.0**
	1.9nm,0.6s,mb4.0,baz=173,slow=9.5,SNR=10								
XAN	**Xi'an**	**45.62**	**335**	P		**P**		**22 40 47.1**	**-1.4**
XAN				pmax		pmax			
	comp=Z,4.0nm,0.8s,mb4.2								
BJT	**Baijiatuan**	**48.67**	**346**	*e*P		**P**		**22 41 11.5**	**-0.5**
	comp=Z,9.7nm,0.4s,mb5.1								
BJI	**Beijing**	**48.69**	**346**	P		**P**		**22 41 11.6**	**-0.5**
BJI				pmax		pmax			
	comp=Z,17nm,0.8s,mb5.0								
LZH	**Lanzhou**	**49.59**	**332**	*e*P		**P**		**22 41 18.3**	**-0.8**
ODAN	**Odare**	**53.45**	**311**	*e*P		**P**		**22 41 47.9**	**-0.2**
	comp=Z,14nm,0.5s,mb5.2								
TAPN	**Taplejung**	**53.48**	**312**	*e*P		**P**		**22 41 48.3**	**0.0**
	comp=Z,9.7nm,0.3s,mb5.3								
RAMN	**Ramite**	**54.10**	**311**	*e*P		**P**		**22 41 53.1**	**+0.3**
	comp=Z,47nm,0.7s,mb5.6								
GTA	**Gaotai**	**54.16**	**331**	⇑P		**P**		**22 41 53.3**	**+0.3**
GTA				pP		pP		22 42 03.0	-19
GTA				sP		sP		22 42 06.8	-28
GTA				PcP		PcP		22 42 58.1	+2.0
GTA				pmax		pmax			
	comp=Z,13nm,0.6s,mb5.1								
JIRN	**Jiri**	**54.78**	**311**	*e*P		**P**		**22 41 57.7**	**0.0**
GUN	**Gumba**	**55.15**	**311**	*e*P		**P**		**22 42 00.4**	**0.0**
	comp=Z,43nm,0.6s,mb5.7								
PKI	**Pulchoki**	**55.32**	**311**	*e*P		**P**		**22 42 02.1**	**+0.5**
KKN	**Kakani**	**55.54**	**311**	*e*P		**P**		**22 42 02.5**	**-0.6**
DMN	**Daman**	**55.57**	**310**	*e*P		**P**		**22 42 03.3**	**-0.1**
	comp=Z,8.3nm,0.5s,mb5.0								
GKN	**Gorkha**	**56.13**	**311**	*e*P		**P**		**22 42 06.6**	**-0.8**
	comp=Z,24nm,0.4s,mb5.5								
ULN	**Ulaanbaatar**	**58.44**	**342**	*e*P		**P**		**22 42 23.3**	**+0.1**
	comp=Z,10nm,0.8s,mb4.9								
SONM	**Songino Array**	**58.62**	**341**	P		**P**		**22 42 24.9**	**+0.5**
	comp=Z,3.1nm,0.7s,mb4.4,baz=163,slow=7.7,SNR=14								
MKAR	**Makanchi Array**	**68.42**	**327**	P		**P**		**22 43 29.4**	**+0.5**
	comp=Z,38nm,0.5s,mb5.5,baz=118,slow=8.3,SNR=382								
KZA	**Kyzart**	**69.97**	**320**	P		**P**		**22 43 40.6**	**+2.0**
	SNR=6.5								
UCH	**Uchtor**	**70.52**	**319**	P		**P**		**22 43 43.5**	**+1.5**
	SNR=12								
UCH	**Uchtor**	**70.52**	**319**	*e*P		**P**		**22 43 43.3**	**+1.3**
	comp=Z,1µm,1.2s								
AAK	**Ala-Archa**	**70.74**	**320**	*e*P		**P**		**22 43 44.4**	**+1.2**
	comp=Z,5.1nm,0.8s,mb4.4								
CHMS	**Chumysh**	**70.76**	**320**	P		**P**		**22 43 44.1**	**+0.7**
	SNR=5.2								
AML	**Almayashu**	**71.01**	**319**	P		**P**		**22 43 46.8**	**+1.9**
	SNR=19								
AML	**Almayashu**	**71.01**	**319**	*e*P		**P**		**22 43 46.7**	**+1.8**
	comp=Z,10nm,1.2s,mb5.9								
USP	**Ospenovka**	**71.05**	**320**	P		**P**		**22 43 46.2**	**+1.1**
	SNR=12								
EKS2	**Erkin-Say**	**71.21**	**320**	P		**P**		**22 43 47.7**	**+1.6**
	SNR=13								
EKS2	**Erkin-Say**	**71.21**	**320**	*e*P		**P**		**22 43 47.2**	**+1.1**
	comp=Z,12nm,0.7s,mb4.8								
ZALV	**Zalesovo Beam**	**71.77**	**334**	P		**P**		**22 43 48.7**	**-0.5**
ZALV	**Zalesovo Beam**	**71.77**	**334**	P		**P**		**22 43 48.7**	**-0.5**
	comp=Z,6.6nm,0.7s,mb4.7,baz=119,slow=5.0,SNR=40								
KURK	**Kurchatov**	**72.71**	**329**	*e*P		**P**		**22 43 54.8**	**-0.1**
	comp=Z,19nm,0.8s,mb5.0								
BVAR	**Borovoye Array**	**78.26**	**328**	P		**P**		**22 44 26.6**	**+0.1**
	comp=Z,7.8nm,0.8s,mb4.5,baz=123,slow=5.5,SNR=46								
BRVK	**Borovoye**	**78.33**	**328**	*e*P		**P**		**22 44 27.0**	**+0.1**
	comp=Z,10nm,0.8s,mb4.6								
TIXI	**Tiksi**	**78.63**	**360**	*e*P		**P**		**22 44 27.7**	**-0.4**
	comp=Z,10nm,0.6s,mb4.8								
ABKAR	**Akbulak array**	**82.71**	**322**	*e*P		**P**		**22 44 50.1**	**-0.3**
	comp=Z,2.9nm,0.7s,mb4.2								
ARU	**Arti**	**85.90**	**328**	*e*P		**P**		**22 45 05.4**	**-0.9**
	comp=Z,11nm,1.0s,mb4.7								
TTA	**Tatalina**	**89.05**	**26**	*e*P		**P**		**22 45 22.6**	**+1.3**
	comp=Z,3.8nm,1.1s,mb4.3								
ILAR	**Eielson Array**	**93.41**	**25**	P		**P**		**22 45 40.7**	**-0.8**
	comp=Z,0.9nm,0.7s,mb4.2,baz=277,slow=4.1,SNR=11								
BMRM	**Bremner River**	**93.89**	**29**	*e*P		**P**		**22 45 38.7**	**-5.0**
	comp=Z,7.2nm,0.7s,mb5.1								
MALT	**Malatya**	**95.72**	**308**	*e*P		**P**		**22 45 53.1**	**+0.5**
HINF	**Hinteralfeld**	**117.28**	**321**	*e*PKP1	PKPdf			22 51 12.0	+0.6
	comp=Z,3.1nm,0.6s								
HAU	**Haudompre**	**117.53**	**321**	*e*PKP1	PKPdf			22 51 12.6	+0.8
PGF	**Pioggiola**	**117.55**	**314**	*e*PKP1	PKPdf			22 51 13.5	+1.5
	comp=Z,2.8nm,0.5s								
BAIF	**Baives**	**118.02**	**324**	*e*PKP1	PKPdf			22 51 14.2	+1.5
LPL	**La Plagne**	**118.16**	**318**	*e*PKP1	PKPdf			22 51 14.6	+1.5
	comp=Z,4.7nm,0.5s								
CABF	**La Chapelle**	**118.20**	**320**	*e*PKP1	PKPdf			22 51 14.6	+1.4
	comp=Z,6.5nm,0.5s								
MBDF	**Montbardon**	**118.41**	**317**	*e*PKP1	PKPdf			22 51 15.8	+2.2
	comp=Z,4.5nm,0.8s								
ORIF	**Oris-en-Rattie**	**118.94**	**318**	*e*PKP1	PKPdf			22 51 15.8	+1.2
	comp=Z,3.6nm,0.6s								
KEST	**Kesra**	**119.02**	**307**	PKP	PKPdf			22 51 17.1	+2.0
	comp=Z,0.6nm,0.7s,baz=346,slow=4.2,SNR=5.3								
LOR	**Lormes**	**119.36**	**321**	*e*PKP1	PKPdf			22 51 16.0	+0.6
ESK	**Eskdalemuir**	**119.39**	**332**	*e*PKPdf	PKPdf			22 51 16.4	+1.2
SMF	**Signal de Mont**	**119.62**	**320**	*e*PKP1	PKPdf			22 51 16.7	+0.8
SSF	**Saint Saulge**	**119.67**	**321**	*e*PKP1	PKPdf			22 51 17.2	+1.2
	comp=Z,3.0nm,0.6s								
AVF	**Avril sur Loir**	**119.87**	**321**	*e*PKP1	PKPdf			22 51 17.1	+0.7
	comp=Z,1.7nm,0.4s								
BGF	**Bois d'Agland**	**120.29**	**321**	*e*PKP1	PKPdf			22 51 18.6	+1.4
TCF	**Toulx Ste Croi**	**120.80**	**320**	*e*PKP1	PKPdf			22 51 19.5	+1.3
MFF	**Saint Martin d**	**122.13**	**322**	*e*PKP1	PKPdf			22 51 21.9	+1.2
	comp=Z,4.8nm,0.5s								
TORD	**Torodi Ar. Bea**	**128.98**	**281**	PKP	PKPdf			22 51 36.1	+1.4
	comp=Z,1.5nm,0.6s,baz=63,slow=2.2,SNR=10								
DBIC	**Dimbokro**	**135.34**	**272**	PKP	PKPdf			22 51 49.3	+2.5
	comp=Z,1.1nm,0.6s,baz=119,slow=5.9,SNR=4.2								
TEIG	**Tepich**	**140.59**	**67**	PKPdf	PKPdf			22 51 57.4	+1.1
JTS	**JuntasAbangare**	**145.18**	**82**	*e*PKPdf	PKPdf			22 52 06.6	+2.1
CPUP	**Villa Florida**	**145.95**	**168**	PKPbc	PKPbc			22 52 09.4	+3.0
	comp=Z,2.6nm,0.4s,baz=200,slow=1.9,SNR=12								
LPAZ	**La Paz**	**150.52**	**142**	PKPbc	PKPbc			22 52 22.9	+4.1
	comp=Z,4.8nm,0.4s,baz=192,slow=3.4,SNR=47								

*THE **11** 22:37:41.5, 34.˝63N×21.˝97E, h72km±20km, ML3.1/9, Error ellipse: s-maj=20.1km s-min=1.5km az=78.0*
*NEIC **11** 22:37:58.8, 35.˝90N×23.˝62E, h30km, MD3.4(ATH), After ATH.*
*ATH **11** 22:37:58.8, 35.˝90N×23.˝62E, h30km±1km, MD3.4/8*
*CSEM **11** 22:37:58.8, 35.˝90N×23.˝62E, h30km, MD3.4, After ATH*

ISC 11 22:37:40.1±0.9,**34.˝68N**±0.˝05×**22.˝01E**±0.˝06,**h10**km,**n61,**σ0°**83**/93,**Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**1.71**	**84**	P	**Pn**	**22 38 09.2**	**-0.8**
GVD	**Gavdhos**	**1.71**	**84**	P	**Pn**	**22 38 08.9**	**-1.1**
GVD				S	**Sn**	**22 38 31.5**	**-0.4**
GVD	**Gavdhos**	**1.71**	**84**	P	**Pn**	**22 38 08.9**	**-1.1**
GVD				S	**Sn**	**22 38 31.5**	**-0.4**
KYTH	**Kithira**	**1.80**	**27**	*e*Pn	**Pn**	**22 38 11.4**	**+0.2**
KYTH	**Kithira**	**1.80**	**27**	*e*PN	**Pn**	**22 38 11.4**	**+0.2**
KYTH	**Kithira**	**1.80**	**27**	*e*Pn	**Pn**	**22 38 11.4**	**+0.2**
VAM	**Vamos**	**1.94**	**67**	*e*Pn	**Pn**	**22 38 12.8**	**-0.2**
VAM				*e*Sn	**Sn**	**22 38 22.9**	**-14**
VAM	**Vamos**	**1.94**	**67**	*e*PN	**Pn**	**22 38 12.8**	**-0.2**
VAM				*e*SN	**Sn**	**22 38 22.9**	**-14**
VAM	**Vamos**	**1.94**	**67**	*e*Pn	**Pn**	**22 38 12.8**	**-0.2**
VAM				*e*Sn	**Sn**	**22 38 22.9**	**-14**
VLI	**Veliai**	**2.17**	**20**	*e*Pn	**Pn**	**22 38 17.5**	**+1.3**
VLI				*e*Sn	**Sn**	**22 38 31.2**	**-12**
VLI	**Veliai**	**2.17**	**20**	*e*PN	**Pn**	**22 38 17.5**	**+1.3**
VLI				*e*SN	**Sn**	**22 38 31.2**	**-12**
VLI	**Veliai**	**2.17**	**20**	*e*Pn	**Pn**	**22 38 17.5**	**+1.3**
VLI				*e*Sn	**Sn**	**22 38 31.2**	**-12**
PYL	**PYLOS**	**2.22**	**354**	P	**Pn**	**22 38 16.9**	**0.0**
PYL	**PYLOS**	**2.22**	**354**	P	**Pn**	**22 38 16.9**	**0.0**
SIVA	**Sivas**	**2.33**	**81**	P	**Pn**	**22 38 18.4**	**0.0**
SIVA				S	**Sn**	**22 38 47.6**	**+0.6**
SIVA	**Sivas**	**2.33**	**81**	P	**Pn**	**22 38 18.4**	**0.0**
SIVA				S	**Sn**	**22 38 47.6**	**+0.6**
IDI	**Anoyia**	**2.44**	**75**	*e*Pn	**Pn**	**22 38 21.5**	**+1.6**
IDI	**Anoyia**	**2.44**	**75**	*e*PN	**Pn**	**22 38 21.5**	**+1.6**
IDI	**Anoyia**	**2.44**	**75**	*e*Pn	**Pn**	**22 38 21.5**	**+1.6**
ITM	**Ithomi**	**2.50**	**358**	P	**Pn**	**22 38 21.0**	**+0.3**
ITM	**Ithomi**	**2.50**	**358**	P	**Pn**	**22 38 21.0**	**+0.3**
VLX	**Vlachokerasia**	**2.70**	**6**	P	**Pn**	**22 38 24.4**	**+0.9**
VLX				S	**Sn**	**22 38 56.9**	**+0.6**
VLX	**Vlachokerasia**	**2.70**	**6**	P	**Pn**	**22 38 24.4**	**+0.9**
VLX				S	**Sn**	**22 38 56.9**	**+0.6**
DID	**Didima**	**2.99**	**19**	*e*PN	**Pn**	**22 38 27.6**	**+0.1**
DID	**Didima**	**2.99**	**19**	P	**Pn**	**22 38 27.1**	**-0.4**
DID				S	**Sn**	**22 39 02.9**	**-0.5**
DID	**Didima**	**2.99**	**19**	P	**Pn**	**22 38 27.1**	**-0.4**
DID				S	**Sn**	**22 39 02.9**	**-0.5**
DID	**Didima**	**2.99**	**19**	*e*Pn	**

	comp=Z,99nm,0.1s							
IDMV	**Damavand**	**5.72**	**9**	*e*Pn	**Pn**	**23 01 35.3**	**-0.8**
IDMV				*e*		23 01 41.5	
	comp=Z,151nm,0.2s							
IFIR	**Firoozkooh**	**5.92**	**15**	*e*Pn	**Pn**	**23 01 37.6**	**-1.1**
IFIR				*e*		23 01 39.9	
	comp=Z,212nm,0.1s							
ISHM	**Shahmirzad**	**6.21**	**18**	*e*Pn	**Pn**	**23 01 41.9**	**-0.8**
ISHM				*e*		23 01 43.3	
	comp=Z,243nm,0.1s							
IGLO	**Ghaloghah**	**7.01**	**20**	*e*Pn	**Pn**	**23 01 54.1**	**+0.4**
IGLO				*e*		23 01 54.5	
	comp=Z,139nm,0.2s							

IDC ***11*** *23:38:35.5±0.4,0.°91S×21.°99W,h0km,mb5.0/35, mb1 5.1/36,mb1mx5.1/37,mbtmp5.0/36,ML5.5/1,MS5.2/22, Ms1 5.2/22,ms1mx5.1/26,Error ellipse: s-maj=13.9km s-min=10.2km az=140.0*

ISCJB ***11*** *23:38:35.5±0.5,0.°93S±0.°03×21.°73W±0.°02,h2km±3km, mb5.4/308,MS5.2/225,Error ellipse: s-maj=5.5km s-min=2.4km az=157.4*

SZGRF ***11*** *23:38:35.3,1.°91S×21.°42W,h17km,mb5.5,Central Mid-Atlantic Ridge*

BJI ***11*** *23:38:37.7,1.°85S×21.°04W,h13km,mB5.6/13,mb5.1/1, Ms5.7/18,Ms7 5.4/17*

MOS ***11*** *23:38:37.0±1.0,0.°87S×21.°72W,h10km,mb5.6/116,Error ellipse: s-maj=7.0km s-min=2.9km az=62.5*

NEIC ***11*** *23:38:38.3±0.2,1.°02S×21.°84W,h13km,mb5.4/208, MS5.2/175,MW6.0,MW5.9,Error ellipse: s-maj=5.2km s-min=3.0km az=155.0,Moment Tensor Solution. s91 Moment tensor: Scale 10^17^Nm; Mrr=0.04; Mθθ=2.87; Mφφ=2.83; Mrθ=0.05; Mθφ=-9.05; Mφr=0.61; Best double couple: Mo=9.50000×10^17^ NP1:φs=351.00000°,δ90.00000°, λ-4.00000°. NP2:φs=81.00000°,δ86.00000°,λ-180.00000°. Principal axes: T 9.5200, Plg2.0000°, Azm36.0000°; N -0.0400, Plg86.0000°, Azm166.0000°; P -9.4900, Plg2.0000°, Azm306.0000°;*

GCMT ***11*** *23:38:44.2±0.1,0.°75S×21.°75W,h24km,MW6.0,Moment Tensor Solution. s100,c211; s86,c131; Moment tensor: Scale 10^18^Nm; Mrr-0.04±.01; Mθθ0.41±.01; Mφφ-0.37±.01; Mrθ-0.08±.02; Mθφ-1.25±.01; Mφr0.13±.02; Best double couple: Mo1.30000×10^18^ NP1:φs261.00000°,δ84.00000°, λ178.00000°. NP2:φs352.00000°,δ88.00000°,λ6.00000°. Principal axes: T 1.3400, Plg6.0000°, Azm217.0000°; N -0.0500, Plg84.0000°, Azm12.0000°; P -1.2900, Plg3.0000°, Azm126.0000°; Data Used: II IU CN IC G. Surface waves: sta=111, comp=244, per= 50.*

ISC 11 23:38:39.3±0.6,0.°98S±0.°03×21.°80W±0.°02,h16km±3km, h15km±1.7km:pP-P,n1344,c0°87/1319,mb5.4/308, MS5.2/225,374C-158D,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**14.88**	**251**	*e*Pn	**Pn**	**23 42 00.1**	**-9.0**
RCBR				*e*Sn	Sn	23 44 31.4	-22
LIC	**Lamto**	**18.21**	**67**	*e*P	**Pn**	**23 42 50.3**	**-1.3**
	1μm,1.2s						
LIC	**Lamto**	**18.21**	**67⇑**	*i*P	**Pn**	**23 42 50.2**	**-1.4**
	956nm,1.2s,baz=252						
LIC				*e*MLR	MLR		
	comp=Z,18μm,20.6s						
LIC	**Lamto**	**18.21**	**67⇑**	*i*P	**Pn**	**23 42 50.2**	**-1.4**
	comp=Z,478nm,1.2s						
TIC	**Toumodi**	**18.38**	**65**	*e*P	**Pn**	**23 42 51.8**	**-1.9**
	comp=Z,199nm,0.2s						
TIC	**Toumodi**	**18.38**	**65**	*e*P	**Pn**	**23 42 51.8**	**-1.9**
TIC				pmax	pmax		
	comp=Z,199nm,0.2s						
KIC	**Kosan Boka**	**18.52**	**67**	*e*P	**Pn**	**23 42 53.7**	**-1.7**
	comp=Z,2μm,1.5s						
DBIC	**Dimbokro**	**18.54**	**66**	P	**Pn**	**23 42 54.0**	**-1.6**
	comp=Z,16nm,0.3s,baz=233,slow=12,SNR=89						
SHEL	**Horse Pasture**	**21.73**	**134**	*e*P	**P**	**23 43 30.2**	**+0.1**
	comp=Z,367nm,1.2s,mb5.7						
SHEL				LR	LR		
	comp=Z,7μm,19.0s,MS5.1						
SHEL	**Horse Pasture**	**21.73**	**134**	*e*P	**P**	**23 43 30.2**	**+0.1**
SHEL				pmax	pmax		
	comp=Z,367nm,1.2s,mb5.7						
SHEL				MLR	MLR		
	comp=Z,7μm,19.0s,MS5.1						
TORD	**Torodi Ar. Bea**	**27.20**	**58**	LR	LR	23 53 38.0	
	comp=Z,8μm,18.8s,MS5.3,baz=230,slow=33						
FUL	**Funchal**	**33.75**	**7**	*e*P	**P**	**23 45 21.3**	**+1.1**
PMAR	**Madeira**	**33.84**	**7**	*e*P	**P**	**23 45 21.5**	**+0.5**
	comp=Z,200nm,1.1s,mb5.2						
PMPS	**Porto Santo**	**34.24**	**8**	*e*P	**P**	**23 45 25.1**	**+0.6**
	comp=Z,129nm,1.7s,mb5.6						
TAM	**Tamanrasset**	**35.59**	**47⇑**	*e*P	**P**	**23 45 35.1**	**-1.1**
	comp=Z,29nm,1.2s,mb5.1						
TAM				*e*S	**S**	**23 51 09.4**	**-2.3**
TAM				LR	LR		
	comp=Z,4μm,20.0s,MS5.2						
TAM	**Tamanrasset**	**35.59**	**47⇑**	*e*P	**P**	**23 45 35.1**	**-1.2**
TAM				*e*S	**S**	**23 51 09.4**	**-2.4**
TAM				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.1						
TAM				MLR	MLR		
	comp=Z,4μm,20.0s,MS5.2						
MDT	**Midelt**	**37.33**	**24**	P	**P**	**23 45 51.0**	**0.0**
	comp=Z,48nm,1.1s,mb5.2,baz=224,slow=8.0,SNR=42						
MDT				PP	PP	23 47 13.8	-2.5
	comp=Z,25nm,1.0s,baz=209,slow=13,SNR=3.7						
MDT				LR	LR	23 59 47.4	
	comp=Z,7μm,20.4s,MS5.5,baz=227,slow=34						
PFVI	**Vila Bisbo**	**39.78**	**16**	*i*P	**P**	**23 46 11.8**	**+0.2**
	comp=Z,109nm,1.9s,mb5.3						
PFVI	**Vila Bisbo**	**39.78**	**16**	*e*PP	PP	23 47 40.1	-3.0
PFVI				*e*S	**S**	**23 52 15.3**	**+0.2**
PFVI				A		23 59 49.1	
	comp=Z,3μm,20.0s						
PFVI	**Vila Bisbo**	**39.78**	**16**	P	**P**	**23 46 11.8**	**+0.3**
SFS	**San Fernando**	**39.98**	**20**	PFAKE		23 46 20.0	+6.8
SFS				LR	LR		
	comp=Z,4μm,22.0s,MS5.3						
BBGH	**Gun Hill**	**39.99**	**292**	*e*P	**P**	**23 46 12.6**	**-1.0**
BBGH				*e*PcP	PcP	23 48 18.9	+0.1
BBGH				*e*S	**S**	**23 52 18.1**	**-0.7**
BBGH				LR	LR		
	comp=Z,5μm,21.0s,MS5.3						
MORF	**Marmelete**	**39.99**	**16**	*i*P	**P**	**23 46 13.4**	**+0.1**
	comp=Z,184nm,1.5s,mb5.6						
MORF				*e*S	**S**	**23 52 20.7**	**+2.4**
MORF				A		00 00 06.1	
	comp=Z,3μm,20.0s						
PBDV	**Barranco-do-Ve**	**40.14**	**17**	*i*P	**P**	**23 46 15.7**	**+1.2**
	comp=Z,237nm,1.2s,mb5.8						
PBDV	**Barranco-do-Ve**	**40.14**	**17**	*e*PP	PP	23 47 48.4	+1.3
PBDV				*e*S	**S**	**23 52 23.9**	**+3.4**
PBDV				A		00 00 25.1	
	comp=Z,3μm,18.0s						
PTEO	**Sao Teotonio**	**40.20**	**16**	*i*P	**P**	**23 46 15.9**	**+0.9**
	comp=Z,240nm,1.1s,mb5.8						
PTEO	**Sao Teotonio**	**40.20**	**16**	*e*PP	PP	23 47 48.3	+0.6
EJIF	**Jimena Fronter**	**40.22**	**21**	P	**P**	**23 46 15.5**	**+0.3**
	comp=Z,201nm,1.7s,mb5.6						
EJIF	**Jimena Fronter**	**40.22**	**21**	P	**P**	**23 46 15.5**	**+0.3**
EJIF				pmax	pmax		
	comp=Z,201nm,1.7s,mb5.6						
PVAQ	**Vaqueiros**	**40.35**	**17**	*i*P	**P**	**23 46 17.4**	**+1.1**
	comp=Z,244nm,1.2s,mb5.8						
PVAQ	**Vaqueiros**	**40.35**	**17**	*e*PP	PP	23 47 50.5	+1.1
PVAQ				*e*S	**S**	**23 52 14.6**	**-9.1**
PVAQ				A		00 00 40.2	
	comp=Z,3μm,20.0s						
ESPR	**Espera**	**40.46**	**20**	P	**P**	**23 46 16.8**	**-0.3**
	comp=Z,61nm,0.9s,mb5.3						
PCVE	**Castro Verde**	**40.47**	**17**	*i*P	**P**	**23 46 18.1**	**+0.8**
	comp=Z,200nm,1.2s,mb5.7						
PCVE	**Castro Verde**	**40.47**	**17**	*e*PP	PP	23 47 50.4	-0.3
PCVE				*e*S	**S**	**23 52 28.7**	**+3.3**
PCVE				A		00 00 33.0	
	comp=Z,3μm,20.0s						
EGRO	**El Granado**	**40.55**	**18**	P	**P**	**23 46 17.4**	**-0.5**
	comp=Z,107nm,0.9s,mb5.5						
EMIJ	**Mijas**	**40.57**	**21**	P	**P**	**23 46 16.9**	**-1.2**
	comp=Z,50nm,0.8s,mb5.2						
MESJ	**Messejana**	**40.61**	**17**	*e*pP	pP	23 46 20.0	-3.5
MESJ				*e*S	**S**	**23 52 26.7**	**-0.8**
MESJ				*e*S	**S**	**23 52 26.9**	**-0.6**
MESJ				*e*SS	SS	23 55 25.5	-2.4
MESJ				AMS	AMS	00 00 28.1	
	comp=N,3μm,13.8s						
MESJ	**Messejana**	**40.61**	**17**	*e*pP	pP	23 46 20.0	-3.5
MESJ				*e*S	**S**	**23 52 26.7**	**-0.8**
MESJ				*e*SS	SS	23 55 25.5	-2.5
PBEJ	**Beja**	**40.89**	**17**	*i*P	**P**	**23 46 21.4**	**+0.7**
	comp=N,146nm,1.9s,mb5.3						
EMIN	**Mina Concepcio**	**41.01**	**18**	P	**P**	**23 46 21.0**	**-0.7**
	comp=N,69nm,1.6s,mb5.0						
LIS	**Lisbon**	**41.18**	**15**	*e*pP	pP	23 46 24.8	-3.4
LIS				AMb	AMB	23 46 27.7	
	comp=Z,210nm,1.8s,mb5.5						
LIS				*e*S	**S**	**23 52 36.1**	**+0.2**
LIS				*e*SS	SS	23 55 38.0	-1.3
LIS	**Lisbon**	**41.18**	**15**	*e*pP	pP	23 46 24.8	-3.4
LIS				A		23 46 27.7	
	comp=Z,210nm,1.8s						
LIS				*e*S	**S**	**23 52 36.1**	**+0.2**
LIS				*e*SS	SS	23 55 38.0	-1.2
PBAR	**Barrancos**	**41.27**	**18**	*i*P	**P**	**23 46 24.6**	**+0.7**
	comp=Z,146nm,1.3s,mb5.5						
PBAR	**Barrancos**	**41.27**	**18**	*e*PP	PP	23 47 58.2	-1.1
PBAR				*e*S	**S**	**23 52 38.5**	**+1.2**
PBAR				A		00 02 33.2	
	comp=Z,3μm,18.0s						
EVOP	**Sao Brissos**	**41.28**	**16**	*e*pP	pP	23 46 25.6	-3.4
EVOP				AMb	AMB	23 46 28.2	
	comp=Z,132nm,2.1s,mb5.2						
EVOP				*e*S	**S**	**23 52 36.9**	**-0.6**
EVOP				*e*S	**S**	**23 52 37.2**	**-0.2**
EVOP				*e*SS	SS	23 55 39.5	-1.7
ELOJ	**Sierra Loja**	**41.31**	**22**	P	**P**	**23 46 24.3**	**+0.1**
	comp=Z,57nm,1.2s,mb5.1						
ELOJ	**Sierra Loja**	**41.31**	**22**	P	**P**	**23 46 24.3**	**+0.1**
ELOJ				pmax	pmax		
	comp=Z,57nm,1.2s,mb5.1						
EVO	**Evora**	**41.32**	**16**	*e*P	**P**	**23 46 22.5**	**-1.7**
	comp=Z,444nm,1.9s,mb5.5						
EVO				*e*MLR	MLR		
	comp=Z,6μm,21.0s,MS5.1						
EVO	**Evora**	**41.32**	**16**	*i*P	**P**	**23 46 25.0**	**+0.8**
	comp=Z,184nm,1.6s,mb5.5						
EVO	**Evora**	**41.32**	**16**	*e*PP	PP	23 47 58.9	-0.9
ERON	**Agron**	**41.33**	**22**	P	**P**	**23 46 24.7**	**+0.4**
	comp=Z,40nm,0.9s,mb5.0						
PMAFR	**Mafra**	**41.37**	**15**	*e*P	**P**	**23 46 25.3**	**+0.6**
	comp=Z,193nm,1.1s,mb5.6						
PMAFR	**Mafra**	**41.37**	**15**	*e*PP	PP	23 48 01.8	+1.4
PMAFR				*e*S	**S**	**23 52 42.3**	**+3.5**
PMAFR				A		00 00 59.3	
	comp=Z,2μm,16.0s						
SIV	**San Ignacio**	**41.49**	**247**	P	**P**	**23 46 23.8**	**-2.2**
	comp=Z,12nm,0.8s,mb4.6,baz=90,slow=10.0,SNR=60						
EBER	**Berja**	**41.57**	**23**	P	**P**	**23 46 26.2**	**-0.1**
	comp=Z,25nm,0.8s,mb4.9						
ECOG	**Cogollos-Vega**	**41.64**	**22**	P	**P**	**23 46 27.0**	**+0.1**
	comp=Z,49nm,0.8s,mb5.2						
ECOG	**Cogollos-Vega**	**41.64**	**22**	P	**P**	**23 46 27.0**	**+0.1**
ECOG				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.2						
GRGR	**Grenville**	**41.66**	**289**	*e*P	**P**	**23 46 27.0**	**-0.5**
GRGR				*e*PP	PP	23 48 03.1	-0.8
GRGR				*e*S	**S**	**23 52 43.0**	**-0.8**
GRGR				LR	LR		
	comp=Z,1μm,19.0s,MS4.8						
PESTR	**Estremoz**	**41.75**	**17**	*i*P	**P**	**23 46 28.6**	**+0.8**
	comp=Z,138nm,1.7s,mb5.3						
PESTR	**Estremoz**	**41.75**	**17**	*e*PP	PP	23 48 03.8	-0.7
PESTR				*e*S	**S**	**23 52 48.4**	**+4.0**
PESTR				A		00 01 09.1	
	comp=Z,3μm,20.0s						
EBAD	**Badajoz**	**41.81**	**17**	P	**P**	**23 46 28.2**	**-0.1**
	comp=Z,45nm,1.0s,mb5.1						
ENIJ	**Nijar**	**41.91**	**24**	P	**P**	**23 46 28.9**	**-0.2**
	comp=Z,108nm,0.9s,mb5.5						
ENIJ	**Nijar**	**41.91**	**24**	P	**P**	**23 46 28.9**	**-0.2**
ENIJ				pmax	pmax		
	comp=Z,108nm,0.9s,mb5.5						
FDF	**Fort de France**	**41.95**	**293**	*e*P	**P**	**23 46 29.2**	**-0.5**
FDF				*e*PcP	PcP	23 48 25.3	+0.1
FDF				*e*S	**S**	**23 52 47.0**	**-1.0**
FDF				LR	LR		
	comp=Z,2μm,22.0s,MS4.9						
EADA	**Adamuz**	**42.07**	**20**	P	**P**	**23 46 29.8**	**-0.6**
	comp=Z,26nm,0.9s,mb4.9						
ETRT	**Tiaret**	**42.12**	**29**	P	**P**	**23 46 32.0**	**+1.1**
PTOM	**Tomar**	**42.22**	**15**	*i*P	**P**	**23 46 32.0**	**+0.4**
	comp=Z,232nm,1.6s,mb5.6						
PTOM	**Tomar**	**42.22**	**15**	*e*PP	PP	23 48 09.8	+0.2
EQES	**Quesada**	**42.29**	**22**	P	**P**	**23 46 32.1**	**-0.1**
	comp=Z,26nm,0.9s,mb4.9						
PMRV	**Marv??o**	**42.33**	**17**	*i*P	**P**	**23 46 33.7**	**+1.2**
	comp=Z,265nm,1.4s,mb5.7						
PMRV	**Marv??o**	**42.33**	**17**	*e*PP	PP	23 48 09.1	-1.6
PMRV				*e*S	**S**	**23 52 57.2**	**+4.3**
PMRV				A		00 01 25.7	
	comp=Z,3μm,20.0s						
EBAN	**Banos Encina**	**42.35**	**21**	P	**P**	**23 46 32.0**	**-0.7**
	comp=Z,59nm,0.8s,mb5.3						
EBAN	**Banos Encina**	**42.35**	**21**	P	**P**	**23 46 32.0**	**-0.7**
EBAN				pmax	pmax		
	comp=Z,59nm,0.8s,mb5.3						
CPUP	**Villa Florida**	**42.46**	**231**	P	**P**	**23 46 31.2**	**-2.7**
CPUP				LR	LR	00 03 41.5	
CPUP	**Villa Florida**	**42.46**	**231**	P	**P**	**23 46 31.2**	**-2.7**
	comp=Z,5.1nm,0.8s,mb4.2,baz=65,slow=6.5,SNR=8.5						
CPUP				LR	LR	00 03 41.5	
	comp=Z,4μm,18.2s,MS5.4,baz=247,slow=36						
EHUE	**Huescar**	**42.48**	**23**	P	**P**	**23 46 33.3**	**-0.5**
	comp=Z,54nm,2.2s,mb4.8						
EHUE	**Huescar**	**42.48**	**23**	P	**P**	**23 46 33.3**	**-0.5**
EHUE				pmax	pmax		
	comp=Z,54nm,2.2s,mb4.8						
EANR	**'Ain N'Sour**	**42.49**	**28**	P	**P**	**23 46 35.0**	**+1.2**
TSUM	**Tsumeb**	**42.62**	**118**	*e*P	**P**	**23 46 35.3**	**+0.2**
	comp=Z,55nm,1.1s,mb5.2						
TSUM				*e*PP	PP	23 48 12.3	-1.9
TSUM				*e*S	**S**	**23 52 59.0**	**+1.2**
TSUM				LR	LR		
	comp=Z,3μm,19.0s,MS5.2						
TSUM	**Tsumeb**	**42.62**	**118**	P	**P**	**23 46 35.4**	**+0.2**
	comp=Z,30nm,0.9s,mb5.0,baz=278,slow=9.4,SNR=37						
TSUM				PP	PP	23 48 13.8	-0.3
	comp=Z,11nm,1.1s,baz=287,slow=10.0,SNR=4.2						
PCBR	**Castelo Branco**	**42.68**	**16**	*e*P	**P**	**23 46 36.4**	**+1.0**
	comp=Z,66nm,1.5s,mb5.1						
PCBR	**Castelo Branco**	**42.68**	**16**	*e*PP	PP	23 48 14.5	-0.1
ECH4	**Ech Chlef**	**42.77**	**28**	P	**P**	**23 46 36.5**	**+0.3**
CART	**Cartagena**	**42.92**	**24**	*e*P	**P**	**23 46 37.0**	**-0.3**
EBNR	**Beni Rached**	**42.96**	**28**	P	**P**	**23 46 39.2**	**+1.5**
EMUR	**La Murta**	**43.05**	**24**	P	**P**	**23 46 38.4**	**+0.1**
	comp=Z,55nm,0.9s,mb5.3						
MTE	**Manteigas**	**43.19**	**16**	*i*P	**P**	**23 46 40.1**	**+0.7**
	comp=Z,117nm,1.4s,mb5.4						
MTE				*e*S	**S**	**23 53 09.6**	**+4.1**
MTE				A		00 02 00.2	
	comp=Z,2μm,20.0s						
MTE	**Manteigas**	**43.19**	**16**	*e*P	**P**	**23 46 40.7**	**+1.2**
	comp=Z,86nm,1.2s,mb5.3						
MTE				*e*PP	PP	23 48 19.7	-0.3
MTE				*e*S	**S**	**23 53 04.8**	**-0.8**
MTE				LR	LR		
	comp=Z,3μm,19.0s,MS5.1						
EVIA	**Vianos**	**43.24**	**22**	P	**P**	**23 46 40.1**	**+0.2**
	comp=Z,29nm,0.8s,mb5.1						
EVIA	**Vianos**	**43.24**	**22**	P	**P**	**23 46 40.1**	**+0.2**
EVIA				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.1						
EPLA	**Plasencia**	**43.30**	**18**	P	**P**	**23 46 39.4**	**-1.0**
	comp=Z,62nm,1.1s,mb5.2						
EPLA	**Plasencia**	**43.30**	**18**	P	**P**	**23 46 39.4**	**-1.0**
EPLA				pmax	pmax		
	comp=Z,62nm,1.1s,mb5.2						
PAB	**San Pablo**	**43.38**	**20⇑**	*e*P	**P**	**23 46 41.4**	**+0.4**
	comp=Z,153nm,1.7s,mb5.5						
PAB				*e*PP	PP	23 48 17.8	-4.3
PAB				*e*S	**S**	**23 53 07.2**	**-1.2**
PAB				LR	LR		
	comp=Z,2μm,19.0s,MS5.0						
PAB	**San Pablo**	**43.38**	**20⇑**	*e*P	**P**	**23 46 41.4**	**+0.3**
PAB				*e*		23 48 17.8	
PAB				*e*S	**S**	**23 53 07.2**	**-1.2**
PAB				pmax	pmax		
	comp=Z,153nm,1.7s,mb5.5						
PAB				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.0						
PVIS	**Viseu**	**43.39**	**15**	*e*P	**P**	**23 46 41.9**	**+0.8**
	comp=Z,101nm,1.5s,mb5.3						
ANWB	**Willy Bob**	**43.51**	**297**	PFAKE		23 46 50.0	+7.6
ANWB				LR	LR		
	comp=Z,1μm,21.0s,MS4.8						
ETOB	**Tobarra**	**43.61**	**23**	P	**P**	**23 46 42.8**	**-0.1**
	comp=Z,25nm,0.9s,mb4.9						
ESDC	**Sonseca Array**	**43.63**	**20**	P	**P**	**23 46 41.4**	**-1.6**
	comp=Z,0.5nm,0.7s						
ESDC	**Sonseca Array**	**43.63**	**20**	P	**P**	**23 46 41.8**	**-1.2**
	comp=Z,46nm,0.9s,mb5.2,baz=201,slow=8.2,SNR=102						
ESDC				PP	PP	23 48 25.8	+1.1
	comp=Z,13nm,1.0s,baz=199,slow=11,SNR=4.8						
ESDC				LR	LR	00 03 50.7	
	comp=Z,1μm,19.3s,MS4.8,baz=195,slow=35						
ADJB	**Djebel Djouab**	**43.78**	**30**	P	**P**	**23 46 45.8**	**+1.5**
AKET	**Djebel Ketaf**	**43.92**	**30**	P	**P**	**23 46 47.2**	**+1.8**
PVRL	**Vila Real**	**43.96**	**15**	*e*P	**P**	**23 46 46.5**	**+0.8**
ATAF	**Djebel Tarf**	**43.98**	**31**	P	**P**	**23 46 46.1**	**+0.1**
MVO	**Moncorvo**	**44.04**	**16**	*i*P	**P**	**23 46 47.1**	**+0.8**
	comp=Z,135nm,1.4s,mb5.5						
MVO				*e*S	**S**	**23 53 22.3**	**+4.3**
MVO				A		00 02 14.2	
	comp=Z,2μm,20.0s						
PCRV	**Puerto La Cruz**	**44.04**	**286**	P	**P**	**23 46 42.9**	**-3.9**
	comp=Z,20nm,1.0s,mb4.8,baz=40,slow=6.0,SNR=1.8						
ABA	**Alger-Bouzarea**	**44.09**	**29**	P	**P**	**23 46 44.0**	**-2.8**
ELOB	**Lobios**	**44.42**	**15**	P	**P**	**23 46 49.2**	**-0.2**
	comp=Z,140nm,2.1s,mb5.3						
GUD	**Guadarrama**	**44.44**	**19**	P	**P**	**23 46 49.4**	**-0.1**
	comp=Z,79nm,1.0s,mb5.4						
GUD	**Guadarrama**	**44.44**	**19**	P	**P**	**23 46 49.4**	**-0.1**
GUD				pmax	pmax		
	comp=Z,79nm,1.0s,mb5.4						
ECHE	**Chera**	**44.66**	**23**	P	**P**	**23 46 51.7**	**+0.5**
	comp=Z,62nm,0.9s,mb5.4						
ECHE	**Chera**	**44.66**	**23**	P	**P**	**23 46 51.7**	**+0.4**
ECHE				pmax	pmax		
	comp=Z,62nm,0.9s,mb5.4						
PBRG	**Braganca**	**44.72**	**16**	*e*P	**P**	**23 46 52.6**	**+0.9**
	comp=Z,101nm,1.6s,mb5.4						
AKF	**Akfadou**	**44.72**	**31**	P	**P**	**23 46 53.6**	**+1.8**
CKHR	**Kef el Ahmar**	**44.74**	**32**	P	**P**	**23 46 53.0**	**+1.0**
SET	**Setif**	**44.82**	**32**	P	**P**	**23 46 54.0**	**+1.4**
ECAL	**Calabor**	**44.84**	**16**	P	**P**	**23 46 53.0**	**+0.2**
	comp=Z,269nm,1.5s,mb5.8						
ERUA	**La Rua**	**45.15**	**15**	P	**P**	**23 46 53.0**	**-2.2**
	comp=Z,128nm,2.0s,mb5.4						
ERUA	**La Rua**	**45.15**	**15**	P	**P**	**23 46 53.0**	**-2.2**
ERUA				pmax	pmax		
	comp=Z,128nm,2.0s,mb5.4						
CTEI	**Djebel Teioual**	**45.25**	**33**	P	**P**	**23 46 57.0**	**+0.9**
ETOR	**Torete**	**45.32**	**21**	P	**P**	**23 46 55.0**	**-1.5**
	comp=Z,14nm,1.0s,mb4.8						
ETOR	**Torete**	**45.32**	**21**	P	**P**	**23 46 55.0**	**-1.5**
ETOR				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
DFRA	**Djebel Bou Aff**	**45.33**	**32**	P	**P**	**23 46 57.8**	**+1.1**
CASM	**Ain Smara**	**45.44**	**33**	P	**P**	**23 46 58.0**	**+0.4**
EMOS	**Mosqueruela**	**45.51**	**23**	P	**P**	**23 46 57.4**	**-0.7**
	comp=Z,39nm,1.2s,mb5.2						
CKFL	**Kef-Lekhel**	**45.67**	**33**	P	**P**	**23 47 00.0**	**+0.6**
ABSA	**Djebel Ababsia**	**45.99**	**33**	P	**P**	**23 47 02.2**	**+0.3**
CAEH	**'Ain El Ouahch**	**46.02**	**32**	P	**P**	**23 47 02.8**	**+0.6**
EPON	**Pontenova**	**46.03**	**15**	P	**P**	**23 47 02.3**	**+0.3**
	comp=Z,222nm,1.5s,mb5.9						
CMAH	**Djebel Manchou**	**46.22**	**33**	P	**P**	**23 47 04.0**	**+0.3**
ERTA	**Horta de San J**	**46.34**	**23**	P	**P**	**23 47 04.6**	**+0.1**
	comp=Z,57nm,1.0s,mb5.5						
EARI	**Arriondas**	**46.53**	**17**	P	**P**	**23 47 07.5**	**+1.5**
	comp=Z,42nm,0.9s,mb5.4						
STVI	**Saint Thomas**	**46.57**	**297**	*e*P	**P**	**23 47 07.3**	**+0.5**
	comp=Z,104nm,1.1s,mb5.7						
KEST	**Kesra**	**46.66**	**35⇑**	*e*P	**P**	**23 47 07.3**	**+0.2**
KEST				*e*PP	PP	23 48 52.3	-4.7
KEST				*e*S	**S**	**23 53 55.8**	**-0.2**
KEST	**Kesra**	**46.66**	**35**	P	**P**	**23 47 05.8**	**-1.4**
	comp=Z,17nm,0.9s,mb5.0,baz=192,slow=3.9,SNR=58						
KEST				PP	PP	23 48 52.4	-4.6
	comp=Z,37nm,1.1s,baz=212,slow=6.7,SNR=5.3						
KEST				LR	LR	00 08 11.7	
	comp=Z,2μm,18.9s,MS5.2,baz=345,slow=38						
ESAC	**San Caprasio**	**46.69**	**22**	P	**P**	**23 47 06.3**	**-1.0**
	comp=Z,73nm,1.0s,mb5.6						
EPOB	**Poblet**	**46.97**	**24**	P	**P**	**23 47 09.0**	**-0.5**
	comp=Z,50nm,1.0s,mb5.4						
ELAN	**Lanestosa**	**47.00**	**18**	P	**P**	**23 47 09.4**	**-0.4**
	comp=Z,88nm,1.1s,mb5.6						
MTP	**Monte Pirata**	**47.02**	**296**	*e*P	**P**	**23 47 10.1**	**-0.3**
	comp=Z,132nm,1.1s,mb5.8						
HUMP	**Col San Antoni**	**47.31**	**296**	*e*P	**P**	**23 47 09.2**	**-3.3**
	comp=Z,88nm,1.0s,mb5.7						
CBYP	**Canovanas**	**47.35**	**296**	*e*P	**P**	**23 47 10.3**	**-2.7**
	comp=Z

FILF Fillols 48.58 24 *eP* **P 23 47 22.3 +0.3**
EJON La Jonquera 48.62 24 P **P 23 47 22.5 +0.2**
comp=Z,38nm,1.2s,mb5.3
LRDF Laroque-de-Fa 48.89 24⇑ *eP* **P 23 47 24.8 +0.4**
MTLF Montolieu 49.10 23⇑ *iP* **P 23 47 26.0 0.0**
comp=Z,108nm,1.3s,mb5.4
MTLF Montolieu 49.10 23⇑ *iP* **P 23 47 26.0 0.0**
comp=Z,54nm,1.3s,mb5.4
MTLF Montolieu 49.10 23⇑ *iP* **P 23 47 26.0 0.0**
MTLF pmax pmax
comp=Z,54nm,1.3s,mb5.4
VSL Villasalto 49.37 32 *eP* **P 23 47 29.1 +1.0**
comp=Z,78nm,1.0s,mb5.7
VSL *e*PP PP 23 49 21.4 -0.9
VSL *e*S **S 23 54 33.8 -0.5**
VSL LR LR
comp=Z,2µm,21.0s,MS5.2
SDV Santo Domingo 49.63 282 PFAKE 23 47 40.0 +9.4
SDV LR LR
comp=Z,597nm,20.0s,MS4.6
WDD Wield Dalam 49.88 39 *eP* **P 23 47 30.5 -1.6**
comp=Z,264nm,1.0s,mb6.2
WDD *e*PcP PcP 23 48 53.2 +0.7
WDD *e*S **S 23 54 40.5 -1.0**
WDD LR LR
comp=Z,4µm,20.0s,MS5.4
LFF La Frestale 49.91 21⇑ *iP* **P 23 47 33.0 +0.8**
comp=Z,439nm,1.6s,mb5.9
LFF La Frestale 49.91 21⇑ *iP* **P 23 47 33.0 +0.8**
comp=Z,220nm,1.6s,mb5.9
LFF La Frestale 49.91 21⇑ *iP* **P 23 47 33.0 +0.8**
LFF pmax pmax
comp=Z,220nm,1.6s,mb5.9
LASF Ste Croix 50.37 24⇑ *iP* **P 23 47 36.1 +0.5**
comp=Z,260nm,1.5s,mb5.7
CAF Calviac 50.38 22⇑ *iP* **P 23 47 36.3 +0.6**
comp=Z,209nm,1.2s,mb5.7
CAF Calviac 50.38 22⇑ *iP* **P 23 47 36.3 +0.6**
comp=Z,105nm,1.2s,mb5.7
CAF Calviac 50.38 22⇑ *iP* **P 23 47 36.3 +0.6**
CAF pmax pmax
comp=Z,105nm,1.2s,mb5.7
RJF Les Rejaudoux 50.51 21⇑ *iP* **P 23 47 37.1 +0.5**
comp=Z,118nm,1.3s,mb5.4
RJF *e*MLR MLR
comp=Z,5µm,22.0s,MS5.2
RJF Les Rejaudoux 50.51 21⇑ *iP* **P 23 47 37.1 +0.5**
comp=Z,59nm,1.3s,mb5.4
RJF LR LR
comp=Z,5µm,22.0s,MS5.5
RJF Les Rejaudoux 50.51 21⇑ *iP* **P 23 47 37.1 +0.5**
RJF pmax pmax
comp=Z,59nm,1.3s,mb5.4
RJF MLR MLR
comp=Z,5µm,22.0s,MS5.5
SUR Sutherland 50.82 132 P **P 23 47 40.6 +1.3**
comp=Z,31nm,0.8s,mb5.3,baz=295,slow=5.2,SNR=30
SUR Sutherland 50.82 132 P **P 23 47 41.1 +1.8**
comp=Z,230nm,1.0s,mb6.1,SNR=7.5
VAE Valguarnera 50.84 37 P **P 23 47 39.4 +0.1**
VAE PP PP 23 49 35.1 -0.6
VAE LR LR 00 08 53.1
VAE Valguarnera 50.84 37 P **P 23 47 39.4 +0.1**
comp=Z,32nm,0.9s,mb5.2,baz=162,slow=1.3,SNR=11
VAE PP PP 23 49 35.1 -0.6
comp=Z,38nm,1.0s,baz=156,slow=12,SNR=4.4
VAE LR LR 00 08 53.1
comp=Z,7µm,18.6s,MS5.7,baz=260,slow=36
LMR La Mourre 50.90 26⇑ *iP* **P 23 47 40.1 +0.5**
comp=Z,155nm,1.3s,mb5.5
LMR La Mourre 50.90 26⇑ *iP* **P 23 47 40.1 +0.5**
comp=Z,77nm,1.3s,mb5.5
LMR La Mourre 50.90 26⇑ *iP* **P 23 47 40.1 +0.5**
LMR pmax pmax
comp=Z,77nm,1.3s,mb5.5
SMRF Simiane la Rot 51.00 25⇑ *iP* **P 23 47 41.5 +1.1**
comp=Z,94nm,1.3s,mb5.2
SMRF Simiane la Rot 51.00 25⇑ *iP* **P 23 47 41.5 +1.1**
comp=Z,94nm,1.3s,mb5.6
MFF Saint Martin d 51.06 19⇑ *iP* **P 23 47 41.1 +0.3**
comp=Z,119nm,1.0s,mb5.5
MFF Saint Martin d 51.06 19⇑ *iP* **P 23 47 41.1 +0.3**
comp=Z,60nm,1.0s,mb5.5
MFF Saint Martin d 51.06 19⇑ *iP* **P 23 47 41.1 +0.3**
MFF pmax pmax
comp=Z,60nm,1.0s,mb5.5
LBL Lubilhac 51.09 23 *eP* **P 23 47 41.7 +0.7**
FRF La Foret Royal 51.14 26⇑ *iP* **P 23 47 41.8 +0.4**
comp=Z,164nm,1.8s,mb5.4
FRF La Foret Royal 51.14 26⇑ *iP* **P 23 47 41.8 +0.4**
comp=Z,82nm,1.8s,mb5.4
FRF La Foret Royal 51.14 26⇑ *iP* **P 23 47 41.8 +0.4**
FRF pmax pmax
comp=Z,82nm,1.8s,mb5.4
LSZ Lusaka 51.33 109 *eP* **P 23 47 43.8 +0.5**
comp=Z,104nm,1.5s,mb5.5
LSZ *e*PP PP 23 49 40.0 -0.5
LSZ *e*S **S 23 55 03.4 +1.1**
LSZ LR LR
comp=Z,2µm,19.0s,MS5.2
LSZ Lusaka 51.33 109 *eP* **P 23 47 43.8 +0.5**
LSZ *e* 23 49 40.0
LSZ *e*S **S 23 55 03.4 +1.1**
LSZ pmax pmax
comp=Z,104nm,1.5s,mb5.5
LSZ MLR MLR
comp=Z,2µm,19.0s,MS5.2
QUIF Quistinic 51.33 16⇑ *iP* **P 23 47 43.1 +0.3**
comp=Z,296nm,1.6s,mb5.7
QUIF Quistinic 51.33 16⇑ *iP* **P 23 47 43.1 +0.3**
comp=Z,148nm,1.6s,mb5.7
QUIF Quistinic 51.33 16⇑ *iP* **P 23 47 43.1 +0.3**
QUIF pmax pmax
comp=Z,148nm,1.6s,mb5.7
VIVF Saint-Julien-l 51.34 24⇑ *iP* **P 23 47 43.6 +0.7**
comp=Z,151nm,1.2s,mb5.5
VIVF Saint-Julien-l 51.34 24⇑ *iP* **P 23 47 43.6 +0.7**
comp=Z,75nm,1.2s,mb5.5
VIVF Saint-Julien-l 51.34 24⇑ *iP* **P 23 47 43.6 +0.7**
VIVF pmax pmax
comp=Z,75nm,1.2s,mb5.5
CALN Calern 51.40 26⇑ *eP* **P 23 47 44.4 +1.0**
PYM Petit Puy Mans 51.44 22⇑ *eP* **P 23 47 45.4 +1.8**
PGF Pioggiola 51.45 29⇑ *iP* **P 23 47 44.1 +0.3**
comp=Z,271nm,1.6s,mb5.6
PGF Pioggiola 51.45 29⇑ *iP* **P 23 47 44.1 +0.3**
comp=Z,136nm,1.6s,mb5.6
PGF Pioggiola 51.45 29⇑ *iP* **P 23 47 44.1 +0.3**
PGF pmax pmax
comp=Z,136nm,1.6s,mb5.6
LBTB Lobatse 51.59 122 P **P 23 47 45.2 0.0**
comp=Z,60nm,0.9s,mb5.5,baz=297,slow=8.1,SNR=40
TCF Toulx Ste Croi 51.60 21⇑ *iP* **P 23 47 45.5 +0.7**
comp=Z,78nm,1.2s,mb5.2
TCF Toulx Ste Croi 51.60 21⇑ *iP* **P 23 47 45.5 +0.7**
comp=Z,39nm,1.2s,mb5.2
TCF Toulx Ste Croi 51.60 21⇑ *iP* **P 23 47 45.5 +0.7**
TCF pmax pmax
comp=Z,39nm,1.2s,mb5.2
MVIF Mont Vial 51.63 27 *eP* **P 23 47 46.6 +1.5**
SSB Saint Sauveur 51.64 24 *eP* **P 23 47 44.7 -0.4**
comp=Z,88nm,1.5s,mb5.5
SSB *e*PP PP 23 49 41.6 -1.2
SSB *e*S **S 23 55 04.6 -1.0**
SSB LR LR
comp=Z,3µm,22.0s,MS5.3
SSB Saint Sauveur 51.64 24 *eP* **P 23 47 44.7 -0.4**
SSB *e* 23 49 41.6
SSB *e*S **S 23 55 04.6 -1.0**
SSB pmax pmax
comp=Z,88nm,1.5s,mb5.5
SSB MLR MLR
comp=Z,3µm,22.0s,MS5.3
ROSF Rostrenen 51.69 16⇑ *iP* **P 23 47 45.7 +0.2**
comp=Z,118nm,1.4s,mb5.3
ROSF Rostrenen 51.69 16⇑ *iP* **P 23 47 45.7 +0.2**
comp=Z,59nm,1.4s,mb5.3
ROSF Rostrenen 51.69 16⇑ *iP* **P 23 47 45.7 +0.2**
ROSF pmax pmax
comp=Z,59nm,1.4s,mb5.3
LUCF Luceram 51.71 27⇑ *eP* **P 23 47 46.8 +1.1**
SBF Sospel 51.73 27⇑ *iP* **P 23 47 46.5 +0.6**
comp=Z,206nm,1.3s,mb5.6
SBF Sospel 51.73 27⇑ *iP* **P 23 47 46.5 +0.6**
comp=Z,103nm,1.3s,mb5.6
SBF Sospel 51.73 27⇑ *iP* **P 23 47 46.5 +0.6**
SBF pmax pmax
comp=Z,103nm,1.3s,mb5.6
AGO Saint Agoulin 51.74 22⇑ *eP* **P 23 47 47.2 +1.3**
TOUF Mont Tournerai 51.76 26⇑ *eP* **P 23 47 47.5 +1.4**
SGMF Saint Gilles 51.81 16⇑ *iP* **P 23 47 46.6 +0.2**
comp=Z,140nm,1.2s,mb5.5
SGMF Saint Gilles 51.81 16⇑ *iP* **P 23 47 46.6 +0.2**
comp=Z,70nm,1.2s,mb5.5
SGMF Saint Gilles 51.81 16⇑ *iP* **P 23 47 46.6 +0.2**
SGMF pmax pmax
comp=Z,70nm,1.2s,mb5.5
AUTN L'Aution 51.83 27⇑ *eP* **P 23 47 48.0 +1.4**
PLDF La Plantade 51.85 22 *eP* **P 23 47 48.2 +1.5**
SAOF Saorge 51.88 27⇑ *eP* **P 23 47 48.0 +1.0**
ORIF Oris-en-Rattie 51.89 25⇑ *iP* **P 23 47 48.3 +1.3**
comp=Z,98nm,1.1s,mb5.3
ORIF *e*MLR MLR
comp=Z,3µm,19.5s,MS5.1
ORIF Oris-en-Rattie 51.89 25⇑ *iP* **P 23 47 48.3 +1.3**
comp=Z,49nm,1.1s,mb5.3
ORIF Oris-en-Rattie 51.89 25⇑ *iP* **P 23 47 48.3 +1.3**
ORIF pmax pmax
comp=Z,49nm,1.1s,mb5.3
BGF Bois d'Agland 52.06 21⇑ *iP* **P 23 47 49.2 +0.9**
comp=Z,240nm,1.7s,mb5.5
BGF Bois d'Agland 52.06 21⇑ *iP* **P 23 47 49.2 +0.9**
comp=Z,120nm,1.7s,mb5.5
BGF Bois d'Agland 52.06 21⇑ *iP* **P 23 47 49.2 +0.9**
BGF pmax pmax
comp=Z,120nm,1.7s,mb5.5
MBDF Montbardon 52.12 26⇑ *iP* **P 23 47 50.2 +1.5**
comp=Z,155nm,1.1s,mb5.6
MBDF Montbardon 52.12 26⇑ *iP* **P 23 47 50.2 +1.5**
comp=Z,77nm,1.1s,mb5.5
MBDF Montbardon 52.12 26⇑ *iP* **P 23 47 50.2 +1.5**
MBDF pmax pmax
comp=Z,77nm,1.1s,mb5.5
TRQA Tornquist 52.16 220 *eP* **P 23 47 46.8 -2.5**
comp=Z,54nm,1.4s,mb5.3
TRQA *e*PP PP 23 49 46.1 -1.7
TRQA *e*S **S 23 55 12.9 -0.2**
TRQA LR LR
comp=Z,2µm,20.0s,MS5.0
CEL Celeste 52.24 38 *eP* **P 23 47 48.7 -1.1**
comp=Z,143nm,1.0s,mb5.9
CEL PcP PcP 23 48 59.8 -1.4
CEL *e*PP PP 23 49 46.9 -1.5
CEL *e*S **S 23 55 13.4 -0.8**
CEL LR LR
comp=Z,3µm,22.0s,MS5.3
BBSR BB Station 52.35 313 *eP* **P 23 47 50.1 -0.7**
BBSR *e*S **S 23 55 12.8 -3.2**
BBSR LR LR
comp=Z,1µm,19.0s,MS5.0
GRR Gorron 52.42 17⇑ *iP* **P 23 47 51.1 +0.2**
comp=Z,178nm,1.2s,mb5.6
GRR Gorron 52.42 17⇑ *iP* **P 23 47 51.1 +0.2**
comp=Z,89nm,1.2s,mb5.6
GRR Gorron 52.42 17⇑ *iP* **P 23 47 51.1 +0.2**
GRR pmax pmax
comp=Z,89nm,1.2s,mb5.6
AVF Avril sur Loir 52.44 22⇑ *iP* **P 23 47 51.9 +0.8**
comp=Z,100nm,1.3s,mb5.3
AVF Avril sur Loir 52.44 22⇑ *iP* **P 23 47 51.9 +0.8**
comp=Z,50nm,1.3s,mb5.3
AVF Avril sur Loir 52.44 22⇑ *iP* **P 23 47 51.9 +0.8**
AVF pmax pmax
comp=Z,50nm,1.3s,mb5.3
SDDR Presa de Saban 52.47 295 *eP* **P 23 47 49.1 -2.8**
comp=Z,96nm,1.2s,mb5.6
SDDR *e*PcP PcP 23 49 02.1 -0.4
SDDR *e*S **S 23 55 14.7 -3.3**
SDDR LR LR
comp=Z,1µm,20.0s,MS5.0
SMF Signal de Mont 52.50 22⇑ *iP* **P 23 47 52.2 +0.6**
comp=Z,212nm,1.8s,mb5.5
SMF Signal de Mont 52.50 22⇑ *iP* **P 23 47 52.2 +0.6**
comp=Z,106nm,1.8s,mb5.5
SMF Signal de Mont 52.50 22⇑ *iP* **P 23 47 52.2 +0.6**
SMF pmax pmax
comp=Z,106nm,1.8s,mb5.5
MBAR Mbarara 52.53 90 *c iP* **P 23 47 53.6 +1.2**
HYF Humbligny 52.59 21⇑ *iP* **P 23 47 52.8 +0.6**
BOSA Boshof 52.63 126 P **P 23 47 52.1 -0.7**
comp=Z,24nm,0.5s,mb5.4,baz=299,slow=7.1,SNR=60
BOSA LR LR 00 07 15.8
comp=Z,2µm,19.9s,MS5.1,baz=293,slow=33
LPG La Plagne 52.72 25⇑ *iP* **P 23 47 54.8 +1.6**
comp=Z,124nm,1.0s,mb5.5
LPG La Plagne 52.72 25⇑ *iP* **P 23 47 54.8 +1.6**
comp=Z,62nm,1.0s,mb5.5
LPG La Plagne 52.72 25⇑ *iP* **P 23 47 54.8 +1.6**
LPG pmax pmax
comp=Z,62nm,1.0s,mb5.5
SSF Saint Saulge 52.73 22⇑ *iP* **P 23 47 53.9 +0.7**
comp=Z,221nm,1.5s,mb5.6
SSF Saint Saulge 52.73 22⇑ *iP* **P 23 47 53.9 +0.7**
comp=Z,111nm,1.5s,mb5.6
SSF Saint Saulge 52.73 22⇑ *iP* **P 23 47 53.9 +0.7**
SSF pmax pmax
comp=Z,111nm,1.5s,mb5.6
LPL La Plagne 52.73 25⇑ *iP* **P 23 47 54.7 +1.4**
comp=Z,107nm,1.0s,mb5.4
LPL La Plagne 52.73 25⇑ *iP* **P 23 47 54.7 +1.4**
comp=Z,54nm,1.0s,mb5.4
LPL La Plagne 52.73 25⇑ *iP* **P 23 47 54.7 +1.4**
LPL pmax pmax
comp=Z,54nm,1.0s,mb5.4
ROSC El Rosal 52.80 277 P **P 23 47 53.6 -0.8**
comp=Z,16nm,0.8s,mb5.0,baz=144,slow=5.4,SNR=17
ROSC LR LR 00 09 08.3
comp=Z,3µm,18.9s,MS5.3,baz=139,slow=35
LDF La Druitiere 52.83 18⇑ *iP* **P 23 47 53.9 0.0**
comp=Z,19nm,1.1s,mb4.7
LDF La Druitiere 52.83 18⇑ *iP* **P 23 47 53.9 0.0**
comp=Z,9.4nm,1.0s,mb4.7
LDF La Druitiere 52.83 18⇑ *iP* **P 23 47 53.9 0.0**
LDF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
FLN La Foliniere 52.87 18⇑ *iP* **P 23 47 54.1 -0.1**
comp=Z,101nm,1.2s,mb5.3
FLN *e*MLR MLR
comp=Z,3µm,18.0s,MS5.0
FLN La Foliniere 52.87 18⇑ *iP* **P 23 47 54.1 -0.1**
comp=Z,50nm,1.2s,mb5.3
FLN LR LR
comp=Z,3µm,18.0s,MS5.3
FLN La Foliniere 52.87 18⇑ *iP* **P 23 47 54.1 -0.1**
FLN pmax pmax
comp=Z,50nm,1.2s,mb5.3
FLN MLR MLR
comp=Z,3µm,18.0s,MS5.3
LOR Lormes 53.03 22⇑ *iP* **P 23 47 56.1 +0.6**
comp=Z,322nm,1.6s,mb5.7
LOR *e*MLR MLR
comp=Z,4µm,21.8s,MS5.2
LOR Lormes 53.03 22⇑ *iP* **P 23 47 56.1 +0.6**
comp=Z,161nm,1.6s,mb5.7
LOR LR LR
comp=Z,4µm,21.8s,MS5.5
LOR Lormes 53.03 22⇑ *iP* **P 23 47 56.1 +0.6**
LOR pmax pmax
comp=Z,161nm,1.6s,mb5.7
LOR MLR MLR
comp=Z,4µm,21.8s,MS5.5
GRTK Grand Turk 53.09 298 *eP* **P 23 47 55.9 -0.6**
GRTK *e*PP PP 23 49 54.6 -1.8
GRTK *e*S **S 23 55 24.9 -1.5**
GRTK LR LR
comp=Z,1µm,21.0s,MS5.0
CUC Castrocucco 53.30 36 *eP* **P 23 47 57.5 -0.1**
comp=Z,22nm,0.9s,mb5.1
CUC *e*PP PP 23 49 55.7 -2.3
CUC *e*S **S 23 55 28.4 -0.2**
CUC LR LR
comp=Z,3µm,22.0s,MS5.3
TIP Timpagrande 53.34 37 *eP* **P 23 47 56.9 -1.0**
comp=Z,226nm,1.6s,mb5.8
TIP *e*PP PP 23 49 57.1 -1.3
TIP *e*S **S 23 55 28.8 -0.4**
TIP LR LR
comp=Z,5µm,22.0s,MS5.5
CABF La Chapelle 53.35 24⇑ *iP* **P 23 47 58.2 +0.4**
comp=Z,98nm,1.2s,mb5.6
CABF La Chapelle 53.35 24⇑ *iP* **P 23 47 58.2 +0.4**
CABF pmax pmax
comp=Z,98nm,1.2s,mb5.6
CFAA Coronel Fontan 53.36 230 P **P 23 47 54.7 -3.5**
comp=Z,0.4nm,0.7s,baz=83,slow=6.4,SNR=5.5
AQU L'Aquila 53.54 32⇑ *eP* **P 23 47 60.0 +0.7**
AQU *e*PP PP 23 50 00.2 +0.1
AQU *e*S **S 23 55 31.7 -0.1**
AQU LR LR
comp=Z,4µm,21.0s,MS5.5
LOMF Lomont 54.24 24⇑ *eP* **P 23 48 05.1 +0.7**
LCO Las Campanas 54.28 234 *eP* **P 23 48 01.9 -3.1**
LCO PP PP 23 50 07.9 +0.9
LCO *e*S **S 23 55 44.0 +1.8**
LCO LR LR
comp=Z,3µm,21.0s,MS5.3
MEZF Maizieres J'vi 54.50 22⇑ *iP* **P 23 48 06.6 +0.4**
comp=Z,162nm,1.2s,mb5.6
MEZF Maizieres J'vi 54.50 22⇑ *iP* **P 23 48 06.6 +0.4**
comp=Z,162nm,1.2s,mb5.9
HAU Haudompre 54.59 23⇑ *iP* **P 23 48 07.1 +0.3**
comp=Z,200nm,1.0s,mb5.8
HAU *e*MLR MLR
comp=Z,5µm,22.8s,MS5.2
HAU Haudompre 54.59 23⇑ *iP* **P 23 48 07.1 +0.3**
comp=Z,100nm,1.0s,mb5.8
HAU LR LR
comp=Z,5µm,22.8s,MS5.5
HAU Haudompre 54.59 23⇑ *iP* **P 23 48 07.1 +0.3**
HAU pmax pmax
comp=Z,100nm,1.0s,mb5.8
HAU MLR MLR
comp=Z,5µm,22.8s,MS5.5
BBS Basel-Blauen 54.61 24⇑ *eP* **P 23 48 07.4 +0.4**
THEF They Montfort 54.63 22⇑ *eP* **P 23 48 07.9 +0.8**
HINF Hinteralfeld 54.63 23⇑ *iP* **P 23 48 07.1 -0.1**
comp=Z,200nm,1.6s,mb5.6
HINF Hinteralfeld 54.63 23⇑ *iP* **P 23 48 07.1 -0.1**
comp=Z,100nm,1.6s,mb5.6
HINF Hinteralfeld 54.63 23⇑ *iP* **P 23 48 07.1 -0.1**
HINF pmax pmax
comp=Z,100nm,1.6s,mb5.6
MOF Molkenrain 54.77 24⇑ *eP* **P 23 48 08.3 +0.1**
ECH Echery 55.07 23⇑ *eP* **P 23 48 10.7 +0.3**
ECH Echery 55.07 23 *eP* **P 23 48 10.2 -0.2**
comp=Z,47nm,1.0s,mb5.5
ECH *e*PcP PcP 23 49 12.0 +0.2
ECH *e*PP PP 23 50 12.1 -1.6
ECH *e*S **S 23 55 52.3 0.0**
ECH LR LR
comp=Z,3µm,19.0s,MS5.3
ECH Echery 55.07 23 *eP* **P 23 48 10.2 -0.2**
ECH *e* 23 49 12.0
ECH *e* 23 50 12.1
ECH *e*S **S 23 55 52.3 0.0**
ECH pmax pmax
comp=Z,47nm,1.0s,mb5.5
ECH MLR MLR
comp=Z,3µm,19.0s,MS5.3
DAVOX Davos/Dischmat 55.08 26 P **P 23 48 08.6 -1.8**
comp=Z,63nm,0.9s,mb5.7,baz=221,slow=6.2,SNR=67
DAVOX LR LR 00 08 34.2
comp=Z,1µm,22.0s,MS5.0,baz=233,slow=33
VLS Valsamata 55.14 40 *eP* **P 23 48 13.3 +2.3**
FELD Feldberg im Sc 55.14 24 *eP* **P 23 48 11.1 +0.2**
LIBD Limburg 55.20 24⇑ *eP* **P 23 48 11.9 +0.6**
CDF Champ du Feu 55.28 23⇑ *iP* **P 23 48 12.0 +0.2**
comp=Z,141nm,1.2s,mb5.6
CDF Champ du Feu 55.28 23⇑ *iP* **P 23 48 12.0 +0.2**
comp=Z,71nm,1.2s,mb5.6
CDF Champ du Feu 55.28 23⇑ *iP* **P 23 48 12.0 +0.2**
CDF pmax pmax
comp=Z,71nm,1.2s,mb5.6
ITM Ithomi 55.47 42 P **P 23 48 13.2 -0.2**
ITM Ithomi 55.47 42 *eP* **P 23 48 14.0 +0.6**
ITM Ithomi 55.47 42 P **P 23 48 13.2 -0.2**
DAVA Damuels 55.47 26⇑ *iP* **P 23 48 13.1 -0.2**
comp=Z,131nm,1.0s,mb5.9,SNR=32
BAIF Baives 55.51 20⇑ *iP* **P 23 48 13.3 -0.2**
comp=Z,131nm,1.2s,mb5.5
BAIF Baives 55.51 20⇑ *iP* **P 23 48 13.3 -0.2**
comp=Z,65nm,1.2s,mb5.5
BAIF Baives 55.51 20⇑ *iP* **P 23 48 13.3 -0.2**
BAIF pmax pmax
comp=Z,65nm,1.2s,mb5.5
KEK Kerkira 55.53 38 *eP* **P 23 48 14.1 +0.3**
LKD2 Lefkada island 55.53 40 P **P 23 48 13.8 -0.1**
DSB Dublin 55.55 11 *eP* **P 23 48 13.8 +0.2**
BFO Black Forest 55.63 24 *eP* **P 23 48 14.5 +0.1**
comp=Z,74nm,1.1s,mb5.6
BFO Black Forest 55.63 24 *eP* **P 23 48 14.5 +0.1**
BFO pmax pmax
comp=Z,74nm,1.1s,mb5.6
FETA Feichten 55.64 26⇑ *iP* **P 23 48 13.7 -0.8**
comp=Z,103nm,1.0s,mb5.8,SNR=34
SPAK Spaichingen-Ko 55.64 24⇑ *eP* **P 23 48 14.8 +0.3**
NNA Nana 55.66 256 *eP* **P 23 48 15.5 +0.3**
NNA *e*PP PP 23 50 19.7 0.0
NNA *e*S **S 23 56 01.6 +0.3**
NNA LR LR
comp=Z,3µm,20.0s,MS5.4
DOU Dourbes 55.68 20 P **P 23 48 13.2 -1.5**
DOU PP PP 23 50 16.6 -2.5
KYTH Kithira 55.74 44 *eP* **P 23 48 17.1 +1.7**
GVD Gavdhos 55.75 46 *eP* **P 23 48 15.3 -0.2**
comp=Z,132nm,0.6s,mb6.1
GVD *e*PcP PcP 23 49 14.6 0.0
IGT Igoumenitsa 55.76 39 P **P 23 48 15.7 +0.2**
IGT Igoumenitsa 55.76 39 P **P 23 48 15.7 +0.2**
GIVF Givet 55.76 20⇑ *iP* **P 23 48 15.1 -0.2**
comp=Z,94nm,1.2s,mb5.4
GIVF Givet 55.76 20⇑ *iP* **P 23 48 15.1 -0.2**
comp=Z,47nm,1.2s,mb5.4
GIVF Givet 55.76 20⇑ *iP* **P 23 48 15.1 -0.2**
GIVF pmax pmax
comp=Z,47nm,1.2s,mb5.4
NVLJ Novalja 55.84 31 P **P 23 48 15.6 -0.4**
VLX Vlachokerasia 55.87 42 P **P 23 48 17.1 +0.8**
WLF Walferdange 55.87 22 P **P 23 48 16.8 +0.7**
comp=Z,36nm,2.1s,mb5.0
WLF PP PP 23 50 19.4 -1.5
WLF Walferdange 55.87 22 *eP* **P 23 48 16.3 +0.2**
comp=Z,157nm,2.1s,mb5.7
WLF Walferdange 55.87 22 *eP* **P 23 48 16.2 +0.1**
comp=Z,35nm,1.1s,mb5.3
WLF *e*PP PP 23 50 18.8 -2.1
WLF *e*S **S 23 56 01.6 -1.3**
WLF LR LR
comp=Z,3µm,20.0s,MS5.4
WLF Walferdange 55.87 22 *eP* **P 23 48 16.2 +0.1**
WLF *e* 23 50 18.8
WLF *e*S **S 23 56 01.6 -1.3**
WLF pmax pmax
comp=Z,35nm,1.1s,mb5.3
WLF MLR MLR
comp=Z,3µm,20.0s,MS5.4
VLI Velíai 55.90 43 *eP* **P 23 48 16.1 -0.5**
SNF Seneffe 55.92 20 P **P 23 48 16.7 +0.3**
LANF Langenberg 55.95 23⇑ *eP* **P 23 48 17.2 +0.6**
RETA Reutte 56.01 26⇑ *iP* **P 23 48 16.5 -0.6**
comp=Z,73nm,1.3s,mb5.5,SNR=25
MOTA Moosalm 56.05 26⇑ *iP* **P 23 48 16.7 -0.7**
comp=Z,21nm,0.7s,mb5.2,SNR=17
LAKA Lakka 56.08 41 P **P 23 48 18.5 +0.7**
TRI Trieste 56.09 29 *eP* **P 23 48 17.9 +0.2**
comp=Z,131nm,1.1s,mb5.9
TRI *e*PP PP 23 50 22.0 -1.0
TRI *e*S **S 23 56 04.5 -1.5**
TRI LR LR
comp=Z,2µm,19.0s,MS5.2
TRI Trieste 56.09 29 *eP* **P 23 48 17.9 +0.1**
TRI *e* 23 50 22.0
TRI *e*S **S 23 56 04.5 -1.5**
TRI pmax pmax
comp=Z,131nm,1.1s,mb5.9
TRI MLR MLR
comp=Z,2µm,19.0s,MS5.2
VAM Vamos 56.11 45 *eP* **P 23 48 18.4 +0.3**
EFP Efpalio 56.13 41 P **P 23 48 18.5 +0.3**
GUR Goura 56.15 42 P **P 23 48 18.8 +0.5**
BCLA Clavier 56.20 21 P **P 23 48 16.6 -1.8**
BCLA PP PP 23 50 21.2 -2.5
GTBY Guantanamo Bay 56.20 295 P **P 23 48 18.1 -0.9**
GTBY *e*S **S 23 56 07.8 -0.5**

GTBY LR LR
comp=Z,1µm,19.0s,MS5.0
TRIZ Trizonia 56.21 41 P **P 23 48 19.3 +0.6**
WTTA Wattenberg 56.23 27⇑*iP* **P 23 48 18.2 -0.4**
comp=Z,91nm,1.4s,mb5.6,SNR=33
STON Ston 56.24 34 P **P 23 48 17.2 -1.6**
RUP Ruppelstein 56.24 22‖*eP* **P 23 48 19.1 +0.4**
ABTA Abfaltersbach 56.25 28‖*iP* **P 23 48 18.7 -0.2**
comp=Z,132nm,1.4s,mb5.8,SNR=39
WATA Walderalm 56.26 27⇑*iP* **P 23 48 18.3 -0.6**
comp=Z,23nm,0.8s,mb5.3,SNR=7.6
KALE Kalithea 56.27 41 P **P 23 48 19.7 +0.5**
STU Stuttgart 56.34 24 *eP* **P 23 48 19.6 +0.1**
comp=Z,56nm,1.0s,mb5.5
STU Stuttgart 56.34 24 *eP* **P 23 48 19.6 +0.2**
STU pmax pmax
comp=Z,56nm,1.0s,mb5.5
ROBS Robic 56.35 29 *eP* **P 23 48 19.4 -0.2**
JAVS Javornik 56.37 29 *iP* **P 23 48 20.2 +0.5**
JAVS *eS* **S 23 56 12.9 +3.2**
VOY Vojsko 56.39 29 *eP* **P 23 48 18.5 -1.3**
VOY *e* 23 48 20.3
VOY *e* 23 48 35.0
VOY *e* 23 48 51.8
VOY *e* 23 49 14.0
VOY *e* 23 49 35.5
VOY *e* 23 50 22.8
HCY Herceg Novi 56.42 35⇑*iP* **P 23 48 19.6 -0.6**
CEY Cerknica 56.44 30 *eP* **P 23 48 20.2 -0.1**
DID Didima 56.52 42 *eP* **P 23 48 19.6 -1.4**
DID Didima 56.52 42 P **P 23 48 20.1 -0.9**
DSF Desfina 56.53 41 P **P 23 48 21.0 -0.1**
IDI Anoyia 56.54 46 *eP* **P 23 48 20.6 -0.6**
TIR Tirane 56.55 37 *eP* **P 23 48 20.7 -0.4**
comp=Z,25nm,0.8s,mb5.3
TIR *eP* PP 23 50 25.0 -2.1
TIR *eS* **S 23 56 11.8 -0.3**
TIR LR LR
comp=Z,4µm,21.0s,MS5.5
TIR Tirane 56.55 37 *eP* **P 23 48 20.7 -0.4**
TIR *e* 23 50 25.0
TIR *eS* **S 23 56 11.8 -0.4**
TIR pmax pmax
comp=Z,25nm,0.8s,mb5.3
TIR MLR MLR
comp=Z,4µm,21.0s,MS5.5
TIR Tirane 56.55 37 P **P 23 48 22.2 +1.1**
ULC Ulcinj 56.56 36⇑*iP* **P 23 48 20.2 -0.9**
ULC Ulcinj 56.56 36⇑*iP* **P 23 48 20.3 -0.8**
BUM Brajici-Budva 56.56 35⇑*iP* **P 23 48 21.0 -0.2**
BUM Brajici-Budva 56.56 35⇑*iP* **P 23 48 21.1 -0.1**
ABH Alteburg 56.57 22 *eP* **P 23 48 21.5 +0.4**
MEM Membach 56.60 21 P **P 23 48 22.4 +1.1**
LTK Loutraki 56.62 42 P **P 23 48 21.2 -0.4**
GORS Gorjuse 56.64 29 *eP* **P 23 48 21.3 -0.3**
OTAV Otavalo 56.66 271 *eP* **P 23 48 21.9 -0.5**
comp=Z,134nm,2.7s,mb5.5
OTAV *eS* **S 23 56 15.4 +0.7**
OTAV LR LR
comp=Z,2µm,21.0s,MS5.1
BOJS Bojanci 56.69 30 *iP* **P 23 48 22.8 +0.8**
BOJS *eS* **S 23 56 13.8 -0.1**
MYKA Terra Mystica 56.69 29 P **P 23 48 22.2 +0.2**
comp=Z,64nm,1.0s,mb5.6
HGN Heimansgroeve 56.70 21⇑*iP* **P 23 48 22.3 +0.3**
comp=Z,74nm,1.3s,mb5.6
HGN Heimansgroeve 56.70 21 *i* x pP 23 48 27.2 0.0
HGN Heimansgroeve 56.70 21 *eP* PP 23 50 39.6 +11
HGN Heimansgroeve 56.70 21 *iS* **S 23 56 16.6 +2.7**
LJU Ljubljana 56.71 30 *iP* **P 23 48 22.6 +0.5**
LJU *eS* **S 23 56 15.6 +1.5**
NEST Nestorio 56.72 38 P **P 23 48 23.4 +1.1**
BRY Bratogost 56.74 35⇑*iP* **P 23 48 21.1 -1.3**
BRY Bratogost 56.74 35⇑*iP* **P 23 48 21.2 -1.2**
AGG Agios Georgios 56.74 40 P **P 23 48 22.2 -0.3**
AGG Agios Georgios 56.74 40 *eP* **P 23 48 22.4 -0.1**
AGG Agios Georgios 56.74 40 P **P 23 48 22.2 -0.3**
FUR Furstenfeldbru 56.75 26 *eP* **P 23 48 22.4 0.0**
comp=Z,209nm,1.3s,mb6.0
FUR Furstenfeldbru 56.75 26 *eP* **P 23 48 22.4 0.0**
FUR pmax pmax
comp=Z,209nm,1.3s,mb6.0
NAIG Nisos Aigina 56.82 42 *eP* **P 23 48 22.0 -1.1**
TOD Tromm 56.84 23⇑*eP* **P 23 48 23.4 +0.4**
THL Klokotos Trika 56.84 40 *eP* **P 23 48 24.0 +0.8**
THL Klokotos Trika 56.84 40 P **P 23 48 23.2 0.0**
TTG Podgorica 56.85 36⇑*iP* **P 23 48 22.3 -0.9**
KBA Koelnbreinsper 56.88 28⇑*iP* **P 23 48 23.4 0.0**
comp=Z,17nm,0.8s,mb5.1,SNR=11
NKY Niksic 56.94 35⇑*iP* **P 23 48 22.9 -0.9**
NKY Niksic 56.94 35⇑*iP* **P 23 48 23.0 -0.8**
LKR Lokris 56.98 41 P **P 23 48 23.7 -0.5**
LKR Lokris 56.98 41 *eP* **P 23 48 24.3 +0.1**
LKR Lokris 56.98 41 P **P 23 48 23.7 -0.5**
ATAL Atalanti 57.01 41 P **P 23 48 24.3 -0.1**
NPS Neapolis 57.05 46 *eP* **P 23 48 25.6 +0.9**
VLY Voula,Athens 57.08 42 *eP* **P 23 48 23.2 -1.7**
ATH Athens Observa 57.09 42 P **P 23 48 25.9 +0.9**
KZN Kozani 57.11 39 P **P 23 48 25.4 +0.3**
KZN Kozani 57.11 39 P **P 23 48 25.4 +0.3**
ATHU Athens Univers 57.13 42 P **P 23 48 25.9 +0.6**
FNA Florina 57.13 38 P **P 23 48 25.4 +0.1**
FNA Florina 57.13 38 P **P 23 48 25.4 +0.1**
UPM Unac-Piva 57.13 35⇑*iP* **P 23 48 24.6 -0.6**
UPM Unac-Piva 57.13 35⇑*iP* **P 23 48 24.7 -0.5**
TNS Taunus Mts 57.19 23 *eP* **P 23 48 25.7 +0.2**
comp=Z,114nm,1.1s,mb5.8
TNS Taunus Mts 57.19 23 *eP* **P 23 48 25.7 +0.2**
TNS pmax pmax
comp=Z,114nm,1.1s,mb5.8
PTL Penteli 57.23 42 *eP* **P 23 48 26.4 +0.4**
BIA Bitola 57.24 38 P **P 23 48 24.8 -1.2**
BIA Bitola 57.24 38 P **P 23 48 24.8 -1.2**
BIA Bitola 57.24 38 *eP* **P 23 48 23.1 -2.9**
SISC Sisak 57.24 31 P **P 23 48 26.7 +0.8**
PVY Plav 57.37 36⇑*iP* **P 23 48 26.4 -0.5**
PVY Plav 57.37 36⇑*iP* **P 23 48 26.5 -0.4**
KRUS Krusevo 57.40 38 *eP* **P 23 48 24.6 -2.5**
SOKA Soboth 57.40 29 P **P 23 48 26.9 -0.2**
comp=Z,80nm,1.2s,mb5.6
ZKR Zakros 57.41 46 *eP* **P 23 48 28.1 +0.8**
PERS Pernice 57.41 29 *iP* **P 23 48 27.1 0.0**
PERS *eS* **S 23 56 23.9 +0.5**
LIT Litokhoron 57.44 39 P **P 23 48 26.0 -1.5**
LIT Litokhoron 57.44 39 P **P 23 48 26.0 -1.5**
NEO Neokhori 57.48 41 *eP* **P 23 48 28.5 +0.8**
XOR Xorichti 57.49 41 P **P 23 48 27.5 -0.3**
XOR Xorichti 57.49 41 P **P 23 48 27.5 -0.3**
PLE Pljevlja 57.49 35⇑*iP* **P 23 48 26.8 -0.9**
PLE Pljevlja 57.49 35⇑*iP* **P 23 48 26.9 -0.8**
IVA Berane 57.50 35⇑*iP* **P 23 48 26.9 -0.9**
IVA Berane 57.50 35⇑*iP* **P 23 48 27.0 -0.8**
BUG Bochum--Univer 57.74 21 *eP* **P 23 48 29.6 +0.3**
comp=Z,59nm,1.1s,mb5.5
AOS Alonnisos 57.83 41 P **P 23 48 29.9 -0.3**
AOS Alonnisos 57.83 41 P **P 23 48 29.9 -0.3**
APE Apeiranthos 57.87 44 *eP* **P 23 48 31.0 +0.5**
SKO Skopje 57.87 37 *eP* **P 23 48 29.1 -1.3**
MOA Molln 57.87 28 P **P 23 48 29.1 -1.2**
comp=Z,45nm,0.9s,mb5.5,SNR=22
GRG Griva 57.87 39 P **P 23 48 30.0 -0.5**
GRG Griva 57.87 39 P **P 23 48 30.0 -0.5**
GRA1 Grafenberg Arr 57.89 25 *eP* **P 23 48 30.3 -0.1**
comp=Z,95nm,1.1s,mb5.7
GRA1 *epP* pP 23 48 35.1 -0.5
GRA1 *ePP* PP 23 50 36.3 -2.5
GRA1 *eS* **S 23 56 32.1 +2.6**
GRF Grafenberg Arr 57.89 25 *eP* **P 23 48 30.3 -0.1**
comp=Z,95nm,1.1s,mb5.7
GRF *epP* pP 23 48 35.1 -0.5
GRF *eS* **S 23 56 32.1 +2.6**
GRF Grafenberg Arr 57.89 25 *eP* **P 23 48 30.3 -0.1**
comp=Z,95nm,1.1s,mb5.7
GRF *epP* pP 23 48 35.1 -0.5
GRF *ePP* PP 23 50 36.3 -2.5
GRF *eS* **S 23 56 32.1 +2.6**
GRF Grafenberg Arr 57.89 25 *eP* **P 23 48 30.3 -0.1**
GRF *e**PP pP 23 48 35.1 -0.5
GRF *e* 23 50 36.3
GRF *eS* **S 23 56 32.1 +2.6**
GRF pmax pmax
comp=Z,95nm,1.1s,mb5.7
GRF Grafenberg Arr 57.89 25 *eP* **P 23 48 30.3 -0.1**
GRF *e**PP pP 23 48 35.1 -0.5
GRF *e* 23 50 36.3
GRF *eS* **S 23 56 32.1 +2.6**
GRF pmax pmax
comp=Z,95nm,1.1s,mb5.7
WTSB Winterswijk 58.01 20⇑*iP* **P 23 48 31.0 -0.2**
comp=Z,108nm,1.3s,mb5.7
MTDJ Mount Denham 58.01 292 *eP* **P 23 48 31.7 -0.1**
MTDJ *eS* **S 23 56 30.3 -1.9**
MTDJ LR LR
comp=Z,996nm,22.0s,MS4.9
THE Thessaloniki 58.04 39 P **P 23 48 31.1 -0.6**
THE Thessaloniki 58.04 39 P **P 23 48 31.1 -0.6**
ARSA Arzberg 58.04 29⇑*iP* **P 23 48 31.4 -0.2**
comp=Z,47nm,1.1s,mb5.5,SNR=20
HORT Hortiatis 58.11 39 P **P 23 48 31.7 -0.4**
HORT Hortiatis 58.11 39 P **P 23 48 31.7 -0.4**
PAIG Paliouri 58.11 40 P **P 23 48 31.6 -0.6**
PAIG Paliouri 58.11 40 P **P 23 48 31.6 -0.6**
ESK Eskdalemuir 58.14 12 *eP* **P 23 48 31.6 -0.4**
ESK *ePP* PP 23 50 41.6 +0.6
ESK *eS* **S 23 56 31.8 -0.9**
ESK LR LR
comp=Z,2µm,22.0s,MS5.3
EKA Eskdalemuir Ar 58.17 12 P **P 23 48 32.0 -0.2**
comp=Z,7.1nm,0.7s,mb4.8,baz=206,slow=6.1,SNR=11
VAY Valandovo 58.18 38 P **P 23 48 32.5 -0.1**
VAY Valandovo 58.18 38 P **P 23 48 32.5 -0.1**
VAY Valandovo 58.18 38 *eP* **P 23 48 30.0 -2.6**
WET Wettzell 58.19 26 *eP* **P 23 48 32.4 -0.1**
comp=Z,71nm,1.0s,mb5.7
WET Wettzell 58.19 26 *eP* **P 23 48 32.4 -0.1**
WET pmax pmax
comp=Z,71nm,1.0s,mb5.7
KNT Kendrikon 58.30 39 P **P 23 48 33.4 0.0**
KNT Kendrikon 58.30 39 P **P 23 48 33.4 0.0**
DIVS Divibare 58.31 34 P **P 23 48 33.7 +0.3**
GEC2 GERESS Array S 58.33 27 *eP* **P 23 48 33.4 -0.1**
comp=Z,61nm,1.1s,mb5.5
GEC2 GERESS Array S 58.33 27 *eP* **P 23 48 33.4 -0.1**
GEC2 pmax pmax
comp=Z,61nm,1.1s,mb5.5
SOH Sokhos 58.39 39 P **P 23 48 34.0 -0.1**
SOH Sokhos 58.39 39 P **P 23 48 34.0 -0.1**
KHC Kasperske Hory 58.48 26 *eP* **P 23 48 34.5 -0.1**
comp=Z,47nm,1.0s,mb5.5
KHC *ePP* PP 23 50 43.6 -0.5
KHC Kasperske Hory 58.48 26 *eP* **P 23 48 34.5 -0.1**
KHC *e* 23 50 43.6
KHC pmax pmax
comp=Z,47nm,1.0s,mb5.5
KHC Kasperske Hory 58.48 26 *eP* **P 23 48 32.0 -2.6**
KHC *ex* x 23 48 34.4
KHC *ePP* PP 23 50 38.1 -6.1
KHC *eS* **S 23 56 38.6 +1.3**
KHC AMS AMS 00 14 10.0
comp=Z,2µm,16.0s
OUR Ouranopolis 58.53 40 P **P 23 48 34.6 -0.5**
OUR Ouranopolis 58.53 40 P **P 23 48 34.6 -0.5**
IBBN Ibbenburen 58.62 21 *eP* **P 23 48 35.8 +0.3**
comp=Z,89nm,1.4s,mb5.6
WIT Witteveen 58.66 20⇑*eP* **P 23 48 35.9 +0.1**
comp=Z,306nm,1.3s,mb6.2
BCIP Isla Barro Col 58.67 281 *eP* **P 23 48 36.6 0.0**
comp=Z,38nm,1.3s,mb5.3
BCIP *eS* **S 23 56 40.5 -0.5**
BCIP LR LR
comp=Z,1µm,20.0s,MS5.0
CONA Conrad Observa 58.68 29‖*iP* **P 23 48 35.8 -0.1**
comp=Z,58nm,1.2s,mb5.5,SNR=23
SRS Serrai 58.71 39 P **P 23 48 36.3 0.0**
SRS Serrai 58.71 39 P **P 23 48 36.3 0.0**
MOX Moxa 58.78 24 *eP* **P 23 48 36.9 +0.3**
comp=Z,119nm,1.6s,mb5.7
MOX *e* pP 23 48 42.2 +0.4
MOX *eS* **S 23 56 42.0 +0.9**
MOX
comp=Z,2µm,18.0s
MOX Moxa 58.78 24 *eP* **P 23 48 36.8 +0.2**
comp=Z,60nm,1.0s,mb5.6
MOX Moxa 58.78 24 *eP* **P 23 48 36.9 +0.3**
MOX *e* pP 23 48 42.2 +0.4
MOX *eS* **S 23 56 42.0 +0.9**
MOX pmax pmax
comp=Z,119nm,1.6s,mb5.7
MOX MLR MLR
comp=Z,2µm,18.0s,MS5.3
NKC Novy Kostel 58.81 25 *eP* **P 23 48 37.1 +0.2**
NKC *e* 23 50 41.8
NKC *eS* **S 23 56 41.9 +0.3**
NKC MLR MLR
comp=Z,2µm,15.3s,MS5.3
NKC Novy Kostel 58.81 25 *eP* **P 23 48 37.1 +0.2**
NKC *ePP* PP 23 50 41.8 -5.3
NKC *eS* **S 23 56 41.9 +0.3**
NKC AMS AMS 00 15 00.0
comp=Z,2µm,15.3s
SOP Sopron 58.85 29⇑*eP* **P 23 48 37.6 +0.5**
CHOS Chios island 58.88 43 *eP* **P 23 48 37.4 -0.2**
PKSM Moragy 58.92 32⇑*P* **P 23 48 35.8 -1.9**
PKSM Moragy 58.92 32⇑*iP* **P 23 48 35.8 -1.9**
TANN Tannenbergstha 58.96 25 *eP* **P 23 48 37.9 +0.1**
comp=Z,52nm,1.1s,mb5.5
KMBO Kilima Mbogo 59.04 91 P **P 23 48 42.2 +3.0**
KMBO LR LR 00 12 37.5
KMBO Kilima Mbogo 59.04 91 P **P 23 48 42.2 +3.0**
comp=Z,6.3nm,1.0s,mb4.6,baz=180,slow=24,SNR=9.1
KMBO LR LR 00 12 37.5
comp=Z,3µm,18.6s,MS5.4,baz=86,slow=34
LIA Limnos Island 59.07 41 *eP* **P 23 48 39.9 +1.0**
PLCA Paso Flores 59.20 222 P **P 23 48 40.0 +0.2**
PLCA LR LR 00 10 57.7
PLCA Paso Flores 59.20 222 P **P 23 48 40.0 +0.2**
comp=Z,3.4nm,0.9s,mb4.4,baz=52,slow=17,SNR=4.2
PLCA LR LR 00 10 57.7
comp=Z,1µm,19.7s,MS5.0,baz=54,slow=33
BDRM Kayabasi 59.20 45 *iP* **P 23 48 39.6 -0.2**
CLZ Clausthal 59.22 23 *eP* **P 23 48 39.8 +0.2**
comp=Z,27nm,1.3s,mb5.1
CLZ Clausthal 59.22 23 *eP* **P 23 48 39.8 +0.2**
CLZ pmax pmax
comp=Z,27nm,1.3s,mb5.1
KAVA Kavala 59.22 40 P **P 23 48 40.0 +0.1**
URLA Izmir 59.24 43 *iP* **P 23 48 37.9 -2.2**
VTS Vitosha 59.30 37⇑*P* **P 23 48 39.2 -1.1**
VTS Vitosha 59.30 37 P **P 23 48 41.0 +0.6**
VTS Vitosha 59.30 37⇑*iP* **P 23 48 39.3 -1.1**
PRK Paraskevi 59.46 42 P **P 23 48 41.7 +0.1**
PRK Paraskevi 59.46 42 *eP* **P 23 48 42.2 +0.6**
PRK Paraskevi 59.46 42 P **P 23 48 41.7 +0.1**
ZST Bratislava 59.47 29 *eP* **P 23 48 41.9 +0.5**
comp=Z,107nm,1.1s,mb5.8
ZST *e* 23 52 21.6
ZST *eS* **S 23 56 50.7 +0.6**
ZST *eSS* SS 00 00 45.2 -0.3
ZST LR LR
comp=Z,800nm,36.1s,MS4.6
ZST Bratislava 59.47 29 *eP* **P 23 48 41.9 +0.5**
ZST *e* 23 52 21.6
ZST *eS* **S 23 56 50.7 +0.6**
ZST *eSS* SS 00 00 45.2 -0.3
ZST pmax pmax
comp=Z,107nm,1.1s,mb5.8
ZST MLR MLR
comp=Z,800nm,36.1s,MS4.6
TREC Trest 59.47 27 *eP* **P 23 48 38.9 -2.5**
TREC *e* 23 48 41.1
TREC *e* 23 50 49.6
TREC *eS* **S 23 56 50.4 +0.3**
TREC MLR MLR
comp=Z,2µm,15.3s,MS5.4
TREC Trest 59.47 27 *eP* **P 23 48 38.9 -2.5**
TREC *ex* x 23 48 41.1
TREC *ePP* PP 23 50 49.6 -3.3
TREC *eS* **S 23 56 50.4 +0.3**
TREC AMS AMS 00 19 30.0
comp=Z,2µm,15.3s
PRU Pruhonice 59.54 26 *eP* **P 23 48 42.5 +0.6**
PRU *e* 23 50 48.1
PRU *eS* **S 23 56 50.8 -0.2**
PRU MLR MLR
comp=Z,2µm,15.8s,MS5.4
PRU Pruhonice 59.54 26 *eP* **P 23 48 42.5 +0.6**
PRU *ePP* PP 23 50 48.1 -5.4
PRU *eS* **S 23 56 50.8 -0.2**
PRU AMS AMS 00 14 50.0
comp=Z,2µm,15.8s
PRA Prague 59.55 26 P **P 23 48 43.0 +1.0**
PRA PP PP 23 50 50.0 -3.6
PRA S **S 23 56 52.0 +0.8**
PRA AMS AMS 00 15 00.0
BLCB Balcova 59.56 43 P **P 23 48 42.6 +0.3**
BLCB Balcova 59.56 43 P **P 23 48 42.6 +0.3**
BOZC Bozcaada 59.62 41 *iP* **P 23 48 43.5 +0.9**
MODS Modra-Piesok 59.67 29 *eP* **P 23 48 43.7 +0.9**
MODS Modra-Piesok 59.67 29 *eP* **P 23 48 43.7 +0.9**
KDAG Bornova 59.72 43 *iP* **P 23 48 43.1 -0.3**
AYVA Ayvalik 59.77 42 *iP* **P 23 48 44.4 +0.6**
AYDN Tasoluk 59.79 44 *iP* **P 23 48 44.0 +0.1**
CLL Collm 59.86 24 *eP* **P 23 48 44.2 +0.2**
comp=Z,35nm,1.1s,mb5.3
CLL Collm 59.86 24⇑*iP* **P 23 48 43.4 -0.6**
comp=Z,35nm,1.1s,mb5.3
CLL *eS* **S 23 56 53.0 -2.0**
CLL LR LR
comp=Z,1µm,21.0s,MS5.0
CLL Collm 59.86 24⇑*iP* **P 23 48 43.4 -0.6**
CLL *eS* **S 23 56 53.0 -2.0**
CLL pmax pmax
comp=Z,35nm,1.1s,mb5.3
CLL MLR MLR
comp=Z,1µm,21.0s,MS5.0
CLL Collm 59.86 24⇑*iP* **P 23 48 43.4 -0.6**
comp=Z,35nm,1.1s,mb5.3
CLL *epP* pP 23 48 49.0 -0.3
CLL *e* 23 48 53.0
CLL *e* 23 49 23.0
CLL *i* PP PP 23 50 53.4 -2.9
comp=Z,30nm,1.4s
CLL *ePPP* 23 52 23.0
CLL *eS* **S 23 56 58.0 +3.0**
comp=N,3µm,22.8s
CLL *eS* **S 23 56 58.0 +3.0**
comp=E,3µm,21.1s
CLL *eSS* SS 00 01 06.0 +14
CLL *eSSS* 00 03 36.0
CLL L 00 12 00.0
comp=Z,1µm,21.0s
BRG Berggiesshubel 59.93 25 *eP* **P 23 48 44.3 -0.2**
comp=Z,22nm,1.1s,mb5.1
BRG Berggiesshubel 59.93 25 *iP* **P 23 48 44.2 -0.3**
comp=Z,22nm,1.1s,mb5.1
BRG *i* 23 49 24.1
comp=Z,22nm,1.3s
BRG PP PP 23 50 51.1 -5.8
comp=Z,57nm,1.5s
BRG Berggiesshubel 59.93 25 *iP* **P 23 48 44.2 -0.3**
BRG *i* 23 49 24.1
BRG 23 50 51.2
BRG pmax pmax
comp=Z,1.0nm,1.1s
BRG pmax pmax
comp=Z,13nm,1.5s,mb4.7
PLD Plovdiv 59.95 39 P **P 23 48 44.9 +0.1**
PLD Plovdiv 59.95 39 P **P 23 48 44.9 +0.1**
PVCC Panska Ves 59.95 26 *eP* **P 23 48 44.7 0.0**
PVCC *eS* **S 23 56 58.3 +2.1**
PVCC MLR MLR
comp=Z,2µm,13.8s,MS5.4
PVCC Panska Ves 59.95 26 *eP* **P 23 48 44.7 0.0**
PVCC *eS* **S 23 56 58.3 +2.1**
PVCC AMS AMS 00 18 20.0
comp=Z,2µm,13.8s
BUD Budapest 59.95 31⇑*eP* **P 23 48 45.1 +0.3**
VRAC Vranov 59.99 28⇑*P* **P 23 48 43.2 -1.9**
VRAC Vranov 59.99 28 P **P 23 48 44.7 -0.4**
comp=Z,26nm,1.0s,mb5.2,baz=222,slow=6.4,SNR=36
VRAC PP PP 23 50 53.3 -4.2
comp=Z,36nm,1.0s,baz=229,slow=10,SNR=9.2
VRAC Vranov 59.99 28 P **P 23 48 45.2 +0.2**
VRAC Vranov 59.99 28⇑*iP* **P 23 48 43.2 -1.8**
TIM Timisoara 60.01 33 P **P 23 48 47.0 +1.8**
BZS Buzias 60.15 34⇑*P* **P 23 48 44.5 -1.6**
BZS Buzias 60.15 34 P **P 23 48 47.1 +0.9**
BZS Buzias 60.15 34⇑*iP* **P 23 48 44.5 -1.7**
ALN Alexandroupoli 60.16 40 P **P 23 48 45.6 -0.7**
ALN Alexandroupoli 60.16 40 *eP* **P 23 48 46.7 +0.4**
ALN Alexandroupoli 60.16 40 P **P 23 48 45.6 -0.7**
AKHS Akhisar 60.32 43 *iP* **P 23 48 47.6 +0.1**
KOLL Kolacno 60.36 30 *eP* **P 23 48 45.4 -2.2**
KOLL *ePP* pP 23 48 55.8 +3.0
KOLL *ePP* PP 23 50 57.5 -3.3
KOLL Kolacno 60.36 30 *eP* **P 23 48 45.4 -2.2**
KOLL *epP* pP 23 48 55.8 +3.0
KOLL *ePP* PP 23 50 57.5 -3.3
VYHS Vyhne 60.52 30 *eP* **P 23 48 46.7 -2.0**
comp=Z,68nm,1.1s,mb5.7
VYHS *e* 23 52 23.4
VYHS *eS* **S 23 57 00.8 -2.9**
VYHS *eSS* SS 00 01 02.3 +0.2
VYHS LR LR
comp=Z,1µm,37.9s,MS4.8
VYHS Vyhne 60.52 30 *eP* **P 23 48 46.7 -2.0**
VYHS *eS* **S 23 57 00.8 -2.9**
VYHS *eSS* SS 00 01 02.3 +0.2
VYHS pmax pmax
comp=Z,68nm,1.1s,mb5.7
VYHS MLR MLR
comp=Z,1µm,37.9s,MS4.8
UPC Upice 60.57 27 *eP* **P 23 48 48.9 -0.1**
UPC *e* 23 50 58.5
UPC Upice 60.57 27 *eP* **P 23 48 48.9 -0.1**
UPC *ePP* PP 23 50 58.5 -4.1
DPC Dobruska-Polom 60.60 27 *eP* **P 23 48 46.9 -2.2**
DPC *e* 23 48 49.3
DPC *e* 23 50 57.6
DPC *eS* **S 23 57 04.2 -0.4**
DPC MLR MLR
comp=Z,2µm,16.9s,MS5.4
DPC Dobruska-Polom 60.60 27 *eP* **P 23 48 46.9 -2.2**
DPC *epP* pP 23 48 49.3 -5.1
DPC *ePP* PP 23 50 57.6 -5.3
DPC *eS* **S 23 57 04.2 -0.4**
DPC AMS AMS 00 15 40.0
comp=Z,2µm,16.9s
BALY Balya 60.61 42 *iP* **P 23 48 48.6 -0.9**
DNZL Cakiroluk 60.62 45 *iP* **P 23 48 49.4 -0.2**
GZR Gura Zlata 60.67 35 P **P 23 48 50.7 +1.0**
GZR Gura Zlata 60.67 35‖*P* **P 23 48 47.3 -2.4**
GZR Gura Zlata 60.67 35‖*iP* **P 23 48 47.3 -2.4**
PSZ Piszkesteto 60.68 31 *eP* **P 23 48 48.2 -1.6**
comp=Z,105nm,1.1s,mb5.9
PSZ *ePP* PP 23 51 00.2 -3.4
PSZ *eS* **S 23 57 05.9 +0.2**
PSZ LR LR
comp=Z,2µm,20.0s,MS5.3
PSZ Piszkesteto 60.68 31 P **P 23 48 50.7 +0.9**
PSZ Piszkesteto 60.68 31‖*iP* **P 23 48 48.2 -1.6**
PSZ Piszkesteto 60.68 31⇑*eP* **P 23 48 50.3 +0.5**
MORC Moravsky Berou 60.76 28 *eP* **P 23 48 48.2 -2.1**
comp=Z,68nm,1.0s,mb5.7
MORC *ePP* PP 23 51 01.7 -2.6
MORC Moravsky Berou 60.76 28 P **P 23 48 51.0 +0.7**
MORC Moravsky Berou 60.76 28⇑*iP* **P 23 48 48.5 -1.8**
GOLH Golhisar 60.79 46 *iP* **P 23 48 49.7 -1.0**
BSEG Bad Segeberg 60.85 21 *eP* **P 23 48 50.8 0.0**
comp=Z,80nm,1.2s,mb5.7
KSP Ksiaz 60.94 27 *eP* **P 23 48 51.5 +0.1**
KSP *eS* **S 23 57 08.9 0.0**
KSP Ksiaz 60.94 27⇑*eP* **P 23 48 51.2 -0.2**
KSP *e* 23 51 02.0
KSP *eS* **S 23 57 06.8 -2.1**
DEMI Demirci 61.02 43 *iP* **P 23 48 52.0 -0.3**
FURI Furi 61.04 79 *eP* **P 23 48 55.7 +2.8**
RUE Ruedersdorf 61.06 24 *eP* **P 23 48 52.6 +0.4**
OKC Ostrava-Krasne 61.09 28 *eP* **P 23 48 50.4 -2.1**
OKC *e* 23 48 52.6
OKC *eS* **S 23 57 09.4 -1.5**
OKC MLR MLR
comp=Z,1µm,13.3s,MS5.3
OKC Ostrava-Krasne 61.09 28 *eP* **P 23 48 50.4 -2.1**
OKC *epP* pP 23 48 52.6 -5.2
OKC *eS* **S 23 57 09.4 -1.5**
OKC AMS AMS 00 19 10.0
comp=Z,1µm,13.3s

DURS Dursunbey 61.12 43 *i* P **P 23 48 51.9 -1.0**
KHAL Karahalli 61.25 44 *i* P **P 23 48 53.2 -0.6**
KORT Korkueli 61.25 46 *i* P **P 23 48 54.1 +0.2**
JMB Yambol 61.32 39 P **P 23 48 54.3 +0.1**
JMB Yambol 61.32 39 P **P 23 48 54.3 +0.1**
KECS Kecovo 61.35 31 *e*P **P 23 48 54.7 +0.4**
comp=Z,22nm,1.0s,mb5.2
KECS *e*PP PP 23 51 05.0 -4.5
KECS Kecovo 61.35 31 *e*P **P 23 48 54.7 +0.4**
KECS *e* 23 51 05.0
KECS pmax pmax
comp=Z,22nm,1.0s,mb5.2
KECS Kecovo 61.35 31 *e*P **P 23 48 54.7 +0.4**
KECS *e*PP PP 23 51 05.0 -4.5
DRGR 61.47 33 ⇑P **P 23 48 53.5 -1.7**
DRGR 61.47 33 P **P 23 48 55.9 +0.8**
DRGR 61.47 33 ⇑*i*P **P 23 48 53.5 -1.6**
GDZ Gediz 61.57 44 *i* P **P 23 48 54.5 -1.4**
ELBA Catalca 61.84 41 *i* P **P 23 48 55.6 -2.1**
NIE Niedzica 61.87 30 *i* P **P 23 48 58.4 +0.7**
VOIR 62.00 36 ⇓P **P 23 48 56.8 -1.9**
VOIR 62.00 36 P **P 23 48 59.5 +0.7**
VOIR 62.00 36 ⇓*i*P **P 23 48 56.8 -2.0**
CRVS Cervenica-Dubn 62.11 31 *e*P **P 23 48 59.8 +0.4**
comp=Z,39nm,1.2s,mb5.4
CRVS *e*PP PP 23 51 13.5 -2.8
CRVS *e* 23 52 41.0
CRVS *e*S **S 23 57 25.7 +1.8**
CRVS LR LR
comp=Z,1μm,24.5s,MS5.0
CRVS Cervenica-Dubn 62.11 31 *e*P **P 23 48 59.8 +0.4**
CRVS *e* 23 51 13.5
CRVS *e* 23 52 41.0
CRVS *e*S **S 23 57 25.7 +1.8**
CRVS pmax pmax
comp=Z,39nm,1.2s,mb5.4
CRVS MLR MLR
comp=Z,1μm,24.5s,MS5.0
OJC Ojcow 62.14 29 *i* P **P 23 48 59.8 +0.2**
OJC *e*PcP pP 23 49 03.0 -1.8
OJC *e*S **S 23 57 25.6 +1.4**
OJC L 00 19 03.0
comp=Z,1.8nm,17.0s
OJC Ojcow 62.14 29⇑*i*P **P 23 48 59.8 +0.2**
OJC *e* 23 49 38.6
OJC *e*S **S 23 57 25.6 +1.4**
OJC MLR MLR
comp=Z,2μm,17.0s,MS5.3
TRPA Tarpa 62.19 32⇑*i*P **P 23 48 59.0 -1.0**
DESE Dese 62.22 77 *e*P **P 23 49 02.0 +1.2**
DESE *e*S **S 23 57 37.5 +11**
PKME Peaks-Kenny Pk 62.28 324 *e*P **P 23 49 00.5 -0.1**
PKME *e*S **S 23 57 25.8 -0.4**
PKME LR LR
comp=Z,942nm,19.0s,MS5.0
SULR 62.29 37 P **P 23 49 01.4 +0.7**
SULR 62.29 37⇑*i*P **P 23 48 58.4 -2.3**
STHS Stebnicka Huta 62.33 30 *e*P **P 23 49 01.0 +0.1**
comp=Z,7.9nm,1.0s,mb4.8
STHS *e*PP PP 23 51 16.4 -1.8
STHS Stebnicka Huta 62.33 30 *e*P **P 23 49 01.0 +0.1**
STHS *e* 23 51 16.4
STHS pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
STHS Stebnicka Huta 62.33 30 *e*P **P 23 49 01.0 +0.1**
STHS *e*PP PP 23 51 16.4 -1.8
GAZI Gazipasa 62.36 48 *i* P **P 23 48 53.7 -7.7**
UZH Uzhgorod 62.37 31 *d i*P **P 23 49 01.1 -0.1**
UZH *e* 23 49 37.5
UZH *e* 23 51 14.3
UZH *e*PPP 23 52 52.3
UZH *e*S **S 23 57 24.1 -3.1**
UZH *e*PS 23 57 36.5
UZH MLR MLR
comp=N,2μm,13.0s,MS5.5
UZH MLR MLR
comp=E,1μm,13.0s,MS5.5
UZH MLR MLR
comp=Z,1μm,13.0s,MS5.2
BOLV Bolvadin 62.42 45 *i* P **P 23 49 01.9 +0.2**
BMR Baia Mare 62.43 33 ⇓P **P 23 49 00.1 -1.4**
BMR Baia Mare 62.43 33 P **P 23 49 02.4 +0.8**
BMR Baia Mare 62.43 33 ⇓*i*P **P 23 49 00.1 -1.5**
RGN Rugen 62.44 22 *e*P **P 23 49 01.2 -0.3**
RGN *e*PcP PcP 23 49 40.5 -0.2
MUD Monsted U'grnd 62.49 19 *i* P **P 23 49 00.9 -0.9**
MUD pmax pmax
comp=Z,22nm,0.9s,mb5.3
MUD Monsted U'grnd 62.49 19 *i* P **P 23 49 00.9 -0.9**
comp=Z,22nm,0.9s,mb5.3
MLR Muntele Rosu 62.55 36 P **P 23 49 00.7 -1.7**
comp=Z,97nm,1.1s,mb5.8,baz=222,slow=2.4,SNR=66
MLR PP PP 23 51 17.5 -2.7
comp=Z,50nm,1.1s,baz=241,slow=5.0,SNR=6.2
MLR LR LR 00 16 31.3
comp=Z,3μm,19.3s,MS5.4,baz=257,slow=36
MLR Muntele Rosu 62.55 36 P **P 23 49 03.4 +0.9**
MLR Muntele Rosu 62.55 36⇑*i*P **P 23 49 00.2 -2.3**
BORA Eskisehir 62.60 43 *i* P **P 23 49 02.5 -0.4**
AMRR Amara 62.91 37 P **P 23 49 05.5 +0.7**
GKP Gorka Klasztor 63.07 25 *e*P **P 23 49 06.1 +0.4**
GRER 63.10 36 P **P 23 49 07.1 +1.0**
PLOR Plostina 63.17 36 ⇑P **P 23 49 04.1 -2.4**
PLOR Plostina 63.17 36⇑*i*P **P 23 49 04.1 -2.4**
KWP Kalwaria Pacla 63.21 31 *e*P **P 23 49 07.0 +0.3**
KWP *e*S **S 23 57 40.3 +2.7**
KWP Kalwaria Pacla 63.21 31 *e*P **P 23 49 06.0 -0.7**
comp=Z,78nm,1.1s,mb5.8
KWP *e*PP PP 23 51 22.2 -3.7
KWP *e*S **S 23 57 37.2 -0.4**
KWP LR LR
comp=Z,1μm,19.0s,MS5.2
KWP Kalwaria Pacla 63.21 31⇑*i*P **P 23 49 06.3 -0.4**
VRI Vrincioaia 63.22 36 ⇓P **P 23 49 04.6 -2.3**
VRI Vrincioaia 63.22 36 P **P 23 49 07.0 +0.1**
VRI Vrincioaia 63.22 36 ⇓*i*P **P 23 49 04.6 -2.3**
HNH Hanover 63.28 321 *e*P **P 23 49 07.3 0.0**
LBNH Lisbon 63.33 322 *e*P **P 23 49 07.5 -0.1**
comp=Z,23nm,0.9s,mb5.3
LBNH *e*PP PP 23 51 25.8 -1.3
LBNH *e*S **S 23 57 39.2 -0.1**
LBNH LR LR
comp=Z,1μm,21.0s,MS5.1
LBNH Lisbon 63.33 322 *e*P **P 23 49 07.5 -0.1**
LBNH *e* 23 51 25.8
LBNH *e*S **S 23 57 39.2 -0.1**
LBNH pmax pmax
comp=Z,23nm,0.9s,mb5.3
LBNH MLR MLR
comp=Z,1μm,21.0s,MS5.1
HENT Hendek 63.33 42 *i* P **P 23 49 06.6 -1.1**
BUR01 Bucovina Ar. S 63.34 34 P **P 23 49 08.9 +1.3**
BURAR Bucovina Array 63.34 34 ⇑P **P 23 49 06.5 -1.1**
BURAR Bucovina Array 63.34 34⇑*i*P **P 23 49 06.5 -1.1**
CNNC Cliffs of the 63.46 311 *e*P **P 23 49 08.5 -0.2**
CNNC *e*S **S 23 57 40.5 -0.8**
CNNC LR LR
comp=Z,918nm,19.0s,MS5.0
BSD Bornholm Skovb 63.47 23⇑*i*P **P 23 49 07.9 -0.5**
BSD pmax pmax
comp=Z,13nm,1.0s,mb5.0
BSD Bornholm Skovb 63.47 23⇑*i*P **P 23 49 07.9 -0.5**
comp=Z,13nm,1.0s,mb5.0
TIRR Tirgusor 63.49 38 *e*P **P 23 49 08.2 -0.4**
comp=Z,82nm,1.6s,mb5.6
TIRR *e*PP PP 23 51 21.7 -6.8
TIRR Tirgusor 63.49 38 P **P 23 49 09.0 +0.3**
TIRR Tirgusor 63.49 38⇑*i*P **P 23 49 02.1 -6.6**
MMAI Mount Meron Ar 63.52 52 P **P 23 49 09.0 -0.2**
comp=Z,65nm,1.2s,mb5.5,baz=256,slow=5.9,SNR=20
MMAI PP PP 23 51 27.6 -1.4
comp=Z,7.7nm,1.0s,baz=286,slow=10,SNR=3.7
TESR 63.53 35⇑*i*P **P 23 49 08.1 -0.8**
JTS JuntasAbangare 63.81 282 PFAKE 23 49 20.0 +8.6
JTS LR LR
comp=Z,2μm,19.0s,MS5.3
MDV Middlebury 63.98 321 *e*P **P 23 49 13.0 +1.0**
DWPF Disney 63.99 302 *e*P **P 23 49 10.1 -2.2**
DWPF *e*PcP PcP 23 49 47.5 -0.3
DWPF LR LR
comp=Z,1μm,19.0s,MS5.2
ACCN Adirondack Com 63.99 320 *e*P **P 23 49 13.1 +1.1**
comp=Z,43nm,1.4s,mb5.3

LVV L'vov 64.00 31 *e*P **P 23 49 11.7 -0.3**
LVV *e* 23 51 29.9
LVV *e*S **S 23 57 44.5 -3.0**
LVV *e* 23 58 04.9
LVV *e* 00 04 42.9
LVV MLR MLR
comp=N,800nm,14.0s,MS5.3
LVV MLR MLR
comp=E,1μm,14.0s,MS5.3
LVV MLR MLR
comp=Z,1μm,14.0s,MS5.2
SGKT Sivrigoynuk 64.01 43 *i* P **P 23 49 10.8 -1.4**
CBN Corbin 64.22 314 *e*P **P 23 49 13.4 -0.3**
CBN LR LR
comp=Z,2μm,19.0s,MS5.2
MVL Millersville 64.24 316 *e*P **P 23 49 14.6 +0.8**
comp=Z,29nm,1.2s,mb5.2
BBAL Bala 64.31 45 *i* P **P 23 49 14.2 +0.1**
JSRW J. Sargeant Re 64.39 313 *e*P **P 23 49 12.0 -2.8**
ASF Jabal al Asfar 64.43 53 P **P 23 49 15.1 -0.1**
comp=Z,28nm,1.0s,mb5.2,baz=128,slow=3.2,SNR=36
ASF LR LR 00 16 50.7
comp=Z,2μm,18.7s,MS5.4,baz=263,slow=36
NHSC New Hope 64.48 308 *e*P **P 23 49 13.9 -1.6**
comp=Z,192nm,1.2s,mb6.0
NHSC LR LR
comp=Z,2μm,19.0s,MS5.2
GULE Gulek 64.59 47 *i* P **P 23 49 16.5 +0.4**
NCB Newcomb 64.63 321 *e*P **P 23 49 15.2 -1.0**
comp=Z,30nm,1.4s,mb5.1
NCB LR LR
comp=Z,2μm,22.0s,MS5.2
BER Bergen 64.71 15 *e*P **P**
BER *e*S **S 23 57 54.8 -1.0**
BRTR Keskin Array B 64.74 45 P **P 23 49 15.4 -1.6**
comp=Z,44nm,0.8s,mb5.5,baz=232,slow=6.1,SNR=98
BRTR PP PP 23 51 35.7 -3.9
comp=Z,9.7nm,1.0s,baz=226,slow=7.3,SNR=5.0
BRTR LR LR 00 18 26.1
comp=Z,1μm,20.0s,MS5.2,baz=79,slow=37
BRTR Keskin Array B 64.74 45*c e*P **P 23 49 15.3 -1.7**
BRTR pmax pmax
comp=Z,44nm,0.8s
BINY Binghamton 64.95 318 *e*P **P 23 49 19.6 +1.3**
comp=Z,76nm,1.4s,mb5.5
BINY LR LR
comp=Z,1μm,19.0s,MS5.2
KIS Kishinev 65.05 36⇑*i*P **P 23 49 17.0 -1.9**
comp=Z,200nm,1.0s,mb6.1
KIS Kishinev 65.05 36 *e*PcP PcP 23 49 50.0 -1.7
KIS Kishinev 65.05 36 *e*PP PP 23 51 25.0 -17
KIS Kishinev 65.05 36 P **P 23 49 18.2 -0.7**
KIS Kishinev 65.05 36*ex i*P **P 23 49 17.0 -1.9**
KIS *e* PcP 23 49 50.0 -1.7
KIS *e*S S 23 57 56.0 -4.5
KIS pmax pmax
comp=Z,200nm,1.0s,mb6.1
KIS pmax pmax
comp=Z,400nm,2.0s,mb6.1
KIS MLR MLR
comp=Z,2μm,15.0s,MS5.4
KIS MLR MLR
comp=N,1μm,14.0s
KIS MLR MLR
comp=Z,1μm,15.0s
KIS Kishinev 65.05 36 *e*PcP PcP 23 49 50.0 -1.7
LONY Lake Ozonia 65.17 321 *e*P **P 23 49 18.2 -1.5**
LONY LR LR
comp=Z,1μm,19.0s,MS5.2
CDAG Cicekdag 65.22 45 *i* P **P 23 49 19.6 -0.5**
AVNT Avonos 65.23 46 *i* P **P 23 49 19.9 -0.3**
KONO Kongsberg 65.24 17 *e*P **P 23 49 20.2 +0.4**
KONO *e*S S 23 58 03.9 +1.4
KONO Kongsberg 65.24 17 PFAKE 23 49 30.0 +10
KONO LR LR
comp=Z,2μm,19.0s,MS5.4
BALT Daday 65.33 43 *i* P **P 23 49 19.2 -1.6**
ILGA Ilgaz 65.35 43 *i* P **P 23 49 20.8 -0.2**
BORG Borgarnes 65.57 0 P **P 23 49 19.8 -2.1**
comp=Z,6.2nm,0.8s,mb4.7,baz=175,slow=3.3,SNR=2.0
FOO Floro 65.69 14 *e*P **P 23 49 27.2 +4.4**
FOO *e*S S 23 58 13.1 +5.2
JSC Jenkinsville 65.72 309 *e*P **P 23 49 21.4 -2.1**
ANDN Andirin 65.86 48 *i* P **P 23 49 24.6 +0.2**
CTKT Corum 65.92 44 *i* P **P 23 49 24.1 -0.5**
BLA Blacksburg 66.08 312 *e*P **P 23 49 23.7 -2.1**
comp=Z,30nm,1.1s,mb5.2
BLA LR LR
comp=Z,1μm,21.0s,MS5.1
BLA Blacksburg 66.08 312 *e*P **P 23 49 23.7 -2.1**
BLA pmax pmax
comp=Z,30nm,1.1s,mb5.2
BLA MLR MLR
comp=Z,1μm,21.0s,MS5.1
KUZU Kuzuini 66.11 49 *i* P **P 23 49 25.6 -0.4**
SUW Suwalki 66.19 27 *e*P **P 23 49 25.8 -0.2**
SUW Suwalki 66.19 27 *e*P **P 23 49 25.4 -0.6**
comp=Z,120nm,1.0s,mb5.9
PINB Pinarbasi 66.31 47 *i* P **P 23 49 27.1 -0.1**
TGUH Tegucigalpa,Un 66.51 286 *e*P **P 23 49 28.2 -0.7**
TGUH *e*PP PP 23 51 55.4 -0.1
TGUH LR LR
comp=Z,983nm,19.0s,MS5.0
MCWV Mont Chateau 66.57 314 *e*P **P 23 49 29.4 +0.6**
comp=Z,321nm,2.8s,mb5.9
MCWV LR LR
comp=Z,2μm,19.0s,MS5.3
GZT Gaziantep 66.69 48 *i* P **P 23 49 28.3 -1.3**
SCHQ Schefferville 66.74 334 P **P 23 49 25.7 -3.8**
comp=Z,6.5nm,1.0s,mb4.6,baz=115,slow=9.6,SNR=3.6
SCHQ LR LR 00 15 19.5
comp=Z,2μm,18.1s,MS5.5,baz=134,slow=33
NOA NORSAR Array B 66.84 17 P **P 23 49 29.9 -0.2**
NOA LR LR 00 18 04.9
NOA NORSAR Array B 66.84 17 P **P 23 49 29.9 -0.2**
comp=Z,9.4nm,1.0s,mb4.8,baz=214,slow=6.4,SNR=12
NOA LR LR 00 18 04.9
comp=Z,1μm,18.6s,MS5.1,baz=215,slow=36
HFS Hagfors 66.87 18 P **P 23 49 29.9 -0.4**
comp=Z,11nm,0.8s,mb5.0,baz=187,slow=2.5,SNR=15
HFS PP PP 23 51 50.9 -6.9
comp=Z,8.3nm,0.9s,baz=193,slow=5.9,SNR=4.2
TOKA Tokat 66.98 45 *i* P **P 23 49 29.9 -1.6**
MOL Molde 67.13 14 *e*S S 23 58 28.7 +3.3
GOGA Godfrey 67.19 307 *e*P **P 23 49 30.7 -2.3**
comp=Z,28nm,1.3s,mb5.1
GOGA LR LR
comp=Z,967nm,21.0s,MS5.0
GOGA Godfrey 67.19 307 *e*P **P 23 49 30.7 -2.3**
GOGA pmax pmax
comp=Z,28nm,1.3s,mb5.1
GOGA MLR MLR
comp=Z,967nm,21.0s,MS5.0
KIEV Kiev 67.23 32 *e*P **P 23 49 32.0 -0.8**
comp=Z,155nm,1.0s,mb6.0
KIEV LR LR
comp=Z,2μm,19.0s,MS5.3
KIEV Kiev 67.23 32 *e*P **P 23 49 32.0 -0.8**
KIEV pmax pmax
comp=Z,155nm,1.0s,mb6.0
KIEV MLR MLR
comp=Z,2μm,19.0s,MS5.3
AKASG Malin Array Be 67.24 32 P **P 23 49 30.5 -2.4**
comp=Z,85nm,0.9s,mb5.8,baz=235,slow=7.0,SNR=112
AKASG PP PP 23 51 53.0 -8.2
comp=Z,3.9nm,0.8s,baz=234,slow=9.4,SNR=4.0
AKASG LR LR 00 19 46.4
comp=Z,2μm,19.3s,MS5.2,baz=195,slow=37
AKASG Malin Array Be 67.24 32 *i* P **P 23 49 29.8 -3.1**
AKASG pmax pmax
comp=Z,85nm,0.9s
SCER sogukcermik 67.27 46 *i* P **P 23 49 32.6 -0.7**
ATAB Bozova 67.27 48 *i* P **P 23 49 32.5 -0.8**
AKCD Akcadag 67.28 47 *i* P **P 23 49 34.3 +0.9**
SIM Simferopol' 67.30 40*ce*P **P 23 49 32.2 -1.1**
SIM *e*S S 23 58 27.0 -1.0
SIM *e*SS SS 00 02 51.0 +3.1
SIM pmax pmax
comp=Z,49nm,1.7s,mb5.3
SIM pmax pmax
comp=Z,16nm,0.9s,mb5.0
ERBA Erbaa 67.31 45 *i* P **P 23 49 32.8 -0.8**
ERPA Erie 67.62 317 *e*P **P 23 49 34.9 -0.5**
ERPA LR LR
comp=Z,1μm,20.0s,MS5.0

MALT Malatya 67.66 48 *e*P **P 23 49 34.8 -1.0**
comp=Z,86nm,0.9s,mb5.8
MALT LR LR
comp=Z,2μm,22.0s,MS5.2
MALT Malatya 67.66 48 P **P 23 49 35.0 -0.8**
MALT Malatya 67.66 48⇑*i*P **P 23 49 34.7 -1.1**
MALT Malatya 67.66 48 P **P 23 49 34.9 -0.9**
KEMA Kemaliye 68.04 47 *i* P **P 23 49 37.7 -0.5**
ELZG Elazig 68.13 48 *i* P **P 23 49 39.8 +1.0**
TEIG Tepich 68.35 292 *e*P **P 23 49 40.5 0.0**
TEIG LR LR
comp=Z,1μm,21.0s,MS5.0
NACGM Naroch 68.39 28 *e*P **P 23 49 37.0 -3.0**
GRSN GIRESUNGRSN 68.47 45 *i* P **P 23 49 39.8 -1.1**
PAYG Puerto Ayora 68.48 270 PFAKE 23 49 50.0 +8.5
PAYG LR LR
comp=Z,2μm,21.0s,MS5.3
CPCT Cooper Cave 68.63 309 *e*P **P 23 49 39.9 -2.1**
MNK Minsk 68.66 28 *e*P **P 23 49 40.0 -1.7**
MNK *e*S S 23 58 43.0 -0.9
MICGM Minsk 68.68 29 *e*P **P 23 49 40.0 -1.8**
DIYA Diyarbakir 68.79 48 *i* P **P 23 49 43.3 +0.4**
KELT Kelkit 68.90 46 *i* P **P 23 49 41.5 -2.1**
ACSO Alum Creek Sta 69.02 314 *e*P **P 23 49 44.9 +0.7**
MARD Mardin 69.09 49 *i* P **P 23 49 43.3 -1.4**
ANN Anapa 69.38 41 ⇓*i*P **P 23 49 44.4 -2.0**
BRAL Brewton 69.48 304 *e*P **P 23 49 46.9 -0.4**
comp=Z,268nm,1.6s,mb5.9
BRAL LR LR
comp=Z,1μm,21.0s,MS5.2
SWET Sewanee 69.67 308 *e*P **P 23 49 46.0 -2.4**
KOPT Kop Dagi 69.75 46 *i* P **P 23 49 49.6 +0.8**
NSS Namsos 69.87 15 *e*S S 23 59 04.4 +6.5
ABPO Ambohimpanom 69.87 110 *e*P **P 23 49 50.4 +0.4**
ABPO LR LR
comp=Z,916nm,20.0s,MS5.0
BNGL BINGOL 69.88 48 *i* P **P 23 49 49.7 0.0**
LRAL Lakeview Retre 69.94 306 *e*P **P 23 49 47.4 -2.7**
comp=Z,30nm,1.2s,mb5.1
LRAL LR LR
comp=Z,1μm,21.0s,MS5.1
VNA1 Neumayer--Stat 70.12 175 *e*P **P 23 49 51.4 +0.9**
VNA1 *e* pP 23 49 56.9 +1.1
AAM Ann Arbor 70.22 316 *e*P **P 23 49 51.0 -0.6**
AAM LR LR
comp=Z,1μm,21.0s,MS5.1
ERZM Erzurum 70.34 47 *i* P **P 23 49 52.3 -0.1**
SOC Sochi 70.43 43*c i*P **P 23 49 52.4 -0.5**
SOC *e* 23 50 12.7
SOC *e* 23 52 26.0
SOC *e*PPP 23 54 11.3
SOC *e*S S 23 59 06.9 +1.6
SOC *e* 23 59 44.0
SOC *e*SS SS 00 03 31.1 -5.4
SOC pmax pmax
comp=Z,81nm,1.1s,mb5.6
HOMI Horasan 70.78 47 *i* P **P 23 49 55.8 +0.7**
BHD Baghdad 70.79 54 *ex* P **P 23 49 54.7 -0.6**
BHD *ex* S 23 59 08.0 -1.8
WCI Wyandotte Cave 70.82 311 *e*P **P 23 49 52.9 -2.5**
comp=Z,43nm,1.3s,mb5.2
WCI LR LR
comp=Z,992nm,20.0s,MS5.1
WCI Wyandotte Cave 70.82 311 *e*P **P 23 49 52.9 -2.5**
WCI pmax pmax
comp=Z,43nm,1.3s,mb5.2
WCI MLR MLR
comp=Z,992nm,20.0s,MS5.1
DBAD Bademkaya 70.94 46 *i* P **P 23 49 56.0 -0.1**
DDEM Demirkent 70.94 46 *i* P **P 23 49 56.2 +0.2**
DBOC Borcka 71.02 45 *i* P **P 23 49 56.2 -0.4**
ARTV Artvin 71.16 46 *i* P **P 23 49 56.4 -1.0**
BLO Bloomington 71.27 312 *e*P **P 23 49 58.8 +0.7**
comp=Z,56nm,1.3s,mb5.3
BLO Bloomington 71.27 312 *e*P **P 23 49 58.8 +0.7**
BLO pmax pmax
comp=Z,56nm,1.3s,mb5.3
SCO Scoresbysund 71.33 360 *e*P **P 23 49 58.6 +0.8**
SCO Scoresbysund 71.33 360 *i* P **P 23 49 58.6 +0.8**
HAKT HAKKARI 71.39 50 *i* P **P 23 49 57.1 -1.7**
WVT Waverly 71.41 309 *e*P **P 23 49 55.6 -3.4**
comp=Z,30nm,1.1s,mb5.1
WVT LR LR
comp=Z,949nm,19.0s,MS5.1
WVT Waverly 71.41 309 *e*P **P 23 49 55.6 -3.4**
WVT pmax pmax
comp=Z,30nm,1.1s,mb5.1
WVT MLR MLR
comp=Z,949nm,19.0s,MS5.1
GLMI Grayling 71.75 318 *e*P **P 23 50 00.1 -0.8**
comp=Z,60nm,0.8s,mb5.6
USIN University of 71.78 311 *e*P **P 23 50 01.1 -0.1**
DYDN Diyadin 71.94 48 *i* P **P 23 50 02.7 +0.5**
DIGO Kars 71.97 47 *i* P **P 23 50 01.3 -1.0**
FINES FINESS Array B 72.10 22 P **P 23 50 00.7 -2.0**
comp=Z,42nm,0.9s,mb5.4,baz=209,slow=3.5,SNR=48
FINES PP PP 23 52 38.4 -4.5
comp=Z,7.6nm,0.8s,baz=199,slow=3.8,SNR=5.5
FINES LR LR 00 18 42.6
comp=Z,1μm,21.9s,MS5.2,baz=241,slow=33
FINES FINESS Array B 72.10 22 P **P 23 50 00.7 -1.9**
FINES 23 52 38.4
OLIL Olney 72.32 311 *e*P **P 23 50 01.1 -3.3**
comp=Z,69nm,1.1s,mb5.5
JMIC Jan Mayen 72.37 5 *e*P **P 23 50 07.5 +3.4**
JMIC *e*S S 23 59 31.8 +5.2
JMIC AMS AMS 00 16 14.2
comp=Z,855nm,11.5s,MS5.3
MIB Mutribah 72.47 58 *e*P **P 23 50 05.5 -0.1**
MIB AMb AMB 23 50 07.1
comp=Z,66nm,1.2s,mb5.5
KIV Kislovodsk 72.58 43 P **P 23 50 06.1 +0.2**
comp=Z,265nm,1.3s,mb6.0,SNR=12
KIV Kislovodsk 72.58 43 *e*P **P 23 50 05.4 -0.5**
comp=Z,103nm,1.3s,mb5.6
KIV LR LR
comp=Z,1μm,22.0s,MS5.1
KIV Kislovodsk 72.58 43*c i*P **P 23 50 06.2 +0.3**
KIV *e*PPP 23 54 29.9
KIV *e*S S 23 59 31.6 +1.5
KIV pmax pmax
comp=Z,52nm,1.0s,mb5.4
KIV pmax pmax
comp=Z,242nm,5.9s
KAF Kangasniemi 72.60 22 *e*P **P 23 50 04.7 -0.9**
KAF pmax pmax
comp=Z,47nm,1.2s,mb5.3
KAF Kangasniemi 72.60 22 *ep* P **P 23 50 04.7 -0.9**
comp=Z,47nm,1.2s,mb5.3,baz=232,slow=6.4
VBMS Vicksburg 72.63 304 *e*P **P 23 50 05.8 -0.6**
VBMS LR LR
comp=Z,1μm,19.0s,MS5.2
KBD Kabd 72.66 59 *e*P **P 23 50 06.5 -0.1**
KBD AMb AMB 23 50 09.2
comp=Z,38nm,1.4s,mb5.1
UMR Umm Al-Rimmam 72.75 59 *e*P **P 23 50 07.3 +0.1**
UMR AMb AMB 23 50 17.1
comp=Z,135nm,1.1s,mb5.8
GNI Garni 72.89 47 P **P 23 50 08.6 +0.8**
comp=Z,27nm,1.0s,mb5.1,baz=332,slow=9.2,SNR=20
GNI Garni 72.89 47*ce*P **P 23 50 09.0 +1.2**
GNI pmax pmax
comp=Z,111nm,1.7s
GNI MLR MLR
comp=Z,2μm,23.0s
GNI Garni 72.89 47 ⇓P **P 23 50 08.2 +0.4**
SNR=13
SIUC Southern Illin 72.89 310 *e*P **P 23 50 07.8 -0.1**
comp=Z,29nm,0.9s,mb5.2
GOR Gori 72.96 45 P **P 23 50 08.5 +0.3**
VORD Divnogorie 72.99 35 *e*P **P 23 50 07.2 -1.0**
VORD *e**SP sP 23 50 11.7 -3.7
VORD *e*S S 23 59 30.9 -3.6
VORD pmax pmax
comp=Z,50nm,0.9s,mb5.4
VORD pmax pmax
comp=N,20nm,0.7s
VORD pmax pmax
comp=E,20nm,0.8s
VORD smax
comp=E,240nm,4.0s
VORD smax
comp=Z,100nm,2.7s
VORD smax
comp=N,110nm,2.0s

VORD MLR MLR
comp=E,950nm,17.0s,MS5.3
VORD MLR MLR
comp=Z,2µm,17.0s,MS5.3
VORD MLR MLR
comp=N,550nm,12.0s,MS5.3
MAIT Maitri 73.02 169 *e*P **P** **23 50 08.5 +0.6**
VSR Storozhevoye 73.02 35 *e*P **P** **23 50 07.4 -0.9**
VSR *e**SP sP 23 50 11.9 -3.7
VSR *e* 23 52 47.5
VSR *e*S S 23 59 31.2 -3.6
VSR pmax pmax
comp=Z,80nm,1.2s,mb5.5
VSR pmax pmax
comp=N,30nm,1.4s
VSR pmax pmax
comp=E,30nm,1.1s
VSR pmax pmax
comp=Z,160nm,4.4s
VSR pmax pmax
comp=N,230nm,4.3s
VSR pmax pmax
comp=E,100nm,2.4s
VSR smax
comp=E,460nm,4.2s
VSR smax
comp=Z,130nm,3.7s
VSR smax
comp=N,60nm,2.3s
VSR MLR MLR
comp=Z,2µm,17.0s,MS5.4
VSR MLR MLR
comp=N,540nm,13.0s,MS5.3
VSR MLR MLR
comp=E,1µm,15.0s,MS5.3
NVL N'lazarevskaya 73.03 169 *e*P **P** **23 50 17.4 +9.4**
NVL *e**PP pP 23 50 23.7 +10
NVL *e*PPP 23 54 32.1
NVL *e**SS sS 23 59 25.9 -17
NVL pmax pmax
comp=Z,12nm,0.8s,mb4.9
ZEI Tsey 73.05 45 *e*P **P** **23 50 06.3 -2.4**
ZEI *e*PPP 23 54 30.3
ZEI *e*S S 23 59 32.3 -3.1
ZEI pmax pmax
comp=Z,53nm,1.6s,mb5.2
ZEI MLR MLR
comp=Z,2µm,15.0s,MS5.4
GNAR Gosnell 73.08 308 *e*P **P** **23 50 07.5 -1.5**
VOR Voronezh 73.25 35 *e*P **P** **23 50 10.0 +0.3**
VOR pmax pmax
comp=Z,160nm,1.2s,mb5.8
OBN Obninsk 73.30 31 *e*P **P** **23 50 09.4 -0.5**
OBN *e*PP PP 23 52 52.4 -0.9
OBN LR LR
comp=Z,1µm,19.0s,MS5.2
OBN Obninsk 73.30 31⇑ *e*P **P** **23 50 09.5 -0.4**
OBN *e* 23 50 18.4
OBN *e* 23 52 51.1
OBN *e*S S 23 59 35.8 -2.0
OBN *e*SS SS 00 04 16.0 -3.8
OBN pmax pmax
comp=Z,52nm,1.2s,mb5.3
OBN MLR MLR
comp=Z,900nm,15.0s,MS5.2
TBLG Delisi 73.34 46 *e*P **P** **23 50 10.6 +0.2**
TBLG Delisi 73.34 46 P **P** **23 50 10.7 +0.3**
MTA Mtatsminda 73.36 46 P **P** **23 50 10.7 +0.2**
HBAR Harrisburg 73.49 308 *e*P **P** **23 50 08.6 -2.9**
HDIL Hopedale 73.70 313 *e*P **P** **23 50 12.4 -0.2**
comp=Z,41nm,1.1s,mb5.3
HDIL LR LR
comp=Z,1µm,19.0s,MS5.2
DGRG David-gareji 73.71 46 P **P** **23 50 12.6 -0.1**
FVM French Village 73.89 310 *e*P **P** **23 50 13.5 -0.3**
comp=Z,52nm,1.4s,mb5.3
FVM French Village 73.89 310 *e*P **P** **23 50 13.5 -0.2**
FVM pmax pmax
comp=Z,52nm,1.4s,mb5.3
SLM Saint Louis 73.91 311 *e*P **P** **23 50 13.4 -0.5**
SLM *e*PP PP 23 52 59.0 +0.1
MOS Moscow 74.12 30 *e*P **P** **23 50 10.9 -3.8**
MOS *e* 23 50 22.9
MOS *e* 23 52 58.3
MOS *e*S S 23 59 44.2 -2.8
MOS *e*SS SS 00 04 26.0 -6.3
MOS pmax pmax
comp=Z,124nm,1.3s,mb5.7
MOS pmax pmax
comp=Z,300nm,2.2s,mb5.8
MOS MLR MLR
comp=Z,1µm,15.0s,MS5.2
SUMG Summit 74.19 355 *e*P **P** **23 50 16.4 +1.6**
comp=Z,28nm,1.1s,mb5.1
SUMG Summit 74.19 355 *e*P **P** **23 50 16.4 +1.6**
SUMG pmax pmax
comp=Z,28nm,1.1s
SUMG Summit 74.19 355 *i* P **P** **23 50 16.4 +1.6**
comp=Z,17nm,1.0s,mb4.9
VRHR Novokhopersk 74.40 36 *e*P **P** **23 50 16.1 -0.3**
VRHR *e**SP sP 23 50 20.6 -3.1
VRHR pmax pmax
comp=Z,30nm,1.0s,mb5.2
VRHR pmax pmax
comp=N,6.0nm,0.6s
VRHR pmax pmax
comp=E,20nm,1.2s
UALR University of 74.66 306 *e*P **P** **23 50 18.6 +0.2**
comp=E,56nm,1.2s,mb5.4
JOF Joensuu 74.95 22 *e*P **P** **23 50 18.8 -0.6**
JOF pmax pmax
comp=Z,28nm,0.9s,mb5.2
JOF Joensuu 74.95 22 *e*p **P** **23 50 18.8 -0.6**
comp=Z,28nm,0.9s,mb5.2
JFWS Jewell Farm 75.03 315 *e*P **P** **23 50 20.1 -0.2**
comp=Z,33nm,1.2s,mb5.1
JFWS LR LR
comp=Z,1µm,21.0s,MS5.2
JFWS Jewell Farm 75.03 315 *e*P **P** **23 50 20.1 -0.2**
JFWS pmax pmax
comp=Z,33nm,1.2s,mb5.1
JFWS MLR MLR
comp=Z,1µm,21.0s,MS5.2
COWI Conover 75.17 318 *e*P **P** **23 50 20.3 -0.7**
comp=Z,12nm,0.9s,mb4.8
COWI *e*PcP PcP 23 50 34.1 -0.4
COWI LR LR
comp=Z,2µm,19.0s,MS5.5
TRO Tromso 75.56 14 *e*P **P** **23 50 20.9 -1.9**
TRO *e*S S 00 00 03.7 +1.1
TRO *e*SS SS 00 04 55.3 +1.7
TRO AMS AMS 00 29 29.9
comp=Z,2µm,15.2s,MS5.6
MIAR Mount Ida 75.61 306 *e*P **P** **23 50 23.7 -0.1**
comp=Z,38nm,1.4s,mb5.1
MIAR LR LR
comp=Z,664nm,21.0s,MS4.9
MIAR Mount Ida 75.61 306 *e*P **P** **23 50 23.7 -0.1**
MIAR pmax pmax
comp=Z,38nm,1.4s,mb5.1
MIAR MLR MLR
comp=Z,664nm,21.0s,MS4.9
MAK Makhachkala 75.65 45 *e*P **P** **23 50 17.8 -6.0**
MAK *e* 23 50 30.1
MAK *e* 23 53 07.1
MAK *e*PPP 23 55 07.3
MAK *e*S S 23 59 57.2 -7.4
MAK *e* 00 00 30.8
MAK pmax pmax
comp=Z,288nm,1.6s,mb6.0
MAK MLR MLR
comp=Z,1µm,15.0s,MS5.3
NATX Nacogdoches 75.99 303 *e*P **P** **23 50 25.1 -0.9**
comp=Z,154nm,1.6s,mb5.7
NATX *e*PP PP 23 53 16.8 0.0
NATX LR LR
comp=Z,794nm,20.0s,MS5.0
HKT Hockley 76.69 301 *e*P **P** **23 50 29.9 -0.1**
comp=Z,59nm,1.8s,mb5.2
HKT LR LR
comp=Z,862nm,21.0s,MS5.0
HKT Hockley 76.69 301 *e*P **P** **23 50 29.9 -0.1**
HKT pmax pmax
comp=Z,59nm,1.8s,mb5.2
HKT MLR MLR
comp=Z,862nm,21.0s,MS5.0
SCIA State Center 76.91 313 PFAKE 23 50 40.0 +9.0
SCIA LR LR
comp=Z,903nm,21.0s,MS5.1
ARCES ARCESS Array B 77.14 15 P **P** **23 50 29.5 -2.2**
comp=Z,4.5nm,0.8s,mb4.5,baz=240,slow=4.1,SNR=12
ARCES LR LR 00 20 29.9
comp=Z,1µm,21.3s,MS5.2,baz=56,slow=33
MSEY Mahe Island 77.24 95 PFAKE 23 50 40.0 +6.5
MSEY LR LR
comp=Z,2µm,20.0s,MS5.3
EYMN Ely 77.25 320 *e*P **P** **23 50 31.9 -0.9**
comp=Z,21nm,1.4s,mb4.9
EYMN LR LR
comp=Z,1µm,19.0s,MS5.3
KLMR Klimovskoe 77.28 26 *e*P **P** **23 50 31.8 -0.9**
KLMR *e* 23 53 24.3
KLMR *e*PPP 23 55 10.4
KLMR *e*S S 00 00 19.5 -2.3
KLMR *e*SS SS 00 05 16.2 -3.9
KLMR *e*SSS 00 08 40.1
KLMR pmax pmax
comp=Z,74nm,1.4s,mb5.4
KLMR pmax pmax
comp=Z,141nm,7.5s
KEV Kevo 77.68 16 *e*P **P** **23 50 34.8 0.0**
comp=Z,26nm,1.0s,mb5.1
KEV LR LR
comp=Z,1µm,21.0s,MS5.3
KEV Kevo 77.68 16 *e*P **P** **23 50 34.8 0.0**
KEV pmax pmax
comp=Z,26nm,1.0s,mb5.1
KEV MLR MLR
comp=Z,1µm,21.0s,MS5.3
KEV Kevo 77.68 16 *e*p **P** **23 50 34.1 -0.7**
comp=Z,16nm,0.8s,mb5.0
KVTX Kingsville 78.14 298 PFAKE 23 50 50.0 +12
KVTX LR LR
comp=Z,1µm,21.0s,MS5.1
APA Apatity 78.27 19⇑ *i*P **P** **23 50 36.6 -1.5**
APA *i* 23 50 46.0
APA *i* 23 53 36.0
APA *i* PPP 23 55 29.0
APA *e*S S 00 00 32.0 -0.2
APA *e* 00 00 43.0
APA *e*PS 00 01 07.0
APA pmax pmax
comp=Z,21nm,1.0s,mb5.0
APA pmax pmax
comp=Z,200nm,7.2s
KSU1 Kansas State U 78.86 310 PFAKE 23 50 50.0 +8.0
KSU1 LR LR
comp=Z,1µm,21.0s,MS5.2
SYO Syowa Base 79.14 161⇑ *e*P **P** **23 50 44.0 +1.1**
ASHO Ashiyiah 79.38 65⇑ P **P** **23 50 44.8 -0.3**
SNR=6.6
HATD Hatta, Dubai 79.46 65 ⇓P **P** **23 50 46.0 +0.4**
SNR=16
ARQ Araqi 79.67 66 P **P** **23 50 47.8 +1.2**
SNR=15
ECSD EROS Data Cent 79.74 315 *e*P **P** **23 50 42.8 -3.9**
comp=Z,35nm,1.1s,mb5.2
ECSD LR LR
comp=Z,2µm,19.0s,MS5.4
WMOK Wichita Mounta 79.87 305 *e*P **P** **23 50 46.9 -0.6**
comp=Z,20nm,1.1s,mb5.0
WMOK LR LR
comp=Z,896nm,20.0s,MS5.1
WMOK Wichita Mounta 79.87 305 *e*P **P** **23 50 46.9 -0.7**
WMOK pmax pmax
comp=Z,20nm,1.1s,mb5.0
WMOK MLR MLR
comp=Z,896nm,20.0s,MS5.1
JCT Junction City 80.16 301 *e*P **P** **23 50 50.0 +0.7**
comp=Z,40nm,1.1s,mb5.3
JCT LR LR
comp=Z,712nm,21.0s,MS5.0
JCT Junction City 80.16 301 *e*P **P** **23 50 50.0 +0.8**
JCT pmax pmax
comp=Z,40nm,1.1s,mb5.3
JCT MLR MLR
comp=Z,712nm,21.0s,MS5.0
AGMN Agassiz Nation 80.17 319 *e*P **P** **23 50 48.5 -0.4**
comp=Z,26nm,1.1s,mb5.1
AGMN LR LR
comp=Z,1µm,19.0s,MS5.2
BSY Bisya 80.23 67 P **P** **23 50 50.3 +0.6**
SNR=9.1
HOQ Hoqain 80.41 66 P **P** **23 50 50.8 +0.1**
SNR=7.2
SMDO Samad 81.04 67 P **P** **23 50 54.5 +0.4**
SNR=10
CBKS Cedar Bluff 81.22 309 *e*P **P** **23 50 54.6 -0.1**
comp=Z,72nm,1.4s,mb5.4
CBKS LR LR
comp=Z,848nm,19.0s,MS5.1
CBKS Cedar Bluff 81.22 309 *e*P **P** **23 50 54.6 -0.1**
CBKS pmax pmax
comp=Z,72nm,1.4s,mb5.4
CBKS MLR MLR
comp=Z,848nm,19.0s,MS5.1
KBS Kingsbay 81.71 6 *e*P **P** **23 50 56.3 -0.3**
KBS *e*S S 00 01 09.4 +1.1
KBS *e*SS SS 00 06 34.5 +8.7
KBS AMS AMS 00 21 17.5
comp=Z,782nm,20.3s,MS5.1
KBS Kingsbay 81.71 6 *e*P **P** **23 50 55.2 -1.4**
comp=Z,14nm,1.0s,mb4.8
KBS LR LR
comp=Z,902nm,20.0s,MS5.1
KBS Kingsbay 81.71 6 *e*P **P** **23 50 55.2 -1.3**
KBS pmax pmax
comp=Z,14nm,1.0s,mb4.8
KBS MLR MLR
comp=Z,902nm,20.0s,MS5.1
FCC Fort Churchill 81.72 330 *e*P **P** **23 50 57.1 +0.2**
comp=Z,0.8nm,1.0s
AMTX Amarillo 82.26 305 *e*P **P** **23 51 00.8 +0.5**
comp=Z,49nm,1.8s,mb5.1
AMTX LR LR
comp=Z,1µm,20.0s,MS5.2
428A Kincaid Ranch, 82.66 301⇑ P **P** **23 51 02.5 +0.1**
baz=82,SNR=22
428A ⇑SKSac SKSac 00 01 21.5 -2.1
baz=82
528A Cox Ranch, San 82.70 300⇑ P **P** **23 51 02.3 -0.3**
baz=83,SNR=5.6
528A ⇓SKSac SKSac 00 01 21.6 -2.3
baz=83
628A Black Gap, Mar 82.72 300⇑ P **P** **23 51 03.0 +0.2**
baz=83
628A ⇓SKSac SKSac 00 01 22.0 -2.0
baz=83
328A Wristen Ranch, 82.83 302⇑ P **P** **23 51 03.2 -0.2**
baz=83
MSTX Muleshoe 83.06 304⇑ P **P** **23 51 03.8 -0.7**
baz=83,SNR=12
MSTX ⇓SKSac SKSac 00 01 25.3 -0.7
baz=83
627A Terlingua Ranc 83.15 300⇑ P **P** **23 51 04.7 -0.3**
baz=83,SNR=7.8
OGNE Ogallala 83.26 311 *e*P **P** **23 51 05.9 +0.5**
comp=Z,52nm,1.0s,mb5.5
OGNE LR LR
comp=Z,1µm,21.0s,MS5.2
427A Hayter Ranch, 83.29 301⇑ P **P** **23 51 05.8 0.0**
baz=83,SNR=9.7
227A Bennet, Jal 83.30 302⇑ P **P** **23 51 05.6 -0.2**
baz=83
Y27A Causey 83.37 304⇑ P **P** **23 51 05.3 -0.8**
baz=83,SNR=11
TXAR Lajitas Array 83.38 300 P **P** **23 51 03.6 -2.6**
comp=Z,7.5nm,0.9s,mb4.7,baz=119,slow=7.3,SNR=26
TXAR LR LR 00 25 43.9
comp=Z,414nm,19.5s,MS4.8,baz=0.0,slow=34
X27A F and S Farms, 83.39 305 ⇓P **P** **23 51 06.0 -0.2**
baz=83,SNR=5.2
527A Woodward Ranch 83.41 300⇑ P **P** **23 51 06.0 -0.3**
baz=83
327A Balmorhea Ranc 83.41 302 ⇓P **P** **23 51 07.3 +0.9**
baz=83
127A Arkansas Junct 83.42 303 ⇓P **P** **23 51 06.0 -0.3**
baz=83
626A Big Bend Ranch 83.81 300⇑ P **P** **23 51 08.2 -0.2**
baz=84,SNR=14
426A McDonald Obser 83.81 301 ⇓P **P** **23 51 08.4 0.0**
baz=84,SNR=16
526A Mary Lane Ranc 83.81 300⇑ P **P** **23 51 07.8 -0.6**
baz=84,SNR=14
326A Caldwell Ranch 83.82 301 ⇓P **P** **23 51 09.0 +0.5**
baz=84
Y26A Elida 83.92 304⇑ P **P** **23 51 08.4 -0.6**
baz=84,SNR=9.4
X26A CR and CF Fran 83.97 305⇑ P **P** **23 51 09.2 +0.1**
baz=84,SNR=16
126A Clayton Basin, 83.97 303⇑ P **P** **23 51 09.1 -0.1**
baz=84
W26A Owens Ranch, T 83.98 305⇑ P **P** **23 51 09.1 0.0**
baz=84
Z26A Caprock 83.99 303 ⇓P **P** **23 51 09.1 -0.2**
baz=84
V26A Tequesquite Ra 84.06 306 ⇓P **P** **23 51 09.3 -0.3**
baz=84,SNR=12
GDL2 Guadalupe Moun 84.22 302 *e*P **P** **23 51 11.7 +1.2**
AKTK Aktyubinsk 84.26 39 P **P** **23 51 10.8 +0.5**
AKTK PP PP 23 54 24.4 -0.5
AKTO Aktyubinsk 84.26 39 P **P** **23 51 10.8 +0.5**
comp=Z,11nm,1.0s,mb5.0,baz=243,slow=4.4,SNR=26
AKTO PP PP 23 54 24.4 -0.5
comp=Z,6.9nm,1.0s,baz=266,slow=9.3,SNR=4.5
W25A X Bar L Ranch, 84.56 305⇑ P **P** **23 51 12.0 -0.2**
baz=84
225A Deer Hill, Car 84.60 302⇑ P **P** **23 51 12.3 -0.1**
baz=84
Z25A Roswell 84.61 303 ⇓P **P** **23 51 12.1 -0.3**
baz=84,SNR=8.3
U25A Circle Dot Ran 84.62 307⇑ P **P** **23 51 12.5 +0.1**
baz=84,SNR=5.4
425A Indio Mountain 84.64 301⇑ P **P** **23 51 12.7 0.0**
baz=84,SNR=29
Y25A Mesa, Roswell 84.64 304⇑ P **P** **23 51 12.3 -0.3**
baz=84,SNR=8.5
X25A Clemmons Ranch 84.67 305 ⇓P **P** **23 51 12.6 -0.1**
baz=84
T25A Trinidad 84.69 307⇑ P **P** **23 51 12.3 -0.4**
baz=85,SNR=8.4
P25A Willow Gulch B 84.72 310 ⇓P **P** **23 51 13.1 +0.2**
baz=85
Q25A Bedland, Calha 84.73 309⇑ P **P** **23 51 12.8 -0.1**
baz=85,SNR=7.8
V25A Rancho No Teng 84.74 306⇑ P **P** **23 51 13.2 +0.2**
baz=85,SNR=7.4
S25A Robets Cordova 84.76 308 ⇓P **P** **23 51 13.0 0.0**
baz=85,SNR=14
N25A Grover 84.79 311⇑ P **P** **23 51 13.7 +0.5**
baz=85
MNTX Cornudas Mount 85.05 302 *e*P **P** **23 51 14.1 -0.6**
comp=Z,3.1nm,0.9s,mb4.4
MNTX *e*PP PP 23 54 30.9 -0.9
MNTX LR LR
comp=Z,549nm,22.0s,MS4.9
RSSD Black Hills 85.10 314 *e*P **P** **23 51 15.5 +0.9**
comp=Z,18nm,1.5s,mb5.0
RSSD LR LR
comp=Z,1µm,19.0s,MS5.3
RSSD Black Hills 85.10 314 *e*P **P** **23 51 15.5 +0.9**
RSSD pmax pmax
comp=Z,18nm,1.5s,mb5.0
RSSD MLR MLR
comp=Z,1µm,19.0s,MS5.3
FFC Flin Flon 85.12 325 *e*P **P** **23 51 13.8 -0.7**
comp=Z,28nm,1.5s,mb5.2
FFC LR LR
comp=Z,1µm,20.0s,MS5.2
FFC Flin Flon 85.12 325 *i* P **P** **23 51 14.5 0.0**
Z24A Sheeppen Canyo 85.15 303 ⇓P **P** **23 51 15.1 -0.1**
baz=85
124A Stringfield Ra 85.18 303 ⇓P **P** **23 51 14.7 -0.6**
baz=85
224A Cornudas Mount 85.19 302⇑ P **P** **23 51 14.4 -1.0**
baz=85,SNR=8.7
Y24A Capitan 85.26 304⇑ P **P** **23 51 15.1 -0.6**
baz=85,SNR=16
V24A Rampart Ranch, 85.26 306⇑ P **P** **23 51 16.0 +0.3**
baz=85,SNR=17
P24A Kohler Place, 85.30 310 ⇓P **P** **23 51 15.3 -0.4**
baz=85
X24A Lazy VL Ranch, 85.30 305 ⇓P **P** **23 51 16.1 +0.2**
baz=85
U24A Moreno Valley 85.32 306⇑ P **P** **23 51 17.1 +1.2**
baz=85
W24A Lazy 6 Ranch, 85.33 305⇑ P **P** **23 51 16.7 +0.7**
baz=85,SNR=24
ABKAR Akbulak array 85.34 41 *e*P **P** **23 51 15.3 -0.4**
comp=Z,16nm,0.9s,mb5.1
ABKAR *e*PP PP 23 54 35.3 +1.6
R24A Sanders Place, 85.34 308 ⇓P **P** **23 51 16.7 +0.7**
baz=85
S24A Houchin Ranch, 85.37 308 ⇓P **P** **23 51 16.5 +0.3**
baz=85,SNR=13
N24A Carr 85.39 311 ⇓P **P** **23 51 16.4 +0.3**
baz=85
Q24A Divide 85.43 309 ⇓P **P** **23 51 17.2 +0.7**
baz=85,SNR=6.0
ARU Arti 85.47 33 *e*P **P** **23 51 14.7 -1.5**
comp=Z,29nm,0.9s,mb5.4
ARU LR LR
comp=Z,791nm,20.0s,MS5.1
ARU Arti 85.47 33 *d i*P **P** **23 51 14.2 -2.0**
ARU 23 54 28.9
ARU PPP 23 56 25.3
ARU S S 00 01 38.6 -8.3
ARU SS SS 00 07 19.3 -3.0
ARU pmax pmax
comp=Z,36nm,1.0s,mb5.5
ARU Arti 85.47 33 P **P** **23 51 16.7 +0.5**
comp=Z,195nm,0.8s,mb6.3,SNR=11
O24A Longmont 85.47 310 ⇓P **P** **23 51 17.2 +0.6**
baz=85
SDCO Great Sand Dun 85.61 308 *e*P **P** **23 51 15.6 -1.7**
comp=Z,25nm,1.2s,mb5.3
SDCO LR LR
comp=Z,615nm,20.0s,MS5.0
123A Bell Site, Whi 85.86 303 ⇓P **P** **23 51 19.0 +0.3**
baz=86
ISCO Idaho Springs 85.86 310 *e*P **P** **23 51 20.1 +1.5**
comp=Z,24nm,1.5s,mb5.2
ISCO LR LR
comp=Z,894nm,19.0s,MS5.2
ISCO Idaho Springs 85.86 310 *e*P **P** **23 51 20.1 +1.6**
ISCO pmax pmax
comp=Z,24nm,1.5s,mb5.2
ISCO MLR MLR
comp=Z,894nm,19.0s,MS5.2
PHWY Pilot Hill 85.87 311 *e*P **P** **23 51 18.4 -0.2**
Z23A Rita Site, Whi 85.87 303⇑ P **P** **23 51 18.3 -0.5**
baz=86
X23A Hourglass Bar 85.92 305 ⇓P **P** **23 51 19.2 +0.2**
baz=86
W23A Werner Place, 85.94 305 ⇓P **P** **23 51 19.4 +0.4**
baz=86,SNR=7.5
223A Chaparral, Ant 85.95 302 ⇓P **P** **23 51 19.5 +0.3**
baz=86
Q23A Hartsel 85.96 309⇑ P **P** **23 51 19.2 +0.1**
baz=86
T23A Casias Ranch, 85.98 307⇑ P **P** **23 51 19.6 +0.5**
baz=86
P23A Jefferson 86.00 309 ⇓P **P** **23 51 19.8 +0.6**
baz=86,SNR=6.4
S23A Nye Farm, Mont 86.00 308⇑ P **P** **23 51 20.6 +1.3**
baz=86
V23A Ortiz Mt. (NFS 86.00 306⇑ P **P** **23 51 20.0 +0.7**
baz=86,SNR=8.5
U23A El Rito 86.05 306⇑ P **P** **23 51 20.6 +1.1**
baz=86,SNR=6.3
O23A Lake Granby, G 86.13 310 ⇓P **P** **23 51 20.2 +0.4**
baz=86,SNR=5.1
ANMO Albuquerque 86.17 305 *e*P **P** **23 51 21.5 +1.3**
comp=Z,22nm,1.2s,mb5.3
ANMO LR LR
comp=Z,990nm,21.0s,MS5.2
ANMO Albuquerque 86.17 305 *e*P **P** **23 51 21.5 +1.3**
ANMO pmax pmax
comp=Z,22nm,1.2s
ANMO MLR MLR
comp=Z,990nm,21.0s
N23A Red Feather La 86.20 311⇑ P **P** **23 51 20.9 +0.7**
baz=86,SNR=9.0
BNM Barren Site 86.26 304 *e*P **P** **23 51 20.2 -0.4**
comp=Z,42nm,1.6s,mb5.4
LPM Los Pinos Moun 86.27 304 *e*P **P** **23 51 22.2 +1.5**
122A Conniff Cattle 86.48 303⇑ P **P** **23 51 22.7 +0.9**
baz=86
Z22A Elephant Butte 86.48 303 ⇓P **P** **23 51 22.0 +0.3**
baz=86,SNR=21

Y22D **IRIS PASSCAL I** 86.50 304 ⇓P P 23 51 22.1 +0.3
baz=86
W22A **Albuquerque** 86.52 305 ⇓P P 23 51 22.4 +0.5
baz=86
Y22A **Socorro** 86.53 304 ⇑P P 23 51 22.4 +0.4
baz=86,SNR=13
222A **Williams Famil** 86.53 302 ⇑P P 23 51 22.0 0.0
baz=86
LENM **Lemitar** 86.55 304 eP P 23 51 23.8 +1.8
N22A **Wattenberg Ran** 86.58 311 ⇑P P 23 51 22.6 +0.5
baz=86,SNR=6.3
U22A **Llaves** 86.59 306 ⇓P P 23 51 23.3 +1.1
baz=86,SNR=11
V22A **San Miguel Ran** 86.60 306 ⇓P P 23 51 23.1 +0.8
baz=86,SNR=7.6
O22A **Kremmling** 86.61 310 ⇑P P 23 51 22.4 +0.2
baz=86,SNR=15
R22A **Saguache, Gunn** 86.63 308 ⇑P P 23 51 23.3 +1.0
baz=86,SNR=6.6
S22A **4UR Ranch, Cre** 86.66 308 ⇓P P 23 51 23.0 +0.5
baz=86,SNR=12
SVE **Sverdlovsk** 86.66 33⇑ eP P 23 51 23.0 +0.9
SVE e 23 54 42.8
SVE ePPP 23 56 38.3
SVE eS SKSac 00 01 45.8 -2.3
SVE eSSS 00 11 11.2
SVE pmax pmax
comp=Z,14nm,0.9s,mb5.2
T22A **Edith** 86.67 307 ⇓P P 23 51 23.0 +0.4
baz=86,SNR=13
LAZ **Ladron** 86.70 304 eP P 23 51 23.2 +0.4
comp=Z,21nm,1.2s,mb5.2
P22A **Eagle** 86.73 310 ⇓P P 23 51 22.5 -0.3
baz=87
M22A **Cedar Creek Ra** 86.73 311 ⇑P P 23 51 23.3 +0.5
baz=87
Q22A **Crested Butte,** 86.80 309 ⇓P P 23 51 23.5 +0.3
baz=87,SNR=5.1
SMCO **Snowmass** 86.87 309 eP P 23 51 22.1 -1.4
comp=Z,33nm,1.4s,mb5.4
LAO **LASA Array** 86.87 317 eP P 23 51 21.1 -2.2
comp=Z,46nm,1.2s,mb5.6
LAO LR LR
comp=Z,1µm,20.0s,MS5.4
MAW **Mawson** 87.06 158 eP P 23 51 27.6 +3.8
comp=Z,8.4nm,1.0s,mb4.9
MAW eS S 00 02 05.0 +3.0
MAW **Mawson** 87.06 158 P P 23 51 25.9 +2.1
comp=Z,10nm,1.1s,mb5.0,baz=277,slow=5.5,SNR=10
MAW LR LR 00 22 13.6
comp=Z,2µm,19.8s,MS5.5,baz=285,slow=30
Z21A **St. Cloud Mine** 87.08 303 ⇑P P 23 51 25.2 +0.5
baz=87,SNR=8.9
221A **Mesquite Ranch** 87.10 302 ⇓P P 23 51 25.4 +0.6
baz=87
Y21A **Point of Rocks** 87.12 304 ⇓P P 23 51 25.5 +0.7
baz=87,SNR=16
121A **Cookes Peak, D** 87.13 302 ⇓P P 23 51 25.6 +0.6
baz=87
W21A **San Fidel** 87.16 305 ⇓P P 23 51 24.9 -0.1
baz=87
T21A **Navajo Lake** 87.17 307 ⇑P P 23 51 25.4 +0.3
baz=87
V21A **Milan** 87.19 306 ⇓P P 23 51 25.1 -0.1
baz=87
RWWY **Rawlins** 87.21 312 eP P 23 51 26.4 +1.3
comp=Z,40nm,1.3s,mb5.5
X21A **Alamocita Cree** 87.23 304 ⇓P P 23 51 25.8 +0.4
baz=87,SNR=19
U21A **Nageezi** 87.24 306 ⇓P P 23 51 26.2 +0.8
baz=87
R21A **Cimarron** 87.26 308 ⇓P P 23 51 26.3 +0.8
baz=87
Q21A **Lamborn Mesa,** 87.31 309 ⇑P P 23 51 26.3 +0.6
baz=87
O21A **Pagoda** 87.31 310 ⇓P P 23 51 26.4 +0.7
baz=87
M21A **Separation Pea** 87.32 312 ⇑P P 23 51 25.8 +0.1
baz=87,SNR=13
L21A **Rawlins** 87.35 312 ⇓P P 23 51 26.1 +0.4
baz=87,SNR=17
N21A **Black Mountain** 87.39 311 ⇓P P 23 51 26.8 +0.9
baz=87,SNR=21
S21A **Coal Bank Pass** 87.41 308 ⇓P P 23 51 26.8 +0.6
baz=87,SNR=16
Y20A **Horse Springs,** 87.70 304 ⇑P P 23 51 28.5 +0.9
baz=88,SNR=8.8
320A **Kipp Ranch, An** 87.71 301 ⇓P P 23 51 27.5 -0.2
baz=88
220A **Playas Peak, P** 87.73 302 ⇑P P 23 51 27.1 -0.7
baz=88,SNR=5.6
X20A **Quemado** 87.83 304 ⇑P P 23 51 28.7 +0.4
baz=88,SNR=8.1
Z20A **Nine Sixteen R** 87.84 303 ⇓P P 23 51 29.2 +0.9
baz=88,SNR=13
120A **U Bar Ranch, L** 87.85 302 ⇓P P 23 51 29.0 +0.6
baz=88,SNR=9.3
W20A **Ramah** 87.86 305 ⇑P P 23 51 29.0 +0.7
baz=88,SNR=5.7
V20A **Brimhall** 87.86 306 ⇑P P 23 51 28.3 -0.1
baz=88
Q20A **Ridgley Place,** 87.88 309 ⇓P P 23 51 28.6 +0.2
baz=88
O20A **White River Ci** 87.90 310 ⇓P P 23 51 28.7 +0.2
baz=88,SNR=6.8
R20A **Redvale** 87.91 308 ⇓P P 23 51 29.5 +0.9
baz=88,SNR=7.7
M20A **Sweetwater, Wa** 87.93 311 ⇓P P 23 51 29.1 +0.5
baz=88,SNR=6.6
U20A **Newcomb** 87.93 306 ⇓P P 23 51 28.6 -0.1
baz=88
N20A **Spence Gulch,** 87.95 311 ⇓P P 23 51 29.1 +0.3
baz=88,SNR=9.1
MVCO **Mesa Verde** 87.95 307 ⇑P P 23 51 29.6 +0.8
baz=88,SNR=9.6
MVCO **Mesa Verde** 87.95 307 eP P 23 51 30.0 +1.2
comp=Z,39nm,1.3s,mb5.5
MVCO LR LR
comp=Z,1µm,22.0s,MS5.2
P20A **De Beque** 87.98 309 ⇓P P 23 51 29.3 +0.5
baz=88,SNR=8.3
PV01 **Paradox Valley** 88.05 308 eP P 23 51 29.7 +0.4
comp=Z,2µm,1.3s
L20A **Wamsutter** 88.07 312 ⇓P P 23 51 29.6 +0.4
baz=88
K20A **Yellowstone Ra** 88.11 313 ⇓P P 23 51 29.4 0.0
baz=88,SNR=13
V19A **Window Rock** 88.33 306 ⇓P P 23 51 30.9 +0.3
baz=88
PV04 **Paradox Valley** 88.33 308 eP P 23 51 32.0 +1.5
319A **Douglas** 88.35 301 ⇓P P 23 51 30.8 0.0
baz=88
T19A **Beclabito** 88.36 307 ⇑P P 23 51 30.6 -0.1
baz=88
219A **White Tail Can** 88.36 302 ⇑P P 23 51 31.2 +0.4
baz=88,SNR=8.6
Z19A **T-Link Ranch,** 88.41 303 ⇑P P 23 51 31.9 +0.9
baz=88
119A **Ashpeak Ranch,** 88.42 303 ⇓P P 23 51 31.7 +0.6
baz=88
Y19A **Nutrioso** 88.43 304 ⇑P P 23 51 32.1 +1.0
baz=88,SNR=14
P19A **Cripple Cowboy** 88.44 310 ⇓P P 23 51 31.1 +0.1
baz=88
X19A **St. Johns** 88.47 304 ⇓P P 23 51 32.0 +0.6
baz=88
U19A **Dine' College,** 88.48 306 ⇑P P 23 51 30.9 -0.5
baz=88
S19A **Harvey Farm, M** 88.48 308 ⇓P P 23 51 30.4 -0.9
baz=88,SNR=6.7
K19A **Absolon Red Bu** 88.49 313 ⇑P P 23 51 30.8 -0.4
baz=88,SNR=10
O19A **Miners Draw (B** 88.58 310 ⇑P P 23 51 31.8 +0.1
baz=88,SNR=10.0
W19A **Sanders** 88.58 305 ⇓P P 23 51 32.1 +0.3
baz=88
R19A **Curley Farm, L** 88.60 308 ⇓P P 23 51 31.7 -0.2
baz=88,SNR=8.2
Q19A **Hogan Spring (** 88.63 309 ⇑P P 23 51 32.7 +0.7
baz=88,SNR=37
N19A **John Jarvie Ra** 88.65 311 ⇓P P 23 51 31.8 -0.2
baz=88
M19A **Rock Springs** 88.66 311 ⇑P P 23 51 32.3 +0.2
baz=88
L19A **Farson** 88.83 312 ⇑P P 23 51 32.2 -0.6
baz=89,SNR=12
W18A **Petrified Fore** 88.87 305 ⇑P P 23 51 32.8 -0.4
baz=89

RLMT **Red Lodge** 88.90 315 ⇓P P 23 51 33.4 +0.4
baz=89,SNR=8.8
RLMT **Red Lodge** 88.90 315 eP P 23 51 34.2 +1.1
comp=Z,26nm,1.3s,mb5.4
RLMT LR LR
comp=Z,1µm,19.0s,MS5.4
318A **Bisbee** 88.96 301 ⇑P P 23 51 34.5 +0.9
baz=89,SNR=6.5
BW06 **Boulder Array** 89.01 313 ⇑P P 23 51 33.8 +0.1
baz=89
BW06 **Boulder Array** 89.01 313 eP P 23 51 33.9 +0.3
comp=Z,38nm,2.0s,mb5.4
BW06 LR LR
comp=Z,998nm,22.0s,MS5.2
U18A **Rough Rock, Ch** 89.02 306 ⇓P P 23 51 34.4 +0.5
baz=89,SNR=9.9
218A **Dragoon** 89.02 302 ⇓P P 23 51 34.2 +0.2
baz=89
X18A **Snowflake** 89.02 304 ⇑P P 23 51 34.4 +0.5
baz=89,SNR=7.1
N18A **Larsen Ranch,** 89.03 311 ⇑P P 23 51 33.7 0.0
baz=89,SNR=8.9
T18A **Mexican Hat** 89.05 307 ⇑P P 23 51 34.3 +0.3
baz=89
V18A **Ganado** 89.05 306 ⇑P P 23 51 34.5 +0.5
baz=89
Z18A **Geronimo** 89.05 303 ⇑P P 23 51 34.4 +0.4
baz=89
Y18A **Canyon Day Jun** 89.07 304 ⇓P P 23 51 34.3 +0.1
baz=89,SNR=9.3
QSPA **South Pole Qui** 89.10 180 eP P 23 51 33.1 -0.2
comp=Z,46nm,0.9s,mb5.8
QSPA LR LR
comp=Z,920nm,21.0s,MS5.2
R18A **Canyonlands Na** 89.11 308 ⇑P P 23 51 34.1 -0.1
baz=89,SNR=14
G18A **Lazy EL Ranch,** 89.11 315 ⇓P P 23 51 33.7 -0.4
baz=89
S18A **Hurst Farm, Bl** 89.16 308 ⇓P P 23 51 35.2 +0.7
baz=89,SNR=8.8
GCMT **Greycliff** 89.20 316 eP P 23 51 34.1 -0.4
comp=Z,15nm,0.8s,mb5.4
I18A **Diamond G Ranc** 89.23 314 ⇓P P 23 51 34.8 +0.1
baz=89,SNR=5.6
F18A **Big Timber** 89.24 316 ⇑P P 23 51 34.4 -0.2
baz=89,SNR=5.7
Q18A **Rafter H Ranch** 89.31 309 ⇓P P 23 51 35.0 -0.2
baz=89,SNR=7.6
L18A **Fontenelle, Gr** 89.33 312 ⇑P P 23 51 34.9 -0.3
baz=89
M18A **Lyman** 89.34 311 ⇓P P 23 51 35.4 +0.2
baz=89,SNR=10
EGMT **Eagleton** 89.35 318 ⇑P P 23 51 34.8 -0.3
baz=89
EGMT **Eagleton** 89.35 318 eP P 23 51 33.9 -1.2
comp=Z,9.3nm,0.3s,mb5.6
EGMT LR LR
comp=Z,1µm,22.0s,MS5.3
D18A **Linhart Farms,** 89.35 317 ⇑P P 23 51 35.4 +0.3
baz=89
K18A **Toltan Ranch,** 89.36 312 ⇓P P 23 51 35.4 +0.1
baz=89
J18A **Kendall Valley** 89.36 313 ⇓P P 23 51 34.8 -0.5
baz=89
B18A **Beardsley Farm** 89.38 318 ⇑P P 23 51 35.1 -0.2
baz=89
QUE **Quetta** 89.40 60 eP P 23 51 37.0 +1.2
QUE eS S 00 02 20.0 -5.8
E18A **Harlowton** 89.40 316 ⇑P P 23 51 35.1 -0.3
baz=89
P18A **Preston Nutter** 89.42 309 ⇓P P 23 51 35.5 -0.2
baz=89,SNR=7.6
Z17A **San Carlos Hig** 89.42 303 ⇑P P 23 51 36.2 +0.4
baz=89
SRU **San Rafael** 89.62 309 ⇑P P 23 51 36.9 +0.3
baz=90
SRU **San Rafael** 89.62 309 eP P 23 51 36.7 +0.1
comp=Z,10nm,1.0s,mb5.1
SRU ePP PP 23 55 08.1 -0.3
SRU **San Rafael** 89.62 309 eP P 23 51 36.7 +0.1
SRU e 23 55 08.1
SRU pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
TUC **Tucson** 89.66 302 eP P 23 51 37.3 +0.3
TUC LR LR
comp=Z,653nm,20.0s,MS5.1
W17A **Winslow** 89.67 305 ⇑P P 23 51 37.3 +0.4
baz=90
217A **Green Valley** 89.67 302 ⇑P P 23 51 37.4 +0.3
baz=90,SNR=5.2
LKWY **Lake** 89.68 314 PFAKE 23 51 50.0 +13
LKWY LR LR
comp=Z,2µm,19.0s,MS5.6
X17A **Forest Lakes** 89.72 304 ⇓P P 23 51 38.6 +1.4
baz=90
Y17A **Roosevelt** 89.74 304 ⇑P P 23 51 38.2 +0.9
baz=90,SNR=8.5
V17A **Tonalea, Kykot** 89.75 305 ⇓P P 23 51 37.8 +0.5
baz=90,SNR=20
R17A **Hanksville Air** 89.75 308 ⇑P P 23 51 36.8 -0.5
baz=90,SNR=10
T17A **Navajo Res., N** 89.79 307 ⇓P P 23 51 38.5 +1.0
baz=90
I17A **Pilgrim Ck.** 89.79 314 ⇓P P 23 51 37.4 +0.1
baz=90
M17A **Scullys Gap (B** 89.79 311 ⇓P P 23 51 37.4 +0.1
baz=90
P17A **Butcher Ranch,** 89.80 309 ⇑P P 23 51 37.2 -0.2
baz=90
LOHW **Long Hollow** 89.80 313 eP P 23 51 38.2 +0.8
comp=Z,24nm,1.4s,mb5.3
S17A **Black Ridge (B** 89.80 307 ⇑P P 23 51 38.0 +0.5
baz=90,SNR=8.6
H17A **Grant Village** 89.80 314 ⇑P P 23 51 37.7 +0.4
baz=90
O17A **Robinson Place** 89.81 310 ⇓P P 23 51 37.9 +0.4
baz=90,SNR=5.7
J17A **Brown Place, J** 89.87 313 ⇓P P 23 51 38.0 +0.3
baz=90
F17A **Fitzpatrick Pl** 89.90 316 ⇑P P 23 51 37.6 -0.1
baz=90
N17A **Moffit Pass** 89.90 311 ⇑P P 23 51 37.8 -0.1
baz=90
MOOW **Moose Ponds** 89.91 314 eP P 23 51 38.5 +0.6
comp=Z,22nm,1.8s,mb5.2
SNOW **Snow King Moun** 89.91 313 eP P 23 51 38.0 +0.2
G17A **Pierce Place,** 89.94 315 ⇓P P 23 51 37.7 -0.2
baz=90
D17A **Six Diamond Ra** 89.95 317 ⇑P P 23 51 37.4 -0.6
baz=90
L17A **Cokeville** 89.96 312 ⇓P P 23 51 37.6 -0.5
baz=90
REDW **Red Top Meadow** 89.97 313 eP P 23 51 39.4 +1.3
comp=Z,24nm,1.3s,mb5.4
YFT **Old Faithful** 89.99 314 eP P 23 51 38.7 +0.5
A17A **Triple J Farms** 90.01 319 ⇓P P 23 51 38.1 -0.1
baz=90
K17A **Gardner Place,** 90.01 313 ⇑P P 23 51 38.6 +0.2
baz=90
C17A **Wharram Farm,** 90.02 317 ⇓P P 23 51 38.4 +0.2
baz=90
U16A **Tuba City** 90.03 306 ⇑P P 23 51 39.6 +1.0
baz=90,SNR=8.1
TPAW **Teton Pass** 90.05 313 eP P 23 51 39.6 +1.1
comp=Z,14nm,1.1s,mb5.2
IMW **Indian Meadow** 90.05 314 eP P 23 51 39.6 +1.1
comp=Z,12nm,1.1s,mb5.1
E17A **Martinsdale** 90.05 316 ⇑P P 23 51 38.2 -0.2
baz=90,SNR=6.5
B17A **L&G Farms, Che** 90.06 318 ⇑P P 23 51 38.5 0.0
baz=90
Q16A **Castle Valley** 90.12 309 ⇑P P 23 51 39.5 +0.5
baz=90
AHID **Auburn Hatcher** 90.14 313 eP P 23 51 39.0 0.0
AHID LR LR
comp=Z,942nm,20.0s,MS5.2
DAU **Daniels Canyon** 90.21 310 eP P 23 51 41.0 +1.6
WUAZ **Wupatki** 90.22 305 ⇑P P 23 51 40.1 +0.6
baz=90,SNR=6.1
WUAZ **Wupatki** 90.22 305 eP P 23 51 41.7 +2.2
comp=Z,22nm,1.3s,mb5.3
WUAZ LR LR
comp=Z,739nm,20.0s,MS5.1
DCID1 **Drake Creek** 90.22 313 eP P 23 51 38.6 -0.7
comp=Z,38nm,0.4s,mb6.1
Z16A **Peralta Trail,** 90.22 303 ⇓P P 23 51 40.0 +0.5
baz=90
216A **Three Points,** 90.22 302 ⇑P P 23 51 39.9 +0.3
baz=90

X16A **Lo Mia Camp, P** 90.25 304 ⇓P P 23 51 40.5 +0.9
baz=90,SNR=11
Y16A **Circle Bar Ran** 90.27 304 ⇓P P 23 51 39.9 +0.1
baz=90,SNR=9.0
H16A **Russell Place,** 90.29 315 ⇑P P 23 51 40.5 +0.9
baz=90
RRI2 **Red Ridge** 90.32 313 eP P 23 51 40.8 +1.1
comp=Z,10.0nm,0.8s,mb5.2
W16A **Flagstaff** 90.34 305 ⇓P P 23 51 40.9 +0.9
baz=90,SNR=5.5
T16A **Glen Canyon Da** 90.35 307 ⇓P P 23 51 39.8 -0.2
baz=90
R16A **Teasdale** 90.35 308 ⇑P P 23 51 39.6 -0.5
baz=90
N16A **Rees Ranch, Co** 90.36 311 ⇑P P 23 51 40.6 +0.6
baz=90
JLU **Jordanelle** 90.36 310 eP P 23 51 40.7 +0.6
L16A **Fish Haven** 90.38 312 ⇓P P 23 51 39.9 -0.2
baz=90
S16A **Weppner Ranch,** 90.43 308 ⇑P P 23 51 40.6 +0.1
baz=90,SNR=7.4
116A **Eloy** 90.44 302 ⇑P P 23 51 41.2 +0.6
baz=90
I16A **Newdale** 90.45 314 ⇓P P 23 51 39.8 -0.5
baz=90
HWUT **Hardware Ranch** 90.47 311 eP P 23 51 41.0 +0.5
HWUT LR LR
comp=Z,1µm,20.0s,MS5.3
K16A **Soda Springs** 90.50 313 ⇑P P 23 51 40.5 -0.2
baz=90
P16A **Fountain Green** 90.51 309 ⇓P P 23 51 40.8 0.0
baz=90
J16A **Bone** 90.53 313 ⇑P P 23 51 40.7 0.0
baz=90,SNR=8.0
D16A **Dana Ranch, Ca** 90.54 317 ⇑P P 23 51 40.2 -0.5
baz=90
BOZ **Bozeman (W)** 90.58 315 ⇓P P 23 51 40.8 -0.1
baz=90
BOZ **Bozeman (W)** 90.58 315 eP P 23 51 42.1 +1.2
comp=Z,4.3nm,1.2s,mb4.7
BOZ LR LR
comp=Z,1µm,19.0s,MS5.3
BOZ **Bozeman (W)** 90.58 315 eP P 23 51 42.2 +1.3
BOZ pmax pmax
comp=Z,4.0nm,1.2s,mb4.6
BOZ MLR MLR
comp=Z,1µm,19.0s,MS5.3
E16A **East Helena** 90.62 316 ⇑P P 23 51 40.5 -0.6
baz=90
B16A **M & M Farms, S** 90.67 318 ⇓P P 23 51 40.4 -0.8
baz=90
C16A **Fuhringer Ranc** 90.68 318 ⇓P P 23 51 40.8 -0.6
baz=90
G16A **Moss Hill, Enn** 90.69 315 ⇑P P 23 51 41.6 +0.1
baz=90,SNR=5.1
Z15A **Gila River Ind** 90.83 303 ⇑P P 23 51 42.7 +0.3
baz=91
NLU **North Lily Min** 90.83 310 eP P 23 51 42.1 -0.1
V15A **Kaibab Nationa** 90.87 306 ⇓P P 23 51 42.6 +0.1
baz=91
115A **Sonoran Desert** 90.89 303 ⇓P P 23 51 43.2 +0.6
baz=91
MSU **Marysvale** 90.90 308 eP P 23 51 43.4 +0.8
X15A **Humboldt** 90.91 304 ⇓P P 23 51 43.1 +0.4
baz=91,SNR=7.7
MVU **Marysvale** 90.93 308 PFAKE 23 51 50.0 +7.3
MVU LR LR
comp=Z,584nm,20.0s,MS5.0
W15A **Williams** 90.94 305 ⇑P P 23 51 43.5 +0.6
baz=91
U15A **North Rim** 90.97 306 ⇑P P 23 51 43.8 +0.9
baz=91
R15A **Junction** 90.98 308 ⇑P P 23 51 43.0 0.0
baz=91
Y15A **Casa Rosa Ranc** 90.98 304 ⇑P P 23 51 43.2 +0.1
baz=91,SNR=5.3
P15A **Leamington** 90.99 309 ⇓P P 23 51 43.0 0.0
baz=91
Q15A **Fillmore** 91.06 309 ⇑P P 23 51 42.4 -1.0
baz=91
L15A **Malad City** 91.09 312 ⇓P P 23 51 42.9 -0.4
baz=91,SNR=5.7
J15A **Blackfoot** 91.13 313 ⇓P P 23 51 43.9 +0.3
baz=91
M15A **Larsen Ranch,** 91.13 311 ⇓P P 23 51 43.0 -0.6
baz=91,SNR=6.4
O15A **The Old Anders** 91.14 310 ⇑P P 23 51 43.9 +0.3
baz=91
LRM **Limekiln Ridge** 91.15 316 eP P 23 51 44.8 +1.2
I15A **Monteview** 91.17 314 ⇓P P 23 51 44.0 +0.3
baz=91
G15A **Dillon** 91.18 315 ⇑P P 23 51 43.7 0.0
baz=91,SNR=8.5
F15A **Butte** 91.18 316 ⇑P P 23 51 44.6 +0.9
baz=91
K15A **Arbon** 91.20 312 ⇓P P 23 51 43.7 -0.2
baz=91
D15A **Lincoln** 91.20 317 ⇑P P 23 51 43.7 -0.1
baz=91
B15A **Bradely Ranch,** 91.23 318 ⇓P P 23 51 43.2 -0.7
baz=91
DLMT **Dillon** 91.25 315 eP P 23 51 44.3 +0.3
comp=Z,6.1nm,1.3s,mb4.8
C15A **Salmond Ranch,** 91.26 318 ⇓P P 23 51 44.2 +0.1
baz=91
H15A **Lima** 91.28 314 ⇑P P 23 51 43.7 -0.5
baz=91
A15A **Johnson Ranch,** 91.35 319 ⇑P P 23 51 43.8 -0.6
baz=91
214A **Organ Pipe Nat** 91.37 302 ⇓P P 23 51 44.0 -0.9
baz=91
HVU **Hansel Valley** 91.38 312 eP P 23 51 45.6 +0.8
comp=Z,10nm,1.2s,mb5.0
HVU **Hansel Valley** 91.38 312 eP P 23 51 45.6 +0.9
HVU pmax pmax
comp=Z,10.0nm,1.2s,mb5.0
DUG **Dugway** 91.40 310 ⇑P P 23 51 44.4 -0.5
baz=91,SNR=5.7
DUG **Dugway** 91.40 310 eP P 23 51 46.2 +1.3
comp=Z,7.9nm,1.1s,mb5.0
DUG LR LR
comp=Z,1µm,22.0s,MS5.3
DUG **Dugway** 91.40 310 eP P 23 51 46.2 +1.3
DUG pmax pmax
comp=Z,8.0nm,1.1s,mb5.0
DUG MLR MLR
comp=Z,1µm,22.0s,MS5.3
MCMT **McKenzie Canyo** 91.43 315 eP P 23 51 44.8 -0.1
comp=Z,2.9nm,1.2s,mb4.5
114A **Black Gap (USA** 91.44 303 ⇑P P 23 51 44.7 -0.5
baz=91
X14A **Yava** 91.45 304 ⇓P P 23 51 45.0 -0.3
baz=91
Y14A **Wickenburg** 91.54 304 ⇑P P 23 51 45.7 0.0
baz=91,SNR=6.2
BGU **Big Grassy Mou** 91.57 311 eP P 23 51 44.5 -1.1
comp=Z,10nm,1.5s,mb4.9
BGU ePP PP 23 55 23.5 -0.4
P14A **Drum Mountains** 91.60 309 ⇓P P 23 51 46.0 +0.1
baz=92
W14A **Seligman** 91.61 305 ⇓P P 23 51 46.2 +0.2
baz=92
T14A **Hurricane** 91.61 307 ⇑P P 23 51 46.2 +0.2
baz=92
V14A **Boquillas Ranc** 91.63 305 ⇑P P 23 51 46.3 +0.2
baz=92
K14A **Jones Ranch, D** 91.67 312 ⇑P P 23 51 45.6 -0.4
baz=92
S14A **Cedar City** 91.68 308 ⇑P P 23 51 46.2 0.0
baz=92
N14A **Grayback Hills** 91.69 311 ⇓P P 23 51 46.0 -0.2
baz=92
U14A **Mt Trumbull** 91.69 306 ⇑P P 23 51 46.8 +0.5
baz=92
CHMT **Chamberlain Mo** 91.70 317 eP P 23 51 47.4 +1.3
B14A **Marquette Ranc** 91.71 318 ⇓P P 23 51 45.6 -0.5
baz=92
EDM **Edmonton** 91.71 323 eP P 23 51 46.4 +0.4
L14A **Malta** 91.72 312 ⇓P P 23 51 46.2 -0.1
baz=92
Q14A **Sevier Lake (B** 91.76 309 ⇓P P 23 51 46.8 +0.3
baz=92,SNR=9.2
F14A **Wisdom** 91.79 316 ⇓P P 23 51 47.1 +0.6
baz=92
A14A **Double T Ranch** 91.80 319 ⇓P P 23 51 46.9 +0.4
baz=92
H14A **Leadore** 91.80 314 ⇑P P 23 51 47.1 +0.4

baz=92
M14A Sheep Mountain 91.81 311 ⇓P P **23 51 46.6 -0.1**
baz=92
CCUT Cedar City 91.83 307 *e*P P **23 51 48.6 +1.6**
comp=Z,8.3nm,1.3s,mb4.9
G14A Jackson 91.86 315 ⇑P P **23 51 47.1 +0.2**
baz=92
E14A Clinton 91.87 316 ⇓P P **23 51 46.3 -0.6**
baz=92
D14A Greenough 91.88 317 ⇑P P **23 51 46.6 -0.3**
baz=92
J14A Carey 91.92 313 ⇓P P **23 51 47.0 -0.2**
baz=92
BRVK Borovoye 92.03 37 *e*P P **23 51 48.4 +0.9**
BRVK LR LR
comp=Z,1μm,20.0s,MS5.3
Z13A Yuma Proving G 92.09 303 ⇑P P **23 51 47.9 -0.3**
baz=92,SNR=7.9
BVAR Borovoye Array 92.09 37 P P **23 51 47.5 -0.2**
comp=Z,1.6nm,0.9s,mb4.3,baz=248,slow=4.0,SNR=8.8
BVAR PP PP 23 55 25.4 -2.3
comp=Z,2.2nm,0.9s,baz=250,slow=7.5,SNR=5.1
WALA Waterton Lakes 92.12 319 *e*P P **23 51 47.5 -0.5**
YKA Yellowknife Ar 92.16 332 P P **23 51 44.5 -3.4**
comp=Z,8.9nm,0.8s,mb5.2,baz=91,slow=5.4,SNR=15
MSO Missoula 92.18 317 *e*P P **23 51 48.0 -0.3**
comp=Z,3.1nm,1.1s,mb4.5
MSO LR LR
comp=Z,1μm,19.0s,MS5.4
113A Mohawk Valley, 92.18 303 ⇑P P **23 51 48.5 -0.2**
baz=92
S13A Holt Ranch, En 92.23 307 ⇓P P **23 51 49.9 +1.1**
baz=92
Y13A Salome 92.23 304 ⇑P P **23 51 48.9 +0.1**
baz=92
W13A Hualapai Mount 92.27 305 ⇑P P **23 51 48.9 -0.2**
baz=92
T13A Saint George 92.27 307 ⇑P P **23 51 49.7 +0.7**
baz=92
O13A Hicks Ranch, I 92.30 310 ⇓P P **23 51 49.9 +0.9**
baz=92
R13A O'Grain Ranch, 92.31 308 ⇓P P **23 51 49.1 0.0**
baz=92
U13A Pakoon Wash 92.32 306 ⇓P P **23 51 48.5 -0.8**
baz=92
P13A Bates Ranch, G 92.33 309 ⇓P P **23 51 49.1 -0.1**
baz=92
I13A Wildhorse Cree 92.35 314 ⇑P P **23 51 49.5 +0.3**
baz=92,SNR=7.1
E13A Victor 92.36 316 ⇑P P **23 51 49.1 0.0**
baz=92
J13A Cove Ranch, Pi 92.40 313 ⇑P P **23 51 49.8 +0.4**
baz=92
G13A Cobalt 92.41 315 ⇓P P **23 51 49.7 +0.3**
baz=92,SNR=5.9
M13A Montello 92.42 311 ⇑P P **23 51 49.5 -0.1**
baz=92,SNR=5.1
M13A Montello 92.42 311 *e*P P **23 51 50.7 +1.1**
PDMCI Parker Dam,Lak 92.48 304 ⇑P P **23 51 49.9 -0.2**
baz=92
B13A Whitefish 92.50 318 ⇑P P **23 51 50.0 +0.2**
baz=92
D13A Huson 92.53 317 ⇑P P **23 51 50.0 +0.1**
baz=92
HLID Hailey 92.57 313 ⇑P P **23 51 50.2 0.0**
baz=92,SNR=6.7
HLID Hailey 92.57 313 *e*P P **23 51 51.4 +1.2**
comp=Z,15nm,1.6s,mb5.2
HLID LR LR
comp=Z,1μm,20.0s,MS5.3
H12A Diamond D Ranc 92.87 314 ⇑P P **23 51 51.3 -0.2**
baz=93
O12A Currie 92.88 310 ⇓P P **23 51 51.8 +0.1**
baz=93
GLA Glamis 93.07 303 ⇓P P **23 51 52.8 0.0**
baz=93
I12A Atlanta 93.08 314 ⇑P P **23 51 52.6 0.0**
baz=93
F12A Elk City 93.11 316 ⇓P P **23 51 52.7 +0.1**
baz=93,SNR=7.1
C12B Naegeli Ranch, 93.20 318 ⇑P P **23 51 52.2 -0.8**
baz=93
T11A Corn Creek, Al 93.32 307 ⇓P P **23 51 54.3 +0.5**
baz=93
IRM Iron Mountain 93.32 304 ⇓P P **23 51 54.4 +0.5**
baz=93
BC3 Big Chuckawall 93.58 303 ⇑P P **23 51 54.9 -0.2**
baz=93
L11A Cat Creek Ranc 93.59 312 ⇑P P **23 51 54.7 -0.3**
baz=93
MFID Camas Ranch 93.60 313 ⇑P P **23 51 55.1 +0.1**
baz=93
DGAR Diego Garcia 94.09 97 PFAKE 23 52 10.0 +12
DGAR LR LR
comp=Z,1μm,19.0s,MS5.5
NEW Newport 94.28 318 *e*P P **23 51 56.4 -1.5**
NEW LR LR
comp=Z,2μm,21.0s,MS5.4
PFO Pinyon Flat Ob 94.42 303 *e*P P **23 51 58.4 -0.5**
PFO LR LR
comp=Z,529nm,20.0s,MS5.0
BMO Blue Mountains 94.60 315 *e*P P **23 51 59.8 +0.3**
BMO LR LR
comp=Z,772nm,19.0s,MS5.2
AML Almayashu 94.73 48 *e*P P **23 51 59.3 -0.9**
AML LR LR
comp=Z,1μm,19.0s,MS5.4
NIL Nilore 94.75 56 PFAKE 23 52 10.0 +10
NIL LR LR
comp=Z,104nm,22.0s,MS4.3
BMN Battle Mountai 94.77 310 *e*P P **23 52 00.3 0.0**
BMN LR LR
comp=Z,1μm,22.0s,MS5.3
EKS2 Erkin-Say 94.77 47 *e*P P **23 51 60.0 -0.4**
comp=Z,3.4nm,1.0s,mb4.7
EKS2 LR LR
comp=Z,1μm,20.0s,MS5.4
EKS2 Erkin-Say 94.77 47 *e*P P **23 52 00.0 -0.3**
EKS2 pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
EKS2 MLR MLR
comp=Z,1μm,20.0s,MS5.4
DAC Darwin (Calif) 95.25 306 PFAKE 23 52 10.0 +7.3
DAC LR LR
comp=Z,1μm,21.0s,MS5.3
AAK Ala-Archa 95.30 47 P P **23 52 04.1 +1.4**
comp=Z,2.3nm,0.4s,mb4.9,baz=267,slow=2.7,SNR=7.0
UCH Uchtor 95.34 48 PFAKE 23 52 10.0 +7.0
UCH LR LR
comp=Z,743nm,19.0s,MS5.2
OD2 Odessa Site #2 95.41 317 *e*P P **23 52 02.7 -0.5**
NVAR Mina Array Bea 95.71 308 P P **23 52 04.2 -0.6**
comp=Z,0.3nm,0.4s,mb4.0,baz=95,slow=3.3,SNR=4.5
WVOR Wild Horse Val 95.71 312 *e*P P **23 52 04.4 -0.3**
comp=Z,7.6nm,1.2s,mb5.0
WVOR LR LR
comp=Z,985nm,19.0s,MS5.3
WVOR Wild Horse Val 95.71 312 *e*P P **23 52 04.4 -0.3**
WVOR pmax pmax
comp=Z,8.0nm,1.2s,mb5.0
WVOR MLR MLR
comp=Z,985nm,19.0s,MS5.3
ISA Isabella 96.00 306 *e*P P **23 52 06.6 +0.4**
HAWA Hanford 96.05 316 PFAKE 23 52 20.0 +14
HAWA LR LR
comp=Z,875nm,19.0s,MS5.2
KSH Kashi 96.62 50 *e*P P **23 52 08.4 -0.5**
KSH *ep*P pP 23 52 12.4 -1.9
KSH *es*P sP 23 52 15.4 -0.9
KSH *eP*P PP 23 56 04.1 +0.7
KSH *e*SKS 00 02 42.8
KSH *e*S S 00 03 24.1 -5.6
KSH *e*SS SS 00 09 58.8 -5.2
KSH pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
KSH pmax pmax
comp=Z,58nm,7.0s
KSH LR LR
comp=N,450nm,10.8s,MS5.4
KSH LR LR
comp=E,580nm,14.2s,MS5.4
KSH LR LR
comp=Z,450nm,10.9s,MS5.2
MOD Modoc 96.99 312 *e*P P **23 52 12.0 +1.5**
MOD LR LR
comp=Z,889nm,19.0s,MS5.3
KURK Kurchatov 97.36 39⇓ *e*P P **23 52 12.5 +0.6**
KURK LR LR
comp=Z,795nm,20.0s,MS5.2
CMB Columbia Colle 97.37 308 PFAKE 23 52 20.0 +7.7
CMB LR LR
comp=Z,756nm,22.0s,MS5.1
JCW Jim Creek 97.49 318 *e*P P **23 52 11.6 -1.0**
LON Longmire 97.58 317 *e*P P **23 52 12.3 -0.7**
comp=Z,5.4nm,1.2s,mb5.0
LON Longmire 97.58 317 *e*P P **23 52 12.3 -0.7**
LON pmax pmax
comp=Z,5.0nm,1.2s,mb4.9
GNW Green Mountain 98.16 318 *e*P P **23 52 15.4 -0.2**
SAO San Andreas Ge 98.32 307 PFAKE 23 52 30.0 +13
SAO LR LR
comp=Z,789nm,19.0s,MS5.2
PGC Sidney 98.43 319 *e*P P **23 52 15.7 -1.1**
YBH Yreka Blue Hor 98.80 312 P P **23 52 17.1 -1.5**
comp=Z,0.7nm,0.4s,mb4.5,baz=117,slow=2.3,SNR=2.5
YBH Yreka Blue Hor 98.80 312 P P **23 52 17.1 -1.5**
YBH pmax pmax
comp=Z,1.0nm,0.4s
WDC Whiskeytown Da 98.80 311 PFAKE 23 52 30.0 +11
WDC LR LR
comp=Z,770nm,21.0s,MS5.2
HUMO Hull Mountain 98.88 313 PFAKE 23 52 30.0 +11
HUMO LR LR
comp=Z,968nm,21.0s,MS5.3
COR Corvallis 98.88 315 PFAKE 23 52 30.0 +11
COR LR LR
comp=Z,898nm,21.0s,MS5.2
NLWA Neilton Lookou 98.89 318 PFAKE 23 52 30.0 +11
NLWA LR LR
comp=Z,2μm,20.0s,MS5.6
MCCM Marconi Confer 99.32 308 PFAKE 23 52 30.0 +9.0
MCCM LR LR
comp=Z,1μm,22.0s,MS5.3
HOPS Hopland 99.38 309 PFAKE 23 52 30.0 +8.7
HOPS LR LR
comp=Z,935nm,20.0s,MS5.3
MKAR Makanchi Array 100.34 43 P Pdif 23 52 24.4 -0.8
MKAR PP PP 23 56 29.8 -1.8
MKAR Makanchi Array 100.34 43 P Pdif 23 52 24.4 -0.8
comp=Z,0.3nm,0.2s,baz=322,slow=4.4,SNR=4.5
MKAR PP PP 23 56 29.8 -1.8
comp=Z,4.0nm,0.8s,baz=284,slow=6.1,SNR=6.5
MKAR Makanchi Array 100.34 43*ce*P Pdif 23 52 24.6 -0.6
ZALV Zalesovo Beam 100.53 35 P Pdif 23 52 23.7 -2.3
comp=Z,0.2nm,0.2s,baz=270,slow=2.9,SNR=2.6
ZALV PP PP 23 56 29.1 -3.6
comp=Z,3.2nm,0.9s,baz=292,slow=7.6,SNR=4.0
SBA Scott Base 101.12 182 PFAKE 23 52 40.0 +11
SBA LR LR
comp=Z,636nm,20.0s,MS5.1
EGAK Eagle 103.03 337 PFAKE 23 52 50.0 +13
EGAK LR LR
comp=Z,2μm,20.0s,MS5.6
CASY Casey 104.89 162 PFAKE 23 53 00.0 +15
CASY LR LR
comp=Z,1μm,21.0s,MS5.4
ILAR Eielson Array 105.17 339 Pdiff Pdif 23 52 44.2 -2.4
comp=Z,0.2nm,0.8s,baz=50,slow=1.5,SNR=2.8
COLA College 105.46 339 PFAKE 23 57 10.0 +8.8
COLA LR LR
comp=Z,1μm,20.0s,MS5.4
TIXI Tiksi 106.99 9 PFAKE 23 57 10.0 +6.1
TIXI LR LR
comp=Z,636nm,20.0s,MS5.2
TRF Thorofare Moun 107.14 338 *e*P PKiKP 23 57 04.8 +0.4
PMR Palmer 107.75 336 *e*P Pdif 23 52 59.1 +1.0
comp=Z,17nm,0.3s
PMR Palmer 107.75 336 *e*P Pdif 23 52 59.1 +1.0
PMR pmax pmax
comp=Z,17nm,0.3s
RKT Rikitea 110.83 245 *e*SKSac SKSac 00 03 54.7 +2.8
comp=Z,263nm,29.0s
RKT *e*SP SP 00 07 12.7 -6.2
comp=Z,649nm,30.2s
RKT *e*SS SS 00 13 24.1 +3.8
comp=Z,1μm,30.5s
RKT *e*LQ 00 24 45.1
comp=Z,2μm,34.2s
RKT *e*LR LR 00 29 57.9
comp=Z,1μm,31.5s
KDAK Kodiak Island 111.36 334 *e*PKiKP PKiKP 23 57 11.3 -1.1
KDAK LR LR
comp=Z,2μm,22.0s,MS5.6
TLY Talaya 111.98 33 PFAKE 23 57 30.0 +16
TLY LR LR
comp=Z,890nm,19.0s,MS5.4
ZAK Zakamensk 112.39 35 *e*PKIKP PKiKP 23 57 28.8 +14
ZAK pmax pmax
comp=Z,2.0nm,1.9s
SONM Songino Array 115.41 36 PKP PKPdf 23 57 19.4 -1.1
comp=Z,0.7nm,0.7s,baz=298,slow=3.1,SNR=2.2
SONM PP PP 23 58 20.9 -0.5
comp=Z,2.1nm,0.9s,baz=289,slow=9.0,SNR=3.9
YAK Yakutsk 115.41 14 PFAKE 23 57 30.0 +10
YAK LR LR
comp=Z,819nm,22.0s,MS5.3
ULN Ulaanbaatar 115.78 36 *e*PKPdf PKPdf 23 57 21.7 +0.5
ULN LR LR
comp=Z,2μm,20.0s,MS5.7
SDPT Sand Point 116.28 335 *e*PKPdf PKPdf 23 57 21.9 0.0
COCO West Island 117.70 104 PFAKE 23 57 40.0 +14
COCO LR LR
comp=Z,608nm,19.0s,MS5.2
TAOE Nuku Hiva Isla 117.81 260 *e*SS SS 00 15 01.4 +8.4
comp=Z,484nm,36.8s
TAOE *e*LR LR 00 32 31.8
comp=Z,820nm,23.4s
LZH Lanzhou 118.81 49 *e*PKP PKPdf 23 57 25.6 -1.8
LZH PP PP 23 58 50.1 +4.5
LZH SKS SKSdf 00 04 36.2 -2.9
LZH SS SS 00 15 03.4 -0.8
LZH AMB AMB
comp=Z,55nm,4.1s
LZH LR LR
comp=N,1μm,18.4s
LZH LR LR
comp=Z,2μm,19.0s,MS5.8
CHTO Chiang Mai 119.31 69 PKPdf PKPdf 23 57 30.0 +1.1
CHTO LR LR
comp=Z,451nm,19.0s,MS5.1
AKUT Akutan 119.31 337 *e*PKPdf PKPdf 23 57 25.4 -2.4
CMAR Chiang Mai Arr 119.37 69 PKP PKPdf 23 57 27.2 -1.7
comp=Z,0.3nm,0.4s,baz=276,slow=3.2,SNR=3.3
CD2 Chengdu 120.56 54 PKP PKPdf 23 57 27.2 -3.7
CD2 PP PP 23 58 57.8 -0.1
CD2 PKS 00 01 02.6
CD2 SKS SKSdf 00 04 34.2 -8.5
CD2 SKKS SKKSac 00 05 46.4 -11
CD2 SS SS 00 15 21.2 -5.9
CD2 AMB AMB
comp=Z,150nm,5.1s
CD2 LR LR
comp=N,1μm,14.5s
CD2 LR LR
comp=E,920nm,20.6s
CD2 LR LR
comp=Z,1μm,22.5s
KMI Kunming 121.40 61 PKP PKPdf 23 57 32.6 -0.1
KMI sPKP 23 57 37.2
KMI PP PP 23 59 08.1 +4.2
KMI PKS 00 01 08.0
KMI SKKS SKKSac 00 05 58.9 -4.5
KMI SS SS 00 15 37.8 -0.6
KMI AMB AMB
comp=Z,140nm,6.4s
KMI LR LR
comp=N,520nm,21.1s,MS5.3
KMI LR LR
comp=E,480nm,21.1s,MS5.3
KMI LR LR
comp=Z,600nm,31.9s
HIA Hailar 121.71 29 PKPdf PKPdf 23 57 33.2 +0.6
HIA LR LR
comp=Z,1μm,22.0s,MS5.4
HHC Hu-ho-hao-te 122.13 41 *e*PKP PKPdf 23 57 28.5 -5.2
HHC PKS 00 01 03.5
HHC AMB AMB
comp=Z,150nm,7.4s
HHC LR LR
comp=N,310nm,13.1s,MS5.6
HHC LR LR
comp=E,960nm,15.8s,MS5.6
HHC LR LR
comp=Z,1μm,16.2s,MS5.6
KULM Kulim 122.39 84 PKPdf PKPdf 23 57 35.0 0.0
KULM LR LR
comp=Z,657nm,22.0s,MS5.2
GYA Guiyang 124.40 58 Pdif Pdif 23 54 11.8 -0.3
GYA PKP PKPdf 23 57 37.0 -1.4
GYA PP PP 23 59 28.0 +3.9
GYA PKS 00 01 12.1
GYA SKKS SKKSac 00 06 18.3 -4.4
GYA SS SS 00 16 15.4 -1.0
GYA AMB AMB
comp=Z,620nm,7.9s
GYA LR LR
comp=N,4μm,25.8s,MS6.0
GYA LR LR
comp=E,3μm,26.6s,MS6.0
GYA LR LR
comp=Z,5μm,24.4s,MS6.1
ADK Adak 125.06 341 PFAKE 23 57 50.0 +11
ADK LR LR
comp=Z,1μm,19.0s,MS5.7
ENH Enshi 125.40 53 PFAKE 23 57 50.0 +10
ENH LR LR
comp=Z,765nm,21.0s,MS5.3
PPT Papeete 125.40 248 *e*PP PP 23 59 27.0 -4.1
comp=Z,119nm,26.2s
PPT *e*SS SS 00 16 24.5 -5.0
comp=Z,2μm,29.5s
PPT *e*LQ 00 31 05.0
comp=Z,5μm,33.8s
PPT *e*LR LR 00 36 44.0
comp=Z,971nm,26.8s
BJT Baijiatuau 125.53 39 PFAKE 23 57 50.0 +10
BJT LR LR
comp=Z,1μm,21.0s,MS5.6
PET Petropavlovsk 128.13 360 PFAKE 23 58 00.0 +15
PET LR LR
comp=Z,515nm,20.0s,MS5.2
CN2 Changchun 128.36 30 *e*PKP PKPdf 23 57 46.8 +1.3
NWAO Narrogin (SRO) 128.74 135 PFAKE 23 58 00.0 +13
NWAO LR LR
comp=Z,1μm,22.0s,MS5.5
NWAO Narrogin (SRO) 128.74 135 PP PP 23 59 51.4 -1.0
comp=Z,7.7nm,1.0s,baz=228,slow=7.4,SNR=3.1
QIZ Qiongzhong 129.35 66 PKP PKPdf 23 57 46.4 -1.7
QIZ PP PP 23 59 55.3 -1.8
QIZ SS SS 00 17 18.6 0.0
QIZ LR LR
comp=N,680nm,20.2s,MS5.3
QIZ LR LR
comp=E,300nm,24.5s,MS5.3
QIZ LR LR
comp=Z,700nm,26.2s,MS5.2
QIZ Qiongzhong 129.35 66 PFAKE 23 58 00.0 +12
QIZ LR LR
comp=Z,689nm,21.0s,MS5.3
MDJ Mudanjiang 129.70 26 PKP PKPdf 23 57 46.2 -1.8
MDJ SKS SKSdf 00 04 57.7 -1.5
MDJ SS SS 00 17 24.1 +4.0
MDJ AMB AMB
comp=Z,60nm,7.2s
MDJ LR LR
comp=N,550nm,26.0s,MS5.4
MDJ LR LR
comp=E,950nm,29.8s,MS5.4
MDJ Mudanjiang 129.70 26 PFAKE 23 58 00.0 +12
MDJ LR LR
comp=Z,647nm,20.0s,MS5.3
KSM Kuching 132.12 89 PFAKE 23 58 00.0 +6.5
KSM LR LR
comp=Z,547nm,20.0s,MS5.3
YSS Yuzh-Sakhalins 132.26 14 PFAKE 23 58 00.0 +7.2
YSS LR LR
comp=Z,306nm,20.0s,MS5.0
KIP Kipapa 132.75 299 PFAKE 23 58 10.0 +16
KIP LR LR
comp=Z,582nm,22.0s,MS5.2
INCN Inchon 133.47 35 PFAKE 23 58 10.0 +15
INCN LR LR
comp=Z,1μm,21.0s,MS5.6
SSE Sheshan 133.91 46 PKP PKPdf 23 57 51.5 -4.9
SSE AMB AMB
comp=Z,100nm,6.4s
SSE LR LR
comp=N,700nm,24.7s,MS5.5
SSE LR LR
comp=E,780nm,24.5s,MS5.5
SSE LR LR
comp=Z,760nm,25.6s,MS5.3
KSRS Korea Array 134.22 34 PP PP 00 00 25.6 -1.6
comp=Z,5.5nm,1.0s,baz=320,slow=5.7,SNR=13
MBWA Marble Bar 136.43 123 PFAKE 23 58 10.0 +8.6
MBWA LR LR
comp=Z,1μm,19.0s,MS5.6
ERM Erimo 136.96 16 PFAKE 23 58 10.0 +8.2
ERM LR LR
comp=Z,670nm,22.0s,MS5.3
ERM Erimo 136.96 16⇓ *i*PKIKP PKPdf 23 58 03.3 +1.5
TATO Taipei 137.27 53 PFAKE 23 58 10.0 +7.2
TATO LR LR
comp=Z,556nm,19.0s,MS5.3
YHNB Yeheng 137.32 54 *e*PKPdf PKPdf 23 58 02.5 -0.4
YHNB LR LR
comp=Z,614nm,20.0s,MS5.3
KKM Kota Kinabalu 137.81 82 PKPdf PKPdf 23 58 04.1 0.0
KKM LR LR
comp=Z,299nm,20.0s,MS5.0
MAJO Matsushiro 140.06 25 PFAKE 23 58 20.0 +12
MAJO LR LR
comp=Z,637nm,21.0s,MS5.3
KAPI Kappang 141.13 99 PFAKE 23 58 20.0 +10
KAPI LR LR
comp=Z,499nm,21.0s,MS5.2
FITZ Fitzroy Crossi 142.77 122 *e*PKP PKPdf 23 58 14.7 +1.7
comp=Z,14nm,1.0s
FITZ Fitzroy Crossi 142.77 122 *e*PKPdf PKPdf 23 58 12.8 -0.1
FITZ Fitzroy Crossi 142.77 122 PKP PKPdf 23 58 12.3 -0.7
comp=Z,4.5nm,0.8s,baz=236,slow=6.1,SNR=4.5
CAN Canberra 142.88 167 *e*PKPdf PKPdf 23 58 12.7 0.0
CAN LR LR
comp=Z,635nm,21.0s,MS5.4
STKA Stephens Creek 143.73 156 PKP PKPdf 23 58 13.4 -0.9
comp=Z,5.1nm,0.8s,baz=196,slow=2.0,SNR=6.6
MIDW Midway 144.23 321 PFAKE 23 58 30.0 +15
MIDW LR LR
comp=Z,774nm,20.0s,MS5.5
JOHN Johnston Islan 144.58 298 *e*PKPdf PKPdf 23 58 15.7 -0.5
JOHN LR LR
comp=Z,714nm,19.0s,MS5.5
CMSA Cobar Meteorol 145.55 161 *e*PKP PKPdf 23 58 19.0 +1.5
ASAR Alice Springs 145.97 138 PKPbc PKPbc 23 58 17.8 -1.3
comp=Z,11nm,0.8s,baz=184,slow=2.3,SNR=18
KNA Kununurra 146.50 121 *e*PKP PKPab 23 58 21.9 +0.1
comp=Z,22nm,0.7s
AFI Afiamalu 146.78 242 PKPdf PKPdf 23 58 19.9 -0.1
AFI LR LR
comp=Z,887nm,19.0s,MS5.6
DAV Davao City (W) 146.91 79 PKPdf PKPdf 23 58 20.0 -0.3
DAV LR LR
comp=Z,574nm,22.0s,MS5.3
ARMA Armidale 148.16 169 *e*PKPdf PKPdf 23 58 22.2 +0.3
QLP Quilpie 149.47 155 *e*PKP PKPbc 23 58 27.8 -0.8
KAKA Kakadu 151.04 119 *e*PKP PKPbc 23 58 32.1 -0.6
comp=Z,39nm,1.2s
KAKA Kakadu 151.04 119 *e*PKPdf PKPdf 23 58 28.0 +1.1
EIDS Eidsvold 152.92 166 *e*PKPdf PKPdf 23 58 29.3 -0.1
MSVF Nonsavu 153.02 226 *e*PKPdf PKPdf 23 58 30.4 +0.6
MSVF LR LR
comp=Z,706nm,20.0s,MS5.5
DZM Mont Dzumac 155.72 199 *e*PP PP 00 02 29.6 -5.3
comp=Z,170nm,28.1s
DZM *e*SS SS 00 22 23.9 +3.2
comp=Z,2μm,30.7s
DZM *e*LR LR 00 50 49.5
comp=Z,2μm,34.1s
CTAO Charters Tower 156.01 151 PFAKE 23 58 40.0 +6.1
CTAO LR LR
comp=Z,802nm,21.0s,MS5.5
COEN Coen 158.98 135 PKPdf PKPdf 23 58 37.4 -0.3
GUMO Guam 161.80 46 *e*PKPdf PKPdf 23 58 40.7 -0.1
GUMO LR LR
comp=Z,368nm,19.0s
PMG Port Moresby 164.92 133 PFAKE 23 58 50.0 +6.2
PMG LR LR
comp=Z,904nm,22.0s

TARA	**Tarawa**	**165.28**	**272**	PFAKE			23 58 50.0	+5.8
TARA				LR	LR			
	comp=Z,37nm,19.0s							
HNR	**Honiara**	**169.51**	**189**	PFAKE			23 59 00.0	+13
HNR				LR	LR			
	comp=Z,532nm,20.0s							

*ISCJB **11** 23:47:16.9±0.4, 7°.55S±0°.04×119°.44E±0°.04, h285km±4km, mb4.1/17, Error ellipse: s-maj=7.4km s-min=5.8km az=22.3*
*NEIC **11** 23:47:17.6±0.5, 7°.56S×119°.45E, h278km±5km, mb4.1/4, Error ellipse: s-maj=9.5km s-min=4.8km az=60.0*
*IDC **11** 23:47:18.1±1.8, 7°.57S×119°.44E, h282km±16km, mb3.3/7, mb1 3.3/9, mb1mx3.2/21, mbtmp3.3/9, Error ellipse: s-maj=48.0km s-min=10.1km az=60.0*
*DJA **11** 23:47:19, 7°.72S×119°.41E, h250km, MLv4.3/8*

ISC 11 23:47:17.5±0.3, 7°.58S±0°.04×119°.47E±0°.04, h276km±4km, n50, σ0s86/58, mb4.1/17, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**2.23**	**158**	P	**Pn**	**23 48 03.4**	**-0.7**
WSI				S	**S**	**23 48 37.8**	**-3.4**
BKSI	**Bulukumba**	**2.33**	**16**	P	**Pn**	**23 48 07.4**	**+2.3**
KAPI	**Kappang**	**2.56**	**6**	P	**Pn**	**23 48 07.5**	**+0.2**
KAPI				S	**S**	**23 48 45.8**	**-1.0**
KAPI	**Kappang**	**2.56**	**6**	P	**Pn**	**23 48 07.5**	**+0.2**
	1.0nm,0.3s,baz=164,slow=7.4,SNR=3.4						
MMRI	**Maumere**	**2.94**	**111**	P	**Pn**	**23 48 10.9**	**0.0**
SPSI	**Sidrap Palu**	**3.60**	**5**	P	**Pn**	**23 48 19.9**	**+1.8**
KHKI	**Kahang-Kahang**	**3.90**	**258**	P	**Pn**	**23 48 21.1**	**-0.2**
SRBI	**Singaraja**	**4.24**	**263**	P	**Pn**	**23 48 25.1**	**-0.1**
IGBI	**Denpasar**	**4.45**	**254**	P	**Pn**	**23 48 27.5**	**-0.1**
IGBI				S	**S**	**23 49 19.7**	**-4.0**
KRKI	**Karangkates**	**6.97**	**265**	S	**S**	**23 50 18.8**	**-0.5**
PWJI	**Pagerwojo**	**7.60**	**266**	P	**Pn**	**23 49 06.8**	**+0.8**
	0.4nm34nm,0.6s						
PWJI				S	**S**	**23 50 30.5**	**-3.1**
	0.4nm34nm,0.6s						
SJI	**Sawahan**	**7.63**	**268**	P	**Pn**	**23 49 07.2**	**+0.9**
SJI				S	**S**	**23 50 36.3**	**+2.0**
PCJI	**Pacitan**	**8.23**	**265**	P	**Pn**	**23 49 13.6**	**-0.2**
	213nm,0.7s						
FITZ	**Fitzroy Crossi**	**12.06**	**151**	*e*P	**Pn**	**23 50 02.0**	**+0.7**
	11nm,1.0s						
FITZ				*e*S	**S**	**23 52 16.8**	**+1.1**
FITZ	**Fitzroy Crossi**	**12.06**	**151**	P	**Pn**	**23 50 03.7**	**+2.4**
	0.6nm,0.3s,baz=338,slow=8.0,SNR=20						
FITZ				S	**S**	**23 52 16.0**	**+0.3**
	1.2nm,0.3s,baz=184,slow=16,SNR=3.2						
FITZ	**Fitzroy Crossi**	**12.06**	**151**	P	**Pn**	**23 50 05.0**	**+3.7**
	22nm,1.6s						
KNA	**Kununurra**	**12.20**	**133**	P	**Pn**	**23 50 02.6**	**-0.4**
	1µm74nm,0.8s						
KSM	**Kuching**	**12.82**	**314**	*e*Pn	**Pn**	**23 50 10.2**	**-0.3**
	11nm,0.9s						
MBWA	**Marble Bar**	**13.50**	**179**	*e*Pn	**Pn**	**23 50 19.6**	**+0.8**
KAKA	**Kakadu**	**13.75**	**113**	*e*Pn	**Pn**	**23 50 20.8**	**-1.1**
KAKA				*e*S	**S**	**23 52 52.6**	**-1.4**
KAKA	**Kakadu**	**13.75**	**113**	P	**Pn**	**23 50 20.5**	**-1.4**
KKM	**Kota Kinabalu**	**13.91**	**346**	*e*P	**Pn**	**23 50 24.0**	**+0.1**
WB2	**Warramunga Arr**	**18.95**	**132**	P	**P**	**23 51 19.2**	**+0.4**
ASAR	**Alice Springs**	**21.16**	**141**	P	**P**	**23 51 42.2**	**+0.5**
	1.1nm,0.4s,mb3.5,baz=312,slow=8.4,SNR=16						
ASAR				S	**S**	**23 55 19.3**	**+0.8**
	1.5nm,0.9s,baz=332,slow=23,SNR=4.7						
KULM	**Kulim**	**22.71**	**304**	*e*P	**P**	**23 51 55.5**	**-0.6**
	5.0nm,0.6s,mb4.0						
COCO	**West Island**	**22.75**	**257**	*e*P	**P**	**23 51 55.9**	**-0.6**
	64nm,0.5s,mb5.2						
STKA	**Stephens Creek**	**31.77**	**143**	P	**P**	**23 53 17.3**	**+0.9**
	0.6nm,0.3s,mb3.6,baz=318,slow=12,SNR=3.7						
YHNB	**Yeheng**	**32.10**	**3**	P	**P**	**23 53 19.4**	**0.0**
CMAR	**Chiang Mai Arr**	**32.85**	**322**	P	**P**	**23 53 26.8**	**+0.8**
	0.5nm,0.4s,mb3.4,baz=150,slow=7.3,SNR=5.4						
KSRS	**Korea Array**	**45.49**	**9**	P	**P**	**23 55 10.2**	**+0.5**
	1.4nm,0.7s,mb3.3,baz=178,slow=8.5,SNR=5.9						
ODAN	**Odare**	**46.24**	**319**	*e*P	**P**	**23 55 15.8**	**0.0**
	4.5nm,0.5s,mb4.1						
TAPN	**Taplejung**	**46.37**	**320**	*e*P	**P**	**23 55 16.5**	**-0.3**
	12nm,0.5s,mb4.5						
RAMN	**Ramite**	**46.82**	**318**	*e*P	**P**	**23 55 20.6**	**+0.3**
	28nm,0.4s,mb4.9						
MAJO	**Matsushiro**	**47.28**	**21**	P	**P**	**23 55 23.0**	**-0.6**
PKI	**Pulchoki**	**48.02**	**318**	*e*P	**P**	**23 55 29.1**	**-0.4**
	7.5nm,0.4s,mb4.4						
DMN	**Daman**	**48.25**	**318**	*e*P	**P**	**23 55 30.7**	**-0.5**
	6.6nm,0.4s,mb4.3						
GKN	**Gorkha**	**48.82**	**318**	*e*P	**P**	**23 55 34.8**	**-0.7**
	15nm,0.4s,mb4.7						
KOLN	**Koldanda**	**49.37**	**317**	*e*P	**P**	**23 55 38.8**	**-0.8**
	9.4nm,0.3s,mb4.5						
ULN	**Ulaanbaatar**	**56.28**	**350**	P	**P**	**23 56 30.2**	**+0.7**
SONM	**Songino Array**	**56.37**	**349**	P	**P**	**23 56 30.9**	**+0.8**
	0.6nm,0.5s,mb3.3,baz=159,slow=7.1,SNR=3.7						
TLY	**Talaya**	**60.57**	**349**	P	**P**	**23 56 58.8**	**-0.2**
MKAR	**Makanchi Array**	**63.41**	**332**	P	**P**	**23 57 18.0**	**+0.1**
	1.5nm,0.5s,mb3.9,baz=148,slow=7.0,SNR=7.8						
EKS2	**Erkin-Say**	**65.01**	**324**	*e*P	**P**	**23 57 28.4**	**0.0**
ZALV	**Zalesovo Beam**	**67.89**	**339**	P	**P**	**23 57 45.1**	**-1.2**
	1.3nm,0.3s,mb4.1,baz=145,slow=5.2,SNR=8.9						
KURK	**Kurchatov**	**67.94**	**333**	*e*P	**P**	**23 57 46.4**	**-0.2**
MIDW	**Midway**	**70.53**	**57**	P	**P**	**23 58 03.5**	**+0.5**
BRVK	**Borovoye**	**73.34**	**332**	*e*P	**P**	**23 58 18.4**	**-0.7**
	2.3nm,0.9s,mb3.8						
GNI	**Garni**	**83.33**	**312**	*e*P	**P**	**23 59 14.6**	**+0.8**
MALT	**Malatya**	**87.67**	**309**	P	**P**	**23 59 34.6**	**-0.6**
LPAZ	**La Paz**	**155.12**	**162**	PKPab	PKPab	00 07 04.6	+0.1
	0.6nm,0.7s,baz=203,slow=7.7,SNR=3.9						

*KISR **11** 23:50:11.8±0.9, 30°.34N×50°.57E, h34km±999km, ML3.2*
*TEH **11** 23:50:12.7, 29°.96N×50°.93E, h22km*
*CSEM **11** 23:50:12.7, 29°.96N×50°.93E, h22km, ML3.5, After TEH*

ISC 11 23:50:10.7±1.3, 29°.88N±0°.05×50°.88E±0°.04, h17km±10km, n37, σ0s92/51, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IPAR	**Pars**	**1.89**	**91**	*e*Pn	**Pn**	**23 50 43.7**	**+1.5**
IPAR				*e*Sg	**Sg**	**23 51 09.4**	**-2.1**
IPAR				*e*Sg	**Sg**	**23 51 11.8**	**+0.3**
IPAR				*e*		23 51 19.1	
	comp=Z,4µm,0.3s						
IPAR	**Pars**	**1.89**	**91**	*e*Pn	**Pn**	**23 50 43.7**	**+1.5**
IPAR				*e*Sg	**Sg**	**23 51 09.4**	**-2.1**
IPAR				*e*Sg	**Sg**	**23 51 11.8**	**+0.3**
ISRV	**Sarvestan**	**2.01**	**104**	*e*Pn	**Pn**	**23 50 44.7**	**+0.8**
ISRV				*e*Sg	**Sg**	**23 51 15.0**	**-0.4**
ISRV				*e*		23 51 24.5	
	comp=Z,6µm,0.3s						
ISRV	**Sarvestan**	**2.01**	**104**	*e*Pn	**Pn**	**23 50 44.7**	**+0.8**
ISRV				*e*Sg	**Sg**	**23 51 15.0**	**-0.4**
IGAR	**Gharneh**	**2.71**	**21**	*e*Pn	**Pn**	**23 50 54.2**	**+0.7**
IGAR				*e*		23 51 00.6	
	comp=Z,2µm,0.1s						
UMR	**Umm Al-Rimmam**	**2.77**	**264**	*e*P	**Pn**	**23 50 54.6**	**+0.3**
UMR				*e*S	**Sn**	**23 51 26.4**	**-0.9**
UMR				AML	AML	23 51 31.9	
	comp=Z,120nm,0.6s						
KBD	**Kabd**	**2.86**	**257**	*e*P	**Pn**	**23 50 56.2**	**+0.6**
KBD				*e*S	**Sn**	**23 51 30.6**	**+1.0**
KBD				AML	AML	23 51 38.2	
	comp=Z,53nm,0.4s						
MIB	**Mutribah**	**3.08**	**270**	*e*P	**Pn**	**23 50 58.4**	**-0.1**
MIB				*e*S	**Sn**	**23 51 32.5**	**-2.4**
MIB				AML	AML	23 51 43.7	
	comp=Z,95nm,0.5s						
ISAD	**Sadrabad**	**3.15**	**49**	*e*Pn	**Pn**	**23 50 59.9**	**+0.3**
ISAD				*e*		23 51 41.4	
	comp=Z,2µm,0.2s						
ISAD	**Sadrabad**	**3.15**	**49**	*e*Pn	**Pn**	**23 50 59.9**	**+0.3**
IZEF	**Zefreh**	**3.26**	**22**	*e*	**Pn**	**23 51 02.4**	**+1.4**
	comp=Z,863nm,0.1s						
IZEF				*e*Pn	**Pn**	**23 51 01.3**	**+0.3**
IKLH	**Kolahrood**	**3.48**	**10**	*e*	**Pg**	**23 51 19.3**	**+1.8**
	comp=Z,746nm,0.2s						
IKLH				*e*Pn	**Pn**	**23 51 04.2**	**+0.1**
IMEH	**Mehriz**	**3.56**	**64**	*e*	**Pb**	**23 51 10.7**	**-2.5**
	comp=Z,651nm,0.1s						
IMEH				*e*Pn	**Pn**	**23 51 05.9**	**+0.8**
ICHK	**Chekchek**	**3.84**	**51**	*e*	**Pg**	**23 51 23.6**	**-0.6**
	comp=Z,668nm,0.3s						
ICHK				*e*Pn	**Pn**	**23 51 09.2**	**+0.2**
IBAF	**Bafgh**	**4.38**	**66**	*e*Pn	**Pn**	**23 51 16.4**	**-0.1**
IBAF				*e*Pn	**Pn**	**23 51 16.8**	**+0.3**
IBAF				*e*		23 51 17.3	
	comp=Z,190nm,0.1s						
IBAF	**Bafgh**	**4.38**	**66**	*e*Pn	**Pn**	**23 51 16.4**	**-0.1**
IBAF	**Bafgh**	**4.38**	**66**	*e*Pn	**Pn**	**23 51 16.8**	**+0.3**
ISFB	**Sefidab**	**4.61**	**14**	*e*Pn	**Pn**	**23 51 19.4**	**-0.2**
ISFB				*e*		23 51 39.8	
	comp=Z,468nm,0.3s						
ISFB	**Sefidab**	**4.61**	**14**	*e*Pn	**Pn**	**23 51 19.4**	**-0.2**
IKOM	**Komasi**	**5.15**	**327**	*e*Pn	**Pn**	**23 51 27.6**	**+0.5**
IKOM				*e*		23 53 15.0	
	comp=N,920nm,0.4s						
IKOM	**Komasi**	**5.15**	**327**	*e*Pn	**Pn**	**23 51 27.6**	**+0.5**
IRAZ	**Razeghan**	**5.57**	**352**	*e*Pn	**Pn**	**23 51 32.8**	**0.0**
IRAZ				*e*		23 53 19.8	
	comp=Z,303nm,0.5s						
IRAZ	**Razeghan**	**5.57**	**352**	*e*Pn	**Pn**	**23 51 32.8**	**0.0**
IVIS	**Veis**	**5.76**	**325**	*e*Pn	**Pn**	**23 51 35.7**	**+0.3**
IVIS				*e*		23 52 54.9	
	comp=Z,256nm,0.3s						
IVIS	**Veis**	**5.76**	**325**	*e*Pn	**Pn**	**23 51 35.7**	**+0.3**
ILAS	**Lasjerd**	**5.76**	**17**	*e*Pn	**Pn**	**23 51 35.9**	**+0.4**
ILAS				*e*		23 51 59.5	
	comp=Z,186nm,0.3s						
ILAS	**Lasjerd**	**5.76**	**17**	*e*Pn	**Pn**	**23 51 35.9**	**+0.4**
IDMV	**Damavand**	**5.77**	**9**	*e*Pn	**Pn**	**23 51 35.0**	**-0.5**
IDMV				*e*		23 51 39.0	
	comp=Z,245nm,0.2s						
IDMV	**Damavand**	**5.77**	**9**	*e*Pn	**Pn**	**23 51 35.0**	**-0.5**
IFIR	**Firoozkooh**	**5.96**	**15**	*e*Pn	**Pn**	**23 51 37.0**	**-1.2**
IFIR				*e*		23 51 40.2	
	comp=Z,237nm,0.1s						
IFIR	**Firoozkooh**	**5.96**	**15**	*e*Pn	**Pn**	**23 51 37.0**	**-1.2**
IAFJ	**Afjeh**	**6.00**	**7**	*e*Pn	**Pn**	**23 51 38.6**	**-0.2**
IAFJ	**Afjeh**	**6.00**	**7**	*e*Pn	**Pn**	**23 51 38.6**	**-0.2**
IANJ	**Anjilo**	**6.13**	**24**	*e*Pn	**Pn**	**23 51 39.6**	**-1.0**
IANJ	**Anjilo**	**6.13**	**24**	*e*Pn	**Pn**	**23 51 39.6**	**-1.0**
ISHM	**Shahmirzad**	**6.25**	**18**	*e*Pn	**Pn**	**23 51 41.6**	**-0.6**
ISHM				*e*		23 51 51.6	
	comp=Z,248nm,0.1s						
ISHM	**Shahmirzad**	**6.25**	**18**	*e*Pn	**Pn**	**23 51 41.6**	**-0.6**

*ISCJB **12** 00:01:42.5±0.6, 36°.84N±0°.03×22°.51E±0°.04, h10km, Error ellipse: s-maj=5.7km s-min=3.9km az=135.9*
*NEIC **12** 00:01:42.9, 36°.87N×22°.53E, h6km, MD3.0(ATH), After ATH.*
*ATH **12** 00:01:42.9, 36°.87N×22°.53E, h6km, MD3.0/5*
*THE **12** 00:01:42.8, 36°.86N×22°.54E, h0km±5km, ML2.1/3, Error ellipse: s-maj=5.8km s-min=1.1km az=177.0*
*CSEM **12** 00:01:43.0±0.4, 36°.86N×22°.50E, h8km, MD3.0, Error ellipse: s-maj=9.2km s-min=7.0km az=51.0*

ISC 12 00:01:42.9±0.7, 36°.83N±0°.03×22°.51E±0°.04, h8km±7km, n35, σ0s69/49, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLI	**Veliai**	**0.36**	**109**	*e*Pg	**Pg**	**00 01 49.9**	**0.0**
VLI				*e*Sb	**Sg**	**00 01 55.2**	**+0.6**
VLI	**Veliai**	**0.36**	**109**	*e*PG	**Pg**	**00 01 49.9**	**0.0**
VLI				*e*SB	**Sg**	**00 01 55.2**	**+0.6**
VLI	**Veliai**	**0.36**	**109**	*e*Pg	**Pg**	**00 01 49.9**	**0.0**
VLI				*e*Sb	**Sg**	**00 01 55.2**	**+0.6**
VLX	**Vlachokerasia**	**0.55**	**349**	P	**Pg**	**00 01 53.2**	**-0.3**
VLX				S	**Sg**	**00 02 00.7**	**+0.1**
VLX	**Vlachokerasia**	**0.55**	**349**	P	**Pg**	**00 01 53.2**	**-0.3**
VLX				S	**Sg**	**00 02 00.7**	**+0.1**
ITM	**Ithomi**	**0.58**	**306**	*e*Pb	**Pg**	**00 01 54.0**	**-0.2**
ITM				*e*Sb	**Sg**	**00 02 02.2**	**+0.4**
ITM	**Ithomi**	**0.58**	**306**	*e*PB	**Pg**	**00 01 54.0**	**-0.2**
ITM				*e*SB	**Sg**	**00 02 02.2**	**+0.4**
ITM	**Ithomi**	**0.58**	**306**	P	**Pg**	**00 01 53.9**	**-0.3**
ITM	**Ithomi**	**0.58**	**306**	*e*Pb	**Pg**	**00 01 54.0**	**-0.2**
ITM				*e*Sb	**Sg**	**00 02 02.2**	**+0.4**
PYL	**PYLOS**	**0.62**	**276**	P	**Pg**	**00 01 55.0**	**+0.1**
PYL	**PYLOS**	**0.62**	**276**	P	**Pg**	**00 01 55.0**	**+0.1**
KYTH	**Kithira**	**0.69**	**143**	*e*Pb	**Pg**	**00 01 56.5**	**+0.2**
KYTH	**Kithira**	**0.69**	**143**	*e*PB	**Pg**	**00 01 56.5**	**+0.2**
KYTH	**Kithira**	**0.69**	**143**	*e*Pb	**Pg**	**00 01 56.5**	**+0.2**
DID	**Didima**	**0.89**	**40**	*e*PB	**Pg**	**00 01 59.0**	**-0.9**
DID	**Didima**	**0.89**	**40**	P	**Pg**	**00 01 58.9**	**-1.0**
DID				S	**Sg**	**00 02 11.7**	**+0.3**
DID	**Didima**	**0.89**	**40**	*e*Pb	**Pg**	**00 01 59.0**	**-0.9**
DID				S	**Sg**	**00 02 11.7**	**+0.3**
GUR	**Goura**	**1.11**	**353**	P	**Pg**	**00 02 02.8**	**-1.4**
GUR				S	**Sg**	**00 02 20.0**	**+1.4**
GUR	**Goura**	**1.11**	**353**	P	**Pg**	**00 02 02.8**	**-1.4**
GUR				S	**Sg**	**00 02 20.0**	**+1.4**
LTK	**Loutraki**	**1.24**	**17**	P	**Pn**	**00 02 06.2**	**-0.4**
LTK				S	**Sb**	**00 02 23.2**	**+0.5**
LTK	**Loutraki**	**1.24**	**17**	P	**Pn**	**00 02 06.2**	**-0.4**
LTK				S	**Sb**	**00 02 23.2**	**+0.5**
VLY	**Voula,Athens**	**1.44**	**45**	*e*Pb	**Pb**	**00 02 09.4**	**-0.6**
VLY	**Voula,Athens**	**1.44**	**45**	*e*PB	**Pb**	**00 02 09.4**	**-0.6**
VLY	**Voula,Athens**	**1.44**	**45**	*e*Pb	**Pb**	**00 02 09.4**	**-0.6**
LAKA	**Lakka**	**1.47**	**343**	P	**Pn**	**00 02 10.2**	**+0.5**
LAKA	**Lakka**	**1.47**	**343**	P	**Pn**	**00 02 10.2**	**+0.5**
PTL	**Penteli**	**1.62**	**41**	P	**Pg**	**00 02 13.6**	**-0.4**
PTL	**Penteli**	**1.62**	**41**	P	**Pg**	**00 02 13.6**	**-0.4**
LKR	**Lokris**	**1.85**	**12**	P	**Pg**	**00 02 19.5**	**+1.1**
LKR	**Lokris**	**1.85**	**12**	P	**Pg**	**00 02 19.5**	**+1.1**
VAM	**Vamos**	**1.97**	**136**	*e*Pn	**Pb**	**00 02 19.3**	**+0.2**
VAM	**Vamos**	**1.97**	**136**	*e*PN	**Pb**	**00 02 19.3**	**+0.2**
VAM	**Vamos**	**1.97**	**136**	*e*Pn	**Pb**	**00 02 19.3**	**+0.2**
AGG	**Agios Georgios**	**2.19**	**356**	P	**Pg**	**00 02 23.5**	**-1.4**
AGG	**Agios Georgios**	**2.19**	**356**	P	**Pg**	**00 02 23.5**	**-1.4**

MEX 12 00:19:14.7±0.7, 16°.01N×97°.60W, h16km±841km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.64**	**307**	*e*P	Pg	00 19 25.0	-2.2
PNIG				*i* S	Sg	00 19 33.4	-2.3
VHO	**Vista Hermosa**	**1.34**	**38**	*i* P	Pn	00 19 35.4	-3.4
VHO				*i* S	Sn	00 19 51.6	-4.8
HUIG	**Huatulco**	**1.45**	**99**	*i* P	Pn	00 19 38.0	-1.7
HUIG				*i* S	Sn	00 19 52.5	-6.6
UTMO	**Huajuapan**	**1.82**	**354**	*i* P	Pn	00 19 43.1	-2.3
UTMO				*i* S	Sn	00 20 02.9	-5.2

*ISCJB **12** 00:25:04.0±0.6, 31°.05S±0°.1×59°.28E±0°.10, h10km, mb4.0/11, Error ellipse: s-maj=17.3km s-min=11.9km az=14.5*
*IDC **12** 00:25:04.3±0.9, 30°.95S×59°.22E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.7/26, mbtmp3.9/8, ML3.6/1, Error ellipse: s-maj=28.7km s-min=25.3km az=56.0*
*NEIC **12** 00:25:05.9±0.4, 30°.93S×59°.28E, h10km, mb4.3/6, Error ellipse: s-maj=11.1km s-min=7.6km az=194.0*

ISC 12 00:25:06.1±0.6, 30°.9S±0°.1×59°.27E±0°.10, h10km, n21, σ0s53/21, mb4.0/11, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.47**	**316**	Pn	**Pn**	**00 28 57.4**	**+0.1**
	0.2nm,0.3s,baz=135,slow=19,SNR=3.8						
DGAR	**Diego Garcia**	**26.45**	**31**	P	**P**	**00 30 42.5**	**-0.8**
LBTB	**Lobatse**	**30.25**	**273**	*e*P	**P**	**00 31 16.9**	**-0.2**
	2.2nm,0.8s,mb3.9						
LSZ	**Lusaka**	**32.42**	**292**	*e*P	**P**	**00 31 35.9**	**-0.4**
	7.1nm,1.2s,mb4.4						
TSUM	**Tsumeb**	**39.32**	**277**	*e*P	**P**	**00 32 36.0**	**+0.5**
	7.4nm,1.2s,mb4.3						
TSUM	**Tsumeb**	**39.32**	**277**	P	**P**	**00 32 34.1**	**-1.4**
	3.6nm,1.1s,mb4.0,baz=45,slow=4.3,SNR=4.0						
COCO	**West Island**	**39.35**	**70**	P	**P**	**00 32 35.6**	**-0.2**
QSPA	**South Pole Qui**	**59.24**	**180**	*e*P	**P**	**00 35 07.0**	**0.0**
	20nm,1.8s,mb4.8						
QSPA	**South Pole Qui**	**59.24**	**180**	P	**P**	**00 35 07.7**	**+0.7**
	1.9nm,1.1s,mb4.0,baz=253,slow=2.8,SNR=2.5						
FITZ	**Fitzroy Crossi**	**60.95**	**95**	*e*P	**P**	**00 35 19.9**	**+0.2**
	1.2nm,0.7s,mb4.1						
CMAR	**Chiang Mai Arr**	**62.16**	**43**	P	**P**	**00 35 27.8**	**+0.1**
	1.8nm,0.8s,mb4.2,baz=232,slow=6.7,SNR=10						
ASAR	**Alice Springs**	**65.61**	**104**	P	**P**	**00 35 50.3**	**-0.2**
	1.0nm,0.7s,mb3.9,baz=238,slow=5.6,SNR=6.8						
STKA	**Stephens Creek**	**68.50**	**115**	P	**P**	**00 36 08.7**	**-0.1**
QIZ	**Qiongzhong**	**69.48**	**51**	P	**P**	**00 36 14.4**	**-0.4**
MALT	**Malatya**	**71.58**	**343**	*e*P	**P**	**00 36 28.1**	**+0.8**
	4.2nm,1.5s,mb4.2						
GNI	**Garni**	**71.99**	**348**	P	**P**	**00 36 29.3**	**-0.4**
UCH	**Uchtor**	**74.13**	**12**	P	**P**	**00 36 42.4**	**+0.1**
BRTR	**Keskin Array B**	**74.22**	**340**	P	**P**	**00 36 43.5**	**+0.7**
	0.7nm,0.8s,mb3.6,baz=158,slow=9.3,SNR=5.7						
EKS2	**Erkin-Say**	**74.43**	**11**	*e*P	**P**	**00 36 44.3**	**+0.3**
BVAR	**Borovoye Array**	**84.16**	**7**	P	**P**	**00 37 36.4**	**-0.5**
	0.3nm,0.5s,mb3.7,baz=163,slow=5.6,SNR=3.0						
ZALV	**Zalesovo Beam**	**87.37**	**15**	P	**P**	**00 37 54.0**	**+1.2**
	0.2nm,0.3s,mb3.8,baz=187,slow=7.1,SNR=2.6						

CASC 12 00:37:11.7±1.6, 11°.86N×88°.53W, h37km±999km, MD3.8, ML2.2, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**1.57**	**26**	*e*P	Pn	00 37 37.1	0.0
BLLM	**Bellamira**	**1.60**	**10**	*e*P	Pn	00 37 37.8	+0.3
SNVI	**San Vicente**	**1.77**	**350**	*e*P	Pn	00 37 40.4	+0.6
TEL3	**Telica 3**	**1.79**	**66**	*e*P	Pn	00 37 39.4	-0.8
TEL3				*i*		00 38 07.0	
	comp=Z,22nm,0.3s						
LFRS	**El Faro**	**1.83**	**344**	*e*P	Pn	00 37 41.0	+0.4
COPN	**Copaltepe**	**1.92**	**80**	*e*P	Pn	00 37 41.5	-0.4
CAHU	**Cacacuatique**	**1.93**	**9**	*e*P	Pn	00 37 42.8	+0.8
MOMJ	**Momotombo**	**2.02**	**74**	*e*P	Pn	00 37 42.4	-0.9
CSAN		**2.09**	**81**	*e*P	Pn	00 37 45.3	+1.1
CSAN				*e*S	Sn	00 38 10.0	+1.0
SBLS	**San Blas**	**2.24**	**332**	*e*P	Pn	00 37 46.8	+0.5
SBLS				*e*S	Sn	00 38 14.3	+1.6
RBDL	**Robledal**	**2.51**	**333**	*e*P	Pn	00 37 51.1	+1.1

*IDC **12** 00:38:06.5±2.3, 3°.92S×152°.51E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/15, mbtmp4.0/3, MS4.1/1, Ms1 4.1/1, ms1mx3.3/17, Error ellipse: s-maj=145.9km s-min=29.2km az=128.0*
*ISCJB **12** 00:38:09.4±1.2, 3°.95S±0°.10×152°.5E±0°.2, h33km, mb3.8/5, Error ellipse: s-maj=30.6km s-min=13.9km az=5.9*
*NEIC **12** 00:38:11.4±0.7, 3°.94S×152°.50E, h35km, mb4.1/3, Error ellipse: s-maj=19.1km s-min=9.0km az=97.0*

ISC 12 00:38:11.4±1.2, 3°.95S±0°.10×152°.5E±0°.2, h35km, n15, σ0s32/13, mb3.8/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTAO	**Charters Tower**	**17.16**	**200**	Pn	**Pn**	**00 42 08.3**	**-0.3**
ASAR	**Alice Springs**	**26.59**	**221**	P	**P**	**00 43 46.5**	**0.0**
	1.0nm,0.4s,mb3.7,baz=52,slow=9.0,SNR=14						
STKA	**Stephens Creek**	**29.61**	**199**	*e*P	**P**	**00 44 13.4**	**0.0**
	0.2nm,0.6s,mb3.0						
FITZ	**Fitzroy Crossi**	**29.82**	**240**	*e*P	**P**	**00 44 16.0**	**+0.5**
	3.3nm,0.7s,mb4.2						
FITZ	**Fitzroy Crossi**	**29.82**	**240**	P	**P**	**00 44 15.8**	**+0.3**
	1.7nm,0.3s,mb4.2,baz=58,slow=8.1,SNR=9.7						
MBWA	**Marble Bar**	**36.15**	**239**	*e*P	**P**	**00 45 10.9**	**+0.2**
	2.6nm,0.5s,mb4.4						
AFI	**Afiamalu**	**36.59**	**108**	LR	LR	00 56 03.3	
	comp=Z,256nm,19.8s,baz=165,slow=29						
KKM	**Kota Kinabalu**	**37.58**	**285**	P	**P**	**00 45 22.9**	**-0.1**
YHNB	**Yeheng**	**41.53**	**315**	P	**P**	**00 45 55.3**	**-0.4**
KSM	**Kuching**	**42.52**	**276**	P	**P**	**00 46 04.2**	**+0.3**
NWAO	**Narrogin (SRO)**	**43.78**	**225**	*e*P	**P**	**00 46 13.6**	**-0.3**
BJT	**Baijiatuau**	**55.02**	**326**	P	**P**	**00 47 39.0**	**-0.5**
ILAR	**Eielson Array**	**81.48**	**22**	P	**P**	**00 50 25.1**	**+0.3**
	0.4nm,0.8s,mb3.4,baz=251,slow=5.4,SNR=5.1						
**A

0.5nm,0.9s,mb3.5,baz=122,slow=6.9,SNR=3.2

IDC ***12*** *01:01:18.2±5.0,6.°97S×129.°93E,h108km±48km, mb3.9/9, mb1 4.0/11,mb1mx3.9/18,mbtmp3.9/11,Error ellipse: s-maj=40.8km s-min=17.1km az=63.0*

NEIC ***12*** *01:01:21.5±1.7,7.°02S×129.°83E,h138km±18km,mb4.3/8, Error ellipse: s-maj=20.0km s-min=11.4km az=62.0*

ISC 12 01:01:22.3±1.8,7.13S±0.09×129.9E±0.2,h149km±19km, n21,σ0:94/23,mb4.0/16,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.08**	**156**	*e*Pn	**Pn**	**01 02 51.6**	**+1.5**
	151nm,0.6s						
KAKA				*e*S	**Sn**	**01 03 57.7**	**-1.1**
FITZ	**Fitzroy Crossi**	**11.67**	**200**	P	**Pn**	**01 04 03.4**	**-0.8**
	0.5nm,0.3s,baz=52,slow=18,SNR=17						
FITZ				S	**Sn**	**01 06 02.6**	**-11**
	0.5nm,0.3s,baz=90,slow=8.1,SNR=5.1						
ASAR	**Alice Springs**	**16.88**	**167**	P	**Pn**	**01 05 10.9**	**+1.1**
	1.5nm,0.3s,baz=339,slow=9.1,SNR=85						
ASAR				S	**S**	**01 08 16.6**	**-1.0**
	0.6nm,0.3s,baz=353,slow=31,SNR=5.7						
STKA	**Stephens Creek**	**26.93**	**158**	P	**P**	**01 06 51.6**	**+1.9**
	2.2nm,0.7s,mb3.9,baz=332,slow=14,SNR=4.6						
CMAR	**Chiang Mai Arr**	**39.74**	**310**	P	**P**	**01 08 39.8**	**-0.8**
	4.4nm,0.7s,mb4.2,baz=136,slow=7.4,SNR=24						
CHTO	**Chiang Mai**	**39.95**	**311**	*e*P	**P**	**01 08 41.6**	**-0.7**
	16nm,1.4s,mb4.5						
MJAR	**Matsushiro Arr**	**44.14**	**10**	P	**P**	**01 09 14.7**	**-1.2**
	0.9nm,0.3s,mb3.8,baz=185,slow=8.5,SNR=3.7						
ULN	**Ulaanbaatar**	**58.36**	**342**	*e*P	**P**	**01 11 02.2**	**+0.5**
	4.4nm,0.6s,mb4.5						
SONM	**Songino Array**	**58.53**	**342**	P	**P**	**01 11 03.2**	**+0.2**
	1.1nm,0.4s,mb4.0,baz=161,slow=6.0,SNR=10.0						
MKAR	**Makanchi Array**	**68.28**	**327**	P	**P**	**01 12 07.3**	**+0.3**
	8.8nm,0.6s,mb4.7,baz=115,slow=8.4,SNR=76						
TKM2	**Tokmak 2**	**70.02**	**321**	*e*P	**P**	**01 12 18.2**	**+0.3**
	3.6nm,0.8s,mb4.2						
UCH	**Uchtor**	**70.36**	**320**	*e*P	**P**	**01 12 20.8**	**+0.8**
	2.4nm,0.7s,mb4.0						
AML	**Almayashu**	**70.84**	**319**	*e*P	**P**	**01 12 23.8**	**+0.9**
	6.6nm,0.8s,mb4.4						
EKS2	**Erkin-Say**	**71.05**	**320**	*e*P	**P**	**01 12 25.2**	**+1.1**
	1.9nm,0.6s,mb4.0						
ZALV	**Zalesovo Beam**	**71.66**	**334**	P	**P**	**01 12 26.6**	**-0.9**
	1.4nm,0.6s,mb3.9,baz=112,slow=4.0,SNR=9.3						
KURK	**Kurchatov**	**72.58**	**329**	*e*P	**P**	**01 12 32.5**	**-0.5**
	7.3nm,1.3s,mb4.2						
KURK	**Kurchatov**	**72.58**	**329**	P	**P**	**01 12 32.6**	**-0.5**
	2.1nm,0.6s,mb4.1,baz=129,slow=5.1,SNR=7.3						
BVAR	**Borovoye Array**	**78.12**	**328**	P	**P**	**01 13 04.6**	**-0.1**
	1.5nm,0.8s,mb3.6,baz=119,slow=8.6,SNR=7.8						
ABKAR	**Akbulak array**	**82.55**	**322**	*e*P	**P**	**01 13 28.5**	**0.0**
	0.4nm,0.5s,mb3.4						
ILAR	**Eielson Array**	**93.51**	**25**	P	**P**	**01 14 19.3**	**-1.4**
	0.3nm,0.7s,mb3.5,baz=241,slow=5.9,SNR=4.2						
LPAZ	**La Paz**	**150.68**	**143**	PKPbc	PKPbc	01 20 59.8	+2.0
	0.6nm,0.4s,baz=319,slow=3.4,SNR=4.4						

NEIC ***12*** *01:40:44.8,38.°61S×178.°47E,h24km,ML3.8(WEL),After WEL.*

NEIC Felt at Manutuke.

WEL 12 01:40:45.2±0.3,38.°61S×178.°43E,h24km±1km,ML3.8/27, **Error ellipse: s-maj=3.2km s-min=1.1km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGZ	**Carnagh Statio**	**0.21**	**305**	P*	Pb	01 40 51.3	+0.3
CNGZ				S*	Sb	01 40 53.2	-1.6
PRDZ	**Paritu Road**	**0.53**	**233**	P*	Pb	01 40 56.2	+0.3
PUZ	**Puketiti**	**0.55**	**346**	P*	Pb	01 40 55.4	-0.9
PUZ				S*	Sb	01 41 04.0	+0.3
PUZ	**Puketiti**	**0.55**	**346**	P	Pb	01 40 55.4	-0.9
PUZ				S	Sb	01 41 04.0	+0.3
MHGZ	**Mahia Peninsul**	**0.68**	**216**	P*	Pb	01 40 58.2	-0.3
KNZ	**Kokohu**	**0.72**	**235**	P*	Pb	01 40 58.6	-0.5
KNZ	**Kokohu**	**0.72**	**235**	P	Pb	01 40 58.6	-0.5
MWZ	**Matawai**	**0.76**	**291**	P*	Pb	01 40 59.0	-0.7
MWZ				S*	Sb	01 41 10.7	+1.1
MWZ				S	Sb	01 41 10.8	+1.2
MWZ	**Matawai**	**0.76**	**291**	P	Pb	01 40 59.0	-0.7
MXZ	**Matakaoa Point**	**1.05**	**355**	PN	Pn	01 41 03.5	-0.8
MXZ				SN	Sn	01 41 18.8	+0.6
MXZ	**Matakaoa Point**	**1.05**	**355**	P	Pn	01 41 03.5	-0.8
URZ	**Urewera**	**1.09**	**288**	PN	Pn	01 41 04.1	-0.9
URZ	**Urewera**	**1.09**	**288**	*e*Pg	Pn	01 41 04.3	-0.7
RAHZ	**Arahi**	**1.09**	**253**	PN	Pn	01 41 04.2	-0.8
NMHZ	**Naumai**	**1.36**	**248**	PN	Pn	01 41 08.2	-0.5
WIZ	**White Island**	**1.45**	**117**	PN	Pn	01 41 09.0	-1.0
CKHZ	**Cape Kidnapper**	**1.48**	**225**	PN	Pn	01 41 09.1	-1.3
RRRZ	**Republican Roa**	**1.52**	**279**	PN	Pn	01 41 11.0	+0.1
RRRZ	**Republican Roa**	**1.52**	**279**	P	Pn	01 41 11.0	+0.1
TARZ	**Mount Tarawera**	**1.55**	**283**	PN	Pn	01 41 11.3	-0.1
MCHZ	**McNeill Hill**	**1.59**	**238**	PN	Pn	01 41 11.7	-0.1
PRRZ	**Plateau Road**	**1.60**	**273**	PN	Pn	01 41 12.1	+0.2
BKZ	**Black Stump Fm**	**1.61**	**249**	PN	Pn	01 41 11.3	-0.8
BKZ	**Black Stump Fm**	**1.61**	**249**	P	Pn	01 41 11.3	-0.8
ALRZ	**Allen Road**	**1.63**	**271**	PN	Pn	01 41 12.1	-0.3
OPRZ	**Ohinepanea**	**1.66**	**297**	PN	Pn	01 41 11.9	-0.9
KAHZ	**Kahuranaki**	**1.69**	**225**	PN	Pn	01 41 12.3	-1.0
PXZ	**Pawanui**	**1.87**	**220**	PN	Pn	01 41 13.8	-1.9
BHHZ	**Black Hill Sta**	**2.04**	**244**	PN	Pn	01 41 17.2	-0.8
WPHZ	**Waipukurau**	**2.12**	**226**	PN	Pn	01 41 17.3	-1.8
PRHZ	**Porangahau**	**2.16**	**219**	PN	Pn	01 41 17.5	-2.2
PNHZ	**Pukenui**	**2.17**	**222**	PN	Pn	01 41 18.1	-1.7
OTVZ	**Oturere**	**2.23**	**255**	PN	Pn	01 41 20.3	-0.3
KRVZ	**Karewarewa**	**2.23**	**256**	PN	Pn	01 41 20.2	-0.4
MOVZ	**Moawhango**	**2.23**	**248**	PN	Pn	01 41 21.2	+0.5
WNVZ	**Wahianoa**	**2.32**	**251**	PN	Pn	01 41 21.5	-0.3
WNVZ				SN	Sn	01 41 48.6	-1.0
WPVZ	**Whakapapa**	**2.33**	**254**	PN	Pn	01 41 22.1	+0.1
FWVZ	**Far West T-bar**	**2.33**	**253**	PN	Pn	01 41 21.6	-0.5
FWVZ	**Far West T-bar**	**2.33**	**253**	P	Pn	01 41 21.6	-0.5
TRVZ	**Turoa**	**2.35**	**252**	PN	Pn	01 41 21.9	-0.3
TSZ	**Takapari Road**	**2.40**	**232**	PN	Pn	01 41 21.2	-1.8
TSZ	**Takapari Road**	**2.40**	**232**	P	Pn	01 41 21.2	-1.8
DVHZ	**Dannevirke**	**2.43**	**225**	PN	Pn	01 41 21.4	-2.0
DVHZ				SN	Sn	01 41 51.5	-0.9
BFZ	**Birch Farm**	**2.67**	**218**	PN	Pn	01 41 23.4	-3.2
BFZ	**Birch Farm**	**2.67**	**218**	P	Pn	01 41 23.4	-3.3
POWZ	**Post Office Ro**	**2.72**	**228**	PN	Pn	01 41 25.6	-1.8
HIZ	**Hauiti**	**2.80**	**271**	PN	Pn	01 41 29.1	+0.6
HIZ	**Hauiti**	**2.80**	**271**	P	Pn	01 41 29.1	+0.6
KUZ	**Kuaotunu**	**2.84**	**310**	PN	Pn	01 41 27.6	-1.4
KUZ	**Kuaotunu**	**2.84**	**310**	P	Pn	01 41 27.6	-1.4
VRZ	**Vera Road**	**2.91**	**259**	PN	Pn	01 41 30.1	+0.1
VRZ	**Vera Road**	**2.91**	**259**	P	Pn	01 41 30.1	+0.1
WAZ	**Wanganui**	**2.91**	**246**	PN	Pn	01 41 30.3	+0.3
WAZ	**Wanganui**	**2.91**	**246**	P	Pn	01 41 30.3	+0.3
TIWZ	**Tintock**	**2.92**	**221**	PN	Pn	01 41 27.5	-2.6
MRZ	**Mangatainoka R**	**3.01**	**226**	PN	Pn	01 41 28.4	-3.0
MRZ	**Mangatainoka R**	**3.01**	**226**	P	Pn	01 41 28.4	-2.9
HOWZ	**Holdsworth Sta**	**3.21**	**224**	PN	Pn	01 41 31.1	-3.0
HOWZ				SN	Sn	01 42 08.2	-3.3
OGWZ	**Otaki Gorge**	**3.34**	**228**	PN	Pn	01 41 33.1	-2.8
MTW	**Mount Morrison**	**3.40**	**221**	PN	Pn	01 41 32.8	-3.9
MTW	**Mount Morrison**	**3.40**	**221**	P	Pn	01 41 32.8	-3.9
TRWZ	**Traveller**	**3.49**	**216**	PN	Pn	01 41 33.6	-4.4
PKE	**Pukeiti**	**3.51**	**259**	PN	Pn	01 41 38.7	+0.4
PKE	**Pukeiti**	**3.51**	**259**	P	Pn	01 41 38.9	+0.6
KIW	**Kapiti Island**	**3.52**	**229**	PN	Pn	01 41 35.9	-2.5
KIW	**Kapiti Island**	**3.52**	**229**	P	Pn	01 41 35.9	-2.5
CAW	**Cannon Point**	**3.59**	**225**	PN	Pn	01 41 36.4	-3.0
CAW	**Cannon Point**	**3.59**	**225**	P	Pn	01 41 36.4	-3.0
PAWZ	**Paruwai Farm**	**3.60**	**219**	PN	Pn	01 41 35.2	-4.3
PAWZ				SN	Sn	01 42 17.5	-3.8
PAWZ	**Paruwai Farm**	**3.60**	**219**	P	Pn	01 41 35.2	-4.3
PAWZ				S	Sn	01 42 17.5	-3.8
MSWZ	**Moikau Station**	**3.72**	**220**	PN	Pn	01 41 36.7	-4.4
MSWZ	**Moikau Station**	**3.72**	**220**	P	Pn	01 41 36.7	-4.4
PLWZ	**Palliser**	**3.83**	**218**	PN	Pn	01 41 38.4	-4.3
SNZO	**South Karori**	**3.93**	**225**	*e*Pn	Pn	01 41 40.3	-3.7
SNZO				*e*S	Sn	01 42 24.9	-4.5
DUWZ	**D'Urville Isla**	**4.11**	**236**	PN	Pn	01 41 43.7	-2.8
TCW	**Tory Channel**	**4.12**	**229**	PN	Pn	01 41 43.3	-3.3
TCW	**Tory Channel**	**4.12**	**229**	P	Pn	01 41 43.3	-3.3
TUWZ	**Tuamarina**	**4.45**	**229**	PN	Pn	01 41 47.2	-3.9
NNZ	**Nelson**	**4.68**	**235**	PN	Pn	01 41 51.3	-2.9
QRZ	**Quartz Range**	**5.06**	**242**	PN	Pn	01 41 55.8	-3.8
THZ	**Tophouse**	**5.28**	**232**	PN	Pn	01 41 59.2	-3.2
LTZ	**Lake Taylor**	**6.27**	**226**	PN	Pn	01 42 11.5	-4.6
CTZ	**Chatham Island**	**6.34**	**145**	PN	Pn	01 42 15.1	-2.0
MQZ	**McQueen's Vall**	**6.70**	**219**	PN	Pn	01 42 17.7	-4.4
ODZ	**Otahua Downs**	**8.66**	**220**	PN	Pn	01 42 44.2	-4.8
JCZ	**Jackson Bay**	**9.09**	**230**	PN	Pn	01 42 52.2	-2.6

ISCJB ***12*** *01:48:36.2±2.5, 18.°3N±0.°1×147.°1E±0.°1, h66km±25km, mb3.8/13,Error ellipse: s-maj=19.9km s-min=17.2km az=35.6*

NEIC ***12*** *01:48:38.0±2.0, 18.°32N×147.°10E,h62km±20km, Error ellipse: s-maj=15.4km s-min=15.0km az=174.0*

IDC ***12*** *01:48:39.0±4.2, 18.°27N×146.°91E,h68km±39km, mb3.6/11, mb1 3.8/12,mb1mx3.7/20,mbtmp3.7/12,ML4.0/1,MS3.7/1, Ms1 3.7/1,ms1mx2.9/26,Error ellipse: s-maj=32.8km s-min=17.6km az=76.0*

ISC 12 01:48:37.7±2.2, 18.°3N±0.°1×147.°1E±0.°1, h62km±23km, n18, σ0:92/18,**mb3.9**/13,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.14**	**205**	*e*Pn	**Pn**	**01 49 53.5**	**+1.4**
GUMO				*e*S	**Sn**	**01 50 47.0**	**-3.1**
GUMO	**Guam**	**5.14**	**205**	P	**Pn**	**01 49 53.7**	**+1.6**
	5.4nm,0.3s,baz=165,slow=20,SNR=2.2						
GUMO				S	**Sn**	**01 50 49.3**	**-0.9**
	9.3nm,0.3s,baz=100,slow=18,SNR=2.7						
WAKE	**Wake Island**	**18.51**	**84**	*e*P	**Pn**	**01 52 48.7**	**-1.2**
	96nm,0.9s						
KSRS	**Korea Array**	**25.48**	**322**	P	**P**	**01 53 60.0**	**0.0**
	0.5nm,0.4s,mb3.4,baz=156,slow=8.8,SNR=4.7						
ASAR	**Alice Springs**	**43.64**	**198**	P	**P**	**01 56 36.4**	**+0.2**
	1.3nm,0.6s,mb3.8,baz=20,slow=9.5,SNR=12						
SONM	**Songino Array**	**44.33**	**321**	P	**P**	**01 56 42.0**	**+0.5**
	0.4nm,0.3s,mb3.6,baz=144,slow=5.4,SNR=3.3						
STKA	**Stephens Creek**	**50.14**	**186**	P	**P**	**01 57 27.0**	**+0.2**
	1.0nm,0.3s,mb4.3,baz=348,slow=9.3,SNR=4.0						
KDAK	**Kodiak Island**	**58.97**	**33**	LR	LR	02 25 55.9	
	comp=Z,57nm,18.6s,baz=285,slow=38						
ZALV	**Zalesovo Beam**	**59.18**	**322**	P	**P**	**01 58 31.4**	**-0.7**
	0.5nm,0.3s,mb4.0,baz=106,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**59.74**	**314**	P	**P**	**01 58 36.0**	**0.0**
	0.5nm,0.6s,mb3.7,baz=87,slow=8.8,SNR=3.9						
ILAR	**Eielson Array**	**63.43**	**26**	P	**P**	**01 59 00.9**	**+0.4**
	0.2nm,0.6s,mb3.5,baz=284,slow=5.8,SNR=5.0						
BVAR	**Borovoye Array**	**67.67**	**321**	P	**P**	**01 59 27.9**	**-0.2**
	1.1nm,0.5s,mb4.2,baz=99,slow=7.5,SNR=8.1						
NVAR	**Mina Array Bea**	**82.33**	**52**	P	**P**	**02 00 54.8**	**+1.9**
	0.6nm,0.7s,mb3.6,baz=252,slow=7.4,SNR=5.0						
ARCES	**ARCESS Array B**	**83.31**	**342**	P	**P**	**02 00 58.0**	**+0.6**
	2.0nm,0.7s,mb4.2,baz=46,slow=6.9,SNR=5.4						
JOF	**Joensuu**	**84.97**	**336**	*e*p	**P**	**02 01 04.5**	**-1.4**
	0.8nm,0.4s,mb4.2						
KAF	**Kangasniemi**	**87.36**	**336**	*e*p	**P**	**02 01 12.6**	**-5.1**
	0.4nm,0.4s,mb4.0						
FINES	**FINESS Array B**	**87.84**	**336**	P	**P**	**02 01 19.3**	**-0.7**
	1.6nm,0.6s,mb4.5,baz=62,slow=4.3,SNR=6.5						
LPAZ	**La Paz**	**146.30**	**92**	PKPbc	PKPbc	02 08 15.2	+3.0
	0.9nm,0.8s,baz=245,slow=2.8,SNR=4.6						

IDC ***12*** *02:10:10.8±2.1, 17.°69S×168.°29E,h0km,mb4.2/5, mb1 4.4/5,mb1mx4.2/11,mbtmp4.2/5,MS3.6/4,Ms1 3.7/4, ms1mx3.3/15,Error ellipse: s-maj=80.2km s-min=31.1km az=135.0*

NOU ***12*** *02:10:15.8±1.1, 17.°20S×166.°88E,h30km,MD3.3,ML3.4*

ISCJB ***12*** *02:10:17.3±2.6, 17.°7S±0.°1×168.°0E±0.°2,h48km±23km, mb4.2/7,MS3.9/2,Error ellipse: s-maj=31.2km s-min=17.3km az=9.6*

NEIC ***12*** *02:10:17.7±0.6, 17.°59S×168.°04E,h35km,mb4.5/1,Error ellipse: s-maj=25.9km s-min=13.6km az=119.0*

NEIC Felt at Port-Vila.

ISC 12 02:10:18.4±2.6, 17.°7S±0.°1×168.°0E±0.°2, h38km±23km, n36, σ1:9/**17**/18,**mb4.2**/6,**MS3.9**/2,**2C-2D**,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAYA	**Yate Dam**	**4.60**	**193**	*e*P	**Pn**	**02 11 26.9**	**+1.5**
BAYA				*e*S	**Sn**	**02 12 18.9**	**+1.3**
DZM	**Mont Dzumac**	**4.63**	**198**	*e*Pn	**Pn**	**02 11 25.5**	**-0.4**
	56nm,0.3s						
DZM				*e*Sn	**Sn**	**02 12 17.6**	**-0.8**
	79nm,0.3s						
DZM				*e*LR	LR	02 12 32.4	
	499nm,23.5s						
DZM	**Mont Dzumac**	**4.63**	**198**	*e*P	**Pn**	**02 11 25.3**	**-0.6**
DZM				*e*S	**Sn**	**02 12 17.0**	**-1.5**
DZM				AMP		02 12 24.8	
	comp=Z,725nm,4.0s						
DZM	**Mont Dzumac**	**4.63**	**198**	*e*Pn	**Pn**	**02 11 25.6**	**-0.3**
DZM				*e*S	**Sn**	**02 12 17.0**	**-1.4**
NOUC	**Port Laguerre**	**4.70**	**199**	*e*P	**Pn**	**02 11 26.2**	**-0.7**
NOUC				*e*S	**Sn**	**02 12 18.3**	**-1.9**
NOUC				AMP		02 12 27.8	
	comp=Z,26nm,4.3s						
PLUM	**Mont Dore**	**4.77**	**195**	*e*S	**Sn**	**02 12 22.5**	**+0.6**
HNR	**Honiara**	**11.29**	**315**	LR	LR	02 16 28.1	
	comp=Z,124nm,20.2s,baz=121,slow=33						
EIDS	**Eidsvold**	**17.49**	**241**	*e*Pn	**Pn**	**02 14 20.8**	**+1.4**
AFI	**Afiamalu**	**19.83**	**82**	LR	LR	02 20 49.5	
	comp=Z,166nm,20.4s,baz=163,slow=33						
STKA	**Stephens Creek**	**27.74**	**234**	P	**P**	**02 16 03.1**	**-0.3**
	comp=Z,3.3nm,0.7s,mb4.1,baz=138,slow=4.4,SNR=3.1						
ASAR	**Alice Springs**	**32.39**	**254**	P	**P**	**02 16 43.9**	**-0.8**
	comp=Z,2.2nm,0.5s,mb4.3,baz=76,slow=8.5,SNR=36						
ASAR				PcP	PcP	02 19 31.4	-0.3
	comp=Z,0.8nm,0.7s,baz=96,slow=2.7,SNR=6.7						
PPT	**Papeete**	**40.40**	**97**	*e*LR	LR	02 29 36.2	
	comp=Z,70nm,22.8s						
PPT	**Papeete**	**40.40**	**97**	LR	LR	02 30 30.6	
	comp=Z,187nm,18.4s,MS4.0,baz=166,slow=30						
TAOE	**Nuku Hiva Isla**	**51.11**	**87**	*e*LR	LR	02 34 35.6	
	comp=Z,98nm,23.1s						
QSPA	**South Pole Qui**	**72.40**	**180**	*e*P	**P**	**02 21 41.2**	**+1.2**
ASAR				PcP	PcP	02 19 31.4	-0.3
	comp=Z,0.4nm,0.8s,mb4.4						
CMAR	**Chiang Mai Arr**	**76.76**	**294**	P	**P**	**02 22 07.4**	**+1.0**
	comp=Z,0.6nm,0.3s,mb4.0,baz=126,slow=5.7,SNR=4.7						
CMAR				LR	LR	02 53 56.1	
	comp=Z,52nm,18.1s,MS3.9,baz=95,slow=34						
SONM	**Songino Array**	**85.23**	**324**	P	**P**	**02 22 50.6**	**-0.2**
	comp=Z,3.8nm,0.8s,mb4.6,baz=144,slow=5.9,SNR=23						
ILAR	**Eielson Array**	**89.08**	**18**	P	**P**	**02 23 06.0**	**-3.1**
	comp=Z,0.4nm,0.8s,mb3.8,baz=236,slow=5.1,SNR=6.3						
MKAR	**Makanchi Array**	**99.77**	**316**	P	Pdif	02 23 57.1	-1.4
	comp=Z,0.3nm,0.6s,baz=98,slow=5.9,SNR=3.7						
ARCES	**ARCESS Array B**	**123.23**	**345**	PKP	PKPdf	02 29 10.2	-0.2
	comp=Z,1.9nm,0.9s,baz=46,slow=2.6,SNR=3.8						
ABTA	**Abfaltersbach**	**144.61**	**330**	⇑*i*PKPab	PKPdf	02 29 48.3	-2.6
	comp=Z,3.2nm,0.6s						
MOTA	**Moosalm**	**144.81**	**332**	⇓*i*PKPdf	PKPdf	02 29 49.8	-1.4
	comp=Z,2.8nm,0.8s						
FETA	**Feichten**	**145.22**	**332**	⇓*i*PKPdf	PKPdf	02 29 51.1	-0.8
	comp=Z,6.2nm,0.7s						
DAVA	**Damuels**	**145.38**	**333**	⇑*i*PKPdf	PKPdf	02 29 51.8	-0.4
	comp=Z,5.8nm,0.6s						
CDF	**Champ du Feu**	**145.52**	**337**	*e*PKP1	PKPbc	02 29 51.6	-0.9
	comp=Z,14nm,0.8s						
HINF	**Hinteralfeld**	**146.17**	**337**	*e*PKP1	PKPbc	02 29 53.6	-0.9
HAU	**Haudompre**	**146.20**	**338**	*e*PKP1	PKPbc	02 29 53.4	-1.2
MEZF	**Maizieres J'vi**	**146.23**	**339**	*e*PKP1	PKPbc	02 29 54.2	-0.5
	comp=Z,14nm,0.8s						
CABF	**La Chapelle**	**147.46**	**337**	*e*PKP1	PKPbc	02 29 58.5	+0.2
LDF	**La Prutiere**	**147.65**	**345**	*e*PKP1	PKPbc	02 29 59.7	+1.0
LOR	**Lormes**	**147.70**	**340**	*e*PKP1	PKPdf	02 29 56.5	+0.4
	comp=Z,11nm,1.0s						
SSF	**Saint Saulge**	**147.99**	**340**	*e*PKP1	PKPdf	02 29 58.0	+1.4
	comp=Z,10nm,0.9s						
GRR	**Gorron**	**148.01**	**346**	*e*PKP1	PKPbc	02 30 01.9	+2.2
LPL	**La Plagne**	**148.11**	**335**	*e*PKP1	PKPbc	02 29 59.6	-0.5
LPG	**La Plagne**	**148.12**	**335**	*e*PKP1	PKPbc	02 29 59.7	-0.4
PGF	**Pioggiola**	**149.40**	**329**	*e*PKP1	PKPbc	02 30 02.2	-1.3
	comp=Z,22nm,1.0s						

NEIC ***12*** *02:27:29.0,45.°07S×167.°45E,h80km,ML3.8(WEL),After WEL.*

WEL 12 02:27:29.0±0.2,45.°07S×167.°47E,h81km±1km,ML3.8/12, **2C,Error ellipse: s-maj=1.6km s-min=1.0km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	**Deep Cove**	**0.47**	**208**	PN	Pn	02 27 42.1	-0.4
DCZ				SN	Sn	02 27 52.9	+0.3
DCZ	**Deep Cove**	**0.47**	**208**	P	Pn	02 27 42.3	-0.3
MSZ	**Milford Sound**	**0.51**	**40**	PN	Pn	02 27 42.7	-0.2
MSZ				SN	Sn	02 27 53.6	+0.3
MSZ	**Milford Sound**	**0.51**	**40**	P	Pn	02 27 42.7	-0.2
MSZ				S	Sn	02 27 53.6	+0.4
MLZ	**Mavora Lakes**	**0.57**	**120**	⇑PN	Pn	02 27 43.1	-0.4
MLZ				SN	Sn	02 27 53.5	-0.7
MLZ	**Mavora Lakes**	**0.57**	**120**	P	Pn	02 27 43.0	-0.5
MLZ				S	Sn	02 27 53.5	-0.7
WHZ	**Wether Hill Ro**	**0.90**	**158**	PN	Pn	02 27 46.7	-0.1
WHZ				SN	Sn	02 27 59.8	-0.4
WHZ	**Wether Hill Ro**	**0.90**	**158**	P	Pn	02 27 46.7	-0.1
WKZ	**Wanaka**	**1.12**	**78**	⇑PN	Pn	02 27 49.6	0.0
WKZ				SN	Sn	02 28 04.6	-0.4
EAZ	**Earnscleugh**	**1.31**	**98**	PN	Pn	02 27 52.0	+0.1
EAZ				SN	Sn	02 28 08.2	-0.9
JCZ	**Jackson Bay**	**1.35**	**43**	PN	Pn	02 27 52.0	-0.4
JCZ	**Jackson Bay**	**1.35**	**43**	P	Pn	02 27 52.0	-0.4
TUZ	**Tuapeka**	**1.76**	**121**	PN	Pn	02 27 57.5	-0.2
TUZ	**Tuapeka**	**1.76**	**121**	P	Pn	02 27 57.5	-0.2
APZ	**The Paps**	**1.81**	**169**	PN	Pn	02 27 58.3	0.0
APZ	**The Paps**	**1.81**	**169**	P	Pn	02 27 58.3	0.0
SYZ	**Scrubby Hill**	**1.88**	**142**	PN	Pn	02 27 59.2	0.0
SYZ	**Scrubby Hill**	**1.88**	**142**	P	Pn	02 27 59.2	-0.1
LBZ	**Lake Benmore**	**2.05**	**72**	PN	Pn	02 28 00.2	-1.3
LBZ	**Lake Benmore**	**2.05**	**72**	P	Pn	02 28 00.2	-1.3
FOZ	**Fox Glacier**	**2.19**	**47**	PN	Pn	02 28 03.2	-0.1
FOZ	**Fox Glacier**	**2.19**	**47**	P	Pn	02 28 03.2	-0.2
ODZ	**Otahua Downs**	**2.25**	**91**	PN	Pn	02 28 03.2	-1.0
ODZ	**Otahua Downs**	**2.25**	**91**	*e*Pn	Pn	02 28 03.0	-1.2
ODZ				*e*S	Sn	02 28 27.2	-3.9
RPZ	**Rata Peaks**	**2.90**	**64**	PN	Pn	02 28 10.9	-2.1
RPZ	**Rata Peaks**	**2.90**	**64**	*e*Pn	Pn	02 28 10.9	-2.0
RPZ				*e*S	Sn	02 28 44.2	-2.7
WVZ	**Waitaha Valley**	**3.08**	**51**	PN	Pn	02 28 14.3	-1.1
WVZ	**Waitaha Valley**	**3.08**	**51**	P	Pn	02 28 14.3	-1.1
LTZ	**Lake Taylor**	**4.15**	**58**	PN	Pn	02 28 26.8	-3.1
LTZ	**Lake Taylor**	**4.15**	**58**	P	Pn	02 28 26.8	-3.1
DSZ	**Denniston Nort**	**4.58**	**45**	PN	Pn	02 28 34.4	-1.4
DSZ	**Denniston Nort**	**4.58**	**45**	P	Pn	02 28 34.4	-1.3

ISCJB ***12*** *02:49:39.4±0.9, 30.°57N±0.°06×102.°75E±0.°07, h10km, mb3.7/3,Error ellipse: s-maj=9.0km s-min=7.7km az=44.7*

IDC ***12*** *02:49:39.9±3.

SSLB	**Suanglung**	**0.69**	**252**	*e*Pg	**Pg**	**03 28 24.4**	**-0.7**
SSLB				*e*S	**Sg**	**03 28 33.8**	**-0.4**
YULB	**Yu-li**	**0.70**	**210**	*e*Pg	**Pg**	**03 28 24.9**	**-0.4**
YULB				*e*S	**Sg**	**03 28 35.3**	**+0.9**
SMLT	**Sun Moon Lake**	**0.72**	**261**	⇓P	**Pg**	**03 28 25.4**	**-0.3**
	baz=259						
SMLT				S	**Sg**	**03 28 34.1**	**-0.8**
	baz=259						
TWE	**Neicheng**	**0.72**	**360**	⇑*i*P	**Pg**	**03 28 26.0**	**+0.3**
	baz=7.0						
TWE				*e*S	**Sg**	**03 28 35.6**	**+0.5**
	baz=7.0						
YHNB	**Yeheng**	**0.72**	**338**	*e*Pg	**Pg**	**03 28 25.7**	**-0.1**
YHNB				*e*S	**Sg**	**03 28 34.9**	**-0.2**
NSK	**Sanguang**	**0.73**	**337**	⇑*i*P	**Pg**	**03 28 26.0**	**+0.1**
	baz=343						
NSK				*e*S	**Sg**	**03 28 35.6**	**+0.2**
	baz=343						
TWF1	**Yuli**	**0.73**	**208**	*e*P	**Pg**	**03 28 25.3**	**-0.7**
	baz=214						
TWF1				*e*S	**Sg**	**03 28 36.5**	**+1.0**
	baz=214						
TYC	**Yuchr**	**0.75**	**263**	⇑*i*P	**Pg**	**03 28 25.9**	**-0.4**
	baz=262						
TYC				S	**Sg**	**03 28 35.1**	**-1.0**
	baz=262						
ILA	**Ilan**	**0.76**	**5**	*e*P	**Pg**	**03 28 27.1**	**+0.4**
	baz=14						
YUS	**Yu-Shan**	**0.83**	**232**	⇑*i*P	**Pg**	**03 28 27.7**	**-0.2**
	baz=229						
YUS				*e*S	**Sg**	**03 28 38.9**	**+0.2**
	baz=229						
NSTT	**Nanjuang**	**0.88**	**316**	⇑*i*P	**Pg**	**03 28 29.1**	**+0.3**
	baz=320						
NSTT				*e*S	**Sg**	**03 28 40.2**	**0.0**
	baz=320						
TWQ1	**Liyutan**	**0.89**	**293**	*e*P	**Pg**	**03 28 29.0**	**0.0**
	baz=295						
TWQ1				*e*S	**Sg**	**03 28 40.7**	**+0.1**
	baz=295						
TCU	**Taichung**	**0.92**	**279**	*e*P	**Pg**	**03 28 30.1**	**+0.5**
	baz=272						
TCU				*e*S	**Sg**	**03 28 43.7**	**+2.1**
	baz=272						
ALS	**Alishan**	**0.93**	**239**	*i* P	**Pg**	**03 28 29.6**	**-0.2**
	baz=236						
ALS				*e*S	**Sg**	**03 28 42.3**	**+0.4**
	baz=236						
CHKT	**Chengkung**	**0.94**	**197**	*e*P	**Pg**	**03 28 30.0**	**0.0**
	baz=183						
CHKT				*e*S	**Sg**	**03 28 44.1**	**+1.9**
	baz=183						
TWA	**Mucha**	**0.98**	**355**	*e*P	**Pg**	**03 28 30.6**	**-0.1**
	baz=350						
TWA				*e*S	**Sg**	**03 28 42.9**	**-0.5**
	baz=350						
TATO	**Taipei**	**0.98**	**350**	*e*Pg	**Pg**	**03 28 31.1**	**+0.3**
CHN5	**Tsauling**	**0.99**	**246**	P	**Pg**	**03 28 31.1**	**+0.1**
	baz=232						
CHN5				*e*S	**Sg**	**03 28 45.8**	**+1.8**
	baz=232						
ELDTW	**Lidau**	**1.01**	**217**	*e*P	**Pg**	**03 28 29.8**	**-1.4**
	baz=205						
ELDTW				*e*S	**Sg**	**03 28 44.3**	**0.0**
	baz=205						
HSN	**Hsinchu**	**1.02**	**321**	*e*P	**Pg**	**03 28 32.1**	**+0.6**
	baz=328						
HSN				*e*S	**Sg**	**03 28 45.1**	**+0.3**
	baz=328						
TAP1	**Taipei**	**1.04**	**353**	*e*P	**Pg**	**03 28 31.9**	**-0.1**
	baz=357						
TAP1				*e*S	**Sg**	**03 28 45.4**	**0.0**
	baz=357						
TWB1	**Santiao Chiao**	**1.04**	**16**	*e*P	**Pg**	**03 28 30.6**	**-1.4**
	baz=11						
TWB1				*e*S	**Sg**	**03 28 45.9**	**+0.4**
	baz=11						
NCU	**National Centr**	**1.06**	**336**	*e*P	**Pg**	**03 28 31.2**	**-1.1**
	baz=349						
WGK	**Gukeng**	**1.06**	**253**	*e*P	**Pg**	**03 28 30.9**	**-1.4**
	baz=250						
NWF	**Wu-fen Shan**	**1.07**	**5**	*e*P	**Pg**	**03 28 32.7**	**+0.2**
	baz=11						
NWF				*e*S	**Sg**	**03 28 47.1**	**+0.7**
	baz=11						
TWS1	**Kuangyinshan**	**1.12**	**348**	*e*P	**Pg**	**03 28 34.0**	**+0.6**
	baz=4.0						
TWS1				*e*S	**Sg**	**03 28 48.9**	**+1.0**
	baz=4.0						
CHN4	**Tsaushan**	**1.18**	**237**	⇑P	**Pb**	**03 28 34.8**	**+0.3**
	baz=229						
CHN4				*e*S	**Sb**	**03 28 51.8**	**+1.9**
	baz=229						
STYT	**Tauyuan**	**1.18**	**225**	P	**Pb**	**03 28 33.9**	**-0.6**
	baz=223						
STYT				*e*S	**Sb**	**03 28 50.1**	**+0.1**
	baz=223						
WTP	**Ta-pu**	**1.23**	**232**	P	**Pn**	**03 28 35.3**	**+0.1**
	baz=231						
WTP				*e*S	**Sb**	**03 28 51.9**	**+0.6**
	baz=231						
CHY	**Chiayi**	**1.25**	**247**	*e*P	**Pn**	**03 28 35.1**	**-0.5**
	baz=261						
CHY				*e*S	**Sb**	**03 28 51.0**	**-0.8**
	baz=261						
TWY	**Chenhua**	**1.27**	**357**	*e*P	**Pn**	**03 28 35.6**	**-0.2**
	baz=349						
WTCT	**Ta-ch'eng**	**1.28**	**264**	*e*P	**Pn**	**03 28 35.3**	**-0.7**
	baz=263						
WTCT				*e*S	**Sb**	**03 28 52.3**	**-0.5**
	baz=263						
TWG	**Pinlang**	**1.30**	**205**	*e*Pn	**Pn**	**03 28 33.6**	**-2.6**
TWG	**Pinlang**	**1.30**	**205**	*e*P	**Pn**	**03 28 33.7**	**-2.6**
	baz=202						
YOJ	**Yonaguni jima**	**1.31**	**69**	*e*P	**Pn**	**03 28 36.2**	**-0.2**
	baz=70						
TWK	**Hsinying**	**1.31**	**236**	*e*P	**Pn**	**03 28 36.0**	**-0.4**
	baz=223						
TWK				*e*S	**Sb**	**03 28 54.4**	**+0.8**
	baz=223						
CHN1	**Nanshi**	**1.33**	**232**	*e*P	**Pn**	**03 28 36.1**	**-0.5**
	baz=231						
CHN1				*e*S	**Sb**	**03 28 54.5**	**+0.4**
	baz=231						
TTN	**Taitung**	**1.33**	**201**	*e*P	**Pn**	**03 28 35.9**	**-0.8**
	baz=198						
SGST	**Jiashian**	**1.35**	**228**	*e*P	**Pn**	**03 28 37.0**	**-0.1**
	baz=227						
SGST				*e*S	**Sb**	**03 28 56.6**	**+1.6**
	baz=227						
CHN8	**Yiju**	**1.49**	**244**	*e*P	**Pn**	**03 28 38.2**	**-0.7**
	baz=244						
CHN8				*e*S	**Sn**	**03 28 57.8**	**-0.7**
	baz=244						
CHN3	**Shinhua**	**1.51**	**233**	*e*P	**Pn**	**03 28 39.0**	**-0.2**
	baz=233						
ECL	**Taimali**	**1.55**	**205**	*e*P	**Pn**	**03 28 38.7**	**-1.0**
	baz=187						
SSD	**Sandimen**	**1.57**	**218**	*e*P	**Pn**	**03 28 40.4**	**+0.4**
	baz=218						
SSD				*e*S	**Sn**	**03 29 01.4**	**+0.8**
	baz=218						
TAI1	**Yung-k'ang**	**1.63**	**234**	*e*P	**Pn**	**03 28 41.2**	**+0.3**
	baz=234						
TWM1	**Shoushan**	**1.64**	**225**	*e*P	**Pn**	**03 28 41.3**	**+0.3**
	baz=223						
SGLT	**Jiouru**	**1.67**	**221**	*e*P	**Pn**	**03 28 41.5**	**+0.2**
	baz=206						
EAST	**Anshuo**	**1.78**	**205**	*e*P	**Pn**	**03 28 41.0**	**-1.9**
	baz=191						
SCZT	**Fangliau**	**1.89**	**211**	*e*P	**Pn**	**03 28 45.0**	**+0.6**
	baz=214						
SCZT				*e*S	**Sn**	**03 29 08.5**	**+0.2**
	baz=214						
LAY	**Lan-yu**	**1.96**	**183**	*e*P	**Pn**	**03 28 42.0**	**-3.3**
	baz=164						
PNG	**Penghu**	**1.99**	**258**	*e*P	**Pn**	**03 28 45.9**	**+0.2**
	baz=258						
PNG				*e*S	**Sn**	**03 29 10.7**	**-0.1**
	baz=258						
TWP	**Hsiaoliuchiu**	**2.04**	**216**	*e*P	**Pn**	**03 28 47.9**	**+1.4**
	baz=219						
TWK1	**Hengchun**	**2.20**	**201**	*e*P	**Pn**	**03 28 50.0**	**+1.3**
	baz=202						
QZH	**Quanzhou**	**2.96**	**289**	*e*Pn	**Pn**	**03 28 59.1**	**0.0**
QZH				Sn	**Sn**	**03 29 32.7**	**-2.1**
QZH				smax			
	comp=N,290nm,0.8s						
QZH				smax			
	comp=E,240nm,0.8s						
KNM	**Kinmen**	**2.98**	**279**	*e*P	**Pn**	**03 29 00.9**	**+1.4**
	baz=275						
SONM	**Songino Array**	**26.71**	**337**	P	**P**	**03 33 53.3**	**+1.8**
	comp=E,0.9nm,0.8s,mb3.4,baz=141,slow=9.3,SNR=4.0						
SONM				LR	LR	03 45 29.1	
	comp=E,51nm,19.3s,baz=355,slow=99						
MKAR	**Makanchi Array**	**38.78**	**316**	P	**P**	**03 35 37.5**	**+0.7**
	comp=E,1.0nm,0.8s,mb3.6,baz=104,slow=10,SNR=8.2						
ZALV	**Zalesovo Beam**	**40.64**	**327**	P	**P**	**03 35 51.7**	**-0.5**
ZALV	**Zalesovo Beam**	**40.64**	**327**	P	**P**	**03 35 51.7**	**-0.5**
	comp=E,0.4nm,0.4s,mb3.4,baz=108,slow=9.5,SNR=5.1						
ASAR	**Alice Springs**	**48.85**	**165**	P	**P**	**03 36 56.5**	**-1.5**
	comp=E,0.6nm,0.9s,mb3.6,baz=355,slow=6.3,SNR=4.6						

IDC 12 03:41:14.7±7.3, 27°.89S×178°.64W, h0km, mb3.9/2, mb1 3.9/2, mb1mx3.7/11, mbtmp3.9/2, Error ellipse: s-maj=335.0km s-min=102.6km az=154.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**34.58**	**254**	P	P	03 48 04.9	-0.4
	1.9nm,0.8s,baz=108,slow=14,SNR=3.5						
ASAR	**Alice Springs**	**42.74**	**265**	P	P	03 49 14.2	+0.2
	0.4nm,0.4s,baz=106,slow=8.1,SNR=6.4						
FINES	**FINESS Array B**	**142.60**	**341**	PKP	PKPdf	04 00 48.5	-0.5
	2.5nm,0.8s,baz=28,slow=3.3,SNR=4.8						

*NEIC **12** 03:48:47.4, 32°.55S×71°.83W, h14km, ML2.9(GUC), After GUC.*

GUC 12 03:48:47.4±1.0, 32°.55S×71°.83W, h14km±11km, MD3.6, ML2.9, 6C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.72**	**23**	⇓*i*P	Pg	03 49 00.0	-1.4
CHNG				*i* S	Sg	03 49 10.9	0.0
CHNG				AML	AML	03 49 12.8	
	comp=E,307nm,0.2s						
ROCH	**El Roble**	**0.81**	**122**	*e*P	Pg	03 49 02.4	-0.7
ROCH				S	Sg	03 49 13.3	-0.4
ROCH	**El Roble**	**0.81**	**122**	*e*P	Pg	03 49 02.4	-0.7
ROCH				⇓*i*P		03 49 02.7	
ROCH				*i* S	Sg	03 49 13.3	-0.4
ROCH				*i* S	Sg	03 49 13.5	-0.2
ROCH				AML	AML	03 49 15.1	
	comp=N,590nm,0.2s						
JACH	**Jahuel**	**1.05**	**98**	⇑*i*P	Pb	03 49 06.7	-0.7
JACH				*i* S	Sb	03 49 20.3	-0.8
JACH	**Jahuel**	**1.05**	**98**	⇑*i*P	Pb	03 49 06.7	-0.7
JACH				*i* S	Sb	03 49 20.3	-0.8
PEL	**Peldehue**	**1.13**	**122**	⇓*i*P	Pb	03 49 07.5	-1.3
PEL				*i* S	Sb	03 49 23.2	-0.1
PEL				AML	AML	03 49 26.1	
	comp=N,1μm,0.2s						
TACH	**Talagante**	**1.33**	**146**	*e*P	Pn	03 49 10.4	-1.2
TACH	**Talagante**	**1.33**	**146**	*e*P	Pn	03 49 10.4	-1.2
CLCH	**Cerro Calan**	**1.38**	**128**	⇓*i*P	Pn	03 49 11.6	-0.7
CLCH				*i* S	Sn	03 49 30.2	-0.1
CLCH				AML	AML	03 49 32.8	
	comp=E,321nm,0.4s						
CLCH				AML	AML	03 49 34.6	
	comp=N,346nm,0.4s						
ANTU	**Antumapu**	**1.43**	**136**	AML	AML	03 49 35.5	
	comp=N,340nm,0.3s						
FCH	**Farellones**	**1.51**	**121**	⇑*i*P	Pn	03 49 14.0	0.0
FCH				*i* S	Sn	03 49 33.6	+0.1
FCH	**Farellones**	**1.51**	**121**	⇑*i*P	Pn	03 49 14.0	0.0
FCH				*i* S	Sn	03 49 33.6	+0.1
FCH				AML	AML	03 49 35.2	
	comp=N,311nm,0.2s						
PCH	**Pirque**	**1.54**	**134**	*i* P	Pn	03 49 14.1	-0.4
PCH				*e*S	Sn	03 49 34.2	0.0
PCH	**Pirque**	**1.54**	**134**	*i* P	Pn	03 49 14.1	-0.4
PCH				*e*S	Sn	03 49 34.2	0.0
CMCH	**Combarbala**	**1.54**	**27**	⇑*i*P	Pn	03 49 14.5	0.0
CMCH				*i* S	Sn	03 49 34.5	+0.1
CMCH	**Combarbala**	**1.54**	**27**	⇑*i*P	Pn	03 49 14.5	0.0
CMCH				*i* S	Sn	03 49 34.5	+0.1
CMCH				AML	AML	03 49 40.3	
	comp=E,792nm,0.6s						
SJCH	**San Jose de Ma**	**1.65**	**132**	*e*P	Pn	03 49 16.2	+0.3
SJCH				*e*S	Sn	03 49 37.2	+0.3
SJCH	**San Jose de Ma**	**1.65**	**132**	*e*P	Pn	03 49 16.2	+0.3
SJCH				*e*S	Sn	03 49 37.2	+0.3
SJCH				AML	AML	03 49 41.5	
	comp=N,110nm,0.2s						
CHCH	**Chadas Angostu**	**1.70**	**145**	*e*P	Pn	03 49 16.3	-0.3
CHCH	**Chadas Angostu**	**1.70**	**145**	*e*P	Pn	03 49 16.3	-0.3
LMEL	**Las Melosas**	**1.88**	**134**	*e*P	Pn	03 49 19.5	+0.4
LMEL				*i* S	Sn	03 49 43.8	+1.1
LMEL	**Las Melosas**	**1.88**	**134**	*e*P	Pn	03 49 19.5	+0.4
LMEL				*i* S	Sn	03 49 43.8	+1.1
LMEL				AML	AML	03 49 49.5	
	comp=N,355nm,0.2s						
LCO	**Las Campanas**	**3.66**	**16**	*e*Pn	Pn	03 49 39.2	-4.4
LCO				*e*S	Sn	03 50 35.5	+8.9

*ISCJB **12** 03:52:23.6±0.3, 46°.77N±0°.02×12°.19E±0°.02, h9km±6km, Error ellipse: s-maj=3.6km s-min=2.4km az=12.0*
*ROM **12** 03:52:23.9±0.6, 46°.73N×12°.22E, h5km, Md2.5/6, Ml1.9/6, Error ellipse: s-maj=12.5km s-min=2.1km az=2.0*
*VIE **12** 03:52:23.7±0.2, 46°.76N×12°.22E, h11km±2km, mb1.7/9, ML2.4/13, Error ellipse: s-maj=1.7km s-min=0.8km az=8.0*
15 km W of Sillian
*CSEM **12** 03:52:24.0±0.1, 46°.77N×12°.21E, h5km, ML2.8/15, Error ellipse: s-maj=1.9km s-min=1.5km az=15.0*
*PRU **12** 03:52:26.3, 46°.85N×12°.21E, h0km*

ISC 12 03:52:24.4±0.3, 46°.78N±0°.02×12°.20E±0°.02, h6km±7km, n54, σ0.974/96, 11C-13D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABTA	**Abfaltersbach**	**0.22**	**98**	⇓*e*Pg	Pg	**03 52 28.7**	**+0.1**
	14nm,0.1s,SNR=372						
ABTA				⇑*i*Sg	Sg	**03 52 31.6**	**+0.1**
	55nm,0.1s						
ABTA	**Abfaltersbach**	**0.22**	**98**	Pg	Pg	**03 52 28.7**	**+0.1**
	14nm,0.1s,SNR=372						
ABTA				Sg	Sg	**03 52 31.6**	**+0.1**
	55nm,0.1s						
AFL	**Alpe Faloria**	**0.25**	**183**	⇑*i*Pg	Pg	**03 52 29.9**	**+0.7**
AFL	**Alpe Faloria**	**0.25**	**183**	*i* Pg	Pg	**03 52 29.9**	**+0.7**
CSMI	**Casera Mimoias**	**0.41**	**130**	⇓*i*Pg	Pg	**03 52 32.3**	**+0.1**
CSMI				*i* Sg	Sg	**03 52 37.8**	**+0.2**
CSMI	**Casera Mimoias**	**0.41**	**130**	*i* Pg	Pg	**03 52 32.3**	**+0.1**
CSMI				*i* Sg	Sg	**03 52 37.8**	**+0.2**
FVI	**Forni Avoltri**	**0.44**	**114**	Pg	Pg	**03 52 32.6**	**-0.2**
FVI				Sg	Sg	**03 52 38.6**	**+0.1**
	107nm,0.2s						
FVI	**Forni Avoltri**	**0.44**	**114**	Pg	Pg	**03 52 32.6**	**-0.2**
FVI				Sg	Sg	**03 52 38.6**	**+0.1**
	107nm,0.2s						
CSO	**Casso**	**0.51**	**170**	⇓*i*Pg	Pg	**03 52 34.1**	**-0.1**
CSO				*i* Sg	Sg	**03 52 41.0**	**+0.2**
CSO	**Casso**	**0.51**	**170**	*i* Pg	Pg	**03 52 34.1**	**-0.1**
CSO				*i* Sg	Sg	**03 52 41.0**	**+0.2**
FAU	**Forcella Aurin**	**0.57**	**196**	⇑*i*Pg	Pg	**03 52 35.4**	**+0.1**
FAU	**Forcella Aurin**	**0.57**	**196**	*i* Pg	Pg	**03 52 35.4**	**+0.1**
ZOU	**Zoufplan**	**0.57**	**112**	⇓*i*Pg	Pg	**03 52 35.1**	**-0.3**
ZOU				*i* Sg	Sg	**03 52 43.2**	**+0.3**
ZOU	**Zoufplan**	**0.57**	**112**	*i* Pg	Pg	**03 52 35.2**	**-0.2**
ZOU				*i* Sg	Sg	**03 52 43.2**	**+0.3**
WTTA	**Wattenberg**	**0.62**	**322**	⇑*e*Pg	Pg	**03 52 36.9**	**+0.6**
	27nm,0.1s,SNR=83						
WTTA				⇓*i*Sg	Sg	**03 52 45.3**	**+0.9**
	35nm,0.2s						
WTTA	**Wattenberg**	**0.62**	**322**	Pg	Pg	**03 52 36.9**	**+0.6**
	27nm,0.1s,SNR=83						
WTTA				Sg	Sg	**03 52 45.3**	**+0.9**
	35nm,0.2s						
PLRO	**Paularo**	**0.69**	**109**	⇓*i*Pg	Pg	**03 52 37.1**	**-0.5**
PLRO				*i* Sg	Sg	**03 52 46.9**	**+0.3**
PLRO	**Paularo**	**0.69**	**109**	*i* Pg	Pg	**03 52 37.1**	**-0.5**
PLRO				*i* Sg	Sg	**03 52 46.9**	**+0.3**
WATA	**Walderalm**	**0.70**	**323**	⇓*e*Pg	Pg	**03 52 38.4**	**+0.5**
	20nm,0.1s,SNR=34						
WATA				⇓*i*Sg	Sg	**03 52 48.1**	**+1.1**
	21nm,0.1s						
WATA	**Walderalm**	**0.70**	**323**	Pg	Pg	**03 52 38.4**	**+0.5**
	20nm,0.1s,SNR=34						
WATA				Sg	Sg	**03 52 48.1**	**+1.1**
	21nm,0.1s						
APPI	**Appiano**	**0.73**	**246**	Pg	Pg	**03 52 38.6**	**+0.2**
APPI				Sg	Sg	**03 52 47.7**	**-0.3**
	74nm,0.2s						
APPI	**Appiano**	**0.73**	**246**	Pg	Pg	**03 52 38.6**	**+0.2**
APPI				Sg	Sg	**03 52 47.7**	**-0.3**
	74nm,0.2s						
VARN	**Col Varnada, M**	**0.79**	**185**	⇑*i*Pg	Pg	**03 52 39.2**	**-0.2**
VARN				*i* Sg	Sg	**03 52 50.0**	**+0.4**
VARN	**Col Varnada, M**	**0.79**	**185**	*i* Pg	Pg	**03 52 39.2**	**-0.2**
VARN				*i* Sg	Sg	**03 52 50.0**	**+0.4**
CTI	**Castel Tesino**	**0.82**	**208**	Pg	Pg	**03 52 39.8**	**-0.3**
	149nm,4.2s						
CTI	**Castel Tesino**	**0.82**	**208**	Pg	Pg	**03 52 39.8**	**-0.3**
	149nm,4.2s						
KBA	**Koelnbreinsper**	**0.84**	**68**	⇓*e*Pg	Pg	**03 52 40.3**	**-0.2**
	2.6nm,0.1s,SNR=15						
KBA				⇓*i*Sg	Sg	**03 52 51.4**	**+0.1**
	8.7nm,0.1s						
KBA	**Koelnbreinsper**	**0.84**	**68**	Pg	Pg	**03 52 40.3**	**-0.2**
	2.6nm,0.1s,SNR=15						
KBA				Sg	Sg	**03 52 51.4**	**0.0**
	8.7nm,0.1s						
GMNA	**Gemona**	**0.87**	**125**	Pg	Pg	**03 52 40.0**	**-1.1**
	21nm,0.4s						
GMNA	**Gemona**	**0.87**	**125**	Pg	Pg	**03 52 40.0**	**-1.1**
	21nm,0.4s						
PTCC	**Patocco-Chiusa**	**0.88**	**115**	Pg	Pg	**03 52 40.7**	**-0.5**
PTCC				Sg	Sg	**03 52 53.2**	**+0.7**
	9.0nm,0.2s						
PTCC	**Patocco-Chiusa**	**0.88**	**115**	Pg	Pg	**03 52 40.7**	**-0.5**
PTCC				Sg	Sg	**03 52 53.2**	**+0.7**
	9.0nm,0.2s						
MOTA	**Moosalm**	**0.94**	**308**	⇓*e*Pg	Pg	**03 52 42.3**	**-0.1**
	1.4nm,0.1s,SNR=8.5						
MOTA				⇑*i*Sg	Sg	**03 52 55.9**	**+1.2**
	4.8nm,0.2s						
MOTA	**Moosalm**	**0.94**	**308**	Pg	Pg	**03 52 42.3**	**-0.1**
	1.4nm,0.1s,SNR=8.5						
MOTA				Sg	Sg	**03 52 55.9**	**+1.3**
	4.8nm,0.2s						
MYKA	**Terra Mystica**	**1.00**	**98**	⇑*i*Pg	Pg	**03 52 43.0**	**-0.5**
	2.2nm,0.1s						
MYKA				⇓*i*Sg	Sg	**03 52 56.2**	**-0.4**
	4.7nm,0.1s						
MYKA	**Terra Mystica**	**1.00**	**98**	Pg	Pg	**03 52 43.0**	**-0.6**
	2.2nm,0.1s						
MYKA				Sg	Sg	**03 52 56.2**	**-0.4**
	4.7nm,0.1s						
FETA	**Feichten**	**1.04**	**284**	⇓*e*Pg	Pg	**03 52 43.9**	**-0.4**
	0.8nm,0.1s,SNR=7.6						
FETA				⇑*i*Sg	Sg	**03 52 58.6**	**+0.9**
	3.6nm,0.1s						
FETA	**Feichten**	**1.04**	**284**	Pg	Pg	**03 52 43.9**	**-0.4**
	0.8nm,0.1s,SNR=7.6						
FETA				Sg	Sg	**03 52 58.6**	**+0.8**
	3.6nm,0.1s						
BRMO	**Bormio**	**1.29**	**257**	Pg	Pg	**03 52 48.6**	**-0.6**
BRMO				Sg	Sg	**03 53 04.8**	**-1.2**
	20nm,0.3s						
BRMO	**Bormio**	**1.29**	**257**	Pg	Pg	**03 52 48.6**	**-0.6**
BRMO				Sg	Sg	**03 53 04.8**	**-1.2**
	20nm,0.3s						
MABI	**Malga Bissina**	**1.37**	**239**	Pg	Pg	**03 52 49.9**	**-0.8**
MABI				Sg	Sg	**03 53 07.8**	**-0.6**
	25nm,0.2s						
MABI	**Malga Bissina**	**1.37**	**239**	Pg	Pg	**03 52 49.9**	**-0.8**
MABI				Sg	Sg	**03 53 07.8**	**-0.6**
	25nm,0.2s						
VOY	**Vojsko**	**1.39**	**122**	*e*Pg	Pg	**03 52 51.7**	**+0.8**
VOY				*e*Sg	Sg	**03 53 11.2**	**+2.3**
VOY				*e*		03 53 12.0	
VOY	**Vojsko**	**1.39**	**122**	Pg	Pg	**03 52 51.7**	**+0.8**
VOY				*e*Sg	Sg	**03 53 11.2**	**+2.3**
TRI	**Trieste**	**1.52**	**134**	Pg	Pg	**03 52 52.9**	**-0.6**
	12nm,0.4s						
TRI	**Trieste**	**1.52**	**134**	Pg	Pg	**03 52 52.9**	**-0.6**
	12nm,0.4s						
MOA	**Molln**	**1.77**	**52**	⇑*i*Pn	Pn	**03 52 54.3**	**-1.2**
MOA				⇑*e*Pg	Pg	**03 52 57.7**	**-0.5**
	2.1nm,0.2s,SNR=14						
MOA				⇑*i*Sg	Sg	**03 53 22.0**	**+0.9**
	7.5nm,0.3s						
MOA	**Molln**	**1.77**	**52**	Pn	Pn	**03 52 54.3**	**-1.1**
KHC	**Kasperske Hory**	**2.53**	**21**	*e*PN	Pn	**03 53 07.0**	**+1.1**
KHC				*ex*	x	03 53 17.5	
KHC				*e*SN	Sn	**03 53 37.9**	**+0.9**
KHC				*e*SG	Sg	**03 53 44.2**	**-1.4**
	comp=Z,5.2nm,0.4s						
KHC	**Kasperske Hory**	**2.53**	**21**	Pn	Pn	**03 53 07.0**	**+1.1**
KHC				Sn	Sn	**03 53 37.9**	**+0.9**
KHC				Sg	Sg	**03 53 44.2**	**-1.4**
	comp=Z,5.2nm,0.4s						
NKC	**Novy Kostel**	**3.46**	**3**	*e*SG	Sg	**03 54 15.0**	**-0.5**
NKC	**Novy Kostel**	**3.46**	**3**	Sg	Sg	**03 54 15.0**	**-0.5**
PRU	**Pruhonice**	**3.57**	**25**	*e*SG	Sg	**03 54 17.1**	**-1.9**
	comp=Z,3.4nm,0.6s						
PRU	**Pruhonice**	**3.57**	**25**	Sg	Sg	**03 54 17.1**	**-1.9**
	comp=Z,3.4nm,0.6s						

*MAN **12** 04:05:49, 13°.59N×125°.50E, h28km, mb4.8, ML3.7, MS3.8*
*BJI **12** 04:05:50.3, 13°.62N×125°.61E, h30km, mB4.7/7, mb4.6/17, Ms4.0/12, Ms7 3.8/10*
*MOS **12** 04:05:50.5±1.0, 13°.48N×125°.46E, h33km, mb5.0/16, Error ellipse: s-maj=19.1km s-min=8.2km az=125.3*
*ISCJB **12** 04:05:52.0±0.3, 13°.44N±0°.03×125°.41E±0°.04, h49km, mb4.6/52, MS3.6/15, Error ellipse: s-maj=5.5km s-min=4.0km az=3.0*
*NEIC **12** 04:05:52.3±0.3, 13°.47N×125°.45E, h35km, mb4.6/8, Error ellipse: s-maj=11.2km s-min=5.0km az=66.0*
*IDC **12** 04:05:54.1±0.5, 13°.50N×125°.43E, h49km±4km, mb4.2/16, mb1 4.2/18, mb1mx4.2/23, mbtmp4.2/18, MS3.6/12, Ms1 3.6/12, ms1mx3.4/26, Error ellipse: s-maj=18.9km s-min=10.1km az=70.0*

**ISC 12 04:05:54.1±0.3, 13°.42N±0°.03×125°.37E±0°.04, h51km, h51km±1.5km: pP-P, n115

QIZ					LR		LR		
	comp=Z,400nm,15.4s								
KAPI	**Kappang**	**19.15**	**197**	*eP*		**Pn**		**04 10 14.9**	**+0.4**
	comp=Z,96nm,1.4s								
KAPI	**Kappang**	**19.15**	**197**	P		**Pn**		**04 10 13.0**	**-1.6**
	comp=Z,1.3nm,0.3s,baz=156,slow=10.0,SNR=4.9								
NJ2	**Nanjing**	**19.48**	**343**	*eP*		**Pn**		**04 10 14.3**	**-4.1**
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
NJ2				LR		LR			
	comp=N,110nm,11.2s								
NJ2				LR		LR			
	comp=E,90nm,12.4s								
WHN	**Wuhan**	**19.84**	**331**	P		**Pn**		**04 10 21.5**	**-1.2**
WHN				S		**S**		**04 14 01.1**	**-0.3**
WHN				pmax		pmax			
	comp=Z,38nm,1.1s								
WHN				LR		LR			
	comp=N,510nm,16.7s								
WHN				LR		LR			
	comp=E,500nm,21.4s								
WHN				LR		LR			
	comp=Z,640nm,20.0s								
CBIJ	**Chichi jima**	**20.80**	**47**	P		**P**		**04 10 29.4**	**-1.8**
	comp=Z,43nm,0.7s,baz=209,slow=10,SNR=4.6								
CBIJ				LR		LR		04 16 36.9	
	comp=Z,88nm,20.7s,MS3.1,baz=68,slow=31								
JHJ	**Hachijo jima 2**	**23.61**	**31**	LR		LR		04 18 05.2	
	comp=Z,75nm,20.9s,MS3.1,baz=247,slow=31								
KSRS	**Korea Array**	**24.04**	**5**	P		**P**		**04 11 03.5**	**-0.8**
	comp=Z,19nm,0.8s,mb4.6,baz=183,slow=11,SNR=66								
KSRS				LR		LR		04 19 48.1	
	comp=Z,110nm,19.2s,MS3.4,baz=32,slow=35								
XAN	**Xi'an**	**25.38**	**327**	P		**P**		**04 11 16.2**	**-0.4**
XAN				S		**S**		**04 15 46.5**	**+6.9**
XAN				pmax		pmax			
	comp=Z,9.0nm,0.9s,mb4.3								
XAN				LR		LR			
	comp=N,120nm,16.4s,MS3.6								
XAN				LR		LR			
	comp=E,31nm,13.0s,MS3.6								
XAN				LR		LR			
	comp=Z,72nm,15.3s,MS3.3								
CMAR	**Chiang Mai Arr**	**25.88**	**285**	P		**P**		**04 11 21.8**	**+0.5**
	comp=Z,1.5nm,0.6s,mb3.7,baz=101,slow=8.3,SNR=8.7								
CMAR				PcP		PcP		04 14 51.0	+1.4
	comp=Z,1.3nm,0.6s,baz=107,slow=0.9,SNR=4.7								
CMAR				LR		LR		04 21 21.4	
	comp=Z,103nm,18.8s,MS3.4,baz=112,slow=36								
CMAR	**Chiang Mai Arr**	**25.88**	**285**	P		**P**		**04 11 21.8**	**+0.5**
CMAR								04 14 51.0	
KAKA	**Kakadu**	**26.90**	**165**	*eP*		**P**		**04 11 28.9**	**-1.5**
	comp=Z,47nm,0.6s,mb5.2								
KAKA	**Kakadu**	**26.90**	**165**	*eP*		**P**		**04 11 29.0**	**-1.4**
	comp=Z,129nm,0.6s,mb5.6								
LZH	**Lanzhou**	**29.72**	**323**	*eP*		**P**		**04 11 57.0**	**+1.6**
LZH				pP		pP		04 12 03.0	-5.6
LZH				sP		sP		04 12 05.1	-10
LZH				pmax		pmax			
	comp=Z,18nm,1.3s,mb4.6								
FITZ	**Fitzroy Crossi**	**31.33**	**179**	*eP*		**P**		**04 12 08.2**	**-1.5**
	comp=Z,32nm,0.9s,mb5.2								
FITZ	**Fitzroy Crossi**	**31.33**	**179**	*eP*		**P**		**04 12 08.6**	**-1.1**
	comp=Z,21nm,0.9s,mb5.0								
ASAJ	**Asahikawa**	**33.96**	**22**	LR		LR		04 25 55.0	
	comp=Z,68nm,19.9s,MS3.4,baz=183,slow=36								
GTA	**Gaotai**	**34.31**	**324**	*eP*		**P**		**04 12 40.1**	**+4.4**
GTA				pP		pP		04 12 44.5	-4.5
GTA				sP		sP		04 12 47.7	-7.4
GTA				pmax		pmax			
	comp=Z,3.0nm,1.1s,mb4.1								
KLR	**Kul'dur**	**36.09**	**7**	*eP*		**P**		**04 12 45.8**	**-5.0**
ULN	**Ulaanbaatar**	**37.57**	**340**	*eP*		**P**		**04 13 03.7**	**+0.3**
	comp=Z,31nm,1.3s,mb4.9								
ULN	**Ulaanbaatar**	**37.57**	**340**	*eP*		**P**		**04 13 03.7**	**+0.2**
ULN				pmax		pmax			
	comp=Z,31nm,1.3s,mb4.9								
TAPN	**Taplejung**	**37.76**	**297**	*eP*		**P**		**04 13 06.7**	**+1.4**
	comp=Z,32nm,1.0s,mb5.0								
SONM	**Songino Array**	**37.77**	**339**	P		**P**		**04 13 05.0**	**-0.1**
	comp=Z,12nm,1.0s,mb4.6,baz=152,slow=9.1,SNR=40								
SONM				pP		pP		04 13 17.3	-1.3
	comp=Z,7.9nm,0.8s,baz=160,slow=8.9,SNR=8.0								
SONM				LR		LR		04 28 55.4	
	comp=Z,66nm,19.2s,MS3.5,baz=132,slow=37								
SONM	**Songino Array**	**37.77**	**339**	P		**P**		**04 13 05.0**	**-0.1**
SONM				*PP		pP		04 13 17.3	-1.3
ASAR	**Alice Springs**	**37.80**	**167**	P		**P**		**04 13 05.1**	**-0.5**
	comp=Z,8.2nm,0.7s,mb4.6,baz=347,slow=6.6,SNR=111								
ASAR				S		**S**		**04 18 55.8**	**+2.9**
	comp=Z,1.7nm,0.8s,baz=336,slow=11,SNR=11								
ODAN	**Odare**	**37.92**	**297**	*eP*		**P**		**04 13 08.5**	**+1.8**
	comp=Z,31nm,0.7s,mb5.1								
RAMN	**Ramite**	**38.63**	**296**	*eP*		**P**		**04 13 14.4**	**+1.7**
	comp=Z,41nm,0.7s,mb5.3								
CTA	**Charters Tower**	**39.13**	**148**	*eP*		**P**		**04 13 17.4**	**+0.5**
	comp=Z,12nm,0.8s,mb4.7								
CTAO	**Charters Tower**	**39.13**	**148**	*eP*		**P**		**04 13 17.2**	**+0.4**
	comp=Z,18nm,0.8s,mb4.8								
CTAO	**Charters Tower**	**39.13**	**148**	*eP*		**P**		**04 13 17.3**	**+0.4**
CTAO				pmax		pmax			
	comp=Z,18nm,0.8s,mb4.8								
JIRN	**Jiri**	**39.14**	**297**	*eP*		**P**		**04 13 18.5**	**+1.6**
	comp=Z,25nm,0.5s,mb5.2								
GUN	**Gumba**	**39.47**	**298**	*eP*		**P**		**04 13 21.1**	**+1.4**
	comp=Z,52nm,0.8s,mb5.3								
PKIN	**Phulchoki**	**39.81**	**297**	*eP*		**P**		**04 13 24.7**	**+2.2**
	comp=Z,10nm,0.6s,mb4.7								
KKN	**Kakani**	**39.96**	**297**	*eP*		**P**		**04 13 26.6**	**+2.9**
GKN	**Gorkha**	**40.56**	**297**	*eP*		**P**		**04 13 31.6**	**+2.9**
	comp=Z,23nm,0.7s,mb4.9								
ZAK	**Zakamensk**	**41.02**	**338**	*eP*		**P**		**04 13 29.0**	**-3.2**
KOLN	**Koldanda**	**41.41**	**297**	*eP*		**P**		**04 13 39.2**	**+3.5**
	comp=Z,18nm,0.7s,mb4.8								
TLY	**Talaya**	**41.98**	**340**	*eP*		**P**		**04 13 39.3**	**-0.7**
TLY				*e*				04 23 37.6	
TLY				pmax		pmax			
	comp=Z,6.0nm,1.1s,mb4.1								
FORT	**Forrest**	**44.02**	**177**	⇓*iP*		**P**		**04 13 56.4**	**-0.3**
	comp=Z,35nm,0.5s,mb5.3								
FORT	**Forrest**	**44.02**	**177**	*eP*		**P**		**04 13 56.2**	**-0.5**
	comp=Z,36nm,0.6s,mb5.3								
KLBR	**Kellerberrin**	**45.35**	**189**	*eP*		**P**		**04 14 05.5**	**-1.8**
	comp=Z,38nm,1.6s,mb5.0								
EIDS	**Eidsvold**	**45.99**	**147**	*eP*		**P**		**04 14 12.3**	**-0.2**
	comp=Z,41nm,0.9s,mb5.4								
STKA	**Stephens Creek**	**47.65**	**161**	P		**P**		**04 14 25.4**	**+0.1**
	comp=Z,20nm,0.9s,mb5.2,baz=332,slow=8.9,SNR=21								
MK31	**Makanchi Array**	**49.01**	**322**	P		**P**		**04 14 35.9**	**+0.2**
MK31				pmax		pmax			
	comp=Z,6.0nm,0.6s,mb4.8								
MKAR	**Makanchi Array**	**49.01**	**322**	P		**P**		**04 14 36.1**	**+0.5**
	comp=Z,2.4nm,0.5s,mb4.5,baz=114,slow=9.1,SNR=26								
MKAR				pP		pP		04 14 49.0	-0.5
	comp=Z,5.1nm,0.7s,baz=118,slow=8.5,SNR=10								
MKAR				LR		LR		04 36 38.0	
	comp=Z,79nm,19.1s,MS3.7,baz=165,slow=38								
MKAR	**Makanchi Array**	**49.01**	**322**	P		**P**		**04 14 36.1**	**+0.4**
MKAR				*PP		pP		04 14 49.1	-0.4
ARMA	**Armidale**	**50.39**	**150**	*eP*		**P**		**04 14 46.9**	**+0.6**
KSH	**Kashi**	**50.50**	**310**	*eP*		**P**		**04 14 53.2**	**+6.1**
KSH				*e*PcP		PcP		04 16 11.2	+6.6
KSH				*e*PP		PP		04 16 50.0	+6.8
KSH				*e*ScP		ScP		04 20 00.1	+3.6
KSH				*e*PcS		PcS		04 20 06.6	+4.7
KSH				*e*S		**S**		**04 22 00.5**	**+3.0**
KSH				*e*ScS		ScS		04 24 35.1	+1.3
KSH				*e*SS		SS		04 25 32.2	+0.2
KSH				pmax		pmax			
	comp=Z,5.0nm,0.5s,mb4.8								
KSH				pmax		pmax			
	comp=Z,67nm,3.9s								
KSH				LR		LR			
	comp=N,200nm,11.8s								
KSH				LR		LR			
	comp=E,100nm,7.0s								
KSH				LR		LR			
	comp=Z,98nm,7.8s								
ZAA0	**Zalesovo Array**	**51.45**	**331**	*eP*		**P**		**04 14 53.7**	**-0.3**
ZALV	**Zalesovo Beam**	**51.45**	**331**	P		**P**		**04 14 53.5**	**-0.6**
	comp=Z,3.0nm,0.7s,mb4.3,baz=111,slow=9.4,SNR=9.1								
ZALV				pP		pP		04 15 07.3	-0.6
	comp=Z,5.8nm,0.7s,baz=117,slow=7.8,SNR=7.6								
ZALV				LR		LR		04 37 16.3	
	comp=Z,52nm,19.7s,MS3.6,baz=250,slow=37								
ZALV	**Zalesovo Beam**	**51.45**	**331**	P		**P**		**04 14 53.5**	**-0.6**
ZALV				*PP		pP		04 15 07.4	-0.6
TKM2	**Tokmak 2**	**51.82**	**314**	*eP*		**P**		**04 14 57.9**	**+0.9**
	comp=Z,2.8nm,0.6s,mb4.4								
TKM2	**Tokmak 2**	**51.82**	**314**	*eP*		**P**		**04 14 57.9**	**+0.9**
TKM2				pmax		pmax			
	comp=Z,3.0nm,0.6s,mb4.4								
UCH	**Uchtor**	**52.36**	**313**	*eP*		**P**		**04 15 02.2**	**+1.2**
	comp=Z,7.6nm,0.9s,mb4.6								
UCH	**Uchtor**	**52.36**	**313**	*eP*		**P**		**04 15 02.2**	**+1.2**
UCH				pmax		pmax			
	comp=Z,8.0nm,0.9s,mb4.7								
AAK	**Ala-Archa**	**52.49**	**314**	LR		LR		04 39 09.4	
	comp=Z,93nm,20.9s,MS3.8,baz=330,slow=38								
KURK	**Kurchatov**	**52.99**	**325**	P		**P**		**04 15 05.7**	**+0.2**
KURK				pP		pP		04 15 19.7	+0.2
KURK				LR		LR		04 37 58.1	
KURK	**Kurchatov**	**52.99**	**325**	P		**P**		**04 15 05.7**	**+0.2**
	comp=Z,12nm,0.7s,mb4.9,baz=127,slow=7.3,SNR=44								
KURK				pP		pP		04 15 19.7	+0.2
	comp=Z,17nm,0.7s,baz=128,slow=7.3,SNR=15								
KURK				LR		LR		04 37 58.1	
	comp=Z,54nm,19.2s,MS3.6,baz=165,slow=36								
KURK	**Kurchatov**	**52.99**	**325**	*c iP*		**P**		**04 15 05.9**	**+0.4**
KURK				pmax		pmax			
	comp=Z,18nm,0.8s,mb5.0								
KURK				MLR		MLR			
	comp=Z,52nm,15.0s,MS3.7								
EKS2	**Erkin-Say**	**53.01**	**314**	*eP*		**P**		**04 15 10.0**	**+4.2**
	comp=Z,2.4nm,0.9s,mb4.1								
EKS2	**Erkin-Say**	**53.01**	**314**	*eP*		**P**		**04 15 10.0**	**+4.2**
EKS2				pmax		pmax			
	comp=Z,2.0nm,0.9s,mb4.0								
CNB	**Canberra Magne**	**53.54**	**156**	*eP*		**P**		**04 15 10.9**	**+1.2**
DZM	**Mont Dzumac**	**53.55**	**131**	*eP*		**P**		**04 15 10.6**	**+0.6**
	comp=Z,6.8nm,0.9s,mb4.6								
KK31	**Karatay Array**	**55.44**	**313**	P		**P**		**04 15 24.9**	**+1.4**
KK31				pmax		pmax			
	comp=Z,5.0nm,0.7s,mb4.7								
VOSK	**Vostochnaya**	**58.15**	**324**	P		**P**		**04 15 43.8**	**+1.3**
VOSK				pmax		pmax			
	comp=Z,7.0nm,0.6s,mb4.9								
TIXI	**Tiksi**	**58.23**	**1**	*eP*		**P**		**04 15 41.8**	**-1.0**
TIXI				pmax		pmax			
	comp=Z,6.0nm,0.9s,mb4.6								
BVA0	**Borovoye Array**	**58.59**	**325**	*i* P		**P**		**04 15 46.6**	**+1.0**
BVA0				pmax		pmax			
	comp=Z,1.0nm,0.5s,mb4.1								
BVAR	**Borovoye Array**	**58.59**	**325**	P		**P**		**04 15 45.6**	**0.0**
	comp=Z,4.9nm,0.7s,mb4.6,baz=116,slow=8.9,SNR=16								
BVAR				pP		pP		04 15 59.9	+0.1
	comp=Z,6.4nm,0.6s,baz=137,slow=8.3,SNR=12								
BRVK	**Borovoye**	**58.66**	**325**	*eP*		**P**		**04 15 46.9**	**+0.8**
	comp=Z,14nm,0.7s,mb5.1								
BRVK				*e*		pP		04 16 00.4	+0.2
BRVK	**Borovoye**	**58.66**	**325**	⇓*eP*		**P**		**04 15 46.8**	**+0.7**
BRVK				pmax		pmax			
	comp=Z,12nm,0.8s,mb5.0								
BRVK				MLR		MLR			
	comp=Z,36nm,16.0s,MS3.6								
ZRNK	**Zerenda**	**59.35**	**324**	P		**P**		**04 15 50.6**	**-0.2**
ZRNK				pmax		pmax			
	comp=Z,8.0nm,0.6s,mb4.9								
ABKAR	**Akbulak array**	**63.93**	**318**	*eP*		**P**		**04 16 21.4**	**-0.4**
	comp=Z,2.0nm,0.6s,mb4.3								
ARU	**Arti**	**66.13**	**326**	*d iP*		**P**		**04 16 35.5**	**-0.4**
ARU				*e**PP		pP		04 16 48.1	-2.2
ARU				S		S		04 25 16.4	-4.1
ARU				pmax		pmax			
	comp=Z,3.0nm,0.6s,mb4.5								
KDAK	**Kodiak Island**	**74.52**	**33**	*ceP*		**P**		**04 17 27.6**	**+0.4**
ZEI	**Tsey**	**74.79**	**311**	*eP*		**P**		**04 17 31.9**	**+2.9**
ZEI				pmax		pmax			
	comp=Z,5.0nm,0.4s,mb4.8								
BPAW	**Bear Paw Mtn.**	**75.26**	**27**	*eP*		**P**		**04 17 31.7**	**+0.4**
	comp=Z,5.9nm,0.9s,mb4.5								
KLMR	**Klimovskoe**	**76.37**	**330**	*eP*		**P**		**04 17 39.0**	**+1.3**
KLMR				pmax		pmax			
	comp=Z,27nm,2.8s,mb4.7								
ILAR	**Eielson Array**	**77.01**	**26**	P		**P**		**04 17 40.0**	**-1.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=267,slow=4.4,SNR=8.3								
ILAR				pP		pP		04 17 55.1	-0.8
	comp=Z,0.8nm,0.8s,baz=264,slow=5.3,SNR=5.7								
OBN	**Obninsk**	**78.43**	**324**	⇓*eP*		**P**		**04 17 51.9**	**+2.6**
OBN				*e*S		S		04 27 42.7	+1.4
OBN				pmax		pmax			
	comp=Z,15nm,1.2s,mb4.8								
OBN				MLR		MLR			
	comp=Z,100nm,18.0s,MS4.2								
CASY	**Casey**	**80.24**	**186**	*eP*		**P**		**04 17 58.4**	**-0.4**
ARCES	**ARCESS Array B**	**80.95**	**339**	P		**P**		**04 18 02.2**	**-0.5**
	comp=Z,2.3nm,0.8s,mb4.2,baz=82,slow=6.6,SNR=6.0								
ARCES				pP		pP		04 18 17.3	-0.2
	comp=Z,2.2nm,0.8s,baz=79,slow=6.3,SNR=2.7								
BRTR	**Keskin Array B**	**82.86**	**309**	P		**P**		**04 18 13.9**	**+0.5**
	comp=Z,0.6nm,0.9s,mb3.6,baz=64,slow=6.6,SNR=5.0								
AKASG	**Malin Array Be**	**83.58**	**320**	P		**P**		**04 18 17.9**	**+1.1**
	comp=Z,0.2nm,0.3s,mb3.7,baz=61,slow=4.9,SNR=3.4								
PPT	**Papeete**	**89.39**	**108**	LR		LR		04 55 43.8	
	comp=Z,134nm,18.3s,MS4.4,baz=327,slow=34								
NOA	**NORSAR Array B**	**89.56**	**334**	P		**P**		**04 18 47.0**	**+1.2**
	comp=Z,0.8nm,0.8s,mb4.1,baz=62,slow=4.5,SNR=3.8								
NOA				LR		LR		05 01 36.4	
	comp=Z,47nm,18.1s,MS4.0,baz=65,slow=37								
MAW	**Mawson**	**92.34**	**200**	*eP*		**P**		**04 18 57.9**	**-0.5**
	comp=Z,1.7nm,0.6s,mb4.5								
MAW	**Mawson**	**92.34**	**200**	P		**P**		**04 18 58.2**	**-0.3**
	comp=Z,3.5nm,0.9s,mb4.7,baz=68,slow=5.8,SNR=9.6								
TXAR	**Lajitas Array**	**116.40**	**47**	PKP		PKPdf		04 24 33.4	+0.7
	comp=Z,0.4nm,0.8s,baz=129,slow=3.4,SNR=4.2								
TXAR				pPKP		pPKPdf		04 24 47.3	-0.9
	comp=Z,0.2nm,0.6s,baz=269,slow=28,SNR=3.6								
TORD	**Torodi Ar. Bea**	**118.25**	**293**	PKP		PKPdf		04 24 36.3	-0.3
	comp=Z,0.4nm,0.6s,baz=69,slow=2.7,SNR=8.9								
TORD				pPKP		pPKPdf		04 24 50.5	-1.6
	comp=Z,1.1nm,0.8s,baz=62,slow=2.1,SNR=6.6								
PLCA	**Paso Flores**	**149.43**	**156**	PKPbc		PKPbc		04 25 38.6	+0.8
	comp=Z,3.4nm,0.8s,baz=210,slow=4.6,SNR=5.4								
PLCA				pPKPbc		pPKPbc		04 25 53.9	+0.6
	comp=Z,3.1nm,0.8s,baz=219,slow=6.5,SNR=3.1								
LPAZ	**La Paz**	**166.65**	**104**	PKPab		PKPab		04 26 59.5	+2.0
	comp=Z,1.1nm,1.0s,baz=270,slow=4.0,SNR=2.8								

JMA 12 04:24:23.3±0.3, 32°03N×139°52E, h252km±3km, M3.6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.11**	**13**	P	Pn	04 24 59.5	+0.4
BSO3	**Boso 3**	**2.89**	**16**	P	Pn	04 25 14.8	+0.2
BSO3				*e*S	S	04 25 55.0	-0.3
BSO1	**Boso 1**	**2.89**	**25**	P	Pn	04 25 14.9	+0.3
BSO1				*e*S	S	04 25 55.0	-0.3
JOD2	**Odawara 2**	**3.25**	**354**	P	Pn	04 25 19.9	+1.4
JOD2				*e*S	S	04 26 02.6	+0.3
JEG	**Eigenji**	**4.05**	**321**	P	Pn	04 25 28.6	+0.9
JGM	**Miyama**	**4.34**	**328**	P	Pn	04 25 32.1	+1.0
JAG	**Ashikaga**	**4.38**	**359**	P	Pn	04 25 31.3	-0.3
JAG				*e*S	S	04 26 22.1	-3.9
JFM	**Mihama**	**4.57**	**321**	P	Pn	04 25 34.5	+0.7
JHO	**Hitachi**	**4.65**	**10**	P	Pn	04 25 34.4	-0.4
JHO				*e*S	S	04 26 27.9	-3.9
JWT	**Wachi**	**4.72**	**314**	P	Pn	04 25 36.1	+0.4
CBIJ	**Chichi jima**	**5.44**	**154**	P	Pn	04 25 39.9	-4.7
CBIJ				*e*S	S	04 26 40.7	-8.7

IDC 12 04:38:59.2±6.3, 2°42N×95°07E, h0km, mb3.8/2, mb1 3.8/4, mb1mx3.4/24, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=128.5km s-min=40.9km az=24.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**3.87**	**84**	Pn	Pn	04 40 00.0	0.0
	2.2nm,0.3s,baz=260,slow=12,SNR=6.8						
CMAR	**Chiang Mai Arr**	**16.39**	**13**	Pn	Pn	04 42 50.7	-0.1
	0.1nm,0.3s,baz=203,slow=11,SNR=8.1						
MKAR	**Makanchi Array**	**45.58**	**348**	P	P	04 47 21.1	+0.2
	0.4nm,0.4s,baz=163,slow=8.6,SNR=6.7						
ZALV	**Zalesovo Beam**	**52.05**	**352**	P	P	04 48 10.3	-0.2
	1.0nm,0.5s,baz=186,slow=6.5,SNR=6.0						

*NEIC **12** 04:41:58.7, 36°.95S×177°.59E, h178km, MG3.7(WEL),*
After WEL.

WEL 12 04:41:58.2±0.8, 36°.89S×177°.50E, h175km±4km, ML3.7/10, Error ellipse: s-maj=8.1km s-min=7.3km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**1.41**	**193**	PN	Pn	04 42 28.8	0.0
URZ				SN	Sn	04 42 52.4	-0.2
URZ	**Urewera**	**1.41**	**193**	*e*Pn	Pn	04 42 28.6	-0.3
URZ				*e*S	Sn	04 42 53.9	+1.3
MWZ	**Matawai**	**1.45**	**179**	PN	Pn	04 42 29.1	-0.1
MWZ				SN	Sn	04 42 53.5	+0.2
MWZ	**Matawai**	**1.45**	**179**	P	Pn	04 42 29.1	-0.1
MWZ				S	Sn	04 42 53.5	+0.2
RAHZ	**Arahi**	**2.06**	**189**	PN	Pn	04 42 36.1	+0.6
RAHZ				SN	Sn	04 43 05.2	+0.7
KNZ	**Kokohu**	**2.14**	**176**	PN	Pn	04 42 36.5	+0.1
KNZ	**Kokohu**	**2.14**	**176**	P	Pn	04 42 36.5	+0.1
NMHZ	**Naumai**	**2.28**	**194**	PN	Pn	04 42 38.9	+1.0
MHGZ	**Mahia Peninsul**	**2.29**	**172**	PN	Pn	04 42 38.4	+0.3
MCHZ	**McNeill Hill**	**2.63**	**194**	PN	Pn	04 42 42.8	+0.7
OTVZ	**Oturere**	**2.70**	**212**	PN	Pn	04 42 43.8	+0.9
CKHZ	**Cape Kidnapper**	**2.79**	**187**	PN	Pn	04 42 43.9	-0.1
FWVZ	**Far West T-bar**	**2.82**	**212**	PN	Pn	04 42 44.9	+0.5
FWVZ	**Far West T-bar**	**2.82**	**212**	P	Pn	04 42 44.9	+0.5
BHHZ	**Black Hill Sta**	**2.84**	**203**	PN	Pn	04 42 44.3	-0.3
KAHZ	**Kahuranaki**	**2.95**	**189**	PN	Pn	04 42 45.8	-0.1
PXZ	**Pawanui**	**3.18**	**189**	PN	Pn	04 42 48.2	-0.6
PNHZ	**Pukenui**	**3.19**	**198**	PN	Pn	04 42 48.1	-0.9
PRHZ	**Porangahau**	**3.44**	**191**	PN	Pn	04 42 51.0	-1.1
WAZ	**Wanganui**	**3.48**	**214**	PN	Pn	04 42 52.3	-0.2
WAZ	**Wanganui**	**3.48**	**214**	P	Pn	04 42 52.3	-0.2
DVHZ	**Dannevirke**	**3.57**	**197**	PN	Pn	04 42 52.1	-1.5
POWZ	**Post Office Ro**	**3.76**	**201**	PN	Pn	04 42 54.9	-1.1
POWZ	**Post Office Ro**	**3.76**	**201**	P	Pn	04 42 54.9	-1.1
MRZ	**Mangatainoka R**	**4.06**	**201**	PN	Pn	04 42 57.7	-2.1
MRZ	**Mangatainoka R**	**4.06**	**201**	P	Pn	04 42 57.7	-2.1
TIWZ	**Tintock**	**4.09**	**198**	PN	Pn	04 42 58.5	-1.6
HOWZ	**Holdsworth Sta**	**4.30**	**201**	PN	Pn	04 43 00.5	-2.3
OGWZ	**Otaki Gorge**	**4.33**	**204**	PN	Pn	04 43 01.1	-2.2
OGWZ	**Otaki Gorge**	**4.33**	**204**	P	Pn	04 43 01.1	-2.2
KIW	**Kapiti Island**	**4.46**	**206**	PN	Pn	04 43 02.6	-2.3
KIW	**Kapiti Island**	**4.46**	**206**	P	Pn	04 43 02.6	-2.3
MTW	**Mount Morrison**	**4.54**	**199**	PN	Pn	04 43 03.2	-2.8
MTW	**Mount Morrison**	**4.54**	**199**	P	Pn	04 43 03.2	-2.8
CAW	**Cannon Point**	**4.62**	**203**	PN	Pn	04 43 04.2	-2.9
CAW	**Cannon Point**	**4.62**	**203**	P	Pn	04 43 04.2	-2.9
TRWZ	**Traveller**	**4.72**	**197**	PN	Pn	04 43 05.9	-2.5
PLWZ	**Palliser**	**4.99**	**200**	PN	Pn	04 43 08.8	-3.1
TUWZ	**Tuamarina**	**5.32**	**210**	PN	Pn	04 43 13.2	-2.9
THZ	**Tophouse**	**6.04**	**215**	PN	Pn	04 43 23.7	-1.8
THZ	**Tophouse**	**6.04**	**215**	P	Pn	04 43 23.7	-1.8
KHZ	**Kahutara**	**6.31**	**208**	PN	Pn	04 43 26.2	-2.9
KHZ	**Kahutara**	**6.31**	**208**	P	Pn	04 43 26.2	-2.9

*SZGRF **12** 05:25:20.8, 35°.79N×72°.67E, h33km, mb5.4, Pakistan*
*MOS **12** 05:25:28.4±1.1, 36°.51N×71°.47E, h33km, mb5.4/64, MS4.1/13, Error ellipse: s-maj=7.2km s-min=3.5km az=130.3*
*TEH **12** 05:25:33.0, 36°.69N×71°.49E, h33km*
*ISCJB **12** 05:25:34.3±0.1, 36°.43N±0°.02×71°.49E±0°.02, h93km, mb4.9/177, Error ellipse: s-maj=2.5km s-min=1.9km az=30.5*
*IDC **12** 05:25:35.9±0.4, 36°.52N×71°.41E, h93km±3km, mb4.3/25, mb1 4.4/

TKM2 **Tokmak 2** 7.22 25 ⇑P Pn 05 27 19.0 +0.1
comp=N,122nm,0.8s
TKM2 **Tokmak 2** 7.22 25 P Pn 05 27 19.2 +0.3
SNR=124
TKM2 **Tokmak 2** 7.22 25 *e*Pn Pn 05 27 19.1 +0.2
comp=N,208nm,1.1s
TKM2 *e*Sn **Sn** 05 28 40.3 +1.0
TKM2 **Tokmak 2** 7.22 25 *e*PN Pn 05 27 19.1 +0.2
TKM2 *e* 05 28 40.3
TKM2 pmax pmax
comp=Z,208nm,1.1s
QUE **Quetta** 7.28 213 *e*P Pn 05 27 20.0 +0.2
QUE *e*S **Sn** 05 28 41.0 +0.1
DDI **Dehra Dun** 8.18 136 *ex* Pn 05 27 27.3 -4.7
DDI *e*S **Sn** 05 29 01.0 -1.8
JOSI **Joshimath** 8.91 129 *e*PKP Pn 05 27 43.0 +1.1
JOSI *e*S **Sn** 05 29 15.2 -5.4
JOSI AML AML 05 29 28.2
comp=E,2µm,0.7s
JOSI AML AML 05 29 29.1
comp=N,2µm,0.8s
KHET **Khetri** 9.08 155 *e*PKP Pn 05 27 43.0 -1.2
KHET *e*S **Sn** 05 29 19.3 -5.4
NDI **New Delhi** 9.09 146 *e*PKP Pn 05 27 44.6 +0.1
NDI *ex* x 05 29 24.0
IMYA **Miami** 9.19 273 *e*Pn Pn 05 27 41.1 -4.6
IMYA *e* 05 29 22.3
comp=Z,14µm,0.4s
KUDL **Kundal** 9.26 151 *ex* Pn 05 27 43.7 -3.0
KUDL *e*S **Sn** 05 29 22.8 -6.4
BISR **Bishrakh** 9.29 146 *e*PKP Pn 05 27 47.1 +0.1
BISR *e*S **Sn** 05 29 25.3 -4.5
SONA **Sohna** 9.41 148 *e*PKP Pn 05 27 47.5 -1.2
SONA *e*S **Sn** 05 29 27.9 -4.9
ISRO **Mashad** 9.70 273⇑ *e*Pn Pn 05 27 47.7 -4.9
ISRO *e*Sg **Sn** 05 29 24.3 -15
ISRO *e* 05 29 31.1
comp=Z,12µm,0.5s
MHI **Mashad** 9.70 273 *e*Pn Pn 05 27 48.2 -4.4
IMOG **Moghan** 9.82 272 *e*Pn Pn 05 27 49.0 -5.3
PTH **Pithoragarh** 10.02 131 *e*PKP Pn 05 27 56.0 -1.0
PTH *e*S **Sn** 05 29 40.6 -7.0
IPAY **Payeh** 10.07 274⇑ *e*Pn Pn 05 27 52.6 -5.1
IPAY *e* 05 27 54.0
comp=Z,8µm,0.4s
IAKL **Akhelmad** 10.26 275⇓ *e*Pn Pn 05 27 55.3 -4.9
IAKL *e* 05 29 48.4
comp=Z,12µm,0.3s
AJM **Ajmer** 10.26 164 *e*PKP Pn 05 27 60.0 -0.4
AJM *e*S **Sn** 05 29 46.9 -6.6
AJM AML AML 05 31 14.4
comp=E,380nm,1.0s
AJM AML AML 05 31 14.6
comp=N,135nm,0.9s
IDAH **Dahanechah** 10.26 252 *e*P Pn 05 27 58.5 -1.8
IEMG **Emamgholi** 10.34 279 *e*Pn Pn 05 27 55.4 -5.8
VAN **Vannovskaya** 10.79 282 P Pn 05 28 00.0 -7.5
ISFR **Sfrayin** 10.85 277 *e*Pn Pn 05 28 02.8 -5.5
ISFR *e* 05 30 17.1
comp=Z,6µm,0.5s
IKOO **Kooshah** 11.06 253 *e*P Pn 05 28 08.8 -2.3
ISHV **Shirvan** 11.09 280 *e*Pn Pn 05 28 05.9 -5.7
ISHV *e* 05 30 10.5
comp=Z,19µm,0.5s
MK31 **Makanchi Array** 13.13 35 ⇓P Pn 05 28 37.9 -0.7
comp=Z,0.6nm,0.3s,baz=221,slow=11,SNR=9.2
MK31 **Makanchi Array** 13.13 35 *e*Pn Pn 05 28 36.7 -1.9
MK31 **Makanchi Array** 13.13 35 *i* P Pn 05 28 38.0 -0.6
MK31 pmax pmax
comp=Z,20nm,0.8s
MKAR **Makanchi Array** 13.13 35 P Pn 05 28 36.5 -2.1
comp=Z,0.4nm,0.3s,baz=218,slow=12,SNR=43
MKAR **Makanchi Array** 13.13 35 *i* P Pn 05 28 37.0 -1.6
MKAR pmax pmax
comp=Z,5.0nm,0.7s
KOLN **Koldanda** 13.39 127 *e*P Pn 05 28 39.5 -2.7
comp=Z,89nm,0.3s
GKN **Gorkha** 13.92 123 *e*P Pn 05 28 46.4 -2.7
comp=Z,136nm,0.4s
IBAF **Bafgh** 14.06 255 *e*P Pn 05 28 49.7 -1.2
BHPL **Bhopal** 14.10 157 *e*PKP Pn 05 28 52.0 +0.6
IGLO **Ghaloghah** 14.22 276 *e*P Pn 05 28 50.5 -2.5
IANJ **Anjilo** 14.28 271 *e*P Pn 05 28 50.5 -3.2
IKIA **Kiasar** 14.37 274 *e*P Pn 05 28 52.9 -1.9
WMQ **Urumqi** 14.42 54 P Pn 05 28 56.5 +1.1
WMQ pP 05 29 10.0
WMQ sP 05 29 24.4
WMQ S **Sn** 05 31 34.0 -0.1
WMQ SS 05 31 54.0
WMQ PcP PcP 05 34 07.0 +2.8
WMQ pmax pmax
comp=Z,29nm,0.8s
WMQ pmax pmax
comp=Z,170nm,4.2s
WMQ LR LR
comp=N,880nm,9.0s
WMQ LR LR
comp=E,590nm,8.0s
WMQ LR LR
comp=Z,530nm,8.0s
DMN **Daman** 14.49 123 *e*P Pn 05 28 53.7 -2.8
comp=Z,106nm,0.5s
KKN **Kakani** 14.49 122 *e*P Pn 05 28 53.7 -2.8
comp=Z,69nm,0.4s
BHV **Bhavnagar** 14.62 178 *ex* Pn 05 28 56.5 -1.7
PKIN **Phulchoki** 14.71 123 *e*P Pn 05 28 56.5 -2.8
comp=Z,127nm,0.6s
ICHK **Chekchek** 14.72 259 *e*P Pn 05 28 58.6 -0.8
PKI **Pulchoki** 14.72 123 *e*P Pn 05 28 56.5 -2.9
ISHM **Shahmirzad** 14.73 273 *e*P Pn 05 28 57.0 -2.5
GUN **Gumba** 14.83 121 *e*P Pn 05 28 58.2 -2.6
comp=Z,119nm,0.4s
IMEH **Mehriz** 14.89 255 *e*P Pn 05 29 01.0 -0.5
ILAS **Lasjerd** 15.06 272 *e*P Pn 05 29 01.1 -2.6
IALA **Alasht** 15.09 274 *e*P Pn 05 29 02.5 -1.5
KURK **Kurchatov** 15.19 18 *e*Pn Pn 05 29 00.4 -4.7
KURK **Kurchatov** 15.19 18 P Pn 05 28 59.2 -5.9
comp=Z,0.2nm,0.3s,baz=213,slow=12,SNR=19
KURK **Kurchatov** 15.19 18 *e*P Pn 05 29 00.8 -4.3
KURK pmax pmax
comp=Z,7.0nm,1.0s
IFIR **Firoozkooh** 15.19 273 *e*P Pn 05 29 09.7 +4.4
JIRN **Jiri** 15.20 121 *e*P Pn 05 29 03.2 -2.3
comp=Z,132nm,0.4s
AB31 **Akbulak array** 15.35 330 ⇑P Pn 05 29 02.1 -5.1
comp=Z,16nm,0.5s,baz=130,slow=13,SNR=231
AB31 ⇓S S 05 31 42.5 -24
comp=Z,19nm,0.6s
AB31 **Akbulak array** 15.35 330 *i* P Pn 05 29 01.8 -5.4
AB31 pmax pmax
comp=Z,7.0nm,0.2s
ABKAR **Akbulak array** 15.35 330 *e*P Pn 05 29 01.8 -5.5
comp=Z,1.0nm,1.2s
IPRN **Peran** 15.45 275 *e*P Pn 05 29 06.8 -1.7
IDMV **Damavand** 15.78 273 *e*P Pn 05 29 11.3 -1.4
RAMN **Ramite** 15.93 122 *e*P Pn 05 29 12.5 -2.2
comp=Z,52nm,0.4s
IVRN **Varamin** 16.12 271 *e*P Pn 05 29 15.6 -1.4
AKL **Akola** 16.38 161 *e*PKP Pn 05 29 20.6 +0.3
TAPN **Taplejung** 16.45 119 *e*P Pn 05 29 19.3 -1.9
comp=Z,115nm,0.4s
ODAN **Odare** 16.53 121 *e*P Pn 05 29 19.9 -2.2
comp=Z,64nm,0.8s
NGP **Nagpur** 16.58 155 *i* x Pn 05 29 19.3 -3.4
NGP *ex* x 05 32 11.3
IR3 **Iran Long-Peri** 16.61 273 *e*P Pn 05 29 22.6 -0.4
BVA0 **Borovoye Array** 16.63 358 ⇓P Pn 05 29 19.2 -3.8
comp=Z,8.4nm,1.1s,baz=171,slow=13,SNR=107
BVA0 **Borovoye Array** 16.63 358 *i* P Pn 05 29 19.3 -3.8
BVAR **Borovoye Array** 16.63 358 P Pn 05 29 18.3 -4.7
comp=Z,1.7nm,0.3s,baz=168,slow=15,SNR=37
ZRNK **Zerenda** 16.63 355 ⇓P Pn 05 29 19.7 -3.4
comp=Z,19nm,0.9s
IKLH **Kolahrood** 16.64 265 *e*P Pn 05 29 23.6 +0.2
BRVK **Borovoye** 16.66 357 Pn Pn 05 29 20.6 -2.9
comp=Z,281nm,0.7s,SNR=15
BRVK **Borovoye** 16.66 357 *e*P Pn 05 29 20.0 -3.5
comp=Z,141nm,1.4s
BRVK **Borovoye** 16.66 357 *e*P Pn 05 29 19.6 -3.9
BRVK pmax pmax
comp=Z,99nm,1.7s
BANOM **Banah** 16.67 235 ⇑P Pn 05 29 24.0 +0.1
SNR=20
IPAR **Pars** 16.77 252 *e*P Pn 05 29 24.2 -0.9

ISRV **Sarvestan** 16.95 251 *e*P Pn 05 29 25.0 -2.2
AKTK **Aktyubinsk** 17.05 329 P Pn 05 29 24.9 -3.5
AKTK LR LR 05 36 55.1
AKTO **Aktyubinsk** 17.05 329 P Pn 05 29 24.9 -3.5
comp=Z,5.2nm,0.3s,baz=135,slow=14,SNR=65
AKTO LR LR 05 36 55.1
comp=Z,102nm,19.9s,baz=150,slow=40
IRAZ **Razeghan** 17.50 273 *e*P Pn 05 29 35.0 +1.1
HATD **Hatta, Dubai** 17.53 233 ⇑P Pn 05 29 35.9 +1.5
SNR=10.0
HATD ⇑P 05 29 35.9
ASHO **Ashiyiah** 17.68 233 ⇑P Pn 05 29 37.2 +1.0
SNR=85
SMDO **Samad** 17.68 225 ⇑P Pn 05 29 37.5 +1.3
SNR=6.2
NAZ **Nazwa, Dubai** 17.73 234 ⇑P Pn 05 29 37.8 +1.1
SNR=9.8
LSA **Lhasa** 17.77 106 P Pn 05 29 37.2 0.0
LSA LR LR
comp=N,320nm,32.9s
LSA LR LR
comp=E,880nm,24.3s
LSA LR LR
comp=Z,1µm,24.3s
POO **Poona** 17.94 173 *e*PKP Pn 05 29 40.1 +0.8
POO *ex* x 05 33 07.3
ARQ **Araqi** 18.37 229 ⇓P Pn 05 29 46.1 +1.7
ARQ ⇓P 05 29 46.5
SNR=10
LATR **Latur** 18.48 165 *e*PKP Pn 05 29 45.3 -0.5
LATR *ex* x 05 32 59.0
ISRB **Sarab** 19.05 281 *e*P Pn 05 29 50.9 -1.5
KAD **Karad** 19.18 172 *e*PKP Pn 05 29 54.5 +0.4
IHRS **Heris** 19.52 283 *e*P Pn 05 29 56.7 -1.2
MAK **Makhachkala** 19.55 297 *e*P Pn 05 29 52.6 -5.7
MAK *e*S **S** 05 33 29.5 -2.1
MAK pmax pmax
comp=Z,250nm,1.5s
MAK MLR MLR
comp=Z,817nm,18.0s
ZAA0 **Zalesovo Array** 19.83 24 *e*P Pn 05 29 57.8 -3.6
ZALV **Zalesovo Beam** 19.83 24 P Pn 05 29 57.0 -4.3
comp=Z,5.7nm,0.3s,baz=222,slow=10,SNR=74
ZALV **Zalesovo Beam** 19.83 24 P Pn 05 29 57.0 -4.4
ZALV pmax pmax
comp=Z,6.0nm,0.3s
HYB **Hyderabad** 19.93 160 *e*P Pn 05 30 03.0 +0.2
HYB *e*S **S** 05 33 50.0 +11
HYB **Hyderabad** 19.93 160 *i* P Pn 05 30 03.0 +0.2
HYB *e*S **S** 05 33 33.0 -6.4
NVS **Novosibirsk** 20.12 20 *e*P **P** 05 30 00.3 -1.8
NVS *e* 05 30 18.6
NVS *e*S **S** 05 33 39.2 -3.4
NVS pmax pmax
comp=Z,145nm,1.8s
NVS pmax pmax
comp=N,137nm,1.7s
NVS pmax pmax
comp=E,71nm,1.9s
NVS smax
comp=N,48nm,2.0s
NVS smax
comp=E,125nm,2.0s
IVIS **Veis** 20.15 272 *e*P **P** 05 30 03.3 +0.7
IGHG **Ghaleghazi** 20.42 272 *e*P **P** 05 30 06.5 +0.9
SHL **Shillong** 20.51 116 *e*PKP **P** 05 30 08.0 +1.4
SHL *i* x 05 33 32.0
IMRD **Marand** 20.56 284 *e*P **P** 05 30 07.8 +0.8
ISHB **Shabestar** 20.64 283 *e*P **P** 05 30 08.9 +1.0
DGRG **David-gareji** 20.90 292 P **P** 05 30 10.9 +0.3
AGT **Agartala** 21.11 121 *i* P **P** 05 30 12.0 -1.0
AGT *i* x 05 30 43.0
KBD **Kabd** 21.24 257 *e*P **P** 05 30 14.1 -0.3
KBD AMb AMB 05 30 17.7
comp=Z,212nm,0.8s,mb5.5
MIB **Mutribah** 21.25 259 *e*P **P** 05 30 14.2 -0.3
MIB AMb AMB 05 30 15.6
comp=Z,530nm,0.9s,mb5.9
GNI **Garni** 21.30 288 *e*P **P** 05 30 16.6 +1.7
comp=Z,128nm,0.9s,mb5.2
GNI **Garni** 21.30 288 P **P** 05 30 15.0 +0.1
comp=Z,85nm,0.8s,mb5.1,baz=136,slow=4.8,SNR=39
GNI LR LR 05 40 46.8
comp=Z,207nm,18.6s,baz=77,slow=43
GNI **Garni** 21.30 288 *e*P **P** 05 30 16.6 +1.7
GNI pmax pmax
comp=Z,128nm,0.9s
MTA **Mtatsminda** 21.36 292 P **P** 05 30 15.9 +0.4
VIS **Vishakhapatnam** 21.36 148 *e*PKP **P** 05 30 16.9 +1.2
VIS *ex* x 05 34 18.4
TBLG **Delisi** 21.40 293 *e*P **P** 05 30 16.5 +0.5
TBLG **Delisi** 21.40 293 P **P** 05 30 16.6 +0.6
RDF **Al-Radifah** 21.46 257 *e*P **P** 05 30 16.9 +0.1
RDF AMb AMB 05 30 18.2
comp=Z,573nm,0.9s,mb5.9
NAY **Al-Naaiem** 21.56 258 *e*P **P** 05 30 17.5 -0.4
NAY AMb AMB 05 30 21.4
comp=Z,231nm,1.0s,mb5.5
SVE **Sverdlovsk** 21.68 344⇑ *e*P **P** 05 30 17.4 -1.4
SVE *e*S **S** 05 34 13.2 +0.1
SVE pmax pmax
comp=Z,76nm,1.0s,mb5.0
SVE MLR MLR
comp=Z,417nm,10.0s
ARU **Arti** 21.84 340 *e*P **P** 05 30 18.9 -1.6
comp=Z,48nm,0.9s,mb4.8
ARU **Arti** 21.84 340 *d* iP **P** 05 30 18.7 -1.8
ARU *e* 05 30 38.3
ARU *e*PPP 05 30 49.5
ARU S **S** 05 34 16.6 +0.4
ARU SS 05 34 43.4
ARU pmax pmax
comp=Z,80nm,1.2s,mb4.9
ARU **Arti** 21.84 340 P **P** 05 30 19.4 -1.1
comp=Z,338nm,1.2s,mb5.5,SNR=9.7
GOR **Gori** 21.89 293 P **P** 05 30 22.9 +1.7
ZEI **Tsey** 22.14 295 *e*P **P** 05 30 22.0 -1.8
ZEI *e*S **S** 05 34 16.3 -5.2
ZEI pmax pmax
comp=Z,110nm,1.3s,mb5.0
BHD **Baghdad** 22.45 270 *ex* x 05 30 19.0
IMP **Imphal** 22.47 115 *e*PKP **P** 05 30 28.0 +0.6
GTA **Gaotai** 22.50 74 *e*P **P** 05 30 30.7 +3.0
GTA pP 05 30 50.9
GTA S **S** 05 34 32.1 +4.5
GTA pmax pmax
comp=Z,46nm,1.2s,mb4.7
GTA pmax pmax
comp=Z,800nm,5.6s
GTA LR LR
comp=N,350nm,14.9s
GTA LR LR
comp=E,330nm,18.1s
GTA LR LR
comp=Z,220nm,13.1s
KIV **Kislovodsk** 23.18 298 *e*P **P** 05 30 33.2 -1.1
comp=Z,144nm,1.1s,mb5.2
KIV **Kislovodsk** 23.18 298 *e*P **P** 05 30 33.4 -0.9
KIV *e*S **S** 05 34 41.7 +3.2
KIV pmax pmax
comp=Z,86nm,1.0s,mb5.0
KIV MLR MLR
comp=Z,306nm,14.0s
SOC **Sochi** 25.27 296 *d* iP **P** 05 30 52.7 -0.6
SOC *e*S **S** 05 35 16.6 +4.7
SOC pmax pmax
comp=Z,120nm,1.0s,mb5.3
VRHR **Novokhopersk** 25.87 314 *e*P **P** 05 30 58.0 -0.6
VRHR pmax pmax
comp=Z,30nm,1.0s,mb4.7
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,30nm,0.9s
MOY **Mondy** 25.88 45 *e*P **P** 05 31 00.2 +1.5
MOY pmax pmax
comp=Z,26nm,1.4s,mb4.5
LZH **Lanzhou** 26.03 81 *e*P **P** 05 31 02.7 +2.5
LZH pP pP 05 31 26.2 +4.8
LZH PP 05 31 47.0
LZH PcP PcP 05 34 26.5 +0.7
LZH *e*S **S** 05 35 23.1 -1.0
LZH SS 05 36 34.5
LZH pmax pmax
comp=Z,11nm,1.1s,mb4.2
LZH pmax pmax
comp=Z,100nm,6.0s
MALT **Malatya** 26.28 284 *e*P **P** 05 31 04.2 +1.7
comp=Z,36nm,1.3s,mb4.6
MALT **Malatya** 26.28 284 *e*P **P** 05 31 04.2 +1.8
MALT pmax pmax
comp=Z,36nm,1.3s,mb4.6
MALT **Malatya** 26.28 284 P **P** 05 31 04.3 +1.9
comp=Z,22nm,1.4s,mb4.4
ZAK **Zakamensk** 26.75 49 *e*P **P** 05 31 07.3 +0.8
ZAK pmax pmax
comp=Z,7.0nm,1.3s,mb4.0
ANN **Anapa** 27.03 299 *e*P **P** 05 31 07.6 -1.5
ANN *e*S **S** 05 35 42.0 +2.3
ANN *e*SS 05 36 52.8
ANN pmax pmax
comp=E,66nm,0.9s,mb5.2
ANN MLR MLR
comp=Z,389nm,19.0s
VORD **Divnogorie** 27.19 312 *e*P **P** 05 31 09.5 -1.0
VORD pmax pmax
comp=Z,20nm,1.3s,mb4.5
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,20nm,1.4s
VORD MLR MLR
comp=Z,210nm,12.0s
VORD MLR MLR
comp=N,60nm,8.0s
VORD MLR MLR
comp=E,180nm,15.0s
CD2 **Chengdu** 27.33 92 ⇑P **P** 05 31 15.0 +3.1
CD2 pP pP 05 31 36.5 +3.2
CD2 sP sP 05 31 48.3 +3.9
CD2 PP PP 05 32 06.0 -9.3
CD2 PcP PcP 05 34 32.5 +3.5
CD2 S **S** 05 35 45.6 +0.9
CD2 sS sS 05 36 23.3 +1.4
CD2 SS 05 37 09.3
CD2 PcS PcS 05 38 13.0 +2.2
CD2 ScS ScS 05 41 52.8 +0.4
CD2 pmax pmax
comp=Z,40nm,0.8s,mb5.0
CD2 pmax pmax
comp=Z,150nm,5.9s
CD2 LR LR
comp=N,810nm,20.6s
CD2 LR LR
comp=E,2µm,26.5s
CD2 LR LR
comp=Z,2µm,23.5s
VSR **Storozhevoye** 27.35 313 *e*P **P** 05 31 11.1 -0.8
VSR pmax pmax
comp=Z,40nm,1.0s,mb4.9
VSR pmax pmax
comp=N,9.0nm,0.5s
VSR pmax pmax
comp=E,20nm,0.7s
VSR MLR MLR
comp=Z,140nm,11.0s
VSR MLR MLR
comp=N,90nm,10.0s
VSR MLR MLR
comp=E,130nm,12.0s
TLY **Talaya** 27.41 46 *e*P **P** 05 31 13.2 +0.8
TLY **Talaya** 27.41 46 *e*P **P** 05 31 14.0 +1.6
TLY pmax pmax
comp=Z,5.0nm,1.2s,mb3.9
TLY MLR MLR
comp=Z,89nm,18.0s
VOR **Voronezh** 27.52 314 P **P** 05 31 15.0 +1.6
SONM **Songino Array** 28.05 55 P **P** 05 31 19.2 +1.0
comp=Z,3.0nm,0.8s,mb3.9,baz=262,slow=9.6,SNR=13
SONM pP pP 05 31 41.4 +1.8
comp=Z,3.4nm,0.8s,baz=257,slow=10.0,SNR=3.1
ULN **Ulaanbaatar** 28.50 55 *e*P **P** 05 31 23.4 +1.2
comp=Z,3.8nm,0.8s,mb4.0
ULN **Ulaanbaatar** 28.50 55 *e*P **P** 05 31 23.4 +1.3
ULN pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
ULN **Ulaanbaatar** 28.50 55 P **P** 05 31 25.7 +3.6
comp=Z,6.7nm,2.1s,mb3.8
ASF **Jabal al Asfar** 28.80 272 P **P** 05 31 25.9 +0.8
comp=Z,1.2nm,0.5s,mb3.8,baz=16,slow=2.4,SNR=7.6
ASF LR LR 05 45 43.3
comp=Z,177nm,19.5s,baz=293,slow=42
KMI **Kunming** 28.99 104 P **P** 05 31 30.4 +3.7
KMI pP pP 05 31 51.6 +3.4
KMI sP sP 05 32 03.2 +3.9
KMI PP PP 05 32 27.8 -6.0
KMI S **S** 05 36 12.5 +1.6
KMI sS sS 05 36 50.8 +2.7
KMI SS SS 05 37 49.6 -28
KMI pmax pmax
comp=Z,8.0nm,0.7s,mb4.5
KMI pmax pmax
comp=Z,110nm,4.7s
KMI LR LR
comp=N,330nm,19.6s
KMI LR LR
comp=E,680nm,20.2s
KMI LR LR
comp=Z,810nm,22.2s
SIM **Simferopol'** 29.39 299 *c* iP **P** 05 31 30.8 +0.7
SIM pmax pmax
comp=Z,14nm,0.8s,mb4.6
CHRT **Chiangrai** 29.74 116 ⇓P **P** 05 31 34.5 +1.0
MMAI **Mount Meron Ar** 29.75 274 P **P** 05 31 34.5 +1.0
comp=Z,0.9nm,0.3s,mb3.8,baz=79,slow=8.6,SNR=3.8
CHG **Chiang Mai** 29.83 119 ⇑P **P** 05 31 35.4 +1.2
comp=Z,16nm,1.1s,mb4.6
CHTO **Chiang Mai** 29.83 119 *e*P **P** 05 31 36.2 +2.0
comp=Z,20nm,1.2s,mb4.6
CHTO **Chiang Mai** 29.83 119 *e*P **P** 05 31 36.2 +2.0
CHTO pmax pmax
comp=Z,20nm,1.2s,mb4.6
CHTO **Chiang Mai** 29.83 119 P **P** 05 31 37.2 +3.0
comp=Z,17nm,1.4s,mb4.5
BRTR **Keskin Array B** 29.84 288 P **P** 05 31 33.8 -0.4
comp=Z,8.5nm,1.0s,mb4.3,baz=96,slow=7.6,SNR=28
BRTR pP pP 05 31 56.0 +0.3
comp=Z,2.8nm,0.8s,baz=96,slow=8.0,SNR=6.4
BRTR **Keskin Array B** 29.84 288 *e*P **P** 05 31 34.7 +0.5
BRTR pmax pmax
comp=Z,9.0nm,1.0s
MOS **Moscow** 29.98 321 *e*P **P** 05 31 32.4 -2.8
MOS *e* 05 32 25.9
MOS pmax pmax
comp=Z,113nm,1.3s,mb5.3
CMAR **Chiang Mai Arr** 30.06 119 P **P** 05 31 38.0 +1.8
comp=Z,4.0nm,0.4s,mb4.4,baz=304,slow=6.4,SNR=30
OBN **Obninsk** 30.26 319 *e*P **P** 05 31 37.1 -0.5
comp=Z,33nm,0.6s,mb5.1
OBN **Obninsk** 30.26 319 ⇓*e*P **P** 05 31 37.6 -0.1
OBN *e* 05 32 31.8
OBN *e*S **S** 05 36 34.4 +4.1
OBN pmax pmax
comp=Z,118nm,1.7s,mb5.2
OBN MLR MLR
comp=Z,300nm,17.0s
BDT **Bhumibol Dam** 30.93 121 P **P** 05 31 45.0 +1.1
comp=Z,16nm,1.0s,mb4.7
HHC **Hu-ho-hao-te** 31.42 70 *e*P **P** 05 31 55.7 +7.7
HHC pP pP 05 32 07.1 -2.5
HHC PP PP 05 32 59.1 -1.5
HHC S **S** 05 36 56.1 +7.4
HHC SS SS 05 38 42.0 -25
HHC pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
HHC pmax pmax
comp=Z,99nm,3.9s
HHC LR LR
comp=N,310nm,10.6s
HHC LR LR
comp=E,470nm,10.6s
HHC LR LR
comp=Z,310nm,12.1s
GYA **Guiyang** 31.46 98 P **P** 05 31 51.0 +2.5
GYA PP PP 05 32 56.8 -4.4
GYA S **S** 05 36 53.2 +3.7
GYA ScP ScP 05 38 20.9 +6.9
GYA PcS PcS 05 38 28.6 +4.4
GYA SS SS 05 38 44.2 -24
GYA pmax pmax

comp=Z,20nm,0.8s,mb4.9
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,540nm,16.8s
GYA LR LR
comp=E,420nm,17.6s
GYA LR LR
comp=Z,530nm,15.4s
KLMR Klimovskoe 31.75 330 *e*P **P 05 31 49.0 -1.7**
KLMR pmax pmax
comp=Z,109nm,1.3s,mb5.4
ENH Enshi 32.17 90 *e*P **P 05 31 57.7 +2.9**
comp=Z,27nm,1.1s,mb4.9
KIS Kishinev 33.20 302 *e*P **P 05 32 05.0 +1.5**
AKASG Malin Array Be 33.31 309 P **P 05 32 03.5 -0.9**
comp=Z,53nm,0.9s,mb5.4,baz=88,slow=7.4,SNR=56
AKBB Malin Array Si 33.31 309 *e*P **P 05 32 03.7 -0.7**
KIEV Kiev 33.32 309 *e*P **P 05 32 03.7 -0.8**
comp=Z,34nm,0.9s,mb5.2
KIEV Kiev 33.32 309 *e*P **P 05 32 03.7 -0.8**
KIEV pmax pmax
comp=Z,34nm,0.9s,mb5.2
PRD Provadia 34.23 295 P **P 05 32 12.4 -0.1**
GRER 34.45 299 P **P 05 32 17.2 +2.8**
VRI Vrincioaia 34.62 300 P **P 05 32 17.8 +1.9**
VRI Vrincioaia 34.62 300⇑*i*P **P 05 32 16.8 +1.0**
PLOR Plostina 34.67 300 ⇓P **P 05 32 17.6 +1.3**
PLOR Plostina 34.67 300⇓*i*P **P 05 32 17.6 +1.3**
TESR 34.67 301⇓*i*P **P 05 32 16.6 +0.3**
MICGM Minsk 34.84 315⇑*e*P **P 05 32 16.0 -1.7**
MNK Minsk 34.87 315⇑*e*P **P 05 32 16.0 -1.9**
MNK pmax pmax
comp=Z,190nm,1.2s,mb5.8
BJI Beijing 35.01 70 P **P 05 32 22.0 +2.7**
BJI sP sP 05 32 51.2 -0.8
BJI pmax pmax
comp=Z,14nm,0.5s,mb5.0
MLR Muntele Rosu 35.17 299 P **P 05 32 22.8 +2.2**
MLR Muntele Rosu 35.17 299 LR LR 05 50 44.8
comp=Z,174nm,19.8s,baz=131,slow=43
MLR Muntele Rosu 35.17 299⇓*i*P **P 05 32 22.5 +1.9**
SZH Strazhica 35.30 295 P **P 05 32 21.9 +0.2**
NACGM Naroch 35.55 316 *e* **P 05 32 21.0 -2.8**
BUR01 Bucovina Ar. S 35.67 303 P **P 05 32 25.7 +0.9**
BURAR Bucovina Array 35.67 303 ⇓P **P 05 32 25.4 +0.6**
BURAR Bucovina Array 35.67 303⇓*i*P **P 05 32 25.4 +0.6**
BUR08 Bucovina Ar. S 35.68 303 *e*P **P 05 32 25.3 +0.4**
PVL Pavlikeni 35.74 295 P **P 05 32 26.4 +0.9**
VOIR 35.80 299⇑P **P 05 32 26.7 +0.7**
VOIR 35.80 299⇑*i*P **P 05 32 26.7 +0.7**
WHN Wuhan 36.00 87 P **P 05 32 30.0 +2.1**
JOF Joensuu 36.14 330 *e*P **P 05 32 27.2 -1.5**
JOF Joensuu 36.14 330 *e*p **P 05 32 27.2 -1.5**
comp=Z,23nm,0.4s,mb5.5
LVV L'vov 36.53 307 *e*P **P 05 32 32.3 +0.1**
PGB Panagyurishte 36.66 294 P **P 05 32 34.0 +0.7**
BMR Baia Mare 36.83 303 P **P 05 32 36.5 +1.8**
BMR Baia Mare 36.83 303⇓*i*P **P 05 32 36.5 +1.8**
VTS Vitosha 37.36 295 ⇓P **P 05 32 39.9 +0.7**
VTS Vitosha 37.36 295⇓*i*P **P 05 32 39.9 +0.7**
VTS Vitosha 37.36 295 P **P 05 32 40.0 +0.8**
DRGR 37.38 302 P **P 05 32 40.8 +1.4**
DRGR 37.38 302⇓*i*P **P 05 32 40.5 +1.1**
KWP Kalwaria Pacla 37.38 306 *e*P **P 05 32 39.9 +0.5**
KWP Kalwaria Pacla 37.38 306 *e*P **P 05 32 39.6 +0.3**
comp=Z,69nm,1.1s,mb5.5
KWP Kalwaria Pacla 37.38 306 *e*P **P 05 32 39.8 +0.4**
SUW Suwalki 37.47 314 *e*P **P 05 32 40.0 0.0**
SUW *e* 05 34 04.0
TRPA Tarpa 37.47 304⇑*i*P **P 05 32 40.9 +0.8**
UZH Uzhgorod 37.64 305*d i*P **P 05 32 42.0 +0.5**
UZH *e* 05 32 51.6
UZH *e* 05 34 08.4
UZH *e*S **S 05 38 26.0 +1.9**
FINES FINESS Array B 37.78 326 P **P 05 32 42.1 -0.4**
comp=Z,14nm,0.5s,mb5.1,baz=121,slow=8.5,SNR=71
FINES LR LR 05 49 05.2
comp=Z,256nm,20.4s,baz=151,slow=37
APA Apatity 37.87 337⇓*i*P **P 05 32 43.0 -0.2**
APA *i* 05 34 08.2
APA *e*SS SS 05 41 08.0 -8.8
APA pmax pmax
comp=Z,30nm,1.3s,mb5.0
APA MLR MLR
comp=Z,700nm,15.0s
KAF Kangasniemi 37.91 327 *e*P **P 05 32 42.3 -1.4**
KAF pmax pmax
comp=Z,3.0nm,0.3s,mb4.6
KAF Kangasniemi 37.91 327 *e*p **P 05 32 42.3 -1.4**
comp=Z,2.5nm,0.3s,mb4.5
VAY Valandovo 38.01 293 *e*P **P 05 32 44.1 -0.6**
CRVS Cervenica-Dubn 38.19 305 *e*P **P 05 32 46.9 +0.8**
comp=Z,60nm,2.6s,mb5.0
CRVS *e*PP PP 05 34 13.4 -1.7
CRVS Cervenica-Dubn 38.19 305 *e*P **P 05 32 46.9 +0.8**
CRVS *e* 05 34 13.4
CRVS pmax pmax
comp=Z,60nm,2.6s,mb5.0
CRVS Cervenica-Dubn 38.19 305 *e*P **P 05 32 46.9 +0.8**
CRVS *e*PP PP 05 34 13.4 -1.7
BZS Buzias 38.20 300 P **P 05 32 47.6 +1.3**
BZS Buzias 38.20 300⇓*i*P **P 05 32 47.2 +0.9**
STHS Stebnicka Huta 38.33 306 *e*P **P 05 32 47.6 +0.2**
comp=Z,8.1nm,0.9s,mb4.5
STHS *e*PP PP 05 34 14.1 -2.6
STHS Stebnicka Huta 38.33 306 *e*P **P 05 32 47.6 +0.2**
STHS *e* 05 34 14.1
STHS pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
STHS Stebnicka Huta 38.33 306 *e*P **P 05 32 47.6 +0.2**
STHS *e*PP PP 05 34 14.1 -2.6
SKO Skopje 38.74 294 *e*P **P 05 32 50.2 -0.7**
KECS Kecovo 38.84 304 *e*P **P 05 32 52.3 +0.7**
comp=Z,6.7nm,1.3s,mb4.3
KECS *e*PP PP 05 34 25.4 +3.2
KECS Kecovo 38.84 304 *e*P **P 05 32 52.3 +0.7**
KECS *e* 05 34 25.4
KECS pmax pmax
comp=Z,7.0nm,1.3s,mb4.3
KECS Kecovo 38.84 304 *e*P **P 05 32 52.3 +0.7**
KECS *e*PP PP 05 34 25.4 +3.2
NIE Niedzica 38.94 306 *e*P **P 05 32 53.9 +1.5**
KRUS Krusevo 38.98 293 *e*P **P 05 32 52.0 -0.9**
BIA Bitola 38.98 293 *e*P **P 05 32 52.2 -0.7**
NJ2 Nanjing 39.09 82 *e*P **P 05 32 57.1 +3.2**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
PSZ Piszkesteto 39.25 304 *e*P **P 05 32 55.3 +0.3**
comp=Z,185nm,2.3s,mb5.5
PSZ Piszkesteto 39.25 304 P **P 05 32 56.3 +1.2**
PSZ Piszkesteto 39.25 304⇓*i*P **P 05 32 56.0 +0.9**
OJC Ojcow 39.27 307 *e*P **P 05 32 55.3 +0.1**
BUD Budapest 39.86 303⇓*e*P **P 05 33 01.0 +0.9**
VYHS Vyhne 39.94 305 *e*P **P 05 33 01.6 +0.9**
comp=Z,30nm,1.6s,mb4.9
VYHS *e*PP PP 05 34 35.5 +1.4
VYHS Vyhne 39.94 305 *e*P **P 05 33 01.6 +0.9**
VYHS *e* 05 34 35.5
VYHS pmax pmax
comp=Z,30nm,1.6s,mb4.9
VYHS Vyhne 39.94 305 *e*P **P 05 33 01.6 +0.9**
VYHS *e*PP PP 05 34 35.5 +1.4
KOLL Kolacno 40.22 305 *e*P **P 05 33 04.0 +0.9**
KOLL Kolacno 40.22 305 *e*P **P 05 33 04.0 +0.9**
PKSM Moragy 40.22 301 P **P 05 33 04.0 +0.8**
PKSM Moragy 40.22 301⇑*i*P **P 05 33 03.3 +0.2**
OKC Ostrava-Krasne 40.34 307 *e*P **P 05 33 03.3 -0.8**
OKC Ostrava-Krasne 40.34 307 *e*P **P 05 33 03.3 -0.8**
TPTI 40.61 138 P **P 05 33 07.3 +0.7**
comp=Z,48nm,1.1s,mb5.2
MORC Moravsky Berou 40.74 307 *e*P **P 05 33 07.4 +0.1**
comp=Z,26nm,1.1s,mb5.0
MORC Moravsky Berou 40.74 307 P **P 05 33 08.2 +0.9**
MORC Moravsky Berou 40.74 307⇓*i*P **P 05 33 07.7 +0.4**
KULM Kulim 40.92 132 *e*P **P 05 33 11.4 +2.2**
comp=Z,24nm,1.1s,mb5.0
KULM Kulim 40.92 132 P **P 05 33 12.0 +2.8**
comp=Z,36nm,1.4s,mb5.0
GKP Gorka Klasztor 40.93 312 *e*P **P 05 33 08.9 +0.1**
KEV Kevo 41.03 338 *e*P **P 05 33 07.9 -1.5**
comp=Z,1.6nm,0.3s,mb4.3
KEV Kevo 41.03 338 *e*P **P 05 33 07.9 -1.5**
KEV pmax pmax
comp=Z,2.0nm,0.3s,mb4.4
KEV Kevo 41.03 338 *e*p **P 05 33 07.9 -1.5**
comp=Z,1.6nm,0.3s,mb4.3
ZST Bratislava 41.11 304 *e*P **P 05 33 10.9 +0.5**
comp=Z,93nm,2.4s,mb5.2
ZST *e*PP PP 05 34 48.3 +1.5
ZST Bratislava 41.11 304 *e*P **P 05 33 10.9 +0.5**
ZST *e* 05 34 48.3
ZST pmax pmax
comp=Z,93nm,2.4s,mb5.2
ZST Bratislava 41.11 304 *e*P **P 05 33 10.9 +0.5**
ZST *e*PP PP 05 34 48.3 +1.5
CN2 Changchun 41.29 63 *e*P **P 05 33 11.3 -0.6**
CN2 *e*S **S 05 39 16.2 -2.7**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
CN2 pmax pmax
comp=Z,200nm,4.0s
VRAC Vranov 41.37 306 P **P 05 33 13.7 +1.2**
VRAC Vranov 41.37 306⇓*i*P **P 05 33 13.5 +1.0**
ARCES ARCESS Array B 41.38 337 P **P 05 33 11.8 -0.5**
comp=Z,52nm,1.0s,mb5.3,baz=115,slow=9.4,SNR=81
DPC Dobruska-Polom 41.50 307 *e*P **P 05 33 14.2 +0.6**
DPC *e* 05 34 50.1
DPC MLR MLR
comp=Z,400nm,23.0s
DPC Dobruska-Polom 41.50 307 *e*P **P 05 33 14.2 +0.6**
DPC *e*pP pP 05 33 35.1 -0.7
DPC *e*PP PP 05 34 50.1 -0.9
DPC AMS AMS 05 47 20.0
comp=Z,400nm,23.0s
KSP Ksiaz 41.50 308 *e*P **P 05 33 13.7 +0.2**
KSP *e* 05 34 55.4
KSP Ksiaz 41.50 308 *e*P **P 05 33 13.7 +0.1**
KSP *e* 05 34 54.5
SOP Sopron 41.51 303⇓*e*P **P 05 33 14.3 +0.6**
UPC Upice 41.69 308 *e*P **P 05 33 15.8 +0.7**
UPC Upice 41.69 308 *e*P **P 05 33 15.8 +0.7**
KTK1 Kautokeino 41.85 336 *e*P **P 05 33 15.8 -0.4**
PSI Prapat 41.94 137 P **P 05 33 18.5 +1.0**
PSI pP pP 05 33 40.7 +0.8
PSI Prapat 41.94 137 P **P 05 33 18.5 +1.0**
comp=Z,18nm,0.9s,mb4.8,baz=325,slow=11,SNR=11
PSI pP pP 05 33 40.7 +0.8
comp=Z,17nm,0.9s,baz=294,slow=10.0,SNR=3.9
CONA Conrad Observa 41.96 304 *i* P **P 05 33 18.1 +0.8**
comp=Z,53nm,1.1s,mb5.2,SNR=27
TREC Trest 42.10 306 *e*P **P 05 33 19.1 +0.7**
TREC Trest 42.10 306 *e*P **P 05 33 19.1 +0.7**
ARSA Arzberg 42.25 303⇓*i*P **P 05 33 20.1 +0.3**
comp=Z,16nm,1.2s,mb4.6
BSD Bornholm Skovb 42.35 315⇓*i*P **P 05 33 19.2 -1.2**
comp=Z,39nm,0.9s,mb5.1
PERS Pernice 42.60 302 *i* P **P 05 33 23.1 +0.6**
PERS *e* pP 05 33 43.8 -1.2
SOKA Soboth 42.65 302⇓*i*P **P 05 33 23.7 +0.7**
comp=Z,52nm,1.2s,mb5.1
BOJS Bojanci 42.66 300 *i* P **P 05 33 23.5 +0.5**
BOJS *e* pP 05 33 50.4 +5.0
PRU Pruhonice 42.66 307 *e*P **P 05 33 24.3 +1.3**
PRU *e* 05 35 05.3
PRU *e*S **S 05 39 40.3 +1.3**
PRU MLR MLR
comp=Z,400nm,25.6s
PRU Pruhonice 42.66 307 *e*P **P 05 33 24.3 +1.3**
PRU *e*PP PP 05 35 05.3 +1.8
PRU *e*S **S 05 39 40.3 +1.3**
PRU AMS AMS 05 47 50.0
comp=Z,400nm,25.6s
TIP Timpagrande 42.79 291 *e*P **P 05 33 23.6 -0.6**
comp=Z,34nm,1.4s,mb4.9
BRG Berggiesshubel 42.99 308 *e*P **P 05 33 26.1 +0.5**
comp=Z,32nm,1.0s,mb5.0
BRG Berggiesshubel 42.99 308 *i* P **P 05 33 26.2 +0.5**
comp=Z,31nm,1.0s,mb5.0
BRG sP sP 05 33 51.0 -7.9
BRG PP PP 05 35 07.0 0.0
BRG S **S 05 39 47.0 +3.3**
BRG Berggiesshubel 42.99 308 *i* P **P 05 33 26.2 +0.6**
BRG 05 35 07.0
BRG S **S 05 39 47.0 +3.3**
BRG pmax pmax
comp=Z,2.0nm,1.0s,mb3.8
RUE Ruedersdorf 43.02 311 *e*P **P 05 33 25.6 -0.2**
comp=Z,27nm,0.6s,mb5.2
MOA Molln 43.03 304⇓*i*P **P 05 33 26.3 +0.3**
comp=Z,38nm,1.1s,mb5.0,SNR=18
LJU Ljubljana 43.09 301 *i* P **P 05 33 27.2 +0.8**
LJU *i* pP 05 33 46.4 -2.5
RGN Rugen 43.27 314 *e*P **P 05 33 28.4 +0.6**
RGN Rugen 43.27 314 *e*P **P 05 33 27.8 +0.1**
comp=Z,100nm,0.9s,mb5.5
CUC Castrocucco 43.30 292 *e*P **P 05 33 29.5 +1.2**
comp=Z,17nm,0.8s,mb4.8
GEC2 GERESS Array S 43.31 305 *e*P **P 05 33 28.7 +0.5**
comp=Z,50nm,1.8s,mb4.9
GEC2 GERESS Array S 43.31 305 *e*P **P 05 33 28.7 +0.5**
GEC2 pmax pmax
comp=Z,50nm,1.8s,mb4.9
KHC Kasperske Hory 43.36 306 *e*P **P 05 33 28.7 0.0**
comp=Z,28nm,1.4s,mb4.8
KHC Kasperske Hory 43.36 306 *e*P **P 05 33 28.4 -0.2**
KHC *e* 05 33 45.0
KHC *e* 05 35 09.5
KHC *e*S **S 05 39 49.5 +0.3**
KHC MLR MLR
comp=Z,400nm,19.9s
KHC Kasperske Hory 43.36 306 *e*P **P 05 33 28.4 -0.2**
KHC *e*pP pP 05 33 45.0 -6.0
KHC *e*PP PP 05 35 09.5 -1.5
KHC *e*S **S 05 39 49.5 +0.3**
KHC AMS AMS 05 47 50.0
comp=Z,400nm,19.9s
HFS Hagfors 43.38 322 LR LR 05 54 47.2
comp=Z,264nm,18.3s,baz=132,slow=40
JAVS Javornik 43.43 301 *i* P **P 05 33 29.3 +0.1**
JAVS *i* 05 34 00.1
TRO Tromso 43.51 336 *e*P **P 05 33 28.9 -0.7**
TRO *e*S **S 05 39 50.9 +0.1**
TRO *e*SS SS 05 43 06.3 -1.9
TRO AMS AMS 06 26 44.8
comp=Z,716nm,25.1s
VOY Vojsko 43.52 301 *e*P **P 05 33 29.8 -0.2**
VOY *e* 05 33 30.5
CLL Collm 43.56 309 *e*P **P 05 33 30.1 -0.1**
comp=Z,29nm,1.2s,mb4.9
CLL Collm 43.56 309 *i* P **P 05 33 30.1 -0.1**
comp=Z,30nm,1.3s,mb4.9
CLL *e*S **S 05 39 55.0 +3.0**
CLL Collm 43.56 309 *i* P **P 05 33 30.1 -0.1**
CLL *e*S **S 05 39 55.0 +3.0**
CLL pmax pmax
comp=Z,35nm,1.3s,mb4.9
CLL Collm 43.56 309 *i* P **P 05 33 30.1 -0.1**
comp=Z,30nm,1.3s,mb4.9
CLL *e*PP PP 05 35 13.0 0.0
CLL *e* 05 35 22.0
CLL *e*S **S 05 39 55.0 +3.0**
CLL *e*SS SS 05 43 24.0 +14
MYKA Terra Mystica 43.61 302⇓*i*P **P 05 33 31.1 +0.4**
comp=Z,17nm,1.2s,mb4.7
CEL Celeste 43.68 290 *e*P **P 05 33 31.1 -0.2**
comp=Z,85nm,2.0s,mb5.1
KBA Koelnbreinsper 43.75 303⇓*i*P **P 05 33 32.3 +0.5**
comp=Z,34nm,1.3s,mb4.9,SNR=11
COP Copenhagen 43.78 315 *i* P **P 05 33 30.2 -1.7**
comp=Z,32nm,0.9s,mb5.0
YAK Yakutsk 43.80 35 *e*P **P 05 33 31.4 -0.6**
YAK *e**PP pP 05 33 38.7 -16
YAK *e* 05 35 13.6
YAK *e* 05 35 18.4
YAK *e*S **S 05 39 58.1 +2.8**
YAK *e**SS sS 05 40 13.5 -20
YAK *e* 05 43 28.6
YAK pmax pmax
comp=Z,11nm,0.8s,mb4.6
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.3s
YAK pmax pmax
comp=N,6.0nm,0.4s
YAK pmax pmax
comp=Z,18nm,0.4s,mb5.2
YAK pmax pmax
comp=E,5.0nm,0.4s
YAK smax
comp=N,54nm,2.2s
YAK smax
comp=E,21nm,1.2s
YAK MLR MLR
comp=Z,231nm,20.0s
YAK MLR MLR
comp=N,314nm,23.0s
YAK MLR MLR
comp=E,150nm,20.0s
WET Wettzell 43.81 306 *e*P **P 05 33 32.8 +0.5**
comp=Z,62nm,2.1s,mb5.0
WET Wettzell 43.81 306 *e*P **P 05 33 32.8 +0.5**
WET pmax pmax
comp=Z,62nm,2.1s,mb5.0
TANN Tannenbergstha 43.96 308 *e*P **P 05 33 34.1 +0.6**
comp=Z,132nm,2.4s,mb5.2
MNSI Mandailing Nat 43.97 137 P **P 05 33 35.7 +1.8**
NKC Novy Kostel 43.99 308 *e*P **P 05 33 34.2 +0.5**
NKC Novy Kostel 43.99 308 *e*P **P 05 33 34.2 +0.5**
WERN Wernitzgruen 44.03 308 *e*P **P 05 33 34.7 +0.7**
comp=Z,76nm,2.0s,mb5.1
GUNZ Gunzen 44.05 308 *e*P **P 05 33 34.8 +0.6**
comp=Z,175nm,2.3s,mb5.4
WERD Werda 44.06 308 *e*P **P 05 33 34.8 +0.6**
comp=Z,26nm,1.2s,mb4.8
MOR8 Moi Rana 44.09 331 *e*P **P 05 33 33.1 -1.1**
MOR8 AMB AMB 05 33 34.8
comp=Z,78nm,0.8s,mb5.5
MDJ Mudanjiang 44.10 61 P **P 05 33 34.7 +0.1**
MDJ pP pP 05 33 56.0 -1.1
MDJ sP sP 05 34 06.5 -1.4
MDJ PP PP 05 35 18.6 -0.3
MDJ ScP ScP 05 39 02.1 +0.8
MDJ PcS PcS 05 39 12.0 +0.8
MDJ S **S 05 40 00.4 +0.4**
MDJ pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
MDJ pmax pmax
comp=Z,22nm,3.7s
MDJ LR LR
comp=N,440nm,24.7s
MDJ LR LR
comp=E,450nm,26.5s
MDJ LR LR
comp=Z,430nm,23.5s
ABTA Abfaltersbach 44.36 303⇓*i*P **P 05 33 36.1 -0.6**
comp=Z,17nm,1.1s,mb4.7
MOX Moxa 44.48 308 *e*P **P 05 33 38.3 +0.7**
comp=Z,100nm,1.9s,mb5.2
MOX Moxa 44.48 308 *e*P **P 05 33 38.1 +0.5**
comp=Z,138nm,2.2s,mb5.3
MOX Moxa 44.48 308 *e*P **P 05 33 38.3 +0.7**
MOX pmax pmax
comp=Z,100nm,1.9s,mb5.2
KSRS Korea Array 44.53 71 P **P 05 33 39.3 +1.1**
comp=Z,2nm,1.0s,mb4.3,baz=277,slow=7.0,SNR=18
KSRS Korea Array 44.53 71 P **P 05 33 39.3 +1.1**
KSRS pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
KONS Konsvik 44.68 331 *e*P **P 05 33 38.8 -0.2**
NOA NORSAR Array B 44.69 323 P **P 05 33 38.1 -1.0**
comp=Z,30nm,0.6s,mb5.2,baz=96,slow=7.8,SNR=103
NOA LR LR 05 55 32.0
comp=Z,143nm,18.4s,baz=90,slow=40
NSS Namsos 44.78 328 *e*P **P 05 33 39.2 -0.6**
GRA1 Grafenberg Arr 44.83 307 *e*P **P 05 33 41.6 +1.2**
comp=Z,200nm,1.8s,mb5.5
GRF Grafenberg Arr 44.83 307 *e*P **P 05 33 41.6 +1.2**
comp=Z,200nm,1.8s,mb5.5
GRF Grafenberg Arr 44.83 307 *e*P **P 05 33 41.6 +1.2**
GRF pmax pmax
comp=Z,200nm,1.8s,mb5.5
GRF Grafenberg Arr 44.83 307 *e*P **P 05 33 41.6 +1.2**
GRF pmax pmax
comp=Z,200nm,1.8s,mb5.5
NAO01 NORSAR Array S 44.83 323 *e*P **P 05 33 39.4 -0.8**
comp=Z,35nm,0.8s,mb5.2
KLR Kul'dur 44.87 54 *e*P **P 05 33 37.6 -3.1**
WTTA Wattenberg 44.88 303⇓*i*P **P 05 33 40.5 -0.3**
comp=Z,43nm,1.1s,mb5.1
LOF Lofoten 44.90 333 *e*P **P 05 33 40.2 -0.4**
LOF AMB AMB 05 33 42.2
comp=Z,34nm,2.3s,mb4.7
WATA Walderalm 44.91 304⇓*i*P **P 05 33 40.9 -0.1**
comp=Z,4.7nm,0.5s,mb4.5
FUR Furstenfeldbru 44.99 305 *e*P **P 05 33 42.2 +0.6**
comp=Z,154nm,1.6s,mb5.5
FUR Furstenfeldbru 44.99 305 *e*P **P 05 33 42.2 +0.6**
FUR pmax pmax
comp=Z,154nm,1.6s,mb5.5
BSEG Bad Segeberg 45.04 313 *e*P **P 05 33 42.6 +0.6**
comp=Z,42nm,1.1s,mb5.1
BSEG Bad Segeberg 45.04 313 *e*P **P 05 33 42.6 +0.6**
BSEG pmax pmax
comp=Z,42nm,1.1s,mb5.1
CLZ Clausthal 45.15 310 *e*P **P 05 33 43.4 +0.5**
comp=Z,43nm,1.3s,mb5.0
CLZ Clausthal 45.15 310 *e*P **P 05 33 43.4 +0.5**
CLZ pmax pmax
comp=Z,43nm,1.3s,mb5.0
MOTA Moosalm 45.22 304⇑*i*P **P 05 33 42.9 -0.7**
comp=Z,23nm,0.9s,mb4.9,SNR=10
KONO Kongsberg 45.40 321 *e*P **P 05 33 44.4 -0.3**
KONO Kongsberg 45.40 321 *e*P **P 05 33 44.1 -0.6**
comp=Z,35nm,0.9s,mb5.1
KONO Kongsberg 45.40 321 *e*P **P 05 33 44.2 -0.5**
KONO pmax pmax
comp=Z,35nm,0.9s,mb5.1
RETA Reutte 45.43 304⇑*i*P **P 05 33 44.7 -0.4**
comp=Z,18nm,1.1s,mb4.7
FETA Feichten 45.53 303⇓*i*P **P 05 33 45.5 -0.5**
comp=Z,31nm,1.2s,mb4.9
MUD Monsted U'grnd 45.60 317 *i* P **P 05 33 45.1 -1.3**
comp=Z,22nm,1.0s,mb4.8
TIXI Tiksi 45.70 22 *e*P **P 05 33 46.3 -0.7**
comp=Z,8.8nm,0.6s,mb4.7
TIXI Tiksi 45.70 22 *e*P **P 05 33 46.1 -0.9**
TIXI pmax pmax
comp=Z,12nm,1.0s,mb4.6
DAVA Damuels 46.05 304⇓*i*P **P 05 33 49.9 -0.1**
comp=Z,85nm,1.0s,mb5.4,SNR=22
STU Stuttgart 46.27 306 *e*P **P 05 33 52.2 +0.5**
TNS Taunus Mts 46.54 308 *e*P **P 05 33 54.3 +0.5**
comp=Z,79nm,1.7s,mb5.2
TNS Taunus Mts 46.54 308 *e*P **P 05 33 54.3 +0.5**
TNS pmax pmax
comp=Z,79nm,1.7s,mb5.2
IBBN Ibbenburen 46.71 311 *e*P **P 05 33 55.5 +0.4**
BFO Black Forest 46.91 305 *e*P **P 05 33 56.2 -0.5**
comp=Z,21nm,1.2s,mb4.7
BFO Black Forest 46.91 305 *e*P **P 05 33 56.2 -0.5**
BFO pmax pmax
comp=Z,21nm,1.2s,mb4.7
BUG Bochum-Univer 47.12 310 *e*P **P 05 33 58.7 +0.4**
comp=Z,52nm,1.4s,mb5.1
LANF Langenberg 47.14 306 *e*P **P 05 33 58.8 +0.3**
CDF Champ du Feu 47.59 306⇓*i*P **P 05 34 01.3 -0.7**
comp=Z,42nm,1.1s,mb4.9
CDF Champ du Feu 47.59 306⇓*i*P **P 05 34 01.3 -0.7**
comp=Z,21nm,1.1s,mb4.9
CDF Champ du Feu 47.59 306⇓*i*P **P 05 34 01.3 -0.7**
CDF pmax pmax
comp=Z,21nm,1.1s,mb4.9
PGF Pioggiola 47.66 298⇓*i*P **P 05 34 02.0 -0.7**
comp=Z,92nm,1.4s,mb5.1
PGF Pioggiola 47.66 298⇓*i*P **P 05 34 02.0 -0.7**
comp=Z,46nm,1.4s,mb5.1
PGF Pioggiola 47.66 298⇓*i*P **P 05 34 02.0 -0.7**
PGF pmax pmax
comp=Z,46nm,1.4s,mb5.1
ECH Echery 47.70 305 *e*P **P 05 34 03.1 +0.2**
MOF Molkenrain 47.78 305 *e*P **P 05 34 02.5 -1.0**
HINF Hinteralfeld 47.98 305⇓*i*P **P 05 34 04.4 -0.6**
comp=Z,108nm,1.4s,mb5.2
HINF Hinteralfeld 47.98 305⇓*i*P **P 05 34 04.4 -0.6**
comp=Z,54nm,1.4s,mb5.2
HINF Hinteralfeld 47.98 305⇓*i*P **P 05 34 04.4 -0.6**
HINF pmax pmax
comp=Z,54nm,1.4s,mb5.2
MEM Membach 48.03 309 P **P 05 34 05.6 +0.3**
comp=Z,14nm,1.2s,mb4.7
LOMF Lomont 48.08 304 *e*P **P 05 34 06.1 +0.3**

WLF Walferdange 48.09 307 *e*P **P 05 34 06.5 +0.6**
comp=Z,68nm,1.2s,mb5.3
WLF Walferdange 48.09 307 *e*P **P 05 34 06.6 +0.7**
comp=Z,47nm,1.1s,mb5.2
WLF Walferdange 48.09 307 *e*P **P 05 34 06.6 +0.7**
WLF pmax pmax
comp=Z,47nm,1.1s,mb5.2
HAU Haudompre 48.27 305⇓*i*P **P 05 34 06.8 -0.5**
comp=Z,64nm,1.1s,mb5.1
HAU Haudompre 48.27 305⇓*i*P **P 05 34 06.8 -0.5**
comp=Z,32nm,1.1s,mb5.1
HAU Haudompre 48.27 305⇓*i*P **P 05 34 06.8 -0.5**
HAU pmax pmax
comp=Z,32nm,1.1s,mb5.1
SAOF Saorge 48.33 300 *e*P **P 05 34 08.5 +0.7**
AUTN L'Aution 48.42 300 *e*P **P 05 34 09.5 +1.0**
SBF Sospel 48.45 300⇓*i*P **P 05 34 08.5 -0.2**
comp=Z,219nm,1.4s,mb5.5
SBF Sospel 48.45 300⇓*i*P **P 05 34 08.5 -0.2**
comp=Z,110nm,1.4s,mb5.5
SBF Sospel 48.45 300⇓*i*P **P 05 34 08.5 -0.2**
SBF pmax pmax
comp=Z,110nm,1.4s,mb5.5
THEF They Montfort 48.47 306 *e*P **P 05 34 08.8 0.0**
LUCF Luceram 48.50 300 *e*P **P 05 34 10.0 +0.9**
BCLA Clavier 48.50 309 P **P 05 34 09.4 +0.4**
LPG La Plagne 48.53 302⇓*i*P **P 05 34 09.5 +0.2**
comp=Z,139nm,1.5s,mb5.4
LPG La Plagne 48.53 302⇓*i*P **P 05 34 09.5 +0.2**
comp=Z,70nm,1.5s,mb5.4
LPG La Plagne 48.53 302⇓*i*P **P 05 34 09.5 +0.2**
LPG pmax pmax
comp=Z,70nm,1.5s,mb5.4
TOUF Mont Tournerai 48.54 300 *e*P **P 05 34 10.4 +1.0**
LPL La Plagne 48.54 302⇓*i*P **P 05 34 09.5 +0.1**
comp=Z,173nm,1.4s,mb5.5
LPL La Plagne 48.54 302⇓*i*P **P 05 34 09.5 +0.1**
comp=Z,86nm,1.4s,mb5.5
LPL La Plagne 48.54 302⇓*i*P **P 05 34 09.5 +0.1**
LPL pmax pmax
comp=Z,87nm,1.4s,mb5.5
MVIF Mont Vial 48.64 300 *e*P **P 05 34 10.9 +0.8**
MBDF Montbardon 48.70 301⇓*i*P **P 05 34 10.0 -0.6**
comp=Z,26nm,0.7s,mb5.0
MBDF Montbardon 48.70 301⇓*i*P **P 05 34 10.0 -0.6**
comp=Z,13nm,0.7s,mb5.0
MBDF Montbardon 48.70 301⇓*i*P **P 05 34 10.0 -0.6**
MBDF pmax pmax
comp=Z,13nm,0.7s,mb5.0
CABF La Chapelle 48.73 303⇓*i*P **P 05 34 10.8 0.0**
comp=Z,172nm,1.3s,mb5.5
CABF La Chapelle 48.73 303⇓*i*P **P 05 34 10.8 0.0**
comp=Z,86nm,1.3s,mb5.5
CABF La Chapelle 48.73 303⇓*i*P **P 05 34 10.8 0.0**
CABF pmax pmax
comp=Z,86nm,1.3s,mb5.5
KBS Kingsbay 48.78 347 *e*P **P 05 34 08.3 -2.4**
KBS AMS AMS 06 25 19.0
comp=Z,554nm,22.8s
GIVF Givet 48.86 308⇓*i*P **P 05 34 12.1 +0.3**
comp=Z,184nm,1.6s,mb5.5
GIVF Givet 48.86 308⇓*i*P **P 05 34 12.1 +0.3**
comp=Z,92nm,1.6s,mb5.5
GIVF Givet 48.86 308⇓*i*P **P 05 34 12.1 +0.3**
GIVF pmax pmax
comp=Z,92nm,1.6s,mb5.5
DOU Dourbes 49.01 308 P **P 05 34 13.3 +0.4**
comp=Z,20nm,1.6s,mb4.8
MEZF Maizieres J'vi 49.02 306⇓*i*P **P 05 34 13.2 +0.2**
KMBO Kilima Mbogo 49.07 228 P **P 05 34 14.5 +0.7**
comp=Z,1.5nm,0.5s,mb4.2,baz=180,slow=24,SNR=3.7
FRF La Foret Royal 49.08 299 *e*P **P 05 34 12.9 -0.6**
comp=Z,180nm,1.6s,mb5.5
FRF La Foret Royal 49.08 299 *e*P **P 05 34 12.9 -0.6**
comp=Z,90nm,1.6s,mb5.5
FRF La Foret Royal 49.08 299 *e*P **P 05 34 12.9 -0.6**
FRF pmax pmax
comp=Z,90nm,1.6s,mb5.5
SNF Seneffe 49.13 309 P **P 05 34 14.1 +0.3**
comp=Z,29nm,1.7s,mb4.9
LMR La Mourre 49.23 299⇓*i*P **P 05 34 13.9 -0.8**
comp=Z,94nm,1.7s,mb5.2
LMR La Mourre 49.23 299⇓*i*P **P 05 34 13.9 -0.8**
comp=Z,47nm,1.7s,mb5.1
LMR La Mourre 49.23 299⇓*i*P **P 05 34 13.9 -0.8**
LMR pmax pmax
comp=Z,47nm,1.7s,mb5.1
BAIF Baives 49.26 308⇓*i*P **P 05 34 15.1 +0.3**
comp=Z,184nm,1.4s,mb5.5
BAIF Baives 49.26 308⇓*i*P **P 05 34 15.1 +0.3**
comp=Z,92nm,1.4s,mb5.5
BAIF Baives 49.26 308⇓*i*P **P 05 34 15.1 +0.3**
BAIF pmax pmax
comp=Z,92nm,1.4s,mb5.5
ORIF Oris-en-Rattie 49.27 301 *e*P **P 05 34 14.3 -0.6**
KEST Kesra 49.44 289 *e*P **P 05 34 16.9 +0.5**
KEST Kesra 49.44 289 P **P 05 34 16.6 +0.2**
comp=Z,2.3nm,0.8s,mb4.2,baz=65,slow=1.1,SNR=11
KEST pP pP 05 34 38.4 -0.9
comp=Z,3.7nm,1.0s,baz=98,slow=3.2,SNR=4.3
SMRF Simiane la Rot 49.72 300 *e*P **P 05 34 18.1 -0.3**
comp=Z,128nm,1.6s,mb5.3
SMRF Simiane la Rot 49.72 300 *e*P **P 05 34 18.1 -0.3**
comp=Z,128nm,1.6s,mb5.6
LOR Lormes 50.07 305⇓*i*P **P 05 34 20.1 -0.9**
comp=Z,77nm,1.4s,mb5.1
LOR Lormes 50.07 305⇓*i*P **P 05 34 20.1 -0.9**
comp=Z,39nm,1.4s,mb5.1
LOR Lormes 50.07 305⇓*i*P **P 05 34 20.1 -0.9**
LOR pmax pmax
comp=Z,39nm,1.4s,mb5.1
VIVF Saint-Julien-l 50.11 302⇓*i*P **P 05 34 21.2 -0.2**
comp=Z,176nm,1.3s,mb5.5
VIVF Saint-Julien-l 50.11 302⇓*i*P **P 05 34 21.2 -0.2**
comp=Z,88nm,1.3s,mb5.5
VIVF Saint-Julien-l 50.11 302⇓*i*P **P 05 34 21.2 -0.2**
VIVF pmax pmax
comp=Z,88nm,1.3s,mb5.5
SMF Signal de Mont 50.23 304⇓*i*P **P 05 34 21.8 -0.4**
comp=Z,126nm,1.2s,mb5.4
SMF Signal de Mont 50.23 304⇓*i*P **P 05 34 21.8 -0.4**
comp=Z,63nm,1.2s,mb5.4
SMF Signal de Mont 50.23 304⇓*i*P **P 05 34 21.8 -0.4**
SMF pmax pmax
comp=Z,63nm,1.2s,mb5.4
SSF Saint Saulge 50.36 305⇓*i*P **P 05 34 22.5 -0.6**
comp=Z,123nm,1.5s,mb5.3
SSF Saint Saulge 50.36 305⇓*i*P **P 05 34 22.5 -0.6**
comp=Z,62nm,1.5s,mb5.3
SSF Saint Saulge 50.36 305⇓*i*P **P 05 34 22.5 -0.6**
SSF pmax pmax
comp=Z,62nm,1.5s,mb5.3
AVF Avril sur Loir 50.52 304⇓*i*P **P 05 34 23.9 -0.5**
comp=Z,40nm,0.8s,mb5.2
AVF Avril sur Loir 50.52 304⇓*i*P **P 05 34 23.9 -0.5**
comp=Z,20nm,0.8s,mb5.2
AVF Avril sur Loir 50.52 304⇓*i*P **P 05 34 23.9 -0.5**
AVF pmax pmax
comp=Z,20nm,0.8s,mb5.2
PLDF La Plantade 50.55 303 *e*P **P 05 34 24.2 -0.4**
KKM Kota Kinabalu 50.81 115 *e*P **P 05 34 29.8 +2.8**
comp=Z,70nm,1.3s,mb5.5
AGO Saint Agoulin 50.86 303 *e*P **P 05 34 26.1 -0.8**
HYF Humbligny 50.88 305 *e*P **P 05 34 27.0 -0.1**
LASF Ste Croix 50.88 301⇓*i*P **P 05 34 27.2 0.0**
comp=Z,144nm,1.3s,mb5.5
BGF Bois d'Agland 50.92 304 *e*P **P 05 34 26.8 -0.6**
comp=Z,92nm,1.5s,mb5.3
BGF Bois d'Agland 50.92 304 *e*P **P 05 34 26.8 -0.6**
comp=Z,46nm,1.5s,mb5.3
BGF Bois d'Agland 50.92 304 *e*P **P 05 34 26.8 -0.6**
BGF pmax pmax
comp=Z,46nm,1.5s,mb5.3
PYM Petit Puy Mans 51.02 303 *e*P **P 05 34 27.1 -1.0**
TCF Toulx Ste Croi 51.41 304⇓*i*P **P 05 34 31.0 -0.1**
comp=Z,177nm,1.5s,mb5.6
TCF Toulx Ste Croi 51.41 304⇓*i*P **P 05 34 31.0 -0.1**
comp=Z,88nm,1.5s,mb5.6
TCF Toulx Ste Croi 51.41 304⇓*i*P **P 05 34 31.0 -0.1**
TCF pmax pmax
comp=Z,88nm,1.5s,mb5.6
CAF Calviac 51.88 302⇓*i*P **P 05 34 34.7 +0.1**
comp=Z,29nm,1.0s,mb5.0
CAF Calviac 51.88 302⇓*i*P **P 05 34 34.7 +0.1**
comp=Z,14nm,1.0s,mb5.0
CAF Calviac 51.88 302⇓*i*P **P 05 34 34.7 +0.1**
CAF pmax pmax
comp=Z,14nm,1.0s,mb5.0
RJF Les Rejaudoux 52.15 303⇓*i*P **P 05 34 36.8 +0.2**
comp=Z,168nm,1.7s,mb5.5
RJF Les Rejaudoux 52.15 303⇓*i*P **P 05 34 36.8 +0.2**
comp=Z,84nm,1.7s,mb5.5
RJF Les Rejaudoux 52.15 303⇓*i*P **P 05 34 36.8 +0.2**
RJF pmax pmax
comp=Z,84nm,1.7s,mb5.5
MTLF Montolieu 52.23 300⇓*i*P **P 05 34 37.0 -0.2**
comp=Z,54nm,1.3s,mb5.1
MTLF Montolieu 52.23 300⇓*i*P **P 05 34 37.0 -0.2**
comp=Z,27nm,1.3s,mb5.1
MTLF Montolieu 52.23 300⇓*i*P **P 05 34 37.0 -0.2**
MTLF pmax pmax
comp=Z,27nm,1.3s,mb5.1
LDF La Druitiere 52.35 307⇓*i*P **P 05 34 37.1 -0.9**
comp=Z,14nm,0.7s,mb4.8
LDF La Druitiere 52.35 307⇓*i*P **P 05 34 37.1 -0.9**
comp=Z,7.3nm,0.6s,mb4.9
LDF La Druitiere 52.35 307⇓*i*P **P 05 34 37.1 -0.9**
LDF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
FLN La Foliniere 52.53 308 *e*P **P 05 34 38.5 -0.9**
comp=Z,42nm,0.8s,mb5.2
FLN La Foliniere 52.53 308 *e*P **P 05 34 38.5 -0.9**
comp=Z,21nm,0.8s,mb5.2
FLN La Foliniere 52.53 308 *e*P **P 05 34 38.5 -0.9**
FLN pmax pmax
comp=Z,21nm,0.8s,mb5.2
YSS Yuzh-Sakhalins 52.55 55 *e*P **P 05 34 42.0 +2.5**
MJAR Matsushiro Arr 52.61 69 P **P 05 34 41.0 +0.8**
MJAR pP pP 05 35 03.8 +0.5
MJAR Matsushiro Arr 52.61 69 P **P 05 34 41.0 +0.8**
comp=Z,0.9nm,0.3s,mb4.3,baz=285,slow=9.7,SNR=5.2
MJAR pP pP 05 35 03.8 +0.5
comp=Z,1.5nm,0.3s,baz=295,slow=6.9,SNR=1.5
ESK Eskdalemuir 52.66 316 *e*P **P 05 34 39.8 -0.3**
comp=Z,6.0nm,0.9s,mb5.0
ESK Eskdalemuir 52.66 316 *i*P **P 05 34 41.1 +1.0**
comp=Z,235nm,1.6s,mb5.7
LFF La Frestale 52.78 303 *e*P **P 05 34 41.1 -0.1**
MBAR Mbarara 52.79 235‖*e*P **P 05 34 42.3 +0.7**
GRR Gorron 52.87 307⇓*i*P **P 05 34 41.0 -0.9**
comp=Z,59nm,1.1s,mb5.2
GRR Gorron 52.87 307⇓*i*P **P 05 34 41.0 -0.9**
comp=Z,30nm,1.1s,mb5.2
GRR Gorron 52.87 307⇓*i*P **P 05 34 41.0 -0.9**
GRR pmax pmax
comp=Z,30nm,1.1s,mb5.2
MFF Saint Martin d 52.90 305⇓*i*P **P 05 34 41.2 -0.9**
comp=Z,235nm,1.6s,mb5.7
MFF Saint Martin d 52.90 305⇓*i*P **P 05 34 41.2 -0.9**
comp=Z,118nm,1.6s,mb5.7
MFF Saint Martin d 52.90 305⇓*i*P **P 05 34 41.2 -0.9**
MFF pmax pmax
comp=Z,118nm,1.6s,mb5.7
EPF Esparros 53.64 300 *e*P **P 05 34 46.3 -1.2**
SGMF Saint Gilles 54.00 307 *e*P **P 05 34 49.5 -0.6**
ETSF Etsaut 54.30 301⇓*i*P **P 05 34 52.4 0.0**
comp=Z,25nm,0.8s,mb5.0
ETSF Etsaut 54.30 301⇓*i*P **P 05 34 52.4 0.0**
comp=Z,13nm,0.8s,mb5.0
ETSF Etsaut 54.30 301⇓*i*P **P 05 34 52.4 0.0**
ETSF pmax pmax
comp=Z,13nm,0.8s,mb5.0
ROSF Rostrenen 54.44 308 *e*P **P 05 34 52.5 -0.8**
QUIF Quistinic 54.49 307⇓*i*P **P 05 34 53.8 +0.1**
ESDC Sonseca Array 57.85 298 P **P 05 35 17.5 -0.2**
comp=Z,5.4nm,0.8s,mb4.6,baz=63,slow=7.0,SNR=21
ESDC pP pP 05 35 39.6 -1.5
comp=Z,5.5nm,0.9s,baz=64,slow=7.0,SNR=4.8
ESLA Sonseca Array 57.85 298 *e*P **P 05 35 17.9 +0.2**
comp=Z,1.4nm,0.8s,mb4.0
TAM Tamanrasset 57.95 276 *e*P **P 05 35 18.2 -0.4**
comp=Z,21nm,1.5s,mb4.9
TAM Tamanrasset 57.95 276 *e*P **P 05 35 18.2 -0.4**
TAM pmax pmax
comp=Z,21nm,1.5s,mb5.0
PVIS Viseu 60.20 301 *e*P **P 05 35 34.4 +0.5**
comp=Z,39nm,1.6s,mb5.2
PMRV Marv??o 60.38 299 *e*P **P 05 35 35.7 +0.5**
comp=Z,38nm,1.6s,mb5.2
PBAR Barrancos 60.65 298 *e*P **P 05 35 37.5 +0.5**
comp=Z,30nm,1.7s,mb5.0
PESTR Estremoz 60.75 299 *e*P **P 05 35 38.0 +0.3**
comp=Z,20nm,1.8s,mb4.8
EVO Evora 61.19 298 *e*P **P 05 35 42.6 +1.9**
comp=Z,30nm,1.7s,mb5.0
SUMG Summit 61.27 341 *e*P **P 05 35 41.6 +0.9**
comp=Z,30nm,1.0s,mb5.3
SUMG Summit 61.27 341 *i*P **P 05 35 40.9 +0.2**
comp=Z,20nm,1.0s,mb5.1
PCVE Castro Verde 61.60 297 *e*P **P 05 35 43.7 +0.3**
comp=Z,36nm,1.7s,mb5.1
PBDV Barranco-do-Ve 61.69 297 *e*P **P 05 35 44.0 -0.1**
comp=Z,36nm,1.4s,mb5.2
LSZ Lusaka 65.69 227 *e*P **P 05 36 11.4 +0.9**
comp=Z,6.1nm,0.7s,mb4.5
LSZ Lusaka 65.69 227 *e*P **P 05 36 11.4 +0.9**
LSZ pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
TORD Torodi Ar. Bea 66.12 269 P **P 05 36 11.2 -2.2**
comp=Z,7.6nm,0.6s,mb4.7,baz=49,slow=5.9,SNR=73
TORD pP pP 05 36 34.8 -2.6
comp=Z,7.3nm,0.8s,baz=47,slow=6.0,SNR=6.3
COLD Coldfoot 71.94 16 *e*P **P 05 36 48.8 +0.2**
comp=Z,6.9nm,1.3s,mb4.3
INK Inuvik 73.92 9 *e*P **P 05 37 00.1 -0.1**
comp=Z,9.1nm,1.1s,mb4.4
INK Inuvik 73.92 9 *e*P **P 05 37 00.2 -0.1**
INK pmax pmax
comp=Z,9.0nm,1.1s
COLA College 74.45 16 *e*P **P 05 37 02.8 -0.6**
comp=Z,3.4nm,0.8s,mb4.1
COLA College 74.45 16 *e*P **P 05 37 02.8 -0.6**
COLA pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
ILAR Eielson Array 74.75 16 P **P 05 37 03.5 -1.6**
comp=Z,2.3nm,1.0s,mb3.8,baz=314,slow=4.1,SNR=16
ILAR pP pP 05 37 29.1 -0.6
comp=Z,3.4nm,1.0s,baz=315,slow=5.2,SNR=6.4
ILAR PKKPbc PKKPbc 05 56 35.5 +5.7
comp=Z,1.2nm,1.1s,baz=29,slow=2.1,SNR=5.0
LBTB Lobatse 74.88 222 *e*P **P 05 37 07.5 +1.1**
comp=Z,9.8nm,0.6s,mb4.7
LBTB Lobatse 74.88 222 *e*P **P 05 37 07.5 +1.1**
LBTB pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
DBIC Dimbokro 75.09 267 *e*P **P 05 37 07.6 -0.3**
comp=Z,8.5nm,1.0s,mb4.4
DBIC Dimbokro 75.09 267 P **P 05 37 06.4 -1.6**
comp=Z,3.8nm,0.8s,mb4.2,baz=51,slow=6.5,SNR=7.0
DBIC pP pP 05 37 32.2 -0.3
comp=Z,3.8nm,0.8s,baz=37,slow=10,SNR=2.2
DBIC Dimbokro 75.09 267 *e*P **P 05 37 07.6 -0.4**
DBIC pmax pmax
comp=Z,8.0nm,1.0s
TSUM Tsumeb 75.18 232 *e*P **P 05 37 09.3 +1.1**
comp=Z,9.4nm,0.9s,mb4.5
PAX Paxson 76.63 16 *e*P **P 05 37 16.4 +0.5**
comp=Z,2.1nm,0.7s,mb4.0
PAX Paxson 76.63 16 *e*P **P 05 37 16.4 +0.6**
PAX pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
DAWY Dawson 76.91 13 *e*P **P 05 37 17.7 +0.3**
BOSA Boshof 77.94 220 P **P 05 37 24.0 +0.4**
comp=Z,10.0nm,0.8s,mb4.6,baz=42,slow=7.5,SNR=14
YKA Yellowknife Ar 81.31 3 P **P 05 37 41.1 -0.3**
comp=Z,2.6nm,0.8s,mb4.1,baz=351,slow=5.6,SNR=7.0
YKA pP pP 05 38 04.7 -1.6
comp=Z,9.4nm,0.8s,baz=349,slow=5.0,SNR=9.4
SCHQ Schefferville 82.33 337 P **P 05 37 46.8 -0.1**
comp=Z,6.9nm,1.1s,mb4.4,baz=37,slow=5.2,SNR=6.8
DLBC Dease Lake 83.80 11 *e*P **P 05 37 55.0 +0.5**
ASAR Alice Springs 83.88 125 P **P 05 37 55.8 +0.5**
comp=Z,2.5nm,0.9s,mb4.0,baz=312,slow=5.0,SNR=4.7
ASAR pP pP 05 38 22.1 +1.8
comp=Z,3.0nm,0.9s,baz=326,slow=4.8,SNR=4.3
FFC Flin Flon 89.05 356 P **P 05 38 20.3 +0.2**
comp=Z,78nm,1.2s,mb5.6,SNR=5.0
FFC Flin Flon 89.05 356 *e*P **P 05 38 20.2 +0.1**
comp=Z,14nm,1.0s,mb4.9
FFC Flin Flon 89.05 356 *e*P **P 05 38 21.0 +0.9**
CTA Charters Tower 90.14 115 P **P 05 38 25.6 -0.2**
comp=Z,2.9nm,0.5s,mb4.7,baz=188,slow=20,SNR=4.3
EDM Edmonton 90.63 3 *e*P **P 05 38 28.1 +0.5**
EDM *e* pP 05 38 53.2 +0.4
STKA Stephens Creek 94.42 127 P **P 05 38 45.8 +0.6**
comp=Z,3.3nm,0.9s,mb4.7,baz=299,slow=10,SNR=3.7
WALA Waterton Lakes 94.77 4 *e*P **P 05 38 45.7 -1.0**
comp=Z,0.1nm,0.9s
AGMN Agassiz Nation 94.91 352 *e*P **P 05 38 47.3 0.0**
comp=Z,12nm,1.4s,mb5.1
AGMN *e* pP 05 39 12.1 -0.5
MSO Missoula 96.99 4 *e*P **P 05 38 59.4 +2.6**
comp=Z,17nm,0.6s,mb4.7
LAO LASA Array 97.25 358 *e*P **P 05 38 58.8 +0.8**
comp=Z,4.6nm,0.9s,mb4.9
PLCA Paso Flores 150.17 250 PKPbc PKPbc 05 45 15.3 -0.3
PLCA pPKPbc pPKPbc 05 45 40.3 -1.4
PLCA Paso Flores 150.17 250 PKPbc PKPbc 05 45 15.3 -0.2
comp=Z,6.2nm,1.0s,baz=100,slow=3.6,SNR=6.6
PLCA pPKPbc pPKPbc 05 45 40.3 -1.4
comp=Z,4.7nm,1.0s,baz=90,slow=1.0,SNR=3.0

MOS **12** *05:25:55.8±1.2, 11°.27S×166°.11E, h33km, mb5.3/38, MS5.3/38, Error ellipse: s-maj=9.7km s-min=8.3km az=73.0*

NEIC **12** *05:25:57.7±0.2, 11°.43S×166°.23E, h38km, mb5.2/88, ME5.0, MS5.4/187, MW5.9, MW5.8, Error ellipse: s-maj=7.7km s-min=5.2km az=148.0 Broadband fault plane solution: P waves. NP1:*ϕ_s*100.00000°, δ60.00000°, λ90.00000°. NP2:*ϕ_s*280.00000°, δ30.00000°, λ90.00000°. Principal axes: T Plg75.0000°, Azm10.0000°; N Plg0.0000°, Azm0.0000°; P Plg15.0000°, Azm190.0000°; Moment Tensor Solution. s68 Moment tensor: Scale 10*^{17} *Nm; Mrr8.71; Mθθ-2.85; Mφφ-5.86; Mrθ0.42; Mθφ2.99; Mφr0.46; Best double couple: M*$_0$*8.30000×10*^{17} *NP1:* ϕ_s*332.00000°, δ46.00000°, λ95.00000°. NP2:* ϕ_s*145.00000°, δ45.00000°, λ85.00000°. Principal axes: T 8.7500, Plg86.0000°, Azm319.0000°; N -1.0400, Plg3.0000°, Azm148.0000°; P -7.7000, Plg0.0000°, Azm58.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NOU **12** *05:25:58.2±1.6, 11°.22S×166°.35E, h30km, MD4.4, ML4.8, MS2.0*

ISCJB **12** *05:25:58.5±1.0, 11°.46S±0°.03×166°.16E±0°.03, h55km±8km, mb5.3/157, MS5.3/224, Error ellipse: s-maj=5.6km s-min=4.6km az=169.1*

DJA **12** *05:26:01, 11°.63S×166°.23E, h66km, Mw6.0/40*

IDC **12** *05:26:01.1±2.8, 11°.40S×166°.25E, h69km±24km, mb4.7/20, mb1 4.8/20, mb1mx4.8/21, mbtmp4.7/20, MS5.1/18, Ms1 5.1/18, ms1mx5.1/20, Error ellipse: s-maj=14.3km s-min=10.5km az=149.0*

GCMT **12** *05:26:01.7±0.1, 11°.49S×165°.99E, h47km, MW5.8, Moment Tensor Solution. s107,c225; s66,c82; Moment tensor: Scale 10*^{17}*Nm; Mrr6.08±.06; Mθθ-0.29±.05; Mφφ-5.79±.05; Mrθ-0.09±.05; Mθφ1.75±.04; Mφr0.46±.05; Best double couple: M*$_0$*6.20000×10*^{17} *NP1:*ϕ_s*163.00000°, δ43.00000°, λ89.00000°. NP2:*ϕ_s*344.00000°, δ47.00000°, λ91.00000°. Principal axes: T 6.1000, Plg88.0000°, Azm266.0000°; N 0.2200, Plg0.0000°, Azm164.0000°; P -6.3200, Plg2.0000°, Azm74.0000°; Data Used: II IU IC G CN. Surface waves: sta=105, comp=206, per= 50.*

BJI **12** *05:26:04.1, 10°.64S×166°.09E, h78km, mb5.8/49, mb5.2/56, Ms5.4/56, Ms7 5.3/50*

ISC 12 05:26:01.5±0.7, 11°.47S±0°.03×166°.20E±0°.03, h68km±6km, h95km±.9km: pP-P, n601, σ1s10/327, mb5.2/158, 20C-4D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.47**	**288**	*e*Pn		**Pn**	**05 27 33.5**	**-0.8**
	3μm,0.7s							
HNR	**Honiara**	**6.47**	**288**	*e*P		**Pn**	**05 27 33.5**	**-0.7**
HNR					pmax	pmax		
	comp=Z,3μm,0.7s							
DZM	**Mont Dzumac**	**10.54**	**179**	*e*Pn		**Pn**	**05 28 29.5**	**-0.4**
	comp=Z,72nm,0.3s							
DZM				*e*Sn		**Sn**	**05 30 21.3**	**-5.1**
	comp=Z,75nm,0.3s							
DZM				*e*LR		LR	05 30 53.5	
	comp=Z,37μm,24.2s							
DZM	**Mont Dzumac**	**10.54**	**179**	*e*P		**Pn**	**05 28 28.6**	**-1.2**
DZM				*e*S		**Sn**	**05 30 20.6**	**-5.7**
DZM				AMP			05 30 59.7	
	comp=Z,2μm,0.5s							
NOUC	**Port Laguerre**	**10.57**	**179**	*e*P		**Pn**	**05 28 29.9**	**-0.3**
NOUC				*e*S		**Sn**	**05 30 22.2**	**-4.8**
NOUC				AMP			05 30 51.4	
	comp=Z,94nm,0.8s							
BAYA	**Yate Dam**	**10.64**	**177**	*e*P		**Pn**	**05 28 31.5**	**+0.2**
BAYA				*e*S		**Sn**	**05 30 24.2**	**-4.6**
BAYA				AMP			05 30 58.7	
	comp=Z,16nm,17.2s							
MSVF	**Nonsavu**	**13.05**	**120**	Pn		**Pn**	**05 29 07.2**	**+3.1**
	comp=Z,5μm,1.1s,SNR=14							
MSVF	**Nonsavu**	**13.05**	**120**	*e*Pn		**Pn**	**05 29 06.4**	**+2.3**
	comp=Z,1μm,1.3s							
FUNA	**Funafuti**	**13.13**	**78**	*e*Pn		**Pn**	**05 29 04.7**	**-0.6**
	comp=Z,633nm,1.3s							
PMG	**Port Moresby**	**18.84**	**274**	*e*P		**Pn**	**05 30 17.2**	**-0.2**
	comp=Z,151nm,1.0s							
PMG	**Port Moresby**	**18.84**	**274**	*d*iP		**Pn**	**05 30 18.3**	**+1.0**
PMG	**Port Moresby**	**18.84**	**274**	P		**Pn**	**05 30 25.5**	**+8.2**
EIDS	**Eidsvold**	**19.89**	**224**	*e*P		**Pn**	**05 30 29.6**	**-0.1**
	comp=Z,143nm,1.1s							
KWAJ	**Kwajalein Atol**	**20.19**	**4**	*e*P		**P**	**05 30 31.8**	**+1.0**
	comp=Z,85nm,0.7s							
CTA	**Charters Tower**	**21.00**	**243**	P		**P**	**05 30 40.6**	**+1.0**
	comp=Z,20nm,0.5s,mb4.7,baz=72,slow=11,SNR=20							
CTA				S		**S**	**05 34 31.9**	**+2.0**
	comp=Z,40nm,1.2s,baz=168,slow=18,SNR=1.6							
CTA				LR		LR	05 37 49.5	
	comp=Z,13μm,19.6s,baz=54,slow=34							
CTA	**Charters Tower**	**21.00**	**243**	P		**P**	**05 30 40.6**	**+1.0**
CTA				S		**S**	**05 34 31.9**	**+2.0**
CTAO	**Charters Tower**	**21.00**	**243**	*e*P		**P**	**05 30 40.9**	**+1.4**
	comp=Z,139nm,1.1s,mb5.2							
CTAO				LR		LR		
	comp=Z,12μm,20.0s							
CTAO	**Charters Tower**	**21.00**	**243**	*e*P		**P**	**05 30 40.9**	**+1.3**
CTAO					pmax	pmax		
	comp=Z,139nm,1.1s,mb5.2							
CTAO					MLR	MLR		
	comp=Z,12μm,20.0s							
CTAO	**Charters Tower**	**21.00**	**243**	P		**P**	**05 30 41.0**	**+1.4**
	comp=Z,5μmcomp=Z,144nm,1.2s,mb5.2							
AFI	**Afiamalu**	**21.62**	**99**	*e*P		**P**	**05 30 48.0**	**+1.7**
	comp=Z,3μm,2.1s,mb6.2							
AFI				LR		LR		
	comp=Z,8μm,22.0s							
AFI	**Afiamalu**	**21.62**	**99**	P		**P**	**05 30 46.5**	**+0.2**
	comp=Z,128nm,1.0s,mb5.2,baz=256,slow=8.3,SNR=8.5							
AFI				S		**S**	**05 34 49.5**	**+7.4**
	comp=Z,14nm,0.6s,baz=343,slow=19,SNR=2.6							
AFI				LR		LR	05 37 28.0	
	comp=Z,7μm,21.6s,baz=101,slow=32							
COEN	**Coen**	**22.59**	**261**	*e*P		**P**	**05 30 57.6**	**+1.0**
	comp=Z,746nm,1.0s,mb6.0							
COEN	**Coen**	**22.59**	**261**	P		**P**	**05 30 56.8**	**+0.2**
	comp=Z,448nm,1.8s,mb5.5							
ARMA	**Armidale**	**23.20**	**213**	*e*P		**P**	**05 31 00.8**	**-1.9**
ARMA				*e*S		**S**	**05 35 08.4**	**-0.9**
ARMA	**Armidale**	**23.20**	**213**	*e*P		**P**	**05 31 02.5**	**-0.2**
	comp=Z,300nm,1.1s,mb5.5							
OUZ	**Omahuta**	**24.58**	**165**	*e*P		**P**	**05 31 15.2**	**0.0**
	comp=Z,154nm,1.3s,mb5.3							
WCZ	**Waipu Caves**	**25.45**	**164**	PN		**P**	**05 31 23.7**	**+0.5**
RIV	**Riverview**	**26.16**	**209**	*e*P		**P**	**05 31 29.4**	**-0.2**
CNB	**Canberra Magne**	**28.23**	**210**	*e*P		**P**	**05 31 46.1**	**-2.0**
URZ	**Urewera**	**28.41**	**162**	P		**P**	**05 31 48.2**	**-1.5**
	comp=Z,13nm,0.5s,mb4.7,baz=7.8,slow=11,SNR=9.1							
URZ				LR		LR	05 41 14.7	
	comp=Z,8μm,21.6s,baz=343,slow=32							
CAN	**Canberra**	**28.42**	**211**	*e*P		**P**	**05 31 50.0**	**+0.2**
	comp=Z,102nm,1.4s,mb5.2							
CAN				LR		LR		
	comp=Z,4μm,22.0s							
CAN	**Canberra**	**28.42**	**211**	*e*P		**P**	**05 31 50.0**	**+0.2**
CAN					pmax	pmax		
	comp=Z,102nm,1.4s,mb5.2							
CAN					MLR	MLR		
	comp=Z,4μm,22.0s							
BHHZ	**Black Hill Sta**	**29.25**	**164**	PN		**P**	**05 31 56.4**	**-0.7**

STKA **Stephens Creek** 30.45 224 *e*P P 05 32 08.0 +0.2
comp=Z,84nm,2.0s,mb5.0
STKA **Stephens Creek** 30.45 224 P P 05 32 08.4 +0.6
comp=Z,25nm,0.8s,mb4.9,baz=46,slow=9.0,SNR=24
STKA PcP PcP 05 35 06.3 +0.4
comp=Z,27nm,0.9s,baz=359,slow=2.5,SNR=5.5
STKA LR LR 05 43 49.7
comp=Z,9µm,19.0s,baz=45,slow=35
WAKE **Wake Island** 30.56 1 PFAKE 05 32 20.0 +11
WAKE LR LR
comp=Z,6µm,22.0s
SNZO **South Karori** 30.65 167 PFAKE 05 32 20.0 +11
SNZO LR LR
comp=Z,8µm,19.0s
KHZ **Kahutara** 31.49 170 *e*P P 05 32 15.9 -0.9
comp=Z,114nm,1.0s,mb5.5
TOO **Toolangi** 31.95 212 *e*P P 05 32 21.6 +0.7
TOO *e*S S 05 37 27.2 -0.2
RPZ **Rata Peaks** 32.40 173 *e*P P 05 32 24.1 -0.7
comp=Z,181nm,1.1s,mb5.7
RPZ **Rata Peaks** 32.40 173 P P 05 32 24.3 -0.5
comp=Z,96nm,0.9s,mb5.5,baz=341,slow=4.7,SNR=22
JCZ **Jackson Bay** 32.56 177 PN P 05 32 26.6 +0.4
GUMO **Guam** 32.67 319 PFAKE 05 32 40.0 +13
GUMO LR LR
comp=Z,2µm,20.0s
ASAR **Alice Springs** 33.00 244 P P 05 32 29.8 -0.6
comp=Z,20nm,0.7s,mb5.0,baz=73,slow=9.8,SNR=115
ASAR PcP PcP 05 35 12.9 -0.1
comp=Z,6.4nm,0.6s,baz=95,slow=3.0,SNR=7.1
ASAR S S 05 37 38.3 -5.9
comp=Z,0.5nm,0.7s,baz=76,slow=16,SNR=2.4
KAKA **Kakadu** 33.02 264 *e*P P 05 32 30.0 -0.6
comp=Z,41nm,0.9s,mb5.3
KAKA **Kakadu** 33.02 264 *e*P P 05 32 30.1 -0.5
comp=Z,143nm,0.9s,mb5.8
KAKA **Kakadu** 33.02 264 P P 05 32 29.2 -1.4
comp=Z,621nmcomp=Z,68nm,0.9s,mb5.5
WKZ **Wanaka** 33.33 176 PN P 05 32 32.4 -0.5
ODZ **Otahua Downs** 33.67 174 *e*P P 05 32 35.0 -0.9
comp=Z,1µm,2.0s,mb6.3
ODZ **Otahua Downs** 33.67 174 PN P 05 32 34.2 -1.7
MLZ **Mavora Lakes** 33.80 177 PN P 05 32 36.9 -0.1
TUZ **Tuapeka** 34.49 176 *e*PN P 05 32 41.8 -1.1
KNA **Kununurra** 36.59 259 P P 05 33 01.7 +0.3
comp=Z,2µmcomp=Z,340nm,0.9s,mb6.3
JOHN **Johnston Islan** 36.90 41 PFAKE 05 33 10.0 +6.1
JOHN LR LR
comp=Z,6µm,22.0s
XMAS **Kiritimati** 38.56 72 PFAKE 05 33 30.0 +12
XMAS LR LR
comp=Z,4µm,20.0s
NLAI **Namlea** 39.59 279 P P 05 33 26.6 -0.1
comp=Z,6µmcomp=Z,222nm,2.1s,mb5.6
FITZ **Fitzroy Crossi** 39.70 255 *e*P P 05 33 27.8 +0.2
comp=Z,25nm,0.9s,mb5.0
FITZ **Fitzroy Crossi** 39.70 255 P P 05 33 26.6 -1.0
LBMI **Labuha** 39.90 283 P P 05 33 32.1 +2.9
comp=Z,4µmcomp=Z,210nm,1.1s,mb5.9
FORT **Forrest** 40.17 235 *e*P P 05 33 30.8 -0.4
comp=Z,89nm,1.0s,mb5.5
FORT **Forrest** 40.17 235 *e*P P 05 33 31.7 +0.5
comp=Z,138nm,1.1s,mb5.7
MIDW **Midway** 42.54 22 PFAKE 05 34 00.0 +9.4
MIDW LR LR
comp=Z,5µm,22.0s
SGSI **Sangihe** 43.16 288 P P 05 33 57.2 +1.2
comp=Z,9µmcomp=Z,389nm,2.3s,mb5.7
PPT **Papeete** 43.16 103 *e*S S 05 40 35.8 +18
comp=Z,2µm,27.2s
PPT *e*LQ 05 44 08.0
comp=Z,10µm,31.8s
PPT *e*LR LR 05 46 02.3
comp=Z,12µm,28.8s,baz=277
PPT **Papeete** 43.16 103 LR LR 05 48 24.7
comp=Z,2µm,19.5s,baz=269,slow=31
MMRI **Maumere** 43.35 270 P P 05 33 56.0 -1.5
comp=Z,4µmcomp=Z,233nm,1.0s,mb5.8
KMSI **Cibinong** 43.61 283 P P 05 33 58.6 -1.0
comp=Z,873nm,0.5s
DAV **Davao City (W)** 44.41 293 PFAKE 05 34 20.0 +14
DAV LR LR
comp=Z,2µm,21.0s
DAV **Davao City (W)** 44.41 293⇑ *e*P P 05 34 02.1 -3.8
MBWA **Marble Bar** 45.48 252 *e*P P 05 34 15.1 +0.7
comp=Z,76nm,0.9s,mb5.4
MBWA LR LR
comp=Z,4µm,20.0s
MBWA **Marble Bar** 45.48 252 P P 05 34 14.5 +0.1
comp=Z,3µmcomp=Z,107nm,1.0s,mb5.5
MRSI **Marisa** 45.54 282 P P 05 34 12.8 -2.1
comp=Z,1µmcomp=Z,41nm,1.9s,mb4.8
BKSI **Bulukumba** 45.95 274 P P 05 34 16.1 -2.1
comp=Z,2µmcomp=Z,56nm,1.2s,mb5.2
KAPI **Kappang** 46.37 274 P P 05 34 21.5 0.0
comp=Z,614nm,0.9s,mb6.3,SNR=7.2
KAPI **Kappang** 46.37 274 *e*P P 05 34 21.2 -0.3
comp=Z,86nm,0.9s,mb5.5
KAPI LR LR
comp=Z,1µm,21.0s
KAPI **Kappang** 46.37 274 P P 05 34 19.9 -1.5
comp=Z,33nm,1.1s,mb5.0,baz=119,slow=4.9,SNR=11
KAPI S S 05 41 03.8 -0.6
comp=Z,2.2nm,0.3s,baz=22,slow=16,SNR=2.3
KAPI **Kappang** 46.37 274 P P 05 34 21.3 -0.2
comp=Z,1µmcomp=Z,59nm,1.0s,mb5.3
SPSI **Sidrap Palu** 46.56 275 P P 05 34 23.2 +0.2
comp=Z,2µmcomp=Z,75nm,1.2s,mb5.3
TTSI **Tana Toraja** 46.70 277 P P 05 34 23.1 -1.0
comp=Z,2µmcomp=Z,53nm,1.1s,mb5.2
PCI **Palu** 47.19 279 P P 05 34 30.0 +2.1
comp=Z,5µmcomp=Z,253nm,1.2s,mb5.8
KIP **Kipapa** 48.00 47 PFAKE 05 34 40.0 +6.0
KIP LR LR
comp=Z,3µm,21.0s
POHA **Pohakuloa** 48.81 51 PFAKE 05 34 50.0 +10
POHA LR LR
comp=Z,4µm,21.0s
KLBR **Kellerberrin** 48.86 238 *e*P P 05 34 40.3 -0.2
comp=Z,122nm,1.3s,mb5.7
NWAO **Narrogin (SRO)** 49.60 236 *e*P P 05 34 46.0 -0.2
comp=Z,344nm,1.6s,mb6.0
NWAO LR LR
comp=Z,8µm,20.0s
KHKI **Kahang-Kahang** 49.88 269 P P 05 34 54.1 +5.5
KBKI **Kotabaru** 50.21 275 P pP 05 35 02.5 -5.9
MYLDM **Lahad Datu** 50.25 287 P P 05 34 52.9 +1.5
MYLDM **Lahad Datu** 50.25 287 P P 05 34 51.3 -0.1
comp=Z,3µmcomp=Z,127nm,1.9s,mb5.5
IGBI **Denpasar** 50.27 268 P pP 05 35 02.5 -6.4
TSM **Tawau** 50.56 285 P P 05 34 55.5 +1.8
SDKM **Sandakan** 51.63 287 P P 05 35 02.9 +1.1
GMJI **Gumukmas** 52.02 268 P pP 05 35 14.6 -7.4
KKM **Kota Kinabalu** 52.68 287 *e*P P 05 35 10.1 +0.5
comp=Z,1µm,2.3s
KKM LR LR
comp=Z,481nm,20.0s
KKM **Kota Kinabalu** 52.68 287 P P 05 35 11.4 +1.8
KKM **Kota Kinabalu** 52.68 287 P P 05 35 07.9 -1.7
comp=Z,4µmcomp=Z,178nm,1.9s,mb5.8
TAOE **Nuku Hiva Isla** 52.82 92 *e*S S 05 42 47.0 +13
comp=Z,1µm,26.0s
TAOE *e*LQ 05 48 17.6
comp=Z,1µm,25.5s
TAOE *e*LR LR 05 50 34.2
comp=Z,5µm,27.1s,baz=266
PWJI **Pagerwojo** 53.66 268 P P 05 35 14.3 -2.4
comp=Z,2µmcomp=Z,123nm,1.0s,mb5.9
SJI **Sawahan** 53.73 269 P P 05 35 16.0 -1.3
comp=Z,5µmcomp=Z,184nm,1.0s,mb6.1
NGJI **Ngawi** 54.09 269 P pP 05 35 30.0 -7.4
PCJI **Pacitan** 54.25 268 P P 05 35 20.0 -1.0
comp=Z,3µmcomp=Z,278nm,0.9s,mb6.3
MJAR **Matsushiro Arr** 54.55 332 P P 05 35 20.7 -2.1
comp=Z,8.1nm,0.7s,mb4.8,baz=160,slow=8.2,SNR=15
MJAR LR LR 05 56 37.6
comp=Z,1µm,21.1s,baz=160,slow=34
MAJO **Matsushiro** 54.55 332 *e*P P 05 35 20.6 -2.2
comp=Z,22nm,0.9s,mb5.2
MAJO LR LR
comp=Z,2µm,21.0s
MAJO **Matsushiro** 54.55 332 *e*P P 05 35 20.6 -2.2
MAJO pmax pmax
comp=Z,22nm,0.9s,mb5.2
MAJO MLR MLR
comp=Z,2µm,21.0s
MAT **Matsushiro** 54.55 332 P P 05 35 20.8 -2.0
MAT S S 05 42 56.0 -1.1
BTM **Bintulu** 54.79 282 P P 05 35 26.4 +1.4
SBUM **Sibu** 55.42 281 P P 05 35 30.9 +1.4
SBUM **Sibu** 55.42 281 P P 05 35 30.7 +1.2
comp=Z,2µmcomp=Z,67nm,2.2s,mb5.3
STKI **Sintang** 55.53 278 P P 05 35 32.2 +1.9
comp=Z,100nm,1.8s,mb5.5
BJII **Banjamegara** 55.81 269 P P 05 35 31.5 -0.8
comp=Z,3µmcomp=Z,107nm,1.8s,mb5.6
NACB **Ninganchiao** 56.15 309 *e*P P 05 35 34.8 +0.3
comp=Z,33nm,0.9s,mb5.4
SSLB **Suanglung** 56.42 309 *e*P P 05 35 34.1 -2.4
comp=Z,16nm,0.8s,mb5.1
YHNB **Yeheng** 56.59 310 *e*P P 05 35 36.1 -1.5
comp=Z,33nm,0.8s,mb5.4
YHNB LR LR
comp=Z,2µm,22.0s
TATO **Taipei** 56.68 310 PFAKE 05 35 50.0 +12
TATO LR LR
comp=Z,2µm,20.0s
KSM **Kuching** 57.01 279 *e*P P 05 35 40.5 -0.4
comp=Z,174nm,1.6s,mb5.8
KSM LR LR
comp=Z,595nm,21.0s
KSM **Kuching** 57.01 279 P P 05 35 42.1 +1.3
KSM **Kuching** 57.01 279 P P 05 35 39.0 -1.9
comp=Z,2µmcomp=Z,69nm,1.7s,mb5.4
RKT **Rikitea** 57.03 110 *e*S S 05 43 43.8 +13
comp=Z,1µm,29.2s
RKT *e*LQ 05 50 02.5
comp=Z,3µm,33.2s
RKT *e*LR LR 05 52 27.2
comp=Z,12µm,27.0s,baz=278
ERM **Erimo** 57.28 340 PFAKE 05 35 50.0 +7.8
ERM LR LR
comp=Z,3µm,22.0s
ERM **Erimo** 57.28 340 *i*P P 05 35 44.6 +2.4
DRV **Dumont d'Urvil** 57.88 192 P P 05 35 50.0 +3.9
DRV S S 05 43 47.0 +6.5
DRV SS SS 05 47 48.0 +16
DRV L 05 50 00.0
DRV **Dumont d'Urvil** 57.88 192 P P 05 35 50.0 +3.9
DRV S S 05 43 47.0 +6.5
DRV SS SS 05 47 48.0 +16
DRV L 05 50 00.0
LEM **Lembang** 57.94 269 P P 05 35 47.6 +0.2
comp=Z,3µmcomp=Z,202nm,0.8s,mb6.2
YUK **Yuzh-Kuril'sk** 58.26 343⇑ *i*P P 05 35 40.2 -8.8
YUK *i* 05 38 01.4
YUK *i*S S 05 44 03.3 +17
YUK *i*SS SS 05 47 40.0 +1.0
YUK *i*SSS 05 49 53.0
YUK pmax pmax
comp=E,140nm,7.3s
YUK pmax pmax
comp=Z,160nm,7.3s
TPI **Tanjungpandan** 58.64 274 P P 05 35 55.0 +2.7
comp=Z,2µmcomp=Z,58nm,1.8s,mb5.3
QZH **Quanzhou** 58.86 308⇑ *i*P P 05 35 52.9 -0.7
QZH S S 05 43 48.0 -6.4
QZH pmax pmax
comp=Z,1µm,4.0s
QZH LR LR
comp=N,1µm,16.0s
QZH LR LR
comp=E,1µm,15.3s
QZH LR LR
comp=Z,3µm,24.7s
PPBI **Pangkal Pinang** 60.24 274 P P 05 36 05.9 +2.5
comp=Z,43nm,2.1s,mb5.1
SSE **Sheshan** 60.46 316 *e*P P 05 36 04.8 +0.3
SSE pP pP 05 36 27.4 +5.1
SSE sP sP 05 36 37.8 +8.0
SSE PcP PcP 05 36 47.7 -1.0
SSE S S 05 44 15.2 +0.3
SSE pmax pmax
comp=Z,37nm,0.7s,mb5.5
SSE pmax pmax
comp=Z,450nm,8.1s
SSE LR LR
comp=N,740nm,26.1s
SSE LR LR
comp=E,890nm,26.1s
SSE LR LR
comp=Z,2µm,25.0s
KSRS **Korea Array** 60.48 325 P P 05 36 03.9 -0.5
comp=Z,3.3nm,0.7s,mb4.5,baz=136,slow=7.4,SNR=13
KSRS PcP PcP 05 36 45.5 -3.0
comp=Z,4.0nm,0.8s,baz=138,slow=6.7,SNR=4.8
INCN **Inchon** 61.22 325 PFAKE 05 36 20.0 +11
INCN LR LR
comp=Z,1µm,21.0s
MDSI **Maura Dua** 61.71 271 P P 05 36 11.2 -2.1
comp=Z,1µmcomp=Z,40nm,2.4s,mb5.0
YSS **Yuzh-Sakhalins** 61.82 342 PFAKE 05 36 30.0 +17
YSS LR LR
comp=Z,719nm,20.0s
YSS **Yuzh-Sakhalins** 61.82 342 *ce*P P 05 36 13.0 -0.3
YSS *e**SP sP 05 36 47.0 +8.3
YSS *e* 05 38 25.0
YSS *e*S S 05 44 30.0 -1.5
YSS *e*PS 05 44 50.0
YSS *e*SS SS 05 48 30.0 -4.9
YSS pmax pmax
comp=Z,500nm,6.0s
GZH **Guangzhou** 62.09 304 P P 05 36 16.0 +0.4
GZH LR LR
comp=N,1µm,20.7s
GZH LR LR
comp=E,1µm,22.7s
GZH LR LR
comp=Z,2µm,24.2s
SKR **Severo-Kuril's** 62.51 353 *e*P P 05 36 17.0 -0.8
SKR pmax pmax
comp=N,1µm,16.0s
SKR pmax pmax
comp=E,1µm,16.0s
SKR pmax pmax
comp=Z,1µm,16.0s
SKR MLR MLR
comp=N,1µm,18.0s
SKR MLR MLR
comp=E,1µm,18.0s
SKR MLR MLR
comp=Z,1µm,18.0s
NJ2 **Nanjing** 62.63 315 *e*P P 05 36 19.2 +0.1
NJ2 pP pP 05 36 42.2 +5.3
NJ2 PP PP 05 38 37.0 -0.7
NJ2 S S 05 44 37.7 -4.6
NJ2 pmax pmax
comp=Z,50nm,1.1s,mb5.4
NJ2 pmax pmax
comp=Z,620nm,5.1s
NJ2 LR LR
comp=N,2µm,22.4s
NJ2 LR LR
comp=E,2µm,22.2s
NJ2 LR LR
comp=Z,7µm,23.0s
QIZ **Qiongzhong** 63.27 298 P P 05 36 24.5 +1.0
QIZ PP PP 05 38 45.3 +1.7
QIZ pmax pmax
comp=Z,35nm,2.0s,mb4.9
QIZ pmax pmax
comp=Z,690nm,7.1s
QIZ LR LR
comp=N,860nm,21.6s
QIZ LR LR
comp=E,730nm,23.7s
QIZ LR LR
comp=Z,3µm,23.7s
QIZ **Qiongzhong** 63.27 298 PFAKE 05 36 40.0 +16
QIZ LR LR
comp=Z,3µm,22.0s
MYKOM **Kota Tinggi** 63.35 278 P P 05 36 25.5 +1.3
MYKOM **Kota Tinggi** 63.35 278 P P 05 36 26.9 +2.7
comp=Z,2µmcomp=Z,62nm,2.1s,mb5.2
KGM **Kluang** 63.91 278 P P 05 36 29.3 +1.4
PET **Petropavlovsk** 64.56 355 PFAKE 05 36 40.0 +8.7
PET LR LR
comp=Z,2µm,21.0s
PET **Petropavlovsk** 64.56 355 *e*P P 05 36 25.4 -5.9
PET *e*S S 05 45 01.6 -3.8
PET *e*SS SS 05 49 23.3 +5.9
PET pmax pmax
comp=Z,300nm,12.6s
PET pmax pmax
comp=Z,300nm,3.9s
KTGM **Kuala Trenggan** 64.92 281 P P 05 36 35.8 +1.4
MDJ **Mudanjiang** 64.93 332 P P 05 36 33.2 -0.7
MDJ pP pP 05 36 55.6 +3.7
MDJ sP sP 05 37 05.9 +6.5
MDJ S S 05 45 07.4 -2.9
MDJ ScS ScS 05 46 18.7 -4.0
MDJ pmax pmax
comp=Z,22nm,2.1s,mb4.6
MDJ pmax pmax
comp=Z,570nm,9.5s
MDJ LR LR
comp=N,990nm,31.3s
MDJ LR LR
comp=E,570nm,33.2s
MDJ LR LR
comp=Z,1µm,27.5s
MDJ **Mudanjiang** 64.93 332 *e*P P 05 36 33.4 -0.6
comp=Z,48nm,1.5s,mb5.1
MDJ LR LR
comp=Z,890nm,20.0s
DL2 **Dalian** 65.08 323 P P 05 36 35.0 0.0
DL2 S S 05 45 08.8 -3.6
DL2 sS sS 05 45 44.3 +1.4
DL2 pmax pmax
comp=Z,20nm,1.0s,mb4.9
DL2 pmax pmax
comp=Z,340nm,8.5s
DL2 LR LR
comp=N,490nm,22.0s
DL2 LR LR
comp=E,580nm,22.9s
DL2 LR LR
comp=Z,1µm,23.3s
SDSI **Sungai Dareh** 65.10 274 P P 05 36 37.1 +1.4
comp=Z,2µmcomp=Z,55nm,2.4s,mb5.0
HABR **Khabarovsk** 65.74 338 *e*P P 05 36 37.2 -1.9
HABR *e* 05 37 07.9
HABR S S 05 45 15.4 -4.7
HABR *e* 05 46 23.2
HABR *e*SS SS 05 49 32.7 -3.3
HABR pmax pmax
comp=Z,110nm,1.9s,mb5.4
HABR pmax pmax
comp=N,51nm,2.3s
HABR pmax pmax
comp=E,28nm,1.0s
HABR MLR MLR
comp=Z,470nm,17.0s
BKNI **Bangkinang** 65.75 276 P P 05 36 42.3 +2.4
comp=Z,4µmcomp=Z,228nm,1.6s,mb5.8
FRIM **Kepong** 65.85 279 P P 05 36 41.8 +1.3
SNY **Shenyang** 65.93 326 ⇑P P 05 36 39.6 -0.8
SNY S S 05 45 20.0 -2.7
SNY pmax pmax
comp=Z,18nm,1.7s,mb4.6
SNY LR LR
comp=N,530nm,19.2s
SNY LR LR
comp=E,820nm,22.8s
SNY LR LR
comp=Z,1µm,26.4s
CASY **Casey** 66.15 201⇑ *i*P P 05 36 40.6 -0.9
CASY **Casey** 66.15 201 *e*P P 05 36 40.8 -0.7
comp=Z,267nm,1.4s,mb5.9
CASY LR LR
comp=Z,2µm,22.0s
PPI **Padang Panjang** 66.21 275 P P 05 36 45.2 +2.3
comp=Z,2µmcomp=Z,64nm,1.1s,mb5.4
CN2 **Changchun** 66.33 329 *e*P P 05 36 41.1 -1.9
CN2 epP pP 05 37 05.7 +4.7
CN2 esP sP 05 37 16.6 +8.1
CN2 PP PP 05 39 11.0 +1.1
CN2 *e*S S 05 45 23.1 -4.4
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1µm,18.0s
CN2 LR LR
comp=E,1µm,18.0s
CN2 LR LR
comp=Z,600nm,19.0s
SBA **Scott Base** 66.38 180 *e*P P 05 36 43.0 +0.2
comp=Z,213nm,1.3s,mb5.8
SBA LR LR
comp=Z,2µm,20.0s
SBA **Scott Base** 66.38 180 *e*P P 05 36 43.0 +0.2
SBA pmax pmax
comp=Z,213nm,1.3s,mb5.8
SBA MLR MLR
comp=Z,2µm,20.0s
IPM **Ipoh** 66.73 280 P P 05 36 47.4 +1.3
IPM **Ipoh** 66.73 280 P P 05 36 45.2 -1.0
comp=Z,3µmcomp=Z,132nm,1.7s,mb5.5
MNSI **Mandailing Nat** 67.28 276 P P 05 36 50.3 +0.6
comp=Z,7µmcomp=Z,80nm,0.7s,mb5.7
KULM **Kulim** 67.30 281 *e*P P 05 36 49.4 -0.3
comp=Z,223nm,1.8s,mb5.7
KULM LR LR
comp=Z,958nm,22.0s
KULM **Kulim** 67.30 281 P P 05 36 51.1 +1.4
KULM **Kulim** 67.30 281 P P 05 36 50.9 +1.1
comp=Z,2µmcomp=Z,55nm,1.8s,mb5.1
KLR **Kul'dur** 67.62 336 *e*P P 05 36 46.0 -5.0
KLR pmax pmax
comp=E,45nm,2.0s
KLR pmax pmax
comp=Z,100nm,2.0s,mb5.3
KLR MLR MLR
comp=N,500nm,18.5s
KLR MLR MLR
comp=E,900nm,18.5s
COCO **West Island** 67.71 261 PFAKE 05 37 00.0 +7.6
COCO LR LR
comp=Z,2µm,20.0s
PSI **Prapat** 68.37 278 P P 05 36 56.0 -0.5
comp=Z,18nm,0.8s,mb4.9,baz=92,slow=9.1,SNR=19
PSI PcP PcP 05 37 20.8 -0.8
comp=Z,26nm,0.9s,baz=66,slow=5.2,SNR=5.0
ENH **Enshi** 68.51 309 *e*P P 05 36 55.9 -1.1
comp=Z,78nm,1.1s,mb5.5
ENH LR LR
comp=Z,851nm,21.0s
GYA **Guiyang** 69.02 304⇑ *i*P P 05 37 01.9 +1.6
GYA pP pP 05 37 25.8 +7.4
GYA PP PP 05 39 37.4 +3.7
GYA ScP 05 41 19.0
GYA S S 05 45 58.7 -1.7
GYA SKS 05 46 48.0
GYA pmax pmax
comp=Z,90nm,1.0s,mb5.5
GYA pmax pmax
comp=Z,9µm,11.2s
GYA LR LR
comp=N,14µm,19.8s
GYA LR LR
comp=E,9µm,20.6s
BJT **Baijiatuau** 69.08 321 *e*P P 05 37 00.6 +0.3
comp=E,12nm,0.5s,mb5.0
BJT LR LR
comp=Z,1µm,22.0s
BJT **Baijiatuau** 69.08 321 *e*P P 05 37 00.6 +0.2
BJT pmax pmax
comp=Z,13nm,0.5s
BJT MLR MLR
comp=Z,1µm,22.0s
BJI **Beijing** 69.09 321 P P 05 36 59.9 -0.5
BJI sP sP 05 37 34.3 +8.2
BJI PP PP 05 39 38.0 +4.0
BJI S S 05 46 00.0 -0.6
BJI sS sS 05 46 31.9 +0.5
BJI pmax pmax
comp=Z,30nm,1.5s,mb4.9
BJI pmax pmax
comp=Z,740nm,9.7s
BJI LR LR
comp=N,1µm,26.5s
BJI LR LR
comp=E,870nm,28.9s
BJI LR LR
comp=Z,2µm,29.4s
TPTI **70.17 278** P P 05 37 06.4 -1.2
comp=Z,866nmcomp=Z,24nm,2.1s,mb4.7

TIY **Taiyuan** 70.17 317 *e*P **P** 05 37 03.8 -3.3
TIY pP pP 05 37 28.2 +2.9
TIY sP sP 05 37 39.5 +6.7
TIY S S 05 45 57.8 -16
TIY sS sS 05 46 41.3 -2.9
TIY pmax pmax
comp=Z,580nm,4.5s
TIY LR LR
comp=N,2μm,25.9s
TIY LR LR
comp=E,5μm,33.5s
TIY LR LR
comp=Z,2μm,26.6s
NST Nakhon Sawan 70.73 291 P **P** **05 37 13.0 +2.1**
XAN Xi'an 70.73 312 P **P** **05 37 09.8 -0.8**
XAN PcP PcP 05 37 28.1 -3.0
XAN pP pP 05 37 33.3 +4.5
XAN sP sP 05 37 45.4 +9.1
XAN PP PP 05 39 51.4 +3.1
XAN S S 05 46 18.3 -1.8
XAN pmax pmax
comp=Z,13nm,1.5s,mb4.5
XAN LR LR
comp=N,760nm,23.2s
XAN LR LR
comp=E,490nm,24.8s
XAN LR LR
comp=Z,780nm,24.0s
KMI Kunming 71.72 301 P **P** **05 37 18.4 +1.6**
KMI PcP PcP 05 37 37.3 +1.8
KMI pP pP 05 37 42.0 +7.0
KMI sP sP 05 37 51.6 +9.1
KMI PP PP 05 40 00.7 +3.7
KMI S S 05 46 30.9 -1.0
KMI SKS 05 47 09.2
KMI SS SS 05 51 09.0 -0.2
KMI pmax pmax
comp=Z,63nm,2.0s,mb5.1
KMI pmax pmax
comp=Z,950nm,4.6s
KMI LR LR
comp=N,460nm,21.2s
KMI LR LR
comp=E,1μm,21.2s
KMI LR LR
comp=Z,2μm,24.8s
BDT Bhumibol Dam 72.25 292 ⇑P **P** **05 37 21.0 +0.9**
comp=Z,13nm,0.9s,mb4.8
CHRT Chiangrai 72.40 295 ⇓P **P** **05 37 21.5 +0.6**
comp=Z,329nm,0.9s,mb6.2
HHC Hu-ho-hao-te 72.44 320 *e*P **P** **05 37 21.0 +0.2**
HHC PcP PcP 05 37 40.2 +2.0
HHC PP PP 05 40 04.0 +1.2
HHC S S 05 46 41.7 +2.2
HHC pmax pmax
comp=Z,29nm,1.2s,mb5.0
HHC pmax pmax
comp=Z,650nm,8.9s
HHC LR LR
comp=N,1μm,19.6s
HHC LR LR
comp=E,2μm,22.3s
HHC LR LR
comp=Z,3μm,25.3s
CMAR Chiang Mai Arr 72.69 294 P **P** **05 37 23.6 +0.9**
comp=Z,14nm,0.8s,mb4.8,baz=122,slow=4.5,SNR=33
CMAR LR LR 06 07 02.7
comp=Z,784nm,20.7s,baz=291,slow=34
CHG Chiang Mai 72.80 294 ⇑P **P** **05 37 24.3 +0.9**
comp=Z,60nm,0.9s,mb5.4
CHTO Chiang Mai 72.80 294 *e*P **P** **05 37 24.7 +1.4**
comp=Z,247nm,1.9s,mb5.7
CHTO LR LR
comp=Z,994nm,21.0s
CHTO Chiang Mai 72.80 294 *e*P **P** **05 37 24.7 +1.4**
CHTO pmax pmax
comp=Z,247nm,1.9s,mb5.7
CHTO MLR MLR
comp=Z,994nm,21.0s
CHTO Chiang Mai 72.80 294 P **P** **05 37 22.6 -0.8**
comp=Z,2μmcomp=Z,63nm,2.0s,mb5.1
MIR Mirnyy 72.87 204 ⇑*i*P **P** **05 37 23.0 +0.1**
MIR *i* 05 37 34.0
MIR *e* 05 37 34.0
MIR *e*S S 05 46 50.0 +6.4
MIR pmax pmax
comp=Z,1μm,5.0s
MIR pmax pmax
comp=E,505nm,4.0s
MIR pmax pmax
comp=Z,315nm,1.8s,mb5.8
MIR smax
comp=N,873nm,12.0s
HIA Hailar 72.96 330 *e*P **P** **05 37 24.0 +0.4**
comp=N,17nm,1.1s,mb4.8
HIA LR LR
comp=Z,1μm,20.0s
HIA Hailar 72.96 330 *e*P **P** **05 37 24.0 +0.4**
HIA pmax pmax
comp=Z,17nm,1.1s
HIA MLR MLR
comp=Z,1μm,20.0s
CD2 Chengdu 73.21 307 ⇑P **P** **05 37 26.2 +0.7**
CD2 pP pP 05 37 51.2 +7.4
CD2 PP PP 05 40 12.9 +3.3
CD2 S S 05 46 45.5 -3.2
CD2 SKS 05 47 18.5
CD2 ScS ScS 05 47 22.3 -6.1
CD2 pmax pmax
comp=Z,60nm,1.0s,mb5.4
CD2 pmax pmax
comp=Z,900nm,5.7s
CD2 LR LR
comp=N,810nm,20.6s
CD2 LR LR
comp=E,2μm,26.5s
CD2 LR LR
comp=Z,2μm,23.5s
BTO Baotou 73.30 319 *e*P **P** **05 37 25.5 -0.3**
SEY Seymchan 74.94 354 ⇓*e*P **P** **05 37 34.4 -0.5**
LZH Lanzhou 75.37 312 *e*P **P** **05 37 39.5 +1.5**
LZH PP PP 05 40 32.1 +4.3
LZH pmax pmax
comp=Z,57nm,1.2s,mb5.2
LZH pmax pmax
comp=Z,280nm,4.5s
LZH LR LR
comp=E,1μm,18.6s
LZH LR LR
comp=Z,3μm,19.0s
CLNS Chul'man 76.13 338 *e*P **P** **05 37 40.0 -1.8**
CLNS pmax pmax
comp=Z,18nm,1.0s,mb4.8
CLNS pmax pmax
comp=N,7.0nm,1.0s
CLNS pmax pmax
comp=E,5.0nm,0.6s
KDAK Kodiak Island 76.81 21 PFAKE 05 38 00.0 +14
KDAK LR LR
comp=Z,3μm,22.0s
KDAK Kodiak Island 76.81 21 *i*P **P** **05 37 48.7 +3.0**
SVW2 Sparrevohn 78.38 18 *e*P **P** **05 37 53.8 -0.5**
comp=Z,29nm,1.5s,mb4.8
QSPA South Pole Qui 78.54 180 *e*P **P** **05 37 54.3 -0.7**
comp=Z,297nm,1.1s,mb6.0
QSPA LR LR
comp=Z,1μm,22.0s
YAK Yakutsk 78.63 343 PFAKE 05 38 10.0 +14
YAK LR LR
comp=Z,2μm,20.0s
YAK Yakutsk 78.63 343 *e*P **P** **05 37 54.3 -1.4**
YAK *e* 05 38 03.8
YAK *e**PP pP 05 38 09.4 -4.8
YAK *e*S S 05 47 44.1 -2.9
YAK *e* 05 48 05.0
YAK *e**SS sS 05 48 26.1 +7.7
YAK *e*SS SS 05 52 47.5 -5.0
YAK pmax pmax
comp=N,14nm,1.5s
YAK pmax pmax
comp=Z,24nm,1.4s,mb4.8
YAK pmax pmax
comp=E,8.0nm,1.3s
YAK smax
comp=N,33nm,2.3s
YAK smax
comp=E,38nm,2.9s
YAK MLR MLR
comp=Z,2μm,21.0s
YAK MLR MLR
comp=N,1μm,22.0s
YAK MLR MLR
comp=E,978nm,22.0s
RSO Redoubt South 78.77 19 *e*P **P** **05 37 57.5 +1.0**
ULN Ulaanbaatar 78.90 324 *e*P **P** **05 37 57.8 +0.3**
comp=E,25nm,1.0s,mb5.0
ULN LR LR
comp=Z,881nm,22.0s
ULN Ulaanbaatar 78.90 324 *e*P **P** **05 37 57.8 +0.3**
ULN pmax pmax
comp=Z,25nm,1.0s,mb5.0
ULN MLR MLR
comp=Z,881nm,22.0s
ULN Ulaanbaatar 78.90 324 P **P** **05 37 58.2 +0.7**
SONM Songino Array 79.27 324 P **P** **05 37 59.3 -0.2**
comp=Z,6.1nm,0.8s,mb4.5,baz=132,slow=6.0,SNR=26
SONM LR LR 06 12 44.9
comp=Z,779nm,20.2s,baz=111,slow=35
SEW Seward 79.62 21 *e*P **P** **05 37 59.9 -1.2**
comp=Z,13nm,0.9s,mb4.8
GTA Gaotai 79.67 314 *e*P **P** **05 38 02.6 +0.7**
GTA pP pP 05 38 27.5 +7.1
GTA S S 05 47 59.5 +0.5
GTA pmax pmax
comp=Z,49nm,1.8s,mb5.0
GTA pmax pmax
comp=Z,960nm,9.5s
GTA LR LR
comp=N,940nm,21.4s
GTA LR LR
comp=E,1μm,21.1s
GTA LR LR
comp=Z,2μm,22.6s
TTA Tatalina 79.70 17 *e*P **P** **05 38 01.2 -0.3**
RC01 Rabbit Creek A 80.23 20 *e*P **P** **05 38 04.2 -0.3**
comp=Z,11nm,0.5s,mb4.9
PMR Palmer 80.80 20 *e*P **P** **05 38 11.2 +3.7**
comp=Z,11nm,0.6s,mb4.9
PMR Palmer 80.80 20 *e*P **P** **05 38 11.2 +3.7**
PMR pmax pmax
comp=Z,11nm,0.6s,mb4.9
DIV Divide 81.64 21 *e*P **P** **05 38 11.8 -0.2**
comp=Z,18nm,0.8s,mb5.0
TRF Thorofare Moun 81.78 18 *e*P **P** **05 38 13.8 +1.2**
comp=Z,15nm,0.9s,mb4.8
BMRM Bremner River 81.95 22 *e*P **P** **05 38 12.6 -0.9**
comp=Z,46nm,1.2s,mb5.2
ZAK Zakamensk 82.30 325 *e*P **P** **05 38 15.1 -0.5**
ZAK pmax pmax
comp=Z,12nm,1.7s,mb4.5
MCK McKinley 82.40 18 *e*P **P** **05 38 14.6 -1.3**
MCCM Marconi Confer 82.47 49 PFAKE 05 38 30.0 +13
MCCM LR LR
comp=Z,2μm,21.0s
HOPS Hopland 82.63 48 PFAKE 05 38 30.0 +12
HOPS LR LR
comp=Z,2μm,20.0s
IRK Irkutsk 82.65 327 *e*P **P** **05 38 14.8 -2.6**
IRK pmax pmax
comp=Z,60nm,1.6s,mb5.2
TLY Talaya 82.72 326 P **P** **05 38 18.2 +0.4**
comp=Z,146nm,0.8s,mb5.9,SNR=5.4
TLY Talaya 82.72 326 PFAKE 05 38 30.0 +12
TLY LR LR
comp=Z,978nm,22.0s
TLY Talaya 82.72 326 *e*P **P** **05 38 15.8 -2.0**
TLY *e*PS 05 49 14.9
TLY pmax pmax
comp=Z,21nm,0.9s,mb5.0
TLY MLR MLR
comp=Z,438nm,20.0s
LSA Lhasa 82.95 302 P **P** **05 38 21.2 +1.7**
SAO San Andreas Ge 83.06 50 PFAKE 05 38 30.0 +10
SAO LR LR
comp=Z,4μm,22.0s
COLA College 83.55 18 *e*P **P** **05 38 20.6 -1.2**
comp=Z,23nm,0.8s,mb5.1
COLA LR LR
comp=Z,2μm,21.0s
COLA College 83.55 18 *e*P **P** **05 38 20.6 -1.2**
COLA pmax pmax
comp=Z,23nm,0.8s,mb5.1
COLA MLR MLR
comp=Z,2μm,21.0s
MENT Mentasta 83.57 21 *e*P **P** **05 38 21.4 -0.5**
WDC Whiskeytown Da 83.58 47 *e*P **P** **05 38 22.3 -0.2**
comp=Z,9.7nm,0.9s,mb4.6
WDC LR LR
comp=Z,1μm,21.0s
WDC Whiskeytown Da 83.58 47 *e*P **P** **05 38 22.3 -0.2**
WDC pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
WDC MLR MLR
comp=Z,1μm,21.0s
ILAR Eielson Array 83.77 18 P **P** **05 38 20.9 -2.1**
comp=Z,5.3nm,0.5s,mb4.6,baz=232,slow=5.2,SNR=26
YBH Yreka Blue Hor 83.87 45 *e*P **P** **05 38 24.4 +0.4**
comp=Z,12nm,0.9s,mb4.7
YBH LR LR
comp=Z,1μm,21.0s
YBH Yreka Blue Hor 83.87 45 LR LR 06 09 12.4
comp=Z,1μm,21.2s,baz=338,slow=31
YBH Yreka Blue Hor 83.87 45 *e*P **P** **05 38 24.4 +0.4**
YBH pmax pmax
comp=Z,12nm,0.9s
YBH MLR MLR
comp=Z,1μm,21.0s
OHCM Honcut 83.90 48 *e*P **P** **05 38 24.1 -0.1**
HUMO Hull Mountain 84.02 45 *e*P **P** **05 38 24.8 +0.1**
comp=Z,18nm,1.1s,mb4.8
HUMO LR LR
comp=Z,1μm,20.0s
CMB Columbia Colle 84.28 50 *e*P **P** **05 38 25.8 -0.4**
comp=Z,7.9nm,0.8s,mb4.6
CMB LR LR
comp=Z,4μm,22.0s
CMB Columbia Colle 84.28 50 *e*P **P** **05 38 25.8 -0.3**
CMB pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
CMB MLR MLR
comp=Z,4μm,22.0s
MAW Mawson 84.50 202 *e*P **P** **05 38 26.6 -0.1**
comp=Z,12nm,1.3s,mb4.6
MAW LR LR
comp=Z,3μm,22.0s
MAW Mawson 84.50 202 P **P** **05 38 26.0 -0.7**
comp=Z,32nm,1.1s,mb5.1,baz=95,slow=6.3,SNR=38
MAW LR LR 06 10 20.5
comp=Z,1μm,21.9s,baz=95,slow=31
MAW Mawson 84.50 202 *e*P **P** **05 38 26.6 -0.1**
MAW pmax pmax
comp=Z,12nm,1.3s
MAW MLR MLR
comp=Z,3μm,22.0s
COR Corvallis 84.51 43 PFAKE 05 38 40.0 +13
COR LR LR
comp=Z,1μm,21.0s
BBB Bella Bella 84.67 34 LR LR 06 08 33.4
comp=Z,2μm,20.7s,baz=100,slow=30
MWC Mount Wilson 84.87 54 *e*P **P** **05 38 28.9 -0.3**
comp=Z,11nm,0.7s,mb4.9
MWC Mount Wilson 84.87 54 *e*P **P** **05 38 28.9 -0.3**
MWC pmax pmax
comp=Z,11nm,0.7s,mb4.9
ISA Isabella 84.98 52 *e*P **P** **05 38 28.8 -0.9**
comp=Z,10nm,0.9s,mb4.8
ISA Isabella 84.98 52 *e*P **P** **05 38 28.8 -0.9**
ISA pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
WAKR Walker 85.14 49 *e*P **P** **05 38 30.4 0.0**
NLWA Neilton Lookou 85.21 40 PFAKE 05 38 40.0 +9.5
NLWA LR LR
comp=Z,2μm,20.0s
MTUM Tungsten Hills 85.43 51 *e*P **P** **05 38 32.5 +0.5**
PAHR Pah Rah Range 85.56 48 *e*P **P** **05 38 32.6 +0.1**
MOD Modoc 85.62 46 *e*P **P** **05 38 32.7 0.0**
comp=Z,8.3nm,0.6s,mb4.8
MOD LR LR
comp=Z,929nm,21.0s
EGAK Eagle 85.62 20 *e*P **P** **05 38 31.4 -0.8**
comp=Z,15nm,0.5s,mb5.2
EGAK LR LR
comp=Z,1μm,22.0s
DAC Darwin (Calif) 85.84 52 PFAKE 05 38 40.0 +6.0
DAC LR LR
comp=Z,2μm,20.0s
HOOD Mount Hood Mea 85.87 42 *e*P **P** **05 38 33.3 -0.6**
comp=Z,15nm,1.0s,mb4.9
PGC Sidney 85.94 39 *e*P **P** **05 38 34.0 -0.2**
comp=Z,1.1nm,1.3s
NVAR Mina Array Bea 85.96 50 P **P** **05 38 34.2 -0.3**
comp=Z,8.3nm,0.8s,mb4.7,baz=235,slow=7.1,SNR=26
NVAR PKPPKP 06 04 39.1
comp=Z,1.1nm,0.9s,baz=115,slow=2.3,SNR=4.1
PFO Pinyon Flat Ob 85.97 55 *e*P **P** **05 38 35.4 +0.7**
comp=Z,6.0nm,0.9s,mb4.5
PFO LR LR
comp=Z,2μm,21.0s
PFO Pinyon Flat Ob 85.97 55 *e*P **P** **05 38 35.4 +0.7**
PFO pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
PFO MLR MLR
comp=Z,2μm,21.0s
GSC Goldstone 86.17 53 *e*P **P** **05 38 35.4 -0.2**
comp=Z,2.8nm,0.6s,mb4.4
GSC Goldstone 86.17 53 *e*P **P** **05 38 35.4 -0.2**
GSC pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
DLBC Dease Lake 86.57 28 LR LR 06 13 37.8
comp=Z,907nm,19.9s,baz=237,slow=33
TIXI Tiksi 86.59 349 *e*P **P** **05 38 36.1 -0.8**
comp=Z,66nm,1.8s,mb5.3
TIXI LR LR
comp=Z,1μm,22.0s
TIXI Tiksi 86.59 349 *e*P **P** **05 38 35.0 -1.9**
TIXI *e*S S 05 49 08.5 +0.7
TIXI pmax pmax
comp=Z,35nm,1.7s,mb5.0
TIXI MLR MLR
comp=Z,574nm,18.0s
JCW Jim Creek 86.72 40 *e*P **P** **05 38 38.0 0.0**
WVOR Wild Horse Val 86.96 46 *e*P **P** **05 38 39.0 -0.4**
comp=Z,17nm,1.1s,mb4.9
WVOR LR LR
comp=Z,1μm,20.0s
WVOR Wild Horse Val 86.96 46 *e*P **P** **05 38 39.0 -0.3**
WVOR pmax pmax
comp=Z,17nm,1.1s,mb4.9
WVOR MLR MLR
comp=Z,1μm,20.0s
PALK Pallekele 87.05 278 *i*P **P** **05 38 43.0 +2.6**
PALK Pallekele 87.05 278 P **P** **05 38 43.7 +3.3**
RPW Rockport 87.07 39 *e*P **P** **05 38 40.6 +0.9**
GLA Glamis 87.12 56 *e*P **P** **05 38 40.5 +0.2**
comp=Z,26nm,1.1s,mb5.1
GLA Glamis 87.12 56 *e*P **P** **05 38 40.5 +0.2**
GLA pmax pmax
comp=Z,26nm,1.1s,mb5.1
BMN Battle Mountai 87.36 48 PFAKE 05 38 50.0 +8.7
BMN LR LR
comp=Z,1μm,21.0s
ETW Entiat 87.52 40 *e*P **P** **05 38 41.7 -0.2**
HAWA Hanford 87.63 42 *e*P **P** **05 38 42.6 +0.1**
comp=Z,6.2nm,0.9s,mb4.6
HAWA LR LR
comp=Z,1μm,21.0s
OD2 Odessa Site #2 88.49 41 *e*P **P** **05 38 46.2 -0.2**
BMO Blue Mountains 88.63 44 *e*P **P** **05 38 46.8 -0.4**
comp=Z,12nm,1.4s,mb4.7
BMO LR LR
comp=Z,2μm,22.0s
BMO Blue Mountains 88.63 44 *e*P **P** **05 38 46.8 -0.4**
BMO pmax pmax
comp=Z,12nm,1.4s,mb4.7
BMO MLR MLR
comp=Z,2μm,22.0s
CCUT Cedar City 89.45 52 *e*P **P** **05 38 51.8 +0.5**
comp=Z,6.1nm,0.8s,mb4.7
WMQ Urumqi 89.71 315 P **P** **05 38 52.4 +0.1**
WMQ pP pP 05 39 18.3 +7.2
WMQ PP PP 05 42 27.7 +2.3
WMQ SKS 05 49 11.9
WMQ S S 05 49 33.5 -5.0
WMQ pmax pmax
comp=Z,46nm,1.2s,mb5.5
WMQ pmax pmax
comp=Z,840nm,4.8s
WMQ LR LR
comp=N,2μm,25.3s
WMQ LR LR
comp=E,740nm,26.2s
WMQ LR LR
comp=Z,2μm,25.2s
NEW Newport 89.78 41 *e*P **P** **05 38 50.8 -1.7**
NEW LR LR
comp=Z,1μm,20.0s
M13A Montello 89.85 48 *e*P **P** **05 38 53.1 +0.1**
comp=Z,19nm,0.9s,mb5.2
INK Inuvik 90.16 19 LR LR 06 17 37.4
comp=Z,999nm,19.7s,baz=227,slow=34
TUC Tucson 90.24 57 *e*P **P** **05 38 55.5 +0.4**
comp=Z,2.7nm,0.7s,mb4.5
TUC LR LR
comp=Z,3μm,20.0s
TUC Tucson 90.24 57 *e*P **P** **05 38 55.5 +0.4**
TUC pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
TUC MLR MLR
comp=Z,3μm,20.0s
HLID Hailey 90.25 46 *e*P **P** **05 38 55.3 +0.4**
comp=Z,6.0nm,0.8s,mb4.8
HLID LR LR
comp=Z,825nm,20.0s
WUAZ Wupatki 90.51 54 *e*P **P** **05 38 56.8 +0.5**
comp=Z,8.0nm,1.0s,mb4.8
WUAZ LR LR
comp=Z,2μm,22.0s
DUG Dugway 90.54 49 *e*P **P** **05 38 56.4 +0.1**
comp=Z,7.2nm,0.9s,mb4.8
DUG LR LR
comp=Z,2μm,21.0s
DUG Dugway 90.54 49 *e*P **P** **05 38 56.4 +0.1**
DUG pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
DUG MLR MLR
comp=Z,2μm,21.0s
BGU Big Grassy Mou 90.56 48 *e*P **P** **05 38 56.3 -0.1**
comp=Z,17nm,1.2s,mb5.0
MVU Marysvale 90.57 51 PFAKE 05 39 10.0 +14
MVU LR LR
comp=Z,4μm,22.0s
MSU Marysvale 90.60 51 *e*P **P** **05 38 57.7 +1.1**
TRD Trivandrum 90.93 278 ⇑*ex* x 05 39 03.0
HVU Hansel Valley 90.96 48 *e*P **P** **05 38 58.6 +0.4**
comp=Z,13nm,0.9s,mb5.1
HVU Hansel Valley 90.96 48 *e*P **P** **05 38 58.6 +0.4**
HVU pmax pmax
comp=Z,13nm,0.9s,mb5.1
NLU North Lily Min 91.03 50 *e*P **P** **05 38 59.5 +0.9**
SPUT South Promonto 91.08 48 *e*P **P** **05 38 59.6 +0.8**
comp=Z,8.9nm,1.0s,mb4.8
BSMT Basson Peak 91.16 41 *e*P **P** **05 39 00.1 +1.2**
comp=Z,8.3nm,0.7s,mb5.0
MSO Missoula 91.44 43 PFAKE 05 39 10.0 +10
MSO LR LR
comp=Z,754nm,22.0s
JTMT Jette 91.46 42 *e*P **P** **05 38 59.3 -1.1**
SYO Syowa Base 91.51 197 ⇑*e*P **P** **05 39 09.2 +8.9**
SYO Syowa Base 91.51 197 ⇑*e*pP pP 05 39 10.9 -8.2
TMUT Trail Mountain 91.52 50 *e*P **P** **05 39 02.3 +1.4**
comp=Z,8.2nm,0.9s,mb5.0
SWMT Swartz Lake 91.58 42 *e*P **P** **05 39 00.0 -0.9**
JLU Jordanelle 91.65 49 *e*P **P** **05 39 01.9 +0.5**
comp=Z,14nm,1.3s,mb5.0
MCMT McKenzie Canyo 91.67 45 *e*P **P** **05 39 01.6 +0.2**
comp=Z,3.2nm,0.9s,mb4.5
DAU Daniels Canyon 91.75 49 *e*P **P** **05 39 02.3 +0.4**
comp=Z,53nm,1.8s,mb5.5
DAU Daniels Canyon 91.75 49 *e*P **P** **05 39 02.3 +0.4**
DAU pmax pmax
comp=Z,53nm,1.8s,mb5.5
HWUT Hardware Ranch 91.80 48 *e*P **P** **05 39 01.9 -0.2**
comp=Z,2.7nm,0.7s,mb4.6
HWUT LR LR
comp=Z,1μm,21.0s
CHMT Chamberlain Mo 91.92 43 *e*P **P** **05 39 01.9 -0.6**
DLMT Dillon 91.97 44 *e*P **P** **05 39 03.0 +0.2**
comp=Z,7.5nm,0.7s,mb5.0

SRU San Rafael 92.00 51 *e*P **P 05 39 04.0 +1.0**
comp=Z,3.0nm,0.8s,mb4.6
SRU San Rafael 92.00 51 *e*P **P 05 39 04.1 +1.0**
SRU pmax pmax
comp=Z,3.0nm,0.8s,mb4.6
WALA Waterton Lakes 92.04 40 *e*P **P 05 39 02.9 -0.1**
comp=Z,0.3nm,1.0s
LRM Limekiln Ridge 92.19 44 *e*P **P 05 39 03.7 -0.1**
DGAR Diego Garcia 92.19 262 PFAKE 05 39 20.0 +15
DGAR LR LR
comp=Z,2µm,21.0s
RRI2 Red Ridge 92.38 46 *e*P **P 05 39 05.5 +0.8**
AHID Auburn Hatcher 92.40 47 PFAKE 05 39 20.0 +15
AHID LR LR
comp=Z,1µm,22.0s
TPAW Teton Pass 92.68 46 *e*P **P 05 39 08.4 +2.3**
comp=Z,3.2nm,0.7s,mb4.8
BOZ Bozeman (W) 92.70 44 *e*P **P 05 39 06.2 0.0**
comp=Z,2.3nm,0.7s,mb4.6
BOZ LR LR
comp=Z,184nm,19.0s
REDW Red Top Meadow 92.72 46 *e*P **P 05 39 06.5 +0.2**
comp=Z,13nm,1.4s,mb5.1
IMW Indian Meadow 92.78 46 *e*P **P 05 39 07.0 +0.5**
comp=Z,4.5nm,0.9s,mb4.8
SNOW Snow King Moun 92.81 46 *e*P **P 05 39 09.1 +2.4**
comp=Z,13nm,1.4s,mb5.1
HRY Holter Researc 92.82 43 *e*P **P 05 39 06.6 0.0**
MOOW Moose Ponds 92.88 46 *e*P **P 05 39 07.0 0.0**
comp=Z,3.0nm,1.0s,mb4.6
LOHW Long Hollow 92.95 46 *e*P **P 05 39 06.8 -0.5**
comp=Z,43nm,2.1s,mb5.4
PV10 Paradox Valley 92.97 52 *e*P **P 05 39 09.3 +1.7**
comp=Z,139nm,0.9s,mb6.3
PV04 Paradox Valley 93.08 52 *e*P **P 05 39 08.4 +0.3**
MVCO Mesa Verde 93.15 53 PFAKE 05 39 20.0 +12
MVCO LR LR
comp=Z,1µm,21.0s
PV01 Paradox Valley 93.28 52 *e*P **P 05 39 10.6 +1.5**
comp=Z,870nm,1.3s
LKWY Lake 93.31 45 PFAKE 05 39 20.0 +11
LKWY LR LR
comp=Z,1µm,20.0s
BW06 Boulder Array 93.51 47 *e*P **P 05 39 11.6 +1.6**
comp=Z,16nm,1.6s,mb5.1
BW06 LR LR
comp=Z,974nm,21.0s
MK31 Makanchi Array 94.13 317 *e*P **P 05 39 12.2 -0.5**
MKAR Makanchi Array 94.13 317 P **P 05 39 12.3 -0.4**
MKAR PKKPbc PKKPbc 05 56 11.3 -4.6
MKAR LR LR 06 24 30.6
MKAR Makanchi Array 94.13 317 P **P 05 39 12.3 -0.4**
comp=Z,16nm,0.7s,mb5.5,baz=92,slow=6.6,SNR=42
MKAR PKKPbc PKKPbc 05 56 11.3 -4.6
comp=Z,0.2nm,0.2s,baz=298,slow=3.1,SNR=4.4
MKAR LR LR 06 24 30.6
comp=Z,319nm,19.4s,baz=106,slow=37
ZAA0 Zalesovo Array 94.16 324 *e*P **P 05 39 11.7 -0.9**
ZALV Zalesovo Beam 94.16 324 P **P 05 39 11.4 -1.2**
comp=Z,8.5nm,0.7s,mb5.2,baz=109,slow=2.6,SNR=14
ZALV LR LR 06 25 02.3
comp=Z,519nm,18.4s,baz=84,slow=38
RLMT Red Lodge 94.21 45 *e*P **P 05 39 07.4 -5.7**
comp=Z,22nm,1.9s,mb5.2
RLMT LR LR
comp=Z,1µm,21.0s
ANMO Albuquerque 94.32 55 *e*P **P 05 39 13.9 +0.1**
comp=Z,1.3nm,0.6s,mb4.4
ANMO LR LR
comp=Z,1µm,21.0s
ANMO Albuquerque 94.32 55 *e*P **P 05 39 14.0 +0.1**
ANMO pmax pmax
comp=Z,1.0nm,0.6s
ANMO MLR MLR
comp=Z,1µm,21.0s
EGMT Eagleton 94.48 42 *e*P **P 05 39 16.1 +1.8**
comp=Z,5.7nm,0.6s,mb5.1
EGMT LR LR
comp=Z,988nm,21.0s
MNTX Cornudas Mount 94.60 59 PFAKE 05 39 30.0 +15
MNTX LR LR
comp=Z,2µm,21.0s
SMCO Snowmass 94.71 51 *e*P **P 05 39 18.1 +2.5**
comp=Z,1.9nm,0.9s,mb4.5
YKA Yellowknife Ar 95.14 27 P **P 05 39 14.4 -2.6**
comp=Z,1.9nm,0.7s,mb4.6,baz=256,slow=4.0,SNR=6.4
PMSA Palmer Station 95.17 161 *e*P **P 05 39 16.1 -1.1**
comp=Z,90nm,1.2s,mb6.1
SDCO Great Sand Dun 95.59 53 PFAKE 05 39 30.0 +10
SDCO LR LR
comp=Z,2µm,22.0s
TXAR Lajitas Array 95.64 61 P **P 05 39 19.4 -0.7**
TXAR PP PP 05 43 10.7 -1.7
TXAR PKKP PKKPbc 05 56 10.3 -0.8
TXAR LR LR 06 14 43.9
TXAR Lajitas Array 95.64 61 P **P 05 39 19.4 -0.7**
comp=Z,1.8nm,0.8s,mb4.6,baz=221,slow=5.4,SNR=23
TXAR PP PP 05 43 10.7 -1.7
comp=Z,1.3nm,1.1s,baz=204,slow=8.2,SNR=4.7
TXAR PKKP PKKPbc 05 56 10.3 -0.8
comp=Z,0.3nm,0.6s,baz=103,slow=4.8,SNR=4.8
TXAR LR LR 06 14 43.9
comp=Z,2µm,20.7s,baz=295,slow=31
TXAR Lajitas Array 95.64 61 P **P 05 39 19.4 -0.7**
TXAR 05 43 10.7
ISCO Idaho Springs 95.86 51 PFAKE 05 39 30.0 +9.2
ISCO LR LR
comp=Z,3µm,22.0s
MAIT Maitri 96.12 188 *e*P **P 05 39 13.2 -8.2**
LAO LASA Array 96.59 44 *e*P **P 05 39 23.2 -0.7**
comp=Z,9.0nm,1.1s,mb5.1
LAO LR LR
comp=Z,1µm,21.0s
KURK Kurchatov 97.25 320 P **P 05 39 26.0 -0.8**
comp=Z,1.6nm,0.5s,mb4.7,baz=98,slow=4.0,SNR=4.3
KURK LR LR 06 22 06.4
comp=Z,946nm,21.9s,baz=120,slow=35
KSH Kashi 97.36 309 *e*P **P 05 39 29.1 +1.5**
KSH *e*pP pP 05 39 55.0 +8.5
KSH *e*PP PP 05 43 28.1 +2.7
KSH *e*SKS 05 49 55.9
KSH *e*S S 05 50 40.4 -6.1
KSH *e*sS sS 05 51 25.2 +6.4
KSH *e*SS SS 05 57 22.0 -4.5
KSH pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
KSH pmax pmax
comp=Z,290nm,4.8s
KSH LR LR
comp=N,500nm,15.5s
KSH LR LR
comp=E,1µm,26.1s
KSH LR LR
comp=Z,1µm,22.6s
RSSD Black Hills 97.71 47 PFAKE 05 39 40.0 +11
RSSD LR LR
comp=Z,900nm,21.0s
VNA1 Neumayer--Stat 97.99 182 *e*Pdiff **P 05 39 31.1 +1.3**
TKM2 Tokmak 2 98.14 312 PFAKE 05 39 40.0 +9.0
TKM2 LR LR
comp=Z,437nm,19.0s
AMTX Amarillo 98.18 56 PFAKE 05 39 40.0 +8.6
AMTX LR LR
comp=Z,2µm,20.0s
NIL Nilore 98.68 303 PFAKE 05 39 40.0 +6.3
NIL LR LR
comp=Z,82nm,19.0s
OGNE Ogallala 98.74 50 PFAKE 05 39 40.0 +6.2
OGNE LR LR
comp=Z,3µm,20.0s
UCH Uchtor 98.84 311 PFAKE 05 39 50.0 +16
UCH LR LR
comp=Z,491nm,21.0s
AAK Ala-Archa 98.91 312 PFAKE 05 39 50.0 +16
AAK LR LR
comp=Z,794nm,22.0s
AAK Ala-Archa 98.91 312 LR LR 06 24 43.6
comp=Z,458nm,21.5s,baz=81,slow=36
JCT Junction City 99.13 61 PFAKE 05 39 50.0 +14
JCT LR LR
comp=Z,2µm,20.0s
AML Almayashu 99.43 311 PFAKE 05 39 50.0 +13
AML LR LR
comp=Z,719nm,22.0s
EKS2 Erkin-Say 99.44 312 PFAKE 05 39 50.0 +13
EKS2 LR LR
comp=Z,754nm,22.0s
CBKS Cedar Bluff 100.23 52 PFAKE 05 39 50.0 +10
CBKS LR LR
comp=Z,1µm,20.0s
FFC Flin Flon 100.31 36 PFAKE 05 39 50.0 +9.5
FFC LR LR
comp=Z,2µm,21.0s
KVTX Kingsville 100.40 64 PFAKE 05 39 50.0 +9.1
KVTX LR LR
comp=Z,622nm,20.0s
WMOK Wichita Mounta 100.53 57 PFAKE 05 39 50.0 +8.5
WMOK LR LR
comp=Z,2µm,20.0s
HKT Hockley 102.48 62 PFAKE 05 40 00.0 +10
HKT LR LR
comp=Z,1µm,20.0s
BVAR Borovoye Array 102.56 322 Pdiff Pdif 05 39 48.8 -1.7
comp=Z,0.9nm,0.6s,baz=78,slow=7.5,SNR=3.3
BRVK Borovoye 102.62 322 PFAKE 05 40 00.0 +9.2
BRVK LR LR
comp=Z,1µm,22.0s
KSU1 Kansas State U 102.69 52 PFAKE 05 40 00.0 +8.9
KSU1 LR LR
comp=Z,2µm,21.0s
ECSD EROS Data Cent 103.00 48 PFAKE 05 40 00.0 +7.5
ECSD LR LR
comp=Z,1µm,20.0s
PAYG Puerto Ayora 103.11 93 PFAKE 05 40 00.0 +7.0
PAYG LR LR
comp=Z,753nm,21.0s
NATX Nacogdoches 103.66 60 PFAKE 05 40 10.0 +15
NATX LR LR
comp=Z,2µm,22.0s
AGMN Agassiz Nation 103.74 43 PFAKE 05 40 10.0 +14
AGMN LR LR
comp=Z,769nm,19.0s
MIAR Mount Ida 104.79 57 PFAKE 05 40 10.0 +10
MIAR LR LR
comp=Z,2µm,20.0s
SCIA State Center 105.42 50 PFAKE 05 44 30.0 +13
SCIA LR LR
comp=Z,2µm,21.0s
PLCA Paso Flores 106.26 139 PFAKE 05 44 30.0 +11
PLCA LR LR
comp=Z,1µm,19.0s
EYMN Ely 106.66 43 PFAKE 05 44 30.0 +11
EYMN LR LR
comp=Z,1µm,21.0s
VBMS Vicksburg 107.20 60 PFAKE 05 44 30.0 +9.4
VBMS LR LR
comp=Z,2µm,22.0s
JFWS Jewell Farm 107.63 49 PFAKE 05 44 30.0 +9.0
JFWS LR LR
comp=Z,1µm,19.0s
TEIG Tepich 108.32 72 PFAKE 05 44 30.0 +7.1
TEIG LR LR
comp=Z,938nm,21.0s
COWI Conover 108.34 45 PFAKE 05 44 30.0 +7.8
COWI LR LR
comp=Z,2µm,22.0s
HDIL Hopedale 108.36 51 PFAKE 05 44 30.0 +7.5
HDIL LR LR
comp=Z,3µm,22.0s
TGUH Tegucigalpa,Un 108.56 79 PFAKE 05 44 30.0 +6.5
TGUH LR LR
comp=Z,1µm,20.0s
ARU Arti 109.22 326 PFAKE 05 44 40.0 +16
ARU LR LR
comp=Z,1µm,22.0s
MSEY Mahe Island 109.25 261 PFAKE 05 44 40.0 +15
MSEY LR LR
comp=Z,1µm,19.0s
WVT Waverly 109.53 56 PFAKE 05 44 40.0 +15
WVT LR LR
comp=Z,2µm,21.0s
BRAL Brewton 110.11 61 PFAKE 05 44 40.0 +14
BRAL LR LR
comp=Z,969nm,22.0s
LRAL Lakeview Retre 110.20 59 PFAKE 05 44 40.0 +14
LRAL LR LR
comp=Z,2µm,20.0s
JTS JuntasAbangare 110.29 83 PFAKE 05 44 40.0 +13
JTS LR LR
comp=Z,1µm,20.0s
WCI Wyandotte Cave 110.73 53 PFAKE 05 44 40.0 +13
WCI LR LR
comp=Z,2µm,21.0s
KBS Kingsbay 111.38 355 PFAKE 05 44 40.0 +13
KBS LR LR
comp=Z,655nm,21.0s
GLMI Grayling 111.59 46 PFAKE 05 44 40.0 +12
GLMI LR LR
comp=Z,2µm,21.0s
LCO Las Campanas 111.94 128 PFAKE 05 44 40.0 +10
LCO LR LR
comp=Z,1µm,21.0s
AAM Ann Arbor 112.52 49 PFAKE 05 44 40.0 +10
AAM LR LR
comp=Z,2µm,22.0s
ABPO Ambohimpanom 112.66 244 PFAKE 05 44 40.0 +8.8
ABPO LR LR
comp=Z,2µm,19.0s
GOGA Godfrey 113.16 59 PFAKE 05 44 40.0 +8.3
GOGA LR LR
comp=Z,1µm,20.0s
NNA Nana 113.21 108 PFAKE 05 44 40.0 +7.6
NNA LR LR
comp=Z,1µm,21.0s
TRQA Tornquist 113.25 140 PFAKE 05 44 40.0 +8.1
TRQA LR LR
comp=Z,1µm,22.0s
OTAV Otavalo 114.87 95 PFAKE 05 44 50.0 +14
OTAV LR LR
comp=Z,406nm,21.0s
DWPF Disney 114.97 64 PFAKE 05 44 50.0 +15
DWPF LR LR
comp=Z,674nm,22.0s
BCIP Isla Barro Col 115.11 85 PFAKE 05 44 50.0 +14
BCIP LR LR
comp=Z,527nm,22.0s
ERPA Erie 115.25 49 PFAKE 05 44 50.0 +15
ERPA LR LR
comp=Z,2µm,21.0s
BLA Blacksburg 115.44 54 PFAKE 05 44 50.0 +14
BLA LR LR
comp=Z,2µm,22.0s
MCWV Mont Chateau 115.65 51 PFAKE 05 44 50.0 +14
MCWV LR LR
comp=Z,1µm,20.0s
NHSC New Hope 115.92 59 PFAKE 05 44 50.0 +13
NHSC LR LR
comp=Z,2µm,21.0s
KEV Kevo 116.33 345 PFAKE 05 44 50.0 +13
KEV LR LR
comp=Z,2µm,22.0s
KEV Kevo 116.33 345 *e*PKIKP PKPdf 05 44 35.4 -1.4
KEV pmax pmax
comp=Z,1.0nm,0.4s
KEV Kevo 116.33 345 *ep* PKPdf 05 44 35.4 -1.4
comp=Z,0.5nm,0.4s
ARCES ARCESS Array B 116.85 346 PKP PKPdf 05 44 36.4 -1.4
comp=Z,3.7nm,0.6s,baz=76,slow=2.2,SNR=32
SUMG Summit 117.18 8 *i* P PP 05 45 47.1 -2.1
CNNC Cliffs of the 117.66 56 PFAKE 05 44 50.0 +10
CNNC LR LR
comp=Z,2µm,22.0s
CBN Corbin 117.74 53 PFAKE 05 44 50.0 +10
CBN LR LR
comp=Z,3µm,20.0s
BINY Binghamton 118.17 48 PFAKE 05 44 50.0 +8.9
BINY LR LR
comp=Z,1µm,20.0s
MTDJ Mount Denham 118.28 75 PFAKE 05 44 50.0 +8.0
MTDJ LR LR
comp=Z,612nm,20.0s
LONY Lake Ozonia 118.69 45 PFAKE 05 44 50.0 +8.0
LONY LR LR
comp=Z,1µm,22.0s
NCB Newcomb 119.08 46 PFAKE 05 44 50.0 +7.2
NCB LR LR
comp=Z,698nm,20.0s
JOF Joensuu 119.49 338 *e*P PKPdf 05 44 40.8 -2.2
JOF Joensuu 119.49 338 *ep* PKPdf 05 44 40.8 -2.2
comp=Z,0.6nm,0.4s
LPAZ La Paz 119.60 116 PKP PKPdf 05 44 44.0 -0.6
comp=Z,1.9nm,0.6s,baz=342,slow=2.2,SNR=12
LPAZ PKKPbc PKKPbc 05 54 55.0 -0.4
comp=Z,0.9nm,0.8s,baz=83,slow=3.7,SNR=4.6
JMIC Jan Mayen 120.44 358 *e* PP 05 46 10.5 -1.1
LBNH Lisbon 120.63 45 PFAKE 05 45 00.0 +14
LBNH LR LR
comp=Z,1µm,20.0s
GTBY Guantanamo Bay 120.65 74 PFAKE 05 45 00.0 +13
GTBY LR LR
comp=Z,415nm,20.0s
GNI Garni 121.27 310 PFAKE 05 45 00.0 +13
GNI LR LR
comp=Z,491nm,22.0s
GNI Garni 121.27 310 *i* PKIKP PKPdf 05 44 46.7 -0.4
ZEI Tsey 121.29 313 *e*PKIKP PKPdf 05 44 44.7 -2.4
ZEI pmax pmax
comp=Z,5.0nm,0.4s
OBN Obninsk 121.39 329 PFAKE 05 45 00.0 +13
OBN LR LR
comp=Z,753nm,20.0s
OBN Obninsk 121.39 329 ⇑ *i* PKIKP PKPdf 05 44 46.6 -0.3
OBN *e* 05 51 45.8
OBN *e*PS PS 05 56 04.1 -8.3
OBN *e*SS SS 06 03 12.4 +25
OBN pmax pmax
comp=Z,11nm,0.6s
VSR Storozhevoye 121.66 324 *i* PKIKP PKPdf 05 44 46.8 -0.7
VSR pmax pmax
comp=N,7.0nm,0.5s
VSR pmax pmax
comp=E,4.0nm,0.5s
VSR pmax pmax
comp=Z,5.0nm,0.5s
VSR MLR MLR
comp=Z,910nm,25.0s
VSR MLR MLR
comp=N,320nm,23.0s
VSR MLR MLR
comp=E,600nm,26.0s
VORD Divnogorie 121.69 324 *i* PKIKP PKPdf 05 44 46.7 -0.9
VORD pmax pmax
comp=Z,3.0nm,0.4s
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,9.0nm,0.6s
VORD MLR MLR
comp=Z,730nm,19.0s
VORD MLR MLR
comp=N,740nm,22.0s
VORD MLR MLR
comp=E,680nm,23.0s
KAF Kangasniemi 121.80 339 *e*PKIKP PKPdf 05 44 41.5 -6.0
KAF pmax pmax
comp=Z,1.0nm,0.5s
KAF Kangasniemi 121.80 339 *ep* PKPdf 05 44 41.5 -6.0
comp=Z,1.4nm,0.5s
KIV Kislovodsk 121.84 315 PFAKE 05 45 00.0 +12
KIV LR LR
comp=Z,854nm,22.0s
KIV Kislovodsk 121.84 315 *i* PKIKP PKPdf 05 44 47.7 -0.4
KIV *e* 05 46 21.7
KIV *e*PS PS 05 56 16.2 -0.7
KIV *e*SS SS 06 02 51.8 -2.6
KIV pmax pmax
comp=Z,7.0nm,1.0s
PKME Peaks-Kenny Pk 122.15 43 PFAKE 05 45 00.0 +11
PKME LR LR
comp=Z,658nm,20.0s
FINES FINESS Array B 122.33 339 PKP PKPdf 05 44 46.5 -2.1
comp=Z,2.0nm,0.5s,baz=41,slow=2.6,SNR=7.5
CPUP Villa Florida 123.42 132 PKP PKPdf 05 44 50.1 -1.6
CPUP Villa Florida 123.42 132 PKP PKPdf 05 44 50.1 -1.6
comp=Z,1.5nm,0.6s,baz=146,slow=3.6,SNR=4.8
SDV Santo Domingo 124.08 87 PFAKE 05 45 00.0 +6.7
SDV LR LR
comp=Z,128nm,20.0s
SDDR Presa de Saban 124.23 75 PFAKE 05 45 00.0 +6.6
SDDR LR LR
comp=Z,1µm,21.0s
GRTK Grand Turk 124.39 72 PFAKE 05 45 10.0 +16
GRTK LR LR
comp=Z,506nm,21.0s
BOSA Boshof 125.11 223 PKP PKPdf 05 44 54.7 -0.2
comp=Z,17nm,1.0s,baz=115,slow=1.4,SNR=14
BOSA Boshof 125.11 223 PKIKP PKPdf 05 44 54.7 -0.2
BOSA MLR MLR
comp=Z,596nm,22.0s
ANN Anapa 125.15 317 *i* PKIKP PKPdf 05 44 47.1 -7.3
ANN pmax pmax
comp=Z,38nm,1.2s
SUR Sutherland 125.27 216 PFAKE 05 45 10.0 +15
SUR LR LR
comp=Z,1µm,19.0s
MALT Malatya 126.46 309 *e*PKPdf PKPdf 05 44 57.6 +0.5
MALT LR LR
comp=Z,533nm,22.0s
MALT Malatya 126.46 309 P PKPdf 05 44 58.0 +0.8
LBTB Lobatse 127.17 226 *e*PKPdf PKPdf 05 44 58.6 -0.3
LBTB LR LR
comp=Z,2µm,19.0s
NOA NORSAR Array B 127.22 345 PKP PKPdf 05 44 57.1 -0.7
comp=Z,1.7nm,0.6s,baz=36,slow=2.1,SNR=6.8
HFS Hagfors 127.32 343 PKP PKPdf 05 44 57.0 -1.1
comp=Z,1.6nm,0.5s,baz=64,slow=3.4,SNR=4.2
AKASG Malin Array Be 127.46 327 PKP PKPdf 05 44 58.2 -0.5
AKASG Malin Array Be 127.46 327 PKP PKPdf 05 44 58.2 -0.5
comp=Z,0.7nm,0.4s,baz=56,slow=1.6,SNR=13
KIEV Kiev 127.47 327 PFAKE 05 45 10.0 +11
KIEV LR LR
comp=Z,1µm,20.0s
KMBO Kilima Mbogo 127.75 260 PKP PKPdf 05 45 00.8 +0.4
comp=Z,4.4nm,0.9s,baz=0.4,slow=24,SNR=5.6
KMBO Kilima Mbogo 127.75 260 PKIKP PKPdf 05 45 00.8 +0.4
KMBO MLR MLR
comp=Z,758nm,21.0s
KONO Kongsberg 128.83 345 PFAKE 05 45 10.0 +9.0
KONO LR LR
comp=Z,2µm,22.0s
BBSR BB Station 128.94 58 PFAKE 05 45 10.0 +7.9
BBSR LR LR
comp=Z,824nm,21.0s
SJG San Juan 129.09 76 PFAKE 05 45 10.0 +7.3
SJG LR LR
comp=Z,561nm,22.0s
ASF Jabal al Asfar 129.14 302 PKP PKPdf 05 45 03.2 +0.7
comp=Z,1.3nm,0.3s,baz=128,slow=3.6,SNR=5.4
BRTR Keskin Array B 129.58 313 PKP PKPdf 05 45 02.6 -0.5
comp=Z,0.9nm,0.6s,baz=43,slow=2.6,SNR=9.3
KIS Kishinev 129.63 323 *e*PKP PKPdf 05 45 08.0 +5.1
KIS LRM 06 40 56.0
comp=Z,400nm,24.0s
MMAI Mount Meron Ar 130.19 304 PKP PKPdf 05 45 05.2 +0.8
comp=Z,0.5nm,0.3s,baz=45,slow=4.3,SNR=4.0
LSZ Lusaka 130.65 238 *e*PKPdf PKPdf 05 45 06.7 +0.9
LSZ LR LR
comp=Z,2µm,19.0s
KWP Kalwaria Pacla 131.49 329 PFAKE 05 45 20.0 +14
KWP LR LR
comp=Z,1µm,22.0s
STHS Stebnicka Huta 132.36 330 *e*PKP PKPdf 05 45 10.8 +2.8
STHS Stebnicka Huta 132.36 330 *e* PKPdf 05 45 10.8 +2.8
CRVS Cervenica-Dubn 132.58 329 *e*PKIKP PKPdf 05 45 07.1 -1.3
CRVS *e* 05 45 19.0
CRVS Cervenica-Dubn 132.58 329 *e*PKP PKPdf 05 45 07.1 -1.3
CRVS *e* 05 45 19.0
CRVS Cervenica-Dubn 132.58 329 *e* PKPdf 05 45 07.1 -1.3
CRVS *e* 05 45 19.0
GRGR Grenville 133.20 84 PFAKE 05 45 20.0 +9.4
GRGR LR LR
comp=Z,483nm,21.0s
ANWB Willy Bob 133.25 77 PFAKE 05 45 20.0 +9.4
ANWB LR LR
comp=Z,531nm,20.0s
OKC Ostrava-Krasne 133.56 332 AMS AMS 06 39 50.0
comp=Z,1µm,24.5s
PVL Pavlikeni 133.68 320 *e*P PKPdf 05 45 09.8 -0.9
FDF Fort de France 133.83 81 PFAKE 05 45 20.0 +8.2
FDF LR LR
comp=Z,809nm,21.0s
PSZ Piszkesteto 134.01 329 PFAKE 05 45 20.0 +8.8
PSZ LR LR
comp=Z,675nm,22.0s
DPC Dobruska-Polom 134.02 333 *e*PKIKP PKPdf 05 45 10.9 -0.2
DPC *e* 05 45 23.3

DPC MLR MLR
comp=Z,2µm,23.0s
DPC Dobruska-Polom 134.02 333 *e*PKPdf PKPdf 05 45 10.9 -0.2
DPC *ep*PKP pPKPdf 05 45 23.3 -7.4
DPC AMS AMS 06 43 40.0
comp=Z,2µm,23.0s
MBAR Mbarara 134.16 258 PFAKE 05 45 20.0 +7.5
MBAR LR LR
comp=Z,717nm,21.0s
VYHS Vyhne 134.16 330 *e*PKIKP PKPdf 05 45 12.7 +1.3
VYHS Vyhne 134.16 330 *e*PKP PKPdf 05 45 12.7 +1.3
VYHS Vyhne 134.16 330 *e* PKPdf 05 45 12.7 +1.3
KDZ Kurdzhali 134.43 318 *e*P PKPdf 05 45 10.0 -2.2
BRG Berggiesshubel 134.63 336 *e*PKP PKPdf 05 45 09.9 -2.3
comp=Z,8.3nm,1.5s
BRG PP PP 05 47 52.0 +6.6
BRG
comp=N,1µm,23.1s
BRG
comp=E,471nm,22.4s
BRG
comp=Z,1µm,22.2s
BRG Berggiesshubel 134.63 336 *e*PKIKP PKPdf 05 45 09.9 -2.3
BRG 05 47 52.0
BRG pmax pmax
comp=Z,19nm,1.5s
BRG MLR MLR
comp=N,5µm,23.1s
BRG MLR MLR
comp=E,631nm,22.4s
BRG MLR MLR
comp=Z,282nm,22.2s
PVCC Panska Ves 134.64 335 AMS AMS 06 38 00.0
comp=Z,1µm,23.2s
CLL Collm 134.67 337 *e*PKP PKPdf 05 45 13.0 +0.7
CLL *e*SKP 05 48 39.0
CLL LR LR
comp=Z,800nm,21.9s
CLL Collm 134.67 337 *e*PKIKP PKPdf 05 45 13.0 +0.7
CLL pmax pmax
comp=Z,30nm,1.2s
CLL MLR MLR
comp=Z,800nm,21.9s
CLL Collm 134.67 337 *e*PKPdf PKPdf 05 45 13.0 +0.7
comp=Z,7.0nm,1.2s
CLL *e*PP PP 05 47 43.0 -2.6
comp=Z,300nm,10.5s
CLL *e*SKSP 05 57 42.0
CLL *e*SPP 05 59 43.0
CLL *e*PSS 06 06 06.0
CLL *e*SSS 06 11 06.0
CLL LmV 06 45 00.0
comp=Z,800nm,21.9s
RZN Rozhen 134.86 319 *e*P PKPdf 05 45 11.4 -1.6
PRA Prague 135.04 334 AMS AMS 06 44 00.0
PRU Pruhonice 135.06 334 AMS AMS 06 43 20.0
comp=Z,1µm,26.5s
TREC Trest 135.16 333 AMS AMS 06 44 40.0
comp=Z,2µm,22.5s
BBGH Gun Hill 135.31 83 PFAKE 05 45 30.0 +15
BBGH LR LR
comp=Z,1µm,20.0s
VTS Vitosha 135.34 321 *e*P PKPdf 05 45 11.6 -2.2
EKA Eskdalemuir Ar 135.45 351 PKP PKPdf 05 45 12.9 -0.7
comp=Z,1.3nm,0.8s,baz=357,slow=3.0,SNR=4.1
ESK Eskdalemuir 135.47 351 PFAKE 05 45 30.0 +16
ESK LR LR
comp=Z,1µm,20.0s
NKC Novy Kostel 135.73 336 AMS AMS 06 49 10.0
comp=Z,1µm,22.0s
CONA Conrad Observa 135.98 331 ⇑ *i*PKPdf PKPdf 05 45 14.6 -0.2
comp=Z,6.2nm,0.9s
KHC Kasperske Hory 136.12 334 *e*PKIKP PKPdf 05 45 15.0 -0.1
KHC MLR MLR
comp=Z,2µm,25.2s
KHC Kasperske Hory 136.12 334 *e*PKPdf PKPdf 05 45 15.0 -0.1
KHC AMS AMS 06 44 20.0
comp=Z,2µm,25.2s
TSUM Tsumeb 136.57 226 PFAKE 05 45 30.0 +13
TSUM LR LR
comp=Z,2µm,19.0s
SOKA Soboth 137.27 331 ⇓ *i*PKPdf PKPdf 05 45 14.4 -2.9
comp=Z,5.9nm,1.2s
TIR Tirane 138.10 321 PFAKE 05 45 30.0 +11
TIR LR LR
comp=Z,1µm,22.0s
WLF Walferdange 138.50 340 PFAKE 05 45 30.0 +11
WLF LR LR
comp=Z,1µm,20.0s
TRI Trieste 138.58 331 PFAKE 05 45 30.0 +10
TRI LR LR
comp=Z,1µm,22.0s
BAIF Baives 138.76 342 *e*PKIKP PKPdf 05 45 12.1 -7.8
BFO Black Forest 138.86 338 PFAKE 05 45 30.0 +10
BFO LR LR
comp=Z,682nm,22.0s
CDF Champ du Feu 139.18 338 *e*PKIKP PKPdf 05 45 18.4 -2.3
comp=Z,26nm,1.1s
ECH Echery 139.39 338 PFAKE 05 45 30.0 +8.9
ECH LR LR
comp=Z,893nm,20.0s
DAVOX Davos/Dischmat 139.51 335 PKhKP PKPpre 05 45 13.9
comp=Z,2.4nm,0.6s,baz=186,slow=6.1,SNR=5.3
DAVOX PKP PKPdf 05 45 21.7 +0.3
comp=Z,5.3nm,0.6s,baz=28,slow=2.6,SNR=6.0
HINF Hinteralfeld 139.83 338 *e*PKIKP PKPdf 05 45 19.0 -2.9
CABF La Chapelle 141.13 338 *e*PKIKP PKPdf 05 45 20.9 -3.4
AQU L'Aquila 141.16 327 PFAKE 05 45 40.0 +15
AQU LR LR
comp=Z,1µm,22.0s
FLN La Foliniere 141.20 346 *e*PKIKP PKPdf 05 45 20.9 -3.5
LDF La Druitiere 141.27 345 *e*PKIKP PKPdf 05 45 21.8 -2.7
TIP Timpagrande 141.30 321 *e*PKPdf PKPdf 05 45 24.4 -0.5
TIP LR LR
comp=Z,760nm,22.0s
CUC Castrocucco 141.37 323 PFAKE 05 45 40.0 +15
CUC LR LR
comp=Z,694nm,22.0s
GRR Gorron 141.64 346 *e*PKIKP PKPdf 05 45 23.0 -2.2
LPL La Plagne 141.81 336 *e*PKIKP PKPdf 05 45 23.0 -2.6
LPG La Plagne 141.82 336 *e*PKIKP PKPdf 05 45 23.2 -2.4
comp=Z,19nm,1.0s
SMF Signal de Mont 141.89 340 *e*PKIKP PKPdf 05 45 22.1 -3.6
AVF Avril sur Loir 141.92 341 *e*PKIKP PKPdf 05 45 22.0 -3.7
BGF Bois d'Agland 142.29 341 *e*PKIKP PKPdf 05 45 22.5 -3.9
CEL Celeste 142.39 320 PFAKE 05 45 40.0 +13
CEL LR LR
comp=Z,613nm,22.0s
MBDF Montbardon 142.45 336 *e*PKIKP PKPdf 05 45 22.9 -3.8
comp=Z,12nm,0.7s
ORIF Oris-en-Rattie 142.64 337 *e*PKIKP PKPdf 05 45 22.6 -4.5
TCF Toulx Ste Croi 142.73 342 *e*PKIKP PKPdf 05 45 24.6 -2.6
comp=Z,116nm,1.7s
SSB Saint Sauveur 142.83 338 PFAKE 05 45 40.0 +13
SSB LR LR
comp=Z,645nm,20.0s
SBF Sospel 142.88 334 *e*PKIKP PKPdf 05 45 22.5 -5.0
comp=Z,32nm,0.8s
MFF Saint Martin d 143.12 344 *e*PKIKP PKPdf 05 45 23.7 -4.2
VIVF Saint-Julien-l 143.15 338 ⇑ *i*PKIKP PKPdf 05 45 24.3 -3.7
comp=Z,99nm,1.7s
PGF Pioggiola 143.22 331 *e*PKIKP PKPdf 05 45 24.0 -4.2
comp=Z,31nm,0.8s
FRF La Foret Royal 143.46 335 *e*PKIKP PKPdf 05 45 24.7 -3.9
comp=Z,53nm,1.0s
SMRF Simiane la Rot 143.55 336 *e*PKIKP PKPdf 05 45 26.0 -2.7
LMR La Mourre 143.70 335 ⇑ *i*PKIKP PKPdf 05 45 25.8 -3.2
comp=Z,203nm,1.6s
RJF Les Rejaudoux 143.82 342 *e*PKIKP PKPdf 05 45 26.7 -2.5
comp=Z,235nm,1.8s
CAF Calviac 143.99 341 *e*PKIKP PKPdf 05 45 27.3 -2.2
comp=Z,138nm,1.9s
LASF Ste Croix 144.12 338 ⇑ *i*PKIKP PKPdf 05 45 27.8 -1.9
comp=Z,70nm,1.1s
LFF La Frestale 144.39 342 *e*PKIKP PKPdf 05 45 28.3 -1.9
comp=Z,281nm,1.8s
WDD Wield Dalam 144.70 318 *e*PKPdf PKPdf 05 45 29.5 -1.5
WDD LR LR
comp=Z,464nm,21.0s
VSL Villasalto 145.33 328 *e*PKPdf PKPdf 05 45 31.5 -0.4
VSL LR LR
comp=Z,461nm,22.0s
MTLF Montolieu 145.34 339 *e*PKIKP PKPdf 05 45 29.6 -2.3
EPF Esparros 146.24 341 *e*PKIKP PKPdf 05 45 31.0 -2.4
SJPF Ste Jean 146.63 343 *e*PKIKP PKPdf 05 45 30.8 -3.3
comp=Z,35nm,1.1s
ETSF Etsaut 146.64 342 *e*PKIKP PKPdf 05 45 33.1 -1.0
comp=Z,38nm,0.9s
KEST Kesra 148.02 323 *e*PKPdf PKPdf 05 45 36.8 +0.1
KEST *e*PKPbc PKPbc 05 45 39.6 -0.2
KEST Kesra 148.02 323 PKPbc PKPbc 05 45 39.3 -0.5
comp=Z,9.6nm,1.0s,baz=65,slow=1.2,SNR=21
CMAH Djebel Manchou 148.48 326 P PKPbc 05 45 40.6 -0.4
CAEH 'Ain El Ouahch 148.68 327 P PKPbc 05 45 42.2 +0.7
CKFL Skikda Ekhel 149.03 327 P PKPbc 05 45 42.4 0.0
PBRG Braganca 149.16 350 *e*PKPab PKPab 05 45 47.2 +0.3
CASM Ain Smara 149.26 327 P PKPbc 05 45 43.0 +0.1
DFRA Djebel Bou Aff 149.37 328 P PKPbc 05 45 44.0 +0.8
CTEI Djebel Teioual 149.45 327 P PKPbc 05 45 43.6 +0.2
MVO Moncorvo 149.83 350 *e*PKPbc PKPbc 05 45 43.4 -0.8
MVO *e*LR LR 06 40 52.5
comp=Z,1µm,20.0s
PVRL Vila Real 149.83 351 *e*PKPbc PKPbc 05 45 43.7 -0.5
PVRL Vila Real 149.83 351 *e*PKPab PKPab 05 45 49.5 -0.2
SET Setif 149.88 328 P PKPbc 05 45 44.0 -0.5
PVIS Viseu 150.41 351 *e*PKPdf PKPdf 05 45 40.1 -0.2
PVIS Viseu 150.41 351 *e*PKPbc PKPbc 05 45 45.6 0.0
ABA Alger-Bouzarea 150.57 332 P PKPbc 05 45 46.7 +0.6
ESDC Sonseca Array 150.59 344 PKPbc PKPbc 05 45 44.5 -1.5
comp=Z,2.9nm,0.7s,baz=15,slow=3.3,SNR=13
ESLA Sonseca Array 150.59 344 PFAKE 05 45 50.0 +9.4
ESLA LR LR
comp=Z,6µm,22.0s
MTE Manteigas 150.66 350 *e*PKPbc PKPbc 05 45 46.0 -0.2
MTE *e*LR LR 06 41 38.5
comp=Z,784nm,20.0s
MTE Manteigas 150.66 350 *e*PKPbc PKPbc 05 45 45.3 -0.9
MTE LR LR
comp=Z,939nm,19.0s
AKET Djebel Ketaf 150.77 330 P PKPbc 05 45 47.7 +1.1
PAB San Pablo 150.81 345 *e*PKPbc PKPbc 05 45 46.3 -0.3
PAB LR LR
comp=Z,875nm,21.0s
ADJB Djebel Djouab 150.90 330 P PKPbc 05 45 47.9 +1.0
EMHD Djebel Mahouad 151.09 331 P PKPbc 05 45 45.0 -2.4
PCBR Castelo Branco 151.19 350 *e*PKPbc PKPbc 05 45 47.2 -0.3
PTOM Tomar 151.56 351 *e*PKPdf PKPdf 05 45 41.9 -0.2
PTOM Tomar 151.56 351 *e*PKPbc PKPbc 05 45 48.2 -0.1
PMRV Marv??o 151.58 350 *e*PKPbc PKPbc 05 45 48.0 -0.4
PMRV *e*LR LR 06 41 26.3
comp=Z,877nm,20.0s
RCBR Riachuelo 152.09 127 PFAKE 05 45 50.0 +6.3
RCBR LR LR
comp=Z,798nm,20.0s
PESTR Estremoz 152.16 350 *e*LR LR 06 41 21.3
comp=Z,1µm,22.0s
PMAFR Mafra 152.33 352 *e*LR LR 06 42 23.3
comp=Z,748nm,20.0s
LIS Lisbon 152.55 352 *e*P PKPdf 05 45 41.2 -2.4
EVO Evora 152.56 350 ⇑ *i*PKIKP PKPdf 05 45 40.3 -3.3
comp=Z,116nm,1.7s
EVO Evora 152.56 350 *e*PKPbc PKPbc 05 45 50.3 -0.3
EVOP Sao Brissos 152.58 350 *e*P PKPdf 05 45 41.4 -2.3
PBAR Barrancos 152.73 348 *e*PKPab PKPab 05 46 02.4 +0.6
PBAR eLQ 06 40 53.8
PBAR *e*LR LR 06 44 33.9
comp=Z,2µm,22.0s
PBEJ Beja 153.03 350 *e*PKPbc PKPbc 05 45 51.8 +0.1
MESJ Messejana 153.27 350 *e*P PKPdf 05 45 43.7 -1.0
PCVE Castro Verde 153.44 350 *e*PKPdf PKPdf 05 45 45.6 +0.7
PCVE Castro Verde 153.44 350 *e*PKPbc PKPbc 05 45 52.4 -0.2
PCVE *e*LR LR 06 41 39.2
comp=Z,1µm,20.0s
PVAQ Vaqueiros 153.60 349 *e*PKPbc PKPbc 05 45 53.3 +0.4
PVAQ *e*LR LR 06 40 45.0
comp=Z,1µm,22.0s
PTEO Sao Teotonio 153.64 351 *e*PKPab PKPab 05 46 06.3 +0.6
PBDV Barranco-do-Ve 153.80 349 *e*LR LR 06 40 40.5
comp=Z,1µm,22.0s
MORF Marmelete 153.86 351 *e*PKPbc PKPbc 05 45 51.9 -1.6
MORF *e*LR LR 06 41 57.1
comp=Z,661nm,22.0s
PFVI Vila Bisbo 154.06 351 *e*LR LR 06 43 27.3
comp=Z,624nm,20.0s
SFS San Fernando 154.19 346 PFAKE 05 46 00.0 +14
SFS LR LR
comp=Z,2µm,20.0s
MDT Midelt 157.14 340 PKP PKPdf 05 45 49.6 -0.5
comp=Z,3.3nm,1.0s,baz=348,slow=1.9,SNR=4.8
MDT PKPab PKPab 05 46 20.6 -0.2
comp=Z,3.5nm,0.8s,baz=346,slow=6.0,SNR=5.8
TAM Tamanrasset 158.40 304 PFAKE 05 46 00.0 +8.1
TAM LR LR
comp=Z,1µm,22.0s
TORD Torodi Ar. Bea 164.77 278 PKP PKPdf 05 45 57.4 -1.3
TORD PKPab PKPab 05 46 55.2 +0.4
TORD PP PP 05 50 36.6 -5.0
TORD Torodi Ar. Bea 164.77 278 PKP PKPdf 05 45 57.4 -1.3
comp=Z,12nm,1.3s,baz=72,slow=0.1,SNR=20
TORD PKPab PKPab 05 46 55.2 +0.4
comp=Z,5.7nm,0.8s,baz=85,slow=3.9,SNR=9.6
TORD PP PP 05 50 36.6 -5.0
comp=Z,0.9nm,0.8s,baz=123,slow=4.9,SNR=4.3
KIC Kosan Boka 169.71 241 *e*P PKPab 05 47 16.3 -0.3
comp=Z,237nm,1.5s
LIC Lamto 169.89 240 *e*P PKPab 05 47 17.3 -0.1
comp=Z,232nm,1.6s
LIC Lamto 169.89 240 *e*PKIKP PKPdf 05 46 00.0 -2.5
comp=Z,50nm,1.3s
DBIC Dimbokro 169.96 242 PFAKE 05 46 10.0 +7.4
DBIC LR LR
comp=Z,2µm,22.0s
TIC Toumodi 170.09 242 *e*P PKPab 05 47 18.4 +0.1
comp=Z,189nm,1.5s

BJI **12** *06:04:22.6, 57.80N×155.10W, h82km, mB5.0/8, mb4.6/10, Ms4.4/4, Ms7 4.2/5*
ISCJB **12** *06:04:24.3±0.3, 57.90N±0.04×155.16W±0.06, h92km±3km, mb4.3/44, Error ellipse: s-maj=6.7km s-min=4.2km az=147.8*
IDC **12** *06:04:24.9±2.1, 58.10N×155.26W, h76km±18km, mb3.8/17, mb1 4.0/21, mb1mx3.9/28, mbtmp3.9/21, Error ellipse: s-maj=23.1km s-min=16.7km az=45.0*
NEIC **12** *06:04:27.6, 57.82N×155.08W, h83km, mb4.5/3, After AEIC.*

ISC 12 06:04:25.7±0.3, 57.87N±0.04×155.14W±0.06, h91km±3km, h80km±2.9km: pP-P, n108, σ0.95/117, mb4.3/44, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.19**	**122**	P	**Pn**	**06 04 47.6**	**0.0**
OHAK				S	**Sn**	**06 05 03.9**	**-0.2**
KDAK	**Kodiak Island**	**1.37**	**92**	P	**Pn**	**06 04 49.9**	**+0.1**
KDAK				S	**Sn**	**06 05 08.4**	**+0.4**
KDAK	**Kodiak Island**	**1.37**	**92**	P	**Pn**	**06 04 50.1**	**+0.3**
	618nm,0.3s,baz=257,slow=4.7						
KDAK				S	**Sn**	**06 05 07.8**	**-0.2**
	283nm,0.3s,baz=46,slow=21,SNR=16						
CHGN	**Chignik**	**2.38**	**230**	*e*Pn	**Pn**	**06 05 03.3**	**+0.4**
CHGN				*e*Sn	**Sn**	**06 05 29.3**	**-2.0**
RSO	**Redoubt South**	**2.88**	**24**	*e*Pn	**Pn**	**06 05 11.0**	**+1.5**
SVW2	**Sparrevohn**	**3.25**	**356**	*e*P	**Pn**	**06 05 15.2**	**+0.8**
SLKM	**Skilak Lake**	**3.66**	**42**	P	**Pn**	**06 05 20.4**	**+0.4**
SEW	**Seward**	**3.70**	**50**	P	**Pn**	**06 05 20.1**	**-0.4**
SDPT	**Sand Point**	**3.88**	**232**	P	**Pn**	**06 05 23.4**	**+0.4**
FIB	**Fire Island**	**4.17**	**35**	P	**Pn**	**06 05 28.0**	**+1.2**
RC01	**Rabbit Creek A**	**4.25**	**38**	P	**Pn**	**06 05 27.8**	**-0.1**
PMR	**Palmer**	**4.82**	**37**	P	**Pn**	**06 05 35.7**	**0.0**
MID	**Middleton Isla**	**4.86**	**67**	*e*Pn	**Pn**	**06 05 35.1**	**-1.1**
MID				*e*Sn	**Sn**	**06 06 27.3**	**-3.8**
TT01	**Tatalina**	**5.08**	**355**	P	**Pn**	**06 05 40.4**	**+1.2**
TTA	**Tatalina**	**5.10**	**356**	*e*P	**Pn**	**06 05 40.6**	**+1.1**
SML	**Sawmill**	**5.23**	**38**	P	**Pn**	**06 05 40.7**	**-0.6**
PPLA	**Purkeypile**	**5.25**	**15**	P	**Pn**	**06 05 43.5**	**+1.9**
FALS	**False Pass**	**5.50**	**240**	P	**Pn**	**06 05 45.2**	**+0.2**
EYAK	**Cordova Ski Ar**	**5.52**	**57**	P	**Pn**	**06 05 44.8**	**-0.4**
DIV	**Divide**	**5.78**	**52**	P	**Pn**	**06 05 48.9**	**+0.1**
TRF	**Thorofare Moun**	**6.09**	**21**	P	**Pn**	**06 05 52.6**	**-0.3**
CHUM	**Lake Minchumin**	**6.19**	**12**	P	**Pn**	**06 05 55.5**	**+1.2**
BMRM	**Bremner River**	**6.21**	**56**	P	**Pn**	**06 05 54.3**	**-0.3**
RND	**Reindeer**	**6.36**	**26**	P	**Pn**	**06 05 55.7**	**-0.9**
DHY	**Denali Highway**	**6.48**	**33**	P	**Pn**	**06 05 57.6**	**-0.7**
BPAW	**Bear Paw Mtn.**	**6.57**	**16**	P	**Pn**	**06 05 59.2**	**-0.3**
MCK	**McKinley**	**6.62**	**25**	P	**Pn**	**06 05 59.9**	**-0.2**
PAX	**Paxson**	**7.00**	**39**	P	**Pn**	**06 06 05.8**	**+0.4**

AKLV Akutan Long Va 7.11 243 P **Pn** **06 06 07.4 +0.6**
UNV Unalaska Valle 7.55 243 P **Pn** **06 06 13.0 +0.1**
MENT Mentasta 7.60 43 *e*Pn **Pn** **06 06 13.5 +0.1**
COLA College 7.85 23 P **Pn** **06 06 15.3 -1.5**
ILAR Eielson Array 7.98 26 P **Pn** **06 06 16.6 -2.0**
5.6nm,0.3s,baz=217,slow=14,SNR=384
ILAR S **Sn** **06 07 41.4 -5.7**
5.8nm,0.3s,baz=214,slow=20,SNR=11
IM3 Indian Mountai 8.17 4 P **Pn** **06 06 21.9 +0.6**
YKU2 Yakutat 8.22 72 *e*Pn **Pn** **06 06 22.0 0.0**
PNL Peninsula 8.38 71 P **Pn** **06 06 23.7 -0.4**
BCA3 Beaver Creek A 8.40 46 P **Pn** **06 06 25.1 +0.7**
HYT Haines Junctio 9.48 64 *e*Pn **Pn** **06 06 39.3 +0.3**
HYT *e*Sn **Sn** **06 08 26.7 +3.2**
EGAK Eagle 9.63 38 *e*Pn **Pn** **06 06 40.5 -0.6**
COLD Coldfoot 9.66 12 P **Pn** **06 06 40.1 -1.4**
DAWY Dawson 9.84 44 *e*Pn **Pn** **06 06 44.8 +0.8**
SKAG Skagway 10.44 73 *e*P **Pn** **06 06 52.1 0.0**
20nm,0.6s
SIT Sitka 10.70 86 *e*Pn **Pn** **06 06 54.6 -1.1**
CRAG Craig 12.33 92 *e*Pn **Pn** **06 07 15.9 -1.8**
DLBC Dease Lake 13.25 77 *e*Pn **Pn** **06 07 31.8 +1.9**
DLBC Dease Lake 13.25 77 P **Pn** **06 07 30.6 +0.8**
1.5nm,0.3s,baz=300,slow=14,SNR=18
DLBC S **Sn** **06 09 48.5 -6.7**
0.4nm,0.3s,baz=108,slow=20,SNR=2.7
INK Inuvik 14.23 34 *e*Pn **Pn** **06 07 41.0 -1.4**
INK Inuvik 14.23 34 P **Pn** **06 07 40.8 -1.6**
1.3nm,0.3s,baz=227,slow=14,SNR=47
AMKA Amchitka 16.10 257 *e*P **Pn** **06 08 06.2 -0.1**
16nm,0.3s
BBB Bella Bella 16.44 99 P **Pn** **06 08 13.6 +3.2**
0.3nm,0.3s,baz=138,slow=12,SNR=4.9
SMY Shemya 18.15 267 *e*P **Pn** **06 08 30.6 -0.7**
20nm,0.5s
YKA Yellowknife Ar 20.42 60 P **P** **06 08 55.6 +0.6**
6.0nm,0.6s,baz=273,slow=9.4,SNR=18
RES Resolute Bay 27.71 30 P **P** **06 10 04.8 0.0**
4.3nm,0.8s,mb4.0,baz=323,slow=5.1,SNR=4.8
AGMN Agassiz Nation 35.76 79 *e*P **P** **06 11 16.4 +1.0**
2.0nm,0.8s,mb4.1
TXAR Lajitas Array 45.36 106 P **P** **06 12 36.4 +1.8**
0.2nm,0.4s,mb3.2,baz=302,slow=7.2,SNR=4.6
SCHQ Schefferville 45.69 54 P **P** **06 12 37.2 +0.4**
2.8nm,0.6s,mb4.2,baz=291,slow=7.5,SNR=9.8
MDJ Mudanjiang 46.48 288 P **P** **06 12 43.9 +0.8**
MDJ pP pP 06 13 03.4 -1.5
MDJ sP sP 06 13 12.7 -2.6
MDJ PcS PcS 06 18 12.7 +1.9
MDJ S **S** **06 19 24.9 +0.8**
MDJ sS sS 06 19 58.8 -2.7
MDJ ScS ScS 06 22 30.8 +2.3
MDJ pmax pmax
comp=Z,7.0nm,1.4s,mb4.2
MDJ pmax pmax
comp=Z,120nm,6.2s
MDJ LR LR
comp=N,130nm,16.6s
MDJ LR LR
comp=E,78nm,18.6s
MDJ LR LR
comp=Z,160nm,14.6s
CN2 Changchun 49.15 290 *e*P **P** **06 13 01.9 -1.9**
CN2 *e*S **S** **06 19 59.3 -2.6**
CN2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
CN2 pmax pmax
comp=Z,200nm,4.0s
ARCES ARCESS Array B 52.90 360 P **P** **06 13 29.4 -2.1**
comp=Z,1.0nm,0.6s,mb4.0,baz=22,slow=6.7,SNR=5.5
ARCES PcP PcP 06 14 38.8 -0.5
comp=Z,1.3nm,0.8s,baz=27,slow=3.0,SNR=4.0
SONM Songino Array 55.14 306 P **P** **06 13 49.0 +1.0**
comp=Z,0.4nm,0.5s,mb3.8,baz=7.6,slow=4.5,SNR=3.6
HHC Hu-ho-hao-te 58.17 297 *e*P **P** **06 14 12.7 +3.1**
HHC pP pP 06 14 32.2 -0.1
HHC sP sP 06 14 41.0 -1.4
HHC PP PP 06 16 22.6 +3.7
HHC sS sS 06 22 39.2 -3.3
HHC SS SS 06 25 59.0 +3.0
HHC pmax pmax
comp=Z,14nm,0.7s,mb5.1
HHC pmax pmax
comp=Z,240nm,5.1s
HHC LR LR
comp=N,140nm,14.1s
HHC LR LR
comp=E,190nm,17.7s
HHC LR LR
comp=Z,180nm,16.2s
ZALV Zalesovo Beam 58.43 323 P **P** **06 14 10.7 -0.5**
comp=Z,0.5nm,0.3s,mb4.0,baz=32,slow=8.5,SNR=3.3
JOF Joensuu 59.44 357 *e*p **P** **06 14 16.7 -1.4**
comp=Z,1.0nm,0.4s,mb4.2
KAF Kangasniemi 60.35 359 *e*p **P** **06 14 21.6 -2.7**
comp=Z,1.7nm,0.4s,mb4.4
NOA NORSAR Array B 60.95 8 P **P** **06 14 28.0 -0.4**
comp=Z,0.7nm,0.5s,mb3.9,baz=331,slow=6.2,SNR=4.6
FINES FINESS Array B 61.02 359 P **P** **06 14 27.6 -1.3**
comp=Z,2.0nm,0.5s,mb4.5,baz=18,slow=7.4,SNR=12
HFS Hagfors 62.01 6 P **P** **06 14 35.0 -0.6**
comp=Z,3.1nm,0.4s,mb4.7,baz=35,slow=5.4,SNR=30
BVAR Borovoye Array 63.42 331 P **P** **06 14 44.6 -0.4**
comp=Z,1.8nm,0.7s,mb4.1,baz=32,slow=6.2,SNR=9.7
MKAR Makanchi Array 65.39 320 P **P** **06 14 57.1 -0.8**
comp=Z,0.3nm,0.4s,mb3.4,baz=39,slow=5.8,SNR=8.9
WMQ Urumqi 66.01 315 *e*P **P** **06 15 05.4 +3.4**
WMQ pP pP 06 15 27.7 +2.6
WMQ PcP PcP 06 15 35.1 +3.2
WMQ sP sP 06 15 37.4 +2.3
WMQ pmax pmax
comp=Z,4.0nm,1.2s,mb4.1
WMQ pmax pmax
comp=Z,38nm,4.2s
CD2 Chengdu 69.91 296 P **P** **06 15 30.8 +4.2**
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
CD2 pmax pmax
comp=Z,100nm,4.7s
BAIF Baives 71.10 14 *e*P **P** **06 15 32.8 -0.7**
AKASG Malin Array Be 71.74 357 P **P** **06 15 36.0 -1.4**
comp=Z,0.9nm,0.3s,mb4.0,baz=4.0,slow=6.1,SNR=7.6
GRR Gorron 72.00 18 *e*P **P** **06 15 38.7 -0.2**
GYA Guiyang 72.17 291 *e*P **P** **06 15 42.8 +2.5**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
HAU Haudompre 73.39 13 *e*P **P** **06 15 47.0 -0.2**
HINF Hinteralfeld 73.63 13 *e*P **P** **06 15 48.2 -0.4**
LOR Lormes 73.80 15 *e*P **P** **06 15 49.5 -0.1**
comp=Z,20nm,1.0s,mb4.5
MFF Saint Martin d 73.85 18 *e*P **P** **06 15 50.0 +0.1**
comp=Z,17nm,0.6s,mb4.6
SSF Saint Saulge 73.95 15 *e*P **P** **06 15 50.5 0.0**
comp=Z,15nm,0.8s,mb4.5
KSH Kashi 73.97 321 *e*P **P** **06 15 53.4 +2.6**
KSH *e*PcP PcP 06 16 09.2 +3.6
KSH *ep*P pP 06 16 12.9 -1.4
KSH *e*sP sP 06 16 21.8 -2.4
KSH *e*PP PP 06 18 39.1 +2.9
KSH *e*S S 06 25 13.6 -1.8
KSH *e*SKS 06 25 47.0
KSH *e*ScS ScS 06 25 51.2 -1.1
KSH pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
KSH pmax pmax
comp=Z,46nm,4.3s
KSH LR LR
comp=Z,29nm,4.4s
AVF Avril sur Loir 74.19 15 *e*P **P** **06 15 51.7 -0.2**
comp=Z,22nm,0.7s,mb4.7
BGF Bois d'Agland 74.35 16 *e*P **P** **06 15 52.6 -0.2**
comp=Z,17nm,0.7s,mb4.6
SMF Signal de Mont 74.40 15 *e*P **P** **06 15 52.8 -0.3**
comp=Z,26nm,1.0s,mb4.6
TCF Toulx Ste Croi 74.52 16 *e*P **P** **06 15 53.5 -0.3**
comp=Z,24nm,1.1s,mb4.5
CABF La Chapelle 74.73 13 *e*P **P** **06 15 54.6 -0.4**
comp=Z,17nm,0.9s,mb4.5
DAVOX Davos/Dischmat 74.98 11 P **P** **06 15 56.6 +0.1**
comp=Z,1.6nm,0.5s,mb4.0,baz=3.4,slow=17,SNR=5.1
RJF Les Rejaudoux 75.38 17 *e*P **P** **06 15 58.7 0.0**
LFF La Frestale 75.61 17 *e*P **P** **06 16 00.2 +0.1**
comp=Z,46nm,0.6s,mb5.1
CAF Calviac 75.83 16 *e*P **P** **06 16 01.3 0.0**
comp=Z,27nm,1.0s,mb4.6

LPL	La Plagne	75.89	13	*e*P		P	06 16 01.9	+0.2
LPG	La Plagne	75.91	13	*e*P		P	06 16 01.8	0.0
VIVF	Saint-Julien-l	76.27	15	*e*P		P	06 16 04.0	+0.1
	comp=Z,28nm,0.9s,mb4.7							
ORIF	Oris-en-Rattie	76.37	14	*e*P		P	06 16 04.7	+0.3
	comp=Z,13nm,1.0s,mb4.3							
MBDF	Montbardon	76.67	13	*e*P		P	06 16 07.1	+1.0
	comp=Z,7.4nm,0.6s,mb4.3							
LASF	Ste Croix	76.92	15	*e*P		P	06 16 07.4	-0.1
SMRF	Simiane la Rot	77.26	14	*e*P		P	06 16 10.2	+0.8
	comp=Z,16nm,0.8s,mb4.5							
ETSF	Etsaut	77.38	19	*e*P		P	06 16 10.9	+0.8
	comp=Z,28nm,0.7s,mb4.8							
MTLF	Montolieu	77.40	17	*e*P		P	06 16 10.3	+0.1
	comp=Z,11nm,0.6s,mb4.5							
EPF	Esparros	77.40	18	*e*P		P	06 16 09.9	-0.3
SBF	Sospel	77.60	13	*e*P		P	06 16 11.3	0.0
FRF	La Foret Royal	77.80	13	*e*P		P	06 16 12.5	+0.1
LMR	La Mourre	78.01	14	*e*P		P	06 16 13.8	+0.2
	comp=Z,8.1nm,0.7s,mb4.3							
PGF	Pioggiola	79.08	12	*e*P		P	06 16 19.4	-0.1
	comp=Z,10nm,0.7s,mb4.5							
ESDC	Sonseca Array	79.86	22	P		P	06 16 24.8	+1.0
	comp=Z,4.8nm,0.6s,mb4.5,baz=343,slow=5.1,SNR=19							
BRTR	Keskin Array B	82.49	353	P		P	06 16 37.8	0.0
	comp=Z,1.4nm,0.8s,mb3.8,baz=21,slow=3.6,SNR=3.6							
KEST	Kesra	85.85	13	P		P	06 16 55.5	+0.7
	comp=Z,2.1nm,0.7s,mb4.2,baz=270,slow=3.6,SNR=8.9							
BOSA	Boshof	150.76	359	PKPbc	PKPbc		06 24 05.5	-1.3
	comp=Z,1.2nm,0.5s,baz=342,slow=3.2,SNR=4.5							

SZGRF **12** *06:08:21.0,20˙50S×176˙50W,h33km, Fiji Islands region*
ISCJB **12** *06:08:55.1±1.0,20˙62S±0˙03×177˙35W±0˙03, h255km±10km, mb5.0/185, Error ellipse: s-maj=5.7km s-min=3.8km az=144.8*
DJA **12** *06:08:58,20˙82S×177˙21W,h274km,mb5.3/19*
MOS **12** *06:09:01.4±2.2,20˙10S×177˙10W,h291km,mb5.3/42, Error ellipse: s-maj=10.1km s-min=8.1km az=58.4*
BJI **12** *06:09:03.9,20˙18S×177˙14W,h338km,mB4.8/20, mb4.9/37*
BGS **12** *06:09:04.1±5.3,20˙67S×177˙33W,h338km,mb5.1(NEIC)*
NEIC **12** *06:09:04.4±0.8,20˙67S×177˙33W,h338km±8km, mb5.1/143, Error ellipse: s-maj=6.7km s-min=4.4km az=156.0*
IDC **12** *06:09:05.4±0.7,20˙69S×177˙29W,h348km±6km,mb4.7/22, mb1 4.7/23,mb1mx4.7/23,mbtmp4.7/23, Error ellipse: s-maj=10.3km s-min=9.4km az=139.0*
GCMT **12** *06:09:05.8±0.6,20˙68S×177˙18W,h346km±3km,MW5.3, Moment Tensor Solution. s41,c54; Moment tensor: Scale 10^{17}Nm; M_{rr}0.03±.05; $M_{\theta\theta}$-1.10±.08; $M_{\phi\phi}$1.07±.07; $M_{r\theta}$-0.72±.07; $M_{\theta\phi}$0.10±.08; $M_{\phi r}$-0.24±.07; Best double couple: $M_0$1.30000×10^{17} NP1:ϕ_S141.00000°, δ59.00000°, λ-173.00000°. NP2:ϕ_S47.00000°, δ84.00000°, λ-31.00000°. Principal axes: T 1.1600, Plg17.0000°, Azm98.0000°; N 0.2900, Plg58.0000°, Azm218.0000°; P -1.4500, Plg26.0000°, Azm360.0000°; Data Used: IU II IC G CN.*

ISC 12 06:08:59.6±1.2, 20˙73S±0˙04×177˙33W±0˙03, h288km±12km, h344km±1.5km:pP-P,n981,σ0s74/729, mb5.1/185, 229C-204D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	5.29	304	Pn	Pn	06 10 27.4	+7.3
	21µm,0.7s						
MSVF	Nonsavu	5.29	304	*e*Pn	Pn	06 10 27.2	+7.2
	2µm,0.7s						
AFI	Afiamalu	8.61	39	*e*Pn	Pn	06 10 56.3	-4.4
	252nm,0.6s						
AFI				*e*Sn	S	06 12 26.3	-13
AFI	Afiamalu	8.61	39	P	Pn	06 10 56.4	-4.3
	70nm,0.3s,baz=132,slow=3.0,SNR=43						
AFI				S	S	06 12 25.7	-13
	113nm,0.3s,baz=56,slow=22,SNR=11						
AFI	Afiamalu	8.61	39	*e*P	Pn	06 10 56.3	-4.4
AFI				*e*		06 12 26.3	
AFI				pmax	pmax		
	comp=Z,252nm,0.6s						
DZM	Mont Dzumac	15.17	262	*e*P	Pn	06 12 24.8	+4.3
	comp=Z,1µm,0.8s						
DZM	Mont Dzumac	15.17	262	*e*P	Pn	06 12 24.4	+3.9
NOUC	Port Laguerre	15.30	262	*e*P	Pn	06 12 25.3	+3.3
RAR	Rarotonga	16.41	95	*e*P	P	06 12 33.5	+0.7
	comp=Z,275nm,0.9s						
RAR	Rarotonga	16.41	95	P	P	06 12 33.4	+0.7
	comp=Z,14nm,0.3s,baz=248,slow=8.3,SNR=21						
RAR				S	S	06 15 41.0	+11
	comp=Z,1.4nm,0.3s,baz=106,slow=20,SNR=2.4						
RAR	Rarotonga	16.41	95	*e*P	P	06 12 33.5	+0.7
RAR				pmax	pmax		
	comp=Z,275nm,0.9s						
OUZ	Omahuta	16.50	207	*e*P	P	06 12 37.5	+4.0
	comp=Z,55nm,0.8s						
PUZ	Puketiti	17.70	192	SN	S	06 15 52.8	-2.2
MWZ	Matawai	18.10	193	PN	P	06 12 50.1	-0.7
MWZ				SN	S	06 16 02.8	-0.1
URZ	Urewera	18.12	194	*e*P	P	06 12 50.9	-0.1
	comp=Z,138nm,0.4s						
URZ	Urewera	18.12	194	P	P	06 12 49.1	-1.9
	comp=Z,18nm,0.3s,baz=334,slow=1.7,SNR=51						
URZ				S	S	06 16 00.9	-2.4
	comp=Z,12nm,0.3s,baz=90,slow=13,SNR=5.4						
URZ	Urewera	18.12	194	PN	P	06 12 49.2	-1.8
URZ				SN	S	06 15 55.2	-8.0
KNZ	Kokohu	18.73	192	PN	P	06 12 58.5	+0.9
RAHZ	Arahi	18.75	194	PN	P	06 12 57.6	-0.2
NMHZ	Naumai	18.99	194	PN	P	06 12 59.4	-0.9
BKZ	Black Stump Fm	19.13	195	PN	P	06 12 59.6	-2.2
FWVZ	Far West T-bar	19.45	197	PN	P	06 13 04.4	-0.9
BHHZ	Black Hill Sta	19.54	195	PN	P	06 13 04.4	-1.8
KAHZ	Kahuranaki	19.64	193	PN	P	06 13 07.3	0.0
PXZ	Pawanui	19.87	193	PN	P	06 13 07.9	-1.8
PNHZ	Pukenui	19.91	195	PN	P	06 13 08.4	-1.6
TSZ	Takapari Road	20.10	195	PN	P	06 13 12.3	+0.2
PRHZ	Porangahau	20.14	194	PN	P	06 13 14.3	+1.8
DVHZ	Dannevirke	20.28	194	PN	P	06 13 13.9	-0.1
BFZ	Birch Farm	20.63	194	PN	P	06 13 17.0	-0.6
HOWZ	Holdsworth Sta	21.00	195	PN	P	06 13 20.3	-1.0
OGWZ	Otaki Gorge	21.02	196	PN	P	06 13 19.7	-1.7
SNZO	South Karori	21.60	196	*e*P	P	06 13 26.5	-0.2
	comp=Z,104nm,0.7s,mb5.3						
NNZ	Nelson	21.89	199	PN	P	06 13 30.7	+1.3
TUWZ	Tuamarina	21.92	198	PN	P	06 13 30.3	+0.7
KHZ	Kahutara	22.95	198	*e*P	P	06 13 39.6	+0.6
	comp=Z,71nm,0.5s,mb5.2						
KHZ	Kahutara	22.95	198	PN	P	06 13 39.0	+0.1
LTZ	Lake Taylor	23.66	199	PN	P	06 13 45.5	+0.1
RPZ	Rata Peaks	24.88	200	*e*P	P	06 13 59.6	+3.1
	comp=Z,37nm,0.5s,mb5.1						
RPZ	Rata Peaks	24.88	200	P	P	06 13 57.0	+0.5
	comp=Z,36nm,0.5s,mb5.1,baz=18,slow=4.8,SNR=21						
TBI	Tubuai	25.95	101	*e*P	P	06 14 05.8	-0.5
	comp=Z,137nm,0.8s,mb5.4						
PAE	Paea	26.37	88	*e*P	P	06 14 08.5	-1.6
	comp=Z,28nm,1.0s,mb4.6						
PAE				*e*pP	pP	06 15 05.4	+0.4
	comp=Z,30nm,1.3s						
PAE	Paea	26.37	88	*e*P	P	06 14 08.5	-1.6
PAE				*e**PP	pP	06 15 05.4	+0.4
PAE				pmax	pmax		
	comp=Z,28nm,1.0s,mb4.7						
PPT	Papeete	26.39	88	*e*P	P	06 14 09.9	-0.4
	comp=Z,146nm,1.2s,mb5.3						
PPT	Papeete	26.39	88	P	P	06 14 09.7	-0.6
	comp=Z,87nm,0.8s,mb5.3,baz=213,slow=3.9,SNR=9.4						
TIAR	Tiarei	26.61	88	*e*P	P	06 14 11.3	-0.9
	comp=Z,189nm,1.0s,mb5.5						
MEH	Mehetia	27.75	89	*e*P	P	06 14 20.5	-1.8
	comp=Z,120nm,1.1s,mb5.2						
PMOR	Pomariorio Ree	28.57	83	*e*P	P	06 14 28.8	-0.8
	comp=Z,166nm,1.3s,mb5.3						
EIDS	Eidsvold	29.39	255	*e*P	P	06 14 38.3	+1.6
EIDS	Eidsvold	29.39	255	*e*P	P	06 14 38.4	+1.6
	comp=Z,51nm,0.6s,mb5.1						
ARMA	Armidale	29.53	245	*e*P	P	06 14 40.1	+2.2
ARMA	Armidale	29.53	245	*e*P	P	06 14 40.5	+2.6
	comp=Z,12nm,0.6s,mb4.6						
XMAS	Kiritimati	29.87	43	*e*P	P	06 14 40.2	-0.8
	comp=Z,203nm,1.0s,mb5.6						
CNB	Canberra Magne	32.62	236	*e*P	P	06 15 06.7	+1.9
KWAJ	Kwajalein Atol	32.87	332	*e*P	P	06 15 07.0	-0.2
	comp=Z,476nm,0.9s,mb6.0						
CAN	Canberra	32.90	237	*e*P	P	06 15 09.7	+2.5
	comp=Z,30nm,0.9s,mb4.8						
CAN	Canberra	32.90	237	*e*P	P	06 15 09.7	+2.4
CAN				pmax	pmax		
	comp=Z,30nm,0.9s,mb4.8						
CTAO	Charters Tower	34.09	265	*e*P	P	06 15 18.4	+0.8
	comp=Z,90nm,0.6s,mb5.5						
CTAO	Charters Tower	34.09	265	*e*P	P	06 15 18.5	+0.8
CTAO				pmax	pmax		
	comp=Z,90nm,0.6s,mb5.5						
CTAO	Charters Tower	34.09	265	P	P	06 15 19.1	+1.4
	comp=Z,1µmcomp=Z,144nm,0.7s,mb5.7						
CMSA	Cobar Meteorol	34.75	244	*e*P	P	06 15 23.8	+0.7
PMG	Port Moresby	36.00	283	*e*P	P	06 15 34.0	0.0
MTSU	Mount Surprise	36.20	267	*e*P	P	06 15 36.8	+1.2
	comp=Z,57nm,0.6s,mb5.3						
TOO	Toolangi	36.27	234	*e*P	P	06 15 37.0	+1.1
COEN	Coen	38.22	274	*e*P	P	06 15 53.5	+1.0
COEN	Coen	38.22	274	*e*P	P	06 15 53.4	+0.9
	comp=Z,136nm,0.7s,mb5.5						
STKA	Stephens Creek	38.25	245	*e*P	P	06 15 53.4	+0.8
	comp=Z,2.0nm,0.7s						
STKA	Stephens Creek	38.25	245	P	P	06 15 54.0	+1.4
	comp=Z,7.2nm,0.5s,mb4.3,baz=91,slow=8.9,SNR=22						
RKT	Rikitea	39.27	101	*e*P	P	06 16 00.5	-0.6
	comp=Z,58nm,1.0s,mb5.0						
RKT	Rikitea	39.27	101	*e*P	P	06 16 00.5	-0.6
RKT				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.0						
ASAR	Alice Springs	45.08	257	P	P	06 16 48.1	+0.4
	comp=Z,68nm,0.7s,mb5.0,baz=96,slow=8.5,SNR=612						
ASAR				S	S	06 23 00.8	-3.9
	comp=Z,3.0nm,0.7s,baz=92,slow=17,SNR=14						
POHA	Pohakuloa	45.55	29	*e*P	P	06 16 50.9	-0.4
	comp=Z,275nm,1.1s,mb5.5						
KIP	Kipapa	45.95	25	*e*P	P	06 16 54.0	-0.4
	comp=Z,196nm,1.0s,mb5.4						
KIP	Kipapa	45.95	25	*e*P	P	06 16 54.0	-0.4
KIP				pmax	pmax		
	comp=Z,196nm,1.0s,mb5.4						
KAKA	Kakadu	48.60	271	*e*P	P	06 17 14.5	-0.5
	comp=Z,53nm,0.4s,mb5.2						
KAKA	Kakadu	48.60	271	*e*P	P	06 17 14.4	-0.6
	comp=Z,142nm,0.4s,mb5.7						
KAKA	Kakadu	48.60	271	P	P	06 17 15.0	0.0
	comp=Z,1µmcomp=Z,122nm,0.6s,mb5.4						
BAKI	Biak	49.40	287	P	P	06 17 22.4	+1.4
	comp=Z,1µmcomp=Z,132nm,1.2s,mb5.1						
FORT	Forrest	49.78	247	*e*P	P	06 17 23.3	-0.3
	comp=Z,25nm,0.6s,mb4.7						
FORT	Forrest	49.78	247	*e*P	P	06 17 23.5	-0.1
	comp=Z,41nm,0.8s,mb4.8						
GUMO	Guam	50.43	309	*e*P	P	06 17 29.1	+0.5
	comp=Z,909nm,1.2s,mb6.0						
GUMO	Guam	50.43	309	P	P	06 17 29.4	+0.8
	comp=Z,482nm,0.7s,mb6.0,baz=167,slow=7.7,SNR=34						
GUMO	Guam	50.43	309	P	P	06 17 29.3	+0.7
	comp=Z,6µmcomp=Z,792nm,1.0s,mb6.0						
KNA	Kununurra	51.25	266	*e*P	P	06 17 35.0	+0.3
	comp=Z,92nm,0.6s,mb5.3						
KNA	Kununurra	51.25	266	P	P	06 17 35.4	+0.7
	comp=Z,4µmcomp=Z,424nm,0.6s,mb5.9						
KNA	Kununurra	51.25	266	P	P	06 17 35.0	+0.3
	comp=Z,4µmcomp=Z,424nm,0.6s,mb5.9						
FITZ	Fitzroy Crossi	53.62	262	*e*P	P	06 17 52.5	+0.4
	comp=Z,18nm,1.1s,mb4.3						
FITZ	Fitzroy Crossi	53.62	262	P	P	06 17 52.6	+0.6
	comp=Z,35nm,1.5s,mb4.5						
FITZ	Fitzroy Crossi	53.62	262	P	P	06 17 52.5	+0.5
	comp=Z,35nm,1.5s,mb4.5						
NLAI	Namlea	56.76	280	P	P	06 18 15.5	+1.1
	comp=Z,2µmcomp=Z,66nm,0.7s,mb5.2						
LBMI	Labuha	57.42	283	P	P	06 18 20.2	+1.2
	comp=Z,92nm,0.8s,mb5.3						
SBA	Scott Base	57.68	184	*e*P	P	06 18 23.0	+3.2
	comp=Z,23nm,0.9s,mb4.6						
SBA	Scott Base	57.68	184	*e*P	P	06 18 23.0	+3.2
SBA				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.6						
TNTI	Ternate	58.12	285	P	P	06 18 25.1	+1.2
	comp=Z,166nm,1.0s,mb5.4						
MBWA	Marble Bar	58.41	257	*e*P	P	06 18 25.2	-0.6
MBWA	Marble Bar	58.41	257	*e*P	P	06 18 25.3	-0.5
	comp=Z,21nm,0.8s,mb4.6						
MBWA	Marble Bar	58.41	257	P	P	06 18 26.3	+0.5
	comp=Z,37nm,0.8s,mb4.9						
MBWA	Marble Bar	58.41	257	P	P	06 18 25.0	-0.8
KLBR	Kellerberrin	58.52	245	*e*P	P	06 18 25.9	-0.5
	comp=Z,40nm,1.4s,mb4.7						
SGSI	Sangihe	61.03	287	P	P	06 18 46.6	+3.0
	comp=Z,174nm,0.7s,mb5.7						
CBIJ	Chichi jima	61.62	319	P	P	06 18 46.4	-0.9
	comp=Z,43nm,0.6s,mb5.3,baz=312,slow=21,SNR=3.8						
MRSI	Marisa	62.95	282	P	P	06 18 57.1	+0.7
	comp=Z,22nm,0.7s,mb4.9						
CASY	Casey	64.02	205	*e*P	P	06 19 02.6	+0.2
	comp=Z,18nm,0.8s,mb4.8						
JHJ	Hachijo jima 2	67.41	322	P	P	06 19 24.1	-0.3
	comp=Z,120nm,0.4s,mb6.0,baz=232,slow=18,SNR=17						
MYLDM	Lahad Datu	68.00	285	P	P	06 19 32.3	+3.8
	comp=Z,44nm,0.9s,mb5.2						
QSPA	South Pole Qui	69.34	180	*e*P	P	06 19 37.1	+1.4
	comp=Z,39nm,0.8s,mb5.1						
QSPA	South Pole Qui	69.34	180	P	P	06 19 37.1	+1.5
	comp=Z,37nm,0.8s,mb5.1,baz=26,slow=1.3,SNR=125						
QSPA				pP	pP	06 20 53.6	+13
	comp=Z,23nm,1.1s,baz=302,slow=0.9,SNR=4.5						
KKM	Kota Kinabalu	70.42	285	*e*P	P	06 19 44.0	+0.6
	comp=Z,30nm,0.9s,mb5.0						
KKM	Kota Kinabalu	70.42	285	P	P	06 19 44.4	+1.0
	comp=Z,36nm,1.1s,mb5.0						
MJAR	Matsushiro Arr	70.77	323	P	P	06 19 44.1	-0.8
	comp=Z,7nm,0.5s,mb5.1,baz=160,slow=6.2,SNR=63						
MAJO	Matsushiro	70.77	323	*e*P	P	06 19 44.2	-0.7
	comp=Z,44nm,0.5s,mb5.3						
MAJO	Matsushiro	70.77	323	*e*P	P	06 19 44.2	-0.7
MAJO				pmax	pmax		
	comp=Z,44nm,0.5s,mb5.3						
MAT	Matsushiro	70.77	323	P	P	06 19 44.0	-0.9
ERM	Erimo	72.33	330	*e*P	P	06 19 55.6	+1.6
	comp=Z,25nm,0.8s,mb4.9						
ERM	Erimo	72.33	330	*e*P	P	06 19 55.7	+1.6
ERM				pmax	pmax		
	comp=Z,25nm,0.8s,mb4.9						
SMY	Shemya	73.53	355	*e*P	P	06 19 58.5	-2.3
	comp=Z,114nm,0.9s,mb5.5						
SMY	Shemya	73.53	355	*e*P	P	06 19 58.5	-2.3
SMY				pmax	pmax		
	comp=Z,114nm,0.9s,mb5.5						
TWG	Pinlang	74.03	302	*e*P	P	06 20 02.4	-2.0
	comp=Z,17nm,0.6s,mb4.8						
KSM	Kuching	74.06	278	*e*P	P	06 20 05.3	+0.5
	comp=Z,11nm,0.6s,mb4.7						
KSM	Kuching	74.06	278	P	P	06 20 05.7	+0.9
	comp=Z,32nm,0.9s,mb5.0						
ASAJ	Asahikawa	74.23	331	P	P	06 20 05.8	+0.8
	comp=Z,142nm,0.8s,mb5.7,baz=213,slow=8.3,SNR=67						
SSLB	Suanglung	74.62	303	*e*P	P	06 20 07.0	-0.8
	comp=Z,13nm,0.6s,mb4.7						
YHNB	Yeheng	74.75	304	*e*P	P	06 20 08.2	-0.3
	comp=Z,18nm,0.8s,mb4.7						
UNV	Unalaska Valle	74.85	7	*e*P	P	06 20 05.6	-2.8
	comp=Z,38nm,0.6s,mb5.2						
FALS	False Pass	76.22	8	*e*P	P	06 20 13.8	-2.3
	comp=Z,46nm,0.6s,mb5.3						
PET	Petropavlovsk	76.35	345	*e*P	P	06 20 14.9	-1.9
	comp=Z,25nm,0.6s,mb5.0						
PET	Petropavlovsk	76.35	345	*e*P	P	06 20 14.9	-1.9
PET				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.0						
YSS	Yuzh-Sakhalins	76.38	333	*e*P	P	06 20 17.1	0.0
	comp=Z,222nm,0.9s,mb5.8						
YSS	Yuzh-Sakhalins	76.38	333	⇓*i*P	P	06 20 17.0	-0.2
YSS				pmax	pmax		
	comp=Z,190nm,1.0s,mb5.7						
QZH	Quanzhou	77.06	303	⇑*i*P	P	06 20 21.4	-0.1
QZH				pmax	pmax		
	comp=Z,70nm,0.8s,mb5.4						
BSC	Santa Cruz Isl	77.31	46	⇑P	P	06 20 23.2	+0.5
	baz=78						
KSRS	Korea Array	77.47	318	P	P	06 20 23.6	+0.2
	comp=Z,7.9nm,0.9s,mb4.4,baz=142,slow=6.4,SNR=26						
SBC	Santa Barbara	77.51	46	⇑P	P	06 20 24.2	+0.4
	baz=78						
MDSI	Maura Dua	77.67	270	P	P	06 20 24.1	-1.1
SAO	San Andreas Ge	77.77	43	*e*P	P	06 20 25.6	+0.4
	comp=Z,46nm,0.8s,mb5.3						
SAO	San Andreas Ge	77.77	43	*e*P	P	06 20 25.6	+0.5
SAO				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.3						
CIS	Catalina Islan	77.80	47	⇑P	P	06 20 25.5	+0.1
	baz=78						
SMMC	Simmler	77.83	45	⇓P	P	06 20 26.0	+0.5
	baz=78,SNR=8.3						
FMP	Fort Macarthur	78.05	47	⇑P	P	06 20 26.9	+0.1
	baz=78						
HOPS	Hopland	78.14	40	*e*P	P	06 20 27.2	+0.2
	comp=Z,46nm,0.9s,mb5.2						
OSI	Osito Adit	78.28	46	⇓P	P	06 20 28.2	+0.2
	baz=78						
OSI	Osito Adit	78.28	46	*e*P	P	06 20 28.6	+0.6
	comp=Z,46nm,1.1s,mb5.1						
DECC	Green Verdugo	78.34	46	⇑P	P	06 20 28.0	-0.2
	baz=78						
CHGN	Chignik	78.38	11	*e*P	P	06 20 25.9	-2.1
PASC	Pasadena Art C	78.39	47	*e*P	P	06 20 28.8	+0.2
	comp=Z,117nm,0.8s,mb5.7						
109C	Camp Elliot, M	78.41	48	⇑P	P	06 20 28.8	0.0
	baz=79						
ARVC	Arvin	78.50	45	⇑P	P	06 20 29.3	+0.1
	baz=79,SNR=9.5						
MWC	Mount Wilson	78.51	47	*e*P	P	06 20 29.3	+0.1
	comp=Z,41nm,0.9s,mb5.2						
MWC	Mount Wilson	78.51	47	*e*P	P	06 20 29.3	+0.1
MWC				pmax	pmax		
	comp=Z,41nm,0.9s,mb5.2						
BAR	Barrett	78.60	49	*e*P	P	06 20 30.0	+0.3
	comp=Z,14nm,1.0s,mb4.7						
MURC	Murrieta	78.74	48	⇑P	P	06 20 30.6	+0.1
	baz=79,SNR=12						
VES	Vestal, Richgr	78.75	45	⇓P	P	06 20 30.3	-0.2
	baz=79,SNR=22						
BFSC	Mount Baldy Ra	78.79	47	⇑P	P	06 20 30.7	-0.1
	baz=79,SNR=12						
MONP	Monument Peak	78.89	49	⇓P	P	06 20 31.8	+0.5
	baz=79,SNR=26						
RCTC	Rector, Farmer	78.92	44	⇓P	P	06 20 31.0	-0.4
	baz=79						
EDW2	Edwards Air Fo	78.93	46	⇓P	P	06 20 31.6	+0.1
	baz=79,SNR=33						
KHMM	Horse Mountain	78.94	38	*e*P	P	06 20 32.6	+1.2
	comp=Z,50nm,1.2s,mb5.1						
DVTC	Desert V Tower	78.99	49	⇓P	P	06 20 32.3	+0.4
	baz=79,SNR=7.5						
ISA	Isabella	79.05	45	⇓P	P	06 20 32.4	+0.3
	baz=79,SNR=37						
ISA	Isabella	79.05	45	*e*P	P	06 20 32.5	+0.4
	comp=Z,49nm,0.9s,mb5.2						
ISA	Isabella	79.05	45	*e*P	P	06 20 32.5	+0.4
ISA				pmax	pmax		
	comp=Z,49nm,0.9s,mb5.2						
CMB	Columbia Colle	79.21	42	*e*P	P	06 20 33.0	0.0
	comp=Z,36nm,0.7s,mb5.2						
CMB	Columbia Colle	79.21	42	*e*P	P	06 20 33.0	+0.1
CMB				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.2						
PFO	Pinyon Flat Ob	79.26	48	P	P	06 20 33.0	-0.3
	comp=Z,138nm,0.8s,mb5.7,SNR=8.4						
PFO	Pinyon Flat Ob	79.26	48	⇓P	P	06 20 33.5	+0.1
	baz=79,SNR=15						
PFO	Pinyon Flat Ob	79.26	48	*e*P	P	06 20 33.5	+0.2
	comp=Z,20nm,0.9s,mb4.8						
PFO	Pinyon Flat Ob	79.26	48	P	P	06 20 33.7	+0.4
BBRC	Big Bear Solar	79.30	47	⇓P	P	06 20 33.8	+0.3
	baz=80						
OHCM	Honcut	79.32	41	*e*P	P	06 20 33.2	-0.2
SWSC	Sam W. Stewart	79.36	49	⇑P	P	06 20 34.0	+0.1
	baz=80,SNR=10						
WDC	Whiskeytown Da	79.45	39	*e*P	P	06 20 34.3	+0.1
	comp=Z,32nm,0.9s,mb5.0						
WDC	Whiskeytown Da	79.45	39	*e*P	P	06 20 34.3	+0.1
WDC				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.0						
LRMC	Laurel Mountai	79.47	46	⇑P	P	06 20 34.5	+0.2
	baz=80,SNR=14						
RRX	Edison Barstow	79.60	47	⇑P	P	06 20 35.2	+0.1
	baz=80						
CWC	Cottonwood Cre	79.76	45	⇓P	P	06 20 36.1	+0.2
	baz=80,SNR=5.1						
BELC	Belle Mtn. Jos	79.80	48	⇑P	P	06 20 36.6	+0.4
	baz=80,SNR=33						
MPMC	Manual Prospec	79.93	45	⇑P	P	06 20 37.1	+0.3
	baz=80,SNR=27						
MLAC	Mammoth Lakes	79.96	43	⇓P	P	06 20 37.4	+0.5
	baz=80,SNR=6.3						
GSC	Goldstone	79.96	46	⇑P	P	06 20 37.1	0.0
	baz=80,SNR=18						
GSC	Goldstone	79

214A **Organ Pipe Nat** 80.97 51 ⇑P P 06 20 43.0 +0.5
baz=81,SNR=11
Z13A **Yuma Proving G** 81.01 50 ⇓P P 06 20 43.1 +0.5
baz=81,SNR=48
MDJ **Mudanjiang** 81.07 325 P P 06 20 42.8 +0.2
MDJ pP pP 06 22 00.9 +11
MDJ sP sP 06 22 36.9 +16
MDJ S S 06 30 23.4 -4.0
MDJ SS SS 06 35 47.3 -2.5
MDJ pmax pmax
comp=Z,74nm,1.0s,mb5.4
MDJ pmax pmax
comp=Z,94nm,4.0s
MDJ **Mudanjiang** 81.07 325 *eP* P 06 20 42.8 +0.2
comp=Z,59nm,0.8s,mb5.4
NEE2 **Needles Airpor** 81.17 48 ⇓P P 06 20 43.7 +0.3
baz=81
V11A **Goodsprings** 81.19 46 ⇑P P 06 20 43.7 +0.2
baz=81,SNR=17
PDMCI **Parker Dam,Lak** 81.25 48 ⇑P P 06 20 44.3 +0.4
baz=81,SNR=18
W12A **Cal Nev Ari** 81.28 47 ⇓P P 06 20 44.6 +0.6
baz=81,SNR=17
114A **Black Gap (USA** 81.33 50 ⇑P P 06 20 44.8 +0.5
baz=82,SNR=32
QIZ **Qiongzhong** 81.52 294 P P 06 20 45.4 -0.2
QIZ S S 06 30 28.4 -4.7
QIZ pmax pmax
comp=Z,41nm,1.7s,mb4.9
V12A **Nelson** 81.53 47 ⇓P P 06 20 45.5 +0.2
baz=82,SNR=14
U11A **Corn Creek** 81.55 46 ⇓P P 06 20 45.6 +0.2
baz=82
MAW **Mawson** 81.56 200 *eP* P 06 20 44.9 -0.1
comp=Z,1.7nm,0.8s
MAW **Mawson** 81.56 200 P P 06 20 45.2 +0.3
comp=Z,6.5nm,0.7s,mb4.5,baz=125,slow=5.4,SNR=28
MAW pP pP 06 22 04.8 +12
comp=Z,18nm,0.9s,baz=117,slow=6.9,SNR=12
MAW **Mawson** 81.56 200 *eP* P 06 20 44.9 0.0
MAW pmax pmax
comp=Z,2.0nm,0.8s
S10A **Tonopah Range,** 81.58 44 ⇑P P 06 20 45.7 +0.2
baz=82,SNR=46
MOD **Modoc** 81.60 39 *eP* P 06 20 45.7 +0.2
comp=Z,53nm,1.0s,mb5.2
Z14A **Wintersburg** 81.60 50 ⇑P P 06 20 46.5 +0.8
baz=82,SNR=17
X13A **Yucca** 81.62 48 ⇓P P 06 20 46.3 +0.5
baz=82,SNR=35
HEBO **Mount Hebo** 81.73 35 *eP* P 06 20 45.9 -0.1
comp=Z,71nm,0.8s,mb5.5
K05A **Summer Lake** 81.75 38 ⇑P P 06 20 46.9 +0.6
baz=82,SNR=49
W13A **Hualapai Mount** 81.86 48 ⇑P P 06 20 47.6 +0.6
baz=82,SNR=28
Y14A **Wickenburg** 81.86 49 ⇓P P 06 20 47.4 +0.3
baz=82,SNR=45
R10A **Warm Springs** 81.97 44 ⇓P P 06 20 48.1 +0.6
baz=82
S11A **Rachel** 81.98 45 ⇑P P 06 20 47.6 +0.1
baz=82,SNR=17
116A **Eloy** 82.09 51 ⇓P P 06 20 49.0 +0.7
baz=82,SNR=28
T11A **Corn Creek, Al** 82.11 45 ⇑P P 06 20 48.6 +0.4
baz=82,SNR=41
U12A **Valley of Fire** 82.12 46 ⇓P P 06 20 48.6 +0.3
baz=82,SNR=12
Z15A **Gila River Ind** 82.13 50 ⇓P P 06 20 48.8 +0.4
baz=82,SNR=9.8
T12A **Moapa** 82.16 46 ⇓P P 06 20 48.7 +0.1
baz=82
V13A **Grand Canyon W** 82.19 47 ⇓P P 06 20 49.1 +0.4
baz=82,SNR=27
Q10A **Clear Creek Ra** 82.21 44 ⇓P P 06 20 48.8 +0.1
baz=82,SNR=25
X14A **Yava** 82.22 49 ⇑P P 06 20 49.7 +0.8
baz=82,SNR=60
H04A **Detroit Lake** 82.24 36 ⇑P P 06 20 48.4 -0.3
baz=82,SNR=34
F03A **Seaside** 82.30 35 ⇓P P 06 20 49.1 +0.1
baz=82,SNR=6.4
217A **Green Valley** 82.34 52 ⇓P P 06 20 50.5 +0.9
baz=82,SNR=40
Y15A **Casa Rosa Ranc** 82.34 49 ⇓P P 06 20 50.1 +0.6
baz=82,SNR=83
G04A **Mulino** 82.41 36 ⇑P P 06 20 49.5 -0.2
baz=83,SNR=18
W14A **Seligman** 82.47 48 ⇑P P 06 20 51.1 +0.9
baz=83,SNR=65
R11A **Troy Canyon, C** 82.47 44 ⇑P P 06 20 50.0 -0.1
baz=83,SNR=31
U13A **Pakoon Wash** 82.50 47 ⇑P P 06 20 50.9 +0.6
baz=83,SNR=41
S12A **Delamar Landin** 82.55 45 ⇓P P 06 20 51.3 +0.8
baz=83,SNR=54
BMN **Battle Mountai** 82.60 42 *eP* P 06 20 50.7 0.0
comp=Z,83nm,1.3s,mb5.4
BMN **Battle Mountai** 82.60 42 *eP* P 06 20 50.7 0.0
BMN pmax pmax
comp=Z,83nm,1.3s,mb5.4
TUC **Tucson** 82.63 52 *eP* P 06 20 52.0 +1.0
comp=Z,36nm,0.8s,mb5.2
TUC **Tucson** 82.63 52 *eP* P 06 20 52.1 +1.0
TUC pmax pmax
comp=Z,36nm,0.8s,mb5.2
V14A **Boquillas Ranc** 82.68 48 ⇓P P 06 20 52.1 +0.8
baz=83,SNR=61
Z16A **Peralta Trail,** 82.68 50 ⇑P P 06 20 52.0 +0.7
baz=83,SNR=48
X15A **Humboldt** 82.69 49 ⇓P P 06 20 52.1 +0.8
baz=83,SNR=74
E03A **Lebam** 82.69 34 ⇓P P 06 20 51.3 +0.2
baz=83,SNR=37
Q11A **Duckwater** 82.71 44 ⇑P P 06 20 51.3 0.0
baz=83,SNR=31
318A **Bisbee** 82.79 53 ⇑P P 06 20 52.8 +0.9
baz=83,SNR=26
117A **Oracle** 82.79 51 ⇑P P 06 20 52.8 +0.9
baz=83
CN2 **Changchun** 82.86 322 *eP* P 06 20 49.1 -2.9
CN2 *es*P sP 06 22 46.8 +17
CN2 *eS* S 06 30 37.8 -7.8
CN2 pmax pmax
comp=Z,20nm,0.8s,mb5.0
CN2 pmax pmax
comp=Z,200nm,4.0s
T13A **Saint George** 82.87 46 ⇓P P 06 20 52.6 +0.4
baz=83,SNR=32
F04A **Amboy** 82.91 35 ⇑P P 06 20 51.9 -0.2
baz=83,SNR=26
WVOR **Wild Horse Val** 82.91 40 *eP* P 06 20 52.2 0.0
comp=Z,59nm,1.0s,mb5.4
WVOR **Wild Horse Val** 82.91 40 *eP* P 06 20 52.3 +0.1
WVOR pmax pmax
comp=Z,59nm,1.0s,mb5.4
Y16A **Circle Bar Ran** 82.92 50 ⇓P P 06 20 53.3 +0.8
baz=83,SNR=65
HOOD **Mount Hood Mea** 82.94 36 *eP* P 06 20 52.4 +0.1
comp=Z,87nm,1.0s,mb5.5
O10A **Cortez Mining,** 82.98 42 ⇓P P 06 20 52.7 0.0
baz=83,SNR=10
LVP **Lakeview Peak** 83.00 35 P P 06 20 52.7 +0.1
218A **Dragoon** 83.01 52 ⇓P P 06 20 54.0 +1.0
baz=83,SNR=38
VIPM **Ingram Point** 83.01 37 P P 06 20 52.9 +0.2
W15A **Williams** 83.03 48 ⇓P P 06 20 54.0 +1.0
baz=83,SNR=6.0
P11A **Circle Ranch,** 83.04 43 ⇑P P 06 20 53.0 0.0
baz=83,SNR=9.3
U14A **Mt Trumbull** 83.04 47 ⇓P P 06 20 53.9 +0.8
baz=83,SNR=62
KLR **Kul'dur** 83.05 329 *eP* P 06 20 48.4 -4.4
KLR pmax pmax
comp=Z,38nm,1.4s,mb5.0
NLWA **Neilton Lookou** 83.08 33 ⇓P P 06 20 53.2 +0.2
baz=83,SNR=30
NLWA **Neilton Lookou** 83.08 33 *eP* P 06 20 53.3 +0.3
comp=Z,65nm,0.9s,mb5.5
WHN **Wuhan** 83.08 306 P P 06 20 53.5 +0.1
R12A **Pony Springs,** 83.11 45 ⇑P P 06 20 53.6 +0.3
baz=83,SNR=28
S13A **Holt Ranch, En** 83.20 46 ⇓P P 06 20 54.3 +0.4
baz=83,SNR=35
N10A **Dunphy** 83.21 42 ⇓P P 06 20 54.1 +0.2
baz=83,SNR=6.1
X16A **Lo Mia Camp, P** 83.22 49 ⇓P P 06 20 54.9 +0.8
baz=83,SNR=117
Y17A **Roosevelt** 83.28 50 ⇓P P 06 20 55.0 +0.6
baz=83,SNR=22
319A **Douglas** 83.28 53 ⇑P P 06 20 55.4 +1.0
baz=83,SNR=22
RSO **Redoubt South** 83.33 12 *eP* P 06 20 52.0 -1.9
Q12A **Willow Creek R** 83.35 44 ⇓P P 06 20 54.7 +0.2
baz=84,SNR=20
Z17A **San Carlos Hig** 83.35 51 ⇓P P 06 20 55.5 +0.8
baz=84
I07A **Izee** 83.38 38 ⇑P P 06 20 55.0 +0.4
baz=84,SNR=79
118A **Homack Ranch,** 83.39 52 ⇑P P 06 20 56.0 +1.0
baz=84
O11A **Cowboy Ranch,** 83.42 43 ⇓P P 06 20 55.2 +0.3
baz=84
V15A **Kaibab Nationa** 83.42 48 ⇑P P 06 20 55.9 +0.9
baz=84,SNR=44
T14A **Hurricane** 83.44 46 ⇓P P 06 20 55.6 +0.5
baz=84,SNR=47
R13A **O'Grain Ranch,** 83.45 45 ⇑P P 06 20 55.8 +0.7
baz=84,SNR=10
OSD **Olympics--Snow** 83.45 33 P P 06 20 55.4 +0.5
W16A **Flagstaff** 83.50 49 ⇑P P 06 20 56.4 +1.0
baz=84
CCUT **Cedar City** 83.52 46 *eP* P 06 20 56.1 +0.7
comp=Z,31nm,0.8s,mb5.2
P12A **McGill** 83.54 44 ⇑P P 06 20 55.7 +0.2
baz=84,SNR=19
J08A **Circle Bar Ran** 83.55 39 ⇑P P 06 20 55.6 +0.1
baz=84
Z18A **Geronimo** 83.56 51 ⇓P P 06 20 56.7 +0.9
baz=84
ARUT **Antelope Range** 83.59 46 *eP* P 06 20 56.0 +0.2
comp=Z,27nm,1.0s,mb5.0
ARUT **Antelope Range** 83.59 46 *eP* P 06 20 56.0 +0.2
ARUT pmax pmax
comp=Z,27nm,1.0s,mb5.0
219A **White Tail Can** 83.60 52 ⇑P P 06 20 56.8 +0.8
baz=84,SNR=35
X17A **Forest Lakes** 83.63 50 ⇑P P 06 20 57.3 +1.2
baz=84
U15A **North Rim** 83.66 47 ⇑P P 06 20 57.2 +1.0
baz=84,SNR=110
SEW **Seward** 83.69 14 *eP* P 06 20 53.9 -1.9
comp=Z,36nm,0.8s,mb5.2
GNW **Green Mountain** 83.73 34 *eP* P 06 20 56.2 -0.1
comp=Z,28nm,1.0s,mb5.0
LON **Longmire** 83.75 35 P P 06 20 55.9 -0.5
N11A **Elko Archery C** 83.75 42 ⇑P P 06 20 56.6 0.0
baz=84,SNR=6.1
S14A **Cedar City** 83.76 46 ⇑P P 06 20 57.2 +0.6
baz=84,SNR=9.6
WUAZ **Wupatki** 83.83 49 ⇑P P 06 20 57.7 +0.7
baz=84,SNR=21
WUAZ **Wupatki** 83.83 49 *eP* P 06 20 57.7 +0.6
comp=Z,26nm,0.9s,mb5.1
320A **Kipp Ranch, An** 83.83 53 ⇓P P 06 20 58.5 +1.3
baz=84,SNR=33
Q13A **Wheeler Ranch,** 83.83 44 ⇑P P 06 20 57.0 0.0
baz=84,SNR=50
T15A **Red Dirt Ranch** 83.90 47 ⇓P P 06 20 57.9 +0.5
baz=84,SNR=57
Y18A **Canyon Day Jun** 83.91 51 ⇓P P 06 20 58.5 +1.0
baz=84,SNR=57
D05A **Enumclaw** 83.93 34 ⇓P P 06 20 57.7 +0.4
baz=84,SNR=27
119A **Ashpeak Ranch,** 83.94 52 ⇑P P 06 20 58.7 +1.0
baz=84,SNR=17
L10A **Juniper Basin** 84.01 41 ⇓P P 06 20 58.0 +0.2
baz=84
W17A **Winslow** 84.07 49 ⇓P P 06 20 59.1 +0.8
baz=84
O12A **Currie** 84.08 43 ⇓P P 06 20 58.2 0.0
baz=84,SNR=26
220A **Playas Peak, P** 84.10 53 ⇑P P 06 20 59.6 +1.1
baz=84,SNR=33
P13A **Bates Ranch, G** 84.11 44 ⇑P P 06 20 58.6 +0.2
baz=84,SNR=41
PGC **Sidney** 84.12 33 *eP* P 06 20 57.9 -0.3
comp=Z,4.8nm,0.8s,mb4.4
R14A **James Farms, M** 84.14 45 ⇓P P 06 20 58.9 +0.3
baz=84,SNR=5.7
Z19A **T-Link Ranch,** 84.23 51 ⇑P P 06 20 60.0 +0.9
baz=84
F07A **Phinny Hill Vi** 84.24 36 ⇓P P 06 20 58.8 -0.1
baz=84
S15A **Panguitch** 84.26 46 ⇓P P 06 21 00.5 +1.4
baz=84,SNR=17
V17A **Tonalea, Kykot** 84.28 49 ⇓P P 06 20 59.8 +0.5
baz=84
BBB **Bella Bella** 84.31 28 P P 06 20 58.7 -0.3
BBB **Bella Bella** 84.31 28 P P 06 20 58.7 -0.3
comp=Z,45nm,0.6s,mb5.5,baz=74,slow=5.9,SNR=38
U16A **Tuba City** 84.31 48 ⇓P P 06 21 00.2 +0.7
baz=84
120A **U Bar Ranch, L** 84.33 52 ⇓P P 06 21 00.6 +1.0
baz=84,SNR=17
Q14A **Sevier Lake (B** 84.34 45 ⇓P P 06 20 59.9 +0.3
baz=84,SNR=54
X18A **Snowflake** 84.34 50 ⇑P P 06 21 00.2 +0.6
baz=84,SNR=14
G08A **Pilot Rock** 84.42 37 ⇓P P 06 20 59.9 +0.1
baz=85,SNR=111
T16A **Glen Canyon Da** 84.48 47 ⇓P P 06 21 01.0 +0.6
baz=85
O13A **Hicks Ranch, I** 84.49 44 ⇑P P 06 21 00.5 +0.2
baz=85,SNR=10
L11A **Cat Creek Ranc** 84.50 41 ⇑P P 06 21 00.5 +0.2
baz=85,SNR=67
RC01 **Rabbit Creek A** 84.52 13 *eP* P 06 20 58.1 -1.8
comp=Z,71nm,1.1s,mb5.4
Y19A **Nutrioso** 84.56 51 ⇓P P 06 21 01.9 +1.1
baz=85,SNR=33
R15A **Junction** 84.59 46 ⇓P P 06 21 01.7 +0.9
baz=85,SNR=7.3
JCW **Jim Creek** 84.60 34 *eP* P 06 21 00.3 -0.3
Z20A **Nine Sixteen R** 84.63 52 ⇓P P 06 21 02.2 +1.0
baz=85,SNR=24
E07A **Sunnyside** 84.69 36 ⇓P P 06 21 01.1 0.0
baz=85,SNR=13
RSW **Rattlesnake Hi** 84.73 36 *eP* P 06 21 01.6 +0.2
N13A **Wendover, West** 84.74 43 ⇑P P 06 21 01.6 +0.1
baz=85
X19A **St. Johns** 84.76 50 ⇓P P 06 21 02.3 +0.5
baz=85,SNR=21
HAWA **Hanford** 84.76 36 *eP* P 06 21 01.5 0.0
comp=Z,58nm,0.8s,mb5.5
W18A **Petrified Fore** 84.78 50 ⇓P P 06 21 02.3 +0.4
baz=85,SNR=5.2
P14A **Drum Mountains** 84.80 44 ⇑P P 06 21 01.8 0.0
baz=85,SNR=15
S16A **Weppner Ranch,** 84.80 47 ⇑P P 06 21 01.9 0.0
baz=85,SNR=17
MSU **Marysvale** 84.82 46 *eP* P 06 21 02.8 +0.8
V18A **Ganado** 84.94 49 ⇓P P 06 21 03.2 +0.6
baz=85,SNR=20
Q15A **Fillmore** 84.94 45 ⇑P P 06 21 02.8 +0.3
baz=85,SNR=8.0
121A **Cookes Peak, D** 84.95 53 ⇑P P 06 21 03.7 +1.0
baz=85,SNR=18
T17A **Navajo Res., N** 84.97 47 ⇓P P 06 21 03.3 +0.5
baz=85,SNR=31
RPW **Rockport** 84.98 34 *eP* P 06 21 01.9 -0.6
W19A **Sanders** 85.03 50 ⇑P P 06 21 03.5 +0.4
baz=85
A05A **Maple Falls** 85.03 33 ⇑P P 06 21 02.1 -0.6
baz=85,SNR=11
B06A **Marblemount** 85.04 34 ⇑P P 06 21 02.1 -0.7
baz=85
M13A **Montello** 85.04 42 ⇑P P 06 21 03.0 0.0
baz=85
M13A **Montello** 85.04 42 *eP* P 06 21 02.9 0.0
comp=Z,29nm,0.9s,mb5.1
TTA **Tatalina** 85.06 10 *eP* P 06 21 01.4 -1.2
comp=Z,42nm,0.9s,mb5.3
TTA **Tatalina** 85.06 10 *eP* P 06 21 01.4 -1.2
TTA pmax pmax
comp=Z,42nm,0.9s,mb5.3
ETW **Entiat** 85.07 35 *eP* P 06 21 02.9 -0.1
E08A **Dider Farm, El** 85.08 36 ⇑P P 06 21 03.0 -0.1
baz=85
PMR **Palmer** 85.10 13 *eP* P 06 21 00.7 -2.0
comp=Z,32nm,0.4s,mb5.5
PMR **Palmer** 85.10 13 *eP* P 06 21 00.7 -2.1
PMR pmax pmax
comp=Z,32nm,0.4s,mb5.5
BMO **Blue Mountains** 85.11 38 *eP* P 06 21 02.9 -0.3
comp=Z,18nm,0.9s,mb4.9
LNOR **Lincton Mounta** 85.15 37 *eP* P 06 21 02.9 -0.5
MFID **Camas Ranch** 85.16 40 ⇓P P 06 21 03.3 -0.2
baz=85,SNR=28
R16A **Teasdale** 85.17 46 ⇑P P 06 21 04.3 +0.6
baz=85,SNR=20
Y20A **Horse Springs,** 85.17 51 ⇓P P 06 21 04.8 +0.9
baz=85,SNR=29
222A **Williams Famil** 85.26 53 ⇑P P 06 21 05.0 +0.7
baz=85,SNR=8.7
DUG **Dugway** 85.28 44 ⇓P P 06 21 03.9 -0.3
baz=85,SNR=8.1
DUG **Dugway** 85.28 44 *eP* P 06 21 03.6 -0.6
comp=Z,4.1nm,0.7s,mb4.4
DUG **Dugway** 85.28 44 *eP* P 06 21 03.6 -0.6
DUG pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
S17A **Black Ridge (B** 85.30 47 ⇑P P 06 21 04.1 -0.2
baz=85
P15A **Leamington** 85.30 45 ⇑P P 06 21 04.3 0.0
baz=85,SNR=6.0
WTV **Waterville** 85.33 35 P P 06 21 03.9 -0.4
U18A **Rough Rock, Ch** 85.33 48 ⇑P P 06 21 04.7 +0.2
baz=86,SNR=21
X20A **Quemado** 85.39 51 ⇑P P 06 21 05.7 +0.9
baz=86
N14A **Grayback Hills** 85.39 43 ⇑P P 06 21 04.4 -0.3
baz=86
Z21A **St. Cloud Mine** 85.41 52 ⇓P P 06 21 06.0 +1.0
baz=86
DIV **Divide** 85.45 15 *eP* P 06 21 03.2 -1.3
comp=Z,48nm,0.6s,mb5.5
D08A **Wollman Farm,** 85.50 36 ⇓P P 06 21 05.1 +0.1
baz=86,SNR=37
O15A **The Old Anders** 85.55 44 ⇓P P 06 21 05.5 0.0
baz=86
V19A **Window Rock** 85.57 49 ⇑P P 06 21 06.0 +0.3
baz=86,SNR=5.6
BMRM **Bremner River** 85.59 15 *eP* P 06 21 03.9 -1.3
comp=Z,61nm,0.9s,mb5.4
E09A **Wood Farm, Sta** 85.61 37 ⇓P P 06 21 05.2 -0.4
baz=86,SNR=22
122A **Conniff Cattle** 85.62 53 ⇓P P 06 21 06.9 +0.9
baz=86
M14A **Sheep Mountain** 85.64 43 ⇑P P 06 21 05.7 -0.2
baz=86,SNR=20
NLU **North Lily Min** 85.64 44 *eP* P 06 21 06.1 +0.1
comp=Z,6.1nm,1.0s,mb4.4
W20A **Ramah** 85.67 50 ⇑P P 06 21 06.9 +0.7
baz=86,SNR=16
PPLA **Purkeypile** 85.68 11 *eP* P 06 21 02.8 -2.8
comp=Z,11nm,0.8s,mb4.7
Q16A **Castle Valley** 85.70 46 ⇓P P 06 21 06.8 +0.5
baz=86,SNR=7.3
223A **Chaparral, Ant** 85.72 54 ⇓P P 06 21 07.4 +0.8
baz=86
P16A **Fountain Green** 85.73 45 ⇓P P 06 21 07.0 +0.6
baz=86
U19A **Dine' College,** 85.73 49 ⇑P P 06 21 06.7 +0.1
baz=86,SNR=24
Y21A **Point of Rocks** 85.73 51 ⇓P P 06 21 07.6 +1.0
baz=86,SNR=33
R17A **Hanksville Air** 85.76 46 ⇑P P 06 21 06.4 -0.1
baz=86,SNR=29
I12A **Atlanta** 85.79 40 ⇓P P 06 21 06.7 +0.1
baz=86,SNR=36
F10A **Beach Ranch, E** 85.80 37 ⇓P P 06 21 06.0 -0.6
baz=86,SNR=149
OD2 **Odessa Site #2** 85.82 36 *eP* P 06 21 06.4 -0.3
X21A **Alamocita Cree** 85.86 51 ⇓P P 06 21 07.9 +0.7
baz=86,SNR=18
TMUT **Trail Mountain** 85.87 45 *eP* P 06 21 08.0 +0.8
comp=Z,33nm,0.8s,mb5.2
S18A **Hurst Farm, El** 85.88 47 ⇑P P 06 21 07.0 -0.2
baz=86,SNR=8.3
PNL **Peninsula** 85.90 18 *eP* P 06 21 05.7 -1.0
comp=Z,86nm,0.8s,mb5.6
Z22A **Elephant Butte** 85.90 52 ⇑P P 06 21 08.1 +0.7
baz=86,SNR=23
MPU **Maple Canyon** 85.96 45 *eP* P 06 21 07.5 0.0
comp=Z,10nm,0.9s,mb4.7
L14A **Malta** 85.99 42 ⇓P P 06 21 07.5 -0.1
baz=86
V20A **Brimhall** 86.02 49 ⇑P P 06 21 07.8 -0.1
baz=86,SNR=5.9
B08A **Colville Reser** 86.06 35 ⇑P P 06 21 07.0 -0.8
baz=86,SNR=54
HLID **Hailey** 86.09 40 ⇑P P 06 21 08.3 +0.2
baz=86,SNR=26
HLID **Hailey** 86.09 40 *eP* P 06 21 08.4 +0.3
comp=Z,9.6nm,0.8s,mb4.7
SPUT **South Promonto** 86.11 43 *eP* P 06 21 07.9 -0.3
comp=Z,1nm,1.1s,mb4.7
T19A **Beclabito** 86.13 48 ⇑P P 06 21 08.5 +0.1
baz=86,SNR=8.2
O16A **Springville** 86.14 44 ⇑P P 06 21 08.4 0.0
baz=86
HVU **Hansel Valley** 86.15 43 *eP* P 06 21 08.4 0.0
comp=Z,10nm,0.6s,mb4.8
HVU **Hansel Valley** 86.15 43 *eP* P 06 21 08.4 0.0
HVU pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
J13A **Cove Ranch, Pi** 86.15 41 ⇓P P 06 21 08.7 +0.3
baz=86,SNR=28
M15A **Larsen Ranch,** 86.19 43 ⇑P P 06 21 08.2 -0.4
baz=86,SNR=15
SRU **San Rafael** 86.23 46 ⇑P P 06 21 08.9 0.0
baz=86,SNR=30
SRU **San Rafael** 86.23 46 *eP* P 06 21 09.0 +0.1
comp=Z,29nm,0.6s,mb5.3
SRU **San Rafael** 86.23 46 *eP* P 06 21 09.0 +0.1
SRU pmax pmax
comp=Z,29nm,0.6s,mb5.3
CTU **Camp Tracy** 86.23 44 *eP* P 06 21 08.7 -0.1
comp=Z,9.3nm,0.9s,mb4.6
U20A **Newcomb** 86.26 49 ⇑P P 06 21 08.9 -0.2
baz=86
425A **Indio Mountain** 86.27 55 ⇑P P 06 21 09.7 +0.5
baz=86,SNR=42
P17A **Butcher Ranch,** 86.27 45 ⇓P P 06 21 09.1 0.0
baz=86,SNR=8.1
R18A **Canyonlands Na** 86.30 47 ⇑P P 06 21 09.1 -0.1
baz=86,SNR=30
C09A **Chrisman Ranch** 86.30 35 ⇑P P 06 21 08.5 -0.5
baz=86,SNR=21
K14A **Jones Ranch, D** 86.30 42 ⇓P P 06 21 09.1 -0.1
baz=86
LAZ **Ladron** 86.31 51 *eP* P 06 21 09.8 +0.4
comp=Z,3.3nm,0.8s,mb4.2
Y22D **IRIS PASSCAL I** 86.32 52 ⇓P P 06 21 09.8 +0.4
baz=86
LENM **Lemitar** 86.32 51 *eP* P 06 21 09.8 +0.4
comp=Z,3.9nm,0.7s,mb4.3
H12A **Diamond D Ranc** 86.37 39 ⇓P P 06 21 09.3 -0.1
baz=86
MNTX **Cornudas Mount** 86.38 54 *eP* P 06 21 09.8 0.0
comp=Z,20nm,0.8s,mb5.0
JLU **Jordanelle** 86.38 44 *eP* P 06 21 09.5 -0.1
comp=Z,7.9nm,0.8s,mb4.6
626A **Big Bend Ranch** 86.39 57 ⇑P P 06 21 10.3 +0.4
baz=86,SNR=38
DAU **Daniels Canyon** 86.41 44 *eP* P 06 21 09.8 +0.1
224A **Cornudas Mount** 86.44 54 ⇑P P 06 21 10.7 +0.6
baz=87,SNR=36
X22A **Bernardo** 86.45 51 ⇓P P 06 21 10.8 +0.8
baz=87
I13A **Wildhorse Cree** 86.47 40 ⇓P P 06 21 09.9 +0.1
baz=87
BJT **Baijiatuao** 86.49 315 *eP* P 06 21 09.9 -0.2
comp=Z,29nm,0.7s,mb5.2
BJT **Baijiatuao** 86.49 315 *eP* P 06 21 09.9 -0.2
BJT pmax pmax
comp=Z,29nm,0.7s
Q18A **Rafter H Ranch** 86.49 46 ⇑P P 06 21 09.9 -0.3
baz=87,SNR=24
BJI **Beijing** 86.50 315 P P 06 21 09.6 -0.5
BJI sP sP 06 23 04.2 +16
BJI S S 06 31 20.3 -1.2
BJI pmax pmax
comp=Z,48nm,0.7s,mb5.4
BJI pmax pmax
comp=Z,280nm,6.5s
J14A **Carey** 86.51 41 ⇑P P 06 21 10.7 +0.6
baz=87,SNR=30
L15A **Malad City** 86.51 43 ⇑P P 06 21 09.7 -0.4
baz=87,SNR=11
N16A **Rees Ranch, Co** 86.54 44 ⇓P P 06 21 10.4 0.0
baz=87,SNR=7.1

TRF Thorofare Moun 86.55 12 eP P 06 21 07.6 -2.2
comp=Z,57nm,0.8s,mb5.5
BNM Barren Site 86.57 52 eP P 06 21 11.0 +0.4
comp=Z,3.6nm,0.7s,mb4.3
V21A Milan 86.61 50 ⇓P P 06 21 10.6 -0.2
baz=87
LPM Los Pinos Moun 86.64 51 eP P 06 21 11.4 +0.4
SYO Syowa Base 86.64 193⇑ eP P 06 21 08.0 -2.4
SYO Syowa Base 86.64 193⇑ epP pP 06 22 30.0 +11
526A Mary Lane Ranc 86.64 56 ⇑P P 06 21 11.5 +0.4
baz=87,SNR=29
O17A Robinson Place 86.64 45 ⇓P P 06 21 11.2 +0.4
baz=87,SNR=62
TXAR Lajitas Array 86.65 57 P P 06 21 11.6 +0.4
comp=Z,17nm,0.8s,mb4.9,baz=217,slow=6.6,SNR=158
MVCO Mesa Verde 86.68 48 eP P 06 21 10.9 -0.1
comp=Z,3.2nm,0.7s,mb4.3
ENH Enshi 86.69 304 eP P 06 21 11.8 +0.5
comp=Z,93nm,1.1s,mb5.5
H13A Challis 86.74 40 ⇑P P 06 21 11.1 -0.1
baz=87,SNR=23
SEY Seymchan 86.74 347 ceP P 06 21 09.3 -1.4
124A Stringfield Ra 86.77 53 ⇓P P 06 21 12.2 +0.5
baz=87,SNR=12
K15A Arbon 86.78 42 ⇓P P 06 21 11.2 -0.2
baz=87,SNR=12
F12A Elk City 86.81 38 ⇑P P 06 21 11.1 -0.4
baz=87,SNR=169
W22A Albuquerque 86.82 51 ⇑P P 06 21 12.4 +0.6
baz=87,SNR=6.8
HWUT Hardware Ranch 86.83 43 eP P 06 21 11.2 -0.5
comp=Z,6.3nm,0.7s,mb4.5
PV10 Paradox Valley 86.87 47 eP P 06 21 11.6 -0.4
comp=Z,460nm,0.9s,mb6.3
U21A Nageezi 86.89 49 ⇓P P 06 21 12.2 +0.1
baz=87,SNR=49
627A Terlingua Ranc 86.92 57 ⇑P P 06 21 12.8 +0.4
baz=87,SNR=22
426A McDonald Obser 86.95 56 ⇑P P 06 21 13.0 +0.4
baz=87,SNR=43
N17A Moffit Pass 86.96 44 ⇑P P 06 21 12.3 -0.1
baz=87,SNR=10
PV04 Paradox Valley 86.97 47 eP P 06 21 12.0 -0.4
SKAG Skagway 86.98 20 eP P 06 21 11.9 0.0
comp=Z,64nm,1.2s,mb5.3
225A Deer Hill, Car 86.98 54 ⇓P P 06 21 13.1 +0.4
baz=87,SNR=25
BPAW Bear Paw Mtn. 87.01 11 eP P 06 21 08.8 -3.2
comp=Z,5.4nm,0.6s,mb4.5
G13A Cobalt 87.04 39 ⇑P P 06 21 12.4 -0.2
baz=87,SNR=33
527A Woodward Ranch 87.05 56 ⇑P P 06 21 13.1 +0.1
baz=87
ANMO Albuquerque 87.06 51 eP P 06 21 13.0 +0.1
comp=Z,13nm,0.7s,mb4.9
ANMO Albuquerque 87.06 51 eP P 06 21 13.0 0.0
ANMO pmax pmax
comp=Z,13nm,0.7s
MCK McKinley 87.06 12 eP P 06 21 10.4 -1.8
comp=Z,47nm,0.8s,mb5.4
MCK McKinley 87.06 12 eP P 06 21 10.4 -1.9
MCK pmax pmax
comp=Z,47nm,0.8s,mb5.4
PV01 Paradox Valley 87.08 47 eP P 06 21 12.4 -0.5
comp=Z,1µm,0.7s
PAX Paxson 87.12 14 eP P 06 21 10.5 -2.0
comp=Z,8.2nm,0.9s,mb4.6
PAX Paxson 87.12 14 eP P 06 21 10.5 -2.1
PAX pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
L16A Fish Haven 87.12 43 ⇓P P 06 21 12.6 -0.4
baz=87,SNR=7.5
Z24A Sheeppen Canyo 87.13 53 ⇓P P 06 21 13.4 +0.1
baz=87,SNR=7.5
O18A Roosevelt 87.16 45 ⇑P P 06 21 13.3 0.0
baz=87
NEW Newport 87.19 35 eP P 06 21 12.2 -1.1
comp=Z,22nm,0.9s,mb5.0
NEW Newport 87.19 35 eP P 06 21 12.2 -1.1
NEW pmax pmax
comp=Z,22nm,0.9s
J15A Blackfoot 87.22 41 ⇑P P 06 21 14.0 +0.5
baz=87,SNR=31
R20A Redvale 87.23 47 ⇑P P 06 21 13.4 -0.3
baz=87
T21A Navajo Lake 87.25 49 ⇑P P 06 21 14.0 +0.2
baz=87
H14A Leadore 87.30 40 ⇑P P 06 21 14.0 +0.2
baz=87,SNR=26
GYA Guiyang 87.31 299 P P 06 21 14.0 -0.3
GYA PP PP 06 24 46.8 +3.4
GYA SKS 06 31 05.9
GYA pmax pmax
comp=Z,20nm,1.0s,mb4.9
GYA pmax pmax
comp=Z,130nm,5.3s
628A Black Gap, Mar 87.33 57 ⇓P P 06 21 14.4 +0.1
baz=88
M17A Scullys Gap (B 87.34 44 ⇓P P 06 21 13.5 -0.6
baz=88
Y24A Capitan 87.34 52 ⇓P P 06 21 14.5 +0.2
baz=88,SNR=29
125A Gardner Draw, 87.36 54 ⇑P P 06 21 14.6 +0.1
baz=88,SNR=12
GDL2 Guadalupe Moun 87.37 54 eP P 06 21 15.0 +0.5
W23A Werner Place, 87.38 51 ⇓P P 06 21 14.3 -0.2
baz=88,SNR=8.7
S21A Coal Bank Pass 87.39 48 ⇓P P 06 21 14.4 0.0
baz=88,SNR=22
HYT Haines Junctio 87.39 18 eP P 06 21 13.3 -0.5
U22A Llaves 87.44 50 ⇑P P 06 21 14.6 -0.1
baz=88,SNR=7.2
K16A Soda Springs 87.45 42 ⇑P P 06 21 14.6 0.0
baz=88,SNR=7.8
D12A Red Ives Fores 87.48 37 ⇓P P 06 21 13.9 -0.7
baz=88
MENT Mentasta 87.50 15 eP P 06 21 13.1 -1.2
I15A Monteview 87.51 41 ⇓P P 06 21 15.2 +0.4
baz=88
226A Malaga, Loving 87.51 54 ⇑P P 06 21 15.3 +0.1
baz=88
427A Hayter Ranch, 87.52 56 ⇓P P 06 21 15.7 +0.5
baz=88,SNR=76
L17A Cokeville 87.53 43 ⇓P P 06 21 14.1 -0.9
baz=88,SNR=5.5
P19A Cripple Cowboy 87.53 46 ⇑P P 06 21 14.8 -0.3
baz=88,SNR=15
G14A Jackson 87.58 39 ⇓P P 06 21 15.2 0.0
baz=88,SNR=20
Z25A Roswell 87.59 53 ⇓P P 06 21 15.8 +0.3
baz=88,SNR=15
V23A Ortiz Mt. (NFS 87.63 50 ⇑P P 06 21 16.1 +0.5
baz=88,SNR=18
Q20A Ridgley Place, 87.66 47 ⇓P P 06 21 15.5 -0.2
baz=88,SNR=14
J16A Bone 87.66 42 ⇑P P 06 21 15.9 +0.3
baz=88,SNR=17
528A Cox Ranch, San 87.70 57 ⇓P P 06 21 16.2 +0.1
baz=88,SNR=16
M18A Lyman 87.70 44 ⇑P P 06 21 15.5 -0.3
baz=88,SNR=8.6
T22A Edith 87.71 49 ⇓P P 06 21 15.7 -0.3
baz=88
MCMT McKenzie Canyo 87.72 40 eP P 06 21 16.1 +0.3
comp=Z,13nm,0.9s,mb4.8
N18A Larsen Ranch, 87.73 44 ⇓P P 06 21 15.4 -0.6
baz=88,SNR=10.0
H15A Lima 87.74 40 ⇓P P 06 21 16.2 +0.3
baz=88
O19A Miners Draw (B 87.76 45 ⇓P P 06 21 15.7 -0.5
baz=88,SNR=11
CLNB Carlsbad 87.77 54 eP P 06 21 16.5 +0.2
comp=Z,4.5nm,0.8s,mb4.3
C12B Naegeli Ranch, 87.78 37 ⇓P P 06 21 15.7 -0.3
baz=88,SNR=28
E13A Victor 87.81 38 ⇑P P 06 21 15.3 -0.9
baz=88,SNR=26
K17A Gardner Place, 87.83 42 ⇑P P 06 21 16.2 -0.2
baz=88
126A Clayton Basin, 87.83 54 ⇑P P 06 21 16.4 -0.3
baz=88,SNR=5.3
P20A De Beque 87.86 46 ⇑P P 06 21 16.5 -0.1
baz=88
RRI2 Red Ridge 87.88 42 eP P 06 21 16.9 +0.3
comp=Z,21nm,1.0s,mb4.9
U23A El Rito 87.89 50 ⇑P P 06 21 16.8 0.0
baz=88,SNR=7.7
Y25A Mesa, Roswell 87.89 53 ⇓P P 06 21 16.7 -0.2
baz=88,SNR=17
R21A Cimarron 87.89 48 ⇑P P 06 21 16.9 +0.1
baz=88,SNR=34
F14A Wisdom 87.94 39 ⇓P P 06 21 16.6 -0.2
baz=88,SNR=26
W24A Lazy 6 Ranch, 87.95 51 ⇓P P 06 21 16.7 -0.4
baz=88,SNR=14
D13A Huson 88.01 37 ⇑P P 06 21 16.1 -1.1
baz=88
DLBC Dease Lake 88.02 23 eP P 06 21 16.7 -0.2
DLBC Dease Lake 88.02 23 P P 06 21 16.6 -0.3
comp=Z,22nm,0.7s,mb5.1,baz=237,slow=4.3,SNR=40
N19A John Jarvie Ra 88.02 45 ⇑P P 06 21 16.5 -0.9
baz=88,SNR=8.3
I16A Newdale 88.06 41 ⇓P P 06 21 18.0 +0.5
baz=88,SNR=34
Q21A Lamborn Mesa, 88.10 47 ⇑P P 06 21 17.8 0.0
baz=88,SNR=11
S22A 4UR Ranch, Cre 88.10 48 ⇓P P 06 21 18.1 +0.3
baz=88,SNR=28
227A Bennet, Jal 88.11 55 ⇓P P 06 21 18.0 0.0
baz=88
CPRX Cap Rock 88.12 54 eP P 06 21 18.0 0.0
comp=Z,33nm,0.9s,mb5.2
G15A Dillon 88.12 40 ⇑P P 06 21 18.0 +0.2
baz=88,SNR=63
Z26A Caprock 88.14 53 ⇑P P 06 21 17.9 -0.2
baz=88,SNR=28
B12A Libby 88.15 36 ⇑P P 06 21 17.6 -0.1
baz=88,SNR=22
DLMT Dillon 88.16 40 eP P 06 21 18.1 +0.2
comp=Z,32nm,0.9s,mb5.2
MSO Missoula 88.17 38 eP P 06 21 16.6 -1.2
comp=Z,8.4nm,0.8s,mb4.6
REDW Red Top Meadow 88.19 42 eP P 06 21 17.5 -0.5
X25A Clemmons Ranch 88.19 52 ⇓P P 06 21 17.7 -0.5
baz=88
TPAW Teton Pass 88.19 42 eP P 06 21 18.1 0.0
comp=Z,15nm,0.9s,mb4.8
E14A Clinton 88.20 38 ⇓P P 06 21 17.7 -0.3
baz=88,SNR=37
328A Wristen Ranch, 88.21 56 ⇓P P 06 21 18.1 -0.3
baz=88,SNR=14
BSMT Bassoo Peak 88.25 37 eP P 06 21 17.5 -0.7
O20A White River Ci 88.27 46 ⇓P P 06 21 18.2 -0.3
baz=88,SNR=12
C13A Hot Springs 88.27 37 ⇓P P 06 21 17.3 -1.0
baz=88,SNR=22
J17A Brown Place, J 88.27 42 ⇑P P 06 21 18.4 -0.1
baz=88,SNR=23
V24A Rampart Ranch, 88.28 51 ⇑P P 06 21 18.7 +0.1
baz=88
SNOW Snow King Moun 88.30 42 eP P 06 21 18.8 +0.2
comp=Z,22nm,0.8s,mb5.0
COLA College 88.30 12 eP P 06 21 16.0 -2.1
comp=Z,46nm,0.7s,mb5.4
COLA College 88.30 12 eP P 06 21 16.0 -2.1
COLA pmax pmax
comp=Z,46nm,0.7s,mb5.4
K18A Toltan Ranch, 88.33 43 ⇑P P 06 21 18.9 +0.2
baz=88,SNR=27
M19A Rock Springs 88.33 44 ⇑P P 06 21 18.2 -0.6
baz=88,SNR=5.6
127A Arkansas Junct 88.35 54 ⇓P P 06 21 18.8 -0.3
baz=88,SNR=8.3
R22A Saguache, Gunn 88.38 48 ⇑P P 06 21 19.4 +0.3
baz=88,SNR=20
A12A Yaak River Ran 88.38 36 ⇑P P 06 21 18.7 -0.1
baz=88,SNR=16
ILAR Eielson Array 88.40 13 P P 06 21 16.4 -2.1
comp=Z,11nm,0.7s,mb4.8,baz=227,slow=5.4,SNR=210
ILAR PP PP 06 24 36.4 -15
comp=Z,2.2nm,0.9s,baz=220,slow=7.6,SNR=4.2
IMW Indian Meadow 88.41 42 eP P 06 21 19.3 +0.3
comp=Z,17nm,0.8s,mb4.9
MOOW Moose Ponds 88.45 42 eP P 06 21 19.2 -0.1
comp=Z,8.8nm,1.1s,mb4.5
LOHW Long Hollow 88.47 42 eP P 06 21 19.3 -0.1
comp=Z,11nm,0.8s,mb4.7
JTMT Jette 88.47 37 eP P 06 21 18.5 -0.8
F15A Butte 88.48 39 ⇑P P 06 21 19.2 -0.1
baz=89,SNR=21
LRM Limekiln Ridge 88.49 39 eP P 06 21 19.3 -0.1
L19A Farson 88.50 44 ⇑P P 06 21 19.5 -0.1
baz=89,SNR=14
SWMT Swartz Lake 88.50 37 eP P 06 21 18.2 -1.2
MAIT Maitri 88.52 183 eP P 06 21 18.4 -0.8
MAIT e 06 22 34.5
VNA1 Neumayer--Stat 88.54 176 eP P 06 21 17.0 -2.4
VNA1 e 06 21 18.2
VNA1 e 06 22 37.7
VNA1 e 06 26 07.8
D14A Greenough 88.55 38 ⇓P P 06 21 18.8 -0.9
baz=89,SNR=42
G16A Moss Hill, Enn 88.57 40 ⇓P P 06 21 19.7 -0.1
baz=89,SNR=31
Q22A Crested Butte, 88.57 47 ⇑P P 06 21 19.9 -0.1
baz=89,SNR=30
N20A Spence Gulch, 88.59 45 ⇓P P 06 21 20.0 -0.1
baz=89,SNR=17
CHMT Chamberlain Mo 88.61 38 eP P 06 21 19.4 -0.5
H16A Russell Place, 88.63 41 ⇓P P 06 21 20.9 +0.8
baz=89,SNR=73
J18A Kendall Valley 88.63 42 ⇑P P 06 21 20.0 -0.1
baz=89,SNR=73
I17A Pilgrim Ck. 88.64 42 ⇓P P 06 21 20.7 +0.6
baz=89,SNR=7.9
W25A X Bar L Ranch, 88.64 52 ⇓P P 06 21 19.8 -0.6
baz=89,SNR=18
SLMT Seeley Lake 88.65 38 eP P 06 21 19.0 -1.1
PLCA Paso Flores 88.66 133 eP P 06 21 21.3 +0.8
comp=Z,17nm,1.3s,mb4.7
PLCA Paso Flores 88.66 133 P P 06 21 21.3 +0.8
comp=Z,3.1nm,0.7s,mb4.2,baz=249,slow=8.9,SNR=5.0
PLCA Paso Flores 88.66 133 eP P 06 21 21.3 +0.8
PLCA pmax pmax
comp=Z,17nm,1.3s
SMCO Snowmass 88.67 47 eP P 06 21 20.5 0.0
comp=Z,12nm,0.8s,mb4.8
YBMT Yellow Bay 88.69 37 eP P 06 21 19.6 -0.7
NST Nakhon Sawan 88.70 287 P P 06 21 23.0 +1.9
BW06 Boulder Array 88.70 43 ⇓P P 06 21 19.8 -0.7
baz=89,SNR=18
BW06 Boulder Array 88.70 43 eP P 06 21 19.9 -0.6
comp=Z,20nm,1.2s,mb4.8
B13A Whitefish 88.72 36 ⇓P P 06 21 19.5 -0.9
baz=89
YFT Old Faithful 88.75 41 eP P 06 21 22.6 +1.9
XAN Xi'an 88.77 307 P P 06 21 21.2 +0.2
XAN pP pP 06 22 41.1 +11
XAN S S 06 31 35.6 -7.6
XAN pmax pmax
comp=Z,22nm,0.8s,mb5.0
YMR Madison River 88.78 41 eP P 06 21 21.4 +0.6
comp=Z,17nm,0.6s,mb5.0
C14A Swan Lake 88.79 37 ⇑P P 06 21 19.7 -1.0
baz=89
O21A Pagoda 88.83 46 ⇑P P 06 21 20.5 -0.7
baz=89
H17A Grant Village 88.88 41 ⇑P P 06 21 22.6 +1.3
baz=89
BOZ Bozeman (W) 88.89 40 ⇑P P 06 21 21.3 0.0
baz=89,SNR=68
BOZ Bozeman (W) 88.89 40 eP P 06 21 21.3 +0.1
comp=Z,29nm,0.9s,mb5.1
BOZ Bozeman (W) 88.89 40 eP P 06 21 21.3 0.0
BOZ pmax pmax
comp=Z,29nm,0.9s,mb5.1
F16A Kennard Place, 88.96 40 ⇓P P 06 21 21.9 +0.2
baz=89,SNR=35
M20A Sweetwater, Wa 88.96 45 ⇑P P 06 21 21.6 -0.1
baz=89,SNR=7.8
YNR Norris Junctio 88.98 41 eP P 06 21 23.2 +1.4
comp=Z,21nm,1.1s,mb4.9
I18A Diamond G Ranc 89.00 42 ⇑P P 06 21 21.8 -0.1
baz=89,SNR=10.0
P22A Eagle 89.02 47 ⇑P P 06 21 21.6 -0.4
baz=89,SNR=8.5
Y27A Causey 89.02 53 ⇑P P 06 21 21.7 -0.5
baz=89,SNR=14
SDCO Great Sand Dun 89.03 49 eP P 06 21 21.7 -0.5
comp=Z,5.9nm,0.8s,mb4.5
N21A Black Mountain 89.05 45 ⇑P P 06 21 22.1 -0.1
baz=89,SNR=16
A13A Flathead Natio 89.06 36 ⇓P P 06 21 21.5 -0.5
baz=89
LKWY Lake 89.08 41 eP P 06 21 24.1 +1.9
comp=Z,18nm,0.7s,mb5.0
LKWY Lake 89.08 41 eP P 06 21 24.1 +1.9
LKWY pmax pmax
comp=Z,19nm,0.7s,mb5.0
D15A Lincoln 89.10 38 ⇑P P 06 21 21.9 -0.3
baz=89,SNR=34
L20A Wamsutter 89.11 44 ⇑P P 06 21 22.6 +0.2
baz=89,SNR=18
K19A Absolon Red Bu 89.19 43 ⇓P P 06 21 21.9 -0.8
baz=89
S24A Houchin Ranch, 89.19 49 ⇑P P 06 21 23.2 +0.3
baz=89
U25A Circle Dot Ran 89.21 50 ⇓P P 06 21 22.7 -0.3
baz=89
HIA Hailar 89.25 324 eP P 06 21 21.9 -1.0
comp=Z,9.4nm,0.4s,mb5.0
HIA Hailar 89.25 324 eP P 06 21 21.9 -1.0
HIA pmax pmax
comp=Z,9.0nm,0.4s
G17A Pierce Place, 89.26 40 ⇑P P 06 21 23.6 +0.5
baz=89,SNR=18
E16A East Helena 89.32 39 ⇑P P 06 21 23.1 -0.2
baz=90,SNR=16
HRY Holter Researc 89.33 39 eP P 06 21 23.3 0.0
MSTX Muleshoe 89.35 53 ⇑P P 06 21 23.1 -0.7
baz=90
B14A Marquette Ranc 89.38 37 ⇑P P 06 21 22.8 -0.7
baz=90,SNR=81
V26A Tequesquite Ra 89.39 51 ⇓P P 06 21 22.9 -0.9
baz=90,SNR=5.4
X27A F and S Farms, 89.40 53 ⇓P P 06 21 23.5 -0.5
baz=90,SNR=11
WALA Waterton Lakes 89.40 36 eP P 06 21 23.2 -0.4
comp=Z,1.0nm,0.9s
O22A Kremmling 89.43 46 ⇑P P 06 21 23.7 -0.3
baz=90,SNR=13
K20A Yellowstone Ra 89.43 44 ⇓P P 06 21 22.9 -1.0
baz=90,SNR=18
C15A Salmond Ranch, 89.44 38 ⇓P P 06 21 23.1 -0.7
baz=90,SNR=31
DAWY Dawson 89.51 16 eP P 06 21 22.7 -1.0
R24A Sanders Place, 89.53 49 ⇑P P 06 21 24.2 -0.3
baz=90,SNR=11
T25A Trinidad 89.53 50 ⇓P P 06 21 24.2 -0.3
baz=90,SNR=6.1
P23A Jefferson 89.54 47 ⇓P P 06 21 25.0 +0.5
baz=90,SNR=7.8
M21A Separation Pea 89.56 45 ⇓P P 06 21 24.1 -0.4
baz=90,SNR=18
W27A Bowe Ranch, En 89.60 52 ⇑P P 06 21 24.4 -0.5
baz=90,SNR=11
F17A Fitzpatrick Pl 89.61 40 ⇓P P 06 21 25.0 +0.4
baz=90,SNR=39
A14A Double T Ranch 89.62 36 ⇑P P 06 21 24.1 -0.5
baz=90,SNR=70
D16A Dana Ranch, Ca 89.66 39 ⇓P P 06 21 24.8 0.0
baz=90,SNR=44
EGAK Eagle 89.67 15 eP P 06 21 23.3 -1.2
comp=Z,38nm,0.8s,mb5.3
U26A Atchley Ranch, 89.69 51 ⇑P P 06 21 24.8 -0.5
baz=90,SNR=14
RWWY Rawlins 89.70 45 eP P 06 21 25.1 -0.1
comp=Z,28nm,1.1s,mb5.0
L21A Rawlins 89.73 44 ⇑P P 06 21 24.8 -0.5
baz=90,SNR=12
S25A Robets Cordova 89.75 49 ⇓P P 06 21 25.1 -0.4
baz=90,SNR=9.0
B15A Bradely Ranch, 89.75 37 ⇑P P 06 21 24.2 -1.1
baz=90,SNR=20
E17A Martinsdale 89.77 39 ⇑P P 06 21 25.3 -0.1
baz=90,SNR=14
N22A Wattenberg Ran 89.79 46 ⇑P P 06 21 25.5 -0.1
baz=90,SNR=14
Q24A Divide 89.83 48 ⇓P P 06 21 25.7 -0.2
baz=90
O23A Lake Granby, G 89.88 47 ⇓P P 06 21 26.1 +0.1
baz=90,SNR=6.2
C16A Fuhringer Ranc 89.95 38 ⇓P P 06 21 25.5 -0.7
baz=90,SNR=37
HHC Hu-ho-hao-te 89.96 314 eP P 06 21 26.2 -0.2
HHC pP pP 06 22 48.4 +13
HHC PP PP 06 25 06.1 +1.9
HHC SKS 06 31 21.3
HHC S S 06 31 45.4 -8.5
HHC SS SS 06 37 56.2 -3.8
HHC pmax pmax
comp=Z,28nm,1.1s,mb5.0
HHC pmax pmax
comp=Z,330nm,7.5s
G18A Lazy EL Ranch, 89.97 41 ⇓P P 06 21 26.4 0.0
baz=90,SNR=31
M22A Cedar Creek Ra 89.97 45 ⇓P P 06 21 26.1 -0.4
baz=90,SNR=5.8
COLD Coldfoot 89.99 10 eP P 06 21 24.8 -1.1
comp=Z,24nm,0.9s,mb5.0
A15A Johnson Ranch, 90.01 37 ⇓P P 06 21 25.7 -0.8
baz=90,SNR=18
KMI Kunming 90.01 297 P P 06 21 28.3 +1.3
KMI pP pP 06 22 50.1 +14
KMI PP PP 06 25 07.5 +2.6
KMI S S 06 31 46.0 -9.0
KMI sS sS 06 34 11.4 +15
KMI SS SS 06 37 58.6 -2.8
KMI pmax pmax
comp=Z,30nm,0.9s,mb5.1
KMI pmax pmax
comp=Z,88nm,4.0s
KMI LR LR
comp=N,180nm,15.6s
KMI LR LR
comp=E,200nm,16.2s
KMI LR LR
comp=Z,190nm,18.0s
RLMT Red Lodge 90.06 41 ⇑P P 06 21 27.0 +0.3
baz=90,SNR=32
RLMT Red Lodge 90.06 41 eP P 06 21 26.7 0.0
comp=Z,27nm,0.9s,mb5.1
GCMT Greycliff 90.14 40 eP P 06 21 27.3 +0.1
comp=Z,28nm,1.3s,mb4.9
F18A Big Timber 90.17 40 ⇑P P 06 21 27.5 +0.2
baz=90,SNR=20
N23A Red Feather La 90.17 46 ⇑P P 06 21 27.3 -0.1
baz=90
I20A Worland 90.19 42 ⇓P P 06 21 27.1 -0.3
baz=90,SNR=31
D17A Six Diamond Ra 90.23 39 ⇓P P 06 21 27.6 +0.1
baz=90,SNR=71
BDT Bhumibol Dam 90.29 288 ⇑P P 06 21 30.0 +1.5
comp=Z,22nm,0.9s,mb5.0
L22A Ellis Ranch, M 90.37 45 ⇑P P 06 21 28.6 +0.3
baz=90
E18A Harlowton 90.39 40 ⇑P P 06 21 28.6 +0.4
baz=90,SNR=36
O24A Longmont 90.41 47 ⇑P P 06 21 28.5 0.0
baz=90
C17A Wharram Farm, 90.43 38 ⇑P P 06 21 28.1 -0.3
baz=91
Q25A Bedland, Calha 90.44 48 ⇑P P 06 21 28.1 -0.6
baz=91
H20A Greybull 90.53 42 ⇓P P 06 21 28.4 -0.6
baz=91
AMTX Amarillo 90.55 53 eP P 06 21 28.5 -0.9
comp=Z,15nm,0.8s,mb4.9
CHRT Chiangrai 90.56 291 ⇑P P 06 21 29.5 -0.2
comp=Z,237nm,1.0s,mb6.0
K22A Casper 90.60 44 ⇑P P 06 21 28.9 -0.5
baz=91,SNR=15
F19A Roth Farm, Mol 90.61 41 ⇓P P 06 21 29.1 -0.2
baz=91,SNR=20
A16A West Butte Ran 90.63 37 ⇑P P 06 21 29.0 -0.3
baz=91
I21A Big Trails, Te 90.66 43 ⇑P P 06 21 29.0 -0.5
baz=91
B17A L&G Farms, Che 90.75 38 ⇓P P 06 21 29.2 -0.6
baz=91,SNR=12
P25A Willow Gulch B 90.76 48 ⇓P P 06 21 29.9 -0.3
baz=91,SNR=7.8
D18A Linhart Farms, 90.77 39 ⇓P P 06 21 30.2 +0.2
baz=91,SNR=8.6
CMAR Chiang Mai Arr 90.78 289 P P 06 21 31.8 +1.1
comp=Z,21nm,0.9s,mb5.0,baz=123,slow=2.8,SNR=82
CMAR pP pP 06 22 53.0 +13
comp=Z,2.3nm,0.8s,baz=115,slow=4.1,SNR=1.8
N24A Carr 90.86 46 ⇓P P 06 21 30.5 -0.1
baz=91
L23A Garrett 90.90 45 ⇓P P 06 21 30.3 -0.4
baz=91,SNR=22
CHG Chiang Mai 90.91 290 ⇓P P 06 21 32.0 +0.7

comp=Z,35nm,0.9s,mb5.2
CHTO Chiang Mai 90.91 290 *e*P P **06 21 32.1 +0.7**
comp=Z,26nm,0.8s,mb5.1
CHTO Chiang Mai 90.91 290 *e*P P **06 21 32.1 +0.8**
CHTO pmax pmax
comp=Z,26nm,0.8s,mb5.1
F20A Billings 91.07 41 ⇑P P **06 21 31.2 -0.2**
baz=91
A17A Triple J Farms 91.14 37 ⇑P P **06 21 31.2 -0.4**
baz=91,SNR=21
M24A Cheyenne 91.19 46 ⇓P P **06 21 32.0 -0.1**
baz=91
H21A Big Horn, Sher 91.20 42 ⇑P P **06 21 31.7 -0.3**
baz=91
EGMT Eagleton 91.21 38 ⇓P P **06 21 31.6 -0.4**
baz=91,SNR=12
EGMT Eagleton 91.21 38 *e*P P **06 21 31.6 -0.4**
comp=Z,18nm,0.9s,mb4.9
L24A Wheatland 91.37 45 ⇑P P **06 21 33.2 +0.2**
baz=92,SNR=5.0
G21A Lodge Grass 91.38 42 ⇑P P **06 21 32.5 -0.3**
baz=92,SNR=5.5
B18A Beardsley Farm 91.38 38 ⇑P P **06 21 32.4 -0.4**
baz=92,SNR=39
CD2 Chengdu 91.44 302 P P **06 21 32.2 -1.3**
CD2 pP pP 06 22 54.7 +12
CD2 PP PP 06 25 17.5 +1.5
CD2 SKS 06 31 29.3
CD2 S S 06 31 58.7 -9.0
CD2 sS sS 06 34 23.8 +14
CD2 SS SS 06 38 16.8 -4.9
CD2 pmax pmax
comp=Z,20nm,0.7s,mb5.1
CD2 pmax pmax
comp=Z,280nm,9.8s
A18A Metzger Ranch, 91.61 38 ⇑P P **06 21 33.3 -0.5**
baz=92
EDM Edmonton 91.97 33 *e*P P **06 21 34.4 -1.0**
WMOK Wichita Mounta 92.67 54 *e*P P **06 21 37.6 -1.5**
comp=Z,0.8nm,0.6s
WMOK Wichita Mounta 92.67 54 *e*P P **06 21 37.6 -1.5**
WMOK pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
LAO LASA Array 92.67 41 *e*P P **06 21 39.1 +0.3**
comp=Z,46nm,1.1s,mb5.3
RSSD Black Hills 92.89 44 *e*P P **06 21 39.3 -0.6**
comp=Z,43nm,1.0s,mb5.3
RSSD Black Hills 92.89 44 *e*P P **06 21 39.3 -0.6**
RSSD pmax pmax
comp=Z,43nm,1.0s,mb5.3
LZH Lanzhou 93.41 307 *e*P P **06 21 43.5 +1.0**
LZH pP pP 06 23 04.9 +13
LZH *e*S S 06 32 15.5 -9.3
LZH SS SS 06 38 44.4 -5.2
LZH pmax pmax
comp=Z,20nm,1.0s,mb5.0
LZH pmax pmax
comp=Z,89nm,4.6s
INK Inuvik 94.33 15 *e*P P **06 21 44.2 -1.8**
comp=Z,15nm,0.8s,mb5.1
INK Inuvik 94.33 15 P P **06 21 44.0 -1.9**
comp=Z,14nm,0.9s,mb5.0,baz=227,slow=3.4,SNR=56
INK PP PP 06 25 28.6 -9.1
comp=Z,5.0nm,0.9s,baz=218,slow=6.5,SNR=4.2
INK Inuvik 94.33 15 *e*P P **06 21 44.2 -1.7**
INK pmax pmax
comp=Z,15nm,0.8s
ULN Ulaanbaatar 95.95 319 *e*P P **06 21 52.8 -0.9**
comp=Z,4.8nm,0.8s,mb4.7
ULN Ulaanbaatar 95.95 319 *e*P P **06 21 52.8 -0.9**
ULN pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
SONM Songino Array 96.34 319 P P **06 21 54.1 -1.4**
comp=Z,1.3nm,0.5s,mb4.3,baz=132,slow=2.2,SNR=7.4
SONM PP PP 06 25 49.1 -4.5
comp=Z,1.2nm,0.6s,baz=111,slow=8.1,SNR=5.6
YKA Yellowknife Ar 96.46 25 P P **06 21 54.3 -1.4**
comp=Z,5.6nm,0.8s,mb4.7,baz=223,slow=4.7,SNR=7.4
GTA Gaotai 97.60 309 *e*P P **06 22 01.5 +0.1**
GTA pmax pmax
comp=Z,6.0nm,1.0s,mb4.9
ECSD EROS Data Cent 97.64 46 *e*P P **06 22 00.2 -1.3**
comp=Z,8.2nm,1.0s,mb5.0
TLY Talaya 99.46 322 *e*P Pdif 06 22 12.0 +2.4
TLY pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
LPAZ La Paz 101.39 112 P Pdif 06 22 22.1 +3.9
comp=Z,1.7nm,0.9s,baz=282,slow=4.1,SNR=6.8
ZALV Zalesovo Beam 111.06 321 PKiKP PKiKP 06 26 55.9 -2.6
comp=Z,2.5nm,0.6s,baz=144,slow=1.0,SNR=16
ZALV PP PP 06 27 35.4 -7.0
comp=Z,1.6nm,0.7s,baz=94,slow=5.9,SNR=5.2
MK31 Makanchi Array 111.81 313 *e*PKPdf PKiKP 06 26 57.4 -2.7
MKAR Makanchi Array 111.81 313 Pdiff Pdif 06 23 07.8 +3.3
comp=Z,0.5nm,0.6s,baz=92,slow=5.3,SNR=6.2
MKAR PKiKP PKiKP 06 26 57.8 -2.3
comp=Z,2.6nm,0.6s,baz=78,slow=0.4,SNR=20
KURK Kurchatov 114.59 317 *e*PKPdf PKiKP 06 27 02.5 -2.8
KURK Kurchatov 114.59 317 *c i*PKIKP PKiKP 06 27 02.9 -2.4
KURK pmax pmax
comp=Z,4.0nm,0.7s
UCH Uchtor 116.89 308 *e*PKPdf PKPdf 06 27 09.2 -0.8
UCH *e*PP PP 06 28 23.8 +0.1
SCHQ Schefferville 118.47 38 PKP PKPdf 06 27 09.6 -3.1
comp=Z,1.9nm,0.8s,baz=263,slow=4.3,SNR=3.8
SCHQ PP PP 06 28 22.6 -12
comp=Z,1.4nm,0.8s,baz=326,slow=9.7,SNR=2.2
BVAR Borovoye Array 119.66 320 PKP PKPdf 06 27 13.0 -2.0
comp=Z,8.6nm,0.6s,baz=91,slow=1.5,SNR=35
BVAR *e*PKP pPKPdf 06 28 39.2 +12
comp=Z,1.1nm,0.7s,baz=92,slow=4.3,SNR=2.1
BRVK Borovoye 119.72 320 *e*PKPdf PKPdf 06 27 12.8 -2.3
BRVK *e*PP PP 06 28 39.8 -3.0
BRVK Borovoye 119.72 320 *c i*PKIKP PKPdf 06 27 13.1 -2.0
BRVK pmax pmax
comp=Z,6.0nm,0.7s
SPITS Spitsbergen Ar 122.13 357 PKP PKPdf 06 27 17.1 -2.0
comp=Z,8.7nm,0.7s,baz=60,slow=14,SNR=4.9
SUMG Summit 123.23 14 *i*P PKPdf 06 27 20.1 -1.2
comp=Z,7.9nm,1.0s
ARU Arti 125.75 325 *e*PKPdf PKPdf 06 27 24.6 -1.9
ARU *e*PP PP 06 29 18.5 -4.5
ARU Arti 125.75 325 *i* PKIKP PKPdf 06 27 24.5 -2.0
ARU 06 29 18.6
BOSA Boshof 126.31 205 PKP PKPdf 06 27 28.3 -0.4
comp=Z,2.6nm,0.8s,baz=181,slow=5.4,SNR=3.9
ABKAR Akbulak array 126.68 317 *e*PKPdf PKPdf 06 27 26.9 -1.6
AKTK Aktyubinsk 127.66 318 PKP PKPdf 06 27 29.3 -1.1
AKTO Aktyubinsk 127.66 318 PKP PKPdf 06 27 29.3 -1.1
comp=Z,5.0nm,0.8s,baz=76,slow=3.7,SNR=16
KEV Kevo 128.81 349 *e*PKIKP PKPdf 06 27 29.4 -2.6
KEV pmax pmax
comp=Z,1.0nm,0.4s
KEV Kevo 128.81 349 *ep* PKPdf 06 27 29.4 -2.6
comp=Z,0.5nm,0.4s
ARCES ARCESS Array B 129.26 350 PKP PKPdf 06 27 30.9 -2.0
comp=Z,6.4nm,0.7s,baz=45,slow=0.8,SNR=25
ARE0 ARCESS Array S 129.26 350 *e*PKPdf PKPdf 06 27 30.7 -2.2
KLMR Klimovskoe 132.34 337 *e*PKIKP PKPdf 06 27 36.9 -2.1
KLMR pmax pmax
comp=Z,19nm,2.0s
JOF Joensuu 133.54 342 *e*P PKPdf 06 27 36.7 -4.5
JOF Joensuu 133.54 342 *ep* PKPdf 06 27 36.7 -4.5
comp=Z,1.6nm,0.4s
KAF Kangasniemi 135.54 344 *e*PKIKP PKPdf 06 27 43.3 -1.6
KAF pmax pmax
comp=Z,2.0nm,0.4s
KAF Kangasniemi 135.54 344 *ep* PKPdf 06 27 43.3 -1.6
comp=Z,1.6nm,0.4s
FINES FINESS Array B 136.17 344 PKP PKPpre 06 27 34.2
FINES SKPbc SKPbc 06 30 45.5 -5.1
FINES FINESS Array B 136.17 344 PKhKP PKPpre 06 27 34.2
comp=Z,0.9nm,0.5s,baz=51,slow=5.5,SNR=3.6
FINES SKPbc SKPbc 06 30 45.5 -5.1
comp=Z,4.7nm,0.7s,baz=48,slow=3.1,SNR=6.6
VRHR Novokhopersk 137.06 324 *e*PKIKP PKPdf 06 27 46.6 -1.5
VRHR pmax pmax
comp=Z,8.0nm,0.4s
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.6s
OBN Obninsk 137.26 332 ⇓*e*PKIKP PKPdf 06 27 46.3 -2.0
OBN *e* 06 30 37.1
OBN pmax pmax
comp=Z,8.0nm,0.5s

VSR Storozhevoye 138.32 326 *e*PKIKP PKPdf 06 27 48.3 -2.1
VSR *e* 06 30 52.0
VSR pmax pmax
comp=Z,4.0nm,0.5s
VSR pmax pmax
comp=N,7.0nm,0.6s
VSR pmax pmax
comp=E,5.0nm,0.4s
ZEI Tsey 139.15 312 *e*PKIKP PKPdf 06 27 52.4 +0.2
ZEI pmax pmax
comp=Z,5.0nm,0.4s
NOA NORSAR Array B 139.28 354 PKhKP PKPpre 06 27 40.5
comp=Z,2.7nm,0.8s,baz=16,slow=4.4,SNR=10
NOA PKP PKPdf 06 27 50.8 -1.1
comp=Z,2.9nm,0.7s,baz=13,slow=4.1,SNR=6.7
NOA SKPbc SKPbc 06 30 53.4 -6.1
comp=Z,6.0nm,1.0s,baz=15,slow=4.4,SNR=5.0
KIV Kislovodsk 139.56 314 *e*PKIKP PKPdf 06 27 52.2 -0.7
KIV pmax pmax
comp=Z,6.0nm,0.7s
HFS Hagfors 139.86 351 PKhKP PKPpre 06 27 42.6
comp=Z,7.8nm,0.7s,baz=73,slow=5.0,SNR=17
HFS SKPbc SKPbc 06 30 56.2 -4.8
comp=Z,6.1nm,0.8s,baz=158,slow=4.3,SNR=5.9
KAC Achnashellach 142.81 7 *e*P PKPdf 06 27 53.1 -5.2
KPL Plockton 142.93 7 *e*P PKPdf 06 27 53.5 -5.0
MDO Dochfour 142.97 6 *e*P PKPdf 06 27 54.4 -4.2
MME1 Meikle Cairn 143.23 5 *e*P PKPdf 06 27 53.7 -5.4
SUW Suwalki 143.27 340 *e*PKP PKPdf 06 27 55.8 -3.4
KAR1 Arisaig 143.32 8 *e*P PKPdf 06 27 54.7 -4.5
AKASG Malin Array Be 143.52 331 PKhKP PKPpre 06 27 55.1
comp=Z,45nm,0.8s,baz=43,slow=4.3,SNR=87
AKASG SKPbc SKPbc 06 31 06.1 -4.5
comp=Z,3.8nm,0.8s,baz=42,slow=2.7,SNR=8.4
AKBB Malin Array Si 143.52 331 *e*PKPdf PKPpre 06 27 55.3
KIEV Kiev 143.53 331 *e*PKPdf PKPdf 06 27 54.9 -4.9
MUD Monsted U'grnd 144.00 354 *i* P PKPdf 06 27 57.3 -3.1
comp=Z,49nm,0.8s
EAB Aberfoyle 144.21 7 *e*P PKPdf 06 27 57.6 -3.2
EBH Black Hill 144.24 6 *e*P PKPdf 06 27 57.5 -3.3
COP Copenhagen 144.34 351 *i* P PKPdf 06 27 57.7 -3.3
comp=Z,45nm,0.8s
BSD Bornholm Skovb 144.45 348 ⇓*i*P PKPdf 06 27 58.2 -3.0
comp=Z,72nm,0.8s
PGBU Glenifferbraes 144.56 7 *e*P PKPdf 06 27 58.8 -2.6
MALT Malatya 144.57 308 *e*PKPdf PKPdf 06 28 01.1 -0.9
MALT Malatya 144.57 308 ⇑*i*P PKPdf 06 28 01.0 -1.0
SIM Simferopol' 144.57 320 *d i*PKHKP PKPdf 06 28 00.1 -1.7
SIM pmax pmax
comp=Z,74nm,0.9s
EDI Edinburgh 144.59 6 *e*P PKPdf 06 27 58.9 -2.5
EAU Auchinoon 144.64 6 *e*P PKPdf 06 27 59.0 -2.5
ESY Stoneypath 144.64 5 *e*P PKPdf 06 27 58.6 -3.0
EBL Broad Law 144.75 6 *e*P PKPdf 06 27 59.2 -2.5
ESK Eskdalemuir 145.19 6 *e*P PKPdf 06 27 59.2 -3.3
ESK Eskdalemuir 145.19 6 *e*PKHKP PKPdf 06 28 00.6 -1.9
ECK Cauldkaine Hil 145.33 6 *e*P PKPdf 06 28 00.9 -1.8
GAL1 Galloway 145.46 8 *e*P PKPdf 06 28 01.5 -1.5
GCD Castle Douglas 145.56 7 *e*P PKPdf 06 28 01.9 -1.2
GKP Gorka Klasztor 145.64 344 *e*PKP PKPdf 06 28 02.8 -0.5
XAL Allendale 145.72 5 *e*P PKPdf 06 28 02.0 -1.4
BSEG Bad Segeberg 146.34 352 *e*PKPbc PKPbc 06 28 04.8 -1.4
LVV L'vov 146.38 335 *e*PKIKP PKPdf 06 28 05.4 +0.7
HPK Haverah Park 146.67 5 *e*P PKPdf 06 28 05.6 +0.6
WLF1 Llynfaes 147.05 8 *e*P PKPdf 06 28 05.5 -0.2
KWP Kalwaria Pacla 147.05 336 *e*PKP PKPdf 06 28 07.1 +1.3
KBI1 Birley Grange 147.38 5 *e*P PKPdf 06 28 07.1 +0.8
BR131 Keskin Array S 147.46 312 *e*PKPbc PKPbc 06 28 08.4 -1.4
BRTR Keskin Array B 147.46 312 PKP PKPdf 06 28 05.3 -1.5
comp=Z,7.2nm,0.7s,baz=130,slow=2.4,SNR=32
BRTR PKPbc PKPbc 06 28 08.3 -1.5
comp=Z,7.0nm,0.7s,baz=144,slow=5.3,SNR=32
TLCR 147.46 325 ⇓P PKPbc 06 28 08.6 -1.0
TLCR 147.46 325 ⇓*i*P PKPbc 06 28 08.6 -1.0
BUR08 Bucovina Ar. S 147.55 331 *e*PKPbc PKPbc 06 28 09.1 -0.6
BUR01 Bucovina Ar. S 147.57 331 P PKPbc 06 28 09.5 -0.4
BURAR Bucovina Array 147.57 331 ⇑P PKPbc 06 28 09.1 -0.7
BURAR Bucovina Array 147.57 331 ⇑*i*P PKPbc 06 28 09.1 -0.7
OJC Ojcow 147.60 339 *e*PKP PKPdf 06 28 08.3 +1.6
TESR 147.69 328 ⇓P PKPbc 06 28 08.9 -1.3
TESR 147.69 328 ⇓*i*P PKPbc 06 28 08.9 -1.3
STHS Stebnicka Huta 147.78 337 *e*PKP PKPbc 06 28 09.7 -0.6
STHS *e* 06 28 14.1
STHS Stebnicka Huta 147.78 337 *e*PKP PKPbc 06 28 09.7 -0.6
STHS *e* 06 28 14.1
WIT Witteveen 147.83 355 *e*PKP PKPbc 06 28 09.9 -0.4
comp=Z,395nm,0.5s
CWF Charnwood Fore 147.91 5 *e*P PKPdf 06 28 07.4 +0.3
HLM1 Long Mynd 147.98 6 *e*P PKPdf 06 28 07.1 -0.2
UZH Uzhgorod 148.02 335 *d i*PKIKP PKPbc 06 28 10.0 -1.0
UZH *e* 06 28 14.0
KSP Ksiaz 148.09 344 *e*PKP PKPbc 06 28 10.0 -1.1
KSP *e* 06 28 14.1
KSP Ksiaz 148.09 344 *e*PKIKP PKPbc 06 28 10.0 -1.1
KSP *e* 06 28 13.9
VRI Vrincioaia 148.10 327 ⇑P PKPbc 06 28 10.2 -1.1
VRI Vrincioaia 148.10 327 ⇑*i*P PKPbc 06 28 10.1 -1.2
NIE Niedzica 148.11 338 *e*PKP PKPbc 06 28 10.4 -0.8
CRVS Cervenica-Dubn 148.12 336 *e*PKP PKPbc 06 28 10.4 -0.8
CRVS Cervenica-Dubn 148.12 336 *e*PKP PKPbc 06 28 10.4 -0.8
TIRR Tirgusor 148.15 324 ⇓P PKPbc 06 28 10.1 -1.3
TIRR Tirgusor 148.15 324 ⇓*i*P PKPbc 06 28 10.1 -1.3
PLOR Plostina 148.15 327 ⇑*i*PKIKP PKPbc 06 28 09.9 -1.5
PLOR Plostina 148.15 327 ⇑*i*P PKPbc 06 28 09.9 -1.5
IBBN Ibbenburen 148.24 354 *e*PKPab PKPab 06 28 13.5 -1.8
TRPA Tarpa 148.32 334 ⇓*i*P PKPbc 06 28 10.3 -1.5
CLZ Clausthal 148.37 351 *e*PKPbc PKPbc 06 28 10.6 -1.2
CLZ *e*PKPab PKPab 06 28 14.0 -1.9
HTR Trewern Hill 148.37 7 *e*P PKPdf 06 28 09.5 +1.6
CLL Collm 148.43 348 *e*PKPbc PKPbc 06 28 10.5 -1.4
CLL Collm 148.43 348 ⇓*i*PKP PKPbc 06 28 10.5 -1.4
CLL *e*PKP PKPab 06 28 14.0 -2.1
CLL *ep*PKP pPKPdf 06 29 38.0 +17
CLL Collm 148.43 348 ⇓*i*PKIKP PKPbc 06 28 10.5 -1.4
CLL *e* 06 28 14.0
CLL pmax pmax
comp=Z,7.0nm,0.9s
CLL pmax pmax
comp=Z,79nm,0.8s
CLL Collm 148.43 348 ⇓*i*PKPbc PKPbc 06 28 10.5 -1.4
comp=Z,79nm,0.9s
CLL *e*PKPab PKPab 06 28 14.0 -2.1
comp=Z,40nm,0.8s
CLL *ep*PKPab pPKPab 06 29 38.0 +12
OKC Ostrava-Krasne 148.46 341 *e*PKIKP PKPbc 06 28 11.0 -1.1
OKC *e* 06 28 15.3
OKC Ostrava-Krasne 148.46 341 ⇑*e*PKP PKPbc 06 28 11.0 -1.1
OKC *e*PKPAB PKPab 06 28 15.3 -1.0
MMAI Mount Meron Ar 148.47 300 PKPbc PKPbc 06 28 12.2 -0.4
comp=Z,16nm,0.5s,baz=67,slow=4.6,SNR=20
UPC Upice 148.47 344 *e*PKIKP PKPbc 06 28 10.9 -1.2
UPC *e* 06 28 15.5
UPC Upice 148.47 344 ⇑*e*PKP PKPbc 06 28 10.9 -1.2
UPC *e*PKPAB PKPab 06 28 15.5 -0.8
MCH1 Michaelchurch 148.48 7 *e*P PKPdf 06 28 09.8 +1.7
DPC Dobruska-Polom 148.53 343 *e*PKIKP PKPbc 06 28 11.3 -0.9
DPC *e* 06 28 16.1
DPC Dobruska-Polom 148.53 343 ⇑*e*PKP PKPbc 06 28 11.3 -0.9
DPC *e*PKPAB PKPab 06 28 16.1 -0.5
DPC *ep*PKP pPKPdf 06 29 36.7 +16
BRG Berggiesshubel 148.64 346 *e*PKPbc PKPbc 06 28 11.2 -1.3
BRG *e*PKPab PKPab 06 28 15.2 -1.8
BRG Berggiesshubel 148.64 346 *e*PKP PKPdf 06 28 07.1 -1.3
comp=Z,11nm,1.2s
BRG *i* 06 28 11.2
comp=Z,35nm,0.7s
BRG *i* 06 28 15.4
comp=Z,30nm,0.8s
BRG *e*PKPPKP 06 29 35.6
comp=Z,6.2nm,1.1s
BRG Berggiesshubel 148.64 346 *e*PKHKP PKPdf 06 28 07.1 -1.3
BRG *i* 06 28 11.2
BRG *i* 06 28 15.4
BRG pmax pmax
comp=Z,2.0nm,1.2s
BRG pmax pmax
comp=Z,6.0nm,0.7s
BRG pmax pmax
comp=Z,21nm,0.8s
BRG pmax pmax
comp=Z,18nm,1.1s
WTSB Winterswijk 148.66 355 *e*PKP PKPbc 06 28 11.0 -1.5
comp=Z,85nm,1.1s

MORC Moravsky Berou 148.70 341 *e*PKPbc PKPbc 06 28 11.3 -1.3
MORC *e*PKPab PKPab 06 28 16.2 -1.1
MORC Moravsky Berou 148.70 341 ⇑*i*P PKPbc 06 28 11.4 -1.3
MLR Muntele Rosu 148.76 328 PKPbc PKPbc 06 28 11.5 -1.4
comp=Z,12nm,0.8s,baz=2.6,slow=1.1,SNR=15
MLR Muntele Rosu 148.76 328 PKiKP PKPbc 06 28 12.0 -0.9
MLR Muntele Rosu 148.76 328 ⇓*i*P PKPbc 06 28 11.2 -1.8
PVCC Panska Ves 148.81 345 *e*PKiKP PKPbc 06 28 12.1 -0.8
PVCC *e* 06 28 16.9
PVCC Panska Ves 148.81 345 ⇑*e*PKP PKPbc 06 28 12.1 -0.8
PVCC *e*PKPAB PKPab 06 28 16.9 -0.8
KECS Kecovo 148.83 337 *e*PKP PKPbc 06 28 12.0 -1.0
KECS *e* 06 28 17.1
KECS Kecovo 148.83 337 *e*PKP PKPbc 06 28 12.0 -1.0
KECS *e* 06 28 17.1
HGH Gray Hill 148.86 7 *e*P PKPdf 06 28 10.4 +1.7
VOIR 149.24 328 ⇓P PKPbc 06 28 12.6 -1.5
VOIR 149.24 328 ⇓*i*P PKPbc 06 28 12.6 -1.5
DRGR 149.30 333 P PKPbc 06 28 12.9 -1.3
DRGR 149.30 333 ⇓*i*P PKPbc 06 28 13.1 -1.2
PRU Pruhonice 149.32 345 *e*PKHKP PKPbc 06 28 13.6 -0.6
PRU *e* 06 28 19.0
PRU Pruhonice 149.32 345 ⇑*e*PKP PKPbc 06 28 13.6 -0.6
PRU *e*PKPAB PKPab 06 28 19.0 -0.8
MOX Moxa 149.32 349 *e*PKP PKPbc 06 28 12.8 -1.4
comp=Z,63nm,1.3s
MOX *e* 06 28 17.9
MOX Moxa 149.32 349 *e*PKPbc PKPbc 06 28 12.9 -1.3
MOX *e*PKPab PKPab 06 28 17.6 -2.2
MOX Moxa 149.32 349 *e*PKHKP PKPbc 06 28 12.8 -1.4
MOX *e* 06 28 17.9
MOX pmax pmax
comp=Z,63nm,1.3s
TANN Tannenbergstha 149.38 348 *e*PKPbc PKPbc 06 28 13.2 -1.1
WERD Werda 149.38 348 *e*PKPbc PKPbc 06 28 13.1 -1.2
VRAC Vranov 149.40 342 PKPbc PKPbc 06 28 13.1 -1.3
comp=Z,18nm,0.9s,baz=35,slow=3.0,SNR=14
VRAC Vranov 149.40 342 ⇑PKHKP PKPbc 06 28 13.0 -1.4
VRAC Vranov 149.40 342 ⇑*i*P PKPbc 06 28 12.9 -1.5
VYHS Vyhne 149.41 339 *e*PKP PKPbc 06 28 13.2 -1.2
VYHS *e* 06 28 19.7
VYHS Vyhne 149.41 339 *e*PKP PKPbc 06 28 13.2 -1.2
VYHS *e* 06 28 19.7
GUNZ Gunzen 149.46 348 *e*PKPbc PKPbc 06 28 13.4 -1.1
GUNZ *e*PKPab PKPab 06 28 18.5 -1.8
KOLL Kolacno 149.48 339 *e*PKP PKPbc 06 28 14.1 -0.5
KOLL Kolacno 149.48 339 *e*PKP PKPbc 06 28 14.1 -0.5
PSZ Piszkesteto 149.52 337 *e*PKPbc PKPbc 06 28 13.3 -1.4
PSZ Piszkesteto 149.52 337 ⇓*i*P PKPbc 06 28 14.0 -0.7
PSZ Piszkesteto 149.52 337 ⇓*e*PKP PKPbc 06 28 13.3 -1.4
WERN Wernitzgruen 149.52 348 *e*PKPbc PKPbc 06 28 13.7 -1.0
WERN *e*PKPab PKPab 06 28 18.9 -1.7
NKC Novy Kostel 149.56 348 *e*PKHKP PKPbc 06 28 13.7 -1.1
NKC *e* 06 28 19.2
NKC Novy Kostel 149.56 348 ⇑*e*PKP PKPbc 06 28 13.7 -1.1
NKC *e*PKPAB PKPab 06 28 19.2 -1.6
TREC Trest 149.72 343 *e*PKHKP PKPbc 06 28 13.6 -1.6
TREC *e* 06 28 20.2
TREC Trest 149.72 343 ⇑*e*PKP PKPbc 06 28 13.6 -1.6
TREC *e*PKPAB PKPab 06 28 20.2 -1.3
BEBN Eben Emael 149.90 356 PKPab PKPab 06 28 20.5 -1.6
HGN Heimansgroeve 149.92 356 *e*PKP PKPbc 06 28 13.0 -2.6
comp=Z,46nm,1.1s
MEM Membach 150.07 356 PKPbc PKPbc 06 28 14.6 -1.4
TNS Taunus Mts 150.22 353 *e*PKPbc PKPbc 06 28 14.8 -1.5
TNS *e*PKPab PKPab 06 28 21.9 -1.6
ZST Bratislava 150.23 340 *e*PKP PKPbc 06 28 15.5 -0.9
ZST *e* 06 28 23.3
ZST Bratislava 150.23 340 *e*PKP PKPbc 06 28 15.5 -0.9
ZST *e* 06 28 23.3
SNF Seneffe 150.26 358 PKPbc PKPbc 06 28 15.4 -1.0
SNF PKPab PKPab 06 28 22.1 -1.6
BCLA Clavier 150.30 357 PKPbc PKPbc 06 28 15.2 -1.3
BCLA PKPab PKPab 06 28 22.0 -1.8
GRA1 Grafenberg Arr 150.31 349 *e*PKPbc PKPbc 06 28 15.6 -1.0
GRA1 *e*PKPab PKPab 06 28 22.1 -1.8
GRF Grafenberg Arr 150.31 349 *e*PKPbc PKPbc 06 28 15.6 -1.0
GRF *e*PKPab PKPab 06 28 22.1 -1.8
GZR Gura Zlata 150.35 331 PKiKP PKPbc 06 28 15.6 -1.2
GZR Gura Zlata 150.35 331 ⇓*i*P PKPbc 06 28 15.3 -1.5
KHC Kasperske Hory 150.35 345 *e*PKiKP PKPdf 06 28 09.9 -1.3
KHC *e* 06 28 15.6
KHC Kasperske Hory 150.35 345 *e*PKPDF PKPdf 06 28 09.4 -1.8
KHC ⇑*e*PKP PKPbc 06 28 15.6 -1.1
KHC *e*PKPAB PKPab 06 28 23.0 -1.1
GEC2 GERESS Array S 150.59 345 *e*PKPbc PKPbc 06 28 15.9 -1.4
GIVF Givet 150.64 357 *e*PKP1 PKPbc 06 28 15.9 -1.4
comp=Z,144nm,0.9s
DOU Dourbes 150.66 357 PKPbc PKPbc 06 28 16.4 -1.0
BZS Buzias 150.70 332 PKiKP PKPbc 06 28 16.2 -1.4
BZS Buzias 150.70 332 P PKPbc 06 28 15.6 -2.0
BAIF Baives 150.71 358 *e*PKP1 PKPbc 06 28 16.2 -1.3
comp=Z,92nm,0.9s
CONA Conrad Observa 150.85 342 ⇑*i*PKPdf PKPdf 06 28 10.1 -1.9
comp=Z,4.7nm,1.2s
CONA Conrad Observa 150.85 342 P PKPbc 06 28 16.7 -1.1
comp=Z,20nm,0.8s
CONA Conrad Observa 150.85 342 P PKPab 06 28 25.6 -0.6
comp=Z,27nm,0.7s
WLF Walferdange 151.00 355 *e*PKPbc PKPbc 06 28 17.4 -0.8
WLF Walferdange 151.00 355 *e*PKIKP PKPbc 06 28 17.2 -1.0
PKSM Moragy 151.42 336 PKiKP PKPbc 06 28 17.7 -1.6
FLN La Foliniere 151.92 4 *e*PKP1 PKPbc 06 28 18.4 -1.9
comp=Z,115nm,1.0s
ROSF Rostrenen 152.05 8 *e*PKP1 PKPbc 06 28 18.4 -2.2
comp=Z,44nm,0.8s
SGMF Saint Gilles 152.22 8 *e*PKP1 PKPbc 06 28 18.9 -2.1
comp=Z,73nm,0.9s
SOKA Soboth 152.22 342 ⇑*i*PKPdf PKPdf 06 28 12.4 -1.6
comp=Z,0.8nm,0.5s
SOKA Soboth 152.22 342 P PKPbc 06 28 19.0 -2.1
comp=Z,7.5nm,0.8s
SOKA Soboth 152.22 342 P PKPab 06 28 30.9 -1.1
comp=Z,24nm,1.1s
MEZF Maizieres J'vi 152.23 357 *e*PKP1 PKPbc 06 28 19.6 -1.4
comp=Z,62nm,0.9s
PERS Pernice 152.24 341 *i* PKPdf PKPbc 06 28 19.0 -2.1
PERS *i* PKPbc PKPab 06 28 30.3 -1.7
GRR Gorron 152.26 5 *e*PKP1 PKPbc 06 28 19.3 -1.8
comp=Z,83nm,0.8s
QUIF Quistinic 152.47 9 *e*PKP1 PKPbc 06 28 20.2 -1.4
WTTA Wattenberg 152.55 347 ⇑*i*PKPdf PKPdf 06 28 13.3 -1.2
comp=Z,4.4nm,0.8s
WTTA Wattenberg 152.55 347 P PKPbc 06 28 20.0 -1.7
comp=Z,23nm,0.9s
WTTA Wattenberg 152.55 347 P PKPab 06 28 32.5 -0.8
comp=Z,24nm,0.6s
MOTA Moosalm 152.58 347 ⇑*i*PKPdf PKPdf 06 28 12.9 -1.7
comp=Z,2.7nm,0.6s
MOTA Moosalm 152.58 347 P PKPbc 06 28 20.2 -1.6
comp=Z,11nm,0.9s
MOTA Moosalm 152.58 347 P PKPab 06 28 32.1 -1.4
comp=Z,28nm,0.9s
HAU Haudompre 152.63 355 *e*PKP1 PKPbc 06 28 20.2 -1.7
comp=Z,21nm,0.7s
MYKA Terra Mystica 152.66 343 ⇑*i*PKPdf PKPdf 06 28 12.4 -2.3
comp=Z,2.1nm,0.5s
MYKA Terra Mystica 152.66 343 P PKPbc 06 28 19.7 -2.4
comp=Z,7.1nm,0.8s
MYKA Terra Mystica 152.66 343 P PKPab 06 28 32.3 -1.5
comp=Z,18nm,0.7s
HINF Hinteralfeld 152.77 354 *e*PKP1 PKPbc 06 28 20.2 -2.0
comp=Z,14nm,0.8s
ABTA Abfaltersbach 152.84 345 ⇑*i*PKPdf PKPdf 06 28 11.9 -3.1
comp=Z,9.0nm,0.8s
ABTA Abfaltersbach 152.84 345 P PKPbc 06 28 19.8 -2.6
comp=Z,18nm,0.7s
ABTA Abfaltersbach 152.84 345 P PKPab 06 28 32.8 -1.7
comp=Z,16nm,0.7s
DAVA Damuels 152.87 349 ⇑*i*PKPdf PKPdf 06 28 13.1 -1.9
comp=Z,1.8nm,0.6s
DAVA Damuels 152.87 349 P PKPbc 06 28 21.1 -1.4
comp=Z,24nm,1.3s
DAVA Damuels 152.87 349 P PKPab 06 28 33.3 -1.4
comp=Z,20nm,0.9s
LJU Ljubljana 152.94 342 *i* PKPdf PKPbc 06 28 20.9 -1.8
FETA Feichten 152.97 348 ⇑*i*PKPdf PKPdf 06 28 13.3 -1.9

comp=Z,8.8nm,1.0s
FETA Feichten 152.97 348 P PKPbc 06 28 21.7 -1.0
comp=Z,9.8nm,0.8s
FETA Feichten 152.97 348 P PKPab 06 28 34.1 -1.0
comp=Z,21nm,1.0s
VISS Visnje 153.07 341 *i* PKPdf PKPbc 06 28 21.1 -1.8
VISS *i* PKPbc PKPab 06 28 34.0 -1.6
BOJS Bojanci 153.21 340 *i* PKPdf PKPbc 06 28 21.8 -1.5
BOJS *i* PKPbc PKPab 06 28 34.4 -1.8
JAVS Javornik 153.22 342 *i* PKPdf PKPbc 06 28 21.8 -1.4
JAVS *i* PKPbc PKPab 06 28 33.6 -2.6
DAVOX Davos/Dischmat 153.36 349 PKPbc PKPbc 06 28 22.6 -1.0
comp=Z,9.2nm,0.5s,baz=251,slow=1.7,SNR=16
DAVOX PKPab PKPab 06 28 35.6 -1.2
comp=Z,8.7nm,0.5s,baz=354,slow=2.1,SNR=7.3
LOR Lormes 153.51 358 *e*PKP1 PKPbc 06 28 22.1 -1.8
comp=Z,19nm,0.8s
SSF Saint Saulge 153.73 359 *e*PKP1 PKPbc 06 28 22.8 -1.5
comp=Z,24nm,0.9s
AVF Avril sur Loir 154.00 359 *e*PKP1 PKPbc 06 28 23.9 -1.0
CABF La Chapelle 154.04 355 *e*PKP1 PKPbc 06 28 23.9 -1.1
comp=Z,12nm,0.7s
MFF Saint Martin d 154.09 4 *e*PKP1 PKPbc 06 28 23.2 -1.9
comp=Z,25nm,0.8s
BGF Bois d'Agland 154.24 360 *e*PKP1 PKPbc 06 28 24.2 -1.2
TCF Toulx Ste Croi 154.51 1 *e*PKP1 PKPbc 06 28 24.1 -1.9
ORIF Oris-en-Rattie 155.73 354 *e*PKP1 PKPdf 06 28 29.0 +10
comp=Z,5.3nm,0.6s
MBDF Montbardon 155.83 353 *e*PKP1 PKPdf 06 28 28.1 +8.9
PBRG Braganca 157.53 19 *e*PKPab PKPab 06 28 53.8 -1.1
PVRL Vila Real 157.71 21 *e*PKPab PKPab 06 28 54.6 -1.0
MVO Moncorvo 158.03 20 *e*PKPdf PKPdf 06 28 21.0 -1.1
MVO Moncorvo 158.03 20 *e*PKPab PKPab 06 28 56.0 -1.0
PVIS Viseu 158.14 22 *e*PKPab PKPab 06 28 56.4 -1.1
MTE Manteigas 158.54 22 *e*PKPab PKPab 06 28 58.2 -1.1
PTOM Tomar 158.91 24 *e*PKPab PKPab 06 28 59.8 -1.1
PCBR Castelo Branco 159.06 22 *e*PKPab PKPab 06 29 00.0 -1.6
PMRV Marv??o 159.46 23 *e*PKPab PKPab 06 29 01.9 -1.4
PESTR Estremoz 159.88 24 *e*PKPab PKPab 06 29 03.7 -1.4
EVO Evora 160.01 25 *e*PKIKP PKPdf 06 28 23.0 -1.5
comp=Z,27nm,1.1s
EVO Evora 160.01 25 *e*PKPab PKPab 06 29 04.3 -1.4
ESDC Sonseca Array 160.28 15 PKPab PKPab 06 29 05.5 -1.3
comp=Z,2.9nm,0.7s,baz=335,slow=3.4,SNR=7.6
PBEJ Beja 160.59 26 *e*PKPab PKPab 06 29 06.8 -1.1
PBAR Barrancos 160.69 24 *e*PKPab PKPab 06 29 07.8 -0.9
PCVE Castro Verde 160.76 27 *e*PKPab PKPab 06 29 07.9 -1.2
MORF Marmelete 160.77 28 *e*PKPab PKPab 06 29 08.0 -1.1
PFVI Vila Bisbo 160.84 29 *e*PKPab PKPab 06 29 08.4 -1.0
PVAQ Vaqueiros 161.09 26 *e*PKPab PKPab 06 29 09.6 -0.9
PBDV Barranco-do-Ve 161.14 27 *e*PKPab PKPab 06 29 09.7 -1.0
LIC Lamto 163.76 152 *e*PKP1 PKPdf 06 28 26.4 -2.7
comp=Z,42nm,1.3s
LIC Lamto 163.76 152 *e*PKPdf PKPdf 06 28 26.0 -3.1
KEST Kesra 163.95 340 PKP PKPdf 06 28 27.6 -0.9
comp=Z,0.6nm,0.7s,baz=220,slow=3.8,SNR=4.2
KEST PKPab PKPab 06 29 21.9 -1.1
comp=Z,3.8nm,0.8s,baz=203,slow=0.5,SNR=12
KIC Kosan Boka 164.01 152 *e*PKP1 PKPdf 06 28 27.0 -2.3
comp=Z,23nm,0.9s
TIC Toumodi 164.14 151 *e*PKP1 PKPdf 06 28 27.4 -2.0
comp=Z,5.6nm,0.2s
DBIC Dimbokro 164.23 151 PKP PKPdf 06 28 27.5 -2.0
comp=Z,4.7nm,0.9s,baz=45,slow=3.5,SNR=4.1
DBIC PKPab PKPab 06 29 22.6 -2.2
comp=Z,6.8nm,1.1s,baz=195,slow=9.7,SNR=3.4
TORD Torodi Ar. Bea 172.40 173 PKP PKPdf 06 28 32.7 -2.1
comp=Z,4.9nm,0.9s,baz=343,slow=0.7,SNR=24
TORD PKPab PKPab 06 30 00.6 -0.2
comp=Z,2.7nm,0.9s,baz=180,slow=3.1,SNR=8.4
TORD PP PP 06 33 51.0 +0.1
comp=Z,2.1nm,1.1s,baz=174,slow=5.2,SNR=3.6

CSEM **12** *06:12:35.7±0.2,39.88N×41.59E, h2km, ML3.8, Error ellipse: s-maj=4.7km s-min=4.0km az=164.0*
NEIC **12** *06:12:35.0,39.85N×41.53E, h5km, ML3.8(ISK), After ISK.*
ISCJB **12** *06:12:35.8±0.2,39.83N±0.02×41.56E±0.02, h10km, mb3.6/4, Error ellipse: s-maj=2.7km s-min=2.6km az=135.2*
ISK **12** *06:12:35.4,39.84N×41.55E, h5km, ML3.8*
TEH **12** *06:12:35.0,39.88N×41.53E, h17km*
DDA **12** *06:12:35.1,39.88N×41.53E, h17km±2km, Ml3.7*
IDC **12** *06:12:39.2±2.1,40.18N×41.86E, h0km, mb3.7/4, mb1 3.7/8, mb1mx3.5/24, mbtmp3.7/8, ML2.5/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/25, Error ellipse: s-maj=39.4km s-min=12.5km az=20.0*
ISC 12 06:12:36.3±0.2, 39.83N±0.02×41.56E±0.02, h10km, n99, σ1§21/117, mb3.6/4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERZM	**Erzurum**	**0.16**	**296**	*i* P	**Pg**	**06 12 38.4**	**-1.5**
ERZM	**Erzurum**	**0.16**	**296**	*i* P	**Pg**	**06 12 38.4**	**-1.4**
EZM	**Erzurum**	**0.17**	**296**	PG	**Pg**	**06 12 39.2**	**-0.7**
HOMI	**Horasan**	**0.34**	**51**	*i* P	**Pg**	**06 12 42.7**	**-0.4**
HOMI				*i* S	**Sg**	**06 12 48.7**	**+1.1**
KOPT	**Kop Dagi**	**0.84**	**283**	*i* P	**Pg**	**06 12 51.7**	**-0.6**
KOPT	**Kop Dagi**	**0.84**	**283**	*i* P	**Pg**	**06 12 51.7**	**-0.7**
BNGL	**BINGOL**	**0.93**	**200**	*i* P	**Pg**	**06 12 52.8**	**-1.5**
BNGL				*i* S	**Sg**	**06 13 06.1**	**-0.3**
DDEM	**Demirkent**	**1.07**	**8**	*i* P	**Pg**	**06 12 55.6**	**-1.2**
DDEM				*i* S	**Sg**	**06 13 11.1**	**+0.4**
DDEM	**Demirkent**	**1.07**	**8**	*i* P	**Pg**	**06 12 55.6**	**-1.2**
DDEM				*i* S	**Sg**	**06 13 11.1**	**+0.4**
AGRB	**Hanur-Agry**	**1.14**	**103**	*e*PN	**Pg**	**06 12 57.6**	**-0.4**
AGRB				*e*SN	**Sg**	**06 13 14.2**	**+1.4**
AGRB	**Hanur-Agry**	**1.14**	**103**	*e*Pn	**Pg**	**06 12 57.6**	**-0.5**
AGRB				*e*Sn	**Sg**	**06 13 14.2**	**+1.3**
BINT	**Bingol**	**1.26**	**221**	*e*PN	**Pn**	**06 12 59.1**	**-0.9**
BINT				*e*SN	**Sn**	**06 13 17.4**	**+0.5**
BINT	**Bingol**	**1.26**	**221**	*e*Pn	**Pn**	**06 12 59.1**	**-0.9**
BINT				*e*Sn	**Sn**	**06 13 17.4**	**+0.4**
ARTV	**Artvin**	**1.38**	**12**	*i* P	**Pn**	**06 13 00.0**	**-1.5**
ARTV				*i* S	**Sb**	**06 13 19.1**	**-0.7**
ARTV	**Artvin**	**1.38**	**12**	*i* P	**Pn**	**06 13 00.0**	**-1.6**
ARTV				*i* S	**Sb**	**06 13 19.1**	**-0.7**
KARS	**Kars**	**1.41**	**55**	*e*PN	**Pn**	**06 13 02.2**	**+0.2**
KARS	**Kars**	**1.41**	**55**	*e*Pn	**Pn**	**06 13 02.2**	**+0.2**
TATV	**Tatvan**	**1.43**	**157**	*i* P	**Pn**	**06 13 01.4**	**-0.9**
TATV				*i* S	**Sn**	**06 13 19.1**	**-2.1**
TATV	**Tatvan**	**1.43**	**157**	*i* P	**Pn**	**06 13 01.4**	**-0.9**
TATV				*i* S	**Sn**	**06 13 19.1**	**-2.0**
DIGO	**Kars**	**1.51**	**67**	*i* P	**Pn**	**06 13 02.2**	**-1.2**
DIGO	**Kars**	**1.51**	**67**	*i* P	**Pn**	**06 13 02.2**	**-1.1**
DBOC	**Borcka**	**1.51**	**3**	*i* P	**Pn**	**06 13 03.1**	**-0.3**
DBOC				*i* S	**Sn**	**06 13 22.0**	**-1.2**
DBOC	**Borcka**	**1.51**	**3**	*i* P	**Pn**	**06 13 03.1**	**-0.3**
DBOC				*i* S	**Sn**	**06 13 22.0**	**-1.2**
BCA	**Borcka**	**1.61**	**2**	*e*PN	**Pn**	**06 13 04.7**	**0.0**
BCA	**Borcka**	**1.61**	**2**	*e*Pn	**Pn**	**06 13 04.7**	**0.0**
DYDN	**Diyadin**	**1.67**	**99**	*i* P	**Pn**	**06 13 07.2**	**+1.7**
DYDN				*i* S	**Sg**	**06 13 30.2**	**+0.2**
DYDN	**Diyadin**	**1.67**	**99**	*i* P	**Pn**	**06 13 07.2**	**+1.7**
DYDN				*i* S	**Sg**	**06 13 30.2**	**+0.2**
EZC	**Erzincan**	**1.70**	**268**	*e*PN	**Pn**	**06 13 06.2**	**+0.3**
GUMT	**Gumushane**	**1.71**	**292**	*e*PN	**Pn**	**06 13 06.6**	**+0.5**
GUMT	**Gumushane**	**1.71**	**292**	*e*Pn	**Pn**	**06 13 06.6**	**+0.5**
MACK	**Trabzon**	**1.76**	**310**	*i* P	**Pn**	**06 13 08.2**	**+1.4**
MACK	**Trabzon**	**1.76**	**310**	*i* P	**Pn**	**06 13 08.2**	**+1.4**
KTUT	**Trabzon**	**1.79**	**311**	*e*PN	**Pn**	**06 13 07.6**	**+0.5**
KTUT	**Trabzon**	**1.79**	**311**	*e*Pn	**Pn**	**06 13 07.6**	**+0.4**
KELT	**Kelkit**	**1.80**	**281**	*i* P	**Pn**	**06 13 07.4**	**+0.1**
KELT	**Kelkit**	**1.80**	**281**	*i* P	**Pn**	**06 13 07.4**	**+0.1**
VANB	**Van**	**1.89**	**130**	*e*PN	**Pn**	**06 13 09.2**	**+0.7**
VANB	**Van**	**1.89**	**130**	*e*Pn	**Pn**	**06 13 09.2**	**+0.7**
PTK	**Pertek**	**1.92**	**241**	*e*PN	**Pn**	**06 13 09.5**	**+0.5**
PTK	**Pertek**	**1.92**	**241**	*e*Pn	**Pn**	**06 13 09.5**	**+0.5**
VANT	**Van**	**1.94**	**136**	*e*PN	**Pn**	**06 13 10.3**	**+1.1**
TVAN	**Van**	**1.94**	**132**	*i* P	**Pg**	**06 13 11.5**	**-1.9**
TVAN	**Van**	**1.94**	**132**	*i* P	**Pg**	**06 13 11.5**	**-1.9**
BEST	**Besiri**	**1.95**	**187**	*i* P	**Pg**	**06 13 12.1**	**-1.6**
BEST				*i* S	**Sg**	**06 13 38.9**	**0.0**
CLDR	**Caldiran**	**1.95**	**110**	*e*PN	**Pn**	**06 13 10.1**	**+0.7**
CLDR	**Caldiran**	**1.95**	**110**	*e*Pn	**Pn**	**06 13 10.1**	**+0.7**
DIYA	**Diyarbakir**	**2.21**	**211**	*i* P	**Pg**	**06 13 16.8**	**-1.9**
DIYA	**Diyarbakir**	**2.21**	**211**	*i* P	**Pg**	**06 13 16.8**	**-1.8**
SVRC	**Sivrice-ELAZID**	**2.27**	**231**	*e*PN	**Pn**	**06 13 15.0**	**+1.2**
SVRC	**Sivrice-ELAZID**	**2.27**	**231**	*e*Pn	**Pn**	**06 13 15.0**	**+1.1**
ELZG	**Elazig**	**2.40**	**237**	*i* P	**Pn**	**06 13 17.4**	**+1.7**
ELZG	**Elazig**	**2.40**	**237**	*i* P	**Pn**	**06 13 17.4**	**+1.8**
KEMA	**Kemaliye**	**2.44**	**258**	*i* P	**Pb**	**06 13 19.3**	**-0.8**
KEMA	**Kemaliye**	**2.44**	**258**	*i* P	**Pb**	**06 13 19.3**	**-0.8**
GNI	**Garni**	**2.47**	**82**	*e*PN	**Pn**	**06 13 17.4**	**+0.9**
GNI	**Garni**	**2.47**	**82**	Pn	**Pn**	**06 13 17.9**	**+1.4**
GNI	5.7nm,0.3s,baz=302,slow=3.7,SNR=14			Pg	**Pg**	**06 13 22.3**	**-1.3**
	24nm,0.3s,baz=300,slow=5.9,SNR=47						
GNI	**Garni**	**2.47**	**82**	*e*Pn	**Pn**	**06 13 17.4**	**+0.9**
GNI	**Garni**	**2.47**	**82**	Pg	**Pg**	**06 13 22.3**	**-1.2**
MARD	**Mardin**	**2.59**	**194**	*i* P	**Pb**	**06 13 21.7**	**-1.0**
GRSN	**GIRESUNGRSN**	**2.74**	**295**	*i* P	**Pb**	**06 13 24.2**	**-1.1**
GRSN	**GIRESUNGRSN**	**2.74**	**295**	*i* P	**Pb**	**06 13 24.2**	**-1.1**
HAKT	**HAKKARI**	**2.83**	**143**	*i* P	**Pb**	**06 13 26.0**	**-0.8**
HAKT	**HAKKARI**	**2.83**	**143**	*i* P	**Pb**	**06 13 26.0**	**-0.8**
MYA	**Malataya**	**2.86**	**239**	*e*PN	**Pn**	**06 13 23.2**	**+1.2**
MYA	**Malataya**	**2.86**	**239**	*e*Pn	**Pn**	**06 13 23.2**	**+1.2**
MALT	**Malatya**	**2.87**	**239**	*e*PN	**Pn**	**06 13 23.4**	**+1.4**
MALT	**Malatya**	**2.87**	**239**	*e*Pn	**Pn**	**06 13 23.3**	**+1.2**
MALT	**Malatya**	**2.87**	**239**	*e*Pn	**Pn**	**06 13 23.3**	**+1.3**
DARE	**Darende-Malaty**	**3.04**	**254**	*e*PN	**Pg**	**06 13 31.7**	**-2.8**
CUKT	**Cukurca**	**3.04**	**147**	*e*PN	**Pn**	**06 13 26.0**	**+1.6**
CUKT	**Cukurca**	**3.04**	**147**	*e*Pn	**Pn**	**06 13 26.0**	**+1.6**
URFA	**Urfa**	**3.21**	**223**	*e*PN	**Pn**	**06 13 28.3**	**+1.6**
URFA	**Urfa**	**3.21**	**223**	*e*Pn	**Pn**	**06 13 28.3**	**+1.6**
AKCD	**Akcadag**	**3.22**	**243**	*i* P	**Pn**	**06 13 28.8**	**+2.0**
AKCD	**Akcadag**	**3.22**	**243**	*i* P	**Pn**	**06 13 28.8**	**+2.0**
RSDY	**Resadiye-TOKAT**	**3.29**	**281**	*e*PN	**Pn**	**06 13 29.2**	**+1.4**
RSDY	**Resadiye-TOKAT**	**3.29**	**281**	*e*Pn	**Pn**	**06 13 29.2**	**+1.4**
IMRD	**Marand**	**3.41**	**108**	*e*Pn	**Pg**	**06 13 37.7**	**-3.8**
IMRD				*e*		06 13 46.5	
	comp=Z,2μm,0.3s						
IMRD				*e*Sg	**Sg**	**06 14 30.3**	**+4.7**
SVSK	**Karacayir**	**3.51**	**273**	*e*PN	**Pn**	**06 13 33.0**	**+2.2**
SVSK	**Karacayir**	**3.51**	**273**	*e*Pn	**Pn**	**06 13 33.0**	**+2.2**
ISHB	**Shabestar**	**3.52**	**115**	*e*Pn	**Pg**	**06 13 40.2**	**-3.5**
ISHB				*e*		06 13 51.5	
	comp=Z,899nm,0.3s						
SARI	**SarD1z-Kayseri**	**3.94**	**255**	*e*PN	**Pb**	**06 13 42.4**	**-3.5**
IAZR	**Azarshahr**	**4.07**	**120**	*e*Pn	**Pb**	**06 13 49.5**	**+1.5**
IAZR				*e*		06 13 55.0	
	comp=Z,705nm,0.2s						
IAZR	**Azarshahr**	**4.07**	**120**	*e*Pn	**Pb**	**06 13 49.5**	**+1.5**
KIV	**Kislovodsk**	**4.21**	**11**	*e*Pg	**Pg**	**06 13 54.5**	**-2.3**
KIV	**Kislovodsk**	**4.21**	**11**	*e*Pg	**Pg**	**06 13 54.5**	**-2.3**
BRTR	**Keskin Array B**	**6.10**	**272**	Pn	**Pb**	**06 14 15.6**	**-7.0**
	comp=Z,0.1nm,0.3s,baz=96,slow=10,SNR=2.9						
ASF	**Jabal al Asfar**	**8.52**	**208**	LR	LR	06 18 45.6	
	comp=Z,288nm,20.4s,baz=48,slow=41						
AKASG	**Malin Array Be**	**13.89**	**326**	Pn	**Pn**	**06 15 54.5**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=133,slow=14,SNR=3.5						
AKASG	**Malin Array Be**	**13.89**	**326**	Pn	**Pn**	**06 15 54.5**	**+1.5**
AKTK	**Aktyubinsk**	**15.69**	**42**	Pn	**Pn**	**06 16 12.6**	**-4.6**
AKTO	**Aktyubinsk**	**15.69**	**42**	Pn	**Pn**	**06 16 12.6**	**-4.6**
	comp=Z,0.4nm,0.3s,baz=198,slow=3.2,SNR=3.7						
FINES	**FINESS Array B**	**23.64**	**341**	P	**P**	**06 17 48.7**	**+1.3**
	comp=Z,1.7nm,0.7s,mb3.6,baz=156,slow=15,SNR=3.6						
FINES	**FINESS Array B**	**23.64**	**341**	P	**P**	**06 17 48.7**	**+1.3**
BVAR	**Borovoye Array**	**23.66**	**47**	P	**P**	**06 17 47.8**	**+0.1**
	comp=Z,0.6nm,0.5s,mb3.3,baz=224,slow=10,SNR=4.3						
BVAR	**Borovoye Array**	**23.66**	**47**	P	**P**	**06 17 47.8**	**0.0**
MKAR	**Makanchi Array**	**30.18**	**63**	P	**P**	**06 18 47.0**	**+0.5**
	comp=Z,1.1nm,0.9s,mb3.6,baz=270,slow=7.3,SNR=6.3						
MKAR	**Makanchi Array**	**30.18**	**63**	P	**P**	**06 18 47.0**	**+0.6**
ZALV	**Zalesovo Beam**	**32.21**	**49**	P	**P**	**06 19 04.1**	**-0.2**
	comp=Z,0.7nm,0.4s,mb3.9,baz=251,slow=9.0,SNR=3.0						

DJA 12 06:25:18, 2.42S×129.71E, h9km, MLv4.1/7, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.21**	**220**	P	Pb	06 25 38.2	-2.8
AAI	**Ambon**	**1.97**	**230**	P	Pn	06 25 52.0	+0.4
BNDI	**Bandanaira**	**2.10**	**175**	P	Pn	06 25 53.9	+0.6
BNDI				S	Sn	06 26 20.9	+1.3
NLAI	**Namlea**	**2.73**	**253**	P	Pn	06 26 05.0	+2.9
NLAI				S	Sn	06 26 37.1	+1.9
LBMI	**Labuha**	**2.83**	**309**	P	Pn	06 26 03.2	-0.2
LBMI				S	Sn	06 26 39.2	+1.5
KMSI	**Cibinong**	**6.45**	**297**	P	Pn	06 26 53.2	-0.1

IDC 12 06:28:47.3±1.3, 4.70S×153.30E, h0km, mb4.0/8, mb1 4.1/8, mb1mx4.0/14, mbtmp4.0/8, Error ellipse: s-maj=49.4km s-min=26.7km az=103.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**26.56**	**223**	P	P	06 34 27.1	-0.1
	0.8nm,0.6s,baz=57,slow=8.5,SNR=5.6						
KSRS	**Korea Array**	**48.14**	**333**	P	P	06 37 29.6	+0.3
	0.8nm,0.7s,baz=160,slow=6.3,SNR=5.3						
CMAR	**Chiang Mai Arr**	**58.29**	**295**	P	P	06 38 44.9	+0.5
	0.5nm,0.3s,baz=116,slow=5.3,SNR=5.1						
MKAR	**Makanchi Array**	**80.58**	**319**	P	P	06 41 01.6	-0.1
	0.5nm,0.5s,baz=93,slow=8.0,SNR=7.6						
ZALV	**Zalesovo Beam**	**81.35**	**326**	P	P	06 41 05.5	-0.2
	0.8nm,0.4s,baz=101,slow=5.9,SNR=4.6						
ILAR	**Eielson Array**	**81.88**	**22**	P	P	06 41 08.4	+0.1
	0.6nm,0.7s,baz=251,slow=5.9,SNR=8.6						
MAW	**Mawson**	**85.85**	**203**	P	P	06 41 28.8	+0.2
	0.8nm,0.6s,baz=8.1,slow=7.1,SNR=4.8						
BVAR	**Borovoye Array**	**89.46**	**323**	P	P	06 41 45.5	-0.7
	2.6nm,0.6s,baz=104,slow=6.3,SNR=12						
MDT	**Midelt**	**145.25**	**326**	PKPbc	PKPbc	06 48 27.6	+0.3
	0.7nm,0.4s,baz=304,slow=3.6,SNR=3.7						
TORD	**Torodi Ar. Bea**	**150.75**	**289**	PKPbc	PKPbc	06 48 42.3	-0.4
	3.3nm,0.6s,baz=71,slow=2.4,SNR=24						

NIC **12** *06:44:52.3±0.4, 36.31N×31.13E, h36km, mb4.0, ML3.6, MW3.3*
NEIC **12** *06:44:54.0, 35.76N×31.22E, h5km, MD3.8(ISK), ML3.6(NIC), After ISK.*
ISK **12** *06:44:54.2, 35.77N×31.22E, h5km, MD3.8*
DDA **12** *06:44:54.5, 35.77N×31.15E, h17km±3km, Md3.7*
CSEM **12** *06:44:54.7±0.1, 35.72N×31.18E, h2km, Mw3.3, Error ellipse: s-maj=3.6km s-min=2.7km az=50.0*
ISCJB **12** *06:44:55.9±1.4, 35.66N±0.02×31.18E±0.04, h26km±15km, Error ellipse: s-maj=5.1km s-min=3.7km az=148.2*
HLW **12** *06:45:03.4, 35.29N×31.18E, h35km±44km, Ml3.4*
ISC 12 06:44:56.5±0.9, 35.72N±0.02×31.19E±0.03, h16km±7km, n115, σ1§00/134, 17C-1D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**1.05**	**60**	*i* P	**Pg**	**06 45 14.4**	**-2.4**
GAZI				*i* S	**Sg**	**06 45 29.7**	**-0.9**
GAZI	**Gazipasa**	**1.05**	**60**	*i* P	**Pg**	**06 45 14.4**	**-2.4**
GAZI				*i* S	**Sg**	**06 45 29.7**	**-0.9**
PPCY	**Paphos**	**1.26**	**131**	P	**Pn**	**06 45 20.5**	**+1.2**
PPCY	**Paphos**	**1.26**	**131**	P	**Pn**	**06 45 20.5**	**+1.2**
ANTB	**Antalya**	**1.26**	**340**	*e*PN	**Pn**	**06 45 17.4**	**-1.9**
ANTB				*e*SN	**Sn**	**06 45 35.1**	**-0.8**
ANTB	**Antalya**	**1.26**	**340**	*e*Pn	**Pn**	**06 45 17.4**	**-1.9**
ANTB				*e*Sn	**Sn**	**06 45 35.1**	**-0.8**
ALFC	**Alevga**	**1.28**	**115**	P	**Pn**	**06 45 18.6**	**-1.0**
	48nm,0.2s						
ALFC				S	**Sb**	**06 45 39.6**	**+3.3**
ALFC	**Alevga**	**1.28**	**115**	P	**Pn**	**06 45 18.6**	**-1.0**
	48nm,0.2s						
ALFC				S	**Sb**	**06 45 39.6**	**+3.3**
AKAS	**Kas**	**1.39**	**292**	*i* P	**Pn**	**06 45 20.3**	**-0.8**
AKAS				*i* S	**Sn**	**06 45 38.2**	**-0.8**
AKAS	**Kas**	**1.39**	**292**	*i* P	**Pn**	**06 45 20.3**	**-0.8**
AKAS				*i* S	**Sn**	**06 45 38.2**	**-0.8**
KORT	**Korkueli**	**1.45**	**332**	*i* P	**Pn**	**06 45 20.5**	**-1.5**
KORT				*i* S	**Sg**	**06 45 45.9**	**+2.6**
KORT	**Korkueli**	**1.45**	**332**	*i* P	**Pn**	**06 45 20.5**	**-1.5**
ELL	**Elmali**	**1.46**	**315**	*e*PN	**Pn**	**06 45 21.6**	**-0.5**
ELL				*e*SN	**Sn**	**06 45 41.6**	**+0.7**
ELL	**Elmali**	**1.46**	**315**	*e*Pn	**Pn**	**06 45 21.6**	**-0.5**
ELL				*e*Sn	**Sn**	**06 45 41.6**	**+0.7**
LEF	**Lefka**	**1.51**	**113**	*e*PN	**Pn**	**06 45 22.0**	**-0.8**
LEF	**Lefka**	**1.51**	**113**	*e*Pn	**Pn**	**06 45 22.0**	**-0.8**
HDMB	**Hadim**	**1.63**	**40**	*e*PN	**Pn**	**06 45 23.4**	**-1.0**
HDMB	**Hadim**	**1.63**	**40**	*e*Pn	**Pn**	**06 45 23.4**	**-1.0**
SZAC	**Souni-Zanaja**	**1.69**	**124**	P	**Pn**	**06 45 25.5**	**+0.3**
SZAC				S	**Sg**	**06 45 51.2**	**+0.4**
SZAC	**Souni-Zanaja**	**1.69**	**124**	P	**Pn**	**06 45 25.5**	**+0.3**
SZAC				S	**Sg**	**06 45 51.2**	**+0.4**
MAMC	**Mammari**	**1.74**	**108**	P	**Pn**	**06 45 24.9**	**-1.1**
MAMC	**Mammari**	**1.74**	**108**	P	**Pn**	**06 45 24.9**	**-1.1**
BCK	**Bucak**	**1.81**	**345**	*e*PN	**Pn**	**06 45 26.3**	**-0.6**
BCK	**Bucak**	**1.81**	**345**	*e*Pn	**Pn**	**06 45 26.3**	**-0.6**
CSS	**Prodhromos**	**1.91**	**113**	P	**Pn**	**06 45 26.9**	**-1.3**
	3.8nm,0.5s						
CSS				S	**Sn**	**06 45 54.8**	**+3.0**
CSS	**Prodhromos**	**1.91**	**113**	P	**Pn**	**06 45 26.9**	**-1.3**
	3.8nm,0.5s						
CSS				S	**Sn**	**06 45 54.8**	**+3.0**
LFK	**Lefkose**	**1.96**	**102**	*e*PN	**Pn**	**06 45 28.6**	**-0.3**
LFK	**Lefkose**	**1.96**	**102**	*e*Pn	**Pn**	**06 45 28.6**	**-0.4**
GLHS	**Glhisar (BURDU**	**1.98**	**317**	*e*PN	**Pn**	**06 45 29.0**	**-0.3**
GLHS	**Glhisar (BURDU**	**1.98**	**317**	*e*Pn	**Pn**	**06 45 29.0**	**-0.3**
GOLH	**Golhisar**	**2.01**	**320**	⇑*i* P	**Pn**	**06 45 30.4**	**+0.8**
GOLH	**Golhisar**	**2.01**	**320**	*i* P	**Pn**	**06 45 30.4**	**+0.8**
IKL	**Isikli**	**2.09**	**75**	*e*PN	**Pn**	**06 45 30.5**	**-0.3**
IKL	**Isikli**	**2.09**	**75**	*e*Pn	**Pn**	**06 45 30.5**	**-0.3**
TURN	**Turunc**	**2.39**	**300**	⇑*i* P	**Pn**	**06 45 37.8**	**+3.0**
KONT	**Konya--Tatoy**	**2.42**	**23**	*e*PN	**Pn**	**06 45 34.6**	**-0.6**
KONT	**Konya--Tatoy**	**2.42**	**23**	*e*Pn	**Pn**	**06 45 34.7**	**-0.5**
EREN	**Erenkoy**	**2.44**	**93**	*e*PN	**Pn**	**06 45 35.4**	**-0.1**
EREN	**Erenkoy**	**2.44**	**93**	*e*Pn	**Pn**	**06 45 35.4**	**-0.1**
DNZL	**Cakiroluk**	**2.62**	**319**	⇑*i* P	**Pn**	**06 45 32.6**	**-5.4**
LADK	**Ladik-KONYA**	**2.65**	**20**	*e*PN	**Pn**	**06 45 38.0**	**-0.4**
LADK	**Ladik-KONYA**	**2.65**	**20**	*e*Pn	**Pn**	**06 45 38.1**	**-0.4**
DENT	**Denizli**	**2.67**	**320**	*e*PN	**Pn**	**06 45 38.8**	**0.0**
DENT	**Denizli**	**2.67**	**320**	*e*Pn	**Pn**	**06 45 38.8**	**0.0**
YER	**Yerkesik**	**2.74**	**302**	*e*PN	**Pn**	**06 45 40.0**	**+0.3**
YER	**Yerkesik**	**2.74**	**302**	*e*Pn	**Pn**	**06 45 40.0**	**+0.3**
SHUT	**Suhut-Afyon**	**2.88**	**350**	*e*PN	**Pn**	**06 45 41.6**	**0.0**
SHUT	**Suhut-Afyon**	**2.88**	**350**	*e*Pn	**Pn**	**06 45 41.6**	**0.0**
KHAL	**Karahalli**	**2.98**	**333**	⇑*i* P	**Pn**	**06 45 43.1**	**+0.2**
KHAL	**Karahalli**	**2.98**	**333**	*i* P	**Pn**	**06 45 43.2**	**+0.2**
BOLV	**Bolvadin**	**3.00**	**356**	⇑*i* P	**Pn**	**06 45 46.7**	**+3.4**
DAT	**Datca**	**3.09**	**290**	*e*PN	**Pn**	**06 45 45.0**	**+0.5**
DAT	**Datca**	**3.09**	**290**	*e*Pn	**Pn**	**06 45 45.1**	**+0.6**
SULT	**Sultanhani-AKS**	**3.10**	**36**	*e*PN	**Pn**	**06 45 45.0**	**+0.4**
SULT	**Sultanhani-AKS**	**3.10**	**36**	*e*Pn	**Pn**	**06 45 45.1**	**+0.4**
MLSB	**Milas**	**3.17**	**301**	*e*PN	**Pn**	**06 45 46.9**	**+1.3**
MLSB	**Milas**	**3.17**	**301**	*e*Pn	**Pn**	**06 45 46.9**	**+1.3**
KIZT	**Kizilcal**	**3.21**	**10**	*e*PN	**Pn**	**06 45 46.2**	**+0.1**
KIZT	**Kizilcal**	**3.21**	**10**	*e*Pn	**Pn**	**06 45 46.2**	**+

YBH	**Yreka Blue Hor**	**84.06**	**39**	P		**P**	**07 10 04.2**	**+0.8**
	1.4nm,0.7s,mb3.6,baz=128,slow=12,SNR=4.0							
NVAR	**Mina Array Bea**	**84.74**	**44**	P		**P**	**07 10 07.0**	**+0.1**
	1.7nm,0.9s,mb3.6,baz=221,slow=7.5,SNR=12							
WVOR	**Wild Horse Val**	**86.89**	**41**	*e*P		**P**	**07 10 16.9**	**-0.2**
	4.7nm,1.3s,mb4.0							
RC01	**Rabbit Creek A**	**88.05**	**14**	*e*P		**P**	**07 10 21.2**	**-0.9**
	7.3nm,1.1s,mb4.3							
MSU	**Marysvale**	**88.78**	**47**	*e*P		**P**	**07 10 26.7**	**+0.6**
	5.4nm,1.3s,mb4.2							
M13A	**Montello**	**89.02**	**43**	*e*P		**P**	**07 10 26.7**	**-0.4**
	5.9nm,1.0s,mb4.4							
TMUT	**Trail Mountain**	**89.84**	**46**	*e*P		**P**	**07 10 31.7**	**+0.8**
	5.4nm,0.6s,mb4.5							
TRF	**Thorofare Moun**	**90.04**	**13**	*e*P		**P**	**07 10 29.7**	**-1.5**
	3.3nm,0.9s,mb4.2							
SRU	**San Rafael**	**90.20**	**47**	*e*P		**P**	**07 10 33.1**	**+0.5**
	7.6nm,0.9s,mb4.5							
TXAR	**Lajitas Array**	**90.47**	**58**	P		**P**	**07 10 34.9**	**+0.7**
	1.9nm,0.7s,mb4.0,baz=212,slow=6.6,SNR=26							
HWUT	**Hardware Ranch**	**90.80**	**44**	*e*P		**P**	**07 10 35.3**	**-0.1**
	2.4nm,0.5s,mb4.4							
ANMO	**Albuquerque**	**90.97**	**52**	*e*P		**P**	**07 10 36.5**	**+0.2**
	2.0nm,1.2s,mb3.9							
ILAR	**Eielson Array**	**91.92**	**14**	P		**P**	**07 10 38.5**	**-1.4**
	0.6nm,0.8s,mb3.7,baz=236,slow=5.3,SNR=8.2							
SDCO	**Great Sand Dun**	**92.97**	**50**	*e*P		**P**	**07 10 45.1**	**-0.3**
	1.2nm,0.8s,mb4.0							
BVAR	**Borovoye Array**	**120.23**	**319**	PKP		PKPdf	07 16 18.2	-1.1
	0.8nm,0.4s,baz=207,slow=1.0,SNR=5.5							
ARCES	**ARCESS Array B**	**131.71**	**348**	PKP		PKPdf	07 16 39.6	-1.1
	1.8nm,0.7s,baz=64,slow=2.8,SNR=8.8							
FINES	**FINESS Array B**	**138.26**	**341**	PKP		PKPdf	07 16 53.1	0.0
	1.4nm,0.6s,baz=88,slow=4.4,SNR=3.6							
NOA	**NORSAR Array B**	**141.91**	**351**	PKhKP		PKPpre	07 16 55.0	
	2.4nm,0.7s,baz=16,slow=4.6,SNR=8.4							
AKASG	**Malin Array Be**	**144.77**	**327**	PKP		PKPdf	07 17 04.2	-0.9
	7.6nm,0.7s,baz=44,slow=3.8,SNR=19							
KIEV	**Kiev**	**144.78**	**327**	*e*PKPdf		PKPdf	07 17 04.2	-0.8
BRTR	**Keskin Array B**	**147.38**	**307**	PKPbc		PKPbc	07 17 12.7	-0.4
	1.3nm,0.6s,baz=147,slow=3.4,SNR=7.1							
MMAI	**Mount Meron Ar**	**147.51**	**295**	PKPbc		PKPbc	07 17 14.5	+0.8
	8.2nm,0.6s,baz=72,slow=5.4,SNR=7.2							
BUR08	**Bucovina Ar. S**	**148.76**	**326**	*e*PKPbc		PKPbc	07 17 17.2	+0.9
CLL	**Collm**	**150.67**	**343**	*i* P		PKPbc	07 17 20.4	-0.3
CLL	**Collm**	**150.67**	**343**	*i* PKPbc		PKPbc	07 17 20.4	-0.3
	comp=Z,13nm,0.8s							
BRG	**Berggiesshubel**	**150.80**	**342**	*e*P		PKPdf	07 17 14.0	-0.8
	comp=Z,7.3nm,1.4s							
BRG				*i*			07 17 20.5	
	comp=Z,8.2nm,0.6s							
DBIC	**Dimbokro**	**162.43**	**164**	PKPab		PKPab	07 18 21.7	+0.1
	comp=Z,2.7nm,0.8s,baz=207,slow=6.8,SNR=3.7							
TORD	**Torodi Ar. Bea**	**169.31**	**190**	PKP		PKPdf	07 17 34.4	-1.7
	comp=Z,0.8nm,1.0s,baz=240,slow=2.3,SNR=3.5							
TORD				PKPab		PKPab	07 18 52.0	+0.1
	comp=Z,0.9nm,0.8s,baz=177,slow=4.3,SNR=4.6							

NEIC ***12*** *07:38:23.0, 58.39N×133.49W, h5km, ML2.8(PGC), ML2.5(AEIC), After PGC.*

PGC 12 07:38:23.0±7.7, 58.39N×133.49W, h5km, ML2.8/4, 4D, 55km east of Juneau, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BESE	**Bessie Mountai**	**0.74**	**285**	P		P	Pg	07 38 35.2	-1.9
SKAG	**Skagway**	**1.44**	**319**	P		P	Pn	07 38 48.0	-1.6
SIT	**Sitka**	**1.66**	**217**	P		P	Pn	07 38 51.2	-1.4
SIT				S		S	Sn	07 39 13.0	-1.4
DLBC	**Dease Lake**	**1.82**	**87**	⇑P		Pn	Pn	07 38 54.1	-0.8
DLBC				⇑S		Sg	Sg	07 39 19.1	-2.3
PLBC	**Pleasant Camp**	**1.83**	**307**	⇓P		Pn	Pn	07 38 54.9	-0.2
PLBC				⇑S		Sg	Sg	07 39 19.5	-2.4
WHY	**Whitehorse**	**2.38**	**343**	⇑P		Pn	Pn	07 39 01.9	-0.8
WHY				⇓Pg		Pg	Pg	07 39 06.0	-2.6
WHY				⇑Sg		Sg	Sg	07 39 36.0	-3.4
HYT	**Haines Junctio**	**3.18**	**322**	⇑P		Pn	Pn	07 39 13.7	+0.2
HYT				⇑Pg		Pg	Pg	07 39 19.6	-4.3
HYT				⇑Sg		Sg	Sg	07 40 01.1	-3.9
PNL	**Peninsula**	**3.31**	**295**	P		P	Pn	07 39 14.5	-0.9
FNBB	**Fort Nelson**	**5.50**	**80**	⇓Sg		Sg	Sg	07 41 15.8	-3.5
DAWY	**Dawson**	**6.37**	**336**	⇑Pg		Pg	Pg	07 40 17.5	-7.2
DAWY				⇓Sg		Sg	Sg	07 41 42.1	-5.0

DJA 12 07:44:28, 1.15N×121.97E, h7km, MLv4.0/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.67**	**183**	P		P	Pg	07 44 40.9	0.0
MRSI				S		S	Sg	07 44 51.0	+1.4
TOLI	**Toli-Toli**	**1.18**	**269**	P		P	Pg	07 44 49.5	-1.1
TOLI				S		S	Sg	07 45 05.4	-0.5
APSI	**Ampana**	**2.07**	**189**	P		P	Pn	07 45 02.2	-1.0
APSI				S		S	Sn	07 45 30.5	+1.2
LUWI	**Luwuk**	**2.32**	**160**	P		P	Pn	07 45 06.3	-0.3
LUWI				S		S	Sn	07 45 35.0	-0.4

MEX 12 07:57:37.7±0.6, 15.10N×93.86W, h16km±46km, MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCIG		**0.86**	**46**	*e*P			Pb	07 57 51.2	-3.1
PCIG				*i* S			Sb	07 58 01.5	-4.1
TGIG		**1.81**	**23**	*i* P			Pn	07 58 05.1	-3.1
TGIG				*i* S			Sn	07 58 26.0	-4.9
CMIG	**Matias Romero**	**2.21**	**334**	*e*P			Pn	07 58 11.1	-2.7
CMIG				*i* S			Sn	07 58 36.0	-4.8
HUIG	**Huatulco**	**2.27**	**287**	*i* P			Pn	07 58 10.5	-4.1
HUIG				*i* S			Sn	07 58 37.4	-4.8
VHO	**Vista Hermosa**	**3.39**	**306**	*i* P			Pn	07 58 28.2	-1.8
VHO				*i* S			Sn	07 59 05.6	-4.3

NEIC ***12*** *08:18:55.7±0.8, 4.80N×94.83E, h35km, mb4.3/3, Error ellipse: s-maj=26.3km s-min=9.1km az=217.0*
IDC ***12*** *08:18:58.1±5.1, 4.80N×94.99E, h63km±47km, mb3.7/9, mb1 3.8/10, mb1mx3.6/24, mbtmp3.7/10, ML3.6/1, Error ellipse: s-maj=56.0km s-min=20.9km az=55.0*
ISCJB ***12*** *08:18:59.2±2.8, 5.0N±0.1×95.2E±0.1, h84km±28km, mb4.0/12, Error ellipse: s-maj=25.6km s-min=19.1km az=144.0*

ISC 12 08:19:00.7±2.6, 4.9N±0.1×95.2E±0.2, h81km±27km, n17, σ0.69/19, mb4.0/12, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.32**	**119**	P		P	**Pn**	**08 20 04.0**	**0.0**
	3.2nm,0.3s,baz=192,slow=8.9,SNR=7.0								
PSI				S		S	**Sn**	**08 20 54.0**	**+0.8**
	1.2nm,0.3s,baz=358,slow=19,SNR=4.6								
KULM	**Kulim**	**5.48**	**86**	*e*Pn		P	**Pn**	**08 20 19.3**	**-0.6**
KULM				eSn		S	**Sn**	**08 21 21.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**13.93**	**15**	P		P	**Pn**	**08 22 20.6**	**+6.1**
	0.4nm,0.3s,baz=208,slow=12,SNR=20								
AML	**Almayashu**	**41.67**	**336**	*e*P		P	**P**	**08 26 43.0**	**+1.7**
	5.0nm,0.6s,mb4.4								
MK31	**Makanchi Array**	**43.15**	**347**	*e*P		P	**P**	**08 26 53.6**	**+0.4**
MKAR	**Makanchi Array**	**43.15**	**347**	P		P	**P**	**08 26 53.6**	**+0.4**
	1.9nm,0.5s,mb4.0,baz=166,slow=8.5,SNR=16								
SONM	**Songino Array**	**43.81**	**11**	P		P	**P**	**08 26 58.7**	**+0.3**
	0.5nm,0.4s,mb3.6,baz=182,slow=11,SNR=3.0								
ASAR	**Alice Springs**	**47.29**	**129**	P		P	**P**	**08 27 26.0**	**-0.4**
	0.5nm,0.5s,mb3.5,baz=300,slow=7.6,SNR=13								
KURK	**Kurchatov**	**47.68**	**346**	*e*P		P	**P**	**08 27 28.9**	**0.0**
	2.3nm,0.6s,mb4.2								
ZALV	**Zalesovo Beam**	**49.58**	**352**	P		P	**P**	**08 27 44.1**	**+0.7**
	1.5nm,0.5s,mb4.2,baz=181,slow=9.2,SNR=6.6								
BVAR	**Borovoye Array**	**52.07**	**341**	P		P	**P**	**08 28 02.1**	**0.0**
	3.6nm,0.7s,mb4.5,baz=142,slow=9.3,SNR=19								
ABKAR	**Akbulak array**	**53.27**	**332**	*e*P		P	**P**	**08 28 11.3**	**+0.1**
	0.8nm,0.6s,mb3.9								
AKTK	**Aktyubinsk**	**54.99**	**332**	P		P	**P**	**08 28 22.4**	**-1.2**
AKTO	**Aktyubinsk**	**54.99**	**332**	P		P	**P**	**08 28 22.4**	**-1.2**
	0.7nm,0.5s,mb4.0,baz=37,slow=10,SNR=2.7								
BRTR	**Keskin Array B**	**65.11**	**312**	P		P	**P**	**08 29 32.4**	**-0.6**
	0.5nm,0.4s,mb3.7,baz=81,slow=7.6,SNR=4.1								
FINES	**FINESS Array B**	**75.76**	**332**	P		P	**P**	**08 30 37.1**	**-0.3**
	2.6nm,0.8s,mb4.0,baz=72,slow=6.8,SNR=4.8								
ARCES	**ARCESS Array B**	**78.35**	**340**	P		P	**P**	**08 30 52.4**	**+0.5**
	1.2nm,0.5s,mb3.9,baz=98,slow=6.5,SNR=14								

IDC ***12*** *08:25:34.4±0.9, 17.03N×84.56W, h0km, mb3.9/8, mb1 4.1/10, mb1mx4.0/20, mbtmp3.9/10, ML3.9/2, MS3.2/6, Ms1 3.2/6, ms1mx3.0/24, Error ellipse: s-maj=28.2km s-min=17.6km az=39.0*
ISCJB ***12*** *08:25:37.4±2.2, 17.23N±0.06×84.70W±0.07, h26km±17km, mb4.1/27, MS3.1/5, Error ellipse: s-maj=12.0km s-min=9.4km az=42.2*
NEIC ***12*** *08:25:38.3±0.7, 17.21N×84.43W, h10km, mb4.1/27, Error ellipse: s-maj=14.0km s-min=10.7km az=50.0*

ISC 12 08:25:37.4±3.6, 17.22N±0.06×84.69W±0.06, h14km±24km, n51, σ1.37/57, mb4.1/27, MS3.1/5, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**4.01**	**219**	*e*Pn		P	**Pn**	**08 26 39.7**	**+1.3**
TEIG	**Tepich**	**4.53**	**312**	*e*Pn		Pn	**Pn**	**08 26 44.7**	**-0.8**
TEIG				eSn		Sn	**Sn**	**08 27 34.3**	**-3.8**
MTDJ	**Mount Denham**	**6.89**	**81**	*e*Pn		Pn	**Pn**	**08 27 15.3**	**-2.7**
CMIG	**Matias Romero**	**9.75**	**271**	Pn		Pn	**Pn**	**08 27 56.1**	**-1.2**
	0.7nm,0.3s,baz=60,slow=9.8,SNR=18								
CMIG				Sn		Sn	**Sn**	**08 29 38.0**	**-8.6**
	0.4nm,0.3s,baz=41,slow=20,SNR=2.4								
CMIG				LR		LR	LR	08 31 47.4	
	comp=Z,124nm,20.1s,baz=349,slow=38								
VHO	**Vista Hermosa**	**11.52**	**271**	*i* P		P	**Pn**	**08 28 21.3**	**-0.2**
PNIG	**Pinotepa**	**12.89**	**268**	*i* P		P	**Pn**	**08 28 38.7**	**-1.6**
LRAL	**Lakeview Retre**	**15.89**	**353**	*e*P		P	**Pn**	**08 29 17.8**	**-2.8**
	19nm,1.8s								
LRAL				eS		S	**Sn**	**08 31 59.5**	**-17**
SDV	**Santo Domingo**	**15.99**	**119**	*e*P		P	**Pn**	**08 29 23.0**	**+0.9**
	11nm,0.7s								
HKT	**Hockley**	**16.26**	**323**	*e*P		P	**Pn**	**08 29 25.8**	**+0.3**
	5.8nm,0.6s								
SWET	**Sewanee**	**17.96**	**357**	*e*P		P	**Pn**	**08 29 48.2**	**+1.5**
TKL	**Tuckaleechee C**	**18.39**	**2**	*e*P		P	**Pn**	**08 29 52.5**	**+0.6**
TKL				eS		S	**Sn**	**08 33 05.4**	**-12**
TKL	**Tuckaleechee C**	**18.39**	**2**	P		P	**Pn**	**08 29 51.1**	**-0.9**
	0.5nm,0.3s,baz=171,slow=13,SNR=8.3								
TKL				S		S	**Sn**	**08 33 01.8**	**-15**
	0.2nm,0.3s,baz=124,slow=15,SNR=3.2								
MIAR	**Mount Ida**	**19.00**	**337**	*e*P		P	**Pn**	**08 30 03.8**	**+4.3**
	8.9nm,1.3s								
WVT	**Waverly**	**19.04**	**352**	*e*P		P	**Pn**	**08 29 58.9**	**-1.0**
	4.8nm,1.0s								
WVT				eS		S	**Sn**	**08 33 16.0**	**-17**
JCT	**Junction City**	**19.09**	**317**	*e*P		P	**Pn**	**08 30 03.3**	**+2.8**
	14nm,0.6s								
PCRV	**Puerto La Cruz**	**20.69**	**107**	LR		LR		08 38 52.1	
	comp=Z,61nm,18.7s,MS3.0,baz=299,slow=39								
TXAR	**Lajitas Array**	**21.16**	**308**	P		P	**P**	**08 30 22.8**	**+0.5**
TXAR				S		S	**S**	**08 34 10.3**	**-7.1**
TXAR				LR		LR		08 40 57.2	
TXAR	**Lajitas Array**	**21.16**	**308**	P		P	**P**	**08 30 22.8**	**+0.5**
	2.4nm,0.7s,mb3.6,baz=120,slow=9.8,SNR=14								
TXAR				S		S	**S**	**08 34 10.3**	**-7.1**
	0.4nm,0.5s,baz=117,slow=20,SNR=6.5								
TXAR				LR		LR		08 40 57.2	
	comp=Z,38nm,21.4s,MS2.7,baz=0.0,slow=43								
JSRW	**J. Sargeant Re**	**21.26**	**15**	*e*Pn		P	**P**	**08 30 23.1**	**-0.1**
WMOK	**Wichita Mounta**	**21.52**	**327**	*e*P		P	**P**	**08 30 27.2**	**+1.2**
	5.0nm,0.9s,mb3.9								
WMOK				eS		S	**S**	**08 34 15.9**	**-8.4**
BLO	**Bloomington**	**21.93**	**356**	*e*P		P	**P**	**08 30 30.9**	**+0.4**
	12nm,0.7s,mb4.4								
MCWV	**Mont Chateau**	**22.75**	**10**	*e*P		P	**P**	**08 30 41.0**	**+1.8**
	16nm,1.0s,mb4.4								
AMTX	**Amarillo**	**23.23**	**322**	*e*P		P	**P**	**08 30 45.2**	**+0.9**
	10nm,0.8s,mb4.3								
MNTX	**Cornudas Mount**	**23.66**	**311**	*e*P		P	**P**	**08 30 48.0**	**-0.6**
	1.5nm,0.8s,mb3.5								
KSU1	**Kansas State U**	**24.16**	**337**	*e*P		P	**P**	**08 30 57.6**	**+4.5**
	10nm,0.5s,mb4.5								
ANMO	**Albuquerque**	**26.25**	**316**	*e*P		P	**P**	**08 31 15.9**	**+3.7**
	3.0nm,1.1s,mb3.7								
ANMO	**Albuquerque**	**26.25**	**316**	P		P	**P**	**08 31 14.5**	**+2.3**
	0.7nm,0.8s,mb3.3,baz=139,slow=14,SNR=3.7								
ANMO				LR		LR	LR	08 42 59.0	
	comp=Z,37nm,18.6s,MS3.0,baz=198,slow=40								
SDCO	**Great Sand Dun**	**27.44**	**322**	*e*P		P	**P**	**08 31 26.3**	**+3.5**
	1.1nm,0.9s,mb3.4								
SADO	**Sadowa**	**27.86**	**8**	LR		LR	LR	08 42 37.0	
	comp=Z,55nm,19.0s,MS3.2,baz=73,slow=36								
HWUT	**Hardware Ranch**	**33.50**	**322**	*e*P		P	**P**	**08 32 19.9**	**+3.6**
	2.6nm,0.7s,mb4.3								
REDW	**Red Top Meadow**	**34.22**	**325**	*e*P		P	**P**	**08 32 27.6**	**+5.0**
	8.1nm,1.2s,mb4.5								
SNOW	**Snow King Moun**	**34.23**	**325**	*e*P		P	**P**	**08 32 26.8**	**+4.1**
	15nm,1.8s,mb4.6								
TPAW	**Teton Pass**	**34.36**	**325**	*e*P		P	**P**	**08 32 28.4**	**+4.6**
	3.3nm,0.8s,mb4.3								
MOOW	**Moose Ponds**	**34.42**	**326**	*e*P		P	**P**	**08 32 29.1**	**+4.7**
	3.2nm,1.0s,mb4.2								
IMW	**Indian Meadow**	**34.62**	**326**	*e*P		P	**P**	**08 32 29.9**	**+3.8**
	2.5nm,0.9s,mb4.1								
BOZ	**Bozeman (W)**	**36.16**	**327**	*e*P		P	**P**	**08 32 42.6**	**+3.2**
	1.7nm,0.9s,mb4.0								
NVAR	**Mina Array Bea**	**36.18**	**313**	P		P	**P**	**08 32 42.7**	**+3.1**
NVAR	**Mina Array Bea**	**36.18**	**313**	P		P	**P**	**08 32 42.7**	**+3.1**
	0.2nm,0.5s,mb3.3,baz=110,slow=11,SNR=3.0								
MCMT	**McKenzie Canyo**	**36.27**	**325**	*e*P		P	**P**	**08 32 44.9**	**+4.7**
	3.3nm,1.2s,mb4.1								
HLID	**Hailey**	**36.36**	**323**	*e*P		P	**P**	**08 32 44.8**	**+3.8**
	0.7nm,0.9s,mb3.6								
LPAZ	**La Paz**	**37.08**	**153**	*e*P		P	**P**	**08 32 48.0**	**+0.6**
	1.7nm,0.9s,mb3.9								
LPAZ	**La Paz**	**37.08**	**153**	P		P	**P**	**08 32 45.0**	**-2.4**
	0.5nm,0.3s,mb3.9,baz=27,slow=6.8,SNR=15								
SCHQ	**Schefferville**	**39.98**	**16**	*e*P		P	**P**	**08 33 10.6**	**-0.8**
	1.3nm,0.4s,mb4.0								
SCHQ	**Schefferville**	**39.98**	**16**	P		P	**P**	**08 33 10.7**	**-0.7**
	2.2nm,0.7s,mb4.0,baz=216,slow=3.4,SNR=6.7								
SUMG	**Summit**	**61.34**	**14**	*e*P		P	**P**	**08 35 51.5**	**-0.7**
	4.5nm,0.8s,mb4.7								
ILAR	**Eielson Array**	**62.82**	**335**	P		P	**P**	**08 36 02.7**	**+0.4**
	2.6nm,0.8s,mb4.4,baz=118,slow=5.0,SNR=40								
TRF	**Thorofare Moun**	**63.88**	**333**	*e*P		P	**P**	**08 36 09.5**	**+0.1**
	2.7nm,0.7s,mb4.4								
ESDC	**Sonseca Array**	**72.19**	**53**	P		P	**P**	**08 37 02.3**	**+0.3**
	0.2nm,0.3s,mb3.5,baz=283,slow=6.4,SNR=3.5								
ESDC				LR		LR	LR	09 07 29.2	
	comp=Z,34nm,18.3s,MS3.6,baz=290,slow=35								
DBIC	**Dimbokro**	**78.37**	**87**	P		P	**P**	**08 37 37.3**	**-0.8**
	2.3nm,0.6s,mb4.3,baz=192,slow=3.6,SNR=5.2								
TORD	**Torodi Ar. Bea**	**82.81**	**78**	P		P	**P**	**08 38 00.8**	**-1.1**
	0.8nm,0.7s,mb3.9,baz=273,slow=4.7,SNR=4.5								
ASAR	**Alice Springs**	**143.35**	**253**	PKP		PKPdf		08 45 09.2	-2.9
	0.5nm,0.7s,baz=101,slow=3.6,SNR=5.8								

ISCJB ***12*** *08:32:25.9±0.5, 22.16N±0.03×121.05E±0.03, h52km±5km, Error ellipse: s-maj=4.4km s-min=3.8km az=27.3*
TAP ***12*** *08:32:25.9, 22.18N×121.06E, h42km, ML3.9, B*
JMA ***12*** *08:32:26.6±0.4, 22.09N×121.17E, h76km, M3.5*
NEIC ***12*** *08:32:28.2±7.3, 22.48N×120.82E, h10km, MG3.5(JMA), Error ellipse: s-maj=65.0km s-min=29.0km az=195.0*

ISC 12 08:32:26.6±0.5, 22.16N±0.03×121.03E±0.02, h47km±5km, n62, σ0.73/116, 8C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EAST	**Anshuo**	**0.28**	**324**	⇓*i*P		P	**Pn**	**08 32 35.0**	**-0.3**
	baz=315								
EAST				S		S	**Sn**	**08 32 41.4**	**0.0**
	baz=315								
TSEB	**Hengchuen, Pin**	**0.28**	**204**	⇑*i*P		Pn	**Pn**	**08 32 35.4**	**+0.1**
	baz=214								
TSEB				*e*S		Sn	**Sn**	**08 32 42.5**	**+1.0**
	baz=214								
TWK1	**Hengchun**	**0.30**	**223**	⇑*i*P		Pn	**Pn**	**08 32 35.3**	**-0.2**
	baz=223								
TWK1				*i* S		Sn	**Sn**	**08 32 41.9**	**+0.1**
	baz=223								
HEN	**Hengchun**	**0.31**	**240**	*i* P		Pn	**Pn**	**08 32 35.4**	**-0.2**
	baz=238								
HEN				*i* S		Sn	**Sn**	**08 32 42.2**	**+0.3**
	baz=238								
SCZT	**Fangliau**	**0.43**	**299**	⇓*i*P		Pn	**Pn**	**08 32 36.3**	**-0.6**
	baz=294								
SCZT				*e*S		Sn	**Sn**	**08 32 43.2**	**-1.0**
	baz=294								
ECL	**Taimali**	**0.44**	**351**	*i* P		Pn	**Pn**	**08 32 36.1**	**-0.9**
	baz=347								
ECL				S		Sn	**Sn**	**08 32 43.6**	**-0.8**
	baz=347								
LAY	**Lan-yu**	**0.50**	**104**	P		Pn	**Pn**	**08 32 37.0**	**-0.8**
	baz=107								
LAY				S		Sn	**Sn**	**08 32 45.3**	**-0.4**
	baz=107								
TTN	**Taitung**	**0.60**	**11**	*e*P		Pn	**Pn**	**08 32 39.0**	**0.0**
	baz=8.0								
TTN				*e*S		Sn	**Sn**	**08 32 48.1**	**+0.2**
	baz=8.0								
TWP	**Hsiaoliuchiu**	**0.64**	**287**	P		Pn	**Pn**	**08 32 40.0**	**+0.5**
	baz=284								
TWP				*e*S		Sn	**Sn**	**08 32 50.8**	**+2.0**
	baz=284								
TWG	**Pinlang**	**0.66**	**4**	*e*Pg		Pn	**Pn**	**08 32 38.4**	**-1.4**
TWG	**Pinlang**	**0.66**	**4**	⇓*i*P		Pn	**Pn**	**08 32 38.8**	**-0.9**
	baz=1.0								
TWG				S		Sn	**Sn**	**08 32 48.5**	**-0.7**
	baz=1.0								
SSD	**Sandimen**	**0.69**	**328**	*e*P		Pn	**Pn**	**08 32 39.6**	**-0.5**
	baz=324								
SSD				S		Sn	**Sn**	**08 32 50.3**	**+0.4**
	baz=324								
SGLT	**Jiouru**	**0.75**	**319**	*e*P		Pn	**Pn**	**08 32 40.6**	**-0.3**
	baz=315								
SGLT				*e*S		Sn	**Sn**	**08 32 51.8**	**+0.5**
	baz=315								
KAU	**Kaohsiung**	**0.78**	**302**	*e*P		Pn	**Pn**	**08 32 41.6**	**+0.3**
	baz=298								
KAU				*e*S		Sn	**Sn**	**08 32 53.2**	**+1.2**
	baz=298								
TWM1	**Shoushan**	**0.86**	**320**	*e*P		Pn	**Pn**	**08 32 43.0**	**+0.5**
	baz=317								
CHKT	**Chengkung**	**0.99**	**19**	⇑*i*P		Pn	**Pn**	**08 32 43.9**	**-0.3**
	baz=17								
CHKT				S		Sn	**Sn**	**08 32 57.1**	**+0.1**
	baz=17								
SGST	**Jiashian**	**1.00**	**336**	*e*P		Pn	**Pn**	**08 32 44.6**	**+0.2**
	baz=333								
SGST				*e*S		Sn	**Sn**	**08 32 57.7**	**+0.3**
	baz=333								
ELDTW	**Lidau**	**1.02**	**360**	*e*P		Pn	**Pn**	**08 32 44.5**	**-0.1**
	baz=357								
ELDTW				*e*S		Sn	**Sn**	**08 32 58.8**	**+0.8**
	baz=357								
STYT	**Tauyuan**	**1.03**	**346**	⇑*i*P		Pn	**Pn**	**08 32 44.5**	**-0.2**
	baz=344								
STYT				*e*S		Sn	**Sn**	**08 32 58.4**	**+0.4**
	baz=344								
CHN3	**Shinhua**	**1.10**	**326**	*e*P		Pn	**Pn**	**08 32 45.4**	**-0.3**
	baz=323								
CHN3				*e*S		Sn	**Sn**	**08 33 00.3**	**+0.7**
	baz=323								
CHN1	**Nanshi**	**1.12**	**336**	P		Pn	**Pn**	**08 32 45.5**	**-0.5**
	baz=333								
CHN1				*e*S		Sn	**Sn**	**08 33 00.2**	**0.0**
	baz=333								
TAI1	**Yung-k'ang**	**1.14**	**320**	*e*P		Pn	**Pn**	**08 32 46.1**	**-0.2**
	baz=318								
TAI1				*e*S		Sn	**Sn**	**08 33 00.3**	**-0.5**
	baz=318								
WTP	**Ta-pu**	**1.15**	**341**	⇑P		Pn	**Pn**	**08 32 45.9**	**-0.4**
	baz=338								
WTP				*e*S		Sn	**Sn**	**08 33 00.9**	**+0.1**
	baz=338								
TPUB	**Ta-pu**	**1.19**	**342**	*e*Pg		Pn	**Pn**	**08 32 45.5**	**-1.5**
TWK

	baz=16							
TWE	**Neicheng**	**2.62**	**13**	*e*P		**Pn**	**08 33 07.1**	**+0.7**
	baz=12							
TWE				*e*S		**Sn**	**08 33 36.5**	**-0.5**
	baz=12							
YOJ	**Yonaguni jima**	**2.93**	**38**	P		**Pn**	**08 33 11.3**	**+0.6**
YOJ				S		**Sn**	**08 33 46.2**	**+1.5**
TWB1	**Santiao Chiao**	**2.97**	**17**	*e*P		**Pn**	**08 33 12.5**	**+1.2**
	baz=16							
NWF	**Wu-fen Shan**	**2.98**	**13**	*e*P		**Pn**	**08 33 13.0**	**+1.6**
	baz=12							
NWF				*e*S		**Sn**	**08 33 44.1**	**-1.8**
	baz=12							
HATJ	**Hateruma jima**	**3.18**	**53**	P		**Pn**	**08 33 14.5**	**+0.3**
HATJ				S		**Sn**	**08 33 49.9**	**-1.0**
KNM	**Kinmen**	**3.27**	**314**	*e*P		**Pn**	**08 33 14.9**	**-0.6**
	baz=310							
IRIF	**Iriomote-Funau**	**3.30**	**48**	P		**Pn**	**08 33 16.3**	**+0.5**
IRIF				S		**Sn**	**08 33 54.3**	**+0.6**
JKRS	**Kuro-shima**	**3.44**	**52**	P		**Pn**	**08 33 18.3**	**+0.6**
JKRS				S		**Sn**	**08 33 57.3**	**+0.1**
JIJ	**Ishigaki jima**	**3.61**	**52**	P		**Pn**	**08 33 20.2**	**+0.1**
JIJ				S		**Sn**	**08 34 00.6**	**-0.8**

NEIC ***12*** *08:37:10.7±2.8,24.04N×122.29E,h10km,MG3.2(JMA),*
Error ellipse: s-maj=30.9km s-min=12.4km az=84.0
ISCJB ***12*** *08:37:11.7±0.4,24.00N±0.02×122.27E±0.02,h15km±4km,*
Error ellipse: s-maj=3.3km s-min=2.5km az=137.3
TAP ***12*** *08:37:12.6,24.07N×122.25E,h33km,ML3.7,C*
JMA ***12*** *08:37:13.3±0.4,24.19N×122.26E,h56km,M3.2*

ISC 12 08:37:12.1±0.5,24.03N±0.02×122.26E±0.02,h18km±3km,
n59,σ0.94/114,5C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.60**	**265**	*e*P	**Pg**	**08 37 24.4**	**+0.4**
	baz=261						
HWA				*e*S	**Sg**	**08 37 33.2**	**+1.1**
	baz=261						
TWD	**Chiawan**	**0.61**	**275**	⇑*i*P	**Pg**	**08 37 24.3**	**+0.1**
	baz=271						
TWD				S	**Sg**	**08 37 32.9**	**+0.5**
	baz=271						
ENA	**Nanau**	**0.61**	**310**	P	**Pg**	**08 37 24.4**	**+0.1**
	baz=315						
ENA				*e*S	**Sg**	**08 37 33.6**	**+1.1**
	baz=315						
NACB	**Ninganchiao**	**0.62**	**283**	*e*Pg	**Pg**	**08 37 23.5**	**-0.9**
TWC	**Suao**	**0.69**	**327**	*i* P	**Pb**	**08 37 25.2**	**-0.3**
	baz=335						
TWC				S	**Sb**	**08 37 33.6**	**-1.0**
	baz=335						
ESL	**Shilin**	**0.79**	**254**	*e*P	**Pb**	**08 37 27.1**	**-0.1**
	baz=241						
ESL				*e*S	**Sb**	**08 37 37.4**	**-0.1**
	baz=241						
YOJ	**Yonaguni jima**	**0.81**	**58**	P	**Pb**	**08 37 27.8**	**+0.2**
YOJ				S	**Sb**	**08 37 38.6**	**+0.4**
ILA	**Ilan**	**0.87**	**328**	*e*P	**Pb**	**08 37 29.1**	**+0.5**
	baz=326						
ILA				S	**Sb**	**08 37 40.1**	**+0.3**
	baz=326						
TWE	**Neicheng**	**0.87**	**322**	P	**Pb**	**08 37 28.6**	**0.0**
	baz=321						
TWE				*e*S	**Sb**	**08 37 39.7**	**-0.3**
	baz=321						
ENTT	**Nioudou**	**0.88**	**314**	*e*P	**Pb**	**08 37 28.7**	**0.0**
	baz=312						
ENTT				*e*S	**Sb**	**08 37 40.3**	**+0.2**
	baz=312						
NNS	**Nan Shan**	**0.90**	**297**	⇑*i*P	**Pb**	**08 37 29.1**	**-0.1**
	baz=285						
NNS				S	**Sb**	**08 37 40.9**	**0.0**
	baz=285						
WHF	**Hehuan Shan**	**0.91**	**277**	⇑*i*P	**Pb**	**08 37 29.2**	**-0.2**
	baz=263						
WHF				S	**Sb**	**08 37 41.1**	**0.0**
	baz=263						
TWB1	**Santiao Chiao**	**1.00**	**346**	*e*P	**Pb**	**08 37 30.1**	**-0.9**
	baz=334						
TWB1				*e*S	**Sb**	**08 37 43.2**	**-0.5**
	baz=334						
EHY	**Hungye**	**1.00**	**239**	*e*P	**Pb**	**08 37 30.4**	**-0.5**
	baz=231						
EHY				*e*S	**Sb**	**08 37 42.5**	**-1.3**
	baz=231						
TWT	**Tachien**	**1.01**	**283**	P	**Pb**	**08 37 31.2**	**+0.1**
	baz=270						
TWT				*e*S	**Sb**	**08 37 44.9**	**+0.9**
	baz=270						
YHNB	**Yeheng**	**1.02**	**308**	*e*Pg	**Pg**	**08 37 30.6**	**-1.4**
YHNB				*e*Sg	**Sg**	**08 37 43.5**	**-2.0**
NSK	**Sanguang**	**1.04**	**308**	*e*P	**Pb**	**08 37 30.9**	**-0.6**
	baz=296						
NSK				*e*S	**Sb**	**08 37 44.7**	**-0.1**
	baz=296						
TWF1	**Yuli**	**1.11**	**233**	P	**Pn**	**08 37 31.9**	**-0.7**
	baz=246						
TWF1				*e*S	**Sb**	**08 37 45.9**	**-0.9**
	baz=246						
NWF	**Wu-fen Shan**	**1.12**	**337**	P	**Pn**	**08 37 32.2**	**-0.6**
	baz=349						
NWF				*e*S	**Sb**	**08 37 47.4**	**+0.2**
	baz=349						
TWA	**Mucha**	**1.13**	**327**	*e*P	**Pn**	**08 37 32.6**	**-0.3**
	baz=325						
TWA				*e*S	**Sb**	**08 37 47.4**	**+0.1**
	baz=325						
TATO	**Taipei**	**1.17**	**323**	*e*Pn	**Pn**	**08 37 33.4**	**-0.1**
TATO				*e*Sn	**Sn**	**08 37 48.7**	**-0.4**
TAP1	**Taipei**	**1.21**	**326**	*e*P	**Pn**	**08 37 33.8**	**-0.2**
	baz=323						
TAP1				*e*S	**Sb**	**08 37 49.9**	**+0.3**
	baz=323						
SSLB	**Suanglung**	**1.22**	**259**	*e*Pn	**Pn**	**08 37 33.3**	**-0.9**
SSLB				*e*Sn	**Sn**	**08 37 48.5**	**-1.7**
CHKT	**Chengkung**	**1.24**	**222**	*e*P	**Pn**	**08 37 33.1**	**-1.3**
	baz=212						
CHKT				*e*S	**Sb**	**08 37 47.4**	**-3.1**
	baz=212						
SMLT	**Sun Moon Lake**	**1.25**	**263**	⇑*i*P	**Pn**	**08 37 34.5**	**-0.2**
	baz=253						
SMLT				S	**Sb**	**08 37 50.1**	**-0.8**
	baz=253						
TYC	**Yuchr**	**1.29**	**265**	⇑*i*P	**Pn**	**08 37 35.0**	**-0.1**
	baz=263						
TYC				*e*S	**Sn**	**08 37 50.7**	**-1.1**
	baz=263						
NSTT	**Nanjuang**	**1.29**	**298**	P	**Pn**	**08 37 35.6**	**+0.5**
	baz=295						
NSTT				*e*S	**Sn**	**08 37 51.2**	**-0.8**
	baz=295						
TWS1	**Kuangyinshan**	**1.31**	**324**	*e*P	**Pn**	**08 37 35.3**	**-0.1**
	baz=332						
TWS1				*e*S	**Sn**	**08 37 52.2**	**-0.3**
	baz=332						
YUS	**Yu-Shan**	**1.31**	**246**	*e*P	**Pn**	**08 37 35.7**	**+0.2**
	baz=245						
YUS				S	**Sn**	**08 37 51.6**	**-0.9**
	baz=245						
NCU	**National Centr**	**1.35**	**314**	*e*P	**Pn**	**08 37 37.9**	**+1.8**
	baz=311						
NCU				*e*S	**Sn**	**08 37 54.0**	**+0.5**
	baz=311						
TWY	**Chenhua**	**1.38**	**334**	*e*P	**Pn**	**08 37 36.1**	**-0.2**
	baz=345						
TWY				*e*S	**Sn**	**08 37 53.7**	**-0.3**
	baz=345						
IRIF	**Iriomote-Funau**	**1.38**	**77**	P	**Pn**	**08 37 36.5**	**+0.1**
TWQ1	**Liyutan**	**1.39**	**283**	*e*P	**Pn**	**08 37 37.7**	**+1.1**
	baz=281						
TWQ1				*e*S	**Sn**	**08 37 53.3**	**-1.2**
	baz=281						
ELDTW	**Lidau**	**1.41**	**234**	*e*P	**Pn**	**08 37 36.0**	**-0.8**
	baz=222						
ELDTW				*e*S	**Sn**	**08 37 53.2**	**-1.8**
	baz=222						
HATJ	**Hateruma jima**	**1.42**	**89**	P	**Pn**	**08 37 37.0**	**+0.1**
HATJ				*e*S	**Sn**	**08 37 54.7**	**-0.3**
ALS	**Alishan**	**1.43**	**249**	*e*P	**Pn**	**08 37 37.7**	**+0.7**
	baz=248						
ALS				*e*S	**Sn**	**08 37 55.0**	**-0.4**
	baz=248						
TCU	**Taichung**	**1.45**	**275**	*e*P	**Pn**	**08 37 37.6**	**+0.3**
	baz=273						
TCU				*e*S	**Sn**	**08 37 56.3**	**+0.4**
	baz=273						
CHN5	**Tsauling**	**1.51**	**254**	P	**Pn**	**08 37 38.8**	**+0.6**
	baz=244						
CHN5				*e*S	**Sn**	**08 37 57.9**	**+0.5**
	baz=244						
WGK	**Gukeng**	**1.59**	**258**	*e*P	**Pn**	**08 37 41.5**	**+2.2**
	baz=257						
WGK				*e*S	**Sn**	**08 38 00.4**	**+1.0**
	baz=257						
JKRS	**Kuro-shima**	**1.61**	**82**	P	**Pn**	**08 37 40.4**	**+0.8**
TWG	**Pinlang**	**1.62**	**222**	*e*Pn	**Pn**	**08 37 39.5**	**-0.2**
TWG				*e*Sn	**Sn**	**08 37 58.2**	**-2.0**
TWG	**Pinlang**	**1.62**	**222**	*e*P	**Pn**	**08 37 38.9**	**-0.9**
	baz=232						
TWG				*e*S	**Sn**	**08 37 57.7**	**-2.5**
	baz=232						
STYT	**Tauyuan**	**1.62**	**238**	*e*P	**Pn**	**08 37 40.4**	**+0.6**
	baz=237						
STYT				*e*S	**Sn**	**08 37 59.8**	**-0.5**
	baz=237						
TTN	**Taitung**	**1.63**	**219**	*e*P	**Pn**	**08 37 40.2**	**+0.4**
	baz=210						
TTN				*e*S	**Sn**	**08 37 59.9**	**-0.5**
	baz=210						
TPUB	**Ta-pu**	**1.66**	**244**	*e*Pn	**Pn**	**08 37 41.2**	**+0.9**
TPUB				*e*Sg	**Sg**	**08 38 03.7**	**-2.0**
CHN4	**Tsaushan**	**1.67**	**246**	*e*P	**Pn**	**08 37 41.6**	**+1.2**
	baz=246						
CHN4				*e*S	**Sn**	**08 38 02.1**	**+0.8**
	baz=246						
WTP	**Ta-pu**	**1.70**	**243**	*e*P	**Pn**	**08 37 41.8**	**+1.0**
	baz=242						
WTP				*e*S	**Sn**	**08 38 03.0**	**+1.0**
	baz=242						
JIJ	**Ishigaki jima**	**1.75**	**79**	P	**Pn**	**08 37 40.9**	**-0.6**
JIJ				*e*S	**Sn**	**08 38 02.1**	**-1.3**
CHY	**Chiayi**	**1.76**	**253**	*e*P	**Pn**	**08 37 43.3**	**+1.6**
	baz=252						
CHY				*e*S	**Sn**	**08 38 05.1**	**+1.5**
	baz=252						
TWK	**Hsinying**	**1.79**	**245**	*e*P	**Pn**	**08 37 43.1**	**+1.0**
	baz=244						
TWK				*e*S	**Sn**	**08 38 06.3**	**+1.9**
	baz=244						
CHN1	**Nanshi**	**1.80**	**242**	*e*P	**Pn**	**08 37 43.3**	**+1.2**
	baz=241						
CHN1				*e*S	**Sn**	**08 38 05.8**	**+1.4**
	baz=241						
SGST	**Jiashian**	**1.80**	**239**	*e*P	**Pn**	**08 37 43.4**	**+1.1**
	baz=238						
SGST				*e*S	**Sn**	**08 38 05.5**	**+0.8**
	baz=238						
ECL	**Taimali**	**1.86**	**220**	*e*P	**Pn**	**08 37 43.3**	**+0.2**
	baz=230						
ECL				*e*S	**Sn**	**08 38 04.4**	**-1.7**
	baz=230						
SSD	**Sandimen**	**1.97**	**230**	*e*P	**Pn**	**08 37 45.4**	**+1.0**
	baz=224						
SSD				*e*S	**Sn**	**08 38 08.2**	**-0.4**
	baz=224						
TWM1	**Shoushan**	**2.07**	**235**	*e*P	**Pn**	**08 37 49.0**	**+3.1**
	baz=221						
LAY	**Lan-yu**	**2.09**	**198**	*e*P	**Pn**	**08 37 44.7**	**-1.5**
	baz=200						
LAY				*e*S	**Sn**	**08 38 07.7**	**-3.9**
	baz=200						
EAST	**Anshuo**	**2.09**	**219**	*e*P	**Pn**	**08 37 47.7**	**+1.5**
	baz=219						
EAST				*e*S	**Sn**	**08 38 11.0**	**-0.7**
	baz=219						
SCZT	**Fangliau**	**2.24**	**223**	*e*P	**Pn**	**08 37 49.7**	**+1.6**
	baz=219						
SCZT				*e*S	**Sn**	**08 38 17.0**	**+1.7**
	baz=219						
TWK1	**Hengchun**	**2.47**	**213**	*e*P	**Pn**	**08 37 51.4**	**-0.1**
	baz=214						
TWK1				*e*S	**Sn**	**08 38 19.9**	**-1.3**
	baz=214						

TRN ***12*** *08:38:37.7,18.80N×64.98W,h59km*
NEIC ***12*** *08:38:38.7,18.90N×64.93W,h58km,MD3.0(RSPR),*
After RSPR.

RSPR 12 08:38:38.7,18.90N×64.93W,h58km±1km,MD3.0/4,8C,
Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STVI	**Saint Thomas**	**0.54**	**182**	⇑*e*P	**Pn**	**08 38 50.3**	**-0.7**
STVI				*e*S	**Sn**	**08 38 59.4**	**-0.5**
STVI	**Saint Thomas**	**0.54**	**182**	⇑*e*P	**Pn**	**08 38 50.3**	**-0.7**
STVI				*e*S	**Sn**	**08 38 59.4**	**-0.5**
MTP	**Monte Pirata**	**0.99**	**217**	⇑*e*P	**Pn**	**08 38 55.8**	**-0.7**
MTP				*e*S	**Sn**	**08 39 08.8**	**-0.9**
MTP	**Monte Pirata**	**0.99**	**217**	⇑*e*P	**Pn**	**08 38 55.8**	**-0.7**
MTP				*e*S	**Sn**	**08 39 08.8**	**-0.9**
CDVI	**St. Croix**	**1.15**	**172**	⇑*e*P	**Pn**	**08 38 57.7**	**-1.0**
CDVI				*e*S	**Sn**	**08 39 12.9**	**-0.6**
CDVI	**St. Croix**	**1.15**	**172**	⇑*e*P	**Pn**	**08 38 57.7**	**-1.0**
CDVI				*e*S	**Sn**	**08 39 12.9**	**-0.6**
HUMP	**Col San Antoni**	**1.15**	**229**	⇑*e*P	**Pn**	**08 38 57.8**	**-0.8**
HUMP				*e*S	**Sn**	**08 39 12.3**	**-1.2**
HUMP	**Col San Antoni**	**1.15**	**229**	⇑*e*P	**Pn**	**08 38 57.8**	**-0.8**
HUMP				*e*S	**Sn**	**08 39 12.3**	**-1.2**
AGPR	**Aguadilla, PR**	**2.11**	**259**	*e*S	**Sn**	**08 39 36.2**	**-0.6**
AGPR	**Aguadilla, PR**	**2.11**	**259**	*e*S	**Sn**	**08 39 36.2**	**-0.6**

DDA ***12*** *09:00:60.0,37.23N×28.01E,h7km±4km,Md3.0*
ISCJB ***12*** *09:01:00.3±1.1,37.29N±0.09×28.23E±0.06,h8km±14km,*
Error ellipse: s-maj=17.0km s-min=5.2km az=24.6
ISK ***12*** *09:01:00.1,37.28N×28.23E,h8km,MD2.5*
CSEM ***12*** *09:01:00.1±0.1,37.31N×28.28E,h2km,MD2.5,Error*
ellipse: s-maj=2.6km s-min=2.4km az=18.0

ISC 12 09:00:60.0±1.7,37.33N±0.10×28.28E±0.08,h1km±21km,
n14,σ0.51/23,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.19**	**179**	PG	**Pg**	**09 01 03.6**	**0.0**
YER				SG	**Sg**	**09 01 06.3**	**+0.2**
YER	**Yerkesik**	**0.19**	**179**	*i* Pg	**Pg**	**09 01 03.6**	**0.0**
YER				*i* Sg	**Sg**	**09 01 06.3**	**+0.2**
MLSB	**Milas**	**0.40**	**266**	*e*PG	**Pg**	**09 01 07.7**	**0.0**
MLSB				*e*SG	**Sg**	**09 01 13.2**	**+0.4**
MLSB	**Milas**	**0.40**	**266**	*e*Pg	**Pg**	**09 01 07.7**	**0.0**
MLSB				*e*Sg	**Sg**	**09 01 13.2**	**+0.3**
TURN	**Turunc**	**0.52**	**150**	*i* P	**Pg**	**09 01 09.1**	**-0.9**
TURN				*i* S	**Sg**	**09 01 17.5**	**+0.8**
TURN	**Turunc**	**0.52**	**150**	*i* P	**Pg**	**09 01 09.1**	**-0.9**
TURN				*i* S	**Sg**	**09 01 17.5**	**+0.8**
BODT	**Bodrum**	**0.82**	**251**	*e*PG	**Pg**	**09 01 14.8**	**-0.8**
BODT				*e*SG	**Sg**	**09 01 26.4**	**+0.2**
BODT	**Bodrum**	**0.82**	**251**	*e*Pg	**Pg**	**09 01 14.8**	**-0.8**
BODT				*e*Sg	**Sg**	**09 01 26.4**	**+0.2**
DAT	**Datca**	**0.82**	**223**	*e*PG	**Pg**	**09 01 15.4**	**-0.2**
DAT	**Datca**	**0.82**	**223**	*e*Pg	**Pg**	**09 01 15.5**	**-0.1**
KULA	**Kula-Manisa**	**1.22**	**14**	*e*PN	**Pn**	**09 01 24.8**	**+0.6**
KULA	**Kula-Manisa**	**1.22**	**14**	*e*Pn	**Pn**	**09 01 24.8**	**+0.6**
AKAS	**Kas**	**1.52**	**135**	*i* P	**Pn**	**09 01 27.9**	**-0.5**
AKAS				*i* S	**Sg**	**09 01 54.2**	**+5.2**
AKAS	**Kas**	**1.52**	**135**	*i* P	**Pn**	**09 01 27.9**	**-0.4**

IDC ***12*** *09:18:53.7±0.8,26.73N×96.97E,h0km,mb4.0/10,*
mb1 4.1/10,mb1mx3.9/23,mbtmp4.0/10,MS2.9/2,
Ms1 2.9/2,ms1mx2.5/26,Error ellipse: s-maj=36.5km
s-min=17.6km az=58.0
ISCJB ***12*** *09:18:55.6±2.1,26.6N±0.1×96.80E±0.05,h25km±15km,*
mb4.0/15,MS2.8/2,Error ellipse: s-maj=17.0km
s-min=7.1km az=178.6
BJI ***12*** *09:18:55.2,27.05N×97.01E,h15km,mB4.6/1,mb4.1/4,*
ML3.8/6,Ms3.6/1,Ms7 3.5/1
NEIC ***12*** *09:18:59.1±0.7,26.80N×97.09E,h35km,mb4.5/2,Error*
ellipse: s-maj=22.8km s-min=13.6km az=54.0

ISC 12 09:18:57.0±2.1,26.69N±0.10×96.91E±0.05,h19km±14km,
n33,σ1.05/39,mb4.0/15,MS2.8/2,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**4.65**	**257**	*e*PN	**Pn**	**09 20 07.0**	**+0.8**
SHL				*i* SN	**Sn**	**09 21 04.0**	**+4.3**
KMI	**Kunming**	**5.48**	**105**	P	**Pb**	**09 20 26.0**	**-6.1**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LSA	**Lhasa**	**5.90**	**302**	Pg	**Pn**	**09 20 25.3**	**+1.9**
LSA				Sg	**Sn**	**09 21 35.8**	**+5.3**
LSA				smax			
	comp=N,10.0nm,1.0s						
LSA				smax			
	comp=E,20nm,1.0s						
TAPN	**Taplejung**	**8.23**	**277**	*e*Pn	**Pn**	**09 20 55.8**	**+0.4**
TAPN				*e*Sn	**Sn**	**09 22 28.6**	**+0.8**
	comp=E,76nm,0.8s						
ODAN	**Odare**	**8.51**	**273**	*e*Pn	**Pn**	**09 20 59.6**	**+0.4**
ODAN				*e*Sn	**Sn**	**09 22 35.1**	**+0.4**
	comp=E,69nm,0.6s						
RAMN	**Ramite**	**9.21**	**274**	*e*Pn	**Pn**	**09 21 08.8**	**-0.1**
JIRN	**Jiri**	**9.59**	**278**	*e*Pn	**Pn**	**09 21 14.6**	**+0.5**
JIRN				*e*Sn	**Sn**	**09 23 01.9**	**+0.5**
	comp=E,32nm,0.4s						
GUN	**Gumba**	**9.89**	**280**	*e*Pn	**Pn**	**09 21 17.9**	**-0.2**
GUN				*e*Sn	**Sn**	**09 23 08.7**	**+0.2**
	comp=E,44nm,0.6s						
PKI	**Pulchoki**	**10.28**	**278**	*e*Pn	**Pn**	**09 21 22.9**	**-0.6**
PKIN	**Phulchoki**	**10.29**	**278**	*e*Pn	**Pn**	**09 21 22.8**	**-0.9**
KKN	**Kakani**	**10.41**	**279**	*e*Pn	**Pn**	**09 21 25.3**	**+0.1**
DMN	**Daman**	**10.55**	**278**	*e*Pn	**Pn**	**09 21 27.2**	**0.0**
DMN				*e*Sn	**Sn**	**09 23 23.6**	**-1.3**
	comp=E,23nm,0.7s						
GKN	**Gorkha**	**10.99**	**280**	*e*Pn	**Pn**	**09 21 31.5**	**-1.7**
GKN				*e*Sn	**Sn**	**09 23 33.3**	**-2.3**
	comp=E,26nm,0.5s						
KOLN	**Koldanda**	**11.89**	**278**	*e*Pn	**Pn**	**09 21 44.3**	**-1.3**
SONM	**Songino Array**	**22.39**	**17**	P	**P**	**09 23 52.3**	**-1.8**
	comp=E,0.3nm,0.3s,mb3.1,baz=198,slow=9.1,SNR=3.5						
MK31	**Makanchi Array**	**23.16**	**334**	*e*P	**P**	**09 24 02.9**	**+0.6**
MKAR	**Makanchi Array**	**23.16**	**334**	P	**P**	**09 24 00.5**	**-1.8**
	comp=E,1.7nm,0.7s,mb3.6,baz=138,slow=8.2,SNR=14						
AAK	**Ala-Archa**	**24.24**	**317**	LR	LR	09 34 34.7	
	comp=E,34nm,18.6s,MS2.9,baz=213,slow=39						
KBL	**Kabul**	**25.17**	**295**	*e*P	**P**	**09 24 23.2**	**+2.1**
	comp=E,11nm,0.7s,mb4.5						
KURK	**Kurchatov**	**27.77**	**335**	P	**P**	**09 24 45.3**	**+0.9**
	comp=E,1.7nm,0.4s,mb4.0,baz=147,slow=10,SNR=7.1						
KSRS	**Korea Array**	**28.27**	**60**	LR	LR	09 36 35.2	
	comp=E,20nm,19.2s,MS2.7,baz=295,slow=38						
BVAR	**Borovoye Array**	**32.91**	**330**	P	**P**	**09 25 29.2**	**-0.6**
	comp=E,1.6nm,0.7s,mb4.1,baz=134,slow=11,SNR=6.1						
ABKAR	**Akbulak array**	**36.31**	**318**	*e*P	**P**	**09 25 59.9**	**+0.6**
	comp=E,4.0nm,0.8s,mb4.4						
AKTK	**Aktyubinsk**	**37.93**	**319**	P	**P**	**09 26 15.1**	**+2.1**
AKTO	**Aktyubinsk**	**37.93**	**319**	P	**P**	**09 26 15.1**	**+2.1**
	comp=E,1.3nm,0.4s,mb4.1,baz=101,slow=11,SNR=4.6						
BRTR	**Keskin Array B**	**53.51**	**301**	P	**P**	**09 28 15.6**	**-0.7**
	comp=E,0.6nm,0.5s,mb3.8,baz=117,slow=7.8,SNR=5.1						
FINES	**FINESS Array B**	**57.80**	**328**	P	**P**	**09 28 47.0**	**+0.3**
	comp=E,1.6nm,0.7s,mb4.1,baz=101,slow=14,SNR=3.1						
ARCES	**ARCESS Array B**	**58.77**	**337**	P	**P**	**09 28 54.2**	**+0.8**
	comp=E,1.6nm,0.9s,mb4.1,baz=88,slow=8.2,SNR=5.1						
ASAR	**Alice Springs**	**61.52**	**141**	P	**P**	**09 29 12.9**	**+0.1**
	comp=E,1.8nm,0.5s,mb4.4,baz=326,slow=6.6,SNR=40						
NOA	**NORSAR Array B**	**64.98**	**328**	P	**P**	**09 29 34.6**	**-0.6**
	comp=E,1.2nm,0.7s,mb4.0,baz=81,slow=6.6,SNR=4.5						
STKA	**Stephens Creek**	**72.16**	**141**	P	**P**	**09 30 20.5**	**0.0**
	comp=E,1.7nm,0.8s,mb4.0,baz=292,slow=5.4,SNR=3.1						
ILAR	**Eielson Array**	**76.45**	**23**	P	**P**	**09 30 44.0**	**-1.1**
	comp=E,0.4nm,0.7s,mb3.5,baz=308,slow=5.0,SNR=5.9						
TORD	**Torodi Ar. Bea**	**88.75**	**284**	P	**P**	**09 31 49.2**	**-0.8**
	comp=E,0.4nm,0.8s,mb3.8,baz=81,slow=5.9,SNR=3.6						

KRSC 12 09:22:18.4±1.1,50.66N×157.99E,h83km±97km,ML3.9,
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALID	**Alaid**	**1.56**	**279**	*i* P	**Pn**	**09 22 44.5**	**-0.1**
ALID				*i* S	**Sn**	**09 23 03.7**	**-0.7**
MIPR	**Malaya Ipel'ka**	**1.79**	**335**	*i* P	**Pn**	**09 22 49.9**	**+2.3**
MIPR				*i* S	**Sn**	**09 23 12.7**	**+3.0**
GRL	**Gorelyy**	**1.90**	**2**	*e*P	**Pn**	**09 22 51.1**	**+2.2**
GRL				*i* S	**Sn**	**09 23 14.9**	**+2.7**
PET	**Petropavlovsk**	**2.40**	**10**	*i* P	**Pn**	**09 22 58.0**	**+2.3**
PET				*i* S	**Sn**	**09 23 27.0**	**+2.8**
AVH	**Avacha**	**2.65**	**10**	*i* P	**Pn**	**09 23 02.4**	**+3.4**
AVH				*i* S	**Sn**	**09 23 34.5**	**+4.3**
SPN	**Mys Shipunski**	**2.75**	**27**	P	**Pn**	**09 23 01.9**	**+1.6**
SPN				*i* S	**Sn**	**09 23 34.0**	**+1.5**
GNL	**Ganaly**	**3.04**	**359**	*i* P	**Pn**	**09 23 07.5**	**+3.3**
MKZ	**Mys Kozlova**	**4.52**	**29**	*e*P	**Pn**	**09 23 25.3**	**+1.0**
MKZ				*e*S	**Sn**	**09 24 14.9**	**-0.6**
KBTR	**Krutoberegovo**	**6.26**	**26**	*e*P	**Pn**	**09 23 50.0**	**+2.0**

KRSC 12 09:35:03.7±0.6,54.26N×160.95E,h19km±19km,ML3.9,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.54**	**57**	*i* P	Pg	**09 35 14.9**	**+0.3**
MKZ				*i* S	Sg	**09 35 23.0**	**+1.1**
KII	**Karymskiy**	**0.91**	**256**	*i* P	Pb	**09 35 20.1**	**-0.7**
KII				*i* S	Sb	**09 35 31.7**	**-0.9**
SPN	**Mys Shipunski**	**1.29**	**206**	*e*P	Pn	**09 35 26.1**	**-0.5**
SPN				*i* S	Sn	**09 35 42.3**	**-1.0**
AVH	**Avacha**	**1.65**	**234**	*i* P	Pn	**09 35 32.9**	**+1.3**
AVH				*i* S	Sn	**09 35 54.7**	**+2.5**
BZGR	**Bezymyannyi-Gr**	**1.69**	**355**	P	Pn	**09 35 33.1**	**+0.9**
BZGR				*i* S	Sn	**09 35 54.9**	**+1.7**
KPT	**Kopyto**	**1.76**	**347**	*e*P	Pn	**09 35 34.6**	**+1.5**
KPT				*i* S	Sn	**09 35 57.3**	**+2.3**
PET	**Petropavlovsk**	**1.84**	**229**	*e*P	Pn	**09 35 35.2**	**+0.9**
PET				*i* S	Sn	**09 35 57.8**	**+0.8**
GNL	**Ganaly

BHL *eS* **Sn** **10 16 26.7 -8.4**

IDC ***12*** *10:17:03.5±1.7, 10°.66N×85°.66W, h0km, mb4.1/6, mb1 4.3/7, mb1mx4.0/19, mbtmp4.0/7, ML3.7/1, MS3.3/6, Ms1 3.3/6, ms1mx3.0/21, Error ellipse: s-maj=45.6km s-min=32.0km az=30.0*
CASC ***12*** *10:17:05.0±2.1, 10°.37N×86°.27W, h3km±10km, MD3.9, ML3.7, mb4.3(NEIC)*
ISCJB ***12*** *10:17:07.1±0.7, 10°.40N±0°.06×86°.25W±0°.04, h40km±6km, mb4.2/24, MS3.3/4, Error ellipse: s-maj=10.3km s-min=5.6km az=28.5*
NEIC ***12*** *10:17:09.8±1.2, 10°.56N×85°.98W, h46km±10km, mb4.3/18, Error ellipse: s-maj=19.8km s-min=11.0km az=204.0*

ISC 12 10:17:06.8±1.1, 10°.40N±0°.06×86°.23W±0°.04, h24km±7km, n75, σ0s97/80, mb4.2/24, MS3.3/4, 1C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VCR	**Vista de Mar**	**0.65**	**114**	*eP*		**Pb**		**10 17 19.3**	**-0.2**
NY14	**Universidad de**	**0.73**	**70**	*i* P		**Pb**		**10 17 21.2**	**+0.3**
NY14				*i* S		**Sb**		**10 17 33.3**	**+2.8**
GBS3	**Finca Las Im˜¡**	**0.86**	**63**	*i* P		**Pb**		**10 17 22.5**	**-0.5**
GBS3				*i* S		**Sb**		**10 17 34.9**	**+0.9**
LAPC	**Finca la Perla**	**0.87**	**65**	*i* P		**Pb**		**10 17 22.7**	**-0.6**
LAPC				*i* S		**Sb**		**10 17 35.1**	**+0.7**
GBS2	**Las Lilas**	**0.88**	**60**	*i* P		**Pb**		**10 17 23.0**	**-0.5**
GBS2				*i* S		**Sb**		**10 17 35.7**	**+0.8**
BUEV	**Buena Vista**	**0.91**	**64**	*i* P		**Pb**		**10 17 23.1**	**-0.7**
GB1A	**Borinquen Arri**	**0.92**	**63**	*i* P		**Pb**		**10 17 23.6**	**-0.5**
GPS3	**Bodega del ICE**	**0.93**	**67**	*i* P		**Pb**		**10 17 23.6**	**-0.5**
GPS3				*i* S		**Sb**		**10 17 37.1**	**+1.0**
GPS2	**Hotel Rinc˜‡n**	**0.94**	**68**	*i* P		**Pb**		**10 17 23.9**	**-0.5**
GPS1	**Guardaparques**	**0.95**	**67**	*i* P		**Pb**		**10 17 24.0**	**-0.5**
SSNN	**San Juan del S**	**0.96**	**23**	*eP*		**Pb**		**10 17 24.1**	**-0.8**
LIM1	**Limonal**	**1.01**	**73**	*i* P		**Pn**		**10 17 25.0**	**-0.6**
GUAB	**Guayabo de Bag**	**1.04**	**73**	*i* P		**Pn**		**10 17 25.2**	**-0.6**
COLC	**Colonia**	**1.05**	**75**	*i* P		**Pn**		**10 17 25.5**	**-0.6**
MESS	**Mesas**	**1.08**	**71**	*i* P		**Pn**		**10 17 25.9**	**-0.5**
CUI	**Cuipilapa**	**1.08**	**76**	*i* P		**Pn**		**10 17 26.1**	**-0.4**
CUI				*i* S		**Sb**		**10 17 40.6**	**0.0**
JCR	**Jicaral**	**1.23**	**116**	*eP*		**Pn**		**10 17 27.9**	**-0.7**
AMAS	**Alto Masis**	**1.24**	**80**	⇑*i*P		**Pn**		**10 17 28.3**	**-0.4**
AMAS				*i* S		**Sn**		**10 17 52.2**	**+1.6**
JTS	**JuntasAbangare**	**1.27**	**95**	*e*Pg		**Sn**		**10 17 28.3**	**-0.7**
JTS				*e*Sg		**Sn**		**10 17 51.5**	**+6.2**
CONN	**Concepcion**	**1.31**	**27**	*eP*		**Pn**		**10 17 28.9**	**-0.6**
CASO	**Castillo**	**1.48**	**88**	*i* P		**Pn**		**10 17 32.1**	**+0.2**
APON	**Apoyo**	**1.52**	**6**	*eP*		**Pn**		**10 17 32.3**	**-0.2**
CRUN	**El Crucero**	**1.58**	**358**	*eP*		**Pn**		**10 17 33.8**	**+0.5**
MGAN	**Managua**	**1.74**	**360**	*eP*		**Pn**		**10 17 35.2**	**-0.3**
MGAN				*e*S		**Sn**		**10 18 03.3**	**+6.3**
MGAN				*i*				10 18 09.1	
	comp=E,933nm,0.5s								
XAVN	**Gruta Xavier**	**1.74**	**357**	*eP*		**Pn**		**10 17 35.5**	**-0.1**
CGA2	**Cerro Gallo 2**	**1.78**	**102**	*eP*		**Pn**		**10 17 36.6**	**+0.5**
CSAN		**1.79**	**354**	*eP*		**Pn**		**10 17 36.0**	**-0.2**
COPN	**Copaltepe**	**1.81**	**349**	*eP*		**Pn**		**10 17 36.5**	**0.0**
PRS1	**Puriscal**	**1.94**	**102**	*eP*		**Pn**		**10 17 38.4**	**+0.2**
MOMJ	**Momotombo**	**2.02**	**352**	*eP*		**Pn**		**10 17 39.2**	**-0.3**
LAJ	**Bijagual**	**2.15**	**104**	*eP*		**Pn**		**10 17 36.3**	**-4.9**
TEL3	**Telica 3**	**2.24**	**345**	*eP*		**Pn**		**10 17 42.5**	**0.0**
QCR	**Quepos**	**2.26**	**115**	*eP*		**Pn**		**10 17 47.3**	**+4.7**
TELN	**Telica**	**2.27**	**345**	*eP*		**Pn**		**10 17 42.9**	**0.0**
URSC	**Urasca**	**2.48**	**103**	*eP*		**Pn**		**10 17 47.5**	**+1.8**
BUS	**Buena Vista**	**2.58**	**109**	*eP*		**Pn**		**10 17 53.3**	**+6.3**
TGUH	**Tegucigalpa,Un**	**3.78**	**345**	*e*Pn		**Pn**		**10 18 04.8**	**+1.2**
CMIG	**Matias Romero**	**10.72**	**309**	Pn		**Pn**		**10 19 40.9**	**+2.0**
CMIG				Sn		**Sn**		**10 21 48.2**	**+10**
CMIG	**Matias Romero**	**10.72**	**309**	Pn		**Pn**		**10 19 40.9**	**+2.0**
	comp=E,0.5nm,0.3s,baz=106,slow=9.2,SNR=6.0								
CMIG				Sn		**Sn**		**10 21 48.2**	**+10**
	comp=E,0.0nm,0.3s,baz=50,slow=11,SNR=2.3								
ROSC	**El Rosal**	**13.02**	**114**	LR		LR		10 24 21.1	
	comp=E,71nm,19.2s,baz=238,slow=35								
ATAH	**Atahualpa**	**19.09**	**156**	LR		LR		10 27 54.4	
	comp=E,123nm,18.8s,baz=329,slow=34								
LRAL	**Lakeview Retre**	**22.54**	**358**	*eP*		**P**		**10 22 05.2**	**+0.1**
	comp=E,8.2nm,0.8s,mb4.2								
GOGA	**Godfrey**	**23.05**	**6**	*eP*		**P**		**10 22 10.8**	**+0.4**
	comp=E,3.2nm,0.5s,mb4.0								
JCT	**Junction City**	**23.64**	**330**	*eP*		**P**		**10 22 16.8**	**+0.4**
	comp=E,3.9nm,0.7s,mb4.0								
JSC	**Jenkinsville**	**24.21**	**10**	*eP*		**P**		**10 22 21.5**	**-0.1**
SWET	**Sewanee**	**24.71**	**1**	*eP*		**P**		**10 22 25.5**	**-0.7**
UALR	**University of**	**24.90**	**348**	*eP*		**P**		**10 22 26.1**	**-1.8**
	comp=E,13nm,0.8s,mb4.5								
TXAR	**Lajitas Array**	**24.91**	**322**	P		**P**		**10 22 29.4**	**+1.3**
	comp=E,2.9nm,0.5s,mb4.0,baz=140,slow=9.3,SNR=28								
TXAR				PcP		PcP		10 26 04.8	+1.2
	comp=E,0.6nm,0.7s,baz=151,slow=5.4,SNR=4.8								
MIAR	**Mount Ida**	**24.96**	**346**	*eP*		**P**		**10 22 27.2**	**-1.2**
	comp=E,9.7nm,0.6s,mb4.5								
CPCT	**Cooper Cave**	**24.99**	**3**	*eP*		**P**		**10 22 28.8**	**0.0**
TKL	**Tuckaleechee C**	**25.25**	**5**	*eP*		**P**		**10 22 30.5**	**-0.6**
TKL				LR		LR		10 32 53.4	
TKL	**Tuckaleechee C**	**25.25**	**5**	P		**P**		**10 22 29.4**	**-1.7**
	comp=E,3.7nm,0.7s,mb4.0,baz=167,slow=12,SNR=6.1								
TKL				LR		LR		10 32 53.4	
	comp=E,59nm,18.3s,MS3.1,baz=15,slow=38								
WVT	**Waverly**	**25.66**	**357**	*eP*		**P**		**10 22 32.7**	**-2.1**
	comp=E,3.1nm,0.6s,mb4.0								
WMOK	**Wichita Mounta**	**26.80**	**337**	*eP*		**P**		**10 22 45.3**	**+0.1**
	comp=E,8.3nm,0.8s,mb4.3								
WCI	**Wyandotte Cave**	**27.71**	**360**	*eP*		**P**		**10 22 51.9**	**-1.4**
	comp=E,9.3nm,0.8s,mb4.5								
HDIL	**Hopedale**	**30.16**	**355**	*eP*		**P**		**10 23 13.2**	**-1.8**
	comp=E,16nm,0.9s,mb4.7								
ANMO	**Albuquerque**	**30.62**	**326**	P		**P**		**10 23 20.6**	**+1.4**
	comp=E,0.9nm,0.7s,mb3.7,baz=142,slow=7.3,SNR=8.5								
LPAZ	**La Paz**	**32.00**	**146**	LR		LR		10 37 20.6	
	comp=E,35nm,19.5s,MS3.0,baz=327,slow=38								
SDCO	**Great Sand Dun**	**32.28**	**331**	*eP*		**P**		**10 23 34.9**	**+1.2**
	comp=E,2.1nm,0.7s,mb4.1								
SRU	**San Rafael**	**35.88**	**327**	*eP*		**P**		**10 24 06.0**	**+1.0**
	comp=E,2.0nm,0.7s,mb4.2								
HWUT	**Hardware Ranch**	**38.24**	**329**	*eP*		**P**		**10 24 25.1**	**+0.1**
	comp=E,32nm,2.3s,mb4.6								
AGMN	**Agassiz Nation**	**38.63**	**350**	*eP*		**P**		**10 24 25.5**	**-2.7**
	comp=E,5.8nm,1.0s,mb4.3								
N13A	**Wendover, West**	**39.11**	**326**	*eP*		**P**		**10 24 33.9**	**+1.6**
	comp=E,8.7nm,0.8s,mb4.5								
REDW	**Red Top Meadow**	**39.20**	**331**	*eP*		**P**		**10 24 33.2**	**+0.1**
SNOW	**Snow King Moun**	**39.23**	**331**	*eP*		**P**		**10 24 34.2**	**+1.0**
	comp=E,60nm,2.5s,mb4.9								
LOHW	**Long Hollow**	**39.27**	**332**	*eP*		**P**		**10 24 34.1**	**+0.5**
	comp=E,25nm,2.7s,mb4.5								
NVAR	**Mina Array Bea**	**40.03**	**320**	P		**P**		**10 24 43.2**	**+3.2**
NVAR				PcP		PcP		10 26 47.3	+2.5
NVAR	**Mina Array Bea**	**40.03**	**320**	P		**P**		**10 24 43.2**	**+3.2**
	comp=E,3.5nm,0.7s,mb4.2,baz=131,slow=7.5,SNR=31								
NVAR				PcP		PcP		10 26 47.3	+2.5
	comp=E,1.0nm,0.6s,baz=131,slow=4.1,SNR=8.6								
HLID	**Hailey**	**41.10**	**329**	*eP*		**P**		**10 24 49.5**	**+0.7**
	comp=E,2.2nm,0.9s,mb3.8								
WVOR	**Wild Horse Val**	**42.66**	**324**	*eP*		**P**		**10 25 02.8**	**+1.2**
	comp=E,2.5nm,0.7s,mb4.0								
SCHQ	**Schefferville**	**46.91**	**15**	P		**P**		**10 25 32.4**	**-2.9**
	comp=E,2.0nm,0.6s,mb4.2,baz=213,slow=7.1,SNR=7.3								
SCHQ				LR		LR		10 45 52.8	
	comp=E,66nm,18.0s,MS3.6,baz=67,slow=37								
ILAR	**Eielson Array**	**68.37**	**336**	P		**P**		**10 28 05.0**	**-1.1**
	comp=E,0.7nm,0.7s,mb3.8,baz=133,slow=4.7,SNR=10.0								
NOA	**NORSAR Array B**	**84.58**	**29**	LR		LR		11 04 55.6	
	comp=E,16nm,19.1s,MS3.4,baz=0.0,slow=34								
KSRS	**Korea Array**	**122.64**	**328**	PKP		PKPdf		10 36 01.0	0.0
	comp=E,0.8nm,0.6s,baz=34,slow=1.4,SNR=6.8								
CMAR	**Chiang Mai Arr**	**150.88**	**350**	PKPbc		PKPbc		10 36 58.1	-0.2
	comp=E,1.0nm,0.6s,baz=331,slow=3.7,SNR=6.2								

FUNV 12 10:18:26.6, 6°.40N×73°.51W, h129km, MW3.6, 2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.88**	**39**	⇓*i*P		Pn		10 18 58.4	-0.7
CAPV				*e*S		Sn		10 19 22.5	-1.4
VIGV	**El Vigia**	**3.23**	**41**	⇓*e*P		Pn		10 19 14.7	-1.5
VIGV				*e*S		Sn		10 19 51.0	-3.5
SOCV	**Socops**	**3.23**	**54**	*eP*		Pn		10 19 14.9	-1.3
SOCV				*e*S		Sn		10 19 50.4	-4.1
ELOV	**Elorza**	**4.04**	**81**	*eP*		Pn		10 19 26.1	-0.8
VIRV	**Villa del Rosa**	**4.22**	**15**	*eP*		Pn		10 19 27.3	-2.1
VIRV				*e*S		Sn		10 20 13.5	-4.6
QARV	**Quebrada Arrib**	**4.80**	**38**	*eP*		Pn		10 19 35.5	-1.6
SANV	**Sanarito**	**5.00**	**52**	*eP*		Pn		10 19 38.1	-1.6
CURV	**Curarigua**	**5.02**	**44**	*eP*		Pn		10 19 38.0	-2.1
DABV	**Dabajuro**	**5.32**	**32**	*eP*		Pn		10 19 42.4	-1.6
TEPV	**Terepaima**	**5.55**	**50**	*eP*		Pn		10 19 45.4	-1.7
SIQV	**Siquisique**	**5.59**	**41**	*eP*		Pn		10 19 45.7	-2.0
BAUV	**El Baul**	**5.98**	**65**	*eP*		Pn		10 19 50.4	-2.6
MAPV	**Macapo**	**6.05**	**55**	*eP*		Pn		10 19 51.3	-2.6
IMOV	**Isla Los Monje**	**6.46**	**23**	*eP*		Pn		10 19 56.5	-2.8
MONV	**Montecano**	**6.53**	**32**	*eP*		Pn		10 19 58.8	-1.6
TURV	**Turiamo**	**6.90**	**54**	*eP*		Pn		10 20 02.7	-2.6
CAOV	**Caicara del Or**	**7.20**	**82**	*eP*		Pn		10 20 06.8	-2.5
CUPV	**Cœpira**	**8.46**	**64**	*eP*		Pn		10 20 23.2	-3.2

DDA ***12*** *10:43:37.4, 40°.31N×29°.15E, h2km±2km, Md2.6*
ISK ***12*** *10:43:37.5, 40°.36N×29°.13E, h13km, MD2.4*
ISCJB ***12*** *10:43:38.0±0.4, 40°.38N±0°.03×29°.16E±0°.03, h10km±5km, Error ellipse: s-maj=5.8km s-min=4.1km az=5.7*
CSEM ***12*** *10:43:38.1±0.1, 40°.38N×29°.15E, h12km, MD2.4, Error ellipse: s-maj=3.8km s-min=3.0km az=172.0*

ISC 12 10:43:38.3±0.4, 40°.38N±0°.04×29°.15E±0°.03, h12km±4km, n30, σ0s83/48, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GEMT	**Gemlik**	**0.07**	**28**	*e*PG		**Pg**		**10 43 40.7**	**-0.2**
GEMT				*e*SG		**Sg**		**10 43 42.9**	**+0.2**
GEMT	**Gemlik**	**0.07**	**28**	*e*Pg		**Pg**		**10 43 40.7**	**-0.2**
GEMT				*e*Sg		**Sg**		**10 43 42.9**	**+0.2**
MDNY	**Mudanya-Bursa**	**0.20**	**268**	*e*PG		**Pg**		**10 43 42.0**	**-0.8**
MDNY				*e*SG		**Sg**		**10 43 45.6**	**-0.2**
MDNY	**Mudanya-Bursa**	**0.20**	**268**	*e*Pg		**Pg**		**10 43 42.0**	**-0.8**
MDNY				*e*Sg		**Sg**		**10 43 45.6**	**-0.2**
ULDT	**Uludag**	**0.23**	**182**	*i* P		**Pg**		**10 43 40.3**	**-3.0**
ULDT	**Uludag**	**0.23**	**182**	*i* P		**Pg**		**10 43 40.3**	**-3.0**
YLV	**Yalova**	**0.26**	**42**	*e*PG		**Pg**		**10 43 43.4**	**-0.3**
YLV	**Yalova**	**0.26**	**42**	*e*Pg		**Pg**		**10 43 43.4**	**-0.3**
ARMT	**Armutlu**	**0.29**	**311**	*e*PG		**Pg**		**10 43 44.0**	**-0.3**
ARMT	**Armutlu**	**0.29**	**311**	*e*Pg		**Pg**		**10 43 44.0**	**-0.3**
ADVT	**Abdulvahap**	**0.45**	**83**	*e*PG		**Pg**		**10 43 46.9**	**-0.4**
ADVT				*e*SG		**Sg**		**10 43 54.3**	**+0.9**
ADVT	**Abdulvahap**	**0.45**	**83**	*e*Pg		**Pg**		**10 43 46.9**	**-0.4**
ADVT				*e*Sg		**Sg**		**10 43 54.3**	**+0.9**
GPA	**Golpazari**	**0.89**	**95**	*e*PG		**Pg**		**10 43 55.7**	**+0.1**
GPA	**Golpazari**	**0.89**	**95**	*e*Pg		**Pg**		**10 43 55.7**	**+0.1**
DURS	**Dursunbey**	**0.93**	**214**	*i* P		**Pg**		**10 43 56.4**	**+0.1**
DURS				*i* S		**Sg**		**10 44 09.8**	**+1.4**
DURS	**Dursunbey**	**0.93**	**214**	*i* P		**Pg**		**10 43 56.4**	**+0.1**
DURS				*i* S		**Sg**		**10 44 09.8**	**+1.4**
CTKS	**Kestanelik-??a**	**0.99**	**331**	*e*PG		**Pg**		**10 43 57.2**	**-0.2**
CTKS				*e*SG		**Sg**		**10 44 11.4**	**+1.1**
CTKS	**Kestanelik-??a**	**0.99**	**331**	*e*Pg		**Pg**		**10 43 57.2**	**-0.2**
CTKS				*e*Sg		**Sg**		**10 44 11.4**	**+1.1**
GULT	**Gulveren**	**1.04**	**86**	*e*PG		**Pg**		**10 43 58.4**	**-0.1**
GULT	**Gulveren**	**1.04**	**86**	*e*Pg		**Pg**		**10 43 58.4**	**-0.1**
BORA	**Eskisehir**	**1.12**	**116**	*i* P		**Pg**		**10 43 58.9**	**-1.0**
BORA				*i* S		**Sg**		**10 44 15.9**	**+1.5**
BORA	**Eskisehir**	**1.12**	**116**	*i* P		**Pg**		**10 43 58.9**	**-0.9**
BORA				*i* S		**Sg**		**10 44 15.9**	**+1.5**
GONE	**Gonen-Balikesi**	**1.17**	**254**	*e*PN		**Pn**		**10 43 59.9**	**-0.5**
GONE	**Gonen-Balikesi**	**1.17**	**254**	*e*Pn		**Pn**		**10 43 59.9**	**-0.5**
GDZ	**Gediz**	**1.31**	**169**	*i* P		**Pn**		**10 44 00.7**	**-1.7**
GDZ				*i* S		**Sb**		**10 44 19.6**	**+0.1**
GDZ	**Gediz**	**1.31**	**169**	*i* P		**Pn**		**10 44 00.7**	**-1.7**
GDZ				*i* S		**Sb**		**10 44 19.6**	**0.0**
BALY	**Balya**	**1.33**	**242**	*i* P		**Pn**		**10 44 03.0**	**+0.2**
BALY				*i* S		**Sb**		**10 44 21.3**	**+1.1**
BALY	**Balya**	**1.33**	**242**	*i* P		**Pn**		**10 44 03.0**	**+0.3**
BALY				*i* S		**Sb**		**10 44 21.3**	**+1.0**
DEMI	**Demirci**	**1.37**	**194**	*i* P		**Pn**		**10 44 03.3**	**+0.1**
DEMI				*i* S		**Sn**		**10 44 21.4**	**+0.1**
DEMI	**Demirci**	**1.37**	**194**	*i* P		**Pn**		**10 44 03.3**	**+0.1**
DEMI				*i* S		**Sn**		**10 44 21.4**	**+0.1**

TAP ***12*** *10:44:57.5, 21°.65N×121°.33E, h30km, ML3.3, C*
JMA ***12*** *10:45:01.2±0.2, 21°.70N×121°.63E, h134km, M2.8*

ISC 12 10:44:57.8±0.9, 21°.62N±0°.06×121°.37E±0°.03, h20km±4km, n32, σ1s03/53, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.45**	**22**	*i* P		**Pg**		**10 45 07.2**	**+0.1**
	baz=37								
LAY				*e*S		**Sg**		**10 45 13.8**	**+0.5**
	baz=37								
TSEB	**Hengchuen, Pin**	**0.52**	**303**	*e*P		**Pg**		**10 45 08.8**	**+0.6**
	baz=299								
TSEB				*i* S		**Sg**		**10 45 16.8**	**+1.5**
	baz=299								
TWK1	**Hengchun**	**0.61**	**302**	P		**Pg**		**10 45 09.1**	**-0.9**
	baz=301								
TWK1				*e*S		**Sg**		**10 45 17.7**	**-0.6**
	baz=301								
HEN	**Hengchun**	**0.70**	**303**	*e*P		**Pb**		**10 45 10.5**	**-0.8**
	baz=303								
HEN				*e*S		**Sb**		**10 45 20.1**	**-0.5**
	baz=303								
EAST	**Anshuo**	**0.90**	**328**	P		**Pb**		**10 45 13.1**	**-1.7**
	baz=339								
SCZT	**Fangliau**	**1.02**	**317**	*e*P		**Pb**		**10 45 16.1**	**-0.7**
	baz=324								
SCZT				*e*S		**Sb**		**10 45 30.0**	**+0.2**
	baz=324								
ECL	**Taimali**	**1.04**	**339**	*e*P		**Pb**		**10 45 14.8**	**-2.5**
	baz=340								
TTN	**Taitung**	**1.15**	**350**	*e*P		**Pn**		**10 45 17.2**	**-1.5**
	baz=352								
TTN				*e*S		**Sb**		**10 45 33.4**	**-0.1**
	baz=352								
TWG	**Pinlang**	**1.23**	**347**	*e*P		**Pn**		**10 45 17.3**	**-2.5**
	baz=337								
TWG				*e*S		**Sb**		**10 45 31.3**	**-4.4**
	baz=337								
SSD	**Sandimen**	**1.31**	**329**	*e*P		**Pn**		**10 45 20.3**	**-0.7**
	baz=338								
CHKT	**Chengkung**	**1.47**	**360**	*e*P		**Pn**		**10 45 21.8**	**-1.4**
	baz=11								
CHKT				*e*S		**Sn**		**10 45 39.7**	**-2.2**
	baz=11								
TWM1	**Shoushan**	**1.48**	**324**	*e*P		**Pn**		**10 45 24.3**	**+0.9**
	baz=338								
ELDTW	**Lidau**	**1.59**	**348**	*e*P		**Pn**		**10 45 23.6**	**-1.4**
	baz=359								
SGST	**Jiashian**	**1.63**	**334**	*e*P		**Pn**		**10 45 26.1**	**+0.8**
	baz=334								
SGST				*e*S		**Sn**		**10 45 46.2**	**+0.4**
	baz=334								
TWF1	**Yuli**	**1.73**	**358**	*e*P		**Pn**		**10 45 24.9**	**-1.8**
	baz=349								
CHN1	**Nanshi**	**1.74**	**334**	*e*P		**Pn**		**10 45 27.9**	**+1.0**
	baz=334								
CHN1				*e*S		**Sn**		**10 45 49.2**	**+0.6**
	baz=334								
WTP	**Ta-pu**	**1.76**	**337**	P		**Pn**		**10 45 27.9**	**+0.7**
	baz=348								
WTP				*e*S		**Sn**		**10 45 50.2**	**+1.1**
	baz=348								
TWK	**Hsinying**	**1.83**	**334**	*e*P		**Pn**		**10 45 29.0**	**+0.8**
	baz=335								
CHN4	**Tsaushan**	**1.86**	**338**	*e*P		**Pn**		**10 45 29.4**	**+0.8**
	baz=338								
EHY	**Hungye**	**1.88**	**359**	*e*P		**Pn**		**10 45 28.0**	**-0.8**
	baz=351								
YUS	**Yu-Shan**	**1.90**	**348**	*e*P		**Pn**		**10 45 28.8**	**-0.4**
	baz=357								
ALS	**Alishan**	**1.95**	**345**	*e*P		**Pn**		**10 45 30.2**	**+0.4**
	baz=354								
ALS				*e*S		**Sn**		**10 45 54.7**	**+0.9**
	baz=354								
CHN5	**Tsauling**	**2.07**	**342**	*e*P		**Pn**		**10 45 31.9**	**+0.5**
	baz=343								
CHN5				*e*S		**Sn**		**10 45 57.5**	**+0.8**
	baz=343								
ESL	**Shilin**	**2.19**	**2**	*e*P		**Pn**		**10 45 32.1**	**-0.9**
	baz=353								
SMLT	**Sun Moon Lake**	**2.29**	**349**	*e*P		**Pn**		**10 45 35.2**	**+0.7**
	baz=350								
SMLT				*e*S		**Sn**		**10 46 02.3**	**+0.1**
	baz=350								
TYC	**Yuchr**	**2.32**	**348**	*e*P		**Pn**		**10 45 35.5**	**+0.6**
	baz=349								
TYC				*e*S		**Sn**		**10 46 03.6**	**+0.7**
	baz=349								
YOJ	**Yonaguni jima**	**3.21**	**28**	P		**Pn**		**10 45 49.0**	**+1.9**
YOJ				*e*S		**Sn**		**10 46 25.8**	**+1.0**
HATJ	**Hateruma jima**	**3.31**	**42**	P		**Pn**		**10 45 49.9**	**+1.4**
HATJ				*e*S		**Sn**		**10 46 26.8**	**-0.5**
IRIF	**Iriomote-Funau**	**3.47**	**38**	P		**Pn**		**10 45 51.7**	**+1.0**
IRIF				*e*S		**Sn**		**10 46 31.2**	**-0.1**
JKRS	**Kuro-shima**	**3.57**	**43**	P		**Pn**		**10 45 53.0**	**+0.9**
JKRS				S		**Sn**		**10 46 33.0**	**-0.7**
JIJ	**Ishigaki jima**	**3.74**	**43**	P		**Pn**		**10 45 55.6**	**+1.1**
JIJ				S		**Sn**		**10 46 36.5**	**-1.5**
JTJ	**Tarama**	**4.30**	**45**	P		**Pn**		**10 46 02.9**	**+0.8**
JTJ				*e*S		**Sn**		**10 46 50.9**	**-0.8**

ISCJB ***12*** *10:48:26.6±0.4, 48°.16N±0°.02×13°.23E±0°.05, h10km, Error ellipse: s-maj=4.6km s-min=2.7km az=5.4*
VIE ***12*** *10:48:27.2±0.6, 48°.16N×13°.27E, h10km, mb2.4/5, ML2.8/7, Error ellipse: s-maj=6.5km s-min=3.9km az=94.0 11 km NE of Mattighofen*
PRU ***12*** *10:48:27.9, 48°.14N×13°.63E, h0km*
BGR ***12*** *10:48:28.1±0.3, 48°.12N×13°.17E, h10km, ML2.3/3, Error ellipse: s-maj=4.4km s-min=2.2km az=92.0*
CSEM ***12*** *10:48:28.4±0.2, 48°.17N×13°.34E, h26km±1km, ML3.4/5, Error ellipse: s-maj=4.0km s-min=2.5km az=94.0*
IPEC ***12*** *10:48:28.3±0.5, 48°.15N×13°.22E, h29km±2km, ML2.1/3, Error ellipse: s-maj=5.9km s-min=1.3km az=60.0*

ISC 12 10:48:27.3±0.3, 48°.13N±0°.02×13°.22E±0°.05, h10km, n45, σ0s92/70, 7C-5D, Austria

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RJOB	**Jochberg**	**0.49**	**216**	⇑*i*Pg		**Pg**		**10 48 40.9**	**+4.1**
RJOB	**Jochberg**	**0.49**	**216**	Pg		**Pg**		**10 48 40.9**	**+4.1**
BGLD	**Berchtesgaden**	**0.50**	**196**	⇑*i*Pg		**Pg**		**10 48 40.5**	**+3.5**
BGLD				⇑*i*Sg		**Sg**		**10 48 49.1**	**+5.5**
BGLD	**Berchtesgaden**	**0.50**	**196**	Pg		**Pg**		**10 48 40.5**	**+3.5**
BGLD				Sg		**Sg**		**10 48 49.1**	**+5.5**
MOA	**Molln**	**0.76**	**112**	*e*Pg		**Pg**		**10 48 42.9**	**+0.9**
	SNR=21								
MOA				*e*Sg		**Sg**		**10 48 52.1**	**+0.2**
MOA	**Molln**	**0.76**	**112**	⇓*e*Pg		**Pg**		**10 48 42.9**	**+0.9**
	6.3nm,0.1s,SNR=14								
MOA				⇑*i*Sg		**Sg**		**10 48 52.3**	**+0.4**
	121nm,0.1s								
MOA	**Molln**	**0.76**	**112**	Pg		**Pg**		**10 48 42.9**	**+0.9**
	6.3nm,0.1s,SNR=14								
MOA				Sg		**Sg**		**10 48 52.3**	**+0.4**
	121nm,0.1s								
**GEC

HMBC				*i* S	S	11 05 37.0	+2.5	
HMBC				AML	AML	11 05 39.4		
	comp=N,31nm,0.2s							
PSGC	**Pisagua**	**4.73**	**324**	*e*P	Pn	11 04 54.3	+2.3	
PSGC				*i* S	S	11 05 51.6	+2.3	
PSGC				AML	AML	11 05 54.6		
	comp=N,9.7nm,0.5s							
MNMC	**Miæe Miæ**	**4.87**	**332**	*e*P	Pn	11 04 57.4	+3.6	
MNMC				*i* S	S	11 05 56.7	+4.2	
MNMC				AML	AML	11 05 59.9		
	comp=E,36nm,0.6s							

*ISCJB **12** 11:04:26.7±0.4,39°.03N±0°.02×27°.88E±0°.03,h9km±4km, Error ellipse: s-maj=4.4km s-min=3.6km az=40.7*
*CSEM **12** 11:04:26.9±0.1,39°.03N×27°.88E,h10km,MD2.9, Error ellipse: s-maj=2.8km s-min=2.4km az=123.0*
*DDA **12** 11:04:26.7,39°.02N×27°.89E,h9km±2km,Md2.9*
*ISK **12** 11:04:26.4,39°.02N×27°.87E,h11km,MD2.8*
ISC 12 11:04:27.1±0.4,**39°.02N**±0°.02×**27°.88E**±0°.03,**h12**km±4km, **n33**,σ0°**61**/56,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.15**	**201**	*i* P	**Pg**	**11 04 30.2**	**-0.5**
AKHS				*i* S	**Sg**	**11 04 33.0**	**-0.2**
AKHS	**Akhisar**	**0.15**	**201**	*i* P	**Pg**	**11 04 30.2**	**-0.5**
AKHS				*i* S	**Sg**	**11 04 33.0**	**-0.2**
AKS	**Akhisar**	**0.15**	**202**	*e*PG	**Pg**	**11 04 30.2**	**-0.5**
AKS				*e*SG	**Sg**	**11 04 32.8**	**-0.4**
AKS	**Akhisar**	**0.15**	**202**	*e*Pg	**Pg**	**11 04 30.2**	**-0.5**
AKS				*e*Sg	**Sg**	**11 04 32.8**	**-0.4**
BALB	**Balikesir**	**0.62**	**360**	*e*PG	**Pg**	**11 04 38.9**	**-0.3**
BALB				*e*SG	**Sg**	**11 04 48.0**	**+0.6**
BALB	**Balikesir**	**0.62**	**360**	*e*Pg	**Pg**	**11 04 38.9**	**-0.3**
BALB				*e*Sg	**Sg**	**11 04 48.0**	**+0.6**
DEMI	**Demirci**	**0.65**	**88**	*i* P	**Pg**	**11 04 39.8**	**+0.1**
DEMI				*i* S	**Sg**	**11 04 48.5**	**+0.3**
DEMI	**Demirci**	**0.65**	**88**	*i* P	**Pg**	**11 04 39.8**	**+0.1**
DEMI				*i* S	**Sg**	**11 04 48.5**	**+0.2**
DURS	**Dursunbey**	**0.74**	**38**	*i* P	**Pg**	**11 04 40.9**	**-0.6**
DURS				*i* S	**Sg**	**11 04 51.6**	**+0.4**
DURS	**Dursunbey**	**0.74**	**38**	*i* P	**Pg**	**11 04 40.9**	**-0.6**
DURS				*i* S	**Sg**	**11 04 51.6**	**+0.4**
BALY	**Balya**	**0.75**	**344**	*i* P	**Pg**	**11 04 41.1**	**-0.6**
BALY				*i* S	**Sg**	**11 04 52.1**	**+0.6**
BALY	**Balya**	**0.75**	**344**	*i* P	**Pg**	**11 04 41.1**	**-0.5**
BALY				*i* S	**Sg**	**11 04 52.1**	**+0.6**
IZM	**Izmir**	**0.79**	**218**	*e*PG	**Pg**	**11 04 41.8**	**-0.5**
IZM				*e*SG	**Sg**	**11 04 53.2**	**+0.5**
KULA	**Kula-Manisa**	**0.79**	**129**	*e*PG	**Pg**	**11 04 42.2**	**-0.2**
KULA	**Kula-Manisa**	**0.79**	**129**	*e*Pg	**Pg**	**11 04 42.2**	**-0.2**
BLCB	**Balcova**	**0.91**	**226**	*e*PG	**Pg**	**11 04 44.4**	**-0.4**
BLCB				*e*SG	**Sg**	**11 04 57.4**	**+0.7**
BLCB	**Balcova**	**0.91**	**226**	*e*Pg	**Pg**	**11 04 44.4**	**-0.3**
BLCB				*e*Sg	**Sg**	**11 04 57.4**	**+0.7**
AYVA	**Ayvalik**	**0.97**	**288**	*i* P	**Pb**	**11 04 45.6**	**-0.2**
AYVA				*i* S	**Sg**	**11 05 00.0**	**+1.5**
AYVA	**Ayvalik**	**0.97**	**288**	*i* P	**Pb**	**11 04 45.6**	**-0.3**
AYVA				*i* S	**Sg**	**11 05 00.0**	**+1.5**
GONE	**Gonen-Balikesi**	**1.04**	**352**	*e*PG	**Pg**	**11 04 46.8**	**-0.3**
GONE	**Gonen-Balikesi**	**1.04**	**352**	*e*Pg	**Pg**	**11 04 46.8**	**-0.3**
GDZ	**Gediz**	**1.25**	**86**	*i* P	**Pn**	**11 04 49.9**	**-0.4**
GDZ				*i* S	**Sb**	**11 05 06.7**	**+0.2**
GDZ	**Gediz**	**1.25**	**86**	*i* P	**Pn**	**11 04 49.9**	**-0.4**
GDZ				*i* S	**Sb**	**11 05 06.7**	**+0.2**
KHAL	**Karahalli**	**1.42**	**117**	*i* P	**Pn**	**11 04 54.5**	**+1.9**
KHAL	**Karahalli**	**1.42**	**117**	*i* P	**Pn**	**11 04 54.5**	**+1.9**
EZN	**Ezine**	**1.45**	**304**	*e*PN	**Pn**	**11 04 53.0**	**-0.1**
EZN	**Ezine**	**1.45**	**304**	*e*Pn	**Pn**	**11 04 53.0**	**-0.1**
ULDT	**Uludag**	**1.48**	**40**	*i* P	**Pn**	**11 04 53.8**	**+0.3**
ULDT				*i* S	**Sn**	**11 05 12.7**	**-0.1**
ULDT	**Uludag**	**1.48**	**40**	*i* P	**Pn**	**11 04 53.8**	**+0.3**
ULDT				*i* S	**Sn**	**11 05 12.7**	**-0.1**
ALT	**Altintas**	**1.73**	**88**	*e*PN	**Pn**	**11 04 57.2**	**+0.2**
ALT	**Altintas**	**1.73**	**88**	*e*Pn	**Pn**	**11 04 57.2**	**+0.2**
SART	**Tekirdag**	**1.75**	**342**	*i* P	**Pn**	**11 04 56.5**	**-0.7**
SART				*i* S	**Sn**	**11 05 18.5**	**-1.0**
SART	**Tekirdag**	**1.75**	**342**	*i* P	**Pn**	**11 04 56.5**	**-0.8**
SART				*i* S	**Sn**	**11 05 18.5**	**-1.0**

*BJI **12** 11:21:28.4,25°.95N×105°.08E,h15km,mB4.8/1,mb4.3/3, ML3.6/13,Ms3.6/1,Ms7 4.1/1*
*IDC **12** 11:21:28.1±1.5,26°.03N×105°.30E,h0km,mb3.7/6, mb1 3.8/6,mb1mx3.6/23,mbtmp3.8/6, Error ellipse: s-maj=40.1km s-min=25.4km az=55.0*
ISC 12 11:21:27.6±1.1,**25°.92N**±0°.05×**105°.25E**±0°.04,**h4**km±7km, **n10**,σ0°**98**/15,**mb3.7**/6,**1C, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GYA	**Guiyang**	**1.38**	**67**	*i* Pg	**Pg**	**11 21 53.9**	**-0.2**
GYA				Sg	**Sg**	**11 22 11.5**	**-0.5**
GYA				smax			
	comp=N,550nm,1.0s						
GYA				smax			
	comp=E,2µm,0.8s						
KMI	**Kunming**	**2.40**	**251**	Pn	**Pn**	**11 22 07.2**	**-0.5**
KMI				Sn	**Sn**	**11 22 35.2**	**-2.3**
KMI				Sg	**Sg**	**11 22 45.5**	**+0.8**
KMI				smax			
	comp=N,140nm,1.0s						
KMI				smax			
	comp=E,120nm,1.2s						
CD2	**Chengdu**	**5.14**	**346**	Pn	**Pn**	**11 22 45.9**	**+0.6**
CD2				Sn	**Sn**	**11 23 45.6**	**+0.5**
CD2				Sg	**Sg**	**11 24 12.5**	**-0.2**
CD2				smax			
	comp=N,130nm,1.0s						
CD2				smax			
	comp=E,150nm,1.0s						
XAN	**Xi'an**	**8.69**	**21**	P	**Pn**	**11 23 33.7**	**-0.5**
XAN				smax			
	comp=N,21nm,1.2s						
XAN				smax			
	comp=E,13nm,1.1s						
SONM	**Songino Array**	**21.89**	**2**	P	**P**	**11 26 21.5**	**0.0**
	comp=E,2.5nm,0.7s,mb3.8,baz=180,slow=10,SNR=11						
KSRS	**Korea Array**	**22.40**	**54**	P	**P**	**11 26 27.1**	**-0.1**
	comp=E,1.4nm,0.7s,mb3.5,baz=244,slow=11,SNR=10						
MKAR	**Makanchi Array**	**27.67**	**325**	P	**P**	**11 27 19.1**	**+2.5**
	comp=E,1.2nm,0.8s,mb3.6,baz=136,slow=12,SNR=7.6						
ZALV	**Zalesovo Beam**	**31.84**	**337**	P	**P**	**11 27 52.8**	**-0.6**
	comp=E,1.4nm,0.7s,mb3.9,baz=141,slow=7.5,SNR=5.5						
ASAR	**Alice Springs**	**56.56**	**148**	P	**P**	**11 31 13.2**	**+1.7**
	comp=E,0.3nm,0.9s,mb3.3,baz=331,slow=7.0,SNR=4.2						
FINES	**FINESS Array B**	**62.45**	**328**	P	**P**	**11 31 51.0**	**-0.7**
	comp=E,1.1nm,0.7s,mb4.1,baz=82,slow=14,SNR=3.8						

*NEIC **12** 11:26:04.6±0.4,2°.03N×127°.22E,h35km,mb4.4/2, Error ellipse: s-maj=19.2km s-min=7.3km az=78.0*
*IDC **12** 11:26:09.5±7.0,1°.97N×127°.17E,h81km±68km,mb3.7/14, mb1 3.8/15,mb1mx3.7/22,mbtmp3.7/15, Error ellipse: s-maj=32.6km s-min=13.3km az=79.0*
*ISCJB **12** 11:26:10.4±0.7,2°.04N±0°.05×127°.09E±0°.07,h105km±6km, mb4.0/16, Error ellipse: s-maj=13.7km s-min=6.7km az=149.9*
*DJA **12** 11:26:11,2°.12N×127°.10E,h67km,mb4.4/5*
ISC 12 11:26:11.6±0.7,**2°.04N**±0°.06×**127°.09E**±0°.07,**h98**km±7km, **n27**,σ0°**95**/30,**mb4.0**/16,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.29**	**168**	P	**Pn**	**11 26 35.6**	**+0.4**
TNTI				S	**Sn**	**11 26 53.9**	**+0.9**
SGSI	**Sangihe**	**2.26**	**316**	P	**Pn**	**11 26 47.0**	**-0.4**
SGSI				S	**Sn**	**11 27 13.0**	**-1.9**
MNI	**Manado**	**2.33**	**255**	P	**Pn**	**11 26 47.2**	**-1.1**
MNI				S	**Sn**	**11 27 16.2**	**-0.3**
LBMI	**Labuha**	**2.69**	**171**	P	**Pn**	**11 26 53.6**	**+0.4**
NLAI	**Namlea**	**5.25**	**180**	P	**Pn**	**11 27 27.0**	**-0.6**
	2µm50nm,0.5s						
LUWI	**Luwuk**	**5.29**	**235**	P	**Pn**	**11 27 29.5**	**+1.2**
	2µm30nm,0.8s						
MRSI	**Marisa**	**5.38**	**253**	P	**Pn**	**11 27 31.6**	**+2.2**
	25nm,0.6s						
AAI	**Ambon**	**5.80**	**169**	P	**Pn**	**11 27 35.5**	**+0.4**
FITZ	**Fitzroy Crossi**	**20.07**	**184**	P	**P**	**11 30 35.7**	**-1.5**
	0.3nm,0.3s,baz=26,slow=7.7,SNR=6.9						

ASAR	**Alice Springs**	**26.40**	**166**	P	**P**	**11 31 37.5**	**-1.6**	
	0.5nm,0.4s,mb3.3,baz=352,slow=14,SNR=20							
CMAR	**Chiang Mai Arr**	**32.05**	**302**	P	**P**	**11 32 29.4**	**+0.1**	
	0.7nm,0.7s,mb3.5,baz=89,slow=6.2,SNR=5.6							
KSRS	**Korea Array**	**35.25**	**1**	P	**P**	**11 32 57.6**	**+0.9**	
	0.7nm,0.5s,mb3.8,baz=178,slow=11,SNR=4.7							
MJAR	**Matsushiro Arr**	**35.84**	**15**	P	**P**	**11 33 00.8**	**-1.0**	
	0.7nm,0.5s,mb3.9,baz=197,slow=9.0,SNR=2.8							
NWAO	**Narrogin (SRO)**	**36.01**	**194**	P	**P**	**11 33 02.4**	**-0.9**	
	4.4nm,0.5s,mb4.6,baz=8.9,slow=8.6,SNR=6.4							
STKA	**Stephens Creek**	**36.43**	**159**	P	**P**	**11 33 05.8**	**-1.2**	
	2.0nm,0.3s,mb4.5,baz=332,slow=10,SNR=7.9							
SONM	**Songino Array**	**49.00**	**342**	P	**P**	**11 34 49.3**	**+1.1**	
	1.3nm,0.6s,mb4.0,baz=154,slow=8.4,SNR=6.8							
MKAR	**Makanchi Array**	**59.14**	**326**	P	**P**	**11 36 03.0**	**+1.0**	
	4.3nm,0.4s,mb4.8,baz=122,slow=8.4,SNR=53							
AML	**Almayashu**	**62.16**	**318**	*e*P	**P**	**11 36 24.6**	**+1.9**	
	7.4nm,1.0s,mb4.7							
ZALV	**Zalesovo Beam**	**62.25**	**333**	P	**P**	**11 36 22.7**	**-0.2**	
	0.5nm,0.4s,mb3.9,baz=90,slow=2.9,SNR=2.9							
KURK	**Kurchatov**	**63.35**	**328**	P	**P**	**11 36 30.5**	**+0.2**	
KURK	**Kurchatov**	**63.35**	**328**	P	**P**	**11 36 30.5**	**+0.2**	
	4.2nm,0.5s,mb4.7,baz=130,slow=6.4,SNR=27							
BVAR	**Borovoye Array**	**68.92**	**327**	P	**P**	**11 37 06.1**	**+0.2**	
	1.2nm,0.6s,mb3.9,baz=130,slow=10,SNR=7.1							
ABKAR	**Akbulak array**	**73.68**	**321**	*e*P	**P**	**11 37 34.5**	**-0.2**	
	1.1nm,0.6s,mb3.8							
AKTK	**Aktyubinsk**	**75.20**	**322**	P	**P**	**11 37 43.5**	**+0.1**	
AKTO	**Aktyubinsk**	**75.20**	**322**	P	**P**	**11 37 43.5**	**+0.1**	
	1.0nm,0.5s,mb3.8,baz=82,slow=7.9							
MAW	**Mawson**	**82.31**	**200**	P	**P**	**11 38 22.0**	**0.0**	
	0.4nm,0.5s,mb3.5,baz=36,slow=8.7,SNR=3.1							
ILAR	**Eielson Array**	**86.46**	**25**	P	**P**	**11 38 43.0**	**0.0**	
	0.2nm,0.7s,mb3.1,baz=238,slow=5.0,SNR=4.0							

*ISCJB **12** 11:31:22.7±1.4,38°.67N±0°.04×44°.0E±0°.2,h3km±18km, Error ellipse: s-maj=27.8km s-min=6.3km az=5.0*
*ISK **12** 11:31:22.5,38°.67N×44°.00E,h6km,MD2.8*
*CSEM **12** 11:31:22.5,38°.67N×44°.00E,h6km,MD2.8, After ISK*
ISC 12 11:31:23.6±1.1,**38°.68N**±0°.04×**44°.0E**±0°.2,**h11**km±13km,**n9**, σ0°**78**/12,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.45**	**259**	*e*PG	**Pg**	**11 31 32.3**	**-0.1**
VANB	**Van**	**0.45**	**259**	*e*Pg	**Pg**	**11 31 32.3**	**-0.1**
CLDR	**Caldiran**	**0.46**	**356**	*e*PG	**Pg**	**11 31 32.2**	**-0.4**
CLDR				*e*SG	**Sg**	**11 31 39.3**	**+0.6**
CLDR	**Caldiran**	**0.46**	**356**	*e*Pg	**Pg**	**11 31 32.2**	**-0.4**
CLDR				*e*Sg	**Sg**	**11 31 39.3**	**+0.5**
HAKT	**HAKKARI**	**1.14**	**190**	*i* P	**Pg**	**11 31 44.0**	**-1.5**
HAKT				*i* S	**Sg**	**11 32 01.5**	**+1.3**
CUKT	**Cukurca**	**1.46**	**191**	*e*PN	**Pn**	**11 31 49.9**	**0.0**
CUKT	**Cukurca**	**1.46**	**191**	*e*Pn	**Pn**	**11 31 49.9**	**0.0**
GNI	**Garni**	**1.59**	**22**	*e*PN	**Pn**	**11 31 51.8**	**+0.2**
GNI	**Garni**	**1.59**	**22**	*e*Pn	**Pn**	**11 31 51.8**	**+0.1**

*ISK **12** 11:38:41.4,36°.95N×29°.19E,h6km,MD2.6*
*ISCJB **12** 11:38:42.7±0.6,36°.97N±0°.04×29°.19E±0°.04,h10km, Error ellipse: s-maj=6.0km s-min=3.9km az=162.7*
*DDA **12** 11:38:42.3,36°.99N×29°.12E,h7km±4km,Md2.9*
*CSEM **12** 11:38:42.5±0.3,36°.97N×29°.20E,h5km,MD2.6, Error ellipse: s-maj=6.6km s-min=5.4km az=168.0*
ISC 12 11:38:42.6±0.7,**36°.96N**±0°.04×**29°.18E**±0°.04,**h4**km±7km, **n22**,σ0°**82**/37,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.32**	**53**	*e*PG	**Pg**	**11 38 48.3**	**-0.5**
GLHS				*e*SG	**Sg**	**11 38 53.3**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.32**	**53**	*e*Pg	**Pg**	**11 38 48.3**	**-0.5**
GLHS				*e*Sg	**Sg**	**11 38 53.3**	**+0.3**
GOLH	**Golhisar**	**0.41**	**48**	*i* P	**Pg**	**11 38 49.4**	**-1.2**
GOLH				*i* S	**Sg**	**11 38 56.9**	**+1.0**
GOLH	**Golhisar**	**0.41**	**48**	*i* P	**Pg**	**11 38 49.4**	**-1.1**
GOLH				*i* S	**Sg**	**11 38 56.9**	**+1.0**
TURN	**Turunc**	**0.47**	**259**	*i* P	**Pg**	**11 38 56.3**	**+4.6**
TURN				*i* S	**Sg**	**11 39 07.1**	**+9.4**
TURN	**Turunc**	**0.47**	**259**	*i* P	**Pg**	**11 38 56.3**	**+4.7**
ELL	**Elmali**	**0.62**	**110**	*e*PG	**Pg**	**11 38 53.7**	**-0.9**
ELL	**Elmali**	**0.62**	**110**	*e*Pg	**Pg**	**11 38 53.7**	**-0.8**
DNZL	**Cakiroluk**	**0.73**	**352**	*i* P	**Pg**	**11 38 55.9**	**-0.8**
DNZL				*i* S	**Sg**	**11 39 06.8**	**+0.5**
DNZL	**Cakiroluk**	**0.73**	**352**	*i* P	**Pg**	**11 38 55.9**	**-0.8**
DNZL				*i* S	**Sg**	**11 39 06.8**	**+0.5**
YER	**Yerkesik**	**0.74**	**284**	*e*PG	**Pg**	**11 38 56.1**	**-0.6**
YER				*e*SG	**Sg**	**11 39 07.0**	**+0.6**
YER	**Yerkesik**	**0.74**	**284**	*e*Pg	**Pg**	**11 38 56.2**	**-0.6**
YER				*e*Sg	**Sg**	**11 39 07.0**	**+0.7**
AKAS	**Kas**	**0.80**	**155**	*i* P	**Pg**	**11 38 59.0**	**+1.1**
AKAS				*i* S	**Sg**	**11 39 13.2**	**+4.8**
AKAS	**Kas**	**0.80**	**155**	*i* P	**Pg**	**11 38 59.0**	**+1.0**
AKAS				*i* S	**Sg**	**11 39 13.2**	**+4.8**
DAT	**Datca**	**1.30**	**260**	*e*PN	**Pn**	**11 39 06.8**	**-0.8**
DAT	**Datca**	**1.30**	**260**	*e*Pn	**Pn**	**11 39 06.8**	**-0.8**
KHL	**Karahalli**	**1.39**	**11**	*e*PN	**Pn**	**11 39 08.0**	**-0.7**
KHL	**Karahalli**	**1.39**	**11**	*e*Pn	**Pn**	**11 39 08.0**	**-0.7**
BDRM	**Kayabasi**	**1.39**	**275**	*i* P	**Pn**	**11 39 10.4**	**+1.6**
BDRM				*i* S	**Sb**	**11 39 26.6**	**-0.7**
BDRM	**Kayabasi**	**1.39**	**275**	*i* P	**Pn**	**11 39 10.4**	**+1.6**
BDRM				*i* S	**Sb**	**11 39 26.6**	**-0.6**
KHAL	**Karahalli**	**1.43**	**10**	*i* P	**Pn**	**11 39 09.8**	**+0.6**
KHAL				*i* S	**Sb**	**11 39 28.5**	**+0.1**
KHAL	**Karahalli**	**1.43**	**10**	*i* P	**Pn**	**11 39 09.9**	**+0.6**
KHAL				*i* S	**Sb**	**11 39 28.5**	**+0.2**

*ISCJB **12** 11:49:47.2±0.7,42°.33N±0°.05×137°.0E±0°.1,h323km±9km, mb2.9/3, Error ellipse: s-maj=13.6km s-min=7.0km az=16.6*
*JMA **12** 11:49:47.5±0.3,42°.35N×136°.99E,h318km,M3.1*
*IDC **12** 11:49:48.0±1.5,42°.64N×136°.69E,h288km±24km,mb2.9/3, mb1 3.0/6,mb1mx2.8/26,mbtmp2.8/6, Error ellipse: s-maj=44.2km s-min=16.0km az=145.0*
ISC 12 11:49:48.1±0.7,**42°.32N**±0°.05×**137°.0E**±0°.1,**h316**km±9km, **n22**,σ1°**09**/35,**mb3.0**/3,**Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSM	**Okushiri--Mats**	**1.82**	**97**	P	**Pn**	**11 50 34.7**	**-0.3**
JOSM				S	**S**	**11 51 12.2**	**-0.2**
JSH	**Shimam**	**2.25**	**81**	P	**Pn**	**11 50 38.1**	**-0.1**
JKB	**Kayabe**	**3.00**	**97**	P	**Pn**	**11 50 45.4**	**+0.4**
JKB				*e*S	**S**	**11 51 31.4**	**+0.9**
JOT	**Ohata**	**3.14**	**106**	P	**Pn**	**11 50 46.6**	**+0.3**
JOT				*e*S	**S**	**11 51 34.0**	**+1.1**
JHR	**Hokuryu**	**3.72**	**66**	P	**Pn**	**11 50 52.8**	**+0.7**
JRG	**Rokugo**	**4.00**	**136**	P	**Pn**	**11 50 55.2**	**0.0**
JRG				S	**S**	**11 51 50.1**	**+1.1**
JSD	**Sado**	**4.38**	**167**	P	**Pn**	**11 51 00.2**	**+0.8**
ASAJ	**Asahikawa**	**4.44**	**64**	P	**Pn**	**11 50 59.9**	**0.0**
	3.9nm,0.3s,baz=256,slow=12,SNR=36						
ASAJ				S	**S**	**11 51 57.8**	**+0.2**
	baz=75,slow=32,SNR=2.4						
JMK	**Ichinoseki**	**4.63**	**135**	P	**Pn**	**11 51 01.5**	**-0.7**
JMK				S	**S**	**11 52 00.4**	**-1.3**
JCH	**Churui**	**4.69**	**84**	P	**Pn**	**11 51 01.7**	**-1.0**
JCH				S	**S**	**11 51 59.7**	**-2.9**
JTKR	**Abashiri--Toko**	**5.29**	**70**	P	**Pn**	**11 51 09.3**	**-0.2**
JMM	**Marumori**	**5.30**	**146**	P	**Pn**	**11 51 09.6**	**-0.2**
JMM				*e*S	**S**	**11 52 14.2**	**-1.4**
JFT	**Otama**	**5.43**	**151**	P	**Pn**	**11 51 12.7**	**+1.5**
JFT				*e*S	**S**	**11 52 20.6**	**+2.4**
MJAR	**Matsushiro Arr**	**5.84**	**171**	P	**Pn**	**11 51 19.9**	**+3.8**
	0.4nm,0.3s,baz=113,slow=32,SNR=5.2						
JRY	**Ryogami san**	**6.46**	**166**	P	**Pn**	**11 51 24.7**	**+1.3**
JRY				*e*S	**S**	**11 52 40.6**	**+0.2**
NEM2	**Nemuro 2**	**6.48**	**78**	P	**Pn**	**11 51 21.5**	**-2.0**
NEM2				S	**S**	**11 52 35.1**	**-5.5**
JOD2	**Odawara 2**	**7.23**	**167**	P	**Pn**	**11 51 31.0**	**-1.6**
JOD2				*e*S	**S**	**11 52 53.2**	**-4.1**
BSO1	**Boso 1**	**8.26**	**157**	P	**Pn**	**11 51 43.4**	**-1.6**
BSO1				*e*S	**S**	**11 53 13.8**	**-6.2**
KSRS	**Korea Array**	**8.53**	**238**	P	**Pn**	**11 51 47.7**	**-0.6**
	0.1nm,0.3s,baz=51,slow=13,SNR=5.5						
MKAR	**Makanchi Array**	**38.60**	**296**	P	**P**	**11 56 40.5**	**-0.8**
	0.3nm,0.5s,mb3.0,baz=85,slow=6.2,SNR=2.6						
ILAR	**Eielson Array**	**46.95**	**35**	P	**P**	**11 57 49.1**	**+1.6**
	0.5nm,0.6s,mb3.0,baz=283,slow=9.0,SNR=12						
INK	**Inuvik**	**51.29**	**28**	P	**P**	**11 58 21.1**	**+1.0**
	0.3nm,0.4s,mb3.0,baz=304,slow=7.3,SNR=3.7						

*IDC **12** 11:55:14.7±1.8,56°.13N×156°.92W,h0km,mb3.7/2, mb1 3.6/4,mb1mx3.4/24,mbtmp3.4/4,ML2.8/1, Error ellipse: s-maj=30.7km s-min=18.9km az=144.0*
*ISCJB **12** 11:55:17.3±1.6,56°.3N±0°.1×156°.7W±0°.1,h26km±18km, mb3.8/2, Error ellipse: s-maj=20.8km s-min=9.5km az=149.5*
*NEIC **12** 11:55:20.9,56°.21N×156°.48W,h18km,ML3.2(AEIC),After AEIC.*
ISC 12 11:55:17.2±1.6,**56°.2N**±0°.1×**156°.6W**±0°.1,**h16**km±10km,**n13**, σ1°**27**/17,**mb3.8**/2,**Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHGN	**Chignik**	**1.04**	**279**	P	**Pg**	**11 55 38.4**	**+1.1**
OHAK	**Old Harbor**	**2.10**	**58**	P	**Pn**	**11 55 52.0**	**+0.4**
OHAK				S	**Sn**	**11 56 16.2**	**-1.2**
SDPT	**Sand Point**	**2.35**	**252**	P	**Pb**	**11 55 57.8**	**-1.4**
SDPT				S	**Sb**	**11 56 26.3**	**-1.6**
KDAK	**Kodiak Island**	**2.72**	**52**	P	**Pn**	**11 56 01.0**	**+0.8**
KDAK	**Kodiak Island**	**2.72**	**52**	Pn	**Pn**	**11 56 00.0**	**-0.1**
	4.7nm,0.3s,baz=218,slow=5.1,SNR=16						
KDAK				Pg	**Pg**	**11 56 07.9**	**-1.4**
	10nm,0.3s,baz=238,slow=8.2,SNR=20						
KDAK				Lg		11 56 45.9	
	6.2nm,0.3s,baz=324,slow=23,SNR=5.9						
FALS	**False Pass**	**4.11**	**254**	P	**Pn**	**11 56 21.5**	**+2.3**
BRLK	**Bradley Lake**	**4.71**	**38**	P	**Pn**	**11 56 27.8**	**+0.2**
RSO	**Redoubt South**	**4.76**	**23**	*e*Pn	**Pn**	**11 56 32.0**	**+3.8**
TT01	**Tatalina**	**6.78**	**2**	P	**Pn**	**11 56 56.4**	**+0.6**
TTA	**Tatalina**	**6.80**	**2**	*e*Pn	**Pn**	**11 56 56.6**	**+0.4**
	2.0nm,0.5s						
ILAR	**Eielson Array**	**9.86**	**25**	Pn	**Pn**	**11 57 34.2**	**-3.8**
	0.0nm,0.3s,baz=216,slow=9.0,SNR=2.7						
ILAR				Sn	**Sn**	**11 59 20.4**	**-7.8**
	0.0nm,0.3s,baz=199,slow=14,SNR=2.7						
TXAR	**Lajitas Array**	**45.68**	**103**	P	**P**	**12 03 38.6**	**+1.6**
	0.5nm,0.7s,mb3.5,baz=303,slow=6.0,SNR=6.5						
SONM	**Songino Array**	**55.51**	**306**	P	**P**	**12 04 49.7**	**-1.3**
	1.0nm,0.7s,mb4.0,baz=42,slow=6.9,SNR=4.7						

*JMA **12** 12:01:58.8±0.6,21°.09N×121°.29E,h0km,M4.0*
*TAP **12** 12:02:00.1,21°.08N×121°.13E,h62km±2km,ML3.6,D*
ISC 12 12:02:00.1±1.7,**21°.08N**±0°.07×**121°.09E**±0°.06,**h16**km±16km, **n30**,σ1°**12**/41,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSEB	**Hengchuen, Pin**	**0.84**	**348**	*i* P	**Pb**	**12 02 16.9**	**+0.6**
	baz=343						
TSEB				S	**Sb**	**12 02 28.3**	**+0.9**
	baz=343						
TWK1	**Hengchun**	**0.90**	**343**	*e*P	**Pb**	**12 02 17.3**	**-0.1**
	baz=341						
TWK1				S	**Sb**	**12 02 30.3**	**+1.0**
	baz=341						
HEN	**Hengchun**	**0.98**	**341**	*e*P	**Pb**	**12 02 18.8**	**0.0**
	baz=332						
HEN				*e*S	**Sb**	**12 02 32.5**	**+1.0**
	baz=332						
LAY	**Lan-yu**	**1.05**	**24**	P	**Pb**	**12 02 17.9**	**-2.1**
	baz=22						
LAY				*e*S	**Sb**	**12 02 32.9**	**-0.6**
	baz=22						
EAST	**Anshuo**	**1.32**	**350**	*e*P	**Pn**	**12 02 22.5**	**-1.4**
	baz=360						
SCZT	**Fangliau**	**1.36**	**341**	*e*P	**Pn**	**12 02 23.4**	**-1.0**
	baz=333						
TWP	**Hsiaoliuchiu**	**1.43**	**332**	*e*P	**Pn**	**12 02 25.2**	**-0.2**
	baz=331						
ECL	**Taimali**	**1.52**	**355**	*e*P	**Pn**	**12 02 26.2**	**-0.5**

ICM	**Isla Caja Muer**	**0.82**	**270**	*e*S	Sg	12 06 14.8 +0.2

WEL 12 12:05:58.1±0.3, 42°86S×175°00E, h33km, ML3.9/49, 3C, Error ellipse: s-maj=2.4km s-min=2.1km az=90.0, Off east coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHZ	**Kahutara**	**1.17**	**292**	P*	Pb	12 06 17.0	-2.7
KHZ				S*	Sb	12 06 31.7	-2.7
CMWZ	**Cape Campbell**	**1.25**	**332**	P*	Pb	12 06 19.4	-1.8
PLWZ	**Palliser**	**1.30**	**8**	PN	Pn	12 06 19.5	-0.5
BSWZ	**Blackbirch Sta**	**1.42**	**323**	⇑PN	Pn	12 06 21.2	-0.3
BSWZ				S*	Sb	12 06 38.2	-3.4
BHW	**Baring Head**	**1.45**	**356**	PN	Pn	12 06 21.6	-0.4
BHW				S*	Sb	12 06 37.9	-4.8
MSWZ	**Moikau Station**	**1.45**	**7**	⇑PN	Pn	12 06 21.4	-0.6
MSWZ				S*	Sb	12 06 37.7	-5.0
PAWZ	**Paruwai Farm**	**1.51**	**12**	⇑PN	Pn	12 06 22.3	-0.5
PAWZ				S*	Sb	12 06 39.0	-5.2
TRWZ	**Traveller**	**1.54**	**20**	PN	Pn	12 06 22.8	-0.5
TRWZ				S*	Sb	12 06 41.6	-3.7
SNZO	**South Karori**	**1.56**	**352**	PN	Pn	12 06 23.1	-0.4
WEL	**Wellington**	**1.58**	**354**	PN	Pn	12 06 23.5	-0.3
TUWZ	**Tuamarina**	**1.63**	**331**	PN	Pn	12 06 24.2	-0.3
MTW	**Mount Morrison**	**1.74**	**13**	PN	Pn	12 06 25.3	-0.7
CAW	**Cannon Point**	**1.75**	**2**	PN	Pn	12 06 25.9	-0.2
CAW				S*	Sb	12 06 44.9	-6.2
TMWZ	**Te Maipa**	**1.87**	**21**	PN	Pn	12 06 27.0	-0.8
CRLZ	**Canterbury Las**	**1.88**	**247**	PN	Pn	12 06 26.9	-1.0
THZ	**Tophouse**	**1.90**	**304**	PN	Pn	12 06 28.5	+0.2
MQZ	**McQueen's Vall**	**1.91**	**243**	PN	Pn	12 06 27.3	-1.1
HOWZ	**Holdsworth Sta**	**2.00**	**11**	PN	Pn	12 06 29.0	-0.5
KIW	**Kapiti Island**	**2.00**	**358**	PN	Pn	12 06 29.5	0.0
LTZ	**Lake Taylor**	**2.01**	**271**	PN	Pn	12 06 29.5	-0.2
NNZ	**Nelson**	**2.04**	**323**	PN	Pn	12 06 29.3	-0.7
OGWZ	**Otaki Gorge**	**2.04**	**4**	PN	Pn	12 06 30.0	-0.2
MRZ	**Mangatainoka R**	**2.24**	**11**	PN	Pn	12 06 32.3	-0.5
BFZ	**Birch Farm**	**2.37**	**24**	PN	Pn	12 06 33.5	-1.1
POWZ	**Post Office Ro**	**2.53**	**13**	PN	Pn	12 06 37.0	+0.1
DSZ	**Denniston Nort**	**2.62**	**294**	PN	Pn	12 06 39.3	+1.2
DVHZ	**Dannevirke**	**2.70**	**19**	PN	Pn	12 06 38.2	-1.0
QRZ	**Quartz Range**	**2.74**	**317**	PN	Pn	12 06 40.2	+0.4
PRHZ	**Porangahau**	**2.86**	**26**	PN	Pn	12 06 40.0	-1.5
TSZ	**Takapari Road**	**2.89**	**15**	PN	Pn	12 06 41.3	-0.5
WPHZ	**Waipukurau**	**2.99**	**22**	PN	Pn	12 06 42.3	-0.9
RPZ	**Rata Peaks**	**3.01**	**252**	PN	Pn	12 06 43.4	0.0
PNHZ	**Pukenui**	**3.08**	**17**	PN	Pn	12 06 43.9	-0.5
WAZ	**Wanganui**	**3.10**	**360**	PN	Pn	12 06 46.5	+1.8
WVZ	**Waitaha Valley**	**3.14**	**265**	PN	Pn	12 06 45.9	+0.7
KAHZ	**Kahuranaki**	**3.37**	**25**	PN	Pn	12 06 46.9	-1.5
BHHZ	**Black Hill Sta**	**3.46**	**14**	PN	Pn	12 06 49.6	-0.1
MTVZ	**Mangateitei**	**3.49**	**6**	PN	Pn	12 06 51.0	+1.0
WNVZ	**Wahianoa**	**3.56**	**7**	PN	Pn	12 06 52.1	+1.1
PKVZ	**Pokaka**	**3.57**	**4**	PN	Pn	12 06 52.5	+1.3
TRVZ	**Turoa**	**3.58**	**7**	PN	Pn	12 06 52.5	+1.3
DFE	**Dawson Falls**	**3.59**	**349**	PN	Pn	12 06 53.7	+2.2
RAEZ	**Rainy Point**	**3.60**	**352**	PN	Pn	12 06 52.8	+1.3
DRZ	**Dome Shelter**	**3.60**	**7**	PN	Pn	12 06 53.0	+1.4
TUVZ	**Tukino**	**3.62**	**8**	PN	Pn	12 06 53.0	+1.1
FWVZ	**Far West T-bar**	**3.62**	**7**	PN	Pn	12 06 52.8	+0.9
MCHZ	**McNeill Hill**	**3.64**	**21**	PN	Pn	12 06 52.0	-0.2
NEZ	**North Egmont**	**3.65**	**349**	PN	Pn	12 06 54.9	+2.6
WPVZ	**Whakapapa**	**3.67**	**7**	PN	Pn	12 06 53.7	+1.1
NGZ	**Ngauruhoe**	**3.71**	**7**	PN	Pn	12 06 54.2	+1.1
DREZ	**Durham Road**	**3.71**	**350**	PN	Pn	12 06 55.3	+2.1
OTVZ	**Oturere**	**3.72**	**8**	PN	Pn	12 06 54.2	+0.9
VRZ	**Vera Road**	**3.73**	**357**	PN	Pn	12 06 54.7	+1.3
PKE	**Pukeiti**	**3.74**	**348**	PN	Pn	12 06 55.4	+1.9
WTVZ	**West Tongariro**	**3.77**	**7**	PN	Pn	12 06 54.9	+1.0
KRVZ	**Karewarewa**	**3.79**	**8**	PN	Pn	12 06 55.2	+1.0
TWVZ	**Taurewa**	**3.80**	**5**	PN	Pn	12 06 55.1	+0.8
MHEZ	**Mangahewa**	**3.81**	**352**	PN	Pn	12 06 56.9	+2.4
LBZ	**Lake Benmore**	**3.82**	**245**	PN	Pn	12 06 54.9	+0.3
ODZ	**Otahua Downs**	**3.83**	**234**	PN	Pn	12 06 54.6	-0.1
BKZ	**Black Stump Fm**	**3.86**	**18**	PN	Pn	12 06 54.6	-0.5
KATZ	**Kakaramea**	**3.91**	**8**	PN	Pn	12 06 57.3	+1.4
FOZ	**Fox Glacier**	**3.95**	**258**	PN	Pn	12 06 56.0	-0.3
NMHZ	**Naumai**	**4.00**	**21**	PN	Pn	12 06 56.7	-0.3
RAHZ	**Arahi**	**4.24**	**23**	PN	Pn	12 06 59.5	-0.9
HIZ	**Hauiti**	**4.34**	**358**	PN	Pn	12 07 03.1	+1.3
JCZ	**Jackson Bay**	**4.70**	**253**	PN	Pn	12 07 07.1	+0.4
EAZ	**Earnscleugh**	**4.74**	**238**	PN	Pn	12 07 07.1	-0.1
WKZ	**Wanaka**	**4.75**	**243**	PN	Pn	12 07 07.7	+0.2
URZ	**Urewera**	**4.87**	**20**	PN	Pn	12 07 04.9	-4.1
MWZ	**Matawai**	**4.91**	**24**	PN	Pn	12 07 07.7	-1.9
TUZ	**Tuapeka**	**4.94**	**229**	PN	Pn	12 07 10.3	+0.4
MLZ	**Mavora Lakes**	**5.51**	**241**	PN	Pn	12 07 18.5	+0.7
SYZ	**Scrubby Hill**	**5.57**	**227**	PN	Pn	12 07 19.2	+0.6
MKAZ	**Moumakai**	**5.74**	**1**	PN	Pn	12 07 21.4	+0.4
WHZ	**Wether Hill Ro**	**5.90**	**237**	PN	Pn	12 07 22.5	-0.5
KUZ	**Kuaotunu**	**6.13**	**5**	PN	Pn	12 07 26.0	-0.3
DCZ	**Deep Cove**	**6.22**	**242**	PN	Pn	12 07 27.7	+0.2
APZ	**The Paps**	**6.37**	**229**	PN	Pn	12 07 30.3	+0.6

*IDC **12** 12:29:58.5±1.0, 10°29N×60°37W, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.7/21, mbtmp3.7/6, ML3.5/1, MS3.9/1, Ms1 4.0/1, ms1mx3.0/22, Error ellipse: s-maj=24.6km s-min=21.5km az=59.0*
*FUNV **12** 12:30:01.6, 10°41N×60°21W, h22km, MW3.7*
*ISCJB **12** 12:30:03.6±0.7, 10°41N±0°03×60°45W±0°04, h58km±6km, mb3.8/8, Error ellipse: s-maj=7.9km s-min=3.9km az=25.0*
*NEIC **12** 12:30:07.7, 10°61N×60°51W, h30km, mb4.4/2, MD3.8(TRN), After TRN.*
*TRN **12** 12:30:07.5, 10°61N×60°51W, h30km, MD3.8*

ISC 12 12:30:04.2±0.7, 10°38N±0°03×60°40W±0°04, h39km±8km, n60, σ1°25/87, mb3.8/8, 5C-4D, Trinidad

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBH	**Brigid Hill**	**0.66**	**279**	⇓*e*P	**Pn**	**12 30 19.2**	**+2.0**
TBH				*e*S	**Sn**	**12 30 28.0**	**+1.5**
TBH	**Brigid Hill**	**0.66**	**279**	⇓*e*P	**Pn**	**12 30 19.2**	**+2.0**
TBH				*e*S	**Sn**	**12 30 28.0**	**+1.5**
TPR	**Prospect**	**0.88**	**335**	⇑*e*P	**Pn**	**12 30 20.7**	**+0.6**
TPR				*e*S	**Sn**	**12 30 29.4**	**-2.3**
TPR	**Prospect**	**0.88**	**335**	⇑*e*P	**Pn**	**12 30 20.7**	**+0.6**
TPR				*e*S	**Sn**	**12 30 29.4**	**-2.3**
TOSP	**Speyside**	**0.92**	**352**	*e*P	**Pn**	**12 30 21.2**	**+0.5**
TOSP				*e*S	**Sn**	**12 30 31.4**	**-1.4**
TRN	**Trinidad (W)**	**1.02**	**285**	⇓*e*P	**Pn**	**12 30 23.6**	**+1.6**
TRN				*e*S	**Sn**	**12 30 36.4**	**+1.2**
TRN	**Trinidad (W)**	**1.02**	**285**	⇓*e*P	**Pn**	**12 30 23.6**	**+1.6**
TRN				*e*S	**Sn**	**12 30 36.4**	**+1.2**
TCE	**Chacachacare**	**1.37**	**283**	⇑*e*P	**Pn**	**12 30 28.9**	**+2.1**
TCE	**Chacachacare**	**1.37**	**283**	⇑*e*P	**Pn**	**12 30 28.9**	**+2.1**
GUIV	**Guiria**	**1.81**	**278**	*e*P	**Pn**	**12 30 33.1**	**+0.2**
GUIV				*e*S	**Sn**	**12 30 56.6**	**+1.9**
GRGR	**Grenville**	**2.13**	**325**	*e*Pn	**Pn**	**12 30 39.0**	**+1.7**
GRW	**Mount Saint Ca**	**2.16**	**325**	*e*P	**Pn**	**12 30 38.2**	**+0.5**
GRW	**Mount Saint Ca**	**2.16**	**325**	*e*P	**Pn**	**12 30 38.2**	**+0.5**
GRHS	**Sauteurs**	**2.20**	**326**	*e*P	**Pn**	**12 30 39.1**	**+0.8**
GRHS				*e*S	**Sn**	**12 31 01.6**	**-2.6**
GRHS	**Sauteurs**	**2.20**	**326**	*e*P	**Pn**	**12 30 39.1**	**+0.8**
GRHS				*e*S	**Sn**	**12 31 01.6**	**-2.6**
GRIC	**Isle de Caille**	**2.22**	**329**	*e*P	**Pn**	**12 30 40.1**	**+1.5**
GRIC				*e*S	**Sn**	**12 31 02.3**	**-2.5**
GRSS	**Sisters**	**2.24**	**328**	*e*P	**Pn**	**12 30 39.7**	**+0.8**
GRSS				*e*S	**Sn**	**12 31 02.3**	**-3.1**
GRSS	**Sisters**	**2.24**	**328**	*e*P	**Pn**	**12 30 39.7**	**+0.8**
GRSS				*e*S	**Sn**	**12 31 02.3**	**-3.1**
GRCU	**Cariacou**	**2.32**	**334**	*e*P	**Pn**	**12 30 41.1**	**+1.1**
GRCU				*e*S	**Sn**	**12 31 05.9**	**-1.3**
GRCU	**Cariacou**	**2.32**	**334**	*e*P	**Pn**	**12 30 41.1**	**+1.1**
GRCU				*e*S	**Sn**	**12 31 05.9**	**-1.3**
GUNV	**Guanoco**	**2.51**	**265**	*e*P	**Pn**	**12 30 43.8**	**+1.2**
GUNV				*e*S	**Sn**	**12 31 13.3**	**+1.3**
RIOV	**Rio Grande**	**2.69**	**211**	*e*P	**Pn**	**12 30 45.5**	**+0.5**
CRUV	**Carupano**	**2.80**	**276**	*e*P	**Pn**	**12 30 45.8**	**-0.9**
CRUV				*e*S	**Sn**	**12 31 19.6**	**+0.4**
ITEV	**Isla Los Testi**	**2.85**	**290**	*e*P	**Pn**	**12 30 47.0**	**-0.3**
ITEV				*e*S	**Sn**	**12 31 20.7**	**+0.3**
SVB	**Belmont**	**2.99**	**344**	*e*P	**Pn**	**12 30 50.6**	**+1.5**
SVB				*e*S	**Sn**	**12 31 22.0**	**-1.8**
SVB	**Belmont**	**2.99**	**344**	*e*P	**Pn**	**12 30 50.6**	**+1.5**
SVB				*e*S	**Sn**	**12 31 22.0**	**-1.8**
ORIV	**Oritupano**	**3.24**	**247**	*e*P	**Pn**	**12 30 51.8**	**-0.8**
ORIV				*e*S	**Sn**	**12 31 30.7**	**+0.7**
MCLT	**Moule a Chique**	**3.35**	**351**	*e*P	**Pn**	**12 30 54.3**	**+0.2**
MCLT				*e*S	**Sn**	**12 31 30.2**	**-2.4**
MCLT	**Moule a Chique**	**3.35**	**351**	*e*S	**Sn**	**12 31 30.2**	**-2.4**
GURV	**El Guri**	**3.72**	**226**	*e*P	**Pn**	**12 30 58.5**	**-0.7**
GURV				*e*S	**Sn**	**12 31 40.8**	**-1.0**
BIM	**Bigot**	**4.16**	**351**	*e*P	**Pn**	**12 31 06.5**	**+1.2**
BIM				*e*S	**Sn**	**12 31 53.4**	**+0.7**
MVM	**Montagne Vaucl**	**4.17**	**353**	*e*P	**Pn**	**12 31 05.8**	**+0.3**
MVM				*e*S	**Sn**	**12 31 52.1**	**-0.9**
PCRV	**Puerto La Cruz**	**4.17**	**268**	Pn	**Pn**	**12 31 04.6**	**-0.9**
	2.9nm,0.3s,baz=55,slow=4.4,SNR=7.5						
PCRV				Sn	**Sn**	**12 31 51.9**	**-1.1**
	5.4nm,0.3s,baz=212,slow=3.7,SNR=3.9						
PCRV	**Puerto La Cruz**	**4.17**	**268**	*e*P	**Pn**	**12 31 04.9**	**-0.6**
PCRV				*e*S	**Sn**	**12 31 51.3**	**-1.8**
IBAV	**Isla La Blanqu**	**4.34**	**290**	*e*P	**Pn**	**12 31 07.4**	**-0.4**
FDF	**Fort de France**	**4.38**	**350**	*e*Pn	**Pn**	**12 31 08.7**	**+0.3**
FDF				*e*Sn	**Sn**	**12 31 56.6**	**-1.6**
FDF	**Fort de France**	**4.38**	**350**	*e*P	**Pn**	**12 31 09.0**	**+0.6**
FDF				*e*S	**Sn**	**12 31 58.7**	**+0.5**
PRGV	**PARIAGUAN**	**4.49**	**249**	*e*P	**Pn**	**12 31 09.1**	**-0.7**
LUEV	**Luepa**	**4.63**	**193**	*e*P	**Pn**	**12 31 09.7**	**-2.1**
CUPV	**Cepira**	**5.31**	**267**	⇓*e*P	**Pn**	**12 31 21.2**	**+0.1**
PHG	**Guadaloupe-2**	**5.73**	**348**	*e*P	**Pn**	**12 31 28.4**	**+1.6**
BCG	**Bois Riant Cap**	**5.79**	**348**	*e*P	**Pn**	**12 31 31.0**	**+3.3**
LZG	**Guadaloupe-1**	**5.88**	**347**	*e*P	**Pn**	**12 31 29.4**	**+0.5**
MERV	**Las Mercedes**	**5.92**	**260**	*e*P	**Pn**	**12 31 28.4**	**-1.1**
CAOV	**Caicara del Or**	**6.59**	**243**	*e*P	**Pn**	**12 31 37.6**	**-1.1**
TURV	**Turiamo**	**7.32**	**271**	*e*P	**Pn**	**12 31 47.5**	**-1.2**
BAUV	**El Baul**	**7.67**	**260**	*e*P	**Pn**	**12 31 52.0**	**-1.5**
MAPV	**Macapo**	**7.95**	**267**	*e*P	**Pn**	**12 31 55.3**	**-2.1**
MONV	**Montecano**	**9.52**	**280**	*e*P	**Pn**	**12 32 17.1**	**-1.8**
ROSC	**El Rosal**	**14.86**	**249**	Pn	**Pn**	**12 33 40.9**	**+9.2**
	0.9nm,0.3s,baz=296,slow=23,SNR=5.8						
SIV	**San Ignacio**	**26.21**	**181**	P	**P**	**12 35 35.0**	**-0.6**
	0.5nm,0.4s,mb3.4,baz=222,slow=23,SNR=3.0						
LPAZ	**La Paz**	**27.58**	**196**	LR	LR	12 47 59.6	
	comp=Z,226nm,20.2s,baz=29,slow=39						
JCT	**Junction City**	**41.70**	**305**	*e*P	**P**	**12 37 49.1**	**-0.3**
	3.3nm,0.6s,mb4.1						
TXAR	**Lajitas Array**	**44.53**	**301**	P	**P**	**12 38 11.6**	**-0.7**
	0.4nm,0.7s,mb3.4,baz=120,slow=6.8,SNR=5.8						
TXAR				PcP	PcP	12 39 56.1	+1.0
	0.3nm,0.5s,baz=120,slow=7.4,SNR=3.8						
SCHQ	**Schefferville**	**44.63**	**355**	P	**P**	**12 38 14.4**	**+1.8**
	1.4nm,0.6s,mb4.0,baz=211,slow=7.6,SNR=3.8						
AGMN	**Agassiz Nation**	**48.06**	**329**	*e*P	**P**	**12 38 40.0**	**+0.3**
	4.0nm,0.8s,mb4.5						
NVAR	**Mina Array Bea**	**58.57**	**309**	P	**P**	**12 39 57.6**	**+0.5**
	0.7nm,0.7s,mb3.8,baz=95,slow=6.4,SNR=7.5						
TORD	**Torodi Ar. Bea**	**60.73**	**81**	P	**P**	**12 40 11.6**	**-0.7**
	0.3nm,0.4s,mb3.8,baz=291,slow=5.4,SNR=5.8						
ILAR	**Eielson Array**	**79.19**	**334**	P	**P**	**12 42 06.2**	**+1.4**
	0.5nm,0.5s,mb3.7,baz=96,slow=5.1,SNR=12						
CMAR	**Chiang Mai Arr**	**144.83**	**36**	PKP	PKPdf	12 49 37.7	-0.2
	0.4nm,0.7s,baz=327,slow=4.4,SNR=3.0						

WEL 12 12:31:34.3±0.2, 41°19S×172°38E, h293km±1km, ML3.5/8, Error ellipse: s-maj=3.1km s-min=1.8km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QRZ	**Quartz Range**	**0.38**	**18**	PN	Pn	12 32 11.7	-0.2
THZ	**Tophouse**	**0.70**	**146**	PN	Pn	12 32 12.6	0.0
THZ				SN	S	12 32 42.0	-1.0
NNZ	**Nelson**	**0.76**	**93**	PN	Pn	12 32 12.5	-0.3
NNZ				SN	S	12 32 42.3	-1.1
TUWZ	**Tuamarina**	**1.20**	**102**	PN	Pn	12 32 15.0	+0.1
BSWZ	**Blackbirch Sta**	**1.24**	**116**	PN	Pn	12 32 15.1	+0.1
KHZ	**Kahutara**	**1.50**	**145**	PN	Pn	12 32 16.8	+0.1
KHZ				SN	S	12 32 50.0	-0.3
LTZ	**Lake Taylor**	**1.60**	**183**	PN	Pn	12 32 17.3	0.0
LTZ				SN	S	12 32 50.0	-1.4
SNZO	**South Karori**	**1.76**	**95**	PN	Pn	12 32 18.5	-0.1
KIW	**Kapiti Island**	**1.94**	**81**	PN	Pn	12 32 20.1	+0.1
CAW	**Cannon Point**	**2.03**	**89**	PN	Pn	12 32 20.9	+0.3
OGWZ	**Otaki Gorge**	**2.15**	**81**	PN	Pn	12 32 21.9	+0.3
PLWZ	**Palliser**	**2.20**	**101**	PN	Pn	12 32 22.3	+0.3
MTW	**Mount Morrison**	**2.36**	**90**	PN	Pn	12 32 23.5	+0.1
WAZ	**Wanganui**	**2.45**	**55**	PN	Pn	12 32 24.9	+0.5
MRZ	**Mangatainoka R**	**2.48**	**79**	PN	Pn	12 32 24.6	+0.1

*ISCJB **12** 12:53:32.4±0.9, 17°9S±0°2×178°2W±0°1, h553km±12km, mb4.2/9, Error ellipse: s-maj=27.4km s-min=13.5km az=145.0*
*IDC **12** 12:53:32.4±2.0, 17°83S×178°19W, h532km±27km, mb3.6/7, mb1 3.9/8, mb1mx3.5/16, mbtmp3.7/8, Error ellipse: s-maj=30.0km s-min=13.5km az=137.0*
*NEIC **12** 12:53:33.2±0.9, 17°91S×178°08W, h547km±13km, Error ellipse: s-maj=32.2km s-min=16.2km az=137.0*

ISC 12 12:53:33.3±0.9, 17°9S±0°2×178°1W±0°1, h549km±12km, n19, σ0°99/19, mb4.2/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.63**	**271**	*e*P	**P**	**12 54 53.5**	**+1.1**
AFI	**Afiamalu**	**7.27**	**58**	P	**P**	**12 55 22.9**	**-1.1**
	6.8nm,0.3s,baz=112,slow=11,SNR=10						
URZ	**Urewera**	**20.75**	**191**	P	**P**	**12 57 34.9**	**-1.1**
	15nm,0.8s,baz=18,slow=23,SNR=6.0						
RPZ	**Rata Peaks**	**27.35**	**197**	P	**P**	**12 58 34.6**	**0.0**
	8.1nm,0.9s,mb4.4,baz=27,slow=9.0,SNR=2.8						
EIDS	**Eidsvold**	**29.52**	**250**	*e*P	**P**	**12 58 53.1**	**-0.7**
ARMA	**Armidale**	**30.19**	**240**	*e*P	**P**	**12 59 00.0**	**+0.6**
RMQ	**Roma**	**31.76**	**248**	*e*P	**P**	**12 59 13.0**	**0.0**
	11nm,0.7s,mb4.5						
CNB	**Canberra Magne**	**33.66**	**232**	*e*P	**P**	**12 59 30.1**	**+1.2**
CMSA	**Cobar Meteorol**	**35.40**	**240**	*e*P	**P**	**12 59 43.6**	**+0.1**
QLP	**Quilpie**	**35.79**	**249**	*e*P	**P**	**12 59 46.1**	**-0.7**
STKA	**Stephens Creek**	**38.88**	**241**	P	**P**	**13 00 12.9**	**+1.0**
	9.1nm,0.5s,mb4.5,baz=92,slow=9.9,SNR=25						
BBOO	**Buckleboo**	**43.65**	**241**	*e*P	**P**	**13 00 49.7**	**-0.1**
	8.4nm,0.5s,mb4.5						
ASAR	**Alice Springs**	**45.05**	**254**	P	**P**	**13 01 00.1**	**-0.6**
	40nm,0.6s,mb5.1,baz=89,slow=7.9,SNR=1135						
KAKA	**Kakadu**	**47.84**	**269**	*e*P	**P**	**13 01 20.6**	**-1.3**
	7.0nm,0.5s,mb4.5						
NVAR	**Mina Array Bea**	**79.21**	**44**	P	**P**	**13 04 43.0**	**+1.3**
NVAR	**Mina Array Bea**	**79.21**	**44**	P	**P**	**13 04 43.0**	**+1.3**
	2.0nm,0.8s,mb3.5,baz=223,slow=8.7,SNR=14						
TXAR	**Lajitas Array**	**85.75**	**58**	P	**P**	**13 05 17.0**	**+2.1**
TXAR	**Lajitas Array**	**85.75**	**58**	P	**P**	**13 05 17.0**	**+2.1**
	1.7nm,0.8s,mb3.8,baz=218,slow=6.2,SNR=25						
ILAR	**Eielson Array**	**85.78**	**13**	P	**P**	**13 05 12.7**	**-1.5**
	0.4nm,0.4s,mb3.4,baz=226,slow=5.2,SNR=14						

MAN 12 13:35:31, 19°11N×121°06E, h16km, mb4.4, ML3.2, MS3.0, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**0.89**	**208**	⇓*i*P	Pb	13 35 48.0	-0.1
PIP				*i* S	Sb	13 36 01.8	+2.1
APYP	**Conner**	**1.25**	**172**	*e*P	Pn	13 35 53.1	-0.7
APYP				*e*S	Sb	13 36 11.8	+1.7
SIPP	**Brgy, Tapao**	**1.31**	**206**	⇓*e*P	Sg	13 36 15.1	+1.7
ABRA	**Dolores**	**1.49**	**193**	*e*P	Pn	13 35 57.5	+0.3
CVP	**Callao Caves**	**1.57**	**153**	*e*P	Pn	13 35 56.5	-1.7
CVP				*e*S	Sn	13 36 18.8	+0.6
CAUP	**Cauayan**	**2.27**	**161**	*e*P	Pn	13 36 10.0	+2.1
PALP	**Palanan**	**2.41**	**147**	*e*P	Pn	13 36 10.3	+0.5
BOLP	**Bolinao**	**2.93**	**202**	*e*P	Pn	13 36 18.6	+1.7
BALP	**Baler**	**3.38**	**172**	*e*P	Pn	13 36 24.9	+1.7
SCZP	**Santa Cruz**	**3.49**	**199**	*e*P	Pn	13 36 29.2	+4.5

*ISCJB **12** 13:40:07.5±0.5, 59°84N±0°03×22°26E±0°05, h0km, Error ellipse: s-maj=4.4km s-min=3.9km az=164.1*
*CSEM **12** 13:40:09.2±0.2, 59°92N×22°30E, h2km, ML1.8, Error ellipse: s-maj=5.2km s-min=3.8km az=158.0, Mining explosion.*
*NAO **12** 13:40:09.4±1.7, 59°87N×22°34E, ML2.1*
*HEL **12** 13:40:09.7, 59°84N×22°38E, h0km, ML1.8, Explosion*
*BER **12** 13:40:10.7±4.0, 59°93N×22°31E, h0km±18km, ML2.1(NAO)*
*IDC **12** 13:40:10.0±2.2, 59°83N×22°52E, h0km, mb1 3.2/3, mb1mx3.0/24, mbtmp3.0/3, ML2.8/3, Error ellipse: s-maj=25.5km s-min=8.0km az=162.0*

ISC 12 13:40:09.1±0.5, 59°88N±0°03×22°33E±0°05, h0km, n29, σ1°27/53, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**1.09**	**71**	*e*P	**Pg**	**13 40 29.4**	**-0.6**
MEF				*e*S	**Sg**	**13 40 44.1**	**0.0**
MEF				MSG		13 40 44.1	
	comp=Z,7.7nm,0.4s						
MEF	**Metsahovi**	**1.09**	**71**	*e*P	**Pg**	**13 40 29.5**	**-0.5**
	SNR=90						
MEF				S	**Sg**	**13 40 44.1**	**0.0**
	comp=Z,7.7nm,0.4s						
RAF	**Rauma**	**1.18**	**347**	*e*P	**Pg**	**13 40 31.5**	**-0.2**
	baz=162						
RAF				*e*S	**Sg**	**13 40 48.1**	**+1.1**
RAF				MSG		13 40 48.1	
	comp=Z,3.7nm,0.4s						
RAF				*e*RG		13 40 53.2	
RAF	**Rauma**	**1.18**	**347**	P	**Pg**	**13 40 31.5**	**-0.2**
MTSE	**Matsula**	**1.40**	**146**	*e*P	**Pn**	**13 40 33.0**	**-2.8**
MTSE				*e*SB	**Sb**	**13 40 50.7**	**-3.6**
PVF	**Pernaja**	**1.89**	**68**	*e*P	**Pn**	**13 40 43.2**	**+0.7**
PVF				*e*SG	**Sg**	**13 41 08.7**	**-0.9**
PVF				MSG		13 41 08.7	
	comp=Z,4.6nm,0.1s						
PVF	**Pernaja**	**1.89**	**68**	P	**Pn**	**13 40 43.2**	**+0.7**
PVF				Sg	**Sg**	**13 41 08.7**	**-0.9**
	comp=Z,4.6nm,0.1s						
SLIT	**Slitere, Latvi**	**2.26**	**181**	*e*P	**Pn**	**13 40 48.0**	**+0.4**
	SNR=50						
SLIT				*e*S	**Sn**	**13 41 18.3**	**+2.2**
	comp=Z,210nm,0.2s,SNR=50						
FIA0	**FINESS Array S**	**2.42**	**48**	Pn	**Pn**	**13 40 52.0**	**+2.1**
	baz=229,slow=14						
FIA0				Lg		13 41 23.9	
	baz=231,slow=28						
FIA0				Rg		13 41 38.6	
	baz=214,slow=37						
FIA0	**FINESS Array S**	**2.42**	**48**	*e*PB	**Pb**	**13 40 52.2**	**-1.3**
	baz=236						
FIA0				*e*SB	**Sb**	**13 41 24.1**	**+0.2**
FIA0				MSG		13 41 24.1	
	comp=Z,8.8nm,0.3s						
FIA0				*e*RG		13 41 40.3	
FIA0	**FINESS Array S**	**2.42**	**48**	Pb	**Pb**	**13 40 52.2**	**-1.3**
FIA0				Lg		13 41 24.0	
	baz=231,slow=23						
FIA0				Sb	**Sb**	**13 41 24.1**	**+0.2**
	comp=Z,8.8nm,0.3s						
FINES	**FINESS Array B**	**2.42**	**48**	Pn	**Pn**	**13 40 52.0**	**+2.1**
	comp=Z,2.2nm,0.3s,baz=234,slow=14,SNR=24						
FINES				Lg		13 41 24.3	
	comp=Z,6.9nm,0.3

mb1 3.5/5,mb1mx3.4/22,mbtmp3.4/5,ML4.1/1,Error ellipse: s-maj=38.3km s-min=25.0km az=59.0
BJI **12** *14:22:55.5,31°.17N×103°.53E,h17km,ML3.3/14*
ISC 12 14:22:54.0±1.2**,31°.27N**±0°.04×**103°.53E**±0°.08**, h3**km±9km**, n8,** σ0**92**/13**, mb3.3/4, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.41**	**151**	Pg	**Pg**	**14 23 01.2**	**-0.6**
CD2				Sg	**Sg**	**14 23 08.1**	**+0.9**
CD2				smax			
	comp=N,4μm,0.5s						
LZH	**Lanzhou**	**4.81**	**3**	*e*Pg	**Pg**	**14 24 35.9**	**+10**
LZH				Sg	**Sg**	**14 25 28.1**	**-0.4**
LZH				smax			
	comp=N,43nm,1.0s						
LZH				smax			
	comp=E,32nm,0.8s						
XAN	**Xi'an**	**5.32**	**57**	Pn	**Pn**	**14 24 12.5**	**-1.7**
XAN				Pg	**Pb**	**14 24 28.8**	**+1.3**
XAN				Sn	**Sn**	**14 25 16.3**	**+0.3**
XAN				Sg	**Sg**	**14 25 39.2**	**-5.6**
XAN				smax			
	comp=N,33nm,0.5s						
XAN				smax			
	comp=E,17nm,0.7s						
CMAR	**Chiang Mai Arr**	**13.42**	**199**	Pn	**Pn**	**14 26 04.4**	**-0.9**
	comp=E,0.3nm,0.3s,baz=14,slow=7.9,SNR=3.5						
KSRS	**Korea Array**	**21.03**	**66**	P	**P**	**14 27 38.1**	**-0.7**
	comp=E,1.0nm,0.7s,mb3.2,baz=258,slow=10.0,SNR=5.8						
MKAR	**Makanchi Array**	**22.53**	**319**	P	**P**	**14 27 55.4**	**+0.6**
	comp=E,0.3nm,0.5s,mb3.0,baz=134,slow=10,SNR=4.3						
ZALV	**Zalesovo Beam**	**26.36**	**335**	P	**P**	**14 28 32.4**	**+1.3**
	comp=E,0.5nm,0.3s,mb3.5,baz=131,slow=4.0,SNR=2.3						
ASAR	**Alice Springs**	**61.89**	**148**	P	**P**	**14 33 14.7**	**-0.1**
	comp=E,0.3nm,0.9s,mb3.4,baz=339,slow=6.3,SNR=4.1						

IDC **12** *15:04:47.0±0.8,32°.21N×94°.66E,h0km,mb3.9/12, mb1 3.9/15,mb1mx3.8/24,mbtmp3.8/15,ML3.6/3,MS3.3/5, Ms1 3.3/5,ms1mx3.0/29,Error ellipse: s-maj=27.5km s-min=15.1km az=52.0*
ISCJB **12** *15:04:47.7±0.4,32°.23N±0°.04×94°.61E±0°.05,h10km, mb4.0/19,MS3.3/3,Error ellipse: s-maj=6.4km s-min=5.5km az=158.8*
BJI **12** *15:04:48.7,32°.10N×94°.53E,h11km,mB4.3/2,mb4.3/8, ML4.0/4,Ms3.8/8,Ms7 3.5/5*
NEIC **12** *15:04:50.4±3.0,32°.19N×94°.76E,h24km±23km,mb4.1/4, Error ellipse: s-maj=13.7km s-min=8.0km az=58.0*
MOS **12** *15:04:50.1±1.5,32°.15N×94°.68E,h33km,mb4.6/6,Error ellipse: s-maj=23.1km s-min=13.8km az=94.5*
ISC 12 15:04:49.8±0.4**,32°.25N**±0°.04×**94°.57E**±0°.05**, h10km, n44,** σ1**18**/50**, mb4.0**/19**, MS3.3**/3**, 4C, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.88**	**230**	Pg	**Pn**	**15 05 53.7**	**+4.2**
LSA				Sg	**Sb**	**15 06 45.0**	**-0.4**
LSA				smax			
	comp=N,110nm,0.8s						
LSA				smax			
	comp=E,240nm,0.9s						
SHL	**Shillong**	**7.06**	**200**	*e*PKP	**Pn**	**15 06 34.0**	**+0.9**
SHL				*i* S	**Sn**	**15 07 52.0**	**-1.5**
GTA	**Gaotai**	**8.32**	**29**	*e*P	**Pn**	**15 06 56.2**	**+5.8**
GTA				pP		15 07 00.4	
GTA				sP		15 07 03.2	
GTA				S	**Sn**	**15 08 31.1**	**+6.7**
GTA				sS		15 08 34.7	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,44nm,5.6s						
GTA				LR	LR		
	comp=N,160nm,11.3s						
GTA				LR	LR		
	comp=E,180nm,11.3s						
GTA				LR	LR		
	comp=Z,130nm,9.5s						
KMI	**Kunming**	**10.08**	**133**	P	**Pn**	**15 07 16.9**	**+2.2**
KMI				S	**Sn**	**15 09 11.0**	**+3.1**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KMI				LR	LR		
	comp=N,250nm,10.5s						
KMI				LR	LR		
	comp=E,280nm,10.5s						
KMI				LR	LR		
	comp=Z,240nm,10.5s						
CMAR	**Chiang Mai Arr**	**14.28**	**163**	Pn	**Pn**	**15 08 08.9**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=335,slow=13,SNR=2.9						
MK31	**Makanchi Array**	**17.31**	**331**	*e*P	**Pn**	**15 08 52.1**	**+0.7**
MKAR	**Makanchi Array**	**17.31**	**331**	P	**Pn**	**15 08 51.5**	**0.0**
	comp=Z,0.2nm,0.3s,baz=144,slow=14,SNR=13						
SONM	**Songino Array**	**17.98**	**27**	P	**Pn**	**15 08 58.8**	**-0.9**
SONM				LR	LR	15 16 39.0	
	comp=Z,50nm,21.0s,baz=58,slow=40						
UCH	**Uchtor**	**18.79**	**308**	P	**Pn**	**15 09 10.8**	**+1.2**
	comp=Z,4.5nm,0.9s						
AAK	**Ala-Archa**	**18.98**	**309**	*e*P	**Pn**	**15 09 12.6**	**+0.7**
AAK				LR	LR	15 17 42.5	
AAK	**Ala-Archa**	**18.98**	**309**	P	**Pn**	**15 09 13.7**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=149,slow=5.8,SNR=6.2						
AAK				LR	LR	15 17 42.5	
	comp=Z,131nm,21.6s,baz=270,slow=41						
QIZ	**Qiongzhong**	**19.02**	**130**	P	**Pn**	**15 09 19.6**	**+7.1**
QIZ				S	**Sn**	**15 12 54.3**	**+8.8**
QIZ				pmax	pmax		
	comp=Z,83nm,4.9s						
QIZ				LR	LR		
	comp=N,170nm,16.5s						
QIZ				LR	LR		
	comp=Z,240nm,14.6s						
ZAK	**Zakamensk**	**19.24**	**17**	*e*P	**Pn**	**15 09 14.5**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AML	**Almayashu**	**19.30**	**307**	*e*P	**Pn**	**15 09 18.1**	**+2.3**
	comp=Z,13nm,1.2s						
EKS2	**Erkin-Say**	**19.46**	**308**	*e*P	**Pn**	**15 09 18.0**	**+0.3**
	comp=Z,15nm,1.1s						
NJ2	**Nanjing**	**20.55**	**84**	*e*P	**P**	**15 09 35.1**	**+6.6**
NJ2				S	**S**	**15 13 16.0**	**-2.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				LR	LR		
	comp=N,150nm,9.2s						
NJ2				LR	LR		
	comp=E,130nm,8.0s						
KBL	**Kabul**	**21.42**	**283**	*e*P	**P**	**15 09 38.1**	**+0.2**
	comp=E,28nm,0.8s,mb4.6						
KBL	**Kabul**	**21.42**	**283**	*e*P	**P**	**15 09 38.1**	**+0.2**
KBL				pmax	pmax		
	comp=Z,28nm,0.8s,mb4.6						
KURK	**Kurchatov**	**21.90**	**332**	*e*P	**P**	**15 09 42.6**	**-0.3**
KURK	**Kurchatov**	**21.90**	**332**	P	**P**	**15 09 42.7**	**-0.2**
	comp=Z,9.7nm,0.7s,mb4.3,baz=138,slow=12,SNR=28						
KURK	**Kurchatov**	**21.90**	**332**	*ce*P	**P**	**15 09 42.8**	**-0.1**
KURK				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.4						
ZALV	**Zalesovo Beam**	**22.79**	**345**	P	**P**	**15 09 52.0**	**-0.2**
	comp=Z,0.6nm,0.3s,mb3.5,baz=161,slow=14,SNR=6.3						
NVS	**Novosibirsk**	**23.98**	**344**	*e*P	**P**	**15 10 06.3**	**+2.2**
BVAR	**Borovoye Array**	**27.11**	**327**	P	**P**	**15 10 32.5**	**-0.2**
	comp=Z,1.7nm,0.7s,mb3.7,baz=126,slow=9.7,SNR=8.8						
BRVK	**Borovoye**	**27.18**	**327**	*e*P	**P**	**15 10 33.3**	**0.0**
BRVK	**Borovoye**	**27.18**	**327**	*ce*P	**P**	**15 10 34.1**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
KSRS	**Korea Array**	**27.77**	**70**	P	**P**	**15 10 36.4**	**-2.4**
	comp=Z,0.5nm,0.5s,mb3.4,baz=272,slow=9.9,SNR=4.1						
KSRS				LR	LR	15 21 51.7	
	comp=Z,50nm,18.2s,MS3.1,baz=260,slow=37						
SVE	**Sverdlovsk**	**33.90**	**327**	*e*P	**P**	**15 11 33.9**	**+1.4**
SVE				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
ARU	**Arti**	**34.69**	**325**	*c i*P	**P**	**15 11 39.3**	**0.0**
ARU				*e*		15 12 54.8	
ARU				S	**S**	**15 17 03.2**	**-5.8**
ARU				SS	SS	15 19 17.0	-22
ARU				pmax	pmax		
	comp=Z,12nm,2.5s,mb4.4						
MJAR	**Matsushiro Arr**	**36.03**	**71**	LR	LR	15 28 15.7	
	comp=Z,73nm,18.2s,MS3.5,baz=335,slow=39						

KIV	**Kislovodsk**	**41.84**	**302**	*e*P	**P**	**15 12 40.6**	**+0.8**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
SEY	**Seymchan**	**47.26**	**32**	*ce*P	**P**	**15 13 23.4**	**+0.6**
BRTR	**Keskin Array B**	**49.04**	**297**	P	**P**	**15 13 36.9**	**0.0**
	comp=Z,1.0nm,0.7s,mb4.0,baz=106,slow=7.8,SNR=6.1						
AKASG	**Malin Array Be**	**50.62**	**312**	P	**P**	**15 13 48.2**	**-0.5**
	comp=Z,0.2nm,0.3s,mb3.5,baz=70,slow=7.2,SNR=2.9						
FINES	**FINESS Array B**	**52.05**	**325**	P	**P**	**15 13 57.5**	**-1.9**
	comp=Z,1.3nm,0.9s,mb3.9,baz=79,slow=8.6,SNR=2.8						
ARCES	**ARCESS Array B**	**52.88**	**336**	P	**P**	**15 14 03.8**	**-1.6**
	comp=Z,0.8nm,0.8s,mb3.7,baz=76,slow=7.5,SNR=2.7						
NOA	**NORSAR Array B**	**59.23**	**326**	P	**P**	**15 14 50.0**	**-0.9**
	comp=Z,1.2nm,0.8s,mb4.0,baz=79,slow=7.0,SNR=4.3						
NOA				LR	LR	15 43 05.9	
	comp=Z,24nm,20.2s,MS3.3,baz=30,slow=39						
LPG	**La Plagne**	**66.42**	**310**	*e*P	**P**	**15 15 39.3**	**+0.3**
LPL	**La Plagne**	**66.42**	**310**	*e*P	**P**	**15 15 39.2**	**+0.2**
	comp=Z,6.9nm,0.5s,mb4.6						
ASAR	**Alice Springs**	**67.11**	**141**	P	**P**	**15 15 42.4**	**-1.2**
	comp=Z,1.4nm,0.5s,mb4.2,baz=326,slow=6.4,SNR=36						
ORIF	**Oris-en-Rattie**	**67.21**	**310**	*e*P	**P**	**15 15 43.3**	**-0.8**
ILAR	**Eielson Array**	**72.17**	**23**	P	**P**	**15 16 13.2**	**-1.1**
	comp=Z,0.4nm,0.7s,mb3.5,baz=298,slow=4.5,SNR=5.2						
STKA	**Stephens Creek**	**77.73**	**140**	P	**P**	**15 16 45.7**	**-1.1**
	comp=Z,1.7nm,0.7s,mb4.1,baz=307,slow=5.1,SNR=5.6						
TORD	**Torodi Ar. Bea**	**85.50**	**283**	P	**P**	**15 17 27.2**	**-1.1**
	comp=Z,0.8nm,0.7s,mb4.0,baz=56,slow=6.8,SNR=3.6						

ISCJB **12** *15:18:50.1±0.5,51°.11N±0°.02×5°.84E±0°.03,h10km,Error ellipse: s-maj=3.8km s-min=2.3km az=144.1*
LDG **12** *15:18:52.0±0.1,51°.15N×5°.88E,h20km,Md2.6/1,Ml2.8/12, Error ellipse: s-maj=2.1km s-min=1.4km az=148.0*
CSEM **12** *15:18:52.5±0.2,51°.07N×5°.94E,h30km,ML2.9/19,Error ellipse: s-maj=4.9km s-min=3.0km az=158.0*
UCC **12** *15:18:52.5±0.4,51°.16N×5°.89E,h19km±1km,ML2.1*
NEIC **12** *15:18:52.0,51°.15N×5°.88E,h20km,ML2.8(LDG),After LDG.*
BNS **12** *15:18:53.6±0.9,51°.12N×5°.94E,h21km±3km,ML2.2*
BGR **12** *15:18:53.5±0.5,51°.13N×6°.09E,h10km,ML2.2/3,Error ellipse: s-maj=6.7km s-min=3.3km az=119.0*
ISC 12 15:18:50.9±0.4**,51°.15N**±0°.02×**5°.82E**±0°.03**, h10km, n83,** σ1**20**/167**, 6C-2D, The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RODG	**Roetgen-Dahlhe**	**0.23**	**92**	*e*Pg	**Pg**	**15 18 58.6**	**+3.1**
RODG	**Roetgen-Dahlhe**	**0.23**	**92**	Pg	**Pg**	**15 18 58.6**	**+3.1**
HGN	**Heimansgroeve**	**0.39**	**170**	*e*Pg	**Pg**	**15 19 00.3**	**+1.8**
HGN				*e*Sg	**Sg**	**15 19 06.2**	**+2.4**
HGN	**Heimansgroeve**	**0.39**	**170**	⇑*i*Pg	**Pg**	**15 19 00.3**	**+1.8**
	baz=350						
HGN				*e*Sg	**Sg**	**15 19 05.3**	**+1.5**
HGN	**Heimansgroeve**	**0.39**	**170**	Pg	**Pg**	**15 19 00.3**	**+1.7**
HGN				Sg	**Sg**	**15 19 06.2**	**+2.4**
DREG	**Dreilaegerbach**	**0.55**	**152**	*e*Pg	**Pg**	**15 19 02.9**	**+1.4**
DREG				*e*Sg	**Sg**	**15 19 10.5**	**+1.7**
	74nm,0.4s						
DREG	**Dreilaegerbach**	**0.55**	**152**	Pg	**Pg**	**15 19 02.9**	**+1.3**
DREG				Sg	**Sg**	**15 19 10.5**	**+1.6**
	74nm,0.4s						
MEM	**Membach**	**0.56**	**168**	⇑P	**Pg**	**15 19 03.2**	**+1.6**
MEM				S	**Sg**	**15 19 10.1**	**+1.2**
MEM	**Membach**	**0.56**	**168**	*e*Pg	**Pg**	**15 19 03.2**	**+1.6**
MEM				*e*Sg	**Sg**	**15 19 11.1**	**+2.2**
MEM	**Membach**	**0.56**	**168**	Pg	**Pg**	**15 19 03.2**	**+1.6**
MEM				S	**Sg**	**15 19 10.1**	**+1.2**
MEM				Sg	**Sg**	**15 19 11.1**	**+2.2**
KLL	**Kalltalsperre**	**0.59**	**148**	*e*Pg	**Pg**	**15 19 03.5**	**+1.2**
KLL				*e*Sg	**Sg**	**15 19 12.1**	**+2.0**
	93nm,0.1s						
KLL	**Kalltalsperre**	**0.59**	**148**	Pg	**Pg**	**15 19 03.5**	**+1.2**
KLL				Sg	**Sg**	**15 19 12.1**	**+2.0**
	93nm,0.1s						
LAUG	**Laupendahl**	**0.73**	**74**	*e*Pg	**Pg**	**15 19 05.6**	**+0.6**
LAUG				*e*Sg	**Sg**	**15 19 14.7**	**+0.1**
	179nm,0.5s						
LAUG	**Laupendahl**	**0.73**	**74**	Pg	**Pg**	**15 19 05.6**	**+0.6**
LAUG				Sg	**Sg**	**15 19 14.7**	**+0.1**
	179nm,0.5s						
BCLA	**Clavier**	**0.80**	**204**	⇑P	**Pg**	**15 19 08.3**	**+2.0**
BCLA				S	**Sg**	**15 19 19.2**	**+2.4**
	comp=E,64nm,0.1s						
BCLA	**Clavier**	**0.80**	**204**	P	**Pg**	**15 19 08.2**	**+1.9**
BCLA				S	**Sg**	**15 19 19.1**	**+2.3**
	comp=E,64nm,0.1s						
STB	**Steinbach**	**0.85**	**130**	*e*Pg	**Pg**	**15 19 08.5**	**+1.2**
STB				*e*Sg	**Sg**	**15 19 18.7**	**+0.3**
	comp=E,90nm,0.5s						
STB	**Steinbach**	**0.85**	**130**	Pg	**Pg**	**15 19 08.5**	**+1.2**
STB				Sg	**Sg**	**15 19 18.7**	**+0.3**
	comp=E,90nm,0.5s						
BNS	**Bensberg**	**0.88**	**102**	*e*Pg	**Pg**	**15 19 08.5**	**+0.8**
BNS				*e*Sg	**Sg**	**15 19 18.9**	**-0.2**
	comp=E,182nm,0.5s						
BNS	**Bensberg**	**0.88**	**102**	Pg	**Pg**	**15 19 08.5**	**+0.8**
BNS				Sg	**Sg**	**15 19 18.9**	**-0.2**
	comp=E,182nm,0.5s						
BUG	**Bochum--Univer**	**0.95**	**72**	*e*Pg	**Pg**	**15 19 09.3**	**+0.1**
BUG				*e*Sg	**Sg**	**15 19 20.4**	**-1.2**
HOBG	**Hohbusch**	**0.97**	**99**	*e*Pg	**Pg**	**15 19 10.1**	**+0.6**
HOBG				*e*Sg	**Sg**	**15 19 21.6**	**-0.5**
	comp=E,167nm,0.7s						
HOBG	**Hohbusch**	**0.97**	**99**	Pg	**Pg**	**15 19 10.1**	**+0.6**
HOBG				Sg	**Sg**	**15 19 21.6**	**-0.5**
	comp=E,167nm,0.7s						
HILG	**Hillesheim**	**1.02**	**147**	*e*Pg	**Pg**	**15 19 11.3**	**+0.9**
HILG				*e*Sg	**Sg**	**15 19 23.8**	**+0.1**
	comp=E,49nm,0.5s						
HILG	**Hillesheim**	**1.02**	**147**	Pg	**Pg**	**15 19 11.3**	**+0.9**
HILG				Sg	**Sg**	**15 19 23.8**	**+0.2**
	comp=E,49nm,0.5s						
WTSB	**Winterswijk**	**1.02**	**36**	*e*Pg	**Pg**	**15 19 10.8**	**+0.4**
WTSB				*e*Sg	**Sg**	**15 19 23.4**	**-0.2**
WTSB	**Winterswijk**	**1.02**	**36**	⇑*i*Pg	**Pg**	**15 19 10.8**	**+0.4**
	comp=E,30nm,0.2s						
WTSB				*e*Sg	**Sg**	**15 19 23.2**	**-0.5**
WTSB	**Winterswijk**	**1.02**	**36**	⇑*i*Pg	**Pg**	**15 19 10.8**	**+0.4**
	comp=E,30nm,0.2s						
WTSB				*e*Sg	**Sg**	**15 19 23.2**	**-0.5**
SNF	**Seneffe**	**1.17**	**237**	⇑P	**Pb**	**15 19 13.8**	**+0.8**
SNF	**Seneffe**	**1.17**	**237**	P	**Pb**	**15 19 13.8**	**+0.7**
GIVF	**Givet**	**1.23**	**212**	*e*Pg	**Pg**	**15 19 15.3**	**+0.9**
GIVF				*e*Sg	**Sn**	**15 19 31.3**	**+0.7**
	comp=E,49nm,0.2s						
GIVF	**Givet**	**1.23**	**212**	*e*Pg	**Pg**	**15 19 15.3**	**+0.9**
GIVF				*e*Sg	**Sn**	**15 19 31.3**	**+0.7**
	comp=E,49nm,0.2s						
GIVF	**Givet**	**1.23**	**212**	*e*P	**Pn**	**15 19 14.6**	**+0.6**
GIVF				*e*Pg	**Pg**	**15 19 15.3**	**+0.9**
GIVF				*e*Sg	**Sn**	**15 19 31.3**	**+0.7**
GIVF	**Givet**	**1.23**	**212**	*e*P	**Pn**	**15 19 14.6**	**+0.6**
GIVF	**Givet**	**1.23**	**212**	*e*Pg	**Pg**	**15 19 15.3**	**+0.9**
GIVF				*e*Sg	**Sn**	**15 19 31.3**	**+0.7**
	comp=E,24nm,0.2s						
DOU	**Dourbes**	**1.31**	**217**	⇓P	**Pn**	**15 19 15.7**	**+0.5**
DOU				S	**Sb**	**15 19 33.2**	**+0.8**
	comp=E,22nm,0.3s						
DOU	**Dourbes**	**1.31**	**217**	P	**Pn**	**15 19 15.6**	**+0.4**
DOU				S	**Sb**	**15 19 33.2**	**+0.8**
	comp=E,22nm,0.3s						
BGG	**Burgeitz**	**1.35**	**134**	*e*Pg	**Pn**	**15 19 15.6**	**-0.1**
BGG				*e*Sg	**Sn**	**15 19 30.8**	**-2.9**
BGG	**Burgeitz**	**1.35**	**134**	Pg	**Pn**	**15 19 15.6**	**-0.1**
BGG				Sg	**Sn**	**15 19 30.8**	**-2.9**
KOE	**Koeppel**	**1.41**	**120**	*e*Pg	**Pg**	**15 19 17.1**	**-0.8**
KOE				*e*Sg	**Sg**	**15 19 34.8**	**-1.5**
	comp=E,20nm,0.4s						
KOE	**Koeppel**	**1.41**	**120**	Pg	**Pg**	**15 19 17.1**	**-0.9**
KOE				Sg	**Sg**	**15 19 34.8**	**-1.5**
	comp=E,20nm,0.4s						
BAIF	**Baives**	**1.50**	**224**	*e*Pg	**Pg**	**15 19 19.9**	**+0.3**
BAIF				*e*Sn	**Sn**	**15 19 34.4**	**-3.0**
BAIF				*e*Sg	**Sg**	**15 19 39.5**	**+0.4**
	comp=E,30nm,0.4s						
BAIF	**Baives**	**1.50**	**224**	*e*Pg	**Pg**	**15 19 19.9**	**+0.3**
BAIF				*e*Sn	**Sn**	**15 19 34.4**	**-3.0**
BAIF				*e*Sg	**Sg**	**15 19 39.5**	**+0.4**
	comp=E,30nm,0.4s						
BAIF	**Baives**	**1.50**	**224**	*e*Pn	**Pn**	**15 19 16.0**	**-1.8**
BAIF				*e*Pg	**Pg**	**15 19 19.9**	**+0.3**
BAIF				*e*Sn	**Sn**	**15 19 34.4**	**-3.0**
BAIF				*e*Sg	**Sg**	**15 19 39.5**	**+0.4**
	comp=E,15nm,0.4s						
WLF	**Walferdange**	**1.50**	**172**	⇓P	**Pn**	**15 19 19.6**	**+1.8**
WLF	**Walferdange**	**1.50**	**172**	*e*Pn	**Pn**	**15 19 19.6**	**+1.8**
WLF				*e*Pg	**Pg**	**15 19 21.0**	**+1.3**
WLF				*e*Sg	**Sg**	**15 19 39.1**	**-0.1**
WLF	**Walferdange**	**1.50**	**172**	P	**Pn**	**15 19 19.5**	**+1.7**
WLF	**Walferdange**	**1.50**	**172**	Pg	**Pg**	**15 19 21.0**	**+1.3**
WLF				Sg	**Sg**	**15 19 39.1**	**-0.1**
TNS	**Taunus Mts**	**1.91**	**118**	*e*Pn	**Pn**	**15 19 23.7**	**+0.3**
TNS				*e*Pg	**Pg**	**15 19 26.9**	**-0.6**
TNS				*e*Sg	**Sg**	**15 19 49.3**	**-3.0**
TNS	**Taunus Mts**	**1.91**	**118**	Pn	**Pn**	**15 19 23.7**	**+0.3**
RFYF	**Reffroy**	**2.54**	**185**	*e*Sn	**Sn**	**15 19 58.4**	**-4.5**
	baz=5.4						
RFYF				*e*Sg	**Sg**	**15 20 12.3**	**+0.1**
	comp=E,17nm,0.2s,baz=10						
RFYF	**Reffroy**	**2.54**	**185**	*e*Sn	**Sn**	**15 19 58.4**	**-4.5**
	baz=5.4						
RFYF				*e*Sg	**Sg**	**15 20 12.3**	**+0.1**
	comp=E,8.5nm,0.2s,baz=10						
MEZF	**Maizieres J'vi**	**2.70**	**191**	*e*Pg	**Pg**	**15 19 42.0**	**-0.5**
	baz=6.0						
MEZF				*e*Sg	**Sg**	**15 20 17.0**	**-0.5**
	comp=E,9.0nm,0.3s						
MEZF	**Maizieres J'vi**	**2.70**	**191**	*e*Pn	**Pn**	**15 19 32.7**	**-1.5**
MEZF				*e*Pg	**Pg**	**15 19 42.0**	**-0.5**
MEZF				*e*Sg	**Sg**	**15 20 17.0**	**-0.5**
MEZF	**Maizieres J'vi**	**2.70**	**191**	*e*Pn	**Pn**	**15 19 32.7**	**-1.5**
MEZF	**Maizieres J'vi**	**2.70**	**191**	*e*Pg	**Pg**	**15 19 42.0**	**-0.5**
	baz=6.0						
MEZF				*e*Sg	**Sg**	**15 20 17.0**	**-0.5**
	comp=E,4.5nm,0.3s						
CDF	**Champ du Feu**	**2.90**	**160**	*e*Pn	**Pn**	**15 19 35.0**	**-2.0**
CDF				*e*Sn	**Sn**	**15 20 06.5**	**-5.4**
CDF				*e*Sg	**Sg**	**15 20 23.0**	**-0.9**
	comp=E,4.0nm,0.3s						
CDF	**Champ du Feu**	**2.90**	**160**	*e*Pn	**Pn**	**15 19 35.0**	**-2.0**
CDF				*e*Sn	**Sn**	**15 20 06.5**	**-5.4**
CDF				*e*Sg	**Sg**	**15 20 23.0**	**-0.9**
	comp=E,2.0nm,0.3s						
CLZ	**Clausthal**	**2.93**	**75**	*e*Sg	**Sg**	**15 20 19.6**	**-5.2**
SFTF	**Sexfontaines**	**2.99**	**190**	*e*Pg	**Pg**	**15 19 47.6**	**-0.6**
SFTF				*e*Sg	**Sg**	**15 20 26.8**	**-0.1**
	comp=E,6.1nm,0.2s						
SFTF	**Sexfontaines**	**2.99**	**190**	*e*Pn	**Pn**	**15 19 36.7**	**-1.6**
SFTF				*e*Pg	**Pg**	**15 19 47.6**	**-0.6**
SFTF				*e*Sg	**Sg**	**15 20 26.8**	**-0.1**
SFTF	**Sexfontaines**	**2.99**	**190**	*e*Pn	**Pn**	**15 19 36.7**	**-1.6**
SFTF	**Sexfontaines**	**2.99**	**190**	*e*Pg	**Pg**	**15 19 47.6**	**-0.6**
SFTF				*e*Sg	**Sg**	**15 20 26.8**	**-0.1**
	comp=E,3.0nm,0.2s						
HAU	**Haudompre**	**3.17**	**174**	*e*Pg	**Pg**	**15 19 50.5**	**-1.0**
HAU				*e*Sg	**Sg**	**15 20 31.4**	**-1.1**
	comp=E,5.9nm,0.2s						
HAU	**Haudompre**	**3.17**	**174**	*e*Pn	**Pn**	**15 19 38.9**	**-1.8**
HAU				*e*Pg	**Pg**	**15 19 50.5**	**-1.0**
HAU				*e*Sg	**Sg**	**15 20 31.4**	**-1.1**
HAU	**Haudompre**	**3.17**	**174**	*e*Pn	**Pn**	**15 19 38.9**	**-1.8**
HAU	**Haudompre**	**3.17**	**174**	*e*Pg	**Pg**	**15 19 50.5**	**-1.0**
HAU				*e*Sg	**Sg**	**15 20 31.4**	**-1.1**
	comp=E,3.0nm,0.2s						
HINF	**Hinteralfeld**	**3.41**	**168**	*e*Sn	**Sn**	**15 20 18.9**	**-5.4**
HINF				*e*Sg	**Sg**	**15 20 38.4**	**-1.7**
	comp=E,2.0nm,0.3s						
HINF	**Hinteralfeld**	**3.41**	**168**	*e*Sn	**Sn**	**15 20 18.9**	**-5.4**
HINF				*e*Sg	**Sg**	**15 20 38.4**	**-1.7**
	comp=E,1.0nm,0.3s						
LOR	**Lormes**	**4.09**	**199**	*e*Pn	**Pn**	**15 19 53.5**	**+0.1**
	baz=23						
LOR				*e*Sn	**Sn**	**15 20 36.4**	**-4.9**
LOR				*e*Sg	**Sg**	**15 21 00.7**	**-1.5**
	comp=E,3.7nm,0.3s						
LOR	**Lormes**	**4.09**	**199**	*e*Pn	**Pn**	**15 19 53.5**	**+0.1**
	baz=23						
LOR				*e*Sn	**Sn**	**15 20 36.4**	**-4.9**
LOR				*e*Sg	**Sg**	**15 21 00.7**	**-1.5**
	comp=E,1.9nm,0.3s						
SSF	**Saint Saulge**	**4.37**	**201**	*e*Pn	**Pn**	**15 19 57.0**	**-0.2**
SSF				*e*Sn	**Sn**	**15 20 43.2**	**-4.9**
SSF				*e*Sg	**Sg**	**15 21 09.3**	**-1.7**
	comp=E,2.3nm,0.2s						
SSF	**Saint Saulge**	**4.37**	**201**	*e*Pn	**Pn**	**15 19 57.0**	**-0.2**
SSF				*e*Sn	**Sn**	**15 20 43.2**	**-4.9**
SSF				*e*Sg	**Sg**	**15 21 09.3**	**-1.7**
	comp=E,1.1nm,0.2s						
LDF	**La Druitiere**	**4.62**	**239**	*e*Pn	**Pn**	**15 20 00.6**	**0.0**
LDF				*e*

BGKT	**Bogazkoy**	**0.72**	**61**	*e*PG	**Pg**	**15 41 17.6**	**-0.2**
BGKT	**Bogazkoy**	**0.72**	**61**	*e*Pg	**Pg**	**15 41 17.6**	**-0.2**
ARMT	**Armutlu**	**0.75**	**111**	*e*PG	**Pg**	**15 41 18.1**	**-0.3**
ARMT	**Armutlu**	**0.75**	**111**	*e*Pg	**Pg**	**15 41 18.1**	**-0.3**
GONE	**Gonen-Balikesi**	**0.81**	**194**	*e*PG	**Pg**	**15 41 19.5**	**0.0**
GONE	**Gonen-Balikesi**	**0.81**	**194**	*e*Pg	**Pg**	**15 41 19.5**	**0.0**
MDNY	**Mudanya-Bursa**	**0.86**	**123**	*e*PG	**Pg**	**15 41 20.1**	**-0.3**
MDNY	**Mudanya-Bursa**	**0.86**	**123**	*e*Pg	**Pg**	**15 41 20.1**	**-0.3**
ISK	**Istanbul-Kandi**	**0.88**	**74**	*e*PG	**Pg**	**15 41 20.1**	**-0.7**
ISK	**Istanbul-Kandi**	**0.88**	**74**	*e*Pg	**Pg**	**15 41 20.1**	**-0.7**
KLYT	**Kilyos**	**0.93**	**63**	*e*PG	**Pg**	**15 41 21.6**	**-0.3**
KLYT	**Kilyos**	**0.93**	**63**	*e*Pg	**Pg**	**15 41 21.6**	**-0.3**
LPK	**Lapseki**	**1.01**	**243**	*e*PG	**Pg**	**15 41 22.5**	**-0.8**
LPK	**Lapseki**	**1.01**	**243**	*e*Pg	**Pg**	**15 41 22.5**	**-0.8**
GEMT	**Gemlik**	**1.03**	**112**	*e*PG	**Pg**	**15 41 23.3**	**-0.4**
GEMT	**Gemlik**	**1.03**	**112**	*e*Pg	**Pg**	**15 41 23.3**	**-0.4**
ERIK	**Erikli-Kesan**	**1.09**	**262**	*e*PN	**Pn**	**15 41 25.1**	**-0.3**
ERIK	**Erikli-Kesan**	**1.09**	**262**	*e*Pn	**Pn**	**15 41 25.1**	**-0.2**
BALY	**Balya**	**1.12**	**193**	*i* P	**Pb**	**15 41 25.3**	**-0.1**
BALY				*i* S	**Sg**	**15 41 40.1**	**+0.2**
BALY	**Balya**	**1.12**	**193**	*i* P	**Pb**	**15 41 25.3**	**-0.1**
BALY				*i* S	**Sg**	**15 41 40.1**	**+0.1**
YLV	**Yalova**	**1.12**	**103**	*e*PN	**Pn**	**15 41 25.0**	**-0.7**
YLV	**Yalova**	**1.12**	**103**	*e*Pn	**Pn**	**15 41 25.0**	**-0.7**
BALB	**Balikesir**	**1.19**	**182**	*e*PN	**Pn**	**15 41 26.5**	**-0.2**
BALB	**Balikesir**	**1.19**	**182**	*e*Pn	**Pn**	**15 41 26.5**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.20**	**249**	*e*PN	**Pn**	**15 41 25.9**	**-0.8**
GELI	**Tayfur-Gelibol**	**1.20**	**249**	*e*Pn	**Pn**	**15 41 25.9**	**-0.8**
DURS	**Dursunbey**	**1.30**	**161**	*i* P	**Pn**	**15 41 29.1**	**+0.9**
DURS				*i* S	**Sb**	**15 41 44.6**	**-0.5**
DURS	**Dursunbey**	**1.30**	**161**	*i* P	**Pn**	**15 41 29.0**	**+0.9**
DURS				*i* S	**Sb**	**15 41 44.6**	**-0.5**
HRT	**Hereke**	**1.31**	**90**	*e*PN	**Pn**	**15 41 27.7**	**-0.6**
HRT	**Hereke**	**1.31**	**90**	*e*Pn	**Pn**	**15 41 27.7**	**-0.6**
SILT	**Sile**	**1.33**	**76**	*e*PN	**Pn**	**15 41 28.2**	**-0.3**
SILT	**Sile**	**1.33**	**76**	*e*Pn	**Pn**	**15 41 28.2**	**-0.3**
EDRB	**Edirne**	**1.35**	**319**	*e*PN	**Pn**	**15 41 28.9**	**0.0**
EDRB	**Edirne**	**1.35**	**319**	*e*Pn	**Pn**	**15 41 28.9**	**0.0**
ENEZ	**Enez**	**1.36**	**266**	*e*PN	**Pn**	**15 41 28.8**	**-0.2**
ENEZ	**Enez**	**1.36**	**266**	*e*Pn	**Pn**	**15 41 28.8**	**-0.2**
ADVT	**Abdulvahap**	**1.43**	**106**	*e*PN	**Pn**	**15 41 29.8**	**-0.1**
ADVT	**Abdulvahap**	**1.43**	**106**	*e*Pn	**Pn**	**15 41 29.8**	**-0.1**
ALN	**Alexandroupoli**	**1.44**	**273**	P	**Pn**	**15 41 29.3**	**-0.7**
ALN				S	**Sn**	**15 41 47.4**	**-1.6**
ALN	**Alexandroupoli**	**1.44**	**273**	P	**Pn**	**15 41 29.3**	**-0.7**
ALN				S	**Sn**	**15 41 47.4**	**-1.6**
CAVI	**Cavuskoy**	**1.58**	**113**	*e*PN	**Pn**	**15 41 32.1**	**0.0**
CAVI	**Cavuskoy**	**1.58**	**113**	*e*Pn	**Pn**	**15 41 32.1**	**+0.1**
EZN	**Ezine**	**1.59**	**231**	*e*PN	**Pn**	**15 41 32.7**	**+0.5**
EZN	**Ezine**	**1.59**	**231**	*e*Pn	**Pn**	**15 41 32.7**	**+0.5**
GADA	**Gvkgeada**	**1.68**	**248**	*e*PN	**Pn**	**15 41 33.9**	**+0.4**
GADA	**Gvkgeada**	**1.68**	**248**	*e*Pn	**Pn**	**15 41 33.9**	**+0.5**
BOZC	**Bozcaada**	**1.75**	**236**	*i* P	**Pn**	**15 41 32.3**	**-2.1**
BOZC				*i* P		15 41 34.7	
BOZC				*i* S	**Sn**	**15 42 00.0**	**+3.3**
BOZC				*i* S	**Sn**	**15 42 00.9**	**+4.2**
AYVA	**Ayvalik**	**1.80**	**213**	*i* P	**Pn**	**15 41 35.8**	**+0.7**
AYVA				*i* S	**Sn**	**15 42 01.1**	**+3.1**
AYVA	**Ayvalik**	**1.80**	**213**	*i* P	**Pn**	**15 41 35.8**	**+0.8**
AYVA				*i* S	**Sn**	**15 42 01.1**	**+3.2**
SPNC	**Sapanca-Adapaz**	**1.81**	**94**	*e*PN	**Pn**	**15 41 35.1**	**0.0**
SPNC	**Sapanca-Adapaz**	**1.81**	**94**	*e*Pn	**Pn**	**15 41 35.1**	**0.0**
GPA	**Golpazari**	**1.89**	**106**	*e*PN	**Pn**	**15 41 35.6**	**-0.6**
DEMI	**Demirci**	**1.89**	**161**	*i* P	**Pn**	**15 41 36.2**	**0.0**
DEMI				*i* S	**Sn**	**15 42 00.0**	**0.0**
DEMI	**Demirci**	**1.89**	**161**	*i* P	**Pn**	**15 41 36.2**	**0.0**
DEMI				*i* S	**Sn**	**15 42 00.0**	**-0.1**
JMB	**Yambol**	**1.92**	**329**	P	**Pn**	**15 41 37.6**	**+0.9**
JMB				S	**Sn**	**15 42 01.5**	**+0.6**
JMB	**Yambol**	**1.92**	**329**	*e*P	**Pn**	**15 41 37.7**	**+1.0**
JMB				*e*Pg	**Pg**	**15 41 41.9**	**+1.2**
JMB	**Yambol**	**1.92**	**329**	P	**Pn**	**15 41 37.6**	**+0.9**
JMB	**Yambol**	**1.92**	**329**	*e*Pg	**Pg**	**15 41 41.9**	**+1.2**
JMB				S	**Sn**	**15 42 01.5**	**+0.6**
AKHS	**Akhisar**	**1.96**	**183**	*i* P	**Pn**	**15 41 36.6**	**-0.6**
AKHS				*i* S	**Sn**	**15 42 07.1**	**+5.3**
AKHS	**Akhisar**	**1.96**	**183**	*i* P	**Pn**	**15 41 36.6**	**-0.6**
AKS	**Akhisar**	**1.96**	**183**	*e*PN	**Pn**	**15 41 37.9**	**+0.8**
AKS	**Akhisar**	**1.96**	**183**	*e*Pn	**Pn**	**15 41 37.9**	**+0.7**
GULT	**Gulveren**	**2.00**	**101**	*e*PN	**Pn**	**15 41 38.0**	**+0.2**
GULT	**Gulveren**	**2.00**	**101**	*e*Pn	**Pn**	**15 41 38.0**	**+0.2**
PRK	**Paraskevi**	**2.04**	**219**	P	**Pn**	**15 41 38.4**	**+0.1**
PRK				S	**Sn**	**15 42 03.1**	**-0.7**
PRK	**Paraskevi**	**2.04**	**219**	P	**Pn**	**15 41 38.4**	**+0.1**
PRK				S	**Sn**	**15 42 03.1**	**-0.7**
KDZ	**Kurdzhali**	**2.07**	**294**	Pg	**Pg**	**15 41 43.3**	**-0.5**
KDZ	**Kurdzhali**	**2.07**	**294**	Pg	**Pg**	**15 41 43.3**	**-0.3**
GDZ	**Gediz**	**2.11**	**145**	*i* P	**Pn**	**15 41 35.4**	**-3.8**
GDZ				*i* S	**Sn**	**15 42 09.4**	**+3.8**
GDZ	**Gediz**	**2.11**	**145**	*i* P	**Pn**	**15 41 35.4**	**-3.9**
GDZ				*i* S	**Sn**	**15 42 09.4**	**+3.9**
HENT	**Hendek**	**2.25**	**89**	*i* P	**Pn**	**15 41 40.5**	**-0.7**
HENT				*i* S	**Sn**	**15 42 08.3**	**-0.7**
HENT	**Hendek**	**2.25**	**89**	*i* P	**Pn**	**15 41 40.5**	**-0.7**
HENT				*i* S	**Sn**	**15 42 08.3**	**-0.6**
LIA	**Limnos Island**	**2.30**	**247**	P	**Pn**	**15 41 41.3**	**-0.7**
LIA				S	**Sn**	**15 42 08.7**	**-1.7**
LIA	**Limnos Island**	**2.30**	**247**	P	**Pn**	**15 41 41.3**	**-0.7**
LIA				S	**Sn**	**15 42 08.7**	**-1.7**
KULA	**Kula-Manisa**	**2.38**	**166**	*e*PN	**Pn**	**15 41 43.7**	**+0.7**
KULA	**Kula-Manisa**	**2.38**	**166**	*e*Pn	**Pn**	**15 41 43.7**	**+0.7**
PRD	**Provadia**	**2.40**	**351**	Pg	**Pg**	**15 41 47.6**	**-2.2**
PRD	**Provadia**	**2.40**	**351**	Pg	**Pg**	**15 41 47.6**	**-2.2**
ALT	**Altintas**	**2.44**	**136**	*e*PN	**Pn**	**15 41 44.3**	**+0.5**
ALT	**Altintas**	**2.44**	**136**	*e*Pn	**Pn**	**15 41 44.3**	**+0.5**
IZM	**Izmir**	**2.49**	**192**	*e*PN	**Pn**	**15 41 45.4**	**+0.9**
IZM	**Izmir**	**2.49**	**192**	*e*Pn	**Pn**	**15 41 45.4**	**+0.9**
MDU	**Mudurnu**	**2.52**	**97**	*e*PN	**Pn**	**15 41 45.4**	**+0.5**
MDU	**Mudurnu**	**2.52**	**97**	*e*Pn	**Pn**	**15 41 45.4**	**+0.5**
BLCB	**Balcova**	**2.54**	**196**	*e*PN	**Pn**	**15 41 46.2**	**+1.0**
BLCB	**Balcova**	**2.54**	**196**	*e*Pn	**Pn**	**15 41 46.2**	**+1.0**
RZN	**Rozhen**	**2.58**	**290**	*e*P	**Pn**	**15 41 46.3**	**+0.6**
RZN	**Rozhen**	**2.58**	**290**	*e*P	**Pn**	**15 41 46.3**	**+0.6**
KAVA	**Kavala**	**2.60**	**275**	P	**Pn**	**15 41 45.6**	**-0.4**
KAVA				S	**Sn**	**15 42 16.9**	**-0.8**
KAVA	**Kavala**	**2.60**	**275**	P	**Pn**	**15 41 45.6**	**-0.4**
KAVA				S	**Sn**	**15 42 16.9**	**-0.8**
KDZE	**Karadeniz Ereo**	**2.69**	**79**	*e*PN	**Pn**	**15 41 48.3**	**+1.0**
KDZE	**Karadeniz Ereo**	**2.69**	**79**	*e*Pn	**Pn**	**15 41 48.3**	**+1.0**
PLD	**Plovdiv**	**2.74**	**299**	Pg	**Pg**	**15 41 54.4**	**-2.0**
PLD	**Plovdiv**	**2.74**	**299**	Pg	**Pg**	**15 41 54.4**	**-2.0**
KHL	**Karahalli**	**2.79**	**153**	*e*PN	**Pn**	**15 41 49.5**	**+0.8**
KHL	**Karahalli**	**2.79**	**153**	*e*Pn	**Pn**	**15 41 49.5**	**+0.9**
CHOS	**Chios island**	**2.84**	**211**	P	**Pn**	**15 41 48.8**	**-0.6**
CHOS				S	**Sn**	**15 42 23.6**	**-0.1**
CHOS	**Chios island**	**2.84**	**211**	P	**Pn**	**15 41 48.8**	**-0.6**
CHOS				S	**Sn**	**15 42 23.6**	**-0.1**
SVRH	**Sivrihisar-ESK**	**3.08**	**116**	*e*PN	**Pn**	**15 41 53.4**	**+0.8**
SVRH	**Sivrihisar-ESK**	**3.08**	**116**	*e*Pn	**Pn**	**15 41 53.4**	**+0.8**
MMB	**Musomiste**	**3.27**	**285**	*e*Pg	**Pg**	**15 42 03.9**	**-2.5**
MMB	**Musomiste**	**3.27**	**285**	*e*Pg	**Pg**	**15 42 03.9**	**-2.5**
KIZT	**Kizilcal**	**3.61**	**121**	*e*PN	**Pn**	**15 42 00.8**	**+0.9**
KIZT	**Kizilcal**	**3.61**	**121**	*e*Pn	**Pn**	**15 42 00.8**	**+0.9**
SAFT	**Safranbolu**	**3.61**	**82**	*e*PN	**Pn**	**15 42 00.9**	**+0.9**
SAFT	**Safranbolu**	**3.61**	**82**	*e*Pn	**Pn**	**15 42 00.9**	**+0.9**
VTS	**Vitosha**	**3.95**	**298**	*e*Pn	**Pn**	**15 42 05.1**	**+0.5**
VTS				*e*Sn	**Sg**	**15 43 14.3**	**+3.5**
VTS	**Vitosha**	**3.95**	**298**	*e*P	**Pn**	**15 42 05.5**	**+0.9**
VTS	**Vitosha**	**3.95**	**298**	*e*Pn	**Pn**	**15 42 05.1**	**+0.5**
VTS	**Vitosha**	**3.95**	**298**	*e*P	**Pn**	**15 42 05.5**	**+0.9**
ZAPS	**Zavoj**	**4.64**	**303**	⇑*i*Pn	**Pn**	**15 42 15.1**	**+1.0**
BARS	**Barje**	**4.99**	**295**	⇑*i*Pn	**Pn**	**15 42 19.7**	**+0.9**
BARS	**Barje**	**4.99**	**295**	⇑*i*Pn	**Pn**	**15 42 19.7**	**+0.9**

GUC 12 16:06:33.2±0.3, 20°03.03'N × 69°23.28'W, h105km ± 3km, ML3.7, 2C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HMBC	**Humberston**	**0.62**	**246**	⇓*i*P	Pn	16 06 50.8	+0.5
HMBC				*i* S	Sn	16 07 04.2	+0.9
HMBC				AML	AML	16 07 05.0	
	comp=E,4μm,0.4s						
PSGC	**Pisagua**	**0.90**	**298**	⇑*i*P	Pn	16 06 53.4	+0.5
PSGC				*i* S	Sn	16 07 08.7	+1.0
PSGC				AML	AML	16 07 10.7	
	comp=E,2μm,0.3s						
MNMC	**Miæe Miæ**	**0.94**	**342**	⇓*i*P	Pn	16 06 54.1	+0.8
MNMC				*i* S	Sn	16 07 09.8	+1.3
MNMC				AML	AML	16 07 11.1	
	comp=N,6μm,0.1s						
PB01	**Plate Boundary**	**1.03**	**191**	⇓*i*P	Pn	16 06 54.9	+0.6
PB01				*i* S	Sn	16 07 11.1	+0.9
PB01				AML	AML	16 07 12.2	
	comp=N,2μm,0.3s						
MACH	**Maria Elena**	**2.20**	**192**	⇑*i*P	Pn	16 07 09.7	+1.2
MACH				*i* S	Sn	16 07 37.8	+2.2
PB04	**Plate Boundary**	**2.23**	**185**	*e*P	Pn	16 07 12.9	+3.9
PB04				*i* S	Sn	16 07 42.9	+6.6
PB04				AML	AML	16 07 55.9	
	comp=E,286nm,0.4s						

IDC 12 16:11:44.6±3.7, 10°28.2S × 166°54.6E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.7/14, mbtmp3.7/4, Error ellipse: s-maj=129.3km s-min=36.0km az=132.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**33.59**	**243**	P	P	16 18 26.9	+0.1
	1.0nm,0.8s,baz=69,slow=10,SNR=16						
SONM	**Songino Array**	**78.95**	**323**	P	P	16 23 50.6	+0.5
	0.2nm,0.3s,baz=134,slow=6.2,SNR=2.9						
ILAR	**Eielson Array**	**83.05**	**18**	P	P	16 24 11.7	+0.1
	0.3nm,0.7s,baz=236,slow=5.1,SNR=4.3						
MKAR	**Makanchi Array**	**93.89**	**317**	P	P	16 25 03.7	-0.4
	0.2nm,0.2s,baz=93,slow=5.8,SNR=4.3						

IDC 12 16:28:21.1±1.3, 1°98N × 127°49E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/18, mbtmp3.7/5, Error ellipse: s-maj=65.0km s-min=24.4km az=80.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**26.25**	**167**	P	P	16 33 58.2	+0.1
	0.6nm,0.3s,baz=346,slow=11,SNR=6.5						
KSRS	**Korea Array**	**35.30**	**1**	P	P	16 35 17.9	+0.1
	0.4nm,0.5s,baz=168,slow=6.2,SNR=2.6						
MJAR	**Matsushiro Arr**	**35.79**	**15**	P	P	16 35 21.8	-0.3
	0.9nm,0.5s,baz=190,slow=8.7,SNR=5.1						
SONM	**Songino Array**	**49.19**	**341**	P	P	16 37 11.3	+0.4
	0.4nm,0.5s,baz=153,slow=9.1,SNR=3.2						
MKAR	**Makanchi Array**	**59.42**	**326**	P	P	16 38 25.3	-0.2
	1.5nm,0.5s,baz=117,slow=7.9,SNR=19						

*ISCJB **12** 17:25:45.3±0.1, 48°.17N±0°.01 × 13°.28E±0°.02, h10km, Error ellipse: s-maj=1.7km s-min=1.5km az=10.1*
*NEIC **12** 17:25:46.3±0.3, 48°.10N × 13°.28E, h10km, ML3.8(LDG), ML3.4(STR), ML3.4(SZGRF), Error ellipse: s-maj=3.9km s-min=3.3km az=179.0*
*VIE **12** 17:25:46.7±0.4, 48°.22N × 13°.30E, h10km, mb2.8/16, ML3.7/18, Error ellipse: s-maj=4.1km s-min=3.2km az=115.0 14 km W of Ried im Innkreis felt 4 ems98 in the region of Ried im Innkreis / UPPER AUSTRIA*
*ROM **12** 17:25:47.9±0.4, 48°.13N × 13°.31E, h23km±2km, Md3.1/3, Ml2.8/4, Error ellipse: s-maj=4.3km s-min=3.6km az=170.0*
*IPEC **12** 17:25:47.8±0.1, 48°.13N × 13°.20E, h31km±1km, ML3.2/3, Error ellipse: s-maj=1.1km s-min=0.9km az=59.0*
*BGR **12** 17:25:48.0±0.2, 48°.12N × 13°.22E, h10km, ML3.4/7, Error ellipse: s-maj=4.4km s-min=3.3km az=60.0*
BGR Felt.
*PRU **12** 17:25:48.0, 48°.16N × 13°.38E, h29km*
*CSEM **12** 17:25:48.1±0.2, 48°.15N × 13°.32E, h26km±1km, ML3.5, Error ellipse: s-maj=2.0km s-min=1.9km az=153.0*
*LDG **12** 17:25:49.5±0.2, 47°.99N × 13°.31E, h25km, Ml3.8/30, Error ellipse: s-maj=4.5km s-min=2.2km az=25.0*
*STR **12** 17:25:55.6±0.4, 48°.24N × 13°.29E, h10km, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BNS **12** 17:25:55.5±0.4, 48°.49N × 12°.89E, h15km, ML3.5*

ISC 12 17:25:46.1±0.1, 48°.16N±0°.01 × 13°.31E±0°.02, h10km, n340, σ1§16/535, 44C-26D, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RNON	**Nonn-Bad Reich**	**0.52**	**216**	⇑*i*Pg	**Pg**	**17 26 00.6**	**+4.4**
RNON	**Nonn-Bad Reich**	**0.52**	**216**	Pg	**Pg**	**17 26 00.6**	**+4.4**
BGLD	**Berchtesgaden**	**0.55**	**202**	⇑*i*Pg	**Pg**	**17 26 00.4**	**+3.7**
BGLD				⇑*i*Sg	**Sg**	**17 26 09.1**	**+5.2**
BGLD	**Berchtesgaden**	**0.55**	**202**	Pg	**Pg**	**17 26 00.4**	**+3.7**
BGLD				Sg	**Sg**	**17 26 09.1**	**+5.2**
RJOB	**Jochberg**	**0.55**	**220**	⇑*i*Pg	**Pg**	**17 26 00.8**	**+4.0**
RJOB	**Jochberg**	**0.55**	**220**	Pg	**Pg**	**17 26 00.8**	**+4.0**
RWMO	**Wildenmoos**	**0.57**	**224**	⇑*i*Pg	**Pg**	**17 26 01.3**	**+4.1**
RWMO	**Wildenmoos**	**0.57**	**224**	Pg	**Pg**	**17 26 01.3**	**+4.1**
MOA	**Molln**	**0.71**	**116**	*e*Pg	**Pg**	**17 26 02.8**	**+2.9**
	SNR=119						
MOA				*e*Sg	**Sg**	**17 26 11.9**	**+2.8**
MOA	**Molln**	**0.71**	**116**	⇓*i*Pg	**Pg**	**17 26 02.9**	**+3.0**
	85nm,0.1s,SNR=206						
MOA				⇑*i*Sg	**Sg**	**17 26 11.9**	**+2.8**
	346nm,0.1s						
MOA	**Molln**	**0.71**	**116**	Pg	**Pg**	**17 26 02.8**	**+2.9**
	SNR=119						
MOA				Sg	**Sg**	**17 26 11.9**	**+2.8**
GEC2	**GERESS Array S**	**0.73**	**20**	*e*Pg	**Pg**	**17 26 03.9**	**+3.6**
	SNR=775						
GEC2				*e*Sg	**Sg**	**17 26 14.6**	**+4.7**
GEC2	**GERESS Array S**	**0.73**	**20**	*e*Pg	**Pg**	**17 26 03.9**	**+3.6**
GEC2				*e*Sg	**Sg**	**17 26 14.6**	**+4.7**
GEC2	**GERESS Array S**	**0.73**	**20**	Pg	**Pg**	**17 26 03.9**	**+3.6**
	SNR=775						
GEC2				Sg	**Sg**	**17 26 14.6**	**+4.7**
KHC	**Kasperske Hory**	**0.99**	**10**	*e*Pg	**Pg**	**17 26 07.2**	**+2.0**
KHC				*e*Sn	**Sn**	**17 26 18.4**	**-1.6**
KHC				*e*Sn	**Sn**	**17 26 20.5**	**+0.5**
KHC	**Kasperske Hory**	**0.99**	**10**	*e*PG	**Pg**	**17 26 07.4**	**+2.3**
KHC				*e*SG	**Sg**	**17 26 20.0**	**+2.0**
	comp=Z,548nm,0.4s						
KHC	**Kasperske Hory**	**0.99**	**10**	*e*Pg	**Pg**	**17 26 07.1**	**+2.0**
	baz=194						
KHC				*e*Sn	**Sn**	**17 26 18.4**	**-1.6**
KHC				Sg	**Sg**	**17 26 20.0**	**+2.0**
	comp=Z,548nm,0.4s						
WET	**Wettzell**	**1.03**	**344**	*e*Pg	**Pg**	**17 26 07.8**	**+1.9**
	SNR=297						
WET				*e*Sg	**Sg**	**17 26 21.0**	**+1.7**
WET	**Wettzell**	**1.03**	**344**	*e*Pg	**Pg**	**17 26 07.8**	**+1.9**
WET				*e*Sg	**Sg**	**17 26 21.0**	**+1.8**
WET	**Wettzell**	**1.03**	**344**	Pg	**Pg**	**17 26 07.8**	**+1.9**
	SNR=297						
WET				Sg	**Sg**	**17 26 21.0**	**+1.8**
KBA	**Koelnbreinsper**	**1.08**	**179**	*e*Pg	**Pg**	**17 26 07.8**	**+0.9**
	SNR=373						
KBA	**Koelnbreinsper**	**1.08**	**179**	⇑*i*Pg	**Pg**	**17 26 08.0**	**+1.0**
	comp=Z,161nm,0.2s,SNR=528						
KBA	**Koelnbreinsper**	**1.08**	**179**	Sg	**Sg**	**17 26 23.0**	**+2.0**
	comp=Z,35nm,0.1s						
KBA	**Koelnbreinsper**	**1.08**	**179**	Pg	**Pg**	**17 26 07.8**	**+0.9**
	SNR=373						
FUR	**Furstenfeldbru**	**1.36**	**271**	*e*Pg	**Pg**	**17 26 12.2**	**-0.1**
	SNR=4.2						
FUR	**Furstenfeldbru**	**1.36**	**271**	*e*Pg	**Pg**	**17 26 12.2**	**-0.1**
FUR	**Furstenfeldbru**	**1.36**	**271**	Pg	**Pg**	**17 26 12.2**	**-0.1**
	SNR=4.2						
WATA	**Walderalm**	**1.43**	**236**	*e*Pn	**Pn**	**17 26 12.6**	**+0.4**
	SNR=84						
WATA				⇓*i*Sn	**Sn**	**17 26 30.7**	**-0.3**
WATA	**Walderalm**	**1.43**	**236**	Pn	**Pn**	**17 26 12.6**	**+0.5**
	SNR=84						
WATA				Sn	**Sn**	**17 26 30.7**	**-0.3**
WTTA	**Wattenberg**	**1.44**	**232**	*e*Pg	**Pg**	**17 26 12.9**	**+0.6**
	SNR=52						
WTTA	**Wattenberg**	**1.44**	**232**	⇑*i*Pn	**Pn**	**17 26 13.0**	**+0.7**
	SNR=72						
WTTA				⇓*i*Sn	**Sn**	**17 26 31.1**	**-0.2**
WTTA	**Wattenberg**	**1.44**	**232**	Pn	**Pn**	**17 26 13.0**	**+0.7**
	SNR=72						
WTTA				Sn	**Sn**	**17 26 31.1**	**-0.2**
ABTA	**Abfaltersbach**	**1.51**	**201**	⇑*e*Pn	**Pn**	**17 26 14.1**	**+0.9**
	SNR=136						
ABTA				⇑*i*Sn	**Sn**	**17 26 32.7**	**-0.3**
ABTA	**Abfaltersbach**	**1.51**	**201**	Pn	**Pn**	**17 26 14.1**	**+0.8**
	SNR=136						
ABTA				Sn	**Sn**	**17 26 32.7**	**-0.3**
MYKA	**Terra Mystica**	**1.55**	**172**	⇑*i*Pn	**Pn**	**17 26 14.6**	**+0.9**
MYKA	**Terra Mystica**	**1.55**	**172**	Pn	**Pn**	**17 26 14.6**	**+0.9**
SCE	**Schlegeis**	**1.56**	**225**	⇑*i*Pn	**Pn**	**17 26 14.8**	**+0.9**
SCE	**Schlegeis**	**1.56**	**225**	Pn	**Pn**	**17 26 14.8**	**+0.9**
FVI	**Forni Avoltri**	**1.60**	**193**	Pg	**Pn**	**17 26 15.6**	**+1.1**
FVI				Sg	**Sn**	**17 26 35.6**	**+0.4**
	comp=Z,89nm,0.2s						
FVI	**Forni Avoltri**	**1.60**	**193**	Pg	**Pn**	**17 26 15.6**	**+1.1**
FVI				Sg	**Sn**	**17 26 35.6**	**+0.4**
	comp=Z,89nm,0.2s						
PLRO	**Paularo**	**1.61**	**184**	*e*Pg	**Pn**	**17 26 15.8**	**+1.1**
PLRO				*e*Sg	**Sn**	**17 26 35.0**	**-0.5**
PLRO	**Paularo**	**1.61**	**184**	*e*Pg	**Pn**	**17 26 15.8**	**+1.2**
PLRO				*e*Sg	**Sn**	**17 26 35.0**	**-0.5**
ZOU	**Zoufplan**	**1.62**	**188**	⇑*i*Pg	**Pn**	**17 26 15.8**	**+1.1**
ZOU				*i* Sg	**Sn**	**17 26 35.0**	**-0.7**
ZOU	**Zoufplan**	**1.62**	**188**	*i* Pg	**Pn**	**17 26 15.8**	**+1.1**
ZOU				*i* Sg	**Sn**	**17 26 35.0**	**-0.6**
LSR	**Lussari**	**1.69**	**175**	⇑*i*Pg	**Pn**	**17 26 17.1**	**+1.4**
LSR				*i* Sg	**Sn**	**17 26 37.1**	**-0.2**
LSR	**Lussari**	**1.69**	**175**	*i* Pg	**Pn**	**17 26 17.1**	**+1.4**
LSR				*i* Sg	**Sn**	**17 26 37.2**	**-0.2**
MOTA	**Moosalm**	**1.70**	**242**	⇑*i*Pn	**Pn**	**17 26 16.2**	**+0.4**
	SNR=25						
MOTA				⇓*i*Sn	**Sn**	**17 26 37.2**	**-0.3**
MOTA	**Moosalm**	**1.70**	**242**	Pn	**Pn**	**17 26 16.2**	**+0.4**
	SNR=25						
MOTA				Sn	**Sn**	**17 26 37.2**	**-0.4**
CSMI	**Casera Mimoias**	**1.71**	**196**	⇑*e*Pg	**Pn**	**17 26 16.7**	**+0.8**
CSMI				*e*Sg	**Sn**	**17 26 37.6**	**-0.2**
CSMI	**Casera Mimoias**	**1.71**	**196**	*e*Pg	**Pn**	**17 26 16.7**	**+0.8**
CSMI				*e*Sg	**Sn**	**17 26 37.6**	**-0.2**
CONA	**Conrad Observa**	**1.73**	**97**	⇓*i*Pn	**Pn**	**17 26 16.7**	**+0.5**
	SNR=49						
CONA				⇓*i*Sn	**Sn**	**17 26 36.5**	**-1.7**
CONA	**Conrad Observa**	**1.73**	**97**	Pn	**Pn**	**17 26 16.7**	**+0.5**
	SNR=49						
CONA				Sn	**Sn**	**17 26 36.5**	**-1.7**
ARSA	**Arzberg**	**1.75**	**121**	*e*Pn	**Pn**	**17 26 17.3**	**+0.8**
	SNR=11						
ARSA	**Arzberg**	**1.75**	**121**	⇓*i*Pn	**Pn**	**17 26 17.3**	**+0.9**
	SNR=12						
ARSA	**Arzberg**	**1.75**	**121**	Sg	**Sn**	**17 26 31.9**	**-6.9**
	comp=Z,23nm,0.2s						
ARSA	**Arzberg**	**1.75**	**121**	Pn	**Pn**	**17 26 17.3**	**+0.8**
	SNR=11						
PTCC	**Patocco-Chiusa**	**1.76**	**179**	Pg	**Pn**	**17 26 17.6**	**+1.0**
	comp=Z,53nm,0.2s						
PTCC	**Patocco-Ch

JAVS	**Javornik**	**2.33**	**167**	*i* Pn	**Pn**	**17**	**26**	**24.1**	**-0.3**
TANN	**Tannenbergstha**	**2.33**	**346**	*e*Pn	**Pn**	**17**	**26**	**25.0**	**+0.6**
	SNR=95								
TANN	**Tannenbergstha**	**2.33**	**346**	Pn	**Pn**	**17**	**26**	**25.0**	**+0.6**
	SNR=95								
WERD	**Werda**	**2.38**	**344**	*e*Pn	**Pn**	**17**	**26**	**25.8**	**+0.6**
	SNR=70								
WERD	**Werda**	**2.38**	**344**	Pn	**Pn**	**17**	**26**	**25.8**	**+0.6**
	SNR=70								
PDKS	**Podkum**	**2.39**	**151**	⇑*i* Pn	**Pn**	**17**	**26**	**25.7**	**+0.3**
PDKS				*e*Sn	**Sn**	**17**	**26**	**51.3**	**-3.4**
PDKS	**Podkum**	**2.39**	**151**	⇑*i* Pn	**Pn**	**17**	**26**	**25.7**	**+0.3**
PDKS				*e*Sn	**Sn**	**17**	**26**	**51.3**	**-3.4**
PDKS									
	comp=Z,16nm,0.2s								
CTI	**Castel Tesino**	**2.40**	**209**	Pg	**Pn**	**17**	**26**	**26.6**	**+1.2**
CTI				Sg	**Sn**	**17**	**26**	**55.1**	**+0.3**
	comp=Z,292nm,5.1s								
CTI	**Castel Tesino**	**2.40**	**209**	Pg	**Pn**	**17**	**26**	**26.6**	**+1.2**
VRAC	**Vranov**	**2.46**	**61**	*e*Pn	**Pn**	**17**	**26**	**26.4**	**+0.2**
	baz=244								
VRAC				*e*Sn	**Sn**	**17**	**26**	**54.8**	**-1.5**
	comp=Z,156nm,0.5s								
TRI	**Trieste**	**2.47**	**173**	Pg	**Pn**	**17**	**26**	**26.9**	**+0.5**
TRI				Sg	**Sn**	**17**	**26**	**54.8**	**-1.8**
	comp=Z,59nm,0.4s								
DAVA	**Damuels**	**2.48**	**251**	*e*Pn	**Pn**	**17**	**26**	**27.2**	**+0.7**
	SNR=14								
DAVA	**Damuels**	**2.48**	**251**	⇓*i* Pn	**Pn**	**17**	**26**	**27.3**	**+0.8**
	SNR=14								
DAVA	**Damuels**	**2.48**	**251**	Pn	**Pn**	**17**	**26**	**27.2**	**+0.7**
	SNR=14								
PVCC	**Panska Ves**	**2.51**	**19**	*e*PN	**Pn**	**17**	**26**	**27.3**	**+0.4**
PVCC				*ex*	x	17	26	45.4	
PVCC				*e*SN	**Sn**	**17**	**26**	**55.8**	**-1.8**
PVCC	**Panska Ves**	**2.51**	**19**	Pn	**Pn**	**17**	**26**	**27.3**	**+0.4**
PVCC				Sn	**Sn**	**17**	**26**	**55.8**	**-1.8**
ZST	**Bratislava**	**2.54**	**88**	*e*Pn	**Pn**	**17**	**26**	**27.6**	**+0.3**
ZST				*e*Pg	**Pg**	**17**	**26**	**35.6**	**+0.9**
ZST				*e*Sn	**Sn**	**17**	**26**	**55.5**	**-2.7**
ZST				*e*Sg	**Sg**	**17**	**27**	**07.2**	**-0.4**
ZST	**Bratislava**	**2.54**	**88**	*e*PN	**Pn**	**17**	**26**	**27.6**	**+0.3**
ZST				*e*PG	**Pg**	**17**	**26**	**35.6**	**+0.9**
ZST				*e*SN	**Sn**	**17**	**26**	**55.5**	**-2.7**
ZST				*e*SG	**Sg**	**17**	**27**	**07.2**	**-0.4**
ZST	**Bratislava**	**2.54**	**88**	*e*Pn	**Pn**	**17**	**26**	**27.6**	**+0.3**
VISS	**Visnje**	**2.58**	**156**	⇑*i* Pn	**Pn**	**17**	**26**	**27.8**	**-0.1**
VISS									
	comp=Z,10.0nm,0.2s								
VISS	**Visnje**	**2.58**	**156**	⇑*i* Pn	**Pn**	**17**	**26**	**27.8**	**-0.1**
FUORN	**Ofenpass-Fuorn**	**2.58**	**235**	Pg	**Pn**	**17**	**26**	**29.3**	**+1.4**
FUORN				Sg	**Sn**	**17**	**26**	**59.1**	**-0.2**
BRMO	**Bormio**	**2.62**	**231**	Pg	**Pn**	**17**	**26**	**29.6**	**+1.2**
BRMO				Sg	**Sn**	**17**	**26**	**59.5**	**-0.7**
KOGS	**Kog**	**2.63**	**130**	*i* Pn	**Pn**	**17**	**26**	**28.7**	**0.0**
KOGS				*i* Sn	**Sn**	**17**	**26**	**57.0**	**-3.6**
KOGS	**Kog**	**2.63**	**130**	*i* Pn	**Pn**	**17**	**26**	**28.7**	**0.0**
KOGS				*i* Sn	**Sn**	**17**	**26**	**57.0**	**-3.6**
KOGS									
	comp=Z,25nm,0.2s								
KOGS	**Kog**	**2.63**	**130**	*i* Pn	**Pn**	**17**	**26**	**28.7**	**+0.1**
KOGS				*i* Sn	**Sn**	**17**	**26**	**57.0**	**-3.6**
	comp=Z,25nm,0.2s								
MODS	**Modra-Piesok**	**2.66**	**84**	*e*Pn	**Pn**	**17**	**26**	**29.5**	**+0.5**
MODS				*e*Sn	**Sn**	**17**	**26**	**59.0**	**-2.2**
MODS				*e*Sg	**Sg**	**17**	**27**	**10.0**	**-1.4**
MODS	**Modra-Piesok**	**2.66**	**84**	*e*PN	**Pn**	**17**	**26**	**29.5**	**+0.5**
MODS				*e*SN	**Sn**	**17**	**26**	**59.0**	**-2.2**
MODS				*e*SG	**Sg**	**17**	**27**	**10.0**	**-1.4**
MODS	**Modra-Piesok**	**2.66**	**84**	*e*Pn	**Pn**	**17**	**26**	**29.5**	**+0.5**
MODS				*e*Sn	**Sn**	**17**	**26**	**59.0**	**-2.2**
MODS				*e*Sg	**Sg**	**17**	**27**	**10.0**	**-1.4**
SKDS	**Skadanscina**	**2.66**	**169**	*i* Pn	**Pn**	**17**	**26**	**29.0**	**0.0**
BUCH	**Bad Urach**	**2.66**	**278**	⇓*i* P	**Pn**	**17**	**26**	**29.9**	**+0.9**
BUCH				S	**Sn**	**17**	**26**	**58.3**	**-3.0**
BUCH	**Bad Urach**	**2.66**	**278**	P	**Pn**	**17**	**26**	**29.9**	**+0.9**
DAVOX	**Davos/Dischmat**	**2.71**	**241**	Pg	**Pn**	**17**	**26**	**30.9**	**+1.2**
DAVOX				Sg	**Sn**	**17**	**27**	**01.1**	**-1.3**
MOX	**Moxa**	**2.72**	**337**	*i* PN	**Pn**	**17**	**26**	**30.3**	**+0.4**
MOX				*i* SN	**Sn**	**17**	**27**	**00.5**	**-2.3**
MOX	**Moxa**	**2.72**	**337**	*e*Pn	**Pn**	**17**	**26**	**30.5**	**+0.6**
	SNR=149								
MOX				*e*Sn	**Sn**	**17**	**27**	**01.1**	**-1.8**
MOX	**Moxa**	**2.72**	**337**	*i* Pn	**Pn**	**17**	**26**	**30.3**	**+0.4**
MOX				*i* Sn	**Sn**	**17**	**27**	**00.5**	**-2.3**
MOX	**Moxa**	**2.72**	**337**	Pn	**Pn**	**17**	**26**	**30.5**	**+0.6**
	SNR=149								
MOX				Sn	**Sn**	**17**	**27**	**01.1**	**-1.7**
SIND	**Sindeldorf**	**2.73**	**297**	⇓P	**Pn**	**17**	**26**	**30.9**	**+0.9**
SIND				S	**Sn**	**17**	**26**	**59.9**	**-3.0**
SIND	**Sindeldorf**	**2.73**	**297**	P	**Pn**	**17**	**26**	**30.9**	**+1.0**
BRG	**Berggiesshubel**	**2.75**	**8**	*e*Pn	**Pn**	**17**	**26**	**30.4**	**+0.2**
	SNR=37								
BRG				*e*Sn	**Sn**	**17**	**27**	**01.7**	**-1.7**
BRG	**Berggiesshubel**	**2.75**	**8**	PN	**Pn**	**17**	**26**	**30.4**	**+0.2**
BRG				*i*		17	26	50.2	
BRG				*i*		17	27	00.9	
BRG	**Berggiesshubel**	**2.75**	**8**	SG	**Sg**	**17**	**27**	**27.1**	**+13**
	comp=Z,56nm,0.4s								
BRG	**Berggiesshubel**	**2.75**	**8**	Pn	**Pn**	**17**	**26**	**30.4**	**+0.2**
	SNR=37								
STU	**Stuttgart**	**2.81**	**284**	⇓P	**Pn**	**17**	**26**	**31.8**	**+0.8**
STU				S	**Sn**	**17**	**27**	**01.7**	**-3.3**
STU	**Stuttgart**	**2.81**	**284**	*e*Pn	**Pn**	**17**	**26**	**31.3**	**+0.3**
STU				*e*Sn	**Sn**	**17**	**27**	**00.9**	**-4.0**
STU	**Stuttgart**	**2.81**	**284**	*e*Pn	**Pn**	**17**	**26**	**31.3**	**+0.2**
STU	**Stuttgart**	**2.81**	**284**	P	**Pn**	**17**	**26**	**31.8**	**+0.8**
STU				*e*Sn	**Sn**	**17**	**27**	**00.9**	**-4.0**
GUT	**Gutenstein**	**2.81**	**270**	⇓*i* P	**Pn**	**17**	**26**	**31.6**	**+0.4**
GUT				S	**Sn**	**17**	**27**	**01.2**	**-3.9**
GUT	**Gutenstein**	**2.81**	**270**	P	**Pn**	**17**	**26**	**31.5**	**+0.4**
MABI	**Malga Bissina**	**2.84**	**223**	Pg	**Pn**	**17**	**26**	**32.0**	**+0.5**
MABI				Sg	**Sn**	**17**	**27**	**04.5**	**-1.3**
TUBL	**Tuebingen-Lenn**	**2.85**	**279**	⇓P	**Pn**	**17**	**26**	**32.5**	**+1.0**
TUBL	**Tuebingen-Lenn**	**2.85**	**279**	P	**Pn**	**17**	**26**	**32.5**	**+0.9**
BEHE	**Becsehely**	**2.90**	**124**	*e*Sn	**Sn**	**17**	**27**	**05.0**	**-2.2**
UPC	**Upice**	**2.94**	**36**	*e*PN	**Pn**	**17**	**26**	**33.0**	**+0.2**
UPC	**Upice**	**2.94**	**36**	Pn	**Pn**	**17**	**26**	**33.0**	**+0.2**
DPC	**Dobruska-Polom**	**2.95**	**41**	*e*PN	**Pn**	**17**	**26**	**32.8**	**-0.2**
DPC				*ex*	x	17	26	55.8	
DPC				*e*SN	**Sn**	**17**	**27**	**05.4**	**-3.0**
DPC	**Dobruska-Polom**	**2.95**	**41**	*e*Pn	**Pn**	**17**	**26**	**32.9**	**-0.1**
	baz=224								
SISB	**Singen-Schiene**	**2.96**	**262**	⇓P	**Pn**	**17**	**26**	**33.7**	**+0.5**
SISB	**Singen-Schiene**	**2.96**	**262**	P	**Pn**	**17**	**26**	**33.7**	**+0.5**
BOJS	**Bojanci**	**2.97**	**153**	⇑*i* Pn	**Pn**	**17**	**26**	**33.0**	**-0.3**
BOJS				*i* Sn	**Sn**	**17**	**27**	**04.7**	**-4.3**
BOJS	**Bojanci**	**2.97**	**153**	⇑*i* Pn	**Pn**	**17**	**26**	**33.0**	**-0.3**
BOJS				*i* Sn	**Sn**	**17**	**27**	**04.7**	**-4.3**
BOJS									
	comp=Z,20nm,0.4s								
BOJS	**Bojanci**	**2.97**	**153**	⇑*i* Pn	**Pn**	**17**	**26**	**33.0**	**-0.3**
BOJS				*i* Sn	**Sn**	**17**	**27**	**04.7**	**-4.2**
	comp=Z,20nm,0.4s								
SPAK	**Spaichingen-Ko**	**3.03**	**271**	P	**Pn**	**17**	**26**	**34.6**	**+0.5**
SPAK	**Spaichingen-Ko**	**3.03**	**271**	P	**Pn**	**17**	**26**	**34.8**	**+0.7**
SPAK				S	**Sn**	**17**	**27**	**06.3**	**-4.2**
SPAK	**Spaichingen-Ko**	**3.03**	**271**	P	**Pn**	**17**	**26**	**34.6**	**+0.5**
SPAK				S	**Sn**	**17**	**27**	**06.3**	**-4.2**
LBG	**Lerchenberg**	**3.05**	**281**	⇓P	**Pn**	**17**	**26**	**35.0**	**+0.6**
LBG				S	**Sn**	**17**	**27**	**09.2**	**-1.8**
LBG	**Lerchenberg**	**3.05**	**281**	P	**Pn**	**17**	**26**	**35.0**	**+0.6**
LBG				S	**Sn**	**17**	**27**	**09.2**	**-1.7**
CLL	**Collm**	**3.16**	**356**	*e*Pn	**Pn**	**17**	**26**	**36.1**	**+0.3**
	SNR=62								
CLL				*e*Sg	**Sg**	**17**	**27**	**32.0**	**+4.5**
CLL	**Collm**	**3.16**	**356**	*i* Pn	**Pn**	**17**	**26**	**36.1**	**+0.2**
CLL				*e*Sg	**Sg**	**17**	**27**	**32.0**	**+4.5**
CLL	**Collm**	**3.16**	**356**	*i* Pn	**Pn**	**17**	**26**	**36.1**	**+0.2**
	comp=Z,103nm,0.3s								
CLL				*i* Pg	**Pg**	**17**	**26**	**58.4**	**+12**
CLL				*e*Sn	**Sn**	**17**	**27**	**11.0**	**-2.5**
CLL				*e*Sg	**Sg**	**17**	**27**	**32.0**	**+4.5**
	comp=Z,27nm,0.5s								
CLL	**Collm**	**3.16**	**356**	Pn	**Pn**	**17**	**26**	**36.1**	**+0.2**
	SNR=62								
MORC	**Moravsky Berou**	**3.22**	**58**	*e*Pn	**Pn**	**17**	**26**	**36.5**	**-0.3**
MORC				*e*Pg	**Pg**	**17**	**26**	**52.6**	**+4.8**
MORC				*e*Sn	**Sn**	**17**	**27**	**11.4**	**-3.7**
MORC				*e*Sg	**Sg**	**17**	**27**	**29.2**	**-0.4**
MORC	**Moravsky Berou**	**3.22**	**58**	*e*Pn	**Pn**	**17**	**26**	**36.6**	**-0.1**
	baz=242								
MORC	**Moravsky Berou**	**3.22**	**58**	*e*Pg	**Pg**	**17**	**26**	**52.7**	**+4.9**
MORC				*e*Sg	**Sg**	**17**	**27**	**27.1**	**-2.5**
	comp=Z,61nm,0.4s								
TOD	**Tromm**	**3.31**	**298**	P	**Pn**	**17**	**26**	**39.1**	**+1.2**
TOD				S	**Sn**	**17**	**27**	**13.5**	**-3.8**
TOD	**Tromm**	**3.31**	**298**	P	**Pn**	**17**	**26**	**39.1**	**+1.2**
TOD				S	**Sn**	**17**	**27**	**13.5**	**-3.8**
KSP	**Ksiaz**	**3.31**	**35**	*e*Pn	**Pn**	**17**	**26**	**38.3**	**+0.3**
KSP				*e*		17	27	01.4	
KSP				*e*Sn	**Sn**	**17**	**27**	**15.3**	**-2.1**
KSP				*e*Sg	**Sg**	**17**	**27**	**29.0**	**-3.5**
KSP	**Ksiaz**	**3.31**	**35**	*e*Pn	**Pn**	**17**	**26**	**38.5**	**+0.5**
KSP				*e*		17	26	59.3	
KSP				Sn	**Sn**	**17**	**27**	**15.1**	**-2.3**
KSP				*e*Sg	**Sg**	**17**	**27**	**27.3**	**-5.2**
KSP	**Ksiaz**	**3.31**	**35**	*e*Pn	**Pn**	**17**	**26**	**38.5**	**+0.5**
KSP				*e*Sn	**Sn**	**17**	**27**	**15.1**	**-2.3**
SWS	**Schriesheim-Wi**	**3.32**	**295**	P	**Pn**	**17**	**26**	**38.9**	**+0.8**
SWS				S	**Sn**	**17**	**27**	**13.5**	**-4.1**
SWS	**Schriesheim-Wi**	**3.32**	**295**	P	**Pn**	**17**	**26**	**38.9**	**+0.8**
BFO	**Black Forest**	**3.33**	**275**	*e*Pn	**Pn**	**17**	**26**	**38.6**	**+0.3**
	SNR=19								
BFO				*e*Sn	**Sn**	**17**	**27**	**13.0**	**-4.9**
BFO	**Black Forest**	**3.33**	**275**	*e*Pn	**Pn**	**17**	**26**	**38.6**	**+0.3**
BFO				*e*Sn	**Sn**	**17**	**27**	**13.0**	**-4.9**
BFO	**Black Forest**	**3.33**	**275**	Pn	**Pn**	**17**	**26**	**38.6**	**+0.3**
	SNR=19								
KOLL	**Kolacno**	**3.42**	**81**	*e*Pn	**Pn**	**17**	**26**	**39.2**	**-0.2**
KOLL				*e*Sn	**Sn**	**17**	**27**	**16.6**	**-3.4**
KOLL	**Kolacno**	**3.42**	**81**	*e*PN	**Pn**	**17**	**26**	**39.2**	**-0.2**
KOLL				*e*SN	**Sn**	**17**	**27**	**16.6**	**-3.4**
KOLL	**Kolacno**	**3.42**	**81**	*e*Pn	**Pn**	**17**	**26**	**39.2**	**-0.2**
KOLL				*e*Sn	**Sn**	**17**	**27**	**16.6**	**-3.4**
UBBA	**Unterbreizbach**	**3.43**	**322**	*e*Pn	**Pn**	**17**	**26**	**40.5**	**+0.9**
	SNR=6.6								
UBBA	**Unterbreizbach**	**3.43**	**322**	Pn	**Pn**	**17**	**26**	**40.5**	**+0.9**
	SNR=6.6								
PKSG		**3.51**	**101**	*e*Pn	**Pn**	**17**	**26**	**41.0**	**+0.3**
PKSG				*e*Sn	**Sn**	**17**	**27**	**18.6**	**-3.6**
FELD	**Feldberg im Sc**	**3.58**	**267**	⇓*i* P	**Pn**	**17**	**26**	**41.6**	**0.0**
FELD	**Feldberg im Sc**	**3.58**	**267**	⇓P	**Pn**	**17**	**26**	**41.5**	**-0.1**
FELD				S	**Sn**	**17**	**27**	**18.9**	**-4.9**
FELD	**Feldberg im Sc**	**3.58**	**267**	P	**Pn**	**17**	**26**	**41.6**	**0.0**
FELD				S	**Sn**	**17**	**27**	**18.9**	**-4.9**
KIZ	**Kirchzarten**	**3.62**	**269**	⇓P	**Pn**	**17**	**26**	**42.2**	**-0.1**
KIZ				Pg	**Pg**	**17**	**26**	**48.3**	**-7.3**
KIZ				S	**Sn**	**17**	**27**	**19.3**	**-5.7**
KIZ	**Kirchzarten**	**3.62**	**269**	P	**Pn**	**17**	**26**	**42.2**	**-0.1**
FBB	**Freiburg im Br**	**3.66**	**270**	S	**Sn**	**17**	**27**	**22.1**	**-3.9**
VYHS	**Vyhne**	**3.70**	**83**	*e*Pn	**Pn**	**17**	**26**	**42.6**	**-0.7**
VYHS				*e*		17	26	52.1	
VYHS				*e*Sn	**Sn**	**17**	**27**	**22.4**	**-4.5**
VYHS	**Vyhne**	**3.70**	**83**	*e*PN	**Pn**	**17**	**26**	**42.6**	**-0.7**
VYHS				*e*		17	26	52.1	
VYHS	**Vyhne**	**3.70**	**83**	*e*SN	**Sn**	**17**	**27**	**22.4**	**-4.5**
VYHS	**Vyhne**	**3.70**	**83**	*e*Pn	**Pn**	**17**	**26**	**42.6**	**-0.7**
PKS9	**Tamasi**	**3.72**	**113**	*e*Sn	**Sn**	**17**	**27**	**23.0**	**-4.5**
LANF	**Langenberg**	**3.75**	**285**	⇓P	**Pn**	**17**	**26**	**44.8**	**+0.8**
LANF	**Langenberg**	**3.75**	**285**	P	**Pn**	**17**	**26**	**44.7**	**+0.7**
LANF				S	**Sn**	**17**	**27**	**23.5**	**-4.6**
LANF	**Langenberg**	**3.75**	**285**	P	**Pn**	**17**	**26**	**44.7**	**+0.7**
LANF				S	**Sn**	**17**	**27**	**23.5**	**-4.6**
TNS	**Taunus Mts**	**3.80**	**305**	*e*Pn	**Pn**	**17**	**26**	**46.4**	**+1.7**
	SNR=9.0								
TNS	**Taunus Mts**	**3.80**	**305**	*e*Pn	**Pn**	**17**	**26**	**46.4**	**+1.7**
TNS	**Taunus Mts**	**3.80**	**305**	Pn	**Pn**	**17**	**26**	**46.4**	**+1.7**
	SNR=9.0								
LIBD	**Limburg**	**3.82**	**272**	P	**Pn**	**17**	**26**	**45.4**	**+0.4**
LIBD	**Limburg**	**3.82**	**272**	P	**Pn**	**17**	**26**	**45.2**	**+0.2**
LIBD	**Limburg**	**3.82**	**272**	P	**Pn**	**17**	**26**	**45.2**	**+0.2**
BBS	**Basel-Blauen**	**3.97**	**262**	⇓P	**Pn**	**17**	**26**	**46.8**	**-0.2**
BBS	**Basel-Blauen**	**3.97**	**262**	P	**Pn**	**17**	**26**	**46.8**	**-0.3**
BBS				S	**Sn**	**17**	**27**	**30.1**	**-3.5**
BBS	**Basel-Blauen**	**3.97**	**262**	P	**Pn**	**17**	**26**	**46.8**	**-0.2**
BBS				S	**Sn**	**17**	**27**	**30.1**	**-3.5**
CDF	**Champ du Feu**	**4.04**	**276**	*e*Pn	**Pn**	**17**	**26**	**47.8**	**-0.2**
	SNR=1.0								
CDF				*e*Sn	**Sn**	**17**	**27**	**31.8**	**-3.5**
	comp=Z,15nm,0.3s								
CDF	**Champ du Feu**	**4.04**	**276**	*e*Pn	**Pn**	**17**	**26**	**47.8**	**-0.2**
	SNR=1.0								
CDF				*e*Sn	**Sn**	**17**	**27**	**31.8**	**-3.5**
	comp=Z,7.5nm,0.3s								
RHK3	**Tenkes**	**4.07**	**122**	⇓*e*Pn	**Pn**	**17**	**26**	**48.1**	**-0.3**
RHK3				*e*Sn	**Sn**	**17**	**27**	**32.5**	**-3.6**
ECH	**Echery**	**4.12**	**273**	⇓*i* P	**Pn**	**17**	**26**	**49.0**	**0.0**
ECH	**Echery**	**4.12**	**273**	P	**Pn**	**17**	**26**	**49.0**	**0.0**
ECH				S	**Sn**	**17**	**27**	**33.6**	**-3.6**
ECH	**Echery**	**4.12**	**273**	P	**Pn**	**17**	**26**	**49.0**	**0.0**
ECH				S	**Sn**	**17**	**27**	**33.6**	**-3.6**
PKSM	**Moragy**	**4.12**	**116**	*e*Pn	**Pn**	**17**	**26**	**48.0**	**-1.1**
CLZ	**Clausthal**	**4.14**	**334**	*e*Pn	**Pn**	**17**	**26**	**51.2**	**+1.8**
	SNR=6.6								
CLZ				*e*Sn	**Sn**	**17**	**27**	**32.8**	**-5.1**
CLZ	**Clausthal**	**4.14**	**334**	*e*Pn	**Pn**	**17**	**26**	**51.2**	**+1.8**
CLZ				*e*Sn	**Sn**	**17**	**27**	**32.8**	**-5.1**
CLZ	**Clausthal**	**4.14**	**334**	Pn	**Pn**	**17**	**26**	**51.2**	**+1.8**
	SNR=6.6								
MOF	**Molkenrain**	**4.16**	**268**	P	**Pn**	**17**	**26**	**49.5**	**-0.1**
MOF	**Molkenrain**	**4.16**	**268**	P	**Pn**	**17**	**26**	**49.5**	**-0.1**
KOE	**Koeppel**	**4.30**	**304**	*e*Pn	**Pn**	**17**	**26**	**53.5**	**+2.0**
KOE	**Koeppel**	**4.30**	**304**	Pn	**Pn**	**17**	**26**	**53.5**	**+2.0**
HINF	**Hinteralfeld**	**4.35**	**268**	*e*Pn	**Pn**	**17**	**26**	**51.6**	**-0.7**
	SNR=1.0								
HINF				*e*Sn	**Sn**	**17**	**27**	**38.3**	**-4.7**
	comp=Z,71nm,0.3s								
HINF	**Hinteralfeld**	**4.35**	**268**	*e*Pn	**Pn**	**17**	**26**	**51.6**	**-0.7**
	SNR=1.0								
HINF				*e*Sn	**Sn**	**17**	**27**	**38.3**	**-4.7**
	comp=Z,36nm,0.3s								
BGG	**Burgeitz**	**4.42**	**300**	*e*Pn	**Pn**	**17**	**26**	**55.1**	**+1.9**
BGG	**Burgeitz**	**4.42**	**300**	Pn	**Pn**	**17**	**26**	**55.1**	**+1.9**
PSZ	**Piszkesteto**	**4.42**	**91**	*e*Sn	**Sn**	**17**	**27**	**42.7**	**-2.0**
PSZ	**Piszkesteto**	**4.42**	**91**	*e*Sn	**Sn**	**17**	**27**	**42.7**	**-2.0**
CRMI	**Carmignano**	**4.67**	**201**	Pg	**Pn**	**17**	**26**	**56.3**	**-0.3**
	comp=Z,14nm,0.2s								
HAU	**Haudompre**	**4.67**	**271**	*e*Pn	**Pn**	**17**	**26**	**56.4**	**-0.2**
	SNR=1.0								
HAU				*e*Sn	**Sn**	**17**	**27**	**45.0**	**-5.9**
	comp=Z,15nm,0.2s,SNR=1.0								
HAU	**Haudompre**	**4.67**	**271**	*e*Pn	**Pn**	**17**	**26**	**56.4**	**-0.2**
	SNR=1.0								
KECS	**Kecovo**	**4.80**	**83**	*e*Pn	**Pn**	**17**	**26**	**58.5**	**+0.1**
KECS				*e*		17	27	05.6	
KECS				*e*Sn	**Sn**	**17**	**27**	**48.0**	**-5.9**
KECS	**Kecovo**	**4.80**	**83**	*e*PN	**Pn**	**17**	**26**	**58.5**	**+0.1**
KECS				*e*		17	27	05.6	
KECS	**Kecovo**	**4.80**	**83**	*e*SN	**Sn**	**17**	**27**	**48.0**	**-5.9**
NRDL	**Niedersach Rie**	**4.80**	**336**	*e*Pn	**Pn**	**17**	**26**	**59.1**	**+0.7**
	SNR=4.5								
NRDL	**Niedersach Rie**	**4.80**	**336**	Pn	**Pn**	**17**	**26**	**59.1**	**+0.7**
	SNR=4.5								
HOBG	**Hohbusch**	**4.81**	**308**	*e*Pn	**Pn**	**17**	**27**	**00.3**	**+1.8**
HOBG				*e*Sn	**Sn**	**17**	**27**	**49.8**	**-4.4**
HOBG	**Hohbusch**	**4.81**	**308**	Pn	**Pn**	**17**	**27**	**00.3**	**+1.8**
HILG	**Hillesheim**	**4.84**	**299**	*e*Pn	**Pn**	**17**	**27**	**01.2**	**+2.2**
HILG	**Hillesheim**	**4.84**	**299**	Pn	**Pn**	**17**	**27**	**01.2**	**+2.2**
STB	**Steinbach**	**4.88**	**302**	*e*Pn	**Pn**	**17**	**27**	**01.4**	**+1.9**
STB				*e*Sn	**Sn**	**17**	**27**	**51.7**	**-4.3**
	comp=Z,46nm,0.7s								
STB	**Steinbach**	**4.88**	**302**	Pn	**Pn**	**17**	**27**	**01.4**	**+1.9**
THEF	**They Montfort**	**4.90**	**274**	P	**Pn**	**17**	**26**	**55.7**	**-4.1**
THEF	**They Montfort**	**4.90**	**274**	P	**Pn**	**17**	**26**	**59.8**	**0.0**
THEF	**They Montfort**	**4.90**	**274**	P	**Pn**	**17**	**26**	**59.8**	**0.0**
WLF	**Walferdange**	**4.96**	**290**	S	**Sn**	**17**	**27**	**53.8**	**-4.1**
WLF	**Walferdange**	**4.96**	**290**	Pn	**Pn**	**17**	**26**	**59.7**	**-0.9**
WLF				*e*Sn	**Sn**	**17**	**27**	**47.3**	**-11**
WLF	**Walferdange**	**4.96**	**290**	Pn	**Pn**	**17**	**26**	**59.7**	**-0.9**
BUG	**Bochum--Univer**	**5.11**	**312**	*e*Pn	**Pn**	**17**	**27**	**04.0**	**+1.4**
	SNR=2.7								
BUG				*e*Sn	**Sn**	**17**	**27**	**57.5**	**-4.1**
BUG	**Bochum--Univer**	**5.11**	**312**	*e*Pn	**Pn**	**17**	**27**	**04.0**	**+1.4**
BUG				*e*Sn	**Sn**	**17**	**27**	**57.5**	**-4.1**
BUG	**Bochum--Univer**	**5.11**	**312**	*e*Pn	**Pn**	**17**	**27**	**04.0**	**+1.4**
BUG				*e*Sn	**Sn**	**17**	**27**	**57.5**	**-4.1**
CABF	**La Chapelle**	**5.15**	**255**	*e*Pn	**Pn**	**17**	**27**	**02.3**	**-0.9**
CABF				*e*Sn	**Sn**	**17**	**27**	**54.8**	**-7.8**
	comp=Z,7.0nm,0.2s								
CABF	**La Chapelle**	**5.15**	**255**	*e*Pn	**Pn**	**17**	**27**	**02.3**	**-0.9**
KLL	**Kalltalsperre**	**5.21**	**301**	*e*Pn	**Pn**	**17**	**27**	**06.0**	**+2.0**
KLL	**Kalltalsperre**	**5.21**	**301**	Pn	**Pn**	**17**	**27**	**06.0**	**+2.0**
LPG	**La Plagne**	**5.23**	**242**	*e*Pn	**Pn**	**17**	**27**	**04.6**	**+0.3**
	SNR=1.0								
LPG				*e*Sn	**Sn**	**17**	**27**	**58.1**	**-6.6**
	comp=Z,16nm,0.4s,SNR=1.0								
LPG	**La Plagne**	**5.23**	**242**	*e*Pn	**Pn**	**17**	**27**	**04.6**	**+0.3**
	SNR=1.0								
LPL	**La Plagne**	**5.23**	**242**	*e*Pn	**Pn**	**17**	**27**	**05.0**	**+0.6**
	SNR=1.0								
LPL				*e*Sn	**Sn**	**17**	**27**	**57.7**	**-7.0**
	comp=Z,15nm,0.3s,SNR=1.0								
LPL	**La Plagne**	**5.23**	**242**	*e*Pn	**Pn**	**17**	**27**	**05.0**	**+0.6**
	SNR=1.0								
RFYF	**Reffroy**	**5.24**	**278**	*e*Pn	**Pn**	**17**	**27**	**04.8**	**+0.3**
	baz=99								
RFYF				*e*Sn	**Sn**	**17**	**28**	**00.7**	**-4.3**
	comp=Z,21nm,0.2s								
RFYF	**Reffroy**	**5.24**	**278**	*e*Pn	**Pn**	**17**	**27**	**04.8**	**+0.3**
	baz=99								
RFYF				*e*Sn	**Sn**	**17**	**28**	**00.7**	**-4.3**
	comp=Z,11nm,0.2s								
DREG	**Dreilaegerbach**	**5.26**	**301**	*e*Pn	**Pn**	**17**	**27**	**06.7**	**+2.0**
DREG			

s-min=10.5km az=161.8

ISC 12 17:38:48.9±0.8, 10°.9N±0°.1×91°.79E±0°.09, h35km, n27, σ0s92/28, mb4.0/16, MS3.2/3, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.24**	**42**	Pn	**Pn**	**17 41 13.3**	**-0.1**
	0.1nm,0.3s,baz=237,slow=15,SNR=4.7						
CMAR				Sn	**Sn**	**17 43 12.2**	**+5.3**
	0.1nm,0.3s,baz=232,slow=32,SNR=4.9						
CHTO	**Chiang Mai**	**10.50**	**40**	Pn	**Pn**	**17 41 15.5**	**-1.5**
VIS	**Vishakhapatnam**	**10.66**	**311**	*i* P	**Pn**	**17 41 17.5**	**-1.7**
VIS				*i* S	**Sn**	**17 43 05.4**	**-12**
VIS				*i* S	**Sn**	**17 43 06.3**	**-11**
VIS				*ex*	x	17 43 08.2	
	comp=N,38nm,0.5s						
VIS				*ex*	x	17 43 09.7	
	comp=E,36nm,0.3s						
PSI	**Prapat**	**10.69**	**138**	LR	LR	17 45 32.0	
	comp=E,156nm,18.1s,baz=208,slow=38						
LSA	**Lhasa**	**18.75**	**358**	P	**Pn**	**17 43 06.8**	**+1.3**
ENH	**Enshi**	**25.37**	**38**	*e*P	**P**	**17 44 11.8**	**-1.2**
	comp=E,8.6nm,0.7s,mb4.4						
GTA	**Gaotai**	**29.31**	**13**	*e*P	**P**	**17 44 49.2**	**+1.1**
GTA				pP	pP	17 44 53.7	-4.5
GTA				sP	sP	17 44 56.7	-5.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
AML	**Almayashu**	**34.94**	**336**	*e*P	**P**	**17 45 39.2**	**+1.7**
	comp=Z,7.7nm,1.1s,mb4.5						
EKS2	**Erkin-Say**	**35.36**	**337**	*e*P	**P**	**17 45 42.1**	**+1.1**
MK31	**Makanchi Array**	**36.70**	**349**	*e*P	**P**	**17 45 52.6**	**+0.1**
MKAR	**Makanchi Array**	**36.70**	**349**	P	**P**	**17 45 52.7**	**+0.2**
MKAR				LR	LR	18 04 38.9	
MKAR	**Makanchi Array**	**36.70**	**349**	P	**P**	**17 45 52.7**	**+0.2**
	comp=Z,3.2nm,0.7s,mb4.2,baz=166,slow=7.8,SNR=31						
MKAR				LR	LR	18 04 38.9	
	comp=Z,18nm,18.9s,MS2.9,baz=178,slow=42						
SONM	**Songino Array**	**38.84**	**16**	P	**P**	**17 46 10.9**	**+0.3**
	comp=Z,0.9nm,0.5s,mb3.8,baz=204,slow=8.9,SNR=8.5						
KURK	**Kurchatov**	**41.18**	**347**	*e*P	**P**	**17 46 28.6**	**-1.3**
	comp=Z,5.3nm,1.3s,mb4.0						
TLY	**Talaya**	**41.83**	**11**	P	**P**	**17 46 35.1**	**-0.2**
KSRS	**Korea Array**	**41.86**	**45**	LR	LR	18 05 01.1	
	comp=Z,27nm,19.1s,MS3.1,baz=205,slow=38						
ZAA0	**Zalesovo Array**	**43.33**	**354**	*e*P	**P**	**17 46 46.7**	**-0.7**
ZALV	**Zalesovo Beam**	**43.33**	**354**	P	**P**	**17 46 47.2**	**-0.1**
	comp=Z,2.0nm,0.4s,mb4.2,baz=175,slow=8.3,SNR=13						
FITZ	**Fitzroy Crossi**	**44.10**	**130**	P	**P**	**17 46 54.6**	**+0.5**
	comp=Z,2.9nm,0.8s,mb4.0,baz=343,slow=9.5,SNR=6.0						
BVAR	**Borovoye Array**	**45.44**	**342**	P	**P**	**17 47 04.2**	**0.0**
	comp=Z,0.4nm,0.4s,mb3.6,baz=142,slow=7.5,SNR=4.3						
BRVK	**Borovoye**	**45.50**	**342**	P	**P**	**17 47 03.1**	**-1.7**
	comp=Z,2.1nm,1.0s,mb3.9						
ABKAR	**Akbulak array**	**46.51**	**332**	*e*P	**P**	**17 47 13.6**	**+0.8**
	comp=Z,1.7nm,0.6s,mb4.2						
KIV	**Kislovodsk**	**53.56**	**317**	P	**P**	**17 48 07.4**	**+1.0**
	comp=Z,4.3nm,0.7s,mb4.5						
ASAR	**Alice Springs**	**53.60**	**130**	P	**P**	**17 48 06.7**	**-0.2**
	comp=Z,0.5nm,0.8s,mb3.5,baz=311,slow=4.9,SNR=7.2						
BRTR	**Keskin Array B**	**58.74**	**310**	P	**P**	**17 48 43.0**	**-0.5**
	comp=Z,0.9nm,0.8s,mb3.9,baz=134,slow=8.0,SNR=5.5						
FINES	**FINESS Array B**	**69.00**	**332**	P	**P**	**17 49 50.6**	**0.0**
	comp=Z,1.6nm,0.7s,mb4.0,baz=108,slow=8.9,SNR=3.3						
FINES				LR	LR	18 23 51.2	
	comp=Z,34nm,19.1s,MS3.6,baz=335,slow=39						
ARCES	**ARCESS Array B**	**71.68**	**340**	P	**P**	**17 50 07.2**	**+0.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=99,slow=7.5,SNR=7.9						

*ISCJB **12** 17:47:14.3±2.1, 19°.27S±0°.10×175°.6W±0°.2, h159km±21km, mb3.7/9, Error ellipse: s-maj=25.1km s-min=14.1km az=21.7*

*IDC **12** 17:47:16.0±2.8, 19°.25S×175°.53W, h162km±26km, mb3.5/7, mb1 3.8/9, mb1mx3.7/16, mbtmp3.6/9, Error ellipse: s-maj=31.6km s-min=16.2km az=138.0*

*NEIC **12** 17:47:18.5±1.7, 19°.26S×175°.19W, h198km±16km, mb4.3/3, Error ellipse: s-maj=26.2km s-min=17.0km az=136.0*

ISC 12 17:47:15.7±1.9, 19°.2S±0°.1×175°.6W±0°.2, h155km±20km, n16, σ0s60/15, mb3.7/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.25**	**283**	*e*Pn	**Pn**	**17 48 55.6**	**+10**
	79nm,0.8s						
AFI	**Afiamalu**	**6.40**	**35**	P	**Pn**	**17 48 47.8**	**0.0**
	6.5nm,0.3s,baz=180,slow=4.0,SNR=7.1						
AFI				S	**Sn**	**17 49 53.0**	**-7.0**
	11nm,0.3s,baz=143,slow=20,SNR=5.3						
URZ	**Urewera**	**20.02**	**197**	P	**P**	**17 51 36.4**	**0.0**
	1.4nm,0.3s,baz=349,slow=18,SNR=6.6						
URZ				S	**S**	**17 55 06.1**	**-6.8**
	0.3nm,0.3s,baz=294,slow=20,SNR=3.0						
CTAO	**Charters Tower**	**35.93**	**262**	*e*P	**P**	**17 54 01.7**	**+0.3**
	3.8nm,0.6s,mb4.2						
ASAR	**Alice Springs**	**47.06**	**255**	P	**P**	**17 55 31.6**	**-0.5**
	5.2nm,0.6s,mb4.3,baz=92,slow=8.5,SNR=106						
FITZ	**Fitzroy Crossi**	**55.49**	**261**	P	**P**	**17 56 34.5**	**-0.3**
	2.6nm,0.9s,mb4.0,baz=101,slow=5.2,SNR=3.8						
MJAR	**Matsushiro Arr**	**70.59**	**322**	P	**P**	**17 58 13.8**	**-0.2**
MJAR	**Matsushiro Arr**	**70.59**	**322**	P	**P**	**17 58 13.8**	**-0.2**
	1.5nm,0.7s,mb3.9,baz=161,slow=6.5,SNR=5.1						
QSPA	**South Pole Qui**	**70.84**	**180**	*e*P	**P**	**17 58 15.1**	**+0.2**
	2.6nm,0.9s,mb4.0						
KSRS	**Korea Array**	**77.49**	**317**	P	**P**	**17 58 55.3**	**+1.2**
	0.5nm,0.7s,mb3.3,baz=116,slow=2.8,SNR=3.6						
NVAR	**Mina Array Bea**	**78.52**	**42**	P	**P**	**17 59 00.7**	**+0.9**
	0.9nm,0.6s,mb3.6,baz=224,slow=7.5,SNR=7.4						
TXAR	**Lajitas Array**	**84.43**	**56**	P	**P**	**17 59 30.8**	**-0.3**
	0.2nm,0.7s,mb3.0,baz=196,slow=5.6,SNR=3.8						
ILAR	**Eielson Array**	**86.58**	**12**	P	**P**	**17 59 39.7**	**-1.1**
	0.2nm,0.4s,mb3.3,baz=222,slow=6.8,SNR=4.0						
BRTR	**Keskin Array B**	**147.62**	**315**	PKPbc	PKPbc	18 06 40.8	-1.2
	0.6nm,0.7s,baz=90,slow=1.4,SNR=3.1						
MMAI	**Mount Meron Ar**	**149.13**	**303**	PKPbc	PKPbc	18 06 43.8	-2.3
	0.7nm,0.4s,baz=90,slow=5.0,SNR=2.8						
DAVOX	**Davos/Dischmat**	**152.15**	**352**	PKPbc	PKPbc	18 06 52.4	-0.3
	1.2nm,0.5s,baz=207,slow=2.3,SNR=3.3						

IDC 12 17:54:53.1±2.2, 9°.60S×116°.16E, h0km, mb3.4/5, mb1 3.6/6, mb1mx3.5/20, mbtmp3.5/6, ML3.4/1, Error ellipse: s-maj=135.8km s-min=12.9km az=49.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.49**	**134**	Pn	Pn	17 57 53.7	+1.5
	0.2nm,0.3s,baz=307,slow=15,SNR=12						
FITZ				Sn	Sn	18 00 02.8	-9.3
	0.1nm,0.3s,baz=180,slow=20,SNR=4.1						
ASAR	**Alice Springs**	**21.98**	**132**	P	P	17 59 49.4	+0.6
	0.5nm,0.7s,baz=303,slow=9.8,SNR=9.9						
ASAR				S	S	18 03 53.4	+1.0
	0.4nm,1.1s,baz=305,slow=24,SNR=3.1						
CMAR	**Chiang Mai Arr**	**32.65**	**329**	P	P	18 01 28.4	+1.5
	0.7nm,0.8s,baz=140,slow=7.1,SNR=5.5						
SONM	**Songino Array**	**57.83**	**352**	P	P	18 04 46.2	-0.1
	0.3nm,0.5s,baz=152,slow=6.4,SNR=2.3						
MKAR	**Makanchi Array**	**63.76**	**335**	P	P	18 05 26.3	-0.4
	0.3nm,0.6s,baz=154,slow=5.4,SNR=3.1						
KURK	**Kurchatov**	**68.33**	**335**	P	P	18 05 55.5	-0.5
	0.2nm,0.5s,baz=155,slow=5.3,SNR=3.1						

*ISCJB **12** 18:37:49.8±0.9, 24°.27N±0°.05×99°.06E±0°.07, h10km, mb3.0/3, Error ellipse: s-maj=10.2km s-min=6.6km az=23.4*

*IDC **12** 18:37:50.3±1.3, 24°.38N×98°.87E, h0km, mb3.1/3, mb1 3.3/4, mb1mx3.1/24, mbtmp3.2/4, ML3.8/1, Error ellipse: s-maj=44.5km s-min=17.5km az=83.0*

*BJI **12** 18:37:52.5, 24°.53N×98°.70E, h28km, ML3.4/6, Ms3.2/1*

ISC 12 18:37:51.5±0.9, 24°.33N±0°.05×98°.96E±0°.07, h10km, n7, σ1s31/10, mb3.0/3, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.53**	**76**	Pg	**Pg**	**18 39 00.7**	**+1.6**
KMI				Sg	**Sg**	**18 39 43.8**	**-1.1**
KMI				smax			
	comp=N,93nm,0.9s						
KMI				smax			
	comp=E,75nm,0.8s						
KMI				LR	LR		
	comp=N,150nm,5.1s						
KMI				LR	LR		
	comp=E,230nm,6.9s						
CHRT	**Chiangrai**	**4.51**	**170**	PG	**Pg**	**18 39 16.0**	**-1.9**
CHRT				SG	**Sg**	**18 40 18.0**	**+1.7**
CHG	**Chiang Mai**	**5.49**	**180**	PG	**Pg**	**18 39 34.8**	**-2.0**
	comp=E,13nm,0.5s						
CMAR	**Chiang Mai Arr**	**5.85**	**180**	Pn	**Pn**	**18 39 18.8**	**+0.6**
	comp=E,0.7nm,0.3s,baz=353,slow=13,SNR=12						
CMAR				Pg	**Pg**	**18 39 39.1**	**-4.4**
	comp=E,1.2nm,0.3s,baz=354,slow=18,SNR=37						
CMAR				Lg		18 40 55.8	
	comp=E,0.9nm,0.3s,baz=354,slow=32,SNR=3.9						
SONM	**Songino Array**	**24.19**	**12**	P	**P**	**18 43 07.5**	**-0.5**
	comp=E,0.1nm,0.3s,mb2.7,baz=194,slow=10,SNR=2.6						
MKAR	**Makanchi Array**	**26.09**	**333**	P	**P**	**18 43 25.5**	**+0.3**
	comp=E,0.4nm,0.6s,mb3.1,baz=136,slow=11,SNR=4.7						
ASAR	**Alice Springs**	**58.53**	**142**	P	**P**	**18 47 49.5**	**+1.2**
	comp=E,0.2nm,0.7s,mb3.3,baz=320,slow=6.6,SNR=4.0						

*IDC **12** 18:44:17.9±2.6, 4°.57S×153°.65E, h133km±8km, mb3.5/7, mb1 3.6/7, mb1mx3.4/14, mbtmp3.5/7, Error ellipse: s-maj=88.3km s-min=18.7km az=97.0*

*ISCJB **12** 18:44:18.4±5.0, 4°.6S±0°.2×153°.5E±0°.3, h147km±39km, mb3.6/8, Error ellipse: s-maj=47.8km s-min=24.9km az=7.6*

*NEIC **12** 18:44:19.4±5.7, 4°.59S×153°.51E, h142km±39km, mb4.0/2, Error ellipse: s-maj=67.6km s-min=19.1km az=90.0*

ISC 12 18:44:19.5±5.3, 4°.6S±0°.2×153°.5E±0°.3, h142km±40km, h133km±3.1km:pP-P, n12, σ0s66/12, mb3.6/8, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.92**	**233**	*e*Pn	**Pn**	**18 46 11.8**	**-0.1**
PMG				*e*Sn	**Sn**	**18 47 40.0**	**0.0**
ASAR	**Alice Springs**	**26.78**	**223**	P	**P**	**18 49 46.1**	**-0.2**
	2.0nm,0.8s,mb3.8,baz=56,slow=8.8,SNR=33						
ASAR				pP	pP	18 50 15.4	-0.8
	1.1nm,0.9s,baz=55,slow=8.6,SNR=3.6						
STKA	**Stephens Creek**	**29.35**	**201**	P	**P**	**18 50 09.4**	**+0.3**
	0.8nm,1.0s,mb3.4						
STKA	**Stephens Creek**	**29.35**	**201**	P	**P**	**18 50 09.4**	**+0.3**
	2.4nm,1.0s,mb3.9,baz=32,slow=15,SNR=3.0						
MBWA	**Marble Bar**	**36.69**	**240**	P	**P**	**18 51 13.0**	**0.0**
	9.9nm,1.0s,mb4.4						
SONM	**Songino Array**	**66.54**	**327**	P	**P**	**18 54 54.9**	**+0.8**
	0.7nm,1.0s,mb3.4,baz=141,slow=6.3,SNR=4.1						
MKAR	**Makanchi Array**	**80.65**	**319**	P	**P**	**18 56 17.4**	**+0.9**
MKAR				pP	pP	18 56 50.5	-1.5
MKAR	**Makanchi Array**	**80.65**	**319**	P	**P**	**18 56 17.4**	**+0.9**
	0.3nm,0.6s,mb3.1,baz=90,slow=6.5,SNR=6.1						
MKAR				pP	pP	18 56 50.5	-1.5
	0.6nm,0.9s,baz=99,slow=6.3,SNR=3.5						
ZALV	**Zalesovo Beam**	**81.39**	**326**	P	**P**	**18 56 18.5**	**-1.8**
	0.3nm,0.4s,mb3.3,baz=116,slow=6.6,SNR=3.1						
ILAR	**Eielson Array**	**81.70**	**22**	pP	pP	18 56 52.5	-4.7
	0.5nm,0.9s,baz=236,slow=7.2,SNR=2.8						
KURK	**Kurchatov**	**84.05**	**322**	P	**P**	**18 56 34.2**	**0.0**
	0.6nm,0.8s,mb3.4,baz=106,slow=4.1,SNR=3.9						
KURK				pP	pP	18 57 06.7	-3.1
	0.5nm,0.9s,baz=105,slow=4.5,SNR=2.8						
MAW	**Mawson**	**86.03**	**203**	P	**P**	**18 56 43.6**	**-0.1**
	2.0nm,0.7s,mb4.0,baz=85,slow=7.5,SNR=6.5						

*IDC **12** 18:51:25.6±0.9, 46°.98N×155°.80E, h0km, mb3.8/14, mb1 4.0/16, mb1mx3.9/26, mbtmp3.8/16, ML3.5/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/20, Error ellipse: s-maj=25.5km s-min=15.5km az=159.0*

*NEIC **12** 18:51:26.1±5.8, 46°.98N×155°.80E, h5km±36km, mb4.4/6, Error ellipse: s-maj=15.5km s-min=11.7km az=161.0*

*ISCJB **12** 18:51:28.3±0.7, 46°.9N±0°.1×155°.7E±0°.1, h33km, mb3.9/19, Error ellipse: s-maj=17.3km s-min=8.8km az=146.0*

*MOS **12** 18:51:28.7±1.6, 46°.70N×155°.78E, h36km, mb4.5/5, Error ellipse: s-maj=13.3km s-min=12.1km az=177.5*

ISC 12 18:51:30.5±0.7, 46°.9N±0°.1×155°.8E±0°.1, h35km, n46, σ1s08/43, mb3.9/19, 1C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.84**	**3**	*e*PN	**Pn**	**18 52 21.5**	**-5.6**
SKR				MLR	MLR		
	comp=E,1μm,12.0s						
SKR				MLR	MLR		
	comp=Z,800nm,12.0s						
KUR	**Kuril'sk**	**5.72**	**256**	*e*PN	**Pn**	**18 52 52.0**	**-0.9**
KUR				pmax	pmax		
	comp=Z,90nm,0.5s						
YSS	**Yuzh-Sakhalins**	**8.90**	**275**	*e*Pn	**Pn**	**18 53 37.0**	**+0.5**
YSS	**Yuzh-Sakhalins**	**8.90**	**275**	*e*PN	**Pn**	**18 53 40.0**	**+3.5**
YSS				MLR	MLR		
	comp=Z,300nm,14.0s						
ASAJ	**Asahikawa**	**9.64**	**258**	Pn	**Pn**	**18 53 46.7**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=80,slow=18,SNR=7.9						
ASAJ	**Asahikawa**	**9.64**	**258**	PN	**Pn**	**18 53 46.7**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**10.22**	**246**	*e*Pn	**Pn**	**18 53 53.9**	**-0.7**
	comp=Z,11nm,0.5s						
ERM				*e*Sn	**Sn**	**18 55 38.2**	**-10**
ERM	**Erimo**	**10.22**	**246**	*e*PN	**Pn**	**18 53 54.9**	**+0.3**
MAJO	**Matsushiro**	**16.63**	**238**	P	**Pn**	**18 55 17.9**	**-2.8**
	comp=Z,5.5nm,0.8s						
MAJO	**Matsushiro**	**16.63**	**238**	P	**Pn**	**18 55 17.9**	**-2.9**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MJAR	**Matsushiro Arr**	**16.63**	**238**	Pn	**Pn**	**18 55 20.4**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=32,slow=12,SNR=5.1						
YAK	**Yakutsk**	**21.25**	**325**	*e*P	**P**	**18 56 17.3**	**+4.1**
KSRS	**Korea Array**	**22.57**	**255**	P	**P**	**18 56 28.2**	**+0.7**
	comp=Z,1.4nm,0.9s,mb3.4,baz=54,slow=10,SNR=5.1						
KSRS	**Korea Array**	**22.57**	**255**	*e*P	**P**	**18 56 32.1**	**+4.6**
ULN	**Ulaanbaatar**	**32.57**	**290**	*e*P	**P**	**18 57 59.6**	**+1.4**
SONM	**Songino Array**	**33.00**	**290**	P	**P**	**18 58 01.6**	**-0.4**
	comp=Z,0.2nm,0.6s,mb3.2,baz=90,slow=7.2,SNR=3.1						
SONM				LR	LR	19 11 24.8	
	comp=Z,39nm,19.0s,baz=181,slow=36						
ILAR	**Eielson Array**	**35.34**	**39**	P	**P**	**18 58 19.1**	**-2.9**
	comp=Z,0.6nm,0.9s,mb3.5,baz=255,slow=8.5,SNR=6.6						
INK	**Inuvik**	**40.59**	**33**	P	**P**	**18 59 05.4**	**-0.8**
	comp=Z,1.3nm,0.2s,mb4.1,baz=254,slow=4.8,SNR=4.3						
ZALV	**Zalesovo Beam**	**44.02**	**306**	P	**P**	**18 59 33.4**	**-0.9**
	comp=Z,0.6nm,0.4s,mb3.6,baz=71,slow=6.0,SNR=4.3						
ZALV	**Zalesovo Beam**	**44.02**	**306**	*e*P	**P**	**18 59 35.2**	**+1.0**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
MKAR	**Makanchi Array**	**48.50**	**298**	P	**P**	**19 00 09.6**	**0.0**
	comp=Z,0.4nm,0.2s,mb4.0,baz=63,slow=8.7,SNR=7.2						
KURK	**Kurchatov**	**48.81**	**305**	*e*P	**P**	**19 00 11.2**	**-0.7**
	comp=Z,3.4nm,0.7s,mb4.5						
KURK	**Kurchatov**	**48.81**	**305**	P	**P**	**19 00 12.4**	**+0.6**
	comp=Z,3.1nm,0.7s,mb4.5,baz=68,slow=8.4,SNR=16						
KURK	**Kurchatov**	**48.81**	**305**	*e*P	**P**	**19 00 11.6**	**-0.3**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
BVAR	**Borovoye Array**	**52.19**	**310**	P	**P**	**19 00 36.9**	**-0.5**
	comp=Z,0.9nm,0.4s,mb4.1,baz=50,slow=7.7,SNR=7.8						
BVAR	**Borovoye Array**	**52.19**	**310**	*e*P	**P**	**19 00 40.4**	**+3.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRVK	**Borovoye**	**52.22**	**310**	P	**P**	**19 00 37.3**	**-0.3**
	comp=Z,4.3nm,1.0s,mb4.3						
BRVK	**Borovoye**	**52.22**	**310**	*e*P	**P**	**19 00 41.4**	**+3.8**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CMAR	**Chiang Mai Arr**	**54.16**	**258**	P	**P**	**19 00 53.9**	**+1.6**
	comp=Z,1.0nm,0.8s,mb3.8,baz=34,slow=7.3,SNR=5.8						
ARU	**Arti**	**56.15**	**318**	*e*P	**P**	**19 01 04.9**	**-1.3**
	comp=Z,3.0nm,0.7s,mb4.4						
ARU	**Arti**	**56.15**	**318**	*c* *i*P	**P**	**19 01 08.1**	**+1.9**
ARU				*e*PP	pP	19 01 22.2	+5.5
ARU				*e*		19 03 10.2	
ARU				S	**S**	**19 08 56.4**	**+3.8**
ARU				SS	SS	19 12 38.4	-0.1
ARU				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.4						
KEV	**Kevo**	**57.84**	**341**	*e*P	sP	19 01 36.1	+3.4
KEV	**Kevo**	**57.84**	**341**	*e*p	sP	19 01 36.1	+3.4
	comp=Z,0.3nm,0.4s						
ARCES	**ARCESS Array B**	**58.34**	**342**	P	**P**	**19 01 22.2**	**+0.7**
	comp=Z,2.0nm,0.8s,mb4.2,baz=29,slow=9.4,SNR=3.0						
ABKAR	**Akbulak array**	**59.74**	**311**	*e*P	**P**	**19 01 31.2**	**-0.2**
	comp=Z,1.1nm,0.6s,mb4.1						
NVAR	**Mina Array Bea**	**60.77**	**64**	P	**P**	**19 01 39.5**	**+0.9**
	comp=Z,0.9nm,0.8s,mb4.0,baz=296,slow=7.8,SNR=6.0						
JOF	**Joensuu**	**62.03**	**335**	*e*P	**P**	**19 01 46.1**	**-0.7**
JOF	**Joensuu**	**62.03**	**335**	*e*p	**P**	**19 01 46.1**	**-0.7**
	comp=Z,0.2nm,0.3s,mb3.7						
FINES	**FINESS Array B**	**64.71**	**336**	P	**P**	**19 02 04.2**	**-0.3**
	comp=Z,0.7nm,0.4s,mb4.0,baz=45,slow=8.1,SNR=9.2						
ASAR	**Alice Springs**	**72.91**	**201**	P	**P**	**19 02 56.7**	**+0.8**
	comp=Z,0.3nm,0.6s,mb3.4,baz=14,slow=6.5,SNR=6.0						
TXAR	**Lajitas Array**	**75.85**	**62**	P	**P**	**19 03 13.8**	**+0.6**
	comp=Z,0.7nm,0.7s,mb3.7,baz=289,slow=3.5,SNR=7.7						
DPC	**Dobruska-Polom**	**77.03**	**335**	*e*P	sP	19 03 38.9	+4.4
PRU	**Pruhonice**	**77.87**	**336**	*e*P	sP	19 03 45.4	+6.2
PSZ	**Piszkesteto**	**78.06**	**331**	*e*P	**P**	**19 03 24.2**	**-1.0**
	comp=Z,4.3nm,0.8s,mb4.4						
PSZ	**Piszkesteto**	**78.06**	**331**	*e*P	**P**	**19 03 24.3**	**-1.0**
PSZ				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
KHC	**Kasperske Hory**	**78.91**	**336**	*e*P	sP	19 03 49.2	+4.2

*NIED **12** 19:23:00.24°.30N×121°.40E, h5km, Mw4.7 Best double couple: M0 1.11000×10^16 NP1:ϕs273.00000°, δ75.00000°, λ-78.00000°. NP2:ϕs55.00000°, δ19.00000°, λ-126.00000°.*

*ISCJB **12** 19:23:30.5±0.4, 23°.99N±0°.01×121°.74E±0°.02, h1km±2km, mb4.0/18, MS3.7/7, Error ellipse: s-maj=3.7km s-min=1.9km az=21.2*

*IDC **12** 19:23:30.8±1.1, 24°.01N×121°.75E, h0km, mb3.7/9, mb1 3.8/11, mb1mx3.7/23, mbtmp3.6/11, ML3.2/2, MS3.7/10, Ms1 3.7/10, ms1mx3.5/30, Error ellipse: s-maj=25.3km s-min=22.6km az=72.0*

*NEIC **12** 19:23:31.8±0.6, 23°.97N×121°.67E, h10km, mb4.2/9, ML4.5(TAP), Error ellipse: s-maj=11.1km s-min=6.3km az=106.0*

NEIC Recorded [5 TAP] at Hua-lien and [2 TAP] in I-lan and Nan-t'ou.

*TAP **12** 19:23:31.3, 24°.01N×121°.63E, h6km, ML4.2, B*

*BJI **12** 19:23:33.6, 23°.94N×121°.37E, h15km, mB4.6/7, mb4.0/10, ML4.0/6, Ms4.3/6, Ms7 4.1/7*

ISC 12 19:23:31.4±0.4, 23°.99N±0°.01×121°.71E±0°.02, h3km±2km, n108, σ0s97/140, mb3.9/18, MS3.7/7, 8C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.10**	**260**	⇓ *i*P	**Pg**	**19 23 33.1**	**-0.2**
	baz=200						
TWD	**Chiawan**	**0.13**	**310**	⇑ *i*P	**Pg**	**19 23 33.5**	**-0.6**
	baz=342						
TWD				*i* S	**Sg**	**19 23 35.0**	**-0.9**
	baz=342						
NACB	**Ninganchiao**	**0.21**	**330**	*e*Pg	**Pg**	**19 23 33.6**	**-1.8**
NACB				*e*Sg	**Sg**	**19 23 37.5**	**-0.6**
ESF	**Shoufeng Towns**	**0.22**	**237**	*e*P	**Pg**	**19 23 35.4**	**-0.3**
	baz=218						
ESF				S	**Sg**	**19 23 38.4**	**-0.2**
	baz=218						
ESL	**Shilin**	**0.31**	**235**	P	**Pg**	**19 23 36.5**	**-0.9**
	baz=230						
ESL				*e*S	**Sg**	**19 23 40.7**	**-0.7**
	baz=230						
EHP	**Heping Village**	**0.32**	**5**	*e*P	**Pg**	**19 23 37.8**	**+0.3**
	baz=23						
TEGC	**Jichi Village**	**0.32**	**209**	*e*P	**Pg**	**19 23 39.2**	**+1.5**
	baz=193						
TEGC				*e*S	**Sg**	**19 23 45.6**	**+3.7**
	baz=193						
ENA	**Nanau**	**0.43**	**4**	⇑ *i*P	**Pg**	**19 23 39.9**	**+0.1**
	baz=26						
ENA				*e*S	**Sg**	**19 23 46.6**	**+1.2**
	baz=26						
WHF	**Hehuan Shan**	**0.43**	**290**	⇑ *i*P	**Pg**	**19 23 38.8**	**-1.0**
	baz=291						
NNS	**Nan Shan**	**0.54**	**325**	P	**Pg**	**19 23 41.3**	**-0.5**
	baz=333						
NNS				*e*S	**Sg**	**19 23 48.6**	**-0.2**
	baz=333						
TWT	**Tachien**	**0.55**	**298**	⇑ *i*P	**Pg**	**19 23 41.6**	**-0.4**
	baz=300						
TWT				*e*S	**Sg**	**19 23 49.3**	**+0.1**
	baz=300						
EHY	**Hungye**	**0.60**	**216**	P	**Pg**	**19 23 42.7**	**-0.3**
	baz=216						
EHY				*e*S	**Sg**	**19 23 51.2**	**+0.5**
	baz=216						
TWC	**Suao**	**0.63**	**12**	*e*P	**Pg**	**19 23 43.6**	**+0.2**
	baz=21						
ENTT	**Nioudou**	**0.

CHN4	**Tsaushan**	**1.21**	**238**	*e*P		**Pg**	**19 23 54.8**	**+0.2**
	baz=230							
CHN4				*e*S		**Sg**	**19 24 11.5**	**+1.3**
	baz=230							
TPUB	**Ta-pu**	**1.21**	**235**	*e*Pg		**Pg**	**19 23 53.8**	**-0.7**
TPUB				*e*Sg		**Sg**	**19 24 10.2**	**0.0**
WTP	**Ta-pu**	**1.25**	**234**	⇓P		**Pg**	**19 23 55.0**	**-0.4**
	baz=231							
WTP				*e*S		**Sg**	**19 24 12.4**	**+0.7**
	baz=231							
YOJ	**Yonaguni jima**	**1.28**	**68**	*e*P		**Pg**	**19 23 56.3**	**+0.3**
	baz=64							
CHY	**Chiayi**	**1.28**	**247**	*e*P		**Pg**	**19 23 56.1**	**+0.2**
	baz=261							
CHY				*e*S		**Sg**	**19 24 13.3**	**+0.8**
	baz=261							
TWY	**Chenhua**	**1.28**	**356**	*e*P		**Pg**	**19 23 56.1**	**+0.1**
	baz=348							
TWG	**Pinlang**	**1.31**	**207**	*e*Pn		**Pn**	**19 23 52.9**	**-3.7**
TWG				*e*Sg		**Sg**	**19 24 14.2**	**+0.7**
TWG	**Pinlang**	**1.31**	**207**	*e*P		**Pg**	**19 23 53.7**	**-2.8**
	baz=203							
WTCT	**Ta-ch'eng**	**1.31**	**265**	*e*P		**Pg**	**19 23 56.2**	**-0.5**
	baz=264							
WTCT				*e*S		**Sg**	**19 24 14.0**	**+0.3**
	baz=264							
TWK	**Hsinying**	**1.33**	**237**	*e*P		**Pn**	**19 23 56.9**	**0.0**
	baz=223							
TWK				*e*S		**Sg**	**19 24 15.2**	**+0.8**
	baz=223							
TTN	**Taitung**	**1.34**	**203**	*e*P		**Pn**	**19 23 56.5**	**-0.5**
	baz=199							
CHN1	**Nanshi**	**1.35**	**234**	*e*P		**Pn**	**19 23 57.0**	**-0.2**
	baz=231							
CHN1				*e*S		**Sg**	**19 24 15.9**	**+1.1**
	baz=231							
SGST	**Jiashian**	**1.38**	**229**	*e*P		**Pn**	**19 23 57.6**	**0.0**
	baz=226							
SGST				*e*S		**Sg**	**19 24 17.1**	**+1.4**
	baz=226							
WSF	**Szhu**	**1.41**	**256**	*e*P		**Pn**	**19 23 57.4**	**-0.6**
	baz=255							
WSF				*e*S		**Sg**	**19 24 16.9**	**+0.2**
	baz=255							
CHN8	**Yiju**	**1.52**	**245**	*e*P		**Pn**	**19 23 59.6**	**+0.2**
	baz=245							
CHN8				*e*S		**Sn**	**19 24 20.8**	**+1.1**
	baz=245							
CHN3	**Shinhua**	**1.54**	**234**	*e*P		**Pn**	**19 24 00.5**	**+0.8**
	baz=234							
ECL	**Taimali**	**1.55**	**207**	*e*P		**Pn**	**19 23 57.6**	**-2.4**
	baz=189							
SSD	**Sandimen**	**1.59**	**219**	*e*P		**Pn**	**19 24 00.1**	**-0.3**
	baz=204							
SCLT	**Jiali**	**1.61**	**240**	*e*P		**Pn**	**19 24 02.4**	**+1.7**
	baz=239							
TAI1	**Yung-k'ang**	**1.66**	**235**	*e*P		**Pn**	**19 24 01.6**	**+0.1**
	baz=235							
TWM1	**Shoushan**	**1.66**	**226**	*e*P		**Pn**	**19 24 03.0**	**+1.6**
	baz=225							
SGLT	**Jiouru**	**1.69**	**222**	*e*P		**Pn**	**19 24 04.0**	**+2.2**
	baz=207							
EAST	**Anshuo**	**1.79**	**206**	*e*P		**Pn**	**19 24 01.8**	**-1.4**
	baz=190							
SCZT	**Fangliau**	**1.90**	**212**	*e*P		**Pn**	**19 24 05.1**	**+0.3**
	baz=195							
LAY	**Lan-yu**	**1.95**	**184**	*e*P		**Pn**	**19 24 02.9**	**-2.6**
	baz=184							
PNG	**Penghu**	**2.02**	**258**	*e*P		**Pn**	**19 24 05.9**	**-0.4**
	baz=257							
PNG				*e*S		**Sn**	**19 24 32.3**	**+0.2**
	baz=257							
TWP	**Hsiaoliuchiu**	**2.06**	**217**	*e*P		**Pn**	**19 24 09.4**	**+2.5**
	baz=238							
HEN	**Hengchun**	**2.17**	**205**	*e*P		**Pn**	**19 24 11.4**	**+2.9**
	baz=192							
TWK1	**Hengchun**	**2.21**	**202**	*e*P		**Pn**	**19 24 08.8**	**-0.2**
	baz=202							
TSEB	**Hengchuen, Pin**	**2.21**	**200**	*e*P		**Pn**	**19 24 10.4**	**+1.4**
	baz=188							
QZH	**Quanzhou**	**2.99**	**289**	Pn		**Pn**	**19 24 18.8**	**-1.0**
QZH				Sn		**Sn**	**19 24 53.7**	**-2.5**
QZH				smax				
	comp=N,840nm,1.0s							
QZH				smax				
	comp=E,440nm,0.9s							
KNM	**Kinmen**	**3.02**	**279**	*e*P		**Pn**	**19 24 21.4**	**+1.3**
	baz=278							
GZH	**Guangzhou**	**7.73**	**265**	P		**Pn**	**19 25 19.6**	**-5.3**
GZH				smax				
	comp=N,120nm,1.0s							
GZH				smax				
	comp=E,110nm,0.9s							
WHN	**Wuhan**	**9.24**	**317**	P		**Pn**	**19 25 44.5**	**-1.1**
WHN				S		**Sn**	**19 27 20.8**	**-9.3**
WHN				LR	LR			
	comp=N,2μm,8.0s							
WHN				LR	LR			
	comp=E,1μm,5.9s							
WHN				LR	LR			
	comp=Z,2μm,7.8s							
KSRS	**Korea Array**	**14.44**	**20**	Pn		**Pn**	**19 26 55.8**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=202,slow=11,SNR=4.3							
KSRS				LR		LR	19 33 05.0	
	comp=Z,213nm,18.5s,baz=193,slow=40							
DAV	**Davao City (W)**	**17.23**	**167**	LR		LR	19 33 43.2	
	comp=Z,215nm,20.1s,baz=21,slow=36							
CBIJ	**Chichi jima**	**18.73**	**76**	LR		LR	19 34 25.0	
	comp=Z,110nm,20.3s,baz=109,slow=35							
MJAR	**Matsushiro Arr**	**18.93**	**45**	P		**Pn**	**19 27 52.6**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=230,slow=9.1,SNR=2.5							
LZH	**Lanzhou**	**19.57**	**312**	*e*P		**Pn**	**19 28 05.8**	**+4.1**
LZH				pP		pP	19 28 09.5	+8.2
LZH				sP		sP	19 28 12.8	+11
LZH				PP			19 28 24.0	
LZH				*e*S		**Sn**	**19 31 32.2**	**-10**
LZH				pmax	pmax			
	comp=Z,10.0nm,1.1s							
LZH				pmax	pmax			
	comp=Z,50nm,4.9s							
LZH				LR	LR			
	comp=N,470nm,9.0s							
LZH				LR	LR			
	comp=Z,490nm,10.3s							
CHTO	**Chiang Mai**	**21.80**	**261**	*e*P		**P**	**19 28 23.9**	**-0.9**
	comp=Z,5.2nm,1.1s,mb3.9							
CMAR	**Chiang Mai Arr**	**21.91**	**260**	P		**P**	**19 28 26.7**	**+0.7**
	comp=Z,2.3nm,0.9s,mb3.6,baz=54,slow=9.1,SNR=11							
GTA	**Gaotai**	**24.06**	**315**	*e*P		**P**	**19 28 50.4**	**+2.5**
GTA				pP			19 28 54.7	
GTA				sP		sP	19 28 57.8	+8.6
GTA				pmax	pmax			
	comp=Z,2.0nm,1.1s,mb3.5							
GUMO	**Guam**	**24.21**	**111**	LR		LR	19 36 18.9	
	comp=Z,91nm,21.3s,MS3.2,baz=192,slow=32							
ULN	**Ulaanbaatar**	**26.52**	**338**	*e*P		**P**	**19 29 10.8**	**+0.6**
	comp=Z,7.6nm,1.1s,mb4.1							
SONM	**Songino Array**	**26.73**	**337**	P		**P**	**19 29 11.9**	**-0.1**
	comp=Z,2.1nm,0.9s,mb3.7,baz=159,slow=6.8,SNR=9.6							
SONM				LR		LR	19 40 59.7	
	comp=Z,275nm,19.4s,MS3.8,baz=190,slow=39							
MK31	**Makanchi Array**	**38.81**	**316**	*e*P		**P**	**19 30 57.4**	**-0.1**
MKAR	**Makanchi Array**	**38.81**	**316**	P		**P**	**19 30 57.6**	**+0.1**
	comp=Z,2.4nm,0.7s,mb4.0,baz=105,slow=10.0,SNR=9.8							
MKAR				LR		LR	19 48 12.7	
	comp=Z,82nm,19.1s,MS3.6,baz=256,slow=38							
ZAA0	**Zalesovo Array**	**40.66**	**327**	*e*P		**P**	**19 31 12.1**	**-0.6**
ZALV	**Zalesovo Beam**	**40.66**	**327**	P		**P**	**19 31 12.3**	**-0.5**
ZALV				LR		LR	19 49 15.3	
ZALV	**Zalesovo Beam**	**40.66**	**327**	P		**P**	**19 31 12.3**	**-0.5**
	comp=Z,2.3nm,0.9s,mb3.8,baz=111,slow=8.4,SNR=8.0							
ZALV				LR		LR	19 49 15.3	
	comp=Z,81nm,18.4s,MS3.6,baz=245,slow=38							
KURK	**Kurchatov**	**42.55**	**320**	*e*P		**P**	**19 31 26.0**	**-2.2**
	comp=Z,2.1nm,0.8s,mb3.9							
KURK	**Kurchatov**	**42.55**	**320**	P		**P**	**19 31 28.3**	**0.0**
	comp=Z,0.8nm,0.6s,mb3.6,baz=114,slow=7.8,SNR=2.6							
UCH	**Uchtor**	**42.92**	**307**	*e*P		**P**	**19 31 34.0**	**+2.6**
	comp=Z,6.5nm,1.3s,mb4.2							
AML	**Almayashu**	**43.50**	**307**	P		**P**	**19 31 35.8**	**-0.3**
KBL	**Kabul**	**46.68**	**296**	*e*P		**P**	**19 32 02.8**	**+1.3**
	comp=Z,6.9nm,1.2s,mb4.5							
BVAR	**Borovoye Array**	**48.12**	**321**	P		**P**	**19 32 12.3**	**-0.2**
	comp=Z,0.6nm,0.7s,mb3.8,baz=99,slow=9.2,SNR=3.9							
BRVK	**Borovoye**	**48.20**	**321**	*e*P		**P**	**19 32 13.3**	**+0.3**
	comp=Z,1.3nm,0.4s,mb4.3							
ASAR	**Alice Springs**	**48.83**	**165**	P		**P**	**19 32 17.9**	**-0.3**
	comp=Z,1.6nm,0.9s,mb4.1,baz=352,slow=6.5,SNR=9.2							
ABKAR	**Akbulak array**	**53.92**	**314**	*e*P		**P**	**19 32 56.1**	**-0.1**
	comp=Z,0.9nm,0.6s,mb3.9							
AKTO	**Aktyubinsk**	**55.24**	**316**	LR		LR	19 58 06.0	
	comp=Z,66nm,18.3s,MS3.8,baz=118,slow=38							
ARU	**Arti**	**55.55**	**323**	P		**P**	**19 33 06.2**	**-1.7**
STKA	**Stephens Creek**	**58.72**	**160**	P		**P**	**19 33 28.3**	**-2.2**
	comp=Z,2.9nm,1.4s,mb4.1							
ILAR	**Eielson Array**	**69.16**	**27**	P		**P**	**19 34 39.2**	**+0.4**
	comp=Z,0.4nm,0.8s,mb3.4,baz=279,slow=6.5,SNR=6.1							
FINES	**FINESS Array B**	**71.85**	**330**	LR		LR	20 09 29.1	
	comp=Z,82nm,18.0s,MS4.0,baz=90,slow=38							
INK	**Inuvik**	**73.22**	**22**	*e*P		**P**	**19 35 03.8**	**+0.4**
	comp=Z,4.4nm,1.0s,mb4.3							
BRTR	**Keskin Array B**	**73.67**	**307**	P		**P**	**19 35 06.3**	**-0.3**
	comp=Z,0.8nm,0.8s,mb3.7,baz=115,slow=5.9,SNR=4.0							
NOA	**NORSAR Array B**	**78.62**	**332**	LR		LR	20 13 32.1	
	comp=Z,86nm,18.4s,MS4.1,baz=55,slow=38							

*KRSC **12** 19:42:24.2±1.3,51°.26N×159°.97E,h17km±16km,ML4.1*
*ISCJB **12** 19:42:25.6±1.6,51°.19N±0°.07×160°.0E±0°.1,h46km±10km, mb3.8/14,Error ellipse: s-maj=16.3km s-min=7.4km az=33.9*
*MOS **12** 19:42:28.0±1.4,51°.66N×158°.94E,h21km,mb4.2/4,Error ellipse: s-maj=15.1km s-min=10.6km az=93.4*
*NEIC **12** 19:42:28.2±2.2,51°.68N×158°.78E,h3km±13km,mb4.3/4, Error ellipse: s-maj=14.3km s-min=11.0km az=140.0*
*IDC **12** 19:42:30.6±1.4,52°.00N×158°.26E,h0km,mb3.6/11, mb1 3.8/11,mb1mx3.7/23,mbtmp3.6/11,Error ellipse: s-maj=35.9km s-min=23.1km az=144.0*

ISC 12 19:42:26.3±1.6,51°.19N±0°.07×160°.0E±0°.1,h35km±11km, n37,σ1s23/39,mb3.8/14,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GRL	**Gorelyy**	**1.82**	**319**	P		**Pn**	**19 42 55.4**	**+0.3**
GRL				S		**Sn**	**19 43 18.2**	**+1.3**
SPN	**Mys Shipunski**	**1.92**	**0**	S		**Sn**	**19 43 19.3**	**+0.1**
PET	**Petropavlovsk**	**2.02**	**336**	P		**Pn**	**19 42 58.0**	**+0.2**
PET				S		**Sn**	**19 43 22.6**	**+0.7**
NLC	**Nalytchevo**	**2.03**	**349**	S		**Sn**	**19 43 19.8**	**-2.2**
SDLR	**Sedlovina**	**2.21**	**342**	P		**Pn**	**19 43 00.6**	**+0.2**
MIPR	**Malaya Ipel'ka**	**2.30**	**300**	*i* P		**Pn**	**19 43 01.8**	**+0.2**
MIPR				S		**Sn**	**19 43 29.2**	**+0.5**
SKR	**Severo-Kuril's**	**2.52**	**260**	*e*PN		**Pn**	**19 43 04.0**	**-0.6**
SKR				*e*S		**Sn**	**19 43 29.7**	**-4.3**
SKR				pmax	pmax			
	comp=E,30nm,0.5s							
SKR				pmax	pmax			
	comp=Z,50nm,0.5s							
SKR				smax				
	comp=N,210nm,0.2s							
SKR				smax				
	comp=E,460nm,0.2s							
GNL	**Ganaly**	**2.82**	**334**	P		**Pn**	**19 43 09.7**	**+1.0**
ALID	**Alaid**	**2.84**	**265**	*i* P		**Pn**	**19 43 08.9**	**-0.1**
ALID				S		**Sn**	**19 43 41.6**	**-0.3**
MKZ	**Mys Kozlova**	**3.53**	**16**	S		**Sn**	**19 43 57.9**	**-1.1**
SMY	**Shemya**	**8.84**	**74**	*e*Pn		Px	19 44 45.2	
	comp=E,30nm,0.3s							
SMY	**Shemya**	**8.84**	**74**	*e*PN		Px	19 44 45.2	
SMY				pmax	pmax			
	comp=Z,30nm,0.3s							
YAK	**Yakutsk**	**19.71**	**315**	*e*P		**Pn**	**19 46 49.8**	**-4.0**
	comp=Z,15nm,0.8s							
YAK	**Yakutsk**	**19.71**	**315**	*e*P		**Pn**	**19 46 49.4**	**-4.5**
YAK				pmax	pmax			
	comp=Z,10.0nm,1.0s							
MDJ	**Mudanjiang**	**21.32**	**264**	P		**P**	**19 47 07.9**	**-2.0**
MJAR	**Matsushiro Arr**	**21.37**	**235**	P		**P**	**19 47 14.8**	**+4.4**
	comp=Z,0.5nm,0.5s,mb3.1,baz=29,slow=9.5,SNR=4.0							
MAJO	**Matsushiro**	**21.37**	**235**	*e*P		**P**	**19 47 11.3**	**+0.9**
	comp=Z,3.7nm,0.7s,mb3.8							
MAJO	**Matsushiro**	**21.37**	**235**	*e*P		**P**	**19 47 11.3**	**+0.9**
MAJO				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb3.9							
TIXI	**Tiksi**	**24.81**	**337**	*e*P		**P**	**19 47 45.1**	**+0.6**
	comp=Z,15nm,0.6s,mb4.7							
TIXI				*e*			19 47 55.7	
TIXI	**Tiksi**	**24.81**	**337**	*e*P		**P**	**19 47 44.7**	**+0.2**
TIXI				pmax	pmax			
	comp=Z,15nm,0.7s,mb4.6							
HIA	**Hailar**	**25.62**	**282**	*e*P		**P**	**19 47 50.8**	**-1.3**
KSRS	**Korea Array**	**26.51**	**251**	P		**P**	**19 48 03.1**	**+3.0**
	comp=Z,0.8nm,0.8s,mb3.3,baz=42,slow=10,SNR=3.4							
KSRS	**Korea Array**	**26.51**	**251**	P		**P**	**19 48 03.2**	**+3.0**
KSRS				pmax	pmax			
	comp=Z,1.0nm,0.8s,mb3.4							
SONM	**Songino Array**	**34.34**	**286**	P		**P**	**19 49 08.1**	**-1.1**
	comp=Z,0.2nm,0.4s,mb3.4,baz=53,slow=8.8,SNR=2.7							
ZAK	**Zakamensk**	**35.12**	**291**	*e*P		**P**	**19 49 12.0**	**-3.9**
ZAK				pmax	pmax			
	comp=Z,1.0nm,1.3s,mb3.6							
ENH	**Enshi**	**42.62**	**261**	*e*P		**P**	**19 50 19.9**	**+1.0**
ZALV	**Zalesovo Beam**	**43.79**	**304**	P		**P**	**19 50 26.7**	**-1.4**
	comp=Z,0.2nm,0.3s,mb3.3,baz=83,slow=4.5,SNR=2.7							
KURK	**Kurchatov**	**48.72**	**303**	*e*P		**P**	**19 51 06.3**	**-0.5**
	comp=Z,1.5nm,0.6s,mb4.2							
KURK	**Kurchatov**	**48.72**	**303**	*e*P		**P**	**19 51 06.3**	**-0.6**
KURK				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb4.0							
MKAR	**Makanchi Array**	**48.96**	**297**	P		**P**	**19 51 08.4**	**-0.3**
	comp=Z,0.4nm,0.4s,mb3.8,baz=60,slow=7.4,SNR=6.2							
BVAR	**Borovoye Array**	**51.55**	**310**	P		**P**	**19 51 26.5**	**-1.8**
	comp=Z,0.7nm,0.6s,mb3.8,baz=66,slow=8.3,SNR=6.8							
BRVK	**Borovoye**	**51.59**	**310**	*e*P		**P**	**19 51 27.0**	**-1.5**
ARCES	**ARCESS Array B**	**55.09**	**342**	P		**P**	**19 51 55.9**	**+1.9**
	comp=Z,1.8nm,0.9s,mb4.1,baz=34,slow=8.7,SNR=2.8							
NVAR	**Mina Array Bea**	**56.46**	**69**	P		sP	19 52 19.4	+0.3
	comp=Z,0.8nm,0.6s,baz=332,slow=8.5,SNR=4.4							
CMAR	**Chiang Mai Arr**	**57.76**	**259**	P		**P**	**19 52 17.2**	**+3.5**
	comp=Z,0.4nm,0.7s,mb3.5,baz=49,slow=8.3,SNR=2.6							
FINES	**FINESS Array B**	**61.86**	**337**	P		**P**	**19 52 43.1**	**+1.8**
	comp=Z,0.7nm,0.6s,mb4.0,baz=46,slow=6.0,SNR=3.8							
NOA	**NORSAR Array B**	**65.36**	**344**	P		**P**	**19 53 06.6**	**+2.2**
	comp=Z,1.1nm,0.9s,mb3.9,baz=36,slow=6.3,SNR=2.8							

KRSC 12 19:42:28.3±2.0,53°.99N×160°.55E,h67km±67km,ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KII	**Karymskiy**	**0.65**	**275**	*e*P		Pn	19 42 42.8	+0.4
KII				*i* S		Sn	19 42 53.9	+1.1
MKZ	**Mys Kozlova**	**0.90**	**50**	*e*P		Pn	19 42 46.1	+0.8
MKZ				*i* S		Sn	19 42 59.5	+1.6
SPN	**Mys Shipunski**	**0.95**	**200**	P		Pn	19 42 46.5	+0.6
SPN				*i* S		Sn	19 43 00.0	+1.0
NLC	**Nalytchevo**	**1.09**	**222**	*e*P		Pn	19 42 48.4	+0.7
NLC				*i* S		Sn	19 43 03.4	+1.2
AVH	**Avacha**	**1.30**	**237**	*e*P		Pn	19 42 51.8	+1.3
PET	**Petropavlovsk**	**1.49**	**230**	*e*Pg		Pn	19 42 53.9	+0.9
PET	**Petropavlovsk**	**1.49**	**230**	P		Pn	19 42 53.7	+0.7
PET	**Petropavlovsk**	**1.49**	**230**	*e*PN		Pn	19 42 54.0	+1.0
PET				pmax	pmax			
	comp=Z,27nm,0.4s							
GNL	**Ganaly**	**1.57**	**260**	*e*P		Pn	19 42 54.4	+0.3
KBTR	**Krutoberegovo**	**2.58**	**29**	P		Pn	19 43 07.9	+0.3

IDC 12 19:45:53.4±4.9,4°.91S×133°.97E,h0km,mb3.5/2, mb1 3.4/3,mb1mx3.2/14,mbtmp3.3/3,ML3.2/1,Error ellipse: s-maj=316.1km s-min=34.1km az=80.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**18.64**	**180**	P		Pn	19 50 12.7	-0.3
	0.1nm,0.3s,baz=351,slow=11,SNR=6.6							
SONM	**Songino Array**	**57.84**	**338**	P		P	19 55 46.6	-0.1
	0.2nm,0.5s,baz=149,slow=5.9,SNR=2.8							
MKAR	**Makanchi Array**	**68.73**	**325**	P		P	19 56 59.4	+0.4
	0.3nm,0.4s,baz=114,slow=6.7,SNR=7.9							

*IDC **12** 19:52:05.4±0.5,10°.99N×91°.71E,h0km,mb4.3/20, mb1 4.3/21,mb1mx4.2/26,mbtmp4.2/21,ML3.9/1,MS3.6/7, Ms1 3.6/7,ms1mx3.3/23,Error ellipse: s-maj=20.8km s-min=12.8km az=64.0*
*BJI **12** 19:52:05.7,10°.82N×91°.78E,h21km,mB4.6/17,mb4.4/32, Ms4.1/22,Ms7 4.0/22*
*NEIC **12** 19:52:06.7±0.2,10°.99N×91°.79E,h10km,mb4.5/28,Error ellipse: s-maj=6.3km s-min=5.1km az=215.0*
*ISCJB **12** 19:52:06.0±0.3,10°.95N±0°.04×91°.73E±0°.03,h18km, mb4.3/66,MS3.7/16,Error ellipse: s-maj=5.9km s-min=4.5km az=178.2*
*MOS **12** 19:52:08.3±0.8,11°.04N×91°.84E,h33km,mb4.6/27,Error ellipse: s-maj=10.5km s-min=5.8km az=116.5*
*DJA **12** 19:52:34,11°.10N×91°.56E,h211km,mb4.3/12*

ISC 12 19:52:06.6±1.3,10°.96N±0°.04×91°.76E±0°.03,h9km±8km, h19km±3.3km:pP-P,n191,σ0s91/192,mb4.3/66,MS3.7/16, 11C-12D,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TPTI		**9.35**	**144**	P		Px	19 54 49.7	
	14nm,1.3s							
BDT	**Bhumibol Dam**	**9.40**	**48**	P		**Pn**	**19 54 21.0**	**-1.4**
NST	**Nakhon Sawan**	**9.40**	**59**	P		Px	19 54 33.0	
CM31	**Chiang Mai Arr**	**10.19**	**42**	*e*Pn		**Pn**	**19 54 33.5**	**+0.3**
	4.6nm,0.6s							
CMAR	**Chiang Mai Arr**	**10.19**	**42**	Pn		**Pn**	**19 54 33.6**	**+0.4**
	0.3nm,0.3s,baz=237,slow=14,SNR=8.2							
CHTO	**Chiang Mai**	**10.45**	**41**	*e*Pn		**Pn**	**19 54 36.5**	**-0.2**
	4.7nm,0.6s							
CHTO	**Chiang Mai**	**10.45**	**41**	*e*P		**Pn**	**19 54 36.5**	**-0.2**
CHTO				pmax	pmax			
	comp=Z,5.0nm,0.6s							
CHTO	**Chiang Mai**	**10.45**	**41**	P		Px	19 54 56.2	
	comp=Z,10nm,0.7s							
KULM	**Kulim**	**10.45**	**122**	*e*Pn		**Pn**	**19 54 37.7**	**+1.0**
	comp=Z,55nm,1.8s							
VIS	**Vishakhapatnam**	**10.57**	**310**	*e*PKP		**Pn**	**19 54 37.2**	**-1.2**
VIS				*e*S		**Sn**	**19 56 26.8**	**-10**
BWNR	**Bhubaneshwar**	**10.90**	**329**	*e*PKP		**Pn**	**19 54 42.0**	**-1.0**
BWNR				*e*S		**Sn**	**19 56 34.0**	**-11**
HYB	**Hyderabad**	**14.31**	**298**	*e*P		**Pn**	**19 55 29.0**	**-0.6**
HYB				*e*S		**Sn**	**19 58 09.0**	**+0.3**
HYB	**Hyderabad**	**14.31**	**298**	*i* P		**Pn**	**19 55 29.0**	**-0.6**
HYB				*e*S		**Sn**	**19 58 09.0**	**+0.3**
PDSI	**Padang**	**14.63**	**143**	P		Px	19 55 50.6	
	comp=Z,42nm,1.0s							
NGP	**Nagpur**	**15.85**	**311**	*e*PKP		**Pn**	**19 55 49.2**	**-1.0**
NGP				AMb		AMB	19 55 59.2	
	comp=Z,36nm,1.5s							
ODAN	**Odare**	**16.34**	**346**	*e*P		**Pn**	**19 55 55.9**	**-0.5**
	comp=Z,33nm,0.6s							
LATR	**Latur**	**16.45**	**299**	*e*PKP		**Pn**	**19 55 57.0**	**-0.9**
LATR				AMb		AMB	19 56 00.6	
	comp=Z,35nm,1.5s							
LATR				*ex*		x	19 58 46.1	
RAMN	**Ramite**	**16.63**	**344**	*e*P		**Pn**	**19 56 00.3**	**+0.2**
	comp=Z,29nm,0.4s							
TAPN	**Taplejung**	**16.74**	**347**	*e*P		**Pn**	**19 56 01.6**	**+0.1**
	comp=Z,81nm,0.9s							
AKL	**Akola**	**17.16**	**306**	*ex*		pP	19 56 12.8	+1.9
KMI	**Kunming**	**17.52**	**35**	P		**Pn**	**19 56 13.1**	**+1.9**
KMI				pP		pP	19 56 15.3	+0.5
KMI				PP			19 56 27.6	
KMI				S		**Sn**	**19 59 26.9**	**+0.4**
KMI				SS			19 59 48.0	
KMI				pmax	pmax			
	comp=Z,7.0nm,1.3s							
KMI				pmax	pmax			
	comp=Z,89nm,4.7s							
KMI				LR	LR			
	comp=N,280nm,14.6s							
KMI				LR	LR			
	comp=E,200nm,14.9s							
KMI				LR	LR			
	comp=Z,250nm,14.1s							
PKI	**Pulchoki**	**17.57**	**341**	*e*P		**Pn**	**19 56 12.3**	**+0.5**
	comp=Z,86nm,1.0s							
PKI				*e*S		**Sn**	**19 59 18.6**	**-9.1**
DMN	**Daman**	**17.70**	**340**	*e*P		**Pn**	**19 56 13.9**	**+0.4**
	comp=Z,52nm,0.6s							
KKN	**Kakani**	**17.81**	**341**	*e*P		**Pn**	**19 56 15.2**	**+0.3**
	comp=Z,27nm,0.7s							
GKN	**Gorkha**	**18.22**	**339**	*e*P		**Pn**	**19 56 19.9**	**0.0**
	comp=Z,26nm,0.3s							
BHPL	**Bhopal**	**18.33**	**314**	*e*PKP		**Pn**	**19 56 21.3**	**+0.1**
BHPL				AMb		AMB	19 56 34.7	
	comp=Z,31nm,0.9s							
KOLN	**Koldanda**	**18.39**	**337**	*e*P		**Pn**	**19 56 22.2**	**+0.2**
	comp=Z,58nm,0.7s							
LSA	**Lhasa**	**18.65**	**358**	P		**Pn**	**19 56 26.4**	**+1.3**
LSA				pmax	pmax			
	comp=Z,10.0nm,1.2s							
QIZ	**Qiongzhong**	**19.21**	**63**	P		**Pn**	**19 56 30.0**	**-2.0**
QIZ				S		**Sn**	**20 00 03.9**	**-3.7**
QIZ				LR	LR			
	comp=N,250nm,15.6s							
QIZ				LR	LR			
	comp=Z,270nm,17.4s							
KSM	**Kuching**	**20.69**	**116**	*e*P		**P**	**19 56 44.9**	**-2.4**
	comp=Z,28nm,1.0s							
AGRA	**Agra**	**20.

GTA LR LR
comp=E,120nm,20.5s,MS3.7
GTA LR LR
comp=Z,100nm,17.8s,MS3.5
KBL Kabul 31.31 322 *e*P **P 19 58 27.3 +0.1**
comp=Z,3.1nm,0.8s,mb4.2
KBL Kabul 31.31 322 *e*P **P 19 58 27.3 +0.1**
KBL pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
KSH Kashi 31.71 336 P P **19 58 29.9 -0.8**
KSH *e*pP pP 19 58 34.0 +0.6
KSH *e*sP sP 19 58 36.6 +2.1
KSH *e*PP PP 19 59 33.4 -9.0
KSH *e*PcP PcP 20 01 23.1 +0.7
KSH *e*S **S 20 03 36.3 -4.2**
KSH *e*ScP ScP 20 05 04.2 -2.0
KSH *e*PcS PcS 20 05 07.3 +0.5
KSH *e*SS SS 20 05 23.5 -33
KSH *e*ScS ScS 20 09 00.2 -3.9
KSH pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
KSH pmax pmax
comp=Z,60nm,4.3s
KSH LR LR
comp=N,250nm,13.9s,MS4.1
KSH LR LR
comp=E,140nm,13.4s,MS4.1
KSH LR LR
comp=Z,96nm,5.7s
MRSI Marisa 31.75 107 P Px 19 58 42.3
comp=Z,12nm,1.0s
BKSI Bulukumba 32.54 118 P Px 19 58 48.5
comp=Z,21nm,1.0s
NJ2 Nanjing 32.64 46 *e*P **P 19 58 38.2 -0.8**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
WMQ Urumqi 32.93 355 P **P 19 58 41.7 +0.4**
WMQ pP pP 19 58 49.7 +5.7
WMQ sP sP 19 58 53.9 +8.8
WMQ *e*S **S 20 03 57.2 -2.1**
WMQ SS SS 20 05 56.2 -25
WMQ ScS ScS 20 09 04.7 -5.4
WMQ pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
WMQ pmax pmax
comp=Z,100nm,4.4s
WMQ LR LR
comp=N,58nm,23.8s,MS3.7
WMQ LR LR
comp=E,160nm,23.8s,MS3.7
WMQ LR LR
comp=Z,67nm,18.3s
HHC Hu-ho-hao-te 34.52 27 *e*P **P 19 58 56.9 +1.7**
HHC pP pP 19 59 00.7 +2.8
HHC sP sP 19 59 03.8 +4.8
HHC PP PP 20 00 12.3 -1.2
HHC *e*S **S 20 04 24.0 -0.1**
HHC SS SS 20 06 33.3 -20
HHC ScS ScS 20 09 17.4 -1.2
HHC pmax pmax
comp=Z,20nm,1.1s,mb5.0
HHC pmax pmax
comp=Z,66nm,3.9s
HHC LR LR
comp=N,130nm,14.0s,MS4.0
HHC LR LR
comp=E,150nm,11.9s,MS4.0
HHC LR LR
comp=Z,110nm,15.7s,MS3.7
UCH Uchtor 34.61 337 *e*P **P 19 58 56.4 +0.4**
comp=Z,2.0nm,1.1s,mb4.0
UCH Uchtor 34.61 337 *e*P **P 19 58 56.4 +0.4**
UCH pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
AML Almayashu 34.84 336 *e*P **P 19 58 59.8 +1.8**
comp=Z,14nm,0.7s,mb5.0
AML Almayashu 34.84 336 *e*P **P 19 58 59.8 +1.8**
AML pmax pmax
comp=Z,14nm,0.7s,mb5.0
AAK Ala-Archa 34.96 338 *e*P **P 19 59 00.0 +1.0**
comp=Z,14nm,1.2s,mb4.8
AAK Ala-Archa 34.96 338 P **P 19 58 59.7 +0.6**
comp=Z,1.8nm,0.3s,mb4.5,baz=180,slow=3.0,SNR=5.8
AAK Ala-Archa 34.96 338 *e*P **P 19 59 00.1 +1.1**
AAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
AAK Ala-Archa 34.96 338 P **P 19 59 07.5 +8.5**
comp=Z,2.1nm,1.1s,mb4.0
EKS2 Erkin-Say 35.26 337 *e*P **P 19 59 03.3 +1.7**
comp=Z,5.0nm,0.8s,mb4.5
EKS2 Erkin-Say 35.26 337 *e*P **P 19 59 03.3 +1.7**
EKS2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
BJT Baijiatuan 36.13 33 *e*P **P 19 59 07.4 -1.7**
BJI Beijing 36.15 33 P **P 19 59 09.6 +0.3**
BJI S **S 20 04 51.5 +2.3**
BJI pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
BJI LR LR
comp=N,170nm,16.2s,MS4.1
BJI LR LR
comp=E,180nm,15.3s,MS4.1
BJI LR LR
comp=Z,78nm,17.7s,MS3.5
MK31 Makanchi Array 36.60 349 *e*P **P 19 59 13.3 +0.2**
MKAR Makanchi Array 36.60 349 P **P 19 59 13.3 +0.3**
MKAR LR LR 20 17 22.1
MKAR Makanchi Array 36.60 349 P **P 19 59 13.3 +0.3**
comp=Z,4.7nm,0.7s,mb4.4,baz=168,slow=8.4,SNR=56
MKAR LR LR 20 17 22.1
comp=Z,51nm,18.0s,MS3.4,baz=168,slow=42
SONM Songino Array 38.76 16 P **P 19 59 31.9 +0.6**
comp=Z,2.5nm,0.8s,mb4.0,baz=200,slow=7.9,SNR=19
ULN Ulaanbaatar 38.97 16 *e*P **P 19 59 33.2 +0.2**
comp=Z,4.5nm,0.9s,mb4.2
ULN Ulaanbaatar 38.97 16 *e*P **P 19 59 33.2 +0.1**
ULN pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
ULN Ulaanbaatar 38.97 16 P **P 19 59 39.6 +6.5**
comp=Z,5.2nm,1.2s,mb4.1
ZAK Zakamensk 40.44 11 *e*P **P 19 59 44.9 -0.3**
ZAK pmax pmax
comp=Z,1.0nm,0.8s,mb3.6
KURK Kurchatov 41.08 347 *e*P **P 19 59 48.9 -1.7**
comp=Z,8.9nm,1.1s,mb4.3
KURK Kurchatov 41.08 347 P **P 19 59 49.5 -1.1**
comp=Z,4.6nm,0.8s,mb4.1,baz=162,slow=7.7,SNR=5.2
KURK Kurchatov 41.08 347 *de*P **P 19 59 51.0 +0.4**
KURK pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
TLY Talaya 41.74 11 *e*P **P 19 59 59.5 +3.5**
TLY pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
TLY MLR MLR
comp=Z,47nm,17.0s,MS3.4
KSRS Korea Array 41.82 45 P **P 19 59 56.4 -0.4**
comp=Z,0.6nm,0.6s,mb3.4,baz=234,slow=7.8,SNR=4.0
KSRS LR LR 20 19 26.5
comp=Z,72nm,18.9s,MS3.6,baz=66,slow=39
ZAA0 Zalesovo Array 43.23 354 *e*P **P 20 00 07.6 -0.5**
ZALV Zalesovo Beam 43.23 354 P **P 20 00 08.0 -0.1**
ZALV LR LR 20 21 48.0
ZALV Zalesovo Beam 43.23 354 P **P 20 00 08.0 -0.1**
comp=Z,2.7nm,0.4s,mb4.3,baz=172,slow=10.0,SNR=21
ZALV LR LR 20 21 48.0
comp=Z,37nm,18.3s,MS3.3,baz=230,slow=41
CN2 Changchun 43.79 35 *e*P **P 20 00 12.8 +0.1**
CN2 epP pP 20 00 17.2 +1.7
CN2 esP sP 20 00 19.8 +3.3
CN2 *e*S **S 20 06 43.1 -0.4**
CN2 pmax pmax
comp=Z,20nm,0.5s,mb5.1
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,18.0s,MS4.2
CN2 LR LR
comp=E,200nm,18.0s,MS4.2
CN2 LR LR
comp=Z,300nm,19.0s,MS4.2
FITZ Fitzroy Crossi 44.19 130 *e*P **P 20 00 16.2 -0.1**
comp=Z,17nm,0.7s,mb4.9
FITZ Fitzroy Crossi 44.19 130 P **P 20 00 16.5 +0.2**
comp=Z,4.9nm,0.5s,mb4.5,baz=285,slow=3.9,SNR=17
FITZ Fitzroy Crossi 44.19 130 P **P 20 00 21.7 +5.4**
comp=Z,50nm,0.7s,mb5.3

BVAR Borovoye Array 45.34 342 P **P 20 00 25.2 +0.2**
comp=Z,2.2nm,0.8s,mb4.0,baz=158,slow=9.3,SNR=13
BRVK Borovoye 45.40 342 *e*P **P 20 00 24.2 -1.2**
BRVK Borovoye 45.40 342 *e*P **P 20 00 23.9 -1.5**
BRVK pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
ABKAR Akbulak array 46.41 332 *e*P **P 20 00 34.1 +0.6**
comp=Z,4.1nm,0.8s,mb4.4
MDJ Mudanjiang 46.68 37 P **P 20 00 34.4 -1.3**
MDJ pmax pmax
comp=Z,4.0nm,1.6s,mb4.1
AKTK Aktyubinsk 48.13 332 P **P 20 00 47.2 +0.3**
AKTO Aktyubinsk 48.13 332 P **P 20 00 47.2 +0.3**
comp=Z,2.2nm,0.5s,mb4.4,baz=122,slow=8.9,SNR=9.4
MJAR Matsushiro Arr 48.94 51 LR LR
20 24 44.9
comp=Z,60nm,19.0s,MS3.6,baz=250,slow=40
NWAO Narrogin (SRO) 49.96 152 P **P 20 01 01.1 0.0**
NWAO Narrogin (SRO) 49.96 152 LR LR
20 20 29.7
comp=Z,127nm,21.1s,MS3.9,baz=175,slow=34
GNI Garni 50.62 313 *e*P **P 20 01 06.8 +0.7**
SVE Sverdlovsk 51.69 339⇓ *e*P **P 20 01 14.7 +0.9**
SVE pmax pmax
comp=Z,11nm,1.0s,mb4.7
ARU Arti 52.15 337 *e*P **P 20 01 16.7 -0.6**
comp=Z,6.8nm,1.0s,mb4.5
ARU Arti 52.15 337 *d i*P **P 20 01 17.1 -0.2**
ARU *e* 20 03 12.8
ARU S **S 20 08 46.3 +4.7**
ARU pmax pmax
comp=Z,12nm,1.7s,mb4.5
KIV Kislovodsk 53.47 317 *e*P **P 20 01 28.2 +1.0**
comp=Z,6.7nm,0.8s,mb4.6
KIV Kislovodsk 53.47 317 *e*P **P 20 01 27.6 +0.4**
KIV pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
ASAR Alice Springs 53.69 130 P **P 20 01 29.6 +0.5**
comp=Z,1.3nm,0.6s,mb4.0,baz=306,slow=6.8,SNR=30
ASAR PcP PcP 20 02 35.9 +0.5
comp=Z,2.1nm,0.7s,baz=313,slow=3.0,SNR=7.7
MALT Malatya 54.69 309 *e*P **P 20 01 35.7 -0.6**
comp=Z,5.6nm,1.3s,mb4.4
MALT Malatya 54.69 309 *e*P **P 20 01 35.7 -0.6**
MALT pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
MALT Malatya 54.69 309 P **P 20 01 38.6 +2.3**
comp=Z,4.6nm,1.0s,mb4.5
KMBO Kilima Mbogo 55.50 261 P **P 20 01 44.8 +2.2**
MMAI Mount Meron Ar 55.97 302 LR LR
20 27 44.7
comp=Z,41nm,18.4s,MS3.5,baz=130,slow=38
YAK Yakutsk 57.87 20 *e*P **P 20 02 02.8 +4.2**
YAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
YAK pmax pmax
comp=N,1.0nm,0.6s
YAK pmax pmax
comp=E,4.0nm,1.4s
BR131 Keskin Array S 58.65 310 *e*P **P 20 02 03.6 -0.8**
comp=E,3.0nm,0.8s,mb4.4
BRTR Keskin Array B 58.65 310 P **P 20 02 04.0 -0.5**
comp=E,3.3nm,0.8s,mb4.4,baz=123,slow=8.5,SNR=18
PMG Port Moresby 58.70 108 *e*P **P 20 01 56.5 -8.7**
PMG pmax pmax
comp=Z,26nm,1.0s
OBN Obninsk 61.53 328⇓ *e*P **P 20 02 23.2 -0.7**
OBN *e* 20 04 39.2
OBN *i* S **S 20 10 54.9 +9.3**
OBN pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
KLMR Klimovskoe 62.67 334 *e*P **P 20 02 30.3 -1.1**
KLMR pmax pmax
comp=Z,20nm,2.0s,mb4.9
STKA Stephens Creek 63.93 134 *e*P **P 20 02 39.7 -0.5**
comp=Z,2.1nm,1.1s,mb4.1
STKA Stephens Creek 63.93 134 P **P 20 02 41.0 +0.7**
comp=Z,2.0nm,0.7s,mb4.3,baz=313,slow=13,SNR=3.7
STKA Stephens Creek 63.93 134 *e*P **P 20 02 39.7 -0.5**
STKA pmax pmax
comp=Z,2.0nm,1.1s
AKASG Malin Array Be 64.29 321 P **P 20 02 41.0 -1.4**
AKASG Malin Array Be 64.29 321 P **P 20 02 41.0 -1.4**
comp=Z,0.4nm,0.3s,mb3.9,baz=80,slow=6.4,SNR=7.9
AKASG Malin Array Be 64.29 321 *ce*P **P 20 02 41.5 -0.8**
TIXI Tiksi 64.71 12 *e*P **P 20 02 43.0 -1.8**
comp=Z,2.8nm,0.6s,mb4.5
TIXI Tiksi 64.71 12 *e*P **P 20 02 43.6 -1.1**
TIXI pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
VRI Vrincioaia 64.86 316⇑ P **P 20 02 46.9 +0.7**
VRI Vrincioaia 64.86 316⇑ *i*P **P 20 02 46.9 +0.7**
PLOR Plostina 64.91 316⇓ P **P 20 02 47.2 +0.7**
PLOR Plostina 64.91 316⇓ *i*P **P 20 02 47.2 +0.7**
SULR 64.98 314⇓ *i*P PcP 20 03 19.2 -0.8
TESR 65.03 316⇓ P **P 20 02 47.3 0.0**
TESR 65.03 316⇓ *i*P **P 20 02 47.3 0.0**
MLR Muntele Rosu 65.33 315⇑ P **P 20 02 50.0 +0.7**
MLR Muntele Rosu 65.33 315⇑ *i*P **P 20 02 50.0 +0.7**
VOIR 65.95 315⇓ P **P 20 02 52.6 -0.6**
VOIR 65.95 315⇓ *i*P **P 20 02 52.6 -0.6**
BURAR Bucovina Array 66.19 317⇑ P **P 20 02 55.1 +0.3**
BURAR Bucovina Array 66.19 317⇑ *i*P **P 20 02 55.1 +0.3**
BUR08 Bucovina Ar. S 66.21 317 *e*P **P 20 02 54.9 +0.1**
JOF Joensuu 67.07 334 *e*P **P 20 02 59.6 -0.4**
JOF Joensuu 67.07 334 *ep* **P 20 02 59.6 -0.4**
comp=Z,1.5nm,0.4s,mb4.4
LSZ Lusaka 68.14 249 *e*P **P 20 03 09.0 +1.4**
comp=Z,1.4nm,0.6s,mb4.2
LSZ Lusaka 68.14 249 *e*P **P 20 03 09.0 +1.4**
LSZ pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
CRVS Cervenica-Dubn 68.87 318 *e*P **P 20 03 12.1 +0.4**
comp=Z,5.4nm,1.5s,mb4.3
CRVS *e*PP pP 20 03 21.6 +7.1
CRVS Cervenica-Dubn 68.87 318 *e*P **P 20 03 12.1 +0.4**
CRVS *e* 20 03 21.6
CRVS pmax pmax
comp=Z,5.0nm,1.5s,mb4.2
CRVS Cervenica-Dubn 68.87 318 *e*P **P 20 03 12.1 +0.4**
CRVS *e*pP pP 20 03 21.6 +7.1
FINES FINESS Array B 68.90 332 P **P 20 03 11.7 +0.1**
comp=Z,5.2nm,0.8s,mb4.5,baz=120,slow=7.7,SNR=12
KAF Kangasniemi 68.99 333 *e*P **P 20 03 08.5 -3.6**
comp=Z,0.4nm,0.3s,mb3.8
KAF Kangasniemi 68.99 333 *ep* **P 20 03 08.5 -3.6**
comp=Z,0.4nm,0.3s,mb3.8
OJC Ojcow 70.11 319 *e*P **P 20 03 17.8 -1.5**
PKSM Moragy 70.49 315⇑ P **P 20 03 21.3 -0.4**
PKSM Moragy 70.49 315⇑ *i*P **P 20 03 21.3 -0.4**
VYHS Vyhne 70.56 318 *e*P **P 20 03 22.1 0.0**
comp=Z,1.6nm,1.0s,mb3.9
VYHS Vyhne 70.56 318 *e*P **P 20 03 22.1 0.0**
VYHS pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
VYHS Vyhne 70.56 318 *e*P **P 20 03 22.1 0.0**
KEV Kevo 71.16 341 *e*P **P 20 03 23.1 -2.3**
comp=Z,0.5nm,0.4s,mb3.8
KEV Kevo 71.16 341 *e*P **P 20 03 23.1 -2.3**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
KEV Kevo 71.16 341 *ep* **P 20 03 23.1 -2.3**
comp=Z,0.5nm,0.4s,mb3.8
MORC Moravsky Berou 71.52 319⇑ P **P 20 03 27.9 0.0**
MORC Moravsky Berou 71.52 319⇑ *i*P **P 20 03 27.9 0.0**
ARCES ARCESS Array B 71.58 340 P **P 20 03 28.6 +0.6**
comp=Z,3.5nm,0.7s,mb4.4,baz=95,slow=5.7,SNR=22
KSP Ksiaz 72.40 320 *e*P **P 20 03 33.2 0.0**
BRG Berggiesshubel 73.89 320 *e*(P) **P 20 03 41.9 -0.1**
comp=Z,4.7nm,0.9s,mb4.4
BRG Berggiesshubel 73.89 320 *e*P **P 20 03 41.8 -0.2**
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
CLL Collm 74.50 320 *es*P sP 20 03 51.0 +1.6
BOSA Boshof 75.27 236 P **P 20 03 50.9 +0.5**
comp=Z,7.1nm,0.8s,mb4.6,baz=78,slow=7.8,SNR=12
NOA NORSAR Array B 75.90 330 P **P 20 03 53.0 -0.4**
comp=Z,2.1nm,0.8s,mb4.1,baz=95,slow=5.5,SNR=5.9
NOA LR LR 20 41 49.3
comp=Z,31nm,19.9s,MS3.6,baz=90,slow=39
CDF Champ du Feu 78.24 317 *e*P **P 20 04 06.4 -0.4**
LPG La Plagne 78.79 314 *e*P **P 20 04 09.9 0.0**
comp=Z,5.9nm,0.6s,mb4.4
LPG La Plagne 78.79 314 *e*P **P 20 04 09.9 0.0**
comp=Z,3.0nm,0.6s,mb4.4
LPG La Plagne 78.79 314 *e*P **P 20 04 09.9 0.0**
LPG pmax pmax
comp=Z,3.0nm,0.6s,mb4.4

LPL La Plagne 78.80 314 *e*P **P 20 04 10.1 +0.1**
comp=Z,14nm,0.9s,mb4.6
LPL La Plagne 78.80 314 *e*P **P 20 04 10.1 +0.1**
comp=Z,6.9nm,0.9s,mb4.6
LPL La Plagne 78.80 314 *e*P **P 20 04 10.1 +0.1**
LPL pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
HAU Haudompre 78.89 317 *e*P **P 20 04 09.8 -0.6**
VIVF Saint-Julien-l 80.31 314 *e*P **P 20 04 18.0 -0.2**
comp=Z,17nm,0.9s,mb4.7
VIVF Saint-Julien-l 80.31 314 *e*P **P 20 04 18.0 -0.2**
comp=Z,8.5nm,0.9s,mb4.7
VIVF Saint-Julien-l 80.31 314 *e*P **P 20 04 18.0 -0.2**
VIVF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
LOR Lormes 80.63 316 *e*P **P 20 04 19.4 -0.5**
SMF Signal de Mont 80.70 316 *e*P **P 20 04 19.7 -0.6**
comp=Z,13nm,0.8s,mb4.6
SMF Signal de Mont 80.70 316 *e*P **P 20 04 19.7 -0.6**
comp=Z,6.6nm,0.8s,mb4.6
SMF Signal de Mont 80.70 316 *e*P **P 20 04 19.7 -0.6**
SMF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
SSF Saint Saulge 80.89 316 *e*P **P 20 04 20.8 -0.5**
AVF Avril sur Loir 81.02 316 *e*P **P 20 04 21.4 -0.6**
MAW Mawson 81.08 191 P **P 20 04 22.7 +1.0**
comp=Z,1.2nm,0.8s,mb3.9,baz=1.3,slow=7.9,SNR=4.1
TAM Tamanrasset 82.40 292 *e*P **P 20 04 30.7 +0.9**
comp=Z,2.9nm,1.0s,mb4.2
TAM Tamanrasset 82.40 292 *e*P **P 20 04 30.7 +1.0**
TAM pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
LDF La Druitiere 83.11 318 *e*P **P 20 04 32.4 -0.5**
comp=Z,6.6nm,0.7s,mb4.5
LDF La Druitiere 83.11 318 *e*P **P 20 04 32.4 -0.5**
comp=Z,3.3nm,0.7s,mb4.5
LDF La Druitiere 83.11 318 *e*P **P 20 04 32.4 -0.5**
LDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
MFF Saint Martin d 83.43 316 *e*P **P 20 04 34.4 -0.2**
ESDC Sonseca Array 87.44 310 P **P 20 04 54.9 0.0**
comp=Z,0.2nm,0.5s,mb3.6,baz=63,slow=4.4,SNR=4.2
ILAR Eielson Array 92.77 21 P **P 20 05 18.5 -0.7**
comp=Z,0.2nm,0.8s,mb3.6,baz=284,slow=4.3,SNR=4.7
PPT Papeete 120.40 104 *e*LR LR 20 07 45.5
comp=Z,85nm,25.2s
PPT *e*LR LR 20 51 30.2
comp=Z,89nm,24.0s
NVAR Mina Array Bea 123.41 28 PKP PKPdf 20 11 05.8 +1.1
comp=Z,0.9nm,0.7s,baz=299,slow=1.5,SNR=6.3
TXAR Lajitas Array 137.27 20 PKhKP PKPpre 20 11 28.1
comp=Z,0.2nm,0.7s,baz=236,slow=1.0,SNR=2.9
TXAR PKP PKPdf 20 11 31.6 +0.4
comp=Z,0.3nm,0.7s,baz=270,slow=0.9,SNR=3.0
PLCA Paso Flores 146.49 205 PKPbc PKPbc 20 11 48.8 +0.2
comp=Z,3.9nm,0.9s,baz=132,slow=8.3,SNR=5.2

GUC 12 20:12:33.2±0.6, 34°51S×70°02W, h17km±3km, MD3.9, ML3.1, 5C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CACH	**El Canelo**	**0.62**	**309**⇑	*i* P	Pg	20 12 44.8	-0.6
CACH				*i* S	Sg	20 12 53.1	-0.5
LMEL	**Las Melosas**	**0.68**	**347**⇑	*i* P	Pg	20 12 45.8	-0.7
LMEL				*i* S	Sg	20 12 56.0	+0.5
LMEL				AML	AML	20 12 58.9	
comp=E,1μm,0.6s							
CHCH	**Chadas Angostu**	**0.78**	**317**	*e*P	Pb	20 12 48.1	-0.1
CHCH				*i* S	Sb	20 12 58.7	+0.3
ANTU	**Antumapu**	**1.06**	**331**	*e*P	Pb	20 12 52.7	-0.4
ANTU				*i* S	Sb	20 13 08.0	+1.2
ANTU				AML	AML	20 13 15.8	
comp=N,577nm,0.3s							
CLCH	**Cerro Calan**	**1.19**	**339**⇓	*i* P	Pn	20 12 55.1	+0.1
CLCH				*i* S	Sb	20 13 11.5	+1.2
CLCH				AML	AML	20 13 18.2	
comp=E,944nm,0.6s							
FCH	**Farellones**	**1.20**	**349**⇑	*i* P	Pn	20 12 55.0	-0.1
FCH				*i* S	Sb	20 13 12.1	+1.5
FCH				AML	AML	20 13 14.5	
comp=E,347nm,0.2s							
LNV	**Longovilo**	**1.28**	**295**⇑	*i* P	Pn	20 12 56.2	0.0
LNV				*i* S	Sb	20 13 13.7	+0.9
PEL	**Peldehue**	**1.47**	**338**	*e*P	Pn	20 12 59.9	+1.1
PEL				*e*S	Sn	20 13 20.0	+2.4
PEL				AML	AML	20 13 23.8	
comp=N,458nm,0.9s							
ROCH	**El Roble**	**1.74**	**331**⇑	*i* P	Pn	20 13 05.5	+2.9
ROCH				*i* S	Sn	20 13 29.5	+5.2
ROCH				AML	AML	20 13 42.9	
comp=E,351nm,0.6s							
CCHI	**Chillan**	**2.68**	**218**	AML	AML	20 14 13.6	
comp=E,236nm,0.8s							

NEIC ***12*** *20:26:57.0, 15°23N×93°92W, h16km, MD4.0(MEX), After MEX.*

MEX 12 20:26:56.7±0.7, 15°20N×93°90W, h30km±17km, MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.83**	**53**	*e*P	Pn	20 27 09.5	-2.8
PCIG				*i* S	Sb	20 27 20.0	-3.4
TGIG		**1.74**	**26**	*e*P	Pn	20 27 23.4	-1.5
TGIG				*i* S	Sn	20 27 43.4	-2.6
SCX	**San Cristobal**	**1.95**	**39**	*i* P	Pn	20 27 26.6	-1.2
SCX				*i* S	Sn	20 27 48.2	-3.1
SCX	**San Cristobal**	**1.95**	**39**	*i* P	Pn	20 27 26.6	-1.2
SCX				*i* S	Sn	20 27 48.2	-3.1
HUIG	**Huatulco**	**2.20**	**285**	*i* P	Pn	20 27 29.9	-1.3
HUIG				*i* S	Sn	20 27 54.1	-3.4
HUIG	**Huatulco**	**2.20**	**285**	*i* P	Pn	20 27 29.9	-1.3
HUIG				*i* S	Sn	20 27 54.1	-3.4
VHO	**Vista Hermosa**	**3.29**	**305**	*i* P	Pn	20 27 50.0	+3.7
VHO	**Vista Hermosa**	**3.29**	**305**	*i* P	Pn	20 27 43.8	-2.5
VHO				*i* S	Sn	20 28 22.3	-2.2
PNIG	**Pinotepa**	**4.24**	**287**	*i* P	Pn	20 27 58.9	-0.3
PNIG				*i* S	Sn	20 28 45.6	-2.1
PNIG	**Pinotepa**	**4.24**	**287**	*i* P	Pn	20 27 57.9	-1.3
PNIG				*i* S	Sn	20 28 45.6	-2.1
UTMO	**Huajuapan**	**4.56**	**305**	*i* P	Pn	20 28 01.5	-2.2
UTMO				*i* S	Sn	20 28 54.5	-1.3

IDC 12 20:40:38.4±2.0, 0.77N×97.32E, h0km, mb3.7/4, mb1 3.6/6, mb1mx3.5/21, mbtmp3.5/6, ML3.2/2, Error ellipse: s-maj=53.7km s-min=27.8km az=63.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**2.58**	**38**	Pn	Pn	20 41 20.9	-0.5
2.2nm,0.3s,baz=180,slow=3.0,SNR=4.3							
CMAR	**Chiang Mai Arr**	**17.65**	**5**	P	Pn	20 44 44.6	-1.2
0.1nm,0.3s,baz=191,slow=11,SNR=5.4							
ASAR	**Alice Springs**	**43.04**	**127**	P	P	20 48 40.1	0.0
0.4nm,0.9s,baz=299,slow=8.1,SNR=4.7							
SONM	**Songino Array**	**47.54**	**8**	P	P	20 49 15.5	0.0
0.3nm,0.4s,baz=188,slow=7.8,SNR=3.6							
MKAR	**Makanchi Array**	**47.69**	**346**	P	P	20 49 16.9	+0.3
0.7nm,0.4s,baz=159,slow=8.3,SNR=12							
ZALV	**Zalesovo Beam**	**54.00**	**351**	P	P	20 50 03.9	-0.2
0.6nm,0.3s,baz=181,slow=6.4,SNR=6.6							

ISCJB ***12*** *20:55:43.5±0.7, 50°26N±0.05×18°77E±0.03, h0km, Error ellipse: s-maj=6.9km s-min=2.9km az=4.1*
IPEC ***12*** *20:55:44.0±0.2, 50°28N×18°85E, h2km±1km, ML1.4/3, Error ellipse: s-maj=2.5km s-min=1.1km az=168.0*
CSEM ***12*** *20:55:44.4±0.4, 50°31N×18°77E, h2km, ML2.5/4*
PRU ***12*** *20:55:45.1, 50°28N×18°78E, h0km*
ISC 12 20:55:44.4±0.7, 50°26N±0.05×18°80E±0.03, h0km, n19, σ0°85/32, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.59**	**225**	*e*Pg	**Pg**	**20 55 56.4**	**+0.6**
OKC				*e*SG	**Sg**	**20 56 03.4**	**-0.1**
comp=Z,6.2nm,0.4s							
OKC	**Ostrava-Krasne**	**0.59**	**225**	*e*Pg	**Pg**	**20 55 56.3**	**+0.5**
baz=45							

OJC	**Ojcow**	**0.65**	**93**	*e*Pg	**Pg**	**20 55 55.9**	**-0.9**
OJC				*e*Sg	**Sg**	**20 56 04.4**	**-0.7**
OJC	**Ojcow**	**0.65**	**93**	*e*Pg	**Pg**	**20 55 55.8**	**-1.0**
	baz=276						
MORC	**Moravsky Berou**	**0.94**	**240**	*e*Pg	**Pg**	**20 56 02.7**	**+0.2**
	baz=58						
MORC				*e*Sg	**Sg**	**20 56 14.7**	**0.0**
	comp=Z,6.5nm,0.1s,baz=58						
NIE	**Niedzica**	**1.29**	**130**	*e*Pg	**Pg**	**20 56 08.5**	**-0.7**
NIE				*e*Sg	**Sg**	**20 56 26.0**	**0.0**
DPC	**Dobruska-Polom**	**1.59**	**274**	*e*PG	**Pg**	**20 56 13.9**	**-1.0**
DPC				*e*SG	**Sg**	**20 56 34.7**	**-0.8**
	comp=Z,6.1nm,0.5s						
DPC	**Dobruska-Polom**	**1.59**	**274**	*e*Pn	**Pn**	**20 56 13.7**	**-0.1**
	baz=91						
DPC				Sg	**Sg**	**20 56 34.7**	**-0.8**
	comp=Z,6.1nm,0.5s						
VRAC	**Vranov**	**1.72**	**237**	*e*Pn	**Pn**	**20 56 15.3**	**-0.2**
VRAC				*e*Sg	**Sg**	**20 56 39.1**	**-0.4**
	comp=Z,3.0nm,0.2s,baz=55						
VYHS	**Vyhne**	**1.77**	**179**	*e*PN	**Pn**	**20 56 15.5**	**-0.7**
VYHS				*e*SN	**Sn**	**20 56 37.8**	**-1.6**
VYHS	**Vyhne**	**1.77**	**179**	*e*Pn	**Pn**	**20 56 15.5**	**-0.7**
VYHS				*e*Sn	**Sn**	**20 56 37.8**	**-1.6**
STHS	**Stebnicka Huta**	**1.79**	**117**	*e*PN	**Pn**	**20 56 17.6**	**+1.0**
STHS				*e*SN	**Sn**	**20 56 41.8**	**+1.7**
STHS	**Stebnicka Huta**	**1.79**	**117**	*e*Pn	**Pn**	**20 56 17.6**	**+1.0**
STHS				*e*Sn	**Sn**	**20 56 41.8**	**+1.7**
UPC	**Upice**	**1.80**	**279**	*e*SG	**Sg**	**20 56 43.1**	**+0.9**
UPC	**Upice**	**1.80**	**279**	Sg	**Sg**	**20 56 43.1**	**+0.9**
KRUC	**Moravsky**	**1.97**	**233**	*e*Pn	**Pn**	**20 56 18.9**	**-0.1**
	baz=52						
KRUC				*e*Sn	**Sn**	**20 56 45.4**	**+1.1**
	comp=Z,1.8nm,0.2s,baz=52						
KECS	**Kecovo**	**2.09**	**148**	*e*PN	**Pn**	**20 56 22.8**	**+2.1**
KECS				*e*SN	**Sn**	**20 56 47.4**	**0.0**
KHC	**Kasperske Hory**	**3.57**	**254**	*e*SG	**Sg**	**20 57 39.5**	**+0.4**
KHC	**Kasperske Hory**	**3.57**	**254**	Sg	**Sg**	**20 57 39.5**	**+0.4**

ISCJB **12** *20:56:04.0±0.9,36°.52N±0°.07×71°.0E±0°.1,h91km±14km, mb3.6/2,Error ellipse: s-maj=17.8km s-min=7.0km az=33.8*

NEIC **12** *20:56:04.8±1.2,36°.40N×71°.09E,h108km±15km,mb3.9/5, Error ellipse: s-maj=24.5km s-min=11.5km az=135.0*

NNC **12** *20:56:05.1±21.0,37°.00N×70°.55E,h0km,mb3.8,mpv3.5, Error ellipse: s-maj=226.3km s-min=134.4km az=50.0*

IDC **12** *20:56:10.4±8.9,36°.70N×71°.24E,h132km±64km,mb3.2/1, mb1 3.2/7,mb1mx3.0/26,mbtmp3.2/7,Error ellipse: s-maj=78.8km s-min=49.0km az=168.0*

ISC 12 20:56:05.3±0.8,36°.50N±0°.07×70°.9E±0°.1,h87km±13km, n29,σ1s20/39,mb3.6/2,2C-1D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.49**	**219**	*e*Pn	**Pn**	**20 56 44.2**	**+0.3**
KBL				*e*Sn	**Sn**	**20 57 11.8**	**-1.6**
KSH	**Kashi**	**4.99**	**51**	Pn	**Pn**	**20 57 13.5**	**-4.2**
KSH				Sn	**Sn**	**20 58 02.7**	**-11**
KSH				smax			
	comp=N,130nm,0.7s						
KSH				smax			
	comp=E,88nm,0.8s						
AML	**Almayashu**	**6.02**	**20**	P	**Pn**	**20 57 33.2**	**+1.6**
	SNR=35						
AML	**Almayashu**	**6.02**	**20**	*e*Pn	**Pn**	**20 57 32.8**	**+1.2**
	comp=E,18nm,0.4s						
AML				*e*Sn	**Sn**	**20 58 37.5**	**-1.5**
UCH	**Uchtor**	**6.36**	**25**	P	**Pn**	**20 57 37.5**	**+1.3**
	SNR=18						
UCH	**Uchtor**	**6.36**	**25**	*e*Pn	**Pn**	**20 57 37.3**	**+1.0**
	comp=E,8.6nm,0.3s						
UCH				*e*Sn	**Sn**	**20 58 46.3**	**-1.1**
EKS2	**Erkin-Say**	**6.53**	**19**	P	**Pn**	**20 57 40.3**	**+1.7**
	SNR=8.8						
EKS2	**Erkin-Say**	**6.53**	**19**	*e*Pn	**Pn**	**20 57 37.5**	**-1.1**
	comp=E,1.9nm,0.7s						
EKS2				*e*Sn	**Sn**	**20 58 46.6**	**-5.1**
KK31	**Karatay Array**	**6.60**	**357**	Pn	**Pn**	**20 57 41.0**	**+1.4**
	comp=E,1.2nm,0.2s,baz=175,slow=12,SNR=71						
KK31				⇑Sn	**Sn**	**20 58 52.4**	**-1.0**
	comp=E,6.2nm,0.5s,baz=176,slow=24,SNR=10						
AAK	**Ala-Archa**	**6.71**	**23**	P	**Pn**	**20 57 42.9**	**+1.8**
	SNR=7.4						
AAK	**Ala-Archa**	**6.71**	**23**	*e*Pn	**Pn**	**20 57 42.7**	**+1.6**
AAK				*e*Sn	**Sn**	**20 58 55.5**	**-0.6**
AAK	**Ala-Archa**	**6.71**	**23**	P	**Pn**	**20 57 43.0**	**+1.8**
	comp=E,3.8nm,0.3s,baz=202,slow=7.1,SNR=8.6						
AAK				S	**Sn**	**20 58 56.0**	**0.0**
	comp=E,1.0nm,0.3s,baz=209,slow=13,SNR=7.3						
CHMS	**Chumysh**	**7.13**	**23**	P	**Pn**	**20 57 48.0**	**+1.2**
	SNR=7.0						
MK31	**Makanchi Array**	**13.32**	**36**	‖Pn	**Pn**	**20 59 13.9**	**+3.3**
	comp=E,0.2nm,0.2s,baz=216,slow=13,SNR=4.4						
MK31	**Makanchi Array**	**13.32**	**36**	*e*Pn	**Pn**	**20 59 09.7**	**-1.0**
MKAR	**Makanchi Array**	**13.32**	**36**	P	**Pn**	**20 59 09.9**	**-0.7**
	comp=E,0.1nm,0.3s,baz=220,slow=13,SNR=4.3						
AB31	**Akbulak array**	**15.06**	**331**	Pn	**Pn**	**20 59 32.1**	**-1.0**
	comp=E,0.8nm,0.3s,baz=170,slow=12,SNR=23						
AB31				⇑Sn	**Sn**	**21 02 11.8**	**-7.1**
	comp=E,1.0nm,0.6s,baz=168,slow=23,SNR=11						
ABKAR	**Akbulak array**	**15.06**	**331**	*e*Pn	**Pn**	**20 59 32.7**	**-0.3**
	comp=E,1.7nm,0.3s						
ABKAR				*e*Sn	**Sn**	**21 02 09.7**	**-9.2**
KURK	**Kurchatov**	**15.25**	**19**	P	**Pn**	**20 59 34.2**	**-1.3**
KURK	**Kurchatov**	**15.25**	**19**	P	**Pn**	**20 59 34.2**	**-1.3**
	comp=E,0.1nm,0.3s,baz=204,slow=11,SNR=6.5						
BVAR	**Borovoye Array**	**16.53**	**359**	P	**Pn**	**20 59 51.9**	**+0.5**
	comp=E,0.2nm,0.3s,baz=167,slow=10,SNR=6.1						
BRVK	**Borovoye**	**16.56**	**359**	*e*Pn	**Pn**	**20 59 52.4**	**+0.5**
AKTK	**Aktyubinsk**	**16.75**	**330**	P	**Pn**	**20 59 55.3**	**+1.0**
AKTO	**Aktyubinsk**	**16.75**	**330**	P	**Pn**	**20 59 55.3**	**+1.0**
	comp=E,0.1nm,0.3s,baz=133,slow=16,SNR=3.9						
ZAA0	**Zalesovo Array**	**19.94**	**25**	*e*P	**Pn**	**21 00 26.7**	**-5.7**
ZALV	**Zalesovo Beam**	**19.94**	**25**	P	**Pn**	**21 00 28.7**	**-3.7**
ZALV	**Zalesovo Beam**	**19.94**	**25**	P	**Pn**	**21 00 28.7**	**-3.7**
	comp=E,0.7nm,0.3s,baz=215,slow=10,SNR=19						
ARU	**Arti**	**21.61**	**341**	*e*P	**P**	**21 00 44.8**	**-3.1**
	comp=E,4.0nm,1.1s,mb3.7						
NOA	**NORSAR Array B**	**44.35**	**323**	P	**P**	**21 04 07.2**	**+0.8**
	comp=E,0.8nm,0.7s,mb3.5,baz=95,slow=8.1,SNR=3.8						

ISCJB **12** *20:59:56.1±0.8,36°.12N±0°.04×21°.13E±0°.04,h4km±6km, mb3.7/6,Error ellipse: s-maj=6.7km s-min=5.2km az=16.5*

NEIC **12** *20:59:58.4,36°.20N×21°.23E,h21km,ML3.4(ATH),After ATH.*

THE **12** *20:59:58.9,36°.14N×21°.36E,h2km±3km,ML3.3/10,Error ellipse: s-maj=4.9km s-min=1.9km az=209.0*

CSEM **12** *20:59:58.8±0.4,36°.06N×21°.20E,h20km,MD3.7,Error ellipse: s-maj=8.2km s-min=5.1km az=14.0*

ATH **12** *20:59:59.1,36°.23N×21°.26E,h23km±5km,MD3.7/21, ML3.4*

IDC **12** *20:59:59.5±2.4,36°.56N×21°.64E,h0km,mb3.7/6, mb1 3.8/8,mb1mx3.6/24,mbtmp3.7/8,ML3.4/2,MS3.1/1, Ms1 3.1/1,ms1mx2.1/30,Error ellipse: s-maj=45.8km s-min=31.0km az=4.0*

ISC 12 20:59:57.5±0.9,36°.13N±0°.04×21°.20E±0°.04,h1km±7km, n188,σ1s08/219,mb3.8/6,2D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.88**	**30**	*e*PN	**Pg**	**21 00 13.9**	**-0.4**
PYL	**PYLOS**	**0.88**	**30**	P	**Pg**	**21 00 13.8**	**-0.5**
PYL	**PYLOS**	**0.88**	**30**	P	**Pg**	**21 00 13.8**	**-0.5**
ITM	**Ithomi**	**1.20**	**29**	P	**Pg**	**21 00 19.6**	**-0.8**
ITM	**Ithomi**	**1.20**	**29**	*e*PN	**Pg**	**21 00 20.1**	**-0.3**
ITM	**Ithomi**	**1.20**	**29**	P	**Pg**	**21 00 19.8**	**-0.7**
ITM	**Ithomi**	**1.20**	**29**	P	**Pg**	**21 00 19.8**	**-0.7**
ITM	**Ithomi**	**1.20**	**29**	*e*Pn	**Pg**	**21 00 20.1**	**-0.3**
KYTH	**Kithira**	**1.49**	**84**	*e*PN	**Pn**	**21 00 26.2**	**+0.8**
KYTH	**Kithira**	**1.49**	**84**	*e*Pn	**Pn**	**21 00 26.3**	**+0.9**
VLI	**Veliai**	**1.52**	**67**	P	**Pn**	**21 00 26.5**	**+0.7**
VLI	**Veliai**	**1.52**	**67**	*e*PN	**Pn**	**21 00 26.7**	**+0.9**
VLI	**Veliai**	**1.52**	**67**	P	**Pn**	**21 00 26.5**	**+0.7**
VLX	**Vlachokerasia**	**1.56**	**37**	*e*PN	**Pn**	**21 00 26.4**	**+0.1**
VLX	**Vlachokerasia**	**1.56**	**37**	P	**Pn**	**21 00 26.3**	**0.0**
VLX				S	**Sn**	**21 00 46.7**	**-0.4**
VLX	**Vlachokerasia**	**1.56**	**37**	P	**Pn**	**21 00 26.3**	**0.0**
VLX				S	**Sn**	**21 00 46.7**	**-0.4**
RLS	**Riolos of Patr**	**1.93**	**6**	P	**Pn**	**21 00 32.7**	**+1.2**
RLS	**Riolos of Patr**	**1.93**	**6**	*e*PN	**Pn**	**21 00 31.9**	**+0.4**
RLS	**Riolos of Patr**	**1.93**	**6**	*e*Pn	**Pn**	**21 00 31.9**	**+0.4**
RLS	**Riolos of Patr**	**1.93**	**6**	P	**Pn**	**21 00 32.7**	**+1.2**
GUR	**Goura**	**2.02**	**27**	*e*PN	**Pn**	**21 00 33.2**	**+0.5**
GUR	**Goura**	**2.02**	**27**	P	**Pn**	**21 00 33.2**	**+0.5**
GUR				S	**Sn**	**21 00 58.6**	**+0.1**
GUR	**Goura**	**2.02**	**27**	P	**Pn**	**21 00 33.2**	**+0.5**
GUR				S	**Sn**	**21 00 58.6**	**+0.1**
VLS	**Valsamata**	**2.10**	**347**	P	**Pn**	**21 00 34.6**	**+0.8**
VLS	**Valsamata**	**2.10**	**347**	*e*PN	**Pn**	**21 00 34.0**	**+0.2**
VLS	**Valsamata**	**2.10**	**347**	P	**Pn**	**21 00 34.3**	**+0.5**
VLS	**Valsamata**	**2.10**	**347**	*e*Pn	**Pn**	**21 00 34.0**	**+0.2**
VLS	**Valsamata**	**2.10**	**347**	P	**Pn**	**21 00 34.3**	**+0.5**
DID	**Didima**	**2.13**	**49**	*e*PB	**Pn**	**21 00 33.9**	**-0.3**
DID	**Didima**	**2.13**	**49**	P	**Pn**	**21 00 33.8**	**-0.4**
DID				S	**Sn**	**21 01 00.2**	**-1.1**
DID	**Didima**	**2.13**	**49**	P	**Pn**	**21 00 33.8**	**-0.4**
DID				S	**Sn**	**21 01 00.2**	**-1.1**
LAKA	**Lakka**	**2.19**	**16**	P	**Pn**	**21 00 36.0**	**+0.9**
LAKA				S	**Sn**	**21 01 04.9**	**+2.0**
LAKA	**Lakka**	**2.19**	**16**	P	**Pn**	**21 00 36.0**	**+0.9**
LAKA				S	**Sn**	**21 01 04.9**	**+2.0**
UPR	**University Cam**	**2.20**	**12**	*e*PN	**Pn**	**21 00 35.6**	**+0.5**
UPR	**University Cam**	**2.20**	**12**	P	**Pn**	**21 00 36.4**	**+1.3**
UPR				S	**Sn**	**21 01 03.5**	**+0.5**
UPR	**University Cam**	**2.20**	**12**	*e*Pn	**Pn**	**21 00 35.6**	**+0.5**
UPR	**University Cam**	**2.20**	**12**	P	**Pn**	**21 00 36.4**	**+1.3**
UPR				S	**Sn**	**21 01 03.5**	**+0.5**
TRIZ	**Trizonia**	**2.33**	**17**	P	**Pn**	**21 00 38.4**	**+1.4**
TRIZ				S	**Sn**	**21 01 07.1**	**+0.8**
TRIZ	**Trizonia**	**2.33**	**17**	P	**Pn**	**21 00 38.4**	**+1.4**
TRIZ				S	**Sn**	**21 01 07.1**	**+0.8**
LTK	**Loutraki**	**2.36**	**36**	*e*PN	**Pn**	**21 00 36.7**	**-0.6**
LTK	**Loutraki**	**2.36**	**36**	P	**Pn**	**21 00 36.7**	**-0.6**
LTK	**Loutraki**	**2.36**	**36**	P	**Pn**	**21 00 36.7**	**-0.6**
EFP	**Efpalio**	**2.36**	**14**	*e*PB	**Pn**	**21 00 38.8**	**+1.5**
EFP	**Efpalio**	**2.36**	**14**	P	**Pn**	**21 00 38.5**	**+1.2**
EFP	**Efpalio**	**2.36**	**14**	P	**Pn**	**21 00 38.5**	**+1.2**
KALE	**Kalithea**	**2.38**	**18**	P	**Pn**	**21 00 39.1**	**+1.5**
KALE				S	**Sn**	**21 01 08.2**	**+0.8**
KALE	**Kalithea**	**2.38**	**18**	P	**Pn**	**21 00 39.1**	**+1.5**
KALE				S	**Sn**	**21 01 08.2**	**+0.8**
NAIG	**Nisos Aigina**	**2.45**	**48**	*e*PN	**Pn**	**21 00 38.4**	**-0.2**
NAIG	**Nisos Aigina**	**2.45**	**48**	*e*Pn	**Pn**	**21 00 38.4**	**-0.2**
DSF	**Desfina**	**2.51**	**25**	P	**Pn**	**21 00 39.1**	**-0.3**
DSF				S	**Sn**	**21 01 10.1**	**-0.5**
DSF	**Desfina**	**2.51**	**25**	P	**Pn**	**21 00 39.1**	**-0.3**
DSF				S	**Sn**	**21 01 10.1**	**-0.5**
VAM	**Vamos**	**2.54**	**106**	P	**Pn**	**21 00 42.3**	**+2.4**
VAM	**Vamos**	**2.54**	**106**	*e*PN	**Pn**	**21 00 41.7**	**+1.8**
VAM	**Vamos**	**2.54**	**106**	P	**Pn**	**21 00 42.3**	**+2.4**
GVD	**Gavdhos**	**2.68**	**118**	*e*PN	**Pn**	**21 00 41.9**	**+0.1**
GVD	**Gavdhos**	**2.68**	**118**	*e*Pn	**Pn**	**21 00 41.9**	**+0.1**
VLY	**Voula,Athens**	**2.69**	**50**	P	**Pn**	**21 00 41.5**	**-0.4**
VLY	**Voula,Athens**	**2.69**	**50**	*e*PN	**Pn**	**21 00 40.8**	**-1.1**
VLY	**Voula,Athens**	**2.69**	**50**	*e*Pn	**Pn**	**21 00 40.8**	**-1.1**
VLY	**Voula,Athens**	**2.69**	**50**	P	**Pn**	**21 00 41.5**	**-0.4**
ATH	**Athens Observa**	**2.72**	**47**	*e*PN	**Pn**	**21 00 41.5**	**-0.9**
ATH	**Athens Observa**	**2.72**	**47**	*e*Pn	**Pn**	**21 00 41.5**	**-0.9**
ATHU	**Athens Univers**	**2.76**	**48**	P	**Pn**	**21 00 42.5**	**-0.4**
ATHU	**Athens Univers**	**2.76**	**48**	P	**Pn**	**21 00 42.5**	**-0.4**
EVR	**Evrytania**	**2.82**	**10**	P	**Pn**	**21 00 47.0**	**+3.3**
EVR	**Evrytania**	**2.82**	**10**	*e*PB	**Pn**	**21 00 46.5**	**+2.8**
EVR	**Evrytania**	**2.82**	**10**	P	**Pn**	**21 00 47.0**	**+3.3**
PTL	**Penteli**	**2.86**	**47**	P	**Pn**	**21 00 43.5**	**-0.8**
PTL	**Penteli**	**2.86**	**47**	*e*PN	**Pn**	**21 00 43.5**	**-0.8**
PTL	**Penteli**	**2.86**	**47**	*e*Pn	**Pn**	**21 00 43.5**	**-0.8**
LKR	**Lokris**	**2.89**	**29**	P	**Pn**	**21 00 44.7**	**-0.0**
LKR	**Lokris**	**2.89**	**29**	*e*PN	**Pn**	**21 00 42.6**	**-2.1**
LKR	**Lokris**	**2.89**	**29**	P	**Pn**	**21 00 44.2**	**-0.5**
LKR	**Lokris**	**2.89**	**29**	*e*Pn	**Pn**	**21 00 42.6**	**-2.1**
LKR	**Lokris**	**2.89**	**29**	P	**Pn**	**21 00 44.2**	**-0.5**
ATAL	**Atalanti**	**2.94**	**29**	P	**Pn**	**21 00 44.7**	**-0.6**
ATAL				S	**Sn**	**21 01 20.7**	**-0.5**
ATAL	**Atalanti**	**2.94**	**29**	P	**Pn**	**21 00 44.7**	**-0.6**
ATAL				S	**Sn**	**21 01 20.7**	**-0.5**
AGG	**Agios Georgios**	**3.02**	**17**	P	**Pn**	**21 00 47.2**	**+0.7**
AGG	**Agios Georgios**	**3.02**	**17**	P	**Pn**	**21 00 47.1**	**+0.6**
AGG				S	**Sn**	**21 01 24.1**	**+0.8**
AGG	**Agios Georgios**	**3.02**	**17**	P	**Pn**	**21 00 47.1**	**+0.6**
AGG				S	**Sn**	**21 01 24.1**	**+0.8**
IDI	**Anoyia**	**3.12**	**105**	P	**Pn**	**21 00 50.9**	**+3.1**
IDI	**Anoyia**	**3.12**	**105**	P	**Pn**	**21 00 50.9**	**+3.1**
THR5	**Thira Island,**	**3.36**	**84**	P	**Pn**	**21 00 50.4**	**-0.7**
THR5	**Thira Island,**	**3.36**	**84**	P	**Pn**	**21 00 50.4**	**-0.7**
IGT	**Igoumenitsa**	**3.46**	**349**	P	**Pn**	**21 00 52.7**	**+0.2**
IGT	**Igoumenitsa**	**3.46**	**349**	P	**Pn**	**21 00 52.3**	**-0.2**
IGT	**Igoumenitsa**	**3.46**	**349**	P	**Pn**	**21 00 52.7**	**+0.2**
THL	**Klokotos Trika**	**3.49**	**10**	*e*PN	**Pn**	**21 00 53.3**	**+0.4**
THL	**Klokotos Trika**	**3.49**	**10**	P	**Pn**	**21 00 53.2**	**+0.3**
THL				S	**Sn**	**21 01 35.8**	**+1.0**
THL	**Klokotos Trika**	**3.49**	**10**	P	**Pn**	**21 00 53.2**	**+0.3**
THL				S	**Sn**	**21 01 35.8**	**+1.0**
JAN	**Janina**	**3.53**	**356**	P	**Pn**	**21 00 57.1**	**+3.6**
JAN	**Janina**	**3.53**	**356**	P	**Pn**	**21 00 57.1**	**+3.6**
NEO	**Neokhori**	**3.55**	**26**	P	**Pn**	**21 00 53.9**	**+0.2**
NEO	**Neokhori**	**3.55**	**26**	*e*PN	**Pn**	**21 00 53.4**	**-0.3**
NEO	**Neokhori**	**3.55**	**26**	*e*Pn	**Pn**	**21 00 53.4**	**-0.3**
NEO	**Neokhori**	**3.55**	**26**	P	**Pn**	**21 00 53.9**	**+0.2**
XOR	**Xorichti**	**3.59**	**25**	P	**Pn**	**21 00 54.4**	**+0.1**
XOR	**Xorichti**	**3.59**	**25**	P	**Pn**	**21 00 53.8**	**-0.5**
XOR				S	**Sn**	**21 01 36.7**	**-0.7**
XOR	**Xorichti**	**3.59**	**25**	P	**Pn**	**21 00 54.4**	**+0.1**
XOR				S	**Sn**	**21 01 36.7**	**-0.7**
NPS	**Neapolis**	**3.69**	**102**	*e*PN	**Pn**	**21 00 57.7**	**+2.0**
AOS	**Alonnisos**	**3.70**	**34**	P	**Pn**	**21 00 54.2**	**-1.6**
AOS	**Alonnisos**	**3.70**	**34**	P	**Pn**	**21 00 54.3**	**-1.5**
AOS	**Alonnisos**	**3.70**	**34**	P	**Pn**	**21 00 54.3**	**-1.5**
KEK	**Kerkira**	**3.74**	**343**	P	**Pn**	**21 00 58.0**	**+1.6**
KEK	**Kerkira**	**3.74**	**343**	*e*PN	**Pn**	**21 00 55.7**	**-0.7**
KEK	**Kerkira**	**3.74**	**343**	*e*Pn	**Pn**	**21 00 55.7**	**-0.7**
KEK	**Kerkira**	**3.74**	**343**	P	**Pn**	**21 00 58.0**	**+1.6**
LIT	**Litokhoron**	**4.09**	**14**	P	**Pn**	**21 01 01.5**	**+0.3**
LIT	**Litokhoron**	**4.09**	**14**	P	**Pn**	**21 01 01.5**	**+0.3**
KZN	**Kozani**	**4.19**	**6**	P	**Pn**	**21 01 03.8**	**+1.3**
KZN	**Kozani**	**4.19**	**6**	*e*PN	**Pn**	**21 01 02.8**	**+0.3**
KZN	**Kozani**	**4.19**	**6**	P	**Pn**	**21 01 03.1**	**+0.6**
KZN	**Kozani**	**4.19**	**6**	*e*Pn	**Pn**	**21 01 02.8**	**+0.3**
KZN	**Kozani**	**4.19**	**6**	P	**Pn**	**21 01 03.1**	**+0.6**
PAIG	**Paliouri**	**4.26**	**27**	P	**Pn**	**21 01 03.1**	**-0.4**
PAIG	**Paliouri**	**4.26**	**27**	P	**Pn**	**21 01 03.0**	**-0.5**
PAIG	**Paliouri**	**4.26**	**27**	P	**Pn**	**21 01 03.1**	**-0.4**
NEST	**Nestorio**	**4.28**	**358**	P	**Pn**	**21 01 05.2**	**+1.5**
NEST	**Nestorio**	**4.28**	**358**	P	**Pn**	**21 01 05.2**	**+1.5**
FNA	**Florina**	**4.65**	**2**	P	**Pn**	**21 01 08.9**	**+0.1**
FNA	**Florina**	**4.65**	**2**	P	**Pn**	**21 01 09.0**	**+0.2**
FNA	**Florina**	**4.65**	**2**	P	**Pn**	**21 01 08.9**	**+0.1**
TIP	**Timpagrande**	**4.66**	**312**	P	**Pn**	**21 01 09.6**	**+0.7**
TIP	**Timpagrande**	**4.66**	**312**	P	**Pn**	**21 01 09.6**	**+0.7**
HORT	**Hortiatis**	**4.70**	**18**	P	**Pn**	**21 01 08.9**	**-0.6**
HORT	**Hortiatis**	**4.70**	**18**	P	**Pn**	**21 01 08.9**	**-0.6**
THE	**Thessaloniki**	**4.70**	**17**	P	**Pn**	**21 01 10.2**	**+0.7**
THE	**Thessaloniki**	**4.70**	**17**	P	**Pn**	**21 01 10.2**	**+0.7**
OUR	**Ouranopolis**	**4.73**	**27**	P	**Pn**	**21 01 09.4**	**-0.6**
OUR	**Ouranopolis**	**4.73**	**27**	P	**Pn**	**21 01 09.4**	**-0.6**
CEL	**Celeste**	**4.74**	**298**	P	**Pn**	**21 01 11.5**	**+1.4**
CEL	**Celeste**	**4.74**	**298**	P	**Pn**	**21 01 11.5**	**+1.4**
KARP	**Karpathos**	**4.88**	**95**	*e*Pn	**Pn**	**21 01 10.6**	**-1.4**
LIA	**Limnos Island**	**4.90**	**39**	P	**Pn**	**21 01 13.6**	**+1.3**
LIA	**Limnos Island**	**4.90**	**39**	P	**Pn**	**21 01 13.6**	**+1.3**
GRG	**Griva**	**4.91**	**11**	P	**Pn**	**21 01 12.4**	**0.0**
GRG	**Griva**	**4.91**	**11**	P	**Pn**	**21 01 12.4**	**0.0**
SOH	**Sokhos**	**4.98**	**19**	P	**Pn**	**21 01 13.7**	**+0.4**
SOH	**Sokhos**	**4.98**	**19**	P	**Pn**	**21 01 13.7**	**+0.4**
KRUS	**Krusevo**	**5.23**	**0**	*e*Pn	**Pn**	**21 01 15.3**	**-1.5**
KRUS				*e*Sg	**Sn**	**21 02 11.7**	**-6.1**
VAY	**Valandovo**	**5.29**	**11**	*e*Pn	**Pn**	**21 01 16.8**	**-0.9**
VAY				*e*Sg	**Sn**	**21 02 15.2**	**-4.0**
SRS	**Serrai**	**5.32**	**20**	P	**Pn**	**21 01 17.2**	**-0.8**
SRS	**Serrai**	**5.32**	**20**	P	**Pn**	**21 01 17.2**	**-0.8**
TAR1	**Taranto**	**5.36**	**326**	*e*Pn	**Pn**	**21 01 18.1**	**-0.5**
PE1	**Pezze di Greco**	**5.53**	**329**	*e*Pn	**Pn**	**21 01 20.6**	**-0.3**
NVR	**Nevrokopi**	**5.61**	**21**	P	**Pn**	**21 01 21.8**	**-0.2**
NVR	**Nevrokopi**	**5.61**	**21**	P	**Pn**	**21 01 21.8**	**-0.2**
VAE	**Valguarnera**	**5.61**	**286**	Pn	**Pn**	**21 01 28.9**	**+6.8**
	1.3nm,0.3s,baz=98,slow=14,SNR=4.4						
VAE				Sn	**Sn**	**21 02 32.7**	**+5.5**
	3.2nm,0.3s,baz=172,slow=7.1,SNR=5.2						
CUC	**Castrocucco**	**5.74**	**314**	P	**Pn**	**21 01 25.7**	**+1.9**
CUC	**Castrocucco**	**5.74**	**314**	P	**Pn**	**21 01 25.7**	**+1.9**
MMB	**Musomiste**	**5.79**	**19**	P	**Pn**	**21 01 23.6**	**-1.0**
MMB	**Musomiste**	**5.79**	**19**	P	**Pn**	**21 01 23.6**	**-1.0**
SG1	**Sgolgore (BA)**	**5.89**	**324**	*e*Pn	**Pn**	**21 01 25.7**	**-0.2**
BAI	**Bari**	**6.01**	**327**	*e*Pn	**Pn**	**21 01 26.9**	**-0.6**
RDO	**Rodhopi**	**6.05**	**33**	P	**Pn**	**21 01 29.1**	**+1.1**
RDO	**Rodhopi**	**6.05**	**33**	P	**Pn**	**21 01 29.1**	**+1.1**
ALN	**Alexandroupoli**	**6.09**	**37**	P	**Pn**	**21 01 30.7**	**+2.1**
ALN	**Alexandroupoli**	**6.09**	**37**	P	**Pn**	**21 01 30.7**	**+2.1**
CDT	**Castel del Mon**	**6.27**	**324**	*e*Pn	**Pn**	**21 01 30.8**	**-0.3**
VTS	**Vitosha**	**6.63**	**13**	P	**Pn**	**21 01 37.2**	**+1.1**
VTS	**Vitosha**	**6.63**	**13**	P	**Pn**	**21 01 37.2**	**+1.1**
BARS	**Barje**	**6.69**	**4**	‖*i*Pn	**Pn**	**21 01 36.0**	**-0.9**
MPEP	**Malo Peshtene**	**7.47**	**14**	P	**Pn**	**21 01 47.1**	**-0.5**
DIVS	**Divibare**	**8.01**	**354**	‖*i*Pn	**Pn**	**21 01 52.7**	**-2.3**
MLR	**Muntele Rosu**	**10.01**	**20**	Pn	**Pn**	**21 02 19.4**	**-3.0**
	0.1nm,0.3s,baz=210,slow=7.2,SNR=2.7						
BOJS	**Bojanci**	**10.39**	**336**	*i* Pn	**Pn**	**21 02 26.1**	**-1.4**
BOJS				*i* Sn	**Sn**	**21 04 16.1**	**-8.4**
BOJS	**Bojanci**	**10.39**	**336**	*i* Pn	**Pn**	**21 02 26.1**	**-1.5**
BRTR	**Keskin Array B**	**10.46**	**66**	Pn	**Pn**	**21 02 29.5**	**+1.0**
	0.1nm,0.3s,baz=253,slow=9.9,SNR=3.2						
BRTR	**Keskin Array B**	**10.46**	**66**	Pn	**Pn**	**21 02 29.5**	**+1.0**
VISS	**Visnje**	**10.79**	**336**	*i* Pn	**Pn**	**21 02 33.9**	**+0.9**
VISS				*i* Sn	**Sn**	**21 04 23.7**	**-11**
VISS	**Visnje**	**10.79**	**336**	*i* Pn	**Pn**	**21 02 33.9**	**+0.9**
JAVS	**Javornik**	**11.14**	**333**	*i* Pn	**Pn**	**21 02 38.0**	**+0.2**
JAVS				*i* Sn	**Sn**	**

HHC LR LR
comp=N,2µm,6.7s
HHC LR LR
comp=E,2µm,6.3s
HHC LR LR
comp=Z,2µm,7.6s
LSA Lhasa 11.44 263 P **Pn** **21 06 07.2 +2.2**
LSA LR LR
comp=N,850nm,12.5s
LSA LR LR
comp=E,2µm,12.5s
LSA LR LR
comp=Z,2µm,13.1s
TIA Tai'an 11.56 64 *e*P **Pn** **21 06 06.5 -0.1**
GZH Guangzhou 11.88 135 P **Pn** **21 06 07.8 -3.1**
NJ2 Nanjing 12.43 85 *e*P **Pn** **21 06 17.2 -1.3**
NJ2 pP 21 06 24.3
NJ2 PP 21 06 27.2
NJ2 sP 21 06 29.3
NJ2 S **Sn** **21 08 34.4 -2.6**
NJ2 sS 21 08 46.0
NJ2 pmax pmax
comp=Z,60nm,1.0s
NJ2 pmax pmax
comp=Z,70nm,3.8s
NJ2 LR LR
comp=N,5µm,12.4s
NJ2 LR LR
comp=E,3µm,15.1s
NJ2 LR LR
comp=Z,14µm,12.6s
SHL Shillong 12.49 243 *e*PKP **Pn** **21 06 20.0 +0.7**
SHL *ex* x 21 10 06.0
CHRT Chiangrai 12.55 200 P **Pn** **21 06 21.5 +1.3**
BJT Baijiatuau 12.66 46 Pn **Pn** **21 06 19.7 -1.9**
comp=Z,13nm,0.4s
BJT Sn **Sn** **21 08 41.2 -1.4**
BJT Baijiatuau 12.66 46 P **Pn** **21 06 19.7 -1.9**
BJT 21 08 41.2
BJT pmax pmax
comp=Z,13nm,0.4s
BJI Beijing 12.68 46 P **Pn** **21 06 20.3 -1.5**
BJI pmax pmax
comp=Z,6.0nm,0.6s
BJI LR LR
comp=N,3µm,4.1s
BJI LR LR
comp=E,3µm,5.0s
BJI LR LR
comp=Z,520nm,17.6s
QIZ Qiongzhong 13.71 157 P **Pn** **21 06 34.4 -1.5**
QIZ pP 21 06 42.1
QIZ S **Sn** **21 09 09.6 +1.3**
QIZ sS 21 09 21.5
QIZ SS 21 09 28.5
QIZ pmax pmax
comp=Z,37nm,1.8s
QIZ LR LR
comp=N,1µm,12.3s
QIZ LR LR
comp=E,460nm,6.9s
QIZ LR LR
comp=Z,2µm,11.9s
QIZ Qiongzhong 13.71 157 *e*Pn **Pn** **21 06 33.8 -2.2**
QIZ *e*Sn **Sn** **21 09 03.5 -4.8**
CHG Chiang Mai 13.80 201 P **Pn** **21 06 40.9 +3.7**
CHTO Chiang Mai 13.80 201 *e*Pn **Pn** **21 06 40.5 +3.3**
CM31 Chiang Mai Arr 14.13 201 *e*Pn **Pn** **21 06 44.6 +2.8**
CMAR Chiang Mai Arr 14.13 201 Pn **Pn** **21 06 41.6 -0.1**
comp=Z,0.6nm,0.3s,baz=12,slow=13,SNR=32
CMAR Lg 21 10 41.7
comp=Z,0.0nm,0.3s,baz=23,slow=30,SNR=3.0
CMAR PcP PcP 21 12 01.4 +0.2
comp=Z,0.1nm,0.3s,baz=298,slow=1.9,SNR=4.8
CMAR LR LR 21 13 03.5
comp=Z,220nm,18.3s,baz=20,slow=41
SSE Sheshan 14.50 88 P **Pn** **21 06 42.6 -4.1**
SSE S **Sn** **21 09 17.7 -10**
SSE pmax pmax
comp=Z,17nm,0.8s
SSE pmax pmax
comp=Z,73nm,4.8s
SSE LR LR
comp=N,570nm,13.2s
SSE LR LR
comp=E,2µm,13.2s
SSE LR LR
comp=Z,3µm,14.4s
TAPN Taplejung 15.04 257 *e*P **Pn** **21 06 53.9 -0.2**
comp=Z,101nm,0.9s
BDT Bhumibol Dam 15.27 199 P **Pn** **21 07 03.0 +5.9**
comp=Z,44nm,0.9s
ODAN Odare 15.49 256 *e*P **Pn** **21 06 58.7 -1.3**
comp=Z,58nm,0.6s
SONM Songino Array 16.08 5 Pn **Pn** **21 07 07.7 +0.2**
comp=Z,0.4nm,0.3s,baz=186,slow=13,SNR=36
SONM Lg 21 11 42.7
baz=196,slow=30,SNR=3.0
SONM LR LR 21 14 09.4
comp=Z,715nm,21.4s,baz=183,slow=40
RAMN Ramite 16.11 257 *e*P **Pn** **21 07 06.7 -1.3**
comp=Z,72nm,0.8s
ULN Ulaanbaatar 16.17 7 *e*Pn **Pn** **21 07 09.2 +0.5**
comp=Z,37nm,1.0s
ULN Ulaanbaatar 16.17 7 *e*P **Pn** **21 07 09.2 +0.5**
ULN pmax pmax
comp=Z,37nm,1.0s
GUN Gumba 16.38 261 *e*P **Pn** **21 07 11.5 -0.1**
comp=Z,180nm,0.8s
NST Nakhon Sawan 16.50 194 P **Pn** **21 07 14.0 +0.9**
YHNB Yeheng 16.70 111 *e*Pn **Pn** **21 07 17.1 +1.6**
comp=Z,23nm,0.6s
SSLB Suanglung 16.81 114 *e*Pn **Pn** **21 07 18.9 +1.9**
comp=Z,83nm,1.1s
TPUB Ta-pu 16.83 116 *e*Pn **Pn** **21 07 18.4 +1.2**
comp=Z,26nm,0.8s
TPUB *e*Sn **Sn** **21 10 28.0 +3.8**
PKI Pulchoki 16.89 260 *e*P **Pn** **21 07 16.8 -1.1**
comp=Z,130nm,0.8s
PKIN Phulchoki 16.89 260 *e*P **Pn** **21 07 16.8 -1.2**
comp=Z,75nm,0.8s
NACB Ninganchiao 17.11 112 *e*Pn **Pn** **21 07 22.0 +1.1**
comp=Z,68nm,1.3s
DMN Daman 17.13 261 *e*P **Pn** **21 07 19.6 -1.4**
comp=Z,165nm,1.1s
YULB Yu-li 17.29 115 *e*Pn **Pn** **21 07 24.5 +1.5**
comp=Z,12nm,0.8s
GKN Gorkha 17.40 262 *e*P **Pn** **21 07 23.5 -0.9**
comp=Z,120nm,0.8s
TWG Pinlang 17.43 117 *e*Pn **Pn** **21 07 26.0 +1.2**
comp=Z,26nm,0.9s
KOLN Koldanda 18.35 263 *e*P **Pn** **21 07 34.4 -1.7**
comp=Z,54nm,0.6s
SNY Shenyang 18.40 52 ⇑P **Pn** **21 07 38.1 +1.5**
SNY S **Sn** **21 11 04.3 +2.3**
SNY pmax pmax
comp=Z,8.0nm,0.7s
SNY pmax pmax
comp=Z,170nm,8.1s
SNY LR LR
comp=N,480nm,13.5s
SNY LR LR
comp=E,690nm,16.8s
SNY LR LR
comp=Z,660nm,16.7s
ZAK Zakamensk 18.56 358 *e*P **Pn** **21 07 39.1 +0.7**
ZAK pmax pmax
comp=Z,10.0nm,0.9s
INCN Inchon 19.26 67 Pn **Pn** **21 07 45.7 -1.4**
TLY Talaya 19.85 359 *e*P **Pn** **21 07 56.8 +2.8**
comp=Z,30nm,1.2s
TLY Talaya 19.85 359 *e*P **Pn** **21 07 54.5 +0.5**
TLY pmax pmax
comp=Z,26nm,1.1s
TLY MLR MLR
comp=Z,895nm,11.0s
MOY Mondy 19.97 354 *e*P **Pn** **21 07 56.1 +0.7**
MOY pmax pmax
comp=Z,86nm,1.9s
KSRS Korea Array 20.27 67 P **P** **21 07 56.9 -0.3**
comp=Z,42nm,1.0s,baz=255,slow=10,SNR=34
KSRS LR LR 21 16 30.9
comp=Z,237nm,20.6s,MS3.5,baz=269,slow=39
KSRS Korea Array 20.27 67 P **P** **21 07 56.9 -0.2**
KSRS pmax pmax
comp=Z,42nm,1.0s

KSRS MLR MLR
comp=Z,237nm,20.6s,MS3.5
IRK Irkutsk 20.41 0 *e*P **P** **21 08 00.2 +1.7**
IRK pmax pmax
comp=Z,145nm,1.2s
CN2 Changchun 20.53 48 *e*P **P** **21 08 00.8 +0.9**
CN2 *e*S **S** **21 11 39.0 -10**
CN2 pmax pmax
comp=Z,40nm,0.6s
CN2 pmax pmax
comp=Z,300nm,6.0s
CN2 LR LR
comp=N,500nm,13.0s,MS4.2
CN2 LR LR
comp=E,400nm,13.0s,MS4.2
CN2 LR LR
comp=Z,300nm,12.0s,MS3.9
HIA Hailar 20.97 29 *e*P **P** **21 08 04.7 +0.2**
comp=Z,37nm,0.8s
HIA Hailar 20.97 29 *e*P **P** **21 08 04.7 +0.1**
HIA pmax pmax
comp=Z,37nm,0.8s
JOSI Joshimath 21.13 273 *e*PKP **P** **21 08 06.8 +0.3**
CIT Chita 21.31 16 *e*P **P** **21 08 08.4 +0.2**
CIT *e* 21 08 21.3
CIT *e* 21 08 31.6
CIT pmax pmax
comp=Z,97nm,1.4s,mb4.9
MK31 Makanchi Array 22.51 318 *e*P **P** **21 08 19.5 -1.7**
MK31 *e*PcP PcP 21 12 14.5 -0.3
MKAR Makanchi Array 22.51 318 P **P** **21 08 21.8 +0.7**
comp=Z,22nm,0.8s,mb4.7,baz=115,slow=12,SNR=194
MKAR PcP PcP 21 12 14.2 -0.7
comp=Z,2.8nm,0.6s,baz=117,slow=1.6,SNR=8.9
MKAR LR LR 21 18 08.2
comp=Z,739nm,19.8s,MS4.1,baz=116,slow=39
MKAR Makanchi Array 22.51 318 *i*P **P** **21 08 21.7 +0.6**
MKAR pmax pmax
comp=Z,22nm,0.8s
SDNR Sundarnagar 23.18 276 *e*PKP **P** **21 08 27.5 -0.9**
AGRA Agra 23.30 265 *e*PKP **P** **21 08 29.2 -0.5**
BISR Bishrakh 23.36 269 *e*PKP **P** **21 08 30.8 +0.6**
VIS Vishakhapatnam 23.54 238 *e*PKP **P** **21 08 30.6 -1.6**
VIS AMb AMB 21 08 32.3
comp=Z,47nm,0.8s,mb5.0
MDJ Mudanjiang 23.56 50 P **P** **21 08 33.2 +1.0**
MDJ pP 21 08 36.1
MDJ sP sP 21 08 37.5 +1.1
MDJ S **S** **21 12 40.5 -5.4**
MDJ sS sS 21 12 52.3 +1.4
MDJ ScP ScP 21 15 57.3 +2.0
MDJ PcS PcS 21 15 58.6 +2.3
MDJ pmax pmax
comp=Z,20nm,1.4s,mb4.3
MDJ pmax pmax
comp=Z,100nm,5.8s
MDJ LR LR
comp=N,360nm,11.2s,MS4.2
MDJ LR LR
comp=E,190nm,10.2s,MS4.2
MDJ LR LR
comp=Z,540nm,12.5s,MS4.2
MDJ Mudanjiang 23.56 50 *e*P **P** **21 08 32.1 -0.1**
comp=Z,160nm,1.8s,mb5.2
KKR Kurukshetra 23.57 273 *e*PKP **P** **21 08 33.0 +0.6**
AYAN Aya Nagar 23.64 269 *e*PKP **P** **21 08 33.2 +0.1**
AYAN AMb AMB 21 08 34.8
comp=Z,50nm,0.9s,mb5.0
SONA Sohna 23.74 268 *e*PKP **P** **21 08 34.2 +0.2**
KSH Kashi 24.14 296 P **P** **21 08 41.3 +3.8**
KSH *e*pP 21 08 50.3
KSH *e*sP sP 21 08 54.3 +13
KSH *e*PP 21 09 16.7
KSH *e*PcP PcP 21 12 20.9 +2.5
KSH *e*S **S** **21 12 55.1 -0.2**
KSH *e*sS sS 21 13 11.1 +11
KSH *e*SS 21 13 50.7
KSH *e*ScP ScP 21 15 55.6 -1.4
KSH *e*PcS PcS 21 15 59.4 +1.3
KSH *e*ScS ScS 21 19 42.1 -2.0
KSH pmax pmax
comp=Z,16nm,0.6s,mb4.6
KSH pmax pmax
comp=Z,220nm,2.4s,mb5.2
KSH LR LR
comp=N,370nm,11.8s,MS4.3
KSH LR LR
comp=E,470nm,12.3s,MS4.3
KSH LR LR
comp=Z,620nm,13.2s,MS4.3
KUDL Kundal 24.27 269 *e*PKP **P** **21 08 36.6 -2.3**
KUDL AMb AMB 21 08 37.8
comp=Z,66nm,1.0s,mb5.0
ULHL Ulahol 24.54 303 P **P** **21 08 43.1 +1.9**
SNR=6.0
NGP Nagpur 24.86 251 *e*PKP **P** **21 08 42.6 -1.7**
KHET Khetri 24.88 269 *e*PKP **P** **21 08 44.9 +0.6**
KHET AMb AMB 21 08 47.1
comp=Z,71nm,1.1s,mb5.1
BHPL Bhopal 25.21 257 *e*PKP **P** **21 08 47.1 -0.3**
BHPL AMb AMB 21 08 49.0
comp=Z,59nm,0.9s,mb5.1
KZA Kyzart 25.21 302 P **P** **21 08 50.3 +3.0**
SNR=21
KBK Karagaybulak 25.57 303 P **P** **21 08 52.9 +2.3**
SNR=9.9
UCH Uchtor 25.78 302 P **P** **21 08 55.1 +2.6**
SNR=40
UCH Uchtor 25.78 302 *e*P **P** **21 08 54.3 +1.9**
FRU Bishkek 25.86 304 *e*P **P** **21 08 55.0 +1.9**
FRU pmax pmax
comp=Z,76nm,2.0s,mb4.9
AAK Ala-Archa 25.89 303 P **P** **21 08 53.6 +0.1**
comp=Z,4.8nm,0.6s,mb4.2,baz=121,slow=6.6,SNR=10
AAK PcP PcP 21 12 22.2 -0.1
comp=Z,3.9nm,0.5s,baz=149,slow=6.0,SNR=4.4
AAK LR LR 21 20 56.0
comp=Z,574nm,20.6s,MS4.1,baz=95,slow=41
AAK Ala-Archa 25.89 303 *c i*P **P** **21 08 54.9 +1.4**
AAK pmax pmax
comp=Z,19nm,2.2s,mb4.2
USP Ospenovka 26.06 304 P **P** **21 08 56.4 +1.5**
SNR=10
ZAA0 Zalesovo Array 26.12 334 *e*P **P** **21 08 55.6 +0.2**
ZALV Zalesovo Beam 26.12 334 P **P** **21 08 55.7 +0.3**
comp=Z,28nm,0.7s,mb4.9,baz=132,slow=9.7,SNR=97
AJM Ajmer 26.33 266 *e*PKP **P** **21 08 58.1 +0.5**
AML Almayashu 26.35 302 P **P** **21 09 00.1 +2.5**
SNR=18
AML Almayashu 26.35 302 *e*P **P** **21 08 58.8 +1.2**
comp=Z,17nm,0.9s,mb4.6
EKS2 Erkin-Say 26.41 303 P **P** **21 08 59.7 +1.6**
SNR=8.9
EKS2 Erkin-Say 26.41 303 *e*P **P** **21 08 59.1 +0.9**
comp=Z,15nm,1.0s,mb4.5
EKS2 *e*PcP PcP 21 12 24.1 +0.7
AKL Akola 26.72 252 *e*PKP **P** **21 09 01.4 +0.3**
AKL AMb AMB 21 09 10.5
comp=Z,32nm,1.7s,mb4.6
KURK Kurchatov 26.74 322 *e*P **P** **21 09 01.8 +0.8**
comp=Z,27nm,1.0s,mb4.7
KURK Kurchatov 26.74 322 P **P** **21 09 00.9 -0.1**
comp=Z,14nm,0.7s,mb4.6,baz=127,slow=8.6,SNR=44
KURK PcP PcP 21 12 23.4 -0.6
comp=Z,6.4nm,0.7s,baz=116,slow=2.1,SNR=9.3
KURK LR LR 21 20 24.8
comp=Z,422nm,19.2s,MS4.0,baz=120,slow=38
KURK Kurchatov 26.74 322 *c e*P **P** **21 09 01.1 +0.1**
KURK pmax pmax
comp=Z,35nm,1.2s,mb4.8
KLR Kul'dur 26.99 42 *e*P **P** **21 09 00.0 -3.2**
KLR *e*S **S** **21 13 45.5 +5.0**
KLR MLR MLR
comp=N,1µm,12.0s,MS4.8
KLR MLR MLR
comp=E,900nm,12.0s,MS4.8
MAJO Matsushiro 28.41 71 *e*P **P** **21 09 16.4 +0.2**
MJAR Matsushiro Arr 28.41 71 P **P** **21 09 16.2 0.0**
MJAR PcP PcP 21 12 27.8 -0.6
MJAR LR LR 21 20 56.8
MJAR Matsushiro Arr 28.41 71 P **P** **21 09 16.2 0.0**
comp=E,2.1nm,0.6s,mb4.0,baz=278,slow=10,SNR=10
MJAR PcP PcP 21 12 27.8 -0.6
comp=E,1.9nm,0.7s,baz=268,slow=2.3,SNR=8.1
MJAR LR LR 21 20 56.8
comp=E,108nm,19.8s,MS3.5,baz=245,slow=37
MJAR Matsushiro Arr 28.41 71 P **P** **21 09 16.2 0.0**
MJAR 21 12 27.8
PSI Prapat 29.29 191 P **P** **21 09 24.4 +0.3**
comp=E,3.3nm,0.3s,mb4.5,baz=3.5,slow=4.4,SNR=6.0
KBL Kabul 29.48 285 *e*P **P** **21 09 27.4 +1.7**
comp=E,37nm,1.3s,mb5.0
KBL Kabul 29.48 285 *e*P **P** **21 09 27.4 +1.7**
KBL pmax pmax
comp=Z,37nm,1.3s,mb5.0
BVAR Borovoye Array 32.30 321 P **P** **21 09 51.0 +0.7**
comp=Z,4.0nm,0.6s,mb4.5,baz=118,slow=9.5,SNR=44
BVAR PcP PcP 21 12 37.6 -0.6
comp=Z,5.1nm,0.8s,baz=134,slow=4.3,SNR=10
BRVK Borovoye 32.37 321 *e*P **P** **21 09 51.8 +0.9**
comp=Z,9.1nm,0.7s,mb4.7
BRVK Borovoye 32.37 321 *c e*P **P** **21 09 51.5 +0.6**
BRVK pmax pmax
comp=Z,28nm,1.7s,mb4.8
YSS Yuzh-Sakhalins 33.02 52 *e*P **P** **21 09 56.6 -0.1**
YSS Yuzh-Sakhalins 33.02 52 *e*P **P** **21 09 50.5 -6.2**
YSS *e* 21 10 03.0
YSS MLR MLR
comp=Z,400nm,17.0s,MS4.2
YAK Yakutsk 34.40 21 *e*P **P** **21 10 08.1 -0.4**
comp=Z,30nm,0.8s,mb5.3
YAK Yakutsk 34.40 21 *e*P **P** **21 10 07.6 -0.9**
YAK pmax pmax
comp=Z,17nm,0.9s,mb5.0
YAK pmax pmax
comp=N,7.0nm,1.2s
YAK pmax pmax
comp=E,8.0nm,1.4s
YAK MLR MLR
comp=Z,383nm,13.0s,MS4.3
YAK MLR MLR
comp=E,128nm,11.0s,MS4.2
YAK MLR MLR
comp=N,196nm,11.0s,MS4.2
ABKAR Akbulak array 37.28 311 *e*P **P** **21 10 33.8 +0.4**
comp=N,9.0nm,0.7s,mb4.7
ABKAR *e*PcP PcP 21 12 51.5 -1.2
ABKT Ailbek 38.01 292 P **P** **21 10 41.2 +1.5**
comp=N,364nm,0.7s,SNR=34
AKTK Aktyubinsk 38.73 312 P **P** **21 10 46.2 +0.6**
AKTK PcP PcP 21 12 56.9 -0.2
AKTO Aktyubinsk 38.73 312 P **P** **21 10 46.2 +0.6**
comp=N,5.7nm,0.5s,mb4.5,baz=96,slow=8.7,SNR=25
AKTO PcP PcP 21 12 56.9 -0.2
comp=N,3.6nm,0.7s,baz=117,slow=6.7,SNR=4.1
SVE Sverdlovsk 38.99 323 ⇑*e*P **P** **21 10 49.1 +1.4**
SVE pmax pmax
comp=Z,61nm,1.1s,mb5.2
SVE MLR MLR
comp=Z,245nm,13.0s,MS4.2
KAPI Kappang 39.51 155 *e*P **P** **21 10 51.4 -1.0**
comp=Z,42nm,1.1s,mb5.1
ARU Arti 39.93 322 *e*P **P** **21 10 55.4 -0.1**
comp=Z,55nm,0.7s,mb5.4
ARU Arti 39.93 322 *c i*P **P** **21 10 55.7 +0.1**
ARU *e* 21 12 29.1
ARU *e* 21 12 58.6
ARU S **S** **21 17 00.7 +0.3**
ARU pmax pmax
comp=Z,96nm,1.2s,mb5.4
ARU Arti 39.93 322 P **P** **21 10 56.1 +0.5**
comp=Z,499nm,0.7s,SNR=28
SOKR Solikamsk 41.86 326 *c i*P **P** **21 11 12.2 +0.8**
SOKR pmax pmax
comp=Z,40nm,0.9s,mb5.0
SOKR MLR MLR
comp=Z,290nm,16.0s,MS4.2
TIXI Tiksi 42.03 11 *e*P **P** **21 11 11.5 -1.2**
comp=Z,7.0nm,0.8s,mb4.3
TIXI Tiksi 42.03 11 *e*P **P** **21 11 11.3 -1.4**
TIXI *e* 21 13 06.4
TIXI pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
TIXI MLR MLR
comp=Z,548nm,17.0s,MS4.5
MAK Makhachkala 45.64 301 *e*P **P** **21 11 50.8 +8.8**
MAK MLR MLR
comp=Z,204nm,13.0s,MS4.2
GNI Garni 48.06 297 P **P** **21 12 01.8 +0.7**
comp=Z,2.9nm,0.5s,mb4.5,baz=174,slow=1.6,SNR=8.3
GNI Garni 48.06 297 *c e*P **P** **21 12 02.5 +1.4**
GNI pmax pmax
comp=Z,34nm,1.7s
MIB Mutribah 48.42 283 *e*P **P** **21 12 03.9 0.0**
MIB AMb AMB 21 12 05.1
comp=Z,94nm,0.9s,mb5.8
RDF Al-Radifah 48.51 282 *e*P **P** **21 12 05.2 +0.5**
RDF AMb AMB 21 12 06.3
comp=Z,96nm,1.0s,mb5.8
NAY Al-Naaiem 48.67 283 *e*P **P** **21 12 05.8 -0.1**
NAY AMb AMB 21 12 06.9
comp=Z,68nm,0.9s,mb5.7
KIV Kislovodsk 49.01 303 P **P** **21 12 09.7 +1.4**
comp=Z,156nm,1.6s,mb5.8,SNR=5.4
KIV Kislovodsk 49.01 303 *e*P **P** **21 12 08.6 +0.3**
comp=Z,26nm,1.0s,mb5.2
KIV Kislovodsk 49.01 303 *e*P **P** **21 12 07.9 -0.4**
KIV pmax pmax
comp=Z,29nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,133nm,16.0s,MS4.0
VRHR Novokhopersk 49.14 312 *e*P **P** **21 12 08.4 -0.8**
VRHR pmax pmax
comp=Z,20nm,0.6s,mb5.3
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,1.2s
KLMR Klimovskoe 50.54 325 *e*P **P** **21 12 19.2 -0.5**
KLMR pmax pmax
comp=Z,121nm,1.6s,mb5.6
VSR Storozhevoye 50.68 313 *e*P **P** **21 12 20.1 -0.8**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,10.0nm,0.7s
VSR MLR MLR
comp=Z,160nm,12.0s,MS4.2
VSR MLR MLR
comp=N,70nm,16.0s,MS4.2
VSR MLR MLR
comp=E,180nm,20.0s,MS4.2
MOS Moscow 51.40 318 *e*P **P** **21 12 25.5 -0.7**
MOS *e*S **S** **21 19 41.6 -4.0**
MOS pmax pmax
comp=Z,99nm,1.1s,mb5.7
KAKA Kakadu 51.88 144 *e*P **P** **21 12 28.5 -1.8**
comp=Z,12nm,0.6s,mb5.0
KAKA Kakadu 51.88 144 *e*P **P** **21 12 29.0 -1.3**
OBN Obninsk 52.02 318 ⇑*e*P **P** **21 12 30.5 -0.4**
OBN *e**PP pP 21 12 47.7 +14
OBN *e* 21 14 28.7
OBN *e*S **S** **21 19 45.9 -8.3**
OBN pmax pmax
comp=Z,53nm,1.7s,mb5.2
OBN MLR MLR
comp=Z,400nm,21.0s,MS4.4
ANN Anapa 52.61 305 *e*P **P** **21 12 34.5 -0.9**
ANN *e*S **S** **21 19 58.3 -4.2**
ANN pmax pmax
comp=Z,72nm,1.5s,mb5.4
ANN MLR MLR
comp=Z,153nm,13.0s,MS4.2
KNA Kununurra 52.83 150 *e*P **P** **21 12 36.6 -0.7**
comp=Z,44nm,0.6s,mb5.6
MALT Malatya 53.24 296 *e*P **P** **21 12 40.4 +0.2**
comp=Z,18nm,1.1s,mb4.9
MALT Malatya 53.24 296 *e*P **P** **21 12 40.4 +0.2**
MALT pmax pmax
comp=Z,18nm,1.1s,mb4.9
MALT Malatya 53.24 296 ⇓*i*P **P** **21 12 41.8 +1.6**
FITZ Fitzroy Crossi 53.72 154 *e*P **P** **21 12 42.8 -1.0**
comp=Z,19nm,1.2s,mb4.9
JOF Joensuu 54.48 327 *e*P **P** **21 12 47.8 -1.0**
JOF Joensuu 54.48 327 *e*p **P** **21 12 47.8 -1.0**
comp=Z,3.9nm,0.4s,mb4.7
MBWA Marble Bar 54.73 162 *e*P **P** **21 12 49.7 -1.4**
comp=Z,18nm,1.1s,mb5.0
SIM Simferopol' 54.89 305 *d i*P **P** **21 12 52.3 +0.2**

SIM *e* 21 13 54.0
SIM pmax pmax
comp=Z,14nm,0.8s,mb5.0
KEV Kevo 56.12 336 *e*P **P 21 12 57.6 -3.0**
comp=Z,2.7nm,0.4s,mb4.6
KEV Kevo 56.12 336 *e*P **P 21 12 57.6 -3.0**
KEV pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
KEV Kevo 56.12 336 *e*p **P 21 12 57.6 -3.0**
comp=Z,2.7nm,0.4s,mb4.6
ASF Jabal al Asfar 56.20 290 P **P 21 13 01.7 0.0**
comp=Z,20nm,0.9s,mb5.2,baz=151,slow=1.4,SNR=32
ASF LR LR 21 41 28.5
comp=Z,50nm,19.1s,MS3.6,baz=126,slow=41
BR131 Keskin Array S 56.48 299 *e*P **P 21 13 03.6 0.0**
comp=Z,4.5nm,0.7s,mb4.6
BR131 *e*PcP PcP 21 13 59.8 -0.6
BRTR Keskin Array B 56.48 299 P **P 21 13 03.7 +0.1**
comp=Z,3.9nm,0.6s,mb4.6,baz=110,slow=6.7,SNR=25
BRTR PcP PcP 21 13 59.9 -0.6
comp=Z,1.6nm,0.7s,baz=99,slow=3.7,SNR=3.9
ARCES ARCESS Array B 56.65 336 P **P 21 13 04.3 -0.1**
comp=Z,6.4nm,0.5s,mb4.9,baz=84,slow=8.6,SNR=76
ARCES PcP PcP 21 13 60.0 -0.5
comp=Z,2.8nm,0.5s,baz=100,slow=5.4,SNR=5.0
ARE0 ARCESS Array S 56.65 336 *e*P **P 21 13 04.1 -0.3**
KAF Kangasniemi 56.85 327 *e*P **P 21 13 04.5 -1.4**
comp=Z,3.6nm,0.4s,mb4.8
KAF Kangasniemi 56.85 327 *e*P **P 21 13 04.5 -1.4**
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
KAF Kangasniemi 56.85 327 *e*p **P 21 13 04.5 -1.4**
comp=Z,3.6nm,0.4s,mb4.8
AKASG Malin Array Be 56.97 313 P **P 21 13 06.5 -0.5**
comp=Z,7.6nm,0.5s,mb5.0,baz=70,slow=6.6,SNR=20
KIEV Kiev 56.98 313 *e*P **P 21 13 06.0 -1.0**
comp=Z,5.4nm,0.6s,mb4.8
KIEV Kiev 56.98 313 *e*P **P 21 13 06.0 -1.0**
KIEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
FINES FINESS Array B 57.03 326 P **P 21 13 06.8 -0.3**
FINES LR LR 21 39 34.3
FINES FINESS Array B 57.03 326 P **P 21 13 06.8 -0.3**
comp=Z,17nm,0.5s,mb5.4,baz=80,slow=7.0,SNR=192
FINES LR LR 21 39 34.3
comp=Z,159nm,18.2s,MS4.2,baz=290,slow=38
MMAI Mount Meron Ar 57.12 291 P **P 21 13 09.4 +1.1**
comp=Z,4.1nm,0.6s,mb4.6,baz=56,slow=12,SNR=8.9
EIL Elat 58.63 288 P **P 21 13 19.4 +0.5**
comp=Z,31nm,0.9s,mb5.3,baz=54,slow=2.6,SNR=27
EIL LR LR 21 42 38.8
comp=Z,75nm,19.1s,MS3.8,baz=283,slow=40
TIRR Tirgusor 58.96 306 *e*P **P 21 13 20.7 -0.3**
comp=Z,14nm,1.3s,mb4.8
TIRR Tirgusor 58.96 306 *e*P **P 21 13 20.7 -0.3**
TIRR pmax pmax
comp=Z,14nm,1.3s,mb4.8
TIRR Tirgusor 58.96 306 ⇓*i*P **P 21 13 21.2 +0.2**
PSN Preselentsi 59.33 305 P **P 21 13 23.5 -0.1**
TESR 59.61 309 ⇓P **P 21 13 25.5 +0.1**
TESR 59.61 309 ⇓*i*P **P 21 13 25.5 +0.1**
VRI Vrincioaia 59.73 308 ⇓P **P 21 13 27.2 +0.9**
VRI Vrincioaia 59.73 308 ⇓*i*P **P 21 13 27.2 +0.9**
ATD Arta Tunnel 59.74 265 P **P 21 13 27.6 +0.8**
comp=Z,31nm,0.9s,mb5.3,baz=338,slow=1.8,SNR=13
PLOR Plostina 59.78 308 ⇑P **P 21 13 27.4 +0.7**
PLOR Plostina 59.78 308 ⇑*i*P **P 21 13 27.4 +0.7**
SUW Suwalki 59.88 318 *e*P **P 21 13 26.7 -0.5**
comp=Z,20nm,0.8s,mb5.2
SUW *e*PcP PcP 21 14 13.8 +0.2
SUW Suwalki 59.88 318 *e*P **P 21 13 26.7 -0.5**
SUW *e* 21 14 13.8
SUW pmax pmax
comp=Z,20nm,0.8s,mb5.2
PRD Provadia 60.01 305 P **P 21 13 27.5 -0.8**
BURAR Bucovina Array 60.25 310 ⇑P **P 21 13 30.0 +0.1**
BURAR Bucovina Array 60.25 310 ⇑*i*P **P 21 13 30.0 +0.1**
BUR08 Bucovina Ar. S 60.26 310 *e*P **P 21 13 29.7 -0.2**
BUR08 *e*PcP PcP 21 14 15.9 +0.7
MLR Muntele Rosu 60.36 308 P **P 21 13 31.0 +0.4**
comp=Z,1.8nm,0.4s,mb4.5,baz=2.5,slow=6.4,SNR=11
MLR LR LR 21 41 55.3
comp=Z,132nm,18.4s,MS4.1,baz=59,slow=38
MLR Muntele Rosu 60.36 308 ⇑P **P 21 13 30.9 +0.3**
MLR Muntele Rosu 60.36 308 ⇑*i*P **P 21 13 30.9 +0.3**
LVV L'vov 60.42 313 *e*P **P 21 13 30.7 -0.2**
JMB Yambol 60.81 304 P **P 21 13 34.7 +1.0**
JMB Yambol 60.81 304 P **P 21 13 34.7 +1.0**
VOIR 60.98 308 ⇓P **P 21 13 34.8 0.0**
VOIR 60.98 308 ⇓*i*P **P 21 13 34.8 0.0**
SZH Strazhica 61.02 305 P **P 21 13 34.9 -0.3**
ZIMR 61.29 306 ⇑P **P 21 13 37.9 +0.9**
ZIMR 61.29 306 ⇑*i*P **P 21 13 37.9 +0.9**
ALN Alexandroupoli 61.68 303 P **P 21 13 39.1 -0.6**
ALN Alexandroupoli 61.68 303 P **P 21 13 39.1 -0.6**
TRPA Tarpa 61.84 311 ⇑*i*P **P 21 13 41.6 +1.0**
UZH Uzhgorod 61.84 312 *c i*P **P 21 13 40.8 +0.2**
UZH *i* 21 14 22.0
KDZ Kurdzhali 61.89 304 P **P 21 13 41.1 0.0**
ASAR Alice Springs 62.05 149 P **P 21 13 42.1 -0.1**
comp=Z,5.5nm,0.5s,mb4.9,baz=337,slow=6.7,SNR=73
DRGR 62.12 310 ⇓P **P 21 13 43.5 +0.9**
DRGR 62.12 310 ⇓*i*P **P 21 13 43.5 +0.9**
QIS Mount Isa 62.14 142 *e*P **P 21 13 42.5 -0.4**
STHS Stebnicka Huta 62.27 313 *e*P **P 21 13 43.3 -0.2**
comp=Z,6.5nm,1.2s,mb4.6
STHS Stebnicka Huta 62.27 313 *e*P **P 21 13 43.3 -0.2**
STHS pmax pmax
comp=Z,7.0nm,1.2s,mb4.7
STHS Stebnicka Huta 62.27 313 *e*P **P 21 13 43.3 -0.2**
CRVS Cervenica-Dubn 62.29 312 *e*P **P 21 13 44.2 +0.6**
comp=Z,16nm,2.1s,mb4.8
CRVS Cervenica-Dubn 62.29 312 *e*P **P 21 13 44.2 +0.6**
CRVS pmax pmax
comp=Z,16nm,2.1s,mb4.8
CRVS Cervenica-Dubn 62.29 312 *e*P **P 21 13 44.2 +0.6**
MPEP Malo Peshtene 62.51 306 P **P 21 13 45.5 +0.3**
GZR Gura Zlata 62.52 308 ⇑*i*P **P 21 13 38.5 -6.7**
NSS Namsos 62.70 331 *e*P **P 21 13 44.3 -1.9**
NSS AMB AMB 21 13 50.3
comp=Z,48nm,3.2s
NIE Niedzica 62.85 313 *e*P **P 21 13 48.2 +0.8**
OJC Ojcow 62.92 314 *e*P **P 21 13 47.8 0.0**
KECS Kecovo 63.03 312 *e*P **P 21 13 49.0 +0.4**
comp=Z,2.9nm,1.2s,mb4.3
KECS Kecovo 63.03 312 *e*P **P 21 13 49.0 +0.4**
KECS pmax pmax
comp=Z,3.0nm,1.2s,mb4.3
KECS Kecovo 63.03 312 *e*P **P 21 13 49.0 +0.4**
VTS Vitosha 63.13 305 P **P 21 13 48.9 -0.5**
VTS Vitosha 63.13 305 P **P 21 13 48.9 -0.5**
VTS Vitosha 63.13 305 ⇑*i*P **P 21 13 48.9 -0.5**
VTS Vitosha 63.13 305 P **P 21 13 49.3 -0.1**
BZS Buzias 63.22 309 ⇓P **P 21 13 50.1 +0.3**
BZS Buzias 63.22 309 ⇓*i*P **P 21 13 50.1 +0.2**
HFS Hagfors 63.24 326 LR LR 21 43 13.0
comp=Z,172nm,18.4s,MS4.3,baz=66,slow=38
PSZ Piszkesteto 63.59 312 *e*P **P 21 13 52.8 +0.5**
comp=Z,18nm,1.4s,mb4.9
PSZ Piszkesteto 63.59 312 *e*P **P 21 13 52.8 +0.5**
PSZ pmax pmax
comp=Z,18nm,1.4s,mb4.9
PSZ Piszkesteto 63.59 312 ⇓*e*P **P 21 13 53.0 +0.7**
PAIG Paliouri 63.71 302 P **P 21 13 52.3 -0.9**
PAIG Paliouri 63.71 302 P **P 21 13 52.3 -0.9**
OKC Ostrava-Krasne 64.05 314 *e*P **P 21 13 55.6 +0.3**
OKC MLR MLR
comp=Z,400nm,24.2s,MS4.5
OKC Ostrava-Krasne 64.05 314 *e*P **P 21 13 55.6 +0.3**
OKC *e*pP pP 21 14 00.1 +1.6
OKC AMS AMS 21 42 50.0
comp=Z,400nm,24.2s
VYHS Vyhne 64.07 312 *e*P **P 21 13 56.0 +0.6**
comp=Z,9.6nm,1.2s,mb4.7
VYHS Vyhne 64.07 312 *e*P **P 21 13 56.0 +0.6**
VYHS pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
VYHS Vyhne 64.07 312 *e*P **P 21 13 56.0 +0.6**
NOA NORSAR Array B 64.11 327 P **P 21 13 54.6 -0.9**
comp=Z,8.6nm,0.5s,mb5.0,baz=72,slow=6.9,SNR=48
NOA LR LR 21 43 41.9
comp=Z,152nm,18.3s,MS4.2,baz=60,slow=38
XOR Xorichti 64.26 302 P **P 21 13 55.6 -1.3**
XOR Xorichti 64.26 302 P **P 21 13 55.6 -1.3**

NAO01 NORSAR Array S 64.33 327 *e*P **P 21 13 55.6 -1.3**
comp=Z,2.9nm,0.4s,mb4.7
MORC Moravsky Berou 64.44 314 *e*P **P 21 13 58.1 +0.2**
comp=Z,27nm,1.4s,mb5.1
MORC Moravsky Berou 64.44 314 *e*P **P 21 13 58.1 +0.2**
MORC pmax pmax
comp=Z,27nm,1.4s,mb5.1
MORC Moravsky Berou 64.44 314 ⇓*i*P **P 21 13 58.5 +0.6**
LIT Litokhoron 64.50 303 P **P 21 13 56.0 -2.4**
LIT Litokhoron 64.50 303 P **P 21 13 56.0 -2.4**
LKR Lokris 64.66 301 P **P 21 13 57.4 -2.1**
LKR Lokris 64.66 301 P **P 21 13 57.4 -2.1**
OSL Oslo 64.71 326 *e*P **P 21 13 59.1 -0.3**
KSP Ksiaz 64.83 316 *e*P **P 21 14 01.1 +0.7**
KSP Ksiaz 64.83 316 *e*P **P 21 13 59.4 -1.0**
PKSM Moragy 64.97 310 ⇓P **P 21 14 00.8 -0.6**
PKSM Moragy 64.97 310 ⇓*i*P **P 21 14 00.8 -0.6**
DPC Dobruska-Polom 64.99 315 *e*P **P 21 14 02.1 +0.7**
DPC MLR MLR
comp=Z,400nm,17.6s,MS4.7
DPC Dobruska-Polom 64.99 315 *e*P **P 21 14 02.1 +0.7**
DPC *e*pP pP 21 14 06.1 +1.5
DPC AMS AMS 21 43 20.0
comp=Z,400nm,17.6s
AGG Agios Georgios 65.01 302 P **P 21 13 59.6 -2.2**
AGG Agios Georgios 65.01 302 P **P 21 13 59.6 -2.2**
THL Klokotos Trika 65.04 302 P **P 21 14 00.2 -1.7**
UPC Upice 65.12 315 *e*P **P 21 14 02.6 +0.3**
UPC Upice 65.12 315 *e*P **P 21 14 02.6 +0.3**
UPC *e*pP pP 21 14 06.6 +1.1
VRAC Vranov 65.18 314 ⇑P **P 21 14 03.6 +0.9**
VRAC Vranov 65.18 314 P **P 21 14 03.2 +0.5**
comp=Z,7.1nm,0.9s,mb4.7,baz=56,slow=8.8,SNR=7.3
VRAC LR LR 21 44 07.9
comp=Z,370nm,19.4s,MS4.6,baz=60,slow=38
VRAC Vranov 65.18 314 P **P 21 14 03.2 +0.5**
VRAC pmax pmax
comp=Z,7.0nm,0.9s
VRAC MLR MLR
comp=Z,370nm,19.5s
VRAC Vranov 65.18 314 ⇑*i*P **P 21 14 03.6 +0.9**
KONO Kongsberg 65.35 326 *e*P **P 21 14 03.1 -0.5**
KONO AMB AMB 21 14 13.1
comp=Z,43nm,3.1s
NEST Nestorio 65.41 304 P **P 21 14 02.9 -1.5**
SOP Sopron 65.78 312 ⇓*e*P **P 21 14 06.3 -0.3**
TREC Trest 65.86 314 *e*P **P 21 14 07.4 +0.3**
TREC MLR MLR
comp=Z,400nm,20.8s,MS4.6
TREC Trest 65.86 314 *e*P **P 21 14 07.4 +0.3**
TREC *e*pP pP 21 14 11.8 +1.4
TREC AMS AMS 21 44 00.0
comp=Z,400nm,20.8s
PVCC Panska Ves 65.97 316 *e*P **P 21 14 08.2 +0.4**
PVCC Panska Ves 65.97 316 *e*P **P 21 14 08.2 +0.4**
PRU Pruhonice 66.19 315 *e*P **P 21 14 10.1 +0.9**
PRU MLR MLR
comp=Z,400nm,20.0s,MS4.6
PRU Pruhonice 66.19 315 *e*P **P 21 14 10.1 +0.9**
PRU *e*pP pP 21 14 14.8 +2.4
PRU AMS AMS 21 44 10.0
comp=Z,400nm,20.0s
BRG Berggiesshubel 66.22 316 *e*P **P 21 14 09.3 0.0**
comp=Z,9.2nm,0.9s,mb4.8
BRG *e* pP 21 14 14.2 +1.6
comp=Z,8.3nm,0.9s
FORT Forrest 66.23 158 *e*P **P 21 14 09.5 0.0**
comp=Z,16nm,0.8s,mb5.1
PYL PYLOS 66.24 300 P **P 21 14 07.1 -2.7**
TTA Tatalina 66.39 29 *e*P **P 21 14 09.9 -0.3**
comp=Z,18nm,1.2s,mb5.0
TTA Tatalina 66.39 29 *e*P **P 21 14 09.9 -0.3**
TTA pmax pmax
comp=Z,18nm,1.2s,mb5.0
ARSA Arzberg 66.59 312 ⇓*i*P **P 21 14 11.9 0.0**
comp=Z,8.9nm,1.2s,mb4.7
CLL Collm 66.61 317 *i* P **P 21 14 10.9 -0.9**
comp=Z,13nm,1.2s,mb4.8
CLL *e*S S 21 23 03.0 +0.1
CLL Collm 66.61 317 *i* P **P 21 14 10.9 -0.9**
comp=Z,13nm,1.2s,mb4.8
MUD Monsted U'grnd 66.75 323 *i* P **P 21 14 12.3 -0.3**
comp=Z,13nm,1.0s,mb4.9
COLD Coldfoot 66.78 24 *e*P **P 21 14 12.6 0.0**
comp=Z,14nm,0.9s,mb5.0
COLD PcP PcP 21 14 42.5 +1.0
PERS Pernice 67.08 312 *i* P **P 21 14 15.0 0.0**
KHC Kasperske Hory 67.09 315 *e*P **P 21 14 15.0 +0.1**
KHC MLR MLR
comp=Z,500nm,13.6s,MS4.9
KHC Kasperske Hory 67.09 315 *e*P **P 21 14 15.0 +0.1**
KHC *e*pP pP 21 14 19.6 +1.4
KHC AMS AMS 21 44 50.0
comp=Z,500nm,13.8s
BSEG Bad Segeberg 67.12 320 *e*P **P 21 14 15.7 +0.7**
comp=Z,24nm,0.9s,mb5.2
BSEG Bad Segeberg 67.12 320 *e*P **P 21 14 15.7 +0.7**
BSEG pmax pmax
comp=Z,24nm,0.9s,mb5.2
GEC2 GERESS Array S 67.12 314 *e*P **P 21 14 15.2 0.0**
comp=Z,14nm,1.2s,mb4.9
GEC2 GERESS Array S 67.12 314 *e*P **P 21 14 15.2 0.0**
GEC2 pmax pmax
comp=Z,14nm,1.2s,mb4.9
SOKA Soboth 67.12 312 ⇑*i*P **P 21 14 15.2 0.0**
comp=Z,16nm,1.1s,mb5.0
MOA Molln 67.16 313 ⇑*i*pP pP 21 14 15.7 -3.0
comp=Z,12nm,1.1s
TANN Tannenbergstha 67.26 316 *e*P **P 21 14 16.1 +0.1**
comp=Z,25nm,1.8s,mb4.9
NKC Novy Kostel 67.34 316 *e*P **P 21 14 16.5 0.0**
NKC *e* 21 14 21.8
NKC Novy Kostel 67.34 316 *e*P **P 21 14 16.5 0.0**
NKC *e*pP pP 21 14 21.8 +2.0
BOJS Bojanci 67.43 310 *e*P **P 21 14 17.9 +0.7**
WET Wettzell 67.51 315 *e*P **P 21 14 17.8 +0.2**
comp=Z,19nm,1.6s,mb4.9
WET Wettzell 67.51 315 *e*P **P 21 14 17.8 +0.2**
WET pmax pmax
comp=Z,19nm,1.6s,mb4.9
VISS Visnje 67.58 311 *i* P **P 21 14 18.1 0.0**
MOX Moxa 67.67 317 *e*P **P 21 14 18.6 0.0**
comp=Z,16nm,1.3s,mb4.9
CLZ Clausthal 67.91 318 *e*P **P 21 14 20.6 +0.5**
comp=Z,24nm,1.0s,mb5.2
CLZ Clausthal 67.91 318 *e*P **P 21 14 20.6 +0.5**
CLZ pmax pmax
comp=Z,24nm,1.0s,mb5.2
BPAW Bear Paw Mtn. 67.92 27 *e*P **P 21 14 20.0 +0.1**
comp=Z,8.3nm,0.7s,mb4.9
PPLA Purkeypile 67.99 29 *e*P **P 21 14 20.6 +0.2**
comp=Z,16nm,0.6s,mb5.2
JAVS Javornik 68.05 311 *i* P **P 21 14 20.8 -0.3**
GRA1 Grafenberg Arr 68.28 316 *e*P **P 21 14 22.9 +0.4**
comp=Z,29nm,0.9s,mb5.3
GRF Grafenberg Arr 68.28 316 *e*P **P 21 14 22.9 +0.4**
comp=Z,29nm,0.9s,mb5.3
GRF Grafenberg Arr 68.28 316 *e*P **P 21 14 22.9 +0.4**
GRF pmax pmax
comp=Z,29nm,0.9s,mb5.3
GRF Grafenberg Arr 68.28 316 *e*P **P 21 14 22.9 +0.4**
GRF pmax pmax
comp=Z,29nm,0.9s,mb5.3
COLA College 68.74 26 *e*P **P 21 14 24.4 -0.7**
comp=Z,29nm,1.1s,mb5.1
COLA *e*PcP PcP 21 14 49.4 -0.4
COLA College 68.74 26 *e*P **P 21 14 24.4 -0.7**
COLA *e* 21 14 49.4
COLA pmax pmax
comp=Z,29nm,1.1s,mb5.1
FUR Furstenfeldbru 68.87 314 *e*P **P 21 14 26.8 +0.6**
comp=Z,70nm,1.2s,mb5.5
FUR Furstenfeldbru 68.87 314 *e*P **P 21 14 26.8 +0.6**
FUR pmax pmax
comp=Z,70nm,1.2s,mb5.5
TIP Timpagrande 68.94 304 *e*P **P 21 14 26.2 -0.5**
comp=Z,28nm,1.4s,mb5.0
WTTA Wattenberg 69.02 313 ⇓*i*P **P 21 14 27.1 0.0**
comp=Z,12nm,0.9s,mb4.8
WATA Walderalm 69.03 313 ⇑*i*P **P 21 14 27.0 -0.2**
comp=Z,4.6nm,0.6s,mb4.6
ILAR Eielson Array 69.15 26 P **P 21 14 26.2 -1.4**
comp=Z,3.4nm,0.8s,mb4.4,baz=286,slow=5.4,SNR=34
ILAR LR LR 21 47 30.0
comp=Z,150nm,18.6s,MS4.3,baz=291,slow=38

MOTA Moosalm 69.32 313 ⇑*i*P **P 21 14 28.7 -0.3**
comp=Z,19nm,1.2s,mb4.9
QLP Quilpie 69.49 142 *e*P **P 21 14 30.5 +0.3**
FETA Feichten 69.69 313 ⇑*i*P **P 21 14 31.1 -0.1**
comp=Z,16nm,1.0s,mb4.9
STU Stuttgart 69.87 315 *e*P **P 21 14 32.4 0.0**
comp=Z,22nm,1.1s,mb5.0
AQU L'Aquila 69.93 308 *e*P **P 21 14 33.5 +0.6**
CEL Celeste 69.94 303 *e*P **P 21 14 33.1 +0.1**
comp=Z,37nm,1.1s,mb5.2
CEL PP PP 21 17 08.1 +0.7
KDAK Kodiak Island 70.19 34 *ce*P **P 21 14 33.4 -0.7**
DAVOX Davos/Dischmat 70.32 313 P **P 21 14 35.0 -0.2**
DAVOX LR LR 21 47 25.0
DAVOX Davos/Dischmat 70.32 313 P **P 21 14 35.0 -0.2**
comp=Z,11nm,0.6s,mb5.0,baz=87,slow=4.8,SNR=27
DAVOX LR LR 21 47 25.0
comp=Z,304nm,18.9s,MS4.6,baz=87,slow=38
BFO Black Forest 70.58 315 *e*P **P 21 14 36.5 -0.2**
comp=Z,37nm,1.6s,mb5.1
BFO Black Forest 70.58 315 *e*P **P 21 14 35.9 -0.8**
BFO PP PP 21 17 12.3 -0.4
BFO Black Forest 70.58 315 *e*P **P 21 14 36.5 -0.2**
BFO pmax pmax
comp=Z,37nm,1.6s,mb5.1
KMBO Kilima Mbogo 71.17 256 P **P 21 14 41.5 +0.6**
comp=Z,12nm,0.9s,mb4.8,baz=1.6,slow=18,SNR=22
CDF Champ du Feu 71.18 316 ⇑*i*P **P 21 14 39.9 -0.4**
comp=Z,25nm,0.9s,mb4.8
CDF Champ du Feu 71.18 316 ⇑*i*P **P 21 14 39.9 -0.4**
comp=Z,12nm,0.9s,mb4.8
CDF Champ du Feu 71.18 316 ⇑*i*P **P 21 14 39.9 -0.4**
CDF pmax pmax
comp=Z,12nm,0.9s,mb4.8
EGAK Eagle 71.21 24 *e*P **P 21 14 39.2 -1.0**
comp=Z,11nm,1.2s,mb4.7
WLF Walferdange 71.27 317 *e*P **P 21 14 41.8 +0.9**
WLF Walferdange 71.27 317 *e*P **P 21 14 41.5 +0.7**
comp=Z,24nm,0.9s,mb5.1
WLF Walferdange 71.27 317 *e*P **P 21 14 41.5 +0.6**
WLF pmax pmax
comp=Z,24nm,0.9s,mb5.1
INK Inuvik 71.45 19 P **P 21 14 41.1 -0.5**
comp=Z,18nm,0.8s,mb5.0,baz=328,slow=7.5,SNR=38
HINF Hinteralfeld 71.70 315 ⇑*i*P **P 21 14 42.8 -0.7**
comp=Z,23nm,1.0s,mb4.8
HINF Hinteralfeld 71.70 315 ⇑*i*P **P 21 14 42.8 -0.7**
comp=Z,12nm,1.0s,mb4.8
HINF Hinteralfeld 71.70 315 ⇑*i*P **P 21 14 42.8 -0.7**
HINF pmax pmax
comp=Z,12nm,1.0s,mb4.8
GIVF Givet 71.83 318 *e*P **P 21 14 44.0 -0.2**
comp=Z,13nm,0.5s,mb4.8
GIVF Givet 71.83 318 *e*P **P 21 14 44.0 -0.2**
comp=Z,6.7nm,0.5s,mb4.8
GIVF Givet 71.83 318 *e*P **P 21 14 44.0 -0.2**
GIVF pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
HAU Haudompre 71.92 316 *e*P **P 21 14 44.3 -0.5**
HAU *e*MLR MLR
comp=Z,360nm,20.5s,MS4.3
HAU Haudompre 71.92 316 *e*P **P 21 14 44.3 -0.5**
HAU MLR MLR
comp=Z,360nm,20.5s,MS4.6
BMRM Bremner River 72.06 29 *e*P **P 21 14 45.3 -0.1**
comp=Z,32nm,1.0s,mb5.2
BAIF Baives 72.20 318 *e*P **P 21 14 46.4 -0.1**
DAWY Dawson 72.25 24 *e*P **P 21 14 45.7 -0.8**
MEZF Maizieres J'vi 72.45 316 *e*P **P 21 14 47.8 -0.2**
STKA Stephens Creek 72.55 147 *e*P **P 21 14 48.4 -0.2**
comp=Z,12nm,0.5s,mb4.1
STKA Stephens Creek 72.55 147 P **P 21 14 48.4 -0.3**
comp=Z,7.0nm,0.5s,mb4.8,baz=342,slow=5.3,SNR=18
CABF La Chapelle 72.72 314 *e*P **P 21 14 49.4 -0.2**
SUMG Summit 72.76 349 *e*P **P 21 14 49.3 -0.1**
comp=Z,12nm,1.0s,mb4.8
SUMG Summit 72.76 349 *i* P **P 21 14 48.7 -0.7**
comp=Z,7.7nm,1.0s,mb4.6
PGF Pioggiola 72.77 310 ⇑*i*P **P 21 14 50.1 +0.1**
comp=Z,25nm,0.6s,mb5.0
PGF Pioggiola 72.77 310 ⇑*i*P **P 21 14 50.1 +0.1**
comp=Z,12nm,0.6s,mb5.0
PGF Pioggiola 72.77 310 ⇑*i*P **P 21 14 50.1 +0.1**
PGF pmax pmax
comp=Z,12nm,0.6s,mb5.0
LPG La Plagne 72.84 313 ⇑*i*P **P 21 14 50.8 +0.5**
comp=Z,82nm,0.8s,mb5.4
LPG La Plagne 72.84 313 ⇑*i*P **P 21 14 50.8 +0.5**
comp=Z,41nm,0.8s,mb5.4
LPG La Plagne 72.84 313 ⇑*i*P **P 21 14 50.8 +0.5**
LPG pmax pmax
comp=Z,41nm,0.8s,mb5.4
LPL La Plagne 72.84 313 ⇑*i*P **P 21 14 50.7 +0.3**
comp=Z,36nm,0.6s,mb5.2
LPL La Plagne 72.84 313 ⇑*i*P **P 21 14 50.7 +0.3**
comp=Z,18nm,0.6s,mb5.2
LPL La Plagne 72.84 313 ⇑*i*P **P 21 14 50.7 +0.3**
LPL pmax pmax
comp=Z,18nm,0.6s,mb5.2
SBF Sospel 73.17 311 ⇑*i*P **P 21 14 52.0 -0.4**
comp=Z,59nm,1.0s,mb5.2
SBF Sospel 73.17 311 ⇑*i*P **P 21 14 52.0 -0.4**
comp=Z,30nm,1.0s,mb5.2
SBF Sospel 73.17 311 ⇑*i*P **P 21 14 52.0 -0.4**
SBF pmax pmax
comp=Z,30nm,1.0s,mb5.2
MBDF Montbardon 73.19 312 *e*P **P 21 14 50.8 -1.6**
comp=Z,24nm,1.1s,mb4.7
MBDF Montbardon 73.19 312 *e*P **P 21 14 50.8 -1.6**
comp=Z,12nm,1.1s,mb4.7
MBDF Montbardon 73.19 312 *e*P **P 21 14 50.8 -1.6**
MBDF pmax pmax
comp=Z,12nm,1.1s,mb4.7
EKA Eskdalemuir Ar 73.42 325 P **P 21 14 53.3 -0.3**
comp=Z,4.6nm,0.8s,mb4.4,baz=51,slow=5.5,SNR=11
ORIF Oris-en-Rattie 73.65 313 ⇑*i*P **P 21 14 55.1 -0.1**
comp=Z,28nm,1.0s,mb4.9
ORIF *e*MLR MLR
comp=Z,487nm,18.0s,MS4.5
ORIF Oris-en-Rattie 73.65 313 ⇑*i*P **P 21 14 55.1 -0.1**
comp=Z,14nm,1.0s,mb4.8
ORIF Oris-en-Rattie 73.65 313 ⇑*i*P **P 21 14 55.1 -0.1**
ORIF pmax pmax
comp=Z,14nm,1.0s,mb4.8
LOR Lormes 73.75 316 ⇑*i*P **P 21 14 54.8 -0.9**
LOR *e*MLR MLR
comp=Z,286nm,20.2s,MS4.2
LOR Lormes 73.75 316 ⇑*i*P **P 21 14 54.8 -0.9**
LOR MLR MLR
comp=Z,290nm,20.3s,MS4.6
FRF La Foret Royal 73.82 311 *e*P **P 21 14 55.3 -0.9**
VSL Villasalto 73.94 307 P **P 21 14 57.3 +0.4**
LMR La Mourre 74.02 311 ⇑*i*P **P 21 14 56.9 -0.4**
comp=Z,13nm,0.6s,mb4.7
LMR La Mourre 74.02 311 ⇑*i*P **P 21 14 56.9 -0.4**
comp=Z,6.6nm,0.6s,mb4.7
LMR La Mourre 74.02 311 ⇑*i*P **P 21 14 56.9 -0.4**
LMR pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
SSF Saint Saulge 74.06 316 *e*P **P 21 14 56.7 -0.8**
comp=Z,11nm,0.9s,mb4.5
SSF Saint Saulge 74.06 316 *e*P **P 21 14 56.7 -0.8**
comp=Z,5.6nm,0.9s,mb4.5
SSF Saint Saulge 74.06 316 *e*P **P 21 14 56.7 -0.8**
SSF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
SMF Signal de Mont 74.06 315 *e*P **P 21 14 56.9 -0.6**
comp=Z,55nm,1.1s,mb5.1
SMF Signal de Mont 74.06 315 *e*P **P 21 14 56.9 -0.6**
comp=Z,28nm,1.1s,mb5.1
SMF Signal de Mont 74.06 315 *e*P **P 21 14 56.9 -0.6**
SMF pmax pmax
comp=Z,28nm,1.1s,mb5.1
CMSA Cobar Meteorol 74.24 144 *e*P **P 21 14 59.0 +0.4**
AVF Avril sur Loir 74.28 315 ⇑*i*P **P 21 14 58.3 -0.5**
comp=Z,45nm,1.1s,mb5.0
AVF Avril sur Loir 74.28 315 ⇑*i*P **P 21 14 58.3 -0.5**
comp=Z,22nm,1.1s,mb5.0
AVF Avril sur Loir 74.28 315 ⇑*i*P **P 21 14 58.3 -0.5**
AVF pmax pmax
comp=Z,22nm,1.1s,mb5.0
SMRF Simiane la Rot 74.30 312 *e*P **P 21 14 59.1 +0.1**
VIVF Saint-Julien-l 74.43 313 *e*P **P 21 14 59.3 -0.4**
comp=Z,66nm,1.4s,mb5.1
VIVF Saint-Julien-l 74.43 313 *e*P **P 21 14 59.3 -0.4**
comp=Z,33nm,1.4s,mb5.1

VIVF	**Saint-Julien-I**	**74.43**	**313**	*e*P		**P**		**21 14 59.3**	**-0.4**
VIVF				pmax		pmax			
	comp=Z,33nm,1.4s,mb5.1								
HYF	**Humbligny**	**74.47**	**316**	*e*P		**P**		**21 14 59.8**	**-0.1**
BGF	**Bois d'Agland**	**74.70**	**315**	*e*P		**P**		**21 15 00.9**	**-0.4**
TCF	**Toulx Ste Croi**	**75.22**	**315**	*e*P		**P**		**21 15 04.1**	**-0.2**
	comp=Z,79nm,1.4s,mb5.2								
TCF	**Toulx Ste Croi**	**75.22**	**315**	*e*P		**P**		**21 15 04.1**	**-0.2**
	comp=Z,39nm,1.4s,mb5.2								
TCF	**Toulx Ste Croi**	**75.22**	**315**	*e*P		**P**		**21 15 04.1**	**-0.2**
TCF				pmax		pmax			
	comp=Z,39nm,1.4s,mb5.1								
LASF	**Ste Croix**	**75.33**	**313**	*e*P		**P**		**21 15 04.9**	**0.0**
	comp=Z,108nm,1.5s,mb5.2								
LDF	**La Druitiere**	**75.38**	**318**	*e*P		**P**		**21 15 04.6**	**-0.6**
	comp=Z,28nm,1.2s,mb4.8								
LDF	**La Druitiere**	**75.38**	**318**	*e*P		**P**		**21 15 04.6**	**-0.6**
	comp=Z,14nm,1.2s,mb4.8								
LDF	**La Druitiere**	**75.38**	**318**	*e*P		**P**		**21 15 04.6**	**-0.6**
LDF				pmax		pmax			
	comp=Z,14nm,1.2s,mb4.8								
FLN	**La Foliniere**	**75.50**	**319**	*e*P		**P**		**21 15 04.4**	**-1.4**
FLN				*e*MLR		MLR			
	comp=Z,183nm,20.0s,MS4.1								
FLN	**La Foliniere**	**75.50**	**319**	*e*P		**P**		**21 15 04.4**	**-1.4**
FLN				MLR		MLR			
	comp=Z,180nm,20.0s,MS4.4								
KEST	**Kesra**	**75.75**	**303**	*e*P		**P**		**21 15 08.1**	**+0.5**
KEST	**Kesra**	**75.75**	**303**	P		**P**		**21 15 07.9**	**+0.4**
	comp=Z,3.0nm,0.9s,mb4.2,baz=99,slow=1.6,SNR=7.5								
GRR	**Gorron**	**75.91**	**318**	*e*P		**P**		**21 15 07.7**	**-0.5**
	comp=Z,135nm,1.4s,mb5.4								
GRR	**Gorron**	**75.91**	**318**	*e*P		**P**		**21 15 07.7**	**-0.5**
	comp=Z,68nm,1.4s,mb5.4								
GRR	**Gorron**	**75.91**	**318**	*e*P		**P**		**21 15 07.7**	**-0.5**
GRR				pmax		pmax			
	comp=Z,68nm,1.4s,mb5.4								
CAF	**Calviac**	**76.00**	**314**	*e*P		**P**		**21 15 09.0**	**+0.2**
RJF	**Les Rejaudoux**	**76.14**	**315**	*e*P		**P**		**21 15 09.9**	**+0.3**
RJF				*e*MLR		MLR			
	comp=Z,205nm,19.2s,MS4.2								
RJF	**Les Rejaudoux**	**76.14**	**315**	*e*P		**P**		**21 15 09.9**	**+0.3**
RJF				MLR		MLR			
	comp=Z,210nm,19.3s,MS4.5								
MFF	**Saint Martin d**	**76.45**	**317**	*e*P		**P**		**21 15 11.1**	**-0.2**
SKAG	**Skagway**	**76.65**	**27**	*e*P		**P**		**21 15 12.7**	**+0.5**
	comp=Z,33nm,1.0s,mb5.2								
LFF	**La Frestale**	**76.80**	**315**	*e*P		**P**		**21 15 13.5**	**+0.2**
SGMF	**Saint Gilles**	**76.94**	**319**	*e*P		**P**		**21 15 13.9**	**-0.1**
	comp=Z,113nm,1.1s,mb5.4								
SGMF	**Saint Gilles**	**76.94**	**319**	*e*P		**P**		**21 15 13.9**	**-0.1**
	comp=Z,57nm,1.1s,mb5.4								
SGMF	**Saint Gilles**	**76.94**	**319**	*e*P		**P**		**21 15 13.9**	**-0.1**
SGMF				pmax		pmax			
	comp=Z,57nm,1.1s,mb5.4								
ROSF	**Rostrenen**	**77.29**	**319**	*e*P		**P**		**21 15 14.9**	**-1.1**
QUIF	**Quistinic**	**77.46**	**319**	*e*P		**P**		**21 15 16.7**	**-0.3**
EPF	**Esparros**	**78.06**	**313**	*e*P		**P**		**21 15 18.8**	**-1.6**
	comp=Z,11nm,0.9s,mb4.5								
EPF	**Esparros**	**78.06**	**313**	*e*P		**P**		**21 15 18.8**	**-1.6**
	comp=Z,5.6nm,0.9s,mb4.5								
EPF	**Esparros**	**78.06**	**313**	*e*P		**P**		**21 15 18.8**	**-1.6**
EPF				pmax		pmax			
	comp=Z,6.0nm,0.9s,mb4.5								
ETSF	**Etsaut**	**78.68**	**314**	*e*P		**P**		**21 15 24.0**	**+0.2**
SJPF	**Ste Jean**	**78.97**	**314**	*e*P		**P**		**21 15 24.8**	**-0.6**
DLBC	**Dease Lake**	**79.36**	**26**	P		**P**		**21 15 27.4**	**+0.2**
	comp=Z,5.0nm,0.8s,mb4.5,baz=280,slow=8.9,SNR=6.0								
YKA	**Yellowknife Ar**	**80.98**	**17**	P		**P**		**21 15 35.7**	**-0.2**
	comp=Z,8.0nm,0.7s,mb4.8,baz=330,slow=5.2,SNR=25								
ESDC	**Sonseca Array**	**82.61**	**312**	P		**P**		**21 15 44.8**	**-0.2**
	comp=Z,1.5nm,0.7s,mb4.1,baz=52,slow=6.1,SNR=8.0								
TAM	**Tamanrasset**	**85.22**	**294**	*e*P		**P**		**21 15 59.4**	**+0.8**
	comp=Z,2.6nm,0.9s,mb4.4								
TAM	**Tamanrasset**	**85.22**	**294**	*e*P		**P**		**21 15 59.4**	**+0.8**
TAM				pmax		pmax			
	comp=Z,3.0nm,0.9s,mb4.4								
SFS	**San Fernando**	**85.93**	**311**	*e*P		**P**		**21 16 02.4**	**+0.5**
LSZ	**Lusaka**	**86.51**	**250**	P		**P**		**21 16 05.0**	**+0.1**
	comp=Z,6.6nm,0.5s,mb5.1,baz=50,slow=20,SNR=24								
MDT	**Midelt**	**87.05**	**307**	P		**P**		**21 16 07.6**	**+0.1**
	comp=Z,6.6nm,1.0s,mb4.8,baz=43,slow=2.4,SNR=7.3								
FCC	**Fort Churchill**	**88.47**	**9**	*e*P		**P**		**21 16 13.5**	**-0.2**
EDM	**Edmonton**	**89.22**	**22**	*e*P		**P**		**21 16 17.3**	**-0.1**
JCW	**Jim Creek**	**90.27**	**29**	*e*P		**P**		**21 16 23.0**	**+0.7**
	comp=Z,6.8nm,0.6s,mb5.2								
FFC	**Flin Flon**	**90.90**	**15**	*e*P		**P**		**21 16 24.3**	**-0.9**
	comp=Z,10nm,1.2s,mb5.0								
FFC	**Flin Flon**	**90.90**	**15**	*ce*P		**P**		**21 16 25.2**	**0.0**
ETW	**Entiat**	**91.39**	**28**	*e*P		**P**		**21 16 27.4**	**-0.2**
	comp=Z,9.7nm,0.8s,mb5.2								
OD2	**Odessa Site #2**	**92.21**	**28**	*e*P		**P**		**21 16 31.7**	**+0.3**
	comp=Z,4.0nm,0.8s,mb4.8								
BSMT	**Basoo Peak**	**93.31**	**25**	*e*P		**P**		**21 16 37.6**	**+1.1**
	comp=Z,2.1nm,0.5s,mb4.8								
SCHQ	**Schefferville**	**93.36**	**355**	P		**P**		**21 16 36.1**	**-0.4**
	comp=Z,9.3nm,0.7s,mb5.4,baz=21,slow=4.5,SNR=17								
LBTB	**Lobatse**	**93.92**	**243**	*e*P		**P**		**21 16 38.5**	**-1.0**
	comp=Z,2.2nm,0.4s,mb4.9								
LBTB	**Lobatse**	**93.92**	**243**	*e*P		**P**		**21 16 38.5**	**-1.1**
LBTB				pmax		pmax			
	comp=Z,2.0nm,0.4s,mb4.9								
SLMT	**Seeley Lake**	**94.29**	**25**	*e*P		**P**		**21 16 41.5**	**+0.5**
	comp=Z,10nm,1.0s,mb5.2								
CHMT	**Chamberlain Mo**	**94.65**	**25**	*e*P		**P**		**21 16 43.1**	**+0.5**
BMO	**Blue Mountains**	**94.85**	**28**	*e*P		**P**		**21 16 42.9**	**-0.7**
	comp=Z,4.3nm,1.3s,mb4.7								
BOSA	**Boshof**	**96.13**	**240**	*e*P		**P**		**21 16 51.2**	**+1.6**
HLID	**Hailey**	**97.07**	**27**	*e*P		**P**		**21 16 54.4**	**+0.6**
	comp=Z,1.2nm,0.6s,mb4.5								
DBIC	**Dimbokro**	**102.47**	**286**	*e*Pdif		Pdif		21 17 19.2	+1.4
QSPA	**South Pole Qui**	**121.59**	**180**	*e*PKPdf		PKPdf		21 22 12.9	-1.2
OTAV	**Otavalo**	**148.02**	**5**	*e*PKPdf		PKPdf		21 23 05.9	+1.1
OTAV				*e*PKPbc		PKPbc		21 23 08.4	+0.5
CPUP	**Villa Florida**	**162.98**	**284**	PKP		PKPdf		21 23 23.4	-0.9
	comp=Z,3.0nm,0.8s,baz=146,slow=3.4,SNR=4.6								
LPAZ	**La Paz**	**163.04**	**334**	PKP		PKPdf		21 23 24.5	-0.2
	comp=Z,4.7nm,1.0s,baz=20,slow=3.5,SNR=12								

*VIE **12** 21:21:53.9±0.5, 41°.53N×15°.80E, h10km, mb3.0/3, Ms3.3/3, Error ellipse: s-maj=9.3km s-min=3.9km az=81.0 100 km WNW of Bari*
*ISCJB **12** 21:21:55.0±0.2, 41°.44N±0°.02×15°.69E±0°.02, h27km±2km, Error ellipse: s-maj=3.1km s-min=2.3km az=34.4*
*ROM **12** 21:21:54.2±0.1, 41°.41N×15°.68E, h4km±1km, Ml3.0/39, Error ellipse: s-maj=1.1km s-min=1.1km az=71.0*
*CSEM **12** 21:21:54.5±0.1, 41°.41N×15°.66E, h20km, ML3.9/16, Ms3.3, Error ellipse: s-maj=2.6km s-min=2.1km az=40.0*

ISC 12 21:21:55.1±0.2, 41°.42N±0°.01×15°.67E±0°.02, h18km±2km, n106, σ0s86/152, 3C, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
RGNG	**Rignano Grg**	**0.26**	**346**	Pg		**Pg**	**21**	**22 00.1**	**-0.9**
RGNG				Sg		**Sg**	**21**	**22 04.7**	**-0.3**
RGNG	**Rignano Grg**	**0.26**	**346**	Pg		**Pg**	**21**	**22 00.1**	**-0.9**
RGNG				Sg		**Sg**	**21**	**22 04.7**	**-0.3**
FG5	**Orsara di Pugl**	**0.33**	**246**	Pg		**Pg**	**21**	**22 02.0**	**-0.2**
FG5				Sg		**Sg**	**21**	**22 06.2**	**-0.8**
FG5	**Orsara di Pugl**	**0.33**	**246**	Pg		**Pg**	**21**	**22 02.0**	**-0.2**
FG5				Sg		**Sg**	**21**	**22 06.2**	**-0.8**
SGRT	**San Giovanni R**	**0.34**	**9**	Pg		**Pg**	**21**	**22 02.3**	**0.0**
SGRT				Sg		**Sg**	**21**	**22 07.7**	**+0.5**
	2μm,0.3s								
SGRT	**San Giovanni R**	**0.34**	**9**	Pg		**Pg**	**21**	**22 02.3**	**0.0**
SGRT				Sg		**Sg**	**21**	**22 07.7**	**+0.5**
	2μm,0.3s								
MSAG	**Monte S. Angel**	**0.34**	**31**	Pg		**Pg**	**21**	**22 02.5**	**+0.1**
MSAG				Sg		**Sg**	**21**	**22 08.1**	**+0.8**
	1μm,0.3s								
MSAG	**Monte S. Angel**	**0.34**	**31**	Pg		**Pg**	**21**	**22 02.5**	**+0.1**
MSAG				Sg		**Sg**	**21**	**22 08.1**	**+0.8**
	1μm,0.3s								
MS1	**Monte Sant'Ang**	**0.35**	**35**	*i* Pg		**Pg**	**21**	**22 02.9**	**+0.4**
MS1				*e*Sg		**Sg**	**21**	**22 08.7**	**+1.2**
SGTA	**Sant Agata di**	**0.37**	**219**	Pg		**Pg**	**21**	**22 03.0**	**+0.2**
	978nm,0.4s								
SGTA	**Sant Agata di**	**0.37**	**219**	Pg		**Pg**	**21**	**22 03.0**	**+0.2**
	978nm,0.4s								
MOCO	**Biccari - m.te**	**0.39**	**263**	Pg		**Pg**	**21**	**22 03.9**	**+0.7**
MOCO				Sg		**Sg**	**21**	**22 09.2**	**+0.6**
	1μm,0.6s								
VULT	**Monte Vulture**	**0.47**	**185**	Pg		**Pg**	**21**	**22 04.6**	**+0.1**
VULT				Sg		**Sg**	**21**	**22 11.9**	**+1.0**
	3μm,0.2s								
VULT	**Monte Vulture**	**0.47**	**185**	Pg		**Pg**	**21**	**22 04.6**	**+0.1**
VULT				Sg		**Sg**	**21**	**22 11.9**	**+1.0**
	3μm,0.2s								
MELA	**Melanico ??? S**	**0.50**	**305**	Pg		**Pg**	**21**	**22 05.2**	**0.0**
MELA				Sg		**Sg**	**21**	**22 13.8**	**+1.9**
	1μm,0.3s								
MELA	**Melanico ??? S**	**0.50**	**305**	Pg		**Pg**	**21**	**22 05.2**	**0.0**
MELA				Sg		**Sg**	**21**	**22 13.8**	**+1.9**
	1μm,0.3s								
CAFE	**Carife**	**0.51**	**220**	Pg		**Pg**	**21**	**22 05.5**	**+0.1**
CAFE				Sg		**Sg**	**21**	**22 14.2**	**+2.0**
	333nm,0.3s								
CAFE	**Carife**	**0.51**	**220**	Pg		**Pg**	**21**	**22 05.5**	**+0.1**
CAFE				Sg		**Sg**	**21**	**22 14.2**	**+2.0**
	333nm,0.3s								
PALZ	**Palazzo San Ge**	**0.52**	**155**	Pg		**Pg**	**21**	**22 05.1**	**-0.5**
PALZ				Sg		**Sg**	**21**	**22 13.5**	**+0.9**
	1μm,0.5s								
PALZ	**Palazzo San Ge**	**0.52**	**155**	Pg		**Pg**	**21**	**22 05.1**	**-0.5**
PALZ				Sg		**Sg**	**21**	**22 13.5**	**+0.9**
	1μm,0.5s								
MRVN	**Minervino Murg**	**0.53**	**132**	Pg		**Pg**	**21**	**22 05.0**	**-0.8**
MRVN				Sg		**Sg**	**21**	**22 13.6**	**+0.7**
	547nm,0.2s								
MRVN	**Minervino Murg**	**0.53**	**132**	Pg		**Pg**	**21**	**22 05.0**	**-0.8**
MRVN				Sg		**Sg**	**21**	**22 13.6**	**+0.7**
	547nm,0.2s								
FG2	**Serracapriola**	**0.54**	**315**	Pg		**Pg**	**21**	**22 04.8**	**-1.2**
FG2	**Serracapriola**	**0.54**	**315**	Pg		**Pg**	**21**	**22 04.8**	**-1.2**
CDT	**Castel del Mon**	**0.57**	**126**	*e*Pg		**Pg**	**21**	**22 05.6**	**-0.8**
CDT				*e*Sg		**Sg**	**21**	**22 14.4**	**+0.5**
MRB1	**Monte Rocchett**	**0.60**	**241**	Pg		**Pg**	**21**	**22 07.2**	**+0.2**
	1μm,0.5s								
MRB1	**Monte Rocchett**	**0.60**	**241**	Pg		**Pg**	**21**	**22 07.2**	**+0.2**
	1μm,0.5s								
SNAL	**S. Angelo Dei**	**0.60**	**215**	Pg		**Pg**	**21**	**22 06.7**	**-0.4**
SNAL				Sg		**Sg**	**21**	**22 16.3**	**+1.1**
	719nm,0.3s								
SNAL	**S. Angelo Dei**	**0.60**	**215**	Pg		**Pg**	**21**	**22 06.7**	**-0.4**
SNAL				Sg		**Sg**	**21**	**22 16.3**	**+1.1**
	719nm,0.3s								
CIGN	**Sant'Elia a Pi**	**0.62**	**292**	Pg		**Pg**	**21**	**22 07.5**	**+0.1**
CIGN				Sg		**Sg**	**21**	**22 17.4**	**+1.7**
	487nm,0.6s								
CIGN	**Sant'Elia a Pi**	**0.62**	**292**	Pg		**Pg**	**21**	**22 07.5**	**+0.1**
CIGN				Sg		**Sg**	**21**	**22 17.4**	**+1.7**
	487nm,0.6s								
ACER	**Acerenza**	**0.67**	**162**	Pg		**Pg**	**21**	**22 07.8**	**-0.4**
ACER				Sg		**Sg**	**21**	**22 18.2**	**+1.1**
	2μm,0.6s								
ACER	**Acerenza**	**0.67**	**162**	Pg		**Pg**	**21**	**22 07.8**	**-0.4**
ACER				Sg		**Sg**	**21**	**22 18.2**	**+1.1**
	2μm,0.6s								
MRLC	**Muro Lucano**	**0.68**	**192**	Pg		**Pg**	**21**	**22 08.0**	**-0.4**
MRLC				Sg		**Sg**	**21**	**22 17.7**	**+0.3**
	1μm,0.3s								
MRLC	**Muro Lucano**	**0.68**	**192**	Pg		**Pg**	**21**	**22 08.0**	**-0.4**
MRLC				Sg		**Sg**	**21**	**22 17.7**	**+0.3**
	1μm,0.3s								
PSB1	**Pescosannita**	**0.68**	**253**	Pg		**Pg**	**21**	**22 08.2**	**-0.2**
	415nm,0.4s								
PSB1	**Pescosannita**	**0.68**	**253**	Pg		**Pg**	**21**	**22 08.2**	**-0.2**
	415nm,0.4s								
SACR	**S. Croce Del S**	**0.73**	**269**	Pg		**Pg**	**21**	**22 09.3**	**-0.1**
SACR				Sg		**Sg**	**21**	**22 19.2**	**+0.2**
	380nm,0.6s								
SACR	**S. Croce Del S**	**0.73**	**269**	Pg		**Pg**	**21**	**22 09.3**	**-0.1**
SACR				Sg		**Sg**	**21**	**22 19.2**	**+0.2**
	380nm,0.6s								
MCRV	**Calabrutti - M**	**0.74**	**211**	Pg		**Pg**	**21**	**22 08.6**	**-1.0**
MCRV				Sg		**Sg**	**21**	**22 20.5**	**+1.0**
	888nm,0.2s								
MCRV	**Calabrutti - M**	**0.74**	**211**	Pg		**Pg**	**21**	**22 08.6**	**-1.0**
MCRV				Sg		**Sg**	**21**	**22 20.5**	**+1.0**
	888nm,0.2s								
PZUN	**Potenza**	**0.78**	**172**	Pg		**Pg**	**21**	**22 10.2**	**-0.2**
PZUN	**Potenza**	**0.78**	**172**	Pg		**Pg**	**21**	**22 10.2**	**-0.2**
BSSO	**Busso**	**0.82**	**279**	Pg		**Pg**	**21**	**22 11.0**	**-0.1**
	363nm,0.7s								
BSSO	**Busso**	**0.82**	**279**	Pg		**Pg**	**21**	**22 11.0**	**-0.1**
	363nm,0.7s								
AMUR	**Altamura**	**0.87**	**126**	Pg		**Pg**	**21**	**22 11.1**	**-1.0**
AMUR				Sg		**Sg**	**21**	**22 23.8**	**+0.3**
	633nm,0.2s								
AMUR	**Altamura**	**0.87**	**126**	Pg		**Pg**	**21**	**22 11.1**	**-1.0**
AMUR				Sg		**Sg**	**21**	**22 23.8**	**+0.3**
	633nm,0.2s								
TRIV	**Trivento**	**0.91**	**293**	Pg		**Pg**	**21**	**22 12.6**	**-0.2**
	382nm,0.5s								
TRIV	**Trivento**	**0.91**	**293**	Pg		**Pg**	**21**	**22 12.6**	**-0.2**
	382nm,0.5s								
FRES	**Fresagrandinar**	**0.93**	**307**	Pg		**Pg**	**21**	**22 12.4**	**-0.9**
	377nm,0.3s								
FRES	**Fresagrandinar**	**0.93**	**307**	Pg		**Pg**	**21**	**22 12.4**	**-0.9**
	377nm,0.3s								
PTRP	**Pietrapertosa**	**0.94**	**162**	Pg		**Pg**	**21**	**22 13.4**	**-0.1**
	901nm,0.6s								
PTRP	**Pietrapertosa**	**0.94**	**162**	Pg		**Pg**	**21**	**22 13.4**	**-0.1**
	901nm,0.6s								
SG1	**Sgolgore (BA)**	**0.96**	**127**	*e*Pg		**Pg**	**21**	**22 12.3**	**-1.4**
SG1				*e*Sg		**Sg**	**21**	**22 25.4**	**-0.9**
BAI	**Bari**	**0.96**	**109**	*i* Pg		**Pg**	**21**	**22 12.7**	**-1.1**
BAI				*e*Sg		**Sg**	**21**	**22 27.1**	**+0.7**
CDRU	**Civita di Ruta**	**0.97**	**197**	Pg		**Pg**	**21**	**22 12.6**	**-1.4**
	218nm,0.2s								
CDRU	**Civita di Ruta**	**0.97**	**197**	Pg		**Pg**	**21**	**22 12.6**	**-1.4**
	218nm,0.2s								
SGG	**Gregorio Mates**	**0.97**	**268**	Pg		**Pg**	**21**	**22 13.4**	**-0.6**
	298nm,0.4s								
SGG	**Gregorio Mates**	**0.97**	**268**	Pg		**Pg**	**21**	**22 13.4**	**-0.6**
	298nm,0.4s								
MIGL	**Miglionico**	**1.00**	**144**	Pg		**Pg**	**21**	**22 13.1**	**-1.4**
MIGL				Sg		**Sg**	**21**	**22 28.4**	**+0.7**
	1μm,0.4s								
MIGL	**Miglionico**	**1.00**	**144**	Pg		**Pg**	**21**	**22 13.1**	**-1.4**
MIGL				Sg		**Sg**	**21**	**22 28.4**	**+0.7**
	1μm,0.4s								
VAGA	**Valle Agricola**	**1.08**	**270**	Pg		**Pg**	**21**	**22 15.1**	**-1.0**
	352nm,0.5s								
VAGA	**Valle Agricola**	**1.08**	**270**	Pg		**Pg**	**21**	**22 15.1**	**-1.0**
	352nm,0.5s								
MIDA	**Miranda**	**1.09**	**282**	Pg		**Pg**	**21**	**22 15.0**	**-1.2**
	175nm,0.3s								
MIDA	**Miranda**	**1.09**	**282**	Pg		**Pg**	**21**	**22 15.0**	**-1.2**
	175nm,0.3s								
MATE	**Matera**	**1.10**	**134**	Pg		**Pg**	**21**	**22 14.4**	**-1.9**
MATE				Sg		**Sg**	**21**	**22 30.2**	**-0.5**
	928nm,0.5s								
MATE	**Matera**	**1.10**	**134**	Pg		**Pg**	**21**	**22 14.4**	**-1.9**
MATE				Sg		**Sg**	**21**	**22 30.2**	**-0.5**
	928nm,0.5s								
RNI2	**Rionero Sannit**	**1.18**	**284**	Pg		**Pg**	**21**	**22 16.3**	**-0.3**
	193nm,0.4s								
RNI2	**Rionero Sannit**	**1.18**	**284**	Pg		**Pn**	**21**	**22 16.3**	**-0.3**
	193nm,0.4s								
CERA	**Filignano**	**1.25**	**279**	Pg		**Pg**	**21**	**22 18.3**	**-1.0**
	246nm,0.6s								
CERA	**Filignano**	**1.25**	**279**	Pg		**Pg**	**21**	**22 18.3**	**-1.0**
	246nm,0.6s								
RFI	**Roccamonfina**	**1.28**	**265**	Pg		**Pn**	**21**	**22 17.5**	**-0.5**
	22nm,0.9s								
RFI	**Roccamonfina**	**1.28**	**265**	Pg		**Pn**	**21**	**22 17.5**	**-0.5**
	22nm,0.9s								
CAFR	**Castel Frentan**	**1.28**	**310**	Pg		**Pn**	**21**	**22 18.2**	**+0.1**
	829nm,0.4s								
CAFR	**Castel Frentan**	**1.28**	**310**	Pg		**Pn**	**21**	**22 18.2**	**+0.1**
	829nm,0.4s								
LPEL	**Lama dei Pelig**	**1.28**	**300**	Pg		**Pn**	**21**	**22 17.8**	**-0.3**
	253nm,0.2s								
LPEL	**Lama dei Pelig**	**1.28**	**300**	Pg		**Pn**	**21**	**22 17.8**	**-0.3**
	253nm,0.2s								
BULG	**Bulgheria - Ca**	**1.36**	**190**	Pg		**Pn**	**21**	**22 19.0**	**-0.2**
	400nm,0.9s								
BULG	**Bulgheria - Ca**	**1.36**	**190**	Pg		**Pn**	**21**	**22 19.0**	**-0.2**
	400nm,0.9s								
MODR	**Mondragone**	**1.38**	**259**	Pg		**Pn**	**21**	**22 18.8**	**-0.7**
	41nm,0.4s								
CUC	**Castrocucco**	**1.43**	**176**	Pg		**Pn**	**21**	**22 19.3**	**-0.8**
	119nm,0.5s								
INTR	**Introdacqua**	**1.45**	**295**	Pg		**Pn**	**21**	**22 20.4**	**0.0**
	233nm,0.7s								
PE1	**Pezze di Greco**	**1.46**	**114**	*i* Pg		**Pn**	**21**	**22 19.7**	**-0.8**
PE1				*e*Sg		**Sg**	**21**	**22 41.4**	**-0.8**
POFI	**Posta Fibreno**	**1.50**	**282**	Pg		**Pn**	**21**	**22 21.1**	**0.0**
	122nm,0.8s								
TAR1	**Taranto**	**1.51**	**126**	*e*Pg		**Pn**	**21**	**22 19.8**	**-1.5**
TAR1				*e*Sg		**Sn**	**21**	**22 41.1**	**+0.6**
VVLD	**Villa Vallelon**	**1.60**	**287**	Pg		**Pn**	**21**	**22 22.6**	**+0.1**
	194nm,0.7s								
FIAM	**Fiamignano**	**2.09**	**295**	Pg		**Pn**	**21**	**22 30.6**	**+1.4**
	42nm,0.5s								
BBLS	**Lazići**	**3.68**	**47**	⇑*i* Pn		**Pn**	**21**	**22 51.8**	**+0.7**
DIVS	**Divibare**	**4.16**	**48**	*e*Pn		**Pn**	**21**	**22 57.4**	**-0.2**
KRUS	**Krusevo**	**4.20**	**89**	*e*Pn		**Pn**	**21**	**22 57.5**	**-0.6**
KRUS				*e*Sg		**Sn**	**21**	**23 40.0**	**-6.7**
BARS	**Barje**	**4.78**	**71**	⇑*i* Pn		**Pn**	**21**	**23 07.2**	**+1.0**
VOY	**Vojsko**	**4.79**	**345**	*e*Pn		**Pn**	**21**	**23 07.8**	**+1.5**
VOY				*e*Sn		**Sn**	**21**	**23 58.5**	**-2.8**
VOY	**Vojsko**	**4.79**	**345**	*e*Pn		**Pn**	**21**	**23 07.8**	**+1.5**
VOY				*e*Sn		**Sn**	**21**	**23 58.5**	**-2.8**
VLS	**Valsamata**	**4.98**	**129**	*e*P		**Pn**	**21**	**23 08.9**	**-0.1**
THL	**Klokotos Trika**	**5.18**	**109**	*e*P		**Pn**	**21**	**23 12.9**	**+1.2**
EVR	**Evrytania**	**5.32**	**116**	*e*P		**Pn**	**21**	**23 15.5**	**+1.8**
AGG	**Agios Georgios**	**5.63**	**113**	*e*P		**Pn**	**21**	**23 19.4**	**+1.5**
EFP	**Efpalio**	**5.65**	**120**	*e*P		**Pn**	**21**	**23 19.2**	**+1.1**
GUR	**Goura**	**6.21**	**122**	*e*P		**Pn**	**21**	**23 27.0**	**+1.1**
MOA	**Molln**	**6.51**	**352**	⇑*i* Pn		**Pn**	**21**	**23 29.7**	**-0.2**
MOA	**Molln**	**6.51**	**352**	Pn		**Pn**	**21**	**23 29.7**	**-0.2**
PYL	**PYLOS**	**6.53**	**132**	*e*P		**Pn**	**21**	**23 29.5**	**-0.8**
DID	**Didima**	**7.04**	**121**	*e*P		**Pn**	**21**	**23 37.4**	**+0.2**
VLY	**Voula,Athens**	**7.21**	**117**	*e*P		**Pn**	**21**	**23 39.6**	**0.0**
VLI	**Veliai**	**7.35**	**127**	*e*P		**Pn**	**21**	**23 42.0**	**+0.6**
KYTH	**Kithira**	**7.70**	**129**	*e*P		**Pn**	**21**	**23 47.1**	**+0.8**

*ISCJB **12** 21:34:44.4±0.4, 34°.79N±0°.02×32°.77E±0°.04, h30km±4km, Error ellipse: s-maj=5.7km s-min=3.3km az=164.5*
*CSEM **12** 21:34:45.5±0.3, 34°.89N×32°.77E, h20km, Mw3.3, Error ellipse: s-maj=8.2km s-min=5.6km az=4.0*
*NEIC **12** 21:34:45.5, 34°.86N×32°.80E, h25km, ML3.0(NIC), After NIC.*
*NIC **12** 21:34:45.5±0.1, 34°.86N×32°.80E, h25km, ML3.0, MW3.3*
*ISK **12** 21:34:47.6, 35°.28N×32°.82E, h8km, MD3.5*
*DDA **12** 21:34:47.2, 35°.18N×32°.93E, h6km, Md3.3*
*GII **12** 21:34:48.0±1.1, 34°.77N×32°.76E, h32km±3km, Md2.2/4*

ISC 12 21:34:45.4±0.4, 34°.83N±0°.02×32°.79E±0°.04, h26km±3km, n49, σ0s85/81, 4C-8D, Cyprus region

| Code | Station Name | Δ° | AZ°

ASAR	**Alice Springs**	**50.44**	**252**	P	**P**	**21 49 38.2**	**-0.4**
	1.8nm,0.6s,mb4.3,baz=86,slow=8.5,SNR=30						
RPN	**Rapa Nui**	**59.85**	**113**	P	**P**	**21 50 45.5**	**-1.0**
NWAO	**Narrogin (SRO)**	**64.88**	**241**	P	**P**	**21 51 20.0**	**-0.1**
NVAR	**Mina Array Bea**	**74.19**	**42**	P	**P**	**21 52 18.9**	**+1.5**
	0.3nm,0.3s,mb3.7,baz=204,slow=8.8,SNR=2.9						
ILAR	**Eielson Array**	**82.54**	**11**	P	**P**	**21 53 04.4**	**+1.6**
ILAR	**Eielson Array**	**82.54**	**11**	P	**P**	**21 53 04.4**	**+1.6**
	0.4nm,0.7s,mb3.6,baz=228,slow=6.5,SNR=5.5						
BRTR	**Keskin Array B**	**146.54**	**321**	PKPbc	PKPbc	22 00 23.5	+1.5
	0.8nm,0.6s,baz=46,slow=4.2,SNR=5.6						

JMA 12 21:51:19.5±0.6, 29°97N×142°09E, h0km, M4.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.68**	**329**	*e*S	Sn	21 53 03.5	+1.7
BSO1	**Boso 1**	**4.76**	**349**	P	Pn	21 52 34.6	+2.1
BSO1				*e*S	Sn	21 53 32.1	+3.6
BSO3	**Boso 3**	**5.00**	**345**	P	Pn	21 52 38.4	+2.6
JHU	**Hanno**	**6.32**	**339**	P	Pn	21 52 57.2	+3.2
JHU				*e*S	Sn	21 54 10.4	+3.5
JRY	**Ryogami san**	**6.60**	**337**	P	Pn	21 53 00.8	+3.1
JHO	**Hitachi**	**6.74**	**350**	P	Pn	21 53 01.4	+1.7
JHO				*e*S	Sn	21 54 17.2	-0.1
JAG	**Ashikaga**	**6.81**	**342**	P	Pn	21 53 03.1	+2.5
JAG				*e*S	Sn	21 54 21.2	+2.4

IDC ***12*** *22:28:30.8±7.2, 14°.29S×167°.52E, h121km±61km, mb3.9/12, mb1 4.0/12, mb1mx4.0/16, mbtmp3.9/12, Error ellipse: s-maj=29.4km s-min=20.8km az=81.0*
ISCJB ***12*** *22:28:33.4±1.5, 14°.33S±0°.06×167°.42E±0°.08, h162km±13km, mb4.0/19, Error ellipse: s-maj=12.2km s-min=9.2km az=162.6*
NEIC ***12*** *22:28:34.1±1.1, 14°.27S×167°.46E, h153km±9km, mb4.2/11, Error ellipse: s-maj=7.8km s-min=6.7km az=65.0*
LDG ***12*** *22:28:45.5±0.2, 15°.09S×165°.90E, h240km, Mb3.9/2, Error ellipse: s-maj=40.3km s-min=7.4km az=79.0*
ISC 12 22:28:33.8±1.4, 14°.29S±0°.06×167°.46E±0°.07, h151km±12km, n79, σ0.83/40, mb4.0/19, 1C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.80**	**187**	*e*Pn	**Pn**	**22 30 26.6**	**+2.1**
	16nm,0.5s						
DZM				*e*Sn	**Sn**	22 31 50.7	**-0.8**
HNR	**Honiara**	**8.80**	**302**	*e*Pn	**Pn**	**22 30 37.9**	**0.0**
EIDS	**Eidsvold**	**18.92**	**232**	*e*P	**P**	**22 32 43.1**	**0.0**
AFI	**Afiamalu**	**20.14**	**91**	*e*P	**P**	**22 32 55.7**	**-0.8**
	31nm,0.7s						
CTA	**Charters Tower**	**21.05**	**251**	P	**P**	**22 33 06.4**	**+0.3**
	2.3nm,0.6s,mb3.7,baz=67,slow=11,SNR=3.0						
URZ	**Urewera**	**25.36**	**162**	*e*P	**P**	**22 33 46.3**	**-0.6**
STKA	**Stephens Creek**	**29.42**	**229**	*e*P	**P**	**22 34 23.8**	**+0.6**
	0.9nm,0.4s,mb3.9						
STKA				PcP	PcP	22 37 25.4	0.0
STKA	**Stephens Creek**	**29.42**	**229**	P	**P**	**22 34 24.1**	**+0.9**
	4.3nm,0.4s,mb4.5,baz=62,slow=9.2,SNR=31						
STKA				PcP	PcP	22 37 25.4	0.0
	3.5nm,0.7s,baz=30,slow=8.0,SNR=5.6						
RPZ	**Rata Peaks**	**29.48**	**175**	P	**P**	**22 34 24.1**	**+0.5**
	6.7nm,0.8s,mb4.5,baz=344,slow=7.4,SNR=3.3						
TUZ	**Tuapeka**	**31.62**	**177**	*e*Pn	**P**	**22 34 35.1**	**-7.2**
WB2	**Warramunga Arr**	**32.10**	**255**	*e*P	**P**	**22 34 46.0**	**-1.0**
ASAR	**Alice Springs**	**33.00**	**249**	P	**P**	**22 34 53.6**	**-1.1**
	1.4nm,0.4s,mb4.1,baz=80,slow=9.4,SNR=22						
GUMO	**Guam**	**35.60**	**320**	P	**P**	**22 35 16.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**40.28**	**259**	*e*P	**P**	**22 35 56.9**	**+0.4**
	0.9nm,0.4s,mb3.8						
MIDW	**Midway**	**44.74**	**19**	*e*P	**P**	**22 36 31.6**	**-0.6**
KKM	**Kota Kinabalu**	**54.70**	**288**	*e*P	**P**	**22 37 47.7**	**-0.1**
	2.0nm,0.5s,mb4.1						
MJAR	**Matsushiro Arr**	**57.60**	**332**	P	**P**	**22 38 08.1**	**+0.1**
	0.5nm,0.5s,mb3.6,baz=174,slow=8.0,SNR=4.2						
MAJO	**Matsushiro**	**57.60**	**332**	*e*P	**P**	**22 38 05.7**	**-2.3**
	2.6nm,0.6s,mb4.2						
YULB	**Yu-li**	**58.66**	**309**	*e*P	**P**	**22 38 16.0**	**+0.3**
SBA	**Scott Base**	**63.57**	**180**	*e*P	**P**	**22 38 48.2**	**+0.4**
	5.8nm,1.2s,mb4.3						
CASY	**Casey**	**64.00**	**202**	*e*P	**P**	**22 38 50.3**	**-0.5**
	3.6nm,0.5s,mb4.5						
COCO	**West Island**	**68.53**	**262**	P	**P**	**22 39 19.7**	**-1.0**
ENH	**Enshi**	**71.23**	**309**	P	**P**	**22 39 35.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**74.94**	**294**	P	**P**	**22 40 00.3**	**+1.5**
	0.9nm,0.7s,mb3.5,baz=102,slow=3.8,SNR=4.9						
CHTO	**Chiang Mai**	**75.07**	**294**	*e*P	**P**	**22 39 59.7**	**+0.2**
	1.9nm,0.9s,mb3.7						
QSPA	**South Pole Qui**	**75.73**	**180**	*e*P	**P**	**22 40 01.9**	**-0.3**
	5.1nm,1.1s,mb4.1						
RPN	**Rapa Nui**	**77.68**	**115**	*e*P	**P**	**22 40 13.3**	**-0.9**
SONM	**Songino Array**	**82.25**	**323**	P	**P**	**22 40 39.4**	**+1.2**
	0.5nm,0.5s,mb3.4,baz=128,slow=6.7,SNR=3.5						
MAW	**Mawson**	**82.36**	**202**	*e*P	**P**	**22 40 38.5**	**0.0**
	0.6nm,0.6s,mb3.4						
MAW	**Mawson**	**82.36**	**202**	P	**P**	**22 40 38.6**	**+0.1**
	3.5nm,0.7s,mb4.1,baz=120,slow=6.2,SNR=11						
TRF	**Thorofare Moun**	**84.07**	**18**	*e*P	**P**	**22 40 47.6**	**+0.5**
CMB	**Columbia Colle**	**85.18**	**49**	*e*P	**P**	**22 40 53.8**	**+0.5**
COLA	**College**	**85.84**	**18**	*e*P	**P**	**22 40 56.5**	**+0.5**
ILAR	**Eielson Array**	**86.06**	**18**	P	**P**	**22 40 57.2**	**+0.2**
	1.4nm,0.8s,mb3.8,baz=236,slow=5.1,SNR=14						
NVAR	**Mina Array Bea**	**86.85**	**49**	P	**P**	**22 41 01.7**	**+0.2**
	0.4nm,0.6s,mb3.4,baz=216,slow=7.3,SNR=3.7						
SYO	**Syowa Base**	**89.18**	**197**	*e*P	**P**	**22 41 08.3**	**-3.7**
PMSA	**Palmer Station**	**92.12**	**160**	P	**P**	**22 41 26.8**	**+1.1**
MKAR	**Makanchi Array**	**97.02**	**316**	P	**P**	**22 41 49.5**	**+1.0**
	1.1nm,0.7s,mb4.3,baz=90,slow=6.3,SNR=13						
ZALV	**Zalesovo Beam**	**97.15**	**324**	P	**P**	**22 41 48.8**	**0.0**
	0.9nm,0.5s,mb4.3,baz=123,slow=5.3,SNR=5.8						
ARCES	**ARCESS Array B**	**119.88**	**346**	PKP	PKPdf	22 47 05.8	+0.2
	1.6nm,0.3s,baz=80,slow=2.1,SNR=49						
BOSA	**Boshof**	**123.83**	**220**	PKP	PKPdf	22 47 14.6	+0.1
	0.6nm,0.4s,baz=241,slow=7.7,SNR=4.0						
FINES	**FINESS Array B**	**125.39**	**338**	PKP	PKPdf	22 47 16.7	+0.3
	1.2nm,0.6s,baz=85,slow=1.5,SNR=8.6						
NOA	**NORSAR Array B**	**130.25**	**345**	PKP	PKPdf	22 47 26.2	+0.5
	0.8nm,0.8s,baz=336,slow=2.3,SNR=3.6						
AKASG	**Malin Array Be**	**130.48**	**326**	PKP	PKPdf	22 47 26.9	+0.5
	0.3nm,0.2s,baz=48,slow=1.4,SNR=2.7						
BRTR	**Keskin Array B**	**132.36**	**311**	PKP	PKPdf	22 47 31.4	+1.0
	0.6nm,0.6s,baz=141,slow=2.3,SNR=3.7						
CONA	**Conrad Observa**	**139.03**	**331**	‖*i*PKiKP	PKiKP	22 47 45.4	+0.6
	1.6nm,0.5s						
CABF	**La Chapelle**	**144.19**	**338**	*e*PKP1	PKPdf	22 47 53.6	+1.8
LDF	**La Druitiere**	**144.29**	**346**	*e*PKP1	PKPdf	22 47 51.7	-0.2
	5.9nm,0.7s						
LOR	**Lormes**	**144.39**	**341**	*e*PKP1	PKPdf	22 47 52.1	0.0
	9.6nm,0.8s						
GRR	**Gorron**	**144.66**	**347**	*e*PKP1	PKPdf	22 47 52.7	+0.2
	18nm,0.6s						
SSF	**Saint Saulge**	**144.68**	**341**	*e*PKP1	PKPdf	22 47 53.2	+0.6
	30nm,0.8s						
LPL	**La Plagne**	**144.87**	**336**	*e*PKP1	PKPdf	22 47 54.2	+1.2
	14nm,0.7s						
LPG	**La Plagne**	**144.88**	**336**	*e*PKP1	PKPdf	22 47 54.4	+1.4
	12nm,0.6s						
SMF	**Signal de Mont**	**144.94**	**340**	*e*PKP1	PKPdf	22 47 53.8	+0.7
	22nm,0.9s						
AVF	**Avril sur Loir**	**144.97**	**341**	*e*PKP1	PKPdf	22 47 53.9	+0.8
	24nm,1.0s						
SGMF	**Saint Gilles**	**145.14**	**348**	*e*PKP1	PKPbc	22 47 54.3	+1.1
ROSF	**Rostrenen**	**145.20**	**349**	*e*PKP1	PKPbc	22 47 54.5	+1.1
BGF	**Bois d'Agland**	**145.34**	**341**	*e*PKP1	PKPbc	22 47 55.1	+1.2
	8.5nm,0.6s						
MBDF	**Montbardon**	**145.51**	**335**	*e*PKP1	PKPbc	22 47 55.6	+1.1
	10.0nm,0.6s						
QUIF	**Quistinic**	**145.58**	**349**	*e*PKP1	PKPbc	22 47 54.7	+0.1
ORIF	**Oris-en-Rattie**	**145.70**	**337**	*e*PKP1	PKPbc	22 47 56.6	+1.5
	20nm,0.6s						
TCF	**Toulx Ste Croi**	**145.78**	**342**	*e*PKP1	PKPbc	22 47 56.4	+1.1
SBF	**Sospel**	**145.94**	**334**	*e*PKP1	PKPbc	22 47 56.5	+0.7
	40nm,0.9s						
MFF	**Saint Martin d**	**146.15**	**345**	*e*PKP1	PKPbc	22 47 57.4	+1.0
	51nm,1.1s						
VIVF	**Saint-Julien-l**	**146.21**	**338**	*e*PKP1	PKPbc	22 47 58.0	+1.4
PGF	**Pioggiola**	**146.27**	**331**	*e*PKP1	PKPbc	22 47 57.8	+1.0
	23nm,0.8s						
FRF	**La Foret Royal**	**146.52**	**334**	*e*PKP1	PKPbc	22 47 58.4	+0.9
SMRF	**Simiane la Rot**	**146.61**	**336**	*e*PKP1	PKPbc	22 47 59.2	+1.4
	16nm,0.8s						
LMR	**La Mourre**	**146.76**	**334**	*e*PKP1	PKPbc	22 47 59.0	+0.8
RJF	**Les Rejaudoux**	**146.87**	**342**	*e*PKP1	PKPbc	22 47 59.4	+0.9
CAF	**Calviac**	**147.04**	**341**	*e*PKP1	PKPbc	22 48 00.4	+1.4
LASF	**Ste Croix**	**147.18**	**338**	*e*PKP1	PKPbc	22 48 00.8	+1.4
LFF	**La Frestale**	**147.44**	**342**	*e*PKP1	PKPbc	22 48 01.3	+1.2
	15nm,0.7s						
MTLF	**Montolieu**	**148.40**	**339**	*e*PKP1	PKPbc	22 48 03.9	+1.2
	14nm,0.8s						
EPF	**Esparros**	**149.29**	**341**	*e*PKP1	PKPbc	22 48 07.2	+2.3
SJPF	**Ste Jean**	**149.67**	**343**	*e*PKP1	PKPbc	22 48 05.7	-0.2
ETSF	**Etsaut**	**149.68**	**342**	*e*PKP1	PKPbc	22 48 07.6	+1.7
KEST	**Kesra**	**150.99**	**321**	PKPbc	PKPbc	22 48 10.5	+1.3
	2.9nm,0.6s,baz=99,slow=0.7,SNR=25						
DBIC	**Dimbokro**	**169.31**	**226**	PKPab	PKPab	22 49 32.3	-4.9
	11nm,1.2s,baz=201,slow=5.3,SNR=3.8						

ISCJB ***12*** *22:55:35.6±1.2, 26°.42S±0°.06×180°.0W±0°.1, h459km±15km, mb4.2/6, Error ellipse: s-maj=19.0km s-min=9.1km az=8.4*
IDC ***12*** *22:55:35.6±10.0, 26°.42S×179°.93W, h442km±100km, mb3.8/2, mb1 3.9/4, mb1mx3.4/14, mbtmp3.8/4, Error ellipse: s-maj=76.3km s-min=32.9km az=29.0*
NEIC ***12*** *22:55:36.6±0.7, 26°.43S×179°.98W, h457km±8km, mb4.3/7, Error ellipse: s-maj=11.9km s-min=6.6km az=104.0*
ISC 12 22:55:36.4±1.0, 26°.45S±0°.06×180°.0W±0°.1, h456km±13km, n35, σ0.63/27, mb4.2/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.87**	**348**	*e*P	**P**	**22 57 42.3**	**+0.9**
	19nm,0.9s						
URZ	**Urewera**	**12.03**	**191**	*e*P	**P**	**22 58 16.1**	**+0.7**
URZ				*e*S	**S**	**23 00 26.1**	**-0.6**
URZ	**Urewera**	**12.03**	**191**	P	**P**	**22 58 15.3**	**-0.1**
	7.7nm,0.3s,baz=272,slow=2.5,SNR=22						
URZ				S	**S**	**23 00 25.6**	**-1.0**
	1.0nm,0.3s,baz=68,slow=11,SNR=3.5						
AFI	**Afiamalu**	**14.64**	**33**	*e*P	**P**	**22 58 42.9**	**-0.8**
SNZO	**South Karori**	**15.47**	**195**	*e*P	**P**	**22 58 51.7**	**-0.4**
	34nm,1.0s						
RPZ	**Rata Peaks**	**18.71**	**201**	P	**P**	**22 59 25.8**	**+0.4**
	1.9nm,0.3s,baz=329,slow=5.3,SNR=9.3						
HNR	**Honiara**	**25.46**	**308**	*e*P	**P**	**23 00 26.3**	**-0.5**
	12nm,0.4s,mb4.7						
CTAO	**Charters Tower**	**31.61**	**274**	*e*P	**P**	**23 01 21.4**	**+0.9**
	12nm,0.4s,mb4.7						
MCQ	**Macquarie Isla**	**32.03**	**203**	P	**P**	**23 01 23.6**	**-0.1**
STKA	**Stephens Creek**	**33.88**	**252**	*e*P	**P**	**23 01 39.7**	**-0.1**
	0.9nm,0.4s,mb3.5						
STKA	**Stephens Creek**	**33.88**	**252**	P	**P**	**23 01 40.3**	**+0.5**
	4.1nm,0.4s,mb4.2,baz=91,slow=12,SNR=21						
ASAR	**Alice Springs**	**41.72**	**263**	P	**P**	**23 02 44.2**	**0.0**
	6.6nm,0.4s,mb4.4,baz=97,slow=8.2,SNR=104						
FITZ	**Fitzroy Crossi**	**50.72**	**268**	*e*P	**P**	**23 03 53.0**	**-0.1**
	1.8nm,0.4s,mb3.8						
MBWA	**Marble Bar**	**55.01**	**262**	*e*P	**P**	**23 04 23.3**	**-0.6**
CASY	**Casey**	**57.85**	**207**	*e*P	**P**	**23 04 42.5**	**-0.3**
QSPA	**South Pole Qui**	**63.65**	**180**	*e*P	**P**	**23 05 22.9**	**+1.9**
	2.8nm,1.1s,mb3.7						
MAW	**Mawson**	**75.39**	**201**	*e*P	**P**	**23 06 32.1**	**+0.3**
SSLB	**Suanglung**	**75.86**	**306**	*e*P	**P**	**23 06 35.1**	**-0.1**
ADK	**Adak**	**78.04**	**2**	*e*P	**P**	**23 06 46.8**	**+0.4**
NIKO	**Nikolski**	**79.67**	**7**	*e*P	**P**	**23 06 55.0**	**-0.1**
ENH	**Enshi**	**87.94**	**305**	*e*P	**P**	**23 07 36.6**	**-0.2**
BJT	**Baijiatuan**	**88.88**	**316**	P	**P**	**23 07 39.8**	**-1.3**
DIV	**Divide**	**91.57**	**16**	P	**P**	**23 07 53.1**	**+0.2**
COLA	**College**	**94.38**	**13**	*e*P	**P**	**23 08 05.5**	**-0.2**
YAK	**Yakutsk**	**96.95**	**339**	*e*P	**P**	**23 08 17.6**	**+0.2**
BVAR	**Borovoye Array**	**122.36**	**318**	PKP	PKPdf	23 13 37.6	-0.8
	0.4nm,0.4s,baz=122,slow=1.9,SNR=4.2						
ARU	**Arti**	**128.93**	**322**	PKPdf	PKPdf	23 13 51.9	+1.0
FINES	**FINESS Array B**	**140.86**	**340**	PKP	PKPpre	23 14 07.0	
FINES	**FINESS Array B**	**140.86**	**340**	PKhKP	PKPpre	23 14 07.0	
	0.6nm,0.5s,baz=26,slow=5.3,SNR=7.2						
KIV	**Kislovodsk**	**141.50**	**308**	*e*PKPdf	PKPdf	23 14 15.3	+0.7
NOA	**NORSAR Array B**	**144.59**	**351**	PKP	PKPdf	23 14 20.4	+0.9
	1.2nm,0.8s,baz=23,slow=4.4,SNR=3.3						
MALT	**Malatya**	**145.72**	**300**	*e*PKPdf	PKPdf	23 14 22.6	+0.4
AKASG	**Malin Array Be**	**147.10**	**325**	PKPbc	PKPbc	23 14 27.4	+0.4
	0.7nm,0.4s,baz=48,slow=4.8,SNR=5.2						
MMAI	**Mount Meron Ar**	**148.71**	**291**	PKPbc	PKPbc	23 14 33.8	+2.1
	1.7nm,0.5s,baz=84,slow=7.8,SNR=8.0						
BRTR	**Keskin Array B**	**149.08**	**304**	PKPbc	PKPbc	23 14 30.9	-1.4
	0.5nm,0.7s,baz=94,slow=2.8,SNR=3.8						

MAN 12 23:06:24, 5.88N×125.06E, h22km, mb4.5, ML3.5, MS3.5, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.23**	**332**	‖*e*P	Pb	23 06 32.6	+2.8
GSPH				*e*S	Sb	23 06 37.1	+3.4
KCP	**Kidapawan**	**1.12**	**2**	‖*i*P	Pn	23 06 47.6	+3.2
KCP				*i* S	Sb	23 06 59.5	+0.6
DMPH	**Davao City--Mi**	**1.27**	**20**	‖*i*P	Pn	23 06 46.2	-0.3
DMPH				*i* S	Sn	23 07 04.8	+1.8
CTBH	**Cotabato--PC H**	**1.56**	**329**	‖*i*P	Pn	23 07 00.9	+11
MATI	**Mati**	**1.59**	**48**	*e*P	Pn	23 06 51.2	+0.3
BUKP	**Musuan**	**1.98**	**0**	*e*P	Pn	23 06 58.3	+2.0
BUKP				*e*S	Sn	23 07 21.5	+1.0
PAGZ	**Pagadian**	**2.57**	**320**	*e*P	Pn	23 07 05.6	+1.3
CGP	**Cagayan de Oro**	**2.58**	**352**	*e*P	Sn	23 07 40.7	+5.5

ISCJB ***12*** *23:14:40.6±1.4, 13°.37N±0°.06×90°.89W±0°.04, h27km±9km, mb3.8/5, Error ellipse: s-maj=10.4km s-min=5.7km az=26.7*
CASC ***12*** *23:14:42.2±1.9, 13°.48N×90°.82W, h27km±6km, MD3.8, ML3.6, mb4.4(NEIC)*
IDC ***12*** *23:14:53.6±9.1, 15°.44N×90°.64W, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.7/17, mbtmp3.6/4, ML4.3/1, Error ellipse: s-maj=187.7km s-min=53.2km az=179.0*
NEIC ***12*** *23:15:04.3±1.5, 15°.31N×90°.79W, h105km±13km, mb4.4/5, Error ellipse: s-maj=20.2km s-min=9.2km az=49.0*
ISC 12 23:14:40.3±1.3, 13°.42N±0°.05×90°.84W±0°.04, h11km±7km, n30, σ1°01/37, mb3.8/5, 2C-4D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.83**	**26**	‖*e*P	**Pg**	**23 14 57.3**	**+0.9**
PCG	**Pacaya**	**0.99**	**13**	*e*P	**Pg**	**23 14 59.7**	**+0.3**
PCG				*e*S	**Sg**	**23 15 13.4**	**+1.1**
FUG	**Fuego 3**	**1.02**	**360**	‖*i*P	**Pg**	**23 14 59.8**	**-0.1**
FG6		**1.13**	**358**	‖*i*P	**Pb**	**23 15 01.5**	**-0.4**
JAT	**Jato**	**1.18**	**319**	‖*e*P	**Pb**	**23 15 02.5**	**-0.2**
SBLS	**San Blas**	**1.25**	**70**	*i* P	**Pn**	**23 15 03.0**	**-0.7**
SBLS				*e*S	**Sb**	**23 15 19.6**	**-0.5**
NBG	**Las Nubes**	**1.25**	**22**	*e*P	**Pn**	**23 15 04.4**	**+0.6**
NBG				*e*S	**Sb**	**23 15 20.9**	**+0.7**
SNJE	**San Jose**	**1.27**	**70**	*e*P	**Pn**	**23 15 03.5**	**-0.6**
TP2	**Tecpan 2**	**1.36**	**352**	‖*e*P	**Pn**	**23 15 05.5**	**+0.2**
TP2				*e*S	**Sb**	**23 15 22.5**	**-0.9**
BOQS	**Boqueron**	**1.54**	**78**	*i* P	**Pn**	**23 15 07.8**	**0.0**
BOQS				*e*S	**Sn**	**23 15 28.5**	**+0.7**
SNET	**Serv Nac Est T**	**1.58**	**80**	*e*P	**Pn**	**23 15 07.3**	**-1.0**
SNET				*e*S	**Sn**	**23 15 27.9**	**-0.9**
LFRS	**El Faro**	**1.74**	**83**	*i* P	**Pn**	**23 15 10.5**	**0.0**
SNVI	**San Vicente**	**1.95**	**84**	*e*P	**Pn**	**23 15 14.0**	**+0.6**
SNVI				*e*S	**Sn**	**23 15 39.0**	**+1.1**
MRL	**Marmol**	**1.98**	**34**	‖*e*P	**Pn**	**23 15 14.9**	**+1.2**
CAHU	**Cacacuatique**	**2.58**	**82**	*e*P	**Pn**	**23 15 22.2**	**+0.2**
CNCH	**Conchagua**	**2.92**	**93**	*e*P	**Pn**	**23 15 27.3**	**+0.5**
TGUH	**Tegucigalpa,Un**	**3.52**	**79**	Pn	**Pg**	**23 15 57.9**	**+10**
TGUH				Sn	**Sg**	**23 16 31.1**	**-2.3**
TGUH	**Tegucigalpa,Un**	**3.52**	**79**	*e*P	**Pn**	**23 15 34.4**	**-0.6**
COPN	**Copaltepe**	**4.32**	**106**	*e*P	**Pn**	**23 15 48.3**	**+2.3**
MGAN	**Managua**	**4.65**	**105**	AML	AML	23 16 45.7	
	comp=N,128nm,0.2s						
TEIG	**Tepich**	**7.20**	**20**	*e*Pn	**Pn**	**23 16 24.2**	**-1.3**
	comp=N,30nm,0.8s						
TXAR	**Lajitas Array**	**19.81**	**325**	P	**Pn**	**23 19 10.6**	**-1.8**
	comp=N,0.2nm,0.3s,baz=150,slow=13,SNR=9.8						
MNTX	**Cornudas Mount**	**22.57**	**326**	*e*P	**P**	**23 19 39.4**	**-1.3**
	comp=N,3.3nm,0.7s,mb3.9						
CBYP	**Canovanas**	**24.50**	**75**	P	**P**	**23 20 08.4**	**+8.6**
HWUT	**Hardware Ranch**	**33.38**	**331**	*e*P	**P**	**23 21 19.5**	**+0.8**
	comp=N,1.0nm,0.4s,mb4.1						
NVAR	**Mina Array Bea**	**34.83**	**321**	P	**P**	**23 21 32.6**	**+1.2**
	comp=N,1.4nm,0.7s,mb4.0,baz=131,slow=8.4,SNR=13						
SCHQ	**Schefferville**	**45.39**	**19**	P	**P**	**23 22 57.0**	**-1.6**
	comp=N,1.0nm,0.5s,mb3.9,baz=237,slow=10.0,SNR=4.0						
ILAR	**Eielson Array**	**63.81**	**337**	P	**P**	**23 25 17.4**	**+5.1**
	comp=N,0.1nm,0.5s,mb3.1,baz=114,slow=2.2,SNR=2.4						
SUMG	**Summit**	**66.49**	**15**	P	**P**	**23 25 31.2**	**+1.6**
ESK	**Eskdalemuir**	**77.75**	**36**	*e*P	**P**	**23 26 41.8**	**+4.5**

NEIC ***12*** *23:29:01.4, 19°.32N×98°.35W, h3km, MD3.8(MEX), After MEX.*
MEX 12 23:29:01.4±0.7, 19°.31N×98°.38W, h4km±3km, MD3.8, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPM	**Popocatepetl**	**0.34**	**223**	*i* P	Pg	23 29 07.3	-0.7
PPM				*i* P		23 29 07.5	
PPM				*i* S	Sg	23 29 13.6	+1.3
PPM				*i* S	Sg	23 29 13.6	+1.3
PPM	**Popocatepetl**	**0.34**	**223**	*i* P	Pg	23 29 07.3	-0.7
PPM				*i* P		23 29 07.5	
PPM				*i* S	Sg	23 29 12.8	+0.5
PPM				*i* S	Sg	23 29 13.6	+1.3
PPM				*i* S	Sg	23 29 13.6	+1.3
IIO	**Organos**	**0.42**	**311**	*i* P	Pg	23 29 09.1	-0.5
IIO				*i* S	Sg	23 29 16.3	+1.1
IIO	**Organos**	**0.42**	**311**	*i* P	Pg	23 29 09.2	-0.4
IIO				*i* S	Sg	23 29 15.6	+0.5
VCVM	**Valle de Chalc**	**0.54**	**269**	*i* P	Pg	23 29 11.0	-0.8
VCVM				*i* S	Sg	23 29 22.0	+3.1
PBVM	**Pinon**	**0.68**	**281**	*i* P	Pg	23 29 15.0	+0.6
PBVM				*i* S	Sg	23 29 24.8	+1.7
PBVM	**Pinon**	**0.68**	**281**	*i* P	Pg	23 29 14.0	-0.4
PBVM				*i* S	Sg	23 29 22.8	-0.3
PTVM	**Pico Tres Padr**	**0.74**	**292**	*e*P	Pg	23 29 15.0	-0.7
PTVM				*i* S	Sg	23 29 26.6	+1.2
PTVM	**Pico Tres Padr**	**0.74**	**292**	*e*P	Pg	23 29 15.0	-0.7
PTVM				*i* S	Sg	23 29 24.6	-0.8
MZVM		**0.81**	**261**	*i* P	Pg	23 29 16.0	-1.0
MZVM				*i* S	Sg	23 29 26.1	-1.4
DEIG	**Demacu**	**1.16**	**328**	*i* P	Pg	23 29 21.5	-2.1
DEIG				*e*S	Sg	23 29 36.2	-2.6
TPIG	**Tehuac#an**	**1.31**	**132**	*e*P	Pn	23 29 22.1	-4.4
TPIG				*i* S	Sg	23 29 39.0	-4.6
UTMO	**Huajuapan**	**1.57**	**160**	*i* P	Pn	23 29 26.9	-3.2
UTMO				*i* S	Sn	23 29 47.3	-3.7
LVIG	**Laguna Verde**	**1.90**	**77**	*i* P	Pn	23 29 31.3	-3.2
LVIG				*i* S	Sn	23 29 54.3	-4.6
LVIG	**Laguna Verde**	**1.90**	**77**	*i* P	Pn	23 29 31.3	-3.2
LVIG				*i* S	Sn	23 29 54.3	-4.6
VHO	**Vista Hermosa**	**2.72**	**145**	*i* P	Pn	23 29 45.5	-0.4
VHO				*i* S	Sn	23 30 16.1	-3.3
VHO	**Vista Hermosa**	**2.72**	**145**	*i* P	Pn	23 29 44.7	-1.3
VHO				*i* S	Sn

DSF	**Desfina**	**1.53**	**222**	P	**Pn**	**23 40 33.9**	**-1.3**
DSF				S	**Sn**	**23 40 54.9**	**-0.2**
DSF	**Desfina**	**1.53**	**222**	P	**Pn**	**23 40 33.9**	**-1.3**
DSF				S	**Sn**	**23 40 54.9**	**-0.2**
SRS	**Serrai**	**1.56**	**354**	P	**Pn**	**23 40 34.4**	**-1.3**
SRS	**Serrai**	**1.56**	**354**	P	**Pn**	**23 40 34.7**	**-1.0**
SRS				S	**Sn**	**23 40 55.7**	**-0.2**
SRS	**Serrai**	**1.56**	**354**	P	**Pn**	**23 40 34.7**	**-1.0**
SRS				S	**Sn**	**23 40 55.7**	**-0.2**
ATH	**Athens Observa**	**1.59**	**183**	*e*Pb	**Pn**	**23 40 33.6**	**-2.5**
ATH	**Athens Observa**	**1.59**	**183**	*e*PB	**Pn**	**23 40 33.6**	**-2.5**
ATH	**Athens Observa**	**1.59**	**183**	*e*Pb	**Pn**	**23 40 33.6**	**-2.5**
ATHU	**Athens Univers**	**1.59**	**181**	P	**Pn**	**23 40 35.8**	**-0.3**
ATHU				S	**Sn**	**23 40 56.1**	**-0.6**
ATHU	**Athens Univers**	**1.59**	**181**	P	**Pn**	**23 40 35.8**	**-0.3**
ATHU				S	**Sn**	**23 40 56.1**	**-0.6**
SIGR	**SIGRI**	**1.62**	**102**	P	**Pn**	**23 40 37.3**	**+0.9**
SIGR	**SIGRI**	**1.62**	**102**	P	**Pn**	**23 40 37.3**	**+0.9**
LTK	**Loutraki**	**1.68**	**204**	*e*PG	**Pg**	**23 40 36.2**	**-3.9**
LTK	**Loutraki**	**1.68**	**204**	P	**Pn**	**23 40 36.3**	**-0.9**
LTK				S	**Sn**	**23 40 58.2**	**-0.5**
LTK	**Loutraki**	**1.68**	**204**	P	**Pn**	**23 40 36.3**	**-0.9**
LTK				S	**Sn**	**23 40 58.2**	**-0.5**
EVR	**Evrytania**	**1.69**	**248**	*e*Pb	**Pn**	**23 40 37.8**	**+0.4**
EVR	**Evrytania**	**1.69**	**248**	*e*PN	**Pn**	**23 40 37.8**	**+0.4**
EVR	**Evrytania**	**1.69**	**248**	*e*Pb	**Pn**	**23 40 37.8**	**+0.4**
VLY	**Voula,Athens**	**1.71**	**181**	*e*Pb	**Pn**	**23 40 35.8**	**-1.9**
VLY	**Voula,Athens**	**1.71**	**181**	*e*PB	**Pn**	**23 40 35.8**	**-1.9**
VLY	**Voula,Athens**	**1.71**	**181**	*e*Pb	**Pn**	**23 40 35.8**	**-1.9**
GADA	**Gvkgeada**	**1.72**	**68**	*e*PN	**Pn**	**23 40 38.1**	**+0.3**
GADA	**Gvkgeada**	**1.72**	**68**	Pn	**Pn**	**23 40 38.0**	**+0.2**
GADA	**Gvkgeada**	**1.72**	**68**	Pn	**Pn**	**23 40 38.0**	**+0.2**
KZN	**Kozani**	**1.74**	**296**	*e*Pn	**Pn**	**23 40 37.1**	**-1.0**
KZN	**Kozani**	**1.74**	**296**	*e*PN	**Pn**	**23 40 37.1**	**-1.0**
KZN	**Kozani**	**1.74**	**296**	P	**Pn**	**23 40 37.6**	**-0.5**
KZN				S	**Sn**	**23 41 00.6**	**+0.3**
KZN	**Kozani**	**1.74**	**296**	*e*Pn	**Pn**	**23 40 37.1**	**-1.0**
KZN	**Kozani**	**1.74**	**296**	P	**Pn**	**23 40 37.6**	**-0.5**
KZN				S	**Sn**	**23 41 00.6**	**+0.3**
KNT	**Kendrikon**	**1.75**	**337**	P	**Pn**	**23 40 38.0**	**-0.2**
KNT				S	**Sn**	**23 41 01.0**	**+0.6**
KNT	**Kendrikon**	**1.75**	**337**	P	**Pn**	**23 40 38.0**	**-0.2**
KNT				S	**Sn**	**23 41 01.0**	**+0.6**
BOZC	**Bozcaada**	**1.75**	**80**	*i* P	**Pn**	**23 40 39.3**	**+1.1**
BOZC				*i* P		23 40 39.3	
BOZC				*i* S	**Sg**	**23 41 03.8**	**-0.3**
BOZC				*i* S	**Sg**	**23 41 03.8**	**-0.3**
KALE	**Kalithea**	**1.76**	**229**	P	**Pn**	**23 40 37.6**	**-0.7**
KALE				S	**Sn**	**23 41 01.1**	**+0.4**
KALE	**Kalithea**	**1.76**	**229**	P	**Pn**	**23 40 37.6**	**-0.7**
KALE				S	**Sn**	**23 41 01.1**	**+0.4**
GRG	**Griva**	**1.76**	**323**	P	**Pn**	**23 40 38.3**	**-0.2**
GRG	**Griva**	**1.76**	**323**	P	**Pn**	**23 40 38.5**	**0.0**
GRG				S	**Sn**	**23 41 00.6**	**-0.3**
GRG	**Griva**	**1.76**	**323**	P	**Pn**	**23 40 38.3**	**-0.2**
GRG				S	**Sn**	**23 41 00.6**	**-0.3**
NVR	**Nevrokopi**	**1.79**	**1**	*e*Pb	**Pn**	**23 40 37.8**	**-0.9**
NVR	**Nevrokopi**	**1.79**	**1**	*e*PB	**Pn**	**23 40 37.8**	**-0.9**
NVR	**Nevrokopi**	**1.79**	**1**	*e*Pb	**Pn**	**23 40 37.8**	**-0.9**
TRIZ	**Trizonia**	**1.81**	**229**	P	**Pn**	**23 40 38.5**	**-0.6**
TRIZ	**Trizonia**	**1.81**	**229**	P	**Pn**	**23 40 38.5**	**-0.6**
NAIG	**Nisos Aigina**	**1.82**	**188**	*e*Pb	**Pn**	**23 40 38.0**	**-1.2**
NAIG	**Nisos Aigina**	**1.82**	**188**	*e*PB	**Pn**	**23 40 38.0**	**-1.2**
NAIG	**Nisos Aigina**	**1.82**	**188**	*e*Pb	**Pn**	**23 40 38.0**	**-1.2**
EFP	**Efpalio**	**1.87**	**233**	*e*PB	**Pn**	**23 40 39.9**	**-0.1**
EFP	**Efpalio**	**1.87**	**233**	P	**Pn**	**23 40 39.9**	**-0.1**
EFP				S	**Sn**	**23 41 04.5**	**+0.9**
EFP	**Efpalio**	**1.87**	**233**	*e*Pb	**Pn**	**23 40 39.9**	**-0.1**
EFP				S	**Sn**	**23 41 04.5**	**+0.9**
PRK	**Paraskevi**	**1.93**	**99**	*e*Pb	**Pn**	**23 40 31.9**	**-8.8**
PRK	**Paraskevi**	**1.93**	**99**	*e*PB	**Pn**	**23 40 31.9**	**-8.8**
EZN	**Ezine**	**1.95**	**81**	*e*PN	**Pn**	**23 40 41.4**	**+0.3**
EZN	**Ezine**	**1.95**	**81**	Pn	**Pn**	**23 40 42.0**	**+0.9**
EZN	**Ezine**	**1.95**	**81**	Pn	**Pn**	**23 40 42.0**	**+1.0**
LAKA	**Lakka**	**1.95**	**228**	P	**Pn**	**23 40 40.9**	**-0.1**
LAKA				S	**Sn**	**23 41 06.6**	**+1.1**
LAKA	**Lakka**	**1.95**	**228**	P	**Pn**	**23 40 40.9**	**-0.1**
LAKA				S	**Sn**	**23 41 06.6**	**+1.1**
GUR	**Goura**	**1.99**	**216**	*e*PB	**Pn**	**23 40 40.8**	**-0.8**
GUR	**Goura**	**1.99**	**216**	P	**Pn**	**23 40 40.9**	**-0.7**
GUR	**Goura**	**1.99**	**216**	P	**Pn**	**23 40 40.9**	**-0.7**
VAY	**Valandovo**	**2.00**	**332**	P	**Pn**	**23 40 41.9**	**+0.2**
VAY	**Valandovo**	**2.00**	**332**	*e*Pn	**Pn**	**23 40 39.7**	**-2.0**
VAY				*e*Sg	**Sg**	**23 41 11.4**	**-0.7**
VAY	**Valandovo**	**2.00**	**332**	P	**Pn**	**23 40 41.9**	**+0.2**
MMB	**Musomiste**	**2.02**	**358**	P	**Pn**	**23 40 41.0**	**-1.0**
MMB	**Musomiste**	**2.02**	**358**	P	**Pn**	**23 40 41.0**	**-1.0**
DID	**Didima**	**2.10**	**193**	*e*PN	**Pn**	**23 40 42.1**	**-1.0**
DID	**Didima**	**2.10**	**193**	P	**Pn**	**23 40 42.1**	**-1.0**
DID				S	**Sn**	**23 41 10.3**	**+1.0**
DID	**Didima**	**2.10**	**193**	P	**Pn**	**23 40 42.1**	**-1.0**
DID				S	**Sn**	**23 41 10.3**	**+1.0**
ENEZ	**Enez**	**2.14**	**56**	*e*PN	**Pn**	**23 40 43.8**	**+0.2**
ENEZ	**Enez**	**2.14**	**56**	*e*Pn	**Pn**	**23 40 43.8**	**+0.2**
ALN	**Alexandroupoli**	**2.16**	**51**	P	**Pn**	**23 40 42.6**	**-1.3**
ALN	**Alexandroupoli**	**2.16**	**51**	P	**Pn**	**23 40 42.1**	**-1.8**
ALN				S	**Sn**	**23 41 10.0**	**-0.8**
ALN	**Alexandroupoli**	**2.16**	**51**	P	**Pn**	**23 40 42.6**	**-1.3**
ALN				S	**Sn**	**23 41 10.0**	**-0.8**
GELI	**Tayfur-Gelibol**	**2.20**	**67**	*e*PN	**Pn**	**23 40 45.0**	**+0.5**
GELI	**Tayfur-Gelibol**	**2.20**	**67**	*e*Pn	**Pn**	**23 40 45.0**	**+0.5**
RZN	**Rozhen**	**2.23**	**18**	P	**Pn**	**23 40 44.3**	**-0.6**
RZN	**Rozhen**	**2.23**	**18**	P	**Pn**	**23 40 44.3**	**-0.6**
FNA	**Florina**	**2.23**	**304**	P	**Pn**	**23 40 44.7**	**-0.2**
FNA	**Florina**	**2.23**	**304**	P	**Pn**	**23 40 44.9**	**0.0**
FNA				S	**Sn**	**23 41 12.8**	**+0.3**
FNA	**Florina**	**2.23**	**304**	P	**Pn**	**23 40 44.7**	**-0.2**
FNA				S	**Sn**	**23 41 12.8**	**+0.3**
NEST	**Nestorio**	**2.29**	**293**	P	**Pn**	**23 40 46.4**	**+0.7**
NEST	**Nestorio**	**2.29**	**293**	P	**Pn**	**23 40 46.4**	**+0.7**
JAN	**Janina**	**2.29**	**273**	*e*Pn	**Pb**	**23 40 49.7**	**+0.3**
JAN	**Janina**	**2.29**	**273**	*e*PN	**Pb**	**23 40 49.7**	**+0.3**
JAN	**Janina**	**2.29**	**273**	*e*Pn	**Pb**	**23 40 49.7**	**+0.3**
ERIK	**Erikli-Kesan**	**2.34**	**61**	*e*PN	**Pn**	**23 40 46.8**	**+0.4**
ERIK	**Erikli-Kesan**	**2.34**	**61**	*e*Pn	**Pn**	**23 40 46.8**	**+0.4**
RLS	**Riolos of Patr**	**2.37**	**231**	*e*Pn	**Pn**	**23 40 49.5**	**+2.7**
RLS	**Riolos of Patr**	**2.37**	**231**	*e*PN	**Pn**	**23 40 49.5**	**+2.7**
RLS	**Riolos of Patr**	**2.37**	**231**	*e*Pn	**Pn**	**23 40 49.5**	**+2.7**
LPK	**Lapseki**	**2.40**	**69**	*e*PN	**Pn**	**23 40 47.7**	**+0.5**
LPK	**Lapseki**	**2.40**	**69**	Pn	**Pn**	**23 40 47.7**	**+0.5**
KDZ	**Kurdzhali**	**2.41**	**30**	P	**Pn**	**23 40 45.3**	**-2.1**
KDZ	**Kurdzhali**	**2.41**	**30**	P	**Pn**	**23 40 45.3**	**-2.1**
VLX	**Vlachokerasia**	**2.46**	**208**	*e*PB	**Pn**	**23 40 47.9**	**-0.2**
VLX	**Vlachokerasia**	**2.46**	**208**	P	**Pn**	**23 40 48.4**	**+0.3**
VLX	**Vlachokerasia**	**2.46**	**208**	*e*Pn	**Pn**	**23 40 47.9**	**-0.2**
VLX	**Vlachokerasia**	**2.46**	**208**	P	**Pn**	**23 40 48.4**	**+0.3**
PLD	**Plovdiv**	**2.63**	**15**	P	**Pn**	**23 40 50.6**	**+0.3**
PLD	**Plovdiv**	**2.63**	**15**	P	**Pn**	**23 40 50.3**	**0.0**
PLD	**Plovdiv**	**2.63**	**15**	P	**Pn**	**23 40 50.6**	**+0.3**
KRUS	**Krusevo**	**2.66**	**313**	*e*Pn	**Pn**	**23 40 50.2**	**-0.6**
KRUS				*e*Sg	**Sn**	**23 41 22.8**	**-0.3**
IGT	**Igoumenitsa**	**2.70**	**270**	P	**Pn**	**23 40 54.1**	**+2.8**
IGT	**Igoumenitsa**	**2.70**	**270**	P	**Pn**	**23 40 54.1**	**+2.8**
ITM	**Ithomi**	**2.81**	**213**	*e*Pb	**Pn**	**23 40 53.4**	**+0.6**
ITM	**Ithomi**	**2.81**	**213**	*e*PN	**Pn**	**23 40 53.4**	**+0.6**
ITM	**Ithomi**	**2.81**	**213**	P	**Pn**	**23 40 53.4**	**+0.6**
ITM	**Ithomi**	**2.81**	**213**	P	**Pn**	**23 40 53.4**	**+0.6**
RKY	**Sarkoy-Tekirda**	**2.81**	**65**	*e*PN	**Pn**	**23 40 53.8**	**+0.9**
RKY	**Sarkoy-Tekirda**	**2.81**	**65**	Pn	**Pn**	**23 40 53.8**	**+1.0**
APE	**Apeiranthos**	**2.83**	**151**	*e*PN	**Pn**	**23 40 51.7**	**-1.5**
APE	**Apeiranthos**	**2.83**	**151**	Pn	**Pn**	**23 40 51.1**	**-2.0**
APE	**Apeiranthos**	**2.83**	**151**	*i* P	**Pn**	**23 40 52.4**	**-0.7**
APE	**Apeiranthos**	**2.83**	**151**	*e*Pn	**Pn**	**23 40 51.7**	**-1.4**
APE	**Apeiranthos**	**2.83**	**151**	*i* P	**Pn**	**23 40 52.4**	**-0.7**
VLS	**Valsamata**	**2.88**	**242**	*e*Pb	**Pb**	**23 40 57.5**	**-1.8**
VLS	**Valsamata**	**2.88**	**242**	*e*PB	**Pb**	**23 40 57.5**	**-1.8**
VLS	**Valsamata**	**2.88**	**242**	*e*Pb	**Pb**	**23 40 57.5**	**-1.8**
MFT	**Murefte**	**2.92**	**64**	*e*PN	**Pn**	**23 40 55.8**	**+1.4**
MFT	**Murefte**	**2.92**	**64**	*e*Pn	**Pn**	**23 40 55.8**	**+1.4**
VLI	**Veliai**	**2.92**	**194**	*e*Pn	**Pn**	**23 40 53.3**	**-1.1**
VLI	**Veliai**	**2.92**	**194**	*e*PN	**Pn**	**23 40 53.3**	**-1.1**
VLI	**Veliai**	**2.92**	**194**	*e*Pn	**Pn**	**23 40 53.3**	**-1.1**
BALY	**Balya**	**2.94**	**85**	*i* P	**Pb**	**23 40 58.4**	**-1.9**
BALY				*i* S	**Sb**	**23 41 36.0**	**-0.3**
BALY	**Balya**	**2.94**	**85**	*i* P	**Pb**	**23 40 58.4**	**-2.0**
BALY				*i* S	**Sb**	**23 41 36.0**	**-0.3**
GONE	**Gonen-Balikesi**	**3.02**	**80**	*e*PN	**Pn**	**23 40 56.4**	**+0.7**
GONE	**Gonen-Balikesi**	**3.02**	**80**	*e*Pn	**Pn**	**23 40 56.4**	**+0.7**
VTS	**Vitosha**	**3.06**	**352**	P	**Pn**	**23 40 57.8**	**+1.5**
VTS	**Vitosha**	**3.06**	**352**	P	**Pn**	**23 40 56.1**	**-0.2**
VTS	**Vitosha**	**3.06**	**352**	*i*|P	**Pn**	**23 40 55.8**	**-0.5**
VTS	**Vitosha**	**3.06**	**352**	P	**Pn**	**23 40 56.4**	**+0.1**
VTS	**Vitosha**	**3.06**	**352**	P	**Pn**	**23 40 56.1**	**-0.2**
KEK	**Kerkira**	**3.11**	**274**	*e*Pn	**Pn**	**23 40 59.1**	**+2.2**
KEK	**Kerkira**	**3.11**	**274**	*e*PN	**Pn**	**23 40 59.1**	**+2.2**
KEK	**Kerkira**	**3.11**	**274**	*e*Pn	**Pn**	**23 40 59.1**	**+2.2**
PYL	**PYLOS**	**3.13**	**212**	*e*PN	**Pn**	**23 40 58.1**	**+0.9**
PYL	**PYLOS**	**3.13**	**212**	*e*Pn	**Pn**	**23 40 58.1**	**+0.9**
BALB	**Balikesir**	**3.14**	**87**	*e*PN	**Pn**	**23 40 58.4**	**+1.1**
BALB	**Balikesir**	**3.14**	**87**	Pn	**Pn**	**23 40 57.9**	**+0.6**
BALB	**Balikesir**	**3.14**	**87**	Pn	**Pn**	**23 40 57.9**	**+0.6**
EDRB	**Edirne**	**3.19**	**43**	*e*PN	**Pn**	**23 40 58.2**	**+0.3**
EDRB	**Edirne**	**3.19**	**43**	Pn	**Pn**	**23 40 58.2**	**+0.2**
EDC	**Edincik**	**3.21**	**75**	*e*PN	**Pn**	**23 40 59.3**	**+1.0**
EDC	**Edincik**	**3.21**	**75**	Pn	**Pn**	**23 40 59.3**	**+1.0**
CRLT	**Corlu**	**3.38**	**61**	*e*PN	**Pn**	**23 41 01.6**	**+0.9**
CRLT	**Corlu**	**3.38**	**61**	Pn	**Pn**	**23 41 01.6**	**+1.0**
KCTX	**Karacabey (Bur**	**3.56**	**77**	*e*PN	**Pn**	**23 41 04.1**	**+1.0**
KCTX	**Karacabey (Bur**	**3.56**	**77**	*e*Pn	**Pn**	**23 41 04.1**	**+1.0**
BARS	**Barje**	**3.58**	**336**	*i*|Pn	**Pn**	**23 41 03.6**	**+0.1**
DURS	**Dursunbey**	**3.60**	**88**	*e*P	**Pb**	**23 41 09.4**	**-2.1**
DURS				*e*S	**Sb**	**23 41 57.1**	**+1.9**
DURS	**Dursunbey**	**3.60**	**88**	*e*P	**Pb**	**23 41 09.4**	**-2.2**
SLVT	**Silivri**	**3.74**	**62**	*e*PN	**Pn**	**23 41 06.8**	**+1.1**
SLVT	**Silivri**	**3.74**	**62**	Pn	**Pn**	**23 41 06.8**	**+1.1**
MLSB	**Milas**	**3.84**	**125**	*e*PN	**Pn**	**23 41 06.7**	**-0.3**
MLSB	**Milas**	**3.84**	**125**	Pn	**Pn**	**23 41 06.7**	**-0.4**
CTYL	**Yal??k??y-??at**	**3.91**	**59**	*e*PN	**Pn**	**23 41 09.1**	**+1.2**
CTYL	**Yal??k??y-??at**	**3.91**	**59**	*e*Pn	**Pn**	**23 41 09.1**	**+1.2**
KULA	**Kula-Manisa**	**3.91**	**104**	*e*PN	**Pn**	**23 41 09.0**	**+1.0**
KULA	**Kula-Manisa**	**3.91**	**104**	*e*Pn	**Pn**	**23 41 09.0**	**+1.0**
CTKS	**Kestanelik-??a**	**3.95**	**63**	*e*PN	**Pn**	**23 41 09.7**	**+1.1**
CTKS	**Kestanelik-??a**	**3.95**	**63**	*e*Pn	**Pn**	**23 41 09.7**	**+1.2**
ARMT	**Armutlu**	**4.00**	**74**	*e*PN	**Pn**	**23 41 10.7**	**+1.5**
ARMT	**Armutlu**	**4.00**	**74**	Pn	**Pn**	**23 41 10.7**	**+1.6**
BGKT	**Bogazkoy**	**4.11**	**65**	*e*PN	**Pn**	**23 41 11.9**	**+1.2**
BGKT	**Bogazkoy**	**4.11**	**65**	*e*Pn	**Pn**	**23 41 12.0**	**+1.2**
KLYT	**Kilyos**	**4.33**	**65**	*e*PN	**Pn**	**23 41 15.1**	**+1.4**
KLYT	**Kilyos**	**4.33**	**65**	Pn	**Pn**	**23 41 15.1**	**+1.4**
GULT	**Gulveren**	**5.21**	**78**	*e*P	**Pn**	**23 41 27.9**	**+2.0**
GULT	**Gulveren**	**5.21**	**78**	*e*P	**Pn**	**23 41 27.9**	**+2.0**
DIVS	**Divibare**	**5.36**	**329**	*e*Pn	**Pn**	**23 41 23.6**	**-4.2**
TIP	**Timpagrande** 2.5nm,0.5s	**5.49**	**268**	*e*Pn	**Pn**	**23 41 30.6**	**+1.0**
TIP	**Timpagrande** 2.5nm,0.5s	**5.49**	**268**	*e*Pn	**Pn**	**23 41 30.6**	**+1.0**
GZR	**Gura Zlata**	**5.88**	**353**	*i*|P	**Pb**	**23 41 44.9**	**-5.5**
VOIR		**5.94**	**8**	*i*|P	**Pn**	**23 41 36.3**	**+0.5**
VOIR		**5.94**	**8**	*i*|P	**Pn**	**23 41 36.3**	**+0.5**
VOIR		**5.94**	**8**	*i*|P	**Pn**	**23 41 36.3**	**+0.5**
BZS	**Buzias**	**6.26**	**346**	*i*|P	**Pn**	**23 41 39.1**	**-1.1**
BZS	**Buzias**	**6.26**	**346**	*i*|P	**Pn**	**23 41 39.1**	**-1.2**
BZS	**Buzias**	**6.26**	**346**	*i*|P	**Pn**	**23 41 39.1**	**-1.2**
PLOR	**Plostina**	**6.62**	**17**	*i*|P	**Pn**	**23 41 43.2**	**-2.0**
PLOR	**Plostina**	**6.62**	**17**	*i*|P	**Pn**	**23 41 43.2**	**-2.0**
VRI	**Vrincioaia**	**6.65**	**18**	*i*|P	**Pn**	**23 41 46.4**	**+0.8**
VRI	**Vrincioaia**	**6.65**	**18**	*i*|P	**Pn**	**23 41 46.4**	**+0.8**
VRI	**Vrincioaia**	**6.65**	**18**	*i*|P	**Pn**	**23 41 46.4**	**+0.8**
TESR		**7.25**	**16**	*i*|P	**Pn**	**23 41 51.9**	**-1.9**
TESR		**7.25**	**16**	*i*|P	**Pn**	**23 41 51.8**	**-2.0**
TESR		**7.25**	**16**	*i*|P	**Pn**	**23 41 51.8**	**-2.0**
PKSM	**Moragy**	**7.65**	**332**	*i*|P	**Pn**	**23 41 59.6**	**+0.2**
PKSM	**Moragy**	**7.65**	**332**	*i*|P	**Pn**	**23 41 59.6**	**+0.3**
PKSM	**Moragy**	**7.65**	**332**	*i*|P	**Pn**	**23 41 59.6**	**+0.3**
BURAR	**Bucovina Array**	**8.11**	**7**	*i*|P	**Pn**	**23 42 02.2**	**-3.5**
BURAR	**Bucovina Array**	**8.11**	**7**	*i*|P	**Pn**	**23 42 02.2**	**-3.4**

IDC ***12*** *23:53:40.0±7.4, 14°.52N×91°.95W, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.7/17, mbtmp3.5/5, ML3.4/1, Error ellipse: s-maj=176.7km s-min=67.7km az=19.0*

ISCJB ***12*** *23:53:50.5±0.5, 14°.59N±0°.05×92°.87W±0°.03, h67km±7km, mb3.6/3, Error ellipse: s-maj=9.9km s-min=3.5km az=28.5*

NEIC ***12*** *23:53:52.1, 14°.55N×92°.86W, h56km, MD4.2(MEX), After MEX.*

MEX ***12*** *23:53:52.0±0.5, 14°.57N×92°.84W, h62km±12km, MD4.2*

CASC ***12*** *23:53:54.0±2.1, 14°.62N×92°.68W, h54km±72km, MD3.9*

ISC 12 23:53:52.0±0.5,**14°.63N**±0°.05×**92°.84W**±0°.03,**h58**km±7km, **n32**,σ0**°95**/49,**mb3.7**/3,**1C-1D**,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.62**	**64**	*e*P	**Pn**	**23 54 04.1**	**-1.0**
THIG				*i* S	**Sn**	**23 54 14.4**	**-0.4**
PCIG		**1.13**	**341**	*e*P	**Pn**	**23 54 11.2**	**-0.5**
PCIG				*i* S	**Sn**	**23 54 25.8**	**-0.5**
JAT	**Jato**	**1.21**	**105**|↓	*e*P	**Pn**	**23 54 13.3**	**+0.6**
TP2	**Tecpan 2**	**1.76**	**85**	*e*P	**Pn**	**23 54 21.6**	**+1.3**
FG6		**1.89**	**92**	*e*P	**Pn**	**23 54 22.8**	**+0.8**
FG6				*e*S	**Sn**	**23 54 44.0**	**-0.8**
FUG	**Fuego 3**	**1.94**	**95**↑	*e*P	**Pn**	**23 54 22.8**	**+0.1**
SCX	**San Cristobal**	**2.10**	**5**	*i* P	**Pn**	**23 54 25.1**	**+0.3**
SCX				*i* S	**Sn**	**23 54 51.1**	**+1.3**
SCX	**San Cristobal**	**2.10**	**5**	*i* P	**Pn**	**23 54 25.1**	**+0.3**
SCX				*i* S	**Sn**	**23 54 51.1**	**+1.3**
TGIG		**2.15**	**353**	*i* P	**Pn**	**23 54 25.1**	**-0.4**
TGIG				*i* S	**Sn**	**23 54 50.6**	**-0.5**
PCG	**Pacaya**	**2.17**	**96**	*e*P	**Pn**	**23 54 26.3**	**+0.5**
PCG				*e*S	**Sn**	**23 54 51.9**	**+0.3**
IXG	**Ixpaco**	**2.35**	**101**	*e*P	**Pn**	**23 54 28.7**	**+0.4**
IXG				*e*S	**Sn**	**23 54 54.2**	**-1.9**
NBG	**Las Nubes**	**2.41**	**91**	*e*P	**Pn**	**23 54 30.7**	**+1.6**
MRL	**Marmol**	**3.07**	**82**	*e*P	**Pn**	**23 54 38.6**	**+0.4**
CMIG	**Matias Romero**	**3.14**	**321**	Pn	**Pn**	**23 54 39.7**	**+0.6**
CMIG	**Matias Romero** 3.0nm,0.3s,baz=138,slow=14,SNR=24	**3.14**	**321**	Pn	**Pn**	**23 54 39.7**	**+0.6**
SBLS	**San Blas**	**3.21**	**104**	*e*P	**Pn**	**23 54 39.6**	**-0.5**
SBLS				*e*S	**Sn**	**23 55 17.9**	**+0.7**
HUIG	**Huatulco**	**3.35**	**290**	*i* P	**Pn**	**23 54 40.8**	**-1.2**
HUIG				*i* S	**Sn**	**23 55 20.3**	**-0.3**
HUIG	**Huatulco**	**3.35**	**290**	*i* P	**Pn**	**23 54 40.8**	**-1.2**
HUIG				*i* S	**Sn**	**23 55 20.3**	**-0.3**
BOQS	**Boqueron**	**3.56**	**104**	*e*P	**Pn**	**23 54 45.0**	**+0.2**
BOQS				*e*S	**Sn**	**23 55 25.5**	**-0.3**
SNVI	**San Vicente**	**4.01**	**104**	*e*P	**Pn**	**23 54 50.2**	**-0.7**
SNVI				*e*S	**Sn**	**23 55 38.5**	**+1.7**
PNIG	**Pinotepa**	**5.39**	**290**	*e*P	**Pn**	**23 55 10.0**	**+0.1**
PNIG				*i* S	**Sn**	**23 56 10.2**	**-0.5**
PNIG	**Pinotepa**	**5.39**	**290**	*e*P	**Pn**	**23 55 10.0**	**+0.1**
PNIG				*i* S	**Sn**	**23 56 10.2**	**-0.5**
UTMO	**Huajuapan**	**5.73**	**304**	*i* P	**Pn**	**23 55 14.4**	**+0.8**
UTMO				*i* S	**Sn**	**23 56 20.4**	**+1.4**
TEIG	**Tepich** 120nm,0.4s	**7.06**	**37**	*e*Pn	**Pn**	**23 55 30.6**	**-2.2**
TEIG				*e*Sn	**Sn**	**23 56 46.6**	**-5.1**
JTS	**JuntasAbangare**	**8.83**	**118**	*e*Pn	**Pn**	**23 55 55.9**	**-1.2**
BCIP	**Isla Barro Col**	**13.83**	**112**	*e*Pn	**Pn**	**23 57 05.0**	**-0.4**
TXAR	**Lajitas Array** baz=131,slow=13,SNR=2.0	**17.73**	**327**	P	**Pn**	**23 57 54.8**	**-0.1**
MNTX	**Cornudas Mount**	**20.50**	**328**	*e*P	**P**	**23 58 26.3**	**+1.0**
WMOK	**Wichita Mounta**	**20.72**	**346**	P	**P**	**23 58 28.2**	**+0.4**
NVAR	**Mina Array Bea** 0.5nm,0.7s,mb3.6,baz=147,slow=8.6,SNR=5.2	**32.67**	**321**	P	**P**	**00 00 20.4**	**+1.6**
YKA	**Yellowknife Ar** 0.8nm,0.6s,mb3.9,baz=154,slow=6.8,SNR=4.0	**50.23**	**347**	P	**P**	**00 02 40.3**	**-1.6**
ILAR	**Eielson Array** 0.2nm,0.6s,mb3.5,baz=108,slow=6.0,SNR=3.3	**61.94**	**337**	P	**P**	**00 04 03.8**	**-1.8**

ISCJB ***12*** *23:56:05.2±0.9, 58°.67N±0°.07×156°.0W±0°.2, h199km±11km, mb3.0/2, Error ellipse: s-maj=17.8km s-min=10.9km az=178.1*

IDC ***12*** *23:56:05.0±1.8, 58°.90N×156°.23W, h170km±27km, mb2.8/3, mb1 3.0/5, mb1mx2.9/23, mbtmp2.9/5, Error ellipse: s-maj=32.5km s-min=21.2km az=106.0*

NEIC ***12*** *23:56:06.4, 58°.64N×156°.15W, h200km, MG2.8(AEIC), After AEIC.*

ISC 12 23:56:06.3±0.9,**58°.67N**±0°.07×**156°.0W**±0°.2,**h193**km±11km, **n21**,σ0**°98**/27,**mb3.0**/2,**Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**2.03**	**115**	P	**Pn**	**23 56 44.7**	**+0.2**
KDAK				S	**Sn**	**23 57 14.4**	**+0.3**
KDAK	**Kodiak Island** 12nm,0.3s,baz=306,slow=7.4,SNR=138	**2.03**	**115**	P	**Pn**	**23 56 44.7**	**+0.2**
KDAK	4.4nm,0.3s,baz=288,slow=5.7,SNR=4.7			S	**Sn**	**23 57 14.1**	**-0.1**
OHAK	**Old Harbor**	**2.06**	**134**	P	**Pn**	**23 56 44.8**	**-0.1**
OHAK				S	**Sn**	**23 57 13.9**	**-0.8**
CNPM	**China Poot**	**2.61**	**69**	P	**Pn**	**23 56 51.8**	**+0.9**
SLKM	**Skilak Lake**	**3.48**	**56**	P	**Pn**	**23 57 02.1**	**+0.9**
SEW	**Seward**	**3.66**	**64**	P	**Pn**	**23 57 04.4**	**+1.0**
SEW				S	**Sn**	**23 57 46.2**	**-1.9**
RC01	**Rabbit Creek A**	**3.99**	**50**	P	**Pn**	**23 57 08.5**	**+1.0**
TT01	**Tatalina**	**4.25**	**0**	P	**Pn**	**23 57 11.2**	**+0.4**
TTA	**Tatalina**	**4.27**	**0**	*e*Pn	**Pn**	**23 57 11.1**	**+0.1**
PPLA	**Purkeypile**	**4.63**	**22**	P	**Pn**	**23 57 17.1**	**+1.5**
SML	**Sawmill**	**4.96**	**47**	P	**Pn**	**23 57 20.0**	**+0.3**
SCM	**Sheep Creek Mo**	**5.36**	**50**	P	**Pn**	**23 57 25.4**	**+0.3**
TRF	**Thorofare Moun**	**5.54**	**28**	P	**Pn**

URZ	**Urewera**	**26.85**	**60**	*e*P		**P**	**00 33 14.9**	**-1.8**		
	27nm,0.9s,mb4.8									
URZ				LR		LR	00 43 02.4			
URZ	**Urewera**	**26.85**	**60**	P		**P**	**00 33 15.2**	**-1.6**		
	19nm,0.9s,mb4.6,baz=238,slow=8.1,SNR=4.4									
URZ				LR		LR	00 43 02.4			
	comp=Z,775nm,20.3s,MS4.2,baz=216,slow=35									
FORT	**Forrest**	**28.85**	**324**	*e*P		**P**	**00 33 34.1**	**-0.5**		
	36nm,0.7s,mb5.2									
FORT	**Forrest**	**28.85**	**324**	*e*P		**P**	**00 33 34.2**	**-0.5**		
	45nm,0.8s,mb5.2									
EIDS	**Eidsvold**	**31.05**	**7**	*e*P		**P**	**00 33 54.2**	**+0.1**		
	27nm,1.3s,mb4.9									
NWAO	**Narrogin (SRO)**	**31.21**	**306**	LR		LR	00 43 34.3			
	comp=Z,1μm,21.2s,MS4.5,baz=142,slow=31									
KLBR	**Kellerberrin**	**32.11**	**308**	*e*P		**P**	**00 34 02.6**	**-0.8**		
	21nm,0.7s,mb5.1									
QSPA	**South Pole Qui**	**33.79**	**180**	*e*P		**P**	**00 34 18.1**	**+0.5**		
QSPA	**South Pole Qui**	**33.79**	**180**	P		**P**	**00 34 17.8**	**+0.2**		
	3.1nm,0.9s,mb4.3,baz=350,slow=4.7,SNR=16									
ASAR	**Alice Springs**	**34.04**	**338**	P		**P**	**00 34 19.9**	**-0.4**		
	6.3nm,0.7s,mb4.7,baz=161,slow=9.1,SNR=24									
ASAR				PcP		PcP	00 36 56.5	-1.3		
	1.9nm,0.9s,baz=159,slow=2.9,SNR=5.7									
ASAR				ScP		ScP	00 40 43.4	+1.9		
	1.1nm,1.1s,baz=174,slow=5.0,SNR=4.4									
CTAO	**Charters Tower**	**36.18**	**359**	*e*P		**P**	**00 34 39.3**	**+0.5**		
	25nm,0.9s,mb5.1									
DZM	**Mont Dzumac**	**37.05**	**31**	*e*S		**S**	**00 40 29.8**	**-1.3**		
	201nm,24.8s									
DZM				*e*LR		LR	00 44 37.1			
	2μm,25.7s									
DZM	**Mont Dzumac**	**37.05**	**31**	*e*P		**P**	**00 34 46.9**	**+0.7**		
	56nm,1.3s,mb5.2									
MAW	**Mawson**	**37.98**	**218**	*e*P		**P**	**00 34 53.9**	**+0.2**		
	1.1nm,1.0s									
MAW				LR		LR	00 49 51.3			
MAW	**Mawson**	**37.98**	**218**	P		**P**	**00 34 54.2**	**+0.6**		
	4.2nm,1.0s,mb4.1,baz=134,slow=8.7,SNR=6.4									
MAW				LR		LR	00 49 51.3			
	comp=Z,722nm,18.4s,MS4.5,baz=88,slow=35									
MBWA	**Marble Bar**	**40.58**	**319**	*e*P		**P**	**00 35 15.6**	**-0.3**		
	23nm,0.8s,mb4.8									
FITZ	**Fitzroy Crossi**	**41.47**	**328**	*e*P		**P**	**00 35 23.4**	**+0.3**		
FITZ	**Fitzroy Crossi**	**41.47**	**328**	P		**P**	**00 35 22.7**	**-0.4**		
	7.0nm,0.9s,mb4.3,baz=171,slow=11,SNR=5.2									
COEN	**Coen**	**42.39**	**354**	*e*P		**P**	**00 35 30.3**	**-0.3**		
COEN	**Coen**	**42.39**	**354**	*e*P		**P**	**00 35 30.3**	**-0.3**		
	221nm,1.1s,mb5.7									
SYO	**Syowa Base**	**44.44**	**209**	*e*P		**P**	**00 35 47.4**	**+0.7**		
KAKA	**Kakadu**	**44.98**	**339**	*e*P		**P**	**00 35 51.0**	**-0.5**		
	16nm,0.7s,mb5.0									
KAKA	**Kakadu**	**44.98**	**339**	*e*P		**P**	**00 35 50.5**	**-1.0**		
	42nm,0.6s,mb5.5									
PMG	**Port Moresby**	**46.80**	**360**	*e*P		**P**	**00 36 06.1**	**+0.3**		
HNR	**Honiara**	**47.83**	**17**	*e*P		**P**	**00 36 14.0**	**+0.1**		
COCO	**West Island**	**58.54**	**298**	*e*P		**P**	**00 37 32.4**	**-0.4**		
PPT	**Papeete**	**60.77**	**77**	LR		LR	00 57 13.3			
	comp=Z,192nm,19.8s,MS4.2,baz=210,slow=29									
RKT	**Rikitea**	**64.39**	**94**	*e*LQ			00 54 17.5			
	275nm,29.2s									
RKT				*e*LR		LR	00 56 50.6			
	214nm,32.2s									
KSM	**Kuching**	**64.89**	**319**	*e*P		**P**	**00 38 16.2**	**+0.6**		
	8.1nm,0.6s,mb4.9									
DAV	**Davao City (W)**	**65.63**	**336**	*e*P		**P**	**00 38 20.4**	**+0.1**		
	192nm,0.4s									
GUMO	**Guam**	**69.67**	**358**	*e*P		**P**	**00 38 45.6**	**-0.1**		
KULM	**Kulim**	**72.20**	**311**	*e*P		**P**	**00 39 01.6**	**+0.5**		
KULM				*e*PcP		PcP	00 39 20.6	+1.3		
BOSA	**Boshof**	**82.15**	**229**	LR		LR	01 10 50.8			
	comp=Z,113nm,18.2s,MS4.3,baz=161,slow=32									
NACB	**Ninganchiao**	**83.06**	**337**	*e*P		**P**	**00 40 01.1**	**-0.4**		
CMAR	**Chiang Mai Arr**	**84.78**	**315**	P		**P**	**00 40 11.3**	**+0.9**		
	1.2nm,0.4s,mb4.4,baz=180,slow=4.6,SNR=11									
CMAR				LR		LR	01 15 56.4			
	comp=Z,129nm,18.5s,MS4.3,baz=167,slow=34									
CHTO	**Chiang Mai**	**85.11**	**315**	*e*P		**P**	**00 40 11.5**	**-0.5**		
	9.2nm,1.0s,mb4.9									
MJAR	**Matsushiro Arr**	**92.81**	**353**	P		**P**	**00 40 48.0**	**-0.2**		
	0.5nm,0.3s,mb4.3,baz=194,slow=5.3,SNR=6.6									
MAJO	**Matsushiro**	**92.81**	**353**	*e*P		**P**	**00 40 48.4**	**+0.2**		
KSRS	**Korea Array**	**94.83**	**345**	LR		LR	01 22 58.8			
	comp=Z,68nm,18.9s,MS4.1,baz=11,slow=35									
BJT	**Baijiatuan**	**99.51**	**336**	P		**P**	**00 41 20.8**	**+2.3**		
MKAR	**Makanchi Array**	**116.16**	**316**	PKP		PKPdf	00 46 20.1	+1.7		
	0.8nm,1.1s,baz=109,slow=5.9,SNR=3.6									
EKS2	**Erkin-Say**	**116.31**	**308**	PKPdf		PKPdf	00 46 19.3	+0.4		
KURK	**Kurchatov**	**120.77**	**316**	PKPdf		PKPdf	00 46 26.8	-0.3		
TXAR	**Lajitas Array**	**124.36**	**88**	PKP		PKPdf	00 46 37.5	+2.8		
	0.3nm,0.8s,baz=132,slow=3.7,SNR=3.8									
MNTX	**Cornudas Mount**	**125.21**	**84**	PKPdf		PKPdf	00 46 36.1	-0.2		
BVAR	**Borovoye Array**	**125.80**	**314**	PKP		PKPdf	00 46 37.5	+0.8		
	0.4nm,0.5s,baz=149,slow=3.5,SNR=4.3									
BRVK	**Borovoye**	**125.86**	**313**	PKPdf		PKPdf	00 46 37.7	+0.9		
ILAR	**Eielson Array**	**130.76**	**31**	PKP		PKPdf	00 46 46.9	+1.0		
	0.7nm,0.6s,baz=269,slow=2.7,SNR=5.9									
WMOK	**Wichita Mounta**	**131.14**	**87**	*e*PKPdf		PKPdf	00 46 47.8	+0.2		
BRTR	**Keskin Array B**	**134.44**	**278**	PKP		PKPdf	00 46 56.5	+3.0		
	0.3nm,0.4s,baz=140,slow=6.5,SNR=3.8									
YKA	**Yellowknife Ar**	**140.57**	**46**	PKP		PKPdf	00 47 06.0	+1.9		
	1.1nm,0.7s,baz=214,slow=2.8,SNR=3.9									
AKASG	**Malin Array Be**	**143.80**	**288**	PKP		PKPdf	00 47 12.0	+1.7		
	2.9nm,0.6s,baz=107,slow=2.3,SNR=8.3									
BURAR	**Bucovina Array**	**144.20**	**281**	*i*P		PKPdf	00 47 08.7	-2.4		
BUR08	**Bucovina Ar. S**	**144.22**	**281**	*e*PKPdf		PKPdf	00 47 11.2	+0.1		
COWI	**Conover**	**144.24**	**82**	*e*PKPpre		PKPpre	00 47 07.8			
COWI				*e*PKPdf		PKPdf	00 47 11.6	+0.4		
CUC	**Castrocucco**	**144.53**	**264**	PKPdf		PKPdf	00 47 11.6	-0.3		
KEST	**Kesra**	**144.96**	**252**	*e*PKPdf		PKPdf	00 47 13.0	+0.2		
KEST	**Kesra**	**144.96**	**252**	PKPbc		PKPdf	00 47 13.4	+0.6		
	8.1nm,1.1s,baz=235,slow=2.0,SNR=8.2									
BZS	**Buzias**	**144.97**	**276**	*i*P		PKPdf	00 47 12.0	-0.5		
DRGR		**145.09**	**278**	*i*P		PKPbc	00 47 11.3	-0.9		
KWP	**Kalwaria Pacla**	**146.71**	**282**	*e*PKPab		PKPab	00 47 18.5	+0.2		
KWP	**Kalwaria Pacla**	**146.71**	**282**	*i*P		PKPbc	00 47 17.6	+0.6		
PKSM	**Moragy**	**146.99**	**274**	*i*P		PKPdf	00 47 17.1	+1.2		
CRVS	**Cervenica-Dubn**	**146.99**	**280**	*e*PKP		PKPab	00 47 19.7	+0.3		
CRVS	**Cervenica-Dubn**	**146.99**	**280**	*e*PKP		PKPbc	00 47 19.7	+1.8		
NACGM	**Naroch**	**147.22**	**293**	*e*		PKPdf	00 47 15.0	-1.0		
KECS	**Kecovo**	**147.29**	**279**	*e*PKP		PKPab	00 47 21.8	+1.2		
KECS	**Kecovo**	**147.29**	**279**	*e*PKP		PKPab	00 47 21.8	+1.2		
STHS	**Stebnicka Huta**	**147.40**	**281**	*e*PKP		PKPab	00 47 21.6	+0.6		
STHS	**Stebnicka Huta**	**147.40**	**281**	*e*PKP		PKPab	00 47 21.6	+0.6		
JOF	**Joensuu**	**148.17**	**309**	*e*P		PKPbc	00 47 21.9	+1.3		
JOF	**Joensuu**	**148.17**	**309**	*e*p		PKPbc	00 47 21.9	+1.3		
	3.1nm,0.7s									
VYHS	**Vyhne**	**148.21**	**278**	*e*PKP		PKPbc	00 47 23.3	+2.1		
VYHS	**Vyhne**	**148.21**	**278**	*e*PKP		PKPbc	00 47 23.3	+2.1		
SUW	**Suwalki**	**148.68**	**290**	*e*PKPbc		PKPbc	00 47 22.3	+0.1		
BINY	**Binghamton**	**149.06**	**99**	PKPdf		PKPdf	00 47 20.8	+1.4		
BINY				*e*PKPbc		PKPbc	00 47 24.4	+0.8		
OKC	**Ostrava-Krasne**	**149.32**	**280**	*e*PKP		PKPbc	00 47 27.0	+3.0		
OKC				*ex*		x	00 47 33.4			
ARSA	**Arzberg**	**149.34**	**274**	*i*PKiKP		PKPbc	00 47 26.4	+2.3		
	14nm,1.4s									
CSNA	**Conrad Observa**	**149.54**	**275**	*i*sPKPdf		PKPbc	00 47 25.8	+1.2		
	5.7nm,1.4s									
MORC	**Moravsky Berou**	**149.62**	**279**	PKPdf		PKPdf	00 47 21.5	+1.5		
MORC				*e*PKPbc		PKPbc	00 47 25.2	+0.5		
MORC				*e*PKPab		PKPab	00 47 30.0	0.0		
VRAC	**Vranov**	**149.89**	**278**	*i*P		PKPbc	00 47 27.2	+1.8		
FINES	**FINESS Array B**	**150.06**	**304**	PKPbc		PKPbc	00 47 25.0	-0.4		
	10.0nm,1.0s,baz=123,slow=7.0,SNR=11									
KAF	**Kangasniemi**	**150.15**	**306**	*e*P		PKPdf	00 47 21.2	+0.7		
KAF	**Kangasniemi**	**150.15**	**306**	*e*p		PKPdf	00 47 21.2	+0.7		
	6.5nm,0.9s									
RES	**Resolute Bay**	**150.44**	**28**	PKPbc		PKPbc	00 47 28.5	+2.5		
	16nm,0.8s,baz=127,slow=3.1,SNR=3.8									
KBA	**Koelnbreinsper**	**150.45**	**272**	*i*sPKPdf		PKPbc	00 47 26.8	0.0		
	12nm,1.1s									
TREC	**Trest**	**150.50**	**277**	*e*PKP		PKPbc	00 47 26.8	0.0		
TREC				*ep*PKP		PKPab	00 47 31.9	-1.7		
DPC	**Dobruska-Polom**	**150.59**	**279**	*e*PKP		PKPbc	00 47 27.1	+0.1		
DPC				*ep*PKP		PKPab	00 47 32.1	-1.8		
UPC	**Upice**	**150.84**	**279**	*e*PKP		PKPab	00 47 32.8	-2.2		
GEC2	**GERESS Array S**	**151.24**	**275**	*e*PKP		PKPbc	00 47 31.6	+3.0		
PRU	**Pruhonice**	**151.38**	**277**	*e*PKP		PKPbc	00 47 29.4	+0.5		
PRU				*ep*PKP		PKPab	00 47 34.5	-2.8		
KHC	**Kasperske Hory**	**151.47**	**275**	*e*PKP		PKPbc	00 47 33.8	+4.7		
KHC				*e*PKPAB		PKPab	00 47 42.1	+4.5		
PVCC	**Panska Ves**	**151.65**	**278**	*e*PKP		PKPbc	00 47 34.7	+5.2		
ARCES	**ARCESS Array B**	**151.67**	**321**	PKPbc		PKPbc	00 47 28.6	-0.4		
	7.1nm,0.8s,baz=101,slow=1.2,SNR=15									
WET	**Wettzell**	**151.86**	**275**	*e*PKP		PKPbc	00 47 33.5	+3.5		
SPITS	**Spitsbergen Ar**	**152.58**	**340**	PKPbc		PKPbc	00 47 33.0	+2.2		
	3.7nm,0.6s,baz=186,slow=2.0,SNR=4.0									
CLL	**Collm**	**152.89**	**279**	*e*(PKPbc)		PKPbc	00 47 37.0	+4.8		
	comp=Z,6.0nm,0.9s									
CLL				*i*			00 47 40.8			
	comp=Z,7.0nm,1.2s									
ESDC	**Sonseca Array**	**154.78**	**241**	PKPbc		PKPbc	00 47 38.3	+1.6		
	comp=Z,1.0nm,0.9s,baz=90,slow=0.8,SNR=4.2									
ESDC				PKPab		PKPab	00 47 54.8	+3.0		
	comp=Z,1.2nm,0.8s,baz=138,slow=2.9,SNR=6.9									
NOA	**NORSAR Array B**	**156.98**	**300**	PKPab		PKPab	00 48 00.2	-0.5		
NOA	**NORSAR Array B**	**156.98**	**300**	PKPab		PKPab	00 48 00.2	-0.5		
	comp=Z,1.5nm,0.8s,baz=96,slow=4.8,SNR=4.6									

ISCJB ***13*** *00:28:52.4±0.4, 38.67N±0.03×22.58E±0.03, h12km±5km, Error ellipse: s-maj=4.9km s-min=3.6km az=142.6*
CSEM ***13*** *00:28:52.4±0.2, 38.67N×22.59E, h19km, ML1.6/9, Error ellipse: s-maj=5.0km s-min=4.1km az=133.0*
THE ***13*** *00:28:52.4, 38.66N×22.58E, h16km, ML1.6/9, Error ellipse: s-maj=0.8km s-min=0.3km az=174.0*
ATH ***13*** *00:28:53.0, 38.67N×22.60E, h8km, MD2.7/5*
NEIC ***13*** *00:28:53.0, 38.67N×22.60E, h8km, MD2.7(ATH), After ATH.*

ISC 13 00:28:52.7±0.5, 38.67N±0.03×22.59E±0.03, h15km±6km, n34, σ0.9 61/55, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
DSF	**Desfina**	**0.26**	**190**	P		**Pg**		**00 28 57.8**	**-0.6**
DSF				S		**Sg**		**00 29 01.8**	**-0.4**
DSF	**Desfina**	**0.26**	**190**	P		**Pg**		**00 28 57.8**	**-0.6**
DSF				S		**Sg**		**00 29 01.8**	**-0.4**
LKR	**Lokris**	**0.32**	**94**	*e*Pg		**Pg**		**00 28 59.0**	**-0.4**
LKR				*e*Sb		**Sg**		**00 29 03.9**	**0.0**
LKR	**Lokris**	**0.32**	**94**	*e*PG		**Pg**		**00 28 59.0**	**-0.4**
LKR				*e*SB		**Sg**		**00 29 03.9**	**0.0**
LKR	**Lokris**	**0.32**	**94**	P		**Pg**		**00 28 59.0**	**-0.4**
LKR				S		**Sg**		**00 29 04.6**	**+0.7**
LKR	**Lokris**	**0.32**	**94**	P		**Pg**		**00 28 59.0**	**-0.4**
LKR				*e*Sb		**Sg**		**00 29 03.9**	**0.0**
LKR				S		**Sg**		**00 29 04.6**	**+0.7**
ATAL	**Atalanti**	**0.34**	**86**	P		**Pg**		**00 28 59.6**	**-0.1**
ATAL				S		**Sg**		**00 29 04.9**	**+0.5**
ATAL	**Atalanti**	**0.34**	**86**	P		**Pg**		**00 28 59.6**	**-0.1**
ATAL				S		**Sg**		**00 29 04.9**	**+0.5**
AGG	**Agios Georgios**	**0.40**	**330**	P		**Pg**		**00 29 00.5**	**-0.3**
AGG				S		**Sg**		**00 29 06.6**	**+0.3**
AGG	**Agios Georgios**	**0.40**	**330**	P		**Pg**		**00 29 00.5**	**-0.3**
AGG				S		**Sg**		**00 29 06.6**	**+0.3**
KALE	**Kalithea**	**0.45**	**232**	P		**Pg**		**00 29 01.2**	**-0.5**
KALE				S		**Sg**		**00 29 07.8**	**+0.1**
KALE	**Kalithea**	**0.45**	**232**	P		**Pg**		**00 29 01.2**	**-0.5**
KALE				S		**Sg**		**00 29 07.8**	**+0.1**
TRIZ	**Trizonia**	**0.51**	**233**	P		**Pg**		**00 29 01.9**	**-0.8**
TRIZ				S		**Sg**		**00 29 09.7**	**+0.2**
TRIZ	**Trizonia**	**0.51**	**233**	P		**Pg**		**00 29 01.9**	**-0.8**
TRIZ				S		**Sg**		**00 29 09.7**	**+0.2**
EFP	**Efpalio**	**0.59**	**246**	*e*PB		**Pg**		**00 29 03.7**	**-0.5**
EFP	**Efpalio**	**0.59**	**246**	P		**Pg**		**00 29 03.6**	**-0.6**
EFP				S		**Sg**		**00 29 12.8**	**+0.7**
EFP	**Efpalio**	**0.59**	**246**	*e*Pb		**Pg**		**00 29 03.7**	**-0.5**
EFP				S		**Sg**		**00 29 12.8**	**+0.7**
EVR	**Evrytania**	**0.66**	**292**	*e*Pb		**Pg**		**00 29 07.3**	**+1.8**
EVR	**Evrytania**	**0.66**	**292**	*e*PB		**Pg**		**00 29 07.3**	**+1.8**
EVR	**Evrytania**	**0.66**	**292**	*e*Pb		**Pg**		**00 29 07.3**	**+1.8**
LTK	**Loutraki**	**0.71**	**155**	*e*PB		**Pg**		**00 29 07.8**	**+1.2**
LTK	**Loutraki**	**0.71**	**155**	*e*Pb		**Pg**		**00 29 07.8**	**+1.2**
GUR	**Goura**	**0.76**	**195**	P		**Pg**		**00 29 06.8**	**-0.6**
GUR				S		**Sg**		**00 29 17.7**	**+0.3**
GUR	**Goura**	**0.76**	**195**	P		**Pg**		**00 29 06.8**	**-0.6**
GUR				S		**Sg**		**00 29 17.7**	**+0.3**
NEO	**Neokhori**	**0.81**	**38**	*e*Pg		**Pg**		**00 29 08.0**	**-0.3**
NEO	**Neokhori**	**0.81**	**38**	*e*PG		**Pg**		**00 29 08.0**	**-0.3**
NEO	**Neokhori**	**0.81**	**38**	*e*Pg		**Pg**		**00 29 08.0**	**-0.3**
XOR	**Xorichti**	**0.84**	**34**	P		**Pb**		**00 29 08.3**	**-0.6**
XOR				S		**Sb**		**00 29 20.1**	**+0.1**
XOR	**Xorichti**	**0.84**	**34**	P		**Pb**		**00 29 08.3**	**-0.6**
XOR				S		**Sb**		**00 29 20.1**	**+0.1**
THL	**Klokotos Trika**	**1.00**	**334**	*e*PG		**Pg**		**00 29 11.5**	**-0.5**
THL	**Klokotos Trika**	**1.00**	**334**	*e*Pg		**Pg**		**00 29 11.5**	**-0.5**
VLY	**Voula,Athens**	**1.25**	**130**	*e*Pn		**Pn**		**00 29 15.9**	**+0.3**
VLY	**Voula,Athens**	**1.25**	**130**	*e*PN		**Pn**		**00 29 15.9**	**+0.3**
VLY	**Voula,Athens**	**1.25**	**130**	*e*Pn		**Pn**		**00 29 15.9**	**+0.3**

ISCJB ***13*** *00:29:06.8±1.1, 28.25S±0.04×71.32W±0.1, h45km±12km, mb4.2/8, Error ellipse: s-maj=15.0km s-min=7.1km az=7.7*
NEIC ***13*** *00:29:07.2, 28.45S×71.40W, h7km, mb4.4/6, ML4.5(GUC), After GUC.*
NEIC Felt at Copiapo.
GUC ***13*** *00:29:07.2±0.9, 28.45S×71.40W, h7km±10km, MD4.5, ML4.5*
IDC ***13*** *00:29:09.7±3.5, 28.21S×71.21W, h57km±32km, mb3.7/3, mb1 3.9/7, mb1mx3.8/16, mbtmpb3.7/7, ML4.0/4, MS2.8/2, Ms1 2.9/2, ms1mx2.6/24, Error ellipse: s-maj=44.4km s-min=15.6km az=76.0*

ISC 13 00:29:07.0±1.6, 28.23S±0.03×71.32W±0.10, h26km±12km, n38, σ0.9 93/44, mb4.2/8, 7C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
LCO	**Las Campanas**	**0.95**	**145**	*i*P		**Pn**		**00 29 23.5**	**-1.1**
LCO				*e*S		**Sb**		**00 29 35.3**	**-1.7**
LCO	**Las Campanas**	**0.95**	**145**	*i*P		**Pn**		**00 29 23.6**	**-1.1**
LCO				*i* S		**Sb**		**00 29 35.9**	**-1.1**
TLL	**Tololo Astrono**	**1.98**	**167**	*e*P		**Pn**		**00 29 39.4**	**+0.5**
TLL				*i* S		**Sn**		**00 30 03.5**	**+0.6**
TLL	**Tololo Astrono**	**1.98**	**167**	*e*P		**Pn**		**00 29 39.4**	**+0.5**
TLL				*i* S		**Sn**		**00 30 03.5**	**+0.6**
TLL				AML		AML		00 30 14.5	
	comp=N,6μm,0.6s								
OVCH	**Ovalle**	**2.38**	**178**	*i*P		**Pn**		**00 29 43.6**	**-0.6**
OVCH				*i* S		**Sn**		**00 30 11.5**	**-0.9**
OVCH	**Ovalle**	**2.38**	**178**	*i*P		**Pn**		**00 29 43.6**	**-0.6**
OVCH				*i* S		**Sn**		**00 30 11.5**	**-0.9**
OVCH				AML		AML		00 30 25.2	
	comp=N,5μm,0.4s								
CMCH	**Combarbala**	**2.95**	**175**	*i*P		**Pn**		**00 29 50.9**	**-1.2**
CMCH				*i* S		**Sn**		**00 30 25.2**	**-1.4**
CMCH	**Combarbala**	**2.95**	**175**	*i*P		**Pn**		**00 29 50.9**	**-1.2**
CMCH				*i* S		**Sn**		**00 30 25.2**	**-1.4**
CFAA	**Coronel Fontan**	**4.30**	**142**	P		**Pn**		**00 30 12.3**	**+1.7**
CFAA				S		**Sn**		**00 31 01.0**	**+1.1**
CFAA	**Coronel Fontan**	**4.30**	**142**	P		**Pn**		**00 30 12.3**	**+1.7**
	comp=N,1.2nm,0.3s,baz=331,slow=11,SNR=127								
CFAA				S		**Sn**		**00 31 01.0**	**+1.1**
	comp=N,5.1nm,0.3s,baz=178,slow=16,SNR=9.8								
PEL	**Peldehue**	**4.93**	**174**	*i* P		**Pn**		**00 30 19.5**	**+0.2**
PEL				*i* S		**Sn**		**00 31 15.0**	**-0.5**
FCH	**Farellones**	**5.16**	**170**	*i*P		**Pn**		**00 30 23.6**	**+1.1**
FCH				*i* S		**Sn**		**00 31 22.3**	**+1.1**
CLCH	**Cerro Calan**	**5.20**	**173**	*e*P		**Pn**		**00 30 23.9**	**+0.9**
CLCH				*e*S		**Sn**		**00 31 21.7**	**-0.3**
LMEL	**Las Melosas**	**5.68**	**171**	*e*P		**Pn**		**00 30 30.4**	**+0.8**
LMEL				*i* S		Sn		00 30 34.0	-60
LMEL	**Las Melosas**	**5.68**	**171**	*e*P		**Pn**		**00 30 30.4**	**+0.8**
LMEL				*i* S		**Sn**		**00 31 34.0**	**0.0**
LPAZ	**La Paz**	**12.24**	**15**	*e*Pn		**Pn**		**00 32 00.8**	**+1.2**
LPAZ				LR		LR		00 35 37.8	
LPAZ	**La Paz**	**12.24**	**15**	P		**Pn**		**00 32 01.0**	**+1.3**
	comp=N,0.3nm,0.3s,baz=194,slow=6.0,SNR=6.4								
LPAZ				LR		LR		00 35 37.8	
	comp=N,16nm,18.5s,baz=302,slow=32								
PLCA	**Paso Flores**	**12.49**	**177**	*e*Pn		**Pn**		**00 32 04.6**	**+1.7**
CPUP	**Villa Florida**	**12.59**	**85**	*e*Pn		**Pn**		**00 32 04.5**	**+0.1**
CPUP				LR		LR		00 37 22.1	
CPUP	**Villa Florida**	**12.59**	**85**	P		**Pn**		**00 32 04.8**	**+0.5**
	comp=N,0.8nm,0.3s,baz=224,slow=14,SNR=5.6								
CPUP				LR		LR		00 37 22.1	
	comp=N,126nm,20.3s,baz=78,slow=39								
SIV	**San Ignacio**	**15.43**	**40**	P		**Pn**		**00 32 41.8**	**-1.1**
	comp=N,0.3nm,0.3s,baz=238,slow=9.8,SNR=3.6								
QSPA	**South Pole Qui**	**61.99**	**180**	*e*P		**P**		**00 39 23.8**	**-0.4**
	comp=N,2.6nm,0.7s,mb4.5								
QSPA	**South Pole Qui**	**61.99**	**180**	P		**P**		**00 39 23.8**	**-0.4**
	comp=N,3.0nm,0.9s,mb4.4,baz=143,slow=3.0,SNR=14								
TXAR	**Lajitas Array**	**65.06**	**329**	P		**P**		**00 39 44.6**	**-0.5**
	comp=N,1.0nm,0.8s,mb3.9,baz=150,slow=7.2,SNR=12								
DBIC	**Dimbokro**	**72.80**	**72**	*e*P		**P**		**00 40 31.7**	**-1.9**
	comp=N,8.2nm,1.0s,mb4.6								
SDCO	**Great Sand Dun**	**73.03**	**332**	*e*P		**P**		**00 40 35.0**	**+0.6**
	comp=N,0.9nm,0.5s,mb4.0								
DUG	**Dugway**	**78.24**	**329**	*e*P		**P**		**00 41 03.9**	**-0.3**
	comp=N,2.1nm,0.8s,mb4.1								
HWUT	**Hardware Ranch**	**78.82**	**330**	*e*P		**P**		**00 41 07.1**	**-0.2**
	comp=N,6.0nm,0.7s,mb4.6								
SPUT	**South Promonto**	**78.97**	**330**	*e*P		**P**		**00 41 08.3**	**+0.1**
	comp=N,2.1nm,0.8s,mb4.1								
NVAR	**Mina Array Bea**	**79.54**	**324**	P		**P**		**00 41 11.1**	**-0.2**
	comp=N,0.6nm,0.7s,mb3.6,baz=152,slow=6.7,SNR=5.8								
BRG	**Berggiesshubel**	**108.53**	**42**	*e*P		PKiKP		00 47 32.7	-0.2
	comp=N,5.2nm,0.9s								
BRG									
	comp=N,272nm,21.9s								
BRG									
	comp=E,506nm,21.7s								
BRG									
	comp=Z,758nm,21.6s								
ASAR	**Alice Springs**	**122.97**	**208**	PKP		PKPdf		00 47 59.2	-2.3
	comp=Z,0.3nm,0.5s,baz=139,slow=2.1,SNR=4.4								
ZAA0	**Zalesovo Array**	**148.93**	**28**	*e*PKPbc		PKPbc		00 48 50.8	-1.2
ZALV	**Zalesovo Beam**	**148.93**	**28**	PKPbc		PKPbc		00 48 50.5	-1.5
	comp=Z,4.7nm,0.5s,baz=303,slow=3.3,SNR=24								
ZALV				*e*PKPbc		pPKPbc		00 49 00.3	-0.4
	comp=Z,1.8nm,0.6s,baz=301,slow=3.5,SNR=4.9								
UCH	**Uchtor**	**149.01**	**54**	*e*PKPdf		PKPdf		00 48 47.4	-1.1
UCH				*e*PKPbc		PKPbc		00 48 52.3	-0.2
MK31	**Makanchi Array**	**152.24**	**41**	*e*PKPbc		PKPbc		00 48 58.0	-2.1
MKAR	**Makanchi Array**	**152.24**	**41**	PKPbc		PKPbc		00 48 58.5	-1.6
MKAR				*e*PKPbc		pPKPbc		00 49 08.7	-0.1
MKAR

1.0nm,0.9s,mb3.7,baz=56,slow=5.3,SNR=5.1
NVAR Mina Array Bea 52.50 281 P P 00 55 21.7 +1.3
TXAR Lajitas Array 54.61 262 P P 00 55 34.4 -1.5
TXAR Lajitas Array 54.61 262 P P 00 55 34.4 -1.5
0.5nm,0.8s,mb3.6,baz=28,slow=6.1,SNR=4.1
TXAR Lajitas Array 54.61 262 P P 00 55 34.4 -1.5
MK31 Makanchi Array 57.65 46 eP P 00 55 57.6 +0.2
MK31 Makanchi Array 57.65 46 eP P 00 55 57.6 +0.2
MKAR Makanchi Array 57.65 46 P P 00 55 57.1 -0.3
0.4nm,0.8s,mb3.5,baz=327,slow=6.4,SNR=4.7
UCH Uchtor 59.39 54 eP P 00 56 10.3 +0.7
1.3nm,0.8s,mb4.0
UCH Uchtor 59.39 54 eP P 00 56 10.3 +0.7
1.3nm,0.8s,mb4.0
CHTO Chiang Mai 88.54 42 P P 00 58 58.9 -1.4
CHTO Chiang Mai 88.54 42 P P 00 58 58.8 -1.4
CMAR Chiang Mai Arr 88.88 42 P P 00 59 02.1 +0.3
0.7nm,0.4s,mb4.3,baz=334,slow=5.5,SNR=6.0
CMAR Chiang Mai Arr 88.88 42 P P 00 59 02.2 +0.4

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*ISCJB **13** 01:32:43.5±0.5, 13°46S±0'.07×111°.35W±0'.09, h10km, mb4.7/71, MS5.3/211, Error ellipse: s-maj=14.7km s-min=7.2km az=149.6*
*IDC **13** 01:32:44.6±1.0, 13°.33S×111°.27W, h0km, mb4.2/10, mb1 4.5/10, mb1mx4.4/13, mbtmp4.2/10, MS5.2/11, Ms1 5.2/11, ms1mx5.2/11, Error ellipse: s-maj=37.1km s-min=18.1km az=52.0*
*NEIC **13** 01:32:45.7±0.3, 13°.38S×111°.28W, h10km, mb4.8/64, MS5.3/195, MW5.6, Error ellipse: s-maj=11.3km s-min=6.6km az=68.0, Moment Tensor Solution. s60 Moment tensor: Scale 10^17 Nm; Mrr=0.14; Mθθ 1.09; Mϕϕ-0.95; Mrθ-0.30; Mθϕ 3.18; Mϕr-0.09; Best double couple: M≈3.40000×10^17 NP1:ϕs279.00000°, δ88.00000°, λ5.00000°. NP2:ϕs189.00000°, δ85.00000°, λ178.00000°. Principal axes: T 3.4300, Plg4.0000°, Azm143.0000°; N -0.1600, Plg84.0000°, Azm302.0000°; P -3.2700, Plg1.0000°, Azm53.0000°;*
*MOS **13** 01:32:45.2±1.2, 13°.14S×111°.17W, h10km, mb5.0/24, MS5.2/28 Error ellipse: s-maj=20.9km s-min=8.6km az=88.6*
*BJI **13** 01:32:47.6, 13°.40S×111°.30W, h10km, mB5.5/19, Ms5.7/23, Ms7 5.5/23*
*GCMT **13** 01:32:51.0±0.1, 13°.52S×111°.31W, h16km, MW5.7, Moment Tensor Solution. s92,c169; s65,c76; Moment tensor: Scale 10^17 Nm; Mrr-0.47±.05; Mθθ 2.05±.05; Mϕϕ-1.57±.05; Mrθ-1.03±.14; Mθϕ 4.29±.04; Mϕr 0.28±.14; Best double couple: M≈4.80000×10^17 NP1:ϕs192.00000°, δ77.00000°, λ-177.00000°. NP2:ϕs101.00000°, δ87.00000°, λ-13.00000°. Principal axes: T 4.9900, Plg7.0000°, Azm147.0000°; N -0.4100, Plg76.0000°, Azm270.0000°; P -4.5800, Plg11.0000°, Azm56.0000°; Data Used: II IU CN IC G. Surface waves: sta=106, comp=231, per= 50.*
ISC 13 01:32:45.5±0.5, 13°.50S±0'.07×111°.33W±0'.09, h10km, n503, σθ 70/289, mb4.7/71, MS5.3/211, 86C-74D, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
RPN	**Rapa Nui**	**13.68**	**172**	LR	LR		01 39 56.0	
	comp=Z,18μm,18.2s,baz=349,slow=31							
RPN				T			01 50 03.0	
	73nm,0.3s,baz=337,slow=24,SNR=11							
PTCN	**Pitcairn Islan**	**21.09**	**234**	PFAKE			01 37 40.0	+10
PTCN				LR	LR			
	comp=Z,7μm,19.0s,MS5.1							
RKT	**Rikitea**	**24.37**	**243**	*e*LQ			01 42 58.2	
	comp=Z,4μm,32.8s							
RKT				*e*LR	LR		01 44 10.2	
	comp=Z,17μm,28.0s,baz=65							
PAYG	**Puerto Ayora**	**24.42**	**60**	PFAKE			01 38 10.0	+5.5
PAYG				LR	LR			
	comp=Z,13μm,22.0s,MS5.4							
NNA	**Nana**	**33.65**	**91**	PFAKE			01 39 40.0	+13
NNA				LR	LR			
	comp=Z,3μm,19.0s,MS5.0							
JTS	**JuntasAbangare**	**35.27**	**49**	PFAKE			01 39 50.0	+9.3
JTS				LR	LR			
	comp=Z,925nm,20.0s,MS4.5							
OTAV	**Otavalo**	**35.32**	**70**	*e*P		**P**	**01 39 39.9**	**-1.3**
OTAV	comp=Z,22nm,1.4s,mb4.9			LR	LR			
	comp=Z,3μm,19.0s,MS5.1							
TGUH	**Tegucigalpa,Un**	**36.29**	**42**	PFAKE			01 40 00.0	+11
TGUH				LR	LR			
	comp=Z,2μm,20.0s,MS4.9							
PPT	**Papeete**	**37.03**	**259**	*e*LR	LR		01 48 28.2	
PPT	comp=Z,13μm,30.5s							
				*e*LR	LR		01 49 54.6	
	comp=Z,10μm,27.5s,baz=94							
PPT	**Papeete**	**37.03**	**259**	LR	LR		01 50 58.2	
	comp=Z,2μm,19.1s,MS4.9,baz=86,slow=30							
BCIP	**Isla Barro Col**	**38.53**	**56**	PFAKE			01 40 20.0	+12
BCIP				LR	LR			
	comp=Z,959nm,20.0s,MS4.6							
TEIG	**Tepich**	**40.46**	**35**	*e*P		**P**	**01 40 23.6**	**-0.9**
TEIG	comp=Z,22nm,0.9s,mb4.9			LR	LR			
	comp=Z,5μm,22.0s,MS5.3							
LCO	**Las Campanas**	**40.66**	**119**	*e*P		**P**	**01 40 25.5**	**-0.7**
	comp=Z,22nm,1.1s,mb4.7							
LCO				LR	LR			
	comp=Z,7μm,20.0s,MS5.5							
ROSC	**El Rosal**	**41.01**	**66**	P		**P**	**01 40 30.0**	**+0.9**
	comp=Z,3.5nm,0.5s,mb4.2,baz=94,slow=23,SNR=2.7							
ROSC				LR	LR		01 54 46.2	
	comp=Z,1μm,18.6s,MS4.8,baz=202,slow=32							
LPAZ	**La Paz**	**41.78**	**99**	*e*P		**P**	**01 40 36.0**	**+0.5**
	comp=Z,46nm,1.5s,mb4.9							
LPAZ				LR	LR			
	comp=Z,1μm,20.0s,MS4.8							
LPAZ	**La Paz**	**41.78**	**99**	P		**P**	**01 40 35.9**	**+0.4**
	comp=Z,5.1nm,0.8s,mb4.2,baz=238,slow=6.0,SNR=13							
LPAZ				LR	LR		01 53 48.0	
	comp=Z,2μm,21.5s,MS4.8,baz=70,slow=30							
LPAZ	**La Paz**	**41.78**	**99**	*e*P		**P**	**01 40 36.0**	**+0.5**
LPAZ				pmax	pmax			
	comp=Z,46nm,1.5s							
LPAZ				MLR	MLR			
	comp=Z,1μm,20.0s							
KVTX	**Kingsville**	**42.83**	**18**	PFAKE			01 40 50.0	+6.2
KVTX				LR	LR			
	comp=Z,2μm,20.0s,MS5.1							
TXAR	**Lajitas Array**	**43.22**	**10**	P		**P**	**01 40 46.9**	**-0.1**
	comp=Z,2.2nm,1.0s,mb3.9,baz=177,slow=9.6,SNR=15							
TXAR				LR	LR		01 55 32.7	
	comp=Z,3μm,18.6s,MS5.2,baz=85,slow=32							
CFAA	**Coronel Fontan**	**43.36**	**122**	P		**P**	**01 40 48.7**	**+0.5**
CFAA	**Coronel Fontan**	**43.36**	**122**	P		**P**	**01 40 48.7**	**+0.6**
	comp=Z,1.9nm,1.2s,mb3.7,baz=291,slow=5.4,SNR=6.4							
626A	**Big Bend Ranch**	**43.36**	**9**	⇓P		**P**	**01 40 48.5**	**+0.4**
	baz=44,SNR=35							
627A	**Terlingua Ranc**	**43.38**	**10**	⇑P		**P**	**01 40 49.3**	**+1.0**
	baz=44,SNR=15							
628A	**Black Gap, Mar**	**43.50**	**11**	P		**P**	**01 40 50.0**	**+0.8**
	baz=44,SNR=8.0							
526A	**Mary Lane Ranc**	**43.87**	**9**	⇑P		**P**	**01 40 52.7**	**+0.6**
	baz=44,SNR=15							
527A	**Woodward Ranch**	**44.02**	**10**	⇓P		**P**	**01 40 54.2**	**+0.9**
	baz=44,SNR=24							
528A	**Cox Ranch, San**	**44.18**	**11**	⇑P		**P**	**01 40 54.9**	**+0.3**
	baz=44,SNR=6.1							
425A	**Indio Mountain**	**44.45**	**8**	⇓P		**P**	**01 40 56.9**	**+0.1**
	baz=45,SNR=6.5							
426A	**McDonald Obser**	**44.47**	**9**	⇑P		**P**	**01 40 56.6**	**-0.3**
	baz=45,SNR=7.8							
PLCA	**Paso Flores**	**44.72**	**135**	*e*P		**P**	**01 41 00.8**	**+1.9**
	comp=Z,22nm,1.4s,mb4.8							
PLCA				LR	LR			
	comp=Z,8μm,20.0s,MS5.7							
PLCA	**Paso Flores**	**44.72**	**135**	P		**P**	**01 41 00.3**	**+1.4**
	comp=Z,4.5nm,0.9s,mb4.3,baz=296,slow=5.4,SNR=3.7							
PLCA				LR	LR		01 55 04.7	
	comp=Z,9μm,19.0s,MS5.7,baz=265,slow=30							
PLCA	**Paso Flores**	**44.72**	**135**	*e*P		**P**	**01 41 00.8**	**+1.9**
PLCA				pmax	pmax			
	comp=Z,22nm,1.4s							
PLCA				MLR	MLR			
	comp=Z,8μm,20.0s							
427A	**Hayter Ranch,**	**44.75**	**10**	⇑P		**P**	**01 40 59.9**	**+0.7**
	baz=45,SNR=9.6							
428A	**Kincaid Ranch,**	**44.75**	**11**	P		**P**	**01 41 00.0**	**+0.8**
	baz=45,SNR=7.4							
325A	**Bean Ranch, Si**	**45.03**	**8**	⇑P		**P**	**01 41 01.6**	**+0.2**
	baz=45,SNR=17							
JCT	**Junction City**	**45.11**	**14**	*e*P		**P**	**01 41 02.1**	**0.0**
	comp=Z,20nm,0.9s,mb5.0							
JCT				LR	LR			
	comp=Z,3μm,19.0s,MS5.2							
JCT	**Junction City**	**45.11**	**14**	*e*P		**P**	**01 41 02.1**	**0.0**
JCT				pmax	pmax			
	comp=Z,20nm,0.9s,mb5.0							
JCT				MLR	MLR			
	comp=Z,3μm,19.0s,MS5.2							
MNTX	**Cornudas Mount**	**45.30**	**7**	*e*P		**P**	**01 41 02.7**	**-0.9**
	comp=Z,16nm,1.0s,mb4.8							
MNTX				LR	LR			
	comp=Z,1μm,21.0s,MS4.8							
328A	**Wristen Ranch,**	**45.37**	**10**	P		**P**	**01 41 04.3**	**+0.2**
	baz=46,SNR=17							
TUC	**Tucson**	**45.55**	**1**	PFAKE			01 41 20.0	+14
TUC				LR	LR			
	comp=Z,6μm,19.0s,MS5.5							
224A	**Cornudas Mount**	**45.66**	**7**	⇑P		**P**	**01 41 06.6**	**+0.3**
	baz=46,SNR=7.5							
HKT	**Hockley**	**45.71**	**19**	PFAKE			01 41 20.0	+13
HKT				LR	LR			
	comp=Z,2μm,19.0s,MS5.0							
MTDJ	**Mount Denham**	**45.88**	**47**	PFAKE			01 41 20.0	+12
MTDJ				LR	LR			
	comp=Z,2μm,19.0s,MS5.1							
227A	**Bennet, Jal**	**45.90**	**10**	⇑P		**P**	**01 41 09.1**	**+0.8**
	baz=46,SNR=5.3							
SDV	**Santo Domingo**	**46.12**	**63**	PFAKE			01 41 20.0	+10
SDV				LR	LR			
	comp=Z,675nm,19.0s,MS4.6							
125A	**Gardner Draw,**	**46.34**	**8**	⇑P		**P**	**01 41 11.5**	**-0.2**
	baz=46,SNR=6.4							
126A	**Clayton Basin,**	**46.41**	**9**	⇑P		**P**	**01 41 12.2**	**-0.1**
	baz=47							
RAR	**Rarotonga**	**46.73**	**254**	PFAKE			01 41 30.0	+15
RAR				LR	LR			
	comp=Z,5μm,22.0s,MS5.5							
CPRX	**Cap Rock**	**46.81**	**9**	*e*P		**P**	**01 41 15.3**	**-0.2**
	comp=Z,8.5nm,1.0s,mb4.6							
Z25A	**Roswell**	**46.94**	**8**	⇑P		**P**	**01 41 16.5**	**0.0**
	baz=47,SNR=6.1							
Z26A	**Caprock**	**47.03**	**8**	P		**P**	**01 41 16.7**	**-0.5**
	baz=47,SNR=6.1							
PFO	**Pinyon Flat Ob**	**47.10**	**354**	PFAKE			01 41 30.0	+12
PFO				LR	LR			
	comp=Z,3μm,19.0s,MS5.2							
Y25A	**Mesa, Roswell**	**47.58**	**7**	⇓P		**P**	**01 41 21.6**	**+0.1**
	baz=48							
Y26A	**Elida**	**47.70**	**8**	⇓P		**P**	**01 41 22.2**	**-0.1**
	baz=48,SNR=6.2							
Y27A	**Causey**	**47.76**	**9**	⇑P		**P**	**01 41 22.7**	**-0.1**
	baz=48,SNR=5.4							
MSTX	**Muleshoe**	**47.90**	**10**	⇑P		**P**	**01 41 23.4**	**-0.5**
	baz=48,SNR=6.5							
X25A	**Clemmons Ranch**	**48.18**	**7**	⇓P		**P**	**01 41 26.4**	**+0.3**
	baz=48							
GMRC	**Granite Mounta**	**48.19**	**355**	⇓P		**P**	**01 41 26.5**	**+0.4**
	baz=48							
XMAS	**Kiritimati**	**48.27**	**285**	PFAKE			01 41 40.0	+13
XMAS				LR	LR			
	comp=Z,3μm,20.0s,MS5.3							
X26A	**CP and CF Fran**	**48.32**	**8**	⇑P		**P**	**01 41 27.2**	**+0.1**
	baz=48							
ANMO	**Albuquerque**	**48.40**	**5**	PFAKE			01 41 40.0	+12
ANMO				LR	LR			
	comp=Z,4μm,19.0s,MS5.5							
GTBY	**Guantanamo Bay**	**48.72**	**48**	PFAKE			01 41 40.0	+10
GTBY				LR	LR			
	comp=Z,3μm,21.0s,MS5.2							
WUAZ	**Wupatki**	**48.75**	**360**	PFAKE			01 41 40.0	+10
WUAZ				LR	LR			
	comp=Z,3μm,20.0s,MS5.3							
W24A	**Lazy 6 Ranch,**	**48.77**	**6**	⇑P		**P**	**01 41 30.4**	**-0.1**
	baz=49,SNR=12							
GSC	**Goldstone**	**48.81**	**354**	*e*P		**P**	**01 41 34.0**	**+3.1**
	comp=Z,79nm,2.3s,mb5.3							
GSC	**Goldstone**	**48.81**	**354**	*e*P		**P**	**01 41 34.0**	**+3.1**
GSC				pmax	pmax			
	comp=Z,79nm,2.3s,mb5.3							
W26A	**Owens Ranch, T**	**48.85**	**8**	⇓P		**P**	**01 41 31.0**	**-0.2**
	baz=49,SNR=6.3							
W25A	**X Bar L Ranch,**	**48.88**	**7**	⇓P		**P**	**01 41 31.2**	**-0.3**
	baz=49,SNR=5.3							
W27A	**Bowe Ranch, En**	**48.93**	**9**	⇑P		**P**	**01 41 32.1**	**+0.3**
	baz=49,SNR=11							
AMTX	**Amarillo**	**48.98**	**11**	*e*P		**P**	**01 41 32.6**	**+0.4**
AMTX				LR	LR			
	comp=Z,2μm,19.0s,MS5.1							
V21A	**Milan**	**49.16**	**4**	⇑P		**P**	**01 41 34.4**	**+0.8**
	baz=49							
V24A	**Rampart Ranch,**	**49.29**	**7**	⇓P		**P**	**01 41 35.3**	**+0.7**
	baz=49							
V22A	**San Miguel Ran**	**49.32**	**5**	⇑P		**P**	**01 41 35.5**	**+0.6**
	baz=50							
WMOK	**Wichita Mounta**	**49.43**	**14**	*e*P		**P**	**01 41 37.3**	**+1.7**
	comp=Z,5.4nm,0.9s,mb4.6							
WMOK				LR	LR			
	comp=Z,2μm,21.0s,MS5.2							
WMOK	**Wichita Mounta**	**49.43**	**14**	*e*P		**P**	**01 41 37.3**	**+1.6**
WMOK				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.5							
WMOK				MLR	MLR			
	comp=Z,2μm,21.0s,MS5.2							
V25A	**Rancho No Teng**	**49.48**	**7**	P		**P**	**01 41 35.9**	**-0.1**
	baz=50,SNR=5.7							
V26A	**Tequesquite Ra**	**49.54**	**8**	P		**P**	**01 41 36.4**	**-0.1**
	baz=50,SNR=17							
VBMS	**Vicksburg**	**49.64**	**23**	PFAKE			01 41 50.0	+13
VBMS				LR	LR			
	comp=Z,1μm,21.0s,MS4.8							
DAC	**Darwin (Calif)**	**49.86**	**353**	PFAKE			01 41 50.0	+11
DAC				LR	LR			
	comp=Z,2μm,19.0s,MS5.2							
U24A	**Moreno Valley**	**49.97**	**6**	⇑P		**P**	**01 41 39.9**	**+0.1**
	baz=50,SNR=5.1							
TRQA	**Tornquist**	**50.01**	**129**	*e*P		**P**	**01 41 42.2**	**+2.0**
	comp=Z,6.2nm,0.8s,mb4.7							
TRQA				LR	LR			
	comp=Z,6μm,19.0s,MS5.6							
BRAL	**Brewton**	**50.03**	**27**	PFAKE			01 41 50.0	+10
BRAL				LR	LR			
	comp=Z,1μm,19.0s,MS4.9							
U25A	**Circle Dot Ran**	**50.06**	**7**	⇓P		**P**	**01 41 40.2**	**-0.2**
	baz=50,SNR=5.3							
T19A	**Beclabito**	**50.11**	**2**	⇑P		**P**	**01 41 41.0**	**+0.2**
	baz=50							
U26A	**Atchley Ranch,**	**50.14**	**8**	⇑P		**P**	**01 41 41.2**	**+0.1**
	baz=50,SNR=7.8							
T15A	**Red Dirt Ranch**	**50.26**	**359**	⇓P		**P**	**01 41 42.0**	**+0.1**
	baz=50							
T22A	**Edith**	**50.41**	**5**	⇑P		**P**	**01 41 43.3**	**+0.2**
	baz=51,SNR=6.8							
DWPF	**Disney**	**50.49**	**35**	PFAKE			01 42 00.0	+16
DWPF				LR	LR			
	comp=Z,2μm,20.0s,MS5.1							
MVCO	**Mesa Verde**	**50.51**	**3**	PFAKE			01 42 00.0	+16
MVCO				LR	LR			
	comp=Z,3μm,19.0s,MS5.3							
T11A	**Corn Creek, Al**	**50.60**	**356**	⇓P		**P**	**01 41 45.3**	**+0.7**
	baz=51							
MIAR	**Mount Ida**	**50.67**	**19**	*e*P		**P**	**01 41 44.7**	**-0.4**
	comp=Z,12nm,0.8s,mb4.9							
MIAR				LR	LR			
	comp=Z,1μm,20.0s,MS4.9							
MIAR	**Mount Ida**	**50.67**	**19**	*e*P		**P**	**01 41 44.7**	**-0.4**
MIAR				pmax	pmax			
	comp=Z,12nm,0.8s,mb4.9							
MIAR				MLR	MLR			
	comp=Z,1μm,20.0s,MS4.9							
T25A	**Trinidad**	**50.79**	**7**	P		**P**	**01 41 46.8**	**+0.9**
	baz=51,SNR=7.7							
CCUT	**Cedar City**	**50.81**	**358**	*e*P		**P**	**01 41 50.6**	**+4.5**
S13A	**Holt Ranch, En**	**50.86**	**357**	⇑P		**P**	**01 41 46.7**	**+0.2**
	baz=51							
SAO	**San Andreas Ge**	**50.90**	**350**	PFAKE			01 42 00.0	+13
SAO				LR	LR			
	comp=Z,5μm,19.0s,MS5.5							
S16A	**Weppner Ranch,**	**50.95**	**360**	⇑P		**P**	**01 41 47.7**	**+0.6**
	baz=51							
SDDR	**Presa de Saban**	**50.97**	**52**	PFAKE			01 42 00.0	+12
SDDR				LR	LR			
	comp=Z,1μm,19.0s,MS4.9							
S21A	**Coal Bank Pass**	**51.00**	**4**	⇓P		**P**	**01 41 48.2**	**+0.7**
	baz=51							
S19A	**Harvey Farm, M**	**51.01**	**2**	⇑P		**P**	**01 41 48.3**	**+0.7**
	baz=51							
S14A	**Cedar City**	**51.02**	**358**	⇓P		**P**	**01 41 48.5**	**+0.9**
	baz=51							
MTUM	**Tungsten Hills**	**51.04**	**353**	*e*P		**P**	**01 41 51.1**	**+3.3**
S22A	**4UR Ranch, Cre**	**51.15**	**5**	⇓P		**P**	**01 41 49.3**	**+0.7**
	baz=51							
S24A	**Houchin Ranch,**	**51.19**	**6**	⇓P		**P**	**01 41 49.6**	**+0.7**
	baz=51							
SDCO	**Great Sand Dun**	**51.27**	**6**	*e*P		**P**	**01 41 49.9**	**+0.4**
	comp=Z,18nm,0.9s,mb5.0							
SDCO				LR	LR			
	comp=Z,4μm,20.0s,MS5.4							
S10A	**Tonopah Range,**	**51.39**	**355**	⇓P		**P**	**01 41 51.2**	**+0.8**
	baz=52							
PV01	**Paradox Valley**	**51.43**	**3**	*e*P		**P**	**01 41 50.8**	**0.0**
	comp=Z,882nm,1.0s							
R20A	**Redvale**	**51.49**	**3**	⇓P		**P**	**01 41 51.9**	**+0.7**
	baz=52							
R19A	**Curley Farm, L**	**51.55**	**2**	⇑P		**P**	**01 41 52.3**	**+0.6**
	baz=52							
R12A	**Pony Springs,**	**51.65**	**357**	⇑P		**P**	**01 41 53.2**	**+0.9**
	baz=52							
R17A	**Hanksville Air**	**51.65**	**1**	⇓P		**P**	**01 41 53.2**	**+0.9**
	baz=52							
PV04	**Paradox Valley**	**51.67**	**2**	*e*P		**P**	**01 41 52.4**	**-0.1**
R21A	**Cimarron**	**51.72**	**4**	⇑P		**P**	**01 41 53.8**	**+1.0**
	baz=52							
R11A	**Troy Canyon, C**	**51.73**	**356**	⇓P		**P**	**01 41 53.5**	**+0.5**
	baz=52							
MVU	**Marysvale**	**51.74**	**359**	PFAKE			01 42 00.0	+7.0
MVU				LR	LR			
	comp=Z,3μm,22.0s,MS5.3							
LRAL	**Lakeview Retre**	**51.78**	**26**	*e*P		**P**	**01 41 53.1**	**-0.3**
	comp=Z,6.9nm,0.8s,mb4.6							
LRAL				LR	LR			
	comp=Z,765nm,20.0s,MS4.7							
R24A	**Sanders Place,**	**51.79**	**6**	⇓P		**P**	**01 41 53.9**	**+0.5**
	baz=52,SNR=5.4							
CMB	**Columbia Colle**	**51.96**	**351**	PFAKE			01 42 10.0	+15
CMB				LR	LR			
	comp=Z,6μm,20.0s,MS5.6							
CPUP	**Villa Florida**	**52.01**	**113**	P		**P**	**01 41 56.6**	**+1.2**
	comp=Z,2.2nm,0.7s,mb4.2,baz=264,slow=10,SNR=4.3							
CPUP				LR	LR		01 59 48.1	
	comp=Z,2μm,20.6s,MS5.2,baz=261,slow=31							
NVAR	**Mina Array Bea**	**52.07**	**353**	P		**P**	**01 41 55.9**	**+0.4**
NVAR	**Mina Array Bea**	**52.07**	**353**	P		**P**	**01 41 55.9**	**+0.4**
	comp=Z,3.8nm,0.8s,mb4.3,baz=180,slow=10,SNR=19							
Q16A	**Castle Valley**	**52.14**	**0**	⇑P		**P**	**01 41 56.6**	**+0.5**
	baz=52							
Q21A	**Lamborn Mesa,**	**52.18**	**4**	⇓P		**P**	**01 41 57.0**	**+0.7**
	baz=52							
Q11A	**Duckwater**	**52.23**	**356**	⇓P		**P**	**01 41 57.7**	**+1.0**
	baz=52							
Q13A	**Wheeler Ranch,**	**52.24**	**357**	⇓P		**P**	**01 41 57.7**	**+0.9**
	baz=52							
Q14A	**Sevier Lake (B**	**52.24**	**358**	⇑P		**P**	**01 41 57.6**	**+0.8**
	baz=52							
Q22A	**Crested Butte,**	**52.25**	**4**	⇓P		**P**	**01 41 57.6**	**+0.7**
	baz=52,SNR=6.1							
Q18A	**Rafter H Ranch**	**52.34**	**1**	⇓P		**P**	**01 41 57.9**	**+0.4**
	baz=52							
SRU	**San Rafael**	**52.34**	**1**	⇓P		**P**	**01 41 58.1**	**+0.6**
	baz=52,SNR=5.5							
SRU	**San Rafael**	**52.34**	**1**	*e*P		**P**	**01 41 58.0**	**+0.5**
	comp=Z,12nm,1.0s,mb4.8							
SRU	**San Rafael**	**52.34**	**1**	*e*P		**P**	**01 41 58.0**	**+0.5**
SRU				pmax	pmax			
	comp=Z,12nm,1.0s,mb4.8							
Q23A	**Hartsel**	**52.38**	**5**	⇑P		**P**	**01 41 58.2**	**+0.3**
	baz=52,SNR=7.1							
LPA	**La Plata**	**52.49**	**124**	*ce*P		**P**	**01 41 57.0**	**-1.9**
LPA				PS			01 49 35.0	
LPA				SCS	ScS		01 51 47.0	-2.3
LPA				SKIKS			01 56 58.0	
LPA								
	comp=Z,7μm,19.0s							
MCCM	**Marconi Confer**	**52.50**	**349**	PFAKE			01 42 10.0	+11
MCCM				LR	LR			
	comp=Z,5μm,20.0s,MS5.6							
Q24A	**Divide**	**52.51**	**6**	⇓P		**P**	**01 41 59.1**	**+0.3**
	baz=53							
TMUT	**Trail Mountain**	**52.52**	**0**	*e*P		**P**	**01 42 00.5**	**+1.6**
Q25A	**Bedland, Calha**	**52.56**	**7**	⇓P		**P**	**01 41 59.9**	**+0.8**
	baz=53							
SMCO	**Snowmass**	**52.56**	**4**	*e*P		**P**	**01 41 59.5**	**+0.3**
	comp=Z,8.6nm,0.9s,mb4.7							
GRTK	**Grand Turk**	**52.60**	**49**	PFAKE			01 42 10.0	+10
GRTK				LR	LR			
	comp=Z,1μm,22.0s,MS4.9							
P17A	**Butcher Ranch,**	**52.70**	**1**	⇑P		**P**	**01 42 00.8**	**+0.6**
	baz=53							
P13A	**Bates Ranch, G**	**52.74**	**357**	⇑P		**P**	**01 42 01.0**	**+0.5**
	baz=53							
P23A	**Jefferson**	**52.85**	**5**	⇑P		**P**	**01 42 02.1**	**+0.8**
	baz=53,SNR=6.3							
P18A	**Preston Nutter**	**52.86**	**1**	⇑P		**P**	**01 42 02.0**	**+0.6**
	baz=53							
P19A	**Cripple Cowboy**	**52.90**	**2**	⇑P		**P**	**01 42 02.0**	**+0.4**
	baz=53							
P22A	**Eagle**	**52.99**	**4**	⇑P		**P**	**01 42 02.8**	**+0.5**
	baz=53							
CBKS	**Cedar Bluff**	**53.16**	**11**	PFAKE			01 42 20.0	+16
CBKS				LR	LR			
	comp=Z,1μm,22.0s,MS4.9							
P25A	**Willow Gulch B**	**53.16**	**7**	⇓P		**P**	**01 42 03.5**	**-0.1**
	baz=53,SNR=6.1							
NLU	**North Lily Min**	**53.18**	**359**	*e*P		**P**	**01 42 03.8**	**+0.1**
	comp=Z,16nm,1.2s,mb4.8							
MPU	**Maple Canyon**	**53.24**	**360**	*e*P		**P**	**01 42 08.2**	**+4.1**
ISCO	**Idaho Springs**	**53.29**

baz=54
N15A Stansbury Isla 54.12 359 ⇑P P **01 42 10.9 +0.3**
baz=54
WVT Waverly 54.12 23 *e*P P **01 42 09.3 -1.4**
comp=Z,4.2nm,0.8s,mb4.4
WVT LR LR
comp=Z,879nm,20.0s,MS4.8
WVT Waverly 54.12 23 *e*P P **01 42 09.3 -1.4**
WVT pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
WVT MLR MLR
comp=Z,879nm,20.0s,MS4.8
N20A Spence Gulch, 54.13 3 ⇑P P **01 42 10.9 +0.2**
baz=54,SNR=34
N19A John Jarvie Ra 54.15 2 ⇓P P **01 42 11.0 +0.1**
baz=54
N17A Moffit Pass 54.17 0 ⇑P P **01 42 11.2 +0.3**
baz=54
BGU Big Grassy Mou 54.17 358 *e*P P **01 42 11.0 0.0**
comp=Z,7.8nm,1.2s,mb4.5
N22A Wattenberg Ran 54.21 5 ⇓P P **01 42 11.7 +0.4**
baz=54,SNR=8.2
N18A Larsen Ranch, 54.22 2 ⇑P P **01 42 11.7 +0.4**
baz=54
N23A Red Feather La 54.35 5 ⇓P P **01 42 12.2 0.0**
baz=54,SNR=5.7
N24A Carr 54.38 6 ⇑P P **01 42 12.7 +0.2**
baz=54
SJG San Juan 54.52 56 PFAKE 01 42 30.0 +16
SJG LR LR
comp=Z,2µm,21.0s,MS5.1
SPUT South Promonto 54.54 359 *e*P P **01 42 13.3 -0.3**
comp=Z,13nm,1.1s,mb4.9
POHA Pohakuloa 54.63 306 PFAKE 01 42 30.0 +15
POHA LR LR
comp=Z,3µm,20.0s,MS5.4
M13A Montello 54.65 357 ⇑P P **01 42 14.6 +0.2**
baz=55
M13A Montello 54.65 357 *e*P P **01 42 15.0 +0.6**
comp=Z,13nm,1.3s,mb4.8
M18A Lyman 54.66 1 ⇑P P **01 42 14.8 +0.3**
baz=55
M15A Larsen Ranch, 54.70 359 ⇑P P **01 42 14.7 -0.1**
baz=55
M14A Sheep Mountain 54.76 358 ⇓P P **01 42 14.8 -0.4**
baz=55,SNR=11
M20A Sweetwater, Wa 54.79 3 ⇓P P **01 42 15.5 0.0**
baz=55
PHWY Pilot Hill 54.79 5 *e*P P **01 42 15.3 -0.2**
comp=Z,6.3nm,0.8s,mb4.7
WDC Whiskeytown Da 54.80 350 PFAKE 01 42 30.0 +14
WDC LR LR
comp=Z,4µm,21.0s,MS5.5
HWUT Hardware Ranch 54.83 360 *e*P P **01 42 14.9 -0.8**
comp=Z,7.3nm,0.9s,mb4.7
HWUT LR LR
comp=Z,4µm,22.0s,MS5.4
OGNE Ogallala 54.85 9 PFAKE 01 42 30.0 +14
OGNE LR LR
comp=Z,885nm,20.0s,MS4.8
CPCT Cooper Cave 54.91 27 *e*P P **01 42 15.3 -1.1**
M21A Separation Pea 54.95 4 ⇑P P **01 42 16.0 -0.6**
baz=55,SNR=14
M24A Cheyenne 55.02 6 ⇑P P **01 42 16.9 -0.3**
baz=55
RWWY Rawlins 55.04 4 *e*P P **01 42 16.9 -0.3**
comp=Z,19nm,1.0s,mb5.1
NHSC New Hope 55.07 32 PFAKE 01 42 30.0 +12
NHSC LR LR
comp=Z,3µm,22.0s,MS5.4
L18A Fontenelle, Gr 55.16 1 ⇓P P **01 42 18.2 0.0**
baz=55
L15A Malad City 55.23 359 ⇓P P **01 42 18.6 -0.1**
baz=55
L14A Malta 55.28 358 ⇑P P **01 42 19.1 +0.1**
baz=56
L20A Wamsutter 55.30 3 ⇑P P **01 42 18.7 -0.4**
baz=56,SNR=12
L21A Rawlins 55.31 4 ⇑P P **01 42 19.1 -0.1**
baz=56
L19A Farson 55.35 2 ⇓P P **01 42 19.3 -0.2**
baz=56
GRGR Grenville 55.45 65 PFAKE 01 42 30.0 +9.3
GRGR LR LR
comp=Z,2µm,20.0s,MS5.1
L11A Cat Creek Ranc 55.54 356 ⇓P P **01 42 20.9 +0.1**
baz=56
L23A Garrett 55.58 5 ⇑P P **01 42 21.4 +0.3**
baz=56
L24A Wheatland 55.58 6 ⇓P P **01 42 21.1 0.0**
baz=56
MOD Modoc 55.74 352 *e*P P **01 42 22.5 +0.2**
comp=Z,24nm,1.5s,mb5.0
MOD LR LR
comp=Z,4µm,20.0s,MS5.5
K14A Jones Ranch, D 55.79 358 ⇓P P **01 42 22.7 +0.1**
baz=56
K18A Toltan Ranch, 55.87 1 ⇓P P **01 42 23.2 -0.1**
baz=56
K20A Yellowstone Ra 55.95 3 ⇓P P **01 42 23.6 -0.2**
baz=56
YBH Yreka Blue Hor 55.95 350 PFAKE 01 42 40.0 +16
YBH LR LR
comp=Z,5µm,20.0s,MS5.6
AHID Auburn Hatcher 55.99 0 PFAKE 01 42 40.0 +16
AHID LR LR
comp=Z,4µm,20.0s,MS5.5
BW06 Boulder Array 56.01 2 ⇑P P **01 42 23.8 -0.4**
baz=56
BW06 Boulder Array 56.01 2 *e*P P **01 42 23.0 -1.2**
comp=Z,10nm,1.2s,mb4.7
BW06 LR LR
comp=Z,3µm,19.0s,MS5.5
K22A Casper 56.05 4 ⇑P P **01 42 23.6 -0.9**
baz=56,SNR=6.9
WVOR Wild Horse Val 56.06 353 *e*P P **01 42 25.1 +0.5**
comp=Z,18nm,1.3s,mb4.9
WVOR LR LR
comp=Z,4µm,20.0s,MS5.5
WVOR Wild Horse Val 56.06 353 *e*P P **01 42 25.1 +0.5**
WVOR pmax pmax
comp=Z,18nm,1.3s,mb4.9
WVOR MLR MLR
comp=Z,4µm,20.0s,MS5.5
K19A Absolon Red Bu 56.09 2 ⇑P P **01 42 24.1 -0.7**
baz=56
J18A Kendall Valley 56.45 1 ⇓P P **01 42 26.9 -0.4**
baz=57
J16A Bone 56.50 360 ⇑P P **01 42 27.4 -0.3**
baz=57
WCI Wyandotte Cave 56.55 24 *e*P P **01 42 26.3 -1.9**
comp=Z,6.5nm,0.8s,mb4.7
WCI LR LR
comp=Z,1µm,19.0s,MS5.0
WCI Wyandotte Cave 56.55 24 *e*P P **01 42 26.3 -1.9**
WCI pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
WCI MLR MLR
comp=Z,1µm,19.0s,MS5.0
J14A Carey 56.58 358 ⇑P P **01 42 27.8 -0.5**
baz=57,SNR=9.2
REDW Red Top Meadow 56.59 0 *e*P P **01 42 28.1 -0.2**
comp=Z,6.7nm,1.1s,mb4.6
J15A Blackfoot 56.63 359 ⇑P P **01 42 28.8 +0.2**
baz=57
K05A Summer Lake 56.63 352 ⇓P P **01 42 29.0 +0.4**
baz=57
J13A Cove Ranch, Pi 56.68 358 ⇑P P **01 42 29.1 +0.1**
baz=57
SNOW Snow King Moun 56.69 0 *e*P P **01 42 28.6 -0.4**
TPAW Teton Pass 56.71 0 *e*P P **01 42 28.9 -0.3**
comp=Z,12nm,1.2s,mb4.8
MFID Camas Ranch 56.79 356 ⇑P P **01 42 30.2 +0.5**
baz=57
LOHW Long Hollow 56.84 1 *e*P P **01 42 29.5 -0.6**
comp=Z,4.8nm,0.8s,mb4.6
HUMO Hull Mountain 56.84 350 PFAKE 01 42 40.0 +10
HUMO LR LR
comp=Z,6µm,21.0s,MS5.7
HLID Hailey 56.85 357 ⇓P P **01 42 29.5 -0.8**
baz=57,SNR=7.2
HLID Hailey 56.85 357 *e*P P **01 42 29.7 -0.5**
comp=Z,6.1nm,0.9s,mb4.6
HLID LR LR
comp=Z,3µm,19.0s,MS5.4
I18A Diamond G Ranc 56.94 1 ⇑P P **01 42 30.8 -0.1**
baz=57
J08A Circle Bar Ran 56.96 354 ⇓P P **01 42 31.2 +0.2**
baz=57
MOOW Moose Ponds 56.97 1 *e*P P **01 42 29.8 -1.2**
comp=Z,13nm,1.4s,mb4.8
FDF Fort de France 57.04 62 PFAKE 01 42 40.0 +7.9
FDF LR LR
comp=Z,1µm,19.0s,MS5.0
IMW Indian Meadow 57.12 0 *e*P P **01 42 31.0 -1.1**
comp=Z,12nm,0.9s,mb4.9
I12A Atlanta 57.12 357 ⇑P P **01 42 30.8 -1.3**
baz=57,SNR=8.9
I21A Big Trails, Te 57.15 3 ⇓P P **01 42 31.7 -0.7**
baz=57,SNR=19
I13A Wildhorse Cree 57.19 358 ⇓P P **01 42 32.5 -0.1**
baz=57
I20A Worland 57.24 3 ⇑P P **01 42 32.8 -0.2**
baz=57
KIP Kipapa 57.49 306 PFAKE 01 42 50.0 +15
KIP LR LR
comp=Z,4µm,19.0s,MS5.5
HDIL Hopedale 57.54 20 *e*P P **01 42 32.9 -2.2**
comp=Z,10nm,0.6s,mb5.0
HDIL LR LR
comp=Z,2µm,19.0s,MS5.3
SCIA State Center 57.60 16 PFAKE 01 42 50.0 +14
SCIA LR LR
comp=Z,2µm,19.0s,MS5.3
BBGH Gun Hill 57.73 65 PFAKE 01 42 50.0 +13
BBGH LR LR
comp=Z,4µm,22.0s,MS5.5
RSSD Black Hills 57.73 6 *e*P P **01 42 36.2 -0.2**
comp=Z,6.7nm,0.8s,mb4.7
RSSD LR LR
comp=Z,4µm,20.0s,MS5.6
RSSD Black Hills 57.73 6 *e*P P **01 42 36.2 -0.2**
RSSD pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
RSSD MLR MLR
comp=Z,4µm,20.0s,MS5.6
H20A Greybull 57.79 3 ⇑P P **01 42 36.4 -0.4**
baz=58
I07A Izee 57.79 353 ⇓P P **01 42 37.0 +0.2**
baz=58,SNR=13
LKWY Lake 57.79 1 PFAKE 01 42 50.0 +13
LKWY LR LR
comp=Z,4µm,19.0s,MS5.6
H13A Challis 57.85 358 ⇑P P **01 42 36.7 -0.5**
baz=58
H15A Lima 57.85 359 ⇑P P **01 42 37.5 +0.2**
baz=58
H12A Diamond D Ranc 57.86 357 ⇓P P **01 42 37.4 +0.1**
baz=58
H14A Leadore 57.87 358 ⇑P P **01 42 37.5 +0.1**
baz=58
ANWB Willy Bob 57.87 59 PFAKE 01 42 50.0 +12
ANWB LR LR
comp=Z,994nm,19.0s,MS4.9
CNNC Cliffs of the 57.91 32 PFAKE 01 42 50.0 +12
CNNC LR LR
comp=Z,2µm,21.0s,MS5.2
H16A Russell Place, 57.92 0 ⇑P P **01 42 37.7 -0.1**
baz=58,SNR=6.3
MCMT McKenzie Canyo 58.06 359 *e*P P **01 42 38.8 +0.1**
comp=Z,7.0nm,1.1s,mb4.6
BLA Blacksburg 58.22 29 PFAKE 01 42 50.0 +10
BLA LR LR
comp=Z,2µm,19.0s,MS5.3
BMO Blue Mountains 58.33 355 *e*P P **01 42 40.5 -0.1**
comp=Z,6.0nm,1.0s,mb4.6
BMO LR LR
comp=Z,2µm,21.0s,MS5.3
G13A Cobalt 58.37 358 ⇓P P **01 42 40.8 -0.1**
baz=58
RLMT Red Lodge 58.37 2 ⇓P P **01 42 40.8 0.0**
baz=58
RLMT Red Lodge 58.37 2 *e*P P **01 42 41.4 +0.5**
comp=Z,5.2nm,1.0s,mb4.5
RLMT LR LR
comp=Z,2µm,20.0s,MS5.3
G15A Dillon 58.40 359 ⇑P P **01 42 40.8 -0.3**
baz=59
ECSD EROS Data Cent 58.52 12 *e*P P **01 42 40.8 -1.2**
comp=Z,3.7nm,0.8s,mb4.5
ECSD LR LR
comp=Z,1µm,20.0s,MS5.0
G18A Lazy EL Ranch, 58.56 1 ⇓P P **01 42 41.4 -0.8**
baz=59,SNR=5.5
G21A Lodge Grass 58.56 3 ⇓P P **01 42 41.8 -0.4**
baz=59
AFI Afiamalu 58.58 262 PFAKE 01 43 00.0 +17
AFI LR LR
comp=Z,2µm,19.0s,MS5.3
DLMT Dillon 58.59 359 *e*P P **01 42 42.5 +0.1**
COR Corvallis 58.83 350 PFAKE 01 43 00.0 +16
COR LR LR
comp=Z,4µm,22.0s,MS5.5
BOZ Bozeman (W) 58.87 360 ⇓P P **01 42 43.6 -0.8**
baz=59
BOZ Bozeman (W) 58.87 360 *e*P P **01 42 43.0 -1.3**
comp=Z,8.7nm,1.5s,mb4.6
BOZ LR LR
comp=Z,1µm,22.0s,MS5.0
BOZ Bozeman (W) 58.87 360 *e*P P **01 42 43.0 -1.3**
BOZ pmax pmax
comp=Z,9.0nm,1.5s,mb4.6
BOZ MLR MLR
comp=Z,1µm,22.0s,MS5.0
G08A Pilot Rock 58.92 354 ⇑P P **01 42 45.0 +0.4**
baz=59,SNR=5.5
F16A Kennard Place, 59.01 360 ⇑P P **01 42 45.4 +0.1**
baz=59
G06A Carlson Farm, 59.06 352 ⇓P P **01 42 45.5 -0.2**
baz=59
F12A Elk City 59.08 357 ⇓P P **01 42 45.6 -0.2**
baz=59
F19A Roth Farm, Mol 59.11 2 ⇑P P **01 42 45.3 -0.8**
baz=59
F17A Fitzpatrick Pl 59.13 1 ⇑P P **01 42 45.7 -0.4**
baz=59
F18A Big Timber 59.14 1 ⇑P P **01 42 45.0 -1.3**
baz=59
JFWS Jewell Farm 59.38 18 *e*P P **01 42 46.9 -1.0**
comp=Z,8.5nm,0.8s,mb4.8
JFWS LR LR
comp=Z,857nm,22.0s,MS4.8
JFWS Jewell Farm 59.38 18 *e*P P **01 42 46.9 -1.0**
JFWS pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
JFWS MLR MLR
comp=Z,857nm,22.0s,MS4.8
E12A Beaver Dam Sad 59.76 357 ⇓P P **01 42 50.1 -0.4**
baz=60
E18A Harlowton 59.80 1 ⇑P P **01 42 49.4 -1.4**
baz=60
HAWA Hanford 60.07 353 PFAKE 01 43 00.0 +7.4
HAWA LR LR
comp=Z,6µm,19.0s,MS5.7
LAO LASA Array 60.09 4 *e*P P **01 42 53.2 +0.5**
comp=Z,9.1nm,0.8s,mb4.9
LAO LR LR
comp=Z,3µm,19.0s,MS5.5
MSO Missoula 60.10 358 PFAKE 01 43 00.0 +7.2
MSO LR LR
comp=Z,1µm,20.0s,MS5.1
CHMT Chamberlain Mo 60.16 358 *e*P P **01 42 52.4 -0.8**
D16A Dana Ranch, Ca 60.25 360 ⇓P P **01 42 53.5 -0.4**
baz=60
D17A Six Diamond Ra 60.38 1 ⇓P P **01 42 53.8 -0.9**
baz=60,SNR=12
D13A Huson 60.38 358 ⇑P P **01 42 53.9 -0.9**
baz=61
D12A Red Ives Fores 60.38 357 ⇓P P **01 42 54.1 -0.6**
baz=61
D18A Linhart Farms, 60.43 1 ⇓P P **01 42 54.8 -0.3**
baz=61
MCWV Mont Chateau 60.47 28 PFAKE 01 43 10.0 +15
MCWV LR LR
comp=Z,2µm,19.0s,MS5.3
CBN Corbin 60.48 30 PFAKE 01 43 10.0 +14
CBN LR LR
comp=Z,3µm,20.0s,MS5.4
SLMT Seeley Lake 60.49 358 *e*P P **01 42 56.4 +0.9**
PMSA Palmer Station 60.50 159 PFAKE 01 43 10.0 +15
PMSA LR LR
comp=Z,3µm,20.0s,MS5.5
LON Longmire 60.71 352 *e*P P **01 42 56.9 -0.1**
comp=Z,4.7nm,0.8s,mb4.7
LON Longmire 60.71 352 *e*P P **01 42 56.9 -0.1**
LON pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
OD2 Odessa Site #2 60.97 354 *e*P P **01 42 57.9 -0.8**
comp=Z,14nm,1.3s,mb4.9
C14A Swan Lake 61.03 358 ⇓P P **01 42 59.0 -0.1**
baz=61
AAM Ann Arbor 61.08 23 PFAKE 01 43 10.0 +10
AAM LR LR
comp=Z,1µm,20.0s,MS5.0
BSMT Bassoo Peak 61.15 357 *e*P P **01 42 58.0 -1.9**
comp=Z,4.7nm,1.0s,mb4.6
C11A Tepee Creek (N 61.22 356 ⇑P P **01 43 00.1 -0.3**
baz=61
EGMT Eagleton 61.26 1 PFAKE 01 43 10.0 +9.3
EGMT LR LR
comp=Z,3µm,20.0s,MS5.5
ETW Entiat 61.36 353 *e*P P **01 43 02.4 +1.0**
B18A Beardsley Farm 61.63 1 ⇓P P **01 43 02.8 -0.4**
baz=62,SNR=5.7
NLWA Neilton Lookou 61.65 350 PFAKE 01 43 20.0 +17
NLWA LR LR
comp=Z,3µm,20.0s,MS5.5
NEW Newport 61.70 356 *e*P P **01 43 01.7 -2.0**
comp=Z,4.2nm,1.3s,mb4.4
NEW LR LR
comp=Z,2µm,20.0s,MS5.3
NEW Newport 61.70 356 *e*P P **01 43 01.7 -2.0**
NEW pmax pmax
comp=Z,4.0nm,1.3s
NEW MLR MLR
comp=Z,2µm,20.0s
A18A Metzger Ranch, 62.16 1 ⇑P P **01 43 07.1 +0.4**
baz=62
A17A Triple J Farms 62.17 0 ⇑P P **01 43 07.0 +0.1**
baz=62
A16A West Butte Ran 62.17 360 ⇓P P **01 43 07.0 +0.2**
baz=62
A15A Johnson Ranch, 62.21 359 ⇑P P **01 43 07.1 0.0**
baz=62
A13A Flathead Natio 62.22 358 ⇑P P **01 43 07.3 +0.2**
baz=62
A14A Double T Ranch 62.22 358 ⇓P P **01 43 07.1 -0.1**
baz=62
ERPA Erie 62.41 26 PFAKE 01 43 20.0 +11
ERPA LR LR
comp=Z,2µm,19.0s,MS5.3
COWI Conover 62.61 17 *e*P P **01 43 08.9 -0.9**
comp=Z,16nm,0.9s,mb5.1
COWI LR LR
comp=Z,2µm,19.0s,MS5.2
AGMN Agassiz Nation 63.04 12 *e*P P **01 43 11.4 -1.2**
comp=Z,0.7nm,0.9s,mb3.8
AGMN LR LR
comp=Z,797nm,21.0s,MS4.9
EYMN Ely 63.67 15 *e*P P **01 43 16.2 -0.7**
comp=Z,6.2nm,0.9s,mb4.6
EYMN LR LR
comp=Z,2µm,20.0s,MS5.3
BBSR BB Station 63.79 43 PFAKE 01 43 30.0 +12
BBSR LR LR
comp=Z,1µm,20.0s,MS5.1
BINY Binghamton 64.26 29 PFAKE 01 43 30.0 +9.2
BINY LR LR
comp=Z,3µm,22.0s,MS5.4
JOHN Johnston Islan 64.87 296 PFAKE 01 43 40.0 +15
JOHN LR LR
comp=Z,3µm,19.0s,MS5.5
NCB Newcomb 66.44 28 PFAKE 01 43 50.0 +15
NCB LR LR
comp=Z,1µm,20.0s,MS5.2
EDM Edmonton 66.47 359 *e*P P **01 43 34.0 -0.9**
LONY Lake Ozonia 66.78 28 PFAKE 01 43 50.0 +13
LONY LR LR
comp=Z,2µm,20.0s,MS5.4
LBNH Lisbon 67.73 30 PFAKE 01 43 50.0 +6.9
LBNH LR LR
comp=Z,2µm,22.0s,MS5.2
MSVF Nonsavu 67.80 256 PFAKE 01 44 00.0 +16
MSVF LR LR
comp=Z,2µm,22.0s,MS5.4
FFC Flin Flon 68.42 6 *e*P P **01 43 47.4 +0.1**
comp=Z,6.4nm,1.0s,mb4.6
FFC LR LR
comp=Z,2µm,19.0s,MS5.3
FFC Flin Flon 68.42 6 *e*P P **01 43 47.3 +0.1**
SNZO South Karori 69.21 231 PFAKE 01 44 10.0 +17
SNZO LR LR
comp=Z,3µm,21.0s,MS5.5
PKME Peaks-Kenny Pk 69.76 30 PFAKE 01 44 10.0 +14
PKME LR LR
comp=Z,1µm,21.0s,MS5.1
FCC Fort Churchill 73.37 9 *e*P P **01 44 16.3 -1.0**
comp=Z,0.6nm,0.9s
RCBR Riachuelo 74.52 92 PFAKE 01 44 40.0 +15
RCBR LR LR
comp=Z,1µm,22.0s,MS5.2
SBA Scott Base 75.19 193 PFAKE 01 44 40.0 +12
SBA LR LR
comp=Z,960nm,19.0s,MS5.1
YKA Yellowknife Ar 75.79 358 P P **01 44 30.4 -0.8**
comp=Z,3.4nm,0.8s,mb4.3,baz=174,slow=5.5,SNR=12
YKA Yellowknife Ar 75.79 358 P P **01 44 30.4 -0.8**
MIDW Midway 76.15 304 PFAKE 01 44 50.0 +16
MIDW LR LR
comp=Z,1µm,21.0s,MS5.2
TARA Tarawa 76.47 275 PFAKE 01 44 50.0 +14
TARA LR LR
comp=Z,80nm,22.0s,MS4.0
QSPA South Pole Qui 76.60 180 *e*P P **01 44 36.7 +0.9**
comp=Z,300nm,2.1s
QSPA LR LR
comp=Z,2µm,19.0s,MS5.3
SCHQ Schefferville 77.75 25 *e*P P **01 44 41.2 -1.3**
comp=Z,28nm,1.5s,mb5.0
SCHQ LR LR
comp=Z,3µm,21.0s,MS5.6
SCHQ Schefferville 77.75 25 P P **01 44 42.0 -0.4**
comp=Z,4.6nm,0.8s,mb4.5,baz=211,slow=5.0,SNR=5.9
SCHQ LR LR 02 17 51.5
comp=Z,2µm,19.8s,MS5.5,baz=233,slow=35
DZM Mont Dzumac 77.96 250 *e*S S 01 54 39.3 +0.9
comp=Z,408nm,29.2s
DZM *e*LQ 02 05 41.2
comp=Z,1µm,29.6s
DZM *e*LR LR 02 08 59.7
comp=Z,3µm,27.1s
KDAK Kodiak Island 78.71 339 PFAKE 01 45 00.0 +12
KDAK LR LR
comp=Z,3µm,21.0s,MS5.7
MENT Mentasta 80.25 346 *e*P P **01 44 56.2 +0.2**
DAWY Dawson 80.27 348 *e*P P **01 44 55.1 -1.0**
PMR Palmer 80.57 343 *e*P P **01 44 57.2 -0.6**
comp=Z,12nm,0.8s,mb4.9
PMR Palmer 80.57 343 *e*P P **01 44 57.2 -0.5**
PMR pmax pmax
comp=Z,12nm,0.8s,mb4.9
RSO Redoubt South 80.80 341 *e*P P **01 45 00.0 +1.1**
EGAK Eagle 81.26 348 PFAKE 01 45 10.0 +8.6
EGAK LR LR
comp=Z,3µm,20.0s,MS5.6
MCK McKinley 82.23 344 *e*P P **01 45 06.2 -0.3**
comp=Z,20nm,0.9s,mb5.0
MCK McKinley 82.23 344 *e*P P **01 45 06.2 -0.3**
MCK pmax pmax
comp=Z,20nm,0.9s,mb5.0
TRF Thorofare Moun 82.38 343 *e*P P **01 45 06.5 -0.8**
comp=Z,33nm,1.0s,mb5.2
PPLA Purkeypile 82.49 342 *e*P P **01 45 07.1 -0.8**
comp=Z,31nm,1.1s,mb5.2
ILAR Eielson Array 82.56 345 P P **01 45 07.0 -1.1**
comp=Z,1.4nm,0.9s,mb4.0,baz=178,slow=5.5,SNR=9.5
ILAR LR LR 02 16 35.9
comp=Z,1µm,18.2s,MS5.4,baz=322,slow=32
COLA College 82.88 345 *e*P P **01 45 09.7 -0.2**
comp=Z,15nm,1.1s,mb5.0
COLA LR LR
comp=Z,1µm,19.0s,MS5.2
COLA College 82.88 345 *e*P P **01 45 09.7 -0.2**
COLA pmax pmax
comp=Z,15nm,1.1s,mb4.9
COLA MLR MLR
comp=Z,1µm,19.0s,MS5.2
BPAW Bear Paw Mtn. 83.08 344 *e*P P **01 45 09.8 -1.2**
comp=Z,26nm,0.9s,mb5.3
INK Inuvik 83.14 352 *e*P P **01 45 09.8 -1.3**
comp=Z,13nm,1.0s,mb4.9
INK Inuvik 83.14 352 *e*P P **01 45 09.8 -1.3**

INK pmax pmax
comp=Z,13nm,1.0s
TTA Tatalina 83.68 341 *e*P **P 01 45 12.5 -1.5**
comp=Z,19nm,1.4s,mb5.0
TTA Tatalina 83.68 341 *e*P **P 01 45 12.5 -1.5**
TTA pmax pmax
comp=Z,19nm,1.4s,mb5.0
COLD Coldfoot 85.35 346 *e*P **P 01 45 22.5 +0.1**
comp=Z,18nm,1.0s,mb5.1
ADK Adak 86.02 326 PFAKE 01 45 40.0 +14
ADK LR LR
comp=Z,3μm,22.0s,MS5.7
HNR Honiara 86.61 261 PFAKE 01 45 40.0 +10
HNR LR LR
comp=Z,864nm,19.0s,MS5.2
WAKE Wake Island 87.05 290 PFAKE 01 45 40.0 +8.1
WAKE LR LR
comp=Z,1μm,21.0s,MS5.3
CAN Canberra 90.01 234 PFAKE 01 46 00.0 +14
CAN LR LR
comp=Z,2μm,21.0s,MS5.6
CASY Casey 94.64 196 PFAKE 01 46 20.0 +14
CASY LR LR
comp=Z,2μm,20.0s,MS5.5
CTAO Charters Tower 96.74 248 PFAKE 01 46 30.0 +13
CTAO LR LR
comp=Z,2μm,20.0s,MS5.5
STKA Stephens Creek 96.96 235 LR LR 02 22 36.1
comp=Z,2μm,20.6s,MS5.5,baz=56,slow=31
PMG Port Moresby 98.86 258 PFAKE 01 46 40.0 +13
PMG LR LR
comp=Z,448nm,20.0s,MS5.0
MAW Mawson 99.01 178 PFAKE 01 46 40.0 +14
MAW LR LR
comp=Z,2μm,21.0s,MS5.5
MAW Mawson 99.01 178 LR LR 02 25 47.2
comp=Z,1μm,21.6s,MS5.3,baz=179,slow=32
PET Petropavlovsk 100.67 322 PFAKE 01 46 40.0 +6.2
PET LR LR
comp=Z,1μm,20.0s,MS5.5
SHEL Horse Pasture 100.83 109 PFAKE 01 46 50.0 +15
SHEL LR LR
comp=Z,1μm,20.0s,MS5.4
GUMO Guam 106.25 280 PFAKE 01 51 20.0 +8.8
GUMO LR LR
comp=Z,874nm,20.0s,MS5.3
DBIC Dimbokro 107.50 87 PFAKE 01 51 30.0 +16
DBIC LR LR
comp=Z,923nm,20.0s,MS5.3
MTE Manteigas 109.07 52 PFAKE 01 51 30.0 +14
MTE LR LR
comp=Z,875nm,21.0s,MS5.3
KBS Kingsbay 109.31 10 PFAKE 01 51 30.0 +15
KBS LR LR
comp=Z,860nm,19.0s,MS5.3
SFS San Fernando 109.99 56 PFAKE 01 51 30.0 +12
SFS LR LR
comp=Z,664nm,19.0s,MS5.2
ERM Erimo 110.40 310 PFAKE 01 51 30.0 +12
ERM LR LR
comp=Z,2μm,20.0s,MS5.6
YSS Yuzh-Sakhalins 110.59 315 PFAKE 01 51 30.0 +12
YSS LR LR
comp=Z,521nm,22.0s,MS5.1
ESK Eskdalemuir 111.30 36 PFAKE 01 51 30.0 +11
ESK LR LR
comp=Z,474nm,19.0s,MS5.1
PAB San Pablo 111.51 53 PFAKE 01 51 30.0 +10
PAB LR LR
comp=Z,744nm,20.0s,MS5.3
ESLA Sonseca Array 111.81 53 PFAKE 01 51 30.0 +9.1
ESLA LR LR
comp=Z,4μm,19.0s,MS6.0
TIXI Tiksi 111.91 343 PFAKE 01 51 30.0 +10
TIXI LR LR
comp=Z,1μm,19.0s,MS5.6
MAJO Matsushiro 114.30 304 PFAKE 01 51 40.0 +14
MAJO LR LR
comp=Z,802nm,20.0s,MS5.3
MAT Matsushiro 114.30 304 SKKS SKKSac 01 59 25.0 +1.5
NWAO Narrogin (SRO) 114.58 224 PFAKE 01 51 40.0 +13
NWAO LR LR
comp=Z,1μm,19.0s,MS5.6
YAK Yakutsk 115.27 333 PFAKE 01 51 40.0 +13
YAK LR LR
comp=Z,2μm,20.0s,MS5.7
SUR Sutherland 115.38 136 PFAKE 01 51 40.0 +12
SUR LR LR
comp=Z,2μm,21.0s,MS5.7
KONO Kongsberg 116.98 29 PFAKE 01 51 40.0 +10
KONO LR LR
comp=Z,624nm,21.0s,MS5.2
SSB Saint Sauveur 117.64 46 PFAKE 01 51 40.0 +8.1
SSB LR LR
comp=Z,709nm,21.0s,MS5.3
WLF Walferdange 117.90 41 PFAKE 01 51 40.0 +7.7
WLF LR LR
comp=Z,688nm,21.0s,MS5.2
KEV Kevo 118.06 15 PFAKE 01 51 40.0 +8.0
KEV LR LR
comp=Z,1μm,21.0s,MS5.5
ECH Echery 118.86 42 PFAKE 01 51 50.0 +16
ECH LR LR
comp=Z,853nm,19.0s,MS5.4
MBWA Marble Bar 119.17 236 PFAKE 01 51 50.0 +14
MBWA LR LR
comp=Z,2μm,19.0s,MS5.7
BFO Black Forest 119.60 42 PFAKE 01 51 50.0 +14
BFO LR LR
comp=Z,679nm,21.0s,MS5.3
TAM Tamanrasset 119.66 71 PFAKE 01 51 50.0 +14
TAM LR LR
comp=Z,553nm,22.0s,MS5.2
MDJ Mudanjiang 120.00 314 PFAKE 01 51 50.0 +13
MDJ LR LR
comp=Z,1μm,22.0s,MS5.5
TSUM Tsumeb 120.10 122 PFAKE 01 51 50.0 +13
TSUM LR LR
comp=Z,3μm,20.0s,MS5.9
BOSA Boshof 120.71 135 PFAKE 01 51 50.0 +12
BOSA LR LR
comp=Z,2μm,20.0s,MS5.7
CLL Collm 121.66 38 *e*PP PP 01 53 05.0 -7.0
CLL *e*PS PS 02 03 00.0 -5.5
CLL *e*(SS) 02 09 54.0
CLL L 02 48 00.0
comp=Z,400nm,20.0s
NKC Novy Kostel 121.67 39 AMS AMS 02 36 40.0
comp=Z,800nm,20.0s
VSL Villasalto 122.09 52 PFAKE 01 51 50.0 +9.3
VSL LR LR
comp=Z,485nm,21.0s,MS5.1
KHC Kasperske Hory 122.72 40 AMS AMS 02 46 30.0
comp=Z,600nm,21.8s
PVCC Panska Ves 122.86 38 AMS AMS 02 36 50.0
comp=Z,800nm,24.3s
PRU Pruhonice 123.03 39 AMS AMS 02 36 40.0
comp=Z,800nm,19.1s
CN2 Changchun 123.09 314 *e*PKP PKPdf 01 51 39.6 -2.9
CN2 *es*PKP 01 51 54.0
CN2 *e*PP PP 01 53 23.9 +2.0
CN2 AMB AMB
comp=Z,200nm,8.0s
CN2 LR LR
comp=N,200nm,20.0s,MS5.0
CN2 LR LR
comp=E,300nm,20.0s,MS5.0
CN2 LR LR
comp=Z,300nm,22.0s,MS4.9
LBTB Lobatse 123.17 132 PFAKE 01 52 00.0 +17
LBTB LR LR
comp=Z,2μm,20.0s,MS5.7
INCN Inchon 123.44 306 PFAKE 01 51 50.0 +6.6
INCN LR LR
comp=Z,620nm,21.0s,MS5.2
DAV Davao City (W) 123.75 270 PFAKE 01 52 00.0 +15
DAV LR LR
comp=Z,570nm,21.0s,MS5.2
TREC Trest 123.84 39 AMS AMS 02 36 30.0
comp=Z,400nm,18.3s
TRI Trieste 123.87 44 PFAKE 01 52 00.0 +16
TRI LR LR
comp=Z,407nm,22.0s,MS5.0
DPC Dobruska-Polom 123.97 38 AMS AMS 02 37 30.0
comp=Z,800nm,25.9s
AQU L'Aquila 124.50 48 PFAKE 01 52 00.0 +15
AQU LR LR
comp=Z,493nm,19.0s,MS5.2
HIA Hailar 125.15 321 PFAKE 01 52 00.0 +14
HIA LR LR
comp=Z,2μm,21.0s,MS5.7
OKC Ostrava-Krasne 125.25 38 AMS AMS 02 38 20.0
comp=Z,800nm,22.2s
KAPI Kappang 126.06 253 PFAKE 01 52 00.0 +11
KAPI LR LR
comp=Z,528nm,19.0s,MS5.2
WDD Wield Dalam 126.73 55 PFAKE 01 52 00.0 +10
WDD LR LR
comp=Z,341nm,20.0s,MS5.0
CUC Castrocucco 126.85 50 PFAKE 01 52 00.0 +10
CUC LR LR
comp=Z,373nm,19.0s,MS5.1
PSZ Piszkesteto 127.07 39 PFAKE 01 52 00.0 +10
PSZ LR LR
comp=Z,381nm,21.0s,MS5.0
CEL Celeste 127.32 52 PFAKE 01 52 00.0 +9.2
CEL LR LR
comp=Z,318nm,20.0s,MS5.0
TIP Timpagrande 127.76 51 PFAKE 01 52 00.0 +8.4
TIP LR LR
comp=Z,545nm,20.0s,MS5.2
KWP Kalwaria Pacla 128.02 36 PFAKE 01 52 00.0 +8.3
KWP LR LR
comp=Z,446nm,19.0s,MS5.2
TATO Taipei 129.12 291 PFAKE 01 52 10.0 +15
TATO LR LR
comp=Z,677nm,20.0s,MS5.3
YHNB Yeheng 129.24 291 PFAKE 01 52 10.0 +15
YHNB LR LR
comp=Z,606nm,19.0s,MS5.3
TIR Tirane 129.42 47 PFAKE 01 52 10.0 +15
TIR LR LR
comp=Z,398nm,19.0s,MS5.1
NJ2 Nanjing 130.65 301 *e*PKP PKPdf 01 51 56.4 -0.9
NJ2 PP PP 01 54 15.0 +2.5
NJ2 PKS 01 55 31.5
NJ2 AMB AMB
comp=Z,100nm,8.1s
NJ2 LR LR
comp=N,120nm,23.5s,MS4.6
NJ2 LR LR
comp=E,90nm,22.3s,MS4.6
BJI Beijing 130.78 312 PKP PKPdf 01 51 58.0 +0.7
BJI PP PP 01 54 15.5 +2.6
BJI LR LR
comp=N,440nm,22.0s,MS5.3
BJI LR LR
comp=E,600nm,21.6s,MS5.3
BJI LR LR
comp=Z,1μm,31.6s
LSZ Lusaka 130.79 124 *e*PKPdf PKPdf 01 52 00.7 +2.7
LSZ LR LR
comp=Z,2μm,20.0s,MS5.8
BJT Baijiatuan 130.79 312 PFAKE 01 52 10.0 +13
BJT LR LR
comp=Z,614nm,22.0s,MS5.3
KIEV Kiev 131.04 32 PFAKE 01 52 10.0 +13
KIEV LR LR
comp=Z,462nm,19.0s,MS5.2
OBN Obninsk 131.55 24 PFAKE 01 52 10.0 +12
OBN LR LR
comp=Z,792nm,22.0s,MS5.4
OBN Obninsk 131.55 24 *i* PKIKP PKPdf 01 51 57.9 -0.4
OBN *i* SS SS 02 11 42.6 -8.0
OBN pmax pmax
comp=Z,7.0nm,1.0s
OBN MLR MLR
comp=Z,700nm,19.0s,MS5.4
TLY Talaya 132.67 331 PFAKE 01 52 10.0 +10
TLY LR LR
comp=Z,1μm,20.0s,MS5.5
TLY Talaya 132.67 331 *i* PKIKP PKPdf 01 52 07.2 +6.7
TLY *e*PPS 02 06 19.5
TLY *e*SS SS 02 12 30.2 +26
TLY pmax pmax
comp=Z,2.0nm,0.8s
ULN Ulaanbaatar 133.23 325 PFAKE 01 52 10.0 +8.3
ULN LR LR
comp=Z,2μm,20.0s,MS5.8
SONM Songino Array 133.62 325 PKP PKPdf 01 52 04.2 +1.8
comp=Z,0.8nm,0.7s,baz=22,slow=1.6,SNR=4.2
HHC Hu-ho-hao-te 133.77 314 *e*PKP PKPdf 01 52 00.0 -2.9
HHC sPKP 01 52 14.4
HHC PP PP 01 54 33.1 +1.1
HHC AMB AMB
comp=Z,55nm,6.9s
HHC LR LR
comp=N,430nm,19.7s,MS5.4
HHC LR LR
comp=E,590nm,19.8s,MS5.4
HHC LR LR
comp=Z,830nm,20.8s,MS5.4
WHN Wuhan 134.72 300 PKP PKPdf 01 52 12.2 +7.2
WHN SS SS 02 12 36.0 +4.5
WHN LR LR
comp=N,1μm,19.1s,MS5.7
WHN LR LR
comp=E,710nm,19.8s,MS5.7
WHN LR LR
comp=Z,2μm,21.1s,MS5.8
ARU Arti 136.46 8 PFAKE 01 52 20.0 +13
ARU LR LR
comp=Z,1μm,21.0s,MS5.7
KSM Kuching 137.11 257 PFAKE 01 52 20.0 +10
KSM LR LR
comp=Z,362nm,22.0s,MS5.1
ZALV Zalesovo Beam 137.68 346 PKP PKPdf 01 52 11.9 +2.2
comp=Z,0.5nm,0.3s,baz=5.7,slow=1.4,SNR=3.3
ENH Enshi 138.87 301 PFAKE 01 52 20.0 +7.3
ENH LR LR
comp=Z,685nm,22.0s,MS5.3
BR131 Keskin Array S 139.63 43 PFAKE 01 52 30.0 +16
BR131 LR LR
comp=Z,513nm,21.0s,MS5.2
BRTR Keskin Array B 139.63 43 PKhKP PKPpre 01 52 04.7
comp=Z,0.6nm,0.8s,baz=233,slow=0.6,SNR=3.9
BRTR PKP PKPdf 01 52 14.7 +0.9
comp=Z,1.2nm,0.8s,baz=195,slow=1.3,SNR=6.0
MBAR Mbarara 139.88 107 PFAKE 01 52 30.0 +15
MBAR LR LR
comp=Z,398nm,21.0s,MS5.1
QIZ Qiongzhong 140.16 284 PKP PKPdf 01 52 14.8 -0.6
QIZ PP PP 01 55 13.3 +0.3
QIZ SS SS 02 13 37.1 +0.1
QIZ LR LR
comp=N,260nm,21.9s,MS5.0
QIZ LR LR
comp=E,150nm,20.7s,MS5.0
QIZ LR LR
comp=Z,420nm,31.3s
QIZ Qiongzhong 140.16 284 PFAKE 01 52 30.0 +15
QIZ LR LR
comp=Z,434nm,20.0s,MS5.2
BRVK Borovoye 140.52 358 PFAKE 01 52 30.0 +15
BRVK LR LR
comp=Z,1μm,21.0s,MS5.5
BVAR Borovoye Array 140.55 358 PKP PKPdf 01 52 14.8 -0.3
comp=Z,0.6nm,0.4s,baz=288,slow=1.4,SNR=6.1
LZH Lanzhou 141.27 312 *e*PKP PKPdf 01 52 13.7 -3.2
LZH sPKP 01 52 23.9
LZH AMB AMB
comp=Z,44nm,5.2s
LZH LR LR
comp=E,690nm,17.2s
LZH LR LR
comp=Z,880nm,18.0s,MS5.6
ABPO Ambohimpanom 141.39 146 PFAKE 01 52 30.0 +12
ABPO LR LR
comp=Z,1μm,21.0s,MS5.6
KURK Kurchatov 142.01 350 *e*PKPdf PKPdf 01 52 12.5 -5.3
KURK LR LR
comp=Z,2μm,21.0s,MS5.8
GYA Guiyang 142.19 296 PKP PKPdf 01 52 18.2 -0.6
GYA PP PP 01 55 27.9 +2.8
GYA PKS 01 55 52.1
GYA SKKS SKKSac 02 02 18.3 -0.4
GYA SS SS 02 14 01.3 +1.3
GYA AMB AMB
comp=Z,320nm,8.3s
GYA LR LR
comp=N,4μm,26.8s,MS6.0
GYA LR LR
comp=E,1μm,27.6s,MS6.0
GYA LR LR
comp=Z,3μm,25.4s,MS5.9
GTA Gaotai 142.34 319 *e*PKP PKPdf 01 52 19.5 +0.8
GTA PP PP 01 55 30.5 +5.4
GTA PKS 01 55 54.1
GTA SKS SKSdf 01 59 28.7 -0.1
GTA SKKS SKKSac 02 02 17.8 -1.1
GTA SS SS 02 14 04.3 +4.2
GTA AMB AMB
comp=Z,88nm,9.5s
GTA LR LR
comp=N,210nm,20.5s,MS5.0
GTA LR LR
comp=E,140nm,19.0s,MS5.0
GTA LR LR
comp=Z,340nm,25.9s
KIV Kislovodsk 142.37 31 *e*PKPdf PKPdf 01 52 17.0 -1.6
KIV LR LR
comp=Z,602nm,20.0s,MS5.3
KIV Kislovodsk 142.37 31 *e*PKHKP PKPpre 01 52 12.3
KIV *i* 01 52 15.5
KIV *e* 01 59 19.1
KIV pmax pmax
comp=Z,6.0nm,0.9s
KIV MLR MLR
comp=Z,587nm,20.0s,MS5.3
CD2 Chengdu 143.39 304 PKP PKPdf 01 52 21.4 +0.6
CD2 PP PP 01 55 38.0 +6.0
CD2 PKS 01 55 55.7
CD2 SKS SKSdf 01 59 29.5 -1.4
CD2 SKKS SKKSac 02 02 26.0 +0.6
CD2 SS SS 02 14 15.8 +2.4
CD2 AMB AMB
comp=Z,150nm,6.6s
CD2 LR LR
comp=N,460nm,17.6s
CD2 LR LR
comp=E,890nm,24.5s
CD2 LR LR
comp=Z,1μm,25.5s
MALT Malatya 143.54 42 *e*PKPdf PKPdf 01 52 18.8 -2.0
MALT LR LR
comp=Z,448nm,21.0s,MS5.2
ABKAR Akbulak array 143.63 10 *e*PKPpre PKPpre 01 52 17.5
ABKAR *e*PKPdf PKPdf 01 52 19.4 -1.2
SDSI Sungai Dareh 144.51 249 P PKPdf 01 52 22.2 -1.1
MK31 Makanchi Array 144.90 344 *e*PKPdf PKPdf 01 52 19.9 -3.0
MKAR Makanchi Array 144.90 344 PKP PKPdf 01 52 20.6 -2.4
comp=Z,5.3nm,0.7s,baz=33,slow=2.9,SNR=38
BKNI Bangkinang 145.38 250 P PKPdf 01 52 15.5 -9.3
BKNI Bangkinang 145.38 250 P PKPbc 01 52 24.8 +0.1
PDSI Padang 145.39 248 P PKPdf 01 52 24.6 -0.2
MAK Makhachkala 145.43 28 *i* PKIKP PKPdf 01 52 23.5 -0.5
MAK *e* 01 55 39.7
MAK pmax pmax
comp=Z,153nm,1.7s
KMBO Kilima Mbogo 145.63 113 PKPbc PKPbc 01 52 27.2 +1.8
comp=Z,3.8nm,1.0s,baz=1.1,slow=24,SNR=6.1
KMBO Kilima Mbogo 145.63 113 *e*PKIKP PKPdf 01 52 27.6 +2.4
KMBO MLR MLR
comp=Z,1μm,20.0s
PPI Padang Panjang 145.64 249 P PKPdf 01 52 24.8 -0.5
WMQ Urumqi 145.66 335 PKPbc PKPbc 01 52 23.6 -1.0
WMQ PP PP 01 55 48.4 +4.0
WMQ PKS 01 55 57.6
WMQ SKS SKSdf 01 59 27.3 -6.3
WMQ SKKS SKKSac 02 02 33.3 -4.3
WMQ SS SS 02 14 35.4 -1.8
WMQ AMB AMB
comp=Z,230nm,4.5s
WMQ LR LR
comp=N,1μm,22.8s,MS5.7
WMQ LR LR
comp=E,1μm,23.2s,MS5.7
WMQ LR LR
comp=Z,2μm,22.8s,MS5.9
KMI Kunming 145.93 295 PKPbc PKPbc 01 52 26.0 -0.1
KMI PKPab PKPab 01 52 28.4 +1.9
KMI PP PP 01 55 48.9 +1.3
KMI AMB AMB
comp=Z,130nm,4.7s
KMI LR LR
comp=N,200nm,24.8s,MS5.2
KMI LR LR
comp=E,430nm,20.3s,MS5.2
KMI LR LR
comp=Z,620nm,21.4s,MS5.3
GNI Garni 146.15 34 *e*PKPbc PKPbc 01 52 24.8 -1.4
GNI LR LR
comp=Z,438nm,20.0s,MS5.2
SISI Saibi 146.44 246 P PKPab 01 52 31.2 +2.4
IPM Ipoh 146.85 257 P PKPbc 01 52 30.9 +1.8
IPM Ipoh 146.85 257 P PKPbc 01 52 30.5 +1.4
comp=Z,0.2nmcomp=Z,756nmcomp=Z,58nm,1.3s
KULM Kulim 147.45 259 *e*PKPbc PKPbc 01 52 29.4 -1.4
KULM LR LR
comp=Z,724nm,22.0s,MS5.4
KULM Kulim 147.45 259 P PKPab 01 52 32.1 -0.7
KULM Kulim 147.45 259 P PKPab 01 52 32.2 -0.6
TSI Tuntungan 148.85 254 P PKPbc 01 52 35.7 +1.2
TSI Tuntungan 148.85 254 P PKPbc 01 52 35.6 +1.1
TPTI 150.06 253 P PKPab 01 52 38.2 -5.1
TKM2 Tokmak 2 150.08 350 *e*PKPbc PKPbc 01 52 34.7 -2.0
TKM2 LR LR
comp=Z,1μm,20.0s,MS5.7
FRU Bishkek 150.32 351⇑ *e*PKP2 PKPbc 01 52 38.0 +0.8
CHTO Chiang Mai 150.47 284 *e*PKPbc PKPbc 01 52 39.2 +0.9
CHTO LR LR
comp=Z,548nm,20.0s,MS5.3
CHTO Chiang Mai 150.47 284 *e*PKIKP PKPbc 01 52 39.3 +1.0
CHTO MLR MLR
comp=Z,548nm,20.0s,MS5.3
CHTO Chiang Mai 150.47 284 P PKPbc 01 52 39.8 +1.5
CM31 Chiang Mai Arr 150.51 284 *e*PKPbc PKPbc 01 52 40.0 +1.6
CM31 LR LR
comp=Z,579nm,19.0s,MS5.4
CMAR Chiang Mai Arr 150.51 284 PKPbc PKPbc 01 52 39.5 +1.1
comp=Z,9.5nm,0.8s,baz=71,slow=0.8,SNR=27
AAK Ala-Archa 150.54 351 PFAKE 01 52 40.0 +7.6
AAK LR LR
comp=Z,2μm,19.0s,MS5.9
EKS2 Erkin-Say 150.61 352 *e*PKPdf PKPdf 01 52 32.6 +0.1
EKS2 *e*PKPbc PKPbc 01 52 35.9 -2.0
EKS2 LR LR
comp=Z,1μm,20.0s,MS5.8
UCH Uchtor 150.93 351 *e*PKPbc PKPbc 01 52 39.3 +0.6
UCH LR LR
comp=Z,1μm,20.0s,MS5.7
AML Almayashu 151.14 352 *e*PKPbc PKPbc 01 52 40.9 +1.7
AML LR LR
comp=Z,2μm,19.0s,MS5.8
MSEY Mahe Island 157.69 143 PFAKE 01 52 50.0 +6.7
MSEY LR LR
comp=Z,695nm,19.0s,MS5.5
NIL Nilore 159.51 349 PFAKE 01 53 00.0 +15
NIL LR LR
comp=Z,94nm,21.0s,MS4.6

IDC 13 01:43:49.0±5.3, 13.99S×111.06W, h0km, mb3.6/2, mb1 4.1/2, mb1mx3.8/12, mbtmp3.6/2, Error ellipse: s-maj=237.9km s-min=93.0km az=108.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**43.66**	**9**	P	P	01 51 55.5	0.0
	1.4nm,1.2s,baz=185,slow=8.6,SNR=6.2						
NVAR	**Mina Array Bea**	**52.59**	**353**	P	P	01 53 04.7	+0.3
	0.3nm,0.5s,baz=181,slow=12,SNR=3.2						
MKAR	**Makanchi Array**	**145.44**	**344**	PKPbc	PKPbc	02 03 28.2	-0.8
	0.4nm,0.6s,baz=47,slow=2.8,SNR=5.3						

NIED ***13*** *01:45:00, 36.40N×140.70E, h50km, Mw3.9 Best double couple: M0 7.11000×10^14 NP1:φs 31.00000°, δ68.00000°, λ 104.00000°. NP2:φs 178.00000°, δ26.00000°, λ60.00000°.*
ISCJB ***13*** *01:45:09.1±0.6, 36.43N±0.04×140.78E±0.07, h57km±4km, mb3.9/13, Error ellipse: s-maj=9.3km s-min=6.4km az=13.6*
JMA ***13*** *01:45:10.2±0.1, 36.43N×140.68E, h52km±1km, M3.8*

Broadband fault plane solution: P waves. NP1: ϕ_s225.00000°, δ24.00000°, λ107.00000°. NP2: ϕ_s26.00000°, δ67.00000°, λ83.00000°. Principal axes: T Plg67.0000°, Azm283.0000°; N Plg7.0000°, Azm29.0000°; P Plg22.0000°, Azm122.0000°;
JMA Felt II J1.
NEIC ***13*** *01:45:11.3±1.8, 36°.42N×140°.64E, h61km±14km, mb4.2/2 Error ellipse: s-maj=19.7km s-min=16.3km az=48.0*
IDC ***13*** *01:45:11.6±2.8, 36°.41N×140°.66E, h63km±26km, mb3.6/11, mb1 3.7/13, mb1mx3.6/23, mbtmp3.6/13, ML3.2/2, Error ellipse: s-maj=28.4km s-min=14.8km az=69.0*

ISC 13 01:45:10.2±0.6, 36°.45N±0°.04×140°.77E±0°.07, h50km±4km, n26, σ0°77/35, mb3.9/13, 1C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.23**	**315**	⇑P			**Pn**	**01 45 18.8**	**0.0**
JHO				S			**Sn**	01 45 24.6	-0.3
JYT	**Yasato**	**0.52**	**245**	⇓P			**Pn**	**01 45 21.1**	**-0.6**
JYT				S			**Sn**	01 45 28.5	-1.4
ONAJ	**Iwakimizuishiy**	**0.65**	**2**	⇓P			**Pn**	**01 45 23.1**	**-0.3**
ONAJ				S			**Sn**	01 45 32.6	-0.3
JAG	**Ashikaga**	**1.06**	**269**	⇓P			**Pn**	**01 45 28.2**	**-0.6**
JFT	**Otama**	**1.12**	**342**	P			**Pn**	**01 45 30.0**	**+0.4**
JFT				S			**Sn**	01 45 44.7	+0.8
JKT	**Katashina**	**1.26**	**285**	⇓P			**Pn**	**01 45 31.4**	**-0.1**
JKT				S			**Sn**	01 45 46.8	-0.6
JFY	**Yanaizu**	**1.28**	**319**	⇓P			**Pn**	**01 45 31.8**	**0.0**
JFY				S			**Sn**	01 45 48.3	+0.5
MJAR	**Matsushiro Arr**	**2.06**	**273**	P			**Pn**	**01 45 41.7**	**-0.8**
	29nm,0.3s,baz=90,slow=9.8,SNR=426								
MJAR				S			**Sn**	**01 45 56.8**	**-10**
	36nm,0.3s,baz=230,slow=35,SNR=25								
MAJO	**Matsushiro**	**2.07**	**273**	*e*Pn			**Pn**	**01 45 43.0**	**+0.5**
MAT	**Matsushiro**	**2.07**	**273**	P			**Pn**	**01 45 42.8**	**+0.3**
MAT				S			**Sn**	**01 46 08.4**	**+1.4**
JHJ	**Hachijo jima 2**	**3.42**	**194**	P			**Pn**	**01 46 02.5**	**+1.5**
	6.9nm,0.3s,baz=236,slow=14,SNR=9.8								
JHJ				S			**Sn**	**01 46 40.7**	**+0.4**
	36nm,0.3s,baz=66,slow=23,SNR=7.6								
KSRS	**Korea Array**	**10.33**	**279**	P			**Pn**	**01 47 38.0**	**+2.2**
	0.2nm,0.3s,baz=93,slow=14,SNR=8.7								
SONM	**Songino Array**	**27.69**	**305**	P			**P**	**01 50 52.6**	**-0.8**
	1.1nm,0.7s,mb3.6,baz=101,slow=8.8,SNR=5.0								
ZALV	**Zalesovo Beam**	**41.93**	**313**	P			**P**	**01 52 55.5**	**-0.2**
	1.1nm,0.5s,mb3.7,baz=96,slow=7.3,SNR=4.3								
MKAR	**Makanchi Array**	**43.99**	**303**	P			**P**	**01 53 12.9**	**+0.4**
	2.9nm,0.8s,mb4.0,baz=88,slow=10,SNR=2.4								
KURK	**Kurchatov**	**45.89**	**308**	*e*P			**P**	**01 53 26.0**	**-1.4**
	2.6nm,0.7s,mb4.3								
ILAR	**Eielson Array**	**50.26**	**32**	P			**P**	**01 54 01.8**	**+0.8**
	1.2nm,0.7s,mb4.0,baz=271,slow=6.3,SNR=16								
ABKAR	**Akbulak array**	**57.92**	**310**	*e*P			**P**	**01 54 56.1**	**-0.9**
	1.1nm,0.6s,mb4.1								
ASAR	**Alice Springs**	**60.14**	**187**	P			**P**	**01 55 12.1**	**-0.4**
	0.5nm,1.0s,mb3.5,baz=23,slow=12,SNR=3.6								
ARCES	**ARCESS Array B**	**64.36**	**339**	P			**P**	**01 55 40.4**	**0.0**
	1.3nm,0.7s,mb4.1,baz=67,slow=9.3,SNR=5.3								
FINES	**FINESS Array B**	**69.09**	**332**	P			**P**	**01 56 10.1**	**-0.5**
	2.8nm,0.8s,mb4.2,baz=126,slow=9.8,SNR=5.2								
AKASG	**Malin Array Be**	**74.44**	**322**	P			**P**	**01 56 42.2**	**-0.6**
	0.4nm,0.4s,mb3.7,baz=45,slow=5.5,SNR=5.8								
NOA	**NORSAR Array B**	**74.52**	**337**	P			**P**	**01 56 42.8**	**-0.3**
	1.8nm,0.7s,mb4.1,baz=40,slow=5.8,SNR=7.5								
BRTR	**Keskin Array B**	**78.85**	**311**	P			**P**	**01 57 08.9**	**+1.0**
	0.3nm,0.5s,mb3.5,baz=97,slow=5.8,SNR=3.7								
TXAR	**Lajitas Array**	**90.89**	**52**	P			**P**	**01 58 09.0**	**+0.4**
TXAR	**Lajitas Array**	**90.89**	**52**	P			**P**	**01 58 09.0**	**+0.4**
	0.1nm,0.5s,mb3.4,baz=314,slow=3.0,SNR=3.5								

BJI ***13*** *01:53:54.3, 25°.99N×105°.14E, h17km, ML3.6/14*
IDC ***13*** *01:53:55.9±1.3, 26°.27N×105°.23E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/24, mbtmp3.8/7, Error ellipse: s-maj=39.3km s-min=22.5km az=55.0*
NEIC ***13*** *01:53:57.4±1.0, 26°.31N×105°.31E, h10km, mb3.9/4, Error ellipse: s-maj=35.9km s-min=18.1km az=59.0*

ISC 13 01:53:54.8±1.1, 26°.04N±0°.06×105°.25E±0°.05, h3km±7km, n16, σ1s06/20, mb3.8/10, 1C, Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GYA	**Guiyang**	**1.34**	**72**	⇑*i*Pg			**Pg**	**01 54 19.2**	**-1.3**
GYA				Sg			**Sg**	**01 54 38.7**	**+0.9**
GYA				smax					
	comp=N,2μm,0.9s								
GYA				smax					
	comp=E,480nm,0.7s								
KMI	**Kunming**	**2.44**	**249**	Pg			**Pg**	**01 54 37.4**	**-4.3**
KMI				Sg			**Sg**	**01 55 13.2**	**-0.2**
KMI				smax					
	comp=N,160nm,0.9s								
KMI				smax					
	comp=E,70nm,0.9s								
CD2	**Chengdu**	**5.03**	**345**	Pn			**Pn**	**01 55 12.3**	**+1.2**
CD2				Sn			**Sn**	**01 56 09.3**	**-0.4**
CD2				Sg			**Sg**	**01 56 36.8**	**+0.5**
CD2				smax					
	comp=N,120nm,1.0s								
CD2				smax					
	comp=E,150nm,0.9s								
XAN	**Xi'an**	**8.58**	**21**	P			**Pn**	**01 55 59.0**	**-0.9**
XAN				smax					
	comp=N,17nm,1.2s								
XAN				smax					
	comp=E,10.0nm,1.1s								
SONM	**Songino Array**	**21.77**	**2**	P			**P**	**01 58 46.9**	**-0.7**
	comp=E,1.6nm,0.7s,mb3.6,baz=184,slow=11,SNR=8.4								
KSRS	**Korea Array**	**22.33**	**54**	P			**P**	**01 58 53.7**	**+0.1**
	comp=E,1.7nm,0.8s,mb3.5,baz=246,slow=9.2,SNR=6.5								
MK31	**Makanchi Array**	**27.58**	**325**	*e*P			**P**	**01 59 41.8**	**-1.2**
MKAR	**Makanchi Array**	**27.58**	**325**	P			**P**	**01 59 44.6**	**+1.6**
	comp=E,1.0nm,0.8s,mb3.5,baz=129,slow=13,SNR=8.6								
AML	**Almayashu**	**30.45**	**310**	*e*P			**P**	**02 00 10.0**	**+1.3**
	comp=E,0.9nm,0.6s,mb3.7								
EKS2	**Erkin-Say**	**30.59**	**311**	*e*P			**P**	**02 00 11.2**	**+1.3**
	comp=E,1.4nm,0.5s,mb4.0								
ZALV	**Zalesovo Beam**	**31.73**	**337**	P			**P**	**02 00 19.3**	**-0.5**
	comp=E,1.5nm,0.6s,mb4.0,baz=139,slow=9.0,SNR=6.1								
KURK	**Kurchatov**	**31.97**	**327**	*e*P			**P**	**02 00 21.3**	**-0.7**
	comp=E,2.6nm,1.0s,mb4.0								
KURK	**Kurchatov**	**31.97**	**327**	P			**P**	**02 00 21.4**	**-0.6**
	comp=E,0.7nm,0.5s,mb3.7,baz=129,slow=10,SNR=4.4								
ABKAR	**Akbulak array**	**41.89**	**316**	*e*P			**P**	**02 01 45.9**	**-0.4**
	comp=E,0.8nm,0.6s,mb3.5								
ASAR	**Alice Springs**	**56.66**	**148**	P			**P**	**02 03 42.7**	**+3.2**
	comp=E,0.6nm,0.9s,mb3.6,baz=355,slow=9.3,SNR=3.3								
FINES	**FINESS Array B**	**62.35**	**328**	P			**P**	**02 04 16.9**	**-1.4**
	comp=E,1.5nm,0.7s,mb4.2,baz=112,slow=6.2,SNR=5.1								

NEIC ***13*** *02:17:12.9, 16°.45N×99°.40W, h16km, MD3.3(MEX), After MEX.*

MEX 13 02:17:12.7±0.7, 16°.45N×99°.41W, h25km±30km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.60**	**314**	*i* P			Pb	02 17 22.9	-1.7
ACX				*i* S			Sb	02 17 31.0	-1.7
ACX	**Acapulco**	**0.60**	**314**	*i* P			Pb	02 17 22.9	-1.7
ACX				*i* S			Sb	02 17 31.0	-1.7
CAIG	**El Cayaco**	**1.01**	**306**	*e*P			Pn	02 17 29.4	-1.9
CAIG				*i* S			Sb	02 17 40.9	-3.6
CAIG	**El Cayaco**	**1.01**	**306**	*e*P			Pn	02 17 29.4	-1.9
CAIG				*i* S			Sb	02 17 40.9	-3.6
PNIG	**Pinotepa**	**1.23**	**93**	*i* P			Pn	02 17 30.7	-3.6
PNIG				*i* S			Sn	02 17 46.6	-3.5
PNIG	**Pinotepa**	**1.23**	**93**	*i* P			Pn	02 17 30.7	-3.6
PNIG				*i* S			Sn	02 17 46.6	-3.5
MEIG	**Mezcala**	**1.48**	**352**	*i* P			Pn	02 17 35.2	-2.5
MEIG				*i* S			Sn	02 17 52.9	-3.3
UTMO	**Huajuapan**	**2.05**	**48**	*i* P			Pn	02 17 44.1	-1.6
UTMO				*i* S			Sn	02 18 07.9	-2.6
VHO	**Vista Hermosa**	**2.63**	**76**	*i* P			Pn	02 17 54.7	+1.1
VHO	**Vista Hermosa**	**2.63**	**76**	*i* P			Pn	02 17 52.1	-1.5
VHO				*i* S			Sn	02 18 21.2	-3.5
PPM	**Popocatepetl**	**2.70**	**16**	*e*P			Pn	02 17 53.2	-1.4
PPM				*i* S			Sn	02 18 23.6	-2.9
PPM	**Popocatepetl**	**2.70**	**16**	*e*P			Pn	02 17 53.2	-1.4
PPM				*i* S			Sn	02 18 23.6	-2.9

IDC ***13*** *02:35:14.8±2.0, 59°.41N×153°.29W, h53km±23km, mb3.3/4, mb1 3.7/7, mb1mx3.4/23, mbtmp3.5/7, ML4.0/3, Error ellipse: s-maj=27.4km s-min=10.5km az=98.0*
ISCJB ***13*** *02:35:15.9±0.4, 59°.36N±0°.03×152°.86W±0°.07, h86km±6km, mb3.8/7, Error ellipse: s-maj=6.3km s-min=5.4km az=18.0*
NEIC ***13*** *02:35:18.3, 59°.33N×152°.78W, h77km, mb4.0/2, After AEIC.*
NEIC Felt at Pedro Bay.

ISC 13 02:35:17.2±0.4, 59°.35N±0°.03×152°.86W±0°.07, h77km±6km, n53, σ0°88/61, mb3.8/7, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RSO	**Redoubt South**	**1.12**	**3**	*e*Pn			**Pn**	**02 35 37.6**	**+0.2**
KDAK	**Kodiak Island**	**1.57**	**175**	P			**Pn**	**02 35 42.8**	**-0.5**
KDAK				S			**Sn**	**02 36 03.4**	**+0.4**
KDAK	**Kodiak Island**	**1.57**	**175**	P			**Pn**	**02 35 42.6**	**-0.7**
	166nm,0.3s,baz=19,slow=8.7,SNR=819								
KDAK				S			**Sn**	**02 36 01.9**	**-1.2**
	92nm,0.3s,baz=176,slow=22,SNR=12								
SLKM	**Skilak Lake**	**1.77**	**48**	P			**Pn**	**02 35 46.1**	**+0.3**
SEW	**Seward**	**1.89**	**65**	P			**Pn**	**02 35 47.2**	**-0.2**
SEW				S			**Sn**	**02 36 09.8**	**-0.7**
OHAK	**Old Harbor**	**2.14**	**186**	*e*P			**Pn**	**02 35 50.3**	**-0.5**
SVW2	**Sparrevohn**	**2.22**	**324**	*e*P			**Pn**	**02 35 52.2**	**+0.3**
FIB	**Fire Island**	**2.27**	**35**	P			**Pn**	**02 35 53.7**	**+1.2**
FIB				S			**Sn**	**02 36 21.6**	**+2.1**
RC01	**Rabbit Creek A**	**2.34**	**40**	P			**Pn**	**02 35 53.7**	**+0.2**
RC01				S			**Sn**	**02 36 21.1**	**-0.2**
PMR	**Palmer**	**2.92**	**38**	P			**Pn**	**02 36 00.8**	**-0.4**
PMR				S			**Sn**	**02 36 33.5**	**-1.7**
KNK	**Knik Glacier**	**3.02**	**45**	P			**Pn**	**02 36 02.3**	**-0.3**
GHO	**Glory Hole Cre**	**3.12**	**37**	P			**Pn**	**02 36 04.1**	**+0.2**
SML	**Sawmill**	**3.33**	**40**	P			**Pn**	**02 36 06.7**	**-0.2**
MID	**Middleton Isla**	**3.34**	**86**	P			**Pn**	**02 36 06.6**	**-0.3**
PPLA	**Purkeypile**	**3.58**	**5**	P			**Pn**	**02 36 11.4**	**+1.2**
SCM	**Sheep Creek Mo**	**3.70**	**45**	P			**Pn**	**02 36 11.8**	**0.0**
EYAK	**Cordova Ski Ar**	**3.78**	**68**	P			**Pn**	**02 36 12.0**	**-0.9**
TT01	**Tatalina**	**3.89**	**338**	P			**Pn**	**02 36 14.7**	**+0.2**
TTA	**Tatalina**	**3.91**	**338**	P			**Pn**	**02 36 14.9**	**+0.2**
DIV	**Divide**	**3.96**	**60**	P			**Pn**	**02 36 15.1**	**-0.4**
CHGN	**Chignik**	**4.26**	**227**	*e*P			**Pn**	**02 36 19.5**	**0.0**
TRF	**Thorofare Moun**	**4.30**	**16**	P			**Pn**	**02 36 20.6**	**+0.5**
BMRM	**Bremner River**	**4.44**	**65**	P			**Pn**	**02 36 21.2**	**-0.6**
RND	**Reindeer**	**4.51**	**24**	P			**Pn**	**02 36 23.0**	**+0.1**
CHUM	**Lake Minchumin**	**4.56**	**3**	P			**Pn**	**02 36 24.2**	**+0.6**
DHY	**Denali Highway**	**4.59**	**33**	P			**Pn**	**02 36 24.1**	**+0.2**
MCK	**McKinley**	**4.79**	**21**	P			**Pn**	**02 36 27.3**	**+0.6**
BPAW	**Bear Paw Mtn.**	**4.86**	**10**	P			**Pn**	**02 36 27.9**	**+0.3**
PAX	**Paxson**	**5.10**	**41**	P			**Pn**	**02 36 31.2**	**+0.2**
MENT	**Mentasta**	**5.71**	**47**	*e*P			**Pn**	**02 36 39.7**	**+0.5**
GCSA	**Galena City Sc**	**5.74**	**343**	P			**Pn**	**02 36 39.8**	**+0.2**
COLA	**College**	**6.03**	**21**	P			**Pn**	**02 36 43.2**	**-0.3**
ILAR	**Eielson Array**	**6.12**	**25**	P			**Pn**	**02 36 44.0**	**-0.8**
	2.0nm,0.3s,baz=209,slow=14,SNR=102								
ILAR				S			**Sn**	**02 37 51.0**	**-2.4**
	6.4nm,0.3s,baz=185,slow=19,SNR=13								
BCA3	**Beaver Creek A**	**6.52**	**50**	P			**Pn**	**02 36 50.5**	**+0.2**
IM3	**Indian Mountai**	**6.68**	**357**	P			**Pn**	**02 36 52.4**	**0.0**
PNL	**Peninsula**	**6.86**	**82**	P			**Pn**	**02 36 54.9**	**0.0**
EGAK	**Eagle**	**7.73**	**40**	*e*Pn			**Pn**	**02 37 06.9**	**+0.1**
	0.6nm,0.5s								
COLD	**Coldfoot**	**8.00**	**7**	P			**Pn**	**02 37 09.9**	**-0.6**
BM3	**Burnt Mountain**	**8.90**	**21**	P			**Pn**	**02 37 21.0**	**-1.8**
SKAG	**Skagway**	**8.94**	**82**	*e*P			**Pn**	**02 37 24.6**	**+1.3**
	10nm,0.5s								
WHY	**Whitehorse**	**9.10**	**74**	P			**Pn**	**02 37 25.7**	**+0.2**
DLBC	**Dease Lake**	**11.83**	**85**	P			**Pn**	**02 38 05.2**	**+2.5**
	2.1nm,0.3s,baz=258,slow=5.5,SNR=30								
DLBC				S			**Sn**	**02 40 11.7**	**-1.0**
	0.5nm,0.3s,baz=181,slow=25,SNR=5.3								
INK	**Inuvik**	**12.33**	**35**	*e*Pn			**Pn**	**02 38 13.4**	**+4.0**
INK	**Inuvik**	**12.33**	**35**	P			**Pn**	**02 38 12.4**	**+3.0**
	0.2nm,0.3s,baz=259,slow=13,SNR=3.5								
YKA	**Yellowknife Ar**	**18.67**	**64**	P			**P**	**02 39 29.2**	**-0.6**
	0.1nm,0.3s,baz=275,slow=9.7,SNR=4.8								
CBKS	**Cedar Bluff**	**39.08**	**98**	*e*P			**P**	**02 42 37.6**	**+1.2**
	6.0nm,0.6s,mb4.6								
TXAR	**Lajitas Array**	**44.69**	**110**	P			**P**	**02 43 23.7**	**+1.5**
	0.1nm,0.4s,mb2.9,baz=307,slow=6.3,SNR=4.1								
JCT	**Junction City**	**45.63**	**105**	*e*P			**P**	**02 43 30.1**	**+0.4**
	3.2nm,0.6s,mb4.2								
SONM	**Songino Array**	**55.23**	**306**	P			**P**	**02 44 39.7**	**-2.1**
	0.8nm,0.7s,mb3.9,baz=46,slow=8.5,SNR=3.8								
FINES	**FINESS Array B**	**59.54**	**1**	P			**P**	**02 45 13.0**	**+1.1**
	1.7nm,0.9s,mb4.1,baz=355,slow=15,SNR=4.0								
MKAR	**Makanchi Array**	**64.99**	**322**	P			**P**	**02 45 47.0**	**-1.4**
MKAR	**Makanchi Array**	**64.99**	**322**	P			**P**	**02 45 47.0**	**-1.4**
	0.2nm,0.4s,mb3.3,baz=32,slow=5.0,SNR=3.6								
ABKAR	**Akbulak array**	**68.50**	**338**	*e*P			**P**	**02 46 10.1**	**-0.6**
	0.5nm,0.6s,mb3.5								

IDC ***13*** *03:29:16.1±0.9, 13°.65S×166°.70E, h0km, mb4.4/13, mb1 4.4/13, mb1mx4.4/16, mbtmp4.3/13, MS3.9/3, Ms1 3.9/3, ms1mx3.3/17, Error ellipse: s-maj=33.3km s-min=20.3km az=122.0*
LDG ***13*** *03:29:17.4±0.3, 13°.25S×166°.61E, h10km, Mb5.0/4, Error ellipse: s-maj=38.1km s-min=9.1km az=80.0*
ISCJB ***13*** *03:29:22.8±1.7, 13°.57S±0°.06×166°.50E±0°.08, h55km±14km, mb4.7/33, MS3.8/3, Error ellipse: s-maj=12.4km s-min=9.0km az=166.4*
NEIC ***13*** *03:29:26.4±1.1, 13°.56S×166°.48E, h77km±10km, mb4.7/15, Error ellipse: s-maj=10.4km s-min=10.1km az=195.0*

ISC 13 03:29:23.9±1.6, 13°.59S±0°.05×166°.60E±0°.09, h53km±13km, n75, σ0°99/52, mb4.7/33, MS3.8/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.72**	**302**	*e*Pn			**Pn**	**03 31 12.7**	**-1.0**
	148nm,0.8s								
HNR				*e*Sn			**Sn**	**03 32 39.9**	**+0.1**
DZM	**Mont Dzumac**	**8.44**	**181**	*e*Pn			**Pn**	**03 31 22.6**	**-0.9**
	14nm,0.3s								
DZM				*e*Sn			**Sn**	**03 32 55.2**	**-2.2**
	4.4nm,0.3s								
DZM				*e*LR		LR		03 33 32.8	
	1μm,23.6s								
DZM	**Mont Dzumac**	**8.44**	**181**	*e*P			**Pn**	**03 31 22.5**	**-1.0**
DZM				*e*S			**Sn**	**03 32 51.7**	**-5.7**
DZM	**Mont Dzumac**	**8.44**	**181**	*e*Pn			**Pn**	**03 31 26.3**	**+2.8**
DZM				*e*Sn			**Sn**	**03 32 50.7**	**-6.7**
MSVF	**Nonsavu**	**11.77**	**112**	*e*Pn			**Pn**	**03 32 14.4**	**+5.2**
	49nm,1.4s								
EIDS	**Eidsvold**	**18.72**	**229**	*e*P			**Pn**	**03 33 39.3**	**+0.2**
CTA	**Charters Tower**	**20.50**	**249**	P			**P**	**03 33 57.2**	**-0.6**
	8.3nm,0.8s,baz=81,slow=13,SNR=4.8								
CTAO	**Charters Tower**	**20.50**	**249**	*e*P			**P**	**03 33 58.0**	**+0.2**
	26nm,1.3s								
AFI	**Afiamalu**	**21.01**	**93**	LR		LR		03 40 34.9	
	comp=Z,200nm,19.1s,MS3.5,baz=189,slow=32								
RMQ	**Roma**	**21.07**	**230**	*e*P			**P**	**03 34 04.2**	**+0.4**
	46nm,0.9s,mb4.8								
ARMA	**Armidale**	**21.71**	**217**	*e*P			**P**	**03 34 11.0**	**+0.4**
MTSU	**Mount Surprise**	**21.90**	**255**	*e*P			**P**	**03 34 14.3**	**+1.5**
	72nm,1.2s,mb5.0								
CMSA	**Cobar Meteorol**	**26.22**	**224**	*e*P			**P**	**03 34 55.5**	**+1.6**
STKA	**Stephens Creek**	**29.26**	**227**	P			**P**	**03 35 21.2**	**+0.1**
	12nm,0.8s,mb4.7,baz=43,slow=7.9,SNR=6.0								
STKA				LR		LR		03 46 32.3	
	comp=Z,591nm,19.0s,MS4.2,baz=33,slow=35								
ASAR	**Alice Springs**	**32.49**	**247**	P			**P**	**03 35 47.5**	**-2.2**
	1.8nm,0.7s,mb4.0,baz=74,slow=9.2,SNR=10								
BBOO	**Buckleboo**	**33.78**	**230**	*e*P			**P**	**03 36 00.8**	**-0.1**
	21nm,0.7s,mb5.2								
FORT	**Forrest**	**39.33**	**238**	*e*P			**P**	**03 36 47.4**	**-0.8**
	16nm,0.7s,mb4.9								
PPT	**Papeete**	**42.33**	**101**	*e*LQ				03 47 20.7	
	476nm,29.0s								
PPT				*e*LR		LR		03 49 00.3	
	137nm,25.0s								
PPT	**Papeete**	**42.33**	**101**	LR		LR		03 51 34.0	
	comp=Z,68nm,20.6s,MS3.5,baz=280,slow=32								
MEEK	**Meekatharra**	**46.63**	**246**	*e*P			**P**	**03 37 46.4**	**-0.9**
TAOE	**Nuku Hiva Isla**	**52.37**	**91**	*e*S			**S**	**03 45 58.5**	**+5.0**
	94nm,27.7s								
TAOE				*e*LR		LR		03 53 46.6	
	121nm,22.2s								
KKM	**Kota Kinabalu**	**53.69**	**288**	*e*P			**P**	**03 38 40.7**	**-0.2**
	18nm,0.9s,mb5.0								
RKT	**Rikitea**	**55.96**	**109**	*e*LR		LR		03 55 17.7	
	144nm,40.5s								

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**56.60**	**333**	P			**P**	**03 39 00.2**	**-1.2**
	6.1nm,1.1s,mb4.6,baz=166,slow=6.8,SNR=12								
MAJO	**Matsushiro**	**56.60**	**333**	*e*P			**P**	**03 39 00.8**	**-0.7**
	5.4nm,0.9s,mb4.6								
MAT	**Matsushiro**	**56.60**	**333**	P			**P**	**03 39 00.7**	**-0.7**
ASAJ	**Asahikawa**	**61.45**	**341**	P			**P**	**03 39 36.1**	**+1.2**
	7.6nm,0.7s,mb4.9,baz=261,slow=12,SNR=4.6								
KSRS	**Korea Array**	**62.44**	**326**	P			**P**	**03 39 42.4**	**+0.7**
	1.9nm,0.8s,mb4.3,baz=140,slow=6.8,SNR=7.5								
CASY	**Casey**	**64.33**	**202**	*e*P			**P**	**03 39 52.8**	**-1.0**
	9.5nm,1.4s,mb4.6								
MDJ	**Mudanjiang**	**66.97**	**332**	*e*P			**P**	**03 40 12.1**	**+1.1**
	6.9nm,0.8s,mb4.7								
CN2	**Changchun**	**68.34**	**329**	*e*P			**P**	**03 40 19.3**	**-0.4**
CN2				pmax		pmax			
	comp=Z,20nm,0.7s,mb5.3								
BJI	**Beijing**	**70.97**	**321**	P			**P**	**03 40 36.9**	**+0.9**
BJI				pmax		pmax			
	comp=Z,10.0nm,0.9s,mb4.8								
CMAR	**Chiang Mai Arr**	**73.89**	**294**	P			**P**	**03 40 55.0**	**+1.2**
	comp=Z,3.9nm,0.7s,mb4.5,baz=124,slow=4.0,SNR=20								
CHTO	**Chiang Mai**	**74.02**	**294**	*e*P			**P**	**03 40 55.6**	**+1.0**
	comp=Z,10nm,1.1s,mb4.7								
HIA	**Hailar**	**74.98**	**330**	*e*P			**P**	**03 41 00.1**	**+0.6**
	comp=Z,11nm,0.7s,mb4.9								
QSPA	**South Pole Qui**	**76.43**	**180**	*e*P			**P**	**03 41 07.4**	**0.0**
	comp=Z,17nm,1.2s,mb4.9								
LZH	**Lanzhou**	**77.07**	**312**	*e*P			**P**	**03 41 10.5**	**-1.2**
LZH				pmax		pmax			
	comp=Z,13nm,1.0s,mb4.8								
ULN	**Ulaanbaatar**	**80.84**	**324**	*e*P			**P**	**03 41 32.9**	**+0.8**
	comp=Z,11nm,1.1s,mb4.7								
SONM	**Songino Array**	**81.20**	**324**	P			**P**	**03 41 34.8**	**+0.8**
	comp=Z,2.3nm,0.8s,mb4.1,baz=142,slow=6.2,SNR=16								
GTA	**Gaotai**	**81.41**	**314**	*e*P			**P**	**03 41 36.8**	**+1.5**
GTA				pmax		pmax			
	comp=Z,11nm,1.2s,mb4.7								
MAW	**Mawson**	**82.69**	**202**	P			**P**	**03 41 41.2**	**-0.4**
	comp=Z,2.5nm,0.9s,mb4.2,baz=87,slow=9.2,SNR=6.2								
MCK	**McKinley**	**84.28**	**18**	*e*P			**P**	**03 41 49.3**	**-0.3**
	comp=Z,9.4nm,1.1s,mb4.8								
TLY	**Talaya**	**84.69**	**326**	*e*P			**P**	**03 41 52.0**	**0.0**
	comp=Z,13nm,1.4s,mb4.9								
PAX	**Paxson**	**84.84**	**20**	*e*P			**P**	**03 41 49.6**	**-2.9**
	comp=Z,4.6nm,0.6s,mb4.8								
COLA	**College**	**85.43**	**18**	*e*P			**P**	**03 41 54.1**	**-1.3**
	comp=Z,5.1nm,0.8s,mb4.7								
ILAR	**Eielson Array**	**85.65**	**18**	P			**P**	**03 41 55.0**	**-1.4**
	comp=Z,2.2nm,0.8s,mb4.4,baz=233,slow=5.0,SNR=14								
COLD	**Coldfoot**	**86.51**	**15**	*e*P			**P**	**03 42 00.8**	**+0.1**
	comp=Z,51nm,1.1s,mb

BOQS	**Boqueron**	**1.99**	**72**	*e*P	**Pn**	**03 39 51.1**	**-0.8**
SNET	**Serv Nac Est T**	**2.02**	**74**	AML	AML	03 40 31.5	
	comp=Z,350nm,0.3s						
LFRS	**El Faro**	**2.17**	**77**	*e*P	**Pn**	**03 39 53.4**	**-0.9**
LFRS				*e*S	**Sn**	**03 40 21.5**	**+1.6**
SNVI	**San Vicente**	**2.38**	**78**	*e*P	**Pn**	**03 39 56.8**	**-0.3**
SNVI				*e*S	**Sn**	**03 40 27.2**	**+2.2**
MRL	**Marmol**	**2.43**	**38**	*e*P	**Pn**	**03 39 58.7**	**+0.8**
BLLM	**Bellamira**	**2.93**	**84**	*e*P	**Pn**	**03 40 05.0**	**+0.3**
BLLM				*e*S	**Sn**	**03 40 41.1**	**+2.3**
CAHU	**Cacacuatique**	**3.00**	**78**	*e*P	**Pn**	**03 40 05.7**	**-0.2**
TGUH	**Tegucigalpa,Un**	**3.96**	**76**	*e*Pn	**Pn**	**03 40 19.6**	**+0.7**
CMIG	**Matias Romero**	**5.28**	**319**	Pn	**Pn**	**03 40 36.7**	**-0.4**
CMIG				Sn	**Sn**	**03 41 39.2**	**+2.3**
CMIG	**Matias Romero**	**5.28**	**319**	Pn	**Pn**	**03 40 36.7**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=127,slow=12,SNR=5.9						
CMIG				Sn	**Sn**	**03 41 39.2**	**+2.3**
	comp=Z,1.1nm,0.3s,baz=128,slow=22,SNR=4.6						
PNIG	**Pinotepa**	**7.41**	**297**	*i* P	**Pn**	**03 41 07.0**	**+0.6**
TEIG	**Tepich**	**7.60**	**21**	*e*Pn	**Pn**	**03 41 09.4**	**+0.4**
	comp=Z,33nm,0.8s						
TXAR	**Lajitas Array**	**19.82**	**326**	P	**Pn**	**03 43 49.5**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=154,slow=13,SNR=10						
MNTX	**Cornudas Mount**	**22.59**	**327**	*e*P	**P**	**03 44 18.5**	**+0.3**
	comp=Z,1.6nm,1.0s,mb3.4						
NVAR	**Mina Array Bea**	**34.81**	**321**	P	**P**	**03 46 10.9**	**+2.8**
	comp=Z,1.0nm,0.8s,mb3.8,baz=133,slow=7.5,SNR=7.6						
CMAR	**Chiang Mai Arr**	**147.04**	**342**	PKPbc	PKPbc	03 59 02.3	+1.6
	comp=Z,1.0nm,0.4s,baz=327,slow=3.5,SNR=4.9						

*ISCJB **13** 03:45:42.0±0.5,51°.48N±0°.03×16°.07E±0°.03, h0km, Error ellipse: s-maj=4.2km s-min=2.2km az=14.8*
*IPEC **13** 03:45:41.9±0.3,51°.62N×16°.19E, h0km, ML2.4/4, Error ellipse: s-maj=1.9km s-min=1.5km az=46.0*
*CSEM **13** 03:45:43.5±0.2,51°.51N×16°.07E, h2km, ML3.4/10, Error ellipse: s-maj=3.9km s-min=2.1km az=21.0*
*BGR **13** 03:45:43.9±0.8,51°.55N×16°.10E, h1km, ML3.1/6, Error ellipse: s-maj=15.6km s-min=6.7km az=161.0*
*PRU **13** 03:45:44.5,51°.49N×16°.07E, h0km*
*WAR **13** 03:45:44.2,51°.53N×16°.10E, ML2.6, Mining Induced*
*VIE **13** 03:45:45.5±0.4,51°.32N×16°.19E, h0km, mb2.2/3, ML2.7/4, Error ellipse: s-maj=2.4km s-min=2.2km az=178.0 62 km WNW of Wroclaw Suspected Mining induced.*
*NEIC **13** 03:45:52.6±1.4,51°.26N×14°.94E, h5km, ML3.1(SZGRF), ML2.4(BRA), Error ellipse: s-maj=27.8km s-min=10.5km az=189.0*

ISC 13 03:45:42.8±0.5,**51°.55N**±0°.02×**16°.09E**±0°.03,**h0km**,**n66,** σ0**s88**/122,**3C-1D**,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.72**	**170**	*e*Pg	**Pg**	**03 45 57.0**	**+0.3**
KSP				*e*Sg	**Sg**	**03 46 06.4**	**+0.4**
KSP	**Ksiaz**	**0.72**	**170**	*i* Pg	**Pg**	**03 45 57.0**	**+0.3**
KSP				*i* Sg	**Sg**	**03 46 06.4**	**+0.4**
KSP	**Ksiaz**	**0.72**	**170**	*e*Pg	**Pg**	**03 45 56.9**	**+0.2**
	baz=355						
KSP				*e*Sg	**Sg**	**03 46 06.4**	**+0.4**
	baz=355						
UPC	**Upice**	**1.05**	**183**	*e*PG	**Pg**	**03 46 03.2**	**+0.3**
UPC	**Upice**	**1.05**	**183**	Pg	**Pg**	**03 46 03.2**	**+0.3**
DPC	**Dobruska-Polom**	**1.21**	**173**	*e*PG	**Pg**	**03 46 05.8**	**-0.3**
DPC				*e*SG	**Sg**	**03 46 20.5**	**-1.3**
	comp=Z,32nm,0.3s						
DPC	**Dobruska-Polom**	**1.21**	**173**	Pg	**Pg**	**03 46 05.8**	**-0.3**
DPC				*e*Sg	**Sg**	**03 46 21.3**	**-0.5**
	baz=356						
PVCC	**Panska Ves**	**1.40**	**224**	*e*PG	**Pg**	**03 46 10.0**	**+0.3**
PVCC				*e*SG	**Sg**	**03 46 28.3**	**+0.4**
	comp=Z,182nm,0.3s						
PVCC	**Panska Ves**	**1.40**	**224**	*e*Pn	**Pn**	**03 46 09.5**	**-0.1**
	baz=42						
PVCC	**Panska Ves**	**1.40**	**224**	Pg	**Pg**	**03 46 10.0**	**+0.3**
PVCC				Sg	**Sg**	**03 46 28.3**	**+0.4**
	comp=Z,182nm,0.3s						
BRG	**Berggiesshubel**	**1.51**	**244**	*e*Pn	**Pn**	**03 46 11.4**	**+0.3**
	SNR=24						
BRG				*e*Sg	**Sg**	**03 46 32.5**	**+1.2**
BRG	**Berggiesshubel**	**1.51**	**244**	PN	**Pn**	**03 46 10.6**	**-0.5**
BRG				PG	**Pg**	**03 46 11.9**	**+0.2**
BRG				SG	**Sg**	**03 46 31.9**	**+0.6**
	comp=Z,131nm,0.4s						
BRG	**Berggiesshubel**	**1.51**	**244**	Pn	**Pn**	**03 46 11.4**	**+0.3**
	SNR=24						
BRG				Sg	**Sg**	**03 46 32.5**	**+1.2**
PRU	**Pruhonice**	**1.85**	**213**	*e*PG	**Pg**	**03 46 17.9**	**-0.3**
PRU				*e*SG	**Sg**	**03 46 41.7**	**-0.4**
	comp=Z,54nm,0.7s						
PRU	**Pruhonice**	**1.85**	**213**	Pg	**Pg**	**03 46 17.9**	**-0.3**
PRU				Sg	**Sg**	**03 46 41.7**	**-0.4**
	comp=Z,54nm,0.7s						
CLL	**Collm**	**1.94**	**264**	*e*Pn	**Pn**	**03 46 16.6**	**-0.5**
	SNR=9.4						
CLL				*i* Pg	**Pg**	**03 46 19.6**	**-0.5**
CLL				*e*Sg	**Sg**	**03 46 45.6**	**+0.3**
CLL	**Collm**	**1.94**	**264**	*i* Pn	**Pn**	**03 46 16.5**	**-0.6**
CLL				*i* Pg	**Pg**	**03 46 19.6**	**-0.5**
CLL				*e*Sg	**Sg**	**03 46 45.0**	**-0.3**
CLL	**Collm**	**1.94**	**264**	*i* Pn	**Pn**	**03 46 16.5**	**-0.6**
	comp=Z,6.0nm,0.6s						
CLL				*i* Pg	**Pg**	**03 46 19.6**	**-0.5**
CLL				*e*		03 46 23.0	
CLL				*e*Sg	**Sg**	**03 46 45.0**	**-0.3**
	comp=Z,41nm,0.4s						
CLL	**Collm**	**1.94**	**264**	Pn	**Pn**	**03 46 16.6**	**-0.5**
	SNR=9.4						
MORC	**Moravsky Berou**	**2.00**	**152**	*e*Pn	**Pn**	**03 46 17.2**	**-0.7**
MORC				*e*Sn	**Sn**	**03 46 45.0**	**+1.4**
MORC	**Moravsky Berou**	**2.00**	**152**	*e*Pn	**Pn**	**03 46 17.3**	**-0.6**
	baz=336						
MORC				*e*Sn	**Sn**	**03 46 45.0**	**+1.4**
MORC				*e*Sg	**Sg**	**03 46 45.8**	**-1.4**
	comp=Z,16nm,0.3s,baz=336						
VRAC	**Vranov**	**2.27**	**172**	*e*Pn	**Pn**	**03 46 21.8**	**+0.3**
	baz=354						
VRAC				*e*Sg	**Sg**	**03 46 55.0**	**-0.7**
	comp=Z,21nm,0.5s,baz=354						
TREC	**Trest**	**2.29**	**190**	*e*PN	**Pn**	**03 46 22.7**	**+0.9**
TREC				*e*PG	**Pg**	**03 46 25.7**	**-1.0**
TREC	**Trest**	**2.29**	**190**	Pn	**Pn**	**03 46 22.7**	**+0.9**
KRUC	**Moravsky**	**2.50**	**175**	*e*Pn	**Pn**	**03 46 25.5**	**+0.8**
	baz=357						
KRUC				*e*Sg	**Sg**	**03 47 02.4**	**-0.7**
	comp=Z,9.3nm,0.3s,baz=357						
TANN	**Tannenbergstha**	**2.56**	**245**	*e*Pn	**Pn**	**03 46 25.8**	**+0.3**
	SNR=13						
TANN				*e*Sg	**Sg**	**03 47 04.8**	**-0.2**
TANN	**Tannenbergstha**	**2.56**	**245**	Pn	**Pn**	**03 46 25.8**	**+0.3**
	SNR=13						
TANN				Sg	**Sg**	**03 47 04.8**	**-0.2**
WERD	**Werda**	**2.63**	**247**	*e*Pn	**Pn**	**03 46 27.1**	**+0.6**
	SNR=12						
WERD	**Werda**	**2.63**	**247**	Pn	**Pn**	**03 46 27.1**	**+0.6**
	SNR=12						
NKC	**Novy Kostel**	**2.66**	**242**	*e*PN	**Pn**	**03 46 27.4**	**+0.6**
NKC				*e*PG	**Pg**	**03 46 32.8**	**-0.9**
NKC				*e*SG	**Sg**	**03 47 09.1**	**+1.0**
	comp=Z,108nm,0.3s						
NKC	**Novy Kostel**	**2.66**	**242**	Pn	**Pn**	**03 46 27.4**	**+0.6**
NKC	**Novy Kostel**	**2.66**	**242**	Pg	**Pg**	**03 46 32.8**	**-0.9**
NKC				Sg	**Sg**	**03 47 09.1**	**+1.0**
	comp=Z,108nm,0.3s						
WERN	**Wernitzgruen**	**2.67**	**243**	*e*Pn	**Pn**	**03 46 27.7**	**+0.7**
	SNR=8.2						
WERN				*e*Sg	**Sg**	**03 47 08.2**	**-0.2**
WERN	**Wernitzgruen**	**2.67**	**243**	Pn	**Pn**	**03 46 27.7**	**+0.7**
	SNR=8.2						
WERN				Sg	**Sg**	**03 47 08.2**	**-0.3**
OJC	**Ojcow**	**2.70**	**118**	*e*Pg	**Pg**	**03 46 35.0**	**+0.4**
OJC				*e*Sg	**Sg**	**03 47 10.3**	**+0.7**
OJC	**Ojcow**	**2.70**	**118**	*e*Pg	**Pg**	**03 46 35.0**	**+0.4**
OJC				*e*Sg	**Sg**	**03 47 10.3**	**+0.7**
NEUB	**Neuenburg**	**2.72**	**264**	*e*Sg	**Sg**	**03 47 11.4**	**+1.2**
NEUB	**Neuenburg**	**2.72**	**264**	Sg	**Sg**	**03 47 11.4**	**+1.1**
JAVC	**Velka Javorina**	**2.88**	**159**	*e*Sg	**Sg**	**03 47 15.0**	**-0.4**
	comp=Z,24nm,1.1s						
KHC	**Kasperske Hory**	**2.91**	**215**	*e*Pn	**Pn**	**03 46 30.6**	**+0.3**
KHC				*e*Pg	**Pg**	**03 46 37.4**	**-1.1**
KHC				*e*Sn	**Sn**	**03 47 08.0**	**+2.0**
KHC				*e*Sg	**Sg**	**03 47 15.8**	**-0.4**
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN	**Pn**	**03 46 30.2**	**-0.1**
KHC				*e*PG	**Pg**	**03 46 36.3**	**-2.2**
KHC				*e*SN	**Sn**	**03 47 04.6**	**-1.3**
KHC				*e*SG	**Sg**	**03 47 14.4**	**-1.8**
	comp=Z,10nm,0.4s						
KHC	**Kasperske Hory**	**2.91**	**215**	*e*Pn	**Pn**	**03 46 30.6**	**+0.3**
KHC	**Kasperske Hory**	**2.91**	**215**	*e*Pg	**Pg**	**03 46 37.4**	**-1.1**
KHC				Sn	**Sn**	**03 47 04.6**	**-1.3**
KHC				Sg	**Sg**	**03 47 14.4**	**-1.8**
	comp=Z,10nm,0.4s						
MOX	**Moxa**	**2.96**	**254**	*e*Pg	**Pg**	**03 46 38.5**	**-1.1**
	SNR=4.8						
MOX				*e*Sg	**Sg**	**03 47 19.2**	**+1.3**
MOX	**Moxa**	**2.96**	**254**	*e*Pg	**Pg**	**03 46 39.4**	**-0.2**
MOX				*e*Sg	**Sg**	**03 47 19.0**	**+1.1**
MOX	**Moxa**	**2.96**	**254**	*e*PG	**Pg**	**03 46 39.4**	**-0.2**
MOX				*e*SG	**Sg**	**03 47 19.0**	**+1.1**
MOX	**Moxa**	**2.96**	**254**	*e*Pg	**Pg**	**03 46 39.4**	**-0.2**
MOX				*e*Sg	**Sg**	**03 47 19.0**	**+1.1**
NIE	**Niedzica**	**3.44**	**127**	*e*P	**Pg**	**03 46 48.0**	**-0.8**
NIE				*e*S	**Sg**	**03 47 33.3**	**-0.1**
VYHS	**Vyhne**	**3.54**	**149**	*e*P	**Sg**	**03 46 52.1**	**+1.5**
VYHS				*e*Sg	**Sg**	**03 47 37.1**	**+0.7**
VYHS	**Vyhne**	**3.54**	**149**	*e*	**Pg**	**03 46 52.1**	**+1.5**
VYHS	**Vyhne**	**3.54**	**149**	*e*SG	**Sg**	**03 47 37.1**	**+0.7**
GRA1	**Grafenberg Arr**	**3.61**	**241**	Sg	**Sg**	**03 47 39.1**	**+0.2**
GRF	**Grafenberg Arr**	**3.61**	**241**	*e*Sg	**Sg**	**03 47 39.1**	**+0.2**
CONA	**Conrad Observa**	**3.63**	**182**	⇓*i*Pn	**Pn**	**03 46 40.9**	**+0.7**
CONA				⇑*i*Sg	**Sg**	**03 47 38.2**	**-1.2**
	comp=Z,12nm,0.3s						
CONA	**Conrad Observa**	**3.63**	**182**	Pn	**Pn**	**03 46 40.9**	**+0.7**
CONA				Sg	**Sg**	**03 47 38.2**	**-1.2**
	comp=Z,12nm,0.3s						
BSD	**Bornholm Skovb**	**3.64**	**349**	*i* P	**Pn**	**03 46 39.0**	**-1.3**
BSD				*i* S	**Sn**	**03 47 21.8**	**-2.1**
BSD				*i* Sn	**Sn**	**03 47 22.0**	**-1.9**
BSD	**Bornholm Skovb**	**3.64**	**349**	*i* P	**Pn**	**03 46 39.1**	**-1.2**
	SNR=49						
BSD				*i* S	**Sn**	**03 47 21.8**	**-2.1**
MOA	**Molln**	**3.89**	**198**	⇑*i*Pn	**Pn**	**03 46 44.1**	**+0.3**
MOA				⇑*i*Sg	**Sg**	**03 47 47.5**	**-0.2**
	comp=Z,15nm,0.5s						
MOA	**Molln**	**3.89**	**198**	Pn	**Pn**	**03 46 44.1**	**+0.3**
MOA				Sg	**Sg**	**03 47 47.5**	**-0.2**
	comp=Z,15nm,0.5s						
STHS	**Stebnicka Huta**	**3.93**	**121**	*e*P	**Pg**	**03 47 00.0**	**+1.9**
STHS				*e*Sg	**Sg**	**03 47 51.8**	**+2.9**
STHS	**Stebnicka Huta**	**3.93**	**121**	*e*	**Pg**	**03 47 00.0**	**+1.9**
STHS	**Stebnicka Huta**	**3.93**	**121**	*e*SG	**Sg**	**03 47 51.8**	**+2.9**
KECS	**Kecovo**	**4.18**	**136**	*e*P	**Pg**	**03 47 02.5**	**-0.4**
KECS	**Kecovo**	**4.18**	**136**	*e*	**Pg**	**03 47 02.5**	**-0.4**
CRVS	**Cervenica-Dubn**	**4.35**	**125**	*e*P	**Pg**	**03 47 04.9**	**-1.3**
CRVS	**Cervenica-Dubn**	**4.35**	**125**	*e*	**Pg**	**03 47 04.9**	**-1.3**

*SKO **13** 03:54:59.6,41°.16N×20°.77E, h23km, M1.7, ML2.1*
*ISCJB **13** 03:55:00.8±0.8,41°.16N±0°.04×20°.80E±0°.05, h27km±12km, Error ellipse: s-maj=7.0km s-min=6.4km az=145.8*
*CSEM **13** 03:55:00.5,41°.18N×20°.81E, h17km, ML2.5/1, After THE THE 13 03:55:00.5,41°.18N×20°.81E, h17km±1km, ML2.5/1, Error ellipse: s-maj=2.7km s-min=0.5km az=37.0*

ISC 13 03:55:00.9±0.8,**41°.16N**±0°.04×**20°.80E**±0°.05,**h26**km±13km, **n11**,σ0**s70**/22,**Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRUS	**Krusevo**	**0.40**	**59**	*i* Pg	**Pb**	**03 55 08.7**	**-0.7**
KRUS				*e*Sg	**Sb**	**03 55 15.4**	**+0.2**
KRUS				*e*Lg		03 55 15.6	
	comp=E,47nm,0.2s						
KRUS				*e*Lg		03 55 15.6	
	comp=N,34nm,0.2s						
BIA	**Bitola**	**0.42**	**109**	P	**Pb**	**03 55 08.7**	**-1.1**
BIA				S	**Sb**	**03 55 15.8**	**-0.1**
BIA	**Bitola**	**0.42**	**109**	*i* Pg	**Pb**	**03 55 08.8**	**-1.0**
BIA				*e*Sg	**Sb**	**03 55 15.7**	**-0.1**
BIA				*e*Lg		03 55 16.8	
	comp=N,38nm,0.2s						
BIA				*e*Lg		03 55 16.9	
	comp=E,34nm,0.2s						
BIA	**Bitola**	**0.42**	**109**	P	**Pb**	**03 55 08.7**	**-1.1**
BIA				S	**Sb**	**03 55 15.8**	**-0.1**
FNA	**Florina**	**0.58**	**131**	P	**Pb**	**03 55 12.0**	**-0.4**
FNA				S	**Sb**	**03 55 20.9**	**+0.7**
FNA	**Florina**	**0.58**	**131**	P	**Pb**	**03 55 12.0**	**-0.4**
FNA				S	**Sb**	**03 55 20.9**	**+0.7**
TIR	**Tirane**	**0.73**	**285**	P	**Pb**	**03 55 13.9**	**-1.0**
TIR				S	**Sb**	**03 55 25.2**	**+0.7**
TIR	**Tirane**	**0.73**	**285**	P	**Pb**	**03 55 13.9**	**-1.0**
TIR				S	**Sb**	**03 55 25.2**	**+0.7**
NEST	**Nestorio**	**0.77**	**166**	P	**Pb**	**03 55 15.3**	**-0.3**
NEST				S	**Sb**	**03 55 26.6**	**+0.9**
NEST	**Nestorio**	**0.77**	**166**	P	**Pb**	**03 55 15.3**	**-0.3**
NEST				S	**Sb**	**03 55 26.6**	**+0.9**
SKO	**Skopje**	**0.94**	**31**	*e*Pg	**Pn**	**03 55 18.4**	**0.0**
SKO				*e*Sg	**Sb**	**03 55 31.6**	**+1.0**
SKO				*e*Lg		03 55 33.5	
	comp=E,28nm,0.4s						
SKO				*e*Lg		03 55 33.8	
	comp=N,43nm,0.3s						

DJA 13 04:13:02,0°.85N×97°.13E, h45km, MLv3.4/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.63**	**45**	P	Pn	04 13 15.2	+0.5
GSI				S	Sn	04 13 26.4	+2.6
TPTI		**2.39**	**1**	P	Pn	04 13 39.2	+0.4
TPTI				S	Sn	04 14 08.2	+1.3
PPI	**Padang Panjang**	**3.52**	**112**	P	Pn	04 13 46.2	-7.9
MYKOM	**Kota Tinggi**	**6.78**	**82**	P	Pn	04 14 38.9	-0.1

IDC 13 04:19:34.2±1.5,**3°.02S**×**140°.70E**, **h0km**, **mb3.6**/3, **mb1 3.7**/3, **mb1mx3.5**/13, **mbtmp3.7**/3, **Error ellipse: s-maj=69.3km s-min=31.2km az=79.0**, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**21.55**	**197**	P	P	04 24 25.1	-0.2
	0.7nm,0.6s,baz=30,slow=10,SNR=9.3						
MKAR	**Makanchi Array**	**71.25**	**322**	P	P	04 30 55.6	+0.3
	0.3nm,0.7s,baz=130,slow=6.2,SNR=2.9						
BVAR	**Borovoye Array**	**80.70**	**325**	P	P	04 31 48.9	-0.3
	0.4nm,0.4s,baz=98,slow=7.6,SNR=2.5						
LPAZ	**La Paz**	**145.65**	**125**	PKPbc	PKPbc	04 39 16.4	+0.4
	1.9nm,0.7s,baz=220,slow=2.3,SNR=8.8						

*SKO **13** 05:11:56.5,41°.14N×20°.74E, h20km, M1.9, ML2.3*
*ISCJB **13** 05:11:57.1±0.7,41°.16N±0°.03×20°.75E±0°.04, h10km, Error ellipse: s-maj=5.0km s-min=4.4km az=38.1*
*CSEM **13** 05:11:57.0,41°.19N×20°.80E, h16km, ML3.0/1, After THE THE 13 05:11:57.0,41°.19N×20°.80E, h16km±5km, ML3.0/1, Error ellipse: s-maj=7.0km s-min=0.5km az=47.0*

ISC 13 05:11:57.7±0.7,**41°.16N**±0°.03×**20°.76E**±0°.04,**h10km**,**n11**, σ0**s71**/22,**Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRUS	**Krusevo**	**0.43**	**60**	*i* Pg	**Pg**	**05 12 05.6**	**-0.5**
KRUS				*i* Sg	**Sg**	**05 12 12.6**	**+0.8**
KRUS				*e*Lg		05 12 12.7	
	comp=E,152nm,0.4s						
KRUS				*e*Lg		05 12 13.0	
	comp=N,70nm,0.2s						
BIA	**Bitola**	**0.45**	**107**	P	**Pg**	**05 12 05.7**	**-0.8**
BIA				S	**Sg**	**05 12 12.2**	**-0.3**
BIA	**Bitola**	**0.45**	**107**	*i* Pg	**Pg**	**05 12 05.7**	**-0.8**
BIA				*e*Sg	**Sg**	**05 12 12.7**	**+0.2**
BIA				*e*Lg		05 12 13.8	
	comp=E,136nm,0.3s						
BIA				*e*Lg		05 12 13.8	
	comp=N,140nm,0.3s						
BIA	**Bitola**	**0.45**	**107**	P	**Pg**	**05 12 05.7**	**-0.8**
BIA				S	**Sg**	**05 12 12.2**	**-0.3**
FNA	**Florina**	**0.60**	**128**	P	**Pg**	**05 12 08.8**	**-0.5**
FNA				S	**Sg**	**05 12 17.9**	**+0.7**
FNA	**Florina**	**0.60**	**128**	P	**Pg**	**05 12 08.8**	**-0.5**
FNA				S	**Sg**	**05 12 17.9**	**+0.7**
TIR	**Tirane**	**0.70**	**286**	P	**Pg**	**05 12 10.2**	**-1.1**
TIR				S	**Sg**	**05 12 21.5**	**+1.1**
TIR	**Tirane**	**0.70**	**286**	P	**Pg**	**05 12 10.2**	**-1.1**
TIR				S	**Sg**	**05 12 21.5**	**+1.1**
NEST	**Nestorio**	**0.77**	**163**	P	**Pg**	**05 12 12.2**	**-0.4**
NEST				S	**Sg**	**05 12 23.5**	**+0.8**
NEST	**Nestorio**	**0.77**	**163**	P	**Pg**	**05 12 12.2**	**-0.4**
NEST				S	**Sg**	**05 12 23.5**	**+0.8**
SKO	**Skopje**	**0.96**	**32**	*e*Pg	**Pg**	**05 12 15.8**	**-0.5**
SKO				*e*Sg	**Sg**	**05 12 29.4**	**+0.5**
SKO				*e*Lg		05 12 30.4	
	comp=E,54nm,0.4s						
SKO				*e*Lg		05 12 30.6	
	comp=N,61nm,0.4s						

*ISCJB **13** 05:13:34.5±0.7,83°.8N±0°.2×11°.5E±°, h10km, mb3.4/8, MS2.8/4, Error ellipse: s-maj=25.4km s-min=14.7km az=148.0*
*IDC **13** 05:13:34.9±0.9,83°.78N×114°.90E, h0km, mb3.4/8, mb1 3.7/8, mb1mx3.5/25, mbtmp3.5/8, MS2.9/4, Ms1 2.9/4, ms1mx2.5/25, Error ellipse: s-maj=31.7km s-min=18.2km az=144.0*
*NEIC **13** 05:13:36.2±0.7,83°.79N×114°.73E, h10km, Error ellipse: s-maj=25.6km s-min=15.2km az=149.0*

ISC 13 05:13:36.4±0.7,**83°.8N**±0°.2×**11°.5E**±°,**h10km**,**n11**,σ1**s18**/8, **mb3.4**/8,**MS2.8**/4,**North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RES	**Resolute Bay**	**21.06**	**21**	LR	LR	05 27 05.7	
	comp=Z,34nm,18.2s,MS2.8,baz=17,slow=38						
ARCES	**ARCESS Array B**	**21.40**	**285**	P	**P**	**05 18 23.0**	**-0.7**
	1.0nm,0.8s,mb3.2,baz=21,slow=12,SNR=2.5						
INK	**Inuvik**	**24.79**	**55**	P	**P**	**05 18 56.4**	**-1.4**
	0.6nm,0.5s,mb3.4,baz=326,slow=5.2,SNR=2.0						
ILAR	**Eielson Array**	**26.96**	**69**	P	**P**	**05 19 16.3**	**-1.1**
	0.2nm,0.7s,mb2.8,baz=352,slow=10.0,SNR=3.4						
ILAR				LR	LR	05 29 41.0	
	comp=Z,28nm,19.4s,MS2.8,baz=157,slow=36						
ZALV	**Zalesovo Beam**	**30.96**	**215**	LR	LR	05 33 09.6	
	comp=Z,23nm,18.8s,MS2.9,baz=49,slow=38						
SONM	**Songino Array**	**36.19**	**190**	P	**P**	**05 20 39.6**	**+1.1**
	0.2nm,0.3s,mb3.5,baz=339,slow=3.7,SNR=2.7						
MKAR	**Makanchi Array**	**38.25**	**217**	P	**P**	**05 20 54.8**	**-1.3**
	0.2nm,0.2s,mb3.4,baz=358,slow=9.2,SNR=4.5						
KSRS	**Korea Array**	**46.66**	**166**	LR	LR	05 41 34.0	
	comp=Z,9.9nm,21.5s,MS2.7,baz=215,slow=36						
NVAR	**Mina Array Bea**	**55.67**	**49**	P	**P**	**05 23 14.0**	**+1.8**
	0.2nm,0.6s,mb3.4,baz=19,slow=6.7,SNR=3.4						
TXAR	**Lajitas Array**	**65.79**	**37**	P	**P**	**05 24 21.9**	**+0.7**
	0.5nm,0.8s,mb3.6,baz=352,slow=4.6,SNR=7.0						
TORD	**Torodi Ar. Bea**	**79.45**	**294**	P	**P**	**05 25 43.5**	**+0.9**
	0.9nm,0.7s,mb3.8,baz=358,slow=5.9,SNR=5.3						

CASC 13 05:16:17.5±0.9,**13°.42N**×**88°.51W**,**h198**km±7km,**MD3.7**,**2C, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLLM	**Bellamira**	**0.27**	**85**	*e*P	**Pn**	**05 16 44.1**	**+0.5**
SNVI	**San Vicente**	**0.37**	**301**	*e*P	**Pn**	**05 16 44.3**	**+0.4**
CAHU	**Cacacuatique**	**0.46**	**40**	*e*P	**Pn**	**05 16 44.5**	**+0.4**
LFRS	**El Faro**	**0.57**	**291**⇑	*e*P	**Pn**	**05 16 45.5**	**+0.9**
LFRS				*e*S	**Sn**	**05 17 06.9**	**+1.4**
CNCH	**Conchagua**	**0.67**	**102**	*e*P	**Pn**	**05 16 45.6**	**+0.5**
RBDL	**Robledal**	**1.33**	**301**	*e*P	**Pn**	**05 16 50.6**	**+1.0**
RBDL				*e*S	**Sn**	**05 17 15.8**	**+1.4**
TGUH	**Tegucigalpa,Un**	**1.36**	**62**⇑	*e*P	**Pn**	**05 16 49.5**	**-0.2**
TGUH				*e*S	**Sn**	**05 17 16.1**	**+1.3**
COPN	**Copaltepe**	**2.24**	**123**	*e*P	**Pn**	**05 16 59.8**	**+1.4**
COPN				*e*S	**Sn**	**05 17 31.1**	**+0.9**

*ISCJB **13** 05:23:41.2±0.3,35°.31S±0°.03×70°.40W±0°.07, h144km±5km, mb4.1/7, Error ellipse: s-maj=10.7km s-min=4.1km az=23.2*
*NEIC **13** 05:23:42.2,35°.20S×70°.64W, h154km, MG4.3(GUC), After GUC.*
*IDC **13** 05:23:42.7±1.4,35°.25S×70°.15W, h139km±13km, mb3.7/7, mb1 3.8/12, mb1mx3.7/17, mbtmp3.7/12, Error ellipse: s-maj=26.8km s-min=9.0km az=97.0*
*GUC **13** 05:23:42.2±0.6,35°.20S×70°.64W, h154km±3km, ML4.3*

ISC 13 05:23:42.2±0.3,**35°.33S**±0°.03×**70°.36W**±0°.07,**h136**km±5km, **n51**,σ0**s97**/85,**mb4.1**/7,**12C-14D**,**Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**1.04**	**266**⇓	*i*P	**Pn**	**05 24 06.0**	**0.0**
TALC				*i* S	**Sn**	**05 24 24.7**	**+0.5**
TALC	**Talca**	**1.04**	**266**⇓	*i*P	**Pn**	**05 24 06.0**	**0.0**

COCH	**Cobquecura**	**2.13**	**247**	*i* P		**Pn**	**05 24 17.5**	**-0.5**
COCH				*i* S		**Sn**	**05 24 44.4**	**-1.2**
COCH				AML		AML	05 24 44.8	
	comp=E,730nm,0.4s							
PEL	**Peldehue**	**2.20**	**353**	⇓*i* P		**Pn**	**05 24 18.8**	**-0.1**
PEL				⇓*i* S		**Sn**	**05 24 46.6**	**-0.5**
PEL				AML		AML	05 24 47.8	
	comp=N,4μm,0.5s							
ROCH	**El Roble**	**2.41**	**347**	⇑*i* P		**Pn**	**05 24 21.2**	**-0.3**
ROCH				*i* S		**Sn**	**05 24 51.0**	**-0.8**
TMU	**Temuco**	**3.84**	**207**	*i* P		**Pn**	**05 24 38.1**	**-1.8**
TMU				*i* S		**Sn**	**05 25 22.7**	**-2.1**
TMU	**Temuco**	**3.84**	**207**	*i* P		**Sn**	**05 24 38.1**	**-1.8**
TMU				*i* S		**Sn**	**05 25 22.7**	**-2.1**
CFAA	**Coronel Fontan**	**4.12**	**26**	P		**Pn**	**05 24 42.9**	**-0.7**
CFAA				S		**Sn**	**05 25 28.8**	**-2.5**
CFAA	**Coronel Fontan**	**4.12**	**26**	P		**Pn**	**05 24 42.9**	**-0.7**
	baz=202,slow=14							
CFAA				S		**Sn**	**05 25 28.8**	**-2.5**
	comp=N,6.4nm,0.3s,baz=316,slow=21,SNR=23							
PLCA	**Paso Flores**	**5.40**	**182**	P		**Pn**	**05 25 00.7**	**+0.1**
	comp=N,1.8nm,0.3s,baz=353,slow=12,SNR=40							
PLCA				S		**Sn**	**05 26 06.1**	**+4.4**
	baz=270,slow=20,SNR=1.8							
LCO	**Las Campanas**	**6.31**	**357**	*e*Pn		**Pn**	**05 25 10.2**	**-2.7**
TRQA	**Tornquist**	**7.26**	**114**	*e*Pn		**Pn**	**05 25 24.7**	**-0.9**
CPUP	**Villa Florida**	**14.33**	**55**	P		**Pn**	**05 26 57.1**	**-1.7**
	comp=N,0.3nm,0.3s,baz=198,slow=11,SNR=3.4							
LPAZ	**La Paz**	**19.07**	**7**	P		**P**	**05 27 55.0**	**+0.9**
	comp=N,0.7nm,0.3s,baz=138,slow=7.2,SNR=29							
USHA	**Ushuaia**	**19.55**	**177**	P		**P**	**05 28 00.5**	**+1.6**
	comp=N,2.7nm,0.3s,baz=344,slow=5.1,SNR=13							
SIV	**San Ignacio**	**20.98**	**26**	P		**P**	**05 28 13.5**	**-1.1**
	comp=N,1.2nm,0.6s,baz=233,slow=8.1,SNR=9.9							
PMSA	**Palmer Station**	**29.72**	**175**	P		**P**	**05 29 36.1**	**+1.1**
	comp=N,51nm,0.9s,mb5.2,baz=312,slow=16,SNR=3.5							
QSPA	**South Pole Qui**	**54.91**	**180**	P		**P**	**05 32 59.1**	**+1.1**
	comp=N,3.1nm,0.8s,mb4.1,baz=168,slow=1.5,SNR=13							
MAW	**Mawson**	**71.51**	**163**	P		**P**	**05 34 47.7**	**+0.1**
	comp=N,1.4nm,0.8s,mb3.8,baz=212,slow=2.9,SNR=6.6							
TXAR	**Lajitas Array**	**71.57**	**330**	P		**P**	**05 34 48.8**	**+0.4**
	comp=N,0.8nm,0.5s,mb3.7,baz=151,slow=8.8,SNR=16							
SUR	**Sutherland**	**72.98**	**118**	P		**P**	**05 34 57.6**	**+0.6**
	comp=N,2.6nm,0.6s,mb4.1,baz=254,slow=11,SNR=2.9							
BOSA	**Boshof**	**78.23**	**117**	P		**P**	**05 35 26.1**	**-0.8**
	comp=N,3.0nm,0.7s,mb4.0,baz=254,slow=2.9,SNR=5.6							
TORD	**Torodi Ar. Bea**	**83.38**	**69**	pP		pP	05 36 28.4	-0.2
	comp=N,1.1nm,1.0s,baz=241,slow=3.0,SNR=4.3							
NVAR	**Mina Array Bea**	**85.77**	**324**	P		**P**	**05 36 06.5**	**+0.7**
	comp=N,0.8nm,0.8s,mb3.5,baz=143,slow=4.7,SNR=4.7							
ZALV	**Zalesovo Beam**	**154.56**	**35**	PKPbc		PKPbc	05 43 25.5	-0.6
	comp=N,0.5nm,0.4s,baz=42,slow=2.3,SNR=3.4							

ISCJB ***13*** *06:05:27.7±0.7, 33˚.14N±0˚.03×34˚.44E±0˚.04, h21km±7km, Error ellipse: s-maj=6.0km s-min=5.0km az=35.5*
CSEM ***13*** *06:05:28.0±0.1, 33˚.14N×34˚.51E, h10km, MD3.2, Error ellipse: s-maj=3.6km s-min=2.2km az=156.0*
GII ***13*** *06:05:29.6±0.7, 33˚.06N×34˚.55E, h10km, Md3.2/12, Mm2.6/6*
NEIC ***13*** *06:05:29.7, 33˚.05N×34˚.55E, h10km, MD3.2(GII), After GII.*
GRAL ***13*** *06:05:32.1±0.3, 33˚.23N×34˚.67E, h23km±4km, MD3.4*
HLW ***13*** *06:05:32.0, 33˚.03N×34˚.44E, h35km±41km, Ml3.0*

ISC 13 06:05:28.5±0.7, 33°.13N±0°.03×34°.53E±0°.04, h15km±5km, n102, σ0s77/132, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNTI	**Hanita**	**0.54**	**95**	Pg	**Pg**	**06 05 40.3**	**+1.2**
HNTI				Sg	**Sg**	**06 05 47.9**	**+1.5**
HNTI	**Hanita**	**0.54**	**95**	Pg	**Pg**	**06 05 40.3**	**+1.2**
HNTI				Sg	**Sg**	**06 05 47.9**	**+1.5**
HNTI	**Hanita**	**0.54**	**95**	Pg	**Pg**	**06 05 40.3**	**+1.2**
HNTI				Sg	**Sg**	**06 05 47.9**	**+1.5**
OFRI	**'Ofer**	**0.64**	**143**	Pg	**Pg**	**06 05 41.8**	**+0.9**
OFRI	**'Ofer**	**0.64**	**143**	Pg	**Pg**	**06 05 41.8**	**+0.9**
OFRI	**'Ofer**	**0.64**	**143**	Pg	**Pg**	**06 05 41.6**	**+0.7**
BLGI	**Bet Lehem HaGe**	**0.68**	**126**	Pg	**Pg**	**06 05 42.6**	**+0.8**
MMC7	**Mount Meron ar**	**0.73**	**98**	Pg	**Pg**	**06 05 43.4**	**+0.7**
MMA0	**Mount Meron ar**	**0.74**	**99**	Pg	**Pg**	**06 05 43.4**	**+0.5**
MMA0				Sg	**Sg**	**06 05 53.8**	**+1.1**
MATL	**Matarih**	**0.76**	**62**	*e*P	**Pg**	**06 05 43.2**	**0.0**
MATL	**Matarih**	**0.76**	**62**	*e*P	**Pg**	**06 05 43.2**	**0.0**
KSDI	**Kefar Szold**	**0.95**	**86**	Pg	**Pg**	**06 05 46.8**	**0.0**
KSDI	**Kefar Szold**	**0.95**	**86**	Pg	**Pg**	**06 05 46.8**	**0.0**
KSDI	**Kefar Szold**	**0.95**	**86**	Pg	**Pg**	**06 05 46.8**	**0.0**
KSDI				Sg	**Sg**	**06 06 00.1**	**+0.9**
SLTI	**Sal'it**	**0.99**	**154**	Pg	**Pg**	**06 05 46.6**	**-1.0**
SLTI				Sg	**Sg**	**06 05 59.1**	**-1.4**
SLTI	**Sal'it**	**0.99**	**154**	Pg	**Pg**	**06 05 46.6**	**-1.0**
SLTI				Sg	**Sg**	**06 05 59.1**	**-1.4**
SLTI	**Sal'it**	**0.99**	**154**	Pg	**Pg**	**06 05 46.6**	**-1.0**
SLTI				Sg	**Sg**	**06 05 59.1**	**-1.4**
HRI	**Mount Hermon**	**1.02**	**82**	Pg	**Pg**	**06 05 47.9**	**-0.2**
HRI	**Mount Hermon**	**1.02**	**82**	Pg	**Pg**	**06 05 47.9**	**-0.2**
HRI	**Mount Hermon**	**1.02**	**82**	Pg	**Pg**	**06 05 47.9**	**-0.2**
MMLI	**Mount Malkishu**	**1.02**	**133**	Pg	**Pg**	**06 05 47.7**	**-0.5**
MMLI				Sg	**Sg**	**06 06 00.9**	**-0.6**
MMLI	**Mount Malkishu**	**1.02**	**133**	Pg	**Pg**	**06 05 47.7**	**-0.5**
MMLI				Sg	**Sg**	**06 06 00.9**	**-0.6**
MMLI	**Mount Malkishu**	**1.02**	**133**	Pg	**Pg**	**06 05 47.4**	**-0.8**
MMLI				Sg	**Sg**	**06 06 00.9**	**-0.6**
KSHT	**Keshet**	**1.08**	**98**	Pg	**Pg**	**06 05 49.4**	**0.0**
KSHT	**Keshet**	**1.08**	**98**	Pg	**Pg**	**06 05 49.4**	**0.0**
KSHT	**Keshet**	**1.08**	**98**	Pg	**Pg**	**06 05 49.3**	**-0.1**
RCY	**Rachaya**	**1.13**	**72**	*e*P	**Pg**	**06 05 49.5**	**-0.8**
RCY				*e*S	**Sg**	**06 06 02.8**	**-2.4**
RCY	**Rachaya**	**1.13**	**72**	*e*P	**Pg**	**06 05 49.5**	**-0.8**
RCY				*e*S	**Sg**	**06 06 02.8**	**-2.3**
BHL	**Bhannes**	**1.21**	**50**	*e*P	**Pn**	**06 05 50.5**	**-0.3**
BHL				*e*S	**Sb**	**06 06 04.1**	**-2.4**
BHL	**Bhannes**	**1.21**	**50**	*e*P	**Pn**	**06 05 50.5**	**-0.3**
BHL				*e*S	**Sb**	**06 06 04.1**	**-2.4**
HMDT	**Nahal Hemdat**	**1.21**	**136**	Pg	**Pg**	**06 05 50.7**	**-1.1**
HMDT				Sg	**Sg**	**06 06 06.4**	**-1.3**
HMDT	**Nahal Hemdat**	**1.21**	**136**	Pg	**Pg**	**06 05 50.7**	**-1.1**
HMDT				Sg	**Sg**	**06 06 06.4**	**-1.3**
HMDT	**Nahal Hemdat**	**1.21**	**136**	Pg	**Pg**	**06 05 50.7**	**-1.1**
HMDT				Sg	**Sg**	**06 06 06.4**	**-1.3**
HWQ	**Hawqa**	**1.64**	**46**	*e*P	**Pn**	**06 05 56.7**	**0.0**
HWQ	**Hawqa**	**1.64**	**46**	*e*P	**Pn**	**06 05 56.7**	**0.0**
DSI	**Dead Sea**	**1.71**	**155**	Pn	**Pn**	**06 05 58.0**	**+0.3**
DSI				S	**Sn**	**06 06 19.4**	**+0.1**
DSI	**Dead Sea**	**1.71**	**155**	Pn	**Pn**	**06 05 58.0**	**+0.3**
DSI				S	**Sn**	**06 06 19.4**	**+0.1**
DSI	**Dead Sea**	**1.71**	**155**	Pn	**Pn**	**06 05 57.9**	**+0.2**
DSI				Sn	**Sn**	**06 06 19.4**	**+0.1**
YTIR	**Yattir**	**1.83**	**164**	Pn	**Pn**	**06 06 00.3**	**+1.0**
YTIR	**Yattir**	**1.83**	**164**	Pn	**Pn**	**06 06 00.3**	**+1.0**
YTIR	**Yattir**	**1.83**	**164**	Pn	**Pn**	**06 06 00.2**	**+0.9**
MZDA	**Masada**	**1.95**	**159**	Pn	**Pn**	**06 06 01.4**	**+0.5**
MZDA				S	**Sn**	**06 06 25.0**	**-0.1**
MZDA	**Masada**	**1.95**	**159**	Pn	**Pn**	**06 06 01.4**	**+0.5**
MZDA				S	**Sn**	**06 06 25.0**	**-0.1**
MZDA	**Masada**	**1.95**	**159**	Pn	**Pn**	**06 06 01.4**	**+0.5**
MZDA				Sn	**Sn**	**06 06 25.0**	**-0.1**
RTMI	**Retamim**	**2.08**	**176**	Pn	**Pn**	**06 06 03.2**	**+0.5**
RTMI	**Retamim**	**2.08**	**176**	Pn	**Pn**	**06 06 03.2**	**+0.5**
RTMI	**Retamim**	**2.08**	**176**	Pn	**Pn**	**06 06 03.2**	**+0.5**
KZIT	**Kziot**	**2.22**	**183**	Pn	**Pn**	**06 06 05.3**	**+0.6**
KZIT	**Kziot**	**2.22**	**183**	Pn	**Pn**	**06 06 05.3**	**+0.6**
KZIT	**Kziot**	**2.22**	**183**	Pn	**Pn**	**06 06 05.2**	**+0.5**
KZIT				Sn	**Sn**	**06 06 31.5**	**-0.4**
ZFRI	**Zfri**	**2.63**	**168**	Pn	**Pn**	**06 06 10.6**	**+0.3**
ZFRI	**Zfri**	**2.63**	**168**	Pn	**Pn**	**06 06 10.6**	**+0.3**
ZFRI	**Zfri**	**2.63**	**168**	Pn	**Pn**	**06 06 10.6**	**+0.3**
AMAG	**Maghara**	**2.73**	**205**	P	**Pn**	**06 06 11.0**	**-0.7**
	baz=205						
AMAG	**Maghara**	**2.73**	**205**	P	**Pn**	**06 06 11.0**	**-0.6**
PRNI	**Paran**	**2.80**	**172**	Pn	**Pn**	**06 06 13.3**	**+0.6**
PRNI	**Paran**	**2.80**	**172**	Pn	**Pn**	**06 06 13.3**	**+0.6**
PRNI	**Paran**	**2.80**	**172**	Pn	**Pn**	**06 06 13.3**	**+0.6**
KRMI	**Paran Flat**	**3.01**	**177**	Pn	**Pn**	**06 06 15.9**	**+0.4**
KRMI	**Paran Flat**	**3.01**	**177**	Pn	**Pn**	**06 06 15.9**	**+0.4**
KRMI	**Paran Flat**	**3.01**	**177**	Pn	**Pn**	**06 06 15.9**	**+0.4**
MBRI	**Mt Berech**	**3.34**	**174**	Pn	**Pn**	**06 06 20.6**	**+0.5**
MBRI				Sn	**Sn**	**06 06 59.8**	**+0.3**
EIL	**Elat**	**3.47**	**174**	Pn	**Pn**	**06 06 21.8**	**-0.1**
EIL	**Elat**	**3.47**	**174**	Pn	**Pn**	**06 06 21.8**	**-0.1**
EIL	**Elat**	**3.47**	**174**	Pn	**Pn**	**06 06 22.4**	**+0.5**
SUZ		**3.59**	**204**	P	**Pn**	**06 06 23.7**	**+0.2**
	baz=204						
SUZ		**3.59**	**204**	P	**Pn**	**06 06 23.7**	**+0.2**
HHAG	**Hagoal**	**3.79**	**214**	P	**Pn**	**06 06 26.3**	**+0.1**
	baz=214						
HHAG				S	**Sn**	**06 07 07.5**	**-3.1**
	baz=214						
HHAG	**Hagoal**	**3.79**	**214**	P	**Pn**	**06 06 26.3**	**0.0**
HHAG				S	**Sn**	**06 07 07.5**	**-3.0**
HBST	**Basata**	**3.91**	**177**	P	**Pn**	**06 06 28.4**	**+0.5**
	baz=176						
HBST	**Basata**	**3.91**	**177**	P	**Pn**	**06 06 28.3**	**+0.4**
KOT	**Kottamia**	**3.94**	**217**	P	**Pn**	**06 06 28.4**	**+0.1**
	baz=217						
KOT				AMP		06 07 00.0	
	comp=N,30μm,0.5s,logA/T=4.8,baz=217						
KOT				S	**Sn**	**06 07 10.3**	**-4.0**
	baz=217						
KOT	**Kottamia**	**3.94**	**217**	P	**Pn**	**06 06 28.4**	**+0.1**
KOT				S	**Sn**	**06 07 10.3**	**-4.0**
ZNM		**4.00**	**201**	P	**Pn**	**06 06 29.6**	**+0.4**
	baz=201						
ZNM		**4.00**	**201**	P	**Pn**	**06 06 29.6**	**+0.4**
ZAF		**4.20**	**204**	P	**Pn**	**06 06 32.3**	**+0.4**
	baz=204						
ZAF		**4.20**	**204**	P	**Pn**	**06 06 32.3**	**+0.4**
GLL	**Jalalah**	**4.29**	**215**	P	**Pn**	**06 06 32.8**	**-0.4**
	baz=215						
GLL	**Jalalah**	**4.29**	**215**	P	**Pn**	**06 06 32.8**	**-0.3**
HSAF	**As Saff**	**4.33**	**217**	P	**Pn**	**06 06 34.2**	**+0.5**
	baz=217						
HSAF	**As Saff**	**4.33**	**217**	P	**Pn**	**06 06 34.2**	**+0.5**
HDHB	**Dhahab**	**4.40**	**179**	P	**Pn**	**06 06 34.6**	**0.0**
	baz=177						
HDHB	**Dhahab**	**4.40**	**179**	P	**Pn**	**06 06 34.6**	**0.0**
AYT	**Al 'Ayyat**	**4.47**	**221**	P	**Pn**	**06 06 36.0**	**+0.3**
	baz=222						
AYT	**Al 'Ayyat**	**4.47**	**221**	P	**Pn**	**06 06 35.9**	**+0.2**
FYM	**Al Fayyum**	**4.54**	**222**	P	**Pn**	**06 06 37.0**	**+0.4**
	baz=222						
FYM	**Al Fayyum**	**4.54**	**222**	P	**Pn**	**06 06 37.0**	**+0.4**
HMYD	**Mayadein**	**4.61**	**225**	P	**Pn**	**06 06 36.5**	**-1.0**
	baz=225						
HMYD	**Mayadein**	**4.61**	**225**	P	**Pn**	**06 06 36.5**	**-1.0**
HKAT	**Jabal Katrina**	**4.62**	**186**	P	**Pn**	**06 06 38.0**	**+0.3**
	baz=186						
HKAT	**Jabal Katrina**	**4.62**	**186**	P	**Pn**	**06 06 38.0**	**+0.3**
HBRG	**Burj al 'Arab**	**4.74**	**239**	P	**Pn**	**06 06 39.7**	**+0.4**
	baz=240						
TR2		**4.78**	**189**	P	**Pn**	**06 06 39.9**	**-0.1**
	baz=188						
TR2		**4.78**	**189**	P	**Pn**	**06 06 39.9**	**0.0**
HNAT	**Natroun**	**4.83**	**225**	P	**Pn**	**06 06 40.6**	**0.0**
	baz=225						
HNAT	**Natroun**	**4.83**	**225**	P	**Pn**	**06 06 40.6**	**0.0**
GRB	**Gharib**	**5.07**	**198**	P	**Pn**	**06 06 43.0**	**-0.9**
	baz=198						
GRB	**Gharib**	**5.07**	**198**	P	**Pn**	**06 06 43.0**	**-0.9**
TR1		**5.13**	**186**	P	**Pn**	**06 06 44.5**	**-0.3**
	baz=185						
TR1		**5.13**	**186**	P	**Pn**	**06 06 44.5**	**-0.2**
HMAT	**Matruh**	**6.63**	**254**	P	**Pn**	**06 07 05.3**	**0.0**
	baz=255						
HMAT	**Matruh**	**6.63**	**254**	P	**Pn**	**06 07 05.3**	**0.0**

IDC 13 06:11:54.2±1.1, 83°.76N×113°.35E, h0km, mb3.3/5, mb1 3.6/5, mb1mx3.4/24, mbtmp3.4/5, Error ellipse: s-maj=37.8km s-min=23.2km az=136.0, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARCES	**ARCESS Array B**	**21.26**	**284**	P	P	06 16 42.9	+1.5
	1.4nm,0.7s,baz=11,slow=11,SNR=2.1						
ILAR	**Eielson Array**	**27.11**	**68**	P	P	06 17 40.0	+1.9
	0.3nm,1.0s,baz=344,slow=9.6,SNR=4.6						
SONM	**Songino Array**	**36.13**	**188**	P	P	06 18 57.8	+0.5
	0.4nm,0.7s,baz=352,slow=2.0,SNR=4.4						
MKAR	**Makanchi Array**	**38.13**	**215**	P	P	06 19 13.4	-0.9
	0.4nm,0.8s,baz=1.1,slow=6.1,SNR=4.2						
TXAR	**Lajitas Array**	**65.91**	**35**	P	P	06 22 40.1	-1.2
	0.2nm,0.5s,baz=19,slow=3.8,SNR=7.1						

ISCJB ***13*** *06:12:43.0±0.7, 83˚.7N±0˚.2×11˚.4E±˚, h10km, mb3.4/8, MS2.9/5, Error ellipse: s-maj=24.1km s-min=15.3km az=151.2*
IDC ***13*** *06:12:43.2±0.8, 83˚.69N×113˚.53E, h0km, mb3.4/7, mb1 3.7/7, mb1mx3.5/23, mbtmp3.5/7, MS3.1/5, Ms1 3.1/5, ms1mx2.8/26, Error ellipse: s-maj=30.3km s-min=18.1km az=145.0*
NEIC ***13*** *06:12:44.7±0.6, 83˚.66N×113˚.60E, h10km, Error ellipse: s-maj=20.4km s-min=13.1km az=152.0*

ISC 13 06:12:44.9±0.7, 83°.7N±0°.2×11°.4E±˚, h10km, n12, σ0s63/9, mb3.4/8, MS2.9/5, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RES	**Resolute Bay**	**21.23**	**20**	LR	LR	06 24 32.1	
	comp=Z,46nm,20.2s,MS2.9,baz=301,slow=33						
ARCES	**ARCESS Array B**	**21.31**	**285**	P	**P**	**06 17 32.0**	**+0.7**
	2.2nm,0.9s,mb3.5,baz=16,slow=13,SNR=2.8						
INK	**Inuvik**	**24.98**	**54**	LR	LR	06 26 55.2	
	comp=Z,35nm,18.6s,MS2.9,baz=108,slow=34						
ILAR	**Eielson Array**	**27.12**	**68**	P	**P**	**06 18 28.2**	**+0.8**
	0.8nm,1.0s,mb3.2,baz=339,slow=9.8,SNR=4.0						
ILAR				LR	LR	06 29 42.3	
	comp=Z,22nm,20.6s,MS2.7,baz=22,slow=38						
ZALV	**Zalesovo Beam**	**30.77**	**214**	LR	LR	06 32 18.6	
	comp=Z,34nm,19.3s,MS3.0,baz=44,slow=38						
SONM	**Songino Array**	**36.03**	**188**	P	**P**	**06 19 45.8**	**+0.1**
	0.2nm,0.3s,mb3.5,baz=350,slow=7.3,SNR=3.1						
MKAR	**Makanchi Array**	**38.06**	**215**	P	**P**	**06 20 03.0**	**0.0**
MKAR				LR	LR	06 36 51.1	
MKAR	**Makanchi Array**	**38.06**	**215**	P	**P**	**06 20 03.0**	**0.0**
	0.3nm,0.6s,mb3.2,baz=0.3,slow=7.3,SNR=2.7						
MKAR				LR	LR	06 36 51.1	
	comp=Z,38nm,19.7s,MS3.2,baz=173,slow=38						
BRTR	**Keskin Array B**	**49.64**	**265**	P	**P**	**06 21 35.1**	**-1.0**
	0.5nm,0.6s,mb3.7,baz=344,slow=8.8,SNR=2.8						
NVAR	**Mina Array Bea**	**55.86**	**48**	P	**P**	**06 22 21.8**	**-0.2**
	0.2nm,0.5s,mb3.4,baz=349,slow=7.4,SNR=2.7						
TXAR	**Lajitas Array**	**65.98**	**35**	P	**P**	**06 23 29.9**	**-0.9**
	0.8nm,0.8s,mb3.8,baz=359,slow=5.3,SNR=7.3						
TORD	**Torodi Ar. Bea**	**79.38**	**293**	P	**P**	**06 24 51.1**	**+0.4**
	0.3nm,0.8s,mb3.3,baz=354,slow=6.2,SNR=3.8						

IDC 13 06:21:21.9±1.4, 3°.30S×135°.86E, h0km, mb3.6/3, mb1 3.9/5, mb1mx3.6/15, mbtmp3.7/5, MS2.7/1, Ms1 2.7/1, ms1mx2.2/17, Error ellipse: s-maj=53.8km s-min=26.8km az=87.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**17.80**	**214**	P	Pn	06 25 29.6	-1.6
	0.2nm,0.3s,baz=29,slow=13,SNR=8.5						
FITZ				S	Sn	06 28 29.7	-21
	0.5nm,0.3s,baz=204,slow=18,SNR=8.5						
CTA	**Charters Tower**	**19.52**	**150**	P	Pn	06 25 51.9	-0.4
	0.1nm,0.3s,baz=310,slow=13,SNR=2.0						
ASAR	**Alice Springs**	**20.33**	**185**	P	P	06 26 00.3	+0.4
	3.0nm,0.7s,baz=11,slow=11,SNR=23						
ASAR				S	S	06 29 40.2	-8.6
	0.5nm,0.7s,baz=18,slow=24,SNR=4.4						
MJAR	**Matsushiro Arr**	**39.70**	**3**	LR	LR	06 42 41.7	
	comp=Z,11nm,19.6s,baz=265,slow=32						
MKAR	**Makanchi Array**	**68.55**	**324**	P	P	06 32 27.3	+0.9
	0.2nm,0.5s,baz=112,slow=6.4,SNR=3.3						
ILAR	**Eielson Array**	**87.55**	**25**	P	P	06 34 10.7	-0.8
	0.2nm,0.4s,baz=265,slow=4.4,SNR=4.6						

IDC ***13*** *07:13:33.4±0.6, 1˚.02N×125˚.31E, h0km, mb4.2/14, mb1 4.2/15, mb1mx4.2/20, mbtmp4.1/15, ML3.8/1, MS3.5/1, Ms1 3.5/1, ms1mx2.4/28, Error ellipse: s-maj=35.3km s-min=13.7km az=79.0*
NEIC ***13*** *07:13:34.8±0.3, 1˚.04N×125˚.31E, h10km, mb4.5/3, Error ellipse: s-maj=11.2km s-min=6.0km az=66.0*
NEIC Felt [III] at Bitung, Indonesia.
ISCJB ***13*** *07:13:43.1±0.4, 0˚.94N±0˚.04×125˚.47E±0˚.04, h93km±4km, mb4.0/16, Error ellipse: s-maj=7.1km s-min=6.1km az=33.6*
DJA ***13*** *07:13:44, 0˚.81N×125˚.52E, h24km, MLv5.0/11*

ISC 13 07:13:44.1±0.4, 0°.95N±0°.04×125°.49E±0°.04, h88km±4km, n46, σ1s04/44, mb4.0/16, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**0.81**	**307**	P	**Pn**	**07 14 00.4**	**-1.2**
MNI				S	**Sn**	**07 14 13.2**	**-1.4**
TNTI	**Ternate**	**1.89**	**95**	P	**Pn**	**07 14 15.8**	**+1.1**
TNTI				S	**Sn**	**07 14 37.8**	**-0.3**
LBMI	**Labuha**	**2.56**	**128**	P	**Pn**	**07 14 23.6**	**0.0**
SGSI	**Sangihe**	**2.72**	**1**	P	**Pn**	**07 14 27.5**	**+1.7**
LUWI	**Luwuk**	**3.36**	**234**	P	**Pn**	**07 14 35.3**	**+0.8**
LUWI				S	**Sn**	**07 15 14.4**	**+1.0**
MRSI	**Marisa**	**3.58**	**262**	P	**Pn**	**07 14 36.7**	**-0.7**
NLAI	**Namlea**	**4.46**	**159**	P	**Pn**	**07 14 48.1**	**-1.3**
AAI	**Ambon**	**5.34**	**150**	P	**Pn**	**07 15 01.5**	**+0.1**
	1.6nm7μm267nm,0.6s						
MSAI	**Masohi**	**5.48**	**141**	P	**Pn**	**07 15 05.1**	**+1.8**
	0.8nm112nm,0.7s						
KDI	**Kendari**	**5.66**	**210**	P	**Pn**	**07 15 06.6**	**+0.9**
	0.1nm45nm,0.8s						
PCI	**Palu**	**5.95**	**252**	P	**Pn**	**07 15 09.6**	**0.0**
	0.4nm1μm91nm,0.8s						
TTSI	**Tana Toraja**	**6.92**	**235**	P	**Pn**	**07 15 22.3**	**-0.6**
MYLDM	**Lahad Datu**	**8.14**	**301**	P	**Pn**	**07 15 43.2**	**+3.6**
	2μm204nm,0.9s						
BKSI	**Bulukumba**	**8.22**	**221**	P	**Pn**	**07 15 41.8**	**+1.1**
	810nm27nm,0.8s						
KKM	**Kota Kinabalu**	**10.55**	**299**	P	**Pn**	**07 16 16.1**	**+3.7**
	1μm24nm,1.1s						
KSM	**Kuching**	**15.19**	**272**	*e*Pn	**Pn**	**07 17 07.0**	**-6.9**
	12nm,0.6s						
KSM	**Kuching**	**15.19**	**272**	P	**Pn**	**07 17 16.0**	**+2.1**
	21nm,0.7s						
KAKA	**Kakadu**	**15.22**	**153**	*e*Pn	**Pn**	**07 17 12.2**	**-2.1**
	61nm,0.8s						
KNA	**Kununurra**	**16.91**	**169**	P	**Pn**	**07 17 34.4**	**-0.9**
FITZ	**Fitzroy Crossi**	**18.93**	**180**	P	**Pn**	**07 17 57.6**	**-2.2**
	0.2nm,0.3s,baz=2.9,slow=3.4,SNR=5.6						
COEN	**Coen**	**22.94**	**131**	*e*P	**P**	**07 18 40.9**	**-0.3**
ASAR	**Alice Springs**	**25.80**	**162**	P	**P**	**07 19 07.7**	**+0.6**
	5.4nm,0.7s,mb4.1,baz=354,slow=17,SNR=38						
ASAR				PcP	PcP	07 22 36.1	+1.4
	1.2nm,0.5s,baz=349,slow=2.3,SNR=10						
PSI	**Prapat**	**26.61**	**274**	LR	LR	07 31 16.0	
	comp=Z,95nm,18.2s,baz=15,slow=40						
NWAO	**Narrogin (SRO)**	**34.59**	**192**	P	**P**	**07 20 24.1**	**-0.5**
	4.4nm,0.9s,mb4.3,baz=0.0,slow=12,SNR=2.6						
STKA	**Stephens Creek**	**36.04**	**156**	P	**P**	**07 20 38.0**	**+0.9**
	1.9nm,0.5s,mb4.3,baz=333,slow=10,SNR=8.3						
KSRS	**Korea Array**	**36.39**	**3**	P	**P**	**07 20 41.5**	**+1.4**
	1.1nm,0.6s,mb4.0,baz=188,slow=11,SNR=7.2						
MJAR	**Matsushiro Arr**	**37.32**	**17**	P	**P**	**07 20 48.2**	**+0.3**
	1.6nm,0.7s,mb4.1,baz=196,slow=8.9,SNR=6.5						
SONM	**Songino Array**	**49.55**	**343**	P	**P**	**07 22 25.9**	**-0.1**
	0.4nm,0.5s,mb3.6,baz=140,slow=7.0,SNR=2.5						
SONM				PcP	PcP	07 23 47.9	+1.4
	0.4nm,0.5s,baz=145,slow=5.3,SNR=2.5						
MK31	**Makanchi Array**	**59.15**	**327**	*e*P	**P**	**07 23 34.9**	**-0.8**
MKAR	**Makanchi

HHC				S	Sn	07 48 51.4	-3.4	
HHC				SS		07 49 06.4		
HHC				pmax	pmax			
	comp=Z,12nm,0.8s							
HHC				pmax	pmax			
	comp=Z,66nm,4.1s							
HHC				LR	LR			
	comp=N,340nm,6.2s							
HHC				LR	LR			
	comp=E,300nm,6.2s							
HHC				LR	LR			
	comp=Z,250nm,7.4s							
CMAR	**Chiang Mai Arr**	**13.51**	**199**	Pn	**Pn**	**07 47 13.7**	**-0.8**	
	baz=9.9,slow=11,SNR=3.7							
CMAR				LR	LR	07 52 43.7		
	comp=Z,99nm,18.3s,baz=340,slow=39							
TAPN	**Taplejung**	**14.32**	**258**	*eP*	**Pn**	**07 47 25.3**	**-0.1**	
ODAN	**Odare**	**14.76**	**256**	*eP*	**Pn**	**07 47 28.4**	**-3.0**	
	comp=Z,25nm,0.8s							
GUN	**Gumba**	**15.68**	**262**	*eP*	**Pn**	**07 47 46.4**	**+2.7**	
	comp=Z,54nm,0.8s							
PKI	**Pulchoki**	**16.18**	**261**	*eP*	**Pn**	**07 47 50.0**	**-0.1**	
	comp=Z,26nm,0.6s							
PKIN	**Phulchoki**	**16.19**	**261**	*eP*	**Pn**	**07 47 49.6**	**-0.6**	
	comp=Z,43nm,0.6s							
DMN	**Daman**	**16.42**	**261**	*eP*	**Pn**	**07 47 52.4**	**-0.8**	
	comp=Z,48nm,0.7s							
SONM	**Songino Array**	**16.57**	**7**	Pn	**Pn**	**07 47 55.7**	**+0.7**	
	comp=Z,0.3nm,0.3s,baz=191,slow=13,SNR=3.8							
SONM				LR	LR	07 55 13.3		
	comp=Z,126nm,21.5s,baz=358,slow=40							
GKN	**Gorkha**	**16.71**	**263**	*eP*	**Pn**	**07 47 57.9**	**+1.1**	
	comp=Z,96nm,0.8s							
KOLN	**Koldanda**	**17.65**	**263**	*eP*	**Pn**	**07 48 07.1**	**-1.6**	
	comp=Z,20nm,0.7s							
KSRS	**Korea Array**	**21.03**	**67**	P	**P**	**07 48 47.5**	**+0.9**	
	comp=Z,7.4nm,0.8s,mb4.1,baz=261,slow=11,SNR=21							
KSRS				LR	LR	07 56 56.3		
	comp=Z,38nm,18.4s,MS2.8,baz=255,slow=37							
MK31	**Makanchi Array**	**22.41**	**319**	*eP*	**P**	**07 49 01.7**	**+0.6**	
MKAR	**Makanchi Array**	**22.41**	**319**	P	**P**	**07 49 01.7**	**+0.5**	
MKAR				LR	LR	07 58 19.7		
MKAR	**Makanchi Array**	**22.41**	**319**	P	**P**	**07 49 01.7**	**+0.5**	
	comp=Z,3.9nm,0.9s,mb3.9,baz=118,slow=12,SNR=13							
MKAR				LR	LR	07 58 19.7		
	comp=Z,76nm,18.1s,MS3.2,baz=265,slow=38							
UCH	**Uchtor**	**25.47**	**303**	*eP*	**P**	**07 49 31.9**	**+1.2**	
	comp=Z,4.1nm,1.0s,mb3.9							
AAK	**Ala-Archa**	**25.59**	**304**	P	**P**	**07 49 35.3**	**+3.4**	
	comp=Z,1.6nm,0.3s,mb4.0,baz=203,slow=13,SNR=3.5							
AAK				LR	LR	08 00 16.2		
	comp=Z,66nm,21.4s,MS3.1,baz=89,slow=38							
AML	**Almayashu**	**26.03**	**303**	*eP*	**P**	**07 49 35.6**	**-0.2**	
	comp=Z,4.2nm,0.8s,mb4.0							
EKS2	**Erkin-Say**	**26.11**	**304**	*eP*	**P**	**07 49 34.9**	**-1.7**	
ZALV	**Zalesovo Beam**	**26.23**	**335**	P	**P**	**07 49 38.2**	**+0.7**	
ZALV				LR	LR	08 00 27.9		
ZALV	**Zalesovo Beam**	**26.23**	**335**	P	**P**	**07 49 38.2**	**+0.7**	
	comp=Z,3.9nm,0.7s,mb4.0,baz=134,slow=8.5,SNR=13							
ZALV				LR	LR	08 00 27.9		
	comp=Z,45nm,19.2s,MS3.0,baz=94,slow=38							
KURK	**Kurchatov**	**26.69**	**324**	P	**P**	**07 49 42.0**	**+0.2**	
	comp=Z,2.5nm,0.7s,mb3.8,baz=129,slow=9.2,SNR=9.9							
KURK				LR	LR	08 01 16.3		
	comp=Z,47nm,21.1s,MS3.0,baz=210,slow=39							
PSI	**Prapat**	**28.76**	**189**	LR	LR	08 01 21.6		
	comp=Z,82nm,18.2s,MS3.4,baz=200,slow=36							
BVAR	**Borovoye Array**	**32.23**	**322**	P	**P**	**07 50 30.0**	**-0.8**	
	comp=Z,0.8nm,0.7s,mb3.6,baz=110,slow=11,SNR=4.3							
BVAR				PcP	PcP	07 53 18.8	-0.3	
	comp=Z,1.8nm,0.8s,baz=132,slow=4.4,SNR=6.9							
AKTK	**Aktyubinsk**	**38.54**	**313**	P	**P**	**07 51 27.9**	**+2.8**	
AKTO	**Aktyubinsk**	**38.54**	**313**	P	**P**	**07 51 27.9**	**+2.8**	
	comp=Z,0.5nm,0.3s,mb3.8,baz=117,slow=9.0,SNR=3.7							
BRTR	**Keskin Array B**	**56.13**	**299**	P	**P**	**07 53 41.6**	**-0.6**	
BRTR	**Keskin Array B**	**56.13**	**299**	P	**P**	**07 53 41.7**	**-0.6**	
	comp=Z,0.5nm,0.5s,mb3.8,baz=110,slow=13,SNR=3.7							
ARCES	**ARCESS Array B**	**56.77**	**336**	P	**P**	**07 53 45.8**	**-0.6**	
	comp=Z,2.2nm,0.9s,mb4.2,baz=84,slow=8.3,SNR=3.5							
ARCES				PcP	PcP	07 54 41.3	-0.8	
	comp=Z,1.1nm,0.8s,baz=98,slow=6.6,SNR=2.8							
AKASG	**Malin Array Be**	**56.79**	**313**	P	**P**	**07 53 46.3**	**-0.5**	
	comp=Z,0.4nm,0.3s,mb3.9,baz=71,slow=7.3,SNR=2.7							
FINES	**FINESS Array B**	**57.02**	**326**	P	**P**	**07 53 47.8**	**-0.5**	
	comp=Z,3.6nm,0.9s,mb4.4,baz=88,slow=9.7,SNR=3.6							
ASAR	**Alice Springs**	**62.02**	**148**	P	**P**	**07 54 22.4**	**-0.8**	
	comp=Z,0.4nm,0.5s,mb3.8,baz=340,slow=7.0,SNR=9.7							
NOA	**NORSAR Array B**	**64.12**	**327**	P	**P**	**07 54 36.9**	**+0.2**	
	comp=Z,0.7nm,0.7s,mb3.8,baz=73,slow=5.3,SNR=2.7							
ILAR	**Eielson Array**	**69.81**	**25**	P	**P**	**07 55 11.8**	**-1.0**	
	comp=Z,1.8nm,1.1s,mb3.9,baz=259,slow=4.7,SNR=12							
STKA	**Stephens Creek**	**72.55**	**147**	P	**P**	**07 55 29.7**	**-0.1**	
	comp=Z,1.6nm,0.8s,mb4.0,baz=347,slow=9.8,SNR=5.8							
YKA	**Yellowknife Ar**	**81.58**	**17**	P	**P**	**07 56 22.2**	**+2.0**	
	comp=Z,1.1nm,0.7s,mb3.9,baz=329,slow=6.3,SNR=3.3							
TORD	**Torodi Ar. Bea**	**93.03**	**287**	P	**P**	**07 57 16.7**	**-0.2**	
	comp=Z,0.7nm,0.9s,mb4.1,baz=91,slow=5.9,SNR=3.2							

IDC 13 07:54:05.9±2.1, 10°76N×91°38E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/24, mbtmp3.6/6, ML3.8/1, Error ellipse: s-maj=64.5km s-min=26.8km az=63.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.58**	**43**	Pn	Pn	07 56 39.9	+1.0
	0.2nm,0.3s,baz=232,slow=17,SNR=2.6						
MKAR	**Makanchi Array**	**36.73**	**350**	P	P	08 01 14.9	+0.1
	0.4nm,0.3s,baz=160,slow=7.3,SNR=6.6						
SONM	**Songino Array**	**39.05**	**16**	P	P	08 01 33.8	-0.7
	0.6nm,0.5s,baz=198,slow=10,SNR=4.9						
KURK	**Kurchatov**	**41.19**	**348**	P	P	08 01 52.0	-0.2
	0.4nm,0.4s,baz=163,slow=6.7,SNR=3.5						
ZALV	**Zalesovo Beam**	**43.39**	**354**	P	P	08 02 09.9	-0.1
	0.5nm,0.4s,baz=177,slow=5.8,SNR=2.8						
ASAR	**Alice Springs**	**53.85**	**130**	P	P	08 03 31.0	0.0
	0.4nm,0.6s,baz=308,slow=6.3,SNR=5.8						

NEIC ***13*** *08:04:41.1, 37°.80S×176°.82E, h2km, ML3.8(WEL), After WEL.*
NEIC Felt at Bay of Plenty.
WEL 13 08:04:41.5±0.1, 37°.80S×176°.84E, h5km, ML3.8/13, 2C-1D, Error ellipse: s-maj=0.8km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARZ	**Manawahe**	**0.22**	**215**	⇑P	Pg	08 04 46.2	+0.4
MARZ				SG	Sg	08 04 49.7	+0.9
MARZ	**Manawahe**	**0.22**	**215**	P	Pg	08 04 46.2	+0.3
OPRZ	**Ohinepanea**	**0.23**	**259**	⇓P	Pg	08 04 46.0	+0.1
OPRZ				SG	Sg	08 04 49.5	+0.6
EDRZ	**Edgecumbe**	**0.31**	**194**	PG	Pg	08 04 48.0	+0.4
EDRZ	**Edgecumbe**	**0.31**	**194**	P	Pg	08 04 48.0	+0.4
WIZ	**White Island**	**0.39**	**46**	PG	Pg	08 04 49.6	+0.5
WIZ				SG	Sg	08 04 55.3	+1.1
WIZ	**White Island**	**0.39**	**46**	P	Pg	08 04 49.6	+0.5
WIZ				S	Sg	08 04 55.3	+1.1
LIRZ	**Lichensteins R**	**0.41**	**240**	PG	Pg	08 04 49.9	+0.5
LIRZ	**Lichensteins R**	**0.41**	**240**	P	Pg	08 04 49.9	+0.5
MKRZ	**Makatiti**	**0.44**	**221**	PG	Pg	08 04 51.1	+1.0
MKRZ	**Makatiti**	**0.44**	**221**	P	Pg	08 04 51.1	+1.0
TGRZ	**Tauranga**	**0.46**	**279**	PG	Pg	08 04 50.6	+0.2
OMRZ	**Omania**	**0.48**	**230**	PG	Pg	08 04 51.0	+0.3
TARZ	**Mount Tarawera**	**0.50**	**211**	PG	Pg	08 04 52.1	+0.9
URZ	**Urewera**	**0.51**	**155**	⇑PG	Pg	08 04 51.3	0.0
URZ				SG	Sg	08 04 58.4	+0.6
URZ	**Urewera**	**0.51**	**155**	P	Pg	08 04 50.6	-0.6
KARZ	**Kaharoa**	**0.52**	**245**	PG	Pg	08 04 51.8	+0.4
KARZ				SG	Sg	08 04 59.0	+0.8
KARZ	**Kaharoa**	**0.52**	**245**	P	Pg	08 04 51.8	+0.4
KARZ				S	Sg	08 04 59.0	+0.9
RRRZ	**Republican Roa**	**0.59**	**205**	PG	Pg	08 04 53.1	+0.2
MYRZ	**Mayor Island**	**0.70**	**318**	P*	Pb	08 04 55.1	-1.1
HRRZ	**Handcock Road**	**0.73**	**216**	P*	Pb	08 04 56.1	-0.6
MWZ	**Matawai**	**0.76**	**134**	P*	Pb	08 04 56.1	-1.1
MWZ				S*	Sb	08 05 06.9	-1.0
MWZ	**Matawai**	**0.76**	**134**	P	Pg	08 04 55.8	-0.3
PRRZ	**Plateau Road**	**0.78**	**207**	P*	Pb	08 04 56.5	-1.0
ALRZ	**Allen Road**	**0.85**	**207**	P*	Pb	08 04 57.9	-0.8
TOZ	**Tahuroa Road**	**1.06**	**274**	P*	Pb	08 05 00.7	-1.5
TOZ	**Tahuroa Road**	**1.06**	**274**	P	Pg	08 05 00.7	-1.1
RAHZ	**Arahi**	**1.13**	**170**	P*	Pb	08 05 02.3	-1.2
RAHZ				S*	Sb	08 05 18.2	-0.3
PUZ	**Puketiti**	**1.16**	**104**	P*	Pb	08 05 03.0	-1.0
PUZ	**Puketiti**	**1.16**	**104**	P	Pg	08 05 03.0	-0.7
NMHZ	**Naumai**	**1.29**	**181**	P*	Pb	08 05 05.0	-1.3
KUZ	**Kuaotunu**	**1.38**	**320**	P	Pn	08 05 03.9	-3.5
KNZ	**Kokohu**	**1.38**	**152**	PN	Pn	08 05 07.2	-0.2
KNZ	**Kokohu**	**1.38**	**152**	P	Pn	08 05 07.2	-0.2
BKZ	**Black Stump Fm**	**1.39**	**191**	P*	Pb	08 05 05.5	-2.4
BKZ	**Black Stump Fm**	**1.39**	**191**	P	Pn	08 05 05.5	-2.0
MKAZ	**Moumakai**	**1.50**	**297**	SN	Sn	08 05 28.7	-0.2
MKAZ	**Moumakai**	**1.50**	**297**	P	Pn	08 05 05.9	-3.1
MKAZ				S	Sn	08 05 28.7	-0.2
MHGZ	**Mahia Peninsul**	**1.59**	**148**	PN	Pn	08 05 10.1	-0.2
KAHZ	**Kahuranaki**	**1.99**	**179**	PN	Pn	08 05 15.3	-0.4
PXZ	**Pawanui**	**2.23**	**179**	PN	Pn	08 05 17.8	-1.3
WCZ	**Waipu Caves**	**2.73**	**312**	P	Pn	08 05 23.4	-2.5

IDC 13 08:07:36.3±9.6, 20°.13S×178°.29W, h661km±135km, mb3.2/4, mb1 3.5/5, mb1mx3.2/14, mbtmp3.3/5, Error ellipse: s-maj=82.3km s-min=30.9km az=2.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**18.50**	**191**	P	P	08 11 14.4	+0.5
	2.7nm,0.3s,baz=360,slow=2.5,SNR=6.0						
STKA	**Stephens Creek**	**37.70**	**244**	P	P	08 13 58.4	-0.4
	2.0nm,0.6s,baz=92,slow=10,SNR=4.7						
ASAR	**Alice Springs**	**44.34**	**256**	P	P	08 14 51.5	+0.5
	4.9nm,0.7s,baz=94,slow=7.9,SNR=64						
TXAR	**Lajitas Array**	**87.09**	**57**	P	P	08 19 14.7	+0.4
	1.8nm,0.8s,baz=209,slow=7.2,SNR=21						
ILAR	**Eielson Array**	**88.02**	**13**	P	P	08 19 17.9	0.0
	0.3nm,0.4s,baz=214,slow=5.5,SNR=7.1						
AKASG	**Malin Array Be**	**142.56**	**331**	PKP	PKPdf	08 25 55.3	-0.5
	1.0nm,0.4s,baz=46,slow=3.9,SNR=5.8						

ISCJB ***13*** *08:08:30.7±0.5, 83°.64N±0°.09×114°.7E±0°.7, h10km, mb4.2/30, MS3.1/6, Error ellipse: s-maj=14.9km s-min=8.5km az=149.9*
IDC ***13*** *08:08:30.8±0.8, 83°.67N×114°.99E, h0km, mb3.9/10, mb1 4.1/11, mb1mx3.8/24, mbtmp3.9/11, ML3.6/1, MS3.2/6, Ms1 3.2/6, ms1mx2.7/39, Error ellipse: s-maj=26.0km s-min=17.0km az=152.0*
NEIC ***13*** *08:08:31.6±0.5, 83°.89N×110°.12E, h10km, mb4.5/19, Error ellipse: s-maj=15.5km s-min=9.9km az=127.0*
ISC 13 08:08:32.7±0.5, 83°.62N±0°.09×114°.7E±0°.6, h10km, n49, σ0s81/44, mb4.2/30, MS3.1/6, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**14.02**	**309**	*e*Pn	**Pn**	**08 11 39.9**	**-11**
SPITS	**Spitsbergen Ar**	**14.29**	**304**	Pn	**Pn**	**08 11 54.7**	**+0.1**
	baz=48,slow=13,SNR=2.4						
RES	**Resolute Bay**	**21.23**	**21**	P	**P**	**08 13 19.0**	**+1.0**
RES	**Resolute Bay**	**21.23**	**21**	LR	LR	08 21 36.2	
	comp=Z,72nm,20.3s,MS3.0,baz=277,slow=37						
ARCES	**ARCESS Array B**	**21.44**	**286**	P	**P**	**08 13 21.6**	**+1.3**
	2.0nm,0.9s,mb3.5,baz=33,slow=9.1,SNR=6.5						
SUMG	**Summit**	**23.43**	**340**	P	**P**	**08 13 30.7**	**-11**
INK	**Inuvik**	**24.90**	**55**	P	**P**	**08 13 55.0**	**-0.1**
	1.6nm,0.8s,mb3.6,baz=354,slow=8.6,SNR=3.6						
ILAR	**Eielson Array**	**27.03**	**69**	P	**P**	**08 14 15.1**	**+0.8**
	0.9nm,0.8s,mb3.3,baz=344,slow=9.7,SNR=9.4						
ILAR				LR	LR	08 24 25.2	
	comp=Z,63nm,20.7s,MS3.2,baz=341,slow=35						
FINES	**FINESS Array B**	**29.21**	**280**	LR	LR	08 28 40.5	
	comp=Z,43nm,19.5s,MS3.1,baz=137,slow=41						
ZALV	**Zalesovo Beam**	**30.81**	**215**	LR	LR	08 28 05.7	
	comp=Z,57nm,19.7s,MS3.2,baz=60,slow=38						
NOA	**NORSAR Array B**	**31.19**	**294**	LR	LR	08 27 22.9	
	comp=Z,19nm,21.7s,MS2.7,baz=345,slow=36						
HFS	**Hagfors**	**31.82**	**291**	LR	LR	08 27 19.3	
	comp=Z,42nm,20.5s,MS3.1,baz=103,slow=35						
SONM	**Songino Array**	**36.02**	**189**	P	**P**	**08 15 34.6**	**+1.3**
	0.4nm,0.4s,mb3.7,baz=344,slow=4.8,SNR=2.9						
MK31	**Makanchi Array**	**38.10**	**217**	*eP*	**P**	**08 15 50.3**	**-0.7**
MKAR	**Makanchi Array**	**38.10**	**217**	P	**P**	**08 15 50.0**	**-1.0**
	1.2nm,0.7s,mb3.7,baz=3.6,slow=7.7,SNR=8.3						
SCHQ	**Schefferville**	**41.77**	**1**	P	**P**	**08 16 20.4**	**-0.9**
	2.1nm,0.8s,mb3.8,baz=73,slow=7.4,SNR=3.6						
NEW	**Newport**	**46.12**	**47**	*eP*	**P**	**08 16 56.6**	**+0.2**
	27nm,2.3s,mb4.8						
JTMT	**Jette**	**46.86**	**44**	*eP*	**P**	**08 17 02.4**	**+0.2**
LAO	**LASA Array**	**48.50**	**37**	*eP*	**P**	**08 17 15.1**	**+0.2**
	4.7nm,0.8s,mb4.6						
BOZ	**Bozeman (W)**	**49.16**	**42**	*eP*	**P**	**08 17 19.9**	**-0.1**
	3.0nm,0.9s,mb4.3						
BMO	**Blue Mountains**	**49.50**	**47**	*eP*	**P**	**08 17 22.8**	**+0.2**
	2.0nm,0.9s,mb4.2						
IMW	**Indian Meadow**	**50.95**	**42**	*eP*	**P**	**08 17 34.2**	**+0.7**
	5.0nm,0.4s,mb4.8						
MOOW	**Moose Ponds**	**51.11**	**42**	*eP*	**P**	**08 17 35.5**	**+0.7**
	1.9nm,0.9s,mb4.0						
RSSD	**Black Hills**	**51.20**	**35**	*eP*	**P**	**08 17 34.8**	**-0.8**
	5.3nm,1.2s,mb4.3						
WVOR	**Wild Horse Val**	**51.79**	**49**	*eP*	**P**	**08 17 41.1**	**+1.2**
	87nm,0.2s						
HWUT	**Hardware Ranch**	**53.18**	**43**	*eP*	**P**	**08 17 50.4**	**+0.1**
	6.5nm,1.1s,mb4.5						
M13A	**Montello**	**53.22**	**45**	*eP*	**P**	**08 17 51.0**	**+0.5**
RWWY	**Rawlins**	**53.41**	**38**	*eP*	**P**	**08 17 51.2**	**-0.7**
	6.1nm,1.3s,mb4.6						
DAU	**Daniels Canyon**	**54.39**	**42**	*eP*	**P**	**08 17 59.6**	**+0.6**
DUG	**Dugway**	**54.48**	**44**	*eP*	**P**	**08 17 59.4**	**-0.4**
	6.0nm,1.3s,mb4.4						
MPU	**Maple Canyon**	**54.75**	**43**	*eP*	**P**	**08 18 02.4**	**+0.6**
	3.5nm,0.8s,mb4.4						
NVAR	**Mina Array Bea**	**55.79**	**49**	P	**P**	**08 18 07.7**	**-1.6**
	0.5nm,0.7s,mb3.6,baz=25,slow=3.1,SNR=4.1						
SMCO	**Snowmass**	**55.93**	**39**	*eP*	**P**	**08 18 10.7**	**+0.5**
	4.4nm,1.2s,mb4.4						
MSU	**Marysvale**	**56.20**	**44**	*eP*	**P**	**08 18 12.9**	**+0.7**
KEST	**Kesra**	**56.38**	**290**	P	**P**	**08 18 13.8**	**+0.4**
	2.0nm,1.0s,mb4.1,baz=326,slow=5.1,SNR=4.9						
PV01	**Paradox Valley**	**56.85**	**40**	*eP*	**P**	**08 18 16.8**	**0.0**
	566nm,0.8s						
SDCO	**Great Sand Dun**	**57.45**	**37**	*eP*	**P**	**08 18 21.1**	**+0.1**
	3.9nm,1.3s,mb4.3						
MVCO	**Mesa Verde**	**57.77**	**40**	*eP*	**P**	**08 18 23.5**	**+0.2**
	7.2nm,1.0s,mb4.7						
ANMO	**Albuquerque**	**60.16**	**39**	*eP*	**P**	**08 18 39.4**	**-0.5**
	6.9nm,1.4s,mb4.5						
AMTX	**Amarillo**	**60.55**	**34**	*eP*	**P**	**08 18 36.7**	**-5.8**
	59nm,0.4s						
WMOK	**Wichita Mounta**	**60.87**	**31**	*eP*	**P**	**08 18 43.7**	**-1.1**
	3.5nm,1.0s,mb4.4						
GLA	**Glamis**	**61.42**	**47**	*eP*	**P**	**08 18 51.8**	**+3.3**
	5.5nm,0.7s,mb4.8						
LHS	**Liberty Hill**	**61.91**	**14**	*e*P	**P**	**08 18 51.6**	**-0.1**
LHS				*e*pP	pP	08 19 08.0	+13
MNTX	**Cornudas Mount**	**63.47**	**38**	*eP*	**P**	**08 19 00.8**	**-1.5**
	2.2nm,1.1s,mb4.2						
JCT	**Junction City**	**65.04**	**33**	*eP*	**P**	**08 19 10.9**	**-1.7**
	4.6nm,0.8s,mb4.6						
TXAR	**Lajitas Array**	**65.94**	**36**	P	**P**	**08 19 17.1**	**-1.2**
TXAR	**Lajitas Array**	**65.94**	**36**	P	**P**	**08 19 17.1**	**-1.2**
	2.3nm,0.9s,mb4.2,baz=349,slow=4.6,SNR=23						
TORD	**Torodi Ar. Bea**	**79.51**	**294**	P	**P**	**08 20 38.7**	**-0.4**
	1.5nm,0.7s,mb4.0,baz=360,slow=5.7,SNR=10						
DBIC	**Dimbokro**	**86.56**	**300**	P	**P**	**08 21 15.8**	**+0.2**
	5.7nm,1.1s,mb4.7,baz=311,slow=9.3,SNR=3.0						

ISCJB ***13*** *08:15:41.6±0.6, 10°.90N±0°.04×62°.26W±0°.03, h82km±6km, Error ellipse: s-maj=7.0km s-min=4.5km az=172.7*
TRN ***13*** *08:15:43.1, 10°.91N×62°.25W, h68km, MD2.8*
NEIC ***13*** *08:15:43.1, 10°.91N×62°.25W, h68km, MD2.8(TRN), After TRN.*
FUNV ***13*** *08:15:43.2, 10°.96N×62°.19W, h69km, MW2.9*
ISC 13 08:15:42.6±0.6, 10°.91N±0°.04×62°.25W±0°.03, h75km±7km, n23, σ0s77/40, 1C-11D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.27**	**173**	*e*P	**Pn**	**08 15 54.8**	**+0.5**
GUIV				*e*S	**Sn**	**08 16 02.8**	**+0.1**
TCE	**Chacachacare**	**0.54**	**113**	⇓*e*P	**Pn**	**08 15 56.4**	**+0.1**
TCE				*e*S	**Sn**	**08 16 06.1**	**-0.3**
TCE	**Chacachacare**	**0.54**	**113**	⇓*e*P	**Pn**	**08 15 56.4**	**+0.1**
TCE				*e*S	**Sn**	**08 16 06.1**	**-0.3**
TRN	**Trinidad (W)**	**0.88**	**107**	⇓*e*P	**Pn**	**08 16 00.0**	**+0.1**
TRN				*e*S	**Sn**	**08 16 11.7**	**-1.1**
TRN	**Trinidad (W)**	**0.88**	**107**	⇓*e*P	**Pn**	**08 16 00.0**	**+0.1**
TRN				*e*S	**Sn**	**08 16 11.7**	**-1.1**
ITEV	**Isla Los Testi**	**0.97**	**297**	⇓*i*P	**Pn**	**08 16 01.1**	**+0.1**
ITEV				*e*S	**Sn**	**08 16 14.2**	**-0.5**
CRUV	**Carupano**	**0.99**	**256**	⇓*e*P	**Pn**	**08 16 01.5**	**+0.2**
CRUV				*e*S	**Sn**	**08 16 15.0**	**-0.3**
GUNV	**Guanoco**	**1.01**	**222**	*e*P	**Pn**	**08 16 02.6**	**+1.1**
GUNV				*e*S	**Sn**	**08 16 16.9**	**+1.4**
TBH	**Brigand Hill**	**1.24**	**110**	⇓*e*P	**Pn**	**08 16 05.0**	**+0.5**
TBH				*e*S	**Sn**	**08 16 21.1**	**+0.3**
TBH	**Brigand Hill**	**1.24**	**110**	⇓*e*P	**Pn**	**08 16 05.0**	**+0.5**
TBH				*e*S	**Sn**	**08 16 21.1**	**+0.3**
GRW	**Mount Saint Ca**	**1.37**	**25**	⇓*e*P	**Pn**	**08 16 06.0**	**-0.1**
GRW				*e*S	**Sn**	**08 16 23.4**	**-0.3**
GRW	**Mount Saint Ca**	**1.37**	**25**	⇓*e*P	**Pn**	**08 16 06.0**	**-0.1**
GRW				*e*S	**Sn**	**08 16 23.4**	**-0.3**
TOSP	**Speyside**	**1.73**	**77**	*eP*	**Pn**	**08 16 10.9**	**+0.1**
TOSP				*e*S	**Sn**	**08 16 32.0**	**-0.2**
ORIV	**Oritupano**	**2.16**	**212**	*eP*	**Pn**	**08 16 17.3**	**+0.7**
PCRV	**Puerto La Cruz**	**2.45**	**253**	*eP*	**Pn**	**08 16 21.4**	**+0.9**
PCRV				*e*S	**Sn**	**08 16 48.6**	**-1.0**
RIOV	**Rio Grande**	**2.86**	**171**	*eP*	**Pn**	**08 16 26.9**	**+0.9**
RIOV				*e*S	**Sn**	**08 16 57.3**	**-2.1**
PRGV	**PARIAGUAN**	**3.18**	**228**	*eP*	**Pn**	**08 16 30.6**	**+0.2**
GURV	**El Guri**	**3.24**	**195**	*eP*	**Pn**	**08 16 31.4**	**+0.2**
CUPV	**Cœpira**	**3.58**	**257**	*eP*	**Pn**	**08 16 36.9**	**+1.1**
CUPV				*e*S	**Sn**	**08 17 16.1**	**-0.8**
MERV	**Las Mercedes**	**4.31**	**248**	*eP*	**Pn**	**08 16 46.0**	**+0.2**
MERV				*e*S	**Sn**	**08 17 32.9**	**-1.9**
LUEV	**Luepa**	**5.10**	**171**	*eP*	**Pn**	**08 16 55.6**	**-1.0**
CAOV	**Caicara del Or**	**5.37**	**229**	⇓*eP*	**Pn**	**08 17 00.9**	**+0.7**
BAUV	**El Baul**	**6.03**	**252**	*eP*	**Pn**	**08 17 09.0**	**-0.3**

ISK ***13*** *08:32:37.3, 37°.61N×29°.37E, h4km, MD2.8*
DDA ***13*** *08:32:44.6, 36°.98N×29°.16E, h7km±4km, Md3.1*
ISCJB ***13*** *08:32:45.5±0.7, 36°.97N±0°.04×29°.25E±0°.04, h17km±11km, Error ellipse: s-maj=7.2km s-min=5.7km az=169.9*
CSEM ***13*** *08:32:45.4±0.5, 37°.01N×29°.28E, h18km±5km, MD3.1, Error ellipse: s-maj=11.1km s-min=9.8km az=48.0*
ISC 13 08:32:45.3±0.7, 36°.98N±0°.04×29°.22E±0°.04, h12km±5km, n24, σ1s18/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.28**	**51**	*e*PG	**Pg**	**08 32 46.9**	**-4.2**
GLHS				*e*SG	**Sg**	**08 32 54.1**	**-0.9**
GLHS	**Glhisar (BURDU**	**0.28**	**51**	*e*Pg	**Pg**	**08 32 46.9**	**-4.2**
GLHS				*e*Sg	**Sg**	**08 32 54.1**	**-0.9**
GOLH	**Golhisar**	**0.38**	**46**	*i*P	**Pg**	**08 32 46.7**	**-6.0**
GOLH				*i*S	**Sg**	**08 32 58.6**	**+0.8**
GOLH	**Golhisar**	**0.38**	**46**	*i*P	**Pg**	**08 32 46.7**	**-6.0**
GOLH				*i*S	**

ARCES S **S** **08 43 43.7 -4.7**
ARCES LR LR 08 48 27.3
ARCES ARCESS Array B 21.52 287 P **P** **08 39 50.2 -0.2**
comp=Z,63nm,1.1s,mb4.9,baz=17,slow=8.9,SNR=15
ARCES S **S** **08 43 43.7 -4.7**
comp=Z,1.7nm,0.6s,baz=27,slow=26,SNR=3.9
ARCES LR LR 08 48 27.3
comp=Z,1μm,19.1s,MS4.3,baz=193,slow=38
ARCES ARCESS Array B 21.52 287 P **P** **08 39 50.2 -0.2**
ARCES S **S** **08 43 43.7 -4.8**
ARE0 ARCESS Array S 21.52 287 *e*P **P** **08 39 49.8 -0.6**
YAK Yakutsk 21.97 162 *e* P **P** **08 39 54.5 -0.8**
comp=Z,195nm,1.0s,mb5.5
YAK Yakutsk 21.97 162 *c i* P **P** **08 39 54.5 -0.8**
YAK *e**PP 08 40 00.4
YAK *e* 08 40 20.5
YAK *e* 08 43 51.9
YAK *e*S **S** **08 43 55.9 -1.5**
YAK *e*SS 08 44 24.0
YAK *e*SSS 08 44 43.6
YAK *e* 08 51 10.8
YAK pmax pmax
comp=Z,102nm,1.1s,mb5.2
YAK pmax pmax
comp=N,120nm,1.3s
YAK pmax pmax
comp=E,30nm,1.4s
YAK pmax pmax
comp=Z,276nm,1.4s,mb5.5
YAK pmax pmax
comp=N,550nm,1.9s
YAK pmax pmax
comp=E,204nm,1.7s
YAK smax
comp=E,819nm,4.8s
YAK smax
comp=N,495nm,4.4s
YAK MLR MLR
comp=Z,2μm,20.0s,MS4.6
YAK MLR MLR
comp=N,2μm,21.0s,MS4.6
YAK MLR MLR
comp=E,2μm,19.0s,MS4.6
TRO Tromso 22.12 293 *e*P **P** **08 39 56.8 -0.1**
TRO *e*S **S** **08 44 02.5 +2.4**
TRO AMS AMS 08 47 35.9
comp=Z,1μm,19.5s,MS4.3
KTK1 Kautokeino 22.26 288 *e*P **P** **08 39 57.7 -0.7**
KTK1 *e*S **S** **08 44 03.9 +1.0**
KTK1 AMS AMS 08 48 32.8
comp=Z,4μm,20.4s,MS4.9
SEY Seymchan 22.41 134⇑ *e*P **P** **08 40 00.7 +0.7**
SEY Seymchan 22.41 134 *c e*P **P** **08 40 00.6 +0.6**
APA Apatity 22.55 278⇑ *i*P **P** **08 40 00.0 -1.4**
APA *i* S **S** **08 44 04.0 -4.4**
APA pmax pmax
comp=Z,500nm,5.0s
APA pmax pmax
comp=Z,120nm,1.5s,mb5.1
JMIC Jan Mayen 23.30 317 *e*P **P** **08 40 11.2 +1.8**
JMIC AMS AMS 08 46 37.9
comp=Z,988nm,11.0s,MS4.5
JMIC Jan Mayen 23.30 317 P **P** **08 40 10.5 +1.1**
comp=Z,9.3nm,0.5s,mb4.5,baz=141,slow=14,SNR=4.5
JMIC LR LR 08 46 47.3
comp=Z,1μm,18.5s,MS4.4,baz=10,slow=30
SUMG Summit 23.45 341 *e*P **P** **08 40 11.0 +0.1**
comp=Z,2μm,2.6s,mb6.0
TNA Tin City 23.88 89 *e*P **P** **08 40 16.6 +1.7**
comp=Z,1μm,2.2s,mb5.9
COLD Coldfoot 24.21 71 *e*P **P** **08 40 18.6 +0.7**
comp=Z,104nm,1.4s,mb5.1
INK Inuvik 24.82 56 *e*P **P** **08 40 23.6 +0.1**
comp=Z,264nm,1.6s,mb5.5
INK Inuvik 24.82 56 P **P** **08 40 23.8 +0.3**
comp=Z,65nm,1.1s,mb5.1,baz=354,slow=11,SNR=28
INK Inuvik 24.82 56 P **P** **08 40 23.8 +0.3**
INK pmax pmax
comp=Z,65nm,1.1s
IMA2 Indian Mountai 24.95 75 *e*P **P** **08 40 26.5 +1.7**
GAMB Gambell 25.19 94 *e*P **P** **08 40 27.3 +0.4**
comp=Z,90nm,1.4s,mb5.1
COLA College 26.74 70 *e*P **P** **08 40 42.6 +1.7**
comp=Z,189nm,1.6s,mb5.4
COLA College 26.74 70 *e*P **P** **08 40 42.6 +1.7**
COLA pmax pmax
comp=Z,189nm,1.6s,mb5.4
ILAR Eielson Array 26.94 70 P **P** **08 40 44.0 +1.2**
comp=Z,37nm,1.2s,mb4.8,baz=343,slow=9.2,SNR=46
ILAR PcP PcP 08 44 03.5 -0.5
comp=Z,1.5nm,0.9s,baz=321,slow=2.6,SNR=5.9
ILAR LR LR 08 50 55.6
comp=Z,3μm,20.8s,MS4.8,baz=12,slow=36
ILAR Eielson Array 26.94 70 P **P** **08 40 44.0 +1.3**
ILAR 08 44 03.5
CLNS Chul'man 27.04 169 *e*P **P** **08 40 43.4 -0.3**
CLNS *e**PP pP 08 40 50.3 +3.6
CLNS *e*PPP 08 41 29.5
CLNS *e* 08 44 03.0
CLNS *e*S **S** **08 45 16.7 -4.2**
CLNS pmax pmax
comp=Z,62nm,1.4s,mb5.0
CLNS pmax pmax
comp=E,8.0nm,1.2s
CLNS pmax pmax
comp=N,48nm,1.4s
CLNS smax
comp=N,505nm,12.9s
CLNS smax
comp=E,609nm,12.9s
CLNS MLR MLR
comp=N,1μm,15.0s,MS4.6
CLNS MLR MLR
comp=Z,1μm,18.0s,MS4.5
CLNS MLR MLR
comp=E,222nm,13.0s,MS4.6
BPAW Bear Paw Mtn. 27.16 74 *e*P **P** **08 40 46.5 +1.8**
comp=E,123nm,1.5s,mb5.2
EGAK Eagle 27.52 64 *e*P **P** **08 40 49.2 +1.3**
comp=E,133nm,1.4s,mb5.4
MCK McKinley 27.73 72 *e*P **P** **08 40 52.4 +2.6**
comp=E,120nm,1.4s,mb5.3
MCK McKinley 27.73 72 *e*P **P** **08 40 52.4 +2.5**
MCK pmax pmax
comp=Z,120nm,1.4s,mb5.3
TTA Tatalina 27.75 79 *e*P **P** **08 40 51.7 +1.7**
SOKR Solikamsk 27.76 249 *c i*P **P** **08 40 49.1 -1.0**
SOKR S **S** **08 45 39.9 +7.7**
SOKR pmax pmax
comp=Z,40nm,1.3s,mb4.9
SOKR MLR MLR
comp=Z,10μm,18.0s,MS5.4
TRF Thorofare Moun 27.86 73 *e*P **P** **08 40 52.7 +1.7**
comp=Z,279nm,1.7s,mb5.6
TRF *e*PcP PcP 08 44 07.3 +1.1
PPLA Purkeypile 28.20 76 *e*P **P** **08 40 55.7 +1.6**
comp=Z,489nm,1.8s,mb5.8
KLMR Klimovskoe 28.38 267 *c i*P **P** **08 40 54.5 -1.2**
KLMR *e*S **S** **08 45 38.3 -3.7**
KLMR pmax pmax
comp=Z,187nm,1.5s,mb5.5
KLMR pmax pmax
comp=Z,185nm,8.0s
KLMR MLR MLR
comp=Z,3μm,22.0s,MS4.8
DAWY Dawson 28.39 63 *e*P **P** **08 40 56.3 +0.6**
PAX Paxson 28.84 69 *e*P **P** **08 41 00.7 +0.9**
comp=Z,126nm,1.6s,mb5.4
PAX Paxson 28.84 69 *e*P **P** **08 41 00.7 +1.0**
PAX pmax pmax
comp=Z,125nm,1.6s,mb5.4
MENT Mentasta 29.06 68 *e*P **P** **08 41 03.1 +1.5**
FINES FINESS Array B 29.30 281 P **P** **08 41 03.0 -0.8**
FINES LR LR 08 55 44.4
FINES FINESS Array B 29.30 281 P **P** **08 41 03.0 -0.8**
comp=Z,11nm,0.9s,mb4.6,baz=11,slow=12,SNR=12
FINES LR LR 08 55 44.4
comp=Z,2μm,20.2s,MS4.7,baz=28,slow=42
SVW2 Sparrevohn 29.59 80 *e*P **P** **08 41 07.6 +1.2**
comp=Z,118nm,1.9s,mb5.3
SVW2 LR LR
comp=Z,3μm,18.0s,MS4.9
PMR Palmer 29.80 73 *e*P **P** **08 41 10.1 +1.8**
comp=Z,82nm,1.6s,mb5.2
PMR LR LR
comp=Z,3μm,19.0s,MS5.0
PMR Palmer 29.80 73 *e*P **P** **08 41 10.1 +1.8**
PMR pmax pmax
comp=Z,82nm,1.6s,mb5.2
PMR MLR MLR
comp=Z,3μm,19.0s,MS5.0
SVE Sverdlovsk 30.07 244⇑ *e*P **P** **08 41 10.9 +0.3**
SVE *e* 08 42 11.9
SVE *e*S **S** **08 46 11.9 +3.4**
SVE pmax pmax
comp=Z,85nm,1.7s,mb5.2
SVE MLR MLR
comp=Z,3μm,14.0s,MS5.1
NVS Novosibirsk 30.09 218⇑ *i*P **P** **08 41 10.0 -0.9**
NVS pmax pmax
comp=Z,166nm,2.0s,mb5.4
NVS pmax pmax
comp=N,122nm,1.8s
NVS pmax pmax
comp=E,93nm,1.8s
RSO Redoubt South 30.52 77 *e*P **P** **08 41 16.2 +1.6**
DIV Divide 30.61 70 *e*P **P** **08 41 16.5 +1.1**
comp=E,113nm,1.6s,mb5.5
ARU Arti 30.67 246 *e*P **P** **08 41 15.2 -0.7**
comp=E,29nm,1.0s,mb5.1
ARU Arti 30.67 246 *c i*P **P** **08 41 15.2 -0.7**
ARU *e* 08 42 12.5
ARU *e* 08 44 11.5
ARU S **S** **08 46 15.4 -2.5**
ARU Arti 30.67 246 P **P** **08 41 15.2 -0.7**
comp=E,82nm,0.7s,mb5.7,SNR=7.5
ZAA0 Zalesovo Array 30.87 216 *e*P **P** **08 41 17.4 -0.4**
ZALV Zalesovo Beam 30.87 216 P **P** **08 41 16.8 -1.0**
comp=E,4.9nm,0.9s,mb4.3,baz=359,slow=9.0,SNR=17
ZALV PcP PcP 08 44 14.4 +0.4
comp=E,6.9nm,0.7s,baz=231,slow=2.3,SNR=8.5
ZALV LR LR 08 54 35.6
comp=E,3μm,18.9s,MS5.0,baz=358,slow=38
ZALV Zalesovo Beam 30.87 216 P **P** **08 41 16.8 -1.0**
ZALV 08 44 14.4
BMRM Bremner River 30.89 69 *e*P **P** **08 41 17.9 0.0**
comp=E,80nm,1.5s,mb5.3
NOA NORSAR Array B 31.27 295 P **P** **08 41 20.4 -0.8**
NOA PcP PcP 08 44 14.8 -0.1
NOA LR LR 08 54 52.2
NOA NORSAR Array B 31.27 295 P **P** **08 41 20.4 -0.8**
comp=E,9.2nm,1.2s,mb4.5,baz=10,slow=8.7,SNR=6.4
NOA PcP PcP 08 44 14.8 -0.1
comp=E,2.2nm,0.8s,baz=12,slow=4.2,SNR=3.7
NOA LR LR 08 54 52.2
comp=E,644nm,19.1s,MS4.3,baz=5.0,slow=38
NOA NORSAR Array B 31.27 295 P **P** **08 41 20.4 -0.8**
NOA 08 44 14.8
FOO Floro 31.33 300 *e*P **P** **08 41 22.3 +0.5**
FOO *e*S **S** **08 46 28.5 +0.4**
FOO AMS AMS 08 51 56.7
comp=Z,1μm,14.9s,MS4.6
IRK Irkutsk 31.68 193 *e*P **P** **08 41 23.3 -1.6**
IRK pmax pmax
comp=Z,105nm,2.2s,mb5.3
HYT Haines Junctio 31.76 63 *e*P **P** **08 41 27.7 +2.2**
CIT Chita 31.77 182 *e*P **P** **08 41 26.1 +0.5**
CIT *e* 08 41 33.0
CIT *e* 08 42 36.2
HFS Hagfors 31.90 292 P **P** **08 41 26.4 -0.4**
comp=Z,5.0nm,0.9s,mb4.3,baz=35,slow=12,SNR=4.9
HFS LR LR 08 53 60.0
comp=Z,1μm,21.4s,MS4.6,baz=11,slow=36
YKA Yellowknife Ar 32.12 42 P **P** **08 41 28.0 -0.7**
comp=Z,14nm,1.0s,mb4.7,baz=348,slow=8.2,SNR=18
YKA PcP PcP 08 44 16.7 -0.5
comp=Z,4.2nm,0.7s,baz=334,slow=3.3,SNR=7.7
TLY Talaya 32.26 194 P **P** **08 41 29.2 -0.8**
comp=Z,91nm,1.2s,mb5.5,SNR=9.2
TLY Talaya 32.26 194 *e*P **P** **08 41 30.0 0.0**
comp=Z,26nm,1.2s,mb4.9
TLY Talaya 32.26 194⇑ *i*P **P** **08 41 29.3 -0.7**
TLY *e* 08 42 41.6
TLY *e*PPP 08 42 57.4
TLY *e*S **S** **08 46 41.5 -1.3**
TLY pmax pmax
comp=Z,24nm,1.3s,mb4.9
TLY MLR MLR
comp=Z,929nm,19.0s,MS4.5
MOY Mondy 32.35 197 *e*P **P** **08 41 31.1 +0.3**
MOY pmax pmax
comp=Z,118nm,2.0s,mb5.4
BER Bergen 32.50 300 *e*P **P** **08 41 32.0 0.0**
BER *e*S **S** **08 46 47.4 +1.0**
PET Petropavlovsk 32.74 130 *i*P **P** **08 41 35.9 +1.7**
PET Petropavlovsk 32.74 130 *e*P **P** **08 41 33.3 -0.9**
PET *e* 08 42 38.7
PET *e*S **S** **08 46 46.2 -4.1**
PET pmax pmax
comp=Z,19nm,2.6s,mb4.6
PET pmax pmax
comp=Z,200nm,12.8s
PET pmax pmax
comp=Z,500nm,11.3s
PET pmax pmax
comp=Z,300nm,17.6s
PET MLR MLR
comp=Z,2μm,18.0s,MS4.8
PET MLR MLR
comp=Z,2μm,18.0s
KONO Kongsberg 32.80 296 *e*P **P** **08 41 37.5 +2.9**
KONO *e*S **S** **08 46 51.4 +0.4**
KONO *e* 08 49 14.4
BRVK Borovoye 32.88 232 P **P** **08 41 35.3 -0.1**
comp=Z,226nm,1.5s,mb5.9,SNR=15
BRVK Borovoye 32.88 232 *e*P **P** **08 41 35.2 -0.3**
comp=Z,105nm,1.4s,mb5.6
BRVK Borovoye 32.88 232 *d i*P **P** **08 41 34.8 -0.6**
BRVK pmax pmax
comp=Z,63nm,1.7s,mb5.3
BVA0 Borovoye Array 32.91 232 *i* P **P** **08 41 35.4 -0.2**
BVAR Borovoye Array 32.91 232 P **P** **08 41 33.6 -2.0**
comp=Z,7.4nm,0.9s,mb4.6,baz=268,slow=7.4,SNR=38
BVAR PP PP 08 42 43.0 -6.7
comp=Z,11nm,1.0s,baz=10,slow=12,SNR=4.3
BVAR PcP PcP 08 44 19.7 +0.2
comp=Z,7.8nm,0.8s,baz=13,slow=1.4,SNR=11
ZRNK Zerenda 33.10 233 P **P** **08 41 36.3 -1.0**
ZRNK pmax pmax
comp=Z,104nm,1.4s,mb5.6
VOSK Vostochnaya 33.15 231 P **P** **08 41 36.7 -1.1**
VOSK pmax pmax
comp=Z,69nm,1.4s,mb5.4
SKAG Skagway 33.32 61 *e*P **P** **08 41 41.8 +2.7**
comp=Z,133nm,2.4s,mb5.4
SKAG LR LR
comp=Z,1μm,18.0s,MS4.6
ZAK Zakamensk 33.57 194 *e*P **P** **08 41 41.4 0.0**
ZAK *e* 08 44 22.6
MOS Moscow 33.61 267 *e*P **P** **08 41 39.2 -2.5**
MOS pmax pmax
comp=Z,400nm,2.8s,mb5.8
MOS MLR MLR
comp=Z,3μm,21.0s,MS5.0
OHAK Old Harbor 33.64 79 *e*P **P** **08 41 42.1 +0.1**
comp=Z,91nm,1.2s,mb5.6
OBN Obninsk 34.34 268 *e*P **P** **08 41 47.1 -0.9**
OBN Obninsk 34.34 268 *c i*P **P** **08 41 47.5 -0.6**
OBN *e* 08 44 24.3
OBN *i* S **S** **08 47 13.7 -1.3**
OBN pmax pmax
comp=Z,114nm,2.5s,mb5.4
OBN MLR MLR
comp=Z,2μm,23.0s,MS4.8
SMY Shemya 34.49 114 *e*P **P** **08 41 50.3 +0.9**
comp=Z,202nm,2.0s,mb5.7
SMY LR LR
comp=Z,1μm,22.0s,MS4.6
SMY Shemya 34.49 114 *e*P **P** **08 41 50.3 +0.9**
SMY pmax pmax
comp=Z,202nm,2.0s,mb5.7
SMY MLR MLR
comp=Z,1μm,22.0s,MS4.6
KURK Kurchatov 34.53 222 *e*P **P** **08 41 49.2 -0.5**
comp=Z,83nm,1.5s,mb5.4
KURK *e*PcP PcP 08 44 22.4 -1.8
KURK Kurchatov 34.53 222 P **P** **08 41 49.4 -0.3**
comp=Z,5.6nm,0.8s,mb4.6,baz=23,slow=7.4,SNR=39
KURK PP PP 08 43 10.1 +2.4
comp=Z,5.4nm,1.1s,baz=10,slow=10,SNR=5.9
KURK LR LR 08 59 07.2
comp=Z,3μm,18.0s,MS5.0,baz=5.0,slow=42
KURK Kurchatov 34.53 222 *c i*P **P** **08 41 48.9 -0.8**
KURK pmax pmax
comp=Z,55nm,2.5s,mb5.0
HIA Hailar 34.54 175 *e*P **P** **08 41 50.1 +0.2**
comp=Z,5.1nm,0.4s,mb4.8
HIA Hailar 34.54 175 *e*P **P** **08 41 50.1 +0.3**
HIA pmax pmax
comp=Z,5.0nm,0.4s
DLBC Dease Lake 34.83 57 *e*P **P** **08 41 53.5 +1.2**
KLR Kul'dur 34.85 161 *e*P **P** **08 41 48.2 -4.3**
KLR *e* 08 41 55.6
KLR *e* 08 43 07.0
KLR *e*S **S** **08 47 25.5 +2.5**
KLR *e*SS SS 08 49 40.0 -14
KLR pmax pmax
comp=E,35nm,1.8s
KLR pmax pmax
comp=Z,100nm,1.8s,mb5.4
KLR MLR MLR
comp=N,900nm,20.0s,MS4.8
KLR MLR MLR
comp=E,2μm,20.0s,MS4.8
SKR Severo-Kuril's 34.86 134 *e*P **P** **08 41 54.0 +1.4**
SKR *e* 08 43 06.0
SKR *e* 08 50 01.2
NACGM Naroch 35.64 278 *e* **P** **08 41 55.0 -4.3**
HABR Khabarovsk 35.74 158 *de*P **P** **08 41 59.6 -0.6**
HABR *e**PP pP 08 42 07.7 +4.5
HABR *e*PPP 08 43 33.3
HABR *e*SS SS 08 49 57.5 -14
HABR *e* 08 52 14.5
HABR pmax pmax
comp=N,44nm,1.6s
HABR pmax pmax
comp=Z,121nm,1.6s,mb5.6
HABR pmax pmax
comp=E,38nm,1.4s
HABR MLR MLR
comp=Z,679nm,20.0s,MS4.4
MICGM Minsk 35.91 276 *e*P **P** **08 42 01.0 -0.6**
MNK Minsk 35.92 277 *e*P **P** **08 42 01.0 -0.6**
MNK *e* 08 43 22.0
MNK *e*PPP 08 43 48.0
MNK *e*S **S** **08 47 36.0 -3.2**
MNK pmax pmax
comp=Z,360nm,2.0s,mb6.0
ULN Ulaanbaatar 36.00 190 *e*P **P** **08 42 03.0 +0.6**
comp=Z,49nm,1.3s,mb5.3
ULN *e*PcP PcP 08 44 30.8 +2.2
ULN Ulaanbaatar 36.00 190 *e*P **P** **08 42 03.0 +0.6**
ULN *e* 08 44 30.8
ULN pmax pmax
comp=Z,49nm,1.3s,mb5.3
ULN Ulaanbaatar 36.00 190 P **P** **08 42 02.7 +0.3**
comp=Z,654nmcomp=Z,33nm,1.7s,mb5.0
SONM Songino Array 36.04 190 P **P** **08 42 02.5 -0.3**
comp=Z,15nm,1.1s,mb4.8,baz=355,slow=5.7,SNR=51
SONM PcP PcP 08 44 28.1 -0.6
comp=Z,6.9nm,0.9s,baz=317,slow=2.3,SNR=5.4
SONM LR LR 08 57 13.2
comp=Z,944nm,18.3s,MS4.6,baz=251,slow=37
SONM Songino Array 36.04 190 P **P** **08 42 02.5 -0.3**
SONM 08 44 28.1
ATKA Atka Island 36.26 101 *e*P **P** **08 42 05.6 +1.0**
comp=Z,358nm,1.4s,mb6.1
AMKA Amchitka 36.37 108 *e*P **P** **08 42 04.6 -1.0**
comp=Z,78nm,2.3s,mb5.2
AKTK Aktyubinsk 36.64 245 P **P** **08 42 07.6 -0.3**
AKTK PP PP 08 43 27.6 -3.4
AKTK LR LR 08 58 21.3
AKTO Aktyubinsk 36.64 245 P **P** **08 42 07.6 -0.3**
comp=Z,12nm,1.0s,mb4.7,baz=12,slow=9.0,SNR=30
AKTO PP PP 08 43 27.6 -3.4
comp=Z,8.6nm,1.0s,baz=340,slow=11,SNR=3.6
AKTO LR LR 08 58 21.3
comp=Z,4μm,21.7s,MS5.2,baz=193,slow=38
AKTO Aktyubinsk 36.64 245 P **P** **08 42 07.6 -0.3**
AKTO 08 43 27.6
SUW Suwalki 36.91 281 *e*P **P** **08 42 09.4 -0.7**
FCC Fort Churchill 37.10 25 *e*P **P** **08 42 10.8 -0.9**
comp=Z,2.4nm,1.4s,mb3.8
VOR Voronezh 37.38 264 *e*P **P** **08 42 14.0 -0.1**
VOR pmax pmax
comp=Z,260nm,1.0s,mb6.0
AB31 Akbulak array 37.62 242 *i* P **P** **08 42 15.5 -0.7**
AB31 pmax pmax
comp=Z,87nm,1.5s,mb5.3
ABKAR Akbulak array 37.62 242 *e*P **P** **08 42 15.3 -0.8**
comp=Z,54nm,1.4s,mb5.1
ABKAR *e*PcP PcP 08 44 34.0 +0.6
YSS Yuzh-Sakhalins 37.64 149 *e*P **P** **08 42 16.9 +0.5**
comp=Z,238nm,1.3s,mb5.8
YSS Yuzh-Sakhalins 37.64 149 *d i*P **P** **08 42 17.0 +0.6**
YSS *e* 08 43 49.0
YSS *e*S **S** **08 48 08.0 +2.4**
YSS pmax pmax
comp=N,190nm,1.5s
YSS pmax pmax
comp=E,80nm,1.5s
YSS pmax pmax
comp=Z,340nm,1.5s,mb5.9
YSS pmax pmax
comp=Z,500nm,3.0s
YSS MLR MLR
comp=N,700nm,16.0s,MS4.8
YSS MLR MLR
comp=E,900nm,16.0s,MS4.8
YSS MLR MLR
comp=Z,900nm,16.0s,MS4.7
VRHR Novokhopersk 37.73 262 *e*P **P** **08 42 16.0 -1.1**
VRHR *e*S **S** **08 48 02.9 -4.1**
VRHR pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
VRHR pmax pmax
comp=N,30nm,1.3s
VRHR pmax pmax
comp=E,30nm,1.1s
VRHR smax
comp=E,10.0nm,2.9s
VRHR smax
comp=Z,10.0nm,3.7s
VRHR smax
comp=N,3.0nm,2.5s
VSR Storozhevoye 37.89 264 *e*P **P** **08 42 17.2 -1.2**
VSR *e*S **S** **08 48 05.7 -3.6**
VSR pmax pmax
comp=N,40nm,1.3s
VSR pmax pmax
comp=Z,40nm,1.3s,mb5.0
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR smax
comp=E,140nm,6.7s
VSR smax
comp=Z,100nm,6.6s
VSR smax
comp=N,120nm,7.4s
VSR MLR MLR
comp=Z,2μm,13.0s,MS5.0
VSR MLR MLR
comp=N,3μm,19.0s
VSR MLR MLR
comp=E,420nm,11.0s
VORD Divnogorie 38.12 264 *e*P **P** **08 42 19.8 -0.6**
VORD pmax pmax
comp=Z,40nm,1.3s,mb5.0
VORD pmax pmax
comp=N,60nm,1.4s
VORD pmax pmax
comp=E,20nm,0.5s
VORD MLR MLR
comp=Z,2μm,18.0s,MS4.9
VORD MLR MLR
comp=N,1μm,14.0s,MS4.9
VORD MLR MLR
comp=E,360nm,12.0s,MS4.9
MK31 Makanchi Array 38.17 217 *e*P **P** **08 42 19.3 -1.5**
MKAR Makanchi Array 38.17 217 P **P** **08 42 18.8 -2.1**
MKAR PP PP 08 43 45.3 -2.5
MKAR PcP PcP 08 44 34.5 -0.6
MKAR LR LR 08 59 07.7
MKAR Makanchi Array 38.17 217 P **P** **08 42 18.8 -2.1**
comp=E,14nm,0.8s,mb4.7,baz=12,slow=6.3,SNR=72
MKAR PP PP 08 43 45.3 -2.5
comp=E,6.3nm,1.1s,baz=18,slow=11,SNR=1.7

MKAR PcP PcP 08 44 34.5 -0.6
comp=E,4.6nm,0.8s,baz=25,slow=4.0,SNR=3.6
MKAR LR LR 08 59 07.7
comp=E,3μm,19.3s,MS5.1,baz=358,slow=38
MKAR Makanchi Array 38.17 217 P **P** **08 42 18.8 -2.0**
MKAR 08 43 45.3
MKAR 08 44 34.5
EKA Eskdalemuir Ar 38.28 306 P **P** **08 42 21.1 -0.5**
comp=E,17nm,1.1s,mb4.7,baz=7.4,slow=8.4,SNR=12
GKP Gorka Klasztor 38.28 286 *e*P **P** **08 42 21.9 +0.1**
ESK Eskdalemuir 38.30 306 *e*P **P** **08 42 22.6 +0.8**
comp=E,156nm,1.6s,mb5.5
ESK Eskdalemuir 38.30 306 *i* P **P** **08 42 23.8 +1.9**
BSEG Bad Segeberg 38.35 293 *e*P **P** **08 42 22.4 +0.1**
comp=Z,150nm,1.8s,mb5.4
BSEG Bad Segeberg 38.35 293 *e*P **P** **08 42 22.4 +0.1**
BSEG pmax pmax
comp=Z,150nm,1.8s,mb5.4
MDJ Mudanjiang 39.39 164 P **P** **08 42 31.1 0.0**
MDJ pP pP 08 42 34.5 +0.3
MDJ sP sP 08 42 35.8 +0.4
MDJ PP PP 08 44 01.3 +0.1
MDJ ScP ScP 08 48 28.4 +1.4
MDJ PcS PcS 08 48 29.6 +0.9
MDJ S **S** **08 48 33.0 +0.9**
MDJ sS sS 08 48 37.8 +0.7
MDJ pmax pmax
comp=Z,50nm,1.4s,mb5.0
MDJ pmax pmax
comp=Z,240nm,3.9s
MDJ LR LR
comp=N,400nm,27.2s
MDJ LR LR
comp=E,1μm,20.6s
MDJ LR LR
comp=Z,950nm,14.0s
MDJ Mudanjiang 39.39 164 *e*P **P** **08 42 31.2 +0.1**
comp=Z,79nm,1.2s,mb5.3
AKASG Malin Array Be 39.50 274 P **P** **08 42 31.1 -0.9**
comp=Z,2.2nm,0.4s,mb4.2,baz=9.9,slow=8.4,SNR=28
AKASG PP PP 08 44 06.0 +3.7
comp=Z,2.3nm,0.7s,baz=14,slow=12,SNR=4.0
AKASG PcP PcP 08 44 37.9 -1.4
comp=Z,3.4nm,0.8s,baz=14,slow=3.8,SNR=5.7
AKASG LR LR 09 00 43.4
comp=Z,3μm,20.0s,MS5.1,baz=10.0,slow=39
AKASG Malin Array Be 39.50 274 P **P** **08 42 31.1 -0.9**
AKASG 08 44 06.0
AKASG 08 44 37.9
AKBB Malin Array Si 39.50 274 *e*P **P** **08 42 31.0 -1.0**
KIEV Kiev 39.51 274 *e*P **P** **08 42 30.8 -1.2**
comp=Z,119nm,1.9s,mb5.3
KIEV Kiev 39.51 274 *e*P **P** **08 42 30.8 -1.3**
KIEV pmax pmax
comp=Z,119nm,1.9s,mb5.3
CN2 Changchun 40.09 169 *e*P **P** **08 42 36.0 -1.0**
CN2 *es*P sP 08 42 42.1 +0.8
CN2 *e*S **S** **08 48 40.9 -1.7**
CN2 pmax pmax
comp=Z,20nm,1.2s,mb4.7
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,500nm,19.0s,MS4.8
CN2 LR LR
comp=E,1μm,19.0s,MS4.8
CN2 LR LR
comp=Z,700nm,20.0s,MS4.5
IBBN Ibbenburen 40.22 295 *e*P **P** **08 42 38.1 +0.2**
comp=Z,154nm,1.7s,mb5.5
CLZ Clausthal 40.42 292 *e*P **P** **08 42 40.0 +0.5**
comp=Z,164nm,1.7s,mb5.5
CLZ Clausthal 40.42 292 *e*P **P** **08 42 40.0 +0.5**
CLZ pmax pmax
comp=Z,164nm,1.7s,mb5.5
ASAJ Asahikawa 40.46 150 LR LR 09 00 48.6
comp=Z,1μm,19.4s,MS4.8,baz=180,slow=38
DSB Dublin 40.63 308 *e*P **P** **08 42 48.1 +6.8**
comp=Z,226nm,1.9s,mb5.5
WTSB Winterswijk 40.66 296 *e*P **P** **08 42 42.3 +0.7**
comp=Z,109nm,2.6s,mb5.0
CLL Collm 40.67 290 *e*P **P** **08 42 40.9 -0.7**
comp=Z,94nm,1.9s,mb5.1
CLL Collm 40.67 290⇑ *i*P **P** **08 42 41.4 -0.2**
comp=Z,94nm,1.9s,mb5.1
CLL *i* PcP PcP 08 44 43.2 +0.2
CLL *e*S **S** **08 48 50.0 -1.1**
CLL LR LR
comp=Z,1μm,21.2s,MS4.7
CLL Collm 40.67 290⇑ *i*P **P** **08 42 41.4 -0.2**
comp=Z,94nm,1.9s,mb5.1
CLL *i* sP sP 08 42 47.6 +1.6
CLL *e*PP PP 08 44 12.0 -3.0
CLL *i* PcP PcP 08 44 43.2 +0.2
CLL *e*S **S** **08 48 50.0 -1.1**
comp=N,500nm,11.5s
CLL *e*S **S** **08 48 50.0 -1.1**
comp=E,200nm,15.4s
CLL *e*SS SS 08 51 42.0 -8.8
CLL L 08 58 00.0
comp=Z,1μm,21.2s
FFC Flin Flon 40.70 33 *e*P **P** **08 42 41.9 -0.1**
comp=Z,70nm,1.7s,mb5.0
FFC Flin Flon 40.70 33 *i* P **P** **08 42 42.6 +0.7**
YUK Yuzh-Kuril'sk 40.73 146 *d* iP **P** **08 42 43.1 +0.8**
YUK *i* 08 44 22.4
YUK *e*S **S** **08 48 48.4 -3.8**
YUK *i* SSS 08 52 49.8
YUK MLR MLR
comp=N,630nm,17.0s,MS4.8
YUK MLR MLR
comp=E,920nm,17.0s,MS4.8
YUK MLR MLR
comp=Z,470nm,17.0s,MS4.4
KSP Ksiaz 40.78 287 *e*P **P** **08 42 41.8 -0.8**
KSP *e* 08 44 17.1
KSP Ksiaz 40.78 287 *e*P **P** **08 42 41.2 -1.4**
KSP *e* 08 44 13.6
KSP *e*S **S** **08 48 51.2 -1.5**
KSP *e*SS SS 08 51 47.6 -5.4
KSP MLR MLR
comp=Z,4μm,18.9s,MS5.3
WMQ Urumqi 40.79 211 P **P** **08 42 43.0 +0.3**
WMQ pP pP 08 42 47.5 +1.7
WMQ sP sP 08 42 50.0 +3.0
WMQ PP PP 08 44 20.6 +4.2
WMQ PcP PcP 08 44 44.6 +1.1
WMQ ScP ScP 08 48 32.4 -0.1
WMQ S **S** **08 48 53.3 +0.3**
WMQ sS sS 08 49 00.8 +2.7
WMQ SS SS 08 51 49.3 -4.1
WMQ ScS ScS 08 52 45.8 -1.4
WMQ pmax pmax
comp=Z,53nm,1.2s,mb5.0
WMQ pmax pmax
comp=Z,640nm,4.3s
WMQ LR LR
comp=N,4μm,24.3s,MS5.2
WMQ LR LR
comp=E,2μm,23.0s,MS5.2
WMQ LR LR
comp=Z,4μm,21.6s,MS5.2
LVV L'vov 40.95 279 *e*P **P** **08 42 43.5 -0.5**
LVV *e* 08 44 26.1
LVV *e*S **S** **08 48 55.1 -0.2**
LVV MLR MLR
comp=Z,2μm,20.0s,MS4.8
LVV MLR MLR
comp=N,400nm,19.0s,MS5.0
LVV MLR MLR
comp=E,2μm,19.0s,MS5.0
BRG Berggiesshubel 41.00 289 *e*P **P** **08 42 43.8 -0.6**
comp=Z,148nm,2.3s,mb5.2
BRG Berggiesshubel 41.00 289 *e*P **P** **08 42 44.5 +0.1**
comp=Z,64nm,1.7s,mb5.0
BRG PP PP 08 44 16.8 -1.8
comp=Z,13nm,1.2s
BRG S **S** **08 48 58.0 +2.0**
BRG SS SS 08 51 55.0 -2.4
BRG
comp=N,1μm,17.8s
BRG
comp=E,716nm,29.4s
BRG
comp=Z,1μm,18.7s
BRG Berggiesshubel 41.00 289 *e*P **P** **08 42 44.5 +0.1**
BRG 08 44 16.8
BRG S **S** **08 48 58.0 +2.0**
BRG SS SS 08 51 55.0 -2.4
BRG pmax pmax
comp=Z,3.0nm,1.7s
BRG pmax pmax
comp=Z,39nm,1.2s,mb4.9
BRG MLR MLR
comp=N,8μm,17.8s,MS5.6
BRG MLR MLR
comp=E,767nm,19.4s,MS5.6
BRG MLR MLR
comp=Z,429nm,18.7s,MS4.3
OJC Ojcow 41.02 283 *e*P **P** **08 42 44.6 +0.1**
OJC *e*PP PP 08 44 22.7 +3.9
OJC *e*S **S** **08 48 59.7 +3.4**
OJC L 09 00 09.2
comp=Z,1.7nm,20.6s
BUG Bochum--Univer 41.13 295 *e*P **P** **08 42 45.5 +0.1**
comp=Z,314nm,2.2s,mb5.5
UPC Upice 41.14 287 *e*P **P** **08 42 45.9 +0.4**
UPC Upice 41.14 287 *e*P **P** **08 42 45.9 +0.4**
DPC Dobruska-Polom 41.26 286 *e*P **P** **08 42 46.9 +0.4**
DPC *e* 08 42 53.0
DPC *e* 08 44 45.0
DPC *e*S **S** **08 49 01.1 +1.2**
DPC MLR MLR
comp=Z,2μm,18.5s,MS4.9
DPC Dobruska-Polom 41.26 286 *e*P **P** **08 42 46.9 +0.4**
DPC *e*pP pP 08 42 53.0 +3.4
DPC *e*PCP PcP 08 44 45.0 +0.1
DPC *e*S **S** **08 49 01.1 +1.2**
DPC AMS AMS 09 03 50.0
comp=Z,2μm,18.5s
PVCC Panska Ves 41.27 288 *e*P **P** **08 42 47.1 +0.5**
PVCC *e* 08 42 54.9
PVCC MLR MLR
comp=Z,2μm,18.4s,MS4.9
PVCC Panska Ves 41.27 288 *e*P **P** **08 42 47.1 +0.5**
PVCC *ex* x 08 42 54.9
PVCC AMS AMS 09 03 50.0
comp=Z,2μm,18.4s
KWP Kalwaria Pacla 41.28 280 *e*P **P** **08 42 47.5 +0.8**
KWP Kalwaria Pacla 41.28 280 *e*P **P** **08 42 46.7 0.0**
comp=Z,258nm,1.6s,mb5.6
EDM Edmonton 41.42 43 *e*P **P** **08 42 47.4 -0.4**
MOX Moxa 41.47 291 *e*P **P** **08 42 48.8 +0.6**
comp=Z,170nm,2.0s,mb5.3
MOX *e*S **S** **08 49 06.0 +3.0**
MOX
comp=Z,700nm,18.0s
MOX Moxa 41.47 291 *e*P **P** **08 42 48.2 0.0**
comp=Z,165nm,2.0s,mb5.3
MOX Moxa 41.47 291 *e*P **P** **08 42 48.8 +0.6**
MOX *e*S **S** **08 49 06.0 +3.0**
MOX pmax pmax
comp=Z,170nm,2.0s,mb5.3
MOX MLR MLR
comp=Z,700nm,18.0s,MS4.6
OKC Ostrava-Krasne 41.57 285 *e*P **P** **08 42 48.9 -0.2**
OKC *e* 08 42 53.8
OKC *e*S **S** **08 49 08.6 +4.1**
OKC MLR MLR
comp=Z,2μm,18.2s,MS4.9
OKC Ostrava-Krasne 41.57 285 *e*P **P** **08 42 48.9 -0.2**
OKC *e*pP pP 08 42 53.8 +1.6
OKC *e*S S **08 49 08.6 +4.1**
OKC AMS AMS 09 01 10.0
comp=Z,2μm,18.2s
TANN Tannenbergstha 41.61 290 *e*P **P** **08 42 49.5 +0.1**
comp=Z,124nm,2.0s,mb5.2
STHS Stebnicka Huta 41.65 281 *e*P **P** **08 42 51.6 +1.9**
comp=Z,35nm,1.2s,mb4.9
STHS Stebnicka Huta 41.65 281 *e*P **P** **08 42 51.6 +1.9**
STHS pmax pmax
comp=Z,35nm,1.2s,mb4.9
STHS Stebnicka Huta 41.65 281 *e*P **P** **08 42 51.6 +1.9**
MORC Moravsky Berou 41.70 285 *e*P **P** **08 42 50.4 +0.2**
comp=Z,144nm,2.0s,mb5.3
MORC Moravsky Berou 41.70 285 *e*P **P** **08 42 50.4 +0.3**
MORC pmax pmax
comp=Z,144nm,2.0s,mb5.3
MORC Moravsky Berou 41.70 285⇑ *i*P **P** **08 42 50.4 +0.3**
PRA Prague 41.74 288 P **P** **08 42 52.0 +1.5**
PRA S **S** **08 49 11.0 +4.0**
PRA AMS AMS 09 04 00.0
NIE Niedzica 41.75 282 *e*P **P** **08 42 51.0 +0.4**
SCHQ Schefferville 41.75 2 *e*P **P** **08 42 49.8 -0.7**
comp=Z,44nm,1.2s,mb5.0
SCHQ Schefferville 41.75 2 P **P** **08 42 49.4 -1.1**
comp=Z,11nm,0.7s,mb4.6,baz=350,slow=6.2,SNR=30
SCHQ PcP PcP 08 44 46.8 +0.3
comp=Z,13nm,1.1s,baz=33,slow=4.7,SNR=4.7
SCHQ LR LR 09 00 38.1
comp=Z,1μm,18.6s,MS4.9,baz=1.1,slow=37
NKC Novy Kostel 41.79 290 *e*P **P** **08 42 51.3 +0.4**
NKC *e* 08 42 57.9
NKC MLR MLR
comp=Z,1μm,21.3s,MS4.7
NKC Novy Kostel 41.79 290 *e*P **P** **08 42 51.3 +0.4**
NKC *e*pP pP 08 42 57.9 +4.0
NKC AMS AMS 08 59 30.0
comp=Z,1μm,21.3s
PRU Pruhonice 41.81 288 *e*P **P** **08 42 52.1 +1.1**
PRU *e* 08 42 57.8
PRU *e*S **S** **08 49 09.1 +1.1**
PRU MLR MLR
comp=Z,2μm,18.3s,MS4.9
PRU Pruhonice 41.81 288 *e*P **P** **08 42 52.1 +1.1**
PRU *e*pP pP 08 42 57.8 +3.7
PRU *e*S **S** **08 49 09.1 +1.1**
PRU AMS AMS 09 04 10.0
comp=Z,2μm,18.3s
HGN Heimansgroeve 41.93 296 *e*P **P** **08 42 51.8 -0.2**
comp=Z,57nm,1.9s,mb4.9
HGN Heimansgroeve 41.93 296 *e*PP PP 08 44 37.8 +9.1
HGN Heimansgroeve 41.93 296 *e*S **S** **08 49 14.3 +4.5**
SNY Shenyang 42.03 171⇑ P **P** **08 42 52.6 -0.3**
SNY PP PP 08 44 37.0 +7.1
SNY S **S** **08 49 01.0 -10**
SNY pmax pmax
comp=Z,40nm,1.6s,mb4.8
SNY pmax pmax
comp=Z,410nm,4.4s
SNY LR LR
comp=E,830nm,23.1s
SNY LR LR
comp=Z,620nm,25.2s,MS4.4
MEM Membach 42.08 296 P **P** **08 42 53.7 +0.5**
comp=Z,28nm,2.6s,mb4.4
CRVS Cervenica-Dubn 42.14 281 *e*P **P** **08 42 54.1 +0.4**
comp=Z,209nm,2.1s,mb5.4
CRVS *e* 08 44 42.1
CRVS Cervenica-Dubn 42.14 281 *e*P **P** **08 42 54.1 +0.4**
CRVS *e* 08 44 42.1
CRVS pmax pmax
comp=Z,209nm,2.1s,mb5.4
CRVS Cervenica-Dubn 42.14 281 *e*P **P** **08 42 54.1 +0.4**
CRVS *e*PP PP 08 44 42.1 +11
TNS Taunus Mts 42.21 294 *e*P **P** **08 42 54.7 +0.4**
comp=Z,126nm,1.8s,mb5.2
TNS Taunus Mts 42.21 294 *e*P **P** **08 42 54.7 +0.4**
TNS pmax pmax
comp=Z,126nm,1.8s,mb5.2
USP Ospenovka 42.25 225 P **P** **08 42 56.1 +1.4**
SNR=17
VRAC Vranov 42.26 286 P **P** **08 42 55.3 +0.6**
comp=Z,1.8nm,0.3s,mb4.2,baz=21,slow=11,SNR=14
VRAC Vranov 42.26 286⇓ *i*P **P** **08 42 55.3 +0.6**
UZH Uzhgorod 42.31 280 *e*P **P** **08 42 54.4 -0.7**
UZH *e* 08 43 01.4
UZH *e* 08 44 33.4
UZH *i* S **S** **08 49 09.6 -5.9**
UZH *e*SS SS 08 52 20.2 -3.2
UZH MLR MLR
comp=N,750nm,17.0s,MS4.9
UZH MLR MLR
comp=E,1μm,17.0s,MS4.9
UZH MLR MLR
comp=Z,500nm,17.0s,MS4.5
BCLA Clavier 42.34 297 P **P** **08 42 56.1 +0.8**
comp=Z,62nm,2.4s,mb4.8
SNF Seneffe 42.35 298 P **P** **08 42 55.9 +0.5**
comp=Z,48nm,2.2s,mb4.7
TREC Trest 42.40 287 *e*P **P** **08 42 56.3 +0.5**
TREC *e*S **S** **08 49 16.8 +0.1**
TREC MLR MLR
comp=Z,2μm,22.2s,MS4.9
TREC Trest 42.40 287 *e*P **P** **08 42 56.3 +0.5**
TREC *e*S **S** **08 49 16.8 +0.1**
TREC AMS AMS 09 04 10.0
comp=Z,2μm,22.2s
GRA1 Grafenberg Arr 42.45 291 *e*P **P** **08 42 56.6 +0.3**
comp=Z,268nm,2.0s,mb5.5
GRA1 *e*pP pP 08 43 03.1 +3.7
GRA1 LR LR
comp=Z,1μm,21.8s,MS4.7
GRF Grafenberg Arr 42.45 291 *e*P **P** **08 42 56.6 +0.3**
comp=Z,268nm,2.0s,mb5.5
GRF *e*pP pP 08 43 03.1 +3.7
GRF *e*L 09 00 00.6
comp=Z,1μm,21.8s
GRF Grafenberg Arr 42.45 291 *e*P **P** **08 42 56.6 +0.3**
GRF *e**PP pP 08 43 03.1 +3.7
GRF pmax pmax
comp=Z,268nm,2.0s,mb5.5
GRF MLR MLR
comp=Z,1μm,21.8s,MS4.7
GRF Grafenberg Arr 42.45 291 *e*P **P** **08 42 56.6 +0.3**
GRF *e**PP pP 08 43 03.1 +3.7
GRF pmax pmax
comp=Z,268nm,2.0s,mb5.5
GRF MLR MLR
comp=Z,1μm,21.8s,MS4.7
CHMS Chumysh 42.50 225 P **P** **08 42 58.1 +1.4**
SNR=6.5
TKM2 Tokmak 2 42.51 224 P **P** **08 42 58.5 +1.7**
SNR=17
TKM2 Tokmak 2 42.51 224 *e*P **P** **08 42 57.6 +0.8**
comp=Z,115nm,1.4s,mb5.4
TKM2 Tokmak 2 42.51 224 *e*P **P** **08 42 57.6 +0.8**
TKM2 pmax pmax
comp=Z,115nm,1.4s,mb5.4
ERM Erimo 42.58 149⇓ *e*P **P** **08 42 56.1 -1.3**
ERM pmax pmax
comp=E,48nm,1.7s,mb5.0
ABH Alteburg 42.64 295 *e*P **P** **08 42 58.8 +1.0**
KECS Kecovo 42.66 282 *e*P **P** **08 42 59.1 +1.2**
comp=Z,18nm,1.7s,mb4.5
KECS Kecovo 42.66 282 *e*P **P** **08 42 59.1 +1.2**
KECS pmax pmax
comp=Z,18nm,1.7s,mb4.5
KECS Kecovo 42.66 282 *e*P **P** **08 42 59.1 +1.2**
FRU Bishkek 42.67 225 *i* P **P** **08 42 50.0 -8.1**
FRU *i* 08 44 40.0
FRU *e* 08 45 08.0
FRU *e*S **S** **08 49 26.0 +5.1**
FRU pmax pmax
comp=Z,200nm,2.0s,mb5.5
FRU MLR MLR
comp=E,3μm,18.0s
GIVF Givet 42.70 297⇑ *i*P **P** **08 42 58.8 +0.6**
comp=E,327nm,1.9s,mb5.4
GIVF Givet 42.70 297⇑ *i*P **P** **08 42 58.8 +0.6**
comp=E,164nm,1.9s,mb5.4
GIVF Givet 42.70 297⇑ *i*P **P** **08 42 58.8 +0.6**
GIVF pmax pmax
comp=Z,164nm,1.9s,mb5.4
DOU Dourbes 42.73 298 P **P** **08 42 57.4 -1.1**
comp=Z,35nm,2.4s,mb4.7
KK31 Karatay Array 42.74 230 *i* P **P** **08 42 58.3 -0.4**
KK31 pmax pmax
comp=Z,84nm,1.4s,mb5.3
KHC Kasperske Hory 42.76 289 *e*P **P** **08 42 58.8 +0.1**
comp=Z,113nm,2.0s,mb5.2
KHC Kasperske Hory 42.76 289 *e*P **P** **08 42 59.2 +0.4**
KHC *e* 08 43 05.8
KHC *e* 08 44 48.6
KHC *e*S **S** **08 49 22.2 +0.2**
KHC MLR MLR
comp=Z,2μm,21.0s,MS4.9
KHC Kasperske Hory 42.76 289 *e*P **P** **08 42 59.2 +0.4**
KHC *e*pP pP 08 43 05.8 +3.9
KHC *e*PP PP 08 44 48.6 +11
KHC *e*S **S** **08 49 22.2 +0.2**
KHC AMS AMS 09 04 30.0
comp=Z,2μm,21.0s
TRPA Tarpa 42.78 280⇑ *i*P **P** **08 42 59.4 +0.5**
TOD Tromm 42.79 293 *e*P **P** **08 42 59.9 +0.9**
BAIF Baives 42.80 298⇑ *i*P **P** **08 42 59.7 +0.6**
comp=Z,403nm,1.9s,mb5.5
BAIF Baives 42.80 298⇑ *i*P **P** **08 42 59.7 +0.6**
comp=Z,201nm,1.9s,mb5.5
BAIF Baives 42.80 298⇑ *i*P **P** **08 42 59.7 +0.6**
BAIF pmax pmax
comp=Z,201nm,1.9s,mb5.5
WET Wettzell 42.82 289 *e*P **P** **08 42 59.9 +0.6**
comp=Z,101nm,2.1s,mb5.2
WET Wettzell 42.82 289 *e*P **P** **08 42 59.9 +0.6**
WET pmax pmax
comp=Z,101nm,2.1s,mb5.2
KBK Karagaybulak 42.82 225 P **P** **08 43 01.2 +1.9**
SNR=9.2
VYHS Vyhne 42.83 284 *e*P **P** **08 42 59.9 +0.6**
comp=Z,52nm,1.9s,mb4.9
VYHS *e* 08 44 50.6
VYHS Vyhne 42.83 284 *e*P **P** **08 42 59.9 +0.6**
VYHS *e* 08 44 50.6
VYHS pmax pmax
comp=Z,52nm,1.9s,mb4.9
VYHS Vyhne 42.83 284 *e*P **P** **08 42 59.9 +0.6**
VYHS *e*PP PP 08 44 50.5 +12
RUP Ruppelstein 42.87 295 *e*P **P** **08 43 00.7 +1.1**
AAK Ala-Archa 42.88 225 P **P** **08 43 00.4 +0.6**
comp=Z,240nm,1.2s,mb5.8,SNR=15
AAK Ala-Archa 42.88 225 P **P** **08 43 00.6 +0.8**
SNR=7.1
AAK Ala-Archa 42.88 225 *e*P **P** **08 43 00.6 +0.7**
comp=Z,84nm,1.3s,mb5.3
AAK Ala-Archa 42.88 225 P **P** **08 43 00.2 +0.3**
comp=Z,3.8nm,0.4s,mb4.5,baz=280,slow=2.0,SNR=18
AAK PcP PcP 08 44 50.0 -0.4
comp=Z,10nm,0.9s,baz=273,slow=3.2,SNR=4.0
AAK LR LR 09 02 46.0
comp=Z,2μm,18.6s,MS4.9,baz=6.4,slow=39
AAK Ala-Archa 42.88 225*d* iP **P** **08 42 59.6 -0.2**
AAK pmax pmax
comp=Z,33nm,1.7s,mb4.8
AAK Ala-Archa 42.88 225 P **P** **08 43 00.9 +1.1**
comp=Z,232nmcomp=Z,14nm,1.7s,mb4.4
EKS2 Erkin-Say 42.91 226 P **P** **08 43 01.4 +1.4**
SNR=15
EKS2 Erkin-Say 42.91 226 *e*P **P** **08 43 00.5 +0.5**
comp=Z,46nm,1.3s,mb5.0
HHC Hu-ho-hao-te 42.95 184 *e*P **P** **08 43 00.8 +0.4**
HHC pP pP 08 43 04.9 +1.4
HHC sP sP 08 43 07.9 +3.2
HHC PP PP 08 44 43.1 +3.3
HHC S **S** **08 49 23.0 -2.0**
HHC sS sS 08 49 31.4 +1.3
HHC SS SS 08 52 28.8 -7.4
HHC ScS ScS 08 52 59.3 -1.2
HHC pmax pmax
comp=Z,28nm,1.3s,mb4.8
HHC pmax pmax
comp=Z,280nm,5.0s
HHC LR LR
comp=N,940nm,13.2s,MS5.0
HHC LR LR
comp=E,870nm,10.4s,MS5.0
HHC LR LR
comp=Z,1μm,16.5s
BUR08 Bucovina Ar. S 42.97 277 *e*P **P** **08 43 00.7 +0.3**
BUR01 Bucovina Ar. S 42.99 277 P **P** **08 43 00.6 -0.1**
BURAR Bucovina Array 42.99 277⇑ P **P** **08 43 01.0 +0.3**
BURAR Bucovina Array 42.99 277⇑ *i*P **P** **08 43 01.0 +0.3**
WLF Walferdange 43.00 296 *e*P **P** **08 43 01.3 +0.6**
comp=Z,75nm,1.6s,mb5.2
GEC2 GERESS Array S 43.03 289 *e*P **P** **08 43 01.3 +0.4**
comp=Z,135nm,2.0s,mb5.3
GEC2 GERESS Array S 43.03 289 *e*P **P** **08 43 01.3 +0.4**
GEC2 pmax pmax
comp=Z,135nm,2.0s,mb5.3
ULHL Ulahol 43.13 223 P **P** **08 43 03.2 +1.4**
SNR=6.1
KIS Kishinev 43.20 273 *e*PP PP 08 44 40.0 -2.4
KIS Kishinev 43.20 273 *e*PPP 08 45 06.0
KIS *e*S **S** **08 49 30.0 +1.4**
KIS *e*SS SS 08 52 40.0 -0.9

KIS eSSS 08 53 42.0
KIS LRM 09 02 40.0
comp=Z,1µm,14.0s
KIS Kishinev 43.20 273 eP **P** **08 43 00.0 -2.4**
KIS e 08 44 40.0
KIS eS **S** **08 49 30.0 +1.4**
KIS eSS SS 08 52 40.0 -0.9
KIS MLR MLR
comp=Z,2µm,16.0s,MS5.2
KIS MLR MLR
comp=N,2µm,18.0s,MS5.3
KIS MLR MLR
comp=E,1µm,14.0s,MS5.3
KIS MLR MLR
comp=Z,3µm,16.0s
PSZ Piszkesteto 43.28 282 eP **P** **08 43 03.4 +0.4**
comp=Z,175nm,1.9s,mb5.5
PSZ Piszkesteto 43.28 282 P **P** **08 43 04.1 +1.1**
PSZ Piszkesteto 43.28 282⇓ iP **P** **08 43 03.2 +0.2**
PSZ Piszkesteto 43.28 282⇑ eP **P** **08 43 04.1 +1.1**
UCH Uchtor 43.28 225 P **P** **08 43 05.4 +2.3**
SNR=20
UCH Uchtor 43.28 225 eP **P** **08 43 04.7 +1.6**
ZST Bratislava 43.31 285 eP **P** **08 43 04.7 +1.5**
comp=Z,104nm,1.9s,mb5.2
ZST Bratislava 43.31 285 eP **P** **08 43 04.7 +1.5**
ZST pmax pmax
comp=Z,104nm,1.9s,mb5.2
ZST Bratislava 43.31 285 eP **P** **08 43 04.7 +1.5**
KZA Kyzart 43.37 224 P **P** **08 43 05.9 +2.1**
SNR=22
AML Almayashu 43.44 226 P **P** **08 43 07.0 +2.6**
SNR=16
AML Almayashu 43.44 226 eP **P** **08 43 05.5 +1.1**
comp=Z,104nm,1.4s,mb5.4
LANF Langenberg 43.51 294 eP **P** **08 43 05.5 +0.7**
CONA Conrad Observa 43.70 286⇓ iP **P** **08 43 06.4 0.0**
comp=Z,53nm,1.6s,mb5.0,SNR=15
BJI Beijing 43.74 179 P **P** **08 43 06.9 +0.1**
BJI sP sP 08 43 11.1 0.0
BJI PP PP 08 44 48.4 +0.1
BJI S **S** **08 49 38.8 +2.2**
BJI sS sS 08 49 42.6 +0.9
BJI pmax pmax
comp=Z,83nm,1.8s,mb5.2
BJI LR LR
comp=N,400nm,20.7s,MS4.9
BJI LR LR
comp=E,1µm,19.0s,MS4.9
BJI LR LR
comp=Z,870nm,18.6s,MS4.7
BJT Baijiatuau 43.77 179 eP **P** **08 43 07.5 +0.5**
comp=Z,99nm,1.1s,mb5.5
BJT Baijiatuau 43.77 179 eP **P** **08 43 07.5 +0.5**
BJT pmax pmax
comp=Z,99nm,1.1s
BUD Budapest 43.80 283⇑ eP **P** **08 43 07.6 +0.4**
SOP Sopron 43.87 286⇑ eP **P** **08 43 08.9 +1.1**
TESR 43.92 276 ⇑P **P** **08 43 08.2 0.0**
TESR 43.92 276⇑ iP **P** **08 43 08.2 0.0**
MOA Molln 43.95 288⇑ iP **P** **08 43 08.3 -0.1**
comp=Z,56nm,1.5s,mb5.1
FUR Furstenfeldbru 43.95 291 eP **P** **08 43 08.8 +0.4**
comp=Z,120nm,1.8s,mb5.3
FUR Furstenfeldbru 43.95 291 eP **P** **08 43 08.8 +0.4**
FUR pmax pmax
comp=Z,120nm,1.8s,mb5.3
DRGR 44.08 279 P **P** **08 43 10.2 +0.7**
DRGR 44.08 279⇓ iP **P** **08 43 10.2 +0.7**
BFO Black Forest 44.10 294 eP **P** **08 43 09.8 +0.2**
comp=Z,92nm,2.0s,mb5.2
BFO Black Forest 44.10 294 eP **P** **08 43 09.8 +0.2**
BFO pmax pmax
comp=Z,92nm,2.0s,mb5.2
CDF Champ du Feu 44.12 295⇑ iP **P** **08 43 10.5 +0.7**
comp=Z,152nm,1.5s,mb5.2
CDF Champ du Feu 44.12 295⇑ iP **P** **08 43 10.5 +0.7**
comp=Z,76nm,1.5s,mb5.2
CDF Champ du Feu 44.12 295⇑ iP **P** **08 43 10.5 +0.7**
CDF pmax pmax
comp=Z,76nm,1.5s,mb5.2
MEZF Maizieres J'vi 44.26 297⇑ iP **P** **08 43 11.6 +0.8**
SPAK Spaichingen-Ko 44.27 293 eP **P** **08 43 11.8 +0.8**
ECH Echery 44.33 295 eP **P** **08 43 12.0 +0.6**
ECH Echery 44.33 295 eP **P** **08 43 11.2 -0.2**
comp=Z,176nm,2.0s,mb5.4
ECH Echery 44.33 295 eP **P** **08 43 11.2 -0.2**
ECH pmax pmax
comp=Z,176nm,2.0s,mb5.4
LIBD Limburg 44.35 294 eP **P** **08 43 12.8 +1.2**
ARSA Arzberg 44.41 286⇓ iP **P** **08 43 12.4 +0.3**
comp=Z,24nm,1.8s,mb4.6,SNR=5.4
ANN Anapa 44.41 264 c iP **P** **08 43 11.8 -0.3**
ANN e 08 44 56.7
ANN eS **S** **08 49 45.9 -0.4**
ANN eSS SS 08 53 11.8 +7.2
ANN pmax pmax
comp=Z,87nm,1.6s,mb5.2
THEF They Montfort 44.44 296 eP **P** **08 43 12.8 +0.5**
FLN La Foliniere 44.54 302⇑ iP **P** **08 43 12.9 -0.2**
comp=Z,255nm,1.5s,mb5.5
FLN eMLR MLR
comp=Z,650nm,19.2s,MS4.3
FLN La Foliniere 44.54 302⇑ iP **P** **08 43 12.9 -0.2**
comp=Z,127nm,1.5s,mb5.5
FLN LR LR
comp=Z,650nm,19.3s,MS4.6
FLN La Foliniere 44.54 302⇑ iP **P** **08 43 12.9 -0.2**
FLN pmax pmax
comp=Z,127nm,1.5s,mb5.5
FLN MLR MLR
comp=Z,650nm,19.3s,MS4.6
VRI Vrincioaia 44.55 275 P **P** **08 43 13.7 +0.5**
VRI Vrincioaia 44.55 275⇓ iP **P** **08 43 13.7 +0.5**
PLOR Plostina 44.58 275 P **P** **08 43 13.8 +0.4**
PLOR Plostina 44.58 275⇑ iP **P** **08 43 13.7 +0.3**
FELD Feldberg im Sc 44.58 294 eP **P** **08 43 13.9 +0.5**
HAU Haudompre 44.62 295 eP **P** **08 43 14.3 +0.6**
comp=Z,115nm,1.4s,mb5.2
HAU eMLR MLR
comp=Z,638nm,20.2s,MS4.2
HAU Haudompre 44.62 295 eP **P** **08 43 14.3 +0.6**
comp=Z,58nm,1.4s,mb5.2
HAU LR LR
comp=Z,640nm,20.3s,MS4.5
HAU Haudompre 44.62 295 eP **P** **08 43 14.3 +0.6**
HAU pmax pmax
comp=Z,58nm,1.4s,mb5.2
HAU MLR MLR
comp=Z,640nm,20.3s,MS4.5
SIM Simferopol' 44.63 268 eP **P** **08 43 14.0 +0.1**
SIM e 08 45 00.0
SIM eS **S** **08 49 48.0 -1.5**
SIM eSS SS 08 53 14.0 +5.1
SIM pmax pmax
comp=Z,50nm,7.3s
SIM pmax pmax
comp=Z,100nm,9.4s
SIM MLR MLR
comp=Z,3µm,22.8s,MS5.1
GTA Gaotai 44.63 197 eP **P** **08 43 14.3 +0.3**
GTA pP pP 08 43 18.8 +1.7
GTA sP sP 08 43 21.8 +3.5
GTA S **S** **08 49 51.3 +1.7**
GTA sS sS 08 49 59.0 +4.3
GTA SS SS 08 53 02.8 -6.3
GTA pmax pmax
comp=Z,19nm,2.1s,mb4.6
GTA pmax pmax
comp=Z,430nm,5.1s
GTA LR LR
comp=N,2µm,16.6s
GTA LR LR
comp=E,2µm,11.6s
GTA LR LR
comp=Z,2µm,16.3s,MS5.2
KIV Kislovodsk 44.67 259 P **P** **08 43 14.8 +0.6**
comp=Z,359nm,1.1s,mb6.1,SNR=11
KIV Kislovodsk 44.67 259 eP **P** **08 43 14.2 0.0**
comp=Z,95nm,1.2s,mb5.5
KIV Kislovodsk 44.67 259 eP **P** **08 43 14.5 +0.3**
KIV e 08 44 56.1
KIV e 08 44 58.5
KIV eS **S** **08 49 48.0 -2.0**
KIV eSS SS 08 53 10.1 +0.6

KIV pmax pmax
comp=Z,125nm,3.6s
KIV pmax pmax
comp=Z,78nm,1.1s,mb5.5
KIV MLR MLR
comp=Z,710nm,16.0s,MS4.7
LDF La Druitiere 44.67 302⇑ iP **P** **08 43 13.9 -0.2**
comp=Z,83nm,1.5s,mb5.1
LDF La Druitiere 44.67 302⇑ iP **P** **08 43 13.9 -0.2**
comp=Z,42nm,1.5s,mb5.0
LDF La Druitiere 44.67 302⇑ iP **P** **08 43 13.9 -0.2**
LDF pmax pmax
comp=Z,42nm,1.5s,mb5.0
RETA Reutte 44.68 291⇑ ipP pP 08 43 15.3 -2.0
comp=Z,42nm,2.1s
MOF Molkenrain 44.69 295 eP **P** **08 43 14.8 +0.5**
HINF Hinteralfeld 44.76 295⇑ iP **P** **08 43 15.3 +0.5**
comp=Z,176nm,1.8s,mb5.3
HINF Hinteralfeld 44.76 295⇑ iP **P** **08 43 15.3 +0.5**
comp=Z,88nm,1.8s,mb5.3
HINF Hinteralfeld 44.76 295⇑ iP **P** **08 43 15.3 +0.5**
HINF pmax pmax
comp=Z,88nm,1.8s,mb5.3
WTTA Wattenberg 44.81 290⇑ ipP pP 08 43 15.9 -2.5
comp=Z,76nm,1.6s,SNR=14
KBA Koelnbreinsper 44.81 289⇓ ipP pP 08 43 16.1 -2.3
comp=Z,100nm,1.4s,SNR=20
A05A Maple Falls 44.90 52 ⇓P **P** **08 43 15.5 -0.5**
baz=45,SNR=9.1
DL2 Dalian 44.92 173 P **P** **08 43 04.4 -12**
DL2 S **S** **08 49 38.1 -16**
DL2 SS SS 08 53 09.3 -5.3
DL2 pmax pmax
comp=Z,20nm,1.8s,mb4.7
DL2 pmax pmax
comp=Z,230nm,12.1s
DL2 LR LR
comp=N,210nm,19.8s
DL2 LR LR
comp=E,660nm,13.6s
DL2 LR LR
comp=Z,570nm,11.6s
GRR Gorron 44.94 302⇑ iP **P** **08 43 16.1 -0.2**
comp=Z,280nm,1.7s,mb5.5
GRR Gorron 44.94 302⇑ iP **P** **08 43 16.1 -0.2**
comp=Z,140nm,1.7s,mb5.5
GRR Gorron 44.94 302⇑ iP **P** **08 43 16.1 -0.2**
GRR pmax pmax
comp=Z,140nm,1.7s,mb5.5
DAVA Damuels 44.97 292⇑ ipP pP 08 43 17.5 -2.1
comp=Z,60nm,1.7s,SNR=8.0
MLR Muntele Rosu 45.01 276 P **P** **08 43 17.7 +0.8**
comp=Z,9.1nm,1.0s,mb4.5,baz=352,slow=7.0,SNR=13
SOKA Soboth 45.03 287⇑ ipP pP 08 43 17.6 -2.5
comp=Z,40nm,1.5s
BBS Basel-Blauen 45.04 294 eP **P** **08 43 18.3 +1.2**
PERS Pernice 45.06 287 i P **P** **08 43 18.1 +0.8**
PERS eS **S** **08 50 07.7 +12**
PERS eSS SS 08 53 29.4 +12
PKSM Moragy 45.10 283 ⇑P **P** **08 43 18.3 +0.7**
PKSM Moragy 45.10 283 P **P** **08 43 18.5 +0.9**
PKSM Moragy 45.10 283⇑ iP **P** **08 43 18.3 +0.7**
PGC Sidney 45.12 53 eP **P** **08 43 17.7 0.0**
comp=Z,5.9nm,1.3s,mb4.3
MAK Makhachkala 45.13 254 eP **P** **08 43 17.3 -0.5**
MAK e 08 44 57.2
MAK e 08 45 01.6
MAK ePPP 08 45 41.7
MAK eS **S** **08 49 53.4 -3.3**
MAK e 08 53 10.6
MAK eSS SS 08 53 17.6 -0.9
MAK eSSS 08 54 06.4
MAK pmax pmax
comp=Z,173nm,1.3s,mb5.7
FETA Feichten 45.14 291⇑ ipP pP 08 43 19.2 -1.8
comp=Z,31nm,1.5s,SNR=7.6
VOIR 45.16 277 P **P** **08 43 18.9 +0.8**
VOIR 45.16 277⇓ iP **P** **08 43 19.3 +1.2**
VOIR 45.16 277⇓ iP **P** **08 43 19.3 +1.2**
LOMF Lomont 45.22 295 eP **P** **08 43 18.9 +0.4**
ROSF Rostrenen 45.22 304⇑ iP **P** **08 43 18.7 +0.2**
comp=Z,220nm,1.6s,mb5.4
ROSF Rostrenen 45.22 304⇑ iP **P** **08 43 18.7 +0.2**
comp=Z,110nm,1.6s,mb5.4
ROSF Rostrenen 45.22 304⇑ iP **P** **08 43 18.7 +0.2**
ROSF pmax pmax
comp=Z,110nm,1.6s,mb5.4
MYKA Terra Mystica 45.22 288⇓ iP **P** **08 43 18.8 +0.2**
comp=Z,64nm,1.5s,mb5.2
ABTA Abfaltersbach 45.23 289⇓ ipP pP 08 43 19.3 -2.4
comp=Z,36nm,1.8s
SGMF Saint Gilles 45.24 304⇑ iP **P** **08 43 18.7 +0.1**
comp=Z,223nm,1.6s,mb5.5
SGMF Saint Gilles 45.24 304⇑ iP **P** **08 43 18.7 +0.1**
comp=Z,112nm,1.6s,mb5.4
SGMF Saint Gilles 45.24 304⇑ iP **P** **08 43 18.7 +0.1**
SGMF pmax pmax
comp=Z,112nm,1.6s,mb5.5
SOC Sochi 45.36 262 d iP **P** **08 43 18.5 -1.2**
SOC e 08 45 03.6
SOC ePPP 08 45 45.2
SOC eS **S** **08 49 57.1 -2.9**
SOC eSS SS 08 53 13.6 -9.3
SOC pmax pmax
comp=Z,9.0nm,0.4s,mb5.0
SOC MLR MLR
comp=Z,2µm,17.0s,MS5.2
BZS Buzias 45.36 280 P **P** **08 43 20.4 +0.7**
BZS Buzias 45.36 280⇓ iP **P** **08 43 20.4 +0.7**
B06A Marblemount 45.43 51 ⇓P **P** **08 43 19.4 -0.8**
baz=45
GZR Gura Zlata 45.46 279 P **P** **08 43 21.9 +1.5**
GZR Gura Zlata 45.46 279⇓ iP **P** **08 43 21.9 +1.5**
DAVOX Davos/Dischmat 45.47 292 P **P** **08 43 21.1 +0.6**
comp=Z,9.5nm,1.0s,mb4.6,baz=358,slow=9.1,SNR=16
DAVOX LR LR 09 06 40.8
comp=Z,835nm,18.6s,MS4.7,baz=7.1,slow=42
RPW Rockport 45.49 52 eP **P** **08 43 20.2 -0.5**
A12A Yaak River Ran 45.50 46 ⇑P **P** **08 43 20.9 +0.2**
baz=45,SNR=11
WALA Waterton Lakes 45.52 44 eP **P** **08 43 21.2 +0.4**
comp=Z,1.9nm,1.2s,mb3.9
LOR Lormes 45.60 298⇑ iP **P** **08 43 21.4 -0.1**
comp=Z,244nm,1.6s,mb5.6
LOR eMLR MLR
comp=Z,1µm,18.8s,MS4.6
LOR Lormes 45.60 298⇑ iP **P** **08 43 21.4 -0.1**
comp=Z,122nm,1.6s,mb5.6
LOR LR LR
comp=Z,1µm,18.8s,MS4.9
LOR Lormes 45.60 298⇑ iP **P** **08 43 21.4 -0.1**
LOR pmax pmax
comp=Z,122nm,1.6s,mb5.6
LOR MLR MLR
comp=Z,1µm,18.8s,MS4.9
A13A Flathead Natio 45.60 45 ⇓P **P** **08 43 21.4 -0.2**
baz=45
QUIF Quistinic 45.63 304⇑ iP **P** **08 43 21.9 +0.2**
comp=Z,660nm,1.9s,mb5.9
QUIF Quistinic 45.63 304⇑ iP **P** **08 43 21.9 +0.2**
comp=Z,330nm,1.9s,mb5.9
QUIF Quistinic 45.63 304⇑ iP **P** **08 43 21.9 +0.2**
QUIF pmax pmax
comp=Z,330nm,1.9s,mb5.9
A14A Double T Ranch 45.64 44 ⇓P **P** **08 43 21.7 -0.2**
baz=45,SNR=41
A15A Johnson Ranch, 45.69 43 ⇓P **P** **08 43 21.6 -0.6**
baz=46,SNR=30
CRNS Crni Vrh 45.70 287 i P **P** **08 43 22.6 +0.3**
LJU Ljubljana 45.71 287 eP **P** **08 43 23.6 +1.2**
JCW Jim Creek 45.71 52 eP **P** **08 43 20.3 -2.1**
comp=Z,21nm,1.2s,mb5.0
HYF Humbligny 45.72 299 eP **P** **08 43 22.8 +0.3**
TIRR Tirgusor 45.76 273 eP **P** **08 43 22.7 -0.1**
comp=Z,90nm,1.8s,mb5.4
TIRR Tirgusor 45.76 273 P **P** **08 43 22.8 0.0**
TIRR Tirgusor 45.76 273⇓ iP **P** **08 43 22.5 -0.3**
B08A Colville Reser 45.77 50 ⇑P **P** **08 43 22.4 -0.5**
baz=46,SNR=45
VOY Vojsko 45.79 288 eP **P** **08 43 22.6 -0.4**
A16A West Butte Ran 45.80 42 ⇑P **P** **08 43 21.9 -1.2**
baz=46,SNR=20
A16A ⇓S **S** **08 50 08.3 +2.0**
baz=46
SSF Saint Saulge 45.84 298⇑ iP **P** **08 43 23.5 +0.1**
comp=Z,282nm,1.9s,mb5.6

SSF Saint Saulge 45.84 298⇑ iP **P** **08 43 23.5 +0.1**
comp=Z,141nm,1.9s,mb5.6
SSF Saint Saulge 45.84 298⇑ iP **P** **08 43 23.5 +0.1**
SSF pmax pmax
comp=Z,141nm,1.9s,mb5.6
KSH Kashi 45.86 223 eP **P** **08 43 26.8 +3.1**
KSH epP pP 08 43 31.3 +4.5
KSH esP sP 08 43 34.1 +6.1
KSH eS **S** **08 50 10.5 +3.2**
KSH pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KSH pmax pmax
comp=Z,230nm,3.5s
KSH LR LR
comp=N,2µm,12.2s,MS5.3
KSH LR LR
comp=E,1µm,10.8s,MS5.3
KSH LR LR
comp=Z,2µm,12.8s,MS5.2
A17A Triple J Farms 45.87 41 ⇓P **P** **08 43 22.8 -0.9**
baz=46,SNR=22
JAVS Javornik 45.91 288 i P **P** **08 43 24.2 +0.2**
JAVS eS **S** **08 50 21.1 +13**
A18A Metzger Ranch, 45.96 41 ⇓P **P** **08 43 23.6 -0.7**
baz=46,SNR=16
B12A Libby 45.97 46 ⇓P **P** **08 43 24.2 -0.2**
baz=46,SNR=6.9
CABF La Chapelle 46.02 295⇑ iP **P** **08 43 25.8 +0.9**
comp=Z,287nm,1.8s,mb5.6
CABF La Chapelle 46.02 295⇑ iP **P** **08 43 25.8 +0.9**
comp=Z,144nm,1.8s,mb5.6
CABF La Chapelle 46.02 295⇑ iP **P** **08 43 25.8 +0.9**
CABF pmax pmax
comp=Z,144nm,1.8s,mb5.6
NEW Newport 46.05 47 eP **P** **08 43 25.5 +0.5**
comp=Z,92nm,1.4s,mb5.5
NEW Newport 46.05 47 eP **P** **08 43 25.5 +0.4**
NEW pmax pmax
comp=Z,93nm,1.4s
TIY Taiyuan 46.08 183 eP **P** **08 43 24.6 -0.8**
TIY pP pP 08 43 29.6 +1.1
TIY sP sP 08 43 31.9 +2.2
TIY PP PP 08 45 11.0 -2.2
TIY S **S** **08 49 59.6 -11**
TIY ScS ScS 08 53 19.1 -1.3
TIY pmax pmax
comp=Z,260nm,4.4s
TIY LR LR
comp=N,450nm,12.3s
TIY LR LR
comp=E,630nm,9.7s
TIY LR LR
comp=Z,1µm,22.0s
AVF Avril sur Loir 46.12 298⇑ iP **P** **08 43 25.7 +0.1**
comp=Z,384nm,1.9s,mb5.7
AVF Avril sur Loir 46.12 298⇑ iP **P** **08 43 25.7 +0.1**
comp=Z,192nm,1.9s,mb5.7
AVF Avril sur Loir 46.12 298⇑ iP **P** **08 43 25.7 +0.1**
AVF pmax pmax
comp=Z,192nm,1.9s,mb5.7
B13A Whitefish 46.15 45 ⇑P **P** **08 43 25.4 -0.5**
baz=46,SNR=20
B13A ⇑S **S** **08 50 13.4 +2.1**
baz=46
BOJS Bojanci 46.16 286 eP **P** **08 43 26.2 +0.2**
BOJS i 08 43 32.1
BOJS eS **S** **08 50 13.5 +2.0**
BOJS eSS SS 08 53 40.2 +4.1
SMF Signal de Mont 46.22 297⇑ iP **P** **08 43 26.3 -0.1**
comp=Z,262nm,1.8s,mb5.6
SMF Signal de Mont 46.22 297⇑ iP **P** **08 43 26.3 -0.1**
comp=Z,131nm,1.8s,mb5.6
SMF Signal de Mont 46.22 297⇑ iP **P** **08 43 26.3 -0.1**
SMF pmax pmax
comp=Z,131nm,1.8s,mb5.6
GNW Green Mountain 46.26 53 eP **P** **08 43 27.4 +0.7**
comp=Z,46nm,1.8s,mb5.1
B14A Marquette Ranc 46.26 44 ⇑P **P** **08 43 26.3 -0.4**
baz=46,SNR=16
B16A M & M Farms, S 46.33 42 ⇑P **P** **08 43 26.6 -0.7**
baz=46,SNR=34
B16A ⇑S **S** **08 50 15.4 +1.6**
baz=46
NLWA Neilton Lookou 46.33 54 eP **P** **08 43 28.8 +1.5**
comp=Z,39nm,1.1s,mb5.2
B15A Bradely Ranch, 46.36 43 ⇑P **P** **08 43 26.6 -0.9**
baz=46,SNR=34
BGF Bois d'Agland 46.40 298⇑ iP **P** **08 43 28.1 +0.3**
comp=Z,439nm,1.7s,mb5.8
BGF Bois d'Agland 46.40 298⇑ iP **P** **08 43 28.1 +0.3**
comp=Z,220nm,1.7s,mb5.8
BGF Bois d'Agland 46.40 298⇑ iP **P** **08 43 28.1 +0.3**
BGF pmax pmax
comp=Z,220nm,1.7s,mb5.8
C09A Chrisman Ranch 46.41 49 ⇓P **P** **08 43 27.3 -0.6**
baz=46,SNR=9.9
ETW Entiat 46.43 51 P **P** **08 43 28.0 -0.1**
B18A Beardsley Farm 46.49 41 ⇓P **P** **08 43 27.6 -0.9**
baz=46,SNR=22
KSRS Korea Array 46.49 166 P **P** **08 43 27.9 -0.8**
comp=Z,5.1nm,1.1s,mb4.3,baz=357,slow=6.4,SNR=12
KSRS PcP PcP 08 45 04.0 +1.1
comp=Z,0.4nm,0.3s,baz=344,slow=4.5,SNR=5.0
KSRS LR LR 09 04 50.7
comp=Z,687nm,18.3s,MS4.6,baz=1,8,slow=38
B17A L&G Farms, Che 46.52 42 ⇑P **P** **08 43 27.9 -0.8**
baz=46,SNR=54
PSN Preselentsi 46.55 273 i P **P** **08 43 29.6 +0.6**
TBLG Delisi 46.64 256 eP **P** **08 43 30.1 +0.3**
TBLG Delisi 46.64 256 P **P** **08 43 30.1 +0.3**
MFF Saint Martin d 46.65 301⇑ iP **P** **08 43 30.0 +0.2**
comp=Z,226nm,1.5s,mb5.6
MFF Saint Martin d 46.65 301⇑ iP **P** **08 43 30.0 +0.2**
comp=Z,113nm,1.5s,mb5.6
MFF Saint Martin d 46.65 301⇑ iP **P** **08 43 30.0 +0.2**
MFF pmax pmax
comp=Z,113nm,1.5s,mb5.6
BSMT Bassoo Peak 46.65 45 eP **P** **08 43 30.0 +0.2**
MTA Mtatsminda 46.67 256 P **P** **08 43 30.6 +0.5**
YBMT Yellow Bay 46.70 45 eP **P** **08 43 30.7 +0.5**
D05A Enumclaw 46.70 52 ⇑P **P** **08 43 30.3 +0.1**
baz=46,SNR=11
TCF Toulx Ste Croi 46.73 299⇑ iP **P** **08 43 30.5 +0.1**
comp=Z,203nm,1.6s,mb5.5
TCF Toulx Ste Croi 46.73 299⇑ iP **P** **08 43 30.5 +0.1**
comp=Z,101nm,1.6s,mb5.5
TCF Toulx Ste Croi 46.73 299⇑ iP **P** **08 43 30.5 +0.1**
TCF pmax pmax
comp=Z,101nm,1.6s,mb5.5
C12B Naegeli Ranch, 46.73 46 ⇑P **P** **08 43 30.1 -0.3**
baz=46,SNR=31
OD2 Odessa Site #2 46.78 49 eP **P** **08 43 30.6 -0.2**
OD2 ePcP PcP 08 45 06.0 +2.2
JTMT Jette 46.79 45 eP **P** **08 43 31.1 +0.2**
DGMT Dagmar 46.80 36 eP **P** **08 43 31.0 +0.1**
comp=Z,139nm,1.2s,mb5.8
C13A Hot Springs 46.84 45 ⇑P **P** **08 43 31.3 0.0**
baz=47,SNR=28
DGRG David-gareji 46.85 256 P **P** **08 43 28.5 -3.0**
EGMT Eagleton 46.86 41 ⇓P **P** **08 43 30.6 -0.8**
baz=47,SNR=19
EGMT Eagleton 46.86 41 eP **P** **08 43 31.3 -0.1**
comp=Z,152nm,1.6s,mb5.7
C15A Salmond Ranch, 46.89 43 ⇓P **P** **08 43 31.4 -0.3**
baz=47,SNR=46
C16A Fuhringer Ranc 46.93 43 ⇓P **P** **08 43 31.1 -0.9**
baz=47,SNR=12
FMW Mount Fremont 46.98 52 P **P** **08 43 32.2 -0.2**
DIVS Divibare 47.04 281 P **P** **08 43 33.1 +0.2**
LPL La Plagne 47.04 295⇑ iP **P** **08 43 34.1 +1.2**
comp=Z,144nm,1.7s,mb5.3
LPL La Plagne 47.04 295⇑ iP **P** **08 43 34.1 +1.2**
comp=Z,72nm,1.7s,mb5.3
LPL La Plagne 47.04 295⇑ iP **P** **08 43 34.1 +1.2**
LPL pmax pmax
comp=Z,72nm,1.7s,mb5.3
SWMT Swartz Lake 47.05 45 eP **P** **08 43 33.6 +0.7**
LPG La Plagne 47.06 294⇑ iP **P** **08 43 34.4 +1.4**
comp=Z,158nm,1.7s,mb5.4
LPG La Plagne 47.06 294⇑ iP **P** **08 43 34.4 +1.4**
comp=Z,79nm,1.7s,mb5.4
LPG La Plagne 47.06 294⇑ iP **P** **08 43 34.4 +1.4**
LPG pmax pmax
comp=Z,79nm,1.7s,mb5.4
D08A Wollman Farm, 47.10 49 ⇓P **P** **08 43 32.5 -0.8**
baz=47,SNR=6.5

PRD **Provadia** 47.11 274 *i* P P 08 43 34.2 +0.8
LON **Longmire** 47.15 52 *e*P P 08 43 34.3 +0.6
comp=Z,50nm,1.2s,mb5.3
LON **Longmire** 47.15 52 *e*P P 08 43 34.3 +0.6
LON pmax pmax
comp=Z,50nm,1.2s,mb5.3
C17A **Wharram Farm,** 47.17 42 ⇓P P 08 43 32.8 -1.1
baz=47,SNR=22
PYM **Petit Puy Mans** 47.18 298 *e*P P 08 43 34.6 +0.6
E03A **Lebam** 47.20 54 ⇓P P 08 43 34.0 -0.1
baz=47,SNR=14
SZH **Strazhica** 47.21 275 *i* P P 08 43 33.5 -0.7
WPW **White Pass** 47.23 52 P P 08 43 34.8 +0.5
PVL **Pavlikeni** 47.32 276 *i* P P 08 43 35.6 +0.5
SLMT **Seeley Lake** 47.35 44 *e*P P 08 43 35.7 +0.4
MPEP **Malo Peshtene** 47.36 278 *i* P P 08 43 34.7 -0.7
D12A **Red Ives Fores** 47.40 46 ⇓P P 08 43 35.4 -0.2
baz=47,SNR=29
D13A **Huson** 47.43 45 ⇑P P 08 43 35.5 -0.4
baz=47,SNR=25
AGMN **Agassiz Nation** 47.46 28 *e*P P 08 43 34.6 -1.5
comp=Z,128nm,2.1s,mb5.5
SSB **Saint Sauveur** 47.50 297 *e*P P 08 43 36.2 -0.2
comp=Z,106nm,1.8s,mb5.5
SSB **Saint Sauveur** 47.50 297 *e*P P 08 43 36.2 -0.2
SSB pmax pmax
comp=Z,106nm,1.8s,mb5.5
E07A **Sunnyside** 47.51 50 ⇑P P 08 43 35.8 -0.8
baz=47
D14A **Greenough** 47.51 44 ⇓P P 08 43 36.0 -0.6
baz=47,SNR=43
TIA **Tai'an** 47.57 178 *e*P P 08 43 36.8 -0.3
TIA pmax pmax
comp=Z,70nm,1.6s,mb5.4
D15A **Lincoln** 47.63 43 ⇑P P 08 43 37.5 0.0
baz=47,SNR=30
E08A **Dider Farm, El** 47.65 50 ⇓P P 08 43 37.6 0.0
baz=48,SNR=6.4
D17A **Six Diamond Ra** 47.66 42 ⇓P P 08 43 36.9 -0.7
baz=48,SNR=16
LBL **Lubilhac** 47.67 298 *e*P P 08 43 37.7 -0.1
D18A **Linhart Farms,** 47.68 41 ⇓P P 08 43 37.5 -0.3
baz=48,SNR=25
RSW **Rattlesnake Hi** 47.70 50 *e*P P 08 43 38.8 +0.8
CHMT **Chamberlain Mo** 47.70 44 *e*P P 08 43 38.3 +0.3
E09A **Wood Farm, Sta** 47.70 49 ⇑P P 08 43 37.9 -0.1
baz=48
HAWA **Hanford** 47.70 50 *e*P P 08 43 38.3 +0.3
D16A **Dana Ranch, Ca** 47.71 43 ⇓P P 08 43 37.4 -0.7
baz=48,SNR=21
ORIF **Oris-en-Rattie** 47.72 295⇑*i*P P 08 43 39.1 +0.9
ORIF *e*MLR MLR
comp=Z,703nm,21.8s,MS4.3
MSO **Missoula** 47.73 45 *e*P P 08 43 38.0 -0.2
comp=Z,37nm,1.2s,mb5.3
RJF **Les Rejaudoux** 47.77 299⇑*i*P P 08 43 39.0 +0.4
comp=Z,256nm,1.6s,mb5.7
RJF *e*MLR MLR
comp=Z,872nm,19.2s,MS4.4
RJF **Les Rejaudoux** 47.77 299⇑*i*P P 08 43 39.0 +0.4
comp=Z,128nm,1.6s,mb5.7
RJF LR LR
comp=Z,870nm,19.3s,MS4.7
RJF **Les Rejaudoux** 47.77 299⇑*i*P P 08 43 39.0 +0.4
RJF pmax pmax
comp=Z,128nm,1.6s,mb5.7
RJF MLR MLR
comp=Z,870nm,19.3s,MS4.7
MAJO **Matsushiro** 47.78 155 *e*P P 08 43 39.0 +0.3
MAT **Matsushiro** 47.78 155 P P 08 43 37.5 -1.2
MAT S S 08 50 42.0 +7.2
MJAR **Matsushiro Arr** 47.78 155 P P 08 43 38.5 -0.3
comp=Z,18nm,1.3s,mb5.0,baz=347,slow=6.6,SNR=24
MJAR PcP PcP 08 45 07.8 +0.3
comp=Z,3.9nm,1.2s,baz=11,slow=3.7,SNR=2.7
MJAR LR LR 09 05 58.3
comp=Z,194nm,18.2s,MS4.1,baz=5.0,slow=39
MJAR **Matsushiro Arr** 47.78 155 P P 08 43 38.5 -0.2
MJAR 08 45 07.8
F03A **Seaside** 47.81 54 ⇓P P 08 43 39.0 +0.2
baz=48,SNR=5.6
MBDF **Montbardon** 47.82 294⇑*i*P P 08 43 40.2 +1.3
comp=Z,155nm,1.4s,mb5.5
MBDF **Montbardon** 47.82 294⇑*i*P P 08 43 40.2 +1.3
comp=Z,77nm,1.4s,mb5.5
MBDF **Montbardon** 47.82 294⇑*i*P P 08 43 40.2 +1.3
MBDF pmax pmax
comp=Z,77nm,1.4s,mb5.5
LZH **Lanzhou** 47.83 193 *e*P P 08 43 40.0 +0.8
LZH pP pP 08 43 45.3 +3.0
LZH sP sP 08 43 47.6 +4.1
LZH PcP PcP 08 45 09.4 +1.7
LZH *e*S S 08 50 36.3 +0.7
LZH sS sS 08 50 44.6 +3.9
LZH pmax pmax
comp=Z,47nm,1.2s,mb5.4
LZH pmax pmax
comp=Z,200nm,4.9s
LZH LR LR
comp=N,2μm,14.7s
LZH LR LR
comp=Z,2μm,16.1s,MS5.2
PLE **Pljevlja** 47.87 282⇑*i*P P 08 43 35.5 -3.8
VIVF **Saint-Julien-I** 47.90 296⇑*i*P P 08 43 40.0 +0.4
comp=Z,153nm,1.6s,mb5.5
VIVF **Saint-Julien-I** 47.90 296⇑*i*P P 08 43 40.0 +0.4
comp=Z,76nm,1.6s,mb5.5
VIVF **Saint-Julien-I** 47.90 296⇑*i*P P 08 43 40.0 +0.4
VIVF pmax pmax
comp=Z,76nm,1.6s,mb5.5
HRY **Holter Researc** 48.01 43 *e*P P 08 43 40.5 +0.1
HRY *e*PcP PcP 08 45 09.4 +1.2
EYMN **Ely** 48.03 24 *e*P P 08 43 39.0 -1.6
comp=Z,75nm,2.0s,mb5.4
UPM **Unac-Piva** 48.04 282⇑*i*P P 08 43 38.7 -2.0
UPM **Unac-Piva** 48.04 282⇑*i*P P 08 43 38.7 -2.0
SURF **Saint Ours** 48.06 294 *e*P P 08 43 42.4 +1.6
CAF **Calviac** 48.09 299⇑*i*P P 08 43 41.9 +0.8
comp=Z,244nm,1.9s,mb5.6
CAF **Calviac** 48.09 299⇑*i*P P 08 43 41.9 +0.8
comp=Z,122nm,1.9s,mb5.6
CAF **Calviac** 48.09 299⇑*i*P P 08 43 41.9 +0.8
CAF pmax pmax
comp=Z,122nm,1.9s,mb5.6
E13A **Victor** 48.09 45 ⇑P P 08 43 40.6 -0.5
baz=48,SNR=23
PGB **Panagyurishte** 48.11 277 *i* P P 08 43 40.4 -0.8
E14A **Clinton** 48.18 44 ⇓P P 08 43 41.2 -0.5
baz=48,SNR=22
VTS **Vitosha** 48.18 278 *i* P P 08 43 40.7 -1.0
E16A **East Helena** 48.20 43 ⇑P P 08 43 41.6 -0.3
baz=48,SNR=30
GNI **Garni** 48.20 256 *e*P P 08 43 41.0 -0.9
comp=Z,146nm,1.8s,mb5.7
GNI **Garni** 48.20 256 P P 08 43 43.4 +1.4
comp=Z,4.0nm,0.5s,mb4.7,baz=76,slow=10,SNR=4.8
GNI PP PP 08 45 38.5 +4.5
comp=Z,2.7nm,0.4s,baz=359,slow=9.1,SNR=3.3
GNI LR LR 09 09 20.3
comp=Z,2μm,18.9s,MS5.0,baz=12,slow=43
GNI **Garni** 48.20 256*c* *i*P P 08 43 43.4 +1.4
GNI pmax pmax
comp=Z,42nm,1.7s
LFF **La Frestale** 48.21 300 *e*P P 08 43 42.5 +0.6
E15A **Deer Lodge** 48.23 44 ⇑P P 08 43 42.0 -0.1
baz=48,SNR=51
IVA **Berane** 48.26 281⇑*i*P P 08 43 40.9 -1.5
IVA **Berane** 48.26 281⇑*i*P P 08 43 41.0 -1.4
F10A **Beach Ranch, E** 48.31 48 ⇑P P 08 43 43.3 +0.5
baz=48,SNR=29
LNOR **Lincton Mounta** 48.33 49 *e*P P 08 43 43.1 +0.3
E17A **Martinsdale** 48.33 42 ⇓P P 08 43 42.9 0.0
baz=48,SNR=34
BRY **Bratogost** 48.38 283⇑*i*P P 08 43 40.2 -3.1
NKY **Niksic** 48.42 282⇑*i*P P 08 43 40.6 -3.0
LAO **LASA Array** 48.44 38 *e*P P 08 43 44.0 +0.3
comp=Z,145nm,1.2s,mb5.9
TOUF **Mont Tournerai** 48.48 294 *e*P P 08 43 44.2 +0.2
PVY **Plav** 48.53 281⇑*i*P P 08 43 44.0 -0.4
PVY **Plav** 48.53 281⇑*i*P P 08 43 44.0 -0.4
HOOD **Mount Hood Mea** 48.58 52 *e*P P 08 43 45.1 +0.2
comp=Z,104nm,1.1s,mb5.8
LUCF **Luceram** 48.59 294 *e*P P 08 43 46.6 +1.7
MVIF **Mont Vial** 48.60 294 *e*P P 08 43 47.4 +2.4
SBF **Sospel** 48.61 294 *e*P P 08 43 45.1 +0.1
comp=Z,264nm,1.6s,mb5.7

SBF **Sospel** 48.61 294 *e*P P 08 43 45.1 +0.1
comp=Z,132nm,1.6s,mb5.7
SBF **Sospel** 48.61 294 *e*P P 08 43 45.1 +0.1
SBF pmax pmax
comp=Z,132nm,1.6s,mb5.7
G04A **Mulino** 48.62 53 ⇑P P 08 43 45.2 +0.1
baz=48,SNR=14
SMRF **Simiane la Rot** 48.69 295 *e*P P 08 43 46.1 +0.5
comp=Z,100nm,1.6s,mb5.3
SMRF **Simiane la Rot** 48.69 295 *e*P P 08 43 46.1 +0.5
comp=Z,100nm,1.6s,mb5.6
F12A **Elk City** 48.69 46 ⇓P P 08 43 45.4 -0.2
baz=48,SNR=79
G06A **Carlson Farm,** 48.76 51 ⇓P P 08 43 46.0 -0.1
baz=49,SNR=25
LASF **Ste Croix** 48.76 297⇑*i*P P 08 43 47.3 +1.1
comp=Z,267nm,1.8s,mb5.7
TTG **Podgorica** 48.77 282⇑*i*P P 08 43 43.5 -2.8
TTG **Podgorica** 48.77 282⇑*i*P P 08 43 43.6 -2.7
F14A **Wisdom** 48.79 44 ⇓P P 08 43 46.7 +0.3
baz=49,SNR=6.5
VTHM **Trough** 48.82 51 P P 08 43 47.6 +0.9
F15A **Butte** 48.83 44 ⇑P P 08 43 46.8 +0.1
baz=49,SNR=32
HCY **Herceg Novi** 48.84 283⇑*i*P P 08 43 40.3 -6.5
HCY **Herceg Novi** 48.84 283⇑*i*P P 08 43 40.4 -6.4
LRM **Limekiln Ridge** 48.85 44 *e*P P 08 43 47.4 +0.6
G08A **Pilot Rock** 48.85 50 ⇓P P 08 43 47.2 +0.3
baz=49,SNR=56
KDZ **Kurdali** 48.86 276 *i* P P 08 43 47.3 +0.3
F17A **Fitzpatrick Pl** 48.90 42 ⇓P P 08 43 47.7 +0.4
baz=49,SNR=27
RZN **Rozhen** 48.90 276 *i* P P 08 43 47.6 +0.3
BUM **Brajici-Budva** 48.94 282 *e*P P 08 43 41.8 -5.8
F16A **Kennard Place,** 48.95 43 ⇑P P 08 43 47.2 -0.4
baz=49,SNR=19
F18A **Big Timber** 48.97 41 ⇓P P 08 43 47.6 -0.2
baz=49,SNR=50
SKO **Skopje** 48.98 280 P P 08 43 48.2 +0.3
SKO **Skopje** 48.98 280 P P 08 43 48.2 +0.3
FRF **La Foret Royal** 48.99 294⇑*i*P P 08 43 48.1 +0.2
comp=Z,73nm,1.1s,mb5.3
FRF **La Foret Royal** 48.99 294⇑*i*P P 08 43 48.1 +0.2
comp=Z,36nm,1.1s,mb5.3
FRF **La Foret Royal** 48.99 294⇑*i*P P 08 43 48.1 +0.2
FRF pmax pmax
comp=Z,36nm,1.1s,mb5.3
ABKT **Ailbek** 49.01 242 P P 08 43 48.2 0.0
comp=Z,163nm,1.2s,mb5.9,SNR=10
F19A **Roth Farm, Mol** 49.08 40 ⇑P P 08 43 48.4 -0.2
baz=49,SNR=34
BOZ **Bozeman (W)** 49.08 43 ⇑P P 08 43 48.8 +0.1
baz=49,SNR=77
BOZ **Bozeman (W)** 49.08 43 *e*P P 08 43 49.2 +0.6
comp=Z,42nm,1.1s,mb5.4
BOZ **Bozeman (W)** 49.08 43 *e*P P 08 43 49.2 +0.5
BOZ pmax pmax
comp=Z,42nm,1.1s,mb5.4
GCMT **Greycliff** 49.09 41 *e*P P 08 43 48.9 +0.2
comp=Z,23nm,0.9s,mb5.2
MMB **Musomiste** 49.11 277 *i* P P 08 43 48.7 -0.2
COR **Corvallis** 49.17 54 *e*P P 08 43 48.7 -0.6
comp=Z,287nm,2.1s,mb5.9
COR **Corvallis** 49.17 54 *e*P P 08 43 48.7 -0.6
COR pmax pmax
comp=Z,287nm,2.1s,mb5.9
H04A **Detroit Lake** 49.17 53 ⇓P P 08 43 49.0 -0.3
baz=49,SNR=14
F20A **Billings** 49.19 40 ⇓P P 08 43 48.5 -0.9
baz=49,SNR=10
LMR **La Mourre** 49.23 294 *e*P P 08 43 49.8 0.0
comp=Z,222nm,1.8s,mb5.6
LMR **La Mourre** 49.23 294 *e*P P 08 43 49.8 0.0
comp=Z,111nm,1.8s,mb5.6
LMR **La Mourre** 49.23 294 *e*P P 08 43 49.8 0.0
LMR pmax pmax
comp=Z,111nm,1.8s,mb5.6
ULC **Ulcinj** 49.23 282⇑*i*P P 08 43 44.9 -4.9
DLMT **Dillon** 49.29 44 *e*P P 08 43 50.7 +0.5
comp=Z,49nm,1.4s,mb5.3
G14A **Jackson** 49.34 45 ⇑P P 08 43 50.6 0.0
baz=49
BMO **Blue Mountains** 49.42 48 *e*P P 08 43 51.8 +0.5
comp=Z,22nm,1.0s,mb5.1
G13A **Cobalt** 49.43 45 ⇑P P 08 43 51.2 -0.1
baz=49,SNR=53
G17A **Pierce Place,** 49.48 42 ⇓P P 08 43 52.2 +0.5
baz=49,SNR=20
AQU **L'Aquila** 49.48 288 *e*P P 08 43 53.1 +1.4
AQU **L'Aquila** 49.48 288 ⇑P P 08 43 53.4 +1.7
AQU **L'Aquila** 49.48 288⇑*i*P P 08 43 53.3 +1.6
VIPM **Ingram Point** 49.48 51 P P 08 43 52.7 +1.0
G16A **Moss Hill, Enn** 49.49 43 ⇓P P 08 43 51.9 +0.1
baz=49,SNR=13
G15A **Dillon** 49.50 44 ⇑P P 08 43 51.6 -0.3
baz=49,SNR=36
VAY **Valandovo** 49.50 278 P P 08 43 50.9 -1.0
VAY **Valandovo** 49.50 278 P P 08 43 50.9 -1.0
ALN **Alexandroupoli** 49.54 275 P P 08 43 52.0 -0.2
ALN **Alexandroupoli** 49.54 275 *e*P P 08 43 51.7 -0.5
ALN **Alexandroupoli** 49.54 275 P P 08 43 52.0 -0.2
G18A **Lazy EL Ranch,** 49.57 41 ⇓P P 08 43 51.6 -0.7
baz=49,SNR=14
SRS **Serrai** 49.59 277 P P 08 43 52.2 -0.4
SRS **Serrai** 49.59 277 P P 08 43 52.2 -0.4
KAVA **Kavala** 49.61 276 P P 08 43 52.4 -0.3
KNT **Kendrikon** 49.62 278 P P 08 43 52.6 -0.2
KNT **Kendrikon** 49.62 278 P P 08 43 52.6 -0.2
MTLF **Montolieu** 49.65 298⇑*i*P P 08 43 53.8 +0.8
comp=Z,101nm,1.8s,mb5.3
MTLF **Montolieu** 49.65 298⇑*i*P P 08 43 53.8 +0.8
comp=Z,50nm,1.8s,mb5.2
MTLF **Montolieu** 49.65 298⇑*i*P P 08 43 53.8 +0.8
MTLF pmax pmax
comp=Z,50nm,1.8s,mb5.2
PGF **Pioggiola** 49.75 292 *e*P P 08 43 54.1 +0.3
comp=Z,135nm,1.3s,mb5.5
PGF **Pioggiola** 49.75 292 *e*P P 08 43 54.1 +0.3
comp=Z,68nm,1.3s,mb5.5
PGF **Pioggiola** 49.75 292 *e*P P 08 43 54.1 +0.3
PGF pmax pmax
comp=Z,68nm,1.3s,mb5.5
TIR **Tirane** 49.77 281 *e*P P 08 43 53.9 -0.1
XAN **Xi'an** 49.78 187 P P 08 43 52.4 -1.7
XAN sP sP 08 43 59.1 +0.6
XAN PcP PcP 08 45 14.0 -0.8
XAN PP PP 08 45 46.6 -1.8
XAN S S 08 51 01.1 -1.9
XAN ScS ScS 08 53 42.3 -2.8
XAN SS SS 08 54 33.6 -1.3
XAN pmax pmax
comp=Z,6.0nm,1.4s,mb4.4
XAN pmax pmax
comp=Z,45nm,6.0s
XAN LR LR
comp=N,680nm,16.9s,MS4.8
XAN LR LR
comp=E,260nm,12.2s,MS4.8
XAN LR LR
comp=Z,290nm,16.0s,MS4.4
RLMT **Red Lodge** 49.78 41 ⇑P P 08 43 54.1 +0.1
baz=50,SNR=17
RLMT **Red Lodge** 49.78 41 *e*P P 08 43 54.6 +0.6
comp=Z,16nm,0.9s,mb5.0
MCMT **McKenzie Canyo** 49.80 44 *e*P P 08 43 55.0 +0.8
comp=Z,18nm,1.2s,mb5.0
G21A **Lodge Grass** 49.83 39 ⇑P P 08 43 53.5 -0.8
baz=50
BR131 **Keskin Array S** 49.85 267 *e*P P 08 43 54.5 0.0
comp=Z,27nm,1.4s,mb5.1
BRTR **Keskin Array B** 49.85 267 P P 08 43 55.4 +0.8
comp=Z,3.1nm,0.5s,mb4.6,baz=2.8,slow=4.7,SNR=20
BRTR PcP PcP 08 45 13.8 -1.1
comp=Z,3.7nm,0.9s,baz=62,slow=3.5,SNR=3.9
BRTR PP PP 08 45 54.9 +5.9
comp=Z,19nm,1.2s,baz=6.5,slow=5.5,SNR=8.0
BRTR LR LR 09 10 45.5
comp=Z,576nm,18.3s,MS4.6,baz=43,slow=43
BRTR **Keskin Array B** 49.85 267 P P 08 43 55.4 +0.8
BRTR 08 45 13.8
BRTR 08 45 54.9
GRG **Griva** 49.88 279 P P 08 43 54.8 0.0
GRG **Griva** 49.88 279 P P 08 43 54.8 0.0
SOH **Sokhos** 49.91 278 P P 08 43 54.9 -0.1
SOH **Sokhos** 49.91 278 *e*P P 08 43 54.7 -0.3
SOH **Sokhos** 49.91 278 P P 08 43 54.9 -0.1

H12A **Diamond D Ranc** 49.92 46 ⇑P P 08 43 54.9 -0.2
baz=50,SNR=19
H13A **Challis** 49.96 45 ⇓P P 08 43 55.4 +0.1
baz=50,SNR=139
COWI **Conover** 49.97 22 *e*P P 08 43 53.7 -1.7
comp=Z,83nm,1.7s,mb5.5
H14A **Leadore** 49.97 45 ⇓P P 08 43 56.1 +0.7
baz=50,SNR=43
I07A **Izee** 50.00 50 ⇑P P 08 43 56.4 +0.8
baz=50,SNR=27
H15A **Lima** 50.03 44 ⇓P P 08 43 56.1 +0.3
baz=50,SNR=44
H16A **Russell Place,** 50.05 43 ⇓P P 08 43 56.2 +0.1
baz=50,SNR=47
YNR **Norris Junctio** 50.08 42 *e*P P 08 43 58.5 +2.2
comp=Z,53nm,1.5s,mb5.3
YMR **Madison River** 50.11 42 *e*P P 08 43 57.5 +1.0
comp=Z,60nm,1.4s,mb5.4
EALK **Alkurruntz** 50.13 302 P P 08 43 56.9 +0.3
comp=Z,470nm,2.2s,mb6.1
EPF **Esparros** 50.14 300 *e*P P 08 43 56.7 0.0
comp=Z,150nm,1.6s,mb5.5
EPF **Esparros** 50.14 300 *e*P P 08 43 56.7 0.0
comp=Z,75nm,1.6s,mb5.5
EPF **Esparros** 50.14 300 *e*P P 08 43 56.7 0.0
EPF pmax pmax
comp=Z,75nm,1.6s,mb5.5
HORT **Hortiatis** 50.16 278 P P 08 43 56.7 -0.2
HORT **Hortiatis** 50.16 278 P P 08 43 56.7 -0.2
FNA **Florina** 50.16 279 P P 08 43 56.6 -0.4
FNA **Florina** 50.16 279 P P 08 43 56.6 -0.4
ELIZ **Elizondo** 50.18 302 P P 08 43 57.2 +0.1
comp=Z,240nm,1.8s,mb5.9
ELIZ **Elizondo** 50.18 302 P P 08 43 57.2 +0.1
ELIZ pmax pmax
comp=Z,240nm,1.8s,mb5.9
SJPF **Ste Jean** 50.21 302 *e*P P 08 43 57.5 +0.3
comp=Z,125nm,1.6s,mb5.4
SJPF **Ste Jean** 50.21 302 *e*P P 08 43 57.5 +0.3
comp=Z,63nm,1.6s,mb5.4
SJPF **Ste Jean** 50.21 302 *e*P P 08 43 57.5 +0.3
SJPF pmax pmax
comp=Z,63nm,1.6s,mb5.4
LKWY **Lake** 50.25 42 *e*P P 08 43 59.9 +2.3
OUR **Ouranopolis** 50.32 277 P P 08 43 57.6 -0.6
OUR **Ouranopolis** 50.32 277 P P 08 43 57.6 -0.6
YFT **Old Faithful** 50.33 42 *e*P P 08 44 00.1 +1.9
comp=Z,44nm,1.1s,mb5.4
ETSF **Etsaut** 50.35 301 *e*P P 08 43 59.5 +1.1
comp=Z,116nm,1.5s,mb5.4
ETSF **Etsaut** 50.35 301 *e*P P 08 43 59.5 +1.1
comp=Z,58nm,1.5s,mb5.4
ETSF **Etsaut** 50.35 301 *e*P P 08 43 59.5 +1.1
ETSF pmax pmax
comp=Z,58nm,1.5s,mb5.4
EARI **Arriondas** 50.39 305 P P 08 43 58.7 0.0
comp=Z,710nm,3.3s
H17A **Grant Village** 50.41 42 ⇑P P 08 44 00.4 +1.6
baz=50,SNR=88
H21A **Big Horn, Sher** 50.43 39 ⇑P P 08 43 58.7 -0.2
baz=50,SNR=26
EJON **La Jonquera** 50.47 298 P P 08 44 03.5 +4.3
comp=Z,336nm,2.5s,mb5.9
EBIE **Bielsa** 50.50 300 P P 08 44 00.5 +1.1
comp=Z,350nm,2.5s,mb6.0
H20A **Greybull** 50.51 40 ⇓P P 08 43 58.9 -0.6
baz=50,SNR=11
CLLI **Livia** 50.52 298 P P 08 44 01.2 +1.6
EPON **Pontenova** 50.54 307 P P 08 43 56.3 -3.5
comp=Z,1μm,3.8s
NEST **Nestorio** 50.57 280 P P 08 43 59.4 -0.6
KZN **Kozani** 50.59 279 P P 08 43 59.7 -0.5
KZN **Kozani** 50.59 279 P P 08 43 59.7 -0.5
I13A **Wildhorse Cree** 50.61 45 ⇓P P 08 44 00.4 +0.1
baz=50,SNR=77
LIA **Limnos Island** 50.62 276 P P 08 44 01.1 +0.7
LIA **Limnos Island** 50.62 276 P P 08 44 01.1 +0.7
I12A **Atlanta** 50.65 46 ⇑P P 08 44 00.2 -0.4
baz=50,SNR=16
I15A **Monteview** 50.66 44 ⇑P P 08 43 59.5 -1.2
baz=50
MALT **Malatya** 50.71 262 *e*P P 08 44 01.3 +0.2
MALT **Malatya** 50.71 262 P P 08 44 02.5 +1.4
comp=Z,655nmcomp=Z,23nm,2.0s,mb4.8
LIT **Litokhoron** 50.72 278 P P 08 43 59.8 -1.3
LIT **Litokhoron** 50.72 278 *e*P P 08 43 59.6 -1.5
LIT **Litokhoron** 50.72 278 P P 08 43 59.8 -1.3
PAIG **Paliouri** 50.76 277 P P 08 44 01.3 -0.1
PAIG **Paliouri** 50.76 277 P P 08 44 01.3 -0.1
J08A **Circle Bar Ran** 50.81 50 ⇓P P 08 44 02.5 +0.8
baz=51
I16A **Newdale** 50.86 43 ⇑P P 08 44 03.1 +1.0
baz=51,SNR=28
IMW **Indian Meadow** 50.88 42 *e*P P 08 44 03.3 +1.0
comp=Z,42nm,1.0s,mb5.3
I17A **Pilgrim Ck.** 50.88 42 ⇓P P 08 44 03.4 +1.0
baz=51,SNR=18
HLID **Hailey** 50.94 46 ⇓P P 08 44 02.3 -0.5
baz=51,SNR=14
HLID **Hailey** 50.94 46 *e*P P 08 44 03.9 +1.2
comp=Z,28nm,1.7s,mb4.9
MFID **Camas Ranch** 50.97 47 ⇑P P 08 44 02.6 -0.4
baz=51,SNR=31
I20A **Worland** 51.03 40 ⇓P P 08 44 03.3 -0.1
baz=51,SNR=33
MOOW **Moose Ponds** 51.04 42 *e*P P 08 44 04.2 +0.7
comp=Z,17nm,0.9s,mb5.0
J13A **Cove Ranch, Pi** 51.12 46 ⇑P P 08 44 03.8 -0.3
baz=51,SNR=16
RSSD **Black Hills** 51.14 36 *e*P P 08 44 04.2 0.0
comp=Z,37nm,0.7s,mb5.4
RSSD **Black Hills** 51.14 36 *e*P P 08 44 04.3 0.0
RSSD pmax pmax
comp=Z,37nm,0.7s,mb5.4
PRK **Paraskevi** 51.14 274 P P 08 44 04.1 -0.3
PRK **Paraskevi** 51.14 274 P P 08 44 04.1 -0.3
I18A **Diamond G Ranc** 51.16 41 ⇓P P 08 44 03.8 -0.6
baz=51,SNR=26
DCID1 **Drake Creek** 51.16 43 *e*P P 08 44 06.1 +1.7
comp=Z,67nm,1.1s,mb5.5
HUMO **Hull Mountain** 51.16 54 *e*P P 08 44 05.6 +1.1
comp=Z,32nm,1.0s,mb5.2
LOHW **Long Hollow** 51.18 42 *e*P P 08 44 05.8 +1.2
comp=Z,139nm,2.0s,mb5.5
I21A **Big Trails, Te** 51.23 39 ⇓P P 08 44 04.3 -0.6
baz=51,SNR=54
K05A **Summer Lake** 51.23 52 ⇓P P 08 44 06.4 +1.5
baz=51,SNR=15
J14A **Carey** 51.25 45 ⇑P P 08 44 05.1 0.0
baz=51,SNR=63
J15A **Blackfoot** 51.26 44 ⇓P P 08 44 05.5 +0.4
baz=51,SNR=8.0
JHJ **Hachijo jima 2** 51.26 154 LR LR 09 05 09.6
comp=Z,436nm,21.5s,MS4.5,baz=299,slow=35
TPAW **Teton Pass** 51.28 43 *e*P P 08 44 06.8 +1.4
comp=Z,99nm,1.5s,mb5.5
THL **Klokotos Trika** 51.30 279 *e*P P 08 44 03.7 -1.8
THL **Klokotos Trika** 51.30 279 P P 08 44 04.8 -0.7
PKME **Peaks-Kenny Pk** 51.31 4 *e*P P 08 44 05.3 -0.3
SNOW **Snow King Moun** 51.32 42 *e*P P 08 44 07.0 +1.3
comp=Z,51nm,1.4s,mb5.3
KBL **Kabul** 51.36 230 *e*P P 08 44 06.5 +0.4
comp=Z,55nm,1.0s,mb5.4
KBL **Kabul** 51.36 230 *e*P P 08 44 06.5 +0.4
KBL pmax pmax
comp=Z,55nm,1.0s,mb5.4
XOR **Xorichti** 51.37 277 P P 08 44 05.5 -0.5
XOR **Xorichti** 51.37 277 P P 08 44 05.5 -0.5
RRI2 **Red Ridge** 51.39 43 *e*P P 08 44 07.4 +1.2
comp=Z,125nm,1.8s,mb5.5
KEK **Kerkira** 51.40 281 P P 08 44 04.6 -1.7
KEK **Kerkira** 51.40 281 P P 08 44 04.6 -1.7
REDW **Red Top Meadow** 51.41 42 *e*P P 08 44 07.2 +0.9
comp=Z,70nm,1.4s,mb5.4
J17A **Brown Place, J** 51.42 42 ⇑P P 08 44 06.0 -0.4
baz=51,SNR=9.9
J16A **Bone** 51.45 43 ⇑P P 08 44 07.0 +0.5
baz=51,SNR=18
CUC **Castrocucco** 51.55 285 *e*P P 08 44 07.2 -0.2
comp=Z,11nm,1.3s,mb4.6
J18A **Kendall Valley** 51.63 42 ⇓P P 08 44 08.3 +0.3
baz=51,SNR=26
FRNY **Flat Rock** 51.69 8 *e*P P 08 44 08.3 -0.1
comp=Z,135nm,1.8s,mb5.6
WVOR **Wild Horse Val** 51.71 50 *e*P P 08 44 09.2 +0.6
comp=Z,43nm,1.3s,mb5.2

WVOR Wild Horse Val 51.71 50 eP P 08 44 09.2 +0.6
WVOR pmax pmax
comp=Z,43nm,1.3s,mb5.2
AGG Agios Georgios 51.80 278 P P 08 44 08.3 -1.0
AGG Agios Georgios 51.80 278 eP P 08 44 08.1 -1.2
AGG Agios Georgios 51.80 278 P P 08 44 08.3 -1.0
ECAL Calabor 51.88 307 P P 08 44 09.5 -0.3
comp=Z,535nm,2.4s,mb6.0
K16A Soda Springs 51.89 43 ⇑P P 08 44 10.0 +0.2
baz=52,SNR=14
LONY Lake Ozonia 51.89 9 eP P 08 44 09.4 -0.5
comp=Z,34nm,1.2s,mb5.2
K15A Arbon 51.96 44 ⇓P P 08 44 10.5 +0.1
baz=52,SNR=14
ECSD EROS Data Cent 51.97 29 eP P 08 44 09.1 -1.4
comp=Z,61nm,1.4s,mb5.3
AHID Auburn Hatcher 51.99 43 eP P 08 44 10.9 +0.2
comp=Z,19nm,1.0s,mb5.0
PBRG Braganca 52.01 307 eP P 08 44 11.8 +1.0
comp=Z,105nm,1.7s,mb5.5
CHOS Chios island 52.02 274 eP P 08 44 06.6 -4.3
K17A Gardner Place, 52.02 43 ⇑P P 08 44 10.1 -0.8
baz=52
K14A Jones Ranch, D 52.05 45 ⇑P P 08 44 11.0 -0.1
baz=52,SNR=36
ATAL Atalanti 52.05 277 P P 08 44 10.5 -0.6
YBH Yreka Blue Hor 52.05 54 eP P 08 44 11.5 +0.4
ELOB Lobios 52.07 308 P P 08 44 11.2 0.0
comp=Z,311nm,2.7s,mb5.8
LKR Lokris 52.09 277 P P 08 44 10.6 -0.9
LKR Lokris 52.09 277 eP P 08 44 10.4 -1.1
LKR Lokris 52.09 277 P P 08 44 10.6 -0.9
MOD Modoc 52.09 51 eP P 08 44 13.0 +1.5
comp=Z,35nm,1.1s,mb5.2
K19A Absolon Red Bu 52.10 41 ⇑P P 08 44 11.0 -0.5
baz=52,SNR=46
BW06 Boulder Array 52.10 41 ⇑P P 08 44 11.0 -0.5
baz=52,SNR=22
BW06 Boulder Array 52.10 41 eP P 08 44 11.6 +0.1
K18A Toltan Ranch, 52.20 42 ⇓P P 08 44 12.2 0.0
baz=52,SNR=23
LKD2 Lefkada island 52.22 280 P P 08 44 11.8 -0.6
L11A Cat Creek Ranc 52.22 47 ⇓P P 08 44 12.9 +0.5
baz=52,SNR=16
L10A Juniper Basin 52.25 48 ⇑P P 08 44 12.7 +0.1
baz=52,SNR=16
TIP Timpagrande 52.26 284 eP P 08 44 12.5 -0.1
K20A Yellowstone Ra 52.30 40 ⇓P P 08 44 11.9 -1.1
baz=52,SNR=18
LBNH Lisbon 52.31 7 eP P 08 44 12.9 -0.1
comp=Z,113nm,1.7s,mb5.5
LBNH Lisbon 52.31 7 eP P 08 44 12.9 -0.1
LBNH pmax pmax
comp=Z,113nm,1.7s,mb5.5
DSF Desfina 52.38 278 P P 08 44 12.3 -1.3
K22A Casper 52.44 39 ⇓P P 08 44 12.6 -1.3
baz=52,SNR=31
EFP Efpalio 52.44 279 eP P 08 44 14.2 +0.2
EFP Efpalio 52.44 279 P P 08 44 14.0 0.0
NCB Newcomb 52.55 9 eP P 08 44 14.3 -0.5
comp=Z,40nm,1.3s,mb5.2
L14A Malta 52.55 45 ⇑P P 08 44 14.9 +0.1
baz=52,SNR=17
ETOR Torete 52.56 302 P P 08 44 11.5 -3.3
comp=Z,38nm,1.7s,mb5.0
ETOR Torete 52.56 302 P P 08 44 11.5 -3.4
ETOR pmax pmax
comp=Z,38nm,1.7s,mb5.0
PTL Penteli 52.59 277 eP P 08 44 15.2 0.0
LAKA Lakka 52.61 278 P P 08 44 14.6 -0.7
L15A Malad City 52.65 44 ⇓P P 08 44 15.4 -0.1
baz=52,SNR=23
L17A Cokeville 52.67 43 ⇑P P 08 44 15.5 -0.1
baz=52,SNR=18
MVO Moncorvo 52.67 307 eP P 08 44 16.5 +0.8
comp=Z,91nm,1.2s,mb5.6
MVO eS S 08 51 48.9 +6.1
MVO A 09 15 49.3
comp=Z,610nm,18.0s
MVO Moncorvo 52.67 307 P P 08 44 15.7 0.0
ATHU Athens Univers 52.68 277 P P 08 44 16.3 +0.5
ATH Athens Observa 52.69 277 P P 08 44 16.3 +0.4
ATH Athens Observa 52.69 277 eP P 08 44 15.8 -0.1
SSE Sheshan 52.70 174 P P 08 44 15.4 -0.7
SSE S S 08 51 45.4 +2.0
SSE pmax pmax
comp=Z,25nm,0.7s,mb5.2
SSE LR LR
comp=N,120nm,22.5s,MS4.6
SSE LR LR
comp=E,550nm,22.5s,MS4.6
SSE LR LR
comp=Z,290nm,25.7s,MS4.2
L16A Fish Haven 52.71 43 ⇓P P 08 44 15.9 -0.1
baz=52,SNR=25
LTK Loutraki 52.72 277 eP P 08 44 15.2 -0.9
VSL Villasalto 52.73 291 eP P 08 44 15.9 -0.3
comp=Z,27nm,1.0s,mb5.1
L19A Farson 52.78 41 ⇑P P 08 44 15.7 -0.8
baz=53,SNR=14
M10A I.L. Ranch, Tu 52.79 48 ⇑P P 08 44 17.6 +1.0
baz=53
VLY Voula,Athens 52.80 277 eP P 08 44 16.1 -0.6
KHMM Horse Mountain 52.81 55 eP P 08 44 19.3 +2.5
comp=Z,79nm,1.2s,mb5.5
VLS Valsamata 52.83 280 eP P 08 44 16.4 -0.5
HVU Hansel Valley 52.84 44 eP P 08 44 17.3 +0.4
comp=Z,40nm,1.0s,mb5.3
HVU Hansel Valley 52.84 44 eP P 08 44 17.3 +0.3
HVU pmax pmax
comp=Z,40nm,1.0s,mb5.3
HNH Hanover 52.84 7 eP P 08 44 17.1 +0.2
RLS Riolos of Patr 52.85 279 eP P 08 44 15.9 -1.2
GUR Goura 52.87 278 eP P 08 44 16.1 -1.1
GUR Goura 52.87 278 P P 08 44 16.1 -1.1
L18A Fontenelle, Gr 52.91 42 ⇑P P 08 44 17.0 -0.4
baz=53,SNR=12
GUD Guadarrama 52.93 304 P P 08 44 17.4 -0.2
comp=Z,73nm,1.3s,mb5.5
GUD Guadarrama 52.93 304 P P 08 44 17.4 -0.2
GUD pmax pmax
comp=Z,73nm,1.3s,mb5.5
L20A Wamsutter 52.95 40 ⇑P P 08 44 17.6 -0.2
baz=53,SNR=20
CD2 Chengdu 53.00 193 P P 08 44 19.3 +1.1
CD2 pP pP 08 44 23.8 +2.4
CD2 sP sP 08 44 26.3 +3.7
CD2 ScP ScP 08 49 23.5 -0.2
CD2 PcS PcS 08 49 25.5 -0.1
CD2 S S 08 51 46.3 -1.1
CD2 sS sS 08 51 53.8 +1.2
CD2 ScS ScS 08 54 05.3 -2.1
CD2 SS SS 08 55 24.3 -1.7
CD2 pmax pmax
comp=Z,40nm,1.1s,mb5.3
CD2 pmax pmax
comp=Z,310nm,5.9s
CD2 LR LR
comp=N,1μm,14.2s,MS5.3
CD2 LR LR
comp=E,2μm,17.6s,MS5.3
CD2 LR LR
comp=Z,1μm,16.5s,MS5.1
L23A Garrett 53.03 38 ⇑P P 08 44 16.9 -1.4
baz=53,SNR=8.6
L21A Rawlins 53.06 39 ⇓P P 08 44 17.9 -0.7
baz=53,SNR=26
M14A Sheep Mountain 53.07 45 ⇓P P 08 44 18.1 -0.6
baz=53,SNR=38
HWUT Hardware Ranch 53.10 43 eP P 08 44 19.1 +0.2
comp=Z,33nm,0.8s,mb5.3
JFWS Jewell Farm 53.10 23 eP P 08 44 17.8 -1.1
JFWS ePcP PcP 08 45 28.0 +0.9
ACCN Adirondack Com 53.14 8 eP P 08 44 19.9 +0.8
ACCN ePcP PcP 08 45 28.7 +1.5
M13A Montello 53.15 46 ⇓P P 08 44 19.9 +0.6
baz=53,SNR=50
M13A Montello 53.15 46 eP P 08 44 19.9 +0.7
comp=Z,42nm,1.0s,mb5.3
L24A Wheatland 53.15 37 ⇑P P 08 44 18.0 -1.2
baz=53
M15A Larsen Ranch, 53.18 44 ⇓P P 08 44 19.0 -0.5
baz=53,SNR=23
DID Didima 53.20 277 eP P 08 44 14.0 -5.7
WDC Whiskeytown Da 53.21 54 eP P 08 44 20.2 +0.5
comp=Z,23nm,1.0s,mb5.1
WDC Whiskeytown Da 53.21 54 eP P 08 44 20.2 +0.5
WDC pmax pmax
comp=Z,23nm,1.0s,mb5.1
WHN Wuhan 53.22 181 P P 08 44 18.4 -1.5
WHN S S 08 51 46.3 -4.2
WHN LR LR
comp=N,940nm,11.0s,MS5.2
WHN LR LR
comp=E,580nm,10.0s,MS5.2
WHN LR LR
comp=Z,2μm,28.9s
CEL Celeste 53.26 284 eP P 08 44 19.1 -0.9
comp=Z,26nm,1.2s,mb5.0
M17A Scullys Gap (B 53.31 43 ⇓P P 08 44 19.7 -0.7
baz=53,SNR=10
SPUT South Promonto 53.33 44 eP P 08 44 21.0 +0.4
RWWY Rawlins 53.34 39 eP P 08 44 20.6 -0.1
comp=Z,137nm,1.3s,mb5.7
APE Apeiranthos 53.38 275 eP P 08 44 26.3 +5.3
M19A Rock Springs 53.39 41 ⇓P P 08 44 20.6 -0.4
baz=53,SNR=18
M18A Lyman 53.40 42 ⇓P P 08 44 20.4 -0.6
baz=53,SNR=14
M21A Separation Pea 53.41 39 ⇑P P 08 44 20.4 -0.8
baz=53,SNR=20
M20A Sweetwater, Wa 53.47 40 ⇑P P 08 44 21.3 -0.3
baz=53,SNR=14
MTE Manteigas 53.48 307 eP P 08 44 22.1 +0.4
comp=Z,86nm,1.6s,mb5.4
MTE A 09 16 13.9
comp=Z,477nm,18.0s
ENH Enshi 53.53 186 eP P 08 44 22.0 -0.2
comp=Z,206nm,1.6s,mb5.8
N11A Elko Archery C 53.56 47 ⇑P P 08 44 22.3 +0.1
baz=53
N10A Dunphy 53.59 48 ⇑P P 08 44 22.9 +0.4
baz=53
N13A Wendover, West 53.65 46 ⇓P P 08 44 23.3 +0.4
baz=54,SNR=11
N13A Wendover, West 53.65 46 eP P 08 44 24.2 +1.3
ITM Ithomi 53.67 278 P P 08 44 22.3 -0.8
ITM Ithomi 53.67 278 eP P 08 44 22.5 -0.6
ITM Ithomi 53.67 278 P P 08 44 22.3 -0.8
BGU Big Grassy Mou 53.67 45 eP P 08 44 23.7 +0.6
comp=Z,72nm,1.8s,mb5.3
M22A Cedar Creek Ra 53.67 39 ⇓P P 08 44 22.2 -0.9
baz=54,SNR=11
EPLA Plasencia 53.68 306 P P 08 44 22.1 -1.1
comp=Z,58nm,2.9s,mb6.0
M24A Cheyenne 53.73 37 ⇑P P 08 44 22.9 -0.6
baz=54,SNR=13
N14A Grayback Hills 53.73 45 ⇑P P 08 44 23.0 -0.5
baz=54,SNR=13
N15A Stansbury Isla 53.74 44 ⇑P P 08 44 23.4 -0.2
baz=54,SNR=31
TRY Troy 53.79 8 eP P 08 44 25.1 +1.1
BMN Battle Mountai 53.82 49 eP P 08 44 25.6 +1.5
N17A Moffit Pass 53.82 43 ⇑P P 08 44 23.5 -0.7
baz=54,SNR=10
N16A Rees Ranch, Co 53.83 43 ⇓P P 08 44 23.4 +0.1
baz=54,SNR=23
PHWY Pilot Hill 53.85 38 eP P 08 44 24.4 0.0
comp=Z,60nm,1.3s,mb5.4
ESDC Sonseca Array 53.87 304 P P 08 44 23.6 -1.0
comp=Z,66nm,2.3s,mb5.2
ESDC Sonseca Array 53.87 304 P P 08 44 24.1 -0.4
comp=Z,20nm,1.0s,mb5.0,baz=5.2,slow=7.8,SNR=39
ESLA Sonseca Array 53.87 304 eP P 08 44 24.8 +0.2
PYL PYLOS 53.97 278 eP P 08 44 25.0 -0.3
SCIA State Center 53.97 26 eP P 08 44 24.2 -1.0
comp=Z,88nm,1.4s,mb5.5
AAM Ann Arbor 53.97 17 eP P 08 44 25.2 -0.1
N19A John Jarvie Ra 53.99 41 ⇓P P 08 44 25.2 -0.2
baz=54,SNR=18
NOQ North Oquirrh 54.01 44 eP P 08 44 27.4 +1.8
comp=Z,158nm,1.8s,mb5.6
O10A Cortez Mining, 54.02 48 ⇑P P 08 44 26.7 +1.1
baz=54,SNR=10
PCBR Castelo Branco 54.03 307 eP P 08 44 26.8 +1.1
comp=Z,67nm,1.7s,mb5.6
JLU Jordanelle 54.11 43 eP P 08 44 26.8 +0.5
comp=Z,30nm,1.0s,mb5.2
N20A Spence Gulch, 54.12 40 ⇓P P 08 44 26.4 +0.1
baz=54,SNR=83
O12A Currie 54.19 46 ⇓P P 08 44 27.0 +0.1
baz=54,SNR=32
VAE Valguarnera 54.19 286 LR LR 09 08 16.8
comp=Z,1μm,0.1s,MS4.9,baz=91,slow=37
N23A Red Feather La 54.22 38 ⇓P P 08 44 26.5 -0.6
baz=54,SNR=24
N21A Black Mountain 54.25 40 ⇑P P 08 44 27.0 -0.3
baz=54,SNR=16
ERPA Erie 54.27 14 eP P 08 44 27.8 +0.4
N22A Wattenberg Ran 54.28 39 ⇑P P 08 44 27.1 -0.4
baz=54,SNR=16
BINY Binghamton 54.28 10 eP P 08 44 27.9 +0.4
comp=Z,66nm,1.1s,mb5.5
DAU Daniels Canyon 54.32 43 eP P 08 44 28.6 +0.8
O15A The Old Anders 54.35 44 ⇓P P 08 44 28.1 0.0
baz=54,SNR=12
PAHR Pah Rah Range 54.35 51 eP P 08 44 24.1 -3.9
N24A Carr 54.36 37 ⇓P P 08 44 28.1 0.0
baz=54,SNR=33
O13A Hicks Ranch, I 54.38 46 ⇑P P 08 44 28.8 +0.5
baz=54,SNR=13
DUG Dugway 54.41 45 ⇓P P 08 44 28.5 0.0
baz=54,SNR=35
DUG Dugway 54.41 45 eP P 08 44 28.8 +0.3
comp=Z,14nm,0.8s,mb4.9
DUG Dugway 54.41 45 eP P 08 44 28.8 +0.3
DUG pmax pmax
comp=Z,14nm,0.8s,mb4.9
PMRV Marv??o 54.43 307 eP P 08 44 29.3 +0.7
comp=Z,71nm,1.3s,mb5.4
PMRV A 09 15 08.8
comp=Z,399nm,18.0s
N25A Grover 54.43 36 ⇓P P 08 44 28.7 +0.1
baz=54,SNR=10
OGNE Ogallala 54.43 35 eP P 08 44 28.5 -0.1
comp=Z,243nm,1.4s,mb5.9
EBEN Beniarda 54.48 300 P P 08 44 31.1 +2.1
comp=Z,265nm,2.9s,mb5.7
O16A Springville 54.50 43 ⇑P P 08 44 29.5 +0.3
baz=54,SNR=45
OHCM Honcut 54.54 53 eP P 08 44 29.8 +0.4
O18A Roosevelt 54.56 42 ⇑P P 08 44 29.2 -0.3
baz=54,SNR=16
O17A Robinson Place 54.57 43 ⇑P P 08 44 29.9 +0.2
baz=54,SNR=11
O19A Miners Draw (B 54.59 41 ⇓P P 08 44 29.8 0.0
baz=54,SNR=18
ETOB Tobarra 54.66 301 P P 08 44 30.4 +0.1
comp=Z,520nm,3.1s
MPU Maple Canyon 54.68 44 eP P 08 44 31.2 +0.8
comp=Z,25nm,0.8s,mb5.3
NLU North Lily Min 54.71 44 eP P 08 44 31.5 +0.9
comp=Z,16nm,0.8s,mb5.2
WCN Washoe City 54.72 51 ⇓P P 08 44 31.5 +0.7
baz=54,SNR=26
ALLY Alegheny Colle 54.73 14 eP P 08 44 31.0 +0.2
EVIA Vianos 54.76 302 P P 08 44 31.8 +0.8
comp=Z,135nm,1.6s,mb5.7
EVIA Vianos 54.76 302 P P 08 44 31.8 +0.7
EVIA pmax pmax
comp=Z,135nm,1.6s,mb5.7
O21A Pagoda 54.79 40 ⇑P P 08 44 31.2 0.0
baz=55,SNR=12
P11A Circle Ranch, 54.81 48 ⇑P P 08 44 31.8 +0.4
baz=55
O20A White River Ci 54.82 40 ⇑P P 08 44 31.3 -0.1
baz=55,SNR=20
O23A Lake Granby, G 54.91 38 ⇑P P 08 44 32.4 +0.3
baz=55,SNR=24
O22A Kremmling 54.91 39 ⇑P P 08 44 32.2 +0.1
baz=55,SNR=135
P12A McGill 54.96 47 ⇑P P 08 44 32.8 +0.3
baz=55,SNR=18
P14A Drum Mountains 54.99 45 ⇑P P 08 44 33.3 +0.5
baz=55,SNR=36
PESTR Estremoz 55.00 307 eP P 08 44 32.8 0.0
comp=Z,96nm,1.5s,mb5.6
PESTR eS S 08 52 20.7 +6.3
PESTR A 09 17 20.9
comp=Z,538nm,18.0s
O24A Longmont 55.05 37 ⇓P P 08 44 32.7 -0.4
baz=55,SNR=14
P13A Bates Ranch, G 55.05 46 ⇓P P 08 44 33.3 +0.2
baz=55,SNR=32
EBAD Badajoz 55.06 306 P P 08 44 31.9 -1.3
comp=Z,221nm,2.2s,mb5.8
PMAFR Mafra 55.06 309 eS S 08 52 13.7 -1.5
PMAFR A 09 05 38.4
comp=Z,358nm,18.0s
P15A Leamington 55.07 44 ⇓P P 08 44 33.0 -0.3
baz=55,SNR=14
P16A Fountain Green 55.08 44 ⇓P P 08 44 33.8 +0.4
baz=55,SNR=9.9
O25A Wiggins 55.12 37 ⇓P P 08 44 33.0 -0.7
baz=55
P18A Preston Nutter 55.17 42 ⇓P P 08 44 34.1 +0.1
baz=55,SNR=28
YLE Yale 55.22 8 eP P 08 44 36.7 +2.4
P19A Cripple Cowboy 55.26 41 ⇑P P 08 44 34.2 -0.4
baz=55,SNR=32
P17A Butcher Ranch, 55.29 43 ⇑P P 08 44 35.1 +0.2
baz=55,SNR=26
ISCO Idaho Springs 55.34 38 eP P 08 44 35.4 +0.2
comp=Z,70nm,1.5s,mb5.5
ISCO Idaho Springs 55.34 38 eP P 08 44 35.4 +0.2
ISCO pmax pmax
comp=Z,70nm,1.5s,mb5.5
EBAN Banos Encina 55.35 303 P P 08 44 35.8 +0.5
comp=Z,73nm,1.2s,mb5.6
EBAN Banos Encina 55.35 303 P P 08 44 35.8 +0.5
EBAN pmax pmax
comp=Z,73nm,1.2s,mb5.6
EVO Evora 55.37 307 ⇑iP P 08 44 35.5 0.0
comp=Z,34nm,1.1s,mb5.0
EVO eMLR MLR
comp=Z,647nm,20.0s,MS4.4
Q12A Willow Creek R 55.40 47 ⇑P P 08 44 36.4 +0.8
baz=55,SNR=11
EADA Adamuz 55.42 304 P P 08 44 35.1 -0.8
comp=Z,306nm,2.8s,mb5.8
TMUT Trail Mountain 55.43 43 eP P 08 44 36.9 +1.0
P20A De Beque 55.44 41 ⇑P P 08 44 35.5 -0.4
baz=55
P22A Eagle 55.46 39 ⇑P P 08 44 36.1 +0.1
baz=55,SNR=27
Q10A Clear Creek Ra 55.48 48 ⇑P P 08 44 36.9 +0.6
baz=55,SNR=24
HDIL Hopedale 55.50 23 eP P 08 44 35.0 -1.4
HDIL ePcP PcP 08 45 35.9 -0.3
PAL Palisades 55.51 9 eP P 08 44 36.8 +0.3
Q11A Buckwater 55.52 48 ⇓P P 08 44 37.0 +0.5
baz=55,SNR=44
WAKR Walker 55.54 51 eP P 08 44 37.5 +0.8
Q13A Wheeler Ranch, 55.55 46 ⇓P P 08 44 37.1 +0.4
baz=55,SNR=19
Q14A Sevier Lake (B 55.57 45 ⇓P P 08 44 37.5 +0.6
baz=55,SNR=66
EHUE Huescar 55.59 302 P P 08 44 37.2 +0.2
comp=Z,56nm,1.2s,mb5.5
EHUE Huescar 55.59 302 P P 08 44 37.2 +0.2
EHUE pmax pmax
comp=Z,56nm,1.2s,mb5.5
Q15A Fillmore 55.63 44 ⇓P P 08 44 37.6 +0.2
baz=55,SNR=26
PBAR Barrancos 55.64 306 eP P 08 44 37.9 +0.5
comp=Z,83nm,1.4s,mb5.6
PBAR eS S 08 52 27.3 +4.4
PBAR A 09 17 27.9
comp=Z,716nm,18.0s
EQES Quesada 55.64 303 P P 08 44 38.2 +0.8
comp=Z,211nm,1.7s,mb5.9
SRU San Rafael 55.67 43 ⇑P P 08 44 37.1 -0.5
baz=56,SNR=22
SRU San Rafael 55.67 43 eP P 08 44 37.6 0.0
P24A Kohler Place, 55.67 37 ⇓P P 08 44 37.3 -0.3
baz=56
Q18A Rafter H Ranch 55.70 42 ⇓P P 08 44 37.0 -0.8
baz=56,SNR=19
NVAR Mina Array Bea 55.71 50 P P 08 44 39.0 +1.1
comp=Z,4.6nm,0.9s,mb4.5,baz=354,slow=3.8,SNR=26
NVAR PcP PcP 08 45 37.5 +0.4
comp=Z,3.1nm,0.8s,baz=358,slow=2.7,SNR=5.8
P25A Willow Gulch B 55.72 37 ⇓P P 08 44 37.7 -0.3
baz=56,SNR=15
GVD Gavdhos 55.74 276 eP P 08 44 36.5 -1.7
P23A Jefferson 55.74 38 ⇓P P 08 44 38.6 +0.5
baz=56,SNR=46
CMAH Djebel Manchou 55.77 292 P P 08 44 39.3 +0.9
Q16A Castle Valley 55.81 43 ⇓P P 08 44 39.2 +0.6
baz=56,SNR=29
SMCO Snowmass 55.86 39 eP P 08 44 39.4 +0.4
PBEJ Beja 55.86 307 eP P 08 44 39.6 +0.6
comp=Z,65nm,1.4s,mb5.5
CMB Columbia Colle 55.93 52 eP P 08 44 40.2 +0.8
comp=Z,33nm,1.6s,mb5.1
CMB Columbia Colle 55.93 52 eP P 08 44 40.2 +0.8
CMB pmax pmax
comp=Z,33nm,1.6s,mb5.1
DFRA Djebel Bou Aff 56.01 294 P P 08 44 40.8 +0.7
EMIN Mina Concepcio 56.01 306 P P 08 44 40.9 +0.8
comp=Z,155nm,2.4s,mb5.6
R10A Warm Springs 56.02 48 ⇓P P 08 44 39.9 -0.2
baz=56
R11A Troy Canyon, C 56.02 48 ⇑P P 08 44 40.2 +0.1
baz=56,SNR=36
ABA Alger-Bouzarea 56.04 297 P P 08 44 32.4 -7.9
CKFL Kef-Lekhel 56.07 293 P P 08 44 41.0 +0.5
ABSA Djebel Ababsia 56.12 292 P P 08 44 40.6 -0.2
R12A Pony Springs, 56.12 47 ⇓P P 08 44 41.2 +0.4
baz=56,SNR=17
MSU Marysvale 56.13 44 eP P 08 44 41.7 +0.8
Q21A Lamborn Mesa, 56.16 40 ⇑P P 08 44 41.1 0.0
baz=56,SNR=36
Q22A Crested Butte, 56.18 39 ⇓P P 08 44 41.9 +0.7
baz=56,SNR=66
Q24A Divide 56.20 38 ⇓P P 08 44 41.4 0.0
baz=56,SNR=42
Q23A Hartsel 56.21 38 ⇑P P 08 44 41.1 -0.3
baz=56,SNR=17
ECOG Cogollos-Vega 56.21 303 P P 08 44 42.9 +1.4
comp=Z,35nm,1.6s,mb5.1
ECOG Cogollos-Vega 56.21 303 P P 08 44 42.9 +1.4
ECOG pmax pmax
comp=Z,35nm,1.6s,mb5.1
CASM Ain Smara 56.23 293 P P 08 44 41.6 0.0
PCVE Castro Verde 56.27 307 eP P 08 44 42.2 +0.3
comp=Z,69nm,1.6s,mb5.4
PCVE eS S 08 52 36.5 +5.2
PCVE A 09 18 01.1
comp=Z,660nm,16.0s
R14A James Farms, M 56.28 45 ⇑P P 08 44 42.5 +0.6
baz=56
MMAI Mount Meron Ar 56.28 264 P P 08 44 42.5 +0.5
comp=Z,5.0nm,0.8s,mb4.6,baz=300,slow=5.7,SNR=7.4
MMAI LR LR 09 15 24.3
comp=Z,483nm,18.3s,MS4.6,baz=30,slow=43
Q25A Bedland, Calha 56.31 37 ⇑P P 08 44 41.6 -0.6
baz=56,SNR=12
EGRO El Granado 56.31 307 P P 08 44 41.4 -0.8
comp=Z,259nm,2.2s,mb5.9
R13A O'Grain Ranch, 56.32 46 ⇓P P 08 44 42.9 +0.6
baz=56,SNR=18
R17A Hanksville Air 56.34 43 ⇑P P 08 44 41.9 -0.5
baz=56,SNR=34
S10A Tonopah Range, 56.36 49 ⇓P P 08 44 42.5 -0.1
baz=56,SNR=15
ELOJ Sierra Loja 56.40 303 P P 08 44 43.6 +0.8
comp=Z,121nm,1.9s,mb5.6
ELOJ Sierra Loja 56.40 303 P P 08 44 43.6 +0.8
ELOJ pmax pmax
comp=Z,121nm,1.9s,mb5.6
R16A Teasdale 56.41 44 ⇓P P 08 44 43.1 +0.1
baz=56,SNR=31
R15A Junction 56.42 44 ⇑P P 08 44 43.9 +0.9
baz=56,SNR=19
R18A Canyonlands Na 56.43 42 ⇑P P 08 44 42.3 -0.8
baz=56,SNR=24
KEST Kesra 56.46 290 eP P 08 44 43.2 -0.1
KEST Kesra 56.46 290 P P 08 44 43.2 0.0
comp=Z,22nm,1.0s,mb5.1,baz=323,slow=3.9,SNR=43
MLAC Mammoth Lakes 56.46 51 ⇑P P 08 44 43.9 +0.7
baz=56
PVAQ Vaqueiros 56.47 307 eP P 08 44 44.1 +0.8
comp=Z,98nm,1.4s,mb5.7
PVAQ A 09 17 55.5
comp=Z,770nm,18.0s
MVL Millersville 56.47 11 eP P 08 44 44.4 +1.1
PV04 Paradox Valley 56.50 41 eP P 08 44 44.0 +0.4
EBER Berja 56.52 302 P P 08 44 43.5 -0.3
comp=Z,344nm,1.9s,mb6.1

R19A	**Curley Farm, L**	**56.57**	**42**	⇑P		**P**	**08 44 43.7**	**-0.4**
	baz=56								
KSU1	**Kansas State U**	**56.59**	**30**	*e*P		**P**	**08 44 43.0**	**-1.2**
R21A	**Cimarron**	**56.62**	**40**	⇑P		**P**	**08 44 44.7**	**+0.3**
	baz=56,SNR=35								
ADJB	**Djebel Djouab**	**56.64**	**296**	P		**P**	**08 44 46.6**	**+2.0**
PBDV	**Barranco-do-Ve**	**56.64**	**307**	*e*P		**P**	**08 44 45.4**	**+0.8**
	comp=Z,136nm,1.7s,mb5.7								
PBDV				A			09 18 12.0		
	comp=Z,737nm,16.0s								
MORF	**Marmelete**	**56.65**	**308**	*e*P		**P**	**08 44 45.2**	**+0.6**
	comp=Z,76nm,1.5s,mb5.5								
MORF				A			09 06 39.6		
	comp=Z,555nm,20.0s								
EGUA	**Guajares**	**56.65**	**303**	P		**P**	**08 44 44.3**	**-0.4**
	comp=Z,250nm,1.2s,mb6.1								
CBKS	**Cedar Bluff**	**56.70**	**33**	*e*P		**P**	**08 44 44.1**	**-0.8**
AKET	**Djebel Ketaf**	**56.71**	**296**	P		**P**	**08 44 47.4**	**+2.4**
S11A	**Rachel**	**56.71**	**48**	⇓P		**P**	**08 44 45.5**	**+0.4**
	baz=56,SNR=8.7								
MCWV	**Mont Chateau**	**56.73**	**14**	*e*P		**P**	**08 44 45.4**	**+0.3**
R20A	**Redvale**	**56.74**	**41**	⇑P		**P**	**08 44 45.3**	**0.0**
	baz=56,SNR=28								
ARUT	**Antelope Range**	**56.75**	**46**	*e*P		**P**	**08 44 45.7**	**+0.4**
	comp=Z,64nm,1.7s,mb5.4								
ARUT	**Antelope Range**	**56.75**	**46**	*e*P		**P**	**08 44 45.7**	**+0.4**
ARUT				pmax		pmax			
	comp=Z,64nm,1.7s,mb5.4								
MTUM	**Tungsten Hills**	**56.76**	**50**	*e*P		**P**	**08 44 47.2**	**+1.8**
PV01	**Paradox Valley**	**56.78**	**41**	*e*P		**P**	**08 44 46.0**	**+0.5**
	comp=Z,4µm,0.7s								
S14A	**Cedar City**	**56.80**	**45**	⇓P		**P**	**08 44 46.2**	**+0.5**
	baz=57,SNR=13								
R22A	**Saguache, Gunn**	**56.82**	**39**	⇓P		**P**	**08 44 46.5**	**+0.7**
	baz=57,SNR=43								
S12A	**Delamar Landin**	**56.82**	**47**	⇓P		**P**	**08 44 45.8**	**0.0**
	baz=57								
ESPR	**Espera**	**56.83**	**305**	P		**P**	**08 44 46.7**	**+0.8**
	comp=Z,429nm,2.8s,mb6.0								
PFVI	**Vila Bisbo**	**56.83**	**308**	A			09 07 59.3		
	comp=Z,460nm,18.0s								
ATAF	**Djebel Tarf**	**56.84**	**295**	P		**P**	**08 44 47.0**	**+1.0**
S13A	**Holt Ranch, En**	**56.93**	**46**	⇓P		**P**	**08 44 46.9**	**+0.3**
	baz=57,SNR=27								
R24A	**Sanders Place,**	**56.93**	**38**	⇑P		**P**	**08 44 46.1**	**-0.4**
	baz=57,SNR=23								
S15A	**Panguitch**	**56.95**	**45**	⇓P		**P**	**08 44 48.0**	**+1.3**
	baz=57,SNR=18								
ASF	**Jabal al Asfar**	**56.95**	**263**	P		**P**	**08 44 47.6**	**+0.8**
	comp=Z,13nm,1.2s,mb4.8,baz=242,slow=2.1,SNR=21								
ASF				LR		LR	09 13 32.5		
	comp=Z,551nm,20.3s,MS4.7,baz=252,slow=41								
S16A	**Weppner Ranch,**	**56.96**	**44**	⇓P		**P**	**08 44 47.2**	**+0.4**
	baz=57,SNR=55								
BLO	**Bloomington**	**56.99**	**20**	*e*P		**P**	**08 44 45.6**	**-1.4**
	comp=Z,44nm,1.4s,mb5.3								
BLO	**Bloomington**	**56.99**	**20**	*e*P		**P**	**08 44 45.6**	**-1.4**
BLO				pmax		pmax			
	comp=Z,44nm,1.4s,mb5.3								
CCUT	**Cedar City**	**56.99**	**46**	*e*P		**P**	**08 44 47.7**	**+0.6**
	comp=Z,45nm,1.4s,mb5.3								
EMIJ	**Mijas**	**57.03**	**304**	P		**P**	**08 44 46.5**	**-0.8**
	comp=Z,305nm,2.5s,mb5.9								
SDMD	**Soldier's Deli**	**57.05**	**11**	*e*P		**P**	**08 44 47.2**	**-0.2**
TIN	**Tinemaha**	**57.09**	**50**	⇓P		**P**	**08 44 48.7**	**+1.0**
	baz=57								
SAO	**San Andreas Ge**	**57.09**	**53**	*e*P		**P**	**08 44 50.4**	**+2.6**
S17A	**Black Ridge (B**	**57.11**	**43**	⇓P		**P**	**08 44 47.5**	**-0.3**
	baz=57,SNR=53								
S18A	**Hurst Farm, Bl**	**57.12**	**42**	⇓P		**P**	**08 44 47.8**	**-0.2**
	baz=57,SNR=44								
S19A	**Harvey Farm, M**	**57.13**	**42**	⇓P		**P**	**08 44 48.3**	**+0.3**
	baz=57,SNR=53								
T11A	**Corn Creek, Al**	**57.15**	**47**	⇓P		**P**	**08 44 48.4**	**+0.2**
	baz=57,SNR=20								
EJIF	**Jimena Fronter**	**57.21**	**305**	P		**P**	**08 44 49.3**	**+0.7**
	comp=Z,168nm,1.5s,mb5.8								
EJIF	**Jimena Fronter**	**57.21**	**305**	P		**P**	**08 44 49.3**	**+0.7**
EJIF				pmax		pmax			
	comp=Z,168nm,1.5s,mb5.8								
GRAC	**Grapevine Rang**	**57.21**	**49**	⇑P		**P**	**08 44 48.8**	**+0.2**
	baz=57								
S22A	**4UR Ranch, Cre**	**57.29**	**39**	⇓P		**P**	**08 44 50.0**	**+0.8**
	baz=57,SNR=110								
S21A	**Coal Bank Pass**	**57.31**	**40**	⇓P		**P**	**08 44 49.7**	**+0.4**
	baz=57,SNR=50								
OLIL	**Olney**	**57.37**	**22**	*e*P		**P**	**08 44 48.8**	**-0.9**
GYA	**Guiyang**	**57.37**	**189**	⇑/P		**P**	**08 44 51.5**	**+1.7**
GYA				PP		PP	08 47 01.0	+4.2
GYA				ScP		ScP	08 49 43.5	+0.5
GYA				S		**S**	**08 52 46.8**	**+0.7**
GYA				SS		SS	08 56 35.9	+0.9
GYA				pmax		pmax			
	comp=Z,40nm,0.9s,mb5.5								
GYA				pmax		pmax			
	comp=Z,140nm,5.2s								
GYA				LR		LR			
	comp=N,840nm,18.8s,MS5.0								
GYA				LR		LR			
	comp=E,720nm,19.6s,MS5.0								
GYA				LR		LR			
	comp=Z,730nm,17.4s,MS4.8								
SLM	**Saint Louis**	**57.37**	**24**	*e*P		**P**	**08 44 47.3**	**-2.4**
SDCO	**Great Sand Dun**	**57.39**	**38**	*e*P		**P**	**08 44 50.0**	**+0.1**
	comp=Z,34nm,1.0s,mb5.3								
S23A	**Nye Farm, Mont**	**57.39**	**39**	⇑P		**P**	**08 44 50.5**	**+0.6**
	baz=57,SNR=15								
T13A	**Saint George**	**57.48**	**46**	⇓P		**P**	**08 44 50.8**	**+0.3**
	baz=57,SNR=22								
EALB	**Alboran**	**57.49**	**302**	P		**P**	**08 44 50.1**	**-0.4**
	comp=Z,193nm,1.6s,mb5.9								
T14A	**Hurricane**	**57.50**	**45**	⇑P		**P**	**08 44 51.1**	**+0.4**
	baz=57,SNR=51								
S24A	**Houchin Ranch,**	**57.51**	**38**	⇑P		**P**	**08 44 50.2**	**-0.5**
	baz=57,SNR=16								
T15A	**Red Dirt Ranch**	**57.60**	**45**	⇓P		**P**	**08 44 51.1**	**-0.2**
	baz=57,SNR=29								
T18A	**Mexican Hat**	**57.68**	**42**	⇑P		**P**	**08 44 51.5**	**-0.3**
	baz=58,SNR=27								
T16A	**Glen Canyon Da**	**57.70**	**44**	⇓P		**P**	**08 44 51.1**	**-0.9**
	baz=58								
MVCO	**Mesa Verde**	**57.70**	**41**	⇓P		**P**	**08 44 52.3**	**+0.2**
	baz=58,SNR=74								
MVCO	**Mesa Verde**	**57.70**	**41**	*e*P		**P**	**08 44 52.6**	**+0.6**
	comp=Z,218nm,1.5s,mb6.0								
T12A	**Moapa**	**57.71**	**47**	⇓P		**P**	**08 44 51.4**	**-0.7**
	baz=58								
CWC	**Cottonwood Cre**	**57.71**	**50**	⇓P		**P**	**08 44 52.2**	**+0.1**
	baz=58								
RCTC	**Rector, Farmer**	**57.74**	**51**	⇑P		**P**	**08 44 52.5**	**+0.2**
	baz=58,SNR=9.0								
T17A	**Navajo Res., N**	**57.74**	**43**	⇑P		**P**	**08 44 51.8**	**-0.5**
	baz=58,SNR=26								
FURC	**Furnace Creek,**	**57.78**	**49**	⇓P		**P**	**08 44 53.2**	**+0.6**
	baz=58,SNR=22								
U10A	**Ash Meadows, A**	**57.88**	**48**	⇑P		**P**	**08 44 53.0**	**-0.2**
	baz=58								
WCI	**Wyandotte Cave**	**57.94**	**20**	*e*P		**P**	**08 44 51.7**	**-2.0**
	comp=Z,41nm,1.4s,mb5.3								
WCI				*e*PcP		PcP	08 45 45.9	+0.1
WCI	**Wyandotte Cave**	**57.94**	**20**	*e*P		**P**	**08 44 51.7**	**-2.0**
WCI				*e*			08 45 45.9		
WCI				pmax		pmax			
	comp=Z,41nm,1.4s,mb5.3								
U11A	**Corn Creek**	**57.95**	**48**	⇑P		**P**	**08 44 53.8**	**-0.1**
	baz=58								
T21A	**Navajo Lake**	**57.99**	**40**	⇑P		**P**	**08 44 54.8**	**+0.7**
	baz=58,SNR=34								
U12A	**Valley of Fire**	**58.01**	**47**	⇑P		**P**	**08 44 54.1**	**-0.2**
	baz=58,SNR=6.7								
FVM	**French Village**	**58.01**	**24**	*e*P		**P**	**08 44 53.0**	**-1.2**
T22A	**Edith**	**58.02**	**39**	⇓P		**P**	**08 44 54.5**	**+0.2**
	baz=58,SNR=66								
T19A	**Beclabito**	**58.05**	**42**	⇓P		**P**	**08 44 54.2**	**-0.3**
	baz=58,SNR=49								
T23A	**Casias Ranch,**	**58.05**	**39**	⇓P		**P**	**08 44 54.8**	**+0.3**
	baz=58,SNR=25								
T25A	**Trinidad**	**58.06**	**37**	⇑P		**P**	**08 44 53.7**	**-0.9**
	baz=58,SNR=8.9								
U13A	**Pakoon Wash**	**58.08**	**46**	⇓P		**P**	**08 44 54.8**	**+0.1**
	baz=58,SNR=30								
U14A	**Mt Trumbull**	**58.13**	**45**	⇓P		**P**	**08 44 55.8**	**+0.7**
	baz=58,SNR=47								
MPMC	**Manual Prospec**	**58.14**	**50**	⇓P		**P**	**08 44 55.8**	**+0.7**
	baz=58,SNR=34								
USIN	**University of**	**58.15**	**21**	*e*P		**P**	**08 44 54.7**	**-0.5**
MIB	**Mutribah**	**58.16**	**252**	*e*P		**P**	**08 44 54.5**	**-0.9**
MIB				AMb		AMB	08 45 03.2		
	comp=Z,128nm,1.4s,mb5.8								
U15A	**North Rim**	**58.20**	**45**	⇓P		**P**	**08 44 55.1**	**-0.4**
	baz=58,SNR=20								
VES	**Vestal, Richgr**	**58.22**	**51**	⇓P		**P**	**08 44 55.6**	**-0.1**
	baz=58,SNR=7.3								
CBN	**Corbin**	**58.24**	**12**	*e*P		**P**	**08 44 56.7**	**+0.8**
	comp=Z,123nm,1.4s,mb5.8								
SIUC	**Southern Illin**	**58.34**	**23**	*e*P		**P**	**08 44 54.6**	**-1.9**
U18A	**Rough Rock, Ch**	**58.39**	**42**	⇓P		**P**	**08 44 56.8**	**0.0**
	baz=58,SNR=16								
SHOC	**Shoshone**	**58.40**	**48**	⇑P		**P**	**08 44 57.2**	**+0.3**
	baz=58,SNR=28								
ISA	**Isabella**	**58.45**	**51**	⇑P		**P**	**08 44 57.4**	**+0.1**
	baz=58,SNR=11								
ISA	**Isabella**	**58.45**	**51**	*e*P		**P**	**08 44 57.6**	**+0.3**
	comp=Z,9.5nm,1.0s,mb4.8								
ISA	**Isabella**	**58.45**	**51**	*e*P		**P**	**08 44 57.6**	**+0.3**
ISA				pmax		pmax			
	comp=Z,10.0nm,1.0s,mb4.8								
V11A	**Goodsprings**	**58.53**	**48**	⇑P		**P**	**08 44 58.2**	**+0.4**
	baz=58								
U20A	**Newcomb**	**58.53**	**41**	⇑P		**P**	**08 44 57.7**	**-0.1**
	baz=58,SNR=18								
U21A	**Nageezi**	**58.54**	**40**	⇓P		**P**	**08 44 57.7**	**-0.3**
	baz=58,SNR=32								
U19A	**Dine' College,**	**58.56**	**42**	⇓P		**P**	**08 44 57.8**	**-0.3**
	baz=58,SNR=24								
U16A	**Tuba City**	**58.57**	**44**	⇑P		**P**	**08 44 58.0**	**-0.1**
	baz=58,SNR=48								
U22A	**Llaves**	**58.65**	**40**	⇑P		**P**	**08 44 58.9**	**+0.2**
	baz=58,SNR=51								
SMMC	**Simmler**	**58.66**	**52**	⇑P		**P**	**08 44 59.0**	**+0.2**
	baz=58								
V12A	**Nelson**	**58.69**	**47**	⇓P		**P**	**08 44 58.9**	**0.0**
	baz=58,SNR=12								
LRMC	**Laurel Mountai**	**58.70**	**50**	⇑P		**P**	**08 45 00.0**	**+1.0**
	baz=58,SNR=20								
NAY	**Al-Naaiem**	**58.72**	**252**	*e*P		**P**	**08 44 58.2**	**-1.1**
NAY				AMb		AMB	08 45 06.9		
	comp=Z,57nm,1.5s,mb5.4								
U24A	**Moreno Valley**	**58.73**	**38**	⇑P		**P**	**08 44 59.4**	**+0.1**
	baz=58,SNR=43								
SHL	**Shillong**	**58.74**	**205**	*e*PKP		**P**	**08 45 00.0**	**+0.5**
SHL				*e*S		**S**	**08 53 08.0**	**+4.0**
KBD	**Kabd**	**58.74**	**251**	*e*P		**P**	**08 44 58.9**	**-0.5**
KBD				AMb		AMB	08 45 07.4		
	comp=Z,95nm,1.4s,mb5.6								
U23A	**El Rito**	**58.75**	**39**	⇑P		**P**	**08 44 59.1**	**-0.3**
	baz=58,SNR=57								
KMI	**Kunming**	**58.78**	**194**	P		**P**	**08 44 59.6**	**-0.2**
KMI				pP		pP	08 45 04.8	+1.9
KMI				sP		sP	08 45 06.5	+2.4
KMI				PcP		PcP	08 45 49.0	-0.3
KMI				PP		PP	08 47 12.4	+3.0
KMI				S		**S**	**08 53 05.1**	**+0.5**
KMI				sS		sS	08 53 10.3	+0.5
KMI				SS		SS	08 56 59.5	+2.2
KMI				pmax		pmax			
	comp=Z,37nm,1.5s,mb5.2								
KMI				LR		LR			
	comp=N,280nm,21.0s								
KMI				LR		LR			
	comp=E,1µm,15.0s								
KMI				LR		LR			
	comp=Z,1µm,17.2s,MS5.0								
U25A	**Circle Dot Ran**	**58.80**	**37**	⇑P		**P**	**08 44 59.2**	**-0.5**
	baz=59,SNR=20								
QZH	**Quanzhou**	**58.81**	**177**	P		**P**	**08 45 01.0**	**+1.1**
QZH				S		**S**	**08 53 04.0**	**-0.9**
QZH				LR		LR			
	comp=N,520nm,9.8s								
QZH				LR		LR			
	comp=E,1µm,12.8s								
QZH				LR		LR			
	comp=Z,1µm,14.9s,MS5.2								
V15A	**Kaibab Nationa**	**58.81**	**45**	⇓P		**P**	**08 45 00.1**	**+0.3**
	baz=59,SNR=29								
U26A	**Atchley Ranch,**	**58.85**	**37**	⇑P		**P**	**08 44 59.2**	**-0.9**
	baz=59,SNR=26								
TUQ	**Turquoise Moun**	**58.89**	**48**	⇓P		**P**	**08 45 00.5**	**+0.2**
	baz=59,SNR=19								
V14A	**Boquillas Ranc**	**58.92**	**45**	⇓P		**P**	**08 45 00.8**	**+0.2**
	baz=59,SNR=37								
GSC	**Goldstone**	**58.95**	**49**	⇓P		**P**	**08 45 01.1**	**+0.3**
	baz=59,SNR=16								
RDF	**Al-Radifah**	**59.01**	**251**	*e*P		**P**	**08 44 60.0**	**-1.3**
RDF				AMb		AMB	08 45 09.7		
	comp=Z,174nm,1.5s,mb5.9								
V18A	**Ganado**	**59.09**	**42**	⇓P		**P**	**08 45 01.9**	**+0.2**
	baz=59,SNR=11								
W12A	**Cal Nev Ari**	**59.11**	**47**	⇑P		**P**	**08 45 02.0**	**+0.1**
	baz=59,SNR=6.6								
V20A	**Brimhall**	**59.11**	**41**	⇑P		**P**	**08 45 01.7**	**-0.2**
	baz=59,SNR=13								
V17A	**Tonalea, Kykot**	**59.11**	**43**	⇑P		**P**	**08 45 02.0**	**+0.1**
	baz=59,SNR=72								
V19A	**Window Rock**	**59.15**	**42**	⇓P		**P**	**08 45 01.7**	**-0.5**
	baz=59								
BLA	**Blacksburg**	**59.15**	**15**	*e*P		**P**	**08 45 01.1**	**-1.1**
	comp=Z,126nm,1.6s,mb5.7								
BLA	**Blacksburg**	**59.15**	**15**	*e*P		**P**	**08 45 01.1**	**-1.1**
BLA				pmax		pmax			
	comp=Z,126nm,1.6s,mb5.7								
V21A	**Milan**	**59.16**	**40**	⇑P		**P**	**08 45 01.8**	**-0.4**
	baz=59,SNR=6.3								
WUAZ	**Wupatki**	**59.17**	**44**	⇑P		**P**	**08 45 02.2**	**-0.1**
	baz=59,SNR=16								
WUAZ	**Wupatki**	**59.17**	**44**	*e*P		**P**	**08 45 03.0**	**+0.7**
	comp=Z,60nm,1.4s,mb5.4								
EDW2	**Edwards Air Fo**	**59.26**	**50**	⇓P		**P**	**08 45 03.5**	**+0.5**
	baz=59,SNR=24								
V23A	**Ortiz Mt. (NFS**	**59.33**	**39**	⇑P		**P**	**08 45 03.2**	**-0.2**
	baz=59,SNR=43								
W14A	**Seligman**	**59.34**	**46**	⇑P		**P**	**08 45 04.1**	**+0.7**
	baz=59,SNR=23								
V25A	**Rancho No Teng**	**59.34**	**37**	⇓P		**P**	**08 45 02.9**	**-0.6**
	baz=59,SNR=74								
RRX	**Edison Barstow**	**59.35**	**49**	⇓P		**P**	**08 45 03.9**	**+0.3**
	baz=59								
PARMO	**Parma**	**59.36**	**23**	*e*P		**P**	**08 45 02.8**	**-0.8**
W13A	**Hualapai Mount**	**59.39**	**46**	⇓P		**P**	**08 45 03.8**	**0.0**
	baz=59,SNR=22								
V24A	**Rampart Ranch,**	**59.41**	**38**	⇑P		**P**	**08 45 03.6**	**-0.4**
	baz=59,SNR=42								
W15A	**Williams**	**59.44**	**45**	⇓P		**P**	**08 45 04.9**	**+0.7**
	baz=59,SNR=15								
V26A	**Tesquite Ra**	**59.44**	**37**	⇑P		**P**	**08 45 02.5**	**-1.7**
	baz=59,SNR=38								
HEC	**Hector,Ludlow**	**59.45**	**49**	⇑P		**P**	**08 45 04.2**	**-0.1**
	baz=59								
OSI	**Osito Adit**	**59.46**	**51**	⇓P		**P**	**08 45 04.9**	**+0.5**
	baz=59								
OSI	**Osito Adit**	**59.46**	**51**	*e*P		**P**	**08 45 05.1**	**+0.7**
SBC	**Santa Barbara**	**59.55**	**52**	⇓P		**P**	**08 45 05.5**	**+0.6**
	baz=59								
GMRC	**Granite Mounta**	**59.56**	**48**	⇓P		**P**	**08 45 05.4**	**+0.4**
	baz=59,SNR=22								
W16A	**Flagstaff**	**59.58**	**44**	⇑P		**P**	**08 45 05.6**	**+0.4**
	baz=59,SNR=9.2								
EIL	**Elat**	**59.64**	**264**	P		**P**	**08 45 06.0**	**+0.3**
	comp=Z,12nm,1.0s,mb4.9,baz=348,slow=4.6,SNR=18								
NEE2	**Needles Airpor**	**59.66**	**47**	⇓P		**P**	**08 45 05.4**	**-0.3**
	baz=60								
W17A	**Winslow**	**59.66**	**43**	⇓P		**P**	**08 45 05.4**	**-0.3**
	baz=60,SNR=7.0								
W18A	**Petrified Fore**	**59.69**	**42**	⇓P		**P**	**08 45 06.1**	**+0.2**
	baz=60,SNR=23								
W19A	**Sanders**	**59.73**	**42**	⇓P		**P**	**08 45 06.3**	**+0.1**
	baz=60,SNR=35								
W20A	**Ramah**	**59.78**	**41**	⇓P		**P**	**08 45 05.7**	**-0.8**
	baz=60,SNR=8.6								
W21A	**San Fidel**	**59.85**	**40**	⇓P		**P**	**08 45 06.6**	**-0.4**
	baz=60								
DECC	**Green Verdugo**	**59.86**	**51**	⇑P		**P**	**08 45 07.3**	**+0.2**
	baz=60								
X13A	**Yucca**	**59.89**	**46**	⇓P		**P**	**08 45 07.9**	**+0.6**
	baz=60,SNR=28								
MWC	**Mount Wilson**	**59.91**	**50**	*e*P		**P**	**08 45 07.9**	**+0.5**
W23A	**Werner Place,**	**59.91**	**39**	⇓P		**P**	**08 45 07.3**	**-0.1**
	baz=60,SNR=23								
W24A	**Lazy 6 Ranch,**	**59.91**	**38**	⇓P		**P**	**08 45 07.0**	**-0.5**
	baz=60,SNR=43								
BFSC	**Mount Baldy Ra**	**59.93**	**50**	⇑P		**P**	**08 45 07.9**	**+0.3**
	baz=60,SNR=15								
BLG	**Laguna Peak**	**59.94**	**51**	⇑P		**P**	**08 45 08.0**	**+0.4**
	baz=60								
W22A	**Albuquerque**	**59.95**	**40**	⇓P		**P**	**08 45 07.9**	**+0.2**
	baz=60								
PASC	**Pasadena Art C**	**59.95**	**50**	*e*P		**P**	**08 45 08.5**	**+0.8**
BBRC	**Big Bear Solar**	**59.97**	**49**	⇑P		**P**	**08 45 08.4**	**+0.5**
	baz=60,SNR=7.7								
W25A	**X Bar L Ranch,**	**59.97**	**37**	⇑P		**P**	**08 45 06.5**	**-1.4**
	baz=60,SNR=21								
WVT	**Waverly**	**59.97**	**22**	*e*P		**P**	**08 45 06.0**	**-1.9**
	comp=Z,39nm,1.4s,mb5.2								
WVT	**Waverly**	**59.97**	**22**	*e*P		**P**	**08 45 06.0**	**-1.9**
WVT				pmax		pmax			
	comp=Z,39nm,1.4s,mb5.2								
SSLB	**Suanglung**	**59.98**	**174**	*e*P		**P**	**08 45 07.6**	**-0.4**
	comp=Z,58nm,1.3s,mb5.5								
BSC	**Santa Cruz Isl**	**60.00**	**52**	⇑P		**P**	**08 45 08.4**	**+0.4**
	baz=60								
X14A	**Yava**	**60.09**	**45**	⇑P		**P**	**08 45 09.3**	**+0.6**
	baz=60,SNR=12								
ANMO	**Albuquerque**	**60.10**	**39**	*e*P		**P**	**08 45 08.6**	**-0.2**
	comp=Z,38nm,1.0s,mb5.4								
ANMO	**Albuquerque**	**60.10**	**39**	*e*P		**P**	**08 45 08.6**	**-0.1**
ANMO				pmax		pmax			
	comp=Z,38nm,1.0s								
W26A	**Owens Ranch, T**	**60.15**	**37**	⇓P		**P**	**08 45 08.1**	**-1.0**
	baz=60,SNR=5.1								
PDMCI	**Parker Dam,Lak**	**60.16**	**47**	⇓P		**P**	**08 45 09.0**	**-0.1**
	baz=60,SNR=11								
IRM	**Iron Mountain**	**60.22**	**48**	⇑P		**P**	**08 45 09.7**	**+0.1**
	baz=60,SNR=13								
W27A	**Bowe Ranch, En**	**60.22**	**36**	⇓P		**P**	**08 45 07.7**	**-1.8**
	baz=60,SNR=12								
X16A	**Lo Mia Camp, P**	**60.26**	**44**	⇑P		**P**	**08 45 10.1**	**+0.2**
	baz=60,SNR=20								
X18A	**Snowflake**	**60.26**	**43**	⇓P		**P**	**08 45 09.6**	**-0.3**
	baz=60,SNR=34								
BELC	**Belle Mtn. Jos**	**60.30**	**48**	⇑P		**P**	**08 45 10.4**	**+0.2**
	baz=60,SNR=10								
X20A	**Quemado**	**60.36**	**41**	⇑P		**P**	**08 45 10.0**	**-0.5**
	baz=60,SNR=22								
X17A	**Forest Lakes**	**60.39**	**43**	⇑P		**P**	**08 45 11.3**	**+0.5**
	baz=60,SNR=35								
FMP	**Fort Macarthur**	**60.40**	**51**	⇓P		**P**	**08 45 10.1**	**-0.7**
	baz=60								
X19A	**St. Johns**	**60.41**	**42**	⇑P		**P**	**08 45 10.4**	**-0.5**
	baz=60,SNR=27								
TPUB	**Ta-pu**	**60.46**	**175**	*e*P		**P**	**08 45 11.6**	**+0.3**
	comp=Z,186nm,1.6s,mb5.9								
X23A	**Hourglass Bar**	**60.48**	**39**	⇑P		**P**	**08 45 10.9**	**-0.4**
	baz=60								
AMTX	**Amarillo**	**60.48**	**35**	*e*P		**P**	**08 45 10.9**	**-0.5**
X22A	**Bernardo**	**60.50**	**40**	⇓P		**P**	**08 45 11.6**	**+0.1**
	baz=60								
X21A	**Alamocita Cree**	**60.51**	**41**	⇑P		**P**	**08 45 11.0**	**-0.5**
	baz=60,SNR=23								
X24A	**Lazy VL Ranch,**	**60.55**	**38**	⇑P		**P**	**08 45 11.0**	**-0.8**
	baz=60								
LAZ	**Ladron**	**60.59**	**40**	*e*P		**P**	**08 45 12.0**	**-0.1**
	comp=Z,41nm,1.6s,mb5.3								
TKL	**Tuckaleechee C**	**60.60**	**18**	*e*P		**P**	**08 45 11.1**	**-1.1**
MURC	**Murrieta**	**60.60**	**50**	⇓P		**P**	**08 45 11.5**	**-0.7**
	baz=60								
Y14A	**Wickenburg**	**60.61**	**46**	⇓P		**P**	**08 45 12.1**	**-0.1**
	baz=60,SNR=21								
X27A	**F and S Farms,**	**60.63**	**36**	⇓P		**P**	**08 45 10.7**	**-1.7**
	baz=60,SNR=14								
X25A	**Clemmons Ranch**	**60.64**	**38**	⇓P		**P**	**08 45 11.4**	**-1.1**
	baz=60,SNR=16								
Y15A	**Casa Rosa Ranc**	**60.65**	**45**	⇑P		**P**	**08 45 12.5**	**0.0**
	baz=60,SNR=17								
PFO	**Pinyon Flat Ob**	**60.66**	**49**	⇓P		**P**	**08 45 12.7**	**+0.1**
	baz=60,SNR=9.0								
PFO	**Pinyon Flat Ob**	**60.66**	**49**	*e*P		**P**	**08 45 12.5**	**0.0**
	comp=Z,38nm,1.4s,mb5.3			

112A	Yuma	61.88	47	⇓P		P	08 45 20.4	-0.5
	baz=62								
Z25A	Roswell	61.88	38	⇑P		P	08 45 19.6	-1.2
	baz=62,SNR=38								
Z26A	Caprock	61.94	37	⇑P		P	08 45 20.0	-1.2
	baz=62,SNR=29								
JSC	Jenkinsville	62.05	16	*e*P		P	08 45 21.5	-0.5
119A	Ashpeak Ranch,	62.06	42	⇑P		P	08 45 21.8	-0.2
	baz=62,SNR=12								
118A	Homack Ranch,	62.14	43	⇓P		P	08 45 22.4	-0.2
	baz=62,SNR=24								
117A	Oracle	62.15	44	⇑P		P	08 45 22.6	0.0
	baz=62,SNR=25								
122A	Conniff Cattle	62.30	40	⇑P		P	08 45 23.2	-0.5
	baz=62,SNR=6.8								
120A	U Bar Ranch, L	62.33	42	⇑P		P	08 45 23.5	-0.3
	baz=62,SNR=14								
TUC	Tucson	62.40	44	*e*P		P	08 45 24.5	+0.1
	comp=Z,71nm,1.8s,mb5.5								
TUC	Tucson	62.40	44	*e*P		P	08 45 24.5	+0.1
TUC					pmax	pmax			
	comp=Z,71nm,1.8s,mb5.5								
124A	Stringfield Ra	62.41	39	⇓P		P	08 45 23.5	-0.9
	baz=62,SNR=50								
121A	Cookes Peak, D	62.41	41	⇑P		P	08 45 23.9	-0.4
	baz=62,SNR=16								
123A	Bell Site, Whi	62.41	39	⇓P		P	08 45 23.3	-1.2
	baz=62								
125A	Gardner Draw,	62.50	38	⇓P		P	08 45 24.0	-1.0
	baz=62,SNR=38								
126A	Clayton Basin,	62.56	37	⇓P		P	08 45 23.9	-1.5
	baz=62,SNR=7.4								
127A	Arkansas Junct	62.57	37	⇑P		P	08 45 23.7	-1.8
	baz=62								
214A	Organ Pipe Nat	62.59	46	⇑P		P	08 45 25.2	-0.5
	baz=62,SNR=10								
216A	Three Points,	62.66	44	⇑P		P	08 45 25.6	-0.5
	baz=62,SNR=7.2								
218A	Dragoon	62.79	43	⇓P		P	08 45 27.1	+0.1
	baz=63,SNR=9.7								
219A	White Tail Can	62.83	42	⇓P		P	08 45 26.7	-0.5
	baz=63,SNR=20								
GOGA	Godfrey	62.85	18	*e*P		P	08 45 26.7	-0.6
	comp=Z,72nm,1.7s,mb5.5								
GOGA	Godfrey	62.85	18	*e*P		P	08 45 26.7	-0.6
GOGA					pmax	pmax			
	comp=Z,71nm,1.7s,mb5.5								
222A	Williams Famil	62.88	40	⇑P		P	08 45 26.2	-1.3
	baz=63								
221A	Mesquite Ranch	62.93	41	⇓P		P	08 45 27.4	-0.4
	baz=63,SNR=13								
217A	Green Valley	62.93	44	⇑P		P	08 45 27.3	-0.6
	baz=63,SNR=26								
CLNB	Carlsbad	62.95	37	*e*P		P	08 45 27.2	-0.8
	comp=Z,9.9nm,1.0s,mb4.9								
220A	Playas Peak, P	62.98	42	⇓P		P	08 45 27.8	-0.4
	baz=63,SNR=22								
GDL2	Guadalupe Moun	62.98	38	*e*P		P	08 45 27.4	-0.8
224A	Cornudas Mount	63.02	39	⇑P		P	08 45 27.5	-1.0
	baz=63,SNR=25								
223A	Chaparral, Ant	63.03	40	⇓P		P	08 45 27.5	-1.0
	baz=63								
LRAL	Lakeview Retre	63.09	21	*e*P		P	08 45 27.1	-1.9
	comp=Z,9.8nm,0.9s,mb4.9								
226A	Malaga, Loving	63.13	37	⇓P		P	08 45 27.6	-1.6
	baz=63,SNR=14								
227A	Bennet, Jal	63.24	37	⇑P		P	08 45 28.3	-1.6
	baz=63								
NHSC	New Hope	63.25	15	*e*P		P	08 45 31.9	+1.8
318A	Bisbee	63.33	43	⇓P		P	08 45 30.0	-0.5
	baz=63,SNR=16								
MNTX	Cornudas Mount	63.41	39	*e*P		P	08 45 30.2	-0.8
	comp=Z,34nm,1.3s,mb5.3								
319A	Douglas	63.44	42	⇑P		P	08 45 31.2	-0.1
	baz=63								
320A	Kipp Ranch, An	63.54	42	⇑P		P	08 45 31.9	0.0
	baz=63								
VBMS	Vicksburg	63.75	24	*e*P		P	08 45 33.7	+0.4
	comp=Z,62nm,1.2s,mb5.5								
325A	Bean Ranch, Si	63.76	38	⇑P		P	08 45 32.3	-1.0
	baz=64,SNR=14								
327A	Balmorhea Ranc	63.86	37	⇑P		P	08 45 33.3	-0.8
	baz=64								
326A	Caldwell Ranch	63.88	37	⇑P		P	08 45 33.0	-1.2
	baz=64								
328A	Wristen Ranch,	63.89	36	⇓P		P	08 45 32.8	-1.5
	baz=64,SNR=29								
425A	Indio Mountain	64.34	38	⇑P		P	08 45 36.6	-0.6
	baz=64,SNR=152								
427A	Hayter Ranch,	64.38	37	⇑P		P	08 45 36.7	-0.7
	baz=64,SNR=21								
426A	McDonald Obser	64.52	37	⇓P		P	08 45 37.5	-0.9
	baz=64,SNR=71								
428A	Kincaid Ranch,	64.55	36	⇑P		P	08 45 37.8	-0.7
	baz=64,SNR=49								
QIZ	Qiongzhong	64.72	186	P		P	08 45 39.6	-0.2
QIZ				sP		sP	08 45 44.9	+0.7
QIZ				S		**S**	**08 54 21.3**	**+1.6**
QIZ				SS		SS	08 58 30.5	+0.3
QIZ				pmax		pmax		
	comp=Z,41nm,1.5s,mb5.2								
QIZ				LR		LR		
	comp=N,430nm,15.1s,MS4.8								
QIZ				LR		LR		
	comp=E,220nm,16.9s,MS4.8								
QIZ				LR		LR		
	comp=Z,640nm,16.9s,MS4.9								
QIZ	Qiongzhong	64.72	186	*e*P		P	08 45 40.6	+0.8
	comp=Z,80nm,1.4s,mb5.5								
JCT	Junction City	64.98	33	*e*P		P	08 45 40.1	-1.3
	comp=Z,92nm,1.1s,mb5.7								
JCT	Junction City	64.98	33	*e*P		P	08 45 40.1	-1.3
JCT					pmax	pmax			
	comp=Z,92nm,1.1s,mb5.7								
527A	Woodward Ranch	65.07	37	⇑P		P	08 45 40.4	-1.5
	baz=65,SNR=30								
528A	Cox Ranch, San	65.11	36	⇓P		P	08 45 41.1	-1.1
	baz=65,SNR=66								
526A	Mary Lane Ranc	65.12	37	⇑P		P	08 45 41.2	-1.1
	baz=65,SNR=35								
CHTO	Chiang Mai	65.17	197	*e*P		P	08 45 41.6	-1.1
	comp=Z,22nm,1.2s,mb5.1								
CHTO	Chiang Mai	65.17	197	*e*P		P	08 45 41.7	-1.0
CHTO					pmax	pmax			
	comp=Z,22nm,1.2s,mb5.1								
CHTO	Chiang Mai	65.17	197	P		P	08 45 41.1	-1.6
	comp=Z,418nmcomp=Z,24nm,1.8s,mb4.9								
CHTO	Chiang Mai	65.17	197	P		P	08 45 42.6	-0.1
	comp=Z,24nm,1.8s,mb4.9								
CM31	Chiang Mai Arr	65.53	197	*e*P		P	08 45 45.1	+0.1
CMAR	Chiang Mai Arr	65.53	197	P		P	08 45 43.5	-1.5
	comp=Z,6.9nm,0.9s,mb4.7,baz=350,slow=7.5,SNR=32								
CMAR				LR		LR	09 16 07.6		
	comp=Z,1μm,18.7s,MS5.2,baz=1.3,slow=38								
626A	Big Bend Ranch	65.62	38	⇓P		P	08 45 44.6	-1.0
	baz=65,SNR=32								
HKT	Hockley	65.74	30	*e*P		P	08 45 46.3	0.0
	comp=Z,45nm,1.6s,mb5.2								
HKT	Hockley	65.74	30	*e*P		P	08 45 46.3	0.0
HKT					pmax	pmax			
	comp=Z,45nm,1.6s,mb5.2								
627A	Terlingua Ranc	65.77	37	⇑P		P	08 45 45.6	-0.9
	baz=66,SNR=67								
628A	Black Gap, Mar	65.77	36	⇓P		P	08 45 45.3	-1.2
	baz=66,SNR=43								
TXAR	Lajitas Array	65.87	37	P		P	08 45 46.2	-0.9
TXAR				⇑*e*			09 14 24.5		
TXAR				LR		LR	09 15 12.5		
TXAR	Lajitas Array	65.87	37	P		P	08 45 46.2	-0.9
	comp=Z,30nm,1.0s,mb5.3,baz=357,slow=4.3,SNR=114								
TXAR				PKP2bc			09 14 24.5		
	comp=Z,1.2nm,1.1s,baz=178,slow=3.8,SNR=5.2								
TXAR				LR		LR	09 15 12.5		
	comp=Z,2μm,19.0s,MS5.2,baz=5.0,slow=37								
TAM	Tamanrasset	69.66	292	*e*P		P	08 46 11.6	+0.5
	comp=Z,87nm,2.0s,mb5.3								
TAM	Tamanrasset	69.66	292	*e*P		P	08 46 11.6	+0.5
TAM					pmax	pmax			
	comp=Z,87nm,2.0s,mb5.3								
LPIG	La Paz	70.58	44	LR		LR	09 17 37.8		
	comp=Z,1μm,19.8s,MS5.2,baz=339,slow=36								
DAV	Davao City (W)	76.67	170	*e*P		P	08 46 52.6	0.0
KDM	Kudat	76.73	179	P		P	08 46 52.6	-0.3
SDDR	Presa de Saban	77.50	7	*e*P		P	08 46 57.3	+0.1
	comp=Z,87nm,1.5s,mb5.5								
KKM	Kota Kinabalu	77.59	179	*e*P		P	08 46 57.4	-0.4
	comp=Z,125nm,1.4s,mb5.7								
KKM	Kota Kinabalu	77.59	179	P		P	08 46 57.6	-0.1
KKM	Kota Kinabalu	77.59	179	P		P	08 46 57.5	-0.3
KKM	Kota Kinabalu	77.59	179	P		P	08 46 58.1	+0.3
	comp=Z,992nmcomp=Z,69nm,1.5s,mb5.4								
SDKM	Sandakan	77.99	178	P		P	08 46 59.9	-0.1
MTP	Monte Pirata	78.42	1	*e*P		P	08 47 03.1	+0.8
	comp=Z,97nm,1.5s,mb5.5								
KTGM	Kuala Trenggan	78.45	193	P		P	08 47 04.1	+1.5
MYLDM	Lahad Datu	78.46	177	P		P	08 47 04.9	+2.4
MYLDM	Lahad Datu	78.46	177	P		P	08 47 03.6	+1.0
KULM	Kulim	78.56	195	P		P	08 47 03.0	-0.1
KULM	Kulim	78.56	195	P		P	08 47 01.7	-1.4
	comp=Z,639nmcomp=Z,30nm,2.0s,mb4.9								
KULM	Kulim	78.56	195	P		P	08 47 02.0	-1.1
	comp=Z,639nmcomp=Z,30nm,2.0s,mb4.9								
CMIG	Matias Romero	78.57	30	LR		LR	09 24 25.1		
	comp=Z,944nm,20.9s,MS5.1,baz=278,slow=38								
TSM	Tawau	79.33	178	P		P	08 47 08.9	+1.5
IPM	Ipoh	79.35	195	P		P	08 47 06.2	-1.3
IPM	Ipoh	79.35	195	P		P	08 47 04.6	-2.9
	comp=Z,740nmcomp=Z,31nm,1.7s,mb5.0								
IPM	Ipoh	79.35	195	P		P	08 47 07.0	-0.5
TORD	Torodi Ar. Bea	79.58	295	P		P	08 47 07.6	-1.2
TORD				LR		LR	09 24 40.9		
TORD	Torodi Ar. Bea	79.58	295	P		P	08 47 07.6	-1.2
	comp=Z,19nm,0.9s,mb5.0,baz=357,slow=5.7,SNR=75								
TORD				LR		LR	09 24 40.9		
	comp=Z,251nm,18.8s,MS4.6,baz=0.0,slow=37								
BTM	Bintulu	80.42	182	P		P	08 47 13.6	+0.4
FRIM	Kepong	80.57	194	P		P	08 47 13.9	-0.2
TPTI		80.68	199	P		P	08 47 11.8	-2.9
	comp=Z,12nm,1.9s,mb4.5								
SBUM	Sibu	81.17	183	P		P	08 47 17.7	+0.5
SBUM	Sibu	81.17	183	P		P	08 47 16.8	-0.5
	comp=Z,582nmcomp=Z,29nm,1.6s,mb5.0								
KGM	Kluang	81.74	192	P		P	08 47 20.4	+0.2
MYKOM	Kota Tinggi	81.95	192	P		P	08 47 18.1	-3.3
MYKOM	Kota Tinggi	81.95	192	P		P	08 47 20.2	-1.2
	comp=Z,859nmcomp=Z,40nm,1.9s,mb5.0								
TGUH	Tegucigalpa,Un	81.95	22	*e*P		P	08 47 23.0	+1.5
	comp=Z,100nm,1.6s,mb5.5								
KSM	Kuching	82.16	185	*e*P		P	08 47 22.3	-0.2
	comp=Z,90nm,1.5s,mb5.5								
KSM	Kuching	82.16	185	P		P	08 47 22.0	-0.5
KSM	Kuching	82.16	185	P		P	08 47 21.6	-0.9
	comp=Z,740nmcomp=Z,31nm,2.0s,mb4.9								
MRSI	Marisa	83.16	173	P		P	08 47 26.2	-1.5
	comp=Z,1μmcomp=Z,59nm,1.4s,mb5.4								
STKI	Sintang	83.54	184	P		P	08 47 30.7	+1.0
	comp=Z,8μmcomp=Z,73nm,1.6s,mb5.6								
PCI	Palu	84.51	176	P		P	08 47 33.9	-0.7
	comp=Z,2μmcomp=Z,180nm,1.4s,mb6.0								
LUWI	Luwuk	84.68	173	P		P	08 47 32.2	-3.2
	comp=Z,1μmcomp=Z,76nm,1.4s,mb5.7								
SDSI	Sungai Dareh	84.71	194	P		P	08 47 33.1	-2.5
PDSI	Padang	84.72	195	P		P	08 47 32.9	-2.7
PCRV	Puerto La Cruz	86.30	0	P		P	08 47 43.4	-0.2
	comp=Z,4.8nm,0.7s,mb4.9,baz=118,slow=4.0,SNR=4.1								
DBIC	Dimbokro	86.63	301	P		P	08 47 44.7	-0.5
DBIC				LR		LR	09 30 02.5		
DBIC	Dimbokro	86.63	301	P		P	08 47 44.7	-0.5
	comp=Z,17nm,1.1s,mb5.2,baz=348,slow=7.2,SNR=5.7								
DBIC				LR		LR	09 30 02.5		
	comp=Z,186nm,19.4s,MS4.5,baz=347,slow=38								
TIC	Toumodi	86.67	301	*e*P		P	08 47 43.9	-1.5
	comp=Z,227nm,1.7s,mb6.1								
KIC	Kosan Boka	86.93	301	*e*P		P	08 47 45.6	-1.0
	comp=Z,235nm,1.3s,mb6.2								
BCIP	Isla Barro Col	87.08	15	*e*P		P	08 47 47.0	-0.3
	comp=Z,39nm,1.5s,mb5.4								
LIC	Lamto	87.09	301	*e*P		P	08 47 47.1	-0.3
	comp=Z,255nm,1.4s,mb6.3								
LIC	Lamto	87.09	301	⇑*i*P		P	08 47 47.0	-0.4
	comp=Z,279nm,1.4s,mb6.0								
LIC				*e*MLR		MLR			
	comp=Z,229nm,21.0s,MS4.3								
LIC	Lamto	87.09	301	⇑*i*P		P	08 47 47.0	-0.4
	comp=Z,140nm,1.4s,mb6.0								
LIC				LR		LR			
	comp=Z,110nm,21.0s,MS4.2								
SDV	Santo Domingo	87.54	6	*e*P		P	08 47 48.9	-0.7
	comp=Z,56nm,1.3s,mb5.6								
KMBO	Kilima Mbogo	89.81	258	LR		LR	09 35 35.9		
	comp=Z,418nm,18.0s,MS4.9,baz=90,slow=40								
ROSC	El Rosal	91.49	10	*e*P		P	08 48 09.0	+0.9
ROSC	El Rosal	91.49	10	P		P	08 48 08.0	-0.1
	comp=Z,8.6nm,0.7s,mb5.2,baz=74,slow=19,SNR=14								
ROSC				LR		LR	09 33 24.1		
	comp=Z,338nm,18.2s,MS4.8,baz=22,slow=38								
TAOE	Nuku Hiva Isla	100.33	77	*e*Pdif		Pdif	08 48 52.5	+3.8
	comp=Z,387nm,34.1s								
TAOE				*e*Sdif		Sdif	09 00 26.9	+2.2
	comp=Z,1μm,31.8s								
TAOE				*e*SS		SS	09 07 19.6	+1.2
	comp=Z,567nm,28.4s								
TAOE				*e*LR		LR	09 21 34.3		
	comp=Z,818nm,27.9s								
TAOE	Nuku Hiva Isla	100.33	77	*e*Pdif		Pdif	08 48 52.5	+3.8
TAOE				*e*Sdif		Sdif	09 00 26.9	+2.2
TAOE				*e*SS		SS	09 07 19.6	+1.2
ASAR	Alice Springs	107.43	162	PKKPbc		PKKPbc	09 04 42.5	+2.5
	comp=Z,0.8nm,0.8s,baz=177,slow=2.8,SNR=7.0								
DZM	Mont Dzumac	107.82	131	*e*LR		LR	09 25 09.5		
	comp=Z,392nm,25.6s								
PPT	Papeete	107.90	87	*e*SS		SS	09 09 11.5	+9.1
	comp=Z,277nm,27.5s								
PPT				*e*LR		LR	09 24 58.1		
	comp=Z,798nm,20.8s,baz=354								
LPAZ	La Paz	112.58	4	PP		PP	08 54 26.5	+2.1
	comp=Z,6.9nm,1.2s,baz=41,slow=8.2,SNR=8.5								
LPAZ				PKKPbc		PKKPbc	09 04 30.9	+7.6
	comp=Z,0.8nm,0.7s,baz=354,slow=1.1,SNR=3.8								
RKT	Rikitea	114.98	73	*e*SP		SP	09 04 18.8	-0.6
	comp=Z,125nm,27.8s								
RKT				*e*SS		SS	09 10 42.4	+5.5
	comp=Z,641nm,28.2s								
RKT				*e*LR		LR	09 28 21.4		
	comp=Z,647nm,37.5s,baz=348								
RKT	Rikitea	114.98	73	*e*SP		SP	09 04 18.8	-0.6
RKT				*e*SS		SS	09 10 42.4	+5.5
STKA	Stephens Creek	115.91	155	PP		PP	08 54 48.1	0.0
	comp=Z,1.1nm,0.5s,baz=294,slow=16,SNR=2.9								
PLCA	Paso Flores	136.91	7	PKP		PKPdf	08 54 23.4	+0.1
	comp=Z,5.5nm,0.9s,baz=48,slow=3.4,SNR=6.3								
CASY	Casey	149.75	184	*e*PKPbc		PKPbc	08 54 49.9	+0.3
MIR	Mirnyy	150.39	198	⇑*i*PKIKP		PKPdf	08 54 51.2	+5.3
MIR				*i*			08 54 58.0		
MIR				pmax		pmax			
	comp=Z,238nm,1.8s								
MAW	Mawson	153.12	222	PKP		PKPdf	08 54 49.9	-0.1
	comp=Z,3.0nm,1.0s,baz=81,slow=4.1,SNR=6.1								
MAW				PKPbc		PKPbc	08 54 57.2	-0.2
	comp=Z,19nm,0.9s,baz=327,slow=4.0,SNR=35								
MAW	Mawson	153.12	222	*e*PKIKP		PKPdf	08 54 49.9	-0.1
MAW				*e*			08 54 57.5		
SYO	Syowa Base	156.52	241	⇑*e*PKPab		PKPab	08 55 23.4	-0.3
SBA	Scott Base	163.02	146	*e*PKPdf		PKPdf	08 54 59.6	-2.3
QSPA	South Pole Qui	173.53	180	PKP		PKPdf	08 55 04.8	-4.0
QSPA				PKPab		PKPab	08 56 36.6	-1.8
QSPA				PP		PP	09 00 30.8	-0.5
QSPA	South Pole Qui	173.53	180	PKP		PKPdf	08 55 04.8	-4.0
	comp=Z,4.2nm,1.2s,baz=160,slow=1.3,SNR=6.9								
QSPA				PKPab		PKPab	08 56 36.6	-1.8
	comp=Z,4.6nm,1.0s,baz=338,slow=0.8,SNR=6.4								
QSPA				PP		PP	09 00 30.8	-0.5
	comp=Z,1.8nm,1.0s,baz=312,slow=7.5,SNR=5.3								

*ISCJB **13** 08:45:41.7±0.3, 32.50N±0.03×105.60E±0.04, h10km, mb4.2/19, Error ellipse: s-maj=4.7km s-min=3.9km az=1.7*
*IDC **13** 08:45:42.1±0.8, 32.43N×105.44E, h0km, mb4.1/13, mb1 4.2/16, mb1mx4.0/27, mbtmp4.1/16, ML4.1/2, MS3.0/1, Ms1 3.2/1, ms1mx2.9/27, Error ellipse: s-maj=33.2km s-min=15.0km az=53.0*
*BJI **13** 08:45:43.7, 32.47N×105.54E, h16km, mB4.6/7, mb4.4/13, ML4.2/20, Ms4.1/19, Ms7 3.8/15*
*NEIC **13** 08:45:44.4±0.6, 32.49N×105.44E, h10km, mb4.5/5, Error ellipse: s-maj=19.7km s-min=10.0km az=57.0*

ISC 13 08:45:43.9±0.3, 32.51N±0.03×105.53E±0.04, h10km, n45, σ1°32/60, mb4.2/19, 2C, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CD2	Chengdu	2.20	224	⇑Pn		Pn	08 46 20.4	-0.1
CD2				Pg		Pg	08 46 23.3	-2.8
CD2				Sg		Sg	08 46 52.0	-2.6
CD2				smax				
	comp=N,11μm,0.6s							
XAN	Xi'an	3.22	61	Pn		Pn	08 46 36.3	+1.7
XAN				Pg		Pg	08 46 45.3	-0.4
XAN				Sn		Sn	08 47 10.8	-2.2
XAN				Sg		Sg	08 47 22.8	-4.7
XAN				smax				
	comp=N,990nm,1.0s							
XAN				smax				
	comp=E,460nm,0.8s							
XAN				LR		LR		
	comp=N,2μm,9.1s							
XAN				LR		LR		
	comp=E,350nm,11.6s							
XAN				LR		LR		
	comp=Z,490nm,7.3s							
LZH	Lanzhou	3.83	339	*e*Pn		Pn	08 46 44.3	+1.4
LZH				Pg		Pb	08 46 50.8	-0.8
LZH				Sn		Sn	08 47 22.0	-6.0
LZH				smax				
	comp=N,1μm,0.6s							
LZH				smax				
	comp=E,2μm,0.8s							
LZH				LR		LR		
	comp=E,3μm,5.8s							
LZH				LR		LR		
	comp=Z,4μm,7.2s							
ENH	Enshi	4.05	122	*e*Pn		Pn	08 46 49.4	+3.4
GYA	Guiyang	6.11	170	⇑*i*Pn		Pn	08 47 15.1	+0.8
GYA				Pg		Pb	08 47 33.6	+3.1
GYA				Sn		Sn	08 48 23.9	-0.4
GYA				smax				
	comp=N,250nm,0.6s							
GYA				smax				
	comp=E,360nm,0.8s							
KMI	Kunming	7.76	199	Pn		Pn	08 47 36.6	-0.3
KMI				Sn		Sn	08 49 07.9	+3.1
KMI				smax				
	comp=N,38nm,0.9s							
KMI				smax				
	comp=E,29nm,0.9s							
KMI				LR		LR		
	comp=N,170nm,6.2s							
KMI				LR		LR		
	comp=E,410nm,4.8s							
KMI				LR		LR		
	comp=Z,220nm,6.9s							
WHN	Wuhan	7.78	102	Pn		Pn	08 47 37.6	+0.4
WHN				Sn		Sn	08 49 02.8	-2.6
WHN				LR		LR		
	comp=N,2μm,5.4s							
WHN				LR		LR		
	comp=E,800nm,3.5s							
GTA	Gaotai	8.30	328	*e*P		Pn	08 47 42.8	-1.4
GTA				sP			08 47 50.6	
GTA				S		Sn	08 49 17.9	-0.1
GTA				pmax		pmax		
	comp=Z,5.0nm,1.1s							
GTA				pmax		pmax		
	comp=Z,58nm,6.5s							
GTA				LR		LR		
	comp=N,650nm,14.9s							
GTA				LR		LR		
	comp=E,900nm,11.3s							
GTA				LR		LR		
	comp=Z,440nm,10.7s							
HHC	Hu-ho-hao-te	9.63	28	*e*P		Pn	08 48 00.6	-1.9
HHC				S		Sn	08 49 49.8	-0.8
HHC				pmax		pmax		
	comp=Z,10.0nm,1.1s							
HHC				pmax		pmax		
	comp=Z,75nm,3.9s							
HHC				LR		LR		
	comp=N,430nm,9.8s							
HHC				LR		LR		
	comp=E,960nm,9.8s							
HHC				LR		LR		
	comp=Z,450nm,8.1s							
QIZ	Qiongzhong	13.97	163	P		Pn	08 49 01.3	-0.7
QIZ				S		Sn	08 51 38.0	+0.7
QIZ				pmax		pmax		
	comp=Z,14nm,1.8s							
QIZ				LR		LR		
	comp=E,220nm,14.4s							
QIZ				LR		LR		
	comp=Z,340nm,11.3s							
CMAR	Chiang Mai Arr	15.20	205	Pn		Pn	08 49 18.2	-0.5
	comp=Z,0.3nm,0.3s,baz=14,slow=11,SNR=14							
CMAR				LR		LR	08 55 56.4	
	comp=Z,54nm,20.6s,baz=15,slow=41							
SONM	Songino Array	15.32	2	Pn		Pn	08 49 20.6	+0.5
	baz=183,slow=15,SNR=2.9							
ODAN	Odare	16.73	255	*e*P		Pn	08 49 39.0	+0.6
	comp=Z,24nm,0.9s							
PKI	Pulchoki	18.10	259	*e*P		Pn	08 49 55.1	-0.3
	comp=Z,30nm,0.9s							
PKIN	Phulchoki	18.11	259	*e*P		Pn	08 49 54.9	-0.6
	comp=Z,20nm,0.6s							
DMN	Daman	18.34	260	*e*P		Pn	08 49 57.5	-0.9
	comp=Z,34nm,0.9s							
GKN	Gorkha	18.59	261	*e*P		Pn	08 50 00.3	-1.2
	comp=Z,19nm,0.5s							
KSRS	Korea Array	18.99	69	P		Pn	08 50 07.6	+1.4
	comp=Z,0.4nm,0.3s,baz=257,slow=11,SNR=13							
KOLN	Koldanda	19.54	262	*e*P		Pn	08 50 10.2	-2.7
	comp=Z,28nm,0.7s							
MK31	Makanchi Array	22.77	316	*e*P		P	08 50 47.5	+1.2
MKAR	Makanchi

ORIF	**Oris-en-Rattie**	**73.99**	**313**	*e*P		**P**	**08 57 22.0**	**+2.4**
	comp=Z,7.7nm,0.7s,mb4.4							
ORIF	**Oris-en-Rattie**	**73.99**	**313**	*e*P		**P**	**08 57 22.0**	**+2.4**
	comp=Z,3.8nm,0.7s,mb4.4							
VIVF	**Saint-Julien-l**	**74.76**	**314**	*e*P		**P**	**08 57 26.6**	**+2.5**

NEIC ***13*** *08:49:23.4, 19.59N×68.02W, h64km, MD3.5(RSPR), After RSPR.*

RSPR 13 08:49:23.4, 19.59N×68.02W, h64km±16km, MD3.5/8, 3C-5D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMN1	**Samana, DR**	**1.25**	**252**⇓	*e*P	Pn	08 49 43.9	-1.0
SMN1				*e*S	Sn	08 50 00.5	-0.4
AGPR	**Aguadilla, PR**	**1.41**	**142**⇑	*e*P	Pn	08 49 45.4	-1.6
AGPR				*e*S	Sn	08 50 03.2	-1.4
LSP	**Las Mesas**	**1.66**	**148**⇓	*e*P	Pn	08 49 49.7	-0.6
LSP				*e*S	Sn	08 50 10.3	-0.4
AOPR	**Arecibo Observ**	**1.72**	**136**	*e*S	Sn	08 50 12.5	+0.3
CRPR	**Cabo Rojo, PR**	**1.79**	**151**⇑	*e*P	Pn	08 49 52.0	-0.2
CRPR				*e*S	Sn	08 50 12.5	-1.4
CELP	**Cerrillos**	**2.03**	**138**⇓	*e*P	Pn	08 49 55.0	-0.4
CELP				*e*S	Sn	08 50 19.7	0.0
CBYP	**Canovanas**	**2.43**	**122**⇓	*e*P	Pn	08 50 01.0	+0.2
HUMP	**Col San Antoni**	**2.51**	**125**⇑	*e*P	Pn	08 50 01.9	+0.1
MTP	**Monte Pirata**	**2.77**	**122**⇓	*e*P	Pn	08 50 04.3	-1.1

IDC ***13*** *08:54:12.3±1.3, 53.94N×160.65E, h0km, mb3.8/8, mb1 4.1/8, mb1mx3.7/24, mbtmp3.8/8, Error ellipse: s-maj=47.2km s-min=24.4km az=145.0*

MOS ***13*** *08:54:15.6±2.4, 53.67N×160.95E, h25km, mb4.1/1, Error ellipse: s-maj=15.9km s-min=8.9km az=70.1*

ISCJB ***13*** *08:54:17.4±0.5, 53.70N±0.03×160.89E±0.07, h51km±6km, mb3.8/9, Error ellipse: s-maj=7.9km s-min=3.2km az=29.1*

KRSC ***13*** *08:54:17.6±0.5, 53.73N×160.81E, h28km±18km, ML4.4*

NEIC ***13*** *08:54:18.5±1.4, 54.05N×160.29E, h49km±17km, Error ellipse: s-maj=26.8km s-min=7.3km az=153.0*

ISC 13 08:54:18.4±0.5, 53.69N±0.03×160.86E±0.07, h47km±6km, n43, σ1°03/61, mb3.8/9, 3C-1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.77**	**221**	*e*P	**Pn**	**08 54 32.3**	**-0.7**
SPN				*i*S	**Sn**	**08 54 42.5**	**-1.0**
KII	**Karymskiy**	**0.91**	**293**	*e*P	**Pn**	**08 54 33.4**	**-1.3**
KII				*i*S	**Sn**	**08 54 44.8**	**-1.9**
MKZ	**Mys Kozlova**	**1.01**	**30**	*e*P	**Pn**	**08 54 35.1**	**-1.1**
MKZ				*i*S	**Sn**	**08 54 47.4**	**-1.8**
NLC	**Nalytchevo**	**1.04**	**241**	*e*P	**Pn**	**08 54 35.9**	**-0.7**
NLC				*i*S	**Sn**	**08 54 49.3**	**-0.7**
AVH	**Avacha**	**1.34**	**252**	*e*P	**Pn**	**08 54 40.7**	**+0.1**
AVH				*i*S	**Sn**	**08 54 57.7**	**+0.5**
PET	**Petropavlovsk**	**1.48**	**244**	*e*Pn	**Pn**	**08 54 42.1**	**-0.5**
PET				*e*Sn	**Sn**	**08 54 60.0**	**-0.7**
PET	**Petropavlovsk**	**1.48**	**244**	*e*P	**Pn**	**08 54 42.3**	**-0.2**
PET				*i*S	**Sn**	**08 55 00.3**	**-0.4**
PET	**Petropavlovsk**	**1.48**	**244**⇑	*i*PN	**Pn**	**08 54 42.1**	**-0.4**
PET				*e*		08 55 00.4	
PET	comp=Z,28nm,0.5s			pmax	pmax		
PET	comp=E,120nm,0.4s			smax			
PET	comp=N,197nm,0.5s			smax			
GNL	**Ganaly**	**1.73**	**271**	*e*P	**Pn**	**08 54 46.0**	**0.0**
GRL	**Gorelyy**	**2.03**	**237**	*e*P	**Pn**	**08 54 50.7**	**+0.7**
GRL				*i*S	**Sn**	**08 55 15.3**	**+1.2**
BZMR	**Bezymyannaya**	**2.26**	**355**	*e*P	**Pn**	**08 54 54.0**	**+0.7**
KPT	**Kopyto**	**2.31**	**351**	*e*P	**Pn**	**08 54 54.4**	**+0.5**
ZLN	**Zelenaya**	**2.33**	**359**	*e*P	**Pn**	**08 54 55.1**	**+0.9**
ZLN				*i*S	**Sn**	**08 55 23.0**	**+1.3**
CIRR	**Tsirk**	**2.43**	**359**	*e*P	**Pn**	**08 54 56.6**	**+1.0**
CIRR				*i*S	**Sn**	**08 55 25.5**	**+1.4**
KOZ	**Kozyrevsk**	**2.44**	**347**	*e*P	**Pn**	**08 54 55.7**	**0.0**
KOZ				*i*S	**Sn**	**08 55 23.7**	**-0.6**
KOZR	**Kozyr**	**2.45**	**347**	PN	**Pn**	**08 54 55.7**	**-0.1**
KOZR				S	**Sn**	**08 55 23.7**	**-0.7**
KRSR	**Krestovskiy**	**2.54**	**356**	*e*P	**Pn**	**08 54 57.4**	**+0.3**
KRSR				*i*S	**Sn**	**08 55 26.9**	**+0.2**
KLY	**Klyuchi**	**2.63**	**357**	*e*P	**Pn**	**08 54 58.6**	**+0.3**
KLY				*i*S	**Sn**	**08 55 28.2**	**-0.8**
SRDR	**Sredinnyy**	**2.72**	**346**	*e*P	**Pn**	**08 54 59.0**	**-0.5**
MIPR	**Malaya Ipel'ka**	**2.85**	**242**	*e*P	**Pn**	**08 55 02.6**	**+1.2**
BDR	**Baidarnaya**	**2.89**	**4**	*e*P	**Pn**	**08 55 02.8**	**+0.9**
BDR				*i*S	**Sn**	**08 55 35.5**	**+0.1**
SMKR	**Semkarok**	**2.92**	**7**	*e*P	**Pn**	**08 55 02.9**	**+0.6**
SMKR				*i*S	**Sn**	**08 55 36.9**	**+0.8**
SRKR	**Sorokina**	**2.98**	**3**	*e*P	**Pn**	**08 55 03.7**	**+0.6**
SRKR				*i*S	**Sn**	**08 55 37.9**	**+0.4**
BKI	**Bering**	**3.35**	**61**	*e*P	**Pn**	**08 55 08.5**	**+0.3**
BKI				*i*S	**Sn**	**08 55 44.5**	**-2.1**
SKR	**Severo-Kuril's**	**4.19**	**226**	*e*PN	**Pn**	**08 55 22.0**	**+2.3**
SKR	comp=Z,20nm,0.5s			pmax	pmax		
SKR	comp=E,40nm,0.2s			pmax	pmax		
ALID	**Alaid**	**4.31**	**231**	*e*P	**Pn**	**08 55 23.2**	**+1.8**
SMY	**Shemya**	**8.01**	**92**	*e*Pn	**Pn**	**08 56 17.1**	**+5.0**
ERM	**Erimo**	**16.60**	**232**	*e*Pn	**Pn**	**08 58 05.9**	**-1.8**
ERM	**Erimo**	**16.60**	**232**⇑	*e*P	**Pn**	**08 58 04.1**	**-3.5**
YAK	**Yakutsk**	**18.40**	**309**⇑	*e*P	**Pn**	**08 58 33.7**	**+4.0**
MJAR	**Matsushiro Arr**	**23.27**	**232**	P	**P**	**08 59 22.0**	**+0.1**
	comp=E,1.4nm,0.8s,mb3.4,baz=20,slow=12,SNR=5.1						
MAJO	**Matsushiro**	**23.28**	**232**	*e*P	**P**	**08 59 21.9**	**0.0**
ILAR	**Eielson Array**	**28.07**	**46**	P	**P**	**09 00 04.5**	**-0.4**
	comp=E,0.7nm,0.7s,mb3.4,baz=267,slow=8.8,SNR=12						
INK	**Inuvik**	**33.12**	**38**	P	**P**	**09 00 49.1**	**-0.3**
	comp=E,0.5nm,0.3s,mb3.9,baz=293,slow=6.7,SNR=4.0						
YKA	**Yellowknife Ar**	**42.41**	**43**	P	**P**	**09 02 06.3**	**-1.6**
	comp=E,0.9nm,0.5s,mb3.6,baz=299,slow=7.4,SNR=2.8						
KURK	**Kurchatov**	**47.81**	**302**⇓	*e*P	**P**	**09 02 56.1**	**+5.4**
KURK	comp=Z,3.0nm,1.7s,mb4.0			pmax	pmax		
HLID	**Hailey**	**53.72**	**64**	*e*P	**P**	**09 03 36.9**	**+1.6**
NVAR	**Mina Array Bea**	**55.11**	**71**	P	**P**	**09 03 46.5**	**+1.0**
	comp=Z,0.5nm,0.6s,mb3.7,baz=298,slow=6.7,SNR=5.0						
UCH	**Uchtor**	**55.50**	**296**	*e*P	**P**	**09 03 45.6**	**-2.6**
FINES	**FINESS Array B**	**59.76**	**337**	P	**P**	**09 04 16.7**	**-1.1**
FINES	**FINESS Array B**	**59.76**	**337**	P	**P**	**09 04 16.7**	**-1.1**
	comp=Z,3.3nm,1.0s,mb4.3,baz=18,slow=5.0,SNR=2.6						
SCHQ	**Schefferville**	**64.91**	**28**	P	**P**	**09 04 51.2**	**-1.1**
	comp=Z,1.3nm,0.7s,mb4.1,baz=333,slow=2.3,SNR=3.0						
TXAR	**Lajitas Array**	**69.99**	**68**	P	**P**	**09 05 25.9**	**+1.1**
	comp=Z,0.6nm,0.5s,mb3.8,baz=297,slow=4.7,SNR=14						

ISCJB ***13*** *08:58:18.2±0.3, 83.60N±0.05×114.3E±0.5, h10km, mb4.3/45, Error ellipse: s-maj=8.9km s-min=5.3km az=136.2*

MOS ***13*** *08:58:18.0±1.0, 83.57N×114.53E, h10km, mb4.5/13, Error ellipse: s-maj=93.7km s-min=9.1km az=86.8*

IDC ***13*** *08:58:18.4±0.6, 83.57N×114.67E, h0km, mb4.0/16, mb1 4.1/16, mb1mx4.0/25, mbtmp4.0/16, MS3.7/1, Ms1 3.8/1, ms1mx2.3/33, Error ellipse: s-maj=19.9km s-min=13.3km az=139.0*

NEIC ***13*** *08:58:20.0±0.3, 83.66N×113.41E, h10km, mb4.5/24, Error ellipse: s-maj=12.1km s-min=6.2km az=143.0*

ISC 13 08:58:20.2±0.3, 83.60N±0.05×114.3E±0.4, h10km, n70, σ0°97/70, mb4.3/45, 3C-4D, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RES	**Resolute Bay**	**21.26**	**21**	P	**P**	**09 03 04.8**	**-1.2**
ARCES	**ARCESS Array B**	**21.40**	**285**	P	**P**	**09 03 07.2**	**-0.3**
	5.0nm,0.7s,mb3.9,baz=14,slow=12,SNR=8.0						
YAK	**Yakutsk**	**21.98**	**160**	*i*P	**P**	**09 03 12.6**	**-1.2**
SEY	**Seymchan**	**22.48**	**132**⇓	*e*P	**P**	**09 03 19.7**	**+0.6**
SUMG	**Summit**	**23.44**	**340**	*e*P	**P**	**09 03 27.7**	**-1.5**
INK	**Inuvik**	**24.95**	**55**	*e*P	**P**	**09 03 43.6**	**+0.5**
	12nm,1.3s,mb4.3						
INK	**Inuvik**	**24.95**	**55**	P	**P**	**09 03 43.7**	**+0.6**
	4.7nm,0.9s,mb4.0,baz=353,slow=9.0,SNR=5.1						
INK	**Inuvik**	**24.95**	**55**	P	**P**	**09 03 43.7**	**+0.7**
INK	comp=Z,5.0nm,0.9s			pmax	pmax		
COLA	**College**	**26.88**	**69**	*e*P	**P**	**09 04 01.9**	**+1.5**
	comp=Z,7.6nm,0.9s,mb4.2						
COLA	**College**	**26.88**	**69**	*e*P	**P**	**09 04 01.9**	**+1.4**
COLA	comp=Z,8.0nm,0.9s,mb4.2			pmax	pmax		
ILAR	**Eielson Array**	**27.08**	**68**	P	**P**	**09 04 01.7**	**-0.6**
	comp=Z,1.8nm,1.1s,mb3.5,baz=345,slow=6.9,SNR=12						
ILAR				LR	LR	09 16 30.5	
	comp=Z,144nm,19.3s,baz=271,slow=40						
BPAW	**Bear Paw Mtn.**	**27.30**	**73**	*e*P	**P**	**09 04 05.9**	**+1.6**
	comp=Z,9.6nm,1.3s,mb4.2						
PPLA	**Purkeypile**	**28.34**	**74**	*e*P	**P**	**09 04 14.7**	**+1.1**
	comp=Z,14nm,1.3s,mb4.4						
PAX	**Paxson**	**28.98**	**68**	*e*P	**P**	**09 04 19.4**	**+0.1**
	comp=Z,4.8nm,1.2s,mb4.1						
PAX	**Paxson**	**28.98**	**68**	*e*P	**P**	**09 04 19.4**	**+0.1**
PAX	comp=Z,5.0nm,1.2s,mb4.1			pmax	pmax		
ARU	**Arti**	**30.53**	**245**	*d*iP	**P**	**09 04 35.9**	**+2.8**
ARU				*e*		09 05 33.0	
ARU				S	**S**	**09 09 37.3**	**+3.2**
ARU				SS	SS	09 11 14.6	-29
ARU	comp=Z,41nm,1.2s,mb5.1			pmax	pmax		
ZALV	**Zalesovo Beam**	**30.77**	**215**	P	**P**	**09 04 35.1**	**0.0**
	comp=Z,1.0nm,0.7s,mb3.7,baz=353,slow=11,SNR=5.3						
TLY	**Talaya**	**32.20**	**192**⇓	*e*P	**P**	**09 04 47.9**	**+0.2**
BRVK	**Borovoye**	**32.76**	**231**⇓	*e*P	**P**	**09 04 52.9**	**+0.3**
BRVK	comp=Z,12nm,1.7s,mb4.5			pmax	pmax		
BVAR	**Borovoye Array**	**32.78**	**231**	P	**P**	**09 04 52.7**	**-0.2**
	comp=Z,4.1nm,1.0s,mb4.3,baz=25,slow=3.9,SNR=8.8						
BVAR				PcP	PcP	09 07 37.7	+0.2
	comp=Z,0.9nm,0.7s,baz=48,slow=2.1,SNR=3.5						
KURK	**Kurchatov**	**34.41**	**221**	*e*P	**P**	**09 05 06.2**	**-0.9**
	comp=Z,3.1nm,1.0s,mb4.2						
KURK	**Kurchatov**	**34.41**	**221**⇑	*e*P	**P**	**09 05 06.6**	**-0.5**
KURK	comp=Z,9.0nm,2.7s,mb4.2			pmax	pmax		
ULN	**Ulaanbaatar**	**35.94**	**188**	*e*P	**P**	**09 05 20.7**	**+0.4**
SONM	**Songino Array**	**35.98**	**189**	P	**P**	**09 05 20.9**	**+0.2**
	comp=Z,2.0nm,1.1s,mb4.0,baz=350,slow=8.8,SNR=9.5						
AKTK	**Aktyubinsk**	**36.51**	**243**	P	**P**	**09 05 24.9**	**-0.1**
AKTO	**Aktyubinsk**	**36.51**	**243**	P	**P**	**09 05 24.9**	**-0.1**
	comp=Z,1.5nm,0.6s,mb4.0,baz=60,slow=4.4,SNR=5.1						
YSS	**Yuzh-Sakhalins**	**37.68**	**148**	*e*P	**P**	**09 05 33.1**	**-1.9**
MK31	**Makanchi Array**	**38.06**	**216**	*e*P	**P**	**09 05 37.4**	**-0.9**
MKAR	**Makanchi Array**	**38.06**	**216**	P	**P**	**09 05 37.5**	**-0.8**
	comp=Z,4.0nm,0.9s,mb4.2,baz=1.1,slow=6.6,SNR=16						
AKASG	**Malin Array Be**	**39.37**	**273**	P	**P**	**09 05 48.7**	**-0.5**
	comp=Z,0.3nm,0.3s,mb3.5,baz=8.2,slow=8.3,SNR=4.2						
SCHQ	**Schefferville**	**41.79**	**1**	P	**P**	**09 06 07.4**	**-1.8**
	comp=Z,1.7nm,0.7s,mb3.8,baz=342,slow=6.4,SNR=3.9						
AAK	**Ala-Archa**	**42.76**	**224**⇑	*e*P	**P**	**09 06 18.5**	**+1.3**
AAK	comp=Z,8.0nm,2.5s,mb4.0			pmax	pmax		
KIV	**Kislovodsk**	**44.53**	**258**	*e*P	**P**	**09 06 32.1**	**+0.7**
KIV	comp=Z,17nm,1.2s,mb4.8			pmax	pmax		
JTMT	**Jette**	**46.91**	**44**	*e*P	**P**	**09 06 49.7**	**-0.5**
	comp=Z,3.2nm,0.9s,mb4.2						
SLMT	**Sewley Lake**	**47.47**	**43**	*e*P	**P**	**09 06 54.3**	**-0.3**
	comp=Z,4.6nm,1.1s,mb4.3						
LAO	**LASA Array**	**48.55**	**37**	*e*P	**P**	**09 07 03.3**	**+0.4**
	comp=Z,10nm,0.9s,mb4.9						
GCMT	**Greyclift**	**49.20**	**40**	*e*P	**P**	**09 07 07.9**	**0.0**
	comp=Z,3.7nm,0.8s,mb4.5						
BRTR	**Keskin Array B**	**49.71**	**266**	P	**P**	**09 07 13.2**	**+1.3**
	comp=Z,1.3nm,0.7s,mb4.1,baz=343,slow=3.9,SNR=4.5						
BRTR	**Keskin Array B**	**49.71**	**266**	*ce*P	**P**	**09 07 13.1**	**+1.2**
BRTR	comp=Z,1.0nm,0.7s			pmax	pmax		
IMW	**Indian Meadow**	**50.99**	**41**	*e*P	**P**	**09 07 22.5**	**+1.0**
	comp=Z,1.8nm,0.9s,mb4.0						
NJ2	**Nanjing**	**51.70**	**175**	*e*P	**P**	**09 07 26.3**	**-0.7**
NJ2	comp=Z,10.0nm,0.5s,mb5.0			pmax	pmax		
TIP	**Timpagrande**	**52.13**	**283**	*e*P	**P**	**09 07 30.4**	**+0.3**
	comp=Z,9.7nm,1.3s,mb4.6						
M13A	**Montello**	**53.27**	**45**	*e*P	**P**	**09 07 39.4**	**+0.9**
	comp=Z,4.9nm,1.0s,mb4.4						
RWWY	**Rawlins**	**53.46**	**38**	*e*P	**P**	**09 07 38.7**	**-1.1**
	comp=Z,15nm,1.1s,mb4.8						
ESDC	**Sonseca Array**	**53.78**	**303**	P	**P**	**09 07 43.1**	**+0.8**
	comp=Z,0.3nm,0.3s,mb3.7,baz=8.4,slow=7.4,SNR=7.3						
DAU	**Daniels Canyon**	**54.43**	**42**	*e*P	**P**	**09 07 47.6**	**+0.6**
	comp=Z,3.7nm,0.8s,mb4.4						
DAU	**Daniels Canyon**	**54.43**	**42**	*e*P	**P**	**09 07 47.6**	**+0.6**
DAU	comp=Z,4.0nm,0.8s,mb4.4			pmax	pmax		
NLU	**North Lily Min**	**54.83**	**43**	*e*P	**P**	**09 07 53.4**	**+3.5**
	comp=Z,3.6nm,0.9s,mb4.4						
ISCO	**Idaho Springs**	**55.44**	**37**	*e*P	**P**	**09 07 54.4**	**+0.1**
	comp=Z,3.2nm,0.9s,mb4.3						
ISCO	**Idaho Springs**	**55.44**	**37**	*e*P	**P**	**09 07 54.4**	**+0.1**
ISCO	comp=Z,3.0nm,0.9s,mb4.3			pmax	pmax		
TMUT	**Trail Mountain**	**55.55**	**42**	*e*P	**P**	**09 07 55.2**	**+0.2**
	comp=Z,11nm,0.9s,mb4.9						
SRU	**San Rafael**	**55.78**	**42**	*e*P	**P**	**09 07 56.0**	**-0.8**
NVAR	**Mina Array Bea**	**55.84**	**49**	P	**P**	**09 07 58.9**	**+1.7**
	comp=Z,0.3nm,0.7s,mb3.4,baz=333,slow=5.6,SNR=3.0						
MSU	**Marysvale**	**56.25**	**43**	*e*P	**P**	**09 08 00.6**	**+0.4**
	comp=Z,4.1nm,0.8s,mb4.5						
MSU	**Marysvale**	**56.25**	**43**	*e*P	**P**	**09 08 00.6**	**+0.5**
MSU	comp=Z,4.0nm,0.8s,mb4.5			pmax	pmax		
KEST	**Kesra**	**56.34**	**289**	P	**P**	**09 08 02.0**	**+1.3**
	comp=Z,3.8nm,0.9s,mb4.4,baz=20,slow=1.3,SNR=11						
PV04	**Paradox Valley**	**56.61**	**40**	*e*P	**P**	**09 08 03.3**	**+0.6**
PV01	**Paradox Valley**	**56.90**	**40**	*e*P	**P**	**09 08 04.6**	**-0.1**
	comp=Z,964nm,0.8s						
MVCO	**Mesa Verde**	**57.82**	**40**	*e*P	**P**	**09 08 12.6**	**+1.4**
	comp=Z,6.1nm,0.8s,mb4.7						
ANMO	**Albuquerque**	**60.21**	**38**	*e*P	**P**	**09 08 27.2**	**-0.6**
	comp=Z,6.2nm,1.2s,mb4.5						
ANMO	**Albuquerque**	**60.21**	**38**	*e*P	**P**	**09 08 27.2**	**-0.6**
ANMO	comp=Z,6.0nm,1.2s			pmax	pmax		
WMOK	**Wichita Mounta**	**60.91**	**31**	*e*P	**P**	**09 08 31.2**	**-1.4**
	comp=Z,5.3nm,1.0s,mb4.6						
WMOK	**Wichita Mounta**	**60.91**	**31**	*e*P	**P**	**09 08 31.2**	**-1.4**
WMOK	comp=Z,5.0nm,1.0s,mb4.6			pmax	pmax		
MNTX	**Cornudas Mount**	**63.52**	**37**	*e*P	**P**	**09 08 48.8**	**-1.3**
	comp=Z,2.6nm,1.0s,mb4.2						
JCT	**Junction City**	**65.08**	**32**	*e*P	**P**	**09 08 59.0**	**-1.3**
	comp=Z,13nm,1.0s,mb4.9						
JCT	**Junction City**	**65.08**	**32**	*e*P	**P**	**09 08 59.1**	**-1.3**
JCT	comp=Z,13nm,1.0s,mb4.9			pmax	pmax		
CMAR	**Chiang Mai Arr**	**65.45**	**196**	P	**P**	**09 09 01.6**	**-1.3**
	comp=Z,1.1nm,0.5s,mb4.1,baz=351,slow=8.4,SNR=6.5						
TXAR	**Lajitas Array**	**65.98**	**36**	P	**P**	**09 09 05.3**	**-0.9**
	comp=Z,1.7nm,0.9s,mb4.1,baz=355,slow=4.4,SNR=17						
TORD	**Torodi Ar. Bea**	**79.48**	**294**	P	**P**	**09 10 26.4**	**-0.1**
	comp=Z,3.5nm,0.7s,mb4.4,baz=358,slow=6.0,SNR=20						
MAW	**Mawson**	**153.00**	**221**	PKPbc	PKPbc	09 18 15.3	-0.2
	comp=Z,3.7nm,1.0s,baz=352,slow=4.9,SNR=6.6						

NEIC ***13*** *09:01:03.9±0.9, 36.15N×71.15E, h225km±9km, mb3.9/3, Error ellipse: s-maj=18.2km s-min=10.7km az=135.0*

IDC ***13*** *09:01:03.5±5.2, 36.31N×70.80E, h193km±47km, mb3.3/4, mb1 3.3/9, mb1mx3.1/26, mbtmp3.3/9, Error ellipse: s-maj=51.9km s-min=37.2km az=133.0*

ISCJB ***13*** *09:01:04.7±0.4, 36.55N±0.04×70.60E±0.09, h203km±8km, mb3.3/4, Error ellipse: s-maj=11.8km s-min=5.8km az=19.8*

NNC ***13*** *09:01:12.8±4.6, 37.10N×70.57E, h234km±44km, mb2.9, mpv3.7, Error ellipse: s-maj=42.3km s-min=27.2km az=23.0*

ISC 13 09:01:05.7±0.4, 36.56N±0.04×70.62E±0.09, h195km±7km, n35, σ1°01/43, mb3.3/4, 7C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.39**	**213**	*e*Pn	**Pn**	**09 01 48.4**	**+0.4**
KBL				*e*Sn	**Sn**	**09 02 20.3**	**-0.6**
CEP	**Cherat**	**2.92**	**158**	⇓P	**Pn**	**09 01 54.4**	**+0.2**
CEP				S	**Sn**	**09 02 31.0**	**-1.0**
CHCP	**Chirah Chowk**	**3.61**	**142**	P	**Pn**	**09 02 03.9**	**+1.4**
THW	**Thamme Wali**	**3.87**	**166**	P	**Pn**	**09 02 05.1**	**-0.5**
KSH	**Kashi**	**5.16**	**53**	⇑*i*Pn	**Pn**	**09 02 18.0**	**-3.9**
KSH				Sn	**Sn**	**09 03 11.8**	**-10**
KSH				smax			
KSH	comp=N,64nm,0.4s			smax			
AML	**Almayashu**	**6.05**	**22**	P	**Pn**	**09 02 34.5**	**+1.1**
	SNR=68						
AML	**Almayashu**	**6.05**	**22**	*e*Pn	**Pn**	**09 02 34.5**	**+1.1**
	comp=E,43nm,0.4s						
AML				*e*Sn	**Sn**	**09 03 41.6**	**-1.3**
UCH	**Uchtor**	**6.42**	**27**	P	**Pn**	**09 02 39.2**	**+1.0**
	SNR=33						
KK31	**Karatay Array**	**6.54**	**359**	P	**Pn**	**09 02 40.5**	**+0.8**
	comp=E,1.9nm,0.3s,baz=180,slow=12,SNR=72						
KK31				⇑S	**Sn**	**09 03 51.4**	**-2.9**
	comp=E,10nm,0.5s,baz=181,slow=17,SNR=12						
EKS2	**Erkin-Say**	**6.57**	**21**	P	**Pn**	**09 02 41.2**	**+1.1**
	SNR=9.8						
AAK	**Ala-Archa**	**6.76**	**25**	P	**Pn**	**09 02 44.3**	**+1.6**
	SNR=5.9						
AAK	**Ala-Archa**	**6.76**	**25**	P	**Pn**	**09 02 44.2**	**+1.5**
	comp=E,3.4nm,0.3s,baz=167,slow=4.9,SNR=8.7						
AAK				S	**Sn**	**09 04 00.2**	**+0.6**
	comp=E,2.7nm,0.3s,baz=127,slow=23,SNR=26						
USP	**Ospenovka**	**7.33**	**23**	P	**Pn**	**09 02 51.4**	**+1.3**
	SNR=6.2						
TKM2	**Tokmak 2**	**7.42**	**30**	⇑P	**Pn**	**09 02 52.0**	**+0.7**
	comp=E,2.8nm,0.4s						
TKM2				⇑S	**Sn**	**09 04 13.6**	**-1.5**
	comp=E,10nm,0.8s						
TKM2	**Tokmak 2**	**7.42**	**30**	P	**Pn**	**09 02 52.0**	**+0.8**
	SNR=7.5						
TKM2	**Tokmak 2**	**7.42**	**30**	*e*Pn	**Pn**	**09 02 51.8**	**+0.6**
	comp=E,4.5nm,0.3s						
MK31	**Makanchi Array**	**13.43**	**37**	*e*Pn	**Pn**	**09 04 06.7**	**-1.8**
MKAR	**Makanchi Array**	**13.43**	**37**	P	**Pn**	**09 04 08.8**	**+0.3**
	comp=E,0.5nm,0.3s,baz=213,slow=10,SNR=11						
AB31	**Akbulak array**	**14.89**	**332**	⇑P	**Pn**	**09 04 26.2**	**-0.3**
	comp=E,1.8nm,0.7s,baz=115,slow=13,SNR=20						
AB31				⇑S	**Sn**	**09 07 02.4**	**-10**
	comp=E,1.4nm,0.7s,baz=287,slow=5.2,SNR=4.2						
ABKAR	**Akbulak array**	**14.89**	**332**	*e*P	**Pn**	**09 04 26.3**	**-0.2**
	comp=E,2.3nm,0.7s						
KURK	**Kurchatov**	**15.28**	**20**	P	**Pn**	**09 04 28.8**	**-2.5**
	comp=E,0.2nm,0.3s,baz=211,slow=11,SNR=6.6						
VOSK	**Vostochnaya**	**16.17**	**1**	⇑P	**Pn**	**09 04 41.6**	**-0.4**
	comp=E,2.3nm,0.5s						
ZRNK	**Zerenda**	**16.43**	**357**	⇓P	**Pn**	**09 04 45.2**	**0.0**
	comp=E,7.6nm,1.1s						
BVAR	**Borovoye Array**	**16.47**	**360**	P	**Pn**	**09 04 46.4**	**+0.9**
BVAR	**Borovoye Array**	**16.47**	**360**	P	**Pn**	**09 04 46.4**	**+0.9**
	comp=E,0.6nm,0.3s,baz=161,slow=11,SNR=7.2						
BRVK	**Borovoye**	**16.50**	**359**	*e*P	**Pn**	**09 04 46.1**	**+0.1**
	comp=E,3.0nm,0.6s						
AKTK	**Aktyubinsk**	**16.58**	**331**	P	**Pn**	**09 04 47.3**	**+0.3**
AKTO	**Aktyubinsk**	**16.58**	**331**	P	**Pn**	**09 04 47.3**	**+0.3**
	comp=E,0.5nm,0.3s,baz=136,slow=10,SNR=9.8						
ZALV	**Zalesovo Beam**	**19.99**	**25**	P	**P**	**09 05 22.5**	**-0.5**
ZALV	**Zalesovo Beam**	**19.99**	**25**	P	**P**	**09 05 22.5**	**-0.5**
	comp=E,3.5nm,0.5s,baz=217,slow=10,SNR=11						
ENH	**Enshi**	**32.88**	**90**	*e*P	**P**	**09 07 12.1**	**-9.1**
	comp=E,18nm,0.3s						
FINES	**FINESS Array B**	**37.27**	**326**	P	**P**	**09 07 58.8**	**+0.5**
	comp=E,0.6nm,0.3s,mb3.6,baz=125,slow=12,SNR=3.9						
ARCES	**ARCESS Array B**	**40.98**	**338**	P	**P**	**09 08 29.5**	**+0.6**
	comp=E,1.2nm,0.6s,mb3.5,baz=116,slow=8.0,SNR=10						
NOA	**NORSAR Array B**	**44.15**	**323**	P	**P**	**09 08 54.6**	**0.0**
	comp=E,0.4nm,0.3s,mb3.2,baz=112,slow=9.1,SNR=2.4						
TORD	**Torodi Ar. Bea**	**65.41**	**268**	P	**P**	**09 11 26.2**	**-1.5**
	comp=E,0.1nm,0.3s,mb2.9,baz=52,slow=6.2,SNR=5.0						

*ISK

KHAL *i* S **Sn** **09 18 25.8 -0.2**

ISK ***13*** *09:32:06.8, 39.°06N×39.°88E, h6km, MD2.8*
DDA ***13*** *09:32:06.2, 39.°14N×39.°91E, h7km±5km, Md2.8*
ISCJB ***13*** *09:32:07.1±0.7, 39.°10N±0.°03×39.°89E±0.°04, h2km±7km, Error ellipse: s-maj=6.0km s-min=4.2km az=25.1*
CSEM ***13*** *09:32:07.6±0.2, 39.°08N×39.°86E, h5km, MD2.8, Error ellipse: s-maj=4.3km s-min=3.8km az=32.0*

ISC 13 09:32:07.6±0.6, 39.°10N±0.°03×39.°89E±0.°03, h4km±6km, n21, σ0996/33, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTK	**Pertek**	**0.44**	**242**	*e*P**g**	**Pg**	**09 32 15.3**	**-0.9**
PTK	**Pertek**	**0.44**	**242**	*e*Pg	**Pg**	**09 32 15.3**	**-0.8**
BINT	**Bingol**	**0.52**	**116**	*e*P**g**	**Pg**	**09 32 17.1**	**-0.5**
BINT				*e*S**g**	**Sg**	**09 32 25.0**	**+0.6**
BINT	**Bingol**	**0.52**	**116**	*e*Pg	**Pg**	**09 32 17.1**	**-0.5**
BINT				*e*Sg	**Sg**	**09 32 25.0**	**+0.7**
EZC	**Erzincan**	**0.77**	**328**	*e*P**G**	**Pg**	**09 32 22.8**	**+0.3**
EZC				*e*S**G**	**Sg**	**09 32 34.3**	**+1.9**
ELZG	**Elazig**	**0.93**	**230**	*i* P	**Pg**	**09 32 24.8**	**-0.7**
ELZG				*i* S	**Sg**	**09 32 37.7**	**+0.2**
ELZG	**Elazig**	**0.93**	**230**	*i* P	**Pg**	**09 32 24.8**	**-0.7**
ELZG				*i* S	**Sg**	**09 32 37.7**	**+0.2**
BNGL	**BINGOL**	**0.99**	**98**	*e*P	**Pg**	**09 32 24.0**	**-2.7**
BNGL				*e*S	**Sg**	**09 32 39.2**	**-0.3**
KEMA	**Kemaliye**	**1.10**	**279**	*i* P	**Pg**	**09 32 28.3**	**-0.4**
KEMA				*i* S	**Sg**	**09 32 42.7**	**-0.2**
KEMA	**Kemaliye**	**1.10**	**279**	*i* P	**Pg**	**09 32 28.3**	**-0.4**
KEMA				*i* S	**Sg**	**09 32 42.7**	**-0.2**
DIYA	**Diyarbakir**	**1.19**	**171**	*i* P	**Pg**	**09 32 31.0**	**+0.5**
DIYA				*e*S	**Sg**	**09 32 47.2**	**+1.3**
DIYA	**Diyarbakir**	**1.19**	**171**	*i* P	**Pg**	**09 32 31.0**	**+0.5**
DIYA				*e*S	**Sg**	**09 32 47.2**	**+1.3**
MYA	**Malataya**	**1.38**	**236**	*e*PN	**Pn**	**09 32 32.9**	**-0.8**
MYA	**Malataya**	**1.38**	**236**	*e*Pn	**Pn**	**09 32 32.9**	**-0.8**
MALT	**Malatya**	**1.39**	**236**	*e*PN	**Pn**	**09 32 33.0**	**-0.8**
MALT	**Malatya**	**1.39**	**236**	*e*Pn	**Pn**	**09 32 33.0**	**-0.8**
GUMT	**Gumushane**	**1.39**	**347**	*e*PN	**Pn**	**09 32 33.9**	**+0.1**
GUMT	**Gumushane**	**1.39**	**347**	*e*Pn	**Pn**	**09 32 33.9**	**+0.1**
EZM	**Erzurum**	**1.39**	**54**	*e*PN	**Pn**	**09 32 33.9**	**0.0**
BEST	**Besiri**	**1.62**	**138**	*i* P	**Pn**	**09 32 37.9**	**+0.9**
BEST				*i* S	**Sn**	**09 32 57.0**	**-1.4**
MARD	**Mardin**	**1.92**	**158**	*i* P	**Pn**	**09 32 41.1**	**+0.1**
MARD				*i* S	**Sn**	**09 33 07.5**	**+1.9**

IDC 13 09:43:02.4±10.0, 11.°20N×91.°30E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.4/22, mbtmp3.8/3, MS3.1/1, Ms1 3.1/1, ms1mx2.5/29, Error ellipse: s-maj=620.1km s-min=30.8km az=62.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**11.26**	**137**	LR	LR	09 49 45.2	
	comp=Z,93nm,18.4s,baz=30,slow=36						
MKAR	**Makanchi Array**	**36.29**	**350**	P	P	09 50 07.5	0.0
	0.3nm,0.5s,baz=158,slow=7.8,SNR=4.3						
ASAR	**Alice Springs**	**54.19**	**130**	P	P	09 52 30.1	+0.1
	0.5nm,0.8s,baz=306,slow=6.9,SNR=6.1						
STKA	**Stephens Creek**	**64.41**	**133**	P	P	09 53 40.5	-0.1
	2.8nm,1.1s,baz=315,slow=11,SNR=2.6						

GUC 13 09:46:09.3±0.5, 22.°32S×69.°14W, h137km±7km, MD3.7, ML3.5, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB04	**Plate Boundary**	**0.32**	**279**	⇑*i*P	Pn	09 46 35.6	+7.3
PB04				*i* S	Sn	09 46 53.8	+11
PB04				AML	AML	09 46 59.1	
	comp=N,610nm,0.1s						
PB01	**Plate Boundary**	**1.31**	**346**	⇑*i*P	Pn	09 46 36.8	+0.9
PB01				*i* S	Sn	09 46 57.0	+1.0
PB01				AML	AML	09 46 58.0	
	comp=E,1μm,0.4s						
CEN1	**Los Morros**	**1.45**	**222**	*e*P	Pn	09 46 39.4	+2.1
CEN1				*i* S	Sn	09 47 03.0	+4.4
ANCH	**Antofagasta**	**1.79**	**220**	*i* P	Pn	09 46 41.8	+0.6
ANCH				*e*S	Sn	09 47 06.5	+0.9
HMBC	**Humberston**	**2.14**	**341**	⇓*i*P	Pn	09 46 46.6	+1.2
HMBC				*i* S	Sn	09 47 14.7	+1.6
HMBC				AML	AML	09 47 16.5	
	comp=N,476nm,0.6s						

IDC 13 10:00:37.2±23.0, 5.°89N×127.°34E, h253km±236km, mb3.3/6, mb1 3.4/6, mb1mx3.1/20, mbtmp3.3/6, Error ellipse: s-maj=100.2km s-min=25.5km az=52.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.10**	**304**	S	S	10 01 34.0	-21
	81nm,0.3s,baz=114,slow=17,SNR=7.0						
ASAR	**Alice Springs**	**30.07**	**168**	P	P	10 06 23.3	+0.1
	0.2nm,0.5s,baz=347,slow=7.1,SNR=4.0						
MKAR	**Makanchi Array**	**56.15**	**324**	P	P	10 09 50.8	+0.2
	2.1nm,0.5s,baz=120,slow=8.3,SNR=21						
ZALV	**Zalesovo Beam**	**58.96**	**332**	P	P	10 10 09.4	-0.6
	0.7nm,0.4s,baz=108,slow=4.7,SNR=2.6						
BVAR	**Borovoye Array**	**65.86**	**326**	P	P	10 10 55.9	+0.3
	1.3nm,0.5s,baz=126,slow=7.5,SNR=7.5						
ILAR	**Eielson Array**	**82.90**	**26**	P	P	10 12 33.5	+0.2
	0.5nm,1.0s,baz=245,slow=5.7,SNR=5.3						
ARCES	**ARCESS Array B**	**88.64**	**340**	P	P	10 13 01.0	-0.3
	2.5nm,1.0s,baz=81,slow=5.8,SNR=5.5						

CASC 13 10:03:59.7±3.1, 11.°12N×86.°75W, h28km±21km, MD3.8, ML2.8, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SSN	**San Juan del S**	**0.90**	**79**	*e*P	Pn	10 04 16.2	-0.2
CRUN	**El Crucero**	**0.96**	**27**	*e*P	Pn	10 04 18.6	+1.3
APON	**Apoyo**	**1.03**	**40**	*e*P	Pn	10 04 18.9	+0.6
COPN	**Copaltepe**	**1.06**	**8**	*e*P	Pn	10 04 18.5	-0.2
XAVN	**Gruta Xavier**	**1.10**	**22**	*e*P	Pn	10 04 19.4	+0.1
CSAN		**1.10**	**17**	*e*P	Pn	10 04 19.0	-0.2
TISN	**Laguna Tiscapa**	**1.12**	**25**	*e*P	Pn	10 04 18.6	-0.9
MGAN	**Managua**	**1.13**	**26**	*e*P	Pn	10 04 19.7	+0.1
NY14	**Universidad de**	**1.29**	**111**	*i* P	Pn	10 04 20.2	-1.6
NY14				*i* S	Sn	10 04 39.2	+1.1
LEON	**Leon**	**1.29**	**354**	*e*P	Pn	10 04 21.1	-0.8
MOMN	**Momotombo**	**1.29**	**9**	*e*P	Pn	10 04 21.9	0.0
CNGN	**Cerro Negro**	**1.37**	**2**	AML	AML	10 04 51.5	
	comp=N,138nm,0.3s						
GPS1	**Guardaparques**	**1.42**	**104**	*i* P	Pn	10 04 22.7	-0.9
MESS	**Mesas**	**1.58**	**104**	*i* P	Pn	10 04 24.3	-1.5
JTS	**JuntasAbangare**	**1.95**	**115**	*e*P	Pn	10 04 29.5	-1.5
JCR	**Jicaral**	**2.05**	**128**	*e*P	Pn	10 04 35.9	+3.6
CNCH	**Conchagua**	**2.39**	**334**	*e*P	Pn	10 04 35.6	-1.4
CGA2	**Cerro Gallo 2**	**2.50**	**116**	*e*P	Pn	10 04 39.2	+0.6
PRS1	**Puriscal**	**2.65**	**115**	*e*P	Pn	10 04 42.6	+2.0
LAJ	**Bijagual**	**2.87**	**116**	*e*P	Pn	10 04 39.5	-4.1
TGUH	**Tegucigalpa,Un**	**2.96**	**350**	*e*P	Pn	10 04 44.5	-0.3
TGUH				*e*S	Sn	10 05 21.7	+2.3
BUS	**Buena Vista**	**3.33**	**118**	*e*P	Pn	10 04 50.8	+0.9
BUS				*e*S	Sn	10 05 30.1	+1.5
ACR	**Cerro Adams**	**4.30**	**124**	*e*P	Pn	10 05 06.2	+2.9

IDC ***13*** *10:11:13.0±1.0, 10.°88N×91.°60E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.8/26, mbtmp3.8/11, ML4.0/1, Error ellipse: s-maj=40.3km s-min=15.1km az=58.0*
NEIC ***13*** *10:11:14.6±0.6, 10.°90N×91.°64E, h10km, mb4.3/2, Error ellipse: s-maj=16.5km s-min=9.4km az=55.0*
ISCJB ***13*** *10:11:16.3±0.8, 11.°0N±0.°1×91.°8E±0.°1, h33km, mb3.9/12, Error ellipse: s-maj=23.0km s-min=13.1km az=145.0*

ISC 13 10:11:18.5±0.8, 11.°0N±0.°1×91.°7E±0.°1, h35km, n13, σ0953/13, mb3.9/12, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.23**	**42**	Pn	**Pn**	**10 13 42.5**	**-0.3**
	0.4nm,0.3s,baz=236,slow=14,SNR=3.8						
AML	**Almayashu**	**34.84**	**336**	*e*P	**P**	**10 18 05.5**	**-0.6**
	6.4nm,0.5s,mb4.8						
MKAR	**Makanchi Array**	**36.61**	**349**	P	**P**	**10 18 21.6**	**+0.4**
	0.7nm,0.4s,mb3.8,baz=171,slow=8.5,SNR=11						
SONM	**Songino Array**	**38.79**	**16**	P	**P**	**10 18 40.4**	**+0.8**
	1.2nm,0.5s,mb3.9,baz=202,slow=8.1,SNR=8.4						
KURK	**Kurchatov**	**41.09**	**347**	P	**P**	**10 18 58.1**	**-0.6**
	0.3nm,0.3s,mb3.4,baz=164,slow=7.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**43.24**	**354**	P	**P**	**10 19 15.9**	**-0.4**
	0.7nm,0.5s,mb3.6,baz=134,slow=8.6,SNR=4.2						
FITZ	**Fitzroy Crossi**	**44.21**	**130**	P	**P**	**10 19 24.3**	**-0.2**
	3.8nm,0.5s,mb4.4,baz=295,slow=4.1,SNR=16						
BVAR	**Borovoye Array**	**45.34**	**342**	P	**P**	**10 19 32.9**	**-0.1**
	0.4nm,0.5s,mb3.5,baz=160,slow=17,SNR=3.4						
ABKAR	**Akbulak array**	**46.41**	**332**	*e*P	**P**	**10 19 42.6**	**+1.1**
	0.5nm,0.5s,mb3.7						
WRA	**Warramunga Arr**	**51.99**	**126**	P	**P**	**10 20 24.5**	**-0.1**
	0.8nm,0.3s,mb4.1,baz=300,slow=10,SNR=42						
WRA				PcP	PcP	10 21 37.6	+0.9
	0.2nm,0.4s,baz=318,slow=3.1,SNR=6.1						
ASAR	**Alice Springs**	**53.71**	**130**	P	**P**	**10 20 37.5**	**+0.3**
	0.7nm,0.5s,mb3.9,baz=308,slow=6.8,SNR=18						
BRTR	**Keskin Array B**	**58.63**	**310**	P	**P**	**10 21 11.6**	**-0.6**
	0.5nm,0.7s,mb3.6,baz=114,slow=7.1,SNR=2.8						
ARCES	**ARCESS Array B**	**71.58**	**340**	P	**P**	**10 22 36.3**	**+0.5**
	0.9nm,0.6s,mb3.9,baz=71,slow=4.4,SNR=4.9						

IDC ***13*** *10:31:47.5±0.5, 8.°31S×121.°66E, h0km, mb4.3/12, mb1 4.4/14, mb1mx4.3/22, mbtmp4.3/14, ML4.3/2, MS3.5/3, Ms1 3.5/3, ms1mx3.0/25, Error ellipse: s-maj=25.5km s-min=11.2km az=80.0*
BJI ***13*** *10:31:50.1, 8.°66S×122.°29E, h51km, mB4.9/4, mb4.6/6*
ISCJB ***13*** *10:31:52.0±0.6, 8.°54S±0.°04×121.°66E±0.°04, h53km±6km, mb4.5/22, MS3.6/2, Error ellipse: s-maj=7.5km s-min=6.0km az=151.5*
NEIC ***13*** *10:31:52.0±0.4, 8.°46S×121.°55E, h35km, mb4.8/3, Error ellipse: s-maj=14.7km s-min=7.6km az=64.0*
DJA ***13*** *10:31:52.8, 61S×121.°64E, h14km, MLv4.7/10*

ISC 13 10:31:53.3±0.5, 8.°52S±0.°04×121.°68E±0.°04, h45km±6km, n61, σ1921/69, mb4.5/22, MS3.6/2, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**0.56**	**101**	P	**Pn**	**10 32 03.8**	**-1.2**
WSI	**Waingapu**	**1.78**	**230**	P	**Pn**	**10 32 20.5**	**-1.1**
BBSI	**Bau Bau**	**3.14**	**16**	P	**Pn**	**10 32 41.1**	**+0.8**
BKSI	**Bulukumba**	**3.54**	**334**	P	**Pn**	**10 32 45.6**	**-0.1**
KDI	**Kendari**	**4.63**	**12**	P	**Pn**	**10 33 01.5**	**+0.7**
SPSI	**Sidrap Palu**	**4.91**	**337**	P	**Pn**	**10 33 08.8**	**+4.2**
KHKI	**Kahang-Kahang**	**6.01**	**271**	P	**Pn**	**10 33 20.1**	**+0.4**
	0.3nm74nm,1.1s						
SRBI	**Singaraja**	**6.42**	**273**	P	**Pn**	**10 33 26.4**	**+1.1**
IGBI	**Denpasar**	**6.47**	**267**	P	**Pn**	**10 33 26.4**	**+0.4**
	0.7nm175nm,0.9s						
JAGI	**Jagej, Banyuwa**	**7.45**	**270**	P	**Pn**	**10 33 40.2**	**+0.8**
	0.2nm68nm,0.9s						
LUWI	**Luwuk**	**7.51**	**8**	P	**Pn**	**10 33 44.4**	**+4.1**
	0.4nm1μm143nm,0.8s						
NLAI	**Namlea**	**7.52**	**46**	P	**Pn**	**10 33 44.3**	**+3.8**
	0.2nm1μm61nm,0.8s						
KNA	**Kununurra**	**9.98**	**137**	*e*P	**Pn**	**10 34 13.3**	**-0.8**
	31nm,0.5s						
KNA				*e*S	**Sn**	**10 36 00.6**	**-4.1**
KNA	**Kununurra**	**9.98**	**137**	P	**Pn**	**10 34 13.8**	**-0.3**
	2μm184nm,0.9s						
FITZ	**Fitzroy Crossi**	**10.27**	**158**	*e*Pn	**Pn**	**10 34 18.3**	**+0.2**
FITZ				Sn	**Sn**	**10 36 04.3**	**-7.6**
FITZ				LR	LR	10 38 46.0	
FITZ	**Fitzroy Crossi**	**10.27**	**158**	Pn	**Pn**	**10 34 17.1**	**-1.0**
	0.9nm,0.3s,baz=10,slow=8.4,SNR=21						
FITZ				Sn	**Sn**	**10 36 04.3**	**-7.6**
	1.3nm,0.3s,baz=253,slow=6.5,SNR=3.8						
FITZ				LR	LR	10 38 46.0	
	comp=Z,67nm,21.0s,baz=96,slow=40						
FITZ	**Fitzroy Crossi**	**10.27**	**158**	P	**Pn**	**10 34 18.9**	**+0.8**
KAKA	**Kakadu**	**11.36**	**112**	*e*P	**Pn**	**10 34 33.3**	**+0.2**
	27nm,0.4s						
KAKA				*e*S	**Sn**	**10 36 37.5**	**-1.3**
KAKA	**Kakadu**	**11.36**	**112**	*e*Pn	**Pn**	**10 34 33.1**	**0.0**
	72nm,0.5s						
KAKA				*e*Sn	**Sn**	**10 36 33.4**	**-5.3**
KAKA	**Kakadu**	**11.36**	**112**	P	**Pn**	**10 34 34.1**	**+1.0**
	794nm77nm,0.6s						
MBWA	**Marble Bar**	**12.70**	**188**	*e*P	**Pn**	**10 34 48.2**	**-3.2**
MBWA				*e*S	**Sn**	**10 36 59.4**	**-12**
MBWA	**Marble Bar**	**12.70**	**188**	*e*Pn	**Pn**	**10 34 48.2**	**-3.1**
	16nm,0.7s						
WRA	**Warramunga Arr**	**16.70**	**134**	Pn	**Pn**	**10 35 40.8**	**-3.4**
WRA				Sn	**Sn**	**10 38 38.9**	**-10**
WRA	**Warramunga Arr**	**16.70**	**134**	Pn	**Pn**	**10 35 40.8**	**-3.4**
	0.8nm,0.3s,baz=306,slow=15,SNR=40						
WRA				Sn	**Sn**	**10 38 38.9**	**-10**
	1.3nm,0.3s,baz=308,slow=23,SNR=13						
MEEK	**Meekatharra**	**18.25**	**189**	*e*P	**Pn**	**10 36 02.7**	**-0.5**
MEEK				*e*S	**S**	**10 39 10.3**	**-19**
ASAR	**Alice Springs**	**19.07**	**144**	P	**Pn**	**10 36 13.8**	**+0.5**
	2.2nm,0.3s,baz=324,slow=9.8,SNR=193						
ASAR				S	**S**	**10 39 35.5**	**-11**
	0.3nm,0.3s,baz=324,slow=19,SNR=8.4						
MORW	**Morawa**	**21.11**	**194**	*e*P	**P**	**10 36 34.3**	**+0.1**
MORW				*e*S	**S**	**10 40 14.4**	**-12**
COEN	**Coen**	**21.75**	**106**	*e*P	**P**	**10 36 42.4**	**+1.2**
	243nm,1.1s,mb5.5						
COEN	**Coen**	**21.75**	**106**	P	**P**	**10 36 43.0**	**+1.8**
KMBL	**Kambalda**	**22.73**	**180**	*e*P	**P**	**10 36 50.4**	**-1.0**
	89nm,0.8s,mb5.2						
FORT	**Forrest**	**22.93**	**166**	*e*P	**P**	**10 36 53.3**	**-0.3**
	21nm,0.7s,mb4.7						
FORT	**Forrest**	**22.93**	**166**	*e*P	**P**	**10 36 53.6**	**+0.1**
	24nm,0.8s,mb4.7						
KLBR	**Kellerberrin**	**23.24**	**189**	*e*P	**P**	**10 36 56.2**	**-0.6**
	7.8nm,0.6s,mb4.3						
MTSU	**Mount Surprise**	**23.98**	**116**	*e*P	**P**	**10 37 05.7**	**+1.9**
	41nm,0.8s,mb4.9						
NWAO	**Narrogin (SRO)**	**24.63**	**189**	P	**P**	**10 37 11.2**	**+1.6**
	3.5nm,0.5s,mb4.1,baz=32,slow=12,SNR=7.0						
NWAO				S	**S**	**10 41 38.1**	**+10**
	5.3nm,0.7s,baz=282,slow=12,SNR=6.5						
NWAO				LR	LR	10 46 40.7	
	comp=Z,184nm,20.0s,MS3.6,baz=168,slow=36						
PSI	**Prapat**	**25.33**	**295**	P	**P**	**10 37 19.2**	**+3.1**
	5.0nm,0.7s,mb4.1,baz=39,slow=23,SNR=3.6						
PSI				LR	LR	10 48 07.2	
	comp=Z,177nm,18.2s,MS3.6,baz=182,slow=39						
CTA	**Charters Tower**	**26.40**	**118**	P	**P**	**10 37 27.3**	**+1.5**
	6.2nm,0.7s,mb4.2,baz=316,slow=6.9,SNR=5.3						
BBOO	**Buckleboo**	**27.59**	**153**	*e*P	**P**	**10 37 36.9**	**+0.5**
	15nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**29.71**	**144**	P	**P**	**10 37 56.6**	**+1.4**
	16nm,0.8s,mb4.8,baz=317,slow=9.3,SNR=22						
CMSA	**Cobar Meteorol**	**31.99**	**139**	*e*P	**P**	**10 38 17.0**	**+1.6**
CMAR	**Chiang Mai Arr**	**34.96**	**320**	P	**P**	**10 38 41.8**	**+0.5**
	3.1nm,0.8s,mb4.3,baz=148,slow=6.8,SNR=13						
ARMA	**Armidale**	**35.46**	**132**	*e*P	**P**	**10 38 48.7**	**+3.2**
YNG	**Young**	**35.51**	**140**	*e*P	**P**	**10 38 48.3**	**+2.4**
	27nm,0.6s,mb5.3						
KSRS	**Korea Array**	**46.11**	**7**	P	**P**	**10 40 12.8**	**-0.2**
	2.0nm,0.9s,mb4.0,baz=181,slow=8.0,SNR=10						
MJAR	**Matsushiro Arr**	**47.44**	**18**	P	**P**	**10 40 22.6**	**-0.9**
	7.2nm,0.9s,mb4.6,baz=192,slow=8.7,SNR=18						
MAT	**Matsushiro**	**47.44**	**18**	P	**P**	**10 40 22.7**	**-0.8**
BJI	**Beijing**	**48.59**	**354**	P	**P**	**10 40 32.3**	**0.0**
BJI				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.2						
SONM	**Songino Array**	**57.72**	**348**	P	**P**	**10 41 39.6**	**+0.2**
	comp=Z,2.9nm,0.8s,mb4.3,baz=173,slow=7.7,SNR=7.6						
MK31	**Makanchi Array**	**65.28**	**331**	*e*P	**P**	**10 42 29.4**	**-1.0**
MKAR	**Makanchi Array**	**65.28**	**331**	P	**P**	**10 42 29.6**	**-0.8**
	comp=Z,1.2nm,0.5s,mb4.2,baz=142,slow=7.2,SNR=16						
ZAA0	**Zalesovo Array**	**69.57**	**338**	*e*P	**P**	**10 42 55.5**	**-1.9**
ZALV	**Zalesovo Beam**	**69.57**	**338**	P	**P**	**10 42 55.5**	**-1.9**
	comp=Z,0.9nm,0.3s,mb4.1,baz=138,slow=4.9,SNR=5.2						
KURK	**Kurchatov**	**69.77**	**332**	*e*P	**P**	**10 42 57.2**	**-1.5**
	comp=Z,2.8nm,0.8s,mb4.2						
MAW	**Mawson**	**70.59**	**200**	P	**P**	**10 43 05.0**	**+1.5**
	comp=Z,0.8nm,0.3s,mb4.1,baz=68,slow=8.4,SNR=9.6						
BVAR	**Borovoye Array**	**75.15**	**331**	P	**P**	**10 43 29.2**	**-1.5**
	comp=Z,0.8nm,0.8s,mb3.7,baz=104,slow=6.1,SNR=3.5						
ILAR	**Eielson Array**	**98.26**	**26**	P	**P**	**10 45 25.0**	**-0.5**
ILAR	**Eielson Array**	**98.26**	**26**	P	**P**	**10 45 25.0**	**-0.5**
	comp=Z,0.2nm,0.7s,mb3.8,baz=243,slow=6.0,SNR=4.0						
TORD	**Torodi Ar. Bea**	**120.99**	**280**	PKP	PKPdf	10 50 40.9	-1.0
	comp=Z,0.8nm,0.9s,baz=77,slow=3.1,SNR=3.1						
CPUP	**Villa Florida**	**145.34**	**182**	PKPbc	PKPbc	10 51 28.6	+1.7
	comp=Z,7.3nm,0.9s,baz=175,slow=2.7,SNR=12						
LPAZ	**La Paz**	**153.50**	**158**	*e*PKPdf	PKPdf	10 51 41.8	+1.5
LPAZ				PKPbc	PKPbc	10 51 50.5	+2.6
LPAZ				PKPab	PKPab	10 52 03.2	+3.1
LPAZ	**La Paz**	**153.50**	**158**	PKPbc	PKPbc	10 51 50.5	+2.6
	comp=Z,1.8nm,0.7s,baz=191,slow=3.4,SNR=5.5						
LPAZ				PKPab	PKPab	10 52 03.2	+3.1
	comp=Z,3.8nm,0.6s,baz=174,slow=4.0,SNR=10						

ISCJB ***13*** *10:44:37.3±1.6, 25.°2N±0.°2×94.°6E±0.°2, h65km±19km, mb3.3/4, Error ellipse: s-maj=31.8km s-min=14.0km az=41.1*
IDC ***13*** *10:44:41.6±4.3, 25.°35N×94.°81E, h88km±41km, mb3.0/4, mb1 3.1/5, mb1mx3.0/26, mbtmp3.0/5, Error ellipse: s-maj=83.0km s-min=22.3km az=69.0*

ISC 13 10:44:36.3±4.0, 25.°2N±0.°1×94.°7E±0.°2, h38km±46km, n7, σ0941/9, mb3.4/4, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**0.81**	**237**	*i* P**G**	**Pn**	**10 44 51.0**	**-0.2**
IMP				*i* SG	**Sn**	**10 45 02.0**	**0.0**
SHL	**Shillong**	**2.56**	**278**	*e*PN	**Pn**	**10 45 19.0**	**+3.8**
SHL				*e*SN	**Sn**	**10 45 45.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**7.81**	**149**	P	**Pn**	**10 46 33.2**	**+5.8**
	0.2nm,0.3s,baz=331,slow=14,SNR=6.1						
MKAR	**Makanchi Array**	**23.68**	**338**	P	**P**	**10 49 44.4**	**0.0**
	0.3nm,0.3s,mb3.2,baz=143,slow=11,SNR=3.8						
SONM	**Songino Array**	**24.39**	**19**	P	**P**	**10 49 50.7**	**-0.2**
	0.7nm,0.7s,mb3.2,baz=199,slow=11,SNR=3.2						
WRA	**Warramunga Arr**	**59.18**	**136**	P	**P**	**10 54 33.6**	**0.0**
	0.5nm,0.8s,mb3.6,baz=324,slow=7.3,SNR=6.9						
ASAR	**Alice Springs**	**61.69**	**139**	P	**P**	**10 54 50.8**	**+0.1**
	0.2nm,0.7s,mb3.4,baz=314,slow=11,SNR=2.6						

IDC 13 10:51:21.3±1.1, 83.°29N×115.°37E, h0km, mb3.6/6, mb1 3.9/6, mb1mx3.5/24, mbtmp3.6/6, MS2.9/3, Ms1 3.0/3, ms1mx2.3/26, Error ellipse: s-maj=40.6km s-min=19.4km az=159.0, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARCES	**ARCESS Array B**	**21.61**	**287**	P	P	10 56 14.1	+1.8
	2.0nm,0.8s,baz=6.9,slow=16,SNR=2.9						
INK	**Inuvik**	**25.03**	**55**	P	P	10 56 46.8	+0.4
	1.5nm,0.8s,baz=341,slow=6.8,SNR=3.2						
INK				LR	LR	11 06 02.1	
	comp=Z,23nm,18.5s,baz=25,slow=35						
ILAR	**Eielson Array**	**27.07**	**69**	P	P	10 57 06.4	+1.5
	0.5nm,0.9s,baz=347,slow=9.1,SNR=5.0						
ILAR				LR	LR	11 07 31.4	
	comp=Z,31nm,20.2s,baz=294,slow=36						
ZALV	**Zalesovo Beam**	**30.58**	**216**	LR	LR	11 10 55.8	
	comp=Z,25nm,18.3s,baz=62,slow=38						
MKAR	**Makanchi Array**	**37.88**	**218**	P	P	10 58 39.2	-0.2
	0.5nm,0.7s,baz=18,slow=5.2,SNR=4.7						
KEST	**Kesra**	**56.57**	**290**	P	P	11 01 05.0	-0.1
	1.0nm,0.7s,baz=340,slow=0.5,SNR=4.0						
TXAR	**Lajitas Array**	**66.16**	**37**	P	P	11 02 08.9	-1.1
	0.7nm,0.9s,baz=347,slow=7.4,SNR=7.7						
TORD	**Torodi Ar. Bea**	**79.72**	**295**	P	P	11 03 30.3	-0.3
	0.9nm,0.7s,baz=4.6,slow=6.2,SNR=5.5						

ISCJB ***13*** *11:03:01.2±0.6, 60.°8S±0.°1×25.°5W±0.°2, h10km, mb4.3/14, MS3.8/7, Error ellipse: s-maj=21.0km s-min=11.5km az=38.4*
IDC ***13*** *11:03:02.2±0.5, 60.°66S×25.°58W, h0km, mb4.3/11, mb1 4.4/11, mb1mx4.3/15, mbtmp4.2/11, MS3.8/7, Ms1 3.7/7, ms1mx3.6/16, Error ellipse: s-maj=23.4km s-min=15.7km az=49.0*
NEIC ***13*** *11:03:03.6±0.

comp=N,60nm,0.4s
comp=E,60nm,0.4s
comp=Z,160nm,0.4s
comp=N,430nm,0.6s
comp=E,140nm,0.6s

KZN	**Kozani**	**0.09**	**191**	*e*Pb	Op	ISC	h m s	ISC
KZN				*e*Sb	**Pg**	**Pg**	**11 22 42.5**	**-0.5**
KZN	**Kozani**	**0.09**	**191**	*e*PB		**Sg**	**11 22 46.0**	**+0.7**
KZN				*e*SB	**Pg**	**Pg**	**11 22 42.5**	**-0.5**
KZN	**Kozani**	**0.09**	**191**	*e*Pb		**Sg**	**11 22 46.0**	**+0.7**
KZN				*e*Sb	**Pg**	**Pb**	**11 22 50.3**	**-1.5**
LIT	**Litokhoron**	**0.61**	**119**	*e*Pb		**Sg**	**11 22 59.7**	**-0.1**
LIT				*e*Sn	**Pg**	**Pb**	**11 22 50.3**	**-1.5**
LIT	**Litokhoron**	**0.61**	**119**	*e*PB		**Sg**	**11 22 59.7**	**-0.1**
LIT				*e*SN	**Pg**	**Pn**	**11 23 08.2**	**-0.5**
LIT	**Litokhoron**	**0.61**	**119**	*e*Pb		**Sn**	**11 23 08.2**	**-0.5**
LIT				*e*Sn	**Pg**	**Pn**	**11 22 59.1**	**-0.4**
THL	**Klokotos Trika**	**0.85**	**168**	*e*PN		**Sn**	**11 23 08.2**	**-0.5**
THL				*e*SN	**Pg**	**Pn**	**11 22 56.7**	**0.0**
THL	**Klokotos Trika**	**0.85**	**168**	*e*Pn		**Sn**	**11 23 08.2**	**-0.5**
THL				*e*Sn	**Pn**	**Pn**	**11 22 56.7**	**0.0**
KRUS	**Krusevo**	**1.05**	**337**	*e*Pn		**Sn**	**11 23 08.2**	**-0.5**
KRUS				*e*Sg	**Pn**	**Pn**	**11 22 59.1**	**-0.4**
SOH	**Sokhos**	**1.26**	**70**	*e*Pn		**Sg**	**11 23 20.1**	**+6.2**
SOH				*e*Sn	**Pn**	**Pn**	**11 23 02.1**	**-0.3**
SOH	**Sokhos**	**1.26**	**70**	*e*PN		**Sn**	**11 23 19.9**	**+1.0**
SOH				*e*SN	**Pn**	**Pn**	**11 23 02.1**	**-0.3**
SOH	**Sokhos**	**1.26**	**70**	*e*Pn		**Sn**	**11 23 19.9**	**+1.0**
SOH				*e*Sn	**Pn**	**Pn**	**11 23 02.1**	**-0.3**
AGG	**Agios Georgios**	**1.44**	**163**	*e*Pn		**Sn**	**11 23 19.9**	**+1.0**
AGG	**Agios Georgios**	**1.44**	**163**	*e*PN	**Pn**	**Pn**	**11 23 06.7**	**+1.9**
AGG	**Agios Georgios**	**1.44**	**163**	*e*Pn		**Pn**	**11 23 06.7**	**+1.9**
					Pn	**Pn**	**11 23 06.7**	**+1.9**

NEIC ***13*** *11:22:38.9, 40°.44N×21°.81E, h16km, MD3.2(ATH), After ATH.*
ATH ***13*** *11:22:38.9, 40°.44N×21°.81E, h16km±3km, MD3.2/4*
CSEM ***13*** *11:22:38.9, 40°.44N×21°.81E, h16km, MD3.2, After ATH*
ISCJB ***13*** *11:22:39.6±0.8, 40°.39N±0°.06×21°.85E±0°.10, h16km±7km, Error ellipse: s-maj=12.4km s-min=9.3km az=11.1*
SKO ***13*** *11:22:39.6, 40°.38N×21°.88E, h20km*
ISC 13 11:22:39.6±0.9, 40°.40N±0°.06×21°.79E±0°.08, h17km±4km, n15, σ0°87/27, Greece

KZN	**Kozani**	**0.09**	**191**	*e*Pb	Op	ISC	h m s	ISC
KZN				*e*Sb	**Pg**	**Pg**	**11 22 42.5**	**-0.5**
KZN	**Kozani**	**0.09**	**191**	*e*PB		**Sg**	**11 22 46.0**	**+0.7**
KZN				*e*SB	**Pg**	**Pg**	**11 22 42.5**	**-0.5**
KZN	**Kozani**	**0.09**	**191**	*e*Pb		**Sg**	**11 22 46.0**	**+0.7**
KZN				*e*Sb	**Pg**	**Pb**	**11 22 50.3**	**-1.5**
LIT	**Litokhoron**	**0.61**	**119**	*e*Pb		**Sg**	**11 22 59.7**	**-0.1**
LIT				*e*Sn	**Pg**	**Pb**	**11 22 50.3**	**-1.5**
LIT	**Litokhoron**	**0.61**	**119**	*e*PB		**Sg**	**11 22 59.7**	**-0.1**
LIT				*e*SN	**Pg**	**Pn**	**11 23 08.2**	**-0.5**
LIT	**Litokhoron**	**0.61**	**119**	*e*Pb		**Sn**	**11 23 08.2**	**-0.5**
LIT				*e*Sn	**Pg**	**Pn**	**11 22 59.1**	**-0.4**
THL	**Klokotos Trika**	**0.85**	**168**	*e*PN		**Sn**	**11 23 08.2**	**-0.5**
THL				*e*SN	**Pg**	**Pn**	**11 22 56.7**	**0.0**
THL	**Klokotos Trika**	**0.85**	**168**	*e*Pn		**Sn**	**11 23 08.2**	**-0.5**
THL				*e*Sn	**Pn**	**Pn**	**11 22 56.7**	**0.0**
KRUS	**Krusevo**	**1.05**	**337**	*e*Pn		**Sn**	**11 22 59.1**	**-0.4**
KRUS				*e*Sg	**Pn**	**Pn**	**11 23 20.1**	**+6.2**
SOH	**Sokhos**	**1.26**	**70**	*e*Pn		**Sg**	**11 23 02.1**	**-0.3**
SOH				*e*Sn	**Pn**	**Pn**	**11 23 19.9**	**+1.0**
SOH	**Sokhos**	**1.26**	**70**	*e*PN		**Sn**	**11 23 02.1**	**-0.3**
SOH				*e*SN	**Pn**	**Pn**	**11 23 19.9**	**+1.0**
SOH	**Sokhos**	**1.26**	**70**	*e*Pn		**Sn**	**11 23 02.1**	**-0.3**
SOH				*e*Sn	**Pn**	**Pn**	**11 23 19.9**	**+1.0**
AGG	**Agios Georgios**	**1.44**	**163**	*e*Pn		**Sn**	**11 23 06.7**	**+1.9**
AGG	**Agios Georgios**	**1.44**	**163**	*e*PN	**Pn**	**Pn**	**11 23 06.7**	**+1.9**
AGG	**Agios Georgios**	**1.44**	**163**	*e*Pn		**Pn**	**11 23 06.7**	**+1.9**

ISCJB ***13*** *11:36:28.5±0.5, 10°.63N±0°.04×61°.56W±0°.03, h63km±6km, Error ellipse: s-maj=6.4km s-min=4.9km az=164.4*
FUNV ***13*** *11:36:28.3, 10°.74N×61°.42W, h27km, MW2.8*
NEIC ***13*** *11:36:31.2, 10°.70N×61°.49W, h36km, MD3.0(TRN), After TRN.*
TRN ***13*** *11:36:31.2, 10°.70N×61°.49W, h36km, MD3.0*
ISC 13 11:36:29.7±0.5, 10°.64N±0°.04×61°.55W±0°.03, h51km±6km, n28, σ0°78/45, 10C-2D, Trinidad

TRN	**Trinidad (W)**	**0.15**	**89⇑**	*e*P	Op	ISC	h m s	ISC
TRN				*e*S	**Pn**	**Sn**	**11 36 37.4**	**-0.4**
TRN	**Trinidad (W)**	**0.15**	**89⇑**	*e*P		**Sn**	**11 36 41.8**	**-1.9**
TRN				*e*S	**Pn**	**Pn**	**11 36 37.4**	**-0.4**
TCE	**Chacachacare**	**0.20**	**285⇑**	*e*P		**Sn**	**11 36 41.8**	**-1.9**
TCE				*e*S	**Pn**	**Pn**	**11 36 38.7**	**+0.5**
TCE	**Chacachacare**	**0.20**	**285⇑**	*e*P		**Sn**	**11 36 44.5**	**+0.2**
TCE				*e*S	**Pn**	**Pn**	**11 36 38.7**	**+0.5**
TPP	**Pointe-a-Pierr**	**0.34**	**163⇑**	*e*P		**Sn**	**11 36 44.5**	**+0.2**
TPP	**Pointe-a-Pierr**	**0.34**	**163⇑**	*e*P	**Pn**	**Pn**	**11 36 40.9**	**+1.5**
TBH	**Brigand Hill**	**0.50**	**108⇑**	*e*P		**Pn**	**11 36 40.9**	**+1.5**
TBH				*e*S	**Pn**	**Pn**	**11 36 41.6**	**+0.6**
TBH	**Brigand Hill**	**0.50**	**108⇑**	*e*P		**Sn**	**11 36 48.7**	**-0.5**
TBH				*e*S	**Pn**	**Pn**	**11 36 41.6**	**+0.6**
GUIV	**Guiria**	**0.66**	**270⇓**	*e*P		**Sn**	**11 36 48.7**	**-0.5**
GUIV				*e*S	**Pn**	**Pn**	**11 36 43.5**	**+0.5**
TPR	**Prospect**	**0.93**	**55**	*e*P		**Sn**	**11 36 53.7**	**+1.1**
TPR				*e*S	**Pn**	**Pn**	**11 36 46.5**	**0.0**
TPR	**Prospect**	**0.93**	**55**	*e*P		**Sn**	**11 36 59.0**	**+0.1**
TPR				*e*S	**Pn**	**Pn**	**11 36 46.5**	**0.0**
TOSP	**Speyside**	**1.19**	**57⇓**	*i*P		**Sn**	**11 36 59.0**	**+0.1**
TOSP				*e*S	**Pn**	**Pn**	**11 36 50.0**	**0.0**
GUNV	**Guanoco**	**1.45**	**251**	*e*P		**Sn**	**11 37 05.3**	**+0.2**
GRW	**Mount Saint Ca**	**1.51**	**356⇑**	*e*P	**Pn**	**Pn**	**11 36 54.9**	**+1.3**
GRW				*e*S	**Pn**	**Pn**	**11 36 54.9**	**+0.5**
GRW	**Mount Saint Ca**	**1.51**	**356⇑**	*e*P		**Sn**	**11 37 13.3**	**+0.4**
GRW				*e*S	**Pn**	**Pn**	**11 36 54.9**	**+0.5**
CRUV	**Carupano**	**1.66**	**271**	*e*P		**Sn**	**11 37 13.3**	**+0.4**
CRUV				*e*S	**Pn**	**Pn**	**11 36 56.5**	**+0.1**
ITEV	**Isla Los Testi**	**1.71**	**295**	*e*P		**Sn**	**11 37 17.7**	**+1.2**
ITEV				*e*S	**Pn**	**Pn**	**11 36 56.8**	**-0.2**
ORIV	**Oritupano**	**2.41**	**230**	*e*P		**Sn**	**11 37 17.7**	**0.0**
RIOV	**Rio Grande**	**2.57**	**186**	*e*P	**Pn**	**Pn**	**11 37 07.4**	**+0.8**
PCRV	**Puerto La Cruz**	**3.07**	**262**	*e*P	**Pn**	**Pn**	**11 37 09.3**	**+0.4**
IBAV	**Isla La Blanqu**	**3.19**	**292**	*e*P	**Pn**	**Pn**	**11 37 14.9**	**-0.8**
IBAV				*e*S	**Pn**	**Pn**	**11 37 16.9**	**-0.5**
GURV	**El Guri**	**3.24**	**208**	*e*P	**Sn**	**Sn**	**11 37 52.4**	**-1.8**
					Pn	**Pn**	**11 37 18.7**	**+0.6**

GURV				*e*S	**Sn**	**Sn**	**11 37 55.1**	**-0.4**
PRGV	**PARIAGUAN**	**3.58**	**239**	*e*P	**Pn**	**Pn**	**11 37 22.3**	**-0.4**
CUPV	**Cœpira**	**4.21**	**262**	*e*P	**Pn**	**Pn**	**11 37 31.4**	**0.0**
CUPV				*e*S	**Sn**	**Sn**	**11 38 18.0**	**-1.2**
LUEV	**Luepa**	**4.77**	**179**	*e*P	**Pn**	**Pn**	**11 37 38.0**	**-1.0**
MERV	**Las Mercedes**	**4.88**	**254**	*e*P	**Pn**	**Pn**	**11 37 40.5**	**0.0**
CAOV	**Caicara del Or**	**5.75**	**235**	*e*P	**Pn**	**Pn**	**11 37 52.4**	**-0.2**
BAUV	**El Baul**	**6.62**	**256**	*e*P	**Pn**	**Pn**	**11 38 03.4**	**-1.0**

IDC ***13*** *11:39:54.6±6.8, 8°.17S×126°.19E, h76km±78km, mb3.4/5, mb1 3.6/8, mb1mx3.4/18, mbtmp3.4/8, ML3.5/3, Error ellipse: s-maj=46.4km s-min=34.2km az=42.0*
NEIC ***13*** *11:39:58.6±2.6, 8°.36S×125°.86E, h118km±30km, mb4.3/1, Error ellipse: s-maj=28.5km s-min=18.0km az=90.0*
ISC 13 11:39:58.6±2.1, 8°.32S±0°.09×126°.0E±0°.1, h118km±23km, n12, σ1s02/16, mb3.7/6, Timor region

KAKA	**Kakadu**	**7.71**	**125**	*e*Pn	Op	ISC	h m s	ISC
KAKA				*e*Sn	**Pn**	**Pn**	**11 41 49.5**	**+1.3**
FITZ	**Fitzroy Crossi**	**9.73**	**182**	P	Sx	Sx	11 43 08.7	
	0.4nm,0.3s,baz=353,slow=12,SNR=11				**Pn**	**Sn**	**11 42 13.9**	**-1.7**
FITZ				S		**Sn**	**11 44 03.8**	**+0.8**
	0.9nm,0.3s,baz=126,slow=14,SNR=7.3							
WRA	**Warramunga Arr**	**14.11**	**146**	P	**Pn**	**Pn**	**11 43 09.9**	**-3.3**
WRA				S	**Sn**	**Sn**	**11 45 44.2**	**-4.8**
WRA	**Warramunga Arr**	**14.11**	**146**	P	**Pn**	**Pn**	**11 43 09.9**	**-3.3**
	0.2nm,0.3s,baz=317,slow=14,SNR=7.9							
WRA				S	**Sn**	**Sn**	**11 45 44.2**	**-4.8**
	0.2nm,0.3s,baz=318,slow=25,SNR=5.4							
ASAR	**Alice Springs**	**17.05**	**154**	P	**Pn**	**Pn**	**11 43 50.4**	**+0.6**
	0.2nm,0.3s,baz=325,slow=10,SNR=11							
ASAR				S	**Sn**	**Sn**	**11 47 00.2**	**+0.3**
	0.1nm,0.3s,baz=319,slow=21,SNR=5.8							
FORT	**Forrest**	**22.43**	**175**	*e*P	**P**	**Pn**	**11 44 47.5**	**-0.2**
	15nm,1.1s,mb4.2							
CMAR	**Chiang Mai Arr**	**37.68**	**315**	P	**P**	**Pn**	**11 47 03.1**	**+0.5**
	0.2nm,0.3s,mb3.4,baz=152,slow=7.6,SNR=4.2							
MJAR	**Matsushiro Arr**	**46.08**	**14**	P	**P**	**Pn**	**11 48 09.4**	**-1.3**
	1.5nm,0.9s,mb3.7,baz=188,slow=8.6,SNR=5.4							
SONM	**Songino Array**	**58.53**	**345**	P	**P**	**Pn**	**11 49 43.5**	**+1.0**
	0.3nm,0.4s,mb3.7,baz=169,slow=10,SNR=3.2							
MKAR	**Makanchi Array**	**67.22**	**329**	P	**P**	**Pn**	**11 50 40.7**	**+0.6**
MKAR	**Makanchi Array**	**67.22**	**329**	P	**P**	**Pn**	**11 50 40.7**	**+0.6**
	0.5nm,0.4s,mb3.7,baz=124,slow=7.7,SNR=13							
ZALV	**Zalesovo Beam**	**71.07**	**336**	P	**P**	**Pn**	**11 51 03.2**	**-0.4**
	0.5nm,0.4s,mb3.7,baz=103,slow=3.2,SNR=4.6							

IDC 13 11:47:53.1±1.6, 83°.58N×115°.21E, h0km, mb3.4/2, mb1 3.8/2, mb1mx3.3/21, mbtmp3.4/2, Error ellipse: s-maj=72.6km s-min=32.0km az=132.0, North of Severnaya Zemlya

MKAR	**Makanchi Array**	**38.10**	**217**	P	Op	ISC	h m s	ISC
	0.3nm,0.6s,baz=8,8,slow=7.7,SNR=4.1				P	P	11 55 13.0	0.0
TXAR	**Lajitas Array**	**65.94**	**37**	P	P		11 58 40.5	+0.2
	0.3nm,0.6s,baz=12,slow=4.5,SNR=6.9							
TORD	**Torodi Ar. Bea**	**79.58**	**295**	P	P		12 00 01.7	+0.1
	160nm,0.4s,baz=357,slow=5.5,SNR=3.7							

NIED ***13*** *12:02:00, 45°.50N×151°.00E, h17km, Mw3.9 Best double couple: M0 6.77000×10^14 NP1:φs6.00000°, δ56.00000°, λ67.00000°. NP2:φs224.00000°, δ40.00000°, λ121.00000°.*
JMA ***13*** *12:02:03.1±0.5, 45°.54N×150°.99E, h30km, M4.4*
MOS ***13*** *12:02:03.8±1.0, 45°.28N×151°.04E, h48km, mb4.5/1, Error ellipse: s-maj=16.9km s-min=14.0km az=147.7*
ISCJB ***13*** *12:02:04.6±1.3, 45°.04N±0°.08×150°.95E±0°.10, h58km±12km, mb3.7/10, MS3.5/3, Error ellipse: s-maj=14.3km s-min=10.5km az=149.1*
IDC ***13*** *12:02:06.7±4.7, 45°.34N×150°.97E, h55km±41km, mb3.5/9, mb1 3.6/11, mb1mx3.5/24, mbtmp3.5/11, ML3.3/1, MS3.5/3, Ms1 3.5/3, ms1mx2.8/42, Error ellipse: s-maj=26.9km s-min=21.5km az=112.0*
NEIC ***13*** *12:02:07.6±2.1, 45°.30N×151°.01E, h64km±18km, mb4.4/1, Error ellipse: s-maj=19.7km s-min=14.0km az=96.0*
ISC 13 12:02:05.3±0.9, 45°.15N±0°.08×151°.03E±0°.09, h46km±9km, n47, σ1s24/55, mb3.7/9, MS3.5/3, Kuril Islands

KUR	**Kuril'sk**	**2.24**	**273**	*e*PN	Op	ISC	h m s	ISC
KUR				S	**Pn**	**Pn**	**12 02 38.5**	**-1.3**
KUR				pmax	**Sn**	**Sn**	**12 03 04.5**	**-1.7**
	comp=N,60nm,0.4s				pmax	pmax		
KUR				pmax	pmax			
	comp=E,60nm,0.4s							
KUR				pmax	pmax			
	comp=Z,160nm,0.4s							
KUR				smax				
	comp=N,430nm,0.6s							
KUR				smax				
	comp=E,140nm,0.6s							
NEM2	**Nemuro 2**	**4.20**	**247**	P	**Pn**	**Pn**	**12 03 05.9**	**-0.8**
NEM2				*e*S	**Sn**	**Sn**	**12 03 53.5**	**-0.9**
JRA	**Rausu**	**4.39**	**256**	P	**Pn**	**Pn**	**12 03 10.7**	**+1.3**
JNK	**Nakash**	**4.79**	**253**	P	**Pn**	**Pn**	**12 03 15.1**	**+0.3**
JNK				*e*S	**Sn**	**Sn**	**12 04 09.4**	**+0.4**
JAK	**Akkeshi**	**5.05**	**247**	P	**Pn**	**Pn**	**12 03 17.7**	**-0.7**
JAK				*e*S	**Sn**	**Sn**	**12 04 13.5**	**-1.8**
JTKR	**Abashiri--Toko**	**5.22**	**259**	P	**Pn**	**Pn**	**12 03 22.2**	**+1.4**
JAR	**Ashorobuto**	**5.54**	**253**	P	**Pn**	**Pn**	**12 03 25.8**	**+0.7**
JAR				*e*S	**Sn**	**Sn**	**12 04 27.8**	**+0.4**
JMP	**Maruseppu**	**5.60**	**261**	P	**Pn**	**Pn**	**12 03 27.3**	**+1.4**
JOB	**Onbets**	**5.65**	**249**	P	**Pn**	**Pn**	**12 03 26.8**	**+0.1**
YSS	**Yuzh-Sakhalins**	**6.04**	**290**	*e*Pn	**Pn**	**Pn**	**12 03 34.2**	**+2.3**
JKK2	**Kamakawa 2**	**6.06**	**261**	P	**Pn**	**Pn**	**12 03 34.0**	**+1.7**
JKK2				*e*S	**Sn**	**Sn**	**12 04 41.7**	**+1.4**
JCH	**Churui**	**6.09**	**248**	P	**Pn**	**Pn**	**12 03 32.5**	**-0.2**
JCH				*e*S	**Sn**	**Sn**	**12 04 39.1**	**-2.0**
ASAJ	**Asahikawa**	**6.11**	**263**	P	**Pn**	**Pn**	**12 03 34.5**	**+1.5**
	comp=E,1.3nm,0.3s,baz=78,slow=14,SNR=14							
ASAJ	**Asahikawa**	**6.11**	**263**	PN	**Pn**	**Pn**	**12 03 34.5**	**+1.6**
ASAJ				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ASAJ	**Asahikawa**	**6.11**	**263**	P	**Pn**	**Pn**	**12 03 34.8**	**+1.9**
JFR	**Furan**	**6.39**	**255**	P	**Pn**	**Pn**	**12 03 39.0**	**+2.3**
SKR	**Severo-Kuril's**	**6.51**	**30**	*e*PN	**Pn**	**Pn**	**12 03 36.5**	**-1.8**
SKR				pmax	pmax			
	comp=N,20nm,0.5s							
SKR				pmax	pmax			
	comp=Z,40nm,0.5s							
JEM	**Erimo**	**6.52**	**244**	P	**Pn**	**Pn**	**12 03 39.7**	**+1.1**
JEM				*e*S	**Sn**	**Sn**	**12 04 47.5**	**-4.1**
ERM	**Erimo**	**6.52**	**244**	*e*Pn	**Pn**	**Pn**	**12 03 40.5**	**+1.9**
	comp=Z,78nm,0.6s							
ERM	**Erimo**	**6.52**	**244**	*e*PN	**Pn**	**Pn**	**12 03 40.5**	**+1.9**
ERM				pmax	pmax			
	comp=Z,78nm,0.6s							
JNBK	**Urakawa-nobuka**	**6.65**	**247**	P	**Pn**	**Pn**	**12 03 39.7**	**-0.6**
JNBK				*e*S	**Sn**	**Sn**	**12 04 49.5**	**-5.2**
JBT2	**Biratori 2**	**6.69**	**252**	P	**Pn**	**Pn**	**12 03 40.9**	**0.0**
JNB	**Noboribetsu**	**7.71**	**253**	P	**Pn**	**Pn**	**12 03 55.7**	**+0.8**
JKB	**Kayabe**	**7.96**	**249**	P	**Pn**	**Pn**	**12 03 57.9**	**-0.5**
JYM2	**Yakumo 2**	**8.31**	**252**	P	**Pn**	**Pn**	**12 04 03.4**	**+0.4**
JANG	**Nango**	**8.47**	**239**	P	**Pn**	**Pn**	**12 04 03.0**	**-2.3**
JTM	**Tenmabayashi**	**8.51**	**243**	P	**Pn**	**Pn**	**12 04 05.2**	**-0.6**
JTH	**Tanohata**	**8.54**	**236**	*e*S	**Sn**	**Sn**	**12 05 34.1**	**-7.0**
JOSM	**Okushiri--Mats**	**8.93**	**254**	P	**Pn**	**Pn**	**12 04 11.7**	**+0.2**
OFUJ	**Ofunato**	**9.22**	**232**	P	**Pn**	**Pn**	**12 04 12.9**	**-2.7**
JRG	**Rokugo**	**9.61**	**237**	*e*S	**Sn**	**Sn**	**12 06 01.6**	**-5.9**
JIO	**Ouri**	**9.84**	**231**	P	**Pn**	**Pn**	**12 04 22.2**	**-1.9**
JIO				*e*S	**Sn**	**Sn**	**12 06 02.4**	**-11**
KSRS	**Korea Array**	**18.95**	**254**	P	**Pn**	**Pn**	**12 06 22.8**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=59,slow=12,SNR=6.2							
YAK	**Yakutsk**	**20.96**	**331**	*e*P	**P**		**12 06 43.3**	**-0.8**
	comp=Z,9.5nm,0.5s							
YAK	**Yakutsk**	**20.96**	**331**	*e*P	**P**		**12 06 43.3**	**-0.8**
YAK				pmax	pmax			
	comp=Z,9.0nm,0.5s							
SONM	**Songino Array**	**30.53**	**291**	P	**P**		**12 08 14.7**	**+0.7**
	comp=Z,0.4nm,0.5s,mb3.5,baz=56,slow=9.0,SNR=3.0							
SONM				LR	LR		12 21 32.3	
	comp=Z,57nm,19.1s,MS3.2,baz=237,slow=38							
ILAR	**Eielson Array**	**38.70**	**37**	P	**P**		**12 09 23.5**	**-0.8**
	comp=Z,0.4nm,0.9s,mb3.1,baz=274,slow=7.8,SNR=4.8							
MKAR	**Makanchi Array**	**46.40**	**298**	P	**P**		**12 10 26.2**	**-0.7**

	comp=Z,0.7nm,0.6s,mb3.8,baz=74,slow=6.7,SNR=8.4							
WRA	**Warramunga Arr**	**66.54**	**197**	P	**P**		**12 12 51.3**	**+1.0**
	comp=Z,1.1nm,0.8s,mb3.9,baz=17,slow=6.8,SNR=5.5							
NOA	**NORSAR Array B**	**69.26**	**340**	P	**P**		**12 13 04.9**	**-2.1**
	comp=Z,0.9nm,0.7s,mb3.8,baz=27,slow=6.3,SNR=4.2							
ASAR	**Alice Springs**	**70.24**	**197**	P	**P**		**12 13 15.2**	**+1.8**
	comp=Z,0.9nm,0.9s,mb3.7,baz=10,slow=6.6,SNR=8.3							
GNI	**Garni**	**72.44**	**309**	LR	LR		12 49 38.9	
	comp=Z,34nm,19.8s,MS3.6,baz=241,slow=40							
BUR08	**Bucovina Ar. S**	**76.09**	**326**	*e*P	**P**		**12 13 47.4**	**-0.4**
BRTR	**Keskin Array B**	**78.54**	**316**	P	**P**		**12 14 01.7**	**0.0**
	comp=Z,0.8nm,0.8s,mb3.7,baz=56,slow=5.4,SNR=4.1							
TXAR	**Lajitas Array**	**79.55**	**59**	P	**P**		**12 14 08.1**	**+0.7**
	comp=Z,0.1nm,0.4s,mb3.1,baz=302,slow=5.2,SNR=4.9							
MMAI	**Mount Meron Ar**	**82.76**	**310**	P	**P**		**12 14 24.8**	**+0.4**
	comp=Z,1.5nm,0.4s,mb4.3,baz=20,slow=5.1,SNR=2.7							
MMAI				LR	LR		12 52 43.5	
	comp=Z,36nm,19.7s,MS3.8,baz=125,slow=37							
NVL	**N'lazarevskaya**	**147.58**	**204**	*e*PKHKP	PKPpre		12 21 31.6	
NVL				pmax	pmax			
	comp=Z,11nm,0.7s							

ISCJB ***13*** *12:03:11.2±1.7, 45°.3N±0°.1×151°.0E±0°.1, h55km±15km, mb3.5/6, Error ellipse: s-maj=25.8km s-min=10.3km az=148.3*
MOS ***13*** *12:03:12.8±1.4, 45°.55N×150°.61E, h72km, mb4.1/3, Error ellipse: s-maj=22.3km s-min=14.4km az=144.4*
IDC ***13*** *12:03:13.5±5.1, 45°.36N×150°.95E, h61km±47km, mb3.3/6, mb1 3.5/8, mb1mx3.3/23, mbtmp3.3/8, ML3.5/2, Error ellipse: s-maj=33.1km s-min=20.7km az=120.0*
ISC 13 12:03:13.4±1.5, 45°.4N±0°.1×150°.9E±0°.1, h57km±13km, n19, σ1s05/21, mb3.5/6, 1C, Kuril Islands

KUR	**Kuril'sk**	**2.13**	**267**	P	Op	ISC	h m s	ISC
KUR				*e*S	**Pn**	**Pn**	**12 04 09.2**	**-0.4**
KUR				smax	**Sn**	**Sn**	**12 04 55.8**	**+2.6**
	comp=N,650nm,0.5s				pmax	pmax		
KUR				smax				
	comp=E,90nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**3.82**	**251**	*c i*	PN	**Pn**	**12 04 09.2**	**-0.4**
YUK				*i*	S	**Sn**	**12 04 55.8**	**+2.6**
YUK				pmax	pmax			
	comp=Z,340nm,0.7s							
YUK				pmax	pmax			
	comp=N,118nm,0.6s							
YUK				pmax	pmax			
	comp=Z,304nm,0.6s							
YUK				pmax	pmax			
	comp=E,109nm,0.1s							
YUK				smax				
	comp=N,170nm,0.5s							
YUK				smax				
	comp=E,240nm,0.5s							
YUK				smax				
	comp=N,234nm,0.3s							
YUK				smax				
	comp=E,290nm,0.5s							
YSS	**Yuzh-Sakhalins**	**5.86**	**289**	*e*PN	**Pn**	**Pn**	**12 04 32.9**	**-4.7**
YSS	**Yuzh-Sakhalins**	**5.86**	**289**	*e*Sn	**Pn**	**Pn**	**12 04 32.9**	**-4.7**
ASAJ	**Asahikawa**	**6.03**	**261**	P	**Pn**	**Pn**	**12 04 41.0**	**+1.1**
	comp=E,1.2nm,0.3s,baz=177,slow=18,SNR=2.8							
ASAJ	**Asahikawa**	**6.03**	**261**	PN	**Pn**	**Pn**	**12 04 41.1**	**+1.2**
ASAJ				pmax	pmax			
	comp=Z,1.0nm,0.3s							
SKR	**Severo-Kuril's**	**6.37**	**32**	*e*PN	**Pn**	**Pn**	**12 04 45.5**	**+1.0**
KSRS	**Korea Array**	**18.91**	**253**	P	**Pn**	**Pn**	**12 07 29.7**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=71,slow=9.8,SNR=3.3							
LZH	**Lanzhou**	**36.38**	**272**	*e*P	**P**		**12 10 13.0**	**+1.1**
LZH				pP	pP		12 10 32.8	+6.4
LZH				sP	sP		12 10 41.0	+7.8
LZH				pmax	pmax			
	comp=Z,21nm,1.0s							
LZH				pmax	pmax			
	comp=Z,85nm,4.3s							
ILAR	**Eielson Array**	**38.59**	**37**	P	**P**		**12 10 29.2**	**-1.1**
	comp=Z,0.2nm,0.7s,mb2.9,baz=263,slow=7.4,SNR=3.7							
MKAR	**Makanchi Array**	**46.20**	**298**	P	**P**		**12 11 32.7**	**+0.4**
	comp=Z,0.5nm,0.5s,mb3.7,baz=79,slow=7.1,SNR=4.4							
MKAR	**Makanchi Array**	**46.20**	**298**	P	**P**		**12 11 32.7**	**+0.4**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
WRA	**Warramunga Arr**	**66.72**	**197**	P	**P**		**12 13 57.5**	**-0.7**
	comp=Z,0.8nm,0.8s,mb3.8,baz=15,slow=6.8,SNR=4.6							
WRA	**Warramunga Arr**	**66.72**	**197**	P	**P**		**12 13 57.5**	**-0.7**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
NOA	**NORSAR Array B**	**69.02**	**340**	P	**P**		**12 14 11.9**	**-0.4**
	comp=Z,1.0nm,0.5s,mb4.0,baz=25,slow=6.4,SNR=2.6							
NOA	**NORSAR Array B**	**69.02**	**340**	P	**P**		**12 14 11.9**	**-0.4**
NOA				pmax	pmax			
	comp=Z,1.0nm,0.5s				

eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.29**	**359**	⇑P	**Pn**	**12 19 09.3**	**+0.4**
OFUJ				S	**Sn**	**12 19 17.7**	**+0.6**
JMK	**Ichinoseki**	**0.39**	**295**	⇑P	**Pn**	**12 19 09.6**	**0.0**
JMK				S	**Sn**	**12 19 18.1**	**-0.3**
JIO	**Ouri**	**0.42**	**218**	⇑P	**Pn**	**12 19 09.9**	**+0.1**
JIO				S	**Sn**	**12 19 18.6**	**-0.2**
JOM	**Ohasama**	**0.74**	**336**	⇑P	**Pn**	**12 19 13.4**	**+0.3**
JOM				S	**Sn**	**12 19 24.8**	**+0.2**
JOU	**Okura**	**0.90**	**242**	⇑P	**Pn**	**12 19 14.7**	**-0.2**
JOU				S	**Sn**	**12 19 27.6**	**-0.2**
JYK	**Kaneyama**	**1.04**	**277**	⇑P	**Pn**	**12 19 16.5**	**-0.1**
JYK				eS	**Sn**	**12 19 30.6**	**-0.1**
JMM	**Marumori**	**1.16**	**217**	⇑P	**Pn**	**12 19 17.4**	**-0.7**
JMM				S	**Sn**	**12 19 32.4**	**-1.0**
JYS	**Shirataka**	**1.39**	**246**	⇑P	**Pn**	**12 19 21.1**	**0.0**
JYA	**Atsumi**	**1.55**	**263**	⇑P	**Pn**	**12 19 23.2**	**0.0**
JYA				eS	**Sn**	**12 19 42.3**	**-0.2**
JFK	**Kawauchi**	**1.56**	**204**	P	**Pn**	**12 19 23.1**	**-0.2**
JFK				S	**Sn**	**12 19 42.1**	**-0.6**
JANG	**Nango**	**1.59**	**356**	P	**Pn**	**12 19 23.9**	**+0.2**
JAH	**Hinai**	**1.61**	**330**	⇓P	**Pn**	**12 19 24.8**	**+0.8**
MJAR	**Matsushiro Arr**	**3.55**	**232**	P	**Pn**	**12 19 51.8**	**+1.5**
	3.7nm,0.3s,baz=40,slow=10,SNR=64						
MAJO	**Matsushiro**	**3.55**	**232**	*e*Pn	**Pn**	**12 19 49.7**	**-0.5**
MAT	**Matsushiro**	**3.55**	**232**	P	**Pn**	**12 19 51.7**	**+1.4**
MAT				S	**Sn**	**12 20 33.0**	**+2.0**
ASAJ	**Asahikawa**	**5.37**	**7**	P	**Pn**	**12 20 14.2**	**-0.8**
	1.3nm,0.3s,baz=213,slow=12,SNR=12						
ASAJ				S	**Sn**	**12 21 12.8**	**-2.6**
	0.9nm,0.3s,baz=232,slow=19,SNR=3.2						
JHJ	**Hachijo jima 2**	**5.86**	**196**	P	**Pn**	**12 20 20.7**	**-1.1**
	8.7nm,0.3s,baz=265,slow=23,SNR=14						
JHJ				S	**Sn**	**12 21 22.4**	**-5.3**
	14nm,0.3s,baz=59,slow=22,SNR=5.7						
KSRS	**Korea Array**	**10.92**	**267**	P	**Pn**	**12 21 33.7**	**+2.8**
	0.2nm,0.3s,baz=79,slow=14,SNR=9.4						
SONM	**Songino Array**	**27.02**	**301**	P	**P**	**12 24 32.6**	**-0.1**
	0.5nm,0.5s,mb3.4,baz=92,slow=7.0,SNR=5.2						
ZALV	**Zalesovo Beam**	**40.91**	**311**	P	**P**	**12 26 31.9**	**-0.6**
	3.7nm,0.7s,mb4.3,baz=92,slow=8.3,SNR=16						
MK31	**Makanchi Array**	**43.38**	**301**	*e*P	**P**	**12 26 52.4**	**-0.3**
MKAR	**Makanchi Array**	**43.38**	**301**	P	**P**	**12 26 52.4**	**-0.4**
	4.8nm,0.8s,mb4.3,baz=85,slow=9.7,SNR=21						
KURK	**Kurchatov**	**45.03**	**307**	*e*P	**P**	**12 27 05.4**	**-0.4**
	11nm,0.8s,mb4.6						
ILAR	**Eielson Array**	**47.91**	**33**	P	**P**	**12 27 29.3**	**+1.2**
	0.4nm,0.7s,mb3.4,baz=267,slow=6.8,SNR=5.9						
ILAR				sP	sP	12 27 53.0	-1.3
	0.4nm,0.6s,baz=268,slow=6.4,SNR=6.0						
BVAR	**Borovoye Array**	**49.56**	**311**	P	**P**	**12 27 39.6**	**-1.4**
	0.8nm,0.5s,mb4.0,baz=80,slow=8.1,SNR=5.2						
ABKAR	**Akbulak array**	**56.98**	**309**	*e*P	**P**	**12 28 34.9**	**-0.6**
	1.9nm,0.6s,mb4.3						
ABKAR				*e*pP	pP	12 28 54.2	+0.3
WRA	**Warramunga Arr**	**58.83**	**188**	P	**P**	**12 28 47.6**	**-1.0**
	0.2nm,0.3s,mb3.6,baz=7.2,slow=6.8,SNR=9.6						
WRA				pP	pP	12 29 06.1	-1.0
	0.4nm,0.5s,baz=5.3,slow=7.3,SNR=2.3						
NVAR	**Mina Array Bea**	**73.78**	**54**	P	**P**	**12 30 26.0**	**+1.9**
	0.2nm,0.3s,mb3.3,baz=294,slow=6.5,SNR=2.5						
TXAR	**Lajitas Array**	**88.89**	**53**	P	**P**	**12 31 45.2**	**+1.1**
	0.2nm,0.7s,mb3.3,baz=298,slow=1.9,SNR=3.1						

IDC 13 12:44:59.2±3.6, 20°.45S×178°.01W, h392km±37km, mb3.2/5, mb1 3.4/6, mb1mx3.2/16, mbtmp3.3/6, Error ellipse: s-maj=125.0km s-min=20.1km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.81**	**43**	P	Pn	12 47 04.7	+1.1
	1.5nm,0.3s,baz=225,slow=1.4,SNR=3.6						
AFI				S	S	12 48 44.4	-1.1
	1.9nm,0.3s,baz=36,slow=21,SNR=5.6						
CTA	**Charters Tower**	**33.49**	**264**	P	P	12 51 03.8	0.0
	1.6nm,0.4s,baz=90,slow=10,SNR=2.5						
STKA	**Stephens Creek**	**37.80**	**244**	P	P	12 51 39.5	-0.4
	1.7nm,0.9s,baz=92,slow=12,SNR=4.3						
ASAR	**Alice Springs**	**44.52**	**257**	P	P	12 52 34.1	+0.1
	2.5nm,0.5s,baz=92,slow=8.4,SNR=32						
WRA	**Warramunga Arr**	**44.60**	**262**	P	P	12 52 34.5	-0.1
	0.8nm,0.3s,baz=99,slow=8.8,SNR=9.9						
ILAR	**Eielson Array**	**88.27**	**13**	P	P	12 57 06.7	+0.1
	0.2nm,0.8s,baz=213,slow=4.3,SNR=3.0						

*NIED **13** 12:52:00, 35°.10N×135°.70E, h5km, Mw3.4 Best double couple: M₀1.21000×10¹⁴ NP1:φ=211.00000°, δ72.00000°, λ121.00000°. NP2:φ=327.00000°, δ35.00000°, λ32.00000°.*
*ISCJB **13** 12:52:08.2±0.7, 35°.18N±0°.04×135°.75E±0°.05, h10km, mb3.2/2, Error ellipse: s-maj=6.8km s-min=4.8km az=141.4*
*NEIC **13** 12:52:09.6, 35°.15N×135°.67E, h6km, MG3.1(JMA), After JMA.*
*IDC **13** 12:52:09.4±1.5, 34°.90N×135°.91E, h0km, mb3.2/2, mb1 3.3/3, mb1mx3.1/22, mbtmp3.1/3, ML2.8/1, MS2.8/1, Ms1 2.8/1, ms1mx2.1/12, Error ellipse: s-maj=29.5km s-min=16.4km az=136.0*
*JMA **13** 12:52:09.5, 35°.15N×135°.67E, h6km±1km, M3.1 JMA Felt III J1.*

ISC 13 12:52:09.6±0.7, 35°.16N±0°.04×135°.69E±0°.05, h10km, n8, σ1§16/12, mb3.2/2, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWT	**Wachi**	**0.27**	**298**	P	**Pg**	**12 52 14.8**	**-0.2**
JWT				S	**Sg**	**12 52 18.1**	**-0.5**
JHE	**Heguri**	**0.50**	**180**	P	**Pg**	**12 52 19.2**	**-0.2**
JHE				S	**Sg**	**12 52 25.7**	**-0.3**
MAJO	**Matsushiro**	**2.47**	**55**	*e*Pn	**Pn**	**12 52 51.9**	**+2.0**
MAJO				*e*Sg	**Sg**	**12 53 27.6**	**-1.3**
MAT	**Matsushiro**	**2.47**	**55**	P	**Pn**	**12 52 51.6**	**+1.7**
MAT				S	**Sg**	**12 53 28.0**	**-0.9**
MJAR	**Matsushiro Arr**	**2.47**	**55**	Pn	**Pn**	**12 52 51.8**	**+2.0**
	1.8nm,0.3s,baz=243,slow=14,SNR=42						
MJAR				Pg	**Pg**	**12 52 56.0**	**-0.9**
	6.1nm,0.3s,baz=234,slow=18,SNR=64						
MJAR				Lg		12 53 27.5	
	8.5nm,0.3s,baz=231,slow=30,SNR=9.2						
GUMO	**Guam**	**23.02**	**157**	LR	LR	13 05 07.0	
	comp=Z,22nm,19.5s,baz=102,slow=34						
SONM	**Songino Array**	**25.17**	**309**	P	**P**	**12 57 39.4**	**+4.5**
	0.6nm,0.6s,mb3.3,baz=125,slow=9.3,SNR=3.9						
WRA	**Warramunga Arr**	**54.81**	**182**	P	**P**	**13 01 38.9**	**-0.8**
	0.1nm,0.5s,mb3.1,baz=359,slow=7.4,SNR=8.9						

*IDC **13** 13:04:44.0±1.9, 59°.90N×22°.22E, h0km, mb1 2.9/4, mb1mx2.8/23, mbtmp2.8/4, ML2.3/4, Error ellipse: s-maj=30.5km s-min=7.8km az=165.0*
*HEL **13** 13:04:44.8±0.4, 59°.91N×22°.32E, h0km, ML1.8, Explosion*

ISC 13 13:04:45.1±1.0, 60°.05N±0°.06×22°.30E±0°.10, h0km, n12, σ1§62/21, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAF	**Rauma**	**1.01**	**345**	PG	**Pg**	**13 05 05.1**	**+0.7**
	baz=173						
RAF				SG	**Sg**	**13 05 21.8**	**+4.3**
RAF				MSG		13 05 21.8	
	comp=Z,13nm,0.1s						
RAF				RG		13 05 26.3	
FIA0	**FINESS Array S**	**2.32**	**51**	PN	**Pn**	**13 05 25.9**	**+1.4**
	baz=234						
FIA0				SG	**Sg**	**13 05 58.5**	**-1.1**
FIA0				MSG		13 05 58.5	
	comp=Z,4.4nm,0.2s						
FIA0				RG		13 06 13.3	
FINES	**FINESS Array B**	**2.32**	**51**	Pn	**Pn**	**13 05 25.6**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=226,slow=14,SNR=29						
FINES				Sn	**Sn**	**13 05 57.8**	**+4.2**
	comp=Z,2.4nm,0.3s,baz=233,slow=22,SNR=21						
FIA1	**FINESS Array S**	**2.32**	**51**	PN	**Pn**	**13 05 25.9**	**+1.5**
FIA1				SG	**Sg**	**13 05 58.3**	**-1.3**
KEF	**Keuruu**	**2.46**	**29**	PN	**Pn**	**13 05 29.2**	**+2.8**
KEF				SG	**Sg**	**13 06 03.4**	**-0.7**
KEF				MSG		13 06 03.4	
	comp=Z,3.1nm,0.2s						
VJF	**Virojoki**	**2.66**	**77**	PN	**Pn**	**13 05 27.9**	**-1.2**
VJF				SG	**Sg**	**13 06 05.8**	**-4.7**
VJF				MSG		13 06 05.8	
	comp=Z,1.9nm,0.4s						
KAF	**Kangasniemi**	**2.84**	**42**	PN	**Pn**	**13 05 34.1**	**+2.5**
KAF				SG	**Sg**	**13 06 12.6**	**-3.7**
KAF				MSG		13 06 12.6	
	comp=Z,2.9nm,0.2s						
VAF	**Ylistaro**	**3.01**	**3**	PN	**Pn**	**13 05 36.8**	**+3.0**
	baz=179						
VAF				SG	**Sg**	**13 06 20.4**	**-1.1**
VAF				MSG		13 06 20.4	
	comp=Z,1.6nm,0.2s						
SUF	**Sumiainen**	**3.25**	**33**	PN	**Pn**	**13 05 39.1**	**+1.8**
HFS	**Hagfors**	**4.31**	**275**	Pn	**Pn**	**13 05 49.8**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=85,slow=16,SNR=10						
HFS				Pg	**Pg**	**13 05 58.1**	**-10**
	comp=Z,0.3nm,0.3s,baz=93,slow=16,SNR=8.5						
HFS				Lg		13 06 56.9	
	comp=Z,0.5nm,0.3s,baz=96,slow=29,SNR=6.9						
NOA	**NORSAR Array B**	**5.56**	**285**	Pn	**Pn**	**13 06 07.3**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=108,slow=14,SNR=3.4						
NOA				Lg		13 07 35.2	
	comp=Z,0.3nm,0.3s,baz=67,slow=14,SNR=2.6						
ARCES	**ARCESS Array B**	**9.62**	**7**	Pn	**Pn**	**13 07 03.5**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=185,slow=13,SNR=7.3						

*CSEM **13** 13:39:27.7±0.5, 37°.44N×16°.36E, h40km, ML4.1/11, Error ellipse: s-maj=10.0km s-min=4.6km az=133.0*
*ISCJB **13** 13:39:29.4±0.4, 37°.53N±0°.04×16°.42E±0°.04, h65km±9km, Error ellipse: s-maj=6.7km s-min=4.4km az=140.6*
*ROM **13** 13:39:30.1±0.1, 37°.48N×16°.42E, h39km, Ml3.1/29, Error ellipse: s-maj=1.4km s-min=1.0km az=123.0*

ISC 13 13:39:30.6±0.4, 37°.55N±0°.03×16°.38E±0°.04, h62km±10km, n85, σ0§83/113, 10C-18D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPAZ	**Palizzi**	**0.50**	**324**	⇓*i*Pg	**Pn**	**13 39 42.5**	**-0.2**
MPAZ				Sg	**Sn**	**13 39 51.2**	**-0.3**
	505nm,0.3s						
MPAZ	**Palizzi**	**0.50**	**324**	⇓*i*Pg	**Pn**	**13 39 42.5**	**-0.2**
MPAZ				Sg	**Sn**	**13 39 51.2**	**-0.3**
	505nm,0.3s						
SOI	**Samo**	**0.58**	**334**	⇓*i*Pg	**Pn**	**13 39 43.7**	**+0.1**
SOI	**Samo**	**0.58**	**334**	⇓*i*Pg	**Pn**	**13 39 43.7**	**+0.1**
MTTG	**Motta San Giov**	**0.71**	**310**	⇓*i*Pg	**Pn**	**13 39 45.2**	**+0.2**
MTTG				Sg	**Sn**	**13 39 55.0**	**-0.6**
	285nm,0.6s						
MTTG	**Motta San Giov**	**0.71**	**310**	⇓*i*Pg	**Pn**	**13 39 45.2**	**+0.2**
MTTG				Sg	**Sn**	**13 39 55.0**	**-0.6**
	285nm,0.6s						
CEL	**Celeste**	**0.81**	**331**	⇓*i*Pg	**Pn**	**13 39 46.7**	**+0.5**
CEL				Sg	**Sn**	**13 39 58.4**	**+0.7**
	252nm,0.5s						
CEL	**Celeste**	**0.81**	**331**	⇓*i*Pg	**Pn**	**13 39 46.7**	**+0.5**
CEL				Sg	**Sn**	**13 39 58.4**	**+0.7**
	252nm,0.5s						
MSCL	**Scilla**	**0.83**	**326**	⇓*i*Pg	**Pn**	**13 39 47.1**	**+0.6**
	305nm,0.1s						
MSCL	**Scilla**	**0.83**	**326**	⇓*i*Pg	**Pn**	**13 39 47.1**	**+0.6**
	305nm,0.1s						
SCLL	**Scilla**	**0.88**	**323**	⇓*i*Pg	**Pn**	**13 39 46.7**	**-0.5**
	55nm,0.1s						
SCLL	**Scilla**	**0.88**	**323**	⇓*i*Pg	**Pn**	**13 39 46.7**	**-0.5**
	55nm,0.1s						
PLAC	**Placanica**	**0.90**	**3**	Pg	**Pn**	**13 39 47.7**	**+0.3**
PLAC				Sg	**Sn**	**13 39 59.6**	**-0.2**
	237nm,0.4s						
PLAC	**Placanica**	**0.90**	**3**	Pg	**Pn**	**13 39 47.7**	**+0.3**
PLAC				Sg	**Sn**	**13 39 59.6**	**-0.2**
	237nm,0.4s						
MMME	**Mongiuffi-Meli**	**0.97**	**294**	⇓*i*Pg	**Pn**	**13 39 48.7**	**+0.4**
MMME				Sg	**Sn**	**13 40 01.9**	**+0.4**
	226nm,0.5s						
MMME	**Mongiuffi-Meli**	**0.97**	**294**	⇓*i*Pg	**Pn**	**13 39 48.7**	**+0.4**
MMME				Sg	**Sn**	**13 40 01.9**	**+0.4**
	226nm,0.5s						
MSRU	**Castanea**	**0.99**	**316**	⇓*i*Pg	**Pn**	**13 39 49.3**	**+0.7**
	151nm,0.4s						
MSRU	**Castanea**	**0.99**	**316**	⇓*i*Pg	**Pn**	**13 39 49.3**	**+0.7**
	151nm,0.4s						
HAGA	**Augusta**	**1.01**	**255**	⇑*i*Pg	**Pn**	**13 39 48.1**	**-0.7**
HAGA				Sg	**Sn**	**13 40 01.1**	**-1.3**
	751nm,0.2s						
HAGA	**Augusta**	**1.01**	**255**	⇑*i*Pg	**Pn**	**13 39 48.1**	**-0.7**
HAGA				Sg	**Sn**	**13 40 01.1**	**-1.3**
	751nm,0.2s						
HCRL	**Carlentini**	**1.11**	**256**	⇑*i*Pg	**Pn**	**13 39 49.7**	**-0.4**
HCRL				Sg	**Sn**	**13 40 03.9**	**-0.7**
	1µm,0.2s						
HCRL	**Carlentini**	**1.11**	**256**	⇑*i*Pg	**Pn**	**13 39 49.7**	**-0.4**
HCRL				Sg	**Sn**	**13 40 03.9**	**-0.7**
	1µm,0.2s						
SSY	**Sortino**	**1.12**	**250**	⇑*i*Pg	**Pn**	**13 39 49.5**	**-0.7**
SSY				Sg	**Sn**	**13 40 03.6**	**-1.2**
	1µm,0.1s						
SSY	**Sortino**	**1.12**	**250**	⇑*i*Pg	**Pn**	**13 39 49.5**	**-0.7**
SSY				Sg	**Sn**	**13 40 03.6**	**-1.2**
	1µm,0.1s						
JOPP	**Joppolo**	**1.12**	**340**	Pg	**Pn**	**13 39 50.9**	**+0.6**
JOPP				Sg	**Sn**	**13 40 05.9**	**+0.9**
	131nm,0.3s						
JOPP	**Joppolo**	**1.12**	**340**	Pg	**Pn**	**13 39 50.9**	**+0.6**
JOPP				Sg	**Sn**	**13 40 05.9**	**+0.9**
	131nm,0.3s						
MILZ	**Milazzo**	**1.16**	**309**	Pg	**Pn**	**13 39 51.2**	**+0.4**
MILZ				Sg	**Sn**	**13 40 06.9**	**+1.1**
	316nm,0.4s						
MILZ	**Milazzo**	**1.16**	**309**	Pg	**Pn**	**13 39 51.2**	**+0.4**
MILZ				Sg	**Sn**	**13 40 06.9**	**+1.1**
	316nm,0.4s						
ECNV	**Catenanuova**	**1.33**	**272**	Pg	**Pn**	**13 39 54.1**	**+1.1**
	644nm,0.8s						
ECNV	**Catenanuova**	**1.33**	**272**	Pg	**Pn**	**13 39 54.1**	**+1.1**
	644nm,0.8s						
HVZN	**Vizzini**	**1.38**	**255**	Pg	**Pn**	**13 39 53.5**	**-0.2**
HVZN				Sg	**Sn**	**13 40 11.1**	**+0.1**
	528nm,0.5s						
HVZN	**Vizzini**	**1.38**	**255**	Pg	**Pn**	**13 39 53.5**	**-0.2**
HVZN				Sg	**Sn**	**13 40 11.1**	**+0.1**
	528nm,0.5s						
VPL	**Vulcano Piano**	**1.38**	**307**	⇓*i*Pg	**Pn**	**13 39 54.1**	**+0.4**
	299nm,0.3s						
VPL	**Vulcano Piano**	**1.38**	**307**	⇓*i*Pg	**Pn**	**13 39 54.1**	**+0.4**
	299nm,0.3s						
HMDC	**Modica**	**1.41**	**246**	Pg	**Pn**	**13 39 53.8**	**-0.3**
HMDC				Sg	**Sn**	**13 40 11.2**	**-0.5**
HMDC	**Modica**	**1.41**	**246**	Pg	**Pn**	**13 39 53.8**	**-0.3**
HMDC				Sg	**Sn**	**13 40 11.2**	**-0.5**
LLI	**Lipari**	**1.44**	**309**	Pg	**Pn**	**13 39 55.2**	**+0.7**
	380nm,0.6s						
LLI	**Lipari**	**1.44**	**309**	Pg	**Pn**	**13 39 55.2**	**+0.7**
	380nm,0.6s						
GALF	**Gagliano Caste**	**1.45**	**277**	Pg	**Pn**	**13 39 56.3**	**+1.7**
GALF	**Gagliano Caste**	**1.45**	**277**	Pg	**Pn**	**13 39 56.3**	**+1.7**
SERS	**Sersale**	**1.50**	**9**	⇑*i*Pg	**Pn**	**13 39 55.9**	**+0.6**
	77nm,0.4s						
SERS	**Sersale**	**1.50**	**9**	⇑*i*Pg	**Pn**	**13 39 55.9**	**+0.6**
	77nm,0.4s						
RAFF	**Raffo Rosso**	**1.64**	**259**	⇑*i*Pg	**Pn**	**13 39 57.6**	**+0.4**
	297nm,0.4s						
RAFF	**Raffo Rosso**	**1.64**	**259**	⇑*i*Pg	**Pn**	**13 39 57.6**	**+0.4**
	297nm,0.4s						
TIP	**Timpagrande**	**1.65**	**10**	Pg	**Pn**	**13 39 57.6**	**+0.2**
	71nm,0.6s						
TIP	**Timpagrande**	**1.65**	**10**	Pg	**Pn**	**13 39 57.6**	**+0.2**
	71nm,0.6s						
CARO	**Carolei**	**1.71**	**356**	Pg	**Pn**	**13 39 58.7**	**+0.6**
	199nm,0.4s						
CARO	**Carolei**	**1.71**	**356**	Pg	**Pn**	**13 39 58.7**	**+0.6**
	199nm,0.4s						
IFIL	**Filicudi I Eol**	**1.75**	**306**	Pg	**Pn**	**13 39 58.8**	**+0.1**
	125nm,0.5s						
IFIL	**Filicudi I Eol**	**1.75**	**306**	Pg	**Pn**	**13 39 58.8**	**+0.1**
	125nm,0.5s						
LADO	**San Nicola del**	**1.79**	**15**	Pg	**Pn**	**13 39 59.6**	**+0.3**
	71nm,0.3s						
LADO	**San Nicola del**	**1.79**	**15**	Pg	**Pn**	**13 39 59.6**	**+0.3**
	71nm,0.3s						
ACL	**Alicudi**	**1.88**	**302**	Pg	**Pn**	**13 40 00.6**	**+0.2**
	69nm,0.3s						
IACL	**Alicudi**	**1.88**	**302**	Pg	**Pn**	**13 40 00.6**	**+0.2**
	69nm,0.3s						
CUC	**Castrocucco**	**2.48**	**350**	Pg	**Pn**	**13 40 08.7**	**+0.1**
	45nm,0.3s						
BULG	**Bulgheria - Ca**	**2.64**	**343**	Pg	**Pn**	**13 40 11.3**	**+0.5**
	59nm,0.3s						
BULG	**Bulgheria - Ca**	**2.64**	**343**	Pg	**Pn**	**13 40 11.3**	**+0.5**
	59nm,0.3s						
MGR	**Morigerati**	**2.66**	**346**	Pg	**Pn**	**13 40 11.6**	**+0.5**
	49nm,0.4s						
MGR	**Morigerati**	**2.66**	**346**	Pg	**Pn**	**13 40 11.6**	**+0.5**
	49nm,0.4s						
SCTE	**Santa Cesarea**	**3.00**	**32**	Pg	**Pn**	**13 40 14.1**	**-1.6**
	47nm,0.2s						
SCTE	**Santa Cesarea**	**3.00**	**32**	Pg	**Pn**	**13 40 14.1**	**-1.6**
	47nm,0.2s						
CDRU	**Civita di Ruta**	**3.05**	**344**	Pg	**Pn**	**13 40 17.1**	**+0.7**
	18nm,0.2s						
CDRU	**Civita di Ruta**	**3.05**	**344**	Pg	**Pn**	**13 40 17.1**	**+0.7**
	18nm,0.2s						
TAR1	**Taranto**	**3.05**	**13**	*e*Pn	**Pn**	**13 40 14.7**	**-1.7**
SG1	**Sgolgore (BA)**	**3.29**	**4**	*e*Pn	**Pn**	**13 40 19.2**	**-0.5**
SG1				*e*Sn	**Sn**	**13 40 53.2**	**-4.4**
PE1	**Pezze di Greco**	**3.35**	**14**	*e*Pn	**Pn**	**13 40 19.4**	**-1.0**
PE1				*e*Sn	**Sn**	**13 40 55.3**	**-3.7**
VLS	**Valsamata**	**3.39**	**78**	*e*P	**Pn**	**13 40 19.9**	**-1.1**
KEK	**Kerkira**	**3.44**	**50**	*e*P	**Pn**	**13 40 19.9**	**-1.8**
KEK	**Kerkira**	**3.44**	**50**	Pg	**Pn**	**13 40 19.9**	**-1.8**
	22µm,19.0s						
KEK	**Kerkira**	**3.44**	**50**	Pg	**Pn**	**13 40 19.9**	**-1.8**
	22µm,19.0s						
CDT	**Castel del Mon**	**3.53**	**359**	*e*Pn	**Pn**	**13 40 22.6**	**-0.3**
CDT				*e*Sn	**Sn**	**13 41 00.8**	**-2.5**
BAI	**Bari**	**3.57**	**6**	*e*Pn	**Pn**	**13 40 22.1**	**-1.4**
JAN	**Janina**	**4.08**	**58**	*e*P	**Pn**	**13 40 29.7**	**-0.8**
PYL	**PYLOS**	**4.33**	**97**	*e*P	**Pn**	**13 40 33.6**	**-0.2**
ITM	**Ithomi**	**4.43**	**93**	*e*P	**Pn**	**13 40 35.6**	**+0.3**
EFP	**Efpalio**	**4.45**	**77**	*e*P	**Pn**	**13 40 36.0**	**+0.5**
EVR	**Evrytania**	**4.48**	**71**	*e*P	**Pn**	**13 40 37.3**	**+1.3**
GUR	**Goura**	**4.74**	**84**	*e*P	**Pn**	**13 40 40.6**	**+1.1**
THL	**Klokotos Trika**	**4.85**	**64**	*e*P	**Pn**	**13 40 40.9**	**-0.1**
AGG	**Agios Georgios**	**4.90**	**71**	*e*P	**Pn**	**13 40 42.5**	**+0.8**
VLI	**Veliai**	**5.30**	**97**	*e*P	**Pn**	**13 40 48.2**	**+1.0**
STON	**Ston**	**5.41**	**10**	*e*Pn	**Pn**	**13 40 45.3**	**-3.3**
STON				Sn	**Sn**	**13 41 41.4**	**-8.1**
STON	**Ston**	**5.41**	**10**	*e*Pn	**Pn**	**13 40 45.3**	**-3.3**
KYTH	**Kithira**	**5.48**	**101**	*e*P	**Pn**	**13 40 50.3**	**+0.7**

*ATH **13** 13:45:03.5, 38°.75N×23°.79E, h28km±1km, MD2.9/8, ML2.4*
*CSEM **13** 13:45:03.7±0.2, 38°.74N×23°.75E, h19km, ML1.7/6, Error ellipse: s-maj=6.0km s-min=4.3km az=71.0*
*ISCJB **13** 13:45:04.0±0.5, 38°.75N±0°.03×23°.76E±0°.05, h28km±5km, Error ellipse: s-maj=6.6km s-min=4.7km az=169.7*
*THE **13** 13:45:04.6, 38°.76N×23°.70E, h1km±3km, ML1.7/6, Error ellipse: s-maj=3.2km s-min=0.8km az=100.0*

ISC 13 13:45:04.0±0.6, 38°.75N±0°.03×23°.75E±0°.05, h26km±5km, n30, σ0§95/48, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.43**	**13**	P	**Pb**	**13 45 12.4**	**-0.8**
AOS				S	**Sb**	**13 45 19.2**	**-0.2**
AOS	**Alonnisos**	**0.43**	**13**	P	**Pb**	**13 45 12.4**	**-0.8**
AOS				S	**Sb**	**13 45 19.2**	**-0.2**
ATAL	**Atalanti**	**0.57**	**265**	P	**Pb**	**13 45 14.4**	**-1.1**
ATAL				S	**Sb**	**13 45 23.1**	**-0.1**
ATAL	**Atalanti**	**0.57**	**265**	P	**Pb**	**13 45 14.4**	**-1.1**
ATAL				S	**Sb**	**13 45 23.1**	**-0.1**
LKR	**Lokris**	**0.60**	**261**	*e*PN	**Pn**	**13 45 12.6**	**-0.6**
LKR	**Lokris**	**0.60**	**261**	P	**Pb**	**13 45 14.8**	**-1.0**
LKR				S	**Sb**	**13 45 23.4**	**-0.5**
LKR	**Lokris**	**0.60**	**261**	P	**Pb**	**13 45 14.8**	**-1.0**
LKR	**Lokris**	**0.60**	**261**	*e*Pn	**Pn**	**13 45 16.3**	**-0.5**
LKR				S	**Sb**	**13 45 23.4**	**-0.5**
NEO	**Neokhori**	**0.69**	**324**	*e*PN	**Pn**	**13 45 17.8**	**-0.4**
NEO				*e*SN	**Sn**	**13 45 28.0**	**-0.1**
NEO	**Neokhori**	**0.69**	**324**	*e*Pn	**Pn**	**13 45 17.8**	**-0.4**
NEO				*e*Sn	**Sn**	**13 45 28.0**	**-0.1**
PTL	**Penteli**	**0.70**	**173**	*e*PN	**Pn**	**13 45 17.0**	**-1.3**
PTL				*e*SN	**Sn**	**13 45 26.2**	**-2.1**
PTL	**Penteli**	**0.70**	**173**	*e*Pn	**Pn**	**13 45 17.0**	**-1.3**
PTL				*e*Sn	**Sn**	**13 45 26.2**	**-2.1**
XOR	**Xorichti**	**0.76**	**325**	P	**Pb**	**13 45 19.6**	**+1.1**
XOR				S	**

TSI				S	Sn	13 57 15.2	+2.0
MNSI	**Mandailing Nat**	**3.77**	**124**	P	Pn	13 57 09.0	+0.3
MNSI				S	Sn	13 57 53.9	+2.0
KULM	**Kulim**	**4.80**	**61**	P	Pn	13 57 22.8	-0.1

NIED ***13*** *13:57:00,47.10N×153.00E,h32km,Mw3.7 Best double couple: M₀3.90000×10¹⁴ NP1:φ₀=301.00000°,δ84.00000°, λ22.00000°. NP2:φ₀=209.00000°,δ68.00000°,λ174.00000°.*
ISCJB ***13*** *13:57:16.9±2.8,46.8N±0.3×153.3E±0.3,h54km±29km, mb3.5/5, Error ellipse: s-maj=59.1km s-min=10.5km az=141.6*
MOS ***13*** *13:57:17.5±0.7,46.88N×153.18E,h60km,mb4.1/1, Error ellipse: s-maj=45.3km s-min=18.4km az=50.4*
IDC ***13*** *13:57:20.3±7.8,46.95N×153.13E,h70km±80km, mb3.2/6, mb1 3.6/7,mb1mx3.3/23,mbtmp3.3/7,ML3.4/1, Error ellipse: s-maj=96.8km s-min=19.5km az=131.0*

ISC 13 13:57:18.8±2.7, 46.8N±0.3×153.3E±0.4, h52km±29km, n13, σ0⁰54/12, mb3.5/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**4.12**	**249**	*e*PN	**Pn**	**13 58 18.3**	**-0.8**
KUR				S	**Sn**	**13 59 06.5**	**+0.5**
KUR				pmax	pmax		
	comp=Z,100nm,0.8s						
KUR				smax			
	comp=N,170nm,0.7s						
KUR				smax			
	comp=E,160nm,0.7s						
SKR	**Severo-Kuril's**	**4.28**	**25**	*e*PN	**Pn**	**13 58 21.5**	**+0.2**
SKR				pmax	pmax		
	comp=N,30nm,0.4s						
SKR				pmax	pmax		
	comp=Z,30nm,0.4s						
ASAJ	**Asahikawa**	**8.01**	**254**	P	**Pn**	**13 59 12.8**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=84,slow=14,SNR=7.9						
ASAJ	**Asahikawa**	**8.01**	**254**	PN	**Pn**	**13 59 12.8**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS	**Korea Array**	**20.96**	**253**	P	**P**	**14 01 56.9**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=56,slow=12,SNR=5.0						
ILAR	**Eielson Array**	**36.40**	**39**	P	**P**	**14 04 17.0**	**-0.6**
	comp=Z,0.5nm,0.8s,mb3.5,baz=281,slow=9.1,SNR=6.3						
ZALV	**Zalesovo Beam**	**42.68**	**306**	PcP	PcP	14 06 58.3	-2.6
	comp=Z,0.4nm,0.5s,baz=64,slow=3.4,SNR=3.8						
MKAR	**Makanchi Array**	**47.03**	**297**	PcP	PcP	14 07 13.3	-2.7
	comp=Z,0.4nm,0.5s,baz=57,slow=3.0,SNR=6.0						
NVAR	**Mina Array Bea**	**62.27**	**62**	P	**P**	**14 07 35.7**	**+0.5**
	comp=Z,0.2nm,0.5s,mb3.5,baz=309,slow=5.7,SNR=2.4						
WRA	**Warramunga Arr**	**68.63**	**199**	P	**P**	**14 08 15.5**	**-0.7**
	comp=Z,0.3nm,0.8s,mb3.3,baz=15,slow=6.5,SNR=4.6						
ASAR	**Alice Springs**	**72.33**	**199**	P	**P**	**14 08 39.5**	**+0.8**
	comp=Z,0.3nm,0.7s,mb3.3,baz=13,slow=6.1,SNR=8.1						
TXAR	**Lajitas Array**	**77.33**	**61**	P	**P**	**14 09 08.0**	**+0.2**
	comp=Z,0.6nm,0.5s,mb3.8,baz=300,slow=4.2,SNR=13						
TXAR	**Lajitas Array**	**77.33**	**61**	P	**P**	**14 09 08.0**	**+0.2**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

ISCJB ***13*** *13:57:48.3±0.7,41.71N±0.05×20.22E±0.04,h10km, Error ellipse: s-maj=7.1km s-min=3.2km az=24.5*
PDG ***13*** *13:57:48.7±0.2,41.78N×20.21E,h6km,MD2.7/1,ML2.8/9, Error ellipse: s-maj=0.8km s-min=1.0km az=0.0*
NEIC ***13*** *13:57:48.7,41.78N×20.21E,h6km,ML2.8(PDG),After PDG.*
SKO ***13*** *13:57:50.4,41.71N×20.25E,h12km,M2.4,ML2.8*

ISC 13 13:57:48.6±0.8, 41.70N±0.05×20.21E±0.04, h2km±6km, n12, σ1⁰21/24, 6C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULC	**Ulcinj**	**0.77**	**290**	⇓*i*Pg	**Pg**	**13 58 02.4**	**-0.9**
ULC				*e*Sg	**Sg**	**13 58 14.1**	**+0.9**
KRUS	**Krusevo**	**0.85**	**113**	*e*Pg	**Pg**	**13 58 04.9**	**0.0**
KRUS				*e*Sg	**Sg**	**13 58 17.3**	**+1.5**
KRUS				*e*Lg		13 58 18.8	
	comp=N,96nm,0.3s						
KRUS				*e*Lg		13 58 19.0	
	comp=E,74nm,0.2s						
PVY	**Plav**	**0.91**	**349**	⇓*i*Pg	**Pg**	**13 58 04.1**	**-2.0**
PVY				*e*Sg	**Sg**	**13 58 17.2**	**-0.7**
SKO	**Skopje**	**0.96**	**73**	*e*Pg	**Pg**	**13 58 07.1**	**+0.2**
SKO				*e*Sg	**Sg**	**13 58 20.1**	**+0.7**
SKO				*e*Lg		13 58 20.8	
	comp=E,140nm,0.3s						
SKO				*e*Lg		13 58 21.6	
	comp=N,225nm,0.4s						
TTG	**Podgorica**	**1.01**	**316**	⇑*i*Pg	**Pg**	**13 58 05.8**	**-2.3**
TTG				*e*Sg	**Sg**	**13 58 21.6**	**+0.3**
BUM	**Brajici-Budva**	**1.15**	**302**	⇑*i*Pg	**Pg**	**13 58 08.7**	**-1.9**
BUM				*e*Sg	**Sg**	**13 58 27.1**	**+1.6**
IVA	**Berane**	**1.19**	**349**	⇑*i*Pg	**Pn**	**13 58 09.3**	**-3.1**
IVA				*e*Sg	**Sg**	**13 58 26.8**	**-0.2**
NKY	**Niksic**	**1.43**	**321**	⇑*i*Pg	**Pn**	**13 58 14.2**	**-1.4**
NKY				*e*Sg	**Sg**	**13 58 36.1**	**+1.5**
HCY	**Herceg Novi**	**1.48**	**301**	⇓*i*Pg	**Pn**	**13 58 15.2**	**-1.1**
HCY				*e*Sg	**Sg**	**13 58 38.0**	**+1.9**
BRY	**Bratogost**	**1.72**	**315**	⇓*i*Pn	**Pn**	**13 58 19.5**	**-0.2**
BRY				*e*Sn	**Sg**	**13 58 43.9**	**-0.1**
PLE	**Pljevlja**	**1.74**	**340**	⇑*i*Pn	**Pn**	**13 58 19.9**	**0.0**
PLE				*e*Sn	**Sn**	**13 58 43.5**	**+0.9**
UPM	**Unac-Piva**	**1.78**	**328**	⇑*i*Pn	**Pn**	**13 58 21.0**	**+0.5**
UPM				*e*Sn	**Sn**	**13 58 45.0**	**+1.3**

ISCJB ***13*** *14:03:54.6±0.4,48.15N±0.02×13.22E±0.05,h10km, Error ellipse: s-maj=5.0km s-min=2.8km az=15.4*
VIE ***13*** *14:03:54.9±0.8,48.15N×13.29E,h10km,mb2.0/6,ML2.8/9, Error ellipse: s-maj=7.9km s-min=6.0km az=114.0 11 km ENE of Mattighofen*
PRU ***13*** *14:03:54.7,48.09N×13.64E,h0km*
BGR ***13*** *14:03:55.4±0.3,48.12N×13.14E,h10km,ML2.3/4, Error ellipse: s-maj=4.4km s-min=3.3km az=99.0*
CSEM ***13*** *14:03:56.0±0.2,48.18N×13.35E,h32km±3km,ML2.8/9, Error ellipse: s-maj=5.2km s-min=3.2km az=103.0*

ISC 13 14:03:55.4±0.4, 48.14N±0.02×13.19E±0.05, h10km, n34, σ0⁰90/59, 14C-3D, Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RJOB	**Jochberg**	**0.48**	**213**	⇑*i*Pg	**Pg**	**14 04 08.6**	**+3.9**
RJOB	**Jochberg**	**0.48**	**213**	Pg	**Pg**	**14 04 08.6**	**+3.9**
BGLD	**Berchtesgaden**	**0.50**	**194**	⇑*i*Pg	**Pg**	**14 04 08.2**	**+3.1**
BGLD				⇑*i*Sg	**Sg**	**14 04 16.8**	**+5.1**
BGLD	**Berchtesgaden**	**0.50**	**194**	Pg	**Pg**	**14 04 08.2**	**+3.1**
BGLD				Sg	**Sg**	**14 04 16.8**	**+5.1**
RWMO	**Wildenmoos**	**0.50**	**218**	⇑*i*Pg	**Pg**	**14 04 09.1**	**+4.0**
RWMO	**Wildenmoos**	**0.50**	**218**	Pg	**Pg**	**14 04 09.1**	**+4.0**
MOA	**Molln**	**0.78**	**111**	*e*Pg	**Pg**	**14 04 10.7**	**+0.3**
MOA				*e*Sg	**Sg**	**14 04 20.1**	**-0.5**
MOA	**Molln**	**0.78**	**111**	⇓*i*Pg	**Pg**	**14 04 10.6**	**+0.3**
	4.8nm,0.1s						
MOA				⇑*i*Sg	**Sg**	**14 04 20.0**	**-0.5**
	50nm,0.1s						
MOA	**Molln**	**0.78**	**111**	Pg	**Pg**	**14 04 10.6**	**+0.2**
	4.8nm,0.1s						
MOA				Sg	**Sg**	**14 04 20.1**	**-0.4**
GEC2	**GERESS Array S**	**0.78**	**26**	*e*Pg	**Pg**	**14 04 11.6**	**+1.1**
GEC2				*e*Sg	**Sg**	**14 04 21.9**	**+1.1**
GEC2	**GERESS Array S**	**0.78**	**26**	Pg	**Pg**	**14 04 11.6**	**+1.1**
GEC2				Sg	**Sg**	**14 04 21.9**	**+1.2**
KHC	**Kasperske Hory**	**1.02**	**14**	*e*PG	**Pg**	**14 04 15.1**	**0.0**
KHC				*ex*	x	14 04 26.3	
KHC				*e*SG	**Sg**	**14 04 28.0**	**-0.4**
	comp=Z,25nm,0.2s						
KHC	**Kasperske Hory**	**1.02**	**14**	Pg	**Pg**	**14 04 15.1**	**0.0**
KHC				Sg	**Sg**	**14 04 28.0**	**-0.4**
	comp=Z,25nm,0.2s						
WET	**Wettzell**	**1.03**	**349**	*e*Pg	**Pg**	**14 04 15.6**	**+0.5**
WET				*e*Sg	**Sg**	**14 04 27.9**	**-0.5**
WET	**Wettzell**	**1.03**	**349**	Pg	**Pg**	**14 04 15.6**	**+0.5**
WET				Sg	**Sg**	**14 04 27.9**	**-0.5**
KBA	**Koelnbreinsper**	**1.07**	**174**	*e*Pg	**Pg**	**14 04 15.7**	**-0.1**
KBA	**Koelnbreinsper**	**1.07**	**174**	⇑*i*Pg	**Pg**	**14 04 15.8**	**-0.1**
	comp=Z,20nm,0.3s						
KBA				⇓*i*Sg	**Sg**	**14 04 30.0**	**+0.3**
	comp=Z,2.6nm,0.1s						
KBA	**Koelnbreinsper**	**1.07**	**174**	Pg	**Pg**	**14 04 15.8**	**0.0**
	comp=Z,20nm,0.3s						
KBA				Sg	**Sg**	**14 04 30.0**	**+0.3**
	comp=Z,2.6nm,0.1s						
WATA	**Walderalm**	**1.35**	**234**	⇑*i*Pn	**Pn**	**14 04 20.4**	**+0.1**
WATA				⇓*i*Sn	**Sn**	**14 04 38.7**	**+0.5**
WATA	**Walderalm**	**1.35**	**234**	Pn	**Pn**	**14 04 20.4**	**+0.1**
WATA				Sn	**Sn**	**14 04 38.7**	**+0.5**
WTTA	**Wattenberg**	**1.37**	**231**	*e*Pg	**Pn**	**14 04 20.9**	**+0.5**
WTTA				*e*Sg	**Sn**	**14 04 36.8**	**-1.8**
ABTA	**Abfaltersbach**	**1.47**	**198**	⇑*i*Pn	**Pn**	**14 04 22.1**	**+0.3**
ABTA				⇑*i*Sn	**Sn**	**14 04 40.8**	**-0.2**
ABTA	**Abfaltersbach**	**1.47**	**198**	Pn	**Pn**	**14 04 22.1**	**+0.3**
ABTA				Sn	**Sn**	**14 04 40.8**	**-0.2**
SCE	**Schlegeis**	**1.49**	**223**	⇑*i*Pn	**Pn**	**14 04 22.5**	**+0.4**
SCE				⇑*i*Sn	**Sn**	**14 04 41.1**	**-0.5**
SCE	**Schlegeis**	**1.49**	**223**	Pn	**Pn**	**14 04 22.5**	**+0.4**
SCE				Sn	**Sn**	**14 04 41.1**	**-0.5**
MYKA	**Terra Mystica**	**1.54**	**168**	⇑*i*Pn	**Pn**	**14 04 22.5**	**-0.3**
MYKA	**Terra Mystica**	**1.54**	**168**	Pn	**Pn**	**14 04 22.5**	**-0.4**
SOKA	**Soboth**	**1.93**	**139**	⇑*i*Pn	**Pn**	**14 04 26.5**	**-1.6**
SOKA				⇑*i*Sn	**Sn**	**14 04 47.5**	**-4.8**
SOKA	**Soboth**	**1.93**	**139**	Pn	**Pn**	**14 04 26.5**	**-1.6**
SOKA				Sn	**Sn**	**14 04 47.5**	**-4.9**
PRU	**Pruhonice**	**2.05**	**25**	*e*SN	**Sn**	**14 04 51.8**	**-3.7**
PRU				*e*SG	**Sg**	**14 05 01.1**	**-0.2**
	comp=Z,7.5nm,0.3s						
VRAC	**Vranov**	**2.54**	**61**	*e*Sn	**Sn**	**14 05 01.3**	**-6.2**
MOX	**Moxa**	**2.71**	**338**	*e*Pn	**Pn**	**14 04 38.3**	**-0.6**
MOX				*e*Sn	**Sn**	**14 05 07.8**	**-3.9**
MOX	**Moxa**	**2.71**	**338**	Pn	**Pn**	**14 04 38.3**	**-0.6**
MOX				Sn	**Sn**	**14 05 07.8**	**-3.9**
MORC	**Moravsky Berou**	**3.30**	**59**	*e*Sn	**Sn**	**14 05 19.2**	**-7.2**

CASC 13 14:05:07.0±1.3, 11.83N×88.31W, h23km±22km, MD3.7, ML3.0, 1C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEON	**Leon**	**1.51**	**67**	⇑*e*P	Pn	14 05 32.0	-0.7
LEON				*e*S	Sn	14 05 52.0	+0.5
CNCH	**Conchagua**	**1.52**	**18**	*e*P	Pn	14 05 32.6	-0.2
BLLM	**Bellamira**	**1.61**	**3**	*e*P	Pn	14 05 34.0	0.0
BLLM				*e*S	Sn	14 05 55.5	+1.4
TELN	**Telica**	**1.64**	**62**	*e*P	Pn	14 05 34.3	-0.1
TELN				*e*S	Sn	14 05 56.2	+1.3
CNGN	**Cerro Negro**	**1.71**	**67**	*e*P	Pn	14 05 35.8	+0.3
CNGN				*e*S	Sn	14 05 57.2	+0.5
CNGN				AML	AML	14 06 06.7	
	comp=E,174nm,0.3s						
COPN	**Copaltepe**	**1.72**	**78**	*e*P	Pn	14 05 35.3	-0.2
COPN				*e*S	Sn	14 05 58.7	+1.9
MOMN	**Momotombo**	**1.83**	**71**	*e*P	Pn	14 05 37.0	0.0
CSAN		**1.88**	**79**	*e*P	Pn	14 05 37.4	-0.4
CAHU	**Cacacuatique**	**1.94**	**3**	*e*P	Pn	14 05 39.4	+0.9
HUEN		**2.15**	**76**	*e*P	Pn	14 05 41.1	-0.4
SBLS	**San Blas**	**2.38**	**328**	*e*P	Pn	14 05 45.2	+0.6
SSN	**San Juan del S**	**2.46**	**102**	*e*P	Pn	14 05 45.6	-0.2
RBDL	**Robledal**	**2.64**	**330**	*e*P	Pn	14 05 48.8	+0.6
CONN	**Concepcion**	**2.64**	**95**	*e*P	Pn	14 05 48.2	0.0

CSEM ***13*** *14:12:50.2±0.2,30.89N×34.93E,h2km, ML3.5, Error ellipse: s-maj=4.8km s-min=3.1km az=109.0*

HLW 13 14:12:47.6, 31.22N×35.28E, h18km±14km, Ml3.0, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMAG	**Maghara**	**1.87**	**253**	P	Pn	14 13 17.8	-0.9
	baz=253						
AMAG	**Maghara**	**1.87**	**253**	P	Pn	14 13 17.8	-0.9
HBST	**Basata**	**2.05**	**194**	P	Pn	14 13 20.3	-0.9
	baz=194						
HBST				AMP		14 13 00.0	
	comp=E,130μm,0.3s,logA/T=5.6,baz=194						
HBST				S	Sn	14 13 45.0	-1.3
	baz=194						
HBST	**Basata**	**2.05**	**194**	P	Pn	14 13 20.3	-0.9
HBST				S	Sn	14 13 45.0	-1.3
HDHB	**Dhahab**	**2.55**	**193**	P	Pn	14 13 27.5	-0.6
	baz=194						
HDHB	**Dhahab**	**2.55**	**193**	P	Pn	14 13 27.5	-0.6
HKAT	**Jabal Katrina**	**2.91**	**203**	P	Pn	14 13 32.1	-0.9
	baz=203						
HKAT	**Jabal Katrina**	**2.91**	**203**	P	Pn	14 13 32.1	-0.9
TR2		**3.13**	**206**	P	Pn	14 13 35.2	-0.8
	baz=207						
TR2		**3.13**	**206**	P	Pn	14 13 35.2	-0.9
TR1		**3.40**	**200**	P	Pn	14 13 38.6	-1.2
	baz=201						
TR1		**3.40**	**200**	P	Pn	14 13 38.6	-1.2

ISCJB ***13*** *14:36:34.7±0.4,39.06N±0.02×27.35E±0.03,h4km±5km, Error ellipse: s-maj=4.2km s-min=3.5km az=6.8*
CSEM ***13*** *14:36:34.9±0.1,39.04N×27.36E,h10km,MD2.9, Error ellipse: s-maj=2.4km s-min=1.9km az=83.0*
ISK ***13*** *14:36:34.2,39.04N×27.38E,h10km,MD2.9*
DDA ***13*** *14:36:35.1,39.07N×27.34E,h7km±2km,Md3.0*

ISC 13 14:36:35.3±0.4, 39.05N±0.02×27.36E±0.03, h12km±4km, n38, σ0⁰66/57, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKS	**Akhisar**	**0.39**	**116**	*e*PG	**Pg**	**14 36 42.2**	**-0.9**
AKS				*e*SG	**Sg**	**14 36 47.6**	**-0.7**
AKS	**Akhisar**	**0.39**	**116**	*e*Pg	**Pg**	**14 36 42.2**	**-0.9**
AKS				*e*Sg	**Sg**	**14 36 47.6**	**-0.8**
AKHS	**Akhisar**	**0.39**	**116**	*e*P	**Pg**	**14 36 43.3**	**+0.1**
AKHS				*e*S	**Sg**	**14 36 49.5**	**+1.1**
AKHS	**Akhisar**	**0.39**	**116**	*e*P	**Pg**	**14 36 43.3**	**+0.2**
AKHS				*e*S	**Sg**	**14 36 49.5**	**+1.1**
AYVA	**Ayvalik**	**0.58**	**296**	*e*P	**Pg**	**14 36 46.2**	**-0.5**
AYVA				*e*S	**Sg**	**14 36 54.2**	**-0.1**
AYVA	**Ayvalik**	**0.58**	**296**	*e*P	**Pg**	**14 36 46.2**	**-0.5**
AYVA				*e*S	**Sg**	**14 36 54.2**	**-0.2**
IZM	**Izmir**	**0.66**	**187**	*e*PG	**Pg**	**14 36 47.3**	**-0.8**
IZM				*e*SG	**Sg**	**14 36 56.8**	**0.0**
IZM	**Izmir**	**0.66**	**187**	*e*Pg	**Pg**	**14 36 47.3**	**-0.8**
IZM				*e*Sg	**Sg**	**14 36 56.8**	**0.0**
BALB	**Balikesir**	**0.71**	**34**	*e*PG	**Pg**	**14 36 48.4**	**-0.7**
BALB				*e*SG	**Sg**	**14 36 58.0**	**+0.2**
BALB	**Balikesir**	**0.71**	**34**	*e*Pg	**Pg**	**14 36 48.4**	**-0.7**
BALB				*e*Sg	**Sg**	**14 36 58.7**	**+0.3**
BLCB	**Balcova**	**0.71**	**201**	*e*PG	**Pg**	**14 36 48.4**	**-0.7**
BLCB				*e*SG	**Sg**	**14 36 58.6**	**+0.1**
BLCB	**Balcova**	**0.71**	**201**	*e*Pg	**Pg**	**14 36 48.4**	**-0.7**
BLCB				*e*Sg	**Sg**	**14 36 58.6**	**+0.1**
BALY	**Balya**	**0.71**	**16**	⇑*i*P	**Pg**	**14 36 48.6**	**-0.6**
BALY				*i* S	**Sg**	**14 36 59.0**	**+0.4**
BALY	**Balya**	**0.71**	**16**	*i* P	**Pg**	**14 36 48.6**	**-0.6**
BALY				*i* S	**Sg**	**14 36 59.0**	**+0.4**
URLA	**Izmir**	**0.92**	**221**	*e*P	**Pg**	**14 36 53.3**	**+0.3**
URLA				*e*S	**Sg**	**14 37 06.9**	**+2.0**
URLA	**Izmir**	**0.92**	**221**	*e*P	**Pg**	**14 36 53.3**	**+0.3**
GONE	**Gonen-Balikesi**	**1.02**	**14**	*e*PG	**Pg**	**14 36 55.1**	**0.0**
GONE				*e*SG	**Sg**	**14 37 09.1**	**+0.7**
GONE	**Gonen-Balikesi**	**1.02**	**14**	*e*Pg	**Pg**	**14 36 55.1**	**0.0**
GONE				*e*Sg	**Sg**	**14 37 09.1**	**+0.7**
DEMI	**Demirci**	**1.05**	**90**	*e*P	**Pb**	**14 36 56.3**	**+0.8**
DEMI				*e*S	**Sb**	**14 37 09.8**	**+0.6**
DEMI	**Demirci**	**1.05**	**90**	*e*P	**Pb**	**14 36 56.3**	**+0.8**
DEMI				*e*S	**Sb**	**14 37 09.9**	**+0.7**
EZN	**Ezine**	**1.11**	**314**	*e*PN	**Pn**	**14 36 56.1**	**-0.6**
EZN	**Ezine**	**1.11**	**314**	*e*Pn	**Pn**	**14 36 56.1**	**-0.7**
KULA	**Kula-Manisa**	**1.15**	**118**	*e*PN	**Pn**	**14 36 56.2**	**-1.0**
KULA	**Kula-Manisa**	**1.15**	**118**	*e*Pn	**Pn**	**14 36 56.2**	**-1.0**
LPK	**Lapseki**	**1.40**	**341**	*e*PN	**Pn**	**14 37 00.3**	**-0.4**
LPK	**Lapseki**	**1.40**	**341**	*e*Pn	**Pn**	**14 37 00.3**	**-0.4**
KCTX	**Karacabey (Bur**	**1.43**	**32**	*e*PN	**Pn**	**14 37 00.7**	**-0.4**
KCTX	**Karacabey (Bur**	**1.43**	**32**	*e*Pn	**Pn**	**14 37 00.7**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.51**	**333**	*e*PN	**Pn**	**14 37 02.3**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.51**	**333**	*e*Pn	**Pn**	**14 37 02.3**	**+0.1**
GADA	**Gvkgeada**	**1.60**	**316**	*e*PN	**Pn**	**14 37 03.4**	**0.0**
GADA	**Gvkgeada**	**1.60**	**316**	*e*Pn	**Pn**	**14 37 03.4**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.64**	**355**	*e*PN	**Pn**	**14 37 04.3**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.64**	**355**	*e*Pn	**Pn**	**14 37 04.3**	**+0.3**
MFT	**Murefte**	**1.73**	**358**	*e*PN	**Pn**	**14 37 05.9**	**+0.7**
MFT	**Murefte**	**1.73**	**358**	*e*Pn	**Pn**	**14 37 05.9**	**+0.6**
ERIK	**Erikli-Kesan**	**1.74**	**338**	*e*PN	**Pn**	**14 37 05.8**	**+0.4**
ERIK	**Erikli-Kesan**	**1.74**	**338**	*e*Pn	**Pn**	**14 37 05.8**	**+0.4**

IDC ***13*** *14:40:56.9±3.0,10.73S×163.22E,h0km,mb3.9/4, mb1 4.2/4,mb1mx3.8/15,mbtmp3.9/4,MS3.0/1,Ms1 3.0/1, ms1mx2.5/22,Error ellipse: s-maj=109.8km s-min=30.1km az=132.0*
ISCJB ***13*** *14:41:03.0±9.3,10.7S±0.4×163.2E±0.6,h57km±63km, mb3.8/4, Error ellipse: s-maj=111.4km s-min=26.5km az=30.4*
NEIC ***13*** *14:41:07.5±8.1,10.47S×162.99E,h74km±55km,mb3.9/1, Error ellipse: s-maj=95.0km s-min=23.0km az=119.0*

ISC 13 14:41:04.7±7.8, 10.7S±0.3×163.2E±0.5, h56km±53km, n10, σ1⁰20/8, mb3.8/4, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.38**	**291**	*e*P	**Pn**	**14 41 54.8**	**-0.3**
CTA	**Charters Tower**	**18.79**	**238**	P	**Pn**	**14 45 21.5**	**+0.9**
	0.5nm,0.3s,baz=60,slow=15,SNR=4.3						
CTAO	**Charters Tower**	**18.79**	**238**	P	**Pn**	**14 45 22.5**	**+1.9**
	3.7nm,0.5s						
WB2	**Warramunga Arr**	**29.24**	**248**	*e*P	**P**	**14 47 01.3**	**-0.3**
WRA	**Warramunga Arr**	**29.25**	**248**	P	**P**	**14 47 00.8**	**-0.8**
	1.6nm,0.7s,mb3.8,baz=77,slow=9.4,SNR=7.8						
GUMO	**Guam**	**30.15**	**323**	LR	LR	14 58 08.3	
	comp=Z,31nm,20.6s,baz=90,slow=34						
ASAR	**Alice Springs**	**30.72**	**241**	P	**P**	**14 47 14.1**	**-0.6**
	2.2nm,0.6s,mb4.2,baz=65,slow=10,SNR=92						
SONM	**Songino Array**	**76.86**	**325**	P	**P**	**14 52 52.0**	**+1.3**
	0.9nm,0.9s,mb3.7,baz=140,slow=8.4,SNR=5.8						
ILAR	**Eielson Array**	**83.97**	**19**	P	**P**	**14 53 28.0**	**-0.5**
	0.4nm,0.8s,mb3.6,baz=245,slow=3.7,SNR=3.7						
KEST	**Kesra**	**145.53**	**321**	PKPbc	PKPbc	15 00 38.5	+1.1
	1.5nm,0.9s,baz=19,slow=3.3,SNR=3.4						

IDC ***13*** *14:49:01.1±1.2,29.83N×79.91E,h0km,mb3.6/13, mb1 3.8/14,mb1mx3.7/28,mbtmp3.7/14,ML3.9/1,MS2.8/1, Ms1 2.8/1,ms1mx2.2/42,Error ellipse: s-maj=34.9km s-min=16.7km az=49.0*
NDI ***13*** *14:49:03.3±4.7,30.03N×80.37E,h33km,ML3.8, mb3.9(NEIC)*
ISCJB ***13*** *14:49:03.7±0.7,29.98N±0.03×80.07E±0.02,h19km±6km, mb3.7/14, Error ellipse: s-maj=4.6km s-min=3.1km az=22.0*
BJI ***13*** *14:49:04.8,30.00N×80.20E,h42km,mB4.4/1,mb3.7/1*
DMN ***13*** *14:49:06.4±0.4,30.40N×80.11E,h10km,Ml4.5/10,Error ellipse: s-maj=22.3km s-min=6.8km az=29.0*
NEIC ***13*** *14:49:08.3±1.7,30.04N×80.16E,h42km±16km,mb3.9/2, Error ellipse: s-maj=14.9km s-min=9.7km az=45.0*

ISC 13 14:49:03.5±0.7, 30.00N±0.02×80.04E±0.02, h6km±4km, n54, σ1⁰43/79, mb3.7/14, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTH	**Pithoragarh**	**0.47**	**161**	*e*PKP	**Pg**	**14 49 11.2**	**-1.4**
PTH				*e*S	**Sg**	**14 49 16.9**	**-1.8**
JOSI	**Joshimath**	**0.69**	**323**	*e*PKP	**Pg**	**14 49 16.3**	**-0.5**
JOSI				*e*S	**Sg**	**14 49 26.0**	**+0.1**
BISR	**Bishrakh**	**2.68**	**239**	*e*PKP	**Pn**	**14 49 48.2**	**+1.0**
SMLA	**Simla**	**2.72**	**295**	*i* P	**Pn**	**14 49 48.5**	**+0.7**
SMLA				*i* S	**Sn**	**14 50 21.7**	**+0.7**
SMLA				AML	AML	14 50 23.2	
	comp=N,3μm,0.3s						
SMLA				AML	AML	14 50 31.3	
	comp=E,5μm,0.4s						
NDI	**New Delhi**	**2.79**	**243**	*e*PKP	**Pn**	**14 49 50.5**	**+1.8**
NDI				*e*S	**Sn**	**14 50 23.0**	**+0.3**
SDNR	**Sundarnagar**	**3.04**	**300**	*e*PKP	**Pn**	**14 49 50.5**	**-1.6**
SDNR				*ex*	**Sg**	**14 50 44.5**	**+3.4**
SONA	**Sohna**	**3.12**	**237**	*e*PKP	**Pn**	**14 49 53.8**	**+0.5**
SONA				*ex*	**Sn**	**14 50 26.6**	**-4.2**
SONA				AML	AML	14 50 48.0	
	comp=E,193nm,0.3s						
SONA				AML	AML	14 50 48.4	
	comp=N,247nm,0.6s						
RTK	**Rohtak**	**3.30**	**254**	*e*PKP	**Pn**	**14 49 57.2**	**+1.5**
RTK				*e*S	**Sn**	**14 50 35.1**	**-0.3**
RTK				AML	AML	14 50 46.1	
	comp=Z,189nm,0.6s						
AGRA	**Agra**	**3.31**	**214**	*e*PKP	**Pn**	**14

ZALV	**Zalesovo Beam**	**24.18**	**7**	P		**P**		**14 54 19.7**	**-0.8**
	comp=N,1.2nm,0.6s,mb3.5,baz=192,slow=6.9,SNR=6.1								
ABKAR	**Akbulak array**	**24.55**	**327**	*eP*		**P**		**14 54 24.5**	**+0.5**
	comp=N,0.9nm,0.5s,mb3.6								
AKTK	**Aktyubinsk**	**26.27**	**327**	P		**P**		**14 54 39.9**	**+0.4**
AKTO	**Aktyubinsk**	**26.27**	**327**	P		**P**		**14 54 39.9**	**+0.4**
	comp=N,1.3nm,0.5s,mb3.8,baz=122,slow=14,SNR=6.1								
SONM	**Songino Array**	**26.96**	**41**	P		**P**		**14 54 47.2**	**+1.4**
	comp=N,1.2nm,0.6s,mb3.6,baz=238,slow=9.1,SNR=7.2								
BR131	**Keskin Array S**	**38.92**	**297**	P		**P**		**14 56 32.1**	**+2.0**
	comp=N,2.2nm,0.4s,mb4.2								
KSRS	**Korea Array**	**40.16**	**66**	P		**P**		**14 56 40.6**	**+0.1**
	comp=N,0.5nm,0.6s,mb3.4,baz=276,slow=8.5,SNR=3.8								
JOF	**Joensuu**	**45.24**	**331**	*ep*		**P**		**14 57 17.2**	**-4.1**
	comp=N,1.6nm,0.4s,mb4.2								
FINES	**FINESS Array B**	**47.04**	**328**	P		**P**		**14 57 34.8**	**-0.7**
	comp=N,1.4nm,0.4s,mb4.3,baz=109,slow=8.9,SNR=8.8								
ARCES	**ARCESS Array B**	**50.01**	**338**	P		**P**		**14 57 58.2**	**-0.1**
ARCES	**ARCESS Array B**	**50.01**	**338**	P		**P**		**14 57 58.2**	**-0.1**
	comp=N,1.8nm,0.9s,mb4.1,baz=120,slow=7.4,SNR=5.3								
HFS	**Hagfors**	**52.78**	**325**	P		**P**		**14 58 18.5**	**-0.7**
	comp=N,1.6nm,0.7s,mb4.1,baz=116,slow=6.8,SNR=4.8								
KAKA	**Kakadu**	**65.94**	**122**	P		**P**		**14 59 50.2**	**-0.6**
WRA	**Warramunga Arr**	**72.09**	**127**	P		**P**		**15 00 27.5**	**-1.4**
WRA	**Warramunga Arr**	**72.09**	**127**	P		**P**		**15 00 27.5**	**-1.4**
	comp=N,0.2nm,0.3s,mb3.5,baz=322,slow=6.0,SNR=3.3								
ASAR	**Alice Springs**	**74.31**	**130**	P		**P**		**15 00 39.8**	**-2.2**
	comp=N,0.5nm,0.9s,mb3.4,baz=316,slow=6.1,SNR=6.3								
ILAR	**Eielson Array**	**78.73**	**19**	P		**P**		**15 01 05.1**	**-1.4**
	comp=N,0.4nm,0.9s,mb3.3,baz=309,slow=5.8,SNR=5.1								

MAN 13 14:51:47.8 0.5N×126.3E, h34 km, mb 4.1, ML 2.9, MS 2.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
MATI	**Mati**	**1.10**	**186**	*eP*	Pn		14 52 06.5	+0.5
MATI				*eS*	Sn		14 52 20.6	+0.6
BUTP	**Butuan**	**1.19**	**321**	*eP*	Pn		14 52 07.3	+0.1
BUTP				*eS*	Sn		14 52 23.1	+1.0
BUKP	**Musuan**	**1.31**	**263**	*eP*	Pn		14 52 10.2	+1.2
CGP	**Cagayan de Oro**	**1.72**	**284**	*iP*	Pn		14 52 15.1	+0.6
CGP				*i* S	Sn		14 52 35.9	+0.6

IDC ***13*** *15:00:11.1±1.5, 10.7S×163.3E, h0 km, mb 4.1/9, mb1 4.3/9, mb1mx4.2/15, mbtmp4.1/9, MS3.4/2, Ms1 3.4/2, ms1mx3.0/20, Error ellipse: s-maj=52.2km s-min=23.0km az=133.0*

ISCJB ***13*** *15:00:15.8±2.2, 10.8S±0.1×163.3E±0.1, h43 km±19 km, mb 4.1/9, MS3.4/2, Error ellipse: s-maj=20.7km s-min=17.3km az=158.2*

NEIC ***13*** *15:00:17.1±2.1, 10.62S×163.32E, h39 km±18 km, mb 4.2/1, Error ellipse: s-maj=17.9km s-min=16.4km az=80.0*

ISC 13 15:00:17.6±1.9, 10.7S±0.1×163.3E±0.1, h43 km±17 km, n19, σ 0.8 9 4/17, mb 4.1/9, MS 3.4/2, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
HNR	**Honiara**	**3.50**	**291**	*eP*	**Pn**		**15 01 09.3**	**-0.2**
DZM	**Mont Dzumac**	**11.73**	**165**	*eP*	**Pn**		**15 03 01.9**	**-0.5**
EIDS	**Eidsvold**	**18.62**	**217**	*eP*	**Pn**		**15 04 35.1**	**+2.9**
CTA	**Charters Tower**	**18.86**	**238**	P	**Pn**		**15 04 35.9**	**+0.7**
	0.6nm,0.3s,baz=70,slow=12,SNR=5.1							
CTAO	**Charters Tower**	**18.86**	**238**	*eP*	**Pn**		**15 04 36.5**	**+1.3**
	17nm,1.1s							
STKA	**Stephens Creek**	**29.09**	**220**	P	**P**		**15 06 14.8**	**+0.6**
	2.2nm,1.1s,mb3.8,baz=12,slow=16,SNR=2.8							
WB2	**Warramunga Arr**	**29.33**	**248**	*eP*	**P**		**15 06 15.6**	**-0.9**
WRA	**Warramunga Arr**	**29.34**	**248**	*eP*	**P**		**15 06 15.6**	**-1.0**
	3.1nm,0.8s,mb4.1,baz=77,slow=9.4,SNR=14							
ASAR	**Alice Springs**	**30.80**	**241**	P	**P**		**15 06 28.4**	**-1.1**
	5.5nm,0.7s,mb4.5,baz=69,slow=10,SNR=65							
FITZ	**Fitzroy Crossi**	**37.13**	**254**	*eP*	**P**		**15 07 23.6**	**-0.8**
KSRS	**Korea Array**	**58.23**	**327**	LR	LR		15 34 30.7	
	comp=Z,18nm,19.2s,MS3.2,baz=182,slow=35							
CMAR	**Chiang Mai Arr**	**69.74**	**294**	P	**P**		**15 11 24.6**	**+1.0**
	1.7nm,1.0s,mb4.0,baz=114,slow=5.0,SNR=7.6							
SONM	**Songino Array**	**76.95**	**325**	P	**P**		**15 12 06.8**	**+1.2**
	1.3nm,0.8s,mb3.9,baz=145,slow=6.7,SNR=7.7							
SONM				LR	LR		15 43 10.7	
	comp=Z,28nm,18.1s,MS3.6,baz=330,slow=34							
ILAR	**Eielson Array**	**83.96**	**19**	P	**P**		**15 12 42.7**	**-0.1**
	0.6nm,0.8s,mb3.8,baz=259,slow=5.3,SNR=5.3							
NVAR	**Mina Array Bea**	**87.66**	**50**	P	**P**		**15 13 01.8**	**0.0**
NVAR	**Mina Array Bea**	**87.66**	**50**	P	**P**		**15 13 01.8**	**0.0**
	0.8nm,0.9s,mb3.9,baz=237,slow=7.0,SNR=4.6							
MKAR	**Makanchi Array**	**91.60**	**317**	P	**P**		**15 13 20.4**	**+0.4**
	2.1nm,0.9s,mb4.5,baz=103,slow=6.0,SNR=14							
ZALV	**Zalesovo Beam**	**91.84**	**325**	P	**P**		**15 13 20.0**	**-1.0**
	0.6nm,0.5s,mb4.2,baz=123,slow=7.3,SNR=4.1							
KEST	**Kesra**	**145.62**	**321**	PKPbc	PKPbc		15 19 52.5	+0.5
	3.0nm,1.1s,baz=263,slow=15,SNR=4.7							

ISCJB ***13*** *15:17:11.2±0.7, 83.5N±0.1×114.8E±1.0, h10 km, mb 3.7/11, MS3.1/9, Error ellipse: s-maj=20.4km s-min=12.9km az=141.8*

IDC ***13*** *15:17:11.4±0.9, 83.52N×115.11E, h0 km, mb 3.7/10, mb1 3.9/10, mb1mx3.7/22, mbtmp3.7/10, MS3.2/9, Ms1 3.2/9, ms1mx2.8/33, Error ellipse: s-maj=28.5km s-min=17.8km az=148.0*

NEIC ***13*** *15:17:12.9±0.6, 83.55N×114.60E, h10 km, mb 4.1/1, Error ellipse: s-maj=19.0km s-min=11.8km az=141.0*

ISC 13 15:17:13.1±0.7, 83.5N±0.1×114.8E±1.0, h10 km, n20, σ 0.9 2/15, mb 3.7/11, MS 3.1/9, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
RES	**Resolute Bay**	**21.31**	**21**	LR	LR		15 30 00.8	
	comp=Z,46nm,20.6s,MS2.9,baz=276,slow=36							
ARCES	**ARCESS Array B**	**21.48**	**286**	P	**P**		**15 21 59.6**	**-1.6**
	1.8nm,0.7s,mb3.5,baz=18,slow=8.9,SNR=2.7							
ILAR	**Eielson Array**	**27.05**	**69**	P	**P**		**15 22 55.8**	**+0.8**
	1.1nm,1.1s,mb3.3,baz=342,slow=9.7,SNR=6.4							
ILAR				LR	LR		15 32 46.4	
	comp=Z,48nm,21.8s,MS3.0,baz=15,slow=35							
FINES	**FINESS Array B**	**29.25**	**280**	LR	LR		15 37 44.5	
	comp=Z,32nm,19.5s,MS2.9,baz=49,slow=42							
ZALV	**Zalesovo Beam**	**30.74**	**215**	P	**P**		**15 23 26.9**	**-1.0**
ZALV				LR	LR		15 36 36.3	
ZALV	**Zalesovo Beam**	**30.74**	**215**	P	**P**		**15 23 26.9**	**-1.0**
	0.4nm,0.3s,mb3.8,baz=358,slow=8.7,SNR=2.8							
ZALV				LR	LR		15 36 36.3	
	comp=Z,36nm,19.2s,MS3.0,baz=252,slow=38							
HFS	**Hagfors**	**31.88**	**292**	LR	LR		15 38 19.1	
	comp=Z,26nm,21.6s,MS2.9,baz=146,slow=40							
KURK	**Kurchatov**	**34.40**	**222**	PcP	PcP		15 26 35.3	+0.3
	0.4nm,0.5s,baz=2.8,slow=3.0,SNR=4.0							
MK31	**Makanchi Array**	**38.04**	**217**	P	**P**		**15 24 31.1**	**+0.2**
MKAR	**Makanchi Array**	**38.04**	**217**	P	**P**		**15 24 30.7**	**-0.2**
	1.0nm,0.8s,mb3.6,baz=0.0,slow=7.3,SNR=8.2							
MKAR				PcP	PcP		15 26 45.9	0.0
	0.2nm,0.6s,baz=54,slow=3.7,SNR=3.9							
MKAR				LR	LR		15 41 27.6	
	comp=Z,42nm,18.0s,MS3.3,baz=1.2,slow=38							
SCHQ	**Schefferville**	**41.86**	**1**	*eP*	**P**		**15 25 01.9**	**-0.7**
	2.3nm,0.6s,mb4.0							
SCHQ				LR	LR		15 42 58.8	
SCHQ	**Schefferville**	**41.86**	**1**	P	**P**		**15 25 01.9**	**-0.7**
	2.0nm,0.6s,mb4.0,baz=209,slow=14,SNR=4.0							
SCHQ				LR	LR		15 42 58.8	
	comp=Z,54nm,20.3s,MS3.4,baz=120,slow=37							
AAK	**Ala-Archa**	**42.75**	**225**	LR	LR		15 46 39.4	
	comp=Z,26nm,20.6s,MS3.1,baz=352,slow=41							
BRTR	**Keskin Array B**	**49.77**	**267**	P	**P**		**15 26 06.7**	**+1.5**
	0.4nm,0.5s,mb3.7,baz=348,slow=6.3,SNR=2.5							
ESDC	**Sonseca Array**	**53.87**	**303**	P	**P**		**15 26 36.6**	**+0.8**
	0.3nm,0.3s,mb3.7,baz=355,slow=12,SNR=4.5							
NVAR	**Mina Array Bea**	**55.84**	**49**	P	**P**		**15 26 50.1**	**0.0**
	0.2nm,0.5s,mb3.4,baz=16,slow=4.7,SNR=2.7							
KEST	**Kesra**	**56.42**	**290**	P	**P**		**15 26 55.6**	**+1.3**
	2.5nm,0.9s,mb4.2,baz=325,slow=3.7,SNR=7.3							
TXAR	**Lajitas Array**	**66.00**	**36**	P	**P**		**15 27 58.2**	**-1.0**
TXAR				LR	LR		15 57 35.4	
TXAR	**Lajitas Array**	**66.00**	**36**	P	**P**		**15 27 58.2**	**-1.0**
	0.5nm,0.6s,mb3.7,baz=28,slow=5.7,SNR=5.9							
TXAR				LR	LR		15 57 35.4	
	comp=Z,31nm,20.4s,MS3.5,baz=185,slow=37							
TORD	**Torodi Ar. Bea**	**79.56**	**294**	P	**P**		**15 29 19.8**	**-0.1**
	2.1nm,0.7s,mb4.2,baz=357,slow=6.3,SNR=12							

IDC ***13*** *15:24:57.0±1.8, 0.41N×127.30E, h0 km, mb 3.4/3, mb1 3.6/3, mb1mx3.3/18, mbtmp3.4/3, MS2.5/1, Ms1 2.5/1, ms1mx1.9/16, Error ellipse: s-maj=168.0km s-min=26.3km az=66.0*

ISCJB ***13*** *15:25:05.2±0.8, 0.3N±0.1×126.78E±0.05, h79 km±11 km, mb 3.4/3, Error ellipse: s-maj=17.5km s-min=8.3km az=179.0*

DJA ***13*** *15:25:07, 0.49N×126.60E, h15 km, MLv 3.8/3*

ISC 13 15:25:05.7±0.9, 0.5N±0.1×126.80E±0.05, h90 km±15 km, n9, σ 1.1 9 1/12, mb 3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
TNTI	**Ternate**	**0.65**	**61**	P	**Pn**		**15 25 22.4**	**+0.6**
TNTI				S	**Sn**		**15 25 33.1**	**-0.6**
MNI	**Manado**	**2.19**	**297**	P	**Pn**		**15 25 41.2**	**+0.7**
MNI				S	**Sn**		**15 26 06.9**	**-0.2**
KMSI	**Cibinong**	**2.82**	**272**	P	**Pn**		**15 25 48.9**	**0.0**
KMSI				S	**Sn**		**15 26 19.3**	**-2.9**
NLAI	**Namlea**	**3.68**	**175**	P	**Pn**		**15 26 06.8**	**+6.3**
LUWI	**Luwuk**	**4.30**	**250**	P	**Pn**		**15 26 10.7**	**+1.9**
LUWI				S	**Sn**		**15 26 58.0**	**+0.2**
WRA	**Warramunga Arr**	**21.57**	**160**	P	**P**		**15 29 46.4**	**-1.8**
	0.5nm,0.3s,mb3.2,baz=340,slow=12,SNR=8.0							
GUMO	**Guam**	**22.14**	**53**	LR	LR		15 36 39.2	
	comp=Z,13nm,18.7s,baz=224,slow=32							
ASAR	**Alice Springs**	**24.95**	**164**	P	**P**		**15 30 21.2**	**+0.4**
	0.4nm,0.3s,mb3.3,baz=334,slow=8.2,SNR=22							
ASAR				PcP	PcP		15 33 56.2	+2.0
	0.1nm,0.6s,baz=353,slow=1.8,SNR=4.1							
MKAR	**Makanchi Array**	**60.29**	**326**	P	**P**		**15 35 09.9**	**+5.0**
	0.3nm,0.3s,mb3.8,baz=117,slow=8.6,SNR=5.2							

IDC 13 15:44:47.2±2.3, 7.09S×150.72E, h0 km, mb 3.3/3, mb1 3.7/3, mb1mx3.4/15, mbtmp3.4/3, Error ellipse: s-maj=145.9km s-min=29.2km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
WRA	**Warramunga Arr**	**20.39**	**230**	P	P		15 49 25.4	-0.4
	0.9nm,0.8s,baz=54,slow=10,SNR=4.9							
ASAR	**Alice Springs**	**23.08**	**223**	P	P		15 49 54.4	-0.2
	0.6nm,0.7s,baz=56,slow=9.1,SNR=16							
ILAR	**Eielson Array**	**85.05**	**22**	P	P		15 57 24.5	0.0
ILAR	**Eielson Array**	**85.05**	**22**	P	P		15 57 24.5	0.0
	0.2nm,0.6s,baz=248,slow=5.6,SNR=5.1							
TORD	**Torodi Ar. Bea**	**148.94**	**284**	PKPbc	PKPbc		16 04 38.1	-0.1
	0.3nm,0.5s,baz=70,slow=3.5,SNR=3.0							

ISK ***13*** *16:02:43.2, 36.79N×37.76E, h5 km, MD 3.0*

ISCJB ***13*** *16:02:45.4±1.1, 36.85N±0.06×37.79E±0.04, h2 km±7 km, Error ellipse: s-maj=10.4km s-min=5.5km az=165.7*

CSEM ***13*** *16:02:46.0±0.5, 36.89N×37.78E, h2 km, MD 3.0, Error ellipse: s-maj=11.6km s-min=4.9km az=164.0*

DDA ***13*** *16:02:46.6, 36.96N×37.72E, h7 km±4 km, Md 3.0*

ISC 13 16:02:46.2±1.1, 36.85N±0.06×37.77E±0.05, h10 km±6 km, n17, σ 1.1 9 1/9 30, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
GZT	**Gaziantep**	**0.53**	**342**	*eP*	**Pg**		**16 02 53.9**	**-2.7**
GZT				*eS*	**Sg**		**16 03 04.5**	**+0.9**
GAZ	**Gaziantep**	**0.56**	**306**	*ePG*	**Pg**		**16 02 55.5**	**-1.5**
GAZ	**Gaziantep**	**0.56**	**306**	*ePg*	**Pg**		**16 02 55.5**	**-1.5**
KUZU	**Kuzuini**	**0.56**	**263**	*eP*	**Pg**		**16 02 57.5**	**+0.3**
KUZU				*eS*	**Sg**		**16 03 06.7**	**+2.1**
KUZU	**Kuzuini**	**0.56**	**263**	*eP*	**Pg**		**16 02 57.5**	**+0.3**
KUZU				*eS*	**Sg**		**16 03 06.7**	**+2.1**
KMRS	**Kahramanmaras**	**0.96**	**314**	*ePG*	**Pg**		**16 03 03.7**	**-1.0**
KMRS				*eSG*	**Sg**		**16 03 18.0**	**+0.8**
KMRS	**Kahramanmaras**	**0.96**	**314**	*ePg*	**Pg**		**16 03 03.7**	**-1.0**
KMRS				*eSg*	**Sg**		**16 03 18.0**	**+0.9**
URFA	**Urfa**	**1.03**	**54**	*ePG*	**Pg**		**16 03 04.8**	**-1.2**
URFA				*eSG*	**Sg**		**16 03 20.5**	**+1.2**
URFA	**Urfa**	**1.03**	**54**	*ePg*	**Pg**		**16 03 04.8**	**-1.2**
URFA				*eSg*	**Sg**		**16 03 20.5**	**+1.2**
ANDN	**Andirin**	**1.35**	**303**	*eP*	**Pn**		**16 03 10.9**	**-0.3**
ANDN				*eS*	**Sb**		**16 03 28.4**	**-0.7**
ANDN	**Andirin**	**1.35**	**303**	*eP*	**Pn**		**16 03 10.9**	**-0.3**
ANDN				*eS*	**Sb**		**16 03 28.4**	**-0.7**
AKCD	**Akcadag**	**1.45**	**5**	*eP*	**Pn**		**16 03 12.1**	**-0.5**
AKCD				*eS*	**Sn**		**16 03 30.9**	**-0.7**
AKCD	**Akcadag**	**1.45**	**5**	*eP*	**Pn**		**16 03 12.1**	**-0.4**
AKCD				*eS*	**Sn**		**16 03 30.9**	**-0.7**
MALT	**Malatya**	**1.55**	**19**	*ePN*	**Pn**		**16 03 14.6**	**+0.7**
MALT				*eSN*	**Sn**		**16 03 36.6**	**+2.5**
MALT	**Malatya**	**1.55**	**19**	*ePn*	**Pn**		**16 03 14.6**	**+0.7**
MALT				*eSn*	**Sn**		**16 03 36.6**	**+2.5**
MYA	**Malataya**	**1.56**	**19**	*ePN*	**Pn**		**16 03 13.9**	**-0.2**
MYA	**Malataya**	**1.56**	**19**	*ePn*	**Pn**		**16 03 13.9**	**-0.2**

ISCJB ***13*** *16:09:48.2±0.3, 83.62N±0.05×114.5E±0.4, h10 km, mb 4.0/31, MS3.3/15, Error ellipse: s-maj=8.2km s-min=6.3km az=143.1*

MOS ***13*** *16:09:48.1±1.2, 83.60N×114.61E, h10 km, mb 4.4/10, Error ellipse: s-maj=84.2km s-min=9.8km az=88.8*

IDC ***13*** *16:09:48.2±0.6, 83.58N×115.20E, h0 km, mb 3.8/15, mb1 4.0/15, mb1mx3.9/23, mbtmp3.9/15, MS3.3/15, Ms1 3.3/15, ms1mx3.1/32, Error ellipse: s-maj=19.8km s-min=14.0km az=137.0*

NEIC ***13*** *16:09:49.8±0.2, 83.59N×114.58E, h10 km, mb 4.3/10, Error ellipse: s-maj=6.3km s-min=4.9km az=142.0*

ISC 13 16:09:50.3±0.3, 83.62N±0.05×114.5E±0.4, h10 km, n62, σ 0.9 0/59, mb 4.0/31, MS 3.3/15, 3C-4D, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
TIXI	**Tiksi**	**12.34**	**158**	P	**Pn**		**16 12 44.6**	**-1.0**
	12nm,1.4s							
TIXI	**Tiksi**	**12.34**	**158**	*eP*	**Pn**		**16 12 45.4**	**-0.2**
TIXI				pmax	pmax			
	comp=Z,6.0nm,1.1s							
SPITS	**Spitsbergen Ar**	**14.28**	**304**	Pn	**Pn**		**16 13 09.8**	**-2.3**
	baz=17,slow=10,SNR=3.0							
SPITS				LR	LR		16 17 46.4	
	comp=Z,93nm,18.2s,baz=295,slow=33							
KEV	**Kevo**	**21.05**	**285**	*eP*	**P**		**16 14 33.6**	**-0.3**
RES	**Resolute Bay**	**21.24**	**21**	LR	LR		16 22 03.3	
	comp=Z,109nm,20.6s,MS3.2,baz=20,slow=35							
ARCES	**ARCESS Array B**	**21.42**	**286**	P	**P**		**16 14 38.3**	**+0.5**
	comp=Z,3.1nm,0.7s,mb3.7,baz=11,slow=8.7,SNR=8.6							
ARCES				S	**S**		**16 18 35.8**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=34,slow=22,SNR=5.7							
ARE0	**ARCESS Array S**	**21.43**	**286**	*eP*	**P**		**16 14 37.2**	**-0.6**
YAK	**Yakutsk**	**21.98**	**161**	*eP*	**P**		**16 14 42.5**	**-1.4**
YAK	**Yakutsk**	**21.98**	**161**	*eP*	**P**		**16 14 42.4**	**-1.5**
YAK				pmax	pmax			
	comp=Z,11nm,0.9s,mb4.3							
YAK				pmax	pmax			
	comp=N,8.0nm,1.3s							
SEY	**Seymchan**	**22.47**	**133**	*eP*	**P**		**16 14 49.7**	**+0.7**
JMIC	**Jan Mayen**	**23.24**	**316**	LR	LR		16 21 37.0	
	comp=N,41nm,19.8s,MS2.9,baz=75,slow=30							
INK	**Inuvik**	**24.92**	**55**	P	**P**		**16 15 12.3**	**-0.5**
INK				LR	LR		16 24 02.1	
INK	**Inuvik**	**24.92**	**55**	P	**P**		**16 15 12.3**	**-0.5**
	comp=N,2.2nm,0.5s,mb4.0,baz=54,slow=12,SNR=3.1							
INK				LR	LR		16 24 02.1	
	comp=N,52nm,21.2s,MS3.0,baz=20,slow=34							
COLA	**College**	**26.84**	**70**	*eP*	**P**		**16 15 33.6**	**+3.3**
ILAR	**Eielson Array**	**27.04**	**69**	P	**P**		**16 15 31.6**	**-0.5**
	comp=N,1.6nm,1.1s,mb3.5,baz=350,slow=9.7,SNR=8.1							
ILAR				LR	LR		16 25 22.0	
	comp=N,104nm,21.1s,MS3.4,baz=334,slow=35							
FINES	**FINESS Array B**	**29.20**	**280**	P	**P**		**16 15 51.4**	**+0.2**
	comp=N,1.0nm,0.6s,mb3.7,baz=31,slow=12,SNR=2.9							
FINES				LR	LR		16 31 35.2	
	comp=N,70nm,18.1s,MS3.3,baz=109,slow=45							
SVE	**Sverdlovsk**	**29.96**	**243**	*eP*	**P**		**16 15 51.8**	**-6.3**
ARU	**Arti**	**30.56**	**245**	*dP*	**P**		**16 16 03.9**	**+0.5**
ARU				*e*			16 17 02.7	
ARU				S	**S**		**16 21 04.5**	**-0.1**
ARU				SS	SS		16 22 39.1	-35
ARU				pmax	pmax			
	comp=Z,6.0nm,1.6s,mb4.2							

ZALV	**Zalesovo Beam**	**30.80**	**215**	P		**P**		**16 16 04.2**	**-1.3**
ZALV				PcP	PcP		16 19 02.0	-0.2	
ZALV				LR	LR		16 29 23.1		
ZALV	**Zalesovo Beam**	**30.80**	**215**	P		**P**		**16 16 04.2**	**-1.3**
	comp=Z,0.2nm,0.4s,mb3.3,baz=19,slow=9.7,SNR=3.9								
ZALV				PcP	PcP		16 19 02.0	-0.2	
	comp=Z,0.4nm,0.3s,baz=17,slow=1.5,SNR=5.9								
ZALV				LR	LR		16 29 23.1		
	comp=Z,105nm,19.6s,MS3.5,baz=58,slow=38								
ZALV	**Zalesovo Beam**	**30.80**	**215**	P		**P**		**16 16 04.2**	**-1.3**
ZALV							16 19 02.0		
NOA	**NORSAR Array B**	**31.18**	**294**	LR	LR		16 28 07.5		
	comp=Z,23nm,21.8s,MS2.8,baz=15,slow=35								
BRVK	**Borovoye**	**32.79**	**231**	*eP*		**P**		**16 16 23.2**	**+0.3**
	comp=Z,2.0nm,0.8s,mb4.1								
BRVK	**Borovoye**	**32.79**	**231**	*eP*		**P**		**16 16 23.8**	**+0.8**
BRVK				pmax	pmax				
	comp=Z,5.0nm,1.7s,mb4.2								
BVAR	**Borovoye Array**	**32.81**	**231**	P		**P**		**16 16 23.6**	**+0.4**
	comp=Z,0.9nm,0.7s,mb3.8,baz=10,slow=9.3,SNR=5.9								
BVAR				PcP	PcP		16 19 07.5	-0.2	
	comp=Z,1.5nm,0.8s,baz=336,slow=1.8,SNR=5.3								
KURK	**Kurchatov**	**34.44**	**221**	*eP*		**P**		**16 16 36.7**	**-0.7**
KURK	**Kurchatov**	**34.44**	**221**	*eP*		**P**		**16 16 39.7**	**+2.3**
KURK				pmax	pmax				
	comp=Z,2.0nm,1.2s,mb3.9								
SONM	**Songino Array**	**36.00**	**189**	P		**P**		**16 16 50.8**	**0.0**
	comp=Z,0.8nm,0.9s,mb3.7,baz=1.9,slow=8.9,SNR=4.4								
SONM				PcP	PcP		16 19 16.6	-0.4	
	comp=Z,0.5nm,0.6s,baz=336,slow=3.2,SNR=3.0								
SONM				LR	LR		16 31 34.1		
	comp=Z,29nm,20.5s,MS3.0,baz=245,slow=36								
SONM	**Songino Array**	**36.00**	**189**	P		**P**		**16 16 50.8**	**-0.1**
SONM							16 19 16.6		
YSS	**Yuzh-Sakhalins**	**37.67**	**148**	*eP*		**P**		**16 17 06.0**	**+0.9**
MK31	**Makanchi Array**	**38.09**	**216**	*eP*		**P**		**16 17 07.9**	**-0.7**
MKAR	**Makanchi Array**	**38.09**	**216**	P		**P**		**16 17 07.5**	**-1.1**
	comp=Z,0.7nm,0.3s,mb3.8,baz=351,slow=7.4,SNR=10								
MKAR				PcP	PcP		16 19 22.6	-0.7	
	comp=Z,0.3nm,0.3s,baz=351,slow=3.8,SNR=4.1								
MKAR				LR	LR		16 34 04.9		
	comp=Z,96nm,19.3s,MS3.6,baz=351,slow=38								
MKAR	**Makanchi Array**	**38.09**	**216**	P		**P**		**16 17 07.5**	**-1.1**
MKAR							16 19 22.6		
SCHQ	**Schefferville**	**41.78**	**1**	*eP*		**P**		**16 17 38.2**	**-0.9**
SCHQ				LR	LR		16 35 28.1		
SCHQ	**Schefferville**	**41.78**	**1**	P		**P**		**16 17 38.0**	**-1.1**
	comp=Z,2.1nm,0.4s,mb4.1,baz=346,slow=8.3,SNR=8.8								
SCHQ				LR	LR		16 35 28.1		
	comp=Z,47nm,20.1s,MS3.4,baz=286,slow=37								
AAK	**Ala-Archa**	**42.79**	**224**	*eP*		**P**		**16 17 49.1**	**+1.6**
AAK				pmax	pmax				
	comp=Z,4.0nm,1.7s,mb3.9								
KIV	**Kislovodsk**	**44.56**	**258**	*eP*		**P**		**16 18 02.4**	**+0.7**
KIV				pmax	pmax				
	comp=Z,9.0nm,1.1s,mb4.5								
KIV				MLR	MLR				
	comp=Z,29nm,16.0s,MS3.3								
KSRS	**Korea Array**	**46.50**	**165**	LR	LR		16 40 12.4		
	comp=Z,23nm,19.2s,MS3.1,baz=314,slow=39								
BOZ	**Bozeman (W)**	**49.17**	**42**	*eP*		**P**		**16 18 37.

WRA	**Warramunga Arr**	**46.13**	**174**	P		**P**		**16 27 30.4**	**+1.3**
	0.6nm,0.6s,mb3.7,baz=354,slow=8.4,SNR=5.5								
ASAR	**Alice Springs**	**49.78**	**175**	P		**P**		**16 28 00.0**	**+2.7**
	0.3nm,0.5s,mb3.5,baz=4.7,slow=14,SNR=10								

BJI ***13*** *16:24:35.4,54˚.60S×143˚.90E,h10km,mB5.5/12,mb5.4/9, Ms5.1/13,Ms7 4.7/13*

IDC ***13*** *16:24:35.9±0.6,54˚.66S×143˚.83E,h0km,mb4.4/11, mb1 4.6/11,mb1mx4.5/14,mbtmp4.5/11,MS4.9/14, Ms1 4.9/14,ms1mx4.6/20,Error ellipse: s-maj=28.4km s-min=15.9km az=90.0*

ISCJB ***13*** *16:24:36.4±0.5,54˚.67S±0˚.06×143˚.7E±0˚.2,h10km, mb4.7/26,MS5.0/177,Error ellipse: s-maj=14.7km s-min=7.8km az=8.0*

NEIC ***13*** *16:24:37.5±0.3,54˚.64S×143˚.90E,h10km,mb5.0/8, MS5.0/158,Error ellipse: s-maj=13.4km s-min=9.1km az=93.0*

GCMT ***13*** *16:24:40.2±0.1,54˚.78S×144˚.05E,h12km,MW5.3, Moment Tensor Solution. s64,c104; s17,c18; Moment tensor: Scale 10¹⁷Nm; Mrr=0.17±.02; Mθθ0.25±.02; Mφφ-0.08±.02; Mrθ-0.07±.05; Mθφ-1.24±.02; Mφr0.03±.05; Best double couple: M₀1.30000×10¹⁷ NP1:φs356.00000°, δ87.00000°,λ1.00000°. NP2:φs266.00000°,δ89.00000°, λ177.00000°. Principal axes: T 1.3400, Plg3.0000°, Azm221.0000°; N -0.1700, Plg87.0000°, Azm67.0000°; P -1.1700, Plg1.0000°, Azm311.0000°; Data Used: II IU IC G CN. Surface waves: sta= 86, comp=161, per= 50.*

ISC 13 16:24:38.0±0.4,54˚.67S±0˚.05×143˚.8E±0˚.2,h10km, (h12km±1.1km:pP-P),n259,σ1s09/46,mb4.7/26,MS5.0/177, 4C-1D,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TOO	**Toolangi**	**17.14**	**5**	*e*P		**Pn**	**16 28 38.7**	**+1.2**
CAN	**Canberra**	**19.69**	**13**	*e*P		**Pn**	**16 29 08.4**	**-0.2**
CNB	**Canberra Magne**	**19.75**	**14**	*e*P		**Pn**	**16 29 09.3**	**0.0**
CASY	**Casey**	**19.78**	**221**	*e*P		**Pn**	**16 29 08.3**	**-1.1**
CASY	**Casey**	**19.78**	**221**	*e*P		**Pn**	**16 29 08.5**	**-0.9**
	107nm,1.4s							
RPZ	**Rata Peaks**	**20.80**	**69**	P		**P**	**16 29 18.0**	**-1.2**
	14nm,0.9s,baz=207,slow=11,SNR=2.6							
RPZ				LR		LR	16 35 38.6	
	comp=Z,13μm,18.9s,MS5.3,baz=223,slow=32							
STKA	**Stephens Creek**	**22.84**	**355**	*e*P		**P**	**16 29 40.8**	**-0.3**
	4.3nm,1.0s,mb3.8							
STKA	**Stephens Creek**	**22.84**	**355**	P		**P**	**16 29 40.4**	**-0.6**
	7.2nm,0.7s,mb4.2,baz=160,slow=11,SNR=22							
STKA				LR		LR	16 37 23.4	
	comp=Z,2μm,18.3s,MS4.6,baz=174,slow=34							
SNZO	**South Karori**	**24.42**	**70**	PFAKE			16 30 10.0	+14
SNZO				LR		LR		
	comp=Z,6μm,20.0s,MS5.1							
SBA	**Scott Base**	**24.66**	**169**	*e*P		**P**	**16 30 00.3**	**+1.9**
	comp=Z,42nm,1.4s,mb4.8							
SBA				LR		LR		
	comp=Z,1μm,20.0s,MS4.5							
ARMA	**Armidale**	**24.89**	**16**	*e*P		**P**	**16 30 03.5**	**+2.7**
ARMA	**Armidale**	**24.89**	**16**	*e*P		**P**	**16 30 01.9**	**+1.1**
	comp=Z,21nm,1.0s,mb4.6							
FORT	**Forrest**	**26.39**	**328**	*e*P		**P**	**16 30 14.2**	**-0.2**
	comp=Z,29nm,0.7s,mb4.9							
FORT	**Forrest**	**26.39**	**328**	*e*P		**P**	**16 30 13.2**	**-1.2**
	comp=Z,33nm,0.8s,mb4.9							
URZ	**Urewera**	**27.89**	**68**	P		**P**	**16 30 23.5**	**-4.3**
	comp=Z,14nm,1.0s,mb4.5,baz=196,slow=6.3,SNR=4.4							
URZ				LR		LR	16 40 29.1	
	comp=Z,6μm,19.9s,MS5.2,baz=224,slow=34							
NWAO	**Narrogin (SRO)**	**28.66**	**308**	PFAKE			16 30 50.0	+15
NWAO				LR		LR		
	comp=Z,4μm,20.0s,MS5.0							
NWAO	**Narrogin (SRO)**	**28.66**	**308**	LR		LR	16 39 26.1	
	comp=Z,5μm,21.0s,MS5.1,baz=106,slow=31							
KLBR	**Kellerberrin**	**29.55**	**311**	*e*P		**P**	**16 30 42.5**	**-0.2**
	comp=Z,21nm,1.2s,mb4.7							
ASAR	**Alice Springs**	**31.82**	**343**	P		**P**	**16 31 02.0**	**-0.7**
	comp=Z,2.5nm,0.6s,mb4.2,baz=164,slow=9.4,SNR=64							
ASAR				PcP		PcP	16 33 51.4	-2.1
	comp=Z,0.8nm,0.5s,baz=154,slow=3.2,SNR=10							
CTAO	**Charters Tower**	**34.58**	**4**	P		**P**	**16 31 27.1**	**+0.3**
CTAO				LR		LR		
	comp=Z,2μm,21.0s,MS4.8							
WB2	**Warramunga Arr**	**35.40**	**345**	*e*P		**P**	**16 31 32.9**	**-1.0**
WRA	**Warramunga Arr**	**35.40**	**345**	P		**P**	**16 31 32.8**	**-1.1**
	comp=Z,13nm,0.7s,mb5.0,baz=168,slow=7.7,SNR=100							
WRA				PcP		PcP	16 34 02.3	-1.4
	comp=Z,1.3nm,0.6s,baz=178,slow=2.4,SNR=7.8							
WRA				LR		LR	16 44 29.7	
	comp=Z,1μm,19.4s,MS4.7,baz=155,slow=34							
QSPA	**South Pole Qui**	**35.44**	**180**	*e*P		**P**	**16 31 32.2**	**-1.5**
	comp=Z,32nm,1.0s,mb5.2							
QSPA				LR		LR		
	comp=Z,2μm,20.0s,MS4.9							
QSPA	**South Pole Qui**	**35.44**	**180**	P		**P**	**16 31 32.1**	**-1.5**
	comp=Z,23nm,1.0s,mb5.1,baz=155,slow=5.4,SNR=30							
DZM	**Mont Dzumac**	**36.76**	**37**	*e*S		**S**	**16 37 22.5**	**-6.7**
	comp=Z,568nm,25.9s							
DZM				*e*LQ			16 40 05.3	
	comp=Z,2μm,26.2s							
DZM				*e*LR		LR	16 41 33.7	
	comp=Z,5μm,25.6s							
MBWA	**Marble Bar**	**38.06**	**322**	*e*P		**P**	**16 31 56.3**	**-0.3**
MBWA				LR		LR		
	comp=Z,3μm,19.0s,MS5.1							
MAW	**Mawson**	**38.08**	**218**	*e*P		**P**	**16 31 55.9**	**-0.4**
MAW				LR		LR	16 47 21.7	
MAW	**Mawson**	**38.08**	**218**	P		**P**	**16 31 56.2**	**-0.1**
	comp=Z,5.5nm,0.8s,mb4.3,baz=113,slow=11,SNR=7.6							
MAW				LR		LR	16 47 21.7	
	comp=Z,2μm,18.1s,MS5.0,baz=86,slow=36							
FITZ	**Fitzroy Crossi**	**39.06**	**332**	*e*P		**P**	**16 32 03.4**	**-1.6**
	comp=Z,10nm,1.0s,mb4.5							
FITZ	**Fitzroy Crossi**	**39.06**	**332**	LR		LR	16 47 45.2	
	comp=Z,972nm,19.5s,MS4.6,baz=94,slow=36							
KAKA	**Kakadu**	**42.80**	**344**	*e*P		**P**	**16 32 34.9**	**-0.9**
	comp=Z,19nm,0.8s,mb4.9							
KAKA	**Kakadu**	**42.80**	**344**	*e*P		**P**	**16 32 34.5**	**-1.2**
	comp=Z,64nm,0.8s,mb5.4							
PMG	**Port Moresby**	**45.23**	**5**	PFAKE			16 33 10.0	+15
PMG				LR		LR		
	comp=Z,1μm,19.0s,MS4.9							
MSVF	**Nonsavu**	**45.27**	**49**	PFAKE			16 33 10.0	+14
MSVF				LR		LR		
	comp=Z,2μm,21.0s,MS5.0							
HNR	**Honiara**	**46.93**	**22**	PFAKE			16 33 20.0	+11
HNR				LR		LR		
	comp=Z,841nm,19.0s,MS4.7							
MAIT	**Maitri**	**50.26**	**199**	*e*P		**P**	**16 33 32.9**	**-0.9**
KAPI	**Kappang**	**53.18**	**330**	PFAKE			16 34 10.0	+14
KAPI				LR		LR		
	comp=Z,861nm,19.0s,MS4.8							
AFI	**Afiamalu**	**53.35**	**58**	PFAKE			16 34 10.0	+13
AFI				LR		LR		
	comp=Z,965nm,22.0s,MS4.8							
COCO	**West Island**	**56.03**	**301**	PFAKE			16 34 30.0	+13
COCO				LR		LR		
	comp=Z,1μm,21.0s,MS4.9							
KSM	**Kuching**	**62.37**	**322**	PFAKE			16 35 10.0	+9.3
KSM				LR		LR		
	comp=Z,573nm,22.0s,MS4.7							
KSM	**Kuching**	**62.37**	**322**	P		**P**	**16 35 06.4**	**+5.7**
PPT	**Papeete**	**62.38**	**81**	*e*S		**S**	**16 43 20.2**	**-7.3**
	comp=Z,777nm,28.0s							
PPT				*e*SS		SS	16 47 32.4	+1.6
	comp=Z,157nm,28.2s							
PPT				*e*LQ			16 50 45.2	
	comp=Z,3μm,28.8s							
PPT				*e*LR		LR	16 53 17.0	
	comp=Z,1μm,23.8s,baz=220							
PPT	**Papeete**	**62.38**	**81**	LR		LR	16 55 37.2	
	comp=Z,634nm,18.8s,MS4.8,baz=222,slow=30							
DAV	**Davao City (W)**	**63.37**	**340**	PFAKE			16 35 20.0	+13
DAV				LR		LR		
	comp=Z,301nm,19.0s,MS4.5							
SDSI	**Sungai Dareh**	**63.73**	**311**	P		**P**	**16 35 10.1**	**+0.3**
	comp=Z,0.1nmcomp=Z,661nmcomp=Z,19nm,1.3s,mb5.0							
KKM	**Kota Kinabalu**	**64.71**	**329**	PFAKE			16 35 30.0	+14
KKM				LR		LR		
	comp=Z,607nm,20.0s,MS4.8							
MNSI	**Mandailing Nat**	**66.08**	**310**	P		**P**	**16 35 25.0**	**-0.1**
	comp=Z,0.1nmcomp=Z,20nm,0.9s,mb5.1							
RKT	**Rikitea**	**66.49**	**97**	*e*S		S	16 44 15.0	-3.2
	comp=Z,231nm,30.3s							
RKT				*e*LQ			16 52 15.6	
	comp=Z,1μm,34.5s							
RKT				*e*LR		LR	16 55 10.4	
	comp=Z,555nm,31.5s,baz=221							
GUMO	**Guam**	**68.00**	**1**	PFAKE			16 35 50.0	+13
GUMO				LR		LR		
	comp=Z,534nm,21.0s,MS4.8							
TPTI		**69.34**	**309**	P		**P**	**16 35 53.9**	**+8.2**
	comp=Z,0.1nmcomp=Z,430nmcomp=Z,11nm,1.7s,mb4.5							
KULM	**Kulim**	**69.64**	**313**	PFAKE			16 36 00.0	+12
KULM				LR		LR		
	comp=Z,622nm,21.0s,MS4.8							
TAOE	**Nuku Hiva Isla**	**74.79**	**84**	*e*LR		LR	16 59 03.8	
	comp=Z,1μm,23.3s,baz=226							
ABPO	**Ambohimpanom**	**78.39**	**254**	PFAKE			16 36 50.0	+11
ABPO				LR		LR		
	comp=Z,946nm,19.0s,MS5.1							
QIZ	**Qiongzhong**	**78.91**	**327**	P		**P**	**16 36 42.8**	**+1.4**
QIZ				PP		PP	16 39 42.6	+2.2
QIZ				S		S	16 46 44.3	+4.7
QIZ				SS		SS	16 51 50.5	+5.2
QIZ				pmax		pmax		
	comp=Z,79nm,5.9s							
QIZ				LR		LR		
	comp=N,250nm,23.6s,MS4.5							
QIZ				LR		LR		
	comp=E,62nm,22.1s,MS4.5							
QIZ				LR		LR		
	comp=Z,390nm,25.4s,MS4.6							
QIZ	**Qiongzhong**	**78.91**	**327**	PFAKE			16 36 50.0	+8.6
QIZ				LR		LR		
	comp=Z,246nm,22.0s,MS4.5							
SUR	**Sutherland**	**80.41**	**226**	PFAKE			16 37 00.0	+10
SUR				LR		LR		
	comp=Z,2μm,21.0s,MS5.4							
PLCA	**Paso Flores**	**80.54**	**154**	P		**P**	**16 36 49.9**	**-0.2**
PLCA	**Paso Flores**	**80.54**	**154**	P		**P**	**16 36 49.9**	**-0.2**
	comp=Z,1.9nm,0.8s,mb4.1,baz=233,slow=10,SNR=2.8							
YHNB	**Yeheng**	**81.32**	**339**	PFAKE			16 37 10.0	+16
YHNB				LR		LR		
	comp=Z,329nm,22.0s,MS4.7							
JOHN	**Johnston Islan**	**81.45**	**45**	PFAKE			16 37 10.0	+15
JOHN				LR		LR		
	comp=Z,937nm,19.0s,MS5.2							
TATO	**Taipei**	**81.60**	**340**	PFAKE			16 37 10.0	+14
TATO				LR		LR		
	comp=Z,262nm,22.0s,MS4.5							
BOSA	**Boshof**	**81.71**	**231**	P		**P**	**16 36 56.8**	**+0.2**
	comp=Z,7.5nm,1.1s,mb4.5,baz=142,slow=4.6,SNR=6.2							
BOSA				LR		LR	17 07 40.6	
	comp=Z,792nm,18.3s,MS5.1,baz=188,slow=32							
CM31	**Chiang Mai Arr**	**82.24**	**318**	PFAKE			16 37 10.0	+11
CM31				LR		LR		
	comp=Z,613nm,20.0s,MS5.0							
CMAR	**Chiang Mai Arr**	**82.24**	**318**	P		**P**	**16 36 59.5**	**+0.3**
	comp=Z,1.3nm,0.9s,mb3.9,baz=190,slow=5.8,SNR=5.1							
CMAR				LR		LR	17 12 19.3	
	comp=Z,646nm,19.8s,MS5.0,baz=172,slow=35							
CHTO	**Chiang Mai**	**82.56**	**318**	PFAKE			16 37 10.0	+9.1
CHTO				LR		LR		
	comp=Z,535nm,20.0s,MS4.9							
LBTB	**Lobatse**	**84.63**	**233**	PFAKE			16 37 20.0	+8.3
LBTB				LR		LR		
	comp=Z,1μm,19.0s,MS5.3							
MSEY	**Mahe Island**	**85.22**	**269**	PFAKE			16 37 30.0	+15
MSEY				LR		LR		
	comp=Z,650nm,22.0s,MS5.0							
KMI	**Kunming**	**86.92**	**323**	P		**P**	**16 37 26.1**	**+3.3**
KMI				pP		pP	16 37 29.3	+3.2
KMI				sP		sP	16 37 30.6	+3.3
KMI				PP		PP	16 40 51.8	+5.6
KMI				S		S	16 48 04.8	+3.9
KMI				sS		sS	16 48 08.6	+2.2
KMI				pmax		pmax		
	comp=Z,9.0nm,1.3s,mb4.8							
KMI				pmax		pmax		
	comp=Z,50nm,4.2s							
KMI				LR		LR		
	comp=N,530nm,18.8s,MS5.0							
KMI				LR		LR		
	comp=E,170nm,19.6s,MS5.0							
KMI				LR		LR		
	comp=Z,610nm,18.9s,MS5.0							
ENH	**Enshi**	**89.59**	**331**	PFAKE			16 37 50.0	+15
ENH				LR		LR		
	comp=Z,217nm,20.0s,MS4.6							
MJAR	**Matsushiro Arr**	**90.97**	**356**	P		**P**	**16 37 41.0**	**-0.5**
	comp=Z,4.5nm,1.1s,mb4.7,baz=183,slow=5.3,SNR=6.0							
MJAR				LR		LR	17 16 31.0	
	comp=Z,205nm,20.7s,MS4.5,baz=190,slow=34							
MAJO	**Matsushiro**	**90.97**	**356**	PFAKE			16 37 50.0	+8.4
MAJO				LR		LR		
	comp=Z,234nm,19.0s,MS4.6							
LSZ	**Lusaka**	**91.65**	**241**	*e*P		**P**	**16 37 47.8**	**+2.4**
	comp=Z,6.3nm,1.1s,mb4.9							
LSZ				LR		LR		
	comp=Z,1μm,19.0s,MS5.4							
CD2	**Chengdu**	**91.92**	**326**	P		**P**	**16 37 47.5**	**+1.3**
CD2				pP		pP	16 37 52.3	+2.8
CD2				sP		sP	16 37 54.5	+3.8
CD2				PP		PP	16 41 30.4	+4.4
CD2				SKS			16 48 18.4	
CD2				S		S	16 48 47.0	-0.3
CD2				sS		sS	16 48 55.1	+2.2
CD2				SS		SS	16 55 00.4	+3.8
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb5.4							
CD2				pmax		pmax		
	comp=Z,120nm,5.4s							
CD2				LR		LR		
	comp=N,270nm,21.1s,MS4.9							
CD2				LR		LR		
	comp=E,290nm,16.2s,MS4.9							
CD2				LR		LR		
	comp=Z,340nm,23.5s							
KSRS	**Korea Array**	**92.76**	**347**	P		**P**	**16 37 49.9**	**0.0**
	comp=Z,0.3nm,0.5s,mb4.0,baz=169,slow=6.6,SNR=2.4							
KSRS				LR		LR	17 20 43.3	
	comp=Z,140nm,19.0s,MS4.4,baz=350,slow=36							
INCN	**Inchon**	**92.96**	**346**	PFAKE			16 38 00.0	+9.2
INCN				LR		LR		
	comp=Z,264nm,21.0s,MS4.7							
ERM	**Erimo**	**96.31**	**360**	PFAKE			16 38 20.0	+14
ERM				LR		LR		
	comp=Z,351nm,20.0s,MS4.8							
LZH	**Lanzhou**	**96.68**	**328**	*e*P		**P**	**16 38 10.6**	**+2.7**
LZH				pP		pP	16 38 13.9	+2.7
LZH				sP		sP	16 38 16.6	+4.2
LZH				PP		PP	16 42 06.1	+3.0
LZH				pmax		pmax		
	comp=Z,18nm,1.0s,mb5.5							
LZH				pmax		pmax		
	comp=Z,72nm,4.1s							
LZH				LR		LR		
	comp=N,240nm,14.2s							
LZH				LR		LR		
	comp=Z,400nm,14.7s,MS5.0							
BJT	**Baijiatuan**	**97.23**	**339**	PFAKE			16 38 20.0	+10
BJT				LR		LR		
	comp=Z,216nm,20.0s,MS4.6							
ASAJ	**Asahikawa**	**98.42**	**359**	LR		LR	17 23 15.4	
	comp=Z,217nm,18.6s,MS4.7,baz=171,slow=36							
KMBO	**Kilima Mbogo**	**98.57**	**256**	PFAKE			16 38 30.0	+13
KMBO				LR		LR		
	comp=Z,497nm,20.0s,MS5.0							
KMBO	**Kilima Mbogo**	**98.57**	**256**	LR		LR	17 14 58.0	
	comp=Z,482nm,19.2s,MS5.0,baz=90,slow=31							
HHC	**Hu-ho-hao-te**	**99.06**	**336**	*e*P		**P**	**16 38 19.3**	**+0.9**
HHC				pP		pP	16 38 22.8	+1.0
HHC				sP		sP	16 38 26.3	+3.3
HHC				PP		PP	16 42 24.9	+3.6
HHC				SKS			16 48 55.4	
HHC				*e*S		S	16 49 46.4	-2.4
HHC				sS		sS	16 49 54.3	0.0
HHC				SS		SS	16 56 39.5	+1.8
HHC				pmax		pmax		
	comp=Z,23nm,0.8s,mb5.8							
HHC				pmax		pmax		
	comp=Z,62nm,5.6s							
HHC				LR		LR		
	comp=N,110nm,16.7s,MS4.6							
HHC				LR		LR		
	comp=E,150nm,19.0s,MS4.6							
HHC				LR		LR		
	comp=Z,210nm,20.6s,MS4.6							
MDJ	**Mudanjiang**	**99.64**	**350**	P		Pdif	16 38 22.5	+0.7
MDJ						PP	PP	16 42 29.1	+3.4
MDJ						S	S	16 49 57.5	+4.0
MDJ						SS	SS	16 56 49.4	+3.6
MDJ						pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.7								
MDJ						pmax	pmax		
	comp=Z,48nm,4.9s								
MDJ						LR	LR		
	comp=N,220nm,23.5s								
MDJ						LR	LR		
	comp=E,100nm,30.5s								
MDJ						LR	LR		
	comp=Z,300nm,23.5s,MS4.7								
MDJ	**Mudanjiang**	**99.64**	**350**	PFAKE			16 38 30.0	+8.2
MDJ				LR		LR			
	comp=Z,233nm,22.0s,MS4.6								
MBAR	**Mbarara**	**102.62**	**251**	PFAKE			16 38 50.0	+15
MBAR				LR		LR			
	comp=Z,458nm,21.0s,MS5.0								
LPAZ	**La Paz**	**104.29**	**148**	PFAKE			16 38 50.0	+7.5
LPAZ				LR		LR			
	comp=Z,330nm,22.0s,MS4.8								
NNA	**Nana**	**105.29**	**139**	PFAKE			16 43 10.0	+9.1
NNA				LR		LR			
	comp=Z,281nm,20.0s,MS4.8								
HIA	**Hailar**	**105.51**	**344**	PFAKE			16 43 10.0	+10
HIA				LR		LR			
	comp=Z,314nm,20.0s,MS4.8								
NIL	**Nilore**	**106.69**	**305**	PFAKE			16 43 10.0	+7.1
NIL				LR		LR			
	comp=Z,56nm,21.0s,MS4.1								
PET	**Petropavlovsk**	**108.04**	**9**	PFAKE			16 43 20.0	+15
PET				LR		LR			
	comp=Z,268nm,19.0s,MS4.8								
WMQ	**Urumqi**	**109.08**	**321**	*e*Pdif		Pdif	16 39 05.8	+2.0
WMQ				PP		PP	16 43 41.8	+5.9
WMQ				S		Sdif	16 51 10.8	-3.0
WMQ				LR		LR			
	comp=N,180nm,21.4s,MS4.7								
WMQ				LR		LR			
	comp=E,160nm,23.8s,MS4.7								
WMQ				LR		LR			
	comp=Z,230nm,22.1s,MS4.7								
PAYG	**Puerto Ayora**	**109.37**	**121**	PFAKE			16 43 20.0	+11
PAYG				LR		LR			
	comp=Z,733nm,20.0s,MS5.2								
TLY	**Talaya**	**111.12**	**335**	PFAKE			16 43 20.0	+9.4
TLY				LR		LR			
	comp=Z,217nm,20.0s,MS4.7								
AML	**Almayashu**	**113.37**	**310**	PFAKE			16 43 30.0	+15
AML				LR		LR			
	comp=Z,279nm,22.0s,MS4.8								
AAK	**Ala-Archa**	**113.42**	**311**	PFAKE			16 43 30.0	+15
AAK				LR		LR			
	comp=Z,220nm,20.0s,MS4.8								
EKS2	**Erkin-Say**	**113.75**	**311**	PFAKE			16 43 30.0	+14
EKS2				LR		LR			
	comp=Z,198nm,20.0s,MS4.7								
OTAV	**Otavalo**	**115.70**	**132**	PFAKE			16 43 30.0	+9.4
OTAV				LR		LR			
	comp=Z,155nm,19.0s,MS4.6								
KURK	**Kurchatov**	**118.23**	**319**	PFAKE			16 43 40.0	+16
KURK				LR		LR			
	comp=Z,180nm,19.0s,MS4.7								
RCBR	**Riachuelo**	**119.72**	**180**	PFAKE			16 43 40.0	+12
RCBR				LR		LR			
	comp=Z,570nm,19.0s,MS5.2								
JTS	**JuntasAbangare**	**121.45**	**120**	PFAKE			16 43 40.0	+8.4
JTS				LR		LR			
	comp=Z,256nm,21.0s,MS4.8								
SAO	**San Andreas Ge**	**121.61**	**70**	PFAKE			16 43 40.0	+8.8
SAO				LR		LR			
	comp=Z,326nm,19.0s,MS5.0								
MCCM	**Marconi Confer**	**121.84**	**68**	PFAKE			16 43 40.0	+8.4
MCCM				LR		LR			
	comp=Z,268nm,19.0s,MS4.9								
PFO	**Pinyon Flat Ob**	**122.07**	**76**	PFAKE			16 43 40.0	+7.8
PFO				LR		LR			
	comp=Z,440nm,19.0s,MS5.1								
HOPS	**Hopland**	**122.36**	**67**	PFAKE			16 43 40.0	+7.4
HOPS				LR		LR			
	comp=Z,432nm,19.0s,MS5.1								
BCIP	**Isla Barro Col**	**122.98**	**126**	PFAKE			16 43 50.0	+15
BCIP				LR		LR			
	comp=Z,245nm,22.0s,MS4.8								
CMB	**Columbia Colle**	**123.11**	**70**	PFAKE			16 43 40.0	+6.0
CMB				LR		LR			
	comp=Z,365nm,20.0s,MS5.0								
BRVK	**Borovoye**	**123.31**	**316**	PFAKE			16 43 50.0	+16
BRVK				LR		LR			
	comp=Z,269nm,20.0s,MS4.9								
KDAK	**Kodiak Island**	**123.32**	**35**	PFAKE			16 43 40.0	+6.2
KDAK				LR		LR			
	comp=Z,648nm,19.0s,MS5.3								
DAC	**Darwin (Calif)**	**123.38**	**73**	PFAKE			16 43 50.0	+15
DAC				LR		LR			
	comp=Z,476nm,19.0s,MS5.2								
TGUH	**Tegucigalpa,Un**	**123.44**	**115**	PFAKE			16 43 50.0	+15
TGUH				LR		LR			
	comp=Z,117nm,19.0s,MS4.6								
WDC	**Whiskeytown Da**	**123.79**	**66**	PFAKE			16 43 50.0	+15
WDC				LR		LR			
	comp=Z,557nm,19.0s,MS5.2								
YBH	**Yreka Blue Hor**	**124.52**	**65**	PFAKE			16 43 50.0	+13
YBH				LR		LR			
	comp=Z,437nm,19.0s,MS5.1								
NVAR	**Mina Array Bea**	**124.54**	**71**	PKP		PKPdf	16 43 37.2	+0.4
	comp=Z,1.4nm,0.9s,baz=196,slow=3.2,SNR=6.1								
HUMO	**Hull Mountain**	**125.01**	**64**	PFAKE			16 43 50.0	+12
HUMO				LR		LR			
	comp=Z,523nm,20.0s,MS5.2								
DBIC	**Dimbokro**	**125.90**	**220**	PFAKE			16 43 50.0	+10
DBIC				LR		LR			
	comp=Z,331nm,19.0s,MS5.0								
COR	**Corvallis**	**126.21**	**62**	PFAKE			16 43 50.0	+10
COR				LR		LR			
	comp=Z,572nm,20.0s,MS5.2								
TXAR	**Lajitas Array**	**126.27**	**89**	PKP		PKPdf	16 43 39.8	-0.6
	comp=Z,0.8nm,0.9s,baz=193,slow=5.1,SNR=6.0								
GNI	**Garni**	**126.33**	**290**	PFAKE			16 43 50.0	+10
GNI				LR		LR			
	comp=Z,237nm,20.0s,MS4.9								
TIXI	**Tiksi**	**126.46**	**354**	PFAKE			16 43 50.0

HAWA LR LR
comp=Z,430nm,20.0s,MS5.1
BMO Blue Mountains 129.52 66 PFAKE 16 44 00.0 +14
BMO LR LR
comp=Z,460nm,20.0s,MS5.2
KIV Kislovodsk 130.05 292 PFAKE 16 44 00.0 +13
KIV LR LR
comp=Z,196nm,20.0s,MS4.8
COLA College 130.15 31 PFAKE 16 44 00.0 +13
COLA LR LR
comp=Z,586nm,22.0s,MS5.2
HLID Hailey 131.20 69 PFAKE 16 44 00.0 +13
HLID LR LR
comp=Z,266nm,21.0s,MS4.9
ILAR Eielson Array 130.37 32 PKP PKPdf 16 43 48.1 +1.0
comp=Z,0.6nm,0.7s,baz=246,slow=3.1,SNR=6.0
HWUT Hardware Ranch 130.46 72 PFAKE 16 44 00.0 +12
HWUT LR LR
comp=Z,312nm,19.0s,MS5.0
ARU Arti 130.52 313 PFAKE 16 44 00.0 +12
ARU LR LR
comp=Z,236nm,22.0s,MS4.8
SDCO Great Sand Dun 131.25 80 PFAKE 16 44 00.0 +10
SDCO LR LR
comp=Z,243nm,20.0s,MS4.9
HKT Hockley 131.27 95 PFAKE 16 44 00.0 +10
HKT LR LR
comp=Z,248nm,19.0s,MS4.9
AMTX Amarillo 131.45 86 PFAKE 16 44 00.0 +10
AMTX LR LR
comp=Z,431nm,21.0s,MS5.1
AHID Auburn Hatcher 131.49 72 PFAKE 16 44 00.0 +10
AHID LR LR
comp=Z,239nm,20.0s,MS4.9
NEW Newport 131.85 62 PFAKE 16 44 00.0 +10
NEW LR LR
comp=Z,379nm,20.0s,MS5.1
MTDJ Mount Denham 131.91 123 PFAKE 16 44 00.0 +8.6
MTDJ LR LR
comp=Z,356nm,21.0s,MS5.0
EGAK Eagle 132.18 34 PFAKE 16 44 00.0 +10
EGAK LR LR
comp=Z,479nm,22.0s,MS5.2
BW06 Boulder Array 132.34 73 PFAKE 16 44 00.0 +8.5
BW06 LR LR
comp=Z,289nm,19.0s,MS5.0
ISCO Idaho Springs 132.59 78 PFAKE 16 44 00.0 +8.0
ISCO LR LR
comp=Z,425nm,20.0s,MS5.2
MSO Missoula 132.60 66 PFAKE 16 44 00.0 +8.2
MSO LR LR
comp=Z,341nm,21.0s,MS5.0
WMOK Wichita Mounta 133.03 88 *e*PKPdf PKPdf 16 43 52.1 -1.0
LKWY Lake 133.05 70 PFAKE 16 44 00.0 +7.2
LKWY LR LR
comp=Z,337nm,19.0s,MS5.1
BOZ Bozeman (W) 133.08 68 PFAKE 16 44 00.0 +7.2
BOZ LR LR
comp=Z,354nm,20.0s,MS5.1
GRGR Grenville 133.09 145 PFAKE 16 44 00.0 +6.2
GRGR LR LR
comp=Z,250nm,21.0s,MS4.9
NATX Nacogdoches 133.28 95 PFAKE 16 44 00.0 +6.4
NATX LR LR
comp=Z,31nm,19.0s,MS4.0
RLMT Red Lodge 134.03 70 PFAKE 16 44 10.0 +15
RLMT LR LR
comp=Z,313nm,19.0s,MS5.0
GTBY Guantanamo Bay 134.54 124 PFAKE 16 44 10.0 +14
GTBY LR LR
comp=Z,272nm,19.0s,MS5.0
CBKS Cedar Bluff 135.29 84 PFAKE 16 44 10.0 +13
CBKS LR LR
comp=Z,250nm,20.0s,MS4.9
OGNE Ogallala 135.39 80 PFAKE 16 44 10.0 +13
OGNE LR LR
comp=Z,354nm,20.0s,MS5.1
SDDR Presa de Saban 135.50 129 PFAKE 16 44 10.0 +12
SDDR LR LR
comp=Z,174nm,19.0s,MS4.8
TAM Tamanrasset 135.50 241 PFAKE 16 44 10.0 +12
TAM LR LR
comp=Z,381nm,22.0s,MS5.1
EGMT Eagleton 135.57 67 PFAKE 16 44 10.0 +13
EGMT LR LR
comp=Z,385nm,20.0s,MS5.1
MIAR Mount Ida 135.92 93 PFAKE 16 44 10.0 +12
MIAR LR LR
comp=Z,245nm,19.0s,MS5.0
VBMS Vicksburg 136.01 98 PFAKE 16 44 10.0 +11
VBMS LR LR
comp=Z,218nm,20.0s,MS4.9
LAO LASA Array 136.67 70 PFAKE 16 44 10.0 +11
LAO LR LR
comp=Z,331nm,19.0s,MS5.1
SJG San Juan 136.92 136 PFAKE 16 44 10.0 +9.2
SJG LR LR
comp=Z,205nm,20.0s,MS4.9
BRAL Brewton 137.10 102 PFAKE 16 44 10.0 +9.2
BRAL LR LR
comp=Z,471nm,19.0s,MS5.2
KSU1 Kansas State U 137.29 86 PFAKE 16 44 10.0 +9.1
KSU1 LR LR
comp=Z,390nm,20.0s,MS5.1
GRTK Grand Turk 137.77 128 PFAKE 16 44 10.0 +7.7
GRTK LR LR
comp=Z,194nm,20.0s,MS4.8
DWPF Disney 138.01 111 PFAKE 16 44 10.0 +7.5
DWPF LR LR
comp=Z,226nm,19.0s,MS4.9
ANWB Willy Bob 138.18 142 PFAKE 16 44 10.0 +6.8
ANWB LR LR
comp=Z,261nm,20.0s,MS5.0
LRAL Lakeview Retre 138.63 100 PFAKE 16 44 10.0 +6.5
LRAL LR LR
comp=Z,257nm,20.0s,MS5.0
DGMT Dagmar 138.83 70 PFAKE 16 44 10.0 +6.6
DGMT LR LR
comp=Z,562nm,20.0s,MS5.3
OBN Obninsk 139.89 302 PFAKE 16 44 20.0 +15
OBN LR LR
comp=Z,192nm,20.0s,MS4.8
ECSD EROS Data Cent 140.26 80 PFAKE 16 44 20.0 +14
ECSD LR LR
comp=Z,216nm,20.0s,MS4.9
WDD Wield Dalam 140.64 263 PFAKE 16 44 20.0 +13
WDD LR LR
comp=Z,507nm,21.0s,MS5.2
GOGA Godfrey 140.91 103 PFAKE 16 44 20.0 +12
GOGA LR LR
comp=Z,311nm,19.0s,MS5.1
SCIA State Center 141.08 85 PFAKE 16 44 20.0 +12
SCIA LR LR
comp=Z,339nm,20.0s,MS5.1
TIR Tirane 141.22 274 PFAKE 16 44 20.0 +12
TIR LR LR
comp=Z,210nm,22.0s,MS4.8
KIEV Kiev 141.41 292 PFAKE 16 44 20.0 +12
KIEV LR LR
comp=Z,248nm,19.0s,MS5.0
CEL Celeste 141.50 267 PFAKE 16 44 20.0 +11
CEL LR LR
comp=Z,348nm,20.0s,MS5.1
TIP Timpagrande 141.61 269 PFAKE 16 44 20.0 +11
TIP LR LR
comp=Z,272nm,20.0s,MS5.0
HDIL Hopedale 142.49 90 PFAKE 16 44 20.0 +10
HDIL LR LR
comp=Z,482nm,20.0s,MS5.3
CUC Castrocucco 142.69 269 PFAKE 16 44 20.0 +9.4
CUC LR LR
comp=Z,157nm,21.0s,MS4.8
FFC Flin Flon 143.28 62 PFAKE 16 44 20.0 +8.8
FFC LR LR
comp=Z,385nm,19.0s,MS5.2
AGMN Agassiz Nation 143.34 75 *e*PKPdf PKPdf 16 44 09.3 -2.2
AGMN LR LR
comp=Z,457nm,21.0s,MS5.2
JFWS Jewell Farm 143.43 86 PFAKE 16 44 20.0 +8.2
JFWS LR LR
comp=Z,450nm,20.0s,MS5.2
KWP Kalwaria Pacla 144.41 287 PFAKE 16 44 20.0 +6.7
KWP LR LR
comp=Z,433nm,21.0s,MS5.2
CRVS Cervenica-Dubn 144.72 285 *e*PKP PKPdf 16 44 12.1 -1.8
CRVS *e* 16 44 15.6
CRVS Cervenica-Dubn 144.72 285 *e*PKP PKPdf 16 44 12.1 -1.8
CRVS *e* 16 44 15.6
KECS Kecovo 145.05 284 *e*PKP PKPdf 16 44 13.6 -0.9
KECS *e* 16 44 17.7
KECS Kecovo 145.05 284 *e*PKP PKPdf 16 44 13.6 -0.9
KECS *e* 16 44 17.6
PSZ Piszkesteto 145.08 283 PFAKE 16 44 30.0 +16
PSZ LR LR
comp=Z,185nm,21.0s,MS4.8
PSZ Piszkesteto 145.08 283 *e*PKP PKPdf 16 44 16.3 +1.8
STHS Stebnicka Huta 145.11 286 *e*PKP PKPdf 16 44 15.2 +0.7
STHS Stebnicka Huta 145.11 286 *e*PKP PKPdf 16 44 15.2 +0.7
BUD Budapest 145.34 281 *e*PKP PKPdf 16 44 16.6 +1.6
BLA Blacksburg 145.37 102 PFAKE 16 44 30.0 +15
BLA LR LR
comp=Z,207nm,21.0s,MS4.9
CNNC Cliffs of the 145.38 107 PFAKE 16 44 30.0 +15
CNNC LR LR
comp=Z,177nm,20.0s,MS4.8
AQU L'Aquila 145.60 270 PFAKE 16 44 30.0 +14
AQU LR LR
comp=Z,239nm,20.0s,MS5.0
JOF Joensuu 145.61 312 *e*P PKPdf 16 44 11.8 -3.2
JOF Joensuu 145.61 312 *e*p PKPdf 16 44 11.8 -3.2
comp=Z,3.7nm,0.7s
EYMN Ely 145.61 78 *e*PKPdf PKPdf 16 44 14.4 -1.0
EYMN LR LR
comp=Z,429nm,22.0s,MS5.2
NIE Niedzica 145.63 285 *e*PX PKPdf 16 44 16.4 +1.0
COWI Conover 145.95 82 *e*PKPdf PKPdf 16 44 14.4 -1.7
COWI LR LR
comp=Z,409nm,21.0s,MS5.2
VYHS Vyhne 145.99 283 *e*PKP PKPdf 16 44 16.0 -0.1
VYHS *e* 16 44 19.6
VYHS Vyhne 145.99 283 *e*PKP PKPdf 16 44 16.0 -0.1
VYHS *e* 16 44 19.6
VSL Villasalto 146.09 263 PFAKE 16 44 30.0 +13
VSL LR LR
comp=Z,315nm,20.0s,MS5.1
SUW Suwalki 146.25 294 *e*PKPbc PKPbc 16 44 16.1 -1.3
OJC Ojcow 146.33 286 *e*PX PKPdf 16 44 17.1 +0.5
SOP Sopron 146.85 280 *e*PKP PKPab 16 44 21.9 +1.1
AAM Ann Arbor 146.88 92 PFAKE 16 44 30.0 +12
AAM LR LR
comp=Z,425nm,20.0s,MS5.2
OKC Ostrava-Krasne 147.06 284 *e*PKP PKPab 16 44 22.6 +1.0
SOKA Soboth 147.19 277 *i* PKPbc PKPbc 16 44 20.1 -0.3
comp=Z,11nm,1.1s
ARSA Arzberg 147.22 279 *i* PKPdf PKPdf 16 44 19.3 +1.1
comp=Z,7.4nm,1.2s
MCWV Mont Chateau 147.37 99 PFAKE 16 44 30.0 +11
MCWV LR LR
comp=Z,295nm,20.0s,MS5.1
TRI Trieste 147.38 275 PFAKE 16 44 30.0 +11
TRI LR LR
comp=Z,227nm,20.0s,MS5.0
FINES FINESS Array B 147.51 308 PKPbc PKPbc 16 44 19.6 -1.3
comp=Z,9.2nm,0.9s,baz=114,slow=4.0,SNR=14
KAF Kangasniemi 147.59 309 *e*P PKPdf 16 44 19.1 +0.8
KAF Kangasniemi 147.59 309 *e*p PKPdf 16 44 19.1 +0.8
CBN Corbin 147.79 104 PFAKE 16 44 30.0 +11
CBN LR LR
comp=Z,327nm,21.0s,MS5.1
PGF Pioggiola 148.28 266 *e*PKP1 PKPbc 16 44 23.1 -0.4
TREC Trest 148.30 282 *e*PKP PKPbc 16 44 24.1 +0.8
DPC Dobruska-Polom 148.34 284 *e*PKP PKPdf 16 44 22.5 +2.6
KEV Kevo 148.66 323 PFAKE 16 44 30.0 +10
KEV LR LR
comp=Z,249nm,19.0s,MS5.0
ERPA Erie 148.89 95 PFAKE 16 44 30.0 +8.9
ERPA LR LR
comp=Z,250nm,20.0s,MS5.0
ARCES ARCESS Array B 149.17 323 PKPbc PKPbc 16 44 22.6 -2.3
comp=Z,11nm,1.1s,baz=134,slow=5.2,SNR=8.5
PRU Pruhonice 149.17 283 AMS AMS 17 56 20.0
KHC Kasperske Hory 149.30 281 *e*PKP PKPbc 16 44 27.8 +1.9
KHC AMS AMS 17 54 50.0
FETA Feichten 149.86 275 *i* PKPdf PKPdf 16 44 21.4 -1.1
comp=Z,9.5nm,1.2s
BRG Berggiesshubel 149.92 284 *e*P PKPbc 16 44 27.3 0.0
comp=Z,5.0nm,1.0s
DAVOX Davos/Dischmat 150.22 274 PKPbc PKPbc 16 44 29.0 +0.8
comp=Z,5.0nm,0.9s,baz=90,slow=4.0,SNR=2.3
FRF La Foret Royal 150.26 266 *e*PKP1 PKPbc 16 44 27.8 -0.6
comp=Z,16nm,0.8s
CLL Collm 150.65 284 *i* PKPbc PKPbc 16 44 31.1 +2.0
comp=Z,16nm,1.6s
KBS Kingsbay 150.87 343 PFAKE 16 44 30.0 +6.8
KBS LR LR
comp=Z,337nm,22.0s,MS5.1
MBDF Montbardon 150.88 268 *e*PKP1 PKPbc 16 44 29.5 -0.3
comp=Z,16nm,0.7s
SMRF Simiane la Rot 151.13 266 *e*PKP1 PKPbc 16 44 30.0 -0.5
BINY Binghamton 151.24 99 *e*PKPbc PKPbc 16 44 29.6 -1.2
BINY LR LR
comp=Z,291nm,20.0s,MS5.1
LPG La Plagne 151.33 269 *e*PKP1 PKPbc 16 44 30.1 -0.8
comp=Z,7.2nm,0.7s
LPL La Plagne 151.35 269 *e*PKP1 PKPbc 16 44 30.2 -0.7
ORIF Oris-en-Rattie 151.51 268 *e*PKP1 PKPbc 16 44 30.9 -0.4
BFO Black Forest 151.92 276 PFAKE 16 44 40.0 +14
BFO LR LR
comp=Z,133nm,19.0s,MS4.8
CABF La Chapelle 152.33 271 *e*PKP1 PKPbc 16 44 32.2 -0.9
comp=Z,18nm,0.8s
SSB Saint Sauveur 152.49 267 PFAKE 16 44 40.0 +13
SSB LR LR
comp=Z,373nm,19.0s,MS5.2
SFS San Fernando 152.50 241 PFAKE 16 44 40.0 +13
SFS LR LR
comp=Z,3μm,21.0s,MS6.0
HINF Hinteralfeld 152.52 274 *e*PKP1 PKPbc 16 44 31.7 -1.8
ECH Echery 152.54 275 PFAKE 16 44 40.0 +13
ECH LR LR
comp=Z,234nm,20.0s,MS5.0
HAU Haudompre 152.91 274 *e*PKP1 PKPbc 16 44 32.9 -1.4
NCB Newcomb 153.35 98 PFAKE 16 44 40.0 +12
NCB LR LR
comp=Z,322nm,19.0s,MS5.2
LONY Lake Ozonia 153.53 96 *e*PKPbc PKPbc 16 44 35.3 -0.6
LONY LR LR
comp=Z,410nm,20.0s,MS5.2
SMF Signal de Mont 153.65 269 *e*PKP1 PKPbc 16 44 35.2 -0.8
ESLA Sonseca Array 153.71 249 PFAKE 16 44 40.0 +11
ESLA LR LR
comp=Z,5μm,22.0s,MS6.2
WLF Walferdange 153.82 277 PFAKE 16 44 40.0 +12
WLF LR LR
comp=Z,499nm,19.0s,MS5.3
PAB San Pablo 153.83 248 PFAKE 16 44 40.0 +11
PAB LR LR
comp=Z,555nm,20.0s,MS5.4
LBNH Lisbon 154.84 100 PFAKE 16 44 40.0 +10
LBNH LR LR
comp=Z,438nm,22.0s,MS5.2
MTE Manteigas 156.15 245 PFAKE 16 44 40.0 +8.1
MTE LR LR
comp=Z,862nm,20.0s,MS5.6
PKME Peaks-Kenny Pk 156.95 100 PFAKE 16 44 40.0 +7.3
PKME LR LR
comp=Z,399nm,19.0s,MS5.3
SCHQ Schefferville 162.41 77 PFAKE 16 44 50.0 +11
SCHQ LR LR
comp=Z,747nm,22.0s

DJA **13** *16:36:54.0*±*0.77S*×*120.95E*±*0.1*, ***h15***km, **MLv3.5/6, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	**1.12**	**263**	P	Pb	16 37 13.7	-1.4
PCI	**Palu**	**1.12**	**263**	P	Pb	16 37 16.7	+1.6
	4μm400nm,0.6s						
MRSI	**Marisa**	**1.59**	**39**	P	Pn	16 37 18.8	-2.8
LUWI	**Luwuk**	**1.84**	**98**	P	Pn	16 37 26.9	+1.8
TOLI	**Toli-Toli**	**1.89**	**355**	P	Pn	16 37 27.2	+1.5
TOLI	**Toli-Toli**	**1.89**	**355**	P	Pn	16 37 30.8	+5.1
TTSI	**Tana Toraja**	**2.53**	**207**	P	Pn	16 37 35.2	+0.7
SPSI	**Sidrap Palu**	**3.38**	**200**	P	Pn	16 37 46.9	+0.6
SPSI	**Sidrap Palu**	**3.38**	**200**	P	Pg	16 37 56.8	-2.1

IDC **13** *16:37:10.9*±*5.1, 1.°14N*×*100.°00E, h0*km, *mb3.5/5, mb1 3.6/5, mb1mx3.4/22, mbtmp3.5/5, Error ellipse: s-maj=301.5km s-min=21.9km az=53.0*
ISCJB **13** *16:37:31.8*±*0.7, 1.°0N*±*0.°1*×*100.°0E*±*0.°1, h209*km±*7km, mb3.1/5, Error ellipse: s-maj=19.6km s-min=14.1km az=138.7*
DJA **13** *16:37:34, 1.°01N*×*100.°01E, h186*km, *MLv3.2/5*
ISC 13 16:37:32.8±0.7, **1.°0N**±0.°1×**100.°0E**±0.°1, **h203**km±7km, **n10, σ0s44/12, mb3.1/5, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNSI	**Mandailing Nat**	**0.47**	**242**	P	Pn	**16 38 00.3**	**+0.1**
MNSI				S	Sn	**16 38 21.1**	**-0.3**
GSI	**Gunungsitoli**	**2.44**	**277**	P	Pn	**16 38 17.2**	**+0.9**
GSI				S	Sn	**16 38 49.7**	**-0.4**
SISI	**Saibi**	**2.50**	**201**	P	Pn	**16 38 16.6**	**-0.4**
IPM	**Ipoh**	**3.59**	**17**	P	Pn	**16 38 29.6**	**-0.1**
TPTI		**3.59**	**308**	P	Pn	**16 38 30.3**	**+0.6**
WRA	**Warramunga Arr**	**39.58**	**124**	P	P	**16 44 44.7**	**+0.1**
	0.5nm,0.4s,mb3.3,baz=303,slow=8.9,SNR=5.1						
ASAR	**Alice Springs**	**41.08**	**129**	P	P	**16 44 57.3**	**+0.4**
	0.3nm,0.8s,mb2.8,baz=306,slow=8.4,SNR=4.3						
MKAR	**Makanchi Array**	**48.14**	**344**	P	P	**16 45 52.5**	**+0.2**
	0.4nm,0.3s,mb3.2,baz=150,slow=8.1,SNR=6.1						
KURK	**Kurchatov**	**52.73**	**343**	P	P	**16 46 26.1**	**-0.5**
	0.2nm,0.5s,mb2.8,baz=158,slow=6.8,SNR=2.7						
BVAR	**Borovoye Array**	**57.37**	**339**	P	P	**16 46 59.2**	**-0.5**
	0.5nm,0.4s,mb3.5,baz=138,slow=11,SNR=4.0						

ISCJB **13** *16:38:47.5*±*0.9, 36.°75N*±*0.°05*×*29.°90E*±*0.°06, h8*km±*5km, Error ellipse: s-maj=8.7km s-min=7.5km az=27.2*
DDA **13** *16:38:47.3, 36.°76N*×*29.°97E, h7*km±*10km, Md2.8*
CSEM **13** *16:38:47.2*±*0.6, 36.°75N*×*29.°90E, h8*km, *MD2.8, Error ellipse: s-maj=13.0km s-min=10.7km az=68.0*
ISC 13 16:38:47.5±0.9, **36.73N**±0.°05×**29.90E**±0.°06, **h10**km±5km, **n14, σ1s12/27, 1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELL	**Elmali**	**0.02**	**25**	*e*PG	**Pg**	**16 38 48.8**	**-0.5**
ELL				*e*SG	**Sg**	**16 38 50.5**	**0.0**
ELL	**Elmali**	**0.02**	**25**	*e*Pg	**Pg**	**16 38 48.8**	**-0.5**
ELL				*e*Sg	**Sg**	**16 38 50.6**	**0.0**
KORT	**Korkueli**	**0.45**	**53**	*i* P	**Pg**	**16 38 55.6**	**-0.8**
KORT				*i* S	**Sg**	**16 39 03.6**	**+1.2**
KORT	**Korkueli**	**0.45**	**53**	*i* P	**Pg**	**16 38 55.6**	**-0.8**
KORT				*i* S	**Sg**	**16 39 03.6**	**+1.2**
GLHS	**Glhisar (BURDU**	**0.53**	**323**	*e*PG	**Pg**	**16 38 56.5**	**-1.4**
GLHS				*e*SG	**Sg**	**16 39 05.2**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.53**	**323**	*e*Pg	**Pg**	**16 38 56.5**	**-1.4**
GLHS				*e*Sg	**Sg**	**16 39 05.2**	**+0.3**
AKAS	**Kas**	**0.55**	**206**	*e*P	**Pg**	**16 38 58.5**	**+0.4**
AKAS				*e*S	**Sg**	**16 39 10.8**	**+5.5**
AKAS	**Kas**	**0.55**	**206**	*e*P	**Pg**	**16 38 58.5**	**+0.4**
GOLH	**Golhisar**	**0.57**	**332**	*e*P	**Pg**	**16 38 55.7**	**-3.0**
GOLH				*e*S	**Sg**	**16 39 06.2**	**0.0**
GOLH	**Golhisar**	**0.57**	**332**	*e*P	**Pg**	**16 38 55.7**	**-2.9**
GOLH				*e*S	**Sg**	**16 39 06.2**	**0.0**
DNZL	**Cakiroluk**	**1.18**	**325**	*e*P	**Pb**	**16 39 12.2**	**+2.3**
DNZL				*e*S	**Sg**	**16 39 26.6**	**+1.2**
DNZL	**Cakiroluk**	**1.18**	**325**	*e*P	**Pb**	**16 39 12.2**	**+2.3**
DNZL				*e*S	**Sg**	**16 39 26.6**	**+1.2**
KHAL	**Karahalli**	**1.67**	**349**	*e*P	**Pn**	**16 39 16.8**	**0.0**
KHAL				*e*S	**Sn**	**16 39 37.1**	**-1.2**
KHAL	**Karahalli**	**1.67**	**349**	*e*P	**Pn**	**16 39 16.8**	**0.0**
KHAL				*e*S	**Sn**	**16 39 37.1**	**-1.1**

IDC **13** *16:45:16.9*±*3.5, 9.°00S*×*108.°02E, h0*km, *mb3.5/6, mb1 3.7/7, mb1mx3.5/20, mbtmp3.5/7, ML3.3/1, Error ellipse: s-maj=182.6km s-min=18.0km az=47.0*
ISCJB **13** *16:45:18.6*±*1.3, 9.°52S*±*0.°08*×*107.°56E*±*0.°05, h43*km±*13km, mb3.4/6, Error ellipse: s-maj=14.1km s-min=7.8km az=21.6*
DJA **13** *16:45:19, 9.°41S*×*107.°59E, h20*km, *MLv4.0/10*
ISC 13 16:45:20.0±2.3, **9.°51S**±0.°06×**107.°55E**±0.°05, **h34**km±19km, **n18, σ0s71/22, mb3.4/6, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**1.96**	**8**	P	**Pn**	**16 45 49.7**	**-1.1**
CISI				S	**Sn**	**16 46 14.1**	**-0.1**
LEM	**Lembang**	**2.67**	**1**	P	**Pn**	**16 46 00.5**	**0.0**
SKJI	**Sukabumi**	**2.67**	**338**	P	**Pn**	**16 46 00.9**	**+0.3**
BJII	**Banjamegara**	**3.04**	**45**	P	**Pn**	**16 46 06.1**	**+0.5**
BJII				S	**Sn**	**16 46 41.5**	**+0.6**
UGM	**Wanagama**	**3.34**	**62**	P	**Pn**	**16 46 08.9**	**-0.9**
UGM				S	**Sn**	**16 46 49.1**	**+0.8**
CGJI	**Cibinong**	**3.42**	**327**	P	**Pn**	**16 46 11.2**	**+0.4**
PCJI	**Pacitan**	**3.81**	**70**	P	**Pn**	**16 46 15.9**	**-0.4**
PCJI				S	**Sn**	**16 46 58.7**	**-1.3**
PWJI	**Pagerwojo**	**4.46**	**71**	P	**Pn**	**16 46 24.4**	**-0.7**
SJI	**Sawahan**	**4.53**	**67**	P	**Pn**	**16 46 27.8**	**+1.7**
KLSI		**5.54**	**329**	P	**Pn**	**16 46 40.1**	**0.0**
	0.1nm26nm,1.2s						
GMJI	**Gumukmas**	**5.95**	**79**	P	**Pn**	**16 46 46.1**	**+0.4**
FITZ	**Fitzroy Crossi**	**19.52**	**118**	P	**Pn**	**16 49 46.0**	**0.0**
	0.1nm,0.3s,baz=274,slow=14,SNR=2.8						
WRA	**Warramunga Arr**	**27.86**	**115**	P	P	**16 51 05.8**	**-0.9**
	0.6nm,0.9s,mb3.2,baz=289,slow=10,SNR=3.3						
ASAR	**Alice Springs**	**28.84**	**122**	P	P	**16 51 16.6**	**+1.3**
	0.2nm,0.6s,mb3.0,baz=302,slow=9.8,SNR=5.5						
CMAR	**Chiang Mai Arr**	**29.06**	**343**	P	P	**16 51 17.4**	**+0.2**
	0.2nm,0.4s,mb3.2,baz=168,slow=9.2,SNR=3.0						
MKAR	**Makanchi Array**	**60.41**	**340**	P	P	**16 55 25.8**	**-0.2**
	0.8nm,0.6s,mb4.0,baz=141,slow=7.9,SNR=9.0						
KURK	**Kurchatov**	**65.03**	**340**	P	P	**16 55 56.4**	**-0.2**
	0.4nm,0.6s,mb3.7,baz=151,slow=6.1,SNR=3.8						
BVAR	**Borovoye Array**	**69.88**	**337**	P	P	**16 56 27.0**	**-0.1**
	0.3nm,0.5s,mb3.5,baz=134,slow=10,SNR=2.7						

IDC 13 17:02:18.4±1.9, **49.°29S**×**117.°02E**, **h0**km, **mb4.1/5, mb1 4.3/6, mb1mx4.1/14, mbtmp4.2/6, ML2.2/1, MS3.8/1, Ms1 3.8/1, ms1mx3.2/17, Error ellipse: s-maj=55.8km s-min=44.2km az=115.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**16.34**	**1**	Pn	Pn	17 06 10.7	+1.5
	0.4nm,0.3s,baz=173,slow=16,SNR=4.4						
NWAO				LR	LR	17 10 36.1	
	comp=Z,384nm,21.6s,baz=174,slow=30						
ASAR	**Alice Springs**	**28.82**	**34**	P	P	17 08 18.4	+0.3
	1.2nm,0.7s,baz=199,slow=7.9,SNR=17						
ASAR				PcP	PcP	17 11 27.4	-0.5
	0.6nm,0.9s,baz=151,slow=2.1,SNR=5.8						
FITZ	**Fitzroy Crossi**	**31.88**	**16**	P	P	17 08 44.5	-0.7
	7.6nm,1.0s,baz=186,slow=8.4,SNR=6.0						
WRA	**Warramunga Arr**	**32.40**	**32**	P	P	17 08 49.8	0.0
	2.6nm,0.9s,baz=203,slow=8.6,SNR=7.8						
WRA				PcP	PcP	17 11 37.0	-0.3
	1.3nm,0.9s,baz=214,slow=2.8,SNR=5.0						
CMAR	**Chiang Mai Arr**	**69.33**	**342**	P	P	17 13 27.2	-0.3
	1.2nm,0.8s,baz=188,slow=5.4,SNR=7.8						
KSRS	**Korea Array**	**86.90**	**9**	P	P	17 15 04.9	+0.4
	0.5nm,0.5s,baz=182,slow=4.6,SNR=5.4						
YKA	**Yellowknife Ar**	**149.11**	**45**	PKPbc	PKPbc	17 22 07.3	+0.1
	2.2nm,0.7s,baz=288,slow=2.8,SNR=4.9						

ISCJB **13** *17:06:48.4*±*1.3, 25.°59S*±*0.°08*×*179.°6E*±*0.°1, h493*km±*15km, mb3.9/11, Error ellipse: s-maj=17.9km s-min=11.5km az=16.6*
NEIC **13** *17:06:48.8*±*1.0, 25.°64S*×*179.°66E, h494*km±*12km, mb4.2/4, Error ellipse: s-maj=16.9km s-min=11.6km az=117.0*
IDC **13** *17:06:49.0*±*1.7, 25.°63S*×*179.°65E, h496*km±*17km, mb3.4/8, mb1 3.7/10, mb1mx3.5/15, mbtmp3.4/10, Error ellipse: s-maj=21.6km s-min=15.4km az=155.0*
ISC 13 17:06:48.9±1.2, **25.°66S**±0.°08×**179.°6E**±0.°1, **h489**km±14km, **n22, σ0s63/16, mb3.9/11, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.02**	**349**	*e*P	**P**	**17 08 45.5**	**+0.1**
	16nm,0.8s						
URZ	**Urewera**	**12.74**	**189**	P	**P**	**17 09 34.4**	**-0.8**
	2.3nm,0.3s,baz=55,slow=5.1,SNR=12						
URZ				S	**S**	**17 11 52.3**	**-0.1**

	1.9nm,0.3s,baz=250,slow=23,SNR=10								
RPZ	**Rata Peaks**	**19.32**	**199**	P	**P**	**17**	**10**	**42.5**	**+0.8**
	0.6nm,0.3s,baz=320,slow=7.9,SNR=3.0								
STKA	**Stephens Creek**	**33.79**	**250**	P	**P**	**17**	**12**	**49.8**	**+0.6**
	1.3nm,0.4s,mb3.7,baz=72,slow=7.5,SNR=4.5								
ASAR	**Alice Springs**	**41.45**	**263**	P	**P**	**17**	**13**	**52.4**	**+0.2**
	4.3nm,0.6s,mb4.0,baz=90,slow=7.0,SNR=74								
ASAR				ScP	ScP	17	18	41.1	-0.9
	0.9nm,1.1s,baz=107,slow=8.1,SNR=5.1								
ASAR				S	**S**	**17**	**19**	**30.4**	**-1.1**
	0.4nm,0.9s,baz=94,slow=18,SNR=4.1								
WRA	**Warramunga Arr**	**41.98**	**268**	P	**P**	**17**	**13**	**56.1**	**-0.4**
	3.8nm,0.6s,mb4.0,baz=101,slow=8.2,SNR=21								
MJAR	**Matsushiro Arr**	**73.16**	**326**	P	**P**	**17**	**17**	**27.8**	**-1.2**
	1.3nm,0.7s,mb3.6,baz=158,slow=5.3,SNR=6.3								
KSRS	**Korea Array**	**79.38**	**321**	P	**P**	**17**	**18**	**03.7**	**+0.3**
	1.1nm,0.6s,mb3.6,baz=138,slow=5.3,SNR=9.4								
ISA	**Isabella**	**84.48**	**46**	*eP*	**P**	**17**	**18**	**29.6**	**+0.1**
	2.7nm,0.8s,mb3.8								
NVAR	**Mina Array Bea**	**86.25**	**44**	P	**P**	**17**	**18**	**37.7**	**-0.3**
	2.3nm,0.8s,mb3.9,baz=224,slow=7.5,SNR=10								
WVOR	**Wild Horse Val**	**88.46**	**41**	*eP*	**P**	**17**	**18**	**48.1**	**-0.2**
	3.5nm,1.0s,mb4.0								
CMAR	**Chiang Mai Arr**	**89.82**	**290**	P	**P**	**17**	**18**	**56.6**	**+1.5**
	0.5nm,0.7s,mb3.5,baz=141,slow=4.4,SNR=3.8								
M13A	**Montello**	**90.54**	**44**	*eP*	**P**	**17**	**18**	**58.1**	**+0.1**
	5.8nm,1.1s,mb4.4								
TXAR	**Lajitas Array**	**91.64**	**58**	P	**P**	**17**	**19**	**03.3**	**0.0**
	1.3nm,0.8s,mb3.9,baz=209,slow=6.2,SNR=14								
ZAA0	**Zalesovo Array**	**113.08**	**320**	*eP*	Pdif	17	20	39.5	+0.5
BVAR	**Borovoye Array**	**121.52**	**318**	PKP	PKPdf	17	24	44.4	-1.5
	0.5nm,0.5s,baz=157,slow=2.1,SNR=5.0								
BVAR				SKP		17	27	33.6	
	0.5nm,0.7s,baz=132,slow=2.1,SNR=3.9								
ARCES	**ARCESS Array B**	**133.53**	**348**	SKPbc	SKPbc	17	27	49.4	-1.3
	2.3nm,0.8s,baz=93,slow=4.9,SNR=8.3								
FINES	**FINESS Array B**	**139.99**	**341**	SKPbc	SKPbc	17	28	08.4	-1.5
	2.4nm,0.7s,baz=47,slow=2.6,SNR=9.1								
NOA	**NORSAR Array B**	**143.76**	**350**	PKP	PKPdf	17	25	24.7	-2.4
	3.2nm,0.8s,baz=21,slow=3.9,SNR=8.7								
AKASG	**Malin Array Be**	**146.24**	**326**	PKPbc	PKPbc	17	25	32.0	-1.7
	0.7nm,0.3s,baz=46,slow=4.0,SNR=6.1								
BRTR	**Keskin Array B**	**148.33**	**305**	PKPbc	PKPbc	17	25	39.2	-0.4
	0.3nm,0.3s,baz=105,slow=1.1,SNR=2.8								
BRTR				PKPab	PKPab	17	25	43.3	-1.3
	1.4nm,0.8s,baz=119,slow=4.5,SNR=7.0								
TORD	**Torodi Ar. Bea**	**167.40**	**189**	PKPab	PKPab	17	27	06.0	-1.4
	0.4nm,0.6s,baz=150,slow=3.2,SNR=2.4								

GUC 13 17:06:54.2±0.6, 20.67S×68.29W, h187km±8km, MD3.8, ML3.9, 4C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**1.18**	**251**	*eP*	Pn	17 07 24.8	+0.8
PB01				*i* S	Sn	17 07 48.0	+1.0
HMBC	**Humberston**	**1.55**	**284**	⇑ *i* P	Pn	17 07 28.3	+1.1
HMBC				*i* S	Sn	17 07 54.6	+1.9
HMBC				AML	AML	17 07 58.1	
	comp=E,668nm,0.4s						
PB04	**Plate Boundary**	**1.94**	**215**	⇓ *i* P	Pn	17 07 37.7	+6.6
PB04				*i* S	Sn	17 08 10.8	+11
PB04				AML	AML	17 08 11.3	
	comp=E,429nm,0.1s						
MNMC	**Miæe Miæ**	**1.96**	**321**	⇑ *i* P	Pn	17 07 32.8	+1.4
MNMC				*i* S	Sn	17 08 02.2	+2.0
MNMC				AML	AML	17 08 04.6	
	comp=N,1µm,0.2s						
PSGC	**Pisagua**	**2.03**	**301**	⇑ *i* P	Pn	17 07 33.0	+0.9
PSGC				*i* S	Sn	17 08 02.8	+1.5
PSGC				AML	AML	17 08 04.8	
	comp=N,397nm,0.4s						
MACH	**Maria Elena**	**2.05**	**222**	⇓ *i* P	Pn	17 07 33.8	+1.6
MACH				*i* S	Sn	17 08 04.0	+2.2
TOCH	**Tocopilla**	**2.28**	**231**	⇑ *i* P	Pn	17 07 36.7	+1.9
TOCH				*i* S	Sn	17 08 08.2	+1.9
TOCH				AML	AML	17 08 10.1	
	comp=N,608nm,0.1s						
CEN1	**Los Morros**	**3.24**	**213**	*eP*	Pn	17 07 51.0	+4.9
CEN1				AML	AML	17 08 33.6	
	comp=N,104nm,0.1s						
ANCH	**Antofagasta**	**3.59**	**213**	*i* P	Pn	17 07 44.9	-5.5
ANCH				*i* S	Sn	17 08 28.9	-5.4

MAN 13 17:37:23, 9.46N×122.47E, h25km, mb4.4, ML3.3, MS3.2, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.77**	**98**	⇑ *i* P	Pb	17 37 38.0	+0.2
SNPH				*i* S	Sb	17 37 48.5	+0.7
GUIM	**Jordan**	**1.17**	**6**	*eP*	Pn	17 37 44.8	+1.0
GUIM				*eS*	Sn	17 37 59.9	+1.0
IPIL	**Ipil**	**1.66**	**176**	*eP*	Pn	17 37 50.8	+0.2
IPIL				*eS*	Sn	17 38 03.1	-8.0
LLP	**Lapu-Lapu**	**1.71**	**60**	*eP*	Pn	17 37 52.5	+1.3
LLP				*eS*	Sn	17 38 13.4	+1.1
PAGZ	**Pagadian**	**1.84**	**150**	*eP*	Pn	17 37 55.1	+2.1
CUYO	**Cuyo Island**	**1.99**	**314**	*eP*	Pn	17 37 56.5	+1.5
OCLP	**Ormoc**	**2.64**	**53**	*eP*	Pn	17 38 06.3	+2.3
BUSP	**Coron**	**3.37**	**319**	*eP*	Pn	17 38 15.7	+1.6

IDC 13 17:41:56.4±5.8, 19.52S×177.17W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.5/14, mbtmp3.6/2, Error ellipse: s-maj=277.4km s-min=61.9km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.51**	**256**	P	P	17 50 17.6	-0.3
	0.5nm,0.5s,baz=91,slow=8.3,SNR=25						
WRA	**Warramunga Arr**	**45.52**	**261**	P	P	17 50 18.2	+0.2
	0.3nm,0.3s,baz=96,slow=7.3,SNR=12						
AKASG	**Malin Array Be**	**142.52**	**332**	PKP	PKPdf	18 01 29.0	-2.2
	1.0nm,0.4s,baz=43,slow=4.6,SNR=8.3						
BRTR	**Keskin Array B**	**146.74**	**314**	PKPbc	PKPbc	18 01 40.5	0.0
	0.3nm,0.5s,baz=62,slow=3.4,SNR=2.4						

*ISCJB **13** 17:52:14.4±0.9, 8.0S±0.2×68.3E±0.1, h10km, mb3.8/12, MS3.4/2, Error ellipse: s-maj=22.8km s-min=20.3km az=24.6*
*IDC **13** 17:52:14.9±1.0, 8.06S×68.26E, h0km, mb3.7/9, mb1 3.8/9, mb1mx3.6/23, mbtmp3.7/9, MS3.5/2, Ms1 3.5/2, ms1mx3.1/25, Error ellipse: s-maj=29.0km s-min=25.3km az=24.0*
*NEIC **13** 17:52:16.4±0.6, 8.04S×68.24E, h10km, mb4.1/3, Error ellipse: s-maj=16.9km s-min=15.1km az=204.0*
ISC 13 17:52:16.5±0.9, 8.0S±0.2×68.3E±0.1, h10km, n15, σ0.66/12, mb3.8/12, MS3.4/2, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**39.84**	**256**	P	**P**	**17**	**59**	**50.4**	**-0.1**
	2.8nm,0.9s,mb4.0,baz=86,slow=10,SNR=4.9								
CMAR	**Chiang Mai Arr**	**40.13**	**49**	P	**P**	**17**	**59**	**52.9**	**0.0**
	0.8nm,0.8s,mb3.5,baz=246,slow=9.0,SNR=4.9								
CMAR				LR	LR	18	16	24.4	
	comp=Z,49nm,18.2s,MS3.4,baz=225,slow=36								
BOSA	**Boshof**	**45.33**	**237**	LR	LR	18	16	08.2	
	comp=Z,57nm,20.2s,MS3.5,baz=153,slow=32								
MKAR	**Makanchi Array**	**56.01**	**12**	P	**P**	**18**	**01**	**54.2**	**-0.9**
	0.3nm,0.6s,mb3.5,baz=188,slow=6.8,SNR=3.7								
BRTR	**Keskin Array B**	**57.31**	**329**	P	**P**	**18**	**02**	**05.2**	**+0.6**
	0.2nm,0.4s,mb3.5,baz=164,slow=7.0,SNR=2.3								
ABKAR	**Akbulak array**	**57.52**	**354**	*eP*	**P**	**18**	**02**	**04.6**	**-1.3**
	0.9nm,0.8s,mb3.9								
KURK	**Kurchatov**	**59.20**	**8**	P	**P**	**18**	**02**	**21.5**	**+3.9**
	1.2nm,0.7s,mb4.0								
BVAR	**Borovoye Array**	**60.85**	**1**	P	**P**	**18**	**02**	**28.9**	**0.0**
	0.4nm,0.6s,mb3.8,baz=153,slow=4.5,SNR=3.9								
BRVK	**Borovoye**	**60.88**	**1**	*eP*	**P**	**18**	**02**	**29.2**	**+0.1**
	1.2nm,0.7s,mb4.1								
ZALV	**Zalesovo Beam**	**63.32**	**11**	P	**P**	**18**	**02**	**46.5**	**+1.1**
	0.4nm,0.6s,mb3.8,baz=195,slow=10,SNR=3.0								
ASAR	**Alice Springs**	**64.55**	**112**	P	**P**	**18**	**02**	**54.2**	**0.0**
	0.6nm,0.8s,mb3.7,baz=260,slow=4.8,SNR=5.4								
WRA	**Warramunga Arr**	**64.87**	**108**	P	**P**	**18**	**02**	**56.3**	**-0.1**
	0.8nm,0.8s,mb3.8,baz=284,slow=7.0,SNR=5.2								
SONM	**Songino Array**	**65.04**	**27**	P	**P**	**18**	**02**	**57.2**	**+0.4**
	0.8nm,0.6s,mb4.0,baz=212,slow=6.5,SNR=5.9								
NVAR	**Mina Array Bea**	**149.17**	**10**	PKPbc	PKPbc	18	12	06.0	+0.3
NVAR	**Mina Array Bea**	**149.17**	**10**	PKPbc	PKPbc	18	12	06.0	+0.3
	0.8nm,0.8s,baz=345,slow=3.1,SNR=3.6								

*NEIC **13** 18:19:17.9, 35.69N×28.06E, h32km, MD3.3(ATH), After ATH.*
*ATH **13** 18:19:17.9, 35.69N×28.06E, h32km±3km, MD3.3/3*
*ISK **13** 18:19:19.0, 35.96N×27.70E, h24km, MD2.9*
*ISCJB **13** 18:19:20.2±0.7, 35.92N±0.04×27.86E±0.06, h46km±13km, Error ellipse: s-maj=8.5km s-min=5.0km az=35.5*
*CSEM **13** 18:19:21.3±0.3, 36.00N×27.75E, h40km, MD3.3, Error ellipse: s-maj=9.7km s-min=5.3km az=128.0*
*DDA **13** 18:19:22.9, 36.37N×28.30E, h7km±10km, Md3.3*
ISC 13 18:19:20.5±0.6, 35.91N±0.04×27.88E±0.05, h45km±13km, n37, σ1.25/58, 1C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.36**	**33**	*eP*	**Pn**	**18**	**19**	**29.6**	**-0.3**
ARG				*eSn*	**Sn**	**18**	**19**	**37.5**	**+1.0**
ARG	**Arkhangelos**	**0.36**	**33**	*eP*	**Pn**	**18**	**19**	**29.6**	**-0.3**
ARG				*eSN*	**Sn**	**18**	**19**	**37.5**	**+1.0**
ARG	**Arkhangelos**	**0.36**	**33**	*eP*	**Pn**	**18**	**19**	**29.6**	**-0.3**
ARG				*eSn*	**Sn**	**18**	**19**	**37.5**	**+1.0**
KARP	**Karpathos**	**0.69**	**238**	*eP*	**Pn**	**18**	**19**	**32.6**	**-1.3**
KARP				*eSn*	**Sn**	**18**	**19**	**43.2**	**-0.3**
KARP	**Karpathos**	**0.69**	**238**	*eP*	**Pn**	**18**	**19**	**32.6**	**-1.3**
KARP				*eSN*	**Sn**	**18**	**19**	**43.2**	**-0.3**
KARP	**Karpathos**	**0.69**	**238**	*eP*	**Pn**	**18**	**19**	**32.6**	**-1.3**
KARP				*eSn*	**Sn**	**18**	**19**	**43.2**	**-0.3**
DAT	**Datca**	**0.85**	**344**	*eP*	**Pn**	**18**	**19**	**34.9**	**-1.2**
DAT				*eSG*	**Sn**	**18**	**19**	**46.3**	**-1.2**
DAT	**Datca**	**0.85**	**344**	*eP*	**Pn**	**18**	**19**	**34.9**	**-1.2**
DAT				*eSg*	**Sn**	**18**	**19**	**46.3**	**-1.2**
BDRM	**Kayabasi**	**1.20**	**343**	⇑ *iP*	**Pn**	**18**	**19**	**40.5**	**-0.4**
BDRM				*i* S	**Sn**	**18**	**19**	**56.4**	**+0.3**
BDRM	**Kayabasi**	**1.20**	**343**	*i* P	**Pn**	**18**	**19**	**40.5**	**-0.4**
BDRM				*i* S	**Sn**	**18**	**19**	**56.4**	**+0.3**
BODT	**Bodrum**	**1.24**	**338**	*eP*	**Pn**	**18**	**19**	**40.0**	**-1.4**
BODT				*eSN*	**Sn**	**18**	**19**	**55.4**	**-1.4**
BODT	**Bodrum**	**1.24**	**338**	*eP*	**Pn**	**18**	**19**	**40.0**	**-1.4**
BODT				*eSn*	**Sn**	**18**	**19**	**55.4**	**-1.5**
YER	**Yerkesik**	**1.26**	**15**	*eP*	**Pn**	**18**	**19**	**41.9**	**+0.2**
YER				*eSN*	**Sn**	**18**	**19**	**58.5**	**+0.9**
YER	**Yerkesik**	**1.26**	**15**	*eP*	**Pn**	**18**	**19**	**41.9**	**+0.2**
YER				*eSn*	**Sn**	**18**	**19**	**58.5**	**+1.0**
MLSB	**Milas**	**1.38**	**357**	*eP*	**Pn**	**18**	**19**	**42.9**	**-0.5**
MLSB	**Milas**	**1.38**	**357**	*eP*	**Pn**	**18**	**19**	**42.9**	**-0.5**
KSL	**Kastellorizon**	**1.40**	**80**	*eP*	**Pn**	**18**	**19**	**41.9**	**-1.7**
KSL	**Kastellorizon**	**1.40**	**80**	*eP*	**Pn**	**18**	**19**	**41.9**	**-1.7**
AKAS	**Kas**	**1.44**	**77**	*eP*	**Pn**	**18**	**19**	**41.8**	**-2.3**
AKAS				*eS*	**Sn**	**18**	**19**	**59.1**	**-2.7**
AKAS	**Kas**	**1.44**	**77**	*eP*	**Pn**	**18**	**19**	**41.8**	**-2.3**
ZKR	**Zakros**	**1.57**	**240**	*eP*	**Pn**	**18**	**19**	**46.0**	**+0.1**
ZKR				*eSn*	**Sn**	**18**	**20**	**06.8**	**+1.7**
ZKR	**Zakros**	**1.57**	**240**	*eP*	**Pn**	**18**	**19**	**46.0**	**+0.1**
ZKR				*eSN*	**Sn**	**18**	**20**	**06.8**	**+1.7**
ZKR	**Zakros**	**1.57**	**240**	*eP*	**Pn**	**18**	**19**	**46.0**	**+0.1**
ZKR				*eSn*	**Sn**	**18**	**20**	**06.8**	**+1.7**
AYDN	**Tasoluk**	**1.75**	**0**	*eP*	**Pn**	**18**	**19**	**48.3**	**-0.1**
AYDN				*eS*	**Sn**	**18**	**20**	**11.5**	**+2.1**
AYDN	**Tasoluk**	**1.75**	**0**	*eP*	**Pn**	**18**	**19**	**48.3**	**-0.1**
AYDN				*eS*	**Sn**	**18**	**20**	**11.5**	**+2.1**
GLHS	**Glhisar (BURDU**	**1.80**	**46**	*eP*	**Pn**	**18**	**19**	**50.3**	**+1.2**
GLHS	**Glhisar (BURDU**	**1.80**	**46**	*eP*	**Pn**	**18**	**19**	**50.3**	**+1.2**
ELL	**Elmali**	**1.84**	**62**	*eP*	**Pn**	**18**	**19**	**51.6**	**+1.9**
ELL	**Elmali**	**1.84**	**62**	*eP*	**Pn**	**18**	**19**	**51.6**	**+2.0**
NPS	**Neapolis**	**1.96**	**251**	*eP*	**Pn**	**18**	**19**	**51.4**	**+0.2**
NPS	**Neapolis**	**1.96**	**251**	*eP*	**Pn**	**18**	**19**	**51.4**	**+0.2**
NPS	**Neapolis**	**1.96**	**251**	*eP*	**Pn**	**18**	**19**	**51.4**	**+0.2**
DNZL	**Cakiroluk**	**2.01**	**28**	*eP*	**Pn**	**18**	**19**	**53.4**	**+1.5**
DNZL				*eS*	**Sn**	**18**	**20**	**21.9**	**+6.1**
DNZL	**Cakiroluk**	**2.01**	**28**	*eP*	**Pn**	**18**	**19**	**53.4**	**+1.5**
IDI	**Anoyia**	**2.51**	**257**	*eP*	**Pn**	**18**	**20**	**00.1**	**+1.2**
IDI	**Anoyia**	**2.51**	**257**	*eP*	**Pn**	**18**	**20**	**00.1**	**+1.2**
IDI	**Anoyia**	**2.51**	**257**	*ePn*	**Pn**	**18**	**20**	**00.1**	**+1.2**

IDC 13 18:22:58.3±2.3, 5.62N×126.36E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=177.4km s-min=27.1km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.59**	**163**	P	P	18 28 38.5	+0.1
	0.4nm,0.4s,baz=343,slow=10,SNR=4.5						
ASAR	**Alice Springs**	**30.02**	**166**	P	P	18 29 09.1	+0.1
	0.2nm,0.6s,baz=349,slow=7.7,SNR=4.8						
MKAR	**Makanchi Array**	**55.80**	**325**	P	P	18 32 37.2	0.0
	0.4nm,0.5s,baz=123,slow=7.7,SNR=5.4						

*BJI **13** 18:30:52.2, 83.60N×114.50E, h10km, mB5.7/53, mb5.1/58, Ms5.6/70, MS7 5.4/62*
*SZGRF **13** 18:30:53.7, 82.41N×119.10E, h33km, mb5.1, MS5.0, North of Severnaya Zemlya*
*ISCJB **13** 18:30:55.6±0.1, 83.55N±0.02×114.65E±0.09, h10km, mb5.2/393, MS5.2/268, Error ellipse: s-maj=2.3km s-min=1.3km az=157.7*
*MOS **13** 18:30:55.5±0.9, 83.49N×114.58E, h10km, mb5.4/130, MS5.2/69, Error ellipse: s-maj=26.3km s-min=5.0km az=92.6*
*IDC **13** 18:30:55.2±0.4, 83.57N×114.84E, h0km, mb4.9/32, mb1 4.9/33, mb1mx4.9/34, mbtmp4.9/33, ML4.5/1, MS5.1/39, Ms1 5.2/39, ms1mx5.0/45, Error ellipse: s-maj=11.9km s-min=9.3km az=145.0*
*NEIC **13** 18:30:57.3±0.1, 83.55N×114.52E, h10km, mb5.3/264, MS5.2/186, MW5.7, Error ellipse: s-maj=3.5km s-min=1.9km az=168.0*
*GCMT **13** 18:30:59.3±0.1, 83.48N×114.73E, h12km, MW5.7, Moment Tensor Solution. s79,c129; s59,c78; Moment tensor: Scale 10^17^Nm; Mrr-3.96±.04; Mθθ0.61±.04; Mφφ3.35±.04; Mrθ-1.43±.11; Mθφ-1.69±.03; Mφr-0.18±.11; Best double couple: Mo4.30000×10^17^ NP1:θ≈351.00000°, δ45.00000°, λ-64.00000°. NP2:θ≈137.00000°, δ51.00000°, λ-113.00000°. Principal axes: T 4.1800, Plg3.0000°, Azm243.0000°; N 0.2400, Plg18.0000°, Azm152.0000°; P -4.4300, Plg72.0000°, Azm344.0000°; Data Used: II IU IC G CN. Surface waves: sta=111, comp=244, per= 50.*
*DJA **13** 18:31:35, 83.51N×110.71E, h339km, mb4.9/20*
ISC 13 18:30:57.6±0.1, 83.53N±0.01×114.54E±0.09, h10km, (h15km±1.3km: pP-P), n1396, σ0.87/1392, mb5.2/393, MS5.2/268, 259C-229D, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**12.26**	**158**	*ePn*	**Pn**	**18**	**33**	**52.0**	**+0.2**
	146nm,1.3s								
TIXI	**Tiksi**	**12.26**	**158**	*eP*	**Pn**	**18**	**33**	**52.0**	**+0.2**
TIXI				pmax	pmax				
	comp=Z,151nm,1.5s								
KBS	**Kingsbay**	**14.06**	**309**	*eP*	**Pn**	**18**	**34**	**19.4**	**+3.0**
KBS	**Kingsbay**	**14.06**	**309**	*eP*	**Pn**	**18**	**34**	**16.2**	**-0.2**
	comp=Z,43nm,0.8s								
KBS	**Kingsbay**	**14.06**	**309**	*deP*	**Pn**	**18**	**34**	**13.9**	**-2.5**
SPITS	**Spitsbergen Ar**	**14.33**	**304**	Pn	**Pn**	**18**	**34**	**18.2**	**-1.8**
	baz=22,slow=6.3,SNR=5.8								
SPITS				LR	LR	18	38	55.6	
	comp=Z,6µm,18.8s,baz=260,slow=34								
DAG	**Danmarks Havn**	**18.38**	**328**	*iP*	**Pn**	**18**	**35**	**10.0**	**-2.0**
	comp=Z,32nm,1.0s								
DAG									
	comp=Z,6µm,18.0s								
BILL	**Bilibino**	**18.74**	**113**	*eP*	**Pn**	**18**	**35**	**15.6**	**-0.7**
	comp=Z,170nm,1.1s								
BILL	**Bilibino**	**18.74**	**113**	*eP*	**Pn**	**18**	**35**	**15.6**	**-0.7**
BILL				pmax	pmax				
	comp=Z,170nm,1.1s								
KEV	**Kevo**	**21.07**	**285**	*eP*	**P**	**18**	**35**	**41.0**	**-0.3**
	comp=Z,31nm,0.7s,mb4.8								
KEV	**Kevo**	**21.07**	**285**	*eP*	**P**	**18**	**35**	**41.0**	**-0.3**
KEV				pmax	pmax				
	comp=Z,31nm,0.7s,mb4.8								
KEV	**Kevo**	**21.07**	**285**	*ep*	**P**	**18**	**35**	**41.0**	**-0.3**
	comp=Z,31nm,0.7s,mb4.8								
RES	**Resolute Bay**	**21.32**	**21**	*eP*	**P**	**18**	**35**	**43.1**	**-0.9**
	comp=Z,48nm,0.9s,mb4.8								
RES	**Resolute Bay**	**21.32**	**21**	*eP*	**P**	**18**	**35**	**43.1**	**-0.8**
	comp=Z,9.0nm,0.5s,mb4.3,baz=348,slow=11,SNR=3.2								
RES				LR	LR	18	43	33.1	
	comp=Z,7µm,20.1s,MS5.0,baz=349,slow=36								
RES	**Resolute Bay**	**21.32**	**21**	*eP*	**P**	**18**	**35**	**43.1**	**-0.8**
RES				pmax	pmax				
	comp=Z,48nm,0.9s,mb4.8								
ARCES	**ARCESS Array B**	**21.45**	**286**	P	**P**	**18**	**35**	**44.3**	**-1.1**
	comp=Z,38nm,0.8s,mb4.8,baz=14,slow=10,SNR=42								
ARCES				S	**S**	**18**	**39**	**38.7**	**-4.1**
	comp=Z,5.7nm,0.8s,baz=21,slow=25,SNR=5.6								
ARCES				LR	LR	18	44	24.1	
	comp=Z,4µm,19.2s,MS4.8,baz=191,slow=38								
ARCES	**ARCESS Array B**	**21.45**	**286**	P	**P**	**18**	**35**	**44.3**	**-1.1**
ARCES				S	**S**	**18**	**39**	**38.7**	**-4.1**
ARE0	**ARCESS Array S**	**21.45**	**286**	*eP*	**P**	**18**	**35**	**44.7**	**-0.7**
YAK	**Yakutsk**	**21.91**	**161**	*eP*	**P**	**18**	**35**	**47.0**	**-3.3**
	comp=Z,109nm,0.8s,mb5.3								
YAK				LR	LR				
	comp=Z,5µm,21.0s,MS4.9								
YAK	**Yakutsk**	**21.91**	**161**	*eP*	**P**	**18**	**35**	**48.9**	**-1.4**
YAK				*e*		18	36	10.3	
YAK				*e*		18	39	47.8	
YAK				*eS*	**S**	**18**	**39**	**50.6**	**-1.1**
YAK				*eSS*		18	40	22.5	
YAK				*eSSS*		18	40	39.1	
YAK				pmax	pmax				
	comp=Z,87nm,0.9s,mb5.2								
YAK				pmax	pmax				
	comp=N,43nm,1.3s								
YAK				pmax	pmax				
	comp=E,11nm,1.5s								
YAK				pmax	pmax				
	comp=Z,339nm,1.5s,mb5.5								
YAK				pmax	pmax				
	comp=N,436nm,1.5s								
YAK				pmax	pmax				
	comp=E,114nm,1.5s								
YAK				smax					
	comp=N,791nm,4.9s								
YAK				smax					
	comp=E,995nm,5.9s								
YAK				MLR	MLR				
	comp=Z,5µm,21.0s,MS4.9								
YAK				MLR	MLR				
	comp=N,4µm,22.0s,MS5.0								
YAK				MLR	MLR				
	comp=E,4µm,20.0s,MS5.0								
TRO	**Tromso**	**22.06**	**292**	*eP*	**P**	**18**	**35**	**53.6**	**+1.7**
TRO				*eS*	**S**	**18**	**39**	**56.3**	**+1.6**
KTK1	**Kautokeino**	**22.20**	**288**	⇑ *iP*	**P**	**18**	**35**	**52.2**	**-1.1**
KTK1				AMB	AMB	18	36	08.9	
	comp=Z,160nm,3.5s								
KTK1				*eS*	**S**	**18**	**39**	**58.6**	**+1.2**
SEY	**Seymchan**	**22.41**	**133**	⇑ *iP*	**P**	**18**	**35**	**56.9**	**+1.2**
APA	**Apatity**	**22.46**	**277**	⇑ *iP*	**P**	**18**	**35**	**55.0**	**-1.1**
APA				*i*		18	36	19.0	
APA				*i* S	**S**	**18**	**39**	**57.0**	**-5.4**
APA				pmax	pmax				
	comp=Z,33nm,0.9s,mb4.8								
APA				pmax	pmax				
	comp=Z,4µm,18.0s								
APA				smax					
	comp=N,8µm,14.0s								
APA				smax					
	comp=E,8µm,14.0s								
JMIC	**Jan Mayen**	**23.31**	**316**	*eP*	**P**	**18**	**36**	**05.0**	**-0.1**
JMIC				*eS*	**S**	**18**	**40**	**20.7**	**+3.9**
JMIC	**Jan Mayen**	**23.31**	**316**	P	**P**	**18**	**36**	**06.5**	**+1.4**
	comp=E,14nm,0.6s,mb4.5,baz=8.6,slow=13,SNR=2.0								
JMIC				LR	LR	18	42	45.0	
	comp=E,3µm,18.7s,MS4.8,baz=9.9,slow=30								
SUMG	**Summit**	**23.52**	**340**	*eP*	**P**	**18**	**36**	**07.3**	**0.0**
	comp=E,354nm,2.0s,mb5.5								
SUMG	**Summit**	**23.52**	**340**	*i* P	**P**	**18**	**36**	**05.2**	**-2.1**
TNA	**Tin City**	**23.98**	**88**	*eP*	**P**	**18**	**36**	**11.2**	**-0.4**
	comp=E,178nm,1.2s,mb5.4								
COLD	**Coldfoot**	**24.34**	**70**	*eP*	**P**	**18**	**36**	**14.0**	**-0.9**
	comp=E,47nm,0.8s,mb5.0								
SCO

KAF Kangasniemi 28.54 280 *e*P **P** **18 36 50.9 -1.8**
comp=Z,16nm,0.7s,mb4.9
KAF Kangasniemi 28.54 280 *e*P **P** **18 36 50.9 -1.8**
KAF pmax pmax
comp=Z,16nm,0.7s,mb4.9
KAF Kangasniemi 28.54 280 *e*p **P** **18 36 50.9 -1.8**
comp=Z,16nm,0.7s,mb4.9
PAX Paxson 28.98 68 *e*P **P** **18 36 55.8 -0.8**
comp=Z,71nm,1.1s,mb5.3
PAX Paxson 28.98 68 *e*P **P** **18 36 55.8 -0.8**
PAX pmax pmax
comp=Z,71nm,1.1s,mb5.3
MENT Mentasta 29.19 67 *e*P **P** **18 36 58.7 +0.1**
FINES FINESS Array B 29.22 280 P **P** **18 36 57.8 -0.9**
comp=Z,14nm,0.8s,mb4.7,baz=19,slow=12,SNR=27
FINES PcP PcP 18 40 04.5 -0.8
comp=Z,9.6nm,0.9s,baz=25,slow=4.6,SNR=4.9
FINES LR LR 18 51 41.2
comp=Z,4µm,20.8s,MS5.0,baz=28,slow=43
FINES FINESS Array B 29.22 280 P **P** **18 36 57.8 -0.9**
FINES 18 40 04.5
SVW2 Sparrevohn 29.71 79 *e*P **P** **18 37 03.5 +0.4**
comp=Z,67nm,1.5s,mb5.2
SVE Sverdlovsk 29.93 243⇓ *e*P **P** **18 37 05.9 +0.8**
SVE *e*S **S** **18 41 58.7 -3.2**
SVE pmax pmax
comp=Z,45nm,1.2s,mb5.1
SVE MLR MLR
comp=Z,8µm,18.0s,MS5.4
PMR Palmer 29.93 72 *e*P **P** **18 37 04.9 -0.2**
comp=Z,24nm,0.2s,mb5.6
PMR Palmer 29.93 72 *e*P **P** **18 37 04.9 -0.2**
PMR pmax pmax
comp=Z,24nm,0.2s,mb5.6
NVS Novosibirsk 29.95 217↑ *i*P **P** **18 37 04.8 -0.4**
NVS pmax pmax
comp=N,35nm,1.5s
NVS pmax pmax
comp=E,43nm,1.5s
NVS pmax pmax
comp=Z,60nm,1.5s,mb5.1
RC01 Rabbit Creek A 30.36 73 *e*P **P** **18 37 08.5 -0.4**
comp=Z,50nm,1.1s,mb5.2
BORG Borgarnes 30.39 324 P **P** **18 37 09.1 -0.1**
comp=Z,14nm,1.0s,mb4.7,baz=37,slow=9.1,SNR=3.3
ARU Arti 30.53 245 *e*P **P** **18 37 09.1 -1.3**
comp=Z,34nm,1.1s,mb5.1
ARU LR LR
comp=Z,20µm,20.0s,MS5.8
ARU Arti 30.53 245*c i*P **P** **18 37 10.0 -0.4**
ARU *e* 18 38 08.7
ARU *e*PPP 18 38 19.4
ARU *e* 18 40 06.2
ARU S **S** **18 42 12.8 +1.4**
ARU SS SS 18 43 51.3 -30
ARU SSS 18 44 07.5
ARU pmax pmax
comp=Z,25nm,1.0s,mb5.0
ARU MLR MLR
comp=Z,21µm,20.0s,MS5.8
ARU Arti 30.53 245 P **P** **18 37 10.8 +0.4**
comp=Z,119nm,1.1s,mb5.6,SNR=8.8
RSO Redoubt South 30.64 76 *e*P **P** **18 37 11.4 0.0**
ZAA0 Zalesovo Array 30.73 215 *e*P **P** **18 37 11.6 -0.5**
ZALV Zalesovo Beam 30.73 215 P **P** **18 37 12.0 -0.2**
ZALV PcP PcP 18 40 08.5 -0.8
ZALV LR LR 18 50 31.4
ZALV Zalesovo Beam 30.73 215 P **P** **18 37 12.0 -0.2**
comp=Z,20nm,1.0s,mb4.9,baz=357,slow=8.9,SNR=32
ZALV PcP PcP 18 40 08.5 -0.8
comp=Z,20nm,1.0s,baz=294,slow=1.4,SNR=9.2
ZALV LR LR 18 50 31.4
comp=Z,7µm,19.2s,MS5.3,baz=360,slow=38
ZALV Zalesovo Beam 30.73 215 P **P** **18 37 12.0 -0.2**
ZALV 18 40 08.5
DIV Divide 30.75 69 *e*P **P** **18 37 13.7 +1.4**
comp=Z,65nm,1.2s,mb5.3
BMRM Bremner River 31.03 68 *e*P **P** **18 37 16.3 +1.5**
comp=Z,80nm,1.3s,mb5.4
NOA NORSAR Array B 31.22 294 P **P** **18 37 15.7 -0.7**
comp=Z,3.7nm,0.8s,mb4.2,baz=15,slow=8.8,SNR=5.5
NOA PcP PcP 18 40 09.7 -0.8
comp=Z,4.0nm,1.0s,baz=14,slow=4.4,SNR=3.2
NOA LR LR 18 50 39.4
comp=Z,1µm,19.6s,MS4.6,baz=10.0,slow=38
NOA NORSAR Array B 31.22 294 P **P** **18 37 15.7 -0.7**
NOA 18 40 09.7
FOO Floro 31.29 300 *e*P **P** **18 37 13.3 -3.8**
FOO *e*S **S** **18 42 25.0 +1.7**
FOO AMS AMS 18 47 34.2
comp=Z,2µm,22.1s,MS4.8
IRK Irkutsk 31.55 192 *e*P **P** **18 37 19.0 -0.5**
IRK pmax pmax
comp=Z,97nm,3.4s
CIT Chita 31.66 181 *e*P **P** **18 37 20.8 +0.4**
CIT *e* 18 38 34.7
CIT pmax pmax
comp=Z,124nm,2.7s,mb5.3
HFS Hagfors 31.85 291 P **P** **18 37 20.5 -1.4**
comp=Z,5.8nm,0.7s,mb4.5,baz=54,slow=7.5,SNR=8.0
HFS LR LR 18 49 56.9
comp=Z,3µm,21.5s,MS5.0,baz=10.0,slow=36
TLY Talaya 32.13 193 *e*P **P** **18 37 24.5 -0.1**
comp=Z,28nm,1.1s,mb5.0
TLY LR LR
comp=Z,2µm,19.0s,MS4.9
TLY Talaya 32.13 193↑ *i*P **P** **18 37 24.6 +0.1**
TLY *e* 18 38 26.8
TLY *e*S **S** **18 42 37.6 +1.1**
TLY pmax pmax
comp=Z,32nm,1.2s,mb5.0
TLY MLR MLR
comp=Z,2µm,11.0s,MS5.0
MOY Mondy 32.22 196 *e*P **P** **18 37 25.7 +0.4**
MOY pmax pmax
comp=Z,160nm,3.1s
YKA Yellowknife Ar 32.27 41 P **P** **18 37 24.0 -1.7**
comp=Z,19nm,1.0s,mb4.9,baz=347,slow=8.1,SNR=23
YKA PcP PcP 18 40 12.2 -1.1
comp=Z,1.6nm,0.6s,baz=348,slow=3.5,SNR=4.1
BER Bergen 32.46 299 *e*P **P** **18 37 28.8 +1.5**
BER *e*S **S** **18 42 39.9 -1.6**
BRVK Borovoye 32.74 231 *e*P **P** **18 37 30.3 +0.5**
comp=Z,68nm,1.1s,mb5.5
BRVK LR LR
comp=Z,12µm,21.0s,MS5.6
BRVK Borovoye 32.74 231*d i*P **P** **18 37 30.4 +0.6**
BRVK pmax pmax
comp=Z,61nm,1.0s,mb5.5
KONO Kongsberg 32.75 295 *e*P **P** **18 37 31.9 +2.0**
KONO *e*S **S** **18 42 48.9 +3.0**
KONO Kongsberg 32.75 295 PFAKE 18 37 40.0 +10
KONO LR LR
comp=Z,2µm,19.0s,MS4.9
PET Petropavlovsk 32.76 129 PFAKE 18 37 40.0 +10
PET LR LR
comp=Z,3µm,20.0s,MS5.0
PET Petropavlovsk 32.76 129 *e*P **P** **18 37 30.9 +0.9**
PET *e* 18 38 35.5
PET *e*S **S** **18 42 47.7 +1.5**
PET 18 44 50.1
PET pmax pmax
comp=Z,400nm,15.8s
PET pmax pmax
comp=Z,300nm,16.3s
PET pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
PET MLR MLR
comp=Z,4µm,18.0s,MS5.1
PET MLR MLR
comp=Z,4µm,18.0s
BVA0 Borovoye Array 32.76 231 *i* P **P** **18 37 29.0 -1.0**
BVA0 pmax pmax
comp=Z,13nm,1.2s,mb4.7
BVAR Borovoye Array 32.76 231 P **P** **18 37 30.1 +0.1**
comp=Z,33nm,1.1s,mb5.2,baz=14,slow=6.9,SNR=58
BVAR PcP PcP 18 40 14.2 -0.7
comp=Z,9.0nm,0.7s,baz=346,slow=1.1,SNR=6.9
BVAR LR LR 18 53 29.5
comp=Z,162nm,20.1s,MS3.7,baz=289,slow=41
BVAR Borovoye Array 32.76 231 P **P** **18 37 30.1 +0.1**
BVAR 18 40 14.2
PNL Peninsula 32.84 64 *e*P **P** **18 37 32.3 +1.6**
ZRNK Zerenda 32.96 233 *i*P **P** **18 37 31.2 -0.5**
KDAK Kodiak Island 33.29 77 P **P** **18 37 34.8 +0.2**
comp=Z,12nm,0.9s,mb4.8,baz=2.8,slow=8.6,SNR=3.9
KDAK LR LR 18 51 44.9
comp=Z,5µm,18.9s,MS5.3,baz=24,slow=38
ZAK Zakamensk 33.44 193 *e*P **P** **18 37 36.3 +0.3**
ZAK *e* 18 40 13.6
ZAK pmax pmax
comp=Z,70nm,1.6s,mb5.3
SKAG Skagway 33.46 60 *e*P **P** **18 37 36.3 +0.3**
comp=Z,20nm,1.0s,mb5.0
MOS Moscow 33.50 267 *e*P **P** **18 37 37.8 +1.4**
MOS *e* 18 38 52.3
MOS *e*PPP 18 39 02.2
MOS *e*S **S** **18 43 01.9 +4.2**
MOS pmax pmax
comp=Z,43nm,0.7s,mb5.5
MOS MLR MLR
comp=Z,5µm,21.0s,MS5.2
OHAK Old Harbor 33.76 78 *e*P **P** **18 37 39.2 +0.5**
comp=Z,169nm,1.7s,mb5.7
OBN Obninsk 34.23 267⇓ *e*P **P** **18 37 42.5 -0.3**
OBN Obninsk 34.23 267 *e*P **P** **18 37 42.4 -0.4**
OBN *e* 18 38 51.4
OBN *i* 18 40 18.1
OBN *i* S **S** **18 43 09.5 +0.5**
OBN *i* SS SS 18 45 25.2 -11
OBN pmax pmax
comp=Z,27nm,1.2s,mb5.0
OBN MLR MLR
comp=Z,6µm,19.0s,MS5.3
KURK Kurchatov 34.38 221 *e*P **P** **18 37 43.5 -0.6**
comp=Z,36nm,1.0s,mb5.3
KURK LR LR
comp=Z,6µm,19.0s,MS5.3
KURK Kurchatov 34.38 221 P **P** **18 37 44.4 +0.2**
comp=Z,13nm,0.9s,mb4.8,baz=16,slow=7.9,SNR=14
KURK PP PP 18 39 05.8 +4.1
comp=Z,42nm,1.3s,baz=16,slow=9.2,SNR=8.5
KURK PcP PcP 18 40 18.9 -0.5
comp=Z,10nm,0.9s,baz=1.9,slow=2.7,SNR=6.3
KURK LR LR 18 53 56.2
comp=Z,5µm,18.1s,MS5.3,baz=10.0,slow=40
KURK Kurchatov 34.38 221*d i*P **P** **18 37 43.7 -0.4**
KURK pmax pmax
comp=Z,44nm,1.0s,mb5.3
HIA Hailar 34.44 174 *e*P **P** **18 37 45.0 +0.3**
comp=Z,41nm,1.3s,mb5.2
HIA LR LR
comp=Z,2µm,19.0s,MS4.9
HIA Hailar 34.44 174 *e*P **P** **18 37 45.0 +0.3**
HIA pmax pmax
comp=Z,41nm,1.3s
HIA MLR MLR
comp=Z,2µm,19.0s
KLR Kul'dur 34.78 160 *e*P **P** **18 37 43.3 -4.4**
KLR *e*S **S** **18 43 10.0 -7.6**
KLR *e*SS SS 18 45 36.0 -12
KLR MLR MLR
comp=N,1µm,19.0s,MS5.1
KLR MLR MLR
comp=E,3µm,19.0s,MS5.1
KLR MLR MLR
comp=E,4µm,14.0s
SKR Severo-Kuril's 34.86 132 *e*P **P** **18 37 48.0 -0.3**
SKR *e*PPP 18 39 12.0
SKR pmax pmax
comp=N,700nm,6.0s
SKR pmax pmax
comp=E,700nm,6.0s
SKR MLR MLR
comp=N,3µm,16.0s,MS5.5
SKR MLR MLR
comp=E,6µm,16.0s,MS5.5
SKR MLR MLR
comp=Z,4µm,16.0s,MS5.3
DLBC Dease Lake 34.98 56 *e*P **P** **18 37 49.8 +0.5**
AKUT Akutan 35.39 91 *e*P **P** **18 37 54.3 +1.5**
comp=Z,820nm,1.7s,mb6.4
NACGM Naroch 35.55 277 *e*P **P** **18 37 50.0 -4.2**
HABR Khabarovsk 35.68 156*ce*P **P** **18 37 52.2 -3.2**
HABR *e**PP pP 18 37 58.3 -0.1
HABR 18 39 13.4
HABR 18 40 20.4
HABR *e*S **S** **18 43 28.9 -2.5**
HABR *e*SS SS 18 45 52.5 -14
HABR *e* 18 48 10.8
HABR MLR MLR
comp=N,1µm,19.0s,MS5.0
HABR MLR MLR
comp=Z,2µm,19.0s,MS4.9
HABR MLR MLR
comp=E,2µm,15.0s,MS5.0
MICGM Minsk 35.82 276↑ *e*P **P** **18 37 55.0 -1.5**
MNK Minsk 35.82 276↑ *e*P **P** **18 37 55.0 -1.5**
MNK *e* 18 39 20.0
MNK *e*S **S** **18 43 30.0 -3.5**
MNK MLR MLR
comp=E,5µm,16.0s
MNK MLR MLR
comp=Z,9µm,20.0s,MS5.5
SONM Songino Array 35.92 189 P **P** **18 37 58.1 +0.7**
comp=Z,20nm,1.0s,mb5.0,baz=357,slow=9.4,SNR=42
SONM PcP PcP 18 40 23.9 -0.1
comp=Z,8.0nm,0.9s,baz=331,slow=2.1,SNR=8.0
SONM LR LR 18 52 42.8
comp=Z,1µm,19.3s,MS4.7,baz=359,slow=36
SONM Songino Array 35.92 189 P **P** **18 37 58.1 +0.7**
SONM 18 40 23.9
MUD Monsted U'grnd 35.94 294 *i* P **P** **18 37 57.1 -0.4**
MUD *e*S **S** **18 43 39.6 +4.4**
MUD
comp=Z,2µm,14.0s
COP Copenhagen 36.35 291 *i* P **P** **18 38 04.2 +3.2**
COP *e*S **S** **18 43 42.3 +0.8**
COP
comp=Z,1µm,29.0s
AMKA Amchitka 36.44 107 *e*P **P** **18 38 03.0 +1.2**
comp=Z,66nm,2.0s,mb5.2
AKTK Aktyubinsk 36.50 244 P **P** **18 38 02.1 -0.3**
AKTK LR LR 18 54 17.8
AKTO Aktyubinsk 36.50 244 P **P** **18 38 02.1 -0.3**
comp=Z,16nm,0.8s,mb4.9,baz=10,slow=8.2,SNR=66
AKTO LR LR 18 54 17.8
comp=Z,9µm,21.7s,MS5.5,baz=195,slow=38
BSD Bornholm Skovb 36.65 288 *i* P **P** **18 38 04.2 +0.6**
BSD *i* S **S** **18 43 48.4 +2.3**
BSD
comp=Z,2µm,13.0s
SUW Suwalki 36.83 280 *e*P **P** **18 38 06.5 +1.4**
FCC Fort Churchill 37.24 24 *e*P **P** **18 38 07.9 -0.7**
comp=Z,1.3nm,1.1s,mb3.7
VOR Voronezh 37.26 264 P **P** **18 38 08.0 -0.8**
VOR pmax pmax
comp=Z,160nm,1.0s,mb5.8
AB31 Akbulak array 37.48 241 *i* P **P** **18 38 10.2 -0.4**
AB31 pmax pmax
comp=Z,24nm,0.8s,mb5.1
ABKAR Akbulak array 37.48 241 *e*P **P** **18 38 10.2 -0.5**
comp=Z,29nm,1.0s,mb5.1
YSS Yuzh-Sakhalins 37.60 148 *e*P **P** **18 38 09.8 -2.0**
comp=Z,283nm,1.7s,mb5.7
YSS LR LR
comp=Z,889nm,20.0s,MS4.6
YSS Yuzh-Sakhalins 37.60 148*de*P **P** **18 38 12.2 +0.4**
YSS *e**SP sP 18 38 21.0 +4.9
YSS *e*S **S** **18 44 02.0 +1.3**
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.3
YSS pmax pmax
comp=Z,700nm,4.0s
YSS MLR MLR
comp=Z,2µm,17.0s,MS5.0
YSS MLR MLR
comp=N,2µm,16.0s,MS5.0
YSS MLR MLR
comp=E,1µm,14.0s,MS5.0
VRHR Novokhopersk 37.62 261 *e*P **P** **18 38 10.2 -1.6**
VRHR *e* 18 39 34.0
VRHR *e*S **S** **18 43 58.8 -2.1**
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
VRHR pmax pmax
comp=N,10.0nm,1.0s
VRHR pmax pmax
comp=E,10.0nm,0.5s
VRHR pmax pmax
comp=Z,50nm,1.7s,mb5.0
VRHR pmax pmax
comp=N,90nm,1.6s
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR smax
comp=E,40nm,1.0s
VRHR smax
comp=Z,60nm,2.2s
VRHR smax
comp=N,30nm,1.2s
VSR Storozhevoye 37.77 263 *e*P **P** **18 38 12.1 -1.0**
VSR *e**PP pP 18 38 18.9 +2.7
VSR *e*S **S** **18 44 02.4 -0.8**
VSR pmax pmax
comp=Z,20nm,0.7s,mb5.0
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=E,2.0nm,0.5s
VSR smax
comp=E,470nm,5.0s
VSR smax
comp=Z,630nm,5.9s
VSR smax
comp=N,460nm,5.6s
VSR MLR MLR
comp=Z,6µm,22.0s,MS5.4
VSR MLR MLR
comp=N,4µm,20.0s,MS5.3
VSR MLR MLR
comp=E,2µm,15.0s,MS5.3
VORD Divnogorie 38.01 263 *e*P **P** **18 38 14.6 -0.5**
VORD *e**PP pP 18 38 20.0 +1.8
VORD *e* 18 39 38.9
VORD *e*S **S** **18 44 06.4 -0.4**
VORD pmax pmax
comp=Z,30nm,1.3s,mb4.9
VORD pmax pmax
comp=N,70nm,1.0s
VORD pmax pmax
comp=E,30nm,0.7s
VORD pmax pmax
comp=Z,460nm,3.1s
VORD pmax pmax
comp=N,540nm,5.6s
VORD pmax pmax
comp=E,600nm,4.3s
VORD smax
comp=N,190nm,5.2s
VORD smax
comp=Z,190nm,4.5s
VORD smax
comp=E,170nm,2.6s
VORD MLR MLR
comp=Z,6µm,19.0s,MS5.4
VORD MLR MLR
comp=N,4µm,16.0s,MS5.4
VORD MLR MLR
comp=E,2µm,12.0s,MS5.4
MK31 Makanchi Array 38.02 217 *e*P **P** **18 38 13.7 -1.6**
MK31 Makanchi Array 38.02 217 *i*P **P** **18 38 14.1 -1.2**
MK31 pmax pmax
comp=Z,149nm,1.3s,mb5.6
MKAR Makanchi Array 38.02 217 P **P** **18 38 13.6 -1.7**
MKAR PcP PcP 18 40 28.9 -1.4
MKAR LR LR 18 55 03.5
MKAR Makanchi Array 38.02 217 P **P** **18 38 13.6 -1.7**
comp=Z,47nm,1.0s,mb5.2,baz=4.4,slow=5.8,SNR=98
MKAR PcP PcP 18 40 28.9 -1.4
comp=Z,11nm,0.9s,baz=25,slow=4.0,SNR=3.9
MKAR LR LR 18 55 03.5
comp=Z,6µm,19.7s,MS5.4,baz=358,slow=38
MKAR Makanchi Array 38.02 217 P **P** **18 38 13.6 -1.7**
MKAR 18 40 28.9
ESK Eskdalemuir 38.28 305 PFAKE 18 38 30.0 +13
ESK LR LR
comp=Z,2µm,21.0s,MS4.9
ESK Eskdalemuir 38.28 305 *i* P **P** **18 38 18.6 +1.3**
MDJ Mudanjiang 39.32 163 P **P** **18 38 25.8 -0.4**
MDJ pP pP 18 38 29.0 -0.3
MDJ sP sP 18 38 30.4 -0.1
MDJ PP PP 18 39 56.3 +0.2
MDJ ScP ScP 18 44 21.5 -0.9
MDJ PcS PcS 18 44 23.4 -0.7
MDJ S **S** **18 44 25.8 -0.9**
MDJ sS sS 18 44 32.6 +0.8
MDJ pmax pmax
comp=Z,44nm,1.1s,mb5.1
MDJ pmax pmax
comp=Z,500nm,5.7s
MDJ LR LR
comp=N,1µm,24.9s,MS5.1
MDJ LR LR
comp=E,3µm,21.5s,MS5.1
MDJ LR LR
comp=Z,2µm,16.2s
MDJ Mudanjiang 39.32 163 *e*P **P** **18 38 25.8 -0.4**
comp=Z,97nm,1.4s,mb5.3
MDJ LR LR
comp=Z,2µm,20.0s,MS5.0
AKASG Malin Array Be 39.41 273 P **P** **18 38 25.6 -1.3**
comp=Z,7.0nm,0.7s,mb4.5,baz=11,slow=8.7,SNR=16
AKASG PcP PcP 18 40 32.5 -2.1
comp=Z,4.4nm,0.8s,baz=16,slow=3.9,SNR=4.8
AKASG LR LR 18 56 40.1
comp=Z,6µm,20.8s,MS5.4,baz=10.0,slow=39
AKASG Malin Array Be 39.41 273 P **P** **18 38 25.6 -1.3**
AKASG 18 40 32.5
AKBB Malin Array Si 39.41 273 *e*P **P** **18 38 25.7 -1.2**
KIEV Kiev 39.41 273 *e*P **P** **18 38 25.1 -1.8**
comp=Z,14nm,0.9s,mb4.7
KIEV LR LR
comp=Z,6µm,21.0s,MS5.4
KIEV Kiev 39.41 273 *e*P **P** **18 38 25.1 -1.8**
KIEV pmax pmax
comp=Z,14nm,0.9s,mb4.7
KIEV MLR MLR
comp=Z,6µm,21.0s,MS5.4
CN2 Changchun 40.01 168 ⇓P **P** **18 38 31.8 -0.2**
CN2 *e*sP sP 18 38 38.0 +1.7
CN2 *e*S **S** **18 44 36.0 -1.1**
CN2 pmax pmax
comp=Z,20nm,0.8s,mb4.9
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,3µm,18.0s,MS5.3
CN2 LR LR
comp=E,3µm,18.0s,MS5.3
CN2 LR LR
comp=Z,3µm,19.0s,MS5.1
CLZ Clausthal 40.36 292 *e*P **P** **18 38 35.5 +0.7**
comp=Z,79nm,1.7s,mb5.2
CLZ Clausthal 40.36 292 *e*P **P** **18 38 35.5 +0.7**
CLZ pmax pmax
comp=Z,79nm,1.7s,mb5.2
CLL Collm 40.61 289⇓ *i*P **P** **18 38 36.4 -0.4**
comp=Z,8.0nm,0.9s,mb4.3
CLL *i* PcP PcP 18 40 38.1 -0.4
CLL *e*S **S** **18 44 47.0 +1.2**
CLL Collm 40.61 289⇓ *i*P **P** **18 38 36.4 -0.4**
CLL *i* 18 40 38.1
CLL *e*S **S** **18 44 47.0 +1.2**
CLL pmax pmax
comp=Z,94nm,0.9s,mb5.4
CLL Collm 40.61 289⇓ *i*P **P** **18 38 36.4 -0.4**
comp=Z,8.0nm,0.9s,mb4.3
CLL *e*Plp pP 18 38 39.0 -0.9
CLL *e*PP PP 18 40 09.0 -1.0
CLL *i* PcP PcP 18 40 38.1 -0.4
CLL *e* 18 40 58.0
CLL *e*S **S** **18 44 47.0 +1.2**
comp=N,1µm,18.6s
CLL *e*S **S** **18 44 47.0 +1.2**
comp=E,400nm,16.2s
CLL *e*SS SS 18 47 42.0 -3.3
CLL Lmax 19 13 00.0
WMQ Urumqi 40.65 210 P **P** **18 38 37.8 +0.6**
WMQ pP pP 18 38 42.3 +2.0
WMQ sP sP 18 38 44.8 +3.3
WMQ PP PP 18 40 15.1 +4.5
WMQ PcP PcP 18 40 40.4 +1.7
WMQ ScP ScP 18 44 28.1 +0.5
WMQ S **S** **18 44 46.8 +0.3**
WMQ sS sS 18 44 54.1 +2.5

WMQ SS SS 18 47 41.3 -4.9
WMQ ScS ScS 18 48 41.0 -1.0
WMQ pmax pmax
comp=Z,67nm,1.1s,mb5.2
WMQ pmax pmax
comp=Z,1μm,4.5s
WMQ LR LR
comp=N,9μm,23.5s,MS5.6
WMQ LR LR
comp=E,6μm,21.6s,MS5.6
WMQ LR LR
comp=Z,9μm,23.4s,MS5.5
YUK Yuzh-Kuril'sk 40.70 145 *c* iP **P 18 38 33.0 -4.7**
YUK *i* 18 40 17.9
YUK *i* S **S 18 44 46.8 -0.6**
YUK MLR MLR
comp=N,1μm,20.0s,MS5.0
YUK MLR MLR
comp=E,2μm,20.0s,MS5.0
YUK MLR MLR
comp=Z,1μm,20.0s,MS4.8
KSP Ksiaz 40.71 286 *e*P **P 18 38 37.8 +0.2**
KSP Ksiaz 40.71 286 *e*P **P 18 38 37.5 -0.2**
KSP *e*S **S 18 44 46.7 -0.7**
KSP *e*SS SS 18 47 42.2 -5.1
KSP MLR MLR
comp=Z,10μm,19.0s,MS5.7
FFC Flin Flon 40.85 32 *e*P **P 18 38 36.5 -2.2**
comp=Z,20nm,1.2s,mb4.6
FFC LR LR
comp=Z,4μm,20.0s,MS5.2
FFC Flin Flon 40.85 32 *i* P **P 18 38 38.9 +0.1**
LVV L'vov 40.86 278 *e*P **P 18 38 39.2 +0.3**
LVV *e* 18 40 17.0
LVV *e*S **S 18 44 50.2 +0.6**
LVV *e* 18 47 51.6
LVV MLR MLR
comp=Z,3μm,21.0s,MS5.1
LVV MLR MLR
comp=N,2μm,20.0s,MS5.1
LVV MLR MLR
comp=E,1μm,19.0s,MS5.1
BRG Berggiesshubel 40.94 288 *e*P **P 18 38 39.0 -0.5**
comp=Z,206nm,3.2s
BRG Berggiesshubel 40.94 288 *e*P **P 18 38 39.1 -0.4**
comp=Z,7.0nm,0.9s,mb4.3
BRG PP PP 18 40 15.0 +1.4
BRG S **S 18 44 53.0 +2.3**
BRG SS SS 18 47 45.0 -6.8
BRG
comp=N,3μm,15.5s
BRG
comp=E,2μm,17.6s
BRG
comp=Z,4μm,17.6s
BRG Berggiesshubel 40.94 288 *e*P **P 18 38 39.1 -0.4**
BRG 18 40 15.0
BRG S **S 18 44 53.0 +2.3**
BRG SS SS 18 47 45.0 -6.8
BRG pmax pmax
comp=Z,30nm,0.9s,mb4.9
BRG MLR MLR
comp=N,4μm,15.5s,MS5.4
BRG MLR MLR
comp=E,2μm,17.6s,MS5.4
BRG MLR MLR
comp=Z,916nm,17.6s,MS4.7
OJC Ojcow 40.94 282 *e*P **P 18 38 39.5 -0.1**
OJC *e*pP pP 18 38 41.5 -1.2
OJC *e*PP PP 18 40 18.3 +4.7
OJC *e*S **S 18 44 51.9 +1.1**
OJC *e*SS SS 18 47 49.3 -2.6
OJC L 18 56 05.2
comp=Z,4.1nm,20.7s
BUG Bochum–Univer 41.08 295 *e*P **P 18 38 41.3 +0.6**
comp=Z,46nm,1.4s,mb4.9
DPC Dobruska-Polom 41.19 286 *e*P **P 18 38 41.8 +0.2**
DPC *e* pP 18 38 45.0 +0.2
DPC *e* 18 40 18.1
DPC *e*S **S 18 44 57.1 +2.5**
DPC MLR MLR
comp=Z,4μm,18.4s,MS5.3
DPC Dobruska-Polom 41.19 286 *e*P **P 18 38 41.8 +0.2**
DPC *e*pP pP 18 38 45.0 +0.2
DPC *e*PP PP 18 40 18.1 +1.7
DPC *e*S **S 18 44 57.1 +2.5**
DPC AMS AMS 18 59 40.0
comp=Z,4μm,18.4s
KWP Kalwaria Pacla 41.20 279 PFAKE 18 38 50.0 +8.3
KWP LR LR
comp=Z,4μm,21.0s,MS5.2
PVCC Panska Ves 41.21 287 *e*P **P 18 38 41.7 -0.1**
PVCC *e* 18 38 47.5
PVCC *e* 18 40 18.8
PVCC *e*S **S 18 44 57.9 +3.1**
PVCC MLR MLR
comp=Z,3μm,17.5s,MS5.2
PVCC Panska Ves 41.21 287 *e*P **P 18 38 41.7 -0.1**
PVCC *e*pP pP 18 38 47.5 +2.6
PVCC *e*PP PP 18 40 18.8 +2.3
PVCC *e*S **S 18 44 57.9 +3.1**
PVCC AMS AMS 18 59 50.0
comp=Z,3μm,17.5s
MOX Moxa 41.41 290 *e*P **P 18 38 43.3 -0.1**
comp=Z,77nm,1.8s,mb5.0
MOX *e*S **S 18 44 59.0 +1.2**
MOX
comp=Z,2μm,19.0s
MOX Moxa 41.41 290 *e*P **P 18 38 43.6 +0.2**
comp=Z,54nm,1.5s,mb5.0
MOX Moxa 41.41 290 *e*P **P 18 38 43.3 -0.1**
MOX *e*S **S 18 44 59.0 +1.2**
MOX pmax pmax
comp=Z,77nm,1.8s,mb5.0
MOX MLR MLR
comp=Z,2μm,19.0s,MS4.9
OKC Ostrava-Krasne 41.50 284 *e*P **P 18 38 43.3 -0.9**
OKC *e* 18 40 21.2
OKC *e*S **S 18 45 02.9 +3.8**
OKC MLR MLR
comp=Z,3μm,18.8s,MS5.2
OKC Ostrava-Krasne 41.50 284 *e*P **P 18 38 43.3 -0.9**
OKC *e*PP PP 18 40 21.2 +1.5
OKC *e*S **S 18 45 02.9 +3.8**
OKC AMS AMS 19 00 00.0
comp=Z,3μm,18.8s
STHS Stebnicka Huta 41.57 281 *e*P **P 18 38 45.9 +1.1**
comp=Z,14nm,0.8s,mb4.6
STHS Stebnicka Huta 41.57 281 *e*P **P 18 38 45.9 +1.1**
STHS pmax pmax
comp=Z,14nm,0.8s,mb4.6
STHS Stebnicka Huta 41.57 281 *e*P **P 18 38 45.9 +1.1**
EDM Edmonton 41.57 42 *e*P **P 18 38 42.9 -1.8**
MORC Moravsky Berou 41.62 284 *e*P **P 18 38 44.6 -0.6**
comp=Z,22nm,1.3s,mb4.6
MORC Moravsky Berou 41.62 284 ⇑P **P 18 38 45.8 +0.6**
MORC Moravsky Berou 41.62 284 ⇑*i*P **P 18 38 45.8 +0.6**
NIE Niedzica 41.67 282 *e*P **P 18 38 46.2 +0.6**
PRA Prague 41.67 287 P **P 18 38 48.0 +2.4**
PRA S **S 18 45 07.0 +5.3**
PRA AMS AMS 19 02 00.0
NKC Novy Kostel 41.73 289 *e*P **P 18 38 46.5 +0.5**
NKC *e* pP 18 38 50.1 +1.0
NKC *e* 18 40 22.8
NKC MLR MLR
comp=Z,3μm,17.3s,MS5.2
NKC Novy Kostel 41.73 289 *e*P **P 18 38 46.5 +0.5**
NKC *e*pP pP 18 38 50.1 +1.0
NKC *e*PP PP 18 40 22.8 +0.6
NKC AMS AMS 18 59 50.0
comp=Z,3μm,17.3s
PRU Pruhonice 41.74 287 *e*P **P 18 38 47.1 +0.9**
PRU *e* 18 40 25.1
PRU *e*S **S 18 45 06.0 +3.3**
PRU MLR MLR
comp=Z,4μm,19.0s,MS5.3
PRU Pruhonice 41.74 287 *e*P **P 18 38 47.1 +0.9**
PRU *e*PP PP 18 40 25.1 +2.8
PRU *e*S **S 18 45 06.0 +3.3**
PRU AMS AMS 19 00 10.0
comp=Z,4μm,19.0s
SCHQ Schefferville 41.86 1 *e*P **P 18 38 44.7 -2.4**
comp=Z,22nm,0.9s,mb4.8
SCHQ LR LR
comp=Z,3μm,20.0s,MS5.2
SCHQ Schefferville 41.86 1 P **P 18 38 44.8 -2.2**
comp=Z,13nm,0.8s,mb4.6,baz=12,slow=7.3,SNR=17
SCHQ LR LR 18 56 26.1
comp=Z,2μm,19.5s,MS5.1,baz=354,slow=37
SNY Shenyang 41.94 170 ⇓P **P 18 38 47.8 -0.1**
SNY PP PP 18 40 27.5 +2.9
SNY S **S 18 45 09.4 +3.6**
SNY pmax pmax
comp=Z,28nm,0.8s,mb4.9
SNY pmax pmax
comp=Z,540nm,3.5s
SNY LR LR
comp=E,2μm,22.0s
SNY LR LR
comp=Z,2μm,21.2s,MS4.8
MEM Membach 42.03 296 P **P 18 38 49.3 +0.8**
CRVS Cervenica-Dubn 42.05 280 *e*P **P 18 38 49.0 +0.3**
comp=Z,160nm,2.6s,mb5.2
CRVS *e*PP PP 18 40 26.3 +0.6
CRVS *e*S **S 18 45 05.1 -2.2**
CRVS *e*SS SS 18 48 17.9 +3.9
CRVS Cervenica-Dubn 42.05 280 *e*P **P 18 38 49.0 +0.3**
CRVS pmax pmax
comp=Z,160nm,2.6s,mb5.2
CRVS Cervenica-Dubn 42.05 280 *e*P **P 18 38 49.0 +0.3**
CRVS *e*PP PP 18 40 26.2 +0.5
CRVS *e*S **S 18 45 05.1 -2.2**
CRVS *e*SS SS 18 48 17.9 +3.9
USP Ospenovka 42.10 225 P **P 18 38 50.4 +1.2**
SNR=40
VRAC Vranov 42.19 285 ⇓P **P 18 38 50.2 +0.4**
VRAC Vranov 42.19 285 LR LR 18 59 35.6
comp=Z,4μm,20.2s,MS5.3,baz=6.1,slow=41
VRAC Vranov 42.19 285 ⇓*i*P **P 18 38 50.2 +0.4**
UZH Uzhgorod 42.23 279 *e*P **P 18 38 49.4 -0.7**
UZH *i* 18 40 29.0
UZH *e*S **S 18 45 07.4 -2.5**
UZH *i* SS SS 18 48 17.0 -0.4
UZH MLR MLR
comp=N,2μm,17.0s,MS5.3
UZH MLR MLR
comp=E,3μm,17.0s,MS5.3
UZH MLR MLR
comp=Z,1μm,17.0s,MS4.9
BCLA Clavier 42.29 296 P **P 18 38 50.5 -0.2**
SNF Seneffe 42.30 297 P **P 18 38 51.1 +0.3**
comp=Z,19nm,1.5s,mb4.5
TREC Trest 42.33 286 *e*P **P 18 38 51.2 +0.3**
TREC MLR MLR
comp=Z,4μm,16.9s,MS5.4
TREC Trest 42.33 286 *e*P **P 18 38 51.2 +0.3**
TREC AMS AMS 19 00 20.0
comp=Z,4μm,16.9s
CHMS Chumysh 42.35 224 P **P 18 38 52.8 +1.6**
SNR=28
GRA1 Grafenberg Arr 42.39 290 *e*P **P 18 38 52.1 +0.6**
comp=Z,126nm,2.0s,mb5.2
GRF Grafenberg Arr 42.39 290 *e*P **P 18 38 52.1 +0.6**
comp=Z,126nm,2.0s,mb5.2
GRF *e*L 18 54 14.5
comp=E,2μm,21.7s
GRF Grafenberg Arr 42.39 290 *e*P **P 18 38 52.1 +0.6**
GRF pmax pmax
comp=Z,126nm,2.0s,mb5.2
GRF MLR MLR
comp=E,2μm,21.7s
FRU Bishkek 42.52 224 *e*P **P 18 38 53.0 +0.4**
FRU *i* 18 40 50.0
FRU *e*S **S 18 45 21.0 +6.6**
FRU pmax pmax
comp=Z,370nm,2.5s,mb5.7
FRU MLR MLR
comp=E,6μm,17.0s
ERM Erimo 42.55 148 PFAKE 18 39 00.0 +7.2
ERM LR LR
comp=Z,2μm,20.0s,MS5.0
ERM Erimo 42.55 148 *d* iP **P 18 38 52.2 -0.6**
ERM pmax pmax
comp=Z,26nm,1.2s,mb4.8
KECS Kecovo 42.58 281 *e*P **P 18 38 53.5 +0.5**
comp=Z,3.9nm,0.8s,mb4.2
KECS Kecovo 42.58 281 *e*P **P 18 38 53.5 +0.5**
KK31 Karatay Array 42.59 229 *i* P **P 18 38 53.0 -0.2**
KK31 pmax pmax
comp=Z,93nm,1.2s,mb5.4
GIVF Givet 42.65 297 *e*P **P 18 38 53.2 -0.4**
KBK Karagaybulak 42.67 224 P **P 18 38 55.5 +1.6**
SNR=21
DOU Dourbes 42.68 297 P **P 18 38 54.3 +0.5**
KHC Kasperske Hory 42.69 288 *e*P **P 18 38 53.0 -0.9**
comp=Z,38nm,1.5s,mb4.9
KHC Kasperske Hory 42.69 288 *e*P **P 18 38 54.5 +0.6**
KHC *e* pP 18 38 57.7 +0.7
KHC *e* 18 40 32.2
KHC *e*S **S 18 45 20.4 +3.7**
KHC MLR MLR
comp=Z,3μm,19.1s,MS5.2
KHC Kasperske Hory 42.69 288 *e*P **P 18 38 54.5 +0.6**
KHC *e*pP pP 18 38 57.7 +0.7
KHC *e*PP PP 18 40 32.2 -0.4
KHC *e*S **S 18 45 20.4 +3.7**
KHC AMS AMS 19 00 30.0
comp=Z,3μm,19.1s
KOLL Kolacno 42.71 283 *e*P **P 18 38 53.7 -0.4**
KOLL Kolacno 42.71 283 *e*P **P 18 38 53.7 -0.4**
AAK Ala-Archa 42.73 224 P **P 18 38 55.5 +1.2**
comp=Z,183nm,1.4s,mb5.6,SNR=8.6
AAK Ala-Archa 42.73 224 P **P 18 38 55.8 +1.5**
SNR=11
AAK Ala-Archa 42.73 224 *e*P **P 18 38 54.8 +0.5**
comp=Z,36nm,1.0s,mb5.0
AAK LR LR
comp=Z,3μm,19.0s,MS5.2
AAK Ala-Archa 42.73 224 P **P 18 38 55.0 +0.7**
comp=Z,11nm,0.7s,mb4.7,baz=201,slow=1.0,SNR=21
AAK LR LR 18 58 41.3
comp=Z,3μm,18.3s,MS5.2,baz=5.8,slow=39
AAK Ala-Archa 42.73 224 P **P 18 38 55.0 +0.7**
AAK pmax pmax
comp=Z,11nm,0.7s,mb4.7
AAK MLR MLR
comp=Z,3μm,18.3s,MS5.2
TOD Tromm 42.73 293 *e*P **P 18 38 54.4 +0.2**
VYHS Vyhne 42.75 283 *e*P **P 18 38 54.5 +0.1**
comp=Z,226nm,3.5s
VYHS *e*PP PP 18 40 33.3 +0.1
VYHS *e*S **S 18 45 21.4 +3.8**
VYHS *e*SS SS 18 48 21.5 -6.1
VYHS LR LR
comp=Z,2μm,21.4s,MS5.0
VYHS Vyhne 42.75 283 *e*P **P 18 38 54.5 +0.1**
VYHS *e*PP PP 18 40 33.3 +0.1
VYHS *e*S **S 18 45 21.4 +3.8**
VYHS *e*SS SS 18 48 21.5 -6.1
BAIF Baives 42.76 297 *e*P **P 18 38 54.1 -0.3**
comp=Z,56nm,1.0s,mb4.9
BAIF Baives 42.76 297 *e*P **P 18 38 54.1 -0.3**
comp=Z,28nm,1.0s,mb4.9
BAIF Baives 42.76 297 *e*P **P 18 38 54.1 -0.3**
BAIF pmax pmax
comp=Z,28nm,1.0s,mb5.0
EKS2 Erkin-Say 42.76 225 P **P 18 38 55.3 +0.8**
SNR=28
EKS2 Erkin-Say 42.76 225 *e*P **P 18 38 54.9 +0.4**
comp=Z,17nm,0.9s,mb4.8
EKS2 LR LR
comp=Z,4μm,19.0s,MS5.4
RUP Ruppelstein 42.82 294 *e*P **P 18 38 55.8 +0.9**
HHC Hu-ho-hao-te 42.84 183 *e*P **P 18 38 55.6 +0.4**
HHC pP pP 18 38 59.5 +1.2
HHC sP sP 18 39 02.8 +3.3
HHC PP PP 18 40 37.3 +3.0
HHC PcS PcS 18 44 37.8 -0.3
HHC S **S 18 45 19.3 +0.2**
HHC sS sS 18 45 25.8 +1.6
HHC SS SS 18 48 24.3 -5.4
HHC ScS ScS 18 48 53.6 -1.9
HHC pmax pmax
comp=Z,23nm,1.2s,mb4.8
HHC pmax pmax
comp=Z,620nm,5.9s
HHC LR LR
comp=N,1μm,15.9s,MS5.5
HHC LR LR
comp=E,5μm,17.1s,MS5.5
HHC LR LR
comp=Z,2μm,22.4s
BUR08 Bucovina Ar. S 42.88 276 *e*P **P 18 38 55.1 -0.3**
BURAR Bucovina Array 42.90 276 ⇑P **P 18 38 55.8 +0.2**
BURAR Bucovina Array 42.90 276 ⇑*i*P **P 18 38 55.8 +0.2**
BUR01 Bucovina Ar. S 42.90 276 P **P 18 38 56.2 +0.6**
WLF Walferdange 42.95 295 PFAKE 18 39 10.0 +14
WLF LR LR
comp=Z,3μm,19.0s,MS5.2
GEC2 GERESS Array S 42.96 288 *e*P **P 18 38 56.5 +0.4**
comp=Z,20nm,1.2s,mb4.7
GEC2 GERESS Array S 42.96 288 *e*P **P 18 38 56.5 +0.4**
GEC2 pmax pmax
comp=Z,20nm,1.2s,mb4.7
ULHL Ulahol 42.98 222 P **P 18 38 56.4 +0.1**
SNR=16
KTD Kalmit 43.09 293 *e*P **P 18 38 57.2 +0.1**
BTO Baotou 43.10 185 *e*P **P 18 38 56.9 -0.4**
KIS Kishinev 43.10 273 *e*PP PP 18 40 38.0 +1.0
KIS Kishinev 43.10 273 *e*P **P 18 38 57.0 -0.3**
KIS *e* 18 40 38.0
KIS *e*PPP 18 41 20.0
KIS *e*S **S 18 45 27.0 +4.2**
KIS MLR MLR
comp=N,5μm,16.0s,MS5.6
KIS MLR MLR
comp=E,3μm,16.0s,MS5.6
KIS MLR MLR
comp=Z,4μm,16.0s,MS5.5
KIS MLR MLR
comp=Z,6μm,16.0s
UCH Uchtor 43.13 224 P **P 18 38 59.6 +2.1**
SNR=43
UCH Uchtor 43.13 224 *e*P **P 18 38 58.5 +0.9**
comp=Z,55nm,1.2s,mb5.2
PSZ Piszkesteto 43.20 282 *e*P **P 18 38 57.6 -0.4**
comp=Z,30nm,1.1s,mb4.9
PSZ LR LR
comp=Z,3μm,20.0s,MS5.2
PSZ Piszkesteto 43.20 282 P **P 18 38 59.4 +1.4**
PSZ Piszkesteto 43.20 282 ⇓*i*P **P 18 38 58.7 +0.7**
PSZ Piszkesteto 43.20 282 ⇑*e*P **P 18 38 59.3 +1.3**
KZA Kyzart 43.22 224 P **P 18 39 00.1 +1.8**
SNR=39
ZST Bratislava 43.23 284 *e*P **P 18 38 58.6 +0.3**
comp=Z,55nm,2.2s,mb4.9
ZST *e*PP PP 18 40 50.9 +13
ZST *e*S **S 18 45 30.4 +5.7**
ZST *e*SS SS 18 48 38.9 +1.7
ZST LR LR
comp=Z,3μm,15.9s,MS5.2
ZST Bratislava 43.23 284 *e*P **P 18 38 58.6 +0.3**
ZST *e*PP PP 18 40 50.9 +13
ZST *e*S **S 18 45 30.4 +5.7**
ZST *e*SS SS 18 48 38.9 +1.7
AML Almayashu 43.30 225 P **P 18 39 01.2 +2.4**
SNR=47
AML Almayashu 43.30 225 *e*P **P 18 38 59.5 +0.6**
comp=Z,36nm,0.8s,mb5.2
AML LR LR
comp=Z,4μm,19.0s,MS5.4
LANF Langenberg 43.45 293 *e*P **P 18 38 59.9 -0.2**
CONA Conrad Observa 43.63 286 ⇑*i*pP pP 18 39 02.0 -2.6
comp=Z,31nm,1.5s
BJI Beijing 43.64 178 P **P 18 39 02.8 +1.1**
BJI PP PP 18 40 42.8 -0.1
BJI S **S 18 45 32.0 +1.2**
BJI sS sS 18 45 38.0 +2.1
BJI pmax pmax
comp=Z,64nm,0.9s,mb5.3
BJI pmax pmax
comp=Z,1μm,4.6s
BJI LR LR
comp=N,4μm,11.2s,MS5.6
BJI LR LR
comp=E,2μm,10.9s,MS5.6
BJI LR LR
comp=Z,2μm,25.3s
BJT Baijiatuan 43.66 178 *e*P **P 18 39 02.5 +0.7**
comp=Z,66nm,1.0s,mb5.3
BJT LR LR
comp=Z,2μm,22.0s,MS5.0
BJT Baijiatuan 43.66 178 *e*P **P 18 39 02.5 +0.6**
BJT pmax pmax
comp=Z,66nm,1.0s
BJT MLR MLR
comp=Z,2μm,22.0s
BUD Budapest 43.72 282 ⇑*e*P **P 18 39 05.0 +2.7**
SOP Sopron 43.80 285 ⇑*e*P **P 18 39 04.9 +2.0**
TESR 43.83 275 ⇑P **P 18 39 03.2 +0.1**
TESR 43.83 275 ⇑*i*P **P 18 39 03.2 +0.1**
MOA Molln 43.88 287 ⇓*i*pP **P 18 39 03.9 +0.4**
comp=Z,19nm,1.1s,mb4.8
DRGR 44.00 279 ⇓P **P 18 39 05.3 +0.9**
DRGR 44.00 279 P **P 18 39 05.5 +1.0**
DRGR 44.00 279 ⇓*i*P **P 18 39 05.3 +0.8**
BFO Black Forest 44.04 293 *e*P **P 18 39 04.7 -0.1**
comp=Z,23nm,1.3s,mb4.8
BFO Black Forest 44.04 293 *e*P **P 18 39 04.7 -0.1**
BFO pmax pmax
comp=Z,23nm,1.3s,mb4.8
CDF Champ du Feu 44.07 294 *e*P **P 18 39 04.9 -0.1**
comp=Z,48nm,1.0s,mb4.9
CDF Champ du Feu 44.07 294 *e*P **P 18 39 04.9 -0.1**
comp=Z,24nm,1.0s,mb4.9
CDF Champ du Feu 44.07 294 *e*P **P 18 39 04.9 -0.1**
CDF pmax pmax
comp=Z,24nm,1.0s,mb4.9
MEZF Maizieres J'vi 44.21 296 *e*P **P 18 39 06.0 -0.2**
SPAK Spaichingen-Ko 44.22 292 *e*P **P 18 39 06.4 +0.2**
ECH Echery 44.28 294 *e*P **P 18 39 06.7 0.0**
ECH Echery 44.28 294 *e*P **P 18 39 07.1 +0.4**
comp=Z,39nm,1.4s,mb4.9
ECH LR LR
comp=Z,2μm,19.0s,MS5.0
ECH Echery 44.28 294 *e*P **P 18 39 07.1 +0.4**
ECH pmax pmax
comp=Z,39nm,1.4s,mb4.9
ECH MLR MLR
comp=Z,2μm,19.0s,MS5.0
LIBD Limburg 44.30 293 *e*P **P 18 39 08.0 +1.2**
ANN Anapa 44.30 264 *c* iP **P 18 39 07.2 +0.3**
ANN *i* 18 40 50.0
ANN *e*S **S 18 45 42.9 +2.6**
ANN *i* SS SS 18 49 07.1 +9.1
ANN *i* SSS 18 49 42.9
ANN pmax pmax
comp=Z,75nm,1.5s,mb5.2
THEF They Montfort 44.39 295 *e*P **P 18 39 07.4 -0.2**
VRI Vrincioaia 44.46 274 ⇓P **P 18 39 08.5 +0.3**
VRI Vrincioaia 44.46 274 ⇓*i*P **P 18 39 08.5 +0.4**
PLOR Plostina 44.48 275 ⇓P **P 18 39 08.4 +0.1**
PLOR Plostina 44.48 275 ⇓*i*P **P 18 39 08.4 +0.1**
FLN La Foliniere 44.50 301 *e*P **P 18 39 07.3 -1.2**
comp=Z,392nm,1.8s,mb5.6
FLN *e*MLR MLR
comp=Z,2μm,19.2s,MS4.7
FLN La Foliniere 44.50 301 *e*P **P 18 39 07.3 -1.2**
comp=Z,196nm,1.8s,mb5.6
FLN LR LR
comp=Z,2μm,19.3s,MS5.0
FLN La Foliniere 44.50 301 *e*P **P 18 39 07.3 -1.2**
FLN pmax pmax
comp=Z,196nm,1.8s,mb5.6
FLN MLR MLR
comp=Z,2μm,19.3s,MS5.0
GTA Gaotai 44.50 196 *e*P **P 18 39 09.0 +0.4**
GTA pP pP 18 39 13.4 +1.7
GTA sP sP 18 39 16.6 +3.7
GTA PcP PcP 18 40 51.6 0.0
GTA S **S 18 45 47.8 +4.4**
GTA sS sS 18 45 56.5 +8.0
GTA pmax pmax
comp=Z,10.0nm,1.1s,mb4.6
GTA pmax pmax
comp=Z,920nm,5.3s
GTA LR LR
comp=N,3μm,15.8s,MS5.5
GTA LR LR
comp=E,3μm,12.8s,MS5.5
GTA LR LR
comp=Z,3μm,16.6s,MS5.3
FELD Feldberg im Sc 44.52 293 *e*P **P 18 39 07.1 -1.6**
SIM Simferopol' 44.53 267 *c* iP **P 18 39 11.0 +2.3**

SIM *e* 18 40 51.0
SIM *eS* **S** **18 45 46.0 +2.4**
SIM pmax pmax
comp=Z,110nm,7.1s
SIM MLR MLR
comp=Z,8µm,24.3s,MS5.5
KIV Kislovodsk 44.54 258 P **P** **18 39 10.9 +2.0**
comp=Z,595nm,1.1s,mb6.3,SNR=23
KIV Kislovodsk 44.54 258 *eP* **P** **18 39 09.3 +0.4**
comp=Z,118nm,1.0s,mb5.7
KIV LR LR
comp=Z,3µm,21.0s,MS5.2
KIV Kislovodsk 44.54 258 *eP* **P** **18 39 09.6 +0.7**
KIV *e* 18 40 53.4
KIV *eS* **S** **18 45 43.4 -0.5**
KIV *eSS* SS 18 49 06.0 +3.2
KIV pmax pmax
comp=Z,119nm,3.2s
KIV pmax pmax
comp=Z,119nm,1.1s,mb5.6
KIV MLR MLR
comp=Z,2µm,16.0s,MS5.1
HAU Haudompre 44.57 295 *eP* **P** **18 39 08.8 -0.2**
comp=Z,73nm,1.1s,mb5.1
HAU *e*MLR MLR
comp=Z,2µm,21.0s,MS4.6
HAU Haudompre 44.57 295 *eP* **P** **18 39 08.8 -0.2**
comp=Z,37nm,1.1s,mb5.1
HAU LR LR
comp=Z,2µm,21.0s,MS4.9
HAU Haudompre 44.57 295 *eP* **P** **18 39 08.8 -0.2**
HAU pmax pmax
comp=Z,37nm,1.1s,mb5.1
HAU MLR MLR
comp=Z,2µm,21.0s,MS4.9
LDF La Druitiere 44.64 301 *eP* **P** **18 39 08.2 -1.3**
comp=Z,23nm,0.9s,mb4.7
LDF La Druitiere 44.64 301 *eP* **P** **18 39 08.2 -1.3**
comp=Z,111nm,0.9s,mb4.7
LDF La Druitiere 44.64 301 *eP* **P** **18 39 08.2 -1.3**
LDF pmax pmax
comp=Z,11nm,0.9s,mb4.7
MOF Molkenrain 44.64 294 *eP* **P** **18 39 09.0 -0.6**
HINF Hinteralfeld 44.70 294 *eP* **P** **18 39 09.5 -0.6**
comp=Z,32nn,1.2s,mb4.7
HINF Hinteralfeld 44.70 294 *eP* **P** **18 39 09.5 -0.6**
comp=Z,16nn,1.2s,mb4.7
HINF Hinteralfeld 44.70 294 *eP* **P** **18 39 09.5 -0.6**
HINF pmax pmax
comp=Z,16nn,1.2s,mb4.7
MOTA Moosalm 44.72 290 ⇓*i*P **P** **18 39 11.4 +1.1**
comp=Z,20nn,1.2s,mb4.8
KBA Koelnbreinsper 44.75 288 ⇑*i*P **P** **18 39 11.4 +1.0**
comp=Z,59nn,1.3s,mb5.3
WTTA Wattenberg 44.75 289 ⇑*i*P **P** **18 39 10.7 +0.2**
comp=Z,36nn,1.2s,mb5.1
DAVA Damuels 44.91 291 ⇑*i*P **P** **18 39 12.1 +0.4**
comp=Z,21nn,1.1s,mb4.9
GRR Gorron 44.91 301 *eP* **P** **18 39 10.6 -1.1**
comp=Z,98nn,1.3s,mb5.2
GRR Gorron 44.91 301 *eP* **P** **18 39 10.6 -1.1**
comp=Z,49nn,1.3s,mb5.2
GRR Gorron 44.91 301 *eP* **P** **18 39 10.6 -1.1**
GRR pmax pmax
comp=Z,49nn,1.3s,mb5.2
MLR Muntele Rosu 44.92 275 ⇑P **P** **18 39 11.9 +0.1**
MLR Muntele Rosu 44.92 275 LR LR 18 59 55.9
comp=Z,5µm,20.8s,MS5.4,baz=15,slow=39
MLR Muntele Rosu 44.92 275 P **P** **18 39 13.5 +1.7**
MLR Muntele Rosu 44.92 275 ⇑*i*P **P** **18 39 11.9 +0.1**
SOKA Soboth 44.96 286 ⇑*i*pP **P** **18 39 12.8 +0.6**
comp=Z,24nn,1.7s,mb4.7
BBS Basel-Blauen 44.98 293 *eP* **P** **18 39 12.3 0.0**
PERS Pernice 44.99 286 *i* P **P** **18 39 14.8 +2.4**
PERS *e*SS SS 18 49 18.0 +6.6
MAK Makhachkala 45.00 253 *eP* **P** **18 39 12.0 -0.5**
MAK *e* 18 40 57.1
MAK *e*PPP 18 41 36.6
MAK *eS* **S** **18 45 47.3 -3.2**
MAK *eSS* SS 18 49 09.7 -1.9
MAK pmax pmax
comp=Z,218nm,1.8s,mb5.7
MAK MLR MLR
comp=Z,5µm,15.0s,MS5.6
PKSM Moragy 45.02 282 ⇓P **P** **18 39 13.5 +0.9**
PKSM Moragy 45.02 282 ⇓*i*P **P** **18 39 13.5 +0.9**
A05A Maple Falls 45.05 51 ⇑P **P** **18 39 11.8 -1.0**
baz=45
VOIR 45.07 276 P **P** **18 39 14.4 +1.4**
FETA Feichten 45.08 290 ⇑*i*pP **P** **18 39 13.9 +0.8**
comp=Z,18nn,1.4s,mb4.7
MYKA Terra Mystica 45.16 287 ⇓*i*pP **P** **18 39 14.4 +0.7**
comp=Z,45nn,1.7s,mb5.0
ABTA Abfaltersbach 45.16 288 ⇑*i*pP **P** **18 39 15.1 +1.3**
comp=Z,20nn,0.9s,mb4.9
ROSF Rostrenen 45.19 304 *eP* **P** **18 39 12.8 -1.2**
comp=Z,293nn,1.8s,mb5.5
ROSF Rostrenen 45.19 304 *eP* **P** **18 39 12.8 -1.2**
comp=Z,147nn,1.8s,mb5.5
ROSF Rostrenen 45.19 304 *eP* **P** **18 39 12.8 -1.2**
ROSF pmax pmax
comp=Z,147nn,1.8s,mb5.5
SGMF Saint Gilles 45.21 303 *eP* **P** **18 39 13.3 -0.8**
comp=Z,141nn,1.1s,mb5.4
SGMF Saint Gilles 45.21 303 *eP* **P** **18 39 13.3 -0.8**
comp=Z,70nn,1.1s,mb5.4
SGMF Saint Gilles 45.21 303 *eP* **P** **18 39 13.3 -0.8**
SGMF pmax pmax
comp=Z,70nn,1.1s,mb5.4
SOC Sochi 45.24 261 *c i*P **P** **18 39 15.6 +1.2**
SOC *e**SP sP 18 39 24.5 +5.7
SOC *e* 18 40 53.0
SOC *i* PPP 18 41 48.4
SOC *eS* **S** **18 45 56.9 +2.9**
SOC *eSS* SS 18 49 16.4 +0.1
SOC pmax pmax
comp=Z,23nm,1.0s,mb5.0
SOC MLR MLR
comp=Z,7µm,22.0s,MS5.6
PGC Sidney 45.27 52 *eP* **P** **18 39 13.3 -1.3**
comp=Z,4.0nn,1.2s,mb4.1
MBW Mount Baker 45.27 51 P **P** **18 39 15.5 +0.9**
BZS Buzias 45.28 279 ⇑P **P** **18 39 15.5 +0.8**
BZS Buzias 45.28 279 ⇑*i*P **P** **18 39 15.5 +0.8**
GZR Gura Zlata 45.37 278 ⇑P **P** **18 39 16.3 +0.9**
GZR Gura Zlata 45.37 278 ⇑*i*P **P** **18 39 16.3 +0.9**
DAVOX Davos/Dischmat 45.41 291 LR LR 19 02 37.2
comp=Z,2µm,18.7s,MS5.1,baz=14,slow=42
LOR Lormes 45.55 297 *eP* **P** **18 39 16.1 -0.7**
comp=Z,72nn,1.3s,mb5.1
LOR *e*MLR MLR
comp=Z,3µm,18.8s,MS4.9
LOR Lormes 45.55 297 *eP* **P** **18 39 16.1 -0.7**
comp=Z,36nn,1.3s,mb5.1
LOR LR LR
comp=Z,3µm,18.8s,MS5.2
LOR Lormes 45.55 297 *eP* **P** **18 39 16.1 -0.7**
LOR pmax pmax
comp=Z,36nn,1.3s,mb5.1
LOR MLR MLR
comp=Z,3µm,18.8s,MS5.2
B06A Marblemount 45.57 51 ⇑P **P** **18 39 16.5 -0.5**
baz=46
QUIF Quistinic 45.60 304 *eP* **P** **18 39 16.4 -0.8**
comp=Z,111nm,1.0s,mb5.4
QUIF Quistinic 45.60 304 *eP* **P** **18 39 16.4 -0.8**
comp=Z,56nn,1.0s,mb5.5
QUIF Quistinic 45.60 304 *eP* **P** **18 39 16.4 -0.8**
QUIF pmax pmax
comp=Z,56nn,1.0s,mb5.5
CRNS Crni Vrh 45.63 287 *i* P **P** **18 39 20.3 +2.9**
CRNS *i* 18 39 28.1
CRNS *eSS* SS 18 49 38.8 +16
RPW Rockport 45.64 51 *eP* **P** **18 39 17.4 -0.2**
comp=Z,12nn,1.0s,mb4.8
A12A Yaak River Ran 45.65 45 ⇓P **P** **18 39 17.9 +0.3**
baz=46
TIRR Tirgusor 45.66 272 *eP* **P** **18 39 17.2 -0.5**
comp=Z,27nn,1.1s,mb5.1
TIRR Tirgusor 45.66 272 *eP* **P** **18 39 17.2 -0.5**
TIRR pmax pmax
comp=Z,27nn,1.1s,mb5.1
WALA Waterton Lakes 45.66 43 *eP* **P** **18 39 17.2 -0.5**
comp=Z,1.7nn,1.1s,mb3.9
HYF Humbligny 45.67 298 *eP* **P** **18 39 17.4 -0.4**
KSH Kashi 45.71 222 P **P** **18 39 22.3 +4.1**
KSH *e*pP pP 18 39 27.9 +6.6
KSH *e*sP sP 18 39 29.1 +6.5
KSH *e*PcP PcP 18 40 59.3 +3.5
KSH *e*PP PP 18 41 10.4 +5.4
KSH *e*ScP ScP 18 44 50.0 +1.8
KSH *e*PcS PcS 18 44 52.1 +2.2
KSH S **S** **18 46 06.3 +5.4**
KSH sS sS 18 46 13.0 +7.0
KSH *e*ScS ScS 18 49 15.0 +1.3
KSH *e*SS SS 18 49 24.6 -0.1
KSH pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KSH LR LR
comp=N,2µm,14.1s,MS5.5
KSH LR LR
comp=E,3µm,11.1s,MS5.5
KSH LR LR
comp=Z,2µm,11.1s,MS5.3
A13A Flathead Natio 45.75 44 ⇓P **P** **18 39 18.4 0.0**
baz=46
A14A Double T Ranch 45.79 43 ⇑P **P** **18 39 18.8 +0.2**
baz=46
A14A ⇑S **S** **18 46 01.9 +0.1**
baz=46
SSF Saint Saulge 45.79 297 *eP* **P** **18 39 17.9 -0.8**
comp=Z,44nn,1.0s,mb5.0
SSF Saint Saulge 45.79 297 *eP* **P** **18 39 17.9 -0.8**
comp=Z,22nn,1.0s,mb5.0
SSF Saint Saulge 45.79 297 *eP* **P** **18 39 17.9 -0.8**
SSF pmax pmax
comp=Z,22nn,1.0s,mb5.0
A15A Johnson Ranch, 45.84 42 ⇑P **P** **18 39 19.0 -0.1**
baz=46
A15A ⇑S **S** **18 46 01.5 -0.9**
baz=46
JAVS Javornik 45.84 287 *i* P **P** **18 39 22.1 +2.9**
JAVS *e*SS SS 18 49 33.8 +7.3
JCW Jim Creek 45.86 51 *eP* **P** **18 39 15.4 -3.8**
comp=Z,23nn,1.1s,mb5.0
B08A Colville Reser 45.92 49 ⇑P **P** **18 39 19.6 -0.1**
baz=46
B08A ⇓S **S** **18 46 04.3 +0.7**
baz=46
TIY Taiyuan 45.97 182 *eP* **P** **18 39 20.8 +0.6**
TIY sP sP 18 39 27.8 +3.2
TIY PP PP 18 41 07.6 -0.1
TIY S **S** **18 46 07.8 +3.2**
TIY sS sS 18 46 16.6 +6.9
TIY pmax pmax
comp=Z,490nm,7.8s
TIY LR LR
comp=N,1µm,10.2s,MS5.4
TIY LR LR
comp=E,2µm,10.4s,MS5.4
TIY LR LR
comp=Z,2µm,26.2s
CABF La Chapelle 45.98 295 *eP* **P** **18 39 19.9 -0.3**
comp=Z,60nn,1.2s,mb5.1
CABF La Chapelle 45.98 295 *eP* **P** **18 39 19.9 -0.3**
comp=Z,30nn,1.2s,mb5.1
CABF La Chapelle 45.98 295 *eP* **P** **18 39 19.9 -0.3**
CABF pmax pmax
comp=Z,30nn,1.2s,mb5.1
A17A Triple J Farms 46.02 41 ⇓P **P** **18 39 19.9 -0.6**
baz=46
TRI Trieste 46.05 287 PFAKE 18 39 30.0 +9.2
TRI LR LR
comp=Z,3µm,20.0s,MS5.3
OSD Olympics--Snow 46.07 53 P **P** **18 39 23.2 +2.3**
AVF Avril sur Loir 46.08 297 *eP* **P** **18 39 20.3 -0.7**
comp=Z,108nn,1.4s,mb5.3
AVF Avril sur Loir 46.08 297 *eP* **P** **18 39 20.3 -0.7**
comp=Z,54nn,1.4s,mb5.3
AVF Avril sur Loir 46.08 297 *eP* **P** **18 39 20.3 -0.7**
AVF pmax pmax
comp=Z,54nn,1.4s,mb5.3
BOJS Bojanci 46.09 286 *i* P **P** **18 39 24.2 +3.0**
BOJS *e*SS SS 18 49 37.2 +6.5
B12A Libby 46.12 45 ⇓P **P** **18 39 21.1 -0.2**
baz=46
SMF Signal de Mont 46.17 297 *eP* **P** **18 39 20.6 -1.1**
comp=Z,82nn,1.4s,mb5.2
SMF Signal de Mont 46.17 297 *eP* **P** **18 39 20.6 -1.1**
comp=Z,41nn,1.4s,mb5.2
SMF Signal de Mont 46.17 297 *eP* **P** **18 39 20.6 -1.1**
SMF pmax pmax
comp=Z,41nn,1.4s,mb5.2
NEW Newport 46.20 47 ⇑P **P** **18 39 22.0 +0.1**
baz=46
NEW Newport 46.20 47 *eP* **P** **18 39 18.8 -3.1**
comp=Z,68nn,1.1s,mb5.5
NEW LR LR
comp=Z,5µm,20.0s,MS5.5
NEW Newport 46.20 47 *eP* **P** **18 39 18.8 -3.1**
NEW pmax pmax
comp=Z,68nn,1.1s
NEW MLR MLR
comp=Z,5µm,20.0s
B13A Whitefish 46.30 44 ⇑P **P** **18 39 22.9 +0.1**
baz=46
INCN Inchon 46.35 167 PFAKE 18 39 30.0 +6.8
INCN LR LR
comp=Z,1µm,19.0s,MS4.8
OSR Olympics--Salm 46.36 53 P **P** **18 39 25.4 +2.2**
BGF Bois d'Agland 46.36 298 *eP* **P** **18 39 22.6 -0.6**
comp=Z,66nn,0.9s,mb5.2
BGF Bois d'Agland 46.36 298 *eP* **P** **18 39 22.6 -0.6**
comp=Z,33nn,0.9s,mb5.3
BGF Bois d'Agland 46.36 298 *eP* **P** **18 39 22.6 -0.6**
BGF pmax pmax
comp=Z,33nn,0.9s,mb5.3
GNW Green Mountain 46.40 52 *eP* **P** **18 39 23.8 +0.3**
comp=Z,14nn,1.1s,mb4.8
B14A Marquette Ranc 46.41 43 ⇓P **P** **18 39 23.1 -0.5**
baz=46
KSRS Korea Array 46.41 165 P **P** **18 39 22.4 -1.3**
comp=Z,2.9nn,0.9s,mb4.2,baz=351,slow=7.4,SNR=13
KSRS LR LR 19 00 46.5
comp=Z,1µm,18.2s,MS4.9,baz=2.1,slow=39
KSRS Korea Array 46.41 165 P **P** **18 39 22.5 -1.3**
KSRS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
KSRS MLR MLR
comp=Z,1µm,18.2s,MS4.9
PSN Preselentsi 46.45 273 P **P** **18 39 25.5 +1.6**
B16A M & M Farms, S 46.48 42 ⇑P **P** **18 39 23.5 -0.6**
baz=46
NLWA Neilton Lookou 46.48 53 *eP* **P** **18 39 23.4 -0.7**
comp=Z,35nn,1.1s,mb5.2
NLWA LR LR
comp=Z,3µm,20.0s,MS5.3
B15A Bradely Ranch, 46.51 42 ⇑P **P** **18 39 23.9 -0.5**
baz=46
TBLG Delisi 46.52 256 *eP* **P** **18 39 25.4 +0.9**
TBLG Delisi 46.52 256 P **P** **18 39 25.4 +0.9**
WTV Waterville 46.52 49 P **P** **18 39 25.5 +1.0**
MTA Mtatsminda 46.55 255 P **P** **18 39 25.7 +1.0**
MTA S **S** **18 46 18.7 +5.9**
C09A Chrisman Ranch 46.56 48 ⇑P **P** **18 39 24.5 -0.2**
baz=46
ETW Entiat 46.58 50 *eP* **P** **18 39 24.1 -0.8**
comp=Z,35nn,1.1s,mb5.2
MFF Saint Martin d 46.61 300 *eP* **P** **18 39 24.6 -0.6**
comp=Z,113nn,1.2s,mb5.4
MFF Saint Martin d 46.61 300 *eP* **P** **18 39 24.6 -0.6**
comp=Z,56nn,1.2s,mb5.4
MFF Saint Martin d 46.61 300 *eP* **P** **18 39 24.6 -0.6**
MFF pmax pmax
comp=Z,56nn,1.2s,mb5.4
B18A Beardsley Farm 46.64 40 ⇓P **P** **18 39 24.9 -0.5**
baz=47
B17A L&G Farms, Che 46.66 41 ⇑P **P** **18 39 25.4 -0.2**
baz=47
TCF Toulx Ste Croi 46.69 298 *eP* **P** **18 39 25.0 -0.8**
comp=Z,78nn,1.2s,mb5.2
TCF Toulx Ste Croi 46.69 298 *eP* **P** **18 39 25.0 -0.8**
comp=Z,39nn,1.2s,mb5.2
TCF Toulx Ste Croi 46.69 298 *eP* **P** **18 39 25.0 -0.8**
TCF pmax pmax
comp=Z,39nn,1.2s,mb5.2
DGRG David-gareji 46.72 255 P **P** **18 39 26.9 +0.7**
DGRG S **S** **18 46 21.0 +5.7**
BSMT Bassoo Peak 46.80 44 *eP* **P** **18 39 26.5 -0.1**
comp=Z,21nn,1.1s,mb5.0
AGO Saint Agoulin 46.83 297 *eP* **P** **18 39 27.3 +0.4**
YBMT Yellow Bay 46.84 44 *eP* **P** **18 39 26.8 -0.2**
comp=Z,29nn,1.1s,mb5.1
D05A Enumclaw 46.85 51 ⇓P **P** **18 39 26.7 -0.4**
baz=47
C12B Naegeli Ranch, 46.88 45 ⇑P **P** **18 39 26.9 -0.4**
baz=47
OD2 Odessa Site #2 46.93 48 *eP* **P** **18 39 28.2 +0.6**
comp=Z,20nn,1.1s,mb5.0
JTMT Jette 46.94 44 *eP* **P** **18 39 26.2 -1.6**
comp=Z,48nn,1.0s,mb5.4
DGMT Dagmar 46.95 35 ⇑P **P** **18 39 27.7 -0.1**
baz=47
DGMT Dagmar 46.95 35 *eP* **P** **18 39 27.7 0.0**
comp=Z,119nn,1.1s,mb5.7
DGMT LR LR
comp=Z,5µm,20.0s,MS5.5
DIVS Divibare 46.96 281 P **P** **18 39 27.4 -0.5**
C13A Hot Springs 46.98 44 ⇑P **P** **18 39 27.6 -0.5**
baz=47
LPL La Plagne 46.99 294 *eP* **P** **18 39 28.5 +0.3**
comp=Z,36nn,1.1s,mb4.9
LPL La Plagne 46.99 294 *eP* **P** **18 39 28.5 +0.3**
comp=Z,18nn,1.1s,mb4.9
LPL La Plagne 46.99 294 *eP* **P** **18 39 28.5 +0.3**
LPL pmax pmax
comp=Z,18nn,1.1s,mb4.9
EGMT Eagleton 47.01 40 ⇑P **P** **18 39 27.8 -0.4**
baz=47
EGMT Eagleton 47.01 40 *eP* **P** **18 39 28.3 0.0**
comp=Z,41nn,1.1s,mb5.3
EGMT LR LR
comp=Z,4µm,22.0s,MS5.3
LPG La Plagne 47.01 294 *eP* **P** **18 39 28.8 +0.5**
comp=Z,50nn,1.1s,mb5.1
LPG La Plagne 47.01 294 *eP* **P** **18 39 28.8 +0.5**
comp=Z,25nn,1.1s,mb5.1
LPG La Plagne 47.01 294 *eP* **P** **18 39 28.8 +0.5**
LPG pmax pmax
comp=Z,25nn,1.1s,mb5.1
PRD Provadia 47.01 273 P **P** **18 39 29.5 +1.1**
C15A Salmond Ranch, 47.04 43 ⇓P **P** **18 39 28.2 -0.4**
baz=47
C16A Fuhringer Ranc 47.08 42 ⇓P **P** **18 39 28.2 -0.6**
baz=47
SZH Strazhica 47.11 275 P **P** **18 39 28.9 -0.3**
PYM Petit Puy Mans 47.14 297 *eP* **P** **18 39 30.1 +0.8**
SWMT Swartz Lake 47.20 44 *eP* **P** **18 39 31.3 +1.5**
comp=Z,50nn,1.1s,mb5.3
D08A Wollman Farm, 47.24 48 ⇑P **P** **18 39 29.5 -0.6**
baz=47
LON Longmire 47.30 51 P **P** **18 39 30.9 +0.3**
C17A Wharram Farm, 47.32 41 ⇑P **P** **18 39 30.6 -0.1**
baz=47
E03A Lebam 47.34 53 ⇓P **P** **18 39 29.9 -1.0**
baz=47
GDM Grand'Maison 47.36 294 *eP* **P** **18 39 32.2 +1.1**
NAC Naches 47.40 50 P **P** **18 39 31.9 +0.5**
SSB Saint Sauveur 47.45 296 PFAKE 18 39 40.0 +8.2
SSB LR LR
comp=Z,1µm,19.0s,MS4.9
TIA Tai'an 47.47 177 *eP* **P** **18 39 31.8 -0.2**
SLMT Seeley Lake 47.50 43 *eP* **P** **18 39 30.3 -1.8**
comp=Z,39nn,1.0s,mb5.4
D12A Red Ives Fores 47.54 45 ⇑P **P** **18 39 31.9 -0.5**
baz=48
D13A Huson 47.57 44 ⇓P **P** **18 39 31.1 -1.6**
baz=48
AGMN Agassiz Nation 47.60 27 *eP* **P** **18 39 31.1 -1.8**
comp=Z,8.9nm,0.8s,mb4.8
AGMN LR LR
comp=Z,4µm,22.0s,MS5.3
LBL Lubilhac 47.63 297 *eP* **P** **18 39 33.7 +0.6**
E07A Sunnyside 47.66 49 ⇑P **P** **18 39 32.2 -1.1**
baz=48
D14A Greenough 47.66 43 ⇓P **P** **18 39 33.1 -0.2**
baz=48
ORIF Oris-en-Rattie 47.67 294 *eP* **P** **18 39 33.4 -0.1**
comp=Z,42nn,1.1s,mb5.1
ORIF *e*MLR MLR
comp=Z,2µm,22.5s,MS4.6
ORIF Oris-en-Rattie 47.67 294 *eP* **P** **18 39 33.4 -0.1**
comp=Z,21nn,1.1s,mb5.1
ORIF Oris-en-Rattie 47.67 294 *eP* **P** **18 39 33.4 -0.1**
ORIF pmax pmax
comp=Z,21nn,1.1s,mb5.1
LZH Lanzhou 47.71 192 *eP* **P** **18 39 35.3 +1.4**
LZH pP pP 18 39 37.9 +0.9
LZH sP sP 18 39 39.9 +1.7
LZH PP PP 18 41 25.1 -0.1
LZH *eS* **S** **18 46 30.3 +0.8**
LZH sS sS 18 46 38.0 +3.3
LZH pmax pmax
comp=Z,36nn,1.0s,mb5.4
LZH pmax pmax
comp=Z,150nn,4.2s
LZH LR LR
comp=N,3µm,15.9s
LZH LR LR
comp=Z,3µm,16.9s,MS5.4
MAJO Matsushiro 47.73 154 *eP* **P** **18 39 33.1 -0.9**
comp=Z,55nn,1.8s,mb5.3
MAJO LR LR
comp=Z,807nn,21.0s,MS4.7
MAJO Matsushiro 47.73 154 *eP* **P** **18 39 33.1 -0.9**
MAJO pmax pmax
comp=Z,55nn,1.8s,mb5.3
MAJO MLR MLR
comp=Z,807nn,21.0s,MS4.7
MAT Matsushiro 47.73 154 P **P** **18 39 32.6 -1.4**
MAT S **S** **18 46 34.0 +4.3**
MJAR Matsushiro Arr 47.73 154 P **P** **18 39 33.4 -0.7**
comp=Z,7.1nn,1.0s,mb4.7,baz=351,slow=8.0,SNR=25
MJAR LR LR 18 59 48.7
comp=Z,629nn,21.9s,MS4.5,baz=10.0,slow=36
RJF Les Rejaudoux 47.73 299 *eP* **P** **18 39 33.4 -0.5**
comp=Z,60nn,1.1s,mb5.2
RJF *e*MLR MLR
comp=Z,2µm,20.0s,MS4.7
RJF Les Rejaudoux 47.73 299 *eP* **P** **18 39 33.4 -0.5**
comp=Z,30nn,1.1s,mb5.2
RJF LR LR
comp=Z,2µm,20.0s,MS5.0
RJF Les Rejaudoux 47.73 299 *eP* **P** **18 39 33.4 -0.5**
RJF pmax pmax
comp=Z,30nn,1.1s,mb5.2
RJF MLR MLR
comp=Z,2µm,20.0s,MS5.0
MBDF Montbardon 47.77 294 *eP* **P** **18 39 34.7 +0.5**
comp=Z,72nn,1.0s,mb5.3
MBDF Montbardon 47.77 294 *eP* **P** **18 39 34.7 +0.5**
comp=Z,36nn,1.0s,mb5.4
MBDF Montbardon 47.77 294 *eP* **P** **18 39 34.7 +0.5**
MBDF pmax pmax
comp=Z,36nn,1.0s,mb5.4
D15A Lincoln 47.78 43 ⇑P **P** **18 39 33.9 -0.4**
baz=48
E08A Dider Farm, El 47.80 49 ⇓P **P** **18 39 33.5 -0.9**
baz=48
D17A Six Diamond Ra 47.81 41 ⇑P **P** **18 39 33.9 -0.6**
baz=48
D18A Linhart Farms, 47.83 40 ⇑P **P** **18 39 34.2 -0.5**
baz=48
JMB Yambol 47.83 274 P **P** **18 39 34.8 +0.1**
JMB Yambol 47.83 274 P **P** **18 39 34.8 +0.1**
JMB Yambol 47.83 274 P **P** **18 39 35.9 +1.2**
RSW Rattlesnake Hi 47.84 49 *eP* **P** **18 39 35.7 +0.9**
comp=Z,56nn,1.1s,mb5.5
CHMT Chamberlain Mo 47.85 43 *eP* **P** **18 39 34.5 -0.3**
comp=Z,19nn,1.0s,mb5.1
E09A Wood Farm, Sta 47.85 48 ⇑P **P** **18 39 34.5 -0.4**
baz=48
HAWA Hanford 47.85 49 *eP* **P** **18 39 32.9 -1.9**
comp=Z,41nn,1.1s,mb5.4
HAWA LR LR
comp=Z,2µm,20.0s,MS5.0
VIVF Saint-Julien-l 47.86 296 *eP* **P** **18 39 34.4 -0.5**
comp=Z,31nn,1.1s,mb4.9
VIVF Saint-Julien-l 47.86 296 *eP* **P** **18 39 34.4 -0.5**
comp=Z,16nn,1.1s,mb5.0
VIVF Saint-Julien-l 47.86 296 *eP* **P** **18 39 34.4 -0.5**
VIVF pmax pmax
comp=Z,16nn,1.1s,mb5.0
D16A Dana Ranch, Ca 47.86 42 ⇑P **P** **18 39 34.3 -0.6**
baz=48
MSO Missoula 47.88 44 ⇓P **P** **18 39 35.1 +0.1**
baz=48
MSO Missoula 47.88 44 *eP* **P** **18 39 33.1 -1.9**
comp=Z,34nn,1.1s,mb5.3

MSO LR LR
comp=Z,6µm,20.0s,MS5.6
F03A Seaside 47.96 53 ⇑P **P 18 39 35.3 -0.4**
baz=48
SURF Saint Ours 48.01 293 *eP* **P 18 39 37.0 +0.9**
PGB Panagyurishte 48.02 276 P **P 18 39 35.9 -0.3**
CAF Calviac 48.05 298 *eP* **P 18 39 36.7 +0.3**
comp=Z,63nm,1.5s,mb5.1
CAF Calviac 48.05 298 *eP* **P 18 39 36.7 +0.3**
comp=Z,32nm,1.5s,mb5.1
CAF pmax pmax
comp=Z,32nm,1.5s,mb5.1
F04A Amboy 48.06 52 ⇓P **P 18 39 36.6 +0.1**
baz=48
GNI Garni 48.08 255 ⇑*iP* **P 18 39 38.9 +2.2**
GNI LR LR
comp=Z,3µm,20.0s,MS5.3
GNI Garni 48.08 255*c iP* **P 18 39 38.8 +2.1**
GNI pmax pmax
comp=Z,48nm,1.7s
VTS Vitosha 48.09 277 P **P 18 39 35.0 -1.7**
VTS Vitosha 48.09 277 ⇑P **P 18 39 37.1 +0.4**
VTS Vitosha 48.09 277 P **P 18 39 35.0 -1.7**
VTS Vitosha 48.09 277 ⇑*iP* **P 18 39 37.1 +0.4**
VTS Vitosha 48.09 277 P **P 18 39 36.3 -0.4**
EYMN Ely 48.16 23 *eP* **P 18 39 35.1 -2.2**
comp=Z,41nm,1.7s,mb5.2
EYMN LR LR
comp=Z,3µm,20.0s,MS5.3
LFF La Frestale 48.17 299 *eP* **P 18 39 36.8 -0.5**
E13A Victor 48.24 44 ⇑P **P 18 39 37.4 -0.5**
baz=48
F07A Phinny Hill Vi 48.31 50 ⇑P **P 18 39 38.4 0.0**
baz=48
E14A Clinton 48.32 44 ⇓P **P 18 39 38.3 -0.2**
baz=48
E16A East Helena 48.35 42 ⇑P **P 18 39 38.5 -0.2**
baz=48,SNR=20
E15A Deer Lodge 48.38 43 ⇑P **P 18 39 39.3 +0.3**
baz=48,SNR=34
PLD Plovdiv 48.40 276 P **P 18 39 38.2 -0.9**
PLD Plovdiv 48.40 276 P **P 18 39 38.2 -0.9**
TOUF Mont Tournerai 48.42 293 *eP* **P 18 39 40.0 +0.7**
E18A Harlowton 48.45 40 ⇓P **P 18 39 39.9 +0.4**
baz=48,SNR=51
F10A Beach Ranch, E 48.46 47 ⇑P **P 18 39 39.8 +0.2**
baz=48,SNR=23
LNOR Lincton Mounta 48.48 48 *eP* **P 18 39 39.7 0.0**
comp=Z,31nm,1.0s,mb5.3
LNOR Lincton Mounta 48.48 48 *eP* **P 18 39 39.7 0.0**
LNOR pmax pmax
comp=Z,31nm,1.0s,mb5.3
E17A Martinsdale 48.48 41 ⇑P **P 18 39 40.1 +0.4**
baz=48,SNR=30
LUCF Luceram 48.53 293 *eP* **P 18 39 40.7 +0.6**
SBF Sospel 48.55 293 *eP* **P 18 39 40.1 -0.2**
comp=Z,84nm,1.1s,mb5.4
SBF Sospel 48.55 293 *eP* **P 18 39 40.1 -0.2**
comp=Z,42nm,1.1s,mb5.4
SBF Sospel 48.55 293 *eP* **P 18 39 40.1 -0.2**
SBF pmax pmax
comp=Z,42nm,1.1s,mb5.4
LAO LASA Array 48.59 37 ⇓P **P 18 39 40.7 +0.2**
baz=48
LAO LASA Array 48.59 37 *eP* **P 18 39 39.3 -1.2**
comp=Z,100nm,1.0s,mb5.8
LAO LR LR
comp=Z,5µm,20.0s,MS5.5
SMRF Simiane la Rot 48.63 295 *eP* **P 18 39 40.9 0.0**
comp=Z,93nm,1.7s,mb5.2
SMRF Simiane la Rot 48.63 295 *eP* **P 18 39 40.9 0.0**
comp=Z,93nm,1.7s,mb5.5
LASF Ste Croix 48.71 296 *eP* **P 18 39 41.7 +0.2**
comp=Z,71nm,1.1s,mb5.3
HOOD Mount Hood Mea 48.73 51 *eP* **P 18 39 41.1 -0.5**
comp=Z,102nm,1.0s,mb5.8
KDZ Kurdzhali 48.77 275 P **P 18 39 42.4 +0.4**
G04A Mulino 48.77 52 ⇓P **P 18 39 42.5 +0.5**
baz=49,SNR=6.0
F12A Elk City 48.84 45 ⇓P **P 18 39 42.6 +0.1**
baz=49,SNR=110
ABKT Ailbek 48.87 241 P **P 18 39 43.1 +0.3**
comp=Z,115nm,1.3s,mb5.8,SNR=8.0
F14A Wisdom 48.93 44 ⇓P **P 18 39 43.3 +0.1**
baz=49
FRF La Foret Royal 48.94 293 *eP* **P 18 39 42.5 -0.7**
comp=Z,72nm,1.0s,mb5.3
FRF La Foret Royal 48.94 293 *eP* **P 18 39 42.5 -0.7**
comp=Z,36nm,1.0s,mb5.4
FRF La Foret Royal 48.94 293 *eP* **P 18 39 42.5 -0.7**
FRF pmax pmax
comp=Z,36nm,1.0s,mb5.4
F15A Butte 48.97 43 ⇓P **P 18 39 43.6 +0.1**
baz=49,SNR=30
G08A Pilot Rock 48.99 49 ⇓P **P 18 39 44.3 +0.6**
baz=49,SNR=79
LRM Limekiln Ridge 48.99 43 *eP* **P 18 39 43.7 0.0**
comp=Z,164nm,1.1s,mb6.0
MMB Musomiste 49.02 277 P **P 18 39 43.9 0.0**
F17A Fitzpatrick Pl 49.05 41 ⇓P **P 18 39 44.3 +0.2**
baz=49,SNR=14
F16A Kennard Place, 49.10 42 ⇓P **P 18 39 44.6 +0.2**
baz=49,SNR=15
F18A Big Timber 49.12 40 ⇓P **P 18 39 44.8 +0.2**
baz=49,SNR=33
LMR La Mourre 49.17 294 *eP* **P 18 39 44.4 -0.7**
comp=Z,44nm,1.1s,mb5.1
LMR La Mourre 49.17 294 *eP* **P 18 39 44.4 -0.7**
comp=Z,22nm,1.1s,mb5.1
LMR La Mourre 49.17 294 *eP* **P 18 39 44.4 -0.7**
LMR pmax pmax
comp=Z,22nm,1.1s,mb5.1
F19A Roth Farm, Mol 49.23 39 ⇓P **P 18 39 45.3 -0.1**
baz=49,SNR=17
BOZ Bozeman (W) 49.23 42 ⇓P **P 18 39 45.9 +0.4**
baz=49
BOZ Bozeman (W) 49.23 42 *eP* **P 18 39 44.0 -1.5**
comp=Z,60nm,1.1s,mb5.5
BOZ LR LR
comp=Z,3µm,21.0s,MS5.3
BOZ Bozeman (W) 49.23 42 *eP* **P 18 39 44.0 -1.5**
BOZ pmax pmax
comp=Z,60nm,1.1s,mb5.5
BOZ MLR MLR
comp=Z,3µm,21.0s,MS5.3
GCMT Greycliff 49.23 40 *eP* **P 18 39 44.2 -1.3**
comp=Z,50nm,1.1s,mb5.5
COR Corvallis 49.31 53 PFAKE 18 40 00.0 +14
COR LR LR
comp=Z,2µm,20.0s,MS5.2
H04A Detroit Lake 49.32 52 ⇑P **P 18 39 46.3 +0.2**
baz=49,SNR=8.6
F20A Billings 49.33 39 ⇑P **P 18 39 45.8 -0.5**
baz=49,SNR=6.6
AQU L'Aquila 49.41 287 *eP* **P 18 39 48.1 +1.2**
comp=Z,66nm,1.0s,mb5.6
AQU LR LR
comp=Z,4µm,20.0s,MS5.4
AQU L'Aquila 49.41 287 ⇑P **P 18 39 48.4 +1.5**
AQU L'Aquila 49.41 287 ⇑*iP* **P 18 39 48.4 +1.5**
VAY Valandovo 49.41 278 P **P 18 39 45.9 -1.0**
VAY Valandovo 49.41 278 P **P 18 39 45.9 -1.0**
VAY Valandovo 49.41 278 *eP* **P 18 39 44.7 -2.2**
ALN Alexandroupoli 49.44 274 P **P 18 39 47.1 0.0**
ALN Alexandroupoli 49.44 274 P **P 18 39 47.1 0.0**
DLMT Dillon 49.44 43 *eP* **P 18 39 47.3 +0.3**
comp=Z,33nm,1.1s,mb5.3
G12A Big Creek, Yel 49.46 45 ⇑P **P 18 39 46.9 -0.3**
baz=49
G14A Jackson 49.49 44 ⇑P **P 18 39 47.8 +0.3**
baz=49,SNR=6.3
SRS Serrai 49.50 277 P **P 18 39 47.1 -0.5**
SRS Serrai 49.50 277 P **P 18 39 47.1 -0.5**
KAVA Kavala 49.52 276 P **P 18 39 47.2 -0.5**
KRUS Krusevo 49.52 279 *eP* **P 18 39 46.9 -0.8**
KNT Kendrikon 49.53 277 P **P 18 39 47.7 -0.1**
KNT Kendrikon 49.53 277 P **P 18 39 47.7 -0.1**
BMO Blue Mountains 49.57 47 *eP* **P 18 39 47.6 -0.5**
comp=Z,40nm,1.0s,mb5.4
BMO LR LR
comp=Z,4µm,20.0s,MS5.4
G13A Cobalt 49.58 44 ⇑P **P 18 39 48.5 +0.3**
baz=50,SNR=28
MTLF Montolieu 49.60 298 *eP* **P 18 39 48.1 -0.3**
comp=Z,32nm,1.3s,mb4.9
MTLF Montolieu 49.60 298 *eP* **P 18 39 48.1 -0.3**
comp=Z,16nm,1.3s,mb4.9
MTLF Montolieu 49.60 298 *eP* **P 18 39 48.1 -0.3**
MTLF pmax pmax
comp=Z,16nm,1.3s,mb4.9
G17A Pierce Place, 49.62 41 ⇑P **P 18 39 49.3 +0.8**
baz=50,SNR=13
VIPM Ingram Point 49.63 50 P **P 18 39 49.2 +0.7**
G16A Moss Hill, Enn 49.63 42 ⇑P **P 18 39 48.5 0.0**
baz=50,SNR=12
G15A Dillon 49.64 43 ⇑P **P 18 39 49.0 +0.3**
baz=50,SNR=33
XAN Xi'an 49.66 186 P **P 18 39 48.8 -0.1**
XAN S **S 18 46 55.8 -1.2**
XAN pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
XAN pmax pmax
comp=Z,130nm,6.9s
XAN LR LR
comp=N,630nm,18.0s,MS5.1
XAN LR LR
comp=E,2µm,18.9s,MS5.1
XAN LR LR
comp=Z,810nm,11.1s
PGF Pioggiola 49.69 291 *eP* **P 18 39 48.6 -0.4**
comp=Z,74nm,1.0s,mb5.3
PGF Pioggiola 49.69 291 *eP* **P 18 39 48.6 -0.4**
comp=Z,37nm,1.0s,mb5.4
PGF Pioggiola 49.69 291 *eP* **P 18 39 48.6 -0.4**
PGF pmax pmax
comp=Z,37nm,1.0s,mb5.4
TIR Tirane 49.69 280 P **P 18 39 48.6 -0.4**
TIR LR LR
comp=Z,4µm,20.0s,MS5.4
TIR Tirane 49.69 280 P **P 18 39 48.6 -0.4**
G18A Lazy EL Ranch, 49.71 40 ⇑P **P 18 39 48.8 -0.3**
baz=50,SNR=13
BR131 Keskin Array S 49.74 266 *eP* **P 18 39 49.7 +0.3**
comp=Z,7.2nm,0.6s,mb4.9
BR131 LR LR
comp=Z,1µm,20.0s,MS5.0
BRTR Keskin Array B 49.74 266 P **P 18 39 50.2 +0.8**
comp=Z,9.8nm,0.7s,mb5.0,baz=7.5,slow=5.2,SNR=59
BRTR PcP PcP 18 41 10.1 -0.2
comp=Z,7.8nm,1.0s,baz=31,slow=2.9,SNR=4.3
BRTR PP PP 18 41 54.5 +11
comp=Z,8.9nm,1.1s,baz=5.2,slow=6.8,SNR=4.2
BRTR LR LR 19 04 01.1
comp=Z,2µm,20.5s,MS5.0,baz=44,slow=40
BRTR Keskin Array B 49.74 266 *i P* **P 18 39 50.2 +0.8**
BRTR pmax pmax
comp=Z,10.0nm,0.7s
GRG Griva 49.79 278 P **P 18 39 49.4 -0.4**
GRG Griva 49.79 278 P **P 18 39 49.4 -0.4**
SOH Sokhos 49.82 277 P **P 18 39 49.4 -0.6**
SOH Sokhos 49.82 277 P **P 18 39 49.4 -0.6**
RLMT Red Lodge 49.93 40 ⇑P **P 18 39 51.1 +0.3**
baz=50
RLMT Red Lodge 49.93 40 *eP* **P 18 39 50.1 -0.6**
comp=Z,18nm,1.0s,mb5.1
RLMT LR LR
comp=Z,4µm,21.0s,MS5.4
MCMT McKenzie Canyo 49.95 43 *eP* **P 18 39 49.8 -1.2**
comp=Z,22nm,1.1s,mb5.1
G21A Lodge Grass 49.97 38 ⇓P **P 18 39 50.3 -0.8**
baz=50
H12A Diamond D Ranc 50.07 45 ⇑P **P 18 39 51.6 -0.3**
baz=50,SNR=26
FNA Florina 50.08 279 P **P 18 39 51.6 -0.4**
FNA Florina 50.08 279 P **P 18 39 51.6 -0.4**
EALK Alkurruntz 50.09 301 P **P 18 39 51.6 -0.5**
comp=Z,112nm,1.8s,mb5.6
EPF Esparros 50.10 299 *eP* **P 18 39 51.2 -0.9**
comp=Z,28nm,0.9s,mb5.0
EPF Esparros 50.10 299 *eP* **P 18 39 51.2 -0.9**
comp=Z,14nm,0.9s,mb5.0
EPF Esparros 50.10 299 *eP* **P 18 39 51.2 -0.9**
EPF pmax pmax
comp=Z,14nm,0.9s,mb5.0
H13A Challis 50.10 45 ⇑P **P 18 39 52.6 +0.5**
baz=50,SNR=132
COWI Conover 50.11 21 *eP* **P 18 39 51.4 -0.8**
comp=Z,26nm,1.3s,mb5.1
COWI LR LR
comp=Z,3µm,19.0s,MS5.3
H14A Leadore 50.12 44 ⇓P **P 18 39 53.1 +0.8**
baz=50,SNR=25
I07A Izee 50.15 49 ⇑P **P 18 39 53.7 +1.3**
baz=50,SNR=27
SJPF Ste Jean 50.17 301 *eP* **P 18 39 51.7 -1.0**
comp=Z,167nm,1.8s,mb5.5
SJPF Ste Jean 50.17 301 *eP* **P 18 39 51.7 -1.0**
comp=Z,83nm,1.8s,mb5.5
SJPF Ste Jean 50.17 301 *eP* **P 18 39 51.7 -1.0**
SJPF pmax pmax
comp=Z,83nm,1.8s,mb5.5
H15A Lima 50.18 43 ⇓P **P 18 39 53.0 +0.3**
baz=50,SNR=24
H16A Russell Place, 50.20 42 ⇓P **P 18 39 53.3 +0.5**
baz=50,SNR=26
OUR Ouranopolis 50.23 276 P **P 18 39 52.8 -0.3**
OUR Ouranopolis 50.23 276 P **P 18 39 52.8 -0.3**
YNR Norris Junctio 50.23 41 *eP* **P 18 39 53.3 +0.2**
comp=Z,24nm,1.0s,mb5.2
ELAN Lanestosa 50.27 303 P **P 18 39 52.9 -0.5**
comp=Z,82nm,1.4s,mb5.6
KBN Korca 50.30 279 *e*PN **P 18 40 01.3 +7.6**
ETSF Etsaut 50.32 300 *eP* **P 18 39 53.8 0.0**
EARI Arriondas 50.37 305 P **P 18 39 53.8 -0.3**
comp=Z,158nm,1.9s,mb5.7
LKWY Lake 50.40 41 *eP* **P 18 39 56.4 +2.0**
comp=Z,54nm,1.2s,mb5.5
LKWY LR LR
comp=Z,10µm,21.0s,MS5.8
LKWY Lake 50.40 41 *eP* **P 18 39 56.4 +2.0**
LKWY pmax pmax
comp=Z,54nm,1.2s,mb5.5
LKWY MLR MLR
comp=Z,10µm,21.0s,MS5.8
EJON La Jonquera 50.42 297 P **P 18 39 54.1 -0.5**
comp=Z,55nm,1.4s,mb5.4
EBIE Bielsa 50.46 299 P **P 18 39 55.8 +0.9**
comp=Z,42nm,1.1s,mb5.4
NEST Nestorio 50.48 279 P **P 18 39 54.6 -0.4**
YFT Old Faithful 50.48 41 *eP* **P 18 39 54.8 -0.2**
comp=Z,50nm,1.0s,mb5.5
CLLI Llivia 50.48 298 P **P 18 39 55.0 0.0**
KZN Kozani 50.51 278 *eP* **P 18 39 54.8 -0.4**
EPON Pontenova 50.52 306 P **P 18 39 54.8 -0.5**
comp=Z,46nm,1.3s,mb5.2
LIA Limnos Island 50.53 275 P **P 18 39 55.9 +0.5**
LIA Limnos Island 50.53 275 P **P 18 39 55.9 +0.5**
H17A Grant Village 50.56 41 ⇓P **P 18 39 57.2 +1.7**
baz=50,SNR=52
H21A Big Horn, Sher 50.58 38 ⇑P **P 18 39 55.4 -0.3**
baz=50,SNR=22
MALT Malatya 50.59 261 *eP* **P 18 39 56.9 +0.9**
comp=Z,27nm,1.3s,mb5.0
MALT LR LR
comp=Z,2µm,20.0s,MS5.1
MALT Malatya 50.59 261 ⇑P **P 18 39 57.2 +1.3**
MALT Malatya 50.59 261 ⇑*iP* **P 18 39 57.2 +1.3**
MALT Malatya 50.59 261 P **P 18 39 57.5 +1.6**
comp=Z,670nmcomp=Z,19nm,1.2s,mb4.9
LIT Litokhoron 50.63 277 P **P 18 39 55.0 -1.2**
LIT Litokhoron 50.63 277 P **P 18 39 55.0 -1.2**
H20A Greybull 50.65 39 ⇑P **P 18 39 55.7 -0.6**
baz=51,SNR=6.4
PAIG Paliouri 50.67 276 P **P 18 39 55.9 -0.5**
PAIG Paliouri 50.67 276 P **P 18 39 55.9 -0.5**
CSOR Sort 50.67 298 P **P 18 39 56.3 -0.1**
comp=Z,77nm,1.4s,mb5.4
I13A Wildhorse Cree 50.76 44 ⇑P **P 18 39 57.3 +0.2**
baz=51,SNR=124
I12A Atlanta 50.80 45 ⇑P **P 18 39 57.1 -0.3**
baz=51,SNR=14
I15A Monteview 50.80 43 ⇑P **P 18 39 57.6 +0.2**
baz=51
J08A Circle Bar Ran 50.95 49 ⇑P **P 18 39 59.5 +0.9**
baz=51,SNR=31
I16A Newdale 51.00 42 ⇓P **P 18 40 00.0 +1.1**
baz=51,SNR=6.7
IMW Indian Meadow 51.02 42 *eP* **P 18 39 57.8 -1.3**
comp=Z,47nm,1.0s,mb5.4
I17A Pilgrim Ck. 51.03 41 ⇓P **P 18 40 00.2 +1.1**
baz=51,SNR=16
PRK Paraskevi 51.05 274 *eP* **P 18 40 02.4 +3.1**
EMAZ Mazaricos 51.06 308 P **P 18 39 57.7 -1.6**
comp=Z,69nm,1.2s,mb5.5
HLID Hailey 51.09 45 ⇓P **P 18 39 59.4 -0.2**
baz=51
HLID Hailey 51.09 45 *eP* **P 18 39 59.1 -0.5**
comp=Z,5.9nm,0.7s,mb4.6
HLID LR LR
comp=Z,7µm,20.0s,MS5.7
MFID Camas Ranch 51.12 46 ⇑P **P 18 40 00.1 +0.3**
baz=51,SNR=25
SRN Sarande 51.13 280 *e*PN **P 18 39 59.9 0.0**
CFON Fontmartina 51.15 297 P **P 18 40 01.0 +1.0**
comp=Z,20nm,1.0s,mb5.0
I20A Worland 51.18 39 ⇑P **P 18 40 00.3 +0.1**
baz=51,SNR=24
MOOW Moose Ponds 51.19 41 *eP* **P 18 39 59.2 -1.1**
comp=Z,36nm,1.1s,mb5.2
THL Klokotos Trika 51.21 278 *eP* **P 18 39 59.5 -1.1**
THL Klokotos Trika 51.21 278 P **P 18 39 59.7 -0.8**
KBL Kabul 51.22 229 *eP* **P 18 40 00.9 +0.2**
comp=Z,70nm,1.1s,mb5.5
KBL Kabul 51.22 229 *eP* **P 18 40 00.9 +0.3**
KBL pmax pmax
comp=Z,70nm,1.1s,mb5.5
JAN Janina 51.25 279 *eP* **P 18 40 01.1 +0.3**
J13A Cove Ranch, Pi 51.27 45 ⇑P **P 18 40 00.8 -0.1**
baz=51,SNR=7.9
XOR Xorichti 51.28 277 P **P 18 40 00.7 -0.3**
XOR Xorichti 51.28 277 P **P 18 40 00.7 -0.3**
RSSD Black Hills 51.29 35 *eP* **P 18 39 59.0 -2.0**
comp=Z,78nm,1.1s,mb5.5
RSSD LR LR
comp=Z,4µm,20.0s,MS5.5
RSSD Black Hills 51.29 35 *eP* **P 18 39 59.0 -2.0**
RSSD pmax pmax
comp=Z,78nm,1.1s,mb5.5
RSSD MLR MLR
comp=Z,4µm,20.0s,MS5.5
I18A Diamond G Ranc 51.30 41 ⇓P **P 18 40 01.9 +0.7**
baz=51,SNR=21
HUMO Hull Mountain 51.31 53 *eP* **P 18 40 00.9 -0.3**
comp=Z,41nm,1.1s,mb5.3
HUMO LR LR
comp=Z,2µm,22.0s,MS5.2
KEK Kerkira 51.31 280 P **P 18 40 00.7 -0.6**
KEK Kerkira 51.31 280 *eP* **P 18 40 00.7 -0.6**
KEK Kerkira 51.31 280 P **P 18 40 00.7 -0.6**
NEO Neokhori 51.33 277 *eP* **P 18 40 04.2 +2.8**
LOHW Long Hollow 51.33 41 *eP* **P 18 40 02.2 +0.9**
comp=Z,25nm,1.2s,mb5.0
I21A Big Trails, Te 51.37 38 ⇑P **P 18 40 01.5 -0.2**
baz=51,SNR=31
K05A Summer Lake 51.37 51 ⇓P **P 18 40 02.8 +1.0**
baz=51,SNR=20
AOS Alonnisos 51.39 276 P **P 18 40 02.6 +0.7**
AOS Alonnisos 51.39 276 P **P 18 40 02.6 +0.7**
J14A Carey 51.40 44 ⇓P **P 18 40 02.6 +0.7**
baz=51,SNR=51
J15A Blackfoot 51.40 43 ⇓P **P 18 40 03.0 +1.1**
baz=51,SNR=19
PKME Peaks-Kenny Pk 51.43 3 *eP* **P 18 40 02.4 +0.3**
comp=Z,38nm,1.4s,mb5.1
PKME LR LR
comp=Z,2µm,21.0s,MS5.0
TPAW Teton Pass 51.43 42 *eP* **P 18 40 01.0 -1.1**
comp=Z,58nm,1.1s,mb5.4
IGT Igoumenitsa 51.43 279 P **P 18 40 01.8 -0.4**
IGT Igoumenitsa 51.43 279 P **P 18 40 01.8 -0.4**
ERUA La Rua 51.45 306 P **P 18 40 01.6 -0.7**
comp=Z,7.4nm,0.6s,mb4.8
ERUA La Rua 51.45 306 P **P 18 40 01.6 -0.7**
ERUA pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
SNOW Snow King Moun 51.47 41 *eP* **P 18 40 03.0 +0.6**
comp=Z,24nm,1.1s,mb5.0
CUC Castrocucco 51.48 284 *eP* **P 18 40 03.0 +0.5**
comp=Z,15nm,1.1s,mb4.8
CUC LR LR
comp=Z,2µm,20.0s,MS5.1
RRI2 Red Ridge 51.54 42 *eP* **P 18 40 02.5 -0.4**
comp=Z,48nm,1.2s,mb5.3
REDW Red Top Meadow 51.56 42 *eP* **P 18 40 03.9 +0.8**
comp=Z,46nm,1.2s,mb5.3
J17A Brown Place, J 51.57 41 ⇓P **P 18 40 04.0 +0.8**
baz=52,SNR=6.3
J16A Bone 51.59 42 ⇑P **P 18 40 04.3 +1.0**
baz=52,SNR=18
NJ2 Nanjing 51.63 175 *eP* **P 18 40 03.3 -0.5**
NJ2 pP pP 18 40 10.1 +3.2
NJ2 sP sP 18 40 11.9 +3.8
NJ2 PP PP 18 42 00.4 -0.5
NJ2 S **S 18 47 31.0 +6.6**
NJ2 pmax pmax
comp=Z,20nm,0.9s,mb5.0
NJ2 pmax pmax
comp=Z,460nm,4.5s
NJ2 LR LR
comp=N,540nm,15.0s,MS5.3
NJ2 LR LR
comp=E,2µm,17.0s,MS5.3
NJ2 LR LR
comp=Z,350nm,13.4s,MS4.6
EPOB Poblet 51.69 298 P **P 18 40 03.7 -0.4**
comp=Z,50nm,1.3s,mb5.3
AGG Agios Georgios 51.71 277 P **P 18 40 01.6 -2.7**
AGG Agios Georgios 51.71 277 *eP* **P 18 40 03.6 -0.7**
AGG Agios Georgios 51.71 277 P **P 18 40 01.6 -2.7**
SADO Sadowa 51.77 12 LR LR 19 01 09.3
comp=Z,5µm,21.3s,MS5.5,baz=11,slow=35
J18A Kendall Valley 51.77 41 ⇑P **P 18 40 05.3 +0.6**
baz=52,SNR=15
EZAM Zamans 51.83 308 P **P 18 40 05.8 +0.7**
comp=Z,64nm,1.1s,mb5.5
EZAM Zamans 51.83 308 P **P 18 40 05.8 +0.7**
EZAM pmax pmax
comp=Z,64nm,1.1s,mb5.5
ECAL Calabor 51.85 306 P **P 18 40 05.1 -0.2**
comp=Z,84nm,1.0s,mb5.6
WVOR Wild Horse Val 51.86 49 *eP* **P 18 40 05.3 0.0**
comp=Z,34nm,1.0s,mb5.2
WVOR LR LR
comp=Z,1µm,20.0s,MS4.9
WVOR Wild Horse Val 51.86 49 *eP* **P 18 40 05.3 0.0**
WVOR pmax pmax
comp=Z,34nm,1.0s,mb5.2
WVOR MLR MLR
comp=Z,1µm,20.0s,MS4.9
EVR Evrytania 51.88 278 *eP* **P 18 40 09.2 +3.7**
ATAL Atalanti 51.96 277 P **P 18 40 05.4 -0.8**
PBRG Braganca 51.99 306 *eP* **P 18 40 07.2 +0.9**
comp=Z,41nm,1.7s,mb5.1
LKR Lokris 52.01 277 P **P 18 40 05.9 -0.6**
LKR Lokris 52.01 277 *eP* **P 18 40 05.6 -0.9**
LKR Lokris 52.01 277 P **P 18 40 05.9 -0.6**
LONY Lake Ozonia 52.01 8 *eP* **P 18 40 06.2 -0.2**
comp=Z,29nm,1.1s,mb5.1
LONY LR LR
comp=Z,2µm,20.0s,MS5.1
K16A Soda Springs 52.03 42 ⇑P **P 18 40 07.8 +1.1**
baz=52,SNR=27
ELOB Lobios 52.05 307 P **P 18 40 05.6 -1.1**
comp=Z,77nm,1.5s,mb5.4
K15A Arbon 52.11 43 ⇓P **P 18 40 08.2 +1.0**
baz=52,SNR=6.6
ECSD EROS Data Cent 52.12 28 *eP* **P 18 40 05.2 -2.1**
comp=Z,38nm,1.4s,mb5.1
ECSD LR LR
comp=Z,3µm,22.0s,MS5.3
LKD2 Lefkada island 52.13 279 P **P 18 40 09.0 +1.6**
AHID Auburn Hatcher 52.14 42 PFAKE 18 40 20.0 +13
AHID LR LR
comp=Z,4µm,22.0s,MS5.4
ERTA Horta de San J 52.16 299 P **P 18 40 07.9 +0.3**
comp=Z,62nm,1.3s,mb5.4
K17A Gardner Place, 52.16 42 ⇑P **P 18 40 08.0 +0.4**
baz=52
TIP Timpagrande 52.18 283 *eP* **P 18 40 07.6 -0.2**
comp=Z,45nm,1.0s,mb5.3
TIP LR LR
comp=Z,3µm,20.0s,MS5.3
K14A Jones Ranch, D 52.20 44 ⇑P **P 18 40 08.5 +0.6**
baz=52,SNR=20
YBH Yreka Blue Hor 52.20 53 *eP* **P 18 40 09.4 +1.5**
comp=Z,12nm,1.1s,mb4.7
YBH LR LR
comp=Z,2µm,20.0s,MS5.2

YBH Yreka Blue Hor 52.20 53 LR LR 19 02 33.5
comp=Z,2µm,21.7s,MS5.2,baz=334,slow=36
YBH Yreka Blue Hor 52.20 53 *e*P **P** **18 40 09.4 +1.5**
YBH pmax pmax
comp=Z,12nm,1.1s
YBH MLR MLR
comp=Z,2µm,20.0s
PCAB Cabril 52.20 307 *e*P **P** **18 40 08.6 +0.7**
comp=Z,67nm,1.6s,mb5.3
K19A Absolon Red Bu 52.24 40 ⇑P **P** **18 40 08.2 0.0**
baz=52,SNR=36
BW06 Boulder Array 52.25 40 ⇑P **P** **18 40 08.2 -0.1**
baz=52
BW06 Boulder Array 52.25 40 PFAKE 18 40 20.0 +12
BW06 LR LR
comp=Z,4µm,22.0s,MS5.4
DSF Desfina 52.30 277 P **P** **18 40 08.2 -0.4**
K18A Toltan Ranch, 52.34 41 ⇑P **P** **18 40 09.1 +0.1**
baz=52,SNR=6.3
EFP Efpalio 52.35 278 *e*P **P** **18 40 09.7 +0.7**
L11A Cat Creek Ranc 52.37 46 ⇑P **P** **18 40 09.5 +0.4**
baz=52,SNR=14
TRIZ Trizonia 52.39 278 P **P** **18 40 08.1 -1.3**
L10A Juniper Basin 52.40 47 ⇑P **P** **18 40 10.0 +0.7**
baz=52,SNR=11
LBNH Lisbon 52.43 6 *e*P **P** **18 40 10.0 +0.5**
comp=Z,27nm,0.9s,mb5.2
LBNH LR LR
comp=Z,2µm,20.0s,MS5.1
LBNH Lisbon 52.43 6 *e*P **P** **18 40 10.0 +0.5**
LBNH pmax pmax
comp=Z,27nm,0.9s,mb5.2
LBNH MLR MLR
comp=Z,2µm,20.0s,MS5.1
K20A Yellowstone Ra 52.45 39 ⇑P **P** **18 40 09.2 -0.5**
baz=52,SNR=14
PTL Penteli 52.50 276 *e*P **P** **18 40 12.3 +2.1**
ETOR Torete 52.52 301 P **P** **18 40 09.6 -0.7**
comp=Z,27nm,1.2s,mb5.0
ETOR Torete 52.52 301 P **P** **18 40 09.6 -0.7**
ETOR pmax pmax
comp=Z,27nm,1.2s,mb5.0
LAKA Lakka 52.52 278 P **P** **18 40 09.0 -1.4**
K22A Casper 52.58 38 ⇑P **P** **18 40 10.2 -0.5**
baz=52,SNR=22
ATHU Athens Univers 52.59 276 P **P** **18 40 11.3 +0.4**
ATH Athens Observa 52.59 276 P **P** **18 40 11.3 +0.4**
ATH Athens Observa 52.59 276 *e*P **P** **18 40 10.4 -0.5**
PVRL Vila Real 52.60 307 *e*P **P** **18 40 11.7 +0.8**
comp=Z,49nm,1.5s,mb5.2
SSE Sheshan 52.61 173 P **P** **18 40 10.3 -0.8**
SSE sP sP 18 40 21.9 +6.4
SSE S **S** **18 47 36.6 -1.2**
SSE sS sS 18 47 42.9 -0.2
SSE pmax pmax
comp=Z,33nm,0.7s,mb5.4
SSE pmax pmax
comp=Z,290nm,6.0s
SSE LR LR
comp=N,1µm,12.9s,MS5.3
SSE LR LR
comp=E,1µm,12.9s,MS5.3
SSE LR LR
comp=Z,1µm,12.0s,MS5.2
MVO Moncorvo 52.65 306 *e*P **P** **18 40 11.7 +0.4**
comp=Z,57nm,1.6s,mb5.2
MVO *e*S **S** **18 47 46.5 +8.3**
MVO *e*LR LR 18 55 51.9
comp=Z,1µm,16.0s
MVO Moncorvo 52.65 306 P **P** **18 40 09.9 -1.4**
NCB Newcomb 52.66 8 *e*P **P** **18 40 10.5 -0.8**
comp=Z,17nm,1.0s,mb4.9
NCB LR LR
comp=Z,2µm,20.0s,MS5.2
VSL Villasalto 52.67 290 *e*P **P** **18 40 11.4 0.0**
comp=Z,35nm,0.9s,mb5.3
VSL LR LR
comp=Z,2µm,20.0s,MS5.2
L14A Malta 52.70 44 ⇓P **P** **18 40 12.1 +0.5**
baz=53,SNR=14
VLY Voula,Athens 52.70 276 *e*P **P** **18 40 11.2 -0.5**
VLS Valsamata 52.74 279 *e*P **P** **18 40 11.9 -0.1**
RLS Riolos of Patr 52.76 278 *e*P **P** **18 40 11.5 -0.6**
GUR Goura 52.78 277 *e*P **P** **18 40 13.3 +1.0**
GUR Goura 52.78 277 P **P** **18 40 11.2 -1.1**
L15A Malad City 52.80 43 ⇑P **P** **18 40 12.7 +0.4**
baz=53,SNR=15
L17A Cokeville 52.82 42 ⇑P **P** **18 40 12.7 +0.2**
baz=53,SNR=7.1
L16A Fish Haven 52.86 42 ⇓P **P** **18 40 13.0 +0.3**
baz=53,SNR=15
CD2 Chengdu 52.87 192 ⇑P **P** **18 40 13.3 +0.3**
CD2 pP pP 18 40 17.8 +1.6
CD2 sP sP 18 40 20.3 +2.9
CD2 PP PP 18 42 14.0 +1.8
CD2 ScP ScP 18 45 18.0 -0.8
CD2 PcS PcS 18 45 19.8 -0.9
CD2 S **S** **18 47 39.6 -1.8**
CD2 sS sS 18 47 47.3 +0.7
CD2 ScS ScS 18 49 59.3 -2.9
CD2 SS SS 18 51 17.3 -2.4
CD2 pmax pmax
comp=Z,40nm,0.8s,mb5.4
CD2 pmax pmax
comp=Z,590nm,6.0s
CD2 LR LR
comp=N,3µm,13.2s,MS5.8
CD2 LR LR
comp=E,5µm,16.1s,MS5.8
CD2 LR LR
comp=Z,3µm,12.5s,MS5.6
GUD Guadarrama 52.90 303 P **P** **18 40 12.2 -0.9**
comp=Z,37nm,1.0s,mb5.3
GUD Guadarrama 52.90 303 P **P** **18 40 12.2 -0.9**
GUD pmax pmax
comp=Z,37nm,1.0s,mb5.3
L19A Farson 52.93 40 ⇑P **P** **18 40 12.6 -0.6**
baz=53,SNR=11
M10A I.L. Ranch, Tu 52.94 47 ⇓P **P** **18 40 14.7 +1.3**
baz=53,SNR=24
HVU Hansel Valley 52.99 44 *e*P **P** **18 40 14.2 +0.5**
comp=Z,55nm,1.0s,mb5.4
HVU Hansel Valley 52.99 44 *e*P **P** **18 40 14.2 +0.5**
HVU pmax pmax
comp=Z,55nm,1.0s,mb5.4
L18A Fontenelle, Gr 53.05 41 ⇑P **P** **18 40 14.7 +0.5**
baz=53
L20A Wamsutter 53.09 39 ⇑P **P** **18 40 14.0 -0.5**
baz=53,SNR=8.5
DID Didima 53.11 276 *e*P **P** **18 40 12.9 -1.8**
WHN Wuhan 53.11 180 ⇓P **P** **18 40 14.0 -0.8**
WHN S **S** **18 47 48.8 +4.1**
WHN pmax pmax
comp=Z,87nm,1.2s,mb5.6
WHN pmax pmax
comp=Z,1µm,5.2s
WHN LR LR
comp=N,2µm,10.5s,MS5.6
WHN LR LR
comp=E,2µm,11.2s,MS5.6
WHN LR LR
comp=Z,3µm,23.5s
L23A Garrett 53.17 37 ⇑P **P** **18 40 13.9 -1.2**
baz=53,SNR=15
PVIS Viseu 53.18 307 *e*P **P** **18 40 15.4 +0.3**
comp=Z,37nm,1.8s,mb5.0
CEL Celeste 53.18 284 *e*P **P** **18 40 13.4 -1.8**
comp=Z,31nm,1.0s,mb5.2
CEL LR LR
comp=Z,2µm,21.0s,MS5.1
L21A Rawlins 53.21 38 ⇑P **P** **18 40 15.1 -0.3**
baz=53,SNR=26
M14A Sheep Mountain 53.22 44 ⇓P **P** **18 40 15.7 +0.3**
baz=53,SNR=33
JFWS Jewell Farm 53.24 23 *e*P **P** **18 40 15.0 -0.6**
comp=Z,9.5nm,0.6s,mb4.9
JFWS LR LR
comp=Z,2µm,21.0s,MS5.2
JFWS Jewell Farm 53.24 23 *e*P **P** **18 40 15.0 -0.6**
JFWS pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
JFWS MLR MLR
comp=Z,2µm,21.0s,MS5.2
HWUT Hardware Ranch 53.25 42 *e*P **P** **18 40 13.8 -1.9**
comp=Z,90nm,1.1s,mb5.6
HWUT LR LR
comp=Z,5µm,21.0s,MS5.5
APE Apeiranthos 53.28 274 ⇑P **P** **18 40 17.6 +1.6**
APE Apeiranthos 53.28 274 *e*P **P** **18 40 15.8 -0.1**
APE Apeiranthos 53.28 274 ⇑*e*P **P** **18 40 17.6 +1.6**
L24A Wheatland 53.30 36 ⇑P **P** **18 40 15.5 -0.5**
baz=53
M13A Montello 53.30 45 ⇓P **P** **18 40 17.1 +1.1**
baz=53
M13A Montello 53.30 45 *e*P **P** **18 40 15.8 -0.2**
comp=Z,84nm,1.1s,mb5.6
M15A Larsen Ranch, 53.33 43 ⇑P **P** **18 40 16.3 0.0**
baz=53,SNR=21
VLX Vlachokerasia 53.34 277 *e*P **P** **18 40 16.2 -0.2**
WDC Whiskeytown Da 53.35 53 *e*P **P** **18 40 16.5 0.0**
comp=Z,34nm,1.1s,mb5.2
WDC LR LR
comp=Z,3µm,22.0s,MS5.2
WDC Whiskeytown Da 53.35 53 *e*P **P** **18 40 16.5 +0.1**
WDC pmax pmax
comp=Z,33nm,1.1s,mb5.2
WDC MLR MLR
comp=Z,3µm,22.0s,MS5.2
ENH Enshi 53.41 185 *e*P **P** **18 40 15.1 -1.9**
comp=Z,131nm,1.6s,mb5.6
ENH LR LR
comp=Z,794nm,19.0s,MS4.8
M17A Scullys Gap (B 53.45 42 ⇑P **P** **18 40 17.3 +0.1**
baz=53,SNR=12
MTE Manteigas 53.46 306 *e*P **P** **18 40 18.1 +0.9**
comp=Z,55nm,1.9s,mb5.2
MTE *e*S **S** **18 47 57.1 +7.9**
MTE *e*LR LR 18 56 18.9
comp=Z,981nm,18.0s
MTE Manteigas 53.46 306 *e*P **P** **18 40 17.2 0.0**
comp=Z,26nm,1.1s,mb5.1
MTE LR LR
comp=Z,994nm,19.0s,MS4.9
SPUT South Promonto 53.48 43 *e*P **P** **18 40 18.9 +1.6**
comp=Z,30nm,1.1s,mb5.1
RWWY Rawlins 53.49 38 *e*P **P** **18 40 15.3 -2.1**
comp=Z,95nm,1.1s,mb5.6
M19A Rock Springs 53.53 40 ⇑P **P** **18 40 17.6 -0.1**
baz=54,SNR=9.6
M18A Lyman 53.55 41 ⇓P **P** **18 40 17.7 -0.1**
baz=54,SNR=13
M21A Separation Pea 53.56 39 ⇓P **P** **18 40 17.4 -0.5**
baz=54,SNR=15
ITM Ithomi 53.58 277 *e*P **P** **18 40 17.6 -0.5**
M20A Sweetwater, Wa 53.62 39 ⇓P **P** **18 40 18.5 +0.1**
baz=54,SNR=16
ECHE Chera 53.64 300 P **P** **18 40 19.5 +1.0**
comp=Z,18nm,0.8s,mb5.0
ECHE Chera 53.64 300 P **P** **18 40 19.5 +1.0**
ECHE pmax pmax
comp=Z,18nm,0.8s,mb5.0
EPLA Plasencia 53.66 305 P **P** **18 40 17.2 -1.5**
comp=Z,67nm,1.0s,mb5.5
EPLA Plasencia 53.66 305 P **P** **18 40 17.2 -1.5**
EPLA pmax pmax
comp=Z,67nm,1.0s,mb5.5
N11A Elko Archery C 53.71 46 ⇑P **P** **18 40 19.5 +0.4**
baz=54
N10A Dunphy 53.74 47 ⇑P **P** **18 40 20.6 +1.3**
baz=54
N13A Wendover, West 53.79 45 ⇓P **P** **18 40 20.6 +0.9**
baz=54,SNR=11
N13A Wendover, West 53.79 45 *e*P **P** **18 40 20.6 +1.0**
comp=Z,50nm,1.0s,mb5.4
BGU Big Grassy Mou 53.82 44 *e*P **P** **18 40 19.3 -0.5**
comp=Z,22nm,1.2s,mb5.0
ESBB Sonseca Array 53.84 303 P **P** **18 40 19.3 -0.8**
comp=Z,47nm,1.2s,mb5.3
ESDC Sonseca Array 53.84 303 P **P** **18 40 19.7 -0.3**
comp=Z,30nm,0.9s,mb5.2
ESDC Sonseca Array 53.84 303 P **P** **18 40 19.1 -1.0**
comp=Z,21nm,0.9s,mb5.1,baz=5.4,slow=8.3,SNR=56
ESLA Sonseca Array 53.84 303 *e*P **P** **18 40 19.9 -0.1**
comp=Z,11nm,1.1s,mb4.7
ESLA LR LR
comp=Z,7µm,19.0s,MS5.8
M24A Cheyenne 53.88 36 ⇓P **P** **18 40 19.7 -0.5**
baz=54,SNR=10
N14A Grayback Hills 53.88 44 ⇓P **P** **18 40 20.8 +0.5**
baz=54,SNR=7.4
PYL PYLOS 53.88 278 *e*P **P** **18 40 17.8 -2.5**
VLI Veliai 53.92 276 *e*P **P** **18 40 17.9 -2.7**
BMN Battle Mountai 53.97 48 *e*P **P** **18 40 23.4 +2.5**
comp=Z,24nm,1.1s,mb5.0
BMN LR LR
comp=Z,2µm,20.0s,MS5.2
BMN Battle Mountai 53.97 48 *e*P **P** **18 40 23.4 +2.5**
BMN pmax pmax
comp=Z,24nm,1.1s,mb5.0
BMN MLR MLR
comp=Z,2µm,20.0s,MS5.2
N17A Moffit Pass 53.97 42 ⇑P **P** **18 40 20.2 -0.7**
baz=54,SNR=7.5
N16A Rees Ranch, Co 53.98 42 ⇓P **P** **18 40 21.5 +0.5**
baz=54,SNR=19
PHWY Pilot Hill 54.00 37 *e*P **P** **18 40 20.4 -0.8**
comp=Z,56nm,1.5s,mb5.3
PAB San Pablo 54.01 303 *e*P **P** **18 40 20.1 -1.2**
comp=Z,81nm,1.0s,mb5.6
PAB LR LR
comp=Z,2µm,19.0s,MS5.2
PAB San Pablo 54.01 303 *e*P **P** **18 40 20.1 -1.1**
PAB pmax pmax
comp=Z,81nm,1.0s,mb5.6
PAB MLR MLR
comp=Z,2µm,19.0s,MS5.2
PCBR Castelo Branco 54.01 306 *e*P **P** **18 40 21.8 +0.6**
comp=Z,55nm,1.4s,mb5.3
N18A Larsen Ranch, 54.02 41 ⇑P **P** **18 40 21.0 -0.4**
baz=54,SNR=9.3
AAM Ann Arbor 54.11 17 PFAKE 18 40 30.0 +8.1
AAM LR LR
comp=Z,2µm,20.0s,MS5.2
SCIA State Center 54.11 25 *e*P **P** **18 40 21.5 -0.5**
comp=Z,13nm,0.3s,mb5.3
SCIA LR LR
comp=Z,2µm,20.0s,MS5.3
VAE Valguarnera 54.12 285 P **P** **18 40 23.3 +1.3**
VAE LR LR 19 04 13.7
VAE Valguarnera 54.12 285 P **P** **18 40 23.3 +1.3**
comp=Z,3.0nm,0.2s,mb4.8,baz=17,slow=8.8,SNR=2.1
VAE LR LR 19 04 13.7
comp=Z,2µm,20.0s,MS5.2,baz=82,slow=37
N19A John Jarvie Ra 54.14 40 ⇑P **P** **18 40 21.7 -0.5**
baz=54
CTU Camp Tracy 54.15 43 *e*P **P** **18 40 21.8 -0.4**
NOQ North Oquirrh 54.16 43 *e*P **P** **18 40 23.2 +0.9**
comp=Z,40nm,1.1s,mb5.3
O10A Cortez Mining, 54.17 47 ⇓P **P** **18 40 23.6 +1.2**
baz=54,SNR=7.7
JLU Jordanelle 54.26 42 *e*P **P** **18 40 23.9 +0.8**
comp=Z,42nm,1.1s,mb5.3
N20A Spence Gulch, 54.27 39 ⇑P **P** **18 40 23.6 +0.5**
baz=54,SNR=90
PTOM Tomar 54.31 307 *e*P **P** **18 40 24.0 +0.5**
comp=Z,57nm,1.5s,mb5.3
O12A Currie 54.33 46 ⇓P **P** **18 40 24.2 +0.6**
baz=54,SNR=34
N23A Red Feather La 54.37 37 ⇑P **P** **18 40 23.7 -0.1**
baz=54,SNR=21
N21A Black Mountain 54.39 39 ⇑P **P** **18 40 24.0 0.0**
baz=54,SNR=7.7
ERPA Erie 54.40 13 PFAKE 18 40 40.0 +16
ERPA LR LR
comp=Z,5µm,21.0s,MS5.5
BINY Binghamton 54.41 10 *e*P **P** **18 40 24.9 +0.8**
comp=Z,69nm,1.2s,mb5.5
BINY LR LR
comp=Z,2µm,22.0s,MS5.2
PMRV Marv??o 54.41 306 *e*P **P** **18 40 24.6 +0.4**
comp=Z,68nm,1.3s,mb5.4
PMRV *e*S **S** **18 48 10.8 +8.8**
PMRV *e*LR LR 18 57 02.3
comp=Z,863nm,20.0s
N22A Wattenberg Ran 54.43 38 ⇓P **P** **18 40 24.3 0.0**
baz=54
DAU Daniels Canyon 54.46 42 *e*P **P** **18 40 23.5 -1.0**
comp=Z,44nm,1.0s,mb5.3
DAU Daniels Canyon 54.46 42 *e*P **P** **18 40 23.5 -1.1**
DAU pmax pmax
comp=Z,44nm,1.0s,mb5.3
O15A The Old Anders 54.50 43 ⇑P **P** **18 40 25.2 +0.4**
baz=54,SNR=7.1
O13A Hicks Ranch, I 54.53 45 ⇓P **P** **18 40 25.5 +0.4**
baz=54
DUG Dugway 54.56 44 ⇑P **P** **18 40 25.4 +0.2**
baz=54
DUG Dugway 54.56 44 *e*P **P** **18 40 23.5 -1.7**
comp=Z,42nm,1.1s,mb5.4
DUG LR LR
comp=Z,6µm,21.0s,MS5.7
DUG Dugway 54.56 44 *e*P **P** **18 40 23.5 -1.7**
DUG pmax pmax
comp=Z,42nm,1.1s,mb5.4
DUG MLR MLR
comp=Z,6µm,21.0s,MS5.7
N25A Grover 54.58 36 ⇑P **P** **18 40 25.6 +0.2**
baz=54
OGNE Ogallala 54.58 34 ⇓P **P** **18 40 24.8 -0.6**
baz=54
OGNE Ogallala 54.58 34 *e*P **P** **18 40 25.7 +0.4**
comp=Z,139nm,1.3s,mb5.8
OGNE LR LR
comp=Z,3µm,20.0s,MS5.4
ETOB Tobarra 54.63 300 P **P** **18 40 26.6 +0.8**
comp=Z,47nm,1.3s,mb5.4
O16A Springville 54.65 43 ⇓P **P** **18 40 26.3 +0.4**
baz=55,SNR=13
O18A Roosevelt 54.70 41 ⇑P **P** **18 40 26.6 +0.3**
baz=55,SNR=8.5
O17A Robinson Place 54.72 42 ⇓P **P** **18 40 27.6 +1.2**
baz=55,SNR=8.4
EVIA Vianos 54.73 301 P **P** **18 40 26.7 +0.2**
comp=Z,41nm,1.0s,mb5.4
EVIA Vianos 54.73 301 P **P** **18 40 26.7 +0.2**
EVIA pmax pmax
comp=Z,41nm,1.0s,mb5.4
O19A Miners Draw (B 54.74 40 ⇑P **P** **18 40 26.6 0.0**
baz=55
MPU Maple Canyon 54.83 43 *e*P **P** **18 40 28.4 +1.2**
comp=Z,68nm,1.1s,mb5.6
NLU North Lily Min 54.86 43 *e*P **P** **18 40 29.1 +1.7**
comp=Z,36nm,1.0s,mb5.4
WCN Washoe City 54.87 50 ⇓P **P** **18 40 28.4 +0.9**
baz=55,SNR=9.9
HOPS Hopland 54.88 54 PFAKE 18 40 40.0 +12
HOPS LR LR
comp=Z,2µm,20.0s,MS5.2
BHD Baghdad 54.92 254 *ex* x 18 40 09.5
BHD *i* x x 18 48 10.0
BHD *i* x x 18 48 31.0
BHD *i* x x 18 52 10.0
BHD *i* x x 18 59 47.0
O21A Pagoda 54.94 39 ⇓P **P** **18 40 28.0 0.0**
baz=55,SNR=12
P11A Circle Ranch, 54.96 47 ⇑P **P** **18 40 29.0 +0.8**
baz=55,SNR=8.4
O20A White River Ci 54.96 39 ⇑P **P** **18 40 28.2 0.0**
baz=55,SNR=6.9
PESTR Estremoz 54.98 306 *e*P **P** **18 40 27.9 -0.4**
comp=Z,74nm,1.2s,mb5.6
PESTR *e*S **S** **18 48 15.6 +5.8**
PESTR *e*LR LR 18 57 05.6
comp=Z,1µm,18.0s
EBAD Badajoz 55.04 306 P **P** **18 40 27.3 -1.5**
comp=Z,37nm,1.0s,mb5.4
O23A Lake Granby, G 55.05 37 ⇑P **P** **18 40 29.2 +0.4**
baz=55,SNR=9.4
O22A Kremmling 55.06 38 ⇓P **P** **18 40 29.1 +0.3**
baz=55,SNR=90
KARN Karanos 55.11 275 P **P** **18 40 27.9 -1.4**
P14A Drum Mountains 55.14 44 ⇓P **P** **18 40 30.0 +0.6**
baz=55,SNR=38
O24A Longmont 55.20 37 ⇓P **P** **18 40 30.1 +0.2**
baz=55
P13A Bates Ranch, G 55.20 45 ⇑P **P** **18 40 30.3 +0.4**
baz=55,SNR=29
P15A Leamington 55.22 43 ⇓P **P** **18 40 30.4 +0.3**
baz=55,SNR=13
P16A Fountain Green 55.23 43 ⇓P **P** **18 40 30.5 +0.4**
baz=55,SNR=5.7
O25A Wiggins 55.27 36 ⇓P **P** **18 40 30.8 +0.4**
baz=55,SNR=7.2
LIS Lisbon 55.27 308 *e*P **P** **18 40 31.4 +0.9**
LIS AMS AMS 19 08 43.4
comp=E,2µm,18.4s
LIS Lisbon 55.27 308 *e*P **P** **18 40 31.3 +0.9**
P18A Preston Nutter 55.32 41 ⇓P **P** **18 40 31.0 +0.3**
baz=55,SNR=18
EBAN Banos Encina 55.32 302 P **P** **18 40 31.1 +0.3**
comp=E,48nm,1.0s,mb5.5
EBAN Banos Encina 55.32 302 P **P** **18 40 31.1 +0.3**
EBAN pmax pmax
comp=Z,48nm,1.0s,mb5.5
EVO Evora 55.35 307 *e*P **P** **18 40 29.9 -1.1**
comp=Z,26nm,0.8s,mb5.0
EVO *e*MLR MLR
comp=Z,1µm,19.5s,MS4.8
EVOP Sao Brissos 55.37 307 *e*P **P** **18 40 32.3 +1.2**
EVOP *e*S **S** **18 48 16.9 +1.9**
EVOP *e*S **S** **18 48 17.2 +2.3**
EVOP *e*SS SS 18 52 01.6 +2.9
EVOP AMS AMS 19 11 56.7
comp=Z,1µm,21.3s,MS4.9
EVOP Sao Brissos 55.37 307 *e*P **P** **18 40 32.2 +1.1**
EADA Adamuz 55.40 303 P **P** **18 40 30.9 -0.4**
comp=Z,32nm,1.2s,mb5.2
P19A Cripple Cowboy 55.41 40 ⇓P **P** **18 40 31.3 -0.1**
baz=55,SNR=21
P17A Butcher Ranch, 55.44 42 ⇑P **P** **18 40 32.1 +0.5**
baz=55,SNR=20
ISCO Idaho Springs 55.48 37 ⇑P **P** **18 40 32.0 +0.1**
baz=55
ISCO Idaho Springs 55.48 37 *e*P **P** **18 40 33.1 +1.2**
comp=Z,22nm,1.0s,mb5.2
ISCO LR LR
comp=Z,4µm,19.0s,MS5.5
ISCO Idaho Springs 55.48 37 *e*P **P** **18 40 33.1 +1.2**
ISCO pmax pmax
comp=Z,22nm,1.0s,mb5.1
ISCO MLR MLR
comp=Z,4µm,19.0s,MS5.5
Q12A Willow Creek R 55.55 46 ⇓P **P** **18 40 32.8 +0.5**
baz=56,SNR=12
EHUE Huescar 55.55 301 P **P** **18 40 33.3 +0.8**
comp=Z,26nm,1.2s,mb5.1
EHUE Huescar 55.55 301 P **P** **18 40 33.3 +0.8**
EHUE pmax pmax
comp=Z,27nm,1.2s,mb5.2
TMUT Trail Mountain 55.58 42 *e*P **P** **18 40 31.9 -0.7**
comp=Z,32nm,1.1s,mb5.3
P20A De Beque 55.58 40 ⇑P **P** **18 40 32.7 0.0**
baz=56,SNR=15
P22A Eagle 55.61 38 ⇑P **P** **18 40 33.1 +0.3**
baz=56,SNR=9.8
EQES Quesada 55.61 302 P **P** **18 40 33.3 +0.4**
comp=Z,58nm,1.2s,mb5.5
PBAR Barrancos 55.62 306 *e*P **P** **18 40 33.0 +0.1**
comp=Z,50nm,1.2s,mb5.4
PBAR *e*S **S** **18 48 21.6 +3.3**
PBAR *e*LR LR 18 57 13.6
comp=Z,2µm,18.0s
Q10A Clear Creek Ra 55.63 47 ⇑P **P** **18 40 33.8 +0.8**
baz=56,SNR=25
HDIL Hopedale 55.64 22 PFAKE 18 40 40.0 +7.0
HDIL LR LR
comp=Z,2µm,20.0s,MS5.3
Q13A Wheeler Ranch, 55.70 45 ⇓P **P** **18 40 34.0 +0.6**
baz=56,SNR=24
WDD Wield Dalam 55.70 284 PFAKE 18 40 50.0 +16
WDD LR LR
comp=Z,788nm,20.0s,MS4.8
Q14A Sevier Lake (B 55.72 44 ⇑P **P** **18 40 34.5 +0.8**
baz=56,SNR=71
MCCM Marconi Confer 55.74 54 PFAKE 18 40 50.0 +16
MCCM LR LR
comp=Z,2µm,19.0s,MS5.2
Q15A Fillmore 55.78 43 ⇓P **P** **18 40 34.5 +0.4**
baz=56,SNR=16
P24A Kohler Place, 55.81 36 ⇑P **P** **18 40 34.2 -0.1**
baz=56
SRU San Rafael 55.81 42 ⇑P **P** **18 40 34.5 +0.2**
baz=56,SNR=22
SRU San Rafael 55.81 42 *e*P **P** **18 40 32.8 -1.5**
comp=Z,23nm,0.8s,mb5.2
SRU San Rafael 55.81 42 *e*P **P** **18 40 32.8 -1.5**
SRU pmax pmax
comp=Z,23nm,0.8s,mb5.3
PBEJ Beja 55.84 306 *e*P **P** **18 40 34.8 +0.3**
Q18A Rafter H Ranch 55.85 41 ⇑P **P** **18 40 34.4 -0.2**

baz=56,SNR=16
NVAR Mina Array Bea 55.86 49 P P 18 40 35.6 +0.9
comp=Z,15nm,1.1s,mb4.9,baz=357,slow=4.1,SNR=34
NVAR PcP PcP 18 41 32.4 -0.9
comp=Z,4.6nm,1.0s,baz=357,slow=4.0,SNR=1.9
P25A Willow Gulch B 55.87 36 ⇓P P 18 40 34.8 +0.1
baz=56,SNR=26
P23A Jefferson 55.89 37 ⇓P P 18 40 35.5 +0.6
baz=56,SNR=19
Q16A Castle Valley 55.96 42 ⇓P P 18 40 36.0 +0.7
baz=56,SNR=14
EMIN Mina Concepcio 55.99 305 P P 18 40 35.1 -0.5
comp=Z,25nm,1.3s,mb5.1
SMCO Snowmass 56.01 38 eP P 18 40 36.3 +0.6
comp=Z,57nm,1.1s,mb5.5
MESJ Messejana 56.06 307 eP P 18 40 36.6 +0.5
MESJ eS S **18 48 26.7 +2.5**
MESJ eS S **18 48 26.9 +2.7**
MESJ AMS AMS 19 13 29.9
comp=Z,902nm,24.3s,MS4.8
MESJ Messejana 56.06 307 eP P 18 40 36.6 +0.5
MESJ eS S **18 48 26.7 +2.5**
MESJ A 19 13 29.9
comp=Z,902nm,24.3s
MESJ Messejana 56.06 307 eP P 18 40 36.5 +0.4
MESJ eS S **18 48 26.7 +2.5**
CMB Columbia Colle 56.07 51 eP P 18 40 36.7 +0.5
comp=Z,11nm,1.0s,mb4.8
CMB LR LR
comp=Z,2µm,20.0s,MS5.2
CMB Columbia Colle 56.07 51 eP P 18 40 36.7 +0.5
CMB pmax pmax
comp=Z,11nm,1.0s,mb4.8
CMB MLR MLR
comp=Z,2µm,20.0s,MS5.2
Q20A Ridgley Place, 56.13 40 ⇑P P 18 40 36.4 -0.2
baz=56,SNR=8.6
MMAI Mount Meron Ar 56.17 263 P P 18 40 37.8 +0.9
comp=Z,13nm,0.8s,mb5.0,baz=28,slow=11,SNR=14
MMAI LR LR 19 08 05.3
comp=Z,1µm,21.5s,MS5.0,baz=5.0,slow=40
R11A Troy Canyon, C 56.17 47 ⇓P P 18 40 37.3 +0.5
baz=56,SNR=46
R10A Warm Springs 56.17 47 ⇑P P 18 40 37.7 +0.9
baz=56
ECOG Cogollos-Vega 56.18 302 P P 18 40 37.2 +0.2
comp=Z,24nm,1.1s,mb5.2
ECOG Cogollos-Vega 56.18 302 P P 18 40 37.2 +0.2
ECOG pmax pmax
comp=Z,25nm,1.1s,mb5.2
PCVE Castro Verde 56.25 306 eP P 18 40 37.6 +0.2
PCVE eS S **18 48 34.1 +7.4**
PCVE eLR LR 18 57 58.0
comp=Z,1µm,18.0s
R12A Pony Springs, 56.27 46 ⇓P P 18 40 37.9 +0.3
baz=56,SNR=8.5
MSU Marysvale 56.28 43 eP P 18 40 36.5 -1.2
comp=Z,47nm,1.0s,mb5.5
MSU Marysvale 56.28 43 eP P 18 40 36.5 -1.2
MSU pmax pmax
comp=Z,47nm,1.0s,mb5.5
MVU Marysvale 56.29 43 PFAKE 18 40 50.0 +12
MVU LR LR
comp=Z,4µm,20.0s,MS5.5
EGRO El Granado 56.29 306 P P 18 40 36.7 -1.1
comp=Z,37nm,1.3s,mb5.2
Q21A Lamborn Mesa, 56.30 39 ⇓P P 18 40 38.0 +0.2
baz=56,SNR=11
Q22A Crested Butte, 56.32 38 ⇓P P 18 40 38.6 +0.7
baz=56,SNR=24
Q24A Divide 56.34 37 ⇑P P 18 40 38.3 +0.1
baz=56,SNR=44
ENIJ Nijar 56.35 301 P P 18 40 37.4 -0.8
comp=Z,27nm,1.0s,mb5.2
ENIJ Nijar 56.35 301 P P 18 40 37.4 -0.8
ENIJ pmax pmax
comp=Z,27nm,1.0s,mb5.2
Q23A Hartsel 56.36 37 ⇑P P 18 40 38.4 +0.2
baz=56,SNR=20
ELOJ Sierra Loja 56.37 303 P P 18 40 38.8 +0.5
comp=Z,14nm,1.0s,mb5.0
ELOJ Sierra Loja 56.37 303 P P 18 40 38.8 +0.5
ELOJ pmax pmax
comp=Z,15nm,1.0s,mb5.0
KEST Kesra 56.40 289 eP P 18 40 37.7 -0.8
KEST Kesra 56.40 289 P P 18 40 38.3 -0.2
comp=Z,37nm,0.9s,mb5.4,baz=305,slow=1.8,SNR=89
R14A James Farms, M 56.43 44 ⇑P P 18 40 38.9 +0.2
baz=56
PVAQ Vaqueiros 56.45 306 eP P 18 40 38.8 0.0
comp=Z,87nm,1.6s,mb5.5
PVAQ eS S **18 48 35.3 +6.0**
PVAQ eLR LR 18 58 02.8
comp=Z,2µm,16.0s
Q25A Bedland, Calha 56.45 36 ⇓P P 18 40 38.7 -0.2
baz=56,SNR=14
ERON Agron 56.46 302 P P 18 40 39.6 +0.6
comp=Z,32nm,0.8s,mb5.4
R13A O'Grain Ranch, 56.47 45 ⇓P P 18 40 39.8 +0.8
baz=56,SNR=28
R17A Hanksville Air 56.49 42 ⇓P P 18 40 39.0 -0.2
baz=56,SNR=12
EBER Berja 56.49 301 P P 18 40 38.9 -0.2
comp=Z,111nm,1.7s,mb5.6
S10A Tonopah Range, 56.51 48 ⇑P P 18 40 39.8 +0.5
baz=56,SNR=21
R16A Teasdale 56.56 43 ⇑P P 18 40 40.1 +0.5
baz=56,SNR=25
GKN Gorkha 56.57 212 eP P 18 40 39.2 -0.6
comp=Z,107nm,1.2s,mb5.7
R15A Junction 56.57 43 ⇓P P 18 40 40.2 +0.5
baz=56
R18A Canyonlands Na 56.58 41 ⇓P P 18 40 39.6 -0.2
baz=56,SNR=24
GUN Gumba 56.59 211 eP P 18 40 40.5 +0.6
comp=Z,188nm,1.1s,mb6.0
MLAC Mammoth Lakes 56.61 50 ⇓P P 18 40 40.6 +0.6
baz=56
EGUA Guajares 56.62 302 P P 18 40 40.7 +0.6
comp=Z,134nm,0.9s,mb6.0
PBDV Barranco-do-Ve 56.62 306 eP P 18 40 40.0 -0.1
comp=Z,70nm,1.9s,mb5.4
PBDV eS S **18 48 34.2 +2.5**
PBDV eLR LR 18 58 15.5
comp=Z,2µm,18.0s
MORF Marmelete 56.63 307 eP P 18 40 40.2 +0.1
comp=Z,61nm,2.1s,mb5.3
MORF eS S **18 48 35.1 +3.4**
MORF eLR LR 18 58 28.4
comp=Z,1µm,18.0s
MORF Marmelete 56.63 307 eP P 18 40 40.6 +0.5
MORF eS S **18 48 34.0 +2.3**
PV04 Paradox Valley 56.65 40 eP P 18 40 40.9 +0.6
R19A Curley Farm, L 56.72 41 ⇑P P 18 40 41.0 +0.2
baz=57
KSU1 Kansas State U 56.73 29 eP P 18 40 40.0 -0.8
comp=Z,24nm,0.6s,mb5.4
KSU1 LR LR
comp=Z,3µm,22.0s,MS5.3
R21A Cimarron 56.77 39 ⇓P P 18 40 41.7 +0.6
baz=57,SNR=22
ESPR Espera 56.80 304 P P 18 40 41.0 -0.4
comp=Z,48nm,1.1s,mb5.4
PFVI Vila Bisbo 56.81 307 eS S 18 48 46.8 +13
PFVI eLR LR 18 58 02.4
comp=Z,1µm,18.0s
JIRN Jiri 56.82 210 eP P 18 40 42.2 +0.6
comp=Z,71nm,1.0s,mb5.7
ASF Jabal al Asfar 56.84 262 P P 18 40 42.4 +0.7
comp=Z,15nm,0.8s,mb5.0,baz=245,slow=2.9,SNR=26
CBKS Cedar Bluff 56.84 32 ⇑P P 18 40 40.2 -1.4
baz=57
CBKS Cedar Bluff 56.84 32 eP P 18 40 40.3 -1.3
comp=Z,27nm,0.7s,mb5.4
CBKS LR LR
comp=Z,4µm,19.0s,MS5.6
CBKS Cedar Bluff 56.84 32 eP P 18 40 40.3 -1.3
CBKS pmax pmax
comp=Z,27nm,0.7s,mb5.4
CBKS MLR MLR
comp=Z,4µm,19.0s,MS5.6
MCWV Mont Chateau 56.85 13 PFAKE 18 40 50.0 +8.3
MCWV LR LR
comp=Z,6µm,20.0s,MS5.7
S11A Rachel 56.86 47 ⇑P P 18 40 41.9 +0.1
baz=57
KOLN Koldanda 56.86 213 eP P 18 40 39.9 -2.0
comp=Z,84nm,1.3s,mb5.6
R20A Redvale 56.89 40 ⇑P P 18 40 42.4 +0.4
baz=57,SNR=12
ARUT Antelope Range 56.90 45 eP P 18 40 43.7 +1.6
comp=Z,36nn,1.2s,mb5.3
ARUT Antelope Range 56.90 45 eP P 18 40 43.7 +1.6
ARUT pmax pmax
comp=Z,36nn,1.2s,mb5.3
PV01 Paradox Valley 56.93 40 eP P 18 40 39.9 -2.4
comp=Z,11µm,1.1s
DMN Daman 56.93 211 eP P 18 40 41.6 -0.8
comp=Z,122nn,1.2s,mb5.8
PKI Pulchoki 56.95 211 eP P 18 40 41.9 -0.6
comp=Z,92nn,1.2s,mb5.7
S14A Cedar City 56.95 44 ⇓P P 18 40 42.5 +0.1
baz=57,SNR=5.6
R22A Saguache, Gunn 56.97 38 ⇓P P 18 40 43.3 +0.8
baz=57,SNR=22
S12A Delamar Landin 56.97 46 ⇓P P 18 40 43.7 +1.1
baz=57,SNR=21
EMIJ Mijas 57.00 303 P P 18 40 42.5 -0.3
comp=Z,42nn,1.2s,mb5.3
TAPN Taplejung 57.04 209 eP P 18 40 44.4 +1.2
comp=Z,80nn,1.3s,mb5.6
S13A Holt Ranch, En 57.07 45 ⇓P P 18 40 43.9 +0.6
baz=57,SNR=43
R24A Sanders Place, 57.08 37 ⇓P P 18 40 43.4 0.0
baz=57,SNR=22
S15A Panguitch 57.10 44 ⇓P P 18 40 44.1 +0.6
baz=57
S16A Weppner Ranch, 57.11 43 ⇓P P 18 40 44.4 +0.8
baz=57,SNR=7.4
CCUT Cedar City 57.14 45 eP P 18 40 44.2 +0.4
comp=Z,36nn,1.3s,mb5.2
EJIF Jimena Fronter 57.18 304 P P 18 40 44.9 +0.8
comp=Z,45nn,1.0s,mb5.5
EJIF Jimena Fronter 57.18 304 P P 18 40 44.9 +0.8
EJIF pmax pmax
comp=Z,45nn,1.0s,mb5.5
TIN Tinemaha 57.23 49 ⇓P P 18 40 45.5 +1.0
baz=57,SNR=7.2
SFS San Fernando 57.23 305 PFAKE 18 41 00.0 +16
SFS LR LR
comp=Z,4µm,20.0s,MS5.5
SAO San Andreas Ge 57.24 52 eP P 18 40 45.3 +0.8
comp=Z,28nn,1.1s,mb5.2
SAO LR LR
comp=Z,2µm,22.0s,MS5.1
SAO San Andreas Ge 57.24 52 eP P 18 40 45.3 +0.8
SAO pmax pmax
comp=Z,28nn,1.1s,mb5.2
SAO MLR MLR
comp=Z,2µm,22.0s,MS5.1
GYA Guiyang 57.25 188 ⇑iP P 18 40 46.8 +2.1
GYA PP PP 18 42 55.0 +3.5
GYA S S **18 48 46.3 +6.2**
GYA SS SS 18 52 30.8 +2.0
GYA pmax pmax
comp=Z,40nm,0.9s,mb5.5
GYA pmax pmax
comp=Z,240nm,5.9s
GYA LR LR
comp=N,10µm,18.5s,MS6.0
GYA LR LR
comp=E,3µm,19.0s,MS6.0
GYA LR LR
comp=Z,7µm,17.9s,MS5.8
S17A Black Ridge (B 57.26 42 ⇑P P 18 40 44.8 +0.2
baz=57,SNR=15
S18A Hurst Farm, Bl 57.27 41 ⇓P P 18 40 44.9 +0.2
baz=57,SNR=31
S19A Harvey Farm, M 57.27 41 ⇑P P 18 40 44.8 +0.1
baz=57,SNR=35
GRAC Grapevine Rang 57.36 48 ⇓P P 18 40 46.1 +0.8
baz=57,SNR=8.0
S22A 4UR Ranch, Cre 57.44 38 ⇓P P 18 40 46.3 +0.4
baz=57,SNR=48
S21A Coal Bank Pass 57.45 39 ⇓P P 18 40 46.6 +0.6
baz=57,SNR=32
RAMN Ramite 57.50 210 eP P 18 40 45.9 -0.5
comp=Z,116nn,1.2s,mb5.8
SDCO Great Sand Dun 57.53 37 eP P 18 40 44.1 -2.4
comp=Z,52nn,1.1s,mb5.5
SDCO LR LR
comp=Z,3µm,19.0s,MS5.5
S23A Nye Farm, Mont 57.54 38 ⇑P P 18 40 46.5 -0.1
baz=58
ODAN Odare 57.55 209 eP P 18 40 46.8 +0.1
comp=Z,205nn,1.1s,mb6.1
T13A Saint George 57.63 45 ⇑P P 18 40 47.6 +0.4
baz=58,SNR=20
T14A Hurricane 57.65 44 ⇑P P 18 40 48.5 +1.1
baz=58,SNR=28
S24A Houchin Ranch, 57.66 37 ⇑P P 18 40 47.2 -0.2
baz=58,SNR=16
S25A Robets Cordova 57.69 36 ⇓P P 18 40 47.1 -0.6
baz=58,SNR=16
T15A Red Dirt Ranch 57.75 44 ⇓P P 18 40 48.3 +0.2
baz=58,SNR=16
T18A Mexican Hat 57.82 41 ⇓P P 18 40 48.5 -0.1
baz=58,SNR=21
T16A Glen Canyon Da 57.85 43 ⇑P P 18 40 48.3 -0.5
baz=58
MVCO Mesa Verde 57.85 40 ⇑P P 18 40 49.0 +0.2
baz=58
MVCO Mesa Verde 57.85 40 eP P 18 40 49.5 +0.7
comp=Z,154nn,1.3s,mb5.9
MVCO LR LR
comp=Z,2µm,21.0s,MS5.2
T12A Moapa 57.85 46 ⇓P P 18 40 48.9 +0.1
baz=58
CWC Cottonwood Cre 57.86 49 ⇑P P 18 40 48.9 0.0
baz=58
RCTC Rector, Farmer 57.88 50 ⇓P P 18 40 49.5 +0.5
baz=58
T17A Navajo Res., N 57.89 42 ⇓P P 18 40 48.8 -0.3
baz=58,SNR=13
FURC Furnace Creek, 57.93 48 ⇑P P 18 40 49.5 +0.2
baz=58,SNR=16
U10A Ash Meadows, A 58.02 48 ⇑P P 18 40 51.0 +1.0
baz=58
MIB Mutribah 58.03 251 eP P 18 40 49.9 -0.2
MIB AMb AMB 18 40 53.8
comp=Z,112nn,1.2s,mb5.8
DAC Darwin (Calif) 58.06 49 PFAKE 18 41 00.0 +10
DAC LR LR
comp=Z,3µm,20.0s,MS5.4
WCI Wyandotte Cave 58.08 19 PFAKE 18 41 00.0 +10
WCI LR LR
comp=Z,2µm,22.0s,MS5.2
U11A Corn Creek 58.10 47 ⇓P P 18 40 50.8 +0.3
baz=58
T21A Navajo Lake 58.14 39 ⇑P P 18 40 51.6 +0.8
baz=58,SNR=17
U12A Valley of Fire 58.16 46 ⇓P P 18 40 51.6 +0.6
baz=58
T22A Edith 58.16 39 ⇓P P 18 40 51.3 +0.3
baz=58,SNR=45
T19A Beclabito 58.19 41 ⇑P P 18 40 51.3 +0.1
baz=58,SNR=26
T23A Casias Ranch, 58.20 38 ⇓P P 18 40 50.9 -0.3
baz=58,SNR=5.7
T25A Trinidad 58.21 36 ⇑P P 18 40 50.7 -0.6
baz=58,SNR=8.8
U13A Pakoon Wash 58.22 45 ⇓P P 18 40 51.7 +0.3
baz=58,SNR=18
UMR Umm Al-Rimmam 58.24 250 eP P 18 40 51.2 -0.4
UMR AMb AMB 18 40 55.3
comp=Z,139nn,1.2s,mb5.9
U14A Mt Trumbull 58.28 45 ⇑P P 18 40 52.3 +0.5
baz=58,SNR=43
MPMC Manual Prospec 58.28 49 ⇑P P 18 40 52.4 +0.6
baz=58,SNR=41
U15A North Rim 58.34 44 ⇓P P 18 40 52.5 +0.3
baz=58,SNR=23
VES Vestal, Richgr 58.36 50 ⇓P P 18 40 52.5 +0.1
baz=58
CBN Corbin 58.37 11 PFAKE 18 41 00.0 +7.6
CBN LR LR
comp=Z,4µm,21.0s,MS5.5
U18A Rough Rock, Ch 58.54 41 ⇑P P 18 40 53.7 +0.1
baz=58,SNR=14
SHOC Shoshone 58.54 48 ⇓P P 18 40 54.1 +0.4
baz=58,SNR=11
NAY Al-Naaiem 58.59 251 eP P 18 40 53.6 -0.4
NAY AMb AMB 18 40 55.0
comp=Z,44nn,1.0s,mb5.4
ISA Isabella 58.59 50 ⇓P P 18 40 53.9 -0.1
baz=58,SNR=17
ISA Isabella 58.59 50 eP P 18 40 54.1 +0.1
comp=Z,27nn,1.1s,mb5.2
ISA Isabella 58.59 50 eP P 18 40 54.1 +0.1
ISA pmax pmax
comp=Z,27nn,1.1s,mb5.2
SHL Shillong 58.60 204 ePKP P 18 40 57.0 +2.8
SHL ex x 18 48 06.0
KBD Kabd 58.61 250 eP P 18 40 54.2 0.0
KBD AMb AMB 18 40 57.9
comp=Z,70nm,1.2s,mb5.6
KMI Kunming 58.66 193 P P 18 40 54.8 +0.2
KMI pP pP 18 41 00.3 +2.5
KMI sP sP 18 41 02.8 +3.8
KMI PP PP 18 43 09.4 +5.4
KMI S S **18 48 59.4 +0.8**
KMI sS sS 18 49 08.8 +4.9
KMI pmax pmax
comp=Z,30nm,1.4s,mb5.1
KMI pmax pmax
comp=Z,520nm,5.7s
KMI LR LR
comp=N,640nm,18.9s,MS5.5
KMI LR LR
comp=E,3µm,14.6s,MS5.5
KMI LR LR
comp=Z,1µm,18.1s,MS5.1
V11A Goodsprings 58.68 47 ⇓P P 18 40 55.1 +0.5
baz=59
U20A Newcomb 58.68 40 ⇑P P 18 40 54.5 -0.1
baz=59,SNR=19
U21A Nageezi 58.69 39 ⇓P P 18 40 54.9 +0.2
baz=59,SNR=25
QZH Quanzhou 58.71 176 P P 18 40 53.1 -1.8
QZH S S **18 48 57.0 -2.3**
QZH LR LR
comp=N,2µm,11.8s,MS5.6
QZH LR LR
comp=E,1µm,13.0s,MS5.6
QZH LR LR
comp=Z,4µm,11.4s,MS5.8
TATO Taipei 58.71 173 PFAKE 18 41 10.0 +15
TATO LR LR
comp=Z,1µm,19.0s,MS5.1
U19A Dine' College, 58.71 41 ⇑P P 18 40 54.6 -0.3
baz=59,SNR=12
U16A Tuba City 58.72 43 ⇓P P 18 40 55.4 +0.5
baz=59,SNR=36
V13A Grand Canyon W 58.78 45 ⇓P P 18 40 55.8 +0.5
baz=59,SNR=12
U22A Llaves 58.80 39 ⇑P P 18 40 56.0 +0.6
baz=59,SNR=34
V12A Nelson 58.83 46 ⇑P P 18 40 56.1 +0.4
baz=59,SNR=8.2
LRMC Laurel Mountai 58.84 49 ⇑P P 18 40 56.7 +0.9
baz=59,SNR=19
RDF Al-Radifah 58.87 250 eP P 18 40 56.1 +0.1
RDF AMb AMB 18 41 00.2
comp=Z,115nn,1.2s,mb5.8
U24A Moreno Valley 58.88 37 ⇓P P 18 40 56.4 +0.5
baz=59,SNR=7.8
U23A El Rito 58.89 38 ⇑P P 18 40 56.4 +0.4
baz=59
U25A Circle Dot Ran 58.95 36 ⇓P P 18 40 56.1 -0.3
baz=59,SNR=85
V15A Kaibab Nationa 58.96 44 ⇑P P 18 40 56.8 +0.3
baz=59,SNR=19
U26A Atchley Ranch, 58.99 36 ⇓P P 18 40 56.6 -0.2
baz=59,SNR=16
QRN Al-Qurain 59.01 250 eP P 18 40 56.4 -0.6
QRN AMb AMB 18 40 58.2
comp=Z,91nn,1.0s,mb5.7
YHNB Yeheng 59.01 173 eP P 18 40 57.0 -0.1
comp=Z,30nn,1.0s,mb5.3
YHNB LR LR
comp=Z,1µm,20.0s,MS5.1
TUQ Turquoise Moun 59.03 47 ⇑P P 18 40 57.6 +0.6
baz=59,SNR=21
V14A Boquillas Ranc 59.07 45 ⇑P P 18 40 57.9 +0.7
baz=59,SNR=34
ARVC Arvin 59.09 50 ⇓P P 18 40 57.9 +0.5
baz=59
GSC Goldstone 59.09 48 ⇑P P 18 40 58.8 +1.3
baz=59,SNR=12
GSC Goldstone 59.09 48 eP P 18 40 58.7 +1.3
comp=Z,26nn,1.1s,mb5.2
GSC Goldstone 59.09 48 eP P 18 40 58.7 +1.2
GSC pmax pmax
comp=Z,26nn,1.1s,mb5.2
PKM Peak Mountain 59.24 51 ⇑P P 18 40 59.3 +0.8
baz=59
W12A Cal Nev Ari 59.26 46 ⇓P P 18 40 58.9 +0.3
baz=59
V20A Brimhall 59.26 40 ⇑P P 18 40 58.2 -0.4
baz=59,SNR=21
V17A Tonalea, Kykot 59.26 42 ⇑P P 18 40 59.4 +0.8
baz=59,SNR=101
BLA Blacksburg 59.28 14 eP P 18 40 58.2 -0.5
comp=Z,18nm,0.7s,mb5.2
BLA LR LR
comp=Z,5µm,20.0s,MS5.7
BLA Blacksburg 59.28 14 eP P 18 40 58.2 -0.6
BLA pmax pmax
comp=Z,18nm,0.7s,mb5.2
BLA MLR MLR
comp=Z,5µm,20.0s,MS5.7
V19A Window Rock 59.30 41 ⇑P P 18 40 59.0 +0.1
baz=59
V21A Milan 59.31 39 ⇓P P 18 40 59.0 0.0
baz=59
WUAZ Wupatki 59.32 43 ⇓P P 18 40 59.3 +0.2
baz=59
WUAZ Wupatki 59.32 43 eP P 18 41 00.5 +1.5
comp=Z,49nn,1.2s,mb5.4
WUAZ LR LR
comp=Z,5µm,20.0s,MS5.6
EDW2 Edwards Air Fo 59.41 49 ⇑P P 18 41 00.1 +0.5
baz=59,SNR=19
LDFC Landfair 59.46 47 eP P 18 41 00.7 +0.7
comp=Z,30nn,1.2s,mb5.2
V23A Ortiz Mt. (NFS 59.48 38 ⇑P P 18 41 00.3 +0.2
baz=59,SNR=19
W14A Seligman 59.49 45 ⇓P P 18 41 01.1 +0.9
baz=59,SNR=21
V25A Rancho No Teng 59.49 37 ⇓P P 18 40 59.9 -0.3
baz=59,SNR=45
EIL Elat 59.53 263 P P 18 41 00.6 +0.1
comp=Z,18nm,0.9s,mb5.1,baz=343,slow=5.6,SNR=18
W13A Hualapai Mount 59.54 45 ⇓P P 18 41 01.3 +0.8
baz=60,SNR=13
V24A Rampart Ranch, 59.56 37 ⇑P P 18 41 01.0 +0.4
baz=60,SNR=23
W15A Williams 59.59 44 ⇑P P 18 41 01.5 +0.7
baz=60,SNR=13
HEC Hector Ludlow 59.60 48 ⇓P P 18 41 01.3 +0.3
baz=60,SNR=16
OSI Osito Adit 59.61 50 ⇑P P 18 41 02.0 +1.0
baz=60
OSI Osito Adit 59.61 50 eP P 18 41 02.9 +1.8
comp=Z,50nn,1.0s,mb5.5
MIDW Midway 59.69 108 PFAKE 18 41 10.0 +8.3
MIDW LR LR
comp=Z,946nn,21.0s,MS4.9
SBC Santa Barbara 59.70 51 ⇑P P 18 41 02.1 +0.5
baz=60
GMRC Granite Mounta 59.71 47 ⇓P P 18 41 02.4 +0.7
baz=60,SNR=27
W16A Flagstaff 59.73 43 ⇓P P 18 41 02.4 +0.5
baz=60,SNR=6.6
NEE2 Needles Airpor 59.80 46 ⇑P P 18 41 02.6 +0.2
baz=60
W17A Winslow 59.80 42 ⇑P P 18 41 02.6 +0.2
baz=60
W18A Petrified Fore 59.84 41 ⇓P P 18 41 02.9 +0.3
baz=60,SNR=14
W19A Sanders 59.87 41 ⇑P P 18 41 03.1 +0.3
baz=60,SNR=32
SSLB Suanglung 59.89 173 eP P 18 41 02.9 -0.1
comp=Z,36nn,1.1s,mb5.3
W20A Ramah 59.92 40 ⇓P P 18 41 02.5 -0.7
baz=60,SNR=13
W21A San Fidel 59.99 39 ⇑P P 18 41 03.5 -0.2
baz=60
DECC Green Verdugo 60.01 50 ⇓P P 18 41 03.7 0.0
baz=60
X13A Yucca 60.04 45 ⇑P P 18 41 04.3 +0.3
baz=60,SNR=26

MWC **Mount Wilson** 60.06 49 *e*P P 18 41 04.1 0.0
comp=Z,104nm,1.1s,mb5.8
MWC **Mount Wilson** 60.06 49 *e*P P 18 41 04.1 0.0
MWC pmax pmax
comp=Z,104nm,1.1s,mb5.8
W23A **Werner Place,** 60.06 38 ⇑P P 18 41 04.1 0.0
baz=60,SNR=14
W24A **Lazy 6 Ranch,** 60.06 37 ⇓P P 18 41 03.5 -0.6
baz=60,SNR=38
BFSC **Mount Baldy Ra** 60.08 49 ⇓P P 18 41 04.4 +0.1
baz=60,SNR=12
BLG **Laguna Peak** 60.08 50 ⇑P P 18 41 04.6 +0.3
baz=60
W22A **Albuquerque** 60.10 39 ⇓P P 18 41 04.5 +0.1
baz=60
PASC **Pasadena Art C** 60.10 50 *e*P P 18 41 04.9 +0.5
comp=Z,95nm,0.8s,mb5.9
WVT **Waverly** 60.11 21 *e*P P 18 41 03.6 -0.9
comp=Z,12nm,0.9s,mb4.9
WVT LR LR
comp=Z,2μm,19.0s,MS5.3
WVT **Waverly** 60.11 21 *e*P P 18 41 03.6 -0.9
WVT pmax pmax
comp=Z,12nm,0.9s,mb4.9
WVT MLR MLR
comp=Z,2μm,19.0s,MS5.3
BBRC **Big Bear Solar** 60.12 48 ⇓P P 18 41 04.8 +0.2
baz=60
W25A **X Bar L Ranch,** 60.12 36 ⇓P P 18 41 03.5 -1.0
baz=60,SNR=15
BSC **Santa Cruz Isl** 60.15 51 ⇓P P 18 41 05.4 +0.6
baz=60
X14A **Yava** 60.24 45 ⇓P P 18 41 06.0 +0.6
baz=60,SNR=19
ANMO **Albuquerque** 60.24 38 *e*P P 18 41 03.2 -2.2
comp=Z,66nm,1.1s,mb5.6
ANMO LR LR
comp=Z,4μm,21.0s,MS5.5
ANMO **Albuquerque** 60.24 38 LR LR 19 08 55.2
comp=Z,4μm,18.2s,MS5.6,baz=352,slow=38
ANMO **Albuquerque** 60.24 38 *e*P P 18 41 03.2 -2.2
ANMO pmax pmax
comp=Z,66nm,1.1s
ANMO MLR MLR
comp=Z,4μm,21.0s
X15A **Humboldt** 60.27 44 ⇑P P 18 41 06.1 +0.4
baz=60,SNR=14
W26A **Owens Ranch, T** 60.29 36 ⇑P P 18 41 04.7 -1.0
baz=60
PDMCI **Parker Dam,Lak** 60.31 46 ⇑P P 18 41 05.4 -0.4
baz=60,SNR=18
W27A **Bowe Ranch, En** 60.36 35 ⇑P P 18 41 05.1 -1.1
baz=60,SNR=10
IRM **Iron Mountain** 60.37 47 ⇓P P 18 41 06.6 +0.4
baz=60,SNR=12
TPUB **Ta-pu** 60.37 174 *e*P P 18 41 05.5 -0.8
comp=Z,51nm,1.3s,mb5.4
X16A **Lo Mia Camp, P** 60.41 43 ⇑P P 18 41 07.0 +0.4
baz=60,SNR=16
X18A **Snowflake** 60.41 42 ⇑P P 18 41 06.7 +0.2
baz=60,SNR=19
BELC **Belle Mtn. Jos** 60.45 48 ⇑P P 18 41 07.2 +0.4
baz=60,SNR=17
X20A **Quemado** 60.50 40 ⇑P P 18 41 07.1 -0.1
baz=60,SNR=17
X17A **Forest Lakes** 60.53 43 ⇓P P 18 41 07.8 +0.4
baz=60
FMP **Fort Macarthur** 60.54 50 ⇑P P 18 41 08.0 +0.5
baz=60
X19A **St. Johns** 60.56 41 ⇓P P 18 41 07.2 -0.3
baz=60,SNR=22
AMTX **Amarillo** 60.63 34 *e*P P 18 41 07.6 -0.4
comp=Z,37nm,1.1s,mb5.4
AMTX LR LR
comp=Z,3μm,20.0s,MS5.4
X23A **Hourglass Bar** 60.63 38 ⇑P P 18 41 07.6 -0.5
baz=61,SNR=13
X21A **Alamocita Cree** 60.65 40 ⇑P P 18 41 08.1 -0.1
baz=61,SNR=29
X24A **Lazy VL Ranch,** 60.70 37 ⇑P P 18 41 07.9 -0.6
baz=61
MDT **Midelt** 60.70 303 LR LR 19 04 48.4
comp=Z,497nm,20.4s,MS4.7,baz=16,slow=34
TKL **Tuckaleechee C** 60.73 17 LR LR 19 07 48.3
comp=Z,3μm,18.9s,MS5.5,baz=3.0,slow=36
LAZ **Ladron** 60.74 39 *e*P P 18 41 08.8 0.0
comp=Z,22nm,1.2s,mb5.2
MURC **Murrieta** 60.75 49 ⇑P P 18 41 08.5 -0.4
baz=61
Y14A **Wickenburg** 60.76 45 ⇑P P 18 41 09.1 +0.2
baz=61,SNR=14
X27A **F and S Farms,** 60.77 35 ⇓P P 18 41 07.8 -1.2
baz=61,SNR=7.3
X25A **Clemmons Ranch** 60.79 37 ⇓P P 18 41 08.7 -0.5
baz=61,SNR=11
Y15A **Casa Rosa Ranc** 60.80 44 ⇑P P 18 41 09.6 +0.5
baz=61,SNR=16
PFO **Pinyon Flat Ob** 60.80 48 ⇓P P 18 41 09.0 -0.3
baz=61,SNR=8.5
PFO **Pinyon Flat Ob** 60.80 48 *e*P P 18 41 10.1 +0.9
comp=Z,15nm,1.0s,mb5.1
PFO LR LR
comp=Z,2μm,19.0s,MS5.3
PFO **Pinyon Flat Ob** 60.80 48 *e*P P 18 41 10.1 +0.9
PFO pmax pmax
comp=Z,15nm,1.0s,mb5.1
PFO MLR MLR
comp=Z,2μm,19.0s,MS5.3
Y13A **Salome** 60.82 45 ⇓P P 18 41 09.8 +0.5
baz=61
X26A **CR and CF Fran** 60.82 36 ⇑P P 18 41 08.3 -1.1
baz=61,SNR=12
CIS **Catalina Islan** 60.84 50 ⇑P P 18 41 10.2 +0.8
baz=61
BC3 **Big Chuckawall** 60.84 47 ⇓P P 18 41 09.2 -0.3
baz=61,SNR=9.9
Y16A **Circle Bar Ran** 60.94 43 ⇑P P 18 41 10.7 +0.6
baz=61,SNR=21
WMOK **Wichita Mounta** 60.95 31 *e*P P 18 41 07.0 -3.3
comp=Z,65nm,1.1s,mb5.7
WMOK LR LR
comp=Z,4μm,20.0s,MS5.5
WMOK **Wichita Mounta** 60.95 31 *e*P P 18 41 07.0 -3.2
WMOK pmax pmax
comp=Z,65nm,1.1s,mb5.7
WMOK MLR MLR
comp=Z,4μm,20.0s,MS5.5
LENM **Lemitar** 60.99 39 *e*P P 18 41 11.8 +1.3
comp=Z,28nm,1.1s,mb5.3
BNM **Barren Site** 61.03 39 *e*P P 18 41 10.8 0.0
comp=Z,35nm,1.3s,mb5.3
Y19A **Nutrioso** 61.03 41 ⇓P P 18 41 11.3 +0.6
baz=61,SNR=26
Y22D **IRIS PASSCAL I** 61.08 39 ⇑P P 18 41 11.3 +0.2
baz=61
SWET **Sewanee** 61.09 19 *e*P P 18 41 10.4 -0.7
Y21A **Point of Rocks** 61.09 40 ⇓P P 18 41 11.5 +0.3
baz=61,SNR=11
Y20A **Horse Springs,** 61.14 40 ⇑P P 18 41 11.6 +0.1
baz=61,SNR=27
Y18A **Canyon Day Jun** 61.15 42 ⇑P P 18 41 11.9 +0.3
baz=61,SNR=9.9
Y17A **Roosevelt** 61.17 43 ⇓P P 18 41 12.3 +0.6
baz=61,SNR=15
Y22A **Socorro** 61.22 39 ⇑P P 18 41 12.2 +0.2
baz=61,SNR=14
SCI **San Clemente I** 61.25 50 ⇑P P 18 41 11.9 -0.3
baz=61
UALR **University of** 61.26 25 *e*P P 18 41 11.6 -0.7
comp=Z,18nm,0.8s,mb5.3
CNNC **Cliffs of the** 61.31 12 PFAKE 18 41 20.0 +7.3
CNNC LR LR
comp=Z,4μm,21.0s,MS5.5
Y24A **Capitan** 61.34 38 ⇓P P 18 41 12.8 -0.1
baz=61,SNR=11
Z14A **Wintersburg** 61.34 45 ⇑P P 18 41 12.8 0.0
baz=61,SNR=6.5
Y25A **Mesa, Roswell** 61.39 37 ⇓P P 18 41 12.4 -0.8
baz=61,SNR=16
MIAR **Mount Ida** 61.43 26 *e*P P 18 41 13.2 -0.3
comp=Z,17nm,1.1s,mb5.1
MIAR LR LR
comp=Z,3μm,20.0s,MS5.5
MIAR **Mount Ida** 61.43 26 *e*P P 18 41 13.2 -0.3
MIAR pmax pmax
comp=Z,17nm,1.1s,mb5.1
MIAR MLR MLR
comp=Z,3μm,20.0s,MS5.5

Z13A **Yuma Proving G** 61.44 45 ⇑P P 18 41 13.7 +0.1
baz=61,SNR=11
Y26A **Elida** 61.45 36 ⇓P P 18 41 12.9 -0.7
baz=61,SNR=14
109C **Camp Elliot, M** 61.46 49 ⇓P P 18 41 13.5 -0.2
baz=61
MSTX **Muleshoe** 61.47 35 ⇓P P 18 41 12.2 -1.6
baz=61,SNR=9.0
Z15A **Gila River Ind** 61.47 44 ⇑P P 18 41 13.4 -0.4
baz=61
Z16A **Peralta Trail,** 61.48 43 ⇓P P 18 41 13.8 0.0
baz=61
GLA **Glamis** 61.49 46 ⇓P P 18 41 14.3 +0.4
baz=61,SNR=5.3
GLA **Glamis** 61.49 46 *e*P P 18 41 15.2 +1.3
comp=Z,25nm,1.1s,mb5.2
GLA **Glamis** 61.49 46 *e*P P 18 41 15.2 +1.3
GLA pmax pmax
comp=Z,25nm,1.1s,mb5.3
MONP **Monument Peak** 61.52 48 ⇑P P 18 41 14.8 +0.8
baz=62,SNR=16
SWSC **Sam W. Stewart** 61.52 47 ⇓P P 18 41 14.4 +0.3
baz=62,SNR=7.5
Y27A **Causey** 61.53 35 ⇓P P 18 41 13.2 -1.0
baz=62,SNR=24
Z17A **San Carlos Hig** 61.59 42 ⇓P P 18 41 14.9 +0.3
baz=62,SNR=9.3
Z19A **T-Link Ranch,** 61.69 41 ⇓P P 18 41 15.5 +0.2
baz=62
BAR **Barrett** 61.71 48 *e*P P 18 41 16.2 +0.8
comp=Z,22nm,1.1s,mb5.2
BHPL **Bhopal** 61.77 219 *e*PKP P 18 41 14.0 -1.9
DVTC **Desert V Tower** 61.77 48 ⇓P P 18 41 16.3 +0.5
baz=62,SNR=6.2
CAL **Calcutta** 61.79 208 *ex* P 18 41 17.2 +1.2
CAL *ex* x 18 49 45.7
Z21A **St. Cloud Mine** 61.79 40 ⇑P P 18 41 16.2 +0.3
baz=62,SNR=5.5
Z18A **Geronimo** 61.84 42 ⇓P P 18 41 16.6 +0.3
baz=62
113A **Mohawk Valley,** 61.86 46 ⇑P P 18 41 16.3 -0.1
baz=62
Z22A **Elephant Butte** 61.89 39 ⇓P P 18 41 16.4 -0.2
baz=62,SNR=30
Z20A **Nine Sixteen R** 61.92 41 ⇓P P 18 41 16.9 +0.1
baz=62,SNR=21
Z24A **Sheeppen Canyo** 61.93 37 ⇓P P 18 41 16.4 -0.4
baz=62,SNR=8.8
Z23A **Rita Site, Whi** 61.94 38 ⇑P P 18 41 16.7 -0.2
baz=62,SNR=6.9
114A **Black Gap (USA** 61.95 45 ⇑P P 18 41 17.5 +0.5
baz=62,SNR=9.7
112A **Yuma** 62.02 46 ⇓P P 18 41 17.1 -0.4
baz=62
Z25A **Roswell** 62.03 37 ⇓P P 18 41 16.6 -0.9
baz=62,SNR=26
115A **Sonoran Desert** 62.05 44 ⇑P P 18 41 17.8 +0.1
baz=62,SNR=8.7
Z26A **Caprock** 62.08 36 ⇓P P 18 41 17.3 -0.6
baz=62,SNR=24
119A **Ashpeak Ranch,** 62.21 41 ⇓P P 18 41 18.8 +0.1
baz=62,SNR=8.0
116A **Eloy** 62.23 44 ⇓P P 18 41 19.0 +0.1
baz=62
118A **Homack Ranch,** 62.28 42 ⇑P P 18 41 19.8 +0.5
baz=62
117A **Oracle** 62.29 43 ⇓P P 18 41 19.8 +0.5
baz=62,SNR=18
122A **Conniff Cattle** 62.44 39 ⇓P P 18 41 19.8 -0.5
baz=62
120A **U Bar Ranch, L** 62.48 41 ⇓P P 18 41 20.5 0.0
baz=62,SNR=18
TUC **Tucson** 62.55 43 *e*P P 18 41 21.9 +0.9
comp=Z,18nm,1.1s,mb5.1
TUC LR LR
comp=Z,5μm,20.0s,MS5.7
TUC **Tucson** 62.55 43 *e*P P 18 41 21.9 +0.9
TUC pmax pmax
comp=Z,18nm,1.1s,mb5.1
TUC MLR MLR
comp=Z,5μm,20.0s,MS5.7
124A **Stringfield Ra** 62.55 38 ⇑P P 18 41 20.9 -0.2
baz=62,SNR=36
121A **Cookes Peak, D** 62.55 40 ⇓P P 18 41 21.3 +0.2
baz=62,SNR=26
123A **Bell Site, Whi** 62.56 38 ⇑P P 18 41 20.3 -0.8
baz=62
125A **Gardner Draw,** 62.65 37 ⇓P P 18 41 21.1 -0.5
baz=63,SNR=32
126A **Clayton Basin,** 62.70 36 ⇑P P 18 41 20.9 -1.2
baz=63,SNR=7.0
127A **Arkansas Junct** 62.72 36 ⇑P P 18 41 21.0 -1.2
baz=63
214A **Organ Pipe Nat** 62.74 45 ⇓P P 18 41 22.0 -0.3
baz=63,SNR=12
216A **Three Points,** 62.80 43 ⇓P P 18 41 22.5 -0.2
baz=63,SNR=6.0
219A **White Tail Can** 62.97 41 ⇑P P 18 41 24.1 +0.3
baz=63,SNR=23
GOGA **Godfrey** 62.98 17 PFAKE 18 41 40.0 +16
GOGA LR LR
comp=Z,2μm,19.0s,MS5.3
222A **Williams Famil** 63.03 39 ⇓P P 18 41 23.9 -0.3
baz=63,SNR=8.1
221A **Mesquite Ranch** 63.07 40 ⇓P P 18 41 24.3 -0.2
baz=63,SNR=16
217A **Green Valley** 63.08 43 ⇑P P 18 41 24.3 -0.2
baz=63,SNR=20
220A **Playas Peak, P** 63.12 41 ⇑P P 18 41 24.7 -0.1
baz=63,SNR=14
GDL2 **Guadalupe Moun** 63.12 37 *e*P P 18 41 24.2 -0.6
comp=Z,8.5nm,0.9s,mb4.9
HOQ **Hogain** 63.16 240 P P 18 41 24.9 -0.2
SNR=8.1
224A **Cornudas Mount** 63.17 38 ⇓P P 18 41 24.5 -0.6
baz=63,SNR=19
223A **Chaparral, Ant** 63.17 39 ⇑P P 18 41 24.5 -0.6
baz=63
225A **Deer Hill, Car** 63.18 37 ⇓P P 18 41 23.8 -1.4
baz=63,SNR=8.6
LRAL **Lakeview Retre** 63.23 20 *e*P P 18 41 24.5 -1.0
comp=Z,12nm,1.0s,mb5.0
LRAL LR LR
comp=Z,2μm,19.0s,MS5.2
226A **Malaga, Loving** 63.28 36 ⇓P P 18 41 24.7 -1.1
baz=63,SNR=9.3
NHSC **New Hope** 63.38 14 PFAKE 18 41 40.0 +13
NHSC LR LR
comp=Z,6μm,20.0s,MS5.8
227A **Bennet, Jal** 63.38 36 ⇑P P 18 41 25.7 -0.9
baz=63,SNR=13
318A **Bisbee** 63.48 42 ⇓P P 18 41 26.3 -0.8
baz=63,SNR=15
ARQ **Araqi** 63.48 241 P P 18 41 27.0 -0.3
SNR=5.6
MNTX **Cornudas Mount** 63.55 38 ⇓P P 18 41 26.7 -0.9
baz=64
MNTX **Cornudas Mount** 63.55 38 *e*P P 18 41 24.7 -3.0
comp=Z,36nm,1.1s,mb5.3
MNTX LR LR
comp=Z,2μm,21.0s,MS5.3
319A **Douglas** 63.59 41 ⇓P P 18 41 27.4 -0.6
baz=64,SNR=20
320A **Kipp Ranch, An** 63.69 41 ⇑P P 18 41 28.0 -0.6
baz=64,SNR=18
VBMS **Vicksburg** 63.89 24 PFAKE 18 41 40.0 +10
VBMS LR LR
comp=Z,2μm,20.0s,MS5.2
WBK **Wadi Bani Khal** 63.96 238 P P 18 41 31.4 +1.0
SNR=5.4
BSY **Bisya** 64.00 240 P P 18 41 31.3 +0.6
SNR=5.4
327A **Balmorhea Ranc** 64.01 36 ⇑P P 18 41 29.7 -1.0
baz=64
326A **Caldwell Ranch** 64.03 36 ⇑P P 18 41 29.6 -1.2
baz=64
328A **Wristen Ranch,** 64.04 35 ⇓P P 18 41 29.8 -1.1
baz=64
NATX **Nacogdoches** 64.14 28 PFAKE 18 41 40.0 +8.4
NATX LR LR
comp=Z,77nm,20.0s,MS3.9
JMDO **Jabal Madar** 64.28 239 P P 18 41 33.0 +0.4
SNR=5.4
BBSR **BB Station** 64.31 359 PFAKE 18 41 40.0 +7.3
BBSR LR LR
comp=Z,1μm,22.0s,MS5.0
425A **Indio Mountain** 64.49 37 ⇓P P 18 41 33.0 -0.8
baz=64,SNR=141

427A **Hayter Ranch,** 64.53 36 ⇓P P 18 41 33.3 -0.9
baz=64,SNR=13
QIZ **Qiongzhong** 64.60 185 P P 18 41 34.3 -0.4
QIZ pP pP 18 41 37.4 -0.5
QIZ PP PP 18 43 57.3 +0.8
QIZ S S 18 50 14.6 +0.6
QIZ sS sS 18 50 20.1 +0.8
QIZ SS SS 18 54 23.0 -1.1
QIZ pmax pmax
comp=Z,22nm,1.1s,mb5.1
QIZ LR LR
comp=N,1μm,12.2s,MS5.3
QIZ LR LR
comp=E,480nm,15.6s,MS5.3
QIZ LR LR
comp=Z,2μm,12.2s,MS5.5
QIZ **Qiongzhong** 64.60 185 *e*P P 18 41 33.8 -0.9
comp=Z,37nm,1.1s,mb5.3
QIZ LR LR
comp=Z,1μm,21.0s,MS5.0
426A **McDonald Obser** 64.67 36 ⇑P P 18 41 33.8 -1.2
baz=65,SNR=78
428A **Kincaid Ranch,** 64.70 35 ⇓P P 18 41 34.6 -0.6
baz=65,SNR=29
CHG **Chiang Mai** 65.04 196 ⇓P P 18 41 29.0 -8.6
CHG **Chiang Mai** 65.04 196 ⇓P P 18 41 36.6 -1.0
comp=Z,22nm,1.0s,mb5.1
CHTO **Chiang Mai** 65.04 196 *e*P P 18 41 34.6 -3.0
CHTO comp=Z,12nm,0.8s,mb5.0 LR LR
comp=Z,3μm,19.0s,MS5.5
CHTO **Chiang Mai** 65.04 196 *e*P P 18 41 34.6 -3.0
CHTO pmax pmax
comp=Z,12nm,0.8s,mb5.0
CHTO MLR MLR
comp=Z,3μm,19.0s,MS5.5
CHTO **Chiang Mai** 65.04 196 P P 18 41 37.4 -0.2
SNR=6.9
JCT **Junction City** 65.13 32 ⇓P P 18 41 37.0 -1.1
baz=65
JCT **Junction City** 65.13 32 *e*P P 18 41 34.5 -3.6
comp=Z,90nm,1.0s,mb5.8
JCT LR LR
comp=Z,6μm,19.0s,MS5.8
JCT **Junction City** 65.13 32 *e*P P 18 41 34.5 -3.5
JCT pmax pmax
comp=Z,90nm,1.0s,mb5.8
JCT MLR MLR
comp=Z,6μm,19.0s,MS5.8
527A **Woodward Ranch** 65.22 36 ⇑P P 18 41 37.8 -0.8
baz=65,SNR=22
BRAL **Brewton** 65.24 20 PFAKE 18 41 50.0 +11
BRAL LR LR
comp=Z,2μm,19.0s,MS5.3
528A **Cox Ranch, San** 65.25 35 ⇑P P 18 41 37.6 -1.2
baz=65,SNR=30
526A **Mary Lane Ranc** 65.27 37 ⇑P P 18 41 38.5 -0.5
baz=65,SNR=46
CM31 **Chiang Mai Arr** 65.40 196 *e*P P 18 41 38.8 -1.1
comp=Z,12nm,0.8s,mb5.0
CM31 LR LR
comp=Z,2μm,19.0s,MS5.3
CMAR **Chiang Mai Arr** 65.40 196 P P 18 41 38.7 -1.2
comp=Z,13nm,0.8s,mb5.0,baz=351,slow=7.7,SNR=86
CMAR LR LR 19 11 53.8
comp=Z,3μm,19.4s,MS5.4,baz=124,slow=38
626A **Big Bend Ranch** 65.77 37 ⇓P P 18 41 41.2 -0.9
baz=66,SNR=18
HKT **Hockley** 65.88 29 PFAKE 18 41 50.0 +7.1
HKT LR LR
comp=Z,1μm,20.0s,MS5.2
627A **Terlingua Ranc** 65.92 36 ⇑P P 18 41 42.3 -0.8
baz=66,SNR=97
628A **Black Gap, Mar** 65.92 35 ⇓P P 18 41 42.0 -1.2
baz=66,SNR=70
TXAR **Lajitas Array** 66.02 36 P P 18 41 41.2 -2.6
TXAR P'P' 19 10 18.9
TXAR LR LR 19 10 39.5
TXAR **Lajitas Array** 66.02 36 P P 18 41 41.2 -2.6
comp=Z,57nm,1.1s,mb5.5,baz=360,slow=4.2,SNR=52
TXAR PKPPKP 19 10 18.9
comp=Z,1.2nm,1.0s,baz=190,slow=3.8,SNR=7.9
TXAR LR LR 19 10 39.5
comp=Z,3μm,20.3s,MS5.5,baz=0.0,slow=36
NST **Nakhon Sawan** 68.13 195 P P 18 41 55.4 -1.9
KVTX **Kingsville** 68.16 31 PFAKE 18 42 10.0 +13
KVTX LR LR
comp=Z,2μm,20.0s,MS5.4
DWPF **Disney** 68.32 15 PFAKE 18 42 10.0 +12
DWPF LR LR
comp=Z,4μm,19.0s,MS5.6
KIP **Kipapa** 68.56 90 PFAKE 18 42 10.0 +10
KIP LR LR
comp=Z,2μm,19.0s,MS5.4
TAM **Tamanrasset** 69.60 291 *e*P P 18 42 06.3 -0.2
comp=Z,11nm,1.1s,mb4.7
TAM LR LR
comp=Z,1μm,20.0s,MS5.2
TAM **Tamanrasset** 69.60 291 *e*P P 18 42 06.3 -0.1
TAM pmax pmax
comp=Z,11nm,1.1s,mb4.7
TAM MLR MLR
comp=Z,1μm,20.0s,MS5.2
POHA **Pohakuloa** 70.49 88 PFAKE 18 42 20.0 +8.1
POHA LR LR
comp=Z,3μm,21.0s,MS5.5
GUMO **Guam** 70.91 149 PFAKE 18 42 30.0 +16
GUMO LR LR
comp=Z,505nm,21.0s,MS4.8
JOHN **Johnston Islan** 71.90 102 PFAKE 18 42 30.0 +10
JOHN LR LR
comp=Z,1μm,19.0s,MS5.2
GRTK **Grand Turk** 75.10 5 PFAKE 18 42 50.0 +11
GRTK LR LR
comp=Z,971nm,20.0s,MS5.1
TEIG **Tepich** 75.92 22 PFAKE 18 43 00.0 +16
TEIG LR LR
comp=Z,2μm,22.0s,MS5.3
ATD **Arta Tunnel** 76.57 253 LR LR 19 23 23.9
comp=Z,1μm,19.7s,MS5.2,baz=11,slow=41
DAV **Davao City (W)** 76.59 169 PFAKE 18 43 00.0 +12
DAV LR LR
comp=Z,798nm,19.0s,MS5.0
DAV **Davao City (W)** 76.59 169 LR LR 19 19 15.5
comp=Z,736nm,20.0s,MS5.0,baz=6.0,slow=38
DAV **Davao City (W)** 76.59 169 *e*P P 18 42 47.1 -0.7
GTBY **Guantanamo Bay** 76.62 9 PFAKE 18 43 00.0 +12
GTBY LR LR
comp=Z,818nm,20.0s,MS5.0
KKM **Kota Kinabalu** 77.49 178 *e*P P 18 42 53.1 +0.2
comp=Z,50nm,1.5s,mb5.2
KKM LR LR
comp=Z,841nm,19.0s,MS5.1
KKM **Kota Kinabalu** 77.49 178 P P 18 42 54.0 +1.1
comp=Z,904nmcomp=Z,34nm,1.3s,mb5.1
SDDR **Presa de Saban** 77.61 6 *e*P P 18 42 53.2 -0.3
comp=Z,39nm,1.1s,mb5.2
SDDR LR LR
comp=Z,933nm,20.0s,MS5.1
MTDJ **Mount Denham** 78.26 12 PFAKE 18 43 10.0 +13
MTDJ LR LR
comp=Z,2μm,19.0s,MS5.4
MYLDM **Lahad Datu** 78.36 176 P P 18 42 59.9 +2.2
comp=Z,1μmcomp=Z,51nm,1.5s,mb5.2
KULM **Kulim** 78.43 194 *e*P P 18 42 57.8 -0.3
comp=Z,27nm,1.1s,mb5.1
KULM LR LR
comp=Z,2μm,20.0s,MS5.5
KULM **Kulim** 78.43 194 P P 18 43 00.6 +2.5
comp=Z,740nmcomp=Z,28nm,1.1s,mb5.1
SJG **San Juan** 78.51 1 PFAKE 18 43 10.0 +11
SJG LR LR
comp=Z,524nm,21.0s,MS4.8
ANWB **Willy Bob** 78.94 356 PFAKE 18 43 10.0 +9.1
ANWB LR LR
comp=Z,468nm,21.0s,MS4.8
IPM **Ipoh** 79.22 194 P P 18 43 04.3 +1.9
comp=Z,840nmcomp=Z,23nm,1.3s,mb4.9
TORD **Torodi Ar. Bea** 79.53 294 P P 18 43 02.2 -2.0
TORD LR LR 19 23 38.5
TORD **Torodi Ar. Bea** 79.53 294 P P 18 43 02.2 -2.0
comp=Z,33nm,0.9s,mb5.3,baz=0.5,slow=5.3,SNR=109
TORD LR LR 19 23 38.5
comp=Z,673nm,20.5s,MS5.0,baz=15,slow=40
TPTI **80.55 198** P P 18 43 09.1 -0.5
comp=Z,447nmcomp=Z,12nm,2.0s,mb4.5
PSI **Prapat 80.95 196** LR LR 19 21 47.5

comp=Z,1μm,19.7s,MS5.3,baz=209,slow=38
SBUM Sibu 81.06 182 P **P** **18 43 13.3 +0.9**
comp=Z,780nmcomp=Z,24nm,1.5s,mb4.9
MYKOM Kota Tinggi 81.82 191 P **P** **18 43 17.3 +0.9**
comp=Z,721nmcomp=Z,22nm,1.6s,mb4.8
FDF Fort de France 81.86 356 *eP* **P** **18 43 14.4 -2.2**
FDF LR LR
comp=Z,89nm,0.9s,mb5.7
comp=Z,737nm,19.0s,MS5.1
KSM Kuching 82.04 184 *eP* **P** **18 43 17.6 +0.1**
KSM LR LR
comp=Z,18nm,1.1s,mb4.9
comp=Z,815nm,20.0s,MS5.1
KSM Kuching 82.04 184 P **P** **18 43 17.5 -0.1**
TGUH LR LR
comp=Z,785nmcomp=Z,24nm,2.5s,mb4.7
TGUH Tegucigalpa,Un 82.09 21 PFAKE 18 43 30.0 +12
BBGH LR LR
comp=Z,869nm,20.0s,MS5.1
GSI Gunungsitoli 82.48 197 P **P** **18 43 19.6 -0.2**
comp=Z,3μmcomp=Z,35nm,1.2s,mb5.2
MNSI Mandailing Nat 82.92 195 P **P** **18 43 20.3 -1.8**
comp=Z,23nm,1.1s,mb5.1
MRSI Marisa 83.07 173 P **P** **18 43 21.7 -1.2**
BBGH Gun Hill 83.42 354 PFAKE 18 43 40.0 +15
BBGH LR LR
comp=Z,1μm,22.0s,MS5.2
STKI Sintang 83.43 183 P **P** **18 43 25.7 +0.9**
comp=Z,2μmcomp=Z,49nm,1.4s,mb5.3
PPI Padang Panjang 84.14 194 P **P** **18 43 28.2 -0.2**
comp=Z,7μmcomp=Z,18nm,1.0s,mb5.2
PCI Palu 84.42 175 P **P** **18 43 30.1 +0.3**
comp=Z,1μmcomp=Z,83nm,1.2s,mb5.8
GRGR Grenville 84.44 356 PFAKE 18 43 40.0 +10
GRGR LR LR
comp=Z,525nm,21.0s,MS4.9
PDSI Padang 84.59 194 P **P** **18 43 28.3 -2.4**
comp=Z,2μmcomp=Z,53nm,1.3s,mb5.5
LUWI Luwuk 84.59 172 P **P** **18 43 28.7 -2.0**
comp=Z,841nmcomp=Z,54nm,1.6s,mb5.4
BAKI Biak 85.13 158 P **P** **18 43 34.0 +0.6**
comp=Z,1μmcomp=Z,54nm,1.3s,mb5.5
JTS JuntasAbangare 85.92 19 PFAKE 18 43 50.0 +13
JTS LR LR
comp=Z,849nm,19.0s,MS5.2
DBIC Dimbokro 86.60 300 P **P** **18 43 39.9 -0.8**
comp=Z,19nm,1.1s,mb5.2,baz=336,slow=8.1,SNR=6.8
DBIC LR LR 19 25 59.8
comp=Z,453nm,20.2s,MS4.9,baz=349,slow=38
TIC Toumodi 86.64 300 *eP* **P** **18 43 39.7 -1.2**
comp=Z,12nm,0.2s,mb5.8
KIC Kosan Boka 86.89 300 *eP* **P** **18 43 40.8 -1.3**
comp=Z,149nm,1.2s,mb6.1
LIC Lamto 87.06 300 *eP* **P** **18 43 42.2 -0.7**
comp=Z,151nm,1.2s,mb6.1
LIC Lamto 87.06 300 *eP* **P** **18 43 42.0 -0.9**
comp=Z,133nm,1.2s,mb5.8
LIC *e*MLR MLR
comp=Z,606nm,21.8s,MS4.7
LIC Lamto 87.06 300 *eP* **P** **18 43 42.0 -0.9**
comp=Z,66nm,1.2s,mb5.7
LIC LR LR
comp=Z,300nm,21.8s,MS4.7
BCIP Isla Barro Col 87.20 14 PFAKE 18 43 50.0 +6.3
BCIP LR LR
comp=Z,1μm,21.0s,MS5.4
AAI Ambon 87.33 166 P **P** **18 43 45.2 +1.0**
comp=Z,222nm,1.0s,mb6.3
SPSI Sidrap Palu 87.45 175 P **P** **18 43 44.2 -0.6**
SDV Santo Domingo 87.66 5 *eP* **P** **18 43 45.6 -0.2**
SDV LR LR
comp=Z,387nm,20.0s,MS4.8
XMAS Kiritimati 87.76 92 PFAKE 18 44 00.0 +14
XMAS LR LR
comp=Z,2μm,20.0s,MS5.5
KMBO Kilima Mbogo 89.68 257 PFAKE 18 44 10.0 +15
KMBO LR LR
comp=Z,969nm,20.0s,MS5.2
KMBO Kilima Mbogo 89.68 257 LR LR 19 31 41.1
comp=Z,865nm,18.9s,MS5.2,baz=90,slow=41
MBAR Mbarara 89.89 264 PFAKE 18 44 10.0 +14
MBAR LR LR
comp=Z,342nm,19.0s,MS4.8
MSEY Mahe Island 91.28 239 PFAKE 18 44 10.0 +7.2
MSEY LR LR
comp=Z,2μm,20.0s,MS5.6
ROSC El Rosal 91.61 9 P **P** **18 44 04.3 -0.1**
comp=Z,5.7nm,0.4s,mb5.3,baz=276,slow=10,SNR=6.3
ROSC LR LR 19 29 22.2
comp=Z,608nm,18.0s,MS5.1,baz=2.6,slow=38
DGAR Diego Garcia 92.51 222 PFAKE 18 44 20.0 +12
DGAR LR LR
comp=Z,2μm,19.0s,MS5.6
PMG Port Moresby 93.84 148 PFAKE 18 44 30.0 +15
PMG LR LR
comp=Z,477nm,19.0s,MS5.0
HNR Honiara 94.77 135 PFAKE 18 44 30.0 +11
HNR LR LR
comp=Z,1μm,22.0s,MS5.4
COCO West Island 95.90 197 PFAKE 18 44 30.0 +6.1
COCO LR LR
comp=Z,1μm,19.0s,MS5.3
OTAV Otavalo 96.11 13 PFAKE 18 44 40.0 +15
OTAV LR LR
comp=Z,806nm,22.0s,MS5.2
PAYG Puerto Ayora 96.58 25 PFAKE 18 44 40.0 +13
PAYG LR LR
comp=Z,590nm,21.0s,MS5.0
TAOE Nuku Hiva Isla 100.46 76 *e*SS SS 19 03 32.1 +16
comp=Z,874nm,26.4s
TAOE *e*LR LR 19 17 39.0
comp=Z,2μm,29.8s
RCBR Riachuelo 101.44 330 PFAKE 18 45 00.0 +11
RCBR LR LR
comp=Z,436nm,20.0s,MS5.0
AFI Afiamalu 101.91 108 PFAKE 18 45 00.0 +8.6
AFI LR LR
comp=Z,1μm,21.0s,MS5.4
WRA Warramunga Arr 103.68 161 Pdiff Pdif 18 44 57.4 -1.9
comp=Z,1.9nm,0.9s,baz=354,slow=4.9,SNR=7.0
WRA PKKP PKKPbc 19 00 56.5 +9.4
comp=Z,0.6nm,0.8s,baz=184,slow=2.6,SNR=4.9
CTAO Charters Tower 104.39 149 PFAKE 18 45 10.0 +7.5
CTAO LR LR
comp=Z,287nm,19.0s,MS4.8
MBWA Marble Bar 104.54 175 PFAKE 18 45 10.0 +6.9
MBWA LR LR
comp=Z,425nm,19.0s,MS5.0
MSVF Nonsavu 104.63 118 PFAKE 18 45 10.0 +6.5
MSVF LR LR
comp=Z,652nm,22.0s,MS5.1
LSZ Lusaka 104.67 265 PFAKE 18 45 10.0 +6.3
LSZ LR LR
comp=Z,824nm,22.0s,MS5.2
ABPO Ambohimpanom 106.29 245 PFAKE 18 49 30.0 +8.5
ABPO LR LR
comp=Z,2μm,21.0s,MS5.6
ASAR Alice Springs 107.37 161 Pdiff Pdif 18 45 17.8 +2.1
comp=Z,0.4nm,0.9s,baz=356,slow=7.5,SNR=3.1
ASAR PKKPbc PKKPbc 19 00 35.6 -0.3
comp=Z,1.2nm,1.1s,baz=160,slow=3.0,SNR=6.1
DZM Mont Dzumac 107.83 130 *e*SS SS 19 05 09.6 +12
comp=Z,514nm,30.1s
DZM *e*LQ 19 15 56.8
comp=Z,963nm,30.2s
DZM *e*LR LR 19 21 04.4
comp=Z,1μm,25.3s
PPT Papeete 108.01 86 *e*SS SS 19 05 09.1 +10
comp=Z,2μm,28.0s
PPT *e*LR LR 19 21 00.3
comp=Z,2μm,23.2s
NNA Nana 108.29 12 PFAKE 18 49 40.0 +15
NNA LR LR
comp=Z,784nm,21.0s,MS5.2
TSUM Tsumeb 109.74 275 PFAKE 18 49 40.0 +12
TSUM LR LR
comp=Z,978nm,22.0s,MS5.3
RAR Rarotonga 110.45 97 PFAKE 18 49 40.0 +11
RAR LR LR
comp=Z,3μm,22.0s,MS5.8
LPAZ La Paz 112.69 3 PFAKE 18 49 50.0 +16
LPAZ LR LR
comp=Z,656nm,22.0s,MS5.2
LBTB Lobatse 114.58 266 PFAKE 18 49 50.0 +13
LBTB LR LR
comp=Z,1μm,19.0s,MS5.5
RKT Rikitea 115.11 72 *e*SP SP 19 00 15.6 -0.6
comp=Z,378nm,27.5s
RKT *e*SS SS 19 06 59.4 +25
comp=Z,2μm,29.0s
RKT *e*LR LR 19 24 20.0
comp=Z,2μm,37.8s
NWAO Narrogin (SRO) 116.25 177 PFAKE 18 49 50.0 +10
NWAO LR LR
comp=Z,392nm,19.0s,MS5.0
BOSA Boshof 118.17 266 PFAKE 18 50 00.0 +16
BOSA LR LR
comp=Z,1μm,20.0s,MS5.5
CAN Canberra 119.69 148 PFAKE 18 50 00.0 +14
CAN LR LR
comp=Z,465nm,19.0s,MS5.1
SUR Sutherland 122.40 270 PFAKE 18 50 00.0 +8.2
SUR LR LR
comp=Z,1μm,20.0s,MS5.5
LCO Las Campanas 125.33 6 PFAKE 18 50 10.0 +12
LCO LR LR
comp=Z,677nm,19.0s,MS5.3
SNZO South Karori 127.65 124 PFAKE 18 50 10.0 +8.5
SNZO LR LR
comp=Z,1μm,22.0s,MS5.6
CFAA Coronel Fontan 127.94 3 PKP PKPdf 18 50 01.8 -0.6
comp=Z,0.2nm,0.6s,baz=271,slow=2.0,SNR=2.8
TRQA Tornquist 134.37 356 PFAKE 18 50 30.0 +16
TRQA LR LR
comp=Z,512nm,20.0s,MS5.2
PLCA Paso Flores 137.03 6 PKP PKPdf 18 50 17.2 -2.0
comp=Z,5.5nm,1.0s,baz=15,slow=4.4,SNR=3.6
PLCA Paso Flores 137.03 6 PKIKP PKPdf 18 50 17.2 -2.0
PLCA pmax pmax
comp=Z,6.0nm,1.0s
CASY Casey 149.64 183 *e*PKPdf PKPdf 18 50 39.9 -0.5
CASY LR LR
comp=Z,917nm,19.0s,MS5.6
MIR Mirnyy 150.26 197 *i* PKIKP PKPdf 18 50 47.6 +6.2
MIR *i* 18 50 54.0
MIR pmax pmax
comp=Z,80nm,1.0s
MAW Mawson 152.97 221 *e*PKPdf PKPdf 18 50 43.4 -2.1
MAW *e*PKPbc PKPbc 18 50 52.8 0.0
MAW LR LR
comp=Z,1μm,22.0s,MS5.7
MAW Mawson 152.97 221 PKP PKPdf 18 50 43.8 -1.7
comp=Z,5.8nm,1.1s,baz=287,slow=4.2,SNR=7.1
MAW PKPbc PKPbc 18 50 52.4 -0.4
comp=Z,25nm,1.0s,baz=318,slow=3.6,SNR=35
PMSA Palmer Station 161.13 358 PFAKE 18 51 10.0 +14
PMSA LR LR
comp=Z,729nm,19.0s
SBA Scott Base 163.00 145 PFAKE 18 51 10.0 +12
SBA LR LR
comp=Z,684nm,20.0s
QSPA South Pole Qui 173.43 180 PFAKE 18 51 20.0 +16
QSPA LR LR
comp=Z,999nm,22.0s
QSPA South Pole Qui 173.43 180 PKPab PKPab 18 52 31.0 -2.6
comp=Z,3.5nm,0.9s,baz=342,slow=2.0,SNR=6.2

ISCJB ***13*** *19:02:14.8±0.6, 83°.5N±0°.1×114°.0E±0°.9, h10km, mb3.8/15, Error ellipse: s-maj=19.3km s-min=10.9km az=140.5*
IDC ***13*** *19:02:15.0±0.7, 83°.51N×114°.25E, h0km, mb3.8/12, mb1 3.9/12, mb1mx3.8/25, mbtmp3.8/12, Error ellipse: s-maj=24.6km s-min=15.4km az=138.0*
NEIC ***13*** *19:02:16.6±0.4, 83°.55N×113°.95E, h10km, mb3.9/2, Error ellipse: s-maj=14.9km s-min=7.9km az=140.0*
ISC 13 19:02:16.8±0.6, 83°.5N±0°.1×114°.2E±0°.9, h10km, n17, σ0s64/17, mb3.8/15, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARCES	ARCESS Array B	21.41	286	P		P		19 07 03.7	-0.5
ARCES	ARCESS Array B	21.41	286	P		P		19 07 03.7	-0.5
	2.6nm,0.8s,mb3.6,baz=26,slow=11,SNR=4.2								
INK	Inuvik	25.01	54	P		P		19 07 40.5	+0.4
	2.6nm,0.7s,mb3.9,baz=346,slow=7.7,SNR=4.6								
ILAR	Eielson Array	27.12	68	P		P		19 08 00.1	+0.8
	1.4nm,1.0s,mb3.4,baz=338,slow=6.6,SNR=10.0								
ZALV	Zalesovo Beam	30.69	215	P		P		19 08 30.7	-0.3
	0.3nm,0.3s,mb3.6,baz=22,slow=4.7,SNR=3.0								
BRVK	Borovoye	32.69	231	*e*P		P		19 08 48.5	-0.1
	4.7nm,1.2s,mb4.3								
BVAR	Borovoye Array	32.72	231	P		P		19 08 49.0	+0.2
	1.0nm,0.8s,mb3.8,baz=34,slow=5.6,SNR=8.0								
KURK	Kurchatov	34.34	221	P		P		19 09 03.4	+0.4
	0.7nm,0.8s,mb3.6,baz=19,slow=7.5,SNR=6.4								
SONM	Songino Array	35.90	189	P		P		19 09 17.0	+0.6
	1.3nm,1.1s,mb3.8,baz=350,slow=6.9,SNR=5.4								
ABKAR	Akbulak array	37.43	241	*e*P		P		19 09 29.8	+0.3
	0.9nm,0.8s,mb3.6								
MKAR	Makanchi Array	37.98	216	P		P		19 09 33.2	-0.9
	2.1nm,0.9s,mb3.8,baz=354,slow=6.2,SNR=8.6								
BRTR	Keskin Array B	49.70	266	P		P		19 11 08.8	+0.5
	0.9nm,0.8s,mb3.8,baz=12,slow=6.3,SNR=4.4								
KEST	Kesra	56.36	289	P		P		19 11 58.6	+1.1
	1.8nm,0.8s,mb4.1,baz=311,slow=3.7,SNR=6.7								
PV01	Paradox Valley	56.97	40	P		P		19 12 01.6	-0.2
	460nm,0.9s								
CMAR	Chiang Mai Arr	65.37	196	P		P		19 12 58.2	-0.7
	0.8nm,0.9s,mb3.8,baz=336,slow=7.3,SNR=4.3								
TXAR	Lajitas Array	66.06	36	P		P		19 13 01.8	-1.4
	1.3nm,1.0s,mb3.9,baz=339,slow=3.1,SNR=7.3								
TORD	Torodi Ar. Bea	79.50	294	P		P		19 14 23.0	-0.2
	1.9nm,0.8s,mb4.1,baz=359,slow=6.0,SNR=11								

ISCJB ***13*** *19:06:17.6±0.4, 7°.33S±0°.09×121°.3E±0°.1, h554km±6km, mb3.4/7, Error ellipse: s-maj=21.4km s-min=7.8km az=148.0*
NEIC ***13*** *19:06:18.0±0.5, 7°.40S×121°.15E, h547km±7km, mb3.8/3, Error ellipse: s-maj=23.2km s-min=7.3km az=62.0*
IDC ***13*** *19:06:18.2±2.0, 7°.21S×121°.49E, h546km±25km, mb2.8/6, mb1 3.0/8, mb1mx2.8/21, mbtmp2.9/8, Error ellipse: s-maj=54.7km s-min=10.9km az=57.0*
DJA ***13*** *19:06:18, 7°.36S×121°.27E, h555km, MLv3.6/7*
ISC 13 19:06:18.3±0.4, 7°.33S±0°.08×121°.3E±0°.1, h549km±6km, n30, σ0s64/29, mb3.4/7, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MMRI	Maumere	1.57	145	P		P		19 07 26.6	+0.4
BKSI	Bulukumba	2.33	329	P		P		19 07 29.7	+0.1
WSI	Waingapu	2.54	204	P		P		19 07 29.8	-0.7
KAPI	Kappang	2.79	326	*e*P		P		19 07 31.5	-0.5
KAPI	Kappang	2.79	326	P		P		19 07 31.8	-0.2
SPSI	Sidrap Palu	3.69	335	P		P		19 07 38.3	+0.4
TTSI	Tana Toraja	4.52	340	P		P		19 07 44.3	+0.1
MRSI	Marisa	7.78	4	P		P		19 08 14.1	+0.2
	0.1nm26nm,0.6s								
KNA	Kununurra	11.09	140	P		P		19 08 47.4	+0.1
	44nm,1.5s								
FITZ	Fitzroy Crossi	11.49	159	P		P		19 08 51.1	-0.5
	0.8nm,0.3s,baz=352,slow=7.1,SNR=35								
FITZ	Fitzroy Crossi	11.49	159	P		P		19 08 51.4	-0.1
	18nm,3.1s								
KAKA	Kakadu	12.17	117	P		P		19 08 58.8	+0.2
	20nm,0.7s								
MBWA	Marble Bar	13.83	186	P		P		19 09 14.2	-1.5
	3.7nm,0.7s								
MBWA	Marble Bar	13.83	186	P		P		19 09 14.5	-1.2
	21nm,2.1s								
KSM	Kuching	14.06	308	P		P		19 09 17.7	-0.5
	12nm,0.8s								
KKM	Kota Kinabalu	14.24	339	P		P		19 09 19.1	-0.9
TNG	Tangerang	14.63	274	P		P		19 09 25.7	+1.6
TNG	Tangerang	14.63	274	P		P		19 09 25.8	+1.7
WRA	Warramunga Arr	17.78	136	P		P		19 09 55.0	+0.8
	0.5nm,0.3s,baz=315,slow=11,SNR=14								
WRA				*S*		**S**		19 12 49.0	-1.1
	0.1nm,0.3s,baz=314,slow=18,SNR=5.3								
WB2	Warramunga Arr	17.79	136	*e*P		P		19 09 55.0	+0.7
ASAR	Alice Springs	20.23	145	P		P		19 10 16.9	+0.5
	0.8nm,0.5s,baz=318,slow=8.3,SNR=17								
ASAR				PcP		PcP		19 14 05.3	+0.1
	0.4nm,0.3s,baz=332,slow=1.5,SNR=9.4								
STKA	Stephens Creek	30.87	145	P		P		19 11 50.5	+0.3
	1.3nm,0.5s,mb3.7,baz=346,slow=13,SNR=5.0								
CMAR	Chiang Mai Arr	33.84	320	P		P		19 12 15.2	-0.3
	1.2nm,0.6s,mb3.6,baz=146,slow=6.3,SNR=8.2								
SONM	Songino Array	56.49	348	P		P		19 15 07.5	-0.8
	0.4nm,0.4s,mb3.0,baz=164,slow=8.6,SNR=6.3								
MKAR	Makanchi Array	64.08	331	P		P		19 15 58.3	-0.1
	0.3nm,0.4s,mb3.1,baz=118,slow=7.0,SNR=4.5								
ZALV	Zalesovo Beam	68.35	338	P		P		19 16 25.3	+0.5
	0.4nm,0.4s,mb3.3,baz=120,slow=3.4,SNR=3.1								
SBA	Scott Base	74.25	171	*e*P		P		19 16 58.8	-0.1
	2.9nm,0.8s,mb3.8								
QSPA	South Pole Qui	82.65	180	*e*P		P		19 17 44.2	+0.5
	1.0nm,0.7s,mb3.5								
TORD	Torodi Ar. Bea	120.43	281	PKP		PKPdf		19 24 07.8	-0.7
	0.4nm,0.8s,baz=125,slow=2.0,SNR=3.3								
CPUP	Villa Florida	146.51	182	PKPbc		PKPbc		19 24 59.0	+0.1
	0.6nm,0.4s,baz=45,slow=2.9,SNR=4.4								
LPAZ	La Paz	154.73	158	PKPab		PKPab		19 25 37.9	+2.0
	0.8nm,0.5s,baz=233,slow=5.1,SNR=3.9								

ISCJB ***13*** *19:10:51.6±0.8, 83°.5N±0°.1×11°.2E±°, h10km, mb3.4/9, Error ellipse: s-maj=23.6km s-min=16.1km az=141.7*
IDC ***13*** *19:10:51.8±1.0, 83°.46N×111°.93E, h0km, mb3.4/8, mb1 3.6/8, mb1mx3.4/24, mbtmp3.4/8, Error ellipse: s-maj=31.8km s-min=20.7km az=140.0*
NEIC ***13*** *19:10:53.5±0.7, 83°.45N×112°.01E, h10km, Error ellipse: s-maj=21.8km s-min=15.2km az=143.0*
ISC 13 19:10:53.6±0.8, 83°.5N±0°.1×11°.2E±°, h10km, n10, σ0s90/10, mb3.4/9, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARCES	ARCESS Array B	21.19	284	P		P		19 15 38.5	-0.1
	0.8nm,0.5s,mb3.3,baz=17,slow=8.9,SNR=5.6								
ILAR	Eielson Array	27.37	66	P		P		19 16 39.3	+1.0
	0.4nm,0.9s,mb3.0,baz=348,slow=9.2,SNR=5.1								
BVAR	Borovoye Array	32.48	228	P		P		19 17 24.5	+0.9
	0.1nm,0.3s,mb3.1,baz=356,slow=4.3,SNR=3.5								
KURK	Kurchatov	34.13	219	P		P		19 17 38.5	+0.5
KURK	Kurchatov	34.13	219	P		P		19 17 38.5	+0.5
	0.4nm,0.7s,mb3.4,baz=17,slow=7.1,SNR=3.6								
SONM	Songino Array	35.80	186	P		P		19 17 51.8	-0.6
	0.3nm,0.8s,mb3.3,baz=336,slow=3.2,SNR=2.9								
MKAR	Makanchi Array	37.78	214	P		P		19 18 08.3	-1.0
	0.3nm,0.2s,mb3.6,baz=20,slow=4.7,SNR=3.5								
BRTR	Keskin Array B	49.45	264	P		P		19 19 44.6	+1.4
	0.3nm,0.5s,mb3.5,baz=42,slow=6.6,SNR=2.4								
TXAR	Lajitas Array	66.25	34	P		P		19 21 40.6	-0.7
	0.3nm,0.7s,mb3.4,baz=4.3,slow=3.6,SNR=3.3								
TORD	Torodi Ar. Bea	79.30	292	P		P		19 22 57.7	-1.2
	1.1nm,0.7s,mb3.9,baz=10.0,slow=6.8,SNR=6.7								

ISCJB ***13*** *19:15:12.0±1.6, 17°.3S±0°.4×179°.2W±0°.3, h493km±31km, mb4.0/9, Error ellipse: s-maj=66.7km s-min=18.6km az=148.5*
IDC ***13*** *19:15:13.3±2.3, 17°.20S×179°.13W, h495km±37km, mb3.4/6, mb1 3.6/7, mb1mx3.3/17, mbtmp3.4/7, Error ellipse: s-maj=90.0km s-min=16.6km az=153.0*
ISC 13 19:15:13.2±1.5, 17°.3S±0°.4×179°.1W±0°.3, h494km±29km, n15, σ0s38/15, mb4.0/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.83	65	P		P		19 17 07.7	0.0
	5.8nm,0.3s,baz=277,slow=8.1,SNR=6.5								
EIDS	Eidsvold	28.86	249	*e*P		P		19 20 30.5	-0.5
ARMA	Armidale	29.68	239	*e*P		P		19 20 38.1	0.0
RMQ	Roma	31.11	247	*e*P		P		19 20 51.3	+0.7
	6.7nm,0.5s,mb4.3								
CTA	Charters Tower	32.89	260	P		P		19 21 06.2	+0.3
	5.0nm,0.8s,mb4.0,baz=88,slow=12,SNR=2.7								
CNB	Canberra Magne	33.27	231	*e*P		P		19 21 09.1	+0.2
CMSA	Cobar Meteorol	34.87	239	*e*P		P		19 21 22.3	-0.1
QLP	Quilpie	35.13	248	*e*P		P		19 21 24.5	-0.1
STKA	Stephens Creek	38.34	240	P		P		19 21 51.4	+0.3
	4.6nm,0.4s,mb4.2,baz=90,slow=10.0,SNR=36								
BBOO	Buckleboo	43.12	240	*e*P		P		19 22 28.8	-0.5
	5.1nm,0.4s,mb4.3								
WRA	Warramunga Arr	44.09	259	P		P		19 22 36.2	-0.8
	1.7nm,0.7s,mb3.6,baz=94,slow=7.4,SNR=11								
ASAR	Alice Springs	44.32	254	P		P		19 22 38.5	-0.2
	15nm,0.8s,mb4.5,baz=89,slow=8.0,SNR=335								
KAKA	Kakadu	46.93	269	*e*P		P		19 22 59.2	+0.3
	8.0nm,0.4s,mb4.5								
FITZ	Fitzroy Crossi	52.47	260	P		P		19 23 39.8	+0.1
	1.0nm,0.3s,mb3.6,baz=106,slow=7.8,SNR=13								
NVAR	Mina Array Bea	79.46	44	P		P		19 26 27.8	+0.1
	0.2nm,0.4s,mb3.0,baz=229,slow=5.5,SNR=3.2								

IDC 13 19:18:31.6±1.5, 3°.96S×152°.40E, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.9/16, mbtmp3.9/9, Error ellipse: s-maj=49.7km s-min=23.2km az=120.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.71	226	P		P		19 23 45.2	-0.4
	4.5nm,0.9s,baz=49,slow=9.6,SNR=12								
ASAR	Alice Springs	26.51	221	P		P		19 24 11.3	+0.3
	0.8nm,0.8s,baz=45,slow=10,SNR=3.8								
CMAR	Chiang Mai Arr	57.16	295	P		P		19 28 21.4	+0.8
	1.2nm,0.9s,baz=112,slow=4.8,SNR=7.4								
SONM	Songino Array	65.40	328	P		P		19 29 16.4	+0.4
	0.7nm,0.8s,baz=143,slow=5.4,SNR=6.0								
MKAR	Makanchi Array	79.43	319	P		P		19 30 39.7	-0.1
	0.3nm,0.2s,baz=103,slow=6.2,SNR=2.8								
ZALV	Zalesovo Beam	80.23	326	P		P		19 30 43.7	-0.3
	0.5nm,0.6s,baz=96,slow=4.5,SNR=3.7								
ILAR	Eielson Array	81.53	22	P		P		19 30 51.0	+0.3
	0.7nm,0.9s,baz=240,slow=5.9,SNR=4.3								
INK	Inuvik	87.82	21	P		P		19 31 22.6	+0.2
	1.7nm,0.5s,baz=280,slow=6.1,SNR=3.6								
BVAR	Borovoye Array	88.33	323	P		P		19 31 24.3	-0.8
	1.3nm,0.9s,baz=113,slow=3.9,SNR=9.1								

ISCJB ***13*** *19:28:21.9±0.7, 1°.97N±0°.08×99°.00E±0°.09, h125km±8km, mb3.4/3, Error ellipse: s-maj=16.0km s-min=12.1km az=149.5*
IDC ***13*** *19:28:22.2±3.1, 1°.91N×98°.90E, h118km±13km, mb3.0/3, mb1 3.1/4, mb1mx2.9/23, mbtmp2.9/4, Error ellipse: s-maj=103.7km s-min=23.4km az=59.0*
DJA ***13*** *19:28:25, 2°.05N×99°.00E, h30km, MLv3.1/3*
ISC 13 19:28:22.8±0.7, 1°.96N±0°.08×99°.00E±0°.09, h119km±8km, n9, σ0s64/11, mb3.4/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSI	Prapat	0.84	355	P		P		19 28 42.9	-0.4
	6.0nm,0.3s,baz=169,slow=10,SNR=12								
PSI				S		**Sn**		19 28 58.2	-0.5
	3.2nm,0.3s,baz=56,slow=20,SNR=16								
MNSI	Mandailing Nat	1.30	153	P		P		19 28 48.0	+0.1
GSI	Gunungsitoli	1.57	245	P		P		19 28 51.1	+0.1
TPTI		2.23	305	P		P		19 29 00.6	+1.5
TPTI				S		**Sn**		19 29 26.2	-0.7
KULM	Kulim	3.69	26	P		P		19 29 18.9	+0.6
CMAR	Chiang Mai Arr	16.39	360	P		P		19 32 06.7	+0.6
	0.1nm,0.3s,baz=192,slow=11,SNR=6.6								
WRA	Warramunga Arr	40.94	124	P		P		19 35 53.6	-0.4
	0.4nm,0.4s,mb3.6,baz=302,slow=9.0,SNR=5.3								
ASAR	Alice Springs	42.44	129	P		P		19 36 06.0	-0.2
	0.1nm,0.4s,mb2.9,baz=296,slow=7.9,SNR=3.6								
MKAR	Makanchi Array	46.97	344	P		P		19 36 41.0	-0.7
	0.3nm,0.3s,mb3.5,baz=149,slow=8.7,SNR=3.8								

IDC 13 19:44:12.3±41.0, 24°.10S×176°.39W, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.8/15, mbtmp4.1/3, Error ellipse: s-maj=751.6km s-min=151.8km az=88.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.71	249	P		P		19 51 28.8	-1.0
	1.6nm,0.7s,baz=101,slow=11,SNR=5.9								
ASAR	Alice Springs	45.25	260	P		P		19 52 31.8	0.0
	1.1nm,0.4s,baz=98,slow=8.1,SNR=57								
WRA	Warramunga Arr	45.68	265	P		P		19 52 35.8	+0.6
	1.3nm,0.4s,baz=104,slow=7.7,SNR=28								

NEIC ***13*** *19:48:51.7, 60°.67N×140°.46W, h5km, ML2.7(AEIC), ML2.6(PGC), After PGC.*
PGC 13 19:48:51.7±3.9, 60°.67N×140°.46W, h5km, ML2.6/4, 1C-6D, 159km west of Haines Jct., Yt Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNL	**Peninsula**	**1.14**	**152**	P	Pg	19 49 13.2	-0.3
HYT	**Haines Junctio**	**1.46**	**83**	⇓Pn	Pn	19 49 17.9	-0.7
HYT				⇓Sg	Sg	19 49 36.9	-1.6
BMRM	**Bremner River**	**2.05**	**280**	P	Pn	19 49 27.0	+0.2
PLBC	**Pleasant Camp**	**2.39**	**119**	⇑Pn	Pn	19 49 31.2	-0.2
PLBC				Sn	Sn	19 49 59.9	-1.1
PLBC	**Pleasant Camp**	**2.39**	**119**	⇑Pn	Pn	19 49 31.2	-0.2
PLBC				⇓Sn	Sn	19 49 59.9	-1.1
PLBC				⇓Sg	Sg	19 50 05.5	-2.8
BCA3	**Beaver Creek A**	**2.48**	**346**	P	Pn	19 49 32.0	-0.7
DIV	**Divide**	**2.64**	**282**	P	Pn	19 49 34.7	-0.2
WHY	**Whitehorse**	**2.75**	**88**	P	Pn	19 49 35.7	-0.7
WHY	**Whitehorse**	**2.75**	**88**	⇑Pn	Pn	19 49 35.9	-0.5
WHY				⇓Sn	Sn	19 50 08.9	-1.0
WHY				⇓Sg	Sg	19 50 17.0	-2.9
MENT	**Mentasta**	**2.75**	**327**	*eP*	Pn	19 49 36.6	+0.2
DAWY	**Dawson**	**3.44**	**8**	P	Pn	19 49 45.5	-0.4
DAWY	**Dawson**	**3.44**	**8**	⇓Pn	Pn	19 49 45.6	-0.3
DAWY				⇑Sn	Sn	19 50 24.8	-2.2
EGAK	**Eagle**	**4.13**	**356**	P	Pn	19 49 55.5	+0.1

IDC **13** *19:57:20.5±0.8,21°.39S×71°.69W,h0km,mb4.1/5, mb1 4.2/7,mb1mx4.0/14,mbtmp4.1/7,ML3.9/2,MS3.1/1, Ms1 3.2/1,ms1mx2.7/14,Error ellipse: s-maj=30.2km s-min=26.2km az=2.0*

ISCJB **13** *19:57:22.3±2.1,21°.27S±0°.05×71°.66W±0°.06,h15km±14km, mb4.2/6,Error ellipse: s-maj=9.5km s-min=7.4km az=148.6*

GUC **13** *19:57:24.3±0.8,21°.27S×71°.46W,h32km±10km,ML3.6*

NEIC **13** *19:57:25.1±0.6,21°.49S×71°.54W,h30km,mb4.2/2, ML3.8(GUC),Error ellipse: s-maj=17.5km s-min=13.0km az=85.0*

ISC 13 19:57:23.1±2.5,21°.27S±0°.05×71°.58W±0°.06,h14km±16km, n30,σ0°.89/26,mb4.2/6,2C-1D,Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOCH	**Tocopilla**	**1.52**	**123**	*eP*	**Pn**	**19 57 49.4**	**-0.6**
TOCH				*i* S	**Sn**	**19 58 07.7**	**-1.8**
TOCH				AML	AML	19 58 10.2	
	comp=N,1μm,0.5s						
HMBC	**Humberston**	**1.87**	**58**	*eP*	**Pn**	**19 57 54.6**	**0.0**
HMBC				*eS*	**Sn**	**19 58 17.9**	**0.0**
HMBC				AML	AML	19 58 23.1	
	comp=N,770nm,0.4s						
MACH	**Maria Elena**	**1.93**	**119**	⇑*i* P	**Pn**	**19 57 56.0**	**+0.5**
MACH				*i* S	**Sn**	**19 58 20.0**	**+0.5**
PB01	**Plate Boundary**	**1.97**	**84**	*eP*	**Pn**	**19 57 57.1**	**+1.1**
PB01				*i* S	**Sn**	**19 58 21.3**	**+0.8**
PB01				AML	AML	19 58 23.6	
	comp=N,998nm,0.6s						
PSGC	**Pisagua**	**2.15**	**40**	*eP*	**Pn**	**19 57 58.0**	**-0.6**
PSGC				*i* S	**Sn**	**19 58 25.0**	**0.0**
PSGC				AML	AML	19 58 35.8	
	comp=N,193nm,0.5s						
PB04	**Plate Boundary**	**2.19**	**117**	⇓*i* P	**Pn**	**19 57 52.2**	**-6.8**
PB04				*i* S	**Sn**	**19 58 13.4**	**-12**
PB04				AML	AML	19 58 14.1	
	comp=N,1μm,0.5s						
ANCH	**Antofagasta**	**2.63**	**156**	⇑*i* P	**Pn**	**19 57 59.9**	**-5.3**
ANCH				*i* S	**Sn**	**19 58 30.1**	**-6.9**
MNMC	**Miæe Miæ**	**2.83**	**42**	AML	AML	19 58 49.6	
	comp=E,591nm,0.4s						
ARE	**Arequipa**	**4.78**	**1**	*eP*	**Pn**	**19 58 34.0**	**-0.7**
ARE				*eS*	**Sn**	**19 59 28.0**	**-1.9**
LPAZ	**La Paz**	**5.94**	**34**	Pn	**Pn**	**19 58 54.6**	**+4.0**
	comp=E,0.8nm,0.3s,baz=223,slow=6.7,SNR=12						
LPAZ				LR	LR	20 01 14.6	
	comp=E,167nm,21.1s,baz=303,slow=38						
SIV	**San Ignacio**	**11.26**	**64**	Pn	**Pn**	**20 00 03.7**	**0.0**
	comp=E,1.3nm,0.3s,baz=265,slow=12,SNR=14						
TRQA	**Tornquist**	**18.68**	**156**	*eP*	**Pn**	**20 01 39.8**	**-1.3**
	comp=E,3.7nm,0.6s						
TXAR	**Lajitas Array**	**59.05**	**327**	P	**P**	**20 07 22.1**	**-0.6**
	comp=E,0.2nm,0.4s,mb3.5,baz=153,slow=10,SNR=3.3						
SDCO	**Great Sand Dun**	**66.81**	**331**	*eP*	**P**	**20 08 15.1**	**+0.8**
	comp=E,9.6nm,1.4s,mb4.6						
DBIC	**Dimbokro**	**71.07**	**75**	P	**P**	**20 08 41.7**	**+0.4**
	comp=E,3.5nm,0.8s,mb4.3,baz=236,slow=7.3,SNR=3.0						
NVAR	**Mina Array Bea**	**73.80**	**323**	P	**P**	**20 08 58.4**	**+1.4**
NVAR	**Mina Array Bea**	**73.80**	**323**	P	**P**	**20 08 58.4**	**+1.4**
	comp=E,0.6nm,0.7s,mb3.6,baz=175,slow=5.1,SNR=4.6						
TORD	**Torodi Ar. Bea**	**79.64**	**72**	P	**P**	**20 09 31.0**	**+0.5**
	comp=E,4.9nm,0.7s,mb4.5,baz=252,slow=5.3,SNR=26						
MAW	**Mawson**	**85.25**	**164**	P	**P**	**20 09 59.3**	**+0.4**
	comp=E,1.2nm,0.5s,mb4.2,baz=245,slow=7.3,SNR=6.3						
ASAR	**Alice Springs**	**128.91**	**210**	PKP	PKPdf	20 16 29.2	-1.8
	comp=E,0.5nm,0.8s,baz=112,slow=2.3,SNR=5.0						
WRA	**Warramunga Arr**	**131.83**	**213**	PKP	PKPdf	20 16 36.4	-0.2
WRA	**Warramunga Arr**	**131.83**	**213**	PKP	PKPdf	20 16 36.4	-0.2
	comp=E,0.8nm,0.8s,baz=159,slow=2.1,SNR=4.9						
ZALV	**Zalesovo Beam**	**142.76**	**23**	PKP	PKPdf	20 16 52.9	-2.8
	comp=E,1.3nm,0.7s,baz=275,slow=2.5,SNR=4.8						
AML	**Almayashu**	**144.22**	**46**	*e*PKPdf	PKPdf	20 16 59.2	+0.5
UCH	**Uchtor**	**144.73**	**46**	*e*PKPdf	PKPdf	20 17 01.3	+1.8
MK31	**Makanchi Array**	**146.87**	**34**	*e*PKPdf	PKPdf	20 17 03.9	+0.9
MKAR	**Makanchi Array**	**146.87**	**34**	PKPbc	PKPbc	20 17 04.0	-0.8
	comp=E,2.4nm,0.8s,baz=318,slow=1.6,SNR=18						
MJAR	**Matsushiro Arr**	**149.96**	**307**	PKPbc	PKPbc	20 17 12.7	-0.6
	comp=E,1.1nm,0.8s,baz=92,slow=1.9,SNR=5.7						
SONM	**Songino Array**	**153.45**	**3**	PKP	PKPdf	20 17 14.0	+0.7
SONM				PKPbc	PKPbc	20 17 20.6	-0.3
SONM				PKPab	PKPab	20 17 33.7	+0.7
SONM	**Songino Array**	**153.45**	**3**	PKP	PKPdf	20 17 14.0	+0.7
	comp=E,0.4nm,0.8s,baz=207,slow=0.3,SNR=3.4						
SONM				PKPbc	PKPbc	20 17 20.6	-0.3
	comp=E,0.3nm,0.6s,baz=89,slow=0.6,SNR=2.7						
SONM				PKPab	PKPab	20 17 33.7	+0.7
	comp=E,0.4nm,0.7s,baz=274,slow=1.5,SNR=3.9						

IDC 13 20:00:09.5±3.3,17°.34S×177°.07W,h0km,mb3.9/5, mb1 4.1/5,mb1mx3.8/14,mbtmp3.9/5,Error ellipse: s-maj=107.2km s-min=30.7km az=132.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.02**	**241**	P	P	20 07 47.6	+1.3
	0.8nm,0.5s,baz=104,slow=8.3,SNR=5.0						
WRA	**Warramunga Arr**	**45.99**	**259**	P	P	20 08 34.2	-0.7
	0.5nm,0.4s,baz=96,slow=7.1,SNR=23						
ASAR	**Alice Springs**	**46.18**	**254**	P	P	20 08 35.7	-0.6
	1.3nm,0.4s,baz=92,slow=7.9,SNR=57						
MJAR	**Matsushiro Arr**	**68.23**	**322**	P	P	20 11 12.4	+0.3
	0.5nm,0.4s,baz=122,slow=3.4,SNR=4.3						
ILAR	**Eielson Array**	**85.05**	**12**	P	P	20 12 46.5	-0.1
	0.3nm,0.4s,baz=220,slow=5.3,SNR=6.0						

IDC 13 20:22:47.0±1.9,3°.71S×148°.63E,h0km,mb3.9/4, mb1 4.2/4,mb1mx3.7/16,mbtmp3.9/4,Error ellipse: s-maj=113.7km s-min=28.5km az=125.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.32**	**220**	P	P	20 27 35.7	0.0
	3.2nm,0.7s,baz=49,slow=10,SNR=11						
ASAR	**Alice Springs**	**24.42**	**214**	P	P	20 28 08.1	+0.7
	1.6nm,0.8s,baz=41,slow=7.3,SNR=14						
FITZ	**Fitzroy Crossi**	**26.68**	**236**	P	P	20 28 27.4	-0.5
	5.0nm,1.0s,baz=73,slow=9.8,SNR=3.0						
ILAR	**Eielson Array**	**82.75**	**23**	P	P	20 35 12.5	0.0
	0.3nm,0.7s,baz=253,slow=4.8,SNR=4.6						

KRSC 13 20:57:57.0±0.4,55°.13N×165°.51E,h34km±26km,ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.28**	**74**	*i* P	Pb	20 58 05.2	+0.7
BKI				*eS*	Sb	20 58 10.6	+1.0
KBTR	**Krutoberegovo**	**1.87**	**306**	*eP*	Pn	20 58 27.5	+1.0
MKZ	**Mys Kozlova**	**2.26**	**257**	*eP*	Pn	20 58 33.4	+1.5
MKZ				*eS*	Sn	20 58 59.1	+0.6
SPN	**Mys Shipunski**	**3.82**	**240**	*eS*	Sn	20 59 34.2	-2.7
AVH	**Avacha**	**4.39**	**248**	*eP*	Pn	20 59 04.1	+2.9
AVH				*eS*	Sn	20 59 52.7	+1.6
GNL	**Ganaly**	**4.65**	**255**	*eP*	Pn	20 59 07.8	+3.1

ISCJB **13** *21:28:35.6±0.4,44°.36S±0°.06×78°.31W±0°.09,h10km, mb4.4/14,MS4.2/11,Error ellipse: s-maj=10.1km s-min=7.4km az=32.6*

IDC **13** *21:28:35.7±0.8,44°.46S×78°.35W,h0km,mb4.3/7, mb1 4.4/9,mb1mx4.3/15,mbtmp4.3/9,ML4.3/2,MS4.1/13, Ms1 4.0/13,ms1mx3.9/18,Error ellipse: s-maj=32.1km s-min=19.3km az=107.0*

NEIC **13** *21:28:37.1±0.2,44°.38S×78°.37W,h10km,mb4.6/12,Error ellipse: s-maj=8.4km s-min=5.5km az=102.0*

ISC 13 21:28:37.3±0.4,44°.38S±0°.06×78°.36W±0°.09,h10km,n64, σ0°.73/43,mb4.4/14,MS4.2/11,3D,Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**6.82**	**60**	*e*Pn	**Pn**	**21 30 17.3**	**-0.1**
PLCA				*e*Sn	**Sn**	**21 31 35.5**	**+0.5**
PLCA				LR	LR	21 32 50.7	
PLCA	**Paso Flores**	**6.82**	**60**	Pn	**Pn**	**21 30 17.4**	**0.0**
	2.5nm,0.3s,baz=230,slow=12,SNR=36						
PLCA				LR	LR	21 32 50.7	
	comp=Z,2μm,19.5s,baz=72,slow=37						
LMEL	**Las Melosas**	**12.27**	**34**	⇓*i*P	**Pn**	**21 31 32.0**	**0.0**
LMEL	**Las Melosas**	**12.27**	**34**	⇓*i*P	**Pn**	**21 31 32.0**	**0.0**
FCH	**Farellones**	**12.69**	**32**	⇓*i*P	**Pn**	**21 31 35.4**	**-2.4**
TRQA	**Tornquist**	**13.84**	**69**	*e*Pn	**Pn**	**21 31 54.5**	**+1.0**
	26nm,1.2s						
CFAA	**Coronel Fontan**	**15.02**	**35**	Pn	**Pn**	**21 32 08.2**	**-1.4**
	0.4nm,0.3s,baz=204,slow=12,SNR=12						
CFAA				LR	LR	21 37 47.1	
	comp=Z,69nm,19.4s,baz=199,slow=36						
LCO	**Las Campanas**	**16.51**	**24**	*e*Pn	**Pn**	**21 32 28.9**	**0.0**
	67nm,1.2s						
PMSA	**Palmer Station**	**21.95**	**164**	*e*P	**P**	**21 33 30.6**	**-0.1**
PMSA	**Palmer Station**	**21.95**	**164**	LR	LR	21 41 20.3	
	comp=Z,296nm,18.2s,MS3.7,baz=354,slow=35						
CPUP	**Villa Florida**	**24.75**	**50**	*e*P	**P**	**21 33 59.1**	**+0.1**
	24nm,0.5s,mb5.0						
CPUP				LR	LR	21 44 08.9	
CPUP	**Villa Florida**	**24.75**	**50**	P	**P**	**21 33 59.3**	**+0.4**
	5.0nm,0.8s,mb4.1,baz=212,slow=9.5,SNR=13						
CPUP				LR	LR	21 44 09.0	
	comp=Z,442nm,18.5s,MS4.0,baz=198,slow=38						
LPAZ	**La Paz**	**29.31**	**20**	*e*P	**P**	**21 34 40.3**	**+0.4**
	3.6nm,1.1s,mb4.0						
LPAZ	**La Paz**	**29.31**	**20**	P	**P**	**21 34 41.6**	**+1.6**
	2.1nm,1.2s,mb3.7,baz=202,slow=5.4,SNR=4.0						
RPN	**Rapa Nui**	**30.22**	**294**	LR	LR	21 43 27.2	
	comp=Z,547nm,19.0s,MS4.2,baz=122,slow=30						
NNA	**Nana**	**32.30**	**3**	P	**P**	**21 35 05.6**	**-0.8**
OTAV	**Otavalo**	**44.42**	**360**	P	**P**	**21 36 48.5**	**+0.2**
	4.3nm,1.1s,mb4.1						
PAYG	**Puerto Ayora**	**44.79**	**343**	*e*P	**P**	**21 36 51.8**	**+0.6**
QSPA	**South Pole Qui**	**45.87**	**180**	*e*P	**P**	**21 36 58.8**	**-0.3**
	11nm,1.2s,mb4.7						
QSPA	**South Pole Qui**	**45.87**	**180**	P	**P**	**21 36 59.7**	**+0.5**
	7.1nm,1.1s,mb4.5,baz=147,slow=5.5,SNR=7.9						
ROSC	**El Rosal**	**49.14**	**5**	*e*P	**P**	**21 37 27.1**	**+1.8**
ROSC	**El Rosal**	**49.14**	**5**	LR	LR	21 56 10.3	
	comp=Z,341nm,18.4s,MS4.4,baz=214,slow=34						
SBA	**Scott Base**	**51.89**	**194**	*e*P	**P**	**21 37 45.6**	**+0.3**
	18nm,1.8s,mb4.7						
SDV	**Santo Domingo**	**53.47**	**10**	P	**P**	**21 37 58.5**	**+0.8**
BBGH	**Gun Hill**	**59.75**	**21**	*e*P	**P**	**21 38 41.7**	**-0.6**
CBYP	**Canovanas**	**63.38**	**13**	P	**P**	**21 39 06.5**	**-0.2**
MAW	**Mawson**	**64.56**	**165**	*e*P	**P**	**21 39 12.9**	**-1.1**
	1.5nm,1.1s,mb3.9						
MAW				LR	LR	22 06 29.1	
MAW	**Mawson**	**64.56**	**165**	P	**P**	**21 39 13.3**	**-0.7**
	5.0nm,1.0s,mb4.5,baz=222,slow=7.8,SNR=8.4						
MAW				LR	LR	22 06 29.1	
	comp=Z,183nm,18.6s,MS4.3,baz=96,slow=35						
TEIG	**Tepich**	**64.92**	**350**	P	**P**	**21 39 16.6**	**-0.3**
CASY	**Casey**	**69.47**	**184**	*e*P	**P**	**21 39 45.5**	**+0.2**
TXAR	**Lajitas Array**	**76.92**	**337**	P	**P**	**21 40 30.8**	**+1.3**
	1.2nm,1.0s,mb3.8,baz=148,slow=10,SNR=6.0						
BOSA	**Boshof**	**79.42**	**120**	P	**P**	**21 40 43.5**	**-0.3**
BOSA				LR	LR	22 12 45.5	
BOSA	**Boshof**	**79.42**	**120**	P	**P**	**21 40 43.5**	**-0.3**
	8.6nm,0.9s,mb4.7,baz=228,slow=4.2,SNR=11						
BOSA				LR	LR	22 12 45.5	
	comp=Z,104nm,20.7s,MS4.2,baz=56,slow=33						
SWET	**Sewanee**	**79.52**	**354**	*e*P	**P**	**21 40 43.6**	**-0.2**
SWET				*e*PcP	PcP	21 40 51.6	-0.1
MIAR	**Mount Ida**	**79.76**	**347**	*e*P	**P**	**21 40 44.9**	**-0.3**
WVT	**Waverly**	**80.59**	**352**	*e*P	**P**	**21 40 49.4**	**-0.2**
	55nm,1.9s,mb5.2						
WMOK	**Wichita Mounta**	**80.90**	**343**	*e*P	**P**	**21 40 50.7**	**-0.6**
	3.3nm,1.2s,mb4.1						
WMOK				*e*PcP	PcP	21 40 58.7	+0.9
TSUM	**Tsumeb**	**80.93**	**108**	*e*P	**P**	**21 40 52.1**	**0.0**
	49nm,2.6s,mb5.0						
LBTB	**Lobatse**	**82.17**	**117**	*e*P	**P**	**21 40 58.2**	**-0.4**
	5.8nm,0.7s,mb4.6						
LBTB	**Lobatse**	**82.17**	**117**	LR	LR	22 11 25.6	
	comp=Z,92nm,20.1s,MS4.1,baz=35,slow=31						
SIUC	**Southern Illin**	**82.30**	**351**	P	**P**	**21 40 58.9**	**+0.2**
ANMO	**Albuquerque**	**82.98**	**337**	*e*P	**P**	**21 41 02.5**	**+0.2**
	3.1nm,1.1s,mb4.2						
DBIC	**Dimbokro**	**83.00**	**74**	*e*P	**P**	**21 41 03.5**	**+0.6**
DBIC				LR	LR	22 11 29.1	
DBIC	**Dimbokro**	**83.00**	**74**	P	**P**	**21 41 03.5**	**+0.6**
	4.8nm,0.8s,mb4.6,baz=182,slow=2.4,SNR=5.2						
DBIC				LR	LR	22 11 29.1	
	comp=Z,51nm,18.8s,MS3.9,baz=125,slow=31						
SDCO	**Great Sand Dun**	**85.35**	**339**	P	**P**	**21 41 14.3**	**+0.1**
LSZ	**Lusaka**	**90.84**	**112**	LR	LR	22 19 22.4	
	comp=Z,100nm,21.2s,MS4.2,baz=355,slow=34						
HLID	**Hailey**	**93.28**	**335**	P	**P**	**21 41 50.9**	**-0.8**
STKA	**Stephens Creek**	**95.82**	**213**	LR	LR	22 16 45.5	
	comp=Z,202nm,21.3s,MS4.6,baz=205,slow=30						
SCHQ	**Schefferville**	**99.32**	**7**	LR	LR	22 25 51.7	
	comp=Z,72nm,19.4s,MS4.2,baz=108,slow=35						
RES	**Resolute Bay**	**119.29**	**355**	PKPdf	PKPdf	21 47 25.9	+0.7
BRTR	**Keskin Array B**	**130.60**	**70**	PKP	PKPdf	21 47 47.8	-0.2
BRTR	**Keskin Array B**	**130.60**	**70**	PKP	PKPdf	21 47 47.8	-0.1
	0.5nm,0.5s,baz=226,slow=3.8,SNR=3.3						
AKASG	**Malin Array Be**	**132.50**	**55**	PKP	PKPdf	21 47 50.1	-1.1
	0.3nm,0.3s,baz=275,slow=2.2,SNR=4.1						
AKTK	**Aktyubinsk**	**150.20**	**63**	PKPbc	PKPbc	21 48 27.6	-0.1
AKTO	**Aktyubinsk**	**150.20**	**63**	PKPbc	PKPbc	21 48 27.6	-0.1
	4.1nm,0.7s,baz=292,slow=1.3,SNR=11						
ARU	**Arti**	**150.52**	**50**	PKPdf	PKPdf	21 48 23.7	+0.9
ARU				*e*PKPbc	PKPbc	21 48 28.4	+0.2
ARU				*e*PKPab	PKPab	21 48 35.3	+0.3
MJAR	**Matsushiro Arr**	**151.28**	**267**	PKPbc	PKPbc	21 48 29.8	-1.0
	0.7nm,0.5s,baz=156,slow=2.2,SNR=4.5						
ABKAR	**Akbulak array**	**151.32**	**65**	PKPdf	PKPdf	21 48 25.9	+1.6
ABKAR				*e*PKPbc	PKPbc	21 48 30.1	-0.3
ABKAR				*e*PKPab	PKPab	21 48 38.0	-0.6
CMAR	**Chiang Mai Arr**	**154.06**	**174**	PKPbc	PKPbc	21 48 36.4	-1.0
	0.9nm,0.8s,baz=217,slow=4.4,SNR=5.7						
BVAR	**Borovoye Array**	**157.78**	**56**	PKP	PKPdf	21 48 33.9	+0.7
	0.4nm,0.5s,baz=327,slow=2.4,SNR=4.9						
KURK	**Kurchatov**	**163.25**	**60**	PKPab	PKPab	21 49 30.0	+0.1
	0.7nm,0.6s,baz=287,slow=4.6,SNR=2.2						
ZALV	**Zalesovo Beam**	**165.45**	**43**	PKP	PKPdf	21 48 39.5	-1.5
	0.9nm,0.8s,baz=304,slow=3.3,SNR=4.9						
ZALV				PKPab	PKPab	21 49 39.7	+0.3
	0.4nm,0.6s,baz=302,slow=2.7,SNR=2.3						
MKAR	**Makanchi Array**	**166.23**	**73**	PKP	PKPdf	21 48 42.4	+0.4
MKAR				PKPab	PKPab	21 49 43.8	+0.6
MKAR	**Makanchi Array**	**166.23**	**73**	PKP	PKPdf	21 48 42.4	+0.4
	0.2nm,0.2s,baz=248,slow=1.6,SNR=4.0						
MKAR				PKPab	PKPab	21 49 43.8	+0.6
	0.3nm,0.2s,baz=273,slow=2.6,SNR=2.6						

MEX 13 21:31:21.0±0.8,16°.06N×97°.75W,h27km±22km,MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.49**	**312**	*e*P	Pb	21 31 29.3	-1.9
PNIG				*i* S	Sb	21 31 36.8	-1.3
VHO	**Vista Hermosa**	**1.40**	**44**	*i* P	Pn	21 31 41.9	-2.9
VHO				*i* S	Sn	21 31 59.6	-2.7
HUIG	**Huatulco**	**1.60**	**100**	*i* P	Pn	21 31 45.6	-2.0
HUIG				*i* S	Sn	21 32 04.9	-2.4
UTMO	**Huajuapan**	**1.76**	**358**	*i* P	Pn	21 31 48.1	-1.6
UTMO				*i* S	Sn	21 32 09.0	-2.2

IDC **13** *22:00:10.6±0.6,83°.55N×115°.20E,h0km,mb4.0/19, mb1 4.1/19,mb1mx4.1/26,mbtmp4.0/19,MS3.6/21, Ms1 3.6/21,ms1mx3.5/33,Error ellipse: s-maj=17.5km s-min=13.4km az=145.0*

MOS **13** *22:00:10.6±1.2,83°.53N×114°.22E,h10km,mb4.6/13,Error ellipse: s-maj=68.7km s-min=8.6km az=88.3*

ISCJB **13** *22:00:10.7±3.2,83°.60N±0°.05×114°.5E±0°.4,h11km±20km, mb4.3/44,MS3.6/23,Error ellipse: s-maj=9.3km s-min=6.0km az=147.2*

BJI **13** *22:00:11.1,83°.42N×114°.31E,h10km,mB5.0/5,mb4.6/7, Ms4.5/4,Ms7 4.3/3*

NEIC **13** *22:00:12.2±0.2,83°.54N×114°.91E,h10km,mb4.6/16,Error ellipse: s-maj=7.3km s-min=4.1km az=144.0*

GCMT **13** *22:00:12.0±0.3,83°.49N×115°.46E,h12km,MW4.8, Moment Tensor Solution. s25,c31; s67,c99; Moment tensor: Scale 10¹⁶Nm; Mrr-1.62±.06; Mθθ0.40±.06; Mϕϕ1.22±.06; Mrθ-0.79±.24; Mθϕ-0.68±.05; Mϕr-0.40±.25; Best double couple: M₀1.80000×10¹⁶ NP1:ϕs352.00000°, δ49.00000°,λ-58.00000°. NP2:ϕs129.00000°,δ50.00000°, λ-121.00000°. Principal axes: T 1.6000, Plg1.0000°, Azm240.0000°; N 0.4000, Plg24.0000°, Azm150.0000°; P -2.0000, Plg66.0000°, Azm332.0000°; Data Used: II IU IC G CN.*

ISC 13 22:00:13.4±3.3,83°.59N±0°.05×114°.5E±0°.4,h16km±21km, n82,σ0°.92/76,mb4.3/44,MS3.6/23,6C-3D,North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**12.32**	**158**	*e*Pn	**Pn**	**22 03 06.2**	**-1.6**
	12nm,1.3s						
TIXI	**Tiksi**	**12.32**	**158**	*e*P	**Pn**	**22 03 07.6**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KBS	**Kingsbay**	**14.03**	**309**	⇑*e*P	**Pn**	**22 03 30.8**	**-0.2**
SPITS	**Spitsbergen Ar**	**14.30**	**304**	LR	LR	22 08 17.9	
	comp=Z,114nm,18.1s,baz=55,slow=34						
RES	**Resolute Bay**	**21.27**	**21**	LR	LR	22 12 47.6	
	comp=Z,196nm,19.3s,MS3.5,baz=269,slow=36						
ARCES	**ARCESS Array B**	**21.43**	**286**	P	**P**	**22 05 01.5**	**+1.3**
	comp=Z,4.0nm,0.7s,mb3.8,baz=23,slow=9.7,SNR=7.1						
ARCES				LR	LR	22 13 48.0	
	comp=Z,101nm,20.8s,MS3.2,baz=199,slow=38						
YAK	**Yakutsk**	**21.96**	**161**	*e*P	**P**	**22 05 03.8**	**-2.1**
YAK				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.6						
YAK				pmax	pmax		
	comp=N,17nm,1.1s						
SEY	**Seymchan**	**22.46**	**133**	⇓*e*P	**P**	**22 05 13.2**	**+2.0**
JMIC	**Jan Mayen**	**23.26**	**316**	LR	LR	22 11 59.5	
	comp=N,76nm,18.1s,MS3.2,baz=239,slow=30						
COLD	**Coldfoot**	**24.32**	**70**	*e*P	**P**	**22 05 29.2**	**-0.5**
	comp=N,7.5nm,1.0s,mb4.1						
INK	**Inuvik**	**24.93**	**55**	*e*P	**P**	**22 05 35.9**	**+0.7**
	comp=N,7.4nm,0.6s,mb4.4						
INK	**Inuvik**	**24.93**	**55**	P	**P**	**22 05 35.1**	**-0.2**
	comp=N,6.5nm,1.0s,mb4.1,baz=331,slow=12,SNR=4.3						
INK				LR	LR	22 13 49.8	
	comp=N,80nm,21.9s,MS3.2,baz=96,slow=33						
INK	**Inuvik**	**24.93**	**55**	*e*P	**P**	**22 05 35.9**	**+0.7**
INK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
COLA	**College**	**26.86**	**70**	*e*P	**P**	**22 05 55.7**	**+3.1**
ILAR	**Eielson Array**	**27.06**	**69**	P	**P**	**22 05 54.1**	**-0.3**
	comp=Z,3.9nm,1.1s,mb3.8,baz=346,slow=8.3,SNR=12						
ILAR				LR	LR	22 15 57.0	
	comp=Z,170nm,21.0s,MS3.6,baz=176,slow=35						
EGAK	**Eagle**	**27.64**	**64**	*e*P	**P**	**22 06 00.5**	**+0.8**
	comp=Z,14nm,1.3s,mb4.5						
MCK	**McKinley**	**27.85**	**71**	*e*P	**P**	**22 06 01.8**	**+0.3**
	comp=Z,44nm,1.7s,mb4.8						
MCK	**McKinley**	**27.85**	**71**	*e*P	**P**	**22 06 01.8**	**+0.2**
MCK				pmax	pmax		
	comp=Z,44nm,1.7s,mb4.8						
KLMR	**Klimovskoe**	**28.27**	**267**	P	**P**	**22 06 04.2**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,25nm,2.2s,mb4.5						
PPLA	**

AKASG	**Malin Array Be**	**39.40**	**273**	*c*eP	**P**		**22 07 41.1**	**-0.6**
	comp=Z,0.3nm,0.3s,mb3.5,baz=12,slow=9.3,SNR=4.0							
AKASG	**Malin Array Be**	**39.40**	**273**	*c*eP	**P**		**22 07 41.2**	**-0.6**
AML	**Almayashu**	**43.33**	**225**	*e*P	**P**		**22 08 14.8**	**+0.7**
	comp=Z,4.4nm,1.1s,mb4.1							
GOF	**Gofitskoye**	**43.42**	**258**	*e*P	**P**		**22 08 10.9**	**-3.9**
BJI	**Beijing**	**43.70**	**178**	P	**P**		**22 08 18.0**	**+0.9**
BJI				pmax	pmax			
	comp=Z,10.0nm,0.9s,mb4.5							
BJI				LR	LR			
	comp=N,47nm,20.4s,MS3.8							
BJI				LR	LR			
	comp=E,130nm,21.3s,MS3.8							
BJI				LR	LR			
	comp=Z,53nm,25.2s,MS3.4							
KIV	**Kislovodsk**	**44.55**	**258**	*e*P	**P**		**22 08 25.2**	**+1.3**
KIV				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.4							
KIV				MLR	MLR			
	comp=Z,52nm,17.0s,MS3.5							
KSH	**Kashi**	**45.75**	**222**	*e*P	**P**		**22 08 37.8**	**+4.3**
KSH				*e*pP	pP		22 08 47.5	+9.1
KSH				*e*sP	sP		22 08 51.6	+11
KSH				*e*PcP	PcP		22 10 13.3	+2.5
KSH				*e*PP	PP		22 10 26.3	+5.9
KSH				*e*ScP	ScP		22 14 02.8	+0.2
KSH				*e*PcS	PcS		22 14 06.8	+1.8
KSH				*e*S	**S**		**22 15 20.4**	**+4.6**
KSH				*e*sS	sS		22 15 36.4	+12
KSH				*e*ScS	ScS		22 18 28.3	+0.1
KSH				*e*SS	SS		22 18 38.8	-0.9
KSH				pmax	pmax			
	comp=Z,2.0nm,0.9s,mb4.0							
KSH				pmax	pmax			
	comp=Z,28nm,5.0s							
KSH				LR	LR			
	comp=N,130nm,5.7s							
KSH				LR	LR			
	comp=E,99nm,9.8s							
KSH				LR	LR			
	comp=Z,130nm,6.9s							
KSRS	**Korea Array**	**46.47**	**165**	LR	LR		22 27 48.5	
	comp=Z,26nm,20.5s,MS3.2,baz=173,slow=36							
JTMT	**Jette**	**46.90**	**44**	*e*P	**P**		**22 08 42.8**	**+0.5**
LZH	**Lanzhou**	**47.77**	**192**	*e*P	**P**		**22 08 49.6**	**+0.4**
LZH				pmax	pmax			
	comp=Z,20nm,1.2s,mb5.0							
LZH				pmax	pmax			
	comp=Z,85nm,4.3s							
MJAR	**Matsushiro Arr**	**47.78**	**154**	P	**P**		**22 08 48.3**	**-1.0**
	comp=Z,0.5nm,0.5s,mb3.9,baz=359,slow=9.1,SNR=4.6							
HRY	**Holter Researc**	**48.12**	**42**	P	**P**		**22 08 51.3**	**-0.6**
LAO	**LASA Array**	**48.54**	**37**	*e*P	**P**		**22 08 54.1**	**-1.0**
	comp=Z,17nm,1.3s,mb4.9							
BOZ	**Bozeman (W)**	**49.19**	**42**	*e*P	**P**		**22 09 00.7**	**+0.5**
	comp=Z,21nm,1.9s,mb4.8							
BRTR	**Keskin Array B**	**49.74**	**266**	P	**P**		**22 09 05.3**	**+0.9**
	comp=Z,0.7nm,0.7s,mb3.8,baz=11,slow=5.2,SNR=5.6							
BRTR				LR	LR		22 33 16.2	
	comp=Z,45nm,19.8s,MS3.5,baz=78,slow=40							
BRTR	**Keskin Array B**	**49.74**	**266**	*c*e*c*P	**P**		**22 09 06.0**	**+1.6**
RSSD	**Black Hills**	**51.24**	**35**	*e*P	**P**		**22 09 16.4**	**+0.8**
	comp=Z,5.9nm,0.9s,mb4.5							
RSSD	**Black Hills**	**51.24**	**35**	*e*P	**P**		**22 09 16.4**	**+0.8**
RSSD				pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.5							
TIP	**Timpagrande**	**52.16**	**283**	*e*P	**P**		**22 09 22.9**	**+0.3**
	comp=Z,11nm,1.4s,mb4.6							
HWUT	**Hardware Ranch**	**53.21**	**42**	*e*P	**P**		**22 09 30.7**	**+0.4**
	comp=Z,5.9nm,0.9s,mb4.5							
ESDC	**Sonseca Array**	**53.81**	**303**	P	**P**		**22 09 35.6**	**+0.9**
	comp=Z,3.2nm,1.0s,mb4.2,baz=4.7,slow=8.0,SNR=8.6							
PHWY	**Pilot Hill**	**53.95**	**37**	*e*P	**P**		**22 09 34.3**	**-1.4**
	comp=Z,27nm,1.0s,mb5.1							
DUG	**Dugway**	**54.52**	**44**	*e*P	**P**		**22 09 40.6**	**+0.7**
MMAI	**Mount Meron Ar**	**56.17**	**263**	LR	LR		22 36 27.5	
	comp=Z,57nm,18.9s,MS3.7,baz=115,slow=39							
MSU	**Marysvale**	**56.24**	**43**	*e*P	**P**		**22 09 53.4**	**+1.1**
KEST	**Kesra**	**56.37**	**289**	*e*P	**P**		**22 09 52.9**	**-0.4**
KEST	**Kesra**	**56.37**	**289**	P	**P**		**22 09 53.4**	**+0.1**
	comp=Z,3.6nm,0.8s,mb4.4,baz=19,slow=2.4,SNR=14							
KEST				LR	LR		22 34 00.6	
	comp=Z,65nm,20.6s,MS3.7,baz=242,slow=36							
MTUM	**Tungsten Hills**	**56.87**	**50**	*e*P	**P**		**22 09 57.0**	**+0.2**
PV01	**Paradox Valley**	**56.89**	**40**	*e*P	**P**		**22 09 57.1**	**+0.2**
	comp=Z,830nm,0.9s							
SDCO	**Great Sand Dun**	**57.49**	**37**	*e*P	**P**		**22 10 00.9**	**-0.2**
	comp=Z,3.2nm,1.0s,mb4.3							
ANMO	**Albuquerque**	**60.20**	**38**	*e*P	**P**		**22 10 19.3**	**-0.7**
	comp=Z,4.8nm,1.1s,mb4.4							
ANMO	**Albuquerque**	**60.20**	**38**	*e*P	**P**		**22 10 19.3**	**-0.7**
ANMO				pmax	pmax			
	comp=Z,5.0nm,1.1s							
JCT	**Junction City**	**65.08**	**32**	*e*P	**P**		**22 10 51.3**	**-1.3**
	comp=Z,4.7nm,0.8s,mb4.6							
JCT	**Junction City**	**65.08**	**32**	*e*P	**P**		**22 10 51.3**	**-1.3**
JCT				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.6							
CMAR	**Chiang Mai Arr**	**65.45**	**196**	P	**P**		**22 10 54.3**	**-0.8**
	comp=Z,0.7nm,0.3s,mb4.1,baz=349,slow=8.2,SNR=8.6							
CMAR				LR	LR		22 41 27.5	
	comp=Z,61nm,19.0s,MS3.8,baz=191,slow=38							
TXAR	**Lajitas Array**	**65.97**	**36**	P	**P**		**22 10 57.5**	**-0.9**
	comp=Z,2.6nm,0.9s,mb4.3,baz=348,slow=5.6,SNR=11							
TXAR				LR	LR		22 39 54.0	
	comp=Z,116nm,19.9s,MS4.1,baz=185,slow=36							
TORD	**Torodi Ar. Bea**	**79.51**	**294**	P	**P**		**22 12 18.6**	**-0.3**
	comp=Z,2.9nm,0.8s,mb4.2,baz=358,slow=5.8,SNR=15							

IDC ***13*** *22:08:12.6±1.1, 6.98S×150.43E, h0km, mb3.9/14, mb1 4.1/14, mb1mx4.1/17, mbtmp3.9/14, Error ellipse: s-maj=36.6km s-min=17.7km az=112.0*
NEIC ***13*** *22:08:14.6±3.9, 6.98S×150.40E, h11km±25km, mb4.4/4, Error ellipse: s-maj=11.1km s-min=6.7km az=155.0*
ISCJB ***13*** *22:08:15.8±0.5, 7.08S±0.07×150.40E±0.08, h33km, mb4.0/16, Error ellipse: s-maj=13.3km s-min=7.6km az=42.6*

ISC 13 22:08:18.0±0.5, 7.05S±0.07×150.39E±0.08, h35km, n27, σ0.64/27, mb4.0/16, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.96**	**234**	*e*Pn	**Pn**		**22 09 15.8**	**-0.5**
PMG				*e*Sn	**Sn**		**22 10 00.8**	**-0.7**
HNR	**Honiara**	**9.75**	**105**	*e*Pn	**Pn**		**22 10 35.3**	**-0.6**
KAKA	**Kakadu**	**18.55**	**251**	P	**Pn**		**22 12 32.7**	**+0.4**
WB2	**Warramunga Arr**	**20.16**	**229**	*e*P	**P**		**22 12 49.7**	**+0.3**
WRA	**Warramunga Arr**	**20.17**	**229**	P	**P**		**22 12 49.8**	**+0.2**
	1.9nm,0.7s,baz=51,slow=10,SNR=9.8							
ASAR	**Alice Springs**	**22.88**	**222**	P	**P**		**22 13 18.5**	**-0.1**
	0.9nm,0.4s,mb3.6,baz=57,slow=9.4,SNR=14							
STKA	**Stephens Creek**	**26.03**	**197**	*e*P	**P**		**22 13 48.5**	**+0.5**
	2.0nm,1.1s,mb3.6							
STKA	**Stephens Creek**	**26.03**	**197**	P	**P**		**22 13 48.6**	**+0.7**
	2.5nm,0.8s,mb3.8,baz=44,slow=6.2,SNR=3.9							
FITZ	**Fitzroy Crossi**	**26.50**	**243**	*e*P	**P**		**22 13 52.9**	**+0.6**
FITZ	**Fitzroy Crossi**	**26.50**	**243**	P	**P**		**22 13 51.7**	**-0.6**
	1.2nm,0.4s,mb3.8,baz=71,slow=4.5,SNR=7.3							
MJAR	**Matsushiro Arr**	**44.84**	**346**	P	**P**		**22 16 27.8**	**-0.9**
	0.9nm,0.6s,mb3.8,baz=163,slow=8.9,SNR=3.9							
MAJO	**Matsushiro**	**44.84**	**346**	*e*P	**P**		**22 16 28.4**	**-0.4**
QIZ	**Qiongzhong**	**47.62**	**304**	*e*P	**P**		**22 16 50.2**	**-0.8**
KSRS	**Korea Array**	**49.00**	**336**	P	**P**		**22 17 00.6**	**-0.6**
	0.4nm,0.4s,mb3.8,baz=148,slow=7.2,SNR=4.3							
KULM	**Kulim**	**51.13**	**283**	*e*P	**P**		**22 17 17.4**	**-0.4**
	6.1nm,1.0s,mb4.5							
CMAR	**Chiang Mai Arr**	**56.71**	**297**	P	**P**		**22 17 59.4**	**+0.8**
	0.5nm,0.9s,mb3.5,baz=97,slow=7.4,SNR=4.0							
SONM	**Songino Array**	**66.98**	**329**	P	**P**		**22 19 07.5**	**+0.4**
	0.5nm,0.4s,mb3.9,baz=129,slow=5.2,SNR=5.6							
MKAR	**Makanchi Array**	**80.46**	**320**	P	**P**		**22 20 26.4**	**+0.1**
	0.3nm,0.2s,mb3.8,baz=106,slow=4.7,SNR=4.9							
ZAA0	**Zalesovo Array**	**81.70**	**327**	*e*P	**P**		**22 20 33.4**	**+0.7**
ZALV	**Zalesovo Beam**	**81.70**	**327**	P	**P**		**22 20 32.1**	**-0.5**
	0.8nm,0.6s,mb3.9,baz=120,slow=5.8,SNR=5.0							
KURK	**Kurchatov**	**84.07**	**323**	P	**P**		**22 20 45.3**	**+0.3**
	0.8nm,0.6s,mb4.0,baz=108,slow=3.3,SNR=3.7							
UCH	**Uchtor**	**84.36**	**314**	*e*P	**P**		**22 20 48.5**	**+1.7**
	3.5nm,1.3s,mb4.3							
AML	**Almayashu**	**84.93**	**313**	*e*P	**P**		**22 20 50.4**	**+0.8**
	5.9nm,0.9s,mb4.7							
ILAR	**Eielson Array**	**85.14**	**22**	P	**P**		**22 20 49.5**	**-0.6**
	2.3nm,0.8s,mb4.4,baz=257,slow=5.3,SNR=22							
BVAR	**Borovoye Array**	**89.60**	**323**	P	**P**		**22 21 11.5**	**-0.4**
	0.9nm,0.7s,mb4.2,baz=117,slow=5.9,SNR=9.8							
NVAR	**Mina Array Bea**	**95.35**	**52**	P	**P**		**22 21 39.3**	**+0.4**
	0.4nm,0.5s,mb4.1,baz=215,slow=7.2,SNR=3.5							
TORD	**Torodi Ar. Bea**	**148.61**	**284**	PKPbc	PKPbc		22 28 03.0	+0.6
	3.7nm,0.6s,baz=89,slow=3.1,SNR=35							

JMA ***13*** *22:22:03.8±0.2, 43.86N×148.42E, h0km, M4.1*
ISCJB ***13*** *22:22:05.0±1.0, 44.34N±0.06×148.52E±0.10, h66km±7km, mb3.8/17, Error ellipse: s-maj=14.3km s-min=6.5km az=39.7*
MOS ***13*** *22:22:05.9±0.7, 44.49N×148.49E, h71km, mb4.3/5, Error ellipse: s-maj=16.5km s-min=13.4km az=101.6*
NEIC ***13*** *22:22:08.0±1.1, 44.46N×148.51E, h73km±10km, mb4.1/8, Error ellipse: s-maj=9.3km s-min=7.3km az=152.0*
IDC ***13*** *22:22:09.6±4.2, 44.46N×148.48E, h85km±38km, mb3.4/9, mb1 3.6/10, mb1mx3.4/22, mbtmp3.4/10, Error ellipse: s-maj=25.5km s-min=24.1km az=129.0*

ISC 13 22:22:06.2±1.0, 44.36N±0.06×148.6E±0.1, h58km±8km, n49, σ0.98/57, mb3.9/17, 3C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.00**	**331**	⇑*i*Pn	**Pn**		**22 22 23.5**	**-0.6**
KUR				*i*S	**Sn**		**22 22 37.2**	**-0.2**
KUR				pmax	pmax			
	comp=N,600nm,0.7s							
KUR				pmax	pmax			
	comp=E,260nm,0.7s							
KUR				pmax	pmax			
	comp=Z,690nm,0.7s							
KUR				smax				
	comp=N,5μm,1.0s							
KUR				smax				
	comp=E,4μm,1.0s							
KUR				smax				
	comp=N,2μm,0.4s							
KUR				smax				
	comp=E,1μm,0.4s							
NEM2	**Nemuro 2**	**2.26**	**245**	P	**Pn**		**22 22 39.6**	**-1.5**
NEM2				*e*S	**Sn**		**22 23 05.5**	**-2.3**
JRA	**Rausu**	**2.50**	**261**	P	**Pn**		**22 22 45.2**	**+0.8**
JRA				*e*S	**Sn**		**22 23 15.4**	**+1.7**
JNK	**Nakash**	**2.87**	**256**	*e*S	**Sn**		**22 23 23.0**	**+0.2**
JAK	**Akkeshi**	**3.11**	**245**	P	**Pn**		**22 22 51.6**	**-1.1**
JTKR	**Abashiri--Toko**	**3.36**	**265**	P	**Pn**		**22 22 57.2**	**+1.0**
JAR	**Ashorobuto**	**3.62**	**255**	P	**Pn**		**22 23 00.3**	**+0.6**
JCH	**Churui**	**4.16**	**247**	P	**Pn**		**22 23 06.8**	**-0.3**
JCH				*e*S	**Sn**		**22 23 53.0**	**-1.4**
JKK2	**Kamakawa 2**	**4.21**	**265**	P	**Pn**		**22 23 09.8**	**+2.1**
ASAJ	**Asahikawa**	**4.28**	**269**	P	**Pn**		**22 23 11.7**	**+2.9**
	comp=E,0.6nm,0.3s,baz=75,slow=23,SNR=4.1							
ASAJ	**Asahikawa**	**4.28**	**269**	PN	**Pn**		**22 23 11.7**	**+2.9**
ASAJ				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ERM	**Erimo**	**4.59**	**241**	*e*Pn	**Pn**		**22 23 14.4**	**+1.5**
ERM				*e*Sn	**Sn**		**22 24 05.9**	**+1.0**
ERM	**Erimo**	**4.59**	**241**	⇑*e*PN	**Pn**		**22 23 13.7**	**+0.8**
JNBK	**Urakawa-nobuka**	**4.71**	**246**	P	**Pn**		**22 23 14.1**	**-0.6**
JNBK				*e*S	**Sn**		**22 24 06.7**	**-1.3**
JKB	**Kayabe**	**6.03**	**248**	P	**Pn**		**22 23 32.3**	**-0.4**
JKB				*e*S	**Sn**		**22 24 36.6**	**-3.7**
JOT	**Ohata**	**6.26**	**244**	P	**Pn**		**22 23 34.5**	**-1.4**
JOT				*e*S	**Sn**		**22 24 40.0**	**-6.0**
PET	**Petropavlovsk**	**10.93**	**34**	⇑*e*PN	**Pn**		**22 24 45.4**	**+5.7**
MDJ	**Mudanjiang**	**13.54**	**278**	Pn	**Pn**		**22 25 17.2**	**+2.0**
HIA	**Hailar**	**20.25**	**294**	P	**P**		**22 26 36.8**	**+0.4**
TATO	**Taipei**	**29.27**	**238**	*e*P	**P**		**22 28 03.5**	**+0.7**
	comp=Z,13nm,0.4s,mb5.0							
ENH	**Enshi**	**33.77**	**259**	P	**P**		**22 28 42.4**	**+0.2**
MCK	**McKinley**	**39.53**	**38**	*e*P	**P**		**22 29 30.4**	**-0.5**
	comp=Z,2.8nm,0.6s,mb4.2							
MCK	**McKinley**	**39.53**	**38**	*e*P	**P**		**22 29 30.4**	**-0.5**
MCK				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.2							
ILAR	**Eielson Array**	**40.40**	**37**	P	**P**		**22 29 38.4**	**+0.3**
	comp=Z,0.2nm,0.4s,mb3.2,baz=264,slow=8.4,SNR=4.4							
MKAR	**Makanchi Array**	**45.20**	**298**	*i* P	**P**		**22 30 17.2**	**+0.2**
	comp=Z,0.3nm,0.2s,mb3.7,baz=80,slow=8.8,SNR=6.2							
MKAR	**Makanchi Array**	**45.20**	**298**	*i* P	**P**		**22 30 17.8**	**+0.7**
KURK	**Kurchatov**	**46.02**	**304**	*e*P	**P**		**22 30 22.2**	**-1.4**
	comp=Z,1.2nm,1.0s,mb3.8							
KURK	**Kurchatov**	**46.02**	**304**	*e*P	**P**		**22 30 22.2**	**-1.4**
KURK				pmax	pmax			
	comp=Z,1.0nm,1.0s,mb3.7							
AAK	**Ala-Archa**	**52.00**	**296**	P	**P**		**22 31 09.0**	**-0.4**
EKS2	**Erkin-Say**	**52.45**	**296**	*e*P	**P**		**22 31 12.6**	**-0.1**
	comp=Z,1.0nm,0.4s,mb4.1							
AML	**Almayashu**	**52.77**	**296**	*e*P	**P**		**22 31 15.5**	**+0.4**
	comp=Z,0.7nm,0.4s,mb3.9							
RES	**Resolute Bay**	**54.09**	**17**	P	**P**		**22 31 23.5**	**-0.8**
ARU	**Arti**	**54.59**	**317**	P	**P**		**22 31 28.0**	**-0.2**
ARU	**Arti**	**54.59**	**317**	P	**P**		**22 31 28.0**	**-0.2**
ABKAR	**Akbulak array**	**57.47**	**309**	*e*P	**P**		**22 31 48.7**	**-0.2**
	comp=Z,0.6nm,0.3s,mb4.1							
ARCES	**ARCESS Array B**	**59.02**	**340**	P	**P**		**22 31 58.8**	**-0.5**
	comp=Z,2.9nm,0.9s,mb4.3,baz=62,slow=11,SNR=3.5							
FFC	**Flin Flon**	**64.61**	**37**	P	**P**		**22 32 36.6**	**-0.5**
FINES	**FINESS Array B**	**64.79**	**333**	P	**P**		**22 32 37.8**	**-0.4**
	comp=Z,1.3nm,0.5s,mb4.2,baz=46,slow=8.2,SNR=11							
FITZ	**Fitzroy Crossi**	**65.59**	**204**	P	**P**		**22 32 44.7**	**+0.9**
NVAR	**Mina Array Bea**	**66.40**	**59**	P	**P**		**22 32 49.5**	**+0.5**
	comp=Z,0.3nm,0.5s,mb3.6,baz=289,slow=8.5,SNR=3.6							
NVAR				pP	pP		22 33 04.2	-0.6
	comp=Z,0.6nm,0.6s,baz=295,slow=8.4,SNR=3.0							
ASAR	**Alice Springs**	**69.01**	**194**	P	**P**		**22 33 06.3**	**+0.9**
	comp=Z,0.2nm,0.3s,mb3.5,baz=18,slow=3.2,SNR=3.0							
NOA	**NORSAR Array B**	**69.39**	**339**	P	**P**		**22 33 07.2**	**-0.2**
	comp=Z,0.8nm,0.5s,mb3.9,baz=29,slow=6.5,SNR=4.2							
KIV	**Kislovodsk**	**70.10**	**312**	*e*P	**P**		**22 33 11.9**	**-0.1**
	comp=Z,1.4nm,0.4s,mb4.2							
KIV	**Kislovodsk**	**70.10**	**312**	*e*P	**P**		**22 33 11.9**	**-0.1**
KIV				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.1							
MORC	**Moravsky Berou**	**76.97**	**330**	P	**P**		**22 33 51.2**	**-1.1**
	comp=Z,1.4nm,0.6s,mb4.1							
MORC	**Moravsky Berou**	**76.97**	**330**	P	**P**		**22 33 51.2**	**-1.0**
MORC				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.9							
BRTR	**Keskin Array B**	**77.85**	**314**	P	**P**		**22 33 57.6**	**+0.3**
	comp=Z,0.3nm,0.4s,mb3.5,baz=14,slow=1.8,SNR=3.2							
TXAR	**Lajitas Array**	**81.47**	**57**	P	**P**		**22 34 17.8**	**+0.7**
TXAR				pP	pP		22 34 31.0	-2.4
TXAR	**Lajitas Array**	**81.47**	**57**	P	**P**		**22 34 17.8**	**+0.7**
	comp=Z,0.1nm,0.5s,mb3.0,baz=318,slow=3.6,SNR=3.6							
TXAR				pP	pP		22 34 31.0	-2.4
	comp=Z,0.4nm,0.6s,baz=312,slow=5.0,SNR=5.5							

NIED ***13*** *22:40:00, 44.40N×149.20E, h32km, Mw3.9 Best double couple: M0 8.10000×10+14 NP1:φ0=269.00000°, δ86.00000°, λ108.00000°. NP2:φ0=10.00000°, δ18.00000°, λ12.00000°.*
MOS ***13*** *22:40:59.1±0.3, 44.32N×149.21E, h46km, mb4.1/2, Error ellipse: s-maj=34.0km s-min=25.1km az=62.1*
NEIC ***13*** *22:40:60.0±1.9, 44.44N×149.29E, h41km±18km, mb4.1/2, Error ellipse: s-maj=19.0km s-min=14.1km az=173.0*
JMA ***13*** *22:40:59.2±0.5, 44.44N×149.22E, h30km, M3.9*
ISCJB ***13*** *22:41:02.3±1.4, 43.65N±0.08×149.1E±0.1, h95km±10km, mb4.4/5, Error ellipse: s-maj=19.2km s-min=9.7km az=37.9*

ISC 13 22:41:02.4±1.2, 43.69N±0.09×149.2E±0.1, h82km±10km, n34, σ0.98/42, mb4.4/5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**2.52**	**264**	P	**Pn**		**22 41 39.9**	**-1.4**
NEM2				*e*S	**Sn**		**22 42 10.2**	**-0.9**
JRA	**Rausu**	**2.95**	**276**	P	**Pn**		**22 41 45.9**	**-1.1**
JNK	**Nakash**	**3.24**	**270**	P	**Pn**		**22 41 50.3**	**-0.7**
JAK	**Akkeshi**	**3.35**	**260**	P	**Pn**		**22 41 51.9**	**-0.5**
JTKR	**Abashiri--Toko**	**3.83**	**276**	P	**Pn**		**22 41 58.3**	**-0.6**
JAR	**Ashorobuto**	**3.96**	**266**	P	**Pn**		**22 42 01.0**	**+0.3**
JOB	**Onbets**	**3.98**	**260**	P	**Pn**		**22 42 01.2**	**+0.2**
JMP	**Maruseppu**	**4.22**	**276**	P	**Pn**		**22 42 04.2**	**-0.1**
JCH	**Churui**	**4.39**	**258**	P	**Pn**		**22 42 07.1**	**+0.5**
JEM	**Erimo**	**4.74**	**251**	P	**Pn**		**22 42 13.2**	**+1.9**
ERM	**Erimo**	**4.74**	**251**	*e*Pn	**Pn**		**22 42 13.7**	**+2.5**
	18nm,0.4s							
ERM				Sn	**Sn**		**22 43 10.2**	**+5.3**
ERM	**Erimo**	**4.74**	**251**	*e*PN	**Pn**		**22 42 13.7**	**+2.4**
ERM							22 43 10.2	
ERM				pmax	pmax			
JNBK	**Urakawa-nobuka**	**4.92**	**256**	P	**Pn**		**22 42 14.3**	**+0.5**
JBT2	**Biratori 2**	**5.07**	**262**	P	**Pn**		**22 42 16.5**	**+0.7**
JNB	**Noboribetsu**	**6.09**	**261**	P	**Pn**		**22 42 30.4**	**+0.7**
JNB				*e*S	**Sn**		**22 43 39.4**	**+1.5**
JKB	**Kayabe**	**6.26**	**256**	P	**Pn**		**22 42 32.6**	**+0.5**
JKB				*e*S	**Sn**		**22 43 41.7**	**-0.5**
JANG	**Nango**	**6.60**	**242**	P	**Pn**		**22 42 36.6**	**-0.1**
JANG				*e*S	**Sn**		**22 43 49.4**	**-1.1**
JTH	**Tanohata**	**6.63**	**238**	*e*S	**Sn**		**22 43 50.1**	**-1.1**
JTM	**Tenmabayashi**	**6.69**	**247**	P	**Pn**		**22 42 38.7**	**+0.8**
JTM				*e*S	**Sn**		**22 43 51.7**	**-0.8**
OFUJ	**Ofunato**	**7.29**	**233**	P	**Pn**		**22 42 47.0**	**+0.9**
OFUJ				*e*S	**Sn**		**22 44 06.8**	**-0.5**
JIO	**Ouri**	**7.90**	**231**	P	**Pn**		**22 42 54.8**	**+0.4**
JIO				*e*S	**Sn**		**22 44 21.5**	**-0.6**
SKR	**Severo-Kuril's**	**8.43**	**32**	*e*PN	**Pn**		**22 42 53.8**	**-7.8**
NIKO	**Nikolski**	**29.03**	**56**	*e*P	**P**		**22 46 51.5**	**-2.8**
	comp=Z,38nm,0.7s,mb5.1							
ENH	**Enshi**	**34.09**	**260**	P	**P**		**22 47 42.2**	**+3.2**
KURK	**Kurchatov**	**46.78**	**305**	P	**P**		**22 49 22.4**	**-0.9**
AAK	**Ala-Archa**	**52.71**	**297**	*e*P	**P**		**22 50 09.1**	**+0.8**
	comp=Z,3.0nm,0.3s,mb4.8							
AAK	**Ala-Archa**	**52.71**	**297**	*e*P	**P**		**22 50 09.1**	**+0.8**
AAK				pmax	pmax			
	comp=Z,3.0nm,0.3s,mb4.8							
EKS2	**Erkin-Say**	**53.16**	**297**	*e*P	**P**		**22 50 11.5**	**-0.1**
	comp=Z,1.0nm,0.6s,mb4.0							
AML	**Almayashu**	**53.47**	**296**	P	**P**		**22 50 14.2**	**+0.3**
KBL	**Kabul**	**60.59**	**291**	*e*P	**P**		**22 51 05.2**	**+0.9**
	comp=Z,1.2nm,0.4s,mb4.3							
KBL	**Kabul**	**60.59**	**291**	*e*P	**P**		**22 51 05.2**	**+0.9**
KBL				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.2							
CTAO	**Charters Tower**	**63.52**	**183**	P	**P**		**22 51 31.1**	**+7.2**
MORC	**Moravsky Berou**	**77.78**	**330**	*e*P	**P**		**22 52 49.5**	**-0.8**
	comp=Z,1.5nm,0.6s,mb3.9							
MORC	**Moravsky Berou**	**77.78**	**330**	*e*P	**P**		**22 52 49.5**	**-0.7**
MORC				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.7							

ISCJB ***13*** *22:55:51.4±0.5, 83.78N±0.09×112.7E±0.7, h10km, mb3.8/12, MS3.1/10, Error ellipse: s-maj=13.7km s-min=10.2km az=168.5*
IDC ***13*** *22:55:51.6±0.9, 83.86N×113.46E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.7/25, mbtmp3.8/8, MS3.2/10, Ms1 3.3/10, ms1mx3.1/29, Error ellipse: s-maj=33.0km s-min=18.9km az=149.0*
NEIC ***13*** *22:55:53.2±0.4, 83.81N×112.66E, h10km, mb4.1/4, Error ellipse: s-maj=11.2km s-min=8.5km az=171.0*

ISC 13 22:55:53.3±0.5, 83.81N±0.09×112.8E±0.7, h10km, n25, σ0.90/19, mb3.8/12, MS3.1/10, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**13.74**	**307**	*e*Pn	**Pn**		**22 59 08.2**	**+0.5**
KEV	**Kevo**	**20.82**	**282**	P	**P**		**23 00 34.3**	**-0.1**
RES	**Resolute Bay**	**21.13**	**20**	LR	LR		23 08 29.9	
	comp=Z,68nm,20.4s,MS3.0,baz=104,slow=36							
ARCES	**ARCESS Array B**	**21.19**	**284**	P	**P**		**23 00 38.4**	**0.0**
	1.9nm,0.8s,mb3.5,baz=19,slow=8.6,SNR=2.7							
JMIC	**Jan Mayen**	**22.97**	**314**	LR	L

*ISCJB **13** 23:03:07.4±0.8, 19.°61N±0.°03×69.°97W±0.°02, h3km±5km, mb4.4/48, MS3.5/5, Error ellipse: s-maj=5.8km s-min=2.4km az=21.2*
*NEIC **13** 23:03:09.7±0.2, 19.°58N×69.°97W, h10km, mb4.6/37, MD4.1(RSPR), Error ellipse: s-maj=5.8km s-min=3.1km az=210.0*
NEIC Felt at Santiago.
*RSPR **13** 23:03:13.8, 19.°55N×69.°95W, h5km±7km, MD4.1/9*
*JSN **13** 23:04:33.5±34.0, 18.°39N×77.°26W, h0km±280km, MD4.6*
ISC 13 23:03:08.9±0.8, 19.°60N±0.°03×69.°96W±0.°02, h2km±5km, n293, σ0°87/304, mb4.4/48, MS3.5/5, 97C-77D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SMN1	**Samana, DR**	**0.77**	**122**	**⇓**	***e***	**P**	**Pg**	**23 03 23.2**	**-0.4**
SMN1					***e***	**S**	**Sg**	**23 03 34.8**	**+1.3**
SDDR	**Presa de Saban**	**1.40**	**244**	**⇑**	***e***	**P**	**Pn**	**23 03 35.2**	**-0.3**
SDDR					***e***	**S**	**Sg**	**23 03 54.2**	**+0.3**
GRTK	**Grand Turk**	**2.20**	**330**	**⇑**	***e***	**P**	**Pn**	**23 03 46.5**	**-0.1**
GRTK	**Grand Turk**	**2.20**	**330**		***e***	**S**	**Sn**	**23 04 16.7**	**+2.4**
GRTK	**Grand Turk**	**2.20**	**330**		***e***	**Pn**	**Pn**	**23 03 46.1**	**-0.4**
GRTK					***e***	**Sn**	**Sn**	**23 04 13.9**	**-0.4**
IMO	**Isla Mona**	**2.44**	**127**	**⇑**	***i***	**P**	**Pn**	**23 03 50.5**	**+0.7**
AGP	**Aguadilla**	**2.92**	**114**		***e***	**Pn**	**Pn**	**23 03 56.0**	**-0.4**
AGP					***e***	**Sn**	**Sn**	**23 04 31.1**	**-1.0**
AGPR	**Aguadilla, PR**	**2.92**	**112**	**⇑**	***e***	**P**	**Pn**	**23 03 56.1**	**-0.4**
AGPR	**Aguadilla, PR**	**2.92**	**112**		***e***	**S**	**Sn**	**23 04 30.9**	**-1.3**
AGPR	**Aguadilla, PR**	**2.92**	**112**		***e***	**Pn**	**Pn**	**23 03 56.0**	**-0.4**
AGPR					***e***	**Pg**	**Pg**	**23 04 05.5**	**+0.5**
AGPR					***e***	**Sn**	**Sn**	**23 04 30.6**	**-1.5**
MPR	**Mayaguez**	**3.00**	**117**		***e***	**Pn**	**Pn**	**23 03 57.2**	**-0.4**
MPR					***e***	**Sn**	**Sn**	**23 04 34.7**	**+0.4**
LSP	**Las Mesas**	**3.07**	**117**	**⇓**	***i***	**P**	**Pn**	**23 03 58.9**	**+0.4**
LSP					***e***	**S**	**Sn**	**23 04 36.4**	**+0.6**
CRPR	**Cabo Rojo, PR**	**3.13**	**120**	**⇓**	***e***	**P**	**Pn**	**23 04 00.3**	**+1.0**
CRPR					***e***	**S**	**Sn**	**23 04 39.5**	**+2.2**
LRS	**Lares**	**3.22**	**113**	**⇑**	***i***	**P**	**Pn**	**23 04 05.2**	**+4.6**
AOPR	**Arecibo Observ**	**3.28**	**112**	**⇓**	***e***	**P**	**Pn**	**23 04 00.1**	**-1.3**
GBPR	**Guanica, Bosqu**	**3.33**	**118**	**⇑**	***i***	**P**	**Pn**	**23 04 03.0**	**+0.9**
OBIP	**Obispado Ponce**	**3.53**	**115**		***e***	**Pn**	**Pn**	**23 04 05.2**	**+0.3**
OBIP					***e***	**Sn**	**Sn**	**23 04 45.7**	**-1.6**
CELP	**Cerrillos**	**3.54**	**115**	**⇑**	***i***	**P**	**Pn**	**23 04 05.0**	**0.0**
ICM	**Isla Caja Muer**	**3.67**	**117**	**⇓**	***e***	**P**	**Pn**	**23 04 08.2**	**+1.4**
SJG	**San Juan**	**3.90**	**112**	**⇑**	***e***	**P**	**Pn**	**23 04 08.2**	**-1.7**
SJG	**San Juan**	**3.90**	**112**	**⇑**	***e***	**P**	**Pn**	**23 04 08.2**	**-1.8**
SJG	**San Juan**	**3.90**	**112**		***e***	**Pn**	**Pn**	**23 04 08.2**	**-1.8**
SJG					***e***	**Sn**	**Sn**	**23 04 56.6**	**+0.3**
SJG	**San Juan**	**3.90**	**112**		Pn		**Pn**	**23 04 08.1**	**-1.8**
	13nm,0.3s,baz=331,slow=12,SNR=11								
SJG					Sn		**Sn**	**23 04 52.6**	**-3.7**
	48nm,0.3s,baz=328,slow=22,SNR=11								
MASC	**Masc**	**4.06**	**279**		***e***	**P**	**Pn**	**23 04 11.0**	**-1.2**
MASC					***e***	**S**	**Sn**	**23 04 58.7**	**-1.6**
	comp=N,23nm,0.6s								
MASC					***e***				
	comp=E,24nm,0.6s								
CBYP	**Canovanas**	**4.10**	**108**	**⇑**	***e***	**P**	**Pn**	**23 04 11.5**	**-1.2**
HUMP	**Col San Antoni**	**4.15**	**110**	**⇑**	***e***	**P**	**Pn**	**23 04 12.1**	**-1.3**
MTP	**Monte Pirata**	**4.43**	**109**	**⇑**	***e***	**P**	**Pn**	**23 04 15.8**	**-1.4**
MOAC	**Moa**	**4.82**	**283**		***e***	**P**	**Pn**	**23 04 20.4**	**-2.2**
MOAC					***e***	**S**	**Sn**	**23 05 16.1**	**-2.9**
	comp=N,239nm,1.0s								
MOAC					***e***				
	comp=E,231nm,0.6s								
GTBY	**Guantanamo Bay**	**4.86**	**275**	**⇑**	***e***	**P**	**Pn**	**23 04 20.7**	**-2.5**
GTBY					***e***	**S**	**Sn**	**23 05 18.6**	**-1.5**
STVI	**Saint Thomas**	**4.90**	**104**	**⇑**	***e***	**P**	**Pn**	**23 04 22.0**	**-1.7**
TBVI	**Tortola**	**5.19**	**102**	**⇓**	***i***	**P**	**Pn**	**23 04 25.7**	**-2.0**
CDVI	**St. Croix**	**5.25**	**110**		***e***	**Pn**	**Pn**	**23 04 27.3**	**-1.2**
CDVI					***e***	**Sn**	**Sn**	**23 05 27.1**	**-2.7**
RCC	**Rio Carpintero**	**5.42**	**275**		***e***	**P**	**Pn**	**23 04 27.5**	**-3.3**
RCC					***e***	**S**	**Sn**	**23 05 28.0**	**-5.8**
	comp=N,125nm,0.7s								
RCC					***e***				
	comp=E,132nm,0.5s								
GWJ	**Greenwich**	**6.59**	**258**	**⇑**	***i***	**P**	**Pn**	**23 04 47.7**	**+0.8**
HOJ	**Hope**	**6.63**	**257**	**⇓**	***i***	**P**	**Pn**	**23 04 48.9**	**+1.5**
LMGC	**Las Mercedes**	**6.65**	**275**		***e***	**P**	**Pn**	**23 04 44.9**	**-2.9**
LMGC					***e***	**S**	**Sn**	**23 06 00.4**	**-3.8**
	comp=N,259nm,0.9s								
LMGC					***e***				
	comp=E,307nm,1.3s								
STH	**Stony Hill**	**6.66**	**258**	**⇑**	***i***	**P**	**Pn**	**23 04 48.0**	**+0.1**
MTDJ	**Mount Denham**	**7.30**	**260**	**⇑**	***e***	**P**	**Pn**	**23 04 56.1**	**-0.6**
MCJ	**Malvern**	**7.51**	**258**	**⇓**	***i***	**P**	**Pn**	**23 05 01.0**	**+1.4**
SDV	**Santo Domingo**	**10.67**	**184**		***e***	**Pn**	**Pn**	**23 05 44.9**	**+2.0**
BBSR	**BB Station**	**13.57**	**19**		***e***	**Pn**	**Pn**	**23 06 21.5**	**-1.0**
BBSR					***e***	**Sn**	**Sn**	**23 08 38.9**	**-15**
BCIP	**Isla Barro Col**	**14.10**	**224**		***e***	**P**	**Pn**	**23 06 28.8**	**-1.2**
	comp=E,18nm,0.8s								
ROSC	**El Rosal**	**15.26**	**197**		***e***	**Pn**	**Pn**	**23 06 46.6**	**+1.0**
ROSC	**El Rosal**	**15.26**	**197**		Pn		**Pn**	**23 06 40.0**	**-5.6**
	comp=E,0.8nm,0.3s,baz=83,slow=19,SNR=1.5								
JTS	**JuntasAbangare**	**17.18**	**240**		***e***	**P**	**Pn**	**23 07 13.3**	**+3.0**
	comp=E,29nm,1.0s								
TEIG	**Tepich**	**17.24**	**275**		***e***	**Pn**	**Pn**	**23 07 11.3**	**+0.3**
JSC	**Jenkinsville**	**17.74**	**328**		***e***	**Pn**	**Pn**	**23 07 17.5**	**+0.3**
GOGA	**Godfrey**	**18.29**	**321**		***e***	**Pn**	**Pn**	**23 07 23.7**	**-0.2**
	comp=E,45nm,1.4s								
CBN	**Corbin**	**19.63**	**342**		***e***	**Pn**	**Pn**	**23 07 44.3**	**+4.2**
	comp=E,38nm,0.5s								
BLA	**Blacksburg**	**19.79**	**335**		***e***	**P**	**Pn**	**23 07 37.8**	**-4.2**
	comp=E,42nm,1.1s								
TKL	**Tuckaleechee C**	**20.11**	**326**		P		**P**	**23 07 42.9**	**-1.1**
TKL					S		**S**	**23 11 19.9**	**-11**
TKL	**Tuckaleechee C**	**20.11**	**326**		P		**P**	**23 07 42.9**	**-1.1**
	comp=E,4.8nm,0.8s,baz=137,slow=19,SNR=2.2								
TKL					S		**S**	**23 11 19.9**	**-11**
	comp=E,6.0nm,0.5s,baz=122,slow=13,SNR=4.6								
LRAL	**Lakeview Retre**	**20.27**	**315**		***e***	**Pn**	**P**	**23 07 47.0**	**+1.1**
	comp=E,101nm,2.3s								
OTAV	**Otavalo**	**20.96**	**204**		***e***	**Pn**	**P**	**23 07 54.6**	**+1.1**
	comp=E,52nm,1.2s								
SWET	**Sewanee**	**21.00**	**321**		***e***	**P**	**P**	**23 07 54.0**	**+0.2**
WVT	**Waverly**	**22.76**	**320**		***e***	**P**	**P**	**23 08 11.3**	**-1.2**
	comp=E,6.5nm,0.7s,mb4.2								
CMIG	**Matias Romero**	**23.79**	**268**		P		**P**	**23 08 19.2**	**-4.1**
	comp=E,1.2nm,0.4s,mb3.6,baz=68,slow=7.3,SNR=4.6								
LBNH	**Lisbon**	**24.62**	**357**		P		**P**	**23 08 24.5**	**-6.2**
SIUC	**Southern Illin**	**24.64**	**321**		***e***	**P**	**P**	**23 08 30.5**	**-0.4**
	comp=E,14nm,0.9s,mb4.5								
HKT	**Hockley**	**25.60**	**299**		***e***	**P**	**P**	**23 08 39.9**	**+0.1**
	comp=E,14nm,1.5s,mb4.3								
MIAR	**Mount Ida**	**25.68**	**310**		***e***	**P**	**P**	**23 08 40.3**	**-0.1**
SADO	**Sadowa**	**26.24**	**345**		S		**S**	**23 13 30.4**	**+12**
	comp=E,2.0nm,0.6s,baz=257,slow=14,SNR=2.2								
SADO					LR		LR	23 19 04.6	
	comp=E,75nm,19.0s,MS3.2,baz=353,slow=36								
JFWS	**Jewell Farm**	**28.85**	**328**		***e***	**P**	**P**	**23 09 06.9**	**-1.9**
	comp=E,8.9nm,0.6s,mb4.7								
JCT	**Junction City**	**29.04**	**298**	**⇑**	P		**P**	**23 09 10.5**	**-0.2**
	baz=29								
WMOK	**Wichita Mounta**	**29.61**	**307**		***e***	**P**	**P**	**23 09 15.1**	**-0.6**
	comp=E,4.5nm,0.8s,mb4.2								
628A	**Black Gap, Mar**	**31.44**	**295**	**⇓**	P		**P**	**23 09 31.6**	**-0.3**
	baz=31								
428A	**Kincaid Ranch,**	**31.52**	**297**	**⇑**	P		**P**	**23 09 32.4**	**-0.1**
	baz=32,SNR=10								
328A	**Wristen Ranch,**	**31.77**	**298**	**⇓**	P		**P**	**23 09 33.9**	**-0.9**
	baz=32								
627A	**Terlingua Ranc**	**31.86**	**294**	**⇑**	P		**P**	**23 09 35.4**	**-0.2**
	baz=32,SNR=7.5								
TXAR	**Lajitas Array**	**32.08**	**294**		P		**P**	**23 09 36.7**	**-0.8**
TXAR					PcP		PcP	23 12 26.0	-1.2
TXAR	**Lajitas Array**	**32.08**	**294**		P		**P**	**23 09 36.7**	**-0.8**
	comp=E,1.7nm,0.7s,mb4.0,baz=109,slow=10,SNR=16								
TXAR					PcP		PcP	23 12 26.0	-1.2
	comp=E,0.8nm,0.9s,baz=137,slow=5.7,SNR=3.7								
427A	**Hayter Ranch,**	**32.15**	**297**	**⇑**	P		**P**	**23 09 37.8**	**-0.3**
	baz=32								
527A	**Woodward Ranch**	**32.18**	**296**	**⇑**	P		**P**	**23 09 38.1**	**-0.3**
	baz=32,SNR=9.4								
MSTX	**Muleshoe**	**32.44**	**303**	**⇓**	P		**P**	**23 09 40.3**	**-0.3**
	baz=32								
626A	**Big Bend Ranch**	**32.52**	**294**	**⇓**	P		**P**	**23 09 41.0**	**-0.3**
	baz=32								
127A	**Arkansas Junct**	**32.55**	**300**	**⇑**	P		**P**	**23 09 40.9**	**-0.7**
	baz=33								
426A	**McDonald Obser**	**32.64**	**296**	**⇑**	P		**P**	**23 09 42.0**	**-0.4**
	baz=33,SNR=9.0								
226A	**Malaga, Loving**	**33.00**	**299**	**⇑**	P		**P**	**23 09 45.4**	**-0.2**
	baz=33								
W27A	**Bowe Ranch, En**	**33.01**	**305**	**⇑**	P		**P**	**23 09 45.7**	**0.0**
	baz=33								
126A	**Clayton Basin,**	**33.08**	**300**	**⇓**	P		**P**	**23 09 45.6**	**-0.6**
	baz=33								
Z26A	**Caprock**	**33.21**	**301**	**⇑**	P		**P**	**23 09 46.6**	**-0.8**
	baz=33								
425A	**Indio Mountain**	**33.47**	**296**	**⇓**	P		**P**	**23 09 49.9**	**+0.2**
	baz=34,SNR=15								
125A	**Gardner Draw,**	**33.60**	**300**	**⇓**	P		**P**	**23 09 50.0**	**-0.8**
	baz=34								
225A	**Deer Hill, Car**	**33.61**	**299**	**⇑**	P		**P**	**23 09 50.7**	**-0.2**
	baz=34,SNR=11								
Z25A	**Roswell**	**33.80**	**301**	**⇓**	P		**P**	**23 09 52.3**	**-0.3**
	baz=34								
Y25A	**Mesa, Roswell**	**33.96**	**302**	**⇑**	P		**P**	**23 09 54.3**	**+0.4**
	baz=34								
MNTX	**Cornudas Mount**	**33.98**	**298**	**⇑**	P		**P**	**23 09 53.8**	**-0.4**
	baz=34								
MNTX	**Cornudas Mount**	**33.98**	**298**		***e***	**P**	**P**	**23 09 53.8**	**-0.3**
	comp=E,13nm,1.0s,mb4.8								
MNTX					***e***	**P**	PP	23 11 11.6	+0.7
U26A	**Atchley Ranch,**	**33.98**	**307**	**⇑**	P		**P**	**23 09 53.7**	**-0.4**
	baz=34								
W25A	**X Bar L Ranch,**	**34.15**	**304**	**⇑**	P		**P**	**23 09 55.4**	**-0.2**
	baz=34								
224A	**Cornudas Mount**	**34.18**	**298**	**⇑**	P		**P**	**23 09 55.8**	**-0.1**
	baz=34,SNR=12								
124A	**Stringfield Ra**	**34.26**	**300**	**⇑**	P		**P**	**23 09 56.8**	**+0.2**
	baz=34,SNR=10.0								
Z24A	**Sheeppen Canyo**	**34.34**	**301**	**⇑**	P		**P**	**23 09 57.3**	**0.0**
	baz=34,SNR=8.3								
V25A	**Rancho No Teng**	**34.46**	**305**	**⇓**	P		**P**	**23 09 58.4**	**+0.1**
	baz=34,SNR=5.8								
U25A	**Circle Dot Ran**	**34.49**	**306**	**⇑**	P		**P**	**23 09 58.3**	**-0.2**
	baz=34								
Y24A	**Capitan**	**34.55**	**302**	**⇑**	P		**P**	**23 09 59.1**	**0.0**
	baz=35,SNR=7.0								
W24A	**Lazy 6 Ranch,**	**34.89**	**304**	**⇓**	P		**P**	**23 10 02.3**	**+0.4**
	baz=35								
123A	**Bell Site, Whi**	**34.91**	**299**	**⇑**	P		**P**	**23 10 02.3**	**+0.1**
	baz=35								
S25A	**Robets Cordova**	**34.95**	**308**	**⇑**	P		**P**	**23 10 02.8**	**+0.4**
	baz=35								
Z23A	**Rita Site, Whi**	**35.03**	**300**	**⇓**	P		**P**	**23 10 03.1**	**-0.1**
	baz=35,SNR=5.5								
SCHQ	**Schefferville**	**35.25**	**3**		***e***	**P**	**P**	**23 10 04.2**	**-0.6**
SCHQ	**Schefferville**	**35.25**	**3**		P		**P**	**23 10 04.0**	**-0.8**
	comp=E,2.2nm,0.6s,mb4.3,baz=183,slow=9.4,SNR=2.8								
SCHQ					LR		LR	23 24 12.3	
	comp=E,101nm,18.2s,MS3.6,baz=180,slow=36								
W23A	**Werner Place,**	**35.45**	**303**	**⇑**	P		**P**	**23 10 07.4**	**+0.5**
	baz=36								
222A	**Williams Famil**	**35.50**	**298**	**⇑**	P		**P**	**23 10 07.5**	**+0.2**
	baz=36								
S24A	**Houchin Ranch,**	**35.52**	**308**	**⇓**	P		**P**	**23 10 07.9**	**+0.5**
	baz=36								
122A	**Conniff Cattle**	**35.53**	**299**	**⇓**	P		**P**	**23 10 08.3**	**+0.7**
	baz=36								
BNM	**Barren Site**	**35.57**	**302**		***e***	**P**	**P**	**23 10 08.8**	**+1.0**
	comp=E,6.8nm,1.1s,mb4.5								
LPM	**Los Pinos Moun**	**35.61**	**302**		***e***	**P**	**P**	**23 10 07.0**	**-1.2**
Z22A	**Elephant Butte**	**35.63**	**300**	**⇓**	P		**P**	**23 10 09.7**	**+1.4**
	baz=36								
ANMO	**Albuquerque**	**35.64**	**303**		***e***	**P**	**P**	**23 10 08.3**	**-0.2**
V23A	**Ortiz Mt. (NFS**	**35.65**	**304**	**⇓**	P		**P**	**23 10 09.1**	**+0.6**
	baz=36								
R24A	**Sanders Place,**	**35.65**	**309**	**⇑**	P		**P**	**23 10 08.8**	**+0.4**
	baz=36								
LPAZ	**La Paz**	**35.71**	**177**		***e***	**P**	**P**	**23 10 08.7**	**-0.4**
	comp=E,3.1nm,0.9s,mb4.2								
LPAZ					PcP		PcP	23 12 35.2	-2.3
LPAZ					LR		LR	23 25 40.9	
LPAZ	**La Paz**	**35.71**	**177**		P		**P**	**23 10 06.1**	**-3.0**
	comp=E,1.2nm,0.8s,mb3.9,baz=342,slow=6.4,SNR=3.1								
LPAZ					PcP		PcP	23 12 35.2	-2.3
	comp=E,1.0nm,0.8s,baz=0.0,slow=6.1,SNR=2.1								
LPAZ					LR		LR	23 25 40.9	
	comp=E,91nm,18.0s,MS3.6,baz=356,slow=38								
SDCO	**Great Sand Dun**	**35.77**	**308**		***e***	**P**	**P**	**23 10 09.3**	**-0.2**
SDCO					***e***	PcP	PcP	23 12 40.0	+2.5
Y22A	**Socorro**	**35.78**	**301**	**⇑**	P		**P**	**23 10 10.1**	**+0.4**
	baz=36								
121A	**Cookes Peak, D**	**36.15**	**299**	**⇑**	P		**P**	**23 10 13.4**	**+0.6**
	baz=36								
U22A	**Llaves**	**36.35**	**305**	**⇑**	P		**P**	**23 10 15.4**	**+0.9**
	baz=36								
Y21A	**Point of Rocks**	**36.38**	**301**	**⇓**	P		**P**	**23 10 15.2**	**+0.5**
	baz=36,SNR=13								
SIV	**San Ignacio**	**36.43**	**166**		P		**P**	**23 10 11.0**	**-4.3**
	comp=E,0.8nm,0.7s,mb3.8,baz=12,slow=13,SNR=4.9								
SIV					PcP		PcP	23 12 37.4	-2.3
	comp=E,1.1nm,0.8s,baz=343,slow=16,SNR=3.1								
X21A	**Alamocita Cree**	**36.57**	**302**	**⇓**	P		**P**	**23 10 17.1**	**+0.7**
	baz=37,SNR=7.2								
ISCO	**Idaho Springs**	**36.61**	**311**	**⇑**	P		**P**	**23 10 17.0**	**+0.4**
	baz=37								
ISCO	**Idaho Springs**	**36.61**	**311**		***e***	**P**	**P**	**23 10 17.1**	**+0.5**
	comp=E,20nm,1.8s,mb4.6								
W21A	**San Fidel**	**36.62**	**303**	**⇓**	P		**P**	**23 10 17.2**	**+0.4**
	baz=37								
220A	**Playas Peak, P**	**36.65**	**297**	**⇑**	P		**P**	**23 10 17.4**	**+0.3**
	baz=37,SNR=6.6								
S22A	**4UR Ranch, Cre**	**36.76**	**307**	**⇓**	P		**P**	**23 10 18.3**	**+0.3**
	baz=37								
120A	**U Bar Ranch, L**	**36.85**	**298**	**⇓**	P		**P**	**23 10 19.3**	**+0.4**
	baz=37								
Y20A	**Horse Springs,**	**36.92**	**301**	**⇑**	P		**P**	**23 10 19.8**	**+0.4**
	baz=37,SNR=5.3								
Z20A	**Nine Sixteen R**	**36.93**	**299**	**⇑**	P		**P**	**23 10 20.1**	**+0.6**
	baz=37								
U21A	**Nageezi**	**36.99**	**305**	**⇑**	P		**P**	**23 10 20.3**	**+0.4**
	baz=37								
319A	**Douglas**	**37.20**	**296**	**⇓**	P		**P**	**23 10 22.4**	**+0.6**
	baz=37								
219A	**White Tail Can**	**37.28**	**297**	**⇑**	P		**P**	**23 10 22.7**	**+0.2**
	baz=37								
O22A	**Kremmling**	**37.41**	**311**	**⇑**	P		**P**	**23 10 23.5**	**0.0**
	baz=37								
119A	**Ashpeak Ranch,**	**37.45**	**299**	**⇓**	P		**P**	**23 10 24.5**	**+0.6**
	baz=38								
R21A	**Cimarron**	**37.50**	**308**	**⇑**	P		**P**	**23 10 25.1**	**+0.8**
	baz=38								
Z19A	**T-Link Ranch,**	**37.52**	**299**	**⇓**	P		**P**	**23 10 24.6**	**+0.1**
	baz=38								
Y19A	**Nutrioso**	**37.64**	**300**	**⇑**	P		**P**	**23 10 25.7**	**+0.1**
	baz=38								
X19A	**St. Johns**	**37.77**	**301**	**⇓**	P		**P**	**23 10 27.1**	**+0.5**
	baz=38								
318A	**Bisbee**	**37.81**	**296**	**⇓**	P		**P**	**23 10 27.0**	**0.0**
	baz=38								
MVCO	**Mesa Verde**	**37.86**	**306**	**⇓**	P		**P**	**23 10 27.6**	**+0.2**
	baz=38								
118A	**Homack Ranch,**	**37.98**	**298**	**⇓**	P		**P**	**23 10 29.1**	**+0.6**
	baz=38,SNR=7.0								
T19A	**Beclabito**	**38.16**	**305**	**⇓**	P		**P**	**23 10 30.7**	**+0.9**
	baz=38								
Q20A	**Ridgley Place,**	**38.24**	**309**	**⇓**	P		**P**	**23 10 31.4**	**+0.8**
	baz=38								
P20A	**De Beque**	**38.50**	**309**	**⇓**	P		**P**	**23 10 33.1**	**+0.5**
	baz=38								
Z17A	**San Carlos Hig**	**38.51**	**299**	**⇑**	P		**P**	**23 10 33.8**	**+0.9**
	baz=38								
M21A	**Separation Pea**	**38.54**	**313**	**⇓**	P		**P**	**23 10 33.4**	**+0.4**
	baz=39								
217A	**Green Valley**	**38.55**	**297**	**⇑**	P		**P**	**23 10 33.4**	**+0.2**
	baz=39								
117A	**Oracle**	**38.61**	**298**	**⇓**	P		**P**	**23 10 34.1**	**+0.3**
	baz=39,SNR=7.8								
T18A	**Mexican Hat**	**38.89**	**305**	**⇓**	P		**P**	**23 10 35.7**	**-0.3**
	baz=39								
X17A	**Forest Lakes**	**38.98**	**301**	**⇓**	P		**P**	**23 10 37.8**	**+0.9**
	baz=39								
S18A	**Hurst Farm, Bl**	**39.14**	**306**	**⇓**	P		**P**	**23 10 38.6**	**+0.5**
	baz=39								
V17A	**Tonalea, Kykot**	**39.24**	**303**	**⇑**	P		**P**	**23 10 38.7**	**-0.2**
	baz=39								
R18A	**Canyonlands Na**	**39.26**	**307**	**⇑**	P		**P**	**23 10 38.9**	**-0.1**
	baz=39								
Z16A	**Peralta Trail,**	**39.31**	**299**	**⇓**	P		**P**	**23 10 39.8**	**+0.2**
	baz=39								
I21A	**Big Trails, Te**	**39.40**	**316**	**⇑**	P		**P**	**23 10 40.3**	**+0.1**
	baz=39								
Y16A	**Circle Bar Ran**	**39.44**	**300**	**⇑**	P		**P**	**23 10 40.6**	**-0.1**
	baz=39								
X16A	**Lo Mia Camp, P**	**39.51**	**301**	**⇑**	P		**P**	**23 10 41.5**	**+0.2**
	baz=40								
U16A	**Tuba City**	**39.63**	**303**	**⇓**	P		**P**	**23 10 41.3**	**-0.9**
	baz=40								
WUAZ	**Wupatki**	**39.68**	**302**	**⇓**	P		**P**	**23 10 42.9**	**+0.3**
	baz=40								
WUAZ	**Wupatki**	**39.68**	**302**		***e***	**P**	**P**	**23 10 43.2**	**+0.6**
	comp=E,6.0nm,0.9s,mb4.3								
S17A	**Black Ridge (B**	**39.74**	**306**	**⇓**	P		**P**	**23 10 44.5**	**+1.4**
	baz=40								
DGMT	**Dagmar**	**39.86**	**324**		***e***	**P**	**P**	**23 10 43.8**	**-0.2**
	comp=E,16nm,0.7s,mb4.9								
P18A	**Preston Nutter**	**39.89**	**309**	**⇑**	P		**P**	**23 10 44.6**	**+0.2**
	baz=40								
Y15A	**Casa Rosa Ranc**	**40.16**	**300**	**⇑**	P		**P**	**23 10 46.8**	**+0.2**
	baz=40								
114A	**Black Gap (USA**	**40.42**	**298**	**⇓**	P		**P**	**23 10 49.0**	**+0.2**
	baz=40								
O17A	**Robinson Place**	**40.43**	**310**	**⇑**	P		**P**	**23 10 48.9**	**+0.1**
	baz=40								
U15A	**North Rim**	**40.60**	**303**	**⇑**	P		**P**	**23 10 49.9**	**-0.4**
	baz=41								
X14A	**Yava**	**40.70**	**300**	**⇑**	P		**P**	**23 10 51.5**	**+0.4**
	baz=41								
Y14A	**Wickenburg**	**40.70**	**300**	**⇓**	P		**P**	**23 10 51.3**	**+0.2**
	baz=41								
T15A	**Red Dirt Ranch**	**40.81**	**304**	**⇓**	P		**P**	**23 10 52.9**	**+1.0**
	baz=41								
DAU	**Daniels Canyon**	**40.88**	**310**		***e***	**P**	**P**	**23 10 52.0**	**-0.5**
	comp=E,4.6nm,0.9s,mb4.1								
W14A	**Seligman**	**40.99**	**301**	**⇓**	P		**P**	**23 10 54.1**	**+0.6**
	baz=41								
V14A	**Boquillas Ranc**	**41.09**	**302**	**⇑**	P		**P**	**23 10 55.6**	**+1.3**
	baz=41								
RLMT	**Red Lodge**	**41.24**	**317**		***e***	**P**	**P**	**23 10 57.5**	**+2.1**
	comp=E,61nm,2.3s,mb4.8								
Q15A	**Fillmore**	**41.30**	**307**	**⇑**	P		**P**	**23 10 56.3**	**+0.3**
	baz=41								
U14A	**Mt Trumbull**	**41.30**	**303**	**⇓**	P		**P**	**23 10 57.0**	**+0.9**
	baz=41								
Y13A	**Salome**	**41.36**	**299**	**⇑**	P		**P**	**23 10 57.1**	**+0.5**
	baz=41								
HWUT	**Hardware Ranch**	**41.48**	**311**		***e***	**P**	**P**	**23 10 56.3**	**-1.1**
X13A	**Yucca**	**41.48**	**300**	**⇑**	P		**P**	**23 10 57.8**	**+0.2**
	baz=42								
LOHW	**

	comp=E,1.8nm,0.7s,mb4.1,baz=114,slow=7.1,SNR=4.5							
SUMG	**Summit**	**55.94**	**11**	*e*P	**P**	**23 12 48.2**	**0.0**
SUMG	**Summit**	**55.94**	**11**	*i* P	**P**	**23 12 54.8**	**+6.7**
	comp=E,5.2nm,0.9s,mb4.6						
EVO	**Evora**	**56.31**	**56**	*e*P	**P**	**23 12 55.1**	**+3.7**
	comp=E,10nm,0.8s,mb4.6						
ESDC	**Sonseca Array**	**59.47**	**55**	P	**P**	**23 13 13.2**	**-0.4**
	comp=E,1.5nm,0.7s,mb4.1,baz=283,slow=7.1,SNR=5.6						
PLCA	**Paso Flores**	**60.02**	**181**	*e*P	**P**	**23 13 17.3**	**+0.1**
ETSF	**Etsaut**	**61.97**	**51**	*e*P	**P**	**23 13 33.9**	**+3.3**
	comp=E,44nm,1.7s,mb5.0						
ETSF	**Etsaut**	**61.97**	**51**	*e*P	**P**	**23 13 33.9**	**+3.3**
	comp=E,22nm,1.7s,mb5.0						
EPF	**Esparros**	**62.63**	**51**	*e*P	**P**	**23 13 36.9**	**+1.9**
	comp=E,19nm,1.1s,mb4.9						
EPF	**Esparros**	**62.63**	**51**	*e*P	**P**	**23 13 36.9**	**+1.9**
	comp=E,9.7nm,1.1s,mb4.8						
LFF	**La Frestale**	**62.87**	**49**	*e*P	**P**	**23 13 37.8**	**+1.3**
TCF	**Toulx Ste Croi**	**63.87**	**47**	*e*P	**P**	**23 13 44.4**	**+1.3**
	comp=E,25nm,1.2s,mb4.8						
TCF	**Toulx Ste Croi**	**63.87**	**47**	*e*P	**P**	**23 13 44.4**	**+1.3**
	comp=E,12nm,1.2s,mb4.8						
MTLF	**Montolieu**	**63.99**	**51**	*e*P	**P**	**23 13 45.3**	**+1.3**
	comp=E,18nm,1.1s,mb4.7						
MTLF	**Montolieu**	**63.99**	**51**	*e*P	**P**	**23 13 45.3**	**+1.3**
	comp=E,9.0nm,1.1s,mb4.7						
AVF	**Avril sur Loir**	**64.64**	**47**	*e*P	**P**	**23 13 49.0**	**+0.8**
LOR	**Lormes**	**64.97**	**46**	*e*P	**P**	**23 13 51.2**	**+0.9**
	comp=E,16nm,0.9s,mb4.7						
LOR	**Lormes**	**64.97**	**46**	*e*P	**P**	**23 13 51.2**	**+0.9**
	comp=E,7.8nm,0.9s,mb4.7						
LASF	**Ste Croix**	**65.13**	**50**	*e*P	**P**	**23 13 52.4**	**+1.0**
	comp=E,10nm,0.9s,mb4.6						
MEZF	**Maizieres J'vi**	**65.72**	**45**	*e*P	**P**	**23 13 56.4**	**+1.2**
	comp=E,27nm,1.0s,mb4.9						
MEZF	**Maizieres J'vi**	**65.72**	**45**	*e*P	**P**	**23 13 56.4**	**+1.2**
	comp=E,27nm,1.0s,mb5.1						
ILAR	**Eielson Array**	**66.88**	**333**	P	**P**	**23 14 00.4**	**-1.9**
	comp=E,0.8nm,0.8s,mb3.8,baz=100,slow=5.1,SNR=7.3						
LPL	**La Plagne**	**67.06**	**48**	*e*P	**P**	**23 14 05.8**	**+2.0**
	comp=E,14nm,1.0s,mb4.6						
LPL	**La Plagne**	**67.06**	**48**	*e*P	**P**	**23 14 05.8**	**+2.0**
	comp=E,7.2nm,1.0s,mb4.7						
LPG	**La Plagne**	**67.08**	**48**	*e*P	**P**	**23 14 06.0**	**+2.1**
TORD	**Torodi Ar. Bea**	**68.63**	**83**	P	**P**	**23 14 12.7**	**-1.5**
	comp=E,3.4nm,1.1s,mb4.2,baz=298,slow=6.6,SNR=4.5						
NOA	**NORSAR Array B**	**68.80**	**31**	P	**P**	**23 14 14.0**	**-0.5**
	comp=E,1.7nm,0.9s,mb4.0,baz=262,slow=9.7,SNR=3.1						
NOA				LR	LR	23 40 29.7	
	comp=E,42nm,21.8s,MS3.6,baz=0.0,slow=32						
DAVOX	**Davos/Dischmat**	**69.11**	**46**	P	**P**	**23 14 16.6**	**-0.1**
	comp=E,1.6nm,0.6s,mb4.1,baz=279,slow=6.0,SNR=3.1						
FETA	**Feichten**	**69.66**	**46**	*i* sP	sP	23 14 24.5	+3.7
	comp=E,4.7nm,1.1s						
TAM	**Tamanrasset**	**69.72**	**72**	*e*P	**P**	**23 14 21.3**	**+0.4**
	comp=E,6.4nm,1.4s,mb4.4						
KEST	**Kesra**	**70.35**	**58**	LR	LR	23 40 25.6	
	comp=E,33nm,19.0s,MS3.6,baz=219,slow=32						
KHC	**Kasperske Hory**	**71.27**	**44**	*e*P	**P**	**23 14 34.0**	**+4.1**
ARCES	**ARCESS Array B**	**73.71**	**21**	P	**P**	**23 14 43.4**	**-0.7**
	comp=E,4.6nm,0.6s,mb4.6,baz=289,slow=3.7,SNR=14						
PKSM	**Moragy**	**75.17**	**46**	*i* P	**P**	**23 14 56.3**	**+3.3**
FINES	**FINESS Array B**	**75.83**	**30**	P	**P**	**23 14 55.7**	**-0.8**
	comp=E,2.2nm,0.6s,mb4.3,baz=274,slow=3.6,SNR=14						
BZS	**Buzias**	**77.33**	**46**	*i* P	**P**	**23 15 09.9**	**+4.6**
DRGR		**77.75**	**45**	*i* P	**P**	**23 15 11.9**	**+4.3**
BUR08	**Bucovina Ar. S**	**79.14**	**43**	*e*P	**P**	**23 15 15.8**	**+0.5**
BURAR	**Bucovina Array**	**79.16**	**43**	*i* P	**P**	**23 15 16.0**	**+0.6**
MLR	**Muntele Rosu**	**80.28**	**45**	*i* P	**P**	**23 15 22.6**	**+1.1**
BRTR	**Keskin Array B**	**87.63**	**49**	P	**P**	**23 15 58.2**	**-1.0**
	comp=E,0.4nm,0.8s,mb3.7,baz=297,slow=3.5,SNR=3.0						
WMQ	**Urumqi**	**113.65**	**17**	*e*PKP	PKiKP	23 21 49.5	+0.3
CN2	**Changchun**	**115.35**	**348**	*e*PKP	PKPdf	23 21 52.3	-0.2
HHC	**Hu-ho-hao-te**	**119.85**	**359**	*e*PKP	PKPdf	23 21 59.3	-2.0
HHC				PP	PP	23 23 26.1	+2.9
HHC				PKS		23 25 34.5	
HHC				SKS	SKSdf	23 29 06.8	-7.8
HHC				AMB	AMB		
	comp=Z,77nm,5.1s						
HHC				LR	LR		
	comp=N,95nm,17.7s						
HHC				LR	LR		
	comp=E,170nm,19.7s						
HHC				LR	LR		
	comp=Z,160nm,19.4s						
LZH	**Lanzhou**	**124.31**	**6**	*e*PKP	PKPdf	23 22 06.6	-3.4
LZH				sPKP		23 22 10.0	
CD2	**Chengdu**	**129.42**	**7**	PKP	PKPdf	23 22 19.5	-0.4
KMI	**Kunming**	**134.98**	**9**	PKP	PKPdf	23 22 29.0	-1.5
STKA	**Stephens Creek**	**149.18**	**240**	PKPbc	PKPbc	23 22 57.0	-2.5
	comp=Z,2.9nm,0.8s,baz=208,slow=16,SNR=5.4						
ASAR	**Alice Springs**	**157.46**	**255**	PKPab	PKPab	23 23 37.8	-1.4
	comp=Z,0.7nm,0.8s,baz=108,slow=4.9,SNR=5.3						

KRSC 13 23:07:40.7±2.4, 51°66N×157°71E, h51km±50km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIPR	**Malaya Ipel'ka**	**0.85**	**317**	*e*P	Pn	23 07 57.6	+1.2
ALID	**Alaid**	**1.57**	**241**	P	Pn	23 08 07.1	+1.0
SDLR	**Sedlovina**	**1.77**	**23**	*e*P	Pn	23 08 09.7	+0.8
SPN	**Mys Shipunski**	**2.02**	**44**	*e*S	Sn	23 08 36.2	-0.1
GNL	**Ganaly**	**2.04**	**4**	*e*P	Pn	23 08 13.3	+0.7
MKZ	**Mys Kozlova**	**3.78**	**38**	P	Pn	23 08 39.6	+3.3
MKZ				S	Sn	23 09 22.5	+3.0

JSN 13 23:17:02.0±6.5, 19°64N×77°08W, h0km±334km, MD4.1, 6C-4D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STH	**Stony Hill**	**1.57**	**171**	*i* P	Pn	23 17 29.2	-2.0
STH				*i* S	Sn	23 17 51.5	-0.8
STH	**Stony Hill**	**1.57**	**171**	*i* P	Pn	23 17 29.1	-2.1
STH				*i* S	Sn	23 17 51.0	-1.3
GWJ	**Greenwich**	**1.59**	**168**	*i* P	Pn	23 17 29.8	-1.6
GWJ	**Greenwich**	**1.59**	**168**	*i* P	Pn	23 17 29.8	-1.7
CMJ	**Castle Mountai**	**1.64**	**156**	*i* P	Pn	23 17 32.5	+0.4
HOJ	**Hope**	**1.66**	**169**	*i* P	Pn	23 17 29.3	-3.0
HOJ	**Hope**	**1.66**	**169**	*i* P	Pn	23 17 29.3	-3.0
MCJ	**Malvern**	**1.80**	**199**	*i* P	Pn	23 17 27.3	-7.0
MCJ				*i* S	Sn	23 17 47.4	-10
MCJ	**Malvern**	**1.80**	**199**	*i* P	Pn	23 17 27.7	-6.5
NEJ	**Negril**	**1.82**	**221**	*i* P	Pg	23 17 36.7	-0.2

*CSEM **13** 23:34:17.8±0.1, 39°42N×33°07E, h2km, MD3.2, Error ellipse: s-maj=3.5km s-min=3.2km az=117.0*
*ISCJB **13** 23:34:18.3±0.8, 39°41N±0°04×33°10E±0°04, h6km±7km, Error ellipse: s-maj=6.5km s-min=5.1km az=146.6*
*DDA **13** 23:34:18.2, 39°38N×33°17E, h7km±5km, Md2.9*
*ISK **13** 23:34:18.1, 39°45N×33°08E, h8km, MD3.2*
ISC 13 23:34:18.4±0.8, 39°40N±0°04×33°10E±0°04, h5km±7km, n29, σ0°89/44, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBAL	**Bala**	**0.14**	**8**	*i* Pg	**Pg**	**23 34 21.3**	**+0.1**
BBAL				*i* Sg	**Sg**	**23 34 24.1**	**+0.9**
LOD	**Lodumlu**	**0.55**	**332**	*e*PG	**Pg**	**23 34 28.0**	**-1.0**
LOD				*e*SG	**Sg**	**23 34 36.0**	**-0.1**
LOD	**Lodumlu**	**0.55**	**332**	*e*Pg	**Pg**	**23 34 28.0**	**-1.0**
LOD				*e*Sg	**Sg**	**23 34 36.0**	**-0.2**
CDAG	**Cicekdag**	**1.01**	**77**	*i* P	**Pg**	**23 34 36.2**	**-1.6**
CDAG				*i* S	**Sg**	**23 34 49.8**	**-1.0**
CDAG	**Cicekdag**	**1.01**	**77**	*i* P	**Pg**	**23 34 36.2**	**-1.6**
CDAG				*i* S	**Sg**	**23 34 49.8**	**-1.1**
KIZT	**Kizilcal**	**1.08**	**242**	*e*PN	**Pn**	**23 34 39.3**	**-0.9**
KIZT				*e*SN	**Sn**	**23 34 55.0**	**-0.5**
KIZT	**Kizilcal**	**1.08**	**242**	*e*Pn	**Pn**	**23 34 39.3**	**-0.8**
KIZT				*e*Sn	**Sn**	**23 34 55.0**	**-0.5**
ELDT	**Eldivan**	**1.12**	**13**	*e*P	**Pg**	**23 34 40.3**	**+0.5**
ELDT				*e*S	**Sg**	**23 34 56.8**	**+2.5**
ELDT	**Eldivan**	**1.12**	**13**	*e*P	**Pg**	**23 34 40.3**	**+0.5**
ELDT				*e*S	**Sg**	**23 34 56.8**	**+2.5**
SVRH	**Sivrihisar-ESK**	**1.22**	**273**	*e*PN	**Pn**	**23 34 41.3**	**-0.8**
SVRH	**Sivrihisar-ESK**	**1.22**	**273**	*e*Pn	**Pn**	**23 34 41.3**	**-0.8**
SULT	**Sultanhani-AKS**	**1.24**	**165**	*e*Pn	**Pn**	**23 34 42.7**	**+0.3**
SULT				*e*SN	**Sn**	**23 35 00.9**	**+1.4**
SULT	**Sultanhani-AKS**	**1.24**	**165**	*e*Pn	**Pn**	**23 34 42.7**	**+0.3**
SULT				*e*Sn	**Sn**	**23 35 00.9**	**+1.4**
CANT	**Cankiri**	**1.27**	**18**	*e*PN	**Pn**	**23 34 42.1**	**-0.7**
LADK	**Ladik-KONYA**	**1.33**	**206**	*e*PN	**Pn**	**23 34 43.9**	**+0.3**
LADK	**Ladik-KONYA**	**1.33**	**206**	*e*Pn	**Pn**	**23 34 43.9**	**+0.4**
CORM	**Corum**	**1.42**	**56**	*e*PN	**Pn**	**23 34 43.8**	**-1.0**
CORM				*e*SN	**Sn**	**23 35 03.6**	**-0.2**
CORM	**Corum**	**1.42**	**56**	*e*Pn	**Pn**	**23 34 43.8**	**-1.0**
CORM				*e*Sn	**Sn**	**23 35 03.7**	**-0.1**
AVNT	**Avonos**	**1.50**	**114**	*e*P	**Pn**	**23 34 46.1**	**+0.1**
AVNT				*e*S	**Sn**	**23 35 05.1**	**-0.8**
AVNT	**Avonos**	**1.50**	**114**	*e*P	**Pn**	**23 34 46.1**	**+0.1**
AVNT				*e*S	**Sn**	**23 35 05.1**	**-0.8**
KONT	**Konya--Tatoy**	**1.56**	**202**	*e*PN	**Pn**	**23 34 47.3**	**+0.5**
KONT	**Konya--Tatoy**	**1.56**	**202**	*e*Pn	**Pn**	**23 34 47.3**	**+0.5**
YOZ	**Yozgat**	**1.74**	**81**	*e*PN	**Pn**	**23 34 49.8**	**+0.6**
YOZ	**Yozgat**	**1.74**	**81**	*e*Pn	**Pn**	**23 34 49.8**	**+0.6**
TOS	**Tosya**	**1.78**	**23**	*e*PN	**Pn**	**23 34 49.8**	**0.0**
TOS	**Tosya**	**1.78**	**23**	*e*Pn	**Pn**	**23 34 49.8**	**0.0**
BYBT	**Boyabat**	**2.43**	**31**	*e*PN	**Pn**	**23 34 59.1**	**+0.4**
BYBT	**Boyabat**	**2.43**	**31**	*e*Pn	**Pn**	**23 34 59.1**	**+0.4**
KOZT	**Kozan**	**2.87**	**131**	*e*PN	**Pn**	**23 35 06.5**	**+1.6**

*ISCJB **13** 23:42:54.9±0.4, 83°39N±0°06×115°4E±0°5, h10km, mb4.0/20, MS3.2/12, Error ellipse: s-maj=10.4km s-min=7.2km az=139.1*
*IDC **13** 23:42:55.3±0.7, 83°43N×115°57E, h0km, mb3.9/12, mb1 4.1/12, mb1mx3.9/23, mbtmp3.9/12, MS3.3/13, Ms1 3.3/13, ms1mx3.1/36, Error ellipse: s-maj=24.2km s-min=16.0km az=144.0*
*NEIC **13** 23:42:56.8±0.3, 83°40N×115°39E, h10km, mb4.2/8, Error ellipse: s-maj=7.6km s-min=5.4km az=139.0*
ISC 13 23:42:57.3±6.9, 83°40N±0°07×115°4E±0°5, h12km±44km, n43, σ0°75/35, mb4.0/20, MS3.2/12, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIXI	**Tiksi**	**12.10**	**159**	*e*Pn	**Pn**	**23 45 49.0**	**-0.1**
	7.2nm,1.0s						
SPITS	**Spitsbergen Ar**	**14.49**	**306**	LR	LR	23 50 55.4	
	comp=Z,52nm,18.1s,baz=280,slow=33						
KEV	**Kevo**	**21.20**	**286**	*e*P	**P**	**23 47 41.9**	**-0.3**
RES	**Resolute Bay**	**21.41**	**22**	*e*P	**P**	**23 47 44.7**	**+0.3**
	12nm,0.7s,mb4.3						
RES	**Resolute Bay**	**21.41**	**22**	LR	LR	23 55 32.2	
	comp=Z,81nm,19.2s,MS3.1,baz=1.0,slow=35						
ARCES	**ARCESS Array B**	**21.58**	**287**	P	**P**	**23 47 46.0**	**-0.3**
	6.7nm,1.0s,mb4.0,baz=28,slow=12,SNR=3.4						
YAK	**Yakutsk**	**21.75**	**162**	*e*P	**P**	**23 47 48.1**	**+0.1**
JMIC	**Jan Mayen**	**23.47**	**317**	LR	LR	23 54 44.8	
	comp=Z,27nm,19.6s,MS2.7,baz=244,slow=30						
INK	**Inuvik**	**24.96**	**55**	*e*P	**P**	**23 48 19.4**	**-0.5**
INK	**Inuvik**	**24.96**	**55**	LR	LR	23 58 10.0	
	comp=Z,66nm,20.0s,MS3.1,baz=20,slow=37						
ILAR	**Eielson Array**	**27.03**	**69**	P	**P**	**23 48 39.6**	**+1.0**
	1.7nm,1.1s,mb3.5,baz=347,slow=8.4,SNR=8.0						
ILAR				LR	LR	23 59 22.0	
	comp=Z,67nm,18.4s,MS3.2,baz=12,slow=36						
FINES	**FINESS Array B**	**29.34**	**281**	LR	LR	00 03 51.8	
	comp=Z,40nm,21.0s,MS3.0,baz=342,slow=43						
ARU	**Arti**	**30.56**	**246**	*e*P	**P**	**23 49 08.7**	**-1.3**
ZALV	**Zalesovo Beam**	**30.68**	**216**	P	**P**	**23 49 11.2**	**+0.1**
	0.2nm,0.4s,mb3.3,baz=356,slow=10,SNR=3.7						
ZALV				LR	LR	00 02 29.7	
	comp=Z,64nm,19.0s,MS3.3,baz=66,slow=38						
NOA	**NORSAR Array B**	**31.36**	**295**	LR	LR	00 03 44.1	
	comp=Z,14nm,19.7s,MS2.6,baz=355,slow=40						
BRVK	**Borovoye**	**32.73**	**232**	*e*P	**P**	**23 49 29.4**	**+0.3**
	1.7nm,0.8s,mb4.0						
BVAR	**Borovoye Array**	**32.75**	**232**	P	**P**	**23 49 30.2**	**+0.8**
	1.4nm,0.8s,mb3.9,baz=15,slow=6.2,SNR=9.0						
BVAR				PcP	PcP	23 52 12.6	-1.6
	0.3nm,0.5s,baz=321,slow=3.7,SNR=3.3						
KURK	**Kurchatov**	**34.34**	**222**	*e*P	**P**	**23 49 43.1**	**-0.2**
	1.8nm,0.5s,mb4.3						
SONM	**Songino Array**	**35.80**	**190**	P	**P**	**23 49 57.0**	**+1.2**
	0.6nm,0.5s,mb3.8,baz=0.0,slow=7.4,SNR=5.6						
ABKAR	**Akbulak array**	**37.50**	**242**	*e*P	**P**	**23 50 09.1**	**-1.1**
	1.9nm,1.0s,mb3.9						
MK31	**Makanchi Array**	**37.97**	**218**	*e*P	**P**	**23 50 13.8**	**-0.5**
MKAR	**Makanchi Array**	**37.97**	**218**	P	**P**	**23 50 14.3**	**+0.1**
	2.5nm,0.9s,mb3.9,baz=356,slow=6.2,SNR=12						
MKAR				LR	LR	00 07 01.4	
	comp=Z,52nm,19.8s,MS3.3,baz=335,slow=38						
AKASG	**Malin Array Be**	**39.51**	**274**	P	**P**	**23 50 27.3**	**+0.2**
	0.4nm,0.4s,mb3.5,baz=358,slow=6.5,SNR=2.8						
EKS2	**Erkin-Say**	**42.74**	**226**	*e*P	**P**	**23 50 53.8**	**+0.1**
	1.6nm,0.9s,mb3.8						
UCH	**Uchtor**	**43.11**	**225**	*e*P	**P**	**23 50 56.4**	**-0.3**
PSZ	**Piszkesteto**	**43.32**	**283**	P	**P**	**23 50 59.5**	**+1.1**
KIV	**Kislovodsk**	**44.61**	**259**	*e*P	**P**	**23 51 13.0**	**+4.2**
	8.8nm,0.9s,mb4.6						
NLWA	**Neilton Lookou**	**46.48**	**54**	P	**P**	**23 51 23.7**	**+0.1**
LAO	**LASA Array**	**48.63**	**38**	*e*P	**P**	**23 51 38.8**	**-1.5**
	20nm,1.4s,mb5.0						
AQU	**L'Aquila**	**49.54**	**288**	*e*P	**P**	**23 51 47.7**	**+0.5**
BMO	**Blue Mountains**	**49.59**	**48**	*e*P	**P**	**23 51 47.0**	**-0.6**
	3.5nm,1.3s,mb4.2						
BRTR	**Keskin Array B**	**49.83**	**267**	P	**P**	**23 51 50.7**	**+1.2**
	1.2nm,0.9s,mb3.9,baz=12,slow=6.3,SNR=5.8						
BRTR				LR	LR	00 15 27.7	
	comp=Z,19nm,19.0s,MS3.1,baz=281,slow=39						
MALT	**Malatya**	**50.67**	**262**	P	**P**	**23 51 55.6**	**-0.3**
KBL	**Kabul**	**51.20**	**230**	*e*P	**P**	**23 51 59.0**	**-1.0**
NVAR	**Mina Array Bea**	**55.88**	**50**	P	**P**	**23 52 35.1**	**+0.9**
	0.7nm,0.9s,mb3.7,baz=333,slow=5.2,SNR=4.0						
KEST	**Kesra**	**56.53**	**290**	*e*P	**P**	**23 52 39.5**	**+0.6**
KEST	**Kesra**	**56.53**	**290**	P	**P**	**23 52 39.1**	**+0.2**
	2.4nm,0.9s,mb4.2,baz=278,slow=2.9,SNR=9.3						
PV01	**Paradox Valley**	**56.97**	**41**	*e*P	**P**	**23 52 42.7**	**+0.8**
	529nm,0.8s						
PV01				*e*PcP	PcP	23 53 37.9	+0.8
ANMO	**Albuquerque**	**60.29**	**39**	LR	LR	00 17 05.7	
	comp=Z,55nm,21.9s,MS3.6,baz=288,slow=34						
TKL	**Tuckaleechee C**	**60.83**	**18**	LR	LR	00 20 05.6	
	comp=Z,35nm,18.1s,MS3.5,baz=91,slow=37						
CHTO	**Chiang Mai**	**64.94**	**197**	P	**P**	**23 53 36.9**	**+0.6**
CMAR	**Chiang Mai Arr**	**65.30**	**197**	P	**P**	**23 53 37.9**	**-0.7**
	0.6nm,0.4s,mb3.9,baz=353,slow=8.0,SNR=6.5						
TXAR	**Lajitas Array**	**66.07**	**37**	P	**P**	**23 53 42.1**	**-1.4**
	1.1nm,0.9s,mb3.9,baz=355,slow=4.0,SNR=8.2						
TXAR				LR	LR	00 24 40.8	
	comp=Z,57nm,20.6s,MS3.8,baz=185,slow=38						

IDC 13 23:47:58.9±1.6, 1°75N×127°31E, h0km, mb4.1/4, mb1 4.2/5, mb1mx3.7/20, mbtmp4.0/5, MLv3.7/1, Error ellipse: s-maj=96.4km s-min=22.1km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.79**	**185**	P	Pn	23 52 31.0	-1.5
	0.2nm,0.3s,baz=354,slow=9.2,SNR=3.2						
WRA	**Warramunga Arr**	**22.63**	**163**	P	P	23 53 02.7	+1.1
	3.5nm,0.4s,baz=342,slow=11,SNR=10						
ASAR	**Alice Springs**	**26.06**	**166**	P	P	23 53 33.8	-0.5
	0.7nm,0.5s,baz=353,slow=7.7,SNR=15						
STKA	**Stephens Creek**	**36.08**	**159**	P	P	23 55 02.2	-0.3
	3.7nm,0.4s,baz=338,slow=7.4,SNR=12						
MKAR	**Makanchi Array**	**59.50**	**326**	P	P	23 58 04.2	+0.2
	0.3nm,0.3s,baz=124,slow=7.5,SNR=8.6						

*IDC **14** 00:06:32.6±0.4, 16°48N×147°04E, h0km, mb5.2/29, mb1 5.2/32, mb1mx5.2/33, mbtmp5.2/32, ML4.7/3, MS4.6/23, Ms1 4.6/23, ms1mx4.4/39, Error ellipse: s-maj=13.2km s-min=8.2km az=92.0*
*ISCJB **14** 00:06:35.5±1.0, 16°46N±0°02×146°95E±0°02, h25km±6km, mb5.4/203, MS4.7/189, Error ellipse: s-maj=4.1km s-min=2.6km az=167.5*
*MOS **14** 00:06:36.5±0.9, 16°51N×146°91E, h33km, mb5.6/57, MS4.7/36, Error ellipse: s-maj=7.7km s-min=5.1km az=94.8*
*BJI **14** 00:06:37.4, 16°52N×147°26E, h54km, mB5.0/30, mb5.1/55, Ms4.8/54, Ms7 4.6/49*
*GCMT **14** 00:06:39.6±0.3, 16°31N×147°17E, h29km±1km, MW5.1, Moment Tensor Solution. s36,c57; s77,c113; Moment tensor: Scale 10^16 Nm; Mrr-2.75±.20; Mθθ-2.19±.14; Mφφ4.94±.15; Mrθ-0.54±.27; Mrφ1.97±.14; Mθφ3.58±.29; Best double couple: M0 5.70000×10^16 NP1:φs50.00000°, δ36.00000°, λ-33.00000°. NP2:φs168.00000°, δ71.00000°, λ-122.00000°. Principal axes: T 6.6600, Plg20.0000°, Azm281.0000°; N -1.8600, Plg30.0000°, Azm179.0000°; P -4.8000, Plg53.0000°, Azm40.0000°; Data Used: II IU IC G CN.*
*TEH **14** 00:06:39.0, 16°46N×146°96E, h43km*
*NEIC **14** 00:06:40.2±0.8, 16°43N×146°93E, h53km±7km, mb5.5/73, MS4.8/143, Error ellipse: s-maj=3.5km s-min=3.1km az=134.0*
*DJA **14** 00:06:50, 16°14N×146°75E, h127km, mb5.3/45*
ISC 14 00:06:39.0±0.6, 16°46N±0°02×146°98E±0°02, h39km±5km, h43km±1.8km:pP-P, n1026, σ0°74/934, mb5.4/203, MS4.7/189, 238C-203D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.51**	**216**	*e*Pn	**Pn**	**00 07 31.9**	**+0.9**
GUMO				*e*Sn	**Sn**	**00 08 11.7**	**+0.4**
GUMO	**Guam**	**3.51**	**216**	P	**Pn**	**00 07 31.0**	**0.0**
	56nm,0.3s,baz=147,slow=4.0,SNR=19						
GUMO				Sn	**Sn**	**00 08 12.2**	**+0.9**
	251nm,0.3s,baz=206,slow=23,SNR=7.1						
GUMO				LR	LR	00 08 57.9	
	comp=Z,5μm,18.1s,baz=46,slow=41						
CBIJ	**Chichi jima**	**11.48**	**338**	Pn	**Pn**	**00 09 18.9**	**-1.5**
	9.5nm,0.3s,baz=244,slow=16,SNR=6.3						
CBIJ				Sn	**Sn**	**00 11 25.3**	**-2.1**
	35nm,0.3s,baz=272,slow=22,SNR=6.5						
JHJ	**Hachijo jima 2**	**17.82**	**340**	P	**Pn**	**00 10 43.5**	**-0.5**
	43nm,0.3s,baz=61,slow=22,SNR=28						
JHJ				S	**S**	**00 14 00.7**	**-6.5**
	3.9nm,0.3s,baz=229,slow=23,SNR=2.8						
WAKE	**Wake Island**	**18.93**	**79**	*e*Pn	**Pn**	**00 10 57.3**	**-0.3**
	526nm,1.6s						
BAKI	**Biak**	**20.56**	**212**	P	sP	00 11 38.8	+9.5
	187nm,1.2s						
BAKI	**Biak**	**20.56**	**212**	P	**P**	**00 11 14.4**	**-0.1**
	2μm187nm,1.2s						
MJAR	**Matsushiro Arr**	**21.47**	**340**	P	**P**	**00 11 23.3**	**-0.7**
	58nm,0.6s,mb5.1,baz=168,slow=11,SNR=148						
MJAR				S	**S**	**00 15 19.2**	**-0.8**
	7.8nm,1.0s,baz=194,slow=36,SNR=4.7						
MAJO	**Matsushiro**	**21.47**	**340**	*e*P	**P**	**00 11 23.5**	**-0.6**
	160nm,0.8s,mb5.4						
MAJO	**Matsushiro**	**21.47**	**340**	*e*P	**P**	**00 11 23.5**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,160nm,0.8s,mb5.4						
MAT	**Matsushiro**	**21.47**	**340**	P	**P**	**00 11 23.8**	**-0.3**
MAT				S	**S**	**00 15 18.0**	**-2.0**
PVCP	**Virac**	**22.23**	**266**	*e*P	**P**	**00 11 33.8**	**+1.4**
PVCP				*e*S	Px	00 12 03.2	
DAV	**Davao City (W)**	**22.91**	**248**	P	**P**	**00 11 38.9**	**-0.8**
	comp=Z,103nm,0.3s,mb5.7,baz=238,slow=14,SNR=3.5						
DAV				LR	LR	00 19 07.0	
	comp=Z,2μm,19.6s,MS4.5,baz=196,slow=33						
DAV	**Davao City (W)**	**22.91**	**248**	*i* P	sP	00 11 59.8	+5.2
DMPH	**Davao City--Mi**	**22.97**	**249**	*e*P	**P**	**00 11 41.1**	**+0.8**
BUKP	**Musuan**	**23.04**	**251**	*e*P	**P**	**00 11 41.4**	**+0.3**
BUKP				*e*S	Px	00 12 14.3	
TNTI	**Ternate**	**24.83**	**233**	P	**P**	**00 12 04.5**	**+6.7**
	comp=Z,95nm,1.0s,mb5.3						
TNTI	**Ternate**	**24.83**	**233**	P	**P**	**00 11 56.4**	**-1.4**
	comp=Z,95nm,1.0s,mb5.3						
NACB	**Ninganchiao**	**24.99**	**292**	*e*P	**P**	**00 11 59.2**	**+0.1**
NACB				*e*S	**S**	**00 16 23.0**	**+2.4**
YULB	**Yu-li**	**25.09**	**290**	*e*P	**P**	**00 12 00.1**	**0.0**
YULB				*e*S	**S**	**00 16 24.6**	**+

LUWI **Luwuk** 29.55 236 P P 00 12 38.3 -1.9
comp=Z,1μmcomp=Z,109nm,0.9s,mb5.6
NJ2 **Nanjing** 29.86 306 eP P 00 12 43.3 +0.6
NJ2 pP pP 00 12 55.1 +1.5
NJ2 sP sP 00 13 00.6 +2.3
NJ2 PP PP 00 13 41.3 -9.3
NJ2 S S 00 17 34.0 -3.2
NJ2 sS sS 00 17 55.0 -0.2
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
NJ2 pmax pmax
comp=Z,110nm,3.9s
NJ2 LR LR
comp=N,810nm,16.5s,MS4.6
NJ2 LR LR
comp=E,890nm,20.6s,MS4.6
NJ2 LR LR
comp=Z,1μm,25.0s,MS4.4
MYLDM **Lahad Datu** 30.09 251 P P 00 12 46.1 +1.1
MYLDM **Lahad Datu** 30.09 251 P P 00 12 46.7 +1.7
comp=Z,838nmcomp=Z,42nm,1.1s,mb5.1
MYLDM **Lahad Datu** 30.09 251 P P 00 12 46.7 +1.7
comp=Z,838nmcomp=Z,42nm,1.1s,mb5.1
COEN **Coen** 30.45 187 eP P 00 12 48.1 0.0
COEN ePcP PcP 00 15 46.6 -0.4
YSS **Yuzh-Sakhalins** 30.61 354 eP P 00 12 49.2 +0.1
comp=Z,141nm,0.5s,mb6.0
YSS **Yuzh-Sakhalins** 30.61 354 eP P 00 12 49.2 0.0
YSS pmax pmax
comp=Z,141nm,0.5s,mb6.0
KDM **Kudat** 30.97 256 P P 00 12 54.5 +1.7
TSM **Tawau** 31.02 250 P P 00 12 54.1 +0.8
SDKM **Sandakan** 31.10 253 P P 00 12 55.2 +1.3
KDI **Kendari** 31.49 232 P P 00 12 56.9 -0.4
comp=Z,43nm,1.0s,mb5.2
KDI **Kendari** 31.49 232 P P 00 12 55.8 -1.5
comp=Z,43nm,1.3s,mb5.1
DL2 **Dalian** 31.50 320 P P 00 12 59.1 +2.0
DL2 eS S 00 18 06.8 +4.1
DL2 sS sS 00 18 25.6 +4.8
DL2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
DL2 LR LR
comp=N,210nm,17.7s,MS4.2
DL2 LR LR
comp=E,370nm,18.7s,MS4.2
DL2 LR LR
comp=Z,670nm,19.4s,MS4.3
MDJ **Mudanjiang** 31.67 336 P P 00 12 58.6 0.0
MDJ pP pP 00 13 09.5 0.0
MDJ S S 00 18 00.6 -4.7
MDJ sS sS 00 18 24.9 +1.5
MDJ ScP ScP 00 19 29.5 -0.7
MDJ PcS PcS 00 19 33.6 -0.6
MDJ pmax pmax
comp=Z,20nm,1.1s,mb4.9
MDJ pmax pmax
comp=Z,57nm,8.1s
MDJ LR LR
comp=N,580nm,23.0s
MDJ LR LR
comp=Z,850nm,23.0s,MS4.4
MDJ **Mudanjiang** 31.67 336⇓ eP P 00 12 59.1 +0.5
comp=Z,10nm,0.7s,mb4.8
MDJ ePP PP 00 14 09.8 -0.8
MDJ LR LR
comp=Z,927nm,22.0s,MS4.4
KKM **Kota Kinabalu** 31.85 255 eP P 00 13 00.3 -0.3
comp=Z,23nm,0.9s,mb5.0
KKM LR LR
comp=Z,521nm,20.0s,MS4.2
KKM **Kota Kinabalu** 31.85 255 P P 00 13 02.0 +1.5
KAKA **Kakadu** 32.35 207 eP P 00 13 03.3 -1.5
comp=Z,29nm,0.6s,mb5.3
KAKA **Kakadu** 32.35 207 eP P 00 13 03.5 -1.4
comp=Z,74nm,0.6s,mb5.7
KAKA **Kakadu** 32.35 207 P P 00 13 04.4 -0.4
comp=Z,558nmcomp=Z,66nm,0.6s,mb5.6
BBSI **Bau Bau** 32.54 230 P P 00 13 10.0 +3.5
comp=Z,91nm,1.1s,mb5.6
BBSI **Bau Bau** 32.54 230 P P 00 13 07.6 +1.1
comp=Z,91nm,1.1s,mb5.6
CN2 **Changchun** 32.81 331 eP P 00 13 08.8 +0.2
CN2 esP sP 00 13 26.1 +1.9
CN2 ePP PP 00 14 19.3 -3.9
CN2 eS S 00 18 21.5 -1.5
CN2 eSS SS 00 20 21.9 -23
CN2 pmax pmax
comp=Z,20nm,0.8s,mb5.1
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,1μm,18.0s,MS4.7
CN2 LR LR
comp=E,900nm,18.0s,MS4.7
CN2 LR LR
comp=Z,2μm,19.0s,MS4.8
WHN **Wuhan** 32.91 301 P P 00 13 08.5 -1.1
WHN S S 00 18 17.3 -7.7
WHN LR LR
comp=N,1μm,16.7s,MS5.0
WHN LR LR
comp=E,2μm,17.7s,MS5.0
WHN LR LR
comp=Z,2μm,20.0s,MS4.9
TTSI **Tana Toraja** 33.11 237 P P 00 13 11.7 +0.2
comp=Z,1μmcomp=Z,36nm,0.8s,mb5.4
TTSI **Tana Toraja** 33.11 237 P P 00 13 11.4 -0.1
comp=Z,1μmcomp=Z,36nm,0.8s,mb5.4
HABR **Khabarovsk** 33.39 346 eP P 00 13 11.4 -2.2
HABR e*PP pP 00 13 22.5 -2.0
HABR e 00 14 22.8
HABR S S 00 18 30.5 -1.5
HABR e*SS sS 00 18 49.1 -1.0
HABR eSS SS 00 20 34.7 -22
HABR SSS 00 20 51.6
HABR e 00 23 33.8
HABR pmax pmax
comp=E,65nm,1.3s
HABR pmax pmax
comp=Z,91nm,1.5s,mb5.5
HABR pmax pmax
comp=N,34nm,0.9s
HABR MLR MLR
comp=Z,877nm,16.0s,MS4.6
SPSI **Sidrap Palu** 33.70 235 P P 00 13 16.0 -0.7
comp=Z,27nm,1.2s,mb5.1
SPSI **Sidrap Palu** 33.70 235 P P 00 13 16.0 -0.7
comp=Z,27nm,1.2s,mb5.1
BKSI **Bulukumba** 34.27 233 P P 00 13 21.1 -0.5
comp=Z,488nmcomp=Z,41nm,0.9s,mb5.3
BKSI **Bulukumba** 34.27 233 P P 00 13 20.2 -1.4
comp=Z,489nmcomp=Z,41nm,0.9s,mb5.3
KAPI **Kappang** 34.36 234 P P 00 13 20.2 -2.2
comp=Z,478nm,0.7s,mb6.5,SNR=10
KAPI **Kappang** 34.36 234⇓ eP P 00 13 20.8 -1.6
comp=Z,60nm,0.8s,mb5.6
KAPI LR LR
comp=Z,450nm,21.0s,MS4.2
MIDW **Midway** 34.86 64 PFAKE 00 13 40.0 +13
MIDW LR LR
comp=Z,1μm,21.0s,MS4.6
SKR **Severo-Kuril's** 34.92 10 eP P 00 13 26.9 +0.1
SKR e pP 00 13 38.0 +0.2
SKR e 00 14 46.0
SKR eSSS 00 21 32.0
SKR pmax pmax
comp=N,50nm,0.8s
SKR pmax pmax
comp=E,50nm,0.8s
SKR pmax pmax
comp=Z,60nm,0.8s,mb5.6
SKR MLR MLR
comp=N,1μm,18.0s,MS4.8
SKR MLR MLR
comp=E,1μm,18.0s,MS4.8
SKR MLR MLR
comp=Z,1μm,18.0s,MS4.8
MMRI **Maumere** 34.95 226 P P 00 13 30.5 +3.0
comp=Z,126nm,1.1s,mb5.8
MMRI **Maumere** 34.95 226 P P 00 13 25.9 -1.6
comp=Z,2μmcomp=Z,126nm,1.1s,mb5.8
KLR **Kul'dur** 34.96 343 eP P 00 13 22.8 -4.4
KLR eS S 00 18 50.5 -5.7
KLR eSSS 00 21 31.5
KLR e 00 23 43.0
KLR pmax pmax
comp=E,56nm,1.8s
KLR pmax pmax
comp=Z,120nm,1.8s,mb5.5
QIZ **Qiongzhong** 35.42 280 P P 00 13 32.8 +1.2
QIZ pP pP 00 13 41.6 -0.9
QIZ sP sP 00 13 46.8 -0.4
QIZ PP PP 00 14 51.9 -0.6
QIZ S S 00 19 01.8 -2.3
QIZ pmax pmax
comp=Z,13nm,1.1s,mb4.8
QIZ pmax pmax
comp=Z,59nm,1.9s,mb5.2
QIZ LR LR
comp=N,430nm,16.3s
QIZ LR LR
comp=E,150nm,22.0s
QIZ LR LR
comp=Z,860nm,17.9s,MS4.5
QIZ **Qiongzhong** 35.42 280 eP P 00 13 31.4 -0.2
QIZ LR LR
comp=Z,882nm,19.0s,MS4.5
BJT **Baijiatuao** 35.59 317 eP P 00 13 32.6 -0.1
comp=Z,27nm,0.6s,mb5.3
BJT ePP PP 00 14 52.6 -1.4
BJT LR LR
comp=Z,857nm,20.0s,MS4.5
BJT **Baijiatuao** 35.59 317 eP P 00 13 32.6 -0.1
BJT e 00 14 52.6
BJT pmax pmax
comp=Z,27nm,0.6s
BJT MLR MLR
comp=Z,857nm,20.0s
BJI **Beijing** 35.60 318 P P 00 13 32.8 0.0
BJI pP pP 00 13 42.6 -1.1
BJI sP sP 00 13 48.8 +0.4
BJI S S 00 19 03.9 -2.3
BJI sS sS 00 19 25.8 +1.4
BJI pmax pmax
comp=Z,34nm,0.6s,mb5.5
BJI pmax pmax
comp=Z,110nm,3.7s
BJI LR LR
comp=N,520nm,18.0s,MS4.5
BJI LR LR
comp=E,680nm,18.0s,MS4.5
BJI LR LR
comp=Z,620nm,21.0s,MS4.3
BTM **Bintulu** 35.82 252 P P 00 13 36.0 +0.9
CTA **Charters Tower** 36.33 181 P P 00 13 38.4 -0.7
comp=Z,9.2nm,0.9s,mb4.7,baz=20,slow=12,SNR=4.8
CTA LR LR 00 28 30.7
comp=Z,349nm,18.6s,MS4.2,baz=131,slow=36
KNA **Kununurra** 36.71 210 P P 00 13 42.7 +0.2
comp=Z,1μmcomp=Z,142nm,1.0s,mb5.7
ENH **Enshi** 36.89 299 eP P 00 13 44.1 +0.1
comp=Z,33nm,0.8s,mb5.2
ENH eS S 00 19 26.8 +0.6
ENH LR LR
comp=Z,601nm,20.0s,MS4.4
SBUM **Sibu** 36.92 252 P P 00 13 44.8 +0.4
SBUM **Sibu** 36.92 252 P P 00 13 44.4 0.0
comp=Z,950nmcomp=Z,31nm,1.6s,mb4.9
SBUM **Sibu** 36.92 252 P P 00 13 44.4 0.0
comp=Z,950nmcomp=Z,31nm,1.6s,mb4.9
PET **Petropavlovsk** 37.62 12 eP P 00 13 50.1 +0.3
comp=Z,184nm,1.6s,mb5.6
PET LR LR
comp=Z,721nm,20.0s,MS4.5
PET **Petropavlovsk** 37.62 12⇓ iP P 00 13 50.5 +0.7
PET e 00 15 16.5
PET eS S 00 19 36.9 +0.2
PET 00 24 03.7
PET pmax pmax
comp=Z,71nm,1.6s,mb5.2
PET pmax pmax
comp=Z,100nm,10.9s
PET pmax pmax
comp=Z,200nm,12.8s
PET pmax pmax
comp=Z,100nm,16.5s
PET MLR MLR
comp=Z,700nm,19.0s,MS4.5
PET MLR MLR
comp=Z,700nm,18.0s
WRA **Warramunga Arr** 38.25 199 P P 00 13 54.5 -0.9
comp=Z,28nm,0.9s,mb5.0,baz=19,slow=9.4,SNR=37
WRA S S 00 19 52.4 +5.5
comp=Z,5.5nm,0.8s,baz=15,slow=15,SNR=6.8
WRA LR LR 00 29 17.6
comp=Z,504nm,21.7s,MS4.3,baz=25,slow=36
WRA **Warramunga Arr** 38.25 199 P P 00 13 54.5 -1.0
WRA S S 00 19 52.4 +5.6
STKI **Sintang** 38.61 249 P P 00 13 58.2 -0.5
comp=Z,52nm,0.6s,mb5.4
STKI **Sintang** 38.61 249 P P 00 13 58.7 0.0
comp=Z,52nm,0.6s,mb5.4
GYA **Guiyang** 38.68 292⇑ iP P 00 13 59.3 +0.1
GYA pP pP 00 14 12.8 +2.6
GYA sP sP 00 14 16.9 +2.0
GYA PP PP 00 15 31.4 +3.2
GYA S S 00 19 53.9 +0.4
GYA sS sS 00 20 12.8 +1.0
GYA SS SS 00 22 34.0 -11
GYA pmax pmax
comp=Z,50nm,0.8s,mb5.3
GYA pmax pmax
comp=Z,450nm,5.2s
GYA LR LR
comp=N,6μm,18.0s,MS5.6
GYA LR LR
comp=E,5μm,18.2s,MS5.6
GYA LR LR
comp=Z,8μm,17.7s,MS5.6
HHC **Hu-ho-hao-te** 39.05 316 eP P 00 14 02.4 +0.4
HHC pP pP 00 14 14.3 +1.2
HHC sP sP 00 14 19.5 +1.8
HHC PP PP 00 15 36.8 +4.8
HHC eS S 00 19 55.1 -3.5
HHC sS sS 00 20 18.5 +1.6
HHC SS SS 00 22 42.6 -9.2
HHC ScS ScS 00 24 05.4 -2.9
HHC pmax pmax
comp=Z,13nm,1.0s,mb4.6
HHC pmax pmax
comp=Z,85nm,4.3s
HHC LR LR
comp=N,460nm,16.2s,MS4.7
HHC LR LR
comp=E,690nm,16.4s,MS4.7
HHC LR LR
comp=Z,760nm,18.4s,MS4.6
KSM **Kuching** 39.06 251 eP P 00 14 01.6 -0.9
comp=Z,56nm,1.1s,mb5.2
KSM LR LR
comp=Z,364nm,20.0s,MS4.2
KSM **Kuching** 39.06 251 P P 00 14 02.8 +0.4
KSM **Kuching** 39.06 251 P P 00 14 01.4 -1.1
comp=Z,694nmcomp=Z,50nm,0.8s,mb5.3
KSM **Kuching** 39.06 251 P P 00 14 01.7 -0.8
comp=Z,694nmcomp=Z,50nm,0.8s,mb5.3
HIA **Hailar** 39.50 332 eP P 00 14 05.4 -0.3
comp=Z,23nm,0.8s,mb5.0
HIA LR LR
comp=Z,2μm,19.0s,MS4.9
HIA **Hailar** 39.50 332 eP P 00 14 05.4 -0.3
HIA pmax pmax
comp=Z,23nm,0.8s
HIA MLR MLR
comp=Z,2μm,19.0s
KHKI **Kahang-Kahang** 39.65 234 P P 00 14 06.5 -0.9
comp=Z,1μmcomp=Z,161nm,0.8s,mb5.8
KHKI **Kahang-Kahang** 39.65 234 P P 00 14 06.8 -0.6
comp=Z,1μmcomp=Z,161nm,0.8s,mb5.8
SRBI **Singaraja** 39.79 235 P P 00 14 17.0 +8.5
SRBI **Singaraja** 39.79 235 P P 00 14 10.3 +1.8
comp=Z,60nm,1.0s,mb5.4
BTO **Baotou** 39.98 315 eP P 00 14 10.3 +0.5
FITZ **Fitzroy Crossi** 40.26 212 LR LR 00 31 58.9
comp=Z,428nm,18.3s,MS4.3,baz=19,slow=38
GMJI **Gumukmas** 41.30 236 P P 00 14 23.2 +2.2
comp=Z,63nm,1.0s,mb5.2
GMJI **Gumukmas** 41.30 236 P P 00 14 20.3 -0.7
comp=Z,63nm,1.0s,mb5.2
JOHN **Johnston Islan** 41.61 83 PFAKE 00 14 40.0 +16
JOHN LR LR
comp=Z,958nm,19.0s,MS4.7
CD2 **Chengdu** 41.85 298 ⇑P P 00 14 25.8 +0.4
CD2 pP pP 00 14 38.0 +1.5
CD2 sP sP 00 14 43.4 +2.3
CD2 PP PP 00 16 06.3 +3.7
CD2 PcP PcP 00 16 21.8 +1.0
CD2 ScP ScP 00 20 07.0 -1.2
CD2 PcS PcS 00 20 12.1 -0.4
CD2 S S 00 20 39.8 -1.0
CD2 sS sS 00 21 00.5 +1.3
CD2 SS SS 00 23 41.6 -6.4
CD2 ScS ScS 00 24 22.4 -3.0
CD2 pmax pmax
comp=Z,30nm,1.2s,mb4.8
CD2 pmax pmax
comp=Z,110nm,6.5s
CD2 LR LR
comp=N,590nm,14.7s,MS4.7
CD2 LR LR
comp=E,720nm,18.6s,MS4.7
CD2 LR LR
comp=Z,990nm,17.6s,MS4.7
ASAR **Alice Springs** 41.88 198 P P 00 14 25.1 -0.5
comp=Z,5.8nm,0.5s,mb4.5,baz=14,slow=6.6,SNR=56
ASAR ScP ScP 00 20 07.8 -0.5
comp=Z,3.3nm,0.9s,baz=31,slow=2.4,SNR=8.0
ASAR S S 00 20 44.7 +3.7
comp=Z,1.3nm,0.8s,baz=31,slow=7.7,SNR=4.3
SMY **Shemya** 42.02 24 eP P 00 14 27.3 +1.0
comp=Z,80nm,0.7s,mb5.5
SMY **Shemya** 42.02 24 eP P 00 14 27.3 +0.9
SMY pmax pmax
comp=Z,80nm,0.7s,mb5.5
KMI **Kunming** 42.10 289 P P 00 14 28.8 +1.3
KMI PP PP 00 16 09.6 +4.2
KMI S S 00 20 47.8 +3.3
KMI SS SS 00 23 50.6 -2.4
KMI pmax pmax
comp=Z,16nm,1.2s,mb4.5
KMI LR LR
comp=N,180nm,21.4s,MS4.5
KMI LR LR
comp=E,710nm,19.7s,MS4.5
KMI LR LR
comp=Z,1μm,18.5s,MS4.8
SJI **Sawahan** 42.33 238 P P 00 14 29.3 -0.2
comp=Z,4μmcomp=Z,56nm,1.1s,mb5.1
SJI **Sawahan** 42.33 238 P P 00 14 30.0 +0.5
comp=Z,4μmcomp=Z,56nm,1.1s,mb5.1
PWJI **Pagerwojo** 42.47 238 P P 00 14 29.3 -1.2
comp=Z,103nm,0.8s,mb5.5
PWJI **Pagerwojo** 42.47 238 P P 00 14 29.3 -1.2
comp=Z,103nm,0.8s,mb5.5
DZM **Mont Dzumac** 42.77 153 eP P 00 14 32.3 -0.6
comp=Z,134nm,1.3s,mb5.5
DZM eLR LR 00 26 32.3
comp=Z,2μm,22.9s
DZM **Mont Dzumac** 42.77 153 eP P 00 14 32.3 -0.6
comp=Z,73nm,1.3s,mb5.2
DZM ePcP PcP 00 16 24.1 +0.2
LZH **Lanzhou** 42.92 306 eP P 00 14 35.6 +1.6
LZH pP pP 00 14 47.5 +2.3
LZH sP sP 00 14 52.8 +3.0
LZH PP PP 00 16 17.5 +3.4
LZH S S 00 20 51.5 -4.9
LZH sS sS 00 21 17.8 +2.9
LZH SS SS 00 24 03.6 -5.4
LZH pmax pmax
comp=Z,42nm,1.0s,mb5.1
LZH pmax pmax
comp=Z,160nm,4.9s
LZH LR LR
comp=E,880nm,15.8s
LZH LR LR
comp=Z,1μm,18.5s,MS4.8
TPI **Tanjungpandan** 43.29 247 P P 00 14 36.6 -0.6
comp=Z,943nmcomp=Z,135nm,0.9s,mb5.7
TPI **Tanjungpandan** 43.29 247 P P 00 14 36.7 -0.5
comp=Z,942nmcomp=Z,135nm,0.9s,mb5.7
CLNS **Chul'man** 43.62 343 eP P 00 14 39.7 +0.4
CLNS e 00 16 20.2
CLNS e 00 16 24.8
CLNS ePPP 00 16 55.4
CLNS eS S 00 21 06.3 +0.3
CLNS pmax pmax
comp=E,17nm,1.7s
CLNS pmax pmax
comp=Z,43nm,1.4s,mb5.0
CLNS pmax pmax
comp=N,50nm,1.8s
CLNS pmax pmax
comp=E,8.0nm,1.2s
CLNS pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
CLNS pmax pmax
comp=N,14nm,1.2s
CLNS smax
comp=N,108nm,12.8s
CLNS smax
comp=E,132nm,14.9s
CLNS MLR MLR
comp=E,298nm,17.0s,MS4.3
CLNS MLR MLR
comp=Z,233nm,19.0s,MS4.1
CLNS MLR MLR
comp=N,193nm,18.0s,MS4.3
BJII **Banjamegara** 43.81 240 P P 00 14 47.0 +5.6
comp=N,44nm,2.0s,mb4.8
BJII **Banjamegara** 43.81 240 P P 00 14 44.5 +3.1
comp=N,44nm,2.0s,mb4.8
CIT **Chita** 44.26 331 eP P 00 14 45.1 +0.6
KTGM **Kuala Trenggan** 44.36 261 P P 00 14 46.4 +0.6
MYKOM **Kota Tinggi** 44.88 256 P P 00 14 49.9 -0.1
MYKOM **Kota Tinggi** 44.88 256 P P 00 14 50.3 +0.3
comp=N,30nm,0.8s,mb5.2
MYKOM **Kota Tinggi** 44.88 256 P P 00 14 50.6 +0.6
comp=N,31nm,0.8s,mb5.2
NST **Nakhon Sawan** 44.95 276 P P 00 14 50.0 -0.5
comp=N,37nm,0.7s,mb5.3
ULN **Ulaanbaatar** 45.28 323 PFAKE 00 15 00.0 +7.3
ULN LR LR
comp=Z,979nm,20.0s,MS4.7
KGM **Kluang** 45.29 256 P P 00 14 53.2 -0.1
CISI **Cisompet, Garu** 45.51 241 P P 00 14 52.8 -2.2
comp=Z,3μmcomp=Z,56nm,1.1s,mb5.4
ADK **Adak** 45.57 31 eP P 00 14 54.9 0.0
comp=Z,174nm,1.3s,mb5.8
ADK ePP PP 00 16 42.9 +0.9
ADK LR LR
comp=Z,778nm,19.0s,MS4.7
ADK **Adak** 45.57 31 eP P 00 14 54.9 0.0
ADK e 00 16 42.9
ADK pmax pmax
comp=Z,174nm,1.3s,mb5.8
ADK MLR MLR
comp=Z,778nm,19.0s,MS4.7
SONM **Songino Array** 45.65 322 P P 00 14 56.1 +0.4
comp=Z,30nm,0.6s,mb5.4,baz=135,slow=8.5,SNR=147
SONM LR LR 00 34 51.1
comp=Z,1μm,19.1s,MS4.8,baz=120,slow=37
MSVF **Nonsavu** 45.72 137 eP P 00 14 55.7 -0.9
comp=Z,42nm,1.2s,mb5.2
MSVF ePP PP 00 16 44.9 +0.6
MSVF LR LR
comp=Z,532nm,19.0s,MS4.5
CHG **Chiang Mai** 45.74 280 ⇑P P 00 14 58.8 +2.1
comp=Z,21nm,0.7s,mb5.2
CHTO **Chiang Mai** 45.74 280 eP P 00 14 57.0 +0.3
comp=Z,16nm,0.9s,mb4.9
CHTO LR LR
comp=Z,345nm,20.0s,MS4.3
CHTO **Chiang Mai** 45.74 280 eP P 00 14 57.0 +0.3
CHTO pmax pmax
comp=Z,16nm,0.9s,mb5.0
CHTO MLR MLR
comp=Z,345nm,20.0s,MS4.3
CHTO **Chiang Mai** 45.74 280 P P 00 14 58.7 +2.0
comp=Z,24nm,0.9s,mb5.1
CM31 **Chiang Mai Arr** 45.77 280 eP P 00 15 00.8 +3.8
CM31 LR LR
comp=Z,573nm,19.0s,MS4.5
CMAR **Chiang Mai Arr** 45.77 280 P P 00 14 57.9 +0.8
comp=Z,27nm,0.8s,mb5.2,baz=77,slow=6.2,SNR=43
CMAR ScP ScP 00 20 25.9 +1.5
comp=Z,0.9nm,0.3s,baz=57,slow=3.3,SNR=4.7
CMAR LR LR 00 35 26.4

comp=Z,557nm,18.0s,MS4.5,baz=273,slow=38
BDT Bhumibol Dam 45.83 278 P P 00 14 58.0 +0.5
MBWA Marble Bar 45.96 216 *e*P **P 00 14 57.2 -1.2**
MBWA PcP PcP 00 16 31.7 -3.1
MBWA *e*PP PP 00 16 46.3 -0.4
MBWA LR LR
comp=Z,408nm,22.0s,MS4.3
RBSI Rajabasa 46.42 245 P P 00 15 01.3 -0.9
comp=Z,111nm,0.7s,mb5.9
FRIM Kepong 46.45 259 P P 00 15 02.5 0.0
SEY Seymchan 46.58 3 *i*P **P 00 15 03.6 +0.9**
SEY Seymchan 46.58 3*d i*P **P 00 15 03.5 +0.8**
IPM Ipoh 46.62 260 P P 00 15 04.0 +0.3
IPM Ipoh 46.62 260 P P 00 15 04.6 +0.9
comp=Z,416nmcomp=Z,35nm,1.0s,mb5.2
IPM Ipoh 46.62 260 P P 00 15 04.7 +1.0
comp=Z,416nmcomp=Z,35nm,1.0s,mb5.2
KULM Kulim 46.72 262 *e*P **P 00 15 04.7 +0.1**
comp=Z,43nm,1.0s,mb5.3
KULM LR LR
comp=Z,505nm,21.0s,MS4.5
KULM Kulim 46.72 262 P P 00 15 05.3 +0.7
KULM Kulim 46.72 262 P P 00 15 05.7 +1.1
comp=Z,46nm,1.1s,mb5.3
KULM Kulim 46.72 262 P P 00 15 07.2 +2.6
comp=Z,46nm,1.1s,mb5.3
KLSI 46.76 247 P P 00 15 03.6 -1.3
comp=Z,2µmcomp=Z,321nm,0.9s,mb6.3
KLSI 46.76 247 P P 00 15 04.4 -0.5
comp=Z,2µmcomp=Z,321nm,0.9s,mb6.3
ARMA Armidale 46.82 174 *e*P **P 00 15 03.0 -1.9**
ARMA Armidale 46.82 174 *e*P **P 00 15 07.5 +2.6**
comp=Z,40nm,1.3s,mb5.2
CGJI Cibinong 46.84 244 P P 00 15 02.8 -2.7
comp=Z,58nm,0.9s,mb5.5
GTA Gaotai 46.89 309 *e*P **P 00 15 07.0 +1.5**
GTA pP pP 00 15 19.5 +2.7
GTA sP sP 00 15 24.8 +3.4
GTA S **S 00 21 53.9 +0.1**
GTA sS sS 00 22 14.5 +2.1
GTA SS SS 00 25 12.8 -7.9
GTA pmax pmax
comp=Z,13nm,1.4s,mb4.7
GTA pmax pmax
comp=Z,100nm,5.4s
GTA LR LR
comp=N,480nm,16.3s,MS4.8
GTA LR LR
comp=E,760nm,16.7s,MS4.8
GTA LR LR
comp=Z,1µm,16.9s,MS4.9
ATKA Atka Island 47.00 32 *e*P **P 00 15 06.2 +0.1**
comp=Z,170nm,1.0s,mb5.9
YAK Yakutsk 47.14 349 *e*P **P 00 15 07.3 +0.3**
comp=Z,149nm,0.6s,mb6.1
YAK Yakutsk 47.14 349*d i*P **P 00 15 06.5 -0.6**
YAK *e**PP pP 00 15 16.0 -2.3
YAK *e* 00 16 39.1
YAK *e* 00 16 56.2
YAK *e*PPP 00 17 38.1
YAK *e*S **S 00 21 54.4 -2.2**
YAK *e**SS sS 00 22 11.2 -4.0
YAK *e* 00 24 54.5
YAK *e*SS SS 00 25 20.6 -3.4
YAK *e*SSS 00 26 32.9
YAK pmax pmax
comp=Z,80nm,0.8s,mb5.7
YAK pmax pmax
comp=N,47nm,1.3s
YAK pmax pmax
comp=E,22nm,1.2s
YAK pmax pmax
comp=Z,13nm,0.6s,mb5.0
YAK smax
comp=N,231nm,2.5s
YAK smax
comp=E,339nm,2.8s
MDSI Maura Dua 47.16 248 P P 00 15 06.4 -1.6
comp=E,959nmcomp=E,79nm,1.0s,mb5.6
MDSI Maura Dua 47.16 248 P P 00 15 06.9 -1.1
comp=E,958nmcomp=E,79nm,1.0s,mb5.6
LWLI Liwa 47.51 247 P P 00 15 09.3 -1.4
comp=E,341nm,0.8s,mb6.5
LWLI Liwa 47.51 247 P P 00 15 09.7 -1.0
comp=E,342nm,0.8s,mb6.5
SDSI Sungai Dareh 48.15 253 P P 00 15 15.0 -0.6
comp=E,21nm,1.1s,mb5.1
SDSI Sungai Dareh 48.15 253 P P 00 15 16.1 +0.5
comp=E,21nm,1.1s,mb5.1
KSI Kapahiang 48.20 249 P P 00 15 14.8 -1.3
comp=E,171nm,1.0s,mb6.0
KSI Kapahiang 48.20 249 P P 00 15 15.1 -1.0
comp=E,171nm,1.0s,mb6.0
STKA Stephens Creek 48.34 186 *e*P **P 00 15 17.2 +0.5**
comp=E,16nm,1.8s,mb4.7
STKA Stephens Creek 48.34 186 P P 00 15 16.4 -0.3
comp=E,3.9nm,0.9s,mb4.4,baz=354,slow=7.5,SNR=3.2
STKA LR LR 00 37 38.8
comp=E,541nm,19.2s,MS4.5,baz=132,slow=39
ZAK Zakamensk 48.67 324 *e*P **P 00 15 19.1 0.0**
ZAK pmax pmax
comp=Z,14nm,1.2s,mb4.9
PPI Padang Panjang 48.91 255 P pP 00 15 32.3 -0.6
PPI Padang Panjang 48.91 255 P **P 00 15 23.8 +2.2**
comp=Z,25nm,0.9s,mb5.2
PDSI Padang 49.03 254 P **P 00 15 21.2 -1.2**
comp=Z,50nm,0.7s,mb5.7
PDSI Padang 49.03 254 P **P 00 15 22.3 -0.1**
comp=Z,50nm,0.7s,mb5.6
TLY Talaya 49.09 326 P **P 00 15 23.8 +1.5**
comp=Z,220nm,0.6s,mb6.4,SNR=8.2
TLY Talaya 49.09 326 *e*P **P 00 15 23.3 +0.9**
comp=Z,23nm,0.6s,mb5.4
TLY Talaya 49.09 326 *e*P **P 00 15 23.0 +0.7**
TLY *e*S **S 00 22 15.6 -9.0**
TLY pmax pmax
comp=Z,21nm,0.7s,mb5.3
TLY MLR MLR
comp=Z,981nm,19.0s,MS4.8
PSI Prapat 49.14 259 P **P 00 15 23.4 +0.1**
comp=Z,56nm,0.8s,mb5.7
PSI LR LR 00 34 17.3
comp=Z,758nm,20.7s,MS4.7,baz=142,slow=34
MNSI Mandailing Nat 49.21 256 P **P 00 15 24.6 +0.8**
comp=Z,30nm,1.1s,mb5.2
MNSI Mandailing Nat 49.21 256 P **P 00 15 24.2 +0.4**
comp=Z,30nm,1.1s,mb5.2
NIKO Nikolski 50.17 33 *e*P **P 00 15 29.8 -0.7**
FORT Forrest 50.37 201 *e*P **P 00 15 33.3 +1.0**
comp=Z,36nm,0.7s,mb5.5
FORT Forrest 50.37 201 *e*P **P 00 15 33.1 +0.9**
comp=Z,47nm,0.8s,mb5.6
SISI Saibi 50.45 254 P **P 00 15 31.7 -1.6**
comp=Z,126nm,0.6s,mb6.1
SISI Saibi 50.45 254 P **P 00 15 31.6 -1.7**
comp=Z,126nm,0.6s,mb6.1
TPTI 50.64 261 P **P 00 15 34.1 -0.6**
comp=Z,21nm,0.8s,mb5.1
TPTI 50.64 261 P **P 00 15 34.6 -0.1**
comp=Z,21nm,0.8s,mb5.1
GSI Gunungsitoli 50.91 258 P **P 00 15 36.2 -0.5**
GSI Gunungsitoli 50.91 258 P **P 00 15 36.8 +0.1**
comp=Z,277nm,0.8s,mb6.2
CAN Canberra 51.53 178 *e*P **P 00 15 41.3 +0.4**
comp=Z,94nm,1.8s,mb5.4
CAN Canberra 51.53 178 *e*P **P 00 15 41.3 +0.4**
CAN pmax pmax
comp=Z,94nm,1.8s,mb5.4
CNB Canberra Magne 51.54 178 *e*P **P 00 15 40.8 -0.1**
UNV Unalaska Valle 51.82 33 *e*P **P 00 15 42.5 -0.4**
comp=Z,100nm,0.9s,mb5.7
AKUT Akutan 52.34 33 *e*P **P 00 15 46.5 -0.2**
comp=Z,190nm,1.0s,mb6.0
BILL Bilibino 53.02 9 *e*P **P 00 15 51.5 0.0**
comp=Z,80nm,1.0s,mb5.6
BILL LR LR
comp=Z,560nm,20.0s,MS4.6
BILL Bilibino 53.02 9 *e*P **P 00 15 51.6 0.0**
BILL pmax pmax
comp=Z,81nm,1.0s,mb5.6
BILL MLR MLR
comp=Z,560nm,20.0s,MS4.6
TOO Toolangi 53.76 181 *e*P pP 00 16 08.6 -0.2
KLBR Kellerberrin 55.40 210 *e*P **P 00 16 08.1 -1.3**
comp=Z,33nm,1.2s,mb5.2
TAPN Taplejung 55.62 292 *e*P **P 00 16 11.7 +0.5**
comp=Z,143nm,1.2s,mb5.9
SDPT Sand Point 55.63 33 *e*P **P 00 16 10.6 -0.3**
comp=Z,267nm,0.9s,mb6.3
ODAN Odare 55.92 292 *e*P **P 00 16 13.5 +0.2**
comp=Z,80nm,0.9s,mb5.8
TIXI Tiksi 56.22 353 *e*P **P 00 16 13.9 -0.8**
comp=Z,39nm,0.8s,mb5.5
TIXI LR LR
comp=Z,638nm,19.0s,MS4.7
TIXI Tiksi 56.22 353 *e*P **P 00 16 14.0 -0.8**
TIXI *e*S **S 00 24 00.9 -0.5**
TIXI *e* 00 25 58.3
TIXI pmax pmax
comp=Z,44nm,0.9s,mb5.5
TIXI MLR MLR
comp=Z,567nm,17.0s,MS4.7
RAMN Ramite 56.62 292 *e*P **P 00 16 18.5 +0.2**
comp=Z,95nm,1.2s,mb5.7
WMQ Urumqi 56.70 312 P **P 00 16 20.3 +1.7**
WMQ pP pP 00 16 33.0 +2.9
WMQ sP sP 00 16 38.3 +3.6
WMQ PcP PcP 00 17 15.8 +1.4
WMQ PP PP 00 18 28.3 +3.4
WMQ ScP ScP 00 21 10.1 -0.9
WMQ S **S 00 24 07.8 -0.7**
WMQ sS sS 00 24 29.3 +1.7
WMQ ScS ScS 00 26 02.0 -2.9
WMQ SS SS 00 27 56.8 +0.2
WMQ pmax pmax
comp=Z,44nm,1.4s,mb5.3
WMQ pmax pmax
comp=Z,260nm,4.7s
WMQ LR LR
comp=N,290nm,19.0s,MS4.6
WMQ LR LR
comp=E,320nm,19.6s,MS4.6
WMQ LR LR
comp=Z,400nm,20.6s,MS4.5
NWAO Narrogin (SRO) 56.75 210 *e*P **P 00 16 18.6 -0.4**
comp=Z,259nm,2.6s,mb5.8
NWAO LR LR
comp=Z,428nm,19.0s,MS4.6
NWAO Narrogin (SRO) 56.75 210 *e*P **P 00 16 18.6 -0.4**
NWAO pmax pmax
comp=Z,259nm,2.6s
NWAO MLR MLR
comp=Z,428nm,19.0s
JIRN Jiri 56.95 293 *e*P **P 00 16 21.7 +1.0**
comp=Z,83nm,0.7s,mb5.9
CHGN Chignik 57.07 33 *e*P **P 00 16 20.0 -1.0**
GUN Gumba 57.22 293 *e*P **P 00 16 23.2 +0.6**
comp=Z,84nm,0.6s,mb5.9
PKI Pulchoki 57.65 292 *e*P **P 00 16 25.5 -0.1**
comp=Z,66nm,0.6s,mb5.9
PKIN Phulchoki 57.66 292 *e*P **P 00 16 26.2 +0.5**
comp=Z,90nm,0.7s,mb5.9
DMN Daman 57.92 293 *e*P **P 00 16 27.8 +0.3**
comp=Z,52nm,0.5s,mb5.8
GKN Gorkha 58.31 293 *e*P **P 00 16 30.3 0.0**
comp=Z,68nm,0.6s,mb5.9
KOLN Koldanda 59.24 293 *e*P **P 00 16 36.6 -0.1**
comp=Z,76nm,0.7s,mb5.8
OHAK Old Harbor 60.04 33 *e*P **P 00 16 41.8 +0.1**
comp=Z,301nm,2.2s,mb5.9
OHAK LR LR
comp=Z,700nm,20.0s,MS4.8
ZAA0 Zalesovo Array 60.53 323 *e*P **P 00 16 43.9 -1.2**
ZAA0 *e*PcP PcP 00 17 29.6 +0.3
ZALV Zalesovo Beam 60.53 323 P **P 00 16 43.8 -1.3**
comp=Z,17nm,0.6s,mb5.3,baz=111,slow=7.2,SNR=81
ZALV PcP PcP 00 17 29.2 -0.2
comp=Z,12nm,0.8s,baz=139,slow=4.6,SNR=4.2
ZALV LR LR 00 43 48.5
comp=Z,560nm,19.0s,MS4.7,baz=92,slow=37
ZALV Zalesovo Beam 60.53 323 P **P 00 16 43.8 -1.3**
ZALV 00 17 29.2
KDAK Kodiak Island 60.57 32 P **P 00 16 45.0 -0.3**
comp=Z,422nm,1.0s,mb6.5,SNR=8.4
KDAK Kodiak Island 60.57 32 *e*P **P 00 16 45.4 +0.2**
comp=Z,88nm,1.1s,mb5.8
KDAK LR LR
comp=Z,804nm,19.0s,MS4.9
KDAK Kodiak Island 60.57 32 P **P 00 16 44.1 -1.1**
comp=Z,49nm,0.8s,mb5.7,baz=335,slow=3.8,SNR=17
KDAK Kodiak Island 60.57 32 *i*P **P 00 16 45.1 -0.2**
TTA Tatalina 60.70 26 *e*P **P 00 16 46.6 +0.5**
MK31 Makanchi Array 60.90 315 *e*P **P 00 16 48.0 +0.2**
MK31 Makanchi Array 60.90 315*ce*P **P 00 16 47.8 +0.1**
MK31 pmax pmax
comp=Z,13nm,0.6s,mb5.2
MKAR Makanchi Array 60.90 315 P **P 00 16 47.9 +0.1**
MKAR PcP PcP 00 17 30.2 -0.8
MKAR LR LR 00 44 59.6
MKAR ⇑*e* 00 46 14.8
MKAR Makanchi Array 60.90 315 P **P 00 16 47.9 +0.1**
comp=Z,14nm,0.7s,mb5.2,baz=90,slow=7.9,SNR=107
MKAR PcP PcP 00 17 30.2 -0.8
comp=Z,8.9nm,0.8s,baz=94,slow=7.4,SNR=5.8
MKAR LR LR 00 44 59.6
comp=Z,364nm,19.4s,MS4.5,baz=92,slow=38
MKAR PKP2bc 00 46 14.8
comp=Z,0.7nm,0.8s,baz=349,slow=3.1,SNR=4.4
MKAR Makanchi Array 60.90 315 P **P 00 16 47.9 +0.2**
MKAR 00 17 30.2
RSO Redoubt South 61.29 29 P **P 00 16 49.3 -0.8**
URZ Urewera 61.33 153 P **P 00 16 49.5 -1.2**
comp=Z,8.0nm,0.7s,mb5.0,baz=333,slow=4.5,SNR=4.3
NVS Novosibirsk 61.63 324⇑*i*P **P 00 16 51.4 -1.1**
NVS *e*S **S 00 25 10.0 -1.9**
NVS pmax pmax
comp=N,15nm,1.4s
NVS pmax pmax
comp=E,37nm,1.4s
NVS pmax pmax
comp=Z,41nm,1.4s,mb5.4
NVS smax
comp=N,8.0nm,1.4s
NVS smax
comp=E,16nm,1.9s
PPLA Purkeypile 62.32 27 *e*P **P 00 16 57.6 +0.6**
comp=E,56nm,0.8s,mb5.8
SEW Seward 62.76 30 *e*P **P 00 16 58.0 -2.0**
comp=E,86nm,0.9s,mb5.9
RC01 Rabbit Creek A 62.89 29 *e*P **P 00 17 00.6 -0.2**
comp=E,46nm,0.6s,mb5.8
PMR Palmer 63.30 29 *e*P **P 00 17 02.9 -0.7**
comp=E,62nm,1.0s,mb5.7
PMR *e*P 00 17 06.0
PMR LR LR
comp=Z,200nm,18.0s,MS4.3
PMR Palmer 63.30 29 *e*P **P 00 17 02.9 -0.7**
PMR pmax pmax
comp=Z,62nm,1.0s,mb5.7
PMR MLR MLR
comp=Z,200nm,18.0s,MS4.3
TRF Thorofare Moun 63.31 27 *e*P **P 00 17 03.4 -0.3**
comp=Z,88nm,0.9s,mb5.9
KURK Kurchatov 63.75 319 P **P 00 17 06.7 -0.1**
comp=Z,422nm,1.0s,mb6.4,SNR=19
KURK Kurchatov 63.75 319 *e*P **P 00 17 06.3 -0.5**
comp=Z,144nm,1.3s,mb5.8
KURK LR LR
comp=Z,986nm,20.0s,MS5.0
KURK Kurchatov 63.75 319*d i*P **P 00 17 05.9 -0.9**
KURK pmax pmax
comp=Z,94nm,1.2s,mb5.7
RPZ Rata Peaks 63.81 161 P **P 00 17 05.2 -1.9**
comp=Z,11nm,0.8s,mb4.9,baz=207,slow=6.8,SNR=1.8
MCK McKinley 63.97 26 *e*P **P 00 17 07.8 -0.2**
comp=Z,59nm,1.1s,mb5.5
MCK McKinley 63.97 26 *e*P **P 00 17 07.8 -0.2**
MCK pmax pmax
comp=Z,59nm,1.1s,mb5.5
COLD Coldfoot 64.53 23⇓*e*P **P 00 17 12.4 +0.9**
comp=Z,68nm,1.0s,mb5.6
COLA College 64.74 25 *e*P **P 00 17 12.4 -0.6**
comp=Z,54nm,0.8s,mb5.6
COLA LR LR
comp=Z,604nm,20.0s,MS4.8
COLA College 64.74 25 *e*P **P 00 17 12.4 -0.6**
COLA pmax pmax
comp=Z,54nm,0.8s,mb5.6
COLA MLR MLR
comp=Z,604nm,20.0s,MS4.8
DIV Divide 64.77 30 *e*P **P 00 17 13.8 +0.6**
comp=Z,101nm,1.1s,mb5.8
NDI New Delhi 64.78 294 *e*PKP **P 00 17 13.0 -0.9**
ULHL Ulahol 64.94 309 P **P 00 17 16.3 +1.6**
SNR=16
ILAR Eielson Array 65.11 26 P **P 00 17 14.2 -1.2**
comp=Z,58nm,0.9s,mb5.6,baz=258,slow=5.0,SNR=328
ILAR LR LR 00 43 19.9
comp=Z,576nm,20.9s,MS4.8,baz=278,slow=34
HYB Hyderabad 65.13 282 *i*P **P 00 17 15.0 -1.4**
KSH Kashi 65.17 306 P **P 00 17 19.1 +2.9**
KSH *e*pP pP 00 17 31.9 +4.0
KSH sP sP 00 17 36.9 +4.5
KSH PcP PcP 00 17 51.3 +2.7
KSH PP PP 00 19 45.1 +5.3
KSH *e*ScP 00 21 49.0
KSH *e*PcS 00 21 54.1
KSH S S 00 25 57.3 +0.7
KSH *e*sS sS 00 26 19.1 +3.2
KSH ScS ScS 00 27 06.5 -2.0
KSH *e*SS SS 00 30 12.0 +2.6
KSH pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KSH pmax pmax
comp=Z,73nm,4.2s
KSH LR LR
comp=N,400nm,16.6s,MS4.8
KSH LR LR
comp=E,200nm,13.2s,MS4.8
KSH LR LR
comp=Z,150nm,12.1s,MS4.4
BMRM Bremner River 65.29 30 *e*P **P 00 17 16.9 +0.3**
comp=Z,156nm,1.2s,mb5.9
PAX Paxson 65.30 28⇓*e*P **P 00 17 16.6 0.0**
comp=Z,71nm,0.8s,mb5.8
PAX *e*pP pP 00 17 30.9 +2.6
PAX Paxson 65.30 28⇓*e*P **P 00 17 16.6 0.0**
PAX *e**PP pP 00 17 30.9 +2.6
PAX pmax pmax
comp=Z,71nm,0.8s,mb5.8
KZA Kyzart 65.68 309 P **P 00 17 22.3 +2.8**
SNR=7.3
KBK Karagaybulak 65.89 310 P **P 00 17 22.4 +1.5**
SNR=19
CHMS Chumysh 66.04 310 P **P 00 17 22.6 +0.8**
SNR=12
MENT Mentasta 66.08 28 *e*P **P 00 17 22.0 +0.4**
FRU Bishkek 66.14 310 *e*P **P 00 17 23.0 +0.6**
FRU *e* 00 17 39.0
FRU pmax pmax
comp=Z,40nm,2.0s,mb5.1
USP Ospenovka 66.22 310 P **P 00 17 22.8 -0.1**
SNR=25
UCH Uchtor 66.22 309 P **P 00 17 25.4 +2.4**
SNR=6.4
AAK Ala-Archa 66.23 310 P **P 00 17 24.6 +1.6**
comp=Z,195nm,0.5s,mb6.4,SNR=5.7
AAK Ala-Archa 66.23 310 P **P 00 17 22.9 -0.1**
SNR=8.2
AAK Ala-Archa 66.23 310⇓*e*P **P 00 17 23.7 +0.7**
comp=Z,13nm,0.6s,mb5.1
AAK PcP PcP 00 17 51.8 -1.1
AAK LR LR
comp=Z,587nm,19.0s,MS4.8
AAK Ala-Archa 66.23 310⇓*e*P **P 00 17 23.7 +0.7**
AAK 00 17 51.8
AAK pmax pmax
comp=Z,13nm,0.6s,mb5.1
AAK MLR MLR
comp=Z,587nm,19.0s,MS4.8
AAK Ala-Archa 66.23 310 P **P 00 17 24.4 +1.4**
comp=Z,66nmcomp=Z,6.3nm,1.0s,mb4.6
EKS2 Erkin-Say 66.76 310 P **P 00 17 27.6 +1.2**
SNR=18
EKS2 Erkin-Say 66.76 310⇑*e*P **P 00 17 27.6 +1.2**
comp=Z,12nm,0.7s,mb5.0
EKS2 LR LR
comp=Z,464nm,19.0s,MS4.7
AML Almayashu 66.83 309 P **P 00 17 29.0 +2.1**
SNR=12
AML Almayashu 66.83 309⇓*e*P **P 00 17 28.0 +1.1**
comp=Z,42nm,0.6s,mb5.6
AML LR LR
comp=Z,395nm,19.0s,MS4.7
EGAK Eagle 67.52 26 *e*P **P 00 17 30.8 0.0**
comp=Z,108nm,1.1s,mb5.8
EGAK LR LR
comp=Z,364nm,20.0s,MS4.6
PNL Peninsula 67.67 32 *e*P **P 00 17 32.3 +0.5**
comp=Z,43nm,0.8s,mb5.5
NIL Nilore 67.70 300 PFAKE 00 17 40.0 +7.5
NIL LR LR
comp=Z,71nm,22.0s,MS3.9
DAWY Dawson 68.17 27 *e*P **P 00 17 35.7 +0.7**
VOSK Vostochnaya 68.61 321 P **P 00 17 36.2 -1.7**
VOSK pmax pmax
comp=Z,33nm,1.4s,mb5.1
BVA0 Borovoye Array 68.98 321 *i*P **P 00 17 39.3 -0.8**
BVA0 pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
BVAR Borovoye Array 68.98 321 P **P 00 17 39.4 -0.8**
comp=Z,26nm,0.5s,mb5.4,baz=100,slow=7.5,SNR=271
BRVK Borovoye 69.04 321 P **P 00 17 40.5 0.0**
comp=Z,236nm,0.8s,mb6.2,SNR=45
BRVK Borovoye 69.04 321 *e*P **P 00 17 39.9 -0.7**
BRVK LR LR
comp=Z,567nm,20.0s,MS4.8
BRVK Borovoye 69.04 321*c i*P **P 00 17 40.1 -0.4**
BRVK pmax pmax
comp=Z,64nm,1.2s,mb5.4
KK31 Karatay Array 69.14 310*ce*P **P 00 17 41.3 -0.1**
KK31 pmax pmax
comp=Z,55nm,0.6s,mb5.7
SKAG Skagway 69.72 32 *e*P **P 00 17 45.5 +0.9**
comp=Z,83nm,1.2s,mb5.5
SKAG LR LR
comp=Z,300nm,19.0s,MS4.6
ZRNK Zerenda 69.81 321 *i*P **P 00 17 44.3 -1.0**
ZRNK pmax pmax
comp=Z,87nm,1.3s,mb5.5
INK Inuvik 70.95 23 *e*P **P 00 17 52.0 0.0**
comp=Z,70nm,0.8s,mb5.6
INK Inuvik 70.95 23 *e*P **P 00 17 52.0 0.0**
INK pmax pmax
comp=Z,70nm,0.8s
PPT Papeete 71.05 116 *e*S S 00 27 10.0 +2.7
comp=Z,143nm,23.2s
PPT *e*LR LR 00 39 20.8
comp=Z,671nm,21.8s,baz=298
PPT Papeete 71.05 116 LR LR 00 43 46.9
comp=Z,567nm,18.7s,MS4.9,baz=13,slow=32
KBL Kabul 71.07 301 *e*P **P 00 17 53.8 +0.4**
DLBC Dease Lake 72.48 33 *e*P **P 00 18 02.3 +0.9**
SVE Sverdlovsk 74.41 325⇓*e*P **P 00 18 12.5 -0.2**
SVE pmax pmax
comp=Z,45nm,1.2s,mb5.3
SVE MLR MLR
comp=Z,376nm,20.0s,MS4.7
ARU Arti 75.59 325 *e*P **P 00 18 19.0 -0.6**
ARU LR LR
comp=Z,511nm,20.0s,MS4.8
ARU Arti 75.59 325*c i*P **P 00 18 18.9 -0.7**
ARU 00 21 07.8
ARU S S 00 27 58.8 +1.2
ARU SS SS 00 32 50.6 +1.9
ARU pmax pmax
comp=Z,61nm,1.2s,mb5.4
ARU MLR MLR
comp=Z,471nm,20.0s,MS4.8
ARU Arti 75.59 325 P **P 00 18 18.2 -1.4**
comp=Z,264nm,1.3s,mb6.0,SNR=24
AB31 Akbulak array 75.81 318*ce*P **P 00 18 19.7 -1.3**
AB31 pmax pmax
comp=Z,54nm,0.8s,mb5.5
ABKAR Akbulak array 75.81 318⇑*e*P **P 00 18 20.0 -1.0**
comp=Z,34nm,0.7s,mb5.4
SOKR Solikamsk 76.07 328*d i*P **P 00 18 22.0 -0.2**
SOKR pmax pmax
comp=Z,20nm,0.9s,mb5.0
SOKR MLR MLR
comp=Z,700nm,21.0s,MS5.0
TAOE Nuku Hiva Isla 76.33 104 *e*S S 00 28 10.5 +3.3
comp=Z,127nm,30.6s
TAOE *e*LR LR 00 42 00.7
comp=Z,617nm,23.4s,baz=300
AKTO Aktyubinsk 76.85 319 LR LR 00 55 33.4
comp=Z,548nm,18.9s,MS4.9,baz=104,slow=38
NLWA Neilton Lookou 77.51 44 *e*P **P 00 18 31.4 +0.8**

NLWA LR LR
comp=Z,327nm,19.0s,MS4.7
PGC Sidney 77.55 43 *eP* **P 00 18 31.6 +0.7**
E03A Lebam 77.87 45 ⇑P **P 00 18 33.0 +0.3**
baz=78,SNR=5.6
IMYA Miami 77.98 304 *eP* **P 00 18 34.6 +1.1**
F03A Seaside 78.00 46 ⇓P **P 00 18 33.4 +0.1**
baz=78
KEBM Edson Butte 78.05 49 *eP* **P 00 18 34.9 +1.1**
GNW Green Mountain 78.17 44 P **P 00 18 34.8 +0.5**
A05A Maple Falls 78.37 42 ⇑P **P 00 18 35.3 0.0**
baz=78
COR Corvallis 78.44 47 PFAKE 00 18 50.0 +14
COR LR LR
comp=Z,403nm,20.0s,MS4.8
ISRO Mashad 78.48 305 *eP* **P 00 18 37.7 +1.4**
MBW Mount Baker 78.53 42 P **P 00 18 36.7 +0.4**
IMOG Moghan 78.63 304 *eP* **P 00 18 38.5 +1.4**
JCW Jim Creek 78.63 43 *eP* **P 00 18 37.4 +0.6**
ERK Elk Rock 78.75 45 P **P 00 18 38.9 +1.4**
F04A Amboy 78.77 45 ⇓P **P 00 18 37.3 -0.3**
baz=79,SNR=5.9
D05A Enumclaw 78.80 44 ⇓P **P 00 18 38.2 +0.4**
baz=79
TDL Tradedollar La 78.83 45 P **P 00 18 38.5 +0.6**
IPAY Payeh 78.83 305 *eP* **P 00 18 39.4 +1.2**
B06A Marblemount 78.86 43 ⇑P **P 00 18 38.1 +0.1**
baz=79
RMW Rattlesnake Mo 78.87 44 P **P 00 18 39.0 +0.9**
G04A Mulino 78.89 46 ⇓P **P 00 18 38.4 +0.1**
baz=79
KHMM Horse Mountain 78.89 51 *eP* **P 00 18 39.9 +1.5**
IDAH Dahanechah 78.92 301 *eP* **P 00 18 40.3 +1.6**
IAKL Akhelmad 78.99 305 *eP* **P 00 18 39.8 +0.8**
LON Longmire 79.02 44 *eP* **P 00 18 39.2 +0.2**
HUMO Hull Mountain 79.09 49 *eP* **P 00 18 40.4 +0.9**
HUMO LR LR
comp=Z,424nm,21.0s,MS4.8
IKRD Kardeh 79.14 305 *eP* **P 00 18 36.9 -3.0**
H04A Detroit Lake 79.20 47 ⇑P **P 00 18 39.5 -0.5**
baz=79,SNR=8.0
ABKT Ailbek 79.20 306 P **P 00 18 40.7 +0.5**
comp=Z,255nm,1.2s,mb6.0,SNR=19
WPW White Pass 79.20 44 P **P 00 18 40.5 +0.5**
KCPM Cahto Peak 79.26 52 *eP* **P 00 18 41.5 +1.1**
YKA Yellowknife Ar 79.39 28 P **P 00 18 40.3 -0.4**
comp=Z,52nm,1.0s,mb5.4,baz=287,slow=5.4,SNR=76
HOOD Mount Hood Mea 79.43 46 *eP* **P 00 18 42.1 +0.8**
YBH Yreka Blue Hor 79.46 50 P **P 00 18 42.0 +0.5**
comp=Z,20nm,1.0s,mb5.0,baz=293,slow=2.5,SNR=23
YBH Yreka Blue Hor 79.46 50 *eP* **P 00 18 42.0 +0.5**
YBH MLR MLR
comp=Z,424nm,22.0s
ISFR Sfrayin 79.48 306 *eP* **P 00 18 43.0 +1.3**
HOPS Hopland 79.79 52 PFAKE 00 18 50.0 +6.6
HOPS LR LR
comp=Z,522nm,19.0s,MS4.9
ITEG Tejag 79.80 301 *eP* **P 00 18 44.3 +0.8**
ETW Entiat 79.81 43 *eP* **P 00 18 43.5 +0.2**
WDC Whiskeytown Da 79.84 51 *eP* **P 00 18 44.1 +0.5**
WDC LR LR
comp=Z,611nm,21.0s,MS4.9
ALE Alert 80.25 4 P **P 00 18 45.3 +0.2**
comp=Z,164nm,1.1s,mb5.9,SNR=5.7
B08A Colville Reser 80.29 42 ⇓P **P 00 18 45.6 -0.2**
baz=80,SNR=26
VIPM Ingram Point 80.33 46 P **P 00 18 46.4 +0.3**
E07A Sunnyside 80.37 44 ⇑P **P 00 18 46.5 +0.1**
baz=80
MDW Midway 80.42 44 P **P 00 18 47.0 +0.4**
F07A Phinny Hill Vi 80.48 45 ⇓P **P 00 18 47.1 +0.1**
baz=80
K05A Summer Lake 80.55 48 ⇑P **P 00 18 48.0 +0.6**
baz=80
RSW Rattlesnake Hi 80.59 44 *eP* **P 00 18 48.0 +0.5**
HAWA Hanford 80.63 44 *eP* **P 00 18 47.9 +0.2**
HAWA LR LR
comp=Z,369nm,20.0s,MS4.7
D08A Wollman Farm, 80.87 44 ⇑P **P 00 18 48.8 -0.2**
baz=81
OHCM Honcut 80.92 52 *eP* **P 00 18 49.1 -0.3**
E08A Dider Farm, El 80.92 44 ⇑P **P 00 18 48.9 -0.4**
baz=81
OD2 Odessa Site #2 80.93 43 *eP* **P 00 18 49.2 -0.1**
C09A Chrisman Ranch 81.11 43 ⇓P **P 00 18 50.0 -0.2**
baz=81,SNR=7.0
I07A Izee 81.21 47 ⇓P **P 00 18 50.9 +0.1**
baz=81,SNR=14
G08A Pilot Rock 81.28 45 ⇓P **P 00 18 51.1 -0.2**
baz=81,SNR=19
E09A Wood Farm, Sta 81.53 44 ⇓P **P 00 18 52.2 -0.3**
baz=81,SNR=11
SAO San Andreas Ge 81.56 54 PFAKE 00 19 00.0 +7.1
SAO LR LR
comp=Z,287nm,19.0s,MS4.7
LNOR Lincton Mounta 81.60 45 *eP* **P 00 18 52.3 -0.5**
KBS Kingsbay 81.66 352 PFAKE 00 19 00.0 +7.4
KBS LR LR
comp=Z,114nm,19.0s,MS4.2
NEW Newport 81.74 42 ⇑P **P 00 18 53.5 -0.1**
baz=82,SNR=18
NEW Newport 81.74 42 *eP* **P 00 18 53.6 0.0**
CMB Columbia Colle 82.07 53 *eP* **P 00 18 55.2 -0.3**
comp=Z,38nm,1.3s,mb5.2
CMB LR LR
comp=Z,286nm,19.0s,MS4.7
CMB Columbia Colle 82.07 53 *eP* **P 00 18 55.2 -0.3**
CMB pmax pmax
comp=Z,37nm,1.3s,mb5.2
CMB MLR MLR
comp=Z,286nm,19.0s,MS4.7
WCN Washoe City 82.22 51 ⇑P **P 00 18 56.7 +0.4**
baz=82
WVOR Wild Horse Val 82.24 48⇓*eP* **P 00 18 56.0 -0.4**
comp=Z,44nm,1.2s,mb5.3
WVOR LR LR
comp=Z,425nm,20.0s,MS4.8
WVOR Wild Horse Val 82.24 48⇓*eP* **P 00 18 56.0 -0.3**
WVOR pmax pmax
comp=Z,44nm,1.2s,mb5.3
WVOR MLR MLR
comp=Z,425nm,20.0s,MS4.8
F10A Beach Ranch, E 82.28 44 ⇑P **P 00 18 56.2 -0.3**
baz=82,SNR=8.2
C11A Tepee Creek (N 82.42 42 ⇑P **P 00 18 57.2 0.0**
baz=82
A12A Yaak River Ran 82.50 41 ⇑P **P 00 18 58.0 +0.5**
baz=82
BMO Blue Mountains 82.53 46 *eP* **P 00 18 57.7 -0.1**
BMO LR LR
comp=Z,189nm,20.0s,MS4.5
EDM Edmonton 82.64 37 *eP* **P 00 18 57.5 -0.7**
B12A Libby 82.67 42 ⇑P **P 00 18 58.3 -0.1**
baz=82
WAKR Walker 82.67 52 *eP* **P 00 18 59.2 +0.5**
IBAF Bafgh 82.73 301 *eP* **P 00 18 59.4 +0.3**
IGLO Ghaloghah 82.86 306 *eP* **P 00 19 00.3 +0.6**
C12B Naegeli Ranch, 82.96 42 ⇓P **P 00 18 59.7 -0.3**
baz=83
IKIA Kiasar 83.06 306 *eP* **P 00 19 03.6 +2.9**
SMMC Simmler 83.07 55 ⇓P **P 00 19 01.1 +0.3**
baz=83
D12A Red Ives Fores 83.23 43 ⇓P **P 00 19 01.2 -0.1**
baz=83
E12A Beaver Dam Sad 83.27 44 ⇑P **P 00 19 01.7 +0.1**
baz=83
A13A Flathead Natio 83.28 41 ⇑P **P 00 19 01.9 +0.3**
baz=83
PKM Peak Mountain 83.32 56 ⇓P **P 00 19 02.2 +0.1**
baz=83
MLAC Mammoth Lakes 83.36 53 ⇑P **P 00 19 03.1 +0.8**
baz=83
BSMT Bassoo Peak 83.36 42 *eP* **P 00 19 02.4 +0.4**
RCTC Rector, Farmer 83.40 54 ⇑P **P 00 19 02.1 -0.4**
baz=83
B13A Whitefish 83.41 42 ⇓P **P 00 19 02.2 0.0**
baz=83,SNR=8.1
ISHM Shahmirzad 83.47 305 *eP* **P 00 19 04.0 +1.2**
ICHK Chekchek 83.52 302 *eP* **P 00 19 04.0 +0.8**
SBC Santa Barbara 83.52 56 ⇓P **P 00 19 03.3 +0.2**
baz=83
APA Apatity 83.53 339⇑*eP* **P 00 19 02.0 -0.5**
APA pmax pmax
comp=Z,26nm,1.0s,mb5.3
NVAR Mina Array Bea 83.55 52 P **P 00 19 03.4 +0.2**
comp=Z,116nm,1.0s,mb4.9,baz=269,slow=5.1,SNR=31
C13A Hot Springs 83.55 42 ⇑P **P 00 19 02.7 -0.3**
baz=83,SNR=12
WALA Waterton Lakes 83.56 41 *eP* **P 00 19 03.4 +0.4**
comp=Z,0.6nm,1.0s
IMEH Mehriz 83.57 301 *eP* **P 00 19 02.9 -0.6**
BLMT Blacktail Moun 83.59 42 *eP* **P 00 19 03.6 +0.4**
MTUM Tungsten Hills 83.64 53 *eP* **P 00 19 04.2 +0.5**
VES Vestal, Richgr 83.64 55 ⇓P **P 00 19 03.0 -0.8**
baz=84,SNR=8.4
F12A Elk City 83.67 44 ⇓P **P 00 19 02.7 -0.9**
baz=84,SNR=18
BSC Santa Cruz Isl 83.70 57 ⇓P **P 00 19 03.6 -0.5**
baz=84
JTMT Jette 83.72 42 *eP* **P 00 19 04.2 +0.4**
D13A Huson 83.80 43 ⇓P **P 00 19 03.3 -0.9**
baz=84,SNR=11
G12A Big Creek, Yel 83.80 45 ⇑P **P 00 19 03.7 -0.6**
baz=84
BMN Battle Mountai 83.80 50 *eP* **P 00 19 05.1 +0.7**
BMN LR LR
comp=Z,419nm,21.0s,MS4.8
ILAS Lasjerd 83.84 305 *eP* **P 00 19 05.3 +0.5**
YBMT Yellow Bay 83.86 42 *eP* **P 00 19 04.6 0.0**
L10A Juniper Basin 83.88 48 ⇓P **P 00 19 04.6 -0.2**
baz=84,SNR=7.2
A14A Double T Ranch 83.89 41 ⇓P **P 00 19 05.3 +0.6**
baz=84,SNR=12
IFIR Firoozkooh 83.93 305 *eP* **P 00 19 07.1 +1.9**
MFID Camas Ranch 83.95 47 ⇑P **P 00 19 04.7 -0.5**
baz=84,SNR=25
SWMT Swartz Lake 83.97 42 *eP* **P 00 19 04.8 -0.4**
TIN Tinemaha 83.98 53 ⇓P **P 00 19 05.8 +0.3**
baz=84
M10A I.L. Ranch, Tu 83.99 49 ⇓P **P 00 19 05.5 +0.1**
baz=84
KLMR Klimovskoe 84.00 332 *eP* **P 00 19 03.5 -1.5**
KLMR pmax pmax
comp=Z,76nm,1.4s,mb5.6
ARVC Arvin 84.04 55 ⇑P **P 00 19 05.5 -0.3**
baz=84
C14A Swan Lake 84.06 42 ⇑P **P 00 19 05.0 -0.6**
baz=84
IPRN Peran 84.09 306 *eP* **P 00 19 07.8 +1.8**
BLG Laguna Peak 84.13 56 ⇑P **P 00 19 05.7 -0.6**
baz=84
E13A Victor 84.17 43 ⇓P **P 00 19 05.3 -1.0**
baz=84,SNR=8.5
ISA Isabella 84.17 55 ⇓P **P 00 19 05.8 -0.7**
baz=84,SNR=8.6
ISA Isabella 84.17 55 *eP* **P 00 19 05.7 -0.7**
B14A Marquette Ranc 84.17 41 ⇑P **P 00 19 06.0 -0.2**
baz=84,SNR=15
ISAD Sadrabad 84.19 301 *eP* **P 00 19 07.3 +0.7**
MSO Missoula 84.22 43 ⇑P **P 00 19 06.0 -0.5**
baz=84
MSO Missoula 84.22 43 *eP* **P 00 19 06.2 -0.2**
MSO LR LR
comp=Z,198nm,20.0s,MS4.5
N10A Dunphy 84.24 49 ⇓P **P 00 19 06.9 +0.2**
baz=84
OSI Osito Adit 84.26 56 ⇓P **P 00 19 06.6 -0.3**
baz=84
CWC Cottonwood Cre 84.27 54 ⇓P **P 00 19 06.5 -0.4**
baz=84
H12A Diamond D Ranc 84.29 45 ⇓P **P 00 19 06.6 -0.2**
baz=84,SNR=14
A15A Johnson Ranch, 84.32 41 ⇓P **P 00 19 07.2 +0.3**
baz=84,SNR=28
I12A Atlanta 84.33 46 ⇑P **P 00 19 06.7 -0.4**
baz=84,SNR=17
L11A Cat Creek Ranc 84.37 48 ⇓P **P 00 19 07.3 0.0**
baz=84,SNR=20
O10A Cortez Mining, 84.37 50 ⇓P **P 00 19 07.3 0.0**
baz=84,SNR=5.4
SLMT Seeley Lake 84.38 42 *eP* **P 00 19 06.7 -0.5**
D14A Greenough 84.42 43 ⇓P **P 00 19 06.4 -1.1**
baz=84
KEV Kevo 84.43 342 *eP* **P 00 19 07.3 +0.3**
KEV LR LR
comp=Z,34nm,0.7s,mb5.6
comp=Z,502nm,19.0s,MS4.9
KEV Kevo 84.43 342 *eP* **P 00 19 07.4 +0.4**
KEV pmax pmax
comp=Z,34nm,0.7s,mb5.6
KEV MLR MLR
comp=Z,502nm,19.0s,MS4.9
KEV Kevo 84.43 342 *ep* **P 00 19 05.7 -1.3**
IDMV Damavand 84.52 305 *eP* **P 00 19 08.4 +0.2**
G13A Cobalt 84.55 45 ⇑P **P 00 19 07.6 -0.6**
baz=84,SNR=37
E14A Clinton 84.64 43 ⇑P **P 00 19 07.6 -1.0**
baz=84
CHMT Chamberlain Mo 84.64 43 *eP* **P 00 19 08.3 -0.3**
B15A Bradely Ranch, 84.64 41 ⇑P **P 00 19 08.1 -0.4**
baz=84,SNR=19
GRAC Grapevine Rang 84.66 53 ⇑P **P 00 19 08.6 -0.3**
baz=84
DECC Green Verdugo 84.67 56 ⇑P **P 00 19 07.9 -1.1**
baz=84
DAC Darwin (Calif) 84.69 54 PFAKE 00 19 20.0 +11
DAC LR LR
comp=Z,262nm,20.0s,MS4.6
ISFB Sefidab 84.69 304 *eP* **P 00 19 08.9 -0.2**
H13A Challis 84.70 45 ⇓P **P 00 19 08.8 -0.1**
baz=84,SNR=14
EDW2 Edwards Air Fo 84.77 55 ⇑P **P 00 19 09.0 -0.5**
baz=85,SNR=15
C15A Salmond Ranch, 84.78 42 ⇑P **P 00 19 08.8 -0.5**
baz=85,SNR=12
MPMC Manual Prospec 84.83 54 ⇑P **P 00 19 09.8 +0.1**
baz=85,SNR=28
LRMC Laurel Mountai 84.84 55 ⇑P **P 00 19 09.6 -0.2**
baz=85
CIS Catalina Islan 84.85 57 ⇓P **P 00 19 09.6 -0.4**
baz=85
FMP Fort Macarthur 84.85 57 ⇑P **P 00 19 09.4 -0.6**
baz=85
Q10A Clear Creek Ra 84.87 51 ⇓P **P 00 19 09.7 -0.2**
baz=85,SNR=6.3
HLID Hailey 84.89 46 ⇓P **P 00 19 09.9 0.0**
baz=85,SNR=19
HLID Hailey 84.89 46 *eP* **P 00 19 09.9 0.0**
MWC Mount Wilson 84.90 56 *eP* **P 00 19 09.8 -0.3**
F14A Wisdom 84.91 44 ⇑P **P 00 19 09.3 -0.6**
baz=85
S10A Tonopah Range, 84.98 52 ⇓P **P 00 19 10.6 +0.1**
baz=85,SNR=19
ARCES ARCESS Array B 84.99 342 P **P 00 19 09.4 -0.5**
comp=Z,40nm,0.7s,mb5.6,baz=66,slow=5.9,SNR=94
ARCES LR LR 01 04 22.7
comp=Z,444nm,19.1s,MS4.9,baz=232,slow=41
ARE0 ARCESS Array S 84.99 342 *eP* **P 00 19 11.6 +1.7**
I13A Wildhorse Cree 84.99 46 ⇑P **P 00 19 10.6 +0.2**
baz=85,SNR=21
G14A Jackson 85.02 44 ⇑P **P 00 19 09.9 -0.6**
baz=85
IZEF Zefreh 85.03 303 *eP* **P 00 19 11.2 +0.4**
A16A West Butte Ran 85.04 40 ⇑P **P 00 19 10.3 -0.2**
baz=85
D15A Lincoln 85.07 42 ⇓P **P 00 19 10.2 -0.6**
baz=85
R10A Warm Springs 85.10 52 ⇑P **P 00 19 10.9 -0.2**
baz=85
J13A Cove Ranch, Pi 85.11 46 ⇑P **P 00 19 11.1 +0.1**
baz=85,SNR=14
P11A Circle Ranch, 85.14 50 ⇑P **P 00 19 11.1 -0.2**
baz=85
B16A M & M Farms, S 85.15 41 ⇑P **P 00 19 10.7 -0.4**
baz=85
E15A Deer Lodge 85.19 43 ⇓P **P 00 19 11.1 -0.2**
baz=85,SNR=26
FURC Furnace Creek, 85.20 54 ⇑P **P 00 19 11.7 0.0**
baz=85,SNR=8.7
BFSC Mount Baldy Ra 85.21 56 ⇓P **P 00 19 11.5 -0.2**
baz=85
H14A Leadore 85.28 45 ⇑P **P 00 19 12.1 +0.2**
baz=85,SNR=43
IPAR Pars 85.29 300 *eP* **P 00 19 12.0 -0.2**
C16A Fuhringer Ranc 85.32 42 ⇓P **P 00 19 11.5 -0.5**
baz=85,SNR=15
IR3 Iran Long-Peri 85.33 305 *eP* **P 00 19 12.0 -0.3**
ISRV Sarvestan 85.36 299 *eP* **P 00 19 13.0 +0.4**
IGAR Gharneh 85.40 302 *eP* **P 00 19 12.9 +0.2**
Q11A Duckwater 85.42 51 ⇑P **P 00 19 12.5 -0.1**
baz=85
F15A Butte 85.48 44 ⇓P **P 00 19 12.6 -0.2**
baz=85,SNR=15
IKLH Kolahrood 85.51 303 *eP* **P 00 19 13.6 +0.4**
LRM Limekiln Ridge 85.51 44 *eP* **P 00 19 12.9 -0.1**
RRX Edison Barstow 85.55 55 ⇓P **P 00 19 13.3 -0.1**
baz=85
IMHD Mahdasht 85.55 306 *eP* **P 00 19 13.4 0.0**
DLMT Dillon 85.56 44 *eP* **P 00 19 13.2 -0.1**
GSC Goldstone 85.58 55 ⇓P **P 00 19 13.3 -0.2**
baz=85,SNR=14
GSC Goldstone 85.58 55 *eP* **P 00 19 13.4 -0.1**
J14A Carey 85.59 46 ⇓P **P 00 19 13.6 +0.2**
baz=85,SNR=21
A17A Triple J Farms 85.60 40 ⇑P **P 00 19 13.2 -0.1**
baz=85,SNR=15
R11A Troy Canyon, C 85.62 51 ⇑P **P 00 19 13.7 +0.1**
baz=86,SNR=28
U10A Ash Meadows, A 85.62 53 ⇓P **P 00 19 13.6 -0.1**
baz=86,SNR=12
HRY Holter Researc 85.63 43 *eP* **P 00 19 13.7 +0.2**
O12A Currie 85.66 49 ⇓P **P 00 19 14.0 +0.1**
baz=86
MAK Makhachkala 85.69 313 *eP* **P 00 19 18.6 +4.7**
MAK *eS* S 00 29 40.4 -3.2
MAK *eSS* SS 00 35 20.1 +0.1
MAK pmax pmax
comp=Z,211nm,1.8s,mb6.1
MAK MLR MLR
comp=Z,649nm,17.0s,MS5.1
G15A Dillon 85.70 44 ⇑P **P 00 19 13.7 -0.3**
baz=86,SNR=18
D16A Dana Ranch, Ca 85.70 42 ⇓P **P 00 19 13.9 0.0**
baz=86,SNR=39
S11A Rachel 85.71 52 ⇓P **P 00 19 14.3 +0.2**
baz=86,SNR=6.4
M13A Montello 85.74 48 ⇓P **P 00 19 14.0 -0.2**
baz=86,SNR=21
M13A Montello 85.74 48 *eP* **P 00 19 14.4 +0.2**
B17A L&G Farms, Che 85.76 41 ⇑P **P 00 19 13.7 -0.5**
baz=86
MURC Murrieta 85.76 56 ⇑P **P 00 19 14.0 -0.5**
baz=86
H15A Lima 85.77 45 ⇓P **P 00 19 14.4 +0.1**
baz=86,SNR=18
P12A McGill 85.78 50 ⇑P **P 00 19 14.2 -0.2**
baz=86
E16A East Helena 85.79 43 ⇑P **P 00 19 14.2 -0.1**
baz=86,SNR=15
BBRC Big Bear Solar 85.79 56 ⇓P **P 00 19 14.1 -0.5**
baz=86
RKT Rikitea 85.81 115 *eLR* LR 00 45 24.8
comp=Z,572nm,22.5s,baz=295
SHOC Shoshone 85.81 54 ⇓P **P 00 19 13.9 -0.8**
baz=86
N13A Wendover, West 85.87 49 ⇓P **P 00 19 14.9 +0.1**
baz=86
KTK1 Kautokeino 85.95 343 *eP* **P 00 19 14.2 -0.5**
Q12A Willow Creek R 85.97 51 ⇑P **P 00 19 15.4 0.0**
baz=86
C17A Wharram Farm, 86.01 41 ⇑P **P 00 19 14.8 -0.6**
baz=86,SNR=18
109C Camp Elliot, M 86.04 57 ⇑P **P 00 19 15.4 -0.5**
baz=86
F16A Kennard Place, 86.07 43 ⇑P **P 00 19 15.5 -0.3**
baz=86,SNR=12
K14A Jones Ranch, D 86.07 47 ⇓P **P 00 19 15.9 +0.1**
baz=86,SNR=12
I15A Monteview 86.08 45 ⇓P **P 00 19 16.4 +0.6**
baz=86
HEC Hector,Ludlow 86.09 55 ⇑P **P 00 19 15.5 -0.6**
baz=86,SNR=8.0
BOZ Bozeman (W) 86.11 44 ⇑P **P 00 19 15.8 -0.1**
baz=86,SNR=21
BOZ Bozeman (W) 86.11 44 *eP* **P 00 19 16.1 +0.2**
BOZ MLR MLR
comp=Z,263nm,19.0s,MS4.7
A18A Metzger Ranch, 86.14 40 ⇑P **P 00 19 16.1 +0.1**
baz=86
G16A Moss Hill, Enn 86.14 44 ⇑P **P 00 19 16.2 +0.1**
baz=86,SNR=32
L14A Malta 86.19 47 ⇑P **P 00 19 16.9 +0.4**
baz=86,SNR=11
IRAZ Razeghan 86.21 306 *eP* **P 00 19 16.2 -0.4**
D17A Six Diamond Ra 86.22 42 ⇓P **P 00 19 16.3 -0.1**
baz=86,SNR=38
TUQ Turquoise Moun 86.23 54 ⇓P **P 00 19 16.6 -0.1**
baz=86,SNR=7.8
O13A Hicks Ranch, I 86.26 49 ⇑P **P 00 19 16.7 -0.1**
baz=86
M14A Sheep Mountain 86.28 48 ⇓P **P 00 19 16.9 +0.1**
baz=86,SNR=22
J15A Blackfoot 86.31 46 ⇑P **P 00 19 17.8 +0.8**
baz=86,SNR=8.6
E17A Martinsdale 86.34 43 ⇑P **P 00 19 17.3 +0.2**
baz=86,SNR=12
U11A Corn Creek 86.35 53 ⇑P **P 00 19 18.0 +0.6**
baz=86
PFO Pinyon Flat Ob 86.35 56 P **P 00 19 16.5 -0.9**
comp=Z,75nm,1.4s,mb5.7,SNR=6.4
PFO Pinyon Flat Ob 86.35 56 ⇑P **P 00 19 16.9 -0.5**
baz=86,SNR=9.4
PFO Pinyon Flat Ob 86.35 56 PFAKE 00 19 30.0 +13
PFO LR LR
comp=Z,344nm,20.0s,MS4.8
R12A Pony Springs, 86.36 51 ⇓P **P 00 19 17.9 +0.5**
baz=86
B18A Beardsley Farm 86.36 41 ⇓P **P 00 19 16.7 -0.4**
baz=86,SNR=15
S12A Delamar Landin 86.40 52 ⇓P **P 00 19 17.8 +0.3**
baz=86,SNR=6.2
P13A Bates Ranch, G 86.45 50 ⇓P **P 00 19 17.7 -0.1**
baz=86,SNR=46
BAR Barrett 86.45 57 *eP* **P 00 19 17.3 -0.6**
K15A Arbon 86.48 47 ⇑P **P 00 19 18.3 +0.4**
baz=86,SNR=8.7
V11A Goodsprings 86.49 54 ⇑P **P 00 19 17.9 -0.1**
baz=86,SNR=6.3
EGMT Eagleton 86.51 41 ⇑P **P 00 19 17.3 -0.5**
baz=86,SNR=16
EGMT Eagleton 86.51 41 *eP* **P 00 19 17.6 -0.2**
EGMT LR LR
comp=Z,440nm,22.0s,MS4.8
JOF Joensuu 86.56 336 *eP* **P 00 19 15.0 -2.7**
JOF Joensuu 86.56 336 *ep* **P 00 19 15.0 -2.7**
DAG Danmarks Havn 86.56 357⇓*iP* **P 00 19 17.8 +0.2**
comp=Z,24nm,1.0s,mb5.4
MONP Monument Peak 86.59 57 ⇑P **P 00 19 18.3 -0.3**
baz=86,SNR=8.8
BELC Belle Mtn. Jos 86.60 56 ⇓P **P 00 19 18.0 -0.6**
baz=86,SNR=7.3
Q13A Wheeler Ranch, 86.60 50 ⇑P **P 00 19 18.2 -0.3**
baz=86,SNR=6.5
N14A Grayback Hills 86.61 48 ⇑P **P 00 19 18.2 -0.3**
baz=86,SNR=24
GMRC Granite Mounta 86.63 55 ⇑P **P 00 19 18.5 -0.2**
baz=86,SNR=11
VRHR Novokhopersk 86.66 322 *eP* **P 00 19 15.8 -2.7**
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
VRHR pmax pmax
comp=N,4.0nm,0.5s
F17A Fitzpatrick Pl 86.67 43 ⇑P **P 00 19 18.9 +0.2**
baz=86,SNR=9.5
H16A Russell Place, 86.69 44 ⇓P **P 00 19 19.4 +0.6**
baz=86,SNR=28
TRO Tromso 86.75 344 *eP* **P 00 19 17.8 -0.8**
TRO AMB AMB 00 19 19.9
comp=Z,52nm,1.0s,mb5.7
D18A Linhart Farms, 86.77 42 ⇓P **P 00 19 19.4 +0.2**
baz=87
T12A Moapa 86.77 53 ⇑P **P 00 19 19.4 0.0**
baz=87
L15A Malad City 86.80 47 ⇑P **P 00 19 19.2 -0.2**
baz=87,SNR=6.5
I16A Newdale 86.80 45 ⇓P **P 00 19 20.1 +0.7**
baz=87,SNR=15
G17A Pierce Place, 86.81 44 ⇑P **P 00 19 20.1 +0.7**
baz=87,SNR=8.2
R13A O'Grain Ranch, 86.88 51 ⇑P **P 00 19 20.2 +0.3**
baz=87,SNR=16
DVTC Desert V Tower 86.92 57 ⇑P **P 00 19 19.8 -0.4**
baz=87
J16A Bone 86.92 46 ⇑P **P 00 19 20.3 +0.3**
baz=87,SNR=15
E18A Harlowton 86.92 42 ⇓P **P 00 19 20.1 +0.2**

baz=87,SNR=23
M15A Larsen Ranch, 86.94 48 ⇑P P 00 19 19.9 -0.2
baz=87,SNR=20
LDFC Landfair 86.97 54 eP P 00 19 20.8 +0.4
V12A Nelson 86.97 54 ⇑P P 00 19 20.3 -0.1
baz=87,SNR=19
U12A Valley of Fire 87.00 53 ⇑P P 00 19 20.5 0.0
baz=87
MOS Moscow 87.00 328 eP P 00 19 22.8 +2.7
SWSC Sam W. Stewart 87.08 57 ⇑P P 00 19 20.6 -0.4
baz=87
K16A Soda Springs 87.08 46 ⇑P P 00 19 21.3 +0.6
baz=87,SNR=16
DUG Dugway 87.09 49 ⇓P P 00 19 20.8 -0.1
baz=87,SNR=37
DUG Dugway 87.09 49 eP P 00 19 21.0 +0.2
W12A Cal Nev Ari 87.09 54 ⇑P P 00 19 21.3 +0.4
baz=87
RRI2 Red Ridge 87.09 46 eP P 00 19 21.5 +0.7
P14A Drum Mountains 87.10 50 ⇑P P 00 19 20.7 -0.2
baz=87,SNR=26
BC3 Big Chuckawall 87.14 56 ⇓P P 00 19 20.7 -0.5
baz=87,SNR=12
Q14A Sevier Lake (B 87.14 50 ⇓P P 00 19 20.9 -0.2
baz=87,SNR=38
S13A Holt Ranch, En 87.15 52 ⇑P P 00 19 21.4 +0.1
baz=87,SNR=6.5
IMW Indian Meadow 87.17 45 eP P 00 19 22.1 +0.9
IRM Iron Mountain 87.22 55 ⇑P P 00 19 21.1 -0.5
baz=87,SNR=15
H17A Grant Village 87.24 44 ⇓P P 00 19 23.3 +1.8
baz=87,SNR=12
F18A Big Timber 87.28 43 ⇑P P 00 19 21.9 +0.2
baz=87,SNR=17
T13A Saint George 87.29 52 ⇓P P 00 19 22.2 +0.3
baz=87,SNR=20
TPAW Teton Pass 87.30 45 eP P 00 19 22.5 +0.7
LKWY Lake 87.30 44 eP P 00 19 22.3 +0.5
LKWY LR LR
comp=Z,442nm,20.0s,MS4.9
O15A The Old Anders 87.31 49 ⇓P P 00 19 21.8 -0.1
baz=87
MOOW Moose Ponds 87.35 45 eP P 00 19 22.6 +0.6
ARUT Antelope Range 87.40 51 eP P 00 19 22.7 +0.3
comp=Z,24nm,1.0s,mb5.4
ARUT Antelope Range 87.40 51 eP P 00 19 22.7 +0.3
ARUT pmax pmax
comp=Z,24nm,1.0s,mb5.4
I17A Pilgrim Ck. 87.41 45 ⇑P P 00 19 22.1 -0.2
baz=87
REDW Red Top Meadow 87.41 46 eP P 00 19 22.8 +0.5
U13A Pakoon Wash 87.44 53 ⇑P P 00 19 22.6 0.0
baz=87,SNR=22
AHID Auburn Hatcher 87.44 46 eP P 00 19 23.0 +0.5
AHID LR LR
comp=Z,253nm,20.0s,MS4.6
NEE2 Needles Airpor 87.45 55 ⇑P P 00 19 22.6 -0.1
baz=87
L16A Fish Haven 87.47 47 ⇑P P 00 19 22.9 +0.3
baz=87,SNR=10
LOHW Long Hollow 87.49 45 eP P 00 19 23.1 +0.3
J17A Brown Place, J 87.51 46 ⇑P P 00 19 23.0 +0.2
baz=87,SNR=5.7
HWUT Hardware Ranch 87.51 47 eP P 00 19 22.9 +0.1
HWUT LR LR
comp=Z,282nm,19.0s,MS4.7
R14A James Farms, M 87.55 51 ⇑P P 00 19 23.0 -0.1
baz=87
K17A Gardner Place, 87.57 46 ⇑P P 00 19 23.1 -0.1
baz=87
G18A Lazy EL Ranch, 87.59 43 ⇑P P 00 19 23.1 -0.1
baz=87,SNR=10
V13A Grand Canyon W 87.60 53 ⇑P P 00 19 23.2 -0.3
baz=88,SNR=14
S14A Cedar City 87.61 51 ⇓P P 00 19 23.6 +0.1
baz=88
DGRG David-gareji 87.68 313 P P 00 19 23.8 +0.2
P15A Leamington 87.68 49 ⇓P P 00 19 23.7 0.0
baz=88,SNR=8.9
Q15A Fillmore 87.80 50 ⇑P P 00 19 24.2 -0.1
baz=88
F19A Roth Farm, Mol 87.80 43 ⇓P P 00 19 24.1 -0.1
baz=88,SNR=7.6
OBN Obninsk 87.81 327 eP P 00 19 23.4 -0.6
OBN LR LR
comp=Z,729nm,22.0s,MS5.0
OBN Obninsk 87.81 327⇑eP P 00 19 24.5 +0.5
OBN e*PP pP 00 19 35.1 -1.0
OBN e*SP sP 00 19 42.3 +1.8
OBN e 00 30 04.0
OBN ePS 00 31 08.0
OBN SS SS 00 35 49.0 -1.3
OBN pmax pmax
comp=Z,28nm,1.2s,mb5.4
OBN MLR MLR
comp=Z,600nm,18.0s,MS5.0
GLA Glamis 87.82 56 ⇑P P 00 19 24.2 -0.3
baz=88
GLA Glamis 87.82 56 eP P 00 19 24.6 +0.1
comp=Z,28nm,1.3s,mb5.3
GLA Glamis 87.82 56 eP P 00 19 24.6 +0.1
GLA pmax pmax
comp=Z,28nm,1.3s,mb5.3
L17A Cokeville 87.83 47 ⇓P P 00 19 24.3 -0.1
baz=88,SNR=5.7
N16A Rees Ranch, Co 87.85 48 ⇓P P 00 19 24.3 -0.2
baz=88
RLMT Red Lodge 87.86 43 ⇓P P 00 19 25.5 +1.1
baz=88,SNR=10
RLMT Red Lodge 87.86 43 eP P 00 19 25.4 +1.0
RLMT LR LR
comp=Z,251nm,21.0s,MS4.6
T14A Hurricane 87.90 52 ⇓P P 00 19 25.0 +0.1
baz=88,SNR=14
W13A Hualapai Mount 87.92 54 ⇑P P 00 19 25.2 +0.2
baz=88,SNR=15
PDMCI Parker Dam,Lak 87.97 55 ⇑P P 00 19 25.1 -0.2
baz=88,SNR=6.1
I18A Diamond G Ranc 88.00 45 ⇓P P 00 19 25.4 +0.3
baz=88
MTA Mtatsminda 88.00 313 P P 00 19 24.0 -1.2
GOF Gofitskoye 88.01 317 eP P 00 19 18.4 -6.8
GOF eS S 00 29 58.5 -7.5
GOF pmax pmax
comp=Z,30nm,1.1s,mb5.4
GOF smax
comp=N,20nm,0.8s
GOF smax
comp=E,20nm,0.8s
TBLG Delisi 88.03 313 eP P 00 19 24.5 -0.8
TBLG Delisi 88.03 313 P P 00 19 24.6 -0.7
O16A Springville 88.03 49 ⇓P P 00 19 25.3 -0.1
baz=88,SNR=8.7
J18A Kendall Valley 88.03 45 ⇑P P 00 19 25.9 +0.5
baz=88,SNR=21
VSR Storozhevoye 88.04 323 eP P 00 19 22.9 -2.3
VSR pmax pmax
comp=N,7.0nm,0.8s
VSR pmax pmax
comp=Z,20nm,0.8s,mb5.4
VSR pmax pmax
comp=E,8.0nm,0.7s
U14A Mt Trumbull 88.04 53 ⇑P P 00 19 25.7 +0.2
baz=88,SNR=16
VORD Divnogorie 88.07 323 eP P 00 19 24.0 -1.3
VORD pmax pmax
comp=N,30nm,1.3s
VORD pmax pmax
comp=Z,20nm,1.3s,mb5.2
VORD pmax pmax
comp=E,30nm,0.6s
MVU Marysvale 88.08 50 PFAKE 00 19 40.0 +14
MVU LR LR
comp=Z,327nm,19.0s,MS4.8
MSU Marysvale 88.11 50 eP P 00 19 26.4 +0.6
P16A Fountain Green 88.12 49 ⇓P P 00 19 26.3 +0.5
baz=88
X13A Yucca 88.12 55 ⇓P P 00 19 25.8 -0.1
baz=88,SNR=15
R15A Junction 88.13 51 ⇓P P 00 19 26.4 +0.5
baz=88
DAU Daniels Canyon 88.14 48 eP P 00 19 22.7 -3.2
112A Yuma 88.18 57 ⇓P P 00 19 25.7 -0.5
baz=88
M17A Scullys Gap (B 88.19 47 ⇓P P 00 19 25.9 -0.2
baz=88,SNR=8.6
K18A Toltan Ranch, 88.22 46 ⇓P P 00 19 26.7 +0.5
baz=88,SNR=11
S15A Panguitch 88.25 51 ⇑P P 00 19 27.1 +0.6
baz=88
N17A Moffit Pass 88.26 48 ⇑P P 00 19 26.1 -0.4
baz=88,SNR=8.1
FFC Flin Flon 88.31 33 P P 00 19 26.0 -0.4
comp=Z,133nm,1.1s,mb6.1,SNR=8.6
FFC Flin Flon 88.31 33 eP P 00 19 26.1 -0.3
FFC LR LR
comp=Z,328nm,19.0s,MS4.8
FFC Flin Flon 88.31 33 *i* P P 00 19 26.3 -0.1
F20A Billings 88.34 43 ⇑P P 00 19 26.6 -0.1
baz=88
V14A Boquillas Ranc 88.35 53 ⇓P P 00 19 27.2 +0.2
baz=88,SNR=24
Y13A Salome 88.37 55 ⇑P P 00 19 26.7 -0.4
baz=88,SNR=7.9
T15A Red Dirt Ranch 88.45 52 ⇑P P 00 19 27.6 +0.2
baz=88,SNR=6.2
L18A Fontenelle, Gr 88.48 47 ⇓P P 00 19 27.1 -0.4
baz=88
W14A Seligman 88.50 54 ⇑P P 00 19 27.9 +0.2
baz=88,SNR=12
BW06 Boulder Array 88.51 46 ⇑P P 00 19 27.2 -0.3
baz=88,SNR=6.4
BW06 Boulder Array 88.51 46 eP P 00 19 27.3 -0.3
BW06 LR LR
comp=Z,329nm,20.0s,MS4.8
GNI Garni 88.58 311 eP P 00 19 28.4 +0.5
comp=Z,22nm,1.2s,mb5.4
GNI LR LR
comp=Z,260nm,20.0s,MS4.7
GNI Garni 88.58 311⇓eP P 00 19 28.8 +0.9
GNI pmax pmax
comp=Z,13nm,1.2s
O17A Robinson Place 88.58 48 ⇑P P 00 19 27.9 -0.1
baz=88,SNR=20
M18A Lyman 88.63 47 ⇑P P 00 19 27.8 -0.4
baz=88,SNR=9.6
KIV Kislovodsk 88.65 316 eP P 00 19 26.7 -1.5
KIV LR LR
comp=Z,497nm,20.0s,MS4.9
KIV Kislovodsk 88.65 316 eP P 00 19 26.9 -1.3
KIV *e* 00 29 52.0
KIV pmax pmax
comp=Z,54nm,1.1s,mb5.8
KIV MLR MLR
comp=Z,423nm,18.0s,MS4.9
R16A Teasdale 88.70 50 ⇓P P 00 19 29.0 +0.5
baz=88,SNR=19
Z13A Yuma Proving G 88.70 56 ⇓P P 00 19 28.5 -0.2
baz=89,SNR=20
Q16A Castle Valley 88.71 50 ⇑P P 00 19 28.8 +0.2
baz=89,SNR=12
U15A North Rim 88.71 52 ⇑P P 00 19 28.9 +0.2
baz=89,SNR=23
113A Mohawk Valley, 88.75 56 ⇑P P 00 19 28.7 -0.3
baz=89,SNR=8.6
S16A Weppner Ranch, 88.80 51 ⇓P P 00 19 29.2 +0.1
baz=89,SNR=20
P17A Butcher Ranch, 88.83 49 ⇓P P 00 19 28.9 -0.3
baz=89,SNR=7.3
IVIS Veis 88.89 306 eP P 00 19 26.9 -2.6
L19A Farson 88.89 46 ⇓P P 00 19 29.5 +0.1
baz=89,SNR=11
X14A Yava 88.90 54 ⇓P P 00 19 30.2 +0.6
baz=89,SNR=12
H20A Greybull 88.93 44 ⇓P P 00 19 29.0 -0.5
baz=89
KAF Kangasniemi 88.95 336 eP P 00 19 27.3 -1.9
KAF Kangasniemi 88.95 336 ep P 00 19 27.3 -1.9
K19A Absolon Red Bu 88.97 46 ⇓P P 00 19 29.2 -0.6
baz=89,SNR=17
Y14A Wickenburg 88.98 55 ⇑P P 00 19 29.8 -0.2
baz=89,SNR=17
V15A Kaibab Nationa 89.01 53 ⇑P P 00 19 30.5 +0.5
baz=89,SNR=20
I20A Worland 89.05 44 ⇑P P 00 19 29.8 -0.2
baz=89,SNR=7.5
N18A Larsen Ranch, 89.07 47 ⇑P P 00 19 29.6 -0.6
baz=89,SNR=12
O18A Roosevelt 89.08 48 ⇑P P 00 19 30.6 +0.2
baz=89,SNR=5.7
T16A Glen Canyon Da 89.12 52 ⇓P P 00 19 30.1 -0.5
baz=89
P18A Preston Nutter 89.14 49 ⇓P P 00 19 30.6 0.0
baz=89,SNR=9.4
W15A Williams 89.15 54 ⇑P P 00 19 31.7 +0.9
baz=89
IGHG Ghaleghazi 89.17 306 eP P 00 19 26.3 -4.6
G21A Lodge Grass 89.17 43 ⇓P P 00 19 30.8 +0.2
baz=89
Z14A Wintersburg 89.22 55 ⇑P P 00 19 30.9 -0.2
baz=89,SNR=5.5
R17A Hanksville Air 89.22 50 ⇓P P 00 19 30.7 -0.3
baz=89,SNR=22
LAO LASA Array 89.23 41 ⇑P P 00 19 30.8 -0.1
baz=89
LAO LASA Array 89.23 41 PFAKE 00 19 40.0 +9.1
LAO LR LR
comp=Z,422nm,19.0s,MS4.9
M19A Rock Springs 89.24 47 ⇓P P 00 19 30.8 -0.2
baz=89
K20A Yellowstone Ra 89.38 46 ⇓P P 00 19 31.3 -0.4
baz=89,SNR=17
X15A Humboldt 89.40 54 ⇑P P 00 19 32.3 +0.3
baz=89,SNR=25
Q18A Rafter H Ranch 89.41 49 ⇓P P 00 19 31.3 -0.5
baz=89,SNR=11
FINES FINESS Array B 89.42 336 P P 00 19 29.4 -2.1
comp=Z,9.6nm,0.5s,mb5.4,baz=54,slow=3.8,SNR=80
S17A Black Ridge (B 89.42 51 ⇓P P 00 19 31.6 -0.4
baz=89,SNR=8.1
N19A John Jarvie Ra 89.45 47 ⇑P P 00 19 30.9 -1.1
baz=89
114A Black Gap (USA 89.47 56 ⇓P P 00 19 32.6 +0.3
baz=89,SNR=8.8
Y15A Casa Rosa Ranc 89.50 55 ⇑P P 00 19 32.6 +0.2
baz=89,SNR=22
H21A Big Horn, Sher 89.51 43 ⇓P P 00 19 32.6 +0.4
baz=89,SNR=8.3
L20A Wamsutter 89.62 46 ⇑P P 00 19 32.7 -0.1
baz=90
T17A Navajo Res., N 89.64 51 ⇓P P 00 19 33.0 0.0
baz=90,SNR=9.9
I21A Big Trails, Te 89.66 44 ⇑P P 00 19 32.6 -0.4
baz=90,SNR=12
U16A Tuba City 89.69 52 ⇑P P 00 19 33.6 +0.3
baz=90,SNR=19
O19A Miners Draw (B 89.70 48 ⇑P P 00 19 32.8 -0.4
baz=90,SNR=16
WUAZ Wupatki 89.72 53 ⇓P P 00 19 33.6 +0.2
baz=90,SNR=20
WUAZ Wupatki 89.72 53 eP P 00 19 34.2 +0.8
WUAZ LR LR
comp=Z,226nm,19.0s,MS4.6
W16A Flagstaff 89.74 53 ⇑P P 00 19 33.9 +0.3
baz=90,SNR=5.6
DGMT Dagmar 89.76 39 PFAKE 00 19 40.0 +6.7
DGMT LR LR
comp=Z,546nm,20.0s,MS5.0
214A Organ Pipe Nat 89.78 57 ⇓P P 00 19 33.7 -0.1
baz=90,SNR=20
R18A Canyonlands Na 89.83 50 ⇑P P 00 19 33.2 -0.7
baz=90,SNR=11
Z15A Gila River Ind 89.86 55 ⇓P P 00 19 33.9 -0.2
baz=90
M20A Sweetwater, Wa 89.92 47 ⇑P P 00 19 34.6 +0.4
baz=90,SNR=12
S18A Hurst Farm, Bl 90.00 51 ⇑P P 00 19 34.4 -0.3
baz=90,SNR=13
MIB Mutribah 90.03 301 eP P 00 19 33.2 -1.8
MIB AMb AMB 00 19 42.3
comp=Z,54nm,0.9s,mb5.9
X16A Lo Mia Camp, P 90.04 54 ⇑P P 00 19 35.4 +0.4
baz=90,SNR=8.6
P19A Cripple Cowboy 90.05 49 ⇓P P 00 19 34.8 0.0
baz=90,SNR=28
FCC Fort Churchill 90.09 27 eP P 00 19 34.7 +0.1
N20A Spence Gulch, 90.12 47 ⇑P P 00 19 35.3 +0.1
baz=90,SNR=9.3
V17A Tonalea, Kykot 90.13 53 ⇓P P 00 19 35.6 +0.3
baz=90,SNR=24
Y16A Circle Bar Ran 90.20 55 ⇑P P 00 19 36.1 +0.4
baz=90,SNR=21
NAY Al-Naaiem 90.29 301 eP P 00 19 34.3 -1.9
NAY AMb AMB 00 19 40.1
comp=Z,47nm,0.7s,mb5.9
T18A Mexican Hat 90.29 51 ⇑P P 00 19 35.5 -0.6
baz=90,SNR=11
L21A Rawlins 90.31 46 ⇓P P 00 19 36.0 0.0
baz=90,SNR=17
R19A Curley Farm, L 90.33 50 ⇓P P 00 19 36.0 -0.2
baz=90,SNR=5.2
W17A Winslow 90.38 53 ⇑P P 00 19 36.9 +0.4
baz=90
O20A White River Ci 90.39 48 ⇓P P 00 19 36.0 -0.4
baz=90,SNR=8.9
Z16A Peralta Trail, 90.42 55 ⇑P P 00 19 36.9 +0.2
baz=90,SNR=7.0
M21A Separation Pea 90.45 46 ⇓P P 00 19 36.4 -0.3
baz=90,SNR=16
PV10 Paradox Valley 90.46 50 eP P 00 19 37.2 +0.4
comp=Z,495nm,1.2s,mb6.7
116A Eloy 90.47 56 ⇑P P 00 19 36.8 -0.2
baz=90,SNR=5.1
P20A De Beque 90.52 48 ⇑P P 00 19 37.1 +0.1
baz=90,SNR=9.7
RWWY Rawlins 90.53 46 eP P 00 19 37.1 +0.1
U18A Rough Rock, Ch 90.55 52 ⇓P P 00 19 37.6 +0.3
baz=90,SNR=5.5
PV04 Paradox Valley 90.56 50 eP P 00 19 37.7 +0.4
X17A Forest Lakes 90.56 54 ⇑P P 00 19 37.9 +0.5
baz=90,SNR=9.5
S19A Harvey Farm, M 90.62 50 ⇓P P 00 19 37.5 -0.1
baz=90,SNR=8.4
K22A Casper 90.62 45 ⇑P P 00 19 37.6 +0.1
baz=90,SNR=12
N21A Black Mountain 90.67 47 ⇑P P 00 19 37.9 +0.2
baz=90,SNR=15
V18A Ganado 90.75 52 ⇑P P 00 19 38.8 +0.5
baz=91
Y17A Roosevelt 90.76 55 ⇑P P 00 19 38.5 +0.2
baz=91,SNR=11
Q20A Ridgley Place, 90.79 49 ⇓P P 00 19 38.3 -0.1
baz=91,SNR=32
216A Three Points, 90.85 56 ⇓P P 00 19 38.6 -0.2
baz=91
PV01 Paradox Valley 90.89 50 eP P 00 19 39.3 +0.5
comp=Z,1μm,1.0s
PV01 ePP PP 00 23 12.6 -2.2
O21A Pagoda 90.91 48 ⇓P P 00 19 38.7 -0.2
baz=91
R20A Redvale 91.02 50 ⇓P P 00 19 39.7 +0.3
baz=91
T19A Beclabito 91.04 51 ⇓P P 00 19 39.5 -0.1
baz=91,SNR=12
U19A Dine' College, 91.09 52 ⇓P P 00 19 39.9 0.0
baz=91,SNR=9.3
SUMG Summit 91.11 2 eP P 00 19 39.2 +0.1
comp=Z,20nm,1.0s,mb5.4
SUMG Summit 91.11 2 *i* P P 00 19 43.2 +4.1
comp=Z,12nm,0.9s,mb5.2
W18A Petrified Fore 91.11 53 ⇓P P 00 19 40.3 +0.4
baz=91
JMIC Jan Mayen 91.15 352 LR LR 00 58 07.4
comp=Z,44nm,21.1s,MS3.9,baz=28,slow=34
X18A Snowflake 91.16 54 ⇑P P 00 19 40.6 +0.4
baz=91,SNR=5.4
Z17A San Carlos Hig 91.19 55 ⇓P P 00 19 40.7 +0.4
baz=91,SNR=5.6
117A Oracle 91.23 56 ⇑P P 00 19 40.8 +0.3
baz=91,SNR=17
TUC Tucson 91.28 56 eP P 00 19 41.2 +0.5
comp=Z,26nm,1.4s,mb5.4
TUC LR LR
comp=Z,208nm,19.0s,MS4.6
TUC Tucson 91.28 56 eP P 00 19 41.2 +0.4
TUC pmax pmax
comp=Z,27nm,1.4s,mb5.4
TUC MLR MLR
comp=Z,208nm,19.0s,MS4.6
MVCO Mesa Verde 91.29 51 ⇑P P 00 19 40.7 0.0
baz=91,SNR=5.9
MVCO Mesa Verde 91.29 51 eP P 00 19 41.2 +0.5
MVCO LR LR
comp=Z,192nm,20.0s,MS4.5
Q21A Lamborn Mesa, 91.36 49 ⇓P P 00 19 41.2 +0.2
baz=91,SNR=5.0
Y18A Canyon Day Jun 91.36 54 ⇓P P 00 19 41.5 +0.4
baz=91,SNR=11
W19A Sanders 91.38 53 ⇓P P 00 19 41.2 0.0
baz=91
L23A Garrett 91.40 45 ⇑P P 00 19 40.8 -0.3
baz=91,SNR=15
N22A Wattenberg Ran 91.40 47 ⇑P P 00 19 41.7 +0.6
baz=91
V19A Window Rock 91.43 52 ⇑P P 00 19 41.8 +0.4
baz=91
217A Green Valley 91.44 56 ⇑P P 00 19 41.9 +0.4
baz=91,SNR=24
R21A Cimarron 91.55 49 ⇑P P 00 19 42.3 +0.4
baz=91,SNR=27
U20A Newcomb 91.58 51 ⇑P P 00 19 42.1 0.0
baz=91
O22A Kremmling 91.58 47 ⇓P P 00 19 41.9 -0.1
baz=91,SNR=11
Z18A Geronimo 91.60 55 ⇓P P 00 19 42.9 +0.6
baz=92
S21A Coal Bank Pass 91.64 50 ⇑P P 00 19 42.4 0.0
baz=92,SNR=6.6
P22A Eagle 91.65 48 ⇓P P 00 19 42.6 +0.3
baz=92,SNR=8.7
SMCO Snowmass 91.66 48 eP P 00 19 42.9 +0.5
RSSD Black Hills 91.69 43 eP P 00 19 42.0 -0.4
comp=Z,26nm,1.3s,mb5.4
RSSD Black Hills 91.69 43 eP P 00 19 42.0 -0.4
RSSD pmax pmax
comp=Z,26nm,1.3s,mb5.4
X19A St. Johns 91.70 53 ⇓P P 00 19 43.3 +0.6
baz=92,SNR=8.1
N23A Red Feather La 91.72 46 ⇑P P 00 19 43.1 +0.6
baz=92,SNR=23
ANN Anapa 91.77 318 eP P 00 19 40.9 -1.8
ANN *e* 00 23 19.4
ANN *e* 00 30 09.5
ANN eSS SS 00 36 48.6 +0.4
ANN pmax pmax
comp=Z,29nm,1.2s,mb5.5
118A Homack Ranch, 91.81 55 ⇑P P 00 19 43.6 +0.4
baz=92,SNR=16
Q22A Crested Butte, 91.83 49 ⇓P P 00 19 43.4 +0.3
baz=92,SNR=11
V20A Brimhall 91.83 52 ⇑P P 00 19 43.4 +0.2
baz=92,SNR=10
PHWY Pilot Hill 91.89 46 eP P 00 19 44.1 +0.7
Y19A Nutrioso 91.90 54 ⇑P P 00 19 44.5 +0.9
baz=92,SNR=17
L24A Wheatland 91.95 45 ⇓P P 00 19 44.1 +0.4
baz=92
O23A Lake Granby, G 92.00 47 ⇑P P 00 19 44.0 0.0
baz=92
W20A Ramah 92.06 53 ⇑P P 00 19 44.4 +0.1
baz=92,SNR=8.3
Z19A T-Link Ranch, 92.13 55 ⇑P P 00 19 45.3 +0.6
baz=92
R22A Saguache, Gunn 92.18 49 ⇑P P 00 19 45.6 +0.8
baz=92,SNR=6.4
U21A Nageezi 92.21 51 ⇓P P 00 19 45.1 +0.1
baz=92,SNR=9.3
318A Bisbee 92.22 56 ⇑P P 00 19 45.6 +0.5
baz=92,SNR=15
M24A Cheyenne 92.26 46 ⇑P P 00 19 45.9 +0.8
baz=92,SNR=5.5
X20A Quemado 92.27 53 ⇓P P 00 19 46.2 +0.9
baz=92
119A Ashpeak Ranch, 92.29 55 ⇑P P 00 19 46.1 +0.6
baz=92,SNR=10
S22A 4UR Ranch, Cre 92.32 50 ⇑P P 00 19 45.8 +0.4
baz=92,SNR=14
ISCO Idaho Springs 92.38 47 ⇓P P 00 19 46.4 +0.7
baz=92,SNR=13
ISCO Idaho Springs 92.38 47 eP P 00 19 45.6 -0.1
comp=Z,9.6nm,1.0s,mb5.1
ISCO Idaho Springs 92.38 47 eP P 00 19 45.6 -0.1
ISCO pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
P23A Jefferson 92.39 48 ⇓P P 00 19 46.7 +0.9
baz=92,SNR=9.6
V21A Milan 92.46 52 ⇑P P 00 19 46.4 +0.3
baz=92
N24A Carr 92.48 46 ⇓P P 00 19 46.5 +0.4
baz=92
T22A Edith 92.54 50 ⇑P P 00 19 46.8 +0.3
baz=92,SNR=5.5
Q23A Hartsel 92.58 48 ⇓P P 00 19 46.9 +0.3

baz=92
Y20A Horse Springs, 92.60 54 ⇓P P 00 19 47.6 +0.7
baz=92,SNR=11
219A White Tail Can 92.60 56 ⇓P P 00 19 47.1 +0.2
baz=92,SNR=10
O24A Longmont 92.63 47 ⇓P P 00 19 47.1 +0.3
baz=92
W21A San Fidel 92.71 52 ⇑P P 00 19 47.8 +0.5
baz=93
Z20A Nine Sixteen R 92.72 54 ⇑P P 00 19 48.0 +0.6
baz=93,SNR=16
319A Douglas 92.81 56 ⇓P P 00 19 48.5 +0.6
baz=93,SNR=5.2
U22A Llaves 92.83 51 ⇑P P 00 19 48.1 +0.3
baz=93,SNR=7.4
X21A Alamocita Cree 92.85 53 ⇓P P 00 19 48.5 +0.5
baz=93,SNR=5.9
120A U Bar Ranch, L 92.90 55 ⇓P P 00 19 48.5 +0.2
baz=93,SNR=12
S23A Nye Farm, Mont 92.94 49 ⇑P P 00 19 48.2 -0.1
baz=93
SCO Scoresbysund 92.94 356 *i* P P 00 19 54.1 +6.5
comp=Z,17nm,1.0s,mb5.4
V22A San Miguel Ran 92.96 51 ⇑P P 00 19 48.3 -0.1
baz=93
P24A Kohler Place, 93.00 47 ⇑P P 00 19 48.9 +0.4
baz=93
N25A Grover 93.03 46 ⇑P P 00 19 48.8 +0.1
baz=93
Q24A Divide 93.05 48 ⇑P P 00 19 49.2 +0.4
baz=93
Y21A Point of Rocks 93.10 53 ⇓P P 00 19 49.8 +0.6
baz=93,SNR=13
T23A Casias Ranch, 93.17 50 ⇓P P 00 19 49.4 0.0
baz=93
220A Playas Peak, P 93.22 56 ⇓P P 00 19 49.9 +0.2
baz=93,SNR=13
SDCO Great Sand Dun 93.28 49 *e*P P 00 19 50.1 +0.2
O25A Wiggins 93.30 47 ⇓P P 00 19 50.1 +0.1
baz=93,SNR=7.0
W22A Albuquerque 93.32 52 ⇑P P 00 19 50.7 +0.6
baz=93
U23A El Rito 93.34 51 ⇑P P 00 19 50.4 +0.2
baz=93,SNR=6.8
LAZ Ladron 93.37 53 *e*P P 00 19 50.8 +0.5
comp=Z,4.4nm,1.3s,mb4.7
Z21A St. Cloud Mine 93.37 54 ⇓P P 00 19 51.1 +0.7
baz=93,SNR=8.4
R24A Sanders Place, 93.37 49 ⇓P P 00 19 50.3 0.0
baz=93
320A Kipp Ranch, An 93.42 56 ⇑P P 00 19 51.3 +0.6
baz=93
X22A Bernardo 93.42 53 ⇑P P 00 19 51.1 +0.5
baz=93
P25A Willow Gulch B 93.52 47 ⇓P P 00 19 51.2 +0.2
baz=93,SNR=6.4
S24A Houchin Ranch, 93.54 49 ⇑P P 00 19 51.4 +0.4
baz=93,SNR=6.3
121A Cookes Peak, D 93.57 55 ⇓P P 00 19 51.9 +0.6
baz=93,SNR=5.7
V23A Ortiz Mt. (NFS 93.57 51 ⇓P P 00 19 51.9 +0.6
baz=93
ANMO Albuquerque 93.67 52 P P 00 19 51.2 -0.5
comp=Z,4.7nm,1.0s,mb4.9,baz=269,slow=4.0,SNR=14
ANMO PP PP 00 23 35.6 -1.2
comp=Z,0.3nm,0.4s,baz=308,slow=10,SNR=4.6
ANMO Albuquerque 93.67 52 *e*P P 00 19 51.7 0.0
Y22A Socorro 93.68 53 ⇑P P 00 19 52.0 +0.2
baz=94,SNR=5.7
Q25A Bedland, Calha 93.71 48 ⇑P P 00 19 51.7 -0.1
baz=94
MALT Malatya 93.81 312 *e*P P 00 19 51.5 -0.8
comp=Z,14nm,1.4s,mb5.2
MALT LR LR
comp=Z,426nm,20.0s,MS4.9
MALT Malatya 93.81 312 *e*P P 00 19 51.5 -0.8
MALT pmax pmax
comp=Z,14nm,1.4s,mb5.2
MALT MLR MLR
comp=Z,426nm,20.0s,MS4.9
SIM Simferopol' 93.81 319 *e*P P 00 19 51.5 -0.7
SIM *e*S S 00 30 57.7 -1.3
SIM pmax pmax
comp=Z,8.0nm,0.7s,mb5.3
SIM MLR MLR
comp=Z,500nm,21.1s,MS5.0
W23A Werner Place, 93.82 52 ⇑P P 00 19 52.9 +0.5
baz=94
AKASG Malin Array Be 93.84 326 P P 00 19 50.5 -1.6
comp=Z,0.4nm,0.3s,mb4.3,baz=52,slow=5.8,SNR=4.4
AKASG LR LR 01 04 34.2
comp=Z,573nm,21.7s,MS5.0,baz=40,slow=37
KIEV Kiev 93.85 326 PFAKE 00 20 00.0 +7.8
KIEV LR LR
comp=Z,578nm,20.0s,MS5.0
BNM Barren Site 93.85 53 *e*P P 00 19 53.2 +0.6
comp=Z,5.1nm,1.2s,mb4.8
BNM *e*PP PP 00 23 41.4 +3.2
Z22A Elephant Butte 93.94 54 ⇑P P 00 19 53.6 +0.6
baz=94,SNR=11
U24A Moreno Valley 93.98 50 ⇓P P 00 19 53.5 +0.3
baz=94
S25A Robets Cordova 94.09 49 ⇓P P 00 19 53.2 -0.4
baz=94
122A Conniff Cattle 94.12 54 ⇑P P 00 19 54.4 +0.6
baz=94
V24A Rampart Ranch, 94.26 51 ⇑P P 00 19 54.9 +0.5
baz=94,SNR=6.2
222A Williams Famil 94.27 55 ⇑P P 00 19 54.9 +0.3
baz=94
T25A Trinidad 94.32 49 ⇑P P 00 19 54.7 0.0
baz=94,SNR=6.6
W24A Lazy 6 Ranch, 94.36 52 ⇑P P 00 19 55.1 +0.2
baz=94,SNR=11
Y23A Lovelace Mesa, 94.38 53 ⇓P P 00 19 55.0 -0.1
baz=94
OGNE Ogallala 94.39 45 ⇑P P 00 19 54.6 -0.3
baz=94
OGNE Ogallala 94.39 45 PFAKE 00 20 10.0 +15
OGNE LR LR
comp=Z,344nm,20.0s,MS4.8
Z23A Rita Site, Whi 94.50 54 ⇑P P 00 19 55.2 -0.4
baz=94
U25A Circle Dot Ran 94.63 50 ⇓P P 00 19 56.3 +0.2
baz=94,SNR=5.6
V25A Rancho No Teng 94.70 51 ⇑P P 00 19 56.5 +0.1
baz=94,SNR=6.4
AGMN Agassiz Nation 94.75 37 *e*P P 00 19 55.9 -0.5
comp=Z,8.3nm,1.0s,mb5.1
AGMN LR LR
comp=Z,361nm,21.0s,MS4.8
SBA Scott Base 94.81 176 *e*P P 00 19 55.4 -0.5
comp=Z,15nm,1.4s,mb5.2
SBA Scott Base 94.81 176 *e*P P 00 19 55.4 -0.5
SBA pmax pmax
comp=Z,15nm,1.4s,mb5.2
Y24A Capitan 94.85 53 ⇑P P 00 19 56.9 -0.3
baz=95
SUW Suwalki 95.03 331 *e*P P 00 19 57.3 -0.3
comp=Z,44nm,1.1s,mb5.8
SUW Suwalki 95.03 331 *e*P P 00 19 57.3 -0.3
SUW pmax pmax
comp=Z,44nm,1.1s,mb5.8
W25A X Bar L Ranch, 95.07 51 ⇓P P 00 19 57.7 -0.4
baz=95
NOA NORSAR Array B 95.09 340 P P 00 19 57.5 -0.1
comp=Z,2.8nm,0.8s,mb4.8,baz=52,slow=4.4,SNR=7.7
NOA PP PP 00 23 46.1 -0.7
comp=Z,2.2nm,0.7s,baz=38,slow=7.6,SNR=7.1
NOA LR LR 01 05 06.0
comp=Z,350nm,20.5s,MS4.8,baz=20,slow=37
NOA NORSAR Array B 95.09 340 P P 00 19 57.6 0.0
NOA 00 23 46.1
U26A Atchley Ranch, 95.12 50 ⇓P P 00 19 57.7 -0.7
baz=95
Z24A Sheppen Canyo 95.14 53 ⇑P P 00 19 58.3 -0.2
baz=95
X25A Clemmons Ranch 95.20 52 ⇑P P 00 19 58.3 -0.5
baz=95
124A Stringfield Ra 95.32 54 ⇓P P 00 19 59.0 -0.3
baz=95
Y25A Mesa, Roswell 95.42 52 ⇑P P 00 19 59.2 -0.6
baz=95,SNR=8.4
224A Cornudas Mount 95.51 54 ⇑P P 00 20 00.3 0.0
baz=95,SNR=9.8
W26A Owens Ranch, T 95.64 51 ⇑P P 00 20 00.7 -0.1
baz=96
Z25A Roswell 95.66 53 ⇓P P 00 20 00.8 -0.1
baz=96
MNTX Cornudas Mount 95.77 55 ⇑P P 00 20 01.1 -0.4
baz=96,SNR=11
MNTX Cornudas Mount 95.77 55 *e*P P 00 20 00.8 -0.6
comp=Z,6.7nm,1.1s,mb5.0
MNTX LR LR
comp=Z,138nm,20.0s,MS4.4
X26A CR and CF Fran 95.83 52 ⇑P P 00 20 00.7 -1.0
baz=96,SNR=5.9
125A Gardner Draw, 95.95 54 ⇓P P 00 20 01.5 -0.7
baz=96
225A Deer Hill, Car 96.05 54 ⇓P P 00 20 02.2 -0.5
baz=96
Y26A Elida 96.08 52 ⇑P P 00 20 02.4 -0.4
baz=96
325A Bean Ranch, Si 96.22 55 ⇓P P 00 20 03.0 -0.5
baz=96
425A Indio Mountain 96.44 55 ⇑P P 00 20 04.4 -0.1
baz=96,SNR=7.7
126A Clayton Basin, 96.45 53 ⇓P P 00 20 03.7 -0.8
baz=96
BR131 Keskin Array S 96.55 315 *e*P P 00 20 03.3 -1.5
comp=Z,7.5nm,0.9s,mb5.1
BR131 LR LR
comp=Z,199nm,19.0s,MS4.6
BRTR Keskin Array B 96.55 315 P P 00 20 03.1 -1.6
comp=Z,9.7nm,1.1s,mb5.2,baz=91,slow=4.2,SNR=14
BRTR LR LR 01 07 01.0
comp=Z,177nm,21.6s,MS4.5,baz=261,slow=38
BRTR Keskin Array B 96.55 315 *ce*P P 00 20 05.3 +0.5
BRTR pmax pmax
comp=Z,10.0nm,1.1s
Y27A Causey 96.59 52 ⇑P P 00 20 03.7 -1.4
baz=96
ECSD EROS Data Cent 96.62 41 PFAKE 00 20 20.0 +15
ECSD LR LR
comp=Z,321nm,19.0s,MS4.8
226A Malaga, Loving 96.62 54 ⇑P P 00 20 04.5 -0.8
baz=96
MSTX Muleshoe 96.85 52 ⇓P P 00 20 05.5 -0.8
baz=97
CBKS Cedar Bluff 96.92 46 PFAKE 00 20 20.0 +14
CBKS LR LR
comp=Z,461nm,21.0s,MS4.9
326A Caldwell Ranch 97.02 55 ⇑P P 00 20 06.2 -0.9
baz=97
426A McDonald Obser 97.24 55 ⇑P P 00 20 07.7 -0.4
baz=97,SNR=7.8
AMTX Amarillo 97.28 51 PFAKE 00 20 20.0 +12
AMTX LR LR
comp=Z,389nm,19.0s,MS4.9
EYMN Ely 97.40 35 PFAKE 00 20 20.0 +12
EYMN LR LR
comp=Z,349nm,20.0s,MS4.8
526A Mary Lane Ranc 97.44 56 ⇓P P 00 20 08.7 -0.3
baz=97
626A Big Bend Ranch 97.61 56 ⇑P P 00 20 09.2 -0.6
baz=98
427A Hayter Ranch, 97.66 55 ⇓P P 00 20 09.3 -0.7
baz=98
BUR08 Bucovina Ar. S 97.72 325 *e*P P 00 20 08.4 -1.5
KWP Kalwaria Pacla 97.90 327 *e*P P 00 20 09.3 -1.4
comp=Z,16nm,1.2s,mb5.4
KWP LR LR
comp=Z,818nm,19.0s,MS5.2
KWP Kalwaria Pacla 97.90 327 *e*P P 00 20 09.3 -1.4
KWP pmax pmax
comp=Z,16nm,1.2s,mb5.4
KWP MLR MLR
comp=Z,818nm,19.0s,MS5.2
328A Wristen Ranch, 97.91 54 ⇑P P 00 20 10.3 -0.8
baz=98
TXAR Lajitas Array 98.07 56 P P 00 20 11.4 -0.5
comp=Z,2.1nm,1.1s,mb4.6,baz=272,slow=3.5,SNR=9.6
TXAR PKKPbc PKKPbc 00 36 47.4 +2.5
comp=Z,0.4nm,0.8s,baz=108,slow=4.1,SNR=3.4
TXAR LR LR 00 59 39.5
comp=Z,384nm,19.7s,MS4.9,baz=0.0,slow=32
627A Terlingua Ranc 98.24 56 ⇓P P 00 20 12.5 -0.1
baz=98,SNR=6.4
MMAI Mount Meron Ar 98.27 308 P P 00 20 12.0 -0.7
comp=Z,2.9nm,0.8s,mb4.9,baz=85,slow=2.9,SNR=3.5
MMAI LR LR 01 11 20.6
comp=Z,166nm,20.3s,MS4.5,baz=25,slow=40
428A Kincaid Ranch, 98.28 55 ⇑P P 00 20 12.3 -0.5
baz=98
528A Cox Ranch, San 98.43 55 ⇓P P 00 20 13.1 -0.4
baz=98
628A Black Gap, Mar 98.63 56 ⇑P P 00 20 14.4 0.0
baz=98,SNR=5.3
KSU1 Kansas State U 98.93 45 PFAKE 00 20 30.0 +14
KSU1 LR LR
comp=Z,238nm,20.0s,MS4.7
WMOK Wichita Mounta 99.48 50 *e*Pdif P 00 20 18.1 +0.1
SCIA State Center 99.71 41 PFAKE 00 20 30.0 +11
SCIA LR LR
comp=Z,111nm,19.0s,MS4.4
COWI Conover 99.79 36 PFAKE 00 20 30.0 +11
COWI LR LR
comp=Z,360nm,19.0s,MS4.9
OKC Ostrava-Krasne 100.08 329 AMS AMS 01 10 00.0
comp=Z,500nm,16.0s
MORC Moravsky Berou 100.42 329 *e*P Pdif 00 20 21.9 +0.1
PSZ Piszkesteto 100.42 327 PFAKE 00 20 30.0 +8.2
PSZ LR LR
comp=Z,416nm,20.0s,MS4.9
DPC Dobruska-Polom 100.62 330 *e*PKP PKiKP 00 24 43.6 -5.3
DPC AMS AMS 01 09 40.0
comp=Z,300nm,14.4s
JCT Junction City 100.63 54 PFAKE 00 20 30.0 +7.3
JCT LR LR
comp=Z,287nm,21.0s,MS4.8
JFWS Jewell Farm 100.98 39 PFAKE 00 20 40.0 +16
JFWS LR LR
comp=Z,465nm,20.0s,MS5.0
PVCC Panska Ves 101.32 331 AMS AMS 01 10 10.0
comp=Z,300nm,16.9s
BRG Berggiesshubel 101.37 332 *e*P PKiKP 00 24 50.8 +0.6
comp=Z,17nm,1.5s
BRG
comp=N,346nm,15.8s
BRG
comp=E,498nm,18.3s
BRG
comp=Z,459nm,15.3s
CLL Collm 101.48 333 *e*PP PP 00 24 35.0 -0.9
comp=Z,31nm,1.8s
CLL LmH 01 09 00.0
comp=N,400nm,18.1s
CLL LmH 01 09 00.0
comp=E,200nm,20.6s
CLL LmV 01 10 00.0
comp=Z,600nm,19.1s
PRA Prague 101.70 331 AMS AMS 01 09 00.0
PRU Pruhonice 101.71 331 AMS AMS 01 08 00.0
comp=Z,300nm,18.8s
TREC Trest 101.74 330 AMS AMS 01 10 10.0
comp=Z,500nm,15.1s
NKC Novy Kostel 102.50 332 AMS AMS 01 10 30.0
comp=Z,600nm,20.3s
MOX Moxa 102.57 333 *e*PP PP 00 24 31.2 -13
comp=Z,17nm,1.9s
MOX
comp=Z,500nm,21.0s
KHC Kasperske Hory 102.76 331 *e*PP PP 00 24 45.8 +0.3
KHC AMS AMS 01 08 30.0
comp=Z,400nm,19.4s
HDIL Hopedale 102.92 41 PFAKE 00 20 40.0 +7.1
HDIL LR LR
comp=Z,332nm,19.0s,MS4.9
GLMI Grayling 103.08 35 PFAKE 00 20 40.0 +6.4
GLMI LR LR
comp=Z,361nm,19.0s,MS4.9
MIAR Mount Ida 103.32 48 PFAKE 00 20 50.0 +15
MIAR LR LR
comp=Z,404nm,19.0s,MS5.0
KVTX Kingsville 103.43 56 PFAKE 00 20 50.0 +15
KVTX LR LR
comp=Z,284nm,19.0s,MS4.8
HKT Hockley 103.92 53 PFAKE 00 20 50.0 +13
HKT LR LR
comp=Z,326nm,19.0s,MS4.9
NATX Nacogdoches 103.93 51 PFAKE 00 20 50.0 +13
NATX LR LR
comp=Z,21nm,21.0s,MS3.6
TIR Tirane 104.52 322 PFAKE 00 20 50.0 +10
TIR LR LR
comp=Z,423nm,19.0s,MS5.0
TRI Trieste 105.04 328 PFAKE 00 25 10.0 +13
TRI LR LR
comp=Z,474nm,19.0s,MS5.0
AAM Ann Arbor 105.23 36 PFAKE 00 25 10.0 +12
AAM LR LR
comp=Z,483nm,21.0s,MS5.0
BFO Black Forest 105.72 333 PFAKE 00 25 10.0 +12
BFO LR LR
comp=Z,444nm,20.0s,MS5.0
WCI Wyandotte Cave 106.16 41 PFAKE 00 25 10.0 +11
WCI LR LR
comp=Z,324nm,20.0s,MS4.9
QSPA South Pole Qui 106.28 180 PKiKP PKiKP 00 24 58.6 +0.2
ECH Echery 106.32 333 PFAKE 00 25 10.0 +11
ECH LR LR
comp=Z,297nm,19.0s,MS4.9
WVT Waverly 106.40 44 PFAKE 00 25 10.0 +10
WVT LR LR
comp=Z,282nm,21.0s,MS4.8
VBMS Vicksburg 106.71 48 PFAKE 00 25 10.0 +9.4
VBMS LR LR
comp=Z,398nm,22.0s,MS4.9
ERPA Erie 107.40 35 PFAKE 00 25 10.0 +8.4
ERPA LR LR
comp=Z,288nm,21.0s,MS4.8
AQU L'Aquila 107.54 326 PFAKE 00 25 10.0 +8.2
AQU LR LR
comp=Z,336nm,20.0s,MS4.9
TIP Timpagrande 107.73 321 PFAKE 00 25 10.0 +7.7
TIP LR LR
comp=Z,350nm,21.0s,MS4.9
CUC Castrocucco 107.76 323 PFAKE 00 25 10.0 +7.7
CUC LR LR
comp=Z,242nm,21.0s,MS4.7
LONY Lake Ozonia 108.40 30 PFAKE 00 25 10.0 +6.6
LONY LR LR
comp=Z,319nm,21.0s,MS4.9
LOR Lormes 108.45 334 *e*PP PP 00 25 26.7 -0.8
LRAL Lakeview Retre 108.74 46 PFAKE 00 25 20.0 +16
LRAL LR LR
comp=Z,255nm,19.0s,MS4.8
SSF Saint Saulge 108.77 335 *e*PP PP 00 25 29.2 -0.6
comp=Z,19nm,1.1s
CEL Celeste 108.83 321 PFAKE 00 25 20.0 +16
CEL LR LR
comp=Z,383nm,22.0s,MS4.9
LDF La Druitiere 108.93 338 *e*PP PP 00 25 28.0 -2.9
comp=Z,8.8nm,0.8s
NCB Newcomb 109.05 30 PFAKE 00 25 20.0 +15
NCB LR LR
comp=Z,2µm,19.0s,MS5.6
MCWV Mont Chateau 109.14 37 PFAKE 00 25 20.0 +15
MCWV LR LR
comp=Z,735nm,20.0s,MS5.2
MBDF Montbardon 109.16 331 *e*PP PP 00 25 32.2 -0.5
comp=Z,9.1nm,0.8s
KMBO Kilima Mbogo 109.23 275 PFAKE 00 25 20.0 +14
KMBO LR LR
comp=Z,236nm,19.0s,MS4.8
BINY Binghamton 109.47 32 PFAKE 00 25 20.0 +15
BINY LR LR
comp=Z,529nm,20.0s,MS5.1
SSB Saint Sauveur 109.73 333 PFAKE 00 25 20.0 +14
SSB LR LR
comp=Z,159nm,22.0s,MS4.5
BRAL Brewton 109.84 48 PFAKE 00 25 20.0 +14
BRAL LR LR
comp=Z,308nm,19.0s,MS4.9
LBNH Lisbon 109.93 29 PFAKE 00 25 20.0 +14
LBNH LR LR
comp=Z,297nm,20.0s,MS4.9
FRF La Foret Royal 110.10 330 *e*PP PP 00 25 37.4 -2.2
comp=Z,36nm,1.2s
PKME Peaks-Kenny Pk 110.30 26 PFAKE 00 25 20.0 +13
PKME LR LR
comp=Z,256nm,22.0s,MS4.8
BLA Blacksburg 110.42 39 PFAKE 00 25 20.0 +13
BLA LR LR
comp=Z,612nm,20.0s,MS5.2
GOGA Godfrey 110.90 44 PFAKE 00 25 20.0 +12
GOGA LR LR
comp=Z,494nm,19.0s,MS5.1
WDD Wield Dalam 111.22 320 PFAKE 00 25 20.0 +11
WDD LR LR
comp=Z,142nm,20.0s,MS4.5
CBN Corbin 111.54 36 PFAKE 00 25 20.0 +11
CBN LR LR
comp=Z,621nm,21.0s,MS5.2
VSL Villasalto 111.71 326 PFAKE 00 25 20.0 +10
VSL LR LR
comp=Z,265nm,21.0s,MS4.8
CNNC Cliffs of the 113.26 39 PFAKE 00 25 20.0 +7.1
CNNC LR LR
comp=Z,602nm,20.0s,MS5.2
TEIG Tepich 114.63 58 PFAKE 00 25 30.0 +14
TEIG LR LR
comp=Z,262nm,20.0s,MS4.8
MBAR Mbarara 115.29 277 PFAKE 00 25 30.0 +13
MBAR LR LR
comp=Z,335nm,21.0s,MS4.9
DWPF Disney 115.51 47 PFAKE 00 25 30.0 +13
DWPF LR LR
comp=Z,341nm,20.0s,MS5.0
ESDC Sonseca Array 117.93 335 PKP PKPdf 00 25 21.3 -0.4
comp=Z,0.2nm,0.4s,baz=13,slow=1.8,SNR=4.2
ESDC PP PP 00 26 26.9 -8.0
comp=Z,0.9nm,0.7s,baz=20,slow=7.6,SNR=6.4
ESDC PKKPbc PKKPbc 00 35 44.5 +1.7
comp=Z,0.1nm,0.4s,baz=203,slow=6.1,SNR=4.5
ESLA Sonseca Array 117.93 335 PFAKE 00 25 30.0 +8.3
ESLA LR LR
comp=Z,2µm,20.0s,MS5.8
PAB San Pablo 118.19 335 PFAKE 00 25 30.0 +7.8
PAB LR LR
comp=Z,351nm,19.0s,MS5.0
TGUH Tegucigalpa,Un 118.42 64 PFAKE 00 25 30.0 +6.7
TGUH LR LR
comp=Z,185nm,20.0s,MS4.7
MTE Manteigas 118.67 338 PFAKE 00 25 30.0 +6.9
MTE LR LR
comp=Z,397nm,20.0s,MS5.0
LSZ Lusaka 121.32 262 *e*PKPdf PKPdf 00 25 29.3 +0.5
SFS San Fernando 121.58 335 PFAKE 00 25 40.0 +11
SFS LR LR
comp=Z,572nm,19.0s,MS5.2
MTDJ Mount Denham 124.25 54 PFAKE 00 25 50.0 +16
MTDJ LR LR
comp=Z,197nm,20.0s,MS4.8
GTBY Guantanamo Bay 125.07 50 PFAKE 00 25 50.0 +14
GTBY LR LR
comp=Z,203nm,22.0s,MS4.8
BOSA Boshof 125.30 246 PKP PKPdf 00 25 37.1 +1.0
comp=Z,2.6nm,0.9s,baz=115,slow=7.7,SNR=5.3
TAM Tamanrasset 125.75 315 *e*PKPdf PKPdf 00 25 36.9 -0.3
TAM LR LR
comp=Z,141nm,21.0s,MS4.6
GRTK Grand Turk 126.89 46 PFAKE 00 25 50.0 +11
GRTK LR LR
comp=Z,243nm,21.0s,MS4.9
BCIP Isla Barro Col 127.14 65 PFAKE 00 25 50.0 +10
BCIP LR LR
comp=Z,276nm,22.0s,MS4.9
SDDR Presa de Saban 128.45 48 PFAKE 00 25 50.0 +7.6
SDDR LR LR
comp=Z,277nm,20.0s,MS4.9
TSUM Tsumeb 131.88 259 PFAKE 00 26 00.0 +11
TSUM LR LR
comp=Z,266nm,21.0s,MS4.9
OTAV Otavalo 132.24 74 PFAKE 00 26 00.0 +10
OTAV LR LR
comp=Z,218nm,22.0s,MS4.8
SJG San Juan 132.62 45 PFAKE 00 26 00.0 +10
SJG LR LR
comp=Z,221nm,21.0s,MS4.8
ATAH Atahualpa 134.72 84 PKP PKPdf 00 25 54.4 0.0
comp=Z,8.0nm,0.7s,baz=3.5,slow=1.4,SNR=6.8
SDV Santo Domingo 135.06 59 PFAKE 00 26 10.0 +15
SDV LR LR
comp=Z,115nm,20.0s,MS4.6
ANWB Willy Bob 135.81 41 PFAKE 00 26 10.0 +14
ANWB LR LR
comp=Z,373nm,21.0s,MS5.1
NNA Nana 137.35 90 *e*PKPdf PKPdf 00 25 58.7 -0.5
FDF Fort de France 138.38 43 PFAKE 00 26 10.0 +8.9

FDF					LR	LR			
	comp=Z,358nm,20.0s,MS5.1								
PLCA	**Paso Flores**	**139.57**	**134**		PKP	PKPdf	00 26 03.5	+0.9	
	comp=Z,3.7nm,0.8s,baz=99,slow=3.1,SNR=7.6								
GRGR	**Grenville**	**139.89**	**47**		PFAKE		00 26 20.0	+16	
GRGR					LR	LR			
	comp=Z,400nm,21.0s,MS5.1								
ARE	**Arequipa**	**143.14**	**96**	*eP*		PKPdf	00 26 08.0	-1.6	
DBIC	**Dimbokro**	**143.88**	**307**		PKP	PKPdf	00 26 09.6	-1.6	
DBIC					SKP		00 29 46.0		
DBIC					LR	LR			
	comp=Z,237nm,22.0s,MS4.9								
DBIC	**Dimbokro**	**143.88**	**307**		PKP	PKPdf	00 26 09.6	-1.6	
	comp=Z,4.4nm,0.5s,baz=44,slow=4.3,SNR=14								
DBIC					SKP		00 29 46.0		
	comp=Z,8.7nm,0.9s,baz=338,slow=5.4,SNR=3.4								
KIC	**Kosan Boka**	**143.99**	**307**	*e*	PKP1	PKPdf	00 26 09.3	-2.0	
	comp=Z,56nm,1.0s								
TIC	**Toumodi**	**144.03**	**307**	*e*	PKP1	PKPdf	00 26 08.3	-3.1	
	comp=Z,50nm,1.1s								
LIC	**Lamto**	**144.30**	**307**	*e*	PKP1	PKPdf	00 26 09.2	-2.6	
	comp=Z,95nm,0.9s								
LIC	**Lamto**	**144.30**	**307**	*e*	PKIKP	PKPdf	00 26 09.5	-2.3	
	comp=Z,67nm,0.9s								
CEN1	**Los Morros**	**144.44**	**107**	⇑	*i*P	PKPdf	00 26 10.6	-1.2	
PSGC	**Pisagua**	**144.62**	**101**	⇓	*i*P	PKPdf	00 26 11.0	-1.2	
HMBC	**Humberston**	**144.85**	**102**	⇓	*i*P	PKPdf	00 26 11.8	-0.7	
MNMC	**Miæe Miæ**	**145.11**	**100**	⇓	*i*P	PKPbc	00 26 13.5	+1.0	
PB04	**Plate Boundary**	**145.17**	**105**	⇓	*i*P	PKPbc	00 26 11.1	-1.6	
LPAZ	**La Paz**	**146.33**	**95**		PKPbc	PKPbc	00 26 16.6	+0.1	
	comp=Z,22nm,0.8s,baz=277,slow=2.9,SNR=90								
TRQA	**Tornquist**	**146.68**	**136**	*e*	PKPdf	PKPdf	00 26 15.1	-0.1	
CPUP	**Villa Florida**	**155.36**	**118**		PKP	PKPdf	00 26 27.7	-1.1	
	comp=Z,0.8nm,0.7s,baz=238,slow=17,SNR=3.2								
CPUP					PKPab	PKPab	00 26 53.5	-0.8	
	comp=Z,5.2nm,0.7s,baz=229,slow=4.9,SNR=9.6								
RCBR	**Riachuelo**	**169.06**	**15**		PFAKE		00 26 50.0	+7.1	
RCBR					LR	LR			
	comp=Z,281nm,22.0s								

*ISCJB **14** 00:06:42.9±0.6,50°.10N±0°.04×18°.36E±0°.03,h0km,Error ellipse: s-maj=5.3km s-min=2.8km az=5.1*
*WAR **14** 00:06:43.9,50°.06N×18°.45E*
*IPEC **14** 00:06:43.8±0.2,50°.07N×18°.47E,h2km±2km,ML1.3/3, Error ellipse: s-maj=2.1km s-min=1.1km az=160.0*
*CSEM **14** 00:06:45.5±0.2,50°.04N×18°.29E,h2km,ML2.5/5,Error ellipse: s-maj=4.1km s-min=2.5km az=18.0*
*PRU **14** 00:06:46.5,50°.02N×18°.29E,h0km*
ISC 14 00:06:44.3±0.5,50°.07N±0°.04×18°.39E±0°.03,h0km,n27, σ0s95/39,Poland

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
RAC	**Raciborz**	**0.12**	**275**	*e*Sg		**Sg**	**00 06 51.3**	**+3.1**
OKC	**Ostrava-Krasne**	**0.28**	**213**	*e*PG		**Pg**	**00 06 50.2**	**+0.6**
OKC				*e*SG		**Sg**	**00 06 53.6**	**+0.3**
	comp=Z,12nm,0.5s							
OKC	**Ostrava-Krasne**	**0.28**	**213**	*e*Pg		**Pg**	**00 06 49.9**	**+0.3**
	baz=42							
OKC				Sg		**Sg**	**00 06 53.6**	**+0.3**
	comp=Z,12nm,0.5s							
MORC	**Moravsky Berou**	**0.62**	**242**	*e*Pg		**Pg**	**00 06 56.5**	**+0.4**
	baz=64							
MORC				*e*Sg		**Sg**	**00 07 05.2**	**+1.0**
	comp=Z,9.2nm,0.2s,baz=64							
OJC	**Ojcow**	**0.92**	**80**	*e*Pg		**Pg**	**00 07 00.6**	**-1.3**
OJC				*e*Sg		**Sg**	**00 07 13.3**	**-0.6**
OJC	**Ojcow**	**0.92**	**80**	*e*Pg		**Pg**	**00 07 00.3**	**-1.6**
	baz=261							
JAVC	**Velka Javorina**	**1.30**	**201**	*e*Pg		**Pg**	**00 07 09.4**	**+0.2**
DPC	**Dobruska-Polom**	**1.35**	**283**	*e*PG		**Pg**	**00 07 09.9**	**-0.3**
DPC				*e*SG		**Sg**	**00 07 27.9**	**+0.1**
	comp=Z,6.9nm,0.4s							
DPC	**Dobruska-Polom**	**1.35**	**283**	Pg		**Pg**	**00 07 09.9**	**-0.3**
DPC				Sg		**Sg**	**00 07 27.9**	**+0.1**
	comp=Z,6.9nm,0.4s							
VRAC	**Vranov**	**1.39**	**237**	*e*Pg		**Pg**	**00 07 10.2**	**-0.8**
	baz=57							
VRAC				*e*Sg		**Sg**	**00 07 28.8**	**-0.2**
	comp=Z,2.3nm,0.2s,baz=57							
NIE	**Niedzica**	**1.41**	**117**	*e*Pg		**Pg**	**00 07 10.5**	**-0.8**
NIE				*e*Sg		**Sg**	**00 07 29.9**	**+0.3**
KOLL	**Kolacno**	**1.50**	**180**	*e*		**Pn**	**00 07 12.0**	**-0.3**
KOLL	**Kolacno**	**1.50**	**180**	*e*SN		**Sn**	**00 07 32.3**	**-0.2**
KOLL	**Kolacno**	**1.50**	**180**	*e*SN		**Sn**	**00 07 32.3**	**-0.2**
UPC	**Upice**	**1.58**	**287**	*e*SG		**Sg**	**00 07 35.6**	**+0.5**
UPC	**Upice**	**1.58**	**287**	Sg		**Sg**	**00 07 35.6**	**+0.5**
VYHS	**Vyhne**	**1.61**	**169**	*e*PN		**Pn**	**00 07 12.9**	**-1.0**
VYHS				*e*SN		**Sn**	**00 07 34.9**	**-0.4**
KRUC	**Moravsky**	**1.64**	**233**	*e*Pn		**Pn**	**00 07 14.5**	**+0.1**
	baz=52							
KRUC				*e*Sg		**Sg**	**00 07 36.3**	**-0.7**
	comp=Z,2.7nm,0.2s,baz=52							
STHS	**Stebnicka Huta**	**1.97**	**108**	*e*PN		**Pn**	**00 07 21.2**	**+2.4**
STHS				*e*SN		**Sn**	**00 07 46.5**	**+2.3**
STHS	**Stebnicka Huta**	**1.97**	**108**	*e*Pn		**Pn**	**00 07 21.2**	**+2.4**
STHS				*e*Sn		**Sn**	**00 07 46.5**	**+2.3**
KECS	**Kecovo**	**2.10**	**138**	*e*SN		**Sn**	**00 07 47.7**	**+0.2**
PRU	**Pruhonice**	**2.48**	**270**	*e*SG		**Sg**	**00 08 01.7**	**-2.2**
PRU	**Pruhonice**	**2.48**	**270**	Sg		**Sg**	**00 08 01.7**	**-2.2**
PVCC	**Panska Ves**	**2.49**	**282**	*e*SG		**Sg**	**00 08 04.5**	**+0.3**
	comp=Z,4.8nm,0.2s							
PVCC	**Panska Ves**	**2.49**	**282**	Sg		**Sg**	**00 08 04.5**	**+0.3**
	comp=Z,4.8nm,0.2s							
KHC	**Kasperske Hory**	**3.27**	**255**	*e*SG		**Sg**	**00 08 29.0**	**-0.1**
KHC	**Kasperske Hory**	**3.27**	**255**	Sg		**Sg**	**00 08 29.0**	**-0.1**

*IDC **14** 00:18:58.5±1.4,16°.51N×147°.33E,h0km,mb3.8/9, mb1 3.9/9,mb1mx3.8/22,mbtmp3.8/9,MS3.4/1,Ms1 3.4/1, ms1mx2.7/30,Error ellipse: s-maj=43.8km s-min=28.0km az=93.0*
*ISCJB **14** 00:19:01.3±0.6,16°.52N±0°.07×147°.3E±0°.1,h33km, mb3.9/13,Error ellipse: s-maj=17.2km s-min=7.5km az=22.4*
*NEIC **14** 00:19:03.5±0.4,16°.54N×147°.30E,h35km,mb4.1/5,Error ellipse: s-maj=12.0km s-min=6.6km az=104.0*
ISC 14 00:19:03.0±5.1,16°.51N±0°.07×147°.3E±0°.1,h30km±36km, n26,σ0s65/27,mb3.9/13,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**3.73**	**219**	*e*Pn		**Pn**	**00 19 58.9**	**+0.5**
GUMO				*e*Sn		**Sn**	**00 20 39.9**	**-1.5**
GUMO	**Guam**	**3.73**	**219**	Sn		**Sn**	**00 20 40.8**	**-0.5**
	7.6nm,0.3s,baz=180,slow=20,SNR=2.9							
GUMO				LR		LR	00 20 45.9	
	comp=Z,436nm,18.4s,baz=58,slow=29							
MJAR	**Matsushiro Arr**	**21.52**	**340**	P		**P**	**00 23 49.5**	**+0.1**
	1.1nm,0.4s,mb3.6,baz=162,slow=4.1,SNR=6.7							
MAJO	**Matsushiro**	**21.52**	**340**	*e*P		**P**	**00 23 48.8**	**-0.7**
	2.1nm,0.4s,mb3.9							
YHNB	**Yeheng**	**25.54**	**293**	P		**P**	**00 24 28.7**	**-0.4**
PMG	**Port Moresby**	**25.75**	**180**	*e*P		**P**	**00 24 31.2**	**+0.1**
YSS	**Yuzh-Sakhalins**	**30.59**	**354**	*e*P		**P**	**00 25 12.9**	**-1.1**
WRA	**Warramunga Arr**	**38.40**	**200**	P		**P**	**00 26 21.9**	**+0.1**
	0.5nm,0.3s,mb3.7,baz=22,slow=9.2,SNR=4.1							
KSM	**Kuching**	**39.35**	**252**	*e*P		**P**	**00 26 31.4**	**+1.5**
SONM	**Songino Array**	**45.79**	**322**	P		**P**	**00 27 22.4**	**+0.6**
	0.6nm,0.6s,mb3.7,baz=126,slow=8.3,SNR=3.4							
CHTO	**Chiang Mai**	**46.01**	**280**	*e*P		**P**	**00 27 23.9**	**-0.1**
MBWA	**Marble Bar**	**46.17**	**217**	*e*P		**P**	**00 27 24.8**	**-0.3**
ZALV	**Zalesovo Beam**	**60.66**	**323**	P		**P**	**00 29 11.4**	**+0.3**
	0.3nm,0.4s,mb3.8,baz=116,slow=12,SNR=2.8							
MKAR	**Makanchi Array**	**61.06**	**315**	P		**P**	**00 29 14.6**	**+0.6**
	0.2nm,0.3s,mb3.8,baz=87,slow=8.6,SNR=2.8							
MCK	**McKinley**	**63.80**	**26**	*e*P		**P**	**00 29 31.6**	**-0.4**
KURK	**Kurchatov**	**63.90**	**319**	*e*P		**P**	**00 29 32.5**	**-0.3**
	1.6nm,0.7s,mb4.2							
KURK	**Kurchatov**	**63.90**	**319**	P		**P**	**00 29 33.1**	**+0.2**
	1.0nm,0.6s,mb4.1,baz=97,slow=7.4,SNR=5.1							
COLA	**College**	**64.57**	**25**	*e*P		**P**	**00 29 36.5**	**-0.4**
ILAR	**Eielson Array**	**64.94**	**26**	P		**P**	**00 29 39.5**	**+0.2**
	1.1nm,0.8s,mb3.9,baz=264,slow=5.0,SNR=11							
AML	**Almayashu**	**67.02**	**309**	*e*P		**P**	**00 29 54.4**	**+1.2**
BVAR	**Borovoye Array**	**69.12**	**321**	P		**P**	**00 30 06.7**	**+0.5**
	0.9nm,0.6s,mb3.9,baz=90,slow=5.8,SNR=6.7							
BRVK	**Borovoye**	**69.18**	**321**	*e*P		**P**	**00 30 05.7**	**-0.9**
	2.1nm,0.8s,mb4.1							
INK	**Inuvik**	**70.79**	**23**	P		**P**	**00 30 16.4**	**+0.2**
KBL	**Kabul**	**71.29**	**301**	*e*P		**P**	**00 30 19.1**	**-0.7**
	1.6nm,0.4s,mb4.3							
ABKAR	**Akbulak array**	**75.96**	**318**	*e*P		**P**	**00 30 46.3**	**-0.7**
	0.5nm,0.6s,mb3.6							
FINES	**FINESS Array B**	**89.49**	**336**	P		**P**	**00 31 57.6**	**+0.7**
	3.2nm,1.0s,mb4.6,baz=347,slow=5.7,SNR=4.0							

*ISCJB **14** 00:35:39.0±5.0,83°.62N±0°.05×114°.5E±0°.4,h5km±32km, mb4.2/32,MS3.9/3,Error ellipse: s-maj=9.1km s-min=6.7km az=139.1*
*MOS **14** 00:35:39.6±0.8,83°.59N×114°.56E,h10km,mb4.7/10,Error ellipse: s-maj=88.4km s-min=9.3km az=88.4*
*IDC **14** 00:35:40.1±0.6,83°.70N×114°.62E,h0km,mb3.9/15, mb1 4.1/16,mb1mx4.0/26,mbtmp3.9/16,ML3.7/1,MS3.9/3, Ms1 3.9/3,ms1mx2.9/35,Error ellipse: s-maj=20.4km s-min=13.8km az=141.0*
*NEIC **14** 00:35:43.3±2.0,83°.63N×114°.40E,h20km±14km,mb4.6/19, Error ellipse: s-maj=4.6km s-min=3.5km az=137.0*
ISC 14 00:35:42.4±4.5,83°.62N±0°.05×114°.4E±0°.4,h13km±29km, n74,σ0s64/72,mb4.2/32,MS3.9/3,North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
TIXI	**Tiksi**	**12.35**	**158**	*e*Pn		**Pn**	**00 38 37.7**	**+0.2**
TIXI	**Tiksi**	**12.35**	**158**	*e*P		**Pn**	**00 38 37.0**	**-0.5**
TIXI				pmax		pmax		
	comp=Z,8.0nm,1.4s							
KBS	**Kingsbay**	**14.00**	**309**	Pn		**Pn**	**00 38 59.5**	**-0.4**
SPITS	**Spitsbergen Ar**	**14.27**	**304**	Pn		**Pn**	**00 39 03.6**	**-0.1**
	baz=351,slow=4.6,SNR=5.1							
ARCES	**ARCESS Array B**	**21.41**	**286**	P		**P**	**00 40 30.5**	**+1.2**
	comp=Z,2.3nm,0.7s,mb3.6,baz=358,slow=11,SNR=4.2							
YAK	**Yakutsk**	**22.00**	**161**	*e*P		**P**	**00 40 35.4**	**-0.2**
	comp=Z,29nm,0.6s,mb4.9							
YAK	**Yakutsk**	**22.00**	**161**	*e*P		**P**	**00 40 35.4**	**-0.2**
YAK				pmax		pmax		
	comp=Z,29nm,0.6s,mb4.9							
SUMG	**Summit**	**23.43**	**340**	*e*P		**P**	**00 40 51.7**	**+1.1**
	comp=Z,157nm,2.5s,mb5.0							
INK	**Inuvik**	**24.92**	**55**	*e*P		**P**	**00 41 03.4**	**-1.0**
	comp=Z,6.9nm,1.0s,mb4.1							
INK				LR		LR	00 51 17.1	
INK	**Inuvik**	**24.92**	**55**	P		**P**	**00 41 03.5**	**-1.0**
	comp=Z,4.7nm,0.9s,mb4.0,baz=245,slow=0.9,SNR=3.1							
INK				LR		LR	00 51 17.1	
	comp=Z,205nm,18.6s,MS3.7,baz=151,slow=38							
INK	**Inuvik**	**24.92**	**55**	P		**P**	**00 41 03.5**	**-1.0**
INK				pmax		pmax		
	comp=Z,5.0nm,0.9s							
INK				MLR		MLR		
	comp=Z,205nm,18.7s							
ILAR	**Eielson Array**	**27.05**	**69**	P		**P**	**00 41 24.1**	**+0.4**
	comp=Z,3.6nm,1.2s,mb3.8,baz=343,slow=6.9,SNR=12							
ARU	**Arti**	**30.55**	**245**	P		**P**	**00 41 54.3**	**-0.6**
ARU	**Arti**	**30.55**	**245**	P		**P**	**00 41 54.3**	**-0.6**
YKA	**Yellowknife Ar**	**32.21**	**41**	P		**P**	**00 42 08.1**	**-1.4**
	comp=Z,1.0nm,0.8s,mb3.7,baz=348,slow=8.8,SNR=3.5							
BRVK	**Borovoye**	**32.78**	**231**	*e*P		**P**	**00 42 14.6**	**+0.1**
	comp=Z,2.2nm,0.7s,mb4.2							
BRVK	**Borovoye**	**32.78**	**231**	*e*P		**P**	**00 42 14.6**	**+0.1**
BRVK				pmax		pmax		
	comp=Z,2.0nm,0.7s,mb4.2							
BVAR	**Borovoye Array**	**32.80**	**231**	P		**P**	**00 42 14.7**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.6,baz=38,slow=7.5,SNR=4.0							
BVAR				PcP		PcP	00 44 59.3	+0.1
	comp=Z,0.6nm,0.5s,baz=15,slow=6.0,SNR=2.6							
KURK	**Kurchatov**	**34.44**	**221**	*e*P		**P**	**00 42 28.0**	**-1.0**
	comp=Z,1.2nm,0.8s,mb3.9							
KURK				PP		PP	00 43 46.0	-0.8
KURK	**Kurchatov**	**34.44**	**221**	PcP		PcP	00 45 04.2	+0.4
	comp=Z,0.6nm,0.7s,baz=341,slow=2.0,SNR=3.4							
KURK	**Kurchatov**	**34.44**	**221**	*e*P		**P**	**00 42 28.0**	**-0.9**
KURK							00 43 46.0	
KURK				pmax		pmax		
	comp=Z,1.0nm,0.8s,mb3.8							
UNV	**Unalaska Valle**	**35.61**	**92**	P		**P**	**00 42 39.3**	**+0.3**
ULN	**Ulaanbaatar**	**35.97**	**188**	*e*P		**P**	**00 42 42.3**	**+0.2**
SONM	**Songino Array**	**36.01**	**189**	P		**P**	**00 42 43.7**	**+1.2**
	comp=Z,1.4nm,0.9s,mb3.9,baz=355,slow=7.4,SNR=7.9							
SONM				PcP		PcP	00 45 08.7	+0.2
	comp=Z,0.5nm,0.5s,baz=7.1,slow=3.5,SNR=3.7							
FCC	**Fort Churchill**	**37.17**	**24**	P		**P**	**00 42 52.2**	**0.0**
ABKAR	**Akbulak array**	**37.51**	**241**	*e*P		**P**	**00 42 54.7**	**-0.5**
	comp=Z,3.1nm,1.2s,mb3.9							
YSS	**Yuzh-Sakhalins**	**37.69**	**148**	*e*P		**P**	**00 42 56.8**	**0.0**
MK31	**Makanchi Array**	**38.08**	**216**	*e*P		**P**	**00 42 59.9**	**-0.3**
MKAR	**Makanchi Array**	**38.08**	**216**	P		**P**	**00 42 59.6**	**-0.5**
	comp=Z,1.6nm,0.8s,mb3.8,baz=12,slow=7.4,SNR=10							
KWP	**Kalwaria Pacla**	**41.17**	**279**	P		**P**	**00 43 26.1**	**+0.4**
SCHQ	**Schefferville**	**41.77**	**1**	P		**P**	**00 43 29.7**	**-0.9**
SCHQ	**Schefferville**	**41.77**	**1**	P		**P**	**00 43 29.4**	**-1.2**
	comp=Z,1.4nm,0.5s,mb3.9,baz=4.4,slow=13,SNR=7.0							
AAK	**Ala-Archa**	**42.79**	**224**	*e*P		**P**	**00 43 39.4**	**+0.4**
EKS2	**Erkin-Say**	**42.81**	**225**	*e*P		**P**	**00 43 39.5**	**+0.2**
PSZ	**Piszkesteto**	**43.17**	**281**	*e*P		**P**	**00 43 41.4**	**-0.7**
UCH	**Uchtor**	**43.19**	**224**	*e*P		**P**	**00 43 48.8**	**+6.5**
AML	**Almayashu**	**43.35**	**225**	*e*P		**P**	**00 43 44.2**	**+0.6**
	comp=Z,2.7nm,0.6s,mb4.2							
AML				*e*PcP		PcP	00 45 33.6	+1.6
KIV	**Kislovodsk**	**44.55**	**258**	*e*P		**P**	**00 43 52.6**	**-0.6**
KIV	**Kislovodsk**	**44.55**	**258**	*e*P		**P**	**00 43 52.6**	**-0.6**
MLR	**Muntele Rosu**	**44.89**	**275**	LR		LR	01 08 18.1	
	comp=Z,400nm,19.1s,MS4.4,baz=54,slow=44							
NEW	**Newport**	**46.15**	**47**	*e*P		**P**	**00 44 05.1**	**-0.7**
JTMT	**Jette**	**46.88**	**44**	*e*P		**P**	**00 44 11.9**	**+0.3**
LON	**Longmire**	**47.25**	**51**	*e*P		**P**	**00 44 14.8**	**+0.3**
	comp=Z,6.2nm,1.1s,mb4.5							
LON	**Longmire**	**47.25**	**51**	*e*P		**P**	**00 44 14.8**	**+0.3**
LON				pmax		pmax		
	comp=Z,6.0nm,1.1s,mb4.4							
BOZ	**Bozeman (W)**	**49.17**	**42**	*e*P		**P**	**00 44 29.7**	**+0.4**
	comp=Z,19nm,1.8s,mb4.8							
BOZ	**Bozeman (W)**	**49.17**	**42**	*e*P		**P**	**00 44 29.7**	**+0.4**
BOZ				pmax		pmax		
	comp=Z,19nm,1.8s,mb4.8							
BMO	**Blue Mountains**	**49.52**	**47**	*e*P		**P**	**00 44 32.8**	**+0.8**
	comp=Z,27nm,2.3s,mb4.9							
BRTR	**Keskin Array B**	**49.73**	**266**	P		**P**	**00 44 34.0**	**+0.4**
	comp=Z,0.5nm,0.6s,mb3.7,baz=23,slow=4.9,SNR=4.9							
IMW	**Indian Meadow**	**50.97**	**41**	*e*P		**P**	**00 44 44.3**	**+1.4**
	comp=Z,5.6nm,1.2s,mb4.4							
HLID	**Hailey**	**51.03**	**45**	*e*P		**P**	**00 44 43.5**	**0.0**
MOOW	**Moose Ponds**	**51.13**	**41**	*e*P		**P**	**00 44 44.9**	**+0.7**
	comp=Z,53nm,3.0s							
RSSD	**Black Hills**	**51.22**	**35**	*e*P		**P**	**00 44 45.0**	**+0.1**
	comp=Z,8.7nm,1.3s,mb4.5							
RSSD	**Black Hills**	**51.22**	**35**	*e*P		**P**	**00 44 45.0**	**+0.2**
RSSD				pmax		pmax		
	comp=Z,9.0nm,1.3s,mb4.5							
KBL	**Kabul**	**51.27**	**229**	P		**P**	**00 44 44.3**	**-1.0**
LOHW	**Long Hollow**	**51.27**	**41**	P		**P**	**00 44 45.3**	**0.0**
TIP	**Timpagrande**	**52.15**	**283**	*e*P		**P**	**00 44 51.8**	**0.0**
	comp=Z,10.0nm,1.3s,mb4.6							
ESDC	**Sonseca Array**	**53.78**	**303**	P		**P**	**00 45 03.5**	**-0.4**
	comp=Z,1.8nm,0.9s,mb4.0,baz=12,slow=7.7,SNR=8.6							
ESLA	**Sonseca Array**	**53.78**	**303**	P		**P**	**00 45 04.6**	**+0.8**
PAB	**San Pablo**	**53.95**	**303**	*e*P		**P**	**00 45 05.2**	**+0.1**
	comp=Z,6.5nm,1.0s,mb4.5							
PAB	**San Pablo**	**53.95**	**303**	*e*P		**P**	**00 45 05.2**	**+0.1**
PAB				pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.5							
DUG	**Dugway**	**54.50**	**44**	*e*P		**P**	**00 45 09.2**	**0.0**
	comp=Z,4.2nm,1.1s,mb4.4							
DUG	**Dugway**	**54.50**	**44**	*e*P		**P**	**00 45 09.2**	**+0.1**
DUG				pmax		pmax		
	comp=Z,4.0nm,1.1s,mb4.4							
NVAR	**Mina Array Bea**	**55.81**	**49**	P		**P**	**00 45 18.7**	**+0.1**
	comp=Z,0.7nm,0.8s,mb3.8,baz=4.4,slow=5.3,SNR=4.9							
KEST	**Kesra**	**56.35**	**289**	*e*P		**P**	**00 45 23.4**	**+0.9**
KEST	**Kesra**	**56.35**	**289**	P		**P**	**00 45 22.9**	**+0.4**
	comp=Z,2.6nm,1.1s,mb4.2,baz=326,slow=7.0,SNR=6.5							
PV01	**Paradox Valley**	**56.87**	**40**	*e*P		**P**	**00 45 26.4**	**+0.3**
SDCO	**Great Sand Dun**	**57.47**	**37**	*e*P		**P**	**00 45 30.8**	**+0.5**
	comp=Z,11nm,1.6s,mb4.6							
ANMO	**Albuquerque**	**60.18**	**38**	*e*P		**P**	**00 45 48.9**	**-0.3**
	comp=Z,17nm,1.9s,mb4.8							
ANMO	**Albuquerque**	**60.18**	**38**	*e*P		**P**	**00 45 48.9**	**-0.4**
ANMO				pmax		pmax		
	comp=Z,17nm,1.9s							
WMOK	**Wichita Mounta**	**60.88**	**31**	*e*P		**P**	**00 45 52.5**	**-1.5**
	comp=Z,6.5nm,1.4s,mb4.6							
WMOK	**Wichita Mounta**	**60.88**	**31**	*e*P		**P**	**00 45 52.5**	**-1.5**
WMOK				pmax		pmax		
	comp=Z,6.0nm,1.4s,mb4.5							
CMAR	**Chiang Mai Arr**	**65.48**	**196**	P		**P**	**00 46 25.3**	**+0.6**
	comp=Z,0.9nm,0.5s,mb4.1,baz=358,slow=8.7,SNR=3.6							
CMAR				LR		LR	01 16 30.2	
	comp=Z,32nm,18.4s,MS3.6,baz=325,slow=37							
TXAR	**Lajitas Array**	**65.95**	**36**	P		**P**	**00 46 26.6**	**-1.0**
	comp=Z,1.5nm,0.8s,mb4.1,baz=353,slow=4.6,SNR=15							
TORD	**Torodi Ar. Bea**	**79.48**	**294**	P		**P**	**00 47 47.6**	**-0.5**
	comp=Z,2.6nm,0.9s,mb4.2,baz=357,slow=5.5,SNR=5.5							

*ATH **14** 00:40:08.6,37°.07N×23°.71E,h28km,MD3.0/11,ML2.3*
*ISCJB **14** 00:40:09.8±0.7,37°.10N±0°.03×23°.70E±0°.04,h22km±6km, Error ellipse: s-maj=5.3km s-min=4.9km az=141.8*
*THE **14** 00:40:10.4,37°.13N×23°.64E,h11km±1km,ML2.1/6,Error ellipse: s-maj=1.5km s-min=0.7km az=57.0*
*CSEM **14** 00:40:10.0±0.3,37°.08N×23°.73E,h28km±1km,ML2.1/6, Error ellipse: s-maj=6.9km s-min=5.6km az=92.0*
ISC 14 00:40:09.4±0.9,37°.10N±0°.03×23°.71E±0°.04,h16km±5km, n38,σ0s89/69,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
DID	**Didima**	**0.55**	**317**	*e*PN		**Pg**	**00 40 20.0**	**-0.4**
DID				*e*SN		**Sg**	**00 40 29.5**	**+1.7**
DID	**Didima**	**0.55**	**317**	P		**Pg**	**00 40 19.8**	**-0.6**
DID				S		**Sg**	**00 40 27.0**	**-0.8**
DID	**Didima**	**0.55**	**317**	P		**Pg**	**00 40 19.8**	**-0.6**
DID				*e*Sn		**Sg**	**00 40 29.5**	**+1.7**
NAIG	**Nisos Aigina**	**0.68**	**345**	*e*PN		**Pn**	**00 40 22.4**	**-2.0**
NAIG	**Nisos Aigina**	**0.68**	**345**	*e*Pn		**Pn**	**00 40 22.4**	**-2.0**
VLI	**Veliai**	**0.73**	**238**	*e*PN		**Pn**	**00 40 22.6**	**-2.5**
VLI	**Veliai**	**0.73**	**238**	*e*Pn		**Pn**	**00 40 22.6**	**-2.5**
ATHU	**Athens Univers**	**0.86**	**4**	P		**Pb**	**00 40 26.4**	**+0.3**
ATHU				S		**Sg**	**00 40 38.5**	**+0.9**
ATHU	**Athens Univers**	**0.86**	**4**	P		**Pb**	**00 40 26.4**	**+0.3**
ATHU				S		**Sg**	**00 40 38.5**	**+0.9**
ATH	**Athens Observa**	**0.87**	**0**	*e*PN		**Pn**	**00 40 25.8**	**-1.2**
ATH				*e*SN		**Sn**	**00 40 38.6**	**-0.7**
ATH	**Athens Observa**	**0.87**	**0**	*e*Pn		**Pn**	**00 40 25.8**	**-1.2**
ATH				*e*Sn		**Sn**	**00 40 38.6**	**-0.7**
PTL	**Penteli**	**0.95**	**7**	*e*PN		**Pn**	**00 40 27.7**	**-0.5**
PTL				*e*SN		**Sn**	**00 40 40.8**	**-0.6**
PTL	**Penteli**	**0.95**	**7**	*e*Pn		**Pn**	**00 40 27.7**	**-0.5**
PTL				*e*Sn		**Sn**	**00 40 40.8**	**-0.6**
KYTH	**Kithira**	**0.98**	**214**	*e*PN		**Pn**	**00 40 27.3**	**-1.3**
KYTH	**Kithira**	**0.98**	**214**	*e*Pn		**Pn**	**00 40 27.3**	**-1.3**
LTK	**Loutraki**	**1.09**	**327**	*e*PN		**Pn**	**00 40 29.5**	**+0.6**
LTK				*e*

baz=215,slow=13,SNR=2.8
KOLN Koldanda 13.31 127 *e*P Pn 01 15 02.5 -1.0
comp=E,8.0nm,0.4s
GKN Gorkha 13.84 123 *e*P Pn 01 15 09.2 -1.2
comp=E,11nm,0.3s
DMN Daman 14.41 123 *e*P Pn 01 15 17.0 -0.7
comp=E,11nm,0.5s
PKIN Phulchoki 14.63 123 *e*P Pn 01 15 19.8 -0.7
comp=E,23nm,0.5s
PKIN Phulchoki 14.63 123 *e*P Pn 01 15 19.8 -0.7
PKI Pulchoki 14.64 123 *e*P Pn 01 15 20.6 -0.1
comp=E,7.3nm,0.2s
JIRN Jiri 15.12 121 *e*P Pn 01 15 26.9 +0.1
comp=E,17nm,0.3s
KURK Kurchatov 15.23 17 Pn Pn 01 15 28.6 +0.6
comp=E,2.6nm,0.9s
KURK Kurchatov 15.23 17 P Pn 01 15 27.5 -0.5
comp=E,0.1nm,0.3s,baz=206,slow=11,SNR=9.4
AB31 Akbulak array 15.44 330 P Pn 01 15 27.2 -3.4
comp=E,2.3nm,0.3s,baz=134,slow=15,SNR=154
AB31 ⇑S S 01 18 09.7 -21
comp=E,1.0nm,0.4s,baz=168,slow=23,SNR=6.7
ABKAR Akbulak array 15.44 330 *e*Pn Pn 01 15 27.1 -3.5
comp=E,6.1nm,0.4s
ABKAR *e*S S 01 18 04.5 -26
RAMN Ramite 15.85 122 *e*P Pn 01 15 35.8 -0.1
comp=E,10.0nm,0.3s
TAPN Taplejung 16.37 119 *e*P Pn 01 15 43.3 +0.9
comp=E,20nm,0.7s
ODAN Odare 16.45 121 *e*P Pn 01 15 43.8 +0.4
BVA0 Borovoye Array 16.69 358 P Pn 01 15 45.1 -1.0
comp=E,0.4nm,0.7s,baz=164,slow=13,SNR=11
BVAR Borovoye Array 16.69 358 P Pn 01 15 45.5 -0.6
comp=E,0.4nm,0.3s,baz=159,slow=13,SNR=12
BRVK Borovoye 16.73 357 *e*Pn Pn 01 15 45.4 -1.2
AKTK Aktyubinsk 17.14 329 P Pn 01 15 50.4 -1.3
AKTK S S 01 18 49.2 -14
AKTO Aktyubinsk 17.14 329 P Pn 01 15 50.4 -1.3
comp=E,1.6nm,0.3s,baz=141,slow=12,SNR=23
AKTO S S 01 18 49.2 -14
comp=E,0.2nm,0.3s,baz=336,slow=20,SNR=4.1
ZAA0 Zalesovo Array 19.87 24 *e*P P 01 16 22.0 +0.5
ZALV Zalesovo Beam 19.87 24 P P 01 16 22.1 +0.5
comp=E,2.2nm,0.3s,baz=202,slow=9.9,SNR=28
GNI Garni 21.38 288 P P 01 16 42.1 +4.2
comp=E,4.3nm,0.8s,mb3.9,baz=328,slow=14,SNR=4.7
ARU Arti 21.93 340 *e*P P 01 16 44.9 +1.4
comp=E,2.7nm,0.7s,mb3.7
BRTR Keskin Array B 29.92 288 P P 01 17 58.8 +1.9
comp=E,0.4nm,0.8s,mb3.1,baz=66,slow=7.1,SNR=2.7
FINES FINESS Array B 37.86 326 P P 01 19 05.8 +0.5
comp=E,1.2nm,0.4s,mb4.1,baz=130,slow=10,SNR=9.6
ARCES ARCESS Array B 41.46 338 P P 01 19 34.9 -0.1
ARCES ARCESS Array B 41.46 338 P P 01 19 34.9 -0.1
comp=E,1.8nm,0.6s,mb4.1,baz=113,slow=9.3,SNR=13
HFS Hagfors 43.47 322 P P 01 19 51.7 +0.3
comp=E,1.8nm,0.4s,mb4.1,baz=96,slow=12,SNR=12
NOA NORSAR Array B 44.77 323 P P 01 20 02.0 +0.2
comp=E,1.3nm,0.6s,mb3.9,baz=96,slow=7.8,SNR=5.5
WRA Warramunga Arr 81.52 122 P P 01 24 14.4 +9.3
comp=E,0.6nm,0.9s,mb3.4,baz=330,slow=4.9,SNR=3.0

*NSSP **14** 01:29:41.4,38.°60N×45.°28E,h5km,Ms3.7*
*ISK **14** 01:29:42.8,38.°61N×45.°23E,h5km,MD3.8,ML3.7*
*NEIC **14** 01:29:43.8,38.°59N×45.°27E,h2km,mb3.8/3,MN3.8(TEH), After TEH.*
*CSEM **14** 01:29:43.6±0.1,38.°58N×45.°30E,h2km,ML3.8, Error ellipse: s-maj=4.4km s-min=3.5km az=30.0*
*TEH **14** 01:29:43.7,38.°61N×45.°28E,h2km*
*THR **14** 01:29:44.3±0.4,38.°79N×45.°39E,h14km±10km,ML3.5*
*IDC **14** 01:29:44.2±2.2,38.°69N×45.°26E,h0km,mb3.6/4, mb1 3.6/6,mb1mx3.5/21,mbtmp3.6/6,ML3.0/2,MS2.8/2, Ms1 2.8/2,ms1mx2.4/29,Error ellipse: s-maj=30.0km s-min=16.7km az=44.0*
ISC 14 01:29:44.0±0.4,38.°60N±0.°02×45.°32E±0.°02,h1km±3km, n124,σ1?35/160,mb3.6/6,7C-23D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IMRD	**Marand**	**0.32**	**69**	Pg		**Pg**	**01 29 49.8**	**-0.4**
IMRD				Sg		**Sg**	**01 29 55.4**	**+1.0**
IMRD	**Marand**	**0.32**	**69**	↓*e*Pg		**Pg**	**01 29 49.9**	**-0.3**
IMRD				*e*Sg		**Sg**	**01 29 55.4**	**+1.0**
IMRD				*e*			01 30 02.4	
	comp=Z,57μm,0.1s							
IMRD	**Marand**	**0.32**	**69**	↓*e*Pg		**Pg**	**01 29 49.9**	**-0.3**
IMRD				*e*Sg		**Sg**	**01 29 55.4**	**+1.0**
ISHB	**Shabestar**	**0.39**	**143**	Pg		**Pg**	**01 29 51.1**	**-0.4**
ISHB				Sg		**Sg**	**01 29 56.9**	**+0.3**
ISHB	**Shabestar**	**0.39**	**143**	↓*e*Pg		**Pg**	**01 29 51.1**	**-0.4**
ISHB				*e*Sg		**Sg**	**01 29 56.9**	**+0.3**
ISHB				*e*			01 29 58.2	
	comp=Z,2μm,0.2s							
NAX	**Nakhchivan**	**0.59**	**13**	P		**Pg**	**01 29 54.9**	**-0.5**
	SNR=1000							
NAX				S		**Sg**	**01 30 04.0**	**+0.9**
ITBZ	**Tabriz**	**0.75**	**119**	Pg		**Pg**	**01 29 57.7**	**-0.6**
ITBZ	**Tabriz**	**0.75**	**119**	↓*e*Pg		**Pg**	**01 29 57.7**	**-0.6**
ITBZ				*e*Sg		**Sg**	**01 30 07.8**	**-0.2**
ITBZ				*e*			01 30 12.7	
	comp=Z,19μm,0.1s							
MAKU	**Maku**	**0.90**	**327**	*e*Pg		**Pg**	**01 29 59.2**	**-2.2**
MAKU				*e*Sg		**Sg**	**01 30 10.5**	**-2.6**
MAKU				AML		AML	01 30 13.6	
	comp=N,2μm,0.4s							
IFTB	**Fath-abad**	**1.03**	**124**	*e*Sg		**Sg**	**01 30 16.2**	**-0.8**
IFTB				*e*Pg		**Pg**	**01 30 02.6**	**-1.1**
IFTB				*e*			01 30 33.5	
	comp=Z,47μm,0.3s							
IAZR	**Azarshahr**	**1.06**	**150**	Pg		**Pg**	**01 30 02.8**	**-1.5**
IAZR	**Azarshahr**	**1.06**	**150**	*e*Sg		**Sg**	**01 30 18.3**	**+0.4**
IAZR				↓*e*Pg		**Pg**	**01 30 03.0**	**-1.3**
IAZR				*e*			01 30 28.0	
	comp=Z,42μm,0.2s							
GRS	**Goris**	**1.20**	**41**	↓*i*P		**Pg**	**01 30 06.0**	**-1.0**
GRS				⇑*i*S		**Sg**	**01 30 23.0**	**+0.4**
GRS	**Goris**	**1.20**	**41**	↓P		**Pg**	**01 30 06.0**	**-1.0**
CLDR	**Caldiran**	**1.22**	**297**	*e*Pn		**Pn**	**01 30 05.5**	**-2.8**
CLDR				*e*SN		**Sn**	**01 30 23.3**	**-2.2**
CLDR	**Caldiran**	**1.22**	**297**	*e*Pn		**Pn**	**01 30 05.5**	**-2.8**
CLDR				*e*Sn		**Sn**	**01 30 23.3**	**-2.2**
IHRS	**Heris**	**1.38**	**101**	Pn		**Pn**	**01 30 09.5**	**-1.0**
IHRS	**Heris**	**1.38**	**101**	*e*		**Pg**	**01 30 16.0**	**+5.5**
	comp=Z,19μm,0.2s							
IHRS				*e*Pn		**Pn**	**01 30 09.5**	**-1.0**
IHRS				*e*Sg		**Sg**	**01 30 27.0**	**-1.5**
TVAN	**Van**	**1.50**	**268**	*e*P		**Pn**	**01 30 09.5**	**-2.6**
TVAN	**Van**	**1.50**	**268**	*e*P		**Pn**	**01 30 09.5**	**-2.6**
TVAN				*e*S		**Sg**	**01 30 34.6**	**+2.4**
VANB	**Van**	**1.51**	**271**	*e*PN		**Pn**	**01 30 11.2**	**-1.1**
VANB	**Van**	**1.51**	**271**	*e*Pn		**Pn**	**01 30 11.2**	**-1.1**
DYDN	**Diyadin**	**1.58**	**307**	*e*P		**Pn**	**01 30 12.8**	**-0.4**
DYDN	**Diyadin**	**1.58**	**307**	*e*P		**Pn**	**01 30 12.8**	**-0.4**
DYDN				*e*S		**Sg**	**01 30 37.2**	**+2.3**
VADZ	**Vardenis**	**1.61**	**12**	↓*i*P		**Pg**	**01 30 16.0**	**+1.1**
VADZ				↓S		**Sn**	**01 30 37.0**	**+2.0**
GNI	**Garni**	**1.61**	**344**	*e*PN		**Pn**	**01 30 13.1**	**-0.6**
GNI				*e*SN		**Sn**	**01 30 35.5**	**+0.3**
GNI	**Garni**	**1.61**	**344**	*e*Pn		**Pn**	**01 30 12.5**	**-1.2**
GNI				*e*S		**Sn**	**01 30 32.9**	**-2.3**
GNI	**Garni**	**1.61**	**344**	Pg		**Pn**	**01 30 12.8**	**-0.9**
	comp=Z,295nm,0.3s,baz=218,slow=1.1,SNR=559							
GNI				Lg			01 30 34.0	
	comp=Z,237nm,0.3s,baz=347,slow=20,SNR=7.0							
GNI	**Garni**	**1.61**	**344**	↓*i*P		**Pn**	**01 30 12.4**	**-1.3**
GNI				↓*i*S		**Sn**	**01 30 36.0**	**+0.9**
GNI	**Garni**	**1.61**	**344**	↓P		**Pn**	**01 30 12.4**	**-1.3**
GNI	**Garni**	**1.61**	**344**	*e*Pn		**Pn**	**01 30 13.1**	**-0.6**
GNI				*e*S		**Sn**	**01 30 32.9**	**-2.2**
GNI				*e*Sn		**Sn**	**01 30 35.5**	**+0.4**
VANT	**Van**	**1.62**	**264**	*e*PN		**Pn**	**01 30 12.9**	**-0.8**
HAKT	**HAKKARI**	**1.64**	**231**	*e*P		**Pn**	**01 30 12.5**	**-1.6**
HAKT	**HAKKARI**	**1.64**	**231**	*e*P		**Pn**	**01 30 12.5**	**-1.5**
HAKT				*e*S		**Sg**	**01 30 38.3**	**+1.6**
STKZ		**1.65**	**42**	↓*i*P		**Pg**	**01 30 20.8**	**+5.1**
STKZ				⇑*i*S		**Sg**	**01 30 44.5**	**+7.5**
ERE	**Yerevan**	**1.70**	**338**	*e*P		**Pn**	**01 30 12.0**	**-2.9**
PAAR	**P'arak'ar**	**1.71**	**335**	⇑P		**Pn**	**01 30 14.1**	**-0.9**
KAPZ	**Kaputan**	**1.79**	**345**	↓*i*P		**Pn**	**01 30 15.7**	**-0.4**
KAPZ				⇑*i*S		**Sg**	**01 30 41.7**	**+0.2**
KAPZ	**Kaputan**	**1.79**	**345**	↓P		**Pn**	**01 30 15.7**	**-0.4**
KAPZ				S		**Sg**	**01 30 41.7**	**+0.2**
IMAH	**Mahabad**	**1.85**	**170**	*e*Pn		**Pn**	**01 30 17.0**	**0.0**
VNNZ	**Vanand**	**1.90**	**323**	↓*i*P		**Pn**	**01 30 18.6**	**+1.0**
VNNZ				↓*i*S		**Sg**	**01 30 47.4**	**+2.3**
VNNZ	**Vanand**	**1.90**	**323**	↓P		**Pn**	**01 30 18.6**	**+1.0**
CUKT	**Cukurca**	**1.91**	**226**	*e*PN		**Pn**	**01 30 17.0**	**-0.8**
CUKT	**Cukurca**	**1.91**	**226**	*e*Pn		**Pn**	**01 30 17.0**	**-0.7**
ARUZ	**Aruch**	**1.93**	**331**	↓*i*P		**Pn**	**01 30 16.6**	**-1.4**
ARUZ				⇑*i*S		**Sn**	**01 30 44.1**	**+1.0**
ARUZ	**Aruch**	**1.93**	**331**	↓P		**Pn**	**01 30 16.6**	**-1.5**
ARUZ				S		**Sn**	**01 30 44.1**	**+1.1**
AKSZ	**Araks**	**1.94**	**326**	↓*i*P		**Pn**	**01 30 19.2**	**+1.0**
AKSZ				↓*i*S		**Sg**	**01 30 47.0**	**+0.6**
AMBZ	**Amberd**	**1.97**	**336**	⇑*i*P		**Pn**	**01 30 19.0**	**+0.4**
AMBZ				↓*i*S		**Sg**	**01 30 49.3**	**+2.0**
AMBZ	**Amberd**	**1.97**	**336**	⇑P		**Pn**	**01 30 19.0**	**+0.5**
ISRB	**Sarab**	**2.00**	**112**	Pn		**Pn**	**01 30 19.6**	**+0.5**
ISRB				Sn		**Sn**	**01 30 44.8**	**0.0**
ISRB	**Sarab**	**2.00**	**112**	*e*Pn		**Pn**	**01 30 19.2**	**+0.1**
ISRB				*e*			01 30 59.4	
	comp=Z,13μm,0.4s							
ISRB	**Sarab**	**2.00**	**112**	*e*Pn		**Pn**	**01 30 19.2**	**+0.1**
GRMI	**Germi**	**2.03**	**83**	*e*Pg		**Pn**	**01 30 20.1**	**+0.7**
GRMI				AML		AML	01 30 51.6	
	comp=N,491nm,0.9s							
AGRB	**Hanur-Agry**	**2.06**	**299**	*e*PN		**Pn**	**01 30 19.1**	**-0.7**
AGRB	**Hanur-Agry**	**2.06**	**299**	*e*Pn		**Pn**	**01 30 19.1**	**-0.7**
GANJ	**Ganja**	**2.19**	**20**	P		**Pn**	**01 30 22.4**	**+0.8**
	SNR=325							
GANJ				S		**Sg**	**01 30 53.4**	**-1.0**
BRDA	**Brd**	**2.20**	**40**	P		**Pn**	**01 30 24.4**	**+2.6**
	SNR=53							
DIGO	**Kars**	**2.36**	**321**	*e*P		**Pn**	**01 30 23.2**	**-0.7**
DIGO	**Kars**	**2.36**	**321**	*e*P		**Pn**	**01 30 23.2**	**-0.7**
DIGO				*e*S		**Sg**	**01 30 57.5**	**-2.3**
GLBA	**Clilabad**	**2.48**	**74**	P		**Pn**	**01 30 28.6**	**+3.0**
	SNR=7.7							
STEZ	**Stepenevan**	**2.50**	**344**	*e*P		**Pn**	**01 30 25.0**	**-0.9**
STEZ				*e*S		**Sg**	**01 31 05.0**	**+0.6**
STE	**Stepanavan**	**2.51**	**343**	P		**Pn**	**01 30 25.0**	**-1.0**
DGRG	**David-gareji**	**2.85**	**1**	P		**Pn**	**01 30 34.2**	**+3.5**
DGRG				S		**Sg**	**01 31 11.7**	**-3.9**
SEKA	**Sheki**	**2.98**	**28**	P		**Pn**	**01 30 34.2**	**+1.7**
	SNR=192							
IML	**Ismayilli**	**3.11**	**44**	P		**Pn**	**01 30 37.3**	**+3.0**
	SNR=20							
MTA	**Mtatsminda**	**3.12**	**353**	P		**Pn**	**01 30 38.3**	**+3.9**
MTA				S		**Sg**	**01 31 20.4**	**-3.9**
TBLG	**Delisi**	**3.16**	**352**	P		**Pn**	**01 30 39.3**	**+4.3**
TBLG				S		**Sg**	**01 31 20.6**	**-5.0**
ALIB	**Äli-Bayra**	**3.17**	**63**	P		**Pn**	**01 30 39.3**	**+4.2**
	SNR=5.2							
ZNJK	**Zanjan**	**3.29**	**125**	*e*Pn		**Pn**	**01 30 38.8**	**+2.0**
EZM	**Erzurum**	**3.34**	**294**	*e*PN		**Pn**	**01 30 37.7**	**+0.3**
PQL	**Pirkuli**	**3.34**	**48**	P		**Pn**	**01 30 40.6**	**+3.1**
	SNR=32							
SIZA	**Siyzn**	**3.71**	**47**	P		**Pn**	**01 30 44.3**	**+1.9**
	SNR=8.3							
BINT	**Bingol**	**3.79**	**276**	*e*PN		**Pn**	**01 30 43.9**	**+0.3**
BINT	**Bingol**	**3.79**	**276**	*e*Pn		**Pn**	**01 30 43.9**	**+0.4**
SNGE	**Sanandaj**	**3.86**	**154**	*e*Pn		**Pn**	**01 30 47.6**	**+3.1**
SNGE				AML		AML	01 32 00.7	
	comp=N,40nm,0.6s							
BCA	**Borcka**	**4.02**	**316**	*e*PN		**Pn**	**01 30 48.0**	**+1.3**
BCA	**Borcka**	**4.02**	**316**	*e*Pn		**Pn**	**01 30 48.0**	**+1.3**
IVIS	**Veis**	**4.25**	**163**	*e*Pn		**Pg**	**01 31 00.7**	**-4.7**
IVIS				*e*			01 31 32.8	
	comp=Z,507nm,0.0s							
IGHG	**Ghaleghazi**	**4.38**	**166**	Pn		**Pn**	**01 30 52.9**	**+1.2**
IGHG	**Ghaleghazi**	**4.38**	**166**	*e*Pn		**Pn**	**01 30 52.9**	**+1.2**
IGHG				*e*			01 32 31.8	
	comp=Z,1μm,0.6s							
IGHG	**Ghaleghazi**	**4.38**	**166**	*e*Pn		**Pn**	**01 30 52.9**	**+1.2**
PTK	**Pertek**	**4.64**	**275**	*e*PN		**Pn**	**01 30 55.9**	**+0.6**
PTK	**Pertek**	**4.64**	**275**	*e*Pn		**Pn**	**01 30 55.9**	**+0.6**
IKOM	**Komasi**	**4.75**	**157**	Pn		**Pn**	**01 30 59.3**	**+2.4**
IKOM	**Komasi**	**4.75**	**157**	*e*Pn		**Pn**	**01 30 59.0**	**+2.1**
IKOM				*e*			01 31 19.6	
	comp=Z,634nm,0.4s							
IKOM	**Komasi**	**4.75**	**157**	Pn		**Pn**	**01 30 59.3**	**+2.4**
IRAZ	**Razeghan**	**4.88**	**129**	Pn		**Pn**	**01 30 58.4**	**-0.1**
IRAZ	**Razeghan**	**4.88**	**129**	*e*Pn		**Pn**	**01 30 58.0**	**-0.5**
IRAZ				*e*			01 31 32.0	
	comp=Z,377nm,0.3s							
IRAZ	**Razeghan**	**4.88**	**129**	*e*Pn		**Pn**	**01 30 58.0**	**-0.5**
THKV	**Tehran--Karaj**	**5.18**	**119**	*e*Pn		**Pn**	**01 31 04.5**	**+1.7**
BHD	**Baghdad**	**5.37**	**188**	*ex*		x	01 31 20.5	
BHD				*i* x		x	01 32 08.5	
BHD				*ex*		x	01 32 35.5	
BHD				*i* x		x	01 33 15.0	
MALT	**Malatya**	**5.42**	**269**	*e*Pn		**Pn**	**01 31 06.5**	**+0.5**
	comp=Z,6.7nm,0.8s							
MALT	**Malatya**	**5.42**	**269**	*e*Pn		**Pn**	**01 31 06.5**	**+0.6**
	comp=Z,6.7nm,0.8s							
ASAO	**Ashtian**	**5.54**	**135**	*e*Pn		**Pn**	**01 31 10.2**	**+2.5**
KIV	**Kislovodsk**	**5.71**	**341**	*e*Pn		**Pn**	**01 31 08.8**	**-1.1**
	comp=Z,9.0nm,0.8s							
KIV	**Kislovodsk**	**5.71**	**341**	*e*Pn		**Pn**	**01 31 08.8**	**-1.1**
	comp=Z,9.0nm,0.8s							
IDMV	**Damavand**	**6.16**	**117**	Pn		**Pn**	**01 31 15.1**	**-1.0**
IDMV	**Damavand**	**6.16**	**117**	*e*Pn		**Pn**	**01 31 15.4**	**-0.7**
IDMV				*e*			01 33 15.2	
	comp=Z,276nm,0.6s							
IDMV	**Damavand**	**6.16**	**117**	*e*Pn		**Pn**	**01 31 15.4**	**-0.7**
BR131	**Keskin Array S**	**9.14**	**281**	Pn		**Pn**	**01 31 57.0**	**-0.1**
	comp=Z,0.9nm,0.6s							
BR131	**Keskin Array S**	**9.14**	**281**	Pn		**Pn**	**01 31 57.0**	**-0.1**
	comp=Z,0.9nm,0.6s							
BRTR	**Keskin Array B**	**9.14**	**281**	Pn		**Pn**	**01 31 58.6**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=94,slow=15,SNR=9.8							
BRTR	**Keskin Array B**	**9.14**	**281**	Pn		**Pn**	**01 31 58.7**	**+1.6**
ASF	**Jabal al Asfar**	**9.40**	**230**	LR		LR	01 36 02.7	
	comp=Z,59nm,19.0s,baz=252,slow=40							
EIL	**Elat**	**12.36**	**227**	LR		LR	01 38 07.1	
	comp=Z,45nm,19.7s,baz=78,slow=41							
AKTK	**Aktyubinsk**	**14.88**	**33**	Pn		**Pn**	**01 33 13.2**	**-2.2**
AKTK	**Aktyubinsk**	**14.88**	**33**	Pn		**Pn**	**01 33 13.2**	**-2.2**
AKTO	**Aktyubinsk**	**14.88**	**33**	Pn		**Pn**	**01 33 13.2**	**-2.2**
	comp=Z,0.2nm,0.3s,baz=221,slow=10,SNR=11							
ABKAR	**Akbulak array**	**14.96**	**40**	*e*Pn		**Pn**	**01 33 16.2**	**-0.3**
	comp=Z,1.4nm,0.6s							
ABKAR	**Akbulak array**	**14.96**	**40**	*e*Pn		**Pn**	**01 33 16.2**	**-0.3**
	comp=Z,1.4nm,0.6s							
ARU	**Arti**	**19.89**	**22**	P		**Pn**	**01 34 16.7**	**-1.6**
	comp=Z,4.3nm,0.8s							
ARU	**Arti**	**19.89**	**22**	P		**Pn**	**01 34 16.7**	**-1.6**
	comp=Z,4.3nm,0.8s							
AML	**Almayashu**	**21.86**	**72**	*e*P		**P**	**01 34 38.0**	**-0.1**
	comp=Z,2.9nm,1.0s,mb3.7							
AML	**Almayashu**	**21.86**	**72**	*e*P		**P**	**01 34 38.0**	**-0.2**
	comp=Z,2.9nm,1.0s,mb3.7							
BRVK	**Borovoye**	**22.46**	**42**	*e*P		**P**	**01 34 43.8**	**-0.6**
	comp=Z,3.5nm,0.7s,mb3.9							
BRVK	**Borovoye**	**22.46**	**42**	*e*P		**P**	**01 34 43.8**	**-0.6**
	comp=Z,3.5nm,0.7s,mb3.9							
BVAR	**Borovoye Array**	**22.50**	**42**	P		**P**	**01 34 44.6**	**-0.3**
	comp=Z,0.5nm,0.5s,mb3.4,baz=232,slow=11,SNR=4.0							
BVAR	**Borovoye Array**	**22.50**	**42**	P		**P**	**01 34 44.6**	**-0.3**
FINES	**FINESS Array B**	**25.80**	**339**	P		**P**	**01 35 15.4**	**-0.9**
	comp=Z,2.6nm,0.9s,mb3.9,baz=157,slow=14,SNR=3.3							
FINES	**FINESS Array B**	**25.80**	**339**	P		**P**	**01 35 15.4**	**-0.9**
KURK	**Kurchatov**	**26.37**	**52**	P		**P**	**01 35 21.2**	**-0.5**
	comp=Z,0.5nm,0.7s,mb3.3,baz=265,slow=8.8,SNR=3.8							
KURK	**Kurchatov**	**26.37**	**52**	P		**P**	**01 35 21.2**	**-0.5**
MKAR	**Makanchi Array**	**28.17**	**61**	P		**P**	**01 35 38.3**	**+0.4**
	comp=Z,0.2nm,0.4s,mb3.3,baz=261,slow=7.2,SNR=3.6							
MKAR	**Makanchi Array**	**28.17**	**61**	P		**P**	**01 35 38.3**	**+0.4**

*IDC **14** 01:30:43.1±15.0,54.°63N×158.°59E,h0km,mb3.5/3, mb1 4.0/3,mb1mx3.4/24,mbtmp3.5/3,Error ellipse: s-maj=362.7km s-min=116.6km az=96.0*
*ISCJB **14** 01:30:59.4±0.5,54.°35N±0.°03×160.°53E±0.°08,h99km±5km, mb3.4/3,Error ellipse: s-maj=8.6km s-min=4.1km az=27.8*
*KRSC **14** 01:30:59.6±0.8,54.°39N×160.°48E,h83km±72km,ML3.8*
ISC 14 01:31:00.4±0.5,54.°37N±0.°03×160.°51E±0.°08,h92km±6km, n18,σ0?71/31,mb3.4/3,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KII	**Karymskiy**	**0.70**	**242**	*i* P		**Pn**	**01 31 16.8**	**-0.3**
KII				*e*S		**Sn**	**01 31 29.5**	**-0.1**
MKZ	**Mys Kozlova**	**0.74**	**75**	*i* P		**Pn**	**01 31 17.7**	**+0.3**
MKZ				*i* S		**Sn**	**01 31 30.9**	**+0.8**
SPN	**Mys Shipunski**	**1.30**	**193**	P		**Pn**	**01 31 23.5**	**-0.3**
SPN				*i* S		**Sn**	**01 31 40.8**	**-0.6**
NLC	**Nalytchevo**	**1.38**	**210**	*i* P		**Pn**	**01 31 24.5**	**-0.2**
NLC				*i* S		**Sn**	**01 31 43.1**	**0.0**
AVH	**Avacha**	**1.52**	**224**	*i* P		**Pn**	**01 31 27.0**	**+0.5**
AVH				*e*S		**Sn**	**01 31 47.0**	**+0.8**
KPT	**Kopyto**	**1.61**	**354**	P		**Pn**	**01 31 27.3**	**-0.3**
KPT				*i* S		**Sn**	**01 31 47.6**	**-0.6**
GNL	**Ganaly**	**1.66**	**247**	*i* P		**Pn**	**01 31 28.2**	**0.0**
GNL				*i* S		**Sn**	**01 31 49.2**	**-0.1**
KOZ	**Kozyrevsk**	**1.73**	**348**	P		**Pn**	**01 31 28.6**	**-0.6**
KOZ				*i* S		**Sn**	**01 31 49.9**	**-1.1**
PET	**Petropavlovsk**	**1.74**	**220**	*i* P		**Pn**	**01 31 29.2**	**0.0**
PET				*i* S		**Sn**	**01 31 51.1**	**-0.1**
KLY	**Klyuchi**	**1.95**	**2**	P		**Pn**	**01 31 32.4**	**+0.4**
KLY				*i* S		**Sn**	**01 31 56.3**	**+0.2**
SRDR	**Sredinnyy**	**2.01**	**347**	P		**Pn**	**01 31 32.1**	**-0.6**
KBTR	**Krutoberegovo**	**2.27**	**35**	*e*P		**Pn**	**01 31 36.7**	**+0.5**
KBTR				*i* S		**Sn**	**01 32 04.1**	**+0.6**
SRKR	**Sorokina**	**2.32**	**9**	*e*P		**Pn**	**01 31 37.9**	**+1.0**
SRKR				*i* S		**Sn**	**01 32 05.9**	**+1.1**
MIPR	**Malaya Ipel'ka**	**3.07**	**229**	*e*P		**Pn**	**01 31 47.0**	**+0.1**
BKI	**Bering**	**3.27**	**73**	*e*P		**Pn**	**01 31 49.6**	**0.0**
BKI				*i* S		**Sn**	**01 32 25.1**	**-2.4**
ILAR	**Eielson Array**	**27.75**	**47**	P		**P**	**01 36 38.6**	**-1.3**
	0.4nm,0.5s,mb3.2,baz=265,slow=7.9,SNR=7.6							
NVAR	**Mina Array Bea**	**55.09**	**71**	P		**P**	**01 40 24.0**	**+1.4**
	0.3nm,0.6s,mb3.5,baz=305,slow=6.5,SNR=2.4							
TXAR	**Lajitas Array**	**69.92**	**68**	P		**P**	**01 42 01.4**	**0.0**
	0.4nm,0.5s,mb3.5,baz=294,slow=5.5,SNR=4.9							

*NEIC **14** 01:48:54.6,19.°74N×65.°49W,h61km,MD3.5(RSPR), After RSPR.*
RSPR 14 01:48:54.6,19.°74N×65.°49W,h61km±11km,MD3.4/3, 6C-4D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STVI	**Saint Thomas**	**1.47**	**160**	*e*S		Sn	01 49 36.5	-0.7
STVI	**Saint Thomas**	**1.47**	**160**	*e*S		Sn	01 49 36.5	-0.7
CBYP	**Canovanas**	**1.50**	**193**	↓*e*P		Pn	01 49 18.3	-1.0
CBYP	**Canovanas**	**1.50**	**193**	*e*Pn		Pn	01 49 17.6	-1.7
CBYP	**Canovanas**	**1.50**	**193**	↓*e*P		Pn	01 49 18.3	-1.0
HUMP	**Col San Antoni**	**1.62**	**192**	⇑*e*P		Pn	01 49 19.9	-1.1
HUMP				*e*S		Sn	01 49 40.2	-0.7
HUMP	**Col San Antoni**	**1.62**	**192**	⇑*e*P		Pn	01 49 19.9	-1.1
HUMP				*e*S		Sn	01 49 40.2	-0.7
MTP	**Monte Pirata**	**1.63**	**182**	⇑*e*P		Pn	01 49 20.5	-0.7
MTP	**Monte Pirata**	**1.63**	**182**	*e*Pn		Pn	01 49 20.6	-0.5
MTP				*e*S		Sn	01 49 40.5	-0.7
MTP	**Monte Pirata**	**1.63**	**182**	⇑*e*P		Pn	01 49 20.5	-0.7
MTP				*e*S		Sn	01 49 40.5	-0.7
SJG	**San Juan**	**1.73**	**201**	*e*Pn		Pn	01 49 18.8	-3.7
AOPR	**Arecibo Observ**	**1.83**	**221**	⇑*e*P		Pn	01 49 23.2	-0.6
AOPR				*e*S		Sn	01 49 45.0	-0.9
AOPR

SWA2			S	Sn	02 30 24.7	-1.9
	baz=184					
SWA2		**5.22 181**	P	**Pn**	**02 29 28.6**	**+0.9**
SWA2			S	**Sn**	**02 30 24.7**	**-2.0**
AWBH		**6.76 154**	P	**Pn**	**02 29 48.6**	**-0.2**
	baz=155					
AWBH		**6.76 154**	P	**Pn**	**02 29 48.6**	**-0.2**
GLL	**Jalalah**	**7.13 132**	P	**Pn**	**02 29 53.9**	**+0.1**
	baz=132					
GLL	**Jalalah**	**7.13 132**	P	**Pn**	**02 29 53.9**	**+0.1**
AMAG	**Maghara**	**7.48 119**	P	**Pn**	**02 29 57.6**	**-1.0**
	baz=118					
AMAG	**Maghara**	**7.48 119**	P	**Pn**	**02 29 57.6**	**-1.0**
HFRF	**Wahat Farafira**	**7.67 162**	P	**Pn**	**02 30 01.7**	**+0.4**
	baz=162					
HFRF	**Wahat Farafira**	**7.67 162**	P	**Pn**	**02 30 01.7**	**+0.4**

BJI **14** *02:30:38.9, 10.82N×143.54E, h21km, mB4.8/9, mb4.8/18, Ms3.9/2, Ms7 3.7/4*
IDC **14** *02:30:39.5±0.5, 11.12N×143.45E, h0km, mb4.4/18, mb1 4.5/19, mb1mx4.5/25, mbtmp4.4/19, ML4.9/1, MS3.5/9, Ms1 3.5/9, ms1mx3.3/22, Error ellipse: s-maj=19.3km s-min=12.5km az=85.0*
MOS **14** *02:30:42.5±1.0, 11.04N×143.47E, h33km, mb4.8/16, Error ellipse: s-maj=13.4km s-min=7.4km az=110.6*
ISCJB **14** *02:30:43.3±1.3, 11.04N±0.04×143.46E±0.06, h41km±12km, mb4.7/56, MS3.5/10, Error ellipse: s-maj=10.2km s-min=7.5km az=5.3*
NEIC **14** *02:30:45.3±1.5, 11.07N×143.47E, h41km±14km, mb4.6/18, Error ellipse: s-maj=9.4km s-min=7.4km az=79.0*

ISC 14 02:30:45.0±1.2, 11.05N±0.04×143.48E±0.06, h38km±12km, h16km±8.4km: pP-P, n88, σ0.95/87, mb4.7/56, MS3.5/10, 4C-2D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.86**	**28**	Pn	**Pn**	**02 31 27.7**	**-0.4**
	166nm,0.3s,baz=246,slow=1.5,SNR=71						
GUMO				Sn	**Sn**	**02 32 01.0**	**-0.3**
	386nm,0.3s,baz=13,slow=23,SNR=17						
GUMO	**Guam**	**2.86**	**28**	*e*P	**Pn**	**02 31 28.3**	**+0.2**
GUMO				*e*S	**Sn**	**02 32 03.0**	**+1.6**
CBIJ	**Chichi jima**	**16.01**	**356**	Pn	**Pn**	**02 34 33.1**	**+5.7**
	3.8nm,0.3s,baz=150,slow=24,SNR=5.1						
DAV	**Davao City (W)**	**18.11**	**259**	P	**Pn**	**02 34 55.8**	**+2.0**
	56nm,0.3s,baz=84,slow=8.6,SNR=3.5						
DAV				LR	LR	02 40 28.9	
	comp=Z,114nm,19.4s,baz=312,slow=33						
PMG	**Port Moresby**	**20.65**	**170**	*e*P	**P**	**02 35 20.6**	**-1.0**
PMG	**Port Moresby**	**20.65**	**170**	⇑*i*P	**P**	**02 35 20.8**	**-0.7**
PMG				pmax	pmax		
	comp=Z,21nm,0.8s						
TGY	**Tagaytay City**	**22.21**	**280**	P	**P**	**02 35 39.1**	**+0.8**
	comp=Z,109nm,0.2s,mb5.8,baz=136,slow=8.9,SNR=6.5						
YULB	**Yu-li**	**24.44**	**303**	P	**P**	**02 35 58.1**	**-2.2**
	comp=Z,2.8nm,0.5s,mb4.0						
SSLB	**Suanglung**	**24.90**	**304**	*e*P	**P**	**02 36 05.1**	**+0.6**
	comp=Z,9.9nm,0.6s,mb4.5						
MJAR	**Matsushiro Arr**	**25.82**	**350**	P	**P**	**02 36 10.2**	**-2.5**
	comp=Z,6.6nm,1.0s,mb4.1,baz=177,slow=9.1,SNR=12						
MJAR				LR	LR	02 45 59.3	
	comp=Z,53nm,19.2s,MS3.1,baz=175,slow=36						
MAJO	**Matsushiro**	**25.82**	**350**	*e*P	**P**	**02 36 10.8**	**-1.9**
	comp=Z,18nm,0.9s,mb4.6						
MAJO	**Matsushiro**	**25.82**	**350**	*e*P	**P**	**02 36 10.8**	**-1.9**
MAJO				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.6						
MAT	**Matsushiro**	**25.82**	**350**	P	**P**	**02 36 10.2**	**-2.5**
KAKA	**Kakadu**	**26.03**	**205**	*e*P	**P**	**02 36 14.1**	**-0.7**
	comp=Z,31nm,0.9s,mb4.8						
KKM	**Kota Kinabalu**	**27.41**	**262**	*e*P	**P**	**02 36 27.7**	**+0.4**
	comp=Z,31nm,1.2s,mb4.7						
KAPI	**Kappang**	**28.51**	**237**	P	**P**	**02 36 34.5**	**-2.5**
	comp=Z,22nm,1.6s,mb4.7						
KSRS	**Korea Array**	**29.78**	**335**	P	**P**	**02 36 46.5**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=112,slow=39,SNR=2.5						
KSRS				PcP	PcP	02 39 52.6	+1.5
	comp=Z,0.5nm,0.4s,baz=132,slow=1.9,SNR=4.5						
KSRS				LR	LR	02 48 09.7	
	comp=Z,37nm,18.1s,MS3.1,baz=150,slow=35						
CTA	**Charters Tower**	**31.06**	**175**	P	**P**	**02 36 59.6**	**0.0**
	comp=Z,5.3nm,0.6s,mb4.6,baz=3.4,slow=8.3,SNR=8.6						
WRA	**Warramunga Arr**	**32.09**	**196**	P	**P**	**02 37 07.5**	**-1.1**
	comp=Z,2.0nm,0.6s,mb4.1,baz=23,slow=9.5,SNR=7.9						
WRA				PcP	PcP	02 39 58.5	+1.0
	comp=Z,0.6nm,0.6s,baz=359,slow=3.3,SNR=4.8						
QIZ	**Qiongzhong**	**33.39**	**288**	P	**P**	**02 37 16.8**	**-3.3**
QIZ				S	**S**	**02 42 34.9**	**-4.1**
QIZ				pmax	pmax		
	comp=Z,78nm,5.8s						
QIZ				LR	LR		
	comp=Z,93nm,7.5s						
ASAR	**Alice Springs**	**35.75**	**195**	P	**P**	**02 37 40.9**	**+0.5**
	comp=Z,0.7nm,0.7s,mb3.7,baz=24,slow=9.3,SNR=8.7						
ASAR				PcP	PcP	02 40 08.8	+0.8
	comp=Z,1.2nm,0.7s,baz=46,slow=2.8,SNR=9.7						
BJT	**Baijiatuau**	**37.64**	**325**	*e*P	**P**	**02 37 56.3**	**-0.1**
	comp=Z,9.3nm,0.6s,mb4.7						
BJT	**Baijiatuau**	**37.64**	**325**	*e*P	**P**	**02 37 56.3**	**-0.1**
BJT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BJI	**Beijing**	**37.65**	**325**	P	**P**	**02 37 56.4**	**-0.1**
BJI				S	**S**	**02 43 44.8**	**+1.0**
BJI				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.9						
BJI				LR	LR		
	comp=N,94nm,20.1s						
BJI				LR	LR		
	comp=E,140nm,25.6s						
BJI				LR	LR		
	comp=Z,60nm,19.2s,MS3.4						
KLR	**Kul'dur**	**39.29**	**348**	*e*P	**P**	**02 38 06.7**	**-3.4**
DZM	**Mont Dzumac**	**39.89**	**146**	*e*P	**P**	**02 38 15.8**	**+0.4**
DZM	**Mont Dzumac**	**39.89**	**146**	*e*P	**P**	**02 38 16.8**	**+1.5**
	comp=Z,40nm,0.9s,mb5.2						
STKA	**Stephens Creek**	**42.72**	**182**	P	**P**	**02 38 38.3**	**-0.2**
	comp=Z,1.8nm,0.7s,mb3.9,baz=12,slow=8.3,SNR=4.0						
CM31	**Chiang Mai Arr**	**43.60**	**285**	*e*P	**P**	**02 38 46.9**	**+1.0**
	comp=Z,24nm,0.7s,mb5.0						
CMAR	**Chiang Mai Arr**	**43.60**	**285**	P	**P**	**02 38 46.8**	**+0.8**
	comp=Z,27nm,0.8s,mb5.0,baz=86,slow=6.3,SNR=90						
CMAR				LR	LR	02 56 14.0	
	comp=Z,60nm,18.8s,MS3.5,baz=3.4,slow=35						
LZH	**Lanzhou**	**43.61**	**311**	*e*P	**P**	**02 38 46.0**	**+0.3**
LZH				pP	pP	02 38 50.5	-6.1
LZH				sP	sP	02 38 53.0	-8.1
LZH				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.7						
CHTO	**Chiang Mai**	**43.62**	**286**	*e*P	**P**	**02 38 46.2**	**+0.1**
	comp=Z,7.7nm,1.0s,mb4.4						
CHTO	**Chiang Mai**	**43.62**	**286**	*e*P	**P**	**02 38 46.2**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
MSVF	**Nonsavu**	**44.54**	**130**	*e*P	**P**	**02 38 54.4**	**+1.1**
	comp=Z,10nm,0.8s,mb4.7						
MSVF	**Nonsavu**	**44.54**	**130**	*e*P	**P**	**02 38 54.4**	**+1.1**
MSVF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
ULN	**Ulaanbaatar**	**47.73**	**327**	*e*P	**P**	**02 39 18.9**	**+0.8**
	comp=Z,3.9nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	**47.73**	**327**	*e*P	**P**	**02 39 18.9**	**+0.9**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
GTA	**Gaotai**	**47.89**	**314**	*e*P	**P**	**02 39 19.6**	**+0.1**
GTA				pP	pP	02 39 23.8	-6.6
GTA				sP	sP	02 39 27.3	-7.6
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
SONM	**Songino Array**	**48.06**	**327**	P	**P**	**02 39 21.0**	**+0.4**
	comp=Z,4.4nm,0.6s,mb4.7,baz=145,slow=7.4,SNR=32						
SONM				LR	LR	03 01 52.4	
	comp=Z,44nm,18.2s,MS3.5,baz=112,slow=39						
ZAK	**Zakamensk**	**51.22**	**328**	*e*P	**P**	**02 39 44.1**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
TLY	**Talaya**	**51.80**	**330**	*e*P	**P**	**02 39 49.7**	**+0.7**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
TLY				pmax	pmax		
	comp=N,48nm,19.0s						
YAK	**Yakutsk**	**51.87**	**352**	*e*P	**P**	**02 39 52.0**	**+2.7**
YAK				*e*		02 40 08.1	
YAK				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.4						
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
SEY	**Seymchan**	**52.19**	**5**	⇑*e*P	**P**	**02 39 52.3**	**+0.6**
TAPN	**Taplejung**	**54.68**	**296**	*e*P	**P**	**02 40 10.6**	**0.0**
	comp=N,38nm,1.0s,mb5.4						
ODAN	**Odare**	**54.91**	**295**	*e*P	**P**	**02 40 12.4**	**+0.1**
	comp=N,42nm,1.0s,mb5.4						
RAMN	**Ramite**	**55.62**	**295**	*e*P	**P**	**02 40 17.4**	**0.0**
	comp=N,58nm,1.2s,mb5.5						
GUN	**Gumba**	**56.35**	**296**	*e*P	**P**	**02 40 23.1**	**+0.5**
	comp=N,93nm,0.8s,mb5.8						
PKI	**Pulchoki**	**56.73**	**296**	*e*P	**P**	**02 40 25.1**	**-0.2**
	comp=N,17nm,0.7s,mb5.2						
PKIN	**Phulchoki**	**56.74**	**296**	*e*P	**P**	**02 40 25.0**	**-0.4**
	comp=N,18nm,0.8s,mb5.2						
DMN	**Daman**	**57.00**	**296**	*e*P	**P**	**02 40 27.2**	**0.0**
	comp=N,26nm,0.8s,mb5.3						
GKN	**Gorkha**	**57.45**	**296**	*e*P	**P**	**02 40 30.2**	**-0.2**
	comp=N,78nm,1.1s,mb5.7						
WMQ	**Urumqi**	**57.93**	**315**	*e*P	**P**	**02 40 34.6**	**+1.1**
WMQ				pP	pP	02 40 44.6	-0.1
WMQ				sP	sP	02 40 48.6	-0.5
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
WMQ				pmax	pmax		
	comp=Z,110nm,4.2s						
WMQ				LR	LR		
	comp=N,71nm,21.8s						
WMQ				LR	LR		
	comp=Z,40nm,20.0s,MS3.5						
KOLN	**Koldanda**	**58.35**	**296**	*e*P	**P**	**02 40 36.4**	**-0.3**
	comp=Z,28nm,1.0s,mb5.2						
TIXI	**Tiksi**	**61.21**	**355**	*e*P	**P**	**02 40 55.7**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
MK31	**Makanchi Array**	**62.39**	**317**	*e*P	**P**	**02 41 04.4**	**+0.4**
MKAR	**Makanchi Array**	**62.39**	**317**	P	**P**	**02 41 04.3**	**+0.3**
	comp=Z,5.2nm,0.6s,mb4.9,baz=92,slow=8.7,SNR=46						
ZAA0	**Zalesovo Array**	**62.91**	**325**	*e*P	**P**	**02 41 06.9**	**-0.3**
ZALV	**Zalesovo Beam**	**62.91**	**325**	P	**P**	**02 41 06.9**	**-0.4**
	comp=Z,2.7nm,0.5s,mb4.6,baz=99,slow=7.5,SNR=12						
ZALV				LR	LR	03 08 56.9	
	comp=Z,28nm,21.4s,MS3.4,baz=74,slow=37						
KURK	**Kurchatov**	**65.66**	**321**	P	**P**	**02 41 25.0**	**-0.4**
	comp=Z,9.5nm,0.6s,mb5.0,baz=109,slow=6.2,SNR=21						
KURK	**Kurchatov**	**65.66**	**321**	*de*P	**P**	**02 41 24.9**	**-0.5**
KURK				pmax	pmax		
	comp=Z,28nm,1.7s,mb5.0						
TKM2	**Tokmak 2**	**66.38**	**312**	*e*P	**P**	**02 41 30.6**	**+0.5**
	comp=Z,1.9nm,0.7s,mb4.2						
TKM2	**Tokmak 2**	**66.38**	**312**	*e*P	**P**	**02 41 30.7**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
UCH	**Uchtor**	**67.09**	**311**	*e*P	**P**	**02 41 35.8**	**+1.1**
	comp=Z,7.7nm,1.1s,mb4.7						
UCH	**Uchtor**	**67.09**	**311**	*e*P	**P**	**02 41 35.8**	**+1.1**
UCH				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
AAK	**Ala-Archa**	**67.15**	**312**	⇑*i*P	**P**	**02 41 35.7**	**+0.6**
AAK				pmax	pmax		
	comp=Z,4.0nm,2.5s,mb4.0						
AML	**Almayashu**	**67.69**	**311**	*e*P	**P**	**02 41 39.5**	**+0.9**
	comp=Z,7.2nm,1.1s,mb4.6						
AML	**Almayashu**	**67.69**	**311**	*e*P	**P**	**02 41 39.5**	**+1.0**
AML				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
COLD	**Coldfoot**	**70.80**	**22**	*e*P	**P**	**02 41 57.1**	**-0.1**
	comp=Z,8.9nm,1.0s,mb4.7						
KBL	**Kabul**	**71.04**	**303**	*e*P	**P**	**02 41 59.4**	**0.0**
	comp=Z,3.5nm,0.5s,mb4.5						
KBL	**Kabul**	**71.04**	**303**	*e*P	**P**	**02 41 59.4**	**0.0**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
BVAR	**Borovoye Array**	**71.08**	**322**	P	**P**	**02 41 59.1**	**-0.1**
	comp=Z,4.4nm,0.6s,mb4.6,baz=103,slow=7.8,SNR=20						
BRVK	**Borovoye**	**71.15**	**322**	*c iP*	**P**	**02 41 59.9**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,16nm,2.5s,mb4.5						
ILAR	**Eielson Array**	**71.43**	**25**	P	**P**	**02 42 00.6**	**-0.6**
	comp=Z,2.8nm,0.7s,mb4.3,baz=249,slow=6.0,SNR=52						
ILAR				LR	LR	03 11 37.2	
	comp=Z,60nm,18.7s,MS3.9,baz=270,slow=34						
DAWY	**Dawson**	**74.50**	**26**	*e*P	**P**	**02 42 21.0**	**+1.7**
INK	**Inuvik**	**77.22**	**22**	P	**P**	**02 42 34.8**	**+0.1**
	comp=Z,3.2nm,0.9s,mb4.3,baz=271,slow=1.9,SNR=4.1						
ABKAR	**Akbulak array**	**77.51**	**318**	*e*P	**P**	**02 42 36.4**	**-0.3**
	comp=Z,2.2nm,0.6s,mb4.3						
ARU	**Arti**	**78.07**	**326**	*d iP*	**P**	**02 42 39.4**	**-0.3**
ARU						02 45 32.3	
ARU				S	S	02 52 32.9	+1.9
ARU				SS	SS	02 57 39.5	+6.9
ARU				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
AKTK	**Aktyubinsk**	**78.69**	**319**	P	**P**	**02 42 42.8**	**-0.6**
AKTO	**Aktyubinsk**	**78.69**	**319**	P	**P**	**02 42 42.8**	**-0.6**
	comp=Z,1.3nm,0.6s,mb4.0,baz=81,slow=11,SNR=7.4						
YKA	**Yellowknife Ar**	**85.72**	**27**	P	**P**	**02 43 20.5**	**+0.7**
	comp=Z,1.5nm,0.6s,mb4.4,baz=284,slow=4.8,SNR=7.6						
ARCES	**ARCESS Array B**	**89.06**	**342**	P	**P**	**02 43 35.6**	**-0.2**
	comp=Z,1.7nm,0.6s,mb4.6,baz=76,slow=6.4,SNR=9.8						
FINES	**FINESS Array B**	**92.87**	**335**	P	**P**	**02 43 52.0**	**-1.6**
FINES				LR	LR	03 30 32.3	
FINES	**FINESS Array B**	**92.87**	**335**	P	**P**	**02 43 52.0**	**-1.6**
	comp=Z,0.6nm,0.4s,mb4.3,baz=98,slow=2.7,SNR=5.4						
FINES				LR	LR	03 30 32.3	
	comp=Z,27nm,21.1s,MS3.7,baz=104,slow=39						
AKASG	**Malin Array Be**	**96.29**	**324**	LR	LR	03 29 56.2	
	comp=Z,37nm,19.7s,MS3.9,baz=230,slow=37						
DBIC	**Dimbokro**	**143.90**	**298**	PKP	PKPdf	02 50 15.2	-2.2
	comp=Z,5.8nm,1.0s,baz=193,slow=14,SNR=3.8						
CFAA	**Coronel Fontan**	**144.28**	**130**	PKP	PKPdf	02 50 16.1	-1.4
	comp=Z,0.9nm,0.8s,baz=209,slow=5.7,SNR=8.4						
LPAZ	**La Paz**	**148.87**	**103**	PKPbc	PKPbc	02 50 31.8	+2.2
	comp=Z,8.0nm,0.8s,baz=256,slow=3.3,SNR=16						
SIV	**San Ignacio**	**155.64**	**104**	PKPab	PKPab	02 51 04.5	+2.5
	comp=Z,1.6nm,0.9s,baz=261,slow=2.2,SNR=7.4						

KRSC 14 02:36:09.6±1.2, 49.22N×156.18E, h11km±11km, ML4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALID	**Alaid**	**1.70**	**346**	*e*P	Pn	02 36 39.5	+0.3
ALID				*e*S	Sn	02 37 01.2	+0.3
MIPR	**Malaya Ipel'ka**	**3.08**	**7**	P	Pn	02 36 59.5	+1.4
MIPR				S	Sn	02 37 36.3	+1.4
GRL	**Gorelyy**	**3.54**	**19**	P	Pn	02 37 07.7	+3.2
PET	**Petropavlovsk**	**4.12**	**21**	P	Pn	02 37 16.3	+4.0
PET				S	Sn	02 38 04.3	+3.9
SDLR	**Sedlovina**	**4.40**	**22**	*e*P	Pn	02 37 18.7	+2.4
SDLR				S	Sn	02 38 09.3	+1.8
SPN	**Mys Shipunski**	**4.57**	**30**	S	Sn	02 38 13.5	+1.8
GNL	**Ganaly**	**4.62**	**13**	*e*P	Pn	02 37 22.9	+3.7
MKZ	**Mys Kozlova**	**6.35**	**31**	P	Pn	02 37 43.7	+0.7
KBTR	**Krutoberegovo**	**8.07**	**27**	P	Pn	02 38 08.0	+1.4

IDC 14 02:45:01.8±3.0, 16.26S×67.07E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/21, mbtmp3.7/6, Error ellipse: s-maj=104.6km s-min=27.3km az=50.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**62.78**	**109**	P	P	02 55 28.9	-0.6
	0.2nm,0.5s,baz=267,slow=5.6,SNR=3.3						
WRA	**Warramunga Arr**	**63.68**	**105**	P	P	02 55 36.1	+0.7
	0.7nm,0.8s,baz=261,slow=7.0,SNR=3.8						
BRTR	**Keskin Array B**	**63.82**	**332**	P	P	02 55 36.5	+0.5
	0.3nm,0.6s,baz=114,slow=3.5,SNR=3.4						
MKAR	**Makanchi Array**	**64.24**	**12**	P	P	02 55 38.5	+0.1
	0.7nm,0.7s,baz=216,slow=4.6,SNR=4.0						
ZALV	**Zalesovo Beam**	**71.56**	**11**	P	P	02 56 23.6	-0.9
	0.6nm,0.4s,baz=194,slow=4.3,SNR=5.2						
SONM	**Songino Array**	**72.84**	**27**	P	P	02 56 33.5	+1.2
	0.7nm,0.6s,baz=211,slow=7.9,SNR=3.5						

CASC 14 03:25:00.8±2.1, 13.79N×90.50W, h89km±10km, MD3.5, ML3.2, 1C-4D, Near coast of Guatemala

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

PCG	**Pacaya**	**0.61**	**350**	*e*P	Pn	03 25 17.0	+0.6
FUG	**Fuego 3**	**0.73**	**333**	⇓*e*P	Pn	03 25 17.7	+0.1
NBG	**Las Nubes**	**0.81**	**11**	⇓*e*P	Pn	03 25 19.6	+1.2
RTR	**El Retiro**	**0.84**	**83**	*i* P	Pn	03 25 18.7	+0.1
RTR				*e*S	Sn	03 25 34.3	+2.3
FG6		**0.85**	**334**	*e*P	Pn	03 25 19.3	+0.5
FG6				*e*S	Sn	03 25 34.5	+2.2
RBDL	**Robledal**	**0.85**	**68**	⇑*i*P	Pn	03 25 18.7	-0.1
RBDL				*e*S	Sn	03 25 34.1	+1.8
SBLS	**San Blas**	**0.85**	**87**	*i* P	Pn	03 25 18.7	-0.1
SBLS				*e*S	Sn	03 25 33.3	+1.0
SBLS				AML	AML	03 25 35.2	
	comp=Z,464nm,0.3s						
SNJE	**San Jose**	**0.87**	**85**	*i* P	Pn	03 25 18.9	-0.1
SNJE				*e*S	Sn	03 25 34.3	+1.7
TP2	**Tecpan 2**	**1.11**	**333**	⇓*e*P	Pn	03 25 23.0	+1.3
TP2				*e*S	Sn	03 25 40.4	+2.9
BOQS	**Boqueron**	**1.19**	**92**	*i* P	Pn	03 25 22.7	+0.1
BOQS				*e*S	Sn	03 25 41.4	+2.3
JAT	**Jato**	**1.22**	**296**	⇓*e*P	Pn	03 25 23.6	+0.6
SNET	**Serv Nac Est T**	**1.24**	**95**	*e*P	Pn	03 25 22.5	-0.8
SNET				*e*S	Sn	03 25 40.4	+0.3
MTO2	**Montecristo 2**	**1.26**	**61**	*e*P	Pn	03 25 23.6	+0.1
LFRS	**El Faro**	**1.41**	**97**	*i* P	Pn	03 25 25.2	-0.1
LFRS				*e*S	Sn	03 25 45.5	+1.6
MRL	**Marmol**	**1.49**	**32**	*e*P	Pn	03 25 28.3	+1.8
MRL				*e*S	Sn	03 25 45.4	-0.4
SNVI	**San Vicente**	**1.62**	**96**	*i* P	Pn	03 25 28.5	+0.4
SNVI				*e*S	Sn	03 25 52.6	+3.8
BLLM	**Bellamira**	**2.23**	**99**	*e*P	Pn	03 25 36.7	+0.7
CNCH	**Conchagua**	**2.64**	**101**	*e*P	Pn	03 25 41.2	-0.3
TGUH	**Tegucigalpa,Un**	**3.14**	**85**	*e*P	Pn	03 25 48.6	+0.4
CRIN	**San Cristobal**	**3.53**	**107**	*e*P	Pn	03 25 54.7	+1.3
COPN	**Copaltepe**	**4.13**	**112**	*e*P	Pn	03 26 02.0	+0.4

ISCJB **14** *03:32:52.5±0.3, 44.46N±0.02×7.26E±0.03, h15km±3km, Error ellipse: s-maj=4.1km s-min=2.9km az=169.2*
ROM **14** *03:32:52.4±0.2, 44.43N×7.21E, h18km±2km, Md3.0/13, Ml3.0/10, Error ellipse: s-maj=2.9km s-min=2.6km az=12.0*
CSEM **14** *03:32:53.1±0.1, 44.46N×7.24E, h10km, ML3.0, Error ellipse: s-maj=2.9km s-min=1.9km az=84.0*
STR **14** *03:32:53.7±0.1, 44.43N×7.20E, h5km, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
NEIC **14** *03:32:53.4, 44.43N×7.19E, h10km, ML2.8(STR), ML2.8(ROM), After STR.*

ISC 14 03:32:53.3±0.3, 44.45N±0.02×7.24E±0.03, h12km±3km, n48, σ0.66/82, 1C-4D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DOI	**San Damiano**	**0.05**	**3**	Pg	**Pg**	**03 32 56.5**	**+1.0**
DOI				Sg	**Sg**	**03 32 58.4**	**+1.2**
	19μm,0.2s						
DOI	**San Damiano**	**0.05**	**3**	Pg	**Pg**	**03 32 56.5**	**+1.0**
DOI				Sg	**Sg**	**03 32 58.4**	**+1.2**
	19μm,0.2s						
PZZ	**Stroppo**	**0.10**	**300**	Pg	**Pg**	**03 32 56.7**	**+0.6**
PZZ				Sg	**Sg**	**03 32 58.7**	**+0.5**
	10μm,0.1s						
PZZ	**Stroppo**	**0.10**	**300**	Pg	**Pg**	**03 32 56.7**	**+0.6**
PZZ				Sg	**Sg**	**03 32 58.7**	**+0.5**
	10μm,0.1s						
STV	**Sant Anna di V**	**0.22**	**164**	Pg	**Pg**	**03 32 58.0**	**+0.1**
STV				Sg	**Sg**	**03 33 00.9**	**-0.1**
	5μm,0.2s						
STV	**Sant Anna di V**	**0.22**	**164**	Pg	**Pg**	**03 32 58.0**	**+0.1**
STV				Sg	**Sg**	**03 33 00.9**	**-0.1**
	5μm,0.2s						
SURF	**Saint Ours**	**0.31**	**275**	Pg	**Pg**	**03 32 59.6**	**+0.1**
SURF				Sg	**Sg**	**03 33 03.3**	**-0.4**
SURF	**Saint Ours**	**0.31**	**275**	Pg	**Pg**	**03 32 59.6**	**+0.1**
SURF				Sg	**Sg**	**03 33 03.3**	**-0.4**
TOUF	**Mont Tournerai**	**0.44**	**179**	Pg	**Pg**	**03 33 01.9**	**0.0**
TOUF				Sg	**Sg**	**03 33 07.8**	**0.0**
TOUF	**Mont Tournerai**	**0.44**	**179**	Pg	**Pg**	**03 33 01.9**	**0.0**
TOUF				Sg	**Sg**	**03 33 07.8**	**0.0**
AUTN	**L'Aution**	**0.48**	**164**	Pg	**Pg**	**03 33 02.7**	**+0.1**
AUTN				Sg	**Sg**	**03 33 08.9**	**0.0**
AUTN	**L'Aution**	**0.48**	**164**	Pg	**Pg**	**03 33 02.7**	**+0.1**
AUTN				Sg	**Sg**	**03 33 08.9**	**0.0**
SAOF	**Saorge**	**0.52**	**154**	Pg	**Pg**	**03 33 03.2**	**-0.2**
SAOF				Sg	**Sg**	**03 33 10.2**	**-0.1**
SAOF	**Saorge**	**0.52**	**154**	Pg	**Pg**	**03 33 03.2**	**-0.2**
SAOF				Sg	**

BNB	**Barry Inlet**	**0.99**	**348**	P	Pg	03 50 26.2	-1.2
BNB				⇑S	Sg	03 50 38.1	-2.2
MOBC	**Moresby Island**	**1.57**	**348**	⇓Pn	Pn	03 50 34.7	-1.7
MOBC				⇑Sn	Sn	03 50 52.4	-4.3
DIB	**Dawson Inlet,**	**1.72**	**338**	⇑Pn	Pn	03 50 36.4	-2.0
DIB				⇑Sn	Sn	03 50 56.9	-3.5
BBB	**Bella Bella**	**2.12**	**73**	⇑Pn	Pn	03 50 42.0	-1.9
BBB				⇑Sn	Sn	03 51 07.3	-2.9
HOLB	**Holberg**	**2.28**	**114**	⇓Pn	Pn	03 50 44.0	-2.1
NDB	**Naden**	**2.52**	**339**	⇓Pn	Pn	03 50 48.1	-1.3
PHC	**Port Hardy**	**2.66**	**108**	⇑Pn	Pn	03 50 48.9	-2.4
BPBC	**Brooks Peninsu**	**2.73**	**121**	⇑Pn	Pn	03 50 51.0	-1.2
RUBB	**Prince Rupert**	**2.80**	**14**	⇑Pn	Pn	03 50 51.9	-1.4
MAYB	**Maynard**	**2.94**	**113**	⇑Pn	Pn	03 50 53.3	-1.8
EDB	**Eliza Dome**	**3.23**	**121**	⇑Pn	Pn	03 50 58.6	-0.6
WOSB	**Woss**	**3.39**	**114**	⇑Pn	Pn	03 51 00.5	-0.8

NEIC ***14*** *03:55:00.9, 16°.91N×100°.18W, h15km, MD3.7(MEX), After MEX.*

MEX 14 03:55:00.4±0.5, 16°.90N×100°.20W, h14km±2km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.16**	**336**	*i* P	Pg	03 55 03.8	-0.6
CAIG				*i* S	Sg	03 55 06.5	-0.6
CAIG	**El Cayaco**	**0.16**	**336**	*i* P	Pg	03 55 03.8	-0.6
CAIG				*i* S	Sg	03 55 06.5	-0.6
ACX	**Acapulco**	**0.33**	**95**	*e*P	Pg	03 55 05.5	-1.7
ACX				*i* S	Sg	03 55 10.1	-1.5
ACX	**Acapulco**	**0.33**	**95**	*e*P	Pg	03 55 05.5	-1.7
ACX				*i* S	Sg	03 55 10.1	-1.5
MEIG	**Mezcala**	**1.16**	**28**	*e*P	Pn	03 55 18.1	-4.1
MEIG				*e*S	Sb	03 55 33.0	-4.2
ZIIG	**Zihuatanejo**	**1.40**	**300**	*i* P	Pn	03 55 23.4	-2.2
ZIIG				*i* S	Sn	03 55 40.7	-3.1
ZIIG	**Zihuatanejo**	**1.40**	**300**	*i* P	Pn	03 55 22.4	-3.2
ZIIG				*i* S	Sn	03 55 38.9	-4.9
PLIG	**Platanillo**	**1.63**	**24**	*e*P	Pn	03 55 25.4	-3.3
PLIG				*i* S	Sn	03 55 45.2	-4.2
PLIG	**Platanillo**	**1.63**	**24**	*e*P	Pn	03 55 25.4	-3.3
PLIG				*i* S	Sn	03 55 45.2	-4.2
PNIG	**Pinotepa**	**2.05**	**104**	*i* P	Pn	03 55 33.6	-0.9
PNIG				*i* S	Sn	03 55 56.7	-3.2
PNIG	**Pinotepa**	**2.05**	**104**	*i* P	Pn	03 55 32.0	-2.5
PNIG				*i* S	Sn	03 55 55.7	-4.2

IPEC ***14*** *04:05:47.0±0.3, 51°.64N×16°.25E, h0km, ML2.5/4, Error ellipse: s-maj=2.0km s-min=1.6km az=40.0*
ISCJB ***14*** *04:05:49.3±0.6, 51°.43N±0°.03×16°.08E±0°.03, h0km, Error ellipse: s-maj=4.8km s-min=2.6km az=21.5*
CSEM ***14*** *04:05:50.1±0.3, 51°.46N×16°.03E, h2km, ML3.3/8, Error ellipse: s-maj=6.1km s-min=4.0km az=26.0*
WAR ***14*** *04:05:51, 51°.46N×16°.10E, ML2.8, Mining Induced*
PRU ***14*** *04:05:51.4, 51°.43N×16°.17E, h0km*
NEIC ***14*** *04:05:53.7±1.3, 51°.22N×15°.91E, h5km, ML2.9(SZGRF), Error ellipse: s-maj=19.0km s-min=9.0km az=189.0*

ISC 14 04:05:50.2±0.6, 51°.48N±0°.03×16°.09E±0°.03, h0km, n49, σ1s40/83, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.65**	**168**	*e*Pg	**Pg**	**04 06 02.1**	**-0.6**
KSP				*e*Sg	**Sg**	**04 06 12.5**	**+1.4**
KSP	**Ksiaz**	**0.65**	**168**	*e*Pg	**Pg**	**04 06 02.2**	**-0.5**
KSP				e		04 06 04.2	
KSP				*e*Sg	**Sg**	**04 06 12.5**	**+1.3**
KSP	**Ksiaz** baz=358	**0.65**	**168**	*e*Pg	**Pg**	**04 06 02.0**	**-0.7**
KSP				*e*Sg	**Sg**	**04 06 12.2**	**+1.0**
UPC	**Upice**	**0.98**	**183**	*e*PG	**Pg**	**04 06 08.4**	**-0.5**
UPC	**Upice**	**0.98**	**183**	Pg	**Pg**	**04 06 08.4**	**-0.5**
DPC	**Dobruska-Polom**	**1.14**	**172**	*e*PG	**Pg**	**04 06 09.5**	**-2.6**
DPC				*e*SG	**Sg**	**04 06 27.1**	**+0.2**
	comp=Z,31nm,0.4s						
DPC	**Dobruska-Polom** baz=358	**1.14**	**172**	*e*Pg	**Pg**	**04 06 11.3**	**-0.8**
DPC				*e*Sg	**Sg**	**04 06 27.2**	**+0.3**
	baz=358						
PVCC	**Panska Ves**	**1.35**	**226**	*e*PG	**Pg**	**04 06 14.4**	**-1.8**
PVCC				*e*SG	**Sg**	**04 06 35.2**	**+1.5**
	comp=Z,125nm,0.3s						
PVCC	**Panska Ves**	**1.35**	**226**	Pg	**Pg**	**04 06 14.4**	**-1.8**
PVCC	**Panska Ves** baz=43	**1.35**	**226**	*e*Pn	**Pn**	**04 06 15.2**	**-1.1**
PVCC				Sg	**Sg**	**04 06 35.2**	**+1.5**
	comp=Z,125nm,0.3s						
BRG	**Berggiesshubel**	**1.48**	**247**	PN	**Pn**	**04 06 17.9**	**-0.2**
BRG				PG	**Pg**	**04 06 19.6**	**+1.0**
BRG				SG	**Sg**	**04 06 39.9**	**+2.1**
	comp=Z,72nm,0.7s						
PRU	**Pruhonice**	**1.79**	**214**	*e*PG	**Pg**	**04 06 23.5**	**-1.0**
PRU				*e*SG	**Sg**	**04 06 47.0**	**-0.7**
	comp=Z,19nm,0.3s						
PRU	**Pruhonice**	**1.79**	**214**	Pg	**Pg**	**04 06 23.5**	**-1.0**
PRU				Sg	**Sg**	**04 06 47.0**	**-0.7**
	comp=Z,19nm,0.3s						
CLL	**Collm**	**1.94**	**266**	*e*Pn	**Pn**	**04 06 25.0**	**+0.6**
CLL				*e*Pg	**Pg**	**04 06 27.0**	**-0.4**
CLL				*e*Sg	**Sg**	**04 06 54.0**	**+1.5**
CLL	**Collm**	**1.94**	**266**	*e*Pn	**Pn**	**04 06 25.0**	**+0.6**
MORC	**Moravsky Berou**	**1.94**	**151**	*e*Pn	**Pn**	**04 06 24.5**	**+0.1**
MORC				*e*S	**Sn**	**04 06 48.3**	**-1.2**
MORC	**Moravsky Berou**	**1.94**	**151**	*e*Pn	**Pn**	**04 06 24.5**	**+0.1**
MORC				*e*S	**Sn**	**04 06 48.3**	**-1.2**
MORC				*e*Sg	**Sg**	**04 06 50.7**	**-1.9**
	comp=Z,32nm,0.6s,baz=337						
VRAC	**Vranov** baz=355	**2.20**	**171**	*e*Pn	**Pn**	**04 06 26.8**	**-1.2**
VRAC				*e*Sg	**Sg**	**04 07 00.6**	**-0.3**
	comp=Z,16nm,0.3s,baz=355						
TREC	**Trest**	**2.22**	**190**	*e*PG	**Pg**	**04 06 30.2**	**-2.6**
TREC	**Trest**	**2.22**	**190**	Pg	**Pg**	**04 06 30.2**	**-2.6**
KRUC	**Moravsky** baz=358	**2.43**	**175**	*e*Pn	**Pn**	**04 06 30.2**	**-0.9**
KRUC				*e*Sg	**Sg**	**04 07 07.6**	**-0.7**
	comp=Z,16nm,0.5s,baz=358						
NKC	**Novy Kostel**	**2.62**	**243**	*e*PG	**Pg**	**04 06 39.7**	**-0.8**
NKC				*e*SG	**Sg**	**04 07 16.0**	**+1.5**
	comp=Z,31nm,0.3s						
NKC	**Novy Kostel**	**2.62**	**243**	Pg	**Pg**	**04 06 39.7**	**-0.8**
NKC				Sg	**Sg**	**04 07 16.0**	**+1.5**
	comp=Z,31nm,0.3s						
OJC	**Ojcow**	**2.67**	**117**	*e*Pg	**Pg**	**04 06 43.5**	**+2.1**
OJC				*e*Sg	**Sg**	**04 07 18.4**	**+2.4**
OJC	**Ojcow**	**2.67**	**117**	*e*Pg	**Pg**	**04 06 43.5**	**+2.1**
OJC				*e*Sg	**Sg**	**04 07 18.4**	**+2.4**
JAVC	**Velka Javorina** comp=Z,25nm,0.9s	**2.82**	**158**	*e*Sg	**Sg**	**04 07 22.6**	**+2.0**
KHC	**Kasperske Hory**	**2.85**	**215**	*e*Pn	**Pn**	**04 06 36.2**	**-0.7**
KHC				*e*S	**Sn**	**04 07 11.8**	**-0.1**
KHC	**Kasperske Hory**	**2.85**	**215**	*e*PG	**Pg**	**04 06 42.5**	**-2.3**
KHC				*e*SG	**Sg**	**04 07 20.6**	**-1.2**
	comp=Z,11nm,0.5s						
KHC	**Kasperske Hory**	**2.85**	**215**	*e*Pn	**Pn**	**04 06 36.2**	**-0.7**
KHC	**Kasperske Hory**	**2.85**	**215**	Pg	**Pg**	**04 06 42.5**	**-2.3**
KHC				*e*S	**Sn**	**04 07 11.8**	**-0.1**
KHC				Sg	**Sg**	**04 07 20.6**	**-1.2**
	comp=Z,11nm,0.5s						
MOX	**Moxa**	**2.94**	**255**	*e*PG	**Pg**	**04 06 47.6**	**+1.0**
MOX				*e*SG	**Sg**	**04 07 27.2**	**+2.5**
MOX	**Moxa**	**2.94**	**255**	*e*Pg	**Pg**	**04 06 47.6**	**+1.0**
MOX				*e*Sg	**Sg**	**04 07 27.2**	**+2.5**
GEC2	**GERESS Array S**	**3.05**	**211**	*e*Pg	**Pg**	**04 06 46.6**	**-2.1**
GEC2	**GERESS Array S**	**3.05**	**211**	*e*Pg	**Pg**	**04 06 46.6**	**-2.1**
KOLL	**Kolacno**	**3.27**	**152**	*e*P	**Pg**	**04 06 56.4**	**+3.6**
KOLL				*e*Sg	**Sg**	**04 07 35.1**	**0.0**
KOLL	**Kolacno**	**3.27**	**152**	*e*	**Pg**	**04 06 56.4**	**+3.6**
KOLL	**Kolacno**	**3.27**	**152**	*e*SG	**Sg**	**04 07 35.1**	**0.0**
ZST	**Bratislava**	**3.35**	**168**	*e*SG	**Sg**	**04 07 39.3**	**+1.4**
ZST	**Bratislava**	**3.35**	**168**	*e*Sg	**Sg**	**04 07 39.3**	**+1.4**
VYHS	**Vyhne**	**3.48**	**148**	*e*P	**Pg**	**04 06 59.7**	**+2.9**
VYHS				*e*Sg	**Sg**	**04 07 44.2**	**+2.3**
VYHS	**Vyhne**	**3.48**	**148**	*e*	**Pg**	**04 06 59.7**	**+2.9**
VYHS	**Vyhne**	**3.48**	**148**	*e*SG	**Sg**	**04 07 44.2**	**+2.3**
BSD	**Bornholm Skovb**	**3.71**	**350**	*i* P	**Pn**	**04 06 47.3**	**-1.4**
BSD				*i* S	**Sn**	**04 07 28.1**	**-4.9**
BSD	**Bornholm Skovb** SNR=49	**3.71**	**350**	*i* P	**Pn**	**04 06 47.3**	**-1.4**
BSD				*i* S	**Sn**	**04 07 28.1**	**-4.9**
	comp=Z,15nm,0.7s,SNR=49						
STHS	**Stebnicka Huta**	**3.89**	**120**	*e*Pn	**Pn**	**04 06 54.4**	**+3.2**
STHS				*e*Sg	**Sg**	**04 07 55.6**	**+0.5**
STHS	**Stebnicka Huta**	**3.89**	**120**	*e*PN	**Pn**	**04 06 54.4**	**+3.2**
STHS				*e*		04 07 07.7	
STHS	**Stebnicka Huta**	**3.89**	**120**	*e*SG	**Sg**	**04 07 55.6**	**+0.5**
STHS	**Stebnicka Huta**	**3.89**	**120**	*e*Pn	**Pn**	**04 06 54.4**	**+3.2**
STHS				*e*Sg	**Sg**	**04 07 55.6**	**+0.5**
KECS	**Kecovo**	**4.13**	**135**	*e*SG	**Sg**	**04 08 01.8**	**-1.1**

NEIC ***14*** *04:14:35.6, 16°.09N×98°.14W, h5km, MD3.6(MEX), After MEX.*

MEX 14 04:14:36.9±0.8, 16°.19N×98°.02W, h4km±22km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.23**	**333**	*e*P	Pg	04 14 40.6	-0.7
PNIG				*i* S	Sg	04 14 45.3	+1.0
PNIG	**Pinotepa**	**0.23**	**333**	*e*P	Pg	04 14 40.6	-0.7
PNIG				*i* S	Sg	04 14 44.9	+0.6
VHO	**Vista Hermosa**	**1.51**	**54**	*i* P	Pn	04 15 01.8	-3.0
VHO				*i* S	Sn	04 15 22.4	-2.6
VHO	**Vista Hermosa**	**1.51**	**54**	*i* P	Pn	04 15 01.8	-3.0
VHO				*i* S	Sn	04 15 19.9	-5.1
UTMO	**Huajuapan**	**1.65**	**7**	*i* P	Pn	04 15 03.9	-2.8
UTMO				*i* S	Sn	04 15 23.3	-5.0
HUIG	**Huatulco**	**1.89**	**103**	*i* P	Pn	04 15 07.5	-2.4
HUIG				*i* S	Sn	04 15 31.4	-2.8
HUIG	**Huatulco**	**1.89**	**103**	*i* P	Pn	04 15 06.3	-3.6
HUIG				*i* S	Sn	04 15 29.1	-5.0
TPIG	**Tehuac#an**	**2.31**	**16**	*i* P	Pn	04 15 13.2	-2.5
TPIG				*i* S	Sn	04 15 39.6	-5.0
CMIG	**Matias Romero**	**3.14**	**73**	*i* P	Pn	04 15 47.0	+20
CMIG	**Matias Romero**	**3.14**	**73**	*i* P	Pn	04 15 24.1	-3.1
CMIG				*i* S	Sn	04 16 01.5	-3.6

MEX 14 04:26:06.1±0.7, 15°.22N×95°.61W, h16km±15km, MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.73**	**319**	*e*P	Pg	04 26 17.6	-2.8
HUIG				*i* S	Sg	04 26 26.8	-3.3
VHO	**Vista Hermosa**	**2.14**	**330**	*i* P	Pn	04 26 38.8	-2.3
VHO				*i* S	Sn	04 27 03.5	-3.9
PCIG		**2.35**	**78**	*i* P	Pn	04 26 41.4	-2.7
PCIG				*i* S	Sn	04 27 07.8	-4.9
PNIG	**Pinotepa**	**2.69**	**296**	*i* P	Pn	04 26 46.9	-1.9
PNIG				*i* S	Sn	04 27 15.6	-5.4
TGIG		**2.85**	**57**	*e*P	Pn	04 26 48.1	-2.9
TGIG				*i* S	Sn	04 27 21.1	-3.8
UTMO	**Huajuapan**	**3.35**	**321**	*i* P	Pn	04 26 56.2	-1.5
UTMO				*i* S	Sn	04 27 34.4	-2.8

IDC ***14*** *04:33:25.1±4.6, 20°.46S×69°.18W, h99km±35km, mb3.3/4, mb1 3.7/7, mb1mx3.5/16, mbtmp3.4/7, Error ellipse: s-maj=46.3km s-min=22.4km az=52.0*
ISCJB ***14*** *04:33:26.1±0.5, 20°.14S±0°.04×69°.08W±0°.09, h113km±6km, mb3.5/4, Error ellipse: s-maj=13.5km s-min=6.9km az=175.1*
NEIC ***14*** *04:33:27.2, 20°.15S×69°.17W, h104km, MG4.1(GUC), After GUC.*
GUC ***14*** *04:33:27.2±0.6, 20°.15S×69°.17W, h104km±6km, ML4.1*

ISC 14 04:33:27.2±0.5, 20°.14S±0°.04×69°.08W±0°.09, h107km±6km, n17, σ0s97/22, mb3.5/4, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.98**	**203**	⇓*i*P	**Pn**	**04 33 47.6**	**-0.2**
PB01				*i* S	**Sn**	**04 34 02.8**	**-0.7**
PB01				AML	AML	04 34 04.0	
	comp=N,9μm,0.3s						
MNMC	**Miaee Miae**	**1.12**	**334**	⇑*i*P	**Pn**	**04 33 49.7**	**+0.3**
MNMC				*i* S	**Sn**	**04 34 06.9**	**+0.7**
MNMC				AML	AML	04 34 08.3	
	comp=E,6μm,0.2s						
PSGC	**Pisagua**	**1.12**	**299**	⇑*i*P	**Pn**	**04 33 48.6**	**-0.9**
PSGC				*i* S	**Sn**	**04 34 05.2**	**-1.1**
PSGC				AML	AML	04 34 08.5	
	comp=N,3μm,0.5s						
MACH	**Maria Elena**	**2.14**	**197**	*e*P	**Pn**	**04 34 02.7**	**+0.8**
MACH				*e*S	**Sn**	**04 34 29.8**	**+1.5**
ANCH	**Antofagasta**	**3.73**	**199**	*e*P	**Pn**	**04 34 23.4**	**+0.5**
ANCH	**Antofagasta**	**3.73**	**199**	*e*P	**Pn**	**04 34 23.4**	**+0.5**
LPAZ	**La Paz**	**3.94**	**13**	*e*Pn	**Pn**	**04 34 29.2**	**+3.6**
LPAZ				*e*Sn	**Sn**	**04 35 12.9**	**+1.9**
LPAZ	**La Paz**	**3.94**	**13**	P	**Pn**	**04 34 28.9**	**+3.3**
	comp=N,7.5nm,0.3s,baz=192,slow=7.4,SNR=180						
LPAZ				S	**Sn**	**04 35 18.6**	**+7.6**
	comp=N,0.5nm,0.3s,baz=241,slow=19,SNR=2.7						
ARE	**Arequipa**	**4.32**	**328**	*e*P	**Pn**	**04 34 30.0**	**-0.8**
SIV	**San Ignacio**	**8.66**	**63**	P	**Pn**	**04 35 28.9**	**-0.8**
	comp=N,2.3nm,0.3s,baz=261,slow=11,SNR=36						
CPUP	**Villa Florida**	**12.43**	**122**	P	**Pn**	**04 36 18.8**	**-1.6**
CPUP	**Villa Florida**	**12.43**	**122**	P	**Pn**	**04 36 18.8**	**-1.6**
	comp=N,0.4nm,0.3s,baz=290,slow=14,SNR=6.2						
TXAR	**Lajitas Array**	**59.43**	**325**	P	**P**	**04 43 18.9**	**+0.1**
	comp=N,0.1nm,0.5s,mb3.1,baz=162,slow=8.7,SNR=4.2						
NVAR	**Mina Array Bea**	**74.33**	**322**	P	**P**	**04 44 52.2**	**-0.9**
	comp=N,0.3nm,0.5s,mb3.2,baz=141,slow=4.6,SNR=3.1						
TORD	**Torodi Ar. Bea**	**77.05**	**71**	P	**P**	**04 45 08.9**	**-0.2**
	comp=N,0.5nm,0.4s,mb3.6,baz=256,slow=5.6						
YKA	**Yellowknife Ar**	**89.86**	**341**	P	**P**	**04 46 14.6**	**+1.0**
	comp=N,0.7nm,0.6s,mb4.0,baz=129,slow=4.6,SNR=5.7						
SONM	**Songino Array**	**152.13**	**7**	PKPbc	PKPbc	04 53 10.5	+0.4
	comp=N,0.3nm,0.4s,baz=357,slow=2.9,SNR=2.6						

ISCJB ***14*** *04:43:35.8±0.6, 83°.5N±0°.1×116°.3E±0°.9, h10km, mb3.7/13, MS3.3/12, Error ellipse: s-maj=19.3km s-min=11.8km az=141.6*
IDC ***14*** *04:43:36.3±0.8, 83°.49N×116°.32E, h0km, mb3.7/13, mb1 3.9/13, mb1mx3.7/26, mbtmp3.7/13, MS3.3/13, Ms1 3.3/13, ms1mx3.1/32, Error ellipse: s-maj=26.3km s-min=16.4km az=139.0*
NEIC ***14*** *04:43:37.7±0.6, 83°.53N×116°.17E, h10km, Error ellipse: s-maj=18.6km s-min=11.0km az=141.0*

ISC 14 04:43:37.8±0.6, 83°.5N±0°.1×116°.3E±0°.9, h10km, n26, σ0s89/17, mb3.7/13, MS3.3/12, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPITS	**Spitsbergen Ar**	**14.51**	**306**	LR	LR	04 51 37.2	
	comp=Z,58nm,19.4s,baz=40,slow=33						
ARCES	**ARCESS Array B**	**21.65**	**288**	P	**P**	**04 48 27.1**	**-0.7**
	3.9nm,1.0s,mb3.8,baz=46,slow=8.7,SNR=3.8						
ILAR	**Eielson Array**	**26.90**	**70**	P	**P**	**04 49 17.1**	**-1.2**
	0.2nm,0.8s,mb2.7,baz=345,slow=9.3,SNR=2.7						
ILAR				LR	LR	04 59 11.2	
	comp=Z,69nm,20.7s,MS3.2,baz=202,slow=35						
FINES	**FINESS Array B**	**29.42**	**282**	LR	LR	05 03 59.8	
	comp=Z,38nm,21.5s,MS3.0,baz=321,slow=42						
ZALV	**Zalesovo Beam**	**30.82**	**217**	LR	LR	05 03 09.6	
	comp=Z,57nm,18.9s,MS3.2,baz=58,slow=38						
NOA	**NORSAR Array**	**31.41**	**296**	LR	LR	05 04 18.7	
	comp=Z,19nm,21.6s,MS2.7,baz=15,slow=40						
YKA	**Yellowknife Ar**	**32.16**	**43**	P	**P**	**04 50 05.2**	**+0.2**
	0.6nm,0.8s,mb3.5,baz=354,slow=9.5,SNR=3.4						
BVAR	**Borovoye Array**	**32.90**	**233**	P	**P**	**04 50 12.1**	**+0.6**
	0.7nm,0.6s,mb3.8,baz=28,slow=9.8,SNR=4.3						
KURK	**Kurchatov**	**34.49**	**223**	P	**P**	**04 50 26.1**	**+0.8**
	0.5nm,0.6s,mb3.6,baz=22,slow=7.3,SNR=3.2						
DLBC	**Dease Lake**	**34.83**	**58**	LR	LR	05 03 58.2	
	comp=Z,52nm,19.0s,MS3.3,baz=328,slow=35						
SONM	**Songino Array**	**35.93**	**191**	P	**P**	**04 50 39.4**	**+1.6**
	0.2nm,0.3s,mb3.5,baz=357,slow=11,SNR=3.7						
AKTK	**Aktyubinsk**	**36.67**	**246**	P	**P**	**04 50 43.4**	**-0.7**
AKTO	**Aktyubinsk**	**36.67**	**246**	P	**P**	**04 50 43.4**	**-0.7**
	0.9nm,0.5s,mb3.8,baz=16,slow=4.9,SNR=4.1						
MK31	**Makanchi Array**	**38.12**	**218**	*e*P	**P**	**04 50 55.8**	**-0.5**
MKAR	**Makanchi Array**	**38.12**	**218**	P	**P**	**04 50 55.7**	**-0.7**
	1.4nm,0.9s,mb3.7,baz=14,slow=5.4,SNR=9.0						
MKAR				LR	LR	05 07 41.8	
	comp=Z,56nm,19.4s,MS3.4,baz=0.8,slow=38						
BBB	**Bella Bella**	**41.19**	**57**	LR	LR	05 10 16.1	
	comp=Z,52nm,19.5s,MS3.4,baz=164,slow=39						
AAK	**Ala-Archa**	**42.85**	**226**	LR	LR	05 10 41.2	
	comp=Z,38nm,18.9s,MS3.3,baz=214,slow=38						
BRTR	**Keskin Array B**	**49.94**	**268**	P	**P**	**04 52 32.2**	**+1.0**
	0.4nm,0.6s,mb3.6,baz=22,slow=8.0,SNR=3.8						
BRTR				LR	LR	05 15 37.2	
	comp=Z,22nm,18.2s,MS3.2,baz=105,slow=38						
YBH	**Yreka Blue Hor**	**52.05**	**54**	LR	LR	05 14 02.2	
	comp=Z,48nm,21.7s,MS3.5,baz=14,slow=35						
MMAI	**Mount Meron Ar**	**56.37**	**265**	LR	LR	05 22 54.4	
	comp=Z,35nm,18.7s,MS3.5,baz=130,slow=42						
KEST	**Kesra**	**56.59**	**291**	P	**P**	**04 53 21.1**	**+0.9**
	1.9nm,0.8s,mb4.2,baz=280,slow=2.6,SNR=7.1						
CMAR	**Chiang Mai Arr**	**65.43**	**198**	P	**P**	**04 54 19.3**	**-1.0**
	0.3nm,0.3s,mb3.8,baz=1.1,slow=4.5,SNR=4.1						
TXAR	**Lajitas Array**	**65.92**	**38**	P	**P**	**04 54 24.5**	**+1.1**
TXAR	**Lajitas Array**	**65.92**	**38**	P	**P**	**04 54 24.5**	**+1.1**
	0.9nm,0.9s,mb3.8,baz=339,slow=4.9,SNR=9.0						
TXAR				LR	LR	05 21 59.8	
	comp=Z,44nm,20.6s,MS3.6,baz=5.0,slow=35						
TORD	**Torodi Ar. Bea**	**79.72**	**296**	P	**P**	**04 55 44.7**	**-0.7**
TORD	**Torodi Ar. Bea**	**79.72**	**296**	P	**P**	**04 55 44.7**	**-0.7**
	1.5nm,0.8s,mb4.0,baz=1.8,slow=6.2,SNR=8.9						

NEIC ***14*** *04:47:17.8±1.8, 22°.76N×94°.65E, h123km±17km, Error ellipse: s-maj=46.2km s-min=9.9km az=60.0*
IDC ***14*** *04:47:18.2±3.9, 22°.75N×94°.69E, h125km±35km, mb3.6/6, mb1 3.6/7, mb1mx3.3/26, mbtmp3.5/7, Error ellipse: s-maj=75.9km s-min=14.7km az=59.0*

ISC 14 04:47:18.0±0.9, 22°.78N±0°.09×94°.40E±0°.08, h120km±9km, n23, σ1s65/32, mb3.8/6, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**2.04**	**348**	*e*PKP	Px	04 48 02.0	
IMP				*e*S	**Sn**	**04 48 17.0**	**-1.0**
SHL	**Shillong**	**3.60**	**321**	*e*PN	**Pn**	**04 48 14.0**	**+1.8**
SHL				*i* SN	**Sn**	**04 48 53.0**	**-1.3**
CMAR	**Chiang Mai Arr**	**6.05**	**135**	P	**Pn**	**04 48 42.6**	**-2.5**
CMAR	**Chiang Mai Arr**	**6.05**	**135**	P	**Pn**	**04 48 42.6**	**-2.5**
	0.4nm,0.3s,baz=307,slow=12,SNR=3.8						
ODAN	**Odare**	**7.56**	**304**	*e*Pn	**Pn**	**04 49 07.1**	**+1.7**
ODAN				*e*Sn	**Sn**	**04 50 27.9**	**-1.6**
	91nm,0.5s						
TAPN	**Taplejung**	**7.58**	**308**	*e*Pn	**Pn**	**04 49 07.8**	**+2.0**
TAPN				*e*Sn	**Sn**	**04 50 29.5**	**-0.7**
	37nm,0.4s						
RAMN	**Ramite**	**8.21**	**302**	*e*Pn	**Pn**	**04 49 16.4**	**+2.1**
JIRN	**Jiri**	**8.88**	**305**	*e*Pn	**Pn**	**04 49 25.2**	**+1.8**
JIRN				*e*Sn	**Sn**	**04 50 58.7**	**-3.0**
	59nm,0.4s						
GUN	**Gumba**	**9.25**	**305**	*e*Pn	**Pn**	**04 49 29.4**	**+1.0**
GUN				*e*Sn	**Sn**	**04 51 07.8**	**-2.7**
	42nm,0.4s						
PKI	**Pulchoki**	**9.44**	**302**	*e*Pn	**Pn**	**04 49 32.3**	**+1.4**
PKIN	**Phulchoki**	**9.45**	**302**	*e*Pn	**Pn**	**04 49 32.1**	**+1.0**
PKIN				*e*Sn	**Sn**	**04 51 12.3**	**-3.2**
	21nm,0.5s						
DMN	**Daman**	**9.70**	**302**	*e*Pn	**Pn**	**04 49 36.6**	**+2.2**
DMN				*e*Sn	**Sn**	**04 51 18.4**	**-3.0**
	20nm,0.6s						
GKN	**Gorkha**	**10.25**	**303**	*e*Pn	**Pn**	**04 49 42.9**	**+1.1**
GKN				*e*Sn	**Sn**	**04 51 31.7**	**-3.0**
	36nm,0.4s						
KOLN	**Koldanda**	**10.96**	**299**	*e*Pn	**Pn**	**04 49 53.3**	**+1.9**
KOLN				*e*Sn	**Sn**	**04 51 48.4**	**-3.7**
	35nm,0.5s						
MK31	**Makanchi Array**	**25.88**	**341**	P	**P**	**04 52 38.0**	**-0.4**
MKAR	**Makanchi Array**	**25.88**	**341**	P	**P**	**04 52 39.2**	**+0.9**
MKAR				pP	pP	04 53 09.8	+5.6
MKAR	**Makanchi Array**	**25.88**	**341**	P	**P**	**04 52 39.2**	**+0.9**
	1.1nm,0.6s,mb3.5,baz=138,slow=11,SNR=8.4						
MKAR				pP	pP	04 53 09.8	+5.6
	1.8nm,0.8s,baz=147,slow=9.4,SNR=6.8						
KURK	**Kurchatov**	**30.48**	**340**	P	**P**	**04 53 20.0**	**+0.7**
	0.8

VOIR		**1.07 259**				P	**Pn**	**05 04 00.1**	**-0.3**
VOIR		**1.07 259**		S		**Sn**	**05 04 17.8**	**-0.5**
VOIR		**1.07 259**				P	**Pn**	**05 04 00.1**	**-0.3**
VOIR				*i* S		**Sn**	**05 04 17.8**	**-0.5**
VOIR		**1.07 259**				P	**Pn**	**05 04 00.1**	**-0.3**
VOIR				*i* S		**Sn**	**05 04 17.8**	**-0.5**
AMRR	**Amara**	**1.18 151**			P	**Pn**	**05 04 02.0**	**+0.5**
AMRR					S	**Sn**	**05 04 20.5**	**+0.2**
AMRR	**Amara**	**1.18 151**			P	**Pn**	**05 04 02.0**	**+0.5**
AMRR	**Amara**	**1.18 151**			S	**Sn**	**05 04 20.5**	**+0.2**
AMRR	**Amara**	**1.18 151**			P	**Pn**	**05 04 02.0**	**+0.5**
AMRR					S	**Sn**	**05 04 20.5**	**+0.2**
AMRR	**Amara**	**1.18 151**			P	**Pn**	**05 04 02.0**	**+0.5**
AMRR					S	**Sn**	**05 04 20.5**	**+0.2**
CFR	**Carcaliu**	**1.22 112**			P	**Pn**	**05 04 01.7**	**-0.1**
CFR					S	**Sn**	**05 04 20.7**	**-0.3**
CFR	**Carcaliu**	**1.22 112**			P	**Pn**	**05 04 01.7**	**-0.1**
CFR	**Carcaliu**	**1.22 112**			S	**Sn**	**05 04 20.7**	**-0.2**
CFR	**Carcaliu**	**1.22 112**			P	**Pn**	**05 04 01.7**	**-0.1**
CFR				*i* S		**Sn**	**05 04 20.7**	**-0.2**
CFR	**Carcaliu**	**1.22 112**			P	**Pn**	**05 04 01.7**	**-0.1**
CFR				*i* S		**Sn**	**05 04 20.7**	**-0.2**
INCR	**INCERC-Sediu C**	**1.23 193**			S	**Sn**	**05 04 21.2**	**-0.1**
BUC1	**Bucharest**	**1.35 196**			P	**Pn**	**05 04 03.6**	**+0.3**
BUC1					S	**Sn**	**05 04 23.2**	**-0.2**
BUC1	**Bucharest**	**1.35 196**			P	**Pn**	**05 04 03.6**	**+0.4**
BUC1	**Bucharest**	**1.35 196**			S	**Sn**	**05 04 23.2**	**-0.2**
BUC1	**Bucharest**	**1.35 196**			P	**Pn**	**05 04 03.6**	**+0.4**
BUC1				*i* S		**Sn**	**05 04 23.2**	**-0.2**
BUC1	**Bucharest**	**1.35 196**			P	**Pn**	**05 04 03.6**	**+0.4**
BUC1				*i* S		**Sn**	**05 04 23.2**	**-0.2**
TLCR		**1.67 105**			P	**Pn**	**05 04 07.3**	**+0.5**
TLCR					S	**Sn**	**05 04 29.2**	**-0.5**
TLCR		**1.67 105**			P	**Pn**	**05 04 07.3**	**+0.5**
TLCR		**1.67 105**			S	**Sn**	**05 04 29.2**	**-0.5**
TLCR		**1.67 105**			P	**Pn**	**05 04 07.3**	**+0.5**
TLCR				*i* S		**Sn**	**05 04 29.2**	**-0.5**
TLCR		**1.67 105**			P	**Pn**	**05 04 07.2**	**+0.4**
TLCR				*i* S		**Sn**	**05 04 29.2**	**-0.5**
CVD	**Cernavoda**	**1.70 141**			P	**Pn**	**05 04 07.2**	**+0.1**
CVD					S	**Sn**	**05 04 29.6**	**-0.8**
CVD	**Cernavoda**	**1.70 141**			P	**Pn**	**05 04 07.3**	**+0.1**
CVD	**Cernavoda**	**1.70 141**			S	**Sn**	**05 04 29.6**	**-0.8**
CVD	**Cernavoda**	**1.70 141**			P	**Pn**	**05 04 07.3**	**+0.1**
CVD				*i* S		**Sn**	**05 04 29.6**	**-0.8**
CVD	**Cernavoda**	**1.70 141**			P	**Pn**	**05 04 07.3**	**+0.1**
CVD				*i* S		**Sn**	**05 04 29.6**	**-0.8**
TIRR	**Tirgusor**	**1.78 131**	*e*		Pn	**Pn**	**05 04 08.2**	**+0.1**
TIRR			*e*		Sn	**Sn**	**05 04 30.8**	**-1.3**
TIRR	**Tirgusor**	**1.78 131**	*e*		Pn	**Pn**	**05 04 08.2**	**+0.1**
TIRR			*e*		Sn	**Sn**	**05 04 30.8**	**-1.3**
KIS	**Kishinev**	**2.08 49**	*e*		P	**Pn**	**05 04 11.0**	**-0.7**
KIS				*i* S		**Sn**	**05 04 36.0**	**-2.5**
	700nm,0.5s							
KIS	**Kishinev**	**2.08 49**			S	**Sn**	**05 04 37.1**	**-1.4**
KIS	**Kishinev**	**2.08 49**	*e*		P	**Pn**	**05 04 11.0**	**-0.7**
KIS				*i* S		**Sn**	**05 04 36.0**	**-2.5**
	700nm,0.5s							
BUR01	**Bucovina Ar. S**	**2.17 336**			P	**Pn**	**05 04 14.2**	**+1.4**
BUR01	**Bucovina Ar. S**	**2.17 336**			P	**Pn**	**05 04 14.2**	**+1.4**
BURAR	**Bucovina Array**	**2.17 336**			P	**Pn**	**05 04 13.9**	**+1.1**
BURAR	**Bucovina Array**	**2.17 336**			P	**Pn**	**05 04 13.9**	**+1.1**
BURAR	**Bucovina Array**	**2.17 336**			P	**Pn**	**05 04 13.9**	**+1.1**
BURAR	**Bucovina Array**	**2.17 336**			P	**Pn**	**05 04 13.9**	**+1.1**
BUR08	**Bucovina Ar. S**	**2.20 336**	*e*		Pg	**Pn**	**05 04 14.2**	**+0.9**
PSN	**Preselentsi**	**2.29 149**	*i*		P	**Pn**	**05 04 15.0**	**+0.7**
PSN	**Preselentsi**	**2.29 149**	*i*		P	**Pn**	**05 04 15.0**	**+0.7**
SZH	**Strazhica**	**2.42 191**	*i*		P	**Pn**	**05 04 15.9**	**0.0**
SZH	**Strazhica**	**2.42 191**	*i*		P	**Pn**	**05 04 15.9**	**0.0**
PRD	**Provadia**	**2.52 166**	*e*		P	**Pn**	**05 04 17.7**	**+0.5**
PRD	**Provadia**	**2.52 166**	*e*		P	**Pn**	**05 04 17.7**	**+0.5**
PVL	**Pavlikeni**	**2.58 200**	*i*		P	**Pn**	**05 04 19.7**	**+1.8**
PVL	**Pavlikeni**	**2.58 200**	*i*		P	**Pn**	**05 04 19.7**	**+1.8**
DRGR		**2.90 295**				**Pn**	**05 04 21.2**	**-0.8**
DRGR		**2.90 295**				**Pn**	**05 04 21.1**	**-0.9**
DRGR		**2.90 295**				**Pn**	**05 04 21.1**	**-0.9**
DRGR		**2.90 295**				**Pn**	**05 04 21.1**	**-0.9**
DRGR		**2.90 295**				**Pn**	**05 04 21.2**	**-0.8**
DJES	**Djerdap**	**3.01 252**	*e*		Pn	**Pn**	**05 04 21.8**	**-1.6**
DJES	**Djerdap**	**3.01 252**	*e*		Pn	**Pn**	**05 04 21.8**	**-1.6**
JMB	**Yambol**	**3.18 179**	*i*		P	**Pn**	**05 04 25.8**	**+0.1**
JMB	**Yambol**	**3.18 179**	*i*		P	**Pn**	**05 04 25.8**	**+0.1**
BZS	**Buzias**	**3.46 271**				**Pn**	**05 04 28.8**	**-0.4**
BZS	**Buzias**	**3.46 271**				**Pn**	**05 04 28.9**	**-0.4**
BZS	**Buzias**	**3.46 271**				**Pn**	**05 04 28.9**	**-0.3**
BZS	**Buzias**	**3.46 271**				**Pn**	**05 04 28.9**	**-0.3**
BZS	**Buzias**	**3.46 271**				**Pn**	**05 04 28.9**	**-0.3**
ZAPS	**Zavoj**	**3.67 231**	*e*		Pn	**Pn**	**05 04 31.6**	**-0.5**
ZAPS			*e*		Sn	**Sn**	**05 05 02.0**	**-13**
VTS	**Vitosha**	**3.88 219**				**Pn**	**05 04 33.7**	**-1.2**
VTS			*e*		Sn	**Sn**	**05 05 04.0**	**-16**
VTS	**Vitosha**	**3.88 219**				**Pn**	**05 04 35.0**	**+0.1**
VTS	**Vitosha**	**3.88 219**			S	**Sn**	**05 05 19.8**	**-0.2**
VTS	**Vitosha**	**3.88 219**				**Pn**	**05 04 34.7**	**-0.2**
VTS	**Vitosha**	**3.88 219**				**Pn**	**05 04 33.7**	**-1.2**
VTS	**Vitosha**	**3.88 219**				**Pn**	**05 04 35.0**	**+0.1**
RZN	**Rozhen**	**4.17 199**	*i*		P	**Pn**	**05 04 38.9**	**+0.2**
RZN	**Rozhen**	**4.17 199**	*i*		P	**Pn**	**05 04 38.9**	**+0.2**
BARS	**Barje**	**4.42 232**	*e*		Pn	**Pn**	**05 04 41.6**	**-0.4**
BARS			*e*		Sn	**Sn**	**05 05 17.1**	**-16**
BARS	**Barje**	**4.42 232**	*e*		Pn	**Pn**	**05 04 41.6**	**-0.4**
GRUS	**Gruza**	**4.50 249**				**Pn**	**05 04 41.8**	**-1.4**
GRUS	**Gruza**	**4.50 249**				**Pn**	**05 04 41.8**	**-1.4**
CRVS	**Cervenica-Dubn**	**4.75 315**	*e*		P	**Pn**	**05 04 46.6**	**+0.2**
CRVS			*e*		S	**Sn**	**05 05 33.9**	**-6.7**
CRVS	**Cervenica-Dubn**	**4.75 315**	*e*		P	**Pn**	**05 04 46.6**	**+0.2**
CRVS			*e*		S	**Sn**	**05 05 33.9**	**-6.7**
CRVS	**Cervenica-Dubn**	**4.75 315**	*e*		P	**Pn**	**05 04 46.6**	**+0.2**
DIVS	**Divibare**	**4.91 254**				**Pn**	**05 04 47.8**	**-0.7**
DIVS	**Divibare**	**4.91 254**				**Pn**	**05 04 47.8**	**-0.7**
KECS	**Kecovo**	**5.02 307**	*e*		P	**Pn**	**05 04 49.7**	**-0.2**
KECS	**Kecovo**	**5.02 307**	*e*		P	**Pn**	**05 04 49.7**	**-0.2**
BBLS	**Lazići**	**5.38 253**				**Pn**	**05 04 54.8**	**-0.1**
BBLS	**Lazići**	**5.38 253**				**Pn**	**05 04 54.8**	**-0.1**
VYHS	**Vyhne**	**5.99 301**	*e*		P	**Pn**	**05 05 10.7**	**+7.8**
VYHS			*e*				05 06 12.4	
VYHS	**Vyhne**	**5.99 301**	*e*			**Pn**	**05 06 10.7**	**+7.8**
VYHS			*e*		S	**Sn**	**05 06 12.4**	**+2.2**

IDC ***14*** *05:05:34.8±0.7, 0.°22S×124.°37E, h0km, mb4.1/10, mb1 4.2/11, mb1mx4.0/22, mbtmp4.1/11, ML4.0/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/27, Error ellipse: s-maj=49.3km s-min=14.3km az=71.0*

ISCJB ***14*** *05:05:41.8±0.4, 0.°17S±0.°03×124.°77E±0.°03, h70km±5km, mb4.1/13, Error ellipse: s-maj=5.7km s-min=5.0km az=27.0*

NEIC ***14*** *05:05:42.8±2.4, 0.°17S×124.°79E, h64km±24km, mb4.6/2, Error ellipse: s-maj=22.7km s-min=10.9km az=51.0*

DJA ***14*** *05:05:42, 0.°11S×124.°87E, h23km, MLv4.3/10*

ISC 14 05:05:43.3±0.4, 0.°16S±0.°03×124.°79E±0.°03, h66km±5km, n34, σ1°s26/41, mb4.1/13, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.09**	**312**	P	**Pn**	**05 06 00.3**	**-2.5**
KMSI				S	**Sn**	**05 06 14.7**	**-2.6**
MNI	**Manado**	**1.59**	**2**	P	**Pn**	**05 06 09.4**	**0.0**
MNI				S	**Sn**	**05 06 30.9**	**+1.8**
LUWI	**Luwuk**	**2.20**	**246**	P	**Pn**	**05 06 18.5**	**+0.9**
LUWI				S	**Sn**	**05 06 49.4**	**+5.5**
TNTI	**Ternate**	**2.73**	**70**	P	**Pn**	**05 06 25.4**	**+0.5**
TNTI				S	**Sn**	**05 06 57.4**	**+0.6**
LBMI	**Labuha**	**2.75**	**100**	P	**Pn**	**05 06 24.5**	**-0.6**
LBMI				S	**Sn**	**05 06 57.2**	**0.0**
MRSI	**Marisa**	**2.92**	**282**	P	**Pn**	**05 06 24.3**	**-3.1**
NLAI	**Namlea**	**3.83**	**143**	P	**Pn**	**05 06 38.9**	**-1.0**
SGSI	**Sangihe**	**3.89**	**11**	S	**Sn**	**05 07 22.9**	**-2.2**
TOLI	**Toli-Toli**	**4.20**	**288**	P	**Pn**	**05 06 50.4**	**+5.6**
TOLI				S	**Sn**	**05 07 34.6**	**+2.0**
KDI	**Kendari**	**4.36**	**210**	P	**Pn**	**05 06 46.7**	**-0.3**
AAI	**Ambon**	**4.88**	**136**	P	**Pn**	**05 06 54.5**	**+0.2**
AAI				S	**Sn**	**05 07 51.6**	**+2.1**
TTSI	**Tana Toraja**	**5.74**	**240**	P	**Pn**	**05 07 06.8**	**+0.8**
	0.3nm2µm78nm,0.7s						
SPSI	**Sidrap Palu**	**6.29**	**233**	P	**Pn**	**05 07 14.9**	**+1.5**
KAPI	**Kappang**	**6.97**	**226**	*e*Pn	**Pn**	**05 07 23.0**	**+0.1**
KAPI				*e*Sn	**Sn**	**05 08 40.4**	**-0.4**
KAKA	**Kakadu**	**14.60**	**149**	*e*Pn	**Pn**	**05 09 04.3**	**-2.1**

FITZ	**Fitzroy Crossi**	**17.85**	**177**		P	**Pn**	**05 09 45.9**	**-1.3**
	0.4nm,0.3s,baz=30,slow=11,SNR=9.9								
WRA	**Warramunga Arr**	**21.77**	**155**		P	**P**	**05 10 28.5**	**-1.2**
WRA	**Warramunga Arr**	**21.77**	**155**		P	**P**	**05 10 28.5**	**-1.2**
	2.4nm,0.6s,mb3.7,baz=336,slow=9.8,SNR=8.7								
COEN	**Coen**	**22.79**	**128**	*e*	P	**P**	**05 10 40.4**	**-0.1**
	51nm,0.9s,mb4.9								
ASAR	**Alice Springs**	**24.99**	**160**		P	**P**	**05 11 01.1**	**+0.1**
	4.9nm,0.9s,mb4.0,baz=329,slow=7.2,SNR=21								
STKA	**Stephens Creek**	**35.33**	**155**		P	**P**	**05 12 33.4**	**+1.2**
STKA	**Stephens Creek**	**35.33**	**155**		P	**P**	**05 12 33.4**	**+1.2**
	1.3nm,0.4s,mb4.1,baz=321,slow=9.7,SNR=9.3								
KSRS	**Korea Array**	**37.53**	**4**		P	**P**	**05 12 51.8**	**+0.8**
	0.7nm,0.5s,mb3.8,baz=172,slow=9.9,SNR=4.6								
KSRS					LR	LR	05 26 06.1		
	comp=Z,17nm,20.4s,baz=175,slow=33								
MJAR	**Matsushiro Arr**	**38.58**	**17**		P	**P**	**05 13 01.5**	**+1.7**
	2.1nm,1.0s,mb3.9,baz=192,slow=8.9,SNR=3.6								
GTA	**Gaotai**	**45.53**	**333**	*e*	P	**P**	**05 13 58.3**	**+1.9**
GTA					pP	pP	05 14 02.3	-11	
GTA					sP	sP	05 14 06.0	-15	
GTA					pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.2								
SONM	**Songino Array**	**50.41**	**344**		P	**P**	**05 14 32.6**	**-1.3**
	comp=Z,0.6nm,0.4s,mb3.9,baz=166,slow=8.6,SNR=5.3								
MK31	**Makanchi Array**	**59.70**	**327**	*e*	P	**P**	**05 15 40.2**	**-0.7**
MKAR	**Makanchi Array**	**59.70**	**327**		P	**P**	**05 15 40.3**	**-0.6**
	comp=Z,2.0nm,0.4s,mb4.5,baz=124,slow=7.7,SNR=43								
AML	**Almayashu**	**62.27**	**319**	*e*	P	**P**	**05 16 00.7**	**+2.2**
	comp=Z,1.9nm,0.8s,mb4.2								
ZALV	**Zalesovo Beam**	**63.20**	**335**		P	**P**	**05 16 03.5**	**-1.0**
	comp=Z,0.9nm,0.4s,mb4.1,baz=131,slow=6.1,SNR=4.7								
KURK	**Kurchatov**	**64.02**	**329**		P	**P**	**05 16 09.0**	**-0.9**
	comp=Z,2.3nm,0.5s,mb4.2,baz=125,slow=7.2,SNR=9.5								
AKTK	**Aktyubinsk**	**75.52**	**323**		P	**P**	**05 17 20.2**	**-0.3**
AKTO	**Aktyubinsk**	**75.52**	**323**		P	**P**	**05 17 20.2**	**-0.3**
	comp=Z,1.2nm,0.3s,mb4.0,baz=94,slow=6.7,SNR=7.7								
TORD	**Torodi Ar. Bea**	**122.18**	**285**		PKP	PKPdf	05 24 31.8	+0.2	
	comp=Z,0.2nm,0.6s,baz=34,slow=1.3,SNR=3.7								

ISCJB ***14*** *05:15:27.1±0.8, 13.°8N±0.°1×144.°8E±0.°2, h145km±7km, mb3.5/6, Error ellipse: s-maj=35.8km s-min=21.9km az=16.3*

NEIC ***14*** *05:15:28.9±0.8, 13.°79N×144.°73E, h140km±8km, mb4.1/2, Error ellipse: s-maj=21.8km s-min=15.1km az=104.0*

IDC ***14*** *05:15:28.4±0.6, 13.°80N×144.°71E, h132km±7km, mb3.1/5, mb1 3.4/5, mb1mx3.1/23, mbtmp3.1/5, Error ellipse: s-maj=38.2km s-min=21.7km az=99.0*

ISC 14 05:15:28.6±0.8, 13.°8N±0.°1×144.°8E±0.°2, h140km±7km, n11, σ0°s37/11, mb3.5/6, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.19**	**162**	P	**Pn**	**05 15 48.2**	**+0.5**
	258nm,0.3s,baz=180,slow=6.1,SNR=48						
GUMO				S	**Sn**	**05 16 01.8**	**-0.3**
	788nm,0.3s,baz=135,slow=19,SNR=112						
WRA	**Warramunga Arr**	**35.05**	**197**	P	**P**	**05 22 07.8**	**-0.3**
	0.5nm,0.9s,mb3.2,baz=16,slow=9.4,SNR=2.5						
ENH	**Enshi**	**36.44**	**303**	*e*P	**P**	**05 22 19.7**	**-0.4**
	99nm,0.8s						
FITZ	**Fitzroy Crossi**	**36.88**	**211**	P	**P**	**05 22 24.0**	**+0.2**
	2.3nm,0.9s,mb3.8,baz=29,slow=9.5,SNR=6.4						
NIKO	**Nikolski**	**53.56**	**33**	*e*P	**P**	**05 24 35.1**	**+0.2**
	52nm,0.4s						
NIKO				*e*pP	pP	05 25 06.9	-0.5
TIXI	**Tiksi**	**58.65**	**354**	*e*P	**P**	**05 25 04.2**	**-6.5**
	1.2nm,0.3s,mb4.2						
MKAR	**Makanchi Array**	**61.32**	**316**	P	**P**	**05 25 29.9**	**+0.5**
	0.1nm,0.6s,mb2.9,baz=99,slow=8.9,SNR=4.4						
KURK	**Kurchatov**	**64.41**	**320**	*e*P	**P**	**05 25 49.2**	**-0.5**
	0.8nm,0.5s,mb3.8						
KURK	**Kurchatov**	**64.41**	**320**	P	**P**	**05 25 49.9**	**+0.2**
	0.2nm,0.3s,mb3.4,baz=106,slow=6.6,SNR=2.6						
ILAR	**Eielson Array**	**68.43**	**25**	P	**P**	**05 26 14.7**	**-0.4**
	0.2nm,0.5s,mb3.1,baz=248,slow=4.8,SNR=4.2						
LPAZ	**La Paz**	**148.11**	**99**	PKPbc	PKPbc	05 35 01.1	+2.3
	1.3nm,1.0s,baz=270,slow=2.0,SNR=3.5						

IDC ***14*** *05:20:43.5±0.8, 31.°62N×104.°18E, h0km, mb3.8/10, mb1 4.0/12, mb1mx3.8/26, mbtmp3.8/12, ML4.0/1, MS3.0/1, Ms1 3.0/1, ms1mx2.0/37, Error ellipse: s-maj=30.0km s-min=16.4km az=58.0*

NEIC ***14*** *05:20:45.4±0.5, 31.°60N×104.°13E, h10km, mb3.7/2, Error ellipse: s-maj=12.9km s-min=8.3km az=58.0*

BJI ***14*** *05:20:45.6, 31.°65N×104.°20E, h16km, ML3.8/20, Ms3.6/5, Ms7 3.5/5*

ISC 14 05:20:46.8±1.0, 31.°65N±0.°03×104.°13E±0.°05, h16km±7km, n26, σ1°s04/36, mb3.8/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.80**	**203**	Pg	**Pg**	**05 21 01.9**	**-0.5**
CD2				Sg	**Sg**	**05 21 13.6**	**+0.6**
CD2				smax			
	comp=N,2µm,0.7s						
LZH	**Lanzhou**	**4.43**	**357**	Pn	**Pn**	**05 21 55.8**	**+2.5**
LZH				Pg	**Pg**	**05 22 07.6**	**-4.0**
LZH				Sg	**Sg**	**05 23 07.8**	**-1.2**
LZH				smax			
	comp=N,110nm,1.0s						
LZH				smax			
	comp=E,120nm,0.9s						
LZH				LR	LR		
	comp=N,550nm,6.2s						
LZH				LR	LR		
	comp=Z,550nm,9.0s						
XAN	**Xi'an**	**4.69**	**58**	Pn	**Pn**	**05 21 56.3**	**-0.5**
XAN				Sn	**Sn**	**05 22 50.0**	**-0.8**
XAN				Sg	**Sg**	**05 23 08.8**	**-8.4**
XAN				smax			
	comp=N,210nm,0.9s						
XAN				smax			
	comp=E,99nm,0.7s						
ENH	**Enshi**	**4.81**	**105**	*e*Pn	**Pn**	**05 21 59.2**	**+0.7**
ENH				*e*Sn	**Sn**	**05 22 55.7**	**+1.9**
GYA	**Guiyang**	**5.63**	**156**	Pn	**Pn**	**05 22 11.8**	**+2.0**
GYA				Sn	**Sn**	**05 23 12.9**	**-1.3**
GYA				Sg	**Sg**	**05 23 41.9**	**-5.7**
GYA				smax			
	comp=N,120nm,0.7s						
GYA				smax			
	comp=E,130nm,0.8s						
KMI	**Kunming**	**6.62**	**191**	Pn	**Pn**	**05 22 23.8**	**+0.4**
KMI				Sn	**Sn**	**05 23 32.0**	**-6.5**
KMI				smax			
	comp=N,35nm,0.7s						
KMI				smax			
	comp=E,41nm,0.8s						
KMI				LR	LR		
	comp=N,180nm,8.2s						
KMI				LR	LR		
	comp=E,71nm,6.7s						
KMI				LR	LR		
	comp=Z,180nm,10.8s						
WHN	**Wuhan**	**8.84**	**95**	P	**Pn**	**05 23 03.0**	**+9.2**
WHN				S	**Sn**	**05 24 26.8**	**-6.3**
WHN				LR	LR		
	comp=N,280nm,9.5s						
WHN				LR	LR		
	comp=E,360nm,6.4s						
WHN				LR	LR		
	comp=Z,310nm,12.1s						
HHC	**Hu-ho-hao-te**	**10.96**	**31**	*e*P	**Pn**	**05 23 23.6**	**+0.7**
HHC				pP		05 23 27.1	
HHC				sP		05 23 30.1	
HHC				S	**Sn**	**05 25 25.3**	**+0.1**
HHC				LR	LR		
	comp=N,100nm,5.9s						
HHC				LR	LR		
	comp=E,240nm,4.1s						
HHC				LR	LR		
	comp=Z,150nm,4.9s						
CMAR	**Chiang Mai Arr**	**13.95**	**201**	Pn	**Pn**	**05 24 02.1**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=8.6,slow=9.2,SNR=3.2						
SONM	**Songino Array**	**16.25**	**5**	Pn	**Pn**	**05 24 34.7**	**+0.4**
	baz=178,slow=10,SNR=5.7						
KSRS	**Korea Array**	**20.41**	**67**	P	**P**	**05 25 22.6**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=259,slow=11,SNR=12						
CN2	**Changchun**	**20.70**	**48**	*e*P	**P**	**05 25 26.9**	**+0.7**
MK31	**Makanchi Array**	**22.58**	**318**	*e*P	**P**	**05 25 47.1**	**+0.9**
MKAR	**Makanchi Array**	**22.58**	**318**	P	**P**	**05 25 47.3**	**+1.0**

	comp=Z,1.1nm,0.4s,mb3.6,baz=118,slow=12,SNR=19								
UCH	**Uchtor**	**25.80**	**303**	*e*P		**P**	**05 26 19.0**	**+2.0**
	comp=Z,2.4nm,1.0s,mb3.7								
AAK	**Ala-Archa**	**25.91**	**303**	LR		LR	05 38 27.1		
	comp=Z,37nm,20.4s,baz=119,slow=41								
ZAA0	**Zalesovo Array**	**26.24**	**334**	*e*P		**P**	**05 26 20.5**	**-0.4**
ZALV	**Zalesovo Beam**	**26.24**	**334**	P		**P**	**05 26 20.9**	**0.0**
	comp=Z,2.0nm,0.5s,mb3.9,baz=131,slow=9.5,SNR=12								
KURK	**Kurchatov**	**26.82**	**323**	P		**P**	**05 26 25.8**	**-0.3**
	comp=Z,0.6nm,0.4s,mb3.4,baz=126,slow=8.4,SNR=6.8								
ABKAR	**Akbulak array**	**37.33**	**311**	*e*P		**P**	**05 27 58.5**	**+0.4**
	comp=Z,0.3nm,0.4s,mb3.5								
ARCES	**ARCESS Array B**	**56.77**	**336**	P		**P**	**05 30 29.1**	**-0.4**
	comp=Z,1.6nm,0.9s,mb4.0,baz=92,slow=8.1,SNR=3.7								
AKASG	**Malin Array Be**	**57.02**	**313**	P		**P**	**05 30 30.6**	**-1.0**
	comp=Z,1.2nm,0.4s,mb4.3,baz=69,slow=7.7,SNR=3.5								
WRA	**Warramunga Arr**	**58.92**	**146**	P		**P**	**05 30 44.3**	**-0.9**
	comp=Z,1.6nm,0.5s,mb4.3,baz=339,slow=7.6,SNR=10								
ASAR	**Alice Springs**	**61.95**	**149**	P		**P**	**05 31 05.0**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.9,baz=341,slow=6.8,SNR=8.6								
ILAR	**Eielson Array**	**69.34**	**26**	P		**P**	**05 31 51.5**	**-1.6**
	comp=Z,0.3nm,0.7s,mb3.3,baz=288,slow=4.6,SNR=5.9								
YKA	**Yellowknife Ar**	**81.16**	**17**	P		**P**	**05 33 00.7**	**-0.5**
	comp=Z,0.4nm,0.5s,mb3.6,baz=324,slow=5.2,SNR=3.5								

NIED ***14*** *05:34:00, 40.°00N×144.°10E, h8km, Mw3.5 Best double couple: M0 2.05000×10^14 NP1:φs158.00000°, δ63.00000°, λ-130.00000°. NP2:φs40.00000°, δ47.00000°, λ-38.00000°.*

ISCJB ***14*** *05:34:16.2±0.8, 39.°99N±0.°04×144.°23E±0.°06, h33km, mb3.4/2, MS3.2/3, Error ellipse: s-maj=7.5km s-min=3.8km az=31.6*

NEIC ***14*** *05:34:17.2, 40.°03N×144.°10E, h33km, MG3.8(JMA), After JMA.*

JMA ***14*** *05:34:17.1±0.2, 40.°03N×144.°10E, h33km, M3.8*

IDC ***14*** *05:34:24.0±1.3, 40.°41N×142.°58E, h0km, mb3.5/4, mb1 3.6/6, mb1mx3.4/25, mbtmp3.4/6, ML3.2/2, MS3.2/3, Ms1 3.2/3, ms1mx2.4/27, Error ellipse: s-maj=33.1km s-min=19.7km az=106.0*

ISC 14 05:34:17.9±0.8, 39.°99N±0.°04×144.°21E±0.°06, h35km, n25, σ1°s03/39, mb3.4/2, MS3.2/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.80**	**269**	P	**Pn**	**05 34 45.6**	**-0.8**
JTH				*e*S	**Sn**	**05 35 06.9**	**-1.1**
MIYJ	**Miyakonagasawa**	**1.89**	**258**	P	**Pn**	**05 34 47.3**	**-0.3**
MIYJ				*e*S	**Sn**	**05 35 09.4**	**-0.7**
JANG	**Nango**	**2.10**	**281**	P	**Pn**	**05 34 50.0**	**-0.5**
JANG				*e*S	**Sn**	**05 35 14.1**	**-1.2**
ERM	**Erimo**	**2.17**	**339**	*e*Pn	**Pn**	**05 34 51.5**	**0.0**
ERM				*e*Sg	**Sn**	**05 35 18.3**	**+1.2**
JOM	**Ohasama**	**2.31**	**258**	P	**Pn**	**05 34 53.8**	**+0.5**
JOM				*e*S	**Sn**	**05 35 20.4**	**-0.1**
JNBK	**Urakawa-nobuka**	**2.53**	**335**	P	**Pn**	**05 34 56.9**	**+0.4**
JNBK				*e*S	**Sn**	**05 35 28.1**	**+2.0**
JMK	**Ichinoseki**	**2.54**	**247**	P	**Pn**	**05 34 56.3**	**-0.2**
JMK				*e*S	**Sn**	**05 35 25.6**	**-0.5**
JCH	**Churui**	**2.69**	**347**	P	**Pn**	**05 34 58.3**	**-0.4**
JCH				*e*S	**Sn**	**05 35 29.5**	**-0.5**
JOT	**Ohata**	**2.77**	**301**	P	**Pn**	**05 35 00.4**	**+0

ellipse: s-maj=85.0km s-min=9.3km az=86.5
ISCJB ***14*** *05:59:19.3±0.2, 83.56N±0.04×114.4E±0.4, h10km, mb4.3/61, MS3.3/15, Error ellipse: s-maj=7.7km s-min=4.8km az=135.1*
IDC ***14*** *05:59:19.1±0.6, 83.48N×115.14E, h0km, mb3.9/17, mb1 4.1/17, mb1mx4.0/24, mbtmp4.0/17, MS3.2/12, Ms1 3.2/12, ms1mx2.9/42, Error ellipse: s-maj=20.4km s-min=13.4km az=143.0*
BJI ***14*** *05:59:20.0, 83.60N×114.10E, h10km, mB4.7/12, mb4.6/21, Ms4.3/10, Ms7 4.0/10*
NEIC ***14*** *05:59:21.1±0.2, 83.59N×114.06E, h10km, mb4.4/29, Error ellipse: s-maj=8.1km s-min=4.3km az=138.0*

ISC 14 05:59:21.3±0.2, 83.56N±0.04×114.3E±0.4, h10km, (h15km±6km:pP-P), n100, σ0s88/94, mb4.3/61, MS3.3/15, 2C-2D, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIXI	**Tiksi**	**12.29**	**158**	*e*Pn	**Pn**	**06 02 15.9**	**-0.2**
TIXI	**Tiksi**	**12.29**	**158**	*e*P	**Pn**	**06 02 15.0**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SPITS	**Spitsbergen Ar**	**14.30**	**304**	Pn	**Pn**	**06 02 39.9**	**-3.4**
	baz=56,slow=12,SNR=3.1						
ARCES	**ARCESS Array B**	**21.42**	**286**	P	**P**	**06 04 08.3**	**-0.5**
	comp=Z,7.0nm,0.9s,mb4.0,baz=24,slow=9.3,SNR=7.2						
APA	**Apatity**	**22.43**	**277**	⇑*i*P	**P**	**06 04 29.0**	**+9.4**
APA				*e*S	**S**	**06 08 26.0**	**+0.4**
APA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.3						
SEY	**Seymchan**	**22.45**	**132**	⇓*i*P	**P**	**06 04 19.5**	**-0.3**
JMIC	**Jan Mayen**	**23.27**	**316**	LR	LR	06 12 00.7	
	comp=Z,25nm,18.2s,MS2.7,baz=56,slow=33						
INK	**Inuvik**	**24.97**	**55**	*e*P	**P**	**06 04 43.7**	**-0.6**
	comp=Z,17nm,1.3s,mb4.4						
INK	**Inuvik**	**24.97**	**55**	P	**P**	**06 04 43.4**	**-0.9**
	comp=Z,2.5nm,0.9s,mb3.7,baz=351,slow=8.7,SNR=2.6						
INK	**Inuvik**	**24.97**	**55**	*e*P	**P**	**06 04 43.7**	**-0.6**
INK				pmax	pmax		
	comp=Z,17nm,1.3s						
COLA	**College**	**26.88**	**69**	*e*P	**P**	**06 05 02.5**	**+0.9**
	comp=Z,6.1nm,0.9s,mb4.1						
COLA	**College**	**26.88**	**69**	*e*P	**P**	**06 05 02.5**	**+0.9**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
ILAR	**Eielson Array**	**27.08**	**68**	P	**P**	**06 05 04.0**	**+0.6**
	comp=Z,2.0nm,1.1s,mb3.6,baz=346,slow=7.9,SNR=7.3						
ILAR				LR	LR	06 15 16.1	
	comp=Z,79nm,21.9s,MS3.2,baz=307,slow=35						
KLMR	**Klimovskoe**	**28.25**	**267**	P	**P**	**06 05 12.3**	**-1.6**
KLMR				pmax	pmax		
	comp=Z,42nm,2.1s,mb4.7						
FINES	**FINESS Array B**	**29.19**	**280**	LR	LR	06 20 15.5	
	comp=Z,36nm,21.2s,MS3.0,baz=333,slow=43						
ARU	**Arti**	**30.52**	**245**	*c i*P	**P**	**06 05 33.6**	**-0.4**
ARU						06 06 30.0	
ARU				S	**S**	**06 10 35.8**	**+0.8**
ARU				SS	SS	06 12 08.5	-36
ARU				pmax	pmax		
	comp=Z,9.0nm,2.5s,mb4.2						
ZALV	**Zalesovo Beam**	**30.74**	**215**	P	**P**	**06 05 35.3**	**-0.7**
	comp=Z,0.5nm,0.3s,mb3.8,baz=10,slow=9.0,SNR=4.7						
ZALV				LR	LR	06 18 52.2	
	comp=Z,56nm,19.0s,MS3.2,baz=338,slow=38						
NOA	**NORSAR Array B**	**31.18**	**294**	LR	LR	06 18 43.0	
	comp=Z,14nm,19.0s,MS2.7,baz=10.0,slow=37						
YKA	**Yellowknife Ar**	**32.27**	**41**	P	**P**	**06 05 48.0**	**-1.4**
	comp=Z,0.5nm,0.8s,mb3.4,baz=348,slow=7.5,SNR=2.7						
BRVK	**Borovoye**	**32.74**	**231**	*e*P	**P**	**06 05 53.8**	**+0.3**
	comp=Z,8.9nm,1.1s,mb4.6						
BRVK	**Borovoye**	**32.74**	**231**	⇓*i*P	**P**	**06 05 53.9**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.4						
BVAR	**Borovoye Array**	**32.76**	**231**	P	**P**	**06 05 53.9**	**+0.2**
	comp=Z,2.1nm,0.8s,mb4.1,baz=0.0,slow=6.7,SNR=8.7						
KURK	**Kurchatov**	**34.39**	**221**	*e*P	**P**	**06 06 07.5**	**-0.4**
	comp=Z,0.4nm,0.9s,mb3.4						
KURK				*e*PP	PP	06 07 26.2	+0.7
KURK	**Kurchatov**	**34.39**	**221**	*e*P	**P**	**06 06 08.1**	**+0.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
DLBC	**Dease Lake**	**34.98**	**56**	LR	LR	06 20 36.8	
	comp=Z,40nm,20.4s,MS3.2,baz=50,slow=37						
ULN	**Ulaanbaatar**	**35.90**	**188**	*i* P	**P**	**06 06 21.3**	**+0.3**
SONM	**Songino Array**	**35.95**	**199**	P	**P**	**06 06 21.0**	**-0.4**
	comp=Z,1.9nm,1.1s,mb3.9,baz=357,slow=8.9,SNR=7.9						
AKTO	**Aktyubinsk**	**36.49**	**243**	LR	LR	06 22 38.7	
	comp=Z,62nm,20.4s,MS3.4,baz=95,slow=38						
ABKAR	**Akbulak array**	**37.47**	**241**	*e*P	**P**	**06 06 34.1**	**-0.2**
	comp=Z,2.4nm,0.9s,mb4.0						
VSR	**Storozhevoye**	**37.75**	**263**	*e*P	**P**	**06 06 36.0**	**-0.7**
VSR				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.6						
VSR				pmax	pmax		
	comp=N,2.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,2.0nm,0.3s						
MK31	**Makanchi Array**	**38.03**	**216**	*e*P	**P**	**06 06 38.0**	**-1.1**
MKAR	**Makanchi Array**	**38.03**	**216**	P	**P**	**06 06 37.9**	**-1.2**
	comp=E,4.9nm,1.0s,mb4.2,baz=1.1,slow=6.6,SNR=22						
MKAR				PcP	PcP	06 08 52.6	-1.5
	comp=E,0.8nm,0.8s,baz=38,slow=2.6,SNR=3.7						
MDJ	**Mudanjiang**	**39.35**	**163**	P	**P**	**06 06 49.3**	**-0.9**
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,55nm,5.3s						
AKASG	**Malin Array Be**	**39.38**	**273**	P	**P**	**06 06 49.9**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.5,baz=13,slow=9.3,SNR=2.7						
CN2	**Changchun**	**40.05**	**167**	*e*P	**P**	**06 06 59.5**	**+3.5**
CN2				*e*pP	pP	06 07 03.9	+4.8
CN2				*e*PP	PP	06 08 35.3	+7.5
WMQ	**Urumqi**	**40.66**	**210**	*e*P	**P**	**06 07 02.6**	**+1.6**
WMQ				pP	pP	06 07 07.0	+2.9
WMQ				sP	sP	06 07 09.6	+4.2
WMQ				PP	PP	06 08 40.0	+5.6
WMQ				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.1						
WMQ				pmax	pmax		
	comp=Z,49nm,4.2s						
WMQ				LR	LR		
	comp=N,77nm,22.4s						
WMQ				LR	LR		
	comp=Z,60nm,23.0s,MS3.4						
BBB	**Bella Bella**	**41.34**	**56**	LR	LR	06 24 40.7	
	comp=Z,34nm,19.8s,MS3.2,baz=87,slow=37						
MEM	**Membach**	**42.00**	**295**	P	**P**	**06 07 12.7**	**+0.7**
TKM2	**Tokmak 2**	**42.37**	**223**	*e*P	**P**	**06 07 15.9**	**+0.9**
	comp=Z,1.6nm,0.8s,mb3.7						
TKM2	**Tokmak 2**	**42.37**	**223**	*e*P	**P**	**06 07 15.9**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
DOU	**Dourbes**	**42.65**	**297**	P	**P**	**06 07 15.8**	**-1.4**
AAK	**Ala-Archa**	**42.74**	**224**	*e*P	**P**	**06 07 19.1**	**+1.0**
	comp=Z,2.2nm,0.5s,mb4.1						
AAK	**Ala-Archa**	**42.74**	**224**	LR	LR	06 27 42.6	
	comp=Z,44nm,18.3s,MS3.4,baz=336,slow=40						
AAK	**Ala-Archa**	**42.74**	**224**	*e*P	**P**	**06 07 19.1**	**+1.1**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
EKS2	**Erkin-Say**	**42.77**	**225**	*e*P	**P**	**06 07 18.7**	**+0.4**
	comp=Z,1.3nm,0.6s,mb3.8						
HHC	**Hu-ho-hao-te**	**42.87**	**183**	*e*P	**P**	**06 07 19.3**	**+0.2**
HHC				pP	pP	06 07 23.3	+1.1
HHC				sP	sP	06 07 26.0	+2.5
HHC				PP	PP	06 09 01.3	+3.0
HHC				*e*S	**S**	**06 13 42.3**	**-0.9**
HHC				SS	SS	06 16 47.5	-6.5
HHC				ScS	ScS	06 17 17.3	-2.1
HHC				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
HHC				pmax	pmax		
	comp=Z,89nm,4.9s						
HHC				LR	LR		
	comp=N,87nm,13.1s						
HHC				LR	LR		
	comp=E,55nm,9.4s						
HHC				LR	LR		
	comp=Z,66nm,14.3s,MS3.7						
UCH	**Uchtor**	**43.14**	**224**	*e*P	**P**	**06 07 21.5**	**+0.2**
	comp=Z,3.4nm,0.9s,mb4.1						
AML	**Almayashu**	**43.30**	**225**	*e*P	**P**	**06 07 24.1**	**+1.4**
	comp=Z,2.3nm,0.7s,mb4.0						
BJI	**Beijing**	**43.67**	**178**	P	**P**	**06 07 26.3**	**+0.7**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.6						
ANN	**Anapa**	**44.28**	**263**	*e*P	**P**	**06 07 29.3**	**-1.1**
ANN				pmax	pmax		
	comp=Z,36nm,1.9s,mb4.8						
KIV	**Kislovodsk**	**44.53**	**258**	*e*P	**P**	**06 07 33.4**	**+0.9**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
DAVOX	**Davos/Dischmat**	**45.38**	**291**	LR	LR	06 27 59.3	
	comp=Z,28nm,20.3s,MS3.2,baz=82,slow=38						
KSH	**Kashi**	**45.72**	**222**	*e*P	**P**	**06 07 45.4**	**+3.4**
KSH				*e*pP	pP	06 07 50.3	+5.2
KSH				*e*sP	sP	06 07 52.5	+6.2
KSH				*e*PcP	PcP	06 09 23.0	+3.4
KSH				*e*PP	PP	06 09 33.3	+4.6
KSH				*e*ScP	ScP	06 13 14.3	+2.3
KSH				*e*PcS	PcS	06 13 16.5	+2.8
KSH				*e*S	**S**	**06 14 28.6**	**+3.9**
KSH				*e*ScS	ScS	06 17 37.5	0.0
KSH				*e*SS	SS	06 17 46.3	-2.2
KSH				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
KSH				pmax	pmax		
	comp=Z,86nm,3.9s						
KSH				LR	LR		
	comp=N,43nm,5.0s						
KSH				LR	LR		
	comp=E,69nm,5.4s						
KSH				LR	LR		
	comp=Z,43nm,5.5s						
NEW	**Newport**	**46.19**	**46**	*e*P	**P**	**06 07 45.5**	**-0.1**
	comp=Z,2.9nm,0.9s,mb4.2						
NEW	**Newport**	**46.19**	**46**	*e*P	**P**	**06 07 45.5**	**-0.1**
NEW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LZH	**Lanzhou**	**47.73**	**192**	*e*P	**P**	**06 07 58.1**	**+0.3**
LZH				pP	pP	06 08 02.6	+1.7
LZH				sP	sP	06 08 05.0	+2.9
LZH				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.0						
LZH				pmax	pmax		
	comp=Z,56nm,6.2s						
LZH				LR	LR		
	comp=E,350nm,15.2s						
LZH				LR	LR		
	comp=Z,400nm,18.3s,MS4.4						
GNI	**Garni**	**48.06**	**255**	LR	LR	06 32 21.3	
	comp=Z,33nm,20.8s,MS3.3,baz=270,slow=41						
BOZ	**Bozeman (W)**	**49.23**	**42**	*e*P	**P**	**06 08 09.6**	**+0.4**
	comp=Z,31nm,2.3s,mb4.9						
BOZ	**Bozeman (W)**	**49.23**	**42**	*e*P	**P**	**06 08 09.6**	**+0.5**
BOZ				pmax	pmax		
	comp=Z,31nm,2.3s,mb4.9						
GCMT	**Greycliff**	**49.23**	**40**	*e*P	**P**	**06 08 09.3**	**+0.2**
	comp=Z,3.5nm,1.0s,mb4.3						
BMO	**Blue Mountains**	**49.57**	**47**	*e*P	**P**	**06 08 12.3**	**+0.5**
	comp=Z,28nm,2.3s,mb4.9						
BRTR	**Keskin Array B**	**49.72**	**266**	P	**P**	**06 08 13.8**	**+0.8**
	comp=Z,2.7nm,1.1s,mb4.2,baz=15,slow=5.1,SNR=7.8						
FLWY	**Flagg Ranch**	**50.85**	**41**	*e*P	**P**	**06 08 29.2**	**+7.8**
	comp=Z,27nm,1.7s,mb4.9						
IMW	**Indian Meadow**	**51.02**	**41**	*e*P	**P**	**06 08 23.8**	**+1.0**
	comp=Z,3.3nm,1.0s,mb4.2						
MOOW	**Moose Ponds**	**51.18**	**41**	*e*P	**P**	**06 08 24.6**	**+0.6**
	comp=Z,46nm,2.8s,mb4.9						
KBL	**Kabul**	**51.22**	**229**	*e*P	**P**	**06 08 23.6**	**-0.8**
	comp=Z,3.3nm,0.4s,mb4.6						
KBL	**Kabul**	**51.22**	**229**	*e*P	**P**	**06 08 23.6**	**-0.8**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
RSSD	**Black Hills**	**51.28**	**35**	*e*P	**P**	**06 08 24.6**	**-0.1**
	comp=Z,3.4nm,0.8s,mb4.3						
RSSD	**Black Hills**	**51.28**	**35**	*e*P	**P**	**06 08 24.6**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
NJ2	**Nanjing**	**51.66**	**175**	*e*P	**P**	**06 08 25.8**	**-1.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
TIP	**Timpagrande**	**52.15**	**283**	*e*P	**P**	**06 08 31.8**	**+0.5**
	comp=Z,10nm,1.2s,mb4.6						
CD2	**Chengdu**	**52.90**	**191**	P	**P**	**06 08 37.5**	**+0.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
WHN	**Wuhan**	**53.14**	**180**	P	**P**	**06 08 32.0**	**-6.7**
HWUT	**Hardware Ranch**	**53.25**	**42**	*e*P	**P**	**06 08 39.6**	**+0.3**
	comp=Z,5.1nm,1.0s,mb4.4						
M13A	**Montello**	**53.29**	**45**	*e*P	**P**	**06 08 40.5**	**+0.8**
	comp=Z,3.6nm,0.9s,mb4.3						
RWWY	**Rawlins**	**53.48**	**38**	*e*P	**P**	**06 08 40.8**	**-0.3**
	comp=Z,10nm,1.0s,mb4.7						
ESDC	**Sonseca Array**	**53.81**	**303**	P	**P**	**06 08 44.2**	**+0.7**
	comp=Z,0.3nm,0.3s,mb3.7,baz=1.1,slow=6.4,SNR=4.9						
NVAR	**Mina Array Bea**	**55.86**	**49**	P	**P**	**06 08 57.7**	**-0.7**
	comp=Z,0.4nm,0.7s,mb3.6,baz=14,slow=8.5,SNR=3.1						
SMCO	**Snowmass**	**56.00**	**38**	*e*P	**P**	**06 08 59.9**	**+0.5**
	comp=Z,6.5nm,1.3s,mb4.5						
MMAI	**Mount Meron Ar**	**56.15**	**263**	P	**P**	**06 09 01.3**	**+0.8**
	comp=Z,0.8nm,0.3s,mb4.3,baz=14,slow=13,SNR=2.9						
MSU	**Marysvale**	**56.28**	**43**	*e*P	**P**	**06 09 02.1**	**+0.8**
KEST	**Kesra**	**56.37**	**289**	*e*P	**P**	**06 09 02.9**	**+0.9**
KEST	**Kesra**	**56.37**	**289**	P	**P**	**06 09 03.0**	**+1.0**
	comp=Z,3.6nm,0.9s,mb4.4,baz=322,slow=3.5,SNR=13						
PV01	**Paradox Valley**	**56.92**	**40**	*e*P	**P**	**06 09 06.2**	**+0.3**
	comp=Z,597nm,1.0s						
SDCO	**Great Sand Dun**	**57.52**	**37**	*e*P	**P**	**06 09 10.6**	**+0.4**
	comp=Z,6.4nm,1.3s,mb4.5						
MVCO	**Mesa Verde**	**57.85**	**40**	*e*P	**P**	**06 09 12.8**	**+0.4**
	comp=Z,4.1nm,0.9s,mb4.5						
KMI	**Kunming**	**58.68**	**192**	P	**P**	**06 09 19.5**	**+1.1**
KMI				pP	pP	06 09 23.3	+1.7
KMI				sP	sP	06 09 24.4	+1.6
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.1						
ANMO	**Albuquerque**	**60.24**	**38**	*e*P	**P**	**06 09 28.7**	**-0.3**
	comp=Z,3.3nm,1.0s,mb4.3						
ANMO	**Albuquerque**	**60.24**	**38**	*e*P	**P**	**06 09 28.7**	**-0.4**
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WMOK	**Wichita Mounta**	**60.94**	**31**	*e*P	**P**	**06 09 32.6**	**-1.2**
	comp=Z,2.2nm,1.2s,mb4.2						
WMOK	**Wichita Mounta**	**60.94**	**31**	*e*P	**P**	**06 09 32.6**	**-1.3**
WMOK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.1						
JCT	**Junction City**	**65.12**	**32**	*e*P	**P**	**06 10 00.2**	**-1.4**
	comp=Z,4.6nm,1.1s,mb4.4						
JCT	**Junction City**	**65.12**	**32**	*e*P	**P**	**06 10 00.3**	**-1.4**
JCT				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
CMAR	**Chiang Mai Arr**	**65.42**	**196**	P	**P**	**06 10 01.8**	**-2.0**
	comp=Z,0.9nm,0.4s,mb4.1,baz=350,slow=6.8,SNR=6.9						
TXAR	**Lajitas Array**	**66.01**	**36**	P	**P**	**06 10 06.5**	**-0.9**
	comp=Z,1.3nm,0.9s,mb4.0,baz=349,slow=4.6,SNR=15						
TXAR				LR	LR	06 39 03.9	
	comp=Z,34nm,21.7s,MS3.5,baz=40,slow=36						
TORD	**Torodi Ar. Bea**	**79.50**	**294**	P	**P**	**06 11 27.5**	**-0.2**
TORD	**Torodi Ar. Bea**	**79.50**	**294**	P	**P**	**06 11 27.5**	**-0.2**
	comp=Z,3.0nm,0.7s,mb4.3,baz=356,slow=6.2,SNR=17						
DBIC	**Dimbokro**	**86.56**	**300**	P	**P**	**06 12 04.0**	**-0.3**
	comp=Z,6.4nm,1.1s,mb4.8,baz=281,slow=5.2,SNR=3.1						
DBIC	**Dimbokro**	**86.56**	**300**	P	**P**	**06 12 04.0**	**-0.2**
DBIC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MAW	**Mawson**	**152.97**	**221**	PKPbc	PKPbc	06 19 16.2	-0.3
	comp=Z,1.6nm,1.0s,baz=315,slow=6.8,SNR=2.4						
MAW				PKPab	PKPab	06 19 26.3	-1.7
	comp=Z,1.9nm,0.8s,baz=0.0,slow=5.0,SNR=4.6						

NNC 14 05:59:40.9±5.7, 53.91N×85.84E, h0km, mb3.6, mpv3.3, 3C-3D, Error ellipse: s-maj=57.6km s-min=31.2km az=75.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**5.46**	**237**	⇑Pn	Pn	06 01 02.6	-0.9
	4.5nm,1.6s						
KURK				⇓Lg		06 02 37.1	
	7.4nm,1.3s						
MK31	**Makanchi Array**	**7.48**	**199**	⇓Pn	Pn	06 01 33.3	+2.1
	0.8nm,0.5s,baz=26,slow=13,SNR=19						
MK31				⇑Sn	Sn	06 02 56.6	-0.1
	0.2nm,0.4s,baz=26,slow=27,SNR=2.8						
MK31				⇑Lg		06 03 39.3	
	1.3nm,0.8s,baz=23,slow=32,SNR=3.6						
VOSK	**Vostochnaya**	**8.98**	**268**	⇓Pn	Pn	06 01 51.1	-0.6
	0.9nm,0.5s						

IDC 14 06:03:28.4±11.0, 9.83S×160.45E, h0km, mb3.7/3, mb1 4.1/4, mb1mx3.7/17, mbtmp3.9/4, Error ellipse: s-maj=327.5km s-min=37.9km az=117.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**17.07**	**232**	P	Pn	06 07 28.8	+0.1
	baz=61,slow=14,SNR=2.6						
WRA	**Warramunga Arr**	**27.12**	**245**	P	P	06 09 14.1	+0.7
	1.0nm,0.8s,baz=74,slow=10.0,SNR=5.2						
ASAR	**Alice Springs**	**28.83**	**238**	P	P	06 09 28.1	-0.5
	0.4nm,0.5s,baz=65,slow=9.9,SNR=4.7						
SONM	**Songino Array**	**74.67**	**326**	P	P	06 15 09.9	+0.2
	0.8nm,0.7s,baz=133,slow=6.1,SNR=5.1						

ISCJB ***14*** *06:10:15.5±0.7, 83.7N±0.1×115.7E±0.9, h10km, mb3.6/10, MS3.0/5, Error ellipse: s-maj=16.6km s-min=13.4km az=141.9*
IDC ***14*** *06:10:15.6±0.9, 83.64N×116.87E, h0km, mb3.6/9, mb1 3.7/9, mb1mx3.6/24, mbtmp3.6/9, MS3.1/5, Ms1 3.1/5, ms1mx2.7/42, Error ellipse: s-maj=27.2km s-min=19.3km az=141.0*
NEIC ***14*** *06:10:18.0±0.8, 83.68N×114.98E, h10km, Error ellipse: s-maj=18.2km s-min=15.3km az=105.0*

ISC 14 06:10:17.5±0.7, 83.7N±0.1×115.8E±0.9, h10km, n19, σ1s26/14, mb3.6/10, MS3.0/5, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPITS	**Spitsbergen Ar**	**14.35**	**305**	Pn	**Pn**	**06 13 38.1**	**-2.1**
	baz=7.8,slow=16,SNR=5.4						
ARCES	**ARCESS Array B**	**21.53**	**287**	P	**P**	**06 15 06.5**	**+0.3**
	1.6nm,0.7s,mb3.6,baz=17,slow=12,SNR=2.6						
ILAR	**Eielson Array**	**26.88**	**70**	P	**P**	**06 15 55.9**	**-1.9**
	0.3nm,0.8s,mb2.9,baz=332,slow=12,SNR=4.1						
ZALV	**Zalesovo Beam**	**30.95**	**216**	LR	LR	06 29 51.9	
	comp=Z,38nm,19.0s,MS3.1,baz=73,slow=38						
NOA	**NORSAR Array B**	**31.27**	**295**	LR	LR	06 30 09.4	
	comp=Z,14nm,18.9s,MS2.7,baz=15,slow=38						
HFS	**Hagfors**	**31.91**	**292**	LR	LR	06 29 09.4	
	comp=Z,31nm,20.2s,MS3.0,baz=1.4,slow=35						
BVAR	**Borovoye Array**	**32.98**	**232**	P	**P**	**06 16 52.5**	**+0.7**
	0.5nm,0.4s,mb3.8,baz=23,slow=5.2,SNR=2.5						
KURK	**Kurchatov**	**34.60**	**223**	P	**P**	**06 17 06.2**	**+0.3**
KURK	**Kurchatov**	**34.60**	**223**	P	**P**	**06 17 06.2**	**+0.3**
	0.5nm,0.7s,mb3.5,baz=19,slow=7.3,SNR=2.6						
SONM	**Songino Array**	**36.12**	**191**	P	**P**	**06 17 18.6**	**-0.4**
	0.2nm,0.4s,mb3.4,baz=7.6,slow=4.4,SNR=2.9						
AKTO	**Aktyubinsk**	**36.70**	**245**	LR	LR	06 33 26.8	
	comp=Z,44nm,21.4s,MS3.2,baz=203,slow=38						
MK31	**Makanchi Array**	**38.24**	**218**	*e*P	**P**	**06 17 36.2**	**-0.8**
MKAR	**Makanchi Array**	**38.24**	**218**	P	**P**	**06 17 36.5**	**-0.5**
	1.2nm,0.9s,mb3.6,baz=358,slow=6.3,SNR=9.1						
BBB	**Bella Bella**	**41.13**	**57**	LR	LR	06 33 42.6	
	comp=Z,37nm,21.2s,MS3.2,baz=94,slow=34						
BRTR	**Keskin Array B**	**49.89**	**267**	P	**P**	**06 19 12.2**	**+1.8**
	0.9nm,1.0s,mb3.8,baz=352,slow=8.7,SNR=3.4						
KEST	**Kesra**	**56.47**	**291**	P	**P**	**06 19 57.7**	**-1.2**
	1.1nm,0.8s,mb3.9,baz=27,slow=11,SNR=4.4						
PV01	**Paradox Valley**	**56.71**	**41**	*e*P	**P**	**06 20 03.0**	**+2.4**
	158nm,1.0s						
TXAR	**Lajitas Array**	**65.80**	**37**	P	**P**	**06 21 02.4**	**+0.2**
	1.8nm,1.2s,mb4.0,baz=48,slow=1.9,SNR=5.6						
TORD	**Torodi Ar. Bea**	**79.59**	**295**	P	**P**	**06 22 26.0**	**+1.6**
	0.9nm,0.8s,mb3.8,baz=351,slow=6.2,SNR=5.3						

ISK ***14*** *06:25:12.4, 34.61N×33.04E, h16km, ML3.7*
IDC ***14*** *06:25:13.5±1.2, 34.73N×32.96E, h0km, mb3.7/4, mb1 3.6/9, mb1mx3.5/23, mbtmp3.5/9, ML3.4/5, Error ellipse: s-maj=25.9km s-min=16.4km az=75.0*
ISCJB ***14*** *06:25:14.5±0.5, 34.72N±0.02×33.01E±0.03, h12km±3km, mb3.5/5, Error ellipse: s-maj=4.1km s-min=2.9km az=157.7*
GII ***14*** *06:25:15.5±0.0, 34.91N×33.14E, h15km±2km, Md2.7/3*
NEIC ***14*** *06:25:16.0, 34.81N×33.11E, h15km, ML3.7(ISK), ML3.6(NIC), After NIC.*
NEIC Felt [III] at Limassol and Prastio.
NIC ***14*** *06:25:16.0±0.4, 34.81N×33.11E, h15km, ML3.6, MW3.7*
NIC Felt earthquake; Maximum Intensity 3; Felt I=III MM at Limassol, Germasogia and Prastio.
CSEM ***14*** *06:25:16.1±0.1, 34.79N×33.04E, h15km, Mw3.7, Error ellipse: s-maj=4.1km s-min=3.0km az=78.0*
DDA ***14*** *06:25:18.3, 35.12N×33.21E, h3km±4km, Md3.5*
HLW ***14*** *06:25:25.5, 34.21N×32.67E, h36km±48km*

ISC 14 06:25:16.3±0.4, 34.77N±0.02×33.06E±0.03, h15km±3km, n107, σ1s13/140, mb3.5/5, 10C-2D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SZAC	**Souni-Zanaja**	**0.15**	**266**	⇑P	**Pg**	**06 25 20.5**	**+0.4**
SZAC	**Souni-Zanaja**

KSHT	Keshet	2.90	127	Pn		Pn	06 26 01.5	-0.4
YURE	YUREGIR	2.93	45	*i* P		Pn	06 26 03.7	+1.3
YURE				*i* S		Sn	06 26 34.6	-2.7
YURE	YUREGIR	2.93	45	*i* P		Pn	06 26 03.7	+1.3
YURE				*i* S		Sn	06 26 34.6	-2.7
KARA	Karaisali	2.97	32	*e*PN		Pn	06 26 02.3	-0.6
KARA	Karaisali	2.97	32	*e*Pn		Pn	06 26 02.3	-0.6
MMLI	Mount Malkishu	3.04	139	Pn		Pn	06 26 03.3	-0.6
KORT	Korkueli	3.13	316	*i* P		Pn	06 26 09.3	+4.2
KORT				*i* S		Sg	06 26 57.1	+0.2
COBT	Iskenderun	3.14	55	*i* P		Pn	06 26 04.9	-0.3
COBT				*i* S		Sn	06 26 43.1	+0.7
COBT	Iskenderun	3.14	55	*i* P		Pn	06 26 04.9	-0.3
COBT				*i* S		Sn	06 26 43.1	+0.7
KONT	Konya--Tatoy	3.22	350	*e*PN		Pn	06 26 06.0	-0.3
KONT	Konya--Tatoy	3.22	350	*e*Pn		Pn	06 26 06.1	-0.3
ELL	Elmali	3.24	309	*e*PN		Pn	06 26 05.7	-0.9
ELL	Elmali	3.24	309	*e*Pn		Pn	06 26 05.7	-0.9
HMDT	Nahal Hemdat	3.24	140	Pn		Pn	06 26 06.4	-0.3
HMDT				Sn		Sn	06 26 46.5	+1.5
LADK	Ladik-KONYA	3.47	351	*e*PN		Pn	06 26 09.6	-0.2
LADK	Ladik-KONYA	3.47	351	*e*Pn		Pn	06 26 09.6	-0.2
DSI	Dead Sea	3.73	148	Pn		Pn	06 26 13.4	0.0
DSI				Sn		Sn	06 26 58.9	+1.8
MZDA	Masada	3.95	150	Pn		Pn	06 26 17.2	+0.8
AMAG	Maghara baz=172	4.11	178	P		Pn	06 26 18.9	+0.2
AMAG	Maghara	4.11	178	P		Pn	06 26 18.8	+0.2
ASF	Jabal al Asfar 1.1nm,0.3s,baz=200,slow=16,SNR=6.4	4.12	128	Pn		Pn	06 26 19.7	+1.0
ASF				Sn		Sn	06 27 08.7	+2.1
	2.1nm,0.3s,baz=354,slow=23,SNR=9.9							
KIZT	Kizilcal	4.21	347	*e*PN		Pn	06 26 20.6	+0.6
KIZT	Kizilcal	4.21	347	*e*Pn		Pn	06 26 20.6	+0.6
AVNT	Avonos	4.26	19	*i* P		Pn	06 26 22.6	+1.9
AVNT	Avonos	4.26	19	*i* P		Pn	06 26 22.5	+1.9
PRNI	Paran	4.70	159	Pn		Pn	06 26 26.7	0.0
KRMI	Paran Flat	4.84	163	Pn		Pn	06 26 28.9	+0.2
KRMI				Sn		Sn	06 27 26.3	+1.8
HHAG	Hagoal baz=187	4.87	190	P		Pn	06 26 27.0	-2.0
HHAG	Hagoal	4.87	190	P		Pn	06 26 27.0	-2.0
DAT	Datca	4.87	295	*e*PN		Pn	06 26 28.5	-0.5
DAT	Datca	4.87	295	*e*Pn		Pn	06 26 28.5	-0.5
SUZ	 baz=178	4.91	182	P		Pn	06 26 29.9	+0.3
SUZ		4.91	182	P		Pn	06 26 29.9	+0.2
KOT	Kottamia baz=190	4.94	193	P		Pn	06 26 29.4	-0.5
KOT				S		Sn	06 27 16.6	-10
	baz=190							
KOT	Kottamia	4.94	193	P		Pn	06 26 29.4	-0.5
BR131	Keskin Array S	4.97	5	Pn		Pn	06 26 32.9	+2.4
BR131	Keskin Array S	4.97	5	Pn		Pn	06 26 32.9	+2.5
BRTR	Keskin Array B 0.5nm,0.3s,baz=187,slow=14,SNR=19	4.97	5	Pn		Pn	06 26 31.5	+1.1
BRTR				Sn		Sn	06 27 31.6	+4.0
	baz=190,slow=23,SNR=2.8							
BRTR	Keskin Array B	4.97	5	Pn		Pn	06 26 31.5	+1.1
BODT	Bodrum	5.20	298	*e*PN		Pn	06 26 32.4	-1.1
BODT	Bodrum	5.20	298	*e*Pn		Pn	06 26 32.4	-1.1
MBRI	Mt Berech	5.20	162	Pn		Pn	06 26 33.7	+0.1
GLL	Jalalah baz=191	5.30	193	P		Pn	06 26 34.1	-0.8
GLL	Jalalah	5.30	193	P		Pn	06 26 34.1	-0.8
EIL	Elat 1.5nm,0.3s,baz=338,slow=12,SNR=8.5	5.33	162	Pn		Pn	06 26 34.5	-0.8
EIL				Sn		Sn	06 27 36.6	+0.2
	5.3nm,0.3s,baz=55,slow=11,SNR=8.2							
EIL	Elat	5.33	162	Pn		Pn	06 26 34.5	-0.8
EIL				Sn		Sn	06 27 36.7	+0.3
EIL	Elat	5.33	162	Pn		Pn	06 26 35.5	+0.2
EIL				Sn		Sn	06 27 38.1	+1.7
MALT	Malatya 8.5nm,0.7s	5.59	49	Pn		Pn	06 26 41.2	+2.4
HDHB	Dhahab baz=162	6.17	167	P		Pn	06 26 47.2	+0.3
HDHB	Dhahab	6.17	167	P		Pn	06 26 47.2	+0.3
HMAT	Matruh baz=239	6.21	236	P		Pn	06 26 47.4	0.0
HMAT				S		Sn	06 27 48.9	-9.2
	baz=239							
HMAT	Matruh	6.21	236	P		Pn	06 26 47.4	0.0
HKAT	Jabal Katrina baz=168	6.27	172	P		Pn	06 26 49.4	+1.0
HKAT	Jabal Katrina	6.27	172	P		Pn	06 26 49.4	+1.1
TR2	 baz=170	6.38	175	P		Pn	06 26 50.1	+0.2
TR2		6.38	175	P		Pn	06 26 50.1	+0.2
SLUM	 baz=249	7.35	246	P		Pn	06 27 03.1	+0.1
SLUM		7.35	246	P		Pn	06 27 03.2	+0.1
AKASG	Malin Array Be	16.17	351	Pn		Pn	06 29 01.0	-1.9
AKASG	Malin Array Be 0.2nm,0.3s,baz=175,slow=10,SNR=3.6	16.17	351	Pn		Pn	06 29 01.0	-1.9
AKASG	Malin Array Be	16.17	351	Pn		Pn	06 29 01.0	-1.9
FINES	FINESS Array B 2.4nm,0.7s,mb3.8,baz=160,slow=8.7,SNR=3.7	27.07	353	P		P	06 30 56.6	-1.3
FINES	FINESS Array B	27.07	353	P		P	06 30 56.6	-1.3
TORD	Torodi Ar. Bea 0.3nm,0.7s,mb3.3,baz=55,slow=6.0,SNR=2.1	35.60	241	P		P	06 32 12.4	-1.1
KURK	Kurchatov 0.3nm,0.3s,mb3.7,baz=267,slow=8.5,SNR=2.8	36.43	50	P		P	06 32 19.3	-0.9
KURK	Kurchatov	36.43	50	P		P	06 32 19.3	-0.9
MKAR	Makanchi Array 0.2nm,0.5s,mb3.1,baz=270,slow=7.2,SNR=3.9	38.57	57	P		P	06 32 38.8	+0.3
MKAR	Makanchi Array	38.57	57	P		P	06 32 38.8	+0.3
ZALV	Zalesovo Beam 0.4nm,0.3s,mb3.5,baz=263,slow=3.8,SNR=2.2	40.62	45	P		P	06 32 55.3	0.0

IDC **14** *06:33:30.0±0.7, 4°.16S×136°.99E, h0km, mb4.3/9, mb1 4.4/11,mb1mx4.3/15,mbtmp4.3/11, ML4.6/2, MS3.2/4, Ms1 3.2/4, ms1mx2.9/22, Error ellipse: s-maj=42.8km s-min=16.5km az=70.0*

NEIC **14** *06:33:31.6±0.4, 4°.28S×136°.80E, h10km, mb4.4/3, Error ellipse: s-maj=12.9km s-min=7.6km az=66.0*

NEIC Felt [III] at Timuka.

ISCJB **14** *06:33:32.9±1.0, 4°.43S±0°.04×136°.87E±0°.08, h33km±10km, mb4.7/22, MS3.2/2, Error ellipse: s-maj=13.4km s-min=6.0km az=170.3*

DJA **14** *06:33:36, 4°.30S×136°.94E, h73km, mb5.2/5*

ISC 14 06:33:35.5±0.9, **4°.46S**±0°.05×**136°.89E**±0°.08, **h41**km±10km, **n49,σ1°07/53, mb4.7/22, MS3.2/2, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAKI	Biak	3.34	346	P	Pn	06 34 24.7	-0.6
BAKI				S	Sn	06 35 02.4	-1.4
TLE	Tual	4.30	254	P	Pn	06 34 44.0	+5.6
TLE				S	Sn	06 35 32.5	+5.1
KAKA	Kakadu 54nm,0.5s	9.30	208	*e*P	Pn	06 35 47.7	+0.6
KAKA	Kakadu 151nm,0.5s	9.30	208	*e*Pn	Pn	06 35 47.8	+0.6
KAKA				*e*Sn	Sn	06 37 27.8	-2.8
KAKA	Kakadu 2μm132nm,0.5s	9.30	208	P	Pn	06 35 48.9	+1.8
LBMI	Labuha 55nm,0.9s	10.12	292	P	Pn	06 35 56.3	-2.1
COEN	Coen	11.29	147	*e*P	Pn	06 36 14.3	0.0
COEN	Coen 110nm,0.5s	11.29	147	*e*Pn	Pn	06 36 14.3	+0.1
COEN				*e*Sn	Sn	06 38 12.2	-6.9
COEN	Coen 3μm101nm,0.6s	11.29	147	P	Pn	06 36 14.5	+0.2
PMG	Port Moresby	11.31	116	*e*Pn	Pn	06 36 16.5	+1.9
KNA	Kununurra 38nm,0.5s	13.77	215	*e*P	Pn	06 36 49.0	+0.8
KNA	Kununurra 2μm165nm,0.8s	13.77	215	P	Pn	06 36 48.3	+0.1
MTSU	Mount Surprise 11nm,0.3s	15.41	152	*e*P	Pn	06 37 09.0	-1.1
MTSU				*e*S	S	06 39 50.2	-24
WRA	Warramunga Arr	15.59	189	Pn	Pn	06 37 10.4	-2.0
WRA				Sn	Sn	06 39 56.9	-7.2
WRA	Warramunga Arr 0.9nm,0.3s,baz=130,slow=1.4,SNR=24	15.59	189	Pn	Pn	06 37 10.4	-2.0
WRA				Sn	Sn	06 39 56.9	-7.2
	2.0nm,0.3s,baz=12,slow=22,SNR=8.0						
FITZ	Fitzroy Crossi 2.1nm,0.3s,baz=49,slow=12,SNR=43	17.46	218	P	Pn	06 37 35.2	-0.9
FITZ				S	S	06 40 39.3	-17
	4.0nm,0.3s,baz=193,slow=15,SNR=8.1						
FITZ				LR	LR	06 44 52.9	
	comp=Z,101nm,19.1s,baz=105,slow=38						
FITZ	Fitzroy Crossi	17.46	218	P	Pn	06 37 35.6	-0.5
CTA	Charters Tower 1.0nm,0.3s,baz=326,slow=9.9,SNR=14	18.01	150	P	Pn	06 37 45.9	+3.1
ASAR	Alice Springs 2.1nm,0.3s,baz=13,slow=11,SNR=88	19.31	188	P	Pn	06 37 59.8	+1.3
ASAR				S	S	06 41 28.9	-4.7
	0.6nm,0.3s,baz=13,slow=27,SNR=4.5						
GUMO	Guam	19.60	24	LR	LR	06 45 13.9	
	comp=Z,41nm,19.2s,baz=172,slow=36						
MBWA	Marble Bar	23.52	224	*e*P	P	06 38 43.4	+1.2
FORT	Forrest 8.9nm,0.5s,mb4.5	27.47	197	*e*P	P	06 39 19.1	+1.2
STKA	Stephens Creek 1.5nm,0.4s,mb4.0,baz=353,slow=15,SNR=2.6	27.63	171	P	P	06 39 22.1	+2.8
STKA				LR	LR	06 51 52.5	
	comp=Z,90nm,19.6s,MS3.4,baz=205,slow=40						
KSRS	Korea Array 1.0nm,0.7s,mb3.6,baz=172,slow=9.7,SNR=5.0	42.53	349	P	P	06 41 25.6	-1.5
KSRS				LR	LR	06 55 49.3	
	comp=Z,20nm,20.5s,MS3.0,baz=140,slow=32						
CMAR	Chiang Mai Arr 0.7nm,0.3s,mb3.8,baz=136,slow=8.3,SNR=5.6	43.79	302	P	P	06 41 37.4	-0.2
LZH	Lanzhou	50.83	325	*e*P	P	06 42 32.3	+0.2
LZH				pP	pP	06 42 37.0	-6.9
LZH				sP	sP	06 42 39.3	-9.3
LZH				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
GTA	Gaotai	55.43	325	*e*P	P	06 43 06.4	+0.4
GTA				pP	pP	06 43 10.4	-7.4
GTA				sP	sP	06 43 14.0	-8.6
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
TAPN	Taplejung comp=Z,13nm,0.5s,mb5.2	57.02	307	*e*P	P	06 43 17.6	+0.1
ODAN	Odare comp=Z,23nm,0.6s,mb5.4	57.07	306	*e*P	P	06 43 18.3	+0.4
RAMN	Ramite comp=Z,30nm,0.6s,mb5.5	57.74	306	*e*P	P	06 43 23.3	+0.7
SONM	Songino Array comp=Z,0.7nm,0.6s,mb3.8,baz=156,slow=6.9,SNR=3.1	58.55	336	P	P	06 43 27.2	-0.7
GUN	Gumba comp=Z,35nm,0.6s,mb5.5	58.73	306	*e*P	P	06 43 30.1	+0.6
PKI	Pulchoki	58.96	306	*e*P	P	06 43 31.3	+0.2
DMN	Daman comp=Z,26nm,0.6s,mb5.5	59.23	306	*e*P	P	06 43 33.5	+0.5
GKN	Gorkha comp=Z,27nm,0.7s,mb5.4	59.77	306	*e*P	P	06 43 37.1	+0.4
KOLN	Koldanda comp=Z,27nm,0.7s,mb5.5	60.51	305	*e*P	P	06 43 42.4	+0.6
MK31	Makanchi Array	70.08	323	*e*P	P	06 44 43.2	-0.2
MKAR	Makanchi Array comp=Z,5.8nm,0.5s,mb4.8,baz=109,slow=8.2,SNR=39	70.08	323	P	P	06 44 43.3	-0.1
ZALV	Zalesovo Beam comp=Z,1.5nm,0.6s,mb4.1,baz=108,slow=5.8,SNR=6.8	72.55	331	P	P	06 44 56.8	-1.4
UCH	Uchtor comp=Z,2.2nm,0.7s,mb4.2	73.05	317	*e*P	P	06 45 02.4	+1.0
AML	Almayashu comp=Z,3.0nm,0.6s,mb4.4	73.58	316	*e*P	P	06 45 05.4	+0.9
BVAR	Borovoye Array comp=Z,4.8nm,0.5s,mb4.7,baz=124,slow=8.1,SNR=20	79.72	326	P	P	06 45 38.7	-0.3
ABKAR	Akbulak array comp=Z,1.0nm,0.6s,mb4.1	84.89	320	*e*P	P	06 46 05.2	-0.9
AKTK	Aktyubinsk	86.35	321	P	P	06 46 13.1	-0.3
AKTO	Aktyubinsk comp=Z,0.6nm,0.3s,mb4.3,baz=101,slow=5.2,SNR=4.1	86.35	321	P	P	06 46 13.1	-0.3
ILAR	Eielson Array comp=Z,2.4nm,0.7s,mb4.5,baz=266,slow=4.3,SNR=29	88.17	25	P	P	06 46 21.0	-0.8
TORD	Torodi Ar. Bea	134.96	284	PKhKP	PKPpre	06 52 45.8	
	comp=Z,0.4nm,0.9s,baz=70,slow=2.7,SNR=3.2						
TORD				PKP	PKPdf	06 52 51.4	+0.1
	comp=Z,0.4nm,0.8s,baz=64,slow=2.2,SNR=2.8						
CPUP	Villa Florida comp=Z,1.9nm,0.5s,baz=194,slow=2.5,SNR=9.6	146.43	156	PKPbc	PKPbc	06 53 14.6	+1.6
LPAZ	La Paz comp=Z,2.1nm,0.8s,baz=249,slow=3.9,SNR=11	147.79	130	PKPbc	PKPbc	06 53 17.1	+0.2

ISCJB **14** *06:34:36.9±0.6, 56°.55N±0°.06×157°.67W±0°.10, h73km±8km, mb3.4/4, Error ellipse: s-maj=11.7km s-min=6.3km az=137.9*

NEIC **14** *06:34:39.0, 56°.31N×157°.57W, h52km, ML3.9(PMR), ML3.5(AEIC), After AEIC.*

IDC **14** *06:34:43.7±5.8, 56°.86N×157°.20W, h105km±39km, mb2.9/3, mb1 3.5/6, mb1mx3.3/26, mbtmp3.2/6, Error ellipse: s-maj=49.6km s-min=29.5km az=59.0*

ISC 14 06:34:38.2±0.6, **56°.48N**±0°.06×**157°.6W**±0°.1, **h71**km±8km, **n30,σ1°45/43, mb3.4/4, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHGN	Chignik	0.47	248	*e*P	Pn	06 34 48.6	-2.1
SDPT	Sand Point	1.96	236	*e*P	Pn	06 35 08.2	-1.1
OHAK	Old Harbor	2.50	71	*e*P	Pn	06 35 16.0	-0.6
KDAK	Kodiak Island	3.05	63	P	Pn	06 35 24.1	0.0
KDAK				S	Sn	06 35 57.9	-1.4
KDAK	Kodiak Island 22nm,0.3s,baz=240,slow=9.5,SNR=276	3.05	63	P	Pn	06 35 24.1	+0.1
KDAK				S	Sn	06 35 58.0	-1.3
	41nm,0.3s,baz=155,slow=23,SNR=33						
FALS	False Pass	3.65	246	P	Pn	06 35 31.8	-0.5
CNPM	China Poot	4.58	45	P	Pn	06 35 45.6	+0.9
RSO	Redoubt South	4.75	31	*e*Pn	Pn	06 35 49.6	+2.5
RSO				*e*Sn	Sn	06 36 44.0	+3.3
SVW2	Sparrevohn	4.75	12	*e*P	Pn	06 35 48.5	+1.3
BRLK	Bradley Lake	4.86	45	P	Pn	06 35 48.5	-0.2
SEW	Seward 35nm,0.2s	5.64	47	*e*Pn	Pn	06 35 59.0	-0.3
SEW				*e*Sn	Sn	06 36 59.5	-3.2
RC01	Rabbit Creek A 9.8nm,0.4s	6.18	38	*e*Pn	Pn	06 36 07.6	+0.9
TTA	Tatalina	6.53	7	*e*P	Pn	06 36 12.3	+0.9
PMR	Palmer	6.75	37	*e*Pn	Pn	06 36 14.8	+0.4
PMR				*e*Sn	Sn	06 37 25.3	-4.4
PPLA	Purkeypile 17nm,0.8s	7.00	21	*e*Pn	Pn	06 36 21.3	+3.4
DIV	Divide	7.72	48	*e*Pn	Pn	06 36 29.6	+1.8
DIV				*e*Sn	Sn	06 37 49.9	-3.6
TRF	Thorofare Moun 11nm,0.4s	7.90	25	*e*Pn	Pn	06 36 31.4	+1.2
TRF				*e*Sn	Sn	06 37 57.3	-0.6
BMRM	Bremner River	8.13	51	*e*Pn	Pn	06 36 34.2	+0.8
BMRM				*e*Sn	Sn	06 37 59.2	-4.4
MCK	McKinley 7.0nm,0.7s	8.47	27	*e*Pn	Pn	06 36 39.2	+1.3
MCK				*e*Sn	Sn	06 38 11.9	+0.1
PAX	Paxson 13nm,0.5s	8.94	38	*e*Pn	Pn	06 36 45.4	+1.0
PAX				*e*Sn	Sn	06 38 20.5	-2.8
MENT	Mentasta	9.54	42	*e*P	Pn	06 36 53.1	+0.5
COLA	College 4.4nm,0.5s	9.68	26	*e*Pn	Pn	06 36 54.0	-0.5
COLA				*e*Sn	Sn	06 38 39.2	-2.1
ILAR	Eielson Array 1.2nm,0.3s,baz=216,slow=13,SNR=89	9.84	28	P	Pn	06 36 55.2	-1.4
ILAR				S	Sn	06 38 38.8	-6.4
	0.5nm,0.3s,baz=204,slow=24,SNR=6.4						
TNA	Tin City	10.37	336	*e*Pn	Pn	06 37 06.6	+2.8
DAWY	Dawson	11.79	42	*e*Pn	Pn	06 37 24.0	+0.9
INK	Inuvik 0.1nm,0.3s,baz=226,slow=11,SNR=3.3	16.14	33	P	Pn	06 38 17.9	-2.4
YKA	Yellowknife Ar 0.6nm,0.5s,mb3.1,baz=272,slow=10,SNR=8.8	22.31	57	P	P	06 39 27.5	-1.9
NVAR	Mina Array Bea 0.2nm,0.6s,mb3.0,baz=308,slow=9.0,SNR=2.9	31.57	108	P	P	06 40 55.9	+2.2
MDJ	Mudanjiang	45.60	287	P	P	06 42 47.9	-3.0
MDJ				sP	sP	06 43 16.4	-0.1
MDJ				S	S	06 49 26.9	-0.9
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,35nm,3.7s						
MDJ				LR	LR		
	comp=N,12nm,21.8s						
MDJ				LR	LR		
	comp=E,8.0nm,22.6s						
MDJ				LR	LR		
	comp=Z,15nm,22.6s						
TXAR	Lajitas Array comp=Z,0.3nm,0.6s,mb3.2,baz=312,slow=6.2,SNR=6.1	46.33	103	P	P	06 42 57.9	+1.0

ISCJB **14** *07:14:51.9±0.4, 61°.93N±0°.03×150°.60W±0°.07, h76km±6km, mb3.5/3, Error ellipse: s-maj=5.2km s-min=4.2km az=0.7*

IDC **14** *07:14:51.8±1.3, 61°.73N×149°.65W, h0km, mb3.3/2, mb1 3.8/5, mb1mx3.5/23, mbtmp3.4/5, ML3.1/3, Error ellipse: s-maj=27.6km s-min=10.5km az=106.0*

NEIC **14** *07:14:53.9, 61°.90N×150°.57W, h55km, ML3.3(PMR), ML3.2(AEIC), After AEIC.*

ISC 14 07:14:53.3±0.3, **61°.92N**±0°.02×**150°.63W**±0°.07, **h59**km±7km, **n39,σ0°84/51, mb3.5/3, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMR	Palmer	0.79	114	*e*P	Pn	07 15 07.5	-1.0
FIB	Fire Island	0.79	164	P	Pn	07 15 08.8	+0.2
FIB				S	Sn	07 15 22.2	+2.5
GHO	Glory Hole Cre	0.82	100	P	Pn	07 15 08.5	-0.4
GHO				S	Sn	07 15 22.3	+1.9
RC01	Rabbit Creek A	0.94	153	P	Pn	07 15 09.7	-0.7
RC01				S	Sn	07 15 23.4	+0.2
SML	Sawmill	1.09	95	P	Pn	07 15 12.1	-0.3
SML				S	Sn	07 15 27.1	+0.4
PPLA	Purkeypile	1.22	324	P	Pn	07 15 14.2	+0.2
PPLA				S	Sn	07 15 30.0	+0.4
SLKM	Skilak Lake	1.43	172	P	Pn	07 15 16.5	-0.5
TRF	Thorofare Moun	1.54	6	P	Pn	07 15 18.9	+0.5
TRF				S	Sn	07 15 38.8	+1.4
RND	Reindeer	1.70	28	P	Pn	07 15 20.7	+0.1
RND				S	Sn	07 15 42.3	+1.1
RSO	Redoubt South	1.79	216	*e*Pn	Pn	07 15 22.5	+0.7
DHY	Denali Highway	1.90	51	P	Pn	07 15 23.3	0.0
SEW	Seward	1.91	162	P	Pn	07 15 23.1	-0.4
MCK	McKinley	1.98	22	P	Pn	07 15 24.5	+0.2
CHUM	Lake Minchumin	2.11	339	P	Pn	07 15 26.5	+0.4
BRLK	Bradley Lake	2.17	183	P	Pn	07 15 26.3	-0.6
CNPM	China Poot	2.42	187	P	Pn	07 15 29.9	-0.5
DIV	Divide	2.46	107	P	Pn	07 15 29.9	-1.0
SVW2	Sparrevohn	2.52	253	*e*P	Pn	07 15 31.6	0.0
PAX	Paxson	2.62	64	P	Pn	07 15 32.3	-0.8
TT01	Tatalina	2.70	294	P	Pn	07 15 33.5	-0.7
TTA	Tatalina	2.70	294	*e*P	Pn	07 15 33.9	-0.3
EYAK	Cordova Ski Ar	2.73	118	P	Pn	07 15 33.0	-1.6
BMRM	Bremner River	3.05	106	P	Pn	07 15 37.6	-1.3
COLA	College	3.21	22	P	Pn	07 15 40.1	-1.1
ILAR	Eielson Array 4.9nm,0.3s,baz=210,slow=13,SNR=238	3.32	29	Pn	Pn	07 15 42.3	-0.3
ILAR				Sn	Sn	07 16 19.6	-1.1
	8.6nm,0.3s,baz=220,slow=22,SNR=9.3						
ILAR				Lg		07 16 39.0	
	10nm,0.3s,baz=205,slow=28,SNR=9.7						
MENT	Mentasta	3.37	69	*e*Pn	Pn	07 15 43.4	+0.1
MENT				*e*Sn	Sn	07 16 28.9	+6.9
DOT	Dot Lake	3.48	57	P	Pn	07 15 44.4	-0.4
GCSA	Galena City Sc	4.00	318	P	Pn	07 15 51.4	-0.5
BCA3	Beaver Creek A	4.26	71	P	Pn	07 15 55.1	-0.4
KDAK	Kodiak Island	4.27	194	P	Pn	07 15 56.0	+0.4
KDAK	Kodiak Island 1.2nm,0.3s,baz=44,slow=11,SNR=11	4.27	194	Pn	Pn	07 15 56.0	+0.4
KDAK				Sn	Sn	07 16 39.7	-4.4
	2.4nm,0.3s,baz=326,slow=15,SNR=2.6						
OHAK	Old Harbor	4.91	197	*e*Pn	Pn	07 16 05.0	+0.6
EGAK	Eagle 15nm,0.6s	5.13	52	Pn	Pn	07 16 07.4	0.0
COLD	Coldfoot 15nm,0.5s	5.33	2	*e*Pn	Pn	07 16 10.8	+0.7
COLD				*e*Sn	Sn	07 17 09.2	-0.7
DAWY	Dawson	5.55	62	*e*Pn	Pn	07 16 13.2	+0.1
DAWY				*e*Sn	Sn	07 17 16.3	+0.8
YKA	Yellowknife Ar 0.1nm,0.3s,baz=286,slow=10,SNR=4.5	16.68	72	Pn	Pn	07 18 41.6	-1.0
NVAR	Mina Array Bea 0.6nm,0.9s,mb3.4,baz=320,slow=9.5,SNR=5.7	30.76	125	P	P	07 21 03.7	+1.1
CLNB	Carlsbad 1.4nm,0.4s,mb3.9	42.04	113	*e*P	P	07 22 41.0	+2.4
TXAR	Lajitas Array 0.2nm,0.7s,mb3.1,baz=349,slow=9.2,SNR=4.3	44.66	115	P	P	07 23 00.4	+0.7

BJI **14** *07:18:14.7, 79°.50N×3°.20E, h10km, mB4.7/15, mb4.7/19, Ms4.5/13, Ms7 4.1/14*

CSEM **14** *07:18:17.9±0.1, 79°.58N×3°.42E, h2km, mb4.6/41, Ms3.1, Error ellipse: s-maj=6.4km s-min=3.7km az=43.0*

ISCJB **14** *07:18:17.9±0.1, 79°.52N±0°.03×3°.1E±0°.1, h10km, mb4.5/79, MS3.7/28, Error ellipse: s-maj=4.8km s-min=2.4km az=42.8*

MOS **14** *07:18:17.8±0.9, 79°.50N×3°.17E, h10km, mb4.8/24, Error ellipse: s-maj=42.2km s-min=5.2km az=93.7*

IDC **14** *07:18:18.0±0.5, 79°.57N×3°.12E, h0km, mb4.1/22, mb1 4.3/28, mb1mx4.3/32, mbtmp4.2/28, ML4.1/6, MS3.7/23, Ms1 3.7/23, ms1mx3.6/34, Error ellipse: s-maj=12.8km s-min=10.2km az=39.0*

NEIC **14** *07:18:19.7±0.2, 79°.54N×3°.25E, h10km, mb4.6/34, Error ellipse: s-maj=6.5km s-min=4.2km az=222.0*

BER **14** *07:18:20.5±3.0, 79°.68N×4°.56E, h15km±52km, MD3.7, ML3.5, ML3.1(NAO)*

NAO **14** *07:18:21.6±3.5, 79°.52N×5°.36E, ML3.1*

ISC 14 07:18:20.0±0.1, **79°.53N**±0°.03×**3°.2E**±0°.1, **h10**km, **(h15**km±1.0km**:pP-P), n462,σ0°71/474, mb4.5/79, MS3.7/28, 103C-102D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.75	106	Pg	Pn	07 18

comp=Z,260nm,21.7s,baz=197,slow=36
ARCES **ARCESS Array B 11.52 138** P **Pn** **07 21 02.0 -2.2**
ARE0 **ARCESS Array S 11.52 138** *e*Pn **Pn** **07 21 02.5 -1.6**
ARE0 *e*Sn **Sn** **07 23 03.2 -9.5**
ARE0 ARCESS Array S 11.52 138 *e*Pn **Pn** **07 21 02.5 -1.7**
SUMG Summit 11.87 257 *e*Pn **Pn** **07 21 05.0 -3.9**
SUMG Summit 11.87 257 *i* P **Pn** **07 21 06.5 -2.4**
comp=Z,166nm,0.6s
APA Apatity 14.41 129⇓ *e*P **Pn** **07 21 40.0 -3.6**
APA pmax pmax
comp=Z,10.0nm,0.8s
JOF Joensuu 18.56 137 *e*P **Pn** **07 22 34.3 -2.4**
JOF Joensuu 18.56 137 *e*p **Pn** **07 22 34.3 -2.4**
JOF Joensuu 18.56 137 *e*P **Pn** **07 22 34.3 -2.4**
NB2 NORSAR Subarra 18.74 168 P **Pn** **07 22 39.3 +0.5**
baz=349,slow=9.3
NB2 NORSAR Subarra 18.74 168 P **Pn** **07 22 39.3 +0.5**
baz=349,slow=9.3,SNR=3.6
NOA NORSAR Array B 18.74 168 P **Pn** **07 22 38.6 -0.1**
comp=Z,0.3nm,0.3s,baz=352,slow=12,SNR=7.0
NOA LR LR 07 29 04.3
comp=Z,64nm,20.0s,baz=355,slow=34
NOA NORSAR Array B 18.74 168 P **Pn** **07 22 38.7 -0.1**
KAF Kangasniemi 18.77 145 *e*P **Pn** **07 22 38.5 -0.7**
KAF Kangasniemi 18.77 145 *e*p **Pn** **07 22 38.5 -0.7**
KAF Kangasniemi 18.77 145 *e*P **Pn** **07 22 38.5 -0.7**
FIA0 FINESS Array S 19.41 146 P **Pn** **07 22 46.6 -0.2**
baz=345,slow=9.4,SNR=3.6
FINES FINESS Array B 19.41 146 P **Pn** **07 22 46.5 -0.3**
comp=Z,1.3nm,0.3s,baz=340,slow=10,SNR=22
FINES LR LR 07 29 58.3
comp=Z,132nm,20.8s,baz=23,slow=36
FINES FINESS Array B 19.41 146 P **Pn** **07 22 46.5 -0.3**
HFS Hagfors 19.75 164 P **Pn** **07 22 49.7 -1.3**
comp=Z,0.4nm,0.3s,baz=17,slow=11,SNR=10
HFS LR LR 07 29 18.2
comp=Z,161nm,20.6s,baz=344,slow=33
HFS Hagfors 19.75 164 P **Pn** **07 22 49.9 -1.1**
baz=11,slow=9.9,SNR=0.3
RES Resolute Bay 19.80 309 P **Pn** **07 22 49.4 -2.0**
comp=Z,1.4nm,0.3s,baz=38,slow=5.0,SNR=9.3
RES LR LR 07 30 59.1
comp=Z,117nm,18.2s,baz=57,slow=38
RES Resolute Bay 19.80 309 P **Pn** **07 22 49.4 -2.0**
KLMR Klimovskoe 21.65 128 *e*P **P** **07 23 09.5 -0.5**
KLMR pmax pmax
comp=Z,28nm,1.2s,mb4.6
KLMR Klimovskoe 21.65 128 *e*P **P** **07 23 09.5 -0.5**
comp=Z,28nm,1.2s,mb4.6
EKA Eskdalemuir Ar 24.39 189 P **P** **07 23 38.4 +0.5**
comp=Z,2.4nm,0.7s,mb3.8,baz=2.9,slow=7.7,SNR=10
EKA Eskdalemuir Ar 24.39 189 P **P** **07 23 38.3 +0.5**
FRB Frobisher Bay 25.04 274 P **P** **07 23 43.1 -0.6**
comp=Z,15nm,1.0s,mb4.5,baz=24,slow=12,SNR=2.5
FRB LR LR 07 33 29.8
comp=Z,228nm,21.2s,MS3.6,baz=213,slow=36
FRB Frobisher Bay 25.04 274 P **P** **07 23 43.1 -0.5**
SOKR Solikamsk 25.64 109 *e*P **P** **07 23 49.7 +0.5**
SOKR pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
TIXI Tiksi 26.01 36 *e*P **P** **07 23 54.2 +1.8**
TIXI pmax pmax
comp=Z,40nm,1.1s,mb4.9
DSB Dublin 26.59 193 *e*P **P** **07 23 56.6 -1.2**
DSB Dublin 26.59 193 *e*P **P** **07 23 56.6 -1.2**
OBN Obninsk 26.82 136⇑ *e*P **P** **07 23 59.6 -0.2**
OBN *e*PP pP 07 24 02.7 -0.1
OBN *e*SP sP 07 24 03.8 -0.3
OBN 07 24 40.0
OBN *e* 07 27 27.1
OBN pmax pmax
comp=Z,11nm,0.4s,mb4.7
OBN MLR MLR
comp=Z,200nm,20.0s,MS3.7
OBN Obninsk 26.82 136 *e*P **P** **07 23 59.6 -0.2**
comp=Z,11nm,0.4s,mb4.7
CLL Collm 28.54 167 *i* P **P** **07 24 15.9 +0.7**
comp=Z,18nm,1.7s,mb4.5
CLL Collm 28.54 167 *i* P **P** **07 24 15.9 +0.7**
CLL pmax pmax
comp=Z,3.0nm,1.7s,mb3.8
CLL Collm 28.54 167 *i* P **P** **07 24 15.9 +0.7**
comp=Z,18nm,1.7s,mb4.5
ARU Arti 28.93 109 *d i* P **P** **07 24 18.6 0.0**
ARU S **S** **07 29 07.8 -0.9**
ARU pmax pmax
comp=Z,14nm,1.2s,mb4.6
BRG Berggiesshubel 29.01 166 *e*P **P** **07 24 20.0 +0.5**
comp=Z,20nm,1.4s,mb4.6
BRG Berggiesshubel 29.01 166 *e*P **P** **07 24 20.0 +0.6**
BRG pmax pmax
comp=Z,43nm,1.5s,mb5.0
MEM Membach 29.05 176 P **P** **07 24 20.3 +0.5**
MEM Membach 29.05 176 P **P** **07 24 20.3 +0.5**
SNF Seneffe 29.14 179 P **P** **07 24 21.5 +0.9**
comp=Z,24nm,2.7s,mb4.5
SNF Seneffe 29.14 179 P **P** **07 24 21.4 +0.8**
comp=Z,24nm,2.7s,mb4.5
KSP Ksiaz 29.16 163 *e*P **P** **07 24 20.9 +0.2**
BCLA Clavier 29.24 177 P **P** **07 24 21.7 +0.3**
comp=Z,18nm,2.7s,mb4.3
BCLA Clavier 29.24 177 P **P** **07 24 21.6 +0.2**
comp=Z,18nm,2.7s,mb4.3
DOU Dourbes 29.55 178 P **P** **07 24 23.2 -1.1**
comp=Z,12nm,2.9s,mb4.1
DOU Dourbes 29.55 178 P **P** **07 24 23.1 -1.1**
comp=Z,12nm,2.9s,mb4.1
OJC Ojcow 29.99 158 *e*P **P** **07 24 28.8 +0.7**
AKASG Malin Array Be 30.31 146 P **P** **07 24 30.4 -0.6**
comp=Z,2.8nm,0.7s,mb4.1,baz=345,slow=9.4,SNR=12
AKASG Malin Array Be 30.31 146 *ce*P **P** **07 24 30.6 -0.3**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 30.31 146 P **P** **07 24 30.4 -0.5**
INK Inuvik 30.33 330 LR LR 07 38 55.7
comp=Z,111nm,18.4s,MS3.5,baz=61,slow=41
VRAC Vranov 30.71 163 P **P** **07 24 35.1 +0.7**
comp=Z,7.8nm,0.8s,mb4.6,baz=10,slow=11,SNR=8.4
VRAC LR LR 07 36 09.0
comp=Z,74nm,20.2s,MS3.3,baz=354,slow=35
VRAC Vranov 30.71 163 P **P** **07 24 35.1 +0.7**
KHC Kasperske Hory 30.74 167 *e*P **P** **07 24 37.5 +2.8**
KHC Kasperske Hory 30.74 167 *e*P **P** **07 24 37.5 +2.8**
STHS Stebnicka Huta 30.89 157 *e*P **P** **07 24 37.8 +1.7**
comp=Z,13nm,0.9s,mb4.8
STHS Stebnicka Huta 30.89 157 *e*P **P** **07 24 37.8 +1.7**
STHS pmax pmax
comp=Z,13nm,0.9s,mb4.8
STHS Stebnicka Huta 30.89 157 *e*P **P** **07 24 37.8 +1.7**
STHS Stebnicka Huta 30.89 157 *e*P **P** **07 24 37.8 +1.7**
comp=Z,13nm,0.9s,mb4.8
CDF Champ du Feu 31.27 175 *e*P **P** **07 24 40.5 +1.1**
CDF Champ du Feu 31.27 175 *e*P **P** **07 24 40.5 +1.1**
GRR Gorron 31.29 185 *e*P **P** **07 24 39.3 -0.3**
GRR Gorron 31.29 185 *e*P **P** **07 24 39.3 -0.3**
CRVS Cervenica-Dubn 31.42 157 *e*P **P** **07 24 41.8 +1.1**
comp=Z,8.0nm,1.5s,mb4.3
CRVS Cervenica-Dubn 31.42 157 *e*P **P** **07 24 41.8 +1.1**
CRVS pmax pmax
comp=Z,8.0nm,1.5s,mb4.3
CRVS Cervenica-Dubn 31.42 157 *e*P **P** **07 24 41.8 +1.1**
CRVS Cervenica-Dubn 31.42 157 *e*P **P** **07 24 41.8 +1.1**
comp=Z,8.0nm,1.5s,mb4.3
KOLL Kolacno 31.54 161 *e*P **P** **07 24 43.0 +1.2**
KOLL Kolacno 31.54 161 *e*P **P** **07 24 43.0 +1.2**
KOLL Kolacno 31.54 161 *e*P **P** **07 24 43.0 +1.2**
VYHS Vyhne 31.65 160 *e*P **P** **07 24 43.9 +1.2**
comp=Z,4.8nm,1.1s,mb4.2
VYHS Vyhne 31.65 160 *e*P **P** **07 24 43.9 +1.2**
VYHS pmax pmax
comp=Z,5.0nm,1.1s,mb4.3
VYHS Vyhne 31.65 160 *e*P **P** **07 24 43.9 +1.2**
VYHS Vyhne 31.65 160 *e*P **P** **07 24 43.9 +1.2**
comp=Z,4.8nm,1.1s,mb4.2
HAU Haudompre 31.66 176 *e*P **P** **07 24 43.8 +0.9**
comp=Z,13nm,0.9s,mb4.4
HAU *e*MLR MLR
comp=Z,52nm,18.5s,MS2.9
HAU Haudompre 31.66 176 *e*P **P** **07 24 43.8 +0.9**
comp=Z,6.4nm,0.9s,mb4.5
HAU LR LR
comp=Z,50nm,18.5s,MS3.2
HAU Haudompre 31.66 176 *e*P **P** **07 24 43.8 +0.9**
comp=Z,6.4nm,0.9s,mb4.4
KECS Kecovo 31.77 158 *e*P **P** **07 24 44.4 +0.6**
comp=Z,3.3nm,0.8s,mb4.2
KECS Kecovo 31.77 158 *e*P **P** **07 24 44.4 +0.6**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
KECS Kecovo 31.77 158 *e*P **P** **07 24 44.4 +0.6**
KECS Kecovo 31.77 158 *e*P **P** **07 24 44.4 +0.6**
comp=Z,3.3nm,0.8s,mb4.2
ZST Bratislava 31.84 162 *e*P **P** **07 24 46.2 +1.8**
comp=Z,27nm,1.7s,mb4.8
ZST Bratislava 31.84 162 *e*P **P** **07 24 46.2 +1.8**
ZST pmax pmax
comp=Z,27nm,1.7s,mb4.8
ZST Bratislava 31.84 162 *e*P **P** **07 24 46.2 +1.8**
ZST Bratislava 31.84 162 *e*P **P** **07 24 46.2 +1.8**
comp=Z,27nm,1.7s,mb4.8
CONA Conrad Observa 32.05 164⇑ *i*pP **P** **07 24 47.6 +1.4**
comp=Z,16nm,1.3s,mb4.7
CONA Conrad Observa 32.05 164 P **P** **07 24 47.6 +1.4**
comp=Z,16nm,1.3s,mb4.7
MOA Molln 32.05 166⇑ *i*pP **P** **07 24 47.3 +1.1**
comp=Z,7.9nm,1.2s,mb4.4
MOA Molln 32.05 166 P **P** **07 24 47.3 +1.1**
comp=Z,7.9nm,1.2s,mb4.4
TRPA Tarpa 32.27 155⇓ *i*P **P** **07 24 49.1 +0.9**
PSZ Piszkesteto 32.29 159 *e*P **P** **07 24 49.4 +1.1**
comp=Z,12nm,1.0s,mb4.7
PSZ Piszkesteto 32.29 159 *e*P **P** **07 24 49.4 +1.0**
PSZ pmax pmax
comp=Z,11nm,1.0s,mb4.6
PSZ Piszkesteto 32.29 159 *e*P **P** **07 24 49.4 +1.0**
comp=Z,12nm,1.0s,mb4.7
LOR Lormes 32.38 179 *e*P **P** **07 24 48.8 -0.4**
LOR *e*MLR MLR
comp=Z,59nm,20.5s,MS3.0
LOR Lormes 32.38 179 *e*P **P** **07 24 48.8 -0.4**
LOR LR LR
comp=Z,60nm,20.5s,MS3.3
LOR Lormes 32.38 179 *e*P **P** **07 24 48.8 -0.4**
SSF Saint Saulge 32.59 180 *e*P **P** **07 24 50.7 -0.3**
comp=Z,15nm,1.0s,mb4.5
SSF Saint Saulge 32.59 180 *e*P **P** **07 24 50.7 -0.3**
comp=Z,7.4nm,1.0s,mb4.6
SSF Saint Saulge 32.59 180 *e*P **P** **07 24 50.7 -0.3**
SSF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
SSF Saint Saulge 32.59 180 *e*P **P** **07 24 50.7 -0.3**
comp=Z,7.4nm,1.0s,mb4.5
AVF Avril sur Loir 32.86 180 *e*P **P** **07 24 53.1 -0.3**
AVF Avril sur Loir 32.86 180 *e*P **P** **07 24 53.1 -0.3**
DAVOX Davos/Dischmat 32.96 172 LR LR 07 37 58.4
comp=Z,62nm,18.6s,MS3.3,baz=82,slow=36
BUR08 Bucovina Ar. S 32.97 152 *e*P **P** **07 24 54.9 +0.6**
BUR08 Bucovina Ar. S 32.97 152 *e*P **P** **07 24 54.9 +0.6**
BURAR Bucovina Array 33.00 152⇓ *i*P **P** **07 24 55.4 +0.9**
MFF Saint Martin d 33.07 184 *e*P **P** **07 24 55.3 +0.1**
comp=Z,58nm,1.4s,mb5.0
MFF Saint Martin d 33.07 184 *e*P **P** **07 24 55.3 +0.1**
comp=Z,29nm,1.4s,mb5.0
MFF Saint Martin d 33.07 184 *e*P **P** **07 24 55.3 +0.1**
MFF pmax pmax
comp=Z,29nm,1.4s,mb5.0
MFF Saint Martin d 33.07 184 *e*P **P** **07 24 55.3 +0.1**
comp=Z,29nm,1.4s,mb5.0
SCHQ Schefferville 33.07 265 P **P** **07 24 53.9 -1.2**
comp=Z,1.7nm,0.7s,mb4.1,baz=0.0,slow=9.1,SNR=3.1
SCHQ LR LR 07 38 46.1
comp=Z,175nm,19.3s,MS3.8,baz=31,slow=37
SCHQ Schefferville 33.07 265 P **P** **07 24 53.9 -1.2**
TCF Toulx Ste Croi 33.36 181 *e*P **P** **07 24 57.5 -0.3**
TCF Toulx Ste Croi 33.36 181 *e*P **P** **07 24 57.5 -0.3**
LPL La Plagne 34.16 176 *e*P **P** **07 25 06.5 +1.8**
comp=Z,8.7nm,0.9s,mb4.4
LPL La Plagne 34.16 176 *e*P **P** **07 25 06.5 +1.8**
comp=Z,4.3nm,0.9s,mb4.4
LPL La Plagne 34.16 176 *e*P **P** **07 25 06.5 +1.8**
LPL pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
LPL La Plagne 34.16 176 *e*P **P** **07 25 06.5 +1.8**
comp=Z,4.3nm,0.9s,mb4.4
LPG La Plagne 34.18 176 *e*P **P** **07 25 06.8 +2.0**
LPG La Plagne 34.18 176 *e*P **P** **07 25 06.8 +2.0**
BRVK Borovoye 34.22 99 *i* P **P** **07 25 05.1 -0.1**
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
BVAR Borovoye Array 34.27 99 P **P** **07 25 06.3 +0.7**
comp=Z,1.9nm,0.5s,mb4.2,baz=330,slow=8.6,SNR=9.4
BVAR Borovoye Array 34.27 99 P **P** **07 25 06.3 +0.7**
RJF Les Rejaudoux 34.35 182 *e*P **P** **07 25 06.4 0.0**
RJF *e*MLR MLR
comp=Z,64nm,18.0s,MS3.1
RJF Les Rejaudoux 34.35 182 *e*P **P** **07 25 06.4 0.0**
RJF LR LR
comp=Z,60nm,18.0s,MS3.4
RJF Les Rejaudoux 34.35 182 *e*P **P** **07 25 06.4 0.0**
AKTK Aktyubinsk 34.59 113 P **P** **07 25 08.3 -0.1**
AKTK LR LR 07 41 17.0
AKTK Aktyubinsk 34.59 113 P **P** **07 25 08.3 -0.1**
AKTO Aktyubinsk 34.59 113 P **P** **07 25 08.3 -0.1**
comp=Z,1.9nm,0.6s,mb4.2,baz=340,slow=8.4,SNR=6.3
AKTO LR LR 07 41 17.0
comp=Z,474nm,20.2s,MS4.2,baz=30,slow=40
ILAR Eielson Array 34.89 338 P **P** **07 25 11.3 +0.5**
comp=Z,0.9nm,0.9s,mb3.7,baz=4.4,slow=6.7,SNR=10
ILAR PcP PcP 07 27 42.5 -0.6
comp=Z,0.8nm,0.6s,baz=343,slow=2.8,SNR=10
ILAR Eielson Array 34.89 338 P **P** **07 25 11.3 +0.5**
ILAR Eielson Array 34.89 338 PcP PcP 07 27 42.5 -0.6
MLR Muntele Rosu 35.17 152 P **P** **07 25 13.2 -0.2**
comp=Z,2.6nm,0.9s,mb4.2,baz=316,slow=21,SNR=5.2
MLR LR LR 07 38 48.1
comp=Z,103nm,20.9s,MS3.6,baz=176,slow=35
MLR Muntele Rosu 35.17 152 P **P** **07 25 13.2 -0.2**
YAK Yakutsk 35.34 41 P **P** **07 25 14.0 -0.8**
YAK Yakutsk 35.34 41 *e*P **P** **07 25 18.9 +4.2**
YAK pmax pmax
comp=Z,14nm,1.0s,mb4.8
YAK pmax pmax
comp=E,4.0nm,0.9s
YAK Yakutsk 35.34 41 P **P** **07 25 14.0 -0.7**
SBF Sospel 35.82 175 *e*P **P** **07 25 19.9 +0.9**
comp=E,48nm,0.8s,mb5.2
SBF Sospel 35.82 175 *e*P **P** **07 25 19.9 +0.9**
comp=E,24nm,0.8s,mb5.2
SBF Sospel 35.82 175 *e*P **P** **07 25 19.9 +0.9**
SBF pmax pmax
comp=Z,24nm,0.8s,mb5.2
SBF Sospel 35.82 175 *e*P **P** **07 25 19.9 +0.9**
comp=Z,24nm,0.8s,mb5.2
ZALV Zalesovo Beam 36.03 84 P **P** **07 25 20.9 +0.2**
comp=Z,0.4nm,0.4s,mb3.7,baz=9.7,slow=10,SNR=3.2
ZALV PcP PcP 07 27 46.0 -0.6
comp=Z,0.7nm,0.5s,baz=289,slow=4.4,SNR=3.1
ZALV LR LR 07 44 37.8
comp=Z,89nm,19.0s,MS3.6,baz=350,slow=44
ZALV Zalesovo Beam 36.03 84 P **P** **07 25 20.9 +0.2**
ZALV 07 27 46.1
ABKAR Akbulak array 36.05 111 *e*P **P** **07 25 21.4 +0.4**
comp=Z,3.8nm,0.9s,mb4.3
ABKAR Akbulak array 36.05 111 *e*P **P** **07 25 21.4 +0.4**
comp=Z,3.8nm,0.9s,mb4.3
KURK Kurchatov 37.98 92 *e*P **P** **07 25 37.2 -0.1**
comp=Z,8.1nm,1.0s,mb4.4
KURK Kurchatov 37.98 92 P **P** **07 25 38.1 +0.8**
comp=Z,5.7nm,0.9s,mb4.3,baz=340,slow=7.8,SNR=18
KURK LR LR 07 45 58.5
comp=Z,125nm,18.9s,MS3.7,baz=320,slow=44
KURK Kurchatov 37.98 92⇑ *i*P **P** **07 25 37.1 -0.2**
KURK pmax pmax
comp=Z,11nm,1.2s,mb4.5
KURK Kurchatov 37.98 92 *e*P **P** **07 25 37.2 -0.1**
comp=Z,8.1nm,1.0s,mb4.4
ESDC Sonseca Array 40.07 189 P **P** **07 25 54.6 -0.3**
comp=Z,0.2nm,0.3s,mb3.4,baz=0.8,slow=8.8,SNR=8.3
ESDC Sonseca Array 40.07 189 P **P** **07 25 54.6 -0.3**
TLY Talaya 41.52 67 *e*P **P** **07 26 14.2 +7.4**
TLY pmax pmax
comp=Z,5.0nm,1.1s,mb4.1
TLY MLR MLR
comp=Z,97nm,16.0s,MS3.8
BR131 Keskin Array S 41.63 144 *e*P **P** **07 26 09.0 +1.3**
comp=Z,2.7nm,0.8s,mb3.9
BR131 Keskin Array S 41.63 144 *e*P **P** **07 26 09.0 +1.3**
comp=Z,2.7nm,0.8s,mb3.9
BRTR Keskin Array B 41.63 144 P **P** **07 26 08.8 +1.0**
comp=Z,3.5nm,0.7s,mb4.1,baz=355,slow=6.6,SNR=18
BRTR LR LR 07 44 30.4
comp=Z,46nm,20.8s,MS3.3,baz=198,slow=38
BRTR Keskin Array B 41.63 144 *ce*P **P** **07 26 09.1 +1.4**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
BRTR Keskin Array B 41.63 144 P **P** **07 26 08.8 +1.1**
MK31 Makanchi Array 42.43 90 *e*P **P** **07 26 14.3 +0.1**
MK31 Makanchi Array 42.43 90 *e*P **P** **07 26 14.3 +0.1**
MKAR Makanchi Array 42.43 90 P **P** **07 26 14.1 -0.1**
comp=Z,2.8nm,0.7s,mb4.0,baz=344,slow=7.1,SNR=22
MKAR LR LR 07 48 33.3
comp=Z,161nm,18.0s,MS4.0,baz=351,slow=43
MALT Malatya 43.57 139 *e*P **P** **07 26 24.4 +0.9**
comp=Z,9.8nm,1.1s,mb4.5
MALT Malatya 43.57 139 *e*P **P** **07 26 24.4 +0.9**
MALT pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
MALT Malatya 43.57 139 *e*P **P** **07 26 24.4 +0.9**
comp=Z,9.8nm,1.1s,mb4.5
KEST Kesra 43.98 173 P **P** **07 26 26.3 -0.5**
comp=Z,0.8nm,0.5s,mb3.7,baz=197,slow=3.9,SNR=4.2
AAK Ala-Archa 45.03 99 *i* P **P** **07 26 35.4 +0.2**
AAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.0
AML Almayashu 45.37 100 *e*P **P** **07 26 39.8 +2.0**
comp=Z,4.7nm,0.7s,mb4.4
AML Almayashu 45.37 100 *e*P **P** **07 26 39.8 +1.9**
comp=Z,4.7nm,0.7s,mb4.4
UCH Uchtor 45.42 99 *e*P **P** **07 26 40.7 +2.4**
comp=Z,6.0nm,1.1s,mb4.3
UCH Uchtor 45.42 99 *e*P **P** **07 26 40.7 +2.4**
comp=Z,6.0nm,1.1s,mb4.3
SONM Songino Array 45.70 66 P **P** **07 26 39.6 -0.9**
comp=Z,0.7nm,0.5s,mb3.8,baz=333,slow=8.1,SNR=4.1
SONM LR LR 07 48 05.4
comp=Z,169nm,18.0s,MS4.0,baz=171,slow=39
SONM Songino Array 45.70 66 P **P** **07 26 39.6 -0.9**
WMQ Urumqi 46.29 85 *e*P **P** **07 26 45.8 +0.7**
WMQ pP pP 07 26 50.3 +2.1
WMQ sP sP 07 26 52.8 +3.3
WMQ PP PP 07 28 34.5 +1.2
WMQ pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
WMQ pmax pmax
comp=Z,70nm,4.2s
WMQ LR LR
comp=N,100nm,20.8s,MS4.0
WMQ LR LR
comp=E,120nm,18.4s,MS4.0
WMQ LR LR
comp=Z,77nm,22.1s,MS3.6
A15A Johnson Ranch, 46.62 305⇑ P **P** **07 26 47.0 -0.6**
baz=46
A14A Double T Ranch 46.73 306⇓ P **P** **07 26 48.0 -0.5**
baz=46
A13A Flathead Natio 46.91 307⇓ P **P** **07 26 49.3 -0.6**
baz=47
B16A M & M Farms, S 47.02 304⇓ P **P** **07 26 49.9 -0.9**
baz=47
C16A Fuhringer Ranc 47.62 304⇓ P **P** **07 26 54.9 -0.5**
baz=47
C17A Wharram Farm, 47.63 303⇑ P **P** **07 26 55.5 0.0**
baz=47
LAO LASA Array 47.84 299⇑ P **P** **07 26 57.1 0.0**
baz=48
LAO LASA Array 47.84 299 *e*P **P** **07 26 57.8 +0.6**
comp=Z,4.3nm,0.8s,mb4.5
LAO LASA Array 47.84 299 *e*P **P** **07 26 57.8 +0.6**
comp=Z,4.3nm,0.8s,mb4.5
C14A Swan Lake 47.95 306⇑ P **P** **07 26 57.5 -0.5**
baz=48
BSMT Bassoo Peak 48.02 307 *e*P **P** **07 26 58.9 +0.3**
BSMT Bassoo Peak 48.02 307 *e*P **P** **07 26 58.9 +0.3**
C13A Hot Springs 48.16 307⇓ P **P** **07 26 60.0 +0.4**
baz=48
B08A Colville Reser 48.17 311⇑ P **P** **07 26 59.6 -0.1**
baz=48
D16A Dana Ranch, Ca 48.34 304⇑ P **P** **07 27 00.4 -0.6**
baz=48
MMAI Mount Meron Ar 48.45 143 P **P** **07 27 02.5 +0.4**
comp=Z,2.0nm,0.5s,mb4.4,baz=345,slow=5.1,SNR=2.9
MMAI LR LR 07 48 14.7
comp=Z,30nm,18.4s,MS3.3,baz=210,slow=37
D15A Lincoln 48.48 305⇓ P **P** **07 27 01.6 -0.5**
baz=48
D14A Greenough 48.59 306⇓ P **P** **07 27 02.5 -0.4**
baz=48
HRY Holter Researc 48.70 304 *e*P **P** **07 27 02.1 -1.6**
comp=Z,4.1nm,0.7s,mb4.6
HRY Holter Researc 48.70 304 *e*P **P** **07 27 02.1 -1.7**
comp=Z,4.1nm,0.7s,mb4.6
E16A East Helena 48.85 304⇑ P **P** **07 27 04.2 -0.8**
baz=49
D12A Red Ives Fores 48.89 307⇑ P **P** **07 27 05.0 -0.3**
baz=49
MSO Missoula 48.90 306⇑ P **P** **07 27 05.2 -0.1**
baz=49
MSO Missoula 48.90 306 *e*P **P** **07 27 05.0 -0.3**
comp=Z,3.7nm,1.2s,mb4.3
MSO Missoula 48.90 306 *e*P **P** **07 27 05.1 -0.2**
comp=Z,3.7nm,1.2s,mb4.3
F19A Roth Farm, Mol 49.09 301⇓ P **P** **07 27 06.4 -0.4**
baz=49
E15A Deer Lodge 49.10 305⇑ P **P** **07 27 06.1 -0.8**
baz=49
ECSD EROS Data Cent 49.11 289 *e*P **P** **07 27 07.0 0.0**
comp=Z,7.8nm,0.8s,mb4.8
ECSD EROS Data Cent 49.11 289 *e*P **P** **07 27 07.0 0.0**
comp=Z,7.8nm,0.8s,mb4.8
F17A Fitzpatrick Pl 49.30 303⇓ P **P** **07 27 07.9 -0.5**
baz=49
E13A Victor 49.31 306⇓ P **P** **07 27 08.4 -0.1**
baz=49
F15A Butte 49.65 304⇑ P **P** **07 27 10.7 -0.4**
baz=49
LRM Limekiln Ridge 49.66 304 *e*P **P** **07 27 10.8 -0.3**
comp=Z,16nm,1.1s,mb5.0
LRM Limekiln Ridge 49.66 304 *e*P **P** **07 27 10.8 -0.3**
comp=Z,16nm,1.1s,mb5.0
RLMT Red Lodge 49.85 301⇑ P **P** **07 27 12.2 -0.4**
baz=50
RLMT Red Lodge 49.85 301 *e*P **P** **07 27 13.5 +0.9**
comp=Z,15nm,1.8s,mb4.7
RLMT Red Lodge 49.85 301 *e*P **P** **07 27 13.5 +0.9**
comp=Z,15nm,1.8s,mb4.7
H21A Big Horn, Sher 49.98 299⇑ P **P** **07 27 13.7 +0.1**
baz=50
H20A Greybull 50.27 300⇑ P **P** **07 27 16.5 +0.7**
baz=50
H16A Russell Place, 50.57 303⇑ P **P** **07 27 18.2 +0.1**
baz=50
G13A Cobalt 50.64 306⇑ P **P** **07 27 18.2 -0.4**
baz=50
I20A Worland 50.81 300⇑ P **P** **07 27 19.8 -0.1**
baz=51
I21A Big Trails, Te 50.81 299⇑ P **P** **07 27 19.4 -0.5**
baz=51
H15A Lima 50.86 304⇓ P **P** **07 27 20.5 +0.3**
baz=51
FLWY Flagg Ranch 51.09 302 *e*P **P** **07 27 22.9 +1.0**
comp=Z,38nm,2.0s,mb5.0
FLWY Flagg Ranch 51.09 302 *e*P **P** **07 27 22.9 +0.9**
comp=Z,38nm,2.0s,mb5.0
H13A Challis 51.16 305⇑ P **P** **07 27 22.6 +0.1**
baz=51
IMW Indian Meadow 51.31 302 *e*P **P** **07 27 24.3 +0.7**
comp=Z,3.7nm,0.9s,mb4.3
IMW Indian Meadow 51.31 302 *e*P **P** **07 27 24.3 +0.7**
comp=Z,3.7nm,0.9s,mb4.3
BMO Blue Mountains 51.32 308 *e*P **P** **07 27 23.9 +0.1**
comp=Z,43nm,2.9s,mb4.9
BMO Blue Mountains 51.32 308 *e*P **P** **07 27 23.9 +0.2**
comp=Z,43nm,2.9s,mb4.9
I18A Diamond G Ranc 51.32 301⇑ P **P** **07 27 24.7 +1.0**
baz=51
I16A Newdale 51.41 303⇑ P **P** **07 27 24.8 +0.4**
baz=51
BLO Bloomington 51.75 278 *e*P **P** **07 27 26.6 -0.3**
comp=Z,150nm,2.4s,mb5.5
BLO Bloomington 51.75 278 *e*P **P** **07 27 26.6 -0.4**
BLO pmax pmax
comp=Z,150nm,2.4s,mb5.5
BLO Bloomington 51.75 278 *e*P **P** **07 27 26.6 -0.4**
comp=Z,150nm,2.4s,mb5.5
I13A Wildhorse Cree 51.77 305⇓ P **P** **07 27 27.0 -0.1**
baz=52
K22A Casper 51.82 298⇑ P **P** **07 27 26.6 -0.9**
baz=52
J18A Kendall Valley 51.83 301⇑ P **P** **07 27 27.5 -0.1**

baz=52
K19A **Absolon Red Bu** 52.03 300 ⇓P P 07 27 28.3 -0.7
baz=52
K20A **Yellowstone Ra** 52.11 300 ⇓P P 07 27 29.0 -0.6
baz=52
HLID **Hailey** 52.16 305 ⇑P P 07 27 29.9 -0.1
baz=52
BW06 **Boulder Array** 52.20 301 ⇓P P 07 27 30.0 -0.2
baz=52
BW06 **Boulder Array** 52.20 301 eP P 07 27 30.6 +0.4
comp=Z,10nm,1.6s,mb4.5
BW06 **Boulder Array** 52.20 301 eP P 07 27 30.6 +0.3
comp=Z,10nm,1.6s,mb4.5
J13A **Cove Ranch, Pi** 52.29 305 ⇓P P 07 27 30.6 -0.3
baz=52
MDJ **Mudanjiang** 52.37 47 P P 07 27 30.8 -0.7
MDJ pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
MDJ pmax pmax
comp=Z,60nm,5.0s
MDJ LR LR
comp=Z,26nm,18.8s,MS3.3
I07A **Izee** 52.39 310 ⇑P P 07 27 32.1 +0.4
baz=52
K18A **Toltan Ranch,** 52.40 301 ⇓P P 07 27 32.0 +0.3
baz=52
MFID **Camas Ranch** 52.52 307 ⇓P P 07 27 31.8 -0.8
baz=52
CN2 **Changchun** 52.60 50 eP P 07 27 31.5 -1.7
L21A **Rawlins** 52.63 299 ⇑P P 07 27 33.2 -0.3
baz=52
K15A **Arbon** 52.73 303 ⇓P P 07 27 34.6 +0.3
baz=52
L20A **Wamsutter** 52.74 299 ⇓P P 07 27 34.9 +0.5
baz=52
GTA **Gaotai** 52.75 75 eP P 07 27 26.4 -8.0
GTA pP pP 07 27 31.3 -6.3
GTA sP sP 07 27 34.1 -4.7
GTA pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
L19A **Farson** 52.81 300 ⇓P P 07 27 34.3 -0.6
baz=53
J08A **Circle Bar Ran** 52.95 309 ⇑P P 07 27 36.4 +0.6
baz=53
M21A **Separation Pea** 52.98 298 ⇓P P 07 27 35.7 -0.3
baz=53
HHC **Hu-ho-hao-te** 53.36 64 eP P 07 27 38.0 -0.9
HHC sP sP 07 27 44.9 +1.6
HHC PP PP 07 29 38.5 -0.2
HHC PcS PcS 07 32 44.3 -0.6
HHC eS S 07 35 05.8 -4.4
HHC pmax pmax
comp=Z,18nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,72nm,4.3s
HHC LR LR
comp=N,130nm,14.2s,MS4.4
HHC LR LR
comp=E,140nm,10.1s,MS4.4
HHC LR LR
comp=Z,180nm,16.1s
L15A **Malad City** 53.38 303 ⇑P P 07 27 39.2 +0.2
baz=53
N23A **Red Feather La** 53.44 297 ⇑P P 07 27 39.5 0.0
baz=53
N22A **Wattenberg Ran** 53.62 297 ⇑P P 07 27 40.4 -0.3
baz=53
L11A **Cat Creek Ranc** 53.73 306 ⇑P P 07 27 41.4 -0.2
baz=54
N20A **Spence Gulch,** 53.88 299 ⇑P P 07 27 42.7 +0.1
baz=54
M15A **Larsen Ranch,** 53.92 303 ⇑P P 07 27 42.9 -0.1
baz=54
N18A **Larsen Ranch,** 53.96 300 ⇑P P 07 27 42.9 -0.4
baz=54
N19A **John Jarvie Ra** 53.96 300 ⇓P P 07 27 43.1 -0.2
baz=54
O23A **Lake Granby, G** 54.10 297 ⇑P P 07 27 44.8 +0.4
baz=54
N17A **Moffit Pass** 54.18 301 ⇓P P 07 27 45.3 +0.4
baz=54
O22A **Kremmling** 54.26 297 ⇓P P 07 27 45.5 0.0
baz=54,SNR=5.9
ISCO **Idaho Springs** 54.46 296 ⇓P P 07 27 47.1 +0.2
baz=54
O19A **Miners Draw (B** 54.54 300 ⇑P P 07 27 47.7 +0.2
baz=54
O20A **White River Ci** 54.56 299 ⇓P P 07 27 48.0 +0.3
baz=54,SNR=9.5
P22A **Eagle** 54.84 297 ⇑P P 07 27 50.4 +0.7
baz=55
BJI **Beijing** 54.89 60 P P 07 27 48.6 -1.5
BJI pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
BJI pmax pmax
comp=Z,140nm,5.1s
BJI LR LR
comp=N,97nm,15.0s,MS4.4
BJI LR LR
comp=E,230nm,15.8s,MS4.4
BJI LR LR
comp=Z,60nm,20.8s,MS3.6
O17A **Robinson Place** 54.89 301 ⇓P P 07 27 50.7 +0.6
baz=55
P23A **Jefferson** 54.91 296 ⇓P P 07 27 50.4 +0.2
baz=55
Q25A **Bedland, Calha** 55.09 295 ⇑P P 07 27 51.8 +0.2
baz=55
P19A **Cripple Cowboy** 55.16 299 ⇓P P 07 27 52.4 +0.3
baz=55
Q24A **Divide** 55.20 296 ⇓P P 07 27 52.4 +0.1
baz=55
P20A **De Beque** 55.20 299 ⇑P P 07 27 52.3 0.0
baz=55,SNR=5.6
SMCO **Snowmass** 55.29 297 eP P 07 27 53.5 +0.5
comp=Z,8.6nm,1.1s,mb4.7
SMCO **Snowmass** 55.29 297 eP P 07 27 53.5 +0.6
comp=Z,8.6nm,1.1s,mb4.7
Q22A **Crested Butte,** 55.58 297 ⇓P P 07 27 55.7 +0.6
baz=55
Q21A **Lamborn Mesa,** 55.72 298 ⇑P P 07 27 56.5 +0.4
baz=56,SNR=5.8
P14A **Drum Mountains** 55.84 303 ⇓P P 07 27 57.0 +0.1
baz=56
Q18A **Rafter H Ranch** 55.87 300 ⇓P P 07 27 57.2 +0.1
baz=56
R24A **Sanders Place,** 55.90 295 ⇓P P 07 27 56.7 -0.7
baz=56
P13A **Bates Ranch, G** 56.12 304 ⇓P P 07 27 59.2 +0.2
baz=56
R21A **Cimarron** 56.17 298 ⇑P P 07 27 59.7 +0.5
baz=56,SNR=7.3
R22A **Saguache, Gunn** 56.18 297 ⇓P P 07 27 59.6 +0.2
baz=56
Q16A **Castle Valley** 56.21 301 ⇑P P 07 28 00.3 +0.7
baz=56
S25A **Robets Cordova** 56.35 295 ⇑P P 07 28 00.3 -0.3
baz=56,SNR=6.1
PV04 **Paradox Valley** 56.36 299 eP P 07 28 00.2 -0.4
PV04 **Paradox Valley** 56.36 299 eP P 07 28 00.2 -0.5
SDCO **Great Sand Dun** 56.44 296 eP P 07 28 01.0 -0.2
comp=Z,2.8nm,0.9s,mb4.3
SDCO **Great Sand Dun** 56.44 296 eP P 07 28 01.0 -0.2
comp=Z,2.8nm,0.9s,mb4.3
Q14A **Sevier Lake (B** 56.47 303 ⇓P P 07 28 01.5 +0.1
baz=56
R20A **Redvale** 56.48 298 ⇑P P 07 28 01.9 +0.4
baz=56
S24A **Houchin Ranch,** 56.50 295 ⇑P P 07 28 01.5 -0.1
baz=56
R19A **Curley Farm, L** 56.52 299 ⇓P P 07 28 02.0 +0.3
baz=56,SNR=7.0
R18A **Canyonlands Na** 56.53 300 ⇓P P 07 28 01.8 0.0
baz=56
PV01 **Paradox Valley** 56.56 299 eP P 07 28 02.4 +0.3
comp=Z,899nm,0.9s
PV01 **Paradox Valley** 56.56 299 eP P 07 28 02.4 +0.3
comp=Z,899nm,0.9s
R17A **Hanksville Air** 56.62 301 ⇓P P 07 28 02.1 -0.4
baz=56,SNR=6.3
S22A **4UR Ranch, Cre** 56.66 297 ⇓P P 07 28 03.1 +0.3
baz=56,SNR=5.7
LZH **Lanzhou** 56.69 72 eP P 07 28 05.0 +2.0
LZH pP pP 07 28 08.3 +2.1
LZH sP sP 07 28 12.1 +4.7
LZH pmax pmax
comp=Z,19nm,1.3s,mb5.0
LZH pmax pmax
comp=Z,57nm,7.5s
LZH LR LR
comp=N,350nm,15.4s
LZH LR LR
comp=Z,400nm,18.3s,MS4.5
MSU **Marysvale** 56.76 302 eP P 07 28 04.3 +0.8
MSU **Marysvale** 56.76 302 eP P 07 28 04.3 +0.8
R16A **Teasdale** 56.88 301 ⇓P P 07 28 05.1 +0.7
baz=57
S21A **Coal Bank Pass** 56.90 298 ⇑P P 07 28 04.6 +0.1
baz=57
Q11A **Duckwater** 56.97 305 ⇑P P 07 28 04.9 0.0
baz=57
S19A **Harvey Farm, M** 57.03 299 ⇓P P 07 28 05.7 +0.3
baz=57,SNR=15
Q10A **Clear Creek Ra** 57.10 306 ⇑P P 07 28 06.0 +0.1
baz=57
WCN **Washoe City** 57.12 309 ⇑P P 07 28 06.0 0.0
baz=57
S18A **Hurst Farm, Bl** 57.23 300 ⇓P P 07 28 07.0 +0.2
baz=57,SNR=5.7
T23A **Casias Ranch,** 57.23 296 ⇓P P 07 28 07.2 +0.4
baz=57
R13A **O'Grain Ranch,** 57.36 304 ⇓P P 07 28 07.8 0.0
baz=57
T22A **Edith** 57.39 297 ⇓P P 07 28 08.3 +0.4
baz=57
S17A **Black Ridge (B** 57.41 301 ⇑P P 07 28 08.3 +0.3
baz=57
R11A **Troy Canyon, C** 57.44 305 ⇓P P 07 28 08.1 -0.2
baz=57
S16A **Weppner Ranch,** 57.45 301 ⇓P P 07 28 08.6 +0.3
baz=57
MVCO **Mesa Verde** 57.45 298 ⇓P P 07 28 08.9 +0.5
baz=57
MVCO **Mesa Verde** 57.45 298 eP P 07 28 08.8 +0.4
MVCO **Mesa Verde** 57.45 298 eP P 07 28 08.8 +0.4
U26A **Atchley Ranch,** 57.47 294 ⇑P P 07 28 08.7 +0.1
baz=57
MIAR **Mount Ida** 57.51 284 eP P 07 28 08.2 -0.7
comp=Z,12nm,1.1s,mb4.8
MIAR **Mount Ida** 57.51 284 eP P 07 28 08.2 -0.7
MIAR pmax pmax
comp=Z,12nm,1.1s,mb4.8
MIAR **Mount Ida** 57.51 284 eP P 07 28 08.2 -0.7
comp=Z,12nm,1.1s,mb4.8
T21A **Navjo Lake** 57.51 297 ⇑P P 07 28 09.0 +0.1
baz=57
U25A **Circle Dot Ran** 57.58 294 ⇓P P 07 28 08.8 -0.5
baz=57
R10A **Warm Springs** 57.61 306 ⇓P P 07 28 10.1 +0.6
baz=57
S15A **Panguitch** 57.61 302 ⇑P P 07 28 10.3 +0.8
baz=57
T18A **Mexican Hat** 57.75 300 ⇓P P 07 28 10.3 -0.1
baz=58,SNR=6.8
NVAR **Mina Array Bea** 57.76 308 P P 07 28 10.8 +0.2
NVAR **Mina Array Bea** 57.76 308 P P 07 28 10.8 +0.2
comp=Z,0.8nm,0.7s,mb3.9,baz=18,slow=4.1,SNR=9.5
NVAR **Mina Array Bea** 57.76 308 P P 07 28 10.8 +0.2
T19A **Beclabito** 57.91 299 ⇑P P 07 28 11.5 -0.1
baz=58
S13A **Holt Ranch, En** 57.93 303 ⇑P P 07 28 12.1 +0.3
baz=58
U23A **El Rito** 57.94 296 ⇑P P 07 28 12.0 +0.2
baz=58,SNR=6.7
U22A **Llaves** 58.00 297 ⇓P P 07 28 12.4 +0.2
baz=58
S10A **Tonopah Range,** 58.01 306 ⇑P P 07 28 11.7 -0.6
baz=58
T17A **Navajo Res., N** 58.03 300 ⇑P P 07 28 12.6 +0.2
baz=58
V26A **Tequesquite Ra** 58.06 294 ⇑P P 07 28 12.3 -0.3
baz=58
U21A **Nageezi** 58.08 297 ⇓P P 07 28 12.8 -0.1
baz=58
V25A **Rancho No Teng** 58.16 294 ⇑P P 07 28 13.4 0.0
baz=58
WMOK **Wichita Mounta** 58.24 289 eP P 07 28 13.6 -0.4
WMOK **Wichita Mounta** 58.24 289 eP P 07 28 13.6 -0.4
T15A **Red Dirt Ranch** 58.26 302 ⇑P P 07 28 14.1 0.0
baz=58
T14A **Hurricane** 58.32 303 ⇓P P 07 28 14.7 +0.2
baz=58
V24A **Rampart Ranch,** 58.38 295 ⇓P P 07 28 15.3 +0.4
baz=58
U18A **Rough Rock, Ch** 58.45 299 ⇑P P 07 28 15.4 0.0
baz=58,SNR=5.2
V22A **San Miguel Ran** 58.46 297 ⇓P P 07 28 15.8 +0.3
baz=58
U19A **Dine' College,** 58.47 299 ⇓P P 07 28 15.2 -0.3
baz=58
V23A **Ortiz Mt. (NFS** 58.51 296 ⇓P P 07 28 15.6 -0.2
baz=58
W27A **Bowe Ranch, En** 58.66 293 ⇑P P 07 28 17.0 +0.2
baz=58
V21A **Milan** 58.69 297 ⇑P P 07 28 17.1 0.0
baz=58
U15A **North Rim** 58.82 302 ⇑P P 07 28 17.9 -0.1
baz=59
V20A **Brimhall** 58.83 298 ⇑P P 07 28 17.9 -0.2
baz=59
W24A **Lazy 6 Ranch,** 58.90 295 ⇓P P 07 28 18.5 -0.1
baz=59
U16A **Tuba City** 58.92 301 ⇓P P 07 28 18.9 +0.2
baz=59,SNR=8.0
U14A **Mt Trumbull** 58.97 303 ⇓P P 07 28 19.1 +0.1
baz=59
U13A **Pakoon Wash** 59.09 303 ⇓P P 07 28 20.4 +0.6
baz=59
KSRS **Korea Array** 59.18 50 P P 07 28 19.4 -1.1
comp=Z,0.4nm,0.3s,mb4.0,baz=1.8,slow=9.9,SNR=4.5
KSRS LR LR 07 54 25.3
comp=Z,33nm,18.7s,MS3.5,baz=334,slow=37
X26A **CR and CF Fran** 59.28 293 ⇓P P 07 28 21.1 -0.1
baz=59
V17A **Tonalea, Kykot** 59.38 300 ⇑P P 07 28 21.9 +0.1
baz=59,SNR=5.8
V15A **Kaibab Nationa** 59.40 301 ⇓P P 07 28 22.4 +0.4
baz=59,SNR=6.2
FURC **Furnace Creek,** 59.47 306 ⇓P P 07 28 22.0 -0.5
baz=59
W20A **Ramah** 59.49 298 ⇓P P 07 28 22.1 -0.6
baz=59
WUAZ **Wupatki** 59.57 301 ⇑P P 07 28 23.3 +0.1
baz=59
WUAZ **Wupatki** 59.57 301 eP P 07 28 22.6 -0.5
comp=Z,4.6nm,1.1s,mb4.4
WUAZ **Wupatki** 59.57 301 eP P 07 28 22.6 -0.6
comp=Z,4.6nm,1.1s,mb4.4
V13A **Grand Canyon W** 59.65 303 ⇓P P 07 28 24.0 +0.3
baz=59
W19A **Sanders** 59.65 299 ⇑P P 07 28 23.2 -0.5
baz=59
MSTX **Muleshoe** 59.67 292 ⇑P P 07 28 23.8 -0.2
baz=60
V14A **Boquillas Ranc** 59.73 302 ⇑P P 07 28 25.1 +0.9
baz=60,SNR=5.6
Y26A **Elida** 59.90 293 ⇑P P 07 28 25.5 +0.1
baz=60
MPMC **Manual Prospec** 59.97 306 ⇑P P 07 28 26.6 +0.7
baz=60
W16A **Flagstaff** 60.01 301 ⇑P P 07 28 26.5 +0.3
baz=60
X21A **Alamocita Cree** 60.04 297 ⇓P P 07 28 26.4 0.0
baz=60
Y25A **Mesa, Roswell** 60.04 294 ⇑P P 07 28 26.3 -0.2
baz=60
X20A **Quemado** 60.06 298 ⇑P P 07 28 26.3 -0.2
baz=60,SNR=5.4
W14A **Seligman** 60.13 302 ⇓P P 07 28 27.5 +0.5
baz=60
Y24A **Capitan** 60.16 295 ⇓P P 07 28 27.8 +0.5
baz=60
X19A **St. Johns** 60.30 298 ⇓P P 07 28 27.6 -0.7
baz=60,SNR=6.0
Y22A **Socorro** 60.41 296 ⇑P P 07 28 29.0 +0.1
baz=60
ISA **Isabella** 60.50 307 ⇑P P 07 28 29.6 0.0
baz=60
Z26A **Caprock** 60.56 293 ⇑P P 07 28 30.0 0.0
baz=60
GSC **Goldstone** 60.61 306 ⇓P P 07 28 30.6 +0.2
baz=60
X16A **Lo Mia Camp, P** 60.66 300 ⇓P P 07 28 30.9 +0.2
baz=60
Y20A **Horse Springs,** 60.66 297 ⇑P P 07 28 30.4 -0.3
baz=60
Z25A **Roswell** 60.68 294 ⇓P P 07 28 30.5 -0.3
baz=60
X15A **Humboldt** 60.71 301 ⇓P P 07 28 31.1 +0.1
baz=60
Z24A **Sheeppen Canyo** 60.73 295 ⇑P P 07 28 30.9 -0.3
baz=60
NEE2 **Needles Airpor** 60.81 303 ⇑P P 07 28 31.9 +0.2
baz=61
X14A **Yava** 60.83 302 ⇓P P 07 28 32.2 +0.4
baz=61
GMRC **Granite Mounta** 60.95 304 ⇑P P 07 28 33.0 +0.3
baz=61
Y18A **Canyon Day Jun** 61.06 299 ⇓P P 07 28 33.9 +0.5
baz=61
Z22A **Elephant Butte** 61.07 296 ⇑P P 07 28 33.5 0.0
baz=61
126A **Clayton Basin,** 61.18 293 ⇑P P 07 28 34.1 -0.1
baz=61
125A **Gardner Draw,** 61.27 294 ⇑P P 07 28 34.9 0.0
baz=61
124A **Stringfield Ra** 61.37 294 ⇓P P 07 28 36.0 +0.5
baz=61
MJAR **Matsushiro Arr** 61.41 40 P P 07 28 34.8 -1.0
comp=Z,1.6nm,0.8s,mb4.2,baz=345,slow=8.9,SNR=5.3
MJAR **Matsushiro Arr** 61.41 40 P P 07 28 34.8 -0.9
Z19A **T-Link Ranch,** 61.41 298 ⇓P P 07 28 36.4 +0.6
baz=61
Z20A **Nine Sixteen R** 61.48 298 ⇑P P 07 28 36.1 -0.1
baz=61
CD2 **Chengdu** 61.73 74 P P 07 28 38.3 +0.4
CD2 pP pP 07 28 42.9 +1.8
CD2 sP sP 07 28 45.3 +3.0
CD2 PP PP 07 30 56.1 +2.8
CD2 ScP ScP 07 33 19.4 -0.9
CD2 S S 07 36 58.3 -2.0
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
CD2 pmax pmax
comp=Z,100nm,4.7s
226A **Malaga, Loving** 61.76 293 ⇑P P 07 28 38.2 0.0
baz=62
BFSC **Mount Baldy Ra** 61.78 306 ⇑P P 07 28 38.4 +0.1
baz=62
120A **U Bar Ranch, L** 62.04 297 ⇑P P 07 28 40.0 0.0
baz=62
Z13A **Yuma Proving G** 62.20 302 ⇑P P 07 28 41.2 +0.2
baz=62
328A **Wristen Ranch,** 62.21 292 ⇓P P 07 28 41.0 -0.2
baz=62
MNTX **Cornudas Mount** 62.33 294 ⇓P P 07 28 41.5 -0.5
baz=62
117A **Oracle** 62.35 299 ⇑P P 07 28 42.3 +0.2
baz=62
326A **Caldwell Ranch** 62.47 293 ⇑P P 07 28 43.2 +0.3
baz=62
116A **Eloy** 62.52 300 ⇓P P 07 28 43.1 -0.1
baz=62
JCT **Junction City** 62.57 289 ⇓P P 07 28 43.3 -0.3
baz=62
JCT **Junction City** 62.57 289 eP P 07 28 43.2 -0.4
comp=Z,4.1nm,0.7s,mb4.7
JCT **Junction City** 62.57 289 eP P 07 28 43.3 -0.3
JCT pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
JCT **Junction City** 62.57 289 eP P 07 28 43.2 -0.4
comp=Z,4.1nm,0.7s,mb4.7
220A **Playas Peak, P** 62.65 297 ⇓P P 07 28 44.0 -0.1
baz=62
219A **White Tail Can** 62.68 298 ⇓P P 07 28 44.3 +0.1
baz=62
428A **Kincaid Ranch,** 62.83 291 ⇓P P 07 28 45.6 +0.3
baz=63
427A **Hayter Ranch,** 62.83 292 ⇓P P 07 28 45.3 -0.1
baz=63
426A **McDonald Obser** 63.11 293 ⇓P P 07 28 46.9 -0.3
baz=63
NJ2 **Nanjing** 63.13 59 eP P 07 28 51.3 +4.0
NJ2 pmax pmax
comp=Z,30nm,0.7s,mb5.5
217A **Green Valley** 63.15 299 ⇓P P 07 28 47.9 +0.4
baz=63
425A **Indio Mountain** 63.16 294 ⇑P P 07 28 47.6 +0.1
baz=63
320A **Kipp Ranch, An** 63.20 297 ⇓P P 07 28 47.9 +0.1
baz=63
319A **Douglas** 63.29 298 ⇓P P 07 28 48.4 +0.1
baz=63
318A **Bisbee** 63.34 298 ⇑P P 07 28 48.8 +0.1
baz=63
528A **Cox Ranch, San** 63.40 291 ⇓P P 07 28 49.2 +0.1
baz=63
628A **Black Gap, Mar** 64.07 291 ⇓P P 07 28 53.1 -0.5
baz=64
627A **Terlingua Ranc** 64.19 292 ⇓P P 07 28 53.7 -0.6
baz=64
626A **Big Bend Ranch** 64.22 293 ⇑P P 07 28 54.0 -0.5
baz=64
TXAR **Lajitas Array** 64.36 292 P P 07 28 54.6 -0.8
comp=Z,1.0nm,0.6s,mb4.0,baz=39,slow=4.9,SNR=24
TXAR LR LR 07 57 29.9
comp=Z,118nm,19.4s,MS4.1,baz=180,slow=37
TXAR **Lajitas Array** 64.36 292 P P 07 28 54.6 -0.8
TORD **Torodi Ar. Bea** 66.40 182 P P 07 29 08.4 -0.3
comp=Z,4.8nm,1.0s,mb4.5,baz=358,slow=5.9,SNR=15
KMI **Kunming** 67.19 76 P P 07 29 14.5 +0.7
KMI pP pP 07 29 19.3 +2.3
KMI sP sP 07 29 20.9 +2.7
KMI PP PP 07 31 45.3 +3.9
KMI S S 07 38 07.6 -0.3
KMI pmax pmax
comp=Z,11nm,0.8s,mb4.9
KMI LR LR
comp=N,73nm,20.3s,MS4.3
KMI LR LR
comp=E,190nm,19.3s,MS4.3
KMI LR LR
comp=Z,130nm,17.1s,MS4.2
CMAR **Chiang Mai Arr** 73.02 81 P P 07 29 48.3 -1.3
comp=Z,2.2nm,0.8s,mb4.2,baz=340,slow=7.4,SNR=13
CMAR LR LR 08 07 42.2
comp=Z,66nm,18.6s,MS3.9,baz=179,slow=41
CMAR **Chiang Mai Arr** 73.02 81 P P 07 29 48.3 -1.3
ROSC **El Rosal** 82.99 259 LR LR 08 05 40.4
comp=Z,59nm,18.7s,MS4.0,baz=338,slow=34
MAW **Mawson** 150.77 137 PKPbc PKPbc 07 38 10.0 -0.2
comp=Z,1.4nm,0.7s,baz=5.6,slow=3.6,SNR=5.1

CASC 14 07:18:32.5±2.7, 12°58N×88°26W, h74km±171km, MD3.5, ML2.7, 1C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	0.80	31	eP	Pn	07 18 48.8	-0.1
CNCH				AML	AML	07 19 01.4	
	comp=Z,152nm,0.1s						
CNCH				eS	Sn	07 19 01.5	+0.6
VSM	**San Miguel**	0.84	359	eP	Pn	07 18 49.7	+0.4
BLLM	**Bellamira**	0.85	1	⇓iP	Pn	07 18 50.3	+0.8
BLLM				eS	Sn	07 19 03.0	+1.0
SNVI	**San Vicente**	1.17	331	eP	Pn	07 18 50.8	-2.5
CRIN	**San Cristobal**	1.19	84	eP	Pn	07 18 54.2	+0.7
CRIN				eS	Sn	07 19 10.1	+0.9
CRIN				AML	AML	07 19 11.0	
	comp=E,135nm,0.3s						
LFRS	**El Faro**	1.29	323	⇑iP	Pn	07 18 56.5	+1.6
LFRS				eS	Sn	07 19 12.6	+0.9
CSAN		1.84	102	eP	Pn	07 19 01.6	-0.4

NEIC 14 07:58:14.4, 15°.22N×95°.65W, h12km, MD4.2(MEX), After MEX.

MEX 14 07:58:14.4±0.8, 15°.20N×95°.65W, h15km±13km, MD4.2, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	0.72	322	*i* P	Pg	07 58 26.1	-2.4
HUIG				*i* S	Sg	07 58 34.7	-3.4
HUIG	**Huatulco**	0.72	322	*i* P	Pg	07 58 26.1	-2.4
HUIG				*i* S	Sg	07 58 34.7	-3.4
CMIG	**Matias Romero**	2.02	21	eP	Pn	07 58 44.2	-3.8
CMIG				*i* S	Sn	07 59 08.7	-4.3
CMIG	**Matias Romero**	2.02	21	eP	Pn	07 58 44.2	-3.8
CMIG				*i* S	Sn	07 59 08.7	-4.3
VHO	**Vista Hermosa**	2.14	331	*i* P	Pn	07 58 47.3	-2.3

VHO				*i* S		Sn	07 59 12.5	-3.3
VHO	**Vista Hermosa**	**2.14**	**331**	*i* P		Pn	07 58 47.3	-2.3
VHO				*i* S		Sn	07 59 12.5	-3.3
PCIG		**2.40**	**78**	*i* P		Pn	07 58 49.8	-3.3
PCIG				*i* S		Sn	07 59 18.0	-4.2
PNIG	**Pinotepa**	**2.67**	**297**	*i* P		Pn	07 58 55.7	-1.2
PNIG				*i* S		Sn	07 59 24.3	-4.6
PNIG	**Pinotepa**	**2.67**	**297**	*i* P		Pn	07 58 54.7	-2.2
PNIG				*i* S		Sn	07 59 24.3	-4.6
TGIG		**2.89**	**57**	*i* P		Pn	07 58 58.3	-1.7
TGIG				*i* S		Sn	07 59 31.3	-3.2
UTMO	**Huajuapan**	**3.34**	**322**	*i* P		Pn	07 59 04.2	-1.9
UTMO				*i* S		Sn	07 59 42.5	-3.0

ISCJB **14** *09:04:40.2±0.3, 41°.14N±0°.03×141°.01E±0°.06, h111km±2km, mb3.9/13, Error ellipse: s-maj=7.3km s-min=4.8km az=15.7*
MOS **14** *09:04:40.7±0.8, 41°.09N×141°.17E, h128km, mb4.3/1, Error ellipse: s-maj=16.0km s-min=11.0km az=70.2*
IDC **14** *09:04:41.7±2.0, 41°.06N×141°.05E, h118km±19km, mb3.6/10, mb1 3.6/12, mb1mx3.5/25, mbtmp3.5/12, Error ellipse: s-maj=18.6km s-min=14.4km az=83.0*
JMA **14** *09:04:41.2±0.1, 41°.14N×141°.04E, h101km±1km, M3.2*
JMA Felt I J1.
NEIC **14** *09:04:42.1±0.8, 41°.11N×141°.11E, h120km±9km, mb4.2/3, Error ellipse: s-maj=13.4km s-min=9.5km az=124.0*

ISC 14 09:04:41.3±0.3, 41°.14N±0°.03×141°.02E±0°.06, h105km±2km, n36, σ0°90/50, mb3.9/13, 1C, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JOT	**Ohata**	**0.24**	**5**	P		**Pn**	**09 04 55.8**	**-0.4**
JOT				S		**Sn**	**09 05 07.3**	**-0.1**
JTM	**Tenmabayashi**	**0.35**	**174**	P		**Pn**	**09 04 56.2**	**-0.5**
JTM				S		**Sn**	**09 05 07.2**	**-1.0**
JSI2	**Shiura 2**	**0.47**	**260**	P		**Pn**	**09 04 57.0**	**-0.4**
JSI2				S		**Sn**	**09 05 08.6**	**-0.8**
JSR	**Shiriuchi**	**0.60**	**311**	P		**Pn**	**09 04 57.9**	**-0.4**
JKB	**Kayabe**	**0.75**	**1**	P		**Pn**	**09 04 59.5**	**-0.1**
JKB				S		**Sn**	**09 05 13.4**	**+0.1**
JANG	**Nango**	**0.85**	**154**	P		**Pn**	**09 04 59.7**	**-0.9**
JANG				S		**Sn**	**09 05 14.2**	**-0.8**
JIW	**Iwasaki**	**0.94**	**235**	P		**Pn**	**09 05 01.3**	**-0.2**
JIW				S		**Sn**	**09 05 17.0**	**+0.3**
JAH	**Hinai**	**0.99**	**197**	P		**Pn**	**09 05 02.1**	**+0.1**
JAH				S		**Sn**	**09 05 18.0**	**+0.4**
JOSM	**Okushiri--Mats**	**1.49**	**310**	P		**Pn**	**09 05 07.2**	**-0.5**
JOSM				S		**Sn**	**09 05 27.6**	**-0.2**
JOM	**Ohasama**	**1.68**	**173**	P		**Pn**	**09 05 10.0**	**0.0**
JOM				S		**Sn**	**09 05 32.1**	**+0.3**
JEW	**Eniwo**	**1.73**	**10**	P		**Pn**	**09 05 11.4**	**+0.8**
JEW				S		**Sn**	**09 05 34.2**	**+1.3**
ERM	**Erimo**	**1.82**	**61**	*e*Pn		**Pn**	**09 05 12.4**	**+0.6**
ERM				*e*Sn		**Sn**	**09 05 36.9**	**+1.8**
ASAJ	**Asahikawa**	**3.19**	**21**	P		**Pn**	**09 05 30.5**	**+0.8**
ASAJ	2.0nm,0.3s,baz=252,slow=10,SNR=12			S		**Sn**	**09 06 05.8**	**-1.2**
ASAJ	**Asahikawa**	**3.19**	**21**	P		**Pn**	**09 05 30.5**	**+0.8**
ASAJ				S		**Sn**	**09 06 05.8**	**-1.2**
ASAJ	comp=Z,2.0nm,0.3s			pmax	pmax			
ASAJ	comp=N,4.0nm,0.3s			smax				
YUK	**Yuzh-Kuril'sk**	**4.60**	**49**	*e*P		**Pn**	**09 05 48.5**	**0.0**
YUK				*i* S		**Sn**	**09 06 37.1**	**-3.7**
YUK	comp=N,53nm,0.4s			pmax	pmax			
YUK	comp=E,49nm,0.4s			pmax	pmax			
YUK	comp=Z,88nm,0.4s			pmax	pmax			
YUK	comp=N,347nm,0.5s			smax				
YUK	comp=E,258nm,0.5s			smax				
YUK	comp=N,900nm,1.4s			smax				
YUK	comp=E,150nm,0.5s			smax				
MAJO	**Matsushiro**	**5.09**	**206**	*e*Pn		**Pn**	**09 05 57.5**	**+2.3**
MAJO	**Matsushiro**	**5.09**	**206**	*e*P		**Pn**	**09 05 57.5**	**+2.3**
MAJO	comp=Z,6.0nm,0.5s			pmax	pmax			
MAT	**Matsushiro**	**5.09**	**206**	P		**Pn**	**09 05 57.5**	**+2.3**
MAT				*e*S		Sn	09 07 35.5	+43
MJAR	**Matsushiro Arr**	**5.09**	**206**	P		**Pn**	**09 05 56.0**	**+0.8**
	comp=Z,1.2nm,0.3s,baz=20,slow=14,SNR=17							
KSRS	**Korea Array**	**10.80**	**254**	P		**Pn**	**09 07 13.9**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=67,slow=13,SNR=3.4							
SONM	**Songino Array**	**25.44**	**297**	P		**P**	**09 09 58.2**	**-0.9**
	comp=Z,0.3nm,0.4s,mb3.1,baz=104,slow=6.1,SNR=2.5							
ZALV	**Zalesovo Beam**	**39.02**	**309**	P		**P**	**09 11 57.0**	**-0.2**
	comp=Z,3.1nm,0.6s,mb4.3,baz=91,slow=7.8,SNR=14							
MK31	**Makanchi Array**	**41.79**	**298**	*e*P		**P**	**09 12 20.2**	**0.0**
MKAR	**Makanchi Array**	**41.79**	**298**	P		**P**	**09 12 20.2**	**-0.1**
	comp=Z,0.7nm,0.4s,mb3.7,baz=84,slow=9.7,SNR=9.1							
KURK	**Kurchatov**	**43.25**	**305**	P		**P**	**09 12 31.2**	**-0.7**
	comp=Z,3.9nm,0.4s,mb4.5,baz=80,slow=8.6,SNR=14							
ILAR	**Eielson Array**	**46.24**	**34**	P		**P**	**09 12 54.9**	**-0.6**
	comp=Z,0.3nm,0.7s,mb3.1,baz=285,slow=11,SNR=6.3							
TKM2	**Tokmak 2**	**47.51**	**295**	*e*P		**P**	**09 13 06.7**	**+1.0**
	comp=Z,6.2nm,0.9s,mb4.4							
TKM2	**Tokmak 2**	**47.51**	**295**	*e*P		**P**	**09 13 06.7**	**+1.0**
TKM2	comp=Z,6.0nm,0.9s,mb4.4			pmax	pmax			
BVAR	**Borovoye Array**	**47.66**	**310**	P		**P**	**09 13 05.9**	**-0.7**
	comp=Z,1.3nm,0.3s,mb4.2,baz=88,slow=9.9,SNR=11							
AB31	**Akbulak array**	**55.12**	**308**	↑P		**P**	**09 14 01.5**	**-0.8**
	comp=Z,1.0nm,0.6s,mb4.1,baz=7.3,slow=15,SNR=18							
ABKAR	**Akbulak array**	**55.12**	**308**	*e*P		**P**	**09 14 02.1**	**-0.2**
	comp=Z,1.2nm,0.5s,mb4.2							
AKTK	**Aktyubinsk**	**55.76**	**310**	P		**P**	**09 14 08.1**	**+1.1**
AKTO	**Aktyubinsk**	**55.76**	**310**	P		**P**	**09 14 08.1**	**+1.1**
	comp=Z,0.8nm,0.5s,mb4.0,baz=80,slow=11,SNR=4.4							
WRA	**Warramunga Arr**	**61.08**	**187**	P		**P**	**09 14 42.4**	**-1.8**
	comp=Z,1.2nm,0.4s,mb4.3,baz=7.8,slow=7.7,SNR=66							
ASAR	**Alice Springs**	**64.81**	**187**	P		**P**	**09 15 07.0**	**-1.7**
	comp=Z,0.4nm,0.3s,mb3.7,baz=2.0,slow=6.1,SNR=9.9							
NVAR	**Mina Array Bea**	**72.80**	**54**	P		**P**	**09 15 58.7**	**+0.4**
	comp=Z,0.4nm,0.7s,mb3.4,baz=309,slow=5.7,SNR=3.3							

IDC **14** *09:08:11.7±1.2, 0°.67N×99°.61E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.7/22, mbtmp3.8/10, ML4.2/1, MS3.6/6, Ms1 3.6/6, ms1mx3.1/33, Error ellipse: s-maj=48.1km s-min=19.7km az=56.0*
ISCJB **14** *09:08:15.1±0.7, 0°.83N±0°.04×99°.77E±0°.06, h25km±6km, mb3.9/11, MS3.8/5, Error ellipse: s-maj=10.5km s-min=5.3km az=154.3*
DJA **14** *09:08:15, 0°.77N×99°.82E, h4km, MLv4.7/11*
NEIC **14** *09:08:17.1±0.7, 0°.72N×99°.76E, h35km, mb4.3/2, Error ellipse: s-maj=23.6km s-min=10.5km az=63.0*
NEIC Felt [III] at Panyabungan and Pasaman.

ISC 14 09:08:15.2±0.9, 0°.79N±0°.04×99°.81E±0°.05, h14km±6km, n30, σ1°10/30, mb3.9/11, MS3.8/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.23**	**272**	P		**Pg**	**09 08 19.8**	**-0.5**
MNSI				S		**Sg**	**09 08 23.9**	**+0.2**
BKNI	**Bangkinang**	**1.31**	**111**	P		**Pn**	**09 08 37.6**	**-1.5**
BKNI				S		**Sb**	**09 08 56.1**	**-0.2**
PPI	**Padang Panjang**	**1.37**	**155**	P		**Pn**	**09 08 38.4**	**-1.5**
PPI				S		**Sn**	**09 08 58.5**	**+0.7**
PDSI	**Padang**	**1.81**	**159**	P		**Pn**	**09 08 46.3**	**+0.3**
PDSI				S		**Sn**	**09 09 10.7**	**+2.0**
SISI	**Saibi**	**2.22**	**199**	P		**Pn**	**09 08 52.0**	**+0.4**
GSI	**Gunungsitoli**	**2.29**	**283**	P		**Pn**	**09 08 53.3**	**+0.7**
SDSI	**Sungai Dareh**	**2.35**	**137**	P		**Pn**	**09 08 55.6**	**+2.2**
TPTI		**3.60**	**313**	P		**Pn**	**09 09 12.2**	**+1.6**
IPM	**Ipoh**	**3.86**	**18**	P		**Pn**	**09 09 15.7**	**+1.5**
KULM	**Kulim**	**4.55**	**11**	*e*Pn		**Pn**	**09 09 23.6**	**0.0**
KULM				*e*Sn		**Sn**	**09 10 17.9**	**+1.5**
KULM	**Kulim**	**4.55**	**11**	P		**Pn**	**09 09 23.8**	**+0.2**
CMAR	**Chiang Mai Arr**	**17.58**	**357**	P		**Pn**	**09 12 21.0**	**+1.1**
	0.3nm,0.3s,baz=183,slow=11,SNR=5.2							
CMAR					LR	LR	09 18 12.7	
	comp=Z,68nm,21.3s,baz=185,slow=34							
WRA	**Warramunga Arr**	**39.61**	**123**	P		**P**	**09 15 46.6**	**0.0**
	0.5nm,0.9s,mb3.2,baz=302,slow=9.1,SNR=2.7							
WRA					PcP	PcP	09 17 54.2	+0.4
	0.2nm,0.5s,baz=310,slow=2.4,SNR=4.6							
ASAR	**Alice Springs**	**41.08**	**129**	P		**P**	**09 15 57.0**	**-1.7**
	0.3nm,0.8s,mb3.0,baz=294,slow=7.0,SNR=3.6							
KSRS	**Korea Array**	**44.75**	**32**	P		**P**	**09 16 27.6**	**-0.6**
	0.5nm,0.4s,mb3.7,baz=224,slow=7.0,SNR=4.2							
KSRS					LR	LR	09 37 25.0	
	comp=Z,36nm,18.8s,MS3.3,baz=202,slow=39							
UCH	**Uchtor**	**47.11**	**334**	*e*P		**P**	**09 16 47.3**	**+0.5**
	2.4nm,0.8s,mb4.2							
SONM	**Songino Array**	**47.21**	**6**	P		**P**	**09 16 47.7**	**+0.2**
	1.2nm,0.8s,mb3.9,baz=197,slow=8.2,SNR=6.4							
TKM2	**Tokmak 2**	**47.22**	**336**	*e*P		**P**	**09 16 47.7**	**0.0**
	3.2nm,0.8s,mb4.3							
AAK	**Ala-Archa**	**47.45**	**335**	LR		LR	09 37 38.2	
	comp=Z,63nm,19.2s,MS3.6,baz=337,slow=37							
MK31	**Makanchi Array**	**48.31**	**344**	*e*P		**P**	**09 16 56.5**	**+0.5**
MKAR	**Makanchi Array**	**48.31**	**344**	P		**P**	**09 16 55.6**	**-0.4**
	3.6nm,0.9s,mb4.4,baz=156,slow=7.6,SNR=16							
STKA	**Stephens Creek**	**51.16**	**133**	LR		LR	09 43 07.3	
	comp=Z,92nm,18.1s,MS3.9,baz=26,slow=41							
KURK	**Kurchatov**	**52.90**	**343**	P		**P**	**09 17 29.1**	**-1.5**
	0.8nm,0.6s,mb3.8,baz=160,slow=6.8,SNR=4.2							
ZAA0	**Zalesovo Array**	**54.41**	**349**	*e*P		**P**	**09 17 40.8**	**-0.9**
ZALV	**Zalesovo Beam**	**54.41**	**349**	P		**P**	**09 17 40.8**	**-0.8**
	2.9nm,0.6s,mb4.4,baz=173,slow=6.5,SNR=13							
BVAR	**Borovoye Array**	**57.52**	**339**	P		**P**	**09 18 02.1**	**-1.9**
	0.4nm,0.5s,mb3.7,baz=145,slow=5.3,SNR=3.4							
BRTR	**Keskin Array B**	**71.32**	**312**	P		**P**	**09 19 33.0**	**-1.6**
	0.9nm,0.7s,mb3.8,baz=133,slow=7.0,SNR=5.6							
MAW	**Mawson**	**72.93**	**194**	LR		LR	09 44 07.8	
	comp=Z,148nm,19.7s,MS4.3,baz=78,slow=30							
AKASG	**Malin Array Be**	**77.18**	**322**	LR		LR	09 59 01.4	
	comp=Z,36nm,19.1s,MS3.7,baz=245,slow=40							
TXAR	**Lajitas Array**	**142.57**	**35**	PKP		PKPdf	09 27 47.7	-0.9
	0.1nm,0.5s,baz=45,slow=1.5,SNR=2.7							

KRSC 14 09:09:22.4±1.0, 50°.51N×157°.25E, h54km±54km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.14**	**289**	*i* P		Pn	09 09 41.7	-0.3
ALID				*e*S		Sn	09 09 55.6	-1.0
MIPR	**Malaya Ipel'ka**	**1.79**	**350**	*e*P		Pn	09 09 53.3	+2.4
GRL	**Gorelyy**	**2.11**	**14**	*e*P		Pn	09 09 58.0	+2.8
GRL				*e*S		Sn	09 10 23.7	+3.5
PET	**Petropavlovsk**	**2.66**	**19**	S		Sn	09 10 37.4	+3.6
SDLR	**Sedlovina**	**2.95**	**19**	P		Pn	09 10 09.8	+3.1
SDLR				S		Sn	09 10 44.8	+3.9
NLC	**Nalytchevo**	**2.96**	**25**	S		Sn	09 10 42.5	+1.3
SPN	**Mys Shipunski**	**3.11**	**33**	S		Sn	09 10 47.1	+2.3
GNL	**Ganaly**	**3.22**	**7**	*e*P		Pn	09 10 14.1	+3.7
GNL				S		Sn	09 10 51.1	+3.7
MKZ	**Mys Kozlova**	**4.89**	**32**	P		Pn	09 10 34.7	+1.5
MKZ				S		Sn	09 11 28.9	+0.5
KBTR	**Krutoberegovo**	**6.61**	**28**	P		Pn	09 10 58.6	+1.8

ISCJB **14** *09:18:05.1±0.5, 36°.44N±0°.03×26°.88E±0°.04, h120km±6km, Error ellipse: s-maj=5.9km s-min=4.4km az=156.1*
ATH **14** *09:18:07.8, 36°.54N×26°.69E, h39km±7km, MD3.6/9*
NEIC **14** *09:18:07.8, 36°.54N×26°.69E, h39km, MD3.6(ATH), After ATH.*
CSEM **14** *09:18:08.8±0.2, 36°.51N×26°.70E, h30km, MD3.6, Error ellipse: s-maj=7.1km s-min=5.6km az=139.0*
HLW **14** *09:18:09.6, 36°.15N×27°.03E, h33km±28km, Ml3.2*

ISC 14 09:18:06.2±0.5, 36°.45N±0°.03×26°.88E±0°.04, h115km±7km, n74, σ0°84/94, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.76**	**36**	*i* P		**Pn**	**09 18 26.0**	**+0.5**
BDRM	**Kayabasi**	**0.76**	**36**	*i* P		**Pn**	**09 18 26.0**	**+0.5**
BDRM				*i* S		**Sn**	**09 18 40.0**	**-0.1**
KARP	**Karpathos**	**0.93**	**166**	*e*Pn		**Pn**	**09 18 28.1**	**+1.0**
KARP	**Karpathos**	**0.93**	**166**	*e*PN		**Pn**	**09 18 28.1**	**+1.0**
KARP	**Karpathos**	**0.93**	**166**	*e*Pn		**Pn**	**09 18 28.1**	**+1.0**
ARG	**Arkhangelos**	**1.03**	**103**	*e*Pn		**Pn**	**09 18 29.4**	**+1.3**
ARG				*e*Sn		**Sn**	**09 18 45.6**	**+1.0**
ARG	**Arkhangelos**	**1.03**	**103**	*e*PN		**Pn**	**09 18 29.4**	**+1.3**
ARG				*e*SN		**Sn**	**09 18 45.6**	**+1.0**
ARG	**Arkhangelos**	**1.03**	**103**	*e*Pn		**Pn**	**09 18 29.4**	**+1.3**
ARG				*e*Sn		**Sn**	**09 18 45.6**	**+1.0**
APE	**Apeiranthos**	**1.25**	**300**	*e*Pn		**Pn**	**09 18 29.5**	**-0.8**
APE	**Apeiranthos**	**1.25**	**300**	*e*PN		**Pn**	**09 18 29.5**	**-0.8**
APE	**Apeiranthos**	**1.25**	**300**	*e*Pn		**Pn**	**09 18 29.5**	**-0.8**
SMG	**Samos**	**1.26**	**358**	*e*Pn		**Pn**	**09 18 30.0**	**-0.5**
SMG	**Samos**	**1.26**	**358**	*e*PN		**Pn**	**09 18 30.0**	**-0.5**
SMG	**Samos**	**1.26**	**358**	*e*Pn		**Pn**	**09 18 30.0**	**-0.5**
ZKR	**Zakros**	**1.44**	**202**	*e*Pb		**Pn**	**09 18 34.0**	**+1.5**
ZKR				*e*Sn		**Sn**	**09 18 52.2**	**-0.3**
ZKR	**Zakros**	**1.44**	**202**	*e*PB		**Pn**	**09 18 34.0**	**+1.5**
ZKR				*e*SN		**Sn**	**09 18 52.2**	**-0.3**
ZKR	**Zakros**	**1.44**	**202**	*e*Pb		**Pn**	**09 18 34.0**	**+1.5**
ZKR				*e*Sn		**Sn**	**09 18 52.2**	**-0.3**
TURN	**Turunc**	**1.45**	**73**	*i* P		**Pn**	**09 18 30.0**	**-2.6**
TURN	**Turunc**	**1.45**	**73**	*i* P		**Pn**	**09 18 30.0**	**-2.6**
AYDN	**Tasoluk**	**1.45**	**33**	*i* P		**Pn**	**09 18 33.3**	**+0.7**
AYDN	**Tasoluk**	**1.45**	**33**	*i* P		**Pn**	**09 18 33.3**	**+0.7**
AYDN				*i* S		**Sn**	**09 18 52.0**	**-0.8**
NPS	**Neapolis**	**1.57**	**221**	*e*Pb		**Pn**	**09 18 34.5**	**+0.4**
NPS				*e*Sn		**Sn**	**09 18 54.3**	**-1.0**
NPS	**Neapolis**	**1.57**	**221**	*e*PB		**Pn**	**09 18 34.5**	**+0.4**
NPS				*e*SN		**Sn**	**09 18 54.3**	**-1.0**
NPS	**Neapolis**	**1.57**	**221**	*e*Pb		**Pn**	**09 18 34.5**	**+0.4**
NPS				*e*Sn		**Sn**	**09 18 54.3**	**-1.0**
CHOS	**Chios island**	**2.04**	**341**	*e*PN		**Pn**	**09 18 39.3**	**-0.6**
CHOS	**Chios island**	**2.04**	**341**	*e*Pn		**Pn**	**09 18 39.3**	**-0.6**
DNZL	**Cakiroluk**	**2.13**	**54**	*i* P		**Pn**	**09 18 41.6**	**+0.6**
DNZL	**Cakiroluk**	**2.13**	**54**	*i* P		**Pn**	**09 18 41.6**	**+0.6**
DNZL				*i* S		**Sn**	**09 19 08.2**	**+0.6**
SIVA	**Sivas**	**2.21**	**230**	*e*Pn		**Pn**	**09 18 42.8**	**+0.8**
SIVA				*e*Sn		**Sn**	**09 19 08.3**	**-1.1**
SIVA	**Sivas**	**2.21**	**230**	*e*PN		**Pn**	**09 18 42.8**	**+0.8**
SIVA				*e*SN		**Sn**	**09 19 08.2**	**-1.2**
SIVA	**Sivas**	**2.21**	**230**	*e*Pn		**Pn**	**09 18 42.8**	**+0.8**
SIVA				*e*Sn		**Sn**	**09 19 08.3**	**-1.1**
AKAS	**Kas**	**2.21**	**95**	*i* P		**Pn**	**09 18 41.9**	**-0.1**
AKAS	**Kas**	**2.21**	**95**	*i* P		**Pn**	**09 18 41.9**	**-0.1**
AKAS				*i* S		**Sn**	**09 19 06.3**	**-3.2**
GOLH	**Golhisar**	**2.29**	**69**	*i* P		**Pn**	**09 18 43.2**	**+0.2**
GOLH	**Golhisar**	**2.29**	**69**	*i* P		**Pn**	**09 18 43.2**	**+0.2**
VAM	**Vamos**	**2.41**	**245**	*e*Pn		**Pn**	**09 18 46.0**	**+1.4**
VAM	**Vamos**	**2.41**	**245**	*e*PN		**Pn**	**09 18 46.0**	**+1.4**
VAM	**Vamos**	**2.41**	**245**	*e*Pn		**Pn**	**09 18 46.0**	**+1.4**
KARN	**Karanos**	**2.62**	**247**	*e*PN		**Pn**	**09 18 48.2**	**+0.9**
KARN	**Karanos**	**2.62**	**247**	*e*Pn		**Pn**	**09 18 48.2**	**+0.9**
KORT	**Korkueli**	**2.84**	**78**	*i* P		**Pn**	**09 18 51.2**	**+1.1**
KORT	**Korkueli**	**2.84**	**78**	*i* P		**Pn**	**09 18 51.2**	**+1.0**
KORT				*i* S		**Sn**	**09 19 23.1**	**-1.0**
DID	**Didima**	**3.10**	**291**	*e*PN		**Pn**	**09 18 53.3**	**-0.3**
DID	**Didima**	**3.10**	**291**	*e*Pn		**Pn**	**09 18 53.3**	**-0.3**
KYTH	**Kithira**	**3.11**	**268**	*e*Pn		**Pn**	**09 18 53.3**	**-0.4**
KYTH	**Kithira**	**3.11**	**268**	*e*PN		**Pn**	**09 18 53.3**	**-0.4**
KYTH	**Kithira**	**3.11**	**268**	*e*Pn		**Pn**	**09 18 53.3**	**-0.4**
VLI	**Veliai**	**3.19**	**276**	*e*Pn		**Pn**	**09 18 54.2**	**-0.5**
VLI	**Veliai**	**3.19**	**276**	*e*PN		**Pn**	**09 18 54.2**	**-0.5**
VLI	**Veliai**	**3.19**	**276**	*e*Pn		**Pn**	**09 18 54.2**	**-0.5**
LTK	**Loutraki**	**3.50**	**298**	*e*PN		**Pn**	**09 18 59.0**	**+0.2**
LTK	**Loutraki**	**3.50**	**298**	*e*Pn		**Pn**	**09 18 59.0**	**+0.2**
GUR	**Goura**	**3.92**	**294**	*e*PN		**Pn**	**09 19 04.8**	**+0.4**
GUR	**Goura**	**3.92**	**294**	*e*Pn		**Pn**	**09 19 04.8**	**+0.4**
ITM	**Ithomi**	**4.04**	**282**	*e*Pn		**Pn**	**09 19 06.2**	**+0.1**
ITM	**Ithomi**	**4.04**	**282**	*e*PN		**Pn**	**09 19 06.2**	**+0.1**
ITM	**Ithomi**	**4.04**	**282**	*e*Pn		**Pn**	**09 19 06.2**	**+0.1**
SLUM		**5.14**	**196**	P		**Pn**	**09 19 20.3**	**-0.6**
SLUM	baz=199				AMP		09 19 00.0	
	comp=N,30μm,0.1s,logA/T=5.4,baz=199							
SLUM		**5.14**	**196**	P		**Pn**	**09 19 20.3**	**-0.6**
HMAT	**Matruh**	**5.34**	**178**	P		**Pn**	**09 19 23.3**	**-0.4**
HMAT	baz=179			S		**Sn**	**09 20 18.4**	**-5.6**
	baz=179							
HMAT	**Matruh**	**5.34**	**178**	P		**Pn**	**09 19 23.3**	**-0.4**
HMAT				S		**Sn**	**09 20 18.4**	**-5.7**
HBRG	**Burj al 'Arab**	**6.36**	**156**	P		**Pn**	**09 19 36.5**	**-0.9**
	baz=156							
HBRG	**Burj al 'Arab**	**6.36**	**156**	P		**Pn**	**09 19 36.5**	**-0.9**
AYT	**Al 'Ayyat**	**7.62**	**151**	P		**Pn**	**09 19 54.4**	**-0.1**
	baz=150							
AYT	**Al 'Ayyat**	**7.62**	**151**	P		**Pn**	**09 19 54.4**	**-0.1**
KOT	**Kottamia**	**7.71**	**146**	P		**Pn**	**09 19 56.4**	**+0.6**
	baz=145							
KOT	**Kottamia**	**7.71**	**146**	P		**Pn**	**09 19 56.4**	**+0.6**
HHAG	**Hagoal**	**7.81**	**145**	P		**Pn**	**09 19 56.8**	**-0.3**
	baz=144							
HHAG				S		**Sn**	**09 21 18.6**	**-5.3**
	baz=144							
HHAG	**Hagoal**	**7.81**	**145**	P		**Pn**	**09 19 56.8**	**-0.3**
HSAF	**As Saff**	**7.86**	**149**	P		**Pn**	**09 19 57.2**	**-0.5**
	baz=148							
HSAF	**As Saff**	**7.86**	**149**	P		**Pn**	**09 19 57.2**	**-0.6**
GLL	**Jalalah**	**7.96**	**148**	P		**Pn**	**09 19 58.7**	**-0.4**
	baz=147							
GLL	**Jalalah**	**7.96**	**148**	P		**Pn**	**09 19 58.7**	**-0.4**
HDK1	**Dakhla**	**11.08**	**168**	P		**Pn**	**09 20 41.8**	**+0.5**
	baz=168							

BJI **14** *09:29:08.6, 83°.60N×114°.20E, h10km, mB4.8/14, mb4.6/22, Ms4.2/9, Ms7 3.9/10*
ISCJB **14** *09:29:11.7±2.4, 83°.62N±0°.04×114°.3E±0°.4, h11km±14km, mb4.3/59, MS3.5/13, Error ellipse: s-maj=9.5km s-min=4.4km az=39.7*
MOS **14** *09:29:11.3±1.1, 83°.59N×114°.23E, h10km, mb4.5/18, Error ellipse: s-maj=86.7km s-min=8.5km az=87.4*
IDC **14** *09:29:11.6±0.7, 83°.63N×114°.73E, h0km, mb3.9/16, mb1 4.1/17, mb1mx4.0/26, mbtmp4.0/17, ML3.8/1, MS3.4/9, Ms1 3.4/9, ms1mx3.1/28, Error ellipse: s-maj=22.3km s-min=12.7km az=146.0*
NEIC **14** *09:29:13.6±0.2, 83°.63N×114°.15E, h10km, mb4.5/29, Error ellipse: s-maj=7.6km s-min=4.2km az=143.0*

ISC 14 09:29:13.2±2.6, 83°.62N±0°.04×114°.3E±0°.4, h7km±16km, h16km±2.5km; pP-P, n324, σ0°60/322, mb4.3/59, MS3.5/13, 117C-119D, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**12.35**	**158**	*e*Pn		**Pn**	**09 32 08.8**	**-0.2**
	8.0nm,1.1s							
TIXI	**Tiksi**	**12.35**	**158**	*e*P		**Pn**	**09 32 09.4**	**+0.3**
TIXI					pmax	pmax		
	comp=Z,9.0nm,1.2s							
SPITS	**Spitsbergen Ar**	**14.26**	**304**	Pn		**Pn**	**09 32 33.2**	**-1.9**
	baz=36,slow=10,SNR=3.1							
SPITS					LR	LR	09 37 11.9	
	comp=Z,118nm,18.7s,baz=0.0,slow=34							
ARCES	**ARCESS Array B**	**21.40**	**285**	P		**P**	**09 34 00.3**	**-0.6**
	comp=Z,8.7nm,1.0s,mb4.0,baz=26,slow=11,SNR=4.4							
YAK	**Yakutsk**	**22.00**	**160**	*e*P		**P**	**09 34 04.5**	**-2.8**
YAK				*e*			09 34 25.9	
YAK					pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.2							
YAK					pmax	pmax		
	comp=N,6.0nm,1.1s							
YAK					pmax	pmax		
	comp=E,3.0nm,1.3s							
APA	**Apatity**	**22.42**	**276**	↓*e*P		**P**	**09 34 16.6**	**+4.8**
APA				*i*			09 34 25.3	
APA					pmax	pmax		
	comp=Z,13nm,1.0s,mb4.3							
APA					MLR	MLR		
	comp=Z,400nm,17.0s,MS3.9							
SEY	**Seymchan**	**22.49**	**132**	↑*i* P		**P**	**09 34 11.2**	**-1.4**
JMIC

comp=N,97nm,13.1s,MS4.0
HHC LR LR
comp=E,110nm,14.3s,MS4.0
HHC LR LR
comp=Z,71nm,14.3s,MS3.7
GOF Gofitskoye 43.41 258 *eP* **P 09 37 22.3 +6.5**
KIV Kislovodsk 44.53 258 *eP* **P 09 37 20.3 -4.6**
KIV pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
A13A Flathead Natio 45.71 44 ⇓P **P 09 37 33.6 -0.6**
baz=46
A14A Double T Ranch 45.75 43 ⇑P **P 09 37 34.5 0.0**
baz=46
A15A Johnson Ranch, 45.79 42 ⇓P **P 09 37 34.1 -0.7**
baz=46
B08A Colville Reser 45.88 48 ⇓P **P 09 37 35.0 -0.5**
baz=46,SNR=5.4
A16A West Butte Ran 45.91 41 ⇓P **P 09 37 34.7 -1.1**
baz=46
A17A Triple J Farms 45.98 40 ⇑P **P 09 37 35.3 -1.0**
baz=46
NEW Newport 46.16 46 ⇓P **P 09 37 38.0 +0.3**
baz=46
NEW Newport 46.16 46 *eP* **P 09 37 38.1 +0.4**
comp=Z,4.0nm,1.0s,mb4.3
NEW Newport 46.16 46 *eP* **P 09 37 38.1 +0.4**
NEW pmax pmax
comp=Z,4.0nm,1.0s
B13A Whitefish 46.26 44 ⇑P **P 09 37 38.2 -0.4**
baz=46
B14A Marquette Ranc 46.37 43 ⇑P **P 09 37 38.8 -0.6**
baz=46
B16A M & M Farms, S 46.43 41 ⇑P **P 09 37 39.3 -0.6**
baz=46
B15A Bradely Ranch, 46.47 42 ⇑P **P 09 37 39.4 -0.7**
baz=46
B18A Beardsley Farm 46.59 40 ⇑P **P 09 37 40.3 -0.8**
baz=46
B17A L&G Farms, Che 46.62 41 ⇓P **P 09 37 41.1 -0.2**
baz=46
C12B Naegeli Ranch, 46.84 45 ⇓P **P 09 37 43.1 0.0**
baz=47
DGMT Dagmar 46.89 35 ⇓P **P 09 37 43.4 0.0**
baz=47
DGMT Dagmar 46.89 35 *eP* **P 09 37 43.3 -0.1**
comp=Z,18nm,0.9s,mb5.0
JTMT Jette 46.90 44 *eP* **P 09 37 43.7 +0.2**
comp=Z,4.9nm,1.0s,mb4.4
C13A Hot Springs 46.94 44 ⇑P **P 09 37 43.7 -0.2**
baz=47
C15A Salmond Ranch, 47.00 42 ⇑P **P 09 37 44.1 -0.2**
baz=47,SNR=5.3
C16A Fuhringer Ranc 47.04 42 ⇑P **P 09 37 43.8 -0.8**
baz=47
LON Longmire 47.27 51 *eP* **P 09 37 46.6 +0.1**
comp=Z,5.1nm,1.0s,mb4.4
LON Longmire 47.27 51 *eP* **P 09 37 46.6 +0.2**
LON pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
C17A Wharram Farm, 47.28 41 ⇑P **P 09 37 46.0 -0.5**
baz=47
D12A Red Ives Fores 47.51 45 ⇓P **P 09 37 47.7 -0.6**
baz=47
D14A Greenough 47.62 43 ⇑P **P 09 37 48.7 -0.5**
baz=47,SNR=5.4
D15A Lincoln 47.73 42 ⇑P **P 09 37 49.7 -0.3**
baz=48,SNR=5.3
D17A Six Diamond Ra 47.76 41 ⇑P **P 09 37 49.8 -0.4**
baz=48
E08A Dider Farm, El 47.76 48 ⇑P **P 09 37 50.0 -0.3**
baz=48
D18A Linhart Farms, 47.78 40 ⇑P **P 09 37 50.4 -0.1**
baz=48
LZH Lanzhou 47.79 191 *eP* **P 09 37 52.0 +1.4**
LZH sP sP 09 37 57.3 +3.9
LZH pP pP 09 37 58.8 +6.2
LZH pmax pmax
comp=Z,20nm,1.2s,mb5.0
LZH pmax pmax
comp=Z,52nm,6.8s
LZH LR LR
comp=E,350nm,14.8s
LZH LR LR
comp=Z,390nm,18.0s,MS4.4
E09A Wood Farm, Sta 47.81 48 ⇑P **P 09 37 50.2 -0.5**
baz=48
D16A Dana Ranch, Ca 47.82 41 ⇓P **P 09 37 50.4 -0.3**
baz=48
MSO Missoula 47.84 44 ⇑P **P 09 37 50.8 -0.1**
baz=48
MSO Missoula 47.84 44 *eP* **P 09 37 50.8 -0.1**
comp=Z,53nm,2.8s,mb5.1
E13A Victor 48.20 44 ⇑P **P 09 37 53.6 -0.1**
baz=48
E14A Clinton 48.28 43 ⇑P **P 09 37 54.6 +0.3**
baz=48
E16A East Helena 48.30 42 ⇓P **P 09 37 54.1 -0.3**
baz=48
E15A Deer Lodge 48.34 43 ⇑P **P 09 37 54.4 -0.3**
baz=48
E18A Harlowton 48.40 40 ⇓P **P 09 37 55.1 -0.1**
baz=48,SNR=5.7
F10A Beach Ranch, E 48.43 47 ⇑P **P 09 37 55.2 -0.2**
baz=48
E17A Martinsdale 48.44 41 ⇓P **P 09 37 55.4 -0.1**
baz=48
LAO LASA Array 48.53 37 ⇑P **P 09 37 56.3 +0.1**
baz=48,SNR=8.5
LAO LASA Array 48.53 37 *eP* **P 09 37 56.8 +0.5**
comp=Z,12nm,0.9s,mb4.9
F12A Elk City 48.80 45 ⇑P **P 09 37 58.1 -0.2**
baz=49,SNR=10
F15A Butte 48.93 42 ⇓P **P 09 37 59.0 -0.3**
baz=49
G08A Pilot Rock 48.96 49 ⇑P **P 09 37 59.5 0.0**
baz=49,SNR=6.5
F17A Fitzpatrick Pl 49.00 41 ⇑P **P 09 37 59.9 +0.1**
baz=49
F16A Kennard Place, 49.05 42 ⇑P **P 09 38 00.3 +0.1**
baz=49
F18A Big Timber 49.07 40 ⇑P **P 09 38 00.3 -0.1**
baz=49
F19A Roth Farm, Mol 49.18 39 ⇑P **P 09 38 01.0 -0.2**
baz=49
BOZ Bozeman (W) 49.19 42 ⇑P **P 09 38 01.6 +0.3**
baz=49,SNR=7.8
BOZ Bozeman (W) 49.19 42 *eP* **P 09 38 01.9 +0.6**
comp=Z,4.9nm,0.9s,mb4.5
BOZ Bozeman (W) 49.19 42 *eP* **P 09 38 01.9 +0.6**
BOZ pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
GCMT Greycliff 49.19 40 *eP* **P 09 38 01.8 +0.5**
comp=Z,4.2nm,1.0s,mb4.4
BMO Blue Mountains 49.53 47 *eP* **P 09 38 04.5 +0.6**
comp=Z,3.1nm,0.9s,mb4.3
G13A Cobalt 49.54 44 ⇓P **P 09 38 04.3 +0.3**
baz=49
G17A Pierce Place, 49.58 41 ⇓P **P 09 38 04.7 +0.4**
baz=49
G18A Lazy EL Ranch, 49.67 40 ⇑P **P 09 38 05.0 +0.1**
baz=49
BRTR Keskin Array B 49.71 266 P **P 09 38 05.9 +0.6**
comp=Z,0.8nm,0.7s,mb3.8,baz=12,slow=7.9,SNR=4.5
BRTR LR LR 10 00 36.4
comp=Z,36nm,21.9s,MS3.3,baz=281,slow=38
BRTR Keskin Array B 49.71 266 *ceP* **P 09 38 09.1 +3.7**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
H13A Challis 50.06 44 ⇓P **P 09 38 07.8 -0.2**
baz=50,SNR=18
H14A Leadore 50.08 43 ⇑P **P 09 38 08.3 +0.2**
baz=50
I07A Izee 50.12 49 ⇓P **P 09 38 08.7 +0.4**
baz=50
H15A Lima 50.14 43 ⇓P **P 09 38 08.8 +0.3**
baz=50
H16A Russell Place, 50.16 42 ⇑P **P 09 38 08.7 +0.1**
baz=50
H17A Grant Village 50.51 41 ⇓P **P 09 38 13.4 +2.1**
baz=50,SNR=9.5
H21A Big Horn, Sher 50.53 38 ⇑P **P 09 38 11.5 0.0**
baz=50
H20A Greybull 50.60 39 ⇑P **P 09 38 11.7 -0.4**
baz=50
I13A Wildhorse Cree 50.72 44 ⇑P **P 09 38 13.2 +0.3**
baz=50,SNR=10
I12A Atlanta 50.76 45 ⇑P **P 09 38 12.3 -0.9**
baz=50
I15A Monteview 50.76 43 ⇓P **P 09 38 13.6 +0.3**
baz=50
FLWY Flagg Ranch 50.81 41 *eP* **P 09 38 15.1 +1.5**
comp=Z,12nm,1.3s,mb4.7
J08A Circle Bar Ran 50.92 48 ⇓P **P 09 38 15.2 +0.8**
baz=51,SNR=9.5
I16A Newdale 50.96 42 ⇑P **P 09 38 15.3 +0.6**
baz=51,SNR=5.9
IMW Indian Meadow 50.98 41 *eP* **P 09 38 16.2 +1.3**
comp=Z,4.6nm,0.9s,mb4.4
I17A Pilgrim Ck. 50.98 41 ⇓P **P 09 38 16.0 +1.1**
baz=51
HLID Hailey 51.05 45 ⇑P **P 09 38 15.6 +0.2**
baz=51
MFID Camas Ranch 51.08 46 ⇓P **P 09 38 15.5 -0.2**
baz=51,SNR=5.1
I20A Worland 51.13 39 ⇓P **P 09 38 16.0 0.0**
baz=51
MOOW Moose Ponds 51.14 41 *eP* **P 09 38 16.9 +0.9**
comp=Z,2.8nm,0.9s,mb4.2
RSSD Black Hills 51.23 35 *eP* **P 09 38 16.9 +0.1**
comp=Z,6.4nm,0.8s,mb4.6
RSSD Black Hills 51.23 35 *eP* **P 09 38 16.9 +0.1**
RSSD pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
I18A Diamond G Ranc 51.26 40 ⇑P **P 09 38 17.3 +0.4**
baz=51
I21A Big Trails, Te 51.33 38 ⇓P **P 09 38 16.7 -0.7**
baz=51,SNR=8.3
K05A Summer Lake 51.34 51 ⇑P **P 09 38 18.3 +0.7**
baz=51
J14A Carey 51.35 44 ⇓P **P 09 38 17.9 +0.2**
baz=51,SNR=6.5
TPAW Teton Pass 51.38 41 *eP* **P 09 38 18.6 +0.7**
comp=Z,3.8nm,0.9s,mb4.3
REDW Red Top Meadow 51.52 41 *eP* **P 09 38 19.4 +0.4**
comp=Z,34nm,2.3s,mb4.9
J16A Bone 51.55 42 ⇓P **P 09 38 19.6 +0.5**
baz=51
NJ2 Nanjing 51.72 175 *eP* **P**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
J18A Kendall Valley 51.73 41 ⇓P **P 09 38 20.9 +0.4**
baz=52
WVOR Wild Horse Val 51.83 49 *eP* **P 09 38 22.0 +0.8**
comp=Z,4.7nm,1.3s,mb4.3
WVOR Wild Horse Val 51.83 49 *eP* **P 09 38 22.0 +0.8**
WVOR pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
K16A Soda Springs 51.99 42 ⇓P **P 09 38 23.1 +0.6**
baz=52
K14A Jones Ranch, D 52.16 44 ⇑P **P 09 38 24.2 +0.5**
baz=52
K19A Absolon Red Bu 52.20 40 ⇑P **P 09 38 23.6 -0.4**
baz=52
BW06 Boulder Array 52.20 40 ⇑P **P 09 38 23.8 -0.3**
baz=52
K18A Toltan Ranch, 52.30 41 ⇑P **P 09 38 24.7 0.0**
baz=52
L10A Juniper Basin 52.36 47 ⇑P **P 09 38 25.3 +0.1**
baz=52
K20A Yellowstone Ra 52.40 39 ⇑P **P 09 38 24.6 -0.9**
baz=52
K22A Casper 52.53 37 ⇓P **P 09 38 25.6 -0.8**
baz=52
L14A Malta 52.66 44 ⇓P **P 09 38 27.4 0.0**
baz=52
L16A Fish Haven 52.81 42 ⇓P **P 09 38 28.6 0.0**
baz=53
L19A Farson 52.88 40 ⇑P **P 09 38 28.7 -0.4**
baz=53
CD2 Chengdu 52.95 191 P **P 09 38 30.0 +0.3**
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,80nm,5.3s
L23A Garrett 53.12 37 ⇑P **P 09 38 30.1 -0.7**
baz=53
L21A Rawlins 53.16 38 ⇑P **P 09 38 30.5 -0.6**
baz=53,SNR=5.4
HWUT Hardware Ranch 53.21 42 *eP* **P 09 38 31.8 +0.3**
comp=Z,8.1nm,1.0s,mb4.6
M13A Montello 53.26 45 ⇓P **P 09 38 32.2 +0.4**
baz=53,SNR=5.3
M13A Montello 53.26 45 *eP* **P 09 38 32.5 +0.7**
comp=Z,5.3nm,1.0s,mb4.4
M15A Larsen Ranch, 53.29 43 ⇓P **P 09 38 31.9 -0.1**
baz=53
RWWY Rawlins 53.44 38 *eP* **P 09 38 33.0 -0.2**
comp=Z,12nm,1.1s,mb4.7
M21A Separation Pea 53.52 38 ⇑P **P 09 38 33.3 -0.5**
baz=53
ESDC Soseca Array 53.77 303 P **P 09 38 35.8 +0.1**
comp=Z,0.2nm,0.3s,mb3.6,baz=22,slow=6.8,SNR=4.0
N16A Rees Ranch, Co 53.94 42 ⇑P **P 09 38 37.1 +0.3**
baz=54
N18A Larsen Ranch, 53.98 41 ⇑P **P 09 38 36.8 -0.3**
baz=54
N19A John Jarvie Ra 54.10 40 ⇓P **P 09 38 37.8 -0.2**
baz=54
N20A Spence Gulch, 54.22 39 ⇑P **P 09 38 38.9 0.0**
baz=54,SNR=8.8
O12A Currie 54.30 45 ⇓P **P 09 38 39.2 -0.2**
baz=54
N23A Red Feather La 54.32 37 ⇑P **P 09 38 39.6 -0.1**
baz=54
N21A Black Mountain 54.35 39 ⇓P **P 09 38 39.5 -0.3**
baz=54
N22A Wattenberg Ran 54.38 38 ⇑P **P 09 38 39.2 -0.8**
baz=54
DAU Daniels Canyon 54.42 42 *eP* **P 09 38 41.1 +0.7**
comp=Z,4.1nm,1.0s,mb4.3
DAU Daniels Canyon 54.42 42 *eP* **P 09 38 41.1 +0.7**
DAU pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
N24A Carr 54.46 36 ⇓P **P 09 38 40.8 +0.2**
baz=54
DUG Dugway 54.52 44 ⇓P **P 09 38 41.1 0.0**
baz=54
DUG Dugway 54.52 44 *eP* **P 09 38 41.4 +0.3**
comp=Z,3.5nm,1.0s,mb4.3
DUG Dugway 54.52 44 *eP* **P 09 38 41.4 +0.3**
DUG pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
O16A Springville 54.61 42 ⇑P **P 09 38 41.8 0.0**
baz=54,SNR=6.1
O18A Roosevelt 54.66 41 ⇓P **P 09 38 42.4 +0.3**
baz=54
O17A Robinson Place 54.68 42 ⇓P **P 09 38 42.6 +0.4**
baz=54
WCN Washoe City 54.84 50 ⇑P **P 09 38 43.8 +0.4**
baz=55
O20A White River Ci 54.92 39 ⇑P **P 09 38 44.0 +0.1**
baz=55
O22A Kremmling 55.01 38 ⇓P **P 09 38 44.8 +0.2**
baz=55,SNR=12
P14A Drum Mountains 55.10 44 ⇓P **P 09 38 45.5 +0.2**
baz=55
P13A Bates Ranch, G 55.16 45 ⇓P **P 09 38 46.1 +0.4**
baz=55
O25A Wiggins 55.22 35 ⇑P **P 09 38 46.4 +0.2**
baz=55
P19A Cripple Cowboy 55.36 40 ⇑P **P 09 38 46.1 -1.1**
baz=55,SNR=5.2
P17A Butcher Ranch, 55.39 42 ⇓P **P 09 38 47.8 +0.4**
baz=55
ISCO Idaho Springs 55.43 37 ⇓P **P 09 38 48.1 +0.5**
baz=55
Q12A Willow Creek R 55.51 46 ⇓P **P 09 38 48.8 +0.5**
baz=55
P20A De Beque 55.54 39 ⇓P **P 09 38 47.7 -0.8**
baz=55
P22A Eagle 55.56 38 ⇓P **P 09 38 49.0 +0.5**
baz=55
Q11A Duckwater 55.63 46 ⇑P **P 09 38 49.6 +0.4**
baz=55
Q13A Wheeler Ranch, 55.66 45 ⇓P **P 09 38 50.1 +0.8**
baz=55
Q14A Sevier Lake (B 55.68 44 ⇓P **P 09 38 50.2 +0.7**
baz=55,SNR=7.2
Q15A Fillmore 55.74 43 ⇑P **P 09 38 50.5 +0.6**
baz=56
Q18A Rafter H Ranch 55.81 41 ⇑P **P 09 38 50.2 -0.2**
baz=56
NVAR Mina Array Bea 55.83 49 P **P 09 38 49.6 -0.9**
comp=Z,0.6nm,0.7s,mb3.7,baz=1.0,slow=6.9,SNR=6.2
P23A Jefferson 55.84 37 ⇓P **P 09 38 51.5 +0.8**
baz=56
Q16A Castle Valley 55.91 42 ⇑P **P 09 38 51.7 +0.6**
baz=56
R11A Troy Canyon, C 56.13 46 ⇑P **P 09 38 52.8 0.0**
baz=56
MSU Marysvale 56.24 43 *eP* **P 09 38 54.4 +0.9**
Q21A Lamborn Mesa, 56.26 39 ⇑P **P 09 38 54.0 +0.3**
baz=56
Q22A Crested Butte, 56.28 38 ⇑P **P 09 38 54.2 +0.5**
baz=56,SNR=6.1
Q24A Divide 56.29 37 ⇓P **P 09 38 53.9 0.0**
baz=56,SNR=5.1
Q23A Hartsel 56.31 37 ⇓P **P 09 38 54.6 +0.6**
baz=56
KEST Kesra 56.34 289 *eP* **P 09 38 56.1 +1.8**
KEST Kesra 56.34 289 P **P 09 38 54.8 +0.5**
comp=Z,3.2nm,1.0s,mb4.3,baz=313,slow=4.8,SNR=8.1
Q25A Bedland, Calha 56.40 36 ⇑P **P 09 38 54.4 -0.3**
baz=56
R17A Hanksville Air 56.44 42 ⇑P **P 09 38 54.7 -0.3**
baz=56
R16A Teasdale 56.52 43 ⇑P **P 09 38 55.4 0.0**
baz=56
R15A Junction 56.53 43 ⇓P **P 09 38 55.8 +0.2**
baz=56
R18A Canyonlands Na 56.54 41 ⇓P **P 09 38 55.2 -0.4**
baz=56
R19A Curley Farm, L 56.68 40 ⇑P **P 09 38 56.7 +0.1**
baz=56
R21A Cimarron 56.72 39 ⇑P **P 09 38 56.9 0.0**
baz=56
R20A Redvale 56.84 40 ⇓P **P 09 38 57.8 0.0**
baz=57
PV01 Paradox Valley 56.88 40 *eP* **P 09 38 58.6 +0.5**
comp=Z,877nm,0.9s
R22A Saguache, Gunn 56.92 38 ⇓P **P 09 38 59.2 +0.9**
baz=57
S12A Delaar Landin 56.93 46 ⇑P **P 09 38 59.3 +0.9**
baz=57
R24A Sanders Place, 57.03 37 ⇑P **P 09 38 59.1 0.0**
baz=57
S13A Holt Ranch, En 57.03 45 ⇓P **P 09 38 59.7 +0.6**
baz=57
S16A Weppner Ranch, 57.07 43 ⇓P **P 09 38 59.5 +0.1**
baz=57,SNR=5.2
S17A Black Ridge (B 57.22 42 ⇓P **P 09 39 00.5 +0.1**
baz=57
S18A Hurst Farm, Bl 57.22 41 ⇑P **P 09 39 00.5 0.0**
baz=57
S19A Harvey Farm, M 57.23 40 ⇓P **P 09 39 00.3 -0.3**
baz=57,SNR=6.7
S22A 4UR Ranch, Cre 57.39 38 ⇓P **P 09 39 02.3 +0.6**
baz=57,SNR=11
S21A Coal Bank Pass 57.41 39 ⇑P **P 09 39 02.3 +0.5**
baz=57,SNR=5.9
SDCO Great Sand Dun 57.48 37 *eP* **P 09 39 02.5 +0.1**
comp=Z,4.9nm,1.1s,mb4.5
T13A Saint George 57.59 45 ⇑P **P 09 39 03.4 +0.3**
baz=57
T14A Hurricane 57.61 44 ⇓P **P 09 39 03.8 +0.6**
baz=57,SNR=5.8
S25A Robets Cordova 57.64 36 ⇑P **P 09 39 03.4 0.0**
baz=57
T15A Red Dirt Ranch 57.71 44 ⇓P **P 09 39 04.0 +0.1**
baz=58
T18A Mexican Hat 57.78 41 ⇓P **P 09 39 04.3 -0.1**
baz=58
MVCO Mesa Verde 57.81 40 ⇓P **P 09 39 04.7 +0.1**
baz=58
MVCO Mesa Verde 57.81 40 *eP* **P 09 39 05.3 +0.7**
comp=Z,11nm,1.2s,mb4.8
T17A Navajo Res., N 57.85 42 ⇓P **P 09 39 04.9 0.0**
baz=58
T21A Navajo Lake 58.09 39 ⇑P **P 09 39 07.3 +0.6**
baz=58
T22A Edith 58.12 38 ⇓P **P 09 39 07.4 +0.6**
baz=58,SNR=6.7
T19A Beclabito 58.15 40 ⇓P **P 09 39 06.4 -0.6**
baz=58
T23A Casias Ranch, 58.15 38 ⇓P **P 09 39 07.3 +0.3**
baz=58
T25A Trinidad 58.16 36 ⇓P **P 09 39 06.9 -0.2**
baz=58
U13A Pakoon Wash 58.18 45 ⇑P **P 09 39 07.5 +0.2**
baz=58
U14A Mt Trumbull 58.24 44 ⇓P **P 09 39 07.7 0.0**
baz=58
MPMC Manual Prospec 58.25 48 ⇑P **P 09 39 08.2 +0.5**
baz=58
U15A North Rim 58.30 43 ⇑P **P 09 39 07.8 -0.2**
baz=58
SHOC Shoshone 58.51 47 ⇑P **P 09 39 10.1 +0.6**
baz=58
ISA Isabella 58.56 49 ⇓P **P 09 39 10.2 +0.3**
baz=58
U21A Nageezi 58.65 39 ⇑P **P 09 39 10.8 +0.3**
baz=58
U19A Dine' College, 58.67 41 ⇓P **P 09 39 10.9 +0.3**
baz=58
U16A Tuba City 58.67 42 ⇓P **P 09 39 10.8 +0.1**
baz=58
KMI Kunming 58.74 192 P **P 09 39 12.8 +1.6**
KMI pP pP 09 39 16.1 +2.8
KMI sP sP 09 39 17.3 +3.2
KMI pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
V13A Grand Canyon W 58.74 45 ⇑P **P 09 39 11.4 +0.3**
baz=58
U22A Llaves 58.75 38 ⇑P **P 09 39 11.5 +0.3**
baz=58,SNR=5.3
LRMC Laurel Mountai 58.81 49 ⇓P **P 09 39 12.0 +0.4**
baz=59
U24A Moreno Valley 58.83 37 ⇓P **P 09 39 12.2 +0.4**
baz=59
U23A El Rito 58.84 38 ⇑P **P 09 39 11.8 -0.1**
baz=59,SNR=7.4
U25A Circle Dot Ran 58.89 36 ⇓P **P 09 39 11.9 -0.3**
baz=59,SNR=9.6
V15A Kaibab Nationa 58.92 43 ⇑P **P 09 39 12.6 +0.3**
baz=59
U26A Atchley Ranch, 58.94 35 ⇓P **P 09 39 12.4 -0.2**
baz=59
TUQ Turquoise Moun 59.00 47 ⇓P **P 09 39 13.4 +0.5**
baz=59
V14A Boquillas Ranc 59.03 44 ⇑P **P 09 39 13.7 +0.5**
baz=59
GSC Goldstone 59.06 48 ⇓P **P 09 39 13.6 +0.2**
baz=59
V18A Ganado 59.19 41 ⇑P **P 09 39 14.6 +0.3**
baz=59
V17A Tonalea, Kykot 59.22 42 ⇑P **P 09 39 14.4 -0.1**
baz=59,SNR=7.7
WUAZ Wupatki 59.28 43 ⇑P **P 09 39 15.2 +0.3**
baz=59
EDW2 Edwards Air Fo 59.38 49 ⇓P **P 09 39 15.8 +0.2**
baz=59
V23A Ortiz Mt. (NFS 59.43 38 ⇓P **P 09 39 16.3 +0.4**
baz=59
PARMO Parma 59.43 22 *eP* **P 09 39 16.6 +0.7**
V25A Rancho No Teng 59.44 36 ⇓P **P 09 39 15.9 0.0**
baz=59
W14A Seligman 59.45 44 ⇑P **P 09 39 16.3 +0.3**
baz=59
W13A Hualapai Mount 59.50 45 ⇓P **P 09 39 16.4 0.0**
baz=59
V24A Rampart Ranch, 59.51 37 ⇓P **P 09 39 16.3 -0.2**
baz=59
V26A Tequesquite Ra 59.53 36 ⇑P **P 09 39 15.9 -0.8**
baz=59
GMRC Granite Mounta 59.67 47 ⇑P **P 09 39 17.8 +0.2**
baz=59
W18A Petrified Fore 59.80 41 ⇓P **P 09 39 19.1 +0.7**
baz=60
W19A Sanders 59.83 41 ⇑P **P 09 39 19.0 +0.3**
baz=60
X13A Yucca 60.00 45 ⇓P **P 09 39 19.8 -0.1**
baz=60
W24A Lazy 6 Ranch, 60.01 37 ⇓P **P 09 39 20.4 +0.5**
baz=60
ANMO Albuquerque 60.20 38 *eP* **P 09 39 21.2 0.0**
comp=Z,6.1nm,1.1s,mb4.5
ANMO Albuquerque 60.20 38 *eP* **P 09 39 21.2 0.0**
ANMO pmax pmax
comp=Z,6.0nm,1.1s
X14A Yava 60.20 44 ⇓P **P 09 39 21.6 +0.3**
baz=60
PDMCI Parker Dam,Lak 60.27 45 ⇓P **P 09 39 21.9 +0.2**
baz=60
X18A Snowflake 60.37 41 ⇑P **P 09 39 22.4 +0.1**

baz=60
BELC Belle Mtn. Jos 60.42 47 ⇓P P P 09 39 22.5 -0.2
baz=60
X17A Forest Lakes 60.49 42 ⇓P P P 09 39 23.4 +0.2
baz=60
X19A St. Johns 60.52 41 ⇑P P P 09 39 23.5 +0.1
baz=60
AMTX Amarillo 60.58 34 ⇓P P P 09 39 22.9 -0.9
baz=60
Y14A Wickenburg 60.72 44 ⇑P P P 09 39 24.5 -0.3
baz=60
Y15A Casa Rosa Ranc 60.76 44 ⇓P P P 09 39 25.1 +0.1
baz=60
PFO Pinyon Flat Ob 60.77 48 ⇓P P P 09 39 25.2 0.0
baz=60
WMOK Wichita Mounta 60.90 31 *e*P P P 09 39 24.8 -1.2
comp=Z,6.1nm,1.0s,mb4.7
WMOK Wichita Mounta 60.90 31 *e*P P P 09 39 24.8 -1.2
WMOK pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
Y16A Circle Bar Ran 60.90 43 ⇓P P P 09 39 26.3 +0.3
baz=61
Y19A Nutrioso 60.98 41 ⇑P P P 09 39 26.8 +0.2
baz=61
Y21A Point of Rocks 61.05 39 ⇑P P P 09 39 27.4 +0.4
baz=61
Y20A Horse Springs, 61.10 40 ⇑P P P 09 39 27.7 +0.4
baz=61
Y18A Canyon Day Jun 61.11 42 ⇓P P P 09 39 27.6 +0.2
baz=61
Y17A Roosevelt 61.13 42 ⇓P P P 09 39 27.9 +0.3
baz=61
Y22A Socorro 61.17 39 ⇓P P P 09 39 27.7 -0.1
baz=61
Y24A Capitan 61.29 37 ⇑P P P 09 39 27.9 -0.7
baz=61
Y27A Causey 61.48 35 ⇓P P P 09 39 29.3 -0.6
baz=61
MONP Monument Peak 61.48 48 ⇓P P P 09 39 30.1 +0.1
baz=61
Z22A Elephant Butte 61.85 39 ⇑P P P 09 39 32.1 -0.4
baz=62
Z25A Roswell 61.98 37 ⇓P P P 09 39 33.0 -0.3
baz=62
Z26A Caprock 62.03 36 ⇑P P P 09 39 33.4 -0.3
baz=62
124A Stringfield Ra 62.50 37 ⇑P P P 09 39 36.3 -0.6
baz=62
121A Cookes Peak, D 62.51 40 ⇓P P P 09 39 37.0 +0.2
baz=62
125A Gardner Draw, 62.60 37 ⇑P P P 09 39 37.0 -0.4
baz=62
224A Cornudas Mount 63.12 38 ⇓P P P 09 39 40.4 -0.6
baz=63
226A Malaga, Loving 63.23 36 ⇑P P P 09 39 40.8 -0.9
baz=63
227A Bennet, Jal 63.33 35 ⇓P P P 09 39 42.1 -0.3
baz=63
MNTX Cornudas Mount 63.50 37 ⇑P P P 09 39 42.7 -0.8
baz=63
319A Douglas 63.55 41 ⇑P P P 09 39 43.6 -0.2
baz=63
320A Kipp Ranch, An 63.64 40 ⇓P P P 09 39 44.5 +0.1
baz=63
326A Caldwell Ranch 63.98 36 ⇑P P P 09 39 45.9 -0.8
baz=64
328A Wristen Ranch, 63.99 35 ⇑P P P 09 39 45.7 -1.0
baz=64
425A Indio Mountain 64.44 37 ⇓P P P 09 39 49.5 -0.1
baz=64,SNR=13
427A Hayter Ranch, 64.48 36 ⇓P P P 09 39 49.7 -0.2
baz=64
426A McDonald Obser 64.62 36 ⇓P P P 09 39 50.3 -0.5
baz=64,SNR=8.1
428A Kincaid Ranch, 64.65 35 ⇓P P P 09 39 50.7 -0.4
baz=64,SNR=6.1
JCT Junction City 65.07 32 ⇑P P P 09 39 53.1 -0.7
baz=65
JCT Junction City 65.07 32 *e*P P P 09 39 52.9 -0.9
comp=Z,9.4nm,0.9s,mb4.8
JCT Junction City 65.07 32 *e*P P P 09 39 52.9 -0.9
JCT pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
528A Cox Ranch, San 65.20 35 ⇑P P P 09 39 53.8 -0.8
baz=65,SNR=6.1
526A Mary Lane Banc 65.22 36 ⇓P P P 09 39 54.3 -0.5
baz=65
CMAR Chiang Mai Arr 65.47 196 LR LR 10 09 56.6
comp=Z,48nm,18.3s,MS3.7,baz=357,slow=37
626A Big Bend Ranch 65.72 36 ⇓P P P 09 39 57.7 -0.3
baz=66
628A Black Gap, Mar 65.87 35 ⇓P P P 09 39 57.9 -1.1
baz=66,SNR=5.2
627A Terlingua Ranc 65.87 36 ⇓P P P 09 39 58.3 -0.7
baz=66,SNR=8.0
TXAR Lajitas Array 65.97 36 P P P 09 39 58.2 -1.4
TXAR LR LR 10 09 16.8
TXAR Lajitas Array 65.97 36 P P P 09 39 58.2 -1.4
comp=Z,3.4nm,1.0s,mb4.3,baz=340,slow=5.2,SNR=27
TXAR LR LR 10 09 16.8
comp=Z,58nm,19.5s,MS3.8,baz=5.0,slow=36
TORD Torodi Ar. Bea 79.47 294 P P P 09 41 19.8 -0.2
comp=Z,2.6nm,1.0s,mb4.1,baz=353,slow=5.8,SNR=11

*ISCJB **14** 09:37:19.8±0.7,83.5°N±0.2×11.4°E±°, h10km, mb3.7/9, Error ellipse: s-maj=27.6km s-min=12.6km az=137.3*
*IDC **14** 09:37:19.9±0.8,83.52°N×114.65°E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/23, mbtmpb3.7/8, MS4.0/1, Ms1 4.0/1, ms1mx2.3/34, Error ellipse: s-maj=33.7km s-min=17.1km az=140.0*
*NEIC **14** 09:37:21.4±0.6, 83.61°N×113.92°E, h10km, Error ellipse: s-maj=31.5km s-min=11.3km az=134.0*
ISC 14 09:37:21.7±0.7, 83.5°N±0.2×11.5°E±°, h10km, n11, σ0.86/10, mb3.7/9, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INK	**Inuvik**	**24.95**	**55**	P	**P**	**09 42 45.2**	**+0.8**
	3.6nm,0.9s,mb3.9,baz=352,slow=19,SNR=4.3						
ILAR	**Eielson Array**	**27.06**	**69**	P	**P**	**09 43 04.7**	**+1.1**
	0.9nm,1.0s,mb3.3,baz=340,slow=8.5,SNR=6.6						
YKA	**Yellowknife Ar**	**32.26**	**41**	P	**P**	**09 43 48.2**	**-1.5**
	1.5nm,1.0s,mb3.8,baz=46,slow=14,SNR=3.1						
BVAR	**Borovoye Array**	**32.77**	**231**	P	**P**	**09 43 53.6**	**-0.6**
	0.2nm,0.3s,mb3.5,baz=3.9,slow=6.4,SNR=2.8						
SONM	**Songino Array**	**35.92**	**190**	P	**P**	**09 44 20.7**	**-0.9**
	0.2nm,0.4s,mb3.4,baz=357,slow=3.0,SNR=4.0						
MK31	**Makanchi Array**	**38.03**	**217**	*e*P	**P**	**09 44 40.4**	**+1.0**
MKAR	**Makanchi Array**	**38.03**	**217**	P	**P**	**09 44 39.6**	**+0.2**
	0.7nm,0.8s,mb3.5,baz=5.6,slow=8.3,SNR=6.6						
KEST	**Kesra**	**56.41**	**290**	P	**P**	**09 47 03.6**	**+0.9**
	1.1nm,0.7s,mb4.0,baz=273,slow=4.2,SNR=5.0						
TXAR	**Lajitas Array**	**66.01**	**36**	P	**P**	**09 48 07.2**	**-0.6**
	1.4nm,1.0s,mb4.0,baz=351,slow=4.8,SNR=11						
TORD	**Torodi Ar. Bea**	**79.55**	**294**	P	**P**	**09 49 28.0**	**-0.3**
	0.9nm,0.7s,mb3.8,baz=350,slow=5.6,SNR=6.6						
PCRV	**Puerto La Cruz**	**86.40**	**359**	LR	LR	10 31 07.2	
	comp=Z,78nm,19.0s,baz=215,slow=37						

*ISCJB **14** 09:45:47.2±0.8,51.45°N±0.04×16.03°E±0.04, h0km, Error ellipse: s-maj=5.9km s-min=3.0km az=18.7*
*IPEC **14** 09:45:47.1±0.3,51.60°N×16.17°E, h0km, ML2.1/4, Error ellipse: s-maj=2.0km s-min=1.6km az=35.0*
*WAR **14** 09:45:48.9,51.54°N×16.07°E, ML2.5, Mining Induced*
*CSEM **14** 09:45:48.2±0.5,51.49°N×16.05°E, h2km, ML3.3/9, Error ellipse: s-maj=7.4km s-min=4.3km az=15.0*
*PRU **14** 09:45:49.1,51.47°N×16.06°E, h0km*
ISC 14 09:45:48.3±0.8, 51.49°N±0.04×16.05°E±0.04, h0km, n25, σ0.94/48, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.67**	**167**	*e*Pg	**Pg**	**09 46 01.8**	**+0.7**
KSP				*e*Sg	**Sg**	**09 46 11.6**	**+1.8**
KSP	**Ksiaz**	**0.67**	**167**	*e*Pg	**Pg**	**09 46 01.9**	**+0.8**
KSP				*e*Sg	**Sg**	**09 46 11.2**	**+1.5**
KSP	**Ksiaz**	**0.67**	**167**	*e*Pg	**Pg**	**09 46 01.7**	**+0.6**
	baz=354						
KSP				*e*Sg	**Sg**	**09 46 11.2**	**+1.5**
UPC	**Upice**	**0.99**	**181**	*e*PG	**Pg**	**09 46 07.9**	**+0.7**
UPC	**Upice**	**0.99**	**181**	Pg	**Pg**	**09 46 07.9**	**+0.7**
DPC	**Dobruska-Polom**	**1.16**	**171**	*e*PG	**Pg**	**09 46 10.6**	**+0.2**
DPC				*e*SG	**Sg**	**09 46 25.0**	**-0.4**
	comp=Z,24nm,0.3s						
DPC	**Dobruska-Polom**	**1.16**	**171**	*e*Pg	**Pg**	**09 46 10.6**	**+0.2**
	baz=356						
DPC				Sg	**Sg**	**09 46 25.0**	**-0.4**
	comp=Z,24nm,0.3s						
PVCC	**Panska Ves**	**1.35**	**225**	*e*PG	**Pg**	**09 46 14.7**	**+0.7**
PVCC				*e*SG	**Sg**	**09 46 32.8**	**+1.3**
	comp=Z,125nm,0.2s						
PVCC	**Panska Ves**	**1.35**	**225**	Pg	**Pg**	**09 46 14.7**	**+0.7**
PVCC				Sg	**Sg**	**09 46 32.8**	**+1.3**
	comp=Z,125nm,0.2s						
BRG	**Berggiesshubel**	**1.47**	**246**	PG	**Pg**	**09 46 16.4**	**+0.1**
BRG				SG	**Sg**	**09 46 36.4**	**+1.1**
	comp=Z,41nm,0.5s						
PRU	**Pruhonice**	**1.79**	**213**	*e*PG	**Pg**	**09 46 21.1**	**-1.4**
PRU				*e*SG	**Sg**	**09 46 45.7**	**+0.1**
	comp=Z,37nm,0.2s						
PRU	**Pruhonice**	**1.79**	**213**	Pg	**Pg**	**09 46 21.1**	**-1.4**
PRU				Sg	**Sg**	**09 46 45.7**	**+0.1**
	comp=Z,37nm,0.2s						
CLL	**Collm**	**1.92**	**266**	*e*Pn	**Pn**	**09 46 23.0**	**+0.9**
CLL				*i* Pg	**Pg**	**09 46 24.7**	**-0.3**
CLL				*e*		09 46 28.0	
CLL				*i*		09 46 44.9	
CLL				*e*Sg	**Sg**	**09 46 49.0**	**-0.8**
	comp=Z,22nm,0.6s						
MORC	**Moravsky Berou**	**1.96**	**151**	*e*Pn	**Pn**	**09 46 22.6**	**-0.2**
	baz=335						
MORC				*e*Sg	**Sg**	**09 46 50.3**	**-1.0**
	comp=Z,14nm,0.2s,baz=335						
OKC	**Ostrava-Krasne**	**2.13**	**140**	*e*PG	**Pg**	**09 46 28.7**	**-0.3**
OKC				*e*SG	**Sg**	**09 46 54.6**	**-2.0**
OKC	**Ostrava-Krasne**	**2.13**	**140**	Pg	**Pg**	**09 46 28.7**	**-0.3**
OKC				Sg	**Sg**	**09 46 54.6**	**-2.0**
VRAC	**Vranov**	**2.22**	**171**	*e*Pn	**Pn**	**09 46 26.4**	**+0.2**
	baz=353						
VRAC				*e*Sg	**Sg**	**09 46 59.4**	**0.0**
	comp=Z,9.2nm,0.3s,baz=353						
KRUC	**Moravsky**	**2.44**	**175**	*e*Pn	**Pn**	**09 46 29.5**	**+0.1**
	baz=357						
KRUC				*e*Sg	**Sg**	**09 47 06.6**	**-0.2**
	comp=Z,6.4nm,0.2s,baz=357						
NKC	**Novy Kostel**	**2.61**	**242**	*e*PN	**Pn**	**09 46 32.0**	**+0.4**
NKC				*e*SG	**Sg**	**09 47 11.6**	**-0.4**
	comp=Z,28nm,0.5s						
NKC	**Novy Kostel**	**2.61**	**242**	Pn	**Pn**	**09 46 32.0**	**+0.4**
NKC				Sg	**Sg**	**09 47 11.6**	**-0.4**
	comp=Z,28nm,0.5s						
OJC	**Ojcow**	**2.70**	**117**	*e*Pg	**Pg**	**09 46 40.5**	**+0.6**
OJC				*e*Sg	**Sg**	**09 47 15.4**	**+0.6**
JAVC	**Velka Javorina**	**2.84**	**158**	*e*Sg	**Sg**	**09 47 20.8**	**+1.5**
	comp=Z,9.8nm,0.7s						
KHC	**Kasperske Hory**	**2.85**	**215**	*e*PN	**Pn**	**09 46 33.4**	**-1.5**
KHC				*e*PG	**Pg**	**09 46 40.5**	**-2.3**
KHC				*e*SG	**Sg**	**09 47 18.3**	**-1.4**
	comp=Z,7.7nm,0.4s						
KHC	**Kasperske Hory**	**2.85**	**215**	Pn	**Pn**	**09 46 33.4**	**-1.5**
MOX	**Moxa**	**2.92**	**255**	(PG)	**Pg**	**09 46 43.8**	**-0.5**
MOX				*e*SG	**Sg**	**09 47 23.2**	**+1.1**

*NIED **14** 09:50:00,46.70°N×154.10°E, h8km, Mw4.0 Best double couple: M0 1.16000×10^15 NP1:φs45.00000°, δ82.00000°, λ68.00000°. NP2:φs296.00000°, δ23.00000°, λ159.00000°.*
*IDC **14** 09:50:00.0±0.7,45.86°N×154.63°E, h0km, mb3.9/18, mb1 4.1/20, mb1mx4.0/27, mbtmpb3.9/20, ML3.5/2, MS3.0/4, Ms1 3.0/4, ms1mx2.7/35, Error ellipse: s-maj=21.7km s-min=14.4km az=156.0*
*NEIC **14** 09:50:01.5±0.5,45.85°N×154.64°E, h10km, mb4.3/1, Error ellipse: s-maj=13.9km s-min=9.0km az=152.0*
*ISCJB **14** 09:50:03.1±0.6,45.8°N±0.1×154.5°E±0.1, h33km, mb3.9/19, MS3.0/3, Error ellipse: s-maj=16.9km s-min=7.9km az=155.2*
*MOS **14** 09:50:03.8±1.4,45.92°N×154.46°E, h41km, mb4.2/1, Error ellipse: s-maj=14.9km s-min=11.8km az=46.4*
ISC 14 09:50:05.5±0.6, 45.9°N±0.1×154.40°E±0.09, h35km, n27, σ1.9/11/29, mb3.9/19, MS3.0/3, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**4.63**	**265**	*e*P	**Pn**	**09 51 12.3**	**-0.6**
KUR				*e*S	**Sn**	**09 52 03.0**	**-2.3**
KUR				pmax	pmax		
	comp=N,50nm,0.5s						
KUR				pmax	pmax		
	comp=Z,130nm,0.5s						
KUR				smax			
	comp=N,100nm,0.7s						
KUR				smax			
	comp=E,170nm,0.7s						
SKR	**Severo-Kuril's**	**4.97**	**13**	*e*P	**Pn**	**09 51 13.5**	**-4.1**
SKR				*e*S	**Sn**	**09 52 02.7**	**-11**
SKR				pmax	pmax		
	comp=Z,50nm,0.7s						
SKR				pmax	pmax		
	comp=N,20nm,0.5s						
SKR				pmax	pmax		
	comp=E,20nm,0.5s						
SKR				smax			
	comp=N,70nm,0.5s						
SKR				smax			
	comp=E,80nm,0.4s						
SKR				MLR	MLR		
	comp=E,900nm,12.0s						
SKR				MLR	MLR		
	comp=Z,600nm,12.0s						
YUK	**Yuzh-Kuril'sk**	**6.32**	**256**	*e*P	**Pn**	**09 51 35.2**	**-0.9**
YUK				*e*S	**Sn**	**09 52 45.8**	**-1.3**
YUK				pmax	pmax		
	comp=N,37nm,0.4s						
YUK				pmax	pmax		
	comp=Z,85nm,0.4s						
YUK				pmax	pmax		
	comp=E,45nm,0.3s						
YUK				smax			
	comp=N,159nm,0.4s						
YUK				smax			
	comp=E,51nm,0.4s						
ASAJ	**Asahikawa**	**8.54**	**263**	Pn	**Pn**	**09 52 06.7**	**+0.1**
	comp=E,0.8nm,0.3s,baz=194,slow=25,SNR=8.4						
ASAJ				LR	LR	09 54 39.4	
	comp=E,73nm,20.9s,baz=310,slow=32						
MJAR	**Matsushiro Arr**	**15.30**	**238**	Pn	**Pn**	**09 53 38.7**	**0.0**
	comp=E,0.1nm,0.3s,baz=32,slow=12,SNR=3.5						
KLR	**Kul'dur**	**15.65**	**291**	*e*P	**Pn**	**09 53 51.2**	**+8.1**
KSRS	**Korea Array**	**21.41**	**256**	P	**P**	**09 54 51.5**	**+1.3**
	comp=E,1.3nm,0.6s,mb3.5,baz=60,slow=10.0,SNR=8.0						
KSRS				LR	LR	10 02 19.5	
	comp=E,19nm,19.2s,MS2.5,baz=5.0,slow=34						
SONM	**Songino Array**	**32.48**	**291**	P	**P**	**09 56 35.1**	**+2.8**
	comp=E,0.2nm,0.4s,mb3.3,baz=69,slow=7.9,SNR=2.1						
KDAK	**Kodiak Island**	**33.99**	**50**	P	**P**	**09 56 43.3**	**-2.1**
	comp=E,7.1nm,0.8s,mb4.7,baz=307,slow=7.7,SNR=4.8						
ILAR	**Eielson Array**	**36.71**	**38**	P	**P**	**09 57 07.0**	**-1.7**
	comp=E,0.6nm,0.9s,mb3.4,baz=248,slow=7.7,SNR=9.8						
ZALV	**Zalesovo Beam**	**43.86**	**307**	P	**P**	**09 58 08.4**	**+0.4**
	comp=E,0.5nm,0.5s,mb3.5,baz=94,slow=6.2,SNR=2.2						
ZALV				LR	LR	10 20 00.9	
	comp=E,16nm,18.1s,MS3.0,baz=304,slow=41						
MKAR	**Makanchi Array**	**48.15**	**299**	P	**P**	**09 58 42.8**	**+0.9**
	comp=E,0.7nm,0.6s,mb3.9,baz=69,slow=7.4,SNR=4.6						
KURK	**Kurchatov**	**48.61**	**305**	P	**P**	**09 58 47.2**	**+1.8**
	comp=E,1.2nm,0.3s,mb4.5,baz=68,slow=8.3,SNR=3.1						
YKA	**Yellowknife Ar**	**51.12**	**37**	P	**P**	**09 59 03.4**	**-0.8**
	comp=E,0.8nm,0.8s,mb3.7,baz=322,slow=12,SNR=3.7						
BVAR	**Borovoye Array**	**52.12**	**310**	P	**P**	**09 59 11.6**	**-0.3**
	comp=E,0.6nm,0.4s,mb3.9,baz=64,slow=6.6,SNR=3.4						
CMAR	**Chiang Mai Arr**	**53.04**	**258**	P	**P**	**09 59 20.3**	**+1.2**
	comp=E,0.3nm,0.3s,mb3.7,baz=47,slow=7.8,SNR=4.3						
ABKAR	**Akbulak array**	**59.69**	**311**	*e*P	**P**	**10 00 06.6**	**+0.6**
	comp=E,0.7nm,0.3s,mb4.2						
AKTO	**Aktyubinsk**	**59.99**	**313**	LR	LR	10 27 21.6	
	comp=E,27nm,19.9s,MS3.4,baz=225,slow=37						
NVAR	**Mina Array Bea**	**62.06**	**63**	P	**P**	**10 00 22.4**	**0.0**
	comp=E,0.6nm,0.7s,mb3.8,baz=282,slow=6.6,SNR=6.0						
FINES	**FINESS Array B**	**65.23**	**335**	P	**P**	**10 00 44.0**	**+1.1**
	comp=E,3.6nm,0.9s,mb4.4,baz=53,slow=10,SNR=3.5						
WRA	**Warramunga Arr**	**67.96**	**200**	P	**P**	**10 01 00.2**	**-0.5**
	comp=E,1.6nm,0.7s,mb4.1,baz=18,slow=6.7,SNR=8.6						
ASAR	**Alice Springs**	**71.65**	**200**	P	**P**	**10 01 24.6**	**+1.3**
	comp=E,1.0nm,0.8s,mb3.8,baz=17,slow=5.7,SNR=7.4						
AKASG	**Malin Array Be**	**72.79**	**327**	P	**P**	**10 01 29.5**	**-0.5**
	comp=E,0.3nm,0.3s,mb3.6,baz=35,slow=6.5,SNR=2.9						
BUR08	**Bucovina Ar. S**	**76.81**	**327**	*e*P	**P**	**10 01 53.7**	**+0.5**
TXAR	**Lajitas Array**	**77.16**	**61**	P	**P**	**10 01 54.8**	**-0.7**
	comp=E,1.4nm,0.8s,mb3.9,baz=299,slow=4.1,SNR=18						
BRTR	**Keskin Array B**	**79.66**	**318**	P	**P**	**10 02 09.3**	**+0.1**
	comp=E,1.3nm,0.9s,mb3.9,baz=38,slow=6.3,SNR=6.1						
MMAI	**Mount Meron Ar**	**84.08**	**312**	P	**P**	**10 02 33.0**	**+0.4**
	comp=E,3.4nm,0.6s,mb4.7,baz=31,slow=8.6,SNR=3.2						

*NEIC **14** 09:57:07.7, 15.62°N×98.63°W, h22km, MD3.8(MEX), After MEX.*
MEX 14 09:57:07.9±1.1, 15.65°N×98.65°W, h20km±480km, MD3.9, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.89**	**34**	*e*P	Pb	09 57 21.9	-2.9
PNIG				*i* S	Sb	09 57 33.3	-3.0
PNIG	**Pinotepa**	**0.89**	**34**	*e*P	Pb	09 57 21.9	-2.9
PNIG				*i* S	Sb	09 57 33.3	-3.0
ACX	**Acapulco**	**1.68**	**316**	*i* P	Pn	09 57 33.7	-2.4
ACX				*i* S	Sn	09 57 52.0	-5.0
ACX	**Acapulco**	**1.68**	**316**	*i* P	Pn	09 57 33.7	-2.4
ACX				*i* S	Sn	09 57 52.0	-5.0
CAIG	**El Cayaco**	**2.08**	**312**	*i* P	Pn	09 57 41.8	+0.1
CAIG				*i* S	Sn	09 58 04.7	-2.3
CAIG	**El Cayaco**	**2.08**	**312**	*i* P	Pn	09 57 39.4	-2.2
CAIG				*i* S	Sn	09 58 04.7	-2.3
UTMO	**Huajuapan**	**2.31**	**20**	*i* P	Pn	09 57 42.4	-2.5
UTMO				*i* S	Sn	09 58 09.0	-3.8
VHO	**Vista Hermosa**	**2.32**	**52**	*e*P	Pn	09 57 42.9	-2.1
VHO				*i* S	Sn	09 58 08.8	-4.3
VHO	**Vista Hermosa**	**2.32**	**52**	*e*P	Pn	09 57 42.9	-2.1
VHO				*i* S	Sn	09 58 08.8	-4.3
MEIG	**Mezcala**	**2.44**	**338**	*i* P	Pn	09 57 45.3	-1.4
MEIG				*i* S	Sn	09 58 13.1	-2.9
HUIG	**Huatulco**	**2.46**	**87**	*i* P	Pn	09 57 38.9	-7.9
HUIG				*i* S	Sn	09 58 17.1	+0.9
HUIG	**Huatulco**	**2.46**	**87**	*i* P	Pn	09 57 46.0	-0.8
HUIG				*i* S	Sn	09 58 14.8	-1.5
TPIG	**Tehuac#an**	**3.02**	**24**	*i* P	Pn	09 57 54.9	+0.4
TPIG				*i* S	Sn	09 58 30.0	-0.2
JCT	**Junction City**	**14.80**	**356**	*e*Pn	Pn	10 00 33.8	-2.3
	3.6nm,0.3s						

*NEIC **14** 10:34:51.6, 17.93°N×61.58°W, h88km, MD4.2(RSPR), After RSPR.*
*RSPR **14** 10:34:51.6, 17.93°N×61.58°W, h88km±8km*
TRN 14 10:34:49.0, 17.89°N×61.48°W, h50km, 11C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEG	**Port Louis**	**1.48**	**181**	*e*P	Pn	10 35 15.2	+1.9
SEUS	**St. Eustatius**	**1.49**	**255**	*e*P	Pn	10 35 15.0	+1.6
SEUS				*e*S	Sn	10 35 33.5	+1.8
SEUS	**St. Eustatius**	**1.49**	**255**	*e*P	Pn	10 35 15.0	+1.6
SEUS				*e*S	Sn	10 35 33.5	+1.8
SMRT	**St. Maarten**	**1.53**	**276**	*e*P	Pn	10 35 15.9	+2.0
SMRT				*e*S	Sn	10 35 34.0	+1.4
SMRT	**St. Maarten**	**1.53**	**276**	*e*P	Pn	10 35 15.9	+2.0
SMRT				*e*S	Sn	10 35 34.5	+1.8
DEG	**La Desirade**	**1.62**	**166**	*e*P	Pn	10 35 16.8	+1.6
SABA	**Saba**	**1.71**	**261**	*e*P	Pn	10 35 18.3	+2.0
SABA				*e*S	Sn	10 35 39.4	+2.4
SABA	**Saba**	**1.71**	**261**	*e*P	Pn	10 35 18.3	+2.0
SABA				*e*S	Sn	10 35 39.4	+2.4
LZG	**Guadaloupe-1**	**1.77**	**189**	*i* P	Pn	10 35 18.1	+1.0
BCG	**Bois Riant Cap**	**1.80**	**184**	*e*P	Pn	10 35 19.0	+1.4
SCG	**Saint Claude**	**1.86**	**186**	*e*P	Pn	10 35 20.6	+2.1
PHG	**Guadaloupe-2**	**1.88**	**185**	*e*P	Pn	10 35 20.6	+1.9
TBG	**Guadaloupe-3**	**2.04**	**185**	*e*P	Pn	10 35 22.2	+1.3
STVI	**Saint Thomas**	**3.34**	**278**	*i* P	Pn	10 35 39.7	+1.0
STVI	**Saint Thomas**	**3.34**	**278**	*i* P	Pn	10 35 39.7	+1.0
MTP	**Monte Pirata**	**3.89**	**274**	*i* P	Pn	10 35 48.4	+2.2
MTP				*e*S	Sn	10 36 31.7	+1.1
MTP	**Monte Pirata**	**3.89**	**274**	*i* P	Pn	10 35 48.4	+2.2
MTP				*e*S	Sn	10 36 31.7	+1.1
CBYP	**Canovanas**	**4.18**	**276**	*e*Pn	Pn	10 35 53.4	+3.1
CBYP				*e*Sn	Sn	10 36 39.8	+1.8

*IDC **14** 10:36:46.5±0.8,32.29°N×105.06°E, h0km, mb3.9/7, mb1 3.9/10, mb1mx3.7/25, mbtmpb3.7/10, ML3.7/2, MS2.9/1, Ms1 3.1/1, ms1mx2.3/38, Error ellipse: s-maj=36.8km s-min=16.6km az=57.0*
*NEIC **14** 10:36:48.9±0.7,32.26°N×104.79°E, h10km, Error ellipse: s-maj=19.8km s-min=11.5km az=65.0*
*BJI **14** 10:36:50.3,32.24°N×105.08°E, h17km, mB4.5/1, mb4.6/1, ML3.8/19, Ms3.7/4, Ms7 3.5/6*
ISC 14 10:36:46.6±0.8, 32.19°N±0.03×105.20°E±0.04, h1km±5km, n19, σ1.9/11/30, mb4.0/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.78**	**224**	Pg	**Pg**	**10 37 20.8**	**+0.1**
CD2				Sg	**Sg**	**10 37 44.5**	**+0.8**
CD2				smax			
	comp=N,3μm,0.6s						
XAN	**Xi'an**	**3.62**	**58**	Pn	**Pb**	**10 37 49.6**	**-1.9**
XAN				Pg	**Pg**	**10 37 55.8**	**-0.3**
XAN				Sn	**Sb**	**10 38 35.8**	**-0.2**
XAN				Sg	**Sg**	**10 38 44.8**	**+1.7**
XAN				smax			
	comp=N,430nm,0.8s						
XAN				smax			
	comp=E,230nm,0.8s						
LZH	**Lanzhou**	**4.04**	**344**	Pn	**Pn**	**10 37 54.3**	**+4.6**
LZH				Pg	**Pg**	**10 38 03.5**	**-0.7**
LZH				Sn	**Sn**	**10 38 37.0**	**-0.7**
LZH				Sg	**Sb**	**10 38 50.3**	**+2.2**
LZH				smax			
	comp=N,700nm,1.0s						
LZH				smax			
	comp=E,1μm,0.9s						
LZH				LR	LR		
	comp=E,880nm,5.8s						
LZH				LR	LR		
	comp=Z,880nm,8.0s						
ENH	**Enshi**	**4.14**	**116**	*e*Pn	**Pb**	**10 37 58.7**	**-1.6**
ENH				*e*Sn	**Sg**	**10 38 59.9**	**+0.3**
GYA	**Guiyang**	**5.85**	**167**	Pn	**Pn**	**10 38 19.0**	**+4.4**
GYA				Sn	**Sn**	**10 39 23.5**	**+1.2**
GYA				Sg	**Sg**	**10 39 53.9**	**-0.8**
GYA				smax			
	comp=N,190nm,0.9s						
GYA				smax			
	comp=E,170nm,0.9s						
WHN	**Wuhan**	**7.99**	**99**	P	Px	10 39 21.0	
WHN				S	**Sn**	**10 40 14.5**	**-0.5**
WHN				LR	LR		
	comp=N,780nm,8.8s						
WHN				LR	LR		
	comp=E,690nm,5.8s						
WHN				LR	LR		
	comp=Z,320nm,15.8s						
HHC	**Hu-ho-hao-te**	**10.04**	**29**	*e*P	**Pn**	**10 39 13.1**	**+1.2**
HHC				S	**Sn**	**10 41 06.4**	**+1.2**
HHC				pmax	pmax		
	comp=Z,13nm,0.8s

comp=Z,1.3nm,0.6s,mb4.1,baz=70,slow=7.8,SNR=4.0
FINES FINESS Array B 57.19 326 P **P** **10 46 33.5 -1.4**
comp=Z,3.2nm,0.9s,mb4.4,baz=39,slow=15,SNR=3.5
WRA Warramunga Arr 58.87 148 P **P** **10 46 48.1 +1.0**
comp=Z,1.5nm,0.6s,mb4.2,baz=342,slow=7.7,SNR=19
ASAR Alice Springs 61.95 150 P **P** **10 47 09.4 +1.3**
comp=Z,0.7nm,0.7s,mb4.0,baz=332,slow=6.4,SNR=12
NOA NORSAR Array B 64.25 327 P **P** **10 47 21.7 -1.4**
NOA NORSAR Array B 64.25 327 P **P** **10 47 21.7 -1.3**
comp=Z,0.8nm,0.5s,mb4.2,baz=71,slow=6.9,SNR=2.2

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*IDC **14** 10:37:43.5±0.6,83.48N×114.71E,h0km,mb4.0/20, mb1 4.1/21,mb1mx4.1/26,mbtmp4.0/21,ML3.8/1,MS4.2/27, Ms1 4.2/27,ms1mx4.0/39,Error ellipse: s-maj=16.7km s-min=11.6km az=140.0*
*ISCJB **14** 10:37:47.1±0.1,83.46N±0.03×119.1E±0.3,h10km, mb4.7/119,MS4.3/41,Error ellipse: s-maj=5.5km s-min=3.0km az=140.1*
*MOS **14** 10:37:47.2±2.3,83.01N×118.02E,h10km,mb5.0/33, MS4.6/6,Error ellipse: s-maj=49.9km s-min=7.3km az=87.5*
*NEIC **14** 10:37:47.5±0.4,83.09N×115.06E,h10km,mb4.9/81,Error ellipse: s-maj=17.2km s-min=7.6km az=139.0*
*GCMT **14** 10:37:49.7±0.2,83.65N×114.51E,h12km,MW5.1, Moment Tensor Solution. s31,c36; s93,c170; Moment tensor: Scale 10^{16}Nm; M_{rr}-5.51±.11; $M_{\theta\theta}$1.14±.10; $M_{\phi\phi}$4.38±.10; $M_{r\theta}$2.77±.48; $M_{\theta\phi}$-2.03±.09; $M_{\phi r}$0.21±.34; Best double couple: $M_0$6.00000×10^{16} NP1:ϕ_s173.00000°, δ43.00000°,λ-59.00000°. NP2:ϕ_s313.00000°,δ54.00000°, λ-116.00000°. Principal axes: T 5.4600, Plg6.0000°, Azm61.0000°; N 1.1400, Plg21.0000°, Azm329.0000°; P -6.5900, Plg69.0000°, Azm167.0000°; Data Used: II IU IC G CN.*

ISC 14 10:37:49.7±1.4,83.49N±0.03×117.7E±0.3,h17km,8km, h18km,2.0km;pP-P,n482,σ0.99/484,mb4.7/119,MS4.3/41, 143C-125D,North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	h m s ISC
TIXI	**Tiksi**	**12.10**	**163**	*e*Pn		**Pn**	**10 40 41.2 +0.2**
TIXI	**Tiksi**	**12.10**	**163**	*e*P		**Pn**	**10 40 37.3 -3.7**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KBS	**Kingsbay**	**14.37**	**311**	*e*P		**Pn**	**10 41 16.3 +4.5**
KBS				*e*S		Sx	10 44 10.3
SPITS	**Spitsbergen Ar**	**14.65**	**307**	Pn		**Pn**	**10 41 07.5 -8.3**
	baz=35,slow=14,SNR=4.8						
SPITS				LR	LR		10 45 48.8
	comp=Z,778nm,18.6s,baz=10.0,slow=34						
BILL	**Bilibino**	**18.39**	**117**	*e*P		**Pn**	**10 42 04.4 +1.0**
	comp=Z,75nm,1.5s						
BILL	**Bilibino**	**18.39**	**117**	*e*P		**Pn**	**10 42 04.4 +1.0**
BILL				pmax	pmax		
	comp=Z,75nm,1.5s						
RES	**Resolute Bay**	**21.22**	**23**	LR		LR	10 50 25.8
	comp=Z,821nm,20.2s,MS4.1,baz=86,slow=36						
YAK	**Yakutsk**	**21.76**	**165**	*e*P		**P**	**10 42 36.1 -3.8**
YAK				*e*			10 42 54.7
YAK				*e*S		**S**	**10 46 31.8 -7.7**
YAK				*e*SS			10 46 57.0
YAK				*e*			10 53 55.7
YAK				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.3						
YAK				pmax	pmax		
	comp=N,13nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,41nm,1.5s,mb4.6						
YAK				pmax	pmax		
	comp=E,15nm,1.4s						
YAK				pmax	pmax		
	comp=N,33nm,0.9s						
YAK				smax			
	comp=E,201nm,15.6s						
YAK				smax			
	comp=N,63nm,12.5s						
YAK				MLR	MLR		
	comp=Z,694nm,25.0s,MS4.0						
YAK				MLR	MLR		
	comp=N,444nm,23.0s,MS3.9						
YAK				MLR	MLR		
	comp=E,277nm,19.0s,MS3.9						
ARCES	**ARCESS Array B**	**21.81**	**289**	P		**P**	**10 42 32.8 -7.5**
	comp=E,4.7nm,0.9s,mb3.9,baz=26,slow=12,SNR=4.2						
ARCES				LR		LR	10 51 17.7
	comp=E,431nm,18.5s,MS3.9,baz=195,slow=38						
SEY	**Seymchan**	**22.13**	**136**	⇓*i*P		**P**	**10 42 43.9 +0.1**
TRO	**Tromso**	**22.41**	**295**	*e*P		**P**	**10 42 43.8 -3.0**
TRO				*e*S		**S**	**10 46 52.5 +0.5**
KTK1	**Kautokeino**	**22.55**	**291**	*e*P		**P**	**10 42 45.9 -2.4**
KTK1				*e*S		**S**	**10 46 52.5 -2.3**
APA	**Apatity**	**22.82**	**280**	⇑*e*P		**P**	**10 42 54.0 +2.9**
APA				*e*S		**S**	**10 46 48.7 -11**
APA				pmax	pmax		
	comp=Z,38nm,1.4s,mb4.6						
JMIC	**Jan Mayen**	**23.58**	**319**	*e*P		**P**	**10 43 00.8 +1.7**
JMIC	**Jan Mayen**	**23.58**	**319**	LR		LR	10 49 38.1
	comp=Z,404nm,19.2s,MS3.9,baz=7.0,slow=31						
SUMG	**Summit**	**23.67**	**342**	*e*P		**P**	**10 43 02.7 +2.9**
	comp=Z,409nm,2.4s,mb5.4						
COLD	**Coldfoot**	**24.01**	**73**	*e*P		**P**	**10 43 03.7 +0.7**
	comp=Z,33nm,1.5s,mb4.5						
INK	**Inuvik**	**24.69**	**57**	*e*P		**P**	**10 43 09.9 +0.8**
	comp=Z,26nm,1.1s,mb4.7						
INK	**Inuvik**	**24.69**	**57**	P		**P**	**10 43 07.7 -1.4**
	comp=Z,5.9nm,0.6s,mb4.3,baz=13,slow=10,SNR=8.8						
INK	**Inuvik**	**24.69**	**57**	*e*P		**P**	**10 43 09.9 +0.8**
INK				pmax	pmax		
	comp=Z,26nm,1.1s						
COLA	**College**	**26.54**	**72**	*e*P		**P**	**10 43 29.0 +3.1**
	comp=Z,14nm,1.0s,mb4.4						
COLA	**College**	**26.54**	**72**	*e*P		**P**	**10 43 29.0 +3.1**
COLA				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.5						
ILAR	**Eielson Array**	**26.75**	**71**	P		**P**	**10 43 28.6 +0.8**
	comp=Z,5.1nm,1.2s,mb3.9,baz=338,slow=6.5,SNR=7.6						
ILAR				LR		LR	10 53 34.0
	comp=Z,815nm,21.8s,MS4.2,baz=11,slow=35						
EGAK	**Eagle**	**27.35**	**66**	*e*P		**P**	**10 43 35.9 +2.7**
	comp=Z,33nm,1.4s,mb4.7						
MCK	**McKinley**	**27.53**	**74**	*e*P		**P**	**10 43 35.6 +0.7**
	comp=Z,267nm,2.8s,mb5.4						
TRF	**Thorofare Moun**	**27.66**	**75**	*e*P		**P**	**10 43 37.5 +1.5**
	comp=Z,18nm,1.1s,mb4.6						
SOKR	**Solikamsk**	**27.95**	**252**	*e*P		sP	10 43 44.8 -1.0
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
SOKR				MLR	MLR		
	comp=Z,2μm,16.0s,MS4.8						
PPLA	**Purkeypile**	**27.99**	**77**	*e*P		**P**	**10 43 41.0 +2.1**
	comp=Z,143nm,2.0s,mb5.3						
DAWY	**Dawson**	**28.23**	**65**	*e*P		**P**	**10 43 46.3 +5.2**
KLMR	**Klimovskoe**	**28.63**	**270**	*e*P		**P**	**10 43 43.3 -1.4**
KLMR				*e*S		**S**	**10 48 30.5 -1.5**
KLMR				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.7						
PAX	**Paxson**	**28.65**	**71**	*e*P		**P**	**10 43 45.2 +0.3**
	comp=Z,19nm,1.1s,mb4.7						
PAX	**Paxson**	**28.65**	**71**	*e*P		**P**	**10 43 45.2 +0.4**
PAX				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.7						
FINES	**FINESS Array B**	**29.58**	**283**	P		**P**	**10 43 45.7 -7.4**
	comp=Z,4.7nm,1.0s,mb4.2,baz=16,slow=11,SNR=2.4						
FINES				LR		LR	10 58 44.0
	comp=Z,517nm,21.0s,MS4.1,baz=192,slow=43						
NVS	**Novosibirsk**	**30.14**	**221**	*e*P		**P**	**10 43 57.8 -0.3**
RSO	**Redoubt South**	**30.30**	**79**	*e*P		**P**	**10 44 05.5 +6.1**
ARU	**Arti**	**30.84**	**248**	P		**P**	**10 44 03.9 -0.4**
ARU							10 45 00.9
ARU				S		**S**	**10 49 07.4 +0.6**
ARU				SS		SS	10 50 43.8 -34
ARU				MLR	MLR		
	comp=Z,2μm,20.0s,MS4.8						
ZALV	**Zalesovo Beam**	**30.91**	**219**	P		**P**	**10 43 58.9 -6.0**
	comp=Z,0.4nm,0.3s,mb3.7,baz=19,slow=4.9,SNR=3.4						
ZALV				LR		LR	10 57 22.3
	comp=Z,647nm,19.4s,MS4.3,baz=17,slow=38						
NOA	**NORSAR Array B**	**31.56**	**297**	LR		LR	10 56 42.1
	comp=Z,186nm,18.8s,MS3.8,baz=10.0,slow=36						
YKA	**Yellowknife Ar**	**32.06**	**44**	P		**P**	**10 44 12.1 -2.8**
	comp=Z,0.8nm,0.8s,mb3.6,baz=348,slow=7.6,SNR=3.5						
TLY	**Talaya**	**32.19**	**197**	*e*P		**P**	**10 44 12.0 -4.1**
TLY				*e*			10 45 28.2
TLY				*e*S		**S**	**10 49 14.6 -13**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.9s,mb4.2						
HFS	**Hagfors**	**32.20**	**294**	LR		LR	10 56 49.8
	comp=Z,420nm,20.5s,MS4.1,baz=8.4,slow=36						
BRVK	**Borovoye**	**33.00**	**235**	*c*eP		**P**	**10 44 23.7 +0.5**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.3						
BVAR	**Borovoye Array**	**33.02**	**235**	P		**P**	**10 44 18.4 -5.0**
	comp=Z,1.4nm,0.8s,mb4.0,baz=44,slow=11,SNR=5.1						
OBN	**Obninsk**	**34.59**	**271**	⇓*e*P		**P**	**10 44 38.1 +1.1**
OBN				*i*		pP	10 44 43.0 +0.8
OBN				*e*			10 46 00.7
OBN				SS		SS	10 52 20.0 -15
OBN				*e*SSS			10 52 43.7
OBN				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.2						
OBN				MLR	MLR		
	comp=Z,900nm,25.0s,MS4.4						
KURK	**Kurchatov**	**34.60**	**225**	*e*P		**P**	**10 44 32.0 -5.1**
	comp=Z,106nm,3.0s						
KURK	**Kurchatov**	**34.60**	**225**	P		**P**	**10 44 32.8 -4.3**
	comp=Z,1.1nm,0.7s,mb3.9,baz=22,slow=7.6,SNR=6.4						
KURK				LR		LR	11 00 38.2
	comp=Z,544nm,18.0s,MS4.3,baz=15,slow=40						
KURK	**Kurchatov**	**34.60**	**225**	*e*P		**P**	**10 44 34.4 -2.7**
KURK				pmax	pmax		
	comp=Z,18nm,2.5s,mb4.6						
KLR	**Kul'dur**	**34.63**	**164**	*e*P		**P**	**10 44 32.2 -5.3**
ULN	**Ulaanbaatar**	**35.91**	**192**	*i*P		**P**	**10 44 49.5 +1.1**
SONM	**Songino Array**	**35.95**	**193**	P		**P**	**10 44 45.1 -3.7**
	comp=Z,0.9nm,0.7s,mb3.8,baz=351,slow=7.5,SNR=5.7						
SONM				LR		LR	11 00 18.6
	comp=Z,112nm,18.8s,MS3.7,baz=263,slow=38						
AKTK	**Aktyubinsk**	**36.81**	**247**	P		**P**	**10 44 50.0 -6.2**
AKTK				LR		LR	11 01 54.6
AKTO	**Aktyubinsk**	**36.81**	**247**	P		**P**	**10 44 50.0 -6.2**
	comp=Z,1.7nm,0.6s,mb4.0,baz=9.0,slow=9.6,SNR=7.0						
AKTO				LR		LR	11 01 54.6
	comp=Z,420nm,20.4s,MS4.2,baz=196,slow=40						
ABKAR	**Akbulak array**	**37.78**	**245**	*e*P		**P**	**10 45 05.8 +1.5**
	comp=Z,2.5nm,0.9s,mb3.9						
MK31	**Makanchi Array**	**38.21**	**220**	*e*P		**P**	**10 45 02.8 -5.2**
MKAR	**Makanchi Array**	**38.21**	**220**	P		**P**	**10 45 02.6 -5.4**
	comp=Z,2.3nm,0.8s,mb4.0,baz=2.3,slow=6.1,SNR=12						
MKAR				LR		LR	11 01 54.5
	comp=Z,597nm,19.6s,MS4.4,baz=356,slow=38						
MDJ	**Mudanjiang**	**39.18**	**167**	P		**P**	**10 45 16.3 +0.2**
MDJ				sP		sP	10 45 20.9 -2.5
MDJ				S		**S**	**10 51 15.3 +0.2**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.8s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,65nm,3.6s						
MDJ				LR	LR		
	comp=N,160nm,24.8s,MS4.1						
MDJ				LR	LR		
	comp=E,300nm,20.4s,MS4.1						
MDJ				LR	LR		
	comp=Z,190nm,21.1s,MS3.9						
AKASG	**Malin Array Be**	**39.77**	**276**	P		**P**	**10 45 12.8 -8.2**
	comp=Z,0.2nm,0.3s,baz=346,slow=31,SNR=2.6						
AKASG				LR		LR	11 03 42.9
	comp=Z,673nm,20.5s,MS4.5,baz=5.0,slow=40						
AKASG	**Malin Array Be**	**39.77**	**276**	*i*P		**P**	**10 45 22.3 +1.3**
CN2	**Changchun**	**39.91**	**171**	*e*P		**P**	**10 45 22.8 +0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
WMQ	**Urumqi**	**40.80**	**214**	P		**P**	**10 45 31.8 +2.2**
WMQ				pP		pP	10 45 36.3 +1.5
WMQ				sP		sP	10 45 38.8 +1.9
WMQ				PcP		PcP	10 47 34.4 +4.2
WMQ				ScP		ScP	10 51 22.1 +3.7
WMQ				S		**S**	**10 51 40.8 +1.5**
WMQ				sS		sS	10 51 48.1 +0.2
WMQ				ScS		ScS	10 55 35.0 +1.8
WMQ				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.5						
WMQ				pmax	pmax		
	comp=Z,160nm,4.3s						
WMQ				LR	LR		
	comp=N,890nm,23.4s,MS4.6						
WMQ				LR	LR		
	comp=E,570nm,21.8s,MS4.6						
WMQ				LR	LR		
	comp=Z,840nm,24.0s,MS4.5						
CLL	**Collm**	**40.96**	**292**	*e*P		**P**	**10 45 33.0 +2.2**
CLL				*e*S		**S**	**10 51 49.0 +7.5**
KSP	**Ksiaz**	**41.07**	**289**	*e*P		**P**	**10 45 33.3 +1.6**
KSP				*e*			10 47 08.8
KSP				*e*S		**S**	**10 51 47.2 +4.1**
KSP				MLR	MLR		
	comp=Z,1μm,19.0s,MS4.7						
EDM	**Edmonton**	**41.35**	**45**	*e*P		**P**	**10 45 37.7 +3.7**
KWP	**Kalwaria Pacla**	**41.56**	**282**	*e*P		**P**	**10 45 40.5 +4.8**
	comp=Z,56nm,0.6s,mb5.4						
SCHQ	**Schefferville**	**41.88**	**4**	P		**P**	**10 45 35.5 -2.9**
SCHQ				LR		LR	11 03 19.3
SCHQ	**Schefferville**	**41.88**	**4**	P		**P**	**10 45 35.5 -2.9**
	comp=Z,3.6nm,0.7s,mb4.1,baz=6.4,slow=4.1,SNR=9.5						
SCHQ				LR		LR	11 03 19.3
	comp=Z,288nm,19.4s,MS4.2,baz=212,slow=37						
STHS	**Stebnicka Huta**	**41.93**	**284**	*e*P		**P**	**10 45 41.4 +2.6**
	comp=Z,5.6nm,1.0s,mb4.2						
STHS				*e*PP		pP	10 45 48.4 +4.4
STHS	**Stebnicka Huta**	**41.93**	**284**	*e*P		**P**	**10 45 41.4 +2.6**
STHS				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
STHS	**Stebnicka Huta**	**41.93**	**284**	*e*P		**P**	**10 45 41.4 +2.6**
STHS				*e*pP		pP	10 45 48.4 +4.4
MORC	**Moravsky Berou**	**41.98**	**287**	*e*P		**P**	**10 45 41.6 +2.4**
	comp=Z,38nm,1.8s,mb4.7						
MORC	**Moravsky Berou**	**41.98**	**287**	*e*P		**P**	**10 45 41.6 +2.4**
MORC				pmax	pmax		
	comp=Z,38nm,1.8s,mb4.7						
CRVS	**Cervenica-Dubn**	**42.42**	**283**	*e*P		**P**	**10 45 44.1 +1.4**
	comp=Z,22nm,1.8s,mb4.5						
CRVS	**Cervenica-Dubn**	**42.42**	**283**	*e*P		**P**	**10 45 44.1 +1.4**
CRVS				pmax	pmax		
	comp=Z,22nm,1.8s,mb4.5						
CRVS	**Cervenica-Dubn**	**42.42**	**283**	*e*P		**P**	**10 45 44.1 +1.4**
VRAC	**Vranov**	**42.55**	**288**	LR		LR	11 06 59.1
	comp=Z,516nm,20.1s,MS4.4,baz=1.0,slow=42						
TKM2	**Tokmak 2**	**42.59**	**227**	*e*P		**P**	**10 45 45.5 +1.3**
	comp=Z,11nm,1.3s,mb4.4						
TKM2	**Tokmak 2**	**42.59**	**227**	*e*P		**P**	**10 45 45.5 +1.3**
TKM2				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.4						
BCLA	**Clavier**	**42.63**	**299**	P		**P**	**10 45 48.6 +4.1**
	comp=Z,31nm,3.1s						
SNF	**Seneffe**	**42.64**	**300**	P		**P**	**10 45 48.8 +4.2**
FRU	**Bishkek**	**42.76**	**228**	*e*P		**P**	**10 45 45.0 -0.6**
FRU				*e*			10 47 43.0
HHC	**Hu-ho-hao-te**	**42.83**	**187**	*e*P		**P**	**10 45 47.9 +1.7**
HHC				pP		pP	10 45 51.9 +0.4
HHC				sP		sP	10 45 54.5 +1.0
HHC				PP		PP	10 47 29.3 +3.9
HHC				PcS		PcS	10 51 31.4 +2.3
HHC				*e*S		**S**	**10 52 08.9 -0.4**
HHC				sS		sS	10 52 17.1 -0.9
HHC				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.8						
HHC				pmax	pmax		
	comp=Z,96nm,4.4s						
HHC				LR	LR		
	comp=N,150nm,11.4s,MS4.5						
HHC				LR	LR		
	comp=E,440nm,15.9s,MS4.5						
HHC				LR	LR		
	comp=Z,260nm,17.4s,MS4.2						
AAK	**Ala-Archa**	**42.96**	**228**	LR		LR	11 05 32.1
	comp=Z,259nm,19.0s,MS4.2,baz=6.2,slow=39						
AAK	**Ala-Archa**	**42.96**	**228**	*d*P		**P**	**10 45 47.2 -0.1**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.7						
EKS2	**Erkin-Say**	**43.00**	**229**	*e*P		**P**	**10 45 49.5 +1.9**
	comp=Z,3.0nm,0.9s,mb4.0						
DOU	**Dourbes**	**43.02**	**300**	P		**P**	**10 45 52.2 +4.6**
	comp=Z,18nm,2.6s,mb4.3						
VYHS	**Vyhne**	**43.11**	**286**	*e*P		**P**	**10 45 50.9 +2.5**
	comp=Z,26nm,2.2s,mb4.6						
VYHS				*e*PP		pP	10 45 56.6 +3.0
VYHS	**Vyhne**	**43.11**	**286**	*e*P		**P**	**10 45 50.9 +2.5**
VYHS				pmax	pmax		
	comp=Z,26nm,2.2s,mb4.6						
VYHS	**Vyhne**	**43.11**	**286**	*e*P		**P**	**10 45 50.9 +2.5**
VYHS				*e*pP		pP	10 45 56.6 +3.0
UCH	**Uchtor**	**43.37**	**228**	*e*P		**P**	**10 45 47.6 -2.9**
	comp=Z,12nm,1.4s,mb4.4						
AML	**Almayashu**	**43.53**	**229**	*e*P		**P**	**10 45 54.0 +2.2**
	comp=Z,8.2nm,0.9s,mb4.5						
PSZ	**Piszkesteto**	**43.56**	**285**	*e*P		**P**	**10 45 54.9 +2.9**
	comp=Z,37nm,1.5s,mb4.9						
PSZ	**Piszkesteto**	**43.56**	**285**	*e*P		**P**	**10 45 54.9 +2.9**
PSZ				pmax	pmax		
	comp=Z,37nm,1.5s,mb4.9						
ZST	**Bratislava**	**43.59**	**287**	*e*P		**P**	**10 45 54.3 +2.0**
	comp=Z,123nm,2.9s,mb5.1						
ZST	**Bratislava**	**43.59**	**287**	*e*P		**P**	**10 45 54.3 +2.0**
ZST				pmax	pmax		
	comp=Z,123nm,2.9s,mb5.1						
ZST	**Bratislava**	**43.59**	**287**	*e*P		**P**	**10 45 54.3 +2.0**
BJI	**Beijing**	**43.60**	**182**	P		**P**	**10 45 50.8 -1.6**
BJI				sP		sP	10 45 57.3 -2.5
BJI				S		**S**	**10 52 18.3 -2.3**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
BJI				LR	LR		
	comp=N,350nm,21.2s,MS4.2						
BJI				LR	LR		
	comp=E,90nm,21.3s,MS4.2						
GOF	**Gofitskoye**	**43.77**	**261**	*e*P		**P**	**10 45 54.4 +0.7**
KIV	**Kislovodsk**	**44.89**	**261**	*e*P		**P**	**10 45 58.8 -3.9**
KIV				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
KIV				MLR	MLR		
	comp=Z,209nm,16.0s,MS4.2						
MAK	**Makhachkala**	**45.34**	**256**	P		**P**	**10 46 07.6 +1.4**
MAK				*e*			10 47 47.3
MAK				*e*PPP			10 48 33.3
MAK				*e*S		**S**	**10 52 47.5 +1.8**
MAK				*e*			10 55 58.8
MAK				pmax	pmax		
	comp=Z,40nm,0.4s,mb5.6						
MAK				MLR	MLR		
	comp=Z,553nm,13.0s,MS4.7						
A12A	**Yaak River Ran**	**45.42**	**48**	⇓P		**P**	**10 46 06.3 -0.5**
	baz=45						
WALA	**Waterton Lakes**	**45.44**	**46**	*e*P		**P**	**10 46 10.9 +3.9**
	comp=Z,0.4nm,1.1s						
A13A	**Flathead Natio**	**45.52**	**47**	⇑P		**P**	**10 46 07.4 -0.2**
	baz=45						
A14A	**Double T Ranch**	**45.56**	**46**	⇓P		**P**	**10 46 07.9 -0.1**
	baz=46						
A15A	**Johnson Ranch,**	**45.62**	**45**	⇑P		**P**	**10 46 08.3 -0.1**
	baz=46						
B08A	**Colville Reser**	**45.67**	**51**	⇑P		**P**	**10 46 08.8 0.0**
	baz=46						
A16A	**West Butte Ran**	**45.74**	**44**	⇓P		**P**	**10 46 09.1 -0.2**
	baz=46						
NEW	**Newport**	**45.95**	**49**	⇑P		**P**	**10 46 10.7 -0.4**
	baz=46						
NEW	**Newport**	**45.95**	**49**	*e*P		**P**	**10 46 10.7 -0.4**
	comp=Z,13nm,1.0s,mb4.8						
NEW				*e*P		pP	10 46 17.2 +0.9
NEW	**Newport**	**45.95**	**49**	*e*P		**P**	**10 46 10.7 -0.4**
NEW				*e*		pP	10 46 17.2 +0.8
NEW				pmax	pmax		
	comp=Z,13nm,1.0s						
B13A	**Whitefish**	**46.07**	**47**	⇑P		**P**	**10 46 11.9 -0.1**
	baz=46						
B14A	**Marquette Ranc**	**46.18**	**46**	⇓P		**P**	**10 46 12.7 -0.2**
	baz=46						
B16A	**M & M Farms, S**	**46.26**	**44**	⇓P		**P**	**10 46 13.5 0.0**
	baz=46						
B15A	**Bradely Ranch,**	**46.29**	**45**	⇓P		**P**	**10 46 13.9 +0.2**
	baz=46						
B18A	**Beardsley Farm**	**46.43**	**43**	⇑P		**P**	**10 46 14.9 +0.1**
	baz=46						
B17A	**L&G Farms, Che**	**46.45**	**44**	⇓P		**P**	**10 46 14.5 -0.4**
	baz=46						
YBMT	**Yellow Bay**	**46.62**	**47**	*e*P		**P**	**10 46 19.5 +3.2**
YBMT				*e*pP		pP	10 46 27.2 +5.7
C12B	**Naegeli Ranch,**	**46.65**	**48**	⇓P		**P**	**10 46 16.0 -0.5**
	baz=47						
JTMT	**Jette**	**46.71**	**47**	*e*P		**P**	**10 46 16.4 -0.6**
C13A	**Hot Springs**	**46.75**	**47**	⇑P		**P**	**10 46 16.5 -0.9**
	baz=47						
DGMT	**Dagmar**	**46.76**	**38**	⇓P		**P**	**10 46 17.3 -0.1**
	baz=47						
DGMT	**Dagmar**	**46.76**	**38**	*e*P		**P**	**10 46 19.5 +2.1**
	comp=Z,30nm,0.9s,mb5.2						
EGMT	**Eagleton**	**46.80**	**43**	⇑P		**P**	**10 46 17.2 -0.6**
	baz=47						
EGMT	**Eagleton**	**46.80**	**43**	*e*P		**P**	**10 46 20.1 +2.4**
	comp=Z,25nm,1.4s,mb5.0						
C15A	**Salmond Ranch,**	**46.82**	**45**	⇑P		**P**	**10 46 17.4 -0.5**
	baz=47						
SWMT	**Swartz Lake**	**46.97**	**47**	*e*P		**P**	**10 46 19.5 +0.5**
LON	**Longmire**	**47.04**	**54**	*e*P		**P**	**10 46 26.6 +7.1**
	comp=Z,9.2nm,1.0s,mb4.7						
LON	**Longmire**	**47.04**	**54**	*e*P		**P**	**10 46 26.6 +7.0**
LON				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
C17A	**Wharram Farm,**	**47.11**	**44**	⇓P		**P**	**10 46 19.2 -0.9**
	baz=47						
SLMT	**Seeley Lake**	**47.28**	**46**	*e*P		**P**	**10 46 25.6 +4.1**
D12A	**Red Ives Fores**	**47.31**	**48**	⇑P		**P**	**10 46 21.2 -0.5**
	baz=47						
D14A	**Greenough**	**47.44**	**46**	⇑P		**P**	**10 46 22.2 -0.5**
	baz=47						
E08A	**Dider Farm, El**	**47.54**	**52**	⇓P		**P**	**10 46 22.6 -0.9**
	baz=47						
MJAR	**Matsushiro Arr**	**47.54**	**158**	P		**P**	**10 46 21.0 -2.6**
	comp=Z,0.2nm,0.4s,mb3.5,baz=335,slow=11,SNR=3.0						
D15A	**Lincoln**	**47.55**	**45**	⇑P		**P**	**10 46 22.7 -1.0**
	baz=48						
D17A	**Six Diamond Ra**	**47.59**	**44**	⇑P		**P**	**10 46 22.6 -1.3**
	baz=48						
HAWA	**Hanford**	**47.60**	**52**	*e*P		**P**	**10 46 28.4 +4.5**

G08A Pilot Rock 48.74 52 ⇑P P 10 46 32.3 -0.5
baz=49
F15A Butte 48.75 46 ⇓P P 10 46 32.9 0.0
baz=49
LRM Limekiln Ridge 48.77 46 eP P 10 46 36.9 +3.9
F17A Fitzpatrick Pl 48.83 44 ⇓P P 10 46 32.9 -0.6
baz=49
F18A Big Timber 48.91 43 ⇑P P 10 46 33.4 -0.7
baz=49
BOZ Bozeman (W) 49.01 45 ⇓P P 10 46 34.2 -0.7
baz=49
BOZ Bozeman (W) 49.01 45 eP P 10 46 33.9 -1.0
comp=Z,13nm,1.1s,mb4.9
BOZ Bozeman (W) 49.01 45 eP P 10 46 33.9 -1.0
BOZ pmax pmax
comp=Z,13nm,1.1s,mb4.9
F19A Roth Farm, Mol 49.02 42 ⇑P P 10 46 34.4 -0.5
baz=49
DLMT Dillon 49.22 46 eP P 10 46 42.8 +6.3
comp=Z,10nm,1.1s,mb4.8
BMO Blue Mountains 49.32 50 eP P 10 46 36.9 -0.3
comp=Z,8.2nm,0.9s,mb4.8
G13A Cobalt 49.35 47 ⇓P P 10 46 37.3 -0.1
baz=49
G17A Pierce Place, 49.41 44 ⇑P P 10 46 37.2 -0.7
baz=49
G16A Moss Hill, Enn 49.41 45 ⇑P P 10 46 37.6 -0.3
baz=49
G18A Lazy EL Ranch, 49.50 43 ⇓P P 10 46 38.5 -0.2
baz=49
RLMT Red Lodge 49.72 43 ⇓P P 10 46 40.2 0.0
baz=50
RLMT Red Lodge 49.72 43 eP P 10 46 46.6 +6.3
comp=Z,38nm,1.9s,mb5.1
MCMT McKenzie Canyo 49.73 46 eP P 10 46 40.3 0.0
comp=Z,6.0nm,1.1s,mb4.5
AQU L'Aquila 49.77 290 eP P 10 46 43.6 +2.9
comp=Z,8.1nm,0.5s,mb5.0
AQU L'Aquila 49.77 290 eP P 10 46 43.6 +2.9
AQU pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
H12A Diamond D Ranc 49.84 48 ⇓P P 10 46 40.6 -0.6
baz=50
H13A Challis 49.87 47 ⇑P P 10 46 40.6 -0.8
baz=50,SNR=25
I07A Izee 49.89 52 ⇓P P 10 46 41.2 -0.4
baz=50
H14A Leadore 49.90 47 ⇑P P 10 46 41.0 -0.6
baz=50
H15A Lima 49.95 46 ⇑P P 10 46 41.6 -0.5
baz=50
H16A Russell Place, 49.98 45 ⇓P P 10 46 41.8 -0.4
baz=50
BRTR Keskin Array B 50.10 270 P P 10 46 38.0 -5.2
comp=Z,0.8nm,0.7s,mb3.9,baz=9.3,slow=4.8,SNR=4.0
BRTR LR LR 11 10 53.5
comp=Z,185nm,21.1s,MS4.1,baz=48,slow=40
H17A Grant Village 50.34 44 ⇓P P 10 46 45.3 +0.3
baz=50,SNR=11
H21A Big Horn, Sher 50.38 41 ⇑P P 10 46 44.5 -0.8
baz=50
I13A Wildhorse Cree 50.53 47 ⇑P P 10 46 46.5 0.0
baz=50,SNR=11
I12A Atlanta 50.56 48 ⇓P P 10 46 46.7 0.0
baz=50
I15A Monteview 50.58 46 ⇓P P 10 46 47.3 +0.5
baz=50
FLWY Flagg Ranch 50.64 44 eP P 10 46 52.2 +5.0
comp=Z,21nm,1.1s,mb5.0
J08A Circle Bar Ran 50.70 52 ⇑P P 10 46 48.2 +0.5
baz=51
I16A Newdale 50.78 45 ⇓P P 10 46 48.9 +0.6
baz=51
IMW Indian Meadow 50.81 44 eP P 10 46 49.1 +0.5
comp=Z,11nm,1.0s,mb4.8
HLID Hailey 50.85 48 eP P 10 46 51.0 +2.1
comp=Z,7.2nm,1.4s,mb4.4
MFID Camas Ranch 50.88 49 ⇑P P 10 46 49.6 +0.5
baz=51
MOOW Moose Ponds 50.97 44 eP P 10 46 49.4 -0.4
comp=Z,10.0nm,1.0s,mb4.7
I20A Worland 50.97 42 ⇑P P 10 46 50.5 +0.7
baz=51
HUMO Hull Mountain 51.04 56 eP P 10 46 56.1 +5.9
DCID1 Drake Creek 51.09 45 eP P 10 46 52.6 +2.0
comp=Z,36nm,1.3s,mb5.1
I18A Diamond G Ranc 51.09 43 ⇑P P 10 46 51.6 +0.9
baz=51
RSSD Black Hills 51.10 38 eP P 10 46 50.0 -0.7
comp=Z,20nm,0.9s,mb5.0
RSSD Black Hills 51.10 38 eP P 10 46 50.0 -0.7
RSSD pmax pmax
comp=Z,20nm,0.9s,mb5.0
LOHW Long Hollow 51.12 44 eP P 10 46 56.4 +5.6
comp=Z,42nm,2.3s,mb5.0
J14A Carey 51.17 47 ⇑P P 10 46 51.4 +0.2
baz=51
I21A Big Trails, Te 51.17 41 ⇓P P 10 46 51.3 0.0
baz=51
TPAW Teton Pass 51.21 45 eP P 10 46 51.3 -0.3
comp=Z,17nm,1.2s,mb4.8
SNOW Snow King Moun 51.25 44 eP P 10 46 55.4 +3.5
comp=Z,6.9nm,1.1s,mb4.5
RRI2 Red Ridge 51.32 45 eP P 10 46 59.5 +7.1
comp=Z,20nm,1.4s,mb4.8
REDW Red Top Meadow 51.34 44 eP P 10 46 58.5 +6.0
comp=Z,18nm,1.3s,mb4.8
J17A Brown Place, J 51.36 44 ⇑P P 10 46 53.0 +0.3
baz=51
J16A Bone 51.37 45 ⇑P P 10 46 52.8 +0.1
baz=51
J18A Kendall Valley 51.56 44 ⇑P P 10 46 54.0 -0.2
baz=52
NJ2 Nanjing 51.57 179 eP P 10 46 53.6 -0.8
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb5.3
WVOR Wild Horse Val 51.61 52 eP P 10 46 59.0 +4.4
comp=Z,9.0nm,1.1s,mb4.6
WVOR Wild Horse Val 51.61 52 eP P 10 46 59.0 +4.5
WVOR pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
K16A Soda Springs 51.81 45 ⇑P P 10 46 56.8 +0.7
baz=52
K14A Jones Ranch, D 51.97 47 ⇓P P 10 46 57.6 +0.4
baz=52
ECSD EROS Data Cent 51.97 31 eP P 10 47 00.4 +3.2
comp=Z,70nm,2.1s,mb5.2
K19A Absolon Red Bu 52.04 43 ⇓P P 10 46 57.6 -0.2
baz=52
BW06 Boulder Array 52.04 43 ⇓P P 10 46 58.1 +0.3
baz=52
BW06 Boulder Array 52.04 43 eP P 10 47 01.0 +3.2
comp=Z,9.5nm,1.3s,mb4.6
L11A Cat Creek Ranc 52.12 49 ⇑P P 10 46 59.0 +0.6
baz=52
K18A Toltan Ranch, 52.13 44 ⇓P P 10 46 59.1 +0.7
baz=52
L10A Juniper Basin 52.15 50 ⇓P P 10 46 59.4 +0.8
baz=52
K20A Yellowstone Ra 52.24 42 ⇑P P 10 46 59.7 +0.5
baz=52
K22A Casper 52.39 41 ⇓P P 10 47 00.2 -0.1
baz=52
L14A Malta 52.47 47 ⇓P P 10 47 00.9 -0.1
baz=52
TIP Timpagrande 52.54 286 eP P 10 46 57.0 -4.5
comp=Z,21nm,1.2s,mb4.9
L15A Malad City 52.57 46 ⇑P P 10 47 01.8 +0.1
baz=52
L16A Fish Haven 52.64 45 ⇓P P 10 47 02.3 +0.1
baz=53
L20A Wamsutter 52.89 42 ⇓P P 10 47 04.3 +0.2
baz=53
CD2 Chengdu 52.92 195 P P 10 47 06.8 +2.4
CD2 pP pP 10 47 11.3 +1.6
CD2 sP sP 10 47 13.8 +2.0
CD2 PP PP 10 49 07.1 +3.4
CD2 ScP ScP 10 52 12.3 +3.1
CD2 PcS PcS 10 52 13.9 +2.0
CD2 S **S** **10 54 32.0 -0.4**
CD2 sS sS 10 54 39.6 -1.6
CD2 ScS ScS 10 56 52.9 +0.1
CD2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CD2 pmax pmax
comp=Z,160nm,6.1s
CD2 LR LR
comp=N,280nm,11.0s,MS4.8
CD2 LR LR
comp=E,530nm,14.9s,MS4.8
CD2 LR LR
comp=Z,350nm,11.0s,MS4.7
M14A Sheep Mountain 52.99 47 ⇑P P 10 47 04.6 -0.2
baz=53
L21A Rawlins 53.01 41 ⇑P P 10 47 04.8 -0.1
baz=53
HWUT Hardware Ranch 53.03 45 eP P 10 47 04.2 -0.9
comp=Z,24nm,1.2s,mb5.0
M13A Montello 53.06 48 ⇑P P 10 47 05.5 +0.2
baz=53
M13A Montello 53.06 48 eP P 10 47 07.3 +2.0
M17A Scullys Gap (B 53.24 45 ⇓P P 10 47 07.0 +0.3
baz=53
RWWY Rawlins 53.29 41 eP P 10 47 10.1 +3.1
comp=Z,22nm,1.0s,mb5.0
M19A Rock Springs 53.33 43 ⇑P P 10 47 07.5 +0.2
baz=53
M18A Lyman 53.33 44 ⇑P P 10 47 07.4 +0.1
baz=53
M21A Separation Pea 53.36 41 ⇓P P 10 47 08.2 +0.6
baz=53
N13A Wendover, West 53.56 48 ⇓P P 10 47 09.2 +0.2
baz=54
N13A Wendover, West 53.56 48 eP P 10 47 14.0 +5.0
comp=Z,22nm,1.2s,mb5.0
N16A Reese Ranch, Co 53.76 45 ⇓P P 10 47 10.7 +0.2
baz=54
PHWY Pilot Hill 53.81 40 eP P 10 47 15.7 +4.9
comp=Z,19nm,1.4s,mb4.8
N20A Spence Gulch, 54.06 42 ⇑P P 10 47 12.3 -0.4
baz=54,SNR=13
O12A Currie 54.10 49 ⇑P P 10 47 13.4 +0.4
baz=54
ESDC Sonseca Array 54.16 306 P P 10 47 08.8 -4.6
ESDC Sonseca Array 54.16 306 P P 10 47 08.8 -4.6
comp=Z,0.4nm,0.3s,mb3.8,baz=360,slow=9.2,SNR=5.1
N23A Red Feather La 54.17 40 ⇓P P 10 47 14.6 +1.1
baz=54
N21A Black Mountain 54.19 42 ⇓P P 10 47 14.5 +0.9
baz=54
N22A Wattenberg Ran 54.23 41 ⇑P P 10 47 15.0 +1.1
baz=54
DAU Daniels Canyon 54.24 45 eP P 10 47 15.5 +1.5
PAHR Pah Rah Range 54.24 53 eP P 10 47 19.5 +5.5
comp=Z,11nm,1.1s,mb4.7
O15A The Old Anders 54.27 46 ⇓P P 10 47 14.7 +0.5
baz=54
N24A Carr 54.32 39 ⇑P P 10 47 14.5 -0.1
baz=54
PAB San Pablo 54.33 306 eP P 10 47 17.4 +2.7
comp=Z,21nm,1.3s,mb4.9
PAB San Pablo 54.33 306 eP P 10 47 17.4 +2.8
PAB pmax pmax
comp=Z,21nm,1.3s,mb4.9
DUG Dugway 54.33 47 ⇑P P 10 47 14.5 -0.2
baz=54
DUG Dugway 54.33 47 eP P 10 47 14.3 -0.4
comp=Z,11nm,1.1s,mb4.7
DUG Dugway 54.33 47 eP P 10 47 14.3 -0.3
DUG pmax pmax
comp=Z,11nm,1.1s,mb4.7
OGNE Ogallala 54.40 37 ⇓P P 10 47 15.5 +0.3
baz=54
OGNE Ogallala 54.40 37 eP P 10 47 15.3 +0.1
comp=Z,70nm,1.5s,mb5.4
O16A Springville 54.43 45 ⇑P P 10 47 15.7 +0.3
baz=54
O18A Roosevelt 54.49 44 ⇑P P 10 47 16.0 +0.2
baz=54
O17A Robinson Place 54.50 45 ⇑P P 10 47 16.4 +0.5
baz=54
O19A Miners Draw (B 54.53 43 ⇓P P 10 47 16.6 +0.5
baz=54
WCN Washoe City 54.61 53 ⇑P P 10 47 16.8 +0.1
baz=54
O20A White River Ci 54.76 42 ⇓P P 10 47 17.6 -0.1
baz=55
O23A Lake Granby, G 54.86 40 ⇑P P 10 47 18.4 -0.1
baz=55
O22A Kremmling 54.86 41 ⇑P P 10 47 17.8 -0.7
baz=55,SNR=13
P12A Mcill 54.87 49 ⇑P P 10 47 18.1 -0.4
baz=55
P14A Drum Mountains 54.91 47 ⇑P P 10 47 18.2 -0.7
baz=55
P13A Bates Ranch, G 54.97 48 ⇑P P 10 47 19.2 -0.1
baz=55
P16A Fountain Green 55.01 46 ⇑P P 10 47 19.7 +0.1
baz=55
O25A Wiggins 55.09 39 ⇓P P 10 47 20.2 0.0
baz=55
P18A Preston Nutter 55.10 44 ⇑P P 10 47 20.1 -0.1
baz=55
P19A Cripple Cowboy 55.20 43 ⇑P P 10 47 20.4 -0.5
baz=55
P17A Butcher Ranch, 55.22 45 ⇑P P 10 47 21.3 +0.2
baz=55
ISCO Idaho Springs 55.29 40 ⇓P P 10 47 22.0 +0.4
baz=55
ISCO Idaho Springs 55.29 40 eP P 10 47 25.4 +3.8
comp=Z,33nm,1.8s,mb5.1
ISCO Idaho Springs 55.29 40 eP P 10 47 25.4 +3.8
ISCO pmax pmax
comp=Z,33nm,1.8s,mb5.1
P20A De Beque 55.38 43 ⇑P P 10 47 22.0 -0.2
baz=55
Q10A Clear Creek Ra 55.38 50 ⇓P P 10 47 22.5 +0.2
baz=55
P22A Eagle 55.41 41 ⇓P P 10 47 21.5 -1.0
baz=55,SNR=7.4
Q11A Duckwater 55.43 50 ⇑P P 10 47 23.0 +0.4
baz=55
Q13A Wheeler Ranch, 55.46 48 ⇓P P 10 47 23.2 +0.3
baz=55
Q14A Sevier Lake (B 55.49 47 ⇑P P 10 47 23.3 +0.2
baz=55
NVAR Mina Array Bea 55.61 52 P P 10 47 23.4 -0.5
comp=Z,0.4nm,0.7s,mb3.6,baz=354,slow=4.5,SNR=4.2
Q18A Rafter H Ranch 55.63 44 ⇓P P 10 47 24.0 -0.1
baz=56
P23A Jefferson 55.70 40 ⇓P P 10 47 24.8 +0.3
baz=56
Q16A Castle Valley 55.73 45 ⇓P P 10 47 25.0 +0.2
baz=56
SMCO Snowmass 55.80 41 eP P 10 47 23.5 -1.8
comp=Z,12nm,1.0s,mb4.9
CMB Columbia Colle 55.81 54 eP P 10 47 30.6 +5.3
comp=Z,14nm,1.6s,mb4.7
CMB Columbia Colle 55.81 54 eP P 10 47 30.6 +5.3
CMB pmax pmax
comp=Z,14nm,1.6s,mb4.7
Q20A Ridgley Place, 55.93 43 ⇓P P 10 47 26.2 0.0
baz=56
R11A Troy Canyon, C 55.93 50 ⇓P P 10 47 26.0 -0.2
baz=56
R12A Pony Springs, 56.03 49 ⇑P P 10 47 27.0 +0.1
baz=56
MSU Marysvale 56.05 46 eP P 10 47 26.8 -0.3
Q22A Crested Butte, 56.12 41 ⇓P P 10 47 26.7 -0.8
baz=56,SNR=10
Q24A Divide 56.15 40 ⇑P P 10 47 27.6 -0.2
baz=56
Q23A Hartsel 56.16 40 ⇑P P 10 47 27.7 -0.2
baz=56
R13A O'Grain Ranch, 56.23 48 ⇓P P 10 47 28.5 +0.1
baz=56
S10A Tonopah Range, 56.26 51 ⇑P P 10 47 28.8 +0.2
baz=56
Q25A Bedland, Calha 56.27 39 ⇓P P 10 47 28.8 +0.2
baz=56
R17A Hanksville Air 56.27 45 ⇓P P 10 47 28.9 +0.3
baz=56
R16A Teasdale 56.34 46 ⇑P P 10 47 29.4 +0.2
baz=56
R15A Junction 56.35 46 ⇑P P 10 47 29.3 +0.1
baz=56
R18A Canyonlands Na 56.37 44 ⇓P P 10 47 29.3 0.0
baz=56
PV04 Paradox Valley 56.44 43 eP P 10 47 33.8 +4.0
R19A Curley Farm, L 56.51 44 ⇓P P 10 47 30.2 -0.1
baz=56
MMAI Mount Meron Ar 56.53 267 LR LR 11 18 04.2
comp=Z,158nm,18.1s,MS4.2,baz=20,slow=43
R21A Cimarron 56.57 42 ⇑P P 10 47 29.9 -0.8
baz=56
MTUM Tungsten Hills 56.65 53 eP P 10 47 38.6 +7.3
ARUT Antelope Range 56.67 48 eP P 10 47 30.1 -1.4
comp=Z,14nm,1.3s,mb4.8
ARUT Antelope Range 56.67 48 eP P 10 47 30.1 -1.4
ARUT pmax pmax
comp=Z,14nm,1.3s,mb4.8
CBKS Cedar Bluff 56.67 35 eP P 10 47 35.7 +4.2
comp=Z,11nm,0.8s,mb5.0
CBKS Cedar Bluff 56.67 35 eP P 10 47 35.7 +4.2
CBKS pmax pmax
comp=Z,11nm,0.8s,mb4.9
R20A Redvale 56.68 43 ⇓P P 10 47 31.6 0.0
baz=57
S14A Cedar City 56.72 47 ⇑P P 10 47 32.3 +0.5
baz=57
PV01 Paradox Valley 56.72 43 eP P 10 47 30.9 -0.9
comp=Z,3µm,1.0s
S12A Delamar Landin 56.73 49 ⇑P P 10 47 32.6 +0.7
baz=57
KEST Kesra 56.75 293 eP P 10 47 28.5 -3.5
KEST Kesra 56.75 293 P P 10 47 28.0 -4.0
comp=Z,3.6nm,0.7s,mb4.5,baz=180,slow=1.2,SNR=8.0
KEST LR LR 11 16 26.1
comp=Z,100nm,19.4s,MS3.9,baz=226,slow=41
R22A Saguache, Gunn 56.77 41 ⇓P P 10 47 33.1 +0.9
baz=57
S13A Holt Ranch, En 56.84 48 ⇑P P 10 47 33.3 +0.6
baz=57
S15A Panguitch 56.87 47 ⇓P P 10 47 33.4 +0.5
baz=57
R24A Sanders Place, 56.88 40 ⇑P P 10 47 32.7 -0.3
baz=57
S16A Weppner Ranch, 56.89 46 ⇓P P 10 47 32.8 -0.2
baz=57
S17A Black Ridge (B 57.04 45 ⇓P P 10 47 34.2 +0.1
baz=57
S18A Hurst Farm, Bl 57.05 44 ⇑P P 10 47 34.2 0.0
baz=58
S19A Harvey Farm, M 57.06 44 ⇑P P 10 47 34.2 -0.1
baz=57
S22A 4UR Ranch, Cre 57.24 41 ⇑P P 10 47 35.1 -0.4
baz=57,SNR=11
S21A Coal Bank Pass 57.25 42 ⇑P P 10 47 35.9 +0.3
baz=57
GYA Guiyang 57.27 192 P P 10 47 39.0 +3.1
GYA PP PP 10 49 46.9 +4.1
GYA ScP ScP 10 52 32.6 +4.2
GYA S **S** **10 55 31.5 +0.7**
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,130nm,5.2s
GYA LR LR
comp=N,540nm,18.6s,MS4.8
GYA LR LR
comp=E,420nm,18.9s,MS4.8
GYA LR LR
comp=Z,530nm,17.8s,MS4.7
SDCO Great Sand Dun 57.34 40 eP P 10 47 35.4 -0.9
comp=Z,12nm,0.9s,mb4.9
S23A Nye Farm, Mont 57.34 41 ⇑P P 10 47 36.4 +0.2
baz=57
T13A Saint George 57.39 48 ⇓P P 10 47 36.7 +0.1
baz=57
T14A Hurricane 57.42 47 ⇑P P 10 47 37.3 +0.5
baz=57
S25A Robets Cordova 57.50 39 ⇑P P 10 47 37.6 +0.2
baz=57
T15A Red Dirt Ranch 57.52 47 ⇓P P 10 47 37.4 -0.1
baz=57
T18A Mexican Hat 57.61 44 ⇓P P 10 47 38.3 +0.2
baz=58
MVCO Mesa Verde 57.64 43 ⇑P P 10 47 37.6 -0.8
baz=58,SNR=9.1
MVCO Mesa Verde 57.64 43 eP P 10 47 37.8 -0.6
comp=Z,49nm,1.3s,mb5.4
T17A Navajo Res., N 57.67 45 ⇑P P 10 47 38.5 -0.1
baz=58
FURC Furnace Creek, 57.68 51 ⇓P P 10 47 38.8 +0.1
baz=58
T21A Navajo Lake 57.94 42 ⇓P P 10 47 40.2 -0.2
baz=58
T22A Edith 57.96 42 ⇑P P 10 47 40.2 -0.4
baz=58
T19A Beclabito 57.98 44 ⇑P P 10 47 40.3 -0.4
baz=58
U13A Pakoon Wash 57.99 48 ⇑P P 10 47 41.2 +0.4
baz=58
T23A Casias Ranch, 58.00 41 ⇑P P 10 47 42.0 +1.1
baz=58
MPMC Manual Prospec 58.03 52 ⇓P P 10 47 41.8 +0.7
baz=58
U14A Mt Trumbull 58.05 48 ⇓P P 10 47 42.0 +0.8
baz=58
U15A North Rim 58.12 47 ⇓P P 10 47 43.0 +1.3
baz=58
SHOC Shoshone 58.30 51 ⇓P P 10 47 44.1 +1.1
baz=58
U18A Rough Rock, Ch 58.32 44 ⇑P P 10 47 44.2 +1.0
baz=58
ISA Isabella 58.34 53 eP P 10 47 47.4 +4.1
comp=Z,4.9nm,1.0s,mb4.5
ISA Isabella 58.34 53 eP P 10 47 47.4 +4.1
ISA pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
U20A Newcomb 58.47 43 ⇑P P 10 47 44.6 +0.4
baz=58
U21A Nageezi 58.49 42 ⇓P P 10 47 44.9 +0.6
baz=58
U16A Tuba City 58.49 46 ⇑P P 10 47 44.6 +0.3
baz=58
U19A Dine' College, 58.50 44 ⇓P P 10 47 44.9 +0.6
baz=58
LRMC Laurel Mountai 58.59 52 ⇓P P 10 47 45.2 +0.2
baz=58
U22A Llaves 58.60 42 ⇑P P 10 47 45.3 +0.2
baz=58
U24A Moreno Valley 58.68 40 ⇑P P 10 47 46.0 +0.3
baz=59
U23A El Rito 58.70 41 ⇓P P 10 47 46.2 +0.5
baz=59
KMI Kunming 58.71 196 P P 10 47 48.8 +2.8
KMI pP pP 10 47 51.9 +0.5
KMI sP sP 10 47 53.6 +0.2
KMI PP PP 10 50 00.3 +4.8
KMI S **S** **10 55 50.3 +0.7**
KMI pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KMI LR LR
comp=N,83nm,12.5s,MS4.6
KMI LR LR
comp=E,300nm,15.0s,MS4.6
KMI LR LR
comp=Z,150nm,16.6s,MS4.2
V15A Kaibab Nationa 58.73 47 ⇑P P 10 47 46.4 +0.4
baz=59
U25A Circle Dot Ran 58.76 39 ⇑P P 10 47 46.8 +0.6
baz=59
TUQ Turquoise Moun 58.79 50 ⇑P P 10 47 47.2 +0.7
baz=59
U26A Atchley Ranch, 58.81 39 ⇑P P 10 47 47.4 +0.9
baz=59
V14A Boquillas Ranc 58.84 48 ⇑P P 10 47 47.5 +0.8
baz=59
GSC Goldstone 58.84 51 ⇑P P 10 47 47.0 +0.2
baz=59
GSC Goldstone 58.84 51 eP P 10 47 53.4 +6.6
comp=Z,6.0nm,1.0s,mb4.6
GSC Goldstone 58.84 51 eP P 10 47 53.4 +6.6
GSC pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
V18A Ganado 59.02 45 ⇑P P 10 47 47.6 -0.4
baz=59,SNR=7.4
V17A Tonalea, Kykot 59.04 45 ⇑P P 10 47 48.7 +0.6
baz=59
V20A Brimhall 59.05 43 ⇑P P 10 47 49.1 +0.9
baz=59
WUAZ Wupatki 59.09 46 ⇓P P 10 47 49.8 +1.3
baz=59
WUAZ Wupatki 59.09 46 eP P 10 47 54.3 +5.8
comp=Z,15nm,1.1s,mb4.9
EDW2 Edwards Air Fo 59.16 52 ⇑P P 10 47 49.9 +1.0
baz=59
W14A Seligman 59.26 48 ⇑P P 10 47 50.4 +0.8
baz=59
V23A Ortiz Mt. (NFS 59.28 41 ⇓P P 10 47 49.4 -0.4
baz=59
V25A Rancho No Teng 59.30 40 ⇑P P 10 47 49.3 -0.6
baz=59

W13A	**Hualapai Mount**	**59.30**	**48**	⇓P		**P**		**10 47 49.5**	**-0.5**
	baz=59									
V24A	**Rampart Ranch,**	**59.36**	**40**	⇑P		**P**		**10 47 50.0**	**-0.4**
	baz=59									
GMRC	**Granite Mounta**	**59.46**	**50**	⇑P		**P**		**10 47 51.1**	**0.0**
	baz=59									
W16A	**Flagstaff**	**59.50**	**46**	⇓P		**P**		**10 47 51.6**	**+0.3**
	baz=59									
W19A	**Sanders**	**59.66**	**44**	⇑P		**P**		**10 47 52.9**	**+0.5**
	baz=60									
W20A	**Ramah**	**59.71**	**43**	⇑P		**P**		**10 47 53.5**	**+0.7**
	baz=60									
MWC	**Mount Wilson**	**59.80**	**52**	*e*P		**P**		**10 47 58.2**	**+4.8**
	comp=Z,28nm,1.2s,mb5.2									
MWC	**Mount Wilson**	**59.80**	**52**	*e*P		**P**		**10 47 58.2**	**+4.8**
MWC					pmax	pmax				
	comp=Z,28nm,1.2s,mb5.2									
X13A	**Yucca**	**59.81**	**48**	⇑P		**P**		**10 47 53.4**	**-0.1**
	baz=60									
BFSC	**Mount Baldy Ra**	**59.82**	**52**	⇑P		**P**		**10 47 53.6**	**0.0**
	baz=60									
W23A	**Werner Place,**	**59.86**	**41**	⇑P		**P**		**10 47 53.5**	**-0.3**
	baz=60									
W24A	**Lazy 6 Ranch,**	**59.87**	**40**	⇑P		**P**		**10 47 54.1**	**+0.2**
	baz=60									
W25A	**X Bar L Ranch,**	**59.93**	**39**	⇓P		**P**		**10 47 54.5**	**+0.3**
	baz=60									
ANMO	**Albuquerque**	**60.05**	**41**	*e*P		**P**		**10 47 53.4**	**-1.6**
	comp=Z,18nm,1.1s,mb5.0									
ANMO	**Albuquerque**	**60.05**	**41**	*e*P		**P**		**10 47 53.4**	**-1.7**
ANMO					pmax	pmax				
	comp=Z,18nm,1.1s									
X15A	**Humboldt**	**60.05**	**47**	⇓P		**P**		**10 47 55.7**	**+0.6**
	baz=60									
PDMCI	**Parker Dam,Lak**	**60.07**	**49**	⇓P		**P**		**10 47 55.3**	**0.0**
	baz=60									
IRM	**Iron Mountain**	**60.12**	**50**	⇓P		**P**		**10 47 56.1**	**+0.4**
	baz=60									
X16A	**Lo Mia Camp, P**	**60.18**	**46**	⇑P		**P**		**10 47 56.3**	**+0.3**
	baz=60									
X18A	**Snowflake**	**60.19**	**45**	⇑P		**P**		**10 47 56.3**	**+0.2**
	baz=60									
BELC	**Belle Mtn. Jos**	**60.21**	**51**	⇑P		**P**		**10 47 56.7**	**+0.5**
	baz=60									
X17A	**Forest Lakes**	**60.31**	**46**	⇑P		**P**		**10 47 57.4**	**+0.5**
	baz=60									
X19A	**St. Johns**	**60.34**	**44**	⇑P		**P**		**10 47 58.1**	**+1.0**
	baz=60									
X23A	**Hourglass Bar**	**60.43**	**41**	⇓P		**P**		**10 47 58.0**	**+0.2**
	baz=60									
X22A	**Bernardo**	**60.45**	**42**	⇑P		**P**		**10 47 58.6**	**+0.7**
	baz=60									
AMTX	**Amarillo**	**60.45**	**37**	*e*P		**P**		**10 48 00.8**	**+2.9**
	comp=Z,17nm,1.3s,mb4.9									
Y14A	**Wickenburg**	**60.53**	**48**	⇓P		**P**		**10 47 59.0**	**+0.6**
	baz=60									
LAZ	**Ladron**	**60.54**	**42**	*e*P		**P**		**10 48 03.7**	**+5.2**
	comp=Z,4.2nm,1.2s,mb4.4									
PFO	**Pinyon Flat Ob**	**60.55**	**51**	⇑P		**P**		**10 47 59.1**	**+0.5**
	baz=60									
Y15A	**Casa Rosa Ranc**	**60.57**	**47**	⇑P		**P**		**10 47 59.6**	**+0.9**
	baz=60									
X27A	**F and S Farms,**	**60.59**	**38**	⇓P		**P**		**10 47 59.7**	**+0.9**
	baz=60									
X26A	**CR and CF Fran**	**60.64**	**39**	⇑P		**P**		**10 47 59.8**	**+0.6**
	baz=61									
LPM	**Los Pinos Moun**	**60.67**	**42**	*e*P		**P**		**10 48 04.3**	**+4.9**
Y16A	**Circle Bar Ran**	**60.71**	**46**	⇓P		**P**		**10 48 00.5**	**+0.8**
	baz=61									
LENM	**Lemitar**	**60.78**	**42**	*e*P		**P**		**10 47 58.4**	**-1.7**
	comp=Z,7.5nm,0.9s,mb4.8									
WMOK	**Wichita Mounta**	**60.79**	**34**	*e*P		**P**		**10 47 57.9**	**-2.2**
Y19A	**Nutrioso**	**60.81**	**44**	⇓P		**P**		**10 48 01.2**	**+0.9**
	baz=61									
BNM	**Barren Site**	**60.83**	**42**	*e*P		**P**		**10 48 04.2**	**+3.7**
	comp=Z,9.0nm,1.2s,mb4.8									
Y21A	**Point of Rocks**	**60.89**	**43**	⇓P		**P**		**10 48 01.6**	**+0.7**
	baz=61									
Y18A	**Canyon Day Jun**	**60.93**	**45**	⇓P		**P**		**10 48 00.8**	**-0.4**
	baz=61,SNR=9.0									
Y20A	**Horse Springs,**	**60.93**	**43**	⇑P		**P**		**10 48 01.3**	**+0.1**
	baz=61									
Y17A	**Roosevelt**	**60.95**	**46**	⇓P		**P**		**10 48 01.5**	**+0.2**
	baz=61									
Y22A	**Socorro**	**61.01**	**42**	⇓P		**P**		**10 48 02.7**	**+1.0**
	baz=61									
Y24A	**Capitan**	**61.14**	**40**	⇓P		**P**		**10 48 03.4**	**+0.9**
	baz=61									
Y25A	**Mesa, Roswell**	**61.20**	**40**	⇑P		**P**		**10 48 03.5**	**+0.5**
	baz=61									
MONP	**Monument Peak**	**61.27**	**51**	⇓P		**P**		**10 48 03.9**	**+0.4**
	baz=61									
MSTX	**Muleshoe**	**61.29**	**38**	⇑P		**P**		**10 48 03.4**	**-0.2**
	baz=61									
MIAR	**Mount Ida**	**61.30**	**29**	*e*P		**P**		**10 48 09.3**	**+5.7**
	comp=Z,17nm,1.5s,mb5.0									
MIAR	**Mount Ida**	**61.30**	**29**	*e*P		**P**		**10 48 09.4**	**+5.8**
MIAR					pmax	pmax				
	comp=Z,17nm,1.5s,mb5.0									
Y27A	**Causey**	**61.34**	**38**	⇓P		**P**		**10 48 03.3**	**-0.7**
	baz=61									
Z22A	**Elephant Butte**	**61.69**	**42**	⇑P		**P**		**10 48 05.3**	**-1.0**
	baz=62									
Z25A	**Roswell**	**61.83**	**40**	⇑P		**P**		**10 48 06.3**	**-0.9**
	baz=62									
Z26A	**Caprock**	**61.90**	**39**	⇓P		**P**		**10 48 07.0**	**-0.7**
	baz=62									
117A	**Oracle**	**62.07**	**46**	⇓P		**P**		**10 48 09.1**	**+0.2**
	baz=62									
CPRX	**Cap Rock**	**62.14**	**39**	*e*P		**P**		**10 48 12.5**	**+3.2**
	comp=Z,1.0nm,0.7s,mb4.0									
120A	**U Bar Ranch, L**	**62.26**	**44**	⇓P		**P**		**10 48 09.7**	**-0.5**
	baz=62									
121A	**Cookes Peak, D**	**62.34**	**43**	⇑P		**P**		**10 48 10.7**	**0.0**
	baz=62									
124A	**Stringfield Ra**	**62.35**	**41**	⇑P		**P**		**10 48 10.3**	**-0.4**
	baz=62									
125A	**Gardner Draw,**	**62.45**	**40**	⇓P		**P**		**10 48 11.2**	**-0.2**
	baz=62									
219A	**White Tail Can**	**62.76**	**44**	⇓P		**P**		**10 48 13.6**	**+0.2**
	baz=63									
217A	**Green Valley**	**62.85**	**46**	⇑P		**P**		**10 48 13.4**	**-0.7**
	baz=63									
221A	**Mesquite Ranch**	**62.87**	**43**	⇑P		**P**		**10 48 14.0**	**-0.2**
	baz=63									
CLNB	**Carlsbad**	**62.90**	**39**	*e*P		**P**		**10 48 19.8**	**+5.4**
	comp=Z,3.9nm,0.9s,mb4.5									
220A	**Playas Peak, P**	**62.91**	**44**	⇓P		**P**		**10 48 14.3**	**-0.2**
	baz=63									
GDL2	**Guadalupe Moun**	**62.93**	**40**	*e*P		**P**		**10 48 19.3**	**+4.7**
224A	**Cornudas Mount**	**62.97**	**41**	⇓P		**P**		**10 48 14.6**	**-0.3**
	baz=63									
225A	**Deer Hill, Car**	**62.99**	**40**	⇓P		**P**		**10 48 14.2**	**-0.8**
	baz=63									
226A	**Malaga, Loving**	**63.09**	**39**	⇓P		**P**		**10 48 14.4**	**-1.3**
	baz=63									
227A	**Bennet, Jal**	**63.20**	**39**	⇓P		**P**		**10 48 15.7**	**-0.7**
	baz=63									
MNTX	**Cornudas Mount**	**63.36**	**41**	⇓P		**P**		**10 48 16.6**	**-0.8**
	baz=63									
MNTX	**Cornudas Mount**	**63.36**	**41**	*e*P		**P**		**10 48 15.5**	**-2.0**
	comp=Z,9.4nm,1.1s,mb4.8									
319A	**Douglas**	**63.38**	**44**	⇑P		**P**		**10 48 16.5**	**-1.1**
	baz=63									
320A	**Kipp Ranch, An**	**63.47**	**44**	⇑P		**P**		**10 48 17.4**	**-0.8**
	baz=63									
326A	**Caldwell Ranch**	**63.84**	**39**	⇓P		**P**		**10 48 19.6**	**-1.0**
	baz=64									
328A	**Wristen Ranch,**	**63.86**	**38**	⇓P		**P**		**10 48 19.2**	**-1.5**
	baz=64									
425A	**Indio Mountain**	**64.29**	**40**	⇑P		**P**		**10 48 23.1**	**-0.5**
	baz=64									
427A	**Hayter Ranch,**	**64.34**	**39**	⇓P		**P**		**10 48 22.3**	**-1.6**
	baz=64									
426A	**McDonald Obser**	**64.48**	**39**	⇓P		**P**		**10 48 22.9**	**-1.9**
	baz=64									
428A	**Kincaid Ranch,**	**64.52**	**38**	⇑P		**P**		**10 48 23.2**	**-1.9**
	baz=64									
QIZ	**Qiongzhong**	**64.60**	**188**		P	**P**		**10 48 24.9**	**-0.8**
QIZ					LR	LR				
	comp=E,110nm,19.0s									
JCT	**Junction City**	**64.96**	**35**	⇓P		**P**		**10 48 25.9**	**-2.1**
	baz=65									
JCT	**Junction City**	**64.96**	**35**	*e*P		**P**		**10 48 25.2**	**-2.8**
528A	**Cox Ranch, San**	**65.07**	**38**	⇑P		**P**		**10 48 26.6**	**-2.1**
	baz=65									
526A	**Mary Lane Ranc**	**65.08**	**40**	⇓P		**P**		**10 48 26.8**	**-2.0**
	baz=65									

CMAR	**Chiang Mai Arr**	**65.47**	**200**		P	**P**		**10 48 26.1**	**-5.2**
	comp=E,0.7nm,0.4s,mb4.1,baz=356,slow=7.2,SNR=7.6									
CMAR					LR	LR		11 18 54.7		
	comp=E,226nm,19.4s,MS4.4,baz=230,slow=38									
626A	**Big Bend Ranch**	**65.58**	**40**		⇑P	**P**		**10 48 30.3**	**-1.7**
	baz=66									
627A	**Terlingua Ranc**	**65.73**	**39**		⇓P	**P**		**10 48 31.3**	**-1.7**
	baz=66									
TXAR	**Lajitas Array**	**65.83**	**39**		P	**P**		**10 48 31.2**	**-2.4**
	comp=E,3.8nm,1.0s,mb4.4,baz=352,slow=6.3,SNR=13									
TXAR					LR	LR		11 19 06.7		
	comp=E,394nm,18.0s,MS4.7,baz=0.0,slow=38									
ATD	**Arta Tunnel**	**76.91**	**256**		LR	LR		11 30 15.1		
	comp=E,152nm,19.4s,MS4.3,baz=325,slow=41									
KULM	**Kulim**	**78.49**	**197**		*e*P	**P**		**10 49 46.5**	**-3.0**
	comp=E,47nm,0.9s,mb5.4									
TORD	**Torodi Ar. Bea**	**79.88**	**297**		P	**P**		**10 49 51.5**	**-5.6**
TORD					LR	LR		11 30 53.7		
TORD	**Torodi Ar. Bea**	**79.88**	**297**		P	**P**		**10 49 51.5**	**-5.6**
	comp=E,4.4nm,0.8s,mb4.4,baz=356,slow=6.2,SNR=14									
TORD					LR	LR		11 30 53.7		
	comp=E,96nm,18.7s,MS4.2,baz=175,slow=40									
KMBO	**Kilima Mbogo**	**90.03**	**260**		LR	LR		11 31 08.7		
	comp=E,106nm,21.9s,MS4.2,baz=270,slow=36									
ROSC	**El Rosal**	**91.58**	**12**		LR	LR		11 31 00.0		
	comp=E,82nm,20.6s,MS4.2,baz=17,slow=35									
DZM	**Mont Dzumac**	**107.54**	**133**		*e*LR	LR		11 28 11.4		
	comp=E,320nm,25.2s									
PPT	**Papeete**	**107.65**	**89**		*e*SS	SS		11 12 12.1	+27	
	comp=E,104nm,28.0s									
PPT					*e*LR	LR		11 28 14.3		
	comp=E,292nm,23.0s									
RKT	**Rikitea**	**114.78**	**75**		*e*LR	LR		11 31 35.6		
	comp=E,205nm,26.0s									

*ISCJB **14** 10:58:44.8±0.4,39.89N±0.03×40.78E±0.03,h10km, Error ellipse: s-maj=4.3km s-min=3.3km az=144.5*
*CSEM **14** 10:58:44.9±0.2,39.90N×40.78E,h10km, MD2.9, Error ellipse: s-maj=5.5km s-min=4.0km az=142.0*
*ISK **14** 10:58:44.3,39.89N×40.78E,h9km, MD2.9*
*DDA **14** 10:58:45.9,40.01N×40.86E,h6km±7km, ML2.7*

ISC 14 10:58:44.3±0.8,39.94N±0.03×40.74E±0.04,h0km±7km, n33,σ0s73/49,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
EZM	**Erzurum**	**0.48**	**94**		PG	**Pg**	**10 58 53.5**	**-0.1**
EZM					*e*SG	**Sg**	**10 59 00.3**	**+0.5**
ERZM	**Erzurum**	**0.48**	**94**		*i* P	**Pg**	**10 58 52.7**	**-0.9**
ERZM					*i* S	**Sg**	**10 58 59.8**	**-0.1**
ERZM	**Erzurum**	**0.48**	**94**		*i* P	**Pg**	**10 58 52.7**	**-0.9**
ERZM					*i* S	**Sg**	**10 58 59.8**	**-0.1**
HOMI	**Horasan**	**0.90**	**83**		*i* P	**Pg**	**10 59 00.9**	**-0.7**
HOMI					*i* S	**Sg**	**10 59 14.6**	**+1.2**
BNGL	**BINGOL**	**1.04**	**162**		*i* P	**Pg**	**10 59 03.3**	**-0.9**
BNGL					*i* S	**Sg**	**10 59 23.3**	**+4.6**
BINT	**Bingol**	**1.08**	**190**		*e*PG	**Pg**	**10 59 04.7**	**-0.3**
BINT					*e*SG	**Sg**	**10 59 19.5**	**+0.4**
BINT	**Bingol**	**1.08**	**190**		*e*Pg	**Pg**	**10 59 04.7**	**-0.4**
BINT					*e*Sg	**Sg**	**10 59 19.5**	**+0.4**
EZC	**Erzincan**	**1.08**	**260**		*e*PN	**Pn**	**10 59 05.9**	**-0.8**
GUMT	**Gumushane**	**1.09**	**299**		*e*PN	**Pn**	**10 59 06.7**	**-0.2**
GUMT					*e*SN	**Sn**	**10 59 23.2**	**+0.6**
GUMT	**Gumushane**	**1.09**	**299**		*e*Pn	**Pn**	**10 59 06.7**	**-0.1**
GUMT					*e*Sn	**Sn**	**10 59 23.2**	**+0.6**
DDEM	**Demirkent**	**1.23**	**39**		*i* P	**Pg**	**10 59 08.1**	**+0.2**
DDEM					*i* S	**Sg**	**10 59 24.5**	**+0.8**
DDEM	**Demirkent**	**1.23**	**39**		*i* P	**Pg**	**10 59 08.1**	**+0.3**
DDEM					*i* S	**Sg**	**10 59 24.5**	**+0.8**
PZAR	**Pazar-Rize**	**1.24**	**6**		*e*PN	**Pn**	**10 59 09.0**	**+0.1**
PZAR	**Pazar-Rize**	**1.24**	**6**		*e*Pn	**Pn**	**10 59 09.0**	**+0.1**
KTUT	**Trabzon**	**1.28**	**325**		*e*PN	**Pn**	**10 59 09.6**	**+0.2**
KTUT	**Trabzon**	**1.28**	**325**		*e*Pn	**Pn**	**10 59 09.6**	**+0.2**
PTK	**Pertek**	**1.48**	**225**		*e*PN	**Pn**	**10 59 11.8**	**-0.3**
PTK	**Pertek**	**1.48**	**225**		*e*Pn	**Pn**	**10 59 11.8**	**-0.3**
ARTV	**Artvin**	**1.54**	**36**		*i* P	**Pn**	**10 59 12.2**	**-0.8**
ARTV					*i* S	**Sn**	**10 59 32.6**	**-1.0**
ARTV	**Artvin**	**1.54**	**36**		*i* P	**Pn**	**10 59 12.2**	**-0.8**
ARTV					*i* S	**Sn**	**10 59 32.6**	**-1.0**
DBOC	**Borcka**	**1.57**	**26**		*i* P	**Pn**	**10 59 15.2**	**+1.8**
DBOC					*i* S	**Sn**	**10 59 33.7**	**-0.7**
DBOC	**Borcka**	**1.57**	**26**		*i* P	**Pn**	**10 59 15.2**	**+1.8**
DBOC					*i* S	**Sn**	**10 59 33.7**	**-0.7**
BCA	**Borcka**	**1.65**	**24**		*e*PN	**Pn**	**10 59 14.3**	**-0.1**
BCA	**Borcka**	**1.65**	**24**		*e*Pn	**Pn**	**10 59 14.3**	**-0.1**
AGRB	**Hanur-Agry**	**1.78**	**101**		*e*PN	**Pn**	**10 59 15.4**	**-0.8**
AGRB	**Hanur-Agry**	**1.78**	**101**		*e*Pn	**Pn**	**10 59 15.4**	**-0.8**
ESPY	**Espiye-Giresun**	**1.82**	**303**		*e*PN	**Pn**	**10 59 17.4**	**+0.7**
ESPY	**Espiye-Giresun**	**1.82**	**303**		*e*Pn	**Pn**	**10 59 17.5**	**+0.7**
BEST	**Besiri**	**2.09**	**168**		*i* P	**Pn**	**10 59 25.2**	**+4.6**
BEST					*i* S	**Sn**	**10 59 48.6**	**+1.4**
MYA	**Malataya**	**2.42**	**229**		*e*PN	**Pn**	**10 59 24.9**	**-0.1**
MYA	**Malataya**	**2.42**	**229**		*e*Pn	**Pn**	**10 59 24.9**	**-0.1**
MALT	**Malatya**	**2.42**	**229**		*e*PN	**Pn**	**10 59 25.3**	**+0.2**
MALT	**Malatya**	**2.42**	**229**		*e*Pn	**Pn**	**10 59 25.3**	**+0.2**

*NEIC **14** 11:00:46.9,38.13N×26.67E,h28km, MD3.4(ATH), After ATH.*
*ATH **14** 11:00:46.9,38.13N×26.67E,h28km±1km, MD3.4/5*
*CSEM **14** 11:00:47.3±0.2,38.12N×26.51E,h10km, MD2.5, Error ellipse: s-maj=4.8km s-min=3.3km az=96.0*
*ISK **14** 11:00:48.5,38.07N×26.69E,h9km, MD2.8*
*ISCJB **14** 11:00:48.0±0.5,38.11N±0.02×26.59E±0.03,h9km±4km, Error ellipse: s-maj=4.8km s-min=3.7km az=152.4*
*DDA **14** 11:00:49.8,38.11N×26.71E,h18km±1km, Md2.5*

ISC 14 11:00:48.4±0.5,38.12N±0.02×26.59E±0.04,h12km±4km, n40,σ0s95/64,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
URLA	**Izmir**	**0.24**	**1**		*i* P	**Pg**	**11 00 52.5**	**-1.0**
URLA					*i* S	**Sg**	**11 00 56.9**	**-0.1**
URLA	**Izmir**	**0.24**	**1**		*i* P	**Pg**	**11 00 52.5**	**-1.1**
URLA					*i* S	**Sg**	**11 00 56.9**	**-0.1**
BLCB	**Balcova**	**0.45**	**53**		*e*PG	**Pg**	**11 00 57.2**	**0.0**
BLCB	**Balcova**	**0.45**	**53**		*e*Pg	**Pg**	**11 00 57.3**	**+0.1**
SMG	**Samos**	**0.45**	**154**		*e*Pb	**Pg**	**11 00 56.5**	**-0.8**
SMG	**Samos**	**0.45**	**154**		*e*PB	**Pg**	**11 00 56.5**	**-0.8**
SMG	**Samos**	**0.45**	**154**		*e*Pb	**Pg**	**11 00 56.5**	**-0.8**
CHOS	**Chios island**	**0.50**	**303**		*e*PN	**Pg**	**11 00 58.6**	**+0.4**
CHOS					*e*SN	**Sg**	**11 01 06.3**	**+1.4**
CHOS	**Chios island**	**0.50**	**303**		*e*Pn	**Pg**	**11 00 58.6**	**+0.4**
IZM	**Izmir**	**0.60**	**62**		*e*PG	**Pg**	**11 00 59.9**	**-0.2**
IZM					*e*SG	**Sg**	**11 01 08.1**	**+0.1**
KDAG	**Bornova**	**0.60**	**61**		*i* P	**Pg**	**11 00 59.6**	**-0.5**
KDAG					*i* S	**Sg**	**11 01 08.1**	**-0.1**
KDAG	**Bornova**	**0.60**	**61**		*i* P	**Pg**	**11 00 59.6**	**-0.6**
KDAG					*i* S	**Sg**	**11 01 08.1**	**-0.1**
GCAM	**G?zelcaml?**	**0.66**	**129**		*i* P	**Pg**	**11 01 01.4**	**+0.3**
GCAM					*i* S	**Sg**	**11 01 10.8**	**+1.0**
GCAM	**G?zelcaml?**	**0.66**	**129**		*i* P	**Pg**	**11 01 01.4**	**+0.3**
GCAM					*i* S	**Sg**	**11 01 10.8**	**+1.0**
AYDN	**Tasoluk**	**1.12**	**114**		*i* P	**Pg**	**11 01 09.3**	**-0.6**
AYDN					*i* S	**Sg**	**11 01 24.4**	**0.0**
AYDN	**Tasoluk**	**1.12**	**114**		*i* P	**Pg**	**11 01 09.3**	**-0.6**
AYDN					*i* S	**Sg**	**11 01 24.4**	**0.0**
PRK	**Paraskevi**	**1.16**	**348**		*e*Pn	**Pn**	**11 01 09.1**	**-1.3**
PRK					*e*Sn	**Sn**	**11 01 24.1**	**-2.0**
PRK	**Paraskevi**	**1.16**	**348**		*e*PN	**Pn**	**11 01 09.1**	**-1.3**
PRK					*e*SN	**Sn**	**11 01 24.1**	**-2.0**
PRK	**Paraskevi**	**1.16**	**348**		*e*Pn	**Pn**	**11 01 09.1**	**-1.3**
PRK					*e*Sn	**Sn**	**11 01 24.1**	**-2.0**
AYVA	**Ayvalik**	**1.19**	**4**		*e*P	**Pn**	**11 01 15.6**	**+4.7**
AYVA					*e*S	**Sb**	**11 01 28.4**	**+2.0**
BODT	**Bodrum**	**1.20**	**151**		*e*PN	**Pn**	**11 01 10.3**	**-0.6**
BODT					*e*SN	**Sn**	**11 01 26.3**	**-0.8**
BODT	**Bodrum**	**1.20**	**151**		*e*Pn	**Pn**	**11 01 10.3**	**-0.6**
BODT					*e*Sn	**Sn**	**11 01 26.3**	**-0.8**
AKHS	**Akhisar**	**1.23**	**51**		*i* P	**Pn**	**11 01 12.5**	**+1.2**
AKHS					*e*S	**Sb**	**11 01 27.0**	**-0.2**
AKHS	**Akhisar**	**1.23**	**51**		*i* P	**Pn**	**11 01 12.5**	**+1.2**
AKHS					*e*S	**Sb**	**11 01 27.0**	**-0.3**
AKS	**Akhisar**	**1.23**	**51**		*e*PN	**Pn**	**11 01 11.8**	**+0.5**
AKS	**Akhisar**	**1.23**	**51**		*e*Pn	**Pn**	**11 01 11.8**	**+0.5**
MLSB	**Milas**	**1.25**	**131**		*e*PN	**Pn**	**11 01 10.9**	**-0.7**
MLSB	**Milas**	**1.25**	**131**		*e*Pn	**Pn**	**11 01 10.9**	**-0.7**
BDRM	**Kayabasi**	**1.25**	**147**		*i* P	**Pn**	**11 01 12.8**	**+1.2**
BDRM					*i* S	**Sb**	**11 01 28.5**	**+0.6**
BDRM	**Kayabasi**	**1.25**	**147**		*i* P	**Pn**	**11 01 12.8**	**+1.2**
BDRM					*i* S	**Sb**	**11 01 28.5**	**+0.6**
APE	**Apeiranthos**	**1.34**	**219**		*e*Pb	**Pb**	**11 01 11.8**	**-1.6**
APE					*e*Sn	**Sn**	**11 01 31.7**	**+1.1**
APE	**Apeiranthos**	**1.34**	**219**		*e*PB	**Pb**	**11 01 11.8**	**-1.6**
APE					*e*SN	**Sn**	**11 01 31.7**	**+1.1**
APE	**Apeiranthos**	**1.34**	**219**		*e*Pb	**Pb**	**11 01 11.8**	**-1.6**
APE					*e*Sn	**Sn**	**11 01 31.7**	**+1.1**
DAT	**Datca**	**1.59**	**150**		*e*PN	**Pn**	**11 01 16.4**	**+0.1**
DAT	**Datca**	**1.59**	**150**		*e*Pn	**Pn**	**11 01 16.4**	**+0.1**
KULA	**Kula-Manisa**	**1.68**	**76**		*e*PN	**Pn**	**11 01 18.0**	**+0.5**
KULA	**Kula-Manisa**	**1.68**	**76**		*e*Pn	**Pn**	**11 01 18.0**	**+0.5**
BALY	**Balya**	**1.81**	**26**		*i* P	**Pn**	**11 01 22.5**	**+3.1**
BALY					*e*S	**Sn**	**11 01 31.4**	**-1.1**
ALN	**Alexandroupoli**	**2.81**	**352**		*e*Pn	**Pn**	**11 01 32.3**	**-0.8**
ALN	**Alexandroupoli**	**2.81**	**352**		*e*Pn	**Pn**	**11 01 32.3**	**-0.8**

*ISK **14** 11:09:20.8,38.59N×26.74E,h14km, MD2.5*
*DDA **14** 11:09:20.9,38.57N×26.76E,h16km±1km, Md2.6*
*ISCJB **14** 11:09:21.5±0.4,38.56N±0.02×26.75E±0.03,h11km±4km, Error ellipse: s-maj=4.1km s-min=3.5km az=179.0*
*NEIC **14** 11:09:21.5,38.57N×26.69E,h40km, MD3.4(ATH), After ATH.*
*ATH **14** 11:09:21.5,38.57N×26.69E,h40km±1km, MD3.4/5*
*CSEM **14** 11:09:21.4±0.1,38.56N×26.76E,h15km, MD2.6, Error ellipse: s-maj=2.8km s-min=2.5km az=47.0*
*THE **14** 11:09:22.0,38.57N×26.76E,h6km±2km, ML2.7/3, Error ellipse: s-maj=2.9km s-min=0.5km az=159.0*

ISC 14 11:09:21.7±0.4,38.56N±0.02×26.75E±0.03,h15km±3km, n47,σ0s76/80,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
URLA	**Izmir**	**0.23**	**212**		*i* P	**Pg**	**11 09 25.9**	**-0.9**
URLA					*i* S	**Sg**	**11 09 30.1**	**-0.2**
URLA	**Izmir**	**0.23**	**212**		*i* P	**Pg**	**11 09 25.9**	**-0.9**
URLA					*i* S	**Sg**	**11 09 30.1**	**-0.2**
BLCB	**Balcova**	**0.28**	**127**		*e*PG	**Pg**	**11 09 27.6**	**-0.1**
BLCB	**Balcova**	**0.28**	**127**		P	**Pg**	**11 09 27.9**	**+0.2**
BLCB					S	**Sg**	**11 09 32.1**	**+0.3**
BLCB	**Balcova**	**0.28**	**127**		*e*Pg	**Pg**	**11 09 27.6**	**-0.1**
BLCB	**Balcova**	**0.28**	**127**		P	**Pg**	**11 09 27.9**	**+0.2**
BLCB					S	**Sg**	**11 09 32.1**	**+0.3**
IZM	**Izmir**	**0.43**	**112**		*e*PG	**Pg**	**11 09 30.3**	**0.0**
IZM					*e*SG	**Sg**	**11 09 37.1**	**+1.0**
KDAG	**Bornova**	**0.43**	**111**		*i* P	**Pg**	**11 09 29.1**	**-1.2**
KDAG					*i* S	**Sg**	**11 09 36.2**	**0.0**
KDAG	**Bornova**	**0.43**	**111**		*i* P	**Pg**	**11 09 29.1**	**-1.2**
KDAG					*i* S	**Sg**	**11 09 36.2**	**+0.1**
CHOS	**Chios island**	**0.57**	**253**		*e*P	**Pg**	**11 09 33.1**	**+0.1**
CHOS					*e*S	**Sg**	**11 09 41.9**	**+1.2**
CHOS	**Chios island**

s-min=8.8km az=131.0
*GCMT **14** 11:10:38.8±0.1, 43.93N×147.66E, h74km±1km, MW5.4, Moment Tensor Solution. s79,c149; s97,c177; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.56±.03; $M_{\theta\theta}$1.18±.03; $M_{\phi\phi}$-0.62±.03; $M_{r\theta}$1.26±.02; $M_{r\phi}$-0.38±.03; $M_{\theta\phi}$0.62±.02; Best double couple: $M_0$1.80000×10^{17} NP1:ϕ_s139.00000°, δ32.00000°, λ-21.00000°. NP2:ϕ_s247.00000°, δ79.00000°, λ-121.00000°. Principal axes: T 1.8400, Plg27.0000°, Azm1.0000°; N -0.1400, Plg30.0000°, Azm254.0000°; P -1.7100, Plg47.0000°, Azm125.0000°; Data Used: II IU IC G CN.*
*SZGRF **14** 11:10:44.5, 45.39N×145.77E, h33km, mb5.8, MS4.9, Hokkaido, Japan, region*
ISC 14 11:10:37.6±0.2, 43.94N±0.02×147.55E±0.02, h75km±2km, h77km±2.0km: pP-P, n1540, σ0s81/1566, mb5.4/391, 322C-237D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**1.22**	**275**	*d*	*i*	PN	**Pn**	**11 10 59.4**	**+0.3**
YUK					*i*	S	**Sn**	**11 11 16.6**	**+1.4**
YUK						pmax	pmax		
	comp=Z,24μm,0.5s								
YUK						pmax	pmax		
	comp=N,4μm,0.3s								
YUK						pmax	pmax		
	comp=E,7μm,0.3s								
YUK						pmax	pmax		
	comp=Z,45μm,0.3s								
YUK	**Yuzh-Kuril'sk**	**1.22**	**275**	⇓	*i*	P	**Pn**	**11 10 59.4**	**+0.3**
YUK						AMB	AMB	11 11 00.1	
	comp=Z,4μm,0.3s								
YUK						AMB	AMB	11 11 00.1	
	comp=Z,7μm,0.3s								
YUK						AMB	AMB	11 11 00.1	
	comp=Z,45μm,0.3s								
YUK					*i*	S	**Sn**	**11 11 16.6**	**+1.4**
KUR	**Kuril'sk**	**1.32**	**10**			PN	**Pn**	**11 11 00.5**	**+0.2**
KUR					*e*	S	**Sn**	**11 11 17.0**	**-0.4**
KUR						pmax	pmax		
	comp=N,46μm,2.0s								
KUR						pmax	pmax		
	comp=E,28μm,2.0s								
KUR						pmax	pmax		
	comp=Z,32μm,2.0s								
KUR						smax			
	comp=N,180μm,2.0s								
KUR						smax			
	comp=E,80μm,2.0s								
KUR	**Kuril'sk**	**1.32**	**10**		*e*	P	**Pn**	**11 11 00.5**	**+0.2**
KUR						AMB	AMB	11 11 08.0	
	comp=E,46μm,2.0s								
KUR						AMB	AMB	11 11 08.0	
	comp=E,28μm,2.0s								
KUR						AMB	AMB	11 11 08.0	
	comp=E,32μm,2.0s								
KUR					*e*	S	**Sn**	**11 11 17.0**	**-0.4**
KUR						A		11 11 20.0	
	comp=E,180μm,2.0s								
KUR						A		11 11 20.0	
	comp=E,80μm,2.0s								
NEM2	**Nemuro 2**	**1.43**	**247**	⇓		P	**Pn**	**11 11 00.9**	**-0.9**
NEM2					*e*	S	**Sn**	**11 11 18.7**	**-1.3**
JRA	**Rausu**	**1.75**	**271**	⇓		P	**Pn**	**11 11 06.9**	**+0.9**
JRA					*e*	S	**Sn**	**11 11 29.6**	**+2.0**
JNK	**Nakash**	**2.08**	**261**	⇓		P	**Pn**	**11 11 10.5**	**+0.1**
JNK					*e*	S	**Sn**	**11 11 35.8**	**+0.4**
JAK	**Akkeshi**	**2.28**	**247**	⇓		P	**Pn**	**11 11 12.4**	**-0.7**
JAK					*e*	S	**Sn**	**11 11 38.7**	**-1.5**
JTKR	**Abashiri--Toko**	**2.63**	**272**	⇓		P	**Pn**	**11 11 19.0**	**+1.2**
JAR	**Ashorobuto**	**2.82**	**258**	⇓		P	**Pn**	**11 11 21.0**	**+0.6**
JOB	**Onbets**	**2.90**	**250**	⇓		P	**Pn**	**11 11 21.4**	**0.0**
JOB					*e*	S	**Sn**	**11 11 54.7**	**-0.5**
JMP	**Maruseppu**	**3.03**	**273**	⇓		P	**Pn**	**11 11 24.7**	**+1.5**
JCH	**Churui**	**3.33**	**248**	⇓		P	**Pn**	**11 11 26.6**	**-0.7**
JCH					*e*	S	**Sn**	**11 12 03.3**	**-2.4**
JKK2	**Kamakawa 2**	**3.47**	**271**	⇓		P	**Pn**	**11 11 31.0**	**+1.8**
ASAJ	**Asahikawa**	**3.58**	**275**			P	**Pn**	**11 11 32.8**	**+2.1**
	comp=E,173nm,0.3s,baz=87,slow=15,SNR=986								
ASAJ						S	**Sn**	**11 12 22.8**	**+11**
	comp=E,196nm,0.3s,baz=54,slow=19,SNR=3.8								
ASAJ	**Asahikawa**	**3.58**	**275**	⇓		P	**Pn**	**11 11 32.7**	**+2.0**
JFR	**Furan**	**3.69**	**260**			P	**Pn**	**11 11 33.3**	**+1.2**
JFR					*e*	S	**Sn**	**11 12 13.2**	**-1.2**
JSE	**Soyaes**	**3.70**	**288**	⇓		P	**Pn**	**11 11 34.3**	**+2.0**
ERM	**Erimo**	**3.75**	**241**		*e*	Pn	**Pn**	**11 11 33.1**	**+0.1**
ERM					*e*	Sn	**Sn**	**11 12 12.6**	**-3.4**
ERM	**Erimo**	**3.75**	**241**		*e*	PN	**Pn**	**11 11 34.5**	**+1.5**
JNBK	**Urakawa-nobuka**	**3.88**	**246**	⇓		P	**Pn**	**11 11 34.1**	**-0.7**
JNBK					*e*	S	**Sn**	**11 12 16.8**	**-2.4**
JAB	**Ashibetsu**	**3.89**	**265**			P	**Pn**	**11 11 37.2**	**+2.3**
JBT2	**Biratori 2**	**3.96**	**255**	⇓		P	**Pn**	**11 11 36.0**	**+0.2**
JSS	**Shosan**	**4.13**	**278**	⇓		P	**Pn**	**11 11 41.1**	**+3.0**
JHR	**Hokuryu**	**4.22**	**269**	⇓		P	**Pn**	**11 11 41.9**	**+2.5**
JWK2	**Keihoku**	**4.27**	**291**			P	**Pn**	**11 11 43.5**	**+3.5**
JYG	**Yagishiri**	**4.43**	**278**	⇓		P	**Pn**	**11 11 44.5**	**+2.2**
YSS	**Yuzh-Sakhalins**	**4.53**	**313**		*e*	Pn	**Pn**	**11 11 45.4**	**+1.9**
YSS	**Yuzh-Sakhalins**	**4.53**	**313**		*i*	PN	**Pn**	**11 11 45.3**	**+1.7**
YSS						S	**Sn**	**11 12 36.0**	**+1.1**
YSS						pmax	pmax		
	comp=Z,770nm,0.5s								
YSS						pmax	pmax		
	comp=Z,2μm,2.0s								
YSS						smax			
	comp=N,6μm,2.0s								
YSS						smax			
	comp=E,4μm,0.9s								
YSS						MLR	MLR		
	comp=E,4μm,16.0s								
YSS						MLR	MLR		
	comp=Z,4μm,16.0s								
YSS	**Yuzh-Sakhalins**	**4.53**	**313**	⇓	*i*	P	**Pn**	**11 11 45.3**	**+1.7**
YSS				⇓	*i*	P		11 11 45.3	
YSS						AMB	AMB	11 11 45.9	
	comp=Z,770nm,0.5s								
YSS						AMB	AMB	11 11 47.0	
	comp=Z,2μm,2.0s								
YSS					*e*	x	rx	11 11 48.3	
YSS					*e*	sP		11 12 05.0	
YSS					*e*	S	**Sn**	**11 12 36.0**	**+1.1**
YSS						A		11 12 40.0	
	comp=Z,6μm,2.0s								
YSS						A		11 12 41.0	
	comp=Z,4μm,0.9s								
YSS						AMS	AMS	11 13 40.0	
	comp=Z,4μm,16.0s								
YSS						AMS	AMS	11 13 40.0	
	comp=Z,4μm,16.0s								
JEW	**Eniwo**	**4.58**	**258**	⇓		P	**Pn**	**11 11 45.7**	**+1.4**
JEW					*e*	S	**Sn**	**11 12 36.9**	**+0.7**
JRR	**Rishiri**	**4.62**	**287**	⇓		P	**Pn**	**11 11 47.9**	**+3.0**
JSK	**Shakotan**	**5.17**	**266**			P	**Pn**	**11 11 53.4**	**+1.1**
JYM2	**Yakumo 2**	**5.57**	**253**	⇓		P	**Pn**	**11 11 57.9**	**+0.1**
UGL	**Uglegorsk**	**6.38**	**326**		*i*	PN	**Pn**	**11 12 12.0**	**+3.1**
UGL					*i*	S	**Sn**	**11 13 27.3**	**+7.0**
UGL						pmax	pmax		
	comp=N,241nm,0.8s								
UGL						pmax	pmax		
	comp=E,795nm,0.8s								
UGL						pmax	pmax		
	comp=Z,2μm,0.8s								
UGL						pmax	pmax		
	comp=N,3μm,6.0s								
UGL						pmax	pmax		
	comp=E,1μm,6.0s								
UGL						smax			
	comp=N,6μm,4.0s								
UGL						smax			
	comp=E,10μm,4.0s								
UGL						smax			
	comp=N,2μm,1.0s								
UGL						smax			
	comp=E,2μm,1.0s								
UGL						smax			
	comp=Z,1μm,1.0s								
UGL	**Uglegorsk**	**6.38**	**326**	⇑	*i*	P	**Pn**	**11 12 12.0**	**+3.1**
UGL				⇑	*i*	P		11 12 12.0	
UGL						AMB	AMB	11 12 13.6	
	comp=Z,241nm,0.8s								
UGL						AMB	AMB	11 12 13.6	
	comp=Z,795nm,0.8s								
UGL						AMB	AMB	11 12 13.6	
	comp=Z,2μm,0.8s								
UGL						AMB	AMB	11 12 14.0	
	comp=Z,3μm,6.0s								
UGL						AMB	AMB	11 12 14.0	
	comp=Z,1μm,6.0s								
UGL					*e*	S	**Sn**	**11 13 27.3**	**+7.0**
UGL						A		11 13 32.0	
	comp=Z,9μm,4.0s								
UGL						A		11 13 32.0	
	comp=Z,6μm,4.0s								
UGL						A		11 13 33.5	
	comp=Z,2μm,1.0s								
UGL						A		11 13 33.5	
	comp=Z,2μm,1.0s								
UGL						A		11 13 33.5	
	comp=Z,1μm,1.0s								
TYV	**Tymovskoe**	**7.68**	**336**		*e*	P	**Pn**	**11 12 28.0**	**+1.4**
TYV						AMB	AMB	11 12 31.0	
	comp=Z,198nm,1.0s								
TYV						AMB	AMB	11 12 31.0	
	comp=Z,330nm,1.0s								
TYV						AMB	AMB	11 12 31.0	
	comp=Z,418nm,1.0s								
TYV						AMB	AMB	11 12 33.0	
	comp=Z,1μm,6.0s								
TYV						AMB	AMB	11 12 33.0	
	comp=Z,3μm,6.0s								
TYV					*e*	S	**Sn**	**11 13 49.0**	**-3.0**
TYV						A		11 13 53.0	
	comp=Z,75nm,1.0s								
TYV						A		11 13 53.0	
	comp=Z,409nm,1.0s								
TYV						A		11 14 12.0	
	comp=Z,4μm,12.0s								
TYV						AMS	AMS	11 18 07.0	
	comp=Z,2μm,12.0s								
TYV						AMS	AMS	11 18 07.0	
	comp=Z,4μm,12.0s								
TEY	**Ternei**	**7.91**	**282**		*e*	P	**Pn**	**11 12 31.0**	**+1.3**
TEY						AMB	AMB	11 12 31.9	
	comp=Z,1μm,1.4s								
TEY						AMB	AMB	11 12 31.9	
	comp=Z,52nm,0.8s								
TEY						AMB	AMB	11 12 31.9	
	comp=Z,201nm,0.9s								
TEY						AMB	AMB	11 12 31.9	
	comp=Z,217nm,0.9s								
TEY						AMB	AMB	11 12 31.9	
	comp=Z,1μm,1.4s								
TEY					*e*	LR	LR	11 15 05.6	
TEY						AMS	AMS	11 15 10.0	
	comp=Z,3μm,13.0s								
SKR	**Severo-Kuril's**	**8.91**	**38**		*e*	PN	**Pn**	**11 12 40.0**	**-3.3**
SKR						pmax	pmax		
	comp=Z,490nm,0.9s								
SKR						pmax	pmax		
	comp=N,80nm,0.5s								
SKR						pmax	pmax		
	comp=E,100nm,0.5s								
SKR						pmax	pmax		
	comp=N,2μm,2.0s								
SKR						pmax	pmax		
	comp=Z,3μm,2.0s								
SKR						pmax	pmax		
	comp=E,1μm,4.0s								
SKR						MLR	MLR		
	comp=Z,1μm,14.0s								
SKR						MLR	MLR		
	comp=E,2μm,12.0s								
SKR	**Severo-Kuril's**	**8.91**	**38**		*e*	P	**Pn**	**11 12 40.0**	**-3.3**
SKR						AMB	AMB	11 12 45.7	
	comp=E,490nm,0.9s								
SKR						AMB	AMB	11 12 45.7	
	comp=E,80nm,0.5s								
SKR						AMB	AMB	11 12 45.7	
	comp=E,100nm,0.5s								
SKR						AMB	AMB	11 12 55.0	
	comp=E,3μm,2.0s								
SKR						AMB	AMB	11 12 55.0	
	comp=E,1μm,4.0s								
SKR						AMB	AMB	11 12 55.0	
	comp=E,2μm,2.0s								
SKR						AMB	AMB	11 12 55.0	
	comp=E,3μm,2.0s								
SKR					*i*	S	**Sn**	**11 14 17.8**	**-4.1**
SKR						A		11 14 28.0	
	comp=E,190nm,0.4s								
SKR						A		11 14 28.0	
	comp=E,370nm,0.5s								
SKR						A		11 14 28.0	
	comp=E,50nm,0.5s								
SKR						A		11 14 33.0	
	comp=E,1μm,8.0s								
SKR						A		11 14 33.0	
	comp=E,3μm,8.0s								
SKR						A		11 14 33.0	
	comp=E,1μm,8.0s								
SKR						A		11 14 33.0	
	comp=E,3μm,8.0s								
SKR						AMS	AMS	11 16 25.0	
	comp=E,2μm,12.0s								
SKR						AMS	AMS	11 16 25.0	
	comp=E,1μm,14.0s								
JSB	**Shiboa**	**9.07**	**222**			P	**Pn**	**11 12 43.2**	**-2.4**
JHK	**Hiroka**	**9.31**	**227**			P	**Pn**	**11 12 46.7**	**-2.2**
JKT	**Katashina**	**9.56**	**224**			P	**Pn**	**11 12 50.3**	**-2.0**
JAG	**Ashikaga**	**9.72**	**222**			P	**Pn**	**11 12 51.0**	**-3.6**
HABR	**Khabarovsk**	**9.78**	**302**		*c*	PN	**Pn**	**11 12 59.3**	**+4.1**
HABR					*e*	S	**Sn**	**11 14 49.0**	**+5.7**
HABR						pmax	pmax		
	comp=Z,644nm,1.5s								
HABR						pmax	pmax		
	comp=E,563nm,1.5s								
HABR						pmax	pmax		
	comp=N,141nm,1.3s								
OKH	**Okha**	**10.09**	**344**	⇑	*i*	P	**Pn**	**11 13 01.8**	**+2.3**
OKH				⇑	*i*	P		11 13 02.6	
OKH						AMB	AMB	11 13 02.9	
	comp=N,600nm,0.6s								
OKH						AMB	AMB	11 13 03.2	
	comp=N,6μm,6.0s								
OKH					*e*	S	**Sn**	**11 14 53.6**	**+2.8**
OKH						A		11 14 58.8	
	comp=N,900nm,0.9s								
OKH						A		11 14 59.6	
	comp=N,3μm,10.0s								
OKH						A		11 14 59.6	
	comp=N,3μm,10.0s								
OKH					*e*	LQ		11 16 16.6	
OKH						AMS	AMS	11 18 28.1	
	comp=N,4μm,15.0s								
OKH						AMS	AMS	11 18 28.1	
	comp=N,4μm,11.0s								
OKH						AMS	AMS	11 18 28.1	
	comp=N,6μm,12.0s								
MAJO	**Matsushiro**	**10.27**	**227**		*e*	PN	**Pn**	**11 12 59.7**	**-2.3**
MAT	**Matsushiro**	**10.27**	**227**			P	**Pn**	**11 12 59.6**	**-2.4**
MAT						S	**Sn**	**11 14 45.0**	**-10**
MAT	**Matsushiro**	**10.27**	**227**			P	**Pn**	**11 12 59.9**	**-2.1**
MJAR	**Matsushiro Arr**	**10.27**	**227**			P	**Pn**	**11 12 59.5**	**-2.5**
	comp=N,8.6nm,0.3s,baz=29,slow=13,SNR=168								
MJAR						S	**Sn**	**11 14 50.5**	**-4.8**
	comp=N,1.9nm,0.3s,baz=54,slow=24,SNR=2.8								
MJAR						ScP	ScP	11 22 26.6	-2.3
	comp=N,0.2nm,0.3s,baz=106,slow=1.4,SNR=4.5								
NKL	**Nikolayevsk**	**10.28**	**336**		*i*	P	**Pn**	**11 12 57.0**	**-5.0**
NKL						AMB	AMB	11 13 00.0	
	comp=N,2μm,6.0s								
NKL						AMB	AMB	11 13 00.0	
	comp=N,1μm,6.0s								
NKL						AMB	AMB	11 13 00.0	
	comp=N,2μm,6.0s								
NKL						AMB	AMB	11 13 04.5	
	comp=N,190nm,1.0s								
NKL						AMB	AMB	11 13 04.5	
	comp=N,90nm,1.0s								
NKL						AMB	AMB	11 13 04.5	
	comp=N,350nm,1.0s								
NKL					*e*	S	**Sn**	**11 14 54.5**	**-0.9**
NKL					*e*	L		11 15 55.0	
NKL						AMS	AMS	11 18 26.0	
	comp=N,1μm,14.0s								
NKL						AMS	AMS	11 18 26.0	
	comp=N,1μm,13.0s								
NKL						AMS	AMS	11 18 26.0	
	comp=N,3μm,13.0s								
JNG	**Nsakai**	**10.43**	**227**			P	**Pn**	**11 13 01.6**	**-2.5**
JNT	**Takato**	**10.81**	**225**			P	**Pn**	**11 13 07.5**	**-1.9**
JOD2	**Odawara 2**	**10.84**	**220**			P	**Pn**	**11 13 07.3**	**-2.5**
AJI	**Ajiro2**	**11.02**	**219**			P	**Pn**	**11 13 08.7**	**-3.5**
JNY	**Yasuok**	**11.36**	**224**			P	**Pn**	**11 13 14.6**	**-2.2**
PET	**Petropavlovsk**	**11.69**	**35**	⇑	*e*	P	**Pn**	**11 13 17.4**	**-3.8**
PET					*e*	Sn	**Sn**	**11 15 22.0**	**-7.7**
PET	**Petropavlovsk**	**11.69**	**35**		*e*	PN	**Pn**	**11 13 16.4**	**-4.8**
PET						pmax	pmax		
	comp=Z,1μm,8.4s								
PET						pmax	pmax		
	comp=Z,73nm,1.1s								
PET						pmax	pmax		
	comp=Z,500nm,13.6s								
PET						MLR	MLR		
	comp=Z,1μm,20.0s								
PET						MLR	MLR		
	comp=Z,1μm,12.0s								
KLR	**Kul'dur**	**12.09**	**302**		*e*	PN	**Pn**	**11 13 25.0**	**-1.7**
KLR					*e*	S	**Sn**	**11 15 41.5**	**+2.0**
KLR						pmax	pmax		
	comp=E,340nm,1.8s								
KLR						pmax	pmax		
	comp=Z,290nm,1.8s								
KLR						smax			
	comp=N,2μm,8.5s								
KLR						smax			
	comp=E,1μm,8.5s								
KLR						MLR	MLR		
	comp=N,2μm,13.0s								
KLR						MLR	MLR		
	comp=E,1μm,13.0s								
JHJ	**Hachijo jima 2**	**12.39**	**212**			P	**Pn**	**11 13 27.0**	**-3.8**
	comp=E,15nm,0.3s,baz=55,slow=4.8,SNR=24								
JHJ						S	**Sn**	**11 15 35.3**	**-12**
	comp=E,189nm,0.3s,baz=282,slow=23,SNR=8.1								
JHJ						LR	LR	11 18 07.3	
	comp=E,1μm,20.9s,baz=54,slow=36								
MDJ	**Mudanjiang**	**12.89**	**279**			P	**Pn**	**11 13 37.4**	**-0.3**
MDJ						sP		11 13 44.9	
MDJ						S	**Sn**	**11 15 59.4**	**+0.3**
MDJ						ScP	ScP	11 22 33.3	+0.8
MDJ						ScS	ScS	11 26 16.8	+8.0
MDJ						pmax	pmax		
	comp=Z,89nm,0.9s								
MDJ						pmax	pmax		
	comp=Z,550nm,5.0s								
MDJ						LR	LR		
	comp=N,1μm,27.2s								
MDJ						LR	LR		
	comp=E,2μm,29.3s								
MDJ						LR	LR		
	comp=Z,2μm,25.2s								
MDJ	**Mudanjiang**	**12.89**	**279**		*e*	Pn	**Pn**	**11 13 36.9**	**-0.8**
	comp=Z,59nm,0.6s								
CN2	**Changchun**	**15.94**	**277**		*e*	P	**Pn**	**11 14 14.3**	**-2.9**
CN2					*e*	sP	sP	11 14 21.3	-22
CN2					*e*	PP		11 14 27.1	
CN2					*e*	S	**S**	**11 17 09.5**	**-13**
CN2					*e*	SS		11 17 28.1	
CN2						pmax	pmax		
	comp=Z,50nm,1.2s								
CN2						LR	LR		
	comp=N,2μm,14.0s								
CN2						LR	LR		
	comp=E,1μm,14.0s								
CN2						LR	LR		
	comp=Z,2μm,17.0s								
KSRS	**Korea Array**	**16.22**	**253**			P	**Pn**	**11 14 19.6**	**-1.0**
	comp=Z,1.3nm,0.3s,baz=61,slow=12,SNR=190								
KSRS						S	**S**	**11 17 26.8**	**-1.6**
	comp=Z,0.9nm,0.3s,baz=66,slow=24,SNR=8.6								
KSRS						LR	LR	11 19 49.7	
	comp=Z,777nm,19.6s,baz=63,slow=34								
KSRS						ScP	ScP	11 22 39.1	+0.6
	comp=Z,0.2nm,0.3s,baz=61,slow=1.2,SNR=8.1								
KSRS	**Korea Array**	**16.22**	**253**			P	**Pn**	**11 14 19.7**	**-1.0**
KSRS						S	**S**	**11 17 26.8**	**-1.6**
KSRS						pmax	pmax		
	comp=Z,1.0nm,0.3s								
KSRS						smax			
	comp=N,1.0nm,0.3s								
KSRS						MLR	MLR		
	comp=Z,777nm,19.6s								
ZEA	**Zeya**	**16.52**	**314**	⇑	*e*	P	**Pn**	**11 14 21.5**	**-2.8**
ZEA						AMB	AMB	11 14 24.0	
	comp=Z,600nm,3.0s								
ZEA						AMB	AMB	11 14 24.0	
	comp=Z,1μm,3.0s								
ZEA						AMB	AMB	11 14 24.0	
	comp=Z,1μm,3.0s								
ZEA						AMB	AMB	11 14 24.4	
	comp=Z,420nm,2.0s								
ZEA						AMB	AMB	11 14 24.4	
	comp=Z,630nm,2.0s								
INCN	**Inchon**	**17.10**	**255**		*e*	Pn	**Pn**	**11 14 28.8**	**-2.8**
	comp=Z,146nm,1.5s								
CBIJ	**Chichi jima**	**17.35**	**196**			P	**Pn**	**11 14 33.5**	**-1.3**
	comp=Z,20nm,0.3s,baz=133,slow=15,SNR=7.3								
CBIJ						S	S	11 17 30.8	-21
	comp=Z,56nm,0.3s,baz=268,slow=24,SNR=11								
SEY	**Seymchan**	**19.24**	**7**	⇑	*i*	P	**Pn**	**11 14 54.1**	**-3.1**
CLNS	**Chul'man**	**19.26**	**320**		*e*	P	**Pn**	**11 14 55.8**	**-1.7**
CLNS					*e*	S	**S**	**11 18 33.7**	**+4.1**
CLNS						pmax	pmax		
	comp=N,134nm,1.0s								
CLNS						pmax	pmax		
	comp=Z,291nm,0.9s								
CLNS						pmax	pmax		
	comp=E,143nm,1.0s								
CLNS						smax			
	comp=N,41nm,8.6s								
CLNS						smax			
	comp=E,180nm,15.8s								
CLNS						MLR	MLR		
	comp=E,543nm,13.0s								
CLNS						MLR	MLR		
	comp=Z,581nm,14.0s								
CLNS						MLR	MLR		
	comp=N,682nm,13.0s								
SMY	**Shemya**	**19.63**	**54**		*e*	Pn	**Pn**	**11 14 58.1**	**-3.7**
	comp=N,221nm,1.1s								
SMY	**Shemya**	**19.63**	**54**		*e*	P	**Pn**	**11 14 58.1**	**-3.8**
SMY						pmax	pmax		
	comp=Z,221nm,1.1s								
HIA	**Hailar**	**19.78**	**295**		*e*	P	**Pn**	**11 14 59.2**	**-4.4**
	comp=Z,149nm,0.7s								
HIA	**Hailar**	**19.78**	**295**		*e*	P	**Pn**	**11 14 59.3**	**-4.3**
HIA						pmax	pmax		
	comp=Z,149nm,0.7s								
DL2	**Dalian**	**20.04**	**264**	⇓		P	**P**	**11 15 04.8**	**+0.4**
DL2						S	**S**	**11 18 44.4**	**-1.1**
DL2						pmax	pmax		
	comp=Z,110nm,0.7s								
DL2						pmax	pmax		
	comp=Z,170nm,6.1s								
DL2						LR	LR		
	comp=N,320nm,13.6s								
DL2						LR	LR		
	comp=E,320nm,15.6s								
DL2						LR	LR		
	comp=Z,350nm,13.0s								
YAK	**Yakutsk**	**20.94**	**336**		*e*	P	**P**	**11 15 10.5**	**-3.4**
	comp=Z,2μm,0.8s								
YAK	**Yakutsk**	**20.94**	**336**		*c*	P	**P**	**11 15 10.0**	**-3.9**
YAK					*e*	S	**S**	**11 18 57.7**	**-5.2**
YAK					*e*	SS		11 19 16.7	
YAK					*e*	SSS		11 19 31.9	
YAK					*i*			11 26 28.6	
YAK						pmax	pmax		
	comp=Z,2μm,1.1s								
YAK						pmax	pmax		
	comp=N,127nm,0.9s								
YAK						pmax	pmax		
	comp=E,77nm,0.9s								
YAK						smax			
	comp=N,276nm,1.7s								
YAK						smax			
	comp=E,154nm,1.4s								
YAK						MLR	MLR		
	comp=Z,2μm,15.0s								
YAK						MLR	MLR		
	comp=N,870nm,14.0s								
YAK						MLR	MLR		
	comp=E,744nm,15.0s								
AMKA	**Amchitka**	**22.51**	**59**		*e*	P	**P**	**11 15 32.3**	**+1.6**
	comp=E,18nm,0.7s,mb4.5								
BJI	**Beijing**	**23.

BJI S **S** **11 19 43.5 -6.2**
BJI ScS ScS 11 26 41.6 -0.5
BJI pmax pmax
comp=Z,120nm,1.2s,mb5.1
BJI LR LR
comp=N,1μm,18.3s
BJI LR LR
comp=E,420nm,16.9s
BJI LR LR
comp=Z,800nm,28.0s
BJT Baijiatuau 23.58 271 *e*P **P** **11 15 40.4 -0.9**
comp=Z,108nm,0.7s,mb5.3
BJT Baijiatuau 23.58 271 *e*P **P** **11 15 40.4 -0.9**
BJT pmax pmax
comp=Z,108nm,0.7s
CIT Chita 23.98 302 *e*P **P** **11 15 44.0 -0.8**
CIT *e* 11 16 19.0
CIT *e* 11 19 56.2
CIT pmax pmax
comp=Z,201nm,1.3s,mb5.3
NJ2 Nanjing 25.41 252 *e*P **P** **11 15 58.6 +0.6**
NJ2 pP pP 11 16 02.8 -13
NJ2 sP sP 11 16 05.6 -19
NJ2 PP 11 16 37.5
NJ2 S **S** **11 20 22.0 +2.8**
NJ2 pmax pmax
comp=Z,20nm,1.0s,mb4.5
NJ2 pmax pmax
comp=Z,170nm,7.1s
NJ2 LR LR
comp=N,1μm,22.2s
NJ2 LR LR
comp=E,1μm,23.9s
NJ2 LR LR
comp=Z,590nm,18.6s
BILL Bilibino 26.10 16 *e*P **P** **11 16 00.8 -3.1**
comp=Z,82nm,0.7s,mb5.3
BILL Bilibino 26.10 16 *e*P **P** **11 16 00.8 -3.1**
BILL pmax pmax
comp=Z,81nm,0.7s,mb5.3
HHC Hu-ho-hao-te 26.63 276 *e*P **P** **11 16 10.9 +2.0**
HHC pP pP 11 16 14.8 -12
HHC sP sP 11 16 17.6 -18
HHC PP 11 16 53.6
HHC S **S** **11 20 41.3 +3.0**
HHC SS 11 21 51.0
HHC PcS PcS 11 23 16.3 +4.1
HHC pmax pmax
comp=Z,180nm,0.9s,mb5.6
HHC pmax pmax
comp=Z,370nm,3.8s
HHC LR LR
comp=N,1μm,14.7s
HHC LR LR
comp=E,590nm,12.6s
HHC LR LR
comp=Z,590nm,18.6s
TIY Taiyuan 27.15 269 *e*P **P** **11 16 15.1 +1.5**
TIY S **S** **11 20 49.8 +3.2**
TIY pmax pmax
comp=Z,180nm,1.3s,mb5.4
BTO Baotou 27.81 276 *e*P **P** **11 16 20.8 +1.2**
ULN Ulaanbaatar 28.23 292 *e*P **P** **11 16 24.3 +1.1**
comp=Z,198nm,0.9s,mb5.6
ULN Ulaanbaatar 28.23 292 *e*P **P** **11 16 24.3 +1.2**
ULN pmax pmax
comp=Z,198nm,0.9s,mb5.6
ULN Ulaanbaatar 28.23 292 P **P** **11 16 24.3 +1.2**
comp=Z,2μmcomp=Z,243nm,1.1s,mb5.7
SONM Songino Array 28.67 292 P **P** **11 16 27.9 +0.8**
comp=Z,120nm,0.8s,mb5.6,baz=81,slow=8.3,SNR=297
SONM ScP ScP 11 23 10.3 -0.1
comp=Z,2.9nm,0.8s,baz=18,slow=0.5,SNR=3.8
SONM LR LR 11 29 05.6
comp=Z,2μm,19.2s,baz=85,slow=39
YHNB Yeheng 28.73 237 P **P** **11 16 32.8 +5.0**
comp=Z,31nm,0.9s,mb4.9
TIXI Tiksi 29.24 348 *e*P **P** **11 16 28.1 -3.8**
comp=Z,38nm,0.8s,mb5.1
TIXI Tiksi 29.24 348 *e*P **P** **11 16 28.0 -3.9**
TIXI *e*S **S** **11 21 09.0 -10**
TIXI pmax pmax
comp=Z,48nm,1.0s,mb5.1
TIXI MLR MLR
comp=Z,907nm,15.0s
WHN Wuhan 29.41 254 P **P** **11 16 34.0 +0.2**
WHN S **S** **11 21 19.8 -2.4**
WHN LR LR
comp=N,2μm,13.9s
WHN LR LR
comp=E,1μm,13.6s
WHN LR LR
comp=Z,1μm,31.2s
IRK Irkutsk 29.70 302 *e*P **P** **11 16 33.5 -2.6**
IRK *e* pP 11 16 50.8 -2.9
IRK pmax pmax
comp=Z,156nm,0.8s,mb5.7
TLY Talaya 30.10 301 P **P** **11 16 39.2 -0.5**
comp=Z,401nm,0.8s,mb6.1,SNR=38
TLY Talaya 30.10 301 *e*P **P** **11 16 39.3 -0.4**
comp=Z,54nm,0.8s,mb5.2
TLY Talaya 30.10 301 ⇑*i*P **P** **11 16 39.3 -0.4**
TLY *e*S **S** **11 21 36.8 +4.0**
TLY pmax pmax
comp=Z,57nm,0.8s,mb5.2
TLY MLR MLR
comp=Z,1μm,16.0s
TPUB Ta-pu 30.21 236 *e*P **P** **11 16 41.5 +0.6**
comp=Z,23nm,0.7s,mb4.9
QZH Quanzhou 30.25 241 P **P** **11 16 46.0 +4.7**
QZH S **S** **11 21 36.4 +0.8**
QZH LR LR
comp=N,580nm,10.6s
QZH LR LR
comp=E,400nm,6.3s
QZH LR LR
comp=Z,740nm,15.8s
TWG Pinlang 30.31 235 *e*P **P** **11 16 43.6 +1.8**
comp=Z,20nm,0.3s,mb5.2
GUMO Guam 30.33 185 LR LR 11 26 54.3
comp=Z,443nm,21.2s,baz=84,slow=32
ZAK Zakamensk 30.42 298 ⇑*i*P **P** **11 16 42.7 +0.2**
ZAK pmax pmax
comp=Z,39nm,1.0s,mb5.0
XAN Xi'an 31.36 265 P **P** **11 16 51.9 +0.9**
XAN pP pP 11 16 57.1 -12
XAN PP PP 11 17 57.3 -5.7
XAN S **S** **11 21 49.8 -3.0**
XAN pmax pmax
comp=Z,16nm,4.5s
XAN LR LR
comp=N,310nm,21.5s
XAN LR LR
comp=E,210nm,20.6s
XAN LR LR
comp=Z,160nm,22.5s
MOY Mondy 31.75 301 *e*P **P** **11 16 54.0 -0.2**
MOY pmax pmax
comp=Z,92nm,1.8s,mb5.2
TNA Tin City 32.54 33 *e*P **P** **11 17 01.1 +0.1**
comp=Z,160nm,0.8s,mb5.9
ENH Enshi 32.98 258 *e*P **P** **11 17 04.8 -0.4**
comp=Z,26nm,0.8s,mb5.1
LZH Lanzhou 34.06 272 ⇑P **P** **11 17 16.3 +1.8**
LZH pP pP 11 17 19.5 -13
LZH S **S** **11 22 37.0 +2.4**
LZH pmax pmax
comp=Z,53nm,1.0s,mb5.3
LZH pmax pmax
comp=Z,150nm,5.3s
LZH LR LR
comp=E,800nm,13.2s
LZH LR LR
comp=Z,960nm,17.0s
GZH Guangzhou 34.94 245 P **P** **11 17 18.0 -4.2**
GZH LR LR
comp=N,940nm,15.0s
GZH LR LR
comp=E,1μm,13.9s
GTA Gaotai 35.55 280 *e*P **P** **11 17 28.8 +1.5**
GTA pP pP 11 17 32.8 -12
GTA sP sP 11 17 36.4 -18
GTA S **S** **11 22 59.3 +1.8**
GTA ScP ScP 11 23 35.3 +1.4
GTA ScS ScS 11 27 40.0 +1.3
GTA pmax pmax
comp=Z,24nm,1.2s,mb5.0
GTA pmax pmax
comp=Z,190nm,6.2s
GTA LR LR
comp=N,580nm,17.8s
GTA LR LR
comp=E,390nm,17.5s
GTA LR LR
comp=Z,310nm,16.7s
CD2 Chengdu 36.71 264 P **P** **11 17 38.6 +1.2**
CD2 pP pP 11 17 43.0 -12
CD2 sP sP 11 17 45.6 -18
CD2 PP PP 11 19 03.1 +0.9
CD2 PcP PcP 11 20 02.0 +3.6
CD2 S **S** **11 23 20.4 +5.0**
CD2 PcS PcS 11 23 48.8 +2.2
CD2 SS SS 11 25 46.6 -12
CD2 ScS ScS 11 27 52.3 +6.9
CD2 pmax pmax
comp=Z,60nm,0.9s,mb5.5
CD2 pmax pmax
comp=Z,180nm,9.4s
CD2 LR LR
comp=N,640nm,19.6s
CD2 LR LR
comp=E,360nm,15.7s
CD2 LR LR
comp=Z,420nm,13.7s
TTA Tatalina 37.10 39 *e*P **P** **11 17 40.8 +0.5**
SVW2 Sparrevohn 37.23 42 *e*P **P** **11 17 42.1 +0.7**
comp=Z,81nm,1.6s,mb5.4
GYA Guiyang 37.25 256 ⇑*i*P **P** **11 17 41.8 -0.1**
GYA PP PP 11 19 09.8 +1.7
GYA PcP PcP 11 20 02.1 +2.0
GYA S **S** **11 23 28.8 +5.2**
GYA ScP ScP 11 23 49.0 +8.6
GYA SS SS 11 25 58.8 -9.3
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.1
GYA pmax pmax
comp=Z,180nm,4.9s
GYA LR LR
comp=N,840nm,16.6s
GYA LR LR
comp=E,720nm,17.9s
GYA LR LR
comp=Z,930nm,15.8s
TGY Tagaytay City 37.43 226 P **P** **11 17 44.7 +1.1**
comp=Z,165nm,0.3s,mb6.5,baz=51,slow=16,SNR=9.1
OHAK Old Harbor 38.59 48 *e*P **P** **11 17 51.4 -1.5**
comp=Z,48nm,1.0s,mb5.3
RSO Redoubt South 38.63 43 *e*P **P** **11 17 53.9 +0.7**
PPLA Purkeypile 38.85 39 *e*P **P** **11 17 56.0 +1.0**
comp=Z,65nm,0.8s,mb5.5
KDAK Kodiak Island 38.91 48 P **P** **11 17 54.0 -1.5**
comp=Z,493nm,0.9s,mb6.3,SNR=12
KDAK Kodiak Island 38.91 48 *e*P **P** **11 17 54.8 -0.7**
comp=Z,61nm,0.8s,mb5.5
KDAK Kodiak Island 38.91 48 P **P** **11 17 54.4 -1.2**
comp=Z,63nm,0.8s,mb5.5,baz=292,slow=3.9,SNR=30
KDAK Kodiak Island 38.91 48 *i*P **P** **11 17 54.4 -1.1**
TRF Thorofare Moun 39.71 38 *e*P **P** **11 18 02.1 0.0**
comp=Z,48nm,0.7s,mb5.4
COLD Coldfoot 39.84 33 *e*P **P** **11 18 03.5 +0.3**
comp=Z,169nm,0.8s,mb5.9
RC01 Rabbit Creek A 40.07 42 *e*P **P** **11 18 04.8 -0.3**
comp=Z,4μm,1.2s
SEW Seward 40.30 44 *e*P **P** **11 18 06.1 -0.9**
comp=Z,52nm,0.7s,mb5.5
MCK McKinley 40.31 38 *e*P **P** **11 18 07.2 +0.1**
comp=Z,81nm,0.8s,mb5.6
MCK McKinley 40.31 38 *e*P **P** **11 18 07.2 +0.1**
MCK pmax pmax
comp=Z,81nm,0.8s,mb5.6
PMR Palmer 40.33 41 *e*P **P** **11 18 07.0 -0.2**
comp=Z,25nm,0.7s,mb5.2
PMR LR LR
comp=Z,300nm,19.0s
COLA College 40.75 36 *e*P **P** **11 18 11.1 +0.4**
comp=Z,185nm,0.8s,mb6.0
COLA College 40.75 36 *e*P **P** **11 18 11.1 +0.4**
COLA pmax pmax
comp=Z,185nm,0.8s,mb6.0
KMI Kunming 40.84 258 P **P** **11 18 12.6 +0.7**
KMI pP pP 11 18 16.1 -14
KMI PP PP 11 19 47.3 0.0
KMI S **S** **11 24 18.1 +0.5**
KMI pmax pmax
comp=Z,12nm,1.3s,mb4.6
KMI LR LR
comp=N,520nm,18.1s
KMI LR LR
comp=E,210nm,15.4s
KMI LR LR
comp=Z,320nm,22.8s
ZAA0 Zalesovo Array 41.12 307 *e*P **P** **11 18 12.5 -1.3**
ZAA0 *e*PcP PcP 11 20 11.9 0.0
ZALV Zalesovo Beam 41.12 307 P **P** **11 18 12.6 -1.3**
ZALV PcP PcP 11 20 11.8 -0.1
ZALV LR LR 11 36 37.0
ZALV Zalesovo Beam 41.12 307 P **P** **11 18 12.6 -1.3**
comp=Z,38nm,0.6s,mb5.4,baz=61,slow=6.3,SNR=127
ZALV PcP PcP 11 20 11.8 -0.1
comp=Z,20nm,0.8s,baz=72,slow=4.8,SNR=5.0
ZALV LR LR 11 36 37.0
comp=Z,272nm,20.0s,baz=70,slow=38
ZALV Zalesovo Beam 41.12 307 P **P** **11 18 12.6 -1.3**
ZALV 11 20 11.8
ILAR Eielson Array 41.17 36 P **P** **11 18 13.7 -0.4**
comp=Z,54nm,0.7s,mb5.5,baz=255,slow=7.6,SNR=572
ILAR LR LR 11 35 00.5
comp=Z,295nm,21.1s,baz=159,slow=36
DAV Davao City (W) 41.45 214 LR LR 11 33 09.2
comp=Z,415nm,21.7s,baz=131,slow=33
NVS Novosibirsk 41.83 309 *e*P **P** **11 18 18.8 -0.9**
NVS *e*S **S** **11 24 22.8 -8.8**
NVS pmax pmax
comp=Z,145nm,1.0s,mb5.7
NVS pmax pmax
comp=N,27nm,0.8s
NVS pmax pmax
comp=E,162nm,1.1s
NVS smax
comp=N,69nm,2.6s
NVS smax
comp=E,46nm,1.6s
PAX Paxson 41.92 39 *e*P **P** **11 18 20.6 +0.3**
comp=E,27nm,0.8s,mb5.0
PAX Paxson 41.92 39 *e*P **P** **11 18 20.6 +0.3**
PAX pmax pmax
comp=Z,27nm,0.8s,mb5.0
DIV Divide 41.98 42 *e*P **P** **11 18 21.2 +0.4**
comp=Z,47nm,0.6s,mb5.4
WMQ Urumqi 42.30 292 P **P** **11 18 24.0 +0.4**
WMQ pP pP 11 18 28.5 -13
WMQ sP sP 11 18 31.0 -19
WMQ PP PP 11 20 05.0 +2.3
WMQ PcP PcP 11 20 18.8 +2.8
WMQ ScP ScP 11 24 07.5 +7.7
WMQ S **S** **11 24 43.5 +4.7**
WMQ SS SS 11 27 45.8 -3.7
WMQ ScS ScS 11 28 23.6 +5.7
WMQ pmax pmax
comp=Z,210nm,1.1s,mb5.8
WMQ pmax pmax
comp=Z,770nm,4.0s
WMQ LR LR
comp=N,880nm,18.0s
WMQ LR LR
comp=E,780nm,22.0s
WMQ LR LR
comp=Z,930nm,22.0s
BMRM Bremner River 42.57 42 *e*P **P** **11 18 25.7 +0.1**
comp=Z,126nm,1.0s,mb5.6
MENT Mentasta 42.72 39 *e*P **P** **11 18 27.4 +0.7**
EGAK Eagle 43.61 36 *e*P **P** **11 18 33.7 -0.3**
comp=Z,115nm,0.8s,mb5.7
DAWY Dawson 44.48 37 *e*P **P** **11 18 41.0 +0.2**
MK31 Makanchi Array 44.76 298 *e*P **P** **11 18 43.5 +0.2**
MKAR Makanchi Array 44.76 298 P **P** **11 18 43.7 +0.3**
MKAR LR LR 11 38 56.2
MKAR Makanchi Array 44.76 298 P **P** **11 18 43.7 +0.3**
comp=Z,281nm,0.8s,mb6.0,baz=72,slow=7.8,SNR=492
MKAR LR LR 11 38 56.2
comp=Z,1μm,18.9s,baz=67,slow=38
PNL Peninsula 45.36 43 *e*P **P** **11 18 47.2 -0.7**
KDM Kudat 45.63 225 P **P** **11 18 51.6 +1.0**
KURK Kurchatov 45.67 304 P **P** **11 18 50.0 -0.5**
comp=Z,2μm,0.6s
KURK Kurchatov 45.67 304 *e*P **P** **11 18 50.0 -0.5**
comp=Z,168nm,0.5s,mb6.0
KURK Kurchatov 45.67 304 P **P** **11 18 51.0 +0.5**
comp=Z,199nm,0.7s,mb5.9,baz=70,slow=8.8,SNR=188
KURK LR LR 11 39 33.5
comp=Z,422nm,20.2s,baz=60,slow=38
KURK Kurchatov 45.67 304*c i*P **P** **11 18 50.4 -0.1**
KURK pmax pmax
comp=Z,290nm,1.0s,mb6.0
HYT Haines Junctio 46.00 41 *e*P **P** **11 18 54.4 +1.5**
BAKI Biak 46.08 196 P **P** **11 18 54.2 +0.1**
comp=Z,154nm,1.3s,mb5.6
INK Inuvik 46.10 30 *e*P **P** **11 18 54.1 +0.4**
comp=Z,175nm,0.7s,mb5.9
INK Inuvik 46.10 30 P **P** **11 18 54.0 +0.4**
comp=Z,159nm,0.7s,mb5.9,baz=300,slow=7.1,SNR=264
INK LR LR 11 39 45.0
comp=Z,498nm,21.4s,baz=289,slow=38
INK Inuvik 46.10 30 *e*P **P** **11 18 54.1 +0.5**
INK pmax pmax
comp=Z,175nm,0.7s
MYLDM Lahad Datu 46.29 222 P **P** **11 18 56.3 +0.6**
MYLDM Lahad Datu 46.29 222 P **P** **11 18 57.7 +1.9**
comp=Z,74nm,1.4s,mb5.2
LSA Lhasa 46.48 272 P **P** **11 19 01.0 +3.9**
LSA pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
LSA LR LR
comp=N,330nm,24.8s
LSA LR LR
comp=E,440nm,28.1s
LSA LR LR
comp=Z,370nm,36.3s
SDKM Sandakan 46.53 224 P **P** **11 18 58.7 +1.0**
KKM Kota Kinabalu 46.69 225 *e*P **P** **11 18 59.6 +0.7**
comp=Z,14nm,0.8s,mb4.7
KKM *e*PcP PcP 11 20 31.3 -0.2
KKM Kota Kinabalu 46.69 225 P **P** **11 18 59.6 +0.7**
KKM Kota Kinabalu 46.69 225 P **P** **11 18 59.4 +0.5**
comp=Z,32nm,1.5s,mb4.8
MNI Manado 46.88 212 P **P** **11 19 00.2 -0.2**
comp=Z,113nm,1.2s,mb5.5
TSM Tawau 47.36 222 P **P** **11 19 05.1 +1.0**
SKAG Skagway 47.41 43 *e*P **P** **11 19 05.0 +1.0**
comp=Z,21nm,0.8s,mb4.9
CHG Chiang Mai 47.61 254 ⇓P **P** **11 19 07.1 +1.0**
comp=Z,26nm,0.7s,mb5.2
CHTO Chiang Mai 47.61 254 *e*P **P** **11 19 07.0 +1.0**
comp=Z,12nm,0.6s,mb4.9
CHTO Chiang Mai 47.61 254 P **P** **11 19 07.2 +1.1**
comp=Z,29nm,0.9s,mb5.1
CMAR Chiang Mai Arr 47.86 254 P **P** **11 19 08.3 +0.4**
CMAR ScP ScP 11 24 23.9 +0.8
CMAR LR LR 11 41 15.6
CMAR Chiang Mai Arr 47.86 254 P **P** **11 19 08.3 +0.4**
comp=Z,3.6nm,0.7s,mb4.3,baz=38,slow=7.8,SNR=23
CMAR ScP ScP 11 24 23.9 +0.8
comp=Z,5.4nm,1.1s,baz=14,slow=3.4,SNR=8.9
CMAR LR LR 11 41 15.6
comp=Z,165nm,18.0s,baz=229,slow=38
SHL Shillong 48.34 267 *e*PKP **P** **11 19 12.0 +0.4**
MRSI Marisa 48.91 215 P **P** **11 19 15.4 -0.7**
comp=Z,2μmcomp=Z,277nm,1.1s,mb6.1
NST Nakhon Sawan 48.97 250 P **P** **11 19 14.0 -2.5**
BVAR Borovoye Array 49.61 309 P **P** **11 19 20.6 -0.3**
comp=Z,108nm,0.8s,mb5.8,baz=69,slow=8.3,SNR=154
BVAR ScS ScS 11 29 03.1 -1.9
comp=Z,2.1nm,1.0s,baz=70,slow=1.7,SNR=3.9
BRVK Borovoye 49.66 309 P **P** **11 19 21.6 +0.3**
comp=Z,1μm,0.8s,mb6.8,SNR=84
BRVK Borovoye 49.66 309 *e*P **P** **11 19 20.8 -0.5**
comp=Z,123nm,0.7s,mb6.0
BRVK Borovoye 49.66 309*ce*P **P** **11 19 21.3 0.0**
BRVK pmax pmax
comp=Z,206nm,0.9s,mb6.1
LUWI Luwuk 49.96 213 P **P** **11 19 18.5 -5.5**
KIP Kipapa 50.02 98 *e*P **P** **11 19 25.2 +0.8**
TAPN Taplejung 50.30 272 *e*P **P** **11 19 27.3 +0.8**
comp=Z,84nm,0.9s,mb5.7
DLBC Dease Lake 50.35 43 *e*P **P** **11 19 27.3 +0.8**
DLBC Dease Lake 50.35 43 P **P** **11 19 27.4 +1.0**
comp=Z,38nm,0.8s,mb5.4,baz=290,slow=7.0,SNR=62
DLBC pP pP 11 19 46.5 +1.3
comp=Z,20nm,0.8s,baz=262,slow=6.0,SNR=4.0
ULHL Ulahol 50.58 294 P **P** **11 19 29.5 +1.1**
SNR=22
TKM2 Tokmak 2 50.69 295 P **P** **11 19 30.4 +1.2**
SNR=142
TKM2 Tokmak 2 50.69 295 *e*P **P** **11 19 30.1 +0.9**
comp=Z,94nm,0.6s,mb6.0
TKM2 Tokmak 2 50.69 295 *e*P **P** **11 19 30.1 +0.8**
TKM2 pmax pmax
comp=Z,94nm,0.6s,mb6.0
BTM Bintulu 50.73 227 P **P** **11 19 31.1 +1.3**
ODAN Odare 50.81 271 *e*P **P** **11 19 30.8 +0.4**
comp=Z,87nm,1.0s,mb5.7
PCI Palu 51.05 217 P **P** **11 19 31.4 -0.8**
comp=Z,1μmcomp=Z,156nm,1.1s,mb6.0
CHMS Chumysh 51.20 296 P **P** **11 19 33.6 +0.5**
SNR=20
JIRN Jiri 51.21 273 *e*P **P** **11 19 33.9 +0.5**
comp=Z,85nm,0.7s,mb5.9
KBK Karagaybulak 51.23 295 P **P** **11 19 34.5 +1.1**
SNR=95
USP Ospenovka 51.24 296 P **P** **11 19 34.2 +0.8**
SNR=166
GUN Gumba 51.29 273 *e*P **P** **11 19 34.6 +0.6**
comp=Z,104nm,0.7s,mb6.0
KZA Kyzart 51.31 295 P **P** **11 19 35.9 +2.0**
SNR=297
RAMN Ramite 51.33 272 *e*P **P** **11 19 34.6 +0.3**
comp=Z,127nm,0.6s,mb6.1
FRU Bishkek 51.37 296 *e*P **P** **11 19 32.8 -1.5**
FRU *e*S **S** **11 26 47.0 -1.0**
FRU pmax pmax
comp=Z,220nm,2.0s,mb5.8
FRU pmax pmax
comp=Z,600nm,3.0s
FRU smax
comp=E,700nm,5.5s
AAK Ala-Archa 51.54 296 P **P** **11 19 36.4 +0.8**
comp=E,562nm,0.5s,mb6.8,SNR=16
AAK Ala-Archa 51.54 296 P **P** **11 19 36.5 +0.8**
SNR=21
AAK Ala-Archa 51.54 296 *e*P **P** **11 19 36.1 +0.4**
comp=E,52nm,0.6s,mb5.7
AAK Ala-Archa 51.54 296 LR LR 11 41 26.3
comp=E,381nm,19.6s,baz=47,slow=36
AAK Ala-Archa 51.54 296 *e*P **P** **11 19 36.1 +0.5**
AAK pmax pmax
comp=Z,52nm,0.6s,mb5.7
AAK Ala-Archa 51.54 296 P **P** **11 19 36.3 +0.7**
comp=Z,227nmcomp=Z,19nm,0.7s,mb5.2
UCH Uchtor 51.72 295 P **P** **11 19 38.2 +1.2**
SNR=92
UCH Uchtor 51.72 295 *e*P **P** **11 19 38.0 +1.0**
comp=Z,35nm,0.8s,mb5.4
SBUM Sibu 51.81 227 P **P** **11 19 39.0 +1.0**
SBUM Sibu 51.81 227 P **P** **11 19 38.2 +0.2**
comp=Z,23nm,1.3s,mb5.0
PKI Pulchoki 51.83 273 *e*P **P** **11 19 38.1 +0.1**
comp=Z,76nm,0.9s,mb5.7
PKIN Phulchoki 51.84 273 *e*P **P** **11 19 38.2 +0.2**
comp=Z,43nm,0.6s,mb5.6
EKS2 Erkin-Say 51.99 296 P **P** **11 19 39.8 +0.7**
SNR=116
EKS2 Erkin-Say 51.99 296 *e*P **P** **11 19 39.7 +0.7**
comp=Z,107nm,0.6s,mb6.0
DMN Daman 52.03 274 *e*P **P** **11 19 40.1 +0.6**
comp=Z,89nm,0.7s,mb5.9
KSH Kashi 52.06 291 P **P** **11 19 42.9 +3.3**
KSH *e*pP pP 11 19 47.8 -11
KSH *e*PcP PcP 11 20 57.1 +6.4
KSH *e*PP PP 11 21 41.1 +3.0
KSH *e*ScP ScP 11 24 51.6 +11
KSH *e*PcS PcS 11 24 53.8 +4.8
KSH S **S** **11 27 01.8 +4.2**
KSH *e*ScS ScS 11 29 28.8 +6.5
KSH pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
KSH LR LR
comp=N,690nm,19.1s
KSH LR LR
comp=E,850nm,17.7s

KSH LR LR
comp=Z,490nm,13.2s
GKN Gorkha 52.13 274 *e*P **P 11 19 40.6 +0.3**
comp=Z,94nm,0.6s,mb6.0
AML Almayashu 52.30 295 P **P 11 19 42.7 +1.4**
SNR=192
KDI Kendari 52.69 212 P **P 11 19 45.0 +0.6**
comp=Z,1µmcomp=Z,130nm,1.0s,mb5.9
POHA Pohakuloa 52.86 98 *e*P **P 11 19 44.9 -0.8**
comp=Z,255nm,1.0s,mb6.2
ALE Alert 52.90 5 P **P 11 19 43.0 -2.2**
comp=Z,196nm,0.7s,mb6.2,SNR=9.2
KOLN Koldanda 53.02 275 *e*P **P 11 19 47.4 +0.6**
comp=Z,134nm,0.9s,mb6.0
KHU Kahuku 53.13 99 *e*P **P 11 19 47.8 +0.1**
SVE Sverdlovsk 53.21 317‖ *e*P **P 11 19 47.3 -0.4**
SVE *e*S **S 11 27 26.1 +13**
SVE pmax pmax
comp=Z,358nm,0.9s,mb6.4
SVE MLR MLR
comp=Z,825nm,20.0s
KSM Kuching 53.66 229 *e*P **P 11 19 52.5 +1.0**
comp=Z,91nm,1.3s,mb5.7
KSM Kuching 53.66 229 P **P 11 19 52.7 +1.1**
KSM Kuching 53.66 229 P **P 11 19 52.5 +0.9**
comp=Z,626nmcomp=Z,62nm,1.3s,mb5.5
SOKR Solikamsk 53.83 321 *d i*P **P 11 19 50.3 -1.9**
SOKR S **S 11 27 33.5 +12**
SOKR pmax pmax
comp=Z,410nm,1.0s,mb6.4
SOKR MLR MLR
comp=Z,520nm,20.0s
KK31 Karatay Array 53.88 298 *i* P **P 11 19 52.8 -0.1**
KK31 pmax pmax
comp=Z,62nm,0.5s,mb5.9
STKI Sintang 54.22 227 P **P 11 19 56.6 +1.0**
comp=Z,73nm,1.1s,mb5.6
JOSI Joshimath 54.32 280 *e*PKP **P 11 19 58.1 +1.8**
ARU Arti 54.41 317 *e*P **P 11 19 55.2 -1.3**
comp=Z,131nm,0.5s,mb6.2
ARU Arti 54.41 317 *c i*P **P 11 19 55.3 -1.2**
ARU *e**PP pP 11 20 13.1 -2.4
ARU *e**SP sP 11 20 22.4 -1.5
ARU *e* 11 20 55.9
ARU *e* 11 21 55.6
ARU S **S 11 27 29.0 0.0**
ARU *SS sS 11 27 55.1 -6.1
ARU 11 29 35.5
ARU SS SS 11 31 05.5 -6.0
ARU pmax pmax
comp=Z,257nm,1.0s,mb6.2
ARU Arti 54.41 317 P **P 11 19 55.0 -1.5**
comp=Z,2µm,0.5s,SNR=75
KBS Kingsbay 54.65 350 *e*P **P 11 19 56.2 -1.8**
KBS Kingsbay 54.65 350 *e*P **P 11 19 55.8 -2.2**
comp=Z,39nm,0.8s,mb5.5
KBS Kingsbay 54.65 350 *ce*P **P 11 19 56.1 -1.9**
KBS pmax pmax
comp=Z,37nm,0.6s,mb5.6
RES Resolute Bay 54.71 17 *e*P **P 11 19 57.5 -0.9**
comp=Z,172nm,0.5s,mb6.3
RES Resolute Bay 54.71 17 P **P 11 19 56.6 -1.8**
comp=Z,275nm,0.8s,mb6.3,baz=321,slow=7.2,SNR=60
RES LR LR 11 46 18.4
comp=Z,297nm,20.1s,baz=130,slow=39
RES Resolute Bay 54.71 17 *e*P **P 11 19 57.5 -0.9**
RES pmax pmax
comp=Z,172nm,0.5s,mb6.3
KTGM Kuala Trenggan 54.72 239 P **P 11 20 01.1 +1.8**
KAPI Kappang 54.79 215 *e*P **P 11 19 58.6 -1.2**
comp=Z,27nm,0.8s,mb5.3
BKSI Bulukumba 54.91 214 P **P 11 19 59.4 -1.2**
comp=Z,545nmcomp=Z,48nm,1.0s,mb5.5
YKA Yellowknife Ar 55.49 34 P **P 11 20 04.0 -0.1**
comp=Z,36nm,0.7s,mb5.5,baz=300,slow=6.6,SNR=81
SMLA Simla 55.69 282 *i* P **P 11 20 05.2 -0.9**
BHK Bhakra 56.06 283 *ex* **P 11 20 05.5 -3.3**
KULM Kulim 56.30 241 *e*P **P 11 20 11.4 +0.8**
comp=Z,35nm,1.1s,mb5.3
KULM Kulim 56.30 241 P **P 11 20 12.6 +1.9**
KULM Kulim 56.30 241 P **P 11 20 11.8 +1.2**
comp=Z,30nm,1.2s,mb5.2
KKR Kurukshetra 56.60 281 *e*PKP **P 11 20 12.7 0.0**
KKR AMb AMB 11 20 19.2
comp=Z,149nm,0.7s,mb6.2
IPM Ipoh 56.69 240 P **P 11 20 15.0 +1.6**
NDI New Delhi 57.06 280 *e*PKP **P 11 20 15.0 -0.9**
MYKOM Kota Tinggi 57.08 235 P **P 11 20 17.6 +1.5**
MMRI Maumere 57.14 210 P **P 11 20 18.4 +1.9**
comp=Z,2µmcomp=Z,116nm,1.7s,mb5.6
AB31 Akbulak array 57.17 309 *i* P **P 11 20 16.5 +0.1**
AB31 pmax pmax
comp=Z,47nm,0.3s,mb6.0
ABKAR Akbulak array 57.17 309 *e*P **P 11 20 16.4 0.0**
comp=Z,108nm,0.6s,mb6.0
KGM Kluang 57.21 236 P **P 11 20 18.6 +1.5**
AYAN Aya Nagar 57.24 280 *e*PKP **P 11 20 16.6 -0.6**
AYAN AMb AMB 11 20 18.2
comp=Z,32nm,0.6s,mb5.5
SONA Sohna 57.41 279 *e*PKP **P 11 20 18.4 +0.1**
SONA AMb AMB 11 20 23.0
comp=Z,44nm,0.4s,mb5.8
RTK Rohtak 57.43 280 *e*PKP **P 11 20 17.5 -1.0**
RTK AMb AMB 11 20 22.0
comp=Z,76nm,0.2s,mb6.3
AKTK Aktyubinsk 57.64 311 P **P 11 20 19.4 -0.3**
AKTK LR LR 11 49 36.9
AKTO Aktyubinsk 57.64 311 P **P 11 20 19.4 -0.3**
comp=Z,83nm,0.7s,mb5.9,baz=64,slow=8.3,SNR=103
AKTO LR LR 11 49 36.9
comp=Z,291nm,19.7s,baz=237,slow=41
COEN Coen 57.75 185 *e*P **P 11 20 20.7 0.0**
comp=Z,410nm,0.8s,mb6.5
COEN Coen 57.75 185 P **P 11 20 20.8 +0.1**
comp=Z,301nm,1.2s,mb6.2
KUDL Kundal 57.89 280 *e*PKP **P 11 20 19.0 -2.8**
KUDL AMb AMB 11 20 23.9
comp=Z,35nm,0.9s,mb5.4
KAKA Kakadu 58.03 197 *e*P **P 11 20 21.8 -0.9**
comp=Z,86nm,0.8s,mb5.8
KAKA Kakadu 58.03 197 *e*P **P 11 20 22.0 -0.7**
comp=Z,562nm,1.2s,mb6.5
APA Apatity 58.33 336⇑ *i*P **P 11 20 23.6 -0.6**
APA pmax pmax
comp=Z,50nm,0.8s,mb5.6
APA MLR MLR
comp=Z,800nm,21.0s
KHET Khetri 58.42 280 *e*PKP **P 11 20 24.9 -0.6**
KHET AMb AMB 11 20 26.3
comp=Z,28nm,0.5s,mb5.5
KEV Kevo 58.64 339 *e*P **P 11 20 25.0 -1.4**
comp=Z,125nm,0.9s,mb5.9
KEV Kevo 58.64 339 *e*P **P 11 20 25.0 -1.4**
KEV pmax pmax
comp=Z,125nm,0.9s,mb5.9
KEV Kevo 58.64 339 *e*p **P 11 20 22.6 -3.8**
NLWA Neilton Lookou 58.70 53 *e*P **P 11 20 27.2 +0.1**
comp=Z,35nm,1.0s,mb5.3
A05A Maple Falls 58.85 50 ⇓P **P 11 20 27.4 -0.7**
baz=59
PPBI Pangkal Pinang 58.97 230 P **P 11 20 30.6 +1.3**
comp=Z,5µmcomp=Z,55nm,1.1s,mb5.5
CMW Cultus Mountai 59.14 51 P **P 11 20 30.6 +0.4**
ARCES ARCESS Array B 59.17 340 P **P 11 20 28.8 -1.2**
comp=Z,72nm,0.8s,mb5.8,baz=47,slow=6.9,SNR=98
ARCES LR LR 11 53 05.9
comp=Z,403nm,20.3s,baz=231,slow=43
ARE0 ARCESS Array S 59.17 340 *e*P **P 11 20 28.8 -1.2**
E03A Lebam 59.34 53 ⇑P **P 11 20 31.2 -0.3**
baz=59
JCW Jim Creek 59.37 51 *e*P **P 11 20 32.0 +0.2**
KBL Kabul 59.40 290 *e*P **P 11 20 31.5 -0.6**
comp=Z,78nm,0.8s,mb5.8
KBL Kabul 59.40 290 *e*P **P 11 20 31.5 -0.6**
KBL pmax pmax
comp=Z,78nm,0.8s,mb5.8
B06A Marblemount 59.45 51 ⇓P **P 11 20 31.6 -0.7**
baz=59
RPW Rockport 59.47 51 *e*P **P 11 20 32.0 -0.3**
F03A Seaside 59.67 54 ⇓P **P 11 20 33.8 -0.1**
baz=59
D05A Enumclaw 59.89 52 ⇓P **P 11 20 34.7 -0.6**
baz=60
KTK1 Kautokeino 60.12 340 *e*P **P 11 20 35.5 -1.1**
KTK1 AMB AMB 11 20 36.9
comp=Z,349nm,0.8s,mb6.4
KTK1 *e*S **S 11 28 45.8 +2.3**
BHPL Bhopal 60.19 274 *e*PKP **P 11 20 37.6 -0.1**
BHPL AMb AMB 11 20 42.8
comp=Z,39nm,1.0s,mb5.4
AJM Ajmer 60.20 279 *e*PKP **P 11 20 37.0 -0.8**
LON Longmire 60.23 52 *e*P **P 11 20 39.0 +1.3**
LVP Lakeview Peak 60.27 53 P **P 11 20 38.3 +0.4**
STD Studebaker Rid 60.28 53 P **P 11 20 39.1 +1.1**
F04A Amboy 60.34 53 ⇑P **P 11 20 37.8 -0.6**
baz=60,SNR=8.1
WPW White Pass 60.41 52 P **P 11 20 39.3 +0.4**
KLMR Klimovskoe 60.44 328 *e*P **P 11 20 37.4 -1.4**
KLMR pmax pmax
comp=Z,154nm,1.0s,mb6.0
KLMR pmax pmax
comp=Z,62nm,3.7s
KLMR MLR MLR
comp=Z,757nm,23.0s
ETW Entiat 60.59 51 *e*P **P 11 20 40.3 +0.2**
TRO Tromso 60.67 342 *e*P **P 11 20 38.8 -1.5**
TRO AMB AMB 11 20 40.5
comp=Z,256nm,0.9s,mb6.2
TRO *e*S **S 11 28 50.1 -0.6**
TRO AMS AMS 11 47 55.2
comp=Z,568nm,16.2s
ASR Mount Adams--S 60.69 53 P **P 11 20 41.2 +0.4**
G04A Mulino 60.71 54 ⇑P **P 11 20 40.5 -0.4**
baz=60
B08A Colville Reser 60.73 50 ⇓P **P 11 20 40.3 -0.6**
baz=60,SNR=11
SJI Sawahan 60.77 222 P **P 11 20 41.6 0.0**
GULW Guler Mountain 60.82 53 P **P 11 20 42.3 +0.7**
EBG Ellensburg 60.85 52 P **P 11 20 42.5 +0.6**
KEBM Edson Butte 60.91 57 *e*P **P 11 20 43.7 +1.4**
EDM Edmonton 61.07 43 *e*P **P 11 20 43.0 -0.3**
HOOD Mount Hood Mea 61.12 54 *e*P **P 11 20 44.4 +0.6**
H04A Detroit Lake 61.17 55 ⇑P **P 11 20 43.7 -0.4**
baz=61,SNR=8.6
MDW Midway 61.48 52 P **P 11 20 46.4 +0.3**
OD2 Odessa Site #2 61.62 50 *e*P **P 11 20 47.0 -0.1**
C09A Chrisman Ranch 61.63 50 ⇓P **P 11 20 46.7 -0.4**
baz=61
D08A Wollman Farm, 61.70 51 ⇑P **P 11 20 46.7 -0.8**
baz=61,SNR=6.5
RSW Rattlesnake Hi 61.70 52 *e*P **P 11 20 48.2 +0.6**
HAWA Hanford 61.73 52 *e*P **P 11 20 47.8 0.0**
comp=Z,48nm,1.3s,mb5.4
KNA Kununurra 61.83 201 *e*P **P 11 20 48.3 -0.4**
comp=Z,79nm,1.1s,mb5.7
HUMO Hull Mountain 61.90 57 *e*P **P 11 20 48.3 -0.7**
E08A Dider Farm, El 61.94 51 ⇑P **P 11 20 49.0 -0.2**
baz=62
NEW Newport 61.99 49 ⇓P **P 11 20 48.8 -0.7**
baz=62,SNR=22
NEW Newport 61.99 49 *e*P **P 11 20 49.0 -0.5**
comp=Z,37nm,1.1s,mb5.3
NEW Newport 61.99 49 *e*P **P 11 20 49.0 -0.5**
NEW pmax pmax
comp=Z,37nm,1.1s
JOF Joensuu 62.06 332 *e*P **P 11 20 48.2 -1.5**
JOF Joensuu 62.06 332 *ep* **P 11 20 48.2 -1.5**
VIPM Ingram Point 62.19 54 P **P 11 20 50.8 -0.1**
A12A Yaak River Ran 62.39 48 ⇑P **P 11 20 51.8 -0.4**
baz=62,SNR=7.6
E09A Wood Farm, Sta 62.45 51 ⇓P **P 11 20 52.4 -0.2**
baz=62
YBH Yreka Blue Hor 62.55 58 *e*P **P 11 20 54.1 +0.8**
comp=Z,14nm,1.0s,mb4.8
YBH Yreka Blue Hor 62.55 58 *e*P **P 11 20 54.2 +0.8**
YBH pmax pmax
comp=Z,14nm,1.0s
G08A Pilot Rock 62.70 52 ⇑P **P 11 20 53.9 -0.4**
baz=62,SNR=7.7
LNOR Lincton Mounta 62.74 52 *e*P **P 11 20 55.2 +0.6**
A13A Flathead Natio 63.05 47 ⇓P **P 11 20 55.8 -0.8**
baz=63,SNR=18
LOF Lofoten 63.06 342 *e*P **P 11 20 55.1 -1.2**
K05A Summer Lake 63.07 56 ⇓P **P 11 20 56.8 +0.1**
baz=63,SNR=13
HYB Hyderabad 63.07 269 *i* P **P 11 20 56.5 -0.6**
I07A Izee 63.09 54 ⇓P **P 11 20 56.9 0.0**
baz=63
C12B Naegeli Ranch, 63.21 49 ⇑P **P 11 20 57.2 -0.5**
baz=63,SNR=16
WALA Waterton Lakes 63.24 47 *e*P **P 11 20 57.5 -0.3**
comp=Z,1.7nm,1.1s,mb3.9
F10A Bench Ranch, E 63.28 51 ⇓P **P 11 20 57.5 -0.7**
baz=63,SNR=7.8
WDC Whiskeytown Da 63.33 58 *e*P **P 11 20 58.4 -0.1**
comp=Z,22nm,1.0s,mb5.0
WDC Whiskeytown Da 63.33 58 *e*P **P 11 20 58.4 -0.1**
WDC pmax pmax
comp=Z,22nm,1.0s,mb5.0
B13A Whitefish 63.36 48 ⇑P **P 11 20 57.9 -0.7**
baz=63,SNR=29
QUE Quetta 63.38 287 *e*P **P 11 21 00.0 +1.0**
QUE *e*S **S 11 29 27.0 +1.2**
BSMT Bassoo Peak 63.50 48 *e*P **P 11 20 59.8 +0.2**
comp=Z,30nm,1.1s,mb5.0
A14A Double T Ranch 63.55 47 ⇓P **P 11 20 59.2 -0.6**
baz=63,SNR=14
LTIM Timbered Crate 63.62 57 P **P 11 21 01.2 +0.7**
BLMT Blacktail Moun 63.63 48 *e*P **P 11 21 00.7 +0.3**
comp=Z,40nm,0.9s,mb5.2
D12A Red Ives Fores 63.67 49 ⇓P **P 11 21 00.4 -0.4**
baz=63
SUMG Summit 63.72 2 *e*P **P 11 21 00.2 -0.4**
comp=Z,71nm,0.8s,mb5.5
SUMG Summit 63.72 2⇑ *i*P **P 11 21 01.0 +0.4**
comp=Z,77nm,0.9s,mb5.5
SUMG *i* S **S 11 29 31.5 +2.7**
C13A Hot Springs 63.72 48 ⇓P **P 11 21 00.8 -0.2**
baz=63,SNR=14
JTMT Jette 63.84 48 *e*P **P 11 21 02.0 +0.3**
comp=Z,26nm,1.0s,mb5.0
LATR Latur 63.86 271 *e*PKP **P 11 21 01.7 -0.6**
BMO Blue Mountains 63.90 52 *e*P **P 11 21 02.0 -0.2**
comp=Z,21nm,1.4s,mb4.8
A15A Johnson Ranch, 63.91 46 ⇑P **P 11 21 01.2 -1.0**
baz=64,SNR=10.0
YBMT Yellow Bay 63.91 48 *e*P **P 11 21 01.9 -0.4**
comp=Z,46nm,1.5s,mb5.1
B14A Marquette Ranc 64.00 47 ⇓P **P 11 21 02.3 -0.5**
baz=64,SNR=20
J08A Circle Bar Ran 64.12 54 ⇓P **P 11 21 03.4 -0.3**
baz=64,SNR=11
SWMT Swartz Lake 64.13 48 *e*P **P 11 21 03.8 +0.1**
comp=Z,37nm,1.0s,mb5.2
KAF Kangasniemi 64.28 333 *e*P **P 11 21 02.1 -2.3**
KAF Kangasniemi 64.28 333 *ep* **P 11 21 02.1 -2.3**
B15A Bradely Ranch, 64.41 47 ⇑P **P 11 21 05.2 -0.2**
baz=64,SNR=11
MOR8 Moi Rana 64.46 341 *e*P **P 11 21 03.6 -1.9**
MOR8 AMB AMB 11 21 06.0
comp=Z,106nm,0.8s,mb5.7
MOS Moscow 64.47 324 *e*P **P 11 21 03.3 -2.5**
MOS *e*S **S 11 29 37.0 -1.6**
MOS pmax pmax
comp=Z,600nm,1.9s,mb6.1
MOS pmax pmax
comp=Z,230nm,1.4s,mb5.8
KONS Konsvik 64.50 342 *e*P **P 11 21 05.9 +0.1**
F12A Elk City 64.51 50 ⇓P **P 11 21 06.1 -0.2**
baz=64,SNR=23
A16A West Butte Ran 64.52 46 ⇑P **P 11 21 05.6 -0.6**
baz=64,SNR=8.4
SLMT Seeley Lake 64.57 48 *e*P **P 11 21 06.4 -0.2**
comp=Z,107nm,1.3s,mb5.5
MSO Missoula 64.58 49 ⇓P **P 11 21 06.1 -0.6**
baz=64,SNR=23
MSO Missoula 64.58 49 *e*P **P 11 21 05.9 -0.7**
comp=Z,54nm,1.3s,mb5.2
WVOR Wild Horse Val 64.58 55 *e*P **P 11 21 06.8 0.0**
comp=Z,30nm,1.3s,mb5.0
WVOR Wild Horse Val 64.58 55 *e*P **P 11 21 06.8 +0.1**
WVOR pmax pmax
comp=Z,30nm,1.3s,mb5.0
ABKT Ailbek 64.60 299 P **P 11 21 07.7 +0.8**
comp=Z,1µm,0.6s,mb6.8,SNR=30
D14A Greenough 64.66 48 ⇑P **P 11 21 06.6 -0.6**
baz=64,SNR=28
E13A Victor 64.68 49 ⇓P **P 11 21 06.8 -0.6**
baz=64,SNR=12
WB2 Warramunga Arr 64.70 194 *e*P **P 11 21 06.7 -1.0**
WRA Warramunga Arr 64.71 194 P **P 11 21 06.4 -1.2**
WRA pP pP 11 21 26.9 -0.2
WRA LR LR 11 46 52.7
WRA ⇑*e* 11 49 57.7
WRA Warramunga Arr 64.71 194 P **P 11 21 06.4 -1.2**
comp=Z,102nm,0.8s,mb5.7,baz=11,slow=6.8,SNR=423
WRA pP pP 11 21 26.9 -0.2
comp=Z,48nm,0.9s,baz=15,slow=6.9,SNR=7.8
WRA LR LR 11 46 52.7
comp=Z,168nm,19.7s,baz=55,slow=34
WRA PKP2bc 11 49 57.7
comp=Z,1.5nm,0.9s,baz=198,slow=2.7,SNR=7.2
WRA Warramunga Arr 64.71 194 P **P 11 21 06.4 -1.2**
WRA *PP pP 11 21 26.9 -0.2
C15A Salmond Ranch, 64.71 47 ⇓P **P 11 21 07.5 0.0**
baz=64,SNR=32
B16A M & M Farms, S 64.79 46 ⇓P **P 11 21 08.1 +0.1**
baz=64,SNR=37
FINES FINESS Array B 64.84 333 P **P 11 21 07.0 -1.1**
comp=Z,68nm,0.5s,mb5.7,baz=41,slow=6.3,SNR=233
FINES LR LR 11 53 28.6
comp=Z,528nm,18.2s,baz=153,slow=40
CHMT Chamberlain Mo 64.90 48 *e*P **P 11 21 08.3 -0.5**
comp=Z,14nm,1.1s,mb4.7
FITZ Fitzroy Crossi 64.91 203 *e*P **P 11 21 09.0 0.0**
comp=Z,64nm,0.8s,mb5.5
A17A Triple J Farms 64.98 45 ⇓P **P 11 21 08.9 -0.4**
baz=65,SNR=28
E14A Clinton 65.08 49 ⇓P **P 11 21 09.7 -0.2**
baz=65,SNR=12
C16A Fuhringer Ranc 65.15 47 ⇓P **P 11 21 10.1 -0.2**
baz=65,SNR=50
D15A Lincoln 65.21 48 ⇑P **P 11 21 10.7 -0.1**
baz=65,SNR=11
OBN Obninsk 65.34 324 P **P 11 21 11.2 -0.2**
comp=Z,1µm,1.0s,mb6.7,SNR=8.0
OBN Obninsk 65.34 324 *e*P **P 11 21 11.2 -0.3**
comp=Z,153nm,0.8s,mb5.9
OBN Obninsk 65.34 324α *i*P **P 11 21 10.9 -0.5**
OBN *PP pP 11 21 29.0 -1.9
OBN 11 21 42.0
OBN *i* S S 11 29 49.7 +0.5
OBN *i* PS 11 30 22.9
OBN pmax pmax
comp=Z,147nm,0.8s,mb5.9
OBN MLR MLR
comp=Z,300nm,15.0s
B17A L&G Farms, Che 65.34 46 ⇑P **P 11 21 11.2 -0.4**
baz=65,SNR=11
FFC Flin Flon 65.38 37 P **P 11 21 11.5 -0.2**
comp=Z,363nm,0.8s,mb6.3,SNR=22
FFC Flin Flon 65.38 37 *e*P **P 11 21 11.4 -0.3**
comp=Z,45nm,0.8s,mb5.3
FFC Flin Flon 65.38 37 *i* P **P 11 21 11.8 +0.1**
H12A Diamond D Ranc 65.47 51 ⇑P **P 11 21 12.0 -0.5**
baz=65,SNR=15
G13A Cobalt 65.49 50 ⇓P **P 11 21 12.0 -0.5**
baz=65,SNR=24
F14A Wisdom 65.52 49 ⇓P **P 11 21 12.3 -0.5**
baz=65
E15A Deer Lodge 65.53 48 ⇓P **P 11 21 12.5 -0.3**
baz=65,SNR=15
MFID Camas Ranch 65.62 53 ⇓P **P 11 21 13.0 -0.4**
baz=65,SNR=7.9
SCO Scoresbysund 65.64 356 *i* P **P 11 21 12.0 -1.1**
comp=Z,42nm,0.8s,mb5.3
VRHR Novokhopersk 65.69 318 *e*P **P 11 21 12.6 -1.2**
VRHR pmax pmax
comp=Z,190nm,0.7s,mb6.0
VRHR pmax pmax
comp=N,60nm,0.8s
VRHR pmax pmax
comp=E,30nm,1.1s
FCC Fort Churchill 65.72 30 *e*P **P 11 21 13.0 -0.8**
comp=E,2.1nm,0.8s,mb4.0
D16A Dana Ranch, Ca 65.74 47 ⇑P **P 11 21 14.1 -0.1**
baz=65,SNR=16
POO Poona 65.75 273 *e*PKP **P 11 21 15.3 +0.7**
POO AMb AMB 11 21 22.8
comp=Z,51nm,0.9s,mb5.4
C17A Wharram Farm, 65.78 47 ⇓P **P 11 21 14.2 -0.2**
baz=66,SNR=26
I12A Atlanta 65.78 52 ⇑P **P 11 21 15.0 +0.5**
baz=66,SNR=39
HRY Holter Researc 65.79 48 *e*P **P 11 21 14.6 +0.1**
comp=Z,18nm,0.7s,mb5.0
H13A Challis 65.80 51 ⇓P **P 11 21 14.2 -0.4**
baz=66,SNR=31
WCN Washoe City 65.81 58 ⇑P **P 11 21 14.8 +0.1**
baz=66,SNR=17
B18A Beardsley Farm 65.81 45 ⇓P **P 11 21 14.3 -0.2**
baz=66,SNR=25
G14A Jackson 65.82 50 ⇓P **P 11 21 13.9 -0.8**
baz=66
F15A Butte 65.98 49 ⇑P **P 11 21 15.4 -0.3**
baz=66,SNR=23
E16A East Helena 65.98 48 ⇓P **P 11 21 15.7 -0.1**
baz=66,SNR=7.9
LRM Limekiln Ridge 66.01 49 *e*P **P 11 21 16.1 +0.1**
comp=Z,252nm,1.0s,mb6.0
EGMT Eagleton 66.05 46 ⇑P **P 11 21 16.0 -0.1**
baz=66,SNR=22
EGMT Eagleton 66.05 46 *e*P **P 11 21 16.0 -0.2**
comp=Z,96nm,1.1s,mb5.5
L10A Juniper Basin 66.07 54 ⇓P **P 11 21 16.7 +0.4**
baz=66,SNR=8.5
D17A Six Diamond Ra 66.12 47 ⇓P **P 11 21 16.5 -0.1**
baz=66,SNR=13
CMB Columbia Colle 66.19 60 *e*P **P 11 21 17.3 +0.1**
comp=Z,20nm,0.9s,mb4.9
CMB Columbia Colle 66.19 60 *e*P **P 11 21 17.3 +0.1**
CMB pmax pmax
comp=Z,19nm,0.9s,mb4.9
DLMT Dillon 66.22 49 *e*P **P 11 21 17.2 -0.1**
comp=Z,26nm,1.0s,mb5.0
H14A Leadore 66.26 50 ⇓P **P 11 21 17.4 -0.1**
baz=66,SNR=11
I13A Wildhorse Cree 66.28 51 ⇓P **P 11 21 17.7 0.0**
baz=66,SNR=14
KAD Karad 66.30 272 *e*PKP **P 11 21 17.6 -0.6**
KAD AMb AMB 11 21 23.5
comp=Z,65nm,1.6s,mb5.2
HLID Hailey 66.33 52 ⇓P **P 11 21 18.1 +0.1**
baz=66,SNR=17
HLID Hailey 66.33 52 *e*P **P 11 21 18.1 0.0**
comp=Z,14nm,1.1s,mb4.7
NSS Namsos 66.40 341 *e*P **P 11 21 16.4 -1.7**
NSS AMB AMB 11 21 17.8
comp=Z,105nm,1.1s,mb5.6
MCMT McKenzie Canyo 66.42 50 *e*P **P 11 21 17.9 -0.7**
comp=Z,5.6nm,1.0s,mb4.3
VOR Voronezh 66.42 320 *e*P **P 11 21 16.0 -2.4**
VOR pmax pmax
comp=Z,420nm,1.4s,mb6.1
L11A Cat Creek Ranc 66.43 54 ⇓P **P 11 21 19.0 +0.3**
baz=66,SNR=27
E17A Martinsdale 66.47 48 ⇓P **P 11 21 18.9 +0.1**
baz=66,SNR=21
F16A Kennard Place, 66.48 49 ⇓P **P 11 21 19.2 +0.2**
baz=66,SNR=18
D18A Linhart Farms, 66.56 46 ⇓P **P 11 21 19.3 -0.1**
baz=66,SNR=14
BOZ Bozeman (W) 66.57 49 ⇓P **P 11 21 19.8 +0.4**
baz=66,SNR=32
BOZ Bozeman (W) 66.57 49 *e*P **P 11 21 19.5 0.0**
comp=Z,15nm,0.4s,mb5.2
BOZ Bozeman (W) 66.57 49 *e*P **P 11 21 19.5 0.0**
BOZ pmax pmax
comp=Z,15nm,0.4s,mb5.2
J13A Cove Ranch, Pi 66.57 52 ⇑P **P 11 21 19.6 +0.1**
baz=66,SNR=13
BMN Battle Mountai 66.65 56 *e*P **P 11 21 20.6 +0.5**
comp=Z,20nm,1.0s,mb4.9
BMN Battle Mountai 66.65 56 *e*P **P 11 21 20.6 +0.5**
BMN pmax pmax
comp=Z,20nm,1.0s,mb4.9
H15A Lima 66.67 50 ⇑P **P 11 21 19.6 -0.5**
baz=66,SNR=8.8
G16A Moss Hill, Enn 66.74 49 ⇑P **P 11 21 20.3 -0.3**
baz=66,SNR=29
VSR Storozhevoye 66.78 320 *e*P **P 11 21 20.5 -0.2**
VSR pmax pmax
comp=N,20nm,0.5s
VSR pmax pmax
comp=Z,70nm,0.5s,mb5.8
VSR pmax pmax
comp=E,20nm,0.6s
VSR MLR MLR
comp=Z,520nm,16.0s

VSR MLR MLR
comp=N,230nm,13.0s
VSR MLR MLR
comp=E,360nm,15.0s
VORD Divnogorie 66.89 319 *eP* **P 11 21 21.1 -0.3**
VORD pmax pmax
comp=Z,90nm,0.7s,mb5.7
VORD pmax pmax
comp=N,30nm,1.0s
VORD pmax pmax
comp=E,20nm,0.4s
N10A Dunphy 66.89 55 ⇑P **P 11 21 21.8 +0.2**
baz=67
E18A Harlowton 66.90 47 ⇓P **P 11 21 21.7 +0.1**
baz=67,SNR=8.8
F17A Fitzpatrick Pl 66.93 48 ⇑P **P 11 21 21.7 0.0**
baz=67,SNR=15
J14A Carey 66.99 52 ⇑P **P 11 21 23.2 +0.9**
baz=67,SNR=32
I15A Monteview 67.14 50 ⇑P **P 11 21 23.6 +0.4**
baz=67
O10A Cortez Mining, 67.16 56 ⇑P **P 11 21 23.9 +0.6**
baz=67
NVAR Mina Array Bea 67.23 58 P **P 11 21 24.1 +0.3**
NVAR pP pP 11 21 43.9 +0.5
NVAR ⇑*e* 11 49 49.5
NVAR Mina Array Bea 67.23 58 P **P 11 21 24.1 +0.3**
comp=E,23nm,0.8s,mb5.1,baz=295,slow=6.5,SNR=132
NVAR pP pP 11 21 43.9 +0.5
comp=E,7.8nm,0.7s,baz=292,slow=6.5,SNR=4.3
NVAR PKP2bc 11 49 49.5
comp=E,0.9nm,0.9s,baz=132,slow=4.4,SNR=5.8
G17A Pierce Place, 67.26 49 ⇑P **P 11 21 24.1 +0.2**
baz=67,SNR=15
H16A Russell Place, 67.38 49 ⇑P **P 11 21 24.7 0.0**
baz=67,SNR=14
MLAC Mammoth Lakes 67.41 59 ⇑P **P 11 21 25.8 +0.9**
baz=67
MSVF Nonsavu 67.42 148 P **P 11 21 26.9 +1.8**
comp=E,220nm,0.9s,mb6.0,SNR=5.8
MSVF Nonsavu 67.42 148 *eP* **P 11 21 26.0 +1.0**
comp=E,44nm,1.0s,mb5.2
F18A Big Timber 67.43 48 ⇓P **P 11 21 24.9 0.0**
baz=67,SNR=19
GCMT Greycliff 67.53 48 *eP* **P 11 21 25.7 +0.1**
comp=E,29nm,0.9s,mb5.1
J15A Blackfoot 67.56 51 ⇑P **P 11 21 26.3 +0.6**
baz=67
K14A Jones Ranch, D 67.68 52 ⇓P **P 11 21 26.5 0.0**
baz=67,SNR=19
I16A Newdale 67.78 50 ⇓P **P 11 21 27.6 +0.4**
baz=68,SNR=12
MAK Makhachkala 67.85 309 *eP* **P 11 21 28.5 +0.8**
MAK *i* 11 21 59.4
MAK *e* 11 23 58.7
MAK *e*PPP 11 25 36.0
MAK *e*S S 11 30 19.7 -0.3
MAK *e* 11 31 18.9
MAK pmax pmax
comp=Z,70nm,0.4s,mb5.8
MAK MLR MLR
comp=Z,445nm,19.0s
M13A Montello 67.86 54 ⇓P **P 11 21 27.9 +0.1**
baz=68,SNR=12
M13A Montello 67.86 54 *eP* **P 11 21 27.7 -0.1**
comp=Z,11nm,0.8s,mb4.8
F19A Roth Farm, Mol 67.88 47 ⇓P **P 11 21 27.5 -0.3**
baz=68,SNR=23
G18A Lazy EL Ranch, 67.90 48 ⇑P **P 11 21 27.6 -0.3**
baz=68,SNR=5.9
NOUC Port Laguerre 67.93 161 *eP* **P 11 21 28.0 -0.2**
DZM Mont Dzumac 67.93 161 *eP* **P 11 21 29.1 +0.9**
comp=Z,85nm,1.1s,mb5.5
DZM *e*LQ 11 38 37.4
DZM *e*LR LR 11 41 29.0
comp=Z,1μm,33.5s
DZM Mont Dzumac 67.93 161 *eP* **P 11 21 28.4 +0.2**
DZM Mont Dzumac 67.93 161 *eP* **P 11 21 28.9 +0.7**
comp=Z,38nm,0.9s,mb5.2
LKWY Lake 67.93 49 *eP* **P 11 21 28.4 +0.2**
comp=Z,14nm,0.8s,mb4.8
LKWY Lake 67.93 49 *eP* **P 11 21 28.4 +0.3**
LKWY pmax pmax
comp=Z,14nm,0.8s,mb4.8
H17A Grant Village 67.94 49 ⇑P **P 11 21 29.2 +1.0**
baz=68,SNR=20
K15A Arbon 67.96 52 ⇑P **P 11 21 29.1 +0.8**
baz=68,SNR=21
L14A Malta 67.97 52 ⇓P **P 11 21 28.5 +0.1**
baz=68,SNR=21
RCTC Rector, Farmer 67.98 60 ⇓P **P 11 21 29.1 +0.6**
baz=68
IMW Indian Meadow 68.07 50 *eP* **P 11 21 29.3 +0.3**
comp=Z,61nm,1.3s,mb5.3
P11A Circle Ranch, 68.08 56 ⇓P **P 11 21 29.4 +0.3**
baz=68
FLWY Flagg Ranch 68.08 50 *eP* **P 11 21 29.7 +0.6**
comp=Z,26nm,1.0s,mb5.0
J16A Bone 68.10 51 ⇓P **P 11 21 29.6 +0.4**
baz=68,SNR=21
SMMC Simmler 68.12 62 ⇓P **P 11 21 29.7 +0.3**
baz=68
DCID1 Drake Creek 68.13 50 *eP* **P 11 21 29.2 -0.2**
comp=Z,70nm,1.3s,mb5.3
Q10A Clear Creek Ra 68.15 57 ⇑P **P 11 21 29.3 -0.3**
baz=68,SNR=28
N13A Wendover, West 68.16 54 ⇑P **P 11 21 29.3 -0.3**
baz=68
RLMT Red Lodge 68.18 48 ⇓P **P 11 21 29.8 +0.1**
baz=68,SNR=10
RLMT Red Lodge 68.18 48 *eP* **P 11 21 29.5 -0.2**
comp=Z,32nm,1.2s,mb5.0
RRI2 Red Ridge 68.21 50 *eP* **P 11 21 30.6 +0.7**
comp=Z,35nm,0.8s,mb5.2
O12A Currie 68.22 55 ⇑P **P 11 21 30.3 +0.3**
baz=68,SNR=6.9
M14A Sheep Mountain 68.25 53 ⇑P **P 11 21 30.3 +0.1**
baz=68,SNR=9.8
I17A Pilgrim Ck. 68.25 50 ⇓P **P 11 21 30.8 +0.7**
baz=68,SNR=9.6
MOOW Moose Ponds 68.27 50 *eP* **P 11 21 30.6 +0.4**
comp=Z,36nm,1.1s,mb5.1
TPAW Teton Pass 68.33 50 *eP* **P 11 21 31.1 +0.5**
comp=Z,60nm,1.2s,mb5.3
F20A Billings 68.33 47 ⇑P **P 11 21 30.5 -0.1**
baz=68,SNR=5.3
VES Vestal, Richgr 68.37 61 ⇑P **P 11 21 30.9 -0.1**
baz=68,SNR=7.4
K16A Soda Springs 68.39 51 ⇑P **P 11 21 31.3 +0.2**
baz=68,SNR=14
ASAR Alice Springs 68.42 193 P **P 11 21 30.6 -0.7**
ASAR pP pP 11 21 51.5 +0.6
ASAR ⇑*e* 11 49 49.3
ASAR Alice Springs 68.42 193 P **P 11 21 30.6 -0.7**
comp=Z,30nm,0.9s,mb5.1,baz=13,slow=5.3,SNR=148
ASAR pP pP 11 21 51.5 +0.6
comp=Z,18nm,0.8s,baz=19,slow=5.2,SNR=8.8
ASAR PKP2bc 11 49 49.3
comp=Z,1.4nm,0.9s,baz=186,slow=4.4,SNR=10
ASAR Alice Springs 68.42 193 P **P 11 21 30.6 -0.7**
ASAR *PP pP 11 21 51.5 +0.6
LOHW Long Hollow 68.44 50 *eP* **P 11 21 31.5 +0.2**
comp=Z,66nm,1.6s,mb5.2
SNOW Snow King Moun 68.45 50 *eP* **P 11 21 32.2 +0.8**
comp=Z,47nm,1.3s,mb5.2
REDW Red Top Meadow 68.46 50 *eP* **P 11 21 31.7 +0.2**
comp=Z,38nm,1.1s,mb5.1
L15A Malad City 68.48 52 ⇑P **P 11 21 31.3 -0.3**
baz=68,SNR=9.7
PKM Peak Mountain 68.50 62 ⇑P **P 11 21 32.4 +0.6**
baz=68
J17A Brown Place, J 68.54 50 ⇓P **P 11 21 32.0 +0.1**
baz=68,SNR=19
DGMT Dagmar 68.56 43 ⇑P **P 11 21 31.5 -0.5**
baz=68,SNR=13
DGMT Dagmar 68.56 43 *eP* **P 11 21 31.4 -0.5**
comp=Z,68nm,0.7s,mb5.6
Q11A Duckwater 68.58 56 ⇑P **P 11 21 32.2 -0.1**
baz=68,SNR=16
S10A Tonopah Range, 68.60 58 ⇓P **P 11 21 32.2 -0.2**
baz=68,SNR=34
P12A McGill 68.63 55 ⇑P **P 11 21 32.3 -0.3**
baz=68,SNR=10
GRAC Grapevine Rang 68.71 59 ⇑P **P 11 21 33.4 +0.3**
baz=68,SNR=6.8
AHID Auburn Hatcher 68.71 51 *eP* **P 11 21 33.1 +0.1**
comp=Z,8.8nm,0.8s,mb4.6

LAO LASA Array 68.75 45 ⇑P **P 11 21 32.9 -0.3**
baz=68,SNR=19
LAO LASA Array 68.75 45 *eP* **P 11 21 32.9 -0.3**
comp=Z,99nm,1.3s,mb5.5
O13A Hicks Ranch, I 68.76 54 ⇓P **P 11 21 33.8 +0.4**
baz=68
N14A Grayback Hills 68.76 53 ⇑P **P 11 21 33.1 -0.2**
baz=68,SNR=8.7
M15A Larsen Ranch, 68.79 53 ⇑P **P 11 21 33.4 -0.1**
baz=68,SNR=25
I18A Diamond G Ranc 68.81 49 ⇓P **P 11 21 33.9 +0.3**
baz=68,SNR=8.7
K17A Gardner Place, 68.82 51 ⇑P **P 11 21 34.0 +0.3**
baz=68
SBC Santa Barbara 68.85 62 ⇑P **P 11 21 34.2 +0.2**
baz=69
ISA Isabella 68.87 61 ⇑P **P 11 21 33.9 -0.2**
baz=69,SNR=12
ISA Isabella 68.87 61 *eP* **P 11 21 33.2 -0.9**
comp=Z,12nm,1.0s,mb4.7
GOF Gofitskoye 68.94 313 *eP* **P 11 21 33.8 -0.6**
GOF *e*S S 11 30 32.6 -0.2
GOF pmax pmax
comp=Z,740nm,0.8s,mb6.6
GOF smax
comp=N,40nm,1.0s
GOF smax
comp=E,120nm,1.0s
R11A Troy Canyon, C 68.94 57 ⇑P **P 11 21 34.5 0.0**
baz=69,SNR=41
Q12A Willow Creek R 68.95 56 ⇑P **P 11 21 34.8 +0.2**
baz=69,SNR=13
ARVC Arvin 68.98 61 ⇓P **P 11 21 34.5 -0.4**
baz=69,SNR=5.4
L16A Fish Haven 69.01 52 ⇑P **P 11 21 34.6 -0.3**
baz=69,SNR=6.9
J18A Kenil Valley 69.02 50 ⇑P **P 11 21 35.1 +0.2**
baz=69,SNR=7.8
EIDS Eidsvold 69.04 177 *eP* **P 11 21 35.1 +0.1**
comp=E,55nm,1.0s,mb5.3
P13A Bates Ranch, G 69.17 55 ⇓P **P 11 21 35.4 -0.5**
baz=69
HWUT Hardware Ranch 69.20 52 *eP* **P 11 21 35.9 -0.2**
comp=E,13nm,0.7s,mb4.9
G21A Lodge Grass 69.21 47 ⇓P **P 11 21 35.6 -0.5**
baz=69
MPMC Manual Prospec 69.23 60 ⇓P **P 11 21 36.7 +0.4**
baz=69,SNR=40
L17A Cokeville 69.27 51 ⇑P **P 11 21 36.4 -0.1**
baz=69,SNR=6.2
S11A Rachel 69.29 57 ⇓P **P 11 21 37.1 +0.4**
baz=69,SNR=13
MICGM Minsk 69.33 327 ⇑*iP* **P 11 21 35.0 -1.6**
MNK Minsk 69.35 327 ⇑*iP* **P 11 21 35.0 -1.7**
MNK pmax pmax
comp=Z,840nm,1.0s,mb6.5
FURC Furnace Creek, 69.36 59 ⇑P **P 11 21 37.4 +0.2**
baz=69,SNR=42
K18A Toltan Ranch, 69.39 50 ⇓P **P 11 21 37.5 +0.3**
baz=69,SNR=12
DUG Dugway 69.40 54 ⇑P **P 11 21 37.3 -0.1**
baz=69,SNR=22
DUG Dugway 69.40 54 *eP* **P 11 21 37.6 +0.3**
comp=Z,13nm,0.8s,mb4.8
DUG Dugway 69.40 54 *eP* **P 11 21 37.6 +0.3**
DUG pmax pmax
comp=Z,13nm,0.8s,mb4.8
NACGM Naroch 69.46 328 *eP* **P 11 21 34.0 -3.4**
LRMC Laurel Mountai 69.48 60 ⇑P **P 11 21 38.0 +0.2**
baz=69,SNR=11
BLG Laguna Peak 69.48 62 ⇑P **P 11 21 38.2 +0.3**
baz=69
NOA NORSAR Array B 69.53 339 P **P 11 21 37.2 -0.6**
NOA ⇑*e* 11 49 40.1
NOA LR LR 11 55 57.7
NOA NORSAR Array B 69.53 339 P **P 11 21 37.2 -0.6**
comp=Z,212nm,0.9s,mb6.0,baz=33,slow=6.2,SNR=230
NOA PKP2bc 11 49 40.1
comp=Z,2.1nm,0.9s,baz=187,slow=3.9,SNR=4.6
NOA LR LR 11 55 57.7
comp=Z,342nm,21.4s,baz=25,slow=39
O15A The Old Anders 69.54 54 ⇑P **P 11 21 38.1 -0.1**
baz=69
R12A Pony Springs, 69.54 56 ⇑P **P 11 21 38.4 +0.1**
baz=69,SNR=17
I20A Wwd 69.57 48 ⇓P **P 11 21 38.3 0.0**
baz=69,SNR=15
BW06 Boulder Array 69.57 50 ⇑P **P 11 21 38.2 -0.2**
baz=69,SNR=24
MBWA Marble Bar 69.62 208 *eP* **P 11 21 38.3 -0.4**
comp=Z,75nm,1.0s,mb5.5
HFS Hagfors 69.63 337 P **P 11 21 37.7 -0.7**
comp=Z,188nm,0.7s,mb6.0,baz=58,slow=5.6,SNR=328
P14A Drum Mountains 69.64 54 ⇓P **P 11 21 39.0 +0.2**
baz=68,SNR=12
EDW2 Edwards Air Fo 69.67 61 ⇑P **P 11 21 40.0 +0.9**
baz=69,SNR=23
H21A Big Horn, Sher 69.70 47 ⇑P **P 11 21 39.0 -0.1**
baz=69,SNR=19
U10A Ash Meadows, A 69.72 59 ⇑P **P 11 21 40.1 +0.7**
baz=70,SNR=18
N16A Rees Ranch, Co 69.75 52 ⇓P **P 11 21 39.3 -0.1**
baz=70
NAO01 NOAR Array S 69.79 339 *eP* **P 11 21 38.7 -0.6**
comp=Z,138nm,0.8s,mb5.8
M17A Scullys Gap (B 69.80 52 ⇑P **P 11 21 39.7 -0.1**
baz=70,SNR=6.7
KIV Kislovodsk 69.86 312 P **P 11 21 41.9 +1.8**
comp=Z,4μm,0.8s,SNR=39
KIV Kislovodsk 69.86 312 *eP* **P 11 21 40.8 +0.7**
comp=Z,540nm,0.9s,mb6.4
KIV Kislovodsk 69.86 312 *eP* **P 11 21 40.9 +0.8**
KIV *e*S S 11 30 45.1 +1.5
KIV pmax pmax
comp=Z,53nm,2.9s,mb4.9
KIV pmax pmax
comp=Z,612nm,1.0s,mb6.4
KIV MLR MLR
comp=Z,571nm,19.0s
DECC Green Verdugo 69.86 62 ⇑P **P 11 21 40.8 +0.5**
baz=70
L18A Fontenelle, Gr 69.86 51 ⇑P **P 11 21 40.2 +0.1**
baz=70,SNR=11
S12A Delmar Landin 69.86 57 ⇓P **P 11 21 41.0 +0.8**
baz=70,SNR=16
Q14A Sevier Lake (B 69.91 55 ⇑P **P 11 21 40.5 0.0**
baz=70,SNR=18
K19A Absolon Red Bu 69.92 50 ⇓P **P 11 21 40.1 -0.4**
baz=70,SNR=9.3
R13A O'Grain Ranch, 70.02 56 ⇑P **P 11 21 41.5 +0.3**
baz=70,SNR=8.4
DGRG David-gareji 70.04 309 P **P 11 21 41.2 0.0**
MWC Mount Wilson 70.05 62 *eP* **P 11 21 41.7 +0.3**
comp=Z,23nm,1.1s,mb4.9
MWC Mount Wilson 70.05 62 *eP* **P 11 21 41.7 +0.3**
MWC pmax pmax
comp=Z,23nm,1.1s,mb4.9
N17A Moffit Pass 70.05 52 ⇑P **P 11 21 41.2 -0.1**
baz=70,SNR=29
SHOC Shoshone 70.09 59 ⇓P **P 11 21 41.6 0.0**
baz=70,SNR=9.2
I21A Big Trails, Te 70.11 48 ⇑P **P 11 21 41.4 -0.2**
baz=70,SNR=30
P15A Leamington 70.12 54 ⇓P **P 11 21 41.7 0.0**
baz=70
L19A Farson 70.12 50 ⇑P **P 11 21 41.3 -0.4**
baz=70,SNR=6.5
GSC Goldstone 70.14 60 ⇓P **P 11 21 41.9 -0.1**
baz=70,SNR=19
GSC Goldstone 70.14 60 *eP* **P 11 21 41.9 -0.1**
comp=Z,15nm,0.9s,mb4.8
GSC Goldstone 70.14 60 *eP* **P 11 21 41.9 -0.1**
GSC pmax pmax
comp=Z,15nm,0.9s,mb4.8
O16A Springville 70.15 53 ⇑P **P 11 21 41.9 -0.1**
baz=70
DAU Daniels Canyon 70.16 53 *eP* **P 11 21 42.2 +0.2**
comp=Z,18nm,1.1s,mb4.8
DAU Daniels Canyon 70.16 53 *eP* **P 11 21 42.2 +0.2**
DAU pmax pmax
comp=Z,18nm,1.1s,mb4.8
M18A Lyman 70.17 51 ⇓P **P 11 21 41.4 -0.6**
baz=70,SNR=5.3
MTA Mtatsminda 70.20 309 P **P 11 21 43.3 +1.1**
TBLG Delisi 70.21 309 *eP* **P 11 21 43.3 +1.0**
TBLG Delisi 70.21 309 P **P 11 21 43.3 +1.0**
BFSC Mount Baldy Ra 70.29 61 ⇓P **P 11 21 43.2 +0.3**
baz=70,SNR=16
U11A Corn Creek 70.30 58 ⇑P **P 11 21 42.7 -0.3**
baz=70
K20A Yellowstone Ra 70.31 49 ⇑P **P 11 21 42.3 -0.6**
baz=70,SNR=8.9
CIS Catalina Islan 70.35 62 ⇓P **P 11 21 43.1 -0.2**
baz=70
GOR Gori 70.39 310 P **P 11 21 44.7 +1.3**
Q15A Fillmore 70.43 55 ⇑P **P 11 21 43.7 0.0**
baz=70
P16A Fountain Green 70.45 54 ⇓P **P 11 21 43.8 0.0**
baz=70
S13A Holt Ranch, En 70.48 56 ⇑P **P 11 21 44.0 0.0**
baz=70,SNR=23
T12A Moapa 70.52 58 ⇓P **P 11 21 44.6 +0.3**
baz=70,SNR=12
SCI San Clemente I 70.53 63 ⇓P **P 11 21 44.5 +0.1**
baz=70
FOO Floro 70.54 342 *eP* **P 11 21 42.9 -1.0**
ARUT Antelope Range 70.59 56 *eP* **P 11 21 44.3 -0.4**
comp=Z,14nm,0.9s,mb4.8
ARUT Antelope Range 70.59 56 *eP* **P 11 21 44.3 -0.4**
ARUT pmax pmax
comp=Z,14nm,0.9s,mb4.8
O17A Robinson Place 70.60 53 ⇑P **P 11 21 44.9 +0.2**
baz=70,SNR=9.0
TUQ Turquoise Moun 70.61 59 ⇑P **P 11 21 45.1 +0.3**
baz=70,SNR=35
M19A Rock Springs 70.63 51 ⇓P **P 11 21 44.6 -0.2**
baz=70
V11A Goodsprings 70.65 59 ⇓P **P 11 21 45.3 +0.2**
baz=70,SNR=10
N18A Larsen Ranch, 70.69 51 ⇑P **P 11 21 45.4 +0.2**
baz=70,SNR=6.8
BBRC Big Bear Solar 70.74 61 ⇑P **P 11 21 46.6 +0.9**
baz=70,SNR=14
HEC Hector Ludlow 70.75 60 ⇑P **P 11 21 46.1 +0.4**
baz=70,SNR=15
L20A Wamsutter 70.75 50 ⇓P **P 11 21 45.3 -0.3**
baz=70,SNR=6.4
S14A Cedar City 70.78 56 ⇓P **P 11 21 45.8 0.0**
baz=70
U12A Valley of Fire 70.81 58 ⇑P **P 11 21 46.4 +0.3**
baz=70
T13A Saint George 70.81 57 ⇓P **P 11 21 46.4 +0.3**
baz=70,SNR=32
MSU Marysvale 70.87 55 *eP* **P 11 21 46.6 +0.2**
comp=Z,6.8nm,0.7s,mb4.6
O18A Roosevelt 70.97 52 ⇑P **P 11 21 47.1 +0.2**
baz=71
MURC Murrieta 70.99 62 ⇓P **P 11 21 47.5 +0.4**
baz=71,SNR=9.9
R15A Junction 71.01 55 ⇓P **P 11 21 47.7 +0.5**
baz=71,SNR=11
N19A John Jarvie Ra 71.03 51 ⇓P **P 11 21 47.2 -0.1**
baz=71
P17A Butcher Ranch, 71.08 53 ⇓P **P 11 21 47.9 +0.3**
baz=71,SNR=12
KONO Kongsberg 71.14 339 *eP* **P 11 21 46.8 -0.9**
comp=Z,98nm,1.2s,mb5.5
KONO Kongsberg 71.14 339 *eP* **P 11 21 46.8 -0.8**
KONO pmax pmax
comp=Z,98nm,1.2s,mb5.5
U13A Pakoon Wash 71.17 57 ⇑P **P 11 21 48.7 +0.5**
baz=71,SNR=56
M20A Sweetwater, Wa 71.18 50 ⇑P **P 11 21 48.2 0.0**
baz=71,SNR=6.1
Q16A Castle Valley 71.19 54 ⇓P **P 11 21 48.0 -0.3**
baz=71,SNR=6.5
GMRC Granite Mounta 71.20 60 ⇑P **P 11 21 48.5 +0.1**
baz=71,SNR=21
GNI Garni 71.26 308 *eP* **P 11 21 50.1 +1.4**
comp=Z,63nm,0.8s,mb5.5
GNI Garni 71.26 308 P **P 11 21 50.8 +2.1**
comp=Z,15nm,0.4s,mb5.2,baz=321,slow=3.1,SNR=9.3
GNI Garni 71.26 308 *i* P **P 11 21 50.3 +1.6**
GNI pmax pmax
comp=Z,104nm,1.3s
P18A Preston Nutter 71.26 53 ⇑P **P 11 21 48.8 +0.1**
baz=71,SNR=8.3
T14A Hurricane 71.28 56 ⇓P **P 11 21 49.3 +0.4**
baz=71
K22A Casper 71.31 49 ⇓P **P 11 21 48.4 -0.5**
baz=71,SNR=11
BORG Borgarnes 71.31 355 P **P 11 21 49.3 +0.8**
comp=Z,110nm,0.8s,mb5.8,baz=23,slow=3.4,SNR=35
BORG Borgarnes 71.31 355 P **P 11 21 49.6 +1.1**
comp=Z,836nm,0.7s,mb6.7,SNR=12
L21A Rawlins 71.31 49 ⇓P **P 11 21 49.0 0.0**
baz=71,SNR=12
S15A Panguitch 71.31 56 ⇑P **P 11 21 49.8 +0.8**
baz=71,SNR=11
LDFC Landfair 71.35 59 *eP* **P 11 21 48.8 -0.4**
comp=Z,60nm,1.0s,mb5.4
W12A Cal Nev Ari 71.35 59 ⇓P **P 11 21 49.6 +0.3**
baz=71,SNR=6.6
R16A Teasdale 71.43 55 ⇓P **P 11 21 50.9 +1.1**
baz=71,SNR=22
O19A Miners Draw (B 71.45 52 ⇑P **P 11 21 49.4 -0.4**
baz=71,SNR=5.1
PFO Pinyon Flat Ob 71.46 61 P **P 11 21 50.2 +0.2**
comp=Z,86nm,1.1s,mb5.5,SNR=8.4
PFO Pinyon Flat Ob 71.46 61 ⇑P **P 11 21 50.2 +0.2**
baz=71,SNR=18
PFO Pinyon Flat Ob 71.46 61 *eP* **P 11 21 49.0 -1.0**
comp=Z,14nm,0.9s,mb4.8
SUW Suwalki 71.49 329 *eP* **P 11 21 49.3 -0.5**
SUW *e*S S 11 31 01.5 -0.8
SUW LMZ 11 50 17.1
comp=Z,800nm,31.5s
SUW Suwalki 71.49 329 *eP* **P 11 21 49.1 -0.7**
comp=Z,269nm,0.9s,mb6.1
SUW Suwalki 71.49 329 *eP* **P 11 21 49.3 -0.5**
SUW *e*S S 11 31 01.5 -0.8
BELC Belle Mtn. Jos 71.49 61 ⇑P **P 11 21 50.4 +0.2**
baz=71,SNR=19
109C Camp Elliot, M 71.52 62 ⇓P **P 11 21 50.3 0.0**
baz=71,SNR=7.9
V13A Grand Canyon W 71.53 58 ⇓P **P 11 21 50.8 +0.4**
baz=71,SNR=36
M21A Separation Pea 71.56 50 ⇓P **P 11 21 49.8 -0.6**
baz=71
N20A Spence Gulch, 71.58 51 ⇑P **P 11 21 50.9 +0.3**
baz=71,SNR=19
RWWY Rawlins 71.58 50 *eP* **P 11 21 50.5 -0.1**
comp=Z,16nm,0.8s,mb4.9
AKASG Malin Array Be 71.60 324 P **P 11 21 49.9 -0.6**
AKASG LR LR 11 57 35.2
AKASG Malin Array Be 71.60 324 P **P 11 21 49.9 -0.6**
comp=Z,46nm,0.5s,mb5.6,baz=38,slow=6.1,SNR=208
AKASG LR LR 11 57 35.2
comp=Z,306nm,19.3s,baz=50,slow=39
AKBB Malin Array Si 71.60 324 *eP* **P 11 21 49.9 -0.7**
KIEV Kiev 71.61 324 *eP* **P 11 21 49.9 -0.7**
comp=Z,85nm,0.8s,mb5.6
KIEV Kiev 71.61 324 *eP* **P 11 21 49.9 -0.7**
KIEV pmax pmax
comp=Z,85nm,0.8s,mb5.6
RSSD Black Hills 71.62 46 *eP* **P 11 21 50.1 -0.7**
comp=Z,72nm,1.4s,mb5.3
RSSD Black Hills 71.62 46 *eP* **P 11 21 50.1 -0.7**
RSSD pmax pmax
comp=Z,72nm,1.4s,mb5.3
U14A Mt Trumbull 71.65 57 ⇓P **P 11 21 51.8 +0.7**
baz=71,SNR=36
Q18A Rafter H Ranch 71.67 53 ⇓P **P 11 21 50.8 -0.4**
baz=71
SOC Sochi 71.69 313 *i* P **P 11 21 51.5 +0.3**
SOC Sochi 71.69 313*c i*P **P 11 21 51.4 +0.2**
SOC pmax pmax
comp=Z,104nm,0.6s,mb5.8
T15A Red Dirt Ranch 71.73 56 ⇓P **P 11 21 51.7 +0.1**
baz=72,SNR=10
S16A Weppner Ranch, 71.74 55 ⇑P **P 11 21 52.1 +0.5**
baz=72,SNR=27
R17A Hanksville Air 71.80 54 ⇑P **P 11 21 51.7 -0.2**
baz=72,SNR=17
NEE2 Needles Airpor 71.85 59 ⇑P **P 11 21 52.0 -0.3**
baz=72
DIGO Kars 71.86 309 *i* P **P 11 21 52.8 +0.5**
IRM Iron Mountain 71.92 60 ⇓P **P 11 21 52.8 +0.1**
baz=72,SNR=31
BAR Barrett 71.93 62 *eP* **P 11 21 52.3 -0.5**
comp=Z,16nm,0.9s,mb4.8
MONP Monument Peak 71.95 62 ⇑P **P 11 21 53.2 +0.2**
baz=72,SNR=12
P19A Cripple Cowboy 71.98 52 ⇑P **P 11 21 53.1 +0.1**
baz=72,SNR=18

ANN	**Anapa**	72.02	315	⇑*i*P		P	11 21 52.8	-0.4
ANN				*e**PP		pP	11 22 10.6	-2.4
ANN				*e*S		S	11 31 08.0	-0.7
ANN				pmax		pmax		
	comp=Z,190nm,1.1s,mb5.8							
N21A	**Black Mountain**	72.04	50	⇑P		P	11 21 53.0	-0.3
	baz=72,SNR=8.8							
BC3	**Big Chuckawall**	72.06	60	⇑P		P	11 21 53.6	0.0
	baz=72,SNR=18							
O20A	**White River Ci**	72.06	51	⇓P		P	11 21 53.1	-0.4
	baz=72,SNR=7.5							
W13A	**Hualapai Mount**	72.09	58	⇑P		P	11 21 53.9	+0.1
	baz=72,SNR=24							
L23A	**Garrett**	72.12	48	⇑P		P	11 21 53.2	-0.6
	baz=72,SNR=8.7							
BLS5	**Blasjo**	72.13	340	*e*P		P	11 21 53.7	+0.2
DBOC	**Borcka**	72.17	310	*i* P		P	11 21 54.7	+0.5
U15A	**North Rim**	72.18	56	⇑P		P	11 21 54.9	+0.6
	baz=72,SNR=32							
V14A	**Boquillas Ranc**	72.21	58	⇓P		P	11 21 54.7	+0.2
	baz=72,SNR=36							
S17A	**Black Ridge (B**	72.27	55	⇓P		P	11 21 54.4	-0.3
	baz=72,SNR=32							
T16A	**Glen Canyon Da**	72.28	56	⇓P		P	11 21 54.6	-0.3
	baz=72							
R18A	**Canyonlands Na**	72.29	54	⇓P		P	11 21 54.8	-0.1
	baz=72,SNR=17							
DVTC	**Desert V Tower**	72.31	62	⇓P		P	11 21 55.2	+0.1
	baz=72,SNR=6.0							
SWSC	**Sam W. Stewart**	72.31	61	⇑P		P	11 21 55.4	+0.2
	baz=72,SNR=6.0							
SOFL	**Sornfelli, Far**	72.37	348	⇑*e*P		P	11 21 53.7	-1.2
SOFL				AMB		AMB	11 21 55.9	
	comp=Z,176nm,1.2s,mb5.8							
P20A	**De Beque**	72.41	52	⇓P		P	11 21 55.2	-0.4
	baz=72,SNR=6.8							
DDEM	**Demirkent**	72.44	310	*i* P		P	11 21 56.8	+1.1
O21A	**Pagoda**	72.44	51	⇓P		P	11 21 55.3	-0.4
	baz=72							
X13A	**Yucca**	72.46	59	⇑P		P	11 21 56.2	+0.3
	baz=72,SNR=39							
PDMCI	**Parker Dam,Lak**	72.46	59	⇓P		P	11 21 56.2	+0.3
	baz=72,SNR=16							
W14A	**Seligman**	72.51	58	⇑P		P	11 21 57.0	+0.8
	baz=72,SNR=27							
N22A	**Wattenberg Ran**	72.61	50	⇑P		P	11 21 57.0	+0.3
	baz=72,SNR=14							
AGMN	**Agassiz Nation**	72.62	39	*e*P		P	11 21 55.6	-1.1
	comp=Z,68nm,1.3s,mb5.3							
V15A	**Kaibab Nationa**	72.66	57	⇓P		P	11 21 57.5	+0.4
	baz=72,SNR=19							
T17A	**Navajo Res., N**	72.69	55	⇓P		P	11 21 56.9	-0.4
	baz=72,SNR=9.9							
S18A	**Hurst Farm, Bl**	72.70	54	⇑P		P	11 21 57.1	-0.2
	baz=72,SNR=20							
R19A	**Curley Farm, L**	72.72	53	⇓P		P	11 21 57.2	-0.2
	baz=72,SNR=13							
PHWY	**Pilot Hill**	72.81	49	*e*P		P	11 21 57.9	0.0
	comp=Z,13nm,0.9s,mb4.8							
N23A	**Red Feather La**	72.82	50	⇑P		P	11 21 58.0	0.0
	baz=72,SNR=17							
Q20A	**Ridgley Place,**	72.83	52	⇓P		P	11 21 57.7	-0.4
	baz=72,SNR=10							
GLA	**Glamis**	72.85	61	⇑P		P	11 21 59.0	+0.7
	baz=73,SNR=12							
GLA	**Glamis**	72.85	61	*e*P		P	11 21 58.3	-0.1
	comp=Z,34nm,1.0s,mb5.1							
GLA	**Glamis**	72.85	61	*e*P		P	11 21 58.3	0.0
GLA				pmax		pmax		
	comp=Z,34nm,1.0s,mb5.1							
PV04	**Paradox Valley**	72.86	53	*e*P		P	11 21 58.2	0.0
SNART	**Snartemo**	72.90	339	*e*P		P	11 21 58.3	+0.2
HOMI	**Horasan**	72.93	309	*i* P		P	11 21 59.9	+1.3
Y13A	**Salome**	72.97	59	⇓P		P	11 21 59.5	+0.5
	baz=73,SNR=5.3							
O22A	**Kremmling**	72.99	50	⇓P		P	11 21 59.3	+0.3
	baz=73,SNR=10.0							
W15A	**Williams**	73.03	57	⇑P		P	11 21 59.9	+0.6
	baz=73,SNR=8.2							
M24A	**Cheyenne**	73.04	48	⇓P		P	11 21 59.5	+0.3
	baz=73,SNR=10							
U16A	**Tuba City**	73.07	56	⇑P		P	11 22 00.4	+0.8
	baz=73,SNR=25							
TVAN	**Van**	73.12	307	*i* P		P	11 22 01.1	+1.4
X14A	**Yava**	73.12	58	⇑P		P	11 22 00.5	+0.7
	baz=73,SNR=18							
WAL1	**Walls**	73.14	345	⇑*e*P		P	11 21 59.0	-0.5
T18A	**Mexican Hat**	73.15	55	⇑P		P	11 21 59.3	-0.7
	baz=73,SNR=16							
S19A	**Harvey Farm, M**	73.17	54	⇑P		P	11 21 59.7	-0.3
	baz=73,SNR=31							
LRW	**Lerwick**	73.17	344	⇑*e*P		P	11 21 59.3	-0.4
LRW				AMB		AMB	11 22 02.1	
	comp=Z,84nm,2.8s,mb5.1							
PV01	**Paradox Valley**	73.23	53	*e*P		P	11 22 00.4	-0.1
	comp=Z,718nm,0.7s,mb6.6							
P22A	**Eagle**	73.27	51	⇑P		P	11 22 01.0	+0.3
	baz=73,SNR=12							
R20A	**Redvale**	73.30	53	⇑P		P	11 22 01.0	+0.1
	baz=73,SNR=8.9							
O23A	**Lake Granby, G**	73.31	50	⇑P		P	11 22 01.4	+0.6
	baz=73,SNR=18							
Q21A	**Lamborn Mesa,**	73.33	52	⇑P		P	11 22 01.0	0.0
	baz=73							
WUAZ	**Wupatki**	73.34	57	⇑P		P	11 22 02.0	+0.9
	baz=73,SNR=15							
WUAZ	**Wupatki**	73.34	57	*e*P		P	11 22 01.6	+0.5
	comp=Z,22nm,1.0s,mb4.9							
Y14A	**Wickenburg**	73.40	59	⇑P		P	11 22 02.0	+0.4
	baz=73,SNR=25							
SMCO	**Snowmass**	73.43	51	*e*P		P	11 22 01.7	0.0
	comp=Z,18nm,0.9s,mb4.9							
N24A	**Carr**	73.45	49	⇓P		P	11 22 02.0	+0.3
	baz=73,SNR=7.8							
BSD	**Bornholm Skovb**	73.46	334	⇑*i*P		P	11 22 00.6	-0.9
	comp=Z,105nm,0.9s,mb5.7							
BSD								
	comp=Z,540nm,16.0s							
Z13A	**Yuma Proving G**	73.49	60	⇓P		P	11 22 02.9	+0.9
	baz=73,SNR=17							
X15A	**Humboldt**	73.51	58	⇓P		P	11 22 02.9	+0.8
	baz=73,SNR=35							
W16A	**Flagstaff**	73.53	57	⇑P		P	11 22 02.7	+0.4
	baz=73,SNR=9.9							
SIM	**Simferopol'**	73.57	317	*c* *i*P		P	11 22 02.4	+0.1
HAKT	**HAKKARI**	73.60	306	*i* P		P	11 22 03.7	+1.1
V17A	**Tonalea, Kykot**	73.62	56	⇓P		P	11 22 03.7	+0.9
	baz=73,SNR=43							
U18A	**Rough Rock, Ch**	73.63	55	⇓P		P	11 22 03.3	+0.5
	baz=73,SNR=16							
R21A	**Cimarron**	73.66	52	⇑P		P	11 22 03.5	+0.5
	baz=73,SNR=22							
Q22A	**Crested Butte,**	73.68	52	⇓P		P	11 22 03.7	+0.6
	baz=73,SNR=19							
113A	**Mohawk Valley,**	73.71	60	⇓P		P	11 22 03.7	+0.4
	baz=74,SNR=5.2							
COP	**Copenhagen**	73.74	335	*i* P		P	11 22 03.6	+0.5
	comp=Z,99nm,0.9s,mb5.5							
COP								
	comp=Z,340nm,20.0s							
ISCO	**Idaho Springs**	73.76	50	⇑P		P	11 22 03.8	+0.2
	baz=74,SNR=18							
ISCO	**Idaho Springs**	73.76	50	*e*P		P	11 22 03.6	+0.1
	comp=Z,29nm,1.3s,mb4.8							
ISCO	**Idaho Springs**	73.76	50	*e*P		P	11 22 03.6	+0.1
ISCO				pmax		pmax		
	comp=Z,29nm,1.3s,mb4.8							
Y15A	**Casa Rosa Ranc**	73.81	58	⇑P		P	11 22 04.6	+0.7
	baz=74,SNR=27							
Z14A	**Wintersburg**	73.82	59	⇑P		P	11 22 04.2	+0.2
	baz=74							
O24A	**Longmont**	73.84	50	⇓P		P	11 22 04.3	+0.3
	baz=74							
T19A	**Beclabito**	73.85	54	⇑P		P	11 22 04.0	-0.2
	baz=74,SNR=6.1							
N25A	**Grover**	73.89	49	⇑P		P	11 22 04.3	0.0
	baz=74							
MVCO	**Mesa Verde**	73.90	54	⇓P		P	11 22 04.5	+0.1
	baz=74,SNR=11							
MVCO	**Mesa Verde**	73.90	54	*e*P		P	11 22 04.2	-0.2
	comp=Z,22nm,1.1s,mb4.8							
P23A	**Jefferson**	73.93	51	⇑P		P	11 22 05.4	+0.8
	baz=74,SNR=9.0							
S21A	**Coal Bank Pass**	74.00	53	⇑P		P	11 22 05.7	+0.7
	baz=74,SNR=27							
MUD	**Monsted U'grnd**	74.02	337	*i* P		P	11 22 04.5	-0.3
	comp=Z,72nm,0.8s,mb5.5							
W17A	**Winslow**	74.04	57	⇓P		P	11 22 05.8	+0.5
	baz=74							
X16A	**Lo Mia Camp, P**	74.04	58	⇑P		P	11 22 06.1	+0.8
	baz=74,SNR=38							
V18A	**Ganado**	74.08	56	⇓P		P	11 22 05.9	+0.5
	baz=74,SNR=25							
ARMA	**Armidale**	74.09	176	*e*P		P	11 22 06.2	+0.9
ARMA				*e*PCP		PcP	11 22 27.5	+7.5
ARMA	**Armidale**	74.09	176	*e*P		P	11 22 06.0	+0.8
	comp=Z,66nm,1.2s,mb5.2							
U19A	**Dine' College,**	74.11	55	⇑P		P	11 22 06.1	+0.5
	baz=74,SNR=26							
R22A	**Saguache, Gunn**	74.21	52	⇓P		P	11 22 06.9	+0.8
	baz=74,SNR=18							
GKP	**Gorka Klasztor**	74.21	332	*e*P		P	11 22 05.8	-0.1
GKP				*e*S		S	11 31 33.5	+0.2
GKP				LMZ			11 50 55.1	
	comp=Z,500nm,34.0s							
GKP	**Gorka Klasztor**	74.21	332	*e*P		P	11 22 05.8	-0.1
GKP				*e*S		S	11 31 33.5	+0.3
Q23A	**Hartsel**	74.26	51	⇑P		P	11 22 06.7	+0.2
	baz=74,SNR=6.9							
114A	**Black Gap (USA**	74.27	60	⇑P		P	11 22 06.9	+0.3
	baz=74,SNR=19							
GRSN	**GIRESUNGRSN**	74.31	312	*i* P		P	11 22 06.3	-0.4
KELT	**Kelkit**	74.32	311	*i* P		P	11 22 07.0	+0.2
P24A	**Kohler Place,**	74.35	50	⇑P		P	11 22 07.0	0.0
	baz=74							
Z15A	**Gila River Ind**	74.36	59	⇑P		P	11 22 07.2	+0.1
	baz=74							
O25A	**Wiggins**	74.37	49	⇓P		P	11 22 07.4	+0.3
	baz=74,SNR=10							
Y16A	**Circle Bar Ran**	74.38	58	⇑P		P	11 22 08.2	+0.9
	baz=74,SNR=29							
LVV	**L'vov**	74.44	326	*e*P		P	11 22 06.7	-0.6
LVV				*i* S		S	11 31 35.7	-0.1
LVV				*e*			11 32 14.5	
LVV				MLR		MLR		
	comp=Z,500nm,21.0s							
LVV				MLR		MLR		
	comp=N,300nm,19.0s							
LVV				MLR		MLR		
	comp=E,300nm,19.0s							
U20A	**Newcomb**	74.46	54	⇑P		P	11 22 07.9	+0.2
	baz=74							
X17A	**Forest Lakes**	74.48	57	⇑P		P	11 22 08.6	+0.8
	baz=74,SNR=27							
S22A	**4UR Ranch, Cre**	74.50	52	⇓P		P	11 22 08.7	+0.8
	baz=74,SNR=17							
KIS	**Kishinev**	74.55	321	*e*P		P	11 22 06.0	-2.0
	comp=E,500nm,1.3s,mb6.1							
KIS				*e*pP		pP	11 22 31.0	+3.1
KIS	**Kishinev**	74.55	321	*e*PP		PP	11 24 50.0	-4.8
KIS				*e*S		S	11 31 35.0	-2.2
KIS	**Kishinev**	74.55	321	*e*P		P	11 22 06.0	-2.0
KIS				*e**PP		pP	11 22 31.0	+3.1
KIS				*e*			11 24 50.0	
KIS				*e*S		S	11 31 35.0	-2.2
KIS				*e*PS			11 32 10.0	
KIS				pmax		pmax		
	comp=Z,540nm,1.3s,mb6.1							
KIS				MLR		MLR		
	comp=N,300nm,20.0s							
KIS				MLR		MLR		
	comp=Z,600nm,20.0s							
KIS				MLR		MLR		
	comp=Z,600nm,21.0s							
V19A	**Window Rock**	74.60	55	⇓P		P	11 22 09.1	+0.6
	baz=74,SNR=5.2							
Q24A	**Divide**	74.60	51	⇓P		P	11 22 08.9	+0.5
	baz=74,SNR=8.7							
T21A	**Navajo Lake**	74.61	53	⇓P		P	11 22 09.0	+0.4
	baz=74							
P25A	**Willow Gulch B**	74.76	50	⇑P		P	11 22 09.5	+0.1
	baz=74,SNR=7.2							
BEST	**Besiri**	74.78	308	*i* P		P	11 22 11.1	+1.7
Z16A	**Peralta Trail,**	74.78	58	⇑P		P	11 22 10.0	+0.5
	baz=74							
W19A	**Sanders**	74.81	56	⇓P		P	11 22 10.0	+0.3
	baz=74,SNR=6.6							
EYMN	**Ely**	74.81	37	*e*P		P	11 22 08.3	-1.2
	comp=Z,44nm,0.8s,mb5.2							
214A	**Organ Pipe Nat**	74.85	60	⇓P		P	11 22 10.7	+0.7
	baz=75							
X18A	**Snowflake**	74.87	57	⇑P		P	11 22 10.5	+0.4
	baz=75,SNR=10							
V20A	**Brimhall**	74.89	55	⇓P		P	11 22 10.3	+0.1
	baz=75,SNR=9.3							
Y17A	**Roosevelt**	74.89	58	⇓P		P	11 22 10.8	+0.6
	baz=75,SNR=16							
OGNE	**Ogallala**	74.90	47	⇓P		P	11 22 09.8	-0.3
	baz=75,SNR=7.7							
OGNE	**Ogallala**	74.90	47	*e*P		P	11 22 09.6	-0.5
	comp=Z,98nm,0.9s,mb5.5							
U21A	**Nageezi**	74.93	54	⇓P		P	11 22 10.2	-0.2
	baz=75,SNR=12							
T22A	**Edith**	74.96	53	⇓P		P	11 22 10.5	-0.1
	baz=75,SNR=13							
S23A	**Nye Farm, Mont**	75.00	52	⇑P		P	11 22 11.0	+0.3
	baz=75							
KWP	**Kalwaria Pacla**	75.11	326	*e*P		P	11 22 11.7	+0.5
KWP				*e*PcP		PcP	11 22 20.5	-3.9
KWP				*e*S		S	11 31 45.1	+1.7
KWP				LMZ			11 52 29.7	
	comp=Z,800nm,31.6s							
KWP	**Kalwaria Pacla**	75.11	326	*e*P		P	11 22 11.6	+0.4
	comp=Z,171nm,0.8s,mb5.8							
KWP	**Kalwaria Pacla**	75.11	326	⇑P		P	11 22 12.1	+0.9
KWP	**Kalwaria Pacla**	75.11	326	⇑*i*P		P	11 22 12.1	+0.9
116A	**Eloy**	75.13	59	⇓P		P	11 22 12.0	+0.4
	baz=75,SNR=9.7							
R24A	**Sanders Place,**	75.14	51	⇓P		P	11 22 11.6	0.0
	baz=75,SNR=12							
Q25A	**Bedland, Calha**	75.14	50	⇓P		P	11 22 11.7	+0.1
	baz=75,SNR=13							
ORE	**Reay**	75.14	345	*e*P		P	11 22 10.9	-0.3
SDCO	**Great Sand Dun**	75.25	52	*e*P		P	11 22 11.9	-0.3
	comp=Z,27nm,1.5s,mb4.8							
ERBA	**Erbaa**	75.29	313	*i* P		P	11 22 13.8	+1.4
W20A	**Ramah**	75.33	55	⇓P		P	11 22 12.6	-0.1
	baz=75,SNR=20							
Y18A	**Canyon Day Jun**	75.33	57	⇑P		P	11 22 13.1	+0.3
	baz=75,SNR=31							
X19A	**St. Johns**	75.34	56	⇓P		P	11 22 12.9	+0.2
	baz=75,SNR=45							
KEMA	**Kemaliye**	75.36	311	*i* P		P	11 22 13.1	+0.3
V21A	**Milan**	75.37	54	⇓P		P	11 22 13.3	+0.3
	baz=75							
Z17A	**San Carlos Hig**	75.39	58	⇑P		P	11 22 13.6	+0.5
	baz=75,SNR=9.0							
U22A	**Llaves**	75.43	53	⇓P		P	11 22 13.6	+0.3
	baz=75,SNR=9.2							
T23A	**Casias Ranch,**	75.44	52	⇓P		P	11 22 13.9	+0.6
	baz=75							
MARD	**Mardin**	75.46	308	*i* P		P	11 22 13.5	+0.1
S24A	**Houchin Ranch,**	75.49	52	⇓P		P	11 22 14.0	+0.4
	baz=75,SNR=7.4							
RSC	**Scourie**	75.59	346	⇑*e*P		P	11 22 13.1	-0.6
ELZG	**Elazig**	75.63	310	*i* P		P	11 22 16.1	+1.7
ECSD	**EROS Data Cent**	75.64	42	*e*P		P	11 22 13.2	-1.1
	comp=Z,82nm,1.4s,mb5.3							
STKA	**Stephens Creek**	75.64	185	*e*P		P	11 22 13.7	-0.5
	comp=Z,5.4nm,0.8s,mb4.3							
STKA	**Stephens Creek**	75.64	185	P		P	11 22 14.0	-0.2
	comp=Z,21nm,0.7s,mb5.0,baz=345,slow=7.3,SNR=32							
STKA				pP		pP	11 22 35.5	+1.3
	comp=Z,17nm,0.7s,baz=340,slow=7.8,SNR=7.2							
STKA				LR		LR	11 51 23.8	
	comp=Z,285nm,20.8s,baz=21,slow=32							
BUR08	**Bucovina Ar. S**	75.64	324	*e*P		P	11 22 14.5	+0.3
BUR01	**Bucovina Ar. S**	75.66	324	P		P	11 22 14.7	+0.3
BURAR	**Bucovina Array**	75.66	324	⇓P		P	11 22 15.0	+0.6
BURAR	**Bucovina Array**	75.66	324	⇓*i*P		P	11 22 15.0	+0.6
216A	**Three Points,**	75.66	59	⇑P		P	11 22 15.1	+0.4
	baz=75,SNR=12							
SCER	**sogukcermik**	75.68	312	*e*P		P	11 22 16.1	+1.4
Y19A	**Nutrioso**	75.68	57	⇑P		P	11 22 15.5	+0.8
	baz=75,SNR=13							
117A	**Oracle**	75.72	59	⇑P		P	11 22 15.5	+0.5
	baz=76,SNR=12							
BOYT	**Boyabat**	75.73	314	*i* P		P	11 22 15.8	+0.9
OJC	**Ojcow**	75.78	328	*i* P		P	11 22 15.2	+0.2
OJC				*e*S		S	11 31 50.3	-0.4
OJC				L			11 57 22.4	
	comp=Z,0.5nm,22.7s							
Z18A	**Geronimo**	75.80	58	⇑P		P	11 22 15.8	+0.4
	baz=76							
MVH1	**Achvaich**	75.81	345	*e*P		P	11 22 14.4	-0.6
U23A	**El Rito**	75.85	53	⇑P		P	11 22 16.1	+0.5
	baz=76,SNR=40							
STHS	**Stebnicka Huta**	75.86	327	*e*P		P	11 22 15.8	+0.3
	comp=Z,61nm,1.0s,mb5.3							
STHS	**Stebnicka Huta**	75.86	327	*e*P		P	11 22 15.8	+0.3
STHS				pmax		pmax		
	comp=Z,61nm,1.0s,mb5.3							
STHS	**Stebnicka Huta**	75.86	327	*e*P		P	11 22 15.8	+0.3
TUC	**Tucson**	75.87	59	*e*P		P	11 22 15.7	-0.1
	comp=Z,11nm,1.0s,mb4.5							
BSEG	**Bad Segeberg**	75.88	336	*e*P		P	11 22 15.5	0.0
	comp=Z,116nm,0.9s,mb5.6							
BSEG	**Bad Segeberg**	75.88	336	*e*P		P	11 22 15.5	0.0
BSEG				pmax		pmax		
	comp=Z,116nm,0.9s,mb5.6							
TESR		75.89	322	⇑P		P	11 22 15.7	0.0
TESR		75.89	322	⇑*i*P		P	11 22 15.7	0.0
S25A	**Robets Cordova**	75.92	51	⇑P		P	11 22 16.6	+0.5
	baz=76							
TLCR		75.92	320	⇓P		P	11 22 16.3	+0.4
TLCR		75.92	320	⇓*i*P		P	11 22 16.3	+0.4
MCD	**Coleburn Disti**	75.95	344	*e*P		P	11 22 15.4	-0.4
RUE	**Ruedersdorf**	76.03	333	*e*P		P	11 22 16.1	-0.3
	comp=Z,92nm,0.9s,mb5.5							
MALT	**Malatya**	76.07	310	*e*P		P	11 22 18.1	+1.2
	comp=Z,45nm,0.9s,mb5.2							
MALT	**Malatya**	76.07	310	P		P	11 22 18.6	+1.7
MALT	**Malatya**	76.07	310	⇑*i*P		P	11 22 18.5	+1.6
UZH	**Uzhgorod**	76.07	326	*e*P		P	11 22 17.3	+0.6
UZH				*i*			11 22 29.3	
UZH				*i*			11 22 51.3	
UZH				*e*			11 25 05.0	
UZH				*e*PPP			11 26 50.5	
UZH				*e*S		S	11 31 51.0	-3.0
UZH				*e*			11 32 20.0	
UZH				*e*PS			11 32 27.5	
UZH				*e*SSS			11 39 58.0	
UZH				MLR		MLR		
	comp=N,380nm,17.0s							
UZH				MLR		MLR		
	comp=E,400nm,17.0s							
UZH				MLR		MLR		
	comp=Z,250nm,17.0s							
Z19A	**T-Link Ranch,**	76.13	57	⇑P		P	11 22 18.5	+1.2
	baz=76							
RRR	**Rubha Reidh**	76.17	346	*e*P		P	11 22 16.4	-0.6
CRVS	**Cervenica-Dubn**	76.19	327	*e*P		P	11 22 17.5	+0.1
	comp=Z,97nm,1.8s,mb5.2							
CRVS				LR		LR		
	comp=Z,300nm,35.8s							
CRVS	**Cervenica-Dubn**	76.19	327	*e*P		P	11 22 17.5	+0.1
217A	**Green Valley**	76.22	59	⇓P		P	11 22 17.9	0.0
	baz=76,SNR=13							
NIE	**Niedzica**	76.22	328	*e*P		P	11 22 18.4	+0.9
Y20A	**Horse Springs,**	76.24	56	⇓P		P	11 22 18.9	+0.9
	baz=76,SNR=38							
CFR	**Carcaliu**	76.24	321	⇑P		P	11 22 17.9	+0.1
CFR	**Carcaliu**	76.24	321	P		P	11 22 18.1	+0.4
CFR	**Carcaliu**	76.24	321	⇑*i*P		P	11 22 17.9	+0.2
V23A	**Ortiz Mt. (NFS**	76.26	54	⇑P		P	11 22 18.3	+0.3
	baz=76,SNR=11							
RRH	**Rhenigidale**	76.26	346	⇑*i*P		P	11 22 17.0	-0.6
MDO	**Dochfour**	76.29	345	⇑*e*P		P	11 22 16.9	-0.9
T25A	**Trinidad**	76.30	51	⇑P		P	11 22 18.0	-0.2
	baz=76,SNR=14							
U24A	**Moreno Valley**	76.32	52	⇓P		P	11 22 18.9	+0.6
	baz=76,SNR=11							
W22A	**Albuquerque**	76.33	54	⇑P		P	11 22 18.8	+0.4
	baz=76							
BMR	**Baia Mare**	76.34	325	P		P	11 22 19.1	+0.9
VRI	**Vrincioaia**	76.35	322	⇓P		P	11 22 19.0	+0.7
VRI	**Vrincioaia**	76.35	322	P		P	11 22 20.0	+1.7
VRI	**Vrincioaia**	76.35	322	⇓*i*P		P	11 22 19.0	+0.7
AKCD	**Akcadag**	76.36	310	*i* P		P	11 22 19.7	+1.2
CTKT	**Corum**	76.37	314	*e*P		P	11 22 18.8	+0.3
TRPA	**Tarpa**	76.37	326	⇑*i*P		P	11 22 18.7	+0.3
PLOR	**Plostina**	76.40	322	⇑P		P	11 22 18.1	-0.5
PLOR	**Plostina**	76.40	322	⇑*i*P		P	11 22 18.1	-0.5
KAC	**Achnashellach**	76.41	345	⇑*i*P		P	11 22 18.1	-0.3
BALT	**Daday**	76.43	315	*i* P		P	11 22 19.1	+0.3
FORT	**Forrest**	76.46	197	*e*P		P	11 22 19.0	+0.1
	comp=Z,147nm,0.7s,mb5.8							
FORT	**Forrest**	76.46	197	*e*P		P	11 22 19.0	+0.1
	comp=Z,154nm,0.7s,mb5.8							
119A	**Ashpeak Ranch,**	76.47	58	⇓P		P	11 22 19.5	+0.2
	baz=76,SNR=7.3							
KSP	**Ksiaz**	76.55	331	*e*P		P	11 22 19.6	+0.3
KSP				*e*PP		PP	11 25 10.2	-1.3
KSP				*e*S		S	11 32

comp=Z,92nm,1.1s,mb5.4
LIKS Likavka 76.99 328 *e*P **P 11 22 21.7 -0.1**
MLR Muntele Rosu 76.99 322 ⇓P **P 11 22 22.5 +0.5**
MLR Muntele Rosu 76.99 322 P **P 11 22 22.1 +0.1**
comp=Z,62nm,0.7s,mb5.5,baz=145,slow=6.9,SNR=34
MLR Muntele Rosu 76.99 322 P **P 11 22 23.8 +1.9**
MLR Muntele Rosu 76.99 322 ⇓*i*P **P 11 22 22.5 +0.6**
QRN Al-Qurain 77.02 297 *e*P **P 11 22 22.2 -0.2**
219A White Tail Can 77.02 58 ⇓P **P 11 22 22.8 +0.4**
baz=77,SNR=29
120A U Bar Ranch, L 77.03 57 ⇑P **P 11 22 22.9 +0.5**
baz=77,SNR=18
AMRR Amara 77.04 321 ⇑P **P 11 22 23.5 +1.3**
AMRR Amara 77.04 321 ⇑*i*P **P 11 22 23.5 +1.3**
KAR1 Arisaig 77.06 345 ⇑*i*P **P 11 22 21.8 -0.3**
Y22A Socorro 77.06 55 ⇓P **P 11 22 23.0 +0.4**
baz=77,SNR=11
W24A Lazy 6 Ranch, 77.09 53 ⇓P **P 11 22 23.2 +0.5**
baz=77,SNR=23
BBOO Buckleboo 77.09 190 *e*P **P 11 22 22.4 0.0**
comp=Z,19nm,0.7s,mb4.9
BBOO *e*PCP pP 11 22 43.1 +0.7
V25A Rancho No Teng 77.10 53 ⇓P **P 11 22 23.2 +0.5**
baz=77
NAY Al-Naaiem 77.11 298 *e*P **P 11 22 22.4 -0.5**
NAY AMb AMB 11 22 24.1
comp=Z,72nm,0.8s,mb5.4
BNM Barren Site 77.11 55 *e*P **P 11 22 23.4 +0.6**
comp=Z,18nm,1.3s,mb4.6
RDF Al-Radifah 77.13 298 *e*P **P 11 22 23.3 +0.2**
RDF AMb AMB 11 22 24.9
comp=Z,198nm,0.8s,mb5.9
NRDL Niedersach Rie 77.19 335 *e*P **P 11 22 21.9 -1.0**
U26A Atchley Ranch, 77.20 52 ⇑P **P 11 22 23.4 +0.1**
baz=77,SNR=9.9
GZT Gaziantep 77.23 310 *i*P **P 11 22 24.1 +0.6**
EBH Black Hill 77.25 344⇑*e*P **P 11 22 22.7 -0.4**
COWI Conover 77.26 37 *e*P **P 11 22 21.7 -1.8**
comp=Z,18nm,0.6s,mb5.0
CLL Collm 77.28 333 *e*P **P 11 22 23.0 -0.5**
comp=Z,132nm,0.6s,mb5.8
CLL Collm 77.28 333⇑*i*P **P 11 22 23.2 -0.3**
comp=Z,134nm,0.6s,mb5.8
CLL *e*S S 11 32 06.0 -1.1
CLL LR LR
comp=Z,600nm,20.0s
CLL Collm 77.28 333⇑*i*P **P 11 22 23.2 -0.3**
CLL *e*S S 11 32 06.0 -1.1
CLL pmax pmax
comp=Z,18nm,0.6s,mb5.0
CLL MLR MLR
comp=Z,600nm,20.0s
CLL Collm 77.28 333⇑*i*P **P 11 22 23.2 -0.3**
comp=Z,134nm,0.6s,mb5.8
CLL *i* 11 22 28.7
CLL *e*pP pP 11 22 41.0 -2.5
CLL *e*PP PP 11 25 16.0 -1.7
CLL *e*S S 11 32 06.0 -1.1
CLL *e*ScS ScS 11 32 33.0 -1.4
CLL *e*sS sS 11 32 35.0 -6.1
CLL *e*PS 11 32 55.0
CLL *e*SS SS 11 37 06.0 +0.7
CLL *e*(SSS) 11 41 00.0
CLL LmV 12 00 00.0
comp=Z,600nm,20.0s
CDAG Cicekdag 77.32 313 *i*P **P 11 22 24.4 +0.5**
BRG Berggiesshubel 77.34 332 *e*P **P 11 22 23.2 -0.6**
comp=Z,45nm,1.2s,mb5.1
BRG Berggiesshubel 77.34 332 *i*P **P 11 22 23.5 -0.3**
comp=Z,19nm,0.6s,mb5.0
BRG PP PP 11 25 16.2 -1.9
comp=Z,12nm,0.9s
BRG S S 11 32 05.0 -2.7
BRG
comp=N,514nm,21.5s
BRG
comp=E,271nm,16.0s
BRG
comp=Z,503nm,19.9s
BRG Berggiesshubel 77.34 332 *i*P **P 11 22 23.5 -0.3**
BRG 11 25 16.2
BRG S S 11 32 05.0 -2.7
BRG pmax pmax
comp=Z,11nm,1.0s,mb4.5
BRG MLR MLR
comp=N,690nm,21.5s
BRG MLR MLR
comp=E,308nm,16.0s
BRG MLR MLR
comp=Z,162nm,19.9s
SCHQ Schefferville 77.35 20 *e*P **P 11 22 23.2 -0.6**
comp=Z,29nm,0.8s,mb5.0
SCHQ Schefferville 77.35 20 P **P 11 22 23.3 -0.4**
comp=Z,18nm,0.5s,mb5.1,baz=347,slow=5.9,SNR=89
SCHQ LR LR 11 59 19.9
comp=Z,378nm,19.8s,baz=338,slow=38
PSN Preselentsi 77.36 320 *i*P **P 11 22 24.6 +0.6**
DRGR 77.36 325 ⇑P **P 11 22 24.5 +0.5**
DRGR 77.36 325 ⇑*i*P **P 11 22 24.5 +0.5**
ESY Stoneypath 77.37 343⇑*e*P **P 11 22 23.0 -0.8**
PVCC Panska Ves 77.41 331 *e*P **P 11 22 24.4 +0.2**
PVCC MLR MLR
comp=Z,500nm,18.3s
PVCC Panska Ves 77.41 331⇑*e*P **P 11 22 24.4 +0.2**
PVCC AMS AMS 12 02 10.0
comp=Z,500nm,18.3s
VOIR 77.43 323 ⇓P **P 11 22 25.2 +0.8**
VOIR 77.43 323 P **P 11 22 25.3 +0.9**
VOIR 77.43 323 ⇓*i*P **P 11 22 25.2 +0.8**
319A Douglas 77.44 59 ⇓P **P 11 22 25.0 +0.3**
baz=77,SNR=22
EAB Aberfoyle 77.47 344⇑*e*P **P 11 22 24.4 0.0**
SULR 77.48 321 ⇑P **P 11 22 25.2 +0.5**
SULR 77.48 321 ⇑*i*P **P 11 22 25.2 +0.5**
EDI Edinburgh 77.48 344 *e*P **P 11 22 23.7 -0.8**
EDI AMB AMB 11 22 27.2
comp=Z,68nm,2.7s,mb4.9
X24A Lazy VL Ranch, 77.53 54 ⇑P **P 11 22 25.4 +0.3**
baz=77,SNR=8.8
220A Playas Peak, P 77.54 58 ⇓P **P 11 22 25.0 -0.2**
baz=77,SNR=23
Z22A Elephant Butte 77.54 56 ⇓P **P 11 22 25.3 0.0**
baz=77,SNR=22
VYHS Vyhne 77.55 328 *i*P **P 11 22 25.3 +0.3**
comp=Z,26nm,0.9s,mb5.0
VYHS *e*S S 11 32 08.8 -1.2
VYHS LR LR
comp=Z,400nm,37.0s
VYHS Vyhne 77.55 328 *i*P **P 11 22 25.3 +0.3**
VYHS *e*S S 11 32 08.8 -1.2
121A Cookes Peak, D 77.55 57 ⇓P **P 11 22 25.6 +0.3**
baz=77,SNR=20
EBL Broad Law 77.60 343 *e*P **P 11 22 24.6 -0.5**
PSZ Piszkesteto 77.60 327 *e*P **P 11 22 25.5 +0.2**
comp=Z,70nm,0.8s,mb5.4
PSZ Piszkesteto 77.60 327 P **P 11 22 26.0 +0.7**
PSZ Piszkesteto 77.60 327⇑*i*P **P 11 22 25.9 +0.6**
PSZ Piszkesteto 77.60 327⇑*e*P **P 11 22 25.8 +0.5**
V26A Tequesquite Ra 77.60 52 ⇑P **P 11 22 25.2 -0.4**
baz=77,SNR=7.3
EAU Auchinoon 77.61 344⇑*e*P **P 11 22 24.9 -0.3**
BR131 Keskin Array S 77.63 314 *e*P **P 11 22 26.1 +0.4**
comp=Z,18nm,0.7s,mb4.9
BRTR Keskin Array B 77.63 314 P **P 11 22 26.0 +0.4**
comp=Z,26nm,0.8s,mb5.0,baz=76,slow=4.0,SNR=91
BRTR LR LR 12 03 20.8
comp=Z,229nm,21.2s,baz=242,slow=41
W25A X Bar L Ranch, 77.63 53 ⇑P **P 11 22 26.1 +0.4**
baz=77,SNR=13
KOLL Kolacno 77.64 328 *e*P **P 11 22 25.9 +0.4**
KOLL Kolacno 77.64 328 *e*P **P 11 22 25.9 +0.4**
CBKS Cedar Bluff 77.66 48 ⇓P **P 11 22 24.4 -1.4**
baz=77,SNR=5.1
CBKS Cedar Bluff 77.66 48 *e*P **P 11 22 24.4 -1.5**
comp=Z,18nm,0.7s,mb4.9
CBKS Cedar Bluff 77.66 48 *e*P **P 11 22 24.4 -1.4**
CBKS pmax pmax
comp=Z,18nm,0.7s,mb4.9
CLZ Clausthal 77.67 334 *e*P **P 11 22 25.9 +0.3**
comp=Z,139nm,1.0s,mb5.6
CLZ Clausthal 77.67 334 *e*P **P 11 22 25.9 +0.3**
CLZ pmax pmax
comp=Z,139nm,1.0s,mb5.6
AVNT Avonos 77.68 312 *i*P **P 11 22 26.7 +0.8**
VRAC Vranov 77.71 330 ⇑P **P 11 22 26.3 +0.4**
VRAC Vranov 77.71 330 P **P 11 22 26.4 +0.5**
comp=Z,60nm,0.8s,mb5.4,baz=38,slow=5.1,SNR=30
VRAC Vranov 77.71 330 P **P 11 22 26.8 +0.9**
VRAC Vranov 77.71 330⇑*i*P **P 11 22 26.3 +0.4**
ANDN Andirin 77.75 311 *i*P **P 11 22 27.3 +1.0**
SGKT Sivrigoynuk 77.81 315 *i*P **P 11 22 26.9 +0.3**
PRA Prague 77.85 331 ⇑P **P 11 22 28.0 +1.4**
PRA S S 11 32 14.0 +0.8
PRA AMS AMS 12 03 00.0
PGBU Glenifferbraes 77.85 344 *e*P **P 11 22 26.4 -0.2**
PGBU AMB AMB 11 22 29.0
comp=Z,150nm,4.2s
PRU Pruhonice 77.88 331⇑*i*P **P 11 22 27.6 +0.8**
PRU *e*S S 11 32 12.9 -0.7
PRU MLR MLR
comp=Z,500nm,15.9s
PRU Pruhonice 77.88 331⇑*i*P **P 11 22 27.6 +0.8**
PRU *e*S S 11 32 12.9 -0.7
PRU AMS AMS 12 02 20.0
comp=Z,500nm,15.9s
122A Conniff Cattle 77.91 56 ⇑P **P 11 22 27.7 +0.4**
baz=78
221A Mesquite Ranch 77.92 57 ⇓P **P 11 22 27.5 +0.2**
baz=78
WIT Witteveen 77.92 337 *e*P **P 11 22 28.6 +1.6**
comp=Z,488nm,0.8s,mb6.3
KUZU Kuzuini 77.92 310 *i*P **P 11 22 28.3 +1.0**
320A Kipp Ranch, An 77.93 58 ⇓P **P 11 22 27.9 +0.4**
baz=78,SNR=9.2
Z23A Rita Site, Whi 77.97 55 ⇑P **P 11 22 28.4 +0.7**
baz=78
Y24A Capitan 77.97 54 ⇓P **P 11 22 28.0 +0.3**
baz=78,SNR=12
X25A Clemmons Ranch 78.00 53 ⇓P **P 11 22 28.3 +0.5**
baz=78
BBAL Bala 78.03 314 *i*P **P 11 22 28.3 +0.5**
EKA Eskdalemuir Ar 78.03 343 P **P 11 22 27.3 -0.2**
comp=Z,26nm,0.7s,mb5.1,baz=22,slow=4.8,SNR=63
ESK Eskdalemuir 78.06 343 P **P 11 22 27.8 +0.1**
comp=Z,269nm,0.8s,mb6.0,SNR=8.7
ESK Eskdalemuir 78.06 343 P **P 11 22 26.6 -1.1**
ESK AMB AMB 11 22 29.3
comp=Z,81nm,2.2s,mb5.1
ESK Eskdalemuir 78.06 343 *e*P **P 11 22 26.6 -1.1**
ESK AMB AMB 11 22 29.3
comp=Z,81nm,2.2s,mb5.1
ESK Eskdalemuir 78.06 343 *e*P **P 11 22 26.9 -0.8**
comp=Z,36nm,0.8s,mb5.2
ESK Eskdalemuir 78.06 343 *i*P **P 11 22 27.8 +0.1**
IBBN Ibbenburen 78.06 336 *e*P **P 11 22 27.6 -0.1**
comp=Z,107nm,0.7s,mb5.7
PRD Provadia 78.10 320 *i*P **P 11 22 28.3 +0.2**
W26A Owens Ranch, T 78.12 53 ⇑P **P 11 22 28.8 +0.4**
baz=78
TREC Trest 78.13 330 *e*P **P 11 22 28.2 0.0**
TREC MLR MLR
comp=Z,400nm,20.1s
TREC Trest 78.13 330⇑*e*P **P 11 22 28.2 0.0**
TREC AMS AMS 11 59 40.0
comp=Z,400nm,20.1s
ECK Cauldkaine Hil 78.17 343⇑*e*P **P 11 22 27.9 -0.4**
HENT Hendek 78.21 316 *i*P **P 11 22 29.4 +0.6**
TANN Tannenbergstha 78.23 333 *e*P **P 11 22 28.5 -0.2**
comp=Z,20nm,0.8s,mb4.9
MODS Modra-Piesok 78.24 329 *e*P **P 11 22 30.2 +1.4**
MODS Modra-Piesok 78.24 329 *e*P **P 11 22 30.1 +1.3**
222A Williams Famil 78.26 57 ⇑P **P 11 22 29.3 0.0**
baz=78
XAL Allendale 78.27 343⇑*i*P **P 11 22 28.3 -0.6**
BUD Budapest 78.30 327⇑*e*P **P 11 22 31.9 +2.7**
MOX Moxa 78.31 333 *e*P **P 11 22 28.8 -0.4**
comp=Z,71nm,1.1s,mb5.3
MOX *e*S S 11 32 20.0 +1.8
MOX
comp=Z,400nm,19.0s
MOX Moxa 78.31 333 *e*P **P 11 22 29.2 0.0**
comp=Z,41nm,0.8s,mb5.2
MOX Moxa 78.31 333 *e*P **P 11 22 28.8 -0.4**
MOX *e*S S 11 32 20.0 +1.8
MOX pmax pmax
comp=Z,71nm,1.1s,mb5.3
MOX MLR MLR
comp=Z,400nm,19.0s
NKC Novy Kostel 78.39 332 *e*P **P 11 22 28.8 -0.8**
NKC MLR MLR
comp=Z,500nm,20.7s
NKC Novy Kostel 78.39 332⇑*e*P **P 11 22 28.8 -0.8**
NKC AMS AMS 12 01 20.0
comp=Z,500nm,20.7s
123A Bell Site, Whi 78.40 56 ⇓P **P 11 22 30.0 +0.1**
baz=78
Y25A Mesa, Roswell 78.41 54 ⇓P **P 11 22 29.9 -0.2**
baz=78,SNR=7.7
Z24A Sheeppen Canyo 78.44 55 ⇓P **P 11 22 30.4 +0.2**
baz=78,SNR=11
ZST Bratislava 78.45 329 *e*P **P 11 22 30.3 +0.3**
comp=Z,45nm,1.1s,mb5.1
ZST *e*S S 11 32 25.8 +6.1
ZST *e*S S 11 32 26.2 +6.5
ZST Bratislava 78.45 329 *e*P **P 11 22 30.3 +0.3**
ZST pmax pmax
comp=Z,45nm,1.1s,mb5.1
ZST Bratislava 78.45 329 *e*P **P 11 22 30.3 +0.3**
ZST *e*S S 11 32 25.8 +6.1
X26A CR and CF Fran 78.48 53 ⇑P **P 11 22 30.3 -0.1**
baz=78,SNR=10.0
W27A Bowe Ranch, En 78.54 52 ⇑P **P 11 22 30.8 0.0**
baz=78,SNR=8.3
COBT Iskenderun 78.56 310 *i*P **P 11 22 31.5 +0.7**
GCD Castle Douglas 78.63 344⇑*e*P **P 11 22 30.3 -0.6**
WTSB Winterswijk 78.64 336⇑*e*P **P 11 22 30.6 -0.4**
comp=Z,132nm,0.7s,mb5.9
SCIA State Center 78.66 42 *e*P **P 11 22 30.6 -0.6**
comp=Z,89nm,0.8s,mb5.6
UBBA Unterbreizbach 78.68 334 *e*P **P 11 22 31.8 +0.6**
ZIMR 78.68 321 ⇓P **P 11 22 31.6 +0.3**
ZIMR 78.68 321 ⇓*i*P **P 11 22 31.6 +0.3**
YURE YUREGIR 78.68 311 *i*P **P 11 22 32.9 +1.4**
SZH Strazhica 78.72 321 *i*P **P 11 22 31.6 0.0**
223A Chaparral, Ant 78.74 56 ⇑P **P 11 22 32.5 +0.6**
baz=78
BZS Buzias 78.76 325 ⇓P **P 11 22 31.7 -0.1**
BZS Buzias 78.76 325 ⇓*i*P **P 11 22 31.7 0.0**
GAL1 Galloway 78.78 344 P **P 11 22 31.1 -0.6**
GAL1 AMB AMB 11 22 33.8
comp=Z,52nm,0.8s,mb5.4
GAL1 Galloway 78.78 344⇑*e*P **P 11 22 31.1 -0.6**
GAL1 AMB AMB 11 22 33.8
comp=Z,52nm,0.8s,mb5.4
GULE Gulek 78.81 311 *i*P **P 11 22 33.3 +1.1**
X27A F and S Farms, 78.82 52 ⇑P **P 11 22 32.3 0.0**
baz=78,SNR=5.3
124A Stringfield Ra 78.83 55 ⇓P **P 11 22 32.5 +0.1**
baz=78,SNR=10
Z25A Roswell 78.86 54 ⇑P **P 11 22 32.2 -0.3**
baz=79,SNR=12
XDE Dent Fell 78.87 343 *e*P **P 11 22 32.6 +0.4**
CNB Canberra Magne 78.89 178 *e*P **P 11 22 33.8 +1.5**
Y26A Elida 78.92 53 ⇓P **P 11 22 32.9 +0.1**
baz=79
KHC Kasperske Hory 78.94 331 *e*P **P 11 22 32.8 +0.2**
comp=Z,105nm,0.8s,mb5.7
KHC Kasperske Hory 78.94 331⇑*i*P **P 11 22 32.8 +0.1**
KHC *e*S S 11 32 23.3 -1.6
KHC MLR MLR
comp=Z,500nm,16.2s
KHC Kasperske Hory 78.94 331⇑*i*P **P 11 22 32.8 +0.1**
KHC *e*S S 11 32 23.3 -1.6
KHC AMS AMS 12 00 50.0
comp=Z,500nm,16.2s
BUG Bochum-Univer 78.96 336 *e*P **P 11 22 32.4 -0.4**
comp=Z,128nm,0.9s,mb5.8
HPK Haverah Park 78.98 342⇑*e*P **P 11 22 32.7 -0.1**
HPK AMB AMB 11 22 35.5
comp=Z,166nm,0.9s,mb5.9
KSU1 Kansas State U 79.09 45 *e*P **P 11 22 31.8 -1.9**
comp=Z,57nm,1.0s,mb5.4
CONA Conrad Observa 79.13 329 *i*P **P 11 22 34.2 +0.5**
comp=Z,75nm,0.7s,mb5.7,SNR=63
GEC2 GERESS Array S 79.14 331 *e*P **P 11 22 33.7 -0.1**
GEC2 pmax pmax
comp=Z,43nm,0.8s,mb5.3
BORA Eskisehir 79.14 316 *e*P **P 11 22 34.8 +0.9**
WET Wettzell 79.17 332 *e*P **P 11 22 34.1 +0.2**
comp=Z,105nm,0.9s,mb5.7
WET Wettzell 79.17 332 *e*P **P 11 22 34.1 +0.2**
WET pmax pmax
comp=Z,105nm,0.9s,mb5.7
224A Cornudas Mount 79.23 56 ⇓P **P 11 22 34.5 -0.1**
baz=79,SNR=17
GRA1 Grafenberg Arr 79.26 333 *e*P **P 11 22 34.7 +0.3**
comp=Z,19nm,0.9s,mb4.9
GRA1 LR LR
comp=Z,600nm,18.7s
GRF Grafenberg Arr 79.26 333 *e*P **P 11 22 34.7 +0.3**
comp=Z,19nm,0.9s,mb4.9
GRF *e*L 12 02 20.6
comp=Z,570nm,18.7s
GRF Grafenberg Arr 79.26 333 *e*P **P 11 22 34.7 +0.3**
GRF pmax pmax
comp=Z,19nm,0.9s,mb4.9
GRF MLR MLR
comp=Z,600nm,18.7s
GRF Grafenberg Arr 79.26 333 *e*P **P 11 22 34.7 +0.3**
GRF pmax pmax
comp=Z,19nm,0.9s,mb4.9
GRF MLR MLR
comp=Z,600nm,18.7s
GRFO Grafenberg 79.26 333 *e*P **P 11 22 34.7 +0.3**
JFWS Jewell Farm 79.27 39 *e*P **P 11 22 33.1 -1.5**
comp=Z,16nm,0.8s,mb4.9
JFWS Jewell Farm 79.27 39 *e*P **P 11 22 33.1 -1.5**
JFWS pmax pmax
comp=Z,16nm,0.8s,mb4.9
Z26A Caprock 79.29 54 ⇓P **P 11 22 35.0 +0.1**
baz=79,SNR=33
Y27A Causey 79.33 53 ⇑P **P 11 22 34.8 -0.3**
baz=79,SNR=18
125A Gardner Draw, 79.33 55 ⇑P **P 11 22 34.9 -0.3**
baz=79,SNR=18
AMTX Amarillo 79.45 51 ⇑P **P 11 22 35.6 -0.1**
baz=79,SNR=18
AMTX Amarillo 79.45 51 *e*P **P 11 22 35.7 0.0**
comp=Z,42nm,1.1s,mb5.2
PKSM Moragy 79.49 327 ⇑P **P 11 22 34.9 -0.8**
PKSM Moragy 79.49 327 P **P 11 22 35.4 -0.3**
PKSM Moragy 79.49 327⇑*i*P **P 11 22 34.9 -0.8**
MSTX Muleshoe 79.49 53 ⇓P **P 11 22 35.9 -0.1**
baz=79
CPRX Cap Rock 79.53 54 *e*P **P 11 22 36.1 -0.1**
comp=Z,4.6nm,0.9s,mb4.3
MNTX Cornudas Mount 79.58 56 ⇑P **P 11 22 36.8 +0.3**
baz=79,SNR=31
MNTX Cornudas Mount 79.58 56 *e*P **P 11 22 35.8 -0.7**
comp=Z,13nm,0.9s,mb4.8
ULDT Uludag 79.60 317 *i*P **P 11 22 36.0 -0.4**
KBI1 Birley Grange 79.61 342⇑*i*P **P 11 22 36.0 -0.3**
GMM Mts of Mourne 79.62 345⇑*e*P **P 11 22 35.5 -0.8**
225A Deer Hill, Car 79.62 55 ⇑P **P 11 22 37.2 +0.5**
baz=79,SNR=12
MPEP Malo Peshtene 79.64 322 *i*P **P 11 22 36.3 -0.3**
TNS Taunus Mts 79.68 335 *e*P **P 11 22 36.8 +0.1**
comp=Z,102nm,0.8s,mb5.8
TNS Taunus Mts 79.68 335 *e*P **P 11 22 36.8 +0.1**
TNS pmax pmax
comp=Z,142nm,0.8s,mb5.8
126A Clayton Basin, 79.72 54 ⇓P **P 11 22 37.3 +0.1**
baz=79,SNR=6.3
BOLV Bolvadin 79.77 315 *i*P **P 11 22 37.8 +0.4**
MOA Molln 79.78 330⇑*i*P **P 11 22 37.3 +0.1**
comp=Z,54nm,0.8s,mb5.4,SNR=30
ARSA Arzberg 79.83 329⇑*i*P **P 11 22 37.7 +0.2**
comp=Z,20nm,1.3s,mb5.2,SNR=16
GDL2 Guadalupe Moun 79.83 55 *e*P **P 11 22 37.7 -0.1**
comp=Z,12nm,0.8s,mb4.8
DIM Dimitrovgrad 79.86 320 *i*P **P 11 22 38.1 +0.3**
KWE Weaver Farm 79.91 342 *e*P **P 11 22 37.4 -0.5**
HGN Heimansgroeve 79.95 336⇑*e*P **P 11 22 37.7 -0.5**
comp=Z,130nm,0.8s,mb5.8
CWF Charnwood Fore 80.04 341 *e*P **P 11 22 37.7 -0.9**
CWF AMB AMB 11 22 41.3
comp=Z,126nm,1.9s,mb5.4
MEM Membach 80.07 336 P **P 11 22 39.4 +0.6**
CLNB Carlsbad 80.07 55 *e*P **P 11 22 39.2 +0.1**
comp=Z,12nm,0.4s,mb4.1
127A Arkansas Junct 80.08 54 ⇓P **P 11 22 38.9 -0.3**
baz=80
WME Myndd Eilian 80.08 343⇑*e*P **P 11 22 38.1 -0.7**
226A Malaga, Loving 80.09 55 ⇓P **P 11 22 39.3 +0.1**
baz=80,SNR=19
TOD Tromm 80.11 334 *e*P **P 11 22 38.9 -0.1**
WPM1 Penmaenmawr 80.13 343⇑*e*P **P 11 22 38.5 -0.6**
GLMI Grayling 80.19 35 *e*P **P 11 22 38.9 -0.6**
comp=Z,61nm,0.8s,mb5.5
PLD Plovdiv 80.20 321 P **P 11 22 40.9 +1.3**
PLD Plovdiv 80.20 321 P **P 11 22 40.9 +1.3**
PLD Plovdiv 80.20 321 *i*P **P 11 22 40.1 +0.5**
WLF1 Llynfaes 80.20 343 *e*P **P 11 22 39.4 0.0**
WLF1 AMB AMB 11 22 41.2
comp=Z,282nm,3.7s
GDZ Gediz 80.23 316 *i*P **P 11 22 39.1 -0.8**
ABH Alteburg 80.26 335 *e*P **P 11 22 39.6 -0.2**
YLL Llanberis 80.30 343⇑*e*P **P 11 22 39.6 -0.3**
DURS Dursunbey 80.35 317 *i*P **P 11 22 40.6 +0.2**
BCLA Clavier 80.44 337 P **P 11 22 40.4 -0.4**
comp=Z,66nm,1.0s,mb5.4
425A Indio Mountain 80.47 56 ⇑P **P 11 22 41.4 +0.1**
baz=80,SNR=36
VTS Vitosha 80.49 322 P **P 11 22 41.6 +0.4**
VTS Vitosha 80.49 322 P **P 11 22 41.6 +0.4**
VTS Vitosha 80.49 322 ⇓*i*P **P 11 22 41.9 +0.7**
VTS Vitosha 80.49 322 *i*P **P 11 22 41.4 +0.2**
SOKA Soboth 80.49 329⇑*i*P **P 11 22 41.1 0.0**
comp=Z,120nm,1.0s,mb5.7
PERS Pernice 80.49 329 *i*P **P 11 22 41.0 -0.1**
PERS *e*S SKSac 11 32 52.7 +0.3
GROS Grobnik 80.50 329 *i*P **P 11 22 40.8 -0.3**
ALN Alexandroupoli 80.52 319 P **P 11 22 41.3 -0.1**
ALN Alexandroupoli 80.52 319 *e*P **P 11 22 41.3 -0.1**
ALN Alexandroupoli 80.52 319 P **P 11 22 41.3 -0.1**
RZN Rozhen 80.52 320 *i*P **P 11 22 41.9 +0.5**
FUR Furstenfeldbru 80.56 332 *e*P **P 11 22 42.1 +0.7**
comp=Z,203nm,0.8s,mb6.0
FUR Furstenfeldbru 80.56 332 *e*P **P 11 22 42.1 +0.7**
FUR pmax pmax
comp=Z,203nm,0.8s,mb6.0
RUP Ruppelstein 80.56 335 *e*P **P 11 22 41.2 -0.2**
HLM1 Long Mynd 80.60 342⇑*e*P **P 11 22 40.4 -1.2**
HLM1 AMB AMB 11 22 44.2
comp=Z,73nm,2.4s,mb5.1
DLF Lyons Farm 80.62 345⇑*i*P **P 11 22 41.6 -0.1**
DSB Dublin 80.64 344 *e*P **P 11 22 41.4 -0.3**
comp=Z,44nm,0.9s,mb5.3
DEMI Demirci 80.65 316 *i*P **P 11 22 42.2 +0.1**
SNF Seneffe 80.65 337 P **P 11 22 41.9 0.0**
comp=Z,33nm,1.1s,mb5.1
BALY Balya 80.66 317 *i*P **P 11 22 42.4 +0.2**
DIVS Divibare 80.67 325 P **P 11 22 41.6 -0.5**
326A Caldwell Ranch 80.69 55 ⇓P **P 11 22 42.3 -0.2**
baz=80,SNR=15
STU Stuttgart 80.72 334 *e*P **P 11 22 42.0 -0.3**
STU Stuttgart 80.72 334 *e*P **P 11 22 41.8 -0.5**
comp=Z,147nm,0.8s,mb5.9
STU Stuttgart 80.72 334 *e*P **P 11 22 41.8 -0.5**
STU pmax pmax
comp=Z,147nm,0.8s,mb5.9
KBA Koelnbreinsper 80.77 330⇑*i*P **P 11 22 43.4 +0.9**
comp=Z,141nm,0.8s,mb5.8,SNR=20
KHAL Karahalli 80.78 315 *i*P **P 11 22 42.9 +0.1**
GIVF Givet 80.87 337 *e*P **P 11 22 42.2 -0.8**
comp=Z,138nm,0.8s,mb5.5
GIVF Givet 80.87 337 *e*P **P 11 22 42.2 -0.8**
comp=Z,69nm,0.8s,mb5.5
GIVF Givet 80.87 337 *e*P **P 11 22 42.2 -0.8**
GIVF pmax pmax
comp=Z,69nm,0.8s,mb5.5
WLF Walferdange 80.87 336 *e*P **P 11 22 44.3 +1.2**
comp=Z,47nm,0.9s,mb5.3
WLF Walferdange 80.87 336 *e*P **P 11 22 43.2 +0.1**
comp=Z,36nm,0.8s,mb5.2
WLF Walferdange 80.87 336 *e*P **P 11 22 43.2 +0.1**
WLF pmax pmax
comp=Z,36nm,0.8s,mb5.2
ELSH Elham, Standar 80.91 339 *e*P **P 11 22 42.7 -0.6**
ELSH AMB AMB 11 22 46.5
comp=Z,395nm,0.9s,mb6.2
DOU Dourbes 80.94 337 P **P 11 22 43.1 -0.3**
comp=Z,26nm,1.2s,mb4.9

327A Balmorhea Ranc 80.94 55 ⇑P P 11 22 43.7 -0.1
baz=81

LANF Langenberg 80.97 334 *eP* P 11 22 43.5 -0.1
MYKA Terra Mystica 81.04 330⇑ *iP* P 11 22 43.3 -0.8
comp=Z,74nm,1.1s,mb5.4

MMB Musomiste 81.05 321 *i* P P 11 22 44.2 0.0
BAIF Baives 81.08 337 *eP* P 11 22 43.5 -0.7
comp=Z,143nm,0.9s,mb5.5

BAIF Baives 81.08 337 *eP* P 11 22 43.5 -0.7
comp=Z,72nm,0.9s,mb5.5

BAIF Baives 81.08 337 *eP* P 11 22 43.5 -0.7
BAIF pmax pmax
comp=Z,72nm,0.9s,mb5.5

HTR Trewern Hill 81.10 342⇑ *iP* P 11 22 44.2 -0.1
MCH1 Michaelchurch 81.11 342⇑ *eP* P 11 22 44.1 -0.2
MCH1 AMB AMB 11 22 47.5
comp=Z,170nm,0.9s,mb5.9

426A McDonald Obser 81.13 56 ⇑P P 11 22 44.5 -0.3
baz=81,SNR=13

TOO Toolangi 81.15 182 *eP* P 11 22 45.3 +0.9
TOO *e*PCP pP 11 23 06.5 +1.9
KAVA Kavala 81.16 320 P P 11 22 44.7 -0.1
WATA Walderalm 81.17 331⇑ *iP* P 11 22 44.9 +0.2
comp=Z,81nm,0.6s,mb5.7,SNR=18

WMOK Wichita Mounta 81.18 50 *eP* P 11 22 43.7 -1.3
comp=Z,20nm,1.0s,mb4.9

WMOK Wichita Mounta 81.18 50 *eP* P 11 22 43.7 -1.3
WMOK pmax pmax
comp=Z,20nm,1.0s,mb4.9

NVR Nevrokopi 81.18 321 *eP* P 11 22 44.9 0.0
MENF Mencas 81.19 338 *eP* P 11 22 44.5 -0.2
WTTA Wattenberg 81.21 331 *iP* P 11 22 45.2 +0.3
comp=Z,116nm,0.7s,mb5.8,SNR=46

AKHS Akhisar 81.23 317 *iP* P 11 22 45.1 -0.1
SWN1 Swindon 81.29 341⇑ *eP* P 11 22 45.4 +0.1
SWN1 AMB AMB 11 22 48.4
comp=Z,281nm,0.8s,mb6.2

VISS Visnje 81.30 329 *iP* P 11 22 44.7 -0.8
VISS *e*S S 11 32 50.0 +0.2
RETA Reutte 81.32 332⇑ *iP* P 11 22 45.6 +0.1
comp=Z,74nm,0.9s,mb5.5,SNR=26

KSDI Kefar Szold 81.32 308 *eP* P 11 22 46.5 +0.7
MOTA Moosalm 81.32 332⇑ *iP* P 11 22 45.6 0.0
comp=Z,151nm,0.8s,mb5.9,SNR=82

328A Wristen Ranch, 81.34 55 ⇓P P 11 22 45.4 -0.5
baz=81,SNR=28

WOL Wolverton 81.34 341 P P 11 22 45.3 -0.2
WOL AMB AMB 11 22 48.6
comp=Z,224nm,0.8s,mb6.1

WOL Wolverton 81.34 341 *eP* P 11 22 45.3 -0.2
WOL AMB AMB 11 22 48.6
comp=Z,224nm,0.8s,mb6.1

ABTA Abfaltersbach 81.35 331⇓ *iP* P 11 22 45.2 -0.5
comp=Z,37nm,0.8s,mb5.2,SNR=28

ASF Jabal al Asfar 81.36 307 P P 11 22 47.0 +1.0
comp=Z,28nm,0.8s,mb5.1,baz=263,slow=2.6,SNR=38

427A Hayter Ranch, 81.37 55 ⇓P P 11 22 45.9 -0.2
baz=81,SNR=29

KORT Korkueli 81.38 314 *iP* P 11 22 46.1 +0.1
BFO Black Forest 81.38 334 P P 11 22 45.6 -0.2
comp=Z,501nm,0.8s,mb6.4,SNR=24

BFO Black Forest 81.38 334 *eP* P 11 22 45.2 -0.6
comp=Z,89nm,0.9s,mb5.6

BFO Black Forest 81.38 334 *eP* P 11 22 45.2 -0.6
BFO pmax pmax
comp=Z,89nm,0.9s,mb5.6

BOJS Bojanci 81.40 328 *iP* P 11 22 45.2 -0.7
BOJS *e*S S 11 32 49.3 -1.5
HGH Gray Hill 81.41 342⇑ *eP* P 11 22 45.6 -0.3
SPAK Spaichingen-Ko 81.44 333 *eP* P 11 22 46.0 -0.1
VOY Vojsko 81.46 329 *eP* P 11 22 45.5 -0.8
VOY *e* 11 22 47.6
VOY *e* pP 11 23 08.3 +1.9
SRS Serrai 81.49 321 P P 11 22 46.0 -0.5
SRS Serrai 81.49 321 P P 11 22 46.0 -0.5
JAVS Javornik 81.51 329 *iP* P 11 22 45.4 -1.2
JAVS *i*S S 11 32 49.3 -2.8
DNZL Cakiroluk 81.52 315 *iP* P 11 22 47.5 +0.7
526A Mary Lane Ranc 81.53 56 ⇓P P 11 22 46.6 -0.3
baz=81,SNR=33

PLE Pljevlja 81.54 325⇑ *iP* P 11 22 46.9 +0.1
PLE Pljevlja 81.54 325⇑ *iP* P 11 22 47.0 +0.2
HDIL Hopedale 81.56 40 *eP* P 11 22 46.0 -0.9
comp=Z,68nm,0.9s,mb5.5

MMAI Mount Meron Ar 81.60 308 P P 11 22 48.3 +1.1
comp=Z,30nm,0.5s,mb5.4,baz=36,slow=7.2,SNR=55
MMAI LR LR 12 03 20.5
comp=Z,221nm,19.3s,baz=55,slow=39

GOLH Golhisar 81.61 315 *iP* P 11 22 46.4 -0.9
CDF Champ du Feu 81.64 335 *eP* P 11 22 46.7 -0.5
comp=Z,267nm,0.9s,mb5.8

CDF Champ du Feu 81.64 335 *eP* P 11 22 46.7 -0.5
comp=Z,134nm,0.9s,mb5.8

CDF Champ du Feu 81.64 335 *eP* P 11 22 46.7 -0.5
CDF pmax pmax
comp=Z,134nm,0.9s,mb5.8

PRK Paraskevi 81.70 318 P P 11 22 47.6 -0.1
PRK Paraskevi 81.70 318 *eP* P 11 22 44.4 -3.3
PRK Paraskevi 81.70 318 P P 11 22 47.6 -0.1
IVA Berane 81.71 324⇑ *iP* P 11 22 48.0 +0.4
IVA Berane 81.71 324⇑ *iP* P 11 22 48.1 +0.4
LIA Limnos Island 81.71 319 P P 11 22 47.8 +0.1
LIA Limnos Island 81.71 319 P P 11 22 47.8 +0.1
FETA Feichten 81.73 332⇑ *iP* P 11 22 47.7 +0.1
comp=Z,100nm,1.1s,mb5.6,SNR=49

KNT Kendrikon 81.77 321 P P 11 22 47.9 -0.1
KNT Kendrikon 81.77 321 P P 11 22 47.9 -0.1
SKO Skopje 81.77 323 P P 11 22 49.0 +1.0
SKO Skopje 81.77 323 P P 11 22 49.0 +1.0
SKO Skopje 81.77 323 *eP* P 11 22 49.0 +1.0
LIBD Limburg 81.77 334 *eP* P 11 22 47.6 -0.3
TRI Trieste 81.78 329 *eP* P 11 22 45.9 -2.0
comp=Z,70nm,0.9s,mb5.5

TRI Trieste 81.78 329 *eP* P 11 22 45.9 -2.1
TRI pmax pmax
comp=Z,70nm,0.9s,mb5.5

DAVA Damuels 81.79 332 *iP* P 11 22 48.0 0.0
comp=Z,102nm,0.9s,mb5.7,SNR=36

VAY Valandovo 81.79 321 P P 11 22 47.5 -0.6
VAY Valandovo 81.79 321 P P 11 22 47.5 -0.6
VAY Valandovo 81.79 321 *eP* P 11 22 47.6 -0.5
SOH Sokhos 81.83 321 *eP* P 11 22 48.7 +0.4
ECH Echery 81.85 334 *eP* P 11 22 47.9 -0.4
ECH Echery 81.85 334 *eP* P 11 22 47.5 -0.8
comp=Z,135nm,0.9s,mb5.8

ECH Echery 81.85 334 *eP* P 11 22 47.5 -0.8
ECH pmax pmax
comp=Z,135nm,0.9s,mb5.8

UPM Unac-Piva 81.85 325⇑ *iP* P 11 22 47.5 -0.9
UPM Unac-Piva 81.85 325⇑ *iP* P 11 22 47.5 -0.9
626A Big Bend Ranch 81.87 57 ⇓P P 11 22 48.7 0.0
baz=82,SNR=34

KDAG Bornova 81.87 317 *iP* P 11 22 50.1 +1.6
FELD Feldberg im Sc 81.89 334 *eP* P 11 22 48.3 -0.2
428A Kincaid Ranch, 81.89 55 ⇓P P 11 22 48.7 -0.1
baz=82,SNR=23

PVY Plav 81.90 324⇑ *iP* P 11 22 47.8 -0.9
PVY Plav 81.90 324⇑ *iP* P 11 22 47.9 -1.1
NKY Niksic 82.13 324⇑ *iP* P 11 22 48.8 -1.1
NKY Niksic 82.13 324⇑ *iP* P 11 22 48.9 -1.0
AYDN Tasoluk 82.14 316 *iP* P 11 22 51.0 +1.0
GRG Griva 82.16 321 P P 11 22 49.7 -0.3
GRG Griva 82.16 321 P P 11 22 49.7 -0.3
MOF Molkenrain 82.18 334 *eP* P 11 22 49.6 -0.4
THEF They Montfort 82.20 335 *eP* P 11 22 49.9 -0.2
DAVOX Davos/Dischmat 82.23 332 P P 11 22 50.6 +0.3
comp=Z,53nm,0.8s,mb5.4,baz=40,slow=4.1,SNR=37

URLA Izmir 82.23 317 *iP* P 11 22 49.3 -1.2
528A Cox Ranch, San 82.23 55 ⇓P P 11 22 50.7 +0.1
baz=82,SNR=33

MEZF Maizieres J'vi 82.23 336 *eP* P 11 22 50.0 -0.3
comp=Z,236nm,0.9s,mb5.7

MEZF Maizieres J'vi 82.23 336 *eP* P 11 22 50.0 -0.3
comp=Z,236nm,0.9s,mb6.0

BRY Bratogost 82.25 325⇑ *iP* P 11 22 49.2 -1.3
BRY Bratogost 82.25 325⇑ *iP* P 11 22 49.3 -1.2
HAU Haudompre 82.29 335 *eP* P 11 22 49.8 -0.8
comp=Z,139nm,0.9s,mb5.5

HAU *e*MLR MLR
comp=Z,663nm,22.0s

HAU Haudompre 82.29 335 *eP* P 11 22 49.8 -0.8
comp=Z,69nm,0.9s,mb5.5

HAU LR LR
comp=Z,660nm,22.0s

HAU Haudompre 82.29 335 *eP* P 11 22 49.8 -0.8
HAU pmax pmax
comp=Z,69nm,0.9s,mb5.5

HAU MLR MLR
comp=Z,660nm,22.0s

HINF Hinteralfeld 82.30 334 *eP* P 11 22 49.8 -0.8
comp=Z,90nm,0.8s,mb5.3

HINF Hinteralfeld 82.30 334 *eP* P 11 22 49.8 -0.8
comp=Z,45nm,0.8s,mb5.3

HINF Hinteralfeld 82.30 334 *eP* P 11 22 49.8 -0.8
HINF pmax pmax
comp=Z,45nm,0.8s,mb5.3

TXAR Lajitas Array 82.31 57 P P 11 22 51.0 0.0
comp=Z,22nm,0.7s,mb5.1,baz=300,slow=3.8,SNR=235
TXAR pP pP 11 23 11.1 -0.1
comp=Z,16nm,0.7s,baz=302,slow=3.0,SNR=8.9
TXAR PKKPbc PKKPbc 11 41 18.8 +3.1
comp=Z,0.9nm,0.8s,baz=158,slow=5.8,SNR=9.9

TXAR Lajitas Array 82.31 57 P P 11 22 51.0 0.0
TXAR *PP pP 11 23 11.1 -0.1
TTG Podgorica 82.34 324⇑ *iP* P 11 22 50.0 -0.9
KRUS Krusevo 82.34 322 *eP* P 11 22 50.4 -0.6
AKAS Kas 82.35 314 *iP* P 11 22 49.3 -1.8
TURN Turunc 82.38 315 *iP* P 11 22 53.6 +2.3
HTL Hartland 82.38 343 P P 11 22 50.9 -0.1
HTL AMB AMB 11 22 54.5
comp=Z,98nm,1.1s,mb5.6

HTL Hartland 82.38 343 *eP* P 11 22 50.9 -0.1
HTL AMB AMB 11 22 54.5
comp=Z,98nm,1.1s,mb5.6

627A Terlingua Ranc 82.39 56 ⇑P P 11 22 51.2 -0.3
baz=82,SNR=26

BBS Basel-Blauen 82.41 334 *eP* P 11 22 50.8 -0.4
GCAM G?zelcaml? 82.43 316 *iP* P 11 22 51.5 -0.1
CHOS Chios island 82.48 317 *eP* P 11 22 52.4 +0.7
BIA Bitola 82.59 322 *eP* P 11 22 51.3 -1.0
BUM Brajici-Budva 82.60 324⇑ *iP* P 11 22 51.5 -0.8
BUM Brajici-Budva 82.60 324⇑ *iP* P 11 22 51.5 -0.8
SLM Saint Louis 82.63 42 *eP* P 11 22 51.7 -0.8
comp=Z,36nm,0.8s,mb5.3

SLM Saint Louis 82.63 42 *eP* P 11 22 51.7 -0.8
SLM pmax pmax
comp=Z,36nm,0.8s,mb5.2

HCY Herceg Novi 82.64 325⇑ *iP* P 11 22 51.7 -0.8
HCY Herceg Novi 82.64 325⇑ *iP* P 11 22 51.8 -0.7
AAM Ann Arbor 82.66 36 *eP* P 11 22 52.2 -0.4
LOMF Lomont 82.72 334 *eP* P 11 22 52.7 -0.1
ULC Ulcinj 82.72 324⇑ *iP* P 11 22 52.5 -0.5
FNA Florina 82.76 322 P P 11 22 52.3 -0.9
FNA Florina 82.76 322 P P 11 22 52.3 -0.9
LIT Litokhoron 82.80 321 P P 11 22 51.4 -2.0
LIT Litokhoron 82.80 321 *eP* P 11 22 51.5 -1.9
LIT Litokhoron 82.80 321 P P 11 22 51.4 -2.0
BDRM Kayabasi 82.82 316 *iP* P 11 22 53.6 +0.1
TIR Tirane 82.96 323 P P 11 22 53.8 -0.4
TIR Tirane 82.96 323 P P 11 22 53.8 -0.4
KZN Kozani 82.97 321 P P 11 22 53.8 -0.4
KZN Kozani 82.97 321 *eP* P 11 22 46.1 -8.1
KZN Kozani 82.97 321 P P 11 22 53.8 -0.4
FVM French Village 83.05 42 *eP* P 11 22 53.3 -1.5
comp=Z,84nm,1.4s,mb5.4

FVM French Village 83.05 42 *eP* P 11 22 53.3 -1.4
FVM pmax pmax
comp=Z,84nm,1.4s,mb5.4

XOR Xorichti 83.07 320 P P 11 22 53.8 -1.0
XOR Xorichti 83.07 320 P P 11 22 53.8 -1.0
NEO Neokhori 83.10 320 *eP* P 11 22 54.1 -0.9
ARG Arkhangelos 83.13 315 P P 11 22 54.8 -0.4
ARG Arkhangelos 83.13 315 P P 11 22 54.8 -0.4
NEST Nestorio 83.20 322 P P 11 22 55.0 -0.5
CCA1 Carnmenellis 83.30 343 P P 11 22 55.3 -0.5
CCA1 AMB AMB 11 22 58.2
comp=Z,109nm,1.3s,mb5.5

CCA1 Carnmenellis 83.30 343⇑ *eP* P 11 22 55.3 -0.5
CCA1 AMB AMB 11 22 58.2
comp=Z,109nm,1.3s,mb5.5

THL Klokotos Trika 83.45 321 *eP* P 11 22 54.9 -1.9
THL Klokotos Trika 83.45 321 P P 11 22 54.0 -2.8
FLN La Foliniere 83.52 339 *eP* P 11 22 56.5 -0.4
comp=Z,282nm,0.8s,mb5.8

FLN *e*MLR MLR
comp=Z,456nm,22.2s

FLN La Foliniere 83.52 339 *eP* P 11 22 56.5 -0.4
comp=Z,141nm,0.8s,mb5.8

FLN LR LR
comp=Z,460nm,22.3s

FLN La Foliniere 83.52 339 *eP* P 11 22 56.5 -0.4
FLN pmax pmax
comp=Z,141nm,0.8s,mb5.8

FLN MLR MLR
comp=Z,460nm,22.3s

JSA Saint Aubin 83.54 341 P P 11 22 56.4 -0.6
JSA AMB AMB 11 22 59.6
comp=Z,210nm,0.9s,mb6.0

JSA Saint Aubin 83.54 341⇑ *eP* P 11 22 56.4 -0.6
JSA AMB AMB 11 22 59.6
comp=Z,210nm,0.9s,mb6.0

OLIL Olney 83.57 41 *eP* P 11 22 56.8 -0.6
comp=Z,25nm,0.9s,mb5.0

LDF La Druitiere 83.58 339 *eP* P 11 22 56.6 -0.7
comp=Z,89nm,0.9s,mb5.3

LDF La Druitiere 83.58 339 *eP* P 11 22 56.6 -0.7
comp=Z,44nm,0.9s,mb5.3

LDF La Druitiere 83.58 339 *eP* P 11 22 56.6 -0.7
LDF pmax pmax
comp=Z,44nm,0.9s,mb5.3

CABF La Chapelle 83.61 334 *eP* P 11 22 57.1 -0.3
comp=Z,85nm,0.9s,mb5.3

CABF La Chapelle 83.61 334 *eP* P 11 22 57.1 -0.3
comp=Z,42nm,0.9s,mb5.3

CABF La Chapelle 83.61 334 *eP* P 11 22 57.1 -0.3
CABF pmax pmax
comp=Z,43nm,0.9s,mb5.3

ATAL Atalanti 83.69 320 P P 11 22 56.9 -1.1
LOR Lormes 83.70 336 *eP* P 11 22 57.4 -0.5
comp=Z,201nm,0.9s,mb5.7

LOR *e*MLR MLR
comp=Z,388nm,18.0s

LOR Lormes 83.70 336 *eP* P 11 22 57.4 -0.5
comp=Z,100nm,0.9s,mb5.7

LOR LR LR
comp=Z,390nm,18.0s

LOR Lormes 83.70 336 *eP* P 11 22 57.4 -0.5
LOR pmax pmax
comp=Z,100nm,0.9s,mb5.7

LOR MLR MLR
comp=Z,390nm,18.0s

LKR Lokris 83.73 320 P P 11 22 56.9 -1.3
LKR Lokris 83.73 320 *eP* P 11 22 56.9 -1.3
LKR Lokris 83.73 320 P P 11 22 56.9 -1.3
AGG Agios Georgios 83.74 320 P P 11 22 57.0 -1.3
AGG Agios Georgios 83.74 320 *eP* P 11 22 56.6 -1.7
AGG Agios Georgios 83.74 320 P P 11 22 57.0 -1.3
JCT Junction City 83.75 53 ⇓P P 11 22 58.0 -0.5
baz=84,SNR=20

JCT Junction City 83.75 53 *eP* P 11 22 58.1 -0.3
comp=Z,36nm,0.9s,mb5.2

JCT Junction City 83.75 53 *eP* P 11 22 58.2 -0.3
JCT pmax pmax
comp=Z,37nm,0.9s,mb5.2

SIUC Southern Illin 83.85 42 *eP* P 11 22 58.1 -0.7
comp=Z,81nm,1.0s,mb5.5

PPT Papeete 83.87 121 LR LR 11 56 30.5
comp=Z,176nm,20.3s,baz=325,slow=33

JAN Janina 83.91 322 *eP* P 11 22 55.0 -4.1
GRR Gorron 83.96 339 *eP* P 11 22 59.0 -0.2
comp=Z,392nm,0.8s,mb6.0

GRR Gorron 83.96 339 *eP* P 11 22 59.0 -0.2
comp=Z,196nm,0.8s,mb6.0

SSF Saint Saulge 83.99 336 *eP* P 11 22 58.9 -0.4
comp=Z,113nm,0.9s,mb5.4

SSF Saint Saulge 83.99 336 *eP* P 11 22 58.9 -0.4
comp=Z,57nm,0.9s,mb5.4

SSF Saint Saulge 83.99 336 *eP* P 11 22 58.9 -0.4
SSF pmax pmax
comp=Z,57nm,0.9s,mb5.4

HYF Humbligny 84.05 337 *eP* P 11 22 59.6 -0.1
EVR Evrytania 84.07 320 *eP* P 11 23 06.1 +6.2
MIAR Mount Ida 84.13 47 *eP* P 11 22 59.7 -0.6
comp=Z,54nm,1.1s,mb5.3

MIAR Mount Ida 84.13 47 *eP* P 11 22 59.7 -0.6
MIAR pmax pmax
comp=Z,54nm,1.1s,mb5.3

KARP Karpathos 84.14 315 *eP* P 11 22 59.7 -0.6
DSF Desfina 84.14 320 P P 11 22 58.4 -1.9

LONY Lake Ozonia 84.18 29 *eP* P 11 22 58.8 -1.6
comp=Z,9.1nm,0.8s,mb4.7

IGT Igoumenitsa 84.24 322 P P 11 23 00.2 -0.6
IGT Igoumenitsa 84.24 322 P P 11 23 00.2 -0.6
SMF Signal de Mont 84.26 336 *eP* P 11 23 00.5 -0.3
comp=Z,370nm,1.0s,mb5.9

SMF Signal de Mont 84.26 336 *eP* P 11 23 00.5 -0.3
comp=Z,185nm,1.0s,mb5.9

SMF Signal de Mont 84.26 336 *eP* P 11 23 00.5 -0.3
SMF pmax pmax
comp=Z,185nm,1.0s,mb5.9

AVF Avril sur Loir 84.28 336 *eP* P 11 23 00.6 -0.2
comp=Z,242nm,1.1s,mb5.7

AVF Avril sur Loir 84.28 336 *eP* P 11 23 00.6 -0.2
comp=Z,121nm,1.1s,mb5.6

AVF Avril sur Loir 84.28 336 *eP* P 11 23 00.6 -0.2
AVF pmax pmax
comp=Z,121nm,1.1s,mb5.6

EIL Elat 84.33 306 P P 11 23 01.8 +0.4
comp=Z,31nm,0.7s,mb5.2,baz=4.1,slow=5.0,SNR=29

KEK Kerkira 84.33 322 P P 11 23 00.4 -0.8
KEK Kerkira 84.33 322 *eP* P 11 23 00.2 -1.0
KEK Kerkira 84.33 322 P P 11 23 00.4 -0.8
KALE Kalithea 84.34 320 P P 11 23 00.1 -1.2
LPL La Plagne 84.38 333 *eP* P 11 23 01.7 +0.3
comp=Z,214nm,0.9s,mb5.7

LPL La Plagne 84.38 333 *eP* P 11 23 01.7 +0.3
comp=Z,107nm,0.9s,mb5.7

LPL La Plagne 84.38 333 *eP* P 11 23 01.7 +0.3
LPL pmax pmax
comp=Z,107nm,0.9s,mb5.7

TRIZ Trizonia 84.39 320 P P 11 23 00.1 -1.5
LPG La Plagne 84.39 333 *eP* P 11 23 01.8 +0.4
comp=Z,268nm,0.9s,mb5.8

LPG La Plagne 84.39 333 *eP* P 11 23 01.8 +0.4
comp=Z,134nm,0.9s,mb5.8

LPG La Plagne 84.39 333 *eP* P 11 23 01.8 +0.4
LPG pmax pmax
comp=Z,134nm,0.9s,mb5.8

EFP Efpalio 84.42 320 *eP* P 11 23 02.1 +0.4
EFP Efpalio 84.42 320 P P 11 23 02.1 +0.4
PARMO Parma 84.42 43 *eP* P 11 23 01.1 -0.7
SGMF Saint Gilles 84.51 340 *eP* P 11 23 02.1 +0.1
comp=Z,361nm,1.0s,mb6.0

SGMF Saint Gilles 84.51 340 *eP* P 11 23 02.1 +0.1
comp=Z,181nm,1.0s,mb6.0

SGMF Saint Gilles 84.51 340 *eP* P 11 23 02.1 +0.1
SGMF pmax pmax
comp=Z,181nm,1.0s,mb6.0

DID Didima 84.53 319 *eP* P 11 22 59.9 -2.4
LAKA Lakka 84.54 320 P P 11 23 01.2 -1.1
ROSF Rostrenen 84.60 341 *eP* P 11 23 02.7 +0.3
comp=Z,433nm,0.9s,mb6.1

ROSF Rostrenen 84.60 341 *eP* P 11 23 02.7 +0.3
comp=Z,217nm,0.9s,mb6.1

GUR Goura 84.61 320 *eP* P 11 23 02.0 -0.7
GUR Goura 84.61 320 P P 11 23 01.3 -1.4
BGF Bois d'Agland 84.64 336 *eP* P 11 23 02.4 -0.2
comp=Z,87nm,0.8s,mb5.5

BGF Bois d'Agland 84.64 336 *eP* P 11 23 02.4 -0.2
comp=Z,44nm,0.8s,mb5.4

BGF Bois d'Agland 84.64 336 *eP* P 11 23 02.4 -0.2
BGF pmax pmax
comp=Z,44nm,0.8s,mb5.4

LKD2 Lefkada island 84.70 321 P P 11 23 02.5 -0.6
AQU L'Aquila 84.77 328 *eP* P 11 23 03.6 +0.2
comp=Z,60nm,0.9s,mb5.5

AQU L'Aquila 84.77 328 *eP* P 11 23 03.6 +0.2
AQU pmax pmax
comp=Z,60nm,0.9s,mb5.5

AQU L'Aquila 84.77 328⇑ *iP* P 11 23 04.1 +0.7
WCI Wyandotte Cave 84.81 40 *eP* P 11 23 02.8 -0.9
comp=Z,24nm,0.9s,mb5.1

WCI Wyandotte Cave 84.81 40 *eP* P 11 23 02.8 -0.9
WCI pmax pmax
comp=Z,24nm,0.9s,mb5.1

BST Brest 84.82 341 *eP* P 11 23 03.7 +0.2
GDM Grand'Maison 84.86 334 *eP* P 11 23 04.1 +0.3
NCB Newcomb 84.87 29 *eP* P 11 23 01.9 -1.9
comp=Z,23nm,1.1s,mb5.0

RLS Riolos of Patr 84.92 320 *eP* P 11 23 03.5 -0.7
PLDF La Plantade 84.94 336 *eP* P 11 23 05.4 +1.2
ZKR Zakros 84.96 315 P P 11 23 04.3 -0.2
ZKR Zakros 84.96 315 P P 11 23 04.3 -0.2
QUIF Quistinic 84.97 341 *eP* P 11 23 04.2 -0.1
comp=Z,257nm,0.9s,mb5.8

QUIF Quistinic 84.97 341 *eP* P 11 23 04.2 -0.1
comp=Z,128nm,0.9s,mb5.8

QUIF Quistinic 84.97 341 *eP* P 11 23 04.2 -0.1
QUIF pmax pmax
comp=Z,128nm,0.9s,mb5.8

AGO Saint Agoulin 85.01 336 *eP* P 11 23 05.8 +1.3
TCF Toulx Ste Croi 85.06 337 *eP* P 11 23 04.9 +0.1
comp=Z,161nm,0.8s,mb5.7

TCF Toulx Ste Croi 85.06 337 *eP* P 11 23 04.9 +0.1
comp=Z,81nm,0.8s,mb5.7

TCF Toulx Ste Croi 85.06 337 *eP* P 11 23 04.9 +0.1
TCF pmax pmax
comp=Z,81nm,0.8s,mb5.7

MBDF Montbardon 85.07 333 *eP* P 11 23 04.4 -0.5
comp=Z,102nm,0.9s,mb5.5

MBDF Montbardon 85.07 333 *eP* P 11 23 04.4 -0.5
comp=Z,51nm,0.9s,mb5.5

MBDF Montbardon 85.07 333 *eP* P 11 23 04.4 -0.5
MBDF pmax pmax
comp=Z,51nm,0.9s,mb5.5

NPS Neapolis 85.15 316 *eP* P 11 23 06.1 +0.7
ORIF Oris-en-Rattie 85.19 334 *eP* P 11 23 05.6 +0.2
comp=Z,166nm,0.7s,mb5.8

ORIF *e*MLR MLR
comp=Z,295nm,22.0s

ORIF Oris-en-Rattie 85.19 334 *eP* P 11 23 05.6 +0.2
comp=Z,83nm,0.7s,mb5.8

ORIF Oris-en-Rattie 85.19 334 *eP* P 11 23 05.6 +0.2
ORIF pmax pmax
comp=Z,83nm,0.7s,mb5.8

KFL Anninata 85.19 321 P P 11 23 05.5 -0.1
VLS Valsamata 85.23 321 P P 11 23 04.5 -1.3
VLS Valsamata 85.23 321 *eP* P 11 23 04.4 -1.4
VLS Valsamata 85.23 321 P P 11 23 04.5 -1.3
SURF Saint Ours 85.28 333 *eP* P 11 23 06.0 +0.1
SSB Saint Sauveur 85.28 335 *eP* P 11 23 05.6 -0.3
comp=Z,75nm,1.1s,mb5.5

SSB Saint Sauveur 85.28 335 *eP* P 11 23 05.6 -0.3
SSB pmax pmax
comp=Z,75nm,1.1s,mb5.5

VLI Veliai 85.31 318 *eP* P 11 23 04.5 -1.7
PYM Petit Puy Mans 85.32 336 *eP* P 11 23 07.4 +1.3
PKME Peaks-Kenny Pk 85.34 25 *eP* P 11 23 05.7 -0.5
comp=Z,23nm,0.8s,mb5.2

XRY Khrisi 85.41 316 *eP* P 11 23 06.5 -0.2
ITM Ithomi 85.42 319 P P 11 23 05.2 -1.5
ITM Ithomi 85.42 319 *eP* P 11 23 05.3 -1.4
ITM Ithomi 85.42 319 P P 11 23 05.2 -1.5
LBNH Lisbon 85.42 27 *eP* P 11 23 05.9 -0.7
comp=Z,12nm,0.6s,mb5.0

LBNH Lisbon 85.42 27 *eP* P 11 23 05.9 -0.7
LBNH pmax pmax
comp=Z,12nm,0.6s,mb5.0

MFF Saint Martin d 85.43 338 *eP* P 11 23 06.9 +0.3
comp=Z,290nm,1.1s,mb5.8

MFF Saint Martin d 85.43 338 *eP* P 11 23 06.9 +0.3
comp=Z,145nm,1.1s,mb5.8

MFF Saint Martin d 85.43 338 *eP* P 11 23 06.9 +0.3
MFF pmax pmax
comp=Z,145nm,1.1s,mb5.8

SAOF Saorge 85.47 332 *eP* P 11 23 06.0 -0.9
AUTN L'Aution 85.50 332 *eP* P 11 23 08.1 +1.1
TOUF Mont Tournerai 85.55 332 *eP* P 11 23 07.6 +0.4
KYTH Kithira 85.61 318 *eP* P 11 23 06.2 -1.5
SBF Sospel 85.62 332 *eP* P 11 23 06.8 -0.8
comp=Z,137nm,0.8s,mb5.7

SBF Sospel 85.62 332 *eP* P 11 23 06.8 -0.8
comp=Z,68nm,0.8s,mb5.6

SBF Sospel 85.62 332 *eP* P 11 23 06.8 -0.8
SBF pmax pmax
comp=Z,68nm,0.8s,mb5.6

LUCF Luceram 85.62 332 *eP* P 11 23 07.8 +0.2
VIVF Saint-Julien-l 85.62 334 *eP* P 11 23 07.9 +0.3
comp=Z,155nm,0.9s,mb5.6

VIVF Saint-Julien-l 85.62 334 *eP* P 11 23 07.9 +0.3
comp=Z,78nm,0.9s,mb5.6

VIVF Saint-Julien-l 85.62 334 *eP* P 11 23 07.9 +0.3
VIVF pmax pmax
comp=Z,78nm,0.9s,mb5.6

MVIF	**Mont Vial**	**85.68**	**332**	*eP*		**P**		**11 23 07.3**	**-0.6**
LBL	**Lubilhac**	**85.72**	**336**	*eP*		**P**		**11 23 09.3**	**+1.2**
PYL	**PYLOS**	**85.73**	**319**	*eP*		**P**		**11 23 06.4**	**-1.9**
PYL	**PYLOS**	**85.73**	**319**	P		**P**		**11 23 06.4**	**-1.9**
VAM	**Vamos**	**85.74**	**317**	*eP*		**P**		**11 23 10.6**	**+2.2**
REVF	**Revere**	**85.75**	**332**	*eP*		**P**		**11 23 08.2**	**-0.1**
WVT	**Waverly**	**85.78**	**42**	*eP*		**P**		**11 23 07.7**	**-0.9**
	comp=Z,19nm,1.0s,mb5.0								
WVT	**Waverly**	**85.78**	**42**	*eP*		**P**		**11 23 07.7**	**-0.9**
WVT					pmax	pmax			
	comp=Z,19nm,1.0s,mb5.0								
BINY	**Binghamton**	**85.78**	**31**	*eP*		**P**		**11 23 07.7**	**-0.8**
	comp=Z,20nm,1.0s,mb5.0								
CUC	**Castrocucco**	**85.81**	**325**	*eP*		**P**		**11 23 09.5**	**+0.9**
	comp=Z,11nm,0.9s,mb4.8								
TIP	**Timpagrande**	**86.09**	**324**	*eP*		**P**		**11 23 09.4**	**-0.6**
	comp=Z,75nm,1.2s,mb5.5								
SMRF	**Simiane la Rot**	**86.13**	**334**	*eP*		**P**		**11 23 10.3**	**+0.2**
	comp=Z,48nm,0.9s,mb5.1								
SMRF	**Simiane la Rot**	**86.13**	**334**	*eP*		**P**		**11 23 10.3**	**+0.2**
	comp=Z,48nm,0.9s,mb5.4								
FRF	**La Foret Royal**	**86.15**	**333**	*eP*		**P**		**11 23 09.5**	**-0.7**
	comp=Z,76nm,1.0s,mb5.3								
FRF	**La Foret Royal**	**86.15**	**333**	*eP*		**P**		**11 23 09.5**	**-0.7**
	comp=Z,38nm,1.0s,mb5.3								
FRF	**La Foret Royal**	**86.15**	**333**	*eP*		**P**		**11 23 09.5**	**-0.7**
FRF					pmax	pmax			
	comp=Z,38nm,1.0s,mb5.3								
RJF	**Les Rejaudoux**	**86.16**	**337**	*eP*		**P**		**11 23 10.5**	**+0.2**
	comp=Z,156nm,1.1s,mb5.6								
RJF				*e*	MLR	MLR			
	comp=Z,491nm,22.0s								
RJF	**Les Rejaudoux**	**86.16**	**337**	*eP*		**P**		**11 23 10.5**	**+0.2**
	comp=Z,78nm,1.1s,mb5.5								
RJF					LR	LR			
	comp=Z,490nm,22.0s								
RJF	**Les Rejaudoux**	**86.16**	**337**	*eP*		**P**		**11 23 10.5**	**+0.2**
RJF					pmax	pmax			
	comp=Z,78nm,1.1s,mb5.5								
RJF					MLR	MLR			
	comp=Z,490nm,22.0s								
PGF	**Pioggiola**	**86.23**	**331**	*eP*		**P**		**11 23 10.2**	**-0.5**
	comp=Z,78nm,0.9s,mb5.3								
PGF	**Pioggiola**	**86.23**	**331**	*eP*		**P**		**11 23 10.2**	**-0.5**
	comp=Z,39nm,0.9s,mb5.3								
PGF	**Pioggiola**	**86.23**	**331**	*eP*		**P**		**11 23 10.2**	**-0.5**
PGF					pmax	pmax			
	comp=Z,39nm,0.9s,mb5.3								
GVD	**Gavdhos**	**86.24**	**317**	*eP*		**P**		**11 23 10.8**	**-0.1**
	comp=Z,405nm,0.9s,mb5.3								
CAF	**Calviac**	**86.35**	**336**	*eP*		**P**		**11 23 11.8**	**+0.6**
	comp=Z,267nm,1.0s,mb5.8								
CAF	**Calviac**	**86.35**	**336**	*eP*		**P**		**11 23 11.8**	**+0.6**
	comp=Z,133nm,1.0s,mb5.8								
CAF	**Calviac**	**86.35**	**336**	*eP*		**P**		**11 23 11.8**	**+0.6**
CAF					pmax	pmax			
	comp=Z,133nm,1.0s,mb5.8								
LMR	**La Mourre**	**86.40**	**333**	*eP*		**P**		**11 23 11.0**	**-0.5**
	comp=Z,208nm,1.1s,mb5.7								
LMR	**La Mourre**	**86.40**	**333**	*eP*		**P**		**11 23 11.0**	**-0.5**
	comp=Z,104nm,1.1s,mb5.7								
LMR	**La Mourre**	**86.40**	**333**	*eP*		**P**		**11 23 11.0**	**-0.5**
LMR					pmax	pmax			
	comp=Z,104nm,1.1s,mb5.7								
MCWV	**Mont Chateau**	**86.45**	**35**	*eP*		**P**		**11 23 11.5**	**-0.3**
	comp=Z,26nm,0.7s,mb5.3								
LASF	**Ste Croix**	**86.58**	**335**	*eP*		**P**		**11 23 13.1**	**+0.8**
	comp=Z,108nm,1.0s,mb5.4								
LFF	**La Frestale**	**86.71**	**337**	*eP*		**P**		**11 23 13.5**	**+0.5**
	comp=Z,328nm,1.0s,mb5.9								
LFF	**La Frestale**	**86.71**	**337**	*eP*		**P**		**11 23 13.5**	**+0.5**
	comp=Z,164nm,1.0s,mb5.9								
CEL	**Celeste**	**87.23**	**324**	*eP*		**P**		**11 23 13.2**	**-2.4**
	comp=Z,24nm,0.8s,mb5.2								
SWET	**Sewanee**	**87.43**	**41**	*eP*		**P**		**11 23 15.6**	**-1.0**
MTLF	**Montolieu**	**87.75**	**335**	*eP*		**P**		**11 23 18.8**	**+0.8**
	comp=Z,89nm,1.0s,mb5.5								
MTLF	**Montolieu**	**87.75**	**335**	*eP*		**P**		**11 23 18.8**	**+0.8**
	comp=Z,44nm,1.0s,mb5.5								
MTLF	**Montolieu**	**87.75**	**335**	*eP*		**P**		**11 23 18.8**	**+0.8**
MTLF					pmax	pmax			
	comp=Z,44nm,1.0s,mb5.4								
CPCT	**Cooper Cave**	**87.90**	**40**	*eP*		**P**		**11 23 18.4**	**-0.5**
LRDF	**Laroque-de-Fa**	**88.02**	**335**	*eP*		**P**		**11 23 21.6**	**+2.3**
TKL	**Tuckaleechee C**	**88.07**	**40**	*eP*		**P**		**11 23 19.1**	**-0.6**
BLA	**Blacksburg**	**88.27**	**36**	*eP*		**P**		**11 23 20.4**	**-0.2**
	comp=Z,21nm,0.9s,mb5.2								
BLA	**Blacksburg**	**88.27**	**36**	*eP*		**P**		**11 23 20.4**	**-0.2**
BLA					pmax	pmax			
	comp=Z,21nm,0.9s,mb5.2								
CARF	**Carcanieres**	**88.35**	**335**	*eP*		**P**		**11 23 22.9**	**+2.0**
FILF	**Fillols**	**88.35**	**335**	*eP*		**P**		**11 23 22.9**	**+2.0**
MLS	**Moulis**	**88.43**	**336**	*eP*		**P**		**11 23 21.1**	**-0.1**
EPF	**Esparros**	**88.58**	**337**	*eP*		**P**		**11 23 22.1**	**+0.2**
	comp=Z,46nm,0.8s,mb5.3								
EPF	**Esparros**	**88.58**	**337**	*eP*		**P**		**11 23 22.1**	**+0.2**
	comp=Z,23nm,0.8s,mb5.2								
EPF	**Esparros**	**88.58**	**337**	*eP*		**P**		**11 23 22.1**	**+0.2**
EPF					pmax	pmax			
	comp=Z,23nm,0.8s,mb5.3								
RESF	**Ens**	**88.79**	**337**	*eP*		**P**		**11 23 23.5**	**+0.6**
VIEF	**Viey**	**88.81**	**337**	*eP*		**P**		**11 23 23.3**	**+0.3**
SJPF	**Ste Jean**	**88.94**	**338**	*eP*		**P**		**11 23 25.4**	**+1.8**
	comp=Z,44nm,0.9s,mb5.2								
SJPF	**Ste Jean**	**88.94**	**338**	*eP*		**P**		**11 23 25.4**	**+1.8**
	comp=Z,22nm,0.9s,mb5.2								
SJPF	**Ste Jean**	**88.94**	**338**	*eP*		**P**		**11 23 25.4**	**+1.8**
SJPF					pmax	pmax			
	comp=Z,22nm,0.9s,mb5.2								
ETSF	**Etsaut**	**88.96**	**337**	*eP*		**P**		**11 23 25.6**	**+1.9**
	comp=Z,118nm,0.8s,mb5.7								
ETSF	**Etsaut**	**88.96**	**337**	*eP*		**P**		**11 23 25.6**	**+1.9**
	comp=Z,59nm,0.8s,mb5.7								
ETSF	**Etsaut**	**88.96**	**337**	*eP*		**P**		**11 23 25.6**	**+1.9**
ETSF					pmax	pmax			
	comp=Z,59nm,0.8s,mb5.7								
KEST	**Kesra**	**92.08**	**327**	*eP*		**P**		**11 23 37.8**	**-0.6**
KEST	**Kesra**	**92.08**	**327**	P		**P**		**11 23 37.5**	**-0.9**
	comp=Z,4.5nm,0.9s,mb4.7,baz=216,slow=15,SNR=5.9								
KEST					LR	LR		12 11 20.3	
	comp=Z,182nm,18.1s,baz=349,slow=40								
MVO	**Moncorvo**	**92.25**	**341**	*eP*		**P**		**11 23 38.5**	**-0.6**
	comp=Z,22nm,1.8s,mb5.1								
MVO				*e*	LR	LR		11 54 58.5	
	comp=Z,265nm,20.0s								
PVRL	**Vila Real**	**92.31**	**342**	*eP*		**P**		**11 23 39.1**	**-0.2**
	comp=Z,38nm,1.6s,mb5.4								
ESDC	**Sonseca Array**	**92.89**	**338**	P		**P**		**11 23 40.2**	**-1.8**
ESDC					LR	LR		12 08 25.0	
ESDC	**Sonseca Array**	**92.89**	**338**	P		**P**		**11 23 40.2**	**-1.8**
	comp=Z,4.1nm,0.7s,mb4.8,baz=22,slow=3.8,SNR=15								
ESDC					LR	LR		12 08 25.0	
	comp=Z,261nm,21.5s,baz=40,slow=37								
ESLA	**Sonseca Array**	**92.89**	**338**	*eP*		**P**		**11 23 41.6**	**-0.4**
	comp=Z,3.0nm,0.9s,mb4.6								
MTE	**Manteigas**	**93.10**	**341**	*eP*		**P**		**11 23 42.3**	**-0.7**
	comp=Z,35nm,1.6s,mb5.4								
MTE				*e*	LR	LR		11 55 59.0	
	comp=Z,387nm,18.0s								
PAB	**San Pablo**	**93.11**	**339**	*eP*		**P**		**11 23 41.6**	**-1.4**
	comp=Z,10nm,1.0s,mb5.1								
PAB	**San Pablo**	**93.11**	**339**	*eP*		**P**		**11 23 41.6**	**-1.5**
PAB					pmax	pmax			
	comp=Z,10.0nm,1.0s,mb5.1								
PMRV	**Marv??o**	**93.99**	**341**	*e*	LR	LR		11 58 05.7	
	comp=Z,217nm,18.0s								
PESTR	**Estremoz**	**94.57**	**341**	*e*	LR	LR		11 56 58.7	
	comp=Z,295nm,16.0s								
PMAFR	**Mafra**	**94.87**	**342**	*e*	LR	LR		11 56 50.2	
	comp=Z,157nm,24.0s								
PBAR	**Barrancos**	**95.09**	**340**	*eP*		**P**		**11 23 51.7**	**-0.5**
	comp=Z,19nm,2.0s,mb5.2								
PBAR				*e*	LR	LR		11 57 40.9	
	comp=Z,273nm,18.0s								
PVAQ	**Vaqueiros**	**95.99**	**340**	*e*	LR	LR		11 57 27.2	
	comp=Z,169nm,16.0s								
PBDV	**Barranco-do-Ve**	**96.19**	**341**	*e*	LR	LR		11 57 52.9	
	comp=Z,197nm,18.0s								
PFVI	**Vila Bisbo**	**96.51**	**341**	*e*	LR	LR		11 59 47.5	
	comp=Z,260nm,18.0s								
MDT	**Midelt**	**99.50**	**337**	P		Pdif		11 24 11.2	-0.9
	comp=Z,4.2nm,0.8s,baz=14,slow=6.8,SNR=8.1								
MDT					PP	PP		11 28 14.5	-0.9
	comp=Z,4.9nm,0.9s,baz=14,slow=7.2,SNR=4.4								
TORD	**Torodi Ar. Bea**	**115.23**	**323**	PKP		PKPdf		11 29 09.2	-1.5
	comp=Z,0.9nm,0.6s,baz=13,slow=2.3,SNR=5.9								
TORD					PP	PP		11 30 06.5	-4.5
	comp=Z,6.9nm,0.9s,baz=28,slow=8.5,SNR=10								
TORD					PKKPbc	PKKPbc		11 39 43.6	-0.3
	comp=Z,3.3nm,1.2s,baz=183,slow=3.9,SNR=4.9								
TORD					PKKPab	PKKPab		11 39 51.2	-2.3
	comp=Z,1.4nm,0.8s,baz=213,slow=8.2,SNR=4.6								
LSZ	**Lusaka**	**121.53**	**279**	PKP		PKPdf		11 29 21.5	-1.1
	comp=Z,1.8nm,0.6s,baz=349,slow=1.9,SNR=5.2								
DBIC	**Dimbokro**	**123.80**	**326**	PKP		PKPdf		11 29 25.9	-1.2
	comp=Z,6.5nm,0.9s,baz=90,slow=5.5,SNR=5.9								
MAW	**Mawson**	**127.80**	**209**	PKP		PKPdf		11 29 33.7	+0.6
	comp=Z,4.9nm,0.9s,baz=51,slow=1.4,SNR=10								
BOSA	**Boshof**	**131.97**	**269**	SKPbc		SKPbc		11 33 01.9	+0.3
	comp=Z,31nm,1.0s,baz=48,slow=4.5,SNR=20								
QSPA	**South Pole Qui**	**133.67**	**180**	*e*PKPdf		PKPdf		11 29 44.4	+0.5
QSPA	**South Pole Qui**	**133.67**	**180**	PKP		PKPdf		11 29 45.4	+1.5
	comp=Z,14nm,0.9s,baz=286,slow=0.8,SNR=30								
SYO	**Syowa Base**	**136.49**	**210**	*e*PKPdf		PKPdf		11 29 50.2	+0.8
LPAZ	**La Paz**	**139.14**	**59**	*e*PKPdf		PKPdf		11 29 56.5	+0.5
LPAZ	**La Paz**	**139.14**	**59**	PKP		PKPdf		11 29 55.8	-0.1
	comp=Z,1.6nm,0.5s,baz=312,slow=3.2,SNR=7.4								
LPAZ	**La Paz**	**139.14**	**59**	PKIKP		PKPdf		11 29 55.8	-0.1
LPAZ					pmax	pmax			
	comp=Z,2.0nm,0.5s								
NVL	**N'lazarevskaya**	**145.46**	**204**	*i* PKP2		PKPdf		11 30 04.2	-1.3
NVL					pmax	pmax			
	comp=Z,131nm,0.9s								
MAIT	**Maitri**	**145.49**	**204**	*e*PKPdif		PKPdf		11 30 06.0	+0.5
MAIT				*e*				11 30 26.8	
LCO	**Las Campanas**	**146.15**	**77**	*e*PKPdf		PKPdf		11 30 09.2	+1.3
LCO	**Las Campanas**	**146.15**	**77**	*i* P		PKPdf		11 30 08.4	+0.4
TLL	**Tololo Astrono**	**146.75**	**79**	*e*P		PKPdf		11 30 10.9	+2.0
TLL	**Tololo Astrono**	**146.75**	**79**	*e*P		PKPdf		11 30 10.9	+2.0
FCH	**Farellones**	**148.84**	**83**	*e*P		PKPdf		11 30 11.9	-0.4
LMEL	**Las Melosas**	**149.17**	**84**	*e*P		PKPbc		11 30 17.4	+0.2
LMEL	**Las Melosas**	**149.17**	**84**	*e*P		PKPbc		11 30 17.4	+0.2
VNA1	**Neumayer--Stat**	**150.64**	**196**	*e*PKPdf		PKPdf		11 30 17.6	+3.6
VNA1				*e*				11 30 23.8	
VNA1				*e*				11 30 27.6	
PLCA	**Paso Flores**	**151.82**	**97**	*e*PKPdf		PKPdf		11 30 16.6	-0.1
PLCA				*e*PKPbc		PKPbc		11 30 23.5	+0.3
PLCA	**Paso Flores**	**151.82**	**97**	PKP		PKPdf		11 30 16.6	-0.2
	comp=Z,7.3nm,1.2s,baz=276,slow=2.5,SNR=4.6								
PLCA					PKPbc	PKPbc		11 30 23.2	+0.1
	comp=Z,36nm,0.9s,baz=260,slow=3.1,SNR=4.3								
CPUP	**Villa Florida**	**153.28**	**57**	PKP		PKPdf		11 30 18.9	-0.4
	comp=Z,0.8nm,0.4s,baz=344,slow=5.7,SNR=3.4								
CPUP					PKPbc	PKPbc		11 30 25.9	-1.0
	comp=Z,2.3nm,0.6s,baz=262,slow=1.1,SNR=9.1								
CPUP					PKPab	PKPab		11 30 38.6	-0.4
	comp=Z,5.6nm,0.7s,baz=334,slow=2.4,SNR=5.3								

MOS **14** *11:28:10.7±1.6,43.72N×147.66E,h84km,mb4.2/1,Error ellipse: s-maj=13.6km s-min=11.9km az=65.4*
ISCJB **14** *11:28:11.7±1.1,43.65N±0.07×147.6E±0.1,h94km±8km, mb3.9/9,Error ellipse: s-maj=15.5km s-min=8.9km az=40.9*
JMA **14** *11:28:12.1±0.2,43.66N×147.66E,h60km,M4.2*
NEIC **14** *11:28:14.0±1.4,43.61N×147.57E,h103km±13km,Error ellipse: s-maj=19.5km s-min=13.9km az=122.0*
IDC **14** *11:28:14.4±2.9,43.65N×147.50E,h105km±33km,mb3.6/9, mb1 3.6/12,mb1mx3.4/26,mbtmp3.5/12,MS3.0/1, Ms1 3.0/1,ms1mx2.7/27,Error ellipse: s-maj=53.8km s-min=20.6km az=165.0*
ISC 14 11:28:13.2±1.1,43.68N±0.07×147.6E±0.1,h88km±9km, n33,σ0.94/45,mb3.9/9,1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**1.29**	**287**	*d i* PN		**Pn**	**11 28 34.7**	**-1.4**
YUK				*i* S		**Sn**	**11 28 50.9**	**-2.6**
YUK				pmax	pmax			
	comp=Z,1μm,0.3s							
YUK				pmax	pmax			
	comp=N,119nm,0.1s							
YUK				pmax	pmax			
	comp=E,211nm,0.1s							
YUK				pmax	pmax			
	comp=Z,300nm,0.3s							
YUK				smax				
	comp=N,1μm,0.5s							
YUK				smax				
	comp=E,270nm,0.5s							
YUK				smax				
	comp=N,890nm,0.4s							
YUK				smax				
	comp=E,3μm,0.4s							
NEM2	**Nemuro 2**	**1.37**	**258**	P		**Pn**	**11 28 36.2**	**-0.9**
NEM2				*e*S		**Sn**	**11 28 54.0**	**-1.2**
KUR	**Kuril'sk**	**1.57**	**8**	*e*PN		**Pn**	**11 28 35.4**	**-4.3**
KUR				*e*S		**Sn**	**11 28 53.0**	**-6.8**
KUR				pmax	pmax			
	comp=N,80nm,0.4s							
KUR				pmax	pmax			
	comp=Z,100nm,0.4s							
KUR				smax				
	comp=N,450nm,0.4s							
KUR				smax				
	comp=E,900nm,0.4s							
JRA	**Rausu**	**1.79**	**279**	P		**Pn**	**11 28 42.3**	**-0.3**
JRA				*e*S		**Sn**	**11 29 05.2**	**+0.3**
JNK	**Nakash**	**2.08**	**268**	P		**Pn**	**11 28 45.8**	**-0.4**
JNK				*e*S		**Sn**	**11 29 11.1**	**-0.4**
JAK	**Akkeshi**	**2.21**	**253**	P		**Pn**	**11 28 47.7**	**-0.3**
JAK				*e*S		**Sn**	**11 29 13.9**	**-0.7**
JTKR	**Abashiri--Toko**	**2.67**	**278**	P		**Pn**	**11 28 54.4**	**+0.3**
JAR	**Ashorobuto**	**2.79**	**264**	P		**Pn**	**11 28 56.4**	**+0.6**
JAR				*e*S		**Sn**	**11 29 29.8**	**+1.1**
JOB	**Onbets**	**2.84**	**255**	P		**Pn**	**11 28 56.8**	**+0.4**
JOB				*e*S		**Sn**	**11 29 30.0**	**+0.3**
JMP	**Maruseppu**	**3.07**	**278**	P		**Pn**	**11 29 00.0**	**+0.5**
JCH	**Churui**	**3.26**	**252**	P		**Pn**	**11 29 02.0**	**-0.1**
JCH				*e*S		**Sn**	**11 29 39.3**	**-0.6**
JKK2	**Kamakawa 2**	**3.50**	**275**	P		**Pn**	**11 29 06.4**	**+1.1**
ASAJ	**Asahikawa**	**3.62**	**279**	P		**Pn**	**11 29 08.1**	**+1.1**
	comp=E,4.0nm,0.3s,baz=96,slow=15,SNR=28							
ASAJ				S		**Sn**	**11 29 57.4**	**+8.7**
	comp=E,2.5nm,0.3s,baz=162,slow=19,SNR=3.0							
ERM	**Erimo**	**3.65**	**244**	*e*Pn		**Pn**	**11 29 09.1**	**+1.8**
ERM				*e*Sn		**Sn**	**11 29 49.3**	**0.0**
JFR	**Furan**	**3.67**	**264**	P		**Pn**	**11 29 09.1**	**+1.5**
JNBK	**Urakawa-nobuka**	**3.80**	**250**	P		**Pn**	**11 29 09.6**	**+0.2**
JNBK				*e*S		**Sn**	**11 29 52.3**	**-0.7**
JSE	**Soyaes**	**3.80**	**291**	P		**Pn**	**11 29 09.6**	**+0.2**
JWK2	**Keihoku**	**4.38**	**294**	P		**Pn**	**11 29 18.8**	**+1.6**
JEW	**Eniwo**	**4.55**	**262**	P		**Pn**	**11 29 21.3**	**+1.7**
YSS	**Yuzh-Sakhalins**	**4.72**	**316**	*e*Pn		**Pn**	**11 29 23.3**	**+1.4**
MAJO	**Matsushiro**	**10.11**	**228**	*e*Pn		**Pn**	**11 30 34.3**	**-0.9**
MJAR	**Matsushiro Arr**	**10.11**	**228**	P		**Pn**	**11 30 35.6**	**+0.3**
	comp=E,0.2nm,0.3s,baz=203,slow=10.0,SNR=5.4							
MJAR				LR		LR	11 34 11.1	
	comp=E,82nm,19.1s,baz=35,slow=36							
KSRS	**Korea Array**	**16.16**	**254**	P		**Pn**	**11 31 53.7**	**-1.2**
	comp=E,0.0nm,0.3s,baz=63,slow=11,SNR=5.0							
ILAR	**Eielson Array**	**41.37**	**36**	P		**P**	**11 35 49.5**	**-0.5**
	comp=E,0.5nm,0.5s,mb3.6,baz=276,slow=8.3,SNR=8.7							
MK31	**Makanchi Array**	**44.89**	**298**	*eP*		**P**	**11 36 19.1**	**+0.4**
MKAR	**Makanchi Array**	**44.89**	**298**	P		**P**	**11 36 17.9**	**-0.7**
	comp=E,1.0nm,0.7s,mb3.6,baz=72,slow=7.8,SNR=9.4							
KURK	**Khatov**	**45.83**	**304**	P		**P**	**11 36 26.4**	**+0.4**
	comp=E,1.2nm,0.6s,mb3.8,baz=73,slow=8.7,SNR=10							
INK	**Inuvik**	**46.31**	**30**	P		**P**	**11 36 29.3**	**-0.2**
	comp=E,1.0nm,0.3s,mb4.0,baz=299,slow=5.6,SNR=12							
BVAR	**Borovoye Array**	**49.79**	**310**	P		**P**	**11 36 56.9**	**+0.4**
	comp=E,0.6nm,0.5s,mb3.8,baz=136,slow=9.4,SNR=4.1							
YKA	**Yellowknife Ar**	**55.69**	**34**	P		**P**	**11 37 41.1**	**+1.3**
	comp=E,1.1nm,0.8s,mb3.9,baz=307,slow=7.4,SNR=3.0							
ARCES	**ARCESS Array B**	**59.42**	**340**	P		**P**	**11 38 04.8**	**-1.1**
	comp=E,3.1nm,0.8s,mb4.4,baz=40,slow=7.2,SNR=4.1							
FINES	**FINESS Array B**	**65.08**	**333**	P		**P**	**11 38 42.5**	**-1.2**
	comp=E,1.5nm,0.5s,mb4.1,baz=35,slow=7.0,SNR=5.1							
NOA	**NORSAR Array B**	**69.78**	**339**	P		**P**	**11 39 12.3**	**-1.1**
	comp=E,0.8nm,0.5s,mb3.9,baz=32,slow=6.8,SNR=4.3							

ISCJB **14** *11:39:59.4±0.3,23.88N±0.02×121.66E±0.02,h45km±4km, Error ellipse: s-maj=3.6km s-min=2.4km az=145.3*
JMA **14** *11:39:59.6±0.2,24.09N×121.67E,h88km,M2.7*
TAP **14** *11:39:59.4,23.89N×121.58E,h45km,ML3.5,B*
ISC 14 11:39:59.9±0.3,23.88N±0.02×121.65E±0.02,h41km±4km, n57,σ0.89/97,4C-8D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.10**	**338**	*eP*		**Pn**	**11 40 07.0**	**+0.3**
	baz=7.0							
HWA				*e*S		**Sn**	**11 40 12.8**	**+1.3**
	baz=7.0							
ESF	**Shoufeng Towns**	**0.13**	**265**	P		**Pn**	**11 40 06.5**	**-0.4**
	baz=269							
ESF				S		**Sn**	**11 40 11.4**	**-0.3**
	baz=269							
TEGC	**Jichi Village**	**0.20**	**210**	*eP*		**Pn**	**11 40 07.6**	**+0.2**
	baz=193							
TEGC				*e*S		**Sn**	**11 40 15.3**	**+2.8**
	baz=193							
TWD	**Chiawan**	**0.20**	**347**	↑*i* P		**Pn**	**11 40 07.2**	**-0.2**
	baz=356							
TWD				*i* S		**Sn**	**11 40 12.5**	**-0.1**
	baz=356							
ESL	**Shilin**	**0.21**	**251**	↓*i* P		**Pn**	**11 40 06.7**	**-0.7**
	baz=239							
ESL				S		**Sn**	**11 40 11.6**	**-1.0**
	baz=239							
WHF	**Hehuan Shan**	**0.44**	**307**	↓*i* P		**Pn**	**11 40 09.6**	**-0.3**
	baz=308							
WHF				S		**Sn**	**11 40 16.6**	**-0.3**
	baz=308							
EHY	**Hungye**	**0.48**	**219**	*eP*		**Pn**	**11 40 08.9**	**-1.5**
	baz=214							
ENA	**Nanau**	**0.55**	**9**	*i* P		**Pn**	**11 40 10.8**	**-0.6**
	baz=8.0							
TWT	**Tachien**	**0.57**	**311**	*i* P		**Pn**	**11 40 11.5**	**-0.1**
	baz=313							
TWT				S		**Sn**	**11 40 19.5**	**-0.4**
	baz=313							
NNS	**Nan Shan**	**0.61**	**336**	↓*i* P		**Pn**	**11 40 11.8**	**-0.4**
	baz=344							
NNS				*e*S		**Sn**	**11 40 20.1**	**-0.8**
	baz=344							
TWF1	**Yuli**	**0.62**	**211**	↓*i* P		**Pn**	**11 40 10.7**	**-1.6**
	baz=212							
SMLT	**Sun Moon Lake**	**0.68**	**270**	↓*i* P		**Pn**	**11 40 12.6**	**-0.6**
	baz=269							
SMLT				S		**Sn**	**11 40 22.2**	**-0.5**
	baz=269							
TYC	**Yuchr**	**0.72**	**272**	*i* P		**Pn**	**11 40 13.1**	**-0.6**
	baz=274							
TYC				S		**Sn**	**11 40 23.6**	**-0.1**
	baz=274							
TWC	**Suao**	**0.75**	**14**	P		**Pn**	**11 40 13.8**	**-0.2**
	baz=11							
TWC				*e*S		**Sn**	**11 40 24.6**	**+0.4**
	baz=11							
YUS	**Yu-Shan**	**0.75**	**239**	P		**Pn**	**11 40 13.8**	**-0.2**
	baz=231							
YUS				S		**Sn**	**11 40 23.4**	**-0.9**
	baz=231							
ENTT	**Nioudou**	**0.76**	**354**	↓*i* P		**Pn**	**11 40 13.6**	**-0.6**
	baz=7.0							
ENTT				S		**Sn**	**11 40 23.5**	**-1.0**
	baz=7.0							
CHKT	**Chengkung**	**0.82**	**198**	*eP*		**Pn**	**11 40 14.4**	**-0.6**
	baz=185							
NSK	**Sanguang**	**0.83**	**342**	↓*i* P		**Pn**	**11 40 14.9**	**-0.3**
	baz=353							
NSK				S		**Sn**	**11 40 25.5**	**-0.8**
	baz=353							
ALS	**Alishan**	**0.86**	**245**	P		**Pn**	**11 40 15.5**	**-0.1**
	baz=236							
ALS				S		**Sn**	**11 40 26.6**	**-0.3**
	baz=236							
WNT	**Mingjian**	**0.88**	**270**	P		**Pn**	**11 40 15.9**	**+0.1**

JKRS	**Kuro-shima**	**2.19**	**80**	P		**Pn**	**11 40 34.4**	**+0.6**
JKRS				S		**Sn**	**11 41 00.4**	**+0.7**
JIJ	**Ishigaki jima**	**2.33**	**78**	P		**Pn**	**11 40 35.7**	**0.0**
JIJ				S		**Sn**	**11 41 02.8**	**-0.4**
JTJ	**Tarama**	**2.89**	**74**	P		**Pn**	**11 40 43.0**	**-0.4**
JTJ				S		**Sn**	**11 41 16.1**	**-0.8**
QZH	**Quanzhou**	**2.98**	**291**	⇑*i*	Pn	**Pn**	**11 40 42.3**	**-2.4**
QZH				Sn		**Sn**	**11 41 13.8**	**-5.4**
QZH				smax				
	comp=N,110nm,0.3s							
QZH				smax				
	comp=E,80nm,0.2s							
KNM	**Kinmen**	**2.98**	**281**	*e*P		**Pn**	**11 40 43.6**	**-1.1**
	baz=280							
JOGS	**Gusukube**	**3.54**	**75**	P		**Pn**	**11 40 52.8**	**+0.4**
JOGS				S		**Sn**	**11 41 33.9**	**+0.9**

*IDC **14** 11:49:20.8±1.8,54°.28N×162°.42W,h0km,mb3.7/5, mb1 3.9/8,mb1mx3.7/25,mbtmp3.7/8,ML3.9/3,MS3.0/1, Ms1 3.1/1,ms1mx2.7/30,Error ellipse: s-maj=32.0km s-min=25.1km az=97.0*

*ISCJB **14** 11:49:26.5±0.9,54°.34N±0°.09×162°.21W±0°.09, h46km±10km,mb4.2/9,Error ellipse: s-maj=16.1km s-min=6.2km az=155.9*

*BJI **14** 11:49:26.3,54°.40N×162°.30W,h26km,mB4.7/3,mb4.6/7, Ms4.1/2,Ms7 4.1/2*

*NEIC **14** 11:49:28.3,54°.36N×162°.31W,h27km,ML3.9(AEIC),After AEIC.*

ISC 14 11:49:27.8±0.9,54°.29N±0°.09×162°.31W±0°.08, h44km±10km,n32,σ0s97/38,mb4.2/9,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FALS	**False Pass**	**0.86**	**312**	P		**Pn**	**11 49 42.4**	**-1.0**
FALS				S		**Sn**	**11 49 53.8**	**-1.1**
SDPT	**Sand Point**	**1.50**	**44**	*e*P		**Pn**	**11 49 51.8**	**-0.4**
AKAT	**Akutan**	**2.04**	**267**	*e*P		**Pn**	**11 50 01.4**	**+1.8**
AKLV	**Akutan Long Va**	**2.14**	**268**	P		**Pn**	**11 50 00.8**	**-0.2**
AKGG	**Akutan Green G**	**2.16**	**269**	P		**Pn**	**11 50 01.3**	**0.0**
UNV	**Unalaska Valle**	**2.51**	**261**	P		**Pn**	**11 50 05.9**	**-0.1**
CHGN	**Chignik**	**3.00**	**46**	*e*P		**Pn**	**11 50 12.8**	**0.0**
OHAK	**Old Harbor**	**5.88**	**56**	*e*P		**Pn**	**11 50 51.5**	**-0.7**
KDAK	**Kodiak Island**	**6.47**	**53**	*e*Pn		**Pn**	**11 51 00.1**	**-0.3**
KDAK				Sn		**Sn**	**11 52 05.7**	**-7.2**
KDAK				Lg			11 52 36.1	
KDAK	**Kodiak Island**	**6.47**	**53**	Pn		**Pn**	**11 50 58.5**	**-1.9**
	4.7nm,0.3s,baz=236,slow=7.5,SNR=17							
KDAK				Sn		**Sn**	**11 52 05.7**	**-7.2**
	0.6nm,0.3s,baz=173,slow=16,SNR=2.4							
KDAK				Lg			11 52 36.1	
	11nm,0.3s,baz=102,slow=21,SNR=6.0							
SVW2	**Sparrevohn**	**7.71**	**25**	*e*P		**Pn**	**11 51 17.0**	**-0.4**
RSO	**Redoubt South**	**8.05**	**36**	*e*Pn		**Pn**	**11 51 23.5**	**+1.5**
RSO				*e*Sn		**Sn**	**11 52 52.5**	**+0.9**
PPLA	**Purkeypile**	**10.10**	**27**	*e*Pn		**Pn**	**11 51 50.9**	**+0.8**
	5.4nm,0.6s							
PMR	**Palmer**	**10.11**	**38**	*e*Pn		**Pn**	**11 51 48.8**	**-1.4**
	7.3nm,0.6s							
TRF	**Thorofare Moun**	**11.07**	**29**	*e*Pn		**Pn**	**11 52 05.1**	**+1.9**
	18nm,1.1s							
PAX	**Paxson**	**12.31**	**38**	*e*Pn		**Pn**	**11 52 20.9**	**+0.6**
	3.3nm,0.4s							
MENT	**Mentasta**	**12.95**	**41**	*e*Pn		**Pn**	**11 52 28.6**	**-0.3**
ILAR	**Eielson Array**	**13.05**	**30**	Pn		**Pn**	**11 52 25.6**	**-4.7**
ILAR				Sn		**Sn**	**11 54 43.2**	**-11**
ILAR				LR		LR	11 58 10.4	
ILAR	**Eielson Array**	**13.05**	**30**	Pn		**Pn**	**11 52 25.6**	**-4.7**
	0.1nm,0.3s,baz=226,slow=11,SNR=4.2							
ILAR				Sn		**Sn**	**11 54 43.2**	**-11**
	baz=197,slow=25,SNR=2.7							
ILAR				LR		LR	11 58 10.4	
	comp=Z,62nm,18.4s,baz=321,slow=40							
DAWY	**Dawson**	**15.19**	**41**	*e*Pn		**Pn**	**11 52 59.7**	**+0.7**
INK	**Inuvik**	**19.43**	**33**	P		**Pn**	**11 53 47.0**	**-4.5**
INK	**Inuvik**	**19.43**	**33**	P		**Pn**	**11 53 47.0**	**-4.5**
	0.3nm,0.3s,baz=240,slow=9.7,SNR=7.8							
YKA	**Yellowknife Ar**	**25.75**	**52**	P		**P**	**11 54 53.2**	**-0.6**
YKA	**Yellowknife Ar**	**25.75**	**52**	P		**P**	**11 54 53.2**	**-0.6**
	1.2nm,0.5s,mb3.7,baz=271,slow=9.2,SNR=18							
NVAR	**Mina Array Bea**	**33.63**	**100**	P		**P**	**11 56 04.0**	**+0.2**
	0.6nm,0.8s,mb3.6,baz=296,slow=8.3,SNR=5.3							
MDJ	**Mudanjiang**	**43.68**	**286**	P		**P**	**11 57 28.6**	**+0.7**
MDJ				pmax	pmax			
	comp=Z,4.0nm,0.6s,mb4.3							
MDJ				pmax	pmax			
	comp=Z,90nm,6.8s							
TXAR	**Lajitas Array**	**48.61**	**96**	P		**P**	**11 58 06.2**	**-0.6**
	comp=Z,0.5nm,0.8s,mb3.6,baz=311,slow=4.6,SNR=7.1							
SCHQ	**Schefferville**	**51.07**	**48**	P		**P**	**11 58 24.0**	**-1.2**
	comp=Z,1.6nm,0.8s,mb4.0,baz=338,slow=11,SNR=3.2							
NJ2	**Nanjing**	**58.38**	**282**	*e*P		**P**	**11 59 22.8**	**+4.3**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.5s,mb5.1							
BVAR	**Borovoye Array**	**64.47**	**328**	P		**P**	**11 59 58.5**	**-0.7**
	comp=Z,0.9nm,0.6s,mb4.0,baz=356,slow=8.7,SNR=3.5							
GYA	**Guiyang**	**69.54**	**287**	*e*P		**P**	**12 00 35.4**	**+3.6**
GYA				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.7							
KMI	**Kunming**	**72.77**	**289**	P		**P**	**12 00 55.3**	**+3.9**
KMI				pP		pP	12 01 02.4	-2.0
KMI				sP		sP	12 01 06.3	-3.1
KMI				pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.6							

KRSC 14 12:10:19.1±0.9,52°.47N×159°.61E,h20km±19km,ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SPN	**Mys Shipunski**	**0.68**	**22**	P		Pb	12 10 32.9	+0.7
SPN				*i* S		Sb	12 10 43.0	+1.9
NLC	**Nalytchevo**	**0.72**	**347**	*e*P		Pb	12 10 33.2	+0.3
NLC				*i* S		Sb	12 10 43.7	+1.3
PET	**Petropavlovsk**	**0.80**	**314**	*i* P		Pb	12 10 34.6	+0.2
PET				*i* S		Sb	12 10 45.7	+0.9
GRL	**Gorelyy**	**0.94**	**276**	*e*P		Pb	12 10 36.8	+0.1
GRL				*e*S		Sb	12 10 49.8	+1.1
AVH	**Avacha**	**0.96**	**327**	*i* P		Pb	12 10 37.4	+0.5
AVH				*i* S		Sb	12 10 50.4	+1.3
KII	**Karymskiy**	**1.57**	**357**	*e*P		Pn	12 10 46.5	+0.7
KII				*i* S		Sn	12 11 06.7	+1.2
GNL	**Ganaly**	**1.59**	**321**	*i* P		Pn	12 10 46.8	+0.8
GNL				*i* S		Sn	12 11 06.9	+1.0
MIPR	**Malaya Ipel'ka**	**1.76**	**265**	*e*P		Pn	12 10 49.0	+0.6
MIPR				*e*S		Sn	12 11 10.7	+0.6
ALID	**Alaid**	**2.99**	**239**	P		Pn	12 11 05.7	+0.4
KBTR	**Krutoberegovo**	**4.19**	**25**	*e*P		Pn	12 11 22.9	+1.1
KBTR				*e*S		Sn	12 12 08.5	-1.6

*IDC **14** 12:16:56.5±3.3,19°.51N×65°.27W,h0km,mb3.4/3, mb1 3.9/3,mb1mx3.5/20,mbtmp3.4/3,Error ellipse: s-maj=77.0km s-min=23.5km az=100.0*

*ISCJB **14** 12:17:01.0±0.8,19°.58N±0°.05×65°.50W±0°.07,h33km, mb3.4/3,Error ellipse: s-maj=9.5km s-min=6.5km az=6.1*

*RSPR **14** 12:17:02.3,19°.58N×65°.48W,h43km,24km,MD3.8/10*

*NEIC **14** 12:17:02.3,19°.58N×65°.48W,h43km,MD3.8(RSPR), After RSPR.*

ISC 14 12:17:01.0±2.2,19°.51N±0°.05×65°.48W±0°.08,h21km±19km, n29,σ0s45/41,mb3.4/3,18C-4D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STVI	**Saint Thomas**	**1.26**	**157**	⇑*e*P		**Pn**	**12 17 23.9**	**+0.6**
STVI	**Saint Thomas**	**1.26**	**157**	⇑*e*P		**Pn**	**12 17 23.9**	**+0.6**
CBYP	**Canovanas**	**1.29**	**196**	⇑*e*P		**Pn**	**12 17 23.4**	**-0.3**
CBYP	**Canovanas**	**1.29**	**196**	⇑*e*P		**Pn**	**12 17 23.4**	**-0.3**
TBVI	**Tortola**	**1.36**	**143**	⇓*e*P		**Pn**	**12 17 24.5**	**-0.2**
TBVI	**Tortola**	**1.36**	**143**	⇓*e*P		**Pn**	**12 17 24.5**	**-0.2**
HUMP	**Col San Antoni**	**1.41**	**195**	⇑*e*P		**Pn**	**12 17 25.0**	**-0.3**
HUMP				*e*S		**Sn**	**12 17 42.8**	**-0.5**
HUMP	**Col San Antoni**	**1.41**	**195**	⇑*e*P		**Pn**	**12 17 25.4**	**-0.0**
HUMP				*e*S		**Sn**	**12 17 42.8**	**-0.5**
MTP	**Monte Pirata**	**1.41**	**183**	⇑*e*P		**Pn**	**12 17 25.5**	**+0.1**
MTP				*e*S		**Sn**	**12 17 43.6**	**+0.3**
MTP	**Monte Pirata**	**1.41**	**183**	⇑*e*P		**Pn**	**12 17 25.5**	**+0.1**
MTP				*e*S		**Sn**	**12 17 43.6**	**+0.3**
SJG	**San Juan**	**1.53**	**205**	⇑*e*P		**Pn**	**12 17 26.6**	**-0.5**
SJG				*e*S		**Sn**	**12 17 45.7**	**-0.6**
SJG	**San Juan**	**1.53**	**205**	P		**Pn**	**12 17 27.0**	**-0.1**
	16nm,0.3s,baz=37,slow=6.4,SNR=30							
SJG				Sn		**Sn**	**12 17 47.1**	**+0.8**
	14nm,0.3s,baz=272,slow=21,SNR=6.5							
SJG	**San Juan**	**1.53**	**205**	⇑*e*P		**Pn**	**12 17 26.6**	**-0.5**
SJG				*e*S		**Sn**	**12 17 45.7**	**-0.6**
AOPR	**Arecibo Observ**	**1.68**	**226**	⇑*e*P		**Pn**	**12 17 28.3**	**-0.7**
AOPR				*e*S		**Sn**	**12 17 49.8**	**-0.1**
AOPR	**Arecibo Observ**	**1.68**	**226**	⇑*e*P		**Pn**	**12 17 28.3**	**-0.7**
AOPR				*e*S		**Sn**	**12 17 49.8**	**-0.1**
CELP	**Cerrillos**	**1.77**	**216**	⇑*e*P		**Pn**	**12 17 30.0**	**-0.3**
CELP	**Cerrillos**	**1.77**	**216**	⇑*e*P		**Pn**	**12 17 30.2**	**-0.2**
OBIP	**Obispado Ponce**	**1.81**	**216**	⇓*e*P		**Pn**	**12 17 30.8**	**-0.1**
OBIP				*e*S		**Sn**	**12 17 53.3**	**0.0**
OBIP	**Obispado Ponce**	**1.81**	**216**	⇓*e*P		**Pn**	**12 17 30.8**	**-0.1**
OBIP				*e*S		**Sn**	**12 17 53.3**	**0.0**
ICM	**Isla Caja Muer**	**1.89**	**212**	⇑*e*P		**Pn**	**12 17 32.1**	**+0.1**
ICM				*e*S		**Sn**	**12 17 55.7**	**+0.5**
ICM	**Isla Caja Muer**	**1.89**	**212**	⇑*e*P		**Pn**	**12 17 32.9**	**+0.9**
ICM				*e*S		**Sn**	**12 17 55.7**	**+0.5**
LSP	**Las Mesas**	**2.02**	**229**	⇑*e*P		**Pn**	**12 17 33.7**	**-0.1**
LSP	**Las Mesas**	**2.02**	**229**	⇑*e*P		**Pn**	**12 17 33.7**	**-0.1**
CRPR	**Cabo Rojo, PR**	**2.15**	**226**	*e*Pn		**Pn**	**12 17 36.6**	**+1.0**
SDDR	**Presa de Saban**	**5.51**	**265**	*e*Pn		**Pn**	**12 18 21.8**	**-0.1**
	31nm,0.5s							
TXAR	**Lajitas Array**	**35.98**	**293**	P		**P**	**12 24 01.1**	**+0.6**
	0.8nm,0.8s,mb3.7,baz=113,slow=11,SNR=12							
NVAR	**Mina Array Bea**	**49.22**	**304**	P		**P**	**12 25 48.1**	**+0.2**
	0.4nm,0.8s,mb3.5,baz=96,slow=8.3,SNR=3.4							
ILAR	**Eielson Array**	**68.88**	**333**	P		**P**	**12 28 03.0**	**-0.7**
	0.1nm,0.4s,mb3.1,baz=101,slow=5.8,SNR=4.1							
ASAR	**Alice Springs**	**161.51**	**254**	PKPab		PKPab	12 37 45.1	-0.4
	0.3nm,0.6s,baz=102,slow=4.8,SNR=7.2							

*IDC **14** 12:42:30.7±1.1,15°.69S×177°.14W,h0km,mb4.0/8, mb1 4.3/9,mb1mx4.2/15,mbtmp4.0/9,ML2.2/1,MS4.2/16, Ms1 4.2/16,ms1mx4.1/17,Error ellipse: s-maj=52.4km s-min=19.1km az=151.0*

*NEIC **14** 12:42:31.6±4.9,16°.04S×176°.94W,h9km±33km,Error ellipse: s-maj=65.4km s-min=9.4km az=156.0*

*ISCJB **14** 12:42:35.2±3.3,15°.7S±0°.3×177°.3W±0°.2,h39km±30km, mb4.0/8,MS4.3/15,Error ellipse: s-maj=62.8km s-min=22.6km az=150.0*

*GCMT **14** 12:42:37.6±0.2,15°.40S×177°.14W,h23km±1km,MW5.0, Moment Tensor Solution. s26,c28; s81,c118; Moment tensor: Scale 10^16^Nm; Mrr-0.62±.18; Mθθ-1.59±.14; Mφφ2.21±.14; Mrθ-0.15±.20; Mrφ4.15±.12; Mθφ0.39±.19; Best double couple: Mφ4.60000×10^16^ NP1:φs78.00000°, δ85.00000°,λ-2.00000°. NP2:φs168.00000°,δ88.00000°, λ-175.00000°. Principal axes: T 4.8900, Plg3.0000°, Azm303.00000°; N -0.6000, Plg84.0000°, Azm187.00000°; P -4.2900, Plg5.0000°, Azm33.0000°; Data Used: ll IU G CN IC.*

ISC 14 12:42:36.9±3.0,15°.7S±0°.3×177°.2W±0°.2,h40km±27km,n28, σ0s91/16,mb4.0/8,MS4.3/15,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**4.93**	**245**	*e*Pn		**Pn**	**12 43 48.9**	**+0.3**
AFI	**Afiamalu**	**5.58**	**72**	Pn		**Pn**	**12 43 52.3**	**-5.2**
	4.5nm,0.3s,baz=1.5,slow=5.2,SNR=7.3							
AFI				LR		LR	12 45 12.6	
	comp=Z,434nm,19.2s,baz=236,slow=30							
AFI				Sn		**Sn**	**12 45 16.2**	**+16**
	10nm,0.3s,baz=354,slow=23,SNR=13							
DZM	**Mont Dzumac**	**16.67**	**245**	*e*P		**Pn**	**12 46 32.4**	**+4.7**
	50nm,1.6s							
DZM				*e*LR		LR	12 50 16.5	
	1μm,23.9s							
DZM	**Mont Dzumac**	**16.67**	**245**	*e*Pn		**Pn**	**12 46 26.9**	**-0.8**
	67nm,1.9s							
URZ	**Urewera**	**23.00**	**191**	LR		LR	12 55 13.8	
	comp=Z,804nm,20.3s,MS4.2,baz=208,slow=33							
PPT	**Papeete**	**26.56**	**98**	*e*LQ			12 53 35.4	
	2μm,28.2s							
PPT				*e*LR		LR	12 54 47.7	
	1μm,25.8s,baz=261							
PPT	**Papeete**	**26.56**	**98**	LR		LR	12 56 03.6	
	comp=Z,621nm,19.0s,MS4.2,baz=272,slow=31							
RPZ	**Rata Peaks**	**29.63**	**197**	LR		LR	12 59 18.5	
	comp=Z,836nm,21.9s,MS4.3,baz=27,slow=34							
RKT	**Rikitea**	**40.43**	**107**	*e*LR		LR	13 01 17.9	
	827nm,28.2s,baz=266							
STKA	**Stephens Creek**	**40.68**	**239**	P		**P**	**12 50 13.8**	**+0.2**
	11nm,0.9s,mb4.5,baz=56,slow=8.0,SNR=10							
STKA				LR		LR	13 05 27.8	
	comp=Z,287nm,18.2s,MS4.2,baz=54,slow=34							
WB2	**Warramunga Arr**	**46.15**	**257**	Pn		**P**	**12 50 54.6**	**-3.3**
WRA	**Warramunga Ar**	**46.16**	**257**	P		**P**	**12 50 58.0**	**+0.1**
	1.4nm,1.0s,mb3.9,baz=91,slow=8.5,SNR=5.0							
ASAR	**Alice Springs**	**46.49**	**252**	P		**P**	**12 51 00.5**	**0.0**
	5.4nm,0.8s,mb4.5,baz=86,slow=8.6,SNR=52							
FITZ	**Fitzroy Crossi**	**54.52**	**259**	LR		LR	13 13 13.3	
	comp=Z,278nm,20.4s,MS4.3,baz=273,slow=34							
DAV	**Davao City (W)**	**60.98**	**287**	LR		LR	13 14 56.7	
	comp=Z,128nm,21.6s,MS4.0,baz=220,slow=32							
NWAO	**Narrogin (SRO)**	**61.23**	**241**	LR		LR	13 17 22.8	
	comp=Z,225nm,19.5s,MS4.3,baz=84,slow=34							
MJAR	**Matsushiro Arr**	**66.85**	**322**	LR		LR	13 16 31.7	
	comp=Z,132nm,21.4s,MS4.1,baz=105,slow=30							
KSRS	**Korea Array**	**73.84**	**317**	P		**P**	**12 54 07.3**	**-0.2**
	0.5nm,0.7s,mb3.5,baz=116,slow=5.7,SNR=3.4							
KSRS				LR		LR	13 20 40.2	
	comp=Z,136nm,20.5s,MS4.2,baz=130,slow=31							
NVAR	**Mina Array Bea**	**77.08**	**44**	P		**P**	**12 54 25.9**	**-0.2**
	0.9nm,0.7s,mb3.8,baz=229,slow=8.0,SNR=5.6							
ILAR	**Eielson Array**	**83.52**	**13**	P		**P**	**12 54 59.0**	**-1.1**
ILAR				LR		LR	13 32 13.4	
ILAR	**Eielson Array**	**83.52**	**13**	P		**P**	**12 54 59.0**	**-1.1**
	0.7nm,0.6s,mb4.0,baz=216,slow=5.3,SNR=14							
ILAR				LR		LR	13 32 13.4	
	comp=Z,76nm,18.1s,MS4.1,baz=199,slow=36							
TXAR	**Lajitas Array**	**83.88**	**57**	P		**P**	**12 55 03.5**	**+0.7**
	1.2nm,1.0s,mb4.0,baz=259,slow=4.5,SNR=5.3							
TXAR				LR		LR	13 24 58.0	
	comp=Z,134nm,18.9s,MS4.3,baz=10.0,slow=30							
IMW	**Indian Meadow**	**84.62**	**42**	*e*P		**P**	**12 55 05.9**	**-0.3**
MAW	**Mawson**	**86.28**	**199**	LR		LR	13 33 56.4	
	comp=Z,220nm,18.6s,MS4.6,baz=337,slow=36							
CMAR	**Chiang Mai Arr**	**89.21**	**289**	LR		LR	13 30 56.8	
	comp=Z,94nm,18.6s,MS4.2,baz=166,slow=32							
PLCA	**Paso Flores**	**92.02**	**133**	LR		LR	13 28 57.9	
	comp=Z,310nm,18.9s,MS4.8,baz=83,slow=30							
SONM	**Songino Array**	**92.64**	**319**	P		**P**	**12 55 46.4**	**+2.1**
	0.3nm,0.5s,mb4.0,baz=101,slow=6.0,SNR=2.1							
SONM				LR		LR	13 32 38.7	
	comp=Z,74nm,21.0s,MS4.1,baz=127,slow=32							
BRTR	**Keskin Array B**	**143.99**	**318**	PKP		PKPdf	13 02 07.8	-0.6
	0.8nm,0.8s,baz=46,slow=4.2,SNR=3.4							

*IDC **14** 12:55:21.7±1.2,45°.80N×89°.77E,h0km,mb3.7/4, mb1 3.9/7,mb1mx3.6/24,mbtmp3.8/7,ML3.8/3,Error ellipse: s-maj=58.3km s-min=16.6km az=40.0*

*ISCJB **14** 12:55:21.8±0.9,46°.17N±0°.04×90°.1E±0°.1,h10km,mb3.6/4, Error ellipse: s-maj=10.7km s-min=6.4km az=6.0*

*ASRS **14** 12:55:24.6±2.7,46°.06N×90°.03E,h15km,Ms3.2/3*

*BJI **14** 12:55:24.8,46°.06N×89°.95E,h12km,mb3.8/1,ML3.8/8*

*NNC **14** 12:55:26.3±2.3,46°.07N×89°.83E,h0km,mb4.0,mpv3.5, Error ellipse: s-maj=23.6km s-min=19.1km az=178.0*

*NEIC **14** 12:55:40.6±1.3,46°.72N×88°.66E,h70km±15km,Error ellipse: s-maj=14.7km s-min=10.3km az=104.0*

ISC 14 12:55:23.9±0.8,46°.13N±0°.04×90°.2E±0°.1,h10km,n24, σ1s41/30,mb3.6/4,3C-4D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WMQ	**Urumqi**	**2.90**	**218**	Pg		**Pg**	**12 56 17.4**	**-2.1**
WMQ				smax				
	comp=N,280nm,0.5s							
WMQ				smax				
	comp=E,310nm,0.5s							
MK31	**Makanchi Array**	**5.48**	**280**	⇓Pn		**Pn**	**12 56 45.7**	**+0.2**
	comp=E,1.0nm,0.3s,baz=95,slow=13,SNR=43							
MK31				⇑Pg		**Pg**	**12 57 03.2**	**-5.6**
	comp=E,8.3nm,0.5s,baz=92,slow=15,SNR=9.9							
MK31				⇑Lg			12 58 14.1	
	comp=E,100nm,0.9s,baz=96,slow=29,SNR=5.3							
MK31	**Makanchi Array**	**5.48**	**280**	*e*Pn		**Pn**	**12 56 44.2**	**-1.3**
UKR	**Ust'-Kan**	**5.99**	**325**	*e*Pn		**Pn**	**12 56 55.5**	**+3.0**
UKR				*e*Sn		**Sn**	**12 58 02.5**	**+1.4**
UKR				*e*Sg		**Sg**	**12 58 32.0**	**-4.1**
ELT	**Yel'tsovka**	**7.57**	**342**	*e*Pn		**Pn**	**12 57 12.9**	**-1.3**
ELT				*e*Pg		**Pg**	**12 57 44.2**	**-4.6**
ELT				*e*Sn		**Sn**	**12 58 40.7**	**+0.7**
ELT				*e*Sg		**Sg**	**12 59 22.7**	**-4.1**
ZAA0	**Zalesovo Array**	**8.54**	**338**	*e*Pn		**Pn**	**12 57 28.7**	**+1.2**
ZALV	**Zalesovo Beam**	**8.54**	**338**	Pn		**Pn**	**12 57 28.9**	**+1.4**
ZALV				Sn		**Sn**	**12 59 04.0**	**+0.1**
ZALV				Lg			12 59 54.8	
ZALV	**Zalesovo Beam**	**8.54**	**338**	Pn		**Pn**	**12 57 28.9**	**+1.4**
	comp=E,1.9nm,0.3s,baz=160,slow=14,SNR=23							
ZALV				Sn		**Sn**	**12 59 04.0**	**+0.1**
	comp=E,0.7nm,0.3s,baz=154,slow=21,SNR=3.9							
ZALV				Lg			12 59 54.8	
	comp=E,1.1nm,0.3s,baz=150,slow=23,SNR=3.2							
KURK	**Kurchatov**	**8.94**	**305**	⇓Lg			13 00 03.9	
	comp=E,64nm,0.7s							
KURK	**Kurchatov**	**8.94**	**305**	Pn		**Pn**	**12 57 32.3**	**-0.7**
	comp=E,0.4nm,0.3s,baz=112,slow=12,SNR=8.6							
KURK				Lg			13 00 05.8	
	comp=E,0.7nm,0.3s,baz=112,slow=32,SNR=8.0							
GTA	**Gaotai**	**9.77**	**130**	*e*P		**Pn**	**12 57 54.3**	**+10**
GTA				pP			12 57 58.5	
GTA				sP			12 58 01.6	
GTA				pmax	pmax			
	comp=Z,2.0nm,0.7s							
NVS	**Novosibirsk**	**9.77**	**336**	*e*Sn		**Sn**	**12 59 31.2**	**-2.7**
NVS				*e*Sg		Sn	13 00 29.5	+56
TKM2	**Tokmak 2**	**10.89**	**258**	⇑Pn		**Pn**	**12 58 00.7**	**+1.1**
	comp=Z,2.8nm,0.6s							
TKM2				⇓Sn		**Sn**	**13 00 00.5**	**-0.9**
TKM2				⇓Lg			13 01 05.2	
	comp=Z,7.8nm,0.8s							
TKM2	**Tokmak 2**	**10.89**	**258**	*e*Pn		**Pn**	**12 58 01.2**	**+1.6**
	comp=Z,3.3nm,0.6s							
SONM	**Songino Array**	**11.22**	**75**	Pg	Px		12 58 52.3	
	comp=Z,0.2nm,0.3s,baz=269,slow=16,SNR=3.9							
SONM				Lg			13 01 12.0	
	comp=Z,0.3nm,0.3s,baz=267,slow=26,SNR=13							
UCH	**Uchtor**	**11.90**	**256**	*e*Pn		**Pn**	**12 58 17.2**	**+3.7**
	comp=Z,3.0nm,0.9s							
EKS2	**Erkin-Say**	**12.22**	**259**	*e*Pn		**Pn**	**12 58 19.2**	**+1.3**
AML	**Almayashu**	**12.49**	**257**	*e*Pn		**Pn**	**12 58 24.3**	**+2.7**
BVAR	**Borovoye Array**	**14.54**	**305**	Pn		**Pn**	**12 58 45.7**	**-3.8**
	comp=Z,0.2nm,0.3s,baz=106,slow=14,SNR=2.8							
ENH	**Enshi**	**21.85**	**130**	P		Px	13 00 39.9	
FINES	**FINESS Array B**	**39.08**	**317**	P		**P**	**13 02 51.5**	**+0.8**
	comp=Z,1.9nm,0.8s,mb3.9,baz=87,slow=9.9,SNR=2.7							
NOA	**NORSAR Array B**	**46.16**	**319**	P		**P**	**13 03 48.5**	**+0.3**
	comp=Z,1.0nm,0.5s,mb4.0,baz=69,slow=7.5,SNR=6.8							
WRA	**Warramunga Arr**	**76.96**	**138**	P		**P**	**13 07 15.5**	**-1.1**
	comp=Z,0.3nm,0.7s,mb3.3,baz=344,slow=6.0,SNR=3.5							
ASAR	**Alice Springs**	**79.99**	**140**	P		**P**	**13 07 32.5**	**-0.6**
	comp=Z,0.4nm,0.9s,mb3.4,baz=318,slow=5.4,SNR=4.1							

FUNV 14 13:13:34.5,6°.37N×73°.57W,h129km,MW3.6,2C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CAPV	**Capacho**	**1.94**	**40**	⇑*i*P		Pn	13 14 07.5	-0.2
CAPV				*e*S		Sn	13 14 31.7	-1.5
VIGV	**El Vigia**	**3.29**	**42**	⇑*i*P		Pn	13 14 23.8	-1.1
VIGV				*e*S		Sn	13 14 59.8	-4.0
SOCV	**Socops**	**3.30**	**55**	*e*P		Pn	13 14 24.1	-0.9
SOCV				*e*S		Sn	13 14 59.6	-4.4
VIRV	**Villa del Rosa**	**4.27**	**16**	*e*P		Pn	13 14 35.6	-2.2
VIR

WRA **Warramunga Arr** **150.02** **241** PKPbc PKPbc 13 59 56.1 +1.4
0.3nm,0.5s,baz=107,slow=2.3,SNR=4.9

*BYKL **14** 13:44:44.8±0.4,56°.21N×113°.99E*
MOS 14 13:44:43.0±1.0,56°.16N×114°.05E,h8km,mb4.3/1,6C-7D, Error ellipse: s-maj=33.3km s-min=17.4km az=135.4, East of Lake Baikal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UKT	**Uakit**	**0.71**	**200**	*e*PG	Pg	13 44 57.6	+0.9
UKT				*e*		13 45 08.6	
UKT				pmax	pmax		
	comp=Z,30nm,0.1s						
UKT				smax			
	comp=N,616nm,0.1s						
UKT	**Uakit**	**0.71**	**200**	⇑*i*Pg	Pg	13 44 57.7	+1.0
UKT				*e*Sg	Sg	13 45 08.9	+3.0
UKT				Pmax			
	comp=N,113nm,0.7s						
UKT				Smax			
	comp=N,687nm,0.5s						
NLYR	**Nelyaty**	**0.98**	**69**	*e*PG	Pg	13 45 02.2	+0.4
NLYR				*e*		13 45 15.6	
NLYR				pmax	pmax		
	comp=Z,352nm,0.2s						
NLYR				smax			
	comp=N,2μm,0.4s						
NLYR	**Nelyaty**	**0.98**	**69**	⇓*i*Pg	Pg	13 45 02.6	+0.8
NLYR				⇓*i*Pb	Pb	13 45 04.0	+1.8
NLYR				*e*		13 45 08.9	
NLYR				*i* Sg	Sg	13 45 16.5	+2.0
NLYR				max			
	comp=N,252nm,0.2s						
NLYR				Smax			
	comp=N,2μm,0.9s						
YOA	**Uoyan**	**1.30**	**270**	⇓*i*PG	Pg	13 45 07.4	-0.6
YOA	**Uoyan**	**1.30**	**270**	⇓*i*Pg	Pg	13 45 07.3	-0.7
YOA				*e*Sg	Sg	13 45 25.4	+0.6
YOA				*e*Sb	Sb	13 45 28.0	+3.5
YOA				Pmax			
	comp=N,497nm,0.3s						
YOA				max			
	comp=N,5μm,0.5s						
KMO	**Kumora**	**1.62**	**262**	*e*PN	Pn	13 45 12.8	+1.0
KMO				*e*		13 45 33.7	
KMO				pmax	pmax		
	comp=Z,149nm,0.3s						
KMO				smax			
	comp=E,1μm,0.7s						
KMO	**Kumora**	**1.62**	**262**	⇑*i*Pg	Pg	13 45 12.8	-1.3
KMO				⇓*i*		13 45 14.3	
KMO				*i* Sg	Sg	13 45 34.5	-0.6
KMO				*e*		13 45 36.3	
KMO				max			
	comp=E,207nm,0.5s						
KMO				max			
	comp=E,1μm,0.6s						
YLYR	**Ulyunkhan**	**2.08**	**233**	*e*PN	Pn	13 45 19.3	+1.1
YLYR				*e*		13 45 20.9	
YLYR	**Ulyunkhan**	**2.08**	**233**	⇑*i*Pn	Pn	13 45 19.3	+1.1
	comp=E,8.0nm,0.5s						
YLYR				⇑*i*Pn	Pn	13 45 19.3	+1.1
	comp=E,6.0nm,0.5s						
YLYR				⇓*i*Pn	Pn	13 45 19.3	+1.1
	comp=E,14nm,0.5s						
YLYR				⇑*i*Pg	Pg	13 45 20.9	-2.0
YLYR				*e*		13 45 26.0	
YLYR				*i* Sg	Sg	13 45 50.0	+0.1
YLYR				*e*		13 45 51.8	
YLYR				max			
	comp=E,53nm,0.3s						
YLYR				max			
	comp=E,431nm,0.2s						
CRS	**Chara**	**2.45**	**71**	*e*PN	Pn	13 45 24.6	+1.4
CRS				*e*		13 45 28.9	
CRS				*e*		13 46 01.4	
CRS				pmax	pmax		
	comp=Z,49nm,0.5s						
CRS				smax			
	comp=E,408nm,0.5s						
CRS	**Chara**	**2.45**	**71**	⇓*i*Pn	Pn	13 45 24.5	+1.3
CRS				⇑*i*Pg	Pg	13 45 28.8	-1.2
CRS				*i* Sg	Sg	13 46 01.4	-0.3
CRS				Pmax			
	comp=E,87nm,0.9s						
CRS				Smax			
	comp=E,409nm,0.5s						
NIZ	**Nizh Angarsk**	**2.56**	**263**	*e*PN	Pn	13 45 25.8	+1.0
NIZ				*e*		13 45 29.8	
NIZ				*e*S	Sn	13 45 57.6	+1.5
NIZ				*e*		13 46 03.3	
NIZ				pmax	pmax		
	comp=Z,47nm,0.7s						
NIZ				smax			
	comp=N,257nm,0.4s						
SYVR	**Suvo**	**3.43**	**225**	*e*Pg	Pg	13 45 46.2	-2.4
SYVR				*e*		13 46 19.1	
SYVR				*i* Sg	Sg	13 46 30.8	-2.1
SYVR				Pmax			
	comp=N,18nm,0.1s						
SYVR				Smax			
	comp=N,100nm,0.7s						
CIT	**Chita**	**4.16**	**184**	*e*	Pn	13 45 57.2	+11
CIT				*e*Pg	Pg	13 46 00.4	-2.1
CIT				*e*		13 46 16.9	
CIT				*e*Sg	Sg	13 46 56.3	0.0
CIT				Pmax			
	comp=N,71nm,0.3s						
CIT				Smax			
	comp=N,235nm,0.2s						
MXMB	**Maximikha**	**4.23**	**229**	*e*Pn	Pn	13 45 47.6	0.0
MXMB				*e*Pg	Pg	13 45 59.9	-4.0
MXMB				*i*		13 46 06.5	
MXMB				*e*		13 46 35.0	
MXMB				*i* Sg	Sg	13 46 56.7	-1.9
MXMB				Pmax			
	comp=N,5.0nm,0.1s						
MXMB				Smax			
	comp=N,157nm,0.8s						
OGRR	**Ongureny**	**4.50**	**239**	*e*PN	Pn	13 45 41.9	-9.4
OGRR				*e*		13 46 04.1	
OGRR				*e*		13 47 02.5	
OGRR				pmax	pmax		
	comp=Z,6.0nm,0.3s						
OGRR				smax			
	comp=N,62nm,0.8s						
OGRR	**Ongureny**	**4.50**	**239**	*e*Pn	Pn	13 45 51.8	+0.5
OGRR				*e*		13 46 05.2	
OGRR				*e*		13 46 18.4	
OGRR				*e*Sg	Sg	13 47 04.7	-2.6
OGRR				max			
	comp=N,13nm,1.0s						
OGRR				Smax			
	comp=N,102nm,1.4s						
ZRHB	**Zarechye**	**5.41**	**231**	*e*	Sn	13 46 59.9	-6.4
ZRHB				*e*Sg	Sg	13 47 33.9	-2.7
ZRHB				Smax			
	comp=N,199nm,1.5s						
TRG	**Tyrgan**	**5.63**	**236**	*e*	Pn	13 46 17.4	+10
TRG				*e*Pg	Pg	13 46 24.9	-5.9
TRG				*e*		13 46 32.3	
TRG				*e*Sg	Sg	13 47 39.7	-4.1
TRG				*e*		13 47 45.7	
TRG				max			
	comp=N,3.0nm,0.3s						
TRG				max			
	comp=N,39nm,0.8s						
UUDB	**Ulan-Yde**	**5.71**	**224**	*e*	Pn	13 46 17.7	+10
UUDB				*e*Pg	Pg	13 46 27.1	-5.2
UUDB				*e*Sn	Sn	13 47 15.5	+1.8
UUDB				*e*Sg	Sg	13 47 43.2	-3.1
UUDB				Pmax			
	comp=N,15nm,1.0s						
UUDB				Smax			
	comp=N,105nm,1.3s						
KAB	**Kabansk**	**5.99**	**230**	*e*	Sb	13 47 42.5	+3.3
KAB				*e*Sg	Sg	13 47 51.0	-4.0
KAB				max			
	comp=N,525nm,0.8s						
CLNS	**Chul'man**	**6.04**	**79**	*e*	Sb	13 47 42.0	+1.1
CLNS				*e*Sg	Sg	13 47 53.7	-3.2
CLNS				*e*		13 47 57.3	
TNDR	**Tynda**	**6.13**	**95**	*e*	Sn	13 47 33.2	+9.4
TNDR				*e*Sg	Sg	13 47 56.4	-3.1
LSTR	**Listvyanka**	**6.92**	**235**	*e*Pg	Pg	13 46 48.3	-7.2
LSTR				*e*		13 48 13.8	
LSTR				*e*Sg	Sg	13 48 17.6	-7.5
LSTR				Pmax			
	comp=N,1.0nm,0.2s						
LSTR				Smax			
	comp=N,83nm,1.6s						
IRK	**Irkutsk**	**6.95**	**240**	*e*	Sb	13 47 57.8	-9.0
IRK				*e*Sg	Sg	13 48 19.7	-6.1
IRK				Smax			
	comp=N,213nm,0.4s						
TLY	**Talaya**	**7.60**	**238**	*e*PG	Pg	13 46 59.8	-8.7
TLY				*e*		13 48 37.8	
TLY				pmax	pmax		
	comp=Z,2.0nm,0.3s						
TLY				smax			
	comp=N,35nm,1.3s						
TLY	**Talaya**	**7.60**	**238**	*e*Pn	Pn	13 46 37.5	+3.5
TLY				*e*Pg	Pg	13 47 00.8	-7.7
TLY				*e*		13 47 46.3	
TLY				*e*Sg	Sg	13 48 39.6	-7.2
TLY				Pmax			
	comp=N,6.0nm,0.1s						
TLY				Smax			
	comp=N,34nm,1.3s						
HIA	**Hailar**	**7.72**	**151**	*e*	Sb	13 48 28.8	-0.1
HIA				*e*		13 48 41.1	
HIA				*e*Sg	Sg	13 48 46.1	-4.3
ARS	**Arshan**	**8.05**	**243**	*e*Pn	Pn	13 46 43.8	+3.7
ARS				*e*		13 47 14.4	
ARS				*e*		13 47 19.7	
ARS				*e*Sg	Sg	13 48 53.5	-7.6
ARS				*e*		13 49 08.9	
ARS				max			
	comp=N,6.0nm,0.5s						
ARS				Smax			
	comp=N,111nm,1.2s						
MOY	**Mondy**	**8.92**	**245**	*e*	Sn	13 48 34.1	+1.6
MOY				*e*Sg	Sn	13 49 22.1	+50
MOY				*e*		13 49 26.2	
MOY				max			
	comp=N,56nm,1.5s						
ULN	**Ulaanbaatar**	**9.35**	**210**	*e*	x	13 49 29.3	
ULN				*e*Sg	Sn	13 49 36.6	+53

*NEIC **14** 13:51:38.5±0.5,4°.54N×128°.04E,h35km,mb4.7/1, Error ellipse: s-maj=29.2km s-min=9.4km az=73.0*
*IDC **14** 13:51:39.3±3.3,4°.51N×128°.01E,h14km±30km,mb3.7/12, mb1 3.8/12,mb1mx3.7/21,mbtmp3.7/12, Error ellipse: s-maj=42.0km s-min=13.3km az=73.0*
*ISCJB **14** 13:51:43.0±1.5,4°.47N±0°.06×127°.9E±0°.1,h92km±14km, mb3.8/12, Error ellipse: s-maj=16.9km s-min=9.6km az=170.4*
*DJA **14** 13:51:49,4°.20N×127°.69E,h46km,mb4.5/11*
ISC 14 13:51:44.1±1.5,4°.47N±0°.06×127°.9E±0°.1,h87km±14km, n29,σ1°07/31,mb3.8/12,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**2.51**	**252**	P	Pn	13 52 20.7	-2.2
SGSI				S	Sn	13 52 49.6	-2.7
DMPH	**Davao City--Mi**	**3.54**	**317**	*e*P	Pn	13 52 36.8	-0.1
TNTI	**Ternate**	**3.71**	**189**	P	Pn	13 52 39.6	+0.4
MNI	**Manado**	**4.30**	**226**	P	Pn	13 52 46.8	-0.4
KMSI	**Cibinong**	**5.51**	**226**	P	Pn	13 53 04.1	+0.4
	3μm160nm,0.8s						
KMSI				S	Sn	13 54 05.4	-0.5
	3μm160nm,0.8s						
MRSI	**Marisa**	**7.17**	**237**	P	Pn	13 53 27.1	+0.8
	825nm86nm,0.8s						
LUWI	**Luwuk**	**7.51**	**223**	P	Pn	13 53 33.6	+2.7
	0.2nm85nm,0.7s						
TOLI	**Toli-Toli**	**7.85**	**245**	P	Pn	13 53 37.9	+2.3
	0.2nm50nm,0.6s						
MYLDM	**Lahad Datu**	**9.41**	**275**	P	Pn	13 53 58.0	+1.1
	18nm,1.5s						
KDI	**Kendari**	**9.90**	**212**	P	Pn	13 54 01.3	-2.3
	566nm16nm,0.7s						
TTSI	**Tana Toraja**	**11.01**	**227**	P	Pn	13 54 18.5	-0.2
	13nm,0.9s						
BKSI	**Bulukumba**	**12.46**	**219**	P	Pn	13 54 38.6	+0.3
	11nm,1.1s						
KBKI	**Kotabaru**	**14.05**	**237**	P	Pn	13 54 59.5	+0.2
	23nm,1.1s						
SBUM	**Sibu**	**15.80**	**263**	P	Pn	13 55 26.5	+4.9
	12nm,1.1s						
UGM	**Wanagama**	**21.27**	**235**	P	P	13 56 18.4	-5.2
FITZ	**Fitzroy Crossi**	**22.54**	**186**	P	P	13 56 35.9	-1.0
	0.9nm,0.4s,mb3.4,baz=1.6,slow=10.0,SNR=5.3						
FITZ	**Fitzroy Crossi**	**22.54**	**186**	P	P	13 56 40.3	+3.3
WRA	**Warramunga Arr**	**25.06**	**166**	P	P	13 56 60.0	-0.6
	0.8nm,0.5s,mb3.4,baz=344,slow=10,SNR=20						
ASAR	**Alice Springs**	**28.56**	**168**	P	P	13 57 31.6	-0.3
	0.2nm,0.4s,mb3.1,baz=351,slow=7.1,SNR=11						
ASAR				PcP	PcP	14 00 42.7	+1.2
	0.6nm,0.4s,baz=354,slow=2.6,SNR=9.9						
ASAR				ScP	ScP	14 04 20.2	+5.1
	0.3nm,0.8s,baz=338,slow=2.0,SNR=4.1						
CMAR	**Chiang Mai Arr**	**31.55**	**298**	P	P	13 57 58.1	-0.3
	0.7nm,0.6s,mb3.5,baz=113,slow=7.7,SNR=5.8						
KSRS	**Korea Array**	**32.83**	**0**	P	P	13 58 08.9	-0.5
	0.9nm,0.7s,mb3.7,baz=178,slow=10,SNR=6.3						
STKA	**Stephens Creek**	**38.41**	**161**	P	P	13 58 58.2	+0.9
	0.7nm,0.4s,mb3.8,baz=334,slow=12,SNR=3.5						
SONM	**Songino Array**	**47.00**	**340**	P	P	14 00 07.1	+0.6
	1.0nm,0.6s,mb3.8,baz=161,slow=8.0,SNR=7.1						
ZALV	**Zalesovo Beam**	**60.48**	**332**	P	P	14 01 44.5	-0.3
	0.8nm,0.4s,mb4.1,baz=129,slow=6.3,SNR=4.5						
KURK	**Kurchatov**	**61.77**	**327**	*e*P	P	14 01 53.8	+0.3
	3.8nm,0.6s,mb4.6						
KURK	**Kurchatov**	**61.77**	**327**	P	P	14 01 54.0	+0.5
	3.8nm,0.6s,mb4.6,baz=126,slow=6.3,SNR=22						
BVAR	**Borovoye Array**	**67.36**	**326**	P	P	14 02 30.6	+0.7
	1.3nm,0.6s,mb4.0,baz=120,slow=8.8,SNR=7.1						
ILAR	**Eielson Array**	**83.93**	**25**	P	P	14 04 03.4	-0.9
	0.3nm,0.6s,mb3.3,baz=261,slow=4.9,SNR=4.8						
ARCES	**ARCESS Array B**	**90.17**	**340**	P	P	14 04 33.8	-0.6
	5.4nm,0.9s,mb4.7,baz=68,slow=6.7,SNR=5.1						

*ISCJB **14** 14:43:11.9±0.4,38°.37N±0°.03×38°.99E±0°.03,h4km±5km, Error ellipse: s-maj=4.5km s-min=3.6km az=173.3*
*DDA **14** 14:43:11.7,38°.39N×39°.00E,h17km±2km,Md3.0*
*ISK **14** 14:43:11.5,38°.40N×39°.01E,h6km,MD2.9*
*CSEM **14** 14:43:12.1±0.2,38°.39N×39°.01E,h2km,MD2.9, Error ellipse: s-maj=4.4km s-min=3.6km az=164.0*
ISC 14 14:43:12.5±0.4,38°.38N±0°.03×39°.00E±0°.03,h6km±5km, n33,σ0s76/50,2C-3D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.12**	**356**	⇑*i*Pg	Pg	14 43 15.6	+0.5
ELZG				*i* Sg	Sg	14 43 17.8	+1.0
SVRC	**Sivrice-ELAZID**	**0.24**	**89**	*e*PG	Pg	14 43 16.8	-0.4
SVRC				*e*SG	Sg	14 43 20.6	0.0
SVRC	**Sivrice-ELAZID**	**0.24**	**89**	*e*Pg	Pg	14 43 16.8	-0.5
SVRC				*e*Sg	Sg	14 43 20.6	+0.1
MALT	**Malatya**	**0.45**	**262**	*e*PG	Pg	14 43 21.3	0.0
MALT	**Malatya**	**0.45**	**262**	*e*Pg	Pg	14 43 21.3	+0.1
MYA	**Malataya**	**0.45**	**264**	*e*PG	Pg	14 43 21.1	-0.2
MYA				*e*SG	Sg	14 43 28.2	+1.1
MYA	**Malataya**	**0.45**	**264**	*e*Pg	Pg	14 43 21.1	-0.1
MYA				*e*Sg	Sg	14 43 28.2	+1.1
PTK	**Pertek**	**0.60**	**31**	*e*PG	Pg	14 43 22.8	-1.2
PTK				*e*SG	Sg	14 43 31.3	-0.6
PTK	**Pertek**	**0.60**	**31**	*e*Pg	Pg	14 43 22.8	-1.3
PTK				*e*Sg	Sg	14 43 31.3	-0.6
AKCD	**Akcadag**	**0.85**	**265**	⇓*i*P	Pg	14 43 28.5	-0.3
AKCD				*i* S	Sg	14 43 40.8	+1.0
AKCD	**Akcadag**	**0.85**	**265**	*i* P	Pg	14 43 28.5	-0.3
AKCD				*i* S	Sg	14 43 40.8	+1.0
URFA	**Urfa**	**0.94**	**188**	*e*PG	Pg	14 43 29.9	-0.7
URFA	**Urfa**	**0.94**	**188**	*e*Pg	Pg	14 43 30.0	-0.6
KEMA	**Kemaliye**	**0.97**	**336**	⇓*i*P	Pg	14 43 30.3	-0.9
KEMA				*i* S	Sg	14 43 43.5	-0.4
KEMA	**Kemaliye**	**0.97**	**336**	*i* P	Pg	14 43 30.3	-0.9
KEMA				*i* S	Sg	14 43 43.5	-0.4
DIYA	**Diyarbakir**	**0.99**	**117**	⇓*i*P	Pg	14 43 31.8	+0.2
DIYA				*i* S	Sg	14 43 45.6	+1.1
DIYA	**Diyarbakir**	**0.99**	**117**	*i* P	Pg	14 43 31.8	+0.2
DIYA				*i* S	Sg	14 43 45.6	+1.1
ATAB	**Bozova**	**1.06**	**212**	*e*P	Pg	14 43 33.0	+0.2
ATAB				*e*S	Sg	14 43 45.3	-1.3
ATAB	**Bozova**	**1.06**	**212**	*e*P	Pg	14 43 33.0	+0.1
ATAB				*e*S	Sg	14 43 45.3	-1.3
DARE	**Darende-Malaty**	**1.10**	**302**	*e*PN	Pg	14 43 33.9	+0.3
DARE	**Darende-Malaty**	**1.10**	**302**	*e*Pn	Pg	14 43 33.9	+0.4
MARD	**Mardin**	**1.77**	**126**	⇑*i*P	Pn	14 43 42.9	-0.7
MARD				*i* S	Sn	14 44 05.5	-0.9
SARI	**SarD1z-Kayseri**	**1.83**	**280**	*e*PN	Pg	14 43 47.2	-0.3
SARI	**SarD1z-Kayseri**	**1.83**	**280**	*e*Pn	Pg	14 43 47.2	-0.4
GAZ	**Gaziantep**	**1.86**	**230**	*e*PN	Pn	14 43 44.8	-0.1
GAZ	**Gaziantep**	**1.86**	**230**	*e*Pn	Pn	14 43 44.8	-0.1
BEST	**Besiri**	**1.86**	**104**	*e*P	Pn	14 43 45.6	+0.7
BEST				*e*S	Sn	14 44 10.7	+2.0
KMRS	**Kahramanmaras**	**1.87**	**243**	*e*PN	Pn	14 43 45.2	+0.1
KMRS	**Kahramanmaras**	**1.87**	**243**	*e*Pn	Pn	14 43 45.2	+0.1
GUMT	**Gumushane**	**2.11**	**10**	*e*PN	Pn	14 43 48.0	-0.4
GUMT	**Gumushane**	**2.11**	**10**	*e*Pn	Pn	14 43 48.0	-0.4
SVSK	**Karacayir**	**2.19**	**315**	*e*PN	Pn	14 43 49.7	+0.3
SVSK	**Karacayir**	**2.19**	**315**	*e*Pn	Pn	14 43 49.7	+0.3

*IDC **14** 14:48:49.9±1.7,5°.43S×154°.44E,h0km,mb3.8/6, mb1 3.9/6,mb1mx3.7/15,mbtmp3.8/6, Error ellipse: s-maj=61.2km s-min=23.2km az=116.0*
*ISCJB **14** 14:49:11.4±3.3,5°.6S±0°.2×154°.2E±0°.1,h200km±30km, mb3.6/7, Error ellipse: s-maj=26.9km s-min=23.8km az=15.3*
*NEIC **14** 14:49:11.4±3.8,5°.61S×154°.21E,h184km±31km,mb4.3/1, Error ellipse: s-maj=41.1km s-min=20.7km az=104.0*
ISC 14 14:49:11.8±3.0,5°.6S±0°.2×154°.2E±0°.1,h187km±26km,n10, σ0s73/11,mb3.7/7,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.94**	**241**	*e*P	Pn	14 51 04.2	-0.2
PMG				*e*S	Sn	14 52 34.0	+0.3
DZM	**Mont Dzumac**	**20.21**	**145**	*e*P	P	14 53 32.6	+0.1
WRA	**Warramunga Arr**	**24.01**	**232**	P	P	14 54 10.1	+0.5
	1.1nm,0.5s,mb3.7,baz=55,slow=9.9,SNR=12						
ASAR	**Alice Springs**	**26.55**	**225**	P	P	14 54 32.5	0.0
	0.4nm,0.4s,mb3.4,baz=56,slow=8.9,SNR=8.9						
STKA	**Stephens Creek**	**28.68**	**203**	P	P	14 54 50.4	-1.0
STKA	**Stephens Creek**	**28.68**	**203**	P	P	14 54 50.4	-1.0
	1.6nm,0.8s,mb3.8,baz=31,slow=14,SNR=3.6						
FITZ	**Fitzroy Crossi**	**30.53**	**244**	P	P	14 55 06.7	-1.1
	4.0nm,1.1s,mb4.0,baz=60,slow=11,SNR=3.2						
SONM	**Songino Array**	**67.74**	**327**	P	P	14 59 50.0	+0.8
	0.4nm,0.5s,mb3.5,baz=135,slow=6.4,SNR=3.3						
ILAR	**Eielson Array**	**82.37**	**22**	P	P	15 01 11.7	-0.8
	0.3nm,0.6s,mb3.1,baz=247,slow=4.8,SNR=5.8						
QSPA	**South Pole Qui**	**84.37**	**180**	*e*P	P	15 01 23.7	+1.2
	3.8nm,0.7s,mb4.2						

*IDC **14** 15:10:07.3±0.8,15°.36S×177°.46W,h0km,mb4.2/11, mb1 4.5/11,mb1mx4.4/14,mbtmp4.2/11,MS5.0/15, Ms1 5.0/15,ms1mx4.9/18, Error ellipse: s-maj=39.0km s-min=18.8km az=146.0*
*GCMT **14** 15:10:13.4±0.1,15°.44S×177°.11W,h15km,MW5.5, Moment Tensor Solution. s72,c126; s99,c207; Moment tensor: Scale 10^{17}Nm; M_{rr}0.22±.02; $M_{\theta\theta}$-0.80±.03; $M_{\phi\phi}$0.58±.02; $M_{r\theta}$-0.17±.04; $M_{r\phi}$1.70±.02; $M_{\theta\phi}$-0.09±.04; Best double couple: $M_0$1.90000×10^{17} NP1:$\phi_1$169.00000°, δ84.00000°,λ177.00000°. NP2:$\phi_2$259.00000°,δ87.00000°, λ6.00000°. Principal axes: T 1.7400, Plg6.0000°, Azm124.0000°; N 0.2100, Plg83.0000°, Azm283.0000°; P -1.9500, Plg2.0000°, Azm34.0000°; Data Used: II IU IC G CN. Surface waves from 103 sta.*
*ISCJB **14** 15:10:15.2±2.0,15°.46S±0°.08×177°.71W±0°.06, h57km±18km,mb4.8/63,MS5.0/20 Error ellipse: s-maj=15.1km s-min=7.4km az=153.3*
*NEIC **14** 15:10:16.9±2.3,15°.27S×177°.77W,h56km±21km,mb4.8/46, Error ellipse: s-maj=21.7km s-min=10.7km az=148.0*
ISC 14 15:10:17.5±1.8,15°.47S±0°.09×177°.69W±0°.06, h63km±17km,h49km±.9km:pP-P,n297,σ0s88/241,mb4.8/63, 71C-81D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.66**	**241**	*e*Pn	Pn	15 11 24.1	-1.2
AFI	**Afiamalu**	**5.93**	**76**	Pn	Pn	15 11 28.7	-14
	5.5nm,0.3s,baz=17,slow=16,SNR=9.5						
AFI				Sn	Sn	15 12 31.7	-18
	1.0nm,0.3s,baz=142,slow=19,SNR=1.5						
AFI				T		15 16 41.8	
	9.9nm,0.3s,baz=110,slow=19,SNR=7.1						
DZM	**Mont Dzumac**	**16.39**	**244**	*e*P	Pn	15 14 07.1	+3.6
	146nm,1.6s						
DZM				*e*LQ		15 17 31.8	
	19μm,29.8s						
DZM				*e*LR	LR	15 18 02.2	
	10μm,24.5s						
DZM	**Mont Dzumac**	**16.39**	**244**	*e*P	Pn	15 14 09.2	+5.6
DZM	**Mont Dzumac**	**16.39**	**244**	*e*Pn	Pn	15 14 05.5	+2.0
	98nm,1.1s						
NOUC	**Port Laguerre**	**16.52**	**244**	*e*P	Pn	15 14 08.5	+3.3
RAR	**Rarotonga**	**17.94**	**111**	LR	LR	15 19 22.7	
	comp=Z,4μm,20.2s,baz=302,slow=31						
URZ	**Urewera**	**23.16**	**190**	LR	LR	15 22 50.2	
	comp=Z,6μm,19.3s,baz=34,slow=33						
PPT	**Papeete**	**27.03**	**98**	*e*LQ		15 21 12.8	
	10μm,27.8s						
PPT				*e*LR	LR	15 22 25.6	
	6μm,25.8s,baz=262						
PPT	**Papeete**	**27.03**	**98**	LR	LR	15 23 29.6	
	comp=Z,2μm,20.7s,baz=271,slow=30						
RPZ	**Rata Peaks**	**29.75**	**197**	LR	LR	15 27 05.6	
	comp=Z,4μm,21.7s,baz=30,slow=34						
EIDS	**Eidsvold**	**30.81**	**246**	*e*P	P	15 16 27.5	0.0
	16nm,1.1s,mb4.8						
ARMA	**Armidale**	**31.80**	**237**	*e*P	P	15 16 40.1	+3.9
CTAO	**Charters Tower**	**34.59**	**257**	*e*P	P	15 17 01.3	+0.7
	25nm,1.3s,mb5.0						
PMG	**Port Moresby**	**34.81**	**276**	P	P	15 16 57.1	-5.5
	38nm,1.1s,mb5.2						
CNB	**Canberra Magne**	**35.48**	**230**	*e*P	P	15 17 08.5	+0.4
QLP	**Quilpie**	**37.09**	**246**	*e*P	P	15 17 21.5	-0.4
TOO	**Toolangi**	**39.26**	**229**	*e*P	P	15 17 37.4	-2.6
STKA	**Stephens Creek**	**40.44**	**239**	*e*P	P	15 17 50.0	+0.1
	13nm,1.3s,mb4.5						
STKA	**Stephens Creek**	**40.44**	**239**	P	P	15 17 49.5	-0.4
	29nm,1.0s,mb4.9,baz=68,slow=7.0,SNR=17						
STKA				LR	LR	15 33 14.2	
	comp=Z,2μm,19.3s,baz=68,slow=34						
RKT	**Rikitea**	**40.92**	**108**	*e*S	S	15 24 00.4	-1.0
	433nm,27.0s						
RKT				*e*LR	LR	15 28 54.8	
	5μm,27.5s,baz=275						
BBOO	**Buckleboo**	**45.21**	**239**	*e*P	P	15 18 28.6	+0.1
	15nm,1.1s,mb4.7						
WRA	**Warramunga Arr**	**45.80**	**257**	P	P	15 18 32.5	-0.8
	3.7nm,1.1s,mb4.2,baz=89,slow=7.0,SNR=9.4						
ASAR	**Alice Springs**	**46.15**	**252**	P	P	15 18 35.6

comp=Z,876nm,20.5s,baz=128,slow=31
EDW2 Edwards Air Fo 75.58 47 ⇑P **P 15 21 55.9 +0.2**
baz=76
CMB Columbia Colle 75.60 43 *e*P **P 15 21 55.2 -0.5**
13nm,1.3s,mb4.7
ISA Isabella 75.64 46 ⇓P **P 15 21 57.2 +1.2**
baz=76
ISA Isabella 75.64 46 *e*P **P 15 21 56.0 0.0**
9.0nm,1.2s,mb4.6
MONP Monument Peak 75.72 50 ⇓P **P 15 21 57.4 +0.9**
baz=76
PFO Pinyon Flat Ob 76.04 49 ⇑P **P 15 21 59.3 +0.9**
baz=76
LRMC Laurel Mountai 76.09 47 ⇑P **P 15 21 59.6 +1.0**
baz=76
YBH Yreka Blue Hor 76.21 39 *e*P **P 15 21 58.9 -0.2**
16nm,1.4s,mb4.8
YBH Yreka Blue Hor 76.21 39 LR LR 15 47 25.8
comp=Z,2µm,21.7s,baz=159,slow=30
MPMC Manual Prospec 76.53 46 ⇑P **P 15 22 00.4 -0.6**
baz=77
BELC Belle Mtn. Jos 76.57 49 ⇑P **P 15 22 01.2 -0.1**
baz=77
MDJ Mudanjiang 76.60 324 P **P 15 22 00.3 -0.9**
MDJ pP pP 15 22 13.8 -4.7
MDJ pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
MDJ pmax pmax
comp=Z,94nm,5.3s
MDJ LR LR
comp=N,280nm,31.0s
MDJ LR LR
comp=E,460nm,31.7s
MDJ LR LR
comp=Z,680nm,32.4s
HEC Hector,Ludlow 76.73 48 ⇑P **P 15 22 01.9 -0.3**
baz=77
NJ2 Nanjing 76.94 309 *e*P **P 15 22 04.6 +1.2**
NJ2 pmax pmax
comp=Z,30nm,0.5s,mb5.5
GRAC Grapevine Rang 77.09 46 ⇓P **P 15 22 03.9 -0.3**
baz=77
GMRC Granite Mounta 77.19 48 ⇑P **P 15 22 04.5 -0.3**
baz=77
NVAR Mina Array Bea 77.20 44 P **P 15 22 02.4 -2.3**
comp=Z,5.9nm,0.9s,mb4.5,baz=227,slow=9.2,SNR=16
K05A Summer Lake 77.88 39 ⇓P **P 15 22 08.3 -0.2**
baz=78
Z13A Yuma Proving G 77.91 50 ⇑P **P 15 22 08.5 -0.4**
baz=78
S10A Tonopah Range, 78.09 45 ⇓P **P 15 22 09.5 -0.3**
baz=78
CN2 Changchun 78.53 322 *e*P **P 15 22 17.3 +5.3**
CN2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
W13A Hualapai Mount 78.62 49 ⇓P **P 15 22 14.4 +1.6**
baz=79
Y14A Wickenburg 78.73 50 ⇓P **P 15 22 13.4 0.0**
baz=79
HOOD Mount Hood Mea 78.92 37 *e*P **P 15 22 14.3 +0.2**
comp=Z,7.8nm,0.9s,mb4.6
R11A Troy Canyon, C 78.99 45 ⇑P **P 15 22 14.9 +0.2**
baz=79
X14A Yava 79.06 50 ⇑P **P 15 22 15.1 0.0**
baz=79
U13A Pakoon Wash 79.19 47 ⇓P **P 15 22 16.2 +0.4**
baz=79
Q11A Duckwater 79.19 45 ⇓P **P 15 22 16.6 +0.8**
baz=79
Y15A Casa Rosa Ranc 79.23 50 ⇑P **P 15 22 16.8 +0.7**
baz=79
W14A Seligman 79.26 49 ⇓P **P 15 22 17.1 +0.9**
baz=79
217A Green Valley 79.42 53 ⇓P **P 15 22 18.0 +0.8**
baz=80
V14A Boquillas Ranc 79.44 48 ⇑P **P 15 22 17.8 +0.6**
baz=80
P11A Circle Ranch, 79.48 44 ⇑P **P 15 22 18.4 +1.1**
baz=80
I07A Izee 79.48 39 ⇓P **P 15 22 18.4 +1.2**
baz=80
T13A Saint George 79.51 47 ⇓P **P 15 22 18.5 +0.9**
baz=80
R12A Pony Springs, 79.65 45 ⇑P **P 15 22 19.7 +1.4**
baz=80
U14A Mt Trumbull 79.75 48 ⇓P **P 15 22 19.6 +0.8**
baz=80
D05A Enumclaw 79.82 35 ⇑P **P 15 22 20.1 +1.1**
baz=80
117A Oracle 79.82 52 ⇓P **P 15 22 20.0 +0.7**
baz=80
Y16A Circle Bar Ran 79.84 51 ⇓P **P 15 22 20.7 +1.3**
baz=80
Q12A Willow Creek R 79.85 45 ⇑P **P 15 22 20.3 +0.9**
baz=80
318A Bisbee 79.91 53 ⇑P **P 15 22 20.5 +0.7**
baz=80
M10A I.L. Ranch, Tu 79.96 42 ⇑P **P 15 22 20.6 +0.7**
baz=80
TTA Tatalina 79.96 10 *e*P **P 15 22 21.0 +1.7**
comp=Z,33nm,1.3s,mb5.1
P12A McGill 80.01 44 ⇓P **P 15 22 20.9 +0.7**
baz=80
PMR Palmer 80.08 13 P **P 15 22 19.9 -0.2**
X16A Lo Mia Camp, P 80.10 50 ⇓P **P 15 22 20.9 +0.1**
baz=80
V15A Kaibab Nationa 80.19 49 ⇓P **P 15 22 22.0 +0.7**
baz=80
ARUT Antelope Range 80.20 46 *e*P **P 15 22 23.2 +1.9**
comp=Z,0.7nm,0.4s,mb3.9
Y17A Roosevelt 80.23 51 ⇓P **P 15 22 22.1 +0.6**
baz=80
U15A North Rim 80.39 48 ⇓P **P 15 22 22.4 +0.1**
baz=80
319A Douglas 80.44 54 ⇓P **P 15 22 22.3 -0.3**
baz=80
JCW Jim Creek 80.44 34 *e*P **P 15 22 24.5 +2.2**
comp=Z,17nm,1.0s,mb4.9
G08A Pilot Rock 80.47 38 ⇑P **P 15 22 22.7 +0.2**
baz=81
O12A Currie 80.51 44 ⇓P **P 15 22 23.2 +0.3**
baz=81
T15A Red Dirt Ranch 80.59 47 ⇑P **P 15 22 23.8 +0.4**
baz=81
P13A Bates Ranch, G 80.60 45 ⇓P **P 15 22 23.4 +0.1**
baz=81
BMRM Bremner River 80.64 16 *e*P **P 15 22 20.7 -2.4**
comp=Z,51nm,1.5s,mb5.2
219A White Tail Can 80.71 53 ⇓P **P 15 22 24.4 +0.3**
baz=81
RSW Rattlesnake Hi 80.72 37 *e*P **P 15 22 26.4 +2.6**
comp=Z,18nm,1.1s,mb4.9
HAWA Hanford 80.75 37 *e*P **P 15 22 25.1 +1.2**
comp=Z,8.2nm,0.9s,mb4.7
L11A Cat Creek Ranc 80.80 42 ⇓P **P 15 22 24.3 0.0**
baz=81
RPW Rockport 80.82 34 P **P 15 22 23.2 -1.1**
Y18A Canyon Day Jun 80.87 51 ⇑P **P 15 22 25.0 +0.1**
baz=81
Q14A Sevier Lake (B 80.88 45 ⇓P **P 15 22 25.4 +0.5**
baz=81
ETW Entiat 80.98 35 *e*P **P 15 22 26.4 +1.2**
comp=Z,34nm,1.2s,mb5.2
320A Kipp Ranch, An 81.01 54 ⇓P **P 15 22 26.2 +0.5**
baz=81
220A Playas Peak, P 81.24 54 ⇓P **P 15 22 27.2 +0.3**
baz=81
P14A Drum Mountains 81.31 45 ⇑P **P 15 22 27.3 +0.2**
baz=81
MSU Marysvale 81.42 46 *e*P **P 15 22 28.7 +0.9**
comp=Z,5.4nm,1.2s,mb4.3
D08A Wollman Farm, 81.47 36 ⇑P **P 15 22 28.6 +0.8**
baz=82
TRF Thorofare Moun 81.49 12 *e*P **P 15 22 26.2 -1.3**
comp=Z,6.5nm,0.8s,mb4.6
E09A Wood Farm, Sta 81.61 37 ⇑P **P 15 22 29.1 +0.5**
baz=82
Z20A Nine Sixteen R 81.69 52 ⇑P **P 15 22 29.8 +0.5**
baz=82
T17A Navajo Res., N 81.71 48 ⇑P **P 15 22 29.2 -0.1**
baz=82
DUG Dugway 81.77 44 ⇑P **P 15 22 30.6 +1.0**
baz=82
OD2 Odessa Site #2 81.77 36 *e*P **P 15 22 28.5 -0.9**
comp=Z,11nm,1.1s,mb4.7
F10A Beach Ranch, E 81.86 38 ⇑P **P 15 22 30.0 +0.2**
baz=82
B08A Colville Reser 81.96 35 ⇑P **P 15 22 31.0 +0.7**
baz=82
I12A Atlanta 82.01 40 ⇑P **P 15 22 31.3 +0.6**
baz=82
MCK McKinley 82.02 12 P **P 15 22 31.7 +1.4**
comp=Z,33nm,1.5s,mb5.0
M14A Sheep Mountain 82.03 43 ⇑P **P 15 22 31.8 +0.9**
baz=82
Y20A Horse Springs, 82.18 52 ⇓P **P 15 22 31.5 -0.3**
baz=82
HLID Hailey 82.35 41 ⇓P **P 15 22 32.6 +0.1**
baz=82
HLID Hailey 82.35 41 *e*P **P 15 22 30.6 -1.9**
comp=Z,7.6nm,1.1s,mb4.5
J13A Cove Ranch, Pi 82.42 41 ⇓P **P 15 22 33.0 +0.1**
baz=82
T18A Mexican Hat 82.44 48 ⇓P **P 15 22 33.1 0.0**
baz=82
TMUT Trail Mountain 82.45 46 *e*P **P 15 22 34.6 +1.5**
comp=Z,10.0nm,1.1s,mb4.7
BJI Beijing 82.55 315 P **P 15 22 32.8 -0.8**
BJI sP sP 15 22 53.0 -4.9
BJI sS sS 15 33 07.1 -8.2
BJI SS SS 15 38 11.3 +2.4
BJI pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
BJI pmax pmax
comp=Z,97nm,5.2s
BJI LR LR
comp=N,510nm,18.3s
BJI LR LR
comp=E,630nm,24.4s
BJI LR LR
comp=Z,750nm,23.6s
H12A Diamond D Ranc 82.56 40 ⇑P **P 15 22 33.3 -0.3**
baz=83
I13A Wildhorse Cree 82.71 41 ⇓P **P 15 22 34.2 -0.2**
baz=83
Y21A Point of Rocks 82.75 52 ⇓P **P 15 22 34.9 0.0**
baz=83
J14A Carey 82.80 41 ⇓P **P 15 22 34.8 0.0**
baz=83
SRU San Rafael 82.84 46 ⇑P **P 15 22 34.7 -0.5**
baz=83
SRU San Rafael 82.84 46 *e*P **P 15 22 36.0 +0.8**
comp=Z,17nm,1.5s,mb4.9
X21A Alamocita Cree 82.85 51 ⇓P **P 15 22 34.6 -0.7**
baz=83
T19A Beclabito 82.92 49 ⇑P **P 15 22 35.3 -0.3**
baz=83
DAU Daniels Canyon 82.92 45 *e*P **P 15 22 33.6 -2.0**
F12A Elk City 82.93 39 ⇑P **P 15 22 35.1 -0.4**
baz=83,SNR=15
H13A Challis 82.94 40 ⇑P **P 15 22 35.7 +0.1**
baz=83
R18A Canyonlands Na 82.97 47 ⇓P **P 15 22 35.5 -0.4**
baz=83
Z22A Elephant Butte 82.99 53 ⇓P **P 15 22 36.0 -0.1**
baz=83
Q18A Rafter H Ranch 83.11 46 ⇓P **P 15 22 36.9 +0.4**
baz=83
G13A Cobalt 83.22 40 ⇓P **P 15 22 36.6 -0.4**
baz=83
S19A Harvey Farm, M 83.23 48 ⇓P **P 15 22 37.2 0.0**
baz=83
COLA College 83.25 12 *e*P **P 15 22 34.2 -2.5**
comp=Z,8.4nm,0.9s,mb4.8
LAZ Ladron 83.32 52 *e*P **P 15 22 39.2 +1.4**
comp=Z,1.0nm,0.6s,mb4.0
ILAR Eielson Array 83.37 13 P **P 15 22 34.2 -3.1**
comp=Z,1.8nm,0.9s,mb4.1,baz=217,slow=5.6,SNR=15
ILAR LR LR 15 53 27.6
comp=Z,507nm,20.3s,baz=49,slow=31
C11A Tepee Creek (N 83.41 37 ⇑P **P 15 22 37.3 -0.6**
baz=84,SNR=6.5
N17A Moffit Pass 83.45 45 ⇑P **P 15 22 37.7 -0.6**
baz=84
425A Indio Mountain 83.59 56 ⇑P **P 15 22 38.8 -0.5**
baz=84,SNR=13
BNM Barren Site 83.61 52 *e*P **P 15 22 40.4 +1.2**
comp=Z,8.0nm,1.1s,mb4.8
MNTX Cornudas Mount 83.62 55 ⇓P **P 15 22 38.8 -0.6**
baz=84,SNR=6.4
224A Cornudas Mount 83.65 54 ⇓P **P 15 22 38.7 -0.8**
baz=84,SNR=10
PV04 Paradox Valley 83.67 47 *e*P **P 15 22 38.4 -1.1**
U21A Nageezi 83.75 50 ⇓P **P 15 22 39.5 -0.5**
baz=84
PV01 Paradox Valley 83.80 48 *e*P **P 15 22 41.1 +0.9**
comp=Z,529nm,1.0s
626A Big Bend Ranch 83.82 57 ⇑P **P 15 22 39.8 -0.6**
baz=84,SNR=6.1
325A Bean Ranch, Si 83.82 55 ⇓P **P 15 22 39.7 -0.7**
baz=84,SNR=13
E13A Victor 83.91 38 ⇑P **P 15 22 40.0 -0.5**
baz=84
MCMT McKenzie Canyo 83.95 40 *e*P **P 15 22 41.4 +0.6**
comp=Z,4.1nm,1.1s,mb4.5
J16A Bone 84.00 42 ⇓P **P 15 22 40.3 -0.7**
baz=84
526A Mary Lane Ranc 84.04 57 ⇓P **P 15 22 40.3 -1.2**
baz=84
ANMO Albuquerque 84.05 51 *e*P **P 15 22 42.0 +0.5**
comp=Z,11nm,1.2s,mb4.8
ANMO Albuquerque 84.05 51 LR LR 15 51 44.7
comp=Z,1µm,21.2s,baz=210,slow=30
TXAR Lajitas Array 84.11 58 P **P 15 22 39.9 -2.1**
comp=Z,7.3nm,1.1s,mb4.7,baz=212,slow=4.4,SNR=25
TXAR LR LR 15 52 15.3
comp=Z,1µm,20.2s,baz=280,slow=30
P19A Cripple Cowboy 84.15 46 ⇓P **P 15 22 41.3 -0.5**
baz=84
S21A Coal Bank Pass 84.16 49 ⇑P **P 15 22 41.2 -0.8**
baz=84
225A Deer Hill, Car 84.21 55 ⇓P **P 15 22 41.7 -0.7**
baz=84
RRI2 Red Ridge 84.22 42 *e*P **P 15 22 38.7 -3.5**
comp=Z,9.1nm,0.9s,mb4.9
N18A Larsen Ranch, 84.25 45 ⇑P **P 15 22 41.9 -0.5**
baz=84
MSO Missoula 84.25 38 ⇑P **P 15 22 42.1 -0.2**
baz=84
BSMT Bassoo Peak 84.27 37 *e*P **P 15 22 43.2 +0.9**
comp=Z,2.9nm,0.8s,mb4.5
426A McDonald Obser 84.31 56 ⇑P **P 15 22 42.2 -0.7**
baz=84,SNR=13
U22A Llaves 84.32 50 ⇑P **P 15 22 42.2 -0.6**
baz=84
627A Terlingua Ranc 84.39 58 ⇑P **P 15 22 42.3 -1.0**
baz=84,SNR=8.7
Y24A Capitan 84.43 53 ⇓P **P 15 22 42.3 -1.2**
baz=84
GYA Guiyang 84.44 299 P **P 15 22 44.0 +0.3**
GYA pP pP 15 22 58.8 -2.3
GYA sP sP 15 23 05.3 -2.7
GYA PP PP 15 26 01.8 +2.0
GYA SKS 15 32 58.8
GYA S S 15 33 05.8 +0.4
GYA SS SS 15 38 38.0 +0.6
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
GYA pmax pmax
comp=Z,110nm,5.8s
GYA LR LR
comp=N,440nm,19.6s
GYA LR LR
comp=E,320nm,20.9s
GYA LR LR
comp=Z,430nm,19.8s
T22A Edith 84.54 49 ⇓P **P 15 22 43.1 -0.9**
baz=85
125A Gardner Draw, 84.55 54 ⇓P **P 15 22 43.6 -0.4**
baz=85
DAWY Dawson 84.56 16 *e*P **P 15 22 42.6 -0.7**
R21A Cimarron 84.63 48 ⇑P **P 15 22 44.0 -0.3**
baz=85
D14A Greenough 84.64 38 ⇓P **P 15 22 43.6 -0.5**
baz=85
LRM Limekiln Ridge 84.67 40 *e*P **P 15 22 44.9 +0.5**
comp=Z,69nm,1.4s,mb5.6
EGAK Eagle 84.69 15 *e*P **P 15 22 43.7 -0.3**
comp=Z,12nm,1.0s,mb5.0
CHMT Chamberlain Mo 84.71 38 *e*P **P 15 22 44.7 +0.2**
comp=Z,3.7nm,1.2s,mb4.4
226A Malaga, Loving 84.76 55 ⇑P **P 15 22 44.5 -0.7**
baz=85
G16A Moss Hill, Enn 84.79 40 ⇓P **P 15 22 44.1 -0.8**
baz=85
427A Hayter Ranch, 84.88 56 ⇑P **P 15 22 44.5 -1.2**
baz=85
S22A 4UR Ranch, Cre 84.89 49 ⇑P **P 15 22 45.7 0.0**
baz=85,SNR=8.2
H16A Russell Place, 84.89 41 ⇓P **P 15 22 45.4 -0.1**
baz=85,SNR=13
COLD Coldfoot 84.90 10 *e*P **P 15 22 45.4 +0.3**
comp=Z,14nm,1.0s,mb5.0
W24A Lazy 6 Ranch, 84.94 52 ⇑P **P 15 22 45.0 -1.0**
baz=85
L19A Farson 84.96 44 ⇓P **P 15 22 45.4 -0.5**
baz=85
J18A Kendall Valley 85.01 43 ⇑P **P 15 22 45.1 -1.0**
baz=85
A13A Flathead Natio 85.03 36 ⇓P **P 15 22 45.2 -0.9**
baz=85
BOZ Bozeman (W) 85.09 40 ⇓P **P 15 22 46.4 -0.1**
baz=85,SNR=7.1
BW06 Boulder Array 85.12 43 ⇑P **P 15 22 45.5 -1.1**
baz=85
528A Cox Ranch, San 85.12 57 ⇑P **P 15 22 45.6 -1.4**
baz=85
N20A Spence Gulch, 85.16 45 ⇓P **P 15 22 46.8 -0.2**
baz=85
F16A Kennard Place, 85.16 40 ⇑P **P 15 22 46.7 -0.1**
baz=85
D15A Lincoln 85.21 39 ⇓P **P 15 22 47.3 +0.3**
baz=85
WALA Waterton Lakes 85.38 36 *e*P **P 15 22 49.8 +2.0**
B14A Marquette Ranc 85.40 37 ⇓P **P 15 22 47.5 -0.4**
baz=86
428A Kincaid Ranch, 85.41 57 ⇑P **P 15 22 48.0 -0.4**
baz=86
HRY Holter Researc 85.47 39 *e*P **P 15 22 47.8 -0.5**
comp=Z,8.7nm,1.0s,mb4.8
E16A East Helena 85.48 39 ⇓P **P 15 22 48.4 0.0**
baz=86
M20A Sweetwater, Wa 85.49 45 ⇑P **P 15 22 48.6 +0.1**
baz=86
C15A Salmond Ranch, 85.51 38 ⇑P **P 15 22 48.4 -0.1**
baz=86,SNR=6.7
328A Wristen Ranch, 85.54 56 ⇑P **P 15 22 49.1 0.0**
baz=86
K19A Absolon Red Bu 85.61 43 ⇓P **P 15 22 49.2 +0.1**
baz=86
A14A Double T Ranch 85.61 37 ⇓P **P 15 22 49.2 +0.2**
baz=86,SNR=7.6
N21A Black Mountain 85.64 46 ⇓P **P 15 22 49.4 +0.1**
baz=86
W25A X Bar L Ranch, 85.66 52 ⇓P **P 15 22 49.7 +0.1**
baz=86
V25A Rancho No Teng 85.78 51 ⇓P **P 15 22 49.9 -0.3**
baz=86
D16A Dana Ranch, Ca 85.79 39 ⇓P **P 15 22 50.6 +0.7**
baz=86,SNR=6.0
B15A Bradely Ranch, 85.79 37 ⇑P **P 15 22 50.1 +0.2**
baz=86
F17A Fitzpatrick Pl 85.81 40 ⇑P **P 15 22 50.1 0.0**
baz=86
SDCO Great Sand Dun 85.86 49 *e*P **P 15 22 49.2 -1.3**
K20A Yellowstone Ra 85.88 44 ⇓P **P 15 22 50.3 -0.2**
baz=86
A15A Johnson Ranch, 86.01 37 ⇓P **P 15 22 51.3 +0.3**
baz=86,SNR=5.3
S24A Houchin Ranch, 86.03 49 ⇑P **P 15 22 51.1 -0.3**
baz=86
C16A Fuhringer Banc 86.03 38 ⇓P **P 15 22 50.8 -0.3**
baz=86
HHC Hu-ho-hao-te 86.07 314 *e*P **P 15 22 53.4 +2.0**
HHC pP pP 15 23 06.8 -2.2
HHC sP sP 15 23 12.1 -3.7
HHC PP PP 15 26 15.4 +2.7
HHC SKS 15 33 12.6
HHC S S 15 33 23.1 +2.2
HHC sS sS 15 33 44.9 -5.7
HHC SS SS 15 39 03.1 +2.3
HHC pmax pmax
comp=Z,20nm,1.0s,mb5.3
HHC pmax pmax
comp=Z,160nm,3.8s
HHC LR LR
comp=N,300nm,14.7s
HHC LR LR
comp=E,490nm,17.5s
HHC LR LR
comp=Z,940nm,21.7s
O22A Kremmling 86.07 47 ⇑P **P 15 22 50.8 -0.7**
baz=86
U25A Circle Dot Ran 86.15 51 ⇑P **P 15 22 51.9 0.0**
baz=86
Y27A Causey 86.17 53 ⇓P **P 15 22 51.8 -0.3**
baz=86
G18A Lazy EL Ranch, 86.24 41 ⇓P **P 15 22 52.2 0.0**
baz=86
RLMT Red Lodge 86.34 41 ⇓P **P 15 22 53.0 +0.4**
baz=86
B16A M & M Farms, S 86.34 38 ⇑P **P 15 22 52.8 +0.2**
baz=86
D17A Six Diamond Ra 86.37 39 ⇓P **P 15 22 53.3 +0.5**
baz=86,SNR=6.6
MAW Mawson 86.38 200 *e*P **P 15 22 52.2 -0.4**
comp=Z,2.4nm,1.4s,mb4.2
MAW Mawson 86.38 200 P **P 15 22 51.6 -1.0**
comp=Z,1.8nm,0.9s,mb4.3,baz=55,slow=7.1,SNR=3.5
MAW LR LR 15 59 02.5
comp=Z,760nm,18.5s,baz=112,slow=34
GCMT Greycliff 86.38 41 *e*P **P 15 22 53.8 +0.9**
comp=Z,7.7nm,1.3s,mb4.8
N22A Wattenberg Ran 86.39 46 ⇑P **P 15 22 53.2 +0.2**
baz=86
F18A Big Timber 86.40 40 ⇓P **P 15 22 53.1 +0.1**
baz=86
C17A Wharram Farm, 86.54 39 ⇓P **P 15 22 53.9 +0.3**
baz=87
E18A Harlowton 86.58 40 ⇓P **P 15 22 53.8 0.0**
baz=87
A16A West Butte Ran 86.66 37 ⇑P **P 15 22 54.4 +0.3**
baz=87,SNR=5.6
F19A Roth Farm, Mol 86.86 41 ⇑P **P 15 22 54.7 -0.5**
baz=87
I21A Big Trails, Te 87.06 43 ⇓P **P 15 22 54.9 -1.3**
baz=87
A17A Triple J Farms 87.18 37 ⇓P **P 15 22 56.7 0.0**
baz=87,SNR=5.5
EGMT Eagleton 87.32 39 ⇑P **P 15 22 57.0 -0.4**
baz=87
KMI Kunming 87.34 297 P **P 15 22 58.0 0.0**
KMI pP pP 15 23 12.4 -3.2
KMI sP sP 15 23 18.8 -3.7
KMI PP PP 15 26 27.3 +4.0
KMI S S 15 33 31.9 -2.0
KMI sS sS 15 33 58.3 -5.4
KMI SS SS 15 39 17.5 -2.6
KMI pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
KMI pmax pmax
comp=Z,85nm,4.6s
KMI LR LR
comp=N,160nm,25.6s
KMI LR LR
comp=E,530nm,24.5s
KMI LR LR
comp=Z,780nm,24.5s
B18A Beardsley Farm 87.48 38 ⇑P **P 15 22 57.5 -0.6**
baz=88
YAK Yakutsk 87.58 338 *e*P **P 15 22 57.0 -1.3**
comp=Z,13nm,1.2s,mb5.0
CD2 Chengdu 88.33 303 P **P 15 23 03.8 +1.2**
CD2 pP pP 15 23 17.3 -3.0
CD2 sP sP 15 23 22.4 -4.7
CD2 PP PP 15 26 34.0 +2.8
CD2 SKS 15 33 26.5
CD2 S S 15 33 43.3 +0.2
CD2 sS sS 15 34 06.0 -7.0
CD2 SS SS 15 39 36.8 +2.4
CD2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.4
CD2 pmax pmax
comp=Z,90nm,6.5s
CD2 LR LR
comp=N,440nm,19.6s
CD2 LR LR
comp=E,530nm,21.1s
CD2 LR LR
comp=Z,550nm,21.1s
CMAR Chiang Mai Arr 88.72 289 P **P 15 23 06.2 +1.5**
comp=Z,1.9nm,1.1s,mb4.3,baz=97,slow=3.3,SNR=10
CMAR LR LR 15 59 25.5

	comp=Z,502nm,20.0s,baz=276,slow=33							
CHTO	**Chiang Mai**	**88.82**	**290**	*e*P	**P**	**15 23 03.4**	**-1.7**
RSSD	**Black Hills**	**89.34**	**44**	*e*P	**P**	**15 23 05.5**	**-1.6**
	comp=Z,5.5nm,1.0s,mb4.8							
LZH	**Lanzhou**	**89.95**	**307**	*e*P	**P**	**15 23 13.5**	**+3.4**
LZH				pP	pP	15 23 27.8	0.0
LZH				sP	sP	15 23 33.0	-1.6
LZH				*e*PP	PP	15 26 48.6	+4.6
LZH				pmax	pmax			
	comp=Z,20nm,1.5s,mb5.2							
LZH				pmax	pmax			
	comp=Z,67nm,8.3s							
LZH				LR	LR			
	comp=N,300nm,16.5s							
LZH				LR	LR			
	comp=Z,350nm,19.0s							
SONM	**Songino Array**	**92.16**	**319**	P	**P**	**15 23 20.8**	**+0.7**
	comp=Z,0.2nm,0.4s,mb3.8,baz=97,slow=6.0,SNR=3.1							
SONM				LR	LR	16 03 22.3		
	comp=Z,288nm,18.1s,baz=117,slow=35							
PLCA	**Paso Flores**	**92.51**	**133**	LR	LR	15 57 33.5		
	comp=Z,427nm,20.7s,baz=107,slow=31							
KSH	**Kashi**	**112.19**	**307**	*e*PKP	PKiKP	15 28 52.1	+5.9	
KSH				*es*PKP		15 29 06.3		
KSH				*e*PP	PP	15 29 34.6	+2.8	
KSH				SKKS	SKKSac	15 36 25.3	-3.1	
KSH				AMB	AMB			
	comp=Z,77nm,5.0s							
BVAR	**Borovoye Array**	**115.38**	**322**	PKP	PKPdf	15 28 50.3	-1.6	
	comp=Z,0.2nm,0.3s,baz=174,slow=3.9,SNR=3.0							
STHS	**Stebnicka Huta**	**142.78**	**339**	*e*	PKPdf	15 29 48.3	+4.6	
CRVS	**Cervenica-Dubn**	**143.15**	**339**	*e*PKP	PKPdf	15 29 50.1	+5.8	
OKC	**Ostrava-Krasne**	**143.38**	**343**	AMS	AMS	16 40 10.0		
	comp=Z,300nm,21.4s							
DPC	**Dobruska-Polom**	**143.40**	**345**	*e*PKP	PKPdf	15 29 45.3	+0.6	
DPC				AMS	AMS	16 34 40.0		
	comp=Z,400nm,18.9s							
BR131	**Keskin Array S**	**143.50**	**318**	*e*PKPdf	PKPdf	15 29 44.6	-0.6	
BRTR	**Keskin Array B**	**143.50**	**318**	PKP	PKPdf	15 29 44.5	-0.8	
	comp=Z,6nm,0.9s,baz=90,slow=2.5,SNR=8.9							
PVCC	**Panska Ves**	**143.65**	**347**	AMS	AMS	16 37 20.0		
	comp=Z,600nm,22.2s							
KECS	**Kecovo**	**143.84**	**339**	*e*PKP	PKPdf	15 29 47.2	+1.6	
MLR	**Muntele Rosu**	**144.07**	**331**	PKP	PKPdf	15 29 45.4	-0.7	
	comp=Z,2.5nm,0.7s,baz=24,slow=10.0,SNR=4.3							
PRU	**Pruhonice**	**144.16**	**346**	AMS	AMS	16 31 20.0		
	comp=Z,600nm,23.2s							
VRAC	**Vranov**	**144.29**	**344**	PKP	PKPdf	15 29 46.0	-0.3	
	comp=Z,2.9nm,0.5s,baz=2.4,slow=12,SNR=4.1							
NKC	**Novy Kostel**	**144.36**	**349**	AMS	AMS	16 37 00.0		
	comp=Z,400nm,21.0s							
VYHS	**Vyhne**	**144.37**	**341**	*e*PKP	PKPdf	15 29 46.3	-0.2	
TREC	**Trest**	**144.59**	**345**	*e*PKP	PKPdf	15 29 50.3	+3.5	
TREC				AMS	AMS	16 40 30.0		
	comp=Z,500nm,20.2s							
SNF	**Seneffe**	**145.01**	**358**	PKP	PKPdf	15 29 48.9	+1.3	
BCLA	**Clavier**	**145.05**	**357**	PKP	PKPdf	15 29 47.3	-0.3	
ZST	**Bratislava**	**145.16**	**343**	*e*PKP	PKPdf	15 29 50.4	+2.5	
KHC	**Kasperske Hory**	**145.18**	**347**	*e*PKPdf	PKPdf	15 29 45.6	-2.2	
KHC	**Kasperske Hory**	**145.18**	**347**	*e*PKP	PKPdf	15 29 47.9	0.0	
KHC				AMS	AMS	16 39 30.0		
	comp=Z,500nm,17.4s							
MMAI	**Mount Meron Ar**	**145.33**	**306**	PKPbc	PKPbc	15 29 50.7	+2.1	
	comp=Z,9.0nm,0.8s,baz=70,slow=6.3,SNR=7.7							
GIVF	**Givet**	**145.40**	**357**	*e*PKP2	PKPdf	15 29 44.9	-3.3	
DOU	**Dourbes**	**145.41**	**357**	PKP	PKPdf	15 29 46.3	-1.9	
BAIF	**Baives**	**145.47**	**358**	*e*PKP2	PKPdf	15 29 45.3	-3.0	
WLF	**Walferdange**	**145.75**	**356**	*e*PKPdf	PKPab	15 29 51.5	+1.8	
EIL	**Elat**	**146.84**	**301**	PKPbc	PKPbc	15 29 52.3	-0.9	
	comp=Z,2.2nm,0.6s,baz=73,slow=1.0,SNR=2.2							
BFO	**Black Forest**	**146.86**	**353**	*e*PKPdf	PKPdf	15 29 52.3	+1.5	
CDF	**Champ du Feu**	**146.89**	**354**	*e*PKP2	PKPdf	15 29 50.9	+0.1	
	comp=Z,34nm,1.1s							
GRR	**Gorron**	**147.07**	**4**	*e*PKP2	PKPdf	15 29 49.5	-1.6	
	comp=Z,85nm,1.6s							
PERS	**Pernice**	**147.13**	**344**	*i* PKPbc	PKPab	15 29 57.5	+2.4	
HAU	**Haudompre**	**147.38**	**355**	*e*PKP2	PKPbc	15 29 54.0	-0.1	
HINF	**Hinteralfeld**	**147.53**	**354**	*e*PKP2	PKPbc	15 29 54.2	-0.3	
VISS	**Visnje**	**147.98**	**343**	*i* PKPbc	PKPab	15 29 59.7	+1.2	
JAVS	**Javornik**	**148.10**	**344**	*i* PKPbc	PKPab	15 30 00.1	+1.1	
BOJS	**Bojanci**	**148.13**	**343**	*i* PKPbc	PKPab	15 30 00.3	+1.1	
DAVOX	**Davos/Dischmat**	**148.15**	**350**	PKPbc	PKPdf	15 29 53.3	+0.4	
	comp=Z,1.1nm,0.3s,baz=250,slow=12,SNR=3.0							
LOR	**Lormes**	**148.27**	**358**	*e*PKP2	PKPdf	15 29 54.7	+1.6	
SSF	**Saint Saulge**	**148.48**	**358**	*e*PKP2	PKPbc	15 29 57.1	0.0	
	comp=Z,55nm,1.3s							
AVF	**Avril sur Loir**	**148.76**	**359**	*e*PKP2	PKPbc	15 29 57.6	-0.2	
	comp=Z,30nm,1.3s							
CABF	**La Chapelle**	**148.79**	**355**	*e*PKP2	PKPbc	15 29 58.5	+0.6	
SMF	**Signal de Mont**	**148.89**	**358**	*e*PKP2	PKPbc	15 29 58.5	+0.4	
	comp=Z,81nm,1.6s							
TCF	**Toulx Ste Croi**	**149.27**	**0**	*e*PKP2	PKPbc	15 29 58.8	-0.3	
	comp=Z,69nm,1.5s							
LPL	**La Plagne**	**149.81**	**354**	*e*PKP2	PKPab	15 30 05.2	-0.8	
LPG	**La Plagne**	**149.83**	**354**	*e*PKP2	PKPab	15 30 05.2	-0.8	
ORIF	**Oris-en-Rattie**	**150.49**	**355**	*e*PKP2	PKPab	15 30 06.2	-2.5	
	comp=Z,24nm,1.1s							
MBDF	**Montbardon**	**150.59**	**354**	*e*PKP2	PKPab	15 30 06.5	-2.7	
KEST	**Kesra**	**158.86**	**344**	PKP	PKPdf	15 30 06.0	-2.6	
	comp=Z,0.4nm,0.4s,baz=293,slow=7.7,SNR=1.6							
TORD	**Torodi Ar. Bea**	**177.62**	**166**	PKP	PKPdf	15 30 21.6	-0.1	
	comp=Z,213nm,0.4s,baz=181,slow=0.3,SNR=3.8							
TORD				PKPab	PKPab	15 32 06.3	-1.5	
	comp=Z,1.0nm,1.0s,baz=180,slow=0.9,SNR=3.2							

*ISCJB **14** 15:23:51.6±0.7, 10.42N±0.03×62.63W±0.02, h11km±5km, Error ellipse: s-maj=6.0km s-min=3.3km az=154.6*
*FUNV **14** 15:23:51.7, 10.43N×62.60W, h1km, MW3.1*
*NEIC **14** 15:23:53.5, 10.39N×62.47W, h3km, MD3.2(TRN), After TRN.*
*TRN **14** 15:23:53.5, 10.39N×62.47W, h3km, MD3.2*
ISC 14 15:23:51.5±0.6, 10.41N±0.04×62.62W±0.02, h4km±5km, n22, σ0.95/39, 2C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUNV	**Guanoco**	**0.41**	**232**	*e*P	**Pg**	**15 23 59.6**	**+0.3**
GUNV				*e*S	**Sg**	**15 24 06.1**	**+1.5**
GUIV	**Guiria**	**0.45**	**59**	*i*P	**Pg**	**15 24 00.4**	**+0.2**
GUIV				*e*S	**Sg**	**15 24 06.6**	**+0.5**
CRUV	**Carupano**	**0.66**	**293**	*e*P	**Pg**	**15 24 03.7**	**-0.5**
CRUV				*e*S	**Sg**	**15 24 12.7**	**-0.1**
TCE	**Chacachacare**	**0.90**	**72**	*e*P	**Pg**	**15 24 07.8**	**-0.8**
TCE				*e*S	**Sg**	**15 24 19.2**	**-1.1**
TCE	**Chacachacare**	**0.90**	**72**	*e*P	**Pg**	**15 24 07.8**	**-0.8**
TCE				*e*S	**Sg**	**15 24 19.2**	**-1.1**
ITEV	**Isla Los Testi**	**1.06**	**332**	*e*P	**Pg**	**15 24 11.4**	**-0.4**
ITEV				*e*S	**Sg**	**15 24 25.9**	**+0.2**
TRN	**Trinidad (W)**	**1.22**	**79**	*e*P	**Pg**	**15 24 13.4**	**-1.4**
TRN				*e*S	**Sg**	**15 24 30.4**	**-0.2**
TRN	**Trinidad (W)**	**1.22**	**79**	*e*P	**Pg**	**15 24 13.4**	**-1.4**
TRN				*e*S	**Sg**	**15 24 30.4**	**-0.2**
TBH	**Brigand Hill**	**1.53**	**87**	*e*P	**Pn**	**15 24 20.7**	**+1.1**
TBH	**Brigand Hill**	**1.53**	**87**	*e*P	**Pn**	**15 24 20.7**	**+1.1**
ORIV	**Oritupano**	**1.54**	**210**	*e*P	**Pn**	**15 24 20.8**	**+1.0**
ORIV				*e*S	**Sn**	**15 24 41.6**	**+1.2**
TPR	**Prospect**	**1.97**	**67**	*e*P	**Pn**	**15 24 25.8**	**+0.2**
TPR				*e*S	**Sn**	**15 24 50.2**	**-0.5**
TPR	**Prospect**	**1.97**	**67**	*e*P	**Pn**	**15 24 25.8**	**+0.2**
TPR				*e*S	**Sn**	**15 24 50.2**	**-0.5**
GRW	**Mount Saint Ca**	**1.97**	**28**	*e*P	**Pn**	**15 24 27.9**	**+2.2**
GRW	**Mount Saint Ca**	**1.97**	**28**	*e*P	**Pn**	**15 24 27.9**	**+2.2**
PCRV	**Puerto La Cruz**	**2.00**	**263**	*e*P	**Pn**	**15 24 26.4**	**+0.3**
TOSP	**Speyside**	**2.23**	**67**	*e*P	**Pn**	**15 24 30.6**	**+1.4**
TOSP				*e*S	**Sn**	**15 24 57.5**	**+0.3**
PRGV	**PARIAGUAN**	**2.59**	**231**	*e*P	**Pn**	**15 24 34.9**	**+0.7**
PRGV				*e*S	**Sn**	**15 25 05.8**	**-0.2**
GURV	**El Guri**	**2.68**	**190**	*e*P	**Pn**	**15 24 35.1**	**-0.3**
GURV				*e*S	**Sn**	**15 25 06.9**	**-1.4**
CUPV	**Cœpira**	**3.14**	**264**	*e*P	**Pn**	**15 24 41.8**	**0.0**
CUPV				*e*S	**Sn**	**15 25 18.1**	**-1.6**
CAOV	**Caicara del Or**	**4.78**	**230**	*e*P	**Pn**	**15 25 03.7**	**-0.5**
CAOV				*e*S	**Sn**	**15 25 56.8**	**-3.3**
BAUV	**El Baul**	**5.54**	**255**	*e*P	**Pn**	**15 25 14.0**	**-0.9**
BAUV				*e*S	**Sn**	**15 26 14.5**	**-4.6**

NEIC 14 15:43:41.0, 63.29N×151.09W, h9km, ML3.5(PMR), ML3.1(AEIC), After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRF	**Thorofare Moun**	**0.40**	**66**	P	Pg	15 43 49.0	+0.3
TRF				S	Sg	15 43 54.8	+0.9
PPLA	**Purkeypile**	**0.64**	**232**	P	Pg	15 43 53.1	-0.1
PPLA				S	Sg	15 44 01.7	+0.2
CHUM	**Lake Minchumin**	**0.81**	**318**	P	Pg	15 43 56.8	+0.4
CHUM				S	Sg	15 44 07.5	+0.5
RND	**Reindeer**	**1.02**	**83**	P	Pg	15 43 59.6	-0.8
MCK	**McKinley**	**1.06**	**64**	P	Pg	15 44 01.0	-0.3
MCK				S	Sg	15 44 14.4	-0.7
DHY	**Denali Highway**	**1.70**	**96**	P	Pn	15 44 11.3	+0.5
DHY				S	Sn	15 44 33.6	+1.0
PMR	**Palmer**	**1.93**	**151**	*e*P	Pn	15 44 13.7	-0.3
SML	**Sawmill**	**1.96**	**138**	P	Pn	15 44 13.9	-0.4
COLA	**College**	**2.13**	**40**	P	Pn	15 44 18.3	+1.5
COLA				S	Sn	15 44 46.6	+3.3
TTA	**Tatalina**	**2.27**	**263**	*e*P	Pn	15 44 17.4	-1.2
TT01	**Tatalina**	**2.27**	**262**	P	Pn	15 44 17.6	-1.0
RC01	**Rabbit Creek A**	**2.30**	**163**	P	Pn	15 44 19.3	+0.3
PAX	**Paxson**	**2.57**	**95**	P	Pn	15 44 23.7	+0.9
SLKM	**Skilak Lake**	**2.83**	**171**	P	Pn	15 44 28.0	+1.8
IM3	**Indian Mountai**	**2.94**	**338**	P	Pn	15 44 27.9	+0.1
RSO	**Redoubt South**	**2.95**	**196**	*e*Pn	Pn	15 44 29.2	+1.3
RSO				*e*Sn	Sn	15 45 07.0	+3.7
SVW2	**Sparrevohn**	**3.05**	**226**	*e*P	Pn	15 44 29.0	-0.3
SEW	**Seward**	**3.29**	**166**	*e*Pn	Pn	15 44 35.3	+2.6
DIV	**Divide**	**3.30**	**129**	P	Pn	15 44 33.4	+0.5
DIV				*e*Sn	Sn	15 45 12.4	+0.2
MENT	**Mentasta**	**3.37**	**93**	*e*P	Pn	15 44 33.3	-0.4
BRLK	**Bradley Lake**	**3.54**	**178**	P	Pn	15 44 38.2	+2.1
CNPM	**China Poot**	**3.78**	**181**	P	Pn	15 44 42.2	+2.8
BMRM	**Bremner River**	**3.84**	**125**	P	Pn	15 44 40.6	+0.5
COLD	**Coldfoot**	**3.97**	**5**	P	Pn	15 44 42.5	+0.5
EGAK	**Eagle**	**4.61**	**67**	*e*Pn	Pn	15 44 51.3	+0.6
BM3	**Burnt Mountain**	**4.95**	**30**	P	Pn	15 44 54.6	-0.8
DAWY	**Dawson**	**5.27**	**76**	*e*Pn	Pn	15 44 59.5	-0.2
KDAK	**Kodiak Island**	**5.58**	**188**	*e*Pn	Pn	15 45 04.5	+0.5

*ISCJB **14** 15:52:33.7±0.5, 38.06N±0.03×20.27E±0.03, h10km, Error ellipse: s-maj=4.6km s-min=2.6km az=28.9*
*CSEM **14** 15:52:33.7±0.3, 38.06N×20.33E, h2km, ML2.9/10, Error ellipse: s-maj=6.0km s-min=3.1km az=26.0*
*ATH **14** 15:52:33.0, 38.00N×20.29E, h9km±1km, MD3.5/13*
*NEIC **14** 15:52:33.0, 38.00N×20.29E, h9km, MD3.5(ATH), After ATH.*
*THE **14** 15:52:35.3, 38.11N×20.44E, h0km±2km, ML2.9/10, Error ellipse: s-maj=2.6km s-min=1.1km az=212.0*
ISC 14 15:52:34.4±0.5, 38.04N±0.03×20.32E±0.03, h10km, n78, σ1.08/129, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.25**	**58**	*e*Pg	**Pg**	**15 52 38.9**	**-0.6**
VLS	**Valsamata**	**0.25**	**58**	*e*PG	**Pg**	**15 52 38.9**	**-0.6**
VLS	**Valsamata**	**0.25**	**58**	P	**Pg**	**15 52 38.9**	**-0.6**
VLS				S	**Sg**	**15 52 41.0**	**-2.0**
VLS	**Valsamata**	**0.25**	**58**	S	**Sg**	**15 52 41.0**	**-2.0**
VLS				S	**Sg**	**15 52 41.0**	**-2.0**
KFL	**Anninata**	**0.37**	**80**	P	**Pg**	**15 52 40.9**	**-0.9**
KFL	**Anninata**	**0.37**	**80**	P	**Pg**	**15 52 40.9**	**-0.9**
LKD2	**Lefkada island**	**0.79**	**19**	P	**Pg**	**15 52 48.3**	**-1.4**
LKD2				S	**Sg**	**15 52 58.9**	**-1.1**
LKD2	**Lefkada island**	**0.79**	**19**	P	**Pg**	**15 52 48.3**	**-1.4**
LKD2				S	**Sg**	**15 52 58.9**	**-1.1**
RLS	**Riolos of Patr**	**0.90**	**89**	*e*Pg	**Pg**	**15 52 50.2**	**-1.6**
RLS				*e*Sb	**Sg**	**15 53 04.1**	**+0.5**
RLS	**Riolos of Patr**	**0.90**	**89**	*e*PG	**Pg**	**15 52 50.2**	**-1.6**
RLS				*e*SB	**Sg**	**15 53 04.1**	**+0.5**
RLS	**Riolos of Patr**	**0.90**	**89**	*e*Pg	**Pg**	**15 52 50.2**	**-1.6**
RLS				*e*Sb	**Sg**	**15 53 04.1**	**+0.5**
UPR	**University Cam**	**1.18**	**78**	*e*PB	**Pb**	**15 52 55.9**	**-1.0**
UPR				*e*SB	**Sb**	**15 53 12.5**	**+0.3**
UPR	**University Cam**	**1.18**	**78**	P	**Pb**	**15 52 55.2**	**-1.7**
UPR				S	**Sb**	**15 53 11.4**	**-0.8**
UPR	**University Cam**	**1.18**	**78**	P	**Pb**	**15 52 55.2**	**-1.7**
UPR	**University Cam**	**1.18**	**78**	*e*Pb	**Pb**	**15 52 55.9**	**-1.0**
UPR				S	**Sb**	**15 53 11.4**	**-0.8**
UPR				*e*Sb	**Sb**	**15 53 12.5**	**+0.3**
EFP	**Efpalio**	**1.30**	**72**	*e*PB	**Pb**	**15 52 58.3**	**-0.7**
EFP				*e*SB	**Sb**	**15 53 16.8**	**+1.0**
EFP	**Efpalio**	**1.30**	**72**	P	**Pn**	**15 52 56.8**	**-1.9**
EFP				S	**Sb**	**15 53 14.4**	**-1.4**
EFP	**Efpalio**	**1.30**	**72**	P	**Pn**	**15 52 56.8**	**-1.9**
EFP	**Efpalio**	**1.30**	**72**	*e*Pb	**Pb**	**15 52 58.3**	**-0.7**
EFP				S	**Sb**	**15 53 14.4**	**-1.4**
EFP				*e*Sb	**Sb**	**15 53 16.8**	**+1.0**
LAKA	**Lakka**	**1.32**	**81**	P	**Pn**	**15 52 57.1**	**-1.8**
LAKA				S	**Sb**	**15 53 16.1**	**-0.2**
LAKA	**Lakka**	**1.32**	**81**	P	**Pn**	**15 52 57.1**	**-1.8**
LAKA				S	**Sb**	**15 53 16.1**	**-0.2**
TRIZ	**Trizonia**	**1.42**	**76**	P	**Pn**	**15 52 58.6**	**-1.6**
TRIZ				S	**Sn**	**15 53 18.7**	**-0.2**
TRIZ	**Trizonia**	**1.42**	**76**	P	**Pn**	**15 52 58.6**	**-1.6**
TRIZ				S	**Sn**	**15 53 18.7**	**-0.2**
EVR	**Evrytania**	**1.46**	**53**	*e*Pb	**Pb**	**15 53 01.4**	**-0.2**
EVR				*e*Sb	**Sb**	**15 53 21.9**	**+1.7**
EVR	**Evrytania**	**1.46**	**53**	*e*PB	**Pb**	**15 53 01.4**	**-0.2**
EVR				*e*SB	**Sb**	**15 53 21.9**	**+1.7**
EVR	**Evrytania**	**1.46**	**53**	*e*Pb	**Pb**	**15 53 01.4**	**-0.2**
EVR				*e*Sb	**Sb**	**15 53 21.9**	**+1.7**
KALE	**Kalithea**	**1.47**	**76**	P	**Pn**	**15 52 59.5**	**-1.5**
KALE				S	**Sn**	**15 53 21.2**	**+0.9**
KALE	**Kalithea**	**1.47**	**76**	P	**Pn**	**15 52 59.5**	**-1.5**
KALE				S	**Sn**	**15 53 21.2**	**+0.9**
IGT	**Igoumenitsa**	**1.49**	**0**	P	**Pn**	**15 53 01.1**	**-0.1**
IGT				S	**Sn**	**15 53 21.9**	**+1.2**
IGT	**Igoumenitsa**	**1.49**	**0**	P	**Pn**	**15 53 01.1**	**-0.1**
IGT				S	**Sn**	**15 53 21.9**	**+1.2**
ITM	**Ithomi**	**1.54**	**124**	*e*Pb	**Pn**	**15 53 02.3**	**+0.4**
ITM	**Ithomi**	**1.54**	**124**	*e*PB	**Pn**	**15 53 02.3**	**+0.4**
ITM	**Ithomi**	**1.54**	**124**	P	**Pn**	**15 53 02.3**	**+0.4**
ITM	**Ithomi**	**1.54**	**124**	P	**Pn**	**15 53 02.3**	**+0.4**
GUR	**Goura**	**1.60**	**93**	*e*PB	**Pb**	**15 53 03.5**	**-0.6**
GUR				*e*SB	**Sb**	**15 53 25.5**	**+1.2**
GUR	**Goura**	**1.60**	**93**	*e*Pb	**Pb**	**15 53 03.5**	**-0.6**
GUR				*e*Sb	**Sb**	**15 53 25.5**	**+1.2**
PYL	**PYLOS**	**1.61**	**135**	*e*PB	**Pb**	**15 53 03.3**	**-0.9**
PYL	**PYLOS**	**1.61**	**135**	P	**Pn**	**15 53 03.5**	**+0.6**
PYL	**PYLOS**	**1.61**	**135**	P	**Pn**	**15 53 03.5**	**+0.6**
JAN	**Janina**	**1.66**	**14**	*e*Pn	**Pn**	**15 53 05.2**	**+1.6**
JAN	**Janina**	**1.66**	**14**	*e*PN	**Pn**	**15 53 05.2**	**+1.6**
JAN	**Janina**	**1.66**	**14**	*e*Pn	**Pn**	**15 53 05.2**	**+1.6**
KEK	**Kerkira**	**1.72**	**346**	*e*Pg	**Pb**	**15 53 05.3**	**-0.8**
KEK				*e*Sn	**Sg**	**15 53 29.6**	**0.0**
KEK	**Kerkira**	**1.72**	**346**	*e*PG	**Pb**	**15 53 05.3**	**-0.8**
KEK				*e*SN	**Sg**	**15 53 29.6**	**0.0**
KEK	**Kerkira**	**1.72**	**346**	P	**Pn**	**15 53 04.5**	**+0.1**
KEK				S	**Sb**	**15 53 29.0**	**+1.3**
KEK	**Kerkira**	**1.72**	**346**	P	**Pn**	**15 53 04.5**	**+0.1**
KEK	**Kerkira**	**1.72**	**346**	*e*Pg	**Pb**	**15 53 05.3**	**-0.8**
KEK				S	**Sb**	**15 53 29.0**	**+1.3**
KEK				*e*Sn	**Sg**	**15 53 29.6**	**0.0**
VLX	**Vlachokerasia**	**1.77**	**112**	*e*PN	**Pn**	**15 53 06.0**	**+1.0**
VLX	**Vlachokerasia**	**1.77**	**112**	P	**Pn**	**15 53 06.9**	**+1.9**
VLX				S	**Sn**	**15 53 29.4**	**+1.9**
VLX	**Vlachokerasia**	**1.77**	**112**	*e*Pn	**Pn**	**15 53 06.0**	**+1.0**
VLX	**Vlachokerasia**	**1.77**	**112**	P	**Pn**	**15 53 06.9**	**+1.9**
VLX				S	**Sn**	**15 53 29.4**	**+1.9**
DSF	**Desfina**	**1.77**	**77**	P	**Pn**	**15 53 05.5**	**+0.3**
DSF				S	**Sn**	**15 53 28.9**	**+1.1**
DSF	**Desfina**	**1.77**	**77**	P	**Pn**	**15 53 05.5**	**+0.3**
DSF				S	**Sn**	**15 53 28.9**	**+1.1**
AGG	**Agios Georgios**	**1.85**	**58**	P	**Pn**	**15 53 07.3**	**+1.1**
AGG				S	**Sn**	**15 53 29.4**	**-0.3**
AGG	**Agios Georgios**	**1.85**	**58**	P	**Pn**	**15 53 07.3**	**+1.1**
AGG				S	**Sn**	**15 53 29.4**	**-0.3**
THL	**Klokotos Trika**	**2.01**	**41**	*e*PN	**Pn**	**15 53 09.5**	**+1.0**
THL	**Klokotos Trika**	**2.01**	**41**	P	**Pn**	**15 53 09.2**	**+0.7**
THL				S	**Sn**	**15 53 34.8**	**+1.1**
THL	**Klokotos Trika**	**2.01**	**41**	P	**Pn**	**15 53 09.2**	**+0.7**
THL	**Klokotos Trika**	**2.01**	**41**	*e*Pn	**Pn**	**15 53 09.5**	**+1.0**
THL				S	**Sn**	**15 53 34.8**	**+1.1**
LTK	**Loutraki**	**2.09**	**90**	*e*PN	**Pn**	**15 53 10.8**	**+1.3**
LTK	**Loutraki**	**2.09**	**90**	*e*Pn	**Pn**	**15 53 10.8**	**+1.3**
LKR	**Lokris**	**2.19**	**73**	*e*Pn	**Pn**	**15 53 12.4**	**+1.5**
LKR	**Lokris**	**2.19**	**73**	*e*PN	**Pn**	**15 53 12.4**	**+1.5**
LKR	**Lokris**	**2.19**	**73**	*e*Pn	**Pn**	**15 53 12.4**	**+1.5**
NEST	**Nestorio**	**2.43**	**13**	P	**Pn**	**15 53 15.7**	**+1.5**
NEST				S	**Sn**	**15 53 45.2**	**+1.1**
NEST	**Nestorio**	**2.43**	**13**	P	**Pn**	**15 53 15.7**	**+1.5**
NEST				S	**Sn**	**15 53 45.2**	**+1.1**
FNA	**Florina**	**2.86**	**16**	P	**Pn**	**15 53 20.5**	**+0.5**
FNA				S	**Sn**	**15 53 54.9**	**+0.4**
FNA	**Florina**	**2.86**	**16**	P	**Pn**	**15 53 20.5**	**+0.5**
FNA				S	**Sn**	**15 53 54.9**	**+0.4**
TIP	**Timpagrande**	**3.01**	**293**	*e*Pn	**Pn**	**15 53 23.1**	**+1.0**
TIP	**Timpagrande**	**3.01**	**293**	*e*Pn	**Pn**	**15 53 23.1**	**+0.9**
KRUS	**Krusevo**	**3.40**	**12**	*e*Pn	**Pn**	**15 53 26.7**	**-0.8**
KRUS				*e*Sg	**Sn**	**15 54 06.8**	**-1.0**
PE1	**Pezze di Greco**	**3.56**	**322**	*e*Pn	**Pn**	**15 53 29.1**	**-0.5**
PE1				*e*Sn	**Sn**	**15 54 11.9**	**+0.2**
SG1	**Sgolgore (BA)**	**3.97**	**316**	*e*Pn	**Pn**	**15 53 34.1**	**-1.2**
SG1				*e*Sn	**Sn**	**15 54 22.1**	**+0.2**
CDT	**Castel del Mon**	**4.36**	**315**	*e*Pn	**Pn**	**15 53 41.7**	**+1.0**
CDT				*e*Sn	**Sn**	**15 54 30.9**	**-0.6**
STON	**Ston**	**5.22**	**338**	*e*Pn	**Pn**	**15 53 50.4**	**-2.2**
STON				Sn	**Sn**	**15 54 47.4**	**-5.3**
STON	**Ston**	**5.22**	**338**	*e*Pn	**Pn**	**15 53 50.3**	**-2.2**
NVLJ	**Novalja**	**7.70**	**330**	*e*Pn	**Pn**	**15 54 26.5**	**0.0**
NVLJ				Sn	**Sn**	**15 55 48.9**	**-4.8**
NVLJ	**Novalja**	**7.70**	**330**	*e*Pn	**Pn**	**15 54 26.5**	**0.0**

MAN 14 16:04:56, 17.69N×120.75E, h17km, mb3.8, ML2.6, MS2.2, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**0.06**	**220**	*e*P	Pg	16 04 59.0	-0.1
ABRA				*e*S	Sg	16 05 03.3	+2.0
SIPP	**Brgy, Tapao**	**0.36**	**309**	*i*P	Pg	16 05 05.5	+2.0
APYP	**Conner**	**0.50**	**70**	*e*P	Pg	16 05 07.4	+1.5
APYP				*e*S	Sg	16 05 17.1	+4.4
CAUP	**Cauayan**	**1.27**	**126**	*e*P	Pn	16 05 21.0	+2.1

*ISCJB **14** 16:09:09.6±1.2, 7.28N±0.08×123.9E±0.1, h604km±20km, mb3.8/10, Error ellipse: s-maj=22.4km s-min=10.7km az=160.6*
*NEIC **14** 16:09:09.8±1.1, 7.37N×123.97E, h584km±16km, mb3.9/9, Error ellipse: s-maj=16.9km s-min=8.1km az=68.0*
*IDC **14** 16:09:13.0±1.9, 7.10N×123.69E, h619km±20km, mb3.1/6, mb1 3.3/6, mb1mx2.8/21, mbtmp3.1/6, Error ellipse: s-maj=54.9km s-min=10.4km az=60.0*
ISC 14 16:09:10.1±1.4, 7.33N±0.09×124.0E±0.2, h588km±20km, n19, σ0.73/22, mb3.8/10, Mindanao

| Code | Station Name | Δ° | AZ° | Phase ID | | Time | Res |
|---|---|---|---

BSO3	**Boso 3**	**11.46**	**347**	P	**Pn**	**16 26 40.8**	**+0.2**
JOD2	**Odawara 2**	**12.24**	**342**	P	**Pn**	**16 26 50.1**	**-0.6**
JHU	**Hanno**	**12.75**	**344**	P	**Pn**	**16 26 55.5**	**-1.7**
JHU				*e*S	**Sn**	**16 29 10.7**	**-7.8**
JHO	**Hitachi**	**13.20**	**349**	P	**Pn**	**16 27 03.7**	**+0.7**
JAG	**Ashikaga**	**13.25**	**345**	P	**Pn**	**16 27 01.4**	**-2.2**
MJAR	**Matsushiro Arr**	**13.69**	**341**	P	**Pn**	**16 27 09.7**	**+0.6**
	0.4nm,0.3s,baz=154,slow=10,SNR=9.5						
KSRS	**Korea Array**	**19.26**	**319**	P	**P**	**16 28 14.4**	**+1.0**
	0.4nm,0.3s,baz=134,slow=12,SNR=16						
WRA	**Warramunga Arr**	**44.24**	**193**	P	**P**	**16 31 54.3**	**-0.3**
	0.4nm,0.4s,mb3.4,baz=12,slow=8.6,SNR=6.8						
ASAR	**Alice Springs**	**47.95**	**192**	P	**P**	**16 32 22.6**	**-0.9**
	0.1nm,0.5s,mb2.7,baz=9.4,slow=9.8,SNR=4.8						
ZALV	**Zalesovo Beam**	**52.96**	**321**	P	**P**	**16 33 00.3**	**-0.4**
	0.9nm,0.5s,mb3.7,baz=116,slow=6.8,SNR=4.4						
BVAR	**Borovoye Array**	**61.47**	**319**	P	**P**	**16 34 01.7**	**+1.3**
	3.6nm,0.7s,mb4.3,baz=90,slow=7.9,SNR=23						

ISCJB ***14*** *16:52:48.5±0.8, 17°.2S±0°.3×178°.5W±0°.1, h556km±13km, mb4.2/11, Error ellipse: s-maj=38.9km s-min=15.0km az=174.6*
IDC ***14*** *16:52:48.8±4.3, 16°.97S×178°.79W, h520km±161km, mb3.7/4, mb1 3.9/5, mb1mx3.2/16, mbtmp3.8/5, Error ellipse: s-maj=120.3km s-min=90.3km az=77.0*
NEIC ***14*** *16:52:49.2±0.6, 17°.23S×178°.49W, h551km±10km, mb4.1/7, Error ellipse: s-maj=30.0km s-min=11.1km az=176.0*

ISC 14 16:52:49.3±0.8, 17°.2S±0°.3×178°.5W±0°.1, h551km±13km, n22, σ0s72/22, mb4.2/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.34**	**261**	*e*P		**P**	**16 54 07.2**	**+0.6**
AFI	**Afiamalu**	**7.26**	**64**	P		**P**	**16 54 39.8**	**-0.1**
AFI	**Afiamalu**	**7.26**	**64**	P		**P**	**16 54 39.8**	**-0.1**
	7.1nm,0.3s,baz=13,slow=14,SNR=10							
RAR	**Rarotonga**	**18.11**	**106**	*e*P		**P**	**16 56 27.4**	**-0.8**
EIDS	**Eidsvold**	**29.43**	**249**	*e*P		**P**	**16 58 08.2**	**-0.6**
	5.6nm,0.6s,mb4.4							
ARMA	**Armidale**	**30.22**	**239**	*e*P		**P**	**16 58 15.5**	**-0.1**
CTA	**Charters Tower**	**33.49**	**260**	P		**P**	**16 58 42.9**	**-0.6**
CTA	**Charters Tower**	**33.49**	**260**	P		**P**	**16 58 42.9**	**-0.6**
	3.7nm,0.8s,mb3.9,baz=86,slow=15,SNR=3.0							
CTAO	**Charters Tower**	**33.49**	**260**	*e*P		**P**	**16 58 43.3**	**-0.2**
QLP	**Quilpie**	**35.70**	**248**	*e*P		**P**	**16 59 01.6**	**-0.4**
STKA	**Stephens Creek**	**38.89**	**240**	*e*P		**P**	**16 59 28.3**	**+0.3**
	1.6nm,0.6s,mb3.7							
STKA	**Stephens Creek**	**38.89**	**240**	P		**P**	**16 59 28.6**	**+0.6**
	5.9nm,0.4s,mb4.4,baz=91,slow=8.7,SNR=41							
WB2	**Warramunga Arr**	**44.67**	**259**	*e*P		**P**	**17 00 12.8**	**-0.8**
WRA	**Warramunga Arr**	**44.68**	**259**	P		**P**	**17 00 13.2**	**-0.6**
	1.5nm,0.3s,mb4.0,baz=96,slow=7.6,SNR=44							
ASAR	**Alice Springs**	**44.90**	**254**	P		**P**	**17 00 15.6**	**+0.1**
	18nm,0.4s,mb5.0,baz=89,slow=7.9,SNR=851							
KAKA	**Kakadu**	**47.52**	**268**	*e*P		**P**	**17 00 35.7**	**+0.3**
	6.4nm,0.3s,mb4.6							
KAKA	**Kakadu**	**47.52**	**268**	*e*P		**P**	**17 00 35.7**	**+0.3**
	20nm,0.3s,mb5.1							
MBWA	**Marble Bar**	**58.17**	**255**	*e*P		**P**	**17 01 51.0**	**-0.2**
	12nm,0.9s,mb4.1							
KLBR	**Kellerberrin**	**59.06**	**243**	*e*P		**P**	**17 01 56.9**	**-0.1**
	7.6nm,0.7s,mb4.0							
NWAO	**Narrogin (SRO)**	**59.46**	**242**	*e*P		**P**	**17 01 59.2**	**-0.4**
	9.9nm,1.0s,mb4.0							
KKM	**Kota Kinabalu**	**68.51**	**284**	*e*P		**P**	**17 02 59.1**	**+1.6**
	3.4nm,0.6s,mb4.0							
QSPA	**South Pole Qui**	**72.82**	**180**	*e*P		**P**	**17 03 23.4**	**+1.8**
	5.8nm,1.4s,mb3.8							

DDA ***14*** *16:58:47.9, 38°.62N×26°.73E, h7km±5km, Md3.0*
NEIC ***14*** *16:58:48.0, 38°.62N×26°.66E, h34km, MD3.5(ATH), After ATH.*
ISCJB ***14*** *16:58:48.7±0.3, 38°.58N±0°.02×26°.70E±0°.03, h21km±5km, Error ellipse: s-maj=4.3km s-min=3.2km az=145.0*
ATH ***14*** *16:58:48.0, 38°.62N×26°.66E, h34km±5km, MD3.5/4*
CSEM ***14*** *16:58:48.2±0.2, 38°.58N×26°.69E, h17km±1km, MD3.0, Error ellipse: s-maj=4.8km s-min=3.6km az=59.0*
THE ***14*** *16:58:48.3, 38°.62N×26°.70E, h4km±2km, ML2.8/4, Error ellipse: s-maj=2.2km s-min=0.7km az=196.0*

ISC 14 16:58:48.4±0.4, 38°.60N±0°.02×26°.71E±0°.03, h13km±3km, n45, σ0s82/82, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.25**	**201**	*i* P		**Pg**	**16 58 53.4**	**-0.3**
URLA				*i* S		**Sg**	**16 58 58.1**	**+0.7**
URLA	**Izmir**	**0.25**	**201**	*i* P		**Pg**	**16 58 53.4**	**-0.4**
URLA				*i* S		**Sg**	**16 58 58.1**	**+0.7**
BLCB	**Balcova**	**0.34**	**129**	P		**Pg**	**16 58 55.0**	**-0.2**
BLCB				S		**Sg**	**16 59 00.7**	**+0.9**
BLCB	**Balcova**	**0.34**	**129**	P		**Pg**	**16 58 55.0**	**-0.2**
BLCB				S		**Sg**	**16 59 00.7**	**+0.9**
KDAG	**Bornova**	**0.48**	**114**	*i* P		**Pg**	**16 58 57.3**	**-0.6**
KDAG				*i* S		**Sg**	**16 59 03.6**	**-0.6**
KDAG	**Bornova**	**0.48**	**114**	*i* P		**Pg**	**16 58 57.3**	**-0.5**
KDAG				*i* S		**Sg**	**16 59 03.6**	**-0.6**
CHOS	**Chios island**	**0.56**	**248**	*e*PN		**Pg**	**16 58 59.9**	**+0.6**
CHOS				*e*SN		**Sg**	**16 59 07.6**	**+1.0**
CHOS	**Chios island**	**0.56**	**248**	P		**Pg**	**16 58 59.8**	**+0.5**
CHOS				S		**Sg**	**16 59 07.3**	**+0.7**
CHOS	**Chios island**	**0.56**	**248**	*e*Pn		**Pg**	**16 58 59.9**	**+0.6**
CHOS				S		**Sg**	**16 59 07.3**	**+0.7**
AYVA	**Ayvalik**	**0.71**	**359**	*i* P		**Pg**	**16 59 01.1**	**-1.1**
AYVA				*i* S		**Sg**	**16 59 10.7**	**-0.9**
AYVA	**Ayvalik**	**0.71**	**359**	*i* P		**Pg**	**16 59 01.1**	**-1.1**
AYVA				*i* S		**Sg**	**16 59 10.7**	**-0.9**
PRK	**Paraskevi**	**0.73**	**332**	*e*Pn		**Pg**	**16 59 02.1**	**-0.5**
PRK				*e*Sn		**Sg**	**16 59 12.1**	**-0.2**
PRK	**Paraskevi**	**0.73**	**332**	*e*PN		**Pg**	**16 59 02.1**	**-0.5**
PRK				*e*SN		**Sg**	**16 59 12.1**	**-0.2**
PRK	**Paraskevi**	**0.73**	**332**	P		**Pg**	**16 59 02.4**	**-0.2**
PRK				S		**Sg**	**16 59 11.9**	**-0.4**
PRK	**Paraskevi**	**0.73**	**332**	*e*Pn		**Pg**	**16 59 02.1**	**-0.5**
PRK	**Paraskevi**	**0.73**	**332**	P		**Pg**	**16 59 02.4**	**-0.2**
PRK				S		**Sg**	**16 59 12.1**	**-0.2**
SMG	**Samos**	**0.89**	**173**	*e*Pn		**Pg**	**16 59 05.5**	**-0.2**
SMG	**Samos**	**0.89**	**173**	*e*PN		**Pg**	**16 59 05.5**	**-0.2**
SMG	**Samos**	**0.89**	**173**	*e*Pn		**Pg**	**16 59 05.5**	**-0.2**
SIGR	**SIGRI**	**0.91**	**313**	P		**Pg**	**16 59 05.5**	**-0.4**
SIGR				S		**Sg**	**16 59 18.1**	**+0.3**
SIGR	**SIGRI**	**0.91**	**313**	P		**Pg**	**16 59 05.5**	**-0.4**
SIGR				S		**Sg**	**16 59 18.1**	**+0.3**
AKHS	**Akhisar**	**0.91**	**72**	*i* P		**Pg**	**16 59 06.0**	**0.0**
AKHS				*i* S		**Sg**	**16 59 18.4**	**+0.6**
AKHS	**Akhisar**	**0.91**	**72**	*i* P		**Pg**	**16 59 06.0**	**0.0**
AKHS				*i* S		**Sg**	**16 59 18.4**	**+0.5**
GCAM	**G?zelcaml?**	**0.99**	**155**	*i* P		**Pb**	**16 59 07.7**	**+0.3**
GCAM				*i* S		**Sb**	**16 59 21.4**	**+1.2**
GCAM	**G?zelcaml?**	**0.99**	**155**	*i* P		**Pb**	**16 59 07.7**	**+0.4**
GCAM				*i* S		**Sb**	**16 59 21.4**	**+1.2**
AYDN	**Tasoluk**	**1.31**	**135**	*i* P		**Pn**	**16 59 12.2**	**-0.3**
AYDN				*i* S		**Sb**	**16 59 29.9**	**+0.3**
AYDN	**Tasoluk**	**1.31**	**135**	*i* P		**Pn**	**16 59 12.1**	**-0.3**
AYDN				*i* S		**Sb**	**16 59 30.0**	**+0.4**
BALY	**Balya**	**1.34**	**32**	*i* P		**Pn**	**16 59 12.3**	**-0.5**
BALY				*i* S		**Sb**	**16 59 31.4**	**+0.9**
BALY	**Balya**	**1.34**	**32**	*i* P		**Pn**	**16 59 12.4**	**-0.4**
BALY				*i* S		**Sb**	**16 59 31.4**	**+0.9**
BOZC	**Bozcaada**	**1.34**	**338**	*i* P		**Pn**	**16 59 14.2**	**+1.4**
BOZC				*i* P			16 59 14.3	
BOZC				*i* S		**Sb**	**16 59 30.5**	**0.0**
BOZC				*i* S		**Sb**	**16 59 31.4**	**+0.9**
DEMI	**Demirci**	**1.63**	**74**	*i* P		**Pn**	**16 59 18.6**	**+1.8**
DEMI				*i* S		**Sn**	**16 59 38.2**	**+0.6**
DEMI	**Demirci**	**1.63**	**74**	*i* P		**Pn**	**16 59 18.6**	**+1.8**
DEMI				*i* S		**Sn**	**16 59 38.2**	**+0.6**
BDRM	**Kayabasi**	**1.64**	**159**	*i* P		**Pn**	**16 59 14.2**	**-2.6**
BDRM				*i* S		**Sn**	**16 59 35.6**	**-2.2**
BDRM	**Kayabasi**	**1.64**	**159**	*i* P		**Pn**	**16 59 14.2**	**-2.6**
BDRM				*i* S		**Sn**	**16 59 35.6**	**-2.1**
DURS	**Dursunbey**	**1.70**	**53**	*i* P		**Pn**	**16 59 17.4**	**-0.3**
DURS				*i* S		**Sn**	**16 59 38.9**	**-0.4**
DURS	**Dursunbey**	**1.70**	**53**	*i* P		**Pn**	**16 59 17.4**	**-0.3**
DURS				*i* S		**Sn**	**16 59 38.9**	**-0.4**
LIA	**Limnos Island**	**1.76**	**318**	P		**Pn**	**16 59 18.6**	**+0.1**
LIA				S		**Sn**	**16 59 40.9**	**+0.1**
LIA	**Limnos Island**	**1.76**	**318**	P		**Pn**	**16 59 18.6**	**+0.1**
LIA				S		**Sn**	**16 59 40.9**	**+0.1**
APE	**Apeiranthos**	**1.79**	**212**	*e*Pn		**Pn**	**16 59 18.1**	**-0.8**
APE	**Apeiranthos**	**1.79**	**212**	*e*PN		**Pn**	**16 59 18.1**	**-0.8**
APE	**Apeiranthos**	**1.79**	**212**	*e*Pn		**Pn**	**16 59 18.1**	**-0.8**
ALN	**Alexandroupoli**	**2.35**	**348**	*e*Pn		**Pn**	**16 59 26.2**	**-0.5**
ALN	**Alexandroupoli**	**2.35**	**348**	*e*PN		**Pn**	**16 59 26.2**	**-0.5**
ALN	**Alexandroupoli**	**2.35**	**348**	P		**Pn**	**16 59 26.2**	**-0.5**
ALN				S		**Sn**	**16 59 55.7**	**+0.3**
ALN	**Alexandroupoli**	**2.35**	**348**	P		**Pn**	**16 59 26.2**	**-0.5**
ALN				S		**Sn**	**16 59 55.7**	**+0.3**

IDC ***14*** *17:06:37.9±0.6, 30°.93N×103°.37E, h0km, mb4.3/21, mb1 4.4/23, mb1mx4.4/27, mbtmp4.3/23, ML3.8/2, MS3.6/12, Ms1 3.6/12, ms1mx3.4/37, Error ellipse: s-maj=17.3km s-min=13.2km az=37.0*
ISCJB ***14*** *17:06:39.7±0.7, 30°.91N±0°.03×103°.41E±0°.03, h23km±5km, mb4.5/61, MS3.7/19, Error ellipse: s-maj=4.7km s-min=3.9km az=162.3*
BJI ***14*** *17:06:39.9, 30°.98N×103°.50E, h16km, mB4.6/19, mb4.6/39, ML4.8/24, Ms4.6/42, Ms7 4.2/34*
NEIC ***14*** *17:06:39.8±0.2, 30°.97N×103°.39E, h10km, mb4.6/26, Error ellipse: s-maj=5.3km s-min=5.1km az=73.0*
NEIC Felt at Chengdu.
MOS ***14*** *17:06:40.9±0.8, 30°.91N×103°.48E, h33km, mb4.8/30, Error ellipse: s-maj=8.9km s-min=5.5km az=105.9*

ISC 14 17:06:41.4±0.7, 30°.99N±0°.02×103°.42E±0°.02, h19km±4km, h17km±.4km:pP-P, n181, σ1s13/198, mb4.5/61, MS3.7/19, 6C-4D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.30**	**104**	Pg		**Pg**	**17 06 48.4**	**+0.5**
CD2				Sg		**Sg**	**17 06 55.6**	**+3.3**
CD2				smax				
	comp=N,301μm,0.7s							
LZH	**Lanzhou**	**5.10**	**4**	Pn		**Pn**	**17 07 59.5**	**+2.7**
LZH				Sn		**Sn**	**17 08 58.3**	**+3.2**
LZH				Sg		**Sg**	**17 09 24.3**	**-0.8**
LZH				smax				
	comp=N,980nm,1.2s							
LZH				smax				
	comp=E,2μm,1.1s							
LZH				LR		LR		
	comp=N,4μm,8.2s							
LZH				LR		LR		
	comp=Z,4μm,8.8s							
ENH	**Enshi**	**5.27**	**96**	*e*P		**Pn**	**17 08 00.9**	**+1.7**
	comp=Z,512nm,0.9s							
GYA	**Guiyang**	**5.33**	**147**	⇑*i*Pn		**Pn**	**17 08 01.0**	**+1.0**
GYA				Sn		**Sn**	**17 09 02.5**	**+1.6**
GYA				Sg		**Sg**	**17 09 31.8**	**-0.7**
GYA				smax				
	comp=N,1μm,1.0s							
GYA				smax				
	comp=E,1μm,0.9s							
GYA				LR		LR		
	comp=N,4μm,7.2s							
GYA				LR		LR		
	comp=E,5μm,8.1s							
GYA				LR		LR		
	comp=Z,2μm,8.1s							
XAN	**Xi'an**	**5.55**	**55**	Pn		**Pn**	**17 08 02.5**	**-0.5**
XAN				Pg		**Pb**	**17 08 16.8**	**-0.9**
XAN				Sg		**Sg**	**17 09 38.8**	**-0.8**
XAN				smax				
	comp=N,2μm,0.9s							
XAN				smax				
	comp=E,460nm,0.8s							
XAN				LR		LR		
	comp=N,2μm,6.4s							
XAN				LR		LR		
	comp=E,610nm,9.7s							
KMI	**Kunming**	**5.87**	**186**	⇑Pn		**Pn**	**17 08 08.4**	**+1.0**
KMI				Sn		**Sn**	**17 09 16.1**	**+1.9**
KMI				smax				
	comp=N,270nm,1.3s							
KMI				smax				
	comp=E,240nm,1.3s							
KMI				LR		LR		
	comp=N,3μm,10.0s							
KMI				LR		LR		
	comp=E,11μm,9.3s							
KMI				LR		LR		
	comp=Z,2μm,10.2s							
GTA	**Gaotai**	**8.91**	**342**	*e*P		**Pn**	**17 08 52.3**	**+3.3**
GTA				pP			17 08 56.6	
GTA				sP			17 09 00.1	
GTA				pmax	pmax			
	comp=Z,5.0nm,1.9s							
GTA				pmax	pmax			
	comp=Z,110nm,6.0s							
GTA				LR		LR		
	comp=N,3μm,11.9s							
GTA				LR		LR		
	comp=E,5μm,11.6s							
GTA				LR		LR		
	comp=Z,1μm,11.0s							
WHN	**Wuhan**	**9.41**	**90**	P		**Pn**	**17 08 56.8**	**+0.8**
WHN				S		**Sn**	**17 10 39.8**	**-1.5**
WHN				LR		LR		
	comp=N,9μm,9.5s							
WHN				LR		LR		
	comp=E,3μm,5.2s							
WHN				LR		LR		
	comp=Z,3μm,5.4s							
LSA	**Lhasa**	**10.68**	**266**	P		**Pn**	**17 09 14.3**	**+0.9**
LSA				pmax	pmax			
	comp=Z,20nm,0.9s							
LSA				LR		LR		
	comp=E,940nm,8.2s							
LSA				LR		LR		
	comp=Z,1μm,10.6s							
BTO	**Baotou**	**10.99**	**27**	*e*P		**Pn**	**17 09 17.1**	**-0.4**
SHL	**Shillong**	**11.51**	**245**	*e*PKP		**Pn**	**17 09 25.0**	**+0.2**
GZH	**Guangzhou**	**11.83**	**129**	P		**Pn**	**17 09 27.8**	**-1.3**
GZH				LR		LR		
	comp=N,1μm,5.7s							
GZH				LR		LR		
	comp=E,1μm,4.1s							
GZH				LR		LR		
	comp=Z,2μm,7.2s							
HHC	**Hu-ho-hao-te**	**11.84**	**32**	*e*P		**Pn**	**17 09 27.6**	**-1.6**
HHC				pP			17 09 32.0	
HHC				sP			17 09 35.8	
HHC				*e*S		**Sn**	**17 11 39.4**	**-1.4**
HHC				SS			17 11 53.8	
HHC				pmax	pmax			
	comp=Z,11nm,0.7s							
HHC				pmax	pmax			
	comp=Z,44nm,3.9s							
HHC				LR		LR		
	comp=N,710nm,8.3s							
HHC				LR		LR		
	comp=E,690nm,5.7s							
HHC				LR		LR		
	comp=Z,700nm,8.2s							
TIA	**Tai'an**	**12.55**	**62**	P		**Pn**	**17 09 39.4**	**+0.5**
TIA				pmax	pmax			
	comp=Z,30nm,0.7s							
TIA				LR		LR		
	comp=N,430nm,7.5s							
TIA				LR		LR		
	comp=E,1μm,8.9s							
TIA				LR		LR		
	comp=Z,310nm,7.4s							
CHTO	**Chiang Mai**	**12.78**	**200**	*e*P		**Pn**	**17 09 42.5**	**+0.4**
	comp=Z,12nm,0.8s							
CHTO	**Chiang Mai**	**12.78**	**200**	*e*P		**Pn**	**17 09 42.5**	**+0.4**
CHTO				pmax	pmax			
	comp=Z,13nm,0.8s							
CM31	**Chiang Mai Arr**	**13.12**	**199**	*e*P		**Pn**	**17 09 47.2**	**+0.5**
	comp=Z,15nm,0.8s							
CMAR	**Chiang Mai Arr**	**13.12**	**199**	Pn		**Pn**	**17 09 46.0**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=11,slow=12,SNR=36							
CMAR				LR		LR	17 15 25.3	
	comp=Z,64nm,21.2s,baz=30,slow=40							
NJ2	**Nanjing**	**13.21**	**81**	*e*P		**Pn**	**17 09 47.6**	**-0.3**
NJ2				pP			17 09 50.9	
NJ2				PP			17 09 54.3	
NJ2				sP			17 09 57.8	
NJ2				S		**Sn**	**17 12 13.0**	**-1.3**
NJ2				pmax	pmax			
	comp=Z,20nm,0.5s							
NJ2				pmax	pmax			
	comp=Z,110nm,3.5s							
NJ2				LR		LR		
	comp=N,4μm,11.0s							
NJ2				LR		LR		
	comp=E,1μm,7.6s							
NJ2				LR		LR		
	comp=Z,1μm,7.9s							
BJT	**Baijiatuau**	**13.73**	**46**	*e*P		**Pn**	**17 09 54.5**	**-0.5**
	comp=Z,10nm,0.6s							
BJT	**Baijiatuau**	**13.73**	**46**	*e*P		**Pn**	**17 09 54.5**	**-0.6**
BJT				pmax	pmax			
	comp=Z,10.0nm,0.6s							
BJI	**Beijing**	**13.75**	**45**	P		**Pn**	**17 09 55.3**	**0.0**
BJI				LR		LR		
	comp=N,600nm,11.1s							
BJI				LR		LR		
	comp=E,470nm,9.6s							
TAPN	**Taplejung**	**14.20**	**259**	*e*P		**Pn**	**17 09 59.9**	**-1.6**
	comp=E,82nm,1.0s							
BDT	**Bhumibol Dam**	**14.26**	**197**	P		**Pn**	**17 10 10.5**	**+8.2**
ODAN	**Odare**	**14.63**	**258**	*e*P		**Pn**	**17 10 05.7**	**-1.6**
	comp=E,60nm,0.8s							
SSE	**Sheshan**	**15.23**	**85**	P		**Pn**	**17 10 09.3**	**-6.1**
SSE				S		**Sn**	**17 13 02.8**	**-0.8**
SSE				pmax	pmax			
	comp=Z,14nm,0.8s							
SSE				pmax	pmax			
	comp=Z,53nm,3.6s							
SSE				LR		LR		
	comp=N,3μm,13.5s							
SSE				LR		LR		
	comp=E,630nm,13.5s							
SSE				LR		LR		
	comp=Z,1μm,9.1s							
JIRN	**Jiri**	**15.39**	**262**	*e*P		**Pn**	**17 10 15.3**	**-2.2**
	comp=Z,76nm,1.0s							
NST	**Nakhon Sawan**	**15.54**	**192**	P		**Pn**	**17 10 21.6**	**+2.1**
	comp=Z,37nm,0.6s							
GUN	**Gumba**	**15.59**	**263**	*e*P		**Pn**	**17 10 17.5**	**-2.6**
	comp=Z,86nm,0.8s							
PKI	**Pulchoki**	**16.08**	**262**	*e*P		**Pn**	**17 10 23.8**	**-2.7**
	comp=Z,70nm,0.6s							
PKIN	**Phulchoki**	**16.09**	**262**	*e*P		**Pn**	**17 10 23.9**	**-2.7**
	comp=Z,100nm,0.7s							
DMN	**Daman**	**16.33**	**263**	*e*P		**Pn**	**17 10 26.8**	**-2.9**
	comp=Z,105nm,1.0s							
GKN	**Gorkha**	**16.62**	**264**	*e*P		**Pn**	**17 10 30.4**	**-3.0**
	comp=Z,86nm,0.6s							
DL2	**Dalian**	**16.87**	**57**	P		**Pn**	**17 10 38.0**	**+1.6**
DL2				*e*S		**Sn**	**17 13 49.3**	**+5.9**
DL2				pmax	pmax			
	comp=Z,30nm,1.0s							
DL2				LR		LR		
	comp=N,320nm,19.7s							
DL2				LR		LR		
	comp=E,290nm,18.3s							
DL2				LR		LR		
	comp=Z,180nm,13.1s							
SONM	**Songino Array**	**16.98**	**7**	Pn		**Pn**	**17 10 37.7**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=185,slow=13,SNR=24							
SONM				LR		LR	17 18 00.9	
	comp=Z,666nm,19.1s,baz=188,slow=40							
ULN	**Ulaanbaatar**	**17.09**	**8**	*e*P		**Pn**	**17 10 39.9**	**+0.8**
	comp=Z,34nm,1.4s							
ULN	**Ulaanbaatar**	**17.09**	**8**	*e*P		**Pn**	**17 10 39.9**	**+0.8**
ULN				pmax	pmax			
	comp=Z,34nm,1.4s							
TPUB	**Ta-pu**	**17.11**	**112**	*e*P		**Pn**	**17 10 44.0**	**+4.5**
SSLB	**Suanglung**	**17.13**	**110**	*e*P		**Pn**	**17 10 44.0**	**+4.3**
	comp=Z,40nm,1.0s							
KOLN	**Koldanda**	**17.57**	**264**	*e*P		**Pn**	**17 10 41.9**	**-3.4**
	comp=Z,56nm,0.8s							
YULB	**Yu-li**	**17.59**	**111**	P		**Pn**	**17 10 39.4**	**-6.2**
	comp=Z,12nm,0.9s							
WMQ	**Urumqi**	**17.86**	**320**	*e*P		**Pn**	**17 10 50.8**	**+2.1**
WMQ				pP		pP	17 10 54.8	+0.2
WMQ				sP		sP	17 10 57.8	+0.8
WMQ				PP			17 11 06.3	
WMQ				S		**Sn**	**17 14 12.3**	**+5.1**
WMQ				PcP		PcP	17 15 23.3	-1.4
WMQ				pmax	pmax			
	comp=Z,19nm,1.0s							
WMQ				pmax	pmax			
	comp=Z,150nm,3.6s							
WMQ				LR		LR		
	comp=N,1μm,9.1s							
WMQ				LR		LR		
	comp=E,750nm,10.9s							
WMQ				LR		LR		
	comp=Z,640nm,9.4s							
ZAK	**Zakamensk**	**19.38**	**360**	⇑*i*P		**Pn**	**17 11 07.7**	**+0.6**
ZAK				pmax	pmax			
	comp=Z,7.0nm,0.9s							
SNY	**Shenyang**	**19.45**	**51**	⇓P		**Pn**	**17 11 08.3**	**+0.2**
SNY				S		**Sn**	**17 14 44.4**	**-1.4**
SNY				SS			17 15 11.3	
SNY				pmax	pmax			
	comp=Z,14nm,0.6s							
SNY				LR		LR		
	comp=E,280nm,15.5s							
SNY				LR		LR		
	comp=Z,330nm,14.5s							
INCN	**Inchon**	**20.23**	**65**	*e*P		**P**	**17 11 16.4**	**+1.0**
	comp=Z,35nm,0.8s							
TLY	**Talaya**	**20.68**	**0**	*e*P		Px	17 11 33.3	
TLY				*e*			17 11 51.7	
TLY				*e*S		**S**	**17 15 22.9**	**+13**
TLY				pmax	pmax			
	comp=Z,5.0nm,0.7s							
TLY				MLR	MLR			
	comp=Z,270nm,10.0s,MS3.9							
MOY	**Mondy**	**20.74**	**356**	*e*P		**P**	**17 11 23.3**	**+2.6**
MOY				pmax	pmax			
	comp=Z,52nm,2.6s							
KSRS	**Korea Array**	**21.23**	**66**	P		**P**	**17 11 26.9**	**+0.7**
	comp=Z,29nm,0.7s,mb4.7,baz=246,slow=9.6,SNR=155							
KSRS				LR		LR	17 19 22.2	
	comp=Z,186nm,20.9s,MS3.5,baz=94,slow=36							
KSRS	**Korea Array**	**21.23**	**66**	P		**P**	**17 11 26.9**	**+0.7**
KSRS				pmax	pmax			
	comp=Z,29nm,0.7s,mb4.7							
KSRS				MLR	MLR			
	comp=Z,186nm,20.9s,MS3.5							
IRK	**Irkutsk**	**21.25**	**1**	*e*P		**P**	**17 11 27.6**	**+1.4**
IRK				pmax	pmax			
	comp=Z,67nm,1.8

MDJ	**Mudanjiang**	**24.62**	**49**	P	**P**	**17 12 02.0 +1.5**			
MDJ				S	**S**	**17 16 23.9 +3.1**			
MDJ				pmax	pmax				
	comp=Z,14nm,1.6s,mb4.2								
MDJ				pmax	pmax				
	comp=Z,20nm,4.2s								
MDJ				LR	LR				
	comp=N,170nm,28.4s,MS3.4								
MDJ				LR	LR				
	comp=E,73nm,28.4s,MS3.4								
MDJ				LR	LR				
	comp=Z,79nm,19.5s								
MDJ	**Mudanjiang**	**24.62**	**49**	*e*P	**P**	**17 12 02.0 +1.5**			
	comp=Z,16nm,1.1s,mb4.5								
KZA	**Kyzart**	**25.09**	**304**	P	**P**	**17 12 07.2 +2.4**			
	SNR=22								
KBK	**Karagaybulak**	**25.48**	**305**	P	**P**	**17 12 10.1 +1.9**			
	SNR=10								
UCH	**Uchtor**	**25.66**	**304**	P	**P**	**17 12 12.5 +2.6**			
	SNR=7.3								
UCH	**Uchtor**	**25.66**	**304**	*e*P	**P**	**17 12 11.9 +2.0**			
AAK	**Ala-Archa**	**25.79**	**305**	P	**P**	**17 12 10.9 -0.2**			
	comp=Z,2.3nm,0.4s,mb4.0,baz=269,slow=4.8,SNR=3.5								
AAK				LR	LR	17 23 56.8			
	comp=Z,291nm,21.6s,MS3.8,baz=16,slow=40								
AAK	**Ala-Archa**	**25.79**	**305**	*c i*P	**P**	**17 12 11.4 +0.3**			
AAK				pmax	pmax				
	comp=Z,14nm,1.7s,mb4.2								
USP	**Ospenovka**	**25.98**	**306**	P	**P**	**17 12 14.0 +1.2**			
	SNR=11								
AML	**Almayashu**	**26.22**	**303**	P	**P**	**17 12 17.3 +2.3**			
	SNR=6.8								
AML	**Almayashu**	**26.22**	**303**	*e*P	**P**	**17 12 16.3 +1.3**			
	comp=Z,16nm,1.1s,mb4.5								
EKS2	**Erkin-Say**	**26.30**	**305**	P	**P**	**17 12 17.5 +1.8**			
	SNR=14								
EKS2	**Erkin-Say**	**26.30**	**305**	*e*P	**P**	**17 12 16.8 +1.1**			
	comp=Z,15nm,0.9s,mb4.5								
ZAA0	**Zalesovo Array**	**26.58**	**335**	*e*P	**P**	**17 12 17.9 -0.2**			
ZALV	**Zalesovo Beam**	**26.58**	**335**	P	**P**	**17 12 18.6 +0.5**			
	comp=Z,15nm,1.0s,mb4.5,baz=137,slow=9.0,SNR=35								
ZALV				LR	LR	17 22 42.9			
	comp=Z,106nm,20.6s,MS3.4,baz=278,slow=36								
KURK	**Kurchatov**	**27.00**	**324**	P	**P**	**17 12 22.1 +0.2**			
	comp=Z,14nm,1.1s,mb4.4,baz=130,slow=9.1,SNR=43								
KURK				PcP	PcP	17 15 42.8 -0.3			
	comp=Z,0.8nm,0.7s,baz=113,slow=2.0,SNR=3.7								
KURK				LR	LR	17 23 04.8			
	comp=Z,162nm,20.0s,MS3.6,baz=120,slow=36								
KURK	**Kurchatov**	**27.00**	**324**	*c i*P	**P**	**17 12 22.0 +0.1**			
KURK				pmax	pmax				
	comp=Z,21nm,1.2s,mb4.5								
NVS	**Novosibirsk**	**27.86**	**335**	*e*P	**P**	**17 12 34.5 +5.0**			
NVS				*e*S	**S**	**17 17 11.1 -0.7**			
NVS				pmax	pmax				
	comp=Z,14nm,1.9s,mb4.3								
NVS				smax					
	comp=N,7.0nm,0.7s								
NVS				smax					
	comp=E,9.0nm,1.1s								
KBL	**Kabul**	**29.05**	**286**	P	**P**	**17 12 41.1 +0.7**			
MJAR	**Matsushiro Arr**	**29.34**	**70**	P	**P**	**17 12 42.7 -0.3**			
	comp=E,1.0nm,0.6s,mb3.7,baz=282,slow=10.0,SNR=5.6								
MJAR				LR	LR	17 23 31.3			
	comp=E,110nm,20.3s,MS3.5,baz=240,slow=34								
HABR	**Khabarovsk**	**29.66**	**45**	*e*P	**P**	**17 12 44.9 -0.7**			
HABR				*e**SP	sP	17 12 58.5 +4.8			
HABR				PPP		17 13 49.4			
HABR						17 15 48.7			
HABR				*e*S	**S**	**17 17 39.5 -0.7**			
HABR				*e**SS	sS	17 17 56.1 +6.4			
HABR				*e*SS	SS	17 19 11.1 -35			
HABR				SSS		17 19 26.9			
HABR				*e*		17 23 22.2			
HABR				pmax	pmax				
	comp=N,31nm,2.7s								
HABR				pmax	pmax				
	comp=Z,36nm,2.2s,mb4.7								
HABR				pmax	pmax				
	comp=E,59nm,2.3s								
HABR				MLR	MLR				
	comp=Z,168nm,19.0s,MS3.7								
DAV	**Davao City (W)**	**31.56**	**134**	LR	LR	17 27 04.6			
	comp=Z,112nm,20.4s,MS3.5,baz=342,slow=39								
BVAR	**Borovoye Array**	**32.52**	**322**	P	**P**	**17 13 11.3 +0.4**			
	comp=Z,1.7nm,0.7s,mb4.1,baz=116,slow=6.7,SNR=5.7								
BVAR				PcP	PcP	17 15 56.4 -0.8			
	comp=Z,2.2nm,0.7s,baz=164,slow=5.9,SNR=6.2								
BRVK	**Borovoye**	**32.60**	**322**	*i* P	**P**	**17 13 11.8 +0.3**			
BRVK				pmax	pmax				
	comp=Z,7.0nm,1.2s,mb4.5								
ASAJ	**Asahikawa**	**33.39**	**56**	P	**P**	**17 13 18.6 +0.1**			
	comp=Z,2.4nm,0.5s,mb4.4,baz=283,slow=30,SNR=5.9								
ASAJ				LR	LR	17 27 34.2			
	comp=Z,90nm,18.3s,MS3.5,baz=118,slow=38								
ASAJ	**Asahikawa**	**33.39**	**56**	P	**P**	**17 13 18.7 +0.1**			
ASAJ				pmax	pmax				
	comp=Z,2.0nm,0.5s								
ASAJ				MLR	MLR				
	comp=Z,90nm,18.3s								
YSS	**Yuzh-Sakhalins**	**34.08**	**51**	*e*P	**P**	**17 13 23.8 -0.7**			
YAK	**Yakutsk**	**35.42**	**21**	*e*P	**P**	**17 13 34.7 -1.2**			
YAK				pmax	pmax				
	comp=Z,10.0nm,1.2s,mb4.6								
YAK				pmax	pmax				
	comp=N,3.0nm,1.6s								
YAK				pmax	pmax				
	comp=E,3.0nm,1.5s								
YAK				MLR	MLR				
	comp=Z,159nm,16.0s,MS3.9								
YAK				MLR	MLR				
	comp=E,158nm,17.0s,MS4.0								
YAK				MLR	MLR				
	comp=N,114nm,14.0s,MS4.0								
ABKAR	**Akbulak array**	**37.32**	**312**	*e*P	**P**	**17 13 52.3 0.0**			
	comp=N,2.5nm,0.8s,mb4.1								
AKTK	**Aktyubinsk**	**38.79**	**313**	P	**P**	**17 14 04.8 +0.2**			
AKTK				LR	LR	17 31 34.3			
AKTO	**Aktyubinsk**	**38.79**	**313**	P	**P**	**17 14 04.8 +0.2**			
	comp=N,2.4nm,0.9s,mb3.9,baz=40,slow=7.9,SNR=5.3								
AKTO				LR	LR	17 31 34.3			
	comp=N,50nm,20.3s,MS3.3,baz=268,slow=39								
SVE	**Sverdlovsk**	**39.25**	**324**	*e*P	**P**	**17 14 09.8 +1.4**			
SVE				pmax	pmax				
	comp=Z,14nm,1.0s,mb4.7								
ARU	**Arti**	**40.17**	**323**	*e*P	**P**	**17 14 16.2 +0.2**			
	comp=Z,12nm,0.9s,mb4.6								
ARU	**Arti**	**40.17**	**323**	*c i*P	**P**	**17 14 16.2 +0.1**			
ARU				*e*		17 15 48.6			
ARU				*e*		17 16 17.8			
ARU				S	**S**	**17 20 23.0 +1.3**			
ARU				SS	SS	17 23 17.7 -1.8			
ARU				pmax	pmax				
	comp=Z,10.0nm,0.8s,mb4.6								
GUMO	**Guam**	**41.79**	**105**	LR	LR	17 30 29.8			
	comp=Z,54nm,19.0s,MS3.4,baz=291,slow=34								
SOKR	**Solikamsk**	**42.17**	**327**	*e*P	**P**	**17 14 33.1 +0.6**			
SOKR				pmax	pmax				
	comp=Z,10.0nm,1.0s,mb4.4								
TIXI	**Tiksi**	**42.98**	**12**	*e*P	**P**	**17 14 38.1 -0.9**			
	comp=Z,3.3nm,0.6s,mb4.2								
TIXI	**Tiksi**	**42.98**	**12**	*e*P	**P**	**17 14 37.3 -1.6**			
TIXI				pmax	pmax				
	comp=Z,8.0nm,1.2s,mb4.3								
TIXI				MLR	MLR				
	comp=Z,197nm,17.0s,MS4.1								
SEY	**Seymchan**	**44.48**	**30**	*e*P	**P**	**17 14 51.4 +0.3**			
GNI	**Garni**	**47.84**	**298**	*e*P	**P**	**17 15 19.2 +1.3**			
GNI				pmax	pmax				
	comp=Z,23nm,1.4s								
MIB	**Mutribah**	**47.95**	**284**	*e*P	**P**	**17 15 17.5 -1.4**			
MIB				AMb	AMB	17 15 29.3			
	comp=Z,25nm,1.3s,mb5.1								
NAY	**Al-Naaiem**	**48.19**	**283**	*e*P	**P**	**17 15 18.9 -1.8**			
NAY				AMb	AMB	17 15 29.5			
	comp=Z,22nm,0.8s,mb5.3								
KIV	**Kislovodsk**	**48.89**	**303**	*e*P	**P**	**17 15 26.6 +0.7**			
KIV				pmax	pmax				
	comp=Z,15nm,0.9s,mb5.0								
KIV				MLR	MLR				
	comp=Z,69nm,17.0s,MS3.7								
VSR	**Storozhevoye**	**50.74**	**313**	*e*P	**P**	**17 15 39.1 -0.8**			
VSR				pmax	pmax				
	comp=N,2.0nm,0.4s								
VSR				pmax	pmax				
	comp=E,4.0nm,0.4s								
VSR				pmax	pmax				
	comp=Z,4.0nm,0.4s,mb4.7								
KLMR	**Klimovskoe**	**50.83**	**325**	*e*P	**P**	**17 15 39.5 -0.9**			
KLMR				pmax	pmax				
	comp=Z,17nm,0.9s,mb5.0								
OBN	**Obninsk**	**52.18**	**318**	*e*P	**P**	**17 15 50.4 -0.2**			
OBN				*i*	pP	17 15 55.5 -1.0			
OBN				*e*		17 17 53.3			
OBN				pmax	pmax				
	comp=Z,19nm,1.2s,mb4.9								
ANN	**Anapa**	**52.52**	**305**	*e*P	**P**	**17 15 52.4 -0.9**			
ANN				*e*		17 17 50.8			
ANN				*e*S	**S**	**17 23 18.4 -0.6**			
ANN				pmax	pmax				
	comp=Z,78nm,1.7s,mb5.4								
ANN				MLR	MLR				
	comp=E,142nm,18.0s								
ANN				MLR	MLR				
	comp=Z,147nm,18.0s,MS4.1								
JOF	**Joensuu**	**54.82**	**328**	*e*P	**P**	**17 16 05.2 -4.6**			
JOF	**Joensuu**	**54.82**	**328**	*e*p	**P**	**17 16 05.2 -4.6**			
BR131	**Keskin Array S**	**56.29**	**300**	P	**P**	**17 16 19.8 -1.0**			
BRTR	**Keskin Array B**	**56.29**	**300**	P	**P**	**17 16 20.1 -0.7**			
	comp=Z,1.1nm,0.7s,mb4.0,baz=97,slow=5.0,SNR=6.3								
MMAI	**Mount Meron Ar**	**56.78**	**291**	P	**P**	**17 16 24.5 +0.1**			
	comp=Z,2.9nm,0.9s,mb4.3,baz=94,slow=8.7,SNR=2.6								
AKASG	**Malin Array Be**	**57.04**	**313**	P	**P**	**17 16 25.0 -1.0**			
	comp=Z,0.7nm,0.3s,mb4.1,baz=74,slow=6.3,SNR=8.8								
ARCES	**ARCESS Array B**	**57.13**	**336**	P	**P**	**17 16 26.0 -0.2**			
	comp=Z,6.5nm,0.9s,mb4.7,baz=64,slow=11,SNR=5.2								
FINES	**FINESS Array B**	**57.34**	**326**	P	**P**	**17 16 27.6 -0.3**			
	comp=Z,3.5nm,0.6s,mb4.6,baz=90,slow=7.6,SNR=5.8								
EIL	**Elat**	**58.23**	**288**	LR	LR	17 44 59.7			
	comp=Z,106nm,18.4s,MS4.0,baz=280,slow=40								
WRA	**Warramunga Arr**	**58.70**	**146**	P	**P**	**17 16 37.4 -0.4**			
	comp=Z,4.1nm,0.6s,mb4.7,baz=337,slow=8.0,SNR=4.9								
WB2	**Warramunga Arr**	**58.71**	**146**	*e*P	**P**	**17 16 37.7 -0.2**			
ASAR	**Alice Springs**	**61.70**	**148**	P	**P**	**17 16 58.5 +0.2**			
	comp=Z,1.5nm,0.6s,mb4.3,baz=339,slow=6.7,SNR=29								
STHS	**Stebnicka Huta**	**62.34**	**313**	*e*P	**P**	**17 17 04.6 +2.2**			
	comp=Z,4.1nm,0.9s,mb4.6								
STHS	**Stebnicka Huta**	**62.34**	**313**	*e*P	**P**	**17 17 04.6 +2.2**			
STHS				pmax	pmax				
	comp=Z,4.0nm,0.9s,mb4.5								
STHS	**Stebnicka Huta**	**62.34**	**313**	*e*P	**P**	**17 17 04.6 +2.2**			
VYHS	**Vyhne**	**64.13**	**313**	*e*P	**P**	**17 17 14.6 +0.3**			
	comp=Z,2.7nm,1.0s,mb4.2								
VYHS	**Vyhne**	**64.13**	**313**	*e*P	**P**	**17 17 14.6 +0.3**			
VYHS				pmax	pmax				
	comp=Z,3.0nm,1.0s,mb4.3								
VYHS	**Vyhne**	**64.13**	**313**	*e*P	**P**	**17 17 14.6 +0.3**			
NOA	**NORSAR Array B**	**64.44**	**327**	P	**P**	**17 17 15.1 -1.1**			
	comp=Z,3.5nm,0.9s,mb4.4,baz=74,slow=6.6,SNR=5.4								
MORC	**Moravsky Berou**	**64.53**	**314**	*e*P	**P**	**17 17 16.8 -0.1**			
	comp=Z,3.8nm,0.8s,mb4.5								
MORC	**Moravsky Berou**	**64.53**	**314**	*e*P	**P**	**17 17 16.8 -0.1**			
MORC				pmax	pmax				
	comp=Z,4.0nm,0.8s,mb4.5								
DPC	**Dobruska-Polom**	**65.09**	**315**	*e*P	**P**	**17 17 21.0 +0.4**			
DPC	**Dobruska-Polom**	**65.09**	**315**	*e*P	**P**	**17 17 21.0 +0.4**			
DPC				*e*pP	pP	17 17 25.9 -0.8			
UPC	**Upice**	**65.23**	**315**	*e*P	**P**	**17 17 24.1 +2.6**			
UPC	**Upice**	**65.23**	**315**	*e*P	**P**	**17 17 24.1 +2.6**			
BRG	**Berggiesshubel**	**66.34**	**316**	*e*P	**P**	**17 17 28.4 -0.2**			
	comp=Z,3.2nm,0.8s,mb4.4								
BRG				*e*	pP	17 17 33.2 -1.6			
	comp=Z,7.3nm,1.1s								
BRG				*e*		17 26 31.4			
	comp=Z,8.3nm,1.3s								
CLL	**Collm**	**66.75**	**317**	*e*P	**P**	**17 17 30.0 -1.2**			
	comp=Z,6.0nm,0.9s,mb4.6								
CLL				*e*S	S	17 26 21.0 -1.2			
CLL	**Collm**	**66.75**	**317**	*e*P	**P**	**17 17 30.0 -1.2**			
	comp=Z,6.0nm,0.9s,mb4.6								
CLL				*e*SSSS		17 34 49.0			
CLL				LmV		17 47 00.0			
	comp=Z,200nm,21.4s								
KHC	**Kasperske Hory**	**67.18**	**315**	*e*P	**P**	**17 17 34.3 +0.3**			
KHC				MLR	MLR				
	comp=Z,200nm,16.2s,MS4.4								
KHC	**Kasperske Hory**	**67.18**	**315**	*e*P	**P**	**17 17 34.3 +0.3**			
KHC				AMS	AMS	17 46 30.0			
	comp=Z,200nm,16.2s								
COLD	**Coldfoot**	**67.82**	**24**	*e*P	**P**	**17 17 38.1 +0.4**			
	comp=Z,4.4nm,0.8s,mb4.8								
COLA	**College**	**69.79**	**26**	*e*P	**P**	**17 17 50.1 0.0**			
	comp=Z,14nm,0.8s,mb4.9								
COLA	**College**	**69.79**	**26**	*e*P	**P**	**17 17 50.1 +0.1**			
COLA				pmax	pmax				
	comp=Z,14nm,0.8s,mb4.9								
ILAR	**Eielson Array**	**70.20**	**25**	P	**P**	**17 17 51.9 -0.7**			
	comp=Z,2.0nm,0.9s,mb4.0,baz=276,slow=6.5,SNR=20								
KMBO	**Kilima Mbogo**	**70.31**	**256**	P	**P**	**17 17 52.7 -1.4**			
	comp=Z,1.2nm,0.8s,mb3.9,baz=180,slow=24,SNR=3.2								
KDAK	**Kodiak Island**	**71.26**	**33**	P	**P**	**17 17 59.0 -0.1**			
	comp=Z,7.9nm,0.6s,mb4.8,baz=321,slow=5.2,SNR=8.9								
CDF	**Champ du Feu**	**71.29**	**316**	*e*P	**P**	**17 17 59.0 -0.5**			
HINF	**Hinteralfeld**	**71.81**	**315**	*e*P	**P**	**17 18 02.1 -0.5**			
GIVF	**Givet**	**71.99**	**318**	*e*P	**P**	**17 18 03.4 -0.3**			
STKA	**Stephens Creek**	**72.23**	**146**	*e*P	**P**	**17 18 03.4 -1.8**			
STKA	**Stephens Creek**	**72.23**	**146**	P	**P**	**17 18 04.2 -1.0**			
	comp=Z,2.5nm,0.7s,mb4.3,baz=326,slow=8.9,SNR=4.2								
PGF	**Pioggiola**	**72.77**	**310**	*e*P	**P**	**17 18 08.5 0.0**			
	comp=Z,35nm,1.1s,mb4.9								
PGF	**Pioggiola**	**72.77**	**310**	*e*P	**P**	**17 18 08.5 0.0**			
	comp=Z,18nm,1.1s,mb4.9								
PGF	**Pioggiola**	**72.77**	**310**	*e*P	**P**	**17 18 08.5 0.0**			
PGF				pmax	pmax				
	comp=Z,18nm,1.1s,mb4.9								
LPG	**La Plagne**	**72.91**	**313**	*e*P	**P**	**17 18 09.6 +0.4**			
	comp=Z,23nm,0.9s,mb4.8								
LPG	**La Plagne**	**72.91**	**313**	*e*P	**P**	**17 18 09.6 +0.4**			
	comp=Z,12nm,0.9s,mb4.8								
LPG	**La Plagne**	**72.91**	**313**	*e*P	**P**	**17 18 09.6 +0.4**			
LPG				pmax	pmax				
	comp=Z,12nm,0.9s,mb4.8								
LPL	**La Plagne**	**72.91**	**313**	*e*P	**P**	**17 18 09.5 +0.2**			
	comp=Z,7.1nm,0.6s,mb4.5								
LPL	**La Plagne**	**72.91**	**313**	*e*P	**P**	**17 18 09.5 +0.2**			
	comp=Z,3.5nm,0.6s,mb4.5								
LPL	**La Plagne**	**72.91**	**313**	*e*P	**P**	**17 18 09.5 +0.2**			
LPL				pmax	pmax				
	comp=Z,4.0nm,0.6s,mb4.5								
BMRM	**Bremner River**	**73.12**	**28**	*e*P	**P**	**17 18 10.6 +0.5**			
	comp=Z,14nm,0.8s,mb5.0								
SBF	**Sospel**	**73.21**	**311**	*e*P	**P**	**17 18 10.7 -0.4**			
ORIF	**Oris-en-Rattie**	**73.72**	**313**	*e*P	**P**	**17 18 13.7 -0.3**			
	comp=Z,25nm,1.4s,mb4.7								
ORIF	**Oris-en-Rattie**	**73.72**	**313**	*e*P	**P**	**17 18 13.7 -0.3**			
	comp=Z,12nm,1.4s,mb4.7								
ORIF	**Oris-en-Rattie**	**73.72**	**313**	*e*P	**P**	**17 18 13.7 -0.3**			
ORIF				pmax	pmax				
	comp=Z,12nm,1.4s,mb4.6								
SMF	**Signal de Mont**	**74.17**	**315**	*e*P	**P**	**17 18 16.0 -0.6**			
	comp=Z,11nm,1.0s,mb4.5								
SMF	**Signal de Mont**	**74.17**	**315**	*e*P	**P**	**17 18 16.0 -0.6**			
	comp=Z,5.7nm,1.0s,mb4.5								
SMF	**Signal de Mont**	**74.17**	**315**	*e*P	**P**	**17 18 16.0 -0.6**			
SMF				pmax	pmax				
	comp=Z,6.0nm,1.0s,mb4.5								
SSF	**Saint Saulge**	**74.17**	**316**	*e*P	**P**	**17 18 15.8 -0.9**			
AVF	**Avril sur Loir**	**74.40**	**315**	*e*P	**P**	**17 18 17.4 -0.6**			
VIVF	**Saint-Julien-l**	**74.50**	**313**	*e*P	**P**	**17 18 18.2 -0.4**			
	comp=Z,14nm,1.1s,mb4.5								
VIVF	**Saint-Julien-l**	**74.50**	**313**	*e*P	**P**	**17 18 18.2 -0.4**			
	comp=Z,6.8nm,1.1s,mb4.5								
VIVF	**Saint-Julien-l**	**74.50**	**313**	*e*P	**P**	**17 18 18.2 -0.4**			
VIVF				pmax	pmax				
	comp=Z,7.0nm,1.1s,mb4.5								
TCF	**Toulx Ste Croi**	**75.33**	**315**	*e*P	**P**	**17 18 23.1 -0.3**			
	comp=Z,11nm,1.0s,mb4.4								
TCF	**Toulx Ste Croi**	**75.33**	**315**	*e*P	**P**	**17 18 23.1 -0.3**			
	comp=Z,5.6nm,1.0s,mb4.5								
TCF	**Toulx Ste Croi**	**75.33**	**315**	*e*P	**P**	**17 18 23.1 -0.3**			
TCF				pmax	pmax				
	comp=Z,6.0nm,1.0s,mb4.5								
LASF	**Ste Croix**	**75.39**	**313**	*e*P	**P**	**17 18 22.9 -0.9**			
LDF	**La Druitiere**	**75.55**	**318**	*e*P	**P**	**17 18 23.9 -0.7**			
GRR	**Gorron**	**76.08**	**318**	*e*P	**P**	**17 18 27.9 +0.3**			
RJF	**Les Rejaudoux**	**76.24**	**315**	*e*P	**P**	**17 18 28.1 -0.5**			
MFF	**Saint Martin d**	**76.58**	**316**	*e*P	**P**	**17 18 30.2 -0.3**			
YKA	**Yellowknife Ar**	**81.98**	**17**	P	**P**	**17 18 59.7 +0.1**			
	comp=Z,2.4nm,0.6s,mb4.3,baz=328,slow=4.8,SNR=8.7								
YKA	**Yellowknife Ar**	**81.98**	**17**	P	**P**	**17 18 59.7 +0.1**			
FFC	**Flin Flon**	**91.88**	**14**	*i* P	**P**	**17 19 48.7 +0.5**			
TORD	**Torodi Ar. Bea**	**93.11**	**287**	P	**P**	**17 19 53.4 -1.3**			
	comp=Z,0.3nm,0.6s,mb3.9,baz=56,slow=5.7,SNR=2.6								
BSMT	**Bassoo Peak**	**94.35**	**25**	*e*P	**P**	**17 20 01.1 +1.4**			
	comp=Z,5.0nm,1.0s,mb4.9								
QSPA	**South Pole Qui**	**120.76**	**180**	*e*P	PKPdf	17 25 30.0 -0.9			

SZGRF ***14*** *17:16:18.6, 7.72N×38.48W, h33km, mb5.2, MS4.1, Central Mid-Atlantic Ridge*

ISCJB ***14*** *17:16:18.5±0.3, 8.07N±0.07×38.01W±0.03, h10km, mb4.7/77, MS4.3/28, Error ellipse: s-maj=9.9km s-min=3.9km az=167.0*

IDC ***14*** *17:16:18.4±0.5, 8.09N×38.00W, h0km, mb4.3/26, mb1 4.4/26, mb1mx4.4/29, mbtmp4.3/26, MS4.2/19, Ms1 4.2/19, ms1mx4.2/22, Error ellipse: s-maj=16.2km s-min=11.5km az=144.0*

NEIC ***14*** *17:16:20.2±0.2, 8.08N×38.01W, h10km, mb4.9/46, Error ellipse: s-maj=7.5km s-min=3.8km az=166.0*

GCMT ***14*** *17:16:23.5±0.3, 8.20N×37.89W, h12km, MW5.0, Moment Tensor Solution. s26,c31; s72,c110; Moment tensor: Scale 10^16 Nm; Mrr=-3.48±.11; Mθθ=0.23±.12; Mφφ=3.71±.11; Mrθ=0.97±.49; Mθφ=-0.04±.10; Mrφ=0.49±.38; Best double couple: M0=3.80000×10^16 NP1:φs=345.00000°, δ=43.00000°, λ=-113.00000°. NP2:φs=194.00000°, δ=51.00000°, λ=-70.00000°. Principal axes: T 3.7400, Plg4.0000°, Azm270.0000°; N 0.0400, Plg15.0000°, Azm1.0000°; P -3.7800, Plg74.0000°, Azm166.0000°; Data Used: IU IC II G CN.*

CSEM ***14*** *17:16:23.8±0.1, 8.08N×38.00W, h33km, mb4.9/51, Ms4.5 Error ellipse: s-maj=8.7km s-min=4.3km az=164.0*

ISC 14 17:16:20.4±0.3, 8.06N±0.07×38.01W±0.03, h10km, (h17km±1.5km: pP-P), n540, s0965/512, mb4.7/77, MS4.3/28, 119C-99D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCRV	**Puerto La Cruz**	**26.37**	**277**	LR	LR	17 33 14.6	
	comp=Z,617nm,18.0s,MS4.2,baz=75,slow=39						
SJG	**San Juan**	**29.13**	**293**	LR	LR	17 31 29.6	
	comp=Z,949nm,21.6s,MS4.4,baz=274,slow=31						
DBIC	**Dimbokro**	**32.91**	**90**	P	**P**	**17 22 54.2 -1.0**	
	5.1nm,0.8s,mb4.5,baz=248,slow=11,SNR=5.9						
DBIC				LR	LR	17 33 48.7	
	comp=Z,604nm,18.6s,MS4.3,baz=248,slow=32						
DBIC	**Dimbokro**	**32.91**	**90**	P	**P**	**17 22 54.2 -1.0**	
SIV	**San Ignacio**	**33.05**	**224**	P	**P**	**17 22 57.1 +0.8**	
	6.9nm,0.9s,mb4.6,baz=66,slow=10,SNR=23						
SIV	**San Ignacio**	**33.05**	**224**	P	**P**	**17 22 57.1 +0.7**	
ROSC	**El Rosal**	**36.22**	**267**	P	**P**	**17 23 24.9 +1.0**	
	6.9nm,0.4s,mb5.0,baz=99,slow=23,SNR=6.0						
ROSC				LR	LR	17 37 52.0	
	comp=Z,437nm,21.3s,MS4.2,baz=24,slow=36						
ROSC	**El Rosal**	**36.22**	**267**	P	**P**	**17 23 24.9 +1.0**	
LPAZ	**La Paz**	**38.39**	**231**	*e*P	**P**	**17 23 42.8 +0.5**	
	25nm,1.1s,mb4.9						
LPAZ	**La Paz**	**38.39**	**231**	P	**P**	**17 23 42.5 +0.2**	
	15nm,0.9s,mb4.7,baz=53,slow=8.8,SNR=41						
LPAZ				LR	LR	17 38 51.6	
	comp=Z,273nm,19.6s,MS4.1,baz=294,slow=35						
LPAZ	**La Paz**	**38.39**	**231**	*e*P	**P**	**17 23 42.8 +0.6**	
	25nm,1.1s,mb4.9						
CPUP	**Villa Florida**	**38.99**	**208**	P	**P**	**17 23 46.5 -0.6**	
	0.3nm,0.4s,baz=356,slow=19,SNR=2.1						
CPUP				LR	LR	17 40 04.7	
	comp=Z,401nm,20.0s,MS4.2,baz=8.4,slow=36						
CPUP	**Villa Florida**	**38.99**	**208**	P	**P**	**17 23 46.5 -0.7**	
PFVI	**Vila Bisbo**	**39.23**	**38**	*e*LR	LR	17 34 22.3	
	337nm,20.0s						
TORD	**Torodi Ar. Bea**	**39.33**	**79**	P	**P**	**17 23 48.0 -2.2**	
	4.5nm,0.8s,mb4.3,baz=274,slow=9.4,SNR=16						
TORD				PcP	PcP	17 25 58.6 -0.3	
	0.7nm,0.8s,baz=270,slow=4.3,SNR=1.9						
TORD			

comp=Z,26nm,1.2s,mb4.8
CAF Calviac 50.48 36 eP P 17 25 18.2 -0.4
comp=Z,13nm,1.2s,mb4.8
CAF Calviac 50.48 36 eP P 17 25 18.2 -0.4
comp=Z,13nm,1.2s,mb4.8
SADO Sadowa 51.02 323 P P 17 25 22.4 -0.3
comp=Z,4.7nm,0.5s,mb4.7,baz=134,slow=6.3,SNR=4.8
SADO Sadowa 51.02 323 P P 17 25 22.4 -0.3
LASF Ste Croix 51.10 38 eP P 17 25 23.3 0.0
comp=Z,68nm,1.5s,mb5.1
LASF Ste Croix 51.10 38 eP P 17 25 23.3 0.0
comp=Z,34nm,1.5s,mb5.1
KEST Kesra 51.19 50 eP P 17 25 22.9 -1.3
KEST Kesra 51.19 50 P P 17 25 24.6 +0.4
comp=Z,2.4nm,0.9s,mb4.1,baz=226,slow=8.8,SNR=7.2
KEST LR LR 17 47 20.8
comp=Z,151nm,19.0s,MS4.0,baz=208,slow=36
KEST Kesra 51.19 50 eP P 17 25 22.9 -1.2
TCF Toulx Ste Croi 51.34 35 eP P 17 25 24.8 -0.3
TCF Toulx Ste Croi 51.34 35 eP P 17 25 24.8 -0.3
FLN La Foliniere 51.39 31 eP P 17 25 24.6 -0.8
FLN eMLR MLR
comp=Z,333nm,22.2s,MS4.0
FLN La Foliniere 51.39 31 eP P 17 25 24.6 -0.8
FLN LR LR
comp=Z,330nm,22.3s,MS4.3
FLN La Foliniere 51.39 31 eP P 17 25 24.6 -0.8
LDF La Druitiere 51.47 31 eP P 17 25 25.1 -0.9
comp=Z,22nm,1.4s,mb4.6
LDF La Druitiere 51.47 31 eP P 17 25 25.1 -0.9
comp=Z,11nm,1.4s,mb4.6
LDF La Druitiere 51.47 31 eP P 17 25 25.1 -0.9
comp=Z,11nm,1.4s,mb4.6
BGF Bois d'Agland 51.86 35 eP P 17 25 28.5 -0.4
comp=Z,62nm,1.5s,mb5.0
BGF Bois d'Agland 51.86 35 eP P 17 25 28.5 -0.4
comp=Z,31nm,1.5s,mb5.0
BGF Bois d'Agland 51.86 35 eP P 17 25 28.5 -0.4
comp=Z,31nm,1.5s,mb5.1
VIVF Saint-Julien-l 52.00 38 eP P 17 25 30.4 +0.4
comp=Z,64nm,1.3s,mb5.1
VIVF Saint-Julien-l 52.00 38 eP P 17 25 30.4 +0.4
comp=Z,32nm,1.3s,mb5.1
VIVF Saint-Julien-l 52.00 38 eP P 17 25 30.4 +0.4
comp=Z,32nm,1.3s,mb5.1
SCHQ Schefferville 52.01 339 P P 17 25 28.9 -1.0
comp=Z,6.2nm,1.1s,mb4.5,baz=139,slow=11,SNR=3.5
SCHQ LR LR 17 43 26.6
comp=Z,177nm,19.7s,MS4.1,baz=174,slow=31
SCHQ Schefferville 52.01 339 P P 17 25 28.9 -1.0
SMRF Simiane la Rot 52.11 39 eP P 17 25 31.2 +0.4
SMRF Simiane la Rot 52.11 39 eP P 17 25 31.2 +0.4
SSB Saint Sauveur 52.15 37 eP P 17 25 33.5 +2.3
comp=Z,38nm,1.8s,mb5.0
AVF Avril sur Loir 52.28 35 eP P 17 25 31.6 -0.5
comp=Z,26nm,1.4s,mb4.7
AVF Avril sur Loir 52.28 35 eP P 17 25 31.6 -0.5
comp=Z,13nm,1.4s,mb4.7
AVF Avril sur Loir 52.28 35 eP P 17 25 31.6 -0.5
comp=Z,13nm,1.4s,mb4.7
LMR La Mourre 52.38 40 eP P 17 25 32.7 -0.2
comp=Z,31nm,1.0s,mb4.9
LMR La Mourre 52.38 40 eP P 17 25 32.7 -0.2
comp=Z,16nm,1.0s,mb4.9
LMR La Mourre 52.38 40 eP P 17 25 32.7 -0.2
comp=Z,16nm,1.0s,mb4.9
SMF Signal de Mont 52.48 35 eP P 17 25 33.2 -0.3
comp=Z,84nm,1.8s,mb5.1
SMF Signal de Mont 52.48 35 eP P 17 25 33.2 -0.3
comp=Z,42nm,1.8s,mb5.1
SMF Signal de Mont 52.48 35 eP P 17 25 33.2 -0.3
comp=Z,42nm,1.8s,mb5.1
SSF Saint Saulge 52.52 35 eP P 17 25 33.3 -0.5
SSF Saint Saulge 52.52 35 eP P 17 25 33.3 -0.5
AAM Ann Arbor 52.63 318 eP P 17 25 32.5 -2.3
AAM Ann Arbor 52.63 318 eP P 17 25 32.5 -2.2
WCI Wyandotte Cave 52.78 312 eP P 17 25 37.4 +1.5
comp=Z,12nm,0.8s,mb4.9
WCI Wyandotte Cave 52.78 312 eP P 17 25 37.4 +1.4
comp=Z,12nm,0.8s,mb4.9
LOR Lormes 52.83 35 eP P 17 25 35.5 -0.7
comp=Z,31nm,1.3s,mb4.8
LOR eMLR MLR
comp=Z,174nm,20.5s,MS3.8
LOR Lormes 52.83 35 eP P 17 25 35.5 -0.7
comp=Z,15nm,1.3s,mb4.8
LOR LR LR
comp=Z,170nm,20.5s,MS4.1
LOR Lormes 52.83 35 eP P 17 25 35.5 -0.7
comp=Z,15nm,1.3s,mb4.8
WVT Waverly 53.20 309 eP P 17 25 38.4 -0.7
WVT Waverly 53.20 309 eP P 17 25 38.4 -0.7
MBDF Montbardon 53.23 39 eP P 17 25 39.4 +0.3
MBDF Montbardon 53.23 39 eP P 17 25 39.4 +0.3
CABF La Chapelle 53.77 36 eP P 17 25 42.9 -0.1
comp=Z,41nm,1.4s,mb4.9
CABF La Chapelle 53.77 36 eP P 17 25 42.9 -0.1
comp=Z,21nm,1.4s,mb4.9
CABF La Chapelle 53.77 36 eP P 17 25 42.9 -0.1
comp=Z,21nm,1.4s,mb4.9
MEZF Maizieres J'vi 54.19 34 eP P 17 25 45.5 -0.6
MEZF Maizieres J'vi 54.19 34 eP P 17 25 45.5 -0.6
OLIL Olney 54.29 312 eP P 17 25 47.4 +0.4
comp=Z,25nm,0.8s,mb5.2
OLIL Olney 54.29 312 eP P 17 25 47.4 +0.4
comp=Z,25nm,0.8s,mb5.2
BAIF Baives 54.61 32 eP P 17 25 49.8 +0.7
BAIF Baives 54.61 32 eP P 17 25 49.8 +0.7
HAU Haudompre 54.65 35 eP P 17 25 48.8 -0.6
HAU eMLR MLR
comp=Z,164nm,22.5s,MS3.8
HAU Haudompre 54.65 35 eP P 17 25 48.8 -0.6
HAU LR LR
comp=Z,160nm,22.5s,MS4.0
HAU Haudompre 54.65 35 eP P 17 25 48.8 -0.6
SIUC Southern Illin 54.77 311 eP P 17 25 51.0 +0.5
comp=Z,27nm,0.9s,mb5.3
SIUC Southern Illin 54.77 311 eP P 17 25 51.0 +0.5
comp=Z,27nm,0.9s,mb5.3
HINF Hinteralfeld 54.84 36 eP P 17 25 50.3 -0.5
comp=Z,100nm,1.9s,mb5.2
HINF Hinteralfeld 54.84 36 eP P 17 25 50.3 -0.5
comp=Z,50nm,1.9s,mb5.2
HINF Hinteralfeld 54.84 36 eP P 17 25 50.3 -0.5
comp=Z,50nm,1.9s,mb5.2
GIVF Givet 54.96 32 eP P 17 25 50.8 -0.9
GIVF Givet 54.96 32 eP P 17 25 50.8 -0.9
CDF Champ du Feu 55.39 35 eP P 17 25 54.1 -0.7
comp=Z,53nm,1.7s,mb5.0
CDF Champ du Feu 55.39 35 eP P 17 25 54.1 -0.7
comp=Z,27nm,1.7s,mb5.0
CDF Champ du Feu 55.39 35 eP P 17 25 54.1 -0.7
comp=Z,27nm,1.7s,mb5.0
BFO Black Forest 55.95 36 eP P 17 25 57.3 -1.5
comp=Z,32nm,1.6s,mb5.1
BFO Black Forest 55.95 36 eP P 17 25 57.3 -1.5
comp=Z,32nm,1.6s,mb5.1
PLCA Paso Flores 57.05 209 P P 17 26 07.8 +1.1
comp=Z,3.9nm,0.9s,mb4.4,baz=69,slow=6.9,SNR=3.9
PLCA LR LR 17 52 30.3
comp=Z,339nm,19.9s,MS4.5,baz=82,slow=38
PLCA Paso Flores 57.05 209 P P 17 26 07.8 +1.1
JFWS Jewell Farm 57.31 316 eP P 17 26 08.1 -0.6
JFWS Jewell Farm 57.31 316 eP P 17 26 08.1 -0.5
TIP Timpagrande 57.89 49 eP P 17 26 11.5 -1.3
TIP Timpagrande 57.89 49 eP P 17 26 11.5 -1.3
GRA1 Grafenberg Arr 58.28 35 eP P 17 26 14.5 -0.8
comp=Z,35nm,1.3s,mb5.2
GRA1 LR LR
comp=Z,200nm,20.6s,MS4.2
GRA1 Grafenberg Arr 58.28 35 eP P 17 26 14.5 -0.8
comp=Z,35nm,1.3s,mb5.2
GRF Grafenberg Arr 58.28 35 eP P 17 26 14.5 -0.8
comp=Z,35nm,1.3s,mb5.2
GRF eL 17 50 14.8
comp=Z,165nm,20.6s
GRF Grafenberg Arr 58.28 35 eP P 17 26 14.5 -0.8
comp=Z,35nm,1.3s,mb5.2
MOX Moxa 58.95 34 eP P 17 26 20.0 0.0
comp=Z,33nm,1.9s,mb5.0
MOX Moxa 58.95 34 eP P 17 26 20.0 0.0
comp=Z,33nm,1.9s,mb5.0
NKC Novy Kostel 59.23 35 eP P 17 26 24.5 +2.6
NKC ex x 17 26 28.9
KHC Kasperske Hory 59.40 37 eP P 17 26 23.0 -0.1
KHC epP pP 17 26 28.0 +1.7
CLL Collm 60.04 34 i P P 17 26 32.7 +5.3
comp=Z,18nm,1.5s,mb4.9
CLL Collm 60.04 34 i (pP) pP 17 26 32.7 +2.0
comp=Z,18nm,1.5s
PRU Pruhonice 60.33 36 eP P 17 26 31.8 +2.3
PRU epP pP 17 26 35.7 +3.0
TREC Trest 60.60 37 eP P 17 26 31.0 -0.3
TSUM Tsumeb 61.10 117 P P 17 26 35.0 -0.3
comp=Z,1.7nm,0.6s,mb4.4,baz=276,slow=10.0,SNR=5.0
TSUM Tsumeb 61.10 117 P P 17 26 35.0 -0.3
ZST Bratislava 61.16 39 eP P 17 26 35.9 +0.7
comp=Z,44nm,2.0s,mb5.2
ZST Bratislava 61.16 39 eP P 17 26 35.9 +0.7
ZST Bratislava 61.16 39 eP P 17 26 35.9 +0.7
comp=Z,44nm,2.0s,mb5.2
UPC Upice 61.41 36 eP P 17 26 37.2 +0.4
WMOK Wichita Mounta 61.49 305 eP P 17 26 36.6 -1.1
WMOK Wichita Mounta 61.49 305 eP P 17 26 36.6 -1.1
DPC Dobruska-Polom 61.52 36 eP P 17 26 37.7 +0.1
DPC epP pP 17 26 43.4 +2.6
JCT Junction City 61.68 300 ⇑P P 17 26 38.5 -0.5
baz=62
JCT Junction City 61.68 300 eP P 17 26 38.6 -0.5
JCT Junction City 61.68 300 eP P 17 26 38.6 -0.4
ECSD EROS Data Cent 61.97 315 eP P 17 26 39.3 -1.5
ECSD EROS Data Cent 61.97 315 eP P 17 26 39.3 -1.4
VYHS Vyhne 62.34 39 eP P 17 26 44.8 +1.7
comp=Z,12nm,1.8s,mb4.7
VYHS Vyhne 62.34 39 eP P 17 26 44.8 +1.7
VYHS Vyhne 62.34 39 eP P 17 26 44.8 +1.7
comp=Z,12nm,1.8s,mb4.7
AGMN Agassiz Nation 62.90 321 eP P 17 26 45.1 -1.7
AGMN Agassiz Nation 62.90 321 eP P 17 26 45.2 -1.7
CBKS Cedar Bluff 63.04 309 eP P 17 26 47.9 -0.1
CBKS Cedar Bluff 63.04 309 eP P 17 26 47.9 -0.1
AMTX Amarillo 63.87 305 ⇑P P 17 26 53.1 -0.4
baz=64
AMTX Amarillo 63.87 305 eP P 17 26 53.7 +0.2
AMTX Amarillo 63.87 305 eP P 17 26 53.7 +0.1
CRVS Cervenica-Dubn 64.12 39 eP P 17 26 56.7 +1.8
comp=Z,11nm,1.5s,mb4.7
CRVS Cervenica-Dubn 64.12 39 eP P 17 26 56.7 +1.8
CRVS Cervenica-Dubn 64.12 39 eP P 17 26 56.7 +1.8
comp=Z,11nm,1.5s,mb4.7
NB2 NORSAR Subarra 64.13 24 P P 17 26 54.2 -0.5
comp=Z,45nm,1.7s,mb5.2,baz=237,slow=6.6,SNR=3.9
NOA NORSAR Array B 64.13 24 P P 17 26 54.8 +0.1
comp=Z,3.1nm,1.1s,mb4.2,baz=230,slow=6.9,SNR=3.4
NOA NORSAR Array B 64.13 24 P P 17 26 54.8 +0.1
428A Kincaid Ranch, 64.17 300 ⇑P P 17 26 55.3 -0.4
baz=64,SNR=16
528A Cox Ranch, San 64.21 300 ⇑P P 17 26 55.0 -0.9
baz=64
DRGR 64.28 42 ⇑i P P 17 26 55.3 -0.8
328A Wristen Ranch, 64.35 301 ⇓P P 17 26 55.4 -1.4
baz=64
SUMG Summit 64.46 360 eP P 17 26 57.0 +0.2
comp=Z,42nm,1.5s,mb5.2
SUMG Summit 64.46 360 eP P 17 26 57.0 +0.3
comp=Z,42nm,1.5s,mb5.2
MSTX Muleshoe 64.63 304 ⇑P P 17 26 57.8 -0.8
baz=65
627A Terlingua Ranc 64.66 299 ⇑P P 17 26 58.3 -0.5
baz=65
HFS Hagfors 64.68 26 P P 17 26 57.6 -0.7
comp=Z,12nm,1.1s,mb4.8,baz=216,slow=14,SNR=2.9
HFS LR LR 17 49 47.8
comp=Z,101nm,19.1s,MS4.0,baz=232,slow=31
HFS Hagfors 64.68 26 P P 17 26 57.6 -0.8
427A Hayter Ranch, 64.80 300 ⇑P P 17 26 59.1 -0.6
baz=65,SNR=12
TXAR Lajitas Array 64.89 299 P P 17 26 59.5 -0.9
comp=Z,1.2nm,0.6s,mb4.1,baz=108,slow=7.2,SNR=14
TXAR LR LR 17 53 36.5
comp=Z,172nm,21.2s,MS4.2,baz=5.0,slow=34
TXAR Lajitas Array 64.89 299 P P 17 26 59.5 -0.9
Y27A Causey 64.94 304 ⇑P P 17 27 00.2 -0.5
baz=65
W27A Bowe Ranch, En 65.02 305 ⇓P P 17 27 00.4 -0.7
baz=65
626A Big Bend Ranch 65.31 299 ⇓P P 17 27 02.7 -0.4
baz=65
526A Mary Lane Ranc 65.32 299 ⇑P P 17 27 02.5 -0.7
baz=65,SNR=7.1
426A Mcnald Obser 65.32 300 ⇑P P 17 27 02.2 -0.9
baz=65,SNR=22
226A Malaga, Loving 65.52 301 ⇓P P 17 27 04.1 -0.2
baz=66
Z26A Caprock 65.55 303 ⇑P P 17 27 03.8 -0.7
baz=66
X26A CR and CF Fran 65.56 304 ⇑P P 17 27 03.9 -0.7
baz=66
U26A Atchley Ranch, 65.75 306 ⇓P P 17 27 05.0 -0.8
baz=66
GDL2 Guadalupe Moun 65.75 302 eP P 17 27 06.5 +0.6
GDL2 Guadalupe Moun 65.75 302 eP P 17 27 06.5 +0.6
125A Gardner Draw, 66.05 302 ⇓P P 17 27 06.6 -1.2
baz=66,SNR=8.5
MLR Muntele Rosu 66.12 44 ⇑i P P 17 27 08.3 +0.3
225A Deer Hill, Car 66.13 301 ⇑P P 17 27 08.2 -0.1
baz=66,SNR=5.4
BUR08 Bucovina Ar. S 66.15 41 eP P 17 27 09.7 +1.6
BUR08 Bucovina Ar. S 66.15 41 eP P 17 27 09.7 +1.6
425A Indio Mountain 66.15 300 ⇑P P 17 27 07.9 -0.7
baz=66,SNR=9.5
Z25A Rowell 66.16 303 ⇑P P 17 27 08.0 -0.5
baz=66
W25A X Bar L Ranch, 66.17 305 ⇓P P 17 27 08.2 -0.3
baz=66
325A Bean Ranch, Si 66.19 301 ⇓P P 17 27 08.1 -0.6
baz=66,SNR=9.1
Y25A Mesa, Roswell 66.21 303 ⇓P P 17 27 08.2 -0.6
baz=66
U25A Circle Dot Ran 66.28 306 ⇓P P 17 27 08.7 -0.5
baz=66
V25A Rancho No Teng 66.38 306 ⇑P P 17 27 10.2 +0.3
baz=66
T25A Trinidad 66.39 307 ⇑P P 17 27 10.1 +0.2
baz=66
S25A Robets Cordova 66.48 308 ⇑P P 17 27 10.2 -0.3
baz=66
Q25A Bedland, Calha 66.52 309 ⇑P P 17 27 10.2 -0.5
baz=66
MNTX Cornudas Mount 66.57 301 ⇑P P 17 27 11.3 +0.1
baz=66,SNR=6.4
MNTX Cornudas Mount 66.57 301 eP P 17 27 10.2 -1.0
comp=Z,6.0nm,1.1s,mb4.5
MNTX Cornudas Mount 66.57 301 eP P 17 27 10.2 -1.0
comp=Z,5.9nm,1.1s,mb4.5
Z24A Sheeppen Canyo 66.71 303 ⇓P P 17 27 11.5 -0.5
baz=67
124A Stringfield Ra 66.72 302 ⇑P P 17 27 11.2 -0.9
baz=67,SNR=6.2
224A Cornudas Mount 66.72 301 ⇑P P 17 27 11.1 -1.0
baz=67,SNR=7.0
Y24A Capitan 66.83 303 ⇑P P 17 27 12.3 -0.5
baz=67,SNR=7.3
W24A Lazy 6 Ranch, 66.94 305 ⇑P P 17 27 13.4 -0.1
baz=67
S24A Houchin Ranch, 67.09 307 ⇓P P 17 27 14.5 +0.1
baz=67
Q24A Divide 67.22 309 ⇑P P 17 27 15.4 +0.3
baz=67
SDCO Great Sand Dun 67.33 307 eP P 17 27 16.9 +1.1
SDCO Great Sand Dun 67.33 307 eP P 17 27 16.9 +1.0
V23A Ortiz Mt. (NFS 67.63 305 ⇑P P 17 27 18.0 +0.2
baz=68
T23A Casias Ranch, 67.66 307 ⇑P P 17 27 18.3 +0.3
baz=68
ISCO Idaho Springs 67.70 310 ⇑P P 17 27 18.3 +0.2
baz=68
ISCO Idaho Springs 67.70 310 eP P 17 27 18.7 +0.6
ISCO Idaho Springs 67.70 310 eP P 17 27 18.7 +0.5
U23A El Rito 67.70 306 ⇓P P 17 27 19.0 +0.7
baz=68
Q23A Hartsel 67.74 309 ⇓P P 17 27 19.0 +0.5
baz=68
P23A Jefferson 67.81 309 ⇑P P 17 27 19.1 +0.3
baz=68
Z22A Elephant Butte 68.03 303 ⇓P P 17 27 19.3 -1.1
baz=68,SNR=6.4
DGMT Dagmar 68.28 319 ⇓P P 17 27 21.8 +0.1
baz=68
DGMT Dagmar 68.28 319 eP P 17 27 21.7 +0.1
DGMT Dagmar 68.28 319 eP P 17 27 21.7 +0.1
T22A Edith 68.35 307 ⇓P P 17 27 22.9 +0.6
baz=68
R22A Saguache, Gunn 68.37 308 ⇑P P 17 27 23.3 +0.9
baz=68
S22A 4UR Ranch, Cre 68.37 307 ⇑P P 17 27 23.1 +0.6
baz=68
KIS Kishinev 68.40 43 eUNK 17 27 27.0
KIS eL 17 56 32.0
P22A Eagle 68.54 309 ⇑P P 17 27 23.6 +0.1
baz=68
FFC Flin Flon 68.56 326 eP P 17 27 22.4 -0.8
FFC Flin Flon 68.56 326 eP P 17 27 22.5 -0.7
121A Cookes Peak, D 68.67 302 ⇓P P 17 27 24.8 +0.4
baz=69
Y21A Point of Rocks 68.69 303 ⇑P P 17 27 25.0 +0.5
baz=69
W21A San Fidel 68.76 304 ⇑P P 17 27 25.2 +0.3
baz=69
X21A Alamocita Cree 68.81 304 ⇑P P 17 27 25.3 0.0
baz=69,SNR=12
U21A Nageezi 68.89 306 ⇑P P 17 27 26.0 +0.3
baz=69,SNR=16
S21A Coal Bank Pass 69.12 307 ⇓P P 17 27 26.7 -0.4
baz=69
320A Kipp Ranch, An 69.22 300 ⇑P P 17 27 28.2 +0.3
baz=69,SNR=5.4
220A Playas Peak, P 69.25 301 ⇓P P 17 27 28.0 0.0
baz=69
Y20A Horse Springs, 69.26 303 ⇑P P 17 27 28.5 +0.4
baz=69
LAO LASA Array 69.26 317 ⇑P P 17 27 28.0 +0.2
baz=69
LAO LASA Array 69.26 317 eP P 17 27 27.7 -0.1
comp=Z,26nm,1.1s,mb5.1
LAO LASA Array 69.26 317 eP P 17 27 27.7 -0.1
comp=Z,26nm,1.1s,mb5.1
N21A Black Mountain 69.27 310 ⇓P P 17 27 28.2 +0.2
baz=69
120A U Bar Ranch, L 69.38 302 ⇑P P 17 27 29.2 +0.4
baz=69
Z20A Nine Sixteen R 69.39 302 ⇑P P 17 27 29.1 +0.2
baz=69
AKASG Malin Array Be 69.44 39 P P 17 27 27.6 -1.3
comp=Z,1.4nm,0.7s,mb4.0,baz=266,slow=5.1,SNR=13
AKASG Malin Array Be 69.44 39 P P 17 27 27.6 -1.3
W20A Ramah 69.46 304 ⇓P P 17 27 29.5 +0.3
baz=69
V20A Brimhall 69.48 305 ⇓P P 17 27 30.3 +0.9
baz=69
I21A Big Trails, Te 69.53 314 ⇓P P 17 27 29.3 -0.3
baz=70
U20A Newcomb 69.58 306 ⇓P P 17 27 30.3 +0.3
baz=70
MVCO Mesa Verde 69.64 307 ⇓P P 17 27 31.2 +0.8
baz=70
MVCO Mesa Verde 69.64 307 eP P 17 27 31.6 +1.3
MVCO Mesa Verde 69.64 307 eP P 17 27 31.6 +1.3
R20A Redvale 69.64 308 ⇓P P 17 27 31.0 +0.7
baz=70
O20A White River Ci 69.74 310 ⇓P P 17 27 31.3 +0.4
baz=70
P20A De Beque 69.79 309 ⇑P P 17 27 31.3 +0.1
baz=70
319A Douglas 69.87 300 ⇑P P 17 27 32.2 +0.3
baz=70
219A White Tail Can 69.88 301 ⇑P P 17 27 31.8 -0.2
baz=70
Y19A Nutrioso 69.99 303 ⇑P P 17 27 32.8 +0.3
baz=70
T19A Beclabito 70.02 306 ⇑P P 17 27 33.0 +0.3
baz=70
L20A Wamsutter 70.04 312 ⇓P P 17 27 33.4 +0.7
baz=70
X19A St. Johns 70.05 304 ⇓P P 17 27 33.1 +0.1
baz=70
U19A Dine' College, 70.12 306 ⇓P P 17 27 33.0 -0.3
baz=70,SNR=8.0
W19A Sanders 70.18 304 ⇓P P 17 27 34.0 +0.3
baz=70
F20A Billings 70.43 316 ⇑P P 17 27 35.2 +0.1
baz=70
W18A Petrified Fore 70.47 304 ⇓P P 17 27 35.4 -0.1
baz=70
318A Bisbee 70.48 300 ⇑P P 17 27 35.4 -0.2
baz=70
118A Homack Ranch, 70.52 302 ⇑P P 17 27 35.7 -0.1
baz=70
K19A Absolon Red Bu 70.52 313 ⇑P P 17 27 36.1 +0.4
baz=70
X18A Snowflake 70.61 304 ⇓P P 17 27 36.3 0.0
baz=70
Y18A Canyon Day Jun 70.63 303 ⇑P P 17 27 37.0 +0.5
baz=71
U18A Rough Rock, Ch 70.67 306 ⇑P P 17 27 37.0 +0.3
baz=71
V18A Ganado 70.67 305 ⇑P P 17 27 37.1 +0.4
baz=71
FINES FINESS Array B 70.73 27 P P 17 27 36.5 0.0
comp=Z,2.8nm,0.9s,mb4.2,baz=212,slow=4.9,SNR=2.4
FINES LR LR 17 55 18.5
comp=Z,108nm,18.8s,MS4.1,baz=15,slow=33
FINES FINESS Array B 70.73 27 P P 17 27 36.5 0.0
BR131 Keskin Array S 70.79 51 eP P 17 27 39.8 +2.5
BRTR Keskin Array B 70.79 51 P P 17 27 37.8 +0.5
comp=Z,2.0nm,0.9s,mb4.0,baz=272,slow=4.6,SNR=8.8
BRTR LR LR 17 57 55.2
comp=Z,93nm,19.6s,MS4.0,baz=44,slow=35
BRTR Keskin Array B 70.79 51 P P 17 27 37.8 +0.5
L19A Farson 70.81 312 ⇑P P 17 27 37.6 +0.2
baz=71
R18A Canyonlands Na 70.84 308 ⇓P P 17 27 37.4 -0.3
baz=71,SNR=7.6
N18A Larsen Ranch, 70.92 310 ⇓P P 17 27 38.4 +0.3
baz=71
F19A Roth Farm, Mol 70.99 316 ⇑P P 17 27 38.6 +0.1
baz=71
BOSA Boshof 71.02 124 LR LR 17 52 34.3
comp=Z,363nm,18.1s,MS4.7,baz=292,slow=31
BW06 Boulder Array 71.03 312 ⇑P P 17 27 38.4 -0.3
baz=71
Q18A Rafter H Ranch 71.09 308 ⇓P P 17 27 39.3 +0.1
baz=71
O18A Roosevelt 71.10 310 ⇓P P 17 27 39.9 +0.6
baz=71
RLMT Red Lodge 71.11 315 ⇑P P 17 27 38.5 -0.7
baz=71,SNR=6.8
RLMT Red Lodge 71.11 315 eP P 17 27 39.1 -0.1
RLMT Red Lodge 71.11 315 eP P 17 27 39.1 -0.1
217A Green Valley 71.19 301 ⇑P P 17 27 40.1 +0.1
baz=71
P18A Preston Nutter 71.22 309 ⇑P P 17 27 39.9 -0.1
baz=71,SNR=8.8
M18A Lyman 71.26 311 ⇑P P 17 27 40.3 +0.2
baz=71
Y17A Roosevelt 71.30 303 ⇑P P 17 27 41.1 +0.5
baz=71
I18A Diamond G Ranc 71.33 313 ⇑P P 17 27 40.5 0.0
baz=71
G18A Lazy EL Ranch, 71.35 315 ⇑P P 17 27 40.6 0.0
baz=71
V17A Tonalea, Kykot 71.36 305 ⇓P P 17 27 40.6 -0.3
baz=71,SNR=10.0
K18A Toltan Ranch, 71.37 312 ⇑P P 17 27 40.7 -0.1
baz=71
SRU San Rafael 71.40 308 eP P 17 27 40.9 -0.1
SRU San Rafael 71.40 308 eP P 17 27 40.9 -0.1
T17A Navajo Res., N 71.46 306 ⇑P P 17 27 41.8 +0.3
baz=71
GCMT Greycliff 71.48 316 eP P 17 27 41.1 -0.3
comp=Z,5.9nm,1.1s,mb4.4
GCMT Greycliff 71.48 316 eP P 17 27 41.1 -0.3
comp=Z,5.9nm,1.1s,mb4.4
S17A Black Ridge (B 71.50 307 ⇓P P 17 27 42.1 +0.4
baz=71
F18A Big Timber 71.53 316 ⇓P P 17 27 40.7 -1.0
baz=72,SNR=8.6
O17A Robinson Place 71.65 310 ⇓P P 17 27 42.8 +0.2
baz=72
U16A Tuba City 71.67 305 ⇓P P 17 27 43.4 +0.7
baz=72
M17A Scullys Gap (B 71.71 311 ⇓P P 17 27 43.2 +0.3
baz=72
E18A Harlowton 71.76 316 ⇑P P 17 27 43.1 0.0
baz=72,SNR=7.8
MMAI Mount Meron Ar 71.76 58 LR LR 18 00 16.2
comp=Z,111nm,20.3s,MS4.1,baz=230,slow=37
D18A Linhart Farms, 71.77 317 ⇑P P 17 27 43.5 +0.4
baz=72
N17A Moffit Pass 71.79 310 ⇓P P 17 27 42.9 -0.5

baz=72,SNR=6.6
WUAZ Wupatki 71.83 305 ⇑P P 17 27 43.4 -0.4
baz=72,SNR=9.7
WUAZ Wupatki 71.83 305 eP P 17 27 44.5 +0.7
WUAZ Wupatki 71.83 305 eP P 17 27 44.5 +0.8
X16A Lo Mia Camp, P 71.83 303 ⇑P P 17 27 43.9 +0.1
baz=72,SNR=7.6
Y16A Circle Bar Ran 71.84 303 ⇓P P 17 27 44.0 +0.2
baz=72
LOHW Long Hollow 71.89 313 eP P 17 27 44.5 +0.6
LOHW Long Hollow 71.89 313 eP P 17 27 44.5 +0.6
I17A Pilgrim Ck. 71.90 314 ⇓P P 17 27 44.5 +0.6
baz=72
B18A Beardsley Farm 71.92 318 ⇓P P 17 27 43.9 -0.1
baz=72
L17A Cokeville 71.93 312 ⇑P P 17 27 44.1 -0.1
baz=72
MOOW Moose Ponds 72.00 313 eP P 17 27 44.4 -0.2
MOOW Moose Ponds 72.00 313 eP P 17 27 44.4 -0.2
FLWY Flagg Ranch 72.00 314 eP P 17 27 45.1 +0.5
FLWY Flagg Ranch 72.00 314 eP P 17 27 45.1 +0.5
REDW Red Top Meadow 72.04 313 eP P 17 27 44.4 -0.4
REDW Red Top Meadow 72.04 313 eP P 17 27 44.4 -0.4
DAU Daniels Canyon 72.06 310 eP P 17 27 45.8 +0.7
DAU Daniels Canyon 72.06 310 eP P 17 27 45.8 +0.8
TPAW Teton Pass 72.12 313 eP P 17 27 45.3 -0.1
TPAW Teton Pass 72.12 313 eP P 17 27 45.3 0.0
S16A Weppner Ranch, 72.13 307 ⇓P P 17 27 46.1 +0.6
baz=72
YFT Old Faithful 72.14 314 eP P 17 27 46.7 +1.3
YFT Old Faithful 72.14 314 eP P 17 27 46.7 +1.3
IMW Indian Meadow 72.16 313 eP P 17 27 45.6 +0.1
IMW Indian Meadow 72.16 313 eP P 17 27 45.6 +0.1
G17A Pierce Place, 72.17 315 ⇑P P 17 27 45.8 +0.2
baz=72
F17A Fitzpatrick Pl 72.19 316 ⇓P P 17 27 46.1 +0.5
baz=72
JLU Jordanelle 72.23 310 eP P 17 27 45.0 -1.0
comp=Z,6.4nm,0.7s,mb4.7
JLU Jordanelle 72.23 310 eP P 17 27 45.0 -1.0
comp=Z,6.4nm,0.7s,mb4.7
O16A Springville 72.24 310 ⇓P P 17 27 46.2 +0.1
baz=72
YMR Madison River 72.26 314 eP P 17 27 45.6 -0.5
comp=Z,39nm,0.7s,mb5.4
YMR Madison River 72.26 314 eP P 17 27 45.6 -0.5
comp=Z,39nm,0.7s,mb5.4
L16A Fish Haven 72.33 311 ⇓P P 17 27 46.8 +0.2
baz=72
D17A Six Diamond Ra 72.36 317 ⇓P P 17 27 46.9 +0.3
baz=72
RRI2 Red Ridge 72.38 313 eP P 17 27 46.9 +0.1
RRI2 Red Ridge 72.38 313 eP P 17 27 46.9 +0.1
E17A Martindale 72.39 316 ⇓P P 17 27 46.2 -0.6
baz=72,SNR=8.9
HWUT Hardware Ranch 72.40 311 eP P 17 27 46.5 -0.5
comp=Z,29nm,0.9s,mb5.2
HWUT Hardware Ranch 72.40 311 eP P 17 27 46.5 -0.5
comp=Z,29nm,0.9s,mb5.2
H16A Russell Place, 72.46 314 ⇑P P 17 27 47.9 +0.6
baz=72
X15A Humboldt 72.49 304 ⇑P P 17 27 47.2 -0.5
baz=72,SNR=6.5
V15A Kaibab Nationa 72.49 305 ⇑P P 17 27 48.2 +0.5
baz=72
I16A Newdale 72.55 313 ⇓P P 17 27 48.3 +0.4
baz=72
Y15A Casa Rosa Ranc 72.55 303 ⇓P P 17 27 48.2 +0.1
baz=72
J16A Bone 72.58 313 ⇓P P 17 27 48.2 +0.2
baz=72,SNR=5.1
U15A North Rim 72.62 306 ⇓P P 17 27 48.6 +0.2
baz=72,SNR=6.7
MSU Marysvale 72.64 308 eP P 17 27 49.3 +0.8
MSU Marysvale 72.64 308 eP P 17 27 49.3 +0.8
NLU North Lily Min 72.66 309 eP P 17 27 49.6 +1.1
NLU North Lily Min 72.66 309 eP P 17 27 49.6 +1.0
BOZ Bozeman (W) 72.83 315 ⇓P P 17 27 49.5 0.0
baz=73,SNR=9.8
BOZ Bozeman (W) 72.83 315 eP P 17 27 49.0 -0.5
comp=Z,6.4nm,1.0s,mb4.5
BOZ Bozeman (W) 72.83 315 eP P 17 27 49.0 -0.5
comp=Z,6.4nm,1.0s,mb4.5
F16A Kennard Place, 72.84 315 ⇓P P 17 27 49.4 -0.1
baz=73
214A Organ Pipe Nat 72.90 301 ⇑P P 17 27 50.5 +0.3
baz=73
D16A Dana Ranch, Ca 72.93 317 ⇑P P 17 27 50.4 +0.4
baz=73,SNR=6.0
E16A East Helena 72.96 316 ⇓P P 17 27 50.2 0.0
baz=73
X14A Yava 73.03 303 ⇓P P 17 27 51.0 +0.1
baz=73,SNR=8.4
L15A Malad City 73.04 311 ⇑P P 17 27 50.1 -0.7
baz=73,SNR=13
M15A Larsen Ranch, 73.05 311 ⇑P P 17 27 51.1 +0.3
baz=73
HRY Holter Researc 73.08 316 eP P 17 27 51.0 0.0
HRY Holter Researc 73.08 316 eP P 17 27 51.0 0.0
C16A Fuhringer Ranc 73.15 317 ⇑P P 17 27 50.9 -0.5
baz=73
J15A Blackfoot 73.19 313 ⇑P P 17 27 51.8 +0.2
baz=73
K15A Arbon 73.20 312 ⇑P P 17 27 51.7 -0.1
baz=73
W14A Seligman 73.21 304 ⇑P P 17 27 52.7 +0.7
baz=73
DUG Dugway 73.24 309 ⇑P P 17 27 52.7 +0.7
baz=73
DUG Dugway 73.24 309 eP P 17 27 53.0 +1.0
DUG Dugway 73.24 309 eP P 17 27 53.0 +1.0
V14A Boquillas Ranc 73.24 305 ⇑P P 17 27 52.3 +0.1
baz=73
I15A Monteview 73.28 313 ⇓P P 17 27 53.0 +0.8
baz=73
HVU Hansel Valley 73.31 311 eP P 17 27 52.8 +0.4
HVU Hansel Valley 73.31 311 eP P 17 27 52.8 +0.4
U14A Mt Trumbull 73.33 306 ⇓P P 17 27 53.2 +0.5
baz=73,SNR=6.1
S14A Cedar City 73.38 307 ⇓P P 17 27 53.5 +0.5
baz=73
P14A Drum Mountains 73.40 309 ⇑P P 17 27 53.1 +0.1
baz=73,SNR=10
ARCES ARCESS Array B 73.40 19 P P 17 27 51.0 -1.4
ARCES ARCESS Array B 73.40 19 P P 17 27 51.0 -1.4
comp=Z,3.9nm,0.9s,mb4.3,baz=233,slow=5.4,SNR=3.3
ARCES ARCESS Array B 73.40 19 P P 17 27 51.0 -1.4
LRM Limekiln Ridge 73.42 315 eP P 17 27 52.3 -0.7
LRM Limekiln Ridge 73.42 315 eP P 17 27 52.3 -0.7
BGU Big Grassy Mou 73.45 310 eP P 17 27 53.1 -0.1
comp=Z,26nm,1.3s,mb5.0
BGU Big Grassy Mou 73.45 310 eP P 17 27 53.1 -0.1
comp=Z,26nm,1.3s,mb5.0
F15A Butte 73.45 315 ⇓P P 17 27 53.8 +0.6
baz=73
DLMT Dillon 73.48 315 eP P 17 27 54.0 +0.6
DLMT Dillon 73.48 315 eP P 17 27 54.0 +0.7
CCUT Cedar City 73.53 307 eP P 17 27 53.4 -0.3
CCUT Cedar City 73.53 307 eP P 17 27 53.4 -0.4
Q14A Sevier Lake (B 73.53 308 ⇑P P 17 27 54.1 +0.3
baz=74,SNR=9.5
N14A Grayback Hills 73.56 310 ⇓P P 17 27 53.9 0.0
baz=74
D15A Lincoln 73.59 317 ⇓P P 17 27 54.3 +0.4
baz=74
MCMT McKenzie Canyo 73.61 314 eP P 17 27 53.5 -0.6
comp=Z,1.8nm,0.8s,mb4.0
MCMT McKenzie Canyo 73.61 314 eP P 17 27 53.5 -0.6
comp=Z,1.8nm,0.8s,mb4.0
Z13A Yuma Proving G 73.63 302 ⇑P P 17 27 54.7 +0.2
baz=74
K14A Jones Ranch, D 73.67 312 ⇑P P 17 27 54.5 0.0
baz=74
L14A Malta 73.68 311 ⇑P P 17 27 54.2 -0.4
baz=74
C15A Salmond Ranch, 73.72 317 ⇓P P 17 27 55.0 +0.3
baz=74,SNR=9.9
M14A Sheep Mountain 73.72 311 ⇑P P 17 27 54.5 -0.4
baz=74
B15A Bradely Ranch, 73.75 318 ⇑P P 17 27 55.3 +0.4
baz=74,SNR=6.3
Y13A Salome 73.79 303 ⇓P P 17 27 55.6 +0.2
baz=74
X13A Yucca 73.81 304 ⇓P P 17 27 56.0 +0.5
baz=74
W13A Hualapai Mount 73.86 304 ⇑P P 17 27 56.3 +0.5
baz=74
S13A Holt Ranch, En 73.92 307 ⇓P P 17 27 56.5 +0.4
baz=74,SNR=5.5
A15A Johnson Ranch, 73.94 319 ⇓P P 17 27 55.9 -0.1
baz=74
T13A Saint George 73.94 306 ⇓P P 17 27 57.1 +0.9
baz=74
H14A Leadore 73.96 314 ⇓P P 17 27 56.9 +0.7
baz=74
U13A Pakoon Wash 73.97 305 ⇑P P 17 27 56.9 +0.5
baz=74
J14A Carey 73.97 313 ⇓P P 17 27 56.3 0.0
baz=74,SNR=6.4
R13A O'Grain Ranch, 74.03 307 ⇓P P 17 27 57.7 +0.9
baz=74
F14A Wisdom 74.06 315 ⇑P P 17 27 57.7 +1.0
baz=74
CHMT Chamberlain Mo 74.08 316 eP P 17 27 55.9 -0.9
CHMT Chamberlain Mo 74.08 316 eP P 17 27 55.9 -0.9
G14A Jackson 74.08 315 ⇑P P 17 27 57.5 +0.7
baz=74
Q13A Wheeler Ranch, 74.10 308 ⇓P P 17 27 57.3 +0.2
baz=74,SNR=7.1
P13A Bates Ranch, G 74.12 309 ⇓P P 17 27 57.2 0.0
baz=74,SNR=8.0
D14A Greenough 74.27 317 ⇑P P 17 27 57.8 -0.1
baz=74
SLMT Seeley Lake 74.27 317 eP P 17 27 58.6 +0.6
SLMT Seeley Lake 74.27 317 eP P 17 27 58.6 +0.7
M13A Montello 74.33 311 ⇓P P 17 27 58.2 -0.3
baz=74,SNR=9.9
M13A Montello 74.33 311 eP P 17 27 57.9 -0.5
comp=Z,15nm,1.1s,mb4.8
M13A Montello 74.33 311 eP P 17 27 57.9 -0.5
comp=Z,15nm,1.1s,mb4.8
I13A Wildhorse Cree 74.45 313 ⇓P P 17 27 58.8 -0.2
baz=74,SNR=13
J13A Cove Ranch, Pi 74.45 313 ⇓P P 17 27 59.1 0.0
baz=74,SNR=6.2
H13A Challis 74.59 314 ⇓P P 17 27 59.8 -0.1
baz=74,SNR=9.0
G13A Cobalt 74.61 314 ⇑P P 17 27 59.7 -0.3
baz=74,SNR=14
SWMT Swartz Lake 74.64 317 eP P 17 27 59.9 -0.1
comp=Z,4.5nm,0.6s,mb4.6
SWMT Swartz Lake 74.64 317 eP P 17 27 59.9 -0.1
comp=Z,4.5nm,0.6s,mb4.6
HLID Hailey 74.64 313 ⇓P P 17 27 59.9 -0.2
baz=75,SNR=8.2
HLID Hailey 74.64 313 eP P 17 28 00.3 +0.1
comp=Z,16nm,1.3s,mb4.8
HLID Hailey 74.64 313 eP P 17 28 00.3 +0.1
comp=Z,16nm,1.3s,mb4.8
E13A Victor 74.68 316 ⇓P P 17 28 00.8 +0.5
baz=75
S12A Delaloar Landin 74.71 307 ⇓P P 17 28 01.1 +0.4
baz=75
WALA Waterton Lakes 74.72 319 eP P 17 27 59.9 -0.6
WALA Waterton Lakes 74.72 319 eP P 17 27 59.9 -0.6
O12A Currie 74.72 309 ⇑P P 17 28 00.4 -0.3
baz=75,SNR=6.2
Q12A Willow Creek R 74.74 308 ⇑P P 17 28 00.6 -0.2
baz=75,SNR=5.8
EDM Edmonton 74.81 323 eP P 17 28 01.0 +0.1
EDM Edmonton 74.81 323 eP P 17 28 01.0 +0.1
P12A McGill 74.81 309 ⇓P P 17 28 01.1 -0.2
baz=75,SNR=7.6
H12A Diamond D Ranc 75.02 314 ⇑P P 17 28 02.1 -0.2
baz=75,SNR=13
B13A Whitefish 75.02 318 ⇑P P 17 28 02.4 +0.1
baz=75
C13A Hot Springs 75.04 317 ⇓P P 17 28 02.4 0.0
baz=75
BC3 Big Chuckawall 75.14 303 ⇑P P 17 28 03.5 +0.2
baz=75
I12A Atlanta 75.17 313 ⇑P P 17 28 02.8 -0.5
baz=75,SNR=11
BSMT Bassoo Peak 75.19 317 eP P 17 28 03.7 +0.5
BSMT Bassoo Peak 75.19 317 eP P 17 28 03.7 +0.4
R11A Troy Canyon, C 75.31 307 ⇑P P 17 28 03.8 -0.3
baz=75,SNR=5.7
GMRC Granite Mounta 75.32 304 ⇓P P 17 28 04.5 +0.2
baz=75
F12A Elk City 75.37 315 ⇓P P 17 28 04.9 +0.6
baz=75,SNR=10
Q11A Duwater 75.37 308 ⇑P P 17 28 04.6 +0.1
baz=75
L11A Cat Creek Ranc 75.55 311 ⇑P P 17 28 05.1 -0.4
baz=76,SNR=11
KMBO Kilima Mbogo 75.58 93 LR LR 17 59 32.4
comp=Z,189nm,18.7s,MS4.4,baz=88,slow=34
E12A Beaver Dam Sad 75.63 316 ⇓P P 17 28 04.8 -1.0
baz=76,SNR=12
C12B Naegeli Ranch, 75.65 317 ⇑P P 17 28 06.0 +0.1
baz=76
MFID Camas Ranch 75.66 313 ⇓P P 17 28 06.1 0.0
baz=76
DVTC Desert V Tower 75.69 302 ⇓P P 17 28 06.4 -0.1
baz=76
HEC Hector,Ludlow 75.87 304 ⇑P P 17 28 07.7 +0.2
baz=76
MONP Monument Peak 75.95 302 ⇑P P 17 28 08.0 +0.1
baz=76
PFO Pinyon Flat Ob 75.98 303 ⇓P P 17 28 08.2 +0.1
baz=76
L10A Juniper Basin 76.08 311 ⇓P P 17 28 08.0 -0.5
baz=76,SNR=8.9
S10A Tonopah Range, 76.10 307 ⇑P P 17 28 08.2 -0.5
baz=76,SNR=9.5
C11A Tepee Creek (N 76.18 317 ⇓P P 17 28 08.4 -0.5
baz=76,SNR=9.8
GSC Goldstone 76.26 304 eP P 17 28 10.8 +1.1
GSC Goldstone 76.26 304 eP P 17 28 10.8 +1.2
YKA Yellowknife Ar 76.71 332 P P 17 28 10.0 -1.6
YKA Yellowknife Ar 76.71 332 P P 17 28 10.0 -1.6
comp=Z,3.3nm,0.9s,mb4.3,baz=93,slow=5.6,SNR=9.8
YKA Yellowknife Ar 76.71 332 P P 17 28 10.0 -1.6
BMO Blue Mountains 76.78 314 eP P 17 28 11.5 -0.9
comp=Z,11nm,1.5s,mb4.6
BMO Blue Mountains 76.78 314 eP P 17 28 11.5 -0.9
comp=Z,11nm,1.5s,mb4.6
NEW Newport 76.78 318 ⇓P P 17 28 12.3 0.0
baz=77
E09A Wood Farm, Sta 77.41 316 ⇑P P 17 28 15.1 -0.8
baz=77
NVAR Mina Array Bea 77.44 308 P P 17 28 16.1 -0.2
comp=Z,2.3nm,0.9s,mb4.1,baz=102,slow=5.5,SNR=9.8
NVAR Mina Array Bea 77.44 308 P P 17 28 16.1 -0.2
ISA Isabella 77.61 305 ⇓P P 17 28 17.6 +0.3
baz=78
ISA Isabella 77.61 305 eP P 17 28 18.1 +0.8
comp=Z,11nm,1.2s,mb4.7
ISA Isabella 77.61 305 eP P 17 28 18.0 +0.7
comp=Z,11nm,1.2s,mb4.7
WVOR Wild Horse Val 77.70 312 eP P 17 28 16.9 -0.6
comp=Z,14nm,1.4s,mb4.7
WVOR Wild Horse Val 77.70 312 eP P 17 28 17.0 -0.6
comp=Z,14nm,1.4s,mb4.7
OD2 Odessa Site #2 77.82 317 eP P 17 28 17.9 -0.3
OD2 Odessa Site #2 77.82 317 eP P 17 28 17.9 -0.3
G08A Pilot Rock 77.96 315 ⇑P P 17 28 18.5 -0.5
baz=78
D08A Wollman Farm, 77.96 316 ⇑P P 17 28 18.1 -0.8
baz=78
E08A Dider Farm, El 78.04 316 ⇑P P 17 28 19.1 -0.3
baz=78
I07A Izee 78.34 313 ⇑P P 17 28 20.6 -0.5
baz=78
PKM Peak Mountain 78.74 304 ⇑P P 17 28 23.8 +0.3
baz=79
K05A Summer Lake 79.36 312 ⇑P P 17 28 27.4 +0.6
baz=79
E03A Lebam 81.15 316 ⇓P P 17 28 36.2 -0.1
baz=81
INK Inuvik 84.61 338 P P 17 28 53.6 -0.2
comp=Z,3.6nm,0.6s,mb4.7,baz=11,slow=3.8,SNR=5.5
INK Inuvik 84.61 338 P P 17 28 53.6 -0.2
AKTK Aktyubinsk 87.68 40 P P 17 29 09.6 +0.2
AKTK Aktyubinsk 87.68 40 P P 17 29 09.6 +0.3
AKTO Aktyubinsk 87.68 40 P P 17 29 09.6 +0.2
comp=Z,2.4nm,0.9s,mb4.4,baz=288,slow=1.2,SNR=6.0
ABKAR Akbulak array 89.12 40 eP P 17 29 15.5 -0.7
comp=Z,2.5nm,0.8s,mb4.6
ABKAR Akbulak array 89.12 40 eP P 17 29 15.5 -0.7
comp=Z,2.5nm,0.8s,mb4.6
ILAR Eielson Array 90.66 336 P P 17 29 22.8 -0.3
comp=Z,0.7nm,0.8s,mb4.0,baz=80,slow=4.5,SNR=5.8
ILAR LR LR 18 07 09.1
comp=Z,104nm,18.5s,MS4.3,baz=119,slow=34
ILAR Eielson Array 90.66 336 P P 17 29 22.8 -0.2
LZH Lanzhou 123.31 37 ePKP PKPdf 17 35 17.8 -0.5
LZH sPKP 17 35 22.3
LZH eSS SS 17 53 41.3 -2.3
LZH LR LR
comp=E,210nm,18.0s
LZH LR LR
comp=Z,260nm,20.1s,MS4.9
HHC Hu-ho-hao-te 123.85 28 ePKP PKPdf 17 35 16.1 -3.1
HHC PP PP 17 37 02.4 +1.2
HHC PKS 17 38 51.8
HHC SKS SKSdf 17 42 23.4 -8.0
HHC AMB AMB
comp=Z,110nm,6.7s
HHC LR LR
comp=N,100nm,16.7s,MS4.7
HHC LR LR
comp=E,100nm,16.6s,MS4.7
HHC LR LR
comp=Z,220nm,19.0s,MS4.8
CN2 Changchun 126.25 15 ePKP PKPdf 17 35 24.3 +0.6
CD2 Chengdu 126.69 42 PKP PKPdf 17 35 24.8 -0.1
KMI Kunming 129.52 48 PKP PKPdf 17 35 31.3 +0.9
KMI sPKP 17 35 35.4
KMI PP PP 17 37 43.4 +3.8
KMI SS SS 17 55 03.8 +1.6
KMI AMB AMB
comp=Z,140nm,8.2s
KMI LR LR
comp=N,69nm,17.6s,MS4.6
KMI LR LR
comp=E,84nm,16.9s,MS4.6
CMAR Chiang Mai Arr 130.03 58 PKP PKPdf 17 35 31.2 -0.3
comp=E,0.2nm,0.6s,baz=282,slow=4.3,SNR=3.3
CMAR Chiang Mai Arr 130.03 58 PKIKP PKPdf 17 35 31.2 -0.3
GYA Guiyang 131.50 44 ePdif Pdif 17 32 24.3 -1.5
GYA PKP PKPdf 17 35 33.0 -1.1
GYA PP PP 17 37 54.3 +2.0
GYA PKS 17 39 08.6
GYA SKKS SKKSac 17 44 46.3 -3.6
GYA SS SS 17 55 26.0 -0.1
GYA AMB AMB
comp=Z,120nm,7.8s
GYA LR LR
comp=N,120nm,23.6s,MS4.6
GYA LR LR
comp=E,110nm,24.9s,MS4.6
GYA LR LR
comp=Z,140nm,22.8s,MS4.6
NJ2 Nanjing 134.41 28 ePKP PKPdf 17 35 35.8 -3.7
QIZ Qiongzhong 138.43 49 PKP PKPdf 17 35 44.6 -2.7
QIZ PP PP 17 38 35.6 -0.8
ASAR Alice Springs 162.65 154 PKPab PKPab 17 37 10.0 -1.7
comp=Z,1.1nm,0.9s,baz=197,slow=4.6,SNR=5.9

IDC 14 17:39:49.4±16.0, 21.90S×175.15W, h0km, mb4.4/5, mb1 4.6/5, mb1mx4.0/17, mbtmp4.4/5, MS2.7/1, Ms1 2.7/1, ms1mx2.4/18, Error ellipse: s-maj=312.3km s-min=149.1km az=80.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.57**	**23**	LR		LR	LR	17 44 45.9	
	comp=Z,44nm,19.5s,baz=50,slow=35								
CTA	**Charters Tower**	**36.02**	**266**	P		P		17 46 53.8	+1.2
	17nm,0.3s,baz=95,slow=12,SNR=56								
STKA	**Stephens Creek**	**39.62**	**246**	P		P		17 47 21.8	-1.1
	2.1nm,0.7s,baz=92,slow=9.4,SNR=3.6								
ASAR	**Alice Springs**	**46.81**	**258**	P		P		17 48 20.4	-0.8
	1.5nm,0.5s,baz=96,slow=7.2,SNR=84								
WRA	**Warramunga Arr**	**47.06**	**263**	P		P		17 48 22.5	-0.6
	3.1nm,0.3s,baz=94,slow=8.5,SNR=44								
FITZ	**Fitzroy Crossi**	**55.49**	**263**	P		P		17 49 27.2	+0.7
	1.1nm,0.4s,baz=116,slow=8.1,SNR=11								

IDC 14 18:07:49.8±2.6, 1.12S×97.76E, h0km, mb3.6/5, mb1 3.6/6, mb1mx3.5/20, mbtmp3.5/6, ML3.7/1, Error ellipse: s-maj=106.3km s-min=20.7km az=58.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**19.49**	**3**	P		P	Pn	18 12 17.9	-1.8
	0.1nm,0.3s,baz=193,slow=11,SNR=5.4								
WRA	**Warramunga Arr**	**40.36**	**120**	P		P		18 15 29.2	-0.5
	0.4nm,0.4s,baz=302,slow=9.0,SNR=6.4								
ASAR	**Alice Springs**	**41.58**	**125**	P		P		18 15 39.5	-0.1
	0.2nm,0.4s,baz=297,slow=7.9,SNR=14								
SONM	**Songino Array**	**49.34**	**8**	P		P		18 16 41.2	+0.5
	0.9nm,0.9s,baz=196,slow=7.2,SNR=4.0								
ZALV	**Zalesovo Beam**	**55.92**	**351**	P		P		18 17 29.2	-0.2
	1.1nm,0.6s,baz=175,slow=7.6,SNR=6.6								
BVAR	**Borovoye Array**	**58.61**	**341**	P		P		18 17 48.0	-0.4
	0.4nm,0.5s,baz=123,slow=12,SNR=3.4								
TXAR	**Lajitas Array**	**145.30**	**34**	PKPbc		PKPbc		18 27 30.7	+0.7
	0.4nm,0.6s,baz=212,slow=1.5,SNR=6.5								

*IDC **14** 18:22:48.9±2.0, 21.96S×179.52W, h576km±22km, mb3.5/11, mb1 3.7/12, mb1mx3.6/17, mbtmp3.5/12, Error ellipse: s-maj=17.5km s-min=14.8km az=138.0*
*ISCJB **14** 18:22:49.3±1.0, 22.05S±0.1×179.76W±0.1, h595km±13km, mb4.1/14, Error ellipse: s-maj=19.8km s-min=13.7km az=150.2*
*NEIC **14** 18:22:50.2±0.9, 21.93S×179.52W, h594km±10km, mb4.6/2, Error ellipse: s-maj=19.5km s-min=12.0km az=152.0*

ISC 14 18:22:51.3±1.2, 22.0S±0.1×179.6W±0.1, h602km±13km, n30, σ0.95/24, mb4.1/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.74**	**332**	eP		P		**18 24 22.2**	**-0.1**
AFI	**Afiamalu**	**10.96**	**44**	P		P		**18 25 15.8**	**-3.9**
	2.6nm,0.3s,baz=249,slow=14,SNR=3.6								
URZ	**Urewera**	**16.48**	**189**	P		P		**18 26 08.4**	**-4.3**
	0.9nm,0.3s,baz=252,slow=13,SNR=5.3								
URZ				S		S		**18 28 47.4**	**-9.4**
	1.3nm,0.3s,baz=135,slow=20,SNR=8.3								
ARMA	**Armidale**	**27.06**	**246**	eP		P		**18 27 49.1**	**+1.6**
CTAO	**Charters Tower**	**31.85**	**267**	eP		P		**18 28 29.9**	**+1.0**
	13nm,0.5s,mb4.8								
STKA	**Stephens Creek**	**35.78**	**246**	P		P		**18 29 02.0**	**+0.5**
	2.4nm,0.5s,mb4.0,baz=84,slow=8.3,SNR=13								
ASAR	**Alice Springs**	**42.71**	**258**	P		P		**18 29 57.4**	**+0.2**
	12nm,0.8s,mb4.5,baz=98,slow=8.3,SNR=194								
ASAR				S		S		**18 35 36.9**	**-1.6**
	1.4nm,0.8s,baz=93,slow=17,SNR=9.4								
WRA	**Warramunga Arr**	**42.90**	**264**	P		P		**18 29 58.1**	**-0.5**
	4.7nm,0.4s,mb4.4,baz=96,slow=7.8,SNR=121								
WRA				ScP		ScP		18 34 33.0	+3.0
	0.2nm,0.3s,baz=85,slow=3.4,SNR=7.2								
WRA				S		S		**18 35 39.0**	**-2.2**
	0.7nm,0.8s,baz=96,slow=14,SNR=3.8								
KAKA	**Kakadu**	**46.50**	**273**	eP		P		**18 30 24.4**	**-1.8**
	13nm,0.5s,mb4.7								
KAKA	**Kakadu**	**46.50**	**273**	eP		P		**18 30 26.2**	**0.0**
	41nm,0.6s,mb5.1								
MBWA	**Marble Bar**	**56.05**	**259**	eP		P		**18 31 34.6**	**-0.3**
	13nm,0.8s,mb4.2								
QSPA	**South Pole Qui**	**68.11**	**180**	P		P		**18 32 52.0**	**+0.3**
QSPA	**South Pole Qui**	**68.11**	**180**	P		P		**18 32 52.0**	**+0.3**
	6.0nm,0.8s,mb4.1,baz=26,slow=2.4,SNR=26								
MJAR	**Matsushiro Arr**	**70.50**	**325**	P		P		**18 33 06.4**	**-0.2**
MJAR	**Matsushiro Arr**	**70.50**	**325**	P		P		**18 33 06.4**	**-0.2**
	2.8nm,0.7s,mb3.8,baz=145,slow=5.3,SNR=13								
MAW	**Mawson**	**79.67**	**200**	P		P		**18 33 56.5**	**-0.6**
	1.4nm,0.6s,mb3.5,baz=131,slow=8.6,SNR=5.8								
PMSA	**Palmer Station**	**80.55**	**157**	P		P		**18 34 01.5**	**-0.2**
	12nm,0.6s,mb4.5,baz=143,slow=10,SNR=2.4								
NVAR	**Mina Array Bea**	**83.14**	**44**	P		P		**18 34 15.7**	**+0.5**
	0.6nm,0.3s,mb3.6,baz=225,slow=7.3,SNR=5.6								
TXAR	**Lajitas Array**	**89.13**	**58**	P		P		**18 34 44.7**	**+0.7**
	1.2nm,0.8s,mb3.8,baz=214,slow=5.4,SNR=12								
CMAR	**Chiang Mai Arr**	**89.17**	**290**	P		P		**18 34 46.2**	**+1.9**
	3.5nm,0.8s,mb4.2,baz=136,slow=3.3,SNR=21								
ILAR	**Eielson Array**	**90.08**	**13**	P		P		**18 34 46.6**	**-0.9**
	0.4nm,0.8s,mb3.3,baz=221,slow=6.8,SNR=3.0								
BVAR	**Borovoye Array**	**119.20**	**319**	PKP		PKPdf		18 40 31.6	-1.0
	0.8nm,0.3s,baz=90,slow=0.6,SNR=4.4								
ARCES	**ARCESS Array B**	**130.06**	**349**	PKP		PKPdf		18 40 52.4	-0.6
	2.6nm,0.9s,baz=86,slow=1.6,SNR=5.9								

AKASG	**Malin Array Be**	**143.51 329**	PKP	PKPdf	18 41 16.2	-2.0		
AKASG	**Malin Array Be**	**143.51 329**	PKP	PKPdf	18 41 16.2	-2.0		
	2.4nm,0.5s,baz=42,slow=4.5,SNR=24							
BRTR	**Keskin Array B**	**146.64 310**	PKPbc	PKPbc	18 41 26.0	-0.6		
	1.3nm,0.7s,baz=134,slow=4.5,SNR=8.0							
MMAI	**Mount Meron Ar**	**147.16 297**	PKPbc	PKPbc	18 41 28.1	-0.1		
	6.5nm,0.9s,baz=57,slow=6.0,SNR=5.8							
CLL	**Collm**	**149.09 344**	*i* P	PKPbc	18 41 32.0	-0.5		
CLL	**Collm**	**149.09 344**	*i* PKPbc	PKPbc	18 41 32.0	-0.5		
	comp=Z,6.0nm,0.6s							
CLL			*i* PKPab	PKPab	18 41 39.2	-0.1		
TORD	**Torodi Ar. Bea**	**171.14 188**	PKPab	PKPab	18 43 14.6	-1.4		
	comp=Z,0.7nm,0.8s,baz=185,slow=3.4,SNR=3.4							

ISCJB ***14*** *18:59:15.4±0.5,32.68N±0.04×105.64E±0.05,h10km, mb3.8/8,Error ellipse: s-maj=6.3km s-min=4.7km az=135.5*

IDC ***14*** *18:59:17.1±0.9,32.56N×105.31E,h0km,mb3.8/8, mb1 3.8/10,mb1mx3.7/23,mbtmp3.7/10,ML3.4/2,Error ellipse: s-maj=43.5km s-min=18.0km az=52.0*

NEIC ***14*** *18:59:18.8±0.5,32.56N×105.26E,h10km,Error ellipse: s-maj=22.2km s-min=8.2km az=52.0*

BJI ***14*** *18:59:20.0,32.72N×105.58E,h17km,mB4.5/1,mb3.7/2, ML3.6/14,Ms7 3.1/2*

ISC 14 18:59:18.4±0.4,32.68N±0.03×105.57E±0.04,h10km,n20, σ1§46/30,mb3.8/8,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CD2	**Chengdu**	**2.35**	**222**	Pg		**Pg**	**19 00 01.8**	**-1.6**
CD2				Sg		**Sg**	**19 00 32.8**	**-1.1**
CD2				smax				
	comp=N,1μm,0.6s							
XAN	**Xi'an**	**3.11**	**63**	Pn		**Pn**	**19 00 09.8**	**+2.3**
XAN				Pg		**Pg**	**19 00 15.8**	**-2.2**
XAN				Sn		**Sn**	**19 00 49.8**	**+5.1**
XAN				Sg		**Sg**	**19 00 57.0**	**-1.3**
XAN				smax				
	comp=N,210nm,0.7s							
XAN				smax				
	comp=E,130nm,0.7s							
LZH	**Lanzhou**	**3.68**	**338**	Pn		**Pn**	**19 00 17.6**	**+2.3**
LZH				Pg		**Pg**	**19 00 26.8**	**-2.1**
LZH				Sg		**Sg**	**19 01 12.1**	**-4.6**
LZH				smax				
	comp=N,230nm,1.0s							
LZH				smax				
	comp=E,260nm,1.0s							
ENH	**Enshi**	**4.12**	**125**	*e*P		**Pn**	**19 00 24.3**	**+2.9**
GYA	**Guiyang**	**6.28**	**171**	Pn		**Pn**	**19 00 53.5**	**+2.5**
GYA				Sn		**Sn**	**19 02 02.8**	**0.0**
GYA				Sg		**Sg**	**19 02 38.8**	**-1.1**
GYA				smax				
	comp=N,30nm,0.6s							
GYA				smax				
	comp=E,40nm,0.7s							
WHN	**Wuhan**	**7.78**	**104**	P		**Pn**	**19 01 05.4**	**-6.3**
WHN				S		**Sn**	**19 02 38.8**	**-1.1**
WHN				LR	LR			
	comp=N,390nm,1.8s							
WHN				LR	LR			
	comp=E,260nm,2.0s							
WHN				LR	LR			
	comp=Z,250nm,5.4s							
GTA	**Gaotai**	**8.17**	**327**	*e*P		**Pn**	**19 01 17.1**	**+0.1**
GTA				pP			19 01 21.4	
GTA				sP			19 01 24.6	
GTA				pmax	pmax			
	comp=Z,3.0nm,1.2s							
HHC	**Hu-ho-hao-te**	**9.46**	**29**	*e*P		**Pn**	**19 01 32.5**	**-2.1**
HHC				pP			19 01 35.8	
HHC				sP			19 01 38.5	
HHC				S		**Sn**	**19 03 18.9**	**-2.1**
HHC				pmax	pmax			
	comp=Z,14nm,0.7s							
HHC				pmax	pmax			
	comp=Z,87nm,6.7s							
HHC				LR	LR			
	comp=N,170nm,5.0s							
HHC				LR	LR			
	comp=E,150nm,6.5s							
HHC				LR	LR			
	comp=Z,96nm,6.9s							
SONM	**Songino Array**	**15.15**	**2**	Pn		**Pn**	**19 02 54.5**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=174,slow=14,SNR=2.6							
KSRS	**Korea Array**	**18.89**	**69**	P		**Pn**	**19 03 41.6**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=254,slow=11,SNR=6.0							
ZALV	**Zalesovo Beam**	**25.89**	**331**	P		**P**	**19 04 50.6**	**+0.4**
	comp=Z,0.6nm,0.5s,mb3.4,baz=140,slow=9.2,SNR=3.8							
KURK	**Kurchatov**	**26.78**	**320**	P		**P**	**19 04 58.0**	**-0.3**
KURK	**Kurchatov**	**26.78**	**320**	P		**P**	**19 04 58.0**	**-0.3**
	comp=Z,0.6nm,0.3s,mb3.5,baz=134,slow=8.9,SNR=6.7							
BVAR	**Borovoye Array**	**32.37**	**319**	P		**P**	**19 05 48.3**	**+0.5**
	comp=Z,0.4nm,0.6s,mb3.4,baz=115,slow=6.8,SNR=3.5							
FINES	**FINESS Array B**	**56.96**	**326**	P		**P**	**19 09 03.9**	**+0.3**
	comp=Z,1.2nm,0.4s,mb4.2,baz=99,slow=8.6,SNR=14							
AKASG	**Malin Array Be**	**57.23**	**313**	P		**P**	**19 09 05.5**	**-0.2**
	comp=Z,0.8nm,0.4s,mb4.2,baz=67,slow=7.5,SNR=4.8							
WRA	**Warramunga Arr**	**59.12**	**148**	P		**P**	**19 09 19.2**	**0.0**
	comp=Z,0.7nm,0.6s,mb3.9,baz=344,slow=7.6,SNR=5.6							
ASAR	**Alice Springs**	**62.22**	**151**	P		**P**	**19 09 41.1**	**+0.9**
	comp=Z,0.5nm,0.6s,mb3.8,baz=338,slow=6.6,SNR=5.5							
NOA	**NORSAR Array B**	**64.00**	**327**	P		**P**	**19 09 51.3**	**-0.4**
NOA	**NORSAR Array B**	**64.00**	**327**	P		**P**	**19 09 51.3**	**-0.4**
	comp=Z,0.8nm,0.6s,mb4.0,baz=71,slow=6.6,SNR=3.0							

IDC 14 19:03:56.5±1.8,5.33S×145.87E,h0km,mb3.5/4, mb1 3.8/5,mb1mx3.5/14,mbtmp3.6/5,ML3.3/1,Error ellipse: s-maj=73.2km s-min=28.9km az=120.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**18.35**	**217**	P		Pn	19 08 12.1	-0.6
	0.1nm,0.3s,baz=42,slow=11,SNR=5.3							
ASAR	**Alice Springs**	**21.57**	**211**	P		P	19 08 47.0	-0.8
	0.8nm,0.8s,baz=35,slow=10,SNR=6.8							
FITZ	**Fitzroy Crossi**	**23.49**	**236**	P		P	19 09 08.8	+0.5
	1.3nm,0.7s,baz=65,slow=13,SNR=3.9							
STKA	**Stephens Creek**	**26.71**	**188**	P		P	19 09 37.8	+0.2
	1.5nm,0.6s,baz=0.0,slow=10,SNR=4.6							
ILAR	**Eielson Array**	**85.32**	**23**	P		P	19 16 35.4	+0.2
	0.2nm,0.5s,baz=246,slow=4.7,SNR=3.8							

IDC ***14*** *19:15:25.8±1.3,3.84S×144.73E,h0km,mb3.8/8, mb1 3.9/9,mb1mx3.8/15,mbtmp3.8/9,ML3.8/1,MS3.2/1, Ms1 3.2/1,ms1mx2.4/16,Error ellipse: s-maj=44.7km s-min=19.2km az=101.0*

ISCJB ***14*** *19:15:40.3±4.2,4.05S±0.2×144.5E±0.2,h136km±42km, mb3.5/8,Error ellipse: s-maj=41.1km s-min=25.4km az=8.9*

NEIC ***14*** *19:15:42.2±3.6,4.05S×144.43E,h132km±33km,Error ellipse: s-maj=28.1km s-min=21.6km az=90.0*

ISC 14 19:15:41.6±3.9,4.08S±0.2×144.6E±0.3,h135km±39km,n12, σ0§74/10,mb3.5/8,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
COEN	**Coen**	**9.97**	**188**	P		**Pn**	**19 18 01.8**	**+0.3**
WRA	**Warramunga Arr**	**18.70**	**211**	P		**P**	**19 19 49.5**	**-0.1**
	0.3nm,0.3s,baz=30,slow=12,SNR=18							
ASAR	**Alice Springs**	**22.07**	**207**	P		**P**	**19 20 26.3**	**+0.5**
	0.8nm,0.5s,mb3.4,baz=32,slow=7.5,SNR=22							
FITZ	**Fitzroy Crossi**	**23.20**	**231**	P		**P**	**19 20 36.1**	**-0.7**
	1.3nm,0.5s,mb3.6,baz=57,slow=14,SNR=9.8							
STKA	**Stephens Creek**	**27.85**	**185**	P		**P**	**19 21 17.9**	**-0.7**
	2.5nm,1.0s,mb3.9,baz=9.5,slow=12,SNR=2.3							
MJAR	**Matsushiro Arr**	**40.78**	**352**	LR		LR	19 39 21.0	
	comp=Z,31nm,19.0s,baz=95,slow=35							
KSRS	**Korea Array**	**44.07**	**341**	P		**P**	**19 23 34.6**	**-1.6**
	0.7nm,0.7s,mb3.4,baz=157,slow=9.2,SNR=3.8							
CMAR	**Chiang Mai Arr**	**50.17**	**298**	P		**P**	**19 24 24.5**	**+0.7**
	1.1nm,0.8s,mb3.5,baz=122,slow=5.6,SNR=6.6							
ZALV	**Zalesovo Beam**	**76.05**	**328**	P		**P**	**19 27 14.2**	**+0.1**
	0.3nm,0.4s,mb3.3,baz=101,slow=6.0,SNR=2.5							
BVAR	**Borovoye Array**	**83.74**	**324**	P		**P**	**19 27 56.6**	**+1.1**
	1.5nm,0.6s,mb3.9,baz=98,slow=9.1,SNR=9.8							
ILAR	**Eielson Array**	**84.64**	**24**	P		**P**	**19 28 00.1**	**+0.3**
	0.4nm,0.8s,mb3.2,baz=251,slow=5.8,SNR=5.2							
LPAZ	**La Paz**	**141.90**	**123**	PKP		PKPdf	19 35 02.0	+3.5
	0.6nm,0.3s,baz=229,slow=4.8,SNR=2.7							

NEIC ***14*** *19:18:57.0,15.51N×93.65W,h73km,MD4.1(MEX),After MEX.*

MEX 14 19:18:56.8±0.8,15.49N×93.65W,h74km±9km,MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PCIG		**0.46**	**63**	*e*P		Pn	19 19 08.4	-1.2
PCIG				*i* S		Sn	19 19 17.6	-1.6
TGIG		**1.37**	**21**	*e*P		Pn	19 19 19.1	-1.2
TGIG				*i* S		Sn	19 19 35.9	-2.0
THIG		**1.46**	**113**	*i* P		Pn	19 19 19.4	-2.0
THIG				*i* S		Sn	19 19 38.1	-1.7
SCX	**San Cristobal**	**1.57**	**38**	*i* P		Pn	19 19 22.4	-0.5
SCX				*i* S		Sn	19 19 40.6	-1.9
SCX	**San Cristobal**	**1.57**	**38**	*i* P		Pn	19 19 22.4	-0.5
SCX				*i* S		Sn	19 19 40.6	-1.9
HUIG	**Huatulco**	**2.39**	**277**	*i* P		Pn	19 19 33.2	-0.6
HUIG				*i* S		Sn	19 19 59.1	-3.0
HUIG	**Huatulco**	**2.39**	**277**	*i* P		Pn	19 19 33.2	-0.6
HUIG				*i* S		Sn	19 19 59.1	-3.0
VHO	**Vista Hermosa**	**3.35**	**298**	*i* P		Pn	19 19 48.4	+1.5
VHO				*i* S		Sn	19 20 27.1	+1.5
VHO	**Vista Hermosa**	**3.35**	**298**	*i* P		Pn	19 19 48.4	+1.5
VHO				*i* S		Sn	19 20 27.1	+1.5
PNIG	**Pinotepa**	**4.40**	**282**	*i* P		Pn	19 20 01.4	+0.2
PNIG				*i* S		Sn	19 20 50.5	-0.7
PNIG	**Pinotepa**	**4.40**	**282**	*i* P		Pn	19 20 01.4	+0.2
PNIG				*i* S		Sn	19 20 50.5	-0.7
UTMO	**Huajuapan**	**4.61**	**301**	*i* P		Pn	19 20 04.6	+0.6
UTMO				*i* S		Sn	19 20 55.9	-0.5

IDC ***14*** *19:39:19.6±0.7,41.75N×20.26E,h0km,mb3.8/14, mb1 4.0/20,mb1mx3.9/27,mbtmp3.9/20,ML3.9/5,Error ellipse: s-maj=15.5km s-min=11.5km az=143.0*

NEIC ***14*** *19:39:21.7,41.78N×20.22E,h11km,ML4.0(PDG), ML3.8(BRA),ML3.7(ATH),ML3.5(BUC),After PDG.*

ISCJB ***14*** *19:39:22.0±0.3,41.828N±0.009×20.21E±0.01, h14km±1km,mb3.9/12,Error ellipse: s-maj=1.9km s-min=1.2km az=143.0*

PDG ***14*** *19:39:21.7±0.7,41.78N×20.22E,h11km±1km,MD4.0/10, ML4.0/9,Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

SKO ***14*** *19:39:22.6,41.68N×20.33E,h15km,M3.6,ML4.0*

CSEM ***14*** *19:39:22.4±0.1,41.80N×20.22E,h5km,ML4.0,Error ellipse: s-maj=2.3km s-min=1.4km az=51.0*

THE ***14*** *19:39:22.7,41.79N×20.31E,h2km±1km,ML3.6/21,Error ellipse: s-maj=1.7km s-min=0.8km az=308.0*

BEO ***14*** *19:39:22.7±0.7,41.82N×20.23E,h7km±3km,ML3.9/9*

PRU ***14*** *19:39:24.2,41.56N×20.27E,h29km*

TIR ***14*** *19:39:48.4,40.88N×20.27E,h0km,ML4.0*

ISC 14 19:39:22.8±0.3,41.805N±0.009×20.23E±0.01,h7km±2km, n443,σ1§09/649,mb3.9/12,65C-45D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PUK	**Puka**	**0.35**	**313**	*i* PG		**Pg**	**19 39 29.0**	**-0.6**
PUK				*i* SG		**Sg**	**19 39 34.7**	**+0.5**
PUK	**Puka**	**0.35**	**313**	*i* Pg		**Pg**	**19 39 29.0**	**-0.6**
PUK				*i* Sg		**Sg**	**19 39 34.7**	**+0.5**
TIR	**Tirane**	**0.53**	**211**	*e*Pg		**Pg**	**19 39 32.4**	**-0.7**
TIR				*e*Sg		**Sg**	**19 39 41.0**	**+1.0**
TIR	**Tirane**	**0.53**	**211**	*e*Pg		**Pg**	**19 39 32.2**	**-0.9**
TIR				*e*Sg		**Sg**	**19 39 39.9**	**-0.1**
TIR	**Tirane**	**0.53**	**211**	P		**Pg**	**19 39 32.4**	**-0.7**
TIR				S		**Sg**	**19 39 40.5**	**+0.5**
TIR	**Tirane**	**0.53**	**211**	P		**Pg**	**19 39 32.4**	**-0.7**
TIR				*e*Sg		**Sg**	**19 39 39.9**	**-0.1**
TIR				S		**Sg**	**19 39 40.5**	**+0.5**
BCI	**Bajram Curri**	**0.57**	**348**	*i* PG		**Pg**	**19 39 32.9**	**-1.0**
BCI				*i* SG		**Sg**	**19 39 42.2**	**+0.8**
BCI	**Bajram Curri**	**0.57**	**348**	*i* Pg		**Pg**	**19 39 32.9**	**-1.0**
BCI				*i* Sg		**Sg**	**19 39 42.2**	**+0.8**
ULC	**Ulcinj**	**0.75**	**283**	⇑*i* Pg		**Pg**	**19 39 35.9**	**-1.4**
ULC				*e*Sg		**Sg**	**19 39 47.2**	**+0.2**
ULC	**Ulcinj**	**0.75**	**283**	⇑*i* Pg		**Pg**	**19 39 35.9**	**-1.4**
ULC				*e*Sg		**Sg**	**19 39 47.2**	**+0.2**
PVY	**Plav**	**0.81**	**346**	⇑*i* Pg		**Pg**	**19 39 37.2**	**-1.2**
PVY				*e*Sg		**Sg**	**19 39 50.4**	**+1.4**
PVY	**Plav**	**0.81**	**346**	⇑*i* Pg		**Pg**	**19 39 37.2**	**-1.2**
PVY				*e*Sg		**Sg**	**19 39 50.4**	**+1.4**
KRUS	**Krusevo**	**0.88**	**119**	*i* Pg		**Pg**	**19 39 37.5**	**-2.1**
KRUS				*i* Sg		**Sg**	**19 39 50.3**	**-0.7**
KRUS				*e*Lg			19 39 52.7	
	comp=E,2μm,0.3s							
KRUS				*e*Lg			19 39 53.5	
	comp=N,3μm,0.4s							
SKO	**Skopje**	**0.92**	**79**	P		**Pg**	**19 39 40.2**	**-0.2**
SKO				S		**Sg**	**19 39 52.6**	**+0.3**
SKO	**Skopje**	**0.92**	**79**	*i* Pg		**Pg**	**19 39 39.8**	**-0.6**
SKO				*i* Sg		**Sg**	**19 39 52.5**	**+0.3**
SKO				*e*Lg			19 39 52.9	
	comp=E,2μm,0.6s							
SKO				*e*Lg			19 39 55.9	
	comp=N,6μm,0.5s							
SKO	**Skopje**	**0.92**	**79**	P		**Pg**	**19 39 40.2**	**-0.2**
SKO				S		**Sg**	**19 39 52.6**	**+0.3**
PDG	**Podgorica**	**0.96**	**311**	⇑*i* Pg		**Pg**	**19 39 39.4**	**-1.8**
PDG				*e*Sg		**Sg**	**19 39 55.0**	**+1.4**
TTG	**Podgorica**	**0.96**	**311**	⇑*i* Pg		**Pg**	**19 39 39.4**	**-1.8**
TTG				*e*Sg		**Sg**	**19 39 55.0**	**+1.4**
TTG	**Podgorica**	**0.96**	**311**	⇑*i* Pg		**Pg**	**19 39 39.4**	**-1.8**
TTG				*e*Sg		**Sg**	**19 39 55.0**	**+1.4**
BEY	**Berane**	**1.09**	**347**	⇑*i* Pg		**Pg**	**19 39 42.5**	**-1.3**
BEY				*e*Sg		**Sg**	**19 40 00.1**	**+2.1**
IVA	**Berane**	**1.09**	**347**	⇑*i* Pg		**Pg**	**19 39 42.5**	**-1.3**
IVA				*e*Sg		**Sg**	**19 40 00.1**	**+2.1**
IVA	**Berane**	**1.09**	**347**	⇑*i* Pg		**Pg**	**19 39 42.5**	**-1.3**
IVA				*e*Sg		**Sg**	**19 40 00.1**	**+2.1**
BUM	**Brajici-Budva**	**1.11**	**297**	⇑*i* Pg		**Pg**	**19 39 42.6**	**-1.5**
BUM				*e*Sg		**Sg**	**19 39 59.9**	**+1.4**
BUM	**Brajici-Budva**	**1.11**	**297**	⇑*i* Pg		**Pg**	**19 39 42.6**	**-1.5**
BUM				*e*Sg		**Sg**	**19 39 59.9**	**+1.4**
BIA	**Bitola**	**1.14**	**133**	P		**Pg**	**19 39 41.8**	**-2.8**
BIA				S		**Sg**	**19 39 58.7**	**-0.6**
BIA	**Bitola**	**1.14**	**133**	*i* Pg		**Pg**	**19 39 41.9**	**-2.7**
BIA				*i* Sg		**Sg**	**19 39 57.6**	**-1.7**
BIA				*e*Lg			19 39 58.9	
	comp=N,855nm,0.3s							
BIA				*e*Lg			19 40 01.7	
	comp=E,1μm,0.3s							
BIA	**Bitola**	**1.14**	**133**	P		**Pg**	**19 39 41.8**	**-2.8**
BIA				S		**Sg**	**19 39 58.7**	**-0.6**
KBN	**Korca**	**1.25**	**160**	*i* PG		**Pg**	**19 39 45.4**	**-1.4**
KBN				*i* SG		**Sg**	**19 40 03.9**	**+0.9**
KBN	**Korca**	**1.25**	**160**	*i* Pg		**Pg**	**19 39 45.4**	**-1.4**
KBN				*i* Sg		**Sg**	**19 40 03.9**	**+0.9**
FNA	**Florina**	**1.33**	**139**	P		**Pn**	**19 39 45.6**	**-2.2**
FNA				S		**Sb**	**19 40 05.0**	**-0.4**
FNA	**Florina**	**1.33**	**139**	P		**Pn**	**19 39 45.6**	**-2.2**
FNA				S		**Sb**	**19 40 05.0**	**-0.4**
NKY	**Niksic**	**1.36**	**318**	⇑*i* Pg		**Pn**	**19 39 46.4**	**-1.8**
NKY				*e*Sg		**Sg**	**19 40 08.9**	**+2.3**
NKY	**Niksic**	**1.36**	**318**	⇑*i* Pg		**Pn**	**19 39 46.4**	**-1.8**
NKY				*e*Sg		**Sg**	**19 40 08.9**	**+2.3**
HCY	**Herceg Novi**	**1.44**	**297**	⇑*i* Pg		**Pn**	**19 39 48.0**	**-1.3**
HCY				*e*Sg		**Sg**	**19 40 10.4**	**+1.3**
HCY	**Herceg Novi**	**1.44**	**297**	⇑*i* Pg		**Pn**	**19 39 48.0**	**-1.3**
HCY				*e*Sg		**Sg**	**19 40 10.4**	**+1.3**
NEST	**Nestorio**	**1.52**	**156**	P		**Pn**	**19 39 49.9**	**-0.5**
NEST				S		**Sn**	**19 40 11.0**	**+0.6**
NEST	**Nestorio**	**1.52**	**156**	P		**Pn**	**19 39 49.9**	**-0.5**
NEST				S		**Sn**	**19 40 11.0**	**+0.6**
BARS	**Barje**	**1.55**	**49**	⇓*i* Pn		**Pn**	**19 39 50.1**	**-0.7**
BARS				*i* Sn		**Sn**	**19 40 11.6**	**+0.5**
BARS	**Barje**	**1.55**	**49**	⇓*i* Pn		**Pn**	**19 39 50.1**	**-0.7**
BARS				*i* Sn		**Sn**	**19 40 11.6**	**+0.5**
PLE	**Pljevlja**	**1.65**	**338**	⇑*i* Pn		**Pn**	**19 39 52.0**	**-0.1**
PLE				*e*Sn		**Sn**	**19 40 15.9**	**+2.4**
PLE	**Pljevlja**	**1.65**	**338**	⇑*i* Pn		**Pn**	**19 39 52.0**	**-0.1**
PLE				*e*Sn		**Sn**	**19 40 15.9**	**+2.4**
BRY	**Bratogost**	**1.66**	**312**	⇑*i* Pn		**Pn**	**19 39 51.3**	**-1.1**
BRY				*e*Sn		**Sn**	**19 40 16.1**	**+2.1**
BRY	**Bratogost**	**1.66**	**312**	⇑*i* Pn		**Pn**	**19 39 51.3**	**-1.1**
BRY				*e*Sn		**Sn**	**19 40 16.1**	**+2.1**
UPM	**Unac-Piva**	**1.71**	**325**	⇑*i* Pn		**Pn**	**19 39 52.8**	**-0.2**
UPM				*e*Sn		**Sn**	**19 40 17.4**	**+2.4**
UPM	**Unac-Piva**	**1.71**	**325**	⇑*i* Pn		**Pn**	**19 39 52.8**	**-0.2**
UPM				*e*Sn		**Sn**	**19 40 17.4**	**+2.4**
VAY	**Valandovo**	**1.82**	**105**	P		**Pn**	**19 39 53.2**	**-1.3**
VAY				S		**Sn**	**19 40 16.7**	**-1.1**
VAY	**Valandovo**	**1.82**	**105**	*e*Pn		**Pn**	**19 39 53.3**	**-1.2**
VAY	**Valandovo**	**1.82**	**105**	P		**Pn**	**19 39 53.2**	**-1.3**
VAY				S		**Sn**	**19 40 16.7**	**-1.1**
GRG	**Griva**	**1.84**	**117**	P		**Pn**	**19 39 53.8**	**-1.0**
GRG	**Griva**	**1.84**	**117**	P		**Pn**	**19 39 54.0**	**-0.8**
GRG				S		**Sn**	**19 40 18.0**	**-0.3**
GRG	**Griva**	**1.84**	**117**	P		**Pn**	**19 39 54.0**	**-0.8**
GRG				S		**Sn**	**19 40 18.0**	**-0.3**
KZN	**Kozani**	**1.90**	**142**	P		**Pn**	**19 39 55.1**	**-0.4**
KZN	**Kozani**	**1.90**	**142**	*e*P		**Pn**	**19 39 55.2**	**-0.3**
KZN	**Kozani**	**1.90**	**142**	P		**Pn**	**19 39 55.2**	**-0.3**
KZN				S		**Sn**	**19 40 19.4**	**-0.3**
KZN	**Kozani**	**1.90**	**142**	P		**Pn**	**19 39 55.2**	**-0.3**
KZN				S		**Sn**	**19 40 19.4**	**-0.3**
SRN	**Sarande**	**1.93**	**185**	*i* PN		**Pn**	**19 39 57.4**	**+1.4**
SRN				*i* SN		**Sn**	**19 40 26.1**	**+5.6**
SRN	**Sarande**	**1.93**	**185**	*i* Pn		**Pn**	**19 39 57.4**	**+1.4**
KNT	**Kendrikon**	**2.10**	**107**	P		**Pn**	**19 39 57.9**	**-0.5**
KNT				S		**Sn**	**19 40 24.4**	**-0.4**
KNT	**Kendrikon**	**2.10**	**107**	P		**Pn**	**19 39 57.9**	**-0.5**
KNT				S		**Sn**	**19 40 24.4**	**-0.4**
GRUS	**Gruza**	**2.11**	**9**	⇑*i* Pn		**Pn**	**19 39 57.8**	**-0.7**
GRUS				*i* Sn		**Sn**	**19 40 24.3**	**-0.8**
GRUS	**Gruza**	**2.11**	**9**	⇑*i* Pn		**Pn**	**19 39 57.8**	**-0.7**
GRUS				*i* Sn		**Sn**	**19 40 24.3**	**-0.8**
KEK	**Kerkira**	**2.12**	**189**	P		**Pn**	**19 39 58.6**	**0.0**
KEK	**Kerkira**	**2.12**	**189**	*e*P		**Pn**	**19 39 58.5**	**-0.1**
KEK	**Kerkira**	**2.12**	**189**	P		**Pn**	**19 39 58.8**	**+0.2**
KEK				S		**Sn**	**19 40 26.0**	**+0.9**
KEK	**Kerkira**	**2.12**	**189**	P		**Pn**	**19 39 58.6**	**0.0**
KEK				S		**Sn**	**19 40 26.0**	**+0.9**
BBLS	**Lazi?i**	**2.15**	**344**	⇑*i* Pn		**Pn**	**19 39 59.4**	**+0.4**
BBLS				*i* Sn		**Sn**	**19 40 25.8**	**-0.1**
BBLS	**Lazi?i**	**2.15**	**344**	⇑*i* Pn		**Pn**	**19 39 59.4**	**+0.4**
BBLS				*i* Sn		**Sn**	**19 40 25.8**	**-0.1**
STON	**Ston**	**2.16**	**300**	*e*Pn		**Pn**	**19 39 58.2**	**-1.0**
STON				Sn		**Sn**	**19 40 26.1**	**-0.1**
STON	**Ston**	**2.16**	**300**	*e*Pn		**Pn**	**19 39 58.2**	**-1.0**
STON				Sn		**Sn**	**19 40 26.1**	**-0.1**
JAN	**Janina**	**2.20**	**167**	P		**Pn**	**19 40 01.7**	**+2.0**
JAN	**Janina**	**2.20**	**167**	*e*P		**Pn**	**19 40 01.8**	**+2.1**
JAN	**Janina**	**2.20**	**167**	P		**Pn**	**19 40 01.7**	**+2.0**
IGT	**Igoumenitsa**	**2.27**	**178**	P		**Pn**	**19 40 01.0**	**+0.3**
IGT	**Igoumenitsa**	**2.27**	**178**	P		**Pn**	**19 40 01.2**	**+0.5**
IGT				S		**Sn**	**19 40 29.4**	**+0.5**
IGT	**Igoumenitsa**	**2.27**	**178**	P		**Pn**	**19 40 01.0**	**+0.3**
IGT				S		**Sn**	**19 40 29.4**	**+0.5**
DIVS	**Divibare**	**2.30**	**356**	⇑*i* Pn		**Pn**	**19 40 00.8**	**-0.3**
DIVS				*i* Sn		**Sn**	**19 40 29.7**	**0.0**
DIVS	**Divibare**	**2.30**	**356**	P		**Pn**	**19 40 00.9**	**-0.2**
DIVS				S		**Sn**	**19 40 31.9**	**+2.2**
DIVS	**Divibare**	**2.30**	**356**	P		**Pn**	**19 40 00.9**	**-0.2**
DIVS				S		**Sn**	**19 40 31.9**	**+2.2**
ZAPS	**Zavoj**	**2.30**	**50**	⇑*i* Pn		**Pn**	**19 40 01.5**	**+0.3**
ZAPS				*i* Sn		**Sn**	**19 40 30.1**	**+0.4**
ZAPS	**Zavoj**	**2.30**	**50**	⇑*i* Pn		**Pn**	**19 40 01.5**	**+0.3**
ZAPS				*i* Sn		**Sn**	**19 40 30.1**	**+0.4**
PE1	**Pezze di Greco**	**2.34**	**246**	*i* Pn		**Pn**	**19 40 00.5**	**-1.2**
PE1				*e*Sn		**Sn**	**19 40 29.5**	**-1.2**
VTS	**Vitosha**	**2.35**	**69**	⇓*i* Pn		**Pn**	**19 40 01.9**	**+0.2**
VTS				*i* Sn		**Sn**	**19 40 30.5**	**-0.3**
VTS	**Vitosha**	**2.35**	**69**	⇓P		**Pn**	**19 40 01.9**

NEO	**Neokhori**	**3.38**	**137**	P		**Pn**	19 40 17.8	+1.9
NEO	**Neokhori**	**3.38**	**137**	*e*P		**Pn**	19 40 14.8	-1.1
NEO	**Neokhori**	**3.38**	**137**	P		**Pn**	19 40 17.8	+1.9
EFP	**Efpalio**	**3.61**	**159**	*e*P		**Pn**	19 40 20.1	+1.0
EFP	**Efpalio**	**3.61**	**159**	P		**Pn**	19 40 20.7	+1.6
EFP				S		**Sn**	19 41 03.7	+1.7
EFP	**Efpalio**	**3.61**	**159**	P		**Pn**	19 40 20.7	+1.6
EFP				S		**Sn**	19 41 03.7	+1.7
VLS	**Valsamata**	**3.63**	**176**	P		**Pn**	19 40 18.7	-0.8
VLS	**Valsamata**	**3.63**	**176**	*e*P		**Pn**	19 40 17.9	-1.6
VLS	**Valsamata**	**3.63**	**176**	P		**Pn**	19 40 18.2	-1.3
VLS				S		**Sn**	19 41 02.4	-0.2
VLS	**Valsamata**	**3.63**	**176**	P		**Pn**	19 40 18.7	-0.8
VLS				S		**Sn**	19 41 02.4	-0.2
KALE	**Kalithea**	**3.71**	**156**	P		**Pn**	19 40 21.3	+0.8
KALE	**Kalithea**	**3.71**	**156**	P		**Pn**	19 40 21.3	+0.8
TRIZ	**Trizonia**	**3.71**	**157**	P		**Pn**	19 40 22.1	+1.6
TRIZ				S		**Sn**	19 41 06.6	+2.1
TRIZ	**Trizonia**	**3.71**	**157**	P		**Pn**	19 40 22.1	+1.6
TRIZ				S		**Sn**	19 41 06.6	+2.1
TIP	**Timpagrande**	**3.73**	**226**	*e*P		**Pn**	19 40 19.4	-1.4
TIP	**Timpagrande**	**3.73**	**226**	*e*P		**Pn**	19 40 19.4	-1.4
LKR	**Lokris**	**3.79**	**145**	P		**Pn**	19 40 21.8	+0.1
LKR	**Lokris**	**3.79**	**145**	*e*P		**Pn**	19 40 21.3	-0.4
LKR	**Lokris**	**3.79**	**145**	P		**Pn**	19 40 21.4	-0.3
LKR				S		**Sn**	19 41 06.5	-0.1
LKR	**Lokris**	**3.79**	**145**	P		**Pn**	19 40 21.4	-0.3
LKR				S		**Sn**	19 41 06.5	-0.1
LAKA	**Lakka**	**3.80**	**159**	P		**Pn**	19 40 22.4	+0.6
LAKA	**Lakka**	**3.80**	**159**	P		**Pn**	19 40 22.4	+0.6
CUC	**Castrocucco**	**3.81**	**243**	*e*P		**Pn**	19 40 20.5	-1.4
CUC	**Castrocucco**	**3.81**	**243**	*e*P		**Pn**	19 40 20.5	-1.3
DSF	**Desfina**	**3.82**	**152**	P		**Pn**	19 40 21.6	+0.4
DSF				S		**Sn**	19 41 07.7	+0.6
DSF	**Desfina**	**3.82**	**152**	P		**Pn**	19 40 21.6	-0.4
DSF				S		**Sn**	19 41 07.7	+0.6
AOS	**Alonnisos**	**3.83**	**132**	P		**Pn**	19 40 23.4	+1.3
AOS	**Alonnisos**	**3.83**	**132**	P		**Pn**	19 40 20.7	-1.4
AOS				S		**Sn**	19 41 07.9	+0.5
AOS	**Alonnisos**	**3.83**	**132**	P		**Pn**	19 40 20.7	-1.4
AOS				S		**Sn**	19 41 07.9	+0.5
RLS	**Riolos of Patr**	**3.86**	**165**	P		**Pn**	19 40 24.2	+1.6
RLS	**Riolos of Patr**	**3.86**	**165**	*e*P		**Pn**	19 40 23.7	+1.1
RLS	**Riolos of Patr**	**3.86**	**165**	P		**Pn**	19 40 24.2	+1.6
BZS	**Buzias**	**3.94**	**14**	⇑P		**Pn**	19 40 23.1	-0.6
BZS	**Buzias**	**3.94**	**14**	⇑*i*P		**Pn**	19 40 23.1	-0.6
BZS	**Buzias**	**3.94**	**14**	⇑P		**Pn**	19 40 23.1	-0.6
RDO	**Rodhopi**	**4.04**	**98**	P		**Pn**	19 40 24.4	-0.6
RDO	**Rodhopi**	**4.04**	**98**	*e*P		**Pn**	19 40 23.9	-1.1
RDO	**Rodhopi**	**4.04**	**98**	P		**Pn**	19 40 24.6	-0.4
RDO	**Rodhopi**	**4.04**	**98**	P		**Pn**	19 40 24.6	-0.4
GUR	**Goura**	**4.19**	**157**	*e*P		**Pn**	19 40 27.7	+0.6
LIA	**Limnos Island**	**4.21**	**115**	P		**Pn**	19 40 29.2	+1.8
LIA	**Limnos Island**	**4.21**	**115**	P		**Pn**	19 40 29.2	+1.8
LTK	**Loutraki**	**4.32**	**150**	*e*P		**Pn**	19 40 29.9	+1.0
LTK	**Loutraki**	**4.32**	**150**	P		**Pn**	19 40 28.9	0.0
LTK				S		**Sn**	19 41 21.1	+1.6
LTK	**Loutraki**	**4.32**	**150**	P		**Pn**	19 40 28.9	0.0
LTK				S		**Sn**	19 41 21.1	+1.6
RHK3	**Tenkes**	**4.33**	**341**	⇓*e*Pn		**Pn**	19 40 29.1	+0.1
RHK3				*e*Sn		**Sn**	19 41 20.7	+1.1
ALN	**Alexandroupoli**	**4.47**	**100**	P		**Pn**	19 40 30.5	-0.4
ALN	**Alexandroupoli**	**4.47**	**100**	*e*P		**Pn**	19 40 30.5	-0.4
ALN	**Alexandroupoli**	**4.47**	**100**	P		**Pn**	19 40 30.6	-0.3
ALN				S		**Sn**	19 41 23.8	+0.7
ALN	**Alexandroupoli**	**4.47**	**100**	P		**Pn**	19 40 30.5	-0.4
ALN				S		**Sn**	19 41 23.8	+0.7
PKSM	**Moragy**	**4.55**	**346**	⇑*i*Pn		**Pn**	19 40 31.7	-0.4
PKSM				*i* Sn		**Sn**	19 41 22.4	-2.8
PKSM	**Moragy**	**4.55**	**346**	⇓P		**Pn**	19 40 31.9	-0.2
PKSM				S		**Sn**	19 41 25.2	0.0
PKSM	**Moragy**	**4.55**	**346**	⇓*i*P		**Pn**	19 40 31.9	-0.2
PKSM	**Moragy**	**4.55**	**346**	S		**Sn**	19 41 25.2	0.0
PKSM	**Moragy**	**4.55**	**346**	⇓P		**Pn**	19 40 31.9	-0.2
PKSM				*e*Sn		**Sn**	19 41 25.3	+0.1
GADA	**Gvkgeada**	**4.58**	**109**	*e*PN		**Pn**	19 40 32.5	+0.1
GADA	**Gvkgeada**	**4.58**	**109**	*e*Pn		**Pn**	19 40 32.6	+0.1
ENEZ	**Enez**	**4.59**	**101**	*e*PN		**Pn**	19 40 31.6	-0.9
ENEZ	**Enez**	**4.59**	**101**	*e*Pn		**Pn**	19 40 31.6	-0.9
VLX	**Vlachokerasia**	**4.73**	**159**	*e*P		**Pn**	19 40 35.8	+1.3
PKS2	**Kecel**	**4.74**	**351**	⇓*e*Pn		**Pn**	19 40 35.1	+0.4
PKS2				*e*Sn		**Sn**	19 41 28.4	-1.5
JMB	**Yambol**	**4.77**	**80**	P		**Pn**	19 40 34.8	-0.2
JMB	**Yambol**	**4.77**	**80**	P		**Pn**	19 40 34.8	-0.2
NVLJ	**Novalja**	**4.79**	**307**	*e*Pn		**Pn**	19 40 35.2	-0.2
NVLJ				Sn		**Sn**	19 41 31.9	+0.7
NVLJ	**Novalja**	**4.79**	**307**	*e*Pn		**Pn**	19 40 35.1	-0.3
NVLJ				Sn		**Sn**	19 41 31.8	+0.7
ITM	**Ithomi**	**4.80**	**164**	P		**Pn**	19 40 36.8	+1.3
ITM	**Ithomi**	**4.80**	**164**	P		**Pn**	19 40 36.8	+1.3
VLY	**Voula,Athens**	**4.80**	**144**	P		**Pn**	19 40 36.9	+1.3
VLY	**Voula,Athens**	**4.80**	**144**	*e*P		**Pn**	19 40 35.5	-0.1
VLY	**Voula,Athens**	**4.80**	**144**	P		**Pn**	19 40 36.9	+1.3
PKS6	**Bocsa**	**4.82**	**354**	*e*Sn		**Sn**	19 41 29.8	-1.9
CEL	**Celeste**	**4.86**	**225**	*e*P		**Pn**	19 40 34.4	-1.9
CEL	**Celeste**	**4.86**	**225**	*e*P		**Pn**	19 40 34.4	-1.9
EDRB	**Edirne**	**4.87**	**87**	*e*PN		**Pn**	19 40 35.4	-1.0
EDRB	**Edirne**	**4.87**	**87**	*e*Pn		**Pn**	19 40 35.4	-1.0
DID	**Didima**	**4.88**	**151**	*e*P		**Pn**	19 40 37.0	+0.4
DID	**Didima**	**4.88**	**151**	P		**Pn**	19 40 36.7	+0.1
DID				S		**Sn**	19 41 34.9	+1.6
DID	**Didima**	**4.88**	**151**	P		**Pn**	19 40 36.7	+0.1
DID				S		**Sn**	19 41 34.9	+1.6
GELI	**Tayfur-Gelibol**	**4.92**	**105**	*e*PN		**Pn**	19 40 36.7	-0.4
GELI	**Tayfur-Gelibol**	**4.92**	**105**	*e*Pn		**Pn**	19 40 36.7	-0.4
PKS9	**Tamasi**	**4.98**	**344**	⇑*e*Pn		**Pn**	19 40 38.3	+0.3
PKS9				*e*Sn		**Sn**	19 41 36.3	+0.5
SIGR	**SIGRI**	**5.01**	**119**	P		**Pn**	19 40 40.6	+2.3
SIGR	**SIGRI**	**5.01**	**119**	P		**Pn**	19 40 40.6	+2.3
PYL	**PYLOS**	**5.04**	**166**	*e*P		**Pn**	19 40 38.1	-0.7
PYL	**PYLOS**	**5.04**	**166**	P		**Pn**	19 40 37.9	-0.9
PYL	**PYLOS**	**5.04**	**166**	P		**Pn**	19 40 37.9	-0.9
VOIR		**5.04**	**42**	⇓P		**Pn**	19 40 39.2	+0.4
VOIR				S		**Sn**	19 41 36.0	-1.2
VOIR		**5.04**	**42**	⇓*i*P		**Pn**	19 40 39.2	+0.4
VOIR		**5.04**	**42**	S		**Sn**	19 41 36.0	-1.2
VOIR		**5.04**	**42**	⇓P		**Pn**	19 40 39.2	+0.4
VOIR				S		**Sn**	19 41 36.0	-1.2
PKSN	**Nyarlorinc**	**5.10**	**357**	⇓*e*Pn		**Pn**	19 40 39.6	0.0
PKSN				*e*Sn		**Sn**	19 41 37.3	-1.4
AQU	**L'Aquila**	**5.11**	**278**	*e*P		**Pn**	19 40 39.1	-0.7
	comp=E,56nm,0.7s							
AQU	**L'Aquila**	**5.11**	**278**	⇑*i*P		**Pn**	19 40 40.7	+0.9
AQU	**L'Aquila**	**5.11**	**278**	*e*P		**Pn**	19 40 39.1	-0.7
	comp=E,56nm,0.7s							
BOJS	**Bojanci**	**5.17**	**317**	*i* Pn		**Pn**	19 40 41.4	+0.8
BOJS				*i* Sn		**Sn**	19 41 39.5	-0.9
BOJS	**Bojanci**	**5.17**	**317**	*i* Pn		**Pn**	19 40 41.4	+0.8
BOJS				*i* Sn		**Sn**	19 41 39.5	-0.9
BOJS								
	comp=Z,92nm,0.8s							
BOJS	**Bojanci**	**5.17**	**317**	*i* Pn		**Pn**	19 40 41.4	+0.8
BOJS				*i* Sn		**Sn**	19 41 39.5	-0.9
SULR		**5.25**	**55**	⇑P		**Pn**	19 40 42.0	+0.3
SULR		**5.25**	**55**	⇑*i*P		**Pn**	19 40 42.0	+0.3
SULR		**5.25**	**55**	⇑P		**Pn**	19 40 42.0	+0.3
BEHE	**Becsehely**	**5.29**	**333**	⇓*e*P		**Pn**	19 40 43.2	+1.1
BEHE				*e*Sn		**Sn**	19 41 44.0	+0.7
DRGR		**5.29**	**19**	⇓P		**Pn**	19 40 41.7	-0.5
DRGR		**5.29**	**19**	⇓*i*P		**Pn**	19 40 41.7	-0.5
DRGR		**5.29**	**19**	⇓P		**Pn**	19 40 41.7	-0.5
PKS7	**Kunszentmiklos**	**5.30**	**352**	⇓*e*Pn		**Pn**	19 40 42.6	+0.3
PKS7				*e*Sn		**Sn**	19 41 44.2	+0.6
CRES	**Cresnjev**	**5.30**	**321**	*i* Pn		**Pn**	19 40 43.0	+0.7
CRES	**Cresnjev**	**5.30**	**321**	*i* Pn		**Pn**	19 40 43.0	+0.7
RKY	**Sarkoy-Tekirda**	**5.35**	**100**	*e*PN		**Pn**	19 40 42.3	-0.7
RKY	**Sarkoy-Tekirda**	**5.35**	**100**	*e*Pn		**Pn**	19 40 42.3	-0.8
GOLS	**Golise**	**5.36**	**323**	*i* Pn		**Pn**	19 40 43.8	+0.6
GOLS	**Golise**	**5.36**	**323**	*i* Pn		**Pn**	19 40 43.8	+0.6
KOGS	**Kog**	**5.46**	**330**	*i* Pn		**Pn**	19 40 44.7	+0.2
KOGS	**Kog**	**5.46**	**330**	*i* Pn		**Pn**	19 40 44.7	+0.2
VLI	**Veliai**	**5.50**	**157**	P		**Pn**	19 40 47.0	+2.0
VLI	**Veliai**	**5.50**	**157**	P		**Pn**	19 40 47.0	+2.0
MLR	**Muntele Rosu**	**5.54**	**46**	⇑P		**Pn**	19 40 46.5	+0.8
MLR	**Muntele Rosu**	**5.54**	**46**	Pn		**Pn**	19 40 46.1	+0.4
	comp=Z,3.0nm,0.3s,baz=162,slow=9.0,SNR=34							
MLR				Sn		**Sn**	19 41 50.1	+0.5
	comp=Z,1.1nm,0.3s,baz=225,slow=14,SNR=4.3							
MLR	**Muntele Rosu**	**5.54**	**46**	⇑*i*P		**Pn**	19 40 46.5	+0.8
MLR	**Muntele Rosu**	**5.54**	**46**	⇑P		**Pn**	19 40 46.5	+0.8
VISS	**Visnje**	**5.59**	**317**	*i* Pn		**Pn**	19 40 46.8	+0.5
VISS	**Visnje**	**5.59**	**317**	*i* Pn		**Pn**	19 40 46.8	+0.5
KNDS	**Knezji Dol**	**5.64**	**313**	*i* Pn		**Pn**	19 40 47.5	+0.4
KNDS				*i* Sn		**Sn**	19 41 53.4	+1.2
KNDS	**Knezji Dol**	**5.64**	**313**	*i* Pn		**Pn**	19 40 47.5	+0.4
KNDS				*i* Sn		**Sn**	19 41 53.4	+1.2
KNDS								
	comp=Z,306nm,1.4s							
KNDS	**Knezji Dol**	**5.64**	**313**	*i* Pn		**Pn**	19 40 47.5	+0.4
KNDS				*i* Sn		**Sn**	19 41 53.3	+1.2
PDKS	**Podkum**	**5.69**	**320**	*e*Pn		**Pn**	19 40 48.4	+0.6
PKSG		**5.74**	**347**	⇓*e*Pn		**Pn**	19 40 48.7	+0.3
PKSG				*e*Sn		**Sn**	19 41 53.8	-0.6
BUD	**Budapest**	**5.74**	**352**	⇓*e*Pn		**Pn**	19 40 48.6	+0.2
BUD				*e*Sn		**Sn**	19 41 52.5	-2.0
BUD	**Budapest**	**5.74**	**352**	⇓*e*Pn		**Pn**	19 40 48.6	+0.2
BUD				*e*Sn		**Sn**	19 41 52.5	-2.0
CEY	**Cerknica**	**5.76**	**315**	*i* Pn		**Pn**	19 40 49.2	+0.6
CEY				*e*Sn		**Sn**	19 41 54.7	-0.2
CEY	**Cerknica**	**5.76**	**315**	*i* Pn		**Pn**	19 40 49.2	+0.6
CEY				*e*Sn		**Sn**	19 41 54.7	-0.2
CEY								
	comp=Z,178nm,1.0s							
CEY	**Cerknica**	**5.76**	**315**	*i* Pn		**Pn**	19 40 49.2	+0.6
CEY				*e*Sn		**Sn**	19 41 54.7	-0.2
SKDS	**Skadanscina**	**5.86**	**312**	*i* Pn		**Pn**	19 40 49.5	-0.5
SKDS				*i* Sn		**Sn**	19 41 54.3	-3.1
SKDS								
	comp=Z,288nm,1.6s							
LJU	**Ljubljana**	**5.91**	**318**	*i* Pn		**Pn**	19 40 51.1	+0.3
LJU				*i* Sn		**Sn**	19 41 58.6	0.0
GONE	**Gonen-Balikesi**	**5.91**	**105**	*e*PN		**Pn**	19 40 50.7	0.0
GONE	**Gonen-Balikesi**	**5.91**	**105**	*e*Pn		**Pn**	19 40 50.7	0.0
BALY	**Balya**	**5.97**	**108**	*i* P		**Pn**	19 40 52.9	+1.2
BALY	**Balya**	**5.97**	**108**	*i* P		**Pn**	19 40 52.8	+1.2
JAVS	**Javornik**	**6.05**	**315**	*i* Pn		**Pn**	19 40 52.9	+0.3
JAVS				*e*Sn		**Sn**	19 42 00.3	-1.8
JAVS	**Javornik**	**6.05**	**315**	*i* Pn		**Pn**	19 40 52.9	+0.3
JAVS				*e*Sn		**Sn**	19 42 00.3	-1.8
JAVS								
	comp=Z,347nm,1.4s							
JAVS	**Javornik**	**6.05**	**315**	*i* Pn		**Pn**	19 40 52.9	+0.3
PERS	**Pernice**	**6.07**	**324**	*i* Pn		**Pn**	19 40 53.4	+0.5
PERS				*i* Sn		**Sn**	19 42 02.9	+0.4
CRNS	**Crni Vrh**	**6.07**	**317**	*e*Pn		**Pn**	19 40 53.2	+0.3
TRI	**Trieste**	**6.10**	**312**	*e*P		**Pn**	19 40 52.1	-1.1
	comp=Z,39nm,0.6s							
TRI	**Trieste**	**6.10**	**312**	*e*P		**Pn**	19 40 52.1	-1.2
	comp=Z,39nm,0.6s							
PSZ	**Piszkesteto**	**6.12**	**358**	*e*P		**Pn**	19 40 53.1	-0.4
	comp=Z,20nm,0.4s							
PSZ	**Piszkesteto**	**6.12**	**358**	⇑*i*P		**Pn**	19 40 53.2	-0.4
PSZ	**Piszkesteto**	**6.12**	**358**	⇓*i*Pn		**Pn**	19 40 53.4	-0.2
PSZ				*e*Sn		**Sn**	19 42 04.4	+0.6
PSZ	**Piszkesteto**	**6.12**	**358**	⇓*e*Pn		**Pn**	19 40 53.3	-0.3
PSZ				*e*Sn		**Sn**	19 42 04.3	+0.5
PSZ	**Piszkesteto**	**6.12**	**358**	⇓*e*Pn		**Pn**	19 40 53.3	-0.3
PSZ				S		**Sn**	19 42 03.8	0.0
PSZ				*e*Sn		**Sn**	19 42 04.3	+0.5
SOKA	**Soboth**	**6.14**	**324**	⇑*i*Pn		**Pn**	19 40 54.5	+0.6
SOKA				⇓*i*Sn		**Sn**	19 42 04.5	+0.2
SOKA	**Soboth**	**6.14**	**324**	Pn		**Pn**	19 40 54.5	+0.7
SOKA				Sn		**Sn**	19 42 04.5	+0.2
PLOR	**Plostina**	**6.16**	**47**	⇑*i*P		**Pn**	19 40 54.9	+0.8
PLOR	**Plostina**	**6.16**	**47**	⇑*i*P		**Pn**	19 40 54.9	+0.8
VRI	**Vrincioaia**	**6.21**	**47**	⇑P		**Pn**	19 40 55.5	+0.7
VRI	**Vrincioaia**	**6.21**	**47**	⇑*i*P		**Pn**	19 40 55.5	+0.7
VRI	**Vrincioaia**	**6.21**	**47**	⇑P		**Pn**	19 40 55.5	+0.7
VAE	**Valguarnera**	**6.23**	**228**	Sn		**Sn**	19 42 08.3	+1.6
	comp=Z,0.5nm,0.3s,baz=238,slow=13,SNR=3.7							
VOJS	**Vojsko**	**6.24**	**315**	*i* Pn		**Pn**	19 40 55.5	+0.4
VOJS				*i* Sn		**Sn**	19 42 05.4	-1.2
VOJS	**Vojsko**	**6.24**	**315**	*i* Pn		**Pn**	19 40 55.5	+0.4
VOJS				*i* Sn		**Sn**	19 42 05.4	-1.2
VOJS								
	comp=Z,302nm,1.6s							
VOJS	**Vojsko**	**6.24**	**315**	*i* Pn		**Pn**	19 40 55.5	+0.3
VOJS				*i* Sn		**Sn**	19 42 05.4	-1.2
CTKS	**Kestanelik-??a**	**6.24**	**92**	*e*PN		**Pn**	19 40 54.4	-0.8
CTKS	**Kestanelik-??a**	**6.24**	**92**	*e*Pn		**Pn**	19 40 54.4	-0.8
ARSA	**Arzberg**	**6.40**	**330**	⇑*i*Pn		**Pn**	19 40 58.2	+0.8
	SNR=9.7							
ARSA				⇓*i*Sn		**Sn**	19 42 12.3	+1.6
ARSA	**Arzberg**	**6.40**	**330**	Pn		**Pn**	19 40 58.2	+0.8
	SNR=9.7							
ARSA				Sn		**Sn**	19 42 12.3	+1.6
SOP	**Sopron**	**6.43**	**337**	⇓*e*Pn		**Pn**	19 40 58.9	+1.0
SOP				*e*Sn		**Sn**	19 42 10.3	-1.2
SOP	**Sopron**	**6.43**	**337**	⇓*e*Pn		**Pn**	19 41 00.1	+2.2
SOP				*e*Sn		**Sn**	19 42 07.3	-4.2
SOP	**Sopron**	**6.43**	**337**	⇓*e*Pn		**Pn**	19 40 58.9	+1.0
SOP				*e*Sn		**Sn**	19 42 10.3	-1.2
CADS	**Cadrg**	**6.44**	**316**	*i* Pn		**Pn**	19 40 57.9	-0.1
CADS				*e*Sn		**Sn**	19 42 10.8	-0.9
CADS	**Cadrg**	**6.44**	**316**	*i* Pn		**Pn**	19 40 57.9	-0.1
CADS				*e*Sn		**Sn**	19 42 10.8	-0.9
CADS								
	comp=Z,263nm,1.6s							
CADS	**Cadrg**	**6.44**	**316**	*i* Pn		**Pn**	19 40 57.8	-0.2
CADS				*e*Sn		**Sn**	19 42 10.8	-0.9
TRPA	**Tarpa**	**6.53**	**14**	⇑*e*Pn		**Pn**	19 40 59.0	-0.3
TIRR	**Tirgusor**	**6.54**	**63**	*e*P		**Pn**	19 40 59.2	-0.3
	comp=Z,8.3nm,0.8s							
TIRR	**Tirgusor**	**6.54**	**63**	⇑*i*P		**Pn**	19 41 00.2	+0.8
TIRR	**Tirgusor**	**6.54**	**63**	*e*P		**Pn**	19 40 59.2	-0.2
	comp=Z,8.3nm,0.8s							
DURS	**Dursunbey**	**6.64**	**107**	*i* P		**Pn**	19 41 02.2	+1.5
DURS	**Dursunbey**	**6.64**	**107**	*i* P		**Pn**	19 41 02.2	+1.5
KECS	**Kecovo**	**6.68**	**1**	*e*Pn		**Pn**	19 41 02.0	+0.7
KECS				*e*			19 42 13.3	
KECS				*e*Sn		**Sn**	19 42 18.2	+0.6
KECS	**Kecovo**	**6.68**	**1**	*e*PN		**Pn**	19 41 02.0	+0.7
KECS				*e*			19 42 13.3	
KECS	**Kecovo**	**6.68**	**1**	*e*SN		**Sn**	19 42 18.2	+0.6
KECS	**Kecovo**	**6.68**	**1**	*e*Pn		**Pn**	19 41 02.0	+0.7
KECS				*e*Sn		**Sn**	19 42 18.2	+0.6
MYKA	**Terra Mystica**	**6.76**	**318**	⇓*i*Pn		**Pn**	19 41 02.8	+0.4
MYKA				⇓*i*Sn		**Sn**	19 42 20.5	+1.0
MYKA	**Terra Mystica**	**6.76**	**318**	Pn		**Pn**	19 41 02.8	+0.4
MYKA				Sn		**Sn**	19 42 20.5	+1.0
VYHS	**Vyhne**	**6.76**	**352**	*e*Pn		**Pn**	19 41 03.3	+0.9
VYHS				*e*Sn		**Sn**	19 42 13.3	-6.3
VYHS	**Vyhne**	**6.76**	**352**	*e*PN		**Pn**	19 41 03.2	+0.8
VYHS				*e*SN		**Sn**	19 42 13.3	-6.3
VYHS	**Vyhne**	**6.76**	**352**	*e*Pn		**Pn**	19 41 03.3	+0.9
ZST	**Bratislava**	**6.76**	**342**	*e*Pn		**Pn**	19 41 04.5	+2.1
ZST				*e*			19 42 11.3	
ZST				*e*Sn		**Sn**	19 42 17.7	-2.0
ZST	**Bratislava**	**6.76**	**342**	*e*PN		**Pn**	19 41 04.5	+2.1
ZST				*e*			19 42 11.3	
ZST	**Bratislava**	**6.76**	**342**	*e*SN		**Sn**	19 42 17.7	-2.0
ZST	**Bratislava**	**6.76**	**342**	*e*Pn		**Pn**	19 41 04.5	+2.1
ZST				*e*Sn		**Sn**	19 42 17.7	-2.0
BURAR	**Bucovina Array**	**6.81**	**30**	⇓P		**Pn**	19 41 03.4	+0.3
BURAR	**Bucovina Array**	**6.81**	**30**	⇓*i*P		**Pn**	19 41 03.3	+0.3
BURAR	**Bucovina Array**	**6.81**	**30**	⇓P		**Pn**	19 41 03.3	+0.3
BUR08	**Bucovina Ar. S**	**6.83**	**30**	*e*P		**Pn**	19 41 03.6	+0.3
BUR08	**Bucovina Ar. S**	**6.83**	**30**	*e*P		**Pn**	19 41 03.6	+0.3
CONA	**Conrad Observa**	**6.87**	**335**	⇑*i*Pn		**Pn**	19 41 05.1	+1.3
	SNR=5.8							
CONA				⇑*i*Sn		**Sn**	19 42 24.6	+2.5
CONA	**Conrad Observa**	**6.87**	**335**	Pn		**Pn**	19 41 05.1	+1.3
	SNR=5.8							
CONA				Sn		**Sn**	19 42 24.6	+2.5
MODS	**Modra-Piesok**	**6.89**	**343**	*e*Pn		**Pn**	19 41 07.3	+3.1
MODS				*e*			19 42 16.1	
MODS				*e*Sn		**Sn**	19 42 21.8	-1.0
MODS	**Modra-Piesok**	**6.89**	**343**	*e*PN		**Pn**	19 41 07.3	+3.1
MODS				*e*			19 42 16.1	
MODS	**Modra-Piesok**	**6.89**	**343**	*e*SN		**Sn**	19 42 21.8	-1.0
KOLL	**Kolacno**	**6.90**	**350**	*e*Pn		**Pn**	19 41 05.2	+1.0
KOLL				*e*			19 42 17.8	
KOLL				*e*Sn		**Sn**	19 42 22.5	-0.4
KOLL	**Kolacno**	**6.90**	**350**	*e*PN		**Pn**	19 41 05.2	+1.0
KOLL				*e*			19 42 17.8	
KOLL	**Kolacno**	**6.90**	**350**	*e*SN		**Sn**	19 42 22.5	-0.4
KOLL	**Kolacno**	**6.90**	**350**	*e*Pn		**Pn**	19 41 05.2	+1.0
KOLL				*e*Sn		**Sn**	19 42 22.5	-0.4
TLCR		**7.10**	**59**	⇑P		**Pn**	19 41 07.8	+0.8
TLCR		**7.10**	**59**	⇑*i*P		**Pn**	19 41 07.8	+0.8
TLCR		**7.10**	**59**	⇑P		**Pn**	19 41 07.8	+0.8
CRVS	**Cervenica-Dubn**	**7.15**	**7**	*i* Pn		**Pn**	19 41 08.6	+0.9
CRVS				*e*			19 42 22.7	
CRVS				*e*Sn		**Sn**	19 42 29.2	0.0
CRVS	**Cervenica-Dubn**	**7.15**	**7**	*i* PN		**Pn**	19 41 08.6	+0.9
CRVS				*e*			19 42 22.7	
CRVS	**Cervenica-Dubn**	**7.15**	**7**	*e*SN		**Sn**	19 42 29.2	0.0
CRVS	**Cervenica-Dubn**	**7.15**	**7**	*i* Pn		**Pn**	19 41 08.6	+0.9
CRVS				*e*Sn		**Sn**	19 42 29.2	0.0
HRT	**Hereke**	**7.17**	**95**	*e*PN		**Pn**	19 41 08.1	0.0
HRT	**Hereke**	**7.17**	**95**	*e*Pn		**Pn**	19 41 08.1	+0.1
KBA	**Koelnbreinsper**	**7.22**	**319**	*i* Pn		**Pn**	19 41 09.4	+0.8
	SNR=34							
KBA				⇑*i*Sn		**Sn**	19 42 31.7	+0.9
KBA	**Koelnbreinsper**	**7.22**	**319**

comp=Z,0.4nm,0.8s,mb3.8,baz=76,slow=5.3,SNR=4.2

TXAR	**Lajitas Array**	**92.32**	**314**	P	**P**	**19 52 32.5**	**-1.4**
WRA	**Warramunga Arr**	**120.83**	**90**	PKP	PKPdf	19 58 12.4	-3.5
	comp=Z,0.3nm,0.8s,baz=296,slow=2.0,SNR=3.1						
ASAR	**Alice Springs**	**122.70**	**94**	PKP	PKPdf	19 58 16.0	-3.5
	comp=Z,0.4nm,0.6s,baz=321,slow=1.4,SNR=10.0						

*ISCJB **14** 19:48:26.3±0.4, 41.80N±0.02×20.27E±0.03, h10km, Error ellipse: s-maj=4.0km s-min=2.4km az=136.1*
*SKO **14** 19:48:26.4, 41.75N×20.33E, h4km, M1.9, ML2.3*
*THE **14** 19:48:26.6, 41.77N×20.29E, h0km±4km, ML2.5/1, Error ellipse: s-maj=6.7km s-min=1.3km az=354.0*
*CSEM **14** 19:48:26.1±0.3, 41.79N×20.26E, h2km, ML2.5/1, Error ellipse: s-maj=7.2km s-min=4.0km az=61.0*
*PDG **14** 19:48:27.5±0.3, 41.81N×20.16E, h6km±1km, ML2.4/10, Error ellipse: s-maj=1.3km s-min=1.6km az=0.0*

ISC 14 19:48:26.6±0.4, 41.77N±0.02×20.27E±0.03, h1km±5km, n34, σ1°04/68, 10C-10D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUK	**Puka**	**0.39**	**314**	*i* Pg	**Pg**	**19 48 33.2**	**-0.8**
PUK				*i* Sg	**Sg**	**19 48 39.5**	**+0.4**
PUK	**Puka**	**0.39**	**314**	*i* Pg	**Pg**	**19 48 33.2**	**-0.8**
PUK				*i* Sg	**Sg**	**19 48 39.5**	**+0.4**
TIR	**Tirane**	**0.52**	**216**	P	**Pg**	**19 48 36.5**	**-0.1**
TIR				S	**Sg**	**19 48 44.8**	**+1.5**
TIR	**Tirane**	**0.52**	**216**	P	**Pg**	**19 48 36.5**	**-0.1**
TIR				S	**Sg**	**19 48 44.8**	**+1.5**
BCI	**Bajram Curri**	**0.61**	**346**	*i* PG	**Pg**	**19 48 36.5**	**-1.8**
BCI				*i* SG	**Sg**	**19 48 46.5**	**+0.3**
BCI	**Bajram Curri**	**0.61**	**346**	*i* Pg	**Pg**	**19 48 36.5**	**-1.8**
BCI				*i* Sg	**Sg**	**19 48 46.5**	**+0.3**
ULC	**Ulcinj**	**0.79**	**284**	⇓ *i* Pg	**Pg**	**19 48 40.2**	**-1.4**
ULC				*e*Sg	**Sg**	**19 48 51.5**	**-0.3**
ULC	**Ulcinj**	**0.79**	**284**	⇓ *i* Pg	**Pg**	**19 48 40.2**	**-1.4**
ULC				*e*Sg	**Sg**	**19 48 51.5**	**-0.3**
KRUS	**Krusevo**	**0.84**	**119**	*i* Pg	**Pg**	**19 48 41.6**	**-0.9**
KRUS				*e*Sg	**Sg**	**19 48 54.7**	**+1.3**
KRUS				*e*Lg		19 48 57.0	
	comp=N,23nm,0.2s						
KRUS				*e*Lg		19 48 57.1	
	comp=E,38nm,0.3s						
PVY	**Plav**	**0.85**	**345**	⇓ *i* Pg	**Pg**	**19 48 41.8**	**-1.1**
PVY				*e*Sg	**Sg**	**19 48 55.1**	**+1.2**
PVY	**Plav**	**0.85**	**345**	⇓ *i* Pg	**Pg**	**19 48 41.8**	**-1.1**
PVY				*e*Sg	**Sg**	**19 48 55.1**	**+1.2**
SKO	**Skopje**	**0.90**	**77**	*e*Pg	**Pg**	**19 48 43.0**	**-0.7**
SKO				*e*Sg	**Sg**	**19 48 55.8**	**+0.5**
SKO				*e*Lg		19 48 57.7	
	comp=N,79nm,0.4s						
SKO				*e*Lg		19 48 58.0	
	comp=E,31nm,0.3s						
PDG	**Podgorica**	**1.00**	**311**	⇑ *i* Pg	**Pg**	**19 48 43.5**	**-2.2**
PDG				*e*Sg	**Sg**	**19 48 59.2**	**+0.6**
TTG	**Podgorica**	**1.00**	**311**	⇑ *i* Pg	**Pg**	**19 48 43.5**	**-2.2**
TTG				*e*Sg	**Sg**	**19 48 59.2**	**+0.6**
BEY	**Berane**	**1.13**	**346**	⇓ *i* Pg	**Pg**	**19 48 47.3**	**-0.9**
BEY				*e*Sg	**Sg**	**19 49 04.0**	**+1.1**
IVA	**Berane**	**1.13**	**346**	⇓ *i* Pg	**Pg**	**19 48 47.3**	**-0.9**
IVA				*e*Sg	**Sg**	**19 49 04.0**	**+1.1**
BUM	**Brajici-Budva**	**1.15**	**298**	⇑ *i* Pg	**Pg**	**19 48 47.2**	**-1.4**
BUM				*e*Sg	**Sg**	**19 49 04.4**	**+0.9**
BUM	**Brajici-Budva**	**1.15**	**298**	⇑ *i* Pg	**Pg**	**19 48 47.2**	**-1.4**
BUM				*e*Sg	**Sg**	**19 49 04.4**	**+0.9**
FNA	**Florina**	**1.29**	**140**	P	**Pg**	**19 48 50.4**	**-0.9**
FNA				S	**Sg**	**19 49 09.3**	**+1.2**
FNA	**Florina**	**1.29**	**140**	P	**Pg**	**19 48 50.4**	**-0.9**
FNA				S	**Sg**	**19 49 09.3**	**+1.2**
NKY	**Niksic**	**1.40**	**318**	⇓ *i* Pg	**Pn**	**19 48 52.0**	**-1.3**
NKY				*e*Sg	**Sg**	**19 49 13.3**	**+1.6**
NKY	**Niksic**	**1.40**	**318**	⇓ *i* Pg	**Pn**	**19 48 52.0**	**-1.3**
NKY				*e*Sg	**Sg**	**19 49 13.3**	**+1.6**
NEST	**Nestorio**	**1.48**	**156**	P	**Pn**	**19 48 54.1**	**-0.2**
NEST				S	**Sb**	**19 49 15.1**	**+1.0**
NEST	**Nestorio**	**1.48**	**156**	P	**Pn**	**19 48 54.1**	**-0.2**
NEST				S	**Sb**	**19 49 15.1**	**+1.0**
HCY	**Herceg Novi**	**1.48**	**298**	⇑ *i* Pg	**Pn**	**19 48 52.5**	**-1.8**
HCY				*e*Sg	**Sg**	**19 49 14.9**	**+0.8**
HCY	**Herceg Novi**	**1.48**	**298**	⇑ *i* Pg	**Pn**	**19 48 52.5**	**-1.8**
HCY				*e*Sg	**Sg**	**19 49 14.9**	**+0.8**
PLE	**Pljevlja**	**1.69**	**338**	⇓ *i* Pn	**Pn**	**19 48 57.7**	**+0.6**
PLE				*e*Sn	**Sg**	**19 49 21.4**	**+0.7**
PLE	**Pljevlja**	**1.69**	**338**	⇓ *i* Pn	**Pn**	**19 48 57.7**	**+0.6**
PLE				*e*Sn	**Sg**	**19 49 21.4**	**+0.7**
BRY	**Bratogost**	**1.71**	**312**	⇑ *i* Pn	**Pn**	**19 48 57.2**	**-0.2**
BRY				*e*Sn	**Sn**	**19 49 21.5**	**+1.6**
BRY	**Bratogost**	**1.71**	**312**	⇑ *i* Pn	**Pn**	**19 48 57.2**	**-0.2**
BRY				*e*Sn	**Sn**	**19 49 21.5**	**+1.6**
UPM	**Unac-Piva**	**1.75**	**325**	⇑ *i* Pn	**Pn**	**19 48 58.6**	**+0.6**
UPM				*e*Sn	**Sg**	**19 49 23.4**	**+0.7**
UPM	**Unac-Piva**	**1.75**	**325**	⇑ *i* Pn	**Pn**	**19 48 58.6**	**+0.6**
UPM				*e*Sn	**Sg**	**19 49 23.4**	**+0.7**
STON	**Ston**	**2.20**	**301**	*e*Pn	**Pn**	**19 49 03.5**	**-0.8**
STON				Sn	**Sn**	**19 49 31.9**	**-0.2**
STON	**Ston**	**2.20**	**301**	*e*Pn	**Pn**	**19 49 03.4**	**-0.8**
STON				Sn	**Sn**	**19 49 31.8**	**-0.3**

JSN 14 19:52:01.0±2.0, 17.42N×75.42W, h122km±339km, MD3.8, 1C-1D, Jamaica region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOJ	**Hope**	**1.40**	**295**	*i* P	Pn	19 52 27.3	-0.1
GWJ	**Greenwich**	**1.41**	**298**	⇓ *i* P	Pn	19 52 26.9	-0.6
GWJ				*i* S	Sn	19 52 44.9	-2.7
STH	**Stony Hill**	**1.48**	**296**	*i* P	Pn	19 52 27.2	-1.1
STH				⇑ *i* S	Sn	19 52 48.7	-0.4
MCJ	**Malvern**	**2.22**	**283**	*i* P	Pn	19 52 36.4	-0.9

MAN 14 19:55:11, 13.56N×120.34E, h32km, mb4.3, ML3.1, MS2.9, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.20**	**332**	*e*P	Pb	19 55 20.0	+2.6
LUBP				*e*S	Sb	19 55 23.3	+1.5
PGP	**Puerto Galera**	**0.60**	**95**	⇓ *e*P	Pb	19 55 23.3	+0.1
TGY	**Tagaytay City**	**0.79**	**47**	*e*P	Pn	19 55 27.0	+1.1
BOAC	**Boac**	**1.47**	**94**	*e*P	Pn	19 55 36.4	+1.2
BUSP	**Coron**	**1.55**	**185**	*e*P	Pn	19 55 37.5	+1.1
POLP	**Polilio Island**	**1.94**	**53**	*e*P	Pn	19 55 42.4	+0.7
BALP	**Baler**	**2.48**	**29**	*e*P	Pn	19 55 49.9	+0.8
ENPP	**El Nido**	**2.50**	**201**	*e*P	Pn	19 55 50.4	+0.9
CUYO	**Cuyo Island**	**2.77**	**166**	*e*P	Pn	19 55 53.5	+0.3

TAP 14 20:01:45.1, 21.98N×121.73E, h128km, ML3.7, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAY	**Lan-yu**	**0.18**	**291**	*i* P	Pn	20 02 02.5	-0.1
	baz=290						
LAY				*i* S	Sn	20 02 15.6	-0.2
	baz=290						
TSEB	**Hengchuen, Pin**	**0.78**	**265**	*i* P	Pn	20 02 06.4	+0.5
	baz=264						
TSEB				*i* S	Sn	20 02 22.4	+0.9
	baz=264						
TWK1	**Hengchun**	**0.86**	**268**	P	Pn	20 02 06.9	+0.3
	baz=267						
TWK1				S	Sn	20 02 22.6	-0.2
	baz=267						
EAST	**Anshuo**	**0.92**	**296**	P	Pn	20 02 06.8	-0.2
	baz=296						
EAST				S	Sn	20 02 23.1	-0.6
	baz=296						
HEN	**Hengchun**	**0.92**	**272**	P	Pn	20 02 07.4	+0.3
	baz=271						
HEN				S	Sn	20 02 23.5	-0.2
	baz=271						
TTN	**Taitung**	**0.95**	**325**	P	Pn	20 02 07.3	-0.1
	baz=325						
TTN				S	Sn	20 02 23.7	-0.5
	baz=325						
ECL	**Taimali**	**0.95**	**311**	P	Pn	20 02 06.9	-0.4
	baz=310						
ECL				*e*S	Sn	20 02 23.2	-1.1
	baz=310						
TWG	**Pinlang**	**1.04**	**324**	P	Pn	20 02 08.4	+0.2
	baz=324						
TWG				S	Sn	20 02 24.8	-0.9
	baz=324						
SCZT	**Fangliau**	**1.10**	**291**	P	Pn	20 02 08.7	-0.1
	baz=291						
SCZT				*e*S	Sn	20 02 25.6	-1.2
	baz=291						
CHKT	**Chengkung**	**1.17**	**343**	P	Pn	20 02 10.0	+0.4
	baz=343						
CHKT				S	Sn	20 02 27.8	-0.3
	baz=343						
SSD	**Sandimen**	**1.28**	**307**	P	Pn	20 02 10.8	+0.2
	baz=307						
SSD				S	Sn	20 02 28.9	-1.1
	baz=307						
TWP	**Hsiaoliuchiu**	**1.32**	**286**	*e*P	Pn	20 02 11.5	+0.4
	baz=286						
TWP				*e*S	Sn	20 02 30.7	-0.1
	baz=286						
SGLT	**Jiouru**	**1.37**	**303**	*e*P	Pn	20 02 11.7	0.0
	baz=303						
SGLT				*e*S	Sn	20 02 31.4	-0.4
	baz=303						
ELDTW	**Lidau**	**1.38**	**331**	*e*P	Pn	20 02 12.0	+0.3
	baz=331						
ELDTW				*e*S	Sn	20 02 32.7	+0.7
	baz=331						
TWF1	**Yuli**	**1.43**	**344**	*e*P	Pn	20 02 12.7	+0.4
	baz=343						
TWF1				*e*S	Sn	20 02 32.8	-0.2
	baz=343						
KAU	**Kaohsiung**	**1.45**	**294**	*e*P	Pn	20 02 12.5	+0.1
	baz=294						
KAU				*e*S	Sn	20 02 32.5	-0.8
	baz=294						
TWM1	**Shoushan**	**1.48**	**305**	*e*P	Pn	20 02 13.4	+0.6
	baz=304						
TWM1				*e*S	Sn	20 02 33.5	-0.5
	baz=304						
STYT	**Tauyuan**	**1.49**	**323**	*e*P	Pn	20 02 13.7	+0.7
	baz=322						
STYT				*e*S	Sn	20 02 34.1	0.0
	baz=322						
SGST	**Jiashian**	**1.53**	**316**	*e*P	Pn	20 02 14.1	+0.6
	baz=316						
SGST				*e*S	Sn	20 02 34.7	-0.3
	baz=316						
EHY	**Hungye**	**1.57**	**346**	*e*P	Pn	20 02 14.2	+0.4
	baz=346						
EHY				*e*S	Sn	20 02 35.6	-0.2
	baz=346						
WTP	**Ta-pu**	**1.63**	**321**	*e*P	Pn	20 02 15.0	+0.4
	baz=320						
WTP				*e*S	Sn	20 02 36.9	-0.2
	baz=320						
CHN1	**Nanshi**	**1.64**	**317**	*e*P	Pn	20 02 15.2	+0.5
	baz=317						
CHN1				*e*S	Sn	20 02 36.9	-0.4
	baz=317						
YUS	**Yu-Shan**	**1.67**	**335**	*e*P	Pn	20 02 16.7	+1.6
	baz=334						
YUS				*e*S	Sn	20 02 37.9	0.0
	baz=334						
CHN3	**Shinhua**	**1.67**	**311**	*e*P	Pn	20 02 14.8	-0.2
	baz=310						
CHN3				*e*S	Sn	20 02 37.5	-0.4
	baz=310						
TWK	**Hsinying**	**1.73**	**318**	*e*P	Pn	20 02 16.3	+0.7
	baz=318						
TWK				*e*S	Sn	20 02 38.6	-0.4
	baz=318						
CHN4	**Tsaushan**	**1.73**	**323**	*e*P	Pn	20 02 16.2	+0.5
	baz=322						
CHN4				*e*S	Sn	20 02 39.0	-0.1
	baz=322						
TAI1	**Yung-k'ang**	**1.75**	**308**	*e*P	Pn	20 02 16.5	+0.6
	baz=307						
TAI1				*e*S	Sn	20 02 39.4	-0.2
	baz=307						
ALS	**Alishan**	**1.75**	**331**	*e*P	Pn	20 02 17.1	+1.1
	baz=330						
ALS				*e*S	Sn	20 02 39.4	-0.2
	baz=330						
ESL	**Shilin**	**1.85**	**351**	*e*P	Pn	20 02 17.5	+0.3
	baz=351						
ESL				*e*S	Sn	20 02 41.1	-0.6
	baz=351						
CHY	**Chiayi**	**1.94**	**322**	*e*P	Pn	20 02 19.1	+0.9
	baz=321						
CHY				*e*S	Sn	20 02 43.0	-0.6
	baz=321						
CHN8	**Yiju**	**1.96**	**314**	*e*P	Pn	20 02 18.5	0.0
	baz=314						
CHN8				*e*S	Sn	20 02 43.5	-0.5
	baz=314						
WGK	**Gukeng**	**2.02**	**328**	*e*P	Pn	20 02 19.6	+0.4
	baz=327						
WGK				*e*S	Sn	20 02 45.3	0.0
	baz=327						
SMLT	**Sun Moon Lake**	**2.05**	**338**	*e*P	Pn	20 02 20.3	+0.7
	baz=338						
SMLT				*e*S	Sn	20 02 45.8	-0.2
	baz=338						
TYC	**Yuchr**	**2.08**	**337**	*e*P	Pn	20 02 20.2	+0.2
	baz=337						
TYC				*e*S	Sn	20 02 46.3	-0.4
	baz=337						
WNT	**Mingjian**	**2.13**	**333**	*e*P	Pn	20 02 20.9	+0.4
	baz=333						
WNT				*e*S	Sn	20 02 47.3	-0.4
	baz=333						
WHF	**Hehuan Shan**	**2.20**	**349**	*e*P	Pn	20 02 22.8	+1.3
	baz=348						
WHF				*e*S	Sn	20 02 49.4	0.0
	baz=348						
TCU	**Taichung**	**2.37**	**336**	*e*P	Pn	20 02 24.4	+0.7
	baz=335						
TCU				*e*S	Sn	20 02 52.5	-0.7
	baz=335						
ENA	**Nanau**	**2.44**	**0**	*e*P	Pn	20 02 24.8	+0.3
ENA				*e*S	Sn	20 02 54.0	-0.8
NNS	**Nan Shan**	**2.48**	**352**	*e*P	Pn	20 02 25.4	+0.4
	baz=352						
NNS				*e*S	Sn	20 02 54.8	-0.7
	baz=352						
TWQ1	**Liyutan**	**2.52**	**340**	*e*P	Pn	20 02 26.0	+0.5
	baz=339						
TWQ1				*e*S	Sn	20 02 55.9	-0.7
	baz=339						
ENTT	**Nioudou**	**2.66**	**357**	*e*P	Pn	20 02 28.0	+0.7
	baz=356						
ENTT				*e*S	Sn	20 02 59.2	-0.4
	baz=356						
NSK	**Sanguang**	**2.71**	**353**	*e*P	Pn	20 02 29.4	+1.5
	baz=352						
NSK				*e*S	Sn	20 03 01.9	+1.0
	baz=352						

*MAN **14** 20:02:43, 9.40N×126.42E, h15km, mb5.1, ML4.0, MS4.2*
*ISCJB **14** 20:02:44.2±1.0, 9.39N±0.04×126.50E±0.08, h71km±9km, mb3.8/12, Error ellipse: s-maj=12.7km s-min=6.5km az=167.2*
*IDC **14** 20:02:49.7±3.5, 9.36N×126.40E, h103km±31km, mb3.6/10, mb1 3.7/11, mb1mx3.5/21, mbtmp3.6/11, MS3.1/2, Ms1 3.1/2, ms1mx2.5/27, Error ellipse: s-maj=54.0km s-min=13.7km az=75.0*
*NEIC **14** 20:02:50.8±2.3, 9.30N×126.23E, h115km±20km, mb4.2/2, Error ellipse: s-maj=46.8km s-min=10.0km az=69.0*

ISC 14 20:02:45.7±1.0, 9.38N±0.04×126.47E±0.08, h67km±9km, n33, σ0°92/39, mb3.8/12, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**0.93**	**244**	*e*P	**Pn**	**20 02 59.9**	**-3.4**
BUTP				*e*S	**Sn**	**20 03 12.3**	**-3.9**
CGP	**Cagayan de Oro**	**1.98**	**243**	⇓ *e*P	**Pn**	**20 03 15.2**	**-1.8**
CGP				*i* S	**Sn**	**20 03 40.9**	**0.0**
BUKP	**Musuan**	**2.04**	**223**	*e*P	**Pn**	**20 03 18.0**	**+0.2**
BUKP				*e*S	**Sn**	**20 03 41.6**	**-0.7**
MATI	**Mati**	**2.42**	**185**	*e*P	**Pn**	**20 03 23.6**	**+0.5**
DAV	**Davao City (W)**	**2.46**	**201**	P	**Pn**	**20 03 28.0**	**+4.5**
	89nm,0.3s,baz=3.3,slow=5.6,SNR=3.7						
DAV				S	**Sn**	**20 03 57.9**	**+5.4**
	62nm,0.3s,baz=49,slow=20,SNR=4.3						
DAV				LR	LR	20 04 30.8	
	comp=Z,692nm,19.9s,baz=341,slow=42						
DMPH	**Davao City--Mi**	**2.47**	**203**	*e*P	**Pn**	**20 03 23.4**	**-0.3**
OCLP	**Ormoc**	**2.47**	**312**	*e*P	**Pn**	**20 03 24.9**	**+1.1**
TBP	**Tagbilaran**	**2.59**	**277**	*e*P	**Pn**	**20 03 24.0**	**-1.4**
TBP				*e*S	**Sn**	**20 03 56.5**	**+0.7**
LLP	**Lapu-Lapu**	**2.64**	**291**	*e*P	**Pn**	**20 03 25.8**	**-0.2**
LLP				*e*S	**Sn**	**20 03 57.3**	**+0.4**
KCP	**Kidapawan**	**2.72**	**210**	⇓ *e*P	**Pn**	**20 03 26.4**	**-0.7**
KCP				*i* S	**Sn**	**20 04 00.5**	**+1.6**
PAGZ	**Pagadian**	**3.41**	**244**	*e*P	**Pn**	**20 03 37.4**	**+0.9**
CNP	**Catarman**	**3.58**	**330**	*e*P	**Pn**	**20 03 37.8**	**-1.1**
GUIM	**Jordan**	**4.02**	**288**	*e*P	**Pn**	**20 03 44.6**	**-0.2**
IPIL	**Ipil**	**4.17**	**248**	*e*P	**Pn**	**20 03 48.3**	**+1.4**
PVCP	**Virac**	**4.77**	**332**	*e*P	**Pn**	**20 03 55.9**	**+0.8**
GUMO	**Guam**	**18.51**	**75**	LR	LR	20 13 47.9	
	comp=Z,320nm,21.2s,baz=69,slow=35						
KAKA	**Kakadu**	**22.73**	**165**	*e*P	**P**	**20 07 33.6**	**-8.6**
FITZ	**Fitzroy Crossi**	**27.32**	**182**	P	**P**	**20 08 24.4**	**+0.1**
	4.5nm,1.0s,mb4.0,baz=356,slow=12,SNR=9.5						
KSRS	**Korea Array**	**27.98**	**2**	P	**P**	**20 08 31.8**	**+1.6**
	1.1nm,0.7s,mb3.5,baz=184,slow=9.8,SNR=5.6						
WRA	**Warramunga Arr**	**30.15**	**165**	P	**P**	**20 08 49.3**	**-0.2**
	0.3nm,0.4s,mb3.2,baz=349,slow=9.5,SNR=5.4						
ASAR	**Alice Springs**	**33.63**	**168**	P	**P**	**20 09 20.1**	**0.0**
	0.4nm,0.5s,mb3.5,baz=352,slow=7.1,SNR=11						
ASAR				PcP	PcP	20 12 00.9	+1.9
	0.4nm,0.7s,baz=29,slow=2.1,SNR=3.2						
SONM	**Songino Array**	**41.92**	**340**	P	**P**	**20 10 29.3**	**-0.3**
	0.2nm,0.5s,mb3.1,baz=149,slow=3.4,SNR=2.6						
STKA	**Stephens Creek**	**43.50**	**161**	*e*P	**P**	**20 10 43.2**	**+0.6**
STKA	**Stephens Creek**	**43.50**	**161**	P	**P**	**20 10 42.6**	**0.0**
	2.5nm,0.8s,mb4.0,baz=339,slow=10,SNR=4.5						
MK31	**Makanchi Array**	**52.85**	**323**	*e*P	**P**	**20 11 54.4**	**-0.2**
ZALV	**Zalesovo Beam**	**55.50**	**332**	P	**P**	**20 12 12.6**	**-1.1**
	0.3nm,0.3s,mb3.8,baz=130,slow=7.8,SNR=2.9						
UCH	**Uchtor**	**55.94**	**315**	*e*P	**P**	**20 12 17.8**	**+0.7**
	1.8nm,0.7s,mb4.2						
KURK	**Kurchatov**	**56.91**	**326**	*e*P	**P**	**20 12 23.7**	**-0.2**
TIXI	**Tiksi**	**62.23**	**1**	*e*P	**P**	**20 13 00.9**	**+0.8**
	1.8nm,0.6s,mb4.3						
BVAR	**Borovoye Array**	**62.51**	**326**	P	**P**	**20 13 02.2**	**0.0**
	0.8nm,0.7s,mb3.8,baz=134,slow=8.3,SNR=4.1						
ABKAR	**Akbulak array**	**67.68**	**319**	*e*P	**P**	**20 13 32.9**	**-3.0**
ARCES	**ARCESS Array B**	**85.09**	**340**	P	**P**	**20 15 13.8**	**-0.2**
	1.2nm,0.4s,mb4.2,baz=81,slow=6.2,SNR=18						
FINES	**FINESS Array B**	**86.77**	**332**	P	**P**	**20 15 22.2**	**-0.2**
	5.1nm,1.1s,mb4.4,baz=70,slow=4.6,SNR=5.6						

*NIED **14** 20:19:00, 46.90N×153.20E, h17km, Mw4.4 Best double couple: M04.29000×10^15 NP1:φ8107.00000°, δ66.00000°, λ-46.00000°. NP2:φ8220.00000°, δ49.00000°, λ-147.00000°.*
*ISCJB **14** 20:19:31.0±1.0, 46.58N±0.07×153.12E±0.10, h47km±10km, mb4.2/14, MS3.4/7, Error ellipse: s-maj=15.6km s-min=6.2km az=137.8*
*JMA **14** 20:19:30.6±0.9, 46.87N×153.24E, h30km, M4.8*
*MOS **14** 20:19:31.7±1.2, 46.76N×152.99E, h50km, mb4.5/2, Error ellipse: s-maj=17.8km s-min=9.1km az=49.4*
*NEIC **14** 20:19:34.9±1.4, 46.86N×152.90E, h58km±13km, mb4.6/4, Error ellipse: s-maj=19.6km s-min=9.2km az=138.0*
*IDC **14** 20:19:34.7±0.8, 46.91N×152.85E, h56km±6km, mb3.8/12, mb1 4.1/13, mb1mx3.8/23, mbtmp3.9/13, MS3.4/8, Ms1 3.5/8, ms1mx3.1/28, Error ellipse: s-maj=23.8km s-min=11.9km az=140.0*
*SKHL **14** 20:19:34.4±0.9, 46.86N×152.93E, h42km±7km, mb5.0/4, Ms3.9/1, msh5.5/3*

ISC 14 20:19:32.8±0.8, 46.55N±0.07×153.21E±0.10, h42km±8km, h55km±1.7km: pP-P, n73, σ1°49/83, mb4.2/14, MS3.4/7, 3C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.96**	**252**	⇑ *i* PN	**Pn**	**20 20 32.3**	**+1.4**
KUR				*e*S	**Sn**	**20 21 15.0**	**-1.0**
KUR				pmax	pmax		
	comp=E,60nm,0.6s						
KUR				pmax	pmax		
	comp=Z,270nm,0.6s						
KUR				smax			
	comp=N,2μm,1.0s						
KUR				smax			
	comp=E,2μm,1.0s						
KUR				smax			
	comp=N,1μm,0.8s						
KUR				smax			
	comp=E,450nm,0.8s						
KUR	**Kuril'sk**	**3.96**	**252**	*e*P	**Pn**	**20 20 32.3**	**+1.4**
KUR				AMB	AMB	20 20 33.0	
	comp=E,60nm,0.6s						
KUR				AMB	AMB	20 20 33.0	
	comp=E,270nm,0.6s						
KUR				*e*S	**Sn**	**20 21 15.0**	**-1.0**
KUR				A		20 21 22.0	
	comp=E,2μm,2.0s						
KUR				A		20 21 22.0	
	comp=E,2μm,2.0s						
KUR				A		20 21 30.2	
	comp=E,450nm,0.8s						
KUR				A		20 21 30.2	
	comp=E,1μm,0.8s						
SKR	**Severo-Kuril's**	**4.56**	**24**	⇑ *i* PN	**Pn**	**20 20 37.5**	**-1.7**
SKR				pmax	pmax		
	comp=N,70nm,0.5s						
SKR				pmax	pmax		
	comp=E,70nm,0.5s						
SKR				pmax	pmax		
	comp=Z,190nm,0.5s						
SKR				MLR	MLR		
	comp=Z,800nm,10.0s						
SKR				MLR	MLR		
	comp=E,1μm,14.0s						
SKR	**Severo-Kuril's**	**4.56**	**24**	⇑ *i* P	**Pn**	**20 20 37.5**	**-1.7**
SKR				AMB	AMB	20 20 39.5	
	comp=E,70nm,0.5s						
SKR				AMB	AMB	20 20 39.5	
	comp=E,190nm,0.5s						
SKR				*e*S	**Sn**	**20 21 25.5**	**-5.3**
SKR				A		20 21 43.0	
	comp=E,1μm,2.0s						
SKR				A		20 21 45.0	
	comp=E,240nm,0.6s						
SKR				A		20 21 45.0	
	comp=E,380nm,0.6s						
SKR				A		20 21 45.0	
	comp=E,160nm,0.6s						
SKR				AMS	AMS	20 22 24.0	
	comp=E,1μm,14.0s						
SKR				AMS	AMS	20 22 24.0	
	comp=E,800nm,10.0s						
YUK	**Yuzh-Kuril'sk**	**5.76**	**247**	⇓ *i* PN	**Pn**	**20 20 57.7**	**+2.0**
YUK				*i* S	**Sn**	**20 22 05.2**	**+4.8**
YUK				pmax	pmax		
	comp=Z,266nm,0.5s

	comp=Z,580nm,0.5s								
YUK				A			20 22 24.0		
	comp=Z,950nm,0.5s								
YUK				AMS	AMS		20 22 58.5		
	comp=Z,530nm,18.0s								
NEM2	**Nemuro 2**	**6.18**	**242**	P	**Pn**		**20 21 01.2**	**-0.2**	
NEM2				*e*S	**Sn**		**20 22 08.5**	**-2.3**	
JRA	**Rausu**	**6.28**	**248**	P	**Pn**		**20 21 05.1**	**+2.3**	
JNK	**Nakash**	**6.70**	**247**	P	**Pn**		**20 21 10.2**	**+1.6**	
JNK				*e*S	**Sn**		**20 22 24.9**	**+1.3**	
JAK	**Akkeshi**	**7.02**	**243**	P	**Pn**		**20 21 12.8**	**-0.2**	
JAK				*e*S	**Sn**		**20 22 28.4**	**-3.1**	
JTKR	**Abashiri--Toko**	**7.05**	**252**	P	**Pn**		**20 21 15.4**	**+2.0**	
YSS	**Yuzh-Sakhalins**	**7.19**	**277**	*e*P	**Pn**		**20 21 16.6**	**+1.4**	
	comp=Z,33nm,0.9s								
YSS	**Yuzh-Sakhalins**	**7.19**	**277**	*e*PN	**Pn**		**20 21 15.0**	**-0.3**	
YSS	**Yuzh-Sakhalins**	**7.19**	**277**	*e*P	**Pn**		**20 21 15.0**	**-0.3**	
PET	**Petropavlovsk**	**7.37**	**27**	*e*P	**Pn**		**20 21 16.4**	**-1.3**	
	comp=Z,41nm,0.6s								
PET	**Petropavlovsk**	**7.37**	**27**	*e*PN	**Pn**		**20 21 16.8**	**-0.9**	
PET				pmax	pmax				
	comp=Z,53nm,0.6s								
JMP	**Maruseppu**	**7.40**	**253**	P	**Pn**		**20 21 20.5**	**+2.4**	
JAR	**Ashorobuto**	**7.45**	**247**	P	**Pn**		**20 21 20.3**	**+1.5**	
JAR				*e*S	**Sn**		**20 22 43.2**	**+1.3**	
JOB	**Onbets**	**7.61**	**245**	P	**Pn**		**20 21 21.9**	**+0.9**	
JOB				*e*S	**Sn**		**20 22 43.9**	**-1.9**	
JKK2	**Kamakawa 2**	**7.86**	**254**	P	**Pn**		**20 21 26.9**	**+2.5**	
ASAJ	**Asahikawa**	**7.86**	**256**	P	**Pn**		**20 21 26.1**	**+1.6**	
	comp=Z,3.1nm,0.3s,baz=89,slow=13,SNR=34								
ASAJ				LR	LR		20 24 15.6		
	comp=Z,218nm,19.8s,baz=248,slow=36								
ASAJ	**Asahikawa**	**7.86**	**256**	P	**Pn**		**20 21 27.5**	**+3.0**	
JCH	**Churui**	**8.05**	**244**	P	**Pn**		**20 21 27.3**	**+0.2**	
JCH				*e*S	**Sn**		**20 22 53.1**	**-3.7**	
TYY	**Tymovskoe**	**8.20**	**306**	*e*P	**Pn**		**20 21 29.8**	**+0.7**	
TYV				AMB	AMB		20 21 39.0		
	comp=Z,22nm,1.0s								
JFR	**Furan**	**8.27**	**250**	P	**Pn**		**20 21 31.5**	**+1.5**	
JAB	**Ashibetsu**	**8.36**	**253**	P	**Pn**		**20 21 34.1**	**+2.9**	
JEM	**Erimo**	**8.52**	**241**	P	**Pn**		**20 21 34.3**	**+0.9**	
ERM	**Erimo**	**8.52**	**241**	*e*P	**Pn**		**20 21 33.5**	**+0.1**	
	comp=Z,42nm,0.6s								
ERM	**Erimo**	**8.52**	**241**	*e*PN	**Pn**		**20 21 33.5**	**+0.1**	
ERM				pmax	pmax				
	comp=Z,41nm,0.6s								
JNBK	**Urakawa-nobuka**	**8.62**	**244**	P	**Pn**		**20 21 34.2**	**-0.6**	
JNB	**Noboribetsu**	**9.60**	**249**	P	**Pn**		**20 21 48.6**	**+0.3**	
JKB	**Kayabe**	**9.90**	**246**	P	**Pn**		**20 21 51.7**	**-0.7**	
JKB				*e*S	**Sn**		**20 23 36.6**	**-5.6**	
JYM2	**Yakumo 2**	**10.21**	**249**	P	**Pn**		**20 21 56.6**	**0.0**	
JANG	**Nango**	**10.50**	**238**	P	**Pn**		**20 21 57.9**	**-2.7**	
JANG				*e*S	**Sn**		**20 23 47.6**	**-9.2**	
JTM	**Tenmabayashi**	**10.51**	**241**	P	**Pn**		**20 21 59.3**	**-1.4**	
JTH	**Tanohata**	**10.59**	**235**	*e*S	**Sn**		**20 23 49.6**	**-9.3**	
JOSM	**Okushiri--Mats**	**10.80**	**251**	P	**Pn**		**20 22 04.5**	**-0.3**	
OFUJ	**Ofunato**	**11.29**	**233**	P	**Pn**		**20 22 09.2**	**-2.2**	
JRG	**Rokugo**	**11.65**	**237**	P	**Pn**		**20 22 14.9**	**-1.5**	
JIO	**Ouri**	**11.91**	**231**	P	**Pn**		**20 22 17.7**	**-2.2**	
JFY	**Yanaizu**	**13.56**	**232**	P	**Pn**		**20 22 40.9**	**-1.5**	
KLR	**Kul'dur**	**14.64**	**288**	*e*P	**Pn**		**20 23 03.0**	**+6.1**	
MJAR	**Matsushiro Arr**	**15.01**	**234**	P	**Pn**		**20 23 00.2**	**-1.8**	
	comp=Z,0.3nm,0.3s,baz=39,slow=9.8,SNR=9.4								
MAJO	**Matsushiro**	**15.02**	**234**	*e*P	**Pn**		**20 22 59.7**	**-2.2**	
	comp=Z,15nm,0.8s								
MAJO	**Matsushiro**	**15.02**	**234**	*e*P	**Pn**		**20 22 59.7**	**-2.3**	
MAJO				pmax	pmax				
	comp=Z,15nm,0.8s								
MAT	**Matsushiro**	**15.02**	**234**	P	**Pn**		**20 23 00.4**	**-1.6**	
MDJ	**Mudanjiang**	**16.63**	**272**	P	**Pn**		**20 23 22.4**	**-0.3**	
MDJ				pmax	pmax				
	comp=Z,10.0nm,0.9s								
MDJ				pmax	pmax				
	comp=Z,67nm,5.2s								
MDJ	**Mudanjiang**	**16.63**	**272**	*e*P	**Pn**		**20 23 24.7**	**+2.0**	
	comp=Z,9.4nm,0.9s								
YAK	**Yakutsk**	**20.52**	**328**	*e*P	**P**		**20 24 14.5**	**+7.4**	
YAK				*e*			20 24 30.3		
YAK				*e*SS			20 28 11.1		
YAK				pmax	pmax				
	comp=Z,13nm,0.9s								
YAK				pmax	pmax				
	comp=Z,13nm,1.1s								
KSRS	**Korea Array**	**20.80**	**253**	P	**P**		**20 24 10.2**	**-0.1**	
	comp=Z,3.0nm,0.8s,baz=54,slow=11,SNR=13								
KSRS				LR	LR		20 33 13.1		
	comp=Z,64nm,19.0s,MS3.0,baz=70,slow=40								
KSRS	**Korea Array**	**20.80**	**253**	P	**P**		**20 24 10.2**	**-0.1**	
KSRS				pmax	pmax				
	comp=Z,3.0nm,0.8s								
KSRS				MLR	MLR				
	comp=Z,64nm,19.0s,MS3.0								
SONM	**Songino Array**	**31.46**	**290**	P	**P**		**20 25 46.8**	**-3.3**	
	comp=Z,0.2nm,0.7s,mb3.1,baz=88,slow=12,SNR=2.2								
SONM				LR	LR		20 38 07.9		
	comp=Z,68nm,18.8s,MS3.4,baz=33,slow=36								
TLY	**Talaya**	**32.33**	**298**	*e*P	**P**		**20 25 57.7**	**+0.1**	
ILAR	**Eielson Array**	**36.66**	**38**	P	**P**		**20 26 34.4**	**-0.5**	
	comp=Z,1.8nm,0.9s,mb3.9,baz=271,slow=7.2,SNR=20								
ILAR				pP	pP		20 26 48.2	+1.9	
	comp=Z,2.5nm,0.7s,baz=267,slow=4.9,SNR=12								
INK	**Inuvik**	**41.78**	**32**	P	**P**		**20 27 17.9**	**+0.4**	
	comp=Z,1.6nm,0.5s,mb3.9,baz=288,slow=9.6,SNR=3.1								
INK				pP	pP		20 27 31.1	+1.9	
	comp=Z,8.1nm,0.6s,baz=308,slow=7.5,SNR=6.5								
INK				LR	LR		20 47 50.1		
	comp=Z,73nm,19.6s,MS3.6,baz=302,slow=41								
INK	**Inuvik**	**41.78**	**32**	P	**P**		**20 27 17.9**	**+0.4**	
INK				*PP	pP		20 27 31.1	+1.9	
ZALV	**Zalesovo Beam**	**42.78**	**306**	LR	LR		20 46 17.9		
	comp=Z,42nm,18.3s,MS3.4,baz=47,slow=38								
RES	**Resolute Bay**	**51.00**	**18**	LR	LR		20 51 10.6		
	comp=Z,39nm,20.5s,MS3.4,baz=281,slow=37								
YKA	**Yellowknife Ar**	**51.04**	**37**	P	**P**		**20 28 29.4**	**-0.7**	
	comp=Z,1.6nm,0.8s,mb4.0,baz=303,slow=8.0,SNR=4.6								
YKA				pP	pP		20 28 44.0	+1.9	
	comp=Z,3.1nm,0.6s,baz=295,slow=6.9,SNR=10								
YKA	**Yellowknife Ar**	**51.04**	**37**	P	**P**		**20 28 29.4**	**-0.8**	
YKA				*PP	pP		20 28 44.0	+1.9	
CMAR	**Chiang Mai Arr**	**52.39**	**257**	P	**P**		**20 28 40.6**	**-0.2**	
	comp=Z,2.0nm,0.8s,mb4.1,baz=31,slow=7.3,SNR=17								
CMAR				pP	pP		20 28 55.3	+2.5	
	comp=Z,0.7nm,0.7s,baz=38,slow=8.5,SNR=3.5								
CMAR				LR	LR		20 50 41.6		
	comp=Z,30nm,18.9s,MS3.4,baz=230,slow=36								
CMAR	**Chiang Mai Arr**	**52.39**	**257**	P	**P**		**20 28 40.6**	**-0.2**	
CMAR				*PP	pP		20 28 55.3	+2.5	
SUMG	**Summit**	**60.89**	**4**	*e*P	**P**		**20 29 39.4**	**-1.1**	
	comp=Z,8.8nm,1.0s,mb4.8								
LRM	**Limekiln Ridge**	**61.26**	**53**	*e*P	**P**		**20 29 44.7**	**+1.4**	
	comp=Z,24nm,0.9s,mb5.3								
NVAR	**Mina Array Bea**	**62.47**	**62**	P	**P**		**20 29 53.1**	**+1.5**	
	comp=Z,1.6nm,0.8s,mb4.2,baz=302,slow=9.0,SNR=6.8								
FINES	**FINESS Array B**	**64.25**	**335**	P	**P**		**20 30 00.3**	**-2.6**	
	comp=Z,2.4nm,0.9s,mb4.2,baz=30,slow=7.6,SNR=5.6								
WRA	**Warramunga Arr**	**68.35**	**199**	P	**P**		**20 30 30.7**	**+1.1**	
	comp=Z,1.6nm,0.9s,mb4.0,baz=15,slow=6.4,SNR=7.5								
FITZ	**Fitzroy Crossi**	**69.00**	**208**	P	**P**		**20 30 35.3**	**+1.6**	
	comp=Z,5.0nm,0.9s,mb4.5,baz=36,slow=8.7,SNR=4.6								
AKASG	**Malin Array Be**	**71.75**	**326**	P	**P**		**20 30 47.7**	**-2.6**	
AKASG	**Malin Array Be**	**71.75**	**326**	P	**P**		**20 30 47.7**	**-2.5**	
	comp=Z,1.3nm,0.5s,mb4.2,baz=34,slow=5.6,SNR=3.5								
ASAR	**Alice Springs**	**72.04**	**199**	P	**P**		**20 30 54.6**	**+2.5**	
	comp=Z,1.6nm,0.8s,mb4.0,baz=14,slow=5.9,SNR=17								
TXAR	**Lajitas Array**	**77.53**	**61**	P	**P**		**20 31 25.0**	**+0.9**	
	comp=Z,0.8nm,0.7s,mb3.8,baz=297,slow=4.5,SNR=13								
STKA	**Stephens Creek**	**78.77**	**190**	LR	LR		21 08 10.4		
	comp=Z,72nm,18.6s,MS4.0,baz=205,slow=37								

IDC 14 20:30:19.3±3.0, 2°44.5′S×151°36.6′E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/14, mbtmp3.8/3, Error ellipse: s-maj=102.1km s-min=44.8km az=103.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.40**	**223**	P	P	20 35 40.1	+0.5
	0.5nm,0.4s,baz=49,slow=9.9,SNR=15						
ASAR	**Alice Springs**	**27.34**	**218**	P	P	20 36 06.3	+0.2
	1.0nm,0.4s,baz=51,slow=8.2,SNR=23						
STKA	**Stephens Creek**	**30.84**	**197**	P	P	20 36 37.4	+0.2
	1.2nm,0.6s,baz=30,slow=14,SNR=4.8						
TORD	**Torodi Ar. Bea**	**148.63**	**291**	PKPbc	PKPbc	20 50 08.3	-1.2
	0.4nm,0.4s,baz=77,slow=2.5,SNR=7.6						

2008 AUG

IDC 14 21:01:03.8±42.0, 31°13.5′S×175°39.0′W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.8/14, mbtmp3.8/3, Error ellipse: s-maj=788.7km s-min=192.2km az=99.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.08**	**257**	P	P	21 08 07.0	-0.2
	2.2nm,0.9s,baz=105,slow=12,SNR=3.6						
ASAR	**Alice Springs**	**44.88**	**267**	P	P	21 09 19.9	-0.2
	0.4nm,0.5s,baz=102,slow=7.8,SNR=6.1						
WRA	**Warramunga Arr**	**45.93**	**272**	P	P	21 09 28.8	+0.2
	0.6nm,0.3s,baz=112,slow=8.0,SNR=16						

IDC 14 21:26:31.1±0.5, 3°87N×125°44E, h0km, mb4.4/14, mb1 4.5/15, mb1mx4.4/22, mbtmp4.4/15, ML4.5/1, MS3.5/5, Ms1 3.5/5, ms1mx3.1/30, Error ellipse: s-maj=27.0km s-min=9.4km az=73.0
BJI 14 21:26:34.6, 3°80N×125°30E, h35km, mB4.9/7, mb4.7/11, Ms3.9/2, Ms7 3.6/3
ISCJB 14 21:26:37.1±0.5, 3°81N±0°02×125°35E±0°04, h57km±4km, mb4.7/52, MS3.4/6, Error ellipse: s-maj=6.8km s-min=3.5km az=177.6
DJA 14 21:26:38, 3°65N×125°35E, h13km, mb4.8/19
NEIC 14 21:26:40.6±0.8, 3°79N×125°30E, h76km±8km, mb4.7/26, Error ellipse: s-maj=6.9km s-min=4.3km az=70.0
NEIC Felt [III] at Sangir.

ISC 14 21:26:38.7±0.4, 3°83N±0°02×125°41E±0°04, h55km±4km, n155, σ1§19/153, mb4.7/52, MS3.4/6, 1C-3D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**2.29**	**349**	*e*P	**Pn**	**21 27 12.4**	**-1.8**
GSPH				*i* S	**Sn**	**21 27 39.3**	**-1.9**
MNI	**Manado**	**2.43**	**193**	P	**Pn**	**21 27 14.6**	**-1.5**
MNI	**Manado**	**2.43**	**193**	P	**Pn**	**21 27 14.1**	**-2.0**
KCP	**Kidapawan**	**3.18**	**354**	⇓*e*P	**Pn**	**21 27 27.0**	**+0.7**
KCP				*i* S	**Sn**	**21 28 05.6**	**+2.6**
MATI	**Mati**	**3.21**	**15**	*e*P	**Pn**	**21 27 26.6**	**-0.2**
DAV	**Davao City (W)**	**3.23**	**3**	*e*Pn	**Pn**	**21 27 30.3**	**+3.3**
DAV				Sn	**Sn**	**21 28 05.6**	**+1.4**
DAV				LR	LR	21 28 54.9	
DAV	**Davao City (W)**	**3.23**	**3**	Pn	**Pn**	**21 27 22.7**	**-4.3**
	60nm,0.3s,baz=233,slow=15,SNR=3.0						
DAV				Sn	**Sn**	**21 28 05.6**	**+1.4**
	112nm,0.3s,baz=284,slow=19,SNR=5.8						
DAV				LR	LR	21 28 54.9	
	comp=Z,1μm,18.3s,baz=42,slow=45						
DAV	**Davao City (W)**	**3.23**	**3**	P	**Pn**	**21 27 33.1**	**+6.1**
DAV	**Davao City (W)**	**3.23**	**3**	P	**Pn**	**21 27 32.0**	**+5.0**
CTBH	**Cotabato--PC H**	**3.57**	**341**	⇑*i*P	**Pn**	**21 27 31.6**	**0.0**
CTBH				*i* S	**Sn**	**21 28 12.4**	**-0.1**
TNTI	**Ternate**	**3.61**	**147**	P	**Pn**	**21 27 31.7**	**-0.5**
TNTI	**Ternate**	**3.61**	**147**	P	**Pn**	**21 27 32.1**	**-0.1**
BUKP	**Musuan**	**4.04**	**355**	*e*P	**Pn**	**21 27 39.3**	**+1.2**
PAGZ	**Pagadian**	**4.47**	**333**	*e*P	**Pn**	**21 27 43.2**	**-0.9**
CGP	**Cagayan de Oro**	**4.65**	**351**	⇓*e*P	**Pn**	**21 27 40.5**	**-6.0**
CGP				*e*S	**Sn**	**21 28 37.6**	**-1.7**
MRSI	**Marisa**	**4.80**	**226**	P	**Pn**	**21 27 45.9**	**-2.6**
MRSI	**Marisa**	**4.80**	**226**	P	**Pn**	**21 27 46.6**	**-1.9**
IPIL	**Ipil**	**4.84**	**325**	*e*P	**Pn**	**21 27 48.1**	**-1.0**
BUTP	**Butuan**	**5.12**	**2**	*e*P	**Pn**	**21 27 54.0**	**+1.1**
TOLI	**Toli-Toli**	**5.33**	**240**	P	**Pn**	**21 27 53.5**	**-2.3**
	1.4nm4μm337nm,0.6s						
TOLI	**Toli-Toli**	**5.33**	**240**	P	**Pn**	**21 27 53.5**	**-2.3**
	1.4nm4μm337nm,0.6s						
LUWI	**Luwuk**	**5.50**	**209**	P	**Pn**	**21 28 01.6**	**+3.4**
LUWI	**Luwuk**	**5.50**	**209**	P	**Pn**	**21 27 59.6**	**+1.4**
	1.9nm5μm550nm,0.8s						
MYLDM	**Lahad Datu**	**7.01**	**281**	P	**Pn**	**21 28 22.4**	**+3.4**
MYLDM	**Lahad Datu**	**7.01**	**281**	P	**Pn**	**21 28 21.5**	**+2.6**
	0.3nm1μm94nm,1.0s						
MYLDM	**Lahad Datu**	**7.01**	**281**	P	**Pn**	**21 28 20.7**	**+1.8**
	0.3nm1μm94nm,1.0s						
NLAI	**Namlea**	**7.22**	**166**	P	**Pn**	**21 28 21.1**	**-0.6**
	0.6nm2μm184nm,0.6s						
PCI	**Palu**	**7.28**	**230**	P	**Pn**	**21 28 25.8**	**+3.2**
	0.3nm652nm48nm,0.8s						
PCI	**Palu**	**7.28**	**230**	P	**Pn**	**21 28 19.7**	**-2.9**
	0.3nm45nm,1.1s						
TSM	**Tawau**	**7.53**	**274**	P	**Pn**	**21 28 25.9**	**-0.1**
KDI	**Kendari**	**8.22**	**200**	P	**Pn**	**21 28 38.3**	**+2.9**
	82nm,0.9s						
KDI	**Kendari**	**8.22**	**200**	P	**Pn**	**21 28 36.2**	**+0.8**
	82nm,0.9s						
SDKM	**Sandakan**	**8.38**	**283**	P	**Pn**	**21 28 37.8**	**+0.2**
TTSI	**Tana Toraja**	**8.82**	**219**	P	**Pn**	**21 28 43.3**	**-0.3**
	38nm,0.7s						
KKM	**Kota Kinabalu**	**9.42**	**284**	Pn	**Pn**	**21 28 53.2**	**+1.4**
KKM	**Kota Kinabalu**	**9.42**	**284**	P	**Pn**	**21 28 52.8**	**+0.9**
KKM	**Kota Kinabalu**	**9.42**	**284**	P	**Pn**	**21 28 52.7**	**+0.8**
	450nm25nm,1.4s						
SPSI	**Sidrap Palu**	**9.57**	**216**	P	**Pn**	**21 28 55.0**	**+1.1**
	24nm,0.7s						
KAPI	**Kappang**	**10.44**	**213**	*e*Pn	**Pn**	**21 29 05.0**	**-0.8**
BKSI	**Bulukumba**	**10.51**	**210**	P	**Pn**	**21 29 07.2**	**+0.4**
	15nm,1.0s						
SBUM	**Sibu**	**13.24**	**264**	P	**Pn**	**21 29 45.4**	**+1.4**
	24nm,1.0s						
STKI	**Sintang**	**14.41**	**255**	P	sP	21 30 19.6	-4.7
SRBI	**Singaraja**	**15.60**	**221**	P	**Pn**	**21 30 24.2**	**+8.9**
	54nm,1.2s						
KAKA	**Kakadu**	**17.85**	**157**	*e*P	**Pn**	**21 30 39.2**	**-4.2**
	36nm,0.6s						
KAKA	**Kakadu**	**17.85**	**157**	*e*P	**Pn**	**21 30 39.5**	**-3.9**
	101nm,0.6s						
KAKA	**Kakadu**	**17.85**	**157**	P	**Pn**	**21 30 39.5**	**-3.9**
	801nm99nm,0.8s						
KNA	**Kununurra**	**19.73**	**170**	⇓*i*P	**Pn**	**21 31 03.5**	**-2.4**
	64nm,0.6s						
KNA	**Kununurra**	**19.73**	**170**	P	**Pn**	**21 31 03.8**	**-2.1**
	3μm320nm,0.7s						
TPUB	**Tau**	**19.90**	**347**	*e*P	**Pn**	**21 31 06.5**	**-1.4**
SSLB	**Suanglung**	**20.31**	**348**	*e*P	**P**	**21 31 10.7**	**+0.5**
NACB	**Ninganchiao**	**20.56**	**350**	*e*P	**P**	**21 31 13.5**	**+0.4**
YHNB	**Yeheng**	**21.09**	**350**	P	**P**	**21 31 19.3**	**+0.6**
QIZ	**Qiongzhong**	**21.44**	**316**	*e*P	**P**	**21 31 22.6**	**0.0**
GUMO	**Guam**	**21.52**	**62**	P	**P**	**21 31 25.6**	**+2.1**
GUMO	**Guam**	**21.52**	**62**	LR	LR	21 38 20.7	
	comp=Z,111nm,18.4s,MS3.3,baz=77,slow=33						
FITZ	**Fitzroy Crossi**	**21.79**	**179**	P	**P**	**21 31 24.6**	**-1.6**
	9.1nm,0.4s,mb4.6,baz=15,slow=8.3,SNR=77						
FITZ	**Fitzroy Crossi**	**21.79**	**179**	P	**P**	**21 31 26.0**	**-0.2**
	38nm,1.7s,mb4.5						
KLSI		**22.32**	**248**	P	**P**	**21 31 36.1**	**+4.1**
	46nm,1.0s,mb4.9						
MDSI	**Maura Dua**	**22.76**	**249**	P	**P**	**21 31 40.3**	**+3.6**
	23nm,1.3s,mb4.5						
MDSI	**Maura Dua**	**22.76**	**249**	P	**P**	**21 31 40.2**	**+3.5**
	23nm,1.3s,mb4.5						
LWLI	**Liwa**	**23.06**	**248**	P	**P**	**21 31 44.5**	**+4.6**
	62nm,0.9s,mb5.0						
LWLI	**Liwa**	**23.06**	**248**	P	**P**	**21 31 41.0**	**+1.1**
	62nm,0.9s,mb5.0						
KSI	**Kapahiang**	**23.98**	**252**	P	pP	21 32 01.0	-1.0
KSI	**Kapahiang**	**23.98**	**252**	P	pP	21 32 01.3	-0.7
IPM	**Ipoh**	**24.32**	**272**	P	**P**	**21 31 53.7**	**+2.1**
	20nm,1.2s,mb4.4						
IPM	**Ipoh**	**24.32**	**272**	P	**P**	**21 31 54.5**	**+2.9**
	20nm,1.2s,mb4.4						
SDSI	**Sungai Dareh**	**24.43**	**259**	P	pP	21 32 02.4	-3.7
KULM	**Kulim**	**24.72**	**274**	*e*P	**P**	**21 31 55.2**	**0.0**
	23nm,1.3s,mb4.5						
KULM	**Kulim**	**24.72**	**274**	P	**P**	**21 31 59.5**	**+4.3**
	15nm,1.2s,mb4.4						
KULM	**Kulim**	**24.72**	**274**	P	**P**	**21 31 57.6**	**+2.4**
	15nm,1.2s,mb4.4						
COEN	**Coen**	**24.96**	**135**	*e*P	**P**	**21 31 56.8**	**-0.5**
COEN	**Coen**	**24.96**	**135**	*e*P	**P**	**21 31 56.7**	**-0.6**
	106nm,0.8s,mb5.4						
COEN	**Coen**	**24.96**	**135**	P	**P**	**21 31 56.9**	**-0.4**
	96nm,0.8s,mb5.3						
WRA	**Warramunga Arr**	**25.20**	**160**	P	**P**	**21 31 58.6**	**-0.8**
	49nm,0.8s,mb5.1,baz=348,slow=13,SNR=164						
WRA				S	**S**	**21 36 25.8**	**+4.8**
	3.8nm,0.8s,baz=345,slow=21,SNR=6.0						
PMG	**Port Moresby**	**25.35**	**121**	*e*P	**P**	**21 32 01.7**	**+0.8**
PPI	**Padang Panjang**	**25.35**	**261**	P	**P**	**21 32 03.7**	**+2.7**
	2μm22nm,0.8s,mb4.7						
MBWA	**Marble Bar**	**25.44**	**192**	*e*P	**P**	**21 32 01.5**	**-0.1**
MBWA	**Marble Bar**	**25.44**	**192**	*e*P	**P**	**21 32 01.6**	**0.0**
	26nm,0.6s,mb4.9						
MNSI	**Mandailing Nat**	**25.98**	**264**	P	**P**	**21 32 10.8**	**+4.2**
	30nm,1.1s,mb4.7						
GSI	**Gunungsitoli**	**27.91**	**266**	P	**P**	**21 32 25.7**	**+1.7**
ASAR	**Alice Springs**	**28.55**	**164**	P	**P**	**21 32 29.2**	**-0.3**
	10nm,0.6s,mb4.8,baz=349,slow=8.2,SNR=199						
ASAR				S	**S**	**21 37 20.2**	**+6.3**
	0.7nm,0.8s,baz=358,slow=27,SNR=2.6						
MTSU	**Mount Surprise**	**28.70**	**140**	*e*P	sP	21 32 49.0	-2.2
CM31	**Chiang Mai Arr**	**29.69**	**301**	*e*P	**P**	**21 32 39.0**	**-0.7**
CMAR	**Chiang Mai Arr**	**29.69**	**301**	P	**P**	**21 32 41.0**	**+1.3**
	1.5nm,0.3s,mb4.1,baz=117,slow=7.0,SNR=19						
CHTO	**Chiang Mai**	**29.85**	**302**	*e*P	**P**	**21 32 40.0**	**-1.1**
	7.0nm,0.7s,mb4.5						
CHTO	**Chiang Mai**	**29.85**	**302**	P	**P**	**21 32 45.1**	**+4.0**
	12nm,0.9s,mb4.6						
ENH	**Enshi**	**30.30**	**332**	*e*P	**P**	**21 32 43.9**	**-1.2**
	7.0nm,0.7s,mb4.5						
MEEK	**Meekatharra**	**30.99**	**192**	*e*P	**P**	**21 32 50.6**	**-0.5**
CTA	**Charters Tower**	**31.37**	**140**	P	**P**	**21 32 55.2**	**+0.7**
CTA	**Charters Tower**	**31.37**	**140**	P	**P**	**21 32 55.2**	**+0.7**
	7.4nm,0.7s,mb4.6,baz=322,slow=12,SNR=6.8						
CTAO	**Charters Tower**	**31.37**	**140**	*e*P	**P**	**21 32 54.5**	**0.0**
	26nm,1.3s,mb4.9						
CTAO	**Charters Tower**	**31.37**	**140**	P	**P**	**21 32 56.6**	**+2.1**
COCO	**West Island**	**32.55**	**240**	P	**P**	**21 33 02.9**	**-2.1**
KSRS	**Korea Array**	**33.55**	**4**	P	**P**	**21 33 12.8**	**-0.6**
	1.7nm,0.6s,mb4.2,baz=186,slow=9.9,SNR=6.9						
MORW	**Morawa**	**33.92**	**195**	*e*P	**P**	**21 33 16.2**	**-0.5**
FORT	**Forrest**	**34.50**	**176**	*e*P	**P**	**21 33 21.3**	**-0.4**
	21nm,0.4s,mb5.4						
FORT	**Forrest**	**34.50**	**176**	*e*P	**P**	**21 33 21.3**	**-0.5**
	49nm,1.0s,mb5.4						
MAJO	**Matsushiro**	**34.63**	**18**	*e*P	**P**	**21 33 22.1**	**-0.7**
	7.2nm,0.6s,mb4.8						
MAT	**Matsushiro**	**34.63**	**18**	P	**P**	**21 33 21.7**	**-1.1**
MJAR	**Matsushiro Arr**	**34.63**	**18**	P	**P**	**21 33 21.7**	**-1.0**
	10nm,0.9s,mb4.8,baz=198,slow=8.7,SNR=28						
MJAR				LR	LR	21 47 05.2	
	comp=Z,50nm,18.4s,MS3.3,baz=195,slow=36						
KMBL	**Kambalda**	**35.16**	**185**	*e*P	**P**	**21 33 26.9**	**-0.5**
	110nm,0.4s						
KLBR	**Kellerberrin**	**35.97**	**191**	*e*P	**P**	**21 33 33.8**	**-0.5**
	11nm,0.4s,mb5.1						
HNR	**Honiara**	**36.85**	**111**	P	**P**	**21 33 43.9**	**+1.7**
BJT	**Baijiatuan**	**36.99**	**348**	*e*P	**P**	**21 33 44.4**	**+1.5**
	6.1nm,0.6s,mb4.6						
BJI	**Beijing**	**37.01**	**348**	P	**P**	**21 33 46.5**	**+3.4**
BJI				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
BJI				LR	LR		
	comp=Z,54nm,16.8s,MS3.4						
NWAO	**Narrogin (SRO)**	**37.36**	**191**	P	**P**	**21 33 46.0**	**-0.2**

*NEIC **14** 21:41:38.1±2.6, 21.69N×120.58E, h29km±20km, mb3.6/2, Error ellipse: s-maj=9.4km s-min=7.1km az=143.0*
*JMA **14** 21:41:38.3±0.4, 21.41N×120.79E, h48km, M3.6*
*ISCJB **14** 21:41:38.5±0.4, 21.77N±0.03×120.41E±0.03, h51km±4km, mb3.7/9, Error ellipse: s-maj=4.9km s-min=4.3km az=44.6*
*BJI **14** 21:41:41.6, 21.69N×119.59E, h15km, mB4.3/1, mb3.7/3, ML3.0/1*

ISC 14 21:41:39.2±0.5, 21.77N±0.03×120.38E±0.03, h35km±3km, n76, σ0.86/120, mb3.7/9, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HEN	**Hengchun**	**0.41**	**54**	*i* P		**Pb**	**21 41 48.3**	**-0.3**
	baz=53							
HEN				S		**Sb**	**21 41 56.0**	**+1.0**
	baz=53							
TWK1	**Hengchun**	**0.44**	**66**	*i* P		**Pb**	**21 41 48.5**	**-0.5**
	baz=63							
TWK1				*i* S		**Sb**	**21 41 57.1**	**+1.4**
	baz=63							
TSEB	**Hengchuen, Pin**	**0.50**	**74**	*i* P		**Pb**	**21 41 48.9**	**-1.1**
	baz=69							
TSEB				S		**Sb**	**21 41 57.4**	**0.0**
	baz=69							
TWP	**Hsiaoliuchiu**	**0.58**	**359**	P		**Pn**	**21 41 50.2**	**-0.8**
	baz=3.0							
TWP				S		**Sn**	**21 42 00.1**	**+0.8**
	baz=3.0							
SCZT	**Fangliau**	**0.65**	**20**	P		**Pn**	**21 41 51.3**	**-0.6**
	baz=23							
SCZT				S		**Sn**	**21 42 01.9**	**+1.0**
	baz=23							
EAST	**Anshuo**	**0.76**	**35**	*i* P		**Pn**	**21 41 52.9**	**-0.5**
	baz=36							
EAST				*e*S		**Sn**	**21 42 04.1**	**+0.5**
	baz=36							
KAU	**Kaohsiung**	**0.80**	**355**	P		**Pn**	**21 41 52.9**	**-1.2**
	baz=359							
KAU				S		**Sn**	**21 42 05.3**	**+0.5**
	baz=359							
SGLT	**Jiouru**	**0.96**	**6**	P		**Pn**	**21 41 56.0**	**-0.2**
	baz=8.0							
SGLT				S		**Sn**	**21 42 09.3**	**+0.5**
	baz=8.0							
ECL	**Taimali**	**0.99**	**33**	P		**Pn**	**21 41 56.0**	**-0.6**
	baz=33							
SSD	**Sandimen**	**1.00**	**14**	*i* P		**Pn**	**21 41 56.2**	**-0.7**
	baz=15							
SSD				*e*S		**Sn**	**21 42 09.4**	**-0.4**
	baz=15							
TWM1	**Shoushan**	**1.05**	**2**	P		**Pn**	**21 41 57.6**	**+0.1**
	baz=4.0							
TWM1				S		**Sn**	**21 42 11.5**	**+0.5**
	baz=4.0							
LAY	**Lan-yu**	**1.12**	**76**	*e*P		**Pn**	**21 41 59.6**	**+1.1**
	baz=74							
LAY				S		**Sn**	**21 42 13.5**	**+0.8**
	baz=74							
TTN	**Taitung**	**1.22**	**36**	*e*P		**Pn**	**21 41 59.3**	**-0.5**
	baz=36							
TTN				*e*S		**Sn**	**21 42 15.5**	**+0.5**
	baz=36							
TWG	**Pinlang**	**1.23**	**31**	*e*Pn		**Pn**	**21 41 59.1**	**-0.9**
TWG				*e*S		**Sn**	**21 42 09.6**	**-5.8**
TWG	**Pinlang**	**1.23**	**31**	*e*P		**Pn**	**21 41 59.6**	**-0.4**
	baz=32							
TWG				*e*S		**Sn**	**21 42 16.6**	**+1.2**
	baz=32							
TAI1	**Yung-k'ang**	**1.28**	**354**	*e*P		**Pn**	**21 41 59.8**	**-0.8**
	baz=356							
TAI1				*e*S		**Sn**	**21 42 17.1**	**+0.6**
	baz=356							
CHN3	**Shinhua**	**1.30**	**360**	*e*P		**Pn**	**21 41 60.0**	**-1.0**
	baz=1.0							
CHN3				*e*S		**Sn**	**21 42 17.5**	**+0.3**
	baz=1.0							
SGST	**Jiashian**	**1.32**	**8**	P		**Pn**	**21 42 00.8**	**-0.4**
	baz=10.0							
CHN1	**Nanshi**	**1.42**	**6**	*e*P		**Pn**	**21 42 02.1**	**-0.5**
	baz=7.0							
CHN1				*e*S		**Sn**	**21 42 20.4**	**+0.4**
	baz=7.0							
WTP	**Ta-pu**	**1.49**	**8**	*e*P		**Pn**	**21 42 02.9**	**-0.6**
	baz=10.0							
WTP				*e*S		**Sn**	**21 42 21.8**	**0.0**
	baz=10.0							
TWK	**Hsinying**	**1.50**	**4**	*e*P		**Pn**	**21 42 03.1**	**-0.6**
	baz=5.0							
TWK				*e*S		**Sn**	**21 42 22.2**	**+0.2**
	baz=5.0							
ELDTW	**Lidau**	**1.54**	**23**	*i* P		**Pn**	**21 42 04.0**	**-0.2**
	baz=23							
ELDTW				*e*S		**Sn**	**21 42 23.4**	**+0.5**
	baz=23							
TPUB	**Ta-pu**	**1.55**	**9**	*e*Pn		**Pn**	**21 42 03.3**	**-1.0**
TPUB				*e*S		**Sn**	**21 42 21.7**	**-1.4**
CHN4	**Tsaushan**	**1.59**	**7**	*e*P		**Pn**	**21 42 04.6**	**-0.3**
	baz=8.0							
CHN4				S		**Sn**	**21 42 23.2**	**-1.1**
	baz=8.0							
CHKT	**Chengkung**	**1.61**	**34**	*e*P		**Pn**	**21 42 05.3**	**+0.1**
	baz=35							
CHKT				*e*S		**Sn**	**21 42 25.4**	**+0.6**
	baz=35							
CHY	**Chiayi**	**1.73**	**1**	*e*P		**Pn**	**21 42 06.4**	**-0.3**
	baz=3.0							
ALS	**Alishan**	**1.78**	**13**	P		**Pn**	**21 42 07.2**	**-0.3**
	baz=14							
TWF1	**Yuli**	**1.79**	**28**	*e*P		**Pn**	**21 42 07.8**	**+0.1**
	baz=29							
TWF1				*e*S		**Sn**	**21 42 30.1**	**+0.8**
	baz=29							
YUS	**Yu-Shan**	**1.80**	**17**	P		**Pn**	**21 42 08.0**	**+0.2**
	baz=18							
YULB	**Yu-li**	**1.83**	**28**	*e*Pn		**Pn**	**21 42 07.6**	**-0.6**
YULB				*e*S		**Sn**	**21 42 26.3**	**-3.8**
WSF	**Szhu**	**1.87**	**356**	*e*P		**Pn**	**21 42 08.0**	**-0.8**
	baz=357							
WSF				*e*S		**Sn**	**21 42 30.7**	**-0.4**
	baz=357							
WGK	**Gukeng**	**1.92**	**5**	*e*P		**Pn**	**21 42 08.7**	**-0.8**
	baz=6.0							
WGK				*e*S		**Sn**	**21 42 32.5**	**+0.1**
	baz=6.0							
EHY	**Hungye**	**1.94**	**27**	*e*P		**Pn**	**21 42 09.8**	**+0.1**
	baz=27							
EHY				*e*S		**Sn**	**21 42 33.3**	**+0.4**
	baz=27							
PNG	**Penghu**	**1.95**	**337**	*e*P		**Pn**	**21 42 08.4**	**-1.4**
	baz=338							
PNG				*e*S		**Sn**	**21 42 32.2**	**-0.9**
	baz=338							
SSLB	**Suanglung**	**2.08**	**15**	*e*Pn		**Pn**	**21 42 11.0**	**-0.7**
SSLB				*e*Sn		**Sn**	**21 42 37.4**	**+1.0**
SMLT	**Sun Moon Lake**	**2.16**	**13**	P		**Pn**	**21 42 12.5**	**-0.3**
	baz=13							
SMLT				*e*S		**Sn**	**21 42 38.0**	**-0.4**
	baz=13							
TYC	**Yuchr**	**2.17**	**12**	P		**Pn**	**21 42 12.5**	**-0.5**
	baz=12							
ESL	**Shilin**	**2.26**	**25**	*e*P		**Pn**	**21 42 13.9**	**-0.2**
	baz=26							
ESL				*e*S		**Sn**	**21 42 40.6**	**-0.2**
	baz=26							
TCU	**Taichung**	**2.39**	**7**	*e*P		**Pn**	**21 42 15.7**	**-0.2**
	baz=7.0							
TCU				*e*S		**Sn**	**21 42 43.9**	**-0.1**
	baz=7.0							
WHF	**Hehuan Shan**	**2.51**	**19**	P		**Pn**	**21 42 17.9**	**+0.3**
	baz=19							
TWT	**Tachien**	**2.58**	**16**	*e*P		**Pn**	**21 42 19.2**	**+0.7**
	baz=16							
TWQ1	**Liyutan**	**2.60**	**8**	*e*P		**Pn**	**21 42 18.3**	**-0.4**
	baz=9.0							
TWQ1				*e*S		**Sn**	**21 42 48.6**	**-0.5**
	baz=9.0							
NACB	**Ninganchiao**	**2.65**	**25**	*e*Pn		**Pn**	**21 42 18.4**	**-1.0**
NACB				*e*Sn		**Sn**	**21 42 45.6**	**-4.7**
NNS	**Nan Shan**	**2.82**	**19**	P		**Pn**	**21 42 22.6**	**+0.8**
	baz=19							
NSTT	**Nanjuang**	**2.91**	**11**	*e*P		**Pn**	**21 42 22.8**	**-0.2**
	baz=12							
ENA	**Nanau**	**2.93**	**25**	*e*P		**Pn**	**21 42 24.2**	**+0.8**
	baz=25							
YHNB	**Yeheng**	**3.03**	**17**	*e*Pn		**Pn**	**21 42 24.9**	**+0.1**
YHNB				Sn		**Sn**	**21 43 05.6**	**+5.7**
NSK	**Sanguang**	**3.04**	**17**	*e*P		**Pn**	**21 42 24.8**	**0.0**
	baz=17							
ENTT	**Nioudou**	**3.06**	**21**	*e*P		**Pn**	**21 42 24.7**	**-0.5**
	baz=21							
ENTT				*e*S		**Sn**	**21 42 58.8**	**-1.8**
	baz=21							
KNM	**Kinmen**	**3.19**	**326**	*e*P		**Pn**	**21 42 26.8**	**-0.1**
	baz=324							
KNM				*e*S		**Sn**	**21 43 03.3**	**-0.4**
	baz=324							
TATO	**Taipei**	**3.35**	**17**	Pn		**Pn**	**21 42 29.8**	**+0.6**
TATO				Sn		**Sn**	**21 43 12.5**	**+4.7**
NWF	**Wu-fen Shan**	**3.54**	**21**	*e*P		**Pn**	**21 42 34.3**	**+2.7**
	baz=21							
TWB1	**Santiao Chiao**	**3.55**	**24**	*e*P		**Pn**	**21 42 34.7**	**+2.8**
	baz=25							
YOJ	**Yonaguni jima**	**3.62**	**42**	P		**Pn**	**21 42 34.2**	**+1.4**
YOJ				*e*S		**Sn**	**21 43 15.9**	**+1.6**
HATJ	**Hateruma jima**	**3.90**	**54**	P		**Pn**	**21 42 36.4**	**-0.2**
HATJ				*e*S		**Sn**	**21 43 20.0**	**-1.2**
IRIF	**Iriomote-Funau**	**4.01**	**50**	P		**Pn**	**21 42 38.5**	**+0.3**
IRIF				*e*S		**Sn**	**21 43 24.1**	**+0.1**
JKRS	**Kuro-shima**	**4.15**	**53**	P		**Pn**	**21 42 40.6**	**+0.4**
JKRS				*e*S		**Sn**	**21 43 27.8**	**+0.3**
JIJ	**Ishigaki jima**	**4.33**	**53**	P		**Pn**	**21 42 42.1**	**-0.4**
JIJ				*e*S		**Sn**	**21 43 30.7**	**-1.1**
JTJ	**Tarama**	**4.90**	**53**	P		**Pn**	**21 42 50.6**	**+0.2**
JTJ				*e*S		**Sn**	**21 43 45.9**	**-0.1**
ENH	**Enshi**	**12.94**	**313**	*e*Pn		**Pn**	**21 44 43.2**	**+2.5**
ENH				Sn		**Sn**	**21 47 14.4**	**+11**
DAV	**Davao City (W)**	**15.45**	**160**	LR		LR	21 51 38.3	
	comp=Z,23nm,21.3s,baz=203,slow=39							
INCN	**Inchon**	**16.57**	**18**	Pn		**Pn**	**21 45 29.7**	**+0.8**
CHTO	**Chiang Mai**	**20.32**	**266**	*e*P		**P**	**21 46 14.1**	**+1.7**
	1.0nm,0.5s							
CM31	**Chiang Mai Arr**	**20.39**	**265**	P		**P**	**21 46 14.3**	**+1.1**
CMAR	**Chiang Mai Arr**	**20.39**	**265**	P		**P**	**21 46 14.3**	**+1.1**
	0.3nm,0.3s,baz=86,slow=14,SNR=4.7							
GTA	**Gaotai**	**24.86**	**320**	*e*P		**P**	**21 47 00.3**	**+1.8**
GTA				pP			21 47 04.8	
GTA				sP		sP	21 47 08.0	-4.6
GTA				pmax		pmax		
	comp=Z,1.0nm,1.2s,mb3.2							
ULN	**Ulaanbaatar**	**28.16**	**341**	*e*P		**P**	**21 47 30.1**	**+2.0**
	comp=Z,2.2nm,1.1s,mb3.7							
SONM	**Songino Array**	**28.34**	**340**	P		**P**	**21 47 30.7**	**+1.0**
	comp=Z,0.3nm,0.3s,mb3.5,baz=156,slow=7.6,SNR=5.4							
YSS	**Yuzh-Sakhalins**	**30.97**	**30**	P		**P**	**21 47 51.8**	**-1.3**
ZALV	**Zalesovo Beam**	**41.90**	**329**	P		**P**	**21 49 26.9**	**+0.8**
	comp=Z,2.0nm,0.9s,mb3.8,baz=116,slow=6.8,SNR=9.7							
WRA	**Warramunga Arr**	**43.64**	**161**	P		**P**	**21 49 39.3**	**-1.3**
	comp=Z,3.3nm,0.6s,mb4.3,baz=345,slow=9.0,SNR=19							
ASAR	**Alice Springs**	**47.04**	**163**	P		**P**	**21 50 06.0**	**-1.5**
	comp=Z,1.0nm,0.9s,mb3.7,baz=345,slow=6.8,SNR=8.1							
BVAR	**Borovoye Array**	**49.09**	**322**	P		**P**	**21 50 24.3**	**+1.3**
	comp=Z,0.2nm,0.4s,mb3.5,baz=90,slow=4.3,SNR=2.7							
STKA	**Stephens Creek**	**57.08**	**158**	P		**P**	**21 51 21.1**	**-0.9**
	comp=Z,3.2nm,0.9s,mb4.4,baz=320,slow=16,SNR=4.1							
ILAR	**Eielson Array**	**71.70**	**27**	P		**P**	**21 52 56.3**	**-0.9**
	comp=Z,0.3nm,0.7s,mb3.4,baz=262,slow=4.5,SNR=3.3							
RPZ	**Rata Peaks**	**80.02**	**145**	LR		LR	22 26 45.7	
	comp=Z,221nm,19.8s,baz=34,slow=34							

KRSC 14 21:46:56.8±1.2, 54.30N×160.08E, h110km±49km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.46**	**235**	*i* P		Pn	21 47 14.5	+1.2
MKZ	**Mys Kozlova**	**1.00**	**74**	*i* P		Pn	21 47 18.4	+0.5
MKZ				*i* S		Sn	21 47 34.1	+0.2
SPN	**Mys Shipunski**	**1.21**	**182**	P		Pn	21 47 20.7	+0.6
SPN				*i* S		Sn	21 47 38.0	+0.2
NLC	**Nalytchevo**	**1.21**	**201**	*i* P		Pn	21 47 21.1	+0.9
NLC				*i* S		Sn	21 47 38.7	+0.8
AVH	**Avacha**	**1.31**	**218**	*i* P		Pn	21 47 23.0	+1.7
AVH				*i* S		Sn	21 47 42.0	+2.1
GNL	**Ganaly**	**1.40**	**245**	*i* P		Pn	21 47 23.6	+1.2
GNL				*i* S		Sn	21 47 43.1	+1.3
PET	**Petropavlovsk**	**1.54**	**214**	*e*P		Pn	21 47 25.0	+1.0
PET				*i* S		Sn	21 47 45.6	+1.0
BZMR	**Bezymyannaya**	**1.66**	**8**	*e*P		Pn	21 47 26.9	+1.5
KPT	**Kopyto**	**1.67**	**3**	*e*P		Pn	21 47 26.4	+0.8
KRSR	**Krestovskiy**	**1.94**	**8**	P		Pn	21 47 29.8	+0.8
SRDR	**Sredinnyy**	**2.03**	**354**	P		Pn	21 47 30.4	+0.3
KBTR	**Krutoberegovo**	**2.47**	**38**	*e*P		Pn	21 47 37.2	+1.4
MIPR	**Malaya Ipel'ka**	**2.84**	**226**	P		Pn	21 47 41.5	+0.8
ALID	**Alaid**	**4.41**	**221**	P		Pn	21 48 02.8	+1.2

*IDC **14** 21:57:27.6±1.5, 49.93N×179.73E, h0km, mb4.1/11, mb1 4.2/11, mb1mx4.0/23, mbtmp4.1/11, Error ellipse: s-maj=39.7km s-min=22.0km az=170.0*
*ISCJB **14** 21:57:31.4±1.1, 50.10N±0.2×179.76E±0.1, h33km, mb4.0/15, Error ellipse: s-maj=23.8km s-min=11.7km az=173.3*
*NEIC **14** 21:57:32.5, 50.10N×179.70E, h14km, ML3.8(PMR), ML3.5(AEIC), After AEIC.*

ISC 14 21:57:34.0±1.1, 50.2N±0.2×179.7E±0.1, h35km, n22, σ0.71/20, mb4.0/15, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**1.25**	**347**	*e*P		**Pn**	**21 57 53.7**	**-1.2**
ATKA	**Atka Island**	**4.33**	**60**	P		**Pn**	**21 58 35.6**	**-1.6**
PPLA	**Purkeypile**	**19.84**	**39**	*e*P		**Pn**	**22 02 03.4**	**+0.1**
ILAR	**Eielson Array**	**22.77**	**38**	P		**P**	**22 02 33.1**	**+0.2**
	0.2nm,0.4s,mb2.9,baz=242,slow=9.8,SNR=5.4							
EGAK	**Eagle**	**25.08**	**40**	*e*P		**P**	**22 02 55.5**	**+0.7**
	38nm,1.8s,mb4.6							
YKA	**Yellowknife Ar**	**36.74**	**45**	P		**P**	**22 04 38.2**	**+0.7**
YKA	**Yellowknife Ar**	**36.74**	**45**	P		**P**	**22 04 38.2**	**+0.7**
	1.7nm,0.4s,mb4.2,baz=278,slow=9.1,SNR=9.0							
EDM	**Edmonton**	**40.23**	**59**	*e*P		**P**	**22 05 07.7**	**+0.9**
NVAR	**Mina Array Bea**	**44.65**	**81**	P		**P**	**22 05 41.9**	**-1.0**
	0.5nm,0.5s,mb3.6,baz=301,slow=7.4,SNR=3.6							
SONM	**Songino Array**	**46.37**	**297**	P		**P**	**22 05 56.3**	**-0.1**
	1.9nm,1.2s,mb3.9,baz=56,slow=7.8,SNR=5.1							
SPITS	**Spitsbergen Ar**	**51.52**	**356**	P		**P**	**22 06 36.1**	**+0.5**
	3.2nm,0.5s,mb4.5,baz=15,slow=8.3,SNR=10.0							
ZALV	**Zalesovo Beam**	**54.20**	**313**	P		**P**	**22 06 55.0**	**-0.6**
	0.4nm,0.4s,mb3.7,baz=38,slow=5.4,SNR=2.9							
KURK	**Kurchatov**	**59.19**	**313**	*e*P		**P**	**22 07 30.7**	**-0.4**
	4.1nm,1.2s,mb4.3							
BVAR	**Borovoye Array**	**61.22**	**319**	P		**P**	**22 07 45.4**	**+0.5**
	2.0nm,0.6s,mb4.5,baz=47,slow=6.4,SNR=16							
FINES	**FINESS Array B**	**66.76**	**347**	P		**P**	**22 08 21.1**	**0.0**
	2.9nm,0.6s,mb4.5,baz=38,slow=9.6,SNR=6.6							
ABKAR	**Akbulak array**	**68.34**	**322**	*e*P		**P**	**22 08 31.9**	**+0.6**
	0.4nm,0.3s,mb3.9							
NOA	**NORSAR Array B**	**68.77**	**354**	P		**P**	**22 08 34.6**	**+0.9**
	1.2nm,0.7s,mb4.0,baz=8.9,slow=6.4,SNR=4.1							
HFS	**Hagfors**	**69.48**	**353**	P		**P**	**22 08 38.3**	**+0.1**
	2.2nm,0.7s,mb4.2,baz=26,slow=3.8,SNR=4.3							
CMAR	**Chiang Mai Arr**	**70.21**	**275**	P		**P**	**22 08 42.6**	**-0.8**
	0.4nm,0.5s,mb3.6,baz=14,slow=7.3,SNR=3.4							
AKASG	**Malin Array Be**	**76.41**	**341**	P		**P**	**22 09 19.6**	**+0.2**
	1.4nm,0.5s,mb4.2,baz=20,slow=6.7,SNR=3.6							
MAW	**Mawson**	**144.95**	**217**	PKP		PKPdf	22 17 03.9	-2.0
	2.2nm,0.9s,baz=85,slow=4.8,SNR=4.3							
BOSA	**Boshof**	**151.06**	**308**	PKPbc		PKPbc	22 17 22.9	-0.1
	1.9nm,0.6s,baz=45,slow=2.2,SNR=5.6							

*ISCJB **14** 22:03:29.2±2.5, 72.82N±0.05×4.9E±0.2, h8km±19km, mb3.4/4, MS3.3/4, Error ellipse: s-maj=9.3km s-min=8.1km az=179.5*
*CSEM **14** 22:03:31.4±0.2, 72.82N×4.66E, h10km, ML2.6, Error ellipse: s-maj=7.4km s-min=5.6km az=90.0*
*IDC **14** 22:03:31.4±1.2, 72.69N×4.61E, h0km, mb3.4/3, mb1 3.7/10, mb1mx3.5/25, mbtmp3.6/10, ML3.4/7, MS3.3/8, Ms1 3.3/8, ms1mx3.0/26, Error ellipse: s-maj=22.4km s-min=18.0km az=67.0*
*NAO **14** 22:03:32.1±7.7, 72.79N×4.79E, h12km±74km, ML2.1*
*NEIC **14** 22:03:32.0±0.4, 72.80N×4.71E, h10km, mb3.8/3, Error ellipse: s-maj=7.0km s-min=5.3km az=89.0*
*BER **14** 22:03:33.9±6.0, 72.87N×4.65E, h10km, MD2.9, ML2.6, ML2.1(NAO)*

ISC 14 22:03:30.8±3.0, 72.84N±0.05×4.8E±0.2, h3km±21km, n54, σ0.93/54, mb3.4/4, MS3.3/4, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**4.53**	**252**	Pn		**Pn**	**22 04 39.2**	**-0.9**
	3.0nm,0.3s,baz=90,slow=5.1,SNR=5.3							
JMIC					LR	LR	22 06 07.5	
	comp=Z,117nm,18.9s,baz=61,slow=35							
JMIC	**Jan Mayen**	**4.53**	**252**	Pn		**Pn**	**22 04 39.2**	**-0.9**
TRO	**Tromso**	**5.58**	**118**	*e*P		**Pn**	**22 04 54.1**	**-0.5**
TRO				*e*S		**Sn**	**22 05 53.7**	**-5.5**
TRO				AML	AML		22 06 00.7	
	comp=Z,6.7nm,0.7s							
TRO	**Tromso**	**5.58**	**118**	*e*P		**Pn**	**22 04 54.1**	**-0.5**
	SNR=49							
SPA0	**Spitsbergen Ar**	**6.09**	**23**	Pn		**Pn**	**22 05 01.3**	**-0.3**
SPA0				Sn		**Sn**	**22 06 09.6**	**-2.1**
SPITS	**Spitsbergen Ar**	**6.09**	**23**	Pn		**Pn**	**22 05 02.8**	**+1.2**
	baz=205,slow=16,SNR=21							
SPITS	**Spitsbergen Ar**	**6.09**	**23**	Pn		**Pn**	**22 05 02.8**	**+1.2**
KBS	**Kingsbay**	**6.37**	**13**	Pn		**Pn**	**22 05 04.5**	**-0.8**
KBS	**Kingsbay**	**6.37**	**13**	*e*Pn		**Pn**	**22 05 05.6**	**+0.3**
KBS	**Kingsbay**	**6.37**	**13**	Pn		**Pn**	**22 05 04.5**	**-0.8**
	SNR=50							
KONS	**Konsvik**	**6.99**	**151**	*e*P		**Pn**	**22 05 13.8**	**-0.1**
KONS				AML	AML		22 06 33.6	
	comp=Z,13nm,0.6s							
KTK1	**Kautokeino**	**7.15**	**113**	*e*P		**Pn**	**22 05 17.5**	**+1.5**
KTK1	**Kautokeino**	**7.15**	**113**	*e*P		**Pn**	**22 05 16.2**	**+0.1**
KTK1	**Kautokeino**	**7.15**	**113**	*e*P		**Pn**	**22 05 16.2**	**+0.1**
ARA0	**ARCESS Array S**	**7.46**	**106**	Pn		**Pn**	**22 05 20.2**	**-0.1**
ARCES	**ARCESS Array B**	**7.46**	**106**	Pn		**Pn**	**22 05 20.2**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=320,slow=12,SNR=22							
ARCES	**ARCESS Array B**	**7.46**	**106**	Pn		**Pn**	**22 05 20.2**	**-0.1**
MOR8	**Moi Rana**	**7.50**	**148**	*e*P		**Pn**	**22 05 20.9**	**+0.1**
MOR8				*e*S		**Sn**	**22 06 39.8**	**-6.4**
MOR8				AML	AML		22 06 46.7	
	comp=Z,11nm,0.6s							
MOR8	**Moi Rana**	**7.50**	**148**	*e*P		**Pn**	**22 05 20.9**	**+0.1**
MOR8				*e*S		**Sn**	**22 06 39.8**	**-6.4**
MOR8	**Moi Rana**	**7.50**	**148**	*e*P		**Pn**	**22 05 20.9**	**+0.1**
	SNR=47							
KEV	**Kevo**	**7.76**	**103**	*e*Pn		**Pn**	**22 05 25.4**	**+0.9**
KEV				*e*Sn		**Sn**	**22 06 52.3**	**-0.4**
KEV	**Kevo**	**7.76**	**103**	*e*Pn		**Pn**	**22 05 25.4**	**+0.9**
KEV				*e*Sn		**Sn**	**22 06 52.3**	**-0.4**
NSS	**Namsos**	**8.74**	**159**	*e*P		**Pn**	**22 05 37.6**	**-0.2**
NSS	**Namsos**	**8.74**	**159**	*e*P		**Pn**	**22 05 37.6**	**-0.3**
	SNR=47							
NOA	**NORSAR Array B**	**12.10**	**165**	Pn		**Pn**	**22 06 24.1**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=352,slow=12,SNR=3.3							
NOA					LR	LR	22 10 59.5	
	comp=Z,86nm,18.1s,baz=345,slow=37							
NOA	**NORSAR Array B**	**12.10**	**165**	Pn		**Pn**	**22 06 24.1**	**+0.2**
NAO01	**NORSAR Array S**	**12.27**	**166**	*e*Pn		**Pn**	**22 06 26.3**	**+0.1**
NAO01	**NORSAR Array S**	**12.27**	**166**	*e*Pn		**Pn**	**22 06 26.3**	**+0.1**
HFS	**Hagfors**	**13.22**	**160**	Pn		**Pn**	**22 06 39.7**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=355,slow=12,SNR=31							
HFS					LR	LR	22 11 33.8	
	comp=Z,128nm,18.8s,baz=305,slow=37							
HFS	**Hagfors**	**13.22**	**160**	Pn		**Pn**	**22 06 39.7**	**+0.6**
JOF	**Joensu**	**13.94**	**122**	*e*p		**Pn**	**22 06 47.3**	**-1.5**
FIA0	**FINESS Array S**	**13.99**	**134**	Pn		**Pn**	**22 06 49.2**	**-0.4**
FINES	**FINESS Array B**	**13.99**	**134**	Pn		**Pn**	**22 06 49.3**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=332,slow=11,SNR=6.0							
FINES					LR	LR	22 11 52.8	
	comp=Z,140nm,19.7s,baz=339,slow=36							
FINES	**FINESS Array B**	**13.99**	**134**	Pn		**Pn**	**22 06 49.3**	**-0.3**
EKA	**Eskdalemuir Ar**	**17.88**	**195**	P		**Pn**	**22 07 39.2**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=8.0,slow=11,SNR=2.5							
EKA	**Eskdalemuir Ar**	**17.88**	**195**	P		**Pn**	**22 07 39.2**	**-0.9**
DSB	**Dublin**	**20.23**	**200**	P		**P**	**22 08 06.6**	**0.0**
	comp=Z,1.7nm,0.7s							
DSB	**Dublin**	**20.23**	**200**	P		**P**	**22 08 06.6**	**0.0**
	comp=Z,1.7nm,0.7s							
RUE	**Ruedersdorf**	**20.80**	**164**	*e*P		**P**	**22 08 11.6**	**-1.2**
	comp=Z,13nm,0.4s							
RUE	**Ruedersdorf**	**20.80**	**164**	*e*P		**P**	**22 08 11.6**	**-1.2**
	comp=Z,13nm,0.4s							
MORC	**Moravsky Berou**	**23.83**	**159**	*e*P		**P**	**22 08 44.9**	**+0.3**
	comp=Z,1.1nm,0.6s,mb3.5							
MORC	**Moravsky Berou**	**23.83**	**159**	*e*P		**P**	**22 08 44.9**	**+0.2**
	comp=Z,1.1nm,0.6s,mb3.5							
VRAC	**Vranov**	**24.19**	**161**	LR		LR	22 18 43.1	
	comp=Z,66nm,18.4s,MS3.1,baz=257,slow=38							
**RES

STR **14** *22:46:39.3±0.4,51.55N×16.93E,h2km,MI3.8,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISCJB **14** *22:46:44.4±0.2,51.48N±0.02×16.09E±0.02,h0km, mb3.8/8,Error ellipse: s-maj=2.3km s-min=1.7km az=18.8*
IPEC **14** *22:46:44.6±0.3,51.61N×16.19E,h0km,ML3.5/4,Error ellipse: s-maj=1.9km s-min=1.5km az=45.0*
IDC **14** *22:46:45.8±0.7,51.52N×15.93E,h0km,mb3.7/8, mb1 3.9/15,mb1mx3.8/24,mbtmpg3.7/15,ML3.4/6,Error ellipse: s-maj=11.6km s-min=7.3km az=78.0*
CSEM **14** *22:46:45.5±0.1,51.55N×16.12E,h0km±1km,ML4.2/20, Ms3.9,Error ellipse: s-maj=2.3km s-min=1.6km az=16.0*
PRU **14** *22:46:46.6,51.52N×16.12E,h0km*
BGR **14** *22:46:47.0±0.5,51.54N×16.09E,h1km,ML4.1/11,Error ellipse: s-maj=5.6km s-min=4.4km az=148.0*
WAR **14** *22:46:47.2,51.53N×16.10E,ML3.3,Mining Induced*
NEIC **14** *22:46:47.0,51.54N×16.09E,h1km,ML4.1(SZGRF), ML3.8(STR),After SZGRF.*
VIE **14** *22:46:49.2±1.0,51.30N×16.00E,h1km±4km,mb3.5/14, ML3.4/13,Ms3.9/3,Error ellipse: s-maj=4.7km s-min=2.4km az=15.0 74 km WNW of Wroclaw Suspected Mining induced.*

ISC 14 22:46:45.4±0.2,51.56N±0.01×16.13E±0.02,h0km,n239, σ0.93/355,mb3.8/8,23C-27D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.72**	**172**	*e*Pg	**Pg**	**22 46 60.0**	**+0.7**
KSP				*e*Sg	**Sg**	**22 47 09.4**	**+0.7**
KSP	**Ksiaz**	**0.72**	**172**	*i* Pg	**Pg**	**22 47 00.0**	**+0.7**
KSP				*e*Sg	**Sg**	**22 47 09.1**	**+0.4**
KSP				*e*L		22 47 13.0	
KSP	**Ksiaz**	**0.72**	**172**	*e*Pg	**Pg**	**22 46 59.6**	**+0.3**
	baz=355						
KSP				*e*Sg	**Sg**	**22 47 08.8**	**+0.1**
	baz=355						
DPC	**Dobruska-Polom**	**1.22**	**174**	*e*PG	**Pg**	**22 47 08.8**	**+0.1**
DPC				*e*SG	**Sg**	**22 47 22.8**	**-1.7**
	comp=Z,418nm,0.6s						
DPC	**Dobruska-Polom**	**1.22**	**174**	Pg	**Pg**	**22 47 08.8**	**+0.1**
DPC				*e*Sg	**Sg**	**22 47 24.2**	**-0.3**
	baz=356						
PVCC	**Panska Ves**	**1.43**	**224**	*e*PG	**Pg**	**22 47 12.4**	**-0.3**
PVCC				*e*SG	**Sg**	**22 47 31.4**	**+0.2**
	comp=Z,1μm,0.4s						
PVCC	**Panska Ves**	**1.43**	**224**	*e*Pn	**Pn**	**22 47 12.3**	**-0.2**
	baz=43						
PVCC				Sg	**Sg**	**22 47 31.4**	**+0.2**
	comp=Z,1μm,0.4s						
BRG	**Berggiesshubel**	**1.54**	**244**	*e*Pn	**Pn**	**22 47 13.3**	**-0.7**
	SNR=261						
BRG				*e*Sg	**Sg**	**22 47 35.0**	**+0.3**
BRG	**Berggiesshubel**	**1.54**	**244**	PN	**Pn**	**22 47 13.2**	**-0.8**
BRG				PG	**Pg**	**22 47 14.8**	**0.0**
BRG				SG	**Sg**	**22 47 34.9**	**+0.2**
	comp=Z,907nm,0.4s						
BRG	**Berggiesshubel**	**1.54**	**244**	Pn	**Pn**	**22 47 13.3**	**-0.7**
	SNR=261						
BRG				Sg	**Sg**	**22 47 35.0**	**+0.3**
RUE	**Ruedersdorf**	**1.72**	**303**	*e*Pn	**Pn**	**22 47 16.1**	**-0.4**
	SNR=30						
RUE	**Ruedersdorf**	**1.72**	**303**	*e*Pn	**Pn**	**22 47 16.1**	**-0.5**
RUE	**Ruedersdorf**	**1.72**	**303**	Pn	**Pn**	**22 47 16.1**	**-0.5**
	SNR=30						
GKP	**Gorka Klasztor**	**1.84**	**21**	*e*Pn	**Pn**	**22 47 19.9**	**+1.6**
GKP				*e*		22 47 26.1	
GKP				*e*		22 47 27.4	
GKP	**Gorka Klasztor**	**1.84**	**21**	*e*Pn	**Pn**	**22 47 19.9**	**+1.6**
PRU	**Pruhonice**	**1.87**	**213**	*e*PN	**Pn**	**22 47 18.8**	**+0.2**
PRU				*e*PG	**Pg**	**22 47 20.7**	**-0.5**
PRU				*e*SG	**Sg**	**22 47 44.6**	**-0.8**
	comp=Z,242nm,0.3s						
PRU	**Pruhonice**	**1.87**	**213**	Pn	**Pn**	**22 47 18.8**	**+0.2**
CLL	**Collm**	**1.97**	**264**	*e*Pn	**Pn**	**22 47 19.3**	**-0.7**
	SNR=197						
CLL				*i* Pg	**Pg**	**22 47 23.7**	**+0.5**
CLL				*e*Sg	**Sg**	**22 47 49.0**	**+0.3**
CLL	**Collm**	**1.97**	**264**	*i* Pn	**Pn**	**22 47 19.5**	**-0.5**
CLL				*i* Pg	**Pg**	**22 47 23.7**	**+0.5**
CLL				*e*Sg	**Sg**	**22 47 49.0**	**+0.3**
CLL	**Collm**	**1.97**	**264**	*i* Pn	**Pn**	**22 47 19.5**	**-0.5**
	comp=Z,94nm,0.5s						
CLL				*i* Pg	**Pg**	**22 47 23.7**	**+0.5**
CLL				*e*		22 47 27.0	
CLL				*e*Sg	**Sg**	**22 47 49.0**	**+0.3**
	comp=Z,302nm,0.7s						
CLL	**Collm**	**1.97**	**264**	*i* Pn	**Pn**	**22 47 19.5**	**-0.5**
RAC	**Raciborz**	**1.98**	**138**	*e*Pn	**Pn**	**22 47 19.2**	**-0.9**
RAC				*e*Pg	**Pg**	**22 47 23.3**	**0.0**
RAC				*e*Sg	**Sg**	**22 47 48.8**	**-0.1**
RAC	**Raciborz**	**1.98**	**138**	*e*Pn	**Pn**	**22 47 19.2**	**-0.9**
MORC	**Moravsky Berou**	**2.00**	**153**	*e*Pn	**Pn**	**22 47 20.3**	**-0.1**
MORC				*e*Sn	**Sn**	**22 47 49.0**	**+2.9**
MORC	**Moravsky Berou**	**2.00**	**153**	⇓*i*P	**Pn**	**22 47 20.2**	**-0.2**
MORC	**Moravsky Berou**	**2.00**	**153**	*e*Pn	**Pn**	**22 47 20.3**	**-0.1**
MORC				*e*Sg	**Sg**	**22 47 48.3**	**-1.3**
	comp=Z,268nm,0.6s,baz=335						
MORC				*e*Sn	**Sn**	**22 47 49.0**	**+2.9**
MORC				S	**Sn**	**22 47 49.9**	**+3.8**
OKC	**Ostrava-Krasne**	**2.15**	**143**	*e*PN	**Pn**	**22 47 21.9**	**-0.6**
OKC				*e*PG	**Pg**	**22 47 26.3**	**-0.3**
OKC				*e*SG	**Sg**	**22 47 53.7**	**-0.8**
	comp=Z,406nm,0.7s						
OKC	**Ostrava-Krasne**	**2.15**	**143**	Pn	**Pn**	**22 47 21.9**	**-0.6**
OKC	**Ostrava-Krasne**	**2.15**	**143**	Pg	**Pg**	**22 47 26.3**	**-0.3**
OKC				Sg	**Sg**	**22 47 53.7**	**-0.8**
	comp=Z,406nm,0.7s						
VRAC	**Vranov**	**2.27**	**172**	⇑P	**Pn**	**22 47 25.2**	**+1.1**
VRAC				S	**Sg**	**22 47 58.7**	**+0.3**
VRAC	**Vranov**	**2.27**	**172**	Pn	**Pn**	**22 47 24.3**	**+0.1**
	comp=Z,9.3nm,0.3s,baz=336,slow=13,SNR=24						
VRAC				Lg		22 47 56.6	
	comp=Z,24nm,0.3s,baz=255,slow=17,SNR=14						
VRAC	**Vranov**	**2.27**	**172**	⇑*i*P	**Pn**	**22 47 25.3**	**+1.1**
VRAC	**Vranov**	**2.27**	**172**	S	**Sg**	**22 47 58.7**	**+0.3**
VRAC	**Vranov**	**2.27**	**172**	*e*Pn	**Pn**	**22 47 24.2**	**0.0**
	baz=354						
VRAC	**Vranov**	**2.27**	**172**	⇑P	**Pn**	**22 47 25.2**	**+1.0**
VRAC				*e*Sg	**Sg**	**22 47 57.1**	**-1.3**
	comp=Z,259nm,0.8s,baz=354						
TREC	**Trest**	**2.30**	**190**	*e*PN	**Pn**	**22 47 24.7**	**+0.1**
TREC				*e*PG	**Pg**	**22 47 28.7**	**-0.9**
TREC	**Trest**	**2.30**	**190**	Pn	**Pn**	**22 47 24.7**	**+0.1**
KRUC	**Moravsky**	**2.51**	**176**	*e*Pn	**Pn**	**22 47 27.4**	**0.0**
	baz=357						
KRUC				*e*Sg	**Sg**	**22 48 04.8**	**-1.1**
	comp=Z,113nm,0.5s,baz=357						
TANN	**Tannenbergstha**	**2.58**	**245**	*e*Pn	**Pn**	**22 47 28.6**	**+0.1**
	SNR=104						
TANN				*e*Pg	**Pg**	**22 47 35.7**	**+0.8**
	SNR=4.1						
TANN				*e*Sg	**Sg**	**22 48 07.6**	**-0.8**
TANN	**Tannenbergstha**	**2.58**	**245**	Pn	**Pn**	**22 47 28.6**	**+0.2**
	SNR=104						
WERD	**Werda**	**2.66**	**247**	*e*Pn	**Pn**	**22 47 29.5**	**0.0**
	SNR=105						
WERD				*e*Pg	**Pg**	**22 47 36.6**	**+0.3**
	SNR=5.1						
WERD				*e*Sg	**Sg**	**22 48 09.5**	**-1.3**
WERD	**Werda**	**2.66**	**247**	Pn	**Pn**	**22 47 29.5**	**0.0**
	SNR=105						
NKC	**Novy Kostel**	**2.68**	**242**	*e*PN	**Pn**	**22 47 30.1**	**+0.3**
NKC				*e*PG	**Pg**	**22 47 36.4**	**-0.4**
NKC				*e*SG	**Sg**	**22 48 12.2**	**+0.7**
	comp=Z,767nm,0.3s						
NKC	**Novy Kostel**	**2.68**	**242**	Pn	**Pn**	**22 47 30.1**	**+0.3**
NKC	**Novy Kostel**	**2.68**	**242**	Pg	**Pg**	**22 47 36.4**	**-0.4**
NKC				Sg	**Sg**	**22 48 12.2**	**+0.7**
	comp=Z,767nm,0.3s						
GUNZ	**Gunzen**	**2.68**	**245**	*e*Pn	**Pn**	**22 47 29.8**	**+0.1**
	SNR=77						
GUNZ				*e*Pg	**Pg**	**22 47 37.2**	**+0.4**
	SNR=7.5						
GUNZ	**Gunzen**	**2.68**	**245**	Pn	**Pn**	**22 47 29.8**	**0.0**
	SNR=77						
OJC	**Ojcow**	**2.69**	**119**	*e*Pn	**Pn**	**22 47 28.3**	**-1.5**
OJC				*e*Pg	**Pg**	**22 47 37.4**	**+0.6**
OJC				*e*Sg	**Sg**	**22 48 12.4**	**+0.8**
OJC	**Ojcow**	**2.69**	**119**	*e*Pn	**Pn**	**22 47 28.3**	**-1.5**
WERN	**Wernitzgruen**	**2.69**	**243**	*e*Pn	**Pn**	**22 47 29.4**	**-0.6**
	SNR=59						
WERN	**Wernitzgruen**	**2.69**	**243**	Pn	**Pn**	**22 47 29.4**	**-0.6**
	SNR=59						
NEUB	**Neuenburg**	**2.75**	**264**	*e*Pn	**Pn**	**22 47 31.0**	**+0.3**
	SNR=77						
NEUB				*e*Pg	**Pg**	**22 47 38.1**	**+0.1**
	SNR=12						
NEUB	**Neuenburg**	**2.75**	**264**	Pn	**Pn**	**22 47 31.0**	**+0.3**
	SNR=77						
JAVC	**Velka Javorina**	**2.88**	**159**	*e*Pn	**Pn**	**22 47 33.7**	**+1.2**
JAVC				*e*Sg	**Sg**	**22 48 18.1**	**+0.2**
	comp=Z,277nm,0.9s						
KHC	**Kasperske Hory**	**2.93**	**215**	*e*Pn	**Pn**	**22 47 32.8**	**-0.4**
KHC				*e*Pg	**Pg**	**22 47 41.5**	**0.0**
KHC				*e*Sn	**Sn**	**22 48 10.7**	**+1.7**
KHC	**Kasperske Hory**	**2.93**	**215**	*e*PN	**Pn**	**22 47 33.0**	**-0.2**
KHC				*e*PG	**Pg**	**22 47 39.5**	**-2.0**
KHC				*e*SG	**Sg**	**22 48 17.2**	**-2.3**
	comp=Z,110nm,0.6s						
KHC	**Kasperske Hory**	**2.93**	**215**	Pn	**Pn**	**22 47 33.0**	**-0.2**
KHC	**Kasperske Hory**	**2.93**	**215**	*e*Pg	**Pg**	**22 47 41.5**	**0.0**
KHC				Sg	**Sg**	**22 48 17.2**	**-2.3**
	comp=Z,110nm,0.6s						
MGBB	**Grossbuechelbe**	**2.95**	**239**	⇓*i*Pn	**Pn**	**22 47 33.5**	**0.0**
MGBB	**Grossbuechelbe**	**2.95**	**239**	Pn	**Pn**	**22 47 33.5**	**0.0**
MOX	**Moxa**	**2.99**	**254**	*i* PN	**Pn**	**22 47 33.7**	**-0.3**
MOX				*i* PG	**Pg**	**22 47 42.4**	**-0.3**
MOX				*i* SG	**Sg**	**22 48 22.3**	**+1.0**
MOX	**Moxa**	**2.99**	**254**	*e*Pn	**Pn**	**22 47 33.8**	**-0.1**
	SNR=23						
MOX				*e*Pg	**Pg**	**22 47 42.6**	**-0.1**
	SNR=8.8						
MOX				*e*Sg	**Sg**	**22 48 21.7**	**+0.4**
MOX	**Moxa**	**2.99**	**254**	Pn	**Pn**	**22 47 33.8**	**-0.2**
	SNR=23						
MOX	**Moxa**	**2.99**	**254**	Pg	**Pg**	**22 47 42.6**	**-0.1**
	SNR=8.8						
MOX				Sg	**Sg**	**22 48 21.7**	**+0.4**
ROTZ	**Rotzenmuhle**	**3.07**	**236**	*e*Pn	**Pn**	**22 47 35.2**	**0.0**
	SNR=46						
ROTZ	**Rotzenmuhle**	**3.07**	**236**	Pn	**Pn**	**22 47 35.2**	**0.0**
	SNR=46						
GEC2	**GERESS Array S**	**3.13**	**211**	*e*Pn	**Pn**	**22 47 35.9**	**0.0**
	SNR=56						
GEC2				*e*Pg	**Pg**	**22 47 44.9**	**-0.5**
	SNR=1.9						
GEC2	**GERESS Array S**	**3.13**	**211**	*e*Pn	**Pn**	**22 47 35.9**	**-0.1**
GEC2				*e*Pg	**Pg**	**22 47 44.9**	**-0.5**
GEC2	**GERESS Array S**	**3.13**	**211**	Pn	**Pn**	**22 47 35.9**	**-0.1**
	SNR=56						
LIKS	**Likavka**	**3.16**	**142**	*e*SG	**Sg**	**22 48 25.3**	**-1.5**
LIKS	**Likavka**	**3.16**	**142**	*e*Sg	**Sg**	**22 48 25.3**	**-1.5**
WET	**Wettzell**	**3.19**	**222**	*e*Pn	**Pn**	**22 47 36.8**	**0.0**
	SNR=48						
WET	**Wettzell**	**3.19**	**222**	Pn	**Pn**	**22 47 36.8**	**0.0**
	SNR=48						
MODS	**Modra-Piesok**	**3.27**	**166**	*e*Pn	**Pn**	**22 47 37.1**	**-0.8**
MODS				*e*		22 47 48.1	
MODS				*e*Sg	**Sg**	**22 48 30.5**	**-0.1**
MODS	**Modra-Piesok**	**3.27**	**166**	*e*PN	**Pn**	**22 47 37.1**	**-0.8**
MODS				*e*		22 47 48.1	
MODS	**Modra-Piesok**	**3.27**	**166**	*e*SG	**Sg**	**22 48 30.5**	**-0.1**
MODS	**Modra-Piesok**	**3.27**	**166**	*e*Pn	**Pn**	**22 47 37.1**	**-0.8**
MODS				*e*Sg	**Sg**	**22 48 30.5**	**-0.1**
KOLL	**Kolacno**	**3.33**	**153**	*e*Pn	**Pn**	**22 47 38.9**	**+0.3**
KOLL				*e*		22 47 50.5	
KOLL				*e*Sg	**Sg**	**22 48 31.9**	**-0.3**
KOLL	**Kolacno**	**3.33**	**153**	*e*PN	**Pn**	**22 47 38.8**	**+0.2**
KOLL				*e*		22 47 50.5	
KOLL	**Kolacno**	**3.33**	**153**	*e*SG	**Sg**	**22 48 31.9**	**-0.3**
KOLL	**Kolacno**	**3.33**	**153**	*e*Pn	**Pn**	**22 47 38.9**	**+0.3**
KOLL				*e*Sg	**Sg**	**22 48 31.9**	**-0.3**
NIE	**Niedzica**	**3.43**	**127**	*e*Pn	**Pn**	**22 47 40.6**	**+0.6**
NIE				*e*Pg	**Pg**	**22 47 49.9**	**-1.2**
NIE				*e*Sg	**Sg**	**22 48 34.7**	**-0.7**
NIE	**Niedzica**	**3.43**	**127**	*e*Pn	**Pn**	**22 47 40.6**	**+0.6**
ZST	**Bratislava**	**3.43**	**169**	*e*Pn	**Pn**	**22 47 40.6**	**+0.6**
ZST				*e*		22 47 50.4	
ZST				*e*Sg	**Sg**	**22 48 36.1**	**+0.7**
ZST	**Bratislava**	**3.43**	**169**	*e*PN	**Pn**	**22 47 40.6**	**+0.6**
ZST				*e*		22 47 50.4	
ZST	**Bratislava**	**3.43**	**169**	*e*SG	**Sg**	**22 48 36.1**	**+0.7**
ZST	**Bratislava**	**3.43**	**169**	*e*Pn	**Pn**	**22 47 40.6**	**+0.6**
ZST				*e*Sg	**Sg**	**22 48 36.1**	**+0.7**
VYHS	**Vyhne**	**3.53**	**149**	*e*Pn	**Pn**	**22 47 41.3**	**-0.2**
VYHS				*e*		22 47 52.3	
VYHS				*e*Sg	**Sg**	**22 48 36.6**	**-2.2**
VYHS	**Vyhne**	**3.53**	**149**	*e*PN	**Pn**	**22 47 41.3**	**-0.2**
VYHS				*e*		22 47 52.3	
VYHS	**Vyhne**	**3.53**	**149**	*e*SG	**Sg**	**22 48 36.6**	**-2.2**
VYHS	**Vyhne**	**3.53**	**149**	*e*Pn	**Pn**	**22 47 41.3**	**-0.2**
VYHS				*e*Sg	**Sg**	**22 48 36.6**	**-2.2**
CLZ	**Clausthal**	**3.59**	**277**	*e*Pn	**Pn**	**22 47 43.1**	**+0.8**
	SNR=12						
CLZ	**Clausthal**	**3.59**	**277**	*e*Pn	**Pn**	**22 47 43.1**	**+0.8**
CLZ	**Clausthal**	**3.59**	**277**	Pn	**Pn**	**22 47 43.1**	**+0.8**
	SNR=12						
BSD	**Bornholm Skovb**	**3.63**	**349**	*i* P	**Pn**	**22 47 41.8**	**-1.1**
BSD				*i* S	**Sn**	**22 48 22.3**	**-4.1**
BSD				*i* LG		22 48 41.4	
BSD	**Bornholm Skovb**	**3.63**	**349**	*i* P	**Pn**	**22 47 41.9**	**-1.0**
	SNR=49						
BSD				*i* Sg	**Sg**	**22 48 41.5**	**-0.6**
	comp=Z,27nm,0.5s,SNR=92						
CONA	**Conrad Observa**	**3.64**	**183**	⇑*i*Pn	**Pn**	**22 47 43.2**	**+0.2**
	SNR=42						
CONA				⇓*i*Sg	**Sg**	**22 48 41.0**	**-1.3**
	comp=Z,108nm,0.4s						
CONA	**Conrad Observa**	**3.64**	**183**	Pn	**Pn**	**22 47 43.2**	**+0.3**
	SNR=42						
CONA				Sg	**Sg**	**22 48 41.0**	**-1.3**
	comp=Z,108nm,0.4s						
GRA1	**Grafenberg Arr**	**3.64**	**241**	*e*Pn	**Pn**	**22 47 43.5**	**+0.5**
GRA1				*e*Sg	**Sg**	**22 48 41.4**	**-0.9**
GRA1	**Grafenberg Arr**	**3.64**	**241**	Pn	**Pn**	**22 47 43.5**	**+0.5**
	SNR=7.5						
GRA1				Sg	**Sg**	**22 48 41.4**	**-0.9**
GRF	**Grafenberg Arr**	**3.64**	**241**	*e*Pn	**Pn**	**22 47 43.5**	**+0.5**
	SNR=7.5						
GRF				*e*Sg	**Sg**	**22 48 41.4**	**-0.9**
GRF	**Grafenberg Arr**	**3.64**	**241**	*e*Pn	**Pn**	**22 47 43.5**	**+0.5**
GRF				*e*Sg	**Sg**	**22 48 41.4**	**-0.9**
GRF	**Grafenberg Arr**	**3.64**	**241**	*e*Pn	**Pn**	**22 47 43.5**	**+0.5**
GRF				*e*Sg	**Sg**	**22 48 41.4**	**-0.9**
NRDL	**Niedersach Rie**	**3.83**	**286**	*e*Pn	**Pn**	**22 47 45.6**	**0.0**
	SNR=6.9						
NRDL	**Niedersach Rie**	**3.83**	**286**	Pn	**Pn**	**22 47 45.6**	**0.0**
	SNR=6.9						
GTTG	**Gyttingen**	**3.85**	**272**	*e*Sg	**Sg**	**22 48 48.4**	**-0.5**
GTTG	**Gyttingen**	**3.85**	**272**	Sg	**Sg**	**22 48 48.4**	**-0.5**
SOP	**Sopron**	**3.89**	**176**	⇑*e*Pn	**Pn**	**22 47 47.0**	**+0.6**
SOP				*e*SB	**Sb**	**22 48 45.5**	**+3.1**
SOP	**Sopron**	**3.89**	**176**	⇑*e*Pn	**Pn**	**22 47 47.0**	**+0.6**
HROE	**Hohe Rhon--Fla**	**3.90**	**257**	⇓*i*Pn	**Pn**	**22 47 46.5**	**-0.1**
HROE	**Hohe Rhon--Fla**	**3.90**	**257**	Pn	**Pn**	**22 47 46.5**	**-0.1**
MOA	**Molln**	**3.91**	**199**	⇓*i*Pn	**Pn**	**22 47 46.9**	**+0.3**
	SNR=50						
MOA				⇓*i*Sg	**Sg**	**22 48 49.0**	**-1.8**
	comp=Z,187nm,0.7s						
MOA	**Molln**	**3.91**	**199**	Pn	**Pn**	**22 47 46.9**	**+0.3**
	SNR=50						
MOA				Sg	**Sg**	**22 48 49.0**	**-1.8**
	comp=Z,187nm,0.7s						
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*Pn	**Pn**	**22 47 47.5**	**+0.9**
STHS				*e*		22 48 01.1	
STHS				*e*Sg	**Sg**	**22 48 51.2**	**+0.3**
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*PN	**Pn**	**22 47 47.5**	**+0.9**
STHS				*e*		22 48 01.1	
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*Pn	**Pn**	**22 47 47.5**	**+0.9**
STHS				*e*Sg	**Sg**	**22 48 51.2**	**+0.3**
UBBA	**Unterbreizbach**	**3.92**	**261**	*e*Pn	**Pn**	**22 47 46.6**	**-0.3**
	SNR=4.8						
UBBA	**Unterbreizbach**	**3.92**	**261**	Pn	**Pn**	**22 47 46.6**	**-0.3**
	SNR=4.8						
KECS	**Kecovo**	**4.17**	**136**	*e*Pn	**Pn**	**22 47 50.0**	**-0.2**
KECS				*e*		22 48 06.4	
KECS				*e*Sg	**Sg**	**22 49 00.1**	**+0.8**
KECS	**Kecovo**	**4.17**	**136**	*e*PN	**Pn**	**22 47 50.0**	**-0.2**
KECS				*e*		22 48 06.4	
KECS	**Kecovo**	**4.17**	**136**	*e*SG	**Sg**	**22 49 00.1**	**+0.8**
BSEG	**Bad Segeberg**	**4.26**	**306**	*e*Pn	**Pn**	**22 47 51.0**	**-0.4**
	SNR=8.7						
BSEG	**Bad Segeberg**	**4.26**	**306**	Pn	**Pn**	**22 47 51.0**	**-0.4**
	SNR=8.7						
ARSA	**Arzberg**	**4.33**	**185**	⇓*i*Pn	**Pn**	**22 47 52.9**	**+0.5**
	SNR=25						
ARSA				⇓*i*Sg	**Sg**	**22 49 04.4**	**0.0**
	comp=Z,113nm,0.6s						
ARSA	**Arzberg**	**4.33**	**185**	Pn	**Pn**	**22 47 52.9**	**+0.4**
	SNR=25						
ARSA				Sg	**Sg**	**22 49 04.4**	**-0.1**
	comp=Z,113nm,0.6s						
CRVS	**Cervenica-Dubn**	**4.34**	**126**	*e*Pn	**Pn**	**22 47 53.1**	**+0.6**
CRVS				*e*		22 48 09.3	
CRVS				*e*Sg	**Sg**	**22 49 03.9**	**-0.7**
CRVS	**Cervenica-Dubn**	**4.34**	**126**	*e*PN	**Pn**	**22 47 53.1**	**+0.6**
CRVS				*e*		22 48 09.3	
CRVS	**Cervenica-Dubn**	**4.34**	**126**	*e*SG	**Sg**	**22 49 03.9**	**-0.7**
CRVS	**Cervenica-Dubn**	**4.34**	**126**	*e*Pn	**Pn**	**22 47 53.1**	**+0.6**
CRVS				*e*Sg	**Sg**	**22 49 03.9**	**-0.7**
PSZ	**Piszkesteto**	**4.39**	**145**	*e*Pn	**Pn**	**22 47 54.5**	**+1.3**
PSZ	**Piszkesteto**	**4.39**	**145**	⇑*i*P	**Pn**	**22 47 54.0**	**+0.8**
PSZ	**Piszkesteto**	**4.39**	**145**	⇓*e*Pn	**Pn**	**22 47 54.4**	**+1.2**
PSZ	**Piszkesteto**	**4.39**	**145**	⇑*i*P	**Pn**	**22 47 54.0**	**+0.8**
PSZ	**Piszkesteto**	**4.39**	**145**	⇓*e*Pn	**Pn**	**22 47 54.4**	**+1.2**
PKSG		**4.42**	**160**	⇓*e*Pn	**Pn**	**22 47 54.1**	**+0.4**
BUD	**Budapest**	**4.50**	**154**	⇓*e*Pn	**Pn**	**22 47 55.1**	**+0.4**
BUD	**Budapest**	**4.50**	**154**	⇓*e*Pn	**Pn**	**22 47 55.1**	**+0.4**
KWP	**Kalwaria Pacla**	**4.62**	**112**	*e*Pn	**Pg**	**22 48 11.5**	**-2.4**
COP	**Copenhagen**	**4.68**	**333**	*i* P	**Pg**	**22 48 18.8**	**+3.7**
COP				*i* S	**Sn**	**22 48 50.0**	**-2.2**
KBA	**Koelnbreinsper**	**4.84**	**203**	⇓*i*Pn	**Pn**	**22 48 00.2**	**+0.8**
	SNR=61						
KBA				⇑*i*Sg	**Sg**	**22 49 19.3**	**-1.5**
	comp=Z,65nm,0.6s						
KBA	**Koelnbreinsper**	**4.84**	**203**	Pn	**Pn**	**22 48 00.2**	**+0.8**
	SNR=61						
KBA				Sg	**Sg**	**22 49 19.3**	**-1.5**
	comp=Z,65nm,0.6s						
TOD	**Tromm**	**5.06**	**250**	P	**Pn**	**22 48 02.2**	**-0.2**
TOD				S	**Sn**	**22 49 11.1**	**+10**
TOD	**Tromm**	**5.06**	**250**	P	**Pn**	**22 48 02.2**	**-0.2**
BEHE	**Becsehely**	**5.11**	**175**	⇓*e*Pn	**Pn**	**22 48 04.8**	**+1.6**
WATA	**Walderalm**	**5.17**	**217**	⇑*i*Pn	**Pn**	**22 48 04.4**	**+0.5**
	SNR=20						
WATA				⇓*i*Sg	**Sg**	**22 49 32.8**	**+1.5**
	comp=Z,38nm,0.5s						
WATA	**Walderalm**	**5.17**	**217**	Pn	**Pn**	**22 48 04.4**	**+0.5**
	SNR=20						
WATA				Sg	**Sg**	**22 49 32.8**	**+1.6**
	comp=Z,38nm,0.5s						
PKS9	**Tamasi**	**5.17**	**163**	⇑*e*Pn	**Pn**	**22 48 06.0**	**+2.0**
WTTA	**Wattenberg**	**5.20**	**216**	⇓*i*Pn	**Pn**	**22 48 05.3**	**+0.9**
	SNR=13						
WTTA				⇑*i*Sg	**Sg**	**22 49 33.3**	**+0.9**
	comp=Z,68nm,0.8s						
WTTA	**Wattenberg**	**5.20**	**216**	Pn	**Pn**	**22 48 05.3**	**+0.9**
	SNR=13						
WTTA				Sg	**Sg**	**22 49 33.3**	**+0.8**
	comp=Z,68nm,0.8s						
STU	**Stuttgart**	**5.26**	**241**	*e*Pn	**Pn**	**22 48 03.6**	**-1.6**
	comp=Z,18nm,0.6s						
STU				*e*S	**Sg**	**22 49 32.6**	**-1.5**
STU	**Stuttgart**	**5.26**	**241**	*e*Pn	**Pn**	**22 48 03.6**	**-1.6**
	comp=Z,18nm,0.6s						
MOTA	**Moosalm**	**5.34**	**220**	⇑*i*Pn	**Pn**	**22 48 06.3**	**0.0**
	SNR=29						
MOTA				⇑*i*Sg	**Sg**	**22 49 37.7**	**+0.8**
	comp=Z,32nm,0.6s						
MOTA	**Moosalm**	**5.34**	**220**	Pn	**Pn**	**22 48 06.3**	**0.0**
	SNR=29						
MOTA				Sg	**Sg**	**22 49 37.7**	**+0.8**
	comp=Z,32nm,0.6s						
RETA	**Reutte**	**5.37**	**223**	*i* Pn	**Pn**	**22 48 06.8**	**+0.1**
	SNR=17						
RETA				⇓*i*Sg	**Sg**	**22 49 37.3**	**-0.5**
	comp=Z,81nm,0.8s						
RETA	**Reutte**	**5.37**	**223

comp=Z,3.2nm,0.3s,baz=279,slow=12,SNR=15
AKASG Sn **Sn** **22 50 15.2 -5.7**
comp=Z,1.7nm,0.3s,baz=272,slow=23,SNR=4.2
AKASG Lg 22 51 15.6
comp=Z,0.3nm,0.3s,baz=279,slow=30,SNR=3.6
AKASG Malin Array Be 8.29 91 Pn **Pn** **22 48 45.5 -1.2**
HFS Hagfors 8.70 352 Pn **Pn** **22 48 50.8 -1.6**
comp=Z,0.2nm,0.3s,baz=164,slow=14,SNR=7.1
HFS Sn **Sn** **22 50 25.2 -5.9**
comp=Z,0.2nm,0.3s,baz=166,slow=25,SNR=2.8
HFS Lg 22 51 22.5
comp=Z,0.4nm,0.3s,baz=185,slow=32,SNR=2.8
NOA NORSAR Array B 9.88 346 Pn **Pn** **22 49 07.2 -1.4**
NOA Sn **Sn** **22 50 52.8 -7.3**
NOA NORSAR Array B 9.88 346 Pn **Pn** **22 49 07.2 -1.4**
comp=Z,0.2nm,0.3s,baz=163,slow=12,SNR=3.1
NOA Sn **Sn** **22 50 52.8 -7.3**
comp=Z,0.2nm,0.3s,baz=153,slow=22,SNR=2.6
NOA NORSAR Array B 9.88 346 Pn **Pn** **22 49 07.2 -1.4**
FINES FINESS Array B 11.31 25 Pn **Pn** **22 49 25.8 -2.3**
comp=Z,0.5nm,0.3s,baz=204,slow=11,SNR=16
FINES Sn **Sn** **22 51 26.8 -8.3**
comp=Z,0.6nm,0.3s,baz=218,slow=25,SNR=5.1
EKA Eskdalemuir Ar 12.09 296 Pn **Pn** **22 49 35.0 -3.8**
EKA Eskdalemuir Ar 12.09 296 Pn **Pn** **22 49 35.0 -3.8**
comp=Z,0.4nm,0.3s,baz=100,slow=14,SNR=9.7
ARCES ARCESS Array B 18.57 10 Pn **Pn** **22 51 00.6 -3.1**
comp=Z,0.5nm,0.3s,baz=185,slow=12,SNR=17
AKTK Aktyubinsk 26.13 76 P **P** **22 52 21.6 +0.7**
AKTK Aktyubinsk 26.13 76 P **P** **22 52 21.6 +0.7**
AKTO Aktyubinsk 26.13 76 P **P** **22 52 21.6 +0.7**
comp=Z,1.7nm,0.7s,mb3.8,baz=280,slow=8.8,SNR=7.6
BVAR Borovoye Array 32.56 66 P **P** **22 53 19.2 +1.3**
comp=Z,0.9nm,0.6s,mb3.9,baz=302,slow=8.3,SNR=6.5
BVAR Borovoye Array 32.56 66 P **P** **22 53 19.2 +1.3**
ZALV Zalesovo Beam 40.16 59 P **P** **22 54 23.9 +1.1**
comp=Z,0.3nm,0.3s,mb3.4,baz=302,slow=8.5,SNR=4.3
ZALV Zalesovo Beam 40.16 59 P **P** **22 54 24.0 +1.2**
SONM Songino Array 54.88 55 P **P** **22 56 19.2 +1.9**
comp=Z,0.4nm,0.5s,mb3.8,baz=295,slow=11,SNR=4.8
SONM Songino Array 54.88 55 P **P** **22 56 19.2 +1.9**
YKA Yellowknife Ar 59.82 336 P **P** **22 56 51.7 -0.2**
comp=Z,1.5nm,0.7s,mb4.1,baz=27,slow=6.4,SNR=3.8
YKA Yellowknife Ar 59.82 336 P **P** **22 56 51.7 -0.2**
ILAR Eielson Array 63.26 352 P **P** **22 57 15.7 +0.6**
comp=Z,0.3nm,0.6s,mb3.6,baz=354,slow=7.3,SNR=3.7
ILAR Eielson Array 63.26 352 P **P** **22 57 15.7 +0.6**
CMAR Chiang Mai Arr 71.34 84 P **P** **22 58 08.0 +0.9**
comp=Z,0.6nm,0.5s,mb4.0,baz=311,slow=7.0,SNR=4.3
CMAR Chiang Mai Arr 71.34 84 P **P** **22 58 07.9 +0.9**
NVAR Mina Array Bea 81.93 325 P **P** **22 59 07.4 +0.7**
comp=Z,0.4nm,0.8s,mb3.6,baz=67,slow=5.1,SNR=3.0
NVAR Mina Array Bea 81.93 325 P **P** **22 59 07.4 +0.7**

IDC ***14*** *22:55:45.9±0.5, 7.3°N×82.7°W, h0[km], mb4.9/19, mb1 5.1/23, mb1mx5.1/25, mbtmp5.0/23, ML4.6/3, MS4.7/23, Ms1 4.7/23, ms1mx4.7/31, Error ellipse: s-maj=21.9km s-min=11.6km az=70.0*

MOS ***14*** *22:55:46.5±1.4, 7.3°N×82.7°W, h10[km], mb5.4/89, MS4.7/59, Error ellipse: s-maj=10.4km s-min=5.2km az=118.0*

BJI ***14*** *22:55:47.2, 7.3°N×82.7°W, h16[km], mB5.4/18, Ms5.3/8, Ms7 5.2/20*

NEIC ***14*** *22:55:47.2±0.2, 7.2°N×82.7°W, h6[km], mb5.3/204, MS4.8/167, MW5.4, Error ellipse: s-maj=4.5km s-min=2.7km az=203.0, Moment Tensor Solution. s71 Moment tensor: Scale 10[17]Nm; Mrr=0.41; Mθθ=0.42; Mφφ=0.83; Mrθ=-0.28; Mθφ=1.30; Mφr=0.01; Best double couple: Mo1.50000×10[17] NP1:φs76.00000°, δ83.00000°, λ=13.00000°. NP2:φs168.00000°, δ77.00000°, λ=173.00000°. Principal axes: T 1.6600, Plg4.0000°, Azm122.0000°; N -0.3600, Plg74.0000°, Azm228.0000°; P -1.3000, Plg14.0000°, Azm31.0000°;*

NEIC Felt at Bocas del Toro, David and Volcan. Also felt at Curridabat, San Jose and San Miguel, Costa Rica.

ISCJB ***14*** *22:55:50.8±0.1, 7.4°N±0.0°×82.7°W±0.0°, h33km, mb5.2/248, MS4.8/201 Error ellipse: s-maj=3.6km s-min=1.7km az=21.2*

CASC ***14*** *22:55:51.0±2.3, 7.4°N×82.8°W, h27km±12km, MD4.9, ML4.8, mb5.3(NEIC)*

GCMT ***14*** *22:55:52.9±0.1, 7.2°N×82.7°W, h22km, MW5.5, Moment Tensor Solution. s77,c133; s35,c41; Moment tensor: Scale 10[17]Nm; Mrr=0.10±.04; Mθθ=0.61±.03; Mφφ=0.52±.04; Mrθ=-0.05±.06; Mθφ=2.42±.03; Mφr=-0.14±.07; Best double couple: Mo2.50000×10[17] NP1:φs263.00000°, δ87.00000°, λ=2.00000°. NP2:φs173.00000°, δ88.00000°, λ=177.00000°. Principal axes: T 2.4500, Plg3.0000°, Azm128.0000°; N 0.0900, Plg87.0000°, Azm325.0000°; P -2.5300, Plg1.0000°, Azm218.0000°; Data Used: II IU G CN IC. Surface waves: sta= 99, comp=188, per= 50.*

SZGRF ***14*** *22:56:01.1, 8.2°N×80.9°W, h33km, mb5.3, MS5.0, Panama*

JSN ***14*** *22:57:42.0±0.6, 14.7°N×79.7°W, h15km*

ISC 14 22:55:52.6±0.1, 7.4°N±0.0°×82.6°W±0.0°, h35km, (h29km±2.1km:pP-P), n1157, σ0.96/1044, mb5.2/248, MS4.8/201, 197C-303D, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
ACR	**Cerro Adams**	**1.31**	**338**	*eP*	**Pn**	**22 56 10.7**	**-3.7**
TBS2		**1.36**	**1**	*eP*	**Pn**	**22 56 21.0**	**+5.9**
TBS2				*eS*	**Sn**	**22 56 39.2**	**+7.3**
BRU2	**Volcan**	**1.36**	**359**	⇓*iP*	**Pn**	**22 56 13.6**	**-1.6**
BRU2				*eS*	**Sn**	**22 56 31.9**	**-0.1**
BRU	**Baru**	**1.38**	**5**	*eP*	**Pn**	**22 56 04.2**	**-11**
CNI	**Changuinola**	**1.99**	**5**	⇓*iP*	**Pn**	**22 56 23.2**	**-0.5**
BUS	**Buena Vista**	**2.37**	**333**	*iP*	**Pn**	**22 56 27.3**	**-1.7**
QCR	**Quepos**	**2.47**	**324**	⇑*eP*	**Pn**	**22 56 26.5**	**-3.9**
URSC	**Urasca**	**2.63**	**336**	*eP*	**Pn**	**22 56 30.7**	**-1.9**
LAJ	**Bijagual**	**2.81**	**330**	⇓*eP*	**Pn**	**22 56 33.5**	**-1.6**
PRS1	**Puriscal**	**3.01**	**326**	*eP*	**Pn**	**22 56 34.2**	**-3.7**
CGA2	**Cerro Gallo 2**	**3.12**	**326**	⇑*eP*	**Pn**	**22 56 36.8**	**-2.6**
PINA	**Piqa, Costa Ab**	**3.16**	**55**	⇓*iP*	**Pn**	**22 56 40.5**	**+0.6**
BCIP	**Isla Barro Col**	**3.30**	**58**	*ePn*	**Pn**	**22 56 41.8**	**0.0**
BCIP				*eSn*	**Sn**	**22 57 24.1**	**+4.2**
BCIP	**Isla Barro Col**	**3.30**	**58**	⇓*eP*	**Pn**	**22 56 41.9**	**+0.1**
BCIP				*eS*	**Sn**	**22 57 27.8**	**+8.0**
JCR	**Jicaral**	**3.41**	**315**	⇑*eP*	**Pn**	**22 56 39.4**	**-3.9**
UPIG		**3.48**	**63**	⇓*iP*	**Pn**	**22 56 44.5**	**+0.2**
UPIG				*eS*	**Sn**	**22 57 27.0**	**+2.8**
JTS	**JuntasAbangare**	**3.63**	**322**	*ePn*	**Pn**	**22 56 44.6**	**-1.7**
JTS				*eSn*	**Sn**	**22 57 23.0**	**-5.0**
JTS	**JuntasAbangare**	**3.63**	**322**	*eP*	**Pn**	**22 56 43.8**	**-2.5**
AMAS	**Alto Masis**	**3.91**	**324**	*iP*	**Pn**	**22 56 49.0**	**-1.2**
AMAS				*iS*	**Sn**	**22 57 34.2**	**-0.6**
VCR	**Vista de Mar**	**3.97**	**313**	⇑*eP*	**Pn**	**22 56 47.7**	**-3.3**
CUI	**Cuipilapa**	**4.04**	**323**	*iP*	**Pn**	**22 56 50.2**	**-1.9**
COLC	**Colonia**	**4.07**	**322**	*iP*	**Pn**	**22 56 50.3**	**-2.2**
GUAB	**Guayabo de Bag**	**4.12**	**322**	*iP*	**Pn**	**22 56 51.0**	**-2.1**
MESS	**Mesas**	**4.13**	**323**	*iP*	**Pn**	**22 56 51.5**	**-1.7**
MESS				*iS*	**Sn**	**22 57 37.4**	**-2.9**
LIM1	**Limonal**	**4.13**	**322**	*iP*	**Pn**	**22 56 51.2**	**-2.0**
GPS2	**Hotel Rinc^‡n**	**4.23**	**322**	*iP*	**Pn**	**22 56 53.5**	**-1.2**
GPS2				*iS*	**Sn**	**22 57 40.5**	**-2.3**
GPS3	**Bodega del ICE**	**4.24**	**321**	*iP*	**Pn**	**22 56 53.3**	**-1.5**
GPS1	**Guardaparques**	**4.25**	**322**	*iP*	**Pn**	**22 56 53.5**	**-1.4**
NY14	**Universidad de**	**4.27**	**319**	*iP*	**Pn**	**22 56 53.3**	**-1.8**
LAPC	**Finca la Perla**	**4.29**	**321**	*iP*	**Pn**	**22 56 53.9**	**-1.6**
BUEV	**Buena Vista**	**4.30**	**321**	*iP*	**Pn**	**22 56 53.9**	**-1.7**
GB1A	**Borinquen Arri**	**4.31**	**322**	*iP*	**Pn**	**22 56 54.0**	**-1.7**
GB1A				*iS*	**Sn**	**22 57 42.9**	**-1.9**
GBS3	**Finca Las Im^¡**	**4.32**	**321**	*iP*	**Pn**	**22 56 53.6**	**-2.2**
GBS2	**Las Lilas**	**4.36**	**321**	*iP*	**Pn**	**22 56 54.8**	**-1.6**
SSN	**San Juan del S**	**4.97**	**321**	*eP*	**Pn**	**22 57 03.0**	**-1.7**
CONN	**Concepcion**	**5.04**	**325**	*eP*	**Pn**	**22 57 04.2**	**-1.5**
APON	**Apoyo**	**5.58**	**323**	*eP*	**Pn**	**22 57 11.0**	**-2.1**
MGAN	**Managua**	**5.87**	**323**	*eP*	**Pn**	**22 57 14.4**	**-2.6**
XAVN	**Gruta Xavier**	**5.91**	**323**	*eP*	**Pn**	**22 57 16.2**	**-1.5**
HUEN		**5.97**	**325**	*eP*	**Pn**	**22 57 17.2**	**-1.4**
CSAN		**6.00**	**322**	*eP*	**Pn**	**22 57 17.2**	**-1.7**
COPN	**Copaltepe**	**6.10**	**321**	*eP*	**Pn**	**22 57 18.5**	**-1.8**
COPN				*eS*	**Sn**	**22 58 26.8**	**-2.2**
MOMN	**Momotombo**	**6.25**	**323**	*eP*	**Pn**	**22 57 20.4**	**-1.9**
CNGN	**Cerro Negro**	**6.41**	**322**	*eP*	**Pn**	**22 57 22.4**	**-2.3**
CRIN	**San Cristobal**	**6.78**	**321**	*eP*	**Pn**	**22 57 27.3**	**-2.4**
CRIN				*eS*	**Sn**	**22 58 45.6**	**-0.1**
CNCH	**Conchagua**	**7.72**	**319**	*eP*	**Pn**	**22 57 40.7**	**-1.9**
CNCH				*eS*	**Sn**	**22 59 04.0**	**-4.7**
TGUH	**Tegucigalpa,Un**	**7.99**	**326**	*ePn*	**Pn**	**22 57 45.8**	**-0.5**
TGUH	**Tegucigalpa,Un**	**7.99**	**326**	*eP*	**Pn**	**22 57 44.1**	**-2.1**
BLLM	**Bellamira**	**8.10**	**318**	*eP*	**Pn**	**22 57 46.5**	**-1.3**
BLLM				*eS*	**Sn**	**22 59 13.1**	**-5.1**
OTAV	**Otavalo**	**8.29**	**149**	*ePn*	**Pn**	**22 57 48.1**	**-2.3**
	126nm,0.7s						
OTAV				*eSn*	**Sn**	**22 59 21.9**	**-0.9**
CAHU	**Cacacuatique**	**8.33**	**320**	*eP*	**Pn**	**22 57 49.2**	**-1.7**
ROSC	**El Rosal**	**8.68**	**107**	*ePn*	**Pn**	**22 57 59.1**	**+3.3**
ROSC	**El Rosal**	**8.68**	**107**	*eP*	**Pn**	**22 57 58.2**	**+2.4**
	24nm,0.3s,baz=104,slow=7.4,SNR=106						
ROSC				Sn	**Sn**	**22 59 36.7**	**+4.1**
	4.2nm,0.3s,baz=270,slow=19,SNR=3.5						
ROSC				LR	LR	23 00 52.8	
	comp=Z,6μm,20.7s,baz=92,slow=35						
ROSC	**El Rosal**	**8.68**	**107**	*eP*	**Pn**	**22 57 59.1**	**+3.3**
LFRS	**El Faro**	**8.79**	**315**	*eP*	**Pn**	**22 57 55.9**	**-1.4**
LFRS				*eS*	**Sn**	**22 59 29.4**	**-5.9**
SNET	**Serv Nac Est T**	**8.96**	**315**	*eP*	**Pn**	**22 57 57.2**	**-2.4**
SNET				*eS*	**Sn**	**22 59 32.9**	**-6.4**
SNET				AML	AML	22 59 39.6	
	comp=Z,615nm,0.2s						
BOQS	**Boqueron**	**9.02**	**315**	*eP*	**Pn**	**22 57 59.0**	**-1.5**
BOQS				*eS*	**Sn**	**22 59 35.5**	**-5.4**
SBLS	**San Blas**	**9.34**	**314**	*eP*	**Pn**	**22 58 03.2**	**-1.6**
RTR	**El Retiro**	**9.39**	**314**	*eP*	**Pn**	**22 58 04.0**	**-1.5**
MTO2	**Montecristo 2**	**9.54**	**317**	*eP*	**Pn**	**22 58 06.7**	**-0.9**
RBDL	**Robledal**	**9.57**	**315**	*eP*	**Pn**	**22 58 06.1**	**-1.8**
PAYG	**Puerto Ayora**	**11.06**	**224**	*ePn*	**Pn**	**22 58 27.7**	**-0.7**
	comp=Z,1μm,1.3s						
MCJ	**Malvern**	**11.51**	**25**	⇑*iP*	**Pn**	**22 58 34.9**	**+0.3**
NEJ	**Negril**	**11.56**	**21**	⇑*iP*	**Pn**	**22 58 36.6**	**+1.3**
MTDJ	**Mount Denham**	**11.85**	**25**	*ePn*	**Pn**	**22 58 39.1**	**0.0**
	comp=Z,742nm,1.5s						
MTDJ				*eSn*	**Sn**	**23 00 54.3**	**+4.1**
HOJ	**Hope**	**12.00**	**28**	⇓*iP*	**Pn**	**22 58 41.8**	**+0.6**
SDV	**Santo Domingo**	**12.01**	**82**	*ePn*	**Pn**	**22 58 42.1**	**+0.7**
SDV	**Santo Domingo**	**12.01**	**82**	*eP*	**Pn**	**22 58 43.0**	**+1.6**
YHJ	**Yallahs**	**12.02**	**29**	⇓*iP*	**Pn**	**22 58 42.6**	**+1.1**
STH	**Stony Hill**	**12.03**	**28**	*iP*	**Pn**	**22 58 42.4**	**+0.8**
GWJ	**Greenwich**	**12.07**	**28**	⇓*iP*	**Pn**	**22 58 42.4**	**+0.2**
BBJ	**Bamboo Saint A**	**12.10**	**25**	*iP*	**Pn**	**22 58 43.2**	**+0.6**
CMJ	**Castle Mountai**	**12.29**	**29**	⇓*iP*	**Pn**	**22 58 46.8**	**+1.6**
TEIG	**Tepich**	**13.84**	**337**	*ePn*	**Pn**	**22 59 05.9**	**-0.4**
GTBY	**Guantanamo Bay**	**14.43**	**30**	*ePn*	**Pn**	**22 59 15.9**	**+1.4**
ATAH	**Atahualpa**	**15.08**	**163**	Pn	**Pn**	**22 59 22.1**	**-1.1**
	comp=Z,1.9nm,0.3s,baz=349,slow=9.6,SNR=24						
ATAH				LR	LR	23 04 28.9	
	comp=Z,8μm,21.4s,baz=149,slow=35						
CMIG	**Matias Romero**	**15.31**	**310**	Pn	**Pn**	**22 59 22.6**	**-3.5**
	comp=Z,3.2nm,0.3s,baz=109,slow=11,SNR=25						
CMIG				Sn	**Sn**	**23 02 11.2**	**-3.5**
	comp=Z,1.0nm,0.3s,baz=125,slow=5.6,SNR=5.0						
CMIG				LR	LR	23 05 21.6	
	comp=Z,3μm,20.7s,baz=119,slow=38						
HUIG	**Huatulco**	**15.54**	**303**	*iP*	**Pn**	**22 59 32.0**	**+2.8**
SDDR	**Presa de Saban**	**15.95**	**43**	*ePn*	**Pn**	**22 59 34.6**	**+0.1**
	comp=Z,264nm,0.9s						
VHO	**Vista Hermosa**	**16.74**	**306**	*eP*	**Pn**	**22 59 42.3**	**-2.2**
PNIG	**Pinotepa**	**17.54**	**302**	*eP*	**Pn**	**22 59 53.1**	**-1.4**
GRTK	**Grand Turk**	**17.90**	**37**	*eP*	**Pn**	**23 00 00.1**	**+1.1**
	comp=Z,118nm,1.0s						
PCRV	**Puerto La Cruz**	**18.04**	**80**	P	**Pn**	**23 00 00.2**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=265,slow=6.7,SNR=46						
PCRV				S	**S**	**23 03 20.0**	**-6.0**
	comp=Z,0.4nm,0.3s,baz=234,slow=19,SNR=3.5						
LVIG	**Laguna Verde**	**18.09**	**314**	*iP*	**Pn**	**23 00 02.6**	**+1.3**
CRPR	**Cabo Rojo, PR**	**18.45**	**54**	*ePn*	**Pn**	**23 00 07.3**	**+1.6**
	comp=Z,268nm,1.3s						
MPR	**Mayaguez**	**18.54**	**53**	*ePn*	**Pn**	**23 00 07.5**	**+0.7**
LSP	**Las Mesas**	**18.57**	**53**	*ePn*	**Pn**	**23 00 08.0**	**+1.0**
AGP	**Aguadilla**	**18.65**	**53**	*ePn*	**Pn**	**23 00 10.6**	**+2.5**
AGPR	**Aguadilla, PR**	**18.70**	**53**	*eP*	**Pn**	**23 00 08.9**	**+0.2**
	comp=Z,1μm,1.3s						
LRS	**Lares**	**18.82**	**53**	*ePn*	**Pn**	**23 00 11.1**	**+0.9**
ICM	**Isla Caja Muer**	**18.87**	**55**	*ePn*	**Pn**	**23 00 11.4**	**+0.7**
OBIP	**Obispado Ponce**	**18.88**	**54**	*ePn*	**Pn**	**23 00 11.5**	**+0.7**
	comp=Z,978nm,1.6s						
CELP	**Cerrillos**	**18.92**	**54**	*ePn*	**Pn**	**23 00 12.0**	**+0.7**
AOPR	**Arecibo Observ**	**18.92**	**53**	*ePn*	**Pn**	**23 00 11.9**	**+0.5**
	comp=Z,962nm,1.9s						
ACX	**Acapulco**	**19.23**	**301**	*eP*	pP	23 00 25.3	+2.2
SJG	**San Juan**	**19.28**	**55**	*ePn*	**Pn**	**23 00 15.8**	**+0.1**
	comp=Z,446nm,1.1s						
SJG	**San Juan**	**19.28**	**55**	P	**Pn**	**23 00 15.2**	**-0.5**
	comp=Z,9.4nm,0.3s,baz=249,slow=6.6,SNR=49						
SJG				S	**S**	**23 03 55.5**	**+4.3**
	comp=Z,0.6nm,0.3s,baz=319,slow=20,SNR=2.2						
SJG	**San Juan**	**19.28**	**55**	*eP*	**Pn**	**23 00 15.8**	**+0.1**
SJG				*pmax*	*pmax*		
	comp=Z,446nm,1.1s						
PPM	**Popocatepetl**	**19.34**	**308**	*eP*	**Pn**	**23 00 16.2**	**-0.2**
HUMP	**Cod San Antoni**	**19.54**	**55**	*ePn*	**Pn**	**23 00 18.3**	**-0.5**
	comp=Z,282nm,0.9s						
CBYP	**Canovanas**	**19.60**	**55**	*eP*	**Pn**	**23 00 18.1**	**-1.5**
	comp=Z,606nm,1.3s						
CAIG	**El Cayaco**	**19.66**	**301**	*eP*	**Pn**	**23 00 17.0**	**-3.2**
IIO	**Organos**	**19.72**	**309**	*eP*	**Pn**	**23 00 21.3**	**+0.5**
MTP	**Monte Pirata**	**19.76**	**56**	*eP*	**Pn**	**23 00 20.3**	**-1.1**
	comp=Z,1μm,1.3s						
PTVM	**Pico Tres Padr**	**20.02**	**309**	*eP*	**P**	**23 00 24.1**	**+1.6**
NNA	**Nana**	**20.14**	**163**	*eP*	**P**	**23 00 22.8**	**-1.1**
	comp=Z,122nm,1.1s						
NNA				LR	LR		
	comp=Z,2μm,20.0s,MS4.5						
NNA	**Nana**	**20.14**	**163**	P	**P**	**23 00 22.3**	**-1.5**
	comp=Z,51nm,0.8s,baz=348,slow=10,SNR=24						
CDVI	**St. Croix**	**20.25**	**58**	*ePn*	**P**	**23 00 26.4**	**+1.3**
	comp=Z,478nm,0.8s						
STVI	**Saint Thomas**	**20.38**	**56**	*eP*	**P**	**23 00 27.1**	**+0.6**
	comp=Z,192nm,1.0s						
DWPF	**Disney**	**20.61**	**3**	*ePn*	**P**	**23 00 28.9**	**+0.1**
	comp=Z,219nm,1.3s						
DWPF				LR	LR		
	comp=Z,2μm,20.0s,MS4.4						
TCE	**Chacachacare**	**20.91**	**80**	*eP*	**P**	**23 00 36.3**	**+4.0**
TCE	**Chacachacare**	**20.91**	**80**	*eP*	**P**	**23 00 36.3**	**+4.0**
ZIIG	**Zihuatanejo**	**20.93**	**301**	*eP*	**P**	**23 00 32.1**	**-0.2**
TPP	**Pointe-a-Pierr**	**21.17**	**81**	*eP*	**P**	**23 00 36.5**	**+1.5**
TPP	**Pointe-a-Pierr**	**21.17**	**81**	*eP*	**P**	**23 00 36.5**	**+1.5**
GRW	**Mount Saint Ca**	**21.23**	**76**	*eP*	**P**	**23 00 36.9**	**+1.2**
GRW	**Mount Saint Ca**	**21.23**	**76**	*eP*	**P**	**23 00 36.9**	**+1.2**
GRGR	**Grenville**	**21.23**	**76**	*eP*	**P**	**23 00 36.9**	**+1.1**
	comp=Z,753nm,1.1s,mb5.9						
GRGR				LR	LR		
	comp=Z,2μm,22.0s,MS4.4						
TRN	**Trinidad (W)**	**21.25**	**80**	*eP*	**P**	**23 00 36.9**	**+0.9**
TRN	**Trinidad (W)**	**21.25**	**80**	*eP*	**P**	**23 00 36.9**	**+0.9**
TBH	**Brigand Hill**	**21.56**	**80**	*eP*	**P**	**23 00 39.8**	**+0.6**
TBH	**Brigand Hill**	**21.56**	**80**	*eP*	**P**	**23 00 39.8**	**+0.6**
SKI	**Saint Kitts**	**21.80**	**61**	*eP*	**P**	**23 00 43.4**	**+1.6**
SKI	**Saint Kitts**	**21.80**	**61**	*eP*	**P**	**23 00 43.4**	**+1.6**
SVB	**Belmont**	**21.85**	**73**	*eP*	**P**	**23 00 43.1**	**+0.7**
SVB	**Belmont**	**21.85**	**73**	*eP*	**P**	**23 00 43.1**	**+0.7**
TPR	**Prospect**	**21.93**	**79**	*eP*	**P**	**23 00 43.1**	**-0.1**
TPR	**Prospect**	**21.93**	**79**	*eP*	**P**	**23 00 43.1**	**-0.1**
TOSP	**Speyside**	**22.18**	**78**	*eP*	**P**	**23 00 45.9**	**0.0**
MCLT	**Moule a Chique**	**22.25**	**72**	*eP*	**P**	**23 00 47.7**	**+1.1**
MCLT	**Moule a Chique**	**22.25**	**72**	*eP*	**P**	**23 00 47.7**	**+1.1**
FDF	**Fort de France**	**22.32**	**69**	*eP*	**P**	**23 00 47.7**	**+0.3**
	comp=Z,776nm,1.4s,mb5.9						
FDF				LR	LR		
	comp=Z,2μm,20.0s,MS4.4						
FDF	**Fort de France**	**22.32**	**69**	*eP*	**P**	**23 00 47.7**	**+0.3**
FDF				*pmax*	*pmax*		
	comp=Z,776nm,1.4s,mb5.9						
FDF				MLR	MLR		
	comp=Z,2μm,20.0s,MS4.4						
FDF	**Fort de France**	**22.32**	**69**	*eP*	**P**	**23 00 48.0**	**+0.6**
BIM	**Bigot**	**22.34**	**70**	*eP*	**P**	**23 00 48.5**	**+1.0**
MVM	**Montagne Vaucl**	**22.51**	**70**	*eP*	**P**	**23 00 51.6**	**+2.3**
ANWB	**Willy Bob**	**22.77**	**61**	*eP*	**P**	**23 00 51.7**	**-0.4**
	comp=Z,118nm,0.8s,mb5.4						
ANWB				LR	LR		
	comp=Z,2μm,21.0s,MS4.4						
BBGH	**Gun Hill**	**23.43**	**74**	*eP*	**P**	**23 00 59.4**	**+0.3**
BBGH				LR	LR		
	comp=Z,3μm,20.0s,MS4.7						
BRAL	**Brewton**	**23.82**	**351**	*eP*	**P**	**23 01 04.9**	**+2.5**
	comp=Z,2μm,2.5s,mb6.1						
BRAL				LR	LR		
	comp=Z,2μm,19.0s,MS4.5						
KVTX	**Kingsville**	**24.67**	**326**	*eP*	**P**	**23 01 05.2**	**-5.0**
KVTX				LR	LR		
	comp=Z,2μm,22.0s,MS4.5						
HKT	**Hockley**	**25.59**	**333**	*eP*	**P**	**23 01 16.8**	**-1.8**
	comp=Z,39nm,1.3s,mb4.8						
HKT				LR	LR		
	comp=Z,2μm,21.0s,MS4.5						
HKT	**Hockley**	**25.59**	**333**	*eP*	**P**	**23 01 16.8**	**-1.8**
HKT				*pmax*	*pmax*		
	comp=Z,39nm,1.3s,mb4.8						
HKT				MLR	MLR		
	comp=Z,2μm,21.0s,MS4.5						
NHSC	**New Hope**	**25.66**	**5**	*eP*	**P**	**23 01 20.0**	**+0.8**
	comp=Z,514nm,1.4s,mb5.9						
NHSC				LR	LR		
	comp=Z,2μm,20.0s,MS4.7						
VBMS	**Vicksburg**	**25.73**	**345**	*eP*	**P**	**23 01 19.8**	**0.0**
	comp=Z,177nm,1.4s,mb5.4						
VBMS				LR	LR		
	comp=Z,2μm,20.0s,MS4.5						
LRAL	**Lakeview Retre**	**25.80**	**352**	*eP*	**P**	**23 01 20.1**	**-0.3**
	comp=Z,200nm,1.6s,mb5.4						
LRAL				LR	LR		
	comp=Z,1μm,22.0s,MS4.4						
GOGA	**Godfrey**	**25.87**	**358**	*eP*	**P**	**23 01 20.7**	**-0.3**
	comp=Z,296nm,1.4s,mb5.6						
GOGA				LR	LR		
	comp=Z,3μm,19.0s,MS4.8						
GOGA	**Godfrey**	**25.87**	**358**	*eP*	**P**	**23 01 20.7**	**-0.4**
GOGA				*pmax*	*pmax*		
	comp=Z,296nm,1.4s,mb5.6						
GOGA				MLR	MLR		
	comp=Z,3μm,19.0s,MS4.8						
ARE	**Arequipa**	**26.19**	**155**	*eP*	**P**	**23 01 23.0**	**-1.1**
JSC	**Jenkinsville**	**26.76**	**3**	*eP*	**P**	**23 01 29.4**	**+0.3**
JSC				*ePcP*	PcP	23 04 50.2	-1.5
LPAZ	**La Paz**	**27.61**	**149**	*eP*	**P**	**23 01 36.0**	**-0.9**
	comp=Z,67nm,1.4s,mb5.1						
LPAZ				LR	LR		
	comp=Z,2μm,22.0s,MS4.7						
LPAZ	**La Paz**	**27.61**	**149**	P	**P**	**23 01 36.2**	**-0.7**
	comp=Z,10nm,0.8s,mb4.5,baz=335,slow=8.9,SNR=38						
LPAZ				LR	LR	23 13 41.2	
	comp=Z,2μm,20.5s,MS4.6,baz=311,slow=39						
LPAZ	**La Paz**	**27.61**	**149**	*eP*	**P**	**23 01 36.0**	**-0.9**
LPAZ				*pmax*	*pmax*		
	comp=Z,67nm,1.4s						
LPAZ				MLR	MLR		
	comp=Z,2μm,22.0s						
SWET	**Sewanee**	**27.82**	**354**	*eP*	**P**	**23 01 38.1**	**-0.5**
CPCT	**Cooper Cave**	**27.94**	**357**	*eP*	**P**	**23 01 39.5**	**-0.2**
CPCT				*ePcP*	PcP	23 04 53.5	-1.1
JCT	**Junction City**	**28.00**	**327**	⇑*eP*	**P**	**23 01 39.3**	**-1.0**
	baz=28,SNR=6.2						
JCT	**Junction City**	**28.00**	**327**	*eP*	**P**	**23 01 39.6**	**-0.7**
	comp=Z,66nm,1.4s,mb5.1						
JCT				LR	LR		
	comp=Z,1μm,22.0s,MS4.4						
JCT	**Junction City**	**28.00**	**327**	*eP*	**P**	**23 01 39.6**	**-0.6**
JCT				*pmax*	*pmax*		
	comp=Z,66nm,1.4s,mb5.1						
JCT				MLR	MLR		
	comp=Z,1μm,22.0s,MS4.4						
CNNC	**Cliffs of the**	**28.03**	**8**	PFAKE		23

127A	**Arkansas Junct**	**31.63**	**325**	⇑P		**P**	**23 02 12.0**	**-0.4**
	baz=32								
325A	**Bean Ranch, Si**	**31.64**	**322**	⇑P		**P**	**23 02 12.4**	**-0.1**
	baz=32,SNR=17								
BLO	**Bloomington**	**31.80**	**354**	*e*P		**P**	**23 02 12.5**	**-1.3**
	comp=Z,193nm,1.6s,mb5.7								
BLO	**Bloomington**	**31.80**	**354**	*e*P		**P**	**23 02 12.5**	**-1.3**
BLO				pmax		pmax			
	comp=Z,193nm,1.6s,mb5.7								
SLM	**Saint Louis**	**31.81**	**349**	*e*P		**P**	**23 02 14.4**	**+0.4**
	comp=Z,68nm,0.5s,mb5.7								
SLM	**Saint Louis**	**31.81**	**349**	*e*P		**P**	**23 02 14.4**	**+0.5**
SLM				pmax		pmax			
	comp=Z,68nm,0.5s,mb5.7								
126A	**Clayton Basin,**	**31.98**	**325**	⇑P		**P**	**23 02 15.2**	**-0.3**
	baz=32								
225A	**Deer Hill, Car**	**32.07**	**323**	⇑P		**P**	**23 02 16.4**	**+0.1**
	baz=32,SNR=13								
MNTX	**Cornudas Mount**	**32.12**	**322**	⇓P		**P**	**23 02 16.1**	**-0.6**
	baz=32,SNR=32								
MNTX	**Cornudas Mount**	**32.12**	**322**	*e*P		**P**	**23 02 15.5**	**-1.2**
	comp=Z,36nm,1.3s,mb5.0								
MNTX				*e*PP		PP	23 03 27.7	-2.0	
MNTX				*e*PcP		PcP	23 05 05.1	-0.4	
MNTX				LR		LR			
	comp=Z,518nm,22.0s,MS4.2								
MCWV	**Mont Chateau**	**32.19**	**4**	*e*P		**P**	**23 02 17.8**	**+0.6**
	comp=Z,152nm,1.5s,mb5.6								
MCWV				LR		LR			
	comp=Z,3µm,22.0s,MS4.9								
MSTX	**Muleshoe**	**32.28**	**328**	⇓P		**P**	**23 02 17.3**	**-0.8**
	baz=32								
Y27A	**Causey**	**32.43**	**327**	⇓P		**P**	**23 02 18.9**	**-0.5**
	baz=32								
AMTX	**Amarillo**	**32.44**	**330**	⇑P		**P**	**23 02 19.1**	**-0.3**
	baz=33								
AMTX	**Amarillo**	**32.44**	**330**	*e*P		**P**	**23 02 17.8**	**-1.7**
	comp=Z,12nm,0.8s,mb4.8								
AMTX				LR		LR			
	comp=Z,1µm,21.0s,MS4.6								
224A	**Cornudas Mount**	**32.47**	**322**	⇓P		**P**	**23 02 19.4**	**-0.3**
	baz=33,SNR=14								
Y26A	**Elida**	**32.82**	**326**	⇑P		**P**	**23 02 22.7**	**-0.1**
	baz=33								
124A	**Stringfield Ra**	**32.86**	**323**	⇑P		**P**	**23 02 23.8**	**+0.6**
	baz=33,SNR=36								
MVL	**Millersville**	**32.93**	**9**	*e*P		**P**	**23 02 24.4**	**+0.7**
X27A	**F and S Farms,**	**32.98**	**328**	⇑P		**P**	**23 02 23.6**	**-0.6**
	baz=33								
Z24A	**Sheeppen Canyo**	**33.26**	**324**	⇑P		**P**	**23 02 27.0**	**+0.4**
	baz=33,SNR=16								
W27A	**Bowe Ranch, En**	**33.28**	**329**	⇓P		**P**	**23 02 26.6**	**-0.3**
	baz=33								
X26A	**CR and CF Fran**	**33.28**	**327**	⇓P		**P**	**23 02 26.6**	**-0.2**
	baz=33								
Y25A	**Mesa, Roswell**	**33.30**	**325**	⇓P		**P**	**23 02 27.3**	**+0.3**
	baz=33								
123A	**Bell Site, Whi**	**33.30**	**322**	⇓P		**P**	**23 02 28.1**	**+1.0**
	baz=33								
222A	**Williams Famil**	**33.46**	**320**	⇓P		**P**	**23 02 28.6**	**+0.1**
	baz=34								
HDIL	**Hopedale**	**33.52**	**351**	*e*P		**P**	**23 02 27.2**	**-1.6**
	comp=Z,76nm,0.6s,mb5.8								
HDIL				LR		LR			
	comp=Z,999nm,22.0s,MS4.5								
W26A	**Owens Ranch, T**	**33.67**	**328**	⇓P		**P**	**23 02 29.9**	**-0.3**
	baz=34								
Z23A	**Rita Site, Whi**	**33.72**	**323**	⇑P		**P**	**23 02 31.0**	**+0.3**
	baz=34								
Y24A	**Capitan**	**33.72**	**325**	⇑P		**P**	**23 02 30.6**	**-0.1**
	baz=34,SNR=9.5								
X25A	**Clemmons Ranch**	**33.73**	**326**	⇓P		**P**	**23 02 30.6**	**-0.1**
	baz=34,SNR=6.0								
221A	**Mesquite Ranch**	**33.83**	**320**	⇑P		**P**	**23 02 33.4**	**+1.7**
	baz=34,SNR=7.9								
320A	**Kipp Ranch, An**	**33.89**	**318**	⇑P		**P**	**23 02 33.9**	**+1.7**
	baz=34,SNR=15								
KSU1	**Kansas State U**	**33.94**	**340**	*e*P		**P**	**23 02 30.9**	**-1.7**
	comp=Z,44nm,0.9s,mb5.4								
KSU1				LR		LR			
	comp=Z,1µm,20.0s,MS4.5								
Y23A	**Lovelace Mesa,**	**34.09**	**324**	⇑P		**P**	**23 02 33.9**	**0.0**
	baz=34,SNR=15								
W25A	**X Bar L Ranch,**	**34.13**	**327**	⇑P		**P**	**23 02 33.8**	**-0.5**
	baz=34,SNR=9.7								
ALLY	**Alegheny Colle**	**34.16**	**3**	*e*P		**P**	**23 02 34.1**	**-0.3**
	comp=Z,47nm,1.0s,mb5.4								
Z22A	**Elephant Butte**	**34.16**	**322**	⇑P		**P**	**23 02 35.2**	**+0.7**
	baz=34,SNR=13								
121A	**Cookes Peak, D**	**34.18**	**320**	⇑P		**P**	**23 02 35.9**	**+1.2**
	baz=34,SNR=20								
V26A	**Tequesquite Ra**	**34.22**	**329**	⇓P		**P**	**23 02 36.7**	**+1.7**
	baz=34,SNR=5.6								
220A	**Playas Peak, P**	**34.25**	**319**	⇑P		**P**	**23 02 36.7**	**+1.4**
	baz=34,SNR=17								
319A	**Douglas**	**34.42**	**317**	⇑P		**P**	**23 02 38.4**	**+1.6**
	baz=34,SNR=14								
BNM	**Barren Site**	**34.58**	**324**	*e*P		**P**	**23 02 38.6**	**+0.5**
	comp=Z,19nm,1.1s,mb4.9								
X23A	**Hourglass Bar**	**34.63**	**325**	⇑P		**P**	**23 02 39.2**	**+0.6**
	baz=35								
Y22A	**Socorro**	**34.63**	**323**	⇑P		**P**	**23 02 39.4**	**+0.8**
	baz=35,SNR=41								
ERPA	**Erie**	**34.63**	**4**	*e*P		**P**	**23 02 38.0**	**-0.5**
	comp=Z,244nm,2.0s,mb5.8								
ERPA				LR		LR			
	comp=Z,2µm,21.0s,MS4.9								
W24A	**Lazy 6 Ranch,**	**34.65**	**326**	⇓P		**P**	**23 02 38.9**	**+0.2**
	baz=35,SNR=9.0								
U26A	**Atchley Ranch,**	**34.66**	**329**	⇑P		**P**	**23 02 39.3**	**+0.5**
	baz=35,SNR=8.4								
V25A	**Rancho No Teng**	**34.69**	**328**	⇑P		**P**	**23 02 38.8**	**-0.2**
	baz=35,SNR=17								
LPM	**Los Pinos Moun**	**34.69**	**324**	*e*P		**P**	**23 02 40.6**	**+1.5**
120A	**U Bar Ranch, L**	**34.73**	**320**	⇑P		**P**	**23 02 40.9**	**+1.4**
	baz=35,SNR=21								
AAM	**Ann Arbor**	**34.74**	**359**	*e*P		**P**	**23 02 38.5**	**-0.9**
	comp=Z,71nm,1.3s,mb5.4								
AAM				LR		LR			
	comp=Z,3µm,20.0s,MS5.0								
AAM	**Ann Arbor**	**34.74**	**359**	*e*P		**P**	**23 02 38.5**	**-0.9**
AAM				pmax		pmax			
	comp=Z,71nm,1.3s,mb5.4								
AAM				MLR		MLR			
	comp=Z,3µm,20.0s,MS5.0								
219A	**White Tail Can**	**34.79**	**318**	⇑P		**P**	**23 02 41.9**	**+1.8**
	baz=35,SNR=16								
LENM	**Lemitar**	**34.79**	**323**	*e*P		**P**	**23 02 41.5**	**+1.5**
CBKS	**Cedar Bluff**	**34.83**	**336**	PFAKE			23 02 50.0	+10	
CBKS				LR		LR			
	comp=Z,602nm,20.0s,MS4.3								
318A	**Bisbee**	**34.94**	**317**	⇓P		**P**	**23 02 42.3**	**+1.0**
	baz=35,SNR=10								
V24A	**Rampart Ranch,**	**34.95**	**327**	⇓P		**P**	**23 02 41.5**	**+0.1**
	baz=35,SNR=12								
U25A	**Circle Dot Ran**	**35.01**	**329**	⇓P		**P**	**23 02 42.5**	**+0.7**
	baz=35								
W23A	**Werner Place,**	**35.02**	**325**	⇓P		**P**	**23 02 42.3**	**+0.3**
	baz=35								
ANMO	**Albuquerque**	**35.05**	**325**	*e*P		**P**	**23 02 42.5**	**+0.3**
	comp=Z,19nm,1.0s,mb5.0								
ANMO				LR		LR			
	comp=Z,911nm,21.0s,MS4.5								
ANMO	**Albuquerque**	**35.05**	**325**	*e*P		**P**	**23 02 42.5**	**+0.3**
ANMO				pmax		pmax			
	comp=Z,19nm,1.0s								
ANMO				MLR		MLR			
	comp=Z,911nm,21.0s								
LAZ	**Ladron**	**35.05**	**323**	*e*P		**P**	**23 02 42.3**	**0.0**
	comp=Z,26nm,1.2s,mb5.0								
Z20A	**Nine Sixteen R**	**35.07**	**320**	⇓P		**P**	**23 02 43.6**	**+1.2**
	baz=35,SNR=37								
Y21A	**Point of Rocks**	**35.10**	**322**	⇓P		**P**	**23 02 44.1**	**+1.4**
	baz=35,SNR=36								
BINY	**Binghamton**	**35.13**	**9**	*e*P		**P**	**23 02 42.5**	**-0.3**
	comp=Z,134nm,1.5s,mb5.7								
BINY				LR		LR			
	comp=Z,2µm,20.0s,MS4.9								
218A	**Dragoon**	**35.30**	**317**	⇓P		**P**	**23 02 46.3**	**+1.9**
	baz=35,SNR=10								
119A	**Ashpeak Ranch,**	**35.30**	**319**	⇑P		**P**	**23 02 45.9**	**+1.5**
	baz=35,SNR=16								
W22A	**Albuquerque**	**35.37**	**325**	⇓P		**P**	**23 02 45.8**	**+0.9**
	baz=36								
Y20A	**Horse Springs,**	**35.47**	**322**	⇓P		**P**	**23 02 47.0**	**+1.2**
	baz=36,SNR=26								
V23A	**Ortiz Mt. (NFS**	**35.47**	**326**	⇑P		**P**	**23 02 47.0**	**+1.2**
	baz=36								
U24A	**Moreno Valley**	**35.47**	**328**	⇓P		**P**	**23 02 46.4**	**+0.7**
	baz=36								
X21A	**Alamocita Cree**	**35.47**	**323**	⇓P		**P**	**23 02 46.9**	**+1.1**
	baz=36,SNR=39								
T25A	**Trinidad**	**35.58**	**329**	⇑P		**P**	**23 02 46.7**	**0.0**
	baz=36,SNR=13								
SCIA	**State Center**	**35.59**	**346**	*e*P		**P**	**23 02 45.2**	**-1.5**
	comp=Z,156nm,1.4s,mb5.8								
SCIA				LR		LR			
	comp=Z,1µm,19.0s,MS4.7								
Z19A	**T-Link Ranch,**	**35.62**	**320**	⇑P		**P**	**23 02 48.2**	**+1.1**
	baz=36								
118A	**Homack Ranch,**	**35.66**	**318**	⇓P		**P**	**23 02 48.8**	**+1.4**
	baz=36,SNR=12								
217A	**Green Valley**	**35.70**	**316**	⇓P		**P**	**23 02 48.7**	**+0.9**
	baz=36,SNR=14								
W21A	**San Fidel**	**35.85**	**324**	⇓P		**P**	**23 02 49.8**	**+0.7**
	baz=36,SNR=13								
U23A	**El Rito**	**35.90**	**327**	⇓P		**P**	**23 02 49.8**	**+0.4**
	baz=36,SNR=27								
X20A	**Quemado**	**35.97**	**322**	⇑P		**P**	**23 02 51.5**	**+1.4**
	baz=36,SNR=11								
JFWS	**Jewell Farm**	**35.97**	**351**	*e*P		**P**	**23 02 48.0**	**-2.0**
	comp=Z,38nm,0.9s,mb5.3								
JFWS				LR		LR			
	comp=Z,865nm,19.0s,MS4.5								
JFWS	**Jewell Farm**	**35.97**	**351**	*e*P		**P**	**23 02 48.0**	**-2.0**
JFWS				pmax		pmax			
	comp=Z,38nm,0.9s,mb5.3								
JFWS				MLR		MLR			
	comp=Z,865nm,19.0s,MS4.5								
Z18A	**Geronimo**	**35.98**	**319**	⇑P		**P**	**23 02 51.6**	**+1.4**
	baz=36								
S25A	**Robets Cordova**	**35.99**	**330**	⇑P		**P**	**23 02 50.1**	**-0.1**
	baz=36,SNR=7.1								
TUC	**Tucson**	**36.00**	**317**	*e*P		**P**	**23 02 51.5**	**+1.1**
	comp=Z,54nm,1.6s,mb5.2								
TUC				LR		LR			
	comp=Z,901nm,20.0s,MS4.5								
TUC	**Tucson**	**36.00**	**317**	*e*P		**P**	**23 02 51.5**	**+1.1**
TUC				pmax		pmax			
	comp=Z,54nm,1.6s,mb5.2								
TUC				MLR		MLR			
	comp=Z,901nm,20.0s,MS4.5								
Y19A	**Nutrioso**	**36.04**	**321**	⇓P		**P**	**23 02 52.5**	**+1.7**
	baz=36,SNR=20								
117A	**Oracle**	**36.13**	**318**	⇓P		**P**	**23 02 52.4**	**+0.9**
	baz=36,SNR=18								
216A	**Three Points,**	**36.27**	**316**	⇑P		**P**	**23 02 53.3**	**+0.5**
	baz=36,SNR=6.9								
U22A	**Llaves**	**36.30**	**326**	⇓P		**P**	**23 02 53.6**	**+0.7**
	baz=36,SNR=14								
V21A	**Milan**	**36.33**	**325**	⇓P		**P**	**23 02 54.2**	**+1.0**
	baz=36,SNR=7.0								
T23A	**Casias Ranch,**	**36.34**	**328**	⇑P		**P**	**23 02 53.5**	**+0.3**
	baz=36,SNR=6.0								
W20A	**Ramah**	**36.36**	**323**	⇑P		**P**	**23 02 54.8**	**+1.3**
	baz=36,SNR=30								
S24A	**Houchin Ranch,**	**36.37**	**329**	⇑P		**P**	**23 02 54.1**	**+0.6**
	baz=36,SNR=7.5								
X19A	**St. Johns**	**36.38**	**321**	⇓P		**P**	**23 02 55.1**	**+1.5**
	baz=36,SNR=21								
Y18A	**Canyon Day Jun**	**36.42**	**320**	⇑P		**P**	**23 02 55.3**	**+1.3**
	baz=36,SNR=8.4								
SDCO	**Great Sand Dun**	**36.60**	**329**	*e*P		**P**	**23 02 55.4**	**0.0**
	comp=Z,24nm,1.3s,mb4.9								
SDCO				LR		LR			
	comp=Z,1µm,22.0s,MS4.6								
ACCN	**Adirondack Com**	**36.68**	**11**	*e*P		**P**	**23 02 56.5**	**+0.4**
	comp=Z,62nm,1.5s,mb5.2								
R24A	**Sanders Place,**	**36.77**	**330**	⇓P		**P**	**23 02 57.6**	**+0.7**
	baz=37,SNR=8.9								
116A	**Eloy**	**36.77**	**317**	⇓P		**P**	**23 02 57.9**	**+0.9**
	baz=37,SNR=10								
U21A	**Nageezi**	**36.78**	**325**	⇓P		**P**	**23 02 58.1**	**+1.0**
	baz=37,SNR=7.7								
T22A	**Edith**	**36.79**	**327**	⇓P		**P**	**23 02 57.9**	**+0.9**
	baz=37,SNR=5.9								
V20A	**Brimhall**	**36.81**	**324**	⇑P		**P**	**23 02 58.2**	**+1.0**
	baz=37,SNR=6.8								
S23A	**Nye Farm, Mont**	**36.82**	**328**	⇓P		**P**	**23 02 58.2**	**+0.8**
	baz=37								
X18A	**Snowflake**	**36.85**	**321**	⇑P		**P**	**23 02 59.0**	**+1.3**
	baz=37,SNR=16								
Q25A	**Bedland, Calha**	**36.89**	**331**	⇓P		**P**	**23 02 59.4**	**+1.6**
	baz=37								
W19A	**Sanders**	**36.89**	**322**	⇓P		**P**	**23 02 59.2**	**+1.3**
	baz=37,SNR=17								
Y17A	**Roosevelt**	**36.89**	**319**	⇓P		**P**	**23 02 58.5**	**+0.5**
	baz=37								
Z16A	**Peralta Trail,**	**37.05**	**318**	⇓P		**P**	**23 03 00.2**	**+0.8**
	baz=37								
V19A	**Window Rock**	**37.09**	**323**	⇓P		**P**	**23 03 00.7**	**+1.1**
	baz=37,SNR=11								
W18A	**Petrified Fore**	**37.11**	**322**	⇑P		**P**	**23 03 01.3**	**+1.5**
	baz=37,SNR=13								
T21A	**Navajo Lake**	**37.12**	**326**	⇓P		**P**	**23 03 00.7**	**+0.8**
	baz=37,SNR=7.8								
NCB	**Newcomb**	**37.15**	**10**	*e*P		**P**	**23 03 00.0**	**0.0**
	comp=Z,112nm,1.8s,mb5.4								
NCB				LR		LR			
	comp=Z,3µm,22.0s,MS5.0								
214A	**Organ Pipe Nat**	**37.19**	**315**	⇓P		**P**	**23 03 01.3**	**+0.8**
	baz=37,SNR=12								
115A	**Sonoran Desert**	**37.21**	**317**	⇓P		**P**	**23 03 01.7**	**+1.0**
	baz=37,SNR=6.6								
U20A	**Newcomb**	**37.24**	**324**	⇓P		**P**	**23 03 01.9**	**+1.0**
	baz=37,SNR=7.3								
X17A	**Forest Lakes**	**37.27**	**320**	⇓P		**P**	**23 03 02.7**	**+1.5**
	baz=37,SNR=9.3								
S22A	**4UR Ranch, Cre**	**37.29**	**328**	⇑P		**P**	**23 03 02.1**	**+0.8**
	baz=37,SNR=13								
P25A	**Willow Gulch B**	**37.33**	**332**	⇑P		**P**	**23 03 01.6**	**0.0**
	baz=38,SNR=18								
Q24A	**Divide**	**37.36**	**331**	⇑P		**P**	**23 03 01.8**	**-0.1**
	baz=38,SNR=9.8								
MDV	**Middlebury**	**37.37**	**11**	*e*P		**P**	**23 03 02.0**	**+0.2**
Y16A	**Circle Bar Ran**	**37.42**	**319**	⇓P		**P**	**23 03 04.0**	**+1.5**
	baz=38,SNR=19								
OGNE	**Ogallala**	**37.57**	**336**	⇓P		**P**	**23 03 02.9**	**-0.8**
	baz=38								
OGNE	**Ogallala**	**37.57**	**336**	*e*P		**P**	**23 03 03.1**	**-0.6**
	comp=Z,69nm,1.0s,mb5.3								
OGNE				*e*PcP		PcP	23 05 19.6	-1.5	
OGNE				LR		LR			
	comp=Z,841nm,19.0s,MS4.6								
U19A	**Dine' College,**	**37.58**	**324**	⇑P		**P**	**23 03 04.2**	**+0.3**
	baz=38,SNR=20								
R22A	**Saguache, Gunn**	**37.61**	**328**	⇓P		**P**	**23 03 04.6**	**+0.6**
	baz=38,SNR=5.9								
V18A	**Ganado**	**37.62**	**322**	⇓P		**P**	**23 03 04.9**	**+0.8**
	baz=38								
Q23A	**Hartsel**	**37.65**	**330**	⇑P		**P**	**23 03 04.2**	**-0.1**
	baz=38,SNR=6.7								
P24A	**Kohler Place,**	**37.68**	**331**	⇑P		**P**	**23 03 05.5**	**+0.9**
	baz=38								
W17A	**Winslow**	**37.69**	**321**	⇓P		**P**	**23 03 05.3**	**+0.6**
	baz=38,SNR=5.9								
114A	**Black Gap (USA**	**37.69**	**316**	⇑P		**P**	**23 03 05.8**	**+1.0**
	baz=38,SNR=8.0								
LONY	**Lake Ozonia**	**37.72**	**9**	*e*P		**P**	**23 03 04.1**	**-0.7**
	comp=Z,110nm,1.8s,mb5.3								
LONY				LR		LR			
	comp=Z,2µm,20.0s,MS4.8								
X16A	**Lo Mia Camp, P**	**37.73**	**319**	⇑P		**P**	**23 03 06.4**	**+1.3**
	baz=38,SNR=13								
S21A	**Coal Bank Pass**	**37.74**	**327**	⇓P		**P**	**23 03 05.3**	**+0.1**
	baz=38,SNR=9.7								
O25A	**Wiggins**	**37.79**	**333**	⇑P		**P**	**23 03 06.2**	**+0.7**
	baz=38								
MVCO	**Mesa Verde**	**37.81**	**325**	⇑P		**P**	**23 03 06.3**	**+0.6**
	baz=38,SNR=9.8								
MVCO	**Mesa Verde**	**37.81**	**325**	*e*P		**P**	**23 03 06.3**	**+0.5**
	comp=Z,84nm,1.3s,mb5.3								
MVCO				LR		LR			
	comp=Z,890nm,20.0s,MS4.6								
T19A	**Beclabito**	**37.85**	**325**	⇑P		**P**	**23 03 06.7**	**+0.6**
	baz=38,SNR=19								
LBNH	**Lisbon**	**37.86**	**13**	PFAKE			23 03 20.0	+14	
LBNH				LR		LR			
	comp=Z,2µm,21.0s,MS4.9								
P23A	**Jefferson**	**38.02**	**330**	⇑P		**P**	**23 03 08.4**	**+1.0**
	baz=38,SNR=5.8								
LCO	**Las Campanas**	**38.02**	**163**	*e*P		**P**	**23 03 06.6**	**-0.9**
	comp=Z,27nm,0.8s,mb5.0								
LCO				LR		LR			
	comp=Z,929nm,19.0s,MS4.6								
LCO	**Las Campanas**	**38.02**	**163**	*i* P		**P**	**23 03 06.1**	**-1.4**
Y15A	**Casa Rosa Ranc**	**38.03**	**318**	⇓P		**P**	**23 03 08.6**	**+1.0**
	baz=38,SNR=13								
U18A	**Rough Rock, Ch**	**38.06**	**323**	⇑P		**P**	**23 03 08.8**	**+0.9**
	baz=38,SNR=12								
Z14A	**Wintersburg**	**38.09**	**317**	⇓P		**P**	**23 03 09.0**	**+0.9**
	baz=38,SNR=7.0								
V17A	**Tonalea, Kykot**	**38.09**	**322**	⇓P		**P**	**23 03 09.5**	**+1.4**
	baz=38,SNR=87								
FRNY	**Flat Rock**	**38.10**	**10**	*e*P		**P**	**23 03 07.9**	**-0.2**
	comp=Z,48nm,1.4s,mb5.0								
R21A	**Cimarron**	**38.13**	**328**	⇑P		**P**	**23 03 08.7**	**+0.3**
	baz=38								
Q22A	**Crested Butte,**	**38.16**	**329**	⇓P		**P**	**23 03 09.3**	**+0.6**
	baz=38,SNR=8.3								
ECSD	**EROS Data Cent**	**38.17**	**344**	*e*P		**P**	**23 03 06.0**	**-2.6**
	comp=Z,27nm,1.0s,mb4.9								
ECSD				LR		LR			
	comp=Z,1µm,19.0s,MS4.8								
W16A	**Flagstaff**	**38.21**	**320**	⇓P		**P**	**23 03 10.1**	**+0.9**
	baz=38								
O24A	**Longmont**	**38.23**	**332**	⇑P		**P**	**23 03 09.2**	**0.0**
	baz=38								
ISCO	**Idaho Springs**	**38.24**	**331**	⇓P		**P**	**23 03 09.5**	**+0.2**
	baz=38,SNR=11								
ISCO	**Idaho Springs**	**38.24**	**331**	*e*P		**P**	**23 03 09.6**	**+0.4**
	comp=Z,13nm,1.0s,mb4.6								
ISCO				LR		LR			
	comp=Z,924nm,22.0s,MS4.5								
ISCO	**Idaho Springs**	**38.24**	**331**	*e*P		**P**	**23 03 09.6**	**+0.3**
ISCO				pmax		pmax			
	comp=Z,13nm,1.0s,mb4.6								
ISCO				MLR		MLR			
	comp=Z,924nm,22.0s,MS4.5								
X15A	**Humboldt**	**38.29**	**319**	⇓P		**P**	**23 03 10.8**	**+1.0**
	baz=38,SNR=13								
113A	**Mohawk Valley,**	**38.31**	**315**	⇓P		**P**	**23 03 11.3**	**+1.3**
	baz=38,SNR=7.9								
WUAZ	**Wupatki**	**38.38**	**321**	⇑P		**P**	**23 03 12.0**	**+1.5**
	baz=38,SNR=22								
WUAZ	**Wupatki**	**38.38**	**321**	*e*P		**P**	**23 03 12.3**	**+1.7**
	comp=Z,77nm,1.2s,mb5.3								
WUAZ				LR		LR			
	comp=Z,829nm,21.0s,MS4.5								
SMCO	**Snowmass**	**38.43**	**329**	*e*P		**P**	**23 03 10.4**	**-0.5**
	comp=Z,29nm,1.1s,mb4.9								
R20A	**Redvale**	**38.45**	**327**	⇑P		**P**	**23 03 11.6**	**+0.5**
	baz=39,SNR=9.7								
Y14A	**Wickenburg**	**38.46**	**318**	⇑P		**P**	**23 03 11.6**	**+0.3**
	baz=38,SNR=16								
Z13A	**Yuma Proving G**	**38.48**	**316**	⇓P		**P**	**23 03 11.8**	**+0.4**
	baz=38,SNR=16								
Q21A	**Lamborn Mesa,**	**38.49**	**328**	⇑P		**P**	**23 03 12.0**	**+0.5**
	baz=39,SNR=9.2								
T18A	**Mexican Hat**	**38.55**	**324**	⇑P		**P**	**23 03 12.1**	**+0.1**
	baz=39,SNR=22								
S19A	**Harvey Farm, M**	**38.55**	**325**	⇓P		**P**	**23 03 12.3**	**+0.3**
	baz=39,SNR=10								
U16A	**Tuba City**	**38.63**	**322**	⇓P		**P**	**23 03 13.8**	**+1.1**
	baz=39,SNR=24								
P22A	**Eagle**	**38.64**	**330**	⇑P		**P**	**23 03 12.9**	**+0.2**
	baz=39,SNR=15								
O23A	**Lake Granby, G**	**38.70**	**331**	⇓P		**P**	**23 03 13.7**	**+0.5**
	baz=39								
X14A	**Yava**	**38.70**	**318**	⇑P		**P**	**23 03 14.5**	**+1.2**
	baz=39,SNR=15								
N24A	**Carr**	**38.71**	**333**	⇑P		**P**	**23 03 13.2**	**0.0**
	baz=39,SNR=8.4								
COWI	**Conover**	**38.93**	**353**	*e*P		**P**	**23 03 13.1**	**-1.9**
	comp=Z,28nm,1.2s,mb4.9								
COWI				*e*PP		PP	23 04 44.9	+0.2	
COWI				*e*PcP		PcP	23 05 24.6	-0.6	
COWI				LR		LR			
	comp=Z,1µm,19.0s,MS4.7								
Y13A	**Salome**	**38.95**	**317**	⇓P		**P**	**23 03 16.6**	**+1.3**
	baz=39,SNR=8.9								
Q20A	**Ridgley Place,**	**38.96**	**328**	⇓P		**P**	**23 03 15.9**	**+0.5**
	baz=39,SNR=5.6								
O22A	**Kremmling**	**38.97**	**330**	⇑P		**P**	**23 03 15.5**	**0.0**
	baz=39,SNR=7.7								
S18A	**Hurst Farm, Bl**	**39.00**	**325**	⇓P		**P**	**23 03 16.0**	**+0.3**
	baz=39,SNR=16								
T17A	**Navajo Res., N**	**39.00**	**323**	⇑P		**P**	**23 03 16.8**	**+1.1**
	baz=39,SNR=

comp=Z,23nm,1.3s,mb4.8
N20A Spence Gulch, 40.33 330 ⇑P P 23 03 26.9 +0.1
baz=40,SNR=7.8
O19A Miners Draw (B 40.38 328 ⇑P P 23 03 27.1 -0.1
baz=40
S15A Panguitch 40.38 323 ⇑P P 23 03 28.8 +1.5
baz=40
T14A Hurricane 40.43 321 ⇓P P 23 03 29.0 +1.4
baz=40,SNR=9.8
RWWY Rawlins 40.47 331 *e*P P 23 03 28.3 +0.4
comp=Z,42nm,1.1s,mb5.1
M21A Separation Pea 40.48 331 ⇓P P 23 03 27.9 -0.1
baz=41,SNR=12
P18A Preston Nutter 40.49 327 ⇑P P 23 03 28.2 +0.1
baz=41,SNR=12
W12A Cal Nev Ari 40.51 318 ⇓P P 23 03 29.4 +1.1
baz=41
Q16A Castle Valley 40.51 325 ⇑P P 23 03 28.6 +0.3
baz=41,SNR=8.9
LDFC Landfair 40.54 317 *e*P P 23 03 30.7 +2.2
BELC Belle Mtn. Jos 40.55 315 ⇑P P 23 03 29.1 +0.5
baz=41,SNR=18
U13A Pakoon Wash 40.58 320 ⇑P P 23 03 30.1 +1.2
baz=41,SNR=18
P17A Butcher Ranch, 40.66 326 ⇓P P 23 03 29.9 +0.5
baz=41,SNR=8.6
PFO Pinyon Flat Ob 40.66 315 ⇓P P 23 03 29.9 +0.3
baz=41
PFO Pinyon Flat Ob 40.66 315 *e*P P 23 03 30.6 +1.1
comp=Z,33nm,1.2s,mb4.8
PFO LR LR
comp=Z,972nm,22.0s,MS4.6
PFO Pinyon Flat Ob 40.66 315 *e*P P 23 03 30.7 +1.1
PFO pmax pmax
comp=Z,33nm,1.2s,mb4.8
PFO MLR MLR
comp=Z,972nm,22.0s,MS4.6
R15A Junction 40.68 323 ⇑P P 23 03 31.0 +1.3
baz=41
GMRC Granite Mounta 40.74 317 ⇓P P 23 03 30.9 +0.7
baz=41,SNR=8.7
109C Camp Elliot, M 40.74 313 ⇓P P 23 03 30.2 -0.1
baz=41
V12A Nelson 40.74 318 ⇑P P 23 03 31.2 +1.0
baz=41,SNR=22
L21A Rawlins 40.76 331 ⇑P P 23 03 29.8 -0.4
baz=41,SNR=11
M20A Sweetwater, Wa 40.79 330 ⇓P P 23 03 30.8 +0.3
baz=41
TMUT Trail Mountain 40.80 325 *e*P P 23 03 31.8 +1.2
comp=Z,22nm,1.0s,mb4.8
O18A Roosevelt 40.82 327 ⇑P P 23 03 31.3 +0.5
baz=41
MVU Marysvale 40.84 324 PFAKE 23 03 40.0 +9.0
MVU LR LR
comp=Z,977nm,20.0s,MS4.7
N19A John Jarvie Ra 40.84 329 ⇑P P 23 03 30.7 -0.3
baz=41
K22A Casper 40.90 333 ⇑P P 23 03 31.2 -0.2
baz=41
CCUT Cedar City 40.91 322 *e*P P 23 03 33.5 +1.9
comp=Z,212nm,2.7s,mb5.3
T13A Saint George 40.91 321 ⇓P P 23 03 33.1 +1.4
baz=41,SNR=6.9
S14A Cedar City 40.92 322 ⇑P P 23 03 32.6 +0.9
baz=41,SNR=5.6
RSSD Black Hills 41.04 336 PFAKE 23 03 40.0 +7.4
RSSD LR LR
comp=Z,919nm,19.0s,MS4.7
EYMN Ely 41.07 351 *e*P P 23 03 30.3 -2.5
comp=Z,23nm,1.0s,mb4.8
EYMN LR LR
comp=Z,908nm,19.0s,MS4.7
N18A Larsen Ranch, 41.16 329 ⇓P P 23 03 33.5 -0.1
baz=41
O17A Robinson Place 41.16 327 ⇑P P 23 03 34.2 +0.6
baz=41,SNR=6.7
R14A James Farms, M 41.18 323 ⇑P P 23 03 34.4 +0.6
baz=41
CFAA Coronel Fontan 41.19 161 P P 23 03 33.0 -0.9
comp=Z,4.9nm,0.8s,mb4.2,baz=339,slow=7.2,SNR=72
V11A Goodsprings 41.19 318 ⇓P P 23 03 34.6 +0.7
baz=41,SNR=12
HEC Hector,Ludlow 41.23 316 ⇑P P 23 03 33.9 -0.3
baz=41,SNR=5.9
S13A Holt Ranch, En 41.23 321 ⇑P P 23 03 35.8 +1.5
baz=41,SNR=52
T12A Moapa 41.25 320 ⇑P P 23 03 35.4 +1.0
baz=41
L20A Wamsutter 41.25 331 ⇑P P 23 03 34.6 +0.3
baz=41
P16A Fountain Green 41.26 325 ⇓P P 23 03 35.4 +0.9
baz=41
Q15A Fillmore 41.26 324 ⇑P P 23 03 35.2 +0.7
baz=41
M19A Rock Springs 41.28 329 ⇓P P 23 03 36.2 +1.6
baz=41
TUQ Turquoise Moun 41.29 317 ⇓P P 23 03 35.8 +1.0
baz=41,SNR=11
MPU Maple Canyon 41.53 326 *e*P P 23 03 37.5 +0.9
comp=Z,37nm,1.1s,mb4.9
MPU *e*PcP PcP 23 05 33.5 -0.2
O16A Springville 41.59 326 ⇑P P 23 03 37.4 +0.3
baz=42,SNR=9.3
P15A Leamington 41.59 325 ⇓P P 23 03 37.8 +0.6
baz=42,SNR=9.9
DAU Daniels Canyon 41.59 327 *e*P P 23 03 38.4 +1.2
CPUP Villa Florida 41.61 145 *e*P P 23 03 34.6 -2.8
comp=Z,61nm,1.1s,mb5.1
CPUP LR LR 23 23 20.3
CPUP Villa Florida 41.61 145 P P 23 03 34.9 -2.6
comp=Z,7.5nm,0.9s,mb4.3,baz=308,slow=8.3,SNR=12
CPUP LR LR 23 23 20.3
comp=Z,1μm,18.3s,MS4.9,baz=302,slow=40
CPUP Villa Florida 41.61 145 *e*P P 23 03 34.6 -2.8
CPUP pmax pmax
comp=Z,61nm,1.1s
R13A O'Grain Ranch, 41.68 322 ⇓P P 23 03 39.3 +1.4
baz=42,SNR=34
M18A Lyman 41.69 329 ⇑P P 23 03 37.6 -0.3
baz=42
NLU North Lily Min 41.73 325 *e*P P 23 03 38.8 +0.4
comp=Z,23nm,1.3s,mb4.7
NLU *e*PcP PcP 23 05 34.7 +0.4
N17A Moffit Pass 41.74 328 ⇑P P 23 03 38.9 +0.5
baz=42,SNR=7.1
K20A Yellowstone Ra 41.75 331 ⇓P P 23 03 39.7 +1.3
baz=42,SNR=9.0
Q14A Sevier Lake (B 41.78 323 ⇓P P 23 03 39.7 +1.0
baz=42,SNR=46
SHOC Shoshone 41.79 318 ⇓P P 23 03 39.5 +0.7
baz=42,SNR=5.6
GSC Goldstone 41.81 317 ⇑P P 23 03 40.2 +1.1
baz=42,SNR=12
GSC Goldstone 41.81 317 *e*P P 23 03 40.4 +1.3
comp=Z,47nm,1.1s,mb5.0
GSC Goldstone 41.81 317 *e*P P 23 03 40.4 +1.3
GSC pmax pmax
comp=Z,47nm,1.1s,mb5.0
L19A Farson 41.82 330 ⇓P P 23 03 39.1 +0.1
baz=42
JLU Jordanelle 41.83 327 *e*P P 23 03 39.5 +0.4
comp=Z,38nm,1.3s,mb4.9
JLU *e*PcP PcP 23 05 35.0 +0.3
S12A Delamar Landin 41.87 321 ⇓P P 23 03 40.9 +1.4
baz=42,SNR=5.5
N16A Rees Ranch, Co 42.02 327 ⇑P P 23 03 41.1 +0.4
baz=42
M17A Scullys Gap (B 42.03 328 ⇓P P 23 03 40.7 -0.1
baz=42,SNR=16
L18A Fontenelle, Gr 42.03 329 ⇑P P 23 03 40.8 +0.1
baz=42,SNR=11
P14A Drum Mountains 42.05 324 ⇑P P 23 03 41.7 +0.7
baz=42,SNR=33
CTU Camp Tracy 42.06 327 *e*P P 23 03 42.1 +1.1
comp=Z,42nm,1.1s,mb5.0
MWC Mount Wilson 42.11 314 *e*P P 23 03 39.6 -1.9
comp=Z,60nm,1.6s,mb5.0
MWC Mount Wilson 42.11 314 *e*P P 23 03 39.7 -1.8
MWC pmax pmax
comp=Z,60nm,1.6s,mb5.0
K19A Absolon Red Bu 42.12 331 ⇓P P 23 03 40.5 -0.9
baz=42,SNR=12
U10A Ash Meadows, A 42.12 318 ⇑P P 23 03 42.8 +1.2
baz=42,SNR=25
I21A Big Trails, Te 42.16 333 ⇑P P 23 03 43.3 +1.5
baz=42
R12A Pony Springs, 42.16 322 ⇑P P 23 03 43.1 +1.2
baz=42,SNR=14
PASC Pasadena Art C 42.17 314 P P 23 03 40.8 -1.2
O15A The Old Anders 42.18 326 ⇓P P 23 03 42.6 +0.7
baz=42
FCH Farellones 42.20 164 *i* P P 23 03 38.4 -3.8
Q13A Wheeler Ranch, 42.20 323 ⇑P P 23 03 43.2 +1.1
baz=42,SNR=48
NOQ North Oquirrh 42.23 326 *e*P P 23 03 43.3 +0.9
comp=Z,50nm,1.1s,mb5.1
NOQ *e*PcP PcP 23 05 34.3 -1.8
AGMN Agassiz Nation 42.24 347 *e*P P 23 03 39.7 -2.6
comp=Z,57nm,1.3s,mb5.0
AGMN LR LR
comp=Z,874nm,22.0s,MS4.6
DUG Dugway 42.31 325 ⇓P P 23 03 43.7 +0.7
baz=42,SNR=15
DUG Dugway 42.31 325 *e*P P 23 03 43.9 +0.8
comp=Z,27nm,1.2s,mb4.8
DUG LR LR
comp=Z,1μm,19.0s,MS4.7
DUG Dugway 42.31 325 *e*P P 23 03 43.9 +0.9
DUG pmax pmax
comp=Z,27nm,1.2s,mb4.8
DUG MLR MLR
comp=Z,1μm,19.0s,MS4.7
EDW2 Edwards Air Fo 42.41 315 ⇑P P 23 03 44.0 +0.1
baz=42,SNR=5.2
BW06 Boulder Array 42.42 330 ⇑P P 23 03 43.4 -0.5
baz=43,SNR=12
BW06 Boulder Array 42.42 330 *e*P P 23 03 42.8 -1.1
comp=Z,58nm,1.6s,mb5.0
BW06 LR LR
comp=Z,1μm,21.0s,MS4.7
FURC Furnace Creek, 42.50 318 ⇑P P 23 03 45.2 +0.6
baz=43,SNR=18
LRMC Laurel Mountai 42.51 316 ⇓P P 23 03 45.4 +0.6
baz=43,SNR=5.5
P13A Bates Ranch, G 42.52 323 ⇑P P 23 03 45.9 +1.2
baz=43,SNR=35
K18A Toltan Ranch, 42.56 330 ⇓P P 23 03 45.0 0.0
baz=43,SNR=6.5
L17A Cokeville 42.59 329 ⇓P P 23 03 44.8 -0.4
baz=43,SNR=15
HWUT Hardware Ranch 42.60 328 *e*P P 23 03 45.8 +0.5
comp=Z,38nm,1.0s,mb5.1
HWUT LR LR
comp=Z,749nm,20.0s,MS4.6
I20A Worland 42.65 333 ⇑P P 23 03 45.4 -0.3
baz=43
MPMC Manual Prospec 42.70 317 ⇓P P 23 03 46.6 +0.4
baz=43,SNR=22
H21A Big Horn, Sher 42.70 334 ⇑P P 23 03 46.8 +0.7
baz=43
Q12A Willow Creek R 42.74 322 ⇑P P 23 03 47.6 +1.0
baz=43,SNR=16
R11A Troy Canyon, C 42.78 321 ⇑P P 23 03 47.8 +1.0
baz=43,SNR=24
L16A Fish Haven 42.82 328 ⇑P P 23 03 47.1 -0.1
baz=43
SPUT South Promonto 42.87 327 *e*P P 23 03 47.4 -0.1
comp=Z,135nm,1.7s,mb5.4
SPUT *e*PcP PcP 23 05 37.3 -0.8
DAC Darwin (Calif) 42.88 317 PFAKE 23 04 00.0 +12
DAC LR LR
comp=Z,766nm,20.0s,MS4.6
BGU Big Grassy Mou 42.93 326 *e*P P 23 03 48.0 0.0
comp=Z,54nm,1.3s,mb5.1
BGU PcP PcP 23 05 38.8 +0.4
O13A Hicks Ranch, I 42.94 324 ⇑P P 23 03 49.0 +0.9
baz=43
N14A Grayback Hills 42.96 326 ⇑P P 23 03 48.8 +0.4
baz=43,SNR=54
M15A Larsen Ranch, 42.97 327 ⇑P P 23 03 48.5 +0.1
baz=43,SNR=20
J18A Kendall Valley 42.98 330 ⇑P P 23 03 48.0 -0.3
baz=43,SNR=27
H20A Greybull 43.01 333 ⇓P P 23 03 47.9 -0.7
baz=43
K17A Gardner Place, 43.09 329 ⇑P P 23 03 48.9 -0.4
baz=43
ARVC Arvin 43.12 315 ⇑P P 23 03 49.8 +0.1
baz=43
BSC Santa Cruz Isl 43.13 313 ⇓P P 23 03 49.7 0.0
baz=43
Q11A Duckwater 43.13 322 ⇑P P 23 03 50.5 +0.9
baz=43,SNR=20
GRAC Grapevine Rang 43.14 318 ⇓P P 23 03 50.3 +0.5
baz=43,SNR=11
ISA Isabella 43.15 316 ⇑P P 23 03 51.0 +1.1
baz=43,SNR=6.4
ISA Isabella 43.15 316 *e*P P 23 03 51.5 +1.6
comp=Z,52nm,1.4s,mb5.1
ISA Isabella 43.15 316 *e*P P 23 03 51.5 +1.6
ISA pmax pmax
comp=Z,53nm,1.4s,mb5.1
S10A Tonopah Range, 43.16 320 ⇓P P 23 03 51.2 +1.2
baz=43,SNR=29
AHID Auburn Hatcher 43.19 329 PFAKE 23 04 00.0 +10
AHID LR LR
comp=Z,828nm,22.0s,MS4.6
R10A Warm Springs 43.19 320 ⇓P P 23 03 51.7 +1.4
baz=43
I18A Diamond G Ranc 43.24 331 ⇓P P 23 03 51.6 +1.0
baz=43
G21A Lodge Grass 43.25 335 ⇑P P 23 03 51.2 +0.7
baz=43
CWC Cottonwood Cre 43.30 317 ⇓P P 23 03 51.8 +0.7
baz=43,SNR=6.5
L15A Malad City 43.32 327 ⇓P P 23 03 50.8 -0.4
baz=43,SNR=7.0
HVU Hansel Valley 43.37 327 *e*P P 23 03 52.6 +1.0
comp=Z,22nm,0.9s,mb4.9
HVU Hansel Valley 43.37 327 *e*P P 23 03 52.6 +1.0
HVU pmax pmax
comp=Z,22nm,0.9s,mb4.9
SBC Santa Barbara 43.40 314 ⇑P P 23 03 52.1 +0.1
baz=44
J17A Brown Place, J 43.43 330 ⇓P P 23 03 51.9 -0.1
baz=44
O12A Currie 43.47 324 ⇑P P 23 03 53.4 +1.0
baz=44,SNR=9.0
K16A Soda Springs 43.48 329 ⇓P P 23 03 52.3 -0.2
baz=44
M14A Sheep Mountain 43.49 326 ⇑P P 23 03 52.5 0.0
baz=44,SNR=40
REDW Red Top Meadow 43.50 330 *e*P P 23 03 52.9 +0.3
comp=Z,67nm,1.4s,mb5.2
SNOW Snow King Moun 43.52 330 *e*P P 23 03 53.4 +0.6
comp=Z,22nm,0.3s,mb5.4
N13A Wendover, West 43.54 325 ⇑P P 23 03 53.4 +0.4
baz=44,SNR=12
N13A Wendover, West 43.54 325 *e*P P 23 03 54.5 +1.5
comp=Z,117nm,1.0s,mb5.6
LOHW Long Hollow 43.56 330 *e*P P 23 03 52.8 -0.2
comp=Z,9.0nm,0.8s,mb4.5
Q10A Clear Creek Ra 43.58 321 ⇓P P 23 03 54.6 +1.3
baz=44,SNR=8.4
P11A Circle Ranch, 43.62 322 ⇑P P 23 03 54.4 +0.8
baz=44
TPAW Teton Pass 43.64 330 *e*P P 23 03 53.9 +0.2
comp=Z,26nm,1.0s,mb4.9
VES Vestal, Richgr 43.67 316 ⇓P P 23 03 54.0 -0.2
baz=44
PKM Peak Mountain 43.70 314 ⇓P P 23 03 54.7 +0.3
baz=44
RRI2 Red Ridge 43.72 330 *e*P P 23 03 54.1 -0.2
comp=Z,94nm,1.8s,mb5.2
MOOW Moose Ponds 43.73 330 *e*P P 23 03 53.8 -0.6
comp=Z,13nm,1.1s,mb4.6
MOOW PP PP 23 05 37.2 +0.6
I17A Pilgrim Ck. 43.77 331 ⇑P P 23 03 55.2 +0.4
baz=44
L14A Malta 43.80 327 ⇓P P 23 03 55.1 +0.1
baz=44,SNR=27
J16A Bone 43.81 329 ⇑P P 23 03 54.9 -0.3
baz=44
M13A Montello 43.85 325 ⇑P P 23 03 55.5 0.0
baz=44,SNR=18
M13A Montello 43.85 325 *e*P P 23 03 56.4 +0.9
comp=Z,64nm,1.3s,mb5.2
K15A Arbon 43.87 328 ⇑P P 23 03 55.4 -0.2
baz=44,SNR=5.8
IMW Indian Meadow 43.93 330 *e*P P 23 03 56.2 +0.1
comp=Z,17nm,1.0s,mb4.7
FLWY Flagg Ranch 43.95 331 *e*P P 23 03 56.7 +0.4
comp=Z,57nm,1.5s,mb5.1
LAO LASA Array 44.03 337 ⇓P P 23 03 55.7 -1.1
baz=44
LAO LASA Array 44.03 337 *e*P P 23 03 54.8 -2.0
comp=Z,57nm,1.0s,mb5.3
LAO LR LR
comp=Z,872nm,20.0s,MS4.7
SMMC Simmler 44.04 314 ⇑P P 23 03 57.2 +0.2
baz=44
RLMT Red Lodge 44.07 333 ⇑P P 23 03 56.4 -0.7
baz=44,SNR=11
RLMT Red Lodge 44.07 333 *e*P P 23 03 56.5 -0.7
comp=Z,37nm,1.1s,mb5.0
RLMT LR LR
comp=Z,673nm,22.0s,MS4.5
F20A Billings 44.10 334 ⇑P P 23 03 56.5 -0.9
baz=44,SNR=15
K14A Jones Ranch, D 44.11 327 ⇓P P 23 03 57.2 -0.4
baz=44,SNR=26
H17A Grant Village 44.13 331 ⇓P P 23 03 58.3 +0.7
baz=44
LKWY Lake 44.17 331 PFAKE 23 04 10.0 +12
LKWY LR LR
comp=Z,2μm,22.0s,MS5.0
I16A Newdale 44.19 330 ⇓P P 23 03 58.1 0.0
baz=44
YFT Old Faithful 44.29 331 *e*P P 23 03 56.8 -2.2
comp=Z,40nm,1.2s,mb5.0
J15A Blackfoot 44.32 329 ⇓P P 23 03 59.4 +0.2
baz=44,SNR=6.7
G18A Lazy EL Ranch, 44.35 333 ⇑P P 23 03 58.9 -0.5
baz=44
F19A Roth Farm, Mol 44.49 334 ⇑P P 23 03 59.8 -0.7
baz=45,SNR=5.4
YMR Madison River 44.52 331 *e*P P 23 04 01.4 +0.6
comp=Z,32nm,1.0s,mb5.1
O10A Cortez Mining, 44.53 323 ⇓P P 23 04 01.8 +0.9
baz=45,SNR=13
NVAR Mina Array Bea 44.55 319 P P 23 04 01.5 +0.4
comp=Z,12nm,0.7s,mb4.8,baz=129,slow=6.7,SNR=91
GCMT Greycliff 44.76 333 *e*P P 23 04 02.2 -0.4
comp=Z,19nm,1.0s,mb4.9
I15A Monteview 44.78 329 ⇓P P 23 04 03.7 +0.8
baz=45
DGMT Dagmar 44.78 340 ⇓P P 23 04 01.9 -0.9
baz=45,SNR=18
DGMT Dagmar 44.78 340 *e*P P 23 04 01.8 -0.9
comp=Z,55nm,0.9s,mb5.4
DGMT LR LR
comp=Z,1μm,21.0s,MS4.7
N10A Dunphy 44.80 323 ⇓P P 23 04 03.3 +0.2
baz=45
J14A Carey 44.83 328 ⇓P P 23 04 03.4 +0.2
baz=45,SNR=34
F18A Big Timber 44.87 333 ⇓P P 23 04 03.2 -0.4
baz=45,SNR=22
G17A Pierce Place, 44.90 332 ⇓P P 23 04 04.1 +0.3
baz=45,SNR=14
BMN Battle Mountai 45.05 322 *e*P P 23 04 06.4 +1.4
comp=Z,82nm,1.1s,mb5.5
BMN LR LR
comp=Z,1μm,22.0s,MS4.7
BMN Battle Mountai 45.05 322 *e*P P 23 04 06.4 +1.3
BMN pmax pmax
comp=Z,82nm,1.1s,mb5.5
BMN MLR MLR
comp=Z,1μm,22.0s,MS4.7
J13A Cove Ranch, Pi 45.23 328 ⇓P P 23 04 06.4 -0.1
baz=45,SNR=10.0
F17A Fitzpatrick Pl 45.30 333 ⇓P P 23 04 06.7 -0.3
baz=45,SNR=9.5
M10A I.L. Ranch, Tu 45.32 324 ⇑P P 23 04 07.3 +0.1
baz=45,SNR=6.6
G16A Moss Hill, Enn 45.33 331 ⇓P P 23 04 07.3 0.0
baz=46,SNR=6.2
WAKR Walker 45.34 319 *e*P P 23 04 08.8 +1.4
E18A Harlowton 45.47 334 ⇑P P 23 04 07.8 -0.5
baz=46,SNR=5.3
HLID Hailey 45.47 328 ⇓P P 23 04 08.4 0.0
baz=46,SNR=30
HLID Hailey 45.47 328 *e*P P 23 04 08.5 +0.2
comp=Z,21nm,0.9s,mb5.0
HLID LR LR
comp=Z,596nm,19.0s,MS4.5
MCMT McKenzie Canyo 45.55 330 *e*P P 23 04 10.0 +1.1
comp=Z,16nm,1.3s,mb4.8
I13A Wildhorse Cree 45.55 328 ⇑P P 23 04 08.9 -0.1
baz=46,SNR=45
BOZ Bozeman (W) 45.56 332 ⇑P P 23 04 08.7 -0.3
baz=46,SNR=22
BOZ Bozeman (W) 45.56 332 *e*P P 23 04 08.7 -0.3
comp=Z,17nm,1.0s,mb4.9
BOZ LR LR
comp=Z,556nm,20.0s,MS4.5
BOZ Bozeman (W) 45.56 332 *e*P P 23 04 08.7 -0.3
BOZ pmax pmax
comp=Z,17nm,1.0s,mb4.9
BOZ MLR MLR
comp=Z,556nm,20.0s,MS4.5
G15A Dillon 45.62 331 ⇑P P 23 04 09.6 +0.1
baz=46
L10A Juniper Basin 45.63 325 ⇑P P 23 04 09.5 -0.1
baz=46,SNR=18
F16A Kennard Place, 45.66 332 ⇓P P 23 04 09.4 -0.4
baz=46,SNR=5.7
H14A Leadore 45.66 329 ⇑P P 23 04 10.2 +0.3
baz=46,SNR=9.0
CMB Columbia Colle 45.71 318 *e*P P 23 04 11.8 +1.4
comp=Z,15nm,1.2s,mb4.8
CMB LR LR
comp=Z,602nm,21.0s,MS4.5
CMB Columbia Colle 45.71 318 *e*P P 23 04 11.8 +1.5
CMB pmax pmax
comp=Z,15nm,1.2s,mb4.8
CMB MLR MLR
comp=Z,602nm,21.0s,MS4.5
SAO San Andreas Ge 45.78 315 *e*P P 23 04 08.9 -2.1
comp=Z,23nm,1.1s,mb5.0
SAO LR LR
comp=Z,838nm,22.0s,MS4.6
SAO San Andreas Ge 45.78 315 *e*P P 23 04 08.9 -2.0
SAO pmax pmax
comp=Z,23nm,1.1s,mb5.0
SAO MLR MLR
comp=Z,838nm,22.0s,MS4.6
E17A Martinsdale 45.81 333 ⇓P P 23 04 10.7 -0.2
baz=46,SNR=10
DLMT Dillon 45.81 331 *e*P P 23 04 11.3 +0.3
comp=Z,58nm,1.6s,mb5.3
DLMT *e*PcP PcP 23 05 48.4 +0.2
D18A Linhart Farms, 45.91 334 ⇓P P 23 04 11.2 -0.6
baz=46,SNR=12
PAHR Pah Rah Range 45.97 320 *e*P P 23 04 13.6 +1.2
comp=Z,126nm,1.7s,mb5.6
WCN Washoe City 45.98 319 ⇑P P 23 04 12.6 +0.1
baz=46
I12A Atlanta 46.01 327 ⇓P P 23 04 12.9 +0.3
baz=46,SNR=31
LRM Limekiln Ridge 46.08 331 *e*P P 23 04 13.4 +0.3
F15A Butte 46.11 331 ⇑P P 23 04 13.3 -0.1
baz=46,SNR=9.3
MFID Camas Ranch 46.14 326 ⇑P P 23 04 13.9 +0.3
baz=46,SNR=25
G14A Jackson 46.15 330 ⇑P P 23 04 13.4 -0.3
baz=46
E16A East Helena 46.24 332 ⇓P P 23 04 14.1 -0.3
baz=46
D17A Six Diamond Ra 46.26 334 ⇑P P 23 04 14.5 0.0
baz=46,SNR=17
H12A Diamond D Ranc 46.38 328 ⇑P P 23 04 15.4 -0.1
baz=46,SNR=25
G13A Cobalt 46.43 329 ⇑P P 23 04 15.5 -0.4
baz=47,SNR=8.9
HRY Holter Researc 46.44 332 *e*P P 23 04 16.0 0.0
F14A Wisdom 46.51 331 ⇓P P 23 04 16.5 0.0
baz=47
EGMT Eagleton 46.53 335 ⇓P P 23 04 15.7 -0.9
baz=47,SNR=5.7
EGMT Eagleton 46.53 335 *e*P P 23 04 16.0 -0.6
comp=Z,34nm,1.1s,mb5.2
EGMT LR LR
comp=Z,557nm,20.0s,MS4.5
D16A Dana Ranch, Ca 46.55 333 ⇑P P 23 04 16.2 -0.6
baz=47,SNR=13
E15A Deer Lodge 46.60 332 ⇑P P 23 04 17.1 -0.2
baz=47,SNR=12
C17A Wharram Farm, 46.66 334 ⇓P P 23 04 16.6 -1.1
baz=47,SNR=7.1
B18A Beardsley Farm 46.83 335 ⇑P P 23 04 18.6 -0.4
baz=47,SNR=5.7
D15A Lincoln 47.00 332 ⇓P P 23 04 19.9 -0.4

baz=47
E14A Clinton 47.01 331 ⇑P P **23 04 19.7 -0.7**
baz=47,SNR=7.3
WVOR Wild Horse Val 47.11 324 *e*P P **23 04 21.5 +0.2**
comp=Z,127nm,1.2s,mb5.7
WVOR LR LR
comp=Z,707nm,21.0s,MS4.6
WVOR Wild Horse Val 47.11 324 *e*P P **23 04 21.5 +0.2**
WVOR pmax pmax
comp=Z,127nm,1.2s,mb5.7
WVOR MLR MLR
comp=Z,707nm,21.0s,MS4.6
OHCM Honcut 47.13 318 *e*P P **23 04 22.3 +0.8**
B17A L&G Farms, Che 47.18 335 ⇓P P **23 04 21.2 -0.6**
baz=47
C16A Fuhringer Ranc 47.22 333 ⇓P P **23 04 21.3 -0.7**
baz=47
CHMT Chamberlain Mo 47.25 332 *e*P P **23 04 21.7 -0.6**
comp=Z,3.4nm,0.9s,mb4.3
A18A Metzger Ranch, 47.28 336 ⇓P P **23 04 21.7 -0.8**
baz=47
E13A Victor 47.36 331 ⇓P P **23 04 22.7 -0.5**
baz=48,SNR=7.9
F12A Elk City 47.41 329 ⇓P P **23 04 23.1 -0.4**
baz=48,SNR=39
MCCM Marconi Confer 47.45 316 PFAKE 23 04 40.0 +16
MCCM LR LR
comp=Z,955nm,22.0s,MS4.7
D14A Greenough 47.49 332 ⇓P P **23 04 23.8 -0.3**
baz=48
MSO Missoula 47.52 331 ⇑P P **23 04 23.5 -0.8**
baz=48,SNR=5.5
MSO Missoula 47.52 331 *e*P P **23 04 24.2 -0.1**
comp=Z,21nm,1.4s,mb5.0
MSO LR LR
comp=Z,579nm,19.0s,MS4.6
C15A Salmond Ranch, 47.59 333 ⇓P P **23 04 24.4 -0.5**
baz=48,SNR=14
SLMT Seeley Lake 47.60 332 *e*P P **23 04 24.4 -0.6**
comp=Z,4.8nm,0.8s,mb4.6
A17A Triple J Farms 47.65 335 ⇓P P **23 04 24.4 -0.9**
baz=48
B16A M & M Farms, S 47.67 334 ⇑P P **23 04 24.5 -0.9**
baz=48,SNR=5.3
MOD Modoc 47.80 322 *e*P P **23 04 26.6 0.0**
comp=Z,32nm,1.3s,mb5.2
MOD LR LR
comp=Z,956nm,21.0s,MS4.8
BMO Blue Mountains 47.88 327 *e*P P **23 04 21.1 -6.2**
comp=Z,20nm,1.0s,mb5.1
BMO LR LR
comp=Z,493nm,20.0s,MS4.5
BMO Blue Mountains 47.88 327 *e*P P **23 04 21.1 -6.1**
BMO pmax pmax
comp=Z,20nm,1.0s,mb5.1
BMO MLR MLR
comp=Z,493nm,20.0s,MS4.5
B15A Bradely Ranch, 47.97 333 ⇓P P **23 04 26.9 -0.9**
baz=48,SNR=15
HOPS Hopland 48.01 317 PFAKE 23 04 40.0 +12
HOPS LR LR
comp=Z,1μm,20.0s,MS4.8
SWMT Swartz Lake 48.03 332 *e*P P **23 04 28.6 +0.3**
B14A Marquette Ranc 48.32 333 ⇓P P **23 04 30.2 -0.4**
baz=48,SNR=18
JTMT Jette 48.34 332 *e*P P **23 04 30.3 -0.4**
C13A Hot Springs 48.43 331 ⇓P P **23 04 31.1 -0.3**
baz=49
WDC Whiskeytown Da 48.47 319 *e*P P **23 04 30.1 -1.8**
comp=Z,14nm,1.3s,mb4.8
WDC LR LR
comp=Z,602nm,20.0s,MS4.6
WDC Whiskeytown Da 48.47 319 *e*P P **23 04 30.1 -1.8**
WDC pmax pmax
comp=Z,14nm,1.3s,mb4.8
WDC MLR MLR
comp=Z,602nm,20.0s,MS4.6
RCBR Riachuelo 48.49 104 P P **23 04 32.2 -0.2**
RCBR LR LR
comp=Z,3μm,19.0s,MS5.3
A15A Johnson Ranch, 48.54 334 ⇑P P **23 04 31.2 -1.0**
baz=49,SNR=8.8
BLMT Blacktail Moun 48.56 332 *e*P P **23 04 33.9 +1.5**
F10A Beach Ranch, E 48.58 328 ⇓P P **23 04 31.8 -0.7**
baz=49,SNR=15
I07A Izee 48.62 325 ⇓P P **23 04 32.3 -0.6**
baz=49,SNR=29
K05A Summer Lake 48.63 323 ⇑P P **23 04 32.3 -0.7**
baz=49
BSMT Bassoo Peak 48.65 332 *e*P P **23 04 33.2 +0.2**
A14A Double T Ranch 48.84 333 ⇑P P **23 04 33.8 -0.7**
baz=49
B13A Whitefish 48.88 332 ⇑P P **23 04 34.9 +0.1**
baz=49
C12B Naegeli Ranch, 48.88 331 ⇓P P **23 04 34.5 -0.3**
baz=49,SNR=18
SCHQ Schefferville 48.95 12 P P **23 04 33.7 -1.6**
SCHQ LR LR 23 24 58.4
SCHQ Schefferville 48.95 12 P P **23 04 33.7 -1.6**
comp=Z,19nm,1.0s,mb5.1,baz=206,slow=5.0,SNR=12
SCHQ LR LR 23 24 58.4
comp=Z,2μm,21.2s,MS5.0,baz=348,slow=36
G08A Pilot Rock 49.06 326 ⇓P P **23 04 35.8 -0.5**
baz=49,SNR=27
LNOR Lincton Mounta 49.07 327 *e*P P **23 04 36.3 -0.1**
WALA Waterton Lakes 49.12 333 *e*P P **23 04 36.3 -0.4**
comp=Z,0.4nm,1.0s
TRQA Tornquist 49.19 158 *e*P P **23 04 35.5 -1.8**
comp=Z,94nm,1.4s,mb5.6
YBH Yreka Blue Hor 49.20 321 *e*P P **23 04 36.3 -1.1**
comp=Z,12nm,1.0s,mb4.9
YBH *e*pP pP 23 04 49.6 +1.8
YBH LR LR
comp=Z,701nm,19.0s,MS4.7
YBH Yreka Blue Hor 49.20 321 *e*P P **23 04 36.3 -1.1**
YBH pmax pmax
comp=Z,12nm,1.0s
YBH MLR MLR
comp=Z,701nm,19.0s
PLCA Paso Flores 49.20 168 P P **23 04 35.6 -1.7**
comp=Z,15nm,0.6s,mb5.2,baz=339,slow=9.5,SNR=45
KHMM Horse Mountain 49.40 319 *e*P P **23 04 40.2 +1.3**
comp=Z,442nm,2.5s,mb6.0
E09A Wood Farm, Sta 49.41 328 ⇑P P **23 04 38.5 -0.5**
baz=50,SNR=33
B12A Libby 49.47 332 ⇑P P **23 04 39.3 -0.1**
baz=50
FFC Flin Flon 49.65 345 *e*P P **23 04 39.1 -1.4**
comp=Z,16nm,0.8s,mb5.1
FFC LR LR
comp=Z,1μm,21.0s,MS4.8
FFC Flin Flon 49.65 345 *i* P P **23 04 39.5 -1.1**
HUMO Hull Mountain 49.82 321 *e*P P **23 04 41.2 -1.0**
HUMO LR LR
comp=Z,730nm,21.0s,MS4.7
A12A Yaak River Ran 49.83 332 ⇓P P **23 04 42.0 0.0**
baz=50
E08A Dider Farm, El 49.88 328 ⇓P P **23 04 41.5 -1.0**
baz=50
G06A Carlson Farm, 49.96 325 ⇑P P **23 04 43.9 +0.8**
baz=50,SNR=17
NEW Newport 50.06 330 ⇑P P **23 04 43.7 -0.1**
baz=50,SNR=5.4
NEW Newport 50.06 330 *e*P P **23 04 42.2 -1.6**
comp=Z,52nm,1.6s,mb5.3
NEW LR LR
comp=Z,543nm,19.0s,MS4.6
NEW Newport 50.06 330 *e*P P **23 04 42.2 -1.7**
NEW pmax pmax
comp=Z,52nm,1.6s
NEW MLR MLR
comp=Z,543nm,19.0s
HAWA Hanford 50.07 327 *e*P P **23 04 44.0 0.0**
comp=Z,64nm,1.3s,mb5.5
HAWA LR LR
comp=Z,868nm,22.0s,MS4.7
RSW Rattlesnake Hi 50.10 327 *e*P P **23 04 44.4 +0.2**
D08A Wollman Farm, 50.17 328 ⇓P P **23 04 44.5 -0.2**
baz=50,SNR=7.8
OD2 Odessa Site #2 50.28 329 P P **23 04 45.2 -0.3**
C09A Chrisman Ranch 50.32 329 ⇑P P **23 04 45.7 -0.2**
baz=50
E07A Sunnyside 50.34 327 ⇑P P **23 04 46.2 +0.1**
baz=50
H04A Detroit Lake 50.52 324 ⇑P P **23 04 47.2 -0.3**
baz=51,SNR=10
HOOD Mount Hood Mea 50.59 325 *e*P P **23 04 49.2 +1.4**
comp=Z,142nm,1.1s,mb5.8
VLL Laurance Lake 50.69 325 P P **23 04 50.1 +1.5**
EBG Ellensburg 50.95 327 P P **23 04 51.3 +0.7**
NAC Naches 50.98 327 P P **23 04 51.7 +0.9**
G04A Mulino 50.99 324 ⇑P P **23 04 51.5 +0.5**
baz=51
ASR Mount Adams--S 51.05 326 P P **23 04 52.4 +1.1**
COR Corvallis 51.12 323 PFAKE 23 05 00.0 +8.1
COR LR LR
comp=Z,798nm,20.0s,MS4.7
TBM Table Mountain 51.12 327 P P **23 04 52.6 +0.7**
B08A Colville Reser 51.22 329 ⇓P P **23 04 52.3 -0.3**
baz=51,SNR=18
F04A Amboy 51.38 325 ⇓P P **23 04 53.5 -0.3**
baz=52
LON Longmire 51.53 326 *e*P P **23 04 54.9 0.0**
comp=Z,26nm,0.9s,mb5.2
LON Longmire 51.53 326 *e*P P **23 04 54.9 0.0**
LON pmax pmax
comp=Z,26nm,0.9s,mb5.2
NLW Nelson Butte 51.56 328 P P **23 04 55.4 +0.2**
D05A Enumclaw 51.89 327 ⇑P P **23 04 58.0 +0.3**
baz=52,SNR=15
FCC Fort Churchill 51.96 352 *e*P P **23 04 56.5 -1.4**
comp=Z,2.8nm,1.3s,mb4.0
FCC Fort Churchill 51.96 352 *e*P P **23 04 56.5 -1.4**
FCC pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
EDM Edmonton 52.01 337 *e*P P **23 04 57.1 -1.4**
F03A Seaside 52.03 325 ⇓P P **23 04 59.6 +0.9**
baz=52
E03A Lebam 52.38 325 ⇑P P **23 05 01.2 -0.1**
baz=52,SNR=8.0
RPW Rockport 52.40 328 *e*P P **23 05 00.8 -0.6**
B06A Marblemount 52.43 328 ⇓P P **23 05 01.4 -0.2**
baz=52,SNR=11
JCW Jim Creek 52.47 328 P P **23 05 01.1 -0.8**
GNW Green Mountain 52.57 327 *e*P P **23 05 01.6 -1.1**
comp=Z,34nm,1.0s,mb5.2
HDW Hoodsport 52.74 327 P P **23 05 04.0 0.0**
A05A Maple Falls 53.04 328 ⇑P P **23 05 05.4 -0.7**
baz=53
NLWA Neilton Lookou 53.04 326 *e*P P **23 05 06.8 +0.6**
comp=Z,109nm,1.1s,mb5.7
NLWA LR LR
comp=Z,969nm,22.0s,MS4.8
PGC Sidney 53.55 327 *e*P P **23 05 10.3 +0.4**
comp=Z,2.7nm,1.3s,mb4.0
RKT Rikitea 59.45 238 *e*S S **23 13 58.0 -1.5**
comp=Z,1μm,29.2s
RKT *e*LQ 23 20 53.5
comp=Z,895nm,41.2s
RKT *e*LR LR 23 23 28.0
comp=Z,1μm,33.5s,baz=63
YKA Yellowknife Ar 59.70 343 P P **23 05 51.8 -1.5**
comp=Z,44nm,1.0s,mb5.5,baz=135,slow=7.2,SNR=85
DLBC Dease Lake 62.45 334 *e*P P **23 06 12.7 +0.6**
DLBC Dease Lake 62.45 334 LR LR 23 35 11.0
comp=Z,938nm,19.4s,MS5.0,baz=115,slow=38
HYT Haines Junctio 66.93 334 *e*P P **23 06 42.3 +1.1**
DAWY Dawson 69.23 337 *e*P P **23 06 55.2 -0.4**
INK Inuvik 69.39 342 *e*P P **23 06 56.5 -0.1**
BMRM Bremner River 70.14 333 *e*P P **23 07 01.8 +0.5**
comp=Z,80nm,1.2s,mb5.5
BMRM *e*PP PP 23 09 36.2 -0.4
EGAK Eagle 70.24 337 *e*P P **23 07 01.6 -0.2**
EGAK LR LR
comp=Z,632nm,21.0s,MS4.8
SUMG Summit 70.33 13 *e*P P **23 07 01.0 -1.3**
comp=Z,65nm,1.0s,mb5.5
MENT Mentasta 70.50 335 *e*P P **23 07 03.9 +0.5**
PPT Papeete 70.57 249 *e*S S 23 16 09.5 -6.9
comp=Z,594nm,25.8s
PPT *e*LR LR 23 28 26.3
comp=Z,586nm,25.5s,baz=60
PPT Papeete 70.57 249 LR LR 23 29 14.7
comp=Z,316nm,19.3s,MS4.6,baz=194,slow=28
DIV Divide 70.73 333 *e*P P **23 07 05.4 +0.5**
DIV *e*pP pP 23 07 14.0 -1.7
SEW Seward 72.12 331 *e*P P **23 07 12.8 -0.5**
comp=Z,30nm,1.0s,mb5.2
PMR Palmer 72.41 333 *e*P P **23 07 14.5 -0.5**
comp=Z,32nm,1.3s,mb5.1
PMR Palmer 72.41 333 *e*P P **23 07 14.5 -0.5**
PMR pmax pmax
comp=Z,32nm,1.3s,mb5.1
PMAFR Mafra 72.46 52 *e*S S 23 16 45.3 +7.7
PMAFR *e*LQ 23 26 31.7
PMAFR *e*LR LR 23 29 56.4
comp=Z,606nm,20.0s
ILAR Eielson Array 72.49 336 P P **23 07 14.8 -0.6**
comp=Z,15nm,0.9s,mb4.9,baz=113,slow=3.9,SNR=103
ILAR PP PP 23 09 55.3 -1.4
comp=Z,1.7nm,1.0s,baz=109,slow=6.0,SNR=4.6
ILAR LR LR 23 43 56.2
comp=Z,606nm,18.2s,MS4.9,baz=110,slow=40
ILAR Eielson Array 72.49 336 P P **23 07 14.9 -0.5**
ILAR 23 09 55.3
RC01 Rabbit Creek A 72.54 332 *e*P P **23 07 16.0 +0.2**
comp=Z,85nm,1.5s,mb5.5
RC01 *e*PcP PcP 23 07 31.4 -1.9
PFVI Vila Bisbo 72.69 54 *e*LR LR 23 29 51.4
comp=Z,270nm,20.0s
PTEO Sao Teotonio 72.80 53 *e*P P **23 07 18.2 +0.4**
comp=Z,86nm,1.8s,mb5.4
MORF Marmelete 72.84 53 *e*P P **23 07 18.8 +0.7**
comp=Z,79nm,1.8s,mb5.3
MORF *e*S S 23 16 49.1 +7.1
COLA College 72.91 336 *e*P P **23 07 17.5 -0.4**
COLA LR LR
comp=Z,478nm,19.0s,MS4.8
MCK McKinley 72.98 335 *e*P P **23 07 18.6 +0.2**
KDAK Kodiak Island 73.09 328 PFAKE 23 07 30.0 +11
KDAK LR LR
comp=Z,658nm,19.0s,MS4.9
KDAK Kodiak Island 73.09 328 LR LR 23 39 57.6
comp=Z,250nm,21.7s,MS4.5,baz=113,slow=36
KDAK Kodiak Island 73.09 328 *i* P P **23 07 19.0 -0.1**
PTO Porto 73.16 49 *e*P P **23 07 20.9 +1.0**
comp=Z,68nm,1.3s,mb5.4
PTOM Tomar 73.19 51 *e*P P **23 07 20.0 -0.1**
comp=Z,48nm,1.4s,mb5.2
OHAK Old Harbor 73.33 328 *e*P P **23 07 20.8 +0.3**
OHAK *e*pP pP 23 07 28.5 -3.0
PCVE Castro Verde 73.34 53 *e*P P **23 07 22.3 +1.3**
comp=Z,27nm,1.8s,mb4.9
PCVE *e*S S 23 16 52.0 +4.3
PCVE *e*LQ 23 26 25.6
PCVE *e*LR LR 23 30 21.7
comp=Z,282nm,18.0s
PBDV Barranco-do-Ve 73.41 53 *e*P P **23 07 22.4 +1.0**
comp=Z,47nm,1.6s,mb5.2
PBDV *e*S S 23 16 48.2 -0.2
PBDV *e*LR LR 23 28 52.9
comp=Z,278nm,22.0s
EVO Evora 73.42 52 *e*P P **23 07 20.6 -0.9**
comp=Z,59nm,0.9s,mb5.2
EVO *e*MLR MLR
comp=Z,541nm,19.0s,MS4.5
EVO Evora 73.42 52 *e*P P **23 07 21.6 +0.1**
comp=Z,26nm,1.7s,mb4.9
TRF Thorofare Moun 73.48 334 *e*P P **23 07 20.7 -0.6**
comp=Z,21nm,0.9s,mb5.1
PBEJ Beja 73.50 53 *e*P P **23 07 22.8 +0.8**
comp=Z,31nm,1.7s,mb5.0
PVAQ Vaqueiros 73.58 53 *e*S S 23 16 55.5 +5.1
PVAQ *e*LQ 23 26 45.1
PVAQ *e*LR LR 23 30 22.2
comp=Z,278nm,20.0s
PCAB Cabril 73.64 49 *e*P P **23 07 24.0 +1.3**
comp=Z,46nm,2.0s,mb5.1
PVIS Viseu 73.66 50 *e*P P **23 07 22.9 0.0**
comp=Z,47nm,1.4s,mb5.2
PESTR Estremoz 73.77 52 *e*P P **23 07 23.5 0.0**
comp=Z,66nm,1.4s,mb5.4
PESTR *e*S S 23 16 58.7 +6.2
PESTR *e*LQ 23 26 55.7
PESTR *e*LR LR 23 30 23.0
comp=Z,493nm,20.0s
RSO Redoubt South 73.80 331 *e*P P **23 07 23.3 0.0**
PVRL Vila Real 73.84 49 *e*P P **23 07 24.2 +0.3**
comp=Z,45nm,1.5s,mb5.2
MTE Manteigas 73.91 50 *e*P P **23 07 24.4 +0.1**
comp=Z,32nm,1.4s,mb5.1
MTE *e*S S 23 16 58.7 +4.8
MTE *e*LQ 23 27 22.2
MTE *e*LR LR 23 30 23.0
comp=Z,606nm,22.0s
MTE Manteigas 73.91 50 *e*P P **23 07 24.6 +0.3**
MTE LR LR
comp=Z,698nm,20.0s,MS4.9
PCBR Castelo Branco 73.92 51 *e*P P **23 07 24.4 0.0**
comp=Z,33nm,1.0s,mb5.2
PMRV Marv??o 73.96 51 *e*P P **23 07 24.2 -0.4**
comp=Z,31nm,1.5s,mb5.0
PMRV *e*S S 23 16 58.9 +4.3
PMRV *e*LQ 23 25 11.4
PMRV *e*LR LR 23 30 35.9
comp=Z,646nm,20.0s
PPLA Purkeypile 74.15 334 *e*P P **23 07 24.6 -0.7**
comp=Z,72nm,1.3s,mb5.4
PBAR Barrancos 74.16 53 *e*P P **23 07 26.1 +0.3**
comp=Z,36nm,1.6s,mb5.0
PBAR *e*S S 23 16 58.8 +1.9
PBAR *e*LR LR 23 30 20.6
comp=Z,321nm,18.0s
MVO Moncorvo 74.35 49 *e*P P **23 07 27.2 +0.3**
comp=Z,51nm,1.7s,mb5.2
MVO *e*S S 23 17 03.6 +4.7
MVO *e*LQ 23 27 23.6
MVO *e*LR LR 23 30 51.1
comp=Z,535nm,20.0s
COLD Coldfoot 74.58 338 *e*P P **23 07 28.0 +0.3**
comp=Z,42nm,1.2s,mb5.2
PBRG Braganca 74.61 49 *e*P P **23 07 28.3 0.0**
comp=Z,42nm,1.4s,mb5.2
XMAS Kiritimati 74.64 270 PFAKE 23 07 40.0 +11
XMAS LR LR
comp=Z,1μm,19.0s,MS5.2
SFS San Fernando 74.75 54 PFAKE 23 07 40.0 +11
SFS LR LR
comp=Z,519nm,19.0s,MS4.8
TTA Tatalina 75.86 333 *e*P P **23 07 33.1 -2.0**
CHGN Chignik 75.95 326 *e*P P **23 07 35.0 -0.8**
MDT Midelt 76.00 58 P P **23 07 36.8 +0.2**
comp=Z,5.5nm,0.8s,mb4.5,baz=256,slow=7.7,SNR=8.4
PAB San Pablo 76.32 51 *e*P P **23 07 38.0 -0.2**
comp=Z,50nm,1.6s,mb5.2
PAB LR LR
comp=Z,762nm,20.0s,MS5.0
PAB San Pablo 76.32 51 *e*P P **23 07 38.0 -0.2**
PAB pmax pmax
comp=Z,50nm,1.6s,mb5.2
PAB MLR MLR
comp=Z,762nm,20.0s,MS5.0
ESDC Sonseca Array 76.62 51 P P **23 07 40.2 +0.3**
ESDC LR LR 23 37 16.4
ESDC Sonseca Array 76.62 51 P P **23 07 40.2 +0.3**
comp=Z,16nm,0.8s,mb5.0,baz=274,slow=5.6,SNR=100
ESDC LR LR 23 37 16.4
comp=Z,458nm,20.0s,MS4.8,baz=280,slow=32
ESLA Sonseca Array 76.62 51 *e*P P **23 07 40.3 +0.4**
TIC Toumodi 76.98 85 *e*P P **23 07 42.1 -0.3**
comp=Z,102nm,1.3s,mb5.6
TIC Toumodi 76.98 85 *e*P P **23 07 42.1 -0.3**
TIC pmax pmax
comp=Z,102nm,1.3s,mb5.6
SDPT Sand Point 76.99 325 *e*P P **23 07 42.0 +0.3**
LIC Lamto 77.01 85 *e*P P **23 07 42.4 -0.2**
comp=Z,129nm,1.8s,mb5.6
LIC Lamto 77.01 85 *e*P P **23 07 42.3 -0.3**
comp=Z,43nm,1.0s,mb5.0
LIC *e*MLR MLR
comp=Z,447nm,21.5s,MS4.5
LIC Lamto 77.01 85 *e*P P **23 07 42.3 -0.3**
comp=Z,21nm,1.0s,mb5.0
LIC LR LR
comp=Z,220nm,21.5s,MS4.4
DBIC Dimbokro 77.14 85 *e*P P **23 07 42.5 -0.8**
comp=Z,27nm,1.1s,mb5.1
DBIC LR LR 23 39 26.8
DBIC Dimbokro 77.14 85 P P **23 07 42.3 -1.0**
comp=Z,9.5nm,1.0s,mb4.7,baz=239,slow=8.9,SNR=3.2
DBIC LR LR 23 39 26.8
comp=Z,339nm,21.0s,MS4.6,baz=253,slow=34
DBIC Dimbokro 77.14 85 *e*P P **23 07 42.6 -0.7**
DBIC pmax pmax
comp=Z,27nm,1.1s
KIC Kosan Boka 77.28 85 *e*P P **23 07 44.1 -0.1**
comp=Z,131nm,1.6s,mb5.6
ROSF Rostrenen 77.45 42⇓*i*P P **23 07 43.4 -1.0**
comp=Z,165nm,1.6s,mb5.4
ROSF Rostrenen 77.45 42⇓*i*P P **23 07 43.4 -1.0**
comp=Z,82nm,1.6s,mb5.4
ROSF Rostrenen 77.45 42⇓*i*P P **23 07 43.4 -1.0**
ROSF pmax pmax
comp=Z,82nm,1.6s,mb5.4
QUIF Quistinic 77.50 43⇓*i*P P **23 07 43.9 -0.8**
comp=Z,59nm,1.1s,mb5.1
QUIF Quistinic 77.50 43⇓*i*P P **23 07 43.9 -0.8**
comp=Z,30nm,1.1s,mb5.1
QUIF Quistinic 77.50 43⇓*i*P P **23 07 43.9 -0.8**
QUIF pmax pmax
comp=Z,30nm,1.1s,mb5.1
JMIC Jan Mayen 77.88 19 LR LR 23 39 45.1
comp=Z,605nm,20.3s,MS4.9,baz=95,slow=34
SGMF Saint Gilles 77.92 42⇓*i*P P **23 07 45.9 -1.1**
comp=Z,67nm,1.3s,mb5.1
SGMF Saint Gilles 77.92 42⇓*i*P P **23 07 45.9 -1.1**
comp=Z,33nm,1.3s,mb5.1
SGMF Saint Gilles 77.92 42⇓*i*P P **23 07 45.9 -1.1**
SGMF pmax pmax
comp=Z,33nm,1.3s,mb5.1
ESK Eskdalemuir 77.94 35 *e*P P **23 07 45.6 -1.4**
ESK LR LR
comp=Z,588nm,19.0s,MS4.9
SJPF Ste Jean 78.73 48⇓*i*P P **23 07 51.6 0.0**
comp=Z,132nm,1.1s,mb5.5
SJPF Ste Jean 78.73 48⇓*i*P P **23 07 51.6 0.0**
comp=Z,66nm,1.1s,mb5.5
SJPF Ste Jean 78.73 48⇓*i*P P **23 07 51.6 0.0**
SJPF pmax pmax
comp=Z,66nm,1.1s,mb5.5
GRR Gorron 79.06 42⇓*i*P P **23 07 52.3 -1.0**
comp=Z,62nm,1.0s,mb5.2
GRR Gorron 79.06 42⇓*i*P P **23 07 52.3 -1.0**
comp=Z,31nm,1.0s,mb5.2
GRR Gorron 79.06 42⇓*i*P P **23 07 52.3 -1.0**
GRR pmax pmax
comp=Z,31nm,1.0s,mb5.2
ETSF Etsaut 79.22 48⇓*i*P P **23 07 54.2 -0.1**
comp=Z,60nm,1.3s,mb5.1
ETSF Etsaut 79.22 48⇓*i*P P **23 07 54.2 -0.1**
comp=Z,30nm,1.3s,mb5.1
ETSF Etsaut 79.22 48⇓*i*P P **23 07 54.2 -0.1**
ETSF pmax pmax
comp=Z,30nm,1.3s,mb5.1
FLN La Foliniere 79.32 42⇓*i*P P **23 07 53.9 -0.8**
comp=Z,71nm,1.1s,mb5.2
FLN *e*MLR MLR
comp=Z,332nm,22.0s,MS4.3
FLN La Foliniere 79.32 42⇓*i*P P **23 07 53.9 -0.8**
comp=Z,36nm,1.1s,mb5.2
FLN LR LR
comp=Z,330nm,22.0s,MS4.6
FLN La Foliniere 79.32 42⇓*i*P P **23 07 53.9 -0.8**
FLN pmax pmax
comp=Z,36nm,1.1s,mb5.2
FLN MLR MLR
comp=Z,330nm,22.0s,MS4.6
REYF Montagne du Re 79.34 48 *e*P P **23 07 55.8 +0.8**
MFF Saint Martin d 79.52 44⇓*i*P P **23 07 55.0 -0.9**
comp=Z,62nm,1.0s,mb5.2
MFF Saint Martin d 79.52 44⇓*i*P P **23 07 55.0 -0.9**
comp=Z,31nm,1.0s,mb5.2
MFF Saint Martin d 79.52 44⇓*i*P P **23 07 55.0 -0.9**
MFF pmax pmax
comp=Z,31nm,1.0s,mb5.2
LDF La Druitiere 79.55 42⇓*i*P P **23 07 54.9 -1.1**
comp=Z,21nm,0.8s,mb4.8
LDF La Druitiere 79.55 42⇓*i*P P **23 07 54.9 -1.1**
comp=Z,11nm,0.8s,mb4.8
LDF La Druitiere 79.55 42⇓*i*P P **23 07 54.9 -1.1**
LDF pmax pmax
comp=Z,11nm,0.8s,mb4.8
VIEF Viey 79.65 48 *e*P P **23 07 57.5 +0.8**
EPF Esparros 79.88 48⇓*i*P P **23 07 57.7 -0.2**
comp=Z,92nm,1.1s,mb5.3
EPF Esparros 79.88 48⇓*i*P P **23 07 57.7 -0.2**
comp=Z,46nm,1.1s,mb5.3
EPF Esparros 79.88 48⇓*i*P P **23 07 57.7 -0.2**
EPF pmax pmax
comp=Z,46nm,1.1s,mb5.3

RESF **Ens** 79.88 48 *e*P P 23 07 58.9 +1.0
LFF **La Frestale** 80.15 46⇓*i*P P 23 07 58.5 -0.8
comp=Z,108nm,1.3s,mb5.3
LFF **La Frestale** 80.15 46⇓*i*P P 23 07 58.5 -0.8
comp=Z,54nm,1.3s,mb5.3
LFF **La Frestale** 80.15 46⇓*i*P P 23 07 58.5 -0.8
LFF pmax pmax
comp=Z,54nm,1.3s,mb5.3
UNV **Unalaska Valle** 80.41 323 *e*P P 23 08 00.9 +0.4
MLS **Moulis** 80.44 48 *e*P P 23 08 01.3 +0.4
RJF **Les Rejaudoux** 80.69 45⇓*i*P P 23 08 01.5 -0.7
comp=Z,128nm,1.4s,mb5.3
RJF *e*MLR MLR
comp=Z,788nm,20.5s,MS4.8
RJF **Les Rejaudoux** 80.69 45⇓*i*P P 23 08 01.5 -0.7
comp=Z,64nm,1.4s,mb5.4
RJF LR LR
comp=Z,790nm,20.5s,MS5.0
RJF **Les Rejaudoux** 80.69 45⇓*i*P P 23 08 01.5 -0.7
RJF pmax pmax
comp=Z,64nm,1.4s,mb5.4
RJF MLR MLR
comp=Z,790nm,20.5s,MS5.0
RAR **Rarotonga** 80.77 247 LR LR 23 33 58.3
comp=Z,410nm,19.5s,MS4.8,baz=94,slow=28
CAF **Calviac** 81.09 46⇓*i*P P 23 08 03.5 -0.8
comp=Z,55nm,1.1s,mb5.1
CAF **Calviac** 81.09 46⇓*i*P P 23 08 03.5 -0.8
comp=Z,28nm,1.1s,mb5.1
CAF **Calviac** 81.09 46⇓*i*P P 23 08 03.5 -0.8
CAF pmax pmax
comp=Z,28nm,1.1s,mb5.1
TCF **Toulx Ste Croi** 81.15 44⇓*i*P P 23 08 03.4 -1.3
comp=Z,40nm,1.1s,mb5.0
TCF **Toulx Ste Croi** 81.15 44⇓*i*P P 23 08 03.4 -1.3
comp=Z,20nm,1.1s,mb5.0
TCF **Toulx Ste Croi** 81.15 44⇓*i*P P 23 08 03.4 -1.3
TCF pmax pmax
comp=Z,20nm,1.1s,mb5.0
MTLF **Montolieu** 81.25 47⇓*i*P P 23 08 04.4 -0.8
comp=Z,76nm,1.2s,mb5.2
MTLF **Montolieu** 81.25 47⇓*i*P P 23 08 04.4 -0.8
comp=Z,38nm,1.2s,mb5.2
MTLF **Montolieu** 81.25 47⇓*i*P P 23 08 04.4 -0.8
MTLF pmax pmax
comp=Z,38nm,1.2s,mb5.2
FILF **Fillols** 81.53 48 *e*P P 23 08 06.6 -0.1
BGF **Bois d'Agland** 81.59 44⇓*i*P P 23 08 05.7 -1.2
comp=Z,43nm,1.0s,mb5.0
BGF **Bois d'Agland** 81.59 44⇓*i*P P 23 08 05.7 -1.2
comp=Z,22nm,1.0s,mb5.0
BGF **Bois d'Agland** 81.59 44⇓*i*P P 23 08 05.7 -1.2
BGF pmax pmax
comp=Z,22nm,1.0s,mb5.0
PYM **Petit Puy Mans** 81.73 45 *e*P P 23 08 07.8 +0.1
AVF **Avril sur Loir** 81.93 44⇓*i*P P 23 08 07.0 -1.7
comp=Z,42nm,1.3s,mb4.9
AVF **Avril sur Loir** 81.93 44⇓*i*P P 23 08 07.0 -1.7
comp=Z,21nm,1.3s,mb4.9
AVF **Avril sur Loir** 81.93 44⇓*i*P P 23 08 07.0 -1.7
AVF pmax pmax
comp=Z,21nm,1.3s,mb4.9
SSF **Saint Saulge** 82.02 44⇓*i*P P 23 08 07.5 -1.7
comp=Z,23nm,1.1s,mb4.7
SSF **Saint Saulge** 82.02 44⇓*i*P P 23 08 07.5 -1.7
comp=Z,11nm,1.1s,mb4.7
SSF **Saint Saulge** 82.02 44⇓*i*P P 23 08 07.5 -1.7
SSF pmax pmax
comp=Z,11nm,1.1s,mb4.7
PLDF **La Plantade** 82.15 45 *e*P P 23 08 09.6 -0.3
LOR **Lormes** 82.25 43⇓*i*P P 23 08 08.8 -1.6
comp=Z,29nm,1.2s,mb4.8
LOR *e*MLR MLR
comp=Z,489nm,18.5s,MS4.6
LOR **Lormes** 82.25 43⇓*i*P P 23 08 08.8 -1.6
comp=Z,14nm,1.2s,mb4.8
LOR LR LR
comp=Z,490nm,18.5s,MS4.9
LOR **Lormes** 82.25 43⇓*i*P P 23 08 08.8 -1.6
LOR pmax pmax
comp=Z,15nm,1.2s,mb4.8
LOR MLR MLR
comp=Z,490nm,18.5s,MS4.9
SMF **Signal de Mont** 82.27 44⇓*i*P P 23 08 08.9 -1.6
comp=Z,44nm,1.3s,mb4.9
SMF **Signal de Mont** 82.27 44⇓*i*P P 23 08 08.9 -1.6
comp=Z,22nm,1.3s,mb4.9
SMF **Signal de Mont** 82.27 44⇓*i*P P 23 08 08.9 -1.6
SMF pmax pmax
comp=Z,22nm,1.3s,mb4.9
BAIF **Baives** 82.36 40 *e*P P 23 08 09.3 -1.6
comp=Z,29nm,1.3s,mb4.8
BAIF **Baives** 82.36 40 *e*P P 23 08 09.3 -1.6
comp=Z,15nm,1.3s,mb4.8
BAIF **Baives** 82.36 40 *e*P P 23 08 09.3 -1.6
BAIF pmax pmax
comp=Z,15nm,1.3s,mb4.8
LASF **Ste Croix** 82.40 47⇓*i*P P 23 08 10.9 -0.4
comp=Z,46nm,1.1s,mb5.0
DOU **Dourbes** 82.61 40 P P 23 08 11.7 -0.6
BER **Bergen** 82.62 30 *e*S S 23 18 31.4 +4.6
GIVF **Givet** 82.76 40 *e*P P 23 08 11.7 -1.3
comp=Z,24nm,0.8s,mb5.0
GIVF **Givet** 82.76 40 *e*P P 23 08 11.7 -1.3
comp=Z,12nm,0.8s,mb5.0
GIVF **Givet** 82.76 40 *e*P P 23 08 11.7 -1.3
GIVF pmax pmax
comp=Z,12nm,0.8s,mb5.0
SSB **Saint Sauveur** 82.83 45 *e*P P 23 08 12.7 -0.8
comp=Z,8.0nm,0.9s,mb4.8
SSB LR LR
comp=Z,408nm,20.0s,MS4.8
SSB **Saint Sauveur** 82.83 45 *e*P P 23 08 12.7 -0.8
SSB pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
SSB MLR MLR
comp=Z,408nm,20.0s,MS4.8
VIVF **Saint-Julien-l** 82.94 46⇓*i*P P 23 08 13.8 -0.3
comp=Z,78nm,1.1s,mb5.4
VIVF **Saint-Julien-l** 82.94 46⇓*i*P P 23 08 13.8 -0.3
comp=Z,39nm,1.1s,mb5.3
VIVF **Saint-Julien-l** 82.94 46⇓*i*P P 23 08 13.8 -0.3
VIVF pmax pmax
comp=Z,39nm,1.1s,mb5.3
MEZF **Maizieres J'vi** 82.99 42⇓*i*P P 23 08 13.0 -1.3
comp=Z,46nm,1.0s,mb5.2
MEZF **Maizieres J'vi** 82.99 42⇓*i*P P 23 08 13.0 -1.3
comp=Z,46nm,1.0s,mb5.5
BCLA **Clavier** 83.05 40 P P 23 08 14.1 -0.4
comp=Z,16nm,2.3s,mb4.7
MEM **Membach** 83.49 40 P P 23 08 16.8 0.0
comp=Z,12nm,2.0s,mb4.6
THEF **They Montfort** 83.63 42 *e*P P 23 08 17.3 -0.3
WLF **Walferdange** 83.64 41 *e*P P 23 08 17.1 -0.5
comp=Z,25nm,1.2s,mb5.2
WLF **Walferdange** 83.64 41 *e*P P 23 08 17.3 -0.3
comp=Z,14nm,1.1s,mb5.0
WLF LR LR
comp=Z,588nm,19.0s,MS5.0
WLF **Walferdange** 83.64 41 *e*P P 23 08 17.3 -0.3
WLF pmax pmax
comp=Z,14nm,1.1s,mb5.0
WLF MLR MLR
comp=Z,588nm,19.0s,MS5.0
SMRF **Simiane la Rot** 83.65 47⇓*i*P P 23 08 17.4 -0.3
comp=Z,53nm,1.4s,mb5.2
SMRF **Simiane la Rot** 83.65 47⇓*i*P P 23 08 17.4 -0.3
comp=Z,53nm,1.4s,mb5.5
KBS **Kingsbay** 83.66 11 AMS AMS 23 47 13.5
comp=Z,871nm,16.9s,MS5.2
KBS **Kingsbay** 83.66 11 *i*P P 23 08 16.2 -0.9
KBS LR LR
comp=Z,1μm,19.0s,MS5.2
ORIF **Oris-en-Rattie** 83.80 46⇓*i*P P 23 08 18.3 -0.2
comp=Z,45nm,1.0s,mb5.3
ORIF *e*MLR MLR
comp=Z,651nm,21.8s,MS4.7
ORIF **Oris-en-Rattie** 83.80 46⇓*i*P P 23 08 18.3 -0.2
comp=Z,22nm,1.0s,mb5.2
ORIF **Oris-en-Rattie** 83.80 46⇓*i*P P 23 08 18.3 -0.2
ORIF pmax pmax
comp=Z,22nm,1.0s,mb5.2
CABF **La Chapelle** 83.81 44⇓*i*P P 23 08 17.5 -1.0
comp=Z,52nm,1.0s,mb5.3
CABF **La Chapelle** 83.81 44⇓*i*P P 23 08 17.5 -1.0
comp=Z,26nm,1.0s,mb5.3
CABF **La Chapelle** 83.81 44⇓*i*P P 23 08 17.5 -1.0
CABF pmax pmax
comp=Z,26nm,1.0s,mb5.3
HAU **Haudompre** 83.89 42⇓*i*P P 23 08 17.4 -1.5
comp=Z,28nm,1.1s,mb5.0
HAU *e*MLR MLR
comp=Z,636nm,20.5s,MS4.7
HAU **Haudompre** 83.89 42⇓*i*P P 23 08 17.4 -1.5
comp=Z,14nm,1.1s,mb5.0
HAU LR LR
comp=Z,640nm,20.5s,MS5.0
HAU **Haudompre** 83.89 42⇓*i*P P 23 08 17.4 -1.5
HAU pmax pmax
comp=Z,14nm,1.1s,mb5.0
HAU MLR MLR
comp=Z,640nm,20.5s,MS5.0
BUG **Bochum-Univer** 84.22 39 *e*P P 23 08 19.6 -0.9
comp=Z,18nm,1.4s,mb5.0
RUP **Ruppelstein** 84.23 41 *e*P P 23 08 20.7 +0.1
HINF **Hinteralfeld** 84.24 43⇓*i*P P 23 08 19.0 -1.7
LPL **La Plagne** 84.35 45⇓*i*P P 23 08 21.0 -0.3
comp=Z,20nm,1.0s,mb4.9
LPL **La Plagne** 84.35 45⇓*i*P P 23 08 21.0 -0.3
comp=Z,9.9nm,1.0s,mb4.9
LPL **La Plagne** 84.35 45⇓*i*P P 23 08 21.0 -0.3
LPL pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
LPG **La Plagne** 84.36 45⇓*i*P P 23 08 21.3 -0.1
comp=Z,38nm,1.3s,mb5.0
LPG **La Plagne** 84.36 45⇓*i*P P 23 08 21.3 -0.1
comp=Z,19nm,1.3s,mb5.1
LPG **La Plagne** 84.36 45⇓*i*P P 23 08 21.3 -0.1
LPG pmax pmax
comp=Z,19nm,1.3s,mb5.1
LMR **La Mourre** 84.37 47⇓*i*P P 23 08 20.4 -1.1
comp=Z,54nm,1.4s,mb5.2
LMR **La Mourre** 84.37 47⇓*i*P P 23 08 20.4 -1.1
comp=Z,27nm,1.4s,mb5.2
LMR **La Mourre** 84.37 47⇓*i*P P 23 08 20.4 -1.1
LMR pmax pmax
comp=Z,27nm,1.4s,mb5.2
ECH **Echery** 84.41 42 *e*P P 23 08 21.2 -0.3
ECH LR LR
comp=Z,447nm,20.0s,MS4.8
MOF **Molkenrain** 84.43 43 *e*P P 23 08 21.1 -0.5
MBDF **Montbardon** 84.44 46⇓*i*P P 23 08 21.4 -0.4
comp=Z,48nm,1.3s,mb5.2
MBDF **Montbardon** 84.44 46⇓*i*P P 23 08 21.4 -0.4
comp=Z,24nm,1.3s,mb5.2
MBDF **Montbardon** 84.44 46⇓*i*P P 23 08 21.4 -0.4
MBDF pmax pmax
comp=Z,24nm,1.3s,mb5.2
IBBN **Ibbenburen** 84.45 38 *e*P P 23 08 20.9 -0.7
comp=Z,26nm,1.2s,mb5.2
FRF **La Foret Royal** 84.45 47⇓*i*P P 23 08 20.8 -1.1
comp=Z,49nm,1.2s,mb5.2
FRF **La Foret Royal** 84.45 47⇓*i*P P 23 08 20.8 -1.1
comp=Z,25nm,1.2s,mb5.2
FRF **La Foret Royal** 84.45 47⇓*i*P P 23 08 20.8 -1.1
FRF pmax pmax
comp=Z,25nm,1.2s,mb5.2
CDF **Champ du Feu** 84.48 42⇓*i*P P 23 08 20.4 -1.5
comp=Z,53nm,1.4s,mb5.2
CDF **Champ du Feu** 84.48 42⇓*i*P P 23 08 20.4 -1.5
comp=Z,26nm,1.4s,mb5.2
CDF **Champ du Feu** 84.48 42⇓*i*P P 23 08 20.4 -1.5
CDF pmax pmax
comp=Z,27nm,1.4s,mb5.2
SURF **Saint Ours** 84.49 46 *e*P P 23 08 23.1 +1.1
SPITS **Spitsbergen Ar** 84.64 12 P P 23 08 21.6 -0.6
comp=Z,12nm,1.0s,mb5.0,baz=242,slow=4.2,SNR=4.1
BBS **Basel-Blauen** 84.72 43 *e*P P 23 08 22.7 -0.4
LANF **Langenberg** 84.78 41 *e*P P 23 08 23.4 +0.1
KONO **Kongsberg** 84.80 31 *e*SKS 23 18 49.7
KONO **Kongsberg** 84.80 31 *i*P P 23 08 22.4 -0.8
KONO LR LR
comp=Z,690nm,20.0s,MS5.0
TOUF **Mont Tournerai** 84.85 46 *e*P P 23 08 24.2 +0.4
AUTN **L'Aution** 84.98 46 *e*P P 23 08 24.8 +0.3
SBF **Sospel** 85.00 47⇓*i*P P 23 08 23.5 -1.1
comp=Z,62nm,1.1s,mb5.3
SBF **Sospel** 85.00 47⇓*i*P P 23 08 23.5 -1.1
comp=Z,31nm,1.1s,mb5.3
SBF **Sospel** 85.00 47⇓*i*P P 23 08 23.5 -1.1
SBF pmax pmax
comp=Z,31nm,1.1s,mb5.3
FELD **Feldberg im Sc** 85.01 43 *e*P P 23 08 24.3 -0.3
SAOF **Saorge** 85.07 46 *e*P P 23 08 25.0 +0.1
TNS **Taunus Mts** 85.07 40 *e*P P 23 08 24.3 -0.5
comp=Z,58nm,1.4s,mb5.5
TNS **Taunus Mts** 85.07 40 *e*P P 23 08 24.3 -0.5
TNS pmax pmax
comp=Z,58nm,1.4s,mb5.5
BFO **Black Forest** 85.18 42 *e*P P 23 08 23.8 -1.6
comp=Z,17nm,1.2s,mb5.0
BFO **Black Forest** 85.18 42 *e*P P 23 08 23.8 -1.6
BFO pmax pmax
comp=Z,17nm,1.2s,mb5.0
NOA **NORSAR Array B** 85.45 29 P P 23 08 25.9 -0.6
comp=Z,15nm,0.9s,mb5.2,baz=276,slow=4.7,SNR=29
NOA LR LR 23 44 23.4
comp=Z,258nm,19.4s,MS4.6,baz=280,slow=34
SPAK **Spaichingen-Ko** 85.51 42 *e*P P 23 08 26.7 -0.3
TAM **Tamanrasset** 85.52 68 *e*P P 23 08 28.3 +0.7
comp=Z,10nm,0.8s,mb5.1
TAM LR LR
comp=Z,471nm,22.0s,MS4.8
TAM **Tamanrasset** 85.52 68 *e*P P 23 08 28.3 +0.7
TAM pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
TAM MLR MLR
comp=Z,471nm,22.0s,MS4.8
STU **Stuttgart** 85.71 42 *e*P P 23 08 27.7 -0.3
BSEG **Bad Segeberg** 85.82 36 *e*P P 23 08 27.7 -0.8
comp=Z,14nm,1.2s,mb5.1
BSEG **Bad Segeberg** 85.82 36 *e*P P 23 08 27.7 -0.8
BSEG pmax pmax
comp=Z,14nm,1.2s,mb5.1
CLZ **Clausthal** 86.10 38 *e*P P 23 08 29.5 -0.4
comp=Z,42nm,1.3s,mb5.5
CLZ **Clausthal** 86.10 38 *e*P P 23 08 29.5 -0.4
CLZ pmax pmax
comp=Z,42nm,1.3s,mb5.5
PGF **Pioggiola** 86.27 48⇓*i*P P 23 08 29.9 -1.0
comp=Z,64nm,1.0s,mb5.5
PGF **Pioggiola** 86.27 48⇓*i*P P 23 08 29.9 -1.0
comp=Z,32nm,1.0s,mb5.5
PGF **Pioggiola** 86.27 48⇓*i*P P 23 08 29.9 -1.0
PGF pmax pmax
comp=Z,32nm,1.0s,mb5.5
DAVA **Damuels** 86.34 43⇓*i*P P 23 08 30.8 -0.3
comp=Z,33nm,1.4s,mb5.4
DAVOX **Davos/Dischmat** 86.40 43 LR LR 23 39 58.7
comp=Z,211nm,21.9s,MS4.5,baz=273,slow=31
HFS **Hagfors** 86.79 30 LR LR 23 40 11.5
comp=Z,361nm,21.7s,MS4.7,baz=281,slow=31
RETA **Reutte** 86.91 43⇑*i*P P 23 08 33.5 -0.4
comp=Z,17nm,1.4s,mb5.1,SNR=7.4
GRA1 **Grafenberg Arr** 86.92 40 *e*P P 23 08 33.5 -0.4
comp=Z,37nm,1.2s,mb5.5
GRA1 *e*S S 23 19 04.7 -5.2
GRA1 *e*SS SS 23 24 58.5 +6.1
GRA1 LR LR
comp=Z,700nm,20.9s,MS5.0
GRF **Grafenberg Arr** 86.92 40 *e*P P 23 08 33.5 -0.4
comp=Z,37nm,1.2s,mb5.5
GRF *e*S S 23 19 04.7 -5.2
GRF *e*SS SS 23 24 58.5 +6.1
GRF *e*L 23 44 42.3
comp=Z,718nm,20.9s
GRF **Grafenberg Arr** 86.92 40 *e*P P 23 08 33.5 -0.4
GRF *e*S S 23 19 04.7 -5.2
GRF *e*SS SS 23 24 58.5 +6.1
GRF pmax pmax
comp=Z,37nm,1.2s,mb5.5
GRF MLR MLR
comp=Z,700nm,20.9s,MS5.0
VSL **Villasalto** 86.92 51 *e*P P 23 08 33.9 -0.2
comp=Z,28nm,0.9s,mb5.5
VSL LR LR
comp=Z,324nm,19.0s,MS4.8
FETA **Feichten** 86.94 43⇓*i*P P 23 08 34.0 -0.2
comp=Z,17nm,1.1s,mb5.2
MOX **Moxa** 87.03 39 *e*P P 23 08 34.0 -0.5
comp=Z,26nm,1.7s,mb5.2
MOX pmax pmax
comp=Z,400nm,22.0s
MOX **Moxa** 87.03 39 *e*P P 23 08 33.9 -0.6
comp=Z,14nm,1.2s,mb5.1
MOX **Moxa** 87.03 39 *e*P P 23 08 34.0 -0.5
MOX pmax pmax
comp=Z,26nm,1.7s,mb5.2
MOX MLR MLR
comp=Z,400nm,22.0s,MS4.8
TRO **Tromso** 87.11 20 *e*SKS 23 19 01.2
MOTA **Mossalm** 87.15 43⇑*i*P P 23 08 34.7 -0.5
comp=Z,8.9nm,1.2s,mb4.9
FUR **Furstenfeldbru** 87.16 42 *e*P P 23 08 34.7 -0.5
comp=Z,28nm,1.5s,mb5.3
FUR **Furstenfeldbru** 87.16 42 *e*P P 23 08 34.7 -0.5
FUR pmax pmax
comp=Z,28nm,1.5s,mb5.3
KEST **Kesra** 87.36 54 P P 23 08 35.9 -0.5
comp=Z,1.7nm,0.7s,mb4.4,baz=293,slow=9.5,SNR=6.2
WTTA **Wattenberg** 87.53 43⇓*i*P P 23 08 36.7 -0.3
comp=Z,13nm,1.4s,mb5.0
TANN **Tannenbergstha** 87.60 40 *e*P P 23 08 36.9 -0.3
comp=Z,21nm,1.2s,mb5.2
NKC **Novy Kostel** 87.62 40 *e*P P 23 08 36.9 -0.4
NKC MLR MLR
comp=Z,700nm,17.7s,MS5.1
NKC **Novy Kostel** 87.62 40 *e*P P 23 08 36.9 -0.4
NKC AMS AMS 23 44 40.0
comp=Z,700nm,17.7s
CLL **Collm** 87.80 39 *e*P P 23 08 37.6 -0.6
comp=Z,34nm,1.5s,mb5.4
CLL **Collm** 87.80 39 *i*P P 23 08 37.2 -1.0
comp=Z,34nm,1.5s,mb5.4
CLL *e*S S 23 19 20.0 +1.7
CLL LR LR
comp=Z,500nm,18.9s,MS5.0
CLL **Collm** 87.80 39 *i*P P 23 08 37.2 -1.0
CLL *e*S S 23 19 20.0 +1.7
CLL pmax pmax
comp=Z,94nm,1.5s,mb5.8
CLL MLR MLR
comp=Z,500nm,18.9s,MS5.0
CLL **Collm** 87.80 39 *i*P P 23 08 37.2 -1.0
comp=Z,34nm,1.5s,mb5.4
CLL *es*P sP 23 08 41.0 -12
CLL *e*SKSac SKSac 23 19 06.0 +2.2
CLL *e*S S 23 19 20.0 +1.7
CLL *e*PS 23 20 23.0
CLL *e*SS SS 23 25 18.0 +13
CLL *e*SSS 23 28 54.0
CLL LmV 23 47 00.0
comp=Z,500nm,18.9s
WET **Wettzell** 88.06 41 *e*P P 23 08 39.2 -0.3
comp=Z,39nm,1.3s,mb5.5
WET **Wettzell** 88.06 41 *e*P P 23 08 39.2 -0.3
WET pmax pmax
comp=Z,39nm,1.3s,mb5.5
ABTA **Abfaltersbach** 88.19 43⇑*i*P P 23 08 39.6 -0.5
comp=Z,18nm,1.1s,mb5.2,SNR=12
BRG **Berggiesshubel** 88.46 39 *e*P P 23 08 40.9 -0.4
comp=Z,31nm,1.6s,mb5.3
BRG **Berggiesshubel** 88.46 39 *i*P P 23 08 41.1 -0.2
comp=Z,35nm,1.7s,mb5.3
BRG *e* pP 23 08 49.9 -2.6
comp=Z,11nm,1.0s
BRG PP PP 23 12 09.7 +0.4
comp=Z,3.7nm,1.2s
BRG SKS 23 19 11.0
BRG S S 23 19 30.0 +5.4
BRG PS 23 20 28.0
BRG SS SS 23 25 28.0 +13
BRG
comp=N,351nm,17.0s
BRG
comp=E,321nm,19.0s
BRG
comp=Z,536nm,17.6s
BRG **Berggiesshubel** 88.46 39 *i*P P 23 08 41.1 -0.2
BRG *e* pP 23 08 49.9 -2.5
BRG 23 12 09.7
BRG 23 19 11.0
BRG S S 23 19 30.0 +5.4
BRG PS 23 20 28.0
BRG pmax pmax
comp=Z,20nm,1.7s,mb5.1
BRG pmax pmax
comp=Z,7.0nm,1.2s,mb4.8
BRG MLR MLR
comp=N,2μm,17.0s,MS5.6
BRG MLR MLR
comp=E,210nm,19.0s,MS5.6
BRG MLR MLR
comp=Z,192nm,17.6s,MS4.6
KHC **Kasperske Hory** 88.52 41 *e*P P 23 08 40.9 -0.7
comp=Z,10nm,1.0s,mb5.1
KHC PP PP 23 12 11.4 +1.5
KHC **Kasperske Hory** 88.52 41 *e*P P 23 08 41.1 -0.5
KHC *e*S SKSac 23 19 13.4 +5.2
KHC MLR MLR
comp=Z,300nm,23.4s,MS4.6
KHC **Kasperske Hory** 88.52 41 *e*P P 23 08 41.1 -0.5
KHC *e*SKS 23 19 13.4
KHC AMS AMS 23 46 30.0
comp=Z,300nm,23.4s
GEC2 **GERESS Array S** 88.65 41 *e*P P 23 08 41.7 -0.5
comp=Z,17nm,1.4s,mb5.2
GEC2 **GERESS Array S** 88.65 41 *e*P P 23 08 41.7 -0.5
GEC2 pmax pmax
comp=Z,17nm,1.4s,mb5.2
KBA **Koelnbreinsper** 88.70 43⇓*i*P P 23 08 42.1 -0.4
comp=Z,20nm,1.5s,mb5.2,SNR=6.9
KTK1 **Kautokeino** 88.75 20 *e*SKS SKSac 23 19 07.7 -1.1
PVCC **Panska Ves** 88.91 39 *e*P P 23 08 43.0 -0.4
PVCC MLR MLR
comp=Z,600nm,19.9s,MS5.0
PVCC **Panska Ves** 88.91 39 *e*P P 23 08 43.0 -0.4
PVCC AMS AMS 23 47 10.0
comp=Z,600nm,19.9s
MYKA **Terra Mystica** 88.98 43⇓*i*P P 23 08 43.4 -0.4
comp=Z,10nm,0.9s,mb5.1
PRU **Pruhonice** 88.99 40 *e*P P 23 08 44.4 +0.6
PRU *e* pP 23 08 53.0 -2.0
PRU *e*S SKSac 23 19 14.7 +3.8
PRU MLR MLR
comp=Z,700nm,20.1s,MS5.1
PRU **Pruhonice** 88.99 40 *e*P P 23 08 44.4 +0.6
PRU *ex* x 23 08 53.0
PRU *e*SKS SKSac 23 19 14.7 +3.8
PRU AMS AMS 23 45 20.0
comp=Z,700nm,20.1s
TRI **Trieste** 89.22 44 PFAKE 23 09 00.0 +15
TRI LR LR
comp=Z,318nm,20.0s,MS4.7
ARCES **ARCESS Array B** 89.35 20 P P 23 08 44.8 -0.3
comp=Z,8.2nm,1.0s,mb5.0,baz=337,slow=5.9,SNR=6.8
ARCES LR LR 23 45 19.3
comp=Z,436nm,21.8s,MS4.8,baz=138,slow=33
JAVS **Javornik** 89.39 44 *e*PKPdf P 23 08 45.4 -0.4
JAVS *e*PKPbc P 23 08 54.8 +9.0
AQU **L'Aquila** 89.52 47 PFAKE 23 09 00.0 +13
AQU LR LR
comp=Z,393nm,20.0s,MS4.8
TREC **Trest** 89.72 40 *e*P P 23 08 46.7 -0.6
TREC *e* pP 23 08 55.8 -2.6
TREC MLR MLR
comp=Z,400nm,20.9s,MS4.8
TREC **Trest** 89.72 40 *e*P P 23 08 46.7 -0.6
TREC *ex* x 23 08 55.8
TREC AMS AMS 23 51 10.0
comp=Z,400nm,20.9s
KEV **Kevo** 89.77 19 PFAKE 23 09 00.0 +13
KEV LR LR
comp=Z,782nm,21.0s,MS5.1
UPC **Upice** 89.82 39 *e*P P 23 08 47.3 -0.4
UPC **Upice** 89.82 39 *e*P P 23 08 47.3 -0.4
UPC *ex* x 23 08 57.0
SOKA **Soboth** 89.92 43⇓*i*P P 23 08 47.2 -1.0
comp=Z,5.3nm,0.9s,mb4.9
KSP **Ksiaz** 89.93 39 *e*P P 23 08 47.8 -0.4
VISS **Visnje** 89.94 44 *i*PKPdf P 23 08 48.1 -0.3
PERS **Pernice** 89.98 43 *i*PKPdf P 23 08 47.5 -1.1
PERS *i*PKPbc P 23 08 57.1 +8.5
DPC **Dobruska-Polom** 90.05 39 *e*P P 23 08 48.4 -0.4
DPC *e*S S 23 19 42.9 +3.4
DPC MLR MLR
comp=Z,600nm,19.8s,MS5.0
DPC **Dobruska-Polom** 90.05 39 *e*P P 23 08 48.4 -0.4

DPC ex x 23 08 58.0
DPC eS S 23 19 42.9 +3.4
DPC AMS AMS 23 45 40.0
comp=Z,600nm,19.8s
CONA Conrad Observa 90.23 42 ⇓ *i* P **P 23 08 49.2 -0.4**
comp=Z,18nm,1.5s,mb5.2
BOJS Bojanci 90.28 44 *i* PKPdf **P 23 08 42.9 -7.1**
BOJS *i* 23 08 49.6
BILL Bilibino 90.86 339 *e*P **P 23 08 52.8 +0.6**
comp=Z,26nm,1.2s,mb5.4
BILL LR LR 23 08 52.8
comp=Z,713nm,20.0s,MS5.1
BILL Bilibino 90.86 339 *e*P **P 23 08 52.8 +0.6**
BILL pmax pmax
comp=Z,26nm,1.2s,mb5.4
BILL MLR MLR 23 08 52.8
comp=Z,713nm,20.0s,MS5.1
AFI Afiamalu 90.89 256 LR LR 23 40 15.5
comp=Z,240nm,18.7s,MS4.7,baz=74,slow=29
MORC Moravsky Berou 90.94 40 *e*P **P 23 08 52.6 -0.3**
comp=Z,32nm,2.3s,mb5.2
MORC Moravsky Berou 90.94 40 *e*P **P 23 08 52.6 -0.3**
MORC pmax pmax
comp=Z,32nm,2.3s,mb5.2
ZST Bratislava 90.99 41 *e*P **P 23 08 53.2 0.0**
comp=Z,21nm,1.6s,mb5.2
ZST *e*PP pP 23 09 02.7 -1.7
ZST Bratislava 90.99 41 *e*P **P 23 08 53.2 0.0**
ZST pmax pmax
comp=Z,21nm,1.6s,mb5.2
ZST Bratislava 90.99 41 *e*P **P 23 08 53.2 0.0**
ZST *e*pP pP 23 09 02.7 -1.7
MODS Modra-Piesok 91.07 41 *e*P **P 23 08 55.0 +1.4**
MODS Modra-Piesok 91.07 41 *e*P **P 23 08 55.0 +1.4**
OKC Ostrava-Krasne 91.30 40 *e*P **P 23 08 54.2 -0.4**
OKC MLR MLR
comp=Z,600nm,21.8s,MS5.0
OKC Ostrava-Krasne 91.30 40 *e*P **P 23 08 54.2 -0.4**
OKC AMS AMS 23 46 50.0
comp=Z,600nm,21.8s
WDD Wield Dalam 91.49 54 PFAKE 23 09 10.0 +14
WDD LR LR
comp=Z,219nm,20.0s,MS4.6
CUC Castrocucco 91.74 49 PFAKE 23 09 10.0 +13
CUC LR LR
comp=Z,293nm,21.0s,MS4.7
KOLL Kolacno 91.75 41 *e*P **P 23 08 57.0 +0.3**
KOLL *e*PP pP 23 09 06.1 -1.8
KOLL Kolacno 91.75 41 *e*P **P 23 08 57.0 +0.3**
KOLL *e*pP pP 23 09 06.1 -1.8
VYHS Vyhne 92.05 41 *e*P **P 23 08 58.2 +0.1**
comp=Z,3.4nm,1.2s,mb4.5
VYHS *e*PP PP 23 12 43.4 +5.5
VYHS Vyhne 92.05 41 *e*P **P 23 08 58.2 +0.1**
VYHS pmax pmax
comp=Z,3.0nm,1.2s,mb4.5
VYHS Vyhne 92.05 41 *e*P **P 23 08 58.2 +0.1**
VYHS *e*PP PP 23 12 43.4 +5.5
CEL Celeste 92.13 51 PFAKE 23 09 10.0 +11
CEL LR LR
comp=Z,294nm,20.0s,MS4.7
OJC Ojcow 92.25 39 *e*P **P 23 08 58.4 -0.6**
FINES FINESS Array B 92.33 27 P **P 23 08 57.2 -1.9**
comp=Z,1.5nm,0.7s,mb4.4,baz=318,slow=2.6,SNR=4.4
FINES LR LR 23 45 39.9
comp=Z,456nm,21.8s,MS4.9,baz=334,slow=32
TIP Timpagrande 92.61 50 *e*P **P 23 08 58.5 -2.4**
comp=Z,7.1nm,1.0s,mb5.0
TIP LR LR
comp=Z,617nm,22.0s,MS5.0
APA Apatity 92.80 20 ⇑ *e*P **P 23 08 57.5 -3.7**
APA pmax pmax
comp=Z,45nm,1.5s,mb5.7
APA MLR MLR
comp=Z,900nm,18.0s,MS5.3
PSZ Piszkesteto 92.88 41 *e*P **P 23 09 02.4 +0.5**
PSZ *e*PP PP 23 12 46.0 +1.6
PSZ LR LR
comp=Z,368nm,20.0s,MS4.8
KECS Kecovo 93.12 40 *e*P **P 23 09 03.4 +0.3**
comp=Z,1.6nm,0.8s,mb4.5
KECS Kecovo 93.12 40 *e*P **P 23 09 03.4 +0.3**
CRVS Cervenica-Dubn 93.64 40 *e*P **P 23 09 05.8 +0.4**
comp=Z,4.1nm,1.2s,mb4.7
CRVS Cervenica-Dubn 93.64 40 *e*P **P 23 09 05.8 +0.4**
CRVS pmax pmax
comp=Z,4.0nm,1.2s,mb4.7
CRVS Cervenica-Dubn 93.64 40 *e*P **P 23 09 05.8 +0.4**
KWP Kalwaria Pacla 94.22 39 P **P 23 09 08.6 +0.5**
comp=Z,79nm,0.3s,mb6.6
KWP LR LR
comp=Z,538nm,20.0s,MS5.0
KWP Kalwaria Pacla 94.22 39 P **P 23 09 08.6 +0.5**
KWP pmax pmax
comp=Z,79nm,0.3s,mb6.6
KWP MLR MLR
comp=Z,538nm,20.0s,MS5.0
TIR Tirane 94.45 47 PFAKE 23 09 20.0 +11
TIR LR LR
comp=Z,281nm,20.0s,MS4.7
QSPA South Pole Qui 97.42 180 *e*P **P 23 09 20.2 -1.8**
comp=Z,21nm,1.5s,mb5.3
QSPA LR LR
comp=Z,358nm,21.0s,MS4.8
QSPA South Pole Qui 97.42 180 LR LR 23 44 50.6
comp=Z,359nm,22.0s,MS4.8,baz=144,slow=30
KIEV Kiev 97.82 37 PFAKE 23 09 40.0 +16
KIEV LR LR
comp=Z,542nm,20.0s,MS5.0
AKASG Malin Array Be 97.83 37 PP PP 23 13 22.4 -0.2
comp=Z,0.4nm,0.4s,baz=300,slow=6.0,SNR=8.1
AKASG LR LR 23 53 06.6
comp=Z,484nm,20.2s,MS5.0,baz=300,slow=35
SEY Seymchan 98.38 338 *i* P **P 23 09 25.8 -0.9**
SEY Seymchan 98.38 338 *i* P **P 23 09 25.7 -1.0**
TIXI Tiksi 98.39 350 *e*P **P 23 09 25.3 -1.3**
comp=Z,8.9nm,1.0s,mb5.2
TIXI LR LR
comp=Z,611nm,21.0s,MS5.1
TIXI Tiksi 98.39 350 *e*P **P 23 09 24.4 -2.2**
TIXI pmax pmax
comp=Z,10.0nm,1.3s,mb5.2
KLMR Klimovskoe 98.44 25 P **P 23 09 24.6 -2.4**
KLMR pmax pmax
comp=Z,44nm,1.6s,mb5.7
OBN Obninsk 99.98 31 PFAKE 23 09 50.0 +16
OBN LR LR
comp=Z,408nm,22.0s,MS4.9
OBN Obninsk 99.98 31 ⇓ *e*P Pdif 23 09 33.1 -0.9
OBN 23 20 13.0
OBN *e*PS PS 23 22 36.1 -2.3
OBN *e*SS SS 23 28 07.6 +9.1
OBN SSS 23 31 59.0
OBN pmax pmax
comp=Z,16nm,1.6s,mb5.2
OBN MLR MLR
comp=Z,300nm,21.0s,MS4.8
PET Petropavlovsk 100.67 327 PFAKE 23 09 50.0 +13
PET LR LR
comp=Z,349nm,20.0s,MS4.9
SBA Scott Base 101.49 192 PFAKE 23 09 50.0 +9.3
SBA LR LR
comp=Z,573nm,19.0s,MS5.1
TSUM Tsumeb 102.06 108 Pdif Pdif 23 09 42.3 -0.9
TSUM LR LR
comp=Z,873nm,19.0s,MS5.3
TARA Tarawa 104.10 273 PFAKE 23 10 00.0 +7.7
TARA LR LR
comp=Z,19nm,21.0s,MS3.6
BRTR Keskin Array B 104.91 46 PP PP 23 14 15.7 -0.7
comp=Z,0.5nm,0.8s,baz=302,slow=12,SNR=3.2
YAK Yakutsk 106.36 345 PFAKE 23 14 20.0 +6.7
YAK LR LR
comp=Z,495nm,22.0s,MS5.0
ARU Arti 108.84 22 PFAKE 23 14 30.0 +12
ARU LR LR
comp=Z,392nm,20.0s,MS5.0
MALT Malatya 108.89 45 PFAKE 23 14 30.0 +11
MALT LR LR
comp=Z,160nm,19.0s,MS4.6
KIV Kislovodsk 109.01 39 PFAKE 23 14 30.0 +11
KIV LR LR
comp=Z,244nm,20.0s,MS4.8
BOSA Boshof 109.25 118 PFAKE 23 14 30.0 +10
BOSA LR LR
comp=Z,818nm,20.0s,MS5.3
LBTB Lobatse 109.64 114 PFAKE 23 14 30.0 +10
LBTB LR LR
comp=Z,908nm,19.0s,MS5.4
LSZ Lusaka 111.99 103 PFAKE 23 14 40.0 +15
LSZ LR LR
comp=Z,537nm,19.0s,MS5.2
GNI Garni 112.30 41 PFAKE 23 14 40.0 +15
GNI LR LR
comp=Z,209nm,20.0s,MS4.7
YSS Yuzh-Sakhalins 112.53 328 PFAKE 23 14 40.0 +15
YSS LR LR
comp=Z,174nm,19.0s,MS4.7
MBAR Mbarara 113.29 87 PFAKE 23 14 40.0 +12
MBAR LR LR
comp=Z,550nm,21.0s,MS5.1
HABR Khabarovsk 115.22 333 P Pdif 23 10 50.1 +8.4
HABR *e* 23 15 28.6
HABR 23 18 01.3
HABR *e*PS PS 23 25 09.2 -1.6
HABR *e*SS SS 23 31 25.6 +1.0
HABR *e*SSS 23 35 42.4
HABR pmax pmax
comp=Z,150nm,2.8s
HABR pmax pmax
comp=E,44nm,0.9s
HABR pmax pmax
comp=N,54nm,2.4s
ERM Erimo 115.42 324 PFAKE 23 14 40.0 +9.0
ERM LR LR
comp=Z,190nm,21.0s,MS4.7
BRVK Borovoye 115.52 18 PFAKE 23 14 40.0 +9.1
BRVK LR LR
comp=Z,521nm,20.0s,MS5.1
BVAR Borovoye Array 115.58 18 PP PP 23 15 32.5 +0.1
comp=Z,1.4nm,0.8s,baz=324,slow=7.3,SNR=4.8
MAW Mawson 115.59 166 PFAKE 23 14 40.0 +9.5
MAW LR LR
comp=Z,397nm,21.0s,MS5.0
ZALV Zalesovo Beam 117.95 8 PKP PKPdf 23 14 33.3 -2.3
comp=Z,0.3nm,0.3s,baz=299,slow=3.0,SNR=3.7
ZALV PP PP 23 15 45.3 -3.6
comp=Z,1.9nm,0.8s,baz=335,slow=6.6,SNR=9.9
ZALV PKKPbc PKKPbc 23 24 59.0 +1.5
comp=Z,0.2nm,0.3s,baz=170,slow=4.2,SNR=2.5
HNR Honiara 118.09 263 PFAKE 23 14 50.0 +13
HNR LR LR
comp=Z,233nm,19.0s,MS4.8
KMBO Kilima Mbogo 119.82 87 PFAKE 23 14 50.0 +10
KMBO LR LR
comp=Z,293nm,20.0s,MS4.9
KURK Kurchatov 119.87 14 PKP PKPdf 23 14 37.3 -2.0
KURK PP PP 23 16 00.1 -2.1
KURK PKKPbc PKKPbc 23 24 53.5 +2.9
KURK LR LR
comp=Z,487nm,19.0s,MS5.2
KURK Kurchatov 119.87 14 PKP PKPdf 23 14 37.3 -2.0
comp=Z,0.7nm,1.0s,baz=335,slow=2.5,SNR=4.1
KURK PP PP 23 16 00.1 -2.1
comp=Z,1.2nm,1.0s,baz=345,slow=5.3,SNR=4.1
KURK PKKPbc PKKPbc 23 24 53.5 +2.9
comp=Z,1.8nm,1.0s,baz=165,slow=2.6,SNR=8.3
HIA Hailar 120.24 343 PFAKE 23 14 50.0 +10
HIA LR LR
comp=Z,556nm,20.0s,MS5.2
CASY Casey 120.53 186 PFAKE 23 14 50.0 +10
CASY LR LR
comp=Z,912nm,19.0s,MS5.4
MDJ Mudanjiang 120.60 334 PKP PKPdf 23 14 38.0 -2.9
MDJ SS SS 23 32 36.8 +2.5
MDJ AMB AMB
comp=Z,110nm,11.8s
MDJ LR LR
comp=N,380nm,33.1s,MS5.1
MDJ LR LR
comp=E,600nm,30.4s,MS5.1
MDJ LR LR
comp=Z,250nm,30.4s,MS4.7
MDJ Mudanjiang 120.60 334 PFAKE 23 14 50.0 +9.1
MDJ LR LR
comp=Z,355nm,20.0s,MS5.0
TLY Talaya 120.88 355 PFAKE 23 14 50.0 +8.7
TLY LR LR
comp=Z,497nm,21.0s,MS5.1
MAJO Matsushiro 121.85 322 PFAKE 23 14 50.0 +6.4
MAJO LR LR
comp=Z,213nm,20.0s,MS4.8
MJAR Matsushiro Arr 121.85 322 PKP PKPdf 23 14 41.0 -2.6
comp=Z,1.7nm,0.7s,baz=77,slow=1.6,SNR=5.2
CN2 Changchun 123.01 336 *e*PKP PKPdf 23 14 39.3 -6.3
ULN Ulaanbaatar 124.28 352 *e*PKPdf PKPdf 23 14 47.4 -0.5
ULN LR LR
comp=Z,336nm,20.0s,MS5.0
ULN Ulaanbaatar 124.28 352 *i* PKIKP PKPdf 23 14 47.3 -0.6
SONM Songino Array 124.40 353 PKP PKPdf 23 14 46.5 -1.6
comp=Z,1.7nm,0.7s,baz=345,slow=0.6,SNR=11
SONM PP PP 23 16 30.3 -2.5
comp=Z,2.7nm,1.1s,baz=348,slow=4.2,SNR=4.8
EKS2 Erkin-Say 125.73 21 *e*PKPdf PKPdf 23 14 50.5 -0.4
EKS2 LR LR
comp=Z,399nm,20.0s,MS5.1
AAK Ala-Archa 126.01 21 PFAKE 23 15 00.0 +8.6
AAK LR LR
comp=Z,495nm,20.0s,MS5.2
AML Almayashu 126.16 22 *e*PKPdf PKPdf 23 14 51.4 -0.3
AML LR LR
comp=Z,462nm,21.0s,MS5.1
UCH Uchtor 126.37 21 *e*PKPdf PKPdf 23 14 50.5 -1.6
KSRS Korea Array 126.98 330 PKP PKPdf 23 14 52.3 -1.1
comp=Z,6.0nm,0.8s,baz=1.9,slow=1.6,SNR=28
INCN Inchon 127.60 331 PFAKE 23 15 10.0 +15
INCN LR LR
comp=Z,272nm,19.0s,MS5.0
WMQ Urumqi 128.25 9 PKP PKPdf 23 14 55.8 +0.2
WMQ PP PP 23 17 04.1 +5.7
WMQ PKS 23 18 31.0
WMQ SKS SKSdf 23 22 06.1 +1.2
WMQ SKKS SKKSac 23 23 55.9 +1.4
WMQ AMB AMB
comp=Z,200nm,4.8s
WMQ LR LR
comp=Z,820nm,25.0s,MS5.3
KSH Kashi 129.28 21 *e*PKP PKPdf 23 14 58.1 +0.4
KSH *e*PP PP 23 17 09.9 +4.5
KSH *e*PKS 23 18 33.3
KSH *e*SKS SKSdf 23 22 03.9 -3.0
KSH *e*SKKS SKKSac 23 23 57.3 -3.8
KSH *e*SS SS 23 34 24.4 +1.1
KSH AMB AMB
comp=Z,100nm,9.0s
KSH LR LR
comp=N,100nm,13.3s,MS5.0
KSH LR LR
comp=E,200nm,13.5s,MS5.0
KSH LR LR
comp=Z,180nm,13.8s,MS4.9
BJI Beijing 129.66 341 PKP PKPdf 23 14 57.3 -1.1
BJI SS SS 23 34 26.4 -1.5
BJI LR LR
comp=N,340nm,27.3s,MS5.1
BJI LR LR
comp=E,410nm,24.0s,MS5.1
BJI LR LR
comp=Z,400nm,23.9s,MS5.0
BJT Baijiatuan 129.69 341 PFAKE 23 15 10.0 +12
BJT LR LR
comp=Z,553nm,22.0s,MS5.2
ABPO Ambohimpanom 130.05 109 PFAKE 23 15 10.0 +10
ABPO LR LR
comp=Z,818nm,21.0s,MS5.4
HHC Hu-ho-hao-te 130.21 346 *e*PKP PKPdf 23 14 54.5 -4.9
HHC sPKP 23 15 08.0
HHC PP PP 23 17 10.6 -0.7
HHC PKS 23 18 29.8
HHC SKS SKSdf 23 22 00.8 -7.8
HHC AMB AMB
comp=Z,100nm,7.8s
HHC LR LR
comp=Z,430nm,21.0s,MS5.1
PMG Port Moresby 130.69 264 PFAKE 23 15 10.0 +8.9
PMG LR LR
comp=Z,305nm,19.0s,MS5.0
CTAO Charters Tower 131.01 250 *e*PKPdf PKPdf 23 15 00.8 -0.7
STKA Stephens Creek 132.19 233 PKP PKPdf 23 15 01.7 -1.7
comp=Z,1.9nm,0.8s,baz=29,slow=10,SNR=2.8
NIL Nilore 133.20 28 PFAKE 23 15 20.0 +15
NIL LR LR
comp=Z,50nm,20.0s,MS4.2
NJ2 Nanjing 135.69 334 *e*PKP PKPdf 23 15 05.6 -4.4
LZH Lanzhou 136.29 352 *e*PKP PKPdf 23 15 11.6 +0.6
LZH sPKP 23 15 16.3
LZH *e*PP PP 23 17 54.3 +4.3
LZH AMB AMB
comp=Z,130nm,7.5s
LZH LR LR
comp=Z,410nm,20.1s,MS5.2
MSEY Mahe Island 138.31 89 PFAKE 23 15 30.0 +15
MSEY LR LR
comp=Z,444nm,19.0s,MS5.2
TATO Taipei 140.11 325 PFAKE 23 15 30.0 +12
TATO LR LR
comp=Z,348nm,21.0s,MS5.1
YHNB Yeheng 140.41 324 PFAKE 23 15 30.0 +11
YHNB LR LR
comp=Z,329nm,19.0s,MS5.1
CD2 Chengdu 141.39 351 PKP PKPdf 23 15 19.8 -0.7
CD2 PP PP 23 18 25.4 +3.8
CD2 PKS 23 18 54.3
CD2 SKS SKSdf 23 22 28.3 0.0
CD2 SKKS SKKSac 23 25 15.4 +1.3
CD2 SS SS 23 36 52.6 +4.6
CD2 AMB AMB
comp=Z,160nm,5.3s
CD2 LR LR
comp=Z,400nm,20.6s,MS5.2
ASAR Alice Springs 141.39 241 PKP PKPdf 23 15 18.1 -2.6
comp=Z,1.3nm,0.8s,baz=120,slow=3.4,SNR=5.9
WB2 Warramunga Arr 142.03 247 *e*PKPdf PKPdf 23 15 19.9 -2.0
WRA Warramunga Arr 142.04 247 PKHKP PKPpre 23 15 14.9
comp=Z,3.2nm,0.9s,baz=104,slow=3.4,SNR=14
WRA PKP PKPdf 23 15 20.5 -1.4
comp=Z,8.6nm,0.9s,baz=103,slow=3.0,SNR=13
GKN Gorkha 142.71 19 *e*P PKPdf 23 15 18.2 -4.7
comp=Z,24nm,0.8s
FORT Forrest 143.03 227 *e*PKP PKPdf 23 15 25.3 +1.9
comp=Z,7.0nm,0.8s
GUN Gumba 143.17 17 *e*P PKPdf 23 15 19.1 -4.7
comp=Z,77nm,1.0s
DMN Daman 143.22 18 *e*P PKPdf 23 15 19.2 -4.7
comp=Z,14nm,0.7s
PKIN Phulchoki 143.34 18 *e*P PKPdf 23 15 18.6 -5.5
comp=Z,29nm,1.0s
PKI Pulchoki 143.35 18 *e*P PKPdf 23 15 19.3 -4.8
comp=Z,19nm,0.8s
JIRN Jiri 143.50 17 *e*P PKPdf 23 15 20.1 -4.2
comp=Z,51nm,1.0s
TAPN Taplejung 144.20 15 *e*P PKPdf 23 15 22.4 -3.2
comp=Z,67nm,1.0s
RAMN Ramite 144.28 17 *e*P PKPdf 23 15 22.3 -3.4
comp=Z,66nm,0.9s
ODAN Odare 144.59 15 *e*P PKPdf 23 15 23.4 -2.9
comp=Z,105nm,1.2s
KAKA Kakadu 145.05 258 *e*PKP PKPdf 23 15 25.6 -1.7
comp=Z,80nm,1.1s
KAKA Kakadu 145.05 258 *e*PKP PKPdf 23 15 25.5 -1.8
GYA Guiyang 145.12 345 PKPbc PKPbc 23 15 25.3 -1.4
GYA PP PP 23 18 47.8 +3.6
GYA PKS 23 19 01.3
GYA SS SS 23 37 36.4 +5.1
GYA AMB AMB
comp=Z,180nm,8.4s
GYA LR LR
comp=N,320nm,25.6s,MS5.0
GYA LR LR
comp=E,210nm,26.9s,MS5.0
GYA LR LR
comp=Z,540nm,25.8s,MS5.2
SHL Shillong 146.78 9 *e*PKP PKPdf 23 15 30.0 -0.1
KMI Kunming 147.22 351 PKPbc PKPbc 23 15 30.0 -3.0
KMI pPKP pPKPdf 23 15 34.1 -8.2
KMI sPKP 23 15 35.8
KMI PP PP 23 19 00.3 +3.8
KMI SKKS SKKSac 23 25 48.0 +0.4
KMI SS SS 23 37 59.6 +4.6
KMI AMB AMB
comp=Z,110nm,7.6s
KMI LR LR
comp=N,110nm,38.8s
KMI LR LR
comp=E,420nm,24.7s
KMI LR LR
comp=Z,340nm,22.9s
KNA Kununurra 148.14 252 *e*PKP PKPdf 23 15 34.4 +1.9
comp=Z,49nm,1.1s
DAV Davao City (W) 148.35 296 PFAKE 23 15 40.0 +7.0
DAV LR LR
comp=Z,282nm,21.0s,MS5.0
NWAO Narrogin (SRO) 148.61 213 PFAKE 23 15 40.0 +7.2
NWAO LR LR
comp=Z,179nm,19.0s,MS4.9
HYB Hyderabad 149.12 37 *i* PKP PKPdf 23 15 37.5 +3.4
KLBR Kellerberrin 149.32 216 *e*PKP PKPdf 23 15 36.0 +2.0
comp=Z,29nm,1.4s
FITZ Fitzroy Crossi 150.46 246 *e*PKPbc PKPbc 23 15 39.5 -2.0
QIZ Qiongzhong 150.96 335 PKPbc PKPbc 23 15 36.3 -6.4
QIZ PP PP 23 19 21.0 +2.4
QIZ SS SS 23 38 43.9 +6.3
QIZ AMB AMB
comp=Z,170nm,6.2s
QIZ LR LR
comp=N,170nm,18.2s
QIZ LR LR
comp=Z,280nm,19.1s,MS5.1
QIZ Qiongzhong 150.96 335 PFAKE 23 15 50.0 +13
QIZ LR LR
comp=Z,245nm,20.0s,MS5.0
CHTO Chiang Mai 153.88 357 PFAKE 23 15 50.0 +8.7
CHTO LR LR
comp=Z,300nm,20.0s,MS5.1
CM31 Chiang Mai Arr 154.23 356 *e*PKPdf PKPdf 23 15 41.0 -0.7
CM31 *e*PKPbc PKPbc 23 15 49.0 -0.9
CM31 LR LR
comp=Z,312nm,19.0s,MS5.2
CMAR Chiang Mai Arr 154.23 356 PKP PKPdf 23 15 40.7 -1.1
comp=Z,0.6nm,0.3s,baz=313,slow=4.6,SNR=9.1
CMAR PKPbc PKPbc 23 15 48.8 -1.2
comp=Z,3.2nm,0.9s,baz=340,slow=2.5,SNR=11
MBWA Marble Bar 154.40 235 PFAKE 23 15 50.0 +8.1
MBWA LR LR
comp=Z,346nm,19.0s,MS5.2
KKM Kota Kinabalu 156.89 305 PFAKE 23 16 00.0 +15
KKM LR LR
comp=Z,125nm,19.0s,MS4.8
KAPI Kappang 157.58 275 PFAKE 23 16 00.0 +14
KAPI LR LR
comp=Z,217nm,20.0s,MS5.0
KULM Kulim 166.94 345 PFAKE 23 16 10.0 +14
KULM LR LR
comp=Z,390nm,22.0s
COCO West Island 175.24 174 PFAKE 23 16 10.0 +10
COCO LR LR
comp=Z,879nm,19.0s

*ISCJB **14** 23:24:04.9±0.9, 24.°78S±0.°05×179.°61E±0.°09, h500km±9km, mb4.1/18, Error ellipse: s-maj=12.1km s-min=7.9km az=9.6*
*NEIC **14** 23:24:05.7±1.0, 24.°84S×179.°72E, h505km±10km, mb4.4/11, Error ellipse: s-maj=11.4km s-min=9.6km az=106.0*
*IDC **14** 23:24:06.0±1.2, 24.°82S×179.°59E, h498km±11km, mb3.6/12, mb1 3.8/13, mb1mx3.7/16, mbtmp3.6/13, Error ellipse: s-maj=14.3km s-min=13.5km az=155.0*
ISC 14 23:24:03.3±0.9, 24.°79S±0.°05×179.°78E±0.°09, h472km±10km, n64, σ0.°86/53, mb4.1/18, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 17nm,0.6s	**7.21**	**347**	*e*P	**P**		**23 25 54.9**	**+4.0**
MSVF				S	**S**		**23 27 19.1**	**+0.3**
AFI	**Afiamalu**	**13.43**	**38**	P	**P**		**23 26 55.5**	**-1.9**
AFI				S	**S**		**23 29 15.1**	**-6.2**
AFI	**Afiamalu** 2.4nm,0.3s,baz=193,slow=19,SNR=3.6	**13.43**	**38**	P	**P**		**23 26 55.5**	**-1.9**
AFI				S	**S**		**23 29 15.1**	**-6.2**
	1.9nm,0.3s,baz=145,slow=16,SNR=2.9							
URZ	**Urewera**	**13.62**	**189**	P	**P**		**23 27 00.2**	**+1.1**

URZ				*e*P			23 27 00.4		
URZ				S		**S**	**23 29 22.7**	**-1.6**	
URZ				*e*S		**S**	**23 29 23.4**	**-0.8**	
URZ	**Urewera**	**13.62**	**189**	P		**P**	**23 27 00.2**	**+1.1**	
	4.9nm,0.3s,baz=27,slow=7.3,SNR=26								
URZ				S		**S**	**23 29 22.7**	**-1.6**	
	4.7nm,0.3s,baz=76,slow=24,SNR=13								
SNZO	**South Karori**	**17.01**	**193**	*e*P		**P**	**23 27 34.7**	**-0.1**	
RPZ	**Rata Peaks**	**20.19**	**199**	P		**P**	**23 28 04.8**	**-0.1**	
	14nm,0.5s,baz=174,slow=7.6,SNR=12								
HNR	**Honiara**	**24.29**	**306**	P		**P**	**23 28 42.3**	**0.0**	
EIDS	**Eidsvold**	**25.98**	**263**	*e*P		**P**	**23 28 58.2**	**+1.1**	
EIDS	**Eidsvold**	**25.98**	**263**	*e*P		**P**	**23 28 58.1**	**+1.0**	
	7.8nm,0.8s,mb4.2								
CMSA	**Cobar Meteorol**	**30.71**	**250**	*e*P		**P**	**23 29 38.8**	**+0.4**	
CTAO	**Charters Tower**	**31.29**	**272**	*e*P		**P**	**23 29 44.7**	**+1.1**	
	18nm,0.3s,mb5.0								
STKA	**Stephens Creek**	**34.21**	**249**	*e*P		**P**	**23 30 09.0**	**+0.6**	
	0.5nm,0.4s,mb3.3								
STKA	**Stephens Creek**	**34.21**	**249**	P		**P**	**23 30 08.6**	**+0.2**	
	2.2nm,0.4s,mb3.9,baz=91,slow=9.2,SNR=12								
PMG	**Port Moresby**	**34.60**	**291**	*e*P		**P**	**23 30 12.0**	**+0.1**	
	33nm,1.0s,mb4.7								
ASAR	**Alice Springs**	**41.70**	**262**	P		**P**	**23 31 09.7**	**-0.2**	
	3.0nm,0.3s,mb4.1,baz=98,slow=8.0,SNR=33								
ASAR				ScP		ScP	23 35 58.5	-2.1	
	1.0nm,0.8s,baz=113,slow=5.2,SNR=5.6								
ASAR				S		**S**	**23 36 48.0**	**-3.9**	
	0.4nm,0.7s,baz=98,slow=13,SNR=4.5								
WRA	**Warramunga Arr**	**42.15**	**267**	P		**P**	**23 31 12.6**	**-0.8**	
WRA				ScP		ScP	23 36 01.1	-1.4	
WRA				S		**S**	**23 36 53.6**	**-4.9**	
WRA	**Warramunga Arr**	**42.15**	**267**	P		**P**	**23 31 12.6**	**-0.8**	
	4.1nm,0.3s,mb4.3,baz=102,slow=8.1,SNR=24								
WRA				ScP		ScP	23 36 01.1	-1.4	
	4.6nm,0.8s,baz=102,slow=4.1,SNR=9.0								
WRA				S		**S**	**23 36 53.6**	**-4.9**	
	3.4nm,1.0s,baz=100,slow=15,SNR=4.9								
FITZ	**Fitzroy Crossi**	**50.56**	**266**	*e*P		**P**	**23 32 17.3**	**-0.3**	
	5.8nm,0.6s,mb4.1								
FITZ	**Fitzroy Crossi**	**50.56**	**266**	P		**P**	**23 32 17.4**	**-0.2**	
	4.7nm,0.7s,mb3.9,baz=107,slow=5.9,SNR=11								
GUMO	**Guam**	**51.14**	**314**	P		**P**	**23 32 21.7**	**0.0**	
QSPA	**South Pole Qui**	**65.30**	**180**	*e*P		**P**	**23 33 57.9**	**+0.9**	
	11nm,1.0s,mb4.5								
QSPA	**South Pole Qui**	**65.30**	**180**	P		**P**	**23 33 57.9**	**+0.9**	
	6.4nm,0.7s,mb4.3,baz=30,slow=1.7,SNR=31								
KKM	**Kota Kinabalu**	**68.97**	**287**	P		**P**	**23 34 20.0**	**-0.8**	
MJAR	**Matsushiro Arr**	**72.52**	**326**	P		**P**	**23 34 40.9**	**-0.4**	
MJAR	**Matsushiro Arr**	**72.52**	**326**	P		**P**	**23 34 40.9**	**-0.4**	
	3.0nm,0.6s,mb4.0,baz=163,slow=6.3,SNR=9.8								
MAJO	**Matsushiro**	**72.52**	**326**	*e*P		**P**	**23 34 41.1**	**-0.2**	
	4.0nm,0.8s,mb4.0								
MAT	**Matsushiro**	**72.52**	**326**	P		**P**	**23 34 40.7**	**-0.6**	
NACB	**Ninganchiao**	**74.46**	**306**	P		**P**	**23 34 49.5**	**-3.2**	
MAW	**Mawson**	**76.85**	**201**	P		**P**	**23 35 05.0**	**-0.3**	
	3.0nm,0.7s,mb4.0,baz=134,slow=8.3,SNR=11								
NIKO	**Nikolski**	**78.06**	**7**	P		**P**	**23 35 12.3**	**+0.3**	
KSRS	**Korea Array**	**78.80**	**320**	P		**P**	**23 35 16.3**	**+0.1**	
	3.2nm,1.0s,mb3.8,baz=134,slow=5.7,SNR=8.5								
KULM	**Kulim**	**82.38**	**279**	*e*P		**P**	**23 35 34.5**	**-1.1**	
ISA	**Isabella**	**83.78**	**46**	*e*P		**P**	**23 35 42.6**	**+0.5**	
NVAR	**Mina Array Bea**	**85.53**	**44**	P		**P**	**23 35 51.4**	**+0.8**	
NVAR	**Mina Array Bea**	**85.53**	**44**	P		**P**	**23 35 51.4**	**+0.8**	
	0.9nm,0.8s,mb3.5,baz=220,slow=8.5,SNR=5.0								
TUC	**Tucson**	**87.22**	**53**	*e*P		**P**	**23 35 59.7**	**+1.0**	
	1.2nm,0.8s,mb3.7								
BJT	**Baijiatuau**	**87.53**	**316**	P		**P**	**23 36 00.2**	**+0.1**	
CMAR	**Chiang Mai Arr**	**89.64**	**290**	P		**P**	**23 36 11.7**	**+1.3**	
	2.8nm,0.9s,mb4.1,baz=138,slow=2.6,SNR=14								
CHTO	**Chiang Mai**	**89.80**	**291**	*e*P		**P**	**23 36 11.2**	**+0.1**	
	9.6nm,1.5s,mb4.4								
ANMO	**Albuquerque**	**91.66**	**52**	P		**P**	**23 36 20.8**	**+1.5**	
NEW	**Newport**	**92.03**	**37**	P		**P**	**23 36 21.1**	**+0.3**	
ILAR	**Eielson Array**	**92.94**	**14**	P		**P**	**23 36 23.0**	**-1.4**	
	0.2nm,0.8s,mb3.2,baz=196,slow=5.5,SNR=2.5								
SMCO	**Snowmass**	**93.37**	**48**	*e*P		**P**	**23 36 26.1**	**-1.0**	
	4.4nm,0.6s,mb4.7								
INK	**Inuvik**	**98.94**	**16**	*e*Pdif		Pdif	23 36 51.9	-0.3	
KURK	**Kurchatov**	**115.70**	**316**	PKPdf		PKPdf	23 41 50.6	-0.3	
AML	**Almayashu**	**117.77**	**306**	*e*PKPdf		PKPdf	23 41 55.4	+0.2	
BVAR	**Borovoye Array**	**120.97**	**318**	PKP		PKPdf	23 41 59.7	-1.3	
	0.7nm,0.4s,baz=10,slow=3.0,SNR=6.0								
BVAR				SKP			23 44 48.5		
	0.8nm,0.5s,baz=108,slow=4.8,SNR=4.1								
ARU	**Arti**	**127.47**	**323**	*e*PKPdf		PKPdf	23 42 12.5	-0.8	
ARCES	**ARCESS Array B**	**132.71**	**348**	PKP		PKPdf	23 42 22.0	-0.9	
	3.6nm,1.0s,baz=20,slow=3.9,SNR=4.7								
ARCES				SKPbc		SKPbc	23 45 02.6	-3.0	
	7.0nm,0.9s,baz=5.7,slow=4.9,SNR=6.5								
FINES	**FINESS Array B**	**139.22**	**341**	PKP		PKPpre	23 42 26.0		
FINES				PKP		PKPdf	23 42 35.1	0.0	
FINES				SKPbc		SKPbc	23 45 22.2	-3.3	
FINES	**FINESS Array B**	**139.22**	**341**	PKhKP		PKPpre	23 42 26.0		
	6.0nm,1.1s,baz=113,slow=2.9,SNR=5.1								
FINES				PKP		PKPdf	23 42 35.1	-0.1	
	5.0nm,1.0s,baz=174,slow=9.6,SNR=3.7								
FINES				SKPbc		SKPbc	23 45 22.2	-3.3	
	14nm,1.0s,baz=66,slow=4.8,SNR=8.7								
NOA	**NORSAR Array B**	**142.93**	**351**	PKP		PKPpre	23 42 38.4		
NOA				SKPbc		SKPbc	23 45 31.9	-3.0	
NOA	**NORSAR Array B**	**142.93**	**351**	PKhKP		PKPpre	23 42 38.4		
	0.5nm,0.4s,baz=17,slow=3.7,SNR=3.5								
NOA				SKPbc		SKPbc	23 45 31.9	-3.0	
	2.5nm,0.8s,baz=16,slow=4.3,SNR=5.2								
HFS	**Hagfors**	**143.38**	**348**	PKhKP		PKPpre	23 42 39.5		
	5.0nm,0.4s,baz=67,slow=3.9,SNR=63								
MALT	**Malatya**	**144.67**	**302**	*e*PKPdf		PKPdf	23 42 45.5	-0.1	
AKASG	**Malin Array Be**	**145.60**	**326**	PKPbc		PKPbc	23 42 46.5	-1.6	
	2.2nm,0.5s,baz=45,slow=4.4,SNR=11								
AKASG				SKPbc		SKPbc	23 45 37.6	-3.9	
	2.5nm,0.7s,baz=47,slow=2.7,SNR=8.2								
ASF	**Jabal al Asfar**	**146.68**	**291**	PKPbc		PKPbc	23 42 51.6	-0.1	
	3.6nm,0.9s,baz=358,slow=0.6,SNR=6.1								
MMAI	**Mount Meron Ar**	**147.87**	**293**	PKPbc		PKPbc	23 42 55.1	+0.3	
	2.8nm,0.4s,baz=80,slow=6.9,SNR=25								
BR131	**Keskin Array S**	**147.94**	**306**	*e*PKPbc		PKPbc	23 42 53.9	-0.9	
BRTR	**Keskin Array B**	**147.94**	**306**	PKPbc		PKPbc	23 42 53.8	-1.0	
	1.4nm,0.7s,baz=133,slow=4.2,SNR=9.3								
BRTR				PKPab		PKPab	23 42 59.0	-0.1	
	1.1nm,0.6s,baz=102,slow=3.7,SNR=8.4								
BRTR				SKPbc		SKPbc	23 45 44.8	-2.3	
	0.6nm,0.8s,baz=23,slow=4.0,SNR=3.6								
EKA	**Eskdalemuir Ar**	**149.41**	**3**	PKPbc		PKPbc	23 42 56.7	-1.2	
	0.5nm,0.6s,baz=328,slow=3.0,SNR=4.1								
CLL	**Collm**	**151.64**	**342**	*e*PKPbc		PKPbc	23 43 02.0	-1.2	
	comp=Z,3.0nm,0.7s								
BRG	**Berggiesshubel**	**151.76**	**341**	*e*P		PKPbc	23 43 02.6	-0.9	
	comp=Z,2.2nm,0.7s								
BRG				*e*			23 43 14.1		
	comp=Z,4.8nm,1.1s								

*NEIC **14** 23:24:29.0±2.5,24°.34N×121°.96E,h10km, Error ellipse: s-maj=27.9km s-min=9.4km az=85.0*
*ISCJB **14** 23:24:29.2±0.5,24°.36N±0°.02×122°.00E±0°.03,h12km±2km, Error ellipse: s-maj=4.2km s-min=2.6km az=6.1*
*TAP **14** 23:24:29.3,24°.39N×121°.93E,h25km,ML3.7,B*

ISC 14 23:24:29.5±0.4,24°.37N±0°.02×121°.99E±0°.03,h14km±2km, n52,σ1§05/85,5C-3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ENA	**Nanau**	**0.24**	**284**	*i*P		**Pg**	**23 24 34.8**	**+0.2**
	baz=282							
ENA				S		**Sg**	**23 24 38.5**	**+0.3**
	baz=282							
EHP	**Heping Village**	**0.24**	**255**	P		**Pg**	**23 24 35.0**	**+0.4**
	baz=244							
EHP				S		**Sg**	**23 24 39.7**	**+1.5**
	baz=244							
TWC	**Suao**	**0.27**	**331**	*e*S		**Sg**	**23 24 40.8**	**+1.7**
	baz=343							
NACB	**Ninganchiao**	**0.41**	**242**	*e*P		**Pg**	**23 24 37.2**	**-0.5**
NACB				*e*S		**Sg**	**23 24 42.7**	**-0.6**
ILA	**Ilan**	**0.45**	**330**	*i* P		**Pg**	**23 24 38.7**	**+0.2**
	baz=331							
ILA				S		**Sg**	**23 24 45.2**	**+0.6**
	baz=331							
TWD	**Chiawan**	**0.46**	**231**	⇑*i*P		**Pg**	**23 24 38.9**	**+0.2**
	baz=230							
TWD				*i* S		**Sg**	**23 24 46.4**	**+1.5**
	baz=230							
ENTT	**Nioudou**	**0.47**	**305**	⇓*i*P		**Pg**	**23 24 38.5**	**-0.4**
	baz=308							
ENTT				S		**Sg**	**23 24 44.9**	**-0.3**
	baz=308							
HWA	**Hwalien**	**0.53**	**222**	*e*P		**Pg**	**23 24 40.6**	**+0.7**
	baz=215							
HWA				*e*S		**Sg**	**23 24 49.8**	**+2.8**
	baz=215							
NNS	**Nan Shan**	**0.57**	**277**	*i* P		**Pg**	**23 24 40.2**	**-0.5**
	baz=282							
NNS				S		**Sg**	**23 24 47.6**	**-0.6**
	baz=282							
TWB1	**Santiao Chiao**	**0.64**	**360**	*i* P		**Pg**	**23 24 42.1**	**+0.2**
	baz=1.0							
TWB1				S		**Sg**	**23 24 50.5**	**+0.2**
	baz=1.0							
YHNB	**Yeheng**	**0.64**	**298**	*e*P		**Pg**	**23 24 40.7**	**-1.2**
YHNB				*e*S		**Sg**	**23 24 48.6**	**-1.8**
NSK	**Sanguang**	**0.65**	**298**	⇓*i*P		**Pg**	**23 24 41.5**	**-0.8**
	baz=307							
NSK				S		**Sg**	**23 24 49.5**	**-1.4**
	baz=307							
WHF	**Hehuan Shan**	**0.70**	**251**	⇑*i*P		**Pg**	**23 24 42.7**	**-0.4**
	baz=257							
WHF				*e*S		**Sg**	**23 24 52.7**	**+0.3**
	baz=257							
TWA	**Mucha**	**0.71**	**329**	*e*P		**Pg**	**23 24 43.6**	**+0.2**
	baz=325							
TWA				S		**Sg**	**23 24 53.4**	**+0.6**
	baz=325							
NWF	**Wu-fen Shan**	**0.72**	**345**	⇑*i*P		**Pg**	**23 24 43.7**	**+0.1**
	baz=343							
NWF				S		**Sg**	**23 24 53.5**	**+0.3**
	baz=343							
ESL	**Shilin**	**0.75**	**223**	P		**Pg**	**23 24 43.5**	**-0.7**
	baz=217							
TWT	**Tachien**	**0.75**	**261**	*e*P		**Pg**	**23 24 43.9**	**-0.3**
	baz=259							
TWT				S		**Sg**	**23 24 54.3**	**+0.2**
	baz=259							
TATO	**Taipei**	**0.76**	**323**	*e*P		**Pg**	**23 24 43.8**	**-0.5**
TATO				*e*S		**Sg**	**23 24 54.0**	**-0.2**
TAP1	**Taipei**	**0.79**	**327**	P		**Pg**	**23 24 45.1**	**+0.2**
	baz=325							
TAP1				S		**Sg**	**23 24 55.2**	**-0.1**
	baz=325							
TWS1	**Kuangyinshan**	**0.90**	**324**	P		**Pg**	**23 24 46.7**	**-0.1**
	baz=338							
TWS1				S		**Sg**	**23 24 59.0**	**+0.4**
	baz=338							
YOJ	**Yonaguni jima**	**0.93**	**84**	*e*P		**Pb**	**23 24 47.9**	**+0.4**
	baz=78							
YOJ				S		**Sg**	**23 25 01.1**	**+1.4**
	baz=78							
NSTT	**Nanjuang**	**0.94**	**286**	P		**Pb**	**23 24 47.2**	**-0.4**
	baz=287							
NSTT				*e*S		**Sb**	**23 24 59.0**	**-0.9**
	baz=287							
NCU	**National Centr**	**0.94**	**309**	*e*P		**Pb**	**23 24 47.0**	**-0.6**
	baz=314							
NCU				S		**Sb**	**23 25 00.8**	**+0.8**
	baz=314							
TWY	**Chenhua**	**0.97**	**338**	P		**Pb**	**23 24 47.8**	**-0.3**
	baz=342							
TWY				S		**Sb**	**23 25 00.8**	**0.0**
	baz=342							
HSN	**Hsinchu**	**1.03**	**295**	*e*P		**Pb**	**23 24 48.4**	**-0.6**
	baz=298							
HSN				*e*S		**Sb**	**23 25 02.5**	**+0.1**
	baz=298							
EHY	**Hungye**	**1.06**	**216**	*e*P		**Pb**	**23 24 47.2**	**-2.4**
	baz=212							
SMLT	**Sun Moon Lake**	**1.11**	**244**	*e*P		**Pb**	**23 24 49.6**	**-0.9**
	baz=231							
SSLB	**Suanglung**	**1.11**	**239**	*e*P		**Pb**	**23 24 49.1**	**-1.4**
SSLB				*e*S		**Sb**	**23 25 04.7**	**-0.2**
TWQ1	**Liyutan**	**1.11**	**269**	P		**Pb**	**23 24 50.6**	**+0.1**
	baz=268							
TWQ1				S		**Sb**	**23 25 05.5**	**+0.6**
	baz=268							
TYC	**Yuchr**	**1.14**	**246**	P		**Pb**	**23 24 49.8**	**-1.2**
	baz=235							
YULB	**Yu-li**	**1.16**	**213**	*e*P		**Pn**	**23 24 48.9**	**-2.5**
YULB				*e*S		**Sb**	**23 25 03.8**	**-2.5**
TWF1	**Yuli**	**1.20**	**212**	*e*P		**Pn**	**23 24 49.4**	**-2.5**
	baz=221							
TCU	**Taichung**	**1.22**	**260**	*e*P		**Pn**	**23 24 52.9**	**+0.7**
	baz=258							
TCU				*e*S		**Sb**	**23 25 09.4**	**+1.3**
	baz=258							
WNT	**Mingjian**	**1.29**	**248**	*e*P		**Pn**	**23 24 53.7**	**+0.5**
	baz=245							
YUS	**Yu-Shan**	**1.29**	**228**	⇑*i*P		**Pn**	**23 24 52.5**	**-0.7**
	baz=224							
ALS	**Alishan**	**1.38**	**232**	⇑P		**Pn**	**23 24 54.1**	**-0.3**
	baz=218							
ELDTW	**Lidau**	**1.48**	**217**	*e*P		**Pn**	**23 24 52.7**	**-3.0**
	baz=204							
CHN4	**Tsaushan**	**1.64**	**232**	*e*P		**Pn**	**23 24 58.6**	**+0.7**
	baz=230							
CHN4				S		**Sn**	**23 25 20.9**	**+2.2**
	baz=230							
TPUB	**Ta-pu**	**1.64**	**230**	*e*Pn		**Pn**	**23 24 58.1**	**+0.2**
TPUB				*e*S		**Sn**	**23 25 20.8**	**+2.0**
STYT	**Tauyuan**	**1.65**	**224**	*e*P		**Pn**	**23 24 57.5**	**-0.5**
	baz=221							
CHY	**Chiayi**	**1.68**	**239**	*e*P		**Pn**	**23 24 59.7**	**+1.3**
	baz=237							
CHY				*e*S		**Sn**	**23 25 22.0**	**+2.2**
	baz=237							
WTP	**Ta-pu**	**1.69**	**229**	P		**Pn**	**23 24 58.9**	**+0.4**
	baz=227							
WTP				S		**Sn**	**23 25 22.0**	**+2.0**
	baz=227							
TWG	**Pinlang**	**1.76**	**209**	*e*Pn		**Pn**	**23 24 59.7**	**+0.1**
TWG				*e*S		**Sn**	**23 25 19.7**	**-2.0**
TWG	**Pinlang**	**1.76**	**209**	*e*P		**Pn**	**23 24 57.0**	**-2.6**
	baz=195							
TWK	**Hsinying**	**1.76**	**232**	*e*P		**Pn**	**23 25 00.2**	**+0.6**
	baz=230							
CHN1	**Nanshi**	**1.79**	**229**	P		**Pn**	**23 25 00.6**	**+0.7**
	baz=227							
CHN1				*e*S		**Sn**	**23 25 24.1**	**+1.7**
	baz=227							
SGST	**Jiashian**	**1.82**	**225**	*e*P		**Pn**	**23 25 01.3**	**+0.9**
	baz=211							
ECL	**Taimali**	**2.01**	**209**	*e*P		**Pn**	**23 25 01.5**	**-1.5**
	baz=197							
SSD	**Sandimen**	**2.04**	**218**	*e*P		**Pn**	**23 25 03.1**	**-0.3**
	baz=217							
EAST	**Anshuo**	**2.24**	**208**	*e*P		**Pn**	**23 25 06.0**	**-0.2**
	baz=198							
SCZT	**Fangliau**	**2.36**	**213**	*e*P		**Pn**	**23 25 09.4**	**+1.6**
	baz=200							
KNM	**Kinmen**	**3.25**	**272**	*e*P		**Pn**	**23 25 19.3**	**-0.7**
	baz=266							

IDC 14 23:38:52.7±2.1,15°.98S×178°.81W,h0km,mb4.1/5, mb1 4.4/5,mb1mx4.1/13,mbtmp4.1/5,Error ellipse: s-maj=123.7km s-min=23.9km az=145.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**39.26**	**239**	P		P	23 46 21.9	-1.3
	1.7nm,0.5s,baz=76,slow=6.6,SNR=6.7							
WRA	**Warramunga Arr**	**44.64**	**258**	P		P	23 47 08.3	+0.9
	1.5nm,0.5s,baz=90,slow=8.1,SNR=8.8							
ASAR	**Alice Springs**	**44.98**	**252**	P		P	23 47 10.2	+0.1
	10.0nm,0.7s,baz=226,slow=8.7,SNR=118							
NVAR	**Mina Array Bea**	**78.31**	**44**	P		P	23 50 55.5	+0.7
	0.7nm,0.7s,baz=226,slow=8.1,SNR=5.2							
ILAR	**Eielson Array**	**84.11**	**13**	P		P	23 51 24.8	-0.3
	0.3nm,0.4s,baz=222,slow=5.0,SNR=6.4							

KRSC 14 23:39:11.5±0.5,54°.94N×162°.31E,h29km±19km,ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.51**	**221**	*i* P		Pb	23 39 22.0	0.0
MKZ				*e*S		Sb	23 39 29.6	+0.4
KBTR	**Krutoberegovo**	**1.30**	**13**	*e*P		Pn	23 39 32.8	-0.9
KBTR				*e*S		Sn	23 39 49.4	-0.7
BZGR	**Bezymyannyi-Gr**	**1.36**	**318**	P		Pn	23 39 34.6	+0.1
BZGR				S		Sn	23 39 51.5	0.0
ZLN	**Zelenaya**	**1.38**	**322**	P		Pn	23 39 34.9	+0.2
ZLN				*e*S		Sn	23 39 52.6	+0.6
KPT	**Kopyto**	**1.57**	**312**	P		Pn	23 39 38.5	+1.1
KPT				S		Sn	23 39 58.1	+1.4
KRSR	**Krestovskiy**	**1.62**	**323**	P		Pn	23 39 38.8	+0.8
KRSR				S		Sn	23 39 58.2	+0.3
KLY	**Klyuchi**	**1.67**	**326**	S		Sn	23 39 59.5	+0.4
KOZ	**Kozyrevsk**	**1.78**	**310**	P		Pn	23 39 41.6	+1.3
KOZ				S		Sn	23 40 03.9	+2.0
KII	**Karymskiy**	**1.90**	**243**	P		Pn	23 39 42.9	+1.0
KII				*e*S		Sn	23 40 06.1	+1.3
SRDR	**Sredinnyy**	**2.02**	**314**	P		Pn	23 39 44.2	+0.7
SRDR				S		Sn	23 40 08.5	+0.8
BKI	**Bering**	**2.12**	**81**	P		Pn	23 39 44.4	-0.5
BKI				*e*S		Sn	23 40 08.0	-2.3
SPN	**Mys Shipunski**	**2.29**	**217**	P		Pn	23 39 46.6	-0.6
SPN				*e*S		Sn	23 40 12.1	-2.2
NLC	**Nalytchevo**	**2.49**	**226**	*e*P		Pn	23 39 50.5	+0.5
NLC				*e*S		Sn	23 40 19.7	+0.4
AVH	**Avacha**	**2.69**	**233**	P		Pn	23 39 54.8	+2.0
AVH				*e*S		Sn	23 40 27.1	+2.8
GNL	**Ganaly**	**2.85**	**246**	P		Pn	23 39 56.6	+1.7
GNL				S		Sn	23 40 29.9	+1.8
PET	**Petropavlovsk**	**2.89**	**230**	S		Sn	23 40 30.1	+0.9

IDC 14 23:48:25.6±1.0,83°.42N×114°.92E,h0km,mb3.6/8, mb1 3.8/8,mb1mx3.6/21,mbtmp3.6/8,MS3.8/2,Ms1 3.9/2, ms1mx2.8/30,Error ellipse: s-maj=27.7km s-min=21.4km az=155.0,North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARCES	**ARCESS Array B**	**21.52**	**287**	P		P	23 53 16.1	+0.5
	4.1nm,0.9s,baz=14,slow=11,SNR=3.8							
ILAR	**Eielson Array**	**27.08**	**69**	P		P	23 54 09.8	+0.6
	0.5nm,0.9s,baz=341,slow=11,SNR=5.8							
ZALV	**Zalesovo Beam**	**30.66**	**216**	P		P	23 54 41.6	+0.5
	0.2nm,0.3s,baz=355,slow=7.2,SNR=2.6							
SONM	**Songino Array**	**35.81**	**190**	P		P	23 55 25.3	-0.8
	0.1nm,0.3s,baz=352,slow=5.8,SNR=2.1							
ASAJ	**Asahikawa**	**40.30**	**149**	LR		LR	00 15 02.6	
	comp=Z,218nm,18.6s,baz=214,slow=40							
BRTR	**Keskin Array B**	**49.77**	**267**	P		P	23 57 21.0	+1.7
	0.5nm,0.8s,baz=1.0,slow=6.4,SNR=3.0							
ESDC	**Sonseca Array**	**53.94**	**303**	P		P	23 57 49.2	-1.1
	0.1nm,0.4s,baz=8.9,slow=10,SNR=4.3							
ESDC				LR		LR	00 18 45.1	
	comp=Z,58nm,21.7s,baz=95,slow=34							
NVAR	**Mina Array Bea**	**55.91**	**49**	P		P	23 58 05.0	+0.4
	0.3nm,0.5s,baz=17,slow=11,SNR=3.6							
TORD	**Torodi Ar. Bea**	**79.62**	**294**	P		P	00 00 33.6	-0.7
	0.9nm,0.7s,baz=345,slow=5.8,SNR=5.9							

CASC 15 00:04:46.6±5.1,7°.56N×82°.71W,h20km±41km,MD3.7, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BRU2	**Volcan**	**1.22**	**1**	*e*P		Pn	00 05 07.7	-0.9
BRU2				*e*S		Sb	00 05 26.6	+2.2
TBS2		**1.22**	**2**	*e*P		Pn	00 05 14.8	+6.2
TBS2				*e*S		Sb	00 05 34.4	+10
BRU	**Baru**	**1.24**	**7**	*e*P		Pn	00 04 58.6	-10
BRU				*e*S		Sb	00 05 10.1	-15
CNI	**Changuinola**	**1.85**	**6**	*e*P		Pn	00 05 19.0	+1.7
BCIP	**Isla Barro Col**	**3.26**	**61**	*e*P		Pn	00 05 36.0	-0.6
BCIP				*e*S		Sn	00 06 19.9	+5.1

*ISCJB **15** 00:13:02.2±1.1,46°.8N±0°.1×152°.9E±0°.1,h53km±9km, mb3.8/14,Error ellipse: s-maj=23.8km s-min=7.6km az=139.2*
*MOS **15** 00:13:04.9±0.9,47°.24N×152°.65E,h56km,mb4.0/4,Error ellipse: s-maj=17.9km s-min=12.6km az=56.2*
*IDC **15** 00:13:07.3±4.1,46°.98N×152°.87E,h78km±36km,mb3.5/11, mb1 3.7/13,mb1mx3.6/22,mbtmp3.5/13,Error ellipse: s-maj=31.5km s-min=20.7km az=131.0*
*NEIC **15** 00:13:08.5±2.3,47°.00N×152°.80E,h89km±22km,mb3.9/4, Error ellipse: s-maj=17.2km s-min=12.4km az=143.0*

ISC 15 00:13:04.4±0.9,46°.9N±0°.1×152°.9E±0°.1,h52km±7km,n50, σ1§33/59,mb3.8/14,Kuril Islands

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

comp=Z,0.3nm,0.4s,baz=50,slow=3.1,SNR=3.8
BRVK Borovoye 50.70 309 *e*P **P 00 21 57.6 -0.7**
comp=Z,0.7nm,0.5s,mb3.9
BRVK Borovoye 50.70 309 *e*P **P 00 21 57.7 -0.6**
BRVK pmax pmax
comp=E,1.0nm,0.5s,mb4.0
YKA Yellowknife Ar 50.87 37 P **P 00 22 00.1 +0.6**
comp=Z,1.0nm,0.8s,mb3.8,baz=300,slow=7.0,SNR=3.5
CMAR Chiang Mai Arr 52.28 256 P **P 00 22 12.0 +1.5**
comp=Z,0.9nm,0.3s,mb4.1,baz=35,slow=8.1,SNR=5.4
UCH Uchtor 53.87 296 *e*P **P 00 22 21.4 -0.5**
comp=Z,3.9nm,1.8s,mb4.0
EKS2 Erkin-Say 54.08 297 P **P 00 22 22.9 -0.6**
KBL Kabul 61.89 291 P **P 00 23 18.0 -0.3**
FINES FINESS Array B 63.84 335 P **P 00 23 29.6 -1.2**
comp=Z,1.0nm,0.4s,mb4.2,baz=27,slow=8.2,SNR=12
NOA NORSAR Array B 68.04 341 P **P 00 23 57.6 -0.1**
comp=Z,0.9nm,0.8s,mb3.9,baz=29,slow=6.5,SNR=3.2
KIV Kislovodsk 70.60 314 *e*P **P 00 24 18.6 +4.7**
KIV pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
AKASG Malin Array Be 71.35 326 P **P 00 24 17.5 -0.8**
comp=Z,1.8nm,0.4s,mb4.4,baz=33,slow=6.3,SNR=3.5
ASAR Alice Springs 72.32 198 P **P 00 24 23.5 -0.8**
comp=Z,0.5nm,0.7s,mb3.5,baz=16,slow=5.5,SNR=4.8
BRTR Keskin Array B 78.19 317 P **P 00 24 58.6 +0.6**
comp=Z,0.3nm,0.5s,mb3.5,baz=53,slow=7.4,SNR=3.2
MMAI Mount Meron Ar 82.62 311 P **P 00 25 22.4 +0.5**
comp=Z,0.4nm,0.4s,mb3.8,baz=54,slow=7.3,SNR=4.6

IDC ***15*** *00:39:34.5±11.0, 17.°18S×178.°16W, h338km±106km, mb3.6/7, mb1 3.8/7, mb1mx3.5/14, mbtmp3.6/7, Error ellipse: s-maj=43.8km s-min=26.4km az=76.0*
ISCJB ***15*** *00:39:40.3±1.2, 17.°2S±0.°2×178.°5W±0.°2, h400km, mb3.8/9, Error ellipse: s-maj=31.2km s-min=22.1km az=32.0*
NEIC ***15*** *00:39:47.5±6.7, 17.°27S×178.°56W, h466km±69km, mb3.6/4, Error ellipse: s-maj=33.1km s-min=22.1km az=79.0*
ISC 15 00:39:41.6±1.2, 17.°2S±0.°2×178.°5W±0.°2, h400km, n28, σ0.°59/12, mb3.8/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.93**	**240**	*e*P		**P**	**00 46 31.9**	**+1.0**
	0.4nm,0.4s,mb3.1							
STKA	**Stephens Creek**	**38.93**	**240**	P		**P**	**00 46 32.2**	**+1.2**
	1.7nm,0.4s,mb3.7,baz=84,slow=9.7,SNR=9.7							
WRA	**Warramunga Arr**	**44.71**	**259**	P		**P**	**00 47 16.8**	**-0.5**
	1.1nm,0.3s,mb3.7,baz=90,slow=9.0,SNR=4.5							
ASAR	**Alice Springs**	**44.93**	**254**	P		**P**	**00 47 19.1**	**+0.1**
	8.6nm,0.4s,mb4.5,baz=88,slow=8.2,SNR=114							
FITZ	**Fitzroy Crossi**	**53.09**	**260**	*e*P		**P**	**00 48 20.5**	**+0.4**
	1.4nm,0.4s,mb3.5							
MBWA	**Marble Bar**	**58.20**	**255**	*e*P		**P**	**00 48 55.0**	**-0.9**
	6.6nm,0.6s,mb4.1							
MJAR	**Matsushiro Arr**	**67.30**	**323**	P		**P**	**00 49 55.4**	**+0.5**
	0.7nm,0.5s,mb3.6,baz=154,slow=6.6,SNR=4.5							
SSLB	**Suanglung**	**71.80**	**303**	P		**P**	**00 50 21.6**	**-0.8**
QSPA	**South Pole Qui**	**72.86**	**180**	*e*P		**P**	**00 50 27.4**	**-0.2**
	1.0nm,0.5s,mb3.6							
QSPA	**South Pole Qui**	**72.86**	**180**	P		**P**	**00 50 27.2**	**-0.3**
	0.8nm,0.5s,mb3.5,baz=101,slow=10,SNR=6.4							
ILAR	**Eielson Array**	**85.20**	**13**	P		**P**	**00 51 33.9**	**+0.2**
	0.4nm,0.4s,mb3.5,baz=225,slow=4.9,SNR=8.6							
CMAR	**Chiang Mai Arr**	**88.59**	**290**	P		**P**	**00 51 51.1**	**+0.3**
	0.8nm,0.4s,mb3.8,baz=111,slow=3.4,SNR=4.7							
BRTR	**Keskin Array B**	**144.24**	**315**	PKP		PKPdf	00 58 29.2	-1.6
	0.7nm,0.5s,baz=88,slow=2.5,SNR=8.5							
CLL	**Collm**	**144.76**	**348**	*i* PKPdf		PKPdf	00 58 30.6	-0.8
	comp=Z,8.0nm,1.4s							
ASF	**Jabal al Asfar**	**144.76**	**302**	PKPbc		PKPdf	00 58 31.3	-0.7
	comp=Z,1.3nm,0.8s,baz=292,slow=8.5,SNR=3.6							
MMAI	**Mount Meron Ar**	**145.70**	**304**	PKPbc		PKPbc	00 58 33.6	-1.2
	comp=Z,2.5nm,0.6s,baz=75,slow=7.0,SNR=7.3							
BAIF	**Baives**	**147.14**	**357**	*e*PKP1		PKPbc	00 58 38.2	-0.1
FLN	**La Foliniere**	**148.47**	**3**	*e*PKP1		PKPbc	00 58 40.5	-1.3
	comp=Z,3.1nm,0.6s							
CDF	**Champ du Feu**	**148.51**	**353**	*e*PKP1		PKPbc	00 58 40.9	-1.0
	comp=Z,2.0nm,0.5s							
LDF	**La Druitiere**	**148.65**	**2**	*e*PKP1		PKPbc	00 58 40.8	-1.4
	comp=Z,1.1nm,0.3s							
HINF	**Hinteralfeld**	**149.15**	**353**	*e*PKP1		PKPbc	00 58 42.7	-0.8
DAVOX	**Davos/Dischmat**	**149.70**	**349**	PKPbc		PKPbc	00 58 44.3	-0.6
	comp=Z,2.9nm,0.5s,baz=297,slow=6.8,SNR=11							
LOR	**Lormes**	**149.95**	**357**	*e*PKP1		PKPbc	00 58 44.4	-1.0
	comp=Z,2.2nm,0.5s							
SSF	**Saint Saulge**	**150.17**	**357**	*e*PKP1		PKPbc	00 58 45.0	-0.9
	comp=Z,1.9nm,0.5s							
AVF	**Avril sur Loir**	**150.45**	**357**	*e*PKP1		PKPbc	00 58 45.1	-1.5
	comp=Z,1.2nm,0.5s							
SMF	**Signal de Mont**	**150.57**	**357**	*e*PKP1		PKPbc	00 58 46.5	-0.4
BGF	**Bois d'Agland**	**150.70**	**358**	*e*PKP1		PKPbc	00 58 47.1	-0.1
TCF	**Toulx Ste Croi**	**150.98**	**359**	*e*PKP1		PKPbc	00 58 46.6	-1.3

IDC ***15*** *00:49:41.7±0.8, 0.°30N×25.°13W, h0km, mb4.1/11, mb1 4.2/11, mb1mx4.0/24, mbtmp4.1/11, MS4.1/19, Ms1 4.1/19, ms1mx4.0/29, Error ellipse: s-maj=41.8km s-min=18.1km az=136.0*
NEIC ***15*** *00:49:43.7±0.3, 0.°46N×25.°24W, h10km, mb4.7/16, Error ellipse: s-maj=11.6km s-min=7.0km az=154.0*
GCMT ***15*** *00:49:49.0±0.3, 0.°72N×25.°48W, h13km±1km, MW5.0, Moment Tensor Solution. s23,c26; s77,c111; Moment tensor: Scale 10^16 Nm; Mrr-3.47±.25; Mθθ-0.19±.16; Mφφ3.67±.18; Mrθ-0.97±.52; Mθφ0.72±.11; Mφr0.07±.35; Best double couple: M0 3.80000×10^16 NP1:φs175.00000°, δ46.00000°, λ-112.00000°. NP2:φs25.00000°, δ48.00000°, λ-69.00000°. Principal axes: T 3.8000, Plg1.0000°, Azm100.0000°; N -0.0500, Plg16.0000°, Azm191.0000°; P -3.7400, Plg74.0000°, Azm7.0000°; Data Used: IU IC II G CN.*
ISC 15 00:49:46.3±4.4, 0.°44N±0.°09×25.°24W±0.°07, h25km±31km, n55, σ0.°87/40, mb4.3/25, MS4.2/19, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**12.33**	**240**	*e*Pn		**Pn**	**00 52 39.6**	**-0.8**
LIC	**Lamto**	**20.97**	**74**	*e*P		**P**	**00 54 32.0**	**+4.3**
	140nm,1.6s							
TIC	**Toumodi**	**21.09**	**73**	*e*P		**P**	**00 54 34.7**	**+5.7**
	187nm,1.7s,mb5.2							
DBIC	**Dimbokro**	**21.25**	**73**	*e*P		**P**	**00 54 30.7**	**-0.1**
	17nm,0.8s,mb4.4							
DBIC				LR		LR	01 00 55.9	
DBIC	**Dimbokro**	**21.25**	**73**	P		**P**	**00 54 30.4**	**-0.3**
	21nm,0.9s,mb4.5,baz=247,slow=13,SNR=9.3							
DBIC				LR		LR	01 00 55.9	
	comp=Z,915nm,21.0s,MS4.1,baz=241,slow=32							
KIC	**Kosan Boka**	**21.28**	**74**	*e*P		**P**	**00 54 32.1**	**+1.1**
	59nm,1.1s,mb4.8							
BBGH	**Gun Hill**	**36.27**	**292**	P		**P**	**00 56 48.5**	**+0.6**
TAM	**Tamanrasset**	**37.26**	**51**	*e*P		**P**	**00 56 56.4**	**+0.2**
	20nm,1.7s,mb4.7							
MDT	**Midelt**	**37.61**	**29**	LR		LR	01 14 03.9	
	comp=Z,71nm,19.4s,MS3.5,baz=140,slow=39							
SIV	**San Ignacio**	**38.96**	**244**	P		**P**	**00 57 11.4**	**+0.8**
	0.4nm,0.7s,mb3.2,baz=95,slow=15,SNR=3.7							
CPUP	**Villa Florida**	**40.81**	**227**	*e*P		**P**	**00 57 27.1**	**+1.3**
	2.9nm,0.4s,mb4.3							
CPUP	**Villa Florida**	**40.81**	**227**	LR		LR	01 14 10.3	
	comp=Z,217nm,21.3s,MS4.0,baz=57,slow=36							
ESDC	**Sonseca Array**	**43.61**	**24**	P		**P**	**00 57 48.5**	**0.0**
	1.6nm,0.9s,mb3.8,baz=222,slow=9.2,SNR=8.9							
ESLA	**Sonseca Array**	**43.61**	**24**	*e*P		**P**	**00 57 47.8**	**-0.7**
	2.5nm,1.2s,mb3.8							
LPAZ	**La Paz**	**45.46**	**247**	*e*P		**P**	**00 58 04.3**	**+0.7**
LPAZ				LR		LR	01 16 31.6	
LPAZ	**La Paz**	**45.46**	**247**	P		**P**	**00 58 03.4**	**-0.2**
	1.8nm,1.0s,mb3.9,baz=71,slow=7.0,SNR=6.5							
LPAZ				LR		LR	01 16 31.6	
	comp=Z,1μm,19.5s,MS4.8,baz=34,slow=35							
TSUM	**Tsumeb**	**46.31**	**117**	P		**P**	**00 58 09.4**	**-1.0**
KEST	**Kesra**	**47.60**	**39**	LR		LR	01 18 37.4	
	comp=Z,123nm,19.7s,MS3.9,baz=183,slow=36							
ROSC	**El Rosal**	**49.22**	**276**	LR		LR	01 17 43.0	
	comp=Z,562nm,18.7s,MS4.6,baz=278,slow=34							
NNA	**Nana**	**52.69**	**255**	P		**P**	**00 59 01.0**	**+1.9**
OTAV	**Otavalo**	**53.22**	**270**	*e*P		**P**	**00 59 03.3**	**+0.2**
	1.6nm,0.8s,mb4.0							
LSZ	**Lusaka**	**55.03**	**109**	*e*P		**P**	**00 59 15.5**	**-0.8**
	17nm,1.7s,mb4.8							
BOSA	**Boshof**	**56.24**	**125**	LR		LR	01 19 18.1	
	comp=Z,311nm,18.8s,MS4.4,baz=287,slow=32							

PLCA	**Paso Flores**	**58.03**	**220**	LR		LR	01 25 18.6	
	comp=Z,154nm,18.3s,MS4.2,baz=278,slow=37							
KMBO	**Kilima Mbogo**	**62.50**	**91**	LR		LR	01 24 30.7	
	comp=Z,147nm,20.1s,MS4.2,baz=90,slow=34							
MLR	**Muntele Rosu**	**63.49**	**38**	P		**P**	**01 00 13.9**	**-0.3**
	4.6nm,1.1s,mb4.5,baz=269,slow=5.7,SNR=5.5							
SCHQ	**Schefferville**	**63.97**	**335**	LR		LR	01 23 25.7	
	comp=Z,188nm,19.3s,MS4.3,baz=168,slow=32							
PAYG	**Puerto Ayora**	**65.06**	**269**	P		**P**	**01 00 23.6**	**-1.5**
MMAI	**Mount Meron Ar**	**65.41**	**54**	LR		LR	01 33 14.5	
	comp=Z,86nm,18.8s,MS4.0,baz=255,slow=40							
BRTR	**Keskin Array B**	**66.20**	**46**	P		**P**	**01 00 32.1**	**+0.1**
	1.1nm,0.8s,mb3.9,baz=232,slow=5.8,SNR=5.4							
BRTR				LR		LR	01 30 19.2	
	comp=Z,72nm,19.7s,MS3.9,baz=65,slow=37							
NOA	**NORSAR Array B**	**66.54**	**18**	P		**P**	**01 00 34.0**	**+0.3**
	1.1nm,0.7s,mb4.0,baz=219,slow=6.3,SNR=3.5							
NOA				LR		LR	01 29 21.3	
	comp=Z,43nm,18.5s,MS3.7,baz=225,slow=36							
AKASG	**Malin Array Be**	**67.94**	**34**	P		**P**	**01 00 42.1**	**-0.8**
	0.3nm,0.3s,mb3.8,baz=238,slow=7.3,SNR=12							
AKASG				LR		LR	01 29 12.4	
	comp=Z,71nm,18.3s,MS3.9,baz=235,slow=35							
ATD	**Arta Tunnel**	**68.45**	**78**	LR		LR	01 27 56.4	
	comp=Z,56nm,19.7s,MS3.8,baz=243,slow=34							
PMSA	**Palmer Station**	**70.91**	**197**	*e*P		**P**	**01 00 58.6**	**-2.3**
	28nm,0.9s,mb5.2							
FINES	**FINESS Array B**	**72.12**	**23**	P		**P**	**01 01 08.5**	**+0.2**
	1.5nm,0.6s,mb4.1,baz=226,slow=5.0,SNR=4.9							
SUMG	**Summit**	**72.51**	**356**	*e*P		**P**	**01 01 10.7**	**+0.3**
	7.6nm,1.1s,mb4.5							
SDCO	**Great Sand Dun**	**82.03**	**308**	*e*P		**P**	**01 02 05.1**	**+0.5**
	13nm,1.6s,mb4.6							
ANMO	**Albuquerque**	**82.55**	**305**	*e*P		**P**	**01 02 07.2**	**-0.1**
	6.3nm,1.4s,mb4.5							
LAZ	**Ladron**	**83.07**	**304**	*e*P		**P**	**01 02 08.2**	**-1.8**
	2.0nm,1.4s,mb4.0							
AKTK	**Aktyubinsk**	**85.36**	**40**	P		**P**	**01 02 22.3**	**+1.0**
AKTO	**Aktyubinsk**	**85.36**	**40**	P		**P**	**01 02 22.3**	**+1.0**
	0.7nm,0.5s,mb4.0,baz=303,slow=1.0,SNR=3.0							
REDW	**Red Top Meadow**	**86.51**	**313**	*e*P		**P**	**01 02 27.6**	**+0.5**
	10.0nm,1.5s,mb4.8							
TPAW	**Teton Pass**	**86.58**	**313**	*e*P		**P**	**01 02 26.0**	**-1.5**
	13nm,1.4s,mb5.0							
HWUT	**Hardware Ranch**	**86.96**	**311**	*e*P		**P**	**01 02 28.9**	**-0.5**
WALA	**Waterton Lakes**	**88.80**	**319**	P		**P**	**01 02 37.8**	**-0.3**
MAW	**Mawson**	**89.67**	**157**	P		**P**	**01 02 42.5**	**+0.8**
QSPA	**South Pole Qui**	**90.51**	**180**	*e*P		**P**	**01 02 46.0**	**+0.7**
QSPA				LR		LR	01 38 56.6	
QSPA	**South Pole Qui**	**90.51**	**180**	P		**P**	**01 02 45.9**	**+0.5**
	3.7nm,1.0s,mb4.7,baz=193,slow=1.3,SNR=6.8							
QSPA				LR		LR	01 38 56.6	
	comp=Z,95nm,18.4s,MS4.3,baz=62,slow=33							
CMB	**Columbia Colle**	**93.80**	**308**	P		**P**	**01 03 01.8**	**+0.3**
INK	**Inuvik**	**96.29**	**339**	LR		LR	01 41 38.0	
	comp=Z,92nm,18.4s,MS4.3,baz=100,slow=32							
DLBC	**Dease Lake**	**97.34**	**329**	P		**P**	**01 03 17.2**	**+0.1**
DLBC	**Dease Lake**	**97.34**	**329**	LR		LR	01 43 33.9	
	comp=Z,187nm,19.3s,MS4.6,baz=66,slow=33							
BBB	**Bella Bella**	**97.54**	**323**	LR		LR	01 46 03.4	
	comp=Z,137nm,18.2s,MS4.5,baz=293,slow=35							
MCK	**McKinley**	**103.89**	**338**	Pdif		Pdif	01 03 46.6	+0.1
ASAR	**Alice Springs**	**149.29**	**140**	PKPbc		PKPbc	01 09 30.0	-3.7
	0.8nm,1.0s,baz=204,slow=2.0,SNR=3.0							

ATH ***15*** *01:18:31.2, 34.°74N×24.°00E, h31km±1km, MD3.7/9*
NEIC ***15*** *01:18:31.2, 34.°74N×24.°00E, h31km, MD3.7(ATH), After ATH.*
CSEM ***15*** *01:18:32.2±0.8, 34.°79N×23.°94E, h30km, MD3.7, Error ellipse: s-maj=21.4km s-min=8.8km az=30.0*
ISC 15 01:18:32.3±1.4, 34.°79N±0.°10×23.°96E±0.°09, h26km±5km, n31, σ0.°76/42, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.12**	**67**	*e*Pb		**Pb**	**01 18 37.0**	**-0.3**
GVD				*e*Sb		**Sb**	**01 18 41.3**	**+0.7**
GVD	**Gavdhos**	**0.12**	**67**	*e*PB		**Pb**	**01 18 37.0**	**-0.3**
GVD				*e*SB		**Sb**	**01 18 41.3**	**+0.7**
GVD	**Gavdhos**	**0.12**	**67**	*e*Pb		**Pb**	**01 18 37.0**	**-0.3**
GVD				*e*Sb		**Sb**	**01 18 41.3**	**+0.7**
KARN	**Karanos**	**0.61**	**357**	*e*PN		**Pn**	**01 18 45.1**	**-0.1**
KARN				*e*SN		**Sn**	**01 18 54.7**	**+0.5**
KARN	**Karanos**	**0.61**	**357**	*e*Pn		**Pn**	**01 18 45.1**	**-0.1**
KARN				*e*Sn		**Sn**	**01 18 54.7**	**+0.5**
VAM	**Vamos**	**0.64**	**18**	*e*Pn		**Pn**	**01 18 45.2**	**-0.5**
VAM				*e*Sn		**Sn**	**01 18 55.3**	**+0.2**
VAM	**Vamos**	**0.64**	**18**	*e*PN		**Pn**	**01 18 45.2**	**-0.5**
VAM				*e*SN		**Sn**	**01 18 55.3**	**+0.2**
VAM	**Vamos**	**0.64**	**18**	*e*Pn		**Pn**	**01 18 45.2**	**-0.5**
VAM				*e*Sn		**Sn**	**01 18 55.3**	**+0.2**
SIVA	**Sivas**	**0.74**	**72**	*e*Pn		**Pn**	**01 18 45.4**	**-1.6**
SIVA				*e*Sn		**Sn**	**01 18 56.9**	**-0.4**
SIVA	**Sivas**	**0.74**	**72**	*e*PN		**Pn**	**01 18 45.4**	**-1.6**
SIVA				*e*SN		**Sn**	**01 18 56.9**	**-0.4**
SIVA	**Sivas**	**0.74**	**72**	*e*Pn		**Pn**	**01 18 45.4**	**-1.6**
SIVA				*e*Sn		**Sn**	**01 18 56.9**	**-0.4**
NPS	**Neapolis**	**1.44**	**71**	*e*Pn		**Pn**	**01 18 57.6**	**+1.0**
NPS	**Neapolis**	**1.44**	**71**	*e*PN		**Pn**	**01 18 57.6**	**+1.0**
NPS	**Neapolis**	**1.44**	**71**	*e*Pn		**Pn**	**01 18 57.6**	**+1.0**
ZKR	**Zakros**	**1.89**	**80**	*e*Pn		**Pn**	**01 19 02.9**	**+0.1**
ZKR	**Zakros**	**1.89**	**80**	*e*PN		**Pn**	**01 19 02.9**	**+0.1**
ZKR	**Zakros**	**1.89**	**80**	*e*Pn		**Pn**	**01 19 02.9**	**+0.1**
VLI	**Veliai**	**2.09**	**337**	*e*Pn		**Pn**	**01 19 07.9**	**-1.7**
VLI	**Veliai**	**2.09**	**337**	*e*PB		**Pb**	**01 19 07.9**	**-1.7**
VLI	**Veliai**	**2.09**	**337**	*e*Pb		**Pb**	**01 19 07.9**	**-1.7**
APE	**Apeiranthos**	**2.61**	**29**	*e*Pn		**Pn**	**01 19 13.0**	**+0.3**
APE	**Apeiranthos**	**2.61**	**29**	*e*PN		**Pn**	**01 19 13.0**	**+0.3**
APE	**Apeiranthos**	**2.61**	**29**	*e*Pn		**Pn**	**01 19 13.0**	**+0.3**
KARP	**Karpathos**	**2.73**	**73**	*e*Pn		**Pn**	**01 19 14.9**	**+0.5**
KARP	**Karpathos**	**2.73**	**73**	*e*PN		**Pn**	**01 19 14.9**	**+0.5**
KARP	**Karpathos**	**2.73**	**73**	*e*Pn		**Pn**	**01 19 14.9**	**+0.5**
PYL	**PYLOS**	**2.76**	**320**	*e*PN		**Pn**	**01 19 15.9**	**+1.0**
PYL	**PYLOS**	**2.76**	**320**	*e*Pn		**Pn**	**01 19 15.9**	**+1.0**
ARG	**Arkhangelos**	**3.69**	**66**	*e*Pn		**Pn**	**01 19 27.6**	**+0.1**
ARG	**Arkhangelos**	**3.69**	**66**	*e*PN		**Pn**	**01 19 27.6**	**+0.1**
ARG	**Arkhangelos**	**3.69**	**66**	*e*Pn		**Pn**	**01 19 27.6**	**+0.1**

IDC ***15*** *01:24:00.6±0.8, 10.°89S×107.°48E, h0km, mb4.1/12, mb1 4.2/13, mb1mx4.1/20, mbtmp4.1/13, ML4.0/1, Error ellipse: s-maj=32.4km s-min=15.3km az=51.0*
BJI ***15*** *01:24:01.1, 10.°90S×107.°50E, h10km, mB4.7/5, mb4.6/8*
NEIC ***15*** *01:24:02.2±0.6, 10.°93S×107.°49E, h10km, mb4.3/9, Error ellipse: s-maj=20.6km s-min=8.4km az=48.0*
ISCJB ***15*** *01:24:08.6±1.5, 10.°71S±0.°07×107.°69E±0.°07, h70km±12km, mb4.1/21, Error ellipse: s-maj=14.7km s-min=8.3km az=44.5*
DJA ***15*** *01:24:16.9, 7.°71S×107.°81E, h235km, MLv4.9/12*
ISC 15 01:24:09.6±1.3, 10.°74S±0.°07×107.°65E±0.°07, h61km±10km, n52, σ1.°08/50, mb4.2/21, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**3.17**	**3**	P		**Pn**	**01 24 53.7**	**-3.3**
CISI				S		**Sn**	**01 25 31.0**	**-2.5**
CLJI	**Cilicap**	**3.29**	**24**	P		**Pn**	**01 25 02.3**	**+3.7**
CLJI				S		**Sn**	**01 25 36.5**	**0.0**
SKJI	**Sukabumi**	**3.86**	**344**	P		**Pn**	**01 25 12.1**	**+5.6**
LEM	**Lembang**	**3.89**	**359**	P		**Pn**	**01 25 07.3**	**+0.5**
YOGI	**Yogyakarta**	**3.90**	**42**	P		Px	01 25 17.2	
YOGI				S		**Sn**	**01 25 49.1**	**-2.5**
BJII	**Banjamegara**	**3.95**	**31**	P		**Pn**	**01 25 10.9**	**+3.3**
UGM	**Wanagama**	**3.99**	**45**	P		**Pn**	**01 25 09.3**	**+1.1**
UGM				S		**Sn**	**01 25 53.4**	**-0.3**
PCJI	**Pacitan**	**4.30**	**54**	P		**Pn**	**01 25 16.6**	**+4.1**
SMRI	**Semarang**	**4.58**	**37**	P		**Pn**	**01 25 22.3**	**+5.9**
PWJI	**Pagerwojo**	**4.90**	**57**	P		**Pn**	**01 25 20.7**	**-0.1**
NGJI	**Ngawi**	**5.04**	**49**	P		**Pn**	**01 25 25.4**	**+2.8**
SJI	**Sawahan**	**5.04**	**54**	P		**Pn**	**01 25 23.0**	**+0.4**
RBSI	**Rajabasa**	**5.22**	**339**	P		**Pn**	**01 25 23.6**	**-1.5**
KRKI	**Karangkates**	**5.38**	**62**	P		**Pn**	**01 25 27.4**	**+0.1**
KASI	**Kota Agung**	**6.05**	**329**	P		**Pn**	**01 25 33.5**	**-3.0**
	0.6nm3μm38nm,1.1s							
GMJI	**Gumukmas**	**6.21**	**67**	P		**Pn**	**01 25 39.8**	**+1.1**
	0.8nm3μm165nm,0.8s							
MDSI	**Maura Dua**	**7.10**	**331**	P		**Pn**	**01 25 47.6**	**-3.3**
	0.1nm749nm16nm,0.6s							
NBBI	**Negara**	**7.26**	**72**	P		**Pn**	**01 25 52.9**	**-0.2**
KULM	**Kulim**	**17.38**	**336**	*e*P		**Pn**	**01 28 08.5**	**+0.4**
	7.8nm,0.7s							
KKM	**Kota Kinabalu**	**18.72**	**27**	*e*P		**Pn**	**01 28 24.0**	**-0.3**
	22nm,1.0s							
FITZ	**Fitzroy Crossi**	**18.88**	**115**	*e*P		**Pn**	**01 28 25.1**	**-1.2**
	6.9nm,0.8s							
FITZ	**Fitzroy Crossi**	**18.88**	**115**	P		**Pn**	**01 28 25.3**	**-1.0**
	0.4nm,0.3s,baz=255,slow=11,SNR=7.3							
FITZ				S		**S**	**01 31 38.6**	**-18**
	0.2nm,0.3s,baz=97,slow=22,SNR=3.6							
WRA	**Warramunga Arr**	**27.28**	**113**	P		**P**	**01 29 48.1**	**-0.4**
	1.2nm,0.6s,mb3.6,baz=285,slow=11,SNR=5.1							
ASAR	**Alice Springs**	**28.11**	**121**	P		**P**	**01 29 54.9**	**-1.0**
	0.6nm,0.8s,mb3.3,baz=305,slow=8.0,SNR=4.4							
ASAR				PcP		PcP	01 33 09.7	+0.7
	0.5nm,0.7s,baz=311,slow=1.0,SNR=4.9							
CMAR	**Chiang Mai Arr**	**30.26**	**343**	P		**P**	**01 30 16.1**	**+1.3**
	2.4nm,0.7s,mb4.0,baz=183,slow=8.5,SNR=12							
CHTO	**Chiang Mai**	**30.59**	**344**	*e*P		**P**	**01 30 18.8**	**+1.0**
	5.6nm,1.0s,mb4.3							
COEN	**Coen**	**34.83**	**99**	*e*P		**P**	**01 30 55.2**	**+0.3**
	58nm,0.8s							
STKA	**Stephens Creek**	**37.73**	**129**	P		**P**	**01 31 19.0**	**-0.5**
STKA	**Stephens Creek**	**37.73**	**129**	P		**P**	**01 31 19.0**	**-0.5**
	2.5nm,0.4s,mb4.3,baz=309,slow=9.5,SNR=5.4							
XAN	**Xi'an**	**44.54**	**2**	P		**P**	**01 32 15.8**	**+0.5**
XAN				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.4							
XAN				pmax	pmax			
	comp=Z,20nm,6.7s							
LZH	**Lanzhou**	**46.71**	**356**	*e*P		**P**	**01 32 33.9**	**+1.5**
LZH				pP	pP		01 32 38.5	-10
LZH				sP	sP		01 32 41.0	-14
LZH				pmax	pmax			
	comp=Z,21nm,1.3s,mb4.9							
GTA	**Gaotai**	**50.42**	**352**	*e*P		**P**	**01 33 02.4**	**+1.5**
GTA				pP	pP		01 33 07.5	-9.3
GTA				sP	sP		01 33 11.0	-13
GTA				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.8							
KSRS	**Korea Array**	**51.57**	**21**	P		**P**	**01 33 10.2**	**+0.6**
	comp=Z,0.9nm,0.5s,mb4.0,baz=210,slow=7.2,SNR=4.6							
MAJO	**Matsushiro**	**55.12**	**30**	*e*P		**P**	**01 33 34.9**	**-0.7**
	comp=Z,6.7nm,0.8s,mb4.7							
MJAR	**Matsushiro Arr**	**55.12**	**30**	P		**P**	**01 33 34.5**	**-1.1**
	comp=Z,1.6nm,0.7s,mb4.2,baz=211,slow=7.7,SNR=5.1							
SONM	**Songino Array**	**58.32**	**359**	P		**P**	**01 33 57.8**	**-0.2**
	comp=Z,2.8nm,1.0s,mb4.2,baz=178,slow=6.5,SNR=7.7							
EKS2	**Erkin-Say**	**61.52**	**332**	*e*P		**P**	**01 34 20.4**	**+0.3**
	comp=Z,1.3nm,0.6s,mb4.2							
MK31	**Makanchi Array**	**61.60**	**340**	*e*P		**P**	**01 34 20.5**	**-0.1**
KURK	**Kurchatov**	**66.21**	**340**	P		**P**	**01 34 50.8**	**0.0**
	comp=Z,4.9nm,0.6s,mb4.7,baz

GLHS	**Glhisar (BURDU**	**1.61**	**322**	*e*Pn	**Pn**	**01 36 10.0**	**+1.6**
GOLH	**Golhisar**	**1.65**	**325**	*i* P	**Pn**	**01 36 08.6**	**-0.3**
GOLH	**Golhisar**	**1.65**	**325**	*i* P	**Pn**	**01 36 08.6**	**-0.3**
HDMB	**Hadim**	**1.77**	**52**	*e*PN	**Pb**	**01 36 11.6**	**-2.0**
HDMB				*e*SN	**Sb**	**01 36 34.2**	**-1.2**
HDMB	**Hadim**	**1.77**	**52**	*e*Pn	**Pb**	**01 36 11.4**	**-2.3**
HDMB				*e*Sn	**Sb**	**01 36 34.5**	**-0.9**
LEF	**Lefka**	**1.91**	**113**	*e*PN	**Pn**	**01 36 11.3**	**-1.2**
LEF	**Lefka**	**1.91**	**113**	*e*Pn	**Pn**	**01 36 10.5**	**-2.1**
ARG	**Arkhangelos**	**2.14**	**279**	*e*P	**Pn**	**01 36 15.1**	**-0.6**
DNZL	**Cakiroluk**	**2.25**	**323**	*i* P	**Pn**	**01 36 15.9**	**-1.4**
DNZL				*i* S	**Sb**	**01 36 51.3**	**+1.9**
DNZL	**Cakiroluk**	**2.25**	**323**	*i* P	**Pn**	**01 36 15.9**	**-1.3**
DNZL				*i* S	**Sb**	**01 36 51.3**	**+2.0**
DENT	**Denizli**	**2.31**	**324**	*e*PN	**Pn**	**01 36 19.4**	**+1.4**
DENT	**Denizli**	**2.31**	**324**	*e*Pn	**Pn**	**01 36 19.4**	**+1.4**
YER	**Yerkesik**	**2.34**	**303**	*e*PN	**Pn**	**01 36 19.9**	**+1.6**
YER				*e*SN	**Sn**	**01 36 47.1**	**+1.0**
YER	**Yerkesik**	**2.34**	**303**	*e*Pn	**Pn**	**01 36 20.0**	**+1.6**
YER				*e*Sn	**Sn**	**01 36 47.1**	**+1.0**
LFK	**Lefkose**	**2.35**	**104**	*e*PN	**Pn**	**01 36 17.4**	**-1.2**
LFK				*e*SN	**Sn**	**01 36 46.5**	**0.0**
LFK	**Lefkose**	**2.35**	**104**	*e*Pn	**Pn**	**01 36 17.4**	**-1.2**
LFK				*e*Sn	**Sn**	**01 36 46.6**	**0.0**
IKL	**Isikli**	**2.41**	**81**	*e*PN	**Pn**	**01 36 19.6**	**+0.3**
IKL	**Isikli**	**2.41**	**81**	*e*Pn	**Pn**	**01 36 19.6**	**+0.2**
KONT	**Konya--Tatoy**	**2.43**	**32**	*e*PN	**Pn**	**01 36 21.4**	**+1.8**
KONT	**Konya--Tatoy**	**2.43**	**32**	*e*Pn	**Pn**	**01 36 21.4**	**+1.8**
LADK	**Ladik-KONYA**	**2.65**	**29**	*e*PN	**Pn**	**01 36 24.1**	**+1.5**
LADK	**Ladik-KONYA**	**2.65**	**29**	*e*Pn	**Pn**	**01 36 24.1**	**+1.5**
KHAL	**Karahalli**	**2.67**	**338**	*i* P	**Pn**	**01 36 23.2**	**+0.2**
KHAL				*e*S	**Sn**	**01 36 52.0**	**-2.3**
KHAL	**Karahalli**	**2.67**	**338**	*i* P	**Pn**	**01 36 52.2**	**+0.3**
KHAL				*e*S	**Sn**	**01 36 52.0**	**-2.3**
DAT	**Datca**	**2.69**	**289**	*e*PN	**Pn**	**01 36 23.6**	**+0.4**
DAT	**Datca**	**2.69**	**289**	*e*Pn	**Pn**	**01 36 23.7**	**+0.5**
MLSB	**Milas**	**2.77**	**301**	*e*PN	**Pn**	**01 36 24.7**	**+0.4**
MLSB	**Milas**	**2.77**	**301**	*e*Pn	**Pn**	**01 36 25.4**	**+1.1**
EREN	**Erenkoy**	**2.81**	**96**	*e*PN	**Pn**	**01 36 24.5**	**-0.4**
EREN	**Erenkoy**	**2.81**	**96**	*e*Pn	**Pn**	**01 36 25.1**	**+0.2**
BOLV	**Bolvadin**	**2.83**	**3**	*i* P	**Pn**	**01 36 23.6**	**-1.5**
BOLV	**Bolvadin**	**2.83**	**3**	*i* P	**Pn**	**01 36 23.6**	**-1.5**
AYDN	**Tasoluk**	**2.90**	**308**	*i* P	**Pn**	**01 36 26.2**	**+0.1**
AYDN				*e*S	**Sn**	**01 36 56.7**	**-3.3**
AYDN	**Tasoluk**	**2.90**	**308**	*i* P	**Pn**	**01 36 26.2**	**+0.1**
AYDN				*e*S	**Sn**	**01 36 56.7**	**-3.3**
BDRM	**Kayabasi**	**2.91**	**295**	*i* P	**Pn**	**01 36 24.0**	**-2.2**
BDRM				*i* S	**Sn**	**01 36 58.4**	**-1.7**
BDRM	**Kayabasi**	**2.91**	**295**	*i* P	**Pn**	**01 36 24.0**	**-2.2**
BDRM				*i* S	**Sn**	**01 36 58.4**	**-1.7**
KARP	**Karpathos**	**2.93**	**264**	*e*P	**Pn**	**01 36 26.3**	**-0.3**
BODT	**Bodrum**	**3.00**	**294**	*e*PN	**Pn**	**01 36 26.3**	**-1.2**
BODT	**Bodrum**	**3.00**	**294**	*e*Pn	**Pn**	**01 36 26.9**	**-0.6**
KULA	**Kula-Manisa**	**3.10**	**328**	*e*PN	**Pn**	**01 36 30.5**	**+1.6**
KULA	**Kula-Manisa**	**3.10**	**328**	*e*Pn	**Pn**	**01 36 29.4**	**+0.5**
ALT	**Altintas**	**3.20**	**351**	*e*PN	**Pn**	**01 36 31.8**	**+1.6**
ALT	**Altintas**	**3.20**	**351**	*e*Pn	**Pn**	**01 36 32.0**	**+1.8**
GDZ	**Gediz**	**3.35**	**343**	*i* P	**Pn**	**01 36 30.6**	**-1.7**
GDZ				*i* S	**Sn**	**01 37 07.9**	**-3.1**
GDZ	**Gediz**	**3.35**	**343**	*i* P	**Pn**	**01 36 30.6**	**-1.6**
GDZ				*i* S	**Sn**	**01 37 07.9**	**-3.1**
GULE	**Gulek**	**3.53**	**66**	*i* P	**Pn**	**01 36 37.3**	**+2.5**
GULE	**Gulek**	**3.53**	**66**	*i* P	**Pn**	**01 36 37.3**	**+2.5**
DEMI	**Demirci**	**3.54**	**333**	*i* P	**Pn**	**01 36 34.2**	**-0.6**
DEMI	**Demirci**	**3.54**	**333**	*i* P	**Pn**	**01 36 34.2**	**-0.6**
KARA	**Karaisali**	**3.73**	**67**	*e*PN	**Pn**	**01 36 39.0**	**+1.4**
KARA	**Karaisali**	**3.73**	**67**	*e*Pn	**Pn**	**01 36 39.8**	**+1.6**
DURS	**Dursunbey**	**4.12**	**335**	*i* P	**Pn**	**01 36 42.4**	**-0.5**
DURS				*i* S	**Sn**	**01 37 25.9**	**-4.1**
DURS	**Dursunbey**	**4.12**	**335**	*i* P	**Pn**	**01 36 42.4**	**-0.4**
DURS				*i* S	**Sn**	**01 37 25.9**	**-4.1**
NPS	**Neapolis**	**4.23**	**263**	*e*P	**Pn**	**01 36 44.9**	**+0.5**
HTY	**Hatay**	**4.38**	**85**	*e*PN	**Pn**	**01 36 47.5**	**+1.1**
HTY	**Hatay**	**4.38**	**85**	*e*Pn	**Pn**	**01 36 47.1**	**+0.6**
KOZT	**Kozan**	**4.38**	**67**	*e*PN	**Pn**	**01 36 47.2**	**+0.7**
SIVA	**Sivas**	**4.92**	**262**	*e*P	**Pn**	**01 36 53.8**	**-0.1**
VAM	**Vamos**	**5.35**	**267**	*e*P	**Pn**	**01 36 56.3**	**-3.5**
GVD	**Gavdhos**	**5.54**	**261**	*e*P	**Pn**	**01 37 02.1**	**-0.3**
KARN	**Karanos**	**5.58**	**267**	*e*P	**Pn**	**01 37 03.0**	**+0.1**

JMA 15 01:40:22.5±0.2, 31°.47N×141°.08E, h78km, M3.8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.96**	**327**	P	Pn	01 40 54.2	+0.5
JHJ2				S	Sn	01 41 18.5	+1.0
BSO1	**Boso 1**	**3.18**	**358**	P	Pn	01 41 11.3	+1.1
BSO1				S	Sn	01 41 52.9	+6.0
BSO3	**Boso 3**	**3.36**	**352**	P	Pn	01 41 13.4	+0.8
BSO3				S	Sn	01 41 56.5	+5.2
BSO4	**Boso 4**	**3.56**	**350**	P	Pn	01 41 16.9	+1.4
BSO4				S	Sn	01 41 59.6	+3.2
CBIJ	**Chichi jima**	**4.46**	**167**	P	Pn	01 41 23.4	-4.3
JHU	**Hanno**	**4.62**	**342**	P	Pn	01 41 31.2	+1.4
JHU				S	Sn	01 42 22.6	+0.4
JYT	**Yasato**	**4.80**	**351**	P	Pn	01 41 33.5	+1.2
JRY	**Ryogami san**	**4.88**	**339**	P	Pn	01 41 35.2	+1.8
JRY				S	Sn	01 42 30.7	+2.1
JHO	**Hitachi**	**5.14**	**355**	P	Pn	01 41 37.4	+0.4
JHO				S	Sn	01 42 35.0	0.0
MAT	**Matsushiro**	**5.59**	**336**	P	Pn	01 41 44.1	+1.0
MAT				S	Sn	01 42 47.0	+1.0
MAT	**Matsushiro**	**5.59**	**336**	P	Pn	01 41 44.6	+1.5
MAT				S	Sn	01 42 47.2	+1.2
JFK	**Kawauchi**	**5.88**	**358**	P	Pn	01 41 47.0	-0.1
JFK				S	Sn	01 42 50.2	-2.9

NEIC ***15*** *02:05:20.6, 18°.19N×68°.43W, h94km, MD3.4(RSPR), After RSPR.*

RSPR 15 02:05:20.6, 18°.19N×68°.43W, h94km±7km, MD3.4/11, 7C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRPR	**Cabo Rojo, PR**	**1.27**	**98⇑**	*e*P	Pn	02 05 42.9	-0.8
LSP	**Las Mesas**	**1.27**	**90⇓**	*e*P	Pn	02 05 44.0	+0.2
SMN1	**Samana, DR**	**1.28**	**321⇑**	*e*P	Pn	02 05 43.6	-0.3
SMN1				*e*S	Sn	02 06 01.0	-0.5
AGPR	**Aguadilla, PR**	**1.28**	**77⇓**	*e*P	Pn	02 05 43.8	-0.1
AGPR				*e*S	Sn	02 06 00.7	-0.8
LRS	**Lares**	**1.51**	**86⇑**	*e*P	Pn	02 05 47.1	+0.4
LRS				*e*S	Sn	02 06 06.6	+0.2
AOPR	**Arecibo Observ**	**1.60**	**84⇑**	*e*P	Pn	02 05 47.1	-0.7
AOPR				*e*S	Sn	02 06 08.5	0.0
OBIP	**Obispado Ponce**	**1.74**	**94⇓**	*e*P	Pn	02 05 48.8	-0.8
CELP	**Cerrillos**	**1.76**	**93⇓**	*e*P	Pn	02 05 49.0	-0.9
CBYP	**Canovanas**	**2.44**	**88⇑**	*e*P	Pn	02 05 58.0	-0.8
CBYP				*e*S	Sn	02 06 28.7	+0.5
HUMP	**Col San Antoni**	**2.45**	**91⇑**	*e*P	Pn	02 05 58.5	-0.4
HUMP				*e*S	Sn	02 06 28.6	+0.3
MTP	**Monte Pirata**	**2.73**	**91⇑**	*e*P	Pn	02 06 02.5	-0.2
SDDR	**Presa de Saban**	**2.83**	**287**	*e*Pn	Pn	02 06 07.6	+3.7
SDDR				*e*Sn	Sn	02 06 38.6	+1.3

IDC ***15*** *02:10:42.8±3.2, 8°.86S×110°.19E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.7/17, mbtmp3.9/5, Error ellipse: s-maj=151.6km s-min=22.5km az=54.0*

ISCJB ***15*** *02:10:52.4±0.9, 9°.06S±0°.09×110°.35E±0°.04, h80km±13km, mb3.7/5, Error ellipse: s-maj=15.2km s-min=5.9km az=11.0*

DJA ***15*** *02:10:54, 9°.04S×110°.36E, h48km, MLv4.2/12*

ISC 15 02:10:53.8±0.9, 9°.00S±0°.09×110°.37E±0°.04, h82km±10km, n18, σ0°.95/28, mb3.7/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**1.09**	**8**	P	**Pn**	**02 11 13.9**	**-0.1**
UGM				S	**Sn**	**02 11 27.9**	**-1.2**
PCJI	**Pacitan**	**1.13**	**45**	P	**Pn**	**02 11 15.7**	**+1.2**
PCJI				S	**Sn**	**02 11 28.3**	**-1.8**
YOGI	**Yogyakarta**	**1.17**	**357**	P	**Pn**	**02 11 14.0**	**-1.1**
YOGI				S	**Sn**	**02 11 30.2**	**-0.8**
PWJI	**Pagerwojo**	**1.72**	**56**	P	**Pn**	**02 11 21.8**	**-0.2**
PWJI				S	**Sn**	**02 11 42.6**	**-0.9**
BJII	**Banjamegara**	**1.77**	**339**	P	**Pn**	**02 11 23.2**	**+0.4**
BJII				S	**Sn**	**02 11 45.7**	**+0.9**
CLJI	**Cilicap**	**1.84**	**313**	S	**Sn**	**02 11 46.2**	**-0.2**
SJI	**Sawahan**	**1.87**	**48**	P	**Pn**	**02 11 23.5**	**-0.5**
SJI				S	**Sn**	**02 11 47.4**	**+0.4**
SMRI	**Semarang**	**1.94**	**2**	P	**Pn**	**02 11 24.9**	**0.0**
SMRI				S	**Sn**	**02 11 50.4**	**+1.8**
NGJI	**Ngawi**	**1.95**	**34**	P	**Pn**	**02 11 27.1**	**+2.0**
NGJI				S	**Sn**	**02 11 50.0**	**+1.1**
KRKI	**Karangkates**	**2.23**	**68**	P	**Pn**	**02 11 28.4**	**-0.3**
KRKI				S	**Sn**	**02 11 56.3**	**+0.8**
CISI	**Cisompet, Garu**	**2.90**	**299**	P	**Pn**	**02 11 37.9**	**+0.1**
CISI				S	**Sn**	**02 12 12.0**	**+0.3**
GMJI	**Gumukmas**	**3.13**	**77**	P	**Pn**	**02 11 40.8**	**-0.1**
JAGI	**Jajag, Banyuwa**	**3.78**	**82**	P	**Pn**	**02 11 49.2**	**-0.5**
WRA	**Warramunga Arr**	**25.60**	**118**	P	**P**	**02 16 15.4**	**-0.2**
	1.1nm,0.5s,mb3.5,baz=289,slow=11,SNR=4.7						
ASAR	**Alice Springs**	**26.82**	**126**	P	**P**	**02 16 27.6**	**+1.1**
	0.4nm,0.6s,mb3.1,baz=307,slow=9.9,SNR=6.6						
STKA	**Stephens Creek**	**36.84**	**133**	P	**P**	**02 17 55.0**	**+0.8**
	0.9nm,0.4s,mb4.0,baz=292,slow=11,SNR=2.8						
SONM	**Songino Array**	**56.69**	**357**	P	**P**	**02 20 27.5**	**-1.1**
	0.9nm,0.5s,mb4.1,baz=176,slow=8.6,SNR=4.2						
ZALV	**Zalesovo Beam**	**66.32**	**344**	P	**P**	**02 21 31.6**	**-1.8**
	1.1nm,0.6s,mb3.9,baz=127,slow=3.9,SNR=5.9						

KISR ***15*** *02:11:56.3±0.8, 31°.58N×50°.29E, h21km±268km, ML3.0*

ISCJB ***15*** *02:11:58.5±0.4, 31°.59N±0°.04×50°.22E±0°.05, h10km, Error ellipse: s-maj=7.1km s-min=3.5km az=41.9*

TEH ***15*** *02:11:58.8, 31°.48N×50°.18E, h5km*

ISC 15 02:11:59.8±0.4, 31°.58N±0°.03×50°.23E±0°.05, h10km, n19, σ0°.79/28, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKLH	**Kolahrood**	**2.07**	**33**	*e*Pn	**Pn**	**02 12 35.3**	**+0.6**
IKLH				*e*Sg	**Sg**	**02 13 06.1**	**-0.4**
IKLH				*e*		02 13 14.8	
	comp=Z,2µm,0.5s						
ISAD	**Sadrabad**	**2.96**	**83**	*e*Pn	**Pn**	**02 12 47.5**	**+0.6**
ISAD				*e*		02 13 58.7	
	comp=Z,930nm,0.4s						
IPAR	**Pars**	**2.98**	**125**	*e*Pn	**Pn**	**02 12 46.4**	**-0.8**
IPAR				*e*Sg	**Sg**	**02 13 31.1**	**-4.6**
IPAR				*e*		02 13 58.8	
	comp=Z,766nm,0.4s						
MIB	**Mutribah**	**3.06**	**235**	*e*P	**Pn**	**02 12 47.7**	**-0.5**
MIB				*e*S	**Sn**	**02 13 25.4**	**+0.6**
MIB				AML	AML	02 13 27.2	
	comp=Z,89nm,0.6s						
ISFB	**Sefidab**	**3.24**	**31**	*e*Pn	**Pn**	**02 12 51.0**	**+0.3**
ISFB				*e*		02 13 52.4	
	comp=Z,978nm,0.6s						
KBD	**Kabd**	**3.25**	**223**	*e*P	**Pn**	**02 12 49.7**	**-1.2**
KBD				*e*S	**Sn**	**02 13 30.1**	**+0.5**
KBD				AML	AML	02 13 31.1	
	comp=Z,28nm,0.5s						
ISRV	**Sarvestan**	**3.32**	**131**	*e*Pn	**Pn**	**02 12 50.6**	**-1.2**
ISRV				*e*		02 14 08.8	
	comp=Z,658nm,0.4s						
IKOM	**Komasi**	**3.45**	**319**	*e*Pn	**Pn**	**02 12 53.7**	**+0.1**
IKOM				*e*		02 12 54.4	
	comp=Z,1µm,0.2s						
QRN	**Al-Qurain**	**3.46**	**216**	*e*P	**Pn**	**02 12 52.7**	**-1.1**
QRN				*e*S	**Sn**	**02 13 35.7**	**+0.8**
QRN				AML	AML	02 13 38.4	
	comp=Z,35nm,0.3s						
NAY	**Al-Naaiem**	**3.47**	**229**	*e*P	**Pn**	**02 12 53.4**	**-0.5**
NAY				*e*S	**Sn**	**02 13 36.2**	**+1.1**
NAY				AML	AML	02 13 40.6	
	comp=Z,20nm,0.5s						
RDF	**Al-Radifah**	**3.52**	**222**	*e*P	**Pn**	**02 12 53.9**	**-0.7**
ICHK	**Chekchek**	**3.61**	**78**	*e*Pn	**Pn**	**02 12 56.3**	**+0.5**
ICHK				*e*		02 13 46.7	
	comp=Z,307nm,0.3s						
IMEH	**Mehriz**	**3.75**	**92**	*e*Pn	**Pn**	**02 12 57.5**	**-0.2**
IMEH				*e*		02 14 10.7	
	comp=Z,221nm,0.5s						
IRAZ	**Razeghan**	**3.82**	**356**	*e*Pn	**Pn**	**02 12 59.3**	**+0.6**
IRAZ				*e*Sg	**Sg**	**02 14 01.7**	**-0.8**
IRAZ				*e*		02 14 05.6	
	comp=Z,545nm,0.3s						
IVIS	**Veis**	**4.08**	**317**	*e*Pn	**Pn**	**02 13 01.3**	**-1.0**
IVIS				*e*		02 14 00.4	
	comp=Z,346nm,0.1s						
IDMV	**Damavand**	**4.26**	**20**	*e*	**Pg**	**02 13 20.6**	**-0.8**
	comp=Z,267nm,0.3s						
IDMV				*e*Pn	**Pn**	**02 13 05.8**	**+1.1**
ILAS	**Lasjerd**	**4.42**	**30**	*e*Pn	**Pn**	**02 13 07.6**	**+0.7**
ILAS				*e*		02 14 30.0	
	comp=Z,204nm,0.2s						
IBAF	**Bafgh**	**4.55**	**89**	*e*	**Pn**	**02 13 11.4**	**+2.6**
	comp=Z,151nm,0.2s						
IBAF				*e*Pn	**Pn**	**02 13 08.5**	**-0.3**
ISHM	**Shahmirzad**	**4.93**	**30**	*e*Pn	**Pn**	**02 13 14.6**	**+0.7**
ISHM				*e*		02 14 50.7	
	comp=Z,194nm,0.2s						

IDC 15 02:19:42.7±1.5, 21°.10S×113°.95W, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.7/12, mbtmp3.5/3, MS3.9/6, Ms1 3.9/6, ms1mx3.8/11, Error ellipse: s-maj=62.8km s-min=30.1km az=37.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**7.33**	**146**	LR	LR	02 23 43.2	
	comp=Z,2µm,20.2s,baz=143,slow=33						
RKT	**Rikitea**	**19.59**	**260**	*e*LR	LR	02 28 20.7	
	291nm,25.8s						
TAOE	**Nuku Hiva Isla**	**28.03**	**292**	*e*LR	LR	02 32 24.2	
	867nm,27.0s						
PPT	**Papeete**	**33.76**	**270**	*e*S	S	02 31 50.6	-0.5
	74nm,25.0s						
PPT				*e*LQ		02 33 54.8	
	305nm,26.5s						
PPT				*e*LR	LR	02 35 08.5	
	182nm,24.8s,baz=115						
PPT	**Papeete**	**33.76**	**270**	LR	LR	02 35 43.8	
	comp=Z,143nm,20.3s,baz=166,slow=28						
PLCA	**Paso Flores**	**41.56**	**128**	LR	LR	02 40 52.3	
	comp=Z,537nm,20.6s,baz=53,slow=30						
CFAA	**Coronel Fontan**	**42.01**	**114**	P	P	02 27 35.0	-0.9
	0.1nm,0.5s,baz=262,slow=7.1,SNR=2.2						
LPAZ	**La Paz**	**43.55**	**92**	P	P	02 27 49.9	+1.3
	1.8nm,1.1s,baz=278,slow=7.1,SNR=4.1						
LPAZ				LR	LR	02 40 53.9	
	comp=Z,50nm,19.2s,baz=89,slow=29						
ROSC	**El Rosal**	**46.63**	**61**	LR	LR	02 43 26.6	
	comp=Z,106nm,18.4s,baz=200,slow=30						
CPUP	**Villa Florida**	**51.76**	**107**	LR	LR	02 45 17.2	
	comp=Z,91nm,18.2s,baz=4.9,slow=30						
NVAR	**Mina Array Bea**	**59.35**	**356**	P	P	02 29 46.2	-0.3
	0.8nm,0.8s,baz=173,slow=8.2,SNR=3.9						
BRTR	**Keskin Array B**	**146.69**	**49**	PKPbc	PKPbc	02 39 26.9	+0.3
	0.6nm,0.8s,baz=344,slow=4.7,SNR=3.3						
BVAR	**Borovoye Array**	**147.96**	**355**	PKPbc	PKPbc	02 39 29.3	-0.4
	0.7nm,0.4s,baz=69,slow=4.8,SNR=2.9						
CMAR	**Chiang Mai Arr**	**148.97**	**271**	PKPbc	PKPbc	02 39 32.9	-0.5
	1.0nm,0.4s,baz=66,slow=0.9,SNR=6.1						

IDC ***15*** *02:36:52.9±0.6, 7°.58S×154°.71E, h0km, mb4.8/16, mb1 4.9/17, mb1mx4.9/18, mbtmp4.8/17, ML3.9/1, MS3.8/6, Ms1 3.9/6, ms1mx3.7/13, Error ellipse: s-maj=23.4km s-min=14.7km az=97.0*

ISCJB ***15*** *02:36:53.9±1.3, 7°.56S±0°.05×154°.74E±0°.04, h15km±8km, mb5.1/88, MS4.1/14, Error ellipse: s-maj=8.6km s-min=6.3km az=146.2*

BJI ***15*** *02:36:54.9, 7°.26S×154°.94E, h20km, mB5.1/28, mb5.0/49, Ms4.8/27, Ms7 4.6/25*

NEIC ***15*** *02:36:54.7±2.5, 7°.56S×154°.75E, h10km±15km, mb5.2/43, Error ellipse: s-maj=6.6km s-min=5.6km az=105.0*

MOS ***15*** *02:36:59.0±0.8, 7°.10S×154°.62E, h33km, mb5.2/21, Error ellipse: s-maj=14.3km s-min=8.6km az=109.8*

ISC 15 02:36:58.7±1.0, 7°.62S±0°.05×154°.79E±0°.04, h38km±9km, h36km±1.0km:pP-P, n237, σ0°.97/156, mb5.1/88, MS4.1/14, 1C-3D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.75**	**256**	*e*Pn	**Pn**	**02 38 49.1**	**0.0**
PMG				*e*Sn	**Sn**	**02 40 16.9**	**+1.2**
PMG	**Port Moresby**	**7.75**	**256**	*e*P	**Pn**	**02 38 50.1**	**+1.0**
PMG				pmax	pmax		
	comp=Z,65nm,0.8s						
COEN	**Coen**	**13.03**	**240**	*e*Pn	**Pn**	**02 40 01.4**	**+0.1**
CTA	**Charters Tower**	**14.90**	**213**	Pn	**Pn**	**02 40 24.2**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=309,slow=8.3,SNR=3.1						
CTA				LR	LR	02 45 19.7	
	comp=Z,406nm,20.1s,baz=37,slow=34						
CTAO	**Charters Tower**	**14.90**	**213**	*e*Pn	**Pn**	**02 40 26.9**	**0.0**
NOUC	**Port Laguerre**	**18.18**	**144**	*e*P	**Pn**	**02 41 08.9**	**+0.6**
DZM	**Mont Dzumac**	**18.24**	**143**	*e*P	**Pn**	**02 41 10.2**	**+1.2**
	comp=Z,127nm,1.3s						
DZM				*e*LR	LR	02 45 30.8	
	comp=Z,2µm,24.4s						
DZM	**Mont Dzumac**	**18.24**	**143**	*e*P	**Pn**	**02 41 10.0**	**+1.0**
DZM	**Mont Dzumac**	**18.24**	**143**	*e*P	**Pn**	**02 41 10.1**	**+1.1**
	comp=Z,237nm,1.3s						
KAKA	**Kakadu**	**22.57**	**255**	*e*P	**P**	**02 41 54.0**	**-1.8**
	comp=Z,28nm,0.6s,mb4.9						
KAKA	**Kakadu**	**22.57**	**255**	*e*P	**P**	**02 41 53.9**	**-2.0**
	comp=Z,172nm,1.0s,mb5.4						
ARMA	**Armidale**	**22.88**	**187**	*e*P	**P**	**02 41 58.8**	**-0.2**
GUMO	**Guam**	**23.25**	**335**	*e*P	**P**	**02 42 01.2**	**-1.8**
	comp=Z,106nm,0.9s,mb5.3						
GUMO	**Guam**	**23.25**	**335**	P	**P**	**02 41 60.0**	**-3.1**
	comp=Z,71nm,0.7s,mb5.2,baz=171,slow=11,SNR=6.6						
GUMO				LR	LR	02 50 00.5	
	comp=Z,174nm,20.9s,MS3.5,baz=158,slow=34						
GUMO	**Guam**	**23.25**	**335**	*e*P	**P**	**02 42 01.3**	**-1.7**
GUMO				pmax	pmax		
	comp=Z,106nm,0.9s,mb5.3						
WRA	**Warramunga Arr**	**23.30**	**236**	P	**P**	**02 42 02.0**	**-1.6**
	comp=Z,17nm,0.8s,mb4.5,baz=60,slow=9.6,SNR=45						
WRA				LR	LR	02 50 36.1	
	comp=Z,134nm,19.5s,MS3.4,baz=55,slow=35						
ASAR	**Alice Springs**	**25.61**	**229**	P	**P**	**02 42 23.8**	**-0.9**
	comp=Z,3.5nm,0.8s,mb4.0,baz=62,slow=9.1,SNR=34						
STKA	**Stephens Creek**	**27.09**	**205**	P	**P**	**02 42 36.6**	**-1.3**
	comp=Z,4.9nm,0.7s,mb4.2,baz=6.2,slow=7.4,SNR=7.2						
STKA				LR	LR	02 53 22.6	
	comp=Z,421nm,18.3s,MS4.0,baz=26,slow=36						
FITZ	**Fitzroy Crossi**	**30.22**	**247**	*e*P	**P**	**02 43 04.8**	**-1.2**
	comp=Z,11nm,0.6s,mb4.8						
FORT	**Forrest**	**34.00**	**224**	*e*P	**P**	**02 43 36.0**	**-3.0**
	comp=Z,9.2nm,0.6s,mb4.9						
TTSI	**Tana Toraja**	**35.10**	**276**	P	sP	02 44 01.0	-2.9
PCI	**Palu**	**35.47**	**279**	P	**P**	**02 43 53.6**	**+1.7**
MBWA	**Marble Bar**	**36.42**	**245**	*e*P	**P**	**02 43 59.9**	**-0.1**
	comp=Z,39nm,1.4s,mb5.1						
RPZ	**Rata Peaks**	**38.68**	**161**	P	**P**	**02 44 19.0**	**+0.3**
	comp=Z,25nm,1.1s,mb4.9,baz=131,slow=12,SNR=7.8						
KKM	**Kota Kinabalu**	**40.80**	**288**	*e*P	**P**	**02 44 36.1**	**-0.7**
	comp=Z,12nm,0.8s,mb4.6						
KLBR	**Kellerberrin**	**41.93**	**230**	*e*P	**P**	**02 44 44.2**	**-1.7**
	comp=Z,17nm,1.1s,mb4.6						
YULB	**Yu-li**	**44.96**	**314**	*e*P	**P**	**02 45 10.2**	**-0.2**
	comp=Z,9.9nm,0.7s,mb4.8						
NACB	**Ninganchiao**	**45.25**	**315**	*e*P	**P**	**02 45 13.1**	**+0.5**
	comp=Z,1nm,0.8s,mb5.0						
MJAR	**Matsushiro Arr**	**46.60**	**342**	P	**P**	**02 45 21.4**	**-1.6**
	comp=Z,8.7nm,0.7s,mb4.8,baz=166,slow=8.1,SNR=36						
MJAR				PcP	PcP	02 46 57.2	+0.5
	comp=Z,3.5nm,0.8s,baz=158,slow=4.2,SNR=4.9						
MAJO	**Matsushiro**	**46.60**	**342**	*e*P	**P**	**02 45 21.8**	**-1.3**
	comp=Z,20nm,0.8s,mb5.1						
MAJO				*e*PcP	PcP	02 46 55.5	-1.2
MAJO	**Matsushiro**	**46.60**	**342**	*e*P	**P**	**02 45 21.8**	**-1.3**
MAJO				*e*		02 46 55.5	
MAJO				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1					

BJI S **S** 02 55 06.6 +3.9
BJI pmax pmax
comp=Z,15nm,0.6s,mb5.2
BJI pmax pmax
comp=Z,150nm,5.5s
BJI LR LR
comp=N,150nm,23.8s,MS4.2
BJI LR LR
comp=E,160nm,23.8s,MS4.2
BJI LR LR
comp=Z,120nm,22.8s,MS4.0
XAN Xi'an 60.01 317 P **P** **02 47 01.5 -0.2**
XAN pP pP 02 47 11.9 -1.1
XAN pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
XAN pmax pmax
comp=Z,15nm,4.8s
XAN LR LR
comp=N,69nm,17.0s,MS3.9
XAN LR LR
comp=E,50nm,19.3s,MS3.9
XAN LR LR
comp=Z,49nm,19.6s,MS3.6
KLR Kul'dur 60.09 343 *e*P **P** **02 46 58.0 -4.0**
KMI Kunming 60.19 305 ⇓P **P** **02 47 04.8 +1.6**
KMI pP pP 02 47 15.5 +1.1
KMI sP sP 02 47 19.8 +1.0
KMI S **S** **02 55 15.8 +1.2**
KMI SS SS 02 59 14.6 +2.1
KMI pmax pmax
comp=Z,22nm,1.1s,mb5.1
KMI LR LR
comp=N,110nm,8.6s
KMI LR LR
comp=E,68nm,10.2s
KMI LR LR
comp=Z,190nm,25.8s
CHRT Chiangrai 60.62 298 P **P** **02 47 06.0 -0.2**
comp=Z,132nm,0.8s,mb6.1
CM31 Chiang Mai Arr 60.87 296 *e*P **P** **02 47 08.8 +0.9**
comp=Z,9.6nm,0.7s,mb5.0
CMAR Chiang Mai Arr 60.87 296 P **P** **02 47 08.8 +0.9**
comp=Z,12nm,0.8s,mb5.1,baz=117,slow=5.0,SNR=40
CMAR LR LR 03 14 26.8
comp=Z,69nm,18.6s,MS3.8,baz=314,slow=37
CHG Chiang Mai 60.99 296 P **P** **02 47 09.0 +0.3**
comp=Z,18nm,0.9s,mb5.2
CHTO Chiang Mai 60.99 296 *e*P **P** **02 47 09.2 +0.5**
comp=Z,26nm,1.2s,mb5.2
CHTO Chiang Mai 60.99 296 *e*P **P** **02 47 09.2 +0.5**
CHTO pmax pmax
comp=Z,26nm,1.2s,mb5.2
CD2 Chengdu 62.06 311 P **P** **02 47 16.1 +0.4**
CD2 pP pP 02 47 26.3 -0.7
CD2 sP sP 02 47 30.3 -1.1
CD2 PP PP 02 49 35.3 +2.6
CD2 ScP ScP 02 51 53.6 -1.5
CD2 S **S** **02 55 37.8 -0.3**
CD2 sS sS 02 55 54.6 -2.2
CD2 ScS ScS 02 57 01.8 -3.3
CD2 SS SS 02 59 42.8 +1.3
CD2 pmax pmax
comp=Z,60nm,0.7s,mb5.8
CD2 pmax pmax
comp=Z,170nm,5.5s
CD2 LR LR
comp=N,220nm,9.0s
CD2 LR LR
comp=E,190nm,17.2s
CD2 LR LR
comp=Z,240nm,24.0s
HHC Hu-ho-hao-te 62.47 324 *e*P **P** **02 47 18.8 +0.5**
HHC pP pP 02 47 29.0 -0.5
HHC sP sP 02 47 33.1 -0.8
HHC PP PP 02 49 38.0 +1.9
HHC *e*S **S** **02 55 42.8 -0.1**
HHC sS sS 02 55 59.5 -2.1
HHC SS SS 02 59 49.3 +1.7
HHC pmax pmax
comp=Z,18nm,1.0s,mb5.2
HHC pmax pmax
comp=Z,120nm,3.6s
HHC LR LR
comp=N,120nm,12.7s,MS4.4
HHC LR LR
comp=E,120nm,12.1s,MS4.4
HHC LR LR
comp=Z,160nm,15.7s,MS4.3
LZH Lanzhou 64.61 316 *e*P **P** **02 47 33.0 +0.5**
LZH pP pP 02 47 43.5 -0.3
LZH sP sP 02 47 48.0 -0.2
LZH PP PP 02 49 57.5 +2.4
LZH *e*S **S** **02 56 08.6 -1.2**
LZH *e*SS SS 03 00 21.5 +0.2
LZH pmax pmax
comp=Z,38nm,1.5s,mb5.2
LZH pmax pmax
comp=Z,170nm,8.1s
LZH LR LR
comp=E,310nm,15.2s
LZH LR LR
comp=Z,430nm,18.0s,MS4.7
NIKO Nikolski 67.79 23 *e*P **P** **02 47 51.7 -0.8**
comp=Z,36nm,0.7s,mb5.5
CLNS Chul'man 68.75 343 *e*P **P** **02 47 57.6 -0.9**
CLNS pmax pmax
comp=Z,23nm,0.9s,mb5.1
CLNS pmax pmax
comp=N,7.0nm,0.8s
CLNS pmax pmax
comp=E,7.0nm,0.9s
RKT Rikitea 68.90 112 *e*LR LR 03 09 08.8
comp=E,193nm,32.8s
GTA Gaotai 69.05 317 *e*P **P** **02 48 01.5 +0.8**
GTA pP pP 02 48 10.9 -1.2
GTA sP sP 02 48 15.3 -1.2
GTA pmax pmax
comp=Z,12nm,1.5s,mb4.6
ULN Ulaanbaatar 69.41 328 *e*P **P** **02 48 04.0 +1.2**
comp=Z,11nm,0.7s,mb4.9
ULN Ulaanbaatar 69.41 328 *e*P **P** **02 48 04.0 +1.2**
ULN pmax pmax
comp=Z,11nm,0.7s,mb4.9
SONM Songino Array 69.74 328 P **P** **02 48 05.8 +1.0**
comp=Z,21nm,0.9s,mb5.1,baz=133,slow=6.5,SNR=71
SEY Seymchan 70.36 359 ⇓*i*P **P** **02 48 07.7 -0.6**
LSA Lhasa 71.45 305 P **P** **02 48 17.0 +1.4**
YAK Yakutsk 72.11 348 *e*P **P** **02 48 18.4 -0.5**
comp=Z,44nm,0.9s,mb5.4
YAK Yakutsk 72.11 348 *e*P **P** **02 48 18.1 -0.8**
YAK pmax pmax
comp=Z,43nm,1.0s,mb5.3
YAK pmax pmax
comp=E,6.0nm,1.4s
YAK pmax pmax
comp=N,8.0nm,1.0s
ZAK Zakamensk 72.91 328 *e*P **P** **02 48 23.5 -0.4**
ZAK pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
TLY Talaya 73.49 330 *e*P **P** **02 48 28.1 +0.8**
TLY pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
TAPN Taplejung 73.55 301 *e*P **P** **02 48 28.8 +0.7**
comp=Z,124nm,1.0s,mb5.8
ODAN Odare 73.67 301 *e*P **P** **02 48 29.4 +0.5**
comp=Z,130nm,0.8s,mb5.9
RAMN Ramite 74.37 301 *e*P **P** **02 48 33.2 +0.2**
comp=Z,37nm,0.8s,mb5.4
CHGN Chignik 74.40 25 *e*P **P** **02 48 31.2 -1.2**
MOY Mondy 74.83 329 *e*P **P** **02 48 35.6 +0.5**
JIRN Jiri 74.93 301 *e*P **P** **02 48 36.9 +0.7**
comp=Z,60nm,0.8s,mb5.6
GUN Gumba 75.26 301 *e*P **P** **02 48 38.7 +0.6**
comp=Z,107nm,0.8s,mb5.8
PKI Pulchoki 75.56 301 *e*P **P** **02 48 40.0 +0.1**
comp=Z,70nm,1.1s,mb5.5
DMN Daman 75.83 301 *e*P **P** **02 48 41.9 +0.5**
comp=Z,117nm,1.0s,mb5.8
BILL Bilibino 75.91 4 *e*P **P** **02 48 41.0 +0.1**
comp=Z,62nm,1.3s,mb5.4
BILL Bilibino 75.91 4 *e*P **P** **02 48 41.1 +0.1**
BILL pmax pmax
comp=Z,62nm,1.3s,mb5.4
GKN Gorkha 76.34 301 *e*P **P** **02 48 44.2 -0.1**
comp=Z,92nm,1.1s,mb5.6
KOLN Koldanda 77.16 301 *e*P **P** **02 48 48.8 -0.1**
comp=Z,19nm,0.7s,mb5.1
OHAK Old Harbor 77.17 26 *e*P **P** **02 48 48.7 +0.4**
comp=Z,29nm,0.7s,mb5.3
KDAK Kodiak Island 77.81 26 *e*P **P** **02 48 51.7 -0.2**
comp=Z,53nm,1.1s,mb5.4
WMQ Urumqi 79.14 317 *e*P **P** **02 49 01.3 +1.8**
WMQ pP pP 02 49 11.8 +0.7
WMQ sP sP 02 49 15.8 +0.4
WMQ pmax pmax
comp=Z,16nm,1.2s,mb4.8
WMQ pmax pmax
comp=Z,140nm,4.0s
WMQ LR LR
comp=N,45nm,20.0s
WMQ LR LR
comp=Z,74nm,24.2s,MS3.9
RSO Redoubt South 79.34 24 *e*P **P** **02 49 00.0 -0.2**
TTA Tatalina 79.67 21 *e*P **P** **02 49 02.6 +0.6**
SEW Seward 80.47 25 *e*P **P** **02 49 06.3 0.0**
comp=Z,48nm,1.0s,mb5.4
RC01 Rabbit Creek A 80.91 24 *e*P **P** **02 49 08.4 -0.3**
comp=Z,64nm,1.1s,mb5.5
TIXI Tiksi 80.94 352 *e*P **P** **02 49 08.1 -0.5**
comp=Z,7.4nm,1.1s,mb4.5
TIXI Tiksi 80.94 352 *e*P **P** **02 49 08.2 -0.4**
TIXI pmax pmax
comp=Z,9.0nm,1.6s,mb4.5
PPLA Purkeypile 81.02 22 *e*P **P** **02 49 09.5 +0.3**
comp=Z,91nm,1.9s,mb5.4
PMR Palmer 81.44 24 *e*P **P** **02 49 11.4 0.0**
TRF Thorofare Moun 82.05 22 *e*P **P** **02 49 13.8 -0.9**
comp=Z,14nm,0.8s,mb4.9
BPAW Bear Paw Mtn. 82.17 21 *e*P **P** **02 49 14.2 -1.1**
comp=Z,14nm,1.3s,mb4.7
QSPA South Pole Qui 82.36 180 *e*P **P** **02 49 16.6 +0.5**
comp=Z,12nm,1.0s,mb4.8
DIV Divide 82.56 25 *e*P **P** **02 49 18.1 +0.7**
comp=Z,28nm,1.0s,mb5.2
MCK McKinley 82.70 22 *e*P **P** **02 49 17.5 -0.6**
comp=Z,61nm,1.0s,mb5.6
PAX Paxson 83.62 23 *e*P **P** **02 49 22.9 +0.1**
comp=Z,5.3nm,0.9s,mb4.7
PAX Paxson 83.62 23 *e*P **P** **02 49 22.9 +0.1**
PAX pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
COLA College 83.73 21 *e*P **P** **02 49 22.3 -1.0**
comp=Z,30nm,0.9s,mb5.4
COLA College 83.73 21 *e*P **P** **02 49 22.3 -1.0**
COLA pmax pmax
comp=Z,30nm,0.9s,mb5.4
MK31 Makanchi Array 83.73 319 *e*P **P** **02 49 24.1 +0.3**
MK31 *ep*P pP 02 49 35.2 -0.3
MAW Mawson 83.75 203 P **P** **02 49 23.6 0.0**
comp=Z,1.4nm,0.8s,mb4.2,baz=117,slow=4.3,SNR=5.0
ILAR Eielson Array 84.02 22 P **P** **02 49 23.6 -1.2**
comp=Z,8.3nm,0.8s,mb4.9,baz=258,slow=4.8,SNR=79
COLD Coldfoot 84.26 19 *e*P **P** **02 49 26.7 +0.7**
comp=Z,12nm,1.1s,mb5.0
MENT Mentasta 84.30 24 *e*P **P** **02 49 25.6 -0.7**
ZALV Zalesovo Beam 84.58 326 P **P** **02 49 27.0 -0.9**
comp=Z,14nm,0.5s,mb5.4,baz=113,slow=5.7,SNR=71
EGAK Eagle 86.16 23 *e*P **P** **02 49 36.1 +0.5**
comp=Z,20nm,1.0s,mb5.3
KSH Kashi 86.25 310 P **P** **02 49 38.3 +1.7**
KSH *ep*P pP 02 49 48.6 +0.3
KSH *es*P sP 02 49 52.6 0.0
KSH *e*SKS 03 00 04.5
KSH *e*S S 03 00 08.5 -0.8
KSH pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
KSH pmax pmax
comp=Z,56nm,5.1s
KSH LR LR
comp=N,120nm,8.6s
KSH LR LR
comp=E,94nm,5.8s
KSH LR LR
comp=Z,150nm,4.6s
DAWY Dawson 86.54 24 *e*P **P** **02 49 38.2 +0.8**
ULHL Ulahol 86.67 313 P **P** **02 49 39.5 +0.9**
SNR=6.5
KURK Kurchatov 87.19 322 *e*P **P** **02 49 40.1 -0.8**
comp=Z,32nm,1.6s,mb5.3
KURK Kurchatov 87.19 322 P **P** **02 49 40.5 -0.4**
comp=Z,2.9nm,0.6s,mb4.7,baz=102,slow=4.5,SNR=12
KURK Kurchatov 87.19 322 *di*P **P** **02 49 39.9 -1.0**
KURK pmax pmax
comp=Z,14nm,1.2s,mb5.1
TKM2 Tokmak 2 87.29 314 P **P** **02 49 42.1 +0.5**
SNR=6.4
TKM2 Tokmak 2 87.29 314 *e*P **P** **02 49 41.7 +0.1**
comp=Z,3.2nm,0.7s,mb4.7
TKM2 Tokmak 2 87.29 314 *e*P **P** **02 49 41.7 +0.1**
TKM2 pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
KZA Kyzart 87.36 313 P **P** **02 49 43.6 +1.6**
SNR=15
UCH Uchtor 87.92 313 P **P** **02 49 45.9 +1.2**
SNR=9.9
UCH Uchtor 87.92 313 *e*P **P** **02 49 46.0 +1.4**
comp=Z,9.4nm,1.1s,mb4.9
AAK Ala-Archa 88.02 313 *e*P **P** **02 49 45.2 +0.1**
AML Almayashu 88.50 313 P **P** **02 49 49.0 +1.6**
SNR=16
AML Almayashu 88.50 313 *e*P **P** **02 49 47.8 +0.4**
comp=Z,15nm,0.9s,mb5.2
EKS2 Erkin-Say 88.55 313 P **P** **02 49 48.2 +0.7**
SNR=5.1
EKS2 Erkin-Say 88.55 313 *e*P **P** **02 49 48.0 +0.4**
comp=Z,4.3nm,0.9s,mb4.8
INK Inuvik 90.37 21 *e*P **P** **02 49 56.7 +1.2**
comp=Z,16nm,1.4s,mb5.2
INK Inuvik 90.37 21 *e*P **P** **02 49 56.7 +1.2**
INK pmax pmax
comp=Z,16nm,1.4s
MWC Mount Wilson 91.89 56 *e*P **P** **02 50 04.8 +1.5**
comp=Z,12nm,1.1s,mb5.1
MWC Mount Wilson 91.89 56 *e*P **P** **02 50 04.8 +1.4**
MWC pmax pmax
comp=Z,12nm,1.1s,mb5.1
NVAR Mina Array Bea 92.26 52 P **P** **02 50 06.8 +1.8**
NVAR Mina Array Bea 92.26 52 P **P** **02 50 06.8 +1.8**
comp=Z,6.3nm,0.8s,mb5.0,baz=253,slow=6.4,SNR=36
WVOR Wild Horse Val 92.56 48 *e*P **P** **02 50 06.8 +0.5**
comp=Z,4.2nm,1.2s,mb4.7
WVOR Wild Horse Val 92.56 48 *e*P **P** **02 50 06.8 +0.5**
WVOR pmax pmax
comp=Z,4.0nm,1.2s,mb4.7
BVAR Borovoye Array 92.66 323 P **P** **02 50 05.5 -1.0**
comp=Z,5.9nm,0.7s,mb5.1,baz=98,slow=6.1,SNR=29
BRVK Borovoye 92.73 323 *e*P **P** **02 50 05.7 -1.1**
comp=Z,6.9nm,1.0s,mb5.0
BRVK Borovoye 92.73 323 *e*P **P** **02 50 05.7 -1.1**
BRVK pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
YKA Yellowknife Ar 96.98 28 P **P** **02 50 26.1 +0.1**
comp=Z,2.1nm,0.8s,mb4.6,baz=266,slow=4.6,SNR=9.3
ABKAR Akbulak array 98.88 319 *e*P **P** **02 50 33.0 -1.9**
comp=Z,2.5nm,1.0s,mb4.7
AKTK Aktyubinsk 100.13 320 P Pdif 02 50 38.8 -1.6
AKTO Aktyubinsk 100.13 320 P Pdif 02 50 38.8 -1.6
comp=Z,1.1nm,0.7s,baz=94,slow=4.3,SNR=4.8
KIV Kislovodsk 111.13 314 *e*P Pdif 02 51 31.2 +1.9
KIV pmax pmax
comp=Z,3.0nm,0.8s
AKASG Malin Array Be 117.92 324 PKP PKPdf 02 55 40.7 -0.6
AKASG Malin Array Be 117.92 324 PKP PKPdf 02 55 40.7 -0.6
comp=Z,0.7nm,0.4s,baz=65,slow=2.3,SNR=6.2
HFS Hagfors 120.00 339 PKP PKPdf 02 55 44.4 -0.5
comp=Z,1.4nm,0.6s,baz=104,slow=1.8,SNR=6.0
NOA NORSAR Array B 120.21 340 PKP PKPdf 02 55 45.2 -0.2
comp=Z,1.2nm,0.6s,baz=43,slow=1.9,SNR=4.7
MLR Muntele Rosu 122.07 320 PKP PKPdf 02 55 49.2 -0.2
comp=Z,0.7nm,0.5s,baz=162,slow=16,SNR=3.1
STHS Stebnicka Huta 123.07 326 *e*PKP PKPdf 02 55 52.8 +1.6
STHS Stebnicka Huta 123.07 326 *e*PKP PKPdf 02 55 52.8 +1.6
CRVS Cervenica-Dubn 123.21 325 *e*PKP PKPdf 02 55 52.1 +0.6
CRVS Cervenica-Dubn 123.21 325 *e*PKP PKPdf 02 55 52.1 +0.6
KECS Kecovo 123.98 325 *e*PKP PKPdf 02 55 53.2 +0.2
KECS Kecovo 123.98 325 *e*PKP PKPdf 02 55 53.2 +0.2
MORC Moravsky Berou 124.90 328 *e*PKPdf PKPdf 02 55 55.0 +0.4
VYHS Vyhne 124.91 326 *e*PKP PKPdf 02 55 55.4 +0.7
VYHS Vyhne 124.91 326 *e*PKP PKPdf 02 55 55.4 +0.7
NNA Nana 125.09 110 *e*PKPdf PKPdf 02 55 55.5 -0.6
DPC Dobruska-Polom 125.20 329 *e*PKIKP PKPdf 02 55 56.2 +0.9
DPC Dobruska-Polom 125.20 329 *e*PKPdf PKPdf 02 55 56.2 +0.9
BSEG Bad Segeberg 125.67 335 *e*PKPdf PKPdf 02 55 57.2 +1.2
BRG Berggiesshubel 126.08 330 *e*PKP PKPdf 02 55 57.4 +0.5
comp=Z,5.2nm,1.0s
BRG Berggiesshubel 126.08 330 *e*PKIKP PKPdf 02 55 57.4 +0.5
BRG pmax pmax
comp=Z,3.0nm,1.0s
CLL Collm 126.25 331 *i* PKIKP PKPdf 02 55 56.2 -1.0
CLL pmax pmax
comp=Z,5.0nm,1.0s
CLL Collm 126.25 331 *i* PKPdf PKPdf 02 55 56.2 -1.0
comp=Z,5.0nm,1.0s
TREC Trest 126.27 328 *e*PKIKP PKPdf 02 55 57.9 +0.6
TREC Trest 126.27 328 *e*PKPdf PKPdf 02 55 57.9 +0.6
PRU Pruhonice 126.33 329 *e*PKIKP PKPdf 02 55 58.6 +1.2
PRU Pruhonice 126.33 329 *e*PKPdf PKPdf 02 55 58.6 +1.2
CLZ Clausthal 127.11 333 *e*PKPdf PKPdf 02 56 00.2 +1.3
KHC Kasperske Hory 127.36 329 *e*PKIKP PKPdf 02 55 59.6 +0.2
KHC Kasperske Hory 127.36 329 *e*PKPdf PKPdf 02 56 00.3 +0.9
GEC2 GERESS Array S 127.47 328 *e*PKPdf PKPdf 02 56 00.3 +0.7
WET Wettzell 127.71 329 *e*PKPdf PKPdf 02 56 01.1 +1.0
EKA Eskdalemuir Ar 129.27 344 PKP PKPdf 02 56 03.6 +0.8
comp=Z,1.7nm,0.7s,baz=18,slow=2.9,SNR=13
DAVOX Davos/Dischmat 130.77 329 PKP PKPdf 02 56 06.7 +0.7
comp=Z,2.5nm,0.7s,baz=318,slow=8.1,SNR=7.8
CDF Champ du Feu 130.94 332 *e*PKP1 PKPdf 02 56 03.4 -2.9
LPAZ La Paz 131.34 119 PKP PKPdf 02 56 10.2 +2.3
comp=Z,0.6nm,0.8s,baz=250,slow=6.5,SNR=2.7
HINF Hinteralfeld 131.56 331 *e*PKP1 PKPdf 02 56 07.1 -0.4
HAU Haudompre 131.66 332 *e*PKP1 PKPdf 02 56 07.4 -0.2
comp=Z,4.8nm,0.8s
MEZF Maizieres J'vi 131.89 333 *e*PKP1 PKPdf 02 56 08.4 +0.3
CABF La Chapelle 132.79 331 *e*PKP1 PKPdf 02 56 10.2 +0.4
comp=Z,5.0nm,0.8s
LPL La Plagne 133.24 329 *e*PKP1 PKPdf 02 56 11.7 +1.0
LPG La Plagne 133.24 329 *e*PKP1 PKPdf 02 56 11.8 +1.1
comp=Z,6.6nm,0.9s
LOR Lormes 133.35 333 *e*PKP1 PKPdf 02 56 11.5 +0.7
comp=Z,7.5nm,1.0s
SSF Saint Saulge 133.66 333 *e*PKP1 PKPdf 02 56 12.3 +0.9
comp=Z,16nm,1.4s
MBDF Montbardon 133.76 328 *e*PKP1 PKPdf 02 56 13.0 +1.3
SMF Signal de Mont 133.82 332 *e*PKP1 PKPdf 02 56 12.4 +0.6
comp=Z,6.1nm,1.0s
AVF Avril sur Loir 133.94 333 *e*PKP1 PKPdf 02 56 12.2 +0.2
FLN La Foliniere 133.99 337 *e*PKP1 PKPdf 02 56 12.6 +0.6
LDF La Druitiere 133.99 337 *e*PKP1 PKPdf 02 56 12.6 +0.6
PGF Pioggiola 133.99 325 *e*PKP1 PKPdf 02 56 12.9 +0.7
ORIF Oris-en-Rattie 134.09 329 *e*PKP1 PKPdf 02 56 12.9 +0.6
BGF Bois d'Agland 134.34 333 *e*PKP1 PKPdf 02 56 13.6 +0.9
FRF La Foret Royal 134.62 327 *e*PKP1 PKPdf 02 56 13.9 +0.5
comp=Z,8.2nm,0.8s
VIVF Saint-Julien-l 134.74 330 *e*PKP1 PKPdf 02 56 14.3 +0.8
TCF Toulx Ste Croi 134.83 333 *e*PKP1 PKPdf 02 56 14.7 +1.0
comp=Z,10.0nm,1.0s
LMR La Mourre 134.85 327 *e*PKP1 PKPdf 02 56 14.6 +0.8
comp=Z,26nm,1.2s
SMRF Simiane la Rot 134.90 329 *e*PKP1 PKPdf 02 56 13.7 -0.2
MFF Saint Martin d 135.60 335 *e*PKP1 PKPdf 02 56 15.6 +0.5
LASF Ste Croix 135.70 330 *e*PKP1 PKPdf 02 56 15.4 0.0
comp=Z,10.0nm,1.0s
LFF La Frestale 136.53 333 *e*PKP1 PKPdf 02 56 17.8 +0.9
comp=Z,19nm,1.0s
EPF Esparros 138.19 332 *e*PKP1 PKPdf 02 56 19.9 -0.1
comp=Z,15nm,1.1s
ESDC Sonseca Array 142.82 332 PKhKP PKPpre 02 56 25.1
comp=Z,0.5nm,0.6s,baz=34,slow=3.6,SNR=5.4
MVO Moncorvo 142.88 337 *e*PKP PKPdf 02 56 28.2 -0.3
PVRL Vila Real 143.05 338 *e*PKP PKPdf 02 56 26.0 -2.8
PVIS Viseu 143.60 338 *e*PKP PKPdf 02 56 27.7 -2.1
MTE Manteigas 143.74 337 *e*PKP PKPdf 02 56 27.6 -2.5
PCBR Castelo Branco 144.19 336 *e*PKP PKPdf 02 56 29.4 -1.5
PMRV Marv??o 144.51 336 *e*PKP PKPdf 02 56 30.6 -0.9
PTOM Tomar 144.75 337 *e*PKP PKPdf 02 56 31.4 -0.5
PESTR Estremoz 145.07 336 *e*PKP PKPdf 02 56 31.9 -0.5
PBAR Barrancos 145.42 334 *e*PKP PKPdf 02 56 32.6 -0.5
EVO Evora 145.53 336 *e*PKIKP PKPdf 02 56 33.3 +0.1
comp=Z,70nm,1.1s
EVO Evora 145.53 336 *e*PKP PKPdf 02 56 33.7 +0.5
PMAFR Mafra 145.66 338 *e*PKP PKPdf 02 56 33.9 +0.5
PBEJ Beja 145.90 335 *e*PKP PKPdf 02 56 35.3 +1.4
PCVE Castro Verde 146.30 335 *e*PKP PKPdf 02 56 35.0 +0.4
PVAQ Vaqueiros 146.36 334 *e*PKP PKPdf 02 56 35.7 +1.0
PBDV Barranco-do-Ve 146.59 335 *e*PKP PKPdf 02 56 36.3 +1.2
PTEO Sao Teotonio 146.66 336 *e*PKP PKPdf 02 56 32.9 -2.3
TAM Tamanrasset 146.83 300 *e*PKPbc PKPbc 02 56 38.0 +0.3
MORF Marmelete 146.83 335 *e*PKP PKPab 02 56 38.5 -0.1
PFVI Vila Bisbo 147.05 336 *e*PKP PKPab 02 56 38.7 -0.7
KIC Kosan Boka 159.64 268 *e*PKP1 PKPab 02 57 33.0 -0.1
comp=Z,29nm,1.0s
DBIC Dimbokro 159.78 269 PKPab PKPab 02 57 33.0 -0.7
comp=Z,7.4nm,0.8s,baz=41,slow=4.3,SNR=8.3
LIC Lamto 159.91 267 *e*PKP1 PKPab 02 57 33.6 -0.7
comp=Z,84nm,2.0s
TIC Toumodi 159.94 269 *e*PKP1 PKPab 02 57 34.2 -0.2
comp=Z,24nm,0.9s

CASC 15 02:47:16.2±1.4, 7.53N×82.87W, h3km, MD3.8, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**1.15**	**345**	*e*P		Pg	02 47 37.4	-0.9
ACR				*e*S		Sg	02 47 54.0	+0.7
BRU2	**Volcan**	**1.26**	**8**	*e*P		Pg	02 47 39.6	-0.8
BRU2				*e*S		Sg	02 47 58.4	+1.5
TBS2		**1.27**	**9**	*e*P		Pg	02 47 45.7	+5.1
BUS	**Buena Vista**	**2.19**	**336**	*e*P		Pn	02 47 54.1	+0.5
URSC	**Urasca**	**2.46**	**339**	*e*P		Pn	02 47 58.0	+0.8
LAJ	**Bijagual**	**2.63**	**332**	*e*P		Pn	02 48 00.2	+0.7
PRS1	**Puriscal**	**2.82**	**330**	*e*P		Pn	02 48 01.2	-1.1
CGA2	**Cerro Gallo 2**	**2.93**	**327**	*e*P		Pn	02 48 03.4	-0.3

NIED ***15*** *02:47:00.26°.90N×130°.00E, h5km, Mw4.2 Best double couple: M₀2.18000×10¹⁵ NP1:φ₁46.00000°, δ45.00000°, λ-88.00000°. NP2:φ₂223.00000°, δ45.00000°, λ-92.00000°.*

JMA 15 02:47:17.1±0.1, 26.94N×129.98E, h75km, M3.6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.24**	**313**	P		Pn	02 47 38.7	-0.2
JTK				S		Sn	02 47 56.1	+0.8
JZK	**Kikaishima**	**1.37**	**360**	P		Pn	02 47 41.2	+0.7
JZK				S		Sn	02 48 00.3	+2.2
JAM	**Amami Oshima**	**1.50**	**347**	P		Pn	02 47 42.5	+0.2
JAM				S		Sn	02 48 01.3	+0.1
JOW	**Kunigami**	**1.53**	**266**	P		Pn	02 47 43.0	+0.4
JOW				S		Sn	02 48 02.2	+0.4
JMZ	**Minamidaito 2**	**1.58**	**135**	P		Pn	02 47 43.6	+0.4
JMZ				S		Sn	02 48 03.4	+0.4
JIH	**Iheya**	**1.80**	**273**	P		Pn	02 47 46.8	+0.6
JIH				S		Sn	02 48 10.0	+1.8
JJT2	**Tamagusuku 2**	**2.15**	**249**	P		Pn	02 47 52.0	+1.1
JJT2				S		Sn	02 48 17.8	+1.1
NAH1	**Naha**	**2.18**	**251**	P		Pn	02 47 52.3	+1.1
NAH1				S		Sn	02 48 18.4	+1.1
JAGN	**Aguni-jima**	**2.47**	**262**	P		Pn	02 47 56.0	+0.8
JAGN				S		Sn	02 48 24.8	+0.4
JNN	**Nakanoshima**	**2.89**	**358**	P		Pn	02 48 01.5	+0.6
JNN				*e*S		Sn	02 48 34.4	-0.2
JKE	**Kume jima 2**	**2.92**	**259**	P		Pn	02 48 01.9	+0.6
JKE				S		Sn	02 48 36.1	+0.7

CASC 15 03:11:10.5±1.3, 12.01N×88.38W, h10km±12km, MD3.7, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.37**	**23**	*e*P		Pn	03 11 34.5	-1.1
CNCH				*e*P			03 11 34.7	
VSM	**San Miguel**	**1.41**	**4**	*e*P		Pn	03 11 35.5	-0.7
VSM				*e*P			03 11 35.9	
BLLM	**Bellamira**	**1.43**	**6**	*e*P		Pn	03 11 35.6	-0.9
BLLM				*e*S		Sn	03 11 55.5	+0.2
LFRS	**El Faro**	**1.73**	**338**	*e*P		Pn	03 11 39.7	-0.9
CAHU	**Cacacuatique**	**1.76**	**5**	*e*P		Pn	03 11 40.8	-0.2
CAHU				*e*P			03 11 41.1	
COPN	**Copaltepe**	**1.76**	**84**	*e*P		Pn	03 11 40.3	-0.7
CSAN		**1.93**	**85**	*e*P		Pn	03 11 44.0	+0.7

CSAN eS Sn 03 12 07.7 +0.2
SBLS San Blas 2.18 326 eP Pn 03 11 47.4 +0.6
TGUH Tegucigalpa,Un 2.30 28 eP Pn 03 11 48.0 -0.5
TGUH eS Sn 03 12 17.3 +0.4

*IDC **15** 03:18:31.4±0.8, 10.06S×107.52E, h0km, mb4.1/7, mb1 4.2/8, mb1mx3.9/18, mbtmp4.0/8, ML3.9/1, Error ellipse: s-maj=34.1km s-min=17.5km az=55.0*
*ISCJB **15** 03:18:32.8±3.5, 9.86S±0.08×107.63E±0.08, h25km±25km, mb4.0/10, Error ellipse: s-maj=16.3km s-min=10.6km az=42.2*
*NEIC **15** 03:18:32.3±0.7, 10.08S×107.48E, h10km, mb4.4/3, Error ellipse: s-maj=34.8km s-min=11.4km az=51.0*
*DJA **15** 03:18:41, 9.29S×107.75E, h52km, MLv4.2/5*
ISC 15 03:18:33.9±3.7, 9.87S±0.07×107.66E±0.07, h17km±23km, **n22,σ1.31/23, mb4.0/10, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CMJI	**Cimerak**	**2.21**	**21**	P		**Pn**	**03 19 07.5**	**-2.4**
CISI	**Cisompet, Garu**	**2.30**	**4**	P		**Pn**	**03 19 07.9**	**-3.2**
LEM	**Lembang**	**3.02**	**359**	P		**Pn**	**03 19 19.2**	**-1.8**
BJII	**Banjamegara**	**3.23**	**39**	P		**Pn**	**03 19 24.5**	**+0.6**
UGM	**Wanagama**	**3.43**	**56**	P		**Pn**	**03 19 27.4**	**+0.7**
PCJI	**Pacitan**	**3.85**	**65**	P		**Pn**	**03 19 32.3**	**-0.2**
PWJI	**Pagerwojo**	**4.49**	**66**	P		**Pn**	**03 19 42.0**	**+0.8**
PWJI				S		**Sn**	**03 20 31.9**	**-1.2**
SJI	**Sawahan**	**4.58**	**63**	P		**Pn**	**03 19 44.6**	**+2.1**
MBWA	**Marble Bar**	**16.15**	**135**	*e*Pn		**Pn**	**03 22 17.0**	**-3.3**
FITZ	**Fitzroy Crossi**	**19.26**	**117**	P		**Pn**	**03 22 59.8**	**+1.0**
	0.3nm,0.3s,baz=279,slow=6.4,SNR=17							
FITZ				S		**Sn**	**03 26 20.8**	**-14**
	0.2nm,0.3s,baz=127,slow=16,SNR=4.8							
WRA	**Warramunga Arr**	**27.62**	**114**	P		**P**	**03 24 20.9**	**+0.1**
	1.5nm,0.7s,mb3.7,baz=285,slow=11,SNR=5.6							
ASAR	**Alice Springs**	**28.56**	**122**	P		**P**	**03 24 29.5**	**+0.3**
	0.8nm,0.7s,mb3.6,baz=297,slow=8.7,SNR=3.2							
CMAR	**Chiang Mai Arr**	**29.43**	**343**	P		**P**	**03 24 37.9**	**+1.1**
	0.7nm,0.6s,mb3.5,baz=168,slow=6.7,SNR=4.3							
STKA	**Stephens Creek**	**38.28**	**130**	P		**P**	**03 25 52.7**	**-0.9**
	4.1nm,0.8s,mb4.2,baz=292,slow=12,SNR=4.9							
TKM2	**Tokmak 2**	**60.14**	**333**	*e*P		**P**	**03 28 41.7**	**+1.2**
	2.2nm,0.5s,mb4.4							
MK31	**Makanchi Array**	**60.79**	**340**	*e*P		**P**	**03 28 45.8**	**+0.9**
MAW	**Mawson**	**64.83**	**197**	P		**P**	**03 29 10.5**	**-1.1**
	0.9nm,0.8s,mb3.9,baz=47,slow=7.0,SNR=7.6							
KURK	**Kurchatov**	**65.40**	**340**	*e*P		**P**	**03 29 14.8**	**-0.6**
	3.7nm,1.1s,mb4.3							
ZALV	**Zalesovo Beam**	**66.45**	**346**	P		**P**	**03 29 23.4**	**+1.3**
	1.2nm,0.3s,mb4.4,baz=152,slow=6.6,SNR=8.5							
BVAR	**Borovoye Array**	**70.24**	**337**	P		**P**	**03 29 47.3**	**+1.3**
	1.5nm,0.6s,mb4.1,baz=134,slow=8.5,SNR=7.9							
ABKAR	**Akbulak array**	**72.19**	**329**	*e*P		**P**	**03 29 55.3**	**-2.5**
	0.8nm,0.4s,mb4.0							
LPAZ	**La Paz**	**153.68**	**189**	PKPbc		PKPbc	03 38 33.4	+0.4
	0.6nm,0.9s,baz=198,slow=6.4,SNR=2.4							
LPAZ				PKPab		PKPab	03 38 45.4	0.0
	1.0nm,0.8s,baz=320,slow=1.7,SNR=4.5							

IDC 15 03:22:00.2±2.4, 11.20S×162.91E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.7/13, mbtmp3.8/3, Error ellipse: s-maj=171.2km s-min=30.8km az=129.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
STKA	**Stephens Creek**	**28.47**	**220**	P		P	03 27 57.2	+0.1
	2.0nm,0.7s,baz=52,slow=12,SNR=4.2							
ASAR	**Alice Springs**	**30.25**	**242**	P		P	03 28 12.8	-0.2
	0.3nm,0.6s,baz=88,slow=10,SNR=4.2							
ILAR	**Eielson Array**	**84.56**	**19**	P		P	03 34 34.6	-0.3
	0.2nm,0.5s,baz=247,slow=4.3,SNR=8.1							
ARCES	**ARCESS Array B**	**115.77**	**345**	PKP		PKPdf	03 40 44.8	+0.7
	5.3nm,1.0s,baz=106,slow=2.0,SNR=3.6							

*BJI **15** 03:37:28.7, 83.60N×114.60E, h10km, mB4.9/15, mb4.6/19, Ms4.5/10, Ms7 4.3/10*
*MOS **15** 03:37:30.7±0.8, 83.50N×115.08E, h10km, mb4.6/24, Error ellipse: s-maj=51.1km s-min=7.7km az=89.5*
*GCMT **15** 03:37:31.1±0.3, 83.64N×114.90E, h12km, MW4.8, Moment Tensor Solution. s18,c21; s69,c98; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.58±.06; $M_{\theta\theta}$0.50±.05; $M_{\phi\phi}$1.08±.06; $M_{r\theta}$0.40±.23; $M_{r\phi}$-0.65±.05; $M_{\theta\phi}$-0.56±.24; Best double couple: $M_0$1.70000×10^{16} NP1:ϕ_s148.00000°, δ33.00000°, λ-89.00000°. NP2:ϕ_s326.00000°, δ57.00000°, λ-91.00000°. Principal axes: T 1.6500, Plg12.0000°, Azm57.0000°; N 0.0800, Plg1.0000°, Azm327.0000°; P -1.7300, Plg78.0000°, Azm233.0000°; Data Used: ll IU IC G CN.*
*ISCJB **15** 03:37:31.9±2.3, 83.53N±0.04×115.0E±0.3, h18km±16km, mb4.4/90, MS3.7/27 Error ellipse: s-maj=6.8km s-min=4.9km az=147.8*
*IDC **15** 03:37:31.2±0.6, 83.62N×114.47E, h0km, mb4.0/22, mb1 4.2/22, mb1mx4.1/27, mbtmp4.1/22, MS3.6/18, Ms1 3.7/18, ms1mx3.6/26, Error ellipse: s-maj=17.4km s-min=12.7km az=146.0*
*NEIC **15** 03:37:32.7±0.2, 83.61N×114.56E, h10km, mb4.5/45, Error ellipse: s-maj=8.3km s-min=3.5km az=145.0*
ISC 15 03:37:33.8±2.4, 83.54N±0.04×114.9E±0.3, h17km±15km, **h17**km±2.1km:**pP-P, n151,σ0.88**/149, **mb4.4**/90, **MS3.7**/27, **23C, North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
TIXI	**Tiksi**	**12.25**	**159**	*e*Pn		**Pn**	**03 40 23.8**	**-3.4**
	105nm,2.8s							
TIXI	**Tiksi**	**12.25**	**159**	*e*P		**Pn**	**03 40 27.1**	**-0.1**
TIXI				pmax		pmax		
	comp=Z,8.0nm,1.6s							
SPITS	**Spitsbergen Ar**	**14.36**	**305**	Pn		**Pn**	**03 40 50.3**	**-5.5**
	baz=312,slow=12,SNR=5.9							
SPITS				LR		LR	03 45 44.7	
	comp=Z,159nm,18.3s,baz=60,slow=35							
RES	**Resolute Bay**	**21.30**	**21**	LR		LR	03 50 27.2	
	comp=Z,269nm,18.1s,MS3.7,baz=5.4,slow=36							
ARCES	**ARCESS Array B**	**21.48**	**286**	P		**P**	**03 42 18.6**	**-2.4**
	comp=Z,5.3nm,0.7s,mb4.0,baz=20,slow=11,SNR=7.9							
ARCES				LR		LR	03 51 23.7	
	comp=Z,96nm,19.8s,MS3.2,baz=178,slow=39							
YAK	**Yakutsk**	**21.90**	**161**	*e*P		**P**	**03 42 24.2**	**-1.3**
YAK				pmax		pmax		
	comp=Z,14nm,0.9s,mb4.4							
YAK				pmax		pmax		
	comp=N,14nm,1.4s							
SEY	**Seymchan**	**22.39**	**133**	*i* P		**P**	**03 42 31.9**	**+1.2**
JMIC	**Jan Mayen**	**23.33**	**316**	LR		LR	03 50 01.0	
	comp=N,50nm,20.5s,MS3.0,baz=296,slow=32							
INK	**Inuvik**	**24.93**	**55**	*e*P		**P**	**03 42 54.8**	**-0.6**
	comp=N,11nm,0.6s,mb4.6							
INK	**Inuvik**	**24.93**	**55**	P		**P**	**03 42 55.1**	**-0.3**
	comp=N,7.5nm,0.9s,mb4.2,baz=360,slow=9.6,SNR=7.5							
INK				LR		LR	03 52 21.2	
	comp=N,149nm,21.6s,MS3.5,baz=180,slow=36							
COLA	**College**	**26.83**	**70**	*e*P		**P**	**03 43 12.9**	**+0.3**
	comp=N,12nm,1.0s,mb4.4							
COLA	**College**	**26.83**	**70**	*e*P		**P**	**03 43 12.9**	**+0.2**
COLA				pmax		pmax		
	comp=Z,12nm,1.0s,mb4.4							
ILAR	**Eielson Array**	**27.04**	**69**	P		**P**	**03 43 14.8**	**+0.4**
	comp=Z,2.8nm,1.0s,mb3.7,baz=344,slow=7.9,SNR=17							
ILAR				LR		LR	03 53 05.7	
	comp=Z,220nm,20.9s,MS3.7,baz=170,slow=34							
MCK	**McKinley**	**27.83**	**71**	*e*P		**P**	**03 43 21.2**	**-0.4**
	comp=Z,43nm,1.9s,mb4.8							
MCK	**McKinley**	**27.83**	**71**	*e*P		**P**	**03 43 21.2**	**-0.4**
MCK				pmax		pmax		
	comp=Z,43nm,1.9s,mb4.8							
TRF	**Thorofare Moun**	**27.96**	**73**	*e*P		**P**	**03 43 23.4**	**+0.7**
	comp=Z,16nm,1.3s,mb4.5							
KLMR	**Klimovskoe**	**28.31**	**267**	*e*P		**P**	**03 43 23.5**	**-2.4**
KLMR				pmax		pmax		
	comp=Z,24nm,1.7s,mb4.5							
FINES	**FINESS Array B**	**29.25**	**281**	P		**P**	**03 43 33.2**	**-1.1**
	comp=Z,4.2nm,0.9s,mb4.2,baz=352,slow=9.1,SNR=3.8							
FINES				LR		LR	03 58 02.0	
	comp=Z,144nm,19.8s,MS3.6,baz=164,slow=42							
ARU	**Arti**	**30.57**	**245**	P		**P**	**03 43 45.0**	**-0.9**
ARU				S		**S**	**03 48 46.4**	**0.0**
ARU					MLR	MLR		
	comp=Z,653nm,19.0s,MS4.3							
ZALV	**Zalesovo Beam**	**30.76**	**215**	P		**P**	**03 43 48.0**	**+0.4**
ZALV					PcP	PcP	03 46 44.2	-0.2
ZALV					LR	LR	03 57 04.7	
ZALV	**Zalesovo Beam**	**30.76**	**215**	P		**P**	**03 43 48.0**	**+0.4**
	comp=Z,1.7nm,0.8s,mb3.9,baz=345,slow=11,SNR=7.0							
ZALV					PcP	PcP	03 46 44.2	-0.2
	comp=Z,0.7nm,0.4s,baz=150,slow=1.2,SNR=4.8							
ZALV					LR	LR	03 57 04.7	
	comp=Z,261nm,18.6s,MS3.9,baz=44,slow=38							
ZALV	**Zalesovo Beam**	**30.76**	**215**	P		**P**	**03 43 48.0**	**+0.4**
ZALV							03 46 44.2	
NOA	**NORSAR Array B**	**31.25**	**294**	P		**P**	**03 43 49.9**	**-2.0**
	comp=Z,0.7nm,0.7s,mb3.6,baz=9.0,slow=8.7,SNR=2.4							
NOA					LR	LR	03 56 10.4	
	comp=Z,44nm,21.2s,MS3.1,baz=10.0,slow=36							
TLY	**Talaya**	**32.15**	**193**	*e*P		**P**	**03 44 08.2**	**+8.3**
TLY				pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.4							
TLY					MLR	MLR		
	comp=Z,67nm,13.0s,MS3.5							
YKA	**Yellowknife Ar**	**32.24**	**41**	P		**P**	**03 43 59.7**	**-0.8**
	comp=Z,1.0nm,0.9s,mb3.6,baz=344,slow=9.0,SNR=3.1							
YKA					PcP	PcP	03 46 50.5	+2.2
	comp=Z,1.0nm,1.0s,baz=31,slow=5.8,SNR=3.6							
YKA	**Yellowknife Ar**	**32.24**	**41**	P		**P**	**03 43 59.7**	**-0.9**
YKA							03 46 50.5	
BRVK	**Borovoye**	**32.77**	**232**	*e*P		**P**	**03 44 05.3**	**0.0**
	comp=Z,6.4nm,1.0s,mb4.5							
BRVK	**Borovoye**	**32.77**	**232**	*e*P		**P**	**03 44 05.3**	**0.0**
BRVK				pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.5							
BVAR	**Borovoye Array**	**32.79**	**231**	P		**P**	**03 44 06.2**	**+0.7**
	comp=Z,3.0nm,0.9s,mb4.2,baz=359,slow=6.2,SNR=9.4							
BVAR					PcP	PcP	03 46 49.7	-0.3
	comp=Z,1.6nm,0.9s,baz=266,slow=2.2,SNR=4.3							
KDAK	**Kodiak Island**	**33.25**	**77**	LR		LR	03 58 19.8	
	comp=Z,137nm,19.3s,MS3.7,baz=279,slow=38							
OBN	**Obninsk**	**34.27**	**268**	*e*P		**P**	**03 44 18.6**	**+0.3**
OBN				*e*SS		SS	03 51 53.9	-18
OBN				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb4.3							
KURK	**Kurchatov**	**34.41**	**222**	*e*P		**P**	**03 44 18.6**	**-1.0**
	comp=Z,2.3nm,0.8s,mb4.2							
KURK	**Kurchatov**	**34.41**	**222**	P		**P**	**03 44 19.4**	**-0.2**
	comp=Z,0.9nm,0.5s,mb4.0,baz=22,slow=7.4,SNR=8.5							
KURK					PcP	PcP	03 46 53.4	-1.2
	comp=Z,1.3nm,0.8s,baz=358,slow=2.7,SNR=3.8							
KURK	**Kurchatov**	**34.41**	**222**	*i* P		**P**	**03 44 19.4**	**-0.2**
KURK				pmax		pmax		
	comp=Z,5.0nm,1.2s,mb4.3							
KLR	**Kul'dur**	**34.78**	**161**	*e*P		**P**	**03 44 19.8**	**-3.0**
DLBC	**Dease Lake**	**34.94**	**56**	LR		LR	03 58 59.7	
	comp=Z,100nm,19.8s,MS3.6,baz=326,slow=37							
ULN	**Ulaanbaatar**	**35.89**	**189**	⇑*i*P		**P**	**03 44 33.9**	**+1.5**
SONM	**Songino Array**	**35.94**	**190**	P		**P**	**03 44 33.6**	**+0.9**
	comp=Z,1.6nm,0.8s,mb4.0,baz=356,slow=8.0,SNR=12							
SONM					PcP	PcP	03 46 59.6	+0.5
	comp=Z,1.0nm,0.7s,baz=45,slow=0.2,SNR=4.2							
SONM					LR	LR	03 58 25.6	
	comp=Z,72nm,18.6s,MS3.5,baz=187,slow=35							
SONM	**Songino Array**	**35.94**	**190**	P		**P**	**03 44 33.6**	**+0.9**
SONM							03 46 59.6	
AKTK	**Aktyubinsk**	**36.54**	**244**	P		**P**	**03 44 37.4**	**-0.5**
AKTO	**Aktyubinsk**	**36.54**	**244**	P		**P**	**03 44 37.4**	**-0.5**
	comp=Z,2.5nm,0.7s,mb4.1,baz=25,slow=11,SNR=6.2							
ABKAR	**Akbulak array**	**37.51**	**242**	*e*P		**P**	**03 44 45.8**	**-0.3**
	comp=Z,1.9nm,0.9s,mb3.8							
VSR	**Storozhevoye**	**37.81**	**264**	*e*P		**P**	**03 44 47.8**	**-0.8**
VSR				pmax		pmax		
	comp=Z,7.0nm,0.9s,mb4.4							
VSR				pmax		pmax		
	comp=N,10.0nm,1.0s							
VSR				pmax		pmax		
	comp=E,4.0nm,0.5s							
MK31	**Makanchi Array**	**38.05**	**217**	*e*P		**P**	**03 44 49.7**	**-1.0**
AKASG	**Malin Array Be**	**39.44**	**274**	P		**P**	**03 45 01.7**	**-0.7**
AKASG					LR	LR	04 03 11.9	
AKASG	**Malin Array Be**	**39.44**	**274**	P		**P**	**03 45 01.7**	**-0.7**
	comp=E,0.4nm,0.3s,mb3.6,baz=9.3,slow=8.7,SNR=5.5							
AKASG					LR	LR	04 03 11.9	
	comp=E,201nm,20.9s,MS3.9,baz=350,slow=39							
CN2	**Changchun**	**40.01**	**168**	*e*P		**P**	**03 45 07.3**	**+0.2**
CLL	**Collm**	**40.64**	**289**	*e*P		**P**	**03 45 11.0**	**-1.2**
CLL	**Collm**	**40.64**	**289**	*e*(P)		**P**	**03 45 11.0**	**-1.2**
CLL				*e*			03 45 38.0	
	comp=Z,3.0nm,0.7s							
CLL					LmV		03 59 00.0	
	comp=Z,100nm,21.8s							
WMQ	**Urumqi**	**40.67**	**210**	*e*P		**P**	**03 45 12.8**	**+0.2**
WMQ				pP		pP	03 45 17.3	-0.6
WMQ				sP		sP	03 45 19.8	-0.2
WMQ				PP		PP	03 46 50.1	+4.0
WMQ				PcP		PcP	03 47 15.4	+1.5
WMQ				*e*S		**S**	**03 51 21.8**	**+0.4**
WMQ				SS		SS	03 54 16.3	-5.1
WMQ				ScS		ScS	03 55 16.0	-0.4
WMQ				pmax		pmax		
	comp=Z,11nm,0.8s,mb4.5							
WMQ				pmax		pmax		
	comp=Z,190nm,4.1s							
WMQ				LR		LR		
	comp=N,320nm,22.5s,MS4.2							
WMQ				LR		LR		
	comp=E,220nm,23.0s,MS4.2							
WMQ				LR		LR		
	comp=Z,300nm,21.0s,MS4.1							
MORC	**Moravsky Berou**	**41.66**	**285**	*e*P		**P**	**03 45 21.0**	**+0.3**
	comp=Z,1.1nm,0.5s,mb3.7							
MORC	**Moravsky Berou**	**41.66**	**285**	*e*P		**P**	**03 45 21.0**	**+0.4**
MORC				pmax		pmax		
	comp=Z,1.0nm,0.5s,mb3.7							
SCHQ	**Schefferville**	**41.85**	**1**	P		**P**	**03 45 20.2**	**-2.0**
	comp=Z,1.5nm,0.6s,mb3.8,baz=22,slow=5.4,SNR=3.6							
SCHQ					LR	LR	04 03 09.5	
	comp=Z,127nm,18.2s,MS3.8,baz=13,slow=37							
SNF	**Seneffe**	**42.33**	**297**	P		**P**	**03 45 26.4**	**+0.2**
TKM2	**Tokmak 2**	**42.39**	**224**	*e*P		**P**	**03 45 27.1**	**+0.5**
	comp=Z,6.5nm,1.1s,mb4.2							
TKM2	**Tokmak 2**	**42.39**	**224**	*e*P		**P**	**03 45 27.2**	**+0.5**
TKM2				pmax		pmax		
	comp=Z,6.0nm,1.1s,mb4.1							
AAK	**Ala-Archa**	**42.76**	**225**	P		**P**	**03 45 31.0**	**+1.3**
	comp=Z,1.9nm,0.3s,mb4.2,baz=97,slow=2.1,SNR=6.4							
BAIF	**Baives**	**42.79**	**297**	⇑*i*P		**P**	**03 45 30.2**	**+0.4**
	comp=Z,27nm,1.4s,mb4.5							
EKS2	**Erkin-Say**	**42.79**	**226**	*e*P		**P**	**03 45 31.0**	**+1.0**
	comp=Z,9.5nm,1.4s,mb4.3							
HHC	**Hu-ho-hao-te**	**42.85**	**184**	*e*P		**P**	**03 45 29.5**	**-0.9**
HHC				pP		pP	03 45 33.9	-1.9
HHC				sP		sP	03 45 36.6	-1.3
HHC				PP		PP	03 47 11.1	+1.4
HHC				*e*S		**S**	**03 51 51.9**	**-1.8**
HHC				SS		SS	03 54 55.5	-9.1
HHC				ScS		ScS	03 55 27.9	-1.9
HHC				pmax		pmax		
	comp=Z,16nm,0.8s,mb4.8							
HHC				pmax		pmax		
	comp=Z,110nm,5.5s							
HHC				LR		LR		
	comp=N,160nm,11.3s,MS4.3							
HHC				LR		LR		
	comp=E,160nm,10.4s,MS4.3							
HHC				LR		LR		
	comp=Z,190nm,14.3s,MS4.1							
UCH	**Uchtor**	**43.16**	**225**	*e*P		**P**	**03 45 34.9**	**+1.9**
	comp=Z,3.1nm,0.9s,mb4.0							
AML	**Almayashu**	**43.33**	**226**	*e*P		**P**	**03 45 35.8**	**+1.5**
	comp=Z,5.7nm,1.0s,mb4.3							
CDF	**Champ du Feu**	**44.10**	**294**	⇑*i*P		**P**	**03 45 40.9**	**+0.5**
	comp=Z,8.1nm,1.1s,mb4.1							
MEZF	**Maizieres J'vi**	**44.24**	**296**	⇑*i*P		**P**	**03 45 42.1**	**+0.5**
FLN	**La Foliniere**	**44.53**	**301**	⇑*i*P		**P**	**03 45 43.5**	**-0.4**
	comp=Z,23nm,1.2s,mb4.6							
FLN					*e*MLR	MLR		
	comp=Z,86nm,18.2s,MS3.4							
KIV	**Kislovodsk**	**44.58**	**258**	*e*P		**P**	**03 45 45.5**	**+1.2**
	comp=Z,15nm,1.1s,mb4.7							
KIV	**Kislovodsk**	**44.58**	**258**	*i* P		**P**	**03 45 46.2**	**+1.9**
KIV				pmax		pmax		
	comp=Z,14nm,1.0s,mb4.8							
HAU	**Haudompre**	**44.60**	**295**	⇑*i*P		**P**	**03 45 44.7**	**+0.3**
HAU				*e*MLR		MLR		
	comp=Z,84nm,17.8s,MS3.4							
HINF	**Hinteralfeld**	**44.73**	**294**	⇑*i*P		**P**	**03 45 45.5**	**0.0**
SGMF	**Saint Gilles**	**45.23**	**303**	⇑*i*P		**P**	**03 45 48.8**	**-0.7**
	comp=Z,6.7nm,0.8s,mb4.2							
DAVOX	**Davos/Dischmat**	**45.44**	**291**	P		**P**	**03 45 51.9**	**+0.7**
	comp=Z,0.4nm,0.3s,mb3.8,baz=288,slow=7.2,SNR=3.6							
LOR	**Lormes**	**45.58**	**297**	⇑*i*P		**P**	**03 45 51.9**	**-0.3**
	comp=Z,24nm,1.4s,mb4.6							
LOR					*e*MLR	MLR		
	comp=Z,118nm,18.2s,MS3.6							
QUIF	**Quistinic**	**45.63**	**304**	⇑*i*P		**P**	**03 45 52.4**	**-0.2**
	comp=Z,112nm,1.7s,mb5.2							
KSH	**Kashi**	**45.74**	**223**	*e*P		**P**	**03 45 56.8**	**+3.2**
KSH				*e*pP		pP	03 46 01.9	+3.0
KSH				*e*sP		sP	03 46 04.0	+3.0
KSH				*e*PcP		PcP	03 47 34.1	+3.1
KSH				*e*PP		PP	03 47 45.3	+4.8
KSH				*e*ScP		ScP	03 51 25.1	+2.5
KSH				*e*PcS		PcS	03 51 27.3	+2.2
KSH				*e*S		**S**	**03 52 40.5**	**+4.7**
KSH				*e*sS		sS	03 52 48.0	+3.4
KSH				*e*ScS		ScS	03 55 50.3	+2.1
KSH				*e*SS		SS	03 55 57.9	-1.8
KSH				pmax		pmax		
	comp=Z,2.0nm,0.8s,mb4.1							
KSH				pmax		pmax		
	comp=Z,26nm,5.0s							
KSH				LR		LR		
	comp=N,94nm,10.2s							
KSH				LR		LR		
	comp=E,120nm,5.4s							
KSH				LR		LR		
	comp=Z,76nm,6.7s							
SSF	**Saint Saulge**	**45.82**	**297**	⇑*i*P		**P**	**03 45 53.9**	**-0.2**
	comp=Z,40nm,1.7s,mb4.8							
CABF	**La Chapelle**	**46.01**	**295**	⇑*i*P		**P**	**03 45 55.9**	**+0.3**
	comp=Z,51nm,1.6s,mb4.9							
AVF	**Avril sur Loir**	**46.11**	**297**	⇑*i*P		**P**	**03 45 56.2**	**-0.2**
	comp=Z,18nm,1.4s,mb4.5							
NEW	**Newport**	**46.16**	**47**	*e*P		**P**	**03 45 57.8**	**+1.0**
	comp=Z,5.5nm,0.9s,mb4.5							
NEW				*e*pP		pP	03 46 04.3	+2.1
NEW	**Newport**	**46.16**	**47**	*e*P		**P**	**03 45 57.8**	**+1.0**
NEW				*e**PP		pP	03 46 04.3	+2.1
NEW				pmax		pmax		
	comp=Z,6.0nm,0.9s							
SMF	**Signal de Mont**	**46.20**	**297**	⇑*i*P		**P**	**03 45 56.8**	**-0.3**
BGF	**Bois d'Agland**	**46.39**	**298**	⇑*i*P		**P**	**03 45 58.8**	**+0.2**
	comp=Z,21nm,1.1s,mb4.7							
KSRS	**Korea Array**	**46.41**	**166**	LR		LR	04 08 01.1	
	comp=Z,62nm,19.0s,MS3.6,baz=181,slow=39							
TCF	**Toulx Ste Croi**	**46.72**	**298**	⇑*i*P		**P**	**03 46 01.1**	**-0.1**
	comp=Z,14nm,1.1s,mb4.5							
JTMT	**Jette**	**46.91**	**44**	*e*P		**P**	**03 46 02.4**	**-0.3**
	comp=Z,4.2nm,1.0s,mb4.3							
LPG	**La Plagne**	**47.04**	**294**	⇑*i*P		**P**	**03 46 04.8**	**+1.1**
SWMT	**Swartz Lake**	**47.17**	**44**	*e*P		**P**	**03 46 04.6**	**0.0**
	comp=Z,2.9nm,0.9s,mb4.2							
ORIF	**Oris-en-Rattie**	**47.70**	**295**	⇑*i*P		**P**	**03 46 09.5**	**+0.6**
ORIF				*e*MLR		MLR		
	comp=Z,127nm,21.8s,MS3.5							
LZH	**Lanzhou**	**47.72**	**192**	*e*P		**P**	**03 46 07.5**	**-1.6**
LZH				pP		pP	03 46 10.8	-3.7
LZH				sP		sP	03 46 12.3	-4.3
LZH				*e*PP		PP	03 47 58.6	-2.0
LZH				pmax		pmax		
	comp=Z,19nm,1.2s,mb5.0							
LZH				pmax		pmax		
	comp=Z,54nm,5.4s							
LZH				LR		LR		
	comp=N,250nm,14.7s							
LZH				LR		LR		
	comp=Z,310nm,18.7s,MS4.3							
RJF	**Les Rejaudoux**	**47.76**	**299**	⇑*i*P		**P**	**03 46 09.6**	**+0.3**
	comp=Z,10nm,1.0s,mb4.5							
RJF					*e*MLR	MLR		
	comp=Z,107nm,20.8s,MS3.5							
MBDF	**Montbardon**	**47.80**	**294**	⇑*i*P		**P**	**03 46 10.8**	**+1.2**
	comp=Z,7.1nm,0.9s,mb4.4							
MSO	**Missoula**	**47.85**	**44**	*e*P		**P**	**03 46 10.6**	**+0.7**
	comp=Z,7.2nm,1.4s,mb4.5							
LAO	**LASA Array**	**48.56**	**37**	*e*P		**P**	**03 46 15.1**	**-0.3**
	comp=Z,12nm,1.1s,mb4.8							
LASF	**Ste Croix**	**48.74**	**296**	⇑*i*P		**P**	**03 46 17.7**	**+0.8**
FRF	**La Foret Royal**	**48.97**	**294**	⇑*i*P		**P**	**03 46 18.7**	**+0.1**
	comp=Z,16nm,1.1s,mb4.6							
BOZ	**Bozeman (W)**	**49.20**	**42**	*e*P		**P**	**03 46 20.4**	**+0.1**
	comp=Z,16nm,1.8s,mb4.8							
BOZ	**

KEST	Kesra	56.43	290	P		P		03 47 13.8	-0.1
	comp=Z,5.6nm,1.0s,mb4.6,baz=330,slow=2.3,SNR=12								
ASF	Jabal al Asfar	56.87	262	P		P		03 47 17.8	+0.7
	comp=Z,2.1nm,0.8s,mb4.2,baz=274,slow=8.9,SNR=3.7								
PV01	Paradox Valley	56.90	40	*eP*		P		03 47 16.4	-0.8
	comp=Z,1μm,1.2s								
GYA	Guiyang	57.26	189	*eP*		P		03 47 20.8	+0.9
GYA				pmax	pmax				
	comp=Z,10.0nm,1.0s,mb4.8								
SDCO	Great Sand Dun	57.50	38	*eP*		P		03 47 22.2	+0.7
	comp=Z,13nm,1.5s,mb4.7								
MVCO	Mesa Verde	57.82	40	*eP*		P		03 47 24.3	+0.6
	comp=Z,23nm,1.5s,mb5.0								
ANMO	Albuquerque	60.22	39	*eP*		P		03 47 40.5	+0.1
	comp=Z,7.2nm,1.2s,mb4.6								
ANMO	Albuquerque	60.22	39	*eP*		P		03 47 40.5	+0.2
ANMO				pmax	pmax				
	comp=Z,7.0nm,1.2s								
WMOK	Wichita Mounta	60.93	31	*eP*		P		03 47 43.9	-1.3
	comp=Z,8.9nm,1.4s,mb4.7								
WMOK	Wichita Mounta	60.93	31	*eP*		P		03 47 43.9	-1.3
WMOK				pmax	pmax				
	comp=Z,9.0nm,1.4s,mb4.7								
TUC	Tucson	62.52	43	*eP*		P		03 47 56.2	+0.2
	comp=Z,2.9nm,1.1s,mb4.3								
TUC	Tucson	62.52	43	*eP*		P		03 47 56.2	+0.3
TUC				pmax	pmax				
	comp=Z,3.0nm,1.1s,mb4.3								
MNTX	Cornudas Mount	63.52	38	*eP*		P		03 48 01.6	-1.0
	comp=Z,5.7nm,1.3s,mb4.4								
CHTO	Chiang Mai	65.06	197	*eP*		P		03 48 11.8	-1.0
JCT	Junction City	65.10	33	*eP*		P		03 48 11.0	-2.0
	comp=Z,14nm,1.4s,mb4.8								
JCT	Junction City	65.10	33	*eP*		P		03 48 11.0	-2.0
JCT				pmax	pmax				
	comp=Z,14nm,1.4s,mb4.8								
CMAR	Chiang Mai Arr	65.42	197	P		P		03 48 14.9	-0.2
	comp=Z,0.7nm,0.5s,mb3.9,baz=350,slow=8.9,SNR=8.2								
CMAR				LR	LR			04 18 27.1	
	comp=Z,105nm,18.0s,MS4.1,baz=225,slow=38								
DBIC	Dimbokro	86.63	300	*eP*		P		03 50 16.1	+0.2
	comp=Z,7.9nm,1.0s,mb4.9								
DBIC	Dimbokro	86.63	300	*eP*		P		03 50 16.2	+0.3
DBIC				pmax	pmax				
	comp=Z,8.0nm,1.0s								
LIC	Lamto	87.08	300	*eP*		P		03 50 17.4	-0.8
	comp=Z,16nm,1.0s,mb4.9								
MAW	Mawson	153.00	222	PKPbc	PKPbc			03 57 27.4	-0.5
	comp=Z,3.4nm,0.9s,baz=262,slow=4.7,SNR=6.4								
MAW				PKPab	PKPab			03 57 39.8	+0.3
	comp=Z,1.4nm,0.8s,baz=327,slow=7.9,SNR=4.0								

ISCJB ***15*** *03:38:15.5±0.3,58.36S±0.07×22.8W±0.1, h10km, mb4.9/27, MS4.6/12, Error ellipse: s-maj=10.0km s-min=9.0km az=27.6*

IDC ***15*** *03:38:15.9±0.5, 58.34S×22.90W, h0km, mb4.7/12, mb1 4.7/12, mb1mx4.6/17, mbtmp4.7/12, MS4.5/12, Ms1 4.5/12, ms1mx4.5/13, Error ellipse: s-maj=20.3km s-min=15.3km az=29.0*

NEIC ***15*** *03:38:17.4±0.2, 58.33S×22.87W, h10km, mb5.1/22, Error ellipse: s-maj=9.0km s-min=7.7km az=177.0*

GCMT ***15*** *03:38:20.8±0.2, 58.69S×22.64W, h14km±1km, MW5.2, Moment Tensor Solution. s53,c80; s93,c137; Moment tensor: Scale 10^16 Nm; Mrr0.38±.16; Mθθ-5.27±.19; Mφφ4.90±.18; Mrθ1.08±.35; Mrφ5.25±.17; Mθφ1.46±.36; Best double couple: M0 7.50000×10^16 NP1:φs337.00000°, δ78.00000°, λ172.00000°. NP2:φs69.00000°, δ83.00000°, λ12.00000°. Principal axes: T 7.5600, Plg14.0000°, Azm293.0000°; N -0.0300, Plg76.0000°, Azm100.0000°; P -7.5200, Plg3.0000°, Azm203.0000°; Data Used: IU II IC G CN.*

ISC 15 03:38:17.3±0.3, 58.38S±0.07×22.8W±0.1, h10km, n72, σ0.94/40, mb4.9/27, MS4.6/12, 1C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.74	159	*e*	Pn	03 41 27.3	-4.6
VNA1				*e*		03 41 36.1	
VNA1				*e*		03 43 48.3	
MAIT	Maitri	18.95	145	*eP*	Pn	03 42 37.5	-1.3
PMSA	Palmer Station	20.33	234	*eP*	P	03 42 53.9	+0.7
	39nm,0.9s						
PMSA	Palmer Station	20.33	234	P	P	03 42 54.6	+1.4
	9.8nm,0.4s,baz=11,slow=5.5,SNR=5.3						
USHA	Ushuaia	24.99	258	P	P	03 43 40.2	-0.6
	28nm,0.9s,mb4.8,baz=85,slow=12,SNR=4.9						
SYO	Syowa Base	28.25	138	*eP*	P	03 44 07.6	-2.4
QSPA	South Pole Qui	31.86	180	P	P	03 44 42.4	+0.6
	7.8nm,0.6s,mb4.7,baz=216,slow=3.2,SNR=66						
TRQA	Tornquist	32.43	292	*eP*	P	03 44 45.1	-2.1
	4.3nm,0.9s,mb4.3						
PLCA	Paso Flores	34.76	279	*eP*	P	03 45 05.4	-2.0
	16nm,1.1s,mb4.9						
PLCA				LR	LR	03 59 02.7	
PLCA	Paso Flores	34.76	279	P	P	03 45 05.3	-2.1
	6.0nm,0.8s,mb4.6,baz=136,slow=9.2,SNR=12						
PLCA				LR	LR	03 59 02.7	
	comp=Z,782nm,18.8s,MS4.5,baz=119,slow=36						
MAW	Mawson	36.83	140	P	P	03 45 24.7	-0.2
MAW				LR	LR	03 58 20.1	
MAW	Mawson	36.83	140	P	P	03 45 24.7	-0.2
	9.7nm,0.8s,mb4.7,baz=247,slow=8.7,SNR=23						
MAW				LR	LR	03 58 20.1	
	comp=Z,1μm,19.2s,MS4.6,baz=252,slow=33						
SUR	Sutherland	39.12	68	*eP*	P	03 45 45.3	+0.7
	48nm,1.4s,mb5.0						
CPUP	Villa Florida	40.15	308	*eP*	P	03 45 51.8	-1.4
	59nm,1.0s,mb5.3						
CPUP	Villa Florida	40.15	308	P	P	03 45 52.1	-1.1
	11nm,0.9s,mb4.6,baz=136,slow=7.8,SNR=16						
SBA	Scott Base	43.89	183	*eP*	P	03 46 24.4	+1.2
	35nm,1.4s,mb4.9						
BOSA	Boshof	44.39	69	*eP*	P	03 46 27.2	-0.5
	25nm,0.9s,mb5.0						
BOSA				LR	LR	04 00 40.8	
BOSA	Boshof	44.39	69	P	P	03 46 27.6	-0.1
	20nm,0.8s,mb4.9,baz=213,slow=7.5,SNR=34						
BOSA				LR	LR	04 00 40.8	
	comp=Z,476nm,20.4s,MS4.4,baz=219,slow=30						
LBTB	Lobatse	47.56	67	*eP*	P	03 46 52.5	-0.3
	8.9nm,0.7s,mb4.9						
TSUM	Tsumeb	48.91	54	*eP*	P	03 47 03.0	-0.3
	4.7nm,0.8s,mb4.6						
CASY	Casey	50.87	158	*eP*	P	03 47 18.2	+0.6
	26nm,1.2s,mb5.0						
LPAZ	La Paz	53.67	302	*eP*	P	03 47 39.1	+0.2
	13nm,0.7s,mb5.0						
LPAZ				LR	LR	04 09 21.8	
LPAZ	La Paz	53.67	302	P	P	03 47 39.1	+0.2
	10nm,0.6s,mb4.9,baz=121,slow=4.3,SNR=59						
LPAZ				LR	LR	04 09 21.8	
	comp=Z,273nm,18.4s,MS4.3,baz=355,slow=35						
LSZ	Lusaka	57.13	63	*eP*	P	03 48 03.7	-0.2
	7.4nm,0.8s,mb4.8						
NNA	Nana	61.45	296	*eP*	P	03 48 33.6	-0.2
	62nm,1.5s,mb5.5						
LIC	Lamto	65.97	19	*eP*	P	03 49 03.6	+0.1
	84nm,1.6s,mb5.5						
KIC	Kosan Boka	66.15	20	*eP*	P	03 49 04.8	+0.1
	66nm,1.5s,mb5.4						
TIC	Toumodi	66.38	19	*eP*	P	03 49 06.2	0.0
	14nm,0.6s,mb5.2						
DBIC	Dimbokro	66.44	19	*eP*	P	03 49 06.2	-0.3
	9.2nm,0.9s,mb4.8						
DBIC				LR	LR	04 10 29.5	
DBIC	Dimbokro	66.44	19	P	P	03 49 06.5	0.0
	5.6nm,0.7s,mb4.7,baz=145,slow=7.5,SNR=9.8						
DBIC				LR	LR	04 10 29.5	
	comp=Z,363nm,20.9s,MS4.6,baz=166,slow=29						
OTAV	Otavalo	72.92	300	*eP*	P	03 49 48.0	+1.3
	28nm,1.3s,mb5.0						
KMBO	Kilima Mbogo	73.76	64	LR	LR	04 17 56.2	
	comp=Z,386nm,20.6s,MS4.7,baz=0.0,slow=32						
ROSC	El Rosal	75.23	306	*eP*	P	03 50 00.4	+0.4
ROSC				LR	LR	04 26 41.3	
ROSC	El Rosal	75.23	306	P	P	03 50 01.1	+1.0
	14nm,0.8s,mb4.9,baz=149,slow=3.1,SNR=13						
ROSC				LR	LR	04 26 41.3	
	comp=Z,204nm,18.1s,MS4.5,baz=198,slow=39						
RKT	Rikitea	81.45	240	*eLQ*		04 12 38.5	
	747nm,37.5s						
RKT				*eLR*	LR	04 16 22.5	

	310nm,24.8s,baz=148								
BCIP	Isla Barro Col	81.47	303	*eP*		P		03 50 34.7	+0.2
	28nm,1.0s,mb5.2								
TAM	Tamanrasset	84.23	26	*eP*		P		03 50 50.2	+1.6
	3.0nm,1.0s,mb4.4								
JTS	JuntasAbangare	84.77	299	*eP*		P		03 50 52.6	+1.1
	58nm,1.5s,mb5.5								
FORT	Forrest	87.89	155	*eP*		P		03 51 06.8	0.0
	17nm,1.0s,mb5.2								
STKA	Stephens Creek	89.14	167	P		P		03 51 12.7	-0.1
	2.7nm,0.9s,mb4.6,baz=98,slow=8.3,SNR=3.2								
STKA				LR		LR		04 29 32.1	
	comp=Z,777nm,18.1s,MS5.2,baz=200,slow=34								
PPT	Papeete	92.63	230	*eLR*		LR		04 21 27.2	
	596nm,25.8s,baz=156								
PPT	Papeete	92.63	230	LR		LR		04 25 28.6	
	comp=Z,339nm,18.2s,MS4.8,baz=134,slow=31								
ASAR	Alice Springs	95.99	159	P		P		03 51 45.4	+0.9
	0.4nm,0.7s,mb3.9,baz=178,slow=6.4,SNR=4.2								
ASAR	Alice Springs	95.99	159	P		P		03 51 45.4	+0.9
TAOE	Nuku Hiva Isla	96.27	242	*eLR*		LR		04 23 05.0	
	244nm,23.8s								
KEST	Kesra	97.54	26	LR		LR		04 33 48.5	
	comp=Z,107nm,18.6s,MS4.4,baz=217,slow=34								
ESDC	Sonseca Array	98.95	15	LR		LR		04 33 54.5	
	comp=Z,102nm,18.1s,MS4.4,baz=345,slow=34								
WRA	Warramunga Arr	99.70	158	LR		LR		04 37 35.4	
	comp=Z,201nm,19.9s,MS4.6,baz=180,slow=36								
CMAR	Chiang Mai Arr	122.04	108	PKP		PKPdf		03 57 14.4	+2.7
	0.8nm,0.3s,baz=212,slow=3.4,SNR=6.1								
HWUT	Hardware Ranch	123.63	296	*e*PKPdf		PKPdf		03 57 13.9	-0.1
LOHW	Long Hollow	124.73	298	*e*PKPdf		PKPdf		03 57 16.3	+0.2
TPAW	Teton Pass	124.79	298	*e*PKPdf		PKPdf		03 57 16.9	+0.6
FINES	FINESS Array B	125.37	26	PKP		PKPdf		03 57 16.9	+0.1
	2.6nm,0.8s,baz=190,slow=6.4,SNR=2.9								
BOZ	Bozeman (W)	126.75	299	*e*PKPdf		PKPdf		03 57 20.1	+0.2
ABKAR	Akbulak array	126.76	54	*e*PKPdf		PKPdf		03 57 19.2	-0.6
EKS2	Erkin-Say	128.19	69	*e*PKPdf		PKPdf		03 57 24.6	+1.8
UCH	Ucor	128.23	70	*e*PKPdf		PKPdf		03 57 26.8	+3.9
ARCES	ARCESS Array B	132.25	21	PKP		PKPdf		03 57 29.9	+0.3
	3.5nm,0.9s,baz=282,slow=2.4,SNR=3.9								
MK31	Makanchi Array	135.38	71	*e*PKPdf		PKPdf		03 57 36.2	0.0
KURK	Kurchatov	136.25	64	*e*PKPdf		PKPdf		03 57 39.3	+1.6
YKA	Yellowknife Ar	139.52	314	PKP		PKPdf		03 57 43.5	+0.2
YKA				PP		PP		04 00 36.6	-2.5
YKA	Yellowknife Ar	139.52	314	PKP		PKPdf		03 57 43.5	+0.2
	2.3nm,0.9s,baz=129,slow=2.5,SNR=6.0								
YKA				PP		PP		04 00 36.6	-2.5
	2.5nm,1.0s,baz=128,slow=6.0,SNR=4.9								
ZALV	Zalesovo Beam	141.24	64	PKP		PKPdf		03 57 46.3	-0.4
	0.6nm,0.4s,baz=221,slow=4.6,SNR=3.8								
DLBC	Dease Lake	143.61	302	PKP		PKPdf		03 57 52.8	+2.0
	2.6nm,0.9s,baz=169,slow=7.2,SNR=3.3								
SONM	Songino Array	148.47	87	PKPbc		PKPbc		03 58 02.7	-0.3
	5.7nm,0.9s,baz=213,slow=2.3,SNR=14								
INK	Inuvik	149.14	317	*e*PKPbc		PKPbc		03 58 03.3	-0.8
INK				PKPab		PKPab		03 58 20.4	+12
INK	Inuvik	149.14	317	PKPbc		PKPbc		03 58 03.9	-0.2
	4.6nm,0.6s,baz=14,slow=7.3,SNR=7.4								
DAWY	Dawson	150.13	308	*e*PKPbc		PKPbc		03 58 06.4	-0.2
KSRS	Ksrese Array	151.68	125	PKPbc		PKPbc		03 58 11.5	+0.4
	1.6nm,0.7s,baz=238,slow=1.1,SNR=6.8								
KSRS				PKPab		PKPab		03 58 20.4	+0.4
	0.5nm,0.4s,baz=196,slow=2.0,SNR=5.2								
ILAR	Eielson Array	153.45	307	PKPbc		PKPbc		03 58 13.7	-0.5
	3.1nm,1.0s,baz=138,slow=1.8,SNR=19								
KDAK	Kodiak Island	153.94	290	PKPbc		PKPbc		03 58 17.4	+2.0
KDAK	Kodiak Island	153.94	290	PKPbc		PKPbc		03 58 17.4	+2.0
	3.2nm,0.6s,baz=202,slow=5.4,SNR=2.8								

NEIC ***15*** *04:04:24.9, 15.99N×96.86W, h20km, MD3.6(MEX), After MEX.*

MEX 15 04:04:24.8±0.7, 16.01N×96.87W, h15km±7km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.77	108	*eP*	Pg	04 04 37.1	-2.6
HUIG				*i S*	Sg	04 04 46.7	-3.1
HUIG	Huatulco	0.77	108	*eP*	Pg	04 04 37.1	-2.6
HUIG				*i S*	Sg	04 04 46.7	-3.1
VHO	Vista Hermosa	1.07	7	*eP*	Pb	04 04 41.2	-3.8
VHO				*i S*	Sb	04 04 54.6	-4.2
VHO	Vista Hermosa	1.07	7	*eP*	Pb	04 04 41.2	-3.8
VHO				*i S*	Sb	04 04 54.6	-4.2
OXX	Oaxaca	1.08	7	*i P*	Pb	04 04 41.9	-3.3
OXX				*i S*	Sb	04 04 55.5	-3.6
OXX	Oaxaca	1.08	7	*i P*	Pb	04 04 41.9	-3.3
OXX				*i S*	Sb	04 04 55.5	-3.6
PNIG	Pinotepa	1.27	288	*eP*	Pn	04 04 44.4	-3.7
PNIG				*i S*	Sb	04 04 59.7	-5.0
PNIG	Pinotepa	1.27	288	*eP*	Pn	04 04 44.4	-3.7
PNIG				*i S*	Sb	04 04 59.7	-5.0
UTMO	Huajuapan	2.02	334	*i P*	Pn	04 04 55.9	-2.5
UTMO				*i S*	Sn	04 05 18.9	-4.6
CMIG	Matias Romero	2.19	60	*eP*	Pn	04 04 57.9	-2.7
CMIG				*i S*	Sn	04 05 24.7	-2.7
CMIG	Matias Romero	2.19	60	*eP*	Pn	04 04 57.9	-2.7
CMIG				*i S*	Sn	04 05 22.7	-4.7
TPIG	Tehuac#an	2.45	349	*i P*	Pn	04 05 04.0	-0.2
TPIG				*i S*	Sn	04 05 33.9	+0.1
PCIG		3.52	94	*i P*	Pn	04 05 16.5	-2.5
TGIG		3.67	77	*i P*	Pn	04 05 22.8	+1.8

MEX 15 04:35:07.5±0.7, 14.07N×93.17W, h11km±17km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.21	46	*i P*	Pn	04 35 27.1	-3.3
THIG				*i S*	Sb	04 35 41.4	-4.9
PCIG		1.63	358	*eP*	Pn	04 35 32.2	-4.0
PCIG				*i S*	Sn	04 35 52.5	-4.6
TGIG		2.70	1	*i P*	Pn	04 35 48.4	-2.5
TGIG				*i S*	Sn	04 36 20.4	-3.2
SCX	San Cristobal	2.71	11	*eP*	Pn	04 35 48.6	-2.4
HUIG	Huatulco	3.31	301	*i P*	Pn	04 35 56.6	-2.6
HUIG				*i S*	Sn	04 36 35.0	-3.6
CMIG	Matias Romero	3.43	331	*i P*	Pn	04 35 58.6	-2.4
CMIG				*i S*	Sn	04 36 38.2	-3.4

ISCJB ***15*** *05:06:11.3±0.3, 7.43S±0.05×121.23E±0.09, h565km±5km, mb4.3/21, Error ellipse: s-maj=14.8km s-min=5.9km az=154.3*

NEIC ***15*** *05:06:11.6±0.4, 7.37S×121.28E, h553km±5km, mb4.6/7, Error ellipse: s-maj=13.7km s-min=5.4km az=64.0*

IDC ***15*** *05:06:11.6±1.4, 7.35S×121.27E, h546km±17km, mb3.6/10, mb1 3.7/12, mb1mx3.5/21, mbtmp3.6/12, Error ellipse: s-maj=25.8km s-min=9.5km az=63.0*

DJA ***15*** *05:06:12, 7.46S×121.24E, h555km, mb4.6/7*

ISC 15 05:06:12.1±0.3, 7.44S±0.05×121.23E±0.09, h555km±4km, n60, σ0.80/57, mb4.3/21, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	Maumere	1.55	140	P	P	05 07 18.9	-1.6
BKSI	Bulukumba	2.38	332	P	P	05 07 24.8	+0.7
KAPI	Kappang	2.82	329	*e*Pn	P	05 07 26.3	-0.3
KAPI				*eS*	S	05 08 26.8	-0.2
SPSI	Sidrap Palu	3.75	337	P	P	05 07 33.0	+0.4
TTSI	Tana Toraja	4.59	342	P	P	05 07 39.1	+0.2
PCI	Palu	6.64	348	P	P	05 07 58.4	+1.5
	0.5nm2μm151nm,1.0s						
MRSI	Marisa	7.90	5	P	P	05 08 08.7	-0.4
	0.7nm2μm179nm,0.8s						
KNA	Kununurra	11.07	139	P	P	05 08 41.2	+0.1
	960nm108nm,1.0s						
FITZ	Fitzroy Crossi	11.43	158	*e*Pn	P	05 08 44.4	-0.4
	25nm,0.9s						
FITZ	Fitzroy Crossi	11.43	158	P	P	05 08 44.5	-0.3
	2.2nm,0.3s,baz=356,slow=7.0,SNR=109						
FITZ	Fitzroy Crossi	11.43	158	P	P	05 08 44.9	+0.1
	54nm,0.9s						
KAKA	Kakadu	12.22	116	*e*Pn	P	05 08 51.6	-1.4
	34nm,0.5s						
MYLDM	Lahad Datu	12.83	348	P	P	05 09 01.6	+2.3
SBUM	Sibu	13.32	317	P	P	05 09 04.8	+0.5
	22nm,1.0s						
MBWA	Marble Bar	13.71	186	*e*Pn	P	05 09 07.7	-0.5
KKM	Kota Kinabalu	14.30	339	*e*Pn	P	05 09 13.3	-1.1
	26nm,0.7s						

KKM	Kota Kinabalu	14.30	339	P		P		05 09 13.5	-0.9
	668nm58nm,0.8s								
CGJI	Cibinong	15.44	272	P		P		05 09 25.1	-1.0
WRA	Warramunga Arr	17.78	136	P		P		05 09 47.9	+0.1
	5.3nm,0.3s,baz=316,slow=10,SNR=130								
MEEK	Meekatharra	19.25	187	*eP*		P		05 10 01.0	-0.1
ASAR	Alice Springs	20.21	144	P		P		05 10 10.1	+0.3
	6.7nm,0.5s,baz=318,slow=8.0,SNR=94								
ASAR				PcP		PcP		05 13 58.5	-0.1
	0.6nm,0.4s,baz=311,slow=2.0,SNR=4.5								
ASAR				ScP		ScP		05 16 42.6	-0.2
	1.0nm,0.6s,baz=321,slow=1.3,SNR=7.2								
MORW	Morawa	22.06	192	*eP*		P		05 10 26.4	0.0
FORT	Forrest	24.08	165	*eP*		P		05 10 44.5	+0.1
	23nm,0.5s,mb5.1								
FORT	Forrest	24.08	165	*eP*		P		05 10 44.5	+0.1
	29nm,0.6s,mb5.1								
KLBR	Kellerberrin	24.25	187	*eP*		P		05 10 45.4	-0.4
	13nm,1.2s,mb4.5								
NWAO	Narrogin (SRO)	25.63	188	P		P		05 10 58.2	+0.1
NWAO	Narrogin (SRO)	25.63	188	P		P		05 10 58.2	+0.1
	3.2nm,0.4s,mb4.3,baz=314,slow=3.7,SNR=6.7								
RKGY	Rocky Gully	27.32	188	*eP*		P		05 11 14.3	+1.4
	6.7nm,0.4s,mb4.6								
BBOO	Buckleboo	28.75	153	*eP*		P		05 11 25.5	+0.1
STKA	Stephens Creek	30.84	145	*eP*		P		05 11 44.1	+0.6
	3.7nm,0.8s,mb4.0								
STKA	Stephens Creek	30.84	145	P		P		05 11 44.0	+0.6
	16nm,0.4s,mb4.8,baz=318,slow=9.0,SNR=48								
STKA				ScP		ScP		05 17 12.8	-0.8
	1.6nm,0.6s,baz=34,slow=3.6,SNR=5.3								
CMSA	Cobar Meteorol	33.10	140	*eP*		P		05 12 03.3	+0.6
CMAR	Chiang Mai Arr	33.85	320	P		P		05 12 09.2	0.0
	2.7nm,0.7s,mb3.9,baz=143,slow=6.7,SNR=12								
CMAR				PcP		PcP		05 14 33.1	+1.3
	0.8nm,0.3s,baz=166,slow=2.5,SNR=6.0								
YNG	Young	36.62	141	*eP*		P		05 12 33.2	+1.2
	8.3nm,0.4s,mb4.6								
ODAN	Odare	47.31	317	*eP*		P		05 13 56.2	+0.1
	13nm,0.6s,mb4.6								
TAPN	Taplejung	47.42	318	*eP*		P		05 13 57.3	+0.4
	21nm,0.5s,mb4.9								
RAMN	Ramite	47.90	317	*eP*		P		05 14 00.9	+0.4
	27nm,0.5s,mb5.0								
HHC	Hu-ho-hao-te	48.87	350	*eP*		P		05 14 10.3	+2.9
HHC				pP		pP		05 15 51.5	+1.2
HHC				PP		PP		05 16 12.3	+3.8
HHC				sP		sP		05 16 48.9	-2.5
HHC				S		S		05 20 34.3	+4.1
HHC				sS		sS		05 23 35.3	-0.8
HHC				SS		SS		05 24 15.5	+4.7
HHC				pmax		pmax			
	comp=Z,18nm,0.8s,mb4.7								
HHC				pmax		pmax			
	comp=Z,75nm,3.8s								
GUN	Gumba	49.01	317	*eP*		P		05 14 09.0	+0.3
	comp=Z,26nm,0.5s,mb5.0								
PKI	Pulchoki	49.11	317	*eP*		P		05 14 09.3	-0.2
DMN	Daman	49.34	316	*eP*		P		05 14 11.2	0.0
GKN	Gorkha	49.91	316	*eP*		P		05 14 15.2	-0.2
KOLN	Koldanda	50.48	315	*eP*		P		05 14 19.4	-0.1
SONM	Songino Array	56.58	348	P		P		05 15 02.2	-0.1
	comp=Z,6nm,0.5s,mb3.8,baz=163,slow=8.0,SNR=15								
MK31	Makanchi Array	64.12	331	*eP*		P		05 15 51.9	-0.1
MKAR	Makanchi Array	64.12	331	P		P		05 15 52.2	+0.1
MKAR				PcP		PcP		05 16 21.6	+0.3
MKAR	Makanchi Array	64.12	331	P		P		05 15 52.2	+0.2
	comp=Z,6.4nm,0.6s,mb4.3,baz=139,slow=7.5,SNR=49								
MKAR				PcP		PcP		05 16 21.6	+0.3
	comp=Z,0.6nm,0.4s,baz=145,slow=4.0,SNR=3.7								
KBL	Kabul	64.58	314	*eP*		P		05 15 55.1	-0.1
	comp=Z,13nm,0.7s,mb4.5								
ZAAO	Zalesovo Array	68.41	338	*eP*		P		05 16 17.1	-1.3
ZALV	Zalesovo Beam	68.41	338	P		P		05 16 17.4	-1.1
	comp=Z,5.4nm,0.3s,mb4.5,baz=135,slow=4.7,SNR=19								
KURK	Kurchatov	68.61	332	*eP*		P		05 16 19.4	-0.3
	comp=Z,2.5nm,0.5s,mb4.0								
OPO	Ambohidratompo	72.58	253	P		P		05 16 44.4	+0.5
	comp=Z,1.7nm,0.7s,mb3.6,baz=45,slow=8.6								
BVAR	Borovoye Array	73.99	331	P		P		05 16 50.3	-0.9
	comp=Z,1.4nm,0.6s,mb3.6,baz=123,slow=5.5,SNR=6.4								
BRTR	Keskin Array B	92.85

ellipse: s-maj=13.0km s-min=10.9km az=64.5
*ISCJB **15** 06:02:32.3±1.0, 43°.90N±0°.06×147°.6E±0°.1, h49km±8km, mb3.9/14, Error ellipse: s-maj=14.8km s-min=6.6km az=39.6*
*NEIC **15** 06:02:32.9±0.7, 43°.98N×147°.72E, h35km, mb4.0/2, Error ellipse: s-maj=16.2km s-min=10.4km az=140.0*
*IDC **15** 06:02:32.7±1.1, 43°.91N×147°.60E, h36km±6km, mb3.7/13, mb1 3.8/14, mb1mx3.7/21, mbtmp3.7/14, ML3.5/1, MS2.8/3, Ms1 2.8/3, ms1mx2.6/20, Error ellipse: s-maj=25.7km s-min=15.8km az=166.0*

ISC 15 06:02:33.6±1.0, 43°.91N±0°.07×147°.6E±0°.1, h43km±8km, h36km±1.4km:pP-P, n42, σ0s92/45, mb3.9/14, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.27**	**276**	⇓*i* PN	**Pn**	**06 02 54.1**	**-0.8**
YUK				*i* S	**Sn**	**06 03 10.6**	**-0.2**
YUK				pmax	pmax		
	comp=Z,270nm,0.3s						
YUK				pmax	pmax		
	comp=N,369nm,0.2s						
YUK				pmax	pmax		
	comp=E,319nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				smax			
	comp=N,2μm,0.2s						
YUK				smax			
	comp=E,3μm,0.4s						
YUK				smax			
	comp=N,1μm,0.4s						
YUK				smax			
	comp=E,420nm,0.2s						
KUR	**Kuril'sk**	**1.33**	**8**	*e*PN	**Pn**	**06 02 55.3**	**-0.4**
KUR				*e*S	**Sn**	**06 03 12.5**	**+0.2**
KUR				pmax	pmax		
	comp=Z,110nm,0.5s						
KUR				smax			
	comp=N,780nm,0.5s						
KUR				smax			
	comp=E,760nm,0.5s						
NEM2	**Nemuro 2**	**1.47**	**249**	P	**Pn**	**06 02 55.3**	**-2.3**
NEM2				*e*S	**Sn**	**06 03 15.2**	**-0.4**
JRA	**Rausu**	**1.81**	**272**	P	**Pn**	**06 03 01.9**	**-0.3**
JNK	**Nakash**	**2.13**	**262**	P	**Pn**	**06 03 05.6**	**-1.0**
JAK	**Akkeshi**	**2.32**	**248**	P	**Pn**	**06 03 07.6**	**-1.6**
JTKR	**Abashiri--Toko**	**2.68**	**273**	P	**Pn**	**06 03 14.8**	**+0.6**
JAR	**Ashorobuto**	**2.86**	**259**	P	**Pn**	**06 03 16.7**	**0.0**
JOB	**Onbets**	**2.94**	**251**	P	**Pn**	**06 03 16.9**	**-0.8**
JMP	**Maruseppu**	**3.08**	**273**	P	**Pn**	**06 03 20.4**	**+0.7**
JCH	**Churui**	**3.37**	**249**	P	**Pn**	**06 03 22.9**	**-0.8**
JCH				*e*S	**Sn**	**06 04 03.3**	**+0.9**
ASAJ	**Asahikawa**	**3.63**	**275**	Pn	**Pn**	**06 03 27.8**	**+0.5**
	comp=E,2.9nm,0.3s,baz=86,slow=16,SNR=15						
ASAJ				Sn	**Sn**	**06 04 20.8**	**+12**
	comp=E,2.7nm,0.3s,baz=354,slow=29,SNR=3.5						
ASAJ				LR	LR	06 05 02.2	
	comp=E,241nm,18.8s,baz=296,slow=41						
ASAJ	**Asahikawa**	**3.63**	**275**	PN	**Pn**	**06 03 27.8**	**+0.6**
ASAJ						06 04 20.8	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
JFR	**Furan**	**3.73**	**260**	P	**Pn**	**06 03 29.3**	**+0.7**
ERM	**Erimo**	**3.78**	**241**	*e*Pn	**Pn**	**06 03 30.3**	**+0.9**
JNBK	**Urakawa-nobuka**	**3.92**	**247**	P	**Pn**	**06 03 30.6**	**-0.6**
YSS	**Yuzh-Sakhalins**	**4.58**	**313**	*e*Pn	**Pn**	**06 03 42.0**	**+1.7**
MAJO	**Matsushiro**	**10.29**	**228**	*i* PN	**Pn**	**06 05 02.2**	**+3.6**
MJAR	**Matsushiro Arr**	**10.29**	**228**	Pn	**Pn**	**06 05 01.0**	**+2.5**
	comp=N,0.2nm,0.3s,baz=27,slow=11,SNR=3.2						
MJAR				LR	LR	06 08 59.5	
	comp=N,26nm,20.8s,baz=80,slow=38						
KSRS	**Korea Array**	**16.26**	**253**	Pn	**Pn**	**06 06 21.1**	**+2.3**
	comp=N,0.1nm,0.3s,baz=67,slow=12,SNR=3.8						
KSRS				LR	LR	06 13 06.6	
	comp=N,26nm,19.4s,baz=55,slow=39						
SONM	**Songino Array**	**28.72**	**292**	P	**P**	**06 08 26.9**	**+0.4**
	comp=N,0.5nm,0.4s,mb3.6,baz=78,slow=8.1,SNR=3.1						
ILAR	**Eielson Array**	**41.16**	**36**	P	**P**	**06 10 13.4**	**+0.2**
	comp=N,0.5nm,0.5s,mb3.4,baz=259,slow=5.7,SNR=11						
ILAR				pP	pP	06 10 23.6	-1.6
	comp=N,0.4nm,0.5s,baz=256,slow=6.5,SNR=3.8						
ZALV	**Zalesovo Beam**	**41.17**	**307**	PcP	PcP	06 12 11.9	0.0
	comp=N,0.9nm,0.5s,baz=143,slow=1.6,SNR=4.6						
MKAR	**Makanchi Array**	**44.81**	**298**	P	**P**	**06 10 42.9**	**-0.1**
MKAR				pP	pP	06 10 53.2	-1.8
MKAR	**Makanchi Array**	**44.81**	**298**	P	**P**	**06 10 42.9**	**-0.1**
	comp=N,0.5nm,0.5s,mb3.6,baz=77,slow=9.3,SNR=6.0						
MKAR				pP	pP	06 10 53.2	-1.8
	comp=N,0.3nm,0.6s,baz=76,slow=10,SNR=2.6						
MKAR	**Makanchi Array**	**44.81**	**298**	*e*P	**P**	**06 10 43.1**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**45.72**	**304**	*e*P	**P**	**06 10 49.1**	**-1.0**
	comp=Z,1.0nm,0.5s,mb4.0						
KURK	**Kurchatov**	**45.72**	**304**	P	**P**	**06 10 50.6**	**+0.4**
	comp=Z,0.7nm,0.4s,mb3.9,baz=76,slow=9.1,SNR=4.2						
KURK	**Kurchatov**	**45.72**	**304**	P	**P**	**06 10 50.6**	**+0.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
INK	**Inuvik**	**46.09**	**30**	P	**P**	**06 10 53.2**	**+0.4**
	comp=Z,1.9nm,0.7s,mb4.1,baz=292,slow=4.0,SNR=6.3						
BVAR	**Borovoye Array**	**49.66**	**309**	PcP	PcP	06 12 41.8	+0.4
	comp=Z,0.5nm,0.4s,baz=104,slow=3.5,SNR=2.6						
YKA	**Yellowknife Ar**	**55.48**	**34**	P	**P**	**06 12 03.9**	**+0.4**
	comp=Z,0.5nm,0.6s,mb3.7,baz=302,slow=8.0,SNR=2.9						
YKA				pP	pP	06 12 13.3	-2.5
	comp=Z,0.7nm,0.7s,baz=303,slow=7.1,SNR=3.3						
ABKAR	**Akbulak array**	**57.23**	**309**	*e*P	**P**	**06 12 15.9**	**-0.3**
	comp=Z,0.9nm,0.4s,mb4.2						
FINES	**FINESS Array B**	**64.89**	**333**	P	**P**	**06 13 06.4**	**-1.5**
	comp=Z,1.6nm,0.5s,mb4.3,baz=66,slow=4.6,SNR=6.4						
NVAR	**Mina Array Bea**	**67.20**	**58**	P	**P**	**06 13 23.4**	**+0.2**
	comp=Z,0.4nm,0.6s,mb3.6,baz=284,slow=5.9,SNR=3.6						
NVAR				pP	pP	06 13 34.6	-1.2
	comp=Z,0.3nm,0.5s,baz=303,slow=6.0,SNR=3.6						
ASAR	**Alice Springs**	**68.41**	**194**	P	**P**	**06 13 30.4**	**-0.3**
	comp=Z,0.6nm,1.0s,mb3.6,baz=17,slow=6.8,SNR=3.2						
ASAR	**Alice Springs**	**68.41**	**194**	P	**P**	**06 13 30.4**	**-0.3**
NOA	**NORSAR Array B**	**69.58**	**339**	P	**P**	**06 13 36.9**	**-0.7**
	comp=Z,0.7nm,0.4s,mb3.9,baz=32,slow=5.8,SNR=3.3						
AKASG	**Malin Array Be**	**71.65**	**324**	P	**P**	**06 13 50.0**	**-0.4**
	comp=Z,1.7nm,0.5s,mb4.2,baz=38,slow=6.6,SNR=10						
BUR08	**Bucovina Ar. S**	**75.69**	**324**	*e*P	**P**	**06 14 14.2**	**0.0**
SCHQ	**Schefferville**	**77.36**	**20**	P	**P**	**06 14 23.4**	**-0.1**
	comp=Z,1.2nm,0.5s,mb4.1,baz=270,slow=12,SNR=3.4						
BRTR	**Keskin Array B**	**77.68**	**314**	P	**P**	**06 14 25.9**	**+0.4**
	comp=Z,0.4nm,0.6s,mb3.5,baz=14,slow=8.9,SNR=2.4						

KRSC 15 06:03:00.9±0.8, 52°.25N×158°.74E, h62km±58km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PET	**Petropavlovsk**	**0.78**	**356**	*e*P	Pn	06 03 17.0	+0.8
PET				*i* S	Sn	06 03 28.5	+1.1
NLC	**Nalytchevo**	**0.99**	**22**	*e*P	Pn	06 03 19.1	+0.2
NLC				*i* S	Sn	06 03 32.2	0.0
AVH	**Avacha**	**1.02**	**360**	*i* P	Pn	06 03 21.0	+1.8
AVH				*i* S	Sn	06 03 35.4	+2.6
SPN	**Mys Shipunski**	**1.15**	**42**	P	Pn	06 03 22.6	+1.6
SPN				*i* S	Sn	06 03 38.5	+2.6
MIPR	**Malaya Ipel'ka**	**1.22**	**272**	*i* P	Pn	06 03 22.1	+0.3
MIPR				*e*S	Sn	06 03 37.8	+0.3
GNL	**Ganaly**	**1.53**	**342**	*e*P	Pn	06 03 27.6	+1.7
GNL				*i* S	Sn	06 03 46.7	+1.9
KII	**Karymskiy**	**1.84**	**13**	P	Pn	06 03 33.2	+3.1
KII				*i* S	Sn	06 03 56.3	+4.0
ALID	**Alaid**	**2.42**	**236**	*e*P	Pn	06 03 37.9	-0.2
MKZ	**Mys Kozlova**	**2.92**	**37**	*e*P	Pn	06 03 45.4	+0.5
MKZ				*i* S	Sn	06 04 18.6	-0.1
KBTR	**Krutoberegovo**	**4.63**	**29**	*e*P	Pn	06 04 10.0	+1.8
KBTR				*i* S	Sn	06 05 01.1	+0.5

*ISCJB **15** 06:18:32.8±0.5, 40°.27N±0°.04×27°.48E±0°.04, h10km±7km, Error ellipse: s-maj=6.7km s-min=4.5km az=33.6*
*CSEM **15** 06:18:32.9±0.1, 40°.27N×27°.51E, h15km, MD2.5, Error ellipse: s-maj=2.3km s-min=1.7km az=45.0*
*ISK **15** 06:18:32.5, 40°.28N×27°.50E, h16km, MD2.5*
*DDA **15** 06:18:32.5, 40°.27N×27°.53E, h13km±1km, Md2.8*

ISC 15 06:18:33.2±0.5, 40°.27N±0°.04×27°.50E±0°.04, h13km±7km, n22, σ0s60/32, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GONE	**Gonen-Balikesi**	**0.27**	**147**	*e*PG	**Pg**	**06 18 38.6**	**-0.2**
GONE	**Gonen-Balikesi**	**0.27**	**147**	*e*Pg	**Pg**	**06 18 38.6**	**-0.1**
EDC	**Edincik**	**0.29**	**74**	*e*PG	**Pg**	**06 18 39.2**	**0.0**
EDC				*e*SG	**Sg**	**06 18 44.0**	**+0.8**
EDC	**Edincik**	**0.29**	**74**	*e*Pg	**Pg**	**06 18 39.2**	**0.0**
EDC				*e*Sg	**Sg**	**06 18 44.0**	**+0.7**
RKY	**Sarkoy-Tekirda**	**0.48**	**330**	*e*PG	**Pg**	**06 18 43.0**	**+0.3**
RKY				*e*SG	**Sg**	**06 18 49.0**	**-0.2**
RKY	**Sarkoy-Tekirda**	**0.48**	**330**	*e*Pg	**Pg**	**06 18 43.0**	**+0.3**
RKY				*e*Sg	**Sg**	**06 18 49.0**	**-0.2**
BALY	**Balya**	**0.54**	**170**	*i* P	**Pg**	**06 18 43.3**	**-0.3**
BALY				*i* S	**Sg**	**06 18 50.5**	**-0.3**
BALY	**Balya**	**0.54**	**170**	*i* P	**Pg**	**06 18 43.3**	**-0.4**
BALY				*i* S	**Sg**	**06 18 50.5**	**-0.3**
MFT	**Murefte**	**0.54**	**343**	*e*PG	**Pg**	**06 18 43.7**	**-0.1**
MFT	**Murefte**	**0.54**	**343**	*e*Pg	**Pg**	**06 18 43.7**	**-0.1**
LPK	**Lapseki**	**0.57**	**281**	*e*PG	**Pg**	**06 18 43.5**	**-0.8**
LPK	**Lapseki**	**0.57**	**281**	*e*Pg	**Pg**	**06 18 43.5**	**-0.8**
KCTX	**Karacabey (Bur**	**0.66**	**90**	*e*PG	**Pg**	**06 18 45.2**	**-0.8**
KCTX	**Karacabey (Bur**	**0.66**	**90**	*e*Pg	**Pg**	**06 18 45.2**	**-0.8**
GELI	**Tayfur-Gelibol**	**0.79**	**280**	*e*PG	**Pg**	**06 18 48.4**	**-0.1**
GELI				*e*SG	**Sg**	**06 19 00.2**	**+1.3**
GELI	**Tayfur-Gelibol**	**0.79**	**280**	*e*Pg	**Pg**	**06 18 48.4**	**-0.1**
GELI				*e*Sg	**Sg**	**06 19 00.2**	**+1.3**
EZN	**Ezine**	**1.00**	**244**	*e*PG	**Pg**	**06 18 52.6**	**+0.1**
EZN	**Ezine**	**1.00**	**244**	*e*Pg	**Pg**	**06 18 52.6**	**+0.1**
DURS	**Dursunbey**	**1.01**	**131**	*i* P	**Pb**	**06 18 52.0**	**-0.4**
DURS				*i* S	**Sb**	**06 19 06.7**	**+1.2**
DURS	**Dursunbey**	**1.01**	**131**	*i* P	**Pb**	**06 18 52.0**	**-0.4**
DURS				*i* S	**Sb**	**06 19 06.7**	**+1.2**
EDRB	**Edirne**	**1.68**	**340**	*e*PN	**Pn**	**06 19 01.6**	**-0.5**
EDRB	**Edirne**	**1.68**	**340**	*e*Pn	**Pn**	**06 19 01.6**	**-0.5**

MEX 15 06:19:32.3±0.8, 14°.04N×93°.17W, h16km±22km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.23**	**45**	*i* P	Pn	06 19 51.2	-3.6
THIG				*i* S	Sb	06 20 05.7	-5.1
PCIG		**1.65**	**358**	*i* P	Pn	06 19 56.3	-4.4
PCIG				*i* S	Sn	06 20 16.5	-5.2
TGIG		**2.72**	**1**	*i* P	Pn	06 20 13.6	-1.8
TGIG				*i* S	Sn	06 20 44.9	-3.1
SCX	**San Cristobal**	**2.73**	**11**	*i* P	Pn	06 20 13.0	-2.5
SCX				*i* S	Sn	06 20 44.5	-3.6
HUIG	**Huatulco**	**3.32**	**301**	*i* P	Pn	06 20 21.1	-2.6
HUIG				*i* S	Sn	06 20 58.6	-4.2
CMIG	**Matias Romero**	**3.45**	**332**	*i* P	Pn	06 20 23.5	-1.9
CMIG				*i* S	Sn	06 21 01.9	-4.1
VHO	**Vista Hermosa**	**4.57**	**312**	*i* P	Pn	06 20 39.9	-0.9
VHO				*i* S	Sn	06 21 31.3	-2.3
PNIG	**Pinotepa**	**5.33**	**297**	*i* P	Pn	06 20 47.7	-3.6

*ISCJB **15** 06:21:43.2±0.4, 45°.47N±0°.02×15°.69E±0°.03, h7km±4km, Error ellipse: s-maj=3.8km s-min=3.0km az=16.8*
*CSEM **15** 06:21:43.6±0.2, 45°.46N×15°.67E, h2km, MD3.2/4, Error ellipse: s-maj=3.9km s-min=2.8km az=31.0*
*LJU **15** 06:21:43.3, 45°.47N×15°.70E, h7km, ML2.4*
*BEO **15** 06:21:45.0±0.4, 45°.48N×15°.70E, h0km, ML2.6/5*
*PRU **15** 06:21:47.2, 45°.97N×16°.26E, h0km*
*VIE **15** 06:21:49.4±0.4, 45°.77N×15°.25E, h9km±2km, mb1.9/4, ML2.3/4, Error ellipse: s-maj=2.9km s-min=1.7km az=161.0 28 km SW of Krsko*

ISC 15 06:21:44.1±0.4, 45°.48N±0°.02×15°.67E±0°.03, h10km±3km, n45, σ0s95/84, 7C-16D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOJS	**Bojanci**	**0.30**	**275**	⇑*i* Pg	**Pg**	**06 21 50.1**	**+0.1**
BOJS				*i* Sg	**Sg**	**06 21 54.5**	**+0.5**
BOJS							
	comp=Z,210nm,0.1s						
BOJS	**Bojanci**	**0.30**	**275**	⇑*i* Pg	**Pg**	**06 21 50.1**	**+0.1**
BOJS				*i* Sg	**Sg**	**06 21 54.5**	**+0.5**
	comp=Z,210nm,0.1s						
CRES	**Cresnjev**	**0.38**	**337**	⇓*i* Pg	**Pg**	**06 21 51.5**	**-0.1**
CRES				*e*Sg	**Sg**	**06 21 56.8**	**+0.2**
CRES	**Cresnjev**	**0.38**	**337**	⇓*i* Pg	**Pg**	**06 21 51.5**	**-0.1**
CRES				*e*Sg	**Sg**	**06 21 56.8**	**+0.2**
GCIS	**Gornji Cirnik**	**0.39**	**355**	⇓*i* Pg	**Pg**	**06 21 51.7**	**-0.1**
GCIS				*i* Sg	**Sg**	**06 21 57.2**	**+0.2**
GCIS							
	comp=Z,93nm,0.1s						
GCIS	**Gornji Cirnik**	**0.39**	**355**	⇓*i* Pg	**Pg**	**06 21 51.7**	**-0.1**
GCIS				*i* Sg	**Sg**	**06 21 57.2**	**+0.2**
	comp=Z,93nm,0.1s						
SISC	**Sisak**	**0.49**	**90**	*e*Pg	**Pg**	**06 21 53.2**	**-0.5**
SISC				Sg	**Sg**	**06 22 00.2**	**+0.1**
SISC	**Sisak**	**0.49**	**90**	*e*Pg	**Pg**	**06 21 53.1**	**-0.6**
SISC				Sg	**Sg**	**06 22 00.2**	**0.0**
LEGS	**Legarje**	**0.53**	**332**	⇓*i* Pg	**Pg**	**06 21 54.1**	**-0.3**
LEGS				*i* Sg	**Sg**	**06 22 01.3**	**-0.1**
LEGS	**Legarje**	**0.53**	**332**	⇓*i* Pg	**Pg**	**06 21 54.1**	**-0.3**
LEGS				*i* Sg	**Sg**	**06 22 01.3**	**-0.2**
VISS	**Visnje**	**0.67**	**300**	*i* Pg	**Pg**	**06 21 57.1**	**+0.1**
VISS				*i* Sg	**Sg**	**06 22 05.7**	**0.0**
VISS							
	comp=Z,78nm,0.2s						
VISS	**Visnje**	**0.67**	**300**	*i* Pg	**Pg**	**06 21 57.1**	**+0.1**
VISS				*i* Sg	**Sg**	**06 22 05.7**	**-0.1**
	comp=Z,78nm,0.2s						
PDKS	**Podkum**	**0.75**	**321**	⇓*i* Pg	**Pg**	**06 21 58.6**	**+0.1**
PDKS				*i* Sg	**Sg**	**06 22 08.0**	**-0.4**
PDKS							
	comp=Z,95nm,0.2s						
CEY	**Cerknica**	**0.91**	**287**	⇓*i* Pg	**Pg**	**06 22 01.4**	**-0.2**
CEY				*e*Sg	**Sg**	**06 22 15.5**	**+2.0**
CEY	**Cerknica**	**0.91**	**287**	⇓*i* Pg	**Pg**	**06 22 01.4**	**-0.2**
CEY				*e*Sg	**Sg**	**06 22 15.5**	**+2.0**
LJU	**Ljubljana**	**0.98**	**306**	*e*Pg	**Pg**	**06 22 03.4**	**+0.4**
LJU				*e*Sg	**Sg**	**06 22 16.1**	**+0.4**
LJU	**Ljubljana**	**0.98**	**306**	*e*Pg	**Pg**	**06 22 04.0**	**+1.1**
LJU				*e*Sg	**Sg**	**06 22 16.1**	**+0.4**
KOGS	**Kog**	**1.05**	**22**	⇓*i* Pg	**Pg**	**06 22 04.1**	**-0.2**
KOGS				*e*Sg	**Sg**	**06 22 19.1**	**+1.1**
NVLJ	**Novalja**	**1.07**	**212**	*e*Pg	**Pg**	**06 22 04.0**	**-0.7**
NVLJ				Sg	**Sg**	**06 22 17.6**	**-1.1**
NVLJ	**Novalja**	**1.07**	**212**	*e*Pg	**Pg**	**06 22 04.0**	**-0.7**
NVLJ				Sg	**Sg**	**06 22 17.5**	**-1.2**
BEHE	**Becsehely**	**1.26**	**37**	*e*Sn	**Sg**	**06 22 24.3**	**-0.2**
SOKA	**Soboth**	**1.28**	**340**	⇑*i* Pg	**Pn**	**06 22 07.3**	**-0.7**
SOKA				⇑*i* Sg	**Sg**	**06 22 20.0**	**-5.3**
	comp=Z,15nm,0.3s						
SOKA	**Soboth**	**1.28**	**340**	Pg	**Pn**	**06 22 07.3**	**-0.7**
BLY	**Banja Luka**	**1.29**	**124**	*e*Pg	**Pn**	**06 22 07.8**	**-0.4**
BLY				*e*Sg	**Sg**	**06 22 24.7**	**-1.0**
BLY	**Banja Luka**	**1.29**	**124**	*e*Pg	**Pn**	**06 22 07.8**	**-0.4**
BLY				*e*Sg	**Sg**	**06 22 24.7**	**-1.0**
VOY	**Vojsko**	**1.36**	**295**	*e*Pg	**Pn**	**06 22 08.8**	**-0.3**
VOY				*e*		06 22 09.7	
VOY				*e*Sg	**Sg**	**06 22 27.5**	**-0.4**
VOY	**Vojsko**	**1.36**	**295**	*e*Pg	**Pn**	**06 22 08.8**	**-0.3**
VOY				*e*Sg	**Sg**	**06 22 27.5**	**-0.4**
ARSA	**Arzberg**	**1.78**	**357**	*e*Pg	**Pn**	**06 22 16.3**	**+1.5**
ARSA				*e*Sg	**Sg**	**06 22 41.3**	**+0.1**
ARSA	**Arzberg**	**1.78**	**357**	*e*Pg	**Pn**	**06 22 16.3**	**+1.5**
ARSA				*e*Sg	**Sg**	**06 22 41.3**	**+0.1**
MYKA	**Terra Mystica**	**1.82**	**310**	⇑*i* Pg	**Pn**	**06 22 16.4**	**+1.0**
MYKA				⇓*i* Sg	**Sn**	**06 22 35.6**	**-3.0**
	comp=Z,12nm,0.3s						
MYKA	**Terra Mystica**	**1.82**	**310**	Pg	**Pn**	**06 22 16.4**	**+0.9**
RHK3	**Tenkes**	**1.85**	**76**	*e*Pn	**Pn**	**06 22 17.2**	**+1.3**
RHK3				*e*Sn	**Sg**	**06 22 42.3**	**-1.4**
PKS9	**Tamasi**	**2.13**	**58**	⇓*e*Pn	**Pn**	**06 22 21.3**	**+1.7**
PKS9				*e*Sn	**Sg**	**06 22 52.0**	**-0.5**
PKSM	**Moragy**	**2.20**	**69**	*e*Pn	**Pn**	**06 22 22.4**	**+1.7**
PKSM	**Moragy**	**2.20**	**69**	*e*Pn	**Pn**	**06 22 22.4**	**+1.7**
KBA	**Koelnbreinsper**	**2.27**	**316**	⇑*i* Pn	**Pn**	**06 22 21.7**	**+0.1**
KBA				⇑*i* Sn	**Sn**	**06 22 46.1**	**-3.6**
KBA	**Koelnbreinsper**	**2.27**	**316**	Pn	**Pn**	**06 22 21.7**	**+0.1**
SOP	**Sopron**	**2.29**	**15**	⇓*e*Pn	**Pb**	**06 22 25.6**	**+0.1**
SOP				*e*Sn	**Sg**	**06 22 53.7**	**-3.9**
SOP	**Sopron**	**2.29**	**15**	⇓*e*Pn	**Pb**	**06 22 25.6**	**+0.1**
SOP				*e*Sn	**Sg**	**06 22 53.7**	**-3.9**
MOA	**Molln**	**2.56**	**338**	⇓*i* Pn	**Pn**	**06 22 26.2**	**+0.6**
MOA				⇓*i* Sn	**Sn**	**06 22 53.9**	**-2.9**
MOA	**Molln**	**2.56**	**338**	Pn	**Pn**	**06 22 26.2**	**+0.6**
MOA				Sn	**Sn**	**06 22 53.9**	**-2.9**
STON	**Ston**	**2.98**	**150**	*e*Pn	**Pn**	**06 22 31.1**	**-0.3**
STON				Sn	**Sn**	**06 23 08.8**	**+1.6**
STON	**Ston**	**2.98**	**150**	*e*Pn	**Pn**	**06 22 31.1**	**-0.3**
STON				Sn	**Sn**	**06 23 08.7**	**+1.5**
KHC	**Kasperske Hory**	**3.92**	**339**	*e*PN	**Pn**	**06 22 44.2**	**-0.1**
KHC				*e*SN	**Sn**	**06 23 27.6**	**-2.8**
KHC	**Kasperske Hory**	**3.92**	**339**	Pn	**Pn**	**06 22 44.2**	**-0.1**
KHC				Sn	**Sn**	**06 23 27.6**	**-2.8**

*ISCJB **15** 06:34:36.8±0.3, 25°.37N±0°.05×122°.53E±0°.03, h227km±3km, mb3.3/7, Error ellipse: s-maj=8.1km s-min=3.4km az=161.3*
*TAP **15** 06:34:37.6, 25°.40N×122°.50E, h231km, ML4.3, D*
*IDC **15** 06:34:40.4±5.6, 25°.43N×122°.48E, h255km±55km, mb3.0/7, mb1 3.2/8, mb1mx3.0/22, mbtmp3.0/8, Error ellipse: s-maj=38.0km s-min=23.3km az=64.0*
*JMA **15** 06:34:40.0±0.3, 25°.43N×122°.50E, h197km, M4.1*

ISC 15 06:34:37.7±0.3, 25°.35N±0°.05×122°.54E±0°.03, h223km±3km, n57, σ0s82/99, mb3.3/7, 5C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.60**	**236**	*i* P	**Pn**	**06 35 08.6**	**+0.7**
	baz=229						
TWB1				*e*S	**S**	**06 35 31.5**	**+0.2**
	baz=229						
NWF	**Wu-fen Shan**	**0.74**	**248**	⇑*i* P	**Pn**	**06 35 09.3**	**+0.9**
	baz=243						
NWF				*i* S	**S**	**06 35 32.6**	**+0.2**
	baz=243						
TWY	**Chenhua**	**0.85**	**265**	P	**Pn**	**06 35 10.1**	**+1.1**
	baz=269						
TWY				*e*S	**S**	**06 35 33.7**	**+0.4**
	baz=269						
ILA	**Ilan**	**0.92**	**231**	*e*P	**Pn**	**06 35 09.8**	**+0.3**
	baz=219						
ILA				*e*S	**S**	**06 35 34.1**	**0.0**
	baz=219						
TWA	**Mucha**	**0.94**	**247**	P	**Pn**	**06 35 10.1**	**+0.6**
	baz=238						
TWA				S	**S**	**06 35 34.5**	**+0.2**
	baz=238						
TWC	**Suao**	**0.97**	**220**	P	**Pn**	**06 35 09.8**	**0.0**
	baz=216						
TWC				S	**S**	**06 35 34.2**	**-0.4**
	baz=216						
YOJ	**Yonaguni jima**	**0.98**	**154**	P	**Pn**	**06 35 10.1**	**+0.3**
YOJ				*e*S	**S**	**06 35 33.8**	**-1.1**
TWE	**Neicheng**	**1.01**	**232**	P	**Pn**	**06 35 10.4**	**+0.5**
	baz=223						
TWE				S	**S**	**06 35 36.0**	**+0.9**
	baz=223						
ENTT	**Nioudou**	**1.13**	**231**	⇑*i* P	**Pn**	**06 35 11.2**	**+0.5**
	baz=226						
ENTT				S	**S**	**06 35 36.4**	**-0.1**
	baz=226						
ENA	**Nanau**	**1.17**	**218**	*i* P	**Pn**	**06 35 11.7**	**+0.7**
	baz=218						
ENA				*e*S	**S**	**06 35 36.7**	**-0.3**
	baz=218						
NSK	**Sanguang**	**1.26**	**238**	*e*P	**Pn**	**06 35 11.9**	**+0.2**
	baz=243						
NSK				*e*S	**S**	**06 35 36.7**	**-1.5**
	baz=243						
NNS	**Nan Shan**	**1.39**	**230**	P	**Pn**	**06 35 13.3**	**+0.6**
	baz=223						
NNS				*e*S	**S**	**06 35 39.7**	**-0.2**
	baz=223						
IRIF	**Iriomote-Funau**	**1.48**	**133**	P	**Pn**	**06 35 13.9**	**+0.5**
IRIF				S	**S**	**06 35 40.9**	**-0.4**
TWD	**Chiawan**	**1.53**	**214**	*i* P	**Pn**	**06 35 13.8**	**0.0**
	baz=215						
TWD				S	**S**	**06 35 40.8**	**-1.1**
	baz=215						
NSTT	**Nanjuang**	**1.57**	**243**	P	**Pn**	**06 35 14.2**	**+0.2**
	baz=240						
NSTT				S

SGST	**Jiashian**	**2.88**	**219**	*e*P		**Pn**	**06 35 28.0**	**+0.7**
	baz=216							
JKE	**Kume jima 2**	**3.95**	**75**	P		**Pn**	**06 35 40.3**	**+0.6**
JKE				*e*S		**S**	**06 36 28.2**	**-0.5**
JAGN	**Aguni-jima**	**4.41**	**73**	P		**Pn**	**06 35 45.5**	**+0.1**
JAGN				*e*S		**S**	**06 36 37.2**	**-1.7**
JJT2	**Tamagusuku 2**	**4.77**	**79**	P		**Pn**	**06 35 50.3**	**+0.5**
JIH	**Iheya**	**5.16**	**70**	P		**Pn**	**06 35 54.3**	**-0.4**
JIH				*e*S		**S**	**06 36 52.2**	**-3.5**
JOW	**Kunigami**	**5.37**	**73**	P		**Pn**	**06 35 56.3**	**-1.0**
JOW				*e*S		**S**	**06 36 55.3**	**-5.2**
JTK	**Tokunoshima**	**6.24**	**66**	P		**Pn**	**06 36 06.3**	**-2.0**
JTK				*e*S		**S**	**06 37 16.0**	**-4.4**
JAM	**Amami Oshima**	**7.01**	**63**	P		**Pn**	**06 36 17.5**	**-0.7**
JMZ	**Minamidaito 2**	**7.86**	**85**	P		**Pn**	**06 36 29.0**	**-0.1**
JMZ				*e*S		**S**	**06 37 51.1**	**-7.2**
KSRS	**Korea Array**	**12.91**	**20**	P		**Pn**	**06 37 34.2**	**+1.0**
	0.2nm,0.3s,baz=192,slow=10.0,SNR=2.7							
SONM	**Songino Array**	**25.81**	**335**	P		**P**	**06 39 47.8**	**-0.4**
	0.5nm,0.5s,mb3.4,baz=152,slow=9.8,SNR=4.6							
MKAR	**Makanchi Array**	**38.38**	**314**	P		**P**	**06 41 36.4**	**-0.9**
	0.3nm,0.4s,mb3.2,baz=108,slow=8.8,SNR=2.7							
ZALV	**Zalesovo Beam**	**39.95**	**326**	P		**P**	**06 41 48.4**	**-1.8**
	0.7nm,0.5s,mb3.4,baz=111,slow=7.9,SNR=2.8							
WRA	**Warramunga Arr**	**46.46**	**165**	P		**P**	**06 42 42.8**	**+0.3**
	0.7nm,0.6s,mb3.2,baz=348,slow=8.6,SNR=2.8							
ILAR	**Eielson Array**	**67.62**	**28**	P		**P**	**06 45 08.8**	**-1.2**
	0.1nm,0.4s,mb2.8,baz=272,slow=5.1,SNR=3.2							
FINES	**FINESS Array B**	**71.06**	**330**	P		**P**	**06 45 30.3**	**-0.9**
	3.3nm,0.9s,mb4.0,baz=76,slow=5.9,SNR=3.9							
YKA	**Yellowknife Ar**	**81.42**	**23**	P		**P**	**06 46 28.8**	**-0.6**
	0.3nm,0.5s,mb3.2,baz=313,slow=5.1,SNR=3.2							

*ISCJB **15** 06:38:25.5±0.4,23˚.71N±0˚.02×122˚.00E±0˚.02,h18km±4km, Error ellipse: s-maj=3.7km s-min=2.1km az=38.5*
*NEIC **15** 06:38:25.5±3.4,23˚.76N×121˚.95E,h10km, Error ellipse: s-maj=36.1km s-min=11.2km az=107.0*
*JMA **15** 06:38:26.4±0.2,23˚.71N×121˚.96E,h55km,M2.7*
*TAP **15** 06:38:26.2,23˚.76N×121˚.93E,h16km,ML3.4,D*

ISC 15 06:38:25.5±0.4,23˚.73N±0˚.02×121˚.98E±0˚.02,h16km±2km, n51,σ0ˢ69/101,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEGC	**Jichi Village**	**0.41**	**268**	*i* P	**Pg**	**06 38 34.0**	**+0.2**
	baz=262						
TEGC				S	**Sg**	**06 38 40.1**	**+0.7**
	baz=262						
HWA	**Hwalien**	**0.43**	**306**	*e*P	**Pg**	**06 38 34.4**	**+0.2**
	baz=307						
HWA				*e*S	**Sg**	**06 38 40.7**	**+0.7**
	baz=307						
TWD	**Chiawan**	**0.50**	**315**	P	**Pg**	**06 38 35.6**	**0.0**
	baz=317						
TWD				S	**Sg**	**06 38 42.3**	**0.0**
	baz=317						
ESL	**Shilin**	**0.51**	**280**	P	**Pg**	**06 38 35.7**	**-0.1**
	baz=277						
ESL				*e*S	**Sg**	**06 38 42.9**	**+0.3**
	baz=277						
NACB	**Ninganchiao**	**0.57**	**322**	*e*Pg	**Pg**	**06 38 36.4**	**-0.5**
NACB				*e*Sg	**Sg**	**06 38 44.1**	**-0.4**
EHY	**Hungye**	**0.65**	**250**	P	**Pg**	**06 38 38.5**	**+0.3**
	baz=245						
EHY				*e*S	**Sg**	**06 38 47.5**	**+0.7**
	baz=245						
YULB	**Yu-li**	**0.71**	**242**	*e*Pg	**Pg**	**06 38 39.3**	**-0.1**
YULB				*e*Sg	**Sg**	**06 38 49.0**	**+0.1**
TWF1	**Yuli**	**0.73**	**240**	*e*P	**Pg**	**06 38 39.9**	**+0.1**
	baz=234						
TWF1				S	**Sg**	**06 38 50.1**	**+0.6**
	baz=234						
ENA	**Nanau**	**0.73**	**342**	P	**Pg**	**06 38 39.8**	**-0.1**
	baz=346						
ENA				S	**Sg**	**06 38 49.7**	**+0.1**
	baz=346						
WHF	**Hehuan Shan**	**0.78**	**303**	P	**Pb**	**06 38 40.5**	**-0.3**
	baz=302						
WHF				S	**Sg**	**06 38 51.2**	**+0.2**
	baz=302						
CHKT	**Chengkung**	**0.84**	**223**	*e*P	**Pb**	**06 38 40.9**	**-0.9**
	baz=217						
CHKT				*e*S	**Sb**	**06 38 51.0**	**-1.8**
	baz=217						
TWC	**Suao**	**0.89**	**352**	P	**Pb**	**06 38 42.9**	**+0.3**
	baz=355						
TWC				*e*S	**Sb**	**06 38 54.6**	**+0.4**
	baz=355						
NNS	**Nan Shan**	**0.91**	**322**	*i* P	**Pb**	**06 38 42.8**	**-0.1**
	baz=323						
NNS				S	**Sb**	**06 38 54.8**	**+0.1**
	baz=323						
TWT	**Tachien**	**0.91**	**306**	P	**Pb**	**06 38 42.8**	**-0.1**
	baz=305						
TWT				S	**Sb**	**06 38 54.4**	**-0.4**
	baz=305						
SSLB	**Suanglung**	**0.95**	**274**	*e*Pg	**Pg**	**06 38 42.7**	**-1.2**
SSLB				*e*Sg	**Sg**	**06 38 54.3**	**-2.0**
YUS	**Yu-Shan**	**0.98**	**256**	*e*P	**Pb**	**06 38 44.3**	**+0.2**
	baz=253						
YUS				S	**Sb**	**06 38 56.4**	**-0.3**
	baz=253						
ENTT	**Nioudou**	**0.99**	**337**	P	**Pb**	**06 38 44.2**	**-0.1**
	baz=339						
ENTT				*e*S	**Sb**	**06 38 56.9**	**-0.1**
	baz=339						
SMLT	**Sun Moon Lake**	**1.01**	**279**	P	**Pb**	**06 38 44.5**	**-0.1**
	baz=277						
SMLT				S	**Sb**	**06 38 57.2**	**-0.3**
	baz=277						
TWE	**Neicheng**	**1.03**	**344**	*e*P	**Pb**	**06 38 45.1**	**0.0**
	baz=346						
TWE				*e*S	**Sb**	**06 38 58.4**	**0.0**
	baz=346						
ELDTW	**Lidau**	**1.04**	**239**	*e*P	**Pb**	**06 38 44.2**	**-0.9**
	baz=235						
ELDTW				*e*S	**Sb**	**06 38 57.3**	**-1.1**
	baz=235						
TYC	**Yuchr**	**1.05**	**280**	*e*P	**Pb**	**06 38 44.9**	**-0.4**
	baz=278						
TYC				*e*S	**Sb**	**06 38 59.2**	**+0.5**
	baz=278						
YHNB	**Yeheng**	**1.09**	**330**	*e*Pn	**Pn**	**06 38 46.1**	**-0.1**
YHNB				*e*Sn	**Sn**	**06 38 59.8**	**-1.2**
ALS	**Alishan**	**1.10**	**259**	P	**Pb**	**06 38 46.4**	**+0.1**
	baz=256						
ALS				S	**Sb**	**06 39 00.6**	**+0.2**
	baz=256						
YOJ	**Yonaguni jima**	**1.19**	**52**	P	**Pn**	**06 38 47.5**	**0.0**
YOJ				S	**Sb**	**06 39 03.0**	**+0.1**
CHN5	**Tsauling**	**1.21**	**264**	P	**Pn**	**06 38 48.3**	**+0.6**
	baz=262						
CHN5				*e*S	**Sb**	**06 39 03.7**	**+0.4**
	baz=262						
TTN	**Taitung**	**1.23**	**219**	*e*P	**Pn**	**06 38 48.1**	**-0.1**
	baz=215						
TTN				*e*S	**Sb**	**06 39 03.1**	**-1.1**
	baz=215						
STYT	**Tauyuan**	**1.26**	**244**	*e*P	**Pn**	**06 38 48.5**	**+0.1**
	baz=240						
STYT				S	**Sb**	**06 39 03.7**	**-1.2**
	baz=240						
TCU	**Taichung**	**1.27**	**290**	*e*P	**Pn**	**06 38 48.9**	**+0.3**
	baz=288						
TCU				*e*S	**Sb**	**06 39 04.3**	**-0.8**
	baz=288						
TWQ1	**Liyutan**	**1.27**	**300**	*e*P	**Pn**	**06 38 48.7**	**+0.1**
	baz=299						
TWQ1				*e*S	**Sb**	**06 39 04.9**	**-0.3**
	baz=299						
NSTT	**Nanjuang**	**1.27**	**315**	*e*P	**Pn**	**06 38 48.1**	**-0.6**
	baz=316						
NSTT				*e*S	**Sb**	**06 39 05.0**	**-0.3**
	baz=316						
TWB1	**Santiao Chiao**	**1.28**	**0**	*e*P	**Pn**	**06 38 48.9**	**+0.2**
	baz=2.0						
TWB1				*e*S	**Sb**	**06 39 04.8**	**-0.6**
	baz=2.0						
TWA	**Mucha**	**1.30**	**344**	*e*P	**Pn**	**06 38 47.7**	**-1.4**
	baz=345						
TWA				*e*S	**Sb**	**06 39 07.1**	**+1.0**
	baz=345						
TPUB	**Ta-pu**	**1.31**	**252**	*e*Pn	**Pn**	**06 38 49.5**	**+0.3**
CHN4	**Tsaushan**	**1.33**	**254**	*e*P	**Pn**	**06 38 50.5**	**+1.0**
	baz=251						
CHN4				*e*S	**Sn**	**06 39 07.3**	**+0.5**
	baz=251						
WTP	**Ta-pu**	**1.34**	**250**	*e*P	**Pn**	**06 38 50.2**	**+0.6**
	baz=246						
WTP				*e*S	**Sn**	**06 39 07.2**	**0.0**
	baz=246						
NWF	**Wu-fen Shan**	**1.35**	**352**	*e*P	**Pn**	**06 38 50.6**	**+0.8**
	baz=354						
NWF				*e*S	**Sn**	**06 39 08.2**	**+0.8**
	baz=354						
SGST	**Jiashian**	**1.44**	**244**	*e*P	**Pn**	**06 38 51.0**	**+0.1**
	baz=241						
SGST				*e*S	**Sn**	**06 39 09.8**	**+0.4**
	baz=241						
CHN1	**Nanshi**	**1.44**	**248**	*e*P	**Pn**	**06 38 52.4**	**+1.4**
	baz=246						
CHN1				*e*S	**Sn**	**06 39 10.6**	**+1.1**
	baz=246						
TWK	**Hsinying**	**1.45**	**252**	*e*P	**Pn**	**06 38 52.3**	**+1.2**
	baz=249						
TWK				*e*S	**Sn**	**06 39 09.4**	**-0.3**
	baz=249						
CHY	**Chiayi**	**1.45**	**261**	*e*P	**Pn**	**06 38 51.5**	**+0.4**
	baz=259						
CHY				*e*S	**Sn**	**06 39 09.6**	**-0.2**
	baz=259						
TWS1	**Kuangyinshan**	**1.46**	**339**	*e*P	**Pn**	**06 38 51.0**	**-0.3**
	baz=341						
TWS1				*e*S	**Sn**	**06 39 10.1**	**0.0**
	baz=341						
ECL	**Taimali**	**1.47**	**220**	*e*P	**Pn**	**06 38 49.7**	**-1.7**
	baz=217						
ECL				*e*S	**Sn**	**06 39 07.9**	**-2.4**
	baz=217						
SSD	**Sandimen**	**1.58**	**232**	*e*P	**Pn**	**06 38 53.9**	**+1.0**
	baz=229						
SSD				*e*S	**Sn**	**06 39 14.3**	**+1.3**
	baz=229						
TWM1	**Shoushan**	**1.69**	**238**	*e*P	**Pn**	**06 38 55.6**	**+1.2**
	baz=235						
TWM1				*e*S	**Sn**	**06 39 16.2**	**+0.5**
	baz=235						
EAST	**Anshuo**	**1.70**	**218**	*e*P	**Pn**	**06 38 53.5**	**-1.0**
	baz=215						
EAST				*e*S	**Sn**	**06 39 16.7**	**+0.9**
	baz=215						
HATJ	**Hateruma jima**	**1.70**	**78**	P	**Pn**	**06 38 54.4**	**-0.1**
HATJ				S	**Sn**	**06 39 15.5**	**-0.4**
IRIF	**Iriomote-Funau**	**1.71**	**69**	P	**Pn**	**06 38 55.0**	**+0.4**
IRIF				S	**Sn**	**06 39 16.2**	**+0.1**
SCZT	**Fangliau**	**1.84**	**223**	*e*P	**Pn**	**06 38 57.4**	**+0.9**
	baz=220						
SCZT				*e*S	**Sn**	**06 39 20.1**	**+0.7**
	baz=220						
JKRS	**Kuro-shima**	**1.92**	**74**	P	**Pn**	**06 38 58.0**	**+0.4**
JKRS				S	**Sn**	**06 39 21.8**	**+0.4**
JIJ	**Ishigaki jima**	**2.07**	**72**	P	**Pn**	**06 38 59.6**	**-0.1**
JIJ				S	**Sn**	**06 39 24.0**	**-1.2**
JTJ	**Tarama**	**2.64**	**69**	P	**Pn**	**06 39 07.9**	**+0.4**
JTJ				S	**Sn**	**06 39 39.1**	**-0.2**

*ISCJB **15** 06:40:40.8±0.7,30˚.54N±0˚.08×138˚.7E±0˚.1,h464km±7km, mb3.4/9, Error ellipse: s-maj=15.7km s-min=11.6km az=12.5*
*IDC **15** 06:40:40.9±0.8,30˚.40N×138˚.48E,h442km±13km,mb3.2/9, mb1 3.2/12,mb1mx3.1/22,mbtmp3.1/12, Error ellipse: s-maj=31.8km s-min=12.4km az=78.0*
*JMA **15** 06:40:41.8±0.3,30˚.67N×138˚.62E,h470km,M3.6*

ISC 15 06:40:42.3±0.7,30˚.63N±0˚.07×138˚.7E±0˚.1,h463km±7km, n29,σ1ˢ06/42,mb3.4/9,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**2.65**	**20**	P	**P**	**06 41 48.3**	**+0.5**
	29nm,0.3s,baz=86,slow=21,SNR=20						
JHJ				S	**S**	**06 42 40.0**	**-1.1**
	39nm,0.3s,baz=70,slow=21,SNR=9.1						
JHJ2	**Mitsune**	**2.65**	**21**	P	**P**	**06 41 49.2**	**+1.4**
JHJ2				S	**S**	**06 42 42.2**	**+1.1**
JWZ	**Kozaga**	**3.83**	**320**	P	**P**	**06 41 56.8**	**+0.1**
JIE	**Ise**	**4.10**	**337**	P	**P**	**06 41 59.9**	**+0.9**
BSO3	**Boso 3**	**4.43**	**20**	P	**P**	**06 42 02.3**	**+0.4**
BSO3				S	**S**	**06 43 06.5**	**-0.4**
BSO1	**Boso 1**	**4.45**	**25**	P	**P**	**06 42 02.3**	**+0.2**
BSO1				S	**S**	**06 43 07.6**	**+0.4**
BSO4	**Boso 4**	**4.56**	**17**	P	**P**	**06 42 03.8**	**+0.7**
BSO4				S	**S**	**06 43 08.6**	**-0.5**
JOD2	**Odawara 2**	**4.63**	**4**	P	**P**	**06 42 05.7**	**+2.0**
CBIJ	**Chichi jima**	**4.67**	**138**	S	**S**	**06 43 02.1**	**-9.0**
	18nm,0.3s,baz=280,slow=20,SNR=4.9						
JAI	**Aioi**	**4.77**	**312**	P	**P**	**06 42 05.1**	**0.0**
JHU	**Hanno**	**5.23**	**5**	P	**P**	**06 42 09.7**	**+0.4**
JHU				S	**S**	**06 43 18.5**	**-2.0**
JRY	**Ryogami san**	**5.37**	**2**	P	**P**	**06 42 11.9**	**+1.2**
JRY				S	**S**	**06 43 22.7**	**-0.3**
JTO	**Tosashimizu**	**5.48**	**295**	P	**P**	**06 42 11.0**	**-0.8**
JYT	**Yasato**	**5.72**	**12**	P	**P**	**06 42 13.9**	**-0.3**
JYT				S	**S**	**06 43 27.0**	**-2.3**
JAG	**Ashikaga**	**5.81**	**6**	P	**P**	**06 42 15.1**	**0.0**
JAG				S	**S**	**06 43 28.8**	**-2.1**
MJAR	**Matsushiro Arr**	**5.91**	**356**	P	**P**	**06 42 16.5**	**+0.5**
	0.9nm,0.3s,baz=169,slow=11,SNR=10						
MJAR				S	**S**	**06 43 33.9**	**+1.3**
	0.4nm,0.3s,baz=203,slow=20,SNR=4.4						
MAT	**Matsushiro**	**5.91**	**356**	P	**P**	**06 42 16.7**	**+0.7**
MAT				S	**S**	**06 43 31.1**	**-1.6**
MAT	**Matsushiro**	**5.91**	**356**	P	**P**	**06 42 16.7**	**+0.7**
MAT				S	**S**	**06 43 32.3**	**-0.4**
JHO	**Hitachi**	**6.17**	**14**	P	**P**	**06 42 19.0**	**+0.4**
JHO				S	**S**	**06 43 36.7**	**-0.8**
KSRS	**Korea Array**	**11.22**	**310**	P	**P**	**06 43 12.8**	**+0.3**
	0.2nm,0.3s,baz=133,slow=11,SNR=3.9						
CMAR	**Chiang Mai Arr**	**37.94**	**261**	P	**P**	**06 47 17.3**	**-1.9**
	0.4nm,0.3s,mb3.3,baz=56,slow=7.3,SNR=4.8						
MKAR	**Makanchi Array**	**45.88**	**307**	P	**P**	**06 48 21.4**	**-0.4**
	0.3nm,0.5s,mb3.0,baz=98,slow=8.7,SNR=4.1						
WRA	**Warramunga Arr**	**50.46**	**185**	P	**P**	**06 48 54.7**	**-1.6**
	1.2nm,0.4s,mb3.6,baz=357,slow=7.6,SNR=15						
BVAR	**Borovoye Array**	**53.37**	**316**	P	**P**	**06 49 17.2**	**+0.1**
	0.8nm,0.4s,mb3.5,baz=102,slow=7.7,SNR=4.7						
ASAR	**Alice Springs**	**54.18**	**185**	P	**P**	**06 49 21.4**	**-1.8**
	0.4nm,0.4s,mb3.1,baz=0.2,slow=6.4,SNR=11						
ARCES	**ARCESS Array B**	**69.19**	**340**	P	**P**	**06 51 03.2**	**+2.2**
	7.0nm,1.1s,mb4.1,baz=63,slow=9.4,SNR=9.2						
FINES	**FINESS Array B**	**73.42**	**322**	P	**P**	**06 51 27.1**	**+1.1**
	2.0nm,0.7s,mb3.8,baz=98,slow=3.9,SNR=5.5						
AKASG	**Malin Array Be**	**77.95**	**322**	P	**P**	**06 51 51.6**	**+0.1**
	0.5nm,0.4s,mb3.3,baz=38,slow=4.7,SNR=2.2						
BRTR	**Keskin Array B**	**81.36**	**311**	P	**P**	**06 52 10.3**	**+0.6**
	0.6nm,0.6s,mb3.3,baz=90,slow=6.2,SNR=3.9						

*NEIC **15** 07:27:52.3,37˚.13S×176˚.41E,h284km, MG3.9(WEL), After WEL.*

WEL 15 07:27:51.3±0.7,37˚.03S×176˚.35E,h286km±8km,ML3.9/4, Error ellipse: s-maj=15.3km s-min=12.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**1.37**	**154**	PN	Pn	07 28 32.2	+0.1
URZ				SN	S	07 29 03.5	-0.9
URZ	**Urewera**	**1.37**	**154**	P	Pn	07 28 32.2	+0.1
MWZ	**Matawai**	**1.60**	**145**	PN	Pn	07 28 33.7	0.0
MWZ				SN	S	07 29 07.0	-0.3
MWZ	**Matawai**	**1.60**	**145**	P	Pn	07 28 33.7	0.0
RAHZ	**Arahi**	**1.97**	**163**	PN	Pn	07 28 36.9	+0.5
CNGZ	**Carnagh Statio**	**2.07**	**135**	PN	Pn	07 28 37.5	+0.3
NMHZ	**Naumai**	**2.10**	**170**	PN	Pn	07 28 38.3	+0.8
NMHZ				SN	S	07 29 14.1	-0.2
BKZ	**Black Stump Fm**	**2.14**	**177**	PN	Pn	07 28 37.8	0.0
BKZ				SN	S	07 29 13.7	-1.2
BKZ	**Black Stump Fm**	**2.14**	**177**	P	Pn	07 28 37.8	0.0
BKZ				S	S	07 29 13.7	-1.1
KNZ	**Kokohu**	**2.25**	**153**	PN	Pn	07 28 38.4	-0.3
KNZ	**Kokohu**	**2.25**	**153**	P	Pn	07 28 38.4	-0.4
KAHZ	**Kahuranaki**	**2.79**	**172**	PN	Pn	07 28 43.6	-0.3
PXZ	**Pawanui**	**3.02**	**173**	PN	Pn	07 28 45.4	-0.8
OGWZ	**Otaki Gorge**	**3.89**	**193**	PN	Pn	07 28 54.0	-1.4
TUWZ	**Tuamarina**	**4.78**	**202**	PN	Pn	07 29 03.8	-1.6

*ISK **15** 07:33:40.5,39˚.58N×29˚.23E,h5km,MD3.0*
*ISCJB **15** 07:33:41.8±0.3,39˚.59N±0˚.02×29˚.27E±0˚.02,h10km, Error ellipse: s-maj=2.7km s-min=2.5km az=159.3*
*CSEM **15** 07:33:41.6±0.1,39˚.58N×29˚.28E,h5km,MD3.0, Error ellipse: s-maj=2.8km s-min=2.6km az=48.0*

ISC 15 07:33:41.9±0.3,39˚.57N±0˚.02×29˚.28E±0˚.02,h5km±4km, n63,σ0ˢ82/85,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.51**	**162**	*i* P	**Pg**	**07 33 50.9**	**-0.8**
GDZ	**Gediz**	**0.51**	**162**	*i* P	**Pg**	**07 33 50.9**	**-0.7**
GDZ				*i* S	**Sg**	**07 33 57.9**	**-0.3**
ULDT	**Uludag**	**0.58**	**349**	*i* P	**Pg**	**07 33 51.7**	**-1.3**
ULDT	**Uludag**	**0.58**	**349**	*i* P	**Pg**	**07 33 51.7**	**-1.3**
ULDT				*i* S	**Sg**	**07 33 59.4**	**-1.2**
DURS	**Dursunbey**	**0.62**	**273**	*i* P	**Pg**	**07 33 53.7**	**-0.1**
DURS	**Dursunbey**	**0.62**	**273**	*i* P	**Pg**	**07 33 53.7**	**-0.1**
DURS				*i* S	**Sg**	**07 34 02.1**	**+0.2**
DEMI	**Demirci**	**0.69**	**220**	*i* P	**Pg**	**07 33 55.8**	**+0.8**
DEMI	**Demirci**	**0.69**	**220**	*i* P	**Pg**	**07 33 55.8**	**+0.8**
DEMI				*i* S	**Sg**	**07 34 04.9**	**+1.0**
ALT	**Altintas**	**0.83**	**128**	*e*PG	**Pg**	**07 33 57.4**	**-0.4**
ALT	**Altintas**	**0.83**	**128**	*e*Pg	**Pg**	**07 33 57.4**	**-0.3**
MDNY	**Mudanya-Bursa**	**0.85**	**339**	*e*PG	**Pg**	**07 33 57.4**	**-0.9**
MDNY				*e*SG	**Sg**	**07 34 09.8**	**+0.5**
MDNY	**Mudanya-Bursa**	**0.85**	**339**	*e*Pg	**Pg**	**07 33 57.4**	**-0.8**
MDNY				*e*Sg	**Sg**	**07 34 09.8**	**+0.5**
GEMT	**Gemlik**	**0.86**	**355**	*e*PG	**Pg**	**07 33 57.9**	**-0.6**
GEMT				*e*SG	**Sg**	**07 34 10.7**	**+1.0**
GEMT	**Gemlik**	**0.86**	**355**	*e*Pg	**Pg**	**07 33 57.9**	**-0.6**
GEMT				*e*Sg	**Sg**	**07 34 10.7**	**+1.0**
ADVT	**Abdulvahap**	**0.93**	**22**	*e*PG	**Pg**	**07 33 59.5**	**-0.2**
ADVT				*e*SG	**Sg**	**07 34 13.4**	**+1.6**
ADVT	**Abdulvahap**	**0.93**	**22**	*e*Pg	**Pg**	**07 33 59.5**	**-0.2**
ADVT				*e*Sg	**Sg**	**07 34 13.4**	**+1.6**
BORA	**Eskisehir**	**0.96**	**71**	*i* P	**Pg**	**07 33 59.9**	**-0.3**
BORA	**Eskisehir**	**0.96**	**71**	*i* P	**Pg**	**07 33 59.9**	**-0.3**
BORA				*i* S	**Sg**	**07 34 13.1**	**+0.5**
KCTX	**Karacabey (Bur**	**0.99**	**315**	*e*PG	**Pg**	**07 33 60.0**	**-0.9**
KCTX				*e*SG	**Sg**	**07 34 14.4**	**+0.6**
KCTX	**Karacabey (Bur**	**0.99**	**315**	*e*Pg	**Pg**	**07 34 00.0**	**-0.9**
KCTX				*e*Sg	**Sg**	**07 34 14.4**	**+0.7**
YLV	**Yalova**	**1.00**	**4**	*e*PG	**Pg**	**07 34 01.1**	**+0.2**
YLV				*e*SG	**Sg**	**07 34 15.7**	**+1.8**
YLV	**Yalova**	**1.00**	**4**	*e*Pg	**Pg**	**07 34 01.2**	**+0.2**
YLV				*e*Sg	**Sg**	**07 34 15.7**	**+1.8**
ARMT	**Armutlu**	**1.04**	**342**	*e*PG	**Pg**	**07 34 01.0**	**-0.8**
ARMT	**Armutlu**	**1.04**	**342**	*e*Pg	**Pg**	**07 34 01.0**	**-0.9**
GPA	**Golpazari**	**1.07**	**48**	*e*PN	**Pg**	**07 34 02.4**	**+0.1**
GPA	**Golpazari**	**1.07**	**48**	*e*Pn	**Pg**	**07 34 02.4**	**0.0**
BALB	**Balikesir**	**1.08**	**274**	*e*PG	**Pg**	**07 34 01.9**	**-0.8**
BALB	**Balikesir**	**1.08**	**274**	*e*Pg	**Pg**	**07 34 01.9**	**-0.7**
KULA	**Kula-Manisa**	**1.16**	**205**	*e*PN	**Pn**	**07 34 03.8**	**-0.9**
KULA	**Kula-Manisa**	**1.16**	**205**	*e*Pn	**Pn**	**07 34 03.8**	**-0.9**
KHAL	**Karahalli**	**1.21**	**172**	*i* P	**Pg**	**07 34 05.0**	**-0.1**
KHAL	**Karahalli**	**1.21**	**172**	*i* P	**Pg**	**07 34 05.0**	**-0.1**
KHAL				*i* S	**Sg**	**07 34 20.9**	**+0.1**
ESKT	**Eskisehir**	**1.22**	**92**	*i* P	**Pg**	**07 34 03.8**	**-1.4**
SEYT	**Eskypehyr**	**1.22**	**92**	*i* P	**Pg**	**07 34 03.8**	**-1.4**
SEYT				*i* S	**Sg**	**07 34 20.4**	**-0.6**
GULT	**Gulveren**	**1.28**	**47**	*e*PN	**Pn**	**07 34 06.4**	**0.0**
GULT	**Gulveren**	**1.28**	**47**	*e*Pn	**Pn**	**07 34 06.4**	**0.0**
HRT	**Hereke**	**1.28**	**13**	*e*PN	**Pn**	**07 34 06.0**	**-0.4**
HRT	**Hereke**	**1.28**	**13**	*e*Pn	**Pn**	**07 34 06.0**	**-0.4**
BALY	**Balya**	**1.29**	**278**	*i* P	**Pn**	**07 34 06.2**	**-0.4**
BALY	**Balya**	**1.29**	**278**	*i* P	**Pn**	**07 34 06.2**	**-0.3**
BALY				*i* S	**Sg**	**07 34 25.2**	**+1.8**
BNT	**Bandirma**	**1.30**	**307**	*e*PN	**Pn**	**07 34 05.2**	**-1.5**
GONE	**Gonen-Balikesi**	**1.31**	**292**	*e*PN	**Pn**	**07 34 05.9**	**-0.9**
GONE				*e*SN	**Sn**	**07 34 24.4**	**-0.3**
GONE	**Gonen-Balikesi**	**1.31**	**292**	*e*Pn	**Pn**	**07 34 05.9**	**-1.0**
GONE				*e*Sn	**Sn**	**07 34 24.5**	**-0.3**
AKHS	**Akhisar**	**1.33**	**239**	*i* P	**Pn**	**07 34 07.9**	**+0.8**
AKHS	**Akhisar**	**1.33**	**239**	*i* P	**Pn**	**07 34 07.9**	**+0.8**
AKHS				*i* S	**Sg**	**07 34 25.1**	**+0.4**
EDC	**Edincik**	**1.33**	**306**	*e*PN	**Pn**	**07 34 06.3**	**-0.8**
EDC	**Edincik**	**1.33**	**306**	*e*Pn	**Pn**	**07 34 06.3**	**-0.8**
ISK	**Istanbul-Kandi**	**1.50**	**354**	*e*PN	**Pn**	**07 34 09.3**	**-0.1**
ISK	**Istanbul-Kandi**	**1.50**	**354**	*e*Pn	**Pn**	**07 34 09.3**	**-0.1**
BOLV	**Bolvadin**	**1.56**	**123**	*i* P	**Pn**	**07 34 11.2**	**+1.0**
BOLV	**Bolvadin**	**1.56**	**123**	*i* P	**Pn**	**07 34 11.2**	**+1.0**
BOLV				*i* S	**Sn**	**07 34 30.8**	**+0.1**
KLYT	**Kilyos**	**1.69**	**354**	*e*PN	**Pn**	**07 34 11.8**	**-0.2**
**KLY

SNR=92
ASHO Ashiyiah 3.13 173 ⇓P Pn 07 37 53.7 +0.7
SNR=92
ASUD Al Ashush, Dub 3.18 185 P Pn 07 37 55.3 +1.6
SNR=29
ASUD Al Ashush, Dub 3.18 185 ⇑P Pn 07 37 55.3 +1.6
SNR=29
IMEH Mehriz 3.68 346 Pn Pn 07 38 03.2 +2.6
IMEH Sn Sn 07 38 47.6 +3.1
IMEH Mehriz 3.68 346 *e*Pn Pn 07 38 02.0 +1.4
IMEH *e* 07 39 12.1
comp=Z,3μm,0.5s
IMEH Mehriz 3.68 346 *e*Pn Pn 07 38 02.0 +1.4
IMEH Sn Sn 07 38 47.6 +3.1
IBAF Bafgh 3.77 359 Pn Pn 07 38 03.5 +1.7
IBAF Bafgh 3.77 359 *e* Pg 07 38 13.5 -1.6
comp=Z,2μm,0.2s
IBAF *e*Pn Pn 07 38 03.6 +1.8
ISAD Sadrabad 4.44 338 Pn Pn 07 38 14.0 +3.1
ISAD Sadrabad 4.44 338 *e*Pn Pn 07 38 13.5 +2.6
ISAD *e* 07 39 32.5
comp=Z,2μm,0.4s
ISAD Sadrabad 4.44 338 *e*Pn Pn 07 38 13.5 +2.6
ARQ Araqi 4.52 170 P Pn 07 38 12.4 +0.3
SNR=10
ARQ Araqi 4.52 170 ⇑P Pn 07 38 12.4 +0.3
SNR=10
ICHK Chekchek 4.55 346 Pn Pn 07 38 14.7 +2.2
ICHK Chekchek 4.55 346 *e*Pn Pn 07 38 14.9 +2.4
ICHK *e* 07 38 38.7
comp=Z,1μm,0.3s
ICHK Chekchek 4.55 346 *e*Pn Pn 07 38 14.9 +2.4
ZHSF Zahedan 4.84 67 *e*Pn Pn 07 38 16.4 0.0
SMDO Samad 5.20 155 P Pn 07 38 22.1 +0.7
SNR=11
SMDO Samad 5.20 155 ⇑P Pn 07 38 22.1 +0.7
SNR=11
IKOO Kooshah 5.43 31 *e*Pn Pn 07 38 26.1 +1.4
IKOO *e* 07 40 13.3
comp=Z,821nm,0.3s
IKOO Kooshah 5.43 31 *e*Pn Pn 07 38 26.1 +1.4
NASN Na'in 5.55 334 Pn Pn 07 38 27.0 +0.7
NASN Na'in 5.55 334 *e*Pn Pn 07 38 27.6 +1.3
NASN Na'in 5.55 334 Pn Pn 07 38 27.0 +0.7
WBK Wadi Bani Khal 5.98 149 ⇓P Pn 07 38 31.8 -0.3
SNR=7.6
QRN Al-Qurain 6.89 280 *e*P Pn 07 38 43.8 -0.9
QRN AML AML 07 40 05.3
comp=Z,25nm,0.4s
UMR Umm Al-Rimmam 7.19 286 *e*P Pn 07 38 47.5 -1.3
RDF Al-Radifah 7.23 281 *e*P Pn 07 38 48.5 -0.9
NAY Al-Naaiem 7.54 283 *e*P Pn 07 38 52.3 -1.3
NAY AML AML 07 40 16.9
comp=Z,11nm,0.6s
MIB Mutribah 7.57 287 *e*P Pn 07 38 52.7 -1.3
MIB AML AML 07 40 20.3
comp=Z,24nm,0.6s
GNI Garni 15.27 327 LR LR 07 47 03.1
comp=Z,63nm,21.0s,baz=123,slow=39
ASF Jabal al Asfar 16.82 290 Pn Pn 07 40 56.4 -3.0
comp=Z,0.2nm,0.3s,baz=133,slow=19,SNR=2.7
ASF LR LR 07 48 19.1
comp=Z,54nm,20.5s,baz=151,slow=40
MMAI Mount Meron Ar 18.22 291 LR LR 07 50 12.3
comp=Z,88nm,18.6s,baz=105,slow=43
EIL Elat 18.26 281 P Pn 07 41 16.2 -1.0
comp=Z,0.2nm,0.3s,baz=94,slow=13,SNR=2.5
EIL LR LR 07 48 59.2
comp=Z,27nm,19.9s,baz=113,slow=39
EIL Elat 18.26 281 P Pn 07 41 16.2 -1.0
ATD Arta Tunnel 20.17 219 P P 07 41 36.5 -1.9
comp=Z,2.9nm,0.3s,baz=98,slow=19,SNR=2.4
ATD LR LR 07 48 39.8
comp=Z,42nm,21.1s,MS2.8,baz=293,slow=35
ATD Arta Tunnel 20.17 219 P P 07 41 36.5 -1.9
AAK Ala-Archa 21.27 41 P P 07 41 49.8 -0.4
AAK Ala-Archa 21.27 41 P P 07 41 49.8 -0.4
comp=Z,1.4nm,0.3s,mb3.8,baz=218,slow=12,SNR=3.6
AAK LR LR 07 50 23.6
comp=Z,63nm,18.8s,MS3.0,baz=27,slow=38
AAK Ala-Archa 21.27 41 P P 07 41 49.8 -0.4
ABKAR Akbulak array 21.67 8 *e*P P 07 41 52.7 -1.6
comp=Z,3.2nm,0.6s,mb3.9
ABKAR Akbulak array 21.67 8 *e*P P 07 41 52.7 -1.7
comp=Z,3.2nm,0.6s,mb3.9
BR131 Keskin Array S 21.77 309 *e*P P 07 41 54.8 -0.7
comp=Z,5.0nm,0.8s,mb4.0
BR131 Keskin Array S 21.77 309 *e*P P 07 41 54.8 -0.7
comp=Z,4.9nm,0.8s,mb4.0
BRTR Keskin Array B 21.77 309 P P 07 41 55.8 +0.2
comp=Z,1.4nm,0.6s,mb3.6,baz=127,slow=14,SNR=8.2
BRTR Keskin Array B 21.77 309 P P 07 41 55.8 +0.3
AKTK Aktyubinsk 22.67 4 P P 07 42 03.6 -1.4
AKTK Aktyubinsk 22.67 4 P P 07 42 03.6 -1.4
AKTO Aktyubinsk 22.67 4 P P 07 42 03.6 -1.4
comp=Z,1.1nm,0.3s,mb3.8,baz=192,slow=11,SNR=6.1
BVAR Borovoye Array 27.46 19 P P 07 42 48.1 -1.7
comp=Z,3.4nm,0.7s,mb4.0,baz=205,slow=6.6,SNR=6.1
BVAR Borovoye Array 27.46 19 P P 07 42 48.1 -1.7
MLR Muntele Rosu 29.43 315 P P 07 43 06.8 -0.7
comp=Z,1.3nm,0.6s,mb3.8,baz=166,slow=8.3,SNR=2.0
MLR Muntele Rosu 29.43 315 P P 07 43 06.8 -0.6
AKASG Malin Array Be 30.40 326 P P 07 43 15.8 -0.2
comp=Z,0.3nm,0.3s,mb3.5,baz=115,slow=7.2,SNR=4.3
AKASG Malin Array Be 30.40 326 P P 07 43 15.8 -0.2
ZALV Zalesovo Beam 33.74 31 P P 07 43 43.8 -1.4
comp=Z,2.7nm,0.4s,mb4.5,baz=235,slow=10,SNR=5.7
ZALV LR LR 07 59 44.9
comp=Z,31nm,18.4s,MS3.1,baz=233,slow=40
GTA Gaotai 38.20 61 *e*P P 07 44 25.8 +2.1
GTA pP pP 07 44 30.3 +5.4
GTA sP sP 07 44 33.5 +8.2
GTA pmax pmax
comp=Z,3.0nm,1.2s
KHC Kasperske Hory 38.58 315 *e*P P 07 44 24.7 -2.1
comp=Z,2.9nm,0.8s,mb4.1
KHC Kasperske Hory 38.58 315 *e*P P 07 44 24.7 -2.0
comp=Z,2.9nm,0.8s,mb4.1
FINES FINESS Array B 39.00 338 P P 07 44 29.1 -1.1
comp=Z,2.8nm,0.8s,mb4.0,baz=152,slow=9.1,SNR=2.4
FINES FINESS Array B 39.00 338 P P 07 44 29.0 -1.1
KEST Kesra 39.86 293 P P 07 44 34.7 -3.0
comp=Z,0.5nm,0.6s,mb3.4,baz=74,slow=18,SNR=2.1
MBDF Montbardon 42.22 307 *e*P P 07 44 58.1 +1.2
comp=Z,7.2nm,0.7s,mb4.1
LPG La Plagne 42.32 308 *e*P P 07 44 59.0 +1.2
comp=Z,7.4nm,0.7s,mb4.1
LPG La Plagne 42.32 308 *e*P P 07 44 59.0 +1.2
comp=Z,3.7nm,0.7s,mb4.1
LPG La Plagne 42.32 308 *e*P P 07 44 59.0 +1.2
comp=Z,3.7nm,0.7s,mb4.1
LPL La Plagne 42.34 308 *e*P P 07 44 59.3 +1.4
comp=Z,12nm,0.9s,mb4.2
LPL La Plagne 42.34 308 *e*P P 07 44 59.3 +1.4
comp=Z,5.9nm,0.9s,mb4.2
LPL La Plagne 42.34 308 *e*P P 07 44 59.3 +1.4
comp=Z,5.9nm,0.9s,mb4.2
CABF La Chapelle 42.93 310 *e*P P 07 45 03.9 +1.2
CABF La Chapelle 42.93 310 *e*P P 07 45 03.9 +1.2
VIVF Saint-Julien-l 43.72 307 *e*P P 07 45 10.0 +0.9
VIVF Saint-Julien-l 43.72 307 *e*P P 07 45 10.0 +0.9
SONM Songino Array 43.89 49 P P 07 45 09.3 -1.1
comp=Z,0.3nm,0.4s,mb3.3,baz=234,slow=4.8,SNR=2.8
SONM Songino Array 43.89 49 P P 07 45 09.3 -1.1
MEZF Maizieres J'vi 43.91 312 *e*P P 07 45 12.2 +1.6
SMF Signal de Mont 44.47 309 *e*P P 07 45 16.4 +1.3
comp=Z,7.7nm,0.7s,mb4.2
SMF Signal de Mont 44.47 309 *e*P P 07 45 16.4 +1.3
comp=Z,3.8nm,0.7s,mb4.2
SMF Signal de Mont 44.47 309 *e*P P 07 45 16.4 +1.3
comp=Z,3.8nm,0.7s,mb4.2
LOR Lormes 44.53 310 *e*P P 07 45 16.7 +1.1
LOR Lormes 44.53 310 *e*P P 07 45 16.7 +1.1
SSF Saint Saulge 44.75 310 *e*P P 07 45 17.8 +0.5
SSF Saint Saulge 44.75 310 *e*P P 07 45 17.8 +0.5
AVF Avril sur Loir 44.82 310 *e*P P 07 45 19.2 +1.3
AVF Avril sur Loir 44.82 310 *e*P P 07 45 19.2 +1.3
ARCES ARCESS Array B 45.27 346 P P 07 45 19.9 -1.2
ARCES ARCESS Array B 45.27 346 P P 07 45 19.9 -1.2
comp=Z,2.1nm,0.9s,mb4.0,baz=131,slow=6.7,SNR=4.1
ARCES ARCESS Array B 45.27 346 P P 07 45 19.9 -1.2
MTLF Montolieu 45.39 305 *e*P P 07 45 22.8 +0.3
MTLF Montolieu 45.39 305 *e*P P 07 45 22.8 +0.3
TCF Toulx Ste Croi 45.56 309 *e*P P 07 45 23.8 0.0
TCF Toulx Ste Croi 45.56 309 *e*P P 07 45 23.8 0.0
CAF Calviac 45.57 307 *e*P P 07 45 25.6 +1.7
comp=Z,12nm,0.9s,mb4.5
CAF Calviac 45.57 307 *e*P P 07 45 25.6 +1.7
comp=Z,6.1nm,0.9s,mb4.5
EPF Esparros 46.76 304 *e*P P 07 45 34.6 +1.3
ETSF Etsaut 47.42 304 *e*P P 07 45 39.5 +1.1
comp=Z,14nm,0.9s,mb4.6
ETSF Etsaut 47.42 304 *e*P P 07 45 39.5 +1.1
comp=Z,7.2nm,0.9s,mb4.6
ETSF Etsaut 47.42 304 *e*P P 07 45 39.5 +1.1
comp=Z,7.2nm,0.9s,mb4.6
ESDC Sonseca Array 50.15 300 P P 07 45 57.9 -1.6
comp=Z,0.2nm,0.3s,mb3.6,baz=68,slow=8.8,SNR=4.7
ESDC Sonseca Array 50.15 300 P P 07 45 57.9 -1.6
TORD Torodi Ar. Bea 52.23 265 P P 07 46 12.8 -2.6
comp=Z,2.4nm,0.5s,mb4.4,baz=61,slow=7.7,SNR=27
SPITS Spitsbergen Ar 53.45 351 P P 07 46 22.4 -1.2
comp=Z,4.3nm,0.8s,mb4.4,baz=165,slow=8.1,SNR=3.5
SPITS Spitsbergen Ar 53.45 351 P P 07 46 22.4 -1.2
KSRS Korea Array 60.28 61 P P 07 47 09.1 -3.5
comp=Z,0.7nm,0.6s,mb3.9,baz=274,slow=6.0,SNR=3.3
DBIC Dimbokro 60.88 262 P P 07 47 14.6 -2.5
comp=Z,1.4nm,0.5s,mb4.3,baz=18,slow=6.4,SNR=4.0
DBIC Dimbokro 60.88 262 P P 07 47 14.6 -2.5
ILAR Eielson Array 86.06 9 P P 07 49 41.6 -2.8
comp=Z,0.4nm,0.6s,mb3.8,baz=320,slow=4.9,SNR=8.2
WRA Warramunga Arr 89.64 113 P P 07 49 59.0 -3.4
comp=Z,0.3nm,0.5s,mb3.9,baz=317,slow=3.8,SNR=3.5
ASAR Alice Springs 91.13 116 P P 07 50 07.2 -2.0
comp=Z,0.2nm,0.6s,mb3.6,baz=308,slow=4.5,SNR=3.1
ASAR Alice Springs 91.13 116 P P 07 50 07.2 -2.0

NNC ***15*** *07:38:12.3±2.3, 50.33N×73.44E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=40.9km s-min=8.9km az=36.0*
ISCJB ***15*** *07:38:18.5±2.0, 51.00N±0.09×73.85E±0.09, h15km±14km, Error ellipse: s-maj=16.3km s-min=5.5km az=29.4*
IDC ***15*** *07:38:18.3±1.1, 51.12N×73.78E, h0km, mb3.3/1, mb1 3.2/5, mb1mx3.1/25, mbtmp3.1/5, ML2.8/4, Error ellipse: s-maj=26.1km s-min=6.5km az=30.0*

ISC 15 07:38:19.7±2.3, 50.91N±0.08×73.75E±0.09, h16km±16km, n11, σ1s10/18, 8C-5D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VOSK	**Vostochnaya**	**2.50**	**318**	⇑Pn		**Pn**		**07 38 59.3**	**-0.4**
	4.1nm,0.5s								
VOSK				⇓Sn		**Sn**		**07 39 32.2**	**+2.3**
	34nm,0.8s								
VOSK				⇑Rg				07 39 59.5	
	164nm,1.6s								
BVA0	**Borovoye Array**	**2.97**	**317**	Pn		**Pn**		**07 39 07.1**	**+1.0**
	0.9nm,0.5s,baz=127,slow=17,SNR=26								
BVA0				Sn		**Sb**		**07 39 48.7**	**+0.5**
	4.6nm,0.7s,baz=125,slow=26,SNR=14								
BVA0				⇑Rg				07 40 15.9	
	8.0nm,1.4s,baz=127,slow=31,SNR=4.1								
BVAR	**Borovoye Array**	**2.97**	**317**	Pn		**Pn**		**07 39 05.5**	**-0.7**
	2.2nm,0.3s,baz=130,slow=16,SNR=21								
BVAR				Pg		**Pb**		**07 39 07.7**	**-4.6**
	2.2nm,0.3s,baz=135,slow=15,SNR=22								
BVAR				Lg				07 39 48.4	
	3.8nm,0.3s,baz=128,slow=26,SNR=10								
KURK	**Kurchatov**	**3.09**	**92**	⇑Pn		**Pn**		**07 39 08.0**	**+0.2**
	8.1nm,1.1s								
KURK				⇓Lg				07 39 54.5	
	46nm,0.8s								
KURK				⇑Rg				07 40 15.9	
	86nm,1.8s								
KURK	**Kurchatov**	**3.09**	**92**	Pn		**Pn**		**07 39 08.0**	**+0.2**
	0.2nm,0.3s,baz=279,slow=14,SNR=13								
KURK				Pg		**Pg**		**07 39 11.9**	**-7.1**
	0.5nm,0.3s,baz=279,slow=14,SNR=15								
KURK				Lg				07 39 53.3	
	0.9nm,0.3s,baz=279,slow=32,SNR=9.9								
ZRNK	**Zerenda**	**3.58**	**307**	⇓Pn		**Pn**		**07 39 13.1**	**-1.4**
	3.2nm,0.8s								
ZRNK				⇓Sn		**Sn**		**07 39 55.6**	**-0.9**
	4.1nm,0.5s								
ZRNK				⇓Lg				07 40 11.5	
	29nm,0.8s								
ZRNK				⇑Rg				07 40 31.3	
	41nm,2.0s								
MK31	**Makanchi Array**	**6.97**	**123**	⇑Sn		**Sn**		**07 41 18.2**	**-1.8**
	1.2nm,0.7s,baz=304,slow=20,SNR=4.1								
MK31				⇑Lg				07 41 50.3	
	7.9nm,0.8s,baz=306,slow=23,SNR=3.5								
MKAR	**Makanchi Array**	**6.97**	**123**	Pn		**Pn**		**07 40 00.9**	**-0.2**
	0.1nm,0.3s,baz=315,slow=13,SNR=2.1								
MKAR				Pg		**Pb**		**07 40 21.1**	**+0.7**
	0.3nm,0.3s,baz=308,slow=12,SNR=5.6								
MKAR				Sn		**Sn**		**07 41 22.9**	**+2.9**
	0.2nm,0.3s,baz=307,slow=17,SNR=5.1								
MKAR				Lg				07 41 54.3	
	0.4nm,0.3s,baz=309,slow=29,SNR=7.8								
ZALV	**Zalesovo Beam**	**7.42**	**61**	Pn		**Pn**		**07 40 07.5**	**+0.3**
	0.3nm,0.3s,baz=252,slow=13,SNR=3.7								
ZALV				Sn		**Sn**		**07 41 30.3**	**-0.6**
	0.4nm,0.3s,baz=251,slow=21,SNR=2.8								
ZALV				Lg				07 42 00.9	
	0.2nm,0.3s,baz=244,slow=22,SNR=4.0								
AAK	**Ala-Archa**	**8.29**	**176**	Lg				07 42 39.3	
	0.0nm,0.3s,baz=190,slow=12,SNR=4.8								
ILAR	**Eielson Array**	**60.43**	**19**	P		**P**		**07 48 27.4**	**-0.5**
	0.3nm,0.9s,baz=327,slow=5.0,SNR=5.6								

IDC 15 07:43:52.3±2.7, 17.65S×174.76W, h150km±25km, mb3.5/5, mb1 3.7/6, mb1mx3.5/15, mbtmp3.5/6, Error ellipse: s-maj=47.6km s-min=17.6km az=136.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.70**	**38**	P		Pn		07 45 02.1	+0.3
	13nm,0.3s,baz=172,slow=3.5,SNR=27								
AFI				S		Sn		07 45 51.2	-4.7
	45nm,0.3s,baz=73,slow=23,SNR=16								
URZ	**Urewera**	**21.73**	**197**	P		P		07 48 31.2	-0.4
	31nm,1.2s,baz=68,slow=11,SNR=3.0								
WRA	**Warramunga Arr**	**48.09**	**259**	P		P		07 52 17.1	0.0
	0.3nm,0.3s,baz=96,slow=7.7,SNR=3.3								
ASAR	**Alice Springs**	**48.20**	**254**	P		P		07 52 18.1	+0.1
	2.9nm,0.8s,baz=90,slow=8.1,SNR=37								
NVAR	**Mina Array Bea**	**76.87**	**42**	P		P		07 55 28.6	+0.8
	0.2nm,0.6s,baz=236,slow=9.7,SNR=2.9								
ILAR	**Eielson Array**	**84.90**	**12**	P		P		07 56 08.8	-0.9
	0.6nm,0.5s,baz=224,slow=6.3,SNR=30								
BRTR	**Keskin Array B**	**147.00**	**318**	PKPbc		PKPbc		08 03 17.3	-0.3
	0.4nm,0.5s,baz=45,slow=2.2,SNR=2.9								
DAVOX	**Davos/Dischmat**	**150.70**	**353**	PKPbc		PKPbc		08 03 27.4	+0.7
	1.7nm,0.5s,baz=331,slow=6.9,SNR=3.5								

CASC 15 07:49:03.0±0.7, 12.54N×88.19W, h35km±10km, MD3.5, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.81**	**26**	*e*P		Pn		07 49 18.1	+0.1
CNCH				*e*P				07 49 18.2	
CNCH				*e*S		Sn		07 49 29.5	+0.7
BLLM	**Bellamira**	**0.90**	**357**	*e*P		Pn		07 49 19.1	-0.1
CRIN	**San Cristobal**	**1.13**	**82**	*e*P		Pn		07 49 22.8	+0.5
CAHU	**Cacacuatique**	**1.22**	**359**	*e*P		Pn		07 49 24.0	+0.4
LFRS	**El Faro**	**1.37**	**322**	*e*P		Pn		07 49 25.5	-0.1
COPN	**Copaltepe**	**1.61**	**103**	*e*S		Sn		07 49 49.1	+0.7
TGUH	**Tegucigalpa,Un**	**1.75**	**31**	*e*P		Pn		07 49 30.9	0.0
CSAN		**1.77**	**101**	*e*P		Pn		07 49 31.2	0.0

IDC 15 08:00:18.2±3.3, 52.71N×33.60E, h0km, mb1 3.8/2, mb1mx3.2/20, mbtmp3.7/2, ML2.9/3, Error ellipse: s-maj=43.6km s-min=11.1km az=112.0, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**3.39**	**235**	Pn		Pn		08 01 11.2	-1.0
	1.0nm,0.3s,baz=56,slow=14,SNR=3.2								
AKASG				Pg		Pg		08 01 17.9	-5.2
	1.6nm,0.3s,baz=56,slow=18,SNR=3.8								
AKASG				Sn		Sn		08 01 52.5	-0.6
	1.4nm,0.3s,baz=60,slow=22,SNR=3.1								
AKASG				Lg				08 02 07.3	
	2.8nm,0.3s,baz=67,slow=29,SNR=3.6								
FINES	**FINESS Array B**	**9.66**	**338**	Pn		Pn		08 02 34.4	-3.9
	0.2nm,0.3s,baz=150,slow=16,SNR=3.2								
FINES				Sn		Sn		08 04 17.3	-10
	0.4nm,0.3s,baz=149,slow=28,SNR=3.2								
ARCES	**ARCESS Array B**	**17.30**	**350**	Pn		Pn		08 04 15.3	-5.5
	0.1nm,0.3s,baz=160,slow=8.3,SNR=5.8								

CASC 15 08:06:04.2±1.3, 12.44N×87.99W, h46km±31km, MD3.7, ML3.9, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.84**	**10**	*e*P		Pn		08 06 20.0	+0.2
CNCH				*e*S		Sn		08 06 32.1	+1.1
CRIN	**San Cristobal**	**0.95**	**74**	*e*P		Pn		08 06 21.6	+0.4
CRIN				*e*S		Sn		08 06 35.2	+1.6
CRIN				AML		AML		08 06 38.0	
	comp=E,3μm,0.2s								
VSM	**San Miguel**	**1.02**	**344**	*e*P		Pn		08 06 22.8	+0.6
BLLM	**Bellamira**	**1.03**	**346**	*e*S		Sn		08 06 36.4	+0.9
LEON	**Leon**	**1.07**	**91**	*e*P		Pn		08 06 22.2	-0.5
TELN	**Telica**	**1.14**	**82**	*e*P		Pn		08 06 24.1	+0.3
CNGN	**Cerro Negro**	**1.26**	**87**	*e*P		Pn		08 06 25.1	-0.3
CNGN				*e*S		Sn		08 06 41.3	+0.2
CAHU	**Cacacuatique**	**1.34**	**351**	*e*P		Pn		08 06 27.1	+0.6
COPN	**Copaltepe**	**1.39**	**101**	*e*P		Pn		08 06 26.7	-0.4
MOMN	**Momotombo**	**1.41**	**91**	*e*P		Pn		08 06 27.8	+0.3
SNVI	**San Vicente**	**1.43**	**325**	*e*S		Sn		08 06 40.6	+0.6
CSAN		**1.55**	**99**	*e*P		Pn		08 06 29.4	0.0
LFRS	**El Faro**	**1.58**	**318**	*e*P		Pn		08 06 29.8	+0.1
LFRS				*e*S		Sn		08 06 49.5	+0.6
XAVN	**Gruta Xavier**	**1.65**	**100**	*e*P		Pn		08 06 31.1	+0.4
LBRS	**Las Brisas**	**1.65**	**322**	*e*P		Pn		08 06 30.8	0.0
LFU	**La Fuente**	**1.70**	**320**	*e*P		Pn		08 06 31.8	+0.4
LFU				*e*S		Sn		08 06 52.6	+0.6
SNET	**Serv Nac Est T**	**1.73**	**316**	*e*S		Sn		08 06 53.0	+0.2
TGUH	**Tegucigalpa,Un**	**1.75**	**23**	*e*P		Pn		08 06 32.6	+0.5
TGUH				*e*S		Sn		08 06 54.1	+0.8
APON	**Apoyo**	**1.95**	**105**	*e*P		Pn		08 06 34.4	-0.4
SBLS	**San Blas**	**2.12**	**311**	*e*P		Pn		08 06 38.9	+1.7
RBDL	**Robledal**	**2.35**	**315**	*e*P		Pn		08 06 41.2	+0.9

NEIC ***15*** *08:06:46.4±4.0, 23.05N×122.11E, h10km, Error ellipse: s-maj=43.6km s-min=13.5km az=130.0*
ISCJB ***15*** *08:06:49.0±0.7, 23.14N±0.02×121.99E±0.02, h13km±4km, Error ellipse: s-maj=3.7km s-min=2.4km az=153.7*
JMA ***15*** *08:06:51.0±0.3, 23.10N×121.99E, h54km, M2.8*
TAP ***15*** *08:06:51.3, 23.13N×121.91E, h27km, ML3.4, C*

ISC 15 08:06:49.1±0.5, 23.15N±0.02×121.96E±0.02, h11km±2km, n55, σ1s01/97, 2C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.55**	**265**	*i*P		**Pg**		**08 07 00.5**	**+0.6**
	baz=266								
CHKT				*i*S		**Sg**		**08 07 07.0**	**-0.2**
	baz=266								
TWF1	**Yuli**	**0.64**	**288**	⇑*i*P		**Pg**		**08 07 02.4**	**+0.8**
	baz=282								
TWF1				*e*S		**Sg**		**08 07 11.1**	**+0.9**
	baz=282								
YULB	**Yu-li**	**0.66**	**292**	*e*Pg		**Pg**		**08 07 02.5**	**+0.6**
EHY	**Hungye**	**0.69**	**301**	⇑*i*P		**Pg**		**08 07 03.1**	**+0.6**
	baz=305								
EHY				*e*S		**Sg**		**08 07 13.1**	**+1.6**
	baz=305								
ESL	**Shilin**	**0.82**	**324**	*e*P		**Pg**		**08 07 05.8**	**+0.8**
	baz=338								
ESL				*e*S		**Sg**		**08 07 16.3**	**+0.6**
	baz=338								
TTN	**Taitung**	**0.85**	**242**	*e*P		**Pg**		**08 07 05.3**	**-0.3**
	baz=235								
TTN				*e*S		**Sg**		**08 07 15.8**	**-0.8**
	baz=235								
ELDTW	**Lidau**	**0.87**	**273**	*e*P		**Pg**		**08 07 05.4**	**-0.6**
	baz=274								
ELDTW				*e*S		**Sg**		**08 07 15.8**	**-1.5**
	baz=274								
TWG	**Pinlang**	**0.88**	**248**	*e*Pg		**Pg**		**08 07 05.3**	**-0.9**
TWG				*e*Sg		**Sg**		**08 07 16.5**	**-1.3**
TWG	**Pinlang**	**0.88**	**248**	*e*P		**Pg**		**08 07 07.9**	**+1.7**
	baz=247								
TWG				*e*S		**Sg**		**08 07 16.6**	**-1.2**
	baz=247								
TWD	**Chiawan**	**0.98**	**340**	*e*P		**Pb**		**08 07 08.0**	**-0.2**
	baz=343								
TWD				*e*S		**Sg**		**08 07 20.2**	**-0.8**
	baz=343								
YUS	**Yu-Shan**	**0.99**	**290**	*e*P		**Pb**		**08 07 08.4**	**+0.2**
	baz=300								
YUS				*e*S		**Sg**		**08 07 20.8**	**-0.3**
	baz=300								
NACB	**Ninganchiao**	**1.07**	**342**	*e*Pn		**Pn**		**08 07 08.9**	**-1.2**
NACB				*e*Sg		**Sg**		**08 07 22.6**	**-1.2**
ECL	**Taimali**	**1.08**	**240**	P		**Pb**		**08 07 08.0**	**-1.9**
	baz=252								
ECL				*e*S		**Sb**		**08 07 19.9**	**-4.1**
	baz=252								
STYT	**Tauyuan**	**1.11**	**271**	P		**Pb**		**08 07 09.5**	**-0.8**
	baz=271								
STYT				*e*S		**Sb**		**08 07 22.6**	**-2.1**
	baz=271								
SSLB	**Suanglung**	**1.12**	**305**	*e*Pn		**Pn**		**08 07 09.9**	**-0.8**
ALS	**Alishan**	**1.12**	**289**	*i* P		**Pb**		**08 07 10.7**	**+0.2**
	baz=290								
ALS				*e*S		**Sb**		**08 07 24.9**	**-0.2**
	baz=290								
LAY	**Lan-yu**	**1.17**	**199**	*e*P		**Pb**		**08 07 08.8**	**-2.6**
	baz=196								
LAY				*e*S		**Sb**		**08 07 20.9**	**-5.7**
	baz=196								
WHF	**Hehuan Shan**	**1.18**	**327**	P		**Pn**		**08 07 11.2**	**-0.4**
	baz=330								
WHF				*e*S		**Sb**		**08 07 25.3**	**-1.5**
	baz=330								
SMLT	**Sun Moon Lake**	**1.22**	**307**	P		**Pn**		**08 07 12.0**	**-0.1**
	baz=309								
SMLT				*e*S		**Sb**		**08 07 27.2**	**-0.7**
	baz=309								
TPUB	**Ta-pu**	**1.23**	**277**	*e*Pn		**Pn**		**08 07 12.2**	**-0.1**
TPUB				*e*Sn		**Sn**		**08 07 28.0**	**-0.9**
WTP	**Ta-pu**	**1.25**	**275**	*e*P		**Pn**		**08 07 12.5**	**0.0**
	baz=274								
WTP				*e*S		**Sb**		**08 07 28.7**	**+0.1**
	baz=274								
CHN5	**Tsauling**	**1.26**	**291**	*e*P		**Pn**		**08 07 13.4**	**+0.8**
	baz=292								
CHN5				*e*S		**Sb**		**08 07 29.4**	**+0.3**
	baz=292								
TYC	**Yuchr**	**1.26**	**307**	*e*P		**Pn**		**08 07 12.9**	**+0.2**
	baz=319								
CHN4	**Tsaushan**	**1.27**	**279**	*e*P		**Pn**		**08 07 13.5**	**+0.6**

	baz=358							
TWC				S		Sn	08 07 33.6	-0.8
	baz=358							
CHY	**Chiayi**	**1.46**	**284**	*e*S		**Sn**	**08 07 34.9**	**+0.5**
	baz=270							
TWM1	**Shoushan**	**1.46**	**257**	*e*P		**Pn**	**08 07 17.0**	**+1.6**
	baz=272							
TWM1				*e*S		**Sn**	**08 07 37.1**	**+2.7**
	baz=272							
SCZT	**Fangliau**	**1.46**	**238**	*e*P		**Pn**	**08 07 16.1**	**+0.7**
	baz=230							
SCZT				*e*S		**Sn**	**08 07 33.1**	**-1.4**
	baz=230							
ENTT	**Nioudou**	**1.53**	**346**	*e*P		**Pn**	**08 07 17.2**	**+0.9**
	baz=348							
ENTT				*e*S		**Sn**	**08 07 35.8**	**-0.3**
	baz=348							
TCU	**Taichung**	**1.54**	**310**	*e*S		**Sn**	**08 07 38.2**	**+1.7**
	baz=312							
TSEB	**Hengchuen, Pin**	**1.59**	**218**	*e*P		**Pn**	**08 07 17.3**	**+0.2**
	baz=218							
TWE	**Neicheng**	**1.59**	**350**	P		**Pn**	**08 07 18.0**	**+0.8**
	baz=352							
TWE				*e*S		**Sn**	**08 07 38.1**	**+0.4**
	baz=352							
YHNB	**Yeheng**	**1.60**	**341**	*e*Pn		**Pn**	**08 07 17.8**	**+0.4**
YHNB				*e*Sn		**Sn**	**08 07 36.5**	**-1.6**
TWQ1	**Liyutan**	**1.61**	**318**	P		**Pn**	**08 07 19.6**	**+2.0**
	baz=319							
TWQ1				*e*S		**Sn**	**08 07 39.9**	**+1.5**
	baz=319							
NSK	**Sanguang**	**1.62**	**340**	*e*P		**Pn**	**08 07 16.9**	**-0.7**
	baz=341							
NSK				*e*S		**Sn**	**08 07 37.4**	**-1.0**
	baz=341							
YOJ	**Yonaguni jima**	**1.62**	**36**	P		**Pn**	**08 07 18.2**	**+0.6**
YOJ				*e*S		**Sn**	**08 07 38.7**	**+0.2**
CHN8	**Yiju**	**1.62**	**277**	*e*S		**Sn**	**08 07 39.1**	**+0.6**
	baz=278							
NSTT	**Nanjuang**	**1.72**	**329**	*e*P		**Pn**	**08 07 20.7**	**+1.8**
	baz=331							
NSTT				*e*S		**Sn**	**08 07 41.2**	**+0.4**
	baz=331							
TWA	**Mucha**	**1.85**	**349**	*e*S		**Sn**	**08 07 44.6**	**+0.3**
	baz=350							
HATJ	**Hateruma jima**	**1.92**	**62**	P		**Pn**	**08 07 22.0**	**+0.3**
HATJ				*e*S		**Sn**	**08 07 44.7**	**-1.1**
NWF	**Wu-fen Shan**	**1.92**	**355**	*e*P		**Pn**	**08 07 23.9**	**+2.2**
	baz=355							
NWF				*e*S		**Sn**	**08 07 46.3**	**+0.5**
	baz=355							
IRIF	**Iriomote-Funau**	**2.00**	**54**	P		**Pn**	**08 07 23.7**	**+0.8**
IRIF				*e*S		**Sn**	**08 07 47.8**	**-0.1**
JKRS	**Kuro-shima**	**2.17**	**60**	P		**Pn**	**08 07 25.9**	**+0.8**
JKRS				*e*S		**Sn**	**08 07 51.7**	**-0.2**
PNG	**Penghu**	**2.25**	**281**	*e*S		**Sn**	**08 07 52.9**	**-1.2**
	baz=281							
JIJ	**Ishigaki jima**	**2.33**	**58**	P		**Pn**	**08 07 27.8**	**+0.4**
JIJ				*e*S		**Sn**	**08 07 54.9**	**-1.2**
JTJ	**Tarama**	**2.91**	**59**	P		**Pn**	**08 07 36.1**	**+0.7**
JTJ				*e*S		**Sn**	**08 08 09.8**	**-0.6**

IDC ***15*** *08:30:01.0±6.8, 13°.35N×89°.03W, h62km±57km, mb3.6/4, mb1 3.9/5, mb1mx3.6/16, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=74.4km s-min=25.4km az=66.0*

ISCJB ***15*** *08:30:01.5±0.4, 13°.17N±0°.05×89°.24W±0°.04, h76km±5km, mb4.0/8, Error ellipse: s-maj=10.3km s-min=3.4km az=30.3*

CASC ***15*** *08:30:02.8, 13°.15N×89°.22W, h49km, MD4.0, ML4.5, mb4.2(NEIC)*

NEIC ***15*** *08:30:02.7±1.3, 13°.14N×89°.21W, h80km±10km, mb4.2/4, MD4.7(SNET), Error ellipse: s-maj=17.3km s-min=12.1km az=185.0*

NEIC Felt [III] at San Salvador.

MEX ***15*** *08:30:06.4±0.3, 12°.82N×89°.74W, h64km±25km, MD4.5*

ISC 15 08:30:02.8±0.3, 13°.21N±0°.05×89°.23W±0°.03, h69km±5km, n66, σ1°19°77, mb4.0/8, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.45**	**21**	*e*P	**Pn**	**08 30 14.0**	**-1.1**
SNET	**Serv Nac Est T**	**0.48**	**359**	*e*P	**Pn**	**08 30 14.3**	**-1.1**
	comp=Z,31μm,0.3s						
SNET				*e*S	**Sn**	**08 30 23.9**	**-0.6**
SNET				AML	AML	08 30 24.7	
	comp=Z,31μm,0.3s						
BOQS	**Boqueron**	**0.53**	**354**	*i* P	**Pn**	**08 30 15.1**	**-0.7**
LFU	**La Fuente**	**0.55**	**11**	*e*P	**Pn**	**08 30 15.8**	**-0.3**
SNVI	**San Vicente**	**0.55**	**43**	*e*P	**Pn**	**08 30 15.4**	**-0.7**
LBRS	**Las Brisas**	**0.56**	**19**	*e*P	**Pn**	**08 30 15.8**	**-0.3**
SBLS	**San Blas**	**0.74**	**329**	*i* P	**Pn**	**08 30 17.2**	**-0.9**
SNJE	**San Jose**	**0.76**	**331**	*e*P	**Pn**	**08 30 17.5**	**-0.8**
RTR	**El Retiro**	**0.80**	**329**	*e*P	**Pn**	**08 30 18.2**	**-0.6**
VSM	**San Miguel**	**0.95**	**76**	*e*P	**Pn**	**08 30 20.5**	**-0.2**
BLLM	**Bellamira**	**0.99**	**76**	*e*P	**Pn**	**08 30 20.8**	**-0.4**
RBDL	**Robledal**	**1.01**	**334**	*e*P	**Pn**	**08 30 20.9**	**-0.5**
CAHU	**Cacacuatique**	**1.14**	**60**	*e*P	**Pn**	**08 30 22.8**	**-0.2**
CAHU				*e*S	**Sn**	**08 30 39.8**	**+1.8**
MTO2	**Montecristo 2**	**1.19**	**354**	*e*P	**Pn**	**08 30 23.6**	**-0.1**
CNCH	**Conchagua**	**1.36**	**87**	*e*P	**Pn**	**08 30 25.4**	**-0.5**
CNCH				*e*S	**Sn**	**08 30 42.8**	**-0.4**
NBG	**Las Nubes**	**1.75**	**322**	*e*P	**Pn**	**08 30 32.6**	**+1.4**
PCG	**Pacaya**	**1.79**	**312**	*e*P	**Pn**	**08 30 32.8**	**+1.2**
MRL	**Marmol**	**1.90**	**346**	*e*P	**Pn**	**08 30 34.7**	**+1.5**
MRL				*e*S	**Sn**	**08 30 48.5**	**-7.7**
FUG	**Fuego 3**	**2.00**	**308**	*e*P	**Pn**	**08 30 34.8**	**+0.3**
TGUH	**Tegucigalpa,Un**	**2.08**	**66**	*e*Pn	**Pn**	**08 30 35.4**	**-0.1**
TGUH	**Tegucigalpa,Un**	**2.08**	**66**	*e*P	**Pn**	**08 30 35.4**	**-0.1**
FG6		**2.10**	**310**	*e*P	**Pn**	**08 30 37.3**	**+1.5**
FG6				*e*S	**Sn**	**08 31 02.9**	**+2.0**
CRIN	**San Cristobal**	**2.18**	**103**	*e*P	**Pn**	**08 30 36.5**	**-0.4**
TP2	**Tecpan 2**	**2.34**	**312**	*e*P	**Pn**	**08 30 40.9**	**+1.7**
LEON	**Leon**	**2.41**	**109**	*e*P	**Pn**	**08 30 38.1**	**-1.9**
TELN	**Telica**	**2.41**	**104**	*e*P	**Pn**	**08 30 39.4**	**-0.6**
CNGN	**Cerro Negro**	**2.56**	**106**	*e*P	**Pn**	**08 30 43.3**	**+1.2**
JAT	**Jato**	**2.59**	**296**	*e*P	**Pn**	**08 30 42.2**	**-0.2**
MOMN	**Momotombo**	**2.74**	**107**	*e*P	**Pn**	**08 30 44.2**	**-0.2**
COPN	**Copaltepe**	**2.77**	**111**	*e*P	**Pn**	**08 30 43.9**	**-0.9**
CSAN		**2.92**	**110**	*e*P	**Pn**	**08 30 46.8**	**-0.1**
XAVN	**Gruta Xavier**	**3.02**	**110**	*e*P	**Pn**	**08 30 48.2**	**-0.1**
TISN	**Laguna Tiscapa**	**3.07**	**110**	*e*P	**Pn**	**08 30 48.3**	**-0.8**
APON	**Apoyo**	**3.34**	**112**	*e*P	**Pn**	**08 30 53.1**	**+0.4**
THIG		**3.40**	**300**	*e*P	**Pn**	**08 30 53.5**	**0.0**
THIG				*i* S	**Sn**	**08 31 30.0**	**-2.7**
PCIG		**4.60**	**303**	*e*P	**Pn**	**08 31 10.2**	**+0.3**
PCIG				*i* S	**Sn**	**08 31 59.7**	**-2.3**
TGIG		**5.17**	**314**	*i* P	**Pn**	**08 31 19.4**	**+1.7**
TGIG				*i* S	**Sn**	**08 32 18.6**	**+2.5**
JCR	**Jicaral**	**5.23**	**129**	*e*P	**Pn**	**08 31 18.8**	**+0.2**
CGA2	**Cerro Gallo 2**	**5.64**	**124**	*e*P	**Pn**	**08 31 25.8**	**+1.7**
PRS1	**Puriscal**	**5.78**	**123**	*e*P	**Pn**	**08 31 27.5**	**+1.5**
LAJ	**Bijagual**	**6.00**	**123**	*e*P	**Pn**	**08 31 26.5**	**-2.6**
QCR	**Quepos**	**6.22**	**127**	*e*P	**Pn**	**08 31 33.0**	**+0.9**
URSC	**Urasca**	**6.30**	**122**	*e*P	**Pn**	**08 31 34.4**	**+1.2**
BUS	**Buena Vista**	**6.47**	**124**	*e*P	**Pn**	**08 31 37.6**	**+2.0**
CMIG	**Matias Romero**	**6.69**	**306**	P	**Pn**	**08 31 39.3**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=99,slow=10.0,SNR=12						
CMIG				S	**Sn**	**08 32 51.8**	**-1.6**
	comp=Z,6.0nm,0.3s,baz=58,slow=17,SNR=9.3						
CMIG	**Matias Romero**	**6.69**	**306**	*e*P	**Pn**	**08 31 38.9**	**+0.4**
CMIG				*i* S	**Sn**	**08 32 52.6**	**-0.7**
TEIG	**Tepich**	**7.04**	**7**	*e*Pn	**Pn**	**08 31 44.7**	**+1.4**
	comp=Z,23nm,0.5s						
HUIG	**Huatulco**	**7.13**	**292**	*i* P	**Pn**	**08 31 43.1**	**-1.5**
HUIG				*i* S	**Sn**	**08 32 52.2**	**-12**
HUIG	**Huatulco**	**7.13**	**292**	*i* P	**Pn**	**08 31 44.1**	**-0.5**
HUIG				*i* S	**Sn**	**08 32 59.5**	**-4.7**
VHO	**Vista Hermosa**	**8.20**	**299**	*i* P	**Pn**	**08 32 01.7**	**+2.5**
VHO				*i* S	**Sn**	**08 33 27.9**	**-2.5**
VHO	**Vista Hermosa**	**8.20**	**299**	*e*P	**Pn**	**08 32 00.7**	**+1.5**
VHO				*i* S	**Sn**	**08 33 27.9**	**-2.5**
PNIG	**Pinotepa**	**9.17**	**291**	*i* P	**Pn**	**08 32 11.9**	**-0.5**
PNIG	**Pinotepa**	**9.17**	**291**	*i* P	**Pn**	**08 32 11.9**	**-0.5**
UTMO	**Huajuapan**	**9.46**	**300**	*i* P	**Pn**	**08 32 18.6**	**+2.3**
MIAR	**Mount Ida**	**21.61**	**350**	*e*P	**P**	**08 34 48.0**	**+0.9**
	comp=Z,3.4nm,0.7s,mb3.8						
WMOK	**Wichita Mounta**	**23.12**	**340**	*e*P	**P**	**08 35 01.5**	**-1.6**
	comp=Z,2.3nm,0.8s,mb3.6						
REDW	**Red Top Meadow**	**35.35**	**332**	*e*P	**P**	**08 36 51.7**	**+0.1**
	comp=Z,3.5nm,0.6s,mb4.4						
SNOW	**Snow King Moun**	**35.39**	**333**	*e*P	**P**	**08 36 52.2**	**+0.3**
	comp=Z,6.3nm,0.6s,mb4.6						
NVAR	**Mina Array Bea**	**36.00**	**320**	P	**P**	**08 36 57.8**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.5,baz=135,slow=8.2,SNR=6.3						
NVAR				PcP	PcP	08 39 22.9	+0.3
	comp=Z,0.9nm,0.7s,baz=132,slow=3.8,SNR=7.8						
YKA	**Yellowknife Ar**	**52.44**	**345**	P	**P**	**08 39 06.3**	**-1.8**
YKA	**Yellowknife Ar**	**52.44**	**345**	P	**P**	**08 39 06.3**	**-1.8**
	comp=Z,1.3nm,0.5s,mb4.2,baz=147,slow=6.8,SNR=15						
PLCA	**Paso Flores**	**56.39**	**163**	P	**P**	**08 39 36.0**	**-1.0**
	comp=Z,3.4nm,1.0s,mb4.3,baz=5.4,slow=5.1,SNR=3.6						
ILAR	**Eielson Array**	**64.64**	**336**	P	**P**	**08 40 30.8**	**-2.2**
	comp=Z,0.5nm,0.6s,mb3.5,baz=170,slow=4.6,SNR=11						
WRA	**Warramunga Arr**	**137.80**	**255**	PKP	PKPdf	08 49 19.8	-0.4
	comp=Z,0.8nm,0.9s,baz=83,slow=2.3,SNR=6.1						
ASAR	**Alice Springs**	**137.93**	**249**	PKP	PKPdf	08 49 19.6	-0.8
	comp=Z,0.2nm,0.6s,baz=107,slow=2.4,SNR=3.2						
CMAR	**Chiang Mai Arr**	**147.52**	**345**	PKPbc	PKPbc	08 49 37.0	-3.1
	comp=Z,0.8nm,0.4s,baz=330,slow=3.1,SNR=6.6						

IDC 15 08:44:50.6±1.9, 19°.76S×177°.96W, h598km±31km, mb3.3/6, mb1 3.5/8, mb1mx3.3/16, mbtmp3.4/8, Error ellipse: s-maj=30.6km s-min=17.1km az=123.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.30**	**46**	P	P	08 46 51.8	-1.0
	3.1nm,0.3s,baz=117,slow=4.5,SNR=5.6						
URZ	**Urewera**	**18.93**	**192**	P	P	08 48 32.8	-1.8
	1.2nm,0.3s,baz=348,slow=11,SNR=5.6						
RPZ	**Rata Peaks**	**25.60**	**199**	P	P	08 49 34.5	+0.6
	11nm,0.9s,baz=353,slow=8.1,SNR=3.0						
ASAR	**Alice Springs**	**44.73**	**256**	P	P	08 52 13.1	+0.8
	2.7nm,0.4s,baz=86,slow=8.4,SNR=83						
ASAR				PcP	PcP	08 53 42.2	+0.8
	0.6nm,0.6s,baz=101,slow=4.0,SNR=4.2						
ASAR				S	S	08 58 05.3	-1.4
	0.8nm,0.8s,baz=92,slow=17,SNR=5.5						
WRA	**Warramunga Arr**	**44.74**	**261**	P	P	08 52 12.4	-0.1
	2.5nm,0.4s,baz=98,slow=8.0,SNR=14						
MJAR	**Matsushiro Arr**	**69.64**	**323**	P	P	08 55 01.1	-0.1
	1.1nm,0.6s,baz=168,slow=14,SNR=5.5						
ILAR	**Eielson Array**	**87.58**	**13**	P	P	08 56 35.0	-0.6
	0.3nm,0.5s,baz=226,slow=4.6,SNR=6.6						
CMAR	**Chiang Mai Arr**	**89.90**	**290**	P	P	08 56 48.0	+0.5
	0.4nm,0.3s,baz=113,slow=3.6,SNR=4.5						

ISCJB ***15*** *09:12:53.9±0.4, 39°.65N±0°.02×29°.43E±0°.03, h0km, Error ellipse: s-maj=3.6km s-min=3.4km az=159.6*

CSEM ***15*** *09:12:53.8±0.1, 39°.63N×29°.46E, h1km, MD2.8, Error ellipse: s-maj=3.4km s-min=3.2km az=72.0*

ISK ***15*** *09:12:53.8, 39°.63N×29°.45E, h10km, MD2.8*

ISC 15 09:12:54.2±0.4, 39°.63N±0°.02×29°.43E±0°.03, h0km, n44, σ0°98/54, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.54**	**176**	*e*P	**Pg**	**09 13 04.8**	**+0.2**
GDZ	**Gediz**	**0.54**	**176**	*e*P	**Pg**	**09 13 04.8**	**+0.2**
GDZ				*e*S	**Sg**	**09 13 11.4**	**-0.2**
CAVI	**Cavuskoy**	**0.65**	**29**	*e*PG	**Pg**	**09 13 06.7**	**+0.1**
CAVI				*e*SG	**Sg**	**09 13 16.1**	**+1.0**
CAVI	**Cavuskoy**	**0.65**	**29**	*e*Pg	**Pg**	**09 13 06.7**	**0.0**
CAVI				*e*Sg	**Sg**	**09 13 16.1**	**+1.0**
DURS	**Dursunbey**	**0.74**	**268**	*e*P	**Pg**	**09 13 08.3**	**0.0**
DURS	**Dursunbey**	**0.74**	**268**	*e*P	**Pg**	**09 13 08.3**	**-0.1**
DURS				*e*S	**Sg**	**09 13 20.5**	**+2.5**
DEMI	**Demirci**	**0.81**	**224**	*e*P	**Pg**	**09 13 10.4**	**+0.8**
DEMI	**Demirci**	**0.81**	**224**	*e*P	**Pg**	**09 13 10.4**	**+0.7**
DEMI				*e*S	**Sg**	**09 13 23.6**	**+3.4**
GEMT	**Gemlik**	**0.82**	**347**	*e*PG	**Pg**	**09 13 10.2**	**+0.3**
GEMT	**Gemlik**	**0.82**	**347**	*e*Pg	**Pg**	**09 13 10.3**	**+0.3**
BORA	**Eskisehir**	**0.83**	**72**	*e*P	**Pg**	**09 13 09.9**	**-0.1**
BORA	**Eskisehir**	**0.83**	**72**	*e*P	**Pg**	**09 13 09.9**	**-0.1**
BORA				*e*S	**Sg**	**09 13 25.0**	**+4.3**
MDNY	**Mudanya-Bursa**	**0.85**	**330**	*e*PG	**Pg**	**09 13 10.8**	**+0.3**
MDNY	**Mudanya-Bursa**	**0.85**	**330**	*e*Pg	**Pg**	**09 13 10.8**	**+0.4**
YLV	**Yalova**	**0.94**	**357**	*e*PG	**Pg**	**09 13 12.1**	**0.0**
YLV	**Yalova**	**0.94**	**357**	*e*Pg	**Pg**	**09 13 12.1**	**0.0**
ARMT	**Armutlu**	**1.03**	**335**	*e*PG	**Pg**	**09 13 14.0**	**0.0**
ARMT				*e*SG	**Sg**	**09 13 28.7**	**+1.4**
ARMT	**Armutlu**	**1.03**	**335**	*e*Pg	**Pg**	**09 13 14.0**	**+0.1**
ARMT				*e*Sg	**Sg**	**09 13 28.7**	**+1.4**
KCTX	**Karacabey (Bur**	**1.04**	**308**	*e*PG	**Pg**	**09 13 13.9**	**-0.2**
KCTX	**Karacabey (Bur**	**1.04**	**308**	*e*Pg	**Pg**	**09 13 13.9**	**-0.2**
ESKT	**Eskisehir**	**1.10**	**95**	*e*P	**Pg**	**09 13 14.3**	**-1.0**
SEYT	**Eskypehyr**	**1.10**	**95**	*e*P	**Pg**	**09 13 14.3**	**-1.0**
SEYT				*e*S	**Sg**	**09 13 32.1**	**+2.5**
GULT	**Gulveren**	**1.15**	**46**	*e*PN	**Pn**	**09 13 16.8**	**-0.8**
GULT	**Gulveren**	**1.15**	**46**	*e*Pn	**Pn**	**09 13 16.8**	**-0.8**
BALB	**Balikesir**	**1.20**	**271**	*e*PN	**Pn**	**09 13 17.6**	**-0.6**
BALB	**Balikesir**	**1.20**	**271**	*e*Pn	**Pn**	**09 13 17.6**	**-0.6**
HRT	**Hereke**	**1.20**	**9**	*e*PN	**Pn**	**09 13 17.0**	**-1.3**
HRT	**Hereke**	**1.20**	**9**	*e*Pn	**Pn**	**09 13 17.0**	**-1.2**
KULA	**Kula-Manisa**	**1.27**	**209**	*e*PN	**Pn**	**09 13 18.2**	**-0.9**
KULA	**Kula-Manisa**	**1.27**	**209**	*e*Pn	**Pn**	**09 13 18.2**	**-0.9**
KHL	**Karahalli**	**1.31**	**177**	*e*PN	**Pn**	**09 13 18.5**	**-1.2**
KHL	**Karahalli**	**1.31**	**177**	*e*Pn	**Pn**	**09 13 18.5**	**-1.2**
GONE	**Gonen-Balikesi**	**1.41**	**288**	*e*PN	**Pn**	**09 13 20.6**	**-0.5**
GONE	**Gonen-Balikesi**	**1.41**	**288**	*e*Pn	**Pn**	**09 13 20.6**	**-0.4**
ISK	**Istanbul-Kandi**	**1.46**	**349**	*e*PN	**Pn**	**09 13 20.5**	**-1.3**
ISK	**Istanbul-Kandi**	**1.46**	**349**	*e*Pn	**Pn**	**09 13 20.5**	**-1.3**
BOLV	**Bolvadin**	**1.49**	**127**	*e*P	**Pn**	**09 13 22.9**	**+0.6**
BOLV	**Bolvadin**	**1.49**	**127**	*e*P	**Pn**	**09 13 22.9**	**+0.7**
BOLV				*e*S	**Sg**	**09 13 43.4**	**+1.3**
SVRH	**Sivrihisar-ESK**	**1.63**	**96**	*e*PN	**Pn**	**09 13 22.8**	**-1.2**
SVRH	**Sivrihisar-ESK**	**1.63**	**96**	*e*Pn	**Pn**	**09 13 22.8**	**-1.3**
MFT	**Murefte**	**2.01**	**306**	*e*PN	**Pn**	**09 13 29.2**	**-0.2**
MFT	**Murefte**	**2.01**	**306**	*e*Pn	**Pn**	**09 13 29.2**	**-0.2**
RKY	**Sarkoy-Tekirda**	**2.02**	**302**	*e*PN	**Pn**	**09 13 28.9**	**-0.7**
RKY	**Sarkoy-Tekirda**	**2.02**	**302**	*e*Pn	**Pn**	**09 13 28.9**	**-0.6**

NEIC ***15*** *09:33:22.7, 38°.27S×175°.91E, h173km, MG3.9(WEL), After WEL.*

WEL 15 09:33:23.6±0.5, 38°.29S×175°.92E, h164km±3km, ML3.9/20, Error ellipse: s-maj=3.9km s-min=3.3km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTVZ	**Oturere**	**0.90**	**193**	PN	Pn	09 33 49.5	+0.6
URZ	**Urewera**	**0.94**	**89**	PN	Pn	09 33 49.1	-0.1
URZ				SN	Sn	09 34 08.5	-0.2
URZ	**Urewera**	**0.94**	**89**	P	Pn	09 33 49.1	-0.1
BKZ	**Black Stump Fm**	**0.99**	**153**	PN	Pn	09 33 49.7	+0.2
BKZ				SN	Sn	09 34 09.2	-0.3
BKZ	**Black Stump Fm**	**0.99**	**153**	P	Pn	09 33 49.7	+0.2
BKZ				S	Sn	09 34 09.2	-0.3
FWVZ	**Far West T-bar**	**1.01**	**196**	PN	Pn	09 33 50.2	+0.5
NMHZ	**Naumai**	**1.07**	**140**	PN	Pn	09 33 51.0	+0.8
MOVZ	**Moawhango**	**1.13**	**187**	PN	Pn	09 33 50.6	0.0
MOVZ				SN	Sn	09 34 11.2	-0.4
MOVZ	**Moawhango**	**1.13**	**187**	P	Pn	09 33 50.6	-0.1
MTVZ	**Mangateitei**	**1.15**	**198**	PN	Pn	09 33 51.3	+0.4
MWZ	**Matawai**	**1.27**	**93**	PN	Pn	09 33 52.0	0.0
MWZ				SN	Sn	09 34 11.7	-2.0
MWZ	**Matawai**	**1.27**	**93**	P	Pn	09 33 52.0	+0.1
MWZ				S	Sn	09 34 11.7	-2.0
MCHZ	**McNeill Hill**	**1.30**	**153**	PN	Pn	09 33 52.9	+0.7
MCHZ				SN	Sn	09 34 14.9	+0.5
KNZ	**Kokohu**	**1.56**	**119**	PN	Pn	09 33 54.7	0.0
KNZ	**Kokohu**	**1.56**	**119**	P	Pn	09 33 54.7	0.0
WAZ	**Wanganui**	**1.64**	**206**	PN	Pn	09 33 55.4	-0.2
PNHZ	**Pukenui**	**1.64**	**172**	PN	Pn	09 33 55.1	-0.5
CKHZ	**Cape Kidnapper**	**1.64**	**147**	PN	Pn	09 33 55.8	+0.2
PRGZ	**Paritu Road**	**1.66**	**113**	PN	Pn	09 33 56.0	+0.1
KAHZ	**Kahuranaki**	**1.68**	**154**	PN	Pn	09 33 56.1	+0.1
TSZ	**Takapari Road**	**1.77**	**179**	PN	Pn	09 33 56.3	-0.6
TSZ	**Takapari Road**	**1.77**	**179**	P	Pn	09 33 56.3	-0.7
MHGZ	**Mahia Peninsul**	**1.78**	**120**	PN	Pn	09 33 57.3	+0.2
CNGZ	**Carnagh Statio**	**1.81**	**97**	PN	Pn	09 33 57.8	+0.4
WPHZ	**Waipukurau**	**1.82**	**167**	PN	Pn	09 33 56.9	-0.6
PUZ	**Puketiti**	**1.85**	**84**	PN	Pn	09 33 55.4	-2.5
PUZ	**Puketiti**	**1.85**	**84**	P	Pn	09 33 55.4	-2.5
PXZ	**Pawanui**	**1.89**	**157**	PN	Pn	09 33 57.7	-0.5
DVHZ	**Dannevirke**	**2.02**	**175**	PN	Pn	09 33 58.6	-1.1
PRHZ	**Porangahau**	**2.05**	**165**	PN	Pn	09 33 59.2	-0.9
POWZ	**Post Office Ro**	**2.11**	**183**	PN	Pn	09 33 59.4	-1.3
MRZ	**Mangatainoka R**	**2.39**	**186**	PN	Pn	09 34 02.2	-1.8
MRZ	**Mangatainoka R**	**2.39**	**186**	P	Pn	09 34 02.2	-1.8
BFZ	**Birch Farm**	**2.40**	**174**	PN	Pn	09 34 02.7	-1.5
TIWZ	**Tintock**	**2.49**	**181**	PN	Pn	09 34 03.4	-1.8
OGWZ	**Otaki Gorge**	**2.59**	**193**	PN	Pn	09 34 04.5	-1.9
HOWZ	**Holdsworth Sta**	**2.63**	**187**	PN	Pn	09 34 04.6	-2.2
KIW	**Kapiti Island**	**2.69**	**197**	PN	Pn	09 34 05.3	-2.3
KIW	**Kapiti Island**	**2.69**	**197**	P	Pn	09 34 05.3	-2.3
TMWZ	**Te Maipa**	**2.82**	**180**	PN	Pn	09 34 06.7	-2.5
MTW	**Mount Morrison**	**2.89**	**186**	PN	Pn	09 34 07.2	-2.8
MTW	**Mount Morrison**	**2.89**	**186**	P	Pn	09 34 07.2	-2.8
CAW	**Cannon Point**	**2.89**	**193**	PN	Pn	09 34 07.5	-2.6
CAW	**Cannon Point**	**2.89**	**193**	P	Pn	09 34 07.5	-2.6
TRWZ	**Traveller**	**3.11**	**183**	PN	Pn	09 34 10.0	-2.8
PAWZ	**Paruwai Farm**	**3.11**	**187**	PN	Pn	09 34 09.8	-3.0
PAWZ	**Paruwai Farm**	**3.11**	**187**	P	Pn	09 34 09.8	-3.0
WEL	**Wellington**	**3.12**	**196**	PN	Pn	09 34 10.2	-2.7
WEL	**Wellington**	**3.12**	**196**	P	Pn	09 34 10.2	-2.8
SNZO	**South Karori**	**3.16**	**197**	PN	Pn	09 34 10.4	-3.1
SNZO	**South Karori**	**3.16**	**197**	P	Pn	09 34 10.4	-3.0
MSWZ	**Moikau Station**	**3.17**	**189**	PN	Pn	09 34 10.4	-3.1
MSWZ	**Moikau Station**	**3.17**	**189**	P	Pn	09 34 10.4	-3.1
BHW	**Baring Head**	**3.22**	**194**	PN	Pn	09 34 11.1	-3.1
BHW	**Baring Head**	**3.22**	**194**	P	Pn	09 34 11.1	-3.1
PLWZ	**Palliser**	**3.32**	**189**	PN	Pn	09 34 12.1	-3.3
TUWZ	**Tuamarina**	**3.49**	**205**	PN	Pn	09 34 14.3	-3.2
NNZ	**Nelson**	**3.52**	**213**	PN	Pn	09 34 14.7	-3.2
NNZ	**Nelson**	**3.52**	**213**	P	Pn	09 34 14.7	-3.3
BSWZ	**Blackbirch Sta**	**3.77**	**204**	P	Pn	09 34 18.5	-2.6
THZ	**Tophouse**	**4.17**	**213**	PN	Pn	09 34 23.3	-3.1
THZ	**Tophouse**	**4.17**	**213**	P	Pn	09 34 23.3	-3.0
KHZ	**Kahutara**	**4.51**	**203**	P	Pn	09 34 27.1	-3.6
LTZ	**Lake Taylor**	**5.28**	**211**	P	Pn	09 34 37.1	-3.7
MQZ	**McQueen's Vall**	**5.95**	**203**	P	Pn	09 34 44.0	-5.6

IDC 15 09:54:42.1±3.6, 11°.37N×93°.19E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, Error ellipse: s-maj=146.4km s-min=24.4km az=65.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.49**	**347**	P	P	10 01 49.1	+0.2
	0.3nm,0.4s,baz=168,slow=7.4,SNR=4.6						
SONM	**Songino Array**	**38.00**	**14**	P	P	10

HLGC				*e*					
	comp=E,5.6nm,0.5s								
CRPR	**Cabo Rojo, PR**	**4.73**	**96**	⇑	*e*P		**Pn**	**10 07 23.8**	**-1.5**
LSP	**Las Mesas**	**4.73**	**94**	⇓	*e*P		**Pn**	**10 07 27.1**	**+1.8**
LMGC	**Las Mercedes**	**4.90**	**288**		*e*P		**Pn**	**10 07 27.7**	**-0.1**
LMGC					*e*S		**Sn**	**10 08 23.6**	**+0.3**
	comp=N,101nm,0.9s								
LMGC					*e*				
	comp=E,87nm,0.9s								
AOPR	**Arecibo Observ**	**5.03**	**92**	⇓	*e*P		**Pn**	**10 07 30.8**	**+1.3**
CELP	**Cerrillos**	**5.22**	**95**	⇑	*e*P		**Pn**	**10 07 31.6**	**-0.5**

ISCJB ***15*** *10:07:07.0±0.3, 37°.88N±0°.02×1°.68W±0°.02, h10km, Error ellipse: s-maj=2.7km s-min=1.7km az=153.3*

CSEM ***15*** *10:07:07.3±0.3, 37°.81N×1°.64W, h2km, ML3.0/8, Error ellipse: s-maj=7.8km s-min=3.4km az=140.0*

MDD ***15*** *10:07:08.6±0.3, 37°.77N×1°.58W, h0km±3km, mbLg3.3/47, Error ellipse: s-maj=3.2km s-min=1.7km az=158.0, PRIMO*

MDD EMS: III TOTANA LORCA.

NEIC ***15*** *10:07:08.7, 37°.77N×1°.57W, h0km, MN3.1(MDD), After MDD.*

INMG ***15*** *10:07:08.6±1.5, 37°.74N×1°.58W, h3km±2km, ML3.3, Error ellipse: s-maj=2.2km s-min=1.5km az=127.0*

ISC 15 10:07:07.7±0.3, 37°.82N±0°.02×1°.61W±0°.02, h6km±2km, n247, σ1$30/445, 4C-10D, Spain

Code	Station Name	Δ°	AZ°		Phase	ID		Time	Res
					Op		ISC	h m s	ISC
EMUR	**La Murta**	**0.29**	**85**		Pg		**Pg**	**10 07 13.7**	**+0.3**
EMUR					Lg			10 07 18.0	
EMUR	**La Murta**	**0.29**	**85**	⇑	Pg		**Pg**	**10 07 13.7**	**+0.3**
	96nm,0.2s,SNR=18								
EMUR					Lg			10 07 18.0	
	3μm,0.5s								
EMUR	**La Murta**	**0.29**	**85**	⇑	Pg		**Pg**	**10 07 13.7**	**+0.3**
	96nm,0.2s,SNR=18								
EMUR					Lg			10 07 18.0	
	3μm,0.5s								
EMUR	**La Murta**	**0.29**	**85**		Lg			10 07 18.0	
	3μm,0.5s								
CART	**Cartagena**	**0.53**	**116**		*e*Pg		**Pg**	**10 07 17.7**	**-0.4**
CART					*e*Sg		**Sg**	**10 07 24.1**	**-0.8**
EHUE	**Huescar**	**0.78**	**270**		Pg		**Pg**	**10 07 23.4**	**+0.7**
EHUE					Lg			10 07 35.6	
EHUE	**Huescar**	**0.78**	**270**		Pg		**Pg**	**10 07 22.8**	**+0.1**
	9.5nm,0.3s,SNR=7.9								
EHUE					Lg			10 07 35.2	
	380nm,0.5s,SNR=7.9								
EHUE	**Huescar**	**0.78**	**270**		Pg		**Pg**	**10 07 22.8**	**+0.1**
	9.5nm,0.3s,SNR=7.9								
EHUE					Lg			10 07 35.2	
	380nm,0.5s,SNR=7.9								
ETOB	**Tobarra**	**0.82**	**3**		Pg		**Pg**	**10 07 24.8**	**+1.2**
ETOB					Lg			10 07 37.3	
ETOB	**Tobarra**	**0.82**	**3**	⇓	Pg		**Pg**	**10 07 24.8**	**+1.2**
	54nm,0.3s,SNR=18								
ETOB					Lg			10 07 37.3	
	1μm,0.4s								
ETOB	**Tobarra**	**0.82**	**3**	⇓	Pg		**Pg**	**10 07 24.8**	**+1.2**
	54nm,0.3s,SNR=18								
ETOB					Lg			10 07 37.3	
	1μm,0.4s								
ENIJ	**Nijar**	**0.97**	**210**		Pg		**Pg**	**10 07 25.3**	**-1.1**
ENIJ					Lg			10 07 37.9	
ENIJ	**Nijar**	**0.97**	**210**	⇓	Pg		**Pg**	**10 07 25.3**	**-1.1**
	175nm,0.3s,SNR=18								
ENIJ					Lg			10 07 37.9	
	643nm,0.4s								
ENIJ	**Nijar**	**0.97**	**210**	⇓	Pg		**Pg**	**10 07 25.3**	**-1.1**
	175nm,0.3s,SNR=18								
ENIJ					Lg			10 07 37.9	
	643nm,0.4s								
ENIJ	**Nijar**	**0.97**	**210**		Pg		**Pg**	**10 07 25.3**	**-1.1**
	175nm,0.3s,SNR=18								
ENIJ					Lg			10 07 37.9	
	643nm,0.4s								
EVIA	**Vianos**	**1.08**	**320**		Pg		**Pg**	**10 07 29.7**	**+1.3**
EVIA					Lg			10 07 44.5	
EVIA	**Vianos**	**1.08**	**320**	⇓	Pg		**Pg**	**10 07 29.7**	**+1.3**
	150nm,0.4s,SNR=18								
EVIA					Lg			10 07 45.2	
	SNR=7.9								
EVIA	**Vianos**	**1.08**	**320**	⇓	Pg		**Pg**	**10 07 29.7**	**+1.3**
	150nm,0.4s,SNR=18								
EVIA					Lg			10 07 45.2	
	SNR=7.9								
EVIA	**Vianos**	**1.08**	**320**		Pg		**Pg**	**10 07 29.7**	**+1.2**
	150nm,0.4s,SNR=18								
EVIA					Lg			10 07 45.2	
	SNR=7.9								
EQES	**Quesada**	**1.16**	**270**		Pg		**Pg**	**10 07 30.7**	**+0.7**
EQES					Lg			10 07 47.6	
EQES	**Quesada**	**1.16**	**270**	⇓	Pg		**Pg**	**10 07 30.3**	**+0.4**
	34nm,0.2s,SNR=18								
EQES					Lg			10 07 47.6	
	834nm,0.5s								
EQES	**Quesada**	**1.16**	**270**	⇓	Pg		**Pg**	**10 07 30.3**	**+0.4**
	34nm,0.2s,SNR=18								
EQES					Lg			10 07 47.6	
	834nm,0.5s								
EQES	**Quesada**	**1.16**	**270**		Pg		**Pg**	**10 07 30.3**	**+0.3**
	34nm,0.2s,SNR=18								
EQES					Lg			10 07 47.6	
	834nm,0.5s								
EBER	**Berja**	**1.38**	**228**		Pg		**Pg**	**10 07 33.4**	**-0.7**
EBER					Lg			10 07 52.4	
EBER	**Berja**	**1.38**	**228**		Pg		**Pg**	**10 07 32.7**	**-1.4**
	87nm,0.3s,SNR=126								
EBER					Lg			10 07 52.3	
	947nm,0.8s,SNR=7.4						

3.3nm,0.3s,SNR=17
EPLA Pg **Pg** **10 08 24.2 -2.9**
2.2nm,0.3s,SNR=6.1
EPLA Sn **Sn** **10 08 59.0 -1.2**
2.8nm,0.2s,SNR=7.9
EPLA Lg 10 09 18.1
103nm,0.9s,SNR=7.5
EPLA Plasencia 4.14 304 Pn **Pn** **10 08 11.0 -0.5**
3.3nm,0.3s,SNR=17
PBAR Barrancos 4.30 276 *e*Pn **Pn** **10 08 14.4 +0.7**
PBAR *e*Sn **Sn** **10 09 04.5 +0.3**
PBAR A 10 09 35.8
50nm,0.4s
PBAR Barrancos 4.30 276 Pn **Pn** **10 08 14.4 +0.7**
PBAR Sn **Sn** **10 09 04.5 +0.3**
50nm,0.4s
PBAR Barrancos 4.30 276 Pn **Pn** **10 08 14.4 +0.7**
PBAR Sn **Sn** **10 09 04.5 +0.3**
50nm,0.4s
EBAD Badajoz 4.36 284 Pn **Pn** **10 08 15.1 +0.7**
EBAD Pg **Pg** **10 08 29.5 -1.6**
EBAD Sn **Sn** **10 09 04.6 -0.8**
EBAD Lg 10 09 28.5
EBAD Lg 10 09 40.4
EBAD Badajoz 4.36 284 Pn **Pn** **10 08 15.2 +0.8**
4.6nm,0.3s,SNR=17
EBAD Pg **Pg** **10 08 28.9 -2.3**
5.1nm,0.2s,SNR=6.9
EBAD Sn **Sn** **10 09 04.6 -0.8**
8.1nm,0.2s,SNR=15
EBAD Lg 10 09 28.5
198nm,0.9s,SNR=7.3
EBAD Badajoz 4.36 284 Pn **Pn** **10 08 15.2 +0.8**
4.6nm,0.3s,SNR=17
EBAD Pg **Pg** **10 08 28.9 -2.3**
5.1nm,0.2s,SNR=6.9
EBAD Sn **Sn** **10 09 04.6 -0.8**
8.1nm,0.2s,SNR=15
EBAD Lg 10 09 28.5
198nm,0.9s,SNR=7.3
EBAD Badajoz 4.36 284 Pn **Pn** **10 08 15.2 +0.8**
4.6nm,0.3s,SNR=17
EGRO El Granado 4.67 268 Pn **Pn** **10 08 18.8 +0.1**
EGRO Sn **Sn** **10 09 11.8 -1.4**
EGRO Lg 10 09 38.3
EGRO El Granado 4.67 268 Pn **Pn** **10 08 18.8 +0.1**
0.7nm,0.2s,SNR=6.1
EGRO Sn **Sn** **10 09 11.8 -1.4**
3.2nm,0.2s,SNR=4.8
EGRO Lg 10 09 38.3
41nm,0.5s,SNR=4.9
EGRO El Granado 4.67 268 Pn **Pn** **10 08 18.8 +0.1**
0.7nm,0.2s,SNR=6.1
EGRO Sn **Sn** **10 09 11.8 -1.4**
3.2nm,0.2s,SNR=4.8
EGRO Lg 10 09 38.3
41nm,0.5s,SNR=4.9
EGRO El Granado 4.67 268 Pn **Pn** **10 08 18.8 +0.1**
0.7nm,0.2s,SNR=6.1
EGRO Sn **Sn** **10 09 11.8 -1.4**
3.2nm,0.2s,SNR=4.8
EGRO Lg 10 09 38.3
41nm,0.5s,SNR=4.9
EMIR Miracle 4.75 30 Pn **Pn** **10 08 21.1 +1.4**
EMIR Pg **Pg** **10 08 37.8 -0.9**
EMIR Sn **Sn** **10 09 14.2 -0.9**
EMIR Lg 10 09 40.2
EMIR Miracle 4.75 30 Pn **Pn** **10 08 21.1 +1.4**
SNR=7.9
EMIR Pg **Pg** **10 08 37.8 -0.9**
4.7nm,0.4s,SNR=4.8
EMIR Sn **Sn** **10 09 14.2 -0.9**
0.1nm,0.1s,SNR=7.9
EMIR Lg 10 09 40.2
SNR=7.9
EMIR Miracle 4.75 30 Pn **Pn** **10 08 21.1 +1.4**
SNR=7.9
EMIR Pg **Pg** **10 08 37.8 -0.9**
4.7nm,0.4s,SNR=4.8
EMIR Sn **Sn** **10 09 14.2 -0.9**
0.1nm,0.1s,SNR=7.9
EMIR Lg 10 09 40.2
SNR=7.9
EMIR Miracle 4.75 30 Pn **Pn** **10 08 21.1 +1.3**
SNR=7.9
PMRV Marv??o 4.81 291 *e*Pn **Pn** **10 08 21.5 +0.9**
PMRV *e*Sn **Sn** **10 09 16.5 0.0**
PMRV *e*Sg **Sg** **10 09 41.3 -0.8**
PMRV A 10 09 51.7
49nm,0.4s
PMRV Marv??o 4.81 291 Pn **Pn** **10 08 21.5 +0.9**
PMRV Sn **Sn** **10 09 16.5 0.0**
PMRV Lg 10 09 41.3
49nm,0.4s
PMRV Marv??o 4.81 291 Pn **Pn** **10 08 21.5 +0.9**
PMRV Sn **Sn** **10 09 16.5 0.0**
PMRV Lg 10 09 41.3
49nm,0.4s
PESTR Estremoz 4.82 284 *e*Pn **Pn** **10 08 22.4 +1.7**
PESTR *e*Sn **Sn** **10 09 16.2 -0.6**
PESTR *e*Sg **Sg** **10 09 43.3 +0.8**
PESTR A 10 09 50.2
51nm,0.7s
PESTR Estremoz 4.82 284 Pn **Pn** **10 08 22.4 +1.7**
PESTR Sn **Sn** **10 09 16.2 -0.6**
PESTR Lg 10 09 43.3
51nm,0.7s
PESTR Estremoz 4.82 284 Pn **Pn** **10 08 22.4 +1.7**
PESTR Sn **Sn** **10 09 16.2 -0.6**
PESTR Lg 10 09 43.3
51nm,0.7s
PVAQ Vaqueiros 4.87 267 *e*Pn **Pn** **10 08 21.4 0.0**
PVAQ *e*Sn **Sn** **10 09 17.7 -0.4**
PVAQ A 10 09 48.2
17nm,0.6s
PVAQ Vaqueiros 4.87 267 Pn **Pn** **10 08 21.4 0.0**
PVAQ Sn **Sn** **10 09 17.7 -0.4**
17nm,0.6s
PVAQ Vaqueiros 4.87 267 Pn **Pn** **10 08 21.4 0.0**
PVAQ Sn **Sn** **10 09 17.7 -0.4**
17nm,0.6s
IUNC Unciti 4.93 1 Lg 10 09 47.0
19nm,0.5s,SNR=7.9
IUNC Unciti 4.93 1 Lg 10 09 47.0
19nm,0.5s,SNR=7.9
IUNC Unciti 4.93 1 Pn **Pn** **10 08 25.0 +2.7**
2.7nm,0.3s,SNR=7.9
IUNC Lg 10 09 47.0
19nm,0.5s,SNR=7.9
EARA Aranguren 4.95 0 Pn **Pn** **10 08 25.4 +2.9**
SNR=4.0
EARA Lg 10 09 46.5
9.3nm,0.4s,SNR=7.9
EARA Aranguren 4.95 0 Pn **Pn** **10 08 25.4 +2.9**
SNR=4.0
EARA Lg 10 09 46.5
9.3nm,0.4s,SNR=7.9
EARA Aranguren 4.95 0 Pn **Pn** **10 08 25.4 +2.9**
SNR=4.0
EARA Lg 10 09 46.5
9.3nm,0.4s,SNR=7.9
PBEJ Beja 4.95 274 *e*Pn **Pn** **10 08 23.4 +0.8**
PBEJ *e*Sn **Sn** **10 09 19.1 -1.1**
PBEJ A 10 09 54.8
31nm,0.5s
PBEJ Beja 4.95 274 Pn **Pn** **10 08 23.4 +0.8**
PBEJ Sn **Sn** **10 09 19.1 -1.1**
16nm,0.5s
PBEJ Beja 4.95 274 Pn **Pn** **10 08 23.4 +0.8**
PBEJ Sn **Sn** **10 09 19.1 -1.1**
16nm,0.5s
PCBR Castelo Branco 5.01 296 *e*Pn **Pn** **10 08 25.4 +2.1**
PCBR *e*Sn **Sn** **10 09 21.2 -0.3**
PCBR *e*Sg **Sg** **10 09 47.6 -0.9**
PCBR A 10 09 57.5
39nm,0.5s
PCBR Castelo Branco 5.01 296 Pn **Pn** **10 08 25.4 +2.1**
PCBR Sn **Sn** **10 09 21.2 -0.3**
PCBR Lg 10 09 47.6
19nm,0.5s
PCBR Castelo Branco 5.01 296 Pn **Pn** **10 08 25.4 +2.1**
PCBR Sn **Sn** **10 09 21.2 -0.3**
PCBR Lg 10 09 47.6
19nm,0.5s
CSOR Sort 5.01 24 Pn **Pn** **10 08 25.4 +2.0**
CSOR Sn **Sn** **10 09 19.5 -2.1**
CSOR Lg 10 09 51.4
CSOR Sort 5.01 24 Pn **Pn** **10 08 25.4 +2.0**
SNR=7.9
CSOR Sn **Sn** **10 09 18.1 -3.5**
116nm,0.3s,SNR=6.1
CSOR Lg 10 09 51.4
18nm,0.6s,SNR=4.0
CSOR Sort 5.01 24 Pn **Pn** **10 08 25.4 +2.0**
SNR=7.9
CSOR Sn **Sn** **10 09 18.1 -3.5**
116nm,0.3s,SNR=6.1
CSOR Lg 10 09 51.4
18nm,0.6s,SNR=4.0
CSOR Sort 5.01 24 Pn **Pn** **10 08 25.4 +2.0**
SNR=7.9
CSOR Sn **Sn** **10 09 18.1 -3.5**
116nm,0.3s,SNR=6.1
CSOR Lg 10 09 51.4
18nm,0.6s,SNR=4.0
IZUN Zunzarren 5.04 1 Pn **Pn** **10 08 27.7 +4.0**
0.6nm,0.2s,SNR=7.9
IZUN Pg **Pg** **10 08 42.3 -1.9**
SNR=4.0
IZUN Sn **Sn** **10 09 21.9 -0.3**
1.0nm,0.2s,SNR=7.9
IZUN Lg 10 09 52.6
22nm,0.8s,SNR=7.9
IZUN Zunzarren 5.04 1 Pn **Pn** **10 08 27.7 +4.0**
0.6nm,0.2s,SNR=7.9
IZUN Pg **Pg** **10 08 42.3 -1.9**
SNR=4.0
IZUN Sn **Sn** **10 09 21.9 -0.3**
1.0nm,0.2s,SNR=7.9
IZUN Lg 10 09 52.6
22nm,0.8s,SNR=7.9
EBIE Bielsa 5.04 15 Pn **Pn** **10 08 25.1 +1.2**
EBIE Pg **Pg** **10 08 44.0 -0.3**
EBIE Sn **Sn** **10 09 19.3 -3.0**
EBIE Lg 10 09 48.0
EBIE Bielsa 5.04 15 Pn **Pn** **10 08 26.0 +2.2**
1.8nm,0.3s,SNR=6.0
EBIE Sn **Sn** **10 09 19.3 -3.0**
SNR=7.9
EBIE Lg 10 09 48.0
11nm,0.7s,SNR=5.0
EBIE Bielsa 5.04 15 Pn **Pn** **10 08 26.0 +2.2**
1.8nm,0.3s,SNR=6.0
EBIE Sn **Sn** **10 09 19.3 -3.0**
SNR=7.9
EBIE Lg 10 09 48.0
11nm,0.7s,SNR=5.0
PBDV Barranco-do-Ve 5.06 265 *e*Pn **Pn** **10 08 25.0 +0.9**
PBDV *e*Sn **Sn** **10 09 21.8 -1.0**
PBDV *e*Sg **Sg** **10 09 48.3 -1.9**
PBDV A 10 10 11.1
28nm,0.5s
PBDV Barranco-do-Ve 5.06 265 Pn **Pn** **10 08 25.0 +0.9**
PBDV Sn **Sn** **10 09 21.8 -1.0**
PBDV Lg 10 09 48.3
28nm,0.5s
PBDV Barranco-do-Ve 5.06 265 Pn **Pn** **10 08 25.0 +0.9**
PBDV Sn **Sn** **10 09 21.8 -1.0**
PBDV Lg 10 09 48.3
28nm,0.5s
EVO Evora 5.10 280 *e*Sn **Sn** **10 09 25.6 +1.9**
EVO *e*Sg **Sg** **10 09 52.0 +0.6**
EVO Evora 5.10 280 Sn **Sn** **10 09 25.6 +1.9**
EVO Lg 10 09 52.0
EVO Evora 5.10 280 Sn **Sn** **10 09 25.6 +1.9**
EVO Lg 10 09 52.0
PCVE Castro Verde 5.10 270 *e*Pn **Pn** **10 08 24.9 +0.2**
PCVE *e*Sg **Sg** **10 09 52.4 +0.8**
PCVE A 10 10 05.7
24nm,0.5s
PCVE Castro Verde 5.10 270 Pn **Pn** **10 08 24.9 +0.2**
PCVE Lg 10 09 52.4
24nm,0.5s
PCVE Castro Verde 5.10 270 Pn **Pn** **10 08 24.9 +0.2**
PCVE Lg 10 09 52.4
24nm,0.5s
IUSE Utxeti 5.12 0 Pn **Pn** **10 08 29.2 +4.3**
0.4nm,0.1s,SNR=5.1
IUSE Lg 10 09 55.8
9.5nm,0.5s,SNR=5.0
IUSE Utxeti 5.12 0 Pn **Pn** **10 08 29.2 +4.3**
0.4nm,0.1s,SNR=5.1
IUSE Lg 10 09 55.8
9.5nm,0.5s,SNR=5.0
ETSF Etsaut 5.14 9 Pn **Pn** **10 08 26.4 +1.3**
ETSF Sn **Sn** **10 09 22.7 -1.9**
ETSF Lg 10 09 53.2
6.8nm,0.6s
ETSF Etsaut 5.14 9 Pn **Pn** **10 08 26.4 +1.3**
ETSF Sn **Sn** **10 09 22.7 -1.9**
ETSF Lg 10 09 53.2
6.8nm,0.6s
MESJ Messejana 5.24 272 *e*P **Pn** **10 08 26.2 -0.2**
MESJ *e*S **Sn** **10 09 22.0 -5.1**
MESJ *e*S **Sn** **10 09 22.1 -5.0**
MESJ Messejana 5.24 272 *e*P **Pn** **10 08 26.3 -0.2**
MESJ *e*S **Sn** **10 09 22.0 -5.1**
MESJ Messejana 5.24 272 P **Pn** **10 08 26.3 -0.2**
MESJ S **Sn** **10 09 22.0 -5.1**
MESJ Messejana 5.24 272 P **Pn** **10 08 26.3 -0.2**
MESJ S **Sn** **10 09 22.0 -5.1**
MTE Manteigas 5.29 301 *e*Pn **Pn** **10 08 28.7 +1.5**
MTE *e*Sg **Sg** **10 09 59.5 +2.0**
MTE A 10 10 10.5
48nm,0.7s
MTE Manteigas 5.29 301 Pn **Pn** **10 08 28.7 +1.5**
MTE Lg 10 09 59.5
24nm,0.7s
MTE Manteigas 5.29 301 Pn **Pn** **10 08 28.7 +1.5**
MTE Lg 10 09 59.5
24nm,0.7s
SJPF Ste Jean 5.30 3 Pn **Pn** **10 08 28.6 +1.3**
SJPF Sn **Sn** **10 09 26.0 -2.6**
SJPF Lg 10 09 57.9
4.8nm,0.4s
SJPF Ste Jean 5.30 3 Pn **Pn** **10 08 28.6 +1.3**
SJPF Sn **Sn** **10 09 26.0 -2.6**
SJPF Lg 10 09 57.9
4.8nm,0.4s
ELIZ Elizondo 5.34 1 Pn **Pn** **10 08 28.0 +0.1**
ELIZ Pg **Pg** **10 08 48.2 -1.8**
ELIZ Sn **Sn** **10 09 28.8 -0.9**
ELIZ Lg 10 09 59.4
ELIZ Elizondo 5.34 1 Pn **Pn** **10 08 28.0 +0.1**
SNR=7.9
ELIZ Pg **Pg** **10 08 48.2 -1.8**
6.1nm,0.3s,SNR=7.9
ELIZ Sn **Sn** **10 09 28.8 -0.9**
0.6nm,0.2s,SNR=7.9
ELIZ Lg 10 09 59.4
14nm,0.7s,SNR=7.9
ELIZ Elizondo 5.34 1 Pn **Pn** **10 08 28.0 +0.1**
SNR=7.9
ELIZ Pg **Pg** **10 08 48.2 -1.8**
6.1nm,0.3s,SNR=7.9
ELIZ Sn **Sn** **10 09 28.8 -0.9**
0.6nm,0.2s,SNR=7.9
ELIZ Lg 10 09 59.4
14nm,0.7s,SNR=7.9
MOE Montemor 5.36 280 *e*Sn **Sn** **10 09 29.7 -0.5**
MOE *e*Sg **Sg** **10 10 00.4 +0.6**
MOE Montemor 5.36 280 Sn **Sn** **10 09 29.7 -0.5**
MOE Lg 10 10 00.4
MOE Montemor 5.36 280 Sn **Sn** **10 09 29.7 -0.5**
MOE Lg 10 10 00.4
MVO Moncorvo 5.36 310 *e*Pn **Pn** **10 08 30.6 +2.4**
MVO *e*Sn **Sn** **10 09 29.5 -0.7**
MVO *e*Sg **Sg** **10 10 00.3 +0.5**
MVO A 10 10 13.7
40nm,0.6s
MVO Moncorvo 5.36 310 Pn **Pn** **10 08 30.2 +2.0**
MVO Sn **Sn** **10 09 27.8 -2.4**
MVO Lg 10 09 59.4
MVO Moncorvo 5.36 310 Pn **Pn** **10 08 30.2 +2.0**
1.7nm,0.1s,SNR=11
MVO Sn **Sn** **10 09 27.8 -2.4**
2.5nm,0.2s,SNR=7.9
MVO Lg 10 10 00.2
102nm,0.6s,SNR=8.8
MVO Moncorvo 5.36 310 Pn **Pn** **10 08 30.2 +2.0**
1.7nm,0.1s,SNR=11
MVO Sn **Sn** **10 09 27.8 -2.4**
2.5nm,0.2s,SNR=7.9
MVO Lg 10 10 00.2
102nm,0.6s,SNR=8.8
EALK Alkurruntz 5.39 1 Pn **Pn** **10 08 30.9 +2.2**
EALK Sn **Sn** **10 09 31.9 +0.8**
EALK Lg 10 10 01.4
EALK Alkurruntz 5.39 1 Pn **Pn** **10 08 30.9 +2.2**
10nm,0.4s,SNR=7.8
EALK Sn **Sn** **10 09 31.0 -0.1**
SNR=7.9
EALK Lg 10 10 00.4
104nm,1.1s,SNR=5.0
EALK Alkurruntz 5.39 1 Pn **Pn** **10 08 30.9 +2.2**
10nm,0.4s,SNR=7.8
EALK Sn **Sn** **10 09 31.0 -0.1**
SNR=7.9
EALK Lg 10 10 00.4
104nm,1.1s,SNR=5.0
EPF Esparros 5.41 15 Pn **Pn** **10 08 30.6 +1.7**
EPF Sn **Sn** **10 09 29.9 -1.6**
EPF Lg 10 10 01.1
5.8nm,0.4s
EPF Esparros 5.41 15 Pn **Pn** **10 08 30.6 +1.7**
EPF Sn **Sn** **10 09 29.9 -1.6**
EPF Lg 10 10 01.1
5.8nm,0.4s
ELAN Lanestosa 5.58 346 Pn **Pn** **10 08 32.7 +1.4**
ELAN Pg **Pg** **10 08 52.2 -2.4**
ELAN Sn **Sn** **10 09 34.9 -0.7**
ELAN Lg 10 10 09.4
ELAN Lanestosa 5.58 346 Pn **Pn** **10 08 32.7 +1.4**
4.1nm,0.3s,SNR=10
ELAN Pg **Pg** **10 08 52.2 -2.4**
1.0nm,0.4s,SNR=7.9
ELAN Sn **Sn** **10 09 34.9 -0.7**
SNR=7.9
ELAN Lg 10 10 09.4
19nm,0.6s
ELAN Lanestosa 5.58 346 Pn **Pn** **10 08 32.7 +1.4**
4.1nm,0.3s,SNR=10
ELAN Pg **Pg** **10 08 52.2 -2.4**
1.0nm,0.4s,SNR=7.9
ELAN Sn **Sn** **10 09 34.9 -0.7**
SNR=7.9
ELAN Lg 10 10 09.4
19nm,0.6s
PBRG Braganca 5.61 317 *e*Pn **Pn** **10 08 33.3 +1.7**
PBRG *e*Sg **Sg** **10 10 08.8 +1.0**
PBRG A 10 10 16.5
22nm,0.5s
PBRG Braganca 5.61 317 Pn **Pn** **10 08 33.3 +1.7**
PBRG Lg 10 10 08.8
11nm,0.5s
PBRG Braganca 5.61 317 Pn **Pn** **10 08 33.3 +1.7**
PBRG Lg 10 10 08.8
11nm,0.5s
PTOM Tomar 5.62 291 *e*Pn **Pn** **10 08 33.0 +1.3**
PTOM *e*Sn **Sn** **10 09 36.2 -0.3**
PTOM *e*Sg **Sg** **10 10 07.8 -0.2**
PTOM A 10 10 20.4
59nm,0.8s
PTOM Tomar 5.62 291 Pn **Pn** **10 08 33.0 +1.3**
PTOM Sn **Sn** **10 09 36.2 -0.3**
PTOM Lg 10 10 07.8
29nm,0.8s
PTOM Tomar 5.62 291 Pn **Pn** **10 08 33.0 +1.3**
PTOM Sn **Sn** **10 09 36.2 -0.3**
PTOM Lg 10 10 07.8
29nm,0.8s
MORF Marmelete 5.62 267 *e*Sn **Sn** **10 09 36.5 -0.1**
MORF A 10 10 13.9
9.4nm,0.4s
MORF Marmelete 5.62 267 Sn **Sn** **10 09 36.5 -0.1**
9.4nm,0.4s
MORF Marmelete 5.62 267 Sn **Sn** **10 09 36.5 -0.1**
9.4nm,0.4s
PTEO Sao Teotonio 5.65 269 *e*Sg **Sg** **10 10 11.9 +2.7**
PTEO A 10 10 16.4
31nm,0.8s
PTEO Sao Teotonio 5.65 269 Lg 10 10 11.9
16nm,0.8s
PTEO Sao Teotonio 5.65 269 Lg 10 10 11.9
16nm,0.8s
PVIS Viseu 5.67 303 *e*Pn **Pn** **10 08 34.2 +1.7**
PVIS *e*Sn **Sn** **10 09 36.3 -1.5**
PVIS A 10 10 21.2
30nm,0.5s
PVIS Viseu 5.67 303 Pn **Pn** **10 08 34.2 +1.7**
PVIS Sn **Sn** **10 09 36.3 -1.5**
15nm,0.5s
PVIS Viseu 5.67 303 Pn **Pn** **10 08 34.2 +1.7**
PVIS Sn **Sn** **10 09 36.3 -1.5**
15nm,0.5s
ECAL Calabor 5.70 318 Pn **Pn** **10 08 34.0 +1.1**
ECAL Sn **Sn** **10 09 34.7 -3.9**
ECAL Lg 10 10 11.3
ECAL Calabor 5.70 318 Pn **Pn** **10 08 34.0 +1.1**
3.2nm,0.3s,SNR=7.8
ECAL Sn **Sn** **10 09 35.8 -2.8**
SNR=7.9
ECAL Lg 10 10 10.2
104nm,1.1s
ECAL Calabor 5.70 318 Pn **Pn** **10 08 34.0 +1.1**
3.2nm,0.3s,SNR=7.8
ECAL Sn **Sn** **10 09 35.8 -2.8**
SNR=7.9
ECAL Lg 10 10 10.2
104nm,1.1s
PVRL Vila Real 5.85 308 *e*Pn **Pn** **10 08 36.7 +1.8**
PVRL *e*Sn **Sn** **10 09 41.8 -0.4**
PVRL *e*Sg **Sg** **10 10 14.9 -0.6**
PVRL A 10 10 25.5
19nm,0.6s
PVRL Vila Real 5.85 308 Pn **Pn** **10 08 36.7 +1.8**
PVRL Sn **Sn** **10 09 41.8 -0.4**
PVRL Lg 10 10 14.9
9.4nm,0.6s
PVRL Vila Real 5.85 308 Pn **Pn** **10 08 36.7 +1.8**
PVRL Sn **Sn** **10 09 41.8 -0.4**
PVRL Lg 10 10 14.9
9.4nm,0.6s
EARI Arriondas 6.12 335 Pn **Pn** **10 08 39.5 +0.9**
EARI Pg **Pg** **10 09 02.9 -2.1**
EARI Sn **Sn** **10 09 45.7 -3.2**
EARI Lg 10 10 25.5
EARI Arriondas 6.12 335 Pn **Pn** **10 08 39.5 +0.9**
11nm,0.8s,SNR=18
EARI Pg **Pg** **10 09 02.9 -2.1**
2.9nm,0.5s,SNR=4.6
EARI Sn **Sn** **10 09 45.7 -3.2**
12nm,0.6s,SNR=7.9
EARI Lg 10 10 25.5
18nm,0.7s
EARI Arriondas 6.12 335 Pn **Pn** **10 08 39.5 +0.9**
11nm,0.8s,SNR=18
EARI Pg **Pg** **10 09 02.9 -2.1**
2.9nm,0.5s,SNR=4.6
EARI Sn **Sn** **10 09 45.7 -3.2**
12nm,0.6s,SNR=7.9
EARI Lg 10 10 25.5
18nm,0.7s
PMAFR Mafra 6.13 283 *e*Pn **Pn** **10 08 40.4 +1.6**
PMAFR *e*Sn **Sn** **10 09 47.7 -1.6**
PMAFR *e*Sg **Sg** **10 10 24.8 +0.1**
PMAFR A 10 10 34.9
36nm,0.7s
PMAFR Mafra 6.13 283 Pn **Pn** **10 08 40.5 +1.6**
10nm,0.2s,SNR=8.4
PMAFR Sn **Sn** **10 09 46.3 -3.0**
43nm,0.6s,SNR=7.9
PMAFR Lg 10 10 25.9
152nm,0.6s
PMAFR Mafra 6.13 283 Pn **Pn** **10 08 40.5 +1.6**
10nm,0.2s,SNR=8.4
PMAFR Sn **Sn** **10 09 46.3 -3.0**
43nm,0.6s,SNR=7.9
PMAFR Lg 10 10 25.9
152nm,0.6s
ERUA La Rua 6.23 319 Sn **Sn** **10 09 48.0 -3.6**
SNR=7.9
ERUA Lg 10 10 28.3
12nm,0.4s,SNR=7.9
ERUA La Rua 6.23 319 Sn **Sn** **10 09 48.0 -3.6**
SNR=7.9
ERUA Lg 10 10 28.3

	12nm,0.4s,SNR=7.9							
PCAB	**Cabril**	**6.29**	**310**	*e*Sn	**Sn**	**10**	**09**	**52.0 -1.0**
PCAB				*e*Sg	**Sg**	**10**	**10**	**29.5 -0.1**
PCAB				A		10	10	49.1
	23nm,0.6s							
PCAB	**Cabril**	**6.29**	**310**	Sn	**Sn**	**10**	**09**	**52.0 -1.0**
PCAB				Lg		10	10	29.5
	12nm,0.6s							
PCAB	**Cabril**	**6.29**	**310**	Sn	**Sn**	**10**	**09**	**52.0 -1.0**
PCAB				Lg		10	10	29.5
	12nm,0.6s							
ELOB	**Lobios**	**6.40**	**311**	Pn	**Pn**	**10**	**08**	**42.7 +0.2**
ELOB				Sn	**Sn**	**10**	**09**	**51.9 -3.9**
ELOB				Lg		10	10	34.4
ELOB	**Lobios**	**6.40**	**311**	Pn	**Pn**	**10**	**08**	**42.7 +0.2**
	2.0nm,0.4s,SNR=4.7							
ELOB				Sn	**Sn**	**10**	**09**	**51.9 -3.9**
	SNR=7.9							
ELOB				Lg		10	10	34.4
	30nm,0.7s,SNR=5.0							
ELOB	**Lobios**	**6.40**	**311**	Pn	**Pn**	**10**	**08**	**42.7 +0.2**
	2.0nm,0.4s,SNR=4.7							
ELOB				Sn	**Sn**	**10**	**09**	**51.9 -3.9**
	SNR=7.9							
ELOB				Lg		10	10	34.4
	30nm,0.7s,SNR=5.0							
EPON	**Pontenova**	**6.93**	**324**	Pn	**Pn**	**10**	**08**	**50.5 +0.7**
EPON				Sn	**Sn**	**10**	**10**	**03.7 -5.1**
EPON				Lg		10	10	48.7
EPON	**Pontenova**	**6.93**	**324**	Pn	**Pn**	**10**	**08**	**50.5 +0.7**
	SNR=7.9							
EPON				Sn	**Sn**	**10**	**10**	**03.7 -5.1**
	SNR=7.9							
EPON				Lg		10	10	48.7
	17nm,0.5s,SNR=7.9							
EPON	**Pontenova**	**6.93**	**324**	Pn	**Pn**	**10**	**08**	**50.5 +0.7**
	SNR=7.9							
EPON				Sn	**Sn**	**10**	**10**	**03.7 -5.1**
	SNR=7.9							
EPON				Lg		10	10	48.7
	17nm,0.5s,SNR=7.9							
EZAM	**Zamans**	**6.95**	**311**	Sn	**Sn**	**10**	**10**	**05.4 -4.0**
	SNR=7.9							
EZAM				Lg		10	10	49.2
	41nm,0.6s,SNR=7.9							
EZAM	**Zamans**	**6.95**	**311**	Sn	**Sn**	**10**	**10**	**05.4 -4.0**
	SNR=7.9							
EZAM				Lg		10	10	49.2
	41nm,0.6s,SNR=7.9							
EMAZ	**Mazaricos**	**7.61**	**315**	Pn	**Pn**	**10**	**08**	**59.4 +0.4**
EMAZ				Sn	**Sn**	**10**	**10**	**20.8 -4.7**
EMAZ				Lg		10	11	11.6
EMAZ	**Mazaricos**	**7.61**	**315**	Pn	**Pn**	**10**	**08**	**59.4 +0.4**
	SNR=7.9							
EMAZ				Sn	**Sn**	**10**	**10**	**20.8 -4.7**
	SNR=7.9							
EMAZ				Lg		10	11	11.6
	18nm,0.8s,SNR=7.9							
EMAZ	**Mazaricos**	**7.61**	**315**	Pn	**Pn**	**10**	**08**	**59.4 +0.4**
	SNR=7.9							
EMAZ				Sn	**Sn**	**10**	**10**	**20.8 -4.7**
	SNR=7.9							
EMAZ				Lg		10	11	11.6
	18nm,0.8s,SNR=7.9							
CAF	**Calviac**	**7.62**	**20**	Pn	**Pn**	**10**	**09**	**00.4 +1.3**
CAF	**Calviac**	**7.62**	**20**	Pn	**Pn**	**10**	**09**	**00.4 +1.3**
KEST	**Kesra**	**9.03**	**100**	*e*Pn	**Pn**	**10**	**09**	**21.5 +2.9**
PGF	**Pioggiola**	**9.39**	**56**	Pn	**Pn**	**10**	**09**	**23.8 +0.3**
PGF	**Pioggiola**	**9.39**	**56**	Pn	**Pn**	**10**	**09**	**23.8 +0.3**
QUIF	**Quistinic**	**10.16**	**354**	Pn	**Pn**	**10**	**09**	**35.1 +1.2**
QUIF	**Quistinic**	**10.16**	**354**	Pn	**Pn**	**10**	**09**	**35.1 +1.2**

BJI **15** *10:25:14.1, 13˚.03N× 124˚.46E, h10km, mB6.1/51, mb5.5/67, Ms6.0/83, Ms7 5.9/70*

IDC **15** *10:25:14.2±0.4, 12˚.90N× 124˚.32E, h0km, mb5.1/30, mb1 5.1/31, mb1mx5.1/32, mbtmp5.1/31, ML4.7/1, MS5.5/33, Ms1 5.5/33, ms1mx5.4/43, Error ellipse: s-maj=12.5km s-min=9.9km az=44.0*

ISCJB **15** *10:25:16.4±0.1, 13˚.11N±0˚.01× 124˚.39E±0˚.02, h14km, mb5.7/271, MS5.7/195, Error ellipse: s-maj=2.8km s-min=1.8km az=177.8*

MAN **15** *10:25:16, 13˚.04N× 124˚.32E, h7km, mb6.1, ML5.2, MS5.8*

MAN INTENSITY VI - LEGASPI CITY; VIRAC CATANDUANES; INTENSITY V - SORSOGON CITY; IROSIN SORSOGON; INTENSITY IV - LIGNON HILL; INTENSITY III - NAGA CITY; BULAN SORSOGON; ROXAS CITY; MASBATE CITY; CATARMAN SAMAR; INTENSITY II - SILAY NEGROS OCCIDENTAL; TACLOBAN CITY; BORONGAN SAMAR.

NEIC **15** *10:25:16.5±0.2, 12˚.90N× 124˚.32E, h10km, mb5.8/114, MS5.6/120, MW5.9, MW5.9, Error ellipse: s-maj=5.9km s-min=4.4km az=67.0, Moment Tensor Solution. s38 Moment tensor: Scale 10¹⁸Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mrφ0.00; Mθφ0.00; Best double couple: M₀1.00000×10¹⁸ NP1:φs14.00000°, δ82.00000°, λ176.00000°. NP2:φs105.00000°, δ86.00000°, λ8.00000°. Principal axes: T 1.0500, Plg8.0000°, Azm329.0000°; N -0.1100, Plg80.0000°, Azm133.0000°; P -0.9400, Plg2.0000°, Azm239.0000°;*

NEIC Minor damage at Legaspi, Luzon. Felt [VI PIVS] at Legaspi; [V PIVS] at Irosin and Sorsogon; [III PIVS] at Bulan and Naga; [II PIVS] at Guinayangan, Luzon. Also felt at Manila. Felt [VI PIVS] at Virac, Catanduanes. Felt [III PIVS] at Catarman and [II PIVS] at Borongan, Samar. Also felt [III PIVS] at Masbate, Masbate and at Roxas City, Panay. Felt [II PIVS] at Silay, Negros and at Tacloban, Leyte.

TEH **15** *10:25:17.0, 12˚.90N× 124˚.29E, h10km*

GCMT **15** *10:25:19.0±0.1, 13˚.07N× 124˚.37E, h15km, MW6.0, Moment Tensor Solution. s104, c225; s76, c113; Moment tensor: Scale 10¹⁸Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mrφ0.00; Mθφ0.00; Best double couple: M₀1.20000×10¹⁸ NP1:φs202.00000°, δ81.00000°, λ-173.00000°. NP2:φs111.00000°, δ83.00000°, λ-9.00000°. Principal axes: T 1.3300, Plg1.0000°, Azm156.00000°; N -0.2500, Plg79.0000°, Azm251.0000°; P -1.0700, Plg11.0000°, Azm66.0000°; Data Used: II IU IC G CN. Surface waves: sta=115, comp=255, per= 50.*

MOS **15** *10:25:21.0±1.0, 13˚.45N× 124˚.17E, h33km, mb5.9/78, MS5.7/63 Error ellipse: s-maj=8.3km s-min=4.4km az=118.7*

DJA **15** *10:25:24, 13˚.09N× 124˚.60E, h73km, Mw6.2/73*

SZGRF **15** *10:25:27.1, 14˚.30N× 124˚.82E, h33km, mb5.7, MS6.2, Luzon, Philippine Islands*

ISC 15 10:25:18.3±0.1, 13˚.10N±0˚.01× 124˚.35E±0˚.02, h15km, h15km±.8km: pP-P, n1028, σ1§44/900, mb5.7/269, MS5.7/195, 72C-49D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time	Res	ISC
							h m s		
PVCP	**Virac**	**0.53**	**339**	*e*P		**Pg**	**10 25 27.8**	**-0.9**	
CNP	**Catarman**	**0.66**	**152**	*e*P		**Pg**	**10 25 29.2**	**-2.0**	
MMPH	**Masbate**	**1.02**	**224**	⇓*e*P		**Pb**	**10 25 35.4**	**-2.3**	
MMPH				*e*S		**Sb**	**10 25 51.2**	**+0.2**	
AUQP	**San Andres**	**1.65**	**278**	*e*P		**Pn**	**10 25 49.4**	**+2.7**	
OCLP	**Ormoc**	**2.05**	**173**	*e*P		**Pn**	**10 25 52.0**	**-0.2**	
RCP	**Roxas**	**2.19**	**226**	⇑*e*P		**Pn**	**10 25 53.0**	**-1.3**	
RCP				*i* S		**Sn**	**10 26 20.0**	**-1.1**	
OTRP	**Odiongan**	**2.39**	**252**	*e*P		**Pn**	**10 25 55.9**	**-1.0**	
BOAC	**Boac**	**2.47**	**279**	*e*P		**Pn**	**10 26 02.5**	**+4.5**	
LLP	**Lapu-Lapu**	**2.79**	**188**	⇑*e*P		**Pn**	**10 25 59.9**	**-2.5**	
LLP				*e*S		**Sn**	**10 26 35.8**	**-0.1**	
POLP	**Polilio Island**	**2.85**	**305**	*e*P		**Pn**	**10 26 08.2**	**+4.9**	
LQP	**Lukban**	**2.91**	**291**	⇑*e*P		**Pn**	**10 26 04.2**	**+0.1**	
LQP				*i* S		**Sg**	**10 26 56.6**	**+4.7**	
GUIM	**Jordan**	**3.00**	**215**	*e*P		**Pn**	**10 26 06.2**	**+0.9**	
PGP	**Puerto Galera**	**3.33**	**277**	⇓*i*P		**Pn**	**10 26 14.3**	**+4.4**	
TGY	**Tagaytay City**	**3.47**	**287**	Pn		**Pn**	**10 26 11.3**	**-0.5**	
	68nm,0.3s,baz=330,slow=4.0,SNR=16								
TGY						**Sg**	**10 27 07.7**	**-2.0**	
	480nm,0.3s,baz=89,slow=14,SNR=3.9								
TGY	**Tagaytay City**	**3.47**	**287**	⇑*e*P		**Pg**	**10 26 22.4**	**-2.4**	
BALP	**Baler**	**3.76**	**315**	*e*P		**Pn**	**10 26 21.3**	**+5.5**	
CUYO	**Cuyo Island**	**3.95**	**236**	*e*P		**Pn**	**10 26 17.6**	**-0.8**	
PCPH	**Palayan**	**3.99**	**308**	⇓*e*P		**Pn**	**10 26 09.8**	**-9.2**	
LUBP	**Lubang**	**4.04**	**279**	*e*P		**Pn**	**10 26 25.7**	**+6.0**	
BUSP	**Coron**	**4.20**	**255**	*e*P		**Pn**	**10 26 21.2**	**-0.6**	
BUTP	**Butuan**	**4.29**	**163**	*e*P		**Pn**	**10 26 25.0**	**+1.9**	
PALP	**Palanan**	**4.36**	**335**	*e*P		**Pn**	**10 26 25.9**	**+1.8**	
CAUP	**Cauayan**	**4.54**	**328**	*e*P		**Pn**	**10 26 27.5**	**+1.1**	
CGP	**Cagayan de Oro**	**4.63**	**176**	⇑*i*P		**Pn**	**10 26 27.0**	**-0.8**	
SCZP	**Santa Cruz**	**5.06**	**302**	*e*P		**Pn**	**10 26 35.4**	**+1.7**	
CVP	**Callao Caves**	**5.19**	**332**	*e*P		**Pn**	**10 26 35.3**	**-0.1**	
BUKP	**Musuan**	**5.24**	**172**	*e*P		**Pn**	**10 26 36.9**	**+0.8**	
PAGZ	**Pagadian**	**5.30**	**190**	*e*P		**Pn**	**10 26 36.8**	**-0.3**	
BOLP	**Bolinao**	**5.39**	**308**	*e*P		**Pn**	**10 26 39.9**	**+1.7**	
IPIL	**Ipil**	**5.56**	**199**	*e*P		**Pn**	**10 26 42.3**	**+1.7**	
APYP	**Conner**	**5.60**	**328**	*e*P		**Pn**	**10 26 42.3**	**+1.2**	
ABRA	**Dolores**	**5.72**	**323**	*e*P		**Pn**	**10 26 44.3**	**+1.4**	
CTBH	**Cotabato--PC H**	**5.84**	**181**	*e*P		**Pn**	**10 26 43.2**	**-1.3**	
DMPH	**Davao City--Mi**	**6.09**	**169**	*e*P		**Pn**	**10 26 50.9**	**+3.1**	
SIPP	**Brgy, Tapao**	**6.09**	**322**	⇑*e*P		**Pn**	**10 26 51.8**	**+4.0**	
SIPP				*i* S		**Sn**	**10 28 05.3**	**+8.0**	
KCP	**Kidapawan**	**6.10**	**173**	⇑*e*P		**Pn**	**10 26 48.0**	**0.0**	
DAV	**Davao City (W)**	**6.11**	**168**	*e*Pn		**Pn**	**10 26 47.7**	**-0.5**	
DAV	**Davao City (W)**	**6.11**	**168**	Pn		**Pn**	**10 26 48.0**	**-0.1**	
	67nm,0.3s,baz=308,slow=1.7,SNR=8.3								
DAV					Sn	**Sn**	**10 28 10.0**	**+12**	
	40nm,0.3s,baz=82,slow=19,SNR=1.3								
DAV					LR	LR	10 29 46.0		
	comp=Z,36μm,19.8s,baz=39,slow=46								
DAV	**Davao City (W)**	**6.11**	**168**	⇑*e*P		**Pn**	**10 26 47.9**	**-0.2**	
DAV	**Davao City (W)**	**6.11**	**168**	P		**Pn**	**10 26 51.6**	**+3.4**	
	22nm6μm,1.1s								
PIP	**Pasuquin**	**6.32**	**326**	⇑*e*P		**Pn**	**10 26 49.8**	**-1.1**	
MATI	**Mati**	**6.40**	**163**	*e*P		**Pn**	**10 26 53.2**	**+1.1**	
ZMPH	**Zamboanga City**	**6.51**	**200**	*e*P		**Pn**	**10 26 52.8**	**-0.8**	
BATP	**Bataraza**	**7.72**	**237**	*e*P		**Pn**	**10 27 11.4**	**+1.1**	
SGSI	**Sangihe**	**9.43**	**173**	P		**Pn**	**10 27 35.5**	**+1.8**	
	2μm,1.6s								
KDM	**Kudat**	**9.62**	**231**	P		**Pn**	**10 27 40.9**	**+4.5**	
MYLDM	**Lahad Datu**	**9.76**	**217**	P		**Pn**	**10 27 43.5**	**+5.2**	
MYLDM	**Lahad Datu**	**9.76**	**217**	P		**Pn**	**10 27 42.6**	**+4.4**	
	635nm,0.9s								
TWG	**Pinlang**	**10.16**	**343**	*e*Pn		**Pn**	**10 27 42.3**	**-1.4**	
	157nm,0.6s								
TWG				*e*Sn		**Sn**	**10 29 36.3**	**-1.1**	
SDKM	**Sandakan**	**10.23**	**224**	P		**Pn**	**10 27 49.5**	**+4.8**	
YULB	**Yu-li**	**10.64**	**345**	*e*Pn		**Pn**	**10 27 50.1**	**-0.1**	
	348nm,1.0s								
YULB				*e*Sn		**Sn**	**10 29 53.4**	**+4.2**	
KKM	**Kota Kinabalu**	**10.65**	**230**	*e*Pn		**Pn**	**10 27 46.1**	**-4.4**	
KKM	**Kota Kinabalu**	**10.65**	**230**	P		**Pn**	**10 27 55.0**	**+4.6**	
KKM	**Kota Kinabalu**	**10.65**	**230**	P		**Pn**	**10 27 57.2**	**+6.7**	
	4μm167nm,1.1s								
TPUB	**Ta-pu**	**10.74**	**341**	*e*Pn		**Pn**	**10 27 53.1**	**+1.4**	
	710nm,1.1s								
TPUB				*e*Sn		**Sn**	**10 29 57.1**	**+5.3**	
TSM	**Tawau**	**10.84**	**217**	P		**Pn**	**10 27 57.7**	**+4.7**	
SSLB	**Suanglung**	**11.11**	**344**	*e*Pn		**Pn**	**10 27 57.9**	**+1.3**	
	356nm,0.9s								
SSLB				*e*Sn		**Sn**	**10 30 05.5**	**+4.8**	
NACB	**Ninganchiao**	**11.32**	**347**	*e*Pn		**Pn**	**10 28 00.2**	**+0.6**	
	618nm,1.5s								
NACB				*e*Sn		**Sn**	**10 30 05.5**	**-0.4**	
MNI	**Manado**	**11.59**	**178**	P		**Pn**	**10 28 05.2**	**+1.9**	
	2μm,1.5s								
YHNB	**Yeheng**	**11.85**	**347**	*e*Pn		**Pn**	**10 28 08.8**	**+2.0**	
	552nm,1.0s								
YHNB				*e*Sn		**Sn**	**10 30 16.2**	**-2.7**	
TATO	**Taipei**	**12.12**	**348**	*e*Pn		**Pn**	**10 28 13.4**	**+2.9**	
TATO				*e*Sn		**Sn**	**10 30 24.0**	**-1.4**	
TATO	**Taipei**	**12.12**	**348**	Pn		**Pn**	**10 28 13.9**	**+3.4**	
	SNR=14								
TOLI	**Toli-Toli**	**12.41**	**197**	P		**Pn**	**10 28 19.8**	**+5.2**	
	5μm465nm,1.2s								
KMSI	**Cibinong**	**12.45**	**182**	P		**Pn**	**10 28 17.7**	**+2.6**	
	3μm,1.2s								
TNTI	**Ternate**	**12.61**	**166**	P		**Pn**	**10 28 15.8**	**-1.4**	
	864nm,1.4s								
MRSI	**Marisa**	**12.77**	**191**	P		**Pn**	**10 28 23.8**	**+4.4**	
QZH	**Quanzhou**	**12.97**	**336**	⇑*i*P		**Pn**	**10 28 20.8**	**-1.4**	
QZH				S		**Sn**	**10 30 44.1**	**-2.3**	
QZH				pmax	pmax				
	comp=Z,550nm,1.1s								
QZH				pmax	pmax				
	comp=Z,6μm,5.0s								
QZH				LR	LR				
	comp=N,19μm,12.0s								
QZH				LR	LR				
	comp=E,42μm,13.0s								
QZH				LR	LR				
	comp=Z,89μm,22.2s								
HKC	**Hong Kong Obse**	**13.33**	**315**	⇑*i*P		**Pn**	**10 28 26.0**	**-1.0**	
HKC				S		**Sn**	**10 30 57.0**	**+2.0**	
LBMI	**Labuha**	**14.00**	**167**	P		**Pn**	**10 28 34.0**	**-2.3**	
	comp=Z,858nm,1.9s								
LUWI	**Luwuk**	**14.14**	**186**	P		**Pn**	**10 28 42.0**	**+3.9**	
	comp=Z,1μm,1.2s								
GZH	**Guangzhou**	**14.42**	**315**	P		**Pn**	**10 28 43.6**	**+1.7**	
GZH				S		**Sn**	**10 31 27.0**	**+5.3**	
GZH				LR	LR				
	comp=N,70μm,18.0s								
GZH				LR	LR				
	comp=E,76μm,18.0s								
PCI	**Palu**	**14.62**	**198**	P		**Pn**	**10 28 46.6**	**+1.9**	
	comp=E,696nm,1.5s								
BTM	**Bintulu**	**14.86**	**230**	P		**Pn**	**10 28 52.0**	**+4.0**	
QIZ	**Qiongzhong**	**15.13**	**295**	P		**Pn**	**10 28 51.5**	**-0.2**	
QIZ				pP		pP	10 28 55.3	-5.7	
QIZ				PP			10 29 02.1		
QIZ				S		**Sn**	**10 31 38.3**	**-0.9**	
QIZ				pmax	pmax				
	comp=Z,3μm,4.0s								
QIZ				LR	LR				
	comp=N,48μm,15.8s								
QIZ				LR	LR				
	comp=E,8μm,17.3s								
QIZ				LR	LR				
	comp=Z,26μm,14.5s								
QIZ	**Qiongzhong**	**15.13**	**295**	*e*P		**Pn**	**10 28 53.0**	**+1.4**	
	comp=Z,301nm,1.3s								
SBUM	**Sibu**	**16.00**	**230**	P		**Pn**	**10 29 05.5**	**+2.5**	
SBUM	**Sibu**	**16.00**	**230**	P		**Pn**	**10 29 04.2**	**+1.2**	
	comp=Z,1μm,1.4s								
NLAI	**Namlea**	**16.46**	**170**	P		**Pn**	**10 29 05.9**	**-3.0**	
	comp=Z,6μmcomp=Z,386nm,1.5s								
TTSI	**Tana Toraja**	**16.66**	**196**	P		**Pn**	**10 29 11.8**	**+0.4**	
MSAI	**Masohi**	**16.96**	**164**	P		**Pn**	**10 29 17.1**	**+1.9**	
	comp=Z,5μmcomp=Z,324nm,1.2s								
KDI	**Kendari**	**17.03**	**186**	P		**Pn**	**10 29 16.8**	**+0.7**	
	comp=Z,270nm,1.7s								
SPSI	**Sidrap Palu**	**17.55**	**195**	P		**Pn**	**10 29 24.4**	**+1.8**	
SSE	**Sheshan**	**18.15**	**351**	P		**Pn**	**10 29 29.9**	**+0.1**	
SSE				sP		sP	10 29 34.5	-1.7	
SSE				S		**Sn**	**10 32 56.0**	**+3.8**	
SSE				pmax	pmax				
	comp=Z,270nm,1.0s								
SSE				pmax	pmax				
	comp=Z,5μm,5.4s								
SSE				LR	LR				
	comp=N,14μm,17.3s								
SSE				LR	LR				
	comp=E,42μm,17.3s								
SSE				LR	LR				
	comp=Z,14μm,22.9s								
STKI	**Sintang**	**18.18**	**226**	P		**Pn**	**10 29 32.5**	**+2.1**	
	comp=Z,403nm,2.1s								
KBKI	**Kotabaru**	**18.21**	**207**	P		**Pn**	**10 29 32.5**	**+1.8**	
	comp=Z,10μmcomp=Z,306nm,1.6s								
BNDI	**Bandanaira**	**18.36**	**162**	P		**Pn**	**10 29 34.7**	**+2.2**	
	comp=Z,1μm,1.5s								
BAKI	**Biak**	**18.37**	**140**	P		**Pn**	**10 29 31.0**	**-1.7**	
	comp=Z,2μm,1.4s								
BBSI	**Bau Bau**	**18.55**	**186**	P		**Pn**	**10 29 35.0**	**+0.1**	
	comp=Z,454nm,2.7s								
KAPI	**Kappang**	**18.57**	**195**	Pn		**Pn**	**10 29 34.2**	**-0.9**	
	comp=Z,3μm,1.4s,SNR=16								
KAPI	**Kappang**	**18.57**	**195**	*e*P		**Pn**	**10 29 33.8**	**-1.2**	
	comp=Z,856nm,1.2s								
BKSI	**Bulukumba**	**18.78**	**193**	P		**Pn**	**10 29 36.3**	**-1.3**	
	comp=Z,6μmcomp=Z,296nm,1.6s								
NJ2	**Nanjing**	**19.53**	**346**	*e*P		**Pn**	**10 29 46.1**	**-0.4**	
NJ2				pP		pP	10 29 50.4	+1.0	
NJ2				sP		sP	10 29 53.0	+1.7	
NJ2				PP			10 30 08.9		
NJ2				S		**Sn**	**10 33 28.0**	**+2.5**	
NJ2				pmax	pmax				
	comp=Z,300nm,1.2s								
NJ2				pmax	pmax				
	comp=Z,6μm,6.1s								
NJ2				LR	LR				
	comp=N,29μm,24.4s								
NJ2				LR	LR				
	comp=E,25μm,23.9s								
NJ2				LR	LR				
	comp=Z,26μm,24.9s								
WHN	**Wuhan**	**19.66**	**334**	⇑P		**Pn**	**10 29 48.1**	**-0.1**	
WHN				S		**Sn**	**10 33 29.0**	**+0.1**	
WHN				pmax	pmax				
	comp=Z,2μm,1.4s								
WHN				pmax	pmax				
	comp=Z,17μm,4.4s								
WHN				LR	LR				
	comp=N,42μm,13.0s								
WHN				LR	LR				
	comp=E,31μm,13.0s								
WHN				LR	LR				
	comp=Z,50μm,15.4s								
GUMO	**Guam**	**19.97**	**86**	*e*P		**Pn**	**10 29 50.0**	**-1.9**	
	comp=Z,1μm,1.3s								
GUMO				LR	LR				
	comp=Z,9μm,19.0s								
GUMO	**Guam**	**19.97**	**86**	P		**Pn**	**10 29 48.1**	**-3.9**	
	comp=Z,567nm,1.0s,baz=228,slow=2.3,SNR=25								
GUMO				S		**Sn**	**10 33 35.5**	**-1.0**	
	comp=Z,17nm,0.8s,baz=24,slow=18,SNR=2.1								
GUMO				LR		LR	10 35 44.4		
	comp=Z,6μm,19.7s,baz=265,slow=32								
GUMO	**Guam**	**19.97**	**86**	*e*P		**Pn**	**10 29 50.0**	**-2.0**	
GUMO				pmax	pmax				
	comp=Z,1μm,1.3s								
GUMO				MLR	MLR				
	comp=Z,9μm,19.0s								
GUMO	**Guam**	**19.97**	**86**	P		**Pn**	**10 29 51.1**	**-0.9**	
	comp=Z,876nm,1.4s								
PBKI	**Pangkalan Bun**	**20.12**	**220**	P		**P**	**10 29 53.3**	**+1.4**	
TLE	**Tual**	**20.39**	**155**	P		**P**	**10 29 54.3**	**-0.5**	
	comp=Z,859nm,1.3s								
GYA	**Guiyang**	**21.26**	**311**	⇑*i*P		**P**	**10 30 03.3**	**-0.9**	
GYA				PP			10 30 29.9		
GYA				S		**S**	**10 33 55.4**	**-4.7**	
GYA				SS			10 34 33.0		
GYA				pmax	pmax				
	comp=Z,220nm,1.0s,mb5.4								
GYA				pmax	pmax				
	comp=Z,1μm,5.0s								
GYA				LR	LR				
	comp=N,42μm,21.2s,MS5.9								
GYA				LR	LR				
	comp=E,40μm,21.8s,MS5.9								
GYA				LR	LR				
	comp=Z,24μm,21.8s,MS5.5								
MMRI	**Maumere**	**21.70**	**186**	P		**P**	**10 30 08.4**	**-0.5**	
	comp=Z,10μmcomp=Z,621nm,1.6s,mb5.8								
CBIJ	**Chichi jima**	**21.74**	**47**	P		**P**	**10 30 07.1**	**-2.2**	
	comp=Z,231nm,1.0s,mb5.6,baz=217,slow=10,SNR=4.9								
CBIJ				S		**S**	**10 34 01.4**	**-8.0**	
	comp=Z,56nm,0.8s,baz=307,slow=20,SNR=1.8								
KMMI	**Kalianget**	**22.52**	**208**	P		**P**	**10 30 18.6**	**+0.9**	
	comp=Z,1μm,1.6s,mb6.1								
TPI	**Tanjungpandan**	**22.87**	**228**	P		**P**	**10 30 20.6**	**-0.8**	
	comp=Z,6μmcomp=Z,616nm,1.4s,mb5.8								
SRBI	**Singaraja**	**22.92**	**204**	P		**P**	**10 30 20.8**	**-1.1**	
	comp=Z,937nm,1.3s,mb6.1								
KHKI	**Kahang-Kahang**	**23.02**	**203**	P		**P**	**10 30 21.7**	**-1.3**	
	comp=Z,7μmcomp=Z,460nm,1.4s,mb5.7								
MYKOM	**Kota Tinggi**	**23.20**	**243**	P		**P**	**10 30 25.1**	**+0.2**	
MYKOM	**Kota Tinggi**	**23.20**	**243**	P		**P**	**10 30 24.7**	**-0.2**	
	comp=Z,5μmcomp=Z,438nm,1.0s,mb5.8								
DNP	**Denpasar**	**23.46**	**203**	P		**P**	**10 30 28.0**	**+0.4**	
	comp=Z,1μm,1.4s,mb6.2								
NST	**Nakhon Sawan**	**23.59**	**279**	P		**P**	**10 30 27.0**	**-2.0**	
	comp=Z,67nm,1.0s,mb5.0								
PPBI	**Pangkal Pinang**	**23.59**	**231**	P		**P**	**10 30 28.8**	**-0.2**	
	comp=Z,192nm,1.9s,mb5.2								
IGBI	**Denpasar**	**23.62**	**203**	P		**P**	**10 30 27.9**	**-1.2**	
	comp=Z,992nm,1.5s,mb6.0								
KMI	**Kunming**	**23.62**	**304**	⇑P		**P**	**10 30 29.0**	**-0.1**	
KMI				sP		sP	10 30 33.3	-2.1	
KMI				PP			10 31 02.1		
KMI				S		**S**	**10 34 40.8**	**-2.3**	
KMI				SS			10 35 29.3		
KMI				pmax	pmax				
	comp=Z,200nm,1.8s,mb5.2								
KMI				pmax	pmax				
	comp=Z,3μm,4.7s								
KMI				LR	LR				
	comp=N,26μm,15.4s,MS5.9								
KMI				LR	LR				
	comp=E,18μm,15.8s,MS5.9								
KMI				LR	LR				
	comp=Z,28μm,16.2s,MS5.8								
JAGI	**Jajag, Banyuwa**	**23.70**	**206**	P		**P**	**10 30 29.4**	**-0.5**	
	comp=Z,496nm,1.3s,mb5.8								
GMJI	**Gumukmas**	**23.84**	**208**	P		**P**	**10 30 30.7**	**-0.4**	
	comp=Z,769nm,1.5s,mb5.9								
TIA	**Tai'an**	**23.91**	**345**	P		**P**	**10 30 31.1**	**-0.6**	
TIA				S		**S**	**10 34 44.

comp=Z,212nm,1.6s,mb5.4
CHTO LR LR
comp=Z,7µm,22.0s,MS5.1
CHTO Chiang Mai 25.07 286 *e*P **P 10 30 40.6 -1.8**
CHTO pmax pmax
comp=Z,212nm,1.6s,mb5.4
CHTO MLR MLR
comp=Z,7µm,22.0s,MS5.1
CHTO Chiang Mai 25.07 286 P **P 10 30 41.6 -0.8**
comp=Z,3µmcomp=Z,96nm,1.6s,mb5.1
CHTO Chiang Mai 25.07 286 P **P 10 30 42.0 -0.4**
SNR=24
XAN Xi'an 25.13 329 P **P 10 30 41.3 -1.5**
XAN pP pP 10 30 44.6 -2.6
XAN PP 10 31 17.4
XAN S **S 10 35 11.8 +4.7**
XAN sS sS 10 35 18.3 +3.8
XAN pmax pmax
comp=Z,36nm,1.3s,mb4.7
XAN pmax pmax
comp=Z,380nm,4.9s
XAN LR LR
comp=N,10µm,13.4s,MS5.6
XAN LR LR
comp=E,7µm,15.2s,MS5.6
XAN LR LR
comp=Z,6µm,17.0s,MS5.2
JCJI Jatiwangi 25.18 220 P **P 10 30 48.7 +5.3**
comp=Z,520nm,1.5s,mb5.8
DL2 Dalian 25.82 355⇑ *i*P **P 10 30 48.9 -0.1**
DL2 PP 10 31 30.1
DL2 S **S 10 35 17.3 -0.6**
DL2 SS 10 36 23.1
DL2 pmax pmax
comp=Z,170nm,1.1s,mb5.5
DL2 LR LR
comp=E,24µm,16.3s
DL2 LR LR
comp=Z,12µm,13.7s,MS5.6
LEM Lembang 25.85 221 P **P 10 30 52.0 +2.5**
comp=Z,8µmcomp=Z,511nm,1.9s,mb5.7
CD2 Chengdu 25.97 316⇑ *i*P **P 10 30 49.8 -0.7**
CD2 pP pP 10 30 53.9 -1.1
CD2 sP sP 10 30 56.8 0.0
CD2 PP 10 31 31.3
CD2 PcP PcP 10 34 17.8 -1.1
CD2 S **S 10 35 18.3 -2.3**
CD2 sS sS 10 35 25.4 -2.6
CD2 SS 10 36 25.3
CD2 pmax pmax
comp=Z,180nm,0.8s,mb5.7
CD2 pmax pmax
comp=Z,3µm,6.7s
CD2 LR LR
comp=N,65µm,20.6s,MS6.2
CD2 LR LR
comp=E,57µm,22.1s,MS6.2
CD2 LR LR
comp=Z,31µm,21.0s,MS5.8
CISI Cisompet, Garu 26.29 220 P **P 10 30 55.9 +2.5**
comp=Z,9µmcomp=Z,612nm,1.6s,mb5.9
KLSI 26.31 229 P **P 10 30 53.8 +0.1**
comp=Z,7µmcomp=Z,392nm,1.7s,mb5.7
SBJI Serang 26.31 225 P **P 10 30 58.5 +4.8**
comp=Z,7µmcomp=Z,492nm,1.6s,mb5.8
KLI Kotabumi 26.33 229 P **P 10 30 58.2 +4.3**
comp=Z,6µmcomp=Z,212nm,1.3s,mb5.5
BKNI Bangkinang 26.36 243 P **P 10 30 55.5 +1.3**
comp=Z,5µmcomp=Z,423nm,1.5s,mb5.7
RBSI Rajabasa 26.38 226 P **P 10 30 57.2 +2.9**
comp=Z,5µmcomp=Z,233nm,1.7s,mb5.4
MAJO Matsushiro 26.45 26 *e*P **P 10 30 53.4 -1.3**
comp=Z,88nm,1.1s,mb5.2
MAJO Matsushiro 26.45 26 *e*P **P 10 30 53.4 -1.3**
MAJO pmax pmax
comp=Z,88nm,1.1s,mb5.2
MAT Matsushiro 26.45 26 P **P 10 30 52.9 -1.8**
MAT S **S 10 35 30.0 +1.9**
MJAR Matsushiro Arr 26.45 26 P **P 10 30 53.3 -1.4**
comp=Z,9.0nm,0.8s,mb4.3,baz=199,slow=9.0,SNR=30
MJAR PcP PcP 10 34 19.6 -0.3
comp=Z,4.6nm,0.7s,baz=193,slow=2.5,SNR=5.6
MDSI Maura Dua 26.58 230 P **P 10 30 55.6 -0.6**
comp=Z,3µmcomp=Z,186nm,1.4s,mb5.4
SDSI Sungai Dareh 26.67 240 P **P 10 30 57.1 +0.1**
comp=Z,4µmcomp=Z,141nm,1.9s,mb5.2
SKJI Sukabumi 26.67 223 P **P 10 31 03.0 +6.0**
TIY Taiyuan 26.72 339 *e*P **P 10 30 57.3 +0.2**
TIY S **S 10 35 34.3 +2.0**
TIY pmax pmax
comp=Z,940nm,4.2s
TIY LR LR
comp=N,18µm,13.4s
TIY LR LR
comp=E,4µm,9.8s
TIY LR LR
comp=Z,15µm,14.1s,MS5.7
KAKA Kakadu 26.87 162 *e*P **P 10 30 54.6 -4.1**
comp=Z,85nm,0.6s,mb5.5
KAKA Kakadu 26.87 162 *e*P **P 10 30 55.0 -3.7**
comp=Z,347nm,0.7s,mb6.0
KAKA Kakadu 26.87 162 P **P 10 30 55.4 -3.3**
comp=Z,2µmcomp=Z,278nm,0.7s,mb5.9
LWLI Liwa 27.02 230 P **P 10 31 01.0 +0.9**
comp=Z,548nm,0.9s,mb6.1
TSI Tuntungan 27.21 252 P **P 10 31 03.6 +1.8**
comp=Z,472nm,1.5s,mb5.8
KSI Kapahiang 27.27 234 P **P 10 31 04.2 +1.8**
comp=Z,1µm,1.9s,mb6.1
PPI Padang Panjang 27.30 242 P **P 10 31 03.3 +0.6**
comp=Z,5µmcomp=Z,251nm,1.8s,mb5.5
MNSI Mandailing Nat 27.42 245 P **P 10 31 03.7 0.0**
comp=Z,5µmcomp=Z,166nm,1.6s,mb5.3
PDSI Padang 27.48 241 P **P 10 31 06.0 +1.7**
comp=Z,256nm,1.1s,mb5.7
BJT Baijiatuan 27.77 346 *e*P **P 10 31 06.1 -0.4**
comp=Z,1µm,1.5s,mb6.3
BJT LR LR
comp=Z,15µm,19.0s,MS5.6
BJT Baijiatuan 27.77 346 *e*P **P 10 31 06.1 -0.4**
BJT pmax pmax
comp=Z,1µm,1.5s
BJT MLR MLR
comp=Z,15µm,19.0s
BJI Beijing 27.79 346 P **P 10 31 06.3 -0.4**
BJI sP sP 10 31 13.0 0.0
BJI S **S 10 35 54.3 +5.3**
BJI sS sS 10 35 59.6 +3.2
BJI pmax pmax
comp=Z,130nm,1.8s,mb5.3
BJI pmax pmax
comp=Z,2µm,4.3s
BJI LR LR
comp=N,15µm,16.4s,MS5.9
BJI LR LR
comp=E,22µm,15.4s,MS5.9
BJI LR LR
comp=Z,12µm,31.4s
TPTI 28.58 252 P **P 10 31 13.6 -0.5**
comp=Z,854nmcomp=Z,40nm,1.3s,mb5.0
SNY Shenyang 28.63 359⇑P **P 10 31 13.9 -0.3**
SNY S **S 10 35 59.6 -2.7**
SNY pmax pmax
comp=Z,180nm,2.0s,mb5.5
SNY LR LR
comp=N,14µm,15.0s,MS6.1
SNY LR LR
comp=E,34µm,14.1s,MS6.1
SNY LR LR
comp=Z,19µm,14.3s,MS5.8
SISI Saibi 28.87 242 P **P 10 31 17.2 +0.5**
comp=Z,3µmcomp=Z,170nm,1.1s,mb5.7
GSI Gunungsitoli 28.99 248 P **P 10 31 17.2 -0.5**
comp=Z,5µmcomp=Z,152nm,1.8s,mb5.4
KNA Kununurra 29.00 171 *e*P **P 10 31 14.4 -3.2**
comp=Z,91nm,0.8s,mb5.6
KNA Kununurra 29.00 171 P **P 10 31 15.0 -2.6**
comp=Z,3µmcomp=Z,413nm,0.9s,mb6.2
LZH Lanzhou 29.40 325⇑P **P 10 31 21.3 +0.2**
LZH pP pP 10 31 24.3 -1.3
LZH sP sP 10 31 26.0 -1.4
LZH PP PP 10 32 17.4 -10
LZH S **S 10 36 14.6 +0.1**
LZH sS sS 10 36 21.5 -0.4
LZH SS SS 10 37 47.6 -32
LZH pmax pmax
comp=Z,240nm,1.2s,mb5.8
LZH pmax pmax
comp=Z,2µm,4.1s
LZH LR LR
comp=E,27µm,14.6s
LZH LR LR
comp=Z,32µm,17.5s,MS6.0
HHC Hu-ho-hao-te 29.83 340⇑ *i*P **P 10 31 25.4 +0.5**
HHC pP pP 10 31 29.3 -0.1
HHC sP sP 10 31 32.5 +1.3
HHC PP PP 10 32 22.4 -10
HHC *e*S **S 10 36 21.6 +0.5**
HHC sS sS 10 36 28.8 +0.2
HHC SS SS 10 37 58.6 -30
HHC PcS PcS 10 38 08.5 -2.7
HHC pmax pmax
comp=Z,110nm,1.3s,mb5.4
HHC pmax pmax
comp=Z,2µm,3.7s
HHC LR LR
comp=N,12µm,12.9s,MS5.9
HHC LR LR
comp=E,17µm,14.7s,MS5.9
HHC LR LR
comp=Z,17µm,17.0s,MS5.8
BTO Baotou 30.15 338 *e*P **P 10 31 27.1 -0.6**
BTO S **S 10 36 29.1 +2.9**
BTO LR LR
comp=N,4µm,12.7s,MS5.5
BTO LR LR
comp=E,7µm,17.6s,MS5.5
CN2 Changchun 30.61 2 *e*P **P 10 31 31.5 -0.2**
CN2 *e*sP sP 10 31 38.5 +0.4
CN2 *e*S **S 10 36 34.8 +1.5**
CN2 pmax pmax
comp=Z,20nm,1.2s,mb4.8
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,5µm,15.0s,MS6.0
CN2 LR LR
comp=E,25µm,15.0s,MS6.0
CN2 LR LR
comp=Z,10µm,15.0s,MS5.6
VLA Vladivostok 30.61 11 *i*P **P 10 31 33.1 +1.3**
VLA Vladivostok 30.61 11 *d i*P **P 10 31 33.0 +1.2**
VLA pmax pmax
comp=Z,96nm,1.2s,mb5.5
FITZ Fitzroy Crossi 31.03 178 *e*P **P 10 31 31.9 -3.8**
comp=Z,55nm,1.0s,mb5.3
FITZ Fitzroy Crossi 31.03 178 P **P 10 31 31.9 -3.7**
comp=Z,2µmcomp=Z,126nm,1.3s,mb5.6
MDJ Mudanjiang 31.73 7 P **P 10 31 41.8 +0.2**
MDJ pP pP 10 31 44.8 -1.3
MDJ sP sP 10 31 46.1 -1.8
MDJ PP PP 10 32 50.9 -2.4
MDJ PcP PcP 10 34 33.0 0.0
MDJ S **S 10 36 49.8 -1.0**
MDJ sS sS 10 36 55.3 -2.9
MDJ ScP ScP 10 38 18.0 +2.0
MDJ pmax pmax
comp=Z,100nm,1.2s,mb5.5
MDJ pmax pmax
comp=Z,470nm,4.9s
MDJ LR LR
comp=N,7µm,15.3s,MS5.8
MDJ LR LR
comp=E,18µm,18.4s,MS5.8
MDJ LR LR
comp=Z,9µm,16.0s,MS5.5
MDJ Mudanjiang 31.73 7 *e*P **P 10 31 43.4 +1.9**
comp=Z,220nm,1.2s,mb5.9
PMG Port Moresby 31.83 134 *e*P **P 10 31 38.9 -3.9**
comp=Z,187nm,1.2s,mb5.8
PMG Port Moresby 31.83 134 *c i*P **P 10 31 39.0 -3.8**
PMG Port Moresby 31.83 134 P **P 10 31 39.5 -3.3**
comp=Z,3µmcomp=Z,147nm,1.2s,mb5.7
COEN Coen 32.72 145 *e*P **P 10 31 45.9 -4.7**
comp=Z,925nm,1.0s,mb6.7
COEN Coen 32.72 145 P **P 10 31 46.4 -4.1**
comp=Z,6µmcomp=Z,509nm,1.4s,mb6.3
SHL Shillong 32.95 297 *e*PKP **P 10 31 51.0 -1.6**
SHL *ex* x 10 37 07.0
AGT Agartala 33.09 294 *i* P **P 10 31 54.0 +0.2**
AGT *i x* x 10 32 52.0
ERM Erimo 33.13 26 PFAKE 10 32 10.0 +16
ERM LR LR
comp=Z,10µm,21.0s,MS5.5
GTA Gaotai 34.00 325⇑P **P 10 32 01.3 -0.2**
GTA S **S 10 37 25.8 -0.5**
GTA pmax pmax
comp=Z,48nm,1.9s,mb5.1
GTA pmax pmax
comp=Z,2µm,4.8s
GTA LR LR
comp=N,15µm,19.6s,MS5.9
GTA LR LR
comp=E,15µm,16.3s,MS5.9
GTA LR LR
comp=Z,26µm,16.7s,MS6.0
WRA Warramunga Arr 34.27 163 P **P 10 31 58.9 -5.2**
comp=Z,22nm,0.9s,mb5.1,baz=342,slow=9.9,SNR=65
WRA S **S 10 37 22.1 -8.7**
comp=Z,10nm,1.1s,baz=344,slow=14,SNR=4.1
MBWA Marble Bar 34.34 188 *e*P **P 10 32 01.2 -3.5**
comp=Z,82nm,1.3s,mb5.5
MBWA Marble Bar 34.34 188 P **P 10 32 05.4 +0.8**
comp=Z,51nm,1.4s,mb5.2
LSA Lhasa 34.88 304 P **P 10 32 09.5 +0.2**
LSA pP pP 10 32 18.3 +4.5
LSA sP sP 10 32 22.3 +6.6
LSA PP PP 10 33 29.3 +0.8
LSA S **S 10 37 38.3 -1.9**
LSA sS sS 10 37 56.1 +8.5
LSA pmax pmax
comp=Z,520nm,5.5s
LSA LR LR
comp=N,7µm,20.6s,MS5.5
LSA LR LR
comp=E,7µm,20.6s,MS5.5
LSA LR LR
comp=Z,10µm,20.6s,MS5.5
LSA Lhasa 34.88 304 *e*P **P 10 32 09.4 +0.1**
comp=Z,456nm,1.4s,mb6.2
LSA Lhasa 34.88 304 *e*P **P 10 32 09.4 +0.1**
LSA pmax pmax
comp=Z,456nm,1.4s,mb6.2
CAL Calcutta 35.47 290 *ex* pP 10 32 19.4 +0.3
CAL *ex* x 10 38 46.7
YUK Yuzh-Kuril'sk 35.93 27⇓ *i*P **P 10 32 18.9 +0.8**
YUK *e*PPP 10 33 38.3
YUK pmax pmax
comp=Z,930nm,3.0s
YUK pmax pmax
comp=Z,113nm,0.8s,mb5.8
YUK pmax pmax
comp=N,157nm,0.9s
YUK pmax pmax
comp=E,156µm,0.9s
HIA Hailar 36.26 355 *e*P **P 10 32 20.1 -0.7**
comp=E,78nm,1.0s,mb5.6
HIA LR LR
comp=Z,17µm,19.0s,MS5.8
HIA Hailar 36.26 355 *e*P **P 10 32 20.1 -0.8**
HIA pmax pmax
comp=Z,78nm,1.0s
HIA MLR MLR
comp=Z,17µm,19.0s
HABR Khabarovsk 36.37 12 *ce*P **P 10 32 20.5 -1.3**
HABR 10 33 42.4
HABR *e*PPP 10 33 56.7
HABR *e* 10 34 43.5
HABR *e*S **S 10 38 03.9 +1.4**
HABR *e*SSS 10 40 48.7
HABR *e* 10 42 35.8
HABR MLR MLR
comp=N,2µm,13.0s,MS5.6
HABR MLR MLR
comp=Z,4µm,13.0s,MS5.4
HABR MLR MLR
comp=E,7µm,12.0s,MS5.6
KLR Kul'dur 36.54 8 *e*P **P 10 32 18.8 -4.4**
KLR *e* 10 33 41.5
KLR *e*S **S 10 37 58.0 -7.1**
KLR pmax pmax
comp=Z,210nm,1.8s,mb5.7
KLR MLR MLR
comp=E,21µm,13.5s
TAPN Taplejung 37.03 298 *e*P **P 10 32 26.8 -1.0**
comp=E,824nm,1.6s,mb6.3
COCO West Island 37.10 228 PFAKE 10 32 40.0 +12
COCO LR LR
comp=Z,5µm,20.0s,MS5.3
YSS Yuzh-Sakhalins 37.12 21 *e*P **P 10 32 28.8 +0.6**
comp=Z,131nm,1.2s,mb5.6
YSS Yuzh-Sakhalins 37.12 21 *e*P **P 10 32 29.0 +0.8**
YSS *e*S **S 10 38 12.0 -2.0**
YSS *e*PS 10 38 28.0
YSS MLR MLR
comp=Z,5µm,15.0s,MS5.5
YSS MLR MLR
comp=N,5µm,14.0s,MS5.5
YSS MLR MLR
comp=E,3µm,17.0s,MS5.5
ODAN Odare 37.19 297 *e*P **P 10 32 28.0 -1.1**
comp=E,379nm,1.1s,mb6.2
ULN Ulaanbaatar 37.54 341 *e*P **P 10 32 32.1 +0.3**
ULN Ulaanbaatar 37.54 341 P **P 10 32 32.6 +0.8**
comp=E,5µmcomp=E,267nm,1.0s,mb5.9
ULN Ulaanbaatar 37.54 341 P **P 10 32 31.7 -0.1**
SNR=189
ASAR Alice Springs 37.72 166 P **P 10 32 29.1 -4.4**
comp=E,15nm,0.4s,mb5.1,baz=346,slow=6.6,SNR=177
ASAR S **S 10 38 15.9 -7.5**
comp=E,3.5nm,0.9s,baz=340,slow=12,SNR=5.4
SONM Songino Array 37.73 340 P **P 10 32 33.3 -0.1**
comp=E,45nm,1.1s,mb5.1,baz=159,slow=7.2,SNR=136
SONM S **S 10 38 23.0 -0.3**
comp=E,0.7nm,0.4s,baz=91,slow=24,SNR=3.2
SONM LR LR 10 48 53.5
comp=E,14µm,19.4s,MS5.8,baz=153,slow=37
SONM Songino Array 37.73 340 P **P 10 32 33.3 -0.1**
SONM S **S 10 38 23.0 -0.3**
RAMN Ramite 37.89 297 *e*P **P 10 32 34.2 -0.9**
comp=E,575nm,1.2s,mb6.2
JIRN Jiri 38.42 298 *e*P **P 10 32 38.8 -0.7**
comp=E,364nm,1.0s,mb6.1
GUN Gumba 38.75 298 *e*P **P 10 32 41.4 -0.9**
comp=E,560nm,1.0s,mb6.2
PKI Pulchoki 39.07 298 *e*P **P 10 32 43.4 -1.6**
comp=E,250nm,1.1s,mb5.8
PKIN Phulchoki 39.08 298 *e*P **P 10 32 43.6 -1.5**
comp=E,89nm,0.7s,mb5.6
KKN Kakani 39.23 298 *e*P **P 10 32 44.8 -1.5**
comp=E,682nm,1.6s,mb6.1
DMN Daman 39.34 298 *e*P **P 10 32 45.8 -1.4**
comp=E,463nm,1.2s,mb6.1
CTAO Charters Tower 39.40 146 *e*P **P 10 32 44.9 -2.8**
comp=E,90nm,1.1s,mb5.4
CTAO LR LR
comp=Z,10µm,20.0s,MS5.7
CTAO Charters Tower 39.40 146 *e*P **P 10 32 44.9 -2.8**
CTAO pmax pmax
comp=Z,90nm,1.1s,mb5.4
CTAO MLR MLR
comp=Z,10µm,20.0s,MS5.7
CTAO Charters Tower 39.40 146 P **P 10 32 45.4 -2.3**
comp=Z,2µmcomp=Z,90nm,1.5s,mb5.3
VIS Vishakhapatnam 39.76 282 *e*PKP **P 10 32 50.8 0.0**
VIS AMb AMB 10 32 59.2
comp=Z,100nm,1.2s,mb5.4
VIS *i* S **S 10 38 54.2 -0.4**
GKN Gorkha 39.84 298 *e*P **P 10 32 49.6 -1.8**
comp=Z,259nm,1.1s,mb5.9
KOLN Koldanda 40.68 297 *e*P **P 10 32 57.2 -1.1**
comp=Z,109nm,0.8s,mb5.5
ZAK Zakamensk 40.97 339 *e*P **P 10 32 59.8 -0.6**
ZAK *e* 10 34 37.7
ZAK pmax pmax
comp=Z,27nm,1.1s,mb4.8
HNR Honiara 41.84 121 PFAKE 10 33 20.0 +12
HNR LR LR
comp=Z,6µm,22.0s,MS5.4
TLY Talaya 41.96 341 *e*P **P 10 33 08.3 -0.2**
comp=Z,1µm,2.4s,mb6.0
TLY Talaya 41.96 341 *c i*P **P 10 33 08.3 -0.2**
TLY *e* 10 34 53.8
TLY *e* 10 34 59.5
TLY *e*S **S 10 39 28.9 +2.4**
TLY *e*SSS 10 43 05.0
TLY pmax pmax
comp=Z,115nm,1.2s,mb5.4
TLY MLR MLR
comp=Z,8µm,19.0s,MS5.6
TLY Talaya 41.96 341 P **P 10 33 08.2 -0.3**
comp=Z,500nm,0.9s,mb6.1,SNR=25
IRK Irkutsk 42.24 342 *e*P **P 10 33 09.4 -1.4**
IRK *e* 10 34 55.4
IRK pmax pmax
comp=Z,239nm,2.2s,mb5.4
KWAJ Kwajalein Atol 42.65 91 *e*P **P 10 33 15.3 +0.6**
MOY Mondy 42.84 339 *e*P **P 10 33 15.6 -0.1**
MOY pmax pmax
comp=Z,388nm,3.7s
PALK Pallekele 43.30 267 *e*P **P 10 33 20.3 +0.3**
comp=Z,47nm,1.1s,mb5.1
PALK Pallekele 43.30 267 *e*P **P 10 33 20.3 +0.3**
PALK pmax pmax
comp=Z,47nm,1.1s,mb5.1
CLNS Chul'man 43.65 0 *e*P **P 10 33 21.2 -0.9**
CLNS *e**PP pP 10 33 37.1 +10
CLNS *e* 10 35 00.9
CLNS *e* 10 35 14.3
CLNS *e*PPP 10 35 41.4
CLNS *e*S **S 10 39 49.7 -1.5**
CLNS pmax pmax
comp=Z,76nm,1.2s,mb5.3
CLNS pmax pmax
comp=N,49nm,1.2s
CLNS pmax pmax
comp=E,24nm,1.1s
CLNS pmax pmax
comp=Z,16nm,1.0s,mb4.7
CLNS pmax pmax
comp=N,18nm,0.7s
CLNS pmax pmax
comp=E,12nm,0.8s
CLNS smax
comp=E,941nm,12.8s
CLNS smax
comp=N,2µm,17.3s
CLNS MLR MLR
comp=E,7µm,14.0s,MS5.8
CLNS MLR MLR
comp=N,6µm,15.0s,MS5.8
CLNS MLR MLR
comp=Z,5µm,14.0s,MS5.6
FORT Forrest 43.77 175 *e*P **P 10 33 19.0 -4.4**
comp=Z,89nm,0.6s,mb5.7
FORT Forrest 43.77 175 *e*P **P 10 33 18.9 -4.5**
comp=Z,105nm,0.7s,mb5.7
WMQ Urumqi 43.85 321 P **P 10 33 23.8 -0.2**
WMQ pP pP 10 33 28.3 -0.3
WMQ sP sP 10 33 30.8 +0.4
WMQ PP PP 10 35 08.0 +1.9
WMQ ScP ScP 10 38 59.8 -1.9
WMQ S **S 10 39 54.9 +0.4**
WMQ SS SS 10 43 03.8 -7.1
WMQ ScS ScS 10 43 19.8 -3.1
WMQ pmax pmax
comp=Z,230nm,1.3s,mb5.8
WMQ pmax pmax
comp=Z,3µm,4.0s
WMQ LR LR
comp=N,25µm,26.0s
WMQ LR LR
comp=E,19µm,18.4s
WMQ LR LR
comp=Z,18µm,20.3s
NGP Nagpur 43.91 287 *e*PKP **P 10 33 24.6 -0.2**
NGP *ex* x 10 33 33.3
comp=Z,229nm,1.9s
NGP *ex* x 10 40 04.8
PTH Pithoragarh 43.96 299 *e*PKP **P 10 33 23.2 -1.9**
PTH *ex* x 10 35 14.2
HYB Hyderabad 44.31 282 *i* P **P 10 33 27.0 -1.1**
HYB *e* pP 10 33 33.0 +0.3
HYB *e*PP PP 10 35 15.0 +3.5
HYB *e*S **S 10 40 02.0 0.0**
HYB *e* 10 43 20.0
KLBR Kellerberin 44.88 188 *e*P **P 10 33 28.2 -4.1**

comp=Z,50nm,1.0s,mb5.3
SKR Severo-Kuril's 45.51 28 *e*P P **10 33 38.5 +1.4**
SKR *e* 10 33 46.5
SKR *e**SS sS 10 40 24.0 -2.1
SKR pmax pmax
comp=Z,60nm,0.7s,mb5.6
SKR pmax pmax
comp=E,90nm,1.0s
SKR MLR MLR
comp=Z,3µm,18.0s,MS5.3
SKR MLR MLR
comp=N,3µm,22.0s
SKR MLR MLR
comp=E,4µm,16.0s
BHPL Bhopal 45.54 290 *e*PKP P **10 33 36.3 -1.5**
BHPL AMb AMB 10 33 45.3
comp=Z,95nm,0.7s,mb5.9
AKL Akola 45.79 286 *i* P P **10 33 39.2 -0.6**
AKL *i* x x 10 40 17.2
LATR Latur 46.20 283 *e*PKP P **10 33 42.3 -0.7**
LATR *e*PKP 10 33 43.1
LATR AMb AMB 10 33 53.9
comp=Z,443nm,1.5s,mb6.2
EIDS Eidsvold 46.27 146 *e*P P **10 33 39.9 -3.4**
comp=Z,130nm,0.9s,mb5.9
NWAO Narrogin (SO) 46.27 188 *e*P P **10 33 38.7 -4.5**
NDI New Delhi 46.38 297 *e*PKP P **10 33 41.9 -2.4**
BHK Bhakra 47.55 301 *ex* P **10 33 49.0 -4.5**
STKA Stephens Creek 47.68 160 *e*P P **10 33 51.6 -2.7**
comp=Z,26nm,0.9s,mb5.3
STKA Stephens Creek 47.68 160 P P **10 33 50.1 -4.2**
comp=Z,74nm,0.8s,mb5.8,baz=333,slow=7.4,SNR=58
STKA LR LR 10 53 29.7
comp=Z,8µm,21.8s,MS5.6,baz=334,slow=36
PET Petropavlovsk 48.27 27 *e*P P **10 33 58.7 0.0**
comp=Z,18nm,0.7s,mb5.2
PET Petropavlovsk 48.27 27 *e*P P **10 33 58.7 +0.1**
PET pmax pmax
comp=Z,18nm,0.7s,mb5.2
AJM Ajmer 48.35 294 *e*PKP P **10 33 59.3 -0.4**
AJM AMb AMB 10 34 07.6
comp=Z,170nm,1.5s,mb5.8
KAD Karad 48.49 282 *e*PKP P **10 34 00.2 -0.6**
KAD AMb AMB 10 34 06.8
comp=Z,107nm,1.4s,mb5.7
MK31 Makanchi Array 48.65 322 *e*P P **10 34 01.5 -0.2**
MK31 *e*P 10 34 01.9
MK31 Makanchi Array 48.65 322 *i* P P **10 34 01.2 -0.5**
MK31 pmax pmax
comp=Z,573nm,1.1s,mb6.5
MKAR Makanchi Array 48.65 322 P P **10 34 02.3 +0.6**
comp=Z,86nm,0.9s,mb5.8,baz=116,slow=8.5,SNR=226
MKAR LR LR 10 56 21.1
comp=Z,9µm,19.3s,MS5.8,baz=124,slow=38
MKAR Makanchi Array 48.65 322 *i* P P **10 34 01.6 -0.1**
MKAR pmax pmax
comp=Z,86nm,0.9s
POO Poona 48.77 283 *e*PKP P **10 34 01.9 -1.1**
POO AMb AMB 10 34 11.0
comp=Z,244nm,1.9s,mb5.9
YAK Yakutsk 49.01 3 *e*P P **10 34 04.9 +0.7**
YAK Yakutsk 49.01 3*c i*P P **10 34 02.7 -1.5**
YAK *e**PP pP 10 34 11.5 +2.7
YAK *e* 10 35 24.9
YAK *e* 10 35 57.7
YAK *e*PPP 10 36 56.2
YAK *e*S S **10 41 05.5 -2.4**
YAK *e**SS sS 10 41 20.1 +4.5
YAK *e* 10 43 56.9
YAK pmax pmax
comp=Z,128nm,1.1s,mb5.9
YAK pmax pmax
comp=E,16nm,1.6s
YAK pmax pmax
comp=N,59nm,1.0s
YAK pmax pmax
comp=Z,1µm,8.0s
YAK pmax pmax
comp=N,473nm,4.4s
YAK pmax pmax
comp=E,115nm,1.8s
YAK smax
comp=E,2µm,10.9s
YAK smax
comp=N,754nm,5.8s
YAK MLR MLR
comp=Z,6µm,13.0s,MS5.8
YAK MLR MLR
comp=N,5µm,14.0s,MS5.8
YAK MLR MLR
comp=E,3µm,14.0s,MS5.8
KSH Kashi 49.96 311⇓ *i*P P **10 34 13.8 +2.0**
KSH *e*pP pP 10 34 17.8 +1.3
KSH *e*sP sP 10 34 20.0 +1.7
KSH S S **10 41 24.1 +2.1**
KSH *e*ScS ScS 10 43 58.0 -5.1
KSH pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KSH pmax pmax
comp=Z,310nm,4.3s
KSH LR LR
comp=N,5µm,14.0s,MS6.0
KSH LR LR
comp=E,8µm,13.6s,MS6.0
KSH LR LR
comp=Z,13µm,16.4s,MS6.0
BHV Bhavnagar 50.35 287 *e*PKP P **10 34 14.0 -1.1**
AAA Alma-Ata 50.55 316 *i* P P **10 34 16.4 +0.2**
AAA *e*S S **10 41 16.4 -14**
AAA pmax pmax
comp=Z,2µm,4.5s
AAA smax
comp=N,3µm,15.1s
ARMA Armidale 50.61 149 *e*P P **10 34 15.6 -1.2**
ARMA *e*S S **10 41 28.5 -2.6**
ARMA Armidale 50.61 149 *e*P P **10 34 14.6 -2.2**
comp=N,194nm,1.1s,mb6.0
ULHL Ulahol 50.66 314 P P **10 34 17.3 +0.2**
SNR=43
ZALV Zalesovo Beam 51.26 331 P P **10 34 20.4 -1.0**
comp=N,46nm,0.9s,mb5.4,baz=117,slow=5.6,SNR=81
ZALV LR LR 10 56 08.1
comp=N,5µm,21.4s,MS5.5,baz=132,slow=36
KZA Kyzart 51.30 314 P P **10 34 22.7 +0.8**
SNR=44
TKM2 Tokmak 2 51.34 315 P P **10 34 22.2 0.0**
SNR=29
TKM2 Tokmak 2 51.34 315 *e*P P **10 34 22.0 -0.2**
comp=N,423nm,1.6s,mb6.1
TKM2 Tokmak 2 51.34 315 *e*P P **10 34 22.0 -0.2**
TKM2 pmax pmax
comp=Z,423nm,1.6s,mb6.1
KBK Karagaybulak 51.70 314 P P **10 34 26.7 +1.8**
SNR=24
UCH Uchtor 51.87 314 P P **10 34 27.1 +1.0**
SNR=69
CHMS Chumysh 51.95 315 P P **10 34 28.0 +1.2**
SNR=27
FRU Bishkek 51.99 315⇑ *i*P P **10 34 27.0 -0.1**
FRU *i* pP 10 34 32.0 +0.3
FRU pmax pmax
comp=Z,142nm,2.2s,mb5.5
AAK Ala-Archa 52.01 314 P P **10 34 28.9 +1.7**
comp=Z,413nm,1.5s,mb6.1,SNR=39
AAK Ala-Archa 52.01 314 P P **10 34 28.1 +0.8**
SNR=12
AAK Ala-Archa 52.01 314 *e*P P **10 34 28.0 +0.8**
comp=Z,180nm,1.4s,mb5.8
AAK LR LR
comp=Z,17µm,22.0s,MS6.0
AAK Ala-Archa 52.01 314*c i*P P **10 34 27.1 -0.1**
AAK pmax pmax
comp=Z,79nm,2.5s,mb5.2
AAK MLR MLR
comp=Z,9µm,22.0s,MS5.8
AAK Ala-Archa 52.01 314 P P **10 34 28.4 +1.2**
comp=Z,602nmcomp=Z,28nm,1.9s,mb4.9
USP Ospenovka 52.22 315 P P **10 34 29.7 +1.0**
SNR=29
AML Almayashu 52.41 313 P P **10 34 31.4 +1.2**
SNR=29
AML Almayashu 52.41 313 *e*P P **10 34 31.3 +1.1**
comp=Z,419nm,1.4s,mb6.2
AML LR LR
comp=Z,23µm,22.0s,MS6.2
EKS2 Erkin-Say 52.52 314 P P **10 34 31.0 0.0**
SNR=49
EKS2 Erkin-Say 52.52 314 *e*P P **10 34 30.8 -0.2**
comp=Z,326nm,1.5s,mb6.0
EKS2 LR LR
comp=Z,19µm,22.0s,MS6.1
NVS Novosibirsk 52.53 331⇑ *i*P P **10 34 30.0 -0.9**
NVS *e*S S **10 41 56.1 -0.9**
NVS pmax pmax
comp=N,858nm,2.6s
NVS pmax pmax
comp=E,989nm,2.6s
NVS pmax pmax
comp=Z,1µm,2.6s,mb6.4
NVS smax
comp=E,247nm,2.6s
KURK Kurchatov 52.69 325 P P **10 34 31.7 -0.4**
comp=E,5µm,1.1s
KURK Kurchatov 52.69 325 P P **10 34 31.8 -0.3**
comp=E,212nm,1.1s,mb6.0,baz=270,slow=8.6,SNR=279
KURK LR LR 10 58 42.1
comp=E,7µm,18.1s,MS5.7,baz=125,slow=38
KURK PKPPKP 11 04 59.9
comp=E,0.6nm,0.8s,baz=267,slow=2.7,SNR=3.2
KURK Kurchatov 52.69 325 *e*P P **10 34 31.6 -0.5**
KURK MLR MLR
comp=Z,7µm,20.0s,MS5.7
RIV Riverview 53.20 152 *e*P P **10 34 35.5 -0.5**
CAN Canberra 53.52 155 *e*P P **10 34 36.7 -1.6**
CAN comp=Z,45nm,0.8s,mb5.5
CAN LR LR
comp=Z,7µm,19.0s,MS5.7
CAN Canberra 53.52 155 *e*P P **10 34 36.7 -1.7**
CAN pmax pmax
comp=Z,45nm,0.8s,mb5.5
CAN MLR MLR
comp=Z,7µm,19.0s,MS5.7
SEY Seymchan 53.58 15 *i*P P **10 34 40.2 +1.7**
SEY Seymchan 53.58 15 *i*P P **10 34 40.2 +1.7**
CNB Canberra Magne 53.67 155 *e*P P **10 34 37.6 -1.8**
CNB *e*S S **10 42 11.5 -1.4**
NOUC Port Laguerre 54.00 130 *e*P P **10 34 40.2 -1.9**
DZM Mont Dzumac 54.09 130 *e*P P **10 34 41.0 -1.8**
comp=Z,316nm,1.2s,mb6.1
DZM *e*S S **10 42 12.9 -6.2**
comp=Z,6µm,28.1s
DZM *e*SS SS 10 45 55.9 -5.1
comp=Z,2µm,25.7s
DZM *e*LQ 10 48 06.3
comp=Z,23µm,29.7s
DZM *e*LR LR 10 50 26.0
comp=Z,7µm,24.6s
DZM Mont Dzumac 54.09 130 *e*P P **10 34 40.7 -2.1**
DZM Mont Dzumac 54.09 130 *e*P P **10 34 41.5 -1.3**
comp=Z,5.9nm,1.1s,mb4.4
TOO Toolangi 54.17 159 *e*P P **10 34 41.2 -1.9**
TOO *e*S S **10 42 28.0 +8.3**
KBL Kabul 54.21 303 *e*P P **10 34 42.7 -0.8**
KK31 Karatay Array 54.94 314 *i* P P **10 34 48.3 -0.5**
KK31 pmax pmax
comp=Z,226nm,1.2s,mb6.1
DGAR Diego Garcia 55.43 251 PFAKE 10 35 00.0 +7.3
DGAR LR LR
comp=Z,6µm,21.0s,MS5.7
QUE Quetta 55.45 298 *e*P P **10 34 52.0 -0.6**
QUE *e*S S **10 42 38.0 +0.7**
SMY Shemya 55.83 34 *e*P P **10 34 55.8 +0.8**
BVAR Borovoye Array 58.28 325 P P **10 35 11.8 -0.6**
BVAR S S **10 43 14.2 +0.2**
BVAR ⇑*e* 11 05 03.0
BVAR Borovoye Array 58.28 325 P P **10 35 11.8 -0.6**
comp=Z,39nm,0.9s,mb5.4,baz=116,slow=10,SNR=80
BVAR S S **10 43 14.2 +0.2**
comp=Z,0.7nm,0.7s,baz=133,slow=10,SNR=3.3
BVAR PKP2bc 11 05 03.0
comp=Z,0.6nm,0.4s,baz=266,slow=2.2,SNR=4.2
BVAR Borovoye Array 58.28 325 P P **10 35 11.8 -0.5**
BVAR S S **10 43 14.2 +0.2**
BRVK Borovoye 58.35 325 *e*P P **10 35 12.3 -0.5**
comp=Z,733nm,1.4s,mb6.5
BRVK LR LR
comp=Z,11µm,21.0s,MS5.9
BRVK Borovoye 58.35 325*c i*P P **10 35 12.0 -0.8**
BRVK pmax pmax
comp=Z,96nm,1.0s,mb5.8
BRVK MLR MLR
comp=Z,5µm,14.0s,MS5.8
TIXI Tiksi 58.58 2⇑ *i*P P **10 35 12.4 -1.7**
TIXI Tiksi 58.58 2 *e*P P **10 35 12.4 -1.7**
TIXI *e*S S **10 43 09.4 -7.9**
TIXI pmax pmax
comp=N,59nm,1.6s
TIXI pmax pmax
comp=E,41nm,2.2s
TIXI pmax pmax
comp=Z,250nm,2.0s,mb5.9
TIXI pmax pmax
comp=Z,225nm,6.4s
TIXI MLR MLR
comp=Z,8µm,18.0s,MS5.9
MOO Moorlands 59.12 160 *e*P P **10 35 17.5 -0.7**
MSVF Nonsavu 61.21 119 P P **10 35 33.0 0.0**
comp=Z,654nm,1.0s,mb6.7,SNR=15
MSVF Nonsavu 61.21 119 *e*P P **10 35 32.2 -0.8**
comp=Z,116nm,1.0s,mb6.0
MSVF LR LR
comp=Z,3µm,20.0s,MS5.4
BILL Bilibino 61.23 17 *e*P P **10 35 32.1 -0.2**
comp=Z,297nm,1.5s,mb6.2
BILL LR LR
comp=Z,6µm,19.0s,MS5.8
BILL Bilibino 61.23 17 *e*P P **10 35 32.1 -0.2**
BILL pmax pmax
comp=Z,297nm,1.5s,mb6.2
BILL MLR MLR
comp=Z,6µm,19.0s,MS5.8
IDAH Dahanechah 61.65 300 *e*P P **10 35 36.9 +1.1**
IMYA Miami 61.66 304 *e*P P **10 35 35.6 -0.3**
ISRO Mashad 62.17 304 *e*P P **10 35 39.1 -0.2**
IMOG Moghan 62.26 304 *e*P P **10 35 40.1 +0.2**
ATKA Atka Island 62.35 38 *e*P P **10 35 40.4 +0.3**
IKOO Kooshah 62.36 300 *e*P P **10 35 39.1 -1.6**
IPAY Payeh 62.56 304 *e*P P **10 35 41.6 -0.3**
ITEG Tejag 62.59 300 *e*P P **10 35 45.1 +2.9**
IKRD Kardeh 62.97 305 *e*P P **10 35 39.6 -5.0**
ABKT Ailbek 63.36 306 P P **10 35 47.2 0.0**
comp=Z,1µm,1.1s,mb7.0,SNR=44
AB31 Akbulak array 63.52 319 *i* P P **10 35 47.4 -0.6**
AB31 pmax pmax
comp=Z,137nm,1.0s,mb5.9
ABKAR Akbulak array 63.52 319 *e*P P **10 35 47.0 -1.0**
comp=Z,634nm,1.6s,mb6.4
JOHN Johnston Islan 63.74 78 PFAKE 10 36 00.0 +10
JOHN LR LR
comp=Z,4µm,22.0s,MS5.6
HOQ Hoqain 64.01 290 P P **10 35 58.0 +6.3**
SNR=5.9
ARQ Araqi 64.75 290 P P **10 35 55.6 -0.9**
SNR=7.7
SVE Sverdlovsk 64.83 327⇑ *e*P P **10 35 55.9 -0.6**
SVE *e* 10 38 14.4
SVE *e*PPP 10 39 50.9
SVE *e*S S **10 44 38.6 +1.7**
SVE pmax pmax
comp=Z,271nm,7.0s
SVE pmax pmax
comp=Z,523nm,1.1s,mb6.5
SVE MLR MLR
comp=Z,4µm,17.0s,MS5.7
AKTK Aktyubinsk 64.96 320 P P **10 35 56.3 -1.2**
AKTK ⇑*e* 11 04 43.8
AKTK LR LR 11 06 16.5
AKTO Aktyubinsk 64.96 320 P P **10 35 56.3 -1.2**
comp=Z,20nm,0.8s,mb5.2,baz=92,slow=6.8,SNR=40
AKTO PKP2bc 11 04 43.8
comp=Z,0.9nm,0.5s,baz=270,slow=3.0,SNR=4.9
AKTO LR LR 11 06 16.5
comp=Z,13µm,20.2s,MS6.1,baz=290,slow=38
HATD Hatta, Dubai 65.00 291 P P **10 36 01.0 +2.7**
SNR=8
ASHO Ashiyiah 65.08 291 P P **10 36 04.5 +5.8**
SNR=7.0
IBAF Bafgh 65.27 299 *e*P P **10 35 59.4 -0.5**
NIKO Nikolski 65.70 38 *e*P P **10 36 02.2 0.0**
comp=Z,128nm,1.0s,mb5.9
ARU Arti 65.84 326 *e*P P **10 36 01.6 -1.4**
comp=Z,137nm,0.6s,mb6.2
ARU LR LR
comp=Z,6µm,21.0s,MS5.8
ARU Arti 65.84 326*c i*P P **10 36 01.5 -1.6**
ARU *e* 10 36 29.6
ARU *e* 10 38 25.4
ARU S S 10 44 48.5 -0.8
ARU 10 45 56.1
ARU SS SS 10 48 59.4 -4.5
ARU pmax pmax
comp=Z,63nm,0.7s,mb5.8
ARU MLR MLR
comp=Z,5µm,16.0s,MS5.8
ARU Arti 65.84 326 P P **10 36 01.1 -2.0**
comp=Z,1µm,1.2s,mb6.8,SNR=26
IMEH Mehriz 66.09 299 *e*P P **10 36 04.1 -1.1**
IANJ Anjilo 66.65 303 *e*P P **10 36 08.6 0.0**
GAMB Gambell 66.93 26 *e*P P **10 36 18.6 +8.8**
comp=Z,209nm,1.5s,mb5.9
ISHM Shahmirzad 67.16 303 *e*P P **10 36 11.5 -0.4**
UNV Unalaska Valle 67.24 37 *e*P P **10 36 12.0 0.0**
comp=Z,54nm,0.9s,mb5.6
ILAS Lasjerd 67.43 303 *e*P P **10 36 14.6 +1.0**
ISRV Sarvestan 67.45 297 *e*P P **10 36 13.4 -0.5**
SOKR Solikamsk 67.47 329*c i*P P **10 36 12.0 -1.4**
SOKR pmax pmax
comp=Z,210nm,1.3s,mb6.0
SOKR MLR MLR
comp=Z,5µm,21.0s,MS5.7
IPAR Pars 67.49 297 *e*P P **10 36 13.5 -0.6**
AKUT Akutan 67.71 37 *e*P P **10 36 16.9 +1.9**
comp=Z,101nm,1.1s,mb5.8
IDMV Damavand 68.18 303 *e*P P **10 36 18.0 -0.4**
IGAR Gharneh 68.25 300 *e*P P **10 36 18.8 0.0**
IVRN Varamin 68.44 303 *e*P P **10 36 18.6 -1.4**
IVRN *e*P 10 36 19.9
AFI Afiamalu 68.72 111 PFAKE 10 36 30.0 +8.0
AFI LR LR
comp=Z,2µm,20.0s,MS5.4
AFI Afiamalu 68.72 111 LR LR 11 05 08.7
comp=Z,2µm,19.0s,MS5.5,baz=99,slow=35
IR3 Iran Long-Peri 69.01 303 *e*P P **10 36 23.0 -0.5**
FALS False Pass 69.17 36 *e*P P **10 36 23.6 -0.5**
comp=Z,213nm,1.6s,mb5.8
RPZ Rata Peaks 70.77 146 *e*P P **10 36 32.2 -1.9**
comp=Z,49nm,0.7s,mb5.5
RPZ Rata Peaks 70.77 146 LR LR 11 09 20.5
comp=Z,4µm,18.9s,MS5.7,baz=311,slow=38
SDPT Sand Point 70.90 36 *e*P P **10 36 39.8 +5.1**
comp=Z,80nm,1.2s,mb5.5
URZ Urewera 71.02 138 LR LR 11 06 17.5
comp=Z,5µm,20.9s,MS5.7,baz=106,slow=35
MAK Makhachkala 71.60 311 *e*P P **10 36 41.7 +2.5**
MAK *e* 10 36 54.6
MAK *e* 10 39 26.1
MAK *e*S S 10 45 53.7 -4.5
MAK *e* 10 46 33.7
MAK pmax pmax
comp=Z,249nm,1.4s,mb6.0
MAK pmax pmax
comp=E,195nm,1.2s
MAK pmax pmax
comp=N,171nm,1.3s
MAK pmax pmax
comp=Z,1µm,3.2s
MAK smax
comp=N,1µm,4.8s
MAK smax
comp=E,2µm,6.6s
QRN Al-Qurain 72.03 296 *e*P P **10 36 39.8 -2.3**
QRN AMb AMB 10 36 51.4
comp=Z,290nm,1.1s,mb6.1
CHGN Chignik 72.12 35 *e*P P **10 36 43.9 +1.8**
UMR Umm Al-Rimmam 72.14 297 *e*P P **10 36 40.2 -2.5**
UMR AMb AMB 10 36 50.2
comp=Z,327nm,1.6s,mb6.0
KBD Kabd 72.19 297 *e*P P **10 36 40.9 -2.2**
KBD AMb AMB 10 36 50.6
comp=Z,215nm,1.0s,mb6.0
RDF Al-Radifah 72.34 296 *e*P P **10 36 41.6 -2.4**
RDF AMb AMB 10 36 51.7
comp=Z,393nm,1.0s,mb6.3
MIB Mutribah 72.44 297 *e*P P **10 36 42.0 -2.5**
MIB AMb AMB 10 36 51.9
comp=Z,392nm,0.8s,mb6.4
NAY Al-Naaiem 72.58 297 *e*P P **10 36 42.7 -2.7**
NAY AMb AMB 10 36 52.7
comp=Z,224nm,0.9s,mb6.1
IAZR Azarshahr 72.97 306 *e*P P **10 36 50.2 +2.7**
IMRD Marand 73.12 307 *e*P P **10 36 51.3 +2.9**
ISHB Shabestar 73.22 306 *e*P P **10 36 51.9 +2.9**
DGRG David-gareji 73.23 310 P P **10 36 47.5 -1.5**
MTA Mtatsminda 73.65 310 P P **10 36 51.9 +0.4**
TBLG Delisi 73.69 310 *e*P P **10 36 52.4 +0.7**
TBLG Delisi 73.69 310 P P **10 36 52.4 +0.7**
TTA Tatalina 73.71 28 *e*P P **10 36 52.0 +0.6**
comp=Z,103nm,1.3s,mb5.6
TTA Tatalina 73.71 28 *e*P P **10 36 52.0 +0.6**
TTA pmax pmax
comp=Z,103nm,1.3s,mb5.6
GNI Garni 73.78 308 *e*P P **10 36 52.2 0.0**
GNI Garni 73.78 308⇑ *i*P P **10 36 52.3 0.0**
GNI *e*P pP 10 36 56.0 -1.1
GNI LR LR
comp=Z,5µm,21.0s,MS5.8
GNI Garni 73.78 308 LR LR 11 13 35.4
comp=Z,5µm,21.2s,MS5.8,baz=307,slow=39
GNI Garni 73.78 308⇑ *i*P P **10 36 52.3 0.0**
GNI MLR MLR
comp=Z,5µm,21.0s
GNI Garni 73.78 308 P P **10 36 56.6 +4.3**
SNR=7.8
KIP Kipapa 73.97 71 PFAKE 10 37 00.0 +6.3
KIP LR LR
comp=Z,3µm,21.0s,MS5.6
GOR Gori 74.15 310 P P **10 36 57.6 +3.2**
CLDR Caldiran 74.48 307 *e*P P **10 36 52.9 -3.5**
BHD Baghdad 74.63 301 *i* x x 10 36 54.4
BHD *i* x x 10 46 28.8
HAKT HAKKARI 74.78 306 *i* P P **10 36 56.9 -1.3**
DIGO Kars 74.81 309 *i* P P **10 37 01.1 +2.8**
VANB Van 74.94 307 *e*P P **10 36 56.5 -2.6**
OHAK Old Harbor 74.97 34 *e*P P **10 36 59.2 +0.5**
comp=Z,84nm,1.2s,mb5.5
KIV Kislovodsk 75.06 312 P P **10 36 59.9 +0.3**
comp=Z,788nm,1.1s,mb6.6,SNR=28
KIV Kislovodsk 75.06 312 *e*P P **10 36 59.6 0.0**
comp=Z,314nm,1.4s,mb6.0
KIV LR LR
comp=Z,6µm,21.0s,MS5.9
KIV Kislovodsk 75.06 312*c i*P P **10 36 58.7 -0.9**
KIV *e* 10 37 13.6
KIV *e*S S 10 46 36.4 -1.0
KIV pmax pmax
comp=Z,256nm,2.5s,mb5.7
KIV MLR MLR
comp=Z,5µm,19.0s,MS5.9
AGRB Hanur-Agry 75.17 308 *e*P P **10 36 58.3 -2.0**
KDAK Kodiak Island 75.33 33 *e*P P **10 37 01.3 +0.4**
comp=Z,162nm,1.4s,mb5.8
KDAK LR LR
comp=Z,3µm,21.0s,MS5.5
KDAK Kodiak Island 75.33 33 P P **10 37 01.1 +0.2**
comp=Z,20nm,1.0s,mb5.0,baz=291,slow=2.3,SNR=11
KDAK Kodiak Island 75.33 33 *i* P P **10 37 01.2 +0.3**
VRHR Novokhopersk 75.37 320 *e*P P **10 36 58.8 -2.5**
VRHR pmax pmax
comp=Z,40nm,0.8s,mb5.4
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.7s
PPLA Purkeypile 75.46 28 *e*P P **10 37 02.0 +0.5**
comp=E,162nm,1.4s,mb5.8
RER Riviere de l'E 75.47 244 PFAKE 10 37 10.0 +7.7
RER LR LR
comp=Z,3µm,20.0s,MS5.5
ARTV Artvin 75.84 309 *i* P P **10 37 05.7 +1.5**
HOMI Horasan 75.96 308 *i* P P **10 37 07.7 +2.8**
BPAW Bear Paw Mtn. 75.99 27 *e*P P **10 37 04.8 +0.3**
comp=Z,10.0nm,0.5s,mb5.0
DDEM Demirkent 76.00 309 *i* P P **10 37 04.7 -0.4**
BCA Borcka 76.04 310 *e*P P **10 37 02.6 -2.7**
KLMR Klimovskoe 76.15 330 *e*P P **10 37 02.7 -2.8**
KLMR *e* 10 39 51.9
KLMR *e*SS SS 10 51 41.7 -0.2

KLMR pmax pmax
comp=Z,268nm,7.8s
KLMR pmax pmax
comp=Z,750nm,1.4s,mb6.4
KLMR MLR MLR
comp=Z,8µm,21.0s,MS6.0
COLD Coldfoot 76.26 24 *e*P P **10 37 06.5 +0.4**
comp=Z,96nm,1.2s,mb5.6
TRF Thorofare Moun 76.31 27 *e*P P **10 37 07.1 +0.7**
comp=Z,342nm,1.7s,mb6.0
EZM Erzurum 76.39 308 *e*P P **10 37 01.1 -6.2**
POHA Pohakuloa 76.52 73 *e*P P **10 37 16.3 +7.9**
comp=Z,110nm,1.0s,mb5.7
BNGL BINGOL 76.65 307 *i* P P **10 37 11.8 +3.0**
BEST Besiri 76.67 306 *i* P P **10 37 13.8 +4.8**
VOR Voronezh 76.85 320 ⇓*i*P P **10 37 08.0 -1.7**
VORD Divnogorie 76.85 320 *e*P P **10 37 08.5 -1.2**
VORD *e*S S 10 46 55.5 -1.3
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VORD pmax pmax
comp=E,30nm,0.9s
VORD smax
comp=N,80nm,4.9s
VORD smax
comp=Z,20nm,4.2s
VORD smax
comp=E,40nm,4.3s
VORD MLR MLR
comp=Z,3µm,20.0s,MS5.7
VORD MLR MLR
comp=N,2µm,18.0s,MS5.7
VORD MLR MLR
comp=E,3µm,23.0s,MS5.7
SEW Seward 76.86 31 *e*P P **10 37 10.6 +1.0**
comp=E,270nm,1.6s,mb5.9
MCK McKinley 76.91 27 *e*P P **10 37 08.8 -0.9**
comp=E,302nm,1.3s,mb6.1
VSR Storozhevoye 76.91 320 *e*P P **10 37 08.9 -1.1**
VSR *e* 10 39 58.6
VSR *e*S S 10 46 59.0 +1.5
VSR pmax pmax
comp=Z,40nm,1.2s,mb5.2
VSR pmax pmax
comp=N,9.0nm,0.5s
VSR pmax pmax
comp=E,40nm,1.6s
VSR pmax pmax
comp=Z,120nm,1.9s,mb5.5
VSR pmax pmax
comp=N,120nm,2.7s
VSR pmax pmax
comp=E,70nm,1.1s
VSR smax
comp=E,280nm,7.9s
VSR smax
comp=Z,100nm,5.7s
VSR smax
comp=N,190nm,6.0s
VSR MLR MLR
comp=Z,5µm,20.0s,MS5.8
VSR MLR MLR
comp=N,2µm,13.0s
VSR MLR MLR
comp=E,4µm,18.0s
PMR Palmer 76.93 29 *e*P P **10 37 09.4 -0.6**
comp=E,118nm,1.3s,mb5.7
PMR Palmer 76.93 29 *e*P P **10 37 09.4 -0.5**
PMR pmax pmax
comp=Z,118nm,1.3s,mb5.7
KOPT Kop Dagi 77.04 308 *i* P P **10 37 14.6 +3.6**
MARD Mardin 77.12 306 *i* P P **10 37 10.4 -1.2**
BINT Bingol 77.17 307 *e*P P **10 37 13.8 +2.1**
SOC Sochi 77.24 312 ⇓*i*P P **10 37 10.8 -1.2**
SOC Sochi 77.24 312 *d*P P **10 37 10.6 -1.4**
SOC *e* 10 37 18.9
SOC *e* 10 40 01.8
SOC *e*S S 10 46 58.6 -2.8
SOC *e* 10 47 25.6
SOC *e*SS SS 10 51 49.0 -10
SOC pmax pmax
comp=Z,14nm,0.8s,mb4.9
SOC MLR MLR
comp=Z,6µm,16.0s,MS6.0
COLA College 77.31 26 *e*P P **10 37 12.6 +0.6**
comp=Z,44nm,1.1s,mb5.3
COLA LR LR
comp=Z,2µm,19.0s,MS5.3
COLA College 77.31 26 *e*P P **10 37 12.6 +0.6**
COLA pmax pmax
comp=Z,44nm,1.1s,mb5.3
COLA MLR MLR
comp=Z,2µm,19.0s,MS5.3
MOS Moscow 77.46 325 *e*P P **10 37 10.6 -2.4**
MOS *i* 10 37 19.1
MOS *e* 10 40 07.3
MOS *e*S S 10 47 06.5 +3.2
MOS pmax pmax
comp=Z,600nm,2.2s,mb6.1
MOS pmax pmax
comp=Z,113nm,1.1s,mb5.7
MOS MLR MLR
comp=Z,6µm,18.0s,MS5.9
MOS MLR MLR
comp=E,6µm,18.0s
KTUT Trabzon 77.48 309 *e*P P **10 37 15.8 +2.4**
DIYA Diyarbakir 77.57 306 *i* P P **10 37 17.4 +3.4**
ILAR Eielson Array 77.73 26 P P **10 37 13.8 -0.5**
comp=E,8.3nm,1.0s,mb4.6,baz=251,slow=5.1,SNR=40
GUMT Gumushane 77.76 309 *e*P P **10 37 14.4 -0.7**
PTK Pertek 78.02 307 *e*P P **10 37 14.9 -1.6**
OBN Obninsk 78.11 324 *e*P P **10 37 16.4 -0.3**
comp=E,361nm,1.4s,mb6.1
OBN LR LR
comp=Z,4µm,19.0s,MS5.8
OBN Obninsk 78.11 324 ⇑*e*P P **10 37 14.7 -2.0**
OBN *e*S S 10 47 09.2 -1.2
OBN pmax pmax
comp=Z,46nm,1.4s,mb5.2
OBN MLR MLR
comp=Z,4µm,16.0s,MS5.8
OBN Obninsk 78.11 324 P P **10 37 16.9 +0.2**
comp=Z,834nm,1.1s,mb6.6,SNR=9.6
SVRC Sivrice-ELAZID 78.15 307 *e*P P **10 37 16.0 -1.2**
ESPY Espiye-Giresun 78.27 309 *e*P P **10 37 17.1 -0.8**
PAF Port-aux-Franc 78.29 213 PFAKE 10 37 30.0 +12
PAF LR LR
comp=Z,4µm,19.0s,MS5.7
APA Apatity 78.36 337 *i* P P **10 37 15.0 -2.8**
APA *i* 10 37 22.6
APA *i* 10 40 08.3
APA *i* S S 10 47 10.0 -2.6
APA *i* PS 10 48 05.0
APA MLR MLR
comp=Z,11µm,18.0s,MS6.2
ELZG Elazig 78.38 307 *i* P P **10 37 22.4 +3.8**
PAX Paxson 78.53 28 *e*P P **10 37 21.6 +2.8**
comp=Z,78nm,1.2s,mb5.5
PAX Paxson 78.53 28 *e*P P **10 37 21.6 +2.8**
PAX pmax pmax
comp=Z,78nm,1.2s,mb5.5
DIV Divide 78.58 30 *e*P P **10 37 20.4 +1.2**
comp=Z,198nm,1.2s,mb5.9
KEMA Kemaliye 78.66 308 *i* P P **10 37 18.4 -1.6**
ANN Anapa 78.73 314 *e*P P **10 37 17.5 -2.8**
ANN *e* 10 37 26.2
ANN *e* 10 40 14.8
ANN *e*S S 10 47 14.0 -3.4
ANN *e*SS SS 10 52 20.3 -1.2
ANN *e*SSS 10 55 40.6
ANN pmax pmax
comp=N,28nm,1.0s
ANN pmax pmax
comp=E,11nm,1.0s
ANN pmax pmax
comp=Z,70nm,1.0s,mb5.5
ANN smax
comp=N,395nm,5.6s
ANN MLR MLR
comp=N,4µm,21.0s,MS5.8
ANN MLR MLR
comp=E,3µm,21.0s,MS5.8
ANN MLR MLR
comp=Z,4µm,21.0s,MS5.7

MALT Malatya 78.84 307 *e*P P **10 37 22.2 +1.1**
comp=Z,120nm,1.4s,mb5.6
MALT LR LR
comp=Z,3µm,19.0s,MS5.7
MALT Malatya 78.84 307 *e*P P **10 37 22.2 +1.1**
MALT pmax pmax
comp=Z,120nm,1.4s,mb5.6
MALT MLR MLR
comp=Z,3µm,19.0s,MS5.7
MALT Malatya 78.84 307 ⇑*i*P P **10 37 22.5 +1.4**
ATAB Bozova 79.06 306 *i* P P **10 37 24.6 +2.3**
BMRM Bremner River 79.17 30 *e*P P **10 37 26.1 +3.7**
comp=Z,122nm,1.3s,mb5.7
AKCD Akcadag 79.24 307 *i* P P **10 37 25.7 +2.4**
ATD Arta Tunnel 79.29 279 LR LR 11 11 21.5
comp=Z,1µm,21.3s,MS5.3,baz=200,slow=35
MENT Mentasta 79.32 28 *e*P P **10 37 23.5 +0.3**
SCER sogukcermik 79.62 309 *i* P P **10 37 28.3 +3.0**
GZT Gaziantep 79.66 306 *i* P P **10 37 24.9 -0.7**
ERBA Erbaa 79.79 309 *i* P P **10 37 29.0 +2.8**
CASY Casey 79.81 186 PFAKE 10 37 40.0 +14
CASY LR LR
comp=Z,2µm,22.0s,MS5.5
JOF Joensuu 79.83 332 *e*P P **10 37 24.1 -1.8**
JOF pmax pmax
comp=Z,130nm,0.8s,mb5.9
JOF Joensuu 79.83 332 *ep* P **10 37 24.1 -1.8**
comp=Z,130nm,0.8s,mb5.9
KUZU Kuzuini 80.13 306 *i* P P **10 37 30.9 +2.8**
EGAK Eagle 80.17 26 *e*P P **10 37 27.9 +0.2**
comp=Z,46nm,1.1s,mb5.3
EGAK LR LR
comp=Z,2µm,20.0s,MS5.5
KEV Kevo 80.34 340 *e*P P **10 37 28.7 +0.1**
comp=Z,98nm,1.1s,mb5.7
KEV LR LR
comp=Z,3µm,19.0s,MS5.7
KEV Kevo 80.34 340 *e*P P **10 37 28.7 +0.1**
KEV pmax pmax
comp=Z,98nm,1.1s,mb5.7
KEV MLR MLR
comp=Z,3µm,19.0s,MS5.7
PINB Pinarbasi 80.36 307 *i* P P **10 37 32.0 +2.6**
DRV Dumont d'Urvil 80.38 174 S S 10 47 29.0 -4.7
DRV SS SS 10 52 36.0 -10
DRV R 11 04 00.0
ANDN Andirin 80.58 306 *i* P P **10 37 33.5 +3.0**
SPITS Spitsbergen Ar 80.89 349 P P **10 37 30.8 -0.6**
comp=Z,13nm,0.9s,mb4.9,baz=309,slow=12,SNR=6.1
ARCES ARCESS Array B 80.90 339 P P **10 37 30.5 -1.1**
ARCES LR LR 11 18 29.6
ARCES ARCESS Array B 80.90 339 P P **10 37 30.5 -1.1**
comp=Z,15nm,0.8s,mb5.0,baz=54,slow=6.2,SNR=14
ARCES LR LR 11 18 29.6
comp=Z,4µm,18.7s,MS5.8,baz=257,slow=39
ARE0 ARCESS Array S 80.90 339 *e*P P **10 37 32.1 +0.5**
ASF Jabal al Asfar 81.02 301 LR LR 11 18 43.8
comp=Z,2µm,19.0s,MS5.5,baz=146,slow=40
SIM Simferopol' 81.04 314 *e*P P **10 37 32.8 0.0**
SIM *e*S S 10 47 40.3 -1.5
SIM pmax pmax
comp=Z,54nm,0.9s,mb5.5
SIM MLR MLR
comp=Z,5µm,20.7s,MS5.9
DAWY Dawson 81.05 26 *e*P P **10 37 33.1 +0.7**
YURE YUREGIR 81.26 306 *i* P P **10 37 35.6 +1.4**
CTKT Corum 81.27 310 *i* P P **10 37 37.2 +3.1**
KBS Kingsbay 81.42 350 *e*P P **10 37 31.8 -2.5**
KBS *e*S S 10 47 44.9 +0.2
KBS AMS AMS 11 17 04.8
comp=Z,7µm,19.0s,MS6.0
KBS Kingsbay 81.42 350 *e*P P **10 37 34.9 +0.6**
comp=Z,131nm,1.5s,mb5.6
KBS LR LR
comp=Z,8µm,19.0s,MS6.1
KBS Kingsbay 81.42 350 *e*P P **10 37 34.9 +0.7**
KBS pmax pmax
comp=Z,131nm,1.5s,mb5.6
KBS MLR MLR
comp=Z,8µm,19.0s,MS6.1
HWQ Hawqa 81.45 303 *e*P P **10 37 36.3 +1.1**
BJO Bjornoya 81.47 345 *e*S S 10 47 46.7 +1.5
BJO AMS AMS 11 16 46.6
comp=Z,5µm,17.0s,MS5.9
AVNT Avonos 81.54 308 *i* P P **10 37 37.9 +2.3**
RCY Rachaya 81.69 302 *e*P P **10 37 39.2 +2.7**
BHL Bhannes 81.75 303 *e*P P **10 37 37.1 +0.3**
CDAG Cicekdag 81.76 309 *i* P P **10 37 38.1 +1.3**
KTK1 Kautokeino 81.81 339 *e*P P **10 37 34.5 -1.9**
KTK1 AMB AMB 10 37 45.6
comp=Z,444nm,1.4s,mb6.2
KTK1 AMS AMS 11 18 48.4
comp=Z,8µm,17.4s,MS6.1
GULE Gulek 81.86 306 *i* P P **10 37 36.6 -0.7**
RAR Rarotonga 81.90 114 LR LR 11 12 48.1
comp=Z,1µm,18.0s,MS5.2,baz=288,slow=35
ILGA Ilgaz 82.00 310 *i* P P **10 37 39.0 +1.0**
MMAI Mount Meron Ar 82.12 302 P P **10 37 41.3 +2.5**
comp=Z,144nm,1.1s,mb5.8,baz=76,slow=7.0,SNR=19
MMAI LR LR 11 20 30.9
comp=Z,2µm,18.8s,MS5.5,baz=70,slow=40
BALT Daday 82.16 311 *i* P P **10 37 37.4 -1.4**
KAF Kangasniemi 82.26 332 *e*P P **10 37 37.7 -1.2**
KAF pmax pmax
comp=Z,66nm,0.7s,mb5.7
KAF Kangasniemi 82.26 332 *ep* P **10 37 37.7 -1.2**
comp=Z,66nm,0.7s,mb5.7,baz=67,slow=5.0
BR131 Keskin Array S 82.30 309 *e*P P **10 37 38.8 -0.8**
comp=Z,7.5nm,0.7s,mb4.7
BR131 LR LR
comp=Z,2µm,19.0s,MS5.5
BRTR Keskin Array B 82.30 309 P P **10 37 37.5 -2.1**
comp=Z,3.1nm,0.7s,mb4.3,baz=99,slow=4.0,SNR=17
BRTR PP PP 10 40 41.0 -7.0
comp=Z,6.5nm,1.1s,baz=81,slow=7.6,SNR=4.7
BRTR LR LR 11 19 55.4
comp=Z,2µm,20.6s,MS5.5,baz=266,slow=40
BRTR Keskin Array B 82.30 309 *i* P P **10 37 38.9 -0.7**
ELDT Eldivan 82.32 310 *i* P P **10 37 42.3 +2.6**
INK Inuvik 82.36 22 *e*P P **10 37 38.8 -0.5**
comp=Z,135nm,1.2s,mb5.8
INK Inuvik 82.36 22 LR LR 11 13 10.0
comp=Z,2µm,20.5s,MS5.4,baz=97,slow=35
INK Inuvik 82.36 22 *e*P P **10 37 38.8 -0.5**
INK pmax pmax
comp=Z,135nm,1.2s
ABPO Ambohimpanom 82.39 249 *e*P P **10 37 41.0 +0.6**
comp=Z,53nm,1.2s,mb5.3
ABPO LR LR
comp=Z,2µm,21.0s,MS5.4
ABPO Ambohimpanom 82.39 249 *e*P P **10 37 41.0 +0.6**
ABPO pmax pmax
comp=Z,53nm,1.2s,mb5.3
ABPO MLR MLR
comp=Z,2µm,21.0s,MS5.4
FINES FINESS Array B 82.52 331 P P **10 37 39.3 -1.0**
comp=Z,8.0nm,0.7s,mb4.9,baz=58,slow=5.3,SNR=13
FINES LR LR 11 18 07.6
comp=Z,8µm,18.0s,MS6.1,baz=82,slow=38
MIR Mirnyy 82.72 192 *e*P P **10 37 37.0 -4.0**
MIR pmax pmax
comp=Z,41nm,1.0s,mb5.4
MIR MLR MLR
comp=N,1µm,18.0s,MS5.4
MIR MLR MLR
comp=E,1µm,18.0s,MS5.4
MIR MLR MLR
comp=Z,2µm,18.0s,MS5.6
BBAL Bala 82.72 309 *i* P P **10 37 44.2 +2.4**
TRO Tromso 83.09 340 *e*P P **10 37 39.9 -3.3**
TRO AMB AMB 10 37 51.8
comp=Z,153nm,1.4s,mb5.8
TRO *e*S S 10 48 00.9 -1.1
TRO AMS AMS 11 15 39.5
comp=Z,4µm,23.6s,MS5.8
MICGM Minsk 83.17 324 *e*P P **10 37 42.0 -1.8**
AKASG Malin Array Be 83.20 320 P P **10 37 42.0 -2.1**
comp=Z,21nm,0.9s,mb5.2,baz=66,slow=5.0,SNR=18
AKASG PP PP 10 40 57.6 +2.5
comp=Z,5.7nm,0.9s,baz=82,slow=7.1,SNR=4.1
AKASG LR LR 11 18 23.1
comp=Z,4µm,19.8s,MS5.8,baz=90,slow=38
AKASG Malin Array Be 83.20 320 P P **10 37 42.0 -2.0**
AKASG 10 40 57.6
AKBB Malin Array Si 83.20 320 *e*P P **10 37 43.1 -1.0**

MNK Minsk 83.20 324 *e*P P **10 37 42.0 -1.9**
MNK *e*S S 10 48 06.0 +2.4
MNK MLR MLR
comp=Z,12µm,18.0s,MS6.3
KIEV Kiev 83.21 320 *e*P P **10 37 42.1 -2.0**
comp=Z,82nm,1.2s,mb5.6
KIEV LR LR
comp=Z,4µm,21.0s,MS5.8
KIEV Kiev 83.21 320 *e*P P **10 37 42.1 -2.0**
KIEV pmax pmax
comp=Z,82nm,1.2s,mb5.6
KIEV MLR MLR
comp=Z,4µm,21.0s,MS5.8
SGKT Sivrigoynuk 83.33 310 *i* P P **10 37 45.4 +0.5**
CSS Prodhromos 83.44 304 P P **10 37 45.0 -0.6**
comp=Z,1.7nm,1.1s
ERMK Ermenek 83.45 306 *i* P P **10 37 43.7 -1.9**
MAMC Mammari 83.49 304 P P **10 37 45.9 0.0**
NACGM Naroch 83.70 325 *e*P P **10 37 43.0 -3.5**
ALFC Alevga 83.99 305 P P **10 37 46.6 -1.8**
comp=Z,3.0nm,1.0s,mb4.4
GAZI Gazipasa 84.00 306 *i* P P **10 37 46.0 -2.5**
SKAG Skagway 84.00 30 *e*P P **10 37 51.5 +3.5**
comp=Z,94nm,1.2s,mb5.8
HENT Hendek 84.14 310 *i* P P **10 37 49.8 +0.7**
PPCY Paphos 84.25 304 P P **10 37 47.7 -2.1**
KIS Kishinev 84.27 317 *e*P P **10 37 46.0 -3.6**
comp=Z,600nm,2.8s,mb6.2
KIS Kishinev 84.27 317 *e*PP PP 10 41 04.0 0.0
KIS *e*S S 10 48 09.0 -5.7
KIS Kishinev 84.27 317 *e*PS 10 49 09.0
KIS *e*SS SS 10 53 29.0 -15
KIS *e*SSS 10 57 31.0
KIS *e*L 11 06 28.0
KIS LRM 11 18 54.0
comp=Z,8µm,22.0s
KIS Kishinev 84.27 317 *e*P P **10 37 46.0 -3.6**
KIS *e* pP 10 37 51.0 -3.5
KIS *e* 10 38 05.0
KIS *e* 10 41 04.0
KIS *e*S S 10 48 09.0 -5.7
KIS *e*PS 10 49 09.0
KIS MLR MLR
comp=Z,9µm,21.0s,MS6.1
KIS MLR MLR
comp=N,3µm,18.0s,MS5.9
KIS MLR MLR
comp=E,3µm,20.0s,MS5.9
KIS MLR MLR
comp=Z,8µm,22.0s
ESKT Eskisehir 84.45 309 *i* P P **10 37 49.3 -1.4**
BOLV Bolvadin 84.55 308 *i* P P **10 37 53.9 +2.7**
SIT Sitka 84.65 33 *e*P P **10 37 51.5 +0.1**
comp=Z,152nm,1.3s,mb6.0
SIT Sitka 84.65 33 *e*P P **10 37 51.5 +0.2**
SIT pmax pmax
comp=Z,152nm,1.3s,mb6.0
TLCR 84.68 315 ⇓*i*P P **10 37 50.8 -0.9**
TLCR 84.68 315 ⇓*i*P P **10 37 50.8 -0.9**
IAS Iasi 85.06 317 P P **10 37 58.2 +4.6**
TIRR Tirgusor 85.12 314 *e*P P **10 37 53.3 -0.6**
comp=Z,151nm,1.7s,mb5.8
TIRR Tirgusor 85.12 314 *e*P P **10 37 53.3 -0.7**
TIRR pmax pmax
comp=Z,151nm,1.7s,mb5.8
TIRR Tirgusor 85.12 314 ⇑*i*P P **10 37 53.8 -0.2**
CFR Carcaliu 85.15 315 ⇓*i*P P **10 37 55.4 +1.3**
CFR P pP 10 37 58.5 -0.4
CFR Carcaliu 85.15 315 ⇓*i*P P **10 37 55.4 +1.3**
KORT Korkueli 85.38 307 *i* P P **10 37 53.2 -2.2**
PSN Preselentsi 85.47 314 *i* P P **10 37 58.9 +3.2**
GDZ Gediz 85.58 309 *i* P P **10 37 57.0 +0.7**
KHAL Karahalli 85.74 308 *i* P P **10 37 55.3 -1.8**
TESR 85.83 317 ⇑P P **10 37 56.6 -0.8**
TESR 85.83 317 ⇑*i*P P **10 37 56.6 -0.8**
ELBA Catalca 85.89 311 *i* P P **10 37 59.1 +1.3**
GRER 85.89 316 ⇑P P **10 37 58.8 +1.0**
GRER 85.89 316 ⇑*i*P P **10 37 58.8 +1.0**
VRI Vrincioaia 85.94 316 ⇑P P **10 37 58.0 -0.1**
VRI Vrincioaia 85.94 316 ⇑*i*P P **10 37 58.0 0.0**
GOLH Golhisar 85.94 307 *i* P P **10 37 58.7 +0.5**
SUW Suwalki 85.96 325 *e*P P **10 37 56.7 -1.2**
SUW *e*pP pP 10 38 01.8 -1.0
SUW *e*S S 10 48 36.1 +4.9
SUW LMZ 11 17 46.9
comp=Z,6µm,24.7s
SUW Suwalki 85.96 325 *e*P P **10 37 58.1 +0.2**
comp=Z,397nm,1.3s,mb6.5
SUW Suwalki 85.96 325 *e*P P **10 37 56.7 -1.2**
SUW *e**PP pP 10 38 01.8 -1.0
SUW MLR MLR
comp=Z,6µm,24.7s,MS5.9
PLOR Plostina 86.00 316 ⇓P P **10 37 58.3 0.0**
PLOR Plostina 86.00 316 ⇓*i*P P **10 37 58.3 0.0**
PRD Provadia 86.14 313 *i* P P **10 38 02.5 +3.5**
AKAS Kas 86.14 306 *i* P P **10 37 58.6 -0.6**
DEMI Demirci 86.17 309 *i* P P **10 38 01.1 +1.8**
DURS Dursunbey 86.22 310 *i* P P **10 38 00.9 +1.4**
DNZL Cakiroluk 86.24 308 *i* P P **10 38 02.0 +2.3**
BURAR Bucovina Array 86.49 318 ⇑P P **10 37 59.7 -1.0**
BURAR Bucovina Array 86.49 318 ⇑*i*P P **10 37 59.7 -1.0**
BUR08 Bucovina Ar. S 86.50 318 *e*P P **10 37 59.7 -1.0**
SULR 86.57 315 P P **10 38 04.5 +3.3**
MLR Muntele Rosu 86.57 316 ⇓P P **10 38 00.5 -0.6**
MLR Muntele Rosu 86.57 316 LR LR 11 21 31.6
comp=Z,6µm,20.0s,MS6.0,baz=63,slow=39
MLR Muntele Rosu 86.57 316 ⇓*i*P P **10 38 00.5 -0.6**
LVV L'vov 86.65 320 *e*P P **10 38 05.4 +4.0**
LVV *e* 10 43 26.0
LVV *e* 10 48 31.4
LVV *e* 10 49 32.2
TURN Turunc 86.77 307 *i* P P **10 38 05.1 +2.8**
BALY Balya 86.83 310 *i* P P **10 37 59.9 -2.6**
AKHS Akhisar 86.89 309 *i* P P **10 38 04.9 +2.0**
JMB Yambol 86.90 313 P P **10 38 06.3 +3.5**
JMB Yambol 86.90 313 P P **10 38 06.3 +3.5**
JMB Yambol 86.90 313 *i* P P **10 38 06.0 +3.2**
SART Tekirdag 86.92 311 *i* P P **10 38 03.6 +0.7**
DLBC Dease Lake 86.93 30 *e*P P **10 37 54.4 -8.2**
DLBC Dease Lake 86.93 30 LR LR 11 12 24.3
comp=Z,892nm,19.6s,MS5.2,baz=306,slow=32
AYDN Tasoluk 87.14 308 *i* P P **10 38 06.8 +2.7**
SZH Strazhica 87.16 314 *i* P P **10 38 06.6 +2.6**
VOIR 87.19 316 ⇑P P **10 38 07.8 +3.7**
VOIR 87.19 316 ⇑*i*P P **10 38 07.8 +3.7**
ARG Arkhangelos 87.30 306 P P **10 38 07.0 +2.1**
ARG Arkhangelos 87.30 306 P P **10 38 07.0 +2.1**
KMBO Kilima Mbogo 87.43 268 *e*P P **10 38 05.5 -0.4**
comp=Z,100nm,1.4s,mb5.9
KMBO Kilima Mbogo 87.43 268 P P **10 38 05.5 -0.4**
comp=Z,18nm,1.1s,mb5.2,baz=0.4,slow=24,SNR=12
KMBO LR LR 11 18 25.9
comp=Z,2µm,19.8s,MS5.4,baz=88,slow=36
KMBO Kilima Mbogo 87.43 268 *e*P P **10 38 05.5 -0.4**
KMBO pmax pmax
comp=Z,100nm,1.4s
KMBO Kilima Mbogo 87.43 268 P P **10 38 07.1 +1.2**
SNR=32
KDAG Bornova 87.43 309 *i* P P **10 38 07.3 +1.8**
KWP Kalwaria Pacla 87.52 320 *e*P P **10 38 05.7 0.0**
KWP *e*pP pP 10 38 08.9 -1.6
KWP LMZ 11 20 51.6
comp=Z,5µm,22.1s
KWP Kalwaria Pacla 87.52 320 ⇑P P **10 38 05.2 -0.5**
KWP LR LR
comp=Z,5µm,20.0s,MS5.9
KWP Kalwaria Pacla 87.52 320 ⇑*i*P P **10 38 05.2 -0.5**
NSS Namsos 87.56 336 *e*SKS 10 48 33.9
PVL Pavlikeni 87.59 314 *i* P P **10 38 09.3 +3.2**
GCAM G?zelcaml? 87.63 308 *i* P P **10 38 08.4 +2.0**
ALN Alexandroupoli 87.70 311 P P **10 38 04.1 -2.6**
ALN Alexandroupoli 87.70 311 P P **10 38 04.1 -2.6**
DAG Danmarks Havn 87.71 352 *i* P P **10 38 09.0 +2.9**
URLA Izmir 87.95 309 *i* P P **10 38 07.6 -0.4**
KDZ Kurdzhali 87.95 312 *i* P P **10 38 10.2 +2.3**
PRK Paraskevi 87.96 310 P P **10 38 09.9 +1.9**
PRK Paraskevi 87.96 310 P P **10 38 09.9 +1.9**
TRPA Tarpa 88.08 319 ⇓*i*P P **10 38 11.6 +3.3**
UZH Uzhgorod 88.08 320 *d*P P **10 38 07.2 -1.1**
UZH *e* pP 10 38 13.0 -0.3
UZH *e* 10 41 39.0
UZH *e*PPP 10 43 36.8

UZH e 10 48 35.6
UZH eS S 10 48 48.4 -3.5
UZH ePS 10 49 49.8
UZH eSS SS 10 54 36.6 -3.0
PLD Plovdiv 88.34 313 P **P** **10 38 12.0 +2.3**
PLD Plovdiv 88.34 313 P **P** **10 38 12.0 +2.3**
PLD Plovdiv 88.34 313 *i* P **P** **10 38 11.7 +2.0**
DRGR 88.36 318 ⇑P **P** **10 38 09.0 -0.7**
DRGR P pP 10 38 12.8 -1.9
DRGR 88.36 318 ⇑*i* P **P** **10 38 09.0 -0.7**
STHS Stebnicka Huta 88.50 320 *e*P **P** **10 38 11.7 +1.4**
comp=Z,31nm,1.4s,mb5.3
STHS e pP 10 38 15.7 +0.5
STHS Stebnicka Huta 88.50 320 *e*P **P** **10 38 11.7 +1.4**
STHS pmax pmax
comp=Z,31nm,1.4s,mb5.3
STHS Stebnicka Huta 88.50 320 *e*P **P** **10 38 11.7 +1.4**
STHS *e*pP pP 10 38 15.7 +0.5
CRVS Cervenica-Dubn 88.52 320 *e*P **P** **10 38 11.0 +0.6**
comp=Z,150nm,1.4s,mb6.1
CRVS e pP 10 38 15.7 +0.4
CRVS eS S 10 48 48.7 -7.4
CRVS LR LR
comp=Z,3µm,20.4s,MS5.8
CRVS Cervenica-Dubn 88.52 320 *e*P **P** **10 38 11.0 +0.6**
CRVS eS S 10 48 48.7 -7.4
CRVS pmax pmax
comp=Z,150nm,1.4s,mb6.1
CRVS MLR MLR
comp=Z,3µm,20.4s,MS5.8
CRVS Cervenica-Dubn 88.52 320 *e*P **P** **10 38 11.0 +0.6**
CRVS *e*pP pP 10 38 15.7 +0.4
HFS Hagfors 88.69 332 P **P** **10 38 09.7 -1.2**
comp=Z,5.1nm,0.6s,mb5.0,baz=95,slow=3.3,SNR=12
HFS LR LR 11 20 56.7
comp=Z,5µm,18.2s,MS6.0,baz=57,slow=38
KAVA Kavala 88.79 312 P **P** **10 38 13.9 +2.0**
RES Resolute Bay 89.05 10 *e*P **P** **10 38 13.3 +0.9**
comp=Z,78nm,1.0s,mb6.0
RES Resolute Bay 89.05 10 *e*P **P** **10 38 13.3 +0.9**
RES pmax pmax
comp=Z,78nm,1.0s,mb6.0
NIE Niedzica 89.07 321 *e*P **P** **10 38 13.2 +0.2**
OJC Ojcow 89.12 322 *i* P **P** **10 38 12.7 -0.5**
OJC *e*PP PP 10 41 43.7 +0.7
OJC eS S 10 49 00.3 -1.4
OJC L 11 23 01.2
comp=Z,5.6nm,20.7s
OJC Ojcow 89.12 322 ⇓*i* P **P** **10 38 12.7 -0.5**
OJC *e* 10 41 43.7
OJC eS S 10 49 00.3 -1.4
MMB Musomiste 89.19 312 *i* P **P** **10 38 13.0 -0.7**
VTS Vitosha 89.27 314 P **P** **10 38 13.6 -0.5**
VTS Vitosha 89.27 314 P **P** **10 38 13.6 -0.5**
VTS Vitosha 89.27 314 ⇑*i* P **P** **10 38 14.1 0.0**
VTS Vitosha 89.27 314 *i* P **P** **10 38 16.0 +1.9**
KECS Kecovo 89.27 320 *e*P **P** **10 38 13.9 0.0**
comp=Z,29nm,1.4s,mb5.4
KECS *e* pP 10 38 18.6 -0.3
KECS *e*PP PP 10 41 46.9 +2.7
KECS Kecovo 89.27 320 *e*P **P** **10 38 13.9 0.0**
KECS *e* 10 41 46.9
KECS pmax pmax
comp=Z,29nm,1.4s,mb5.4
KECS Kecovo 89.27 320 *e*P **P** **10 38 13.9 0.0**
KECS *e*pP pP 10 38 18.6 -0.3
KECS *e*PP PP 10 41 46.9 +2.7
OUR Ouranopolis 89.36 311 P **P** **10 38 15.8 +1.2**
OUR Ouranopolis 89.36 311 P **P** **10 38 15.8 +1.2**
NB2 NORSAR Subarra 89.40 333 P **P** **10 38 12.3 -2.0**
baz=68,slow=4.8
NOA NORSAR Array B 89.40 333 P **P** **10 38 12.4 -1.9**
NOA PP PP 10 41 45.7 +0.8
NOA LR LR 11 21 35.8
NOA NORSAR Array B 89.40 333 P **P** **10 38 12.4 -1.9**
comp=Z,4.1nm,0.7s,mb4.9,baz=67,slow=4.4,SNR=11
NOA PP PP 10 41 45.7 +0.8
comp=Z,5.1nm,0.9s,baz=67,slow=7.9,SNR=4.9
NOA LR LR 11 21 35.8
comp=Z,7µm,20.2s,MS6.1,baz=55,slow=38
NOA NORSAR Array B 89.40 333 P **P** **10 38 12.4 -1.9**
NOA 10 41 45.7
SRS Serrai 89.42 312 P **P** **10 38 16.4 +1.6**
SRS Serrai 89.42 312 P **P** **10 38 16.4 +1.6**
BZS Buzias 89.45 317 P **P** **10 38 17.2 +2.4**
NAO01 NORSAR Array S 89.64 333 *e*P **P** **10 38 19.9 +4.5**
comp=Z,9.6nm,0.8s,mb5.2
SOH Sokhos 89.68 312 P **P** **10 38 17.3 +1.3**
SOH Sokhos 89.68 312 P **P** **10 38 17.3 +1.3**
AOS Alonnisos 89.77 310 P **P** **10 38 17.6 +1.1**
AOS Alonnisos 89.77 310 P **P** **10 38 17.6 +1.1**
PSZ Piszkesteto 89.83 319 ⇑P **P** **10 38 16.7 +0.1**
PSZ P pP 10 38 19.7 -1.8
PSZ Piszkesteto 89.83 319 ⇑*i*P **P** **10 38 16.7 +0.1**
PSZ Piszkesteto 89.83 319 ⇑*e*PcP PcP 10 38 19.4 +1.5
KNT Kendrikon 89.91 312 P **P** **10 38 18.8 +1.7**
KNT Kendrikon 89.91 312 P **P** **10 38 18.8 +1.7**
LIKS Likavka 89.94 321 *e*P **P** **10 38 23.1 +6.0**
LIKS Likavka 89.94 321 *e*pP pP 10 38 23.1 +1.1
VAY Valandovo 90.10 312 P **P** **10 38 19.2 +1.2**
VAY Valandovo 90.10 312 P **P** **10 38 19.2 +1.2**
VAY Valandovo 90.10 312 *e*P **P** **10 38 17.6 -0.4**
BSD Bornholm Skovb 90.11 327 *i* P **P** **10 38 20.1 +2.4**
comp=Z,31nm,1.0s,mb5.6
RAC Raciborz 90.14 322 *e*P **P** **10 38 16.5 -1.5**
RAC eS S 10 49 11.1 0.0
RAC LR LR
comp=Z,4µm,20.0s,MS5.8
RAC Raciborz 90.14 322 *e*P **P** **10 38 16.5 -1.5**
RAC eS S 10 49 11.1 0.0
BBB Bella Bella 90.19 36 LR LR 11 15 31.4
comp=Z,666nm,21.0s,MS5.0,baz=318,slow=33
PPT Papeete 90.22 108 eS S 10 49 07.7 -5.3
comp=Z,5µm,28.5s
PPT Papeete 90.22 108 *e*PS PS 10 50 15.4 -5.7
comp=Z,2µm,26.2s
PPT eSS SS 10 55 11.2 -1.6
comp=Z,3µm,25.2s
PPT eLQ 11 02 53.4
comp=Z,13µm,33.2s
PPT eLR LR 11 06 56.5
comp=Z,5µm,30.2s,baz=298
PPT Papeete 90.22 108 LR LR 11 16 29.9
comp=Z,1µm,18.3s,MS5.4,baz=282,slow=34
XOR Xorichti 90.22 310 P **P** **10 38 19.5 +0.9**
XOR Xorichti 90.22 310 P **P** **10 38 19.5 +0.9**
OKC Ostrava-Krasne 90.25 322 *e*P **P** **10 38 18.2 -0.3**
OKC *e* 10 42 00.2
OKC MLR MLR
comp=Z,3µm,17.7s,MS5.8
OKC Ostrava-Krasne 90.25 322 *e*P **P** **10 38 18.2 -0.3**
OKC *e*pP pP 10 38 23.2 -0.2
OKC *ex* x 10 41 34.4
OKC *e*PP PP 10 42 00.2 +8.2
OKC eSKS 10 48 52.6
OKC *ex* x 10 50 02.8
OKC AMS AMS 11 21 50.0
comp=Z,3µm,17.7s
JMIC Jan Mayen 90.26 346 eSKS 10 48 47.2
JMIC AMS AMS 11 21 53.3
comp=Z,4µm,15.7s,MS5.9
VYHS Vyhne 90.30 320 *e*P **P** **10 38 18.9 +0.1**
comp=Z,31nm,1.5s,mb5.4
VYHS *e* pP 10 38 23.6 -0.1
VYHS *e*PP PP 10 42 00.3 +7.9
VYHS eS S 10 49 11.5 -1.2
VYHS eSS SS 10 55 23.5 +12
VYHS LR LR
comp=Z,3µm,25.3s,MS5.6
VYHS Vyhne 90.30 320 *e*P **P** **10 38 18.9 +0.1**
VYHS *e* 10 42 00.3
VYHS eS S 10 49 11.5 -1.2
VYHS pmax pmax
comp=Z,31nm,1.5s,mb5.4
VYHS MLR MLR
comp=Z,3µm,25.3s,MS5.6
VYHS Vyhne 90.30 320 *e*P **P** **10 38 18.9 +0.1**
VYHS *e*pP pP 10 38 23.6 -0.1
VYHS *e*PP PP 10 42 00.3 +7.9
VYHS eS S 10 49 11.5 -1.2
VYHS eSS SS 10 55 23.5 +12
GRG Griva 90.33 312 P **P** **10 38 20.4 +1.3**
GRG Griva 90.33 312 P **P** **10 38 20.4 +1.3**

LIT Litokhoron 90.52 311 P **P** **10 38 16.4 -3.6**
LIT Litokhoron 90.52 311 P **P** **10 38 16.4 -3.6**
BUD Budapest 90.53 319 ⇑*e*PcP PcP 10 38 22.3 +1.3
KOLL Kolacno 90.54 320 *e*P pP 10 38 25.0 +0.2
KOLL Kolacno 90.54 320 *e*pP pP 10 38 25.0 +0.2
MORC Moravsky Berou 90.64 322 ⇑P **P** **10 38 20.0 -0.3**
MORC Moravsky Berou 90.64 322 ⇑*i* P **P** **10 38 20.0 -0.3**
SKO Skopje 90.70 313 *e*P **P** **10 38 20.8 0.0**
KONO Kongsberg 90.75 333 *e*P **P** **10 38 22.8 +2.2**
KONO *e*SKS 10 48 56.4
KONO *e*SS SS 10 55 35.0 +17
KONO AMS AMS 11 20 53.6
comp=Z,6µm,21.1s,MS6.0
KONO Kongsberg 90.75 333 PFAKE 10 38 30.0 +9.4
KONO LR LR
comp=Z,8µm,22.0s,MS6.1
KSP Ksiaz 90.99 323 *e*P **P** **10 38 21.6 -0.4**
KSP *e*pP pP 10 38 26.0 -0.9
KSP *e*S S 10 49 15.2 -3.7
KSP LMZ 11 21 50.1
comp=Z,8µm,18.2s
KSP Ksiaz 90.99 323 *e*P **P** **10 38 20.7 -1.2**
KSP *e* 10 49 03.5
KSP MLR MLR
comp=Z,7µm,24.9s,MS6.0
DIVS Divibare 91.03 316 P **P** **10 38 21.8 -0.5**
KRUS Krusevo 91.03 313 *e*P **P** **10 38 21.0 -1.4**
BIA Bitola 91.09 312 *e*P **P** **10 38 22.5 -0.1**
DPC Dobruska-Polom 91.16 322 *e*P **P** **10 38 26.3 +3.6**
DPC *e* 10 50 25.0
DPC MLR MLR
comp=Z,4µm,18.0s,MS5.9
DPC Dobruska-Polom 91.16 322 *e*P **P** **10 38 26.3 +3.6**
DPC *ex* x 10 41 40.3
DPC *e*PP PP 10 42 07.9 +8.7
DPC *e*SP SP 10 50 25.0 -2.9
DPC AMS AMS 11 20 00.0
comp=Z,4µm,18.0s
RGN Rugen 91.19 327 *e*P **P** **10 38 25.5 +2.8**
comp=Z,97nm,1.2s,mb6.0
PKSM Moragy 91.21 318 ⇑P **P** **10 38 27.3 +4.3**
PKSM Moragy 91.21 318 P **P** **10 38 25.8 +2.7**
PKSM Moragy 91.21 318 ⇑*i* P **P** **10 38 27.3 +4.2**
GUR Goura 91.28 309 P **P** **10 38 24.3 +0.7**
UPC Upice 91.29 323 *e*P **P** **10 38 26.6 +3.3**
UPC Upice 91.29 323 *e*P **P** **10 38 26.6 +3.3**
VRAC Vranov 91.39 321 P **P** **10 38 24.2 +0.4**
VRAC P pP 10 38 28.2 -0.6
VRAC ⇑P pP 10 38 29.3 +0.6
VRAC PP PP 10 42 05.8 +4.7
VRAC LR LR 11 24 45.4
VRAC Vranov 91.39 321 P **P** **10 38 24.3 +0.4**
comp=Z,13nm,1.0s,mb5.2,baz=148,slow=14,SNR=5.1
VRAC PP PP 10 42 05.8 +4.7
comp=Z,4.0nm,0.7s,baz=43,slow=12,SNR=4.8
VRAC LR LR 11 24 45.3
comp=Z,5µm,21.2s,MS5.9,baz=84,slow=39
VRAC Vranov 91.39 321 P **P** **10 38 24.3 +0.5**
VRAC 10 42 05.8
VRAC Vranov 91.39 321 ⇑*i* P **P** **10 38 29.3 +5.5**
VLX Vlachokerasia 91.43 309 P **P** **10 38 25.3 +1.0**
ZST Bratislava 91.49 320 *e*P **P** **10 38 25.6 +1.3**
comp=Z,368nm,3.7s
ZST *e*PP PP 10 42 05.2 +3.4
ZST eS SKSac 10 48 59.6 +3.1
ZST LR LR
comp=Z,1µm,21.4s,MS5.4
ZST Bratislava 91.49 320 *e*P **P** **10 38 25.6 +1.3**
ZST *e*PP PP 10 42 05.2 +3.4
ZST eS SKSac 10 48 59.6 +3.1
IVA Berane 91.50 315 ⇓*i* P **P** **10 38 25.0 +0.5**
IVA Berane 91.50 315 ⇓*i* P **P** **10 38 25.0 +0.5**
PVY Plav 91.53 314 ⇓*i* P **P** **10 38 26.0 +1.4**
PVY Plav 91.53 314 ⇓*i* P **P** **10 38 26.0 +1.4**
BCI Bajram Curri 91.55 314 *i* PN **P** **10 38 28.2 +3.5**
KBN Korca 91.60 312 *i* PN **P** **10 38 26.2 +1.2**
PLE Pljevlja 91.69 315 ⇓*i* P **P** **10 38 24.9 -0.5**
PLE Pljevlja 91.69 315 ⇓*i* P **P** **10 38 24.9 -0.4**
PLE Pljevlja 91.69 315 ⇓*i* P **P** **10 38 25.0 -0.4**
MAW Mawson 91.70 200 P **P** **10 38 21.6 -3.1**
MAW LR LR 11 15 54.9
MAW Mawson 91.70 200 P **P** **10 38 21.6 -3.1**
comp=Z,1.9nm,1.0s,mb4.4,baz=56,slow=3.6,SNR=4.7
MAW LR LR 11 15 54.9
comp=Z,918nm,20.9s,MS5.2,baz=56,slow=33
PUK Puka 91.77 314 *i* PN **P** **10 38 28.1 +2.3**
RUE Ruedersdorf 91.79 325 *e*P **P** **10 38 28.4 +2.8**
comp=Z,74nm,1.2s,mb5.9
YKA Yellowknife Ar 91.94 23 P **P** **10 38 25.6 -0.4**
comp=Z,2.0nm,0.6s,mb4.6,baz=301,slow=4.5,SNR=14
YKA PKiKP PKiKP 10 43 14.5 -1.9
comp=Z,0.8nm,0.9s,baz=316,slow=1.8,SNR=4.3
YKA PKKPbc PKKPbc 10 55 41.0 -4.4
comp=Z,0.7nm,0.7s,baz=125,slow=3.0,SNR=6.0
SOP Sopron 92.02 320 ⇑*e*PcP PcP 10 38 29.6 +2.0
TIR Tirane 92.02 313 P **P** **10 38 29.0 +2.1**
TIR Tirane 92.02 313 P **P** **10 38 29.0 +2.1**
TREC Trest 92.06 322 *e*SKS 10 49 03.5
TREC AMS AMS 11 21 40.0
comp=Z,4µm,19.5s
UPM Unac-Piva 92.07 315 ⇓*i* P **P** **10 38 26.1 -1.0**
UPM Unac-Piva 92.07 315 ⇓*i* P **P** **10 38 26.1 -1.0**
TTG Podgorica 92.09 314 ⇓*i* P **P** **10 38 26.9 -0.3**
TTG Podgorica 92.09 314 ⇓*i* P **P** **10 38 26.9 -0.3**
TTG Podgorica 92.09 314 ⇓*i* P **P** **10 38 26.9 -0.3**
PVCC Panska Ves 92.13 323 *e*P **P** **10 38 31.1 +3.9**
PVCC MLR MLR
comp=Z,5µm,16.9s,MS6.0
PVCC Panska Ves 92.13 323 *e*P **P** **10 38 31.1 +3.9**
PVCC AMS AMS 11 22 20.0
comp=Z,5µm,16.9s
NKY Niksic 92.14 315 ⇓*i* P **P** **10 38 26.9 -0.5**
NKY Niksic 92.14 315 ⇓*i* P **P** **10 38 26.9 -0.5**
NKY Niksic 92.14 315 ⇓*i* P **P** **10 38 26.9 -0.5**
BER Bergen 92.25 334 *e*SKS 10 49 04.4
BER AMS AMS 11 23 05.1
comp=Z,7µm,20.3s,MS6.1
ULC Ulcinj 92.25 314 ⇓*i* P **P** **10 38 27.2 -0.8**
ULC Ulcinj 92.25 314 ⇓*i* P **P** **10 38 27.2 -0.7**
ULC Ulcinj 92.25 314 ⇓*i* P **P** **10 38 27.3 -0.7**
IGT Igoumenitsa 92.28 311 P **P** **10 38 29.3 +1.1**
IGT Igoumenitsa 92.28 311 P **P** **10 38 29.3 +1.1**
LKD2 Lefkada island 92.28 311 P **P** **10 38 29.6 +1.4**
BRG Berggiesshubel 92.35 324 *e*P **P** **10 38 31.0 +2.8**
comp=Z,63nm,1.5s,mb5.7
BRG Berggiesshubel 92.35 324 *e*P **P** **10 38 30.9 +2.6**
comp=Z,29nm,1.6s,mb5.4
BRG *i* pP 10 38 36.0 +2.8
comp=Z,63nm,1.6s
BRG *e*PP PP 10 42 15.3 +6.8
comp=Z,54nm,1.7s
BRG S S 10 49 55.0 +24
BRG *e* 10 58 58.7
comp=Z,5.7nm,0.8s
BRG
comp=N,7µm,17.7s
BRG
comp=E,6µm,18.8s
BRG
comp=Z,5µm,19.5s
BRG Berggiesshubel 92.35 324 *e*P **P** **10 38 30.9 +2.7**
BRG *e* 10 42 15.3
BRG pmax pmax
comp=Z,17nm,1.6s,mb5.1
BRG pmax pmax
comp=Z,33nm,1.7s,mb5.4
BRG MLR MLR
comp=N,4µm,17.7s,MS6.1
BRG MLR MLR
comp=E,4µm,18.8s,MS6.1
BRG MLR MLR
comp=Z,3µm,19.5s,MS5.8
CONA Conrad Observa 92.36 320 ⇓*i* P **P** **10 38 26.7 -1.6**
comp=Z,42nm,1.5s,mb5.6,SNR=12
PRU Pruhonice 92.36 323 *e*P **P** **10 38 32.4 +4.1**
PRU *e* 10 42 13.8
PRU *e* 10 49 03.4
PRU *e* 10 50 37.7
PRU MLR MLR
comp=Z,4µm,17.4s,MS6.0
PRU Pruhonice 92.36 323 *e*P **P** **10 38 32.4 +4.1**
PRU *e*pP pP 10 38 35.0 +1.8
PRU *e*PP PP 10 42 13.8 +5.2

PRU eSKS 10 49 03.4
PRU eSP SP 10 50 37.7 -3.5
PRU AMS AMS 11 20 40.0
comp=Z,4µm,17.4s
BUM Brajici-Budva 92.38 314 ⇓*i* P **P** **10 38 26.6 -2.0**
BUM Brajici-Budva 92.38 314 ⇓*i* P **P** **10 38 26.7 -1.9**
PRA Prague 92.39 323 P **P** **10 38 33.0 +4.6**
PRA PP PP 10 42 14.0 +5.1
PRA SKS 10 49 05.0
PRA AMS AMS 11 21 00.0
SRN Sarande 92.41 312 *i* PN **P** **10 38 28.2 -0.5**
BRY Bratogost 92.42 315 *e*P **P** **10 38 27.9 -0.8**
BRY Bratogost 92.42 315 *e*P **P** **10 38 27.9 -0.8**
BRY Bratogost 92.42 315 *e*P **P** **10 38 27.9 -0.8**
MUD Monsted U'grnd 92.45 330 *i* P **P** **10 38 30.9 +2.3**
comp=Z,15nm,1.1s,mb5.2
VLS Valsamata 92.53 310 P **P** **10 38 30.4 +1.1**
VLS Valsamata 92.53 310 P **P** **10 38 30.4 +1.1**
HCY Herceg Novi 92.61 315 ⇓*i* P **P** **10 38 28.6 -1.0**
HCY Herceg Novi 92.61 315 ⇓*i* P **P** **10 38 28.6 -1.0**
HCY Herceg Novi 92.61 315 ⇓*i* P **P** **10 38 28.6 -1.0**
CLL Collm 92.71 324 *e*P **P** **10 38 32.3 +2.4**
comp=Z,35nm,1.4s,mb5.6
CLL Collm 92.71 324 *e*P **P** **10 38 30.0 +0.1**
comp=Z,36nm,1.4s,mb5.6
CLL eSKS 10 49 07.0
CLL eS S 10 49 34.0 -0.4
CLL LR LR
comp=Z,6µm,22.0s,MS6.0
CLL Collm 92.71 324 *e*P **P** **10 38 30.0 +0.1**
CLL *e*S S 10 49 34.0 -0.4
CLL pmax pmax
comp=Z,36nm,1.4s,mb5.6
CLL MLR MLR
comp=Z,6µm,22.0s,MS6.0
CLL Collm 92.71 324 *e*P **P** **10 38 30.0 +0.1**
comp=Z,36nm,1.4s,mb5.6
CLL *e*Plp 10 38 32.0
CLL *e* pP 10 38 35.0 +0.2
CLL *e*PP PP 10 42 07.0 -4.4
comp=Z,111nm,1.8s
CLL *e*PPlp 10 42 17.0
comp=Z,300nm,12.3s
CLL *e*SKSac SKSac 10 49 07.0 +3.8
CLL eS S 10 49 34.0 -0.4
CLL eSP SP 10 50 47.0 +2.0
CLL *e*PPS 10 51 21.0
CLL *e* 10 53 00.0
CLL eSS SS 10 55 54.0 +7.7
CLL LmV 11 20 00.0
comp=Z,6µm,22.0s
BSEG Bad Segeberg 93.04 327 *e*P **P** **10 38 34.2 +2.9**
comp=Z,52nm,1.3s,mb5.8
BSEG Bad Segeberg 93.04 327 *e*P **P** **10 38 34.2 +2.9**
BSEG pmax pmax
comp=Z,52nm,1.3s,mb5.8
KHC Kasperske Hory 93.28 322 ⇑*e*P **P** **10 38 32.7 +0.2**
KHC Kasperske Hory 93.28 322 *e*P **P** **10 38 32.2 -0.3**
KHC *e* 10 42 18.3
KHC *e* 10 49 04.6
KHC MLR MLR
comp=Z,4µm,18.6s,MS5.9
KHC Kasperske Hory 93.28 322 *e*P **P** **10 38 32.2 -0.3**
KHC *e*pP pP 10 38 35.9 -1.6
KHC *ex* x 10 41 49.5
KHC *e*PP PP 10 42 18.3 +2.4
KHC eSKS 10 49 04.6
KHC AMS AMS 11 21 00.0
comp=Z,4µm,18.6s
DOBS Dobrina 93.29 319 *i* P **P** **10 38 36.1 +3.5**
GEC2 GERESS Array S 93.32 322 *e*P **P** **10 38 35.8 +3.1**
comp=Z,33nm,1.3s,mb5.6
GEC2 GERESS Array S 93.32 322 *e*P **P** **10 38 35.8 +3.1**
GEC2 pmax pmax
comp=Z,33nm,1.3s,mb5.6
PERS Pernice 93.32 319 *i* P **P** **10 38 35.6 +2.8**
SOKA Soboth 93.36 319 ⇑*i* P **P** **10 38 31.4 -1.6**
comp=Z,37nm,1.3s,mb5.7
MOA Molin 93.38 321 *i* PcP PcP 10 38 33.3 -0.3
comp=Z,80nm,1.1s,SNR=13
TANN Tannenbergstha 93.40 324 *e*P **P** **10 38 36.0 +2.9**
comp=Z,24nm,1.5s,mb5.4
TANN *e*PP PP 10 42 14.5 -2.3
WERD Werda 93.48 324 *e*P **P** **10 38 36.2 +2.8**
comp=Z,68nm,2.0s,mb5.7
NKC Novy Kostel 93.49 323 *e*P **P** **10 38 36.8 +3.3**
NKC Novy Kostel 93.49 323 *e*P **P** **10 38 36.8 +3.3**
GUNZ Gunzen 93.50 323 *e*P **P** **10 38 36.5 +3.0**
comp=Z,85nm,2.0s,mb5.8
WERN Wernitzgruen 93.50 323 *e*P **P** **10 38 36.6 +3.0**
comp=Z,50nm,1.9s,mb5.6
MBAR Mbarara 93.66 270 PFAKE 10 38 50.0 +15
MBAR LR LR
comp=Z,875nm,22.0s,MS5.2
MBAR Mbarara 93.66 270 ⇑*e*P **P** **10 38 34.3 -0.7**
BOJS Bojanci 93.67 318 *i* P **P** **10 38 37.3 +2.8**
BOJS *e*PP PP 10 42 20.3 +1.2
BOJS *e*SKSac SKSac 10 49 10.0 +1.2
BOJS *e*S S 10 49 48.8 +5.6
WET Wettzell 93.69 322 *e*P **P** **10 38 37.7 +3.3**
comp=Z,50nm,1.6s,mb5.7
WET Wettzell 93.69 322 *e*P **P** **10 38 37.7 +3.3**
WET pmax pmax
comp=Z,50nm,1.6s,mb5.7
SUMG Summit 93.77 355 *e*P **P** **10 38 35.3 +0.9**
comp=Z,127nm,1.8s,mb6.0
SUMG Summit 93.77 355 *i* P **P** **10 38 39.2 +4.9**
comp=Z,16nm,0.9s,mb5.4
SUMG
comp=Z,3µm,24.0s
MOX Moxa 93.79 324 *e*P **P** **10 38 38.6 +3.7**
comp=Z,57nm,1.8s,mb5.7
MOX *e*PP PP 10 42 23.5 +3.7
MOX eS SKSac 10 49 06.0 -3.2
MOX
comp=Z,6µm,21.0s
MOX Moxa 93.79 324 *e*P **P** **10 38 37.7 +2.8**
comp=Z,51nm,1.7s,mb5.7
MOX Moxa 93.79 324 *e*P **P** **10 38 38.6 +3.7**
MOX *e* 10 42 23.5
MOX eS SKSac 10 49 06.0 -3.2
NRDL Niedersach Rie 93.81 326 *e*P **P** **10 38 36.9 +2.0**
comp=Z,87nm,1.5s,mb6.0
LJU Ljubljana 93.93 319 *i* P **P** **10 38 39.6 +4.0**
LJU *e*PP PP 10 42 30.2 +9.1
LJU *e*SKSac SKSac 10 49 11.4 +1.3
LJU *i* S S 10 49 45.7 +0.3
CLZ Clausthal 93.96 325 *e*P **P** **10 38 38.7 +3.1**
comp=Z,49nm,1.3s,mb5.8
CLZ Clausthal 93.96 325 *e*P **P** **10 38 38.7 +3.1**
CLZ pmax pmax
comp=Z,49nm,1.3s,mb5.8
KBA Koelnbreinsper 94.26 320 ⇓*i* P **P** **10 38 35.7 -1.4**
comp=Z,39nm,1.2s,mb5.7,SNR=9.9
JAVS Javornik 94.29 319 *e*P **P** **10 38 39.6 +2.3**
VOY Vojsko 94.34 319 *e*P **P** **10 38 36.7 -0.8**
VOY *e* pP 10 38 40.8 -1.6
VOY *e* 10 38 45.8
VOY *e* 10 38 53.7
GRA1 Grafenberg Arr 94.43 323 *e*P **P** **10 38 41.0 +3.2**
comp=Z,60nm,1.6s,mb5.8
GRA1 LR LR
comp=Z,8µm,19.8s,MS6.2
GRF Grafenberg Arr 94.43 323 *e*P **P** **10 38 41.0 +3.2**
comp=Z,60nm,1.6s,mb5.8
GRF *e*L 11 22 59.0
comp=Z,8µm,19.8s
GRF Grafenberg Arr 94.43 323 *e*P **P** **10 38 41.0 +3.2**
GRF pmax pmax
comp=Z,60nm,1.6s,mb5.8
GRF MLR MLR
comp=Z,8µm,19.8s,MS6.2
GRF Grafenberg Arr 94.43 323 *e*P **P** **10 38 41.0 +3.2**
GRF pmax pmax
comp=Z,60nm,1.6s,mb5.8
GRF MLR MLR
comp=Z,8µm,19.8s,MS6.2
ABTA Abfaltersbach 94.92 320 ⇑*i* P **P** **10 38 37.5 -2.7**
comp=Z,41nm,1.1s,mb5.8,SNR=12
TIP Timpagrande 95.00 312 *e*P **P** **10 38 41.6 +0.9**
comp=Z,74nm,1.4s,mb5.9
FUR Furstenfeldbru 95.07 322 *e*P **P** **10 38 44.0 +3.2**
comp=Z,82nm,1.4s,mb6.0
FUR *e*PP PP 10 42 32.6 +2.7

FUR	**Furstenfeldbru**	**95.07**	**322**	*e*P		**P**	**10 38 44.0**	**+3.2**
FUR				*e*			10 42 32.6	
FUR					pmax	pmax		
	comp=Z,82nm,1.4s,mb6.0							
IBBN	**Ibbenburen**	**95.17**	**327**	*e*P		**P**	**10 38 44.0**	**+2.9**
	comp=Z,139nm,1.8s,mb6.1							
WTTA	**Wattenberg**	**95.24**	**321**	⇑*i*P		**P**	**10 38 39.6**	**-2.0**
	comp=Z,74nm,1.5s,mb5.9,SNR=12							
CUC	**Castrocucco**	**95.38**	**313**	*e*P		**P**	**10 38 45.3**	**+2.9**
	comp=Z,26nm,1.4s,mb5.5							
CUC					LR	LR		
	comp=Z,4µm,22.0s,MS5.8							
JCW	**Jim Creek**	**95.44**	**38**	*e*P		**P**	**10 38 47.1**	**+4.6**
	comp=Z,21nm,1.0s,mb5.5							
MOTA	**Moosalm**	**95.53**	**321**	⇓*i*PcP		PcP	10 38 42.5	-0.6
	comp=Z,24nm,1.0s,SNR=12							
TNS	**Taunus Mts**	**95.79**	**324**	*e*P		**P**	**10 38 47.0**	**+3.0**
	comp=Z,43nm,1.3s,mb5.7							
TNS				*e*PP		PP	10 42 38.5	+3.2
TNS	**Taunus Mts**	**95.79**	**324**	*e*P		**P**	**10 38 47.0**	**+3.0**
TNS				*e*			10 42 38.5	
TNS					pmax	pmax		
	comp=Z,43nm,1.3s,mb5.7							
WTSB	**Winterswijk**	**95.85**	**327**	*e*P		**P**	**10 38 46.4**	**+2.2**
	comp=Z,43nm,1.8s,mb5.6							
BUG	**Bochum--Univer**	**95.85**	**326**	*e*P		**P**	**10 38 46.9**	**+2.6**
	comp=Z,52nm,1.5s,mb5.7							
BUG				*e*PP		PP	10 42 38.8	+3.0
TOD	**Tromm**	**95.87**	**324**	*e*P		**P**	**10 38 46.0**	**+1.6**
CEL	**Celeste**	**95.97**	**311**	*e*P		**P**	**10 38 44.5**	**-0.6**
	comp=Z,81nm,1.3s,mb6.0							
CEL					LR	LR		
	comp=Z,2µm,21.0s,MS5.5							
STU	**Stuttgart**	**96.03**	**323**	*e*P		**P**	**10 38 47.9**	**+2.7**
	comp=Z,67nm,1.5s,mb5.8							
STU				*e*PP		PP	10 42 39.8	+2.5
AQU	**L'Aquila**	**96.15**	**316**	⇓P		**P**	**10 38 49.9**	**+4.1**
AQU					LR	LR		
	comp=Z,3µm,19.0s,MS5.8							
AQU	**L'Aquila**	**96.15**	**316**	⇓*i*P		**P**	**10 38 49.9**	**+4.1**
COR	**Corvallis**	**96.15**	**42**		PFAKE		10 39 00.0	+14
COR					LR	LR		
	comp=Z,2µm,19.0s,MS5.6							
DAVOX	**Davos/Dischmat**	**96.53**	**321**		LR	LR	11 22 16.8	
	comp=Z,2µm,21.4s,MS5.5,baz=64,slow=35							
SPAK	**Spaichingen-Ko**	**96.59**	**323**	*e*P		**P**	**10 38 49.5**	**+1.8**
ETW	**Entiat**	**96.67**	**38**	*e*P		**P**	**10 38 51.3**	**+3.2**
	comp=Z,11nm,0.8s,mb5.3							
LANF	**Langenberg**	**96.75**	**324**	*e*P		**P**	**10 38 47.7**	**-0.7**
BFO	**Black Forest**	**96.75**	**323**	*e*P		**P**	**10 38 50.9**	**+2.5**
	comp=Z,30nm,1.5s,mb5.5							
BFO					LR	LR		
	comp=Z,5µm,20.0s,MS6.0							
RUP	**Ruppelstein**	**96.82**	**324**	*e*P		**P**	**10 38 48.4**	**-0.3**
HGN	**Heimansgroeve**	**96.92**	**326**	*e*P		**P**	**10 38 51.0**	**+1.9**
	comp=Z,39nm,2.0s,mb5.5							
HGN	**Heimansgroeve**	**96.92**	**326**	*e*PP		PP	10 42 48.6	+4.5
MEM	**Membach**	**96.96**	**326**	P		**P**	**10 38 49.7**	**+0.4**
	comp=Z,16nm,1.6s,mb5.2							
FELD	**Feldberg im Sc**	**97.16**	**323**	*e*P		**P**	**10 38 49.3**	**-1.0**
HUMO	**Hull Mountain**	**97.22**	**43**		PFAKE		10 39 00.0	+9.3
HUMO					LR	LR		
	comp=Z,2µm,21.0s,MS5.5							
TAOE	**Nuku Hiva Isla**	**97.28**	**97**	*e*PS		PS	10 51 37.7	-1.5
	comp=Z,1µm,28.2s							
TAOE				*e*LR		LR	11 10 16.8	
	comp=Z,2µm,23.5s							
CDF	**Champ du Feu**	**97.33**	**323**	*e*P		**P**	**10 38 49.3**	**-1.7**
	comp=Z,119nm,1.6s,mb5.8							
CDF	**Champ du Feu**	**97.33**	**323**	*e*P		**P**	**10 38 49.3**	**-1.7**
	comp=Z,60nm,1.6s,mb5.8							
CDF	**Champ du Feu**	**97.33**	**323**	*e*P		**P**	**10 38 49.3**	**-1.7**
CDF					pmax	pmax		
	comp=Z,60nm,1.6s,mb5.8							
VAE	**Valguarnera**	**97.35**	**311**	P		**P**	**10 38 49.8**	**-1.6**
VAE	**Valguarnera**	**97.35**	**311**	P		**P**	**10 38 49.8**	**-1.6**
	comp=Z,4.7nm,0.5s,mb5.2,baz=152,slow=22,SNR=2.0							
WLF	**Walferdange**	**97.35**	**325**	*e*P		**P**	**10 38 54.4**	**+3.3**
	comp=Z,50nm,1.2s,mb5.8							
WLF	**Walferdange**	**97.35**	**325**	*e*P		**P**	**10 38 51.9**	**+0.8**
	comp=Z,41nm,1.1s,mb5.8							
WLF	**Walferdange**	**97.35**	**325**	*e*P		**P**	**10 38 51.9**	**+0.8**
WLF					pmax	pmax		
	comp=Z,41nm,1.1s,mb5.8							
BCLA	**Clavier**	**97.44**	**326**	P		**P**	**10 38 49.8**	**-1.8**
	comp=Z,18nm,1.9s,mb5.2							
ECH	**Echery**	**97.49**	**323**	*e*P		**P**	**10 38 50.6**	**-1.2**
ECH					LR	LR		
	comp=Z,5µm,20.0s,MS6.0							
BBS	**Basel-Blauen**	**97.65**	**322**	*e*P		**P**	**10 38 51.9**	**-0.6**
EDM	**Edmonton**	**97.65**	**31**	*e*P		**P**	**10 38 53.2**	**+0.8**
HAWA	**Hanford**	**97.72**	**39**		PFAKE		10 39 00.0	+7.1
HAWA					LR	LR		
	comp=Z,2µm,21.0s,MS5.6							
OD2	**Odessa Site #2**	**97.74**	**38**	*e*P		**P**	**10 38 56.3**	**+3.4**
	comp=Z,15nm,1.2s,mb5.4							
YBH	**Yreka Blue Hor**	**97.75**	**44**		PFAKE		10 39 00.0	+6.9
YBH					LR	LR		
	comp=Z,2µm,22.0s,MS5.5							
YBH	**Yreka Blue Hor**	**97.75**	**44**		LR	LR	11 18 55.6	
	comp=Z,1µm,20.2s,MS5.3,baz=297,slow=33							
HINF	**Hinteralfeld**	**97.86**	**323**	*e*P		**P**	**10 38 51.2**	**-2.3**
	comp=Z,67nm,1.7s,mb5.6							
HINF	**Hinteralfeld**	**97.86**	**323**	*e*P		**P**	**10 38 51.2**	**-2.3**
	comp=Z,33nm,1.7s,mb5.6							
HINF	**Hinteralfeld**	**97.86**	**323**	*e*P		**P**	**10 38 51.2**	**-2.3**
HINF					pmax	pmax		
	comp=Z,33nm,1.7s,mb5.6							
GIVF	**Givet**	**97.87**	**326**	*e*P		**P**	**10 38 51.8**	**-1.7**
	comp=Z,149nm,1.8s,mb5.9							
GIVF	**Givet**	**97.87**	**326**	*e*P		**P**	**10 38 51.8**	**-1.7**
	comp=Z,75nm,1.8s,mb5.9							
GIVF	**Givet**	**97.87**	**326**	*e*P		**P**	**10 38 51.8**	**-1.7**
GIVF					pmax	pmax		
	comp=Z,75nm,1.8s,mb5.9							
SNF	**Seneffe**	**97.95**	**326**	P		**P**	**10 38 52.8**	**-1.0**
DOU	**Dourbes**	**98.00**	**326**	P		**P**	**10 38 53.6**	**-0.4**
	comp=Z,12nm,1.8s,mb5.1							
HAU	**Haudompre**	**98.07**	**323**	*e*P		**P**	**10 38 52.4**	**-2.0**
BAIF	**Baives**	**98.23**	**326**	*e*P		**P**	**10 38 53.3**	**-1.8**
NEW	**Newport**	**98.24**	**36**	*e*P		**P**	**10 38 55.5**	**+0.3**
	comp=Z,5.6nm,0.8s,mb5.2							
NEW	**Newport**	**98.24**	**36**	*e*P		**P**	**10 38 55.5**	**+0.3**
NEW					pmax	pmax		
	comp=Z,6.0nm,0.8s							
WDC	**Whiskeytown Da**	**98.36**	**45**		PFAKE		10 39 10.0	+14
WDC					LR	LR		
	comp=Z,2µm,20.0s,MS5.6							
MEZF	**Maizieres J'vi**	**98.57**	**324**	*e*P		**P**	**10 38 55.1**	**-1.5**
	comp=Z,135nm,1.6s,mb5.9							
MEZF	**Maizieres J'vi**	**98.57**	**324**	*e*P		**P**	**10 38 55.1**	**-1.5**
	comp=Z,135nm,1.6s,mb6.2							
HOPS	**Hopland**	**98.65**	**47**		PFAKE		10 39 10.0	+13
HOPS					LR	LR		
	comp=Z,3µm,22.0s,MS5.7							
EKA	**Eskdalemuir Ar**	**98.87**	**333**	P		**P**	**10 38 56.9**	**-0.9**
	comp=Z,8.8nm,1.1s,mb5.2,baz=38,slow=4.2,SNR=5.0							
EKA				*e*PP		PP	10 43 02.6	+3.9
	comp=Z,2.7nm,1.0s,baz=30,slow=7.3,SNR=3.5							
ESK	**Eskdalemuir**	**98.90**	**333**		PFAKE		10 39 10.0	+12
ESK					LR	LR		
	comp=Z,5µm,20.0s,MS6.0							
LPG	**La Plagne**	**99.06**	**321**	*e*P		**P**	**10 38 57.7**	**-1.2**
	comp=Z,38nm,1.0s,mb5.6							
LPG	**La Plagne**	**99.06**	**321**	*e*P		**P**	**10 38 57.7**	**-1.2**
	comp=Z,19nm,1.0s,mb5.6							
LPG	**La Plagne**	**99.06**	**321**	*e*P		**P**	**10 38 57.7**	**-1.2**
LPG					pmax	pmax		
	comp=Z,19nm,1.0s,mb5.6							
LPL	**La Plagne**	**99.06**	**321**	*e*P		**P**	**10 38 57.4**	**-1.5**
	comp=Z,30nm,0.9s,mb5.5							
LPL	**La Plagne**	**99.06**	**321**	*e*P		**P**	**10 38 57.4**	**-1.5**
	comp=Z,15nm,0.9s,mb5.5							
LPL	**La Plagne**	**99.06**	**321**	*e*P		**P**	**10 38 57.4**	**-1.5**
LPL					pmax	pmax		
	comp=Z,15nm,0.9s,mb5.5							
MCCM	**Marconi Confer**	**99.14**	**47**		PFAKE		10 39 10.0	+11
MCCM					LR	LR		
	comp=Z,2µm,22.0s,MS5.5							
LSZ	**Lusaka**	**99.20**	**256**	*e*P		**P**	**10 38 58.1**	**-2.0**
	comp=Z,9.8nm,1.1s,mb5.2							
LSZ	**Lusaka**	**99.20**	**256**	*e*P		**P**	**10 38 58.1**	**-2.0**
LSZ					pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.3							
MOD	**Modoc**	**99.30**	**43**		PFAKE		10 39 10.0	+10
MOD					LR	LR		
	comp=Z,1µm,20.0s,MS5.4							
WALA	**Waterton Lakes**	**99.64**	**35**	*e*Pdif		Pdif	10 39 03.6	+2.3
	comp=Z,0.7nm,1.5s							
BSMT	**Bassoo Peak**	**99.80**	**36**	*e*Pdif		Pdif	10 39 05.1	+3.1
	comp=Z,6.6nm,1.1s							
BMO	**Blue Mountains**	**99.83**	**39**		PFAKE		10 39 10.0	+7.9
BMO					LR	LR		
	comp=Z,1µm,20.0s,MS5.3							
ORIF	**Oris-en-Rattie**	**99.88**	**321**	*e*P		Pdif	10 39 01.2	-1.1
	comp=Z,64nm,1.4s							
ORIF	**Oris-en-Rattie**	**99.88**	**321**	*e*P		Pdif	10 39 01.2	-1.1
	comp=Z,32nm,1.4s							
ORIF	**Oris-en-Rattie**	**99.88**	**321**	*e*P		Pdif	10 39 01.2	-1.1
ORIF					pmax	pmax		
	comp=Z,32nm,1.4s,mb5.6							
SSF	**Saint Saulge**	**100.21**	**323**	*e*P		Pdif	10 39 02.2	-1.6
	comp=Z,37nm,1.5s							
SSF	**Saint Saulge**	**100.21**	**323**	*e*P		Pdif	10 39 02.2	-1.6
	comp=Z,19nm,1.5s							
SSF	**Saint Saulge**	**100.21**	**323**	*e*P		Pdif	10 39 02.2	-1.6
SSF					pmax	pmax		
	comp=Z,19nm,1.5s							
SMF	**Signal de Mont**	**100.23**	**323**	*e*P		Pdif	10 39 02.3	-1.6
AVF	**Avril sur Loir**	**100.44**	**323**	*e*P		Pdif	10 39 03.1	-1.7
	comp=Z,67nm,1.6s							
AVF	**Avril sur Loir**	**100.44**	**323**	*e*P		Pdif	10 39 03.1	-1.7
	comp=Z,33nm,1.6s							
AVF	**Avril sur Loir**	**100.44**	**323**	*e*P		Pdif	10 39 03.1	-1.7
AVF					pmax	pmax		
	comp=Z,33nm,1.6s							
SAO	**San Andreas Ge**	**100.75**	**48**		PFAKE		10 39 20.0	+14
SAO					LR	LR		
	comp=Z,2µm,21.0s,MS5.6							
SLMT	**Seeley Lake**	**100.86**	**36**	*e*Pdif		Pdif	10 39 09.9	+3.2
	comp=Z,15nm,1.3s							
CMB	**Columbia Colle**	**100.96**	**47**	*e*Pdif		Pdif	10 39 15.3	+8.1
	comp=Z,5.2nm,1.3s							
CMB					LR	LR		
	comp=Z,2µm,22.0s,MS5.6							
CMB	**Columbia Colle**	**100.96**	**47**	*e*P		Pdif	10 39 15.3	+8.2
CMB					pmax	pmax		
	comp=Z,5.0nm,1.3s							
CMB					MLR	MLR		
	comp=Z,2µm,22.0s,MS5.6							
KEST	**Kesra**	**101.78**	**311**	PP		PP	10 43 25.7	+4.1
	comp=Z,3.0nm,0.9s,baz=338,slow=4.3,SNR=4.6							
FFC	**Flin Flon**	**101.94**	**25**		PFAKE		10 39 20.0	+8.5
FFC					LR	LR		
	comp=Z,2µm,22.0s,MS5.5							
BMN	**Battle Mountai**	**102.04**	**43**		PFAKE		10 39 20.0	+8.1
BMN					LR	LR		
	comp=Z,2µm,22.0s,MS5.5							
NVAR	**Mina Array Bea**	**102.25**	**46**	P		Pdif	10 39 14.2	+1.4
	comp=Z,2.4nm,0.7s,baz=284,slow=3.3,SNR=15							
NVAR					PKKPbc	PKKPbc	10 55 13.9	-2.6
	comp=Z,0.5nm,0.7s,baz=143,slow=3.6,SNR=3.8							
HLID	**Hailey**	**102.28**	**40**	*e*Pdif		Pdif	10 39 15.2	+2.3
	comp=Z,15nm,1.4s							
HLID					LR	LR		
	comp=Z,2µm,21.0s,MS5.5							
RJF	**Les Rejaudoux**	**102.31**	**323**	*e*P		Pdif	10 39 12.5	-0.6
	comp=Z,48nm,1.4s							
RJF	**Les Rejaudoux**	**102.31**	**323**	*e*P		Pdif	10 39 12.5	-0.6
	comp=Z,24nm,1.4s							
RJF	**Les Rejaudoux**	**102.31**	**323**	*e*P		Pdif	10 39 12.5	-0.6
RJF					pmax	pmax		
	comp=Z,24nm,1.4s							
DLMT	**Dillon**	**102.41**	**37**	*e*Pdif		Pdif	10 39 17.5	+3.9
	comp=Z,11nm,1.3s							
EGMT	**Eagleton**	**102.51**	**34**		PFAKE		10 39 30.0	+16
EGMT					LR	LR		
	comp=Z,1µm,19.0s,MS5.4							
MFF	**Saint Martin d**	**102.56**	**324**	*e*P		Pdif	10 39 12.9	-1.3
	comp=Z,35nm,1.3s							
MFF	**Saint Martin d**	**102.56**	**324**	*e*P		Pdif	10 39 12.9	-1.3
	comp=Z,18nm,1.3s							
MFF	**Saint Martin d**	**102.56**	**324**	*e*P		Pdif	10 39 12.9	-1.3
MFF					pmax	pmax		
	comp=Z,18nm,1.3s							
BOZ	**Bozeman (W)**	**102.82**	**37**		PFAKE		10 39 30.0	+15
BOZ					LR	LR		
	comp=Z,1µm,20.0s,MS5.3							
QSPA	**South Pole Qui**	**102.95**	**180**	*e*Pdif		Pdif	10 39 15.8	-0.1
DAC	**Darwin (Calif)**	**103.75**	**47**		PFAKE		10 39 30.0	+10
DAC					LR	LR		
	comp=Z,2µm,22.0s,MS5.6							
LKWY	**Lake**	**104.15**	**37**		PFAKE		10 39 30.0	+8.7
LKWY					LR	LR		
	comp=Z,3µm,20.0s,MS5.8							
RKT	**Rikitea**	**104.72**	**111**	*e*SKSac		SKSac	10 49 57.0	-7.6
	comp=Z,510nm,25.2s							
RKT				*e*Sdif		Sdif	10 51 16.0	-0.4
	comp=Z,1µm,28.2s							
RKT	**Rikitea**	**104.72**	**111**	*e*PS		PS	10 52 56.8	-1.6
	comp=Z,427nm,32.0s							
RKT				*e*SS		SS	10 58 33.2	-3.9
	comp=Z,1µm,29.5s							
RKT				*e*LQ			11 09 20.1	
	comp=Z,6µm,34.5s							
RKT				*e*LR		LR	11 13 32.5	
	comp=Z,2µm,32.2s,baz=289							
AHID	**Auburn Hatcher**	**104.75**	**39**		PFAKE		10 39 40.0	+16
AHID					LR	LR		
	comp=Z,1µm,19.0s,MS5.5							
DUG	**Dugway**	**105.06**	**42**		PFAKE		10 43 50.0	+10
DUG					LR	LR		
	comp=Z,1µm,20.0s,MS5.5							
HWUT	**Hardware Ranch**	**105.10**	**40**		PFAKE		10 43 50.0	+10
HWUT					LR	LR		
	comp=Z,1µm,21.0s,MS5.5							
DGMT	**Dagmar**	**105.14**	**31**		PFAKE		10 43 50.0	+10
DGMT					LR	LR		
	comp=Z,1µm,20.0s,MS5.5							
LAO	**LASA Array**	**105.23**	**33**	*e*PKPdf		PKiKP	10 43 42.3	+1.8
LAO					LR	LR		
	comp=Z,1µm,22.0s,MS5.5							
BW06	**Boulder Array**	**105.68**	**38**	*e*PKPdf		PKiKP	10 43 45.5	+4.1
BW06					LR	LR		
	comp=Z,1µm,21.0s,MS5.5							
MVU	**Marysvale**	**106.36**	**43**		PFAKE		10 43 50.0	+7.2
MVU					LR	LR		
	comp=Z,1µm,20.0s,MS5.5							
RSSD	**Black Hills**	**108.05**	**34**	*e*PKPdf		PKiKP	10 43 46.2	+0.3
SUR	**Sutherland**	**108.24**	**240**		PFAKE		10 44 00.0	+14
SUR					LR	LR		
	comp=Z,2µm,21.0s,MS5.7							
PV10	**Paradox Valley**	**108.51**	**42**	*e*PKPdf		PKiKP	10 43 46.4	-0.5
ESDC	**Sonseca Array**	**108.84**	**320**	PP		PP	10 44 14.8	+1.2
	comp=Z,6.6nm,1.0s,baz=51,slow=8.0,SNR=6.7							
ESLA	**Sonseca Array**	**108.84**	**320**		PFAKE		10 44 00.0	+13
ESLA					LR	LR		
	comp=Z,7µm,19.0s,MS6.2							
AGMN	**Agassiz Nation**	**109.22**	**27**		PFAKE		10 44 00.0	+12
AGMN					LR	LR		
	comp=Z,2µm,20.0s,MS5.7							
MVO	**Moncorvo**	**109.79**	**323**	*e*PP		PP	10 44 20.9	+0.5
MVO				*e*SS		SS	11 00 04.5	+21
MVO				*e*LQ			11 19 12.1	
MVO				*e*LR		LR	11 23 32.4	
	comp=Z,3µm,20.0s							
ISCO	**Idaho Springs**	**109.83**	**39**		PFAKE		10 44 00.0	+11
ISCO					LR	LR		
	comp=Z,2µm,21.0s,MS5.6							
MTE	**Manteigas**	**110.58**	**323**	*e*PP		PP	10 44 29.6	+3.5
MTE				*e*SS		SS	11 00 07.0	+13
MTE				*e*LQ			11 19 00.4	
MTE				*e*LR		LR	11 24 02.3	
	comp=Z,3µm,20.0s							
PVIS	**Viseu**	**110.58**	**323**	*e*PP		PP	10 44 30.6	+4.5
PCBR	**Castelo Branco**	**110.89**	**322**	*e*PP		PP	10 44 32.6	+4.3
PMRV	**Marv??o**	**111.10**	**322**	*e*PP		PP	10 44 32.2	+2.4
PMRV				*e*SS		SS	11 00 13.2	+12
PMRV				*e*LQ			11 19 23.1	
PMRV				*e*LR		LR	11 24 59.3	
	comp=Z,2µm,18.0s							
SDCO	**Great Sand Dun**	**111.14**	**41**	*e*PKPdf		PKiKP	10 43 49.7	-2.1
EYMN	**Ely**	**111.36**	**25**		PFAKE		10 44 00.0	+8.1
EYMN					LR	LR		
	comp=Z,2µm,19.0s,MS5.7							
PESTR	**Estremoz**	**111.57**	**321**	*e*PP		PP	10 44 35.9	+2.7
PESTR				*e*SS		SS	11 00 32.5	+25
PESTR				*e*LQ			11 19 25.8	
PESTR				*e*LR		LR	11 23 50.3	
	comp=Z,2µm,20.0s							
PBAR	**Barrancos**	**111.66**	**320**	*e*PP		PP	10 44 36.1	+2.2
PBAR				*e*SS		SS	11 00 19.5	+11
PBAR				*e*LR		LR	11 23 06.1	
	comp=Z,2µm,20.0s							
EVO	**Evora**	**112.04**	**321**	*e*PP		PP	10 44 38.7	+2.1
EVOP	**Sao Brissos**	**112.11**	**321**	*e*PP		PP	10 44 38.3	+1.2
EVOP				*e*SS		SS	11 00 19.0	+4.3
EVOP					AMS	AMS	11 31 12.5	
	comp=N,3µm,17.3s							
ANMO	**Albuquerque**	**112.17**	**43**	*e*PKPdf		PKiKP	10 43 55.4	+1.5
ANMO					LR	LR		
	comp=Z,1µm,21.0s,MS5.5							
ECSD	**EROS Data Cent**	**112.22**	**31**		PKPdf	PKiKP	10 43 53.7	0.0
ECSD					LR	LR		
	comp=Z,1µm,19.0s,MS5.5							
PBEJ	**Beja**	**112.27**	**321**	*e*PP		PP	10 44 42.9	+4.7
PMAFR	**Mafra**	**112.53**	**322**	*e*SS		SS	11 00 29.7	+9.5
PMAFR				*e*LQ			11 19 03.5	
PMAFR				*e*LR		LR	11 20 41.5	
	comp=Z,2µm,20.0s							
PVAQ	**Vaqueiros**	**112.56**	**320**	*e*PP		PP	10 44 42.9	+2.5
PVAQ				*e*SS		SS	11 00 41.3	+21
PVAQ				*e*LR		LR	11 20 34.3	
	comp=Z,2µm,20.0s							
MESJ	**Messejana**	**112.60**	**321**	*e*PP		PP	10 44 40.9	+0.3
MESJ				*e*SS		SS	11 00 24.1	+2.9
MESJ				*e*SS		SS	11 00 24.7	+3.5
MESJ					AMS	AMS	11 33 24.1	
	comp=Z,3µm,26.0s,MS5.8							
MESJ	**Messejana**	**112.60**	**321**	*e*PP		PP	10 44 40.9	+0.3
MESJ				*e*SS		SS	11 00 24.1	+2.9
MESJ				A			11 33 24.1	
	comp=Z,3µm,26.0s							
LIS	**Lisbon**	**112.61**	**322**	*e*PP		PP	10 44 41.6	+1.0
LIS					AMS	AMS	11 38 54.9	
	comp=Z,3µm,16.4s,MS5.9							
LIS	**Lisbon**	**112.61**	**322**	*e*PP		PP	10 44 41.6	+1.0
LIS				A			11 38 54.9	
	comp=Z,3µm,16.4s							
PCVE	**Castro Verde**	**112.62**	**321**	*e*PP		PP	10 44 44.1	+3.3
PCVE				*e*SS		SS	11 00 46.4	+25
PCVE				*e*LQ			11 20 00.0	
PCVE				*e*LR		LR	11 23 31.4	
	comp=Z,3µm,20.0s							
PBDV	**Barranco-do-Ve**	**112.79**	**320**	*e*SS		SS	11 00 37.3	+13
PBDV				*e*LQ			11 23 00.4	
PBDV				*e*LR		LR	11 25 23.6	
	comp=Z,3µm,20.0s							
PTEO	**Sao Teotonio**	**113.09**	**321**	*e*PP		PP	10 44 49.0	+4.8
MORF	**Marmelete**	**113.20**	**321**	*e*PP		PP	10 44 48.6	+3.7
MORF				*e*SS		SS	11 00 34.6	+5.4
MORF				*e*LQ			11 23 02.7	
MORF				*e*LR		LR	11 25 43.3	
	comp=Z,3µm,20.0s							
MDT	**Midelt**	**113.23**	**315**	PP		PP	10 44 46.2	+0.8
	comp=Z,8.4nm,1.1s,baz=50,slow=6.4,SNR=6.3							
PFVI	**Vila Bisbo**	**113.42**	**321**	*e*SS		SS	11 00 49.9	+18
PFVI				*e*LQ			11 22 27.0	
PFVI				*e*LR		LR	11 25 44.8	
	comp=Z,3µm,18.0s							
COWI	**Conover**	**113.81**	**25**		PFAKE		10 44 10.0	+13
COWI					LR	LR		
	comp=Z,2µm,20.0s,MS5.7							
CBKS	**Cedar Bluff**	**113.96**	**37**		PFAKE		10 44 10.0	+13
CBKS					LR	LR		
	comp=Z,2µm,22.0s,MS5.6							
MNTX	**Cornudas Mount**	**114.77**	**46**	*e*PKPdf		PKiKP	10 44 00.7	+1.8
MNTX					LR	LR		
	comp=Z,1µm,21.0s,MS5.5							
AMTX	**Amarillo**	**115.33**	**41**		PFAKE		10 44 10.0	+10
AMTX					LR	LR		
	comp=Z,2µm,20.0s,MS5.7							
JFWS	**Jewell Farm**	**115.88**	**28**	*e*PKPdf		PKPdf	10 44 00.2	-0.5
JFWS					LR	LR		
	comp=Z,2µm,19.0s,MS5.7							
WMOK	**Wichita Mounta**	**117.25**	**39**	*e*PKPdf		PKPdf	10 44 03.4	-0.3
TXAR	**Lajitas Array**	**117.34**	**47**	PKP		PKPdf	10 44 03.6	-0.3
	comp=Z,2.9nm,0.9s,baz=245,slow=0.9,SNR=19							
TXAR					PKKPbc	PKKPbc	10 54 31.8	+4.1
	comp=Z,2.2nm,1.1s,baz=157,slow=6.8,SNR=5.8							
TORD	**Torodi Ar. Bea**	**117.47**	**292**	PKP		PKPdf	10 44 02.2	-2.3
TORD				PP		PP	10 45 04.6	-11
TORD					PKKPbc	PKKPbc	10 54 29.2	+2.3
TORD	**Torodi Ar. Bea**	**117.47**	**292**	PKP		PKPdf	10 44 02.2	-2.3
	comp=Z,3.3nm,1.1s,baz=53,slow=1.7,SNR=8.3							
TORD				PP		PP	10 45 04.6	-11
	comp=Z,4.8nm,0

comp=Z,3µm,22.0s,MS6.0
JTS JuntasAbangare 142.77 53 *e*PKPdf PKPdf 10 44 51.6 -0.6
JTS LR LR
comp=Z,1µm,20.0s,MS5.7
CRPR Cabo Rojo, PR 147.09 20 *e*PKPbc PKPbc 10 45 01.5 -0.1
SJG San Juan 147.30 19 PKPbc PKPbc 10 45 01.6 -0.6
comp=Z,17nm,0.5s,baz=344,slow=22,SNR=5.5
BCIP Isla Barro Col 147.34 49 *e*PKPdf PKPdf 10 44 59.6 -0.5
BCIP *e*PKPbc PKPbc 10 45 01.3 -1.1
BCIP *e*PKPab PKPab 10 45 04.2 -0.1
BCIP LR LR
comp=Z,1µm,20.0s,MS5.7
ICM Isla Caja Muer 147.39 19 *e*PKPbc PKPbc 10 45 02.4 -0.1
MTP Monte Pirata 147.50 18 *e*PKPbc PKPbc 10 45 02.9 +0.2
ANWB Willy Bob 148.83 11 PFAKE 10 45 10.0 +7.6
ANWB LR LR
comp=Z,1µm,20.0s,MS5.6
PLCA Paso Flores 149.53 157 PKPbc PKPbc 10 45 02.8 -4.6
comp=Z,6.8nm,0.6s,baz=195,slow=3.0,SNR=18
PHG Guadaloupe-2 150.47 12 *e*P PKPbc 10 45 13.9 +3.5
HMG Houelmont 150.49 12 *e*P PKPab 10 45 17.5 +0.7
TBG Guadaloupe-3 150.63 12 *e*P PKPbc 10 45 09.8 -1.0
FDF Fort de France 151.82 11 PFAKE 10 45 20.0 +13
FDF LR LR
comp=Z,1µm,22.0s,MS5.7
BBGH Gun Hill 153.64 9 PFAKE 10 45 20.0 +10
BBGH LR LR
comp=Z,3µm,22.0s,MS6.0
GRGR Grenville 154.23 14 PFAKE 10 45 20.0 +9.3
GRGR LR LR
comp=Z,1µm,22.0s,MS5.6
ROSC El Rosal 154.26 47 PKP PKPdf 10 45 10.6 -0.2
comp=Z,6.0nm,0.4s,baz=290,slow=10,SNR=2.4
ROSC PKPbc PKPbc 10 45 19.0 0.0
comp=Z,5.2nm,0.3s,baz=107,slow=22,SNR=5.6
ATAH Atahualpa 156.85 77 PKP PKPdf 10 45 14.4 +0.1
comp=Z,3.2nm,0.7s,baz=8.1,slow=7.1,SNR=3.5
ATAH PKPab PKPab 10 45 43.9 -0.1
comp=Z,24nm,0.9s,baz=304,slow=5.0,SNR=6.5
CFAA Coronel Fontan 158.25 150 PKP PKPdf 10 45 13.7 -1.8
comp=Z,0.4nm,1.1s,baz=237,slow=2.9,SNR=4.4
NNA Nana 159.28 89 PFAKE 10 45 30.0 +13
NNA LR LR
comp=Z,1µm,22.0s,MS5.7
NNA Nana 159.28 89 PKPab PKPab 10 45 54.5 0.0
comp=Z,20nm,0.8s,baz=282,slow=4.4,SNR=4.1
LPAZ La Paz 167.51 106 PKP PKPdf 10 45 24.8 0.0
comp=Z,5.4nm,1.0s,baz=332,slow=2.4,SNR=14
LPAZ PKPab PKPab 10 46 31.6 +1.0
comp=Z,7.8nm,1.0s,baz=235,slow=5.2,SNR=2.1
LPAZ La Paz 167.51 106 *e*PKIKP PKPdf 10 45 24.7 -0.2
SIV San Ignacio 174.01 119 PKP PKPdf 10 45 26.8 -1.5
comp=Z,4.2nm,1.1s,baz=204,slow=0.5,SNR=12

*MOS **15** 10:38:29.6±1.7,56°.23N×112°.17E,h21km,mb4.3/1, Error ellipse: s-maj=34.6km s-min=19.5km az=57.0*
BYKL 15 10:38:28.5±0.4,56°.23N×112°.18E,h25km±3km, 8C-4D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOA	**Uoyan**	**0.27**	**249**	⇑*i*Pg	Pb	10 38 34.5	-0.6
YOA				*e*		10 38 40.0	
YOA				pmax	pmax		
	comp=Z,4µm,0.2s						
YOA				smax			
	comp=N,3µm,0.4s						
YOA	**Uoyan**	**0.27**	**249**	⇑*i*Pg	Pb	10 38 34.5	-0.6
YOA				⇑*i*		10 38 36.0	
YOA				*e*Sg	Sb	10 38 39.8	+0.2
YOA				*e*		10 38 44.8	
YOA				Pmax			
	comp=N,4µm,0.2s						
YOA				Smax			
	comp=N,13µm,0.4s						
KMO	**Kumora**	**0.65**	**238**	*e*PG	Pb	10 38 40.6	-0.5
KMO				*e*		10 38 49.0	
KMO				pmax	pmax		
	comp=Z,113nm,0.1s						
KMO				smax			
	comp=E,848nm,0.5s						
KMO	**Kumora**	**0.65**	**238**	⇑*i*Pg	Pb	10 38 40.6	-0.5
KMO				*e*Pb	Pb	10 38 42.6	+1.5
KMO				*e*Sg	Sb	10 38 49.6	-0.2
KMO				max			
	comp=E,158nm,0.1s						
KMO				Smax			
	comp=E,854nm,0.5s						
UKT	**Uakit**	**1.10**	**132**	*e*PG	Pn	10 38 48.6	+0.3
UKT				*e*		10 39 02.7	
UKT				pmax	pmax		
	comp=Z,85nm,0.1s						
UKT				smax			
	comp=N,947nm,0.1s						
UKT	**Uakit**	**1.10**	**132**	⇓*i*Pg	Pn	10 38 48.7	+0.4
	comp=N,14nm,0.3s						
UKT				⇑*i*Pg	Pn	10 38 48.7	+0.4
	comp=N,27nm,0.3s						
UKT				⇑*i*Pg	Pn	10 38 48.7	+0.4
	comp=N,18nm,0.3s						
UKT				*e*Pb	Pb	10 38 49.8	+0.9
UKT				*i*Sg	Sn	10 39 03.4	+0.7
UKT				max			
	comp=N,57nm,0.3s						
UKT				Smax			
	comp=N,1µm,0.3s						
YLYR	**Ulyunkhan**	**1.48**	**204**	*e*PN	Pn	10 38 54.8	+1.4
YLYR				*e*		10 39 14.0	
YLYR				pmax	pmax		
	comp=Z,77nm,0.2s						
YLYR				smax			
	comp=E,772nm,0.2s						
YLYR	**Ulyunkhan**	**1.48**	**204**	⇓*i*Pg	Pn	10 38 54.8	+1.4
YLYR				*e*		10 39 02.9	
YLYR				*i*Sg	Sn	10 39 15.1	+3.2
YLYR				*e*Sb	Sb	10 39 16.4	+2.9
YLYR				Pmax			
	comp=E,76nm,0.2s						
YLYR				max			
	comp=E,660nm,0.2s						
NIZ	**Nizh Angarsk**	**1.55**	**254**	*e*PN	Pn	10 38 56.2	+1.8
NIZ				*e*		10 39 17.3	
NIZ				pmax	pmax		
	comp=Z,112nm,0.4s						
NIZ				smax			
	comp=E,491nm,0.5s						
NIZ	**Nizh Angarsk**	**1.55**	**254**	⇑*i*Pg	Pn	10 38 56.2	+1.8
NIZ				*i*Sg	Sn	10 39 18.1	+4.4
NIZ				Pmax			
	comp=E,113nm,0.5s						
NIZ				Smax			
	comp=E,490nm,0.6s						
NLYR	**Nelyaty**	**1.98**	**81**	*e*Pn	Pn	10 39 01.8	+1.5
NLYR				⇑*i*Pg	Pn	10 39 03.8	+3.5
NLYR				*e*		10 39 07.5	
NLYR				*e*		10 39 23.1	
NLYR				*e*Sg	Sn	10 39 30.1	+5.8
NLYR				Pmax			
	comp=E,129nm,0.7s						
NLYR				Smax			
	comp=E,327nm,1.0s						
SYVR	**Suvo**	**2.87**	**207**	⇓*i*Pn	Pn	10 39 13.2	+0.6
SYVR				*e*Pg	Pn	10 39 18.9	+6.3
SYVR				*e*Sg	Sn	10 39 56.9	+11
SYVR				Pmax			
	comp=E,15nm,0.4s						
SYVR				Smax			
	comp=E,107nm,1.5s						
CRS	**Chara**	**3.44**	**76**	*e*PN	Pn	10 39 22.0	+1.7
CRS				*e*		10 39 30.2	
CRS				*e*		10 40 14.1	
CRS				pmax	pmax		
	comp=Z,51nm,1.0s						
CRS				smax			
	comp=E,247nm,1.2s						
CRS	**Chara**	**3.44**	**76**	⇓*i*Pn	Pn	10 39 22.0	+1.7
CRS				*e*Pg	Pn	10 39 29.6	+9.3
CRS				*e*PgPg		10 39 33.1	
CRS				*e*		10 39 49.1	
CRS				*e*Sn	Sn	10 39 59.0	-1.2
CRS				*i*Sg	Sn	10 40 14.6	+14
CRS				max			
	comp=E,27nm,0.8s						
CRS				Smax			
	comp=E,253nm,1.8s						
MXMB	**Maximikha**	**3.58**	**215**	*e*Sg	Sn	10 40 19.2	+15
MXMB				Smax			
	comp=E,192nm,1.0s						
OGRR	**Ongureny**	**3.70**	**227**	*e*Pn	Pn	10 39 25.5	+1.5
OGRR				*e*Pg	Pn	10 39 34.4	+10
OGRR				*e*PgPg		10 39 37.6	
OGRR				*i*Sg	Sn	10 40 22.5	+16
OGRR				Pmax			
	comp=E,7.0nm,0.4s						
OGRR				Smax			
	comp=E,56nm,0.5s						
CIT	**Chita**	**4.29**	**169**	*e*	Pn	10 40 38.5	+66
CIT				*e*Sg	Sn	10 40 43.8	+22
CIT				Smax			
	comp=E,229nm,0.3s						
ZRHB	**Zarechye**	**4.71**	**221**	*e*	Pn	10 40 46.2	+68
ZRHB				*e*Sg	Sn	10 40 55.5	+24
ZRHB				Smax			
	comp=E,153nm,1.3s						
TUP	**Tupik**	**4.79**	**109**	*e*Pn	Pn	10 39 39.7	+0.7
TUP				*e*		10 39 55.9	
TUP				*i*Sg	Sn	10 40 56.0	+22
TUP				Pmax			
	comp=E,3.0nm,0.5s						
TUP				Smax			
	comp=E,144nm,1.1s						
TRG	**Tyrgan**	**4.86**	**227**	*e*Pn	Pn	10 39 40.3	+0.4
TRG				Pg	Pn	10 39 55.1	+15
TRG				*e*Sg	Sn	10 40 58.9	+24
UUDB	**Ulan-Yde**	**5.12**	**213**	*e*Sg	Sn	10 41 08.0	+26
UUDB				Smax			
	comp=E,36nm,0.7s						
KAB	**Kabansk**	**5.30**	**220**	*e*Sg	Sn	10 41 14.1	+28
KAB				Smax			
	comp=E,112nm,0.7s						
IRK	**Irkutsk**	**6.12**	**233**	*e*	Pn	10 39 17.9	-39
IRK				*e*		10 39 22.9	
IRK				*e*Sg	Sn	10 41 38.2	+32
LSTR	**Listvyanka**	**6.15**	**228**	*e*	Pn	10 41 05.6	+68
LSTR				*e*Sg	Sn	10 41 38.8	+32
TLY	**Talaya**	**6.79**	**231**	*e*PG	Pn	10 40 31.7	+25
TLY				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TLY	**Talaya**	**6.79**	**231**	*e*Pg	Pn	10 40 29.5	+23
TLY				*e*Sg	Sn	10 41 57.7	+35
TLY				Smax			
	comp=Z,26nm,1.4s						
ARS	**Arshan**	**7.18**	**237**	*e*		10 41 51.5	
ARS				*e*Sg	Sn	10 42 11.9	+39
ARS				Smax			
	comp=Z,101nm,0.8s						
ZAK	**Zakamensk**	**7.92**	**226**	*e*Sg	Sn	10 42 33.4	+43
ZAK				*e*		10 42 49.4	
ZAK				max			
	comp=Z,14nm,1.5s						
MOY	**Mondy**	**8.03**	**240**	*e*Pn	Pn	10 40 25.8	+2.5
MOY				*e*Pg	Pn	10 40 52.0	+29
MOY				*e*		10 42 10.1	
MOY				*e*Sg	Sn	10 42 36.9	+44
MOY				Pmax			
	comp=Z,8.0nm,1.3s						
MOY				Smax			
	comp=Z,16nm,0.9s						

*ISCJB **15** 10:40:26.9±0.7,26°.22S±0°.06×177°.6W±0°.2, h33km, mb4.0/7, Error ellipse: s-maj=25.6km s-min=5.4km az=16.7*
*NEIC **15** 10:40:31.6±1.5,25°.94S×177°.52W, h60km±15km, Error ellipse: s-maj=30.4km s-min=13.0km az=119.0*
*IDC **15** 10:40:32.0±3.6,25°.87S×177°.55W, h58km±31km, mb3.8/7, mb1 4.0/8, mb1mx3.9/14, mbtmp3.8/8, ML3.8/2, Error ellipse: s-maj=29.8km s-min=20.6km az=126.0*
ISC 15 10:40:29.1±0.7,26°.19S±0°.07×177°.6W±0°.2,h35km,n26, σ1§85/25,mb4.0/7,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MWZ	**Matawai**	**12.79**	**198**	*e*PN	**Pn**	**10 43 31.1**	**+2.7**
MWZ				SN	**Sn**	**10 45 56.3**	**+6.9**
URZ	**Urewera**	**12.84**	**199**	P	**Pn**	**10 43 34.1**	**+5.2**
	1.1nm,0.3s,baz=187,slow=22,SNR=7.1						
URZ				S	**Sn**	**10 45 56.9**	**+6.3**
	6.7nm,0.3s,baz=290,slow=20,SNR=9.7						
AFI	**Afiamalu**	**13.38**	**25**	P	**Pn**	**10 43 35.5**	**-1.1**
	14nm,0.3s,baz=143,slow=1.0,SNR=16						
AFI				S	**Sn**	**10 45 50.4**	**-14**
	3.9nm,0.3s,baz=40,slow=21,SNR=3.5						
MHGZ	**Mahia Peninsul**	**13.47**	**195**	*e*SN	**Sn**	**10 46 08.6**	**+2.7**
CKHZ	**Cape Kidnapper**	**14.15**	**197**	SN	**Sn**	**10 46 25.4**	**+2.8**
MRZ	**Mangatainoka R**	**15.51**	**200**	SN	**Sn**	**10 46 54.3**	**-1.3**
HOWZ	**Holdsworth Sta**	**15.74**	**200**	SN	**Sn**	**10 46 58.5**	**-2.8**
TUWZ	**Tuamarina**	**16.73**	**203**	PN	**Pn**	**10 44 22.6**	**+2.0**
TUWZ				SN	**Sn**	**10 47 22.9**	**-2.4**
NNZ	**Nelson**	**16.75**	**204**	SN	**Sn**	**10 47 22.4**	**-3.3**
THZ	**Tophouse**	**17.39**	**204**	SN	**Sn**	**10 47 37.3**	**-4.1**
KHZ	**Kahutara**	**17.75**	**202**	SN	**Sn**	**10 47 44.6**	**-5.3**
LTZ	**Lake Taylor**	**18.51**	**204**	SN	**Sn**	**10 48 02.0**	**-6.4**
MQZ	**McQueen's Vall**	**19.19**	**202**	SN	**Sn**	**10 48 14.8**	**-10**
ASAR	**Alice Springs**	**43.84**	**262**	P	**P**	**10 48 34.1**	**+2.1**
	0.9nm,0.4s,mb3.8,baz=92,slow=7.3,SNR=39						
WRA	**Warramunga Arr**	**44.45**	**268**	P	**P**	**10 48 38.0**	**+1.1**
	1.2nm,0.4s,mb4.0,baz=103,slow=7.5,SNR=20						
MJAR	**Matsushiro Arr**	**75.00**	**324**	P	**P**	**10 52 05.7**	**-1.2**
	1.4nm,0.9s,mb3.9,baz=155,slow=5.9,SNR=4.2						
MAW	**Mawson**	**76.36**	**200**	P	**P**	**10 52 17.0**	**+2.7**
	2.1nm,0.5s,mb4.3,baz=132,slow=7.9,SNR=17						
NVAR	**Mina Array Bea**	**84.92**	**43**	P	**P**	**10 53 00.2**	**-0.2**
NVAR	**Mina Array Bea**	**84.92**	**43**	P	**P**	**10 53 00.2**	**-0.2**
	1.1nm,0.8s,mb4.0,baz=223,slow=9.2,SNR=8.4						
CMAR	**Chiang Mai Arr**	**92.34**	**289**	P	**P**	**10 53 35.1**	**-1.1**
	0.6nm,0.8s,mb4.0,baz=142,slow=4.6,SNR=2.8						
ILAR	**Eielson Array**	**93.76**	**13**	P	**P**	**10 53 41.5**	**-0.1**
	0.2nm,0.4s,mb3.9,baz=216,slow=4.5,SNR=3.7						
NOA	**NORSAR Array B**	**144.64**	**353**	PKP	PKPdf	10 59 57.9	-3.4
	1.3nm,0.6s,baz=1.4,slow=2.2,SNR=6.0						
AKASG	**Malin Array Be**	**148.06**	**327**	PKPbc	PKPbc	11 00 08.6	-2.0
	0.9nm,0.4s,baz=47,slow=4.1,SNR=4.2						
EKA	**Eskdalemuir Ar**	**150.60**	**6**	PKPbc	PKPbc	11 00 15.3	-1.5
	1.3nm,1.0s,baz=327,slow=3.7,SNR=3.1						
BRTR	**Keskin Array B**	**150.67**	**305**	PKPbc	PKPbc	11 00 17.1	-0.4
	0.5nm,0.7s,baz=99,slow=3.8,SNR=2.8						
BRTR				PKPab	PKPab	11 00 24.0	-0.5
	1.3nm,0.5s,baz=117,slow=1.9,SNR=6.9						
TORD	**Torodi Ar. Bea**	**167.01**	**177**	PKPab	PKPab	11 01 36.3	+0.9
	0.2nm,0.4s,baz=204,slow=4.0,SNR=3.5						

*ISK **15** 10:45:42.0,38°.43N×37°.07E, h5km, ML2.0*
*CSEM **15** 10:45:43.3±0.3,38°.26N×37°.08E, h2km, ML2.0, Error ellipse: s-maj=6.9km s-min=5.5km az=24.0*
*DDA **15** 10:45:43.6,38°.33N×37°.06E, h7km±5km, Md3.0*
*ISCJB **15** 10:45:44.1±0.6,38°.29N±0°.04×37°.08E±0°.04, h10km, Error ellipse: s-maj=6.3km s-min=4.0km az=34.6*
ISC 15 10:45:44.6±0.7,38°.32N±0°.04×37°.10E±0°.04,h4km±9km, n14,σ1§04/23,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARI	**SarD1z-Kayseri**	**0.48**	**319**	*e*PG	**Pg**	**10 45 52.8**	**-1.0**
SARI				*e*SG	**Sg**	**10 46 01.4**	**+1.5**
SARI	**SarD1z-Kayseri**	**0.48**	**319**	*e*Pg	**Pg**	**10 45 52.8**	**-0.9**
SARI				*e*Sg	**Sg**	**10 46 01.4**	**+1.5**
PINB	**Pinarbasi**	**0.65**	**304**	*i*P	**Pg**	**10 45 55.4**	**-1.7**
PINB				*i*S	**Sg**	**10 46 06.3**	**+0.8**
PINB	**Pinarbasi**	**0.65**	**304**	*i*P	**Pg**	**10 45 55.4**	**-1.7**
PINB				*i*S	**Sg**	**10 46 06.3**	**+0.8**
AKCD	**Akcadag**	**0.65**	**92**	*i*P	**Pg**	**10 45 55.9**	**-1.2**
AKCD				*i*S	**Sg**	**10 46 06.8**	**+1.3**
AKCD	**Akcadag**	**0.65**	**92**	*i*P	**Pg**	**10 45 55.9**	**-1.2**
AKCD				*i*S	**Sg**	**10 46 06.8**	**+1.3**
GZT	**Gaziantep**	**1.03**	**159**	*i*P	**Pg**	**10 46 04.9**	**+0.6**
GZT				*i*S	**Sg**	**10 46 18.4**	**+0.8**
MALT	**Malatya**	**1.05**	**90**	*e*PG	**Pg**	**10 46 03.2**	**-1.4**
MALT	**Malatya**	**1.05**	**90**	*e*Pg	**Pg**	**10 46 03.3**	**-1.4**
KOZT	**Kozan**	**1.30**	**231**	*e*PN	**Pn**	**10 46 09.6**	**0.0**
KEMA	**Kemaliye**	**1.45**	**49**	*e*P	**Pn**	**10 46 12.0**	**+0.4**
KEMA				*e*S	**Sb**	**10 46 31.7**	**+0.8**
KEMA	**Kemaliye**	**1.45**	**49**	*e*P	**Pn**	**10 46 12.0**	**+0.4**
KEMA				*e*S	**Sb**	**10 46 31.7**	**+0.8**
PTK	**Pertek**	**1.89**	**72**	*e*Pn	**Pn**	**10 46 16.6**	**-1.0**

*ISCJB **15** 10:47:52.0±1.7,59°.5N±0°.2×22°.3E±0°.2, h0km, Error ellipse: s-maj=30.3km s-min=7.0km az=162.3*
*HEL **15** 10:47:53.4±0.3,59°.33N×22°.57E, h0km, ML2.2, Explosion*
*IDC **15** 10:47:54.9±2.7,59°.64N×22°.31E, h0km, mb1 3.0/4, mb1mx2.9/23, mbtmp2.9/4, ML2.6/4, Error ellipse: s-maj=40.9km s-min=9.0km az=162.0*
ISC 15 10:47:53.5±1.5,59°.6N±0°.2×22°.3E±0°.1,h0km,n10, σ1§21/15,Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**1.24**	**57**	*e*P	**Pg**	**10 48 16.4**	**-0.8**
MEF				*e*S	**Sg**	**10 48 31.9**	**-1.3**
PVF	**Pernaja**	**2.03**	**60**	*e*P	**Pn**	**10 48 28.6**	**-0.3**
PVF				*e*S	**Sn**	**10 48 55.4**	**+0.4**
PVF				MSG		10 48 59.2	
	comp=Z,17nm,0.1s						
FIA0	**FINESS Array S**	**2.65**	**43**	*e*P	**Pn**	**10 48 38.9**	**+1.5**
FIA0				*e*S	**Sn**	**10 49 11.4**	**+1.3**
FIA0				MSG		10 49 15.2	
	comp=Z,7.4nm,0.1s						
FINES	**FINESS Array B**	**2.65**	**43**	Pn	**Pn**	**10 48 38.7**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=226,slow=13,SNR=7.3						
FINES				Sn	**Sn**	**10 49 11.8**	**+1.7**
	comp=Z,3.0nm,0.3s,baz=238,slow=25,SNR=8.3						
VJF	**Virojoki**	**2.81**	**68**	*e*P	**Pn**	**10 48 39.3**	**-0.3**
VJF				*e*SG	**Sg**	**10 49 19.2**	**-4.3**
VJF				MSG		10 49 21.8	
	comp=Z,5.9nm,0.1s						
KEF	**Keuruu**	**2.89**	**25**	MSG		10 49 21.8	
	comp=Z,6.4nm,0.2s						
KAF	**Kangasniemi**	**3.21**	**36**	*e*P	**Pn**	**10 48 47.1**	**+1.9**
HFS	**Hagfors**	**4.38**	**281**	Pn	**Pn**	**10 49 01.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=103,slow=17,SNR=5.5						
HFS				Pg	**Pg**	**10 49 10.6**	**-6.8**
	comp=Z,0.5nm,0.3s,baz=92,slow=16,SNR=6.7						
HFS				Lg		10 50 10.9	
	comp=Z,1.4nm,0.3s,baz=98,slow=30,SNR=7.4						
NOA	**NORSAR Array B**	**5.71**	**290**	Pn	**Pn**	**10 49 18.6**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=96,slow=12,SNR=1.8						
ARCES	**ARCESS Array B**	**10.10**	**6**	Pn	**Pn**	**10 50 17.1**	**-2.4**
	comp=Z,0.3nm,0.3s,baz=191,slow=13,SNR=8.9						

*ISCJB **15** 10:49:48.4±0.7,39°.43N±0°.03×33°.06E±0°.04, h4km±5km, Error ellipse: s-maj=5.5km s-min=4.3km az=27.6*
*CSEM **15** 10:49:48.3±0.2,39°.43N×33°.08E, h2km, MD2.8, Error ellipse: s-maj=4.8km s-min=4.0km az=128.0*
*DDA **15** 10:49:49.1,39°.52N×33°.10E, h9km±1km, MD2.8*
*ISK **15** 10:49:50.2,39°.41N×33°.03E, h24km, MD2.8*
ISC 15 10:49:48.5±0.7,39°.43N±0°.03×33°.07E±0°.04,h2km±5km, n25,σ0§88/43,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBAL	**Bala**	**0.12**	**20**	*i*P	**Pg**	**10 49 50.6**	**-0.2**
BBAL				*i*S	**Sg**	**10 49 52.7**	**+0.2**
BBAL	**Bala**	**0.12**	**20**	*i*P	**Pg**	**10 49 50.6**	**-0.2**
BBAL				*i*S	**Sg**	**10 49 52.7**	**+0.3**
CDAG	**Cicekdag**	**1.03**	**79**	*i*P	**Pg**	**10 50 07.2**	**-1.0**
CDAG				*i*S	**Sg**	**10 50 22.6**	**+1.2**
CDAG	**Cicekdag**	**1.03**	**79**	*i*P	**Pg**	**10 50 07.2**	**-0.9**
CDAG				*i*S	**Sg**	**10 50 22.6**	**+1.2**
KIZT	**Kizilcal**	**1.07**	**240**	*e*PG	**Pg**	**10 50 09.9**	**+0.8**
KIZT				*e*SG	**Sg**	**10 50 23.9**	**+0.9**
KIZT	**Kizilcal**	**1.07**	**240**	*e*Pg	**Pg**	**10 50 09.9**	**+0.8**
KIZT				*e*Sg	**Sg**	**10 50 23.9**	**+0.9**
ELDT	**Eldivan**	**1.09**	**14**	*i*P	**Pg**	**10 50 08.6**	**-0.9**
ELDT				*i*S	**Sg**	**10 50 23.0**	**-0.6**
ELDT	**Eldivan**	**1.09**	**14**	*i*P	**Pg**	**10 50 08.6**	**-0.9**
ELDT				*i*S	**Sg**	**10 50 23.0**	**-0.7**
SVRH	**Sivrihisar-ESK**	**1.20**	**271**	*e*PN	**Pn**	**10 50 11.5**	**-0.8**
SVRH	**Sivrihisar-ESK**	**1.20**	**271**	*e*Pn	**Pn**	**10 50 11.5**	**-0.7**
SULT	**Sultanhani-AKS**	**1.28**	**164**	*e*PN	**Pn**	**10 50 13.7**	**+0.4**
SULT				*e*SN	**Sn**	**10 50 29.2**	**-1.8**
SULT	**Sultanhani-AKS**	**1.28**	**164**	*e*Pn	**Pn**	**10 50 13.7**	**+0.4**
SULT				*e*Sn	**Sn**	**10 50 29.2**	**-1.8**
LADK	**Ladik-KONYA**	**1.34**	**204**	*e*PN	**Pn**	**10 50 13.8**	**-0.4**
LADK	**Ladik-KONYA**	**1.34**	**204**	*e*Pn	**Pn**	**10 50 13.8**	**-0.4**
SGKT	**Sivrigoynuk**	**1.38**	**326**	*i*P	**Pn**	**10 50 15.1**	**+0.3**
SGKT				*i*S	**Sg**	**10 50 31.8**	**-1.1**
SGKT	**Sivrigoynuk**	**1.38**	**326**	*i*P	**Pn**	**10 50 15.1**	**+0.3**
SGKT				*i*S	**Sg**	**10 50 31.8**	**-1.1**
CORM	**Corum**	**1.42**	**58**	*e*PN	**Pn**	**10 50 14.9**	**-0.3**
CORM				*e*SN	**Sn**	**10 50 34.6**	**+0.1**
CORM	**Corum**	**1.42**	**58**	*e*Pn	**Pn**	**10 50 14.9**	**-0.3**
CORM				*e*Sn	**Sn**	**10 50 34.6**	**+0.2**
AVNT	**Avonos**	**1.53**	**114**	*i*P	**Pn**	**10 50 17.9**	**+1.0**
AVNT				*i*S	**Sn**	**10 50 37.1**	**-0.2**
AVNT	**Avonos**	**1.53**	**114**	*i*P	**Pn**	**10 50 17.9**	**+1.1**
AVNT				*i*S	**Sn**	**10 50 37.1**	**-0.2**
KONT	**Konya--Tatoy**	**1.58**	**201**	*e*PN	**Pn**	**10 50 17.0**	**-0.5**
KONT	**Konya--Tatoy**	**1.58**	**201**	*e*Pn	**Pn**	**10 50 17.0**	**-0.5**
ESKT	**Eskisehir**	**1.72**	**274**	*i*P	**Pn**	**10 50 22.8**	**+3.4**
BALT	**Daday**	**2.12**	**6**	*i*P	**Pn**	**10 50 26.2**	**+1.3**
BALT				*i*S	**Sn**	**10 50 52.5**	**+0.8**
BALT	**Daday**	**2.12**	**6**	*i*P	**Pn**	**10 50 26.2**	**+1.3**
BALT				*i*S	**Sn**	**10 50 52.5**	**+0.8**

*ISCJB **15** 10:55:48.9±1.1, 19°.1S±0°.1×177°.8W±0°.2, h524km±15km, mb3.7/10, Error ellipse: s-maj=29.2km s-min=13.7km az=44.8*
*NEIC **15** 10:55:50.3±1.0, 19°.12S×177°.75W, h532km±13km, mb4.1/1, Error ellipse: s-maj=20.6km s-min=10.8km az=135.0*
*IDC **15** 10:55:50.3±1.5, 19°.10S×177°.78W, h533km±18km, mb3.3/9, mb1 3.6/11, mb1mx3.5/17, mbtmp3.4/11, Error ellipse: s-maj=25.4km s-min=11.2km az=143.0*
ISC 15 10:55:49.3±1.2, 19°.1S±0°.2×177°.7W±0°.2, h518km±15km, n24,σ0§84/17, mb3.7/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.68**	**49**	P	**P**	**10 57 45.1**	**+2.0**
AFI				S	**S**	**10 59 14.9**	**-1.3**
AFI	**Afiamalu**	**7.68**	**49**	P	**P**	**10 57 45.1**	**+2.0**
	15nm,0.3s,baz=178,slow=2.7,SNR=14						
AFI				S	**S**	**10 59 14.9**	**-1.3**
	8.3nm,0.3s,baz=198,slow=20,SNR=5.9						
URZ	**Urewera**	**19.64**	**192**	P	**P**	**10 59 42.5**	**-1.0**
	2.1nm,0.3s,baz=74,slow=15,SNR=9.3						
STKA	**Stephens Creek**	**38.65**	**243**	P	**P**	**11 02 28.1**	**0.0**
	10nm,0.8s,mb4.4,baz=67,slow=8.2,SNR=14						

GRR	**Gorron** 3.8nm,0.4s	**150.65**	**4**	*e*PKP1	PKPbc	11 14 41.2	-1.3
LOR	**Lormes** 1.9nm,0.4s	**151.85**	**358**	*e*PKP1	PKPbc	11 14 44.2	-1.1
SSF	**Saint Saulge**	**152.07**	**358**	*e*PKP1	PKPbc	11 14 44.9	-0.9

NEIC ***15*** *10:57:28.3, 38.°01N×20.°09E, h8km, MD3.5(ATH), After ATH.*
ATH ***15*** *10:57:28.3, 38.°01N×20.°09E, h8km±1km, MD3.5/9*
CSEM ***15*** *10:57:29.6±0.4, 38.°10N×20.°15E, h2km, ML2.6/9, Error ellipse: s-maj=8.5km s-min=4.3km az=48.0*
ISCJB ***15*** *10:57:31.8±0.7, 38.°16N±0.°03×20.°24E±0.°04, h10km, Error ellipse: s-maj=5.5km s-min=3.2km az=135.9*
THE ***15*** *10:57:31.1, 38.°18N×20.°25E, h1km±1km, ML2.6/9, Error ellipse: s-maj=2.9km s-min=1.0km az=228.0*

ISC 15 10:57:31.8±0.7, 38°13'N±0'.03×20°23'E±0'.04, h10km, n65, σ1§23/110, 2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.29**	**81**	*i*Pg	**Pg**	**10 57 36.3**	**-1.3**
VLS	**Valsamata**	**0.29**	**81**	*i*PG	**Pg**	**10 57 36.3**	**-1.3**
VLS	**Valsamata**	**0.29**	**81**	P	**Pg**	**10 57 36.3**	**-1.3**
VLS				S	**Sg**	**10 57 39.7**	**-1.8**
VLS	**Valsamata**	**0.29**	**81**	P	**Pg**	**10 57 36.3**	**-1.3**
VLS				S	**Sg**	**10 57 39.7**	**-1.8**
KFL	**Anninata**	**0.44**	**92**	P	**Pg**	**10 57 39.1**	**-1.3**
KFL	**Anninata**	**0.44**	**92**	P	**Pg**	**10 57 39.1**	**-1.3**
LKD2	**Lefkada island**	**0.74**	**27**	P	**Pg**	**10 57 43.2**	**-2.9**
LKD2				S	**Sg**	**10 57 54.6**	**-1.1**
LKD2	**Lefkada island**	**0.74**	**27**	P	**Pg**	**10 57 43.2**	**-2.9**
LKD2				S	**Sg**	**10 57 54.6**	**-1.1**
RLS	**Riolos of Patr**	**0.98**	**94**	*e*Pg	**Pg**	**10 57 48.7**	**-1.9**
RLS				*e*Sb	**Sg**	**10 58 04.3**	**+0.9**
RLS	**Riolos of Patr**	**0.98**	**94**	*e*PG	**Pg**	**10 57 48.7**	**-1.9**
RLS				*e*SB	**Sg**	**10 58 04.3**	**+0.9**
RLS	**Riolos of Patr**	**0.98**	**94**	*e*Pg	**Pg**	**10 57 48.7**	**-1.9**
RLS				*e*Sb	**Sg**	**10 58 04.3**	**+0.9**
EFP	**Efpalio**	**1.35**	**77**	*e*PB	**Pb**	**10 57 56.5**	**-0.7**
EFP				*e*SB	**Sb**	**10 58 16.7**	**+2.2**
EFP	**Efpalio**	**1.35**	**77**	P	**Pn**	**10 57 56.3**	**-0.4**
EFP				S	**Sb**	**10 58 14.5**	**0.0**
EFP	**Efpalio**	**1.35**	**77**	P	**Pn**	**10 57 56.3**	**-0.4**
EFP				S	**Sb**	**10 58 14.5**	**0.0**
EFP				*e*Sb	**Sb**	**10 58 16.7**	**+2.2**
LAKA	**Lakka**	**1.38**	**85**	P	**Pn**	**10 57 55.5**	**-1.6**
LAKA				S	**Sb**	**10 58 16.0**	**+0.6**
LAKA	**Lakka**	**1.38**	**85**	P	**Pn**	**10 57 55.5**	**-1.6**
LAKA				S	**Sb**	**10 58 16.0**	**+0.6**
IGT	**Igoumenitsa**	**1.40**	**3**	P	**Pn**	**10 57 56.4**	**-1.0**
IGT				S	**Sn**	**10 58 15.1**	**-0.8**
IGT	**Igoumenitsa**	**1.40**	**3**	P	**Pn**	**10 57 56.4**	**-1.0**
IGT				S	**Sn**	**10 58 15.1**	**-0.8**
EVR	**Evrytania**	**1.47**	**57**	*e*Pb	**Pb**	**10 57 58.6**	**-0.5**
EVR				*e*Sb	**Sb**	**10 58 20.7**	**+2.9**
EVR	**Evrytania**	**1.47**	**57**	*e*PB	**Pb**	**10 57 58.6**	**-0.5**
EVR				*e*SB	**Sb**	**10 58 20.7**	**+2.9**
EVR	**Evrytania**	**1.47**	**57**	*e*Pb	**Pb**	**10 57 58.6**	**-0.5**
EVR				*e*Sb	**Sb**	**10 58 20.7**	**+2.9**
TRIZ	**Trizonia**	**1.47**	**80**	P	**Pn**	**10 57 56.7**	**-1.6**
TRIZ				S	**Sn**	**10 58 18.3**	**+0.7**
TRIZ	**Trizonia**	**1.47**	**80**	P	**Pn**	**10 57 56.7**	**-1.6**
TRIZ				S	**Sn**	**10 58 18.3**	**+0.7**
KALE	**Kalithea**	**1.53**	**80**	P	**Pn**	**10 57 58.6**	**-0.5**
KALE				S	**Sn**	**10 58 20.3**	**+1.3**
KALE	**Kalithea**	**1.53**	**80**	P	**Pn**	**10 57 58.6**	**-0.5**
KALE				S	**Sn**	**10 58 20.3**	**+1.3**
JAN	**Janina**	**1.60**	**17**	*e*Pn	**Pn**	**10 58 01.2**	**+1.1**
JAN				*e*Sn	**Sg**	**10 58 24.7**	**+1.5**
JAN	**Janina**	**1.60**	**17**	*e*PN	**Pn**	**10 58 01.2**	**+1.1**
JAN				*e*SN	**Sg**	**10 58 24.7**	**+1.5**
JAN	**Janina**	**1.60**	**17**	*e*Pn	**Pn**	**10 58 01.2**	**+1.1**
JAN				*e*Sn	**Sg**	**10 58 24.7**	**+1.5**
KEK	**Kerkira**	**1.62**	**348**	*e*Pg	**Pn**	**10 58 00.2**	**-0.1**
KEK				*e*Sn	**Sg**	**10 58 23.8**	**+0.1**
KEK	**Kerkira**	**1.62**	**348**	*e*PG	**Pn**	**10 58 00.2**	**-0.1**
KEK				*e*SN	**Sg**	**10 58 23.8**	**+0.1**
KEK	**Kerkira**	**1.62**	**348**	P	**Pn**	**10 57 59.4**	**-0.9**
KEK				S	**Sn**	**10 58 20.9**	**-0.3**
KEK	**Kerkira**	**1.62**	**348**	P	**Pn**	**10 57 59.4**	**-0.9**
KEK	**Kerkira**	**1.62**	**348**	*e*Pg	**Pn**	**10 58 00.2**	**-0.1**
KEK				S	**Sn**	**10 58 20.9**	**-0.3**
KEK				*e*Sn	**Sg**	**10 58 23.8**	**+0.1**
ITM	**Ithomi**	**1.65**	**125**	*e*Pb	**Pn**	**10 57 59.8**	**-1.0**
ITM				*e*Sb	**Sb**	**10 58 23.0**	**0.0**
ITM	**Ithomi**	**1.65**	**125**	*e*PB	**Pn**	**10 57 59.8**	**-1.0**
ITM				*e*SB	**Sb**	**10 58 23.0**	**0.0**
ITM	**Ithomi**	**1.65**	**125**	*e*Pb	**Pn**	**10 57 59.8**	**-1.0**
ITM				*e*Sb	**Sb**	**10 58 23.0**	**0.0**
GUR	**Goura**	**1.68**	**96**	*e*PN	**Pn**	**10 58 01.5**	**+0.3**
GUR	**Goura**	**1.68**	**96**	P	**Pn**	**10 58 01.0**	**-0.2**
GUR				S	**Sn**	**10 58 23.7**	**+0.9**
GUR	**Goura**	**1.68**	**96**	P	**Pn**	**10 58 01.0**	**-0.2**
GUR	**Goura**	**1.68**	**96**	*e*Pn	**Pn**	**10 58 01.5**	**+0.3**
GUR				S	**Sn**	**10 58 23.7**	**+0.9**
DSF	**Desfina**	**1.83**	**80**	P	**Pn**	**10 58 03.4**	**+0.1**
DSF				S	**Sn**	**10 58 26.9**	**+0.4**
DSF	**Desfina**	**1.83**	**80**	P	**Pn**	**10 58 03.4**	**+0.1**
DSF				S	**Sn**	**10 58 26.9**	**+0.4**
AGG	**Agios Georgios**	**1.87**	**61**	P	**Pn**	**10 58 04.8**	**+1.0**
AGG	**Agios Georgios**	**1.87**	**61**	P	**Pn**	**10 58 03.7**	**-0.1**
AGG				S	**Sn**	**10 58 28.3**	**+0.8**
AGG	**Agios Georgios**	**1.87**	**61**	P	**Pn**	**10 58 03.7**	**-0.1**
AGG				S	**Sn**	**10 58 28.3**	**+0.8**
THL	**Klokotos Trika**	**2.00**	**44**	*e*PN	**Pn**	**10 58 06.2**	**+0.6**
THL				*e*SN	**Sg**	**10 58 34.8**	**-1.2**
THL	**Klokotos Trika**	**2.00**	**44**	P	**Pn**	**10 58 05.4**	**-0.2**
THL				S	**Sn**	**10 58 31.7**	**+1.0**
THL	**Klokotos Trika**	**2.00**	**44**	P	**Pn**	**10 58 05.4**	**-0.2**
THL	**Klokotos Trika**	**2.00**	**44**	*e*Pn	**Pn**	**10 58 06.2**	**+0.6**
THL				S	**Sn**	**10 58 31.7**	**+1.0**
THL				*e*Sn	**Sg**	**10 58 34.8**	**-1.2**
LTK	**Loutraki**	**2.16**	**92**	*e*PN	**Pn**	**10 58 08.4**	**+0.6**
LTK	**Loutraki**	**2.16**	**92**	*e*Pn	**Pn**	**10 58 08.4**	**+0.6**
LKR	**Lokris**	**2.24**	**76**	P	**Pg**	**10 58 11.8**	**-2.9**
LKR	**Lokris**	**2.24**	**76**	P	**Pg**	**10 58 11.8**	**-2.9**
DID	**Didima**	**2.46**	**104**	P	**Pn**	**10 58 12.4**	**+0.5**
DID				S	**Sn**	**10 58 43.8**	**+1.7**
DID	**Didima**	**2.46**	**104**	P	**Pn**	**10 58 12.4**	**+0.5**
DID				S	**Sn**	**10 58 43.8**	**+1.7**
NEO	**Neokhori**	**2.62**	**62**	*e*Pn	**Pn**	**10 58 15.9**	**+1.8**
NEO	**Neokhori**	**2.62**	**62**	*e*PN	**Pn**	**10 58 15.9**	**+1.8**
NEO	**Neokhori**	**2.62**	**62**	*e*Pn	**Pn**	**10 58 15.9**	**+1.8**
LIT	**Litokhoron**	**2.64**	**41**	P	**Pg**	**10 58 18.5**	**-3.9**
LIT	**Litokhoron**	**2.64**	**41**	P	**Pg**	**10 58 18.5**	**-3.9**
FNA	**Florina**	**2.79**	**18**	P	**Pn**	**10 58 18.8**	**+2.3**
FNA	**Florina**	**2.79**	**18**	P	**Pn**	**10 58 18.8**	**+2.3**
TIP	**Timpagrande**	**2.91**	**292**	P	**Pn**	**10 58 20.4**	**+2.3**
TIP	**Timpagrande**	**2.91**	**292**	P	**Pn**	**10 58 20.4**	**+2.3**
CUC	**Castrocucco**	**3.91**	**300**	P	**Pn**	**10 58 35.8**	**+4.0**

ISK ***15*** *11:11:10.1, 37.°12N×37.°25E, h5km, MD2.9*
ISCJB ***15*** *11:11:11.8±0.6, 37.°16N±0.°03×37.°23E±0.°04, h4km±4km, Error ellipse: s-maj=5.9km s-min=4.5km az=142.9*
DDA ***15*** *11:11:11.9, 37.°16N×37.°22E, h7km±4km, Md2.9*
CSEM ***15*** *11:11:12.6±0.3, 37.°16N×37.°22E, h15km, MD2.9, Error ellipse: s-maj=8.0km s-min=6.1km az=143.0*

ISC 15 11:11:12.3±0.5, 37°16'N±0'.03×37°22'E±0'.04, h7km±4km, n29, σ1§10/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZ	**Gaziantep**	**0.01**	**316**	PG	**Pg**	**11 11 11.5**	**-2.1**
GAZ	**Gaziantep**	**0.01**	**316**	*i*Pg	**Pg**	**11 11 11.5**	**-2.1**
GZT	**Gaziantep**	**0.33**	**54**	*i*P	**Pg**	**11 11 18.1**	**-0.6**
GZT				*i*S	**Sg**	**11 11 28.1**	**+4.9**
KUZU	**Kuzuini**	**0.41**	**197**	*i*P	**Pg**	**11 11 19.8**	**-0.3**
KUZU				*i*S	**Sg**	**11 11 26.5**	**+1.1**
KUZU	**Kuzuini**	**0.41**	**197**	*i*P	**Pg**	**11 11 19.8**	**-0.3**
KUZU				*i*S	**Sg**	**11 11 26.5**	**+1.1**
KMRS	**Kahramanmaras**	**0.43**	**323**	*e*PG	**Pg**	**11 11 20.5**	**-0.1**
KMRS				*e*SG	**Sg**	**11 11 28.2**	**+2.0**
KMRS	**Kahramanmaras**	**0.43**	**323**	*e*Pg	**Pg**	**11 11 20.5**	**-0.1**
KMRS				*e*Sg	**Sg**	**11 11 28.2**	**+2.0**
ATAB	**Bozova**	**0.91**	**70**	*i*P	**Pg**	**11 11 29.0**	**-0.7**
ATAB				*i*S	**Sg**	**11 11 42.6**	**+1.1**
ATAB	**Bozova**	**0.91**	**70**	*i*P	**Pg**	**11 11 29.0**	**-0.7**
ATAB				*i*S	**Sg**	**11 11 42.6**	**+1.1**
COBT	**Iskenderun**	**1.01**	**231**	*i*P	**Pg**	**11 11 31.7**	**+0.1**
COBT				*i*S	**Sg**	**11 11 45.0**	**+0.3**
COBT	**Iskenderun**	**1.01**	**231**	*i*P	**Pg**	**11 11 31.7**	**+0.1**
COBT				*i*S	**Sg**	**11 11 45.0**	**+0.4**
KOZT	**Kozan**	**1.16**	**286**	*e*PN	**Pn**	**11 11 34.0**	**-0.9**
KOZT				*e*SN	**Sn**	**11 11 51.4**	**+0.6**
KOZT	**Kozan**	**1.16**	**286**	*e*Pn	**Pn**	**11 11 34.0**	**-0.8**
KOZT				*e*Sn	**Sn**	**11 11 51.4**	**+0.5**
AKCD	**Akcadag**	**1.26**	**26**	*i*P	**Pn**	**11 11 36.6**	**+0.3**
AKCD				*i*S	**Sb**	**11 11 54.6**	**+1.9**
AKCD	**Akcadag**	**1.26**	**26**	*i*P	**Pn**	**11 11 36.6**	**+0.4**
AKCD				*i*S	**Sb**	**11 11 54.6**	**+1.9**
URFA	**Urfa**	**1.30**	**77**	*e*PN	**Pn**	**11 11 35.9**	**-0.9**
URFA				*e*SN	**Sn**	**11 11 55.0**	**+0.5**
URFA	**Urfa**	**1.30**	**77**	*e*Pn	**Pn**	**11 11 35.9**	**-0.9**
URFA				*e*Sn	**Sn**	**11 11 55.0**	**+0.5**
MALT	**Malatya**	**1.49**	**39**	*e*PN	**Pn**	**11 11 39.3**	**-0.1**
MALT	**Malatya**	**1.49**	**39**	*e*Pn	**Pn**	**11 11 39.3**	**-0.2**
MYA	**Malatya**	**1.50**	**39**	*e*PN	**Pn**	**11 11 40.0**	**+0.5**
MYA	**Malatya**	**1.50**	**39**	*e*Pn	**Pn**	**11 11 40.0**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.57**	**345**	*e*PN	**Pn**	**11 11 37.9**	**-2.6**
SARI				*e*SN	**Sn**	**11 11 58.9**	**-2.2**
SARI	**SarD1z-Kayseri**	**1.57**	**345**	*e*Pn	**Pn**	**11 11 37.9**	**-2.6**
SARI				*e*Sn	**Sn**	**11 11 58.9**	**-2.2**
PINB	**Pinarbasi**	**1.65**	**337**	*i*P	**Pn**	**11 11 42.6**	**+1.0**
PINB				*i*S	**Sn**	**11 12 07.4**	**+4.5**
PINB	**Pinarbasi**	**1.65**	**337**	*i*P	**Pn**	**11 11 42.6**	**+1.1**
PINB				*i*S	**Sn**	**11 12 07.4**	**+4.5**
DARE	**Darende-Malaty**	**1.85**	**14**	*e*PN	**Pn**	**11 11 39.1**	**-5.1**
DARE				*e*SN	**Sn**	**11 11 59.3**	**-8.5**
DARE	**Darende-Malaty**	**1.85**	**14**	*e*Pn	**Pn**	**11 11 39.2**	**-5.1**
DARE				*e*Sn	**Sn**	**11 11 59.3**	**-8.6**
SVRC	**Sivrice-ELAZID**	**2.05**	**53**	*e*PN	**Pn**	**11 11 46.9**	**-0.1**
SVRC	**Sivrice-ELAZID**	**2.05**	**53**	*e*Pn	**Pn**	**11 11 46.9**	**-0.2**

MAN 15 11:13:36, 5°82'N×126°71'E, h32km, mb4.8, ML3.8, MS3.8, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.21**	**338**	*e*P	Pn	11 13 56.7	0.0
MATI				*e*S	Sn	11 14 12.7	+0.7
DMPH	**Davao City--Mi**	**1.73**	**316**	*i*P	Pn	11 14 05.1	+1.2
DMPH				*i*S	Sn	11 14 25.5	+0.6
KCP	**Kidapawan**	**2.00**	**306**	*i*P	Pn	11 14 08.5	+1.0
KCP				*i*S	Sn	11 14 28.6	-2.9
BUKP	**Musuan**	**2.62**	**321**	*e*P	Pn	11 14 17.3	+1.2
BUKP				*e*S	Sn	11 14 48.8	+1.9

MAN 15 11:27:35, 13°13'N×124°51'E, h6km, mb4.6, ML3.4, MS3.3, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.57**	**324**	*e*P	Pg	11 27 47.2	+1.1
PVCP				*e*S	Sg	11 27 53.3	-0.3
CNP	**Catarman**	**0.64**	**166**	*e*P	Pg	11 27 48.8	+1.5
CNP				*e*S	Sg	11 27 56.7	+1.1
MMPH	**Masbate**	**1.15**	**228**	*i*P	Pg	11 27 55.0	-2.1
MMPH				*i*S	Sg	11 28 09.0	-3.2
GQP	**Guinayangan**	**2.15**	**291**	*e*P	Pn	11 28 12.6	+1.3
GQP				*e*S	Sn	11 28 40.4	+2.1

ISK ***15*** *11:27:57.2, 37.°54N×29.°26E, h12km, MD2.7*
ISCJB ***15*** *11:28:00.8±0.7, 36.°96N±0.°05×29.°19E±0.°04, h11km±7km, Error ellipse: s-maj=7.9km s-min=6.0km az=172.6*
CSEM ***15*** *11:28:00.8±0.4, 36.°98N×29.°18E, h15km, MD2.8, Error ellipse: s-maj=9.4km s-min=6.9km az=5.0*
DDA ***15*** *11:28:01.7, 37.°02N×29.°20E, h7km±7km, Md2.8*

ISC 15 11:28:01.3±0.7, 36°98'N±0'.05×29°21'E±0'.05, h19km±7km, n20, σ1§07/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.29**	**53**	*e*PG	**Pg**	**11 28 06.4**	**-1.3**
GLHS				*e*SG	**Sg**	**11 28 12.8**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.29**	**53**	*e*Pg	**Pg**	**11 28 06.4**	**-1.3**
GLHS				*e*Sg	**Sg**	**11 28 12.8**	**+0.7**
GOLH	**Golhisar**	**0.38**	**48**	*i*P	**Pg**	**11 28 07.7**	**-1.6**
GOLH				*i*S	**Sg**	**11 28 15.1**	**+0.4**
GOLH	**Golhisar**	**0.38**	**48**	*i*P	**Pg**	**11 28 07.7**	**-1.6**
GOLH				*i*S	**Sg**	**11 28 15.1**	**+0.4**
TURN	**Turunc**	**0.50**	**258**	*i*P	**Pg**	**11 28 18.7**	**+7.4**
TURN	**Turunc**	**0.50**	**258**	*i*P	**Pg**	**11 28 18.7**	**+7.4**
ELL	**Elmali**	**0.61**	**112**	*e*PG	**Pg**	**11 28 15.1**	**+1.8**
ELL	**Elmali**	**0.61**	**112**	*e*Pg	**Pg**	**11 28 15.1**	**+1.8**
DNZL	**Cakiroluk**	**0.72**	**350**	*i*P	**Pb**	**11 28 14.7**	**-0.6**
DNZL				*i*S	**Sg**	**11 28 25.5**	**+0.4**
DNZL	**Cakiroluk**	**0.72**	**350**	*i*P	**Pb**	**11 28 14.7**	**-0.5**
DNZL				*i*S	**Sg**	**11 28 25.5**	**+0.4**
YER	**Yerkesik**	**0.76**	**282**	*e*PG	**Pg**	**11 28 15.1**	**-1.0**
YER				*e*SG	**Sg**	**11 28 26.7**	**+0.5**
YER	**Yerkesik**	**0.76**	**282**	*e*Pg	**Pg**	**11 28 15.1**	**-1.0**
YER				*e*Sg	**Sg**	**11 28 26.7**	**+0.6**
AKAS	**Kas**	**0.81**	**157**	*i*P	**Pb**	**11 28 16.4**	**-0.3**
AKAS				*i*S	**Sb**	**11 28 31.6**	**+4.3**
AKAS	**Kas**	**0.81**	**157**	*i*P	**Pb**	**11 28 16.4**	**-0.3**
AKAS				*i*S	**Sb**	**11 28 31.6**	**+4.3**
MLSB	**Milas**	**1.19**	**286**	*e*PN	**Pn**	**11 28 20.8**	**-2.0**
MLSB	**Milas**	**1.19**	**286**	*e*Pn	**Pn**	**11 28 20.8**	**-2.0**
AYDN	**Tasoluk**	**1.26**	**303**	*i*P	**Pn**	**11 28 24.5**	**+0.6**
AYDN				*i*S	**Sb**	**11 28 41.7**	**+1.5**
AYDN	**Tasoluk**	**1.26**	**303**	*i*P	**Pn**	**11 28 24.5**	**+0.7**
AYDN				*i*S	**Sb**	**11 28 41.7**	**+1.5**
DAT	**Datca**	**1.33**	**260**	*e*PN	**Pn**	**11 28 24.8**	**0.0**
DAT	**Datca**	**1.33**	**260**	*e*Pn	**Pn**	**11 28 24.8**	**0.0**

ISCJB ***15*** *11:32:17.7±0.5, 59.°68N±0.°03×22.°35E±0.°06, h0km, Error ellipse: s-maj=4.5km s-min=3.6km az=36.1*
CSEM ***15*** *11:32:19.9±0.4, 59.°70N×22.°42E, h2km, ML2.4, Error ellipse: s-maj=9.5km s-min=6.5km az=133.0*
IDC ***15*** *11:32:20.8±1.9, 59.°63N×22.°52E, h0km, mb1 3.4/4, mb1mx3.1/24, mbtmp3.3/4, ML3.2/4, Error ellipse: s-maj=24.2km s-min=7.6km az=163.0*
NAO ***15*** *11:32:20.8±1.8, 59.°72N×22.°51E, ML2.5*
HEL ***15*** *11:32:20.0±0.2, 59.°61N×22.°48E, h0km, ML2.1, ML2.5(NAO), Explosion*
NEIC ***15*** *11:32:22.7, 59.°80N×22.°40E, h0km, ML2.5(NAO), After BER.*
BER ***15*** *11:32:22.7±3.9, 59.°80N×22.°40E, h0km±21km, ML2.5(NAO)*

ISC 15 11:32:19.1±0.4, 59°65'N±0'.03×22°48'E±0'.06, h0km, n37, σ1§38/65, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**1.12**	**59**	*e*P	**Pg**	**11 32 40.5**	**0.0**
MEF				*e*S	**Sg**	**11 32 55.0**	**+0.1**
MEF	**Metsahovi** SNR=90	**1.12**	**59**	*e*P	**Pg**	**11 32 40.6**	**+0.1**
MEF				*e*S	**Sg**	**11 32 54.8**	**-0.1**
	31nm,0.4s,SNR=90						
MTSE	**Matsula**	**1.17**	**143**	*e*P	**Pg**	**11 32 39.9**	**-1.5**
MTSE				*e*SB	**Sb**	**11 32 55.8**	**-1.8**
RAF	**Rauma** baz=161	**1.42**	**346**	*e*P	**Pn**	**11 32 46.6**	**+0.6**
RAF				*e*SB	**Sb**	**11 33 05.9**	**+0.9**
RAF				MSG		11 33 05.9	
	comp=Z,6.4nm,0.1s						
RAF	**Rauma**	**1.42**	**346**	P	**Pn**	**11 32 46.6**	**+0.5**
RAF				Sb	**Sb**	**11 33 05.9**	**+0.9**
	comp=Z,6.4nm,0.1s						
PVF	**Pernaja**	**1.92**	**61**	*e*PN	**Pn**	**11 32 54.3**	**+1.4**
SLIT	**Slitere, Latvi** SNR=50	**2.03**	**183**	*e*P	**Pn**	**11 32 55.9**	**+1.4**
SLIT				*e*S	**Sn**	**11 33 21.4**	**+0.9**
	comp=Z,445nm,0.4s,SNR=50						
FIA0	**FINESS Array S** baz=219,slow=14	**2.53**	**43**	Pn	**Pn**	**11 33 03.6**	**+2.4**
FIA0				Lg		11 33 36.6	
	baz=222,slow=28						
FIA0	**FINESS Array S** baz=218	**2.53**	**43**	*e*P	**Pn**	**11 33 03.3**	**+2.0**
FIA0				*e*SB	**Sb**	**11 33 35.4**	**-1.4**
FIA0				MSG		11 33 35.4	
	comp=Z,12nm,0.4s						
FIA0	**FINESS Array S** baz=219,slow=13,SNR=50	**2.53**	**43**	Pn	**Pn**	**11 33 03.7**	**+2.4**
FIA0				Sb	**Sb**	**11 33 35.4**	**-1.4**
	comp=Z,12nm,0.4s						
FIA0				Lg		11 33 36.6	
FINES	**FINESS Array B** comp=Z,2.7nm,0.3s,baz=221,slow=14,SNR=50	**2.53**	**43**	Pn	**Pn**	**11 33 03.5**	**+2.3**
FINES				Sn	**Sn**	**11 33 36.1**	**+3.4**
	comp=Z,16nm,0.3s,baz=248,slow=25,SNR=36						
FINES	**FINESS Array B**	**2.53**	**43**	Sn	**Sn**	**11 33 36.1**	**+3.4**
VJF	**Virojoki**	**2.69**	**69**	*e*S	**Sn**	**11 33 38.2**	**+1.5**
VJF				MSG		11 33 38.2	
	comp=Z,6.1nm,0.2s						
VJF	**Virojoki** comp=Z,6.1nm,0.2s	**2.69**	**69**	S	**Sn**	**11 33 38.2**	**+1.4**
KEF	**Keuruu**	**2.78**	**24**	*e*PB	**Pb**	**11 33 08.5**	**-1.0**
KEF				*e*SB	**Sb**	**11 33 44.0**	**-0.1**
KEF				MSG		11 33 44.0	
	comp=Z,23nm,0.4s						
KEF	**Keuruu**	**2.78**	**24**	Pb	**Pb**	**11 33 08.5**	**-1.0**
KEF				Sb	**Sb**	**11 33 44.0**	**-0.1**
	comp=Z,23nm,0.4s						
KAF	**Kangasniemi**	**3.10**	**36**	*e*PB	**Pb**	**11 33 12.7**	**-2.2**
KAF				*e*SB	**Sb**	**11 33 51.7**	**-1.5**
KAF				MSG		11 33 51.7	
	comp=Z,9.6nm,0.2s						
KAF	**Kangasniemi**	**3.10**	**36**	Pb	**Pb**	**11 33 12.7**	**-2.2**
KAF				Sb	**Sb**	**11 33 51.6**	**-1.6**
	comp=Z,9.6nm,0.2s						
VAF	**Ylistaro** baz=172	**3.40**	**1**	*e*PB	**Pb**	**11 33 18.1**	**-2.0**
VAF				*e*SG	**Sg**	**11 34 08.9**	**+0.7**
VAF				MSG		11 34 08.9	
	comp=Z,5.4nm,0.4s						
VAF	**Ylistaro**	**3.40**	**1**	Pb	**Pb**	**11 33 18.0**	**-2.1**
VAF				Sg	**Sg**	**11 34 08.9**	**+0.7**
	comp=Z,5.4nm,0.4s						
SUF	**Sumiainen**	**3.55**	**28**	*e*P	**Pn**	**11 33 18.4**	**+3.1**
SUF	**Sumiainen**	**3.55**	**28**	P	**Pn**	**11 33 18.4**	**+3.1**
HFS	**Hagfors** baz=89,slow=16	**4.45**	**280**	Pn	**Pn**	**11 33 29.2**	**+1.5**
HFS				Sn	**Sn**	**11 34 18.7**	**-1.5**
	baz=101,slow=22						
HFS				Lg		11 34 36.2	
	baz=97,slow=37						
HFS	**Hagfors**	**4.45**	**280**	Pn	**Pn**	**11 33 29.0**	**+1.3**
HFS				Pn	**Pn**	**11 33 29.2**	**+1.5**
HFS				Sn	**Sn**	**11 34 18.7**	**-1.5**
HFS				Sn	**Sn**	**11 34 21.2**	**+1.1**
HFS				Lg		11 34 36.2	
HFS				Lg		11 34 38.0	
HFS	**Hagfors** comp=Z,1.1nm,0.3s,baz=97,slow=13,SNR=21	**4.45**	**280**	Pn	**Pn**	**11 33 29.0**	**+1.3**
HFS				Sn	**Sn**	**11 34 21.2**	**+1.1**
	comp=Z,1.5nm,0.3s,baz=105,slow=26,SNR=8.8						
HFS				Lg		11 34 38.0	
	comp=Z,2.7nm,0.3s,baz=90,slow=28,SNR=7.4						
HFS	**Hagfors**	**4.45**	**280**	*e*P	**Pn**	**11 33 29.2**	**+1.5**
HFS				*e*S	**Sn**	**11 34 18.7**	**-1.5**
HFS				*e*SG	**Sg**	**11 34 36.2**	**-5.7**
HFS	**Hagfors**	**4.45**	**280**	Pn	**Pn**	**11 33 29.0**	**+1.3**
HFS				Sn	**Sn**	**11 34 18.7**	**-1.4**
	baz=101,slow=20,SNR=50						
NOA	**NORSAR Array B** comp=Z,1.5nm,0.3s,baz=97,slow=12,SNR=7.7	**5.76**	**289**	Pn	**Pn**	**11 33 45.8**	**+0.1**
NOA				Sn	**Sn**	**11 34 50.7**	**-1.8**
	comp=Z,1.0nm,0.3s,baz=128,slow=24,SNR=3.4						
NOA				Lg		11 35 22.1	
	comp=Z,1.6nm,0.3s,baz=53,slow=18,SNR=4.1						
NOA	**NORSAR Array B**	**5.76**	**289**	Pn	**Pn**	**11 33 45.8**	**+0.1**
NOA				Sn	**Sn**	**11 34 50.7**	**-1.7**
BSD	**Bornholm Skovb**	**6.12**	**225**	*i*P	**Pn**	**11 33 50.7**	**+0.1**
BSD				*i*S	**Sn**	**11 34 57.2**	**-4.0**
BSD				*i*LG		11 35 22.9	
BSD	**Bornholm Skovb** SNR=46	**6.

WRA	**Warramunga Arr**	**34.16**	**163**	P	**P**	**11 59 13.2**	**-1.7**
	0.3nm,0.7s,mb3.4,baz=348,slow=9.3,SNR=4.1						
ASAR	**Alice Springs**	**37.60**	**166**	P	**P**	**11 59 41.5**	**-2.9**
	0.2nm,0.4s,mb3.2,baz=341,slow=6.6,SNR=7.3						
SONM	**Songino Array**	**37.85**	**340**	P	**P**	**11 59 48.3**	**+2.0**
	0.6nm,0.6s,mb3.5,baz=157,slow=8.3,SNR=4.2						
MKAR	**Makanchi Array**	**48.77**	**322**	P	**P**	**12 01 13.7**	**-0.8**
	0.5nm,0.6s,mb3.7,baz=130,slow=8.6,SNR=2.6						

IDC 15 12:04:25.8±1.2, 83.74N×111.46E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/22, mbtmp3.5/3, Error ellipse: s-maj=54.3km s-min=26.5km az=144.0, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILAR	**Eielson Array**	**27.31**	**66**	P	P	12 10 12.7	+1.3
	0.5nm,1.0s,baz=339,slow=9.7,SNR=6.1						
MKAR	**Makanchi Array**	**38.00**	**213**	P	P	12 11 44.4	-0.5
	0.8nm,0.8s,baz=356,slow=7.3,SNR=4.9						
TXAR	**Lajitas Array**	**66.04**	**33**	P	P	12 15 12.4	-1.3
	0.2nm,0.6s,baz=14,slow=4.9,SNR=4.5						
TORD	**Torodi Ar. Bea**	**79.14**	**291**	P	P	12 16 32.6	+0.8
	0.9nm,0.8s,baz=353,slow=5.6,SNR=7.0						

*NEIC **15** 12:24:48.5, 62°.03N×136°.28W, h1km, ML3.7(PGC), After PGC.*

PGC 15 12:24:48.5±0.0, 62°.03N×136°.28W, h1km, ML3.7/5, 3D, 157km northeast of Haines Jct., Yt Southern Yukon Territory, Canada, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HYT	**Haines Junctio**	**1.35**	**206**	⇓P	Pg	12 25 12.9	-1.4
HYT				⇑S	Sg	12 25 30.5	-1.2
WHY	**Whitehorse**	**1.54**	**153**	⇓Pn	Pn	12 25 15.4	-1.6
WHY				⇑Sg	Sg	12 25 36.2	-1.5
DAWY	**Dawson**	**2.48**	**327**	*e*Pn	Pn	12 25 29.5	-0.5
DAWY				*e*Pg	Pg	12 25 35.6	-0.5
DAWY				*e*Sg	Sg	12 26 08.1	-0.1
DAWY	**Dawson**	**2.48**	**327**	⇑Pn	Pn	12 25 29.6	-0.5
PLBC	**Pleasant Camp**	**2.59**	**181**	⇑Pn	Pn	12 25 31.2	-0.2
PLBC				⇓Pg	Pg	12 25 34.2	-3.8
PLBC				⇑Sg	Sg	12 26 07.0	-4.5
SKAG	**Skagway**	**2.62**	**169**	*e*Pn	Pn	12 25 31.3	-0.6
SKAG				*e*Pb	Pb	12 25 35.1	-1.2
SKAG				*e*Pg	Pg	12 25 36.9	-1.9
SKAG				*e*Sg	Sg	12 26 08.4	-4.4
BCA3	**Beaver Creek A**	**2.75**	**295**	P	Pn	12 25 32.8	-0.9
PNL	**Peninsula**	**2.82**	**214**	*e*Pn	Pn	12 25 34.8	+0.1
PNL				*e*Pg	Pg	12 25 40.4	-2.1
EGAK	**Eagle**	**3.52**	**324**	*e*Pn	Pn	12 25 43.4	-0.9
EGAK				*e*Pg	Pg	12 25 54.0	-1.9
EGAK				*e*Sg	Sg	12 26 39.6	-1.8
BESE	**Bessie Mountai**	**3.54**	**168**	P	Pn	12 25 44.1	-0.4
MENT	**Mentasta**	**3.57**	**288**	*e*Pn	Pn	12 25 43.6	-1.4
DOT	**Dot Lake**	**3.92**	**298**	P	Pn	12 25 49.0	-0.8
BMRM	**Bremner River**	**4.13**	**259**	*e*Pn	Pn	12 25 52.9	+0.2
PAX	**Paxson**	**4.36**	**286**	*e*Pn	Pn	12 25 55.2	-0.6
PAX				*e*Sg	Sg	12 27 03.4	-5.2
DLBC	**Dease Lake**	**4.77**	**136**	*e*Pn	Pn	12 26 01.1	-0.2
DLBC				*e*Sg	Sg	12 27 16.5	-5.0
DLBC	**Dease Lake**	**4.77**	**136**	Pn	Pn	12 26 01.1	-0.2
DLBC				⇑Sg	Sg	12 27 15.0	-6.4
SIT	**Sitka**	**5.02**	**174**	P	Pn	12 26 03.8	-1.0
SCM	**Sheep Creek Mo**	**5.22**	**273**	P	Pn	12 26 08.0	+0.4
DHY	**Denali Highway**	**5.24**	**286**	P	Pn	12 26 08.3	+0.4
SML	**Sawmill**	**5.70**	**273**	P	Pn	12 26 13.7	-0.5
COLA	**College**	**5.92**	**304**	Pn	Pn	12 26 15.8	-1.4
COLA				*e*Pg	Pg	12 26 39.0	-2.8
COLA				*e*Sg	Sg	12 27 56.8	-1.5
RND	**Reindeer**	**5.95**	**289**	P	Pn	12 26 17.9	+0.3
MCK	**McKinley**	**6.03**	**292**	*e*Pn	Pn	12 26 19.2	+0.5
MCK				*e*Sg	Sg	12 28 01.2	-0.9
BM3	**Burnt Mountain**	**6.47**	**330**	P	Pn	12 26 24.5	-0.3
TRF	**Thorofare Moun**	**6.59**	**289**	*e*Pn	Pn	12 26 26.8	+0.5
BPAW	**Bear Paw Mtn.**	**6.99**	**294**	Pn	Pn	12 26 27.1	-4.8
BPAW				*e*Pg	Pg	12 26 58.3	-4.0
IM3	**Indian Mountai**	**8.62**	**305**	P	Pn	12 26 54.1	0.0

*ISCJB **15** 12:28:44.9±1.9, 28°.6S±0°.1×178°.4W±0°.3, h185km±26km, mb3.9/6, Error ellipse: s-maj=42.7km s-min=12.4km az=23.0*

*NEIC **15** 12:28:46.9±1.9, 28°.56S×178°.27W, h198km±17km, Error ellipse: s-maj=24.8km s-min=13.7km az=122.0*

*IDC **15** 12:28:46.7±3.8, 28°.53S×178°.36W, h190km±32km, mb3.6/6, mb1 3.7/8, mb1mx3.7/15, mbtmp3.7/8, Error ellipse: s-maj=25.0km s-min=21.0km az=102.0*

ISC 15 12:28:45.4±1.9, 28°.6S±0°.1×178°.4W±0°.3, h176km±25km, n29, σ0s99/11, mb3.9/6, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**10.36**	**200**	P	**Pn**	**12 31 11.0**	**+1.5**
URZ				S	**Sn**	**12 33 04.4**	**-0.1**
	3.4nm,0.3s,baz=93,slow=23,SNR=8.9						
PNHZ	**Pukenui**	**12.15**	**200**	SN	Sx	12 33 39.8	
WPHZ	**Waipukurau**	**12.22**	**199**	SN	**Sn**	**12 33 43.1**	**-6.1**
BFZ	**Birch Farm**	**12.85**	**199**	SN	Sx	12 33 54.3	
HOWZ	**Holdsworth Sta**	**13.27**	**201**	SN	Sx	12 34 05.2	
NNZ	**Nelson**	**14.29**	**206**	*e*PN	**Pn**	**12 31 57.2**	**-2.5**
NNZ				SN	Sx	12 34 28.8	
KHZ	**Kahutara**	**15.28**	**203**	SN	Sx	12 34 49.9	
AFI	**Afiamalu**	**15.84**	**24**	P	**Pn**	**12 32 18.9**	**-0.1**
	1.4nm,0.3s,baz=210,slow=18,SNR=3.3						
AFI				S	Sx	12 35 00.6	
	1.1nm,0.3s,baz=81,slow=23,SNR=2.7						
MQZ	**McQueen's Vall**	**16.72**	**203**	SN	Sx	12 35 20.8	
STKA	**Stephens Creek**	**34.61**	**254**	P	**P**	**12 35 19.1**	**+1.4**
	3.3nm,0.8s,mb4.0,baz=318,slow=19,SNR=5.9						
ASAR	**Alice Springs**	**42.91**	**265**	P	**P**	**12 36 26.6**	**-0.2**
	1.2nm,0.7s,mb3.6,baz=102,slow=7.4,SNR=14						
ASAR				PcP	PcP	12 38 13.1	-1.2
	0.6nm,0.4s,baz=112,slow=3.9,SNR=7.7						
WRA	**Warramunga Arr**	**43.74**	**270**	P	**P**	**12 36 32.6**	**-0.8**
	3.0nm,0.7s,mb4.1,baz=108,slow=7.7,SNR=26						
WRA				PcP	PcP	12 38 16.2	-0.9
	1.6nm,0.5s,baz=107,slow=3.3,SNR=10						
MAW	**Mawson**	**73.89**	**200**	P	**P**	**12 40 00.7**	**+0.2**
	2.6nm,0.6s,mb4.1,baz=153,slow=4.5,SNR=4.2						
MJAR	**Matsushiro Arr**	**76.58**	**325**	P	**P**	**12 40 15.8**	**-0.4**
	3.0nm,1.0s,mb3.9,baz=166,slow=5.9,SNR=7.7						
KSRS	**Korea Array**	**82.76**	**320**	P	**P**	**12 40 50.0**	**+0.5**
	2.2nm,0.9s,mb3.9,baz=142,slow=5.8,SNR=5.0						
MKAR	**Makanchi Array**	**116.36**	**311**	PKP	PKPdf	12 47 06.3	-1.3
MKAR	**Makanchi Array**	**116.36**	**311**	PKP	PKPdf	12 47 06.3	-1.3
	0.4nm,0.4s,baz=196,slow=1.0,SNR=5.7						
BVAR	**Borovoye Array**	**124.88**	**317**	PKP	PKPdf	12 47 22.9	-1.0
	1.4nm,0.4s,baz=29,slow=1.3,SNR=8.8						
ARCES	**ARCESS Array B**	**136.76**	**348**	PKP	PKPdf	12 47 45.8	0.0
	2.3nm,0.8s,baz=29,slow=2.8,SNR=4.6						
JOF	**Joensuu**	**140.62**	**339**	*ep*	PKPdf	12 47 49.8	-3.3
	5.0nm,0.8s						
KAF	**Kangasniemi**	**142.74**	**341**	*ep*	PKPdf	12 47 52.1	-4.8
	1.2nm,0.4s						
FINES	**FINESS Array B**	**143.34**	**341**	PKP	PKPdf	12 47 54.5	-3.5
FINES	**FINESS Array B**	**143.34**	**341**	PKP	PKPdf	12 47 54.5	-3.5
	1.6nm,0.5s,baz=62,slow=3.2,SNR=8.2						
NOA	**NORSAR Array B**	**146.92**	**351**	PKPbc	PKPbc	12 48 05.3	-1.0
	1.7nm,0.5s,baz=15,slow=4.5,SNR=10						
AKASG	**Malin Array Be**	**149.66**	**324**	PKPbc	PKPbc	12 48 12.7	-1.0
AKASG				PKPab	PKPab	12 48 18.4	-1.1
AKASG	**Malin Array Be**	**149.66**	**324**	PKPbc	PKPbc	12 48 12.7	-1.0
	2.7nm,0.4s,baz=47,slow=3.3,SNR=18						
AKASG				PKPab	PKPab	12 48 18.4	-1.1
	1.4nm,0.4s,baz=49,slow=4.6,SNR=7.2						
MMAI	**Mount Meron Ar**	**150.74**	**287**	PKPbc	PKPbc	12 48 17.4	+0.5
	2.0nm,0.5s,baz=68,slow=2.9,SNR=4.7						
BRTR	**Keskin Array B**	**151.42**	**301**	PKPbc	PKPbc	12 48 17.4	-0.9
	1.9nm,0.6s,baz=146,slow=5.6,SNR=9.5						
BRTR				PKPab	PKPab	12 48 26.8	-0.5
	1.2nm,0.6s,baz=106,slow=3.7,SNR=5.7						
TORD	**Torodi Ar. Bea**	**164.63**	**180**	PKP	PKPdf	12 48 27.9	-0.8
	0.9nm,0.9s,baz=260,slow=0.8,SNR=4.2						
TORD				PKPab	PKPab	12 49 24.6	-0.1
	2.1nm,0.8s,baz=170,slow=3.2,SNR=8.9						

*IDC **15** 12:39:49.9±1.6, 63°.26N×150°.09W, h79km±19km, mb3.0/2, mb1 3.5/6, mb1mx3.2/23, mbtmp3.2/6, Error ellipse: s-maj=22.2km s-min=10.7km az=117.0*

*ISCJB **15** 12:39:50.9±0.4, 63°.37N±0°.03×149°.84W±0°.07, h114km±4km, mb3.1/2, Error ellipse: s-maj=5.7km s-min=4.6km az=147.9*

*NEIC **15** 12:39:51.8, 63°.36N×149°.79W, h111km, MG3.0(AEIC), After AEIC.*

ISC 15 12:39:52.1±0.4, 63°.37N±0°.03×149°.84W±0°.07, h108km±4km, n37, σ0s80/51, mb3.1/2, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRF	**Thorofare Moun**	**0.22**	**293**	P	**Pn**	**12 40 07.7**	**+0.5**
TRF				S	**Sn**	**12 40 19.6**	**+1.0**
RND	**Reindeer**	**0.45**	**84**	P	**Pn**	**12 40 08.4**	**+0.1**
RND				S	**Sn**	**12 40 20.8**	**+0.4**
MCK	**McKinley**	**0.55**	**47**	P	**Pn**	**12 40 09.1**	**+0.2**
MCK				S	**Sn**	**12 40 21.7**	**+0.1**
BPAW	**Bear Paw Mtn.**	**0.90**	**326**	P	**Pn**	**12 40 12.0**	**0.0**
BPAW				S	**Sn**	**12 40 26.8**	**-0.1**
DHY	**Denali Highway**	**1.15**	**103**	P	**Pn**	**12 40 14.6**	**-0.1**
PPLA	**Purkeypile**	**1.17**	**247**	P	**Pn**	**12 40 15.4**	**+0.6**
PPLA				*e*Pn	**Pn**	**12 40 15.5**	**+0.7**
PPLA				S	**Sn**	**12 40 32.5**	**+0.6**
PPLA				*e*Sn	**Sn**	**12 40 32.7**	**+0.8**
CHUM	**Lake Minchumin**	**1.22**	**296**	P	**Pn**	**12 40 15.6**	**+0.2**
SML	**Sawmill**	**1.71**	**155**	P	**Pn**	**12 40 21.0**	**-0.2**
COLA	**College**	**1.75**	**29**	P	**Pn**	**12 40 21.4**	**-0.2**
COLA				S	**Sn**	**12 40 43.1**	**-1.1**
PMR	**Palmer**	**1.81**	**169**	P	**Pn**	**12 40 22.0**	**-0.5**
ILAR	**Eielson Array**	**1.92**	**41**	P	**Pn**	**12 40 23.1**	**-0.7**
	8.8nm,0.3s,baz=224,slow=12,SNR=715						
ILAR				S	**Sn**	**12 40 47.8**	**-0.2**
	5.5nm,0.3s,baz=250,slow=14,SNR=13						
PAX	**Paxson**	**2.02**	**99**	*e*Pn	**Pn**	**12 40 25.0**	**-0.1**
PAX				P		12 40 25.2	
PAX				*e*Sn	**Sn**	**12 40 52.5**	**+2.1**
FIB	**Fire Island**	**2.21**	**184**	P	**Pn**	**12 40 28.9**	**+1.3**
RC01	**Rabbit Creek A**	**2.29**	**179**	P	**Pn**	**12 40 28.6**	**+0.1**
DOT	**Dot Lake**	**2.60**	**81**	P	**Pn**	**12 40 32.1**	**-0.5**
MENT	**Mentasta**	**2.81**	**96**	*e*Pn	**Pn**	**12 40 35.0**	**-0.3**
TTA	**Tatalina**	**2.84**	**264**	*e*Pn	**Pn**	**12 40 35.3**	**-0.4**
TTA				*e*Sn	**Sn**	**12 41 09.0**	**-0.4**
TT01	**Tatalina**	**2.85**	**263**	P	**Pn**	**12 40 35.2**	**-0.7**
SLKM	**Skilak Lake**	**2.87**	**184**	P	**Pn**	**12 40 36.3**	**+0.1**
DIV	**Divide**	**2.94**	**138**	P	**Pn**	**12 40 35.6**	**-1.6**
IM3	**Indian Mountai**	**3.12**	**329**	P	**Pn**	**12 40 39.2**	**-0.2**
RSO	**Redoubt South**	**3.22**	**207**	*e*Pn	**Pn**	**12 40 42.6**	**+1.7**
SEW	**Seward**	**3.28**	**177**	P	**Pn**	**12 40 40.7**	**-1.0**
SEW				*e*Pn	**Pn**	**12 40 40.9**	**-0.8**
SEW				*e*Sn	**Sn**	**12 41 18.9**	**-0.9**
GCSA	**Galena City Sc**	**3.39**	**297**	P	**Pn**	**12 40 43.0**	**-0.1**
BMRM	**Bremner River**	**3.44**	**132**	*e*Pn	**Pn**	**12 40 42.7**	**-1.0**
BMRM				P		12 40 42.8	
BRLK	**Bradley Lake**	**3.65**	**188**	P	**Pn**	**12 40 46.2**	**-0.3**
BCA3	**Beaver Creek A**	**3.66**	**91**	P	**Pn**	**12 40 45.7**	**-0.9**
EGAK	**Eagle**	**4.07**	**66**	P	**Pn**	**12 40 52.5**	**+0.4**
BM3	**Burnt Mountain**	**4.62**	**26**	P	**Pn**	**12 40 59.2**	**-0.3**
DAWY	**Dawson**	**4.70**	**77**	P	**Pn**	**12 40 60.0**	**-0.7**
KDAK	**Kodiak Island**	**5.76**	**195**	*e*Pn	**Pn**	**12 41 14.5**	**-0.5**
KDAK				P		12 41 14.6	
KDAK	**Kodiak Island**	**5.76**	**195**	P	**Pn**	**12 41 12.7**	**-2.4**
	1.5nm,0.3s,baz=48,slow=13,SNR=19						
KDAK				S	**Sn**	**12 42 13.7**	**-6.1**
	2.0nm,0.3s,baz=21,slow=12,SNR=10						
INK	**Inuvik**	**8.31**	**46**	P	**Pn**	**12 41 50.2**	**+0.7**
	0.3nm,0.3s,baz=249,slow=15,SNR=6.9						
YKA	**Yellowknife Ar**	**15.94**	**77**	P	**Pn**	**12 43 31.3**	**+1.5**
	0.1nm,0.3s,baz=284,slow=11,SNR=6.7						
NVAR	**Mina Array Bea**	**31.32**	**128**	P	**P**	**12 46 02.9**	**+1.1**
	0.2nm,0.5s,mb3.1,baz=307,slow=8.9,SNR=2.8						
TXAR	**Lajitas Array**	**44.96**	**117**	P	**P**	**12 47 57.5**	**+1.4**
TXAR	**Lajitas Array**	**44.96**	**117**	P	**P**	**12 47 57.5**	**+1.4**
	0.2nm,0.6s,mb3.0,baz=332,slow=5.5,SNR=4.5						

MAN 15 12:41:19, 13°.13N×124°.40E, h8km, mb4.6, ML3.4, MS3.4, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.52**	**333**	*e*P	Pg	12 41 29.4	+0.3
CNP	**Catarman**	**0.67**	**157**	*e*P	Pg	12 41 32.3	+0.5
CNP				*e*S	Sg	12 41 41.9	+1.4
AUQP	**San Andres**	**1.69**	**277**	*e*P	Pn	12 41 50.4	+1.6
GQP	**Guinayangan**	**2.05**	**292**	⇑*e*P	Pn	12 41 54.6	+0.8
GQP				*e*S	Sn	12 42 20.5	+0.9
POLP	**Polilio Island**	**2.87**	**304**	*e*P	Pn	12 42 09.5	+4.4
GUIM	**Jordan**	**3.05**	**216**	*e*P	Pn	12 42 07.9	+0.4
CAUP	**Cauayan**	**4.54**	**327**	*e*P	Pn	12 42 29.1	+1.1

IDC 15 13:22:06.7±1.9, 9°.50S×159°.49E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.7/15, mbtmp3.8/5, Error ellipse: s-maj=79.7km s-min=28.7km az=125.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.41**	**244**	P	P	13 27 45.0	-0.2
	2.3nm,1.1s,baz=74,slow=9.1,SNR=5.7						
STKA	**Stephens Creek**	**27.77**	**214**	P	P	13 27 58.0	+0.7
	2.7nm,1.0s,baz=48,slow=14,SNR=2.7						
ASAR	**Alice Springs**	**28.21**	**237**	P	P	13 28 01.2	-0.1
	0.5nm,0.6s,baz=65,slow=10,SNR=7.9						
ASAR				PcP	PcP	13 31 15.3	+0.1
	0.4nm,0.7s,baz=45,slow=4.1,SNR=5.2						
ILAR	**Eielson Array**	**84.11**	**20**	P	P	13 34 39.4	+0.3
	0.1nm,0.5s,baz=265,slow=5.7,SNR=3.9						
MKAR	**Makanchi Array**	**88.22**	**318**	P	P	13 34 59.3	-0.5
	0.6nm,0.6s,baz=102,slow=6.9,SNR=6.5						

*NEIC **15** 13:25:58.2±1.9, 23°.97N×121°.67E, h2km±17km, ML3.6(TAP), Error ellipse: s-maj=26.2km s-min=6.0km az=106.0*

NEIC Recorded [4 TAP] at Hua-lien and [1 TAP] in I-lan and Nan-t'ou.

*TAP **15** 13:25:58.3, 23°.99N×121°.60E, h5km, ML3.3, B*

ISC 15 13:25:58.8±0.4, 23°.99N±0°.01×121°.66E±0°.03, h4km±5km, n55, σ0s83/84, 10C-5D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.05**	**260**	⇓*i*P	**Pg**	**13 25 59.7**	**-0.4**
	baz=150						
TWD	**Chiawan**	**0.11**	**327**	⇑*i*P	**Pg**	**13 26 00.8**	**-0.3**
	baz=1.0						
TWD				*i* S	**Sg**	**13 26 02.3**	**-0.3**
	baz=1.0						
ESF	**Shoufeng Towns**	**0.18**	**231**	*i* P	**Pg**	**13 26 01.8**	**-0.7**
	baz=216						
ESF				*e*S	**Sg**	**13 26 04.0**	**-0.8**
	baz=216						
NACB	**Ninganchiao**	**0.20**	**342**	*e*Pg	**Pg**	**13 26 02.1**	**-0.5**
NACB				*e*Sg	**Sg**	**13 26 05.0**	**-0.3**
ESL	**Shilin**	**0.27**	**231**	⇓*i*P	**Pg**	**13 26 03.3**	**-0.8**
	baz=230						
ESL				*e*S	**Sg**	**13 26 06.3**	**-1.3**
	baz=230						
TEGC	**Jichi Village**	**0.30**	**202**	*e*P	**Pg**	**13 26 05.4**	**+0.8**
	baz=190						
TEGC				*e*S	**Sg**	**13 26 11.5**	**+3.0**
	baz=190						
WHF	**Hehuan Shan**	**0.40**	**294**	⇑*i*P	**Pg**	**13 26 05.9**	**-0.6**
	baz=297						
WHF				S	**Sg**	**13 26 10.9**	**-0.7**
	baz=297						
ENA	**Nanau**	**0.45**	**9**	⇑*i*P	**Pg**	**13 26 07.4**	**0.0**
	baz=19						
ENA				*e*S	**Sg**	**13 26 13.9**	**+0.6**
	baz=19						
TWT	**Tachien**	**0.52**	**301**	⇑P	**Pg**	**13 26 08.8**	**0.0**
	baz=303						
TWT				S	**Sg**	**13 26 15.6**	**+0.1**
	baz=303						
NNS	**Nan Shan**	**0.52**	**330**	⇑*i*P	**Pg**	**13 26 08.7**	**-0.2**
	baz=337						
NNS				S	**Sg**	**13 26 15.7**	**0.0**
	baz=337						
EHY	**Hungye**	**0.57**	**213**	P	**Pg**	**13 26 09.1**	**-0.7**
	baz=216						
EHY				*e*S	**Sg**	**13 26 18.6**	**+1.4**
	baz=216						
TWC	**Suao**	**0.64**	**15**	*i* P	**Pg**	**13 26 11.2**	**0.0**
	baz=21						
TWC				S	**Sg**	**13 26 20.5**	**+1.0**
	baz=21						
ENTT	**Nioudou**	**0.66**	**352**	⇑*i*P	**Pg**	**13 26 11.5**	**0.0**
	baz=359						
ENTT				*e*S	**Sg**	**13 26 19.9**	**-0.1**
	baz=359						
SSLB	**Suanglung**	**0.68**	**253**	*e*Pg	**Pg**	**13 26 11.0**	**-0.8**
YULB	**Yu-li**	**0.68**	**210**	*e*Pg	**Pg**	**13 26 11.0**	**-0.9**
SMLT	**Sun Moon Lake**	**0.70**	**262**	⇓*i*P	**Pg**	**13 26 12.1**	**-0.3**
	baz=260						
SMLT				*e*S	**Sg**	**13 26 20.6**	**-1.0**
	baz=260						
TWF1	**Yuli**	**0.71**	**208**	⇓P	**Pg**	**13 26 11.9**	**-0.6**
	baz=214						
TWF1				*e*S	**Sg**	**13 26 24.4**	**+2.5**
	baz=214						
YHNB	**Yeheng**	**0.73**	**339**	*e*Pg	**Pg**	**13 26 12.6**	**-0.3**
YHNB				*e*Sg	**Sg**	**13 26 24.8**	**+2.4**
TWE	**Neicheng**	**0.73**	**0**	⇑*i*P	**Pg**	**13 26 13.0**	**+0.1**
	baz=7.0						
TWE				S	**Sg**	**13 26 23.5**	**+1.1**
	baz=7.0						
NSK	**Sanguang**	**0.74**	**338**	⇑*i*P	**Pg**	**13 26 13.1**	**0.0**
	baz=343						
NSK				S	**Sg**	**13 26 22.9**	**+0.2**
	baz=343						
TYC	**Yuchr**	**0.74**	**264**	P	**Pg**	**13 26 12.6**	**-0.5**
	baz=263						
TYC				*e*S	**Sg**	**13 26 21.5**	**-1.2**
	baz=263						
ILA	**Ilan**	**0.78**	**6**	*e*P	**Pg**	**13 26 13.5**	**-0.3**
	baz=14						
YUS	**Yu-Shan**	**0.82**	**233**	P	**Pg**	**13 26 14.2**	**-0.3**
	baz=230						
YUS				*e*S	**Sg**	**13 26 26.2**	**+1.1**
	baz=230						
NSTT	**Nanjuang**	**0.88**	**317**	⇑*i*P	**Pg**	**13 26 15.9**	**+0.2**
	baz=320						
NSTT				S	**Sg**	**13 26 27.4**	**+0.3**
	baz=320						
TWQ1	**Liyutan**	**0.89**	**294**	*e*P	**Pg**	**13 26 16.1**	**+0.2**
	baz=294						
WNT	**Mingjian**	**0.90**	**263**	*e*P	**Pg**	**13 26 15.5**	**-0.6**
	baz=250						
TCU	**Taichung**	**0.92**	**280**	*e*P	**Pg**	**13 26 15.8**	**-0.6**
	baz=278						
ALS	**Alishan**	**0.92**	**239**	⇑*i*P	**Pg**	**13 26 16.3**	**-0.2**
	baz=237						
ALS				*e*S	**Sg**	**13 26 29.2**	**+0.8**
	baz=237						
CHKT	**Chengkung**	**0.92**	**197**	*e*P	**Pg**	**13 26 16.5**	**-0.1**
	baz=183						
CHKT				*e*S	**Sg**	**13 26 31.1**	**+2.6**
	baz=183						
CHN5	**Tsauling**	**0.98**	**247**	⇓*i*P	**Pg**	**13 26 17.8**	**+0.1**
	baz=233						
CHN5				*e*S	**Sg**	**13 26 33.1**	**+2.8**
	baz=233						
ELDTW	**Lidau**	**0.99**	**217**	*e*P	**Pg**	**13 26 16.7**	**-1.1**
	baz=210						
TWA	**Mucha**	**0.99**	**356**	*e*P	**Pg**	**13 26 17.6**	**-0.3**
	baz=350						
TWA				*e*S	**Sg**	**13 26 30.8**	**0.0**
	baz=350						
TATO	**Taipei**	**1.00**	**351**	*e*P	**Pg**	**13 26 17.6**	**-0.3**
WGK	**Gukeng**	**1.05**	**254**	*e*P	**Pg**	**13 26 19.4**	**+0.4**
	baz=250						
TAP1	**Taipei**	**1.05**	**353**	*e*P	**Pg**	**13 26 19.1**	**0.0**
	baz=360						
TWB1	**Santiao Chiao**	**1.06**	**16**	*e*P	**Pg**	**13 26 19.1**	**-0.1**
	baz=16						
NCU	**National Centr**	**1.07**	**336**	*e*P	**Pg**	**13 26 18.9**	**-0.5**
	baz=341						
NWF	**Wu-fen Shan**	**1.08**	**6**	*e*P	**Pg**	**13 26 19.8**	**+0.1**
	baz=10.0						
NWF				*e*S	**Sg**	**13 26 34.5**	**+0.7**
	baz=10.0						
TWS1	**Kuangyinshan**	**1.13**	**349**	*e*P	**Pg**	**13 26 21.3**	**+0.8**
	baz=3.0						
TWS1				*e*S	**Sg**	**13 26 35.9**	**+0.6**
	baz=3.0						
CHN4	**Tsaushan**	**1.17**	**237**	*e*P	**Pg**	**13 26 21.4**	**+0.2**
	baz=230						
CHN4				*e*S	**Sg**	**13 26 38.7**	**+2.3**
	baz=230						
STYT	**Tauyuan**	**1.17**	**226**	*e*P	**Pg**	**13 26 20.7**	**-0.5**
	baz=207						
TPUB	**Ta-pu**	**1.17**	**234**	*e*P	**Pg**	**13 26 20.7**	**-0.5**
WTP	**Ta-pu**	**1.21**	**233**	*e*P	**Pg**	**13 26 21.6**	**-0.5**
	baz=236						
WTP				*e*S	**Sg**	**13 26 39.9**	**+2.1**
	baz=236						
CHY	**Chiayi**	**1.23**	**247**	*e*P	**Pg**	**13 26 22.3**	**-0.2**
	baz=262						
CHY				*e*S	**Sg**	**13 26 38.6**

CRLZ	**Canterbury Las**	**4.07**	**70**	PN	Pn	13 41 39.0	-2.3
LTZ	**Lake Taylor**	**4.23**	**59**	PN	Pn	13 41 40.5	-2.9

*ISCJB **15** 13:58:31.6±0.3,62.°96N±0.°03×150.°81W±0.°07, h117km±3km, mb3.9/5, Error ellipse: s-maj=5.1km s-min=4.8km az=5.2*
*IDC **15** 13:58:32.1±1.4,62.°89N×150.°76W, h108km±21km, mb3.5/5, mb1 3.5/10, mb1mx3.3/25, mbtmp3.4/10, Error ellipse: s-maj=34.1km s-min=10.0km az=113.0*
*NEIC **15** 13:58:33.2,62.°97N×150.°76W, h108km, MG3.2(AEIC), After AEIC.*

ISC 15 13:58:32.8±0.3,62.°95N±0.°03×150.°80W±0.°07, h110km±3km, n51, σ0.°61/60, mb3.9/5, 1D, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRF	**Thorofare Moun**	**0.56**	**24**	P	**Pn**	**13 58 50.0**	**0.0**
TRF				S	**Sn**	**13 59 02.9**	**-0.1**
PPLA	**Purkeypile**	**0.64**	**266**	P	**Pn**	**13 58 51.3**	**+0.7**
PPLA				S	**Sn**	**13 59 04.2**	**+0.2**
RND	**Reindeer**	**1.00**	**61**	P	**Pn**	**13 58 54.0**	**0.0**
RND				S	**Sn**	**13 59 10.0**	**+0.2**
MCK	**McKinley**	**1.15**	**46**	P	**Pn**	**13 58 55.6**	**0.0**
MCK				S	**Sn**	**13 59 13.5**	**+0.7**
BPAW	**Bear Paw Mtn.**	**1.16**	**356**	P	**Pn**	**13 58 55.4**	**-0.3**
BPAW				S	**Sn**	**13 59 11.7**	**-1.4**
CHUM	**Lake Minchumin**	**1.16**	**325**	P	**Pn**	**13 58 55.6**	**-0.1**
CHUM				S	**Sn**	**13 59 12.4**	**-0.6**
PMR	**Palmer**	**1.57**	**149**	P	**Pn**	**13 59 00.5**	**+0.1**
DHY	**Denali Highway**	**1.57**	**84**	P	**Pn**	**13 59 00.5**	**+0.1**
SML	**Sawmill**	**1.62**	**134**	P	**Pn**	**13 59 01.3**	**+0.3**
FIB	**Fire Island**	**1.81**	**170**	P	**Pn**	**13 59 04.7**	**+1.3**
RC01	**Rabbit Creek A**	**1.93**	**164**	P	**Pn**	**13 59 05.3**	**+0.4**
SCM	**Sheep Creek Mo**	**1.96**	**123**	P	**Pn**	**13 59 05.2**	**-0.1**
COLA	**College**	**2.33**	**33**	P	**Pn**	**13 59 09.8**	**-0.2**
TTA	**Tatalina**	**2.38**	**272**	P	**Pn**	**13 59 10.6**	**0.0**
TTA1	**Tatalina**	**2.39**	**271**	P	**Pn**	**13 59 10.6**	**-0.1**
PAX	**Paxson**	**2.44**	**87**	*e*Pn	**Pn**	**13 59 11.8**	**+0.5**
SLKM	**Skilak Lake**	**2.46**	**173**	P	**Pn**	**13 59 12.1**	**+0.4**
ILAR	**Eielson Array**	**2.52**	**42**	P	**Pn**	**13 59 12.1**	**-0.3**
	6.1nm,0.3s,baz=226,slow=13,SNR=329						
ILAR				S	**Sn**	**13 59 43.3**	**+0.4**
	7.9nm,0.3s,baz=14,slow=25,SNR=11						
RSO	**Redoubt South**	**2.66**	**201**	*e*Pn	**Pn**	**13 59 14.8**	**+0.5**
SEW	**Seward**	**2.92**	**167**	P	**Pn**	**13 59 18.1**	**+0.4**
DIV	**Divide**	**2.99**	**125**	P	**Pn**	**13 59 17.7**	**-0.9**
DOT	**Dot Lake**	**3.12**	**74**	P	**Pn**	**13 59 20.2**	**-0.2**
BRLK	**Bradley Lake**	**3.19**	**181**	P	**Pn**	**13 59 22.3**	**+1.0**
MENT	**Mentasta**	**3.24**	**87**	*e*Pn	**Pn**	**13 59 22.1**	**+0.2**
GCSA	**Galena City Sc**	**3.24**	**307**	P	**Pn**	**13 59 22.7**	**+0.4**
IM3	**Indian Mountai**	**3.31**	**339**	P	**Pn**	**13 59 22.7**	**-0.1**
EYAK	**Cordova Ski Ar**	**3.40**	**133**	P	**Pn**	**13 59 23.9**	**-0.1**
BMRM	**Bremner River**	**3.54**	**121**	P	**Pn**	**13 59 24.9**	**-0.9**
BCA3	**Beaver Creek A**	**4.11**	**84**	P	**Pn**	**13 59 33.1**	**-0.4**
EGAK	**Eagle**	**4.64**	**62**	P	**Pn**	**13 59 40.8**	**+0.1**
BM3	**Burnt Mountain**	**5.19**	**27**	P	**Pn**	**13 59 48.0**	**-0.1**
DAWY	**Dawson**	**5.23**	**73**	P	**Pn**	**13 59 48.3**	**-0.3**
KDAK	**Kodiak Island**	**5.25**	**190**	*e*Pn	**Pn**	**13 59 48.2**	**-0.7**
KDAK				*e*Sn	**Sn**	**14 00 47.0**	**-1.3**
KDAK	**Kodiak Island**	**5.25**	**190**	P	**Pn**	**13 59 48.2**	**-0.8**
	5.9nm,0.3s,baz=17,slow=10,SNR=36						
KDAK				S	**Sn**	**14 00 46.0**	**-2.2**
	6.9nm,0.3s,baz=130,slow=22,SNR=14						
OHAK	**Old Harbor**	**5.88**	**193**	P	**Pn**	**13 59 56.0**	**-1.4**
TNA	**Tin City**	**7.90**	**297**	Pn	**Pn**	**14 00 26.1**	**+1.4**
INK	**Inuvik**	**8.92**	**45**	P	**Pn**	**14 00 38.7**	**+0.2**
INK	**Inuvik**	**8.92**	**45**	P	**Pn**	**14 00 38.7**	**+0.2**
	0.2nm,0.3s,baz=246,slow=15,SNR=6.4						
DLBC	**Dease Lake**	**11.11**	**105**	P	**Pn**	**14 01 08.1**	**-0.1**
	0.1nm,0.3s,baz=293,slow=11,SNR=4.4						
YKA	**Yellowknife Ar**	**16.46**	**75**	P	**Pn**	**14 02 16.6**	**-0.3**
YKA	**Yellowknife Ar**	**16.46**	**75**	P	**Pn**	**14 02 16.6**	**-0.3**
	0.2nm,0.3s,baz=285,slow=10,SNR=5.4						
EDM	**Edmonton**	**21.74**	**99**	*e*P	**P**	**14 03 16.0**	**+1.1**
SONM	**Songino Array**	**53.92**	**306**	P	**P**	**14 07 45.2**	**+0.8**
SONM	**Songino Array**	**53.92**	**306**	P	**P**	**14 07 45.2**	**+0.8**
	0.4nm,0.6s,mb3.6,baz=31,slow=8.6,SNR=3.2						
SONM	**Songino Array**	**53.92**	**306**	P	**P**	**14 07 45.2**	**+0.8**
ZALV	**Zalesovo Beam**	**55.62**	**324**	P	**P**	**14 07 56.0**	**-0.5**
	0.5nm,0.3s,mb4.0,baz=45,slow=8.4,SNR=3.2						
FINES	**FINESS Array B**	**55.91**	**2**	P	**P**	**14 07 57.5**	**-1.0**
FINES	**FINESS Array B**	**55.91**	**2**	P	**P**	**14 07 57.5**	**-1.0**
	1.2nm,0.7s,mb4.0,baz=354,slow=11,SNR=2.4						
MKAR	**Makanchi Array**	**62.78**	**322**	P	**P**	**14 08 45.7**	**-0.3**
	0.3nm,0.2s,mb3.8,baz=32,slow=8.5,SNR=3.4						
AKTK	**Aktyubinsk**	**64.69**	**340**	P	**P**	**14 08 58.7**	**+0.3**
AKTO	**Aktyubinsk**	**64.69**	**340**	P	**P**	**14 08 58.7**	**+0.3**
	1.0nm,0.4s,mb4.0,baz=45,slow=4.3,SNR=4.0						

*MOS **15** 14:01:05.0±1.4,52.°46N×159.°65E, h17km, mb4.2/1, Error ellipse: s-maj=26.1km s-min=11.1km az=88.8*
*IDC **15** 14:01:05.4±1.4,53.°07N×159.°49E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.4/23, mbtmp3.5/4, Error ellipse: s-maj=60.6km s-min=25.2km az=153.0*
*ISCJB **15** 14:01:09.0±1.0,52.°59N±0.°04×160.°02E±0.°07, h29km±6km, mb3.5/4, Error ellipse: s-maj=8.4km s-min=5.1km az=139.8*
*KRSC **15** 14:01:09.5±0.6,52.°64N×159.°97E, h21km±16km, ML4.1*
*NEIC **15** 14:01:13.7±1.1,53.°15N×159.°27E, h67km±10km, mb3.9/1, Error ellipse: s-maj=22.9km s-min=15.7km az=162.0*

ISC 15 14:01:09.3±1.0,52.°60N±0.°04×159.°93E±0.°06, h17km±5km, n22, σ0.°91/35, mb3.5/4, 1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.50**	**6**	P	**Pg**	**14 01 19.7**	**+0.3**
SPN				*i* S	**Sg**	**14 01 26.6**	**+0.4**
PET	**Petropavlovsk**	**0.89**	**299**	*e*Pg	**Pg**	**14 01 25.3**	**-1.2**
PET				*e*		14 01 37.6	
PET	**Petropavlovsk**	**0.89**	**299**	*i* P	**Pb**	**14 01 25.4**	**-0.8**
PET				*i* S	**Sb**	**14 01 37.0**	**-0.7**
PET	**Petropavlovsk**	**0.89**	**299**	⇓*i* P	**Pb**	**14 01 25.5**	**-0.7**
PET				*i* S	**Sb**	**14 01 37.2**	**-0.5**
PET				pmax	pmax		
	comp=Z,486nm,0.3s						
PET				pmax	pmax		
	comp=Z,5.0nm,0.3s						
PET				smax			
	comp=N,965nm,0.5s						
AVH	**Avacha**	**0.98**	**313**	*i* P	**Pb**	**14 01 27.4**	**-0.4**
AVH				*i* S	**Sb**	**14 01 40.4**	**-0.1**
GRL	**Gorelyy**	**1.14**	**268**	*e*P	**Pn**	**14 01 30.0**	**-0.4**
GRL				*i* S	**Sb**	**14 01 44.6**	**-0.3**
KII	**Karymskiy**	**1.47**	**349**	*e*P	**Pn**	**14 01 34.5**	**-0.4**
KII				*i* S	**Sn**	**14 01 52.3**	**-1.4**
GNL	**Ganaly**	**1.62**	**313**	*i* P	**Pn**	**14 01 37.0**	**-0.1**
GNL				*i* S	**Sn**	**14 01 57.4**	**-0.2**
MIPR	**Malaya Ipel'ka**	**1.97**	**262**	*i* P	**Pn**	**14 01 42.5**	**+0.7**
MIPR				*e*S	**Sn**	**14 02 07.1**	**+1.0**
ALID	**Alaid**	**3.23**	**239**	*e*P	**Pn**	**14 02 00.6**	**+1.5**
KPT	**Kopyto**	**3.38**	**3**	P	**Pn**	**14 02 02.2**	**+1.0**
KPT				*i* S	**Sn**	**14 02 40.7**	**-0.1**
KRSR	**Krestovskiy**	**3.64**	**6**	P	**Pn**	**14 02 06.6**	**+1.8**
KRSR				*i* S	**Sn**	**14 02 48.4**	**+1.1**
SRDR	**Sredinnyy**	**3.73**	**358**	P	**Pn**	**14 02 06.7**	**+0.7**
KLY	**Klyuchi**	**3.75**	**6**	P	**Pn**	**14 02 07.7**	**+1.5**
KLY				*i* S	**Sn**	**14 02 50.5**	**+0.7**
KBTR	**Krutoberegovo**	**3.99**	**24**	*e*P	**Pn**	**14 02 09.9**	**+0.3**
KBTR				*i* S	**Sn**	**14 02 55.1**	**-0.7**
BKI	**Bering**	**4.42**	**51**	*e*P	**Pn**	**14 02 14.0**	**-1.5**
BKI				*i* S	**Sn**	**14 03 00.2**	**-6.3**
YAK	**Yakutsk**	**18.69**	**312**	Pn	**Pn**	**14 05 18.6**	**-8.1**
	comp=N,5.8nm,0.7s						
YAK	**Yakutsk**	**18.69**	**312**	P	**Pn**	**14 05 18.7**	**-8.1**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MJAR	**Matsushiro Arr**	**22.16**	**232**	P	**P**	**14 06 04.1**	**-0.1**
	comp=Z,1.9nm,0.8s,mb3.6,baz=22,slow=11,SNR=5.1						
ILAR	**Eielson Array**	**29.23**	**45**	P	**P**	**14 07 08.0**	**-1.7**
	comp=Z,0.3nm,0.6s,mb3.2,baz=266,slow=7.5,SNR=5.3						
MKAR	**Makanchi Array**	**48.28**	**296**	P	**P**	**14 09 44.2**	**-4.9**
	comp=Z,0.5nm,0.4s,mb3.9,baz=57,slow=7.6,SNR=4.0						
TXAR	**Lajitas Array**	**70.92**	**67**	P	**P**	**14 12 24.3**	**-1.1**
	comp=Z,0.3nm,0.6s,mb3.4,baz=304,slow=4.7,SNR=6.1						

*DDA **15** 14:20:03.7,39.°49N×32.°74E, h6km±1km, Md2.8*

*ISCJB **15** 14:20:05.9±0.7,39.°61N±0.°03×32.°81E±0.°03, h3km±7km, Error ellipse: s-maj=5.2km s-min=4.3km az=15.2*
*ISK **15** 14:20:05.5,39.°62N×32.°84E, h9km, MD2.9*
*CSEM **15** 14:20:05.7±0.2,39.°63N×32.°83E, h2km, MD2.9, Error ellipse: s-maj=4.8km s-min=3.9km az=9.0*

ISC 15 14:20:06.5±0.5,39.°63N±0.°03×32.°83E±0.°03, h6km±6km, n28, σ1.°05/44, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBAL	**Bala**	**0.24**	**111**	*i* P	**Pg**	**14 20 10.1**	**-1.1**
BBAL				*i* S	**Sg**	**14 20 14.5**	**+0.2**
BBAL	**Bala**	**0.24**	**111**	*i* P	**Pg**	**14 20 10.1**	**-1.1**
BBAL				*i* S	**Sg**	**14 20 14.5**	**+0.1**
LOD	**Lodumlu**	**0.27**	**349**	*e*PG	**Pg**	**14 20 10.6**	**-1.1**
LOD				*e*SG	**Sg**	**14 20 16.7**	**+1.4**
LOD	**Lodumlu**	**0.27**	**349**	*e*Pg	**Pg**	**14 20 10.6**	**-1.1**
LOD				*e*Sg	**Sg**	**14 20 16.7**	**+1.5**
ELDT	**Eldivan**	**0.97**	**28**	*i* P	**Pg**	**14 20 25.3**	**+0.1**
ELDT				*i* S	**Sg**	**14 20 41.6**	**+3.8**
ELDT	**Eldivan**	**0.97**	**28**	*i* P	**Pg**	**14 20 25.3**	**+0.1**
ELDT				*i* S	**Sg**	**14 20 41.7**	**+3.8**
SVRH	**Sivrihisar-ESK**	**1.03**	**260**	*e*PG	**Pg**	**14 20 25.7**	**-0.5**
SVRH				*e*SG	**Sg**	**14 20 40.6**	**+1.1**
SVRH	**Sivrihisar-ESK**	**1.03**	**260**	*e*Pg	**Pg**	**14 20 25.7**	**-0.5**
SVRH				*e*Sg	**Sg**	**14 20 40.6**	**+1.1**
KIZT	**Kizilcal**	**1.05**	**225**	*e*PG	**Pg**	**14 20 25.2**	**-1.4**
KIZT				*e*SG	**Sg**	**14 20 41.8**	**+1.6**
KIZT	**Kizilcal**	**1.05**	**225**	*e*Pg	**Pg**	**14 20 25.2**	**-1.4**
KIZT				*e*Sg	**Sg**	**14 20 41.8**	**+1.6**
SGKT	**Sivrigoynuk**	**1.12**	**328**	*i* P	**Pg**	**14 20 26.6**	**-1.3**
SGKT				*i* S	**Sg**	**14 20 43.7**	**+1.3**
SGKT	**Sivrigoynuk**	**1.12**	**328**	*i* P	**Pg**	**14 20 26.6**	**-1.3**
SGKT				*i* S	**Sg**	**14 20 43.7**	**+1.3**
CDAG	**Cicekdag**	**1.19**	**90**	*i* P	**Pg**	**14 20 28.3**	**-1.0**
CDAG				*i* S	**Sg**	**14 20 45.7**	**+1.0**
CDAG	**Cicekdag**	**1.19**	**90**	*i* P	**Pg**	**14 20 28.3**	**-1.0**
CDAG				*i* S	**Sg**	**14 20 45.7**	**+1.0**
CORM	**Corum**	**1.49**	**68**	*e*PN	**Pn**	**14 20 33.7**	**-0.1**
CORM	**Corum**	**1.49**	**68**	*e*Pn	**Pn**	**14 20 33.7**	**-0.1**
MDU	**Mudurnu**	**1.50**	**304**	*e*PN	**Pn**	**14 20 32.6**	**-1.3**
MDU	**Mudurnu**	**1.50**	**304**	*e*Pn	**Pn**	**14 20 32.6**	**-1.3**
SULT	**Sultanhani-AKS**	**1.52**	**159**	*e*PN	**Pn**	**14 20 34.0**	**-0.2**
SULT	**Sultanhani-AKS**	**1.52**	**159**	*e*Pn	**Pn**	**14 20 34.0**	**-0.3**
TOS	**Tosya**	**1.68**	**33**	*e*PN	**Pn**	**14 20 35.9**	**-0.4**
TOS	**Tosya**	**1.68**	**33**	*e*Pn	**Pn**	**14 20 35.9**	**-0.5**
AVNT	**Avonos**	**1.79**	**118**	*i* P	**Pn**	**14 20 38.4**	**+0.5**
AVNT				*i* S	**Sn**	**14 21 03.0**	**+2.1**
AVNT	**Avonos**	**1.79**	**118**	*i* P	**Pn**	**14 20 38.4**	**+0.5**
AVNT				*i* S	**Sn**	**14 21 03.0**	**+2.1**
YOZ	**Yozgat**	**1.92**	**89**	*e*PN	**Pn**	**14 20 39.1**	**-0.7**
YOZ	**Yozgat**	**1.92**	**89**	*e*Pn	**Pn**	**14 20 39.1**	**-0.6**
GULT	**Gulveren**	**1.95**	**295**	*e*PN	**Pn**	**14 20 40.0**	**-0.2**
GULT	**Gulveren**	**1.95**	**295**	*e*Pn	**Pn**	**14 20 40.0**	**-0.2**

*ATH **15** 14:28:31.1,37.°90N×21.°49E, h26km±1km, MD3.0/5*
*THE **15** 14:28:32.5,37.°91N×21.°50E, h10km±3km, ML1.8/6, Error ellipse: s-maj=3.0km s-min=0.6km az=124.0*
*CSEM **15** 14:28:32.4±0.2,37.°92N×21.°50E, h21km±2km, MD3.0, Error ellipse: s-maj=5.2km s-min=3.4km az=174.0*

ISC 15 14:28:32.1±0.7,37.°90N±0.°05×21.°50E±0.°04, h29km±4km, n27, σ0.°82/47, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.16**	**350**	*e*PB	**Pb**	**14 28 37.0**	**-0.7**
RLS				*e*SB	**Sb**	**14 28 40.6**	**-0.9**
RLS	**Riolos of Patr**	**0.16**	**350**	*e*Pb	**Pb**	**14 28 37.0**	**-0.7**
RLS				*e*Sb	**Sb**	**14 28 40.6**	**-0.9**
LAKA	**Lakka**	**0.51**	**48**	P	**Pb**	**14 28 42.1**	**-0.5**
LAKA				S	**Sb**	**14 28 49.9**	**+0.2**
LAKA	**Lakka**	**0.51**	**48**	P	**Pb**	**14 28 42.1**	**-0.5**
LAKA				S	**Sb**	**14 28 49.9**	**+0.2**
KFL	**Anninata**	**0.60**	**291**	P	**Pb**	**14 28 44.0**	**-0.1**
KFL	**Anninata**	**0.60**	**291**	P	**Pb**	**14 28 44.0**	**-0.1**
EFP	**Efpalio**	**0.62**	**31**	*e*PN	**Pn**	**14 28 43.6**	**-1.3**
EFP				*e*SN	**Sn**	**14 28 52.9**	**-1.0**
EFP	**Efpalio**	**0.62**	**31**	P	**Pb**	**14 28 43.7**	**-0.7**
EFP				S	**Sb**	**14 28 53.1**	**+0.4**
EFP	**Efpalio**	**0.62**	**31**	P	**Pb**	**14 28 43.7**	**-0.7**
EFP				S	**Sb**	**14 28 53.1**	**+0.4**
TRIZ	**Trizonia**	**0.65**	**44**	P	**Pb**	**14 28 44.3**	**-0.6**
TRIZ				S	**Sb**	**14 28 54.0**	**+0.4**
TRIZ	**Trizonia**	**0.65**	**44**	P	**Pb**	**14 28 44.3**	**-0.6**
TRIZ				S	**Sb**	**14 28 54.0**	**+0.4**
GUR	**Goura**	**0.67**	**86**	*e*PN	**Pb**	**14 28 45.0**	**-0.2**
GUR				*e*SN	**Sn**	**14 28 54.1**	**-1.0**
GUR	**Goura**	**0.67**	**86**	P	**Pb**	**14 28 45.0**	**-0.2**
GUR				S	**Sb**	**14 28 54.2**	**+0.1**
GUR	**Goura**	**0.67**	**86**	P	**Pb**	**14 28 45.0**	**-0.2**
GUR				*e*Sn	**Sn**	**14 28 54.1**	**-1.0**
KALE	**Kalithea**	**0.70**	**45**	P	**Pb**	**14 28 45.8**	**0.0**
KALE				S	**Sb**	**14 28 56.0**	**+0.8**
KALE	**Kalithea**	**0.70**	**45**	P	**Pb**	**14 28 45.8**	**0.0**
KALE				S	**Sb**	**14 28 56.0**	**+0.8**
VLS	**Valsamata**	**0.77**	**291**	*e*PN	**Pn**	**14 28 46.2**	**-0.8**
VLS	**Valsamata**	**0.77**	**291**	P	**Pb**	**14 28 46.4**	**-0.5**
VLS				S	**Sb**	**14 28 57.9**	**+0.8**
VLS	**Valsamata**	**0.77**	**291**	P	**Pb**	**14 28 46.4**	**-0.5**
VLS				S	**Sb**	**14 28 57.9**	**+0.8**
ITM	**Ithomi**	**0.79**	**155**	P	**Pb**	**14 28 48.4**	**+1.1**
ITM	**Ithomi**	**0.79**	**155**	P	**Pb**	**14 28 48.4**	**+1.1**
DSF	**Desfina**	**0.96**	**57**	P	**Pn**	**14 28 49.9**	**+0.3**
DSF				S	**Sb**	**14 29 03.9**	**+1.5**
DSF	**Desfina**	**0.96**	**57**	P	**Pn**	**14 28 49.9**	**+0.3**
DSF				S	**Sb**	**14 29 03.9**	**+1.5**
EVR	**Evrytania**	**1.04**	**13**	*e*PN	**Pn**	**14 28 51.4**	**+0.6**
EVR	**Evrytania**	**1.04**	**13**	*e*Pn	**Pn**	**14 28 51.4**	**+0.6**
LKD2	**Lefkada island**	**1.11**	**324**	P	**Pn**	**14 28 53.3**	**+1.6**
LKD2				S	**Sn**	**14 29 09.8**	**+3.8**
LKD2	**Lefkada island**	**1.11**	**324**	P	**Pn**	**14 28 53.3**	**+1.6**
LKD2				S	**Sn**	**14 29 09.8**	**+3.8**

IDC 15 14:41:41.6±57.0,16.°59S×176.°58W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.8/14, mbtmp4.2/3, Error ellipse: s-maj=1069.0km s-min=176.5km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.80**	**240**	P	P	14 49 25.1	+0.3
	1.6nm,0.5s,baz=68,slow=5.4,SNR=3.9						
WRA	**Warramunga Arr**	**46.60**	**258**	P	P	14 50 11.6	-0.2
	1.2nm,0.5s,baz=94,slow=7.0,SNR=12						
ASAR	**Alice Springs**	**46.84**	**253**	P	P	14 50 13.4	-0.2
	6.0nm,0.5s,baz=88,slow=8.8,SNR=193						

MAN 15 14:58:22,17.°40N×121.°43E, h24km, mb4.7, ML3.6, MS3.6, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CVP	**Callao Caves**	**0.48**	**51**	*i* P	Pb	14 58 32.2	+0.3
CVP				*i* S	Sb	14 58 40.5	+1.9
APYP	**Conner**	**0.49**	**339**	*e*P	Pb	14 58 33.1	+1.0
CAUP	**Cauayan**	**0.59**	**140**	*e*P	Pb	14 58 35.0	+1.3
ABRA	**Dolores**	**0.73**	**290**	*e*P	Pb	14 58 36.2	+0.2
PALP	**Palanan**	**1.01**	**109**	*e*P	Pn	14 58 41.0	+0.3
BALP	**Baler**	**1.66**	**175**	*e*P	Pn	14 58 48.8	-0.7
BOLP	**Bolinao**	**1.77**	**235**	*e*P	Pn	14 58 53.1	+2.0

IDC 15 15:03:09.3±4.0,6.°76N×126.°54E, h89km±31km, mb3.3/5, mb1 3.5/5, mb1mx3.2/20, mbtmp3.3/5, Error ellipse: s-maj=104.8km s-min=22.7km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.00**	**288**	P	Pn	15 03 28.9	-0.1
	62nm,0.3s,baz=310,slow=1.5,SNR=5.1						
DAV				S	Sn	15 03 50.4	+6.8
	78nm,0.3s,baz=245,slow=22,SNR=8.2						
FITZ	**Fitzroy Crossi**	**24.72**	**182**	P	P	15 08 22.7	+0.3
	2.6nm,0.8s,baz=7.1,slow=8.1,SNR=2.4						
WRA	**Warramunga Arr**	**27.62**	**164**	P	P	15 08 50.6	+2.1
	0.4nm,0.6s,baz=344,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**31.08**	**167**	P	P	15 09 18.3	-0.9
	0.1nm,0.3s,baz=340,slow=7.3,SNR=4.6						
STKA	**Stephens Creek**	**41.02**	**160**	P	P	15 10 42.5	-1.3
	1.8nm,0.8s,baz=350,slow=11,SNR=2.7						
MKAR	**Makanchi Array**	**54.99**	**324**	P	P	15 12 31.6	+0.1
	0.3nm,0.4s,baz=123,slow=5.3,SNR=3.8						

*ISCJB **15** 15:04:40.9±0.8,35.°87N±0.°03×141.°32E±0.°08, h39km±7km, mb3.9/10, Error ellipse: s-maj=11.4km s-min=5.7km az=8.1*
*JMA **15** 15:04:42.6±0.1,35.°83N×141.°10E, h33km±1km, M3.3*
*NEIC **15** 15:04:42.6,35.°83N×141.°10E, h33km, mb4.4/2, After JMA.*
*IDC **15** 15:04:43.4±2.3,35.°78N×141.°34E, h49km±20km, mb3.5/8, mb1 3.6/10, mb1mx3.4/24, mbtmp3.6/10, ML3.4/2, MS2.8/2, Ms1 2.8/2, ms1mx2.5/26, Error ellipse: s-maj=29.6km s-min=13.3km az=93.0*

ISC 15 15:04:41.4±1.1,35.°84N±0.°03×141.°26E±0.°08, h24km±7km, n26, σ0.°83/29, mb3.9/10, 4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.35**	**247**	⇓P	**Pb**	**15 04 49.3**	**+0.2**
CHOJ				S	**Sb**	**15 04 54.0**	**-0.4**
JYT	**Yasato**	**0.94**	**294**	⇓P	**Pb**	**15 04 57.6**	**-1.5**
JHO	**Hitachi**	**0.95**	**324**	⇓P	**Pb**	**15 04 58.7**	**-0.4**
BSO4	**Boso 4**	**1.13**	**222**	P	**Pn**	**15 05 01.7**	**0.0**
BSO2	**Boso 2**	**1.16**	**201**	*e*S	**Sb**	**15 05 19.0**	**+1.6**
BSO3	**Boso 3**	**1.20**	**211**	P	**Pn**	**15 05 02.1**	**-0.6**
BSO3				*e*S	**Sb**	**15 05 18.6**	**0.0**
BSO1	**Boso 1**	**1.21**	**191**	P	**Pn**	**15 05 03.2**	**+0.5**
JAG	**Ashikaga**	**1.57**	**292**	⇓P	**Pn**	**15 05 06.6**	**-1.1**
MAJO	**Matsushiro**	**2.56**	**287**	*e*Pn	**Pn**	**15 05 21.5**	**+0.1**
MAT	**Matsushiro**	**2.56**	**287**	P	**Pn**	**15 05 21.4**	**0.0**
MAT				*e*S	**Sn**	**15 05 53.8**	**+2.0**
JHJ	**Hachijo jima 2**	**2.98**	**205**	P	**Pn**	**15 05 26.9**	**-0.2**
	8.3nm,0.3s,baz=92,slow=12,SNR=5.7						
JHJ				S	**Sn**	**15 06 02.5**	**+0.6**
	35nm,0.3s,baz=56,slow=22,SNR=9.8						
ERM	**Erimo**	**6.34**	**13**	*e*Pn	**Pn**	**15 06 14.3**	**+1.1**
ERM				*e*Sn	**Sn**	**15 07 25.4**	**+0.6**
ASAJ	**Asahikawa**	**8.33**	**7**	P	**Pn**	**15 06 41.9**	**+1.4**
	0.6nm,0.3s,baz=97,slow=22,SNR=7.5						
KSRS	**Korea Array**	**10.84**	**282**	LR	LR	15 11 22.5	
	comp=Z,62nm,18.5s,baz=171,slow=36						
GUMO	**Guam**	**22.39**	**171**	LR	LR	15 17 28.4	
	comp=Z,22nm,19.6s,baz=271,slow=34						
SONM	**Songino Array**	**28.36**	**306**	P	**P**	**15 10 32.9**	**-0.5**
	0.4nm,0.5s,mb3.3,baz=116,slow=9.8,SNR=3.3						
ZALV	**Zalesovo Beam**	**42.63**	**313**	P	**P**	**15 12 35.5**	**0.0**
	1.1nm,0.5s,mb3.9,baz=84,slow=7.6,SNR=8.5						
MK31	**Makanchi Array**	**44.65**	**303**	*e*P	**P**	**15 12 51.7**	**-0.2**
MKAR	**Makanchi Array**	**44.65**	**303**	P	**P**	**15 12 52.0**	**+0.1**
	3.3nm,0.7s,mb4.3,baz=89,slow=9.3,SNR=24						
KURK	**Kurchatov**	**46.58**	**309**	*e*P	**P**	**15 13 06.2**	**-0.8**
	3.6nm,0.7s,mb4.4						
ILAR	**Eielson Array**	**50.57**	**32**	P	**P**	**15 13 37.3**	**-0.2**
	0.5nm,1.1s,mb3.4,baz=286,slow=6.2,SNR=4.2						
BVAR	**Borovoye Array**	**51.29**	**313**	P	**P**	**15 13 43.2**	**+0.1**
	1.5nm,0.8s,mb4.0,baz=93,slow=7.4,SNR=6.3						
AML	**Almayashu**	**51.66**	**299**	*e*P	**P**	**15 13 46.4**	**+0.2**
	2.6nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**55.65**	**198**	P	**P**	**15 14 14.4**	**-1.1**
	1.3nm,0.8s,mb4.0,baz=333,slow=

MMAI Mount Meron Ar 149.49 304 PKPbc PKPbc 16 04 40.0 0.0
1.2nm,0.5s,baz=69,slow=4.8,SNR=2.4

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*BJI **15** 15:52:46.7, 82˚.10N× 17˚.50W, h10km, mB4.9/26, mb4.7/36, Ms4.5/15, Ms7 4.5/28*

*MOS **15** 15:52:48.4±0.9, 82˚.01N× 17˚.37W, h10km, mb4.9/73, Error ellipse: s-maj=34.8km s-min=5.8km az=93.3*

*IDC **15** 15:52:49.1±0.4, 82˚.10N× 17˚.79W, h0km, mb4.2/57, mb1 4.7/28, mb1mx4.6/32, mbtmp4.5/28, ML5.0/1, MS4.0/19, Ms1 4.0/19, ms1mx3.8/28, Error ellipse: s-maj=13.2km s-min=9.3km az=19.0*

*ISCJB **15** 15:52:49.2±1.2, 82˚.09N±0˚.03× 17˚.6W±0˚.1, h11km±7km, mb4.8/177, MS4.0/47, Error ellipse: s-maj=4.5km s-min=2.0km az=20.9*

*NEIC **15** 15:52:50.8±0.1, 82˚.09N× 17˚.47W, h10km, mb4.9/106, MS4.0/7, Error ellipse: s-maj=4.1km s-min=1.9km az=29.0*

*CSEM **15** 15:52:50.2±0.1, 82˚.12N× 17˚.42W, h10km, mb4.8/99, Ms4.2, Error ellipse: s-maj=4.0km s-min=2.1km az=28.0*

*GCMT **15** 15:52:50.6±0.3, 82˚.23N× 18˚.58W, h12km, MW4.8, Moment Tensor Solution. s22,c27; s59,c82; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.37±.10; $M_{\theta\theta}$-0.34±.11; $M_{\phi\phi}$1.70±.07; $M_{r\theta}$-0.04±.43; $M_{\theta\phi}$-0.94±.07; $M_{\phi r}$-0.22±.28; Best double couple: $M_0$1.70000×10^{16} NP1:ϕ_s149.00000°, δ43.00000°, λ-104.00000°. NP2:ϕ_s348.00000°, δ49.00000°, λ-78.00000°. Principal axes: T 2.0800, Plg3.0000°, Azm69.0000°; N -0.6800, Plg9.0000°, Azm159.0000°; P -1.4000, Plg80.0000°, Azm320.0000°; Data Used: II IU IC CN G.*

*NAO **15** 15:52:57.7, 81˚.60N× 16˚.39W, h33km, mb4.7*

*SZGRF **15** 15:53:02.2, 81˚.17N× 12˚.68W, h10km, mb4.8, MS3.7, Near north coast of Kalaallit Nunaat*

ISC 15 15:52:49.8±1.3, 82˚.10N±0˚.02× 17˚.5W±0˚.1, h3km±8km, h12km±1.7km: pP-P, n1034, s0˚72/1043, mb4.8/177, MS4.0/47, 178C-179D, Near north coast of Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
DAG	**Danmarks Havn**	**5.37**	**183**	*i*	P	**Pn**	**15 54 10.3**	**-0.3**
	61nm,1.1s							
DAG	**Danmarks Havn**	**5.37**	**183**	⇑ *i*	P	**Pn**	**15 54 10.3**	**-0.3**
	61nm,1.1s							
KBS	**Kingsbay**	**5.74**	**108**	*e*	Pn	**Pn**	**15 54 14.5**	**-1.2**
KBS				*e*	Sn	**Sn**	**15 55 20.1**	**-1.9**
KBS	**Kingsbay**	**5.74**	**108**	*d*	P	**Pn**	**15 54 14.4**	**-1.3**
KBS					pmax	pmax		
	comp=Z,103nm,0.7s							
KBS	**Kingsbay**	**5.74**	**108**		Pn	**Pn**	**15 54 14.6**	**-1.1**
KBS					Sn	**Sn**	**15 55 20.3**	**-1.7**
KBS				*i*	S	**Sn**	**15 55 20.6**	**-1.4**
	SNR=90							
SPA0	**Spitsbergen Ar**	**6.89**	**107**		Pn	**Pn**	**15 54 30.5**	**-1.0**
	SNR=582							
SPITS	**Spitsbergen Ar**	**6.89**	**107**		LR	LR	15 56 56.1	
	comp=Z,2μm,18.9s,baz=320,slow=36							
HSP	**Hornsund**	**7.72**	**113**	*e*	P	**Pn**	**15 54 43.2**	**+0.3**
SUMG	**Summit**	**10.49**	**216**	*e*	Pn	**Pn**	**15 55 17.6**	**-3.2**
SUMG				*e*	Sn	**Sn**	**15 57 13.3**	**-5.2**
SUMG	**Summit**	**10.49**	**216**	*i*	P	**Pn**	**15 55 18.5**	**-2.2**
SUMG				*i*	S	**Sn**	**15 57 09.9**	**-8.6**
JMIC	**Jan Mayen**	**11.35**	**165**		Pn	**Pn**	**15 55 32.7**	**+0.2**
	comp=Z,111nm,0.3s,baz=152,slow=8.2,SNR=2.7							
JMIC	**Jan Mayen**	**11.35**	**165**		Pn	**Pn**	**15 55 32.7**	**+0.2**
SCO	**Scoresbysund**	**11.73**	**187**	*i*	P	**Pn**	**15 55 38.4**	**+0.7**
SCO				*i*	S	**Sn**	**15 57 45.6**	**-3.3**
SCO				*i*	S	**Sn**	**15 57 48.2**	**-0.7**
SCO	**Scoresbysund**	**11.73**	**187**	*i*	P	**Pn**	**15 55 38.4**	**+0.7**
	SNR=90							
SCO				*i*	S	**Sn**	**15 57 48.3**	**-0.6**
	comp=Z,34nm,0.6s							
RES	**Resolute Bay**	**15.68**	**286**	*e*	Pn	**Pn**	**15 56 24.7**	**-6.5**
	comp=Z,104nm,1.2s							
RES				*e*	Sn	**Sn**	**15 59 09.5**	**-15**
RES	**Resolute Bay**	**15.68**	**286**		Pn	**Pn**	**15 56 26.4**	**-4.8**
	comp=Z,3.0nm,0.3s,baz=51,slow=8.0,SNR=13							
RES					LR	LR	16 02 38.4	
	comp=Z,1μm,18.8s,baz=334,slow=38							
RES	**Resolute Bay**	**15.68**	**286**		P	**Pn**	**15 56 26.4**	**-4.7**
RES					pmax	pmax		
	comp=Z,3.0nm,0.3s							
RES					MLR	MLR		
	comp=Z,1μm,18.8s							
KEV	**Kevo**	**15.68**	**115**	*e*	P	**Pn**	**15 56 34.5**	**+3.2**
KEV					pmax	pmax		
	comp=Z,36nm,1.1s							
KEV	**Kevo**	**15.68**	**115**	*e*	p	**Pn**	**15 56 34.5**	**+3.2**
	comp=Z,36nm,1.1s							
KEV	**Kevo**	**15.68**	**115**	*e*	P	**Pn**	**15 56 34.5**	**+3.2**
	comp=Z,36nm,1.1s							
ARCES	**ARCESS Array B**	**15.71**	**118**		Pn	**Pn**	**15 56 31.4**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=0.0,slow=4.0,SNR=12							
ARCES					LR	LR	16 02 05.8	
	comp=Z,315nm,21.5s,baz=150,slow=35							
ARCES	**ARCESS Array B**	**15.71**	**118**		Pn	**Pn**	**15 56 31.4**	**-0.2**
ARE0	**ARCESS Array S**	**15.71**	**118**	*e*	Pn	**Pn**	**15 56 28.5**	**-3.0**
BORG	**Borgarnes**	**17.48**	**185**		LR	LR	16 02 54.4	
	comp=Z,332nm,19.6s,baz=195,slow=35							
APA0	**Apatity Array**	**18.47**	**111**		P	**Pn**	**15 57 07.6**	**+1.3**
	SNR=4.7							
APA	**Apatity**	**18.56**	**111**	⇓ *i*	P	**Pn**	**15 57 08.8**	**+1.4**
APA					pmax	pmax		
	comp=Z,81nm,1.4s							
APA					MLR	MLR		
	comp=Z,700nm,14.0s							
APA	**Apatity**	**18.56**	**111**	*i*	P	**Pn**	**15 57 08.8**	**+1.4**
	comp=Z,700nm,14.0s							
FRB	**Frobisher Bay**	**22.22**	**246**		P	**P**	**15 57 45.0**	**-1.9**
	comp=Z,25nm,0.8s,mb4.7,baz=18,slow=10,SNR=10							
FRB					LR	LR	16 06 24.5	
	comp=Z,588nm,21.6s,MS4.0,baz=58,slow=37							
FRB	**Frobisher Bay**	**22.22**	**246**		P	**P**	**15 57 45.0**	**-1.9**
NB2	**NORSAR Subarra**	**22.45**	**142**		P	**P**	**15 57 48.7**	**-0.7**
	comp=Z,54nm,1.4s,mb4.8,baz=350,slow=11,SNR=8.5							
NOA	**NORSAR Array B**	**22.45**	**142**		P	**P**	**15 57 48.3**	**-1.1**
	comp=Z,5.9nm,0.8s,mb4.1,baz=236,slow=17,SNR=19							
NOA					LR	LR	16 05 16.7	
	comp=Z,217nm,20.7s,MS3.6,baz=350,slow=33							
NOA	**NORSAR Array B**	**22.45**	**142**		P	**P**	**15 57 48.3**	**-1.1**
NAO01	**NORSAR Array S**	**22.62**	**143**	*e*	P	**P**	**15 57 49.5**	**-1.6**
NAO01	**NORSAR Array S**	**22.62**	**143**	*e*	P	**P**	**15 57 49.5**	**-1.7**
JOF	**Joensuu**	**22.75**	**117**	*e*	P	**P**	**15 57 51.1**	**-1.4**
JOF					pmax	pmax		
	comp=Z,54nm,1.3s,mb4.8							
JOF	**Joensuu**	**22.75**	**117**	*e*	p	**P**	**15 57 51.1**	**-1.4**
	comp=Z,54nm,1.3s,mb4.8							
JOF	**Joensuu**	**22.75**	**117**	*e*	P	**P**	**15 57 51.1**	**-1.4**
	comp=Z,54nm,1.3s,mb4.8							
KAF	**Kangasniemi**	**22.93**	**123**	*e*	P	**P**	**15 57 52.3**	**-2.1**
KAF					pmax	pmax		
	comp=Z,24nm,0.8s,mb4.7							
KAF	**Kangasniemi**	**22.93**	**123**	*e*	p	**P**	**15 57 52.3**	**-2.1**
	comp=Z,24nm,0.8s,mb4.7,baz=348,slow=9.4							
KAF	**Kangasniemi**	**22.93**	**123**	*e*	P	**P**	**15 57 52.3**	**-2.1**
	comp=Z,24nm,0.8s,mb4.7							
FIA0	**FINESS Array S**	**23.55**	**124**		P	**P**	**15 57 59.8**	**-1.2**
	SNR=2.6							
FINES	**FINESS Array B**	**23.55**	**124**		P	**P**	**15 58 00.0**	**-1.0**
	comp=Z,15nm,0.7s,mb4.5,baz=353,slow=11,SNR=35							
FINES					PcP	PcP	16 01 44.8	-0.8
	comp=Z,3.3nm,0.7s,baz=1.1,slow=1.6,SNR=7.1							
FINES					LR	LR	16 06 27.5	
	comp=Z,327nm,21.3s,MS3.8,baz=351,slow=35							
FINES	**FINESS Array B**	**23.55**	**124**		P	**P**	**15 58 00.0**	**-1.0**
FINES							16 01 44.8	
FINES	**FINESS Array B**	**23.55**	**124**		P	**P**	**15 58 00.0**	**-1.0**
FINES	**FINESS Array B**	**23.55**	**124**		PcP	PcP	16 01 44.8	-0.8
HFS	**Hagfors**	**23.57**	**140**		P	**P**	**15 58 00.2**	**-1.0**
	comp=Z,17nm,0.8s,mb4.5,baz=359,slow=8.9,SNR=32							
HFS					LR	LR	16 05 59.7	
	comp=Z,263nm,19.2s,MS3.7,baz=343,slow=34							
HFS	**Hagfors**	**23.57**	**140**		P	**P**	**15 58 00.1**	**-1.0**
	SNR=0.4							
TIXI	**Tiksi**	**25.46**	**24**	*e*	P	**P**	**15 58 17.3**	**-1.0**
TIXI					pmax	pmax		
	comp=Z,21nm,1.2s,mb4.5							
TIXI	**Tiksi**	**25.46**	**24**	*e*	P	**P**	**15 58 17.3**	**-1.0**
	comp=Z,21nm,1.2s,mb4.5							
PUL	**Pulkovo**	**25.69**	**120**	*i*	P	**P**	**15 58 21.9**	**+1.4**
PUL					pmax	pmax		
	comp=Z,127nm,1.3s,mb5.3							
PUL	**Pulkovo**	**25.69**	**120**	*i*	P	**P**	**15 58 21.9**	**+1.4**
	comp=Z,127nm,1.3s,mb5.3							
KLMR	**Klimovskoe**	**25.79**	**109**	*e*	P	**P**	**15 58 20.7**	**-0.7**
KLMR				*e*	S	**S**	**16 02 53.4**	**+2.6**
KLMR					pmax	pmax		
	comp=Z,73nm,1.6s,mb5.0							
KLMR	**Klimovskoe**	**25.79**	**109**	*e*	P	**P**	**15 58 20.7**	**-0.7**
	comp=Z,73nm,1.6s,mb5.0							
INK	**Inuvik**	**26.25**	**311**	*e*	P	**P**	**15 58 23.1**	**-2.4**
	comp=Z,75nm,1.3s,mb5.1							
INK	**Inuvik**	**26.25**	**311**		P	**P**	**15 58 23.6**	**-1.9**
	comp=Z,27nm,0.9s,mb4.8,baz=13,slow=13,SNR=21							
INK					LR	LR	16 10 17.1	
	comp=Z,101nm,18.9s,MS3.4,baz=258,slow=40							
INK	**Inuvik**	**26.25**	**311**		P	**P**	**15 58 23.7**	**-1.8**
INK					pmax	pmax		
	comp=Z,27nm,0.9s							
INK					MLR	MLR		
	comp=Z,101nm,18.9s							
INK	**Inuvik**	**26.25**	**311**	*e*	P	**P**	**15 58 23.1**	**-2.4**
	comp=Z,75nm,1.3s,mb5.1							
EKA	**Eskdalemuir Ar**	**27.21**	**162**		P	**P**	**15 58 34.0**	**-0.3**
	comp=Z,4.0nm,1.0s,mb3.9,baz=347,slow=7.0,SNR=7.0							
EKA	**Eskdalemuir Ar**	**27.21**	**162**		P	**P**	**15 58 34.0**	**-0.2**
ESK	**Eskdalemuir**	**27.22**	**162**		P	**P**	**15 58 34.2**	**-0.2**
	comp=Z,19nm,1.2s,mb4.5							
ESK	**Eskdalemuir**	**27.22**	**162**		P	**P**	**15 58 34.2**	**-0.2**
ESK					pmax	pmax		
	comp=Z,19nm,1.2s,mb4.5							
ESK	**Eskdalemuir**	**27.22**	**162**		P	**P**	**15 58 34.2**	**-0.2**
	comp=Z,19nm,1.2s,mb4.5							
SOKR	**Solikamsk**	**29.37**	**92**	*e*	P	**P**	**15 58 50.3**	**-3.1**
SOKR					pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5							
SOKR					MLR	MLR		
	comp=Z,450nm,16.0s,MS4.2							
YKA	**Yellowknife Ar**	**29.63**	**291**		P	**P**	**15 58 54.8**	**-0.9**
	comp=Z,7.6nm,0.9s,mb4.4,baz=16,slow=9.4,SNR=39							
YKA					PcP	PcP	16 01 59.3	-0.4
	comp=Z,1.8nm,0.9s,baz=355,slow=2.8,SNR=4.2							
YKA	**Yellowknife Ar**	**29.63**	**291**		P	**P**	**15 58 54.8**	**-0.9**
YKA	**Yellowknife Ar**	**29.63**	**291**		PcP	PcP	16 01 59.3	-0.5
BILL	**Bilibino**	**30.03**	**357**	*e*	P	**P**	**15 58 58.6**	**-0.7**
	comp=Z,21nm,1.3s,mb4.7							
BILL	**Bilibino**	**30.03**	**357**	*e*	P	**P**	**15 58 58.6**	**-0.6**
BILL					pmax	pmax		
	comp=Z,21nm,1.3s,mb4.7							
BILL	**Bilibino**	**30.03**	**357**	*e*	P	**P**	**15 58 58.6**	**-0.6**
	comp=Z,21nm,1.3s,mb4.7							
EGAK	**Eagle**	**30.45**	**315**	*e*	P	**P**	**15 59 02.2**	**-0.8**
	comp=Z,15nm,1.1s,mb4.6							
EGAK	**Eagle**	**30.45**	**315**	*e*	P	**P**	**15 59 02.2**	**-0.8**
	comp=Z,15nm,1.1s,mb4.6							
FCC	**Fort Churchill**	**30.46**	**270**	*e*	P	**P**	**15 59 01.3**	**-1.7**
FCC	**Fort Churchill**	**30.46**	**270**	*e*	P	**P**	**15 59 01.3**	**-1.8**
SCHQ	**Schefferville**	**30.69**	**239**		P	**P**	**15 59 04.5**	**-0.6**
	comp=Z,4.3nm,0.6s,mb4.4,baz=23,slow=9.3,SNR=7.7							
SCHQ					LR	LR	16 11 11.2	
	comp=Z,424nm,21.6s,MS4.1,baz=21,slow=36							
SCHQ	**Schefferville**	**30.69**	**239**		P	**P**	**15 59 04.6**	**-0.5**
DAWY	**Dawson**	**30.98**	**313**	*e*	P	**P**	**15 59 07.0**	**-0.6**
DAWY	**Dawson**	**30.98**	**313**	*e*	P	**P**	**15 59 07.0**	**-0.6**
ILAR	**Eielson Array**	**30.99**	**320**		P	**P**	**15 59 08.0**	**+0.3**
	comp=Z,2.6nm,0.9s,mb4.1,baz=5.7,slow=8.0,SNR=32							
ILAR					PcP	PcP	16 02 02.4	-1.0
	comp=Z,2.6nm,0.8s,baz=335,slow=3.9,SNR=13							
ILAR	**Eielson Array**	**30.99**	**320**		P	**P**	**15 59 08.0**	**+0.3**
ILAR	**Eielson Array**	**30.99**	**320**		PcP	PcP	16 02 02.3	-1.0
OBN	**Obninsk**	**31.00**	**115**	⇓ *e*	P	**P**	**15 59 07.7**	**-0.2**
OBN				*e*			16 00 09.2	
OBN				*e*	S	**S**	**16 04 16.2**	**+3.4**
OBN					pmax	pmax		
	comp=Z,31nm,0.9s,mb5.1							
OBN					MLR	MLR		
	comp=Z,300nm,19.0s,MS4.0							
OBN	**Obninsk**	**31.00**	**115**	*e*	P	**P**	**15 59 07.7**	**-0.2**
	comp=Z,31nm,0.9s,mb5.1							
CLZ	**Clausthal**	**31.51**	**146**	*e*	P	**P**	**15 59 12.6**	**+0.2**
	comp=Z,9.0nm,1.4s,mb4.4							
CLZ	**Clausthal**	**31.51**	**146**	*e*	P	**P**	**15 59 12.6**	**+0.2**
CLZ					pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.4							
CLZ	**Clausthal**	**31.51**	**146**	*e*	P	**P**	**15 59 12.6**	**+0.2**
	comp=Z,9.0nm,1.4s,mb4.4							
BPAW	**Bear Paw Mtn.**	**32.01**	**323**	*e*	P	**P**	**15 59 16.7**	**0.0**
	comp=Z,16nm,1.2s,mb4.7							
BPAW	**Bear Paw Mtn.**	**32.01**	**323**	*e*	P	**P**	**15 59 16.7**	**0.0**
	comp=Z,16nm,1.2s,mb4.7							
CLL	**Collm**	**32.25**	**143**	*e*	P	**P**	**15 59 18.7**	**-0.2**
	comp=Z,20nm,1.4s,mb4.8							
CLL	**Collm**	**32.25**	**143**	*i*	P	**P**	**15 59 18.7**	**-0.2**
	comp=Z,25nm,1.3s,mb4.9							
CLL	**Collm**	**32.25**	**143**	*i*	P	**P**	**15 59 18.7**	**-0.2**
CLL					pmax	pmax		
	comp=Z,25nm,1.3s,mb4.9							
CLL	**Collm**	**32.25**	**143**	*i*	P	**P**	**15 59 18.7**	**-0.2**
	comp=Z,25nm,1.3s,mb4.9							
CLL				*e*	PP	PP	16 00 33.0	+1.6
	comp=Z,11nm,1.5s							
CLL				*e*	PcP	PcP	16 02 07.0	+0.1
CLL				*e*	S	**S**	**16 04 42.0**	**+10**
CLL					L		16 11 00.0	
	comp=Z,100nm,21.1s							
CLL	**Collm**	**32.25**	**143**	*i*	P	**P**	**15 59 18.7**	**-0.2**
	comp=Z,25nm,1.3s,mb4.9							
SNF	**Seneffe**	**32.41**	**154**		P	**P**	**15 59 21.0**	**+0.7**
MENT	**Mentasta**	**32.50**	**317**	*e*	P	**P**	**15 59 21.1**	**+0.1**
MENT				*e*	PcP	PcP	16 02 07.9	+0.5
MENT	**Mentasta**	**32.50**	**317**	*e*	P	**P**	**15 59 21.1**	**+0.1**
SVE	**Sverdlovsk**	**32.55**	**90**	⇓ *e*	P	**P**	**15 59 22.1**	**+0.6**
SVE				*e*	S	**S**	**16 04 35.0**	**-2.0**
SVE					pmax	pmax		
	comp=Z,23nm,1.3s,mb5.0							
SVE					MLR	MLR		
	comp=Z,580nm,16.0s,MS4.4							
SVE	**Sverdlovsk**	**32.55**	**90**	*e*	P	**P**	**15 59 22.1**	**+0.6**
	comp=Z,580nm,16.0s							
BRG	**Berggiesshubel**	**32.76**	**142**	*e*	P	**P**	**15 59 23.2**	**-0.2**
	comp=Z,12nm,1.3s,mb4.7							
BRG	**Berggiesshubel**	**32.76**	**142**	*e*	P	**P**	**15 59 23.1**	**-0.2**
	comp=Z,12nm,1.3s,mb4.7							
BRG				*e*		pP	15 59 23.1	-1.1
	comp=Z,12nm,1.3s							
BRG								
	comp=N,102nm,13.1s							
BRG								
	comp=E,85nm,13.5s							
BRG								
	comp=Z,109nm,13.3s							
BRG	**Berggiesshubel**	**32.76**	**142**	*e*	P	**P**	**15 59 23.1**	**-0.3**
BRG				*e*		pP	15 59 23.1	-1.1
BRG					pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4							
BRG					MLR	MLR		
	comp=N,61nm,13.1s,MS3.6							
BRG					MLR	MLR		
	comp=E,51nm,13.5s,MS3.6							
BRG					MLR	MLR		
	comp=Z,65nm,13.3s,MS3.5							
BRG	**Berggiesshubel**	**32.76**	**142**	*e*	P	**P**	**15 59 23.1**	**-0.3**
	comp=Z,7.0nm,1.3s,mb4.4							
MOX	**Moxa**	**32.79**	**145**	*e*	P	**P**	**15 59 24.1**	**+0.4**
	comp=Z,18nm,1.5s,mb4.8							
MOX	**Moxa**	**32.79**	**145**	*e*	P	**P**	**15 59 23.9**	**+0.2**
	comp=Z,5.0nm,0.8s,mb4.5							
MOX	**Moxa**	**32.79**	**145**	*e*	P	**P**	**15 59 24.1**	**+0.4**
MOX					pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.3							
MOX	**Moxa**	**32.79**	**145**	*e*	P	**P**	**15 59 24.1**	**+0.4**
	comp=Z,6.0nm,1.5s,mb4.3							
GIVF	**Givet**	**32.85**	**153**	*e*	P	**P**	**15 59 23.2**	**-1.0**
GIVF	**Givet**	**32.85**	**153**	*e*	P	**P**	**15 59 23.2**	**-1.0**
BAIF	**Baives**	**32.86**	**154**	*e*	P	**P**	**15 59 23.8**	**-0.4**
	comp=Z,26nm,1.3s,mb4.7							
BAIF	**Baives**	**32.86**	**154**	*e*	P	**P**	**15 59 23.8**	**-0.4**
	comp=Z,13nm,1.3s,mb4.7							
BAIF	**Baives**	**32.86**	**154**	*e*	P	**P**	**15 59 23.8**	**-0.4**
BAIF					pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7							
BAIF	**Baives**	**32.86**	**154**	*e*	P	**P**	**15 59 23.8**	**-0.4**
	comp=Z,13nm,1.3s,mb4.7							
KSP	**Ksiaz**	**32.99**	**140**	*e*	P	**P**	**15 59 25.8**	**+0.4**
KSP				*e*			16 00 40.1	
KSP	**Ksiaz**	**32.99**	**140**	*e*	P	**P**	**15 59 25.8**	**+0.4**
WERD	**Werda**	**33.05**	**144**	*e*	P	**P**	**15 59 26.0**	**+0.1**
	comp=Z,16nm,1.2s,mb4.8							
TANN	**Tannenbergstha**	**33.09**	**144**	*e*	P	**P**	**15 59 26.6**	**+0.3**
	comp=Z,22nm,1.2s,mb5.0							
GUNZ	**Gunzen**	**33.13**	**144**	*e*	P	**P**	**15 59 27.0**	**+0.4**
	comp=Z,19nm,1.4s,mb4.8							
WERN	**Wernitzgruen**	**33.21**	**144**	*e*	P	**P**	**15 59 28.0**	**+0.7**
	comp=Z,18nm,1.2s,mb4.9							
NKC	**Novy Kostel**	**33.27**	**144**	*i*	P	**P**	**15 59 28.6**	**+0.8**
NKC				*e*			15 59 31.4	
NKC	**Novy Kostel**	**33.27**	**144**	*i*	P	**P**	**15 59 28.6**	**+0.8**
NKC				*e*	pP	pP	15 59 31.4	+2.7
NKC	**Novy Kostel**	**33.27**	**144**	*i*	P	**P**	**15 59 28.6**	**+0.8**
UPC	**Upice**	**33.30**	**140**	*i*	P	**P**	**15 59 28.0**	**-0.1**
UPC				*e*			15 59 31.2	
UPC	**Upice**	**33.30**	**140**	*i*	P	**P**	**15 59 28.0**	**-0.1**
UPC				*e*	pP	pP	15 59 31.2	+2.3
UPC	**Upice**	**33.30**	**140**	*i*	P	**P**	**15 59 28.0**	**-0.1**
DPC	**Dobruska-Polom**	**33.48**	**140**	*i*	P	**P**	**15 59 30.2**	**+0.5**
DPC					MLR	MLR		
	comp=Z,200nm,18.7s,MS3.9							
DPC	**Dobruska-Polom**	**33.48**	**140**	*i*	P	**P**	**15 59 30.2**	**+0.5**
DPC					AMS	AMS	16 11 40.0	
	comp=Z,200nm,18.7s							
DPC	**Dobruska-Polom**	**33.48**	**140**	*i*	P	**P**	**15 59 30.2**	**+0.5**
	comp=Z,200nm,18.7s							
PRU	**Pruhonice**	**33.69**	**142**	*i*	P	**P**	**15 59 32.8**	**+1.3**
PRU					MLR	MLR		
	comp=Z,100nm,18.2s,MS3.6							
PRU	**Pruhonice**	**33.69**	**142**	*i*	P	**P**	**15 59 32.8**	**+1.3**
PRU					AMS	AMS	16 12 20.0	
	comp=Z,100nm,18.2s							
PRU	**Pruhonice**	**33.69**	**142**	*i*	P	**P**	**15 59 32.8**	**+1.3**
	comp=Z,100nm,18.2s							
GRA1	**Grafenberg Arr**	**33.71**	**146**	*e*	P	**P**	**15 59 32.3**	**+0.6**
	comp=Z,14nm,1.1s,mb4.8							
GRA1					LR	LR		
	comp=Z,100nm,20.1s,MS3.5							
GRA1	**Grafenberg Arr**	**33.71**	**146**	*e*	P	**P**	**15 59 32.3**	**+0.6**
	comp=Z,100nm,20.1s							
GRF	**Grafenberg Arr**	**33.71**	**146**	*e*	P	**P**	**15 59 32.3**	**+0.6**
	comp=Z,14nm,1.1s,mb4.8							
GRF				*e*	L		16 12 04.9	
	comp=Z,147nm,20.1s							
GRF	**Grafenberg Arr**	**33.71**	**146**	*e*	P	**P**	**15 59 32.3**	**+0.6**
GRF					pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8							
GRF					MLR	MLR		
	comp=Z,100nm,20.1s,MS3.5							
GRF	**Grafenberg Arr**	**33.71**	**146**	*e*	P	**P**	**15 59 32.3**	**+0.6**
GRF					pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8							
GRF					MLR	MLR		
	comp=Z,100nm,20.1s,MS3.5							
GRF	**Grafenberg Arr**	**33.71**	**146**	*e*	P	**P**	**15 59 32.3**	**+0.6**
	comp=Z,100nm,20.1s							
FLN	**La Foliniere**	**33.90**	**160**	*e*	P	**P**	**15 59 33.8**	**+0.5**
	comp=Z,31nm,1.2s,mb4.8							
FLN				*e*	MLR	MLR		
	comp=Z,106nm,20.0s,MS3.3							
FLN	**La Foliniere**	**33.90**	**160**	*e*	P	**P**	**15 59 33.8**	**+0.5**
	comp=Z,15nm,1.2s,mb4.8							
FLN					LR	LR		
	comp=Z,110nm,20.0s,MS3.6							
FLN	**La Foliniere**	**33.90**	**160**	*e*	P	**P**	**15 59 33.8**	**+0.5**
FLN					pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8							
FLN					MLR	MLR		
	comp=Z,110nm,20.0s,MS3.6							
FLN	**La Foliniere**	**33.90**	**160**	*e*	P	**P**	**15 59 33.8**	**+0.5**
	comp=Z,15nm,1.2s,mb4.8							
HYT	**Haines Junctio**	**33.95**	**311**	*e*	P	**P**	**15 59 34.4**	**+0.7**
HYT	**Haines Junctio**	**33.95**	**311**	*e*	P	**P**	**15 59 34.4**	**+0.7**
LDF	**La Druitiere**	**34.08**	**159**	*e*	P	**P**	**15 59 34.3**	**-0.6**
	comp=Z,4.1nm,0.5s,mb4.3							
LDF	**La Druitiere**	**34.08**	**159**	*e*	P	**P**	**15 59 34.3**	**-0.6**
	comp=Z,2.0nm,0.5s,mb4.3							
LDF	**La Druitiere**	**34.08**	**159**	*e*	P	**P**	**15 59 34.3**	**-0.6**
LDF					pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3							
LDF	**La Druitiere**	**34.08**	**159**	*e*	P	**P**	**15 59 34.3**	**-0.6**
	comp=Z,2.0nm,0.5s,mb4.3							
OKC	**Ostrava-Krasne**	**34.16**	**138**	*i*	P

comp=Z,18nm,1.4s,mb4.8
CDF Champ du Feu 34.70 151 *e*P **P 15 59 40.1 -0.1**
CDF pmax pmax
comp=Z,18nm,1.4s,mb4.8
CDF Champ du Feu 34.70 151 *e*P **P 15 59 40.1 -0.1**
comp=Z,18nm,1.4s,mb4.8
GEC2 GERESS Array S 34.75 143 *e*P **P 15 59 41.7 +1.0**
comp=Z,20nm,1.2s,mb4.9
GEC2 GERESS Array S 34.75 143 *e*P **P 15 59 41.7 +1.0**
GEC2 pmax pmax
comp=Z,20nm,1.2s,mb4.9
GEC2 GERESS Array S 34.75 143 *e*P **P 15 59 41.7 +1.0**
comp=Z,20nm,1.2s,mb4.9
LVV L'vov 34.76 131 *e*P **P 15 59 40.2 -0.6**
LVV L'vov 34.76 131 *e*P **P 15 59 40.2 -0.6**
BFO Black Forest 34.85 149 *e*P **P 15 59 42.1 +0.5**
comp=Z,28nm,1.6s,mb4.9
BFO Black Forest 34.85 149 *e*P **P 15 59 42.1 +0.5**
BFO pmax pmax
comp=Z,28nm,1.6s,mb4.9
BFO Black Forest 34.85 149 *e*P **P 15 59 42.1 +0.5**
comp=Z,28nm,1.6s,mb4.9
STHS Stebnicka Huta 34.87 134 *e*P **P 15 59 43.4 +1.7**
comp=Z,8.5nm,0.7s,mb4.8
STHS Stebnicka Huta 34.87 134 *e*P **P 15 59 43.4 +1.7**
STHS pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
STHS Stebnicka Huta 34.87 134 *e*P **P 15 59 43.4 +1.7**
STHS Stebnicka Huta 34.87 134 *e*P **P 15 59 43.4 +1.7**
comp=Z,9.0nm,0.7s,mb4.8
ECH Echery 34.88 151 *e*P **P 15 59 40.9 -0.9**
comp=Z,12nm,1.3s,mb4.7
ECH Echery 34.88 151 *e*P **P 15 59 40.9 -1.0**
ECH pmax pmax
comp=Z,12nm,1.3s,mb4.7
ECH Echery 34.88 151 *e*P **P 15 59 40.9 -1.0**
comp=Z,12nm,1.3s,mb4.7
HAU Haudompre 35.04 152 *e*P **P 15 59 42.6 -0.6**
HAU *e*MLR MLR
comp=Z,113nm,17.8s,MS3.4
HAU Haudompre 35.04 152 *e*P **P 15 59 42.6 -0.6**
HAU MLR MLR
comp=Z,110nm,17.8s,MS3.6
HAU Haudompre 35.04 152 *e*P **P 15 59 42.6 -0.6**
YAK Yakutsk 35.05 26 *e*P **P 15 59 41.5 -1.7**
comp=Z,13nm,0.7s,mb5.0
YAK LR LR
comp=Z,167nm,20.0s,MS3.8
YAK Yakutsk 35.05 26 *e*P **P 15 59 40.8 -2.4**
YAK pmax pmax
comp=Z,14nm,1.0s,mb4.8
YAK pmax pmax
comp=N,10.0nm,1.6s
YAK Yakutsk 35.05 26 *e*P **P 15 59 40.8 -2.4**
comp=N,10.0nm,1.6s,mb4.5
SEY Seymchan 35.08 8*c i*P **P 15 59 43.3 -0.1**
SEY Seymchan 35.08 8 *i* P **P 15 59 43.3 -0.1**
VSR Storozhevoye 35.14 114 *e*P **P 15 59 43.8 -0.2**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,10.0nm,0.4s
VSR Storozhevoye 35.14 114 *e*P **P 15 59 43.8 -0.2**
comp=E,10.0nm,0.7s,mb4.8
HINF Hinteralfeld 35.26 151 *e*P **P 15 59 44.5 -0.6**
HINF Hinteralfeld 35.26 151 *e*P **P 15 59 44.5 -0.6**
CRVS Cervenica-Dubn 35.40 134 *e*P **P 15 59 46.8 +0.5**
comp=E,6.0nm,1.3s,mb4.4
CRVS Cervenica-Dubn 35.40 134 *e*P **P 15 59 46.8 +0.5**
CRVS pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
CRVS Cervenica-Dubn 35.40 134 *e*P **P 15 59 46.8 +0.5**
CRVS Cervenica-Dubn 35.40 134 *e*P **P 15 59 46.8 +0.5**
comp=Z,6.0nm,1.3s,mb4.4
FFC Flin Flon 35.46 276 *e*P **P 15 59 44.4 -2.4**
comp=Z,41nm,1.8s,mb5.1
FFC Flin Flon 35.46 276 *e*P **P 15 59 44.4 -2.4**
FFC pmax pmax
comp=Z,41nm,1.8s,mb5.1
FFC Flin Flon 35.46 276 *e*P **P 15 59 44.4 -2.4**
comp=Z,41nm,1.8s,mb5.1
DLBC Dease Lake 35.47 303 *e*P **P 15 59 48.5 +1.7**
DLBC Dease Lake 35.47 303 P **P 15 59 47.8 +1.1**
comp=Z,6.4nm,0.9s,mb4.5
DLBC Dease Lake 35.47 303 *e*P **P 15 59 48.5 +1.7**
VYHS Vyhne 35.55 137 *e*P **P 15 59 48.3 +0.7**
comp=Z,6.2nm,1.3s,mb4.4
VYHS Vyhne 35.55 137 *e*P **P 15 59 48.3 +0.7**
VYHS pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
VYHS Vyhne 35.55 137 *e*P **P 15 59 48.3 +0.7**
VYHS Vyhne 35.55 137 *e*P **P 15 59 48.3 +0.7**
comp=Z,6.2nm,1.3s,mb4.4
VRHR Novokhopersk 35.57 111 *e*P **P 15 59 46.7 -1.1**
VRHR pmax pmax
comp=E,30nm,0.7s
VRHR pmax pmax
comp=Z,40nm,0.7s,mb5.5
VRHR pmax pmax
comp=N,40nm,1.0s
VRHR Novokhopersk 35.57 111 *e*P **P 15 59 46.7 -1.1**
comp=N,40nm,1.0s,mb5.3
LOR Lormes 35.62 155 *e*P **P 15 59 47.3 -0.9**
comp=N,13nm,0.9s,mb4.5
LOR *e*MLR MLR
comp=Z,134nm,18.2s,MS3.4
LOR Lormes 35.62 155 *e*P **P 15 59 47.3 -0.9**
comp=Z,6.3nm,0.9s,mb4.5
LOR LR LR
comp=Z,130nm,18.3s,MS3.7
LOR Lormes 35.62 155 *e*P **P 15 59 47.3 -0.9**
LOR pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
LOR MLR MLR
comp=Z,130nm,18.3s,MS3.7
LOR Lormes 35.62 155 *e*P **P 15 59 47.3 -0.9**
comp=Z,6.3nm,0.9s,mb4.5
ZST Bratislava 35.69 139 *e*P **P 15 59 50.5 +1.7**
comp=Z,27nm,1.8s,mb4.9
ZST Bratislava 35.69 139 *e*P **P 15 59 50.5 +1.7**
ZST pmax pmax
comp=Z,27nm,1.8s,mb4.9
ZST Bratislava 35.69 139 *e*P **P 15 59 50.5 +1.7**
ZST Bratislava 35.69 139 *e*P **P 15 59 50.5 +1.7**
comp=Z,27nm,1.8s,mb4.9
KECS Kecovo 35.72 135 *e*P **P 15 59 49.1 0.0**
comp=Z,4.6nm,0.9s,mb4.4
KECS Kecovo 35.72 135 *e*P **P 15 59 49.1 0.0**
KECS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KECS Kecovo 35.72 135 *e*P **P 15 59 49.1 0.0**
UZH Uzhgorod 35.75 133 *e*P **P 15 59 49.4 +0.1**
UZH *e* 15 59 54.6
UZH Uzhgorod 35.75 133 *e*P **P 15 59 49.4 +0.1**
SSF Saint Saulge 35.80 155 *e*P **P 15 59 49.1 -0.7**
comp=Z,41nm,1.4s,mb4.9
SSF Saint Saulge 35.80 155 *e*P **P 15 59 49.1 -0.7**
comp=Z,21nm,1.4s,mb4.9
SSF Saint Saulge 35.80 155 *e*P **P 15 59 49.1 -0.7**
SSF pmax pmax
comp=Z,21nm,1.4s,mb4.9
SSF Saint Saulge 35.80 155 *e*P **P 15 59 49.1 -0.7**
comp=Z,21nm,1.4s,mb4.9
AVF Avril sur Loir 36.06 155 *e*P **P 15 59 51.3 -0.7**
comp=Z,34nm,1.3s,mb4.8
AVF Avril sur Loir 36.06 155 *e*P **P 15 59 51.3 -0.7**
comp=Z,17nm,1.3s,mb4.8
AVF Avril sur Loir 36.06 155 *e*P **P 15 59 51.3 -0.7**
AVF pmax pmax
comp=Z,17nm,1.3s,mb4.8
AVF Avril sur Loir 36.06 155 *e*P **P 15 59 51.3 -0.7**
comp=Z,17nm,1.3s,mb4.8
MFF Saint Martin d 36.07 160 *e*P **P 15 59 51.1 -0.9**
MFF Saint Martin d 36.07 160 *e*P **P 15 59 51.1 -0.9**
PSZ Piszkesteto 36.22 136 *e*P **P 15 59 54.6 +1.2**
comp=Z,20nm,1.3s,mb4.9
PSZ Piszkesteto 36.22 136 *e*P **P 15 59 54.6 +1.2**
PSZ pmax pmax
comp=Z,20nm,1.3s,mb4.9
PSZ Piszkesteto 36.22 136 *e*P **P 15 59 54.6 +1.2**
comp=Z,20nm,1.3s,mb4.9
SMF Signal de Mont 36.24 155 *e*P **P 15 59 52.3 -1.2**
SMF Signal de Mont 36.24 155 *e*P **P 15 59 52.3 -1.2**
BGF Bois d'Agland 36.27 156 *e*P **P 15 59 53.2 -0.6**
comp=Z,71nm,1.4s,mb5.1
BGF Bois d'Agland 36.27 156 *e*P **P 15 59 53.2 -0.6**
comp=Z,35nm,1.4s,mb5.1
BGF Bois d'Agland 36.27 156 *e*P **P 15 59 53.2 -0.6**
BGF pmax pmax
comp=Z,35nm,1.4s,mb5.1
BGF Bois d'Agland 36.27 156 *e*P **P 15 59 53.2 -0.6**
comp=Z,35nm,1.4s,mb5.1
CABF La Chapelle 36.41 152 *e*P **P 15 59 54.7 -0.3**
comp=Z,43nm,1.2s,mb5.0
CABF La Chapelle 36.41 152 *e*P **P 15 59 54.7 -0.3**
comp=Z,22nm,1.2s,mb5.0
CABF La Chapelle 36.41 152 *e*P **P 15 59 54.7 -0.3**
CABF pmax pmax
comp=Z,22nm,1.2s,mb5.0
CABF La Chapelle 36.41 152 *e*P **P 15 59 54.7 -0.3**
comp=Z,22nm,1.2s,mb5.0
TCF Toulx Ste Croi 36.50 157 *e*P **P 15 59 55.0 -0.8**
comp=Z,68nm,1.6s,mb4.9
TCF Toulx Ste Croi 36.50 157 *e*P **P 15 59 55.0 -0.8**
comp=Z,34nm,1.6s,mb4.9
TCF Toulx Ste Croi 36.50 157 *e*P **P 15 59 55.0 -0.8**
TCF pmax pmax
comp=Z,34nm,1.6s,mb4.9
TCF Toulx Ste Croi 36.50 157 *e*P **P 15 59 55.0 -0.8**
comp=Z,34nm,1.6s,mb4.9
BUR08 Bucovina Ar. S 37.03 130 *e*P **P 16 00 00.5 +0.2**
BUR08 Bucovina Ar. S 37.03 130 *e*P **P 16 00 00.5 +0.3**
BURAR Bucovina Array 37.06 130⇑P **P 16 00 00.8 +0.3**
BURAR Bucovina Array 37.06 130⇑*i*P **P 16 00 00.8 +0.3**
BURAR Bucovina Array 37.06 130⇑*i*P **P 16 00 00.8 +0.3**
RJF Les Rejaudoux 37.45 158 *e*P **P 16 00 03.2 -0.6**
comp=Z,14nm,0.7s,mb4.6
RJF *e*MLR MLR
comp=Z,129nm,20.5s,MS3.4
RJF Les Rejaudoux 37.45 158 *e*P **P 16 00 03.2 -0.6**
comp=Z,7.3nm,0.7s,mb4.6
RJF LR LR
comp=Z,130nm,20.5s,MS3.7
RJF Les Rejaudoux 37.45 158 *e*P **P 16 00 03.2 -0.6**
RJF pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
RJF MLR MLR
comp=Z,130nm,20.5s,MS3.7
RJF Les Rejaudoux 37.45 158 *e*P **P 16 00 03.2 -0.6**
comp=Z,7.2nm,0.7s,mb4.6
NVS Novosibirsk 37.54 69 *e*P **P 16 00 03.8 -0.7**
NVS pmax pmax
comp=Z,27nm,1.9s,mb4.7
NVS pmax pmax
comp=N,21nm,2.0s
NVS Novosibirsk 37.54 69 *e*P **P 16 00 03.8 -0.7**
comp=N,21nm,2.0s,mb4.5
LPL La Plagne 37.54 152 *e*P **P 16 00 05.0 +0.4**
comp=N,60nm,1.6s,mb4.8
LPL La Plagne 37.54 152 *e*P **P 16 00 05.0 +0.4**
comp=N,30nm,1.6s,mb4.8
LPL La Plagne 37.54 152 *e*P **P 16 00 05.0 +0.4**
LPL pmax pmax
comp=Z,30nm,1.6s,mb4.8
LPL La Plagne 37.54 152 *e*P **P 16 00 05.0 +0.4**
comp=Z,30nm,1.6s,mb4.8
BRVK Borovoye 37.55 82 *e*P **P 16 00 05.2 +0.6**
BRVK Borovoye 37.55 82⇓*e*P **P 16 00 05.3 +0.7**
BRVK pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
BRVK MLR MLR
comp=Z,320nm,15.0s,MS4.2
BRVK Borovoye 37.55 82 *e*P **P 16 00 05.2 +0.6**
LPG La Plagne 37.56 152 *e*P **P 16 00 05.3 +0.5**
comp=Z,45nm,1.2s,mb4.8
LPG La Plagne 37.56 152 *e*P **P 16 00 05.3 +0.5**
comp=Z,22nm,1.2s,mb4.8
LPG La Plagne 37.56 152 *e*P **P 16 00 05.3 +0.5**
LPG pmax pmax
comp=Z,23nm,1.2s,mb4.8
LPG La Plagne 37.56 152 *e*P **P 16 00 05.3 +0.5**
comp=Z,22nm,1.2s,mb4.8
BVAR Borovoye Array 37.60 82 P **P 16 00 05.4 +0.4**
comp=Z,3.5nm,0.8s,mb4.1,baz=335,slow=6.6,SNR=17
BVAR Borovoye Array 37.60 82 P **P 16 00 05.4 +0.4**
DRGR 37.62 133⇓P **P 16 00 06.2 +1.0**
DRGR 37.62 133⇓*i*P **P 16 00 06.2 +1.0**
DRGR 37.62 133 P **P 16 00 06.2 +1.0**
VIVF Saint-Julien-l 38.07 154 *e*P **P 16 00 08.8 -0.3**
comp=Z,72nm,1.6s,mb4.9
VIVF Saint-Julien-l 38.07 154 *e*P **P 16 00 08.8 -0.3**
comp=Z,36nm,1.6s,mb4.8
VIVF Saint-Julien-l 38.07 154 *e*P **P 16 00 08.8 -0.3**
VIVF pmax pmax
comp=Z,36nm,1.6s,mb4.8
VIVF Saint-Julien-l 38.07 154 *e*P **P 16 00 08.8 -0.3**
comp=Z,36nm,1.6s,mb4.9
ORIF Oris-en-Rattie 38.08 153 *e*P **P 16 00 07.8 -1.4**
comp=Z,72nm,1.6s,mb4.9
ORIF *e*MLR MLR
comp=Z,144nm,19.0s,MS3.5
ORIF Oris-en-Rattie 38.08 153 *e*P **P 16 00 07.8 -1.4**
comp=Z,36nm,1.6s,mb4.8
ORIF Oris-en-Rattie 38.08 153 *e*P **P 16 00 07.8 -1.4**
ORIF pmax pmax
comp=Z,36nm,1.6s,mb4.8
ORIF Oris-en-Rattie 38.08 153 *e*P **P 16 00 07.8 -1.4**
comp=Z,36nm,1.6s,mb4.9
KDAK Kodiak Island 38.38 322 *i* P **P 16 00 10.8 -0.8**
KDAK Kodiak Island 38.38 322 *i* P **P 16 00 10.8 -0.8**
AKTK Aktyubinsk 38.42 95 P **P 16 00 11.9 0.0**
AKTK Aktyubinsk 38.42 95 P **P 16 00 11.9 -0.1**
AKTO Aktyubinsk 38.42 95 P **P 16 00 11.9 0.0**
comp=Z,7.0nm,0.8s,mb4.4,baz=353,slow=11
EDM Edmonton 38.47 286 *e*P **P 16 00 12.8 +0.4**
EDM Edmonton 38.47 286 *e*P **P 16 00 12.8 +0.4**
ZALV Zalesovo Beam 38.62 68 P **P 16 00 13.7 +0.1**
comp=Z,3.5nm,0.7s,mb4.2,baz=352,slow=9.0,SNR=21
ZALV PcP PcP 16 02 25.2 -0.3
comp=Z,1.1nm,0.6s,baz=311,slow=4.8,SNR=3.1
ZALV LR LR 16 19 45.3
comp=Z,195nm,18.6s,MS4.0,baz=299,slow=42
ZALV Zalesovo Beam 38.62 68 P **P 16 00 13.7 +0.1**
ZALV 16 02 25.2
BZS Buzias 38.67 135⇑P **P 16 00 14.9 +0.8**
BZS Buzias 38.67 135⇑*i*P **P 16 00 14.9 +0.8**
BZS Buzias 38.67 135 P **P 16 00 14.9 +0.8**
VRI Vrincioaia 38.95 129⇓P **P 16 00 16.7 +0.3**
VRI Vrincioaia 38.95 129⇓*i*P **P 16 00 16.7 +0.3**
VRI Vrincioaia 38.95 129 P **P 16 00 16.7 +0.3**
MLR Muntele Rosu 39.24 130⇑P **P 16 00 22.0 +3.2**
MLR Muntele Rosu 39.24 130⇑*i*P **P 16 00 22.0 +3.1**
ETSF Etsaut 39.74 160 *e*P **P 16 00 23.7 +0.6**
comp=Z,22nm,1.1s,mb4.5
ETSF Etsaut 39.74 160 *e*P **P 16 00 23.7 +0.6**
comp=Z,11nm,1.1s,mb4.5
ETSF Etsaut 39.74 160 *e*P **P 16 00 23.7 +0.6**
ETSF pmax pmax
comp=Z,11nm,1.1s,mb4.5
ETSF Etsaut 39.74 160 *e*P **P 16 00 23.7 +0.6**
comp=Z,11nm,1.1s,mb4.5
ABKAR Akbulak array 39.84 93 *e*P **P 16 00 23.8 0.0**
comp=Z,8.0nm,1.0s,mb4.4
ABKAR Akbulak array 39.84 93 *e*P **P 16 00 23.8 0.0**
comp=Z,8.0nm,1.0s,mb4.4
PKME Peaks-Kenny Pk 40.39 239 *e*P **P 16 00 28.8 +0.3**
comp=Z,320nm,2.5s,mb5.6
PKME Peaks-Kenny Pk 40.39 239 *e*P **P 16 00 28.8 +0.3**
comp=Z,320nm,2.5s,mb5.6
TIRR Tirgusor 40.52 128⇑P **P 16 00 28.8 -0.7**
TIRR Tirgusor 40.52 128⇑*i*P **P 16 00 28.8 -0.8**
TIRR Tirgusor 40.52 128 P **P 16 00 28.8 -0.8**
EYMN Ely 40.64 263 *e*P **P 16 00 30.4 -0.1**
comp=Z,41nm,0.9s,mb5.0
EYMN Ely 40.64 263 *e*P **P 16 00 30.4 -0.1**
comp=Z,41nm,0.9s,mb5.0
AGMN Agassiz Nation 40.90 267 *e*P **P 16 00 32.2 -0.3**
AGMN Agassiz Nation 40.90 267 *e*P **P 16 00 32.2 -0.4**
KURK Kurchatov 40.97 75 P **P 16 00 32.9 -0.3**
comp=Z,88nm,1.4s,mb5.2,SNR=8.0
KURK Kurchatov 40.97 75 *e*P **P 16 00 31.8 -1.4**
comp=Z,24nm,1.2s,mb4.7
KURK Kurchatov 40.97 75 P **P 16 00 33.7 +0.5**
comp=Z,16nm,1.0s,mb4.6,baz=352,slow=7.3,SNR=42
KURK Kurchatov 40.97 75*d i*P **P 16 00 33.0 -0.2**
KURK pmax pmax
comp=Z,23nm,1.2s,mb4.7
KURK MLR MLR
comp=Z,433nm,17.0s,MS4.4
KURK Kurchatov 40.97 75 *e*P **P 16 00 31.8 -1.4**
comp=Z,24nm,1.2s,mb4.7
AQU L'Aquila 41.17 145⇑P **P 16 00 32.4 -2.6**
AQU L'Aquila 41.17 145⇑*i*P **P 16 00 32.4 -2.5**
AQU L'Aquila 41.17 145 P **P 16 00 32.4 -2.5**
MVO Moncorvo 41.23 168 *e*P **P 16 00 36.9 +1.5**
comp=Z,21nm,1.9s,mb4.5
MVO *e*LR LR 16 13 40.6
comp=Z,106nm,20.0s
MVO Moncorvo 41.23 168 *e*P **P 16 00 36.9 +1.5**
comp=Z,21nm,1.9s,mb4.5
ANN Anapa 41.23 118 *e*P **P 16 00 29.2 -6.2**
ANN *e*S **S 16 06 39.8 -10**
ANN *e*SS SS 16 09 40.3 -12
ANN pmax pmax
comp=Z,24nm,1.4s,mb4.6
FRNY Flat Rock 41.34 243 *e*P **P 16 00 36.7 +0.4**
comp=Z,47nm,1.4s,mb4.9
FRNY Flat Rock 41.34 243 *e*P **P 16 00 36.7 +0.5**
comp=Z,47nm,1.4s,mb4.9
PVIS Viseu 41.65 169 *e*P **P 16 00 39.9 +1.0**
comp=Z,16nm,2.0s,mb4.3
PVIS Viseu 41.65 169 *e*P **P 16 00 39.9 +1.0**
comp=Z,16nm,2.0s,mb4.3
LONY Lake Ozonia 41.67 244 *e*P **P 16 00 39.4 +0.4**
LONY Lake Ozonia 41.67 244 *e*P **P 16 00 39.4 +0.4**
LBNH Lisbon 41.72 241 *e*P **P 16 00 39.3 -0.1**
comp=Z,13nm,0.9s,mb4.6
LBNH Lisbon 41.72 241 *e*P **P 16 00 39.3 -0.1**
LBNH pmax pmax
comp=Z,13nm,0.9s,mb4.6
LBNH Lisbon 41.72 241 *e*P **P 16 00 39.3 -0.1**
comp=Z,13nm,0.9s,mb4.6
VTS Vitosha 41.82 134⇑P **P 16 00 39.8 -0.4**
VTS Vitosha 41.82 134⇑*i*P **P 16 00 39.8 -0.5**
VTS Vitosha 41.82 134 P **P 16 00 39.8 -0.5**
DGMT Dagmar 41.88 276⇑P **P 16 00 40.5 -0.1**
baz=42,SNR=5.7
DGMT Dagmar 41.88 276 *e*P **P 16 00 41.0 +0.4**
DGMT Dagmar 41.88 276 *e*P **P 16 00 41.0 +0.4**
MTE Manteigas 41.98 169 *e*P **P 16 00 42.6 +1.0**
comp=Z,26nm,1.9s,mb4.5
MTE *e*LR LR 16 14 42.8
comp=Z,107nm,20.0s
MTE Manteigas 41.98 169 *e*P **P 16 00 42.6 +1.0**
comp=Z,26nm,1.9s,mb4.5
COWI Conover 42.13 260 *e*P **P 16 00 42.1 -0.6**
comp=Z,48nm,1.2s,mb5.0
COWI Conover 42.13 260 *e*P **P 16 00 42.1 -0.6**
comp=Z,48nm,1.2s,mb5.0
A18A Metzger Ranch, 42.21 281⇑P **P 16 00 42.6 -0.8**
baz=42
A17A Triple J Farms 42.30 282⇑P **P 16 00 43.2 -0.8**
baz=42,SNR=16
PCBR Castelo Branco 42.54 169 *e*P **P 16 00 47.3 +1.2**
comp=Z,36nm,1.7s,mb4.8
PCBR Castelo Branco 42.54 169 *e*P **P 16 00 47.3 +1.2**
comp=Z,36nm,1.7s,mb4.8
A15A Johnson Ranch, 42.54 284⇓P **P 16 00 45.2 -0.9**
baz=42,SNR=12
WALA Waterton Lakes 42.62 285 *e*P **P 16 00 46.8 +0.1**
comp=Z,1.2nm,1.4s
WALA Waterton Lakes 42.62 285 *e*P **P 16 00 46.8 +0.1**
comp=Z,1.2nm,1.4s
A14A Double T Ranch 42.64 285⇓P **P 16 00 46.7 -0.2**
baz=42,SNR=16
B18A Beardsley Farm 42.72 281⇓P **P 16 00 46.8 -0.7**
baz=42
KIV Kislovodsk 42.72 113 *i* P **P 16 00 48.7 +1.1**
KIV *e*S **S 16 07 16.7 +5.3**
KIV pmax pmax
comp=Z,16nm,1.1s,mb4.7
KIV MLR MLR
comp=Z,100nm,16.0s,MS3.8
KIV Kislovodsk 42.72 113 *i* P **P 16 00 48.7 +1.1**
comp=Z,16nm,1.1s,mb4.7
PTOM Tomar 42.74 170 *e*P **P 16 00 48.9 +1.2**
comp=Z,35nm,1.7s,mb4.8
PTOM Tomar 42.74 170 *e*P **P 16 00 48.9 +1.2**
comp=Z,35nm,1.7s,mb4.8
ACCN Adirondack Com 42.77 243 *e*P **P 16 00 48.7 +0.7**
comp=Z,318nm,2.9s,mb5.5
ACCN Adirondack Com 42.77 243 *e*P **P 16 00 48.7 +0.7**
comp=Z,318nm,2.9s,mb5.5
ESDC Sonseca Array 42.82 165 P **P 16 00 49.3 +0.9**
comp=Z,6.6nm,0.9s,mb4.4,baz=359,slow=8.4,SNR=37
ESDC Sonseca Array 42.82 165 P **P 16 00 49.3 +0.9**
PAB San Pablo 42.93 165 *e*P **P 16 00 49.6 +0.3**
comp=Z,16nm,1.1s,mb4.7
PAB San Pablo 42.93 165 *e*P **P 16 00 49.6 +0.3**
PAB pmax pmax
comp=Z,16nm,1.1s,mb4.7
PAB San Pablo 42.93 165 *e*P **P 16 00 49.6 +0.3**
comp=Z,16nm,1.1s,mb4.7
PMRV Marv??o 42.95 168 *e*P **P 16 00 50.4 +0.9**
comp=Z,22nm,1.5s,mb4.7
PMRV *e*LR LR 16 15 56.0
comp=Z,116nm,20.0s
PMRV Marv??o 42.95 168 *e*P **P 16 00 50.4 +0.9**
comp=Z,22nm,1.5s,mb4.7
B17A L&G Farms, Che 42.95 282⇑P **P 16 00 48.8 -0.7**
baz=43,SNR=10
A12A Yaak River Ran 42.98 287⇑P **P 16 00 49.9 +0.3**
baz=43,SNR=6.2
EGMT Eagleton 43.08 281⇑P **P 16 00 49.7 -0.7**
baz=43,SNR=6.0
EGMT Eagleton 43.08 281 *e*P **P 16 00 50.6 +0.2**
comp=Z,16nm,1.0s,mb4.7
EGMT Eagleton 43.08 281 *e*P **P 16 00 50.6 +0.2**
comp=Z,16nm,1.0s,mb4.7
TLY Talaya 43.08 51 *e*P **P 16 00 49.2 -1.2**
TLY *e*S **S 16 07 17.8 +1.4**
TLY pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
TLY MLR MLR
comp=Z,718nm,21.0s,MS4.5
TLY Talaya 43.08 51 *e*P **P 16 00 49.2 -1.2**
comp=Z,4.0nm,1.0s,mb4.1
TLY *e*S **S 16 07 17.8 +1.4**
comp=Z,718nm,21.0s
B15A Bradely Ranch, 43.17 284⇓P **P 16 00 50.2 -1.0**
baz=43,SNR=19
B14A Marquette Ranc 43.22 284⇓P **P 16 00 51.0 -0.6**
baz=43,SNR=11
B13A Whitefish 43.37 285⇑P **P 16 00 52.5 -0.2**
baz=43,SNR=8.6
PMAFR Mafra 43.38 171 *e*LR LR 16 15 00.9
comp=Z,93nm,18.0s
B12A Libby 43.42 287⇓P **P 16 00 53.5 +0.3**
baz=43
PESTR Estremoz 43.51 169 *e*P **P 16 00 54.8 +0.8**
comp=Z,18nm,1.9s,mb4.5
PESTR *e*LR LR 16 15 29.8
comp=Z,104nm,22.0s
PESTR Estremoz 43.51 169 *e*P **P 16 00 54.8 +0.8**
comp=Z,18nm,1.9s,mb4.5
C16A Fuhringer Ranc 43.56 283⇑P **P 16 00 54.0 -0.4**
baz=43,SNR=19
C17A Wharram Farm, 43.60 282⇓P **P 16 00 53.8 -0.7**
baz=43,SNR=10.0
C15A Salmond Ranch, 43.71 283⇓P **P 16 00 54.8 -0.7**
baz=44,SNR=15
BLMT Blacktail Moun 43.71 285 *e*P **P 16 00 55.9 +0.4**
BLMT Blacktail Moun 43.71 285 *e*P **P 16 00 55.9 +0.4**
A05A Maple Falls 43.75 293⇑P **P 16 00 54.9 -0.9**
baz=44
NEW Newport 43.83 288⇑P **P 16 00 56.8 +0.3**
baz=44,SNR=17
NEW Newport 43.83 288 *e*P **P 16 00 57.4 +1.0**
comp=Z,35nm,1.1s,mb5.0
NEW Newport 43.83 288 *e*P **P 16 00 57.4 +1.0**
NEW pmax pmax
comp=Z,35nm,1.1s
NEW Newport 43.83 288 *e*P **P 16 00 57.4 +1.0**
comp=Z,35nm,1.1s,mb5.0
C14A Swan Lake 43.87 285⇓P **P 16 00 56.4 -0.4**
baz=44,SNR=15
D18A Linhart Farms, 43.89 281⇑P **P 16 00 56.6 -0.4**
baz=44,SNR=7.7
LAO LASA Array 43.90 277⇑P **P 16 00 57.6 +0.5**
baz=44,SNR=9.7
LAO LASA Array 43.90 277 *e*P **P 16 00 57.0 0.0**
comp=Z,9.4nm,0.6s,mb4.7
LAO LASA Array 43.90 277 *e*P **P 16 00 57.0 -0.1**
comp=Z,9.4nm,0.6s,mb4.7
BSMT Bassoo Peak 43.92 286 *e*P **P 16 00 57.7 +0.5**
comp=Z,40nm,0.7s,mb5.2
BSMT Bassoo Peak 43.92 286 *e*P **P 16 00 57.7 +0.5**

comp=Z,40nm,0.7s,mb5.2
JTMT Jette 43.96 285 eP P 16 00 57.4 -0.1
JTMT Jette 43.96 285 eP P 16 00 57.4 -0.1
B08A Colville Reser 44.02 290 ⇑P P 16 00 58.4 +0.3
baz=44,SNR=20
D17A Six Diamond Ra 44.06 281 ⇓P P 16 00 57.8 -0.5
baz=44,SNR=6.9
C13A Hot Springs 44.06 285 ⇓P P 16 00 58.4 +0.1
baz=44,SNR=38
C11A Tepee Creek (N 44.13 287 ⇑P P 16 00 58.9 0.0
baz=44,SNR=7.1
B06A Marblemount 44.14 292 ⇑P P 16 00 59.6 +0.6
baz=44
SWMT Swartz Lake 44.15 285 eP P 16 00 58.9 -0.2
SWMT Swartz Lake 44.15 285 eP P 16 00 58.9 -0.2
C12B Naegeli Ranch, 44.15 286 ⇑P P 16 00 59.3 +0.3
baz=44
PBAR Barrancos 44.21 168 eP P 16 01 00.5 +0.8
comp=Z,19nm,1.6s,mb4.6
PBAR eLR LR 16 15 30.1
comp=Z,110nm,20.0s
PBAR Barrancos 44.21 168 eP P 16 01 00.5 +0.8
comp=Z,19nm,1.6s,mb4.6
BINY Binghamton 44.23 245 eP P 16 01 00.2 +0.4
comp=Z,32nm,1.0s,mb5.0
BINY Binghamton 44.23 245 eP P 16 01 00.2 +0.5
comp=Z,32nm,1.0s,mb5.0
PGC Sidney 44.27 294 eP P 16 00 59.3 -0.7
comp=Z,8.2nm,1.8s,mb4.2
PGC Sidney 44.27 294 eP P 16 00 59.3 -0.6
comp=Z,8.2nm,1.8s,mb4.2
D16A Dana Ranch, Ca 44.29 282 ⇓P P 16 00 59.5 -0.7
baz=44,SNR=22
ZAK Zakamensk 44.32 52 eP P 16 00 58.7 -1.7
ZAK Zakamensk 44.32 52 eP P 16 00 58.7 -1.7
PBEJ Beja 44.34 169 eP P 16 01 02.4 +1.7
comp=Z,41nm,1.8s,mb4.9
PBEJ Beja 44.34 169 eP P 16 01 02.4 +1.7
comp=Z,41nm,1.8s,mb4.9
SLMT Seeley Lake 44.35 284 eP P 16 01 00.7 +0.1
SLMT Seeley Lake 44.35 284 eP P 16 01 00.7 +0.1
D15A Lincoln 44.41 283 ⇑P P 16 01 00.4 -0.8
baz=44,SNR=8.3
D14A Greenough 44.51 284 ⇑P P 16 01 01.5 -0.4
baz=44,SNR=18
JCW Jim Creek 44.52 292 P P 16 01 02.0 0.0
JCW Jim Creek 44.52 292 P P 16 01 02.0 0.0
E18A Harlowton 44.53 281 ⇓P P 16 01 01.8 -0.3
baz=44
D13A Huson 44.62 285 ⇓P P 16 01 02.5 -0.3
baz=44
CHMT Chamberlain Mo 44.64 284 eP P 16 01 02.6 -0.4
comp=Z,15nm,0.9s,mb4.8
CHMT Chamberlain Mo 44.64 284 eP P 16 01 02.6 -0.3
comp=Z,15nm,0.9s,mb4.8
HRY Holter Researc 44.65 282 eP P 16 01 02.6 -0.4
HRY Holter Researc 44.65 282 eP P 16 01 02.6 -0.4
E17A Martinsdale 44.76 281 ⇑P P 16 01 03.6 -0.4
baz=45,SNR=11
D12A Red Ives Fores 44.78 286 ⇓P P 16 01 04.0 -0.1
baz=45
E16A East Helena 44.80 282 ⇑P P 16 01 03.8 -0.4
baz=45,SNR=19
MSO Missoula 44.81 285 ⇑P P 16 01 04.3 0.0
baz=45,SNR=14
MSO Missoula 44.81 285 eP P 16 01 04.3 0.0
comp=Z,28nm,0.9s,mb5.1
MSO Missoula 44.81 285 eP P 16 01 04.3 0.0
comp=Z,28nm,0.9s,mb5.1
GOR Gori 44.84 112 P P 16 01 06.1 +1.5
OD2 Odessa Site #2 44.89 289 P P 16 01 04.9 0.0
OD2 Odessa Site #2 44.89 289 P P 16 01 04.9 -0.1
OBC Olympics--Boni 44.95 294 P P 16 01 06.8 +1.4
OBC Olympics--Boni 44.95 294 P P 16 01 06.8 +1.4
PVAQ Vaqueiros 44.96 169 eLR LR 16 15 28.9
comp=Z,130nm,20.0s
E15A Deer Lodge 45.03 283 ⇓P P 16 01 05.7 -0.5
baz=45,SNR=19
F19A Roth Farm, Mol 45.09 279 ⇑P P 16 01 06.6 +0.1
baz=45,SNR=26
OSD Olympics--Snow 45.11 294 P P 16 01 08.0 +1.3
OSD Olympics--Snow 45.11 294 P P 16 01 08.0 +1.3
PBDV Barranco-do-Ve 45.12 169 eLR LR 16 16 47.5
comp=Z,114nm,20.0s
PAL Palisades 45.15 243 eP P 16 01 07.8 +0.7
PAL Palisades 45.15 243 eP P 16 01 07.8 +0.7
F18A Big Timber 45.15 280 ⇓P P 16 01 07.0 0.0
baz=45,SNR=8.4
E14A Clinton 45.16 284 ⇓P P 16 01 06.9 -0.2
baz=45,SNR=11
TBLG Delisi 45.18 111 eP P 16 01 08.2 +0.9
TBLG Delisi 45.18 111 P P 16 01 08.2 +1.0
TBLG Delisi 45.18 111 eP P 16 01 08.2 +0.9
PFVI Vila Bisbo 45.21 170 eLR LR 16 15 16.1
comp=Z,118nm,18.0s
MTA Mtatsminda 45.22 111 P P 16 01 08.2 +0.5
E13A Victor 45.23 285 ⇑P P 16 01 07.6 0.0
baz=45,SNR=35
D08A Wollman Farm, 45.25 289 ⇑P P 16 01 07.0 -0.8
baz=45,SNR=6.7
GNW Green Mountain 45.25 293 eP P 16 01 08.0 +0.1
comp=Z,22nm,1.0s,mb5.0
GNW Green Mountain 45.25 293 eP P 16 01 08.0 +0.2
comp=Z,22nm,1.0s,mb5.0
GCMT Greycliff 45.25 280 eP P 16 01 07.5 -0.3
comp=Z,9.9nm,0.8s,mb4.7
GCMT Greycliff 45.25 280 eP P 16 01 07.5 -0.4
comp=Z,9.9nm,0.8s,mb4.7
F17A Fitzpatrick Pl 45.28 281 ⇓P P 16 01 07.9 -0.1
baz=45,SNR=5.4
MK31 Makanchi Array 45.30 72 eP P 16 01 07.6 -0.6
MK31 Makanchi Array 45.30 72 eP P 16 01 07.6 -0.6
MKAR Makanchi Array 45.30 72 P P 16 01 08.2 0.0
comp=Z,2.7nm,0.8s,mb4.2,baz=352,slow=7.7,SNR=27
MKAR LR LR 16 23 58.8
comp=Z,272nm,18.3s,MS4.2,baz=343,slow=41
E12A Beaver Dam Sad 45.44 286 ⇓P P 16 01 09.1 -0.2
baz=45,SNR=34
G21A Lodge Grass 45.47 278 ⇓P P 16 01 09.5 -0.1
baz=45
ECSD EROS Data Cent 45.47 267 eP P 16 01 09.6 -0.1
comp=Z,44nm,1.0s,mb5.2
ECSD EROS Data Cent 45.47 267 eP P 16 01 09.6 0.0
comp=Z,44nm,1.0s,mb5.2
D05A Enumclaw 45.52 292 ⇑P P 16 01 09.6 -0.3
baz=45
F16A Kennard Place, 45.53 282 ⇑P P 16 01 09.8 -0.2
baz=45,SNR=12
DGRG David-gareji 45.53 110 P P 16 01 09.8 -0.4
NLWA Neilton Lookou 45.55 294 eP P 16 01 11.1 +0.9
comp=Z,30nm,0.9s,mb5.2
NLWA Neilton Lookou 45.55 294 eP P 16 01 11.1 +0.9
comp=Z,30nm,0.9s,mb5.2
F15A Butte 45.59 283 ⇑P P 16 01 10.6 +0.1
baz=45,SNR=18
LRM Limekiln Ridge 45.60 283 eP P 16 01 10.4 -0.2
comp=Z,100nm,0.8s,mb5.8
LRM Limekiln Ridge 45.60 283 eP P 16 01 10.4 -0.2
comp=Z,100nm,0.8s,mb5.8
BOZ Bozeman (W) 45.66 282 ⇓P P 16 01 11.3 +0.2
baz=46,SNR=15
BOZ Bozeman (W) 45.66 282 eP P 16 01 11.1 0.0
BOZ Bozeman (W) 45.66 282 eP P 16 01 11.1 0.0
E09A Wood Farm, Sta 45.68 288 ⇑P P 16 01 10.7 -0.5
baz=46
G18A Lazy EL Ranch, 45.70 280 ⇓P P 16 01 10.8 -0.7
baz=46
F14A Wisdom 45.73 284 ⇑P P 16 01 11.5 -0.2
baz=46
BR131 Keskin Array S 45.79 123 eP P 16 01 13.3 +1.1
comp=Z,3.3nm,0.7s,mb4.4
BR131 Keskin Array S 45.79 123 eP P 16 01 13.3 +1.1
comp=Z,3.3nm,0.7s,mb4.4
BRTR Keskin Array B 45.79 123 P P 16 01 13.2 +1.1
comp=Z,6.1nm,0.9s,mb4.5,baz=351,slow=6.4,SNR=22
BRTR LR LR 16 21 13.7
comp=Z,106nm,21.4s,MS3.8,baz=346,slow=37
BRTR Keskin Array B 45.79 123 P P 16 01 13.2 +1.0
E08A Dider Farm, El 45.82 289 ⇓P P 16 01 12.2 -0.1
baz=46,SNR=5.3
RLMT Red Lodge 45.86 280 ⇑P P 16 01 12.8 +0.2
baz=46,SNR=9.1
RLMT Red Lodge 45.86 280 eP P 16 01 13.1 +0.5
comp=Z,16nm,1.1s,mb4.9
RLMT Red Lodge 45.86 280 eP P 16 01 13.1 +0.5
comp=Z,16nm,1.1s,mb4.9
E07A Sunnyside 45.86 290 ⇑P P 16 01 12.0 -0.6
baz=46
LON Longmire 45.92 292 eP P 16 01 13.6 +0.4
comp=Z,26nm,1.3s,mb5.0
LON Longmire 45.92 292 eP P 16 01 13.6 +0.5
LON pmax pmax
comp=Z,26nm,1.3s,mb5.0
LON Longmire 45.92 292 eP P 16 01 13.6 +0.5
comp=Z,26nm,1.3s,mb5.0
WPW White Pass 45.94 292 P P 16 01 13.8 +0.5
WPW White Pass 45.94 292 P P 16 01 13.8 +0.5
HAWA Hanford 45.98 290 eP P 16 01 13.9 +0.3
comp=Z,18nm,0.9s,mb5.0
HAWA Hanford 45.98 290 eP P 16 01 13.9 +0.3
comp=Z,18nm,0.9s,mb5.0
RSW Rattlesnake Hi 45.99 290 eP P 16 01 13.5 -0.1
RSW Rattlesnake Hi 45.99 290 eP P 16 01 13.5 -0.1
H21A Big Horn, Sher 46.04 277 ⇑P P 16 01 14.1 0.0
baz=46,SNR=6.3
F12A Elk City 46.04 285 ⇓P P 16 01 13.8 -0.3
baz=46,SNR=19
DLMT Dillon 46.07 283 eP P 16 01 14.1 -0.2
DLMT Dillon 46.07 283 eP P 16 01 14.1 -0.2
F10A Beach Ranch, E 46.09 287 ⇓P P 16 01 14.3 -0.1
baz=46
G16A Moss Hill, Enn 46.10 282 ⇑P P 16 01 14.6 0.0
baz=46,SNR=9.7
RSSD Black Hills 46.12 274 eP P 16 01 14.9 +0.2
comp=Z,12nm,0.7s,mb4.9
RSSD Black Hills 46.12 274 eP P 16 01 14.9 +0.2
RSSD pmax pmax
comp=Z,12nm,0.7s,mb4.9
RSSD Black Hills 46.12 274 eP P 16 01 14.9 +0.2
comp=Z,12nm,0.7s,mb4.9
G15A Dillon 46.25 283 ⇓P P 16 01 15.8 0.0
baz=46,SNR=6.8
G14A Jackson 46.30 284 ⇓P P 16 01 16.3 +0.1
baz=46,SNR=22
H20A Greybull 46.31 278 ⇓P P 16 01 16.3 +0.1
baz=46,SNR=5.9
LNOR Lincton Mounta 46.33 288 eP P 16 01 15.4 -1.0
LNOR Lincton Mounta 46.33 288 eP P 16 01 15.4 -1.0
E03A Lebam 46.35 294 ⇓P P 16 01 17.3 +0.8
baz=46,SNR=6.7
ASR Mount Adams--S 46.48 292 P P 16 01 18.3 +0.7
ASR Mount Adams--S 46.48 292 P P 16 01 18.3 +0.7
H16A Russell Place, 46.54 281 ⇑P P 16 01 18.3 +0.3
baz=46,SNR=12
G13A Cobalt 46.56 284 ⇓P P 16 01 18.3 +0.1
baz=46,SNR=43
MCMT McKenzie Canyo 46.63 283 eP P 16 01 19.0 +0.2
MCMT McKenzie Canyo 46.63 283 eP P 16 01 19.0 +0.3
GNI Garni 46.73 111 i P P 16 01 21.5 +1.9
GNI pmax pmax
comp=Z,26nm,1.2s
GNI MLR MLR
comp=Z,78nm,16.0s
GNI Garni 46.73 111 i P P 16 01 21.5 +1.9
comp=Z,78nm,16.0s
F04A Amboy 46.80 292 ⇓P P 16 01 20.4 +0.3
baz=47,SNR=5.3
H15A Lind 46.81 283 ⇑P P 16 01 20.5 +0.3
baz=47,SNR=14
I20A Worland 46.85 278 ⇓P P 16 01 20.7 +0.3
baz=47,SNR=12
I21A Big Trails, Te 46.87 277 ⇑P P 16 01 20.2 -0.4
baz=47,SNR=29
H14A Leadore 46.91 283 ⇑P P 16 01 21.4 +0.5
baz=47,SNR=14
F03A Seaside 46.95 293 ⇓P P 16 01 22.1 +0.8
baz=47
G08A Pilot Rock 46.99 289 ⇑P P 16 01 22.2 +0.7
baz=47,SNR=13
HIA Hailar 47.02 37 P P 16 01 20.2 -1.5
comp=Z,17nm,1.9s,mb4.7
HIA Hailar 47.02 37 P P 16 01 20.2 -1.5
HIA pmax pmax
comp=Z,17nm,1.9s
HIA Hailar 47.02 37 P P 16 01 20.2 -1.5
comp=Z,17nm,1.9s,mb4.7
FLWY Flagg Ranch 47.07 281 eP P 16 01 23.5 +1.3
FLWY Flagg Ranch 47.07 281 eP P 16 01 23.5 +1.3
H13A Challis 47.08 284 ⇓P P 16 01 22.6 +0.3
baz=47,SNR=36
SONM Songino Array 47.17 50 P P 16 01 23.7 +0.8
comp=Z,1.5nm,0.7s,mb4.0,baz=340,slow=6.8,SNR=9.5
SONM PcP PcP 16 02 54.3 0.0
comp=Z,1.6nm,0.9s,baz=321,slow=2.0,SNR=3.4
SONM LR LR 16 21 21.5
comp=Z,397nm,20.3s,MS4.4,baz=26,slow=36
SONM Songino Array 47.17 50 P P 16 01 23.7 +0.8
SONM 16 02 54.3
SONM Songino Array 47.17 50 P P 16 01 23.7 +0.8
SONM Songino Array 47.17 50 PcP PcP 16 02 54.3 0.0
H12A Diamond D Ranc 47.17 285 ⇓P P 16 01 22.9 -0.1
baz=47,SNR=44
BMO Blue Mountains 47.20 287 eP P 16 01 23.2 +0.1
comp=Z,13nm,0.7s,mb5.0
BMO Blue Mountains 47.20 287 eP P 16 01 23.2 0.0
comp=Z,13nm,0.7s,mb5.0
ULN Ulaanbaatar 47.21 49 eP P 16 01 24.3 +1.1
comp=Z,11nm,1.2s,mb4.7
ULN Ulaanbaatar 47.21 49 eP P 16 01 24.3 +1.1
ULN pmax pmax
comp=Z,11nm,1.2s,mb4.7
ULN Ulaanbaatar 47.21 49 eP P 16 01 24.3 +1.1
comp=Z,11nm,1.2s,mb4.7
G06A Carlson Farm, 47.26 290 ⇓P P 16 01 24.2 +0.6
baz=47,SNR=6.6
IMW Indian Meadow 47.29 281 eP P 16 01 25.0 +1.1
IMW Indian Meadow 47.29 281 eP P 16 01 25.0 +1.1
VFP Flag Point 47.29 291 P P 16 01 24.7 +0.9
VFP Flag Point 47.29 291 P P 16 01 24.7 +0.9
HOOD Mount Hood Mea 47.31 291 eP P 16 01 25.6 +1.6
HOOD Mount Hood Mea 47.31 291 eP P 16 01 25.6 +1.6
I18A Diamond G Ranc 47.33 280 ⇓P P 16 01 24.4 +0.2
baz=47,SNR=9.0
I16A Newdale 47.38 281 ⇑P P 16 01 25.2 +0.6
baz=47
MOOW Moose Ponds 47.41 281 eP P 16 01 25.5 +0.7
MOOW Moose Ponds 47.41 281 eP P 16 01 25.5 +0.7
LOHW Long Hollow 47.52 280 eP P 16 01 25.8 +0.1
comp=Z,11nm,1.0s,mb4.8
LOHW Long Hollow 47.52 280 eP P 16 01 25.8 +0.1
comp=Z,11nm,1.0s,mb4.8
G04A Mulino 47.53 292 ⇑P P 16 01 26.1 +0.4
baz=47
TPAW Teton Pass 47.69 281 eP P 16 01 28.3 +1.3
TPAW Teton Pass 47.69 281 eP P 16 01 28.3 +1.3
I13A Wildhorse Cree 47.70 284 ⇑P P 16 01 27.4 +0.4
baz=48,SNR=25
MALT Malatya 47.75 118 eP P 16 01 29.2 +1.7
MALT Malatya 47.75 118 i P P 16 01 29.1 +1.6
MALT Malatya 47.75 118 i P P 16 01 29.1 +1.6
REDW Red Top Meadow 47.80 281 eP P 16 01 28.6 +0.8
REDW Red Top Meadow 47.80 281 eP P 16 01 28.6 +0.7
J18A Kendall Valley 47.83 280 ⇓P P 16 01 28.3 +0.1
baz=48,SNR=15
RRI2 Red Ridge 47.88 281 eP P 16 01 29.5 +1.1
K22A Casper 47.91 276 ⇓P P 16 01 27.7 -1.0
baz=48,SNR=18
I12A Atlanta 47.95 285 ⇓P P 16 01 28.5 -0.5
baz=48,SNR=20
VIPM Ingram Point 47.97 290 P P 16 01 30.4 +1.2
VIPM Ingram Point 47.97 290 P P 16 01 30.4 +1.2
J16A Bone 47.99 281 ⇓P P 16 01 29.7 +0.4
baz=48,SNR=7.1
H04A Detroit Lake 48.00 292 ⇑P P 16 01 28.7 -0.7
baz=48
K19A Absolon Red Bu 48.05 279 ⇑P P 16 01 28.6 -1.2
baz=48
HLID Hailey 48.08 284 ⇓P P 16 01 29.9 -0.2
baz=48,SNR=17
HLID Hailey 48.08 284 eP P 16 01 30.2 +0.1
HLID Hailey 48.08 284 eP P 16 01 30.2 +0.1
K20A Yellowstone Ra 48.15 278 ⇑P P 16 01 29.6 -1.0
baz=48
FRU Bishkek 48.16 81 eP P 16 01 31.0 +0.4
FRU pmax pmax
comp=Z,33nm,1.4s,mb5.2
BW06 Boulder Array 48.21 279 ⇑P P 16 01 30.6 -0.4
baz=48,SNR=12
BW06 Boulder Array 48.21 279 eP P 16 01 31.0 0.0
BW06 Boulder Array 48.21 279 eP P 16 01 31.0 0.0
J13A Cove Ranch, Pi 48.21 284 ⇑P P 16 01 31.2 +0.2
baz=48,SNR=37
I07A Izee 48.25 289 ⇑P P 16 01 31.3 0.0
baz=48,SNR=9.8
L24A Wheatland 48.28 275 ⇑P P 16 01 31.3 -0.3
baz=48
L23A Garrett 48.32 275 ⇑P P 16 01 30.8 -1.1
baz=48,SNR=6.8
AAK Ala-Archa 48.34 81 eP P 16 01 32.3 +0.3
comp=Z,12nm,1.0s,mb4.9
AAK Ala-Archa 48.34 81 P P 16 01 33.7 +1.7
comp=Z,3.7nm,0.5s,mb4.6,baz=241,slow=6.1,SNR=7.9
AAK Ala-Archa 48.34 81 P P 16 01 33.7 +1.7
AAK pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
AAK Ala-Archa 48.34 81 P P 16 01 33.7 +1.7
comp=Z,4.0nm,0.5s,mb4.7
K18A Toltan Ranch, 48.40 280 ⇓P P 16 01 32.5 0.0
baz=48,SNR=7.6
MFID Camas Ranch 48.42 285 ⇑P P 16 01 31.8 -0.8
baz=48,SNR=9.4
K16A Soda Springs 48.42 281 ⇓P P 16 01 32.9 +0.2
baz=48
L22A Ellis Ranch, M 48.50 276 ⇓P P 16 01 33.0 -0.3
baz=48,SNR=8.7
K15A Arbon 48.69 282 ⇑P P 16 01 35.0 +0.2
baz=48,SNR=7.2
L21A Rawlins 48.70 277 ⇑P P 16 01 34.3 -0.5
baz=48,SNR=13
AML Almayashu 48.72 82 eP P 16 01 35.8 +0.9
comp=Z,4.7nm,0.8s,mb4.6
AML Almayashu 48.72 82 eP P 16 01 35.8 +0.8
comp=Z,4.7nm,0.8s,mb4.6
UCH Uchtor 48.74 81 eP P 16 01 36.7 +1.6
comp=Z,16nm,1.2s,mb4.9
UCH Uchtor 48.74 81 eP P 16 01 36.7 +1.6
comp=Z,16nm,1.2s,mb4.9
L20A Wamsutter 48.79 278 ⇓P P 16 01 34.8 -0.7
baz=49
J08A Circle Bar Ran 48.82 288 ⇓P P 16 01 35.5 -0.2
baz=49,SNR=6.6
L19A Farson 48.83 279 ⇑P P 16 01 35.1 -0.7
baz=49,SNR=5.7
M24A Cheyenne 48.83 274 ⇓P P 16 01 35.8 0.0
baz=49,SNR=7.2
WMQ Urumqi 48.92 68 eP P 16 01 37.5 +1.0
WMQ pP pP 16 01 42.0 +4.6
WMQ sP sP 16 01 44.5 +6.8
WMQ PcP PcP 16 03 02.1 +1.5
WMQ PP PP 16 03 31.0 +1.5
WMQ eS S 16 08 39.8 -0.8
WMQ ScS ScS 16 11 26.8 -2.2
WMQ SS SS 16 12 05.8 -4.7
WMQ pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
WMQ pmax pmax
comp=Z,130nm,6.6s
WMQ LR LR
comp=N,190nm,18.7s,MS4.3
WMQ LR LR
comp=E,180nm,18.0s,MS4.3
WMQ LR LR
comp=Z,180nm,18.3s,MS4.1
RWWY Rawlins 48.95 277 eP P 16 01 36.7 0.0
RWWY Rawlins 48.95 277 eP P 16 01 36.7 0.0
OGNE Ogallala 48.96 271 ⇓P P 16 01 36.4 -0.5
baz=49,SNR=8.7
OGNE Ogallala 48.96 271 eP P 16 01 36.8 0.0
OGNE Ogallala 48.96 271 eP P 16 01 36.8 0.0
L17A Cokeville 49.04 280 ⇑P P 16 01 37.1 -0.4
baz=49
M21A Separation Pea 49.05 277 ⇓P P 16 01 37.0 -0.5
baz=49,SNR=13
PHWY Pilot Hill 49.08 275 eP P 16 01 37.7 -0.1
PHWY Pilot Hill 49.08 275 eP P 16 01 37.7 -0.1
L18A Fontenelle, Gr 49.10 279 ⇓P P 16 01 37.2 -0.7
baz=49
M22A Cedar Creek Ra 49.14 276 ⇑P P 16 01 37.6 -0.6
baz=49,SNR=5.3
L16A Fish Haven 49.20 281 ⇓P P 16 01 38.7 0.0
baz=49
M20A Sweetwater, Wa 49.27 278 ⇓P P 16 01 39.0 -0.3
baz=49,SNR=9.7
L15A Malad City 49.34 282 ⇑P P 16 01 39.6 -0.2
baz=49,SNR=9.7
M19A Rock Springs 49.39 279 ⇑P P 16 01 39.7 -0.5
baz=49
L14A Malta 49.43 283 ⇑P P 16 01 40.7 +0.3
baz=49,SNR=6.5
N24A Carr 49.47 274 ⇑P P 16 01 40.6 -0.2
baz=49
N23A Red Feather La 49.55 275 ⇑P P 16 01 41.5 +0.2
baz=49,SNR=14
M18A Lyman 49.59 279 ⇑P P 16 01 40.8 -0.9
baz=49
HWUT Hardware Ranch 49.62 281 eP P 16 01 41.7 -0.2
HWUT Hardware Ranch 49.62 281 eP P 16 01 41.7 -0.2
M17A Scullys Gap (B 49.63 280 ⇑P P 16 01 41.5 -0.5
baz=49,SNR=5.6
N22A Wattenberg Ran 49.71 276 ⇓P P 16 01 42.3 -0.2
baz=50,SNR=5.7
K05A Sumner Lake 49.76 290 ⇑P P 16 01 43.1 +0.2
baz=50,SNR=12
N21A Black Mountain 49.90 277 ⇑P P 16 01 43.2 -0.8
baz=50
USIN University of 49.92 256 P P 16 01 43.4 -0.8
USIN University of 49.92 256 P P 16 01 43.4 -0.8
N20A Spence Gulch, 49.93 277 ⇓P P 16 01 44.1 -0.1
baz=50,SNR=5.6
M14A Sheep Mountain 49.96 283 ⇑P P 16 01 44.6 +0.1
baz=50,SNR=8.3
N18A Larsen Ranch, 49.98 279 ⇓P P 16 01 44.5 -0.2
baz=50,SNR=8.2
N19A John Jarvie Ra 50.00 278 ⇓P P 16 01 44.5 -0.3
baz=50
O25A Wiggins 50.07 273 ⇑P P 16 01 44.8 -0.5
baz=50
M13A Montello 50.21 283 ⇓P P 16 01 46.7 +0.3
baz=50,SNR=9.8
M13A Montello 50.21 283 eP P 16 01 45.9 -0.5
comp=Z,18nm,1.1s,mb5.0
M13A Montello 50.21 283 eP P 16 01 45.9 -0.5
comp=Z,18nm,1.1s,mb5.0
O23A Lake Granby, G 50.22 275 ⇓P P 16 01 46.7 +0.3
baz=50,SNR=6.4
O22A Kremmling 50.35 276 ⇑P P 16 01 47.4 -0.1
baz=50,SNR=14
M10A I.L. Ranch, Tu 50.37 286 ⇓P P 16 01 48.3 +0.7
baz=50,SNR=9.6
O21A Pagoda 50.43 277 ⇓P P 16 01 47.6 -0.4
baz=50
MOD Modoc 50.49 289 eP P 16 01 49.7 +1.2
MOD Modoc 50.49 289 eP P 16 01 49.7 +1.2
O19A Miners Draw (B 50.57 278 ⇑P P 16 01 48.8 -0.3
baz=50
ISCO Idaho Springs 50.58 275 ⇑P P 16 01 49.4 +0.2
baz=50,SNR=5.1
ISCO Idaho Springs 50.58 275 eP P 16 01 48.8 -0.4
comp=Z,3.9nm,0.9s,mb4.3
ISCO LR LR
comp=Z,400nm,20.0s,MS4.4
ISCO Idaho Springs 50.58 275 eP P 16 01 48.8 -0.4
ISCO pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
ISCO MLR MLR
comp=Z,400nm,20.0s,MS4.4
ISCO Idaho Springs 50.58 275 eP P 16 01 48.8 -0.4
comp=Z,400nm,20.0s
N14A Grayback Hills 50.58 282 ⇑P P 16 01 49.2 0.0
baz=50,SNR=5.2
O20A White River Ci 50.61 277 ⇓P P 16 01 49.8 +0.3
baz=50,SNR=8.7
P25A Willow Gulch B 50.66 273 ⇓P P 16 01 49.6 -0.2
baz=50,SNR=7.8
ABKT Ailbek 50.70 98 P P 16 01 51.3 +1.2
comp=Z,75nm,1.3s,mb5.5,SNR=7.6
N13A Wendover, West 50.72 283 eP P 16 01 45.2 -4.9
CBKS Cedar Bluff 50.74 269 ⇑P P 16 01 49.0 -1.3
baz=51
CBKS Cedar Bluff 50.74 269 eP P 16 01 50.3 -0.1
CBKS Cedar Bluff 50.74 269 eP P 16 01 50.3 -0.1
DAU Daniels Canyon 50.75 280 eP P 16 01 51.2 +0.8
DAU Daniels Canyon 50.75 280 eP P 16 01 51.2 +0.7
P24A Kohler Place, 50.76 274 ⇑P P 16 01 50.4 -0.1
baz=51
O17A Robinson Place 50.90 280 ⇑P P 16 01 52.1 +0.6
baz=51,SNR=10
P22A Eagle 50.94 276 ⇑P P 16 01 52.2 +0.3
baz=51,SNR=7.0
O16A Springville 50.99 280 ⇑P P 16 01 52.4 +0.2

baz=51
P23A **Jefferson** 51.03 275 ⇓P P 16 01 52.7 +0.1
baz=51
DUG **Dugway** 51.18 282 ⇓P P 16 01 53.7 0.0
baz=51,SNR=6.6
DUG **Dugway** 51.18 282 *e*P P 16 01 53.8 +0.1
DUG **Dugway** 51.18 282 *e*P P 16 01 53.8 +0.1
P19A **Cripple Cowboy** 51.21 278 ⇓P P 16 01 54.1 +0.2
baz=51,SNR=22
P20A **De Beque** 51.26 277 ⇓P P 16 01 54.4 +0.2
baz=51,SNR=8.3
Q25A **Bedland, Calha** 51.26 273 ⇓P P 16 01 53.7 -0.6
baz=51
NLU **North Lily Min** 51.31 281 *e*P P 16 01 55.9 +1.2
NLU **North Lily Min** 51.31 281 *e*P P 16 01 55.9 +1.2
Q24A **Divide** 51.34 274 ⇓P P 16 01 54.6 -0.3
baz=51,SNR=9.7
O12A **Currie** 51.37 284 ⇓P P 16 01 55.3 +0.3
baz=51
SMCO **Snowmass** 51.38 276 *e*P P 16 01 55.9 +0.7
SMCO **Snowmass** 51.38 276 *e*P P 16 01 55.9 +0.7
P18A **Preston Nutter** 51.39 279 ⇑P P 16 01 55.1 -0.1
baz=51,SNR=8.9
O13A **Hicks Ranch, I** 51.40 283 ⇓P P 16 01 55.8 +0.5
baz=51
Q23A **Hartsel** 51.49 275 ⇑P P 16 01 56.0 0.0
baz=51
KSH **Kashi** 51.60 80 *e*P P 16 02 00.3 +3.5
KSH *e*pP pP 16 02 05.6 +7.9
KSH *e*sP sP 16 02 07.3 +9.3
KSH *e*PcP PcP 16 03 13.9 +3.3
KSH *e*PP PP 16 03 58.4 +4.6
KSH *e*ScP ScP 16 07 08.9 +1.4
KSH *e*PcS PcS 16 07 10.4 +2.0
KSH *e*S **S** **16 09 19.9 +1.9**
KSH *e*sS sS 16 09 27.0 +7.6
KSH *e*ScS ScS 16 11 46.8 -0.6
KSH *e*SS SS 16 12 53.3 -0.1
KSH pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
KSH pmax pmax
comp=Z,79nm,5.2s
KSH LR LR
comp=Z,560nm,17.2s,MS4.7
P17A **Butcher Ranch,** 51.60 280 ⇓P P 16 01 56.3 -0.6
baz=51
TKL **Tuckaleechee C** 51.67 252 P P 16 01 57.3 -0.1
comp=Z,6.2nm,0.9s,mb4.5,baz=11,slow=6.9,SNR=5.4
TKL **Tuckaleechee C** 51.67 252 P P 16 01 57.3 -0.1
Q22A **Crested Butte,** 51.68 276 ⇑P P 16 01 58.1 +0.6
baz=52,SNR=9.3
P15A **Leamington** 51.72 281 ⇓P P 16 01 57.5 -0.2
baz=52
Q20A **Ridgley Place,** 51.78 277 ⇓P P 16 01 57.9 -0.3
baz=52,SNR=7.4
Q21A **Lamborn Mesa,** 51.80 276 ⇓P P 16 01 58.9 +0.5
baz=52,SNR=5.7
P14A **Drum Mountains** 51.81 282 ⇓P P 16 01 58.9 +0.5
baz=52,SNR=13
TMUT **Trail Mountain** 51.84 280 *e*P P 16 01 59.2 +0.6
comp=Z,14nm,0.8s,mb4.9
TMUT **Trail Mountain** 51.84 280 *e*P P 16 01 59.2 +0.5
comp=Z,14nm,0.8s,mb4.9
Q18A **Rafter H Ranch** 51.89 279 ⇑P P 16 01 58.5 -0.5
baz=52,SNR=10
SRU **San Rafael** 51.93 279 ⇑P P 16 01 58.8 -0.5
baz=52
SRU **San Rafael** 51.93 279 *e*P P 16 01 59.3 0.0
SRU **San Rafael** 51.93 279 *e*P P 16 01 59.3 0.0
KHMM **Horse Mountain** 51.95 292 *e*P P 16 02 01.4 +2.0
KHMM **Horse Mountain** 51.95 292 *e*P P 16 02 01.4 +2.0
R24A **Sanders Place,** 52.05 274 ⇓P P 16 02 00.1 -0.1
baz=52
P13A **Bates Ranch, G** 52.07 283 ⇓P P 16 02 00.5 +0.2
baz=52,SNR=18
WDC **Whiskeytown Da** 52.09 291 *e*P P 16 02 00.6 +0.2
WDC **Whiskeytown Da** 52.09 291 *e*P P 16 02 00.6 +0.1
P11A **Circle Ranch,** 52.20 284 ⇑P P 16 02 01.7 +0.4
baz=52
Q16A **Castle Valley** 52.21 280 ⇓P P 16 02 02.3 +0.9
baz=52,SNR=11
R21A **Cimarron** 52.25 276 ⇑P P 16 02 02.6 +0.8
baz=52,SNR=6.7
R22A **Saguache, Gunn** 52.28 275 ⇑P P 16 02 02.6 +0.6
baz=52,SNR=10
Q15A **Fillmore** 52.29 281 ⇓P P 16 02 02.2 +0.2
baz=52
MDJ **Mudanjiang** 52.39 29 P P 16 02 01.3 -1.4
MDJ pP pP 16 02 04.4 +0.9
MDJ sP sP 16 02 05.8 +2.0
MDJ PcP PcP 16 03 10.9 -2.5
MDJ PP PP 16 03 56.8 -4.1
MDJ S **S** **16 09 23.3 -5.4**
MDJ SS SS 16 13 01.8 -3.8
MDJ pmax pmax
comp=Z,11nm,1.0s,mb4.7
MDJ pmax pmax
comp=Z,48nm,4.8s
MDJ LR LR
comp=N,82nm,10.4s
MDJ LR LR
comp=E,110nm,22.3s
MDJ LR LR
comp=Z,110nm,10.4s,MS4.2
MDJ **Mudanjiang** 52.39 29 *e*P P 16 02 01.1 -1.6
comp=Z,8.5nm,0.8s,mb4.7
MDJ **Mudanjiang** 52.39 29 *e*P P 16 02 01.0 -1.7
comp=Z,8.4nm,0.8s,mb4.7
PV04 **Paradox Valley** 52.42 278 *e*P P 16 02 03.5 +0.5
PV04 **Paradox Valley** 52.42 278 *e*P P 16 02 03.5 +0.6
Q14A **Sevier Lake (B** 52.43 282 ⇓P P 16 02 03.6 +0.6
baz=52,SNR=8.2
S25A **Robets Cordova** 52.52 273 ⇓P P 16 02 03.6 -0.1
baz=52,SNR=33
PAHR **Pah Rah Range** 52.54 288 *e*P P 16 02 05.1 +1.3
PAHR **Pah Rah Range** 52.54 288 *e*P P 16 02 05.1 +1.3
R20A **Redvale** 52.55 277 ⇑P P 16 02 04.2 +0.3
baz=52,SNR=7.8
R18A **Canyonlands Na** 52.56 279 ⇑P P 16 02 03.8 -0.2
baz=52,SNR=12
R19A **Curley Farm, L** 52.56 278 ⇓P P 16 02 04.1 +0.1
baz=52
SDCO **Great Sand Dun** 52.58 274 *e*P P 16 02 03.5 -0.6
comp=Z,8.3nm,0.9s,mb4.7
SDCO **Great Sand Dun** 52.58 274 *e*P P 16 02 03.5 -0.7
comp=Z,8.3nm,0.9s,mb4.7
Q12A **Willow Creek R** 52.59 283 ⇑P P 16 02 04.6 +0.5
baz=52,SNR=6.1
MMAI **Mount Meron Ar** 52.62 122 P P 16 02 05.1 +0.6
comp=Z,7.7nm,0.7s,mb4.8,baz=6.6,slow=8.0,SNR=9.3
MMAI LR LR 16 25 57.6
comp=Z,80nm,18.9s,MS3.8,baz=125,slow=38
PV01 **Paradox Valley** 52.62 277 *e*P P 16 02 04.6 +0.1
PV01 **Paradox Valley** 52.62 277 *e*P P 16 02 04.6 +0.1
R17A **Hanksville Air** 52.64 279 ⇓P P 16 02 04.2 -0.4
baz=52,SNR=6.5
S24A **Houchin Ranch,** 52.65 274 ⇓P P 16 02 04.6 -0.1
baz=52,SNR=6.7
HBAR **Harrisburg** 52.70 259 *e*P P 16 02 03.2 -1.8
HBAR **Harrisburg** 52.70 259 *e*P P 16 02 03.2 -1.8
JSC **Jenkinsville** 52.70 249 *e*P P 16 02 04.9 -0.2
JSC **Jenkinsville** 52.70 249 *e*P P 16 02 04.9 -0.2
MSU **Marysvale** 52.75 281 *e*P P 16 02 06.2 +0.9
MSU **Marysvale** 52.75 281 *e*P P 16 02 06.2 +0.8
S22A **4UR Ranch, Cre** 52.77 275 ⇑P P 16 02 06.0 +0.5
baz=53,SNR=18
Q11A **Duckwater** 52.89 284 ⇑P P 16 02 06.8 +0.4
baz=53,SNR=19
CN2 **Changchun** 52.90 33 *e*P P 16 02 06.4 -0.1
CN2 *e*sP sP 16 02 13.4 +5.8
CN2 *e*S **S** **16 09 31.6 -4.1**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CN2 LR LR
comp=N,200nm,20.0s,MS4.3
CN2 LR LR
comp=E,200nm,20.0s,MS4.3
CN2 LR LR
comp=Z,200nm,16.0s,MS4.3
S21A **Coal Bank Pass** 52.98 276 ⇑P P 16 02 07.5 +0.4
baz=53,SNR=9.9
WCN **Washoe City** 52.98 288 ⇓P P 16 02 08.0 +0.9
baz=53,SNR=5.2
Q10A **Clear Creek Ra** 53.01 285 ⇑P P 16 02 08.0 +0.7
baz=53,SNR=17
T25A **Trinidad** 53.03 273 ⇑P P 16 02 06.9 -0.6
baz=53
S19A **Harvey Farm, M** 53.08 278 ⇓P P 16 02 08.3 +0.4
baz=53,SNR=20
OHCM **Honcut** 53.17 290 *e*P P 16 02 09.7 +1.2
OHCM **Honcut** 53.17 290 *e*P P 16 02 09.7 +1.2
R12A **Pony Springs,** 53.26 283 ⇑P P 16 02 08.9 -0.2
baz=53
S18A **Hurst Farm, Bl** 53.26 278 ⇑P P 16 02 09.3 +0.1
baz=53,SNR=20
R13A **O'Grain Ranch,** 53.31 282 ⇑P P 16 02 10.3 +0.7
baz=53,SNR=20
R11A **Troy Canyon, C** 53.37 284 ⇑P P 16 02 10.0 0.0
baz=53,SNR=28
S17A **Black Ridge (B** 53.42 279 ⇓P P 16 02 10.5 +0.1
baz=53,SNR=9.2
S16A **Weppner Ranch,** 53.44 280 ⇓P P 16 02 11.0 +0.5
baz=53,SNR=11
T22A **Edith** 53.50 275 ⇑P P 16 02 11.1 +0.2
baz=53,SNR=7.6
R10A **Warm Springs** 53.52 285 ⇓P P 16 02 11.8 +0.7
baz=53,SNR=26
MVCO **Mesa Verde** 53.52 277 ⇑P P 16 02 12.0 +0.9
baz=53,SNR=7.2
MVCO **Mesa Verde** 53.52 277 *e*P P 16 02 11.7 +0.6
comp=Z,38nm,1.4s,mb5.1
MVCO **Mesa Verde** 53.52 277 *e*P P 16 02 11.7 +0.6
comp=Z,38nm,1.4s,mb5.1
T21A **Navajo Lake** 53.61 276 ⇓P P 16 02 12.1 +0.4
baz=53,SNR=6.1
S14A **Cedar City** 53.62 282 ⇓P P 16 02 11.8 0.0
baz=53
NVAR **Mina Array Bea** 53.65 287 P P 16 02 12.8 +0.8
comp=Z,9.4nm,0.8s,mb4.8,baz=16,slow=4.7,SNR=70
NVAR **Mina Array Bea** 53.65 287 P P 16 02 12.8 +0.8
U26A **Atchley Ranch,** 53.67 272 ⇓P P 16 02 12.0 -0.2
baz=54,SNR=12
WAKR **Walker** 53.73 288 *e*P P 16 02 13.0 +0.4
WAKR **Walker** 53.73 288 *e*P P 16 02 13.0 +0.4
U25A **Circle Dot Ran** 53.76 273 ⇓P P 16 02 12.7 -0.2
baz=54,SNR=9.2
T18A **Mexican Hat** 53.78 278 ⇓P P 16 02 12.9 -0.1
baz=54,SNR=16
CCUT **Cedar City** 53.85 282 *e*P P 16 02 14.2 +0.7
CCUT **Cedar City** 53.85 282 *e*P P 16 02 14.2 +0.7
S13A **Holt Ranch, En** 53.89 282 ⇑P P 16 02 14.2 +0.4
baz=54,SNR=11
S10A **Tonopah Range,** 53.92 285 ⇑P P 16 02 14.2 +0.1
baz=54,SNR=28
T19A **Beclabito** 53.97 277 ⇓P P 16 02 14.5 +0.1
baz=54,SNR=12
S12A **Delamar Landin** 54.00 283 ⇓P P 16 02 15.1 +0.6
baz=54,SNR=12
U23A **El Rito** 54.07 274 ⇓P P 16 02 15.3 +0.2
baz=54
S11A **Rachel** 54.08 284 ⇑P P 16 02 15.5 +0.3
baz=54
MIAR **Mount Ida** 54.09 262 *e*P P 16 02 13.7 -1.6
comp=Z,29nm,1.1s,mb5.1
MIAR **Mount Ida** 54.09 262 *e*P P 16 02 13.7 -1.6
MIAR pmax pmax
comp=Z,29nm,1.1s,mb5.1
MIAR **Mount Ida** 54.09 262 *e*P P 16 02 13.6 -1.7
comp=Z,29nm,1.1s,mb5.1
T16A **Glen Canyon Da** 54.16 280 ⇓P P 16 02 15.6 -0.1
baz=54
U21A **Nageezi** 54.18 276 ⇓P P 16 02 15.9 0.0
baz=54,SNR=6.9
T15A **Red Dirt Ranch** 54.24 281 ⇓P P 16 02 16.6 +0.2
baz=54,SNR=8.7
V26A **Tequesquite Ra** 54.26 272 ⇑P P 16 02 15.9 -0.7
baz=54
T14A **Hurricane** 54.30 281 ⇓P P 16 02 17.1 +0.3
baz=54
V25A **Rancho No Teng** 54.34 273 ⇑P P 16 02 16.9 -0.2
baz=54,SNR=11
U20A **Newcomb** 54.35 277 ⇑P P 16 02 17.3 +0.2
baz=54
T13A **Saint George** 54.45 282 ⇓P P 16 02 18.0 +0.1
baz=54
U18A **Rough Rock, Ch** 54.49 278 ⇓P P 16 02 17.9 -0.2
baz=54
U19A **Dine' College,** 54.52 277 ⇓P P 16 02 17.8 -0.6
baz=54
V24A **Rampart Ranch,** 54.54 273 ⇓P P 16 02 18.5 -0.1
baz=54,SNR=15
HHC **Hu-ho-hao-te** 54.61 46 *e*P P 16 02 20.4 +1.4
HHC pP pP 16 02 24.9 +5.0
HHC sP sP 16 02 27.9 +7.7
HHC PP PP 16 04 23.5 +2.6
HHC S **S** **16 09 56.3 -2.6**
HHC sS sS 16 10 03.8 +3.5
HHC pmax pmax
comp=Z,17nm,0.7s,mb5.2
HHC pmax pmax
comp=Z,58nm,4.2s
HHC LR LR
comp=N,220nm,13.7s,MS4.5
HHC LR LR
comp=E,120nm,13.1s,MS4.5
HHC LR LR
comp=Z,230nm,15.5s,MS4.4
WMOK **Wichita Mounta** 54.61 267 *e*P P 16 02 18.3 -0.8
comp=Z,8.3nm,1.0s,mb4.7
WMOK **Wichita Mounta** 54.61 267 *e*P P 16 02 18.3 -0.8
WMOK pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
WMOK **Wichita Mounta** 54.61 267 *e*P P 16 02 18.3 -0.8
comp=Z,8.0nm,1.0s,mb4.7
MTUM **Tungsten Hills** 54.74 287 *e*P P 16 02 21.7 +1.7
MTUM **Tungsten Hills** 54.74 287 *e*P P 16 02 21.7 +1.7
GTA **Gaotai** 54.76 57 *e*P P 16 02 20.3 +0.2
GTA pP pP 16 02 24.4 +3.5
GTA sP sP 16 02 27.8 +6.5
GTA S **S** **16 10 01.1 +0.2**
GTA sS sS 16 10 07.9 +5.6
GTA SS SS 16 13 44.0 +0.9
GTA pmax pmax
comp=Z,8.0nm,1.4s,mb4.6
GTA pmax pmax
comp=Z,64nm,6.5s
GTA LR LR
comp=Z,430nm,17.5s,MS4.6
V21A **Milan** 54.79 276 ⇓P P 16 02 20.3 0.0
baz=55,SNR=6.9
U15A **North Rim** 54.81 280 ⇓P P 16 02 20.6 +0.1
baz=55,SNR=18
AMTX **Amarillo** 54.87 270 ⇓P P 16 02 20.0 -1.0
baz=55
W27A **Bowie Ranch, En** 54.88 271 ⇓P P 16 02 20.1 -0.9
baz=55,SNR=9.8
V20A **Brimhall** 54.91 277 ⇑P P 16 02 20.8 -0.5
baz=55
GRAC **Grapevine Rang** 54.93 285 ⇓P P 16 02 21.1 -0.3
baz=55
U16A **Tuba City** 54.93 279 ⇑P P 16 02 21.7 +0.3
baz=55,SNR=20
U14A **Mt Trumbull** 54.94 281 ⇑P P 16 02 21.7 +0.3
baz=55,SNR=5.4
TIN **Tinemaha** 54.99 286 ⇓P P 16 02 22.4 +0.6
baz=55
U13A **Pakoon Wash** 55.05 282 ⇓P P 16 02 22.7 +0.5
baz=55,SNR=10
W24A **Lazy 6 Ranch,** 55.06 273 ⇓P P 16 02 22.0 -0.4
baz=55,SNR=16
U12A **Valley of Fire** 55.11 283 ⇓P P 16 02 22.8 +0.1
baz=55
V18A **Ganado** 55.19 278 ⇓P P 16 02 22.8 -0.5
baz=55
W23A **Werner Place,** 55.22 274 ⇓P P 16 02 23.4 0.0
baz=55
V15A **Kaibab Nationa** 55.39 280 ⇓P P 16 02 25.4 +0.7
baz=55,SNR=16
V17A **Tonalea, Kykot** 55.40 279 ⇓P P 16 02 25.0 +0.2
baz=55,SNR=17
W22A **Albuquerque** 55.40 275 ⇑P P 16 02 25.4 +0.6
baz=55
ANMO **Albuquerque** 55.47 274 *e*P P 16 02 24.8 -0.4
comp=Z,8.0nm,0.9s,mb4.8
ANMO LR LR
comp=Z,366nm,20.0s,MS4.5
ANMO **Albuquerque** 55.47 274 *e*P P 16 02 24.8 -0.5
ANMO pmax pmax
comp=Z,8.0nm,0.9s
ANMO MLR MLR
comp=Z,366nm,20.0s
ANMO **Albuquerque** 55.47 274 *e*P P 16 02 24.8 -0.5
comp=Z,366nm,20.0s
W21A **San Fidel** 55.47 276 ⇓P P 16 02 25.3 +0.1
baz=55
X26A **CR and CF Fran** 55.49 272 ⇓P P 16 02 24.7 -0.8
baz=55,SNR=5.3
KBL **Kabul** 55.54 88 *e*P P 16 02 26.0 +0.2
comp=Z,10nm,1.0s,mb4.8
KBL **Kabul** 55.54 88 *e*P P 16 02 26.0 +0.2
KBL pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
KBL **Kabul** 55.54 88 *e*P P 16 02 26.0 +0.2
comp=Z,10.0nm,1.0s,mb4.8
W20A **Ramah** 55.57 276 ⇑P P 16 02 25.4 -0.6
baz=55,SNR=8.8
CWC **Cottonwood Cre** 55.58 286 ⇓P P 16 02 27.1 +1.0
baz=55,SNR=6.1
WUAZ **Wupatki** 55.58 279 ⇑P P 16 02 26.6 +0.5
baz=55,SNR=10
WUAZ **Wupatki** 55.58 279 *e*P P 16 02 26.4 +0.3
comp=Z,13nm,0.9s,mb5.0
WUAZ **Wupatki** 55.58 279 *e*P P 16 02 26.4 +0.3
comp=Z,13nm,0.9s,mb5.0
V13A **Grand Canyon W** 55.61 282 ⇑P P 16 02 26.9 +0.6
baz=55,SNR=18
V14A **Boquillas Ranc** 55.70 281 ⇓P P 16 02 28.0 +1.1
baz=56,SNR=34
X24A **Lazy VL Ranch,** 55.70 273 ⇓P P 16 02 26.6 -0.4
baz=56
W19A **Sanders** 55.71 277 ⇑P P 16 02 26.7 -0.3
baz=56,SNR=15
X23A **Hourglass Bar** 55.79 274 ⇑P P 16 02 27.8 +0.2
baz=56
V12A **Nelson** 55.85 283 ⇓P P 16 02 28.4 +0.5
baz=56,SNR=6.8
BJI **Beijing** 55.86 42 P P 16 02 27.3 -0.7
BJI PP PP 16 04 32.5 +0.4
BJI S S **16 10 15.3 -0.3**
BJI pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
BJI LR LR
comp=N,240nm,18.5s,MS4.3
BJI LR LR
comp=E,67nm,18.5s,MS4.3
BJI LR LR
comp=Z,140nm,17.8s,MS4.1
MPMC **Manual Prospec** 55.87 285 ⇓P P 16 02 29.2 +1.1
baz=56,SNR=36
MSTX **Muleshoe** 55.92 271 ⇓P P 16 02 27.5 -1.0
baz=56,SNR=6.1
W17A **Winslow** 55.92 279 ⇓P P 16 02 28.5 -0.1
baz=56
W16A **Flagstaff** 56.02 279 ⇑P P 16 02 29.6 +0.4
baz=56
Y27A **Causey** 56.06 271 ⇓P P 16 02 29.1 -0.4
baz=56,SNR=8.8
LAZ **Ladron** 56.10 275 *e*P P 16 02 29.8 0.0
comp=Z,2.9nm,1.0s,mb4.3
LAZ **Ladron** 56.10 275 *e*P P 16 02 29.8 0.0
comp=Z,2.9nm,1.0s,mb4.3
Y26A **Elida** 56.11 272 ⇓P P 16 02 29.5 -0.4
baz=56
W14A **Seligman** 56.11 281 ⇑P P 16 02 30.8 +0.9
baz=56,SNR=19
X21A **Alamocita Cree** 56.14 276 ⇑P P 16 02 29.9 -0.2
baz=56,SNR=5.2
X20A **Quemado** 56.15 276 ⇑P P 16 02 30.0 -0.1
baz=56,SNR=14
Y25A **Mesa, Roswell** 56.23 272 ⇑P P 16 02 30.1 -0.7
baz=56,SNR=7.7
W12A **Cal Nev Ari** 56.27 283 ⇓P P 16 02 31.1 +0.1
baz=56
BNM **Barren Site** 56.27 274 *e*P P 16 02 30.3 -0.7
comp=Z,9.1nm,1.3s,mb4.7
BNM **Barren Site** 56.27 274 *e*P P 16 02 30.3 -0.8
comp=Z,9.1nm,1.3s,mb4.7
Y24A **Capitan** 56.33 273 ⇑P P 16 02 31.3 -0.2
baz=56,SNR=8.1
W13A **Hualapai Mount** 56.34 282 ⇑P P 16 02 32.0 +0.5
baz=56,SNR=5.2
X18A **Snowflake** 56.36 278 ⇑P P 16 02 31.9 +0.2
baz=56
X19A **St. Johns** 56.37 277 ⇓P P 16 02 31.1 -0.6
baz=56,SNR=16
ISA **Isabella** 56.40 286 ⇓P P 16 02 32.4 +0.5
baz=56,SNR=14
ISA **Isabella** 56.40 286 *e*P P 16 02 32.8 +0.9
ISA **Isabella** 56.40 286 *e*P P 16 02 32.8 +0.9
Y23A **Lovelace Mesa,** 56.41 274 ⇓P P 16 02 31.9 -0.1
baz=56,SNR=5.8
LRMC **Laurel Mountai** 56.47 285 ⇑P P 16 02 33.4 +1.0
baz=56,SNR=13
LDFC **Landfair** 56.52 283 *e*P P 16 02 33.5 +0.7
LDFC **Landfair** 56.52 283 *e*P P 16 02 33.5 +0.7
GSC **Goldstone** 56.53 285 ⇑P P 16 02 33.6 +0.8
baz=56,SNR=7.6
GSC **Goldstone** 56.53 285 *e*P P 16 02 33.8 +0.9
GSC **Goldstone** 56.53 285 *e*P P 16 02 33.8 +0.9
Y22A **Socorro** 56.53 275 ⇓P P 16 02 32.7 -0.2
baz=56,SNR=6.5
Y21A **Point of Rocks** 56.56 275 ⇑P P 16 02 33.4 +0.3
baz=56,SNR=11
X17A **Forest Lakes** 56.67 279 ⇓P P 16 02 33.7 -0.2
baz=56
X15A **Humboldt** 56.71 280 ⇑P P 16 02 34.7 +0.5
baz=56,SNR=7.0
Y20A **Horse Springs,** 56.75 276 ⇑P P 16 02 33.8 -0.6
baz=57
Z26A **Caprock** 56.77 272 ⇓P P 16 02 34.1 -0.5
baz=57,SNR=9.1
X14A **Yava** 56.82 281 ⇑P P 16 02 35.1 +0.2
baz=57
X13A **Yucca** 56.83 282 ⇑P P 16 02 35.3 +0.3
baz=57,SNR=12
Y19A **Nutrioso** 56.83 277 ⇑P P 16 02 34.7 -0.3
baz=57
GMRC **Granite Mounta** 56.89 283 ⇑P P 16 02 35.7 +0.3
baz=57,SNR=9.5
Z24A **Sheeppen Canyo** 56.91 273 ⇓P P 16 02 35.3 -0.3
baz=57,SNR=8.4
HEC **Hector,Ludlow** 56.93 284 ⇓P P 16 02 36.2 +0.5
baz=57,SNR=5.2
Z23A **Rita Site, Whi** 57.09 274 ⇓P P 16 02 36.7 -0.2
baz=57
EDW2 **Edwards Air Fo** 57.10 286 ⇑P P 16 02 37.5 +0.6
baz=57,SNR=6.9
Y18A **Canyon Day Jun** 57.11 278 ⇓P P 16 02 37.1 +0.1
baz=57,SNR=6.4
PDMCI **Parker Dam,Lak** 57.16 282 ⇑P P 16 02 37.4 +0.1
baz=57,SNR=7.6
Z22A **Elephant Butte** 57.20 275 ⇓P P 16 02 37.2 -0.4
baz=57,SNR=13
Y16A **Circle Bar Ran** 57.21 279 ⇑P P 16 02 37.9 +0.2
baz=57
Z21A **St. Cloud Mine** 57.25 275 ⇑P P 16 02 38.0 +0.1
baz=57
Y15A **Casa Rosa Ranc** 57.25 280 ⇓P P 16 02 38.3 +0.3
baz=57
MIB **Mutribah** 57.26 111 *e*P P 16 02 38.2 +0.1
MIB AMb AMB 16 02 39.5
comp=Z,69nm,0.9s,mb5.7
127A **Arkansas Junct** 57.27 271 ⇑P P 16 02 38.1 -0.1
baz=57
Y17A **Roosevelt** 57.30 278 ⇑P P 16 02 38.5 +0.1
baz=57
Y14A **Wickenburg** 57.36 281 ⇑P P 16 02 38.9 +0.2
baz=57
126A **Clayton Basin,** 57.40 272 ⇓P P 16 02 38.3 -0.7
baz=57
IRM **Iron Mountain** 57.43 283 ⇑P P 16 02 39.5 +0.3
baz=57,SNR=13
125A **Gardner Draw,** 57.47 272 ⇑P P 16 02 39.3 -0.2
baz=57,SNR=11
124A **Stringfield Ra** 57.54 273 ⇑P P 16 02 39.9 -0.2
baz=57,SNR=21
UMR **Umm Al-Rimmam** 57.56 110 *e*P P 16 02 40.3 +0.1
UMR AMb AMB 16 02 44.6
comp=Z,110nm,1.3s,mb5.7
Z20A **Nine Sixteen R** 57.57 276 ⇑P P 16 02 40.1 -0.1
baz=57,SNR=5.8
Y13A **Salome** 57.59 281 ⇑P P 16 02 40.8 +0.4
baz=57
BFSC **Mount Baldy Ra** 57.69 285 ⇓P P 16 02 41.8 +0.7
baz=58,SNR=5.7
BELC **Belle Mtn. Jos** 57.70 284 ⇓P P 16 02 42.0 +0.8
baz=58,SNR=13
123A **Bell Site, Whi** 57.72 274 ⇓P P 16 02 41.7 +0.4
baz=58
CLNB **Carlsbad** 57.75 271 *e*P P 16 02 41.5 0.0
comp=Z,4.4nm,0.7s,mb4.6

CLNB	**Carlsbad**	**57.75**	**271**	*e*P		**P**	**16 02 41.5**	**0.0**
	comp=Z,4.4nm,0.7s,mb4.6							
MWC	**Mount Wilson**	**57.76**	**286**	*e*P		**P**	**16 02 42.3**	**+0.7**
	comp=Z,75nm,1.6s,mb5.5							
MWC	**Mount Wilson**	**57.76**	**286**	*e*P		**P**	**16 02 42.3**	**+0.7**
MWC					pmax	pmax		
	comp=Z,75nm,1.6s,mb5.5							
MWC	**Mount Wilson**	**57.76**	**286**	*e*P		**P**	**16 02 42.3**	**+0.7**
	comp=Z,75nm,1.6s,mb5.5							
NAY	**Al-Naaiem**	**57.80**	**111**	*e*P		**P**	**16 02 41.8**	**-0.1**
NAY					AMb	AMB	16 02 45.1	
	comp=Z,19nm,1.5s,mb4.9							
GDL2	**Guadalupe Moun**	**57.88**	**272**	*e*P		**P**	**16 02 42.4**	**0.0**
GDL2	**Guadalupe Moun**	**57.88**	**272**	*e*P		**P**	**16 02 42.4**	**0.0**
Z14A	**Wintersburg**	**57.92**	**280**	⇑P		**P**	**16 02 42.9**	**+0.2**
	baz=58							
227A	**Bennet, Jal**	**57.92**	**271**	⇑P		**P**	**16 02 43.4**	**+0.7**
	baz=58							
BC3	**Big Chuckawall**	**57.97**	**283**	⇓P		**P**	**16 02 43.4**	**+0.3**
	baz=58							
226A	**Malaga, Loving**	**57.98**	**272**	⇑P		**P**	**16 02 42.6**	**-0.5**
	baz=58,SNR=13							
121A	**Cookes Peak, D**	**58.03**	**275**	⇑P		**P**	**16 02 43.4**	**-0.1**
	baz=58							
225A	**Deer Hill, Car**	**58.03**	**272**	⇓P		**P**	**16 02 42.8**	**-0.8**
	baz=58,SNR=8.5							
120A	**U Bar Ranch, L**	**58.13**	**276**	⇓P		**P**	**16 02 44.1**	**-0.1**
	baz=58,SNR=7.1							
PFO	**Pinyon Flat Ob**	**58.15**	**284**	⇓P		**P**	**16 02 44.2**	**-0.1**
	baz=58							
Z13A	**Yuma Proving G**	**58.17**	**281**	⇑P		**P**	**16 02 44.6**	**+0.2**
	baz=58,SNR=6.1							
117A	**Oracle**	**58.39**	**278**	⇓P		**P**	**16 02 46.2**	**+0.1**
	baz=58,SNR=6.6							
115A	**Sonoran Desert**	**58.47**	**280**	⇑P		**P**	**16 02 47.1**	**+0.5**
	baz=58							
328A	**Wristen Ranch,**	**58.47**	**270**	⇓P		**P**	**16 02 45.8**	**-0.8**
	baz=58,SNR=17							
GLA	**Glamis**	**58.48**	**282**	⇓P		**P**	**16 02 46.8**	**+0.2**
	baz=58							
GLA	**Glamis**	**58.48**	**282**	*e*P		**P**	**16 02 45.6**	**-1.0**
	comp=Z,6.6nm,0.8s,mb4.7							
GLA	**Glamis**	**58.48**	**282**	*e*P		**P**	**16 02 45.7**	**-0.9**
GLA					pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7							
GLA	**Glamis**	**58.48**	**282**	*e*P		**P**	**16 02 45.7**	**-0.9**
	comp=Z,7.0nm,0.8s,mb4.7							
LZH	**Lanzhou**	**58.50**	**54**	*e*P		**P**	**16 02 46.5**	**-0.3**
LZH					pP	pP	16 02 49.8	+2.2
LZH					sP	sP	16 02 51.3	+3.4
LZH					*e*PP	PP	16 04 57.6	+1.9
LZH					*e*S	**S**	**16 10 47.0**	**-3.5**
LZH					sS	sS	16 10 54.1	+2.2
LZH					*e*SS	SS	16 14 44.0	+1.9
LZH					pmax	pmax		
	comp=Z,27nm,1.4s,mb5.1							
LZH					pmax	pmax		
	comp=Z,110nm,7.2s							
LZH					LR	LR		
	comp=N,640nm,17.0s							
LZH					LR	LR		
	comp=Z,740nm,19.2s,MS4.8							
114A	**Black Gap (USA**	**58.51**	**280**	⇑P		**P**	**16 02 46.7**	**-0.1**
	baz=58							
MNTX	**Cornudas Mount**	**58.52**	**273**	⇓P		**P**	**16 02 45.9**	**-0.9**
	baz=58,SNR=9.7							
MNTX	**Cornudas Mount**	**58.52**	**273**	*e*P		**P**	**16 02 45.8**	**-1.1**
	comp=Z,4.7nm,0.8s,mb4.6							
MNTX	**Cornudas Mount**	**58.52**	**273**	*e*P		**P**	**16 02 45.8**	**-1.1**
	comp=Z,4.7nm,0.8s,mb4.6							
TUC	**Tucson**	**58.66**	**278**	*e*P		**P**	**16 02 48.0**	**+0.1**
	comp=Z,9.0nm,1.0s,mb4.8							
TUC	**Tucson**	**58.66**	**278**	*e*P		**P**	**16 02 48.0**	**+0.1**
TUC					pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8							
TUC	**Tucson**	**58.66**	**278**	*e*P		**P**	**16 02 48.0**	**+0.1**
	comp=Z,9.0nm,1.0s,mb4.8							
326A	**Caldwell Ranch**	**58.70**	**271**	⇑P		**P**	**16 02 48.2**	**+0.1**
	baz=58							
220A	**Playas Peak, P**	**58.75**	**276**	⇓P		**P**	**16 02 48.4**	**-0.2**
	baz=59,SNR=14							
219A	**White Tail Can**	**58.75**	**277**	⇓P		**P**	**16 02 48.1**	**-0.5**
	baz=59							
325A	**Bean Ranch, Si**	**58.78**	**272**	⇓P		**P**	**16 02 48.2**	**-0.5**
	baz=59							
MONP	**Monument Peak**	**58.85**	**284**	⇑P		**P**	**16 02 50.0**	**+0.8**
	baz=59,SNR=5.8							
HKT	**Hockley**	**58.92**	**263**	*e*P		**P**	**16 02 48.9**	**-0.9**
	comp=Z,19nm,1.4s,mb4.9							
HKT	**Hockley**	**58.92**	**263**	*e*P		**P**	**16 02 48.9**	**-0.8**
HKT					pmax	pmax		
	comp=Z,19nm,1.4s,mb4.9							
HKT	**Hockley**	**58.92**	**263**	*e*P		**P**	**16 02 48.8**	**-0.9**
	comp=Z,19nm,1.4s,mb4.9							
JCT	**Junction City**	**58.94**	**267**	⇓P		**P**	**16 02 49.7**	**-0.2**
	baz=59,SNR=12							
JCT	**Junction City**	**58.94**	**267**	*e*P		**P**	**16 02 49.3**	**-0.6**
	comp=Z,60nm,1.3s,mb5.5							
JCT	**Junction City**	**58.94**	**267**	*e*P		**P**	**16 02 49.3**	**-0.6**
JCT					pmax	pmax		
	comp=Z,60nm,1.3s,mb5.5							
JCT	**Junction City**	**58.94**	**267**	*e*P		**P**	**16 02 49.3**	**-0.6**
	comp=Z,60nm,1.3s,mb5.5							
216A	**Three Points,**	**59.05**	**279**	⇓P		**P**	**16 02 50.8**	**+0.1**
	baz=59							
427A	**Hayter Ranch,**	**59.08**	**271**	⇑P		**P**	**16 02 50.6**	**-0.2**
	baz=59,SNR=13							
BAR	**Barrett**	**59.09**	**284**	*e*P		**P**	**16 02 50.4**	**-0.5**
	comp=Z,12nm,1.1s,mb4.8							
BAR	**Barrett**	**59.09**	**284**	*e*P		**P**	**16 02 50.4**	**-0.5**
	comp=Z,12nm,1.1s,mb4.8							
428A	**Kincaid Ranch,**	**59.10**	**270**	⇓P		**P**	**16 02 51.0**	**+0.1**
	baz=59,SNR=14							
217A	**Green Valley**	**59.19**	**278**	⇓P		**P**	**16 02 52.0**	**+0.4**
	baz=59,SNR=13							
320A	**Kipp Ranch, An**	**59.30**	**276**	⇓P		**P**	**16 02 52.2**	**-0.2**
	baz=59							
426A	**McDonald Obser**	**59.34**	**271**	⇓P		**P**	**16 02 52.0**	**-0.6**
	baz=59,SNR=26							
425A	**Indio Mountain**	**59.36**	**272**	⇓P		**P**	**16 02 52.5**	**-0.2**
	baz=59,SNR=59							
319A	**Douglas**	**59.37**	**277**	⇑P		**P**	**16 02 52.9**	**+0.1**
	baz=59,SNR=12							
KSRS	**Korea Array**	**59.40**	**32**	P		**P**	**16 02 51.8**	**-1.2**
	comp=Z,1.8nm,0.9s,mb4.1,baz=20,slow=6.6,SNR=4.2							
KSRS					LR	LR	16 27 16.5	
	comp=Z,71nm,21.7s,MS3.8,baz=200,slow=35							
KSRS	**Korea Array**	**59.40**	**32**	P		**P**	**16 02 51.8**	**-1.2**
KSRS					pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2							
KSRS					MLR	MLR		
	comp=Z,71nm,21.7s,MS3.8							
KSRS	**Korea Array**	**59.40**	**32**	P		**P**	**16 02 51.8**	**-1.2**
	comp=Z,71nm,21.7s							
528A	**Cox Ranch, San**	**59.67**	**270**	⇑P		**P**	**16 02 54.4**	**-0.5**
	baz=60,SNR=15							
527A	**Woodward Ranch**	**59.80**	**271**	⇑P		**P**	**16 02 55.6**	**-0.2**
	baz=60,SNR=23							
526A	**Mary Lane Ranc**	**59.95**	**271**	⇓P		**P**	**16 02 56.4**	**-0.4**
	baz=60,SNR=19							
TAM	**Tamanrasset**	**60.07**	**155**	*e*P		**P**	**16 02 57.7**	**0.0**
	comp=Z,4.6nm,1.0s,mb4.5							
TAM	**Tamanrasset**	**60.07**	**155**	*e*P		**P**	**16 02 57.7**	**0.0**
TAM					pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5							
TAM	**Tamanrasset**	**60.07**	**155**	*e*P		**P**	**16 02 57.7**	**0.0**
	comp=Z,5.0nm,1.0s,mb4.5							
628A	**Black Gap, Mar**	**60.35**	**270**	⇑P		**P**	**16 02 58.9**	**-0.7**
	baz=60,SNR=9.3							
627A	**Terlingua Ranc**	**60.45**	**270**	⇓P		**P**	**16 02 59.7**	**-0.6**
	baz=60,SNR=15							
626A	**Big Bend Ranch**	**60.45**	**271**	⇓P		**P**	**16 02 59.8**	**-0.5**
	baz=60,SNR=11							
TXAR	**Lajitas Array**	**60.60**	**271**	P		**P**	**16 03 01.1**	**-0.2**
TXAR					LR	LR	16 30 54.6	
TXAR	**Lajitas Array**	**60.60**	**271**	P		**P**	**16 03 01.1**	**-0.2**
	comp=Z,5.5nm,0.6s,mb4.9,baz=29,slow=4.1,SNR=53							
TXAR					LR	LR	16 30 54.6	
	comp=Z,148nm,19.0s,MS4.2,baz=185,slow=38							
TXAR	**Lajitas Array**	**60.60**	**271**	P		**P**	**16 03 01.1**	**-0.2**
MAT	**Matsushiro**	**60.95**	**22**	P		**P**	**16 03 02.2**	**-1.4**
LSA	**Lhasa**	**63.28**	**67**	P		**P**	**16 03 20.3**	**+1.0**
LSA	**Lhasa**	**63.28**	**67**	*e*P		**P**	**16 03 20.0**	**+0.7**
LSA					pmax	pmax		
	comp=Z,23nm,1.5s,mb5.1							

LSA	**Lhasa**	**63.28**	**67**	*e*P		**P**	**16 03 20.0**	**+0.7**
	comp=Z,23nm,1.5s,mb5.1							
CD2	**Chengdu**	**63.61**	**55**	P		**P**	**16 03 21.8**	**+0.3**
CD2				pP		pP	16 03 26.3	+4.0
CD2				sP		sP	16 03 28.8	+6.1
CD2				PP		PP	16 05 42.8	+2.0
CD2				ScP			16 07 59.0	
CD2				S		**S**	**16 11 52.3**	**-3.4**
CD2				sS		sS	16 12 00.1	+3.0
CD2				ScS		ScS	16 13 10.6	-4.7
CD2				SS		SS	16 16 00.8	-1.4
CD2				pmax		pmax		
	comp=Z,10.0nm,1.1s,mb4.8							
CD2				pmax		pmax		
	comp=Z,100nm,7.4s							
CD2				LR		LR		
	comp=Z,380nm,16.5s,MS4.7							
NJ2	**Nanjing**	**64.02**	**41**	*e*P		**P**	**16 03 27.5**	**+3.3**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.7s,mb5.0							
GKN	**Gorkha**	**64.10**	**74**	*e*P		**P**	**16 03 24.3**	**-0.4**
	comp=Z,54nm,1.0s,mb5.5							
KOLN	**Koldanda**	**64.19**	**75**	*e*P		**P**	**16 03 26.5**	**+1.2**
GUN	**Gumba**	**64.36**	**73**	*e*P		**P**	**16 03 26.4**	**0.0**
KKN	**Kakani**	**64.39**	**73**	*e*P		**P**	**16 03 26.6**	**-0.1**
	comp=Z,46nm,0.9s,mb5.5							
DMN	**Daman**	**64.55**	**74**	*e*P		**P**	**16 03 27.4**	**-0.3**
	comp=Z,25nm,0.9s,mb5.2							
PKI	**Pulchoki**	**64.63**	**73**	*e*P		**P**	**16 03 28.1**	**-0.1**
JIRN	**Jiri**	**64.64**	**72**	*e*P		**P**	**16 03 28.4**	**+0.1**
TAPN	**Taplejung**	**65.15**	**71**	*e*P		**P**	**16 03 31.2**	**-0.4**
RAMN	**Ramite**	**65.40**	**72**	*e*P		**P**	**16 03 33.8**	**+0.6**
ODAN	**Odare**	**65.59**	**71**	*e*P		**P**	**16 03 33.9**	**-0.6**
	comp=Z,49nm,1.2s,mb5.4							
SHL	**Shillong**	**67.45**	**67**	*e*PKP		**P**	**16 03 44.5**	**-1.8**
GYA	**Guiyang**	**68.33**	**53**	P		**P**	**16 03 52.8**	**+0.9**
GYA				PcP		PcP	16 04 18.4	+0.9
GYA				PP		PP	16 06 25.0	+2.8
GYA				ScP			16 08 22.8	
GYA				S		S	16 12 51.5	-1.8
GYA				SKS			16 13 47.6	
GYA				SS		SS	16 17 16.4	+0.7
GYA				pmax		pmax		
	comp=Z,20nm,1.0s,mb5.1							
GYA				pmax		pmax		
	comp=Z,130nm,5.2s							
KMI	**Kunming**	**69.21**	**57**	P		**P**	**16 04 01.0**	**+3.6**
KMI				S		S	16 13 02.3	-1.4
KMI				LR		LR		
	comp=N,310nm,19.8s							
KMI				LR		LR		
	comp=E,130nm,12.4s							
KMI				LR		LR		
	comp=Z,350nm,19.0s,MS4.6							
TORD	**Torodi Ar. Bea**	**69.45**	**160**	P		**P**	**16 03 58.4**	**-0.5**
	comp=Z,5.7nm,0.9s,mb4.5,baz=355,slow=6.3,SNR=22							
TORD				LR		LR	16 35 49.0	
	comp=Z,68nm,20.9s,MS3.9,baz=205,slow=37							
CHTO	**Chiang Mai**	**74.98**	**61**	*e*P		**P**	**16 04 30.5**	**-1.5**
	comp=Z,19nm,1.4s,mb4.8							
CHTO				LR		LR		
	comp=Z,275nm,20.0s,MS4.5							
CHTO	**Chiang Mai**	**74.98**	**61**	*e*P		**P**	**16 04 30.5**	**-1.5**
CHTO				pmax		pmax		
	comp=Z,19nm,1.4s,mb4.8							
CHTO				MLR		MLR		
	comp=Z,275nm,20.0s,MS4.5							
CHTO	**Chiang Mai**	**74.98**	**61**	*e*P		**P**	**16 04 30.5**	**-1.5**
	comp=Z,275nm,20.0s							
CMAR	**Chiang Mai Arr**	**75.34**	**61**	P		**P**	**16 04 33.1**	**-0.9**
	comp=Z,6.7nm,0.9s,mb4.6,baz=345,slow=6.9,SNR=42							
CMAR	**Chiang Mai Arr**	**75.34**	**61**	P		**P**	**16 04 33.2**	**-0.9**
TIC	**Toumodi**	**75.64**	**167**	*e*P		**P**	**16 04 35.4**	**-0.4**
	comp=Z,4.6nm,0.2s,mb5.0							
TIC	**Toumodi**	**75.64**	**167**	*e*P		**P**	**16 04 35.4**	**-0.4**
TIC					pmax	pmax		
	comp=Z,5.0nm,0.2s,mb5.1							
TIC	**Toumodi**	**75.64**	**167**	*e*P		**P**	**16 04 35.4**	**-0.4**
	comp=Z,4.6nm,0.2s,mb5.1							
KIC	**Kosan Boka**	**75.93**	**167**	*e*P		**P**	**16 04 33.4**	**-4.1**
	comp=Z,86nm,1.7s,mb5.4							
QIZ	**Qiongzhong**	**76.02**	**51**	P		**P**	**16 04 34.6**	**-3.4**
QIZ				S		S	16 14 18.6	-3.0
QIZ				pmax		pmax		
	comp=Z,110nm,4.5s							
QIZ				LR		LR		
	comp=N,190nm,16.3s,MS4.5							
QIZ				LR		LR		
	comp=E,49nm,17.9s,MS4.5							
QIZ				LR		LR		
	comp=Z,230nm,17.0s,MS4.5							
LIC	**Lamto**	**76.06**	**167**	*e*P		**P**	**16 04 37.6**	**-0.6**
	comp=Z,66nm,1.4s,mb5.4							
LIC	**Lamto**	**76.06**	**167**	*e*P		**P**	**16 04 36.4**	**-1.8**
	comp=Z,73nm,1.4s,mb5.1							
LIC	**Lamto**	**76.06**	**167**	*e*P		**P**	**16 04 36.4**	**-1.8**
	comp=Z,36nm,1.4s,mb5.1							
ROSC	**El Rosal**	**80.87**	**238**	LR		LR	16 38 09.8	
	comp=Z,93nm,20.4s,MS4.1,baz=205,slow=34							
OTAV	**Otavalo**	**85.91**	**241**	*e*P		**P**	**16 05 31.2**	**+0.5**
	comp=Z,8.1nm,1.1s,mb4.9							
OTAV	**Otavalo**	**85.91**	**241**	*e*P		**P**	**16 05 31.2**	**+0.5**
	comp=Z,8.1nm,1.1s,mb4.9							
WRA	**Warramunga Arr**	**116.78**	**30**	PKP		PKPdf	16 11 35.4	+0.6
	comp=Z,0.3nm,0.9s,baz=339,slow=2.2,SNR=5.9							
ASAR	**Alice Springs**	**120.44**	**31**	PKP		PKPdf	16 11 40.1	-1.6
	comp=Z,1.3nm,1.0s,baz=14,slow=2.0,SNR=9.0							
SYO	**Syowa Base**	**153.74**	**137**⇓	*e*PKPdf		pPKPdf	16 12 46.0	+5.0
QSPA	**South Pole Qui**	**172.12**	**180**	PKPab		PKPab	16 14 21.3	0.0
	comp=Z,2.3nm,1.1s,baz=260,slow=1.5,SNR=6.0							

ISK ***15*** *16:08:05.0,37.°52N×35.°08E,h5km,ML2.5*
DDA ***15*** *16:08:05.8,37.°52N×35.°08E,h7km±3km,Md2.9*
ISCJB ***15*** *16:08:06.7±0.5,37.°50N±0.°03×35.°09E±0.°04,h10km, Error ellipse: s-maj=4.7km s-min=4.6km az=4.2*
CSEM ***15*** *16:08:06.2±0.2,37.°53N×35.°06E,h2km,ML2.5, Error ellipse: s-maj=4.7km s-min=4.0km az=50.0*

ISC 15 16:08:06.6±0.8, 37.°53N±0.°05×35.°07E±0.°05, h4km±10km, n24,σ0s76/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARA	**Karaisali**	**0.27**	**182**	PG	**Pg**	**16 08 11.0**	**-0.9**
KARA				*e*SG	**Sg**	**16 08 15.8**	**+0.4**
KARA	**Karaisali**	**0.27**	**182**	*i* Pg	**Pg**	**16 08 11.0**	**-0.8**
KARA				*e*Sg	**Sg**	**16 08 15.8**	**+0.4**
GULE	**Gulek**	**0.34**	**223**	*i* P	**Pg**	**16 08 12.2**	**-0.9**
GULE				*i* S	**Sg**	**16 08 18.2**	**+0.7**
GULE	**Gulek**	**0.34**	**223**	*i* P	**Pg**	**16 08 12.2**	**-0.9**
GULE				*i* S	**Sg**	**16 08 18.2**	**+0.6**
KOZT	**Kozan**	**0.61**	**95**	*e*PG	**Pg**	**16 08 17.3**	**-0.9**
KOZT				*e*SG	**Sg**	**16 08 26.4**	**+0.3**
KOZT	**Kozan**	**0.61**	**95**	*e*Pg	**Pg**	**16 08 17.3**	**-0.9**
KOZT				*e*Sg	**Sg**	**16 08 26.4**	**+0.3**
CEYT	**Ceyhan**	**0.75**	**134**	*e*PG	**Pg**	**16 08 20.5**	**-0.5**
CEYT				*e*SG	**Sg**	**16 08 32.3**	**+1.5**
CEYT	**Ceyhan**	**0.75**	**134**	*e*Pg	**Pg**	**16 08 20.5**	**-0.5**
CEYT				*e*Sg	**Sg**	**16 08 32.3**	**+1.5**
YURE	**YUREGIR**	**0.84**	**147**	*i* P	**Pg**	**16 08 23.0**	**+0.3**
YURE	**YUREGIR**	**0.84**	**147**	*i* P	**Pg**	**16 08 23.0**	**+0.4**
KRTS	**Karatas**	**0.99**	**166**	*e*PG	**Pg**	**16 08 25.1**	**-0.4**
KRTS	**Karatas**	**0.99**	**166**	*e*Pg	**Pg**	**16 08 25.2**	**-0.3**
AVNT	**Avonos**	**1.25**	**352**	*i* P	**Pn**	**16 08 30.1**	**-0.8**
AVNT				*i* S	**Sb**	**16 08 48.3**	**+1.0**
AVNT	**Avonos**	**1.25**	**352**	*i* P	**Pn**	**16 08 30.1**	**-0.7**
AVNT				*i* S	**Sb**	**16 08 48.3**	**+1.0**
SULT	**Sultanhani-AKS**	**1.40**	**299**	*e*PN	**Pn**	**16 08 33.1**	**+0.3**
SULT	**Sultanhani-AKS**	**1.40**	**299**	*e*Pn	**Pn**	**16 08 33.1**	**+0.3**
KMRS	**Kahramanmaras**	**1.46**	**91**	*e*PN	**Pn**	**16 08 33.1**	**-0.5**
KMRS	**Kahramanmaras**	**1.46**	**91**	*e*Pn	**Pn**	**16 08 33.1**	**-0.5**
IKL	**Isikli**	**1.70**	**221**	*e*PN	**Pn**	**16 08 36.2**	**-0.8**
IKL	**Isikli**	**1.70**	**221**	*e*Pn	**Pn**	**16 08 36.2**	**-0.8**
SARI	**SarD1z-Kayseri**	**1.72**	**48**	*e*PN	**Pn**	**16 08 32.5**	**-4.7**
SARI	**SarD1z-Kayseri**	**1.72**	**48**	*e*Pn	**Pn**	**16 08 32.5**	**-4.7**
HDMB	**Hadim**	**2.14**	**255**	*e*PN	**Pn**	**16 08 43.9**	**+0.9**
HDMB	**Hadim**	**2.14**	**255**	*e*Pn	**Pn**	**16 08 43.9**	**+0.9**

IDC 15 16:18:15.9±1.5, 40.°99S×83.°47E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/16, mbtmp3.8/5, MS4.1/11, Ms1 4.1/11, ms1mx4.1/14, Error ellipse: s-maj=46.3km s-min=29.5km az=103.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**28.02**	**84**	LR	LR	16 32 21.8	
	comp=Z,448nm,20.0s,baz=240,slow=30						
MAW	**Mawson**	**28.95**	**196**	LR	LR	16 33 11.0	
	comp=Z,253nm,19.9s,baz=41,slow=31						
ASAR	**Alice Springs**	**45.34**	**84**	P	P	16 26 34.9	-0.9
	0.9nm,0.9s,baz=224,slow=6.5,SNR=4.6						
STKA	**Stephens Creek**	**46.89**	**98**	LR		16 41 59.9	
	comp=Z,390nm,21.1s,baz=209,slow=30						
WRA	**Warramunga Arr**	**47.85**	**80**	P	P	16 26 56.1	+0.5
	2.5nm,1.1s,baz=235,slow=8.6,SNR=5.4						
BOSA	**Boshof**	**48.56**	**266**	LR	LR	16 43 25.7	
	comp=Z,471nm,21.1s,baz=135,slow=31						
QSPA	**South Pole Qui**	**49.16**	**180**	P	P	16 27 05.5	+0.6
	3.1nm,1.0s,baz=288,slow=2.9,SNR=14						
KMBO	**Kilima Mbogo**	**57.56**	**301**	LR	LR	16 48 04.7	
	comp=Z,61nm,18.4s,baz=89,slow=31						
CMAR	**Chiang Mai Arr**	**60.86**	**17**	P	P	16 28 31.2	+1.1
	0.4nm,0.3s,baz=244,slow=5.7,SNR=4.9						
MKAR	**Makanchi Array**	**87.41**	**359**	P	P	16 31 03.1	-1.4
	0.1nm,0.2s,baz=176,slow=5.8,SNR=2.4						
MKAR				LR	LR	17 08 20.6	
	comp=Z,130nm,21.4s,baz=177,slow=34						
BRTR	**Keskin Array B**	**92.26**	**324**	LR	LR	17 10 09.6	
	comp=Z,56nm,20.5s,baz=136,slow=34						
TORD	**Torodi Ar. Bea**	**92.42**	**285**	LR	LR	17 10 59.5	
	comp=Z,137nm,19.6s,baz=180,slow=34						
DBIC	**Dimbokro**	**93.06**	**276**	LR	LR	17 09 37.4	
	comp=Z,146nm,18.5s,baz=118,slow=33						
ZALV	**Zalesovo Beam**	**94.57**	**1**	LR	LR	17 12 17.0	
	comp=Z,62nm,21.6s,baz=75,slow=34						
PLCA	**Paso Flores**	**95.30**	**200**	LR	LR	17 15 04.8	
	comp=Z,158nm,19.3s,baz=88,slow=36						

CASC 15 16:49:31.9±1.6, 13.°54N×90.°47W, h29km±4km, MD3.5, 1C-2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.63**	**2**⇑	*e*P	Pb	16 49 45.0	+0.6
SBLS	**San Blas**	**0.88**	**70**⇓	*e*P	Pn	16 49 48.0	-0.3
SBLS				*e*S	Sb	16 50 00.7	+0.8
RTR	**El Retiro**	**0.88**	**66**⇓	*e*P	Pn	16 49 48.2	-0.1
RTR				*e*S	Sb	16 50 01.3	+1.3
SNJE	**San Jose**	**0.90**	**69**	*e*P	Pn	16 49 48.4	-0.2
SNJE				*e*S	Sn	16 50 01.5	+0.8
RBDL	**Robledal**	**0.95**	**53**	*e*P	Pn	16 49 49.4	+0.1
FUG	**Fuego 3**	**0.97**	**338**	*e*P	Pn	16 49 49.4	-0.2
NBG	**Las Nubes**	**1.05**	**7**	*e*P	Pn	16 49 52.2	+1.7
FG6		**1.09**	**339**	*e*P	Pn	16 49 51.1	0.0
BOQS	**Boqueron**	**1.18**	**81**	*e*P	Pn	16 49 52.2	-0.1
BOQS				*e*S	Sn	16 50 08.3	+0.9
TP2	**Tecpan 2**	**1.34**	**337**	*e*P	Pn	16 49 55.4	+0.7
TP2				*e*S	Sn	16 50 13.0	+1.5
LFRS	**El Faro**	**1.38**	**87**	*e*P	Pn	16 49 55.2	+0.1
LFRS				*e*S	Sn	16 50 13.4	+1.0
SNVI	**San Vicente**	**1.59**	**87**	*e*P	Pn	16 49 58.6	+0.5
SNVI				*e*S	Sn	16 50 20.3	+2.6
CNCH	**Conchagua**	**2.58**	**96**	*e*P	Pn	16 50 12.7	+1.0
CNCH				*e*S	Sn	16 50 43.8	+1.6

ISCJB ***15*** *17:14:14.0±5.3,23.°6S±0.°2×179.°4E±0.°2,h473km±56km, mb4.1/13, Error ellipse: s-maj=42.6km s-min=18.0km az=141.2*
NEIC ***15*** *17:14:13.8±4.3,23.°52S×179.°46E,h471km±43km,mb4.1/6, Error ellipse: s-maj=42.3km s-min=17.7km az=49.0*
IDC ***15*** *17:14:25.5±2.7,24.°08S×178.°96E,h588km±31km,mb3.1/5, mb1 3.2/5,mb1mx3.1/13,mbtmp3.1/5, Error ellipse: s-maj=29.1km s-min=18.4km az=170.0*

ISC 15 17:14:14.5±4.0, 23.°6S±0.°2×179.°4E±0.°2, h463km±43km, n26,σ0s95/21, mb4.1/13, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.73**	**187**	P	**P**	**17 17 22.3**	**0.0**
	1.6nm,0.3s,baz=328,slow=5.2,SNR=7.2						
RPZ	**Rata Peaks**	**21.19**	**197**	P	**P**	**17 18 24.4**	**-1.3**
	6.5nm,0.5s,mb4.4,baz=55,slow=18,SNR=5.5					

0.1nm,0.3s,baz=117,slow=18,SNR=3.0
TTA Tatalina 10.69 21 *e*Pn **Pn 17 25 09.1 +4.0**
PAX Paxson 13.93 38 Pn **Pn 17 25 47.9 -1.4**
5.5nm,1.2s
ILAR Eielson Array 14.61 31 Pn **Pn 17 25 55.6 -2.9**
0.0nm,0.3s,baz=225,slow=13,SNR=3.0
ILAR LR LR 17 32 03.5
comp=Z,132nm,18.6s,baz=234,slow=39
EGAK Eagle 16.53 36 *e*Pn **Pn 17 26 24.5 +0.8**
4.3nm,0.8s
DAWY Dawson 16.82 40 *e*Pn **Pn 17 26 28.1 +0.8**
CRAG Craig 18.31 70 *e*Pn **Pn 17 26 45.2 -0.6**
DLBC Dease Lake 19.86 61 P **Pn 17 27 06.8 +2.3**
0.1nm,0.3s,baz=323,slow=26,SNR=3.7
INK Inuvik 21.00 32 *e*P **P 17 27 14.6 -0.6**
7.5nm,0.9s,mb4.0
INK Inuvik 21.00 32 P **P 17 27 15.4 +0.2**
6.0nm,0.8s,mb4.0,baz=249,slow=12,SNR=8.2
JCW Jim Creek 27.07 83 *e*P **P 17 28 13.5 -0.8**
11nm,0.5s,mb4.7
YKA Yellowknife Ar 27.40 50 P **P 17 28 18.7 +1.5**
0.4nm,0.6s,mb3.1,baz=260,slow=7.5,SNR=3.3
YSS Yuzh-Sakhalins 33.80 281 *e*P **P 17 29 10.9 -2.9**
19nm,0.8s,mb5.1
NVAR Mina Array Bea 34.72 96 P **P 17 29 27.0 +5.1**
0.4nm,0.4s,mb3.7,baz=287,slow=9.4,SNR=2.6
MAJO Matsushiro 42.71 271 P **P 17 30 20.9 -8.0**
12nm,1.3s,mb4.5
KSRS Korea Array 48.26 279 P **P 17 31 12.9 +0.1**
3.3nm,0.9s,mb4.4,baz=52,slow=6.9,SNR=8.0
TXAR Lajitas Array 49.77 94 P **P 17 31 25.9 +1.4**
0.5nm,0.8s,mb3.6,baz=306,slow=6.6,SNR=7.3
TLY Talaya 52.22 308 *e*P **P 17 31 41.4 -1.1**
3.6nm,0.7s,mb4.4
ULN Ulaanbaatar 53.05 303 *e*P **P 17 31 46.4 -2.3**
4.1nm,1.0s,mb4.3
SONM Songino Array 53.40 303 P **P 17 31 51.9 +0.6**
2.6nm,1.1s,mb4.1,baz=50,slow=7.6,SNR=9.6
ARCES ARCESS Array B 57.34 356 P **P 17 32 18.9 -0.5**
ARCES ARCESS Array B 57.34 356 P **P 17 32 18.9 -0.5**
0.9nm,0.7s,mb3.9,baz=359,slow=9.0,SNR=3.9
ZALV Zalesovo Beam 58.77 320 P **P 17 32 29.2 -0.4**
0.7nm,0.3s,mb4.1,baz=59,slow=7.1,SNR=4.6
ZALV LR LR 17 59 32.1
comp=Z,26nm,18.2s,MS3.4,baz=70,slow=38
KURK Kurchatov 63.67 321 P **P 17 33 03.3 +0.4**
2.2nm,0.9s,mb4.2,baz=38,slow=6.2,SNR=4.7
BVAR Borovoye Array 64.69 327 P **P 17 33 09.6 0.0**
3.0nm,0.8s,mb4.4,baz=45,slow=6.5,SNR=14
BRVK Borovoye 64.70 327 *e*P **P 17 33 08.5 -1.1**
2.3nm,0.8s,mb4.3
MKAR Makanchi Array 65.34 316 P **P 17 33 13.3 -0.5**
1.0nm,0.6s,mb4.0,baz=49,slow=5.5,SNR=8.0
MKAR LR LR 18 02 36.3
comp=Z,43nm,21.4s,MS3.6,baz=166,slow=37
FINES FINESS Array B 65.38 354 P **P 17 33 14.1 +0.2**
1.6nm,0.8s,mb4.1,baz=12,slow=8.5,SNR=3.2
NOA NORSAR Array B 66.03 2 P **P 17 33 18.9 +0.8**
0.7nm,0.8s,mb3.8,baz=356,slow=6.3,SNR=3.4
AKTK Aktyubinsk 70.70 333 P **P 17 33 47.6 +0.1**
AKTO Aktyubinsk 70.70 333 P **P 17 33 47.6 +0.1**
7.0nm,0.8s,mb4.7,baz=46,slow=6.5,SNR=26
EKA Eskdalemuir Ar 70.71 11 P **P 17 33 48.2 +0.8**
0.9nm,0.8s,mb3.8,baz=7.8,slow=5.7,SNR=3.5
ABKAR Akbulak array 71.22 331 *e*P **P 17 33 46.7 -3.9**
2.6nm,0.6s,mb4.2
AAK Ala-Archa 71.93 318 *e*P **P 17 33 54.9 -0.2**
AAK Ala-Archa 71.93 318 P **P 17 33 55.7 +0.7**
1.4nm,0.3s,mb4.4,baz=144,slow=4.3,SNR=3.8
AKASG Malin Array Be 75.81 351 P **P 17 34 17.2 -0.5**
0.3nm,0.3s,mb3.7,baz=12,slow=5.7,SNR=4.2
BR131 Keskin Array S 86.11 346 *e*P **P 17 35 13.3 +0.5**
2.0nm,0.8s,mb4.4
BRTR Keskin Array B 86.11 346 P **P 17 35 13.7 +1.0**
1.8nm,0.8s,mb4.3,baz=48,slow=2.4,SNR=8.7

*IDC **15** 17:23:57.1±0.7,25°.16N×128°.05E,h0km,mb4.0/14, mb1 4.0/15,mb1mx4.0/24,mbtmp3.9/15,ML2.7/1,MS2.8/2, Ms1 2.8/2,ms1mx2.6/35,Error ellipse: s-maj=30.0km s-min=14.9km az=72.0*
*ISCJB **15** 17:23:58.2±1.1,25°.14N±0°.03×128°.07E±0°.04,h25km±8km, mb4.0/17,Error ellipse: s-maj=6.8km s-min=3.9km az=44.6*
*NIED **15** 17:24:00,25°.20N×128°.10E,h11km,Mw4.0 Best double couple: M0 1.02000×10^15 NP1:φ=272.00000°,δ62.00000°, λ-82.00000°. NP2:φ=76.00000°,δ29.00000°, λ-104.00000°.*
*JMA **15** 17:24:00.2±0.2,25°.21N×128°.10E,h69km±4km,M4.1*
*NEIC **15** 17:24:01.0±4.4,25°.09N×127°.89E,h24km±31km,mb4.3/4, Error ellipse: s-maj=16.8km s-min=9.7km az=77.0*

ISC 15 17:23:59.8±1.1,25°.18N±0°.03×128°.03E±0°.04,h21km±8km, n49,σ1§08/68,mb4.0/17,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJT2	**Tamagusuku 2**	**0.99**	**345**	P	**Pb**	**17 24 18.6**	**+0.4**
JJT2				S	**Sb**	**17 24 32.5**	**+1.7**
NAH1	**Naha**	**1.07**	**343**	P	**Pn**	**17 24 19.5**	**0.0**
NAH1				*e*S	**Sb**	**17 24 33.3**	**+0.3**
JAGN	**Aguni-jima**	**1.57**	**333**	P	**Pn**	**17 24 26.9**	**+0.4**
JAGN				S	**Sn**	**17 24 46.2**	**-0.1**
JKE	**Kume jima 2**	**1.60**	**316**	P	**Pn**	**17 24 27.1**	**+0.2**
JKE				S	**Sn**	**17 24 47.3**	**+0.3**
JOW	**Kunigami**	**1.66**	**7**	P	**Pn**	**17 24 27.1**	**-0.6**
JOW				*e*S	**Sn**	**17 24 46.4**	**-2.0**
JIH	**Iheya**	**1.85**	**358**	P	**Pn**	**17 24 30.4**	**+0.1**
JIH				*e*S	**Sn**	**17 24 52.1**	**-0.9**
JOGS	**Gusukube**	**2.42**	**261**	P	**Pn**	**17 24 39.0**	**+0.9**
JOGS				*e*S	**Sn**	**17 25 07.7**	**+0.5**
JMJ	**Miyako jima 2**	**2.51**	**262**	P	**Pn**	**17 24 40.4**	**+1.0**
JMJ				S	**Sn**	**17 25 09.9**	**+0.5**
JTK	**Tokunoshima**	**2.72**	**17**	P	**Pn**	**17 24 41.3**	**-1.0**
JTK				*e*S	**Sn**	**17 25 13.1**	**-1.5**
JMZ	**Minamidaito 2**	**2.95**	**77**	P	**Pn**	**17 24 42.5**	**-2.9**
JMZ				*e*S	**Sn**	**17 25 13.9**	**-6.3**
JTJ	**Tarama**	**3.07**	**261**	P	**Pn**	**17 24 47.5**	**+0.4**
JTJ				S	**Sn**	**17 25 22.3**	**-0.9**
JAM	**Amami Oshima**	**3.51**	**23**	P	**Pn**	**17 24 52.1**	**-1.1**
JAM				*e*S	**Sn**	**17 25 29.8**	**-4.3**
JZK	**Kikaishima**	**3.57**	**29**	P	**Pn**	**17 24 52.9**	**-1.1**
JZK				S	**Sn**	**17 25 34.8**	**-0.8**
JIJ	**Ishigaki jima**	**3.63**	**258**	P	**Pn**	**17 24 54.6**	**-0.2**
JIJ				S	**Sn**	**17 25 34.1**	**-2.9**
JKRS	**Kuro-shima**	**3.78**	**256**	P	**Pn**	**17 24 57.0**	**+0.2**
JKRS				*e*S	**Sn**	**17 25 39.8**	**-0.9**
IRIF	**Iriomote-Funau**	**4.00**	**259**	P	**Pn**	**17 25 00.1**	**+0.2**
HATJ	**Hateruma jima**	**4.01**	**255**	*e*S	**Sn**	**17 25 43.8**	**-2.5**
YOJ	**Yonaguni jima**	**4.62**	**262**	P	**Pn**	**17 25 08.1**	**-0.3**
JNN	**Nakanoshima**	**4.92**	**19**	P	**Pn**	**17 25 12.0**	**-0.6**
NACB	**Ninganchiao**	**5.94**	**262**	*e*Pn	**Pn**	**17 25 25.6**	**-1.0**
NACB				*e*Sn	**Sn**	**17 26 19.3**	**-15**
YHNB	**Yeheng**	**6.07**	**267**	*e*Pn	**Pn**	**17 25 29.9**	**+1.6**
	8.2nm,0.3s						
YULB	**Yu-li**	**6.40**	**255**	*e*Pn	**Pn**	**17 25 30.7**	**-2.1**
	25nm,0.3s						
YULB				*e*Sn	**Sn**	**17 26 34.2**	**-11**
SSLB	**Suanglung**	**6.60**	**259**	*e*Pn	**Pn**	**17 25 34.2**	**-1.4**
	16nm,0.3s						
SSLB				*e*Sn	**Sn**	**17 26 42.2**	**-8.0**
TWG	**Pinlang**	**6.78**	**251**	*e*Pn	**Pn**	**17 25 35.4**	**-2.7**
	48nm,0.3s						
TWG				*e*Sn	**Sn**	**17 26 47.8**	**-7.0**
TPUB	**Ta-pu**	**7.01**	**256**	*e*Pn	**Pn**	**17 25 40.9**	**-0.4**
	33nm,0.3s						
KSRS	**Korea Array**	**12.24**	**360**	Pn	**Pn**	**17 26 53.2**	**+0.4**
	0.1nm,0.3s,baz=175,slow=13,SNR=4.4						
KSRS				LR	LR	17 32 20.5	
	comp=Z,26nm,18.4s,baz=334,slow=41						
BJT	**Baijiatuau**	**17.83**	**329**	Pn	**Pn**	**17 28 07.6**	**+1.0**
ASAJ	**Asahikawa**	**22.31**	**28**	P	**P**	**17 28 55.8**	**0.0**
	7.1nm,0.7s,mb4.2,baz=210,slow=12,SNR=9.8						
YSS	**Yuzh-Sakhalins**	**24.69**	**25**	*e*P	**P**	**17 29 21.9**	**+2.7**
	37nm,0.9s,mb4.9						
YSS				*e*		17 29 33.0	
GTA	**Gaotai**	**27.62**	**308**	*e*P	**P**	**17 29 47.3**	**+1.5**
GTA				pP	pP	17 29 51.3	-0.7
GTA				sP	sP	17 29 54.5	-0.1
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
SONM	**Songino Array**	**28.34**	**328**	P	**P**	**17 29 52.3**	**+0.2**
	comp=Z,0.8nm,0.5s,mb3.6,baz=141,slow=9.3,SNR=6.8						
SONM				LR	LR	17 41 59.6	
	comp=Z,38nm,21.1s,baz=70,slow=38						
MK31	**Makanchi Array**	**42.11**	**313**	*e*P	**P**	**17 31 50.8**	**+0.5**
MKAR	**Makanchi Array**	**42.11**	**313**	P	**P**	**17 31 51.2**	**+0.9**
	comp=Z,2.3nm,0.5s,mb4.0,baz=98,slow=10,SNR=31						
ZALV	**Zalesovo Beam**	**42.98**	**324**	P	**P**	**17 31 57.2**	**-0.1**
ZALV	**Zalesovo Beam**	**42.98**	**324**	P	**P**	**17 31 57.2**	**-0.1**
	comp=Z,0.9nm,0.4s,mb3.9,baz=121,slow=7.6,SNR=5.3						
WRA	**Warramunga Arr**	**45.27**	**172**	P	**P**		
WRA	**Warramunga Arr**	**45.27**	**172**	P	**P**	**17 32 16.2**	**+0.2**
	comp=Z,1.9nm,0.5s,mb4.2,baz=353,slow=8.7,SNR=27						
KURK	**Kurchatov**	**45.46**	**317**	*e*P	**P**	**17 32 18.2**	**+1.0**
	comp=Z,1.3nm,0.6s,mb3.9						
KURK	**Kurchatov**	**45.46**	**317**	P	**P**	**17 32 18.3**	**+1.1**
	comp=Z,1.0nm,0.6s,mb3.9,baz=106,slow=9.0,SNR=2.8						
CTAO	**Charters Tower**	**48.36**	**157**	P	**P**	**17 32 41.0**	**+0.8**
	comp=Z,4.1nm,0.9s,mb4.5						
ASAR	**Alice Springs**	**48.89**	**173**	P	**P**	**17 32 44.8**	**+0.6**
	comp=Z,1.6nm,0.8s,mb4.1,baz=351,slow=7.7,SNR=25						
BVAR	**Borovoye Array**	**50.94**	**319**	P	**P**	**17 32 59.9**	**+0.4**
	comp=Z,0.5nm,0.6s,mb3.6,baz=113,slow=9.8,SNR=3.9						
STKA	**Stephens Creek**	**58.20**	**166**	*e*P	**P**	**17 33 49.0**	**-3.3**
	comp=Z,0.7nm,0.9s,mb3.7						
STKA	**Stephens Creek**	**58.20**	**166**	P	**P**	**17 33 52.1**	**-0.2**
	comp=Z,2.0nm,0.9s,mb4.1,baz=350,slow=6.1,SNR=4.0						
ILAR	**Eielson Array**	**65.44**	**28**	P	**P**	**17 34 42.1**	**+1.4**
	comp=Z,0.3nm,0.9s,mb3.3,baz=277,slow=7.2,SNR=3.2						
FINES	**FINESS Array B**	**73.69**	**331**	P	**P**	**17 35 32.6**	**+0.9**
	comp=Z,2.0nm,0.9s,mb4.0,baz=102,slow=4.6,SNR=3.3						
AKASG	**Malin Array Be**	**76.21**	**320**	P	**P**	**17 35 48.0**	**+1.5**
	comp=Z,0.5nm,0.5s,mb3.7,baz=77,slow=5.5,SNR=4.1						
BRTR	**Keskin Array B**	**77.54**	**308**	P	**P**	**17 35 56.0**	**+1.8**
	comp=Z,0.9nm,0.7s,mb3.8,baz=98,slow=7.4,SNR=5.3						
NOA	**NORSAR Array B**	**80.17**	**334**	P	**P**	**17 36 08.5**	**+0.2**
	comp=Z,0.8nm,0.8s,mb3.7,baz=52,slow=5.7,SNR=3.5						

*ISCJB **15** 17:31:15.4±1.6,43°.6N±0°.1×147°.4E±0°.1,h67km±15km, mb3.5/3,Error ellipse: s-maj=26.1km s-min=14.6km az=157.0*
*JMA **15** 17:31:16.0±0.2,43°.57N×147°.31E,h32km,M3.4*
*IDC **15** 17:31:19.8±3.4,45°.61N×146°.81E,h0km,mb3.6/3, mb1 3.8/3,mb1mx3.4/21,mbtmp3.6/3,ML3.0/1,Error ellipse: s-maj=89.1km s-min=25.0km az=149.0*

ISC 15 17:31:16.5±1.7,43°.7N±0°.1×147°.4E±0°.1,h59km±17km,n12, σ0§68/20,mb3.5/3,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.21**	**257**	P	**Pn**	**17 31 36.5**	**-0.7**
NEM2				*e*S	**Sn**	**17 31 51.0**	**-1.7**
JRA	**Rausu**	**1.65**	**281**	P	**Pn**	**17 31 43.0**	**-0.1**
JRA				*e*S	**Sn**	**17 32 02.9**	**-0.3**
JNK	**Nakash**	**1.92**	**269**	P	**Pn**	**17 31 46.8**	**0.0**
JNK				*e*S	**Sn**	**17 32 09.6**	**-0.2**
JAK	**Akkeshi**	**2.05**	**252**	P	**Pn**	**17 31 48.4**	**-0.2**
JAK				*e*S	**Sn**	**17 32 12.5**	**-0.5**
JTKR	**Abashiri--Toko**	**2.52**	**278**	P	**Pn**	**17 31 55.8**	**+0.9**
JAR	**Ashorobuto**	**2.64**	**264**	P	**Pn**	**17 31 57.5**	**+0.9**
JAR				*e*S	**Sn**	**17 32 28.4**	**+1.0**
JOB	**Onbets**	**2.68**	**255**	P	**Pn**	**17 31 57.8**	**+0.7**
JOB				*e*S	**Sn**	**17 32 28.8**	**+0.4**
JCH	**Churui**	**3.11**	**252**	P	**Pn**	**17 32 03.7**	**+0.8**
JCH				*e*S	**Sn**	**17 32 38.5**	**-0.3**
ASAJ	**Asahikawa**	**3.48**	**279**	Pn	**Pn**	**17 32 13.3**	**+5.3**
	1.1nm,0.3s,baz=112,slow=14,SNR=9.4						
ASAJ				Sn	**Sn**	**17 32 55.5**	**+7.6**
	1.5nm,0.3s,baz=319,slow=26,SNR=7.4						
ILAR	**Eielson Array**	**41.48**	**36**	P	**P**	**17 38 56.7**	**-0.4**
	0.3nm,0.6s,mb3.1,baz=277,slow=8.3,SNR=6.7						
MKAR	**Makanchi Array**	**44.77**	**298**	P	**P**	**17 39 24.3**	**+0.4**
	0.2nm,0.2s,mb3.5,baz=79,slow=10,SNR=2.6						
FINES	**FINESS Array B**	**65.03**	**333**	P	**P**	**17 41 49.2**	**-0.8**
	0.7nm,0.5s,mb4.0,baz=57,slow=8.6,SNR=5.2						

*ISCJB **15** 17:31:23.7±0.5,31°.36N±0°.06×103°.56E±0°.07,h10km, mb3.6/7,Error ellipse: s-maj=8.9km s-min=8.3km az=30.1*
*IDC **15** 17:31:24.6±1.1,31°.39N×103°.57E,h0km,mb3.5/7, mb1 3.6/8,mb1mx3.5/22,mbtmp3.5/8,Error ellipse: s-maj=41.5km s-min=18.5km az=54.0*
*NEIC **15** 17:31:25.7±0.5,31°.36N×103°.50E,h10km,mb4.4/2,Error ellipse: s-maj=15.1km s-min=9.1km az=61.0*
*BJI **15** 17:31:30.9,31°.23N×103°.85E,h18km,ML3.1/12*

ISC 15 17:31:26.1±0.5,31°.41N±0°.04×103°.51E±0°.07,h10km,n17, σ1§15/20,mb3.6/7,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.54**	**157**	Pg	**Pg**	**17 31 37.6**	**+1.0**
CD2				Sg	**Sg**	**17 31 46.3**	**+2.5**
CD2				smax			
	comp=N,1μm,0.6s						
LZH	**Lanzhou**	**4.67**	**3**	*e*Pg	**Pg**	**17 32 58.1**	**+2.5**
LZH				smax			
	comp=N,29nm,1.0s						
LZH				smax			
	comp=E,31nm,1.0s						
XAN	**Xi'an**	**5.26**	**59**	Pn	**Pn**	**17 32 44.0**	**-0.8**
XAN				Sn	**Sn**	**17 33 45.3**	**-0.2**
XAN				Sg	**Sb**	**17 34 05.9**	**+4.5**
XAN				smax			
	comp=N,30nm,0.7s						
XAN				smax			
	comp=E,14nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.54**	**199**	P	**Pn**	**17 34 37.9**	**-0.4**
CMAR	**Chiang Mai Arr**	**13.54**	**199**	P	**Pn**	**17 34 37.9**	**-0.4**
	comp=E,1.0nm,0.8s,baz=22,slow=4.1,SNR=6.6						
SONM	**Songino Array**	**16.55**	**7**	Pn	**Pn**	**17 35 19.2**	**+1.1**
	baz=176,slow=8.5,SNR=2.3						
YHNB	**Yeheng**	**17.14**	**109**	Pn	**Pn**	**17 35 25.2**	**-0.5**
	comp=E,70nm,1.6s						
KSRS	**Korea Array**	**21.00**	**67**	P	**P**	**17 36 08.2**	**-1.4**
	comp=E,2.0nm,0.7s,baz=258,slow=11,SNR=6.6						
MK31	**Makanchi Array**	**22.41**	**319**	*e*P	**P**	**17 36 23.7**	**-1.0**
MKAR	**Makanchi Array**	**22.41**	**319**	P	**P**	**17 36 23.8**	**-0.9**
	comp=E,0.7nm,0.6s,mb3.3,baz=121,slow=12,SNR=7.3						
ZALV	**Zalesovo Beam**	**26.22**	**335**	P	**P**	**17 37 02.0**	**+1.1**
	comp=E,0.8nm,0.8s,mb3.3,baz=138,slow=13,SNR=3.5						
KURK	**Kurchatov**	**26.70**	**323**	P	**P**	**17 37 06.2**	**+1.0**
	comp=E,0.2nm,0.3s,mb3.2,baz=129,slow=9.2,SNR=4.1						
FINES	**FINESS Array B**	**57.03**	**326**	P	**P**	**17 41 12.2**	**+0.5**
	comp=E,1.2nm,0.7s,mb4.0,baz=87,slow=7.2,SNR=3.3						
WRA	**Warramunga Arr**	**59.01**	**146**	P	**P**	**17 41 26.2**	**+0.1**
	comp=E,0.3nm,0.5s,mb3.6,baz=338,slow=7.6,SNR=7.0						
ASAR	**Alice Springs**	**62.02**	**148**	P	**P**	**17 41 46.3**	**-0.3**
	comp=E,0.3nm,0.7s,mb3.5,baz=326,slow=6.4,SNR=4.7						
HNR	**Honiara**	**67.55**	**117**	*e*P	**P**	**17 42 20.9**	**-2.0**
KMBO	**Kilima Mbogo**	**70.48**	**256**	P	**P**	**17 42 40.1**	**-1.1**
	comp=E,3.9nm,1.4s,mb4.1						

MAN 15 17:53:53,13°.17N×124°.56E,h3km,mb4.8,ML3.7,MS3.8, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.57**	**317**	*e*P	Pg	17 54 04.5	+0.5
CNP	**Catarman**	**0.67**	**171**	*e*P	Pg	17 54 06.2	+0.4
BOAC	**Boac**	**2.65**	**276**	*e*P	Pn	17 54 37.6	+0.9
POLP	**Polilio Island**	**2.97**	**302**	*e*P	Pn	17 54 43.1	+2.0
BALP	**Baler**	**3.85**	**312**	*e*P	Pn	17 54 52.2	-1.0
CAUP	**Cauayan**	**4.58**	**325**	*e*P	Pn	17 55 03.7	+0.4

IDC 15 17:59:59.4±2.1,16°.73S×178°.19W,h0km,mb3.6/4, mb1 4.0/4,mb1mx3.8/14,mbtmp3.6/4,Error ellipse: s-maj=128.4km s-min=28.1km az=152.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.06**	**258**	P	P	18 08 17.1	-0.3
	0.3nm,0.5s,baz=96,slow=7.3,SNR=5.8						
ASAR	**Alice Springs**	**45.32**	**253**	P	P	18 08 19.6	+0.2
	1.3nm,0.7s,baz=89,slow=8.8,SNR=22						
ILAR	**Eielson Array**	**84.70**	**13**	P	P	18 12 34.2	-0.4
	0.1nm,0.4s,baz=228,slow=5.3,SNR=4.6						
TXAR	**Lajitas Array**	**85.19**	**58**	P	P	18 12 38.5	+0.5
	0.5nm,0.6s,baz=224,slow=5.2,SNR=6.3						

CASC 15 18:02:02.0±1.9,10°.52N×86°.83W,h18km±15km,MD3.7, ML1.6,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SSN	**San Juan del S**	**1.24**	**51**	*e*P	Pn	18 02 23.7	-0.7
COPN	**Copaltepe**	**1.67**	**8**	*e*P	Pn	18 02 30.1	-0.3
CSAN		**1.71**	**14**	*e*P	Pn	18 02 30.2	-0.7
JCR	**Jicaral**	**1.82**	**111**	*e*P	Pn	18 02 31.1	-1.3
MOMN	**Momotombo**	**1.90**	**9**	*e*P	Pn	18 02 33.0	-0.6
MOMN				*e*S	Sn	18 02 57.9	+0.8
MOMN				AML	AML	18 02 59.5	
	comp=Z,4.6nm,0.2s						
CNGN	**Cerro Negro**	**1.98**	**4**	*e*P	Pn	18 02 34.1	-0.4
CNGN				*e*S	Sn	18 03 00.5	+1.6
CGA2	**Cerro Gallo 2**	**2.38**	**102**	*e*P	Pn	18 02 41.5	+1.3
PRS1	**Puriscal**	**2.54**	**102**	*e*P	Pn	18 02 43.3	+1.0
LAJ	**Bijagual**	**2.75**	**103**	*e*P	Pn	18 02 39.9	-5.2
URSC	**Urasca**	**3.08**	**102**	*e*P	Pn	18 02 51.3	+1.5
URSC				*e*S	Sn	18 03 27.9	+1.7
BUS	**Buena Vista**	**3.18**	**107**	*e*P	Pn	18 02 51.5	+0.4
BUS				*e*S	Sn	18 03 29.7	+1.2

*ISCJB **15** 18:03:33.0±0.4,67°.02N±0°.03×20°.53E±0°.09,h0km,Error ellipse: s-maj=6.0km s-min=3.3km az=42.3*
*IDC **15** 18:03:35.6±1.0,67°.13N×21°.07E,h0km,mb1 2.9/4, mb1mx2.8/23,mbtmp2.8/4,ML2.4/4,Error ellipse: s-maj=17.9km s-min=9.2km az=119.0*
*CSEM **15** 18:03:35.3±0.2,67°.07N×20°.76E,h2km,ML2.3,Error ellipse: s-maj=6.4km s-min=4.1km az=107.0,Mining explosion.*
*HEL **15** 18:03:36.5±0.3,67°.07N×20°.94E,h0km,ML2.3, ML1.9(BER),ML2.1(NAO),Explosion*
*NAO **15** 18:03:36.1±1.1,67°.06N×21°.33E,ML2.1*
*BER **15** 18:03:38.0±3.5,67°.12N×20°.85E,h0km,ML1.9, ML2.1(NAO),Suspected explosion*

ISC 15 18:03:35.3±0.4,67°.07N±0°.03×20°.73E±0°.09,h0km,n36, σ1§12/61,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HEF	**Hetta**	**1.75**	**38**	*e*P	**Pn**	**18 04 05.7**	**-1.0**
HEF				*e*S	**Sn**	**18 04 29.3**	**-0.3**
HEF				MSG		18 04 34.1	
	comp=Z,17nm,0.2s						
HEF	**Hetta**	**1.75**	**38**	P	**Pn**	**18 04 05.7**	**-1.0**
HEF				S	**Sn**	**18 04 29.3**	**-0.3**
	comp=Z,17nm,0.2s						
KIF	**Kilpisjarvi**	**1.94**	**1**	*e*P	**Pn**	**18 04 10.7**	**+1.3**
KIF				*e*S	**Sn**	**18 04 37.0**	**+2.5**
KIF				MSG		18 04 40.9	
	comp=Z,25nm,0.1s						
KIF	**Kilpisjarvi**	**1.94**	**1**	P	**Pn**	**18 04 10.6**	**+1.2**
KIF				S	**Sn**	**18 04 37.0**	**+2.5**
	comp=Z,25nm,0.1s						
RNF	**Rovaniemi**	**2.14**	**100**	*e*P	**Pn**	**18 04 11.9**	**-0.2**
RNF				*e*S	**Sn**	**18 04 40.5**	**+1.2**
RNF				MSG		18 04 44.1	
	comp=Z,17nm,0.2s						
RNF	**Rovaniemi**	**2.14**	**100**	P	**Pn**	**18 04 11.9**	**-0.2**
RNF				S	**Sn**	**18 04 40.5**	**+1.2**
	comp=Z,17nm,0.2s						
KTK1	**Kautokeino**	**2.17**	**25**	*e*P	**Pn**	**18 04 12.6**	**+0.1**
KTK1				*e*Sg	**Sg**	**18 04 42.6**	**-2.1**
KTK1				AML	AML	18 04 46.9	
	comp=Z,27nm,0.2s						
KTK1	**Kautokeino**	**2.17**	**25**	*e*P	**Pn**	**18 04 12.6**	**+0.1**
KTK1				*e*SG	**Sg**	**18 04 42.6**	**-2.1**
KTK1				AML	AML	18 04 46.9	
	comp=Z,27nm,0.2s						
KTK1	**Kautokeino**	**2.17**	**25**	P	**Pn**	**18 04 12.6**	**+0.1**
KTK1				Sg	**Sg**	**18 04 42.5**	**-2.2**
	comp=Z,27nm,0.2s						
STEI	**Steigen**	**2.28**	**295**	*e*P	**Pn**	**18 04 17.9**	**+3.9**
STEI	**Steigen**	**2.28**	**295**	*e*P	**Pn**	**18 04 17.9**	**+3.9**
STEI	**Steigen**	**2.28**	**295**	P	**Pn**	**18 04 17.9**	**+3.8**
SGF	**Sodankyl**	**2.28**	**78**	*e*P	**Pn**	**18 04 14.1**	**0.0**
SGF				*e*S	**Sn**	**18 04 43.9**	**+1.0**
SGF				MSG		18 04 49.1	
	comp=Z,19nm,0.2s						
SGF	**Sodankyl**	**2.28**	**78**	P	**Pn**	**18 04 14.0**	**-0.1**
SGF				S	**Sn**	**18 04 43.8**	**+0.9**
	comp=Z,19nm,0.2s						
TRO	**Tromso**	**2.66**	**346**	*e*Sg	**Sg**	**18 04 59.2**	**-1.3**
TRO				AML	AML	18 05 00.8	
	comp=Z,10nm,0.2s						
TRO	**Tromso**	**2.66**	**346**	*e*SG	**Sg**	**18 04 59.2**	**-1.3**
TRO				AML	AML	18 05 00.8	
	comp=Z,10nm,0.2s						
TRO	**Tromso**	**2.66**	**346**	*e*Sg	**Sg**	**18 04 59.2**	**-1.4**
	comp=Z,10nm,0.2s,SNR=90						
MOR8	**Moi Rana**	**2.67**	**253**	*e*Sg	**Sg**	**18 04 56.1**	**-4.7**
MOR8				AML	AML	18 05 02.5	
	comp=Z,7.8nm,0.2s						
MOR8	**Moi Rana**	**2.67**	**253**	*e*SG	**Sg**	**18 04 56.1**	**-4.7**
MOR8				AML	AML	18 05 02.5	
	comp=Z,7.8nm,0.2s						
MOR8	**Moi Rana**	**2.67**	**253**	Sg	**Sg**	**18 04 56.0**	**-4.8**
	comp=Z,7.8nm,0.2s						
ARA0	**ARCESS Array S**	**3.04**	**

az=174.0
CSEM ***15*** *18:26:57.5,28.˚17N×52.˚79E,h6km,mb3.5/3, After NEIC*
IDC ***15*** *18:26:58.6±3.0, 28.˚39N×52.˚75E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.4/21, mbtmp3.8/3, ML3.3/1, MS2.9/1, Ms1 3.0/1, ms1mx2.3/28, Error ellipse: s-maj=64.1km s-min=33.1km az=151.0*
ISCJB ***15*** *18:26:58.2±2.4, 28.˚28N±0.˚09×52.˚83E±0.˚06, h13km±13km, mb3.9/7, Error ellipse: s-maj=15.6km s-min=8.3km az=0.7*
KISR ***15*** *18:26:59.2±0.8, 28.˚76N×52.˚57E, h34km, ML3.1*
TEH ***15*** *18:27:01.4, 28.˚31N×52.˚91E, h11km*

ISC 15 18:26:58.6±2.5, 28.˚25N±0.˚09×52.˚85E±0.˚06, h5km±13km, n38, σ1°11/43, mb3.9/7, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISRV	**Sarvestan**	**1.15**	**11**	Pg	**Pg**	**18 27 20.9**	**+0.2**
ISRV	**Sarvestan**	**1.15**	**11**	*e*Pg	**Pg**	**18 27 21.0**	**+0.3**
ISRV				*e*Sg	**Sg**	**18 27 34.9**	**-0.7**
ISRV				*e*		18 27 43.5	
	comp=Z,9μm,0.4s						
ISRV	**Sarvestan**	**1.15**	**11**	Pg	**Pg**	**18 27 20.9**	**+0.2**
IPAR	**Pars**	**1.59**	**6**	Pn	**Pn**	**18 27 28.4**	**+1.0**
IPAR	**Pars**	**1.59**	**6**	*e*Pn	**Pn**	**18 27 28.1**	**+0.7**
IPAR				*e*Sg	**Sg**	**18 27 49.7**	**-0.1**
IPAR				*e*		18 27 54.1	
	comp=Z,3μm,0.4s						
IPAR	**Pars**	**1.59**	**6**	Pn	**Pn**	**18 27 28.4**	**+1.0**
IMEH	**Mehriz**	**3.48**	**26**	Pn	**Pn**	**18 27 54.3**	**+0.9**
IMEH	**Mehriz**	**3.48**	**26**	*e*Pn	**Pn**	**18 27 54.3**	**+0.9**
IMEH				*e*		18 28 57.9	
	comp=Z,305nm,0.3s						
IMEH	**Mehriz**	**3.48**	**26**	Pn	**Pn**	**18 27 54.3**	**+0.9**
IBAF	**Bafgh**	**4.08**	**35**	*e*Pn	**Pn**	**18 28 02.4**	**+0.8**
IBAF				*e*		18 28 21.5	
	comp=Z,185nm,0.2s						
IGAR	**Gharneh**	**4.20**	**351**	*e*	x	18 28 38.0	
IGAR	comp=Z,149nm,0.2s						
				*e*Pn	**Pn**	**18 28 04.5**	**+1.3**
ICHK	**Chekchek**	**4.20**	**18**	Pn	**Pn**	**18 28 04.3**	**+1.0**
ICHK	**Chekchek**	**4.20**	**18**	*e*	**Pg**	**18 28 18.0**	**-1.1**
ICHK	comp=Z,271nm,0.2s						
				*e*Pn	**Pn**	**18 28 04.4**	**+1.1**
IZEF	**Zefreh**	**4.65**	**355**	Pn	**Pn**	**18 28 10.5**	**+1.1**
IZEF	**Zefreh**	**4.65**	**355**	*e*Pn	**Pn**	**18 28 10.6**	**+1.2**
IZEF				*e*		18 28 46.7	
	comp=Z,110nm,0.2s						
IZEF	**Zefreh**	**4.65**	**355**	Pn	**Pn**	**18 28 10.5**	**+1.1**
NAY	**Al-Naaiem**	**5.02**	**283**	*e*P	**Pn**	**18 28 16.4**	**+1.8**
NAY				*e*S	**Sn**	**18 29 13.3**	**+0.3**
NAY				AML	AML	18 29 20.1	
	comp=Z,10nm,0.6s						
MIB	**Mutribah**	**5.07**	**289**	*e*P	**Pn**	**18 28 15.5**	**+0.2**
MIB				*e*S	**Sn**	**18 29 13.6**	**-0.5**
MIB				AML	AML	18 29 23.1	
	comp=Z,27nm,0.6s						
BR131	**Keskin Array S**	**19.57**	**311**	P	**Pn**	**18 31 26.1**	**-2.4**
	comp=Z,1.2nm,0.8s						
BR131	**Keskin Array S**	**19.57**	**311**	P	**Pn**	**18 31 26.1**	**-2.5**
	comp=Z,1.2nm,0.8s						
BRTR	**Keskin Array B**	**19.57**	**311**	P	**Pn**	**18 31 27.7**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=138,slow=13,SNR=4.9						
BRTR	**Keskin Array B**	**19.57**	**311**	P	**Pn**	**18 31 27.7**	**-0.9**
ABKAR	**Akbulak array**	**21.67**	**13**	*e*P	**P**	**18 31 48.3**	**-1.6**
	comp=Z,1.1nm,0.7s,mb3.4						
ABKAR	**Akbulak array**	**21.67**	**13**	*e*P	**P**	**18 31 48.3**	**-1.6**
	comp=Z,1.1nm,0.7s,mb3.4						
MK31	**Makanchi Array**	**29.54**	**43**	P	**P**	**18 33 05.1**	**+1.2**
MK31	**Makanchi Array**	**29.54**	**43**	P	**P**	**18 33 05.1**	**+1.2**
ZALV	**Zalesovo Beam**	**34.69**	**33**	P	**P**	**18 33 49.5**	**+0.5**
	comp=Z,0.5nm,0.4s,mb3.8,baz=250,slow=8.6,SNR=3.4						
AQU	**L'Aquila**	**34.81**	**304**	P	**P**	**18 33 47.0**	**-3.3**
	comp=Z,12nm,0.8s,mb4.9						
AQU	**L'Aquila**	**34.81**	**304**	P	**P**	**18 33 47.0**	**-3.2**
	comp=Z,12nm,0.8s,mb4.9						
FINES	**FINESS Array B**	**37.68**	**339**	P	**P**	**18 34 13.9**	**-0.6**
	comp=Z,2nm,0.8s,mb3.9,baz=146,slow=8.4,SNR=4.6						
FINES	**FINESS Array B**	**37.68**	**339**	P	**P**	**18 34 13.9**	**-0.6**
NOA	**NORSAR Array B**	**42.92**	**332**	P	**P**	**18 34 56.5**	**-1.4**
	comp=Z,0.5nm,0.6s,mb3.4,baz=120,slow=8.1,SNR=4.5						
NOA				LR	LR	18 52 46.6	
	comp=Z,15nm,20.2s,baz=265,slow=36						
NOA	**NORSAR Array B**	**42.92**	**332**	P	**P**	**18 34 56.5**	**-1.4**
CHTO	**Chiang Mai**	**43.08**	**92**	*e*P	**P**	**18 34 59.2**	**-0.5**
CHTO	**Chiang Mai**	**43.08**	**92**	*e*P	**P**	**18 34 59.2**	**-0.5**
ULN	**Ulaanbaatar**	**45.92**	**49**	P	**P**	**18 35 19.5**	**-2.6**
	comp=Z,2.2nm,1.2s,mb4.0						
ULN	**Ulaanbaatar**	**45.92**	**49**	P	**P**	**18 35 19.5**	**-2.6**
	comp=Z,2.2nm,1.2s,mb4.0						
TORD	**Torodi Ar. Bea**	**49.80**	**263**	P	**P**	**18 35 52.9**	**+0.2**
	comp=Z,1.1nm,0.8s,mb3.9,baz=62,slow=7.9,SNR=4.7						

IDC 15 18:41:48.6±1.5, 83.˚78N×112.˚85E, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.4/21, mbtmp3.5/3, MS2.8/2, Ms1 2.8/2, ms1mx2.4/26, Error ellipse: s-maj=98.2km s-min=26.2km az=133.0, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPITS	**Spitsbergen Ar**	**14.04**	**302**	LR	LR	18 49 52.1	
	comp=Z,37nm,18.3s,baz=0.0,slow=34						
ILAR	**Eielson Array**	**27.16**	**68**	P	P	18 47 33.0	+0.1
	0.2nm,0.6s,baz=346,slow=10,SNR=3.5						
ZALV	**Zalesovo Beam**	**30.83**	**213**	LR	LR	19 03 01.6	
	comp=Z,16nm,18.4s,baz=60,slow=41						
MKAR	**Makanchi Array**	**38.11**	**214**	P	P	18 49 08.6	0.0
	1.1nm,0.9s,baz=14,slow=7.8,SNR=7.7						
TXAR	**Lajitas Array**	**55.93**	**35**	P	P	18 52 36.0	+0.2
	0.6nm,0.7s,baz=1.9,slow=3.8,SNR=8.5						

IDC ***15*** *18:58:30.7±3.0, 12.˚55N×123.˚64E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/19, mbtmp3.6/4, MS3.5/2, Ms1 3.5/2, ms1mx2.9/30, Error ellipse: s-maj=299.6km s-min=21.6km az=64.0*
ISCJB ***15*** *18:58:33.0±2.3, 13.˚2N±0.˚1×124.˚7E±0.˚2, h45km±21km, mb3.6/4, Error ellipse: s-maj=30.0km s-min=13.9km az=154.2*
MAN ***15*** *18:58:37, 13.˚22N×124.˚19E, h87km, mb4.8, ML3.7, MS3.7*

ISC 15 18:58:34.5±2.3, 13.˚1N±0.˚1×124.˚7E±0.˚2, h38km±22km, n14, σ1°18/14, mb3.6/4, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMPH	**Masbate**	**1.28**	**234**	*e*P	**Pn**	**18 58 50.4**	**-5.4**
MMPH				*e*S	**Sn**	**18 59 04.7**	**-7.1**
AUQP	**San Andres**	**1.96**	**276**	*e*P	**Pn**	**18 59 04.3**	**-0.9**
OCLP	**Ormoc**	**2.06**	**182**	*e*P	**Pn**	**18 59 13.7**	**+7.0**
GQP	**Guinayangan**	**2.30**	**290**	*e*P	**Pn**	**18 59 08.3**	**-1.7**
GQP				*e*S	**Sn**	**18 59 36.5**	**-0.7**
BOAC	**Boac**	**2.78**	**277**	*e*P	**Pn**	**18 59 17.3**	**+0.8**
POLP	**Polilio Island**	**3.10**	**301**	*e*P	**Pn**	**18 59 23.4**	**+2.4**
GUIM	**Jordan**	**3.21**	**220**	*e*P	**Pn**	**18 59 24.1**	**+1.6**
CAUP	**Cauayan**	**4.69**	**324**	*e*P	**Pn**	**18 59 42.3**	**-0.5**
DAV	**Davao City (W)**	**6.08**	**172**	LR	LR	19 02 51.4	
	comp=Z,206nm,18.8s,baz=22,slow=45						
WRA	**Warramunga Arr**	**34.20**	**164**	P	**P**	**19 05 15.1**	**-1.5**
	0.4nm,0.6s,mb3.5,baz=341,slow=9.1,SNR=4.8						
ASAR	**Alice Springs**	**37.66**	**166**	P	**P**	**19 05 45.9**	**-0.2**
	0.4nm,0.4s,mb3.5,baz=340,slow=7.1,SNR=16						
MKAR	**Makanchi Array**	**48.83**	**322**	P	**P**	**19 07 16.6**	**+0.6**
	0.9nm,0.7s,mb3.9,baz=125,slow=8.4,SNR=11						
BVAR	**Borovoye Array**	**58.45**	**325**	P	**P**	**19 08 27.2**	**+0.9**
	0.3nm,0.6s,mb3.5,baz=124,slow=7.9,SNR=4.0						
JMIC	**Jan Mayen**	**90.31**	**346**	LR	LR	19 53 47.7	
	comp=Z,41nm,18.3s,baz=263,slow=37						

IDC 15 19:05:51.5±2.6, 13.˚04N×124.˚60E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.2/18, mbtmp3.3/4, Error ellipse: s-maj=263.9km s-min=23.3km az=66.0, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**34.15**	**164**	P	P	19 12 37.9	-0.5
	0.2nm,0.6s,baz=344,slow=8.1,SNR=3.4						
ASAR	**Alice Springs**	**37.60**	**166**	P	P	19 13 08.5	+0.5
	0.2nm,0.3s,baz=340,slow=6.9,SNR=5.0						
MKAR	**Makanchi Array**	**48.85**	**322**	P	P	19 14 38.7	-0.1
	0.2nm,0.7s,baz=131,slow=7.1,SNR=3.6						
ZALV	**Zalesovo Beam**	**51.43**	**331**	P	P	19 14 58.3	+0.1
	0.2nm,0.3s,baz=170,slow=9.0,SNR=3.6						

IDC ***15*** *19:08:58.5±0.7, 12.˚85N×124.˚21E, h0km, mb3.8/11, mb1 4.0/11, mb1mx3.9/20, mbtmp3.8/11, MS3.1/1, Ms1 3.1/1, ms1mx2.6/29, Error ellipse: s-maj=37.8km s-min=14.1km az=71.0*
NEIC ***15*** *19:08:59.8±0.6, 12.˚93N×124.˚44E, h10km, mb4.4/7, Error ellipse: s-maj=20.8km s-min=11.1km az=62.0*
ISCJB ***15*** *19:09:00.5±1.1, 13.˚03N±0.˚03×124.˚56E±0.˚06, h25km±8km, mb4.0/18, Error ellipse: s-maj=9.3km s-min=5.4km az=171.2*
MAN ***15*** *19:09:00, 13.˚20N×124.˚62E, h9km, mb4.8, ML3.7, MS3.7*

ISC 15 19:09:03.4±1.1, 12.˚98N±0.˚03×124.˚49E±0.˚05, h32km±9km, n41, σ1°11/45, mb4.0/18, 1C-2D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.49**	**160**	*e*P	**Pb**	**19 09 13.6**	**-0.2**
PVCP	**Virac**	**0.69**	**332**	*e*P	**Pn**	**19 09 11.9**	**-5.0**
MMPH	**Masbate**	**1.04**	**234**	*e*P	**Pn**	**19 09 19.8**	**-1.9**
MMPH				*e*S	**Sn**	**19 09 33.9**	**-1.3**
AUQP	**San Andres**	**1.80**	**281**	*e*P	**Pn**	**19 09 33.2**	**+1.1**
OCLP	**Ormoc**	**1.92**	**176**	*e*P	**Pn**	**19 09 35.8**	**+2.0**
GQP	**Guinayangan**	**2.19**	**295**	*e*P	**Pn**	**19 09 37.5**	**0.0**
GQP				*e*S	**Sn**	**19 10 05.9**	**+2.4**
RCP	**Roxas**	**2.21**	**231**	*e*P	**Pn**	**19 09 37.4**	**-0.3**
RCP				*e*S	**Sn**	**19 10 08.5**	**+4.5**
BOAC	**Boac**	**2.62**	**281**	*e*P	**Pn**	**19 09 45.1**	**+1.7**
LLP	**Lapu-Lapu**	**2.69**	**191**	*e*P	**Pn**	**19 09 43.8**	**-0.7**
LLP				*e*S	**Sn**	**19 10 15.9**	**0.0**
GUIM	**Jordan**	**2.98**	**219**	*e*P	**Pn**	**19 09 49.0**	**+0.6**
POLP	**Polilio Island**	**3.02**	**305**	*e*P	**Pn**	**19 09 49.7**	**+0.7**
TGY	**Tagaytay City**	**3.63**	**288**	Pn	**Pn**	**19 09 58.9**	**+1.6**
	82nm,0.3s,baz=198,slow=11,SNR=2.8						
BALP	**Baler**	**3.94**	**315**	*e*P	**Pn**	**19 09 59.8**	**-1.7**
CUYO	**Cuyo Island**	**4.00**	**238**	*e*P	**Pn**	**19 10 02.0**	**-0.4**
LUBP	**Lubang**	**4.20**	**281**	*e*P	**Pn**	**19 10 09.5**	**+4.4**
PALP	**Palanan**	**4.52**	**334**	*e*P	**Pn**	**19 10 09.0**	**-0.6**
CAUP	**Cauayan**	**4.71**	**327**	*e*P	**Pn**	**19 10 10.8**	**-1.4**
BUKP	**Musuan**	**5.10**	**174**	*e*P	**Pn**	**19 10 21.9**	**+4.3**
PAGZ	**Pagadian**	**5.21**	**192**	*e*P	**Pn**	**19 10 20.9**	**+1.8**
APYP	**Conner**	**5.78**	**328**	*e*P	**Pn**	**19 10 25.8**	**-1.1**
ABRA	**Dolores**	**5.90**	**322**	*e*P	**Pn**	**19 10 28.5**	**-0.1**
KSRS	**Korea Array**	**24.57**	**7**	P	**P**	**19 14 21.0**	**+0.7**
	1.3nm,0.6s,mb3.7,baz=181,slow=9.6,SNR=5.3						
KSRS				LR	LR	19 23 20.8	
	comp=Z,43nm,21.4s,baz=200,slow=35						
CMAR	**Chiang Mai Arr**	**25.17**	**286**	P	**P**	**19 14 22.8**	**-3.3**
	0.3nm,0.4s,mb3.2,baz=104,slow=6.6,SNR=5.1						
FITZ	**Fitzroy Crossi**	**30.90**	**178**	P	**P**	**19 15 16.7**	**-0.5**
	3.3nm,1.0s,mb4.1,baz=95,slow=21,SNR=6.3						
WRA	**Warramunga Arr**	**34.12**	**163**	P	**P**	**19 15 43.9**	**-1.4**
	0.4nm,0.3s,mb3.8,baz=345,slow=7.8,SNR=17						
WRA				PcP	PcP	19 18 21.6	-0.7
	0.7nm,0.7s,baz=333,slow=3.0,SNR=6.2						
ASAR	**Alice Springs**	**37.56**	**166**	P	**P**	**19 16 14.8**	**-0.1**
	1.1nm,0.3s,mb4.0,baz=343,slow=7.1,SNR=46						
ULN	**Ulaanbaatar**	**37.70**	**341**	*e*P	**P**	**19 16 16.2**	**+0.4**
	3.3nm,0.9s,mb4.1						
SONM	**Songino Array**	**37.89**	**340**	P	**P**	**19 16 17.9**	**+0.6**
	0.6nm,0.6s,mb3.5,baz=168,slow=10,SNR=5.7						
STKA	**Stephens Creek**	**47.52**	**160**	*e*P	**P**	**19 17 35.9**	**+0.3**
STKA	**Stephens Creek**	**47.52**	**160**	P	**P**	**19 17 36.1**	**+0.5**
	2.4nm,0.8s,mb4.3,baz=316,slow=7.7,SNR=3.5						
MK31	**Makanchi Array**	**48.83**	**322**	*e*P	**P**	**19 17 46.4**	**+0.7**
MKAR	**Makanchi Array**	**48.83**	**322**	P	**P**	**19 17 46.1**	**+0.5**
	2.3nm,0.7s,mb4.3,baz=120,slow=8.4,SNR=27						
ZALV	**Zalesovo Beam**	**51.43**	**331**	P	**P**	**19 18 04.8**	**-0.3**
	0.7nm,0.7s,mb3.7,baz=100,slow=8.1,SNR=3.8						
KURK	**Kurchatov**	**52.86**	**325**	*e*P	**P**	**19 18 15.2**	**-0.7**
	4.1nm,0.8s,mb4.4						
BVAR	**Borovoye Array**	**58.46**	**325**	P	**P**	**19 18 55.7**	**-0.3**
	1.1nm,0.8s,mb4.0,baz=116,slow=8.4,SNR=6.7						
BRVK	**Borovoye**	**58.53**	**325**	*e*P	**P**	**19 18 54.8**	**-1.8**
	2.9nm,0.9s,mb4.3						
ABKAR	**Akbulak array**	**63.70**	**319**	*e*P	**P**	**19 19 30.5**	**-1.2**
	2.6nm,1.0s,mb4.2						
ARU	**Arti**	**66.02**	**326**	*e*P	**P**	**19 19 45.7**	**-1.0**
	2.5nm,0.6s,mb4.4						
BPAW	**Bear Paw Mtn.**	**76.04**	**27**	*e*P	**P**	**19 20 48.5**	**+1.2**
	3.5nm,0.9s,mb4.3						
COLD	**Coldfoot**	**76.32**	**24**	P	**P**	**19 20 49.2**	**+0.4**
	10nm,1.6s,mb4.5						
ILAR	**Eielson Array**	**77.78**	**26**	P	**P**	**19 20 58.5**	**+1.5**
	0.2nm,0.7s,mb3.1,baz=270,slow=5.4,SNR=3.5						

ISK ***15*** *19:22:43.8, 36.˚94N×29.˚24E, h5km, MD2.5*
ISCJB ***15*** *19:22:44.2±0.8, 36.˚97N±0.˚04×29.˚23E±0.˚04, h0km±11km, Error ellipse: s-maj=7.3km s-min=6.0km az=173.0*
CSEM ***15*** *19:22:44.6±0.2, 36.˚99N×29.˚28E, h12km, MD2.5, Error ellipse: s-maj=4.1km s-min=3.1km az=27.0*
DDA ***15*** *19:22:45.2, 37.˚05N×29.˚23E, h7km±7km, Md2.8*

ISC 15 19:22:44.8±0.7, 36.˚98N±0.˚04×29.˚25E±0.˚05, h10km±9km, n18, σ0°75/29, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.27**	**48**	*e*PG	**Pg**	**19 22 49.6**	**-0.6**
GLHS				*e*SG	**Sg**	**19 22 55.3**	**+1.5**
GLHS	**Glhisar (BURDU**	**0.27**	**48**	*e*Pg	**Pg**	**19 22 49.6**	**-0.6**
GLHS				*e*Sg	**Sg**	**19 22 55.3**	**+1.4**
GOLH	**Golhisar**	**0.36**	**44**	*i* P	**Pg**	**19 22 50.3**	**-1.7**
GOLH				*i* S	**Sg**	**19 22 57.3**	**+0.6**
GOLH	**Golhisar**	**0.36**	**44**	*i* P	**Pg**	**19 22 50.3**	**-1.6**
GOLH				*i* S	**Sg**	**19 22 57.3**	**+0.5**
ELL	**Elmali**	**0.58**	**113**	*e*PG	**Pg**	**19 22 55.2**	**-0.8**
ELL	**Elmali**	**0.58**	**113**	*e*Pg	**Pg**	**19 22 55.2**	**-0.8**
DNZL	**Cakiroluk**	**0.73**	**347**	*i* P	**Pg**	**19 22 59.5**	**+0.6**
DNZL				*i* S	**Sg**	**19 23 07.8**	**-0.7**
DNZL	**Cakiroluk**	**0.73**	**347**	*i* P	**Pg**	**19 22 59.5**	**+0.6**
DNZL				*i* S	**Sg**	**19 23 07.8**	**-0.7**
YER	**Yerkesik**	**0.79**	**282**	*e*PG	**Pg**	**19 23 00.4**	**+0.4**
YER				*e*SG	**Sg**	**19 23 09.9**	**-0.3**
YER	**Yerkesik**	**0.79**	**282**	*e*Pg	**Pg**	**19 23 00.4**	**+0.4**
YER				*e*Sg	**Sg**	**19 23 10.0**	**-0.3**
AKAS	**Kas**	**0.79**	**159**	*i* P	**Pg**	**19 23 00.7**	**+0.6**
AKAS				*i* S	**Sg**	**19 23 15.9**	**+5.5**
AKAS	**Kas**	**0.79**	**159**	*i* P	**Pg**	**19 23 00.7**	**+0.6**
MLSB	**Milas**	**1.22**	**286**	*e*PN	**Pn**	**19 23 08.2**	**+0.3**
MLSB	**Milas**	**1.22**	**286**	*e*Pn	**Pn**	**19 23 08.2**	**+0.3**
AYDN	**Tasoluk**	**1.29**	**303**	*i* P	**Pn**	**19 23 08.3**	**-0.6**
AYDN				*i* S	**Sb**	**19 23 26.1**	**+0.4**
AYDN	**Tasoluk**	**1.29**	**303**	*i* P	**Pn**	**19 23 08.3**	**-0.6**
AYDN				*i* S	**Sb**	**19 23 26.1**	**+0.4**
DAT	**Datca**	**1.36**	**260**	*e*PN	**Pn**	**19 23 10.1**	**+0.3**
DAT	**Datca**	**1.36**	**260**	*e*Pn	**Pn**	**19 23 10.1**	**+0.2**

IDC ***15*** *19:36:18.9±1.2, 83.˚84N×112.˚16E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.7/23, mbtmp3.7/6, MS3.4/19, Ms1 3.5/19, ms1mx3.2/31, Error ellipse: s-maj=69.2km s-min=18.0km az=130.0*
ISCJB ***15*** *19:36:19.3±0.9, 83.˚6N±0.˚1×11.˚5E±.˚, h10km, mb3.7/8, MS3.4/19, Error ellipse: s-maj=30.3km s-min=12.0km az=39.1*
MOS ***15*** *19:36:19.5±1.3, 83.˚43N×115.˚93E, h10km, mb4.0/2, Error ellipse: s-maj=99.9km s-min=16.8km az=88.8*
NEIC ***15*** *19:36:21.4±0.9, 83.˚49N×115.˚40E, h10km, mb3.9/1, Error ellipse: s-maj=27.6km s-min=12.8km az=127.0*

ISC 15 19:36:21.4±0.9, 83.˚5N±0.˚1×11.˚5E±.˚, h10km, n26, σ1°03/13, mb3.7/8, MS3.4/19, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIXI	**Tiksi**	**12.21**	**159**	Pn	**Pn**	**19 39 13.4**	**-1.6**
RES	**Resolute Bay**	**21.31**	**22**	LR	LR	19 48 54.1	
	comp=Z,108nm,18.1s,MS3.3,baz=316,slow=36						
YAK	**Yakutsk**	**21.86**	**162**	*e*P	**P**	**19 41 14.1**	**+0.5**
YAK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
INK	**Inuvik**	**24.91**	**55**	P	**P**	**19 41 42.4**	**-1.5**
INK				P		19 41 42.6	
INK				LR	LR	19 50 55.7	
INK	**Inuvik**	**24.91**	**55**	P	**P**	**19 41 42.4**	**-1.5**
	comp=N,1.2nm,0.5s,mb3.7,baz=355,slow=11,SNR=2.6						
INK				LR	LR	19 50 55.7	
	comp=N,63nm,20.9s,MS3.1,baz=19,slow=35						
INK	**Inuvik**	**24.91**	**55**	P	**P**	**19 41 42.4**	**-1.5**
INK						19 41 42.6	

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILAR	**Eielson Array**	**27.00**	**69**	P	**P**	**19 42 04.2**	**+1.4**
	comp=N,1.2nm,1.1s,mb3.4,baz=355,slow=6.4,SNR=10						
ILAR				LR	LR	19 52 14.6	
	comp=N,88nm,19.3s,MS3.3,baz=351,slow=35						
BPAW	**Bear Paw Mtn.**	**27.21**	**73**	*e*P	**P**	**19 42 05.9**	**+1.2**
ZALV	**Zalesovo Beam**	**30.76**	**216**	LR	LR	19 55 54.9	
	comp=N,83nm,18.6s,MS3.4,baz=249,slow=38						
NOA	**NORSAR Array B**	**31.30**	**295**	LR	LR	19 56 18.4	
	comp=N,18nm,20.1s,MS2.7,baz=305,slow=39						
FRB	**Frobisher Bay**	**32.93**	**3**	LR	LR	19 54 57.1	
	comp=N,60nm,18.8s,MS3.3,baz=3.3,slow=34						
KDAK	**Kodiak Island**	**33.21**	**78**	LR	LR	19 56 58.2	
	comp=N,82nm,19.9s,MS3.4,baz=285,slow=37						
KURK	**Kurchatov**	**34.42**	**222**	P	**P**	**19 43 08.6**	**+0.2**
	comp=N,0.4nm,0.8s,mb3.4,baz=22,slow=7.1,SNR=4.5						
KURK				LR	LR	19 58 35.6	
	comp=N,36nm,19.9s,MS3.1,baz=340,slow=39						
DLBC	**Dease Lake**	**34.92**	**57**	LR	LR	19 56 16.9	
	comp=N,48nm,19.9s,MS3.2,baz=317,slow=34						
ULN	**Ulaanbaatar**	**35.87**	**189**	P	**P**	**19 43 20.9**	**+0.1**
	comp=N,1.9nm,1.0s,mb4.0						
ULN	**Ulaanbaatar**	**35.87**	**189**	P	**P**	**19 43 20.9**	**+0.1**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
SONM	**Songino Array**	**35.91**	**190**	P	**P**	**19 43 22.4**	**+1.1**
	comp=Z,1.3nm,1.1s,mb3.8,baz=359,slow=7.4,SNR=5.5						
SONM				LR	LR	19 59 53.8	
	comp=Z,32nm,18.1s,MS3.1,baz=78,slow=39						
AKTO	**Aktyubinsk**	**36.57**	**245**	LR	LR	19 59 39.4	
	comp=Z,75nm,21.8s,MS3.4,baz=10,slow=38						
MKAR	**Makanchi Array**	**38.05**	**217**	P	**P**	**19 43 39.0**	**-0.4**
	comp=Z,0.7nm,0.6s,mb3.6,baz=14,slow=7.4,SNR=8.9						
MKAR				LR	LR	20 00 46.1	
	comp=Z,78nm,18.6s,MS3.5,baz=14,slow=38						
SCHQ	**Schefferville**	**41.88**	**2**	LR	LR	20 00 48.7	
	comp=Z,56nm,21.8s,MS3.4,baz=316,slow=35						
ULM	**Lac du Bonnet**	**45.64**	**28**	LR	LR	20 04 58.6	
	comp=Z,50nm,18.8s,MS3.5,baz=357,slow=38						
KSRS	**Korea Array**	**46.37**	**166**	LR	LR	20 06 29.2	
	comp=Z,23nm,20.4s,MS3.1,baz=345,slow=39						
SADO	**Sadowa**	**51.77**	**13**	LR	LR	20 06 29.6	
	comp=Z,102nm,19.5s,MS3.9,baz=51,slow=35						
YBH	**Yreka Blue Hor**	**52.14**	**54**	LR	LR	20 05 51.8	
	comp=Z,87nm,19.6s,MS3.8,baz=13,slow=34						
CMAR	**Chiang Mai Arr**	**65.40**	**197**	LR	LR	20 17 17.5	
	comp=Z,87nm,20.3s,MS3.9,baz=196,slow=38						
TXAR	**Lajitas Array**	**65.99**	**37**	P	**P**	**19 47 06.3**	**-1.1**
	comp=Z,0.8nm,0.6s,mb3.9,baz=38,slow=5.0,SNR=8.9						
TXAR				LR	LR	20 16 30.2	
	comp=Z,66nm,18.8s,MS3.9,baz=180,slow=37						

ISCJB ***15*** *19:36:59.1±0.5, 31.˚42N±0.˚04×77.˚58E±0.˚04, h38km±9km, mb3.3/3, Error ellipse: s-maj=6.1km s-min=5.9km az=11.0*
NDI ***15*** *19:36:59.4±3.1, 31.˚38N×77.˚61E, h12km±12km, ML2.9*
IDC ***15*** *19:37:00.3±12.0, 31.˚85N×76.˚75E, h0km, mb3.3/3, mb1 3.3/5, mb1mx3.2/25, mbtmp3.3/5, ML3.1/2, Error ellipse: s-maj=212.6km s-min=62.9km az=142.0*

ISC 15 19:36:59.6±0.7, 31.˚41N±0.˚03×77.˚61E±0.˚04, h21km±6km, n18, σ1°28/29, mb3.3/3, 2D, Northern India

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMLA	**Simla**	**0.47**	**234**	*

HORT	**Hortiatis**	**0.71**	**247**	P	**Pg**	**19 48 36.8**	**-0.1**
HORT				S	**Sg**	**19 48 46.9**	**+0.5**
HORT	**Hortiatis**	**0.71**	**247**	P	**Pg**	**19 48 36.8**	**-0.1**
HORT				S	**Sg**	**19 48 46.9**	**+0.5**
KNT	**Kendrikon**	**0.85**	**289**	P	**Pg**	**19 48 39.5**	**0.0**
KNT				S	**Sg**	**19 48 51.1**	**+0.3**
KNT	**Kendrikon**	**0.85**	**289**	P	**Pg**	**19 48 39.5**	**0.0**
KNT				S	**Sg**	**19 48 51.1**	**+0.3**
PAIG	**Paliouri**	**0.98**	**193**	P	**Pg**	**19 48 41.3**	**-0.6**
PAIG				S	**Sg**	**19 48 54.7**	**0.0**
PAIG	**Paliouri**	**0.98**	**193**	P	**Pg**	**19 48 41.3**	**-0.6**
PAIG				S	**Sg**	**19 48 54.7**	**0.0**
VAY	**Valandovo**	**1.14**	**293**	*e*Pg	**Pg**	**19 48 43.6**	**-1.3**
VAY				*e*Sg	**Sg**	**19 48 58.9**	**-1.0**
VAY				*e*Lg		19 49 00.8	
	comp=N,10nm,0.3s						
VAY				*e*Lg		19 49 00.9	
	comp=E,12nm,0.3s						
RDO	**Rodhopi**	**1.22**	**77**	*e*Pb	**Pb**	**19 48 46.1**	**+0.6**
RDO	**Rodhopi**	**1.22**	**77**	*e*PB	**Pb**	**19 48 46.1**	**+0.6**
RDO	**Rodhopi**	**1.22**	**77**	*e*Pb	**Pb**	**19 48 46.1**	**+0.6**
ALN	**Alexandroupoli**	**1.58**	**89**	*e*Pg	**Pn**	**19 48 50.2**	**+0.2**
ALN	**Alexandroupoli**	**1.58**	**89**	*e*PG	**Pn**	**19 48 50.2**	**+0.2**
ALN	**Alexandroupoli**	**1.58**	**89**	*e*Pg	**Pn**	**19 48 50.2**	**+0.2**

MAN 15 20:11:02.8 13.N×126.55.E, h31 km, mb 4.6, ML 3.5, MS 3.5, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.21**	**194**	*e*P	Pn	20 11 22.1	-0.7
BUTP	**Butuan**	**1.24**	**312**	*e*P	Pn	20 11 24.1	+0.8
DMPH	**Davao City--Mi**	**1.47**	**225**	‖*i*P	Pn	20 11 27.9	+1.6
DMPH				*i* S	Sn	20 11 41.1	-3.3
BUKP	**Musuan**	**1.49**	**261**	*e*P	Pn	20 11 27.6	+1.0
CGP	**Cagayan de Oro**	**1.86**	**280**	‖*i*P	Pn	20 11 32.4	+0.6
CGP				*i* S	Sn	20 11 54.0	-0.3
PAGZ	**Pagadian**	**3.15**	**265**	*e*P	Pn	20 11 51.4	+1.9

IDC **15** *20:33:11.5±7.4, 35°.27S×179°.07E, h180 km±64 km, mb 3.3/3, mb1 3.5/4, mb1mx3.3/13, mbtmp3.2/4, Error ellipse: s-maj=85.7 km s-min=31.2 km az=21.0*

ISCJB **15** *20:33:13.7±1.5, 35°.6S±0°.2×178°.9E±0°.2, h218 km±17 km, mb 3.3/3, Error ellipse: s-maj=32.2 km s-min=18.5 km az=159.1*

NEIC **15** *20:33:15.1, 35°.60S×178°.78E, h226 km, MG 4.1 (WEL), After WEL.*

WEL **15** *20:33:15.6±0.7, 35°.61S×178°.84E, h217 km±16 km, ML 4.0/8, Error ellipse: s-maj=16.4 km s-min=12.6 km az=90.0*

ISC 15 20:33:14.5±1.5, 35°.6S±0°.2×179°.0E±0°.2, h213 km±16 km, n30, σ0§94/38, mb 3.3/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.05**	**195**	PN	**Pn**	**20 33 54.7**	**+0.3**
MXZ				SN	**S**	**20 34 24.5**	**-1.3**
PUZ	**Puketiti**	**2.56**	**193**	PN	**Pn**	**20 34 00.2**	**+0.5**
PUZ				SN	**S**	**20 34 34.6**	**-0.7**
PUZ	**Puketiti**	**2.56**	**193**	P	**Pn**	**20 34 00.2**	**+0.5**
PUZ				S	**S**	**20 34 35.6**	**+0.3**
CNGZ	**Carnagh Statio**	**2.96**	**192**	PN	**Pn**	**20 34 05.5**	**+1.2**
CNGZ				SN	**S**	**20 34 43.7**	**+0.1**
MWZ	**Matawai**	**2.98**	**202**	PN	**Pn**	**20 34 05.6**	**+1.0**
MWZ				SN	**S**	**20 34 44.8**	**+0.9**
MWZ	**Matawai**	**2.98**	**202**	P	**Pn**	**20 34 05.6**	**+1.1**
URZ	**Urewera**	**3.06**	**208**	PN	**Pn**	**20 34 05.6**	**+0.2**
URZ				SN	**S**	**20 34 45.1**	**-0.5**
URZ	**Urewera**	**3.06**	**208**	P	**Pn**	**20 34 05.6**	**+0.2**
URZ				*e*Sn	**S**	**20 34 44.6**	**-1.0**
URZ	**Urewera**	**3.06**	**208**	P	**Pn**	**20 34 05.5**	**0.0**
	2.5nm,0.3s,baz=27,slow=11,SNR=18						
URZ				S	**S**	**20 34 46.3**	**+0.7**
	5.6nm,0.3s,baz=77,slow=20,SNR=7.7						
PRGZ	**Paritu Road**	**3.45**	**194**	PN	**Pn**	**20 34 10.3**	**+0.3**
KNZ	**Kokohu**	**3.59**	**196**	PN	**Pn**	**20 34 11.7**	**0.0**
KNZ	**Kokohu**	**3.59**	**196**	P	**Pn**	**20 34 11.7**	**0.0**
RAHZ	**Arahi**	**3.66**	**204**	PN	**Pn**	**20 34 13.1**	**+0.6**
MHGZ	**Mahia Peninsul**	**3.67**	**193**	PN	**Pn**	**20 34 13.2**	**+0.6**
NMHZ	**Naumai**	**3.91**	**205**	PN	**Pn**	**20 34 16.4**	**+0.9**
BKZ	**Black Stump Fm**	**4.09**	**208**	PN	**Pn**	**20 34 18.6**	**+0.9**
BHHZ	**Black Hill Sta**	**4.54**	**210**	PN	**Pn**	**20 34 23.3**	**0.0**
TSZ	**Takapari Road**	**5.07**	**207**	PN	**Pn**	**20 34 29.2**	**-0.7**
MRZ	**Mangatainoka R**	**5.74**	**207**	PN	**Pn**	**20 34 37.0**	**-1.5**
MRZ	**Mangatainoka R**	**5.74**	**207**	P	**Pn**	**20 34 37.0**	**-1.4**
HOWZ	**Holdsworth Sta**	**5.97**	**206**	PN	**Pn**	**20 34 39.8**	**-1.6**
OGWZ	**Otaki Gorge**	**6.03**	**209**	PN	**Pn**	**20 34 40.9**	**-1.3**
OGWZ	**Otaki Gorge**	**6.03**	**209**	P	**Pn**	**20 34 40.9**	**-1.2**
KIW	**Kapiti Island**	**6.17**	**210**	PN	**Pn**	**20 34 42.6**	**-1.4**
KIW	**Kapiti Island**	**6.17**	**210**	P	**Pn**	**20 34 42.6**	**-1.4**
RAR	**Rarotonga**	**23.48**	**58**	*e*P	**P**	**20 38 03.2**	**-1.9**
ASAR	**Alice Springs**	**40.61**	**274**	P	**P**	**20 40 34.6**	**+0.9**
	0.2nm,0.4s,mb2.9,baz=116,slow=7.6,SNR=10						
WRA	**Warramunga Arr**	**42.08**	**280**	P	**P**	**20 40 45.5**	**-0.2**
WRA	**Warramunga Arr**	**42.08**	**280**	P	**P**	**20 40 45.5**	**-0.2**
	0.2nm,0.4s,mb2.9,baz=119,slow=6.8,SNR=8.0						
LPAZ	**La Paz**	**98.24**	**117**	P	**P**	**20 46 29.4**	**+1.5**
	0.4nm,0.5s,mb4.0,baz=243,slow=4.5,SNR=2.4						

IDC 15 20:34:59.8±2.4, 9.07N×92.28E, h0 km, mb 3.3/4, mb1 3.4/5, mb1mx3.3/20, mbtmp3.2/5, ML 3.0/1, MS 3.1/2, Ms1 3.1/2, ms1mx2.6/14, Error ellipse: s-maj=74.9 km s-min=23.5 km az=69.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.35**	**34**	Pn	Pn	20 37 44.1	+0.8
	0.0nm,0.3s,baz=222,slow=13,SNR=2.9						
MKAR	**Makanchi Array**	**38.55**	**349**	P	P	20 42 24.4	+0.3
	0.2nm,0.3s,baz=161,slow=9.2,SNR=3.8						
MKAR				LR	LR	21 02 50.8	
	comp=Z,31nm,18.3s,baz=181,slow=43						
SONM	**Songino Array**	**40.44**	**15**	P	P	20 42 39.4	-0.5
	0.2nm,0.5s,baz=188,slow=9.9,SNR=2.8						
ZALV	**Zalesovo Beam**	**45.16**	**354**	LR	LR	21 04 29.2	
	comp=Z,22nm,19.5s,baz=156,slow=39						
WRA	**Warramunga Arr**	**50.45**	**125**	P	P	20 43 59.6	+0.1
	0.5nm,0.9s,baz=304,slow=8.6,SNR=5.9						
ASAR	**Alice Springs**	**52.09**	**129**	P	P	20 44 11.8	0.0
	0.9nm,1.2s,baz=301,slow=7.4,SNR=2.7						

ISCJB **15** *20:48:26.3±0.5, 37°.93N±0°.02×21°.49E±0°.03, h5 km±5 km, Error ellipse: s-maj=4.1 km s-min=3.8 km az=37.4*

CSEM **15** *20:48:26.1±0.2, 37°.92N×21°.47E, h12 km, MD3.1, Error ellipse: s-maj=4.0 km s-min=3.8 km az=76.0*

ATH **15** *20:48:26.9, 37°.98N×21°.57E, h21 km±2 km, MD3.1/8*

THE **15** *20:48:26.7, 37°.94N×21°.50E, h5 km±1 km, ML 2.0/7, Error ellipse: s-maj=1.5 km s-min=0.6 km az=345.0*

ISC 15 20:48:26.9±0.5, 37°.94N±0°.02×21°.50E±0°.03, h13 km±4 km, n44, σ1§00/77, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.12**	**350**	*e*PB	**Pg**	**20 48 30.9**	**+0.7**
RLS				*e*SB	**Sg**	**20 48 34.5**	**+2.0**
RLS	**Riolos of Patr**	**0.12**	**350**	*e*Pb	**Pg**	**20 48 30.9**	**+0.7**
RLS				*e*Sb	**Sg**	**20 48 34.5**	**+2.0**
UPR	**University Cam**	**0.42**	**33**	*e*PB	**Pg**	**20 48 34.8**	**-0.4**
UPR	**University Cam**	**0.42**	**33**	P	**Pg**	**20 48 35.0**	**-0.2**
UPR				S	**Sg**	**20 48 41.3**	**+0.5**
UPR	**University Cam**	**0.42**	**33**	P	**Pg**	**20 48 35.0**	**-0.2**
UPR				S	**Sg**	**20 48 41.3**	**+0.5**
LAKA	**Lakka**	**0.49**	**51**	P	**Pg**	**20 48 36.0**	**-0.5**
LAKA				S	**Sg**	**20 48 43.4**	**+0.4**
LAKA	**Lakka**	**0.49**	**51**	P	**Pg**	**20 48 36.0**	**-0.5**
LAKA				S	**Sg**	**20 48 43.4**	**+0.4**
KFL	**Anninata**	**0.58**	**287**	P	**Pg**	**20 48 37.9**	**-0.4**
KFL	**Anninata**	**0.58**	**287**	P	**Pg**	**20 48 37.9**	**-0.4**
EFP	**Efpalio**	**0.59**	**33**	*e*PN	**Pg**	**20 48 37.5**	**-0.9**
EFP				*e*SN	**Sg**	**20 48 44.5**	**-1.7**
EFP	**Efpalio**	**0.59**	**33**	P	**Pg**	**20 48 37.5**	**-0.9**
EFP				S	**Sg**	**20 48 46.4**	**+0.2**
EFP	**Efpalio**	**0.59**	**33**	P	**Pg**	**20 48 37.5**	**-0.9**
EFP				S	**Sg**	**20 48 46.4**	**+0.2**
TRIZ	**Trizonia**	**0.63**	**47**	P	**Pg**	**20 48 38.2**	**-0.9**
TRIZ				S	**Sg**	**20 48 47.7**	**+0.3**
TRIZ	**Trizonia**	**0.63**	**47**	P	**Pg**	**20 48 38.2**	**-0.9**
TRIZ				S	**Sg**	**20 48 47.7**	**+0.3**
GUR	**Goura**	**0.67**	**90**	*e*PN	**Pg**	**20 48 38.9**	**-1.0**
GUR				*e*SN	**Sg**	**20 48 47.5**	**-1.3**
GUR	**Goura**	**0.67**	**90**	P	**Pg**	**20 48 38.9**	**-1.0**
GUR				S	**Sg**	**20 48 49.4**	**+0.6**
GUR	**Goura**	**0.67**	**90**	P	**Pg**	**20 48 38.9**	**-1.0**
GUR				*e*Sn	**Sg**	**20 48 47.5**	**-1.3**
GUR				S	**Sg**	**20 48 49.4**	**+0.6**
KALE	**Kalithea**	**0.68**	**48**	P	**Pg**	**20 48 39.2**	**-1.0**
KALE				S	**Sg**	**20 48 50.0**	**+0.8**
KALE	**Kalithea**	**0.68**	**48**	P	**Pg**	**20 48 39.2**	**-1.0**
KALE				S	**Sg**	**20 48 50.0**	**+0.8**
VLS	**Valsamata**	**0.75**	**289**	P	**Pg**	**20 48 40.2**	**-1.3**
VLS				S	**Sg**	**20 48 52.7**	**+1.3**
VLS	**Valsamata**	**0.75**	**289**	P	**Pg**	**20 48 40.2**	**-1.3**
VLS				S	**Sg**	**20 48 52.7**	**+1.3**
ITM	**Ithomi**	**0.83**	**155**	*e*PN	**Pg**	**20 48 41.6**	**-1.4**
ITM				*e*SN	**Sg**	**20 48 55.3**	**+1.5**
ITM	**Ithomi**	**0.83**	**155**	P	**Pg**	**20 48 42.6**	**-0.4**
ITM	**Ithomi**	**0.83**	**155**	*e*Pn	**Pg**	**20 48 41.6**	**-1.4**
ITM	**Ithomi**	**0.83**	**155**	P	**Pg**	**20 48 42.6**	**-0.4**
ITM				*e*Sn	**Sg**	**20 48 55.3**	**+1.5**
VLX	**Vlachokerasia**	**0.90**	**129**	*e*PN	**Pg**	**20 48 43.9**	**-0.4**
VLX	**Vlachokerasia**	**0.90**	**129**	P	**Pg**	**20 48 43.7**	**-0.6**
VLX				S	**Sg**	**20 48 56.9**	**+0.8**
VLX	**Vlachokerasia**	**0.90**	**129**	P	**Pg**	**20 48 43.7**	**-0.6**
VLX				S	**Sg**	**20 48 56.9**	**+0.8**
DSF	**Desfina**	**0.94**	**59**	P	**Pg**	**20 48 43.5**	**-1.6**
DSF				S	**Sg**	**20 48 57.1**	**-0.3**
DSF	**Desfina**	**0.94**	**59**	P	**Pg**	**20 48 43.5**	**-1.6**
DSF				S	**Sg**	**20 48 57.1**	**-0.3**
PYL	**PYLOS**	**1.06**	**169**	*e*PN	**Pg**	**20 48 47.3**	**0.0**
PYL	**PYLOS**	**1.06**	**169**	*e*Pn	**Pg**	**20 48 47.3**	**0.0**
LKD2	**Lefkada island**	**1.08**	**323**	P	**Pg**	**20 48 46.1**	**-1.5**
LKD2				S	**Sg**	**20 49 03.1**	**+1.4**
LKD2	**Lefkada island**	**1.08**	**323**	P	**Pg**	**20 48 46.1**	**-1.5**
LKD2				S	**Sg**	**20 49 03.1**	**+1.4**
LTK	**Loutraki**	**1.17**	**85**	*e*PN	**Pn**	**20 48 48.5**	**-0.4**
LTK	**Loutraki**	**1.17**	**85**	P	**Pb**	**20 48 47.9**	**-1.0**
LTK				S	**Sb**	**20 49 05.3**	**+1.3**
LTK	**Loutraki**	**1.17**	**85**	P	**Pb**	**20 48 47.9**	**-1.0**
LTK	**Loutraki**	**1.17**	**85**	*e*Pn	**Pn**	**20 48 48.5**	**-0.4**
LTK				S	**Sb**	**20 49 05.3**	**+1.3**
AGG	**Agios Georgios**	**1.27**	**31**	P	**Pn**	**20 48 49.6**	**-0.7**
AGG				S	**Sb**	**20 49 07.9**	**+1.0**
AGG	**Agios Georgios**	**1.27**	**31**	P	**Pn**	**20 48 49.6**	**-0.7**
AGG				S	**Sb**	**20 49 07.9**	**+1.0**
DID	**Didima**	**1.45**	**107**	*e*PN	**Pn**	**20 48 53.6**	**+0.8**
DID	**Didima**	**1.45**	**107**	P	**Pn**	**20 48 52.8**	**0.0**
DID				S	**Sn**	**20 49 13.3**	**+1.7**
DID	**Didima**	**1.45**	**107**	P	**Pn**	**20 48 52.8**	**0.0**
DID	**Didima**	**1.45**	**107**	*e*Pn	**Pn**	**20 48 53.6**	**+0.8**
DID				S	**Sn**	**20 49 13.3**	**+1.7**

ISCJB **15** *20:58:51.9±1.3, 2°.15S±0°.09×99°.38E±0°.07, h49 km±13 km, mb 3.5/5, Error ellipse: s-maj=16.1 km s-min=9.6 km az=34.2*

DJA **15** *20:58:53, 2°.06S×99°.37E, h51 km, MLv 3.2/6*

IDC **15** *20:58:54.9±3.8, 0°.75S×101°.43E, h0 km, mb 3.5/5, mb1 3.6/5, mb1mx3.5/17, mbtmp3.5/5, Error ellipse: s-maj=169.5 km s-min=24.2 km az=57.0*

ISC 15 20:58:52.9±1.4, 2°.15S±0°.08×99°.39E±0°.07, h36 km±15 km, n12, σ0§83/16, mb 3.5/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.87**	**340**	P	**Pn**	**20 59 08.9**	**+0.2**
SISI				S	**Sn**	**20 59 20.8**	**+0.6**
PDSI	**Padang**	**1.63**	**41**	P	**Pn**	**20 59 18.9**	**-0.2**
PDSI				S	**Sn**	**20 59 37.1**	**-1.8**
PPI	**Padang Panjang**	**1.96**	**31**	P	**Pn**	**20 59 23.7**	**0.0**
PPI				S	**Sn**	**20 59 48.6**	**+1.6**
SDSI	**Sungai Dareh**	**2.37**	**59**	P	**Pn**	**20 59 29.7**	**+0.4**
MNSI	**Mandailing Nat**	**2.93**	**4**	P	**Pn**	**20 59 37.2**	**+0.1**
GSI	**Gunungsitoli**	**3.88**	**332**	P	**Pn**	**20 59 49.8**	**-0.3**
GSI				S	**Sn**	**21 00 33.3**	**-1.2**
MDSI	**Maura Dua**	**5.31**	**116**	P	**Pn**	**21 00 10.2**	**+0.4**
WRA	**Warramunga Arr**	**38.44**	**120**	P	**P**	**21 06 11.2**	**-0.3**
	0.4nm,0.7s,mb3.3,baz=304,slow=9.0,SNR=3.4						
ASAR	**Alice Springs**	**39.66**	**126**	P	**P**	**21 06 21.1**	**-0.5**
	0.3nm,0.8s,mb3.1,baz=303,slow=7.6,SNR=4.1						
SONM	**Songino Array**	**50.15**	**6**	P	**P**	**21 07 40.9**	**-3.8**
	0.4nm,0.7s,mb3.5,baz=189,slow=8.3,SNR=3.3						
MKAR	**Makanchi Array**	**51.01**	**345**	P	**P**	**21 07 52.2**	**+1.0**
	0.6nm,0.7s,mb3.6,baz=160,slow=8.9,SNR=3.2						
ZALV	**Zalesovo Beam**	**57.20**	**350**	P	**P**	**21 08 36.6**	**+0.4**
	0.6nm,0.4s,mb4.0,baz=159,slow=6.2,SNR=3.4						

IDC **15** *21:08:45.3±10.0, 32°.48N×141°.29E, h0 km, mb 3.7/3, mb1 3.9/3, mb1mx3.4/20, mbtmp3.7/3, Error ellipse: s-maj=368.9 km s-min=31.2 km az=66.0*

ISCJB **15** *21:08:50.4±1.6, 32°.67N±0°.08×141°.2E±0°.2, h63 km±18 km, mb 3.8/3, Error ellipse: s-maj=23.2 km s-min=13.7 km az=0.7*

JMA **15** *21:08:50.4±0.3, 32°.68N×141°.27E, h68 km, M 3.3*

ISC 15 21:08:50.9±1.8, 32°.65N±0°.09×141°.3E±0°.2, h43 km±21 km, n11, σ0§54/15, mb 3.8/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.30**	**291**	P	**Pn**	**21 09 12.9**	**+0.3**
BSO1	**Boso 1**	**2.02**	**353**	P	**Pn**	**21 09 22.5**	**+0.1**
BSO1				*e*S	**Sn**	**21 09 46.6**	**+0.2**
BSO2	**Boso 2**	**2.14**	**349**	*e*S	**Sn**	**21 09 49.3**	**-0.2**
BSO3	**Boso 3**	**2.24**	**344**	P	**Pn**	**21 09 25.4**	**0.0**
BSO3				*e*S	**Sn**	**21 09 51.4**	**-0.5**
JIM2	**Oshima 2**	**2.57**	**324**	P	**Pn**	**21 09 30.0**	**0.0**
JOD2	**Odawara 2**	**3.18**	**326**	P	**Pn**	**21 09 38.6**	**+0.3**
JOD2				*e*S	**Sn**	**21 10 14.1**	**-0.8**
JRY	**Ryogami san**	**3.89**	**330**	P	**Pn**	**21 09 47.7**	**-0.4**
JRY				*e*S	**Sn**	**21 10 32.4**	**-0.1**
JAG	**Ashikaga**	**4.06**	**339**	P	**Pn**	**21 09 51.2**	**+0.8**
MKAR	**Makanchi Array**	**46.46**	**306**	P	**P**	**21 17 14.8**	**+1.3**
	0.3nm,0.2s,mb3.8,baz=86,slow=11,SNR=3.4						
WRA	**Warramunga Arr**	**52.71**	**188**	P	**P**	**21 18 00.5**	**-0.7**
	1.7nm,0.3s,mb4.0,baz=6.4,slow=7.6,SNR=9.0						
ASAR	**Alice Springs**	**56.43**	**188**	P	**P**	**21 18 27.7**	**-0.5**
	0.5nm,0.9s,mb3.5,baz=9.6,slow=6.1,SNR=3.2						

IDC 15 21:09:05.9±1.8, 4.82S×141.42E, h0 km, mb 3.1/2, mb1 3.5/3, mb1mx3.3/11, mbtmp3.2/3, ML 3.1/1, Error ellipse: s-maj=276.6 km s-min=32.0 km az=112.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.54**	**204**	Pn	Pn	21 12 58.9	-0.5
	0.1nm,0.3s,baz=24,slow=13,SNR=3.4						
ASAR	**Alice Springs**	**20.09**	**200**	P	P	21 13 41.5	+0.3
	0.5nm,0.7s,baz=30,slow=10,SNR=8.7						
ILAR	**Eielson Array**	**86.63**	**24**	P	P	21 21 51.0	+0.1
	0.2nm,0.7s,baz=260,slow=5.4,SNR=3.3						

IDC 15 21:21:11.2±2.3, 4.38N×127.02E, h0 km, mb 3.4/3, mb1 3.5/3, mb1mx3.3/18, mbtmp3.4/3, Error ellipse: s-maj=172.7 km s-min=28.3 km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.22**	**164**	P	P	21 26 38.8	-0.1
	0.4nm,0.4s,baz=344,slow=11,SNR=6.2						
ASAR	**Alice Springs**	**28.67**	**167**	P	P	21 27 10.1	+0.1
	0.2nm,0.7s,baz=349,slow=9.6,SNR=3.5						
MKAR	**Makanchi Array**	**57.19**	**325**	P	P	21 31 00.2	+0.1
	0.2nm,0.4s,baz=125,slow=7.9,SNR=3.7						

DDA **15** *21:21:21.8, 36°.98N×29°.14E, h7 km±3 km, Md 2.8*

ISK **15** *21:21:22.2, 37°.10N×29°.20E, h25 km, MD 2.6*

CSEM **15** *21:21:22.5±0.5, 37°.03N×29°.22E, h25 km±11 km, MD 2.6, Error ellipse: s-maj=12.9 km s-min=7.3 km az=31.0*

ISC 15 21:21:23.7±0.7, 37.04N±0°.06×29.18E±0°.05, h14 km±14 km, n12, σ1§20/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**65**	*e*PG	**Pg**	**21 21 28.4**	**-1.2**
GLHS				*e*SG	**Sg**	**21 21 34.0**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.28**	**65**	*e*Pg	**Pg**	**21 21 28.4**	**-1.2**
GLHS				*e*Sg	**Sg**	**21 21 34.0**	**+0.4**
GOLH	**Golhisar**	**0.36**	**57**	*i* P	**Pg**	**21 21 29.5**	**-1.6**
GOLH				*i* S	**Sg**	**21 21 36.6**	**+0.5**
GOLH	**Golhisar**	**0.36**	**57**	*i* P	**Pg**	**21 21 29.5**	**-1.6**
GOLH				*i* S	**Sg**	**21 21 36.6**	**+0.5**
ELL	**Elmali**	**0.65**	**116**	*e*PG	**Pg**	**21 21 36.1**	**-0.3**
ELL				*e*SG	**Sg**	**21 21 46.2**	**+1.1**
ELL	**Elmali**	**0.65**	**116**	*e*Pg	**Pg**	**21 21 36.1**	**-0.3**
ELL				*e*Sg	**Sg**	**21 21 46.2**	**+1.2**
DNZL	**Cakiroluk**	**0.66**	**351**	*i* P	**Pg**	**21 21 36.1**	**-0.5**
DNZL				*i* S	**Sg**	**21 21 46.8**	**+1.5**
DNZL	**Cakiroluk**	**0.66**	**351**	*i* P	**Pg**	**21 21 36.1**	**-0.5**
DNZL				*i* S	**Sg**	**21 21 46.8**	**+1.5**
YER	**Yerkesik**	**0.72**	**278**	*e*PG	**Pg**	**21 21 37.8**	**0.0**
YER				*e*SG	**Sg**	**21 21 47.6**	**+0.3**
YER	**Yerkesik**	**0.72**	**278**	*e*Pg	**Pg**	**21 21 37.8**	**0.0**
YER				*e*Sg	**Sg**	**21 21 47.6**	**+0.3**
AKAS	**Kas**	**0.87**	**157**	*i* P	**Pb**	**21 21 38.1**	**-2.5**
AKAS				*i* S	**Sb**	**21 21 54.4**	**+2.3**
AKAS	**Kas**	**0.87**	**157**	*i* P	**Pb**	**21 21 38.1**	**-2.5**
AKAS				*i* S	**Sb**	**21 21 54.4**	**+2.3**

ISCJB **15** *21:33:53.4±2.8, 15°.8N±0°.1×146°.9E±0°.2, h60 km±24 km, mb4.0/17, Error ellipse: s-maj=28.7 km s-min=17.2 km az=9.1*

NEIC **15** *21:33:53.9±2.6, 15°.77N×146°.89E, h50 km±23 km, mb4.3/4, Error ellipse: s-maj=23.3 km s-min=15.5 km az=84.0*

IDC **15** *21:33:55.6±3.5, 15°.77N×146°.83E, h61 km±31 km, mb3.6/13, mb1 3.7/14, mb1mx3.7/22, mbtmp3.6/14, ML 3.6/1, Error ellipse: s-maj=30.4 km s-min=16.6 km az=93.0*

ISC 15 21:33:55.0±2.7, 15.7N±0°.1×146.9E±0°.2, h59 km±24 km, n19, σ0§90/20, mb 4.0/17, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.92**	**223**	P	**Pn**	**21 34 37.7**	**-1.2**
	8.3nm,0.3s,baz=40,slow=19,SNR=3.3						
GUMO				S	**Sn**	**21 35 13.5**	**+0.7**
	30nm,0.3s,baz=7.2,slow=23,SNR=7.2						
KSRS	**Korea Array**	**27.40**	**326**	P	**P**	**21 39 35.7**	**+0.8**
	0.5nm,0.5s,mb3.4,baz=139,slow=9.0,SNR=3.3						
ASAJ	**Asahikawa**	**28.52**	**353**	P	**P**	**21 39 45.9**	**+1.0**
	2.2nm,0.6s,mb4.1,baz=270,slow=1.0,SNR=3.9						
WRA	**Warramunga Arr**	**37.55**	**200**	P	**P**	**21 41 03.6**	**0.0**
	0.5nm,0.6s,mb3.4,baz=26,slow=9.5,SNR=6.2						
WRA				PcP	PcP	21 43 22.5	+1.8
	0.3nm,0.5s,baz=15,slow=3.4,SNR=4.2						
ASAR	**Alice Springs**	**41.18**	**198**	P	**P**	**21 41 34.1**	**+0.3**
	0.3nm,0.7s,mb3.0,baz=16,slow=8.1,SNR=4.1						
CMAR	**Chiang Mai Arr**	**45.84**	**281**	P	**P**	**21 42 12.2**	**+0.7**
	0.4nm,0.4s,mb3.7,baz=75,slow=6.3,SNR=3.3						
SONM	**Songino Array**	**46.19**	**323**	P	**P**	**21 42 13.9**	**+0.1**
	0.4nm,0.5s,mb3.6,baz=142,slow=8.3,SNR=4.2						
LSA	**Lhasa**	**52.84**	**295**	*e*P	**P**	**21 43 06.4**	**+1.7**
	1.6nm,0.5s,mb4.2						
ZALV	**Zalesovo Beam**	**61.07**	**323**	P	**P**	**21 44 01.5**	**-1.1**
	0.3nm,0.3s,mb3.9,baz=86,slow=9.7,SNR=4.4						
MK31	**Makanchi Array**	**61.36**	**315**	*e*P	**P**	**21 44 04.8**	**+0.1**
MKAR	**Makanchi Array**	**61.36**	**315**	P	**P**	**21 44 04.9**	**+0.2**
	1.3nm,0.4s,mb4.4,baz=91,slow=7.4,SNR=12						
KURK	**Kurchatov**	**64.25**	**319**	*e*P	**P**	**21 44 22.9**	**-1.0**
	2.7nm,0.3s,mb4.8						
ILAR	**Eielson Array**	**65.79**	**25**	P	**P**	**21 44 33.8**	**+0.3**
	0.2nm,0.3s,mb3.6,baz=248,slow=6.7,SNR=6.0						
BVAR	**Borovoye Array**	**69.50**	**321**	P	**P**	**21 44 56.7**	**-0.4**
	2.3nm,0.5s,mb4.4,baz=112,slow=7.6,SNR=13						
BRVK	**Borovoye**	**69.56**	**321**	*e*P	**P**	**21 44 56.9**	**-0.7**
	2.1nm,0.7s,mb4.2						
ABKAR	**Akbulak array**	**76.30**	**318**	*e*P	**P**	**21 45 36.4**	**-1.

RLS					*e*Sb		**Sg**	**21 47 12.8**	**-2.8**
ITM	**Ithomi**	**0.93**	**115**		*e*PB		**Pg**	**21 47 13.0**	**+1.4**
ITM	**Ithomi**	**0.93**	**115**		*e*Pb		**Pg**	**21 47 13.0**	**+1.4**
PYL	**PYLOS**	**0.97**	**134**		*e*PN		**Pg**	**21 47 16.0**	**+3.6**
PYL	**PYLOS**	**0.97**	**134**		*e*Pn		**Pg**	**21 47 16.0**	**+3.6**
LAKA	**Lakka**	**1.10**	**52**		P		**Pg**	**21 47 14.5**	**-0.4**
LAKA					S		**Sg**	**21 47 29.8**	**+0.6**
LAKA	**Lakka**	**1.10**	**52**		P		**Pg**	**21 47 14.5**	**-0.4**
LAKA					S		**Sg**	**21 47 29.8**	**+0.6**
EFP	**Efpalio**	**1.18**	**43**		*e*PN		**Pn**	**21 47 14.4**	**-2.9**
EFP	**Efpalio**	**1.18**	**43**		*e*Pn		**Pn**	**21 47 14.4**	**-2.9**
VLX	**Vlachokerasia**	**1.22**	**99**		*e*PN		**Pn**	**21 47 18.7**	**+0.9**
VLX					*e*SN		**Sn**	**21 47 33.4**	**-1.4**
VLX	**Vlachokerasia**	**1.22**	**99**		*e*Pn		**Pn**	**21 47 18.7**	**+0.9**
VLX					*e*Sn		**Sn**	**21 47 33.4**	**-1.4**
GUR	**Goura**	**1.22**	**72**		*e*PN		**Pn**	**21 47 16.2**	**-1.7**
GUR	**Goura**	**1.22**	**72**		P		**Pg**	**21 47 16.1**	**-1.1**
GUR					S		**Sg**	**21 47 34.1**	**+1.0**
GUR	**Goura**	**1.22**	**72**		P		**Pg**	**21 47 16.1**	**-1.1**
GUR					S		**Sg**	**21 47 34.1**	**+1.0**
LKD2	**Lefkada island**	**1.23**	**352**		P		**Pg**	**21 47 16.5**	**-0.9**
LKD2					S		**Sg**	**21 47 33.8**	**+0.5**
LKD2	**Lefkada island**	**1.23**	**352**		P		**Pg**	**21 47 16.5**	**-0.9**
LKD2					S		**Sg**	**21 47 33.8**	**+0.5**
TRIZ	**Trizonia**	**1.24**	**50**		P		**Pg**	**21 47 16.0**	**-1.5**
TRIZ					S		**Sg**	**21 47 34.6**	**+1.0**
TRIZ	**Trizonia**	**1.24**	**50**		P		**Pg**	**21 47 16.0**	**-1.5**
TRIZ					S		**Sg**	**21 47 34.6**	**+1.0**
DSF	**Desfina**	**1.55**	**57**		P		**Pn**	**21 47 23.3**	**+0.9**
DSF					S		**Sn**	**21 47 45.6**	**+2.5**
DSF	**Desfina**	**1.55**	**57**		P		**Pn**	**21 47 23.3**	**+0.9**
DSF					S		**Sn**	**21 47 45.6**	**+2.5**
LTK	**Loutraki**	**1.72**	**74**		*e*PN		**Pn**	**21 47 24.2**	**-0.5**
LTK	**Loutraki**	**1.72**	**74**		*e*Pn		**Pn**	**21 47 24.3**	**-0.4**
AGG	**Agios Georgios**	**1.85**	**38**		P		**Pn**	**21 47 27.2**	**+0.7**
AGG					S		**Sn**	**21 47 50.7**	**+0.3**
AGG	**Agios Georgios**	**1.85**	**38**		P		**Pn**	**21 47 27.2**	**+0.7**
AGG					S		**Sn**	**21 47 50.7**	**+0.3**

*IDC **15** 21:53:44.9±0.7, 13°.00N×124°.57E, h0km, mb4.0/13, mb1 4.1/14, mb1mx4.1/20, mbtmp4.0/14, ML4.5/1, MS3.5/7, Ms1 3.5/7, ms1mx3.2/26, Error ellipse: s-maj=30.6km s-min=13.9km az=66.0*
*BJI **15** 21:53:45.7, 13°.06N×124°.54E, h10km, mB4.3/5, mb4.6/8, Ms4.2/4, Ms7 4.0/4*
*NEIC **15** 21:53:46.5±0.3, 12°.90N×124°.50E, h10km, mb4.5/11, Error ellipse: s-maj=12.9km s-min=6.9km az=55.0*
NEIC Felt [II PIVS] at Catarman. Also felt [II PIVS] at Virac, Catanduanes and at Legaspi, Luzon.
*MAN **15** 21:53:47, 13°.02N×124°.30E, h1km, mb5.4, ML4.3, MS4.5*
MAN INTENSITY II - LEGASPI CITY; CATARMAN SAMAR; VIRAC CATANDUANES.
*ISCJB **15** 21:53:48.2±0.9, 13°.04N±0°.03×124°.49E±0°.05, h30km±7km, mb4.2/25, MS3.5/6, Error ellipse: s-maj=7.5km s-min=5.2km az=173.7*

ISC 15 21:53:47.3±1.0, 13°.02N±0°.03×124°.49E±0°.05, h10km±6km, n61, σ1°.05/62, mb4.2/25, MS3.5/6, 7C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.54**	**161**	*e*P	**Pg**	**21 54 00.4**	**+2.7**
PVCP	**Virac**	**0.66**	**331**	*e*P	**Pg**	**21 53 58.6**	**-1.4**
MMPH	**Masbate**	**1.07**	**232**	*e*P	**Pg**	**21 54 05.5**	**-2.3**
MMPH				*i* S	**Sg**	**21 54 20.6**	**-1.1**
AUQP	**San Andres**	**1.79**	**280**	*e*P	**Pn**	**21 54 19.9**	**+1.7**
OCLP	**Ormoc**	**1.96**	**176**	*e*P	**Pn**	**21 54 22.2**	**+1.6**
RCP	**Roxas**	**2.24**	**230**	*e*P	**Pn**	**21 54 24.1**	**-0.2**
RCP				*e*S	**Sn**	**21 54 50.8**	**-1.2**
OTDP	**Odiongan**	**2.49**	**255**	*e*P	**Pn**	**21 54 28.3**	**+0.5**
BOAC	**Boac**	**2.61**	**280**	*e*P	**Pn**	**21 54 29.6**	**+0.1**
LLP	**Lapu-Lapu**	**2.73**	**191**	*e*P	**Pn**	**21 54 31.4**	**+0.1**
LLP				*e*S	**Sn**	**21 55 11.4**	**+7.0**
POLP	**Polillo Island**	**3.00**	**305**	*e*P	**Pn**	**21 54 36.3**	**+1.5**
GUIM	**Jordan**	**3.02**	**218**	*e*P	**Pn**	**21 54 35.8**	**+0.7**
LQP	**Lukban**	**3.06**	**291**	*e*P	**Pg**	**21 54 46.3**	**+0.3**
TGY	**Tagaytay City**	**3.61**	**288**	Pn	**Pn**	**21 54 44.6**	**+1.3**
	36nm,0.3s,baz=96,slow=3.5,SNR=7.2						
SNPH	**Sibulan**	**3.85**	**199**	*e*P	**Pn**	**21 54 48.2**	**+1.6**
SNPH				*e*S	**Sn**	**21 55 18.1**	**-14**
BALP	**Baler**	**3.91**	**314**	*e*P	**Pn**	**21 54 46.7**	**-0.7**
CUYO	**Cuyo Island**	**4.02**	**238**	*e*P	**Pn**	**21 54 48.6**	**-0.3**
PCPH	**Palayan**	**4.14**	**308**	*e*P	**Pn**	**21 54 50.0**	**-0.6**
PCPH				*i* S	**Sn**	**21 55 40.3**	**+1.1**
LUBP	**Lubang**	**4.19**	**280**	*e*P	**Pn**	**21 54 56.3**	**+5.1**
BUCP	**Coron**	**4.31**	**257**	*e*P	**Pn**	**21 54 53.3**	**+0.4**
CAUP	**Cauayan**	**4.67**	**327**	*e*P	**Pn**	**21 54 57.7**	**-0.1**
BUKP	**Musuan**	**5.14**	**174**	*e*P	**Pn**	**21 55 07.6**	**+3.3**
PAGZ	**Pagadian**	**5.25**	**192**	*e*P	**Pn**	**21 55 07.4**	**+1.5**
DAV	**Davao City (W)**	**6.01**	**170**	LR	LR	21 58 07.4	
	comp=Z,1μm,18.4s,baz=333,slow=44						
TPUB	**Ta-pu**	**10.86**	**341**	*e*Pn	**Pn**	**21 56 24.3**	**+1.5**
WHN	**Wuhan**	**19.79**	**333**	P	**Pn**	**21 58 19.5**	**+0.2**
WHN				S	**Sn**	**22 01 47.6**	**-14**
WHN				LR	LR		
	comp=N,1μm,22.0s						
WHN				LR	LR		
	comp=E,390nm,14.7s						
WHN				LR	LR		
	comp=Z,620nm,21.2s						
GUMO	**Guam**	**19.85**	**86**	LR	LR	22 04 43.4	
	comp=Z,47nm,20.8s,baz=251,slow=33						
KSRS	**Korea Array**	**24.52**	**7**	P	**P**	**21 59 05.3**	**-1.6**
	comp=Z,1.8nm,0.8s,mb3.7,baz=186,slow=10,SNR=5.6						
KSRS				LR	LR	22 08 28.1	
	comp=Z,86nm,19.3s,MS3.2,baz=47,slow=36						
CMAR	**Chiang Mai Arr**	**25.16**	**286**	P	**P**	**21 59 11.7**	**-1.2**
	comp=Z,0.8nm,0.7s,mb3.4,baz=95,slow=8.0,SNR=8.7						
CHTO	**Chiang Mai**	**25.21**	**287**	*e*P	**P**	**21 59 12.6**	**-0.8**
	comp=Z,1.3nm,0.6s,mb3.6						
XAN	**Xi'an**	**25.26**	**329**	P	**P**	**21 59 13.8**	**+0.1**
XAN				S	**S**	**22 03 44.3**	**+4.9**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
XAN				pmax	pmax		
	comp=Z,13nm,6.9s						
XAN				LR	LR		
	comp=N,79nm,11.6s,MS3.5						
XAN				LR	LR		
	comp=E,29nm,13.6s,MS3.5						
XAN				LR	LR		
	comp=Z,51nm,12.1s,MS3.2						
WRA	**Warramunga Arr**	**34.16**	**163**	P	**P**	**22 00 31.4**	**-1.3**
	comp=Z,0.7nm,0.3s,mb4.1,baz=347,slow=7.7,SNR=22						
WRA				PcP	PcP	22 03 08.3	-1.6
	comp=Z,0.4nm,0.6s,baz=337,slow=2.8,SNR=4.9						
LSA	**Lhasa**	**35.03**	**304**	*e*P	**P**	**22 00 42.3**	**+2.0**
	comp=Z,2.8nm,0.6s,mb4.4						
ASAR	**Alice Springs**	**37.61**	**166**	P	**P**	**22 01 02.0**	**-0.3**
	comp=Z,1.9nm,0.4s,mb4.2,baz=344,slow=6.8,SNR=51						
ASAR				PcP	PcP	22 03 18.9	-1.2
	comp=Z,0.8nm,0.6s,baz=345,slow=2.1,SNR=4.6						
ULN	**Ulaanbaatar**	**37.66**	**341**	*e*P	**P**	**22 01 03.7**	**+1.2**
	comp=Z,5.1nm,0.8s,mb4.3						
SONM	**Songino Array**	**37.85**	**340**	P	**P**	**22 01 04.2**	**+0.1**
	comp=Z,2.1nm,0.8s,mb3.9,baz=159,slow=6.7,SNR=12						
SONM				LR	LR	22 16 45.4	
	comp=Z,54nm,19.1s,MS3.4,baz=342,slow=36						
CTAO	**Charters Tower**	**39.26**	**147**	*e*P	**P**	**22 01 14.8**	**-1.5**
	comp=Z,8.5nm,1.1s,mb4.4						
STKA	**Stephens Creek**	**47.56**	**160**	P	**P**	**22 02 21.1**	**-1.9**
	comp=Z,4.7nm,0.8s,mb4.6,baz=351,slow=3.9,SNR=6.1						
MK31	**Makanchi Array**	**48.79**	**322**	*e*P	**P**	**22 02 33.3**	**+0.8**
MKAR	**Makanchi Array**	**48.79**	**322**	P	**P**	**22 02 32.7**	**+0.2**
MKAR				PcP	PcP	22 03 57.6	+0.4
MKAR				LR	LR	22 24 31.8	
MKAR	**Makanchi Array**	**48.79**	**322**	P	**P**	**22 02 32.7**	**+0.2**
	comp=Z,2.5nm,0.7s,mb4.4,baz=117,slow=8.5,SNR=28						
MKAR				PcP	PcP	22 03 57.6	+0.4
	comp=Z,0.8nm,0.7s,baz=132,slow=4.1,SNR=3.1						
MKAR				LR	LR	22 24 31.8	
	comp=Z,54nm,20.3s,MS3.5,baz=171,slow=38						
ZAA0	**Zalesovo Array**	**51.39**	**331**	*e*P	**P**	**22 02 51.6**	**-0.4**
ZALV	**Zalesovo Beam**	**51.39**	**331**	P	**P**	**22 02 51.5**	**-0.5**
ZALV				LR	LR	22 25 21.3	
	comp=Z,1.8nm,0.7s,mb4.1,baz=118,slow=8.8,SNR=7.0						
	comp=Z,41nm,20.6s,MS3.4,baz=48,slow=37						
KURK	**Kurchatov**	**52.82**	**325**	*e*P	**P**	**22 03 03.2**	**+0.4**
	comp=Z,21nm,0.9s,mb5.1						
KBL	**Kabul**	**54.36**	**303**	*e*P	**P**	**22 03 14.0**	**-0.4**
	comp=Z,5.1nm,0.9s,mb4.5						

BVAR	**Borovoye Array**	**58.42**	**325**		P		**P**	**22 03 43.2**	**+0.1**
	comp=Z,1.9nm,0.7s,mb4.3,baz=119,slow=9.2,SNR=9.8								
BRVK	**Borovoye**	**58.49**	**325**		*e*P		**P**	**22 03 43.7**	**+0.2**
	comp=Z,6.5nm,0.8s,mb4.7								
ABKAR	**Akbulak array**	**63.66**	**319**		*e*P		**P**	**22 04 17.7**	**-1.0**
	comp=Z,2.1nm,0.8s,mb4.2								
ARU	**Arti**	**65.98**	**326**		*e*P		**P**	**22 04 32.5**	**-1.2**
	comp=Z,4.0nm,0.6s,mb4.6								
BPAW	**Bear Paw Mtn.**	**76.00**	**27**		*e*P		**P**	**22 05 35.3**	**+0.9**
	comp=Z,4.4nm,0.8s,mb4.4								
MCK	**McKinley**	**76.92**	**27**		*e*P		**P**	**22 05 39.6**	**+0.1**
	comp=Z,4.1nm,0.7s,mb4.5								
ILAR	**Eielson Array**	**77.75**	**26**		P		**P**	**22 05 43.6**	**-0.6**
	comp=Z,0.5nm,0.7s,mb3.5,baz=246,slow=5.9,SNR=6.9								
BRTR	**Keskin Array B**	**82.45**	**309**		P		**P**	**22 06 09.5**	**-0.6**
	comp=Z,0.4nm,0.8s,mb3.4,baz=113,slow=3.3,SNR=2.7								
FINES	**FINESS Array B**	**82.65**	**331**		P		**P**	**22 06 10.3**	**-0.5**
FINES	**FINESS Array B**	**82.65**	**331**		P		**P**	**22 06 10.3**	**-0.4**
	comp=Z,2.0nm,0.9s,mb4.2,baz=57,slow=7.0,SNR=5.7								
BUR08	**Bucovina Ar. S**	**86.64**	**318**		*e*P		**P**	**22 06 31.1**	**-0.1**
NOA	**NORSAR Array B**	**89.53**	**333**		P		**P**	**22 06 43.9**	**-0.7**
NOA					LR	LR		22 50 32.1	
NOA	**NORSAR Array B**	**89.53**	**333**		P		**P**	**22 06 43.9**	**-0.7**
	comp=Z,0.4nm,0.7s,mb3.9,baz=68,slow=4.7,SNR=3.1								
NOA					LR	LR		22 50 32.1	
	comp=Z,48nm,18.8s,MS3.9,baz=55,slow=38								
JCT	**Junction City**	**119.30**	**44**		*e*PKPdf	PKPdf		22 12 37.6	+0.2
WCI	**Wyandotte Cave**	**121.43**	**28**		*e*PKPdf	PKPdf		22 12 40.9	-0.4
WVT	**Waverly**	**122.37**	**31**		*e*PKPdf	PKPdf		22 12 43.2	-0.1
TRQA	**Tornquist**	**154.41**	**168**		*e*PKPbc	PKPbc		22 13 45.1	-3.2

*IDC **15** 22:27:22.8±4.0, 20°.83S×178°.24W, h509km±48km, mb3.4/4, mb1 3.6/6, mb1mx3.4/15, mbtmp3.5/6, Error ellipse: s-maj=48.1km s-min=17.6km az=168.0*
*ISCJB **15** 22:27:27.5±1.1, 21°.1S±0°.2×178°.2W±0°.1, h598km±17km, mb4.0/6, Error ellipse: s-maj=27.7km s-min=18.8km az=177.8*
*NEIC **15** 22:27:28.0±1.1, 21°.17S×178°.21W, h578km±12km, mb4.3/2, Error ellipse: s-maj=21.4km s-min=15.0km az=163.0*

ISC 15 22:27:28.2±1.2, 21°.1S±0°.2×178°.2W±0°.1, h589km±17km, n16, σ0°.90/10, mb4.0/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.88**	**312**	*e*Pn	**P**	**22 28 59.8**	**+0.3**
RAR	**Rarotonga**	**17.17**	**94**	P	**P**	**22 30 55.3**	**-1.4**
	9.0nm,0.3s,baz=113,slow=3.1,SNR=5.0						
URZ	**Urewera**	**17.59**	**192**	P	**P**	**22 31 01.5**	**+1.2**
	1.1nm,0.3s,baz=26,slow=9.6,SNR=5.5						
CTAO	**Charters Tower**	**33.27**	**265**	*e*P	**P**	**22 33 17.9**	**-0.5**
	6.1nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**37.39**	**245**	P	**P**	**22 33 52.8**	**+0.5**
	2.4nm,0.7s,mb3.8,baz=96,slow=14,SNR=6.4						
ASAR	**Alice Springs**	**44.23**	**257**	P	**P**	**22 34 46.2**	**-0.3**
	5.0nm,0.6s,mb4.2,baz=96,slow=7.9,SNR=56						
ASAR				PcP	PcP	22 36 19.9	+1.9
	0.7nm,0.6s,baz=102,slow=4.3,SNR=5.4						
WB2	**Warramunga Ar**	**44.35**	**263**	*e*P	**P**	**22 34 46.5**	**-0.9**
WRA	**Warramunga Arr**	**44.36**	**263**	P	**P**	**22 34 47.1**	**-0.5**
	3.0nm,0.3s,mb4.3,baz=96,slow=7.5,SNR=26						
MBWA	**Marble Bar**	**57.56**	**258**	*e*P	**P**	**22 36 22.7**	**-0.3**
	6.2nm,0.6s,mb3.9						
ILAR	**Eielson Array**	**88.92**	**13**	P	**P**	**22 39 21.9**	**+1.8**
	0.3nm,0.5s,mb3.4,baz=214,slow=5.3,SNR=4.5						
MKAR	**Makanchi Array**	**111.48**	**313**	PKiKP	PKiKP	22 44 57.7	+1.6
	0.1nm,0.3s,baz=131,slow=0.3,SNR=4.5						
BVAR	**Borovoye Array**	**119.42**	**320**	PKP	PKPdf	22 45 12.6	+1.5
	0.6nm,0.4s,baz=107,slow=3.9,SNR=5.4						
ARCES	**ARCESS Array B**	**129.46**	**349**	PKP	PKPdf	22 45 32.2	+2.3
	1.9nm,0.8s,baz=35,slow=3.3,SNR=4.3						
AKASG	**Malin Array Be**	**143.44**	**331**	PKP	PKPdf	22 45 55.9	-0.2
	2.5nm,0.4s,baz=43,slow=4.3,SNR=13						
BRTR	**Keskin Array B**	**147.10**	**312**	PKPbc	PKPbc	22 46 07.7	+1.7
	1.0nm,0.6s,baz=130,slow=4.8,SNR=7.3						
MMAI	**Mount Meron Ar**	**147.95**	**299**	PKPbc	PKPbc	22 46 10.7	+2.4
	1.4nm,0.4s,baz=74,slow=6.2,SNR=14						

IDC 15 22:29:08.2±2.2, 9°.48S×115°.29E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.6/17, mbtmp3.6/6, Error ellipse: s-maj=122.2km s-min=21.8km az=49.0, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.13**	**122**	P	P	22 33 54.0	-0.8
	0.4nm,0.4s,baz=296,slow=12,SNR=2.6						
ASAR	**Alice Springs**	**22.70**	**131**	P	P	22 34 12.1	+0.5
	0.5nm,0.5s,baz=307,slow=9.0,SNR=10						
SONM	**Songino Array**	**57.60**	**353**	P	P	22 38 59.7	-0.1
	0.2nm,0.4s,baz=168,slow=7.4,SNR=2.6						
MKAR	**Makanchi Array**	**63.28**	**335**	P	P	22 39 39.5	+0.8
	0.4nm,0.4s,baz=152,slow=6.9,SNR=9.4						
ZALV	**Zalesovo Beam**	**68.24**	**341**	P	P	22 40 09.7	-0.8
	0.7nm,0.3s,baz=159,slow=6.6,SNR=4.9						
BVAR	**Borovoye Array**	**73.04**	**334**	P	P	22 40 40.1	+0.3
	0.6nm,0.6s,baz=148,slow=8.7,SNR=5.3						

MAN 15 22:42:13, 13°.43N×124°.28E, h12km, mb4.2, ML3.1, MS2.8, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.21**	**323**	*e*P	Pg	22 42 18.9	+1.4
AUQP	**San Andres**	**1.57**	**266**	*e*P	Pn	22 42 40.1	-0.6
AUQP				*e*S	Sn	22 43 02.0	+1.1
GQP	**Guinayangan**	**1.85**	**285**	*e*P	Pn	22 42 44.6	+0.1
GQP				*e*S	Sn	22 43 12.7	+4.8
BOAC	**Boac**	**2.37**	**271**	*e*P	Pn	22 42 56.2	+4.4
BALP	**Baler**	**3.49**	**312**	*e*P	Sg	22 43 59.9	-5.2

*CSEM **15** 22:56:53.4±0.3, 41°.60N×20°.15E, h2km, ML2.3, Error ellipse: s-maj=5.5km s-min=5.0km az=137.0*
*ISCJB **15** 22:56:53.7±0.4, 41°.61N±0°.02×20°.13E±0°.03, h10km, Error ellipse: s-maj=3.8km s-min=2.5km az=34.6*
*PDG **15** 22:56:54.9±0.2, 41°.64N×20°.02E, h11km, ML2.7/10, Error ellipse: s-maj=1.1km s-min=1.5km az=0.0*
*SKO **15** 22:56:54.5, 41°.56N×20°.07E, h16km, M2.0, ML2.4*
*BEO **15** 22:56:54.2±0.4, 41°.62N×20°.19E, h0km, ML2.3/5*
*NEIC **15** 22:56:54.9, 41°.64N×20°.02E, h11km, ML2.7(PDG), After PDG.*

ISC 15 22:56:54.0±0.5, 41°.61N±0°.02×20°.14E±0°.03, h1km±4km, n46, σ1°.09/86, 11C-15D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.34**	**219**	*i* Pg	**Pg**	**22 57 00.5**	**+0.1**
TIR				*i* Sg	**Sg**	**22 57 06.0**	**+1.2**
TIR	**Tirane**	**0.34**	**219**	*i* Pg	**Pg**	**22 57 00.5**	**+0.1**
TIR				*i* Sg	**Sg**	**22 57 06.0**	**+1.2**
PUK	**Puka**	**0.47**	**337**	*e*PG	**Pg**	**22 57 03.5**	**+0.5**
PUK				*i* SG	**Sg**	**22 57 10.2**	**+1.0**
PUK	**Puka**	**0.47**	**337**	*e*Pg	**Pg**	**22 57 03.5**	**+0.5**
PUK				*i* Sg	**Sg**	**22 57 10.2**	**+1.0**
ULC	**Ulcinj**	**0.76**	**298**	*i* Pg	**Pg**	**22 57 07.2**	**-1.3**
ULC				*e*Sg	**Sg**	**22 57 18.2**	**-0.1**
ULC	**Ulcinj**	**0.76**	**298**	*i* Pg	**Pg**	**22 57 07.2**	**-1.3**
ULC				*e*Sg	**Sg**	**22 57 18.2**	**-0.1**
BCI	**Bajram Curri**	**0.76**	**356**	*e*PG	**Pg**	**22 57 09.3**	**+0.8**
BCI	**Bajram Curri**	**0.76**	**356**	*e*Pg	**Pg**	**22 57 09.3**	**+0.8**
KRUS	**Krusevo**	**0.86**	**106**	*e*Pg	**Pg**	**22 57 10.6**	**0.0**
KRUS				*e*Sg	**Sg**	**22 57 23.3**	**+1.5**
KRUS				*e*Lg		22 57 24.2	
	comp=E,18nm,0.2s						
KRUS				*e*Lg		22 57 24.5	
	comp=N,17nm,0.2s						
PVY	**Plav**	**0.99**	**353**	*i* Pg	**Pg**	**22 57 12.2**	**-0.8**
PVY				*e*Sg	**Sg**	**22 57 27.3**	**+1.4**
PVY	**Plav**	**0.99**	**353**	*i* Pg	**Pg**	**22 57 12.2**	**-0.8**
PVY				*e*Sg	**Sg**	**22 57 27.3**	**+1.4**
SKO	**Skopje**	**1.03**	**69**	*e*Pg	**Pg**	**22 57 15.0**	**+1.2**
SKO				*e*Sg	**Sg**	**22 57 29.6**	**+2.4**
SKO				*e*Lg		22 57 29.8	
	comp=E,55nm,0.4s						
SKO				*e*Lg		22 57 30.2	
	comp=N,141nm,0.8s						
PDG	**Podgorica**	**1.05**	**321**	*i* Pg	**Pg**	**22 57 12.9**	**-1.2**
PDG				*e*Sg	**Sg**	**22 57 28.7**	**+0.9**
TTG	**Podgorica**	**1.05**	**321**	*i* Pg	**Pg**	**22 57 12.9**	**-1.2**
TTG				*e*Sg	**Sg**	**22 57 28.7**	**+0.9**
TTG	**Podgorica**	**1.05**	**321**	*i* Pg	**Pg**	**22 57 12.9**	**-1.2**
TTG				*e*Sg	**Sg**	**22 57 28.7**	**+0.9**
BIA	**Bitola**	**1.07**	**123**	*e*Pg	**Pg**	**22 57 13.5**	**-0.9**
BIA				*e*Sg	**Sg**	**22 57 29.3**	**+1.0**
BIA				*e*Lg		22 57 30.8	
	comp=N,29nm,0.4s						
BIA				*e*Lg		22 57 31.4	
	comp=E,33nm,0.5s						
BUM	**Brajici-Budva**	**1.16**	**307**	*i* Pg	**Pg**	**22 57 15.0**	**-1.2**
BUM				*e*Sg	**Sg**	**22 57 31.8**	**+0.6**
BUM	**Brajici-Budva**	**1.16**	**307**	*i* Pg	**Pg**	**22 57 15.0**	**-1.2**
BUM				*e*Sg	**Sg**	**22 57 31.8**	**+0.6**
BEY	**Berane**	**1.27**	**352**	*i* Pg	**Pg**	**22 57 18.0**	**-0.4**
BEY				*e*Sg	**Sg**	**22 57 37.1**	**+2.2**
IVA	**Berane**	**1.27**	**352**	*i* Pg	**Pg**	**22 57 18.0**	**-0.4**
IVA				*e*Sg	**Sg**	**22 57 37.1**	**+2.2**
IVA	**Berane**	**1.27**	**352**	*i* Pg	**Pg**	**22 57 18.0**	**-0.4**
IVA				*e*Sg	**Sg**	**22 57 37.1**	**+2.2**
NKY	**Niksic**	**1.47**	**325**	*i* Pg	**Pn**	**22 57 20.0**	**-1.6**
NKY				*e*Sg	**Sg**	**22 57 42.3**	**+1.0**
NKY	**Niksic**	**1.47**	**325**	*i* Pg	**Pn**	**22 57 20.0**	**-1.6**
NKY				*e*Sg	**Sg**	**22 57 42.3**	**+1.0**
HCY	**Herceg Novi**	**1.48**	**305**	*i* Pg	**Pn**	**22 57 20.5**	**-1.3**
HCY				*e*Sg	**Sg**	**22 57 42.0**	**+0.3**
HCY	**Herceg Novi**	**1.48**	**305**	*i* Pg	**Pn**	**22 57 20.5**	**-1.3**
HCY				*e*Sg	**Sg**	**22 57 42.0**	**+0.3**
SJES	**Sjenica**	**1.65**	**356**	*e*Pg	**Pn**	**22 57 24.1**	**0.0**
SJES				*i* Sg	**Sg**	**22 57 47.4**	**+0.2**
SJES	**Sjenica**	**1.65**	**356**	*e*Pg	**Pn**	**22 57 24.1**	**0.0**
SJES				*i* Sg	**Sg**	**22 57 47.4**	**+0.2**
BARS	**Barje**	**1.73**	**45**	*e*Pn	**Pn**	**22 57 24.5**	**-0.7**
BARS				*i* Sg	**Sg**	**22 57 49.2**	**-0.4**
BARS	**Barje**	**1.73**	**45**	*e*Pn	**Pn**	**22 57 24.5**	**-0.7**
BRY	**Bratogost**	**1.75**	**318**	*i* Pn	**Pn**	**22 57 25.1**	**-0.4**
BRY				*e*Sn	**Sn**	**22 57 49.0**	**+0.5**
BRY	**Bratogost**	**1.75**	**318**	*i* Pn	**Pn**	**22 57 25.1**	**-0.4**
BRY				*e*Sn	**Sn**	**22 57 49.0**	**+0.5**
PLE	**Pljevlja**	**1.81**	**342**	*i* Pn	**Pn**	**22 57 25.7**	**-0.5**
PLE				*e*Sn	**Sn**	**22 57 51.5**	**+1.7**
PLE	**Pljevlja**	**1.81**	**342**	*i* Pn	**Pn**	**22 57 25.7**	**-0.5**
PLE				*e*Sn	**Sn**	**22 57 51.5**	**+1.7**
UPM	**Unac-Piva**	**1.83**	**331**	*i* Pn	**Pn**	**22 57 26.5**	**-0.1**
UPM				*e*Sn	**Sn**	**22 57 51.8**	**+1.3**
UPM	**Unac-Piva**	**1.83**	**331**	*i* Pn	**Pn**	**22 57 26.5**	**-0.1**
UPM				*e*Sn	**Sn**	**22 57 51.8**	**+1.3**
VAY	**Valandovo**	**1.85**	**98**	*e*Pn	**Pn**	**22 57 25.6**	**-1.2**
STON	**Ston**	**2.21**	**306**	*e*Pn	**Pn**	**22 57 31.3**	**-0.5**
STON				Sn	**Sg**	**22 58 03.6**	**-1.4**
STON	**Ston**	**2.21**	**306**	*e*Pn	**Pn**	**22 57 31.2**	**-0.6**
STON				Sn	**Sg**	**22 58 03.5**	**-1.5**
BBLS	**Lazići**	**2.32**	**347**	*e*Pn	**Pn**	**22 57 34.1**	**+0.8**
BBLS				*i* Sg	**Sg**	**22 58 07.1**	**-1.4**
BBLS	**Lazići**	**2.32**	**347**	*e*Pn	**Pn**	**22 57 34.1**	**+0.8**
BBLS				*i* Sg	**Sg**	**22 58 07.1**	**-1.4**
**ZAP

KALE				S	Sg	23 41 26.8	+1.1
KALE	**Kalithea**	**0.23**	**80**	P	Pg	23 41 22.5	0.0
KALE				S	Sg	23 41 26.8	+1.1
RLS	**Riolos of Patr**	**0.42**	**226**	*e*PB	Pg	23 41 26.2	+0.2
RLS				*e*SB	Sg	23 41 32.7	+1.0
RLS	**Riolos of Patr**	**0.42**	**226**	*e*Pb	Pg	23 41 26.2	+0.2
RLS				*e*Sb	Sg	23 41 32.7	+1.0
DSF	**Desfina**	**0.53**	**83**	P	Pg	23 41 27.5	-0.6
DSF				S	Sg	23 41 36.0	+0.9
DSF	**Desfina**	**0.53**	**83**	P	Pg	23 41 27.5	-0.6
DSF				S	Sg	23 41 36.0	+0.9
EVR	**Evrytania**	**0.56**	**356**	*e*PB	Pg	23 41 28.0	-0.7
EVR				*e*SB	Sg	23 41 36.9	+0.7
EVR	**Evrytania**	**0.56**	**356**	*e*Pb	Pg	23 41 28.0	-0.7
EVR				*e*Sb	Sg	23 41 36.9	+0.7
GUR	**Goura**	**0.57**	**137**	*e*PB	Pg	23 41 27.8	-0.9
GUR				*e*SB	Sg	23 41 35.1	-1.0
GUR	**Goura**	**0.57**	**137**	P	Pg	23 41 28.1	-0.6
GUR				S	Sg	23 41 36.9	+0.8
GUR	**Goura**	**0.57**	**137**	*e*Pb	Pg	23 41 27.8	-0.9
GUR	**Goura**	**0.57**	**137**	P	Pg	23 41 28.1	-0.6
GUR				*e*Sb	Sg	23 41 35.1	-1.0
GUR				S	Sg	23 41 36.9	+0.8
AGG	**Agios Georgios**	**0.77**	**29**	P	Pg	23 41 31.4	-1.1
AGG				S	Sg	23 41 43.1	+0.6
AGG	**Agios Georgios**	**0.77**	**29**	P	Pg	23 41 31.4	-1.1
AGG				S	Sg	23 41 43.1	+0.6
VLS	**Valsamata**	**1.01**	**260**	*e*PB	Pg	23 41 35.8	-1.4
VLS				*e*SB	Sg	23 41 52.2	+1.9
VLS	**Valsamata**	**1.01**	**260**	*e*Pb	Pg	23 41 35.8	-1.4
VLS				*e*Sb	Sg	23 41 52.2	+1.9

ISK ***15*** *23:57:58.8,37˚.00N×29˚.21E,h10km,MD2.8*
ISCJB ***15*** *23:57:59.1±0.6,37˚.01N±0˚.03×29˚.18E±0˚.03,h3km±7km, Error ellipse: s-maj=5.6km s-min=4.2km az=19.9*
CSEM ***15*** *23:57:59.0±0.2,36˚.99N×29˚.22E,h10km,MD2.8, Error ellipse: s-maj=5.5km s-min=3.8km az=9.0*
DDA ***15*** *23:57:59.3,37˚.00N×29˚.11E,h7km±5km,Md2.9*
ISC 15 23:57:59.7±0.5, 37˚02N±0˚03×29˚21E±0˚04, h12km±6km, n24, σ0s97/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.27**	**59**	*e*Pg	Pg	23 58 04.2	-1.1
GLHS				*e*SG	Sg	23 58 09.7	+0.6
GLHS	**Glhisar (BURDU**	**0.27**	**59**	*e*Pg	Pg	23 58 04.2	-1.1
GLHS				*e*Sg	Sg	23 58 09.7	+0.6
GOLH	**Golhisar**	**0.36**	**52**	*i* P	Pg	23 58 05.0	-1.9
GOLH				*i* S	Sg	23 58 11.8	+0.1
GOLH	**Golhisar**	**0.36**	**52**	*i* P	Pg	23 58 05.0	-1.9
GOLH				*i* S	Sg	23 58 11.8	+0.1
ELL	**Elmali**	**0.62**	**115**	*e*PG	Pg	23 58 10.3	-1.5
ELL				*e*SG	Sg	23 58 20.9	+0.8
ELL	**Elmali**	**0.62**	**115**	*e*Pg	Pg	23 58 10.3	-1.5
ELL				*e*Sg	Sg	23 58 20.9	+0.8
DNZL	**Cakiroluk**	**0.68**	**349**	*i* P	Pg	23 58 12.6	-0.4
DNZL				*i* S	Sg	23 58 23.2	+1.3
DNZL	**Cakiroluk**	**0.68**	**349**	*i* P	Pg	23 58 12.6	-0.4
DNZL				*i* S	Sg	23 58 23.2	+1.2
YER	**Yerkesik**	**0.75**	**279**	*e*PG	Pg	23 58 13.9	-0.3
YER				*e*SG	Sg	23 58 24.8	+0.8
YER	**Yerkesik**	**0.75**	**279**	*e*Pg	Pg	23 58 13.9	-0.3
YER				*e*Sg	Sg	23 58 24.8	+0.8
AKAS	**Kas**	**0.85**	**158**	*i* P	Pg	23 58 14.6	-1.4
AKAS				*i* S	Sg	23 58 29.1	+2.0
AKAS	**Kas**	**0.85**	**158**	*i* P	Pg	23 58 14.6	-1.4
AKAS				*i* S	Sg	23 58 29.1	+2.0
KORT	**Korkueli**	**0.92**	**91**	*i* P	Pg	23 58 17.8	+0.4
KORT				*i* S	Sg	23 58 33.1	+3.8
KORT	**Korkueli**	**0.92**	**91**	*i* P	Pg	23 58 17.8	+0.4
BCK	**Bucak**	**1.19**	**68**	*e*PN	Pn	23 58 22.5	+0.4
BCK	**Bucak**	**1.19**	**68**	*e*Pn	Pn	23 58 22.5	+0.4
AYDN	**Tasoluk**	**1.24**	**302**	*i* P	Pn	23 58 22.7	-0.1
AYDN				*i* S	Sb	23 58 38.6	-0.2
AYDN	**Tasoluk**	**1.24**	**302**	*i* P	Pn	23 58 22.7	-0.1
AYDN				*i* S	Sb	23 58 38.6	-0.3
DAT	**Datca**	**1.34**	**258**	*e*PN	Pn	23 58 24.1	-0.1
DAT	**Datca**	**1.34**	**258**	*e*Pn	Pn	23 58 24.1	0.0
KHAL	**Karahalli**	**1.37**	**9**	*i* P	Pn	23 58 25.3	+0.8
KHAL	**Karahalli**	**1.37**	**9**	*i* P	Pn	23 58 25.3	+0.7
BODT	**Bodrum**	**1.52**	**272**	*e*PN	Pn	23 58 26.2	-0.4
BODT	**Bodrum**	**1.52**	**272**	*e*Pn	Pn	23 58 26.2	-0.4

IDC ***16*** *00:10:11.4±1.2,13˚.68N×91˚.62W,h0km,mb4.1/8, mb1 4.4/10,mb1mx4.1/22,mbtmp4.1/10,ML3.8/2,MS3.7/4, Ms1 3.7/4,ms1mx3.1/27, Error ellipse: s-maj=38.0km s-min=18.3km az=44.0*
NEIC ***16*** *00:10:13.9±4.3,13˚.61N×91˚.76W,h13km±27km,mb4.3/26, MD4.2(MEX), Error ellipse: s-maj=17.5km s-min=9.9km az=194.0*
ISCJB ***16*** *00:10:14.7±1.4,13˚.79N±0˚.05×91˚.88W±0˚.03,h11km±9km, mb4.2/33,MS3.7/4, Error ellipse: s-maj=9.8km s-min=3.7km az=23.9*
CASC ***16*** *00:10:15.5±2.0,13˚.58N×91˚.77W,h0km±185km,MD4.0, mb4.3(NEIC)*
MEX ***16*** *00:10:18.5±0.3,13˚.65N×92˚.08W,h32km±196km,MD4.2*
ISC 16 00:10:15.9±1.2, 13˚86N±0˚06×91˚81W±0˚04, h5km±7km, n195, σ0s80/206, mb4.2/33, MS3.7/4, 58C-62D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.13**	**337**	*i* P	Pg	00 10 38.1	+0.5
THIG				*i* S	Sg	00 10 53.2	+0.9
RBDL	**Robledal**	**2.08**	**83**	*e*P	Pn	00 10 52.2	+0.8
RTR	**El Retiro**	**2.10**	**89**	*e*P	Pn	00 10 51.7	-0.1
SBLS	**San Blas**	**2.12**	**90**	*e*P	Pn	00 10 51.7	-0.3
SBLS				*e*S	Sn	00 11 19.1	+0.2
PCIG		**2.29**	**324**	*i* P	Pn	00 10 52.7	-1.6
PCIG				*i* S	Sn	00 11 19.6	-3.2
MTO2	**Montecristo 2**	**2.44**	**77**	*e*P	Pn	00 10 57.2	+0.8
MTO2				*e*S	Sn	00 11 31.1	+4.5
BOQS	**Boqueron**	**2.46**	**93**	*e*P	Pn	00 10 56.6	-0.1
BOQS				*e*S	Sn	00 11 28.4	+1.2
LFRS	**El Faro**	**2.68**	**95**	*e*P	Pn	00 10 59.7	-0.1
SNVI	**San Vicente**	**2.90**	**94**	*e*P	Pn	00 11 02.7	0.0
SCX	**San Cristobal**	**2.97**	**345**	*i* P	Pn	00 11 05.5	+1.8
SCX				*i* S	Sn	00 11 40.3	+0.6
SCX	**San Cristobal**	**2.97**	**345**	*i* P	Pn	00 11 05.5	-0.2
SCX				*i* S	Sn	00 11 39.9	+0.2
TGIG		**3.17**	**337**	*i* P	Pn	00 11 06.5	+0.1
TGIG				*i* S	Sn	00 11 43.8	-0.8
VSM	**San Miguel**	**3.46**	**97**	*e*P	Pn	00 11 10.3	-0.2
BLLM	**Bellamira**	**3.50**	**96**	*e*P	Pn	00 11 10.9	-0.1
CAHU	**Cacacuatique**	**3.50**	**91**	*e*P	Pn	00 11 10.6	-0.4
CNCH	**Conchagua**	**3.91**	**98**	*e*P	Pn	00 11 16.0	-0.7
CMIG	**Matias Romero** 1.6nm,0.3s,baz=136,slow=12,SNR=13	**4.37**	**318**	Pn	Pn	00 11 21.7	-1.3
CMIG	6.3nm,0.3s,baz=128,slow=9.3,SNR=20			Pg	Pg	00 11 33.8	-5.9
CMIG	5.7nm,0.3s,baz=91,slow=18,SNR=8.9			Sn	Sn	00 12 16.0	+1.7
CMIG	13nm,0.3s,baz=216,slow=20,SNR=6.3			Lg		00 12 31.4	
TGUH	**Tegucigalpa,Un**	**4.41**	**87**	*e*Pn	Pn	00 11 21.9	-1.6
VHO	**Vista Hermosa**	**5.72**	**305**	*i* P	Pn	00 11 40.0	-1.6
VHO				*i* S	Sn	00 12 35.5	-12
VHO	**Vista Hermosa**	**5.72**	**305**	*i* P	Pn	00 11 40.0	-1.6
VHO				*i* S	Sn	00 12 41.5	-6.1
PNIG	**Pinotepa**	**6.60**	**293**	*i* P	Pn	00 11 51.4	-2.2
PNIG				*i* S	Sn	00 13 02.6	-6.7
PNIG	**Pinotepa**	**6.60**	**293**	*i* P	Pn	00 11 51.4	-2.2
PNIG				*i* S	Sn	00 13 02.6	-6.7
UTMO	**Huajuapan**	**6.99**	**305**	*i* P	Pn	00 11 58.4	-0.6
UTMO				*i* S	Sn	00 13 13.6	-5.3
TEIG	**Tepich**	**7.18**	**28**	*e*Pn	Pn	00 12 04.6	+3.0
JTS	**JuntasAbangare**	**7.59**	**117**	*e*Pn	Pn	00 12 15.3	+8.1
PPM	**Popocatepetl**	**8.34**	**309**	*i* P	Pn	00 12 16.4	-1.2
PPM				*i* S	Sn	00 13 48.6	-3.5
PPM	**Popocatepetl**	**8.34**	**309**	*i* P	Pn	00 12 16.4	-1.2
PPM				*i* S	Sn	00 13 48.6	-3.5
628A	**Black Gap, Mar** baz=19	**18.63**	**328**	⇑P	Pn	00 14 35.4	+0.7
627A	**Terlingua Ranc** baz=19,SNR=14	**18.86**	**327**	⇑P	Pn	00 14 38.6	+1.1
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=157,slow=11,SNR=17	**18.91**	**326**	P	Pn	00 14 38.6	+0.4
528A	**Cox Ranch, San** baz=19	**19.13**	**330**	⇑P	Pn	00 14 40.6	-0.2
626A	**Big Bend Ranch** baz=19,SNR=15	**19.34**	**326**	⇓P	Pn	00 14 43.7	+0.4
527A	**Woodward Ranch** baz=20,SNR=9.0	**19.53**	**328**	⇓P	Pn	00 14 44.7	-0.8
428A	**Kincaid Ranch,** baz=20,SNR=7.7	**19.55**	**331**	⇓P	Pn	00 14 46.4	+0.7
526A	**Mary Lane Ranc** baz=20,SNR=8.6	**19.71**	**327**	⇑P	Pn	00 14 48.2	+0.5
427A	**Hayter Ranch,** baz=20	**20.00**	**330**	⇓P	Pn	00 14 50.0	-1.1
328A	**Wristen Ranch,** baz=20,SNR=10	**20.16**	**332**	⇓P	P	00 14 52.1	+0.9
426A	**McDonald Obser** baz=20	**20.16**	**328**	⇑P	P	00 14 52.0	+0.7
MIAR	**Mount Ida**	**20.66**	**356**	*e*P	P	00 14 55.6	-0.9
326A	**Caldwell Ranch** baz=21	**20.66**	**329**	⇓P	P	00 14 57.4	+0.8
425A	**Indio Mountain** baz=21,SNR=12	**20.76**	**326**	⇑P	P	00 14 58.3	+0.6
GOGA	**Godfrey** 118nm,2.5s	**20.89**	**20**	*e*P	P	00 14 59.0	-0.1
227A	**Bennet, Jal** baz=21,SNR=6.0	**20.91**	**332**	⇓P	P	00 15 00.4	+1.2
325A	**Bean Ranch, Si** baz=21,SNR=11	**21.21**	**327**	⇓P	P	00 15 02.9	+0.4
226A	**Malaga, Loving** baz=21,SNR=12	**21.33**	**330**	⇓P	P	00 15 04.5	+0.7
CLNB	**Carlsbad** 2.3nm,0.5s,mb3.8	**21.39**	**331**	*e*P	P	00 15 05.2	+0.7
127A	**Arkansas Junct** baz=22	**21.50**	**333**	⇑P	P	00 15 05.3	-0.3
GDL2	**Guadalupe Moun**	**21.57**	**330**	*e*P	P	00 15 06.9	+0.5
MNTX	**Cornudas Mount** baz=22,SNR=19	**21.68**	**327**	⇑P	P	00 15 07.4	-0.2
MNTX	**Cornudas Mount** 6.9nm,0.8s,mb4.1	**21.68**	**327**	*e*P	P	00 15 06.9	-0.7
225A	**Deer Hill, Car** baz=22,SNR=12	**21.72**	**329**	⇑P	P	00 15 08.6	+0.5
WMOK	**Wichita Mounta** 5.1nm,0.9s,mb4.0	**21.72**	**344**	*e*P	P	00 15 06.3	-1.8
126A	**Clayton Basin,** baz=22,SNR=6.2	**21.77**	**331**	⇓P	P	00 15 09.0	+0.4
SWET	**Sewanee**	**21.92**	**13**	*e*P	P	00 15 09.8	-0.3
224A	**Cornudas Mount** baz=22,SNR=19	**22.05**	**328**	⇑P	P	00 15 12.3	+0.7
125A	**Gardner Draw,** baz=22,SNR=17	**22.09**	**330**	⇓P	P	00 15 11.8	-0.1
Z26A	**Caprock** baz=22,SNR=13	**22.28**	**332**	⇓P	P	00 15 13.9	-0.1
MSTX	**Muleshoe** baz=22,SNR=8.6	**22.36**	**335**	⇑P	P	00 15 13.8	-1.0
WVT	**Waverly** 4.3nm,0.7s,mb4.0	**22.46**	**8**	*e*P	P	00 15 14.4	-1.5
CPCT	**Cooper Cave**	**22.48**	**16**	*e*P	P	00 15 16.8	+0.7
124A	**Stringfield Ra** baz=23	**22.51**	**329**	⇑P	P	00 15 17.2	+0.7
Z25A	**Roswell** baz=23	**22.62**	**331**	⇓P	P	00 15 17.4	-0.3
AMTX	**Amarillo** baz=23,SNR=13	**22.75**	**339**	⇓P	P	00 15 18.2	-0.9
AMTX	**Amarillo** 25nm,0.7s,mb4.8	**22.75**	**339**	*e*P	P	00 15 18.2	-0.9
Y26A	**Elida** baz=23	**22.76**	**333**	⇓P	P	00 15 18.5	-0.6
TKL	**Tuckaleechee C**	**22.88**	**17**	*e*P	P	00 15 19.5	-0.9
TKL	**Tuckaleechee C** 7.3nm,0.7s,mb4.2,baz=182,slow=11,SNR=14	**22.88**	**17**	P	P	00 15 19.6	-0.8
TKL	comp=Z,150nm,20.1s,MS3.4,baz=355,slow=40			LR	LR	00 25 20.9	
X27A	**F and S Farms,** baz=23,SNR=8.3	**23.08**	**336**	⇑P	P	00 15 21.6	-0.9
X26A	**CR and CF Fran** baz=23	**23.29**	**334**	⇑P	P	00 15 23.9	-0.8
W27A	**Bowe Ranch, En** baz=24,SNR=12	**23.43**	**336**	⇓P	P	00 15 25.7	-0.4
Y24A	**Capitan** baz=24,SNR=15	**23.50**	**331**	⇑P	P	00 15 27.0	+0.1
220A	**Playas Peak, P** baz=24	**23.60**	**322**	⇓P	P	00 15 27.7	-0.2
121A	**Cookes Peak, D** baz=24	**23.63**	**325**	⇑P	P	00 15 28.7	+0.5
Z22A	**Elephant Butte** baz=24	**23.73**	**327**	⇑P	P	00 15 29.3	+0.1
Y23A	**Lovelace Mesa,** baz=24,SNR=12	**23.80**	**330**	⇓P	P	00 15 30.1	+0.4
SIUC	**Southern Illin** 28nm,1.2s,mb4.6	**23.87**	**5**	*e*P	P	00 15 28.5	-1.8
CCM	**Cathedral Cave** 4.0nm,0.8s,mb3.9	**24.11**	**1**	*e*P	P	00 15 29.8	-2.7
219A	**White Tail Can** baz=24	**24.11**	**321**	⇑P	P	00 15 33.2	+0.6
120A	**U Bar Ranch, L** baz=24	**24.13**	**323**	⇑P	P	00 15 32.6	-0.2
W25A	**X Bar L Ranch,** baz=24,SNR=7.2	**24.13**	**334**	⇑P	P	00 15 32.9	+0.1
318A	**Bisbee** baz=24	**24.18**	**319**	⇓P	P	00 15 33.7	+0.5
BNM	**Barren Site** 11nm,1.2s,mb4.2	**24.26**	**329**	*e*P	P	00 15 34.6	+0.6
Y22A	**Socorro** baz=24	**24.26**	**328**	⇑P	P	00 15 34.6	+0.6
V26A	**Tequesquite Ra** baz=24,SNR=5.4	**24.35**	**336**	⇑P	P	00 15 34.6	-0.2
W24A	**Lazy 6 Ranch,** baz=25,SNR=7.1	**24.54**	**332**	⇑P	P	00 15 37.1	+0.6
Y21A	**Point of Rocks** baz=25	**24.69**	**327**	⇑P	P	00 15 38.8	+0.9
LAZ	**Ladron** 2.9nm,0.9s,mb3.8	**24.72**	**328**	*e*P	P	00 15 41.1	+3.0
V25A	**Rancho No Teng** baz=25	**24.73**	**334**	⇑P	P	00 15 38.4	+0.2
WCI	**Wyandotte Cave** 14nm,0.6s,mb4.7	**24.76**	**10**	*e*P	P	00 15 36.1	-2.3
ANMO	**Albuquerque** 3.1nm,0.7s,mb4.0	**24.82**	**330**	*e*P	P	00 15 38.8	-0.3
ANMO	**Albuquerque** 3.1nm,0.7s,mb4.0,baz=152,slow=12,SNR=12	**24.82**	**330**	P	P	00 15 38.8	-0.2
W23A	**Werner Place,** baz=25	**24.84**	**331**	⇑P	P	00 15 39.9	+0.6
V24A	**Rampart Ranch,** baz=25	**24.91**	**333**	⇓P	P	00 15 40.5	+0.5
118A	**Homack Ranch,** baz=25	**24.98**	**321**	⇓P	P	00 15 40.8	+0.2
Y20A	**Horse Springs,** baz=25	**24.99**	**326**	⇓P	P	00 15 40.9	+0.3
OLIL	**Olney** 18nm,0.8s,mb4.7	**24.99**	**7**	*e*P	P	00 15 38.4	-2.2
X21A	**Alamocita Cree** baz=25,SNR=6.0	**25.08**	**328**	⇑P	P	00 15 41.5	0.0
TUC	**Tucson** 2.0nm,0.8s,mb3.7	**25.26**	**320**	*e*P	P	00 15 43.6	+0.5
Y19A	**Nutrioso** baz=26	**25.51**	**325**	⇓P	P	00 15 45.6	+0.2
X20A	**Quemado** baz=26	**25.53**	**327**	⇓P	P	00 15 45.5	0.0
T25A	**Trinidad** baz=26	**25.77**	**336**	⇓P	P	00 15 47.8	+0.1
U23A	**El Rito** baz=26	**25.82**	**333**	⇑P	P	00 15 48.4	+0.3
S25A	**Robets Cordova** baz=26	**26.23**	**337**	⇑P	P	00 15 51.3	-0.6
W19A	**Sanders** baz=26	**26.44**	**326**	⇓P	P	00 15 55.1	+1.3
PCRV	**Puerto La Cruz** 3.1nm,0.5s,mb4.1,baz=221,slow=5.5,SNR=3.3	**26.82**	**95**	P	P	00 15 59.8	+2.4
X16A	**Lo Mia Camp, P** baz=27	**27.10**	**322**	⇓P	P	00 16 00.0	+0.3
S22A	**4UR Ranch, Cre** baz=27	**27.29**	**333**	⇑P	P	00 16 01.6	+0.3
V17A	**Tonalea, Kykot** baz=28	**27.59**	**325**	⇓P	P	00 16 04.1	0.0
MVCO	**Mesa Verde** baz=28	**27.61**	**330**	⇑P	P	00 16 04.4	+0.1
MVCO	**Mesa Verde** 12nm,1.1s,mb4.4	**27.61**	**330**	*e*P	P	00 16 04.2	-0.1
P23A	**Jefferson** baz=28	**28.27**	**337**	⇓P	P	00 16 10.2	+0.1
U15A	**North Rim** baz=29	**29.01**	**324**	⇓P	P	00 16 16.9	+0.2
BC3	**Big Chuckawall** baz=29	**29.14**	**317**	⇑P	P	00 16 18.2	+0.2
O22A	**Kremmling** baz=29	**29.22**	**336**	⇓P	P	00 16 18.7	+0.1
T15A	**Red Dirt Ranch** baz=30	**29.48**	**325**	⇓P	P	00 16 20.4	-0.6
O20A	**White River Ci** baz=30	**29.88**	**334**	⇓P	P	00 16 24.6	+0.1
Q18A	**Rafter H Ranch** baz=30	**29.90**	**331**	⇓P	P	00 16 24.9	+0.3
R16A	**Teasdale** baz=30	**29.93**	**328**	⇓P	P	00 16 25.4	+0.4
U13A	**Pakoon Wash** baz=30	**29.97**	**322**	⇓P	P	00 16 25.6	+0.3
N20A	**Spence Gulch,** baz=30	**30.48**	**335**	⇑P	P	00 16 30.1	+0.4
L23A	**Garrett** baz=31	**30.62**	**339**	⇑P	P	00 16 31.3	+0.3
ARUT	**Antelope Range** 4.3nm,0.8s,mb4.3	**30.62**	**325**	*e*P	P	00 16 32.2	+1.2
S13A	**Holt Ranch, En** baz=31	**30.71**	**324**	⇑P	P	00 16 32.5	+0.6
BFSC	**Mount Baldy Ra** baz=31	**30.97**	**315**	⇑P	P	00 16 34.8	+0.6
O17A	**Robinson Place** baz=31	**31.05**	**331**	⇓P	P	00 16 34.9	+0.2
N17A	**Moffit Pass** baz=32	**31.68**	**332**	⇓P	P	00 16 40.5	+0.2
P13A	**Bates Ranch, G** baz=32	**32.13**	**327**	⇑P	P	00 16 45.4	+1.1
HWUT	**Hardware Ranch** 3.8nm,0.9s,mb4.3	**32.55**	**332**	*e*P	P	00 16 48.1	+0.2
Q11A	**Duckwater** baz=33	**32.61**	**324**	⇓P	P	00 16 49.0	+0.5
N14A	**Grayback Hills** baz=33	**32.73**	**329**	⇓P	P	00 16 50.3	+0.7
J18A	**Kendall Valley** baz=33	**33.18**	**335**	⇓P	P	00 16 53.6	+0.1
L15A	**Malad City** baz=33	**33.24**	**331**	⇓P	P	00 16 54.5	+0.5
M14A	**Sheep Mountain** baz=33,SNR=5.2	**33.31**	**330**	⇓P	P	00 16 54.9	+0.3
K16A	**Soda Springs** baz=34	**33.53**	**333**	⇑P	P	00 16 56.3	-0.2
M13A	**Montello** baz=34	**33.60**	**329**	⇓P	P	00 16 57.4	+0.2
REDW	**Red Top Meadow** 8.6nm,1.1s,mb4.6	**33.65**	**335**	*e*P	P	00 16 57.5	0.0
L14A	**Malta** baz=34	**33.66**	**331**	⇑P	P	00 16 58.1	+0.4
SNOW	**Snow King Moun** 6.4nm,0.7s,mb4.7	**33.69**	**335**	*e*P	P	00 16 57.6	-0.3
LOHW	**Long Hollow** 3.3nm,1.1s,mb4.2	**33.75**	**335**	*e*P	P	00 16 58.2	-0.2
TPAW	**Teton Pass** 4.8nm,1.0s,mb4.4	**33.80**	**335**	*e*P	P	00 16 56.8	-2.1
K15A	**Arbon** baz=34	**33.84**	**332**	⇑P	P	00 16 59.3	+0.1
NVAR	**Mina Array Bea** 1.9nm,0.7s,mb4.1,baz=133,slow=8.7,SNR=5.1	**33.90**	**321**	P	P	00 16 59.0	-0.8
NVAR	0.4nm,0.5s,baz=130,slow=1.4,SNR=3.8			PcP	PcP	00 19 34.4	-4.0
K14A	**Jones Ranch, D** baz=34	**34.03**	**331**	⇓P	P	00 17 01.1	+0.3
J15A	**Blackfoot** baz=34	**34.36**	**333**	⇓P	P	00 17 03.8	+0.1
F20A	**Billings** baz=35	**34.70**	**340**	⇓P	P	00 17 06.6	-0.1
G18A	**Lazy EL Ranch,** baz=35	**34.78**	**338**	⇓P	P	00 17 07.2	-0.2
J14A	**Carey** baz=35	**34.79**	**332**	⇑P	P	00 17 07.8	+0.4
G17A	**Pierce Place,** baz=35	**35.23**	**337**	⇑P	P	00 17 11.8	+0.6
F18A	**Big Timber** baz=35	**35.34**	**338**	⇑P	P	00 17 12.0	-0.2
HLID	**Hailey** baz=36	**35.39**	**331**	⇑P	P	00 17 12.6	0.0
HLID	**Hailey** 2.5nm,1.0s,mb4.1	**35.39**	**331**	*e*P	P	00 17 12.2	-0.3
H15A	**Lima** baz=36	**35.42**	**334**	⇓P	P	00 17 13.1	+0.3
I13A	**Wildhorse Cree** baz=36	**35.52**	**332**	⇓P	P	00 17 14.5	+0.8
MCMT	**McKenzie Canyo** 3.7nm,0.9s,mb4.3	**35.68**	**334**	*e*P	P	00 17 15.9	+0.8
F17A	**Fitzpatrick Pl** baz=36	**35.69**	**337**	⇑P	P	00 17 15.9	+0.8
H14A	**Leadore** baz=36	**35.73**	**333**	⇑P	P	00 17 16.1	+0.6
G15A	**Dillon** baz=36	**35.80**	**335**	⇓P	P	00 17 16.2	+0.1
BOZ	**Bozeman (W)** 0.7nm,0.5s,mb3.9	**35.85**	**336**	*e*P	P	00 17 16.9	+0.4
I12A	**Atlanta** baz=36,SNR=8.3	**35.90**	**331**	⇓P	P	00 17 17.2	+0.2
MFID	**Camas Ranch** baz=36	**35.95**	**330**	⇑P	P	00 17 18.2	+0.7
E18A	**Harlowton** baz=36	**35.98**	**339**	⇑P	P	00 17 17.6	0.0
H13A	**Challis** baz=36	**36.09**	**332**	⇑P	P	00 17 18.6	0.0
H12A	**Diamond D Ranc** baz=36,SNR=7.6	**36.35**	**332**	⇑P	P	00 17 21.1	+0.3
G13A	**Cobalt** baz=36	**36.49**	**333**	⇑P	P	00 17 21.9	-0.1
E16A	**East Helena** baz=37	**36.60**	**337**	⇓P	P	00 17 22.7	-0.2
WVOR	**Wild Horse Val** 2.2nm,0.9s,mb4.0	**36.71**	**326**	*e*P	P	00 17 24.0	+0.1
D17A	**Six Diamond Ra** baz=37	**36.76**	**338**	⇑P	P	00 17 23.8	-0.4
E15A	**Deer Lodge** baz=37	**36.89**	**336**	⇑P	P	00 17 25.2	-0.2
G12A	**Big Creek, Yel** baz=37	**37.01**	**332**	⇓P	P	00 17 26.3	-0.1
J08A	**Circle Bar Ran** baz=37	**37.26**	**327**	⇑P	P	00 17 28.8	+0.2
F12A	**Elk City** baz=38,SNR=13	**37.46**	**333**	⇓P	P	00 17 29.9	-0.3
E13A	**Victor** baz=38	**37.53**	**334**	⇓P	P	00 17 30.4	-0.4
C16A	**Fuhringer Ranc** baz=38	**37.69**	**338**	⇑P	P	00 17 31.7	-0.4
E12A	**Beaver Dam Sad** baz=38	**38.11**	**333**	⇓P	P	00 17 34.9	-0.8
K05A	**Summer Lake** baz=38	**38.15**	**325**	⇓P	P	00 17 35.9	-0.3
D13A	**Huson** baz=38	**38.16**	**335**	⇓P	P	00 17 35.5	-0.7
I07A	**Izee** baz=38	**38.30**	**327**	⇑P	P	00 17 37.5	+0.2
B15A	**Bradely Ranch,** baz=38	**38.42**	**338**	⇑P	P	00 17 37.0	-1.2
D12A	**Red Ives Fores** baz=39	**38.51**	**334**	⇓P	P	00 17 38.1	-1.0
C13A	**Hot Springs** baz=39	**38.68**	**335**	⇓P	P	00 17 39.8	-0.7
A14A	**Double T Ranch** baz=39	**39.28**	**337**	⇑P	P	00 17 44.9	-0.6
C11A	**Tepee Creek (N** baz=40	**39.51**	**334**	⇓P	P	00 17 46.8	-0.6
HOOD	**Mount Hood Mea** 10nm,0.8s,mb4.6	**40.27**	**327**	*e*P	P	00 17 54.2	+0.4
SIV	**San Ignacio** 1.0nm,0.6s,mb3.6,baz=320,slow=9.7,SNR=6.3	**42.46**	**133**	P	P	00

CMAR Chiang Mai Arr 146.19 341 PKPbc PKPbc 00 29 53.5 -4.7
comp=Z,1.2nm,0.3s,baz=337,slow=3.9,SNR=10

*CSEM **16** 00:29:19.4±0.4, 38.06N×20.17E, h2km, MD3.7, Error ellipse: s-maj=7.8km s-min=4.6km az=58.0*
*ATH **16** 00:29:19.7, 38.08N×20.24E, h16km±1km, MD3.7/16*
*ISCJB **16** 00:29:19.0±0.6, 38.06N±0.03×20.19E±0.04, h10km, Error ellipse: s-maj=5.0km s-min=3.1km az=136.1*
*NEIC **16** 00:29:19.7, 38.08N×20.24E, h16km, MD3.7(ATH), After ATH.*
*THE **16** 00:29:20.4, 38.08N×20.24E, h0km±2km, ML2.5/10, Error ellipse: s-maj=3.3km s-min=1.5km az=230.0*
*SKO **16** 00:29:32.0, 38.88N×20.32E, h2km*

ISC 16 00:29:19.1±0.8, 38.04N±0.03×20.17E±0.04, h5km±4km, n79, σ1s02/125, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.35**	**68**	*e*Pb	**Pg**	**00 29 26.3**	**+0.4**
VLS				*e*Sb	**Sg**	**00 29 30.7**	**+0.1**
VLS	**Valsamata**	**0.35**	**68**	*e*PB	**Pg**	**00 29 26.3**	**+0.4**
VLS				*e*SB	**Sg**	**00 29 30.7**	**+0.1**
VLS	**Valsamata**	**0.35**	**68**	P	**Pg**	**00 29 26.3**	**+0.4**
VLS				S	**Sg**	**00 29 30.7**	**+0.1**
VLS	**Valsamata**	**0.35**	**68**	P	**Pg**	**00 29 26.3**	**+0.4**
VLS				S	**Sg**	**00 29 30.7**	**+0.1**
KFL	**Anninata**	**0.49**	**82**	P	**Pg**	**00 29 28.8**	**+0.3**
KFL	**Anninata**	**0.49**	**82**	P	**Pg**	**00 29 28.8**	**+0.3**
LKD2	**Lefkada island**	**0.84**	**27**	P	**Pg**	**00 29 34.3**	**-0.8**
LKD2				S	**Sg**	**00 29 48.1**	**+2.1**
LKD2	**Lefkada island**	**0.84**	**27**	P	**Pg**	**00 29 34.3**	**-0.8**
LKD2				S	**Sg**	**00 29 48.1**	**+2.1**
RLS	**Riolos of Patr**	**1.02**	**89**	*e*Pn	**Pg**	**00 29 38.4**	**-0.2**
RLS				*e*Sn	**Sg**	**00 29 51.5**	**-0.4**
RLS	**Riolos of Patr**	**1.02**	**89**	*e*PN	**Pg**	**00 29 38.4**	**-0.2**
RLS				*e*SN	**Sg**	**00 29 51.5**	**-0.4**
RLS	**Riolos of Patr**	**1.02**	**89**	*e*Pn	**Pg**	**00 29 38.4**	**-0.2**
UPR	**University Cam**	**1.29**	**79**	*e*PN	**Pn**	**00 29 43.2**	**-0.6**
UPR	**University Cam**	**1.29**	**79**	P	**Pn**	**00 29 43.2**	**-0.6**
UPR				S	**Sg**	**00 30 01.8**	**+1.2**
UPR	**University Cam**	**1.29**	**79**	P	**Pn**	**00 29 43.2**	**-0.6**
UPR				S	**Sg**	**00 30 01.8**	**+1.2**
EFP	**Efpalio**	**1.42**	**74**	*e*PN	**Pn**	**00 29 45.3**	**-0.2**
EFP	**Efpalio**	**1.42**	**74**	P	**Pn**	**00 29 44.9**	**-0.6**
EFP				S	**Sg**	**00 30 06.7**	**+2.1**
EFP	**Efpalio**	**1.42**	**74**	P	**Pn**	**00 29 44.9**	**-0.6**
EFP	**Efpalio**	**1.42**	**74**	*e*Pn	**Pn**	**00 29 45.3**	**-0.2**
EFP				S	**Sg**	**00 30 06.7**	**+2.1**
LAKA	**Lakka**	**1.44**	**82**	P	**Pn**	**00 29 45.4**	**-0.3**
LAKA				S	**Sg**	**00 30 05.1**	**-0.1**
LAKA	**Lakka**	**1.44**	**82**	P	**Pn**	**00 29 45.4**	**-0.3**
LAKA				S	**Sg**	**00 30 05.1**	**-0.1**
IGT	**Igoumenitsa**	**1.49**	**5**	P	**Pn**	**00 29 46.8**	**+0.3**
IGT	**Igoumenitsa**	**1.49**	**5**	P	**Pn**	**00 29 46.7**	**+0.2**
IGT				S	**Sg**	**00 30 06.7**	**-0.3**
IGT	**Igoumenitsa**	**1.49**	**5**	P	**Pn**	**00 29 46.8**	**+0.3**
IGT				S	**Sg**	**00 30 06.7**	**-0.3**
TRIZ	**Trizonia**	**1.53**	**77**	P	**Pn**	**00 29 46.5**	**-0.5**
TRIZ				S	**Sg**	**00 30 08.5**	**+0.3**
TRIZ	**Trizonia**	**1.53**	**77**	P	**Pn**	**00 29 46.5**	**-0.5**
TRIZ				S	**Sg**	**00 30 08.5**	**+0.3**
EVR	**Evrytania**	**1.55**	**55**	*e*Pn	**Pg**	**00 29 48.0**	**-0.8**
EVR	**Evrytania**	**1.55**	**55**	*e*PN	**Pg**	**00 29 48.0**	**-0.8**
EVR	**Evrytania**	**1.55**	**55**	*e*Pn	**Pg**	**00 29 48.0**	**-0.8**
KALE	**Kalithea**	**1.59**	**77**	P	**Pn**	**00 29 47.7**	**-0.1**
KALE				S	**Sg**	**00 30 10.2**	**+0.1**
KALE	**Kalithea**	**1.59**	**77**	P	**Pn**	**00 29 47.7**	**-0.1**
KALE				S	**Sg**	**00 30 10.2**	**+0.1**
ITM	**Ithomi**	**1.64**	**121**	*e*Pn	**Pg**	**00 29 50.3**	**-0.2**
ITM				*e*Sn	**Sg**	**00 30 11.1**	**-0.6**
ITM	**Ithomi**	**1.64**	**121**	*e*PN	**Pg**	**00 29 50.3**	**-0.2**
ITM				*e*SN	**Sg**	**00 30 11.1**	**-0.6**
ITM	**Ithomi**	**1.64**	**121**	*e*Pn	**Pg**	**00 29 50.3**	**-0.2**
ITM				*e*Sn	**Sg**	**00 30 11.1**	**-0.6**
KEK	**Kerkira**	**1.69**	**350**	*e*Pn	**Pg**	**00 29 49.6**	**+0.3**
KEK	**Kerkira**	**1.69**	**350**	*e*PN	**Pn**	**00 29 49.6**	**+0.3**
KEK	**Kerkira**	**1.69**	**350**	P	**Pn**	**00 29 49.6**	**+0.3**
KEK				S	**Sg**	**00 30 14.3**	**+0.8**
KEK	**Kerkira**	**1.69**	**350**	P	**Pn**	**00 29 49.6**	**+0.3**
KEK				S	**Sg**	**00 30 14.3**	**+0.8**
PYL	**PYLOS**	**1.69**	**132**	*e*PN	**Pg**	**00 29 51.5**	**0.0**
PYL	**PYLOS**	**1.69**	**132**	*e*Pn	**Pg**	**00 29 51.5**	**0.0**
JAN	**Janina**	**1.69**	**18**	*e*Pn	**Pn**	**00 29 49.8**	**+0.5**
JAN				*e*Sn	**Sg**	**00 30 12.1**	**-1.5**
JAN	**Janina**	**1.69**	**18**	*e*PN	**Pn**	**00 29 49.8**	**+0.5**
JAN				*e*SN	**Sg**	**00 30 12.1**	**-1.5**
JAN	**Janina**	**1.69**	**18**	*e*Pn	**Pn**	**00 29 49.8**	**+0.5**
JAN				*e*Sn	**Sg**	**00 30 12.1**	**-1.5**
GUR	**Goura**	**1.72**	**93**	*e*PN	**Pb**	**00 29 50.3**	**-0.8**
GUR	**Goura**	**1.72**	**93**	P	**Pb**	**00 29 50.4**	**-0.7**
GUR				S	**Sb**	**00 30 12.8**	**-0.1**
GUR	**Goura**	**1.72**	**93**	P	**Pb**	**00 29 50.4**	**-0.7**
GUR				S	**Sb**	**00 30 12.8**	**-0.1**
VLX	**Vlachokerasia**	**1.87**	**110**	*e*PN	**Pb**	**00 29 52.6**	**-1.1**
VLX	**Vlachokerasia**	**1.87**	**110**	P	**Pb**	**00 29 52.6**	**-1.1**
VLX				S	**Sg**	**00 30 18.4**	**-0.9**
VLX	**Vlachokerasia**	**1.87**	**110**	P	**Pb**	**00 29 52.6**	**-1.1**
VLX				S	**Sg**	**00 30 18.4**	**-0.9**
DSF	**Desfina**	**1.89**	**78**	P	**Pn**	**00 29 52.2**	**+0.2**
DSF				S	**Sb**	**00 30 17.2**	**-0.7**
DSF	**Desfina**	**1.89**	**78**	P	**Pn**	**00 29 52.2**	**+0.2**
DSF				S	**Sb**	**00 30 17.2**	**-0.7**
AGG	**Agios Georgios**	**1.95**	**59**	*e*Pn	**Pb**	**00 29 53.5**	**-1.6**
AGG	**Agios Georgios**	**1.95**	**59**	*e*PN	**Pb**	**00 29 53.5**	**-1.6**
AGG	**Agios Georgios**	**1.95**	**59**	P	**Pb**	**00 29 54.7**	**-0.4**
AGG				S	**Sb**	**00 30 17.2**	**-2.5**
AGG	**Agios Georgios**	**1.95**	**59**	*e*Pn	**Pb**	**00 29 53.5**	**-1.6**
AGG	**Agios Georgios**	**1.95**	**59**	P	**Pb**	**00 29 54.7**	**-0.4**
AGG				S	**Sb**	**00 30 17.2**	**-2.5**
THL	**Klokotos Trika**	**2.09**	**43**	*e*PN	**Pb**	**00 29 55.8**	**-1.7**
THL	**Klokotos Trika**	**2.09**	**43**	P	**Pb**	**00 29 56.2**	**-1.3**
THL				S	**Sb**	**00 30 22.9**	**-0.8**
THL	**Klokotos Trika**	**2.09**	**43**	*e*Pn	**Pb**	**00 29 55.8**	**-1.7**
THL	**Klokotos Trika**	**2.09**	**43**	P	**Pb**	**00 29 56.2**	**-1.3**
THL				S	**Sb**	**00 30 22.9**	**-0.8**
LTK	**Loutraki**	**2.21**	**90**	*e*PB	**Pn**	**00 29 56.4**	**+0.1**
LKR	**Lokris**	**2.30**	**74**	*e*Pn	**Pn**	**00 29 58.9**	**+1.3**
LKR	**Lokris**	**2.30**	**74**	*e*PN	**Pn**	**00 29 58.9**	**+1.3**
LKR	**Lokris**	**2.30**	**74**	*e*Pn	**Pn**	**00 29 58.9**	**+1.3**
DID	**Didima**	**2.49**	**102**	*e*PN	**Pn**	**00 30 00.9**	**+0.8**
DID	**Didima**	**2.49**	**102**	P	**Pn**	**00 30 02.3**	**+2.2**
DID				S	**Sn**	**00 30 34.1**	**+3.3**
DID	**Didima**	**2.49**	**102**	*e*Pn	**Pn**	**00 30 00.9**	**+0.8**
DID	**Didima**	**2.49**	**102**	P	**Pn**	**00 30 02.3**	**+2.2**
DID				S	**Sn**	**00 30 34.1**	**+3.3**
XOR	**Xorichti**	**2.71**	**60**	P	**Pn**	**00 30 04.7**	**+1.5**
XOR				S	**Sn**	**00 30 37.5**	**+1.2**
XOR	**Xorichti**	**2.71**	**60**	P	**Pn**	**00 30 04.7**	**+1.5**
XOR				S	**Sn**	**00 30 37.5**	**+1.2**
LIT	**Litokhoron**	**2.73**	**41**	*e*Pn	**Pn**	**00 30 04.3**	**+0.7**
LIT	**Litokhoron**	**2.73**	**41**	*e*PN	**Pn**	**00 30 04.3**	**+0.7**
LIT	**Litokhoron**	**2.73**	**41**	*e*Pn	**Pn**	**00 30 04.3**	**+0.7**
VLY	**Voula,Athens**	**2.87**	**93**	*e*Pn	**Pn**	**00 30 06.1**	**+0.7**
VLY	**Voula,Athens**	**2.87**	**93**	*e*PN	**Pn**	**00 30 06.1**	**+0.7**
VLY	**Voula,Athens**	**2.87**	**93**	*e*Pn	**Pn**	**00 30 06.1**	**+0.7**
BIA	**Bitola**	**3.10**	**16**	*e*Pn	**Pn**	**00 30 11.2**	**+2.6**
BIA				*e*Sg	**Sn**	**00 30 44.0**	**-2.1**
KRUS	**Krusevo**	**3.42**	**14**	*e*Pn	**Pn**	**00 30 14.7**	**+1.6**
KRUS				*e*Sg	**Sn**	**00 30 53.8**	**-0.2**
STON	**Ston**	**5.18**	**339**	*e*Pn	**Pn**	**00 30 35.8**	**-1.4**
STON				S	**Sn**	**00 31 32.6**	**-4.6**
NVLJ	**Novalja**	**7.64**	**330**	*i* Pn	**Pn**	**00 31 10.5**	**-0.4**
NVLJ				S	**Sn**	**00 32 32.3**	**-5.5**

*NEIC **16** 00:35:01.9, 36.96N×28.19E, h42km, MD3.6(ATH), After ATH.*
*ATH **16** 00:35:01.9, 36.96N×28.19E, h42km±7km, MD3.6/5*
*THE **16** 00:35:02.6, 36.91N×27.82E, h1km, ML3.6/1, Error ellipse: s-maj=0.9km s-min=0.4km az=112.0*
*ISK **16** 00:35:02.7, 36.98N×27.77E, h12km, MD3.2*
*DDA **16** 00:35:02.9, 36.97N×27.71E, h30km±2km, Md3.1*
*CSEM **16** 00:35:03.4±0.2, 36.96N×27.79E, h10km, MD3.1, Error ellipse: s-maj=3.8km s-min=3.4km az=145.0*
*ISCJB **16** 00:35:03.3±0.4, 36.95N±0.02×27.78E±0.03, h11km±3km, Error ellipse: s-maj=3.9km s-min=3.7km az=146.5*

ISC 16 00:35:03.6±0.4, 36.96N±0.02×27.79E±0.03, h10km±3km, n73, σ0s98/99, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAT	**Datca**	**0.28**	**217**	*e*PG	**Pg**	**00 35 09.0**	**-0.3**
DAT				*e*SG	**Sg**	**00 35 13.6**	**+0.5**
DAT	**Datca**	**0.28**	**217**	*e*Pg	**Pg**	**00 35 09.0**	**-0.3**
DAT				*e*Sg	**Sg**	**00 35 13.6**	**+0.5**
BDRM	**Kayabasi**	**0.29**	**292**	*i* P	**Pg**	**00 35 09.5**	**-0.1**
BDRM				*i* S	**Sg**	**00 35 15.0**	**+1.4**
BDRM	**Kayabasi**	**0.29**	**292**	*i* P	**Pg**	**00 35 09.5**	**0.0**
BDRM				*i* S	**Sg**	**00 35 15.0**	**+1.5**
MLSB	**Milas**	**0.34**	**359**	*e*PG	**Pg**	**00 35 10.3**	**-0.1**
MLSB	**Milas**	**0.34**	**359**	*e*Pg	**Pg**	**00 35 10.3**	**-0.1**
BODT	**Bodrum**	**0.40**	**286**	*e*PG	**Pg**	**00 35 10.3**	**-1.1**
BODT				*e*SG	**Sg**	**00 35 17.3**	**+0.6**
BODT	**Bodrum**	**0.40**	**286**	*e*Pg	**Pg**	**00 35 10.3**	**-1.1**
BODT				*e*Sg	**Sg**	**00 35 17.3**	**+0.6**
YER	**Yerkesik**	**0.43**	**66**	*e*PG	**Pg**	**00 35 11.8**	**-0.3**
YER				*e*SG	**Sg**	**00 35 18.4**	**+0.5**
YER	**Yerkesik**	**0.43**	**66**	*e*Pg	**Pg**	**00 35 11.8**	**-0.3**
YER				*e*Sg	**Sg**	**00 35 18.4**	**+0.5**
NIS1	**Nisyros Isl.**	**0.60**	**234**	P	**Pg**	**00 35 15.0**	**-0.3**
NIS1				S	**Sg**	**00 35 24.2**	**+1.0**
NIS1	**Nisyros Isl.**	**0.60**	**234**	P	**Pg**	**00 35 15.0**	**-0.3**
NIS1				S	**Sg**	**00 35 24.2**	**+1.0**
AYDN	**Tasoluk**	**0.71**	**6**	*i* P	**Pg**	**00 35 17.2**	**-0.1**
AYDN				*i* S	**Sg**	**00 35 26.5**	**-0.1**
AYDN	**Tasoluk**	**0.71**	**6**	*i* P	**Pg**	**00 35 17.2**	**-0.1**
AYDN				*i* S	**Sg**	**00 35 26.5**	**-0.1**
ARG	**Arkhangelos**	**0.79**	**160**	*e*P	**Pg**	**00 35 17.3**	**-1.5**
ARG				*e*S	**Sg**	**00 35 27.9**	**-1.1**
ARG	**Arkhangelos**	**0.79**	**160**	*e*P	**Pg**	**00 35 17.3**	**-1.5**
ARG				*e*S	**Sg**	**00 35 27.9**	**-1.1**
ARG	**Arkhangelos**	**0.79**	**160**	P	**Pg**	**00 35 17.3**	**-1.5**
ARG				S	**Sg**	**00 35 28.9**	**-0.1**
ARG	**Arkhangelos**	**0.79**	**160**	*e*P	**Pg**	**00 35 17.3**	**-1.5**
ARG				*e*S	**Sg**	**00 35 27.9**	**-1.1**
GCAM	**G?zelcaml?**	**0.86**	**329**	*i* P	**Pg**	**00 35 20.1**	**-0.2**
GCAM				*i* S	**Sg**	**00 35 32.2**	**+0.7**
GCAM	**G?zelcaml?**	**0.86**	**329**	*i* P	**Pg**	**00 35 20.1**	**-0.2**
GCAM				*i* S	**Sg**	**00 35 32.2**	**+0.6**
DNZL	**Cakiroluk**	**1.24**	**53**	*i* P	**Pn**	**00 35 26.2**	**-0.8**
DNZL				*i* S	**Sb**	**00 35 45.0**	**+1.8**
DNZL	**Cakiroluk**	**1.24**	**53**	*i* P	**Pn**	**00 35 26.2**	**-0.9**
DNZL				*i* S	**Sb**	**00 35 45.0**	**+1.7**
DENT	**Denizli**	**1.27**	**51**	*e*PN	**Pn**	**00 35 26.9**	**-0.6**
DENT	**Denizli**	**1.27**	**51**	*e*Pn	**Pn**	**00 35 26.9**	**-0.6**
GLHS	**Glhisar (BURDU**	**1.38**	**81**	*e*PN	**Pn**	**00 35 29.2**	**+0.2**
GLHS	**Glhisar (BURDU**	**1.38**	**81**	*e*Pn	**Pn**	**00 35 29.2**	**+0.2**
GOLH	**Golhisar**	**1.45**	**78**	*i* P	**Pn**	**00 35 29.7**	**-0.1**
GOLH				*i* S	**Sn**	**00 35 51.2**	**+2.3**
GOLH	**Golhisar**	**1.45**	**78**	*i* P	**Pn**	**00 35 29.7**	**-0.2**
KARP	**Karpathos**	**1.49**	**200**	*e*P	**Pn**	**00 35 29.2**	**-1.3**
KARP	**Karpathos**	**1.49**	**200**	*e*P	**Pn**	**00 35 29.2**	**-1.3**
KARP	**Karpathos**	**1.49**	**200**	*e*P	**Pn**	**00 35 29.2**	**-1.3**
IZM	**Izmir**	**1.50**	**344**	*e*PN	**Pn**	**00 35 29.2**	**-1.4**
IZM	**Izmir**	**1.50**	**344**	*e*Pn	**Pn**	**00 35 29.2**	**-1.4**
KDAG	**Bornova**	**1.50**	**344**	*i* P	**Pn**	**00 35 28.6**	**-2.1**
KDAG	**Bornova**	**1.50**	**344**	*i* P	**Pn**	**00 35 28.6**	**-2.1**
BLCB	**Balcova**	**1.54**	**338**	*e*PN	**Pn**	**00 35 29.9**	**-1.3**
BLCB	**Balcova**	**1.54**	**338**	P	**Pn**	**00 35 30.5**	**-0.7**
BLCB				S	**Sn**	**00 35 52.4**	**+1.0**
BLCB	**Balcova**	**1.54**	**338**	*e*Pn	**Pn**	**00 35 29.9**	**-1.3**
BLCB	**Balcova**	**1.54**	**338**	P	**Pn**	**00 35 30.5**	**-0.7**
BLCB				S	**Sn**	**00 35 52.4**	**+1.0**
AKAS	**Kas**	**1.63**	**116**	*i* P	**Pn**	**00 35 32.5**	**+0.1**
AKAS				*i* S	**Sn**	**00 35 57.3**	**+3.8**
AKAS	**Kas**	**1.63**	**116**	*i* P	**Pn**	**00 35 32.5**	**+0.1**
KULA	**Kula-Manisa**	**1.70**	**24**	*e*PN	**Pn**	**00 35 32.5**	**-0.9**
KULA	**Kula-Manisa**	**1.70**	**24**	*e*Pn	**Pn**	**00 35 32.5**	**-0.9**
ELL	**Elmali**	**1.71**	**96**	*e*PN	**Pn**	**00 35 34.3**	**+0.8**
ELL	**Elmali**	**1.71**	**96**	*e*Pn	**Pn**	**00 35 34.3**	**+0.7**
APE	**Apeiranthos**	**1.81**	**274**	*e*PN	**Pn**	**00 35 34.0**	**-0.9**
APE	**Apeiranthos**	**1.81**	**274**	*e*P	**Pn**	**00 35 36.9**	**+2.0**
APE	**Apeiranthos**	**1.81**	**274**	*e*P	**Pn**	**00 35 36.9**	**+2.0**
APE	**Apeiranthos**	**1.81**	**274**	*e*Pn	**Pn**	**00 35 34.0**	**-0.9**
APE	**Apeiranthos**	**1.81**	**274**	*e*P	**Pn**	**00 35 36.9**	**+2.0**
AKHS	**Akhisar**	**1.92**	**1**	*i* P	**Pn**	**00 35 35.4**	**-1.0**
AKHS				*i* S	**Sn**	**00 35 59.3**	**-1.3**
AKHS	**Akhisar**	**1.92**	**1**	*i* P	**Pn**	**00 35 35.4**	**-1.0**
AKHS				*i* S	**Sn**	**00 35 59.3**	**-1.3**
KHL	**Karahalli**	**1.94**	**45**	*e*PN	**Pn**	**00 35 36.6**	**-0.1**
KHL	**Karahalli**	**1.94**	**45**	*e*Pn	**Pn**	**00 35 36.6**	**-0.1**
KHAL	**Karahalli**	**1.96**	**43**	*i* P	**Pn**	**00 35 37.3**	**+0.4**
KHAL	**Karahalli**	**1.96**	**43**	*i* P	**Pn**	**00 35 37.3**	**+0.4**
CHOS	**Chios island**	**1.98**	**317**	*e*P	**Pn**	**00 35 36.9**	**-0.3**
CHOS	**Chios island**	**1.98**	**317**	*e*P	**Pn**	**00 35 36.9**	**-0.3**
DEMI	**Demirci**	**2.21**	**19**	*i* P	**Pn**	**00 35 40.1**	**-0.3**
DEMI	**Demirci**	**2.21**	**19**	*i* P	**Pn**	**00 35 40.1**	**-0.3**
PRK	**Paraskevi**	**2.58**	**333**	*e*P	**Pn**	**00 35 45.4**	**-0.1**
PRK	**Paraskevi**	**2.58**	**333**	*e*P	**Pn**	**00 35 45.4**	**-0.1**
PRK	**Paraskevi**	**2.58**	**333**	*e*P	**Pn**	**00 35 45.4**	**-0.1**
ALT	**Altintas**	**2.79**	**40**	*e*PN	**Pn**	**00 35 48.6**	**+0.3**
ALT	**Altintas**	**2.79**	**40**	*e*Pn	**Pn**	**00 35 48.6**	**+0.3**
IDI	**Anoyia**	**2.88**	**236**	*e*P	**Pn**	**00 35 51.4**	**+1.9**
IDI	**Anoyia**	**2.88**	**236**	*e*P	**Pn**	**00 35 51.4**	**+1.9**
IDI	**Anoyia**	**2.88**	**236**	*e*P	**Pn**	**00 35 51.4**	**+1.9**
LIA	**Limnos Island**	**3.58**	**326**	*e*P	**Pn**	**00 35 59.8**	**+0.6**
LIA	**Limnos Island**	**3.58**	**326**	*e*P	**Pn**	**00 35 59.8**	**+0.6**
LIA	**Limnos Island**	**3.58**	**326**	*e*P	**Pn**	**00 35 59.8**	**+0.6**
HDMB	**Hadim**	**3.76**	**88**	*e*PN	**Pn**	**00 36 03.4**	**+1.7**
HDMB	**Hadim**	**3.76**	**88**	*e*Pn	**Pn**	**00 36 03.4**	**+1.7**

*NEIC **16** 01:10:11.4, 37.60S×177.42E, h115km, MG3.8(WEL), After WEL.*

WEL 16 01:10:12.1±0.2, 37.62S×177.41E, h107km±2km, ML3.7/5, Error ellipse: s-maj=1.7km s-min=1.4km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**0.20**	**298**	PN	Pn	01 10 26.9	-0.2
WIZ				SN	Sn	01 10 38.5	+0.1
URZ	**Urewera**	**0.68**	**200**	PN	Pn	01 10 29.9	-0.1
URZ				SN	Sn	01 10 43.4	-0.1
URZ	**Urewera**	**0.68**	**200**	P	Pn	01 10 29.9	-0.1
MXZ	**Matakaoa Point**	**0.71**	**85**	PN	Pn	01 10 30.5	+0.2
OPRZ	**Ohinepanea**	**0.71**	**252**	PN	Pn	01 10 30.3	0.0
MWZ	**Matawai**	**0.72**	**173**	PN	Pn	01 10 30.4	+0.1
MWZ				SN	Sn	01 10 44.4	+0.4
MWZ	**Matawai**	**0.72**	**173**	P	Pn	01 10 30.4	+0.1
PUZ	**Puketiti**	**0.81**	**124**	PN	Pn	01 10 31.0	-0.1
PUZ				SN	Sn	01 10 44.9	-0.5
PUZ	**Puketiti**	**0.81**	**124**	P	Pn	01 10 31.0	-0.1
TARZ	**Mount Tarawera**	**0.94**	**229**	PN	Pn	01 10 32.8	+0.4
RRRZ	**Republican Roa**	**1.01**	**224**	PN	Pn	01 10 33.4	+0.3
CNGZ	**Carnagh Statio**	**1.07**	**144**	PN	Pn	01 10 34.0	+0.3
PRRZ	**Plateau Road**	**1.19**	**222**	PN	Pn	01 10 35.4	+0.3
ALRZ	**Allen Road**	**1.26**	**222**	PN	Pn	01 10 36.3	+0.4
RAHZ	**Arahi**	**1.32**	**191**	PN	Pn	01 10 36.8	+0.3
PRGZ	**Paritu Road**	**1.35**	**164**	PN	Pn	01 10 36.8	-0.1
KNZ	**Kokohu**	**1.41**	**172**	PN	Pn	01 10 37.3	-0.4
KNZ	**Kokohu**	**1.41**	**172**	P	Pn	01 10 37.3	-0.4
NMHZ	**Naumai**	**1.55**	**198**	PN	Pn	01 10 39.8	+0.5
BKZ	**Black Stump Fm**	**1.70**	**205**	PN	Pn	01 10 40.7	-0.5
BKZ				SN	Sn	01 11 03.3	0.0
BKZ	**Black Stump Fm**	**1.70**	**205**	P	Pn	01 10 40.7	-0.5
MCHZ	**McNeill Hill**	**1.90**	**197**	PN	Pn	01 10 43.6	-0.1
CKHZ	**Cape Kidnapper**	**2.05**	**187**	PN	Pn	01 10 44.8	-0.8
KAHZ	**Kahuranaki**	**2.21**	**191**	PN	Pn	01 10 46.9	-0.7
WPHZ	**Waipukurau**	**2.55**	**197**	PN	Pn	01 10 50.5	-1.6
TSZ	**Takapari Road**	**2.68**	**204**	PN	Pn	01 10 51.9	-1.9
TSZ	**Takapari Road**	**2.68**	**204**	P	Pn	01 10 51.9	-1.9
POWZ	**Post Office Ro**	**3.05**	**204**	PN	Pn	01 10 56.3	-2.3
MRZ	**Mangatainoka R**	**3.35**	**205**	PN	Pn	01 10 59.9	-2.7
MRZ				SN	Sn	01 11 37.7	-4.0
HOWZ	**Holdsworth Sta**	**3.59**	**204**	PN	Pn	01 11 02.7	-3.1
TMWZ	**Te Maipa**	**3.67**	**198**	PN	Pn	01 11 03.9	-3.0
PLWZ	**Palliser**	**4.28**	**202**	PN	Pn	01 11 10.9	-4.1

*ISCJB **16** 01:22:14.6±1.0, 5.7N±0.2×61.3E±0.1, h10km, mb3.8/16, MS3.8/12, Error ellipse: s-maj=24.1km s-min=12.4km az=23.7*
*IDC **16** 01:22:14.2±1.3, 5.66N×61.23E, h0km, mb3.8/11, mb1 3.9/11, mb1mx3.8/22, mbtmp3.8/11, MS3.8/13, Ms1 3.8/13, ms1mx3.6/22, Error ellipse: s-maj=37.9km s-min=20.5km az=44.0*
*NEIC **16** 01:22:16.4±0.8, 5.72N×61.26E, h10km, mb4.1/6, Error ellipse: s-maj=20.0km s-min=9.9km az=203.0*

ISC 16 01:22:16.6±1.0, 5.7N±0.2×61.3E±0.1, h10km, n47, σ0s86/39, mb3.8/16, MS3.8/12, 7C-10D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**19.11**	**289**	LR	LR	01 32 33.2	
	comp=Z,134nm,22.0s,baz=88,slow=32						
KMBO	**Kilima Mbogo**	**24.94**	**255**	LR	LR	01 36 24.9	
	comp=Z,254nm,21.3s,MS3.7,baz=270,slow=34						
MMAI	**Mount Meron Ar**	**36.30**	**322**	LR	LR	01 43 28.0	
	comp=Z,109nm,18.6s,MS3.7,baz=105,slow=35						
MALT	**Malatya**	**38.52**	**331**	*e*P	**P**	**01 29 38.2**	**-0.9**
	1.6nm,0.7s,mb3.9						
CMAR	**Chiang Mai Arr**	**38.84**	**68**	P	**P**	**01 29 43.0**	**+0.8**
	1.1nm,0.5s,mb3.8,baz=252,slow=9.5,SNR=4.8						
CMAR				LR	LR	01 43 36.8	
	comp=Z,123nm,19.2s,MS3.7,baz=202,slow=33						
CHTO	**Chiang Mai**	**38.93**	**67**	*e*P	**P**	**01 29 44.6**	**+1.6**
	2.4nm,0.6s,mb4.1						
BR131	**Keskin Array S**	**42.03**	**328**	*e*P	**P**	**01 30 08.0**	**-0.3**
	1.2nm,0.8s,mb3.6						
BRTR	**Keskin Array B**	**42.03**	**328**	P	**P**	**01 30 08.4**	**+0.1**
	1.5nm,0.8s,mb3.7,baz=154,slow=8.6,SNR=11						
BRTR				LR	LR	01 47 56.7	
	comp=Z,79nm,18.2s,MS3.6,baz=118,slow=37						
ABKAR	**Akbulak array**	**43.40**	**359**	*e*P	**P**	**01 30 19.6**	**+0.4**
	6.6nm,1.1s,mb4.3						
AKTK	**Aktyubinsk**	**44.65**	**357**	P	**P**	**01 30 29.6**	**+0.4**
AKTO	**Aktyubinsk**	**44.65**	**357**	P	**P**	**01 30 29.6**	**+0.4**
	1.5nm,0.8s,mb3.9,baz=166,slow=8.2,SNR=6.6						
MK31	**Makanchi Array**	**44.75**	**20**	*e*P	**P**	**01 30 29.3**	**-0.9**
MKAR	**Makanchi Array**	**44.75**	**20**	P	**P**	**01 30 29.8**	**-0.4**
MKAR				LR	LR	01 50 40.7	
MKAR	**Makanchi Array**	**44.75**	**20**	P	**P**	**01 30 29.8**	**-0.4**
	1.0nm,0.8s,mb3.7,baz=208,slow=9.7,SNR=7.1						
MKAR				LR	LR	01 50 40.7	
	comp=Z,42nm,20.2s,MS3.4,baz=203,slow=38						
KURK	**Kurchatov**	**47.14**	**15**	*e*P	**P**	**01 30 48.7**	**-0.2**
	2.5nm,0.8s,mb4.2						
BVAR	**Borovo

6.5nm,0.3s,baz=106,slow=20,SNR=5.9
CMIG LR LR 01 34 36.3
comp=Z,154nm,20.9s,baz=131,slow=41
CNGN Cerro Negro 4.76 108 *e*P **Pn 01 32 35.1 +0.5**
COPN Copaltepe 4.96 111 *e*P **Pn 01 32 37.8 +0.3**
CSAN 5.12 110 *e*P **Pn 01 32 40.6 +1.0**
CSAN AML AML 01 33 48.6
comp=Z,2μm,0.3s
TEIG Tepich 6.83 25 *e*Pn **Pn 01 33 02.5 -0.5**
comp=Z,177nm,0.7s
TXAR Lajitas Array 19.05 325 P **Pn 01 35 44.2 +0.9**
comp=Z,0.1nm,0.3s,baz=155,slow=12,SNR=9.1
ROSC El Rosal 19.07 117 *e*P **Pn 01 35 40.1 -3.6**
GOGA Godfrey 20.59 19 *e*P **P 01 35 58.5 -0.1**
comp=Z,4.2nm,0.6s
SWET Sewanee 21.66 12 *e*P **P 01 36 09.7 -0.4**
MNTX Cornudas Mount 21.81 326 *e*P **P 01 36 12.0 +0.4**
comp=Z,2.0nm,0.8s,mb3.5
WVT Waverly 22.25 8 *e*P **P 01 36 16.4 +0.1**
comp=Z,3.5nm,0.8s,mb3.7
TKL Tuckaleechee C 22.60 16 P **P 01 36 19.2 -0.8**
TKL LR LR 01 45 49.9
TKL Tuckaleechee C 22.60 16 P **P 01 36 19.2 -0.8**
comp=Z,4.7nm,0.6s,mb4.0,baz=183,slow=9.9,SNR=9.9
TKL LR LR 01 45 49.9
comp=Z,49nm,21.5s,baz=5.8,slow=38
AMTX Amarillo 22.78 338 *e*P **P 01 36 21.5 -0.5**
comp=Z,3.9nm,0.5s,mb4.0
CCM Cathedral Cave 23.95 0 *e*P **P 01 36 31.4 -1.5**
comp=Z,6.5nm,0.8s,mb4.0
WCI Wyandotte Cave 24.53 10 *e*P **P 01 36 37.3 -0.9**
comp=Z,3.9nm,0.7s,mb4.0
TUC Tucson 25.45 319 *e*P **P 01 36 47.5 +0.8**
comp=Z,2.0nm,0.9s,mb3.5
NVAR Mina Array Bea 34.07 321 P **P 01 38 05.5 +2.5**
NVAR PcP PcP 01 40 40.5 +1.4
NVAR Mina Array Bea 34.07 321 P **P 01 38 05.5 +2.5**
comp=Z,2.8nm,0.8s,mb4.2,baz=129,slow=8.4,SNR=15
NVAR PcP PcP 01 40 40.5 +1.4
comp=Z,1.0nm,0.7s,baz=130,slow=4.3,SNR=4.7
HLID Hailey 35.48 331 *e*P **P 01 38 16.7 +1.7**
comp=Z,1.0nm,0.8s,mb3.7
WVOR Wild Horse Val 36.84 326 *e*P **P 01 38 27.5 +0.8**
comp=Z,0.8nm,0.7s,mb3.8
SIV San Ignacio 42.23 134 P **P 01 39 11.0 -0.8**
comp=Z,2.8nm,0.6s,mb4.2,baz=311,slow=8.1,SNR=19
SIV PcP PcP 01 41 03.9 -0.8
comp=Z,0.8nm,0.7s,baz=315,slow=4.3,SNR=3.9
YKA Yellowknife Ar 51.16 346 P **P 01 40 20.0 -0.9**
comp=Z,1.1nm,0.8s,mb4.0,baz=151,slow=7.1,SNR=3.9
ILAR Eielson Array 63.08 337 P **P 01 41 44.0 -1.0**
comp=Z,0.4nm,0.7s,mb3.5,baz=141,slow=4.5,SNR=7.6
MKAR Makanchi Array 119.20 5 PKP PKPdf 01 50 04.6 -1.8
comp=Z,0.3nm,0.7s,baz=64,slow=2.8,SNR=3.6
CMAR Chiang Mai Arr 146.18 342 PKPbc PKPbc 01 50 57.6 -0.8
comp=Z,3.2nm,0.7s,baz=339,slow=3.3,SNR=12

*IDC **16** 01:42:39.5±2.1, 13.°60S×167.°31E, h171km±15km, mb4.1/12, mb1 4.2/12, mb1mx4.2/15, mbtmp4.1/12, Error ellipse: s-maj=24.6km s-min=14.7km az=127.0*
*ISCJB **16** 01:42:42.8±2.1, 13.°6S±0.°1×167.°2E±0.°1, h211km±21km, mb4.3/20, Error ellipse: s-maj=21.7km s-min=14.4km az=28.3*
*NEIC **16** 01:42:42.6±1.6, 13.°54S×167.°22E, h197km±13km, mb4.6/8, Error ellipse: s-maj=10.9km s-min=10.2km az=175.0*
*LDG **16** 01:42:48.8±0.3, 14.°04S×166.°25E, h250km, Mb4.2/2, Error ellipse: s-maj=64.9km s-min=14.0km az=81.0*
ISC 16 01:42:43.8±1.9, 13.°7S±0.°1×167.°2E±0.°1, h208km±20km, n77, σ0°90°/27, mb4.3/20, 21C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.40**	**185**	*e*P	**Pn**	**01 44 43.1**	**+0.9**
DZM				*e*S	**Sn**	**01 46 15.5**	**-1.3**
DZM	**Mont Dzumac**	**8.40**	**185**	*e*Pn	**Pn**	**01 44 43.0**	**+0.9**
20nm,0.6s							
EIDS	**Eidsvold**	**19.14**	**230**	*e*P	**P**	**01 46 53.0**	**+1.6**
20nm,0.5s							
CTA	**Charters Tower**	**21.05**	**249**	P	**P**	**01 47 12.0**	**+0.1**
9.6nm,0.5s,mb4.6,baz=76,slow=13,SNR=15							
CTAO	**Charters Tower**	**21.05**	**249**	*e*P	**P**	**01 47 11.4**	**-0.5**
11nm,0.6s,mb4.6							
STKA	**Stephens Creek**	**29.66**	**228**	P	**P**	**01 48 30.4**	**+0.3**
5.0nm,0.5s,mb4.4,baz=51,slow=8.0,SNR=16							
STKA				PcP	PcP	01 51 29.5	+0.3
2.9nm,0.4s,baz=45,slow=4.1,SNR=4.7							
STKA				ScP	ScP	01 54 55.0	+3.5
1.0nm,0.5s,baz=72,slow=6.4,SNR=6.3							
WRA	**Warramunga Arr**	**32.06**	**254**	P	**P**	**01 48 50.3**	**-1.0**
1.8nm,0.5s,mb3.9,baz=86,slow=9.7,SNR=9.0							
WRA				PcP	PcP	01 51 36.1	+0.3
2.2nm,0.6s,baz=85,slow=3.0,SNR=5.3							
WRA				ScP	ScP	01 55 03.2	+3.5
0.3nm,0.4s,baz=78,slow=3.4,SNR=3.5							
ASAR	**Alice Springs**	**33.02**	**248**	P	**P**	**01 48 58.9**	**-0.8**
3.5nm,0.5s,mb4.2,baz=76,slow=9.3,SNR=75							
ASAR				pP	pP	01 49 37.5	-4.7
0.7nm,0.6s,baz=75,slow=9.0,SNR=1.2							
ASAR				PcP	PcP	01 51 38.5	0.0
2.5nm,0.5s,baz=74,slow=2.4,SNR=16							
ASAR				S	**S**	**01 54 00.9**	**-1.9**
1.9nm,0.9s,baz=82,slow=16,SNR=9.2							
ASAR				ScP	ScP	01 55 06.2	+3.3
1.7nm,0.9s,baz=90,slow=4.0,SNR=7.6							
FORT	**Forrest**	**39.81**	**238**	*e*P	**P**	**01 49 57.1**	**+0.1**
22nm,0.6s,mb4.8							
MAJO	**Matsushiro**	**56.95**	**332**	*e*P	**P**	**01 52 06.4**	**-1.0**
8.7nm,0.8s,mb4.4							
KSRS	**Korea Array**	**62.84**	**325**	P	**P**	**01 52 47.4**	**-0.1**
2.2nm,0.8s,mb3.8,baz=149,slow=8.2,SNR=5.4							
BJT	**Baijiatuan**	**71.40**	**321**	*e*P	**P**	**01 53 41.1**	**-0.2**
9.4nm,0.5s,mb4.7							
XAN	**Xi'an**	**72.94**	**312**	P	**P**	**01 53 50.8**	**+0.2**
XAN				pmax	pmax		
comp=Z,4.0nm,0.6s,mb4.2							
XAN				pmax	pmax		
comp=Z,24nm,5.7s							
CMAR	**Chiang Mai Arr**	**74.48**	**294**	P	**P**	**01 54 00.6**	**+0.7**
comp=Z,5.8nm,0.7s,mb4.3,baz=127,slow=4.7,SNR=24							
CHTO	**Chiang Mai**	**74.60**	**294**	*e*P	**P**	**01 54 00.5**	**0.0**
comp=Z,2.3nm,0.6s,mb4.0							
QSPA	**South Pole Qui**	**76.36**	**180**	*e*P	**P**	**01 54 10.6**	**+1.2**
comp=Z,5.2nm,0.8s,mb4.2							
LZH	**Lanzhou**	**77.57**	**312**	*e*P	**P**	**01 54 18.5**	**+1.5**
LZH				pmax	pmax		
comp=Z,19nm,1.2s,mb4.6							
SONM	**Songino Array**	**81.62**	**324**	P	**P**	**01 54 38.5**	**+0.1**
comp=Z,1.9nm,0.5s,mb4.0,baz=146,slow=6.0,SNR=16							
GTA	**Gaotai**	**81.90**	**314**	*e*P	**P**	**01 54 41.4**	**+1.3**
GTA				pmax	pmax		
comp=Z,7.0nm,1.1s,mb4.2							
MAW	**Mawson**	**82.85**	**202**	P	**P**	**01 54 45.3**	**+0.7**
comp=Z,3.1nm,0.6s,mb4.2,baz=107,slow=6.4,SNR=23							
ILAR	**Eielson Array**	**85.53**	**18**	P	**P**	**01 54 56.8**	**-1.1**
comp=Z,1.3nm,0.5s,mb3.9,baz=239,slow=4.8,SNR=37							
ILAR				pP	pP	01 55 43.7	-5.0
comp=Z,0.7nm,0.9s,baz=216,slow=6.2,SNR=2.4							
NVAR	**Mina Array Bea**	**86.61**	**49**	P	**P**	**01 55 03.0**	**-0.9**
comp=Z,0.4nm,0.6s,mb3.4,baz=250,slow=7.2,SNR=2.3							
VNA1	**Neumayer--Stat**	**95.84**	**182**	*e*Pdiff	PKiKP	02 00 23.5	-0.6
MKAR	**Makanchi Array**	**96.40**	**316**	P	**P**	**01 55 49.2**	**+0.2**
MKAR	**Makanchi Array**	**96.40**	**316**	P	**P**	**01 55 49.2**	**+0.2**
comp=Z,4.1nm,0.6s,mb4.9,baz=86,slow=5.9,SNR=38							
MKAR				PKiKP	PKiKP	02 00 24.7	-0.9
comp=Z,0.2nm,0.5s,baz=164,slow=0.7,SNR=3.7							
ZALV	**Zalesovo Beam**	**96.51**	**324**	P	**P**	**01 55 48.4**	**-1.0**
comp=Z,1.9nm,0.6s,mb4.5,baz=112,slow=4.4,SNR=8.6							
KEV	**Kevo**	**118.69**	**345**	*e*p	PKPdf	02 01 05.1	-1.3
comp=Z,0.4nm,0.3s							
ARCES	**ARCESS Array B**	**119.21**	**346**	PKP	PKPdf	02 01 07.0	-0.4
ARCES				PKKPbc	PKKPbc	02 11 20.4	-3.5
ARCES	**ARCESS Array B**	**119.21**	**346**	PKP	PKPdf	02 01 07.0	-0.4
comp=Z,2.3nm,0.4s,baz=64,slow=2.0,SNR=53							
ARCES				PKKPbc	PKKPbc	02 11 20.4	-3.5
comp=Z,3.0nm,0.9s,baz=224,slow=2.5,SNR=7.0							
JOF	**Joensuu**	**121.89**	**338**	*e*p	PKPdf	02 01 12.2	-0.5
comp=Z,0.7nm,0.3s							
SIV	**San Ignacio**	**123.90**	**120**	PKP	PKPdf	02 01 17.8	-0.2
comp=Z,0.4nm,0.6s,baz=234,slow=8.7,SNR=3.3							
BOSA	**Boshof**	**124.15**	**221**	PKP	PKPdf	02 01 18.8	+0.6
comp=Z,3.3nm,1.0s,baz=117,slow=6.1,SNR=5.7							
KAF	**Kangasniemi**	**124.19**	**339**	*e*p	PKPdf	02 01 16.3	-0.9
comp=Z,0.8nm,0.3s							
FINES	**FINESS Array B**	**124.72**	**338**	PKP	PKPdf	02 01 17.9	-0.3
comp=Z,1.5nm,0.5s,baz=83,slow=1.8,SNR=19							

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOA	**NORSAR Array B**	**129.59**	**345**	PKP	PKPdf	02 01 27.7	+0.2
comp=Z,1.3nm,0.6s,baz=32,slow=2.0,SNR=8.2							
AKASG	**Malin Array Be**	**129.83**	**326**	PKP	PKPdf	02 01 28.1	-0.2
comp=Z,0.9nm,0.5s,baz=54,slow=3.4,SNR=7.2							
LSZ	**Lusaka**	**130.31**	**236**	*e*PKPdf	PKPdf	02 01 30.8	+0.6
ASF	**Jabal al Asfar**	**131.14**	**301**	PKP	PKPdf	02 01 32.4	+1.0
comp=Z,1.0nm,0.5s,baz=198,slow=3.2,SNR=3.2							
BR131	**Keskin Array S**	**131.78**	**311**	*e*PKPdf	PKPdf	02 01 33.1	+0.8
BRTR	**Keskin Array B**	**131.78**	**311**	PKP	PKPdf	02 01 32.5	+0.2
comp=Z,0.5nm,0.4s,baz=145,slow=5.2,SNR=6.2							
BRTR				SKPbc	SKPbc	02 04 41.9	+3.2
comp=Z,0.7nm,0.6s,baz=56,slow=3.4,SNR=5.2							
CABF	**La Chapelle**	**143.53**	**338**	*e*PKP1	PKPdf	02 01 52.4	-1.3
FLN	**La Foliniere**	**143.56**	**346**	⇑*i*PKP1	PKPdf	02 01 50.9	-2.8
comp=Z,12nm,0.5s							
LDF	**La Druitiere**	**143.63**	**346**	*e*PKP1	PKPdf	02 01 51.0	-2.8
comp=Z,7.1nm,0.4s							
LOR	**Lormes**	**143.72**	**341**	*e*PKP1	PKPdf	02 01 51.8	-2.2
GRR	**Gorron**	**143.99**	**346**	⇑*i*PKP1	PKPdf	02 01 52.8	-1.6
comp=Z,14nm,0.4s							
SSF	**Saint Saulge**	**144.02**	**341**	*e*PKP1	PKPdf	02 01 53.1	-1.4
comp=Z,10nm,0.7s							
LPL	**La Plagne**	**144.21**	**336**	*e*PKP1	PKPdf	02 01 54.5	-0.4
comp=Z,11nm,0.6s							
LPG	**La Plagne**	**144.21**	**336**	*e*PKP1	PKPdf	02 01 54.6	-0.3
comp=Z,14nm,0.6s							
SMF	**Signal de Mont**	**144.28**	**340**	⇑*i*PKP1	PKPdf	02 01 53.9	-1.1
comp=Z,17nm,0.8s							
AVF	**Avril sur Loir**	**144.31**	**341**	⇑*i*PKP1	PKPdf	02 01 54.0	-1.0
comp=Z,13nm,0.5s							
SGMF	**Saint Gilles**	**144.48**	**348**	⇑*i*PKP1	PKPdf	02 01 54.6	-0.7
comp=Z,48nm,0.6s							
ROSF	**Rostrenen**	**144.54**	**349**	*e*PKP1	PKPdf	02 01 54.6	-0.8
comp=Z,35nm,0.7s							
BGF	**Bois d'Agland**	**144.67**	**341**	⇑*i*PKP1	PKPdf	02 01 55.4	-0.3
comp=Z,36nm,0.6s							
MBDF	**Montbardon**	**144.84**	**336**	⇑*i*PKP1	PKPdf	02 01 56.0	0.0
comp=Z,14nm,0.7s							
QUIF	**Quistinic**	**144.92**	**349**	⇑*i*PKP1	PKPdf	02 01 55.8	-0.3
comp=Z,29nm,0.4s							
ORIF	**Oris-en-Rattie**	**145.04**	**337**	⇑*i*PKP1	PKPbc	02 01 57.0	+0.8
comp=Z,54nm,0.8s							
TCF	**Toulx Ste Croi**	**145.11**	**342**	⇑*i*PKP1	PKPbc	02 01 56.9	+0.5
comp=Z,20nm,0.7s							
SSB	**Saint Sauveur**	**145.23**	**338**	*e*PKPbc	PKPbc	02 01 57.0	+0.2
SBF	**Sospel**	**145.27**	**334**	⇑*i*PKP1	PKPbc	02 01 57.2	+0.2
comp=Z,102nm,1.0s							
MFF	**Saint Martin d**	**145.49**	**345**	⇑*i*PKP1	PKPbc	02 01 57.9	+0.3
comp=Z,15nm,0.4s							
VIVF	**Saint-Julien-l**	**145.54**	**338**	*e*PKP1	PKPbc	02 01 58.3	+0.5
comp=Z,5.7nm,0.7s							
FRF	**La Foret Royal**	**145.85**	**334**	⇑*i*PKP1	PKPbc	02 01 59.0	+0.2
comp=Z,39nm,0.6s							
SMRF	**Simiane la Rot**	**145.94**	**336**	⇑*i*PKP1	PKPbc	02 01 59.8	+0.8
comp=Z,30nm,0.7s							
LMR	**La Mourre**	**146.10**	**334**	⇑*i*PKP1	PKPbc	02 01 59.7	+0.2
comp=Z,38nm,0.6s							
RJF	**Les Rejaudoux**	**146.21**	**342**	*e*PKP1	PKPbc	02 02 00.5	+0.8
CAF	**Calviac**	**146.38**	**341**	⇑*i*PKP1	PKPbc	02 02 01.0	+0.7
comp=Z,8.8nm,0.7s							
LASF	**Ste Croix**	**146.51**	**338**	*e*PKP1	PKPbc	02 02 01.5	+0.8
comp=Z,22nm,0.7s							
LFF	**La Frestale**	**146.77**	**342**	⇑*i*PKP1	PKPbc	02 02 01.9	+0.5
comp=Z,19nm,0.6s							
MTLF	**Montolieu**	**147.73**	**339**	⇑*i*PKP1	PKPbc	02 02 04.8	+0.7
comp=Z,22nm,0.6s							
EPF	**Esparros**	**148.62**	**341**	⇑*i*PKP1	PKPbc	02 02 06.7	+0.3
SJPF	**Ste Jean**	**149.01**	**343**	⇑*i*PKP1	PKPbc	02 02 08.3	+1.0
comp=Z,5.7nm,0.5s							
ETSF	**Etsaut**	**149.02**	**342**	⇑*i*PKP1	PKPbc	02 02 09.2	+1.8
comp=Z,8.4nm,0.5s							
KEST	**Kesra**	**150.36**	**322**	PKPbc	PKPbc	02 02 11.5	+0.6
comp=Z,4.6nm,0.6s,baz=98,slow=2.1,SNR=18							
ESDC	**Sonseca Array**	**152.95**	**345**	PKPbc	PKPbc	02 02 16.9	+0.3
ESDC				PKPab	PKPab	02 02 28.7	+0.1
ESDC	**Sonseca Array**	**152.95**	**345**	PKPbc	PKPbc	02 02 16.9	+0.3
comp=Z,0.3nm,0.3s,baz=2.9,slow=5.1,SNR=13							
ESDC				PKPab	PKPab	02 02 28.7	+0.1
comp=Z,1.2nm,0.6s,baz=14,slow=3.9,SNR=9.1							
EVO	**Evora**	**154.87**	**351**	*e*PKIKP	PKPdf	02 02 09.4	-2.5
comp=Z,3.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**165.91**	**270**	PKP	PKPdf	02 02 24.9	+0.2
comp=Z,0.7nm,0.7s,baz=154,slow=0.9,SNR=6.7							
TORD				PKPab	PKPab	02 03 25.5	-0.3
comp=Z,0.7nm,0.5s,baz=83,slow=4.8,SNR=7.3							
TORD				pPKPab	pPKPab	02 04 09.4	-7.9
comp=Z,1.0nm,0.9s,baz=171,slow=10,SNR=3.5							

*MEX **16** 01:46:29.9±0.6, 13.°18N×91.°96W, h21km±21km, MD4.4*
*IDC **16** 01:46:30.8±0.8, 13.°96N×91.°29W, h0km, mb4.4/13, mb1 4.6/14, mb1mx4.5/20, mbtmp4.4/14, ML4.4/1, MS4.0/13, Ms1 4.0/13, ms1mx3.8/27, Error ellipse: s-maj=37.7km s-min=14.6km az=56.0*
*ISCJB **16** 01:46:35.5±0.8, 13.°83N±0.°05×91.°66W±0.°04, h38km±6km, mb4.6/75, MS4.1/14, Error ellipse: s-maj=10.0km s-min=4.6km az=33.6*
*NEIC **16** 01:46:39.0±0.8, 13.°89N×91.°57W, h58km±7km, mb4.7/65, MD4.3(MEX), Error ellipse: s-maj=9.4km s-min=4.6km az=225.0*
ISC 16 01:46:37.7±0.7, 13.°91N±0.°05×91.°62W±0.°04, h35km±5km, n331, σ0°81°/334, mb4.6/75, MS4.1/14, 102C-79D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.18**	**328**	*i* P	**Pn**	**01 46 56.0**	**-1.6**
THIG				*i* S	**Sn**	**01 47 17.0**	**+4.6**
PCIG		**2.36**	**319**	*i* P	**Pn**	**01 47 10.8**	**-3.2**
PCIG				*i* S	**Sn**	**01 47 42.4**	**+0.6**
SCX	**San Cristobal**	**2.98**	**341**	*i* P	**Pn**	**01 47 22.6**	**+0.2**
SCX				*i* S	**Sn**	**01 48 03.4**	**+6.4**
SCX	**San Cristobal**	**2.98**	**341**	*i* P	**Pn**	**01 47 22.6**	**+0.2**
SCX				*i* S	**Sn**	**01 48 03.4**	**+6.4**
TGIG		**3.20**	**333**	*i* P	**Pn**	**01 47 25.7**	**+0.2**
TGIG				*i* S	**Sn**	**01 48 07.5**	**+5.0**
TGUH	**Tegucigalpa,Un**	**4.22**	**87**	*e*Pn	**Pn**	**01 47 41.5**	**+2.0**
CMIG	**Matias Romero**	**4.46**	**316**	Pn	**Pn**	**01 47 39.5**	**-3.3**
CMIG				Sn	**Sn**	**01 48 35.2**	**+1.6**
CMIG				Lg		01 48 50.0	
CMIG	**Matias Romero**	**4.46**	**316**	Pn	**Pn**	**01 47 39.5**	**-3.3**
2.2nm,0.3s,baz=138,slow=10.0,SNR=26							
CMIG				Sn	**Sn**	**01 48 35.2**	**+1.6**
15nm,0.3s,baz=96,slow=22,SNR=6.2							
CMIG				Lg		01 48 50.0	
52nm,0.3s,baz=265,slow=19,SNR=8.1							
HUIG	**Huatulco**	**4.72**	**294**	*i* P	**Pn**	**01 47 39.7**	**-6.7**
HUIG				*i* S	**Sn**	**01 48 33.7**	**-6.2**
HUIG	**Huatulco**	**4.72**	**294**	*i* P	**Pn**	**01 47 39.7**	**-6.7**
HUIG				*i* S	**Sn**	**01 48 33.7**	**-6.2**
SCIG	**Sabancuy**	**5.05**	**5**	*i* P	**Pn**	**01 47 52.5**	**+1.6**
SCIG				*i* S	**Sn**	**01 48 58.5**	**+11**
VHO	**Vista Hermosa**	**5.85**	**303**	*e*P	**Pn**	**01 47 56.7**	**-5.2**
VHO				*i* S	**Sn**	**01 49 02.6**	**-5.2**
VHO	**Vista Hermosa**	**5.85**	**303**	*e*P	**Pn**	**01 47 56.7**	**-5.2**
VHO				*i* S	**Sn**	**01 49 02.6**	**-5.2**
PNIG	**Pinotepa**	**6.75**	**292**	*i* P	**Pn**	**01 48 07.4**	**-6.9**
PNIG				*i* S	**Sn**	**01 49 22.9**	**-7.1**
PNIG	**Pinotepa**	**6.75**	**292**	*i* P	**Pn**	**01 48 07.4**	**-6.9**
PNIG				*i* S	**Sn**	**01 49 22.9**	**-7.1**
TEIG	**Tepich**	**7.05**	**26**	*e*Pn	**Pn**	**01 48 22.0**	**+3.7**
TPIG	**Tehuac#an**	**7.11**	**310**	*e*P	**Pn**	**01 48 18.4**	**-0.9**
TPIG				*i* S	**Sn**	**01 49 37.5**	**-1.3**
UTMO	**Huajuapan**	**7.12**	**304**	*i* P	**Pn**	**01 48 14.2**	**-5.1**
UTMO				*i* S	**Sn**	**01 49 36.4**	**-2.5**
LVIG	**Laguna Verde**	**7.39**	**322**	*e*P	**Pn**	**01 48 22.6**	**-0.5**
LVIG	**Laguna Verde**	**7.39**	**322**	*e*P	**Pn**	**01 48 22.6**	**-0.5**
JTS	**JuntasAbangare**	**7.44**	**118**	*e*Pn	**Pn**	**01 48 24.3**	**+0.4**
PPM	**Popocatepetl**	**8.46**	**308**	*e*P	**Pn**	**01 48 35.7**	**-2.0**
PPM				*i* S	**Sn**	**01 50 10.9**	**-1.0**
PPM	**Popocatepetl**	**8.46**	**308**	*e*P	**Pn**	**01 48 35.7**	**-2.0**
PPM				*i* S	**Sn**	**01 50 10.9**	**-1.0**
MEIG	**Mezcala**	**8.67**	**298**	*e*P	**Pn**	**01 48 35.9**	**-4.8**
CAIG	**El Cayaco**	**8.90**	**292**	*i* P	**Pn**	**01 48 37.5**	**-6.4**
CAIG				*i* S	**Sn**	**01 50 21.3**	**-1.7**
CAIG	**El Cayaco**	**8.90**	**292**	*i* P	**Pn**	**01 48 37.5**	**-6.4**
CAIG				*i* S	**Sn**	**01 50 21.3**	**-1.7**
BCIP	**Isla Barro Col**	**12.47**	**111**	*e*Pn	**Pn**	**01 49 33.7**	**+1.0**
MTDJ	**Mount Denham**	**14.20**	**71**	*e*Pn	**Pn**	**01 50 02.9**	**+6.6**
HKT	**Hockley**	**16.43**	**347**	*e*Pn	**Pn**	**01 50 24.8**	**-0.8**
74nm,1.8s							
JCT	**Junction City**	**18.14**	**337**	*e*P	**Pn**	**01 50 48.6**	**+1.8**
24nm,1.0s							

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
628A	**Black Gap, Mar**	**18.69**	**328**	⇓P	**Pn**	**01 50 53.6**	**+0.2**
baz=19,SNR=23							
OTAV	**Otavalo**	**18.82**	**135**	*e*P	**Pn**	**01 50 55.4**	**+0.1**
2.2nm,0.9s							
627A	**Terlingua Ranc**	**18.92**	**327**	⇓P	**Pn**	**01 50 56.2**	**-0.1**
baz=19,SNR=45							
TXAR	**Lajitas Array**	**18.98**	**326**	P	**Pn**	**01 50 56.7**	**-0.3**
0.3nm,0.3s,baz=153,slow=11,SNR=46							
TXAR				LR	LR	01 58 10.2	
comp=Z,122nm,20.2s,baz=90,slow=37							
528A	**Cox Ranch, San**	**19.18**	**329**	⇑P	**Pn**	**01 50 58.9**	**-0.5**
baz=19,SNR=7.0							
ROSC	**El Rosal**	**19.27**	**116**	*e*P	**Pn**	**01 51 02.3**	**+1.7**
ROSC	**El Rosal**	**19.27**	**116**	P	**Pn**	**01 51 02.1**	**+1.5**
1.0nm,0.3s,baz=104,slow=22,SNR=7.2							
626A	**Big Bend Ranch**	**19.41**	**325**	⇓P	**Pn**	**01 51 01.6**	**-0.5**
baz=20,SNR=47							
LRAL	**Lakeview Retre**	**19.50**	**12**	*e*P	**Pn**	**01 51 03.2**	**0.0**
527A	**Woodward Ranch**	**19.59**	**328**	⇓P	**Pn**	**01 51 03.9**	**-0.4**
baz=20,SNR=27							
428A	**Kincaid Ranch,**	**19.60**	**330**	⇓P	**Pn**	**01 51 03.5**	**-0.9**
baz=20,SNR=31							
526A	**Mary Lane Ranc**	**19.77**	**326**	⇓P	**Pn**	**01 51 05.5**	**-1.0**
baz=20,SNR=32							
427A	**Hayter Ranch,**	**20.05**	**329**	⇓P	**P**	**01 51 08.3**	**+0.5**
baz=20,SNR=14							
328A	**Wristen Ranch,**	**20.20**	**331**	⇑P	**P**	**01 51 10.1**	**+0.7**
baz=20,SNR=38							
426A	**McDonald Obser**	**20.22**	**328**	⇑P	**P**	**01 51 09.9**	**+0.2**
baz=20,SNR=13							
326A	**Caldwell Ranch**	**20.71**	**329**	⇓P	**P**	**01 51 15.5**	**+0.5**
baz=21,SNR=22							
GOGA	**Godfrey**	**20.78**	**20**	*e*P	**P**	**01 51 16.6**	**+0.9**
21nm,0.7s							
UALR	**University of**	**20.79**	**358**	*e*P	**P**	**01 51 16.2**	**+0.5**
425A	**Indio Mountain**	**20.82**	**326**	⇑P	**P**	**01 51 16.5**	**+0.3**
baz=21,SNR=37							
227A	**Bennet, Jal**	**20.95**	**331**	⇓P	**P**	**01 51 18.3**	**+0.7**
baz=21,SNR=11							
325A	**Bean Ranch, Si**	**21.27**	**327**	⇓P	**P**	**01 51 20.9**	**-0.1**
baz=21,SNR=27							
226A	**Malaga, Loving**	**21.38**	**330**	⇓P	**P**	**01 51 22.5**	**+0.3**
baz=21,SNR=46							
CLNB	**Carlsbad**	**21.44**	**331**	*e*P	**P**	**01 51 23.0**	**+0.2**
12nm,1.0s,mb4.2							
127A	**Arkansas Junct**	**21.54**	**332**	⇓P	**P**	**01 51 23.7**	**-0.2**
baz=22,SNR=9.5							
GDL2	**Guadalupe Moun**	**21.62**	**329**	*e*P	**P**	**01 51 24.9**	**+0.2**
WMOK	**Wichita Mounta**	**21.73**	**344**	*e*P	**P**	**01 51 24.2**	**-1.7**
15nm,0.9s,mb4.4							
MNTX	**Cornudas Mount**	**21.74**	**327**	⇑P	**P**	**01 51 25.5**	**-0.5**
baz=22,SNR=77							
MNTX	**Cornudas Mount**	**21.74**	**327**	*e*P	**P**	**01 51 25.1**	**-1.0**
23nm,0.8s,mb4.7							
NHSC	**New Hope**	**21.77**	**27**	*e*P	**P**	**01 51 25.7**	**-0.6**
65nm,1.0s,mb5.0							
225A	**Deer Hill, Car**	**21.78**	**328**	⇑P	**P**	**01 51 26.6**	**+0.1**
baz=22,SNR=39							
126A	**Clayton Basin,**	**21.82**	**331**	⇑P	**P**	**01 51 27.1**	**+0.3**
baz=22,SNR

5.0nm,0.9s,mb4.0
V23A Ortiz Mt. (NFS 25.38 331 ⇓P P 01 52 02.4 +0.7
baz=25,SNR=13
KSU1 Kansas State U 25.48 351 *e*P P 01 52 00.5 -1.9
18nm,0.7s,mb4.7
Y19A Nutrioso 25.58 324 ⇑P P 01 52 03.7 +0.3
baz=26,SNR=9.6
X20A Quemado 25.60 326 ⇑P P 01 52 04.0 +0.4
baz=26,SNR=6.8
T25A Trinidad 25.80 336 ⇑P P 01 52 06.2 +0.8
baz=26,SNR=16
V22A San Miguel Ran 25.86 331 ⇑P P 01 52 06.5 +0.5
baz=26,SNR=7.1
U23A El Rito 25.87 332 ⇑P P 01 52 06.7 +0.6
baz=26,SNR=20
Y18A Canyon Day Jun 25.90 323 ⇓P P 01 52 06.9 +0.5
baz=26
X19A St. Johns 25.94 325 ⇓P P 01 52 07.3 +0.5
baz=26
U22A Llaves 26.21 331 ⇑P P 01 52 10.2 +1.1
baz=26,SNR=12
S25A Robets Cordova 26.26 337 ⇑P P 01 52 09.8 +0.1
baz=26,SNR=10
Y17A Roosevelt 26.32 322 ⇓P P 01 52 09.9 -0.3
baz=26
HDIL Hopedale 26.62 4 *e*P P 01 52 11.1 -1.8
33nm,1.2s,mb4.7
U21A Nageezi 26.63 330 ⇑P P 01 52 13.8 +0.8
baz=27,SNR=9.2
T22A Edith 26.75 332 ⇓P P 01 52 14.7 +0.7
baz=27,SNR=5.9
SDCO Great Sand Dun 26.76 335 *e*P P 01 52 14.0 -0.1
5.8nm,1.1s,mb4.0
U20A Newcomb 27.02 329 ⇑P P 01 52 16.8 +0.4
baz=27
T21A Navajo Lake 27.03 331 ⇓P P 01 52 17.6 +1.1
baz=27,SNR=7.4
U19A Dine' College, 27.30 328 ⇑P P 01 52 18.7 -0.3
baz=27
S22A 4UR Ranch, Cre 27.33 333 ⇑P P 01 52 19.4 +0.2
baz=27,SNR=12
T19A Beclabito 27.62 329 ⇓P P 01 52 22.4 +0.5
baz=28
V17A Tonalea, Kykot 27.66 325 ⇑P P 01 52 22.4 +0.3
baz=28,SNR=12
MVCO Mesa Verde 27.66 330 ⇑P P 01 52 22.4 +0.1
baz=28,SNR=13
MVCO Mesa Verde 27.66 330 *e*P P 01 52 22.6 +0.4
38nm,1.2s,mb4.9
S21A Coal Bank Pass 27.69 332 ⇑P P 01 52 22.7 +0.2
baz=28
X15A Humboldt 27.70 321 ⇓P P 01 52 22.7 +0.1
baz=28
WUAZ Wupatki 27.91 324 ⇓P P 01 52 24.4 0.0
baz=28
WUAZ Wupatki 27.91 324 *e*P P 01 52 25.0 +0.5
13nm,1.0s,mb4.5
T18A Mexican Hat 28.29 328 ⇑P P 01 52 27.7 -0.1
baz=28
Q22A Crested Butte, 28.29 334 ⇓P P 01 52 28.1 +0.3
baz=28
P23A Jefferson 28.30 336 ⇓P P 01 52 28.7 +0.8
baz=28,SNR=9.3
U17A Shonto 28.30 326 ⇑P P 01 52 28.0 +0.1
baz=28
S19A Harvey Farm, M 28.40 330 ⇓P P 01 52 29.1 +0.3
baz=28,SNR=10
PV01 Paradox Valley 28.44 331 *e*P P 01 52 30.2 +1.1
1µm,1.2s
ISCO Idaho Springs 28.58 337 ⇑P P 01 52 30.6 +0.3
baz=29
V15A Kaibab Nationa 28.58 323 ⇑P P 01 52 30.7 +0.3
baz=29
T17A Navajo Res., N 28.67 327 ⇑P P 01 52 32.1 +0.9
baz=29,SNR=5.4
S18A Hurst Farm, Bl 28.78 329 ⇑P P 01 52 32.6 +0.5
baz=29,SNR=8.0
PV04 Paradox Valley 28.80 331 *e*P P 01 52 32.9 +0.6
R19A Curley Farm, L 28.89 330 ⇓P P 01 52 33.6 +0.5
baz=29
JFWS Jewell Farm 28.93 2 *e*P P 01 52 31.4 -2.0
6.5nm,0.6s,mb4.5
V14A Boquillas Ranc 29.00 322 ⇓P P 01 52 34.8 +0.6
baz=29,SNR=6.7
U15A North Rim 29.08 324 ⇓P P 01 52 35.5 +0.7
baz=29,SNR=7.9
T15A Red Dirt Ranch 29.55 325 ⇑P P 01 52 39.4 +0.4
baz=30,SNR=8.4
U14A Mt Trumbull 29.59 323 ⇑P P 01 52 39.9 +0.6
baz=30
S16A Weppner Ranch, 29.63 327 ⇑P P 01 52 40.4 +0.7
baz=30
V13A Grand Canyon W 29.68 321 ⇑P P 01 52 40.6 +0.4
baz=30
R17A Hanksville Air 29.70 329 ⇑P P 01 52 40.8 +0.4
baz=30,SNR=10.0
Q18A Rafter H Ranch 29.95 330 ⇓P P 01 52 43.4 +0.9
baz=30,SNR=6.4
T14A Hurricane 29.98 324 ⇑P P 01 52 43.7 +0.9
baz=30
R16A Teasdale 29.99 328 ⇑P P 01 52 44.0 +1.1
baz=30,SNR=10
S15A Panguitch 30.01 326 ⇓P P 01 52 43.8 +0.7
baz=30
V12A Nelson 30.13 320 ⇑P P 01 52 44.5 +0.3
baz=30
SRU San Rafael 30.14 330 ⇑P P 01 52 44.6 +0.4
baz=30
SRU San Rafael 30.14 330 *e*P P 01 52 44.7 +0.5
6.6nm,0.9s,mb4.4
N21A Black Mountain 30.15 336 ⇓P P 01 52 45.3 +1.0
baz=30
Q16A Castle Valley 30.31 329 ⇓P P 01 52 46.5 +0.8
baz=30
P18A Preston Nutter 30.41 331 ⇓P P 01 52 47.1 +0.5
baz=30,SNR=7.1
T13A Saint George 30.42 323 ⇑P P 01 52 46.9 +0.2
baz=30
CCUT Cedar City 30.48 325 *e*P P 01 52 48.3 +1.1
12nm,1.1s,mb4.5
N20A Spence Gulch, 30.51 335 ⇑P P 01 52 48.0 +0.5
baz=31,SNR=7.2
L23A Garrett 30.64 339 ⇓P P 01 52 48.7 +0.1
baz=31,SNR=8.2
S13A Holt Ranch, En 30.78 324 ⇑P P 01 52 50.4 +0.5
baz=31,SNR=14
M21A Separation Pea 30.81 337 ⇑P P 01 52 50.4 +0.3
baz=31
O18A Roosevelt 30.81 332 ⇓P P 01 52 51.0 +0.9
baz=31
RWWY Rawlins 30.82 337 *e*P P 01 52 50.3 +0.2
11nm,1.2s,mb4.6
L22A Ellis Ranch, M 30.83 338 ⇑P P 01 52 50.5 +0.3
baz=31
O17A Robinson Place 31.09 331 ⇑P P 01 52 53.6 +1.0
baz=31,SNR=8.2
L21A Rawlins 31.12 337 ⇓P P 01 52 52.2 -0.5
baz=31,SNR=5.8
MPU Maple Canyon 31.39 330 *e*P P 01 52 55.6 +0.5
15nm,1.1s,mb4.7
Q14A Sevier Lake (B 31.46 327 ⇑P P 01 52 56.4 +0.5
baz=32
O16A Springville 31.47 330 ⇑P P 01 52 56.7 +0.8
baz=32
DAU Daniels Canyon 31.51 331 *e*P P 01 52 56.8 +0.5
32nm,1.5s,mb4.9
R12A Pony Springs, 31.73 324 ⇑P P 01 52 58.7 +0.5
baz=32,SNR=5.3
N17A Moffit Pass 31.73 332 ⇓P P 01 52 59.2 +1.0
baz=32
Q13A Wheeler Ranch, 31.84 326 ⇑P P 01 53 00.3 +1.1
baz=32,SNR=10.0
S11A Rachel 31.93 322 ⇓P P 01 53 00.8 +0.8
baz=32
RSSD Black Hills 31.93 343 *e*P P 01 52 58.4 -1.5
2.0nm,0.6s,mb4.1
MPMC Manual Prospec 32.01 318 ⇑P P 01 53 00.6 -0.1
baz=32
DUG Dugway 32.11 329 ⇓P P 01 53 02.4 +0.9
baz=32
DUG Dugway 32.11 329 *e*P P 01 53 01.6 +0.1
8.4nm,1.2s,mb4.5
COWI Conover 32.16 3 *e*P P 01 52 59.6 -2.2
10nm,0.6s,mb4.8
P13A Bates Ranch, G 32.19 326 ⇓P P 01 53 03.2 +0.9
baz=32,SNR=19
R11A Troy Canyon, C 32.30 323 ⇓P P 01 53 03.5 +0.3
baz=32

SADO Sadowa 32.54 17 LR LR 02 07 31.7
comp=Z,400nm,19.2s,MS4.1,baz=101,slow=39
HWUT Hardware Ranch 32.59 332 *e*P P 01 53 05.4 -0.4
197nm,1.1s
S10A Tonopah Range, 32.62 322 ⇓P P 01 53 06.5 +0.4
baz=33
BW06 Boulder Array 32.66 335 ⇑P P 01 53 06.1 -0.2
baz=33
BW06 Boulder Array 32.66 335 *e*P P 01 53 06.4 +0.1
2.0nm,0.9s,mb4.0
L17A Cokeville 32.67 333 ⇑P P 01 53 06.1 -0.3
baz=33,SNR=6.7
Q11A Duckwater 32.68 324 ⇓P P 01 53 07.3 +0.8
baz=33,SNR=9.5
K18A Toltan Ranch, 32.75 334 ⇓P P 01 53 07.6 +0.5
baz=33,SNR=6.2
BGU Big Grassy Mou 32.77 329 *e*P P 01 53 07.3 +0.1
6.1nm,0.8s,mb4.6
I20A Worland 33.11 338 ⇑P P 01 53 10.3 0.0
baz=33,SNR=9.0
O12A Currie 33.17 327 ⇓P P 01 53 11.2 +0.4
baz=33,SNR=18
J18A Kendall Valley 33.22 335 ⇓P P 01 53 11.1 0.0
baz=33,SNR=5.8
K17A Gardner Place, 33.22 334 ⇑P P 01 53 11.4 +0.2
baz=33,SNR=6.2
L15A Malad City 33.28 331 ⇓P P 01 53 12.1 +0.3
baz=33,SNR=15
HVU Hansel Valley 33.29 331 *e*P P 01 53 12.2 +0.3
16nm,1.0s,mb4.9
N13A Wendover, West 33.31 328 *e*P P 01 53 12.6 +0.6
16nm,0.9s,mb5.0
M14A Sheep Mountain 33.36 330 ⇓P P 01 53 13.0 +0.6
baz=33,SNR=20
J17A Brown Place, J 33.63 334 ⇑P P 01 53 15.3 +0.6
baz=34,SNR=11
REDW Red Top Meadow 33.69 334 *e*P P 01 53 15.3 0.0
38nm,1.2s,mb5.2
L14A Malta 33.71 330 ⇑P P 01 53 15.6 +0.1
baz=34,SNR=25
SNOW Snow King Moun 33.73 335 *e*P P 01 53 15.4 -0.2
33nm,1.1s,mb5.2
LOHW Long Hollow 33.79 335 *e*P P 01 53 15.8 -0.3
12nm,1.3s,mb4.7
TPAW Teton Pass 33.83 334 *e*P P 01 53 16.5 0.0
16nm,1.1s,mb4.9
RRI2 Red Ridge 33.87 334 *e*P P 01 53 17.0 +0.1
31nm,1.4s,mb5.0
K15A Arbon 33.88 332 ⇑P P 01 53 17.3 +0.4
baz=34,SNR=11
J16A Bone 33.94 333 ⇑P P 01 53 17.8 +0.4
baz=34
NVAR Mina Array Bea 33.98 321 P P 01 53 18.4 +0.5
NVAR PcP PcP 01 55 54.0 -1.6
NVAR Mina Array Bea 33.98 321 P P 01 53 18.4 +0.5
10.0nm,0.9s,mb4.8,baz=130,slow=7.9,SNR=29
NVAR PcP PcP 01 55 54.0 -1.6
0.8nm,0.8s,baz=172,slow=2.6,SNR=3.7
K14A Jones Ranch, D 34.07 331 ⇑P P 01 53 18.9 +0.2
baz=34,SNR=14
J15A Blackfoot 34.40 333 ⇑P P 01 53 21.8 +0.3
baz=34
RLMT Red Lodge 34.53 338 ⇑P P 01 53 22.1 -0.5
baz=35
RLMT Red Lodge 34.53 338 *e*P P 01 53 21.7 -0.9
2.7nm,0.6s,mb4.3
G18A Lazy EL Ranch, 34.81 338 ⇓P P 01 53 24.4 -0.5
baz=35,SNR=6.3
J14A Carey 34.83 332 ⇑P P 01 53 25.5 +0.3
baz=35,SNR=12
M10A I.L. Ranch, Tu 35.01 327 ⇓P P 01 53 27.4 +0.6
baz=35,SNR=7.9
F19A Roth Farm, Mol 35.05 339 ⇑P P 01 53 26.1 -0.9
baz=35
J13A Cove Ranch, Pi 35.20 331 ⇓P P 01 53 28.6 +0.3
baz=35,SNR=8.5
GCMT Greycliff 35.25 338 *e*P P 01 53 26.9 -1.9
3.7nm,0.9s,mb4.3
E20A Meyer Farm, Mu 35.33 340 ⇑P P 01 53 29.0 -0.5
baz=35
F18A Big Timber 35.37 338 ⇓P P 01 53 29.0 -0.7
baz=35
HLID Hailey 35.44 331 ⇑P P 01 53 30.4 0.0
baz=36,SNR=12
HLID Hailey 35.44 331 *e*P P 01 53 30.7 +0.3
9.2nm,1.0s,mb4.7
H15A Lima 35.46 334 ⇑P P 01 53 30.8 +0.2
baz=36,SNR=10
I13A Wildhorse Cree 35.57 332 ⇑P P 01 53 32.6 +1.1
baz=36,SNR=17
F17A Fitzpatrick Pl 35.72 337 ⇓P P 01 53 33.0 +0.3
baz=36,SNR=5.8
MCMT McKenzie Canyo 35.72 334 *e*P P 01 53 33.8 +1.0
12nm,0.9s,mb4.8
H14A Leadore 35.77 333 ⇓P P 01 53 33.9 +0.6
baz=36,SNR=9.2
G15A Dillon 35.84 335 ⇑P P 01 53 34.1 +0.2
baz=36,SNR=9.8
D20A Manuel Ranch, 35.85 341 ⇑P P 01 53 33.4 -0.5
baz=36
BOZ Bozeman (W) 35.88 336 ⇓P P 01 53 33.8 -0.3
baz=36
BOZ Bozeman (W) 35.88 336 *e*P P 01 53 33.4 -0.8
7.3nm,1.3s,mb4.5
I12A Atlanta 35.95 331 ⇓P P 01 53 35.2 +0.4
baz=36,SNR=26
DGMT Dagmar 36.00 346 *e*P P 01 53 33.9 -1.2
8.5nm,0.6s,mb4.8
MFID Camas Ranch 36.01 329 ⇓P P 01 53 35.9 +0.6
baz=36,SNR=7.1
H13A Challis 36.13 332 ⇓P P 01 53 36.6 +0.2
baz=36
LRM Limekiln Ridge 36.35 335 *e*P P 01 53 38.0 -0.2
50nm,1.0s,mb5.4
F15A Butte 36.38 335 ⇑P P 01 53 38.8 +0.3
baz=36,SNR=7.9
H12A Diamond D Ranc 36.39 332 ⇑P P 01 53 39.1 +0.5
baz=36,SNR=25
ULM Lac du Bonnet 36.41 355 P P 01 53 35.3 -3.4
3.3nm,0.8s,mb4.3,baz=170,slow=8.7,SNR=4.2
ULM LR LR 02 12 28.8
comp=Z,176nm,18.2s,MS3.9,baz=231,slow=43
G13A Cobalt 36.53 333 ⇑P P 01 53 39.7 -0.1
baz=37,SNR=9.9
WVOR Wild Horse Val 36.78 326 *e*P P 01 53 41.8 -0.1
9.6nm,1.0s,mb4.6
D17A Six Diamond Ra 36.78 338 ⇓P P 01 53 41.5 -0.3
baz=37,SNR=6.2
HRY Holter Researc 36.84 337 *e*P P 01 53 41.6 -0.7
3.0nm,0.5s,mb4.4
E15A Deer Lodge 36.92 336 ⇑P P 01 53 43.0 -0.1
baz=37
G12A Big Creek, Yel 37.05 332 ⇑P P 01 53 44.2 +0.1
baz=37
EGMT Eagleton 37.20 340 *e*P P 01 53 44.3 -1.1
5.4nm,0.5s,mb4.6
J08A Circle Bar Ran 37.32 327 ⇑P P 01 53 46.6 +0.1
baz=37
F12A Elk City 37.50 333 ⇑P P 01 53 48.1 +0.1
baz=38,SNR=45
CHMT Chamberlain Mo 37.56 336 *e*P P 01 53 48.2 -0.3
3.2nm,0.8s,mb4.1
E13A Victor 37.57 334 ⇑P P 01 53 48.1 -0.5
baz=38,SNR=11
D14A Greenough 37.80 335 ⇑P P 01 53 50.0 -0.5
baz=38
LPAZ La Paz 37.93 141 P P 01 53 49.3 -2.7
0.7nm,0.7s,mb3.5,baz=325,slow=7.7,SNR=3.3
LPAZ LR LR 02 09 16.0
comp=Z,58nm,20.0s,MS3.4,baz=24,slow=36
C15A Salmond Ranch, 38.01 337 ⇑P P 01 53 52.5 +0.2
baz=38
E12A Beaver Dam Sad 38.15 333 ⇓P P 01 53 52.9 -0.6
baz=38,SNR=13
D13A Huson 38.20 335 ⇓P P 01 53 53.6 -0.3
baz=38,SNR=11
SWMT Swartz Lake 38.34 335 *e*P P 01 53 54.4 -0.7
1.6nm,0.6s,mb3.9
I07A Izee 38.36 327 ⇓P P 01 53 55.1 -0.1
baz=38,SNR=9.8
D12A Red Ives Fores 38.55 334 ⇓P P 01 53 56.1 -0.7
baz=39
F10A Beach Ranch, E 38.57 331 ⇓P P 01 53 56.6 -0.4
baz=39,SNR=14
C13A Hot Springs 38.71 335 ⇑P P 01 53 57.8 -0.4
baz=39
BSMT Bassoo Peak 38.94 335 *e*P P 01 53 59.7 -0.3
2.4nm,0.8s,mb4.0

B13A Whitefish 39.23 336 ⇓P P 01 54 02.3 -0.2
baz=39
A14A Double T Ranch 39.31 337 ⇓P P 01 54 03.0 -0.1
baz=39,SNR=6.9
C11A Tepee Creek (N 39.54 334 ⇓P P 01 54 04.9 -0.2
baz=40,SNR=15
NEW Newport 40.24 334 *e*P P 01 54 07.2 -3.8
6.5nm,1.0s,mb4.3
OD2 Odessa Site #2 40.30 331 *e*P P 01 54 11.0 -0.5
34nm,1.1s,mb5.0
HOOD Mount Hood Mea 40.33 327 *e*P P 01 54 12.1 +0.4
C09A Chrisman Ranch 40.40 332 ⇑P P 01 54 12.5 +0.2
baz=40,SNR=6.7
LON Longmire 41.36 328 *e*P P 01 54 19.8 -0.4
14nm,0.9s,mb4.6
SIV San Ignacio 42.36 133 P P 01 54 25.5 -3.2
2.7nm,0.7s,mb4.0,baz=306,slow=8.5,SNR=18
SIV PcP PcP 01 56 19.8 -2.0
0.4nm,0.5s,baz=344,slow=7.4,SNR=1.9
JCW Jim Creek 42.40 330 *e*P P 01 54 27.4 -1.3
12nm,0.7s,mb4.7
EDM Edmonton 42.84 341 *e*P P 01 54 30.6 -1.5
SCHQ Schefferville 45.18 20 *e*P P 01 54 48.6 -2.2
39nm,1.0s,mb5.2
SCHQ Schefferville 45.18 20 P P 01 54 48.9 -2.0
26nm,0.7s,mb5.2,baz=212,slow=6.9,SNR=33
SCHQ LR LR 02 14 54.9
comp=Z,857nm,19.8s,MS4.7,baz=205,slow=38
YKA Yellowknife Ar 51.20 347 P P 01 55 35.7 -1.5
YKA PcP PcP 01 56 50.9 -1.3
YKA Yellowknife Ar 51.20 347 P P 01 55 35.7 -1.5
9.8nm,0.6s,mb4.9,baz=150,slow=7.5,SNR=41
YKA PcP PcP 01 56 50.9 -1.3
0.9nm,0.7s,baz=142,slow=3.8,SNR=3.1
CPUP Villa Florida 52.07 140 P P 01 55 44.2 -0.1
2.1nm,0.8s,mb4.1,baz=328,slow=7.6,SNR=2.4
DLBC Dease Lake 52.89 336 *e*P P 01 55 50.5 +0.6
RKT Rikitea 56.17 230 *e*T 02 56 32.3
3.1nm,0.3s
DAWY Dawson 59.90 338 *e*P P 01 56 38.5 -1.2
INK Inuvik 60.63 343 *e*P P 01 56 43.2 -1.4
12nm,0.8s,mb5.1
EGAK Eagle 60.94 338 *e*P P 01 56 45.2 -1.6
6.4nm,1.0s,mb4.7
KDAK Kodiak Island 62.99 328 P P 01 57 00.1 -0.6
4.7nm,0.7s,mb4.7,baz=97,slow=2.3,SNR=4.2
ILAR Eielson Array 63.07 337 P P 01 56 59.7 -1.4
4.6nm,1.0s,mb4.6,baz=113,slow=5.7,SNR=37
ILAR LR LR 02 25 49.8
comp=Z,97nm,21.1s,MS4.0,baz=166,slow=37
MCK McKinley 63.44 335 *e*P P 01 57 04.2 +0.7
22nm,1.3s,mb5.1
COLA College 63.49 337 *e*P P 01 57 03.1 -0.8
11nm,1.1s,mb4.9
TRF Thorofare Moun 63.88 335 *e*P P 01 57 05.2 -1.3
37nm,1.5s,mb5.2
BPAW Bear Paw Mtn. 64.41 335 *e*P P 01 57 08.3 -1.6
7.9nm,0.9s,mb4.7
PPLA Purkeypile 64.48 334 *e*P P 01 57 10.1 -0.3
15nm,1.1s,mb4.9
PPT Papeete 65.18 243 *e*LR LR 02 16 15.7
135nm,25.8s
PPT Papeete 65.18 243 LR LR 02 18 35.7
comp=Z,121nm,21.8s,MS4.1,baz=112,slow=29
ESK Eskdalemuir 77.80 36 *e*P P 01 58 28.2 -3.0
9.9nm,0.8s,mb4.8
ESDC Sonsecca Array 79.48 52 P P 01 58 37.7 -3.1
1.1nm,0.7s,mb3.9,baz=285,slow=4.2,SNR=8.2
NOA NORSAR Array B 84.05 28 P P 01 59 03.3 -1.1
0.8nm,0.8s,mb3.9,baz=290,slow=7.5,SNR=3.9
NOA LR LR 02 34 39.2
comp=Z,53nm,21.2s,MS3.9,baz=280,slow=34
WLF Walferdange 84.48 40 *e*P P 01 59 04.0 -2.8
3.9nm,0.6s,mb4.7
ARCES ARCESS Array B 86.11 18 P P 01 59 12.9 -1.7
1.6nm,0.8s,mb4.3,baz=319,slow=3.6,SNR=3.8
ARCES LR LR 02 42 33.6
comp=Z,71nm,18.5s,MS4.1,baz=21,slow=39
FINES FINESS Array B 90.42 25 LR LR 02 40 45.8
comp=Z,130nm,18.8s,MS4.4,baz=214,slow=36
AKASG Malin Array Be 97.60 33 LR LR 02 50 13.0
comp=Z,76nm,18.0s,MS4.2,baz=0.0,slow=39
CN2 Changchun 113.35 332 *e*P PKiKP 02 05 12.8 +0.8
CN2 PP PP 02 06 01.8 -0.2
CN2 pmax pmax
comp=Z,10.0nm,0.3s
CN2 pmax pmax
comp=Z,200nm,4.0s
KURK Kurchatov 115.09 7 PKP PKiKP 02 05 13.0 -2.1
comp=Z,0.3nm,0.3s,baz=330,slow=1.8,SNR=3.5
MKAR Makanchi Array 119.33 5 PKP PKPdf 02 05 21.1 -2.2
comp=Z,0.4nm,0.7s,baz=38,slow=2.6,SNR=3.1
HHC Hu-ho-hao-te 121.44 340 *e*PKP PKPdf 02 05 25.3 -2.3
HHC PP PP 02 06 59.6 +1.6
HHC PKS 02 09 00.3
HHC SKS SKSdf 02 12 25.5 -12
HHC AMB AMB
comp=Z,64nm,4.1s
HHC LR LR
comp=N,84nm,17.3s,MS4.7
HHC LR LR
comp=E,120nm,14.1s,MS4.7
HHC LR LR
comp=Z,120nm,12.3s,MS4.8
LSZ Lusaka 121.89 99 *e*PKPdf PKPdf 02 05 29.4 +0.3
NJ2 Nanjing 125.77 328 *e*PKP PKPdf 02 05 30.6 -5.6
LZH Lanzhou 128.17 344 *e*PKP PKPdf 02 05 43.0 +2.3
LZH sPKP 02 05 57.5
LZH LR LR
comp=N,130nm,18.2s
LZH LR LR
comp=Z,180nm,20.1s,MS4.8
CD2 Chengdu 133.05 342 PKP PKPdf 02 05 44.0 -6.1
GYA Guiyang 136.12 336 *e*Pdif Pdif 02 02 56.8 -2.8
GYA PKP PKPdf 02 05 52.4 -3.5
GYA sPKP 02 06 20.0
GYA PP PP 02 08 36.8 +2.5
GYA AMB AMB
comp=Z,90nm,7.9s
CHTO Chiang Mai 145.86 342 *e*PKPbc PKPbc 02 06 11.8 -2.3
CMAR Chiang Mai Arr 146.20 342 PKPbc PKPbc 02 06 13.4 -1.7
comp=Z,6.5nm,0.8s,baz=344,slow=3.9,SNR=25

*NEIC **16** 01:46:37.6, 16°.67N×98°.74W, h16km, MD3.5(MEX), After MEX.*

MEX 16 01:46:37.5±0.8, 16°.67N×98°.73W, h16km±8km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.65**	**115**	*i* P	Pg		01 46 48.1	-2.1
PNIG				*i* S	Sg		01 46 55.9	-2.8
PNIG	**Pinotepa**	**0.65**	**115**	*i* P	Pg		01 46 48.1	-2.1
PNIG				*i* S	Sg		01 46 55.9	-2.8
ACX	**Acapulco**	**1.09**	**280**	*i* P	Pb		01 46 55.4	-2.6
ACX				*i* S	Sb		01 47 08.2	-3.9
ACX	**Acapulco**	**1.09**	**280**	*i* P	Pb		01 46 55.4	-2.6
ACX				*i* S	Sb		01 47 08.2	-3.9
UTMO	**Huajuapan**	**1.46**	**38**	*i* P	Pn		01 47 00.2	-2.9
UTMO				*i* S	Sn		01 47 16.4	-5.4
MEIG	**Mezcala**	**1.51**	**326**	*e*P	Pn		01 47 00.9	-3.0
MEIG				*i* S	Sn		01 47 18.0	-5.1
CAIG	**El Cayaco**	**1.52**	**284**	*i* P	Pn		01 47 01.5	-2.5
CAIG				*i* S	Sn		01 47 18.4	-5.0
CAIG	**El Cayaco**	**1.52**	**284**	*i* P	Pn		01 47 01.1	-2.8
CAIG				*i* S	Sn		01 47 18.4	-5.0
PLIG	**Platanillo**	**1.86**	**337**	*i* P	Pn		01 47 05.8	-2.9
PLIG				*i* S	Sn		01 47 26.4	-5.5
PLIG	**Platanillo**	**1.86**	**337**	*i* P	Pn		01 47 05.8	-2.9
PLIG				*i* S	Sn		01 47 26.4	-5.5
VHO	**Vista Hermosa**	**1.96**	**78**	*e*P	Pn		01 47 04.7	-5.3
VHO				*i* S	Sn		01 47 25.9	-8.4
VHO	**Vista Hermosa**	**1.96**	**78**	*e*P	Pn		01 47 06.7	-3.3
VHO				*i* S	Sn		01 47 29.6	-4.7
TPIG	**Tehuac#an**	**2.18**	**37**	*e*P	Pn		01 47 10.2	-2.8
TPIG				*i* S	Sn		01 47 35.7	-4.0
PPM	**Popocatepetl**	**2.38**	**2**	*e*P	Pn		01 47 15.7	-0.2
PPM				*i* S	Sn		01 47 45.6	+0.8
PPM	**Popocatepetl**	**2.38**	**2**	*e*P	Pn		01 47 15.7	-0.2
PPM				*i* S	Sn		01 47 45.6	+0.8
MZVM		**2.55**	**349**	*i* P	Pn		01 47 18.5	+0.4
MZVM				*i* S	Sn		01 47 49.3	+0.5
SZVM	**Salazar**	**2.71**	**347**	*e*P	Pn		01 47 20.1	-0.2
SZVM	**Salazar**	**2.71**	**347**	*e*P	Pn		01 47 20.1	-0.2

SZVM			*i* S	Sn	01 47 54.7	+1.9
ZIIG	**Zihuatanejo**	**2.77 290**	*i* P	Pn	01 47 28.6	+7.4
ZIIG	**Zihuatanejo**	**2.77 290**	*i* P	Pn	01 47 19.3	-1.9
ZIIG			*i* S	Sn	01 47 51.2	-3.2

*MEX **16** 01:57:16.5±0.8, 13°.34N×91°.57W, h20^{km}±31^{km}, MD4.2*
*ISCJB **16** 01:57:18.5±1.3, 13°.58N±0°.05×91°.97W±0°.03, h4^{km}±9^{km}, mb4.0/22, MS3.6/2, Error ellipse: s-maj=9.3km s-min=3.8km az=19.2*
*IDC **16** 01:57:19.2±1.5, 13°.79N×91°.47W, h0^{km}, mb3.9/7, mb1 4.2/8, mb1mx3.9/20, mbtmp3.9/8, ML3.7/1, MS3.7/2, Ms1 3.7/2, ms1mx3.0/26, Error ellipse: s-maj=45.9km s-min=25.2km az=51.0*
*NEIC **16** 01:57:20.6±5.3, 13°.62N×91°.86W, h10^{km}±33^{km}, mb3.9/16, MD4.2(MEX), Error ellipse: s-maj=20.7km s-min=10.6km az=203.0*
*CASC **16** 01:57:20.2±2.5, 13°.29N×92°.04W, h35^{km}±999^{km}, MD3.9, mb3.9(NEIC)*

ISC 16 01:57:20.0±1.3, 13°.62N±0°.05×91°.91W±0°.03, h1^{km}±7^{km}, n86, σ1°.04/100, mb4.0/22, MS3.6/2, 20C-11D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.74**	**21**	⇑*eP*		**Pg**		**01 57 39.2**	**+4.9**
THIG		**1.32**	**345**	*i* P		**Pg**		**01 57 41.6**	**-3.9**
THIG				*i* S		**Sg**		**01 58 02.5**	**-0.1**
FUG	**Fuego 3**	**1.33**	**52**	*eP*		**Pg**		**01 57 46.4**	**+0.9**
FUG				*eS*		**Sg**		**01 58 10.2**	**+7.5**
FG6		**1.37**	**47**	*eP*		**Pn**		**01 57 47.1**	**+0.9**
TP2	**Tecpan 2**	**1.45**	**37**	*eP*		**Pn**		**01 57 48.6**	**+1.3**
NBG	**Las Nubes**	**1.80**	**57**	*eP*		**Pn**		**01 57 54.2**	**+2.0**
RBDL	**Robledal**	**2.22**	**77**	*eP*		**Pn**		**01 57 58.4**	**+0.5**
RBDL				*eS*		**Sn**		**01 58 27.2**	**+1.2**
SBLS	**San Blas**	**2.24**	**84**	*eP*		**Pn**		**01 57 57.7**	**-0.5**
SBLS				*eS*		**Sn**		**01 58 26.8**	**+0.3**
SNJE	**San Jose**	**2.26**	**83**	*eP*		**Pn**		**01 57 58.0**	**-0.5**
PCIG		**2.43**	**329**	*i* P		**Pn**		**01 57 59.0**	**-1.8**
PCIG				*i* S		**Sn**		**01 58 29.8**	**-1.4**
BOQS	**Boqueron**	**2.56**	**87**	*eP*		**Pn**		**01 58 02.5**	**-0.2**
BOQS				*eS*		**Sn**		**01 58 34.1**	**-0.4**
MRL	**Marmol**	**2.59**	**56**	*eP*		**Pn**		**01 58 05.2**	**+2.1**
MTO2	**Montecristo 2**	**2.60**	**72**	*eP*		**Pn**		**01 58 03.1**	**0.0**
LFRS	**El Faro**	**2.77**	**90**	*eP*		**Pn**		**01 58 05.9**	**+0.3**
SCX	**San Cristobal**	**3.18**	**347**	*eP*		**Pn**		**01 58 08.3**	**-2.8**
SCX				*i* S		**Sn**		**01 58 48.8**	**-0.9**
SCX	**San Cristobal**	**3.18**	**347**	*eP*		**Pn**		**01 58 08.3**	**-2.8**
SCX				*i* S		**Sn**		**01 58 48.8**	**-0.9**
TGIG		**3.35**	**340**	*i* P		**Pn**		**01 58 11.2**	**-2.3**
TGIG				*i* S		**Sn**		**01 58 53.2**	**-0.7**
CNCH	**Conchagua**	**3.98**	**94**	*eP*		**Pn**		**01 58 22.1**	**-0.1**
CNCH				*eS*		**Sn**		**01 59 07.2**	**-2.4**
CMIG	**Matias Romero**	**4.49**	**321**	Pn		**Pn**		**01 58 27.8**	**-1.4**
	1.2nm,0.3s,baz=126,slow=8.0,SNR=10.0								
CMIG				Sn		**Sn**		**01 59 22.6**	**+0.7**
	2.7nm,0.3s,baz=141,slow=20,SNR=3.8								
CMIG				Lg				01 59 37.2	
	4.8nm,0.3s,baz=268,slow=15,SNR=5.7								
TGUH	**Tegucigalpa,Un**	**4.53**	**84**	*ePn*		**Pn**		**01 58 29.6**	**-0.1**
VHO	**Vista Hermosa**	**5.78**	**307**	*i* P		**Pn**		**01 58 45.6**	**-1.3**
VHO				*i* S		**Sn**		**01 59 55.1**	**+1.2**
VHO	**Vista Hermosa**	**5.78**	**307**	*i* P		**Pn**		**01 58 45.6**	**-1.3**
VHO				*i* S		**Sn**		**01 59 55.1**	**+1.2**
PNIG	**Pinotepa**	**6.61**	**295**	*i* P		**Pn**		**01 58 56.4**	**-1.9**
PNIG	**Pinotepa**	**6.61**	**295**	*i* P		**Pn**		**01 58 56.4**	**-1.9**
UTMO	**Huajupan**	**7.05**	**307**	*eP*		**Pn**		**01 59 04.0**	**-0.4**
UTMO				*i* S		**Sn**		**02 00 26.6**	**+1.4**
TEIG	**Tepich**	**7.43**	**27**	*ePn*		**Pn**		**01 59 10.7**	**+1.0**
JTS	**JuntasAbangare**	**7.57**	**115**	*ePn*		**Pn**		**01 59 07.5**	**-4.1**
PPM	**Popocatepetl**	**8.42**	**311**	*i* P		**Pn**		**01 59 26.6**	**+3.5**
PPM				*i* S		**Sn**		**02 01 02.9**	**+4.0**
PPM	**Popocatepetl**	**8.42**	**311**	*i* P		**Pn**		**01 59 26.6**	**+3.5**
PPM				*i* S		**Sn**		**02 01 02.9**	**+4.0**
628A	**Black Gap, Mar**	**18.78**	**329**	⇓P		**Pn**		**02 01 41.3**	**+0.1**
	baz=13								
627A	**Terlingua Ranc**	**19.01**	**328**	⇓P		**Pn**		**02 01 44.3**	**+0.4**
	baz=13,SNR=7.2								
TXAR	**Lajitas Array**	**19.06**	**327**	P		**Pn**		**02 01 44.8**	**+0.3**
	0.1nm,0.3s,baz=148,slow=12,SNR=14								
626A	**Big Bend Ranch**	**19.48**	**326**	⇑P		**Pn**		**02 01 49.7**	**+0.1**
	baz=14								
526A	**Mary Lane Ranc**	**19.86**	**327**	⇑P		**Pn**		**02 01 54.1**	**0.0**
	baz=14								
328A	**Wristen Ranch,**	**20.32**	**332**	⇑P		**P**		**02 01 58.0**	**+0.4**
	baz=15								
326A	**Caldwell Ranch**	**20.81**	**330**	⇑P		**P**		**02 02 03.1**	**+0.2**
	baz=15,SNR=6.0								
425A	**Indio Mountain**	**20.90**	**327**	⇓P		**P**		**02 02 04.3**	**+0.4**
	baz=15								
227A	**Bennet, Jal**	**21.07**	**332**	⇑P		**P**		**02 02 05.8**	**+0.2**
	baz=15								
325A	**Bean Ranch, Si**	**21.36**	**328**	⇓P		**P**		**02 02 09.4**	**+0.6**
	baz=16,SNR=6.1								
226A	**Malaga, Loving**	**21.49**	**331**	⇓P		**P**		**02 02 10.6**	**+0.4**
	baz=16,SNR=10								
CLNB	**Carlsbad**	**21.55**	**331**	*eP*		**P**		**02 02 11.2**	**+0.4**
	1.3nm,0.5s,mb3.6								
GDL2	**Guadalupe Moun**	**21.73**	**330**	⇑P		**P**		**02 02 13.5**	**+0.7**
	6.2nm,0.8s,mb4.1								
MNTX	**Cornudas Mount**	**21.83**	**328**	⇑P		**P**		**02 02 13.8**	**-0.1**
	baz=16,SNR=9.4								
MNTX	**Cornudas Mount**	**21.83**	**328**	*eP*		**P**		**02 02 13.2**	**-0.7**
	3.6nm,0.9s,mb3.8								
225A	**Deer Hill, Car**	**21.88**	**329**	⇓P		**P**		**02 02 14.9**	**+0.5**
	baz=16,SNR=5.7								
WMOK	**Wichita Mounta**	**21.93**	**345**	*eP*		**P**		**02 02 13.4**	**-1.5**
	6.6nm,1.3s,mb3.9								
SWET	**Sewanee**	**22.17**	**13**	*eP*		**P**		**02 02 16.5**	**-1.0**
224A	**Cornudas Mount**	**22.20**	**328**	⇑P		**P**		**02 02 18.1**	**+0.3**
	baz=17,SNR=6.2								
125A	**Gardner Draw,**	**22.24**	**331**	⇑P		**P**		**02 02 18.2**	**0.0**
	baz=17,SNR=9.6								
Z26A	**Caprock**	**22.44**	**333**	⇓P		**P**		**02 02 20.0**	**-0.4**
	baz=17,SNR=8.5								
124A	**Stringfield Ra**	**22.66**	**329**	⇑P		**P**		**02 02 23.9**	**+1.1**
	baz=17								
WVT	**Waverly**	**22.71**	**9**	*eP*		**P**		**02 02 21.0**	**-2.2**
	5.7nm,1.2s,mb4.0								
Z25A	**Roswell**	**22.78**	**331**	⇑P		**P**		**02 02 23.5**	**-0.5**
	baz=17								
AMTX	**Amarillo**	**22.94**	**339**	⇓P		**P**		**02 02 24.6**	**-1.1**
	baz=17,SNR=6.4								
AMTX	**Amarillo**	**22.94**	**339**	*eP*		**P**		**02 02 24.2**	**-1.5**
	11nm,0.7s,mb4.5								
TKL	**Tuckaleechee C**	**23.14**	**17**	P		**P**		**02 02 25.7**	**-2.0**
	4.9nm,0.8s,mb4.1,baz=173,slow=11,SNR=8.2								
TKL				LR		LR		02 13 59.1	
	comp=Z,167nm,18.7s,MS3.5,baz=257,slow=44								
W27A	**Bowe Ranch, En**	**23.61**	**337**	⇑P		**P**		**02 02 31.6**	**-1.1**
	baz=18,SNR=6.5								
W25A	**X Bar L Ranch,**	**24.30**	**334**	⇑P		**P**		**02 02 38.8**	**-0.2**
	baz=19								
BNM	**Barren Site**	**24.41**	**329**	*eP*		**P**		**02 02 41.1**	**+1.1**
	5.9nm,1.1s,mb4.0								
Y22A	**Socorro**	**24.41**	**329**	⇑P		**P**		**02 02 41.4**	**+1.3**
	baz=19								
V26A	**Tequesquite Ra**	**24.53**	**336**	⇓P		**P**		**02 02 41.8**	**+0.7**
	baz=19								
W24A	**Lazy 6 Ranch,**	**24.71**	**333**	⇑P		**P**		**02 02 43.2**	**+0.4**
	baz=19								
LAZ	**Ladron**	**24.87**	**329**	*eP*		**P**		**02 02 45.5**	**+1.3**
	1.9nm,1.2s,mb3.7								
ANMO	**Albuquerque**	**24.98**	**331**	*eP*		**P**		**02 02 44.5**	**-0.7**
	1.7nm,0.8s,mb3.8								
ANMO	**Albuquerque**	**24.98**	**331**	P		**P**		**02 02 46.0**	**+0.8**
	1.6nm,0.8s,mb3.8,baz=152,slow=11,SNR=7.6								
WCI	**Wyandotte Cave**	**25.01**	**11**	*eP*		**P**		**02 02 42.4**	**-3.1**
	8.2nm,0.6s,mb4.6								
U26A	**Atchley Ranch,**	**25.04**	**337**	⇑P		**P**		**02 02 45.4**	**-0.4**
	baz=19								
V24A	**Rampart Ranch,**	**25.08**	**334**	⇑P		**P**		**02 02 46.4**	**+0.3**
	baz=19								
Y20A	**Horse Springs,**	**25.13**	**326**	⇓P		**P**		**02 02 47.3**	**+0.7**
	baz=20								
X21A	**Alamocita Cree**	**25.23**	**328**	⇑P		**P**		**02 02 48.5**	**+1.0**
	baz=20								
T25A	**Trinidad**	**25.95**	**337**	⇑P		**P**		**02 02 54.4**	**+0.5**
	baz=20								
U21A	**Nageezi**	**26.74**	**331**	⇑P		**P**		**02 03 01.8**	**+0.6**
	baz=21								
MVCO	**Mesa Verde**	**27.77**	**331**	⇓P		**P**		**02 03 11.1**	**+0.7**
	baz=22								

HWUT	**Hardware Ranch**	**32.71**	**332**	*eP*		**P**		**02 03 54.3**	**+0.3**
	3.3nm,0.9s,mb4.3								
SADO	**Sadowa**	**32.90**	**17**	LR		LR		02 17 59.9	
	comp=Z,116nm,18.6s,MS3.6,baz=117,slow=38								
TPAW	**Teton Pass**	**33.97**	**335**	*eP*		**P**		**02 04 05.1**	**+0.1**
	3.2nm,1.0s,mb4.2								
NVAR	**Mina Array Bea**	**34.02**	**321**	P		**P**		**02 04 06.7**	**+1.1**
	2.0nm,0.9s,mb4.0,baz=132,slow=8.4,SNR=9.7								
MOOW	**Moose Ponds**	**34.10**	**335**	*eP*		**P**		**02 04 06.4**	**+0.3**
	0.9nm,0.7s,mb3.8								
HLID	**Hailey**	**35.55**	**331**	*eP*		**P**		**02 04 19.0**	**+0.3**
	2.1nm,1.0s,mb3.9								
MCMT	**McKenzie Canyo**	**35.85**	**334**	*eP*		**P**		**02 04 22.1**	**+0.9**
	1.5nm,0.8s,mb3.9								
WVOR	**Wild Horse Val**	**36.85**	**326**	*eP*		**P**		**02 04 30.7**	**+0.8**
	1.9nm,0.9s,mb3.8								
SIV	**San Ignacio**	**42.37**	**133**	P		**P**		**02 05 14.4**	**-1.8**
	0.5nm,0.6s,mb3.4,baz=294,slow=10.0,SNR=3.2								
SCHQ	**Schefferville**	**45.55**	**20**	P		**P**		**02 05 37.0**	**-4.1**
	3.7nm,0.6s,mb4.6,baz=219,slow=11,SNR=5.6								
YKA	**Yellowknife Ar**	**51.41**	**347**	P		**P**		**02 06 24.1**	**-2.1**
	1.9nm,0.7s,mb4.2,baz=155,slow=7.4,SNR=7.0								
ILAR	**Eielson Array**	**63.22**	**337**	P		**P**		**02 07 49.2**	**-0.5**
	0.7nm,1.0s,mb3.7,baz=128,slow=5.4,SNR=7.6								
CMAR	**Chiang Mai Arr**	**146.38**	**341**	PKPbc		PKPbc		02 17 01.6	-2.0
	1.9nm,0.9s,baz=338,slow=4.3,SNR=7.2								

*IDC **16** 01:59:51.6±2.4, 14°.16N×91°.63W, h0^{km}, mb3.8/6, mb1 4.0/8, mb1mx3.8/21, mbtmp3.7/8, ML3.5/1, Error ellipse: s-maj=53.7km s-min=24.8km az=25.0*
*NEIC **16** 01:59:56.2±1.7, 14°.07N×91°.49W, h35^{km}, mb3.7/7, Error ellipse: s-maj=28.0km s-min=20.9km az=180.0*

ISC 16 01:59:53.6±2.1, 14°.1N±0°.2×91°.6W±0°.1, h10^{km}, n19, σ1°.03/20, mb3.8/12, Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**4.32**	**313**	Pn		**Pn**		**02 00 55.9**	**-3.4**
CMIG				Sn		**Sn**		**02 01 49.2**	**-0.6**
CMIG				Lg				02 02 06.3	
CMIG	**Matias Romero**	**4.32**	**313**	Pn		**Pn**		**02 00 55.9**	**-3.4**
	baz=140,slow=12,SNR=1.6								
CMIG				Sn		**Sn**		**02 01 49.2**	**-0.6**
	1.1nm,0.3s,baz=72,slow=16,SNR=2.6								
CMIG				Lg				02 02 06.3	
	3.4nm,0.3s,baz=253,slow=14,SNR=4.5								
HKT	**Hockley**	**16.22**	**347**	*ePn*		**Pn**		**02 03 41.2**	**-0.4**
TXAR	**Lajitas Array**	**18.80**	**326**	P		**Pn**		**02 04 14.3**	**+0.5**
TXAR	**Lajitas Array**	**18.80**	**326**	P		**Pn**		**02 04 14.3**	**+0.5**
	0.0nm,0.3s,baz=147,slow=12,SNR=4.6								
GDL2	**Guadalupe Moun**	**21.44**	**329**	*eP*		**P**		**02 04 43.4**	**+1.5**
	3.7nm,0.8s,mb3.8								
WMOK	**Wichita Mounta**	**21.52**	**344**	*eP*		**P**		**02 04 42.4**	**-0.4**
	3.2nm,1.1s,mb3.7								
MNTX	**Cornudas Mount**	**21.57**	**326**	*eP*		**P**		**02 04 43.8**	**+0.4**
	1.5nm,0.8s,mb3.5								
WVT	**Waverly**	**22.17**	**8**	*eP*		**P**		**02 04 50.7**	**+0.9**
	2.4nm,0.6s,mb3.8								
TKL	**Tuckaleechee C**	**22.56**	**17**	P		**P**		**02 04 54.5**	**+0.5**
	2.0nm,0.7s,mb3.7,baz=189,slow=13,SNR=2.8								
AMTX	**Amarillo**	**22.58**	**338**	*eP*		**P**		**02 04 54.1**	**-0.1**
	5.8nm,0.6s,mb4.2								
ANMO	**Albuquerque**	**24.68**	**330**	*eP*		**P**		**02 05 15.2**	**+0.5**
	1.1nm,0.7s,mb3.5								
ANMO	**Albuquerque**	**24.68**	**330**	P		**P**		**02 05 15.1**	**+0.3**
	0.6nm,0.6s,mb3.3,baz=130,slow=11,SNR=4.3								
NVAR	**Mina Array Bea**	**33.81**	**321**	P		**P**		**02 06 37.0**	**+1.0**
	0.9nm,0.8s,mb3.8,baz=138,slow=8.7,SNR=5.4								
MCMT	**McKenzie Canyo**	**35.52**	**334**	*eP*		**P**		**02 06 52.0**	**+1.4**
	0.4nm,0.5s,mb3.6								
SCHQ	**Schefferville**	**44.97**	**20**	P		**P**		**02 08 07.2**	**-1.6**
	3.4nm,0.8s,mb4.2,baz=232,slow=12,SNR=4.0								
YKA	**Yellowknife Ar**	**50.99**	**346**	P		**P**		**02 08 54.1**	**-1.1**
	1.6nm,0.8s,mb4.0,baz=153,slow=7.8,SNR=6.9								
ILAR	**Eielson Array**	**62.87**	**337**	P		**P**		**02 10 17.8**	**-1.8**
	0.2nm,0.6s,mb3.4,baz=116,slow=8.1,SNR=3.7								
CMAR	**Chiang Mai Arr**	**145.99**	**342**	PKPbc		PKPbc		02 19 33.4	-1.0
	0.8nm,0.5s,baz=350,slow=4.6,SNR=3.2								

*IDC **16** 02:03:10.9±0.8, 32°.23N×50°.13E, h0^{km}, mb3.9/15, mb1 4.0/19, mb1mx4.0/28, mbtmp3.9/19, ML3.7/4, MS2.9/3, Ms1 3.0/3, ms1mx2.5/33, Error ellipse: s-maj=21.7km s-min=14.8km az=156.0*
*ISCJB **16** 02:03:12.0±0.2, 32°.25N±0°.02×50°.08E±0°.03, h10^{km}, mb4.2/27, MS4.1/3, Error ellipse: s-maj=3.4km s-min=2.7km az=43.5*
*SGS **16** 02:03:12.9, 32°.40N×50°.47E, h11^{km}*
*CSEM **16** 02:03:13.1±0.1, 32°.21N×50°.08E, h10^{km}, mb4.3/20, Error ellipse: s-maj=5.4km s-min=4.5km az=175.0*
*MOS **16** 02:03:13.8±1.1, 32°.16N×50°.13E, h33^{km}, mb4.5/13, Error ellipse: s-maj=11.2km s-min=7.9km az=124.6*
*TEH **16** 02:03:14.5, 32°.22N×50°.10E, h4^{km}*
*NEIC **16** 02:03:14.6, 32°.26N×50°.23E, h16^{km}, mb4.2/8, ML3.7(THR), MN3.9(TEH), After THR.*
*THR **16** 02:03:14.5±0.6, 32°.26N×50°.23E, h15^{km}±4^{km}, ML3.7*
*KISR **16** 02:03:15.4±1.0, 31°.89N×50°.13E, h4^{km}±243^{km}, ML3.7*
*OMAN **16** 02:04:49.9±99.0, 26°.48N×55°.08E, h6^{km}, Error ellipse: s-maj=1785.0km s-min=12.1km az=341.0*

ISC 16 02:03:13.8±0.2, 32°.27N±0°.02×50°.12E±0°.02, h10^{km}, n229, σ1°.40/238, mb4.2/27, MS4.1/3, 14C-9D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.13**	**262**	Pg		**Pg**		**02 03 37.0**	**+1.4**
SHGR	**Shooshtar-Gavs**	**1.13**	**262**	*ePg*		**Pg**		**02 03 37.3**	**+1.7**
SHGR				AML		AML		02 04 00.4	
	comp=N,3μm,0.5s								
SHGR				AML		AML		02 04 09.1	
	comp=E,2μm,0.6s								
SHGR	**Shooshtar-Gavs**	**1.13**	**262**	Pg		**Pg**		**02 03 37.0**	**+1.4**
IKLH	**Kolahrood**	**1.61**	**49**	*ePn*		**Pn**		**02 03 41.5**	**-0.8**
IKLH				*eSg*		**Sg**		**02 04 05.9**	**+0.3**
IKLH				*e*				02 04 13.3	
	comp=Z,13μm,0.3s								
IKLH	**Kolahrood**	**1.61**	**49**	*ePn*		**Pn**		**02 03 41.5**	**-0.8**
IKLH				*eSg*		**Sg**		**02 04 05.9**	**+0.3**
IGAR	**Gharneh**	**1.63**	**85**	*ePn*		**Pn**		**02 03 41.9**	**-0.7**
IGAR				*eSg*		**Sg**		**02 04 06.3**	**0.0**
IGAR				*e*				02 04 10.1	
	comp=Z,23μm,0.2s								
IZEF	**Zefreh**	**1.96**	**71**	*ePn*		**Pn**		**02 03 47.7**	**+0.5**
IZEF				*e*				02 04 04.6	
	comp=Z,5μm,0.2s								
IZEF	**Zefreh**	**1.96**	**71**	*ePn*		**Pn**		**02 03 47.7**	**+0.5**
ASAO	**Ashtian**	**2.27**	**358**	Pn		**Pn**		**02 03 53.0**	**+1.6**
ASAO				Sg		**Sg**		**02 04 26.0**	**-0.8**
ASAO	**Ashtian**	**2.27**	**358**	*ePn*		**Pn**		**02 03 53.9**	**+2.5**
ASAO				*eSg*		**Sg**		**02 04 26.7**	**-0.1**
ASAO				AML		AML		02 04 42.6	
	comp=E,204nm,0.8s								
ASAO	**Ashtian**	**2.27**	**358**	Pn		**Pn**		**02 03 53.0**	**+1.6**
NASN	**Na'in**	**2.33**	**76**	Pn		**Pn**		**02 03 53.0**	**+0.8**
NASN				Sg		**Sg**		**02 04 25.0**	**-3.7**
NASN	**Na'in**	**2.33**	**76**	*ePn*		**Pn**		**02 03 53.7**	**+1.5**
NASN				*eSg*		**Sg**		**02 04 25.1**	**-3.6**
NASN	**Na'in**	**2.33**	**76**	Pn		**Pn**		**02 03 53.0**	**+0.8**
GHVR	**GHOM**	**2.41**	**24**	Pn		**Pn**		**02 03 55.0**	**+1.7**
GHVR	**GHOM**	**2.41**	**24**	*ePn*		**Pn**		**02 03 55.0**	**+1.7**
GHVR				AML		AML		02 04 41.3	
	comp=N,332nm,0.6s								
GHVR	**GHOM**	**2.41**	**24**	Pn		**Pn**		**02 03 55.0**	**+1.7**
ISFB	**Sefidab**	**2.73**	**40**	*ePn*		**Pn**		**02 03 59.2**	**+1.5**
ISFB				*e*				02 04 40.2	
	comp=Z,3μm,0.3s								
ISFB	**Sefidab**	**2.73**	**40**	*ePn*		**Pn**		**02 03 59.2**	**+1.5**
IKOM	**Komasi**	**2.90**	**312**	*e*		**Pg**		**02 04 14.7**	**+5.3**
	comp=Z,3μm,0.3s								
IKOM				*ePn*		**Pn**		**02 04 02.4**	**+2.4**
ISAD	**Sadrabad**	**3.04**	**96**	*ePn*		**Pn**		**02 04 03.4**	**+1.4**
ISAD				*e*				02 05 01.1	
	comp=Z,6μm,0.3s								
ISAD	**Sadrabad**	**3.04**	**96**	*ePn*		**Pn**		**02 04 03.4**	**+1.4**
IRAZ	**Razeghan**	**3.13**	**357**	Pn		**Pn**		**02 04 05.6**	**+2.4**
IRAZ	**Razeghan**	**3.13**	**357**	*ePn*		**Pn**		**02 04 05.2**	**+2.0**
IRAZ				*e*				02 05 11.7	
	comp=Z,2μm,0.3s								
IRAZ	**Razeghan**	**3.13**	**357**	*ePn*		**Pn**		**02 04 05.2**	**+2.0**
IR3	**Iran Long-Peri**	**3.28**	**13**	*ePn*		**Pn**		**02 04 07.0**	**+1.7**
IR3	**Iran Long-Peri**	**3.28**	**13**	*ePn*		**Pn**		**02 04 07.0**	**+1.7**

UMR	**Umm Al-Rimmam**	**3.41**	**218**	*eP*		**Pn**		**02 04 09.1**	**+2.0**
MIB	**Mutribah**	**3.43**	**225**	*eP*		**Pn**		**02 04 09.8**	**+2.5**
MIB				*eS*		**Sn**		**02 04 50.6**	**+2.5**
MIB				AML		AML		02 04 52.5	
	comp=Z,232nm,0.6s								
IMHD	**Mahdasht**	**3.43**	**7**	*e*		x		02 04 33.0	
	comp=Z,828nm,0.2s								
IMHD				*ePn*		**Pn**		**02 04 09.4**	**+2.0**
IPAR	**Pars**	**3.49**	**133**	*ePn*		**Pn**		**02 04 08.8**	**+0.6**
IPAR				*e*				02 05 29.4	
	comp=Z,3μm,0.5s								
IPAR	**Pars**	**3.49**	**133**	*ePn*		**Pn**		**02 04 08.8**	**+0.6**
IVIS	**Veis**	**3.54**	**310**	*ePn*		**Pn**		**02 04 10.3**	**+1.4**
IVIS				*e*				02 05 22.8	
	comp=Z,1μm,0.4s								
IVIS	**Veis**	**3.54**	**310**	*ePn*		**Pn**		**02 04 10.3**	**+1.4**
IGHG	**Ghaleghazi**	**3.61**	**306**	*ePn*		**Pn**		**02 04 10.4**	**+0.5**
IGHG				*e*				02 05 52.8	
	comp=Z,4μm,0.4s								
IGHG	**Ghaleghazi**	**3.61**	**306**	*ePn*		**Pn**		**02 04 10.4**	**+0.5**
ICHK	**Chekchek**	**3.63**	**89**	*ePn*		**Pn**		**02 04 12.1**	**+2.0**
ICHK				*e*				02 05 17.2	
	comp=Z,3μm,0.3s								
ICHK	**Chekchek**	**3.63**	**89**	*ePn*		**Pn**		**02 04 12.1**	**+2.0**
SNGE	**Sanandaj**	**3.64**	**321**	Pn		**Pn**		**02 04 13.0**	**+2.8**
SNGE	**Sanandaj**	**3.64**	**321**	*ePn*		**Pn**		**02 04 13.2**	**+2.9**
SNGE	**Sanandaj**	**3.64**	**321**	Pn		**Pn**		**02 04 13.0**	**+2.8**
IDMV	**Damavand**	**3.66**	**25**	*ePn*		**Pn**		**02 04 12.3**	**+1.8**
IDMV				*e*				02 04 38.5	
	comp=Z,2μm,0.5s								
IDMV	**Damavand**	**3.66**	**25**	*ePn*		**Pn**		**02 04 12.3**	**+1.8**
DAMV	**Damavand**	**3.68**	**24**	Pn		**Pn**		**02 04 12.0**	**+1.2**
DAMV	**Damavand**	**3.68**	**24**	*ePn*		**Pn**		**02 04 12.9**	**+2.1**
DAMV	**Damavand**	**3.68**	**24**	Pn		**Pn**		**02 04 12.0**	**+1.2**
CHTH	**Charan**	**3.72**	**13**	Pn		**Pn**		**02 04 13.0**	**+1.7**
CHTH	**Charan**	**3.72**	**13**	*ePn*		**Pn**		**02 04 13.6**	**+2.3**
CHTH	**Charan**	**3.72**	**13**	Pn		**Pn**		**02 04 13.0**	**+1.7**
KBD	**Kabd**	**3.73**	**215**	*eP*		**Pn**		**02 04 13.5**	**+2.0**
KBD				*eS*		**Sn**		**02 04 56.3**	**+0.9**
KBD				AML		AML		02 05 00.4	
	comp=Z,175nm,0.4s								
ISRV	**Sarvestan**	**3.86**	**137**	*ePn*		**Pn**		**02 04 13.5**	**+0.2**
ISRV	**Sarvestan**	**3.86**	**137**	*ePn*		**Pn**		**02 04 13.5**	**+0.2**
ILAS	**Lasjerd**	**3.90**	**37**	*ePn*		**Pn**		**02 04 15.1**	**+1.3**
ILAS				*e*				02 05 37.2	
	comp=Z,2μm,0.4s								
ILAS	**Lasjerd**	**3.90**	**37**	*ePn*		**Pn**		**02 04 15.1**	**+1.3**
NAY	**

BURAR	Bucovina Array	24.34	316	⇑*i*	P		P	02 08 32.2	+0.6
BUR08	Bucovina Ar. S	24.36	316	*e*	P		P	02 08 31.9	+0.1
BUR08	Bucovina Ar. S	24.36	316	*e*	P		P	02 08 31.9	+0.1
ARU	Arti	24.86	11	*e*	P		P	02 08 36.8	+0.5
	comp=Z,3.8nm,0.9s,mb3.9								
ARU	Arti	24.86	11		P		P	02 08 37.1	+0.8
ARU	Arti	24.86	11		P		P	02 08 37.1	+0.8
BVAR	Borovoye Array	25.38	29		P		P	02 08 40.5	-0.5
	comp=Z,1.2nm,0.6s,mb3.6,baz=201,slow=7.9,SNR=5.3								
BVAR	Borovoye Array	25.38	29		P		P	02 08 40.5	-0.5
BVAR						pmax	pmax		
	comp=Z,1.0nm,0.6s								
BVAR	Borovoye Array	25.38	29		P		P	02 08 40.5	-0.5
DRGR		25.47	313	⇓*i*	P		P	02 08 43.8	+1.8
DRGR		25.47	313	⇓*i*	P		P	02 08 43.8	+1.8
KURK	Kurchatov	27.93	40		P		P	02 09 02.8	-1.3
	comp=Z,0.8nm,0.7s,mb3.4,baz=242,slow=9.6,SNR=7.3								
KURK	Kurchatov	27.93	40		P		P	02 09 02.8	-1.3
KURK						pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5								
KURK	Kurchatov	27.93	40		P		P	02 09 02.8	-1.3
	comp=Z,1.0nm,0.7s,mb3.5								
MK31	Makanchi Array	28.50	50	*e*	P		P	02 09 07.8	-1.5
MK31	Makanchi Array	28.50	50	*e*	P		P	02 09 07.8	-1.4
MKAR	Makanchi Array	28.50	50		P		P	02 09 08.7	-0.6
	comp=Z,0.6nm,0.6s,mb3.5,baz=243,slow=11,SNR=5.9								
MKAR	Makanchi Array	28.50	50		P		P	02 09 08.7	-0.5
MKAR						pmax	pmax		
	comp=Z,1.0nm,0.6s								
MKAR	Makanchi Array	28.50	50		P		P	02 09 08.7	-0.5
MORC	Moravsky Berou	29.85	315	*e*	P		P	02 09 19.9	-1.3
	comp=Z,1.6nm,0.8s,mb3.8								
MORC	Moravsky Berou	29.85	315	*e*	P		P	02 09 19.9	-1.2
MORC						pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9								
MORC	Moravsky Berou	29.85	315	*e*	P		P	02 09 19.9	-1.2
	comp=Z,2.0nm,0.8s,mb3.9								
ZALV	Zalesovo Beam	32.83	38		P		P	02 09 46.4	-0.9
ZALV	Zalesovo Beam	32.83	38		P		P	02 09 46.4	-0.9
	comp=Z,1.1nm,0.5s,mb4.0,baz=262,slow=10,SNR=3.9								
ZALV	Zalesovo Beam	32.83	38		P		P	02 09 46.4	-0.9
ZALV						pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0								
FINES	FINESS Array B	33.10	339		P		P	02 09 48.4	-1.2
	comp=Z,4.0nm,1.0s,mb4.3,baz=122,slow=9.3,SNR=13								
FINES	FINESS Array B	33.10	339		P		P	02 09 48.4	-1.2
FINES						pmax	pmax		
	comp=Z,4.0nm,1.0s								
FINES	FINESS Array B	33.10	339		P		P	02 09 48.4	-1.2
	comp=Z,4.0nm,1.0s,mb4.3								
MBDF	Montbardon	35.73	303	*e*	P		P	02 10 11.6	-1.0
	comp=Z,23nm,1.2s,mb4.7								
MBDF	Montbardon	35.73	303	*e*	P		P	02 10 11.6	-1.0
	comp=Z,11nm,1.2s,mb4.7								
MBDF	Montbardon	35.73	303	*e*	P		P	02 10 11.6	-1.0
MBDF						pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7								
MBDF	Montbardon	35.73	303	*e*	P		P	02 10 11.6	-1.0
	comp=Z,11nm,1.2s,mb4.7								
LPG	La Plagne	35.82	304	*e*	P		P	02 10 12.6	-0.8
LPG	La Plagne	35.82	304	*e*	P		P	02 10 12.6	-0.8
LPL	La Plagne	35.84	304	*e*	P		P	02 10 12.5	-1.0
	comp=Z,50nm,1.7s,mb4.9								
LPL	La Plagne	35.84	304	*e*	P		P	02 10 12.5	-1.0
	comp=Z,25nm,1.7s,mb4.9								
LPL	La Plagne	35.84	304	*e*	P		P	02 10 12.5	-1.0
LPL						pmax	pmax		
	comp=Z,25nm,1.7s,mb4.9								
LPL	La Plagne	35.84	304	*e*	P		P	02 10 12.5	-1.0
	comp=Z,25nm,1.7s,mb4.9								
CDF	Champ du Feu	35.90	309	*e*	P		P	02 10 13.5	-0.5
CDF	Champ du Feu	35.90	309	*e*	P		P	02 10 13.5	-0.5
ORIF	Oris-en-Rattie	36.38	303	*e*	P		P	02 10 16.8	-1.3
	comp=Z,14nm,1.0s,mb4.5								
ORIF	Oris-en-Rattie	36.38	303	*e*	P		P	02 10 16.8	-1.3
	comp=Z,7.1nm,1.0s,mb4.5								
ORIF	Oris-en-Rattie	36.38	303	*e*	P		P	02 10 16.8	-1.3
ORIF						pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5								
ORIF	Oris-en-Rattie	36.38	303	*e*	P		P	02 10 16.8	-1.3
	comp=Z,7.0nm,1.0s,mb4.5								
CABF	La Chapelle	36.41	306	*e*	P		P	02 10 16.9	-1.5
	comp=Z,19nm,1.1s,mb4.6								
CABF	La Chapelle	36.41	306	*e*	P		P	02 10 16.9	-1.5
	comp=Z,9.4nm,1.1s,mb4.6								
CABF	La Chapelle	36.41	306	*e*	P		P	02 10 16.9	-1.5
CABF						pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6								
CABF	La Chapelle	36.41	306	*e*	P		P	02 10 16.9	-1.5
	comp=Z,9.0nm,1.1s,mb4.6								
SMRF	Simiane la Rot	36.53	302	*e*	P		P	02 10 17.9	-1.6
	comp=Z,107nm,1.6s,mb5.1								
SMRF	Simiane la Rot	36.53	302	*e*	P		P	02 10 17.9	-1.6
	comp=Z,107nm,1.6s,mb5.4								
SMRF	Simiane la Rot	36.53	302	*e*	P		P	02 10 17.9	-1.6
	comp=Z,107nm,1.6s,mb5.4								
VIVF	Saint-Julien-l	37.23	303	*e*	P		P	02 10 23.7	-1.7
VIVF	Saint-Julien-l	37.23	303	*e*	P		P	02 10 23.7	-1.7
SMF	Signal de Mont	37.95	306	*e*	P		P	02 10 28.8	-2.7
	comp=Z,32nm,1.4s,mb4.6								
SMF	Signal de Mont	37.95	306	*e*	P		P	02 10 28.8	-2.7
	comp=Z,16nm,1.4s,mb4.6								
SMF	Signal de Mont	37.95	306	*e*	P		P	02 10 28.8	-2.7
SMF						pmax	pmax		
	comp=Z,16nm,1.4s,mb4.6								
SMF	Signal de Mont	37.95	306	*e*	P		P	02 10 28.8	-2.7
	comp=Z,16nm,1.4s,mb4.6								
LOR	Lormes	38.01	307	*e*	P		P	02 10 30.5	-1.4
LOR	Lormes	38.01	307	*e*	P		P	02 10 30.5	-1.4
SSF	Saint Saulge	38.22	307	*e*	P		P	02 10 31.6	-2.2
SSF	Saint Saulge	38.22	307	*e*	P		P	02 10 31.6	-2.2
NB2	NORSAR Subarra	38.28	330		P		P	02 10 32.4	-1.6
	comp=Z,0.5nm,0.4s,mb3.6,baz=122,slow=8.3,SNR=5.0								
NOA	NORSAR Array B	38.28	330		P		P	02 10 32.3	-1.7
	comp=Z,0.6nm,0.5s,mb3.6,baz=122,slow=8.3,SNR=5.2								
NOA	NORSAR Array B	38.28	330		P		P	02 10 32.3	-1.7
NOA						pmax	pmax		
	comp=Z,1.0nm,0.5s								
NOA	NORSAR Array B	38.28	330		P		P	02 10 32.3	-1.7
	comp=Z,1.0nm,0.5s,mb3.8								
AVF	Avril sur Loir	38.30	306	*e*	P		P	02 10 32.9	-1.5
AVF	Avril sur Loir	38.30	306	*e*	P		P	02 10 32.9	-1.5
NAO01	NORSAR Array S	38.31	330	*e*	P		P	02 10 32.8	-1.5
	comp=Z,2.6nm,0.8s,mb4.0								
NAO01	NORSAR Array S	38.31	330	*e*	P		P	02 10 32.8	-1.5
	comp=Z,2.6nm,0.8s,mb4.0								
GTA	Gaotai	40.49	65	*e*	P		P	02 10 53.3	+0.5
GTA					pP		pP	02 10 56.8	+0.9
GTA					sP		sP	02 10 59.8	+2.7
GTA						pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2								
ESDC	Sonseca Array	43.83	295		P		P	02 11 18.7	-1.3
	comp=Z,0.2nm,0.5s,baz=77,slow=9.0,SNR=3.0								
ESDC	Sonseca Array	43.83	295		P		P	02 11 18.7	-1.3
SONM	Songino Array	44.80	53		P		P	02 11 26.7	-1.0
	comp=Z,0.6nm,0.6s,mb3.6,baz=258,slow=9.2,SNR=4.0								
SONM	Songino Array	44.80	53		P		P	02 11 26.7	-1.0
SONM						pmax	pmax		
	comp=Z,1.0nm,0.6s								
SONM	Songino Array	44.80	53		P		P	02 11 26.7	-1.0
	comp=Z,1.0nm,0.6s,mb3.8								
CMAR	Chiang Mai Arr	45.84	95		P		P	02 11 34.1	-2.2
	comp=Z,1.4nm,0.3s,mb4.3,baz=280,slow=8.6,SNR=4.3								
CMAR						LR	LR	02 33 50.2	
	comp=Z,17nm,21.0s,MS3.0,baz=245,slow=40								
CMAR	Chiang Mai Arr	45.84	95		P		P	02 11 34.1	-2.2
CMAR						pmax	pmax		
	comp=Z,1.0nm,0.3s								
CMAR						MLR	MLR		
	comp=Z,17nm,21.0s								
CMAR	Chiang Mai Arr	45.84	95		P		P	02 11 34.1	-2.2
	comp=Z,17nm,21.0s								
DBIC	Dimbokro	57.03	256	*e*	P		P	02 12 58.7	-1.5
	comp=Z,1.8nm,0.5s,mb4.4								
DBIC	Dimbokro	57.03	256		P		P	02 12 59.0	-1.2
	comp=Z,1.9nm,0.5s,mb4.4,baz=13,slow=14,SNR=7.0								
DBIC	Dimbokro	57.03	256		P		P	02 12 59.0	-1.2
DBIC						pmax	pmax		
	comp=Z,2.0nm,0.5s								
DBIC	Dimbokro	57.03	256		P		P	02 12 59.0	-1.2
	comp=Z,2.0nm,0.5s,mb4.4								
LIC	Lamto	57.42	256	*e*	P		P	02 13 02.0	-1.0
	comp=Z,8.4nm,0.6s,mb4.6								
LIC	Lamto	57.42	256	*e*	P		P	02 13 02.0	-1.0
	comp=Z,4.2nm,0.6s,mb4.7								
LIC	Lamto	57.42	256	*e*	P		P	02 13 02.0	-1.0
	comp=Z,4.2nm,0.6s,mb4.7								
LBTB	Lobatse	61.59	205	*e*	P		P	02 13 30.9	-0.5
	comp=Z,4.5nm,0.5s,mb4.8								
LBTB	Lobatse	61.59	205	*e*	P		P	02 13 31.0	-0.4
LBTB						pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.8								
LBTB	Lobatse	61.59	205	*e*	P		P	02 13 31.0	-0.4
	comp=Z,4.0nm,0.5s,mb4.8								
BOSA	Boshof	65.00	204	*e*	P		P	02 13 53.1	-0.9
	comp=Z,3.2nm,0.6s,mb4.5								
BOSA	Boshof	65.00	204		P		P	02 13 52.8	-1.2
	comp=Z,4.9nm,0.7s,mb4.6,baz=59,slow=4.7,SNR=8.9								
BOSA	Boshof	65.00	204	*e*	P		P	02 13 53.1	-0.9
BOSA						pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5								
BOSA	Boshof	65.00	204	*e*	P		P	02 13 53.1	-0.9
	comp=Z,3.0nm,0.6s,mb4.5								
SCHQ	Schefferville	77.81	328		P		P	02 15 09.3	-1.8
	comp=Z,3.2nm,0.9s,mb4.3,baz=93,slow=8.6,SNR=3.7								
SCHQ	Schefferville	77.81	328		P		P	02 15 09.4	-1.7
INK	Inuvik	79.69	1	*e*	P		P	02 15 20.0	-1.3
	comp=Z,4.6nm,1.0s,mb4.4								
INK	Inuvik	79.69	1	*e*	P		P	02 15 20.0	-1.2
INK						pmax	pmax		
	comp=Z,5.0nm,1.0s								
INK	Inuvik	79.69	1	*e*	P		P	02 15 20.0	-1.2
	comp=Z,5.0nm,1.0s,mb4.4								
ILAR	Eielson Array	82.36	7		P		P	02 15 33.4	-2.2
	comp=Z,0.5nm,0.8s,mb3.5,baz=319,slow=3.1,SNR=6.3								
ILAR	Eielson Array	82.36	7		P		P	02 15 33.4	-2.1
ILAR						pmax	pmax		
	comp=Z,1.0nm,0.8s								
ILAR	Eielson Array	82.36	7		P		P	02 15 33.4	-2.1
	comp=Z,1.0nm,0.8s,mb3.8								
YKA	Yellowknife Ar	84.77	353		P		P	02 15 46.4	-1.5
	comp=Z,1.8nm,0.7s,mb4.3,baz=14,slow=5.7,SNR=6.4								
YKA	Yellowknife Ar	84.77	353		P		P	02 15 46.4	-1.5
YKA						pmax	pmax		
	comp=Z,2.0nm,0.7s								
YKA	Yellowknife Ar	84.77	353		P		P	02 15 46.4	-1.5
	comp=Z,2.0nm,0.7s,mb4.4								
DLBC	Dease Lake	89.64	0		LR		LR	03 02 24.0	
	comp=Z,455nm,22.0s,MS4.9,baz=144,slow=40								
TKL	Tuckaleechee C	99.78	323		LR		LR	03 02 22.7	
	comp=Z,154nm,21.6s,MS4.5,baz=298,slow=36								

ISCJB ***16*** *02:04:14.4±0.5, 24°.37N±0°.02×121°.94E±0°.02, h7km±3km, Error ellipse: s-maj=3.8km s-min=2.8km az=43.9*
TAP ***16*** *02:04:14.8, 24°.36N×121°.86E, h19km, ML3.1, C*
JMA ***16*** *02:04:16.2±0.2, 25°.11N×122°.19E, h22km*

ISC 16 02:04:14.7±0.4, 24°.36N±0°.02×121°.94E±0°.02, h8km±4km, n34, σ0°69/59, 2C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.19**	**253**	*i*	P	**Pg**	**02 04 18.8**	**+0.2**
	baz=243							
EHP				S		**Sg**	**02 04 21.6**	**+0.5**
	baz=243							
ENA	**Nanau**	**0.19**	**290**	⇑*i*	P	**Pg**	**02 04 18.9**	**+0.4**
	baz=304							
ENA				*e*	S	**Sg**	**02 04 21.3**	**+0.1**
	baz=304							
TWD	**Chiawan**	**0.42**	**228**	*e*	P	**Pg**	**02 04 22.7**	**-0.2**
	baz=225							
TWD				*e*	S	**Sg**	**02 04 28.8**	**+0.4**
	baz=225							
TWE	**Neicheng**	**0.43**	**326**	⇓*i*	P	**Pg**	**02 04 23.3**	**+0.2**
	baz=337							
TWE				S		**Sg**	**02 04 29.0**	**+0.1**
	baz=337							
ENTT	**Nioudou**	**0.43**	**309**	⇓*i*	P	**Pg**	**02 04 23.1**	**-0.1**
	baz=318							
ENTT				S		**Sg**	**02 04 28.7**	**-0.2**
	baz=318							
ILA	**Ilan**	**0.43**	**337**	*e*	P	**Pg**	**02 04 23.7**	**+0.5**
	baz=348							
ILA				*e*	S	**Sg**	**02 04 30.2**	**+1.3**
	baz=348							
HWA	**Hwalien**	**0.49**	**218**	*e*	P	**Pg**	**02 04 25.1**	**+0.9**
	baz=217							
NNS	**Nan Shan**	**0.52**	**279**		P	**Pg**	**02 04 24.4**	**-0.3**
	baz=288							
NNS				S		**Sg**	**02 04 30.7**	**-0.9**
	baz=288							
NSK	**Sanguang**	**0.61**	**301**	*e*	P	**Pg**	**02 04 26.2**	**-0.3**
	baz=307							
NSK				*e*	S	**Sg**	**02 04 33.3**	**-1.2**
	baz=307							
TWB1	**Santiao Chiao**	**0.64**	**4**	*e*	P	**Pg**	**02 04 28.0**	**+0.8**
	baz=4.0							
TWB1				*e*	S	**Sg**	**02 04 35.5**	**-0.1**
	baz=4.0							
WHF	**Hehuan Shan**	**0.65**	**251**	⇑*i*	P	**Pg**	**02 04 26.8**	**-0.4**
	baz=257							
WHF				*e*	S	**Sg**	**02 04 35.1**	**-0.7**
	baz=257							
TWA	**Mucha**	**0.69**	**333**	*e*	P	**Pg**	**02 04 28.7**	**+0.6**
	baz=339							
TWT	**Tachien**	**0.70**	**261**		P	**Pg**	**02 04 28.1**	**-0.2**
	baz=262							
TWT				*e*	S	**Sg**	**02 04 36.3**	**-1.1**
	baz=262							
ESL	**Shilin**	**0.71**	**220**	*e*	P	**Pg**	**02 04 28.4**	**-0.1**
	baz=222							
NWF	**Wu-fen Shan**	**0.72**	**349**		P	**Pg**	**02 04 29.2**	**+0.6**
	baz=346							
NWF				*e*	S	**Sg**	**02 04 38.1**	**+0.1**
	baz=346							
TWS1	**Kuangyinshan**	**0.87**	**327**	*e*	P	**Pg**	**02 04 31.6**	**+0.1**
	baz=333							
TWS1				*e*	S	**Sg**	**02 04 43.0**	**+0.1**
	baz=333							
NSTT	**Nanjuang**	**0.89**	**288**	*e*	P	**Pg**	**02 04 31.7**	**-0.2**
	baz=282							
NSTT				*e*	S	**Sg**	**02 04 42.0**	**-1.5**
	baz=282							
TWY	**Chenhua**	**0.96**	**341**	*e*	P	**Pg**	**02 04 32.9**	**-0.3**
	baz=346							
TWY				*e*	S	**Sg**	**02 04 46.0**	**+0.4**
	baz=346							
YOJ	**Yonaguni jima**	**0.98**	**84**		P	**Pg**	**02 04 34.2**	**+0.6**
YOJ					S	**Sg**	**02 04 46.8**	**+0.4**
YOJ	**Yonaguni jima**	**0.98**	**84**	*e*	P	**Pg**	**02 04 33.8**	**+0.2**
	baz=74							
EHY	**Hungye**	**1.02**	**213**	*e*	P	**Pg**	**02 04 34.6**	**+0.2**
	baz=222							
TWQ1	**Liyutan**	**1.06**	**269**	*e*	P	**Pg**	**02 04 35.3**	**+0.2**
	baz=271							
TWQ1				*e*	S	**Sg**	**02 04 48.6**	**-0.2**
	baz=271							
TYC	**Yuchr**	**1.09**	**245**	*e*	P	**Pg**	**02 04 34.9**	**-0.7**
	baz=250							
TYC				*e*	S	**Sg**	**02 04 49.3**	**-0.4**
	baz=250							
TWF1	**Yuli**	**1.16**	**210**	*e*	P	**Pb**	**02 04 36.5**	**-0.5**
	baz=222							
YUS	**Yu-Shan**	**1.25**	**226**	*e*	P	**Pn**	**02 04 38.5**	**0.0**
	baz=225							
YUS				*e*	S	**Sb**	**02 04 54.8**	**-0.1**
	baz=225							
ALS	**Alishan**	**1.34**	**231**	*e*	P	**Pn**	**02 04 39.2**	**-0.5**
	baz=218							
CHN5	**Tsauling**	**1.38**	**237**	*e*	P	**Pn**	**02 04 40.0**	**-0.3**
	baz=237							
CHN5				*e*	S	**Sb**	**02 05 00.3**	**+1.8**
	baz=237							
CHN4	**Tsaushan**	**1.59**	**231**	*e*	P	**Pn**	**02 04 43.5**	**+0.3**
	baz=230							
CHN4				*e*	S	**Sn**	**02 05 05.6**	**+1.7**
	baz=230							
STYT	**Tauyuan**	**1.61**	**222**	*e*	P	**Pn**	**02 04 42.9**	**-0.5**
	baz=223							
IRIF	**Iriomote-Funau**	**1.64**	**91**		P	**Pn**	**02 04 43.5**	**-0.3**
IRIF					S	**Sn**	**02 05 03.9**	**-1.1**
WTP	**Ta-pu**	**1.64**	**228**	*e*	P	**Pn**	**02 04 43.9**	**0.0**
	baz=227							
WTP				*e*	S	**Sn**	**02 05 06.6**	**+1.4**
	baz=227							
CHN1	**Nanshi**	**1.74**	**228**	*e*	P	**Pn**	**02 04 46.3**	**+1.1**
	baz=227							
CHN1				*e*	S	**Sn**	**02 05 07.3**	**-0.4**
	baz=227							
JKRS	**Kuro-shima**	**1.90**	**93**		P	**Pn**	**02 04 47.7**	**+0.3**
JKRS					S	**Sn**	**02 05 11.2**	**-0.2**
JIJ	**Ishigaki jima**	**2.01**	**90**		S	**Sn**	**02 05 12.4**	**-1.9**

ISCJB ***16*** *02:11:27.5±1.0, 5°.7N±0°.2×61°.2E±0°.1, h10km, mb3.6/11, MS3.8/2, Error ellipse: s-maj=24.6km s-min=17.8km az=40.6*
IDC ***16*** *02:11:27.6±1.2, 5°.69N×61°.26E, h0km, mb3.7/10, mb1 3.8/10, mb1mx3.7/22, mbtmp3.7/10, MS3.5/3, Ms1 3.5/3, ms1mx2.9/27, Error ellipse: s-maj=33.9km s-min=22.1km az=41.0*
NEIC ***16*** *02:11:29.1±0.7, 5.69N×61°.23E, h10km, mb3.8/2, Error ellipse: s-maj=17.5km s-min=13.2km az=219.0*

ISC 16 02:11:29.4±1.0, 5°.7N±0°.2×61°.3E±0°.1, h10km, n19, σ0°53/15, mb3.6/11, MS3.8/2, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**19.09**	**289**		LR	LR	02 21 45.0	
	comp=Z,52nm,20.8s,baz=264,slow=32							
CMAR	**Chiang Mai Arr**	**38.85**	**68**		P		**02 18 56.2**	**+1.0**
	0.4nm,0.3s,mb3.6,baz=258,slow=8.9,SNR=4.0							
BRTR	**Keskin Array B**	**42.01**	**328**		P		**02 19 20.7**	**-0.3**
	0.5nm,0.7s,mb3.3,baz=155,slow=9.1,SNR=4.6							
ABKAR	**Akbulak array**	**43.39**	**359**	*e*	P		**02 19 32.8**	**+0.8**
	2.1nm,0.9s,mb3.9							
AKTK	**Aktyubinsk**	**44.64**	**357**		P		**02 19 42.3**	**+0.2**
AKTO	**Aktyubinsk**	**44.64**	**357**		P		**02 19 42.3**	**+0.2**
	1.1nm,0.8s,mb3.7,baz=189,slow=11,SNR=4.1							
MK31	**Makanchi Array**	**44.75**	**20**	*e*	P		**02 19 42.4**	**-0.6**
MKAR	**Makanchi Array**	**44.75**	**20**		P		**02 19 43.0**	**+0.1**
	0.4nm,0.7s,mb3.3,baz=217,slow=12,SNR=3.1							
LBTB	**Lobatse**	**46.23**	**227**		LR	LR	02 36 51.3	
	comp=Z,110nm,20.8s,MS3.8,baz=84,slow=33							
KURK	**Kurchatov**	**47.13**	**15**	*e*	P		**02 20 01.6**	**-0.1**
	0.4nm,0.5s,mb3.6							
KURK	**Kurchatov**	**47.13**	**15**		P		**02 20 00.9**	**-0.8**
	0.3nm,0.5s,mb3.5,baz=212,slow=7.9,SNR=4.7							
BOSA	**Boshof**	**48.66**	**224**		LR	LR	02 38 47.4	
	comp=Z,87nm,19.2s,MS3.8,baz=334,slow=34							
ZALV	**Zalesovo Beam**	**51.74**	**18**		P		**02 20 36.6**	**-0.3**
	0.3nm,0.3s,mb3.7,baz=234,slow=4.8,SNR=2.4							
AKASG	**Malin Array Be**	**52.20**	**335**		P		**02 20 39.8**	**-0.6**
	0.1nm,0.2s,mb3.3,baz=139,slow=5.8,SNR=3.6							
TORD	**Torodi Ar. Bea**	**59.12**	**282**		P		**02 21 31.4**	**+0.6**
TORD	**Torodi Ar. Bea**	**59.12**	**282**		P		**02 21 31.4**	**+0.6**
	0.8nm,1.0s,mb3.7,baz=91,slow=6.2,SNR=3.8							
WRA	**Warramunga Arr**	**76.17**	**112**		P		**02 23 18.1**	**-0.3**
	2.5nm,1.0s,mb4.1,baz=283,slow=7.2,SNR=4.6							
ASAR	**Alice Springs**	**76.54**	**116**		P		**02 23 20.1**	**-0.4**
	1.3nm,0.8s,mb3.9,baz=282,slow=5.5,SNR=9.3							
TXAR	**Lajitas Array**	**142.25**	**338**		PKP	PKPdf	02 31 02.0	-0.9
	0.3nm,0.8s,baz=48,slow=1.3,SNR=3.6							

ISCJB ***16*** *02:17:37.3±0.7, 83°.8N±0°.1×11°.4E±°, h10km, mb3.5/8, Error ellipse: s-maj=26.6km s-min=12.4km az=137.3*
IDC ***16*** *02:17:37.5±1.0, 83°.73N×114°.04E, h0km, mb3.5/7, mb1 3.8/7, mb1mx3.6/22, mbtmp3.5/7, Error ellipse: s-maj=36.4km s-min=18.1km az=134.0*
NEIC ***16*** *02:17:39.1±0.5, 83°.72N×114°.20E, h10km, mb4.0/1, Error ellipse: s-maj=19.8km s-min=9.6km az=138.0*

ISC 16 02:17:39.2±0.7, 83.7N±0°.1×11°.4E±°, h10km, n10, σ0°54/10, mb3.5/8, North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARCES	**ARCESS Array B**	**21.36**	**285**		P		**02 22 26.4**	**+0.4**
ARCES	**ARCESS Array B**	**21.36**	**285**		P		**02 22 26.4**	**+0.4**
	3.2nm,0.8s,mb3.7,baz=19,slow=13,SNR=2.9							
INK	**Inuvik**	**24.88**	**55**	*e*	P		**02 23 01.3**	**-0.1**
	3.3nm,1.0s,mb3.8							
ILAR	**Eielson Array**	**27.04**	**69**		P		**02 23 21.8**	**+0.9**
	0.2nm,0.7s,mb2.8,baz=340,slow=11,SNR=3.3							
YKA	**Yellowknife Ar**	**32.15**	**41**		P		**02 24 05.5**	**-0.8**
	1.8nm,1.0s,mb3.9,baz=359,slow=10,SNR=3.1							
KURK	**Kurchatov**	**34.50**	**221**		P		**02 24 27.4**	**+0.5**
	0.4nm,0.5s,mb3.6,baz=21,slow=7.2,SNR=3.5							
SONM	**Songino Array**	**36.11**	**189**		P		**02 24 40.9**	**+0.3**
	0.3nm,0.5s,mb3.5,baz=347,slow=4.4,SNR=3.6							
MK31	**Makanchi Array**	**38.16**	**216**	*e*	P		**02 24 57.6**	**-0.4**
MKAR	**Makanchi Array**	**38.16**	**216**		P		**02 24 57.3**	**-0.8**
	0.6nm,0.7s,mb3.5,baz=10,slow=7.6,SNR=5.1

CUKT	**Cukurca**	**2.11 128**	*e*Pn	**Pn**	**02 38 41.6**	**0.0**
URFA	**Urfa**	**2.42 243**	*e*PN	**Pn**	**02 38 46.6**	**+0.8**
URFA	**Urfa**	**2.42 243**	*e*Pn	**Pn**	**02 38 46.6**	**+0.8**
MALT	**Malatya**	**2.45 265**	*e*PN	**Pn**	**02 38 46.6**	**+0.4**
MALT	**Malatya**	**2.45 265**	*e*Pn	**Pn**	**02 38 46.6**	**+0.4**
GUMT	**Gumushane**	**2.46 320**	*e*PN	**Pn**	**02 38 46.6**	**+0.3**
GUMT	**Gumushane**	**2.46 320**	*e*Pn	**Pn**	**02 38 46.6**	**+0.3**
AKCD	**Akcadag**	**2.85 265**	*e*P	**Pn**	**02 38 52.4**	**+0.7**
AKCD	**Akcadag**	**2.85 265**	*e*P	**Pn**	**02 38 52.4**	**+0.8**

ISCJB ***16*** *02:43:23.3±1.1, 39°.55N±0°.04×23°.98E±0°.09, h20km±7km, Error ellipse: s-maj=11.8km s-min=6.1km az=5.1*
CSEM ***16*** *02:43:23.0±0.5, 39°.54N×24°.01E, h20km, ML1.7/3, Error ellipse: s-maj=12.5km s-min=6.1km az=92.0*
THE ***16*** *02:43:23.2, 39°.56N×23°.97E, h15km±1km, ML1.7/3, Error ellipse: s-maj=1.4km s-min=0.5km az=77.0*
NEIC ***16*** *02:43:24.6, 39°.61N×23°.77E, h29km, MD3.3(ATH), After ATH.*
ATH ***16*** *02:43:24.6, 39°.61N×23°.77E, h29km±2km, MD3.3/5*

ISC 16 02:43:23.5±1.0, 39°.55N±0°.04×23°.96E±0°.08, h17km±4km, n25, σ0°45/39, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.38**	**189**	P		**Pg**		**02 43 31.1**	**-0.3**
AOS				S		**Sg**		**02 43 37.1**	**+0.4**
AOS	**Alonnisos**	**0.38**	**189**	P		**Pg**		**02 43 31.1**	**-0.3**
AOS				S		**Sg**		**02 43 37.1**	**+0.4**
PAIG	**Paliouri**	**0.43**	**330**	P		**Pg**		**02 43 32.0**	**-0.3**
PAIG				S		**Sg**		**02 43 38.3**	**0.0**
PAIG	**Paliouri**	**0.43**	**330**	P		**Pg**		**02 43 32.0**	**-0.3**
PAIG				S		**Sg**		**02 43 38.3**	**0.0**
NEO	**Neokhori**	**0.62**	**247**	*e*Pn		**Pg**		**02 43 35.8**	**+0.1**
NEO				*e*Sn		**Sg**		**02 43 43.3**	**-0.6**
NEO	**Neokhori**	**0.62**	**247**	*e*PN		**Pg**		**02 43 35.8**	**+0.1**
NEO				*e*SN		**Sg**		**02 43 43.3**	**-0.6**
NEO	**Neokhori**	**0.62**	**247**	*e*Pn		**Pg**		**02 43 35.8**	**+0.1**
NEO				*e*Sn		**Sg**		**02 43 43.3**	**-0.6**
XOR	**Xorichti**	**0.62**	**253**	P		**Pg**		**02 43 35.5**	**-0.2**
XOR				S		**Sg**		**02 43 44.6**	**+0.6**
XOR	**Xorichti**	**0.62**	**253**	P		**Pg**		**02 43 35.5**	**-0.2**
XOR				S		**Sg**		**02 43 44.6**	**+0.6**
LKR	**Lokris**	**1.17**	**220**	*e*Pn		**Pn**		**02 43 44.2**	**-0.8**
LKR	**Lokris**	**1.17**	**220**	*e*PN		**Pn**		**02 43 44.2**	**-0.8**
LKR	**Lokris**	**1.17**	**220**	*e*Pn		**Pn**		**02 43 44.2**	**-0.8**
SOH	**Sokhos**	**1.35**	**340**	*e*Pn		**Pn**		**02 43 48.0**	**+0.5**
SOH				*e*Sn		**Sn**		**02 44 04.8**	**-0.3**
SOH	**Sokhos**	**1.35**	**340**	*e*PN		**Pn**		**02 43 48.0**	**+0.5**
SOH				*e*SN		**Sn**		**02 44 04.8**	**-0.3**
SOH	**Sokhos**	**1.35**	**340**	*e*Pn		**Pn**		**02 43 48.0**	**+0.5**
AGG	**Agios Georgios**	**1.37**	**248**	*e*Pn		**Pn**		**02 43 47.9**	**+0.2**
AGG				*e*Sn		**Sn**		**02 44 05.3**	**-0.1**
AGG	**Agios Georgios**	**1.37**	**248**	*e*PN		**Pn**		**02 43 47.9**	**+0.2**
AGG				*e*SN		**Sn**		**02 44 05.3**	**-0.1**
AGG	**Agios Georgios**	**1.37**	**248**	P		**Pn**		**02 43 47.0**	**-0.7**
AGG	**Agios Georgios**	**1.37**	**248**	P		**Pn**		**02 43 47.0**	**-0.7**
AGG	**Agios Georgios**	**1.37**	**248**	*e*Pn		**Pn**		**02 43 47.9**	**+0.2**
AGG				*e*Sn		**Sn**		**02 44 05.3**	**-0.1**
THL	**Klokotos Trika**	**1.50**	**271**	*e*PN		**Pn**		**02 43 50.3**	**+0.7**
THL	**Klokotos Trika**	**1.50**	**271**	*e*Pn		**Pn**		**02 43 50.3**	**+0.7**
EVR	**Evrytania**	**1.79**	**250**	*e*Pn		**Pn**		**02 43 54.0**	**+0.5**
EVR	**Evrytania**	**1.79**	**250**	*e*PN		**Pn**		**02 43 54.0**	**+0.5**
EVR	**Evrytania**	**1.79**	**250**	*e*Pn		**Pn**		**02 43 54.0**	**+0.5**

CASC 16 02:50:21.8±4.7, 8°.87N×83°.04W, h0km±12km, MD3.6, 1C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.25**	**211**	⇓	*i*P		Pg	02 50 26.9	+0.3
BRU2	**Volcan**	**0.35**	**102**	*e*S			Sg	02 50 36.7	+3.6
TBS2		**0.38**	**101**	*e*P			Pg	02 50 35.5	+6.3
TBS2				*e*S			Sg	02 50 41.5	+7.4
BUS	**Buena Vista**	**0.98**	**314**	*e*P			Pg	02 50 41.2	+0.5
URSC	**Urasca**	**1.21**	**323**	⇓	*e*P		Pg	02 50 45.0	0.0
URSC				*e*S			Sg	02 51 03.9	+3.3
QCR	**Quepos**	**1.24**	**296**	⇓	*e*P		Pg	02 50 44.5	-1.2
QCR				*e*S			Sg	02 51 04.8	+3.0
LAJ	**Bijagual**	**1.46**	**313**	*e*P			Pn	02 50 52.5	+3.2
LAJ				*e*S			Sg	02 51 18.1	+9.4
PRS1	**Puriscal**	**1.68**	**311**	⇑	*e*P		Pn	02 50 50.5	-1.9
PRS1				*e*S			Sn	02 51 15.4	+0.8
CGA2	**Cerro Gallo 2**	**1.81**	**309**	*e*P			Pn	02 50 54.6	+0.3
CGA2				*e*S			Sn	02 51 20.2	+2.2

NIED ***16*** *02:50:00, 37°.50N×142°.70E, h20km, Mw3.7 Best double couple: M0 3.68000×10^14 NP1:φs 17.00000°, δ 75.00000°, λ 85.00000°. NP2:φs 217.00000°, δ 15.00000°, λ 109.00000°.*

JMA 16 02:50:54.1±0.2, 37°.53N×142°.67E, h28km±4km, M3.8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**1.39**	**312**	P			Pn	02 51 18.2	+0.5
JIO				*e*S			Sn	02 51 35.7	+0.6
JFK	**Kawauchi**	**1.44**	**264**	P			Pn	02 51 19.0	+0.7
JFK				*e*S			Sn	02 51 37.2	+1.0
JMM	**Marumori**	**1.53**	**283**	P			Pn	02 51 19.8	+0.3
JMM				*e*S			Sn	02 51 38.8	+0.4
ONAJ	**Iwakimizuishiy**	**1.55**	**255**	*e*S			Sn	02 51 39.0	0.0
JOU	**Okura**	**1.79**	**298**	P			Pn	02 51 24.5	+1.4
JOU				*e*S			Sn	02 51 47.3	+2.4
JMK	**Ichinoseki**	**1.82**	**322**	P			Pn	02 51 24.9	+1.4
JMK				*e*S			Sn	02 51 47.2	+1.5
JFT	**Otama**	**1.85**	**270**	P			Pn	02 51 25.5	+1.5
JFT				*e*S			Sn	02 51 48.8	+2.3
JYS	**Shirataka**	**2.17**	**289**	P			Pn	02 51 30.0	+1.6
JYS				*e*S			Sn	02 51 56.4	+2.0
JOM	**Ohasama**	**2.22**	**331**	P			Pn	02 51 30.1	+1.1
JYK	**Kaneyama**	**2.29**	**308**	P			Pn	02 51 31.6	+1.7
JAG	**Ashikaga**	**2.80**	**248**	P			Pn	02 51 38.7	+1.7
JANG	**Nango**	**2.98**	**343**	P			Pn	02 51 39.9	+0.5
JANG				*e*S			Sn	02 52 14.6	+0.4
BSO1	**Boso 1**	**3.18**	**206**	P			Pn	02 51 43.3	+1.1
BSO1				*e*S			Sn	02 52 20.0	+0.8
MAT	**Matsushiro**	**3.70**	**256**	P			Pn	02 51 52.4	+3.0
MAT				S			Sn	02 52 34.0	+1.9

ISCJB ***16*** *03:20:36.1±0.7, 67°.41S±0°.06×112°.4E±0°.2, h10km, mb4.7/5, Error ellipse: s-maj=12.8km s-min=8.5km az=156.8*
IDC ***16*** *03:20:37.9±0.8, 67°.17S×112°.23E, h0km, mb4.7/5, mb1 4.7/6, mb1mx4.4/13, mbtmp4.6/6, ML4.0/1, MS3.5/2, Ms1 3.5/2, ms1mx3.1/16, Error ellipse: s-maj=33.9km s-min=20.1km az=129.0*
NEIC ***16*** *03:20:39.2±0.4, 67°.22S×112°.13E, h10km, mb4.2/1, Error ellipse: s-maj=13.1km s-min=11.9km az=107.0*

ISC 16 03:20:37.8±0.7, 67°.36S±0°.08×112°.2E±0°.2, h10km, n23, σ1°01/14, mb4.7/5, 1D, Antarctica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CASY	**Casey**	**1.28**	**328**	*e*Pn			**Pn**	**03 21 01.7**	**0.0**
CASY				*e*Sn			**Sn**	**03 21 18.5**	**-0.3**
SBA	**Scott Base**	**18.43**	**147**	*e*P			**Pn**	**03 24 50.0**	**-2.9**
	17nm,1.0s								
MAW	**Mawson**	**18.51**	**246**	P			**Pn**	**03 24 54.0**	**+0.2**
	0.5nm,0.3s,baz=114,slow=15,SNR=18								
MAW				S			**Sn**	**03 28 08.9**	**-11**
	0.3nm,0.3s,baz=36,slow=19,SNR=4.3								
MAW				LR			LR	03 31 12.9	
	comp=Z,109nm,18.2s,baz=293,slow=34								
QSPA	**South Pole Qui**	**22.71**	**180**	P			**P**	**03 25 42.6**	**+3.4**
QSPA				S			**S**	**03 29 41.9**	**-5.6**
QSPA				LR			LR	03 35 12.1	
QSPA	**South Pole Qui**	**22.71**	**180**	P			**P**	**03 25 42.6**	**+3.5**
	22nm,0.8s,mb4.6,baz=315,slow=3.3,SNR=31								
QSPA				S			**S**	**03 29 41.9**	**-5.6**
	4.3nm,0.8s,baz=105,slow=20,SNR=3.6								
QSPA				LR			LR	03 35 12.0	
	comp=Z,174nm,19.4s,baz=144,slow=38								
SYO	**Syowa Base**	**25.61**	**233**	⇓	*e*P		**P**	**03 26 07.0**	**+0.3**
STKA	**Stephens Creek**	**39.51**	**41**	P			**P**	**03 28 08.7**	**+0.4**
	8.7nm,0.8s,mb4.5,baz=178,slow=8.5,SNR=7.7								
URZ	**Urewera**	**45.74**	**84**	P			**P**	**03 29 00.3**	**+1.4**
	18nm,0.8s,mb5.1,baz=155,slow=14,SNR=5.9								
ASAR	**Alice Springs**	**45.74**	**28**	P			**P**	**03 28 58.6**	**-0.3**
	6.5nm,0.8s,mb4.6,baz=194,slow=7.2,SNR=48								
WRA	**Warramunga Arr**	**49.46**	**28**	P			**P**	**03 29 27.4**	**-0.5**
	5.4nm,0.8s,mb4.6,baz=193,slow=6.6,SNR=17								
BRTR	**Keskin Array B**	**121.86**	**297**	PKP		PKPdf		03 39 34.1	+3.1
	0.4nm,0.7s,baz=183,slow=2.9,SNR=2.9								
HWUT	**Hardware Ranch**	**145.04**	**115**	*e*PKPdf		PKPdf		03 40 14.6	+0.5
ISCO	**Idaho Springs**	**145.43**	**124**	*e*PKPbc		PKPbc		03 40 17.2	+2.3
HLID	**Hailey**	**145.73**	**110**	*e*PKPbc		PKPbc		03 40 18.6	+2.9
BW06	**Boulder Array**	**146.76**	**116**	*e*PKPbc		PKPbc		03 40 21.1	+2.3
NOA	**NORSAR Array B**	**147.29**	**298**	PKPbc		PKPbc		03 40 21.8	+2.1
	0.7nm,0.8s,baz=115,slow=4.2,SNR=3.6								
TRF	**Thorofare Moun**	**147.82**	**57**	*e*PKPbc		PKPbc		03 40 22.2	+1.1
BPAW	**Bear Paw Mtn.**	**148.04**	**55**	*e*PKPbc		PKPbc		03 40 23.5	+1.9
EKA	**Eskdalemuir Ar**	**148.37**	**280**	PKPbc		PKPbc		03 40 23.9	+1.1
	1.0nm,0.8s,baz=105,slow=4.5,SNR=3.1								
ARCES	**ARCESS Array B**	**148.79**	**317**	PKPbc		PKPbc		03 40 23.9	+0.5
	3.7nm,1.0s,baz=130,slow=4.0,SNR=3.3								
ILAR	**Eielson Array**	**149.82**	**57**	PKPbc		PKPbc		03 40 27.2	+1.2
	2.0nm,0.8s,baz=267,slow=3.3,SNR=18								
RSSD	**Black Hills**	**149.82**	**122**	*e*PKPbc		PKPbc		03 40 28.1	+1.3
DAWY	**Dawson**	**151.86**	**62**	*e*PKPbc		PKPbc		03 40 33.9	+3.0

ISCJB ***16*** *03:24:39.7±1.3, 67°.76N±0°.04×33°.9E±0°.2, h0km, Error ellipse: s-maj=10.0km s-min=6.3km az=4.8*
HEL ***16*** *03:24:40.6±0.1, 67°.71N×34°.07E, h0km, ML2.7, ML2.5(NAO), Explosion*
CSEM ***16*** *03:24:40.4±0.6, 67°.74N×34°.01E, h2km, ML2.5, Error ellipse: s-maj=11.4km s-min=6.9km az=98.0, Mining explosion.*
NAO ***16*** *03:24:42.0±1.2, 67°.59N×33°.83E, ML2.5*
IDC ***16*** *03:24:46.6±2.0, 67°.59N×32°.93E, h0km, mb1 3.3/4, mb1mx3.1/22, mbtmp3.3/4, ML3.0/4, Error ellipse: s-maj=20.5km s-min=8.3km az=82.0*

ISC 16 03:24:41.2±1.1, 67°.77N±0°.04×33°.8E±0°.2, h0km, n30, σ1°30/62, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.35**	**243**	Pg		**Pg**		**03 24 48.2**	**+0.4**
	baz=74,slow=18								
APA0				Lg				03 24 52.6	
	baz=93,slow=37								
APA0				Rg				03 24 54.8	
	baz=90,slow=37								
APA0	**Apatity Array**	**0.35**	**243**	*i*	P	**Pg**		**03 24 48.2**	**+0.4**
APA0				*i*	S	**Sg**		**03 24 52.6**	**+0.4**
APA0				*e*	RG			03 24 54.8	
APA0	**Apatity Array**	**0.35**	**243**	P		**Pg**		**03 24 48.2**	**+0.4**
APA0				Lg				03 24 52.6	
	baz=93,slow=29								
APA0				S		**Sg**		**03 24 52.6**	**+0.3**
MSF	**Maaselka**	**2.65**	**227**	*e*P		**Pn**		**03 25 25.0**	**-0.1**
MSF				*e*S		**Sn**		**03 25 57.5**	**-0.2**
MSF	**Maaselka**	**2.65**	**227**	P		**Pn**		**03 25 24.9**	**-0.1**
MSF				S		**Sn**		**03 25 57.5**	**-0.3**
SGF	**Sodankyl**	**2.80**	**267**	*e*P		**Pn**		**03 25 27.6**	**+0.4**
SGF				*e*S		**Sn**		**03 26 02.8**	**+1.2**
SGF	**Sodankyl**	**2.80**	**267**	P		**Pn**		**03 25 27.5**	**+0.3**
SGF				S		**Sn**		**03 26 02.8**	**+1.2**
KEV	**Kevo**	**3.18**	**312**	*e*P		**Pn**		**03 25 33.8**	**+1.4**
KEV				*e*S		**Sn**		**03 26 12.4**	**+1.6**
KEV				*e*SG		**Sg**		**03 26 21.8**	**-1.4**
KEV				MSG				03 26 24.1	
	comp=Z,23nm,0.3s								
KEV	**Kevo**	**3.18**	**312**	P		**Pn**		**03 25 33.7**	**+1.4**
KEV				S		**Sn**		**03 26 12.4**	**+1.5**
KEV				Sg		**Sg**		**03 26 21.8**	**-1.4**
	comp=Z,23nm,0.3s								
RNF	**Rovaniemi**	**3.25**	**253**	*e*P		**Pn**		**03 25 34.0**	**+0.7**
RNF				*e*S		**Sn**		**03 26 12.9**	**+0.4**
RNF	**Rovaniemi**	**3.25**	**253**	P		**Pn**		**03 25 33.9**	**+0.6**
RNF				S		**Sn**		**03 26 12.9**	**+0.3**
ARA0	**ARCESS Array S**	**3.51**	**304**	Pn		**Pn**		**03 25 38.5**	**+1.5**
	baz=123,slow=16								
ARA0				Pg		**Pg**		**03 25 47.4**	**-1.1**
	baz=111,slow=18								
ARA0				Sn		**Sn**		**03 26 20.0**	**+0.9**
	baz=124,slow=28								
ARA0				Lg				03 26 31.3	
	baz=112,slow=37								
ARA0	**ARCESS Array S**	**3.51**	**304**	*e*P		**Pn**		**03 25 38.1**	**+1.1**
ARA0				*e*S		**Sn**		**03 26 20.1**	**+0.9**
ARA0				*e*SG		**Sg**		**03 26 32.8**	**-1.2**
ARA0	**ARCESS Array S**	**3.51**	**304**	P		**Pn**		**03 25 38.0**	**+1.0**
ARA0	**ARCESS Array S**	**3.51**	**304**	Pn		**Pn**		**03 25 38.5**	**+1.5**
	baz=123,slow=15,SNR=452								
ARA0	**ARCESS Array S**	**3.51**	**304**	Pg		**Pg**		**03 25 47.3**	**-1.2**
	baz=111,slow=16,SNR=7.0								
ARA0				S		**Sn**		**03 26 20.0**	**+0.9**
ARA0				Lg				03 26 31.3	
	baz=112,slow=35,SNR=90								
ARA0				Sg		**Sg**		**03 26 32.7**	**-1.3**
ARCES	**ARCESS Array B**	**3.51**	**304**	Pn		**Pn**		**03 25 39.0**	**+2.0**
	comp=Z,5.0nm,0.3s,baz=123,slow=15,SNR=337								
ARCES				Pg		**Pg**		**03 25 46.0**	**-2.5**
	comp=Z,3.4nm,0.3s,baz=118,slow=15,SNR=12								
ARCES				Sn		**Sn**		**03 26 19.5**	**+0.4**
	comp=Z,3.8nm,0.3s,baz=121,slow=24,SNR=10								
ARCES				Lg				03 26 31.6	
	comp=Z,11nm,0.3s,baz=119,slow=30,SNR=13								
HEF	**Hetta**	**3.85**	**284**	*e*P		**Pn**		**03 25 42.5**	**+0.9**
HEF				*e*S		**Sn**		**03 26 28.3**	**+0.8**
HEF				*e*SG		**Sg**		**03 26 42.5**	**-2.3**
HEF				MSG				03 26 46.1	
	comp=Z,10nm,0.3s								
HEF	**Hetta**	**3.85**	**284**	P		**Pn**		**03 25 42.5**	**+0.9**
HEF				S		**Sn**		**03 26 28.2**	**+0.7**
HEF				Sg		**Sg**		**03 26 42.5**	**-2.4**
	comp=Z,10nm,0.3s								
KIF	**Kilpisjarvi**	**4.96**	**290**	*e*P		**Pn**		**03 25 58.1**	**+1.3**
KIF				*e*S		**Sn**		**03 26 55.3**	**+0.5**
KIF				*e*SG		**Sg**		**03 27 15.9**	**-4.5**
KIF				MSG				03 27 16.7	
	comp=Z,12nm,0.4s								
KIF	**Kilpisjarvi**	**4.96**	**290**	P		**Pn**		**03 25 58.1**	**+1.3**
KIF				S		**Sn**		**03 26 55.3**	**+0.5**
FIA0	**FINESS Array S**	**7.16**	**211**	Pn		**Pn**		**03 26 25.6**	**-1.3**
	baz=22,slow=16								
FIA0				Sn		**Sn**		**03 27 42.0**	**-6.8**
	baz=15,slow=16								
FIA0				Lg				03 28 18.1	
	baz=19,slow=28								
FIA0	**FINESS Array S**	**7.16**	**211**	*e*P		**Pn**		**03 26 25.6**	**-1.3**
FIA0				*e*S		**Sn**		**03 27 42.0**	**-6.8**
FIA0				*e*SG		**Sg**		**03 28 18.1**	**-13**
FIA0	**FINESS Array S**	**7.16**	**211**	P		**Pn**		**03 26 25.6**	**-1.3**
FINES	**FINESS Array B**	**7.16**	**211**	Pn		**Pn**		**03 26 25.4**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=23,slow=13,SNR=7.2								
FINES				Sn		**Sn**		**03 27 43.2**	**-5.6**
	comp=Z,0.3nm,0.3s,baz=23,slow=26,SNR=3.9								
FINES				Lg				03 28 17.5	
	comp=Z,1.2nm,0.3s,baz=29,slow=27,SNR=9.1								
SPA0	**Spitsbergen Ar**	**11.55**	**342**	*e*P		**Pn**		**03 27 25.0**	**-2.0**
SPA0	**Spitsbergen Ar**	**11.55**	**342**	P		**Pn**		**03 27 25.0**	**-2.0**
HFS	**Hagfors**	**11.63**	**239**	Pn		**Pn**		**03 27 25.5**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=40,slow=12,SNR=7.3								
HFS				Sn		**Sn**		**03 29 25.7**	**-13**
	comp=Z,0.1nm,0.3s,baz=41,slow=23,SNR=3.6								
HFS				Lg				03 30 38.7	
	comp=Z,0.4nm,0.3s,baz=39,slow=30,SNR=5.2								
HFS	**Hagfors**	**11.63**	**239**	*e*P		**Pn**		**03 27 24.9**	**-3.3**
HFS				*e*				03 29 26.2	
NOA	**NORSAR Array B**	**11.80**	**246**	Pn		**Pn**		**03 27 27.8**	**-2.7**
	comp=Z,2.0nm,0.3s,baz=46,slow=11,SNR=2.7								
NOA				Lg				03 30 42.4	
	comp=Z,0.3nm,0.3s,baz=189,slow=16,SNR=3.5								

GUC 16 03:25:50.2±0.4, 20°.80S×69°.90W, h48km±2km, MD3.5, ML3.5, 2C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.46**	**122**	⇓	*i*P		Pn	03 26 01.4	+0.6
PB01					*i*S		Sn	03 26 09.1	+0.7
PB01					AML	AML		03 26 10.1	
	comp=E,9μm,0.4s								
PSGC	**Pisagua**	**1.21**	**350**	⇑	*i*P		Pn	03 26 11.6	+0.9
PSGC					*i*S		Sn	03 26 27.8	+1.7
PSGC					AML	AML		03 26 30.9	
	comp=E,1μm,0.1s								
MACH	**Maria Elena**	**1.40**	**174**	*i*P			Pn	03 26 14.5	+1.2
MACH				*i*S			Sn	03 26 32.9	+2.4
PB04	**Plate Boundary**	**1.51**	**165**	*e*P			Pn	03 26 16.4	+1.6
PB04				*i*S			Sn	03 26 36.2	+2.9
PB04				AML		AML		03 26 41.9	
	comp=E,504nm,0.6s								
MNMC	**Miæe Miæ**	**1.69**	**10**	⇓	*i*P		Pn	03 26 18.4	+1.1
MNMC				*i*S			Sn	03 26 39.8	+2.2
MNMC				AML		AML		03 26 47.5	
	comp=E,3μm,0.2s								
CEN1	**Los Morros**	**2.59**	**186**	⇑	*i*P		Pn	03 26 33.7	+4.0
CEN1					*i*S		Sn	03 27 06.7	+6.8
CEN1					AML	AML		03 27 25.0	
	comp=E,113nm,0.9s								

ISCJB ***16*** *03:38:38.6±0.5, 39°.56N±0°.03×27°.64E±0°.03, h8km±4km, Error ellipse: s-maj=4.5km s-min=3.7km az=26.2*
CSEM ***16*** *03:38:38.7±0.1, 39°.56N×27°.64E, h10km, MD2.9, Error ellipse: s-maj=2.9km s-min=2.7km az=48.0*
ISK ***16*** *03:38:38.3, 39°.56N×27°.63E, h9km, MD2.9*
DDA ***16*** *03:38:38.1, 39°.56N×27°.66E, h28km±1km, Md2.9*

ISC 16 03:38:39.0±0.4, 39°.56N±0°.02×27°.64E±0°.03, h12km±3km, n51, σ0°65/74, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BALY	**Balya**	**0.18**	**355**	*i*	P	**Pg**		**03 38 43.2**	**+0.1**
BALY				*i*	S	**Sg**		**03 38 46.5**	**+0.6**
BALY	**Balya**	**0.18**	**355**	*i*	P	**Pg**		**03 38 43.2**	**+0.1**
BALY				*i*	S	**Sg**		**03 38 46.5**	**+0.6**
BALB	**Balikesir**	**0.20**	**66**	*e*	PG	**Pg**		**03 38 43.7**	**+0.4**
BALB				*e*	SG	**Sg**		**03 38 46.9**	**+0.6**
BALB	**Balikesir**	**0.20**	**66**	*e*	Pg	**Pg**		**03 38 43.7**	**+0.3**
BALB				*e*	Sg	**Sg**		**03 38 46.9**	**+0.6**
GONE	**Gonen-Balikesi**	**0.49**	**4**	*e*	PG	**Pg**		**03 38 48.1**	**-0.4**
GONE				*e*	SG	**Sg**		**03 38 55.7**	**+0.6**
GONE	**Gonen-Balikesi**	**0.49**	**4**	*e*	Pg	**Pg**		**03 38 48.2**	**-0.4**
GONE				*e*	Sg	**Sg**		**03 38 55.7**	**+0.6**
DURS	**Dursunbey**	**0.64**	**86**	*i*	P	**Pg**		**03 38 50.8**	**-0.7**
DURS				*i*	S	**Sg**		**03 39 00.0**	**0.0**
DURS	**Dursunbey**	**0.64**	**86**	*i*	P	**Pg**		**03 38 50.8**	**-0.7**
DURS				*i*	S	**Sg**		**03 39 00.0**	**0.0**
AKHS	**Akhisar**	**0.69**	**169**	*i*	P	**Pg**		**03 38 52.2**	**-0.1**
AKHS				*i*	S	**Sg**		**03 39 02.1**	**+0.7**
AKHS	**Akhisar**	**0.69**	**169**	*i*	P	**Pg**		**03 38 52.1**	**-0.2**
AKHS				*i*	S	**Sg**		**03 39 02.1**	**+0.7**
AYVA	**Ayvalik**	**0.78**	**252**	*i*	P	**Pg**		**03 38 53.0**	**-1.0**
AYVA				*i*	S	**Sg**		**03 39 04.1**	**-0.1**
AYVA	**Ayvalik**	**0.78**	**252**	*i*	P	**Pg**		**03 38 53.0**	**-1.0**
AYVA				*i*	S	**Sg**		**03 39 04.1**	**-0.1**
EDC	**Edincik**	**0.81**	**12**	*e*	PG	**Pg**		**03 38 53.9**	**-0.7**
EDC				*e*	SG	**Sg**		**03 39 05.7**	**+0.6**
EDC	**Edincik**	**0.81**	**12**	*e*	Pg	**Pg**		**03 38 53.9**	**-0.7**
EDC				*e*	Sg	**Sg**		**03 39 05.7**	**+0.6**
BNT	**Bandirma**	**0.82**	**15**	*e*	PG	**Pg**		**03 38 54.2**	**-0.8**
BNT	**Bandirma**	**0.82**	**15**	*e*	Pg	**Pg**		**03 38 54.2**	**-0.7**
KCTX	**Karacabey (Bur**	**0.90**	**38**	*e*	PG	**Pg**		**03 38 55.8**	**-0.5**
KCTX				*e*	SG	**Sg**		**03 39 08.1**	**+0.2**
KCTX	**Karacabey (Bur**	**0.90**	**38**	*e*	Pg	**Pg**		**03 38 55.8**	**-0.5**
KCTX				*e*	Sg	**Sg**		**03 39 08.1**	**+0.1**
DEMI	**Demirci**	**0.98**	**121**	*i*	P	**Pg**		**03 38 57.7**	**-0.2**
DEMI				*i*	S	**Sg**		**03 39 10.8**	**+0.2**
DEMI	**Demirci**	**0.98**	**121**	*i*	P	**Pg**		**03 38 57.7**	**-0.1**
DEMI				*i*	S	**Sg**		**03 39 10.8**	**+0.

TRF				S	Sn	03 54 00.7	+2.1		
PPLA	Purkeypile	0.61	243	P	Pn	03 53 47.8	+1.2		
PPLA				S	Sn	03 54 03.0	+2.5		
CHUM	Lake Minchumin	0.92	321	P	Pn	03 53 50.0	+0.8		
CHUM				S	Sn	03 54 07.2	+2.0		
BPAW	Bear Paw Mtn.	0.93	1	P	Pn	03 53 49.9	+0.7		
BPAW				S	Sn	03 54 06.8	+1.5		
RND	Reindeer	1.00	76	P	Pn	03 53 50.2	+0.2		
MCK	McKinley	1.09	58	P	Pn	03 53 51.4	+0.6		
DHY	Denali Highway	1.66	92	P	Pn	03 53 56.9	-0.3		
DHY				S	Sn	03 54 19.6	+0.2		
GHO	Glory Hole Cre	1.71	145	P	Pn	03 53 57.6	-0.3		
PMR	Palmer	1.82	150	P	Pn	03 53 58.0	-1.1		
SML	Sawmill	1.85	137	P	Pn	03 53 57.8	-1.8		
SML				S	Sn	03 54 22.9	-0.8		
FIB	Fire Island	2.06	169	P	Pn	03 54 01.6	-0.5		
MDM	Murphy Dome	2.17	33	P	Pn	03 54 03.8	+0.4		
RC01	Rabbit Creek A	2.18	164	P	Pn	03 54 02.4	-1.2		
COLA	College	2.20	38	P	Pn	03 54 04.0	+0.2		
TTA	Tatalina	2.29	266	ePn	Pn	03 54 05.5	+0.5		
TTA				eSn	Sn	03 54 33.0	-0.4		
TT01	Tatalina	2.30	265	P	Pn	03 54 05.5	+0.4		
ILAR	Eielson Array	2.42	47	P	Pn	03 54 06.5	-0.1		
	33nm,0.3s,baz=228,slow=12,SNR=1141								
ILAR				S	Sn	03 54 35.9	-0.5		
	22nm,0.3s,baz=209,slow=22,SNR=13								
PAX	Paxson	2.53	92	P	Pn	03 54 07.8	-0.3		
SLKM	Skilak Lake	2.71	172	P	Pn	03 54 09.5	-0.9		
RSO	Redoubt South	2.85	198	ePn	Pn	03 54 11.8	-0.5		
GCSA	Galena City Sc	3.03	304	P	Pn	03 54 15.6	+1.0		
IM3	Indian Mountai	3.05	338	P	Pn	03 54 15.9	+1.0		
DOT	Dot Lake	3.16	78	P	Pn	03 54 15.6	-0.7		
SEW	Seward	3.17	166	P	Pn	03 54 15.3	-1.2		
DIV	Divide	3.21	128	P	Pn	03 54 14.5	-2.4		
MENT	Mentasta	3.33	91	ePn	Pn	03 54 17.4	-1.1		
MENT				eSn	Sn	03 54 50.8	-6.8		
EYAK	Cordova Ski Ar	3.63	134	P	Pn	03 54 20.9	-1.6		
BMRM	Bremner River	3.74	123	P	Pn	03 54 21.8	-2.2		
COLD	Coldfoot	4.08	4	P	Pn	03 54 29.3	+0.9		
BCA3	Beaver Creek A	4.19	87	P	Pn	03 54 28.5	-1.4		
EGAK	Eagle	4.63	65	P	Pn	03 54 35.3	-0.5		
BM3	Burnt Mountain	5.03	29	P	Pn	03 54 41.7	+0.5		
DAWY	Dawson	5.26	75	P	Pn	03 54 43.4	-0.9		
KDAK	Kodiak Island	5.47	189	P	Pn	03 54 44.1	-3.1		
	6.7nm,0.3s,baz=34,slow=7.0,SNR=73								
KDAK				S	Sn	03 55 42.4	-6.4		
	14nm,0.3s,baz=272,slow=22,SNR=10								
OHAK	Old Harbor	6.08	192	ePn	Pn	03 54 53.0	-2.4		
	20nm,0.5s								
OHAK				eSn	Sn	03 56 01.9	-1.7		
PNL	Peninsula	6.59	117	P	Pn	03 55 00.2	-2.1		
TNA	Tin City	7.71	296	ePn	Pn	03 55 18.9	+1.6		
SKAG	Skagway	8.41	109	ePn	Pn	03 55 24.7	-2.1		
	8.3nm,0.5s								
INK	Inuvik	8.82	47	ePn	Pn	03 55 32.0	-0.4		
INK	Inuvik	8.82	47	P	Pn	03 55 32.0	-0.4		
	0.7nm,0.3s,baz=247,slow=17,SNR=16								
SIT	Sitka	9.93	121	P	Pn	03 55 44.5	-2.8		
DLBC	Dease Lake	11.27	105	P	Pn	03 56 04.0	-1.2		
	0.1nm,0.3s,baz=308,slow=12,SNR=2.5								
YKA	Yellowknife Ar	16.50	76	P	Pn	03 57 10.1	-1.9		
	0.9nm,0.3s,baz=279,slow=9.2,SNR=42								
EDM	Edmonton	21.87	100	eP	P	03 58 09.8	-0.9		
RES	Resolute Bay	22.12	36	P	P	03 58 13.6	+0.3		
	14nm,0.8s,mb4.4,baz=216,slow=3.1,SNR=8.3								
B08A	Colville Reser	22.86	116	⇑P	P	03 58 20.4	-0.3		
	baz=23								
NEW	Newport	23.84	113	⇑P	P	03 58 29.4	-0.3		
	baz=24								
NEW	Newport	23.84	113	eP	P	03 58 29.2	-0.6		
	1.3nm,0.4s,mb3.6								
D08A	Wollman Farm,	24.06	117	⇑P	P	03 58 31.3	-0.4		
	baz=24								
A13A	Flathead Natio	24.48	108	⇑P	P	03 58 35.6	+0.1		
	baz=24								
WALA	Waterton Lakes	24.60	108	eP	P	03 58 36.4	-0.3		
	0.3nm,0.9s								
F07A	Phinny Hill Vi	24.61	120	⇑P	P	03 58 36.9	+0.1		
	baz=24								
A14A	Double T Ranch	24.88	107	⇑P	P	03 58 38.9	-0.3		
	baz=25								
B13A	Whitefish	24.88	109	⇓P	P	03 58 39.0	-0.2		
	baz=25								
A15A	Johnson Ranch,	25.17	106	⇓P	P	03 58 41.8	0.0		
	baz=25								
JTMT	Jette	25.45	110	eP	P	03 58 42.8	-1.4		
	3.0nm,0.9s,mb3.7								
G08A	Pilot Rock	25.49	119	⇓P	P	03 58 44.5	-0.2		
	baz=25								
D12A	Red Ives Fores	25.54	112	⇑P	P	03 58 44.7	-0.4		
	baz=25								
C14A	Swan Lake	25.66	109	⇑P	P	03 58 45.8	-0.4		
	baz=25								
B15A	Bradley Ranch,	25.75	107	⇑P	P	03 58 46.1	-0.9		
	baz=26								
D13A	Huson	25.88	111	⇑P	P	03 58 47.9	-0.3		
	baz=26								
C15A	Salmond Ranch,	26.14	108	⇓P	P	03 58 50.2	-0.4		
	baz=26								
D14A	Greenough	26.29	110	⇑P	P	03 58 51.6	-0.4		
	baz=26								
MSO	Missoula	26.31	111	⇓P	P	03 58 51.4	-0.7		
	baz=26								
C16A	Fuhringer Ranc	26.49	107	⇑P	P	03 58 53.4	-0.3		
	baz=26								
B17A	L&G Farms, Che	26.53	105	⇑P	P	03 58 53.7	-0.4		
	baz=26								
B18A	Beardsley Farm	26.91	104	⇑P	P	03 58 57.0	-0.4		
	baz=27								
C17A	Wharram Farm,	27.05	106	⇓P	P	03 58 58.0	-0.8		
	baz=27,SNR=9.8								
D16A	Dana Ranch, Ca	27.17	108	⇓P	P	03 58 59.6	-0.2		
	baz=27								
EGMT	Eagleton	27.19	104	⇓P	P	03 58 59.6	-0.3		
	baz=27								
D17A	Six Diamond Ra	27.45	107	⇑P	P	03 59 01.4	-0.9		
	baz=27								
WVOR	Wild Horse Val	28.02	122	eP	P	03 59 07.1	-0.3		
	2.7nm,1.0s,mb3.7								
G15A	Dillon	28.24	111	⇓P	P	03 59 09.4	0.0		
	baz=28								
MFID	Camas Ranch	28.30	118	⇓P	P	03 59 09.8	-0.1		
	baz=28								
G16A	Moss Hill, Enn	28.48	111	⇓P	P	03 59 11.5	+0.1		
	baz=28								
I13A	Wildhorse Cree	28.58	115	⇓P	P	03 59 12.5	+0.2		
	baz=28,SNR=6.7								
D20A	Manuel Ranch,	28.62	104	⇑P	P	03 59 12.7	+0.1		
	baz=28								
HLID	Hailey	28.75	116	eP	P	03 59 12.7	-1.2		
	1.0nm,0.8s,mb3.5								
H16A	Russell Place,	29.14	110	⇓P	P	03 59 18.1	+0.8		
	baz=29								
F19A	Roth Farm, Mol	29.22	106	⇓P	P	03 59 17.9	-0.1		
	baz=29								
G18A	Lazy EL Ranch,	29.37	108	⇑P	P	03 59 19.4	0.0		
	baz=29								
RLMT	Red Lodge	29.66	108	⇓P	P	03 59 22.6	+0.8		
	baz=29,SNR=6.1								
RLMT	Red Lodge	29.66	108	eP	P	03 59 22.1	+0.3		
	7.2nm,1.1s,mb4.2								
LAO	LASA Array	29.77	102	⇓P	P	03 59 23.0	+0.2		
	baz=30								
MOOW	Moose Ponds	30.12	111	eP	P	03 59 26.1	+0.1		
	1.4nm,0.6s,mb3.8								
TPAW	Teton Pass	30.25	112	eP	P	03 59 27.7	+0.6		
	5.5nm,1.2s,mb4.1								
LOHW	Long Hollow	30.30	111	eP	P	03 59 28.5	+1.0		
	1.7nm,0.7s,mb3.8								
L14A	Malta	30.50	116	⇑P	P	03 59 30.2	+0.9		
	baz=30								
I18A	Diamond G Ranc	30.56	110	⇑P	P	03 59 30.9	+1.1		
	baz=30								
H20A	Greybull	30.71	107	⇓P	P	03 59 31.4	+0.3		
	baz=30								
J18A	Kendall Valley	30.87	111	⇑P	P	03 59 33.4	+0.9		
	baz=31								
L15A	Malad City	30.88	115	⇓P	P	03 59 33.1	+0.5		
	baz=31								
N13A	Wendover, West	31.10	118	⇓P	P	03 59 35.7	+1.0		
	baz=31								
O12A	Currie	31.39	120	⇑P	P	03 59 37.8	+0.6		
	baz=31								
BW06	Boulder Array	31.43	111	eP	P	03 59 37.9	+0.4		
	0.9nm,0.4s,mb3.9								
I21A	Big Trails, Te	31.55	107	⇓P	P	03 59 38.5	-0.1		
	baz=31,SNR=7.5								
NVAR	Mina Array Bea	31.63	126	P	P	03 59 39.7	+0.4		
NVAR				PcP	PcP	04 02 27.3	-1.1		
NVAR	Mina Array Bea	31.63	126	P	P	03 59 39.7	+0.4		
	1.9nm,0.7s,mb4.0,baz=315,slow=8.7,SNR=18								
NVAR				PcP	PcP	04 02 27.3	-1.1		
	0.8nm,0.6s,baz=286,slow=2.3,SNR=7.5								
ULM	Lac du Bonnet	31.81	88	P	P	03 59 40.3	-0.5		
	2.7nm,0.5s,mb4.2,baz=294,slow=8.6,SNR=3.0								
K20A	Yellowstone Ra	32.03	110	⇑P	P	03 59 42.9	+0.1		
	baz=32								
L19A	Farson	32.06	111	⇓P	P	03 59 42.9	-0.1		
	baz=32								
DUG	Dugway	32.22	117	⇑P	P	03 59 44.8	+0.3		
	baz=32								
DUG	Dugway	32.22	117	eP	P	03 59 44.2	-0.3		
	2.0nm,0.7s,mb4.0								
Q11A	Duckwater	32.27	122	P	P	03 59 45.6	+0.8		
	baz=32,SNR=10								
R10A	Warm Springs	32.50	124	⇓P	P	03 59 47.6	+0.7		
	baz=32								
P14A	Drum Mountains	32.64	118	⇑P	P	03 59 48.6	+0.6		
	baz=32,SNR=5.2								
S10A	Tonopah Range,	32.71	124	⇑P	P	03 59 49.1	+0.3		
	baz=32								
R11A	Troy Canyon, C	32.72	123	⇑P	P	03 59 48.9	0.0		
	baz=32,SNR=6.8								
RSSD	Black Hills	32.73	103	eP	P	03 59 48.8	-0.1		
	5.4nm,0.5s,mb4.6								
O17A	Robinson Place	33.07	115	⇑P	P	03 59 52.6	+0.8		
	baz=33								
Q14A	Sevier Lake (B	33.07	119	⇑P	P	03 59 52.3	+0.4		
	baz=33								
L22A	Ellis Ranch, M	33.36	108	⇓P	P	03 59 55.7	+1.4		
	baz=33,SNR=6.0								
R13A	O'Grain Ranch,	33.49	121	⇑P	P	03 59 56.1	+0.6		
	baz=33								
N20A	Spence Gulch,	33.57	111	⇑P	P	03 59 57.0	+0.9		
	baz=33,SNR=8.7								
O19A	Miners Draw (B	33.65	113	⇓P	P	03 59 57.5	+0.6		
	baz=33								
P18A	Preston Nutter	33.75	115	⇑P	P	03 59 58.9	+1.1		
	baz=34								
T11A	Corn Creek, Al	33.83	123	⇑P	P	03 59 58.8	+0.3		
	baz=34								
N21A	Black Mountain	33.94	111	⇑P	P	03 59 59.5	+0.1		
	baz=34								
Q16A	Castle Valley	33.97	117	⇓P	P	04 00 00.5	+0.8		
	baz=34								
MPMC	Manual Prospec	34.03	127	⇑P	P	04 00 00.8	+0.6		
	baz=34								
S13A	Holt Ranch, En	34.06	121	⇓P	P	04 00 01.0	+0.6		
	baz=34,SNR=9.6								
SRU	San Rafael	34.07	116	⇓P	P	04 00 00.9	+0.4		
	baz=34,SNR=5.3								
SRU	San Rafael	34.07	116	eP	P	04 00 00.7	+0.2		
	3.0nm,0.5s,mb4.4								
PKM	Peak Mountain	34.26	131	⇑P	P	04 00 03.0	+0.8		
	baz=34								
N22A	Wattenberg Ran	34.36	109	⇓P	P	04 00 03.3	+0.3		
	baz=34								
R16A	Teasdale	34.39	118	⇓P	P	04 00 04.4	+1.1		
	baz=34,SNR=5.3								
T13A	Saint George	34.53	122	⇑P	P	04 00 05.1	+0.6		
	baz=34,SNR=6.6								
S15A	Panguitch	34.56	119	⇓P	P	04 00 05.7	+1.0		
	baz=34								
T14A	Hurricane	34.81	121	⇑P	P	04 00 07.8	+0.9		
	baz=35								
S16A	Weppner Ranch,	34.83	118	⇓P	P	04 00 08.0	+1.0		
	baz=35,SNR=5.0								
GSC	Goldstone	34.96	127	⇓P	P	04 00 08.8	+0.6		
	baz=35								
V11A	Goodsprings	34.99	124	⇓P	P	04 00 09.3	+0.9		
	baz=35								
N24A	Carr	35.02	108	⇓P	P	04 00 09.2	+0.5		
	baz=35								
S17A	Black Ridge (B	35.22	117	⇑P	P	04 00 11.1	+0.7		
	baz=35,SNR=6.8								
U14A	Mt Trumbull	35.34	121	⇑P	P	04 00 12.2	+0.7		
	baz=35,SNR=5.9								
V13A	Grand Canyon W	35.52	123	⇓P	P	04 00 13.8	+0.8		
	baz=35								
U15A	North Rim	35.67	120	⇑P	P	04 00 14.8	+0.5		
	baz=36								
R20A	Redvale	35.74	114	⇓P	P	04 00 15.1	+0.3		
	baz=36								
GMRC	Granite Mounta	35.84	126	⇓P	P	04 00 16.4	+0.6		
	baz=36								
R21A	Cimarron	35.93	113	⇓P	P	04 00 16.9	+0.4		
	baz=36								
T18A	Mexican Hat	36.03	117	⇓P	P	04 00 17.1	-0.2		
	baz=36,SNR=8.0								
V14A	Boquillas Ranc	36.05	122	⇓P	P	04 00 18.3	+0.7		
	baz=36								
W13A	Hualapai Mount	36.23	123	⇓P	P	04 00 19.4	+0.4		
	baz=36								
V15A	Kaibab Nationa	36.25	120	⇑P	P	04 00 20.1	+0.9		
	baz=36								
U16A	Tuba City	36.38	119	⇓P	P	04 00 20.2	-0.2		
	baz=36								
P25A	Willow Gulch B	36.41	108	⇓P	P	04 00 20.8	+0.3		
	baz=36								
S21A	Coal Bank Pass	36.43	114	⇑P	P	04 00 21.3	+0.5		
	baz=36								
W14A	Seligman	36.43	122	⇓P	P	04 00 21.2	+0.4		
	baz=36								
IRM	Iron Mountain	36.59	125	⇑P	P	04 00 22.8	+0.7		
	baz=36								
T19A	Beclabito	36.63	116	⇓P	P	04 00 22.4	-0.1		
	baz=36								
S22A	4UR Ranch, Cre	36.76	113	⇓P	P	04 00 24.4	+0.9		
	baz=36								
V17A	Tonalea, Kykot	36.97	119	⇓P	P	04 00 26.2	+0.9		
	baz=37,SNR=6.5								
W16A	Flagstaff	37.14	120	⇑P	P	04 00 27.5	+0.8		
	baz=37								
X14A	Yava	37.16	122	⇓P	P	04 00 27.8	+0.9		
	baz=37								
V18A	Ganado	37.23	118	⇓P	P	04 00 28.3	+0.7		
	baz=37								
MONP	Monument Peak	37.27	128	⇓P	P	04 00 28.5	+0.7		
	baz=37								
Y13A	Salome	37.39	124	⇓P	P	04 00 29.6	+0.7		
	baz=37								
S24A	Houchin Ranch,	37.53	111	⇓P	P	04 00 31.2	+1.2		
	baz=37								
U21A	Nageezi	37.54	115	⇑P	P	04 00 31.1	+1.0		
	baz=37								
X16A	Lo Mia Camp, P	37.77	121	⇑P	P	04 00 33.0	+1.0		
	baz=38,SNR=6.6								
Y15A	Casa Rosa Ranc	37.83	122	⇓P	P	04 00 33.6	+1.0		
	baz=38								
S25A	Robets Cordova	37.84	110	⇑P	P	04 00 33.0	+0.4		
	baz=38								
Z13A	Yuma Proving G	38.00	124	⇑P	P	04 00 34.5	+0.4		
	baz=38								
X19A	St. Johns	38.61	118	⇑P	P	04 00 39.8	+0.7		
	baz=38								
CBKS	Cedar Bluff	38.92	104	⇑P	P	04 00 41.7	+0.1		
	baz=39								
CBKS	Cedar Bluff	38.92	104	eP	P	04 00 41.2	-0.4		
	10nm,0.6s,mb4.8								
U25A	Circle Dot Ran	38.92	111	P	P	04 00 42.4	+0.7		
	baz=39,SNR=9.0								
Y19A	Nutrioso	39.03	118	⇓P	P	04 00 44.1	+1.5		
	baz=39,SNR=6.0								
X21A	Alamocita Cree	39.20	116	⇓P	P	04 00 44.8	+0.8		
	baz=39								
U26A	Atchley Ranch,	39.21	110	⇓P	P	04 00 44.7	+0.6		
	baz=39								
ANMO	Albuquerque	39.31	115	eP	P	04 00 45.1	+0.2		
	1.9nm,0.9s,mb3.9								
V25A	Rancho No Teng	39.31	112	⇓P	P	04 00 45.9	+1.0		
	baz=39								
117A	Oracle	39.67	121	⇓P	P	04 00 49.1	+1.2		
	baz=40								
V26A	Tequesquite Ra	39.70	111	⇑P	P	04 00 48.8	+0.7		
	baz=40								
TUC	Tucson	39.88	121	eP	P	04 00 49.7	-0.1		
	1.5nm,0.7s,mb3.9								
Y22A	Socorro	39.98	116	⇑P	P	04 00 51.1	+0.6		
	baz=40								
KSU1	Kansas State U	40.07	101	eP	P	04 00 50.0	-1.2		
	31nm,0.8s,mb5.2								
Y24A	Capitan	40.61	114	⇑P	P	04 00 56.7	+1.0		
	baz=40								
318A	Bisbee	40.97	121	⇑P	P	04 00 59.5	+0.8		
	baz=41								
X27A	F and S Farms,	40.97	111	⇑P	P	04 00 59.1	+0.5		
	baz=41								
SCHQ	Schefferville	41.10	61	P	P	04 00 58.9	-0.6		
	2.5nm,0.8s,mb4.1,baz=356,slow=2.0,SNR=3.2								
220A	Playas Peak, P	41.13	119	⇓P	P	04 01 00.7	+0.7		
	baz=41								
319A	Douglas	41.30	120	⇑P	P	04 01 02.5	+1.1		
	baz=41								
AMTX	Amarillo	41.37	109	eP	P	04 01 01.4	-0.5		
	5.1nm,0.8s,mb4.4								
MSTX	Muleshoe	41.69	111	⇓P	P	04 01 04.5	0.0		
	baz=42,SNR=5.2								
225A	Deer Hill, Car	42.45	115	⇑P	P	04 01 11.3	+0.6		
	baz=42								
MNTX	Cornudas Mount	42.58	116	eP	P	04 01 11.6	-0.1		
	1.3nm,0.9s,mb3.7								
WMOK	Wichita Mounta	42.75	106	eP	P	04 01 11.8	-1.3		
	6.6nm,0.9s,mb4.4								
425A	Indio Mountain	43.54	116	⇑P	P	04 01 20.2	+0.8		
	baz=43								
426A	McDonald Obser	44.03	115	⇓P	P	04 01 23.6	+0.2		
	baz=44								
OLIL	Olney	44.20	93	eP	P	04 01 23.0	-1.7		
	11nm,0.9s,mb4.6								
526A	Mary Lane Ranc	44.54	115	⇑P	P	04 01 28.1	+0.6		
	baz=44,SNR=6.4								
527A	Woodward Ranch	44.66	115	⇑P	P	04 01 28.6	+0.2		
	baz=44								
626A	Big Bend Ranch	44.97	116	⇓P	P	04 01 31.2	+0.4		
	baz=45								
528A	Cox Ranch, San	44.99	114	P	P	04 01 31.4	+0.4		
	baz=45,SNR=11								
TXAR	Lajitas Array	45.35	115	P	P	04 01 33.9	0.0		
TXAR				PcP	PcP	04 03 09.1	-2.1		
TXAR	Lajitas Array	45.35	115	P	P	04 01 33.9	0.0		
	2.5nm,0.8s,mb4.0,baz=329,slow=6.5,SNR=30								
TXAR				PcP	PcP	04 03 09.1	-2.1		
	0.5nm,0.7s,baz=320,slow=4.9,SNR=3.6								
627A	Terlingua Ranc	45.36	115	P	P	04 01 34.2	+0.2		
	baz=45,SNR=7.2								
WCI	Wyandotte Cave	45.43	92	eP	P	04 01 32.7	-1.7		
	6.2nm,0.7s,mb4.5								
628A	Black Gap, Mar	45.54	115	⇓P	P	04 01 35.1	-0.2		
	baz=45								
WVT	Waverly	46.46	95	eP	P	04 01 40.9	-1.6		
	6.0nm,0.8s,mb4.4								
KEV	Kevo	47.34	1	ep	P	04 01 47.4	-1.5		
	1.5nm,0.3s,mb4.2								
ARCES	ARCESS Array B	47.55	2	P	P	04 01 49.3	-1.2		
	3.2nm,0.8s,mb4.2,baz=14,slow=8.3,SNR=18								
ARCES				PcP	PcP	04 03 18.4	+0.1		
	3.4nm,1.0s,baz=336,slow=2.7,SNR=4.2								
SWET	Sewanee	48.08	94	eP	P	04 01 53.3	-1.8		
SONM	Songino Array	53.71	305	P	P	04 02 37.5	+0.5		
	1.9nm,0.8s,mb4.2,baz=23,slow=8.0,SNR=5.5								
JOF	Joensuu	54.20	359	ep	P	04 02 38.5	-1.9		
	1.2nm,0.4s,mb4.3								
KAF	Kangasniemi	55.01	2	ep	P	04 02 44.3	-1.9		
	0.8nm,0.3s,mb4.2								
NOA	NORSAR Array B	55.37	10	P	P	04 02 46.8	-2.0		
	1.3nm,0.8s,mb4.0,baz=351,slow=7.2,SNR=5.9								
ZALV	Zalesovo Beam	55.37	324	P	P	04 02 47.5	-1.4		
	2.3nm,0.4s,mb4.3,baz=25,slow=8.2,SNR=6.5								
FINES	FINESS Array B	55.68	2	P	P	04 02 49.5	-1.5		
	1.5nm,0.6s,mb4.2,baz=2.3,slow=6.9,SNR=11								
BVAR	Borovoye Array	59.69	332	P	P	04 03 18.2	-1.0		
	1.0nm,0.2s,mb4.4,baz=34,slow=8.8,SNR=7.8								
BVAR				pP	pP	04 03 45.8	-2.1		
	0.8nm,0.5s,baz=64,slow=3.4,SNR=2.1								
KURK	Kurchatov	59.92	326	eP	P	04 03 18.6	-2.2		
	1.1nm,0.4s,mb4.2								
KURK	Kurchatov	59.92	326	P	P	04 03 19.9	-0.9		
	0.6nm,0.3s,mb4.1,baz=24,slow=6.7,SNR=4.7								
MK31	Makanchi Array	62.53	322	eP	P	04 03 36.7	-1.7		
MKAR	Makanchi Array	62.53	322	P	P	04 03 36.8	-1.6		
	0.7nm,0.4s,mb4.0,baz=34,slow=6.6,SNR=18								
AKTK	Aktyubinsk	64.44	340	P	P	04 03 49.7	-1.2		
AKTO	Aktyubinsk	64.44	340	P	P	04 03 49.7	-1.2		
	1.6nm,0.5s,mb4.2,baz=31,slow=7.6,SNR=8.0								
ABKAR	Akbulak array	65.27	338	eP	P	04 03 55.3	-1.0		
	1.9nm,0.6s,mb4.1								
AKASG	Malin Array Be	66.47	360	P	P	04 04 01.3	-2.6		
	2.3nm,0.4s,mb4.4,baz=359,slow=6.3,SNR=15								
ESDC	Sonseca Array	74.16	26	P	P	04 04 48.3	-2.6		
	0.5nm,0.7s,mb3.3,baz=339,slow=5.7,SNR=4.0								
ESDC				pP	pP	04 05 18.5	-2.3		
	1.2nm,0.9s,baz=352,slow=3.7,SNR=3.2								
BR131	Keskin Array S	77.37	356	eP	P	04 05 08.8	-0.4		
	0.9nm,0.6s,mb3.7								
BRTR	Keskin Array B	77.37	356	P	P	04

KKM	**Kota Kinabalu**	**72.15**	**290**	*e*P		**P**	**04 08 23.8**	**-1.0**
	21nm,1.1s,mb5.0							
NVAR	**Mina Array Bea**	**91.39**	**44**	P		**P**	**04 09 59.2**	**-6.3**
NVAR	**Mina Array Bea**	**91.39**	**44**	P		**P**	**04 09 59.2**	**-6.3**
	0.6nm,0.8s,mb4.0,baz=225,slow=8.2,SNR=5.1							
KIV	**Kislovodsk**	**145.59**	**301**	*e*PKPbc	PKPbc		04 16 33.3	-4.7
FINES	**FINESS Array B**	**147.37**	**337**	PKPbc	PKPbc		04 16 37.2	-5.4
	5.1nm,0.6s,baz=41,slow=4.0,SNR=6.6							
MMAI	**Mount Meron Ar**	**150.70**	**279**	PKPbc	PKPbc		04 16 49.0	-3.0
	1.2nm,0.5s,baz=90,slow=5.8,SNR=3.4							
NOA	**NORSAR Array B**	**151.42**	**349**	PKPbc	PKPbc		04 16 47.6	-5.0
	2.7nm,0.8s,baz=16,slow=4.2,SNR=3.4							

BJI **16** *04:01:05.6,52˚.25N×98˚.09E,h12km,mB5.6/51,mb5.1/57, Ms6.0/71,Ms7 5.8/62*

NNC **16** *04:01:05.7±2.7,52˚.72N×98˚.31E,h0km,mb5.3,Error ellipse: s-maj=34.4km s-min=24.6km az=12.0*

IDC **16** *04:01:05.7±0.4,52˚.21N×98˚.27E,h0km,mb5.1/25, mb1 5.2/30,mb1mx5.2/31,mbtmp5.1/30,ML3.7/6,MS5.3/22, Ms1 5.3/22,ms1mx5.2/24,Error ellipse: s-maj=12.1km s-min=8.8km az=13.0*

LDG **16** *04:01:05.1±0.1,52˚.13N×98˚.17E,h10km,Mb5.2/39, Ms5.2/10,Error ellipse: s-maj=6.2km s-min=4.8km az=73.0*

MOS **16** *04:01:06.6±1.1,52˚.20N×98˚.23E,h15km,mb5.5/137, MS5.5/91,Error ellipse: s-maj=6.2km s-min=4.0km az=38.0*

MOS Felt (VI) at Orlik; (V) at Mondy; (III-IV) at Irkutsk; (II-III) at Zakamensk, Angarsk, Zima, Tulun; (II) at Nizneudinsk.

ISCJB **16** *04:01:06.8±0.1,52˚.23N±0˚.01×98˚.09E±0˚.02,h10km, mb5.3/380,MS5.5/258,Error ellipse: s-maj=2.0km s-min=1.6km az=16.9*

ASRS **16** *04:01:07.8±1.6,52˚.56N×98˚.21E,h15km,Ms5.8/3*

NEIC **16** *04:01:08.6±1.5,52˚.27N×98˚.21E,h12km±9km,mb5.3/245, MS5.4/175,MW5.6,Error ellipse: s-maj=3.8km s-min=2.3km az=181.0,Moment Tensor Solution. s111 Moment tensor: Scale 10^{17}Nm; M_{rr}0.94; $M_{\theta\theta}$1.03; $M_{\phi\phi}$-1.97; $M_{r\theta}$-0.10; $M_{\theta\phi}$2.32; $M_{\phi r}$0.29; Best double couple: M_{o}2.90000×10^{17} NP1:ϕ_s106.00000°,δ85.00000°, λ-1.00000°. NP2:ϕ_s196.00000°,δ89.00000°, λ-175.00000°. Principal axes: T 2.2900, Plg2.0000°, Azm331.0000°; N 0.9600, Plg85.0000°, Azm213.0000°; P -3.2500, Plg4.0000°, Azm61.0000°;*

GCMT **16** *04:01:11.7±0.1,52˚.16N×98˚.31E,h28km,MW5.7,Moment Tensor Solution. s82,c159; s37,c44; Moment tensor: Scale 10^{17}Nm; M_{rr}0.87±.05; $M_{\theta\theta}$1.74±.05; $M_{\phi\phi}$-2.62±.05; $M_{r\theta}$0.63±.11; $M_{\theta\phi}$4.09±.05; $M_{\phi r}$0.19±.10; Best double couple: M_{o}4.70000×10^{17} NP1:ϕ_s14.00000°,δ81.00000°, λ174.00000°. NP2:ϕ_s105.00000°,δ84.00000°,λ9.00000°. Principal axes: T 4.3100, Plg10.0000°, Azm329.0000°; N 0.7600, Plg79.0000°, Azm140.0000°; P -5.0800, Plg2.0000°, Azm239.0000°; Data Used: II IU IC G CN. Surface waves: sta=118, comp=242, per= 50.*

BGS **16** *04:01:11.3±1.8,51˚.95N×96˚.76E,h14km,mb5.3,MS5.8*

SZGRF **16** *04:01:14.0,51˚.98N×97˚.65E,h33km,mb5.3,MS5.7, Tuva-Buryatia-Mongolia border region*

DJA **16** *04:01:27,51˚.82N×97˚.26E,h150km,mb5.3/37*

ISC 16 04:01:07.4±0.5,**52˚.26N**±0˚.01×**98˚.17E**±0˚.02,**h3**km±3km, **h22**km±2.6km**:pP-P,n1349,**σ**0s94**/1328,**mb5.3**/380, **MS5.5**/258,**167C-190D,Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ORL	**Orlik**	**1.04**	**74**	⇓*i*P		**Pg**	**04 01 27.3**	**0.0**
ORL	**Orlik**	**1.04**	**74**	*e*PG		**Pg**	**04 01 27.3**	**0.0**
ORL				*e*			04 01 38.2	
MOY	**Mondy**	**1.85**	**108**	*e*PN		**Pn**	**04 01 37.6**	**-2.3**
MOY				*e*			04 02 02.5	
MOY				pmax	pmax			
	comp=Z,42μm,0.9s							
MOY				smax				
	comp=N,644μm,1.4s							
ARS	**Arshan**	**2.65**	**96**	*e*PN		**Pn**	**04 01 54.0**	**+3.1**
ARS				*e*			04 02 26.7	
ARS				pmax	pmax			
	comp=Z,114μm,0.7s							
ARS				smax				
	comp=E,367μm,1.0s							
HVS	**Khovu-Aksy**	**3.00**	**250**	*e*PN		**Pn**	**04 01 59.0**	**+3.3**
HVS				*e*S		**Sn**	**04 02 35.8**	**+3.7**
TLY	**Talaya**	**3.44**	**98**	*e*Pn		**Pn**	**04 02 05.7**	**+4.0**
TLY				*e*Sg		**Sb**	**04 02 51.2**	**+0.3**
TLY	**Talaya**	**3.44**	**98**	*d i*PN		**Pn**	**04 02 06.2**	**+4.5**
TLY				*e*			04 02 50.2	
TLY				pmax	pmax			
	comp=Z,2μm,0.4s							
TLY				smax				
	comp=E,24μm,0.6s							
ZAK	**Zakamensk**	**3.72**	**118**	*e*P		**Pn**	**04 02 11.5**	**+5.9**
ZAK	**Zakamensk**	**3.72**	**118**	*e*PN		**Pn**	**04 02 03.8**	**-1.8**
ZAK				*e*			04 02 11.5	
ZAK				*e*			04 02 59.1	
ZAK				pmax	pmax			
	comp=Z,5μm,0.9s							
ZAK				smax				
	comp=N,97μm,1.6s							
IRK	**Irkutsk**	**3.75**	**88**	*e*P		**Pn**	**04 02 12.4**	**+6.4**
IRK	**Irkutsk**	**3.75**	**88**	*e*PN		**Pn**	**04 02 02.9**	**-3.1**
IRK				*e*			04 02 12.4	
IRK				*e*			04 03 00.4	
IRK				pmax	pmax			
	comp=Z,14μm,1.4s							
IRK				smax				
	comp=N,205μm,1.0s							
CERR	**Cheremushki**	**4.16**	**281**	*e*PN		**Pn**	**04 02 11.8**	**+0.1**
CERR				*i*			04 02 22.6	
CERR				*i*			04 03 15.6	
CERR	**Cheremushki**	**4.16**	**281**	*e*Pn		**Pn**	**04 02 11.8**	**+0.1**
CERR				*i* Pg		**Pg**	**04 02 22.6**	**-4.5**
CERR				*i* Sg		**Sg**	**04 03 15.6**	**-5.4**
TRG	**Tyrgan**	**5.02**	**81**	*e*PN		**Pn**	**04 02 22.8**	**-0.7**
TRG				*e*			04 02 36.6	
TRG				*e*			04 03 39.5	
TRG				pmax	pmax			
	comp=Z,5μm,0.8s							
TRG				smax				
	comp=E,30μm,1.1s							
KAB	**Kabansk**	**5.23**	**89**	*e*PN		**Pg**	**04 02 41.4**	**-6.1**
KAB				*e*			04 03 48.2	
KAB				pmax	pmax			
	comp=Z,19μm,1.5s							
KAB				smax				
	comp=N,137μm,2.1s							
OGRR	**Ongureny**	**5.87**	**73**	*e*PN		**Pn**	**04 02 34.0**	**-1.1**
OGRR				*e*			04 02 51.6	
OGRR				*e*			04 04 06.8	
OGRR				pmax	pmax			
	comp=Z,10μm,1.5s							
OGRR				smax				
	comp=N,33μm,1.2s							
SONM	**Songino Array**	**6.91**	**127**	Pn		**Pn**	**04 02 48.4**	**-1.0**
	comp=N,1.2nm,0.3s,baz=307,slow=14,SNR=12							
SONM				Pg		**Pb**	**04 03 08.4**	**+0.6**
	comp=N,83nm,0.3s,baz=305,slow=18,SNR=65							
SONM				Lg			04 04 42.0	
	comp=N,326nm,0.3s,baz=300,slow=25,SNR=11							
SONM				LR	LR		04 05 36.9	
	comp=N,26μm,20.1s,baz=314,slow=40							
SONM	**Songino Array**	**6.91**	**127**	PN		**Pn**	**04 02 48.4**	**-0.9**
SONM							04 03 08.4	
SONM				pmax	pmax			
	comp=Z,1.0nm,0.3s							
SONM				pmax	pmax			
	comp=Z,83nm,0.3s							
SONM				MLR	MLR			
	comp=Z,26μm,20.1s							
ULN	**Ulaanbaatar**	**7.21**	**124**	*e*Pn		**Pn**	**04 02 56.6**	**+3.0**
ULN				*e*Sg		Sg	04 04 46.9	-12
ULN	**Ulaanbaatar**	**7.21**	**124**	*e*PN		**Pn**	**04 02 53.4**	**-0.2**
ULN				*e*			04 03 13.6	
ULN				*e*			04 04 45.5	
ULN	**Ulaanbaatar**	**7.21**	**124**	P		**Pb**	**04 03 13.6**	**+0.5**
	comp=Z,50nmcomp=Z,926nm,1.2s							
ULN	**Ulaanbaatar**	**7.21**	**124**	Pn		**Pn**	**04 02 57.1**	**+3.6**
	SNR=35							
SYVR	**Suvo**	**7.28**	**74**	*e*P		**Pn**	**04 02 54.0**	**-0.5**
SYVR				pmax	pmax			
	comp=Z,2μm,1.2s							
ELT	**Yel'tsovka**	**7.31**	**283**	*e*Sg		Sx	04 04 55.6	
YLYR	**Ulyunkhan**	**8.17**	**66**	*e*P		**Pn**	**04 03 06.3**	**-0.3**
YLYR				pmax	pmax			
	comp=Z,2μm,1.6s							
ZAA0	**Zalesovo Array**	**8.21**	**287**	*e*Pn		**Pn**	**04 03 07.6**	**+0.3**
ZAA0				*e*Lg			04 05 18.5	
ZALV	**Zalesovo Beam**	**8.21**	**287**	Pn		**Pn**	**04 03 07.6**	**+0.4**
ZALV				Lg			04 05 19.3	
ZALV				LR		LR	04 06 10.3	
ZALV	**Zalesovo Beam**	**8.21**	**287**	Pn		**Pn**	**04 03 07.6**	**+0.4**
	comp=Z,2.4nm,0.3s,baz=96,slow=11,SNR=42							
ZALV				Lg			04 05 19.3	
	comp=Z,73nm,0.3s,baz=105,slow=23,SNR=12							
ZALV				LR		LR	04 06 10.3	
	comp=Z,17μm,18.6s,baz=102,slow=37							
UKR	**Ust'-Kan**	**8.45**	**266**	*e*P		**Pn**	**04 03 12.9**	**+2.4**
UKR	**Ust'-Kan**	**8.45**	**266**	*e*Pn		**Pn**	**04 03 12.9**	**+2.4**
UKR				*e*Pg		Pn	04 03 40.1	+30
UKR				*e*Sg		Sn	04 05 33.6	+47
KMO	**Kumora**	**8.48**	**60**	*e*P		**Pn**	**04 03 10.7**	**-0.2**
KMO				pmax	pmax			
	comp=Z,4μm,1.3s							
NVS	**Novosibirsk**	**9.26**	**292**	*e*P		**Pn**	**04 03 22.2**	**+0.6**
NVS	**Novosibirsk**	**9.26**	**292**	*e*Pn		**Pn**	**04 03 22.2**	**+0.6**
NVS				*e*Pg		Pn	04 03 55.4	+34
NVS				*e*Sg		Sn	04 05 52.3	+46
CIT	**Chita**	**9.47**	**85**	*e*P		**Pn**	**04 03 25.4**	**+1.0**
CIT				pmax	pmax			
	comp=Z,955nm,1.1s							
WMQ	**Urumqi**	**10.96**	**224**	P		**Pn**	**04 03 46.0**	**+1.0**
WMQ				LR	LR			
	comp=N,45μm,10.0s							
WMQ				LR	LR			
	comp=E,44μm,11.2s							
WMQ				LR	LR			
	comp=Z,26μm,8.2s							
MK31	**Makanchi Array**	**11.67**	**248**	Pn		**Pn**	**04 03 54.4**	**-0.2**
	comp=Z,99nm,0.9s,baz=59,slow=15,SNR=198							
MK31				⇓Sn		**Sn**	**04 06 14.4**	**+9.1**
	comp=Z,414nm,1.1s,baz=51,slow=15,SNR=4.0							
MK31				⇑Lg			04 07 21.7	
	comp=Z,2μm,1.3s,baz=50,slow=27,SNR=3.8							
MK31	**Makanchi Array**	**11.67**	**248**	*e*Pn		**Pn**	**04 03 54.1**	**-0.5**
MK31	**Makanchi Array**	**11.67**	**248**	*i* P		**Pn**	**04 03 54.4**	**-0.2**
MK31				*i*			04 06 07.1	
MK31				pmax	pmax			
	comp=Z,99nm,1.0s							
MK31				smax				
	comp=N,414nm,1.1s							
MKAR	**Makanchi Array**	**11.67**	**248**	Pn		**Pn**	**04 03 54.2**	**-0.4**
	comp=N,1.3nm,0.3s,baz=70,slow=10,SNR=62							
MKAR				Lg			04 07 15.0	
	comp=N,3.2nm,0.3s,baz=60,slow=32,SNR=4.5							
KURK	**Kurchatov**	**12.28**	**271**	Pn		**Pn**	**04 04 03.4**	**+0.5**
	comp=N,490nm,0.9s,SNR=23							
KURK	**Kurchatov**	**12.28**	**271**	*e*Pn		**Pn**	**04 04 02.1**	**-0.8**
KURK	**Kurchatov**	**12.28**	**271**	Pn		**Pn**	**04 04 03.9**	**+1.0**
	comp=N,0.5nm,0.3s,baz=79,slow=16,SNR=40							
KURK				Lg			04 07 31.5	
	comp=N,2.4nm,0.3s,baz=315,slow=25,SNR=6.4							
KURK				LR		LR	04 08 42.5	
	comp=N,14μm,20.2s,baz=75,slow=37							
KURK	**Kurchatov**	**12.28**	**271**	*c i*P		**Pn**	**04 04 03.0**	**+0.1**
KURK				pmax	pmax			
	comp=Z,39nm,0.8s							
KURK				MLR	MLR			
	comp=Z,11μm,18.0s							
GTA	**Gaotai**	**12.90**	**174**	⇑P		**Pn**	**04 04 11.3**	**-0.2**
GTA				pP			04 04 14.9	
GTA				sP			04 04 18.5	
GTA				S		**Sn**	**04 06 34.8**	**-0.7**
GTA				sS			04 06 40.0	
GTA				SS			04 06 49.6	
GTA				pmax	pmax			
	comp=Z,28nm,1.7s							
GTA				pmax	pmax			
	comp=Z,2μm,4.8s							
GTA				LR	LR			
	comp=Z,48μm,10.5s							
HIA	**Hailar**	**13.97**	**94**	*e*Pn		**Pn**	**04 04 25.3**	**-0.7**
	comp=Z,186nm,1.0s							
HIA	**Hailar**	**13.97**	**94**	*e*P		**Pn**	**04 04 25.3**	**-0.7**
HIA				pmax	pmax			
	comp=Z,186nm,1.0s							
BTO	**Baotou**	**14.21**	**140**	*e*P		**Pn**	**04 04 27.4**	**-2.0**
BTO				S		**Sn**	**04 07 11.3**	**+3.8**
BTO				LR	LR			
	comp=N,16μm,7.3s							
BTO				LR	LR			
	comp=E,9μm,7.6s							
HHC	**Hu-ho-hao-te**	**14.64**	**136**	*e*P		**Pn**	**04 04 37.6**	**+2.4**
HHC				pP	pP		04 04 43.0	+0.5
HHC				sP	sP		04 04 47.3	+4.3
HHC				S		**Sn**	**04 07 19.8**	**+1.9**
HHC				sS	sS		04 07 27.8	-11
HHC				SS			04 07 36.8	
HHC				pmax	pmax			
	comp=Z,65nm,0.9s							
HHC				pmax	pmax			
	comp=Z,1μm,4.1s							
HHC				LR	LR			
	comp=N,26μm,7.6s							
HHC				LR	LR			
	comp=E,20μm,6.0s							
HHC				LR	LR			
	comp=Z,30μm,7.8s							
CLNS	**Chul'man**	**16.11**	**63**	⇓*i*P		**Pn**	**04 04 53.8**	**-0.8**
VOSK	**Vostochnaya**	**16.53**	**282**	⇓Pn		**Pn**	**04 04 57.0**	**-2.9**
	comp=Z,40nm,0.8s							
VOSK				⇓Sn		**Sn**	**04 08 01.8**	**-1.9**
	comp=Z,457nm,1.1s							
VOSK				⇓Lg			04 09 52.9	
	comp=Z,1μm,1.4s							
VOSK	**Vostochnaya**	**16.53**	**282**	P		**Pn**	**04 04 55.8**	**-4.1**
VOSK							04 08 01.7	
VOSK				pmax	pmax			
	comp=Z,244nm,2.0s							
VOSK				smax				
	comp=Z,2μm,3.0s							
LZH	**Lanzhou**	**16.67**	**164**	⇑P		**Pn**	**04 05 00.3**	**-1.5**
LZH				pP	pP		04 05 03.8	-1.2
LZH				sP	sP		04 05 07.3	+1.8
LZH				PP			04 05 14.1	
LZH				S		**Sn**	**04 08 05.0**	**-2.2**
LZH				sS	sS		04 08 11.5	-8.6
LZH				SS			04 08 26.3	
LZH				pmax	pmax			
	comp=Z,500nm,1.3s							
LZH				pmax	pmax			
	comp=Z,2μm,5.4s							
LZH				LR	LR			
	comp=E,35μm,10.5s							
LZH				LR	LR			
	comp=Z,37μm,11.0s							
AAA	**Alma-Ata**	**16.81**	**246**	*i* P		**Pn**	**04 05 03.4**	**-0.2**
AAA				*i* S		**Sn**	**04 08 18.2**	**+7.6**
AAA				pmax	pmax			
	comp=Z,6μm,4.0s							
AAA				smax				
	comp=N,6μm,7.1s							
AAA				MLR	MLR			
	comp=Z,35μm,12.0s							
KNDC	**Almaty**	**16.84**	**246**	⇓Pn		**Pn**	**04 05 02.6**	**-1.2**
	comp=Z,802nm,1.2s							
KNDC				⇑Lg			04 10 07.1	
	comp=Z,1μm,1.4s							
BVA0	**Borovoye Array**	**16.84**	**284**	⇑Pn		**Pn**	**04 05 02.0**	**-1.8**
	comp=Z,15nm,1.0s,baz=257,slow=30,SNR=167							
BVA0				⇓Sn		**Sn**	**04 08 09.3**	**-1.8**
	comp=Z,37nm,1.0s							
BVA0				⇓Lg			04 09 59.2	
	comp=Z,67nm,1.2s,baz=55,slow=24,SNR=3.8							
BVA0	**Borovoye Array**	**16.84**	**284**	*i* P		**Pn**	**04 05 00.8**	**-3.0**
BVA0							04 08 16.9	
BVA0				pmax	pmax			
	comp=Z,18nm,0.9s							
BVA0				smax				
	comp=N,55nm,1.2s							
BVAR	**Borovoye Array**	**16.84**	**284**	Pn		**Pn**	**04 05 01.5**	**-2.3**
	comp=N,0.0nm,0.3s,baz=82,slow=12,SNR=17							
BVAR				Lg			04 10 04.0	
	comp=N,0.0nm,0.3s,baz=88,slow=31,SNR=3.1							
BRVK	**Borovoye**	**16.90**	**284**	Pn		**Pn**	**04 05 03.1**	**-1.5**
	comp=N,413nm,0.9s,SNR=16							
BRVK	**Borovoye**	**16.90**	**284**	*e*Pn		**Pn**	**04 05 02.0**	**-2.5**
	comp=N,150nm,1.1s							
BRVK	**Borovoye**	**16.90**	**284**	*c i*P		**Pn**	**04 05 02.9**	**-1.7**
BRVK				pmax	pmax			
	comp=Z,80nm,1.7s							
BRVK				MLR	MLR			
	comp=Z,17μm,18.0s							
BJI	**Beijing**	**17.41**	**127**	P		**Pn**	**04 05 12.0**	**+1.0**
BJI				S		**Sn**	**04 08 24.1**	**-0.9**
BJI				pmax	pmax			
	comp=Z,180nm,1.4s							
BJI				pmax	pmax			
	comp=Z,2μm,6.2s							
BJI				LR	LR			
	comp=N,75μm,12.4s							
BJI				LR	LR			
	comp=E,100μm,11.6s							
BJI				LR	LR			
	comp=Z,10μm,21.1s							
BJT	**Baijiatuau**	**17.42**	**128**	*e*P		**Pn**	**04 05 11.7**	**+0.5**
	comp=Z,227nm,1.3s							
BJT	**Baijiatuau**	**17.42**	**128**	*e*P		**Pn**	**04 05 11.7**	**+0.5**
BJT				pmax	pmax			
	comp=Z,227nm,1.3s							
TIY	**Taiyuan**	**17.66**	**140**	*e*P		**Pn**	**04 05 12.8**	**-1.3**
TIY				PP			04 05 22.3	
TIY				S		**Sn**	**04 08 18.9**	**-12**
TIY				pmax	pmax			
	comp=Z,930nm,8.7s							
TIY				LR	LR			
	comp=N,30μm,9.6s							
TIY				LR	LR			
	comp=E,7μm,9.0s							
TIY				LR	LR			
	comp=Z,36μm,11.4s							
ZRNK	**Zerenda**	**17.68**	**284**	⇓Pn		**Pn**	**04 05 13.3**	**-1.0**
	comp=Z,115nm,0.9s							
ZRNK				⇓Sn		**Sn**	**04 08 32.3**	**+0.9**
	comp=Z,138nm,1.1s							
ZRNK				⇓Lg			04 10 26.6	
	comp=Z,624nm,1.4s							
ZRNK	**Zerenda**	**17.68**	**284**	P		**Pn**	**04 05 12.6**	**-1.7**
ZRNK							04 08 32.3	
ZRNK				pmax	pmax			
	comp=Z,380nm,1.8s							
ZRNK				smax				
	comp=Z,1μm,3.0s							
TKM2	**Tokmak 2**	**17.80**	**247**	P		**Pn**	**04 05 14.4**	**-1.4**
	SNR=166							
ULHL	**Ulahol**	**17.87**	**245**	P		**Pn**	**04 05 17.2**	**+0.4**
	SNR=47							
USP	**Ospenovka**	**18.21**	**250**	P		**Pn**	**04 05 18.4**	**-2.5**
	SNR=44							
CHMS	**Chumysh**	**18.23**	**249**	P		**Pn**	**04 05 18.9**	**-2.3**
	SNR=27							
KBK	**Karagaybulak**	**18.33**	**248**	P		**Pn**	**04 05 21.7**	**-0.8**
	SNR=24							
FRU	**Bishkek**	**18.41**	**249**	⇓*e*P		**Pn**	**04 05 21.5**	**-1.9**
FRU				*e*S		**Sn**	**04 08 53.0**	**+3.7**
FRU				pmax	pmax			
	comp=Z,830nm,2.0s							
FRU				smax				
	comp=E,5μm,7.0s							
FRU				MLR	MLR			
	comp=E,75μm,8.5s							
KZA	**Kyzart**	**18.54**	**246**	P		**Pn**	**04 05 24.6**	**-0.4**
	SNR=59							
AAK	**Ala-Archa**	**18.61**	**248**	P		**Pn**	**04 05 24.9**	**-0.9**
	comp=E,805nm,1.0s,SNR=35							
AAK	**Ala-Archa**	**18.61**	**248**	P		**Pn**	**04 05 24.2**	**-1.6**
	SNR=38							
AAK	**Ala-Archa**	**18.61**	**248**	*e*P		**Pn**	**04 05 24.1**	**-1.7**
	comp=E,174nm,1.1s							
AAK	**Ala-Archa**	**18.61**	**248**	P		**Pn**	**04 05 24.3**	**-1.5**
	comp=E,0.7nm,0.3s,baz=65,slow=6.8,SNR=30							
AAK				Lg			04 10 53.1	
	comp=E,0.6nm,0.3s,baz=257,slow=14,SNR=3.7							
AAK	**Ala-Archa**	**18.61**	**248**	*d i*P		**Pn**	**04 05 23.9**	**-1.9**
AAK				pmax	pmax			
	comp=Z,150nm,1.7s							
AAK				MLR	MLR			
	comp=Z,7μm,15.0s							
AAK	**Ala-Archa**	**18.61**	**248**	P		**Pn**	**04 05 23.8**	**-2.0**
	comp=Z,816nmcomp=Z,36nm,1.2s							
UCH	**Uchtor**	**18.86**	**247**	P		**Pn**	**04 05 28.4**	**-0.4**
	SNR=147							
EKS2	**Erkin-Say**	**19.00**	**249**	P		**Pn**	**04 05 29.3**	**-1.2**
	SNR=68							
AML	**Almayashu**	**19.38**	**248**	P		**Pn**	**04 05 33.8**	**-1.4**
	SNR=57							
YAK	**Yakutsk**	**19.49**	**48**	*e*P		**Pn**	**04 05 34.2**	**-2.2**
	comp=Z,384nm,0.8s							
YAK	**Yakutsk**	**19.49**	**48**	*e*P		**Pn**	**04 05 34.0**	**-2.3**
YAK				*e*S		**Sn**	**04 09 08.8**	**-6.4**
YAK				pmax	pmax			
	comp=Z,132nm,1.1s							
YAK				pmax	pmax			
	comp=N,18nm,1.0s							
YAK				pmax	pmax			
	comp=E,93nm,1.3s							
YAK				smax				
	comp=E,205nm,0.9s							
YAK				smax				
	comp=N,296nm,0.9s							
XAN	**Xi'an**	**19.79**	**153**	P		**Pn**	**04 05 36.8**	**-3.3**
XAN				pP	pP		04 05 41.0	+1.5
XAN				sP	sP		04 05 43.3	+3.4
XAN				S		**Sn**	**04 09 15.8**	**-6.9**
XAN				sS	sS		04 09 23.4	0.0
XAN				pmax	pmax			
	comp=Z,700nm,6.3s							
XAN				LR	LR			
	comp=N,11μm,10.9s							
XAN				LR	LR			
	comp=E,2μm,9.7s							
XAN				LR	LR			
	comp=Z,4μm,10.3s							
KSH	**Kashi**	**19.93**	**239**	⇑*i*P		**Pn**	**04 05 44.5**	**+2.8**
KSH				*e*pP		pP	04 05 49.6	+8.7
KSH				sP		sP	04 05 51.0	+10
KSH				PP			04 06 03.0	
KSH				S		**Sn**	**04 09 22.3**	**-3.7**
KSH				*e*PcP		PcP	04 10 00.0	+3.3
KSH				*e*ScP		ScP	04 13 34.9	+1.4
KSH				*e*PcS		PcS	04 13 35.9	+1.8
KSH				*e*ScS		ScS	04 17 16.0	+0.2
KSH				pmax	pmax			
	comp=Z,10.0nm,0.7s							
KSH				pmax	pmax			
	comp=Z,860nm,3.2s							
KSH				LR	LR			
	comp=N,3μm,9.7s							
KSH				LR	LR			
	comp=E,4μm,6.7s							
KSH				LR	LR			
	comp=Z,5μm,9.4s							
CN2	**Changchun**	**20.02**	**104**	*e*P		**P**	**04 05 40.8**	**-0.2**
CN2				*e*S		**S**	**04 09 22.0**	**-4.4**
CN2				pmax	pmax			
	comp=Z,30nm,1.1s							
CN2				pmax	pmax			
	comp=Z,200nm,4.0s							
CN2				LR	LR			
	comp=N,9μm,10.0s,MS5.6							
CN2				LR	LR			
	comp=E,10μm,10.0s,MS5.6							
CN2				LR	LR			
	comp=Z,8μm,11.0s,MS5.3							
SNY	**Shenyang**	**20.11**	**111**	⇑P		**P**	**04 05 41.3**	**-0.8**
SNY				S		**S**	**04 09 23.9**	**-4.5**
SNY				pmax	pmax			
	comp=Z,100nm,1.3s							
SNY				pmax	pmax			
	comp=Z,380nm,3.5s							
SNY				LR	LR			
	comp=Z,27μm,15.6s,MS5.7							
KK31	**Karatay Array**	**20.64**	**255**	P		**P**	**04

TIA Tai'an 20.92 133 P **P** **04 05 50.4 -0.5**
TIA pmax pmax
comp=Z,90nm,1.3s
TIA pmax pmax
comp=Z,2µm,10.2s
TIA LR LR
comp=N,12µm,11.5s,MS5.6
TIA LR LR
comp=E,12µm,12.8s,MS5.6
TIA LR LR
comp=Z,25µm,12.1s,MS5.8
DL2 Dalian 21.04 120 P **P** **04 05 52.5 +0.3**
DL2 S **S** **04 09 44.6 -2.3**
DL2 pmax pmax
comp=Z,40nm,1.0s,mb4.7
DL2 pmax pmax
comp=Z,380nm,7.1s
DL2 LR LR
comp=N,31µm,13.3s,MS6.1
DL2 LR LR
comp=E,38µm,13.1s,MS6.1
DL2 LR LR
comp=Z,16µm,11.8s,MS5.6
KLR Kul'dur 21.36 85 *e*P **P** **04 05 49.4 -6.1**
KLR *e* 04 06 24.5
KLR *e* 04 09 55.5
CD2 Chengdu 21.73 167 P **P** **04 05 59.9 +0.3**
CD2 pP 04 06 04.0
CD2 sP sP 04 06 06.9 +6.1
CD2 PP 04 06 25.1
CD2 S **S** **04 09 55.5 -4.9**
CD2 PcP PcP 04 10 00.5 +0.2
CD2 sS sS 04 10 02.3 +0.5
CD2 SS 04 10 32.8
CD2 pmax pmax
comp=Z,200nm,1.4s,mb5.3
CD2 pmax pmax
comp=Z,1µm,4.7s
CD2 LR LR
comp=N,17µm,10.4s
CD2 LR LR
comp=E,12µm,8.4s
CD2 LR LR
comp=Z,17µm,12.5s,MS5.7
SVE Sverdlovsk 22.05 297⇑ *e*P **P** **04 06 02.9 +0.1**
SVE *e*S **S** **04 10 05.6 -0.7**
SVE pmax pmax
comp=Z,180nm,0.9s,mb5.5
SVE MLR MLR
comp=Z,17µm,14.0s,MS5.6
MDJ Mudanjiang 22.07 98 P **P** **04 06 02.6 -0.6**
MDJ pP 04 06 08.4
MDJ sP sP 04 06 10.9 +6.5
MDJ PcP PcP 04 09 56.5 -4.2
MDJ S **S** **04 10 06.6 -0.4**
MDJ ScP ScP 04 13 33.1 -5.5
MDJ PcS PcS 04 13 35.5 -3.6
MDJ ScS ScS 04 17 18.5 -4.7
MDJ pmax pmax
comp=Z,40nm,0.9s,mb4.8
MDJ pmax pmax
comp=Z,310nm,4.8s
MDJ LR LR
comp=N,43µm,15.6s,MS6.1
MDJ LR LR
comp=E,30µm,13.7s,MS6.1
MDJ LR LR
comp=Z,23µm,10.1s,MS5.9
MDJ Mudanjiang 22.07 98 *e*P **P** **04 06 03.4 +0.3**
comp=Z,135nm,1.4s,mb5.2
MDJ LR LR
comp=Z,1µm,19.0s,MS4.3
LSA Lhasa 23.13 196 P **P** **04 06 13.8 -0.7**
LSA S **S** **04 10 27.4 +1.0**
LSA LR LR
comp=E,73µm,17.2s
LSA LR LR
comp=Z,24µm,11.9s
ARU Arti 23.23 296 *e*P **P** **04 06 14.1 -1.2**
comp=Z,98nm,0.8s,mb5.3
ARU LR LR
comp=Z,818nm,20.0s,MS4.2
ARU Arti 23.23 296*c i*P **P** **04 06 14.0 -1.3**
ARU *e*PPP 04 06 47.5
ARU *e*S **S** **04 10 26.6 -1.0**
ARU SSS 04 11 14.2
ARU pmax pmax
comp=Z,129nm,1.2s,mb5.2
ARU MLR MLR
comp=Z,12µm,13.0s,MS5.5
ARU Arti 23.23 296 P **P** **04 06 15.8 +0.5**
comp=Z,492nm,1.2s,mb5.8,SNR=22
HABR Khabarovsk 23.66 84 *e*P **P** **04 06 18.8 -1.0**
HABR *e**PP 04 06 23.2
HABR PPP 04 06 54.4
HABR 04 10 02.6
HABR *e*S **S** **04 10 34.3 -0.5**
HABR *e**SS sS 04 10 42.6 +6.3
HABR SS 04 11 14.4
HABR *e*SSS 04 11 27.9
HABR *e* 04 17 27.0
HABR pmax pmax
comp=N,31nm,1.4s
HABR pmax pmax
comp=Z,96nm,1.3s,mb5.1
HABR pmax pmax
comp=E,46nm,0.8s
HABR MLR MLR
comp=Z,17µm,11.0s,MS5.8
HABR MLR MLR
comp=N,8µm,9.0s
HABR MLR MLR
comp=E,17µm,11.0s
TIXI Tiksi 23.71 24 *i* P **P** **04 06 19.3 -0.8**
TIXI *e*S **S** **04 10 31.7 -3.5**
TIXI pmax pmax
comp=E,184nm,1.3s
TIXI pmax pmax
comp=Z,506nm,1.1s,mb5.9
TIXI pmax pmax
comp=N,85nm,1.1s
TIXI pmax pmax
comp=Z,686nm,7.9s
SOKR Solikamsk 23.97 304*c i*P **P** **04 06 22.3 -0.3**
SOKR S **S** **04 10 42.4 +2.8**
SOKR pmax pmax
comp=Z,110nm,1.2s,mb5.2
SOKR MLR MLR
comp=Z,6µm,10.0s,MS5.4
AB31 Akbulak array 24.18 278 ⇑P **P** **04 06 24.6 +0.1**
AB31 ⇑S **S** **04 10 44.1 +1.0**
ABKAR Akbulak array 24.18 278 *e*P **P** **04 06 23.6 -1.0**
comp=Z,2.1nm,1.5s
VLA Vladivostok 24.28 99⇑ *i*P **P** **04 06 25.0 -0.6**
VLA Vladivostok 24.28 99*c i*P **P** **04 06 25.9 +0.3**
VLA pmax pmax
comp=Z,82nm,1.2s,mb5.0
VLA MLR MLR
comp=Z,12µm,16.0s,MS5.5
WHN Wuhan 24.75 145 P **P** **04 06 28.8 -1.1**
WHN S **S** **04 10 43.8 -8.8**
WHN LR LR
comp=N,12µm,4.3s
WHN LR LR
comp=E,39µm,10.8s
WHN LR LR
comp=Z,28µm,12.0s,MS6.0
INCN Inchon 24.80 115 PFAKE 04 06 40.0 +10
INCN LR LR
comp=Z,13µm,19.0s,MS5.5
AKTK Aktyubinsk 24.93 282 P **P** **04 06 30.6 -0.7**
AKTK LR LR 04 16 42.5
AKTO Aktyubinsk 24.93 282 ⇓P **P** **04 06 31.3 -0.1**
comp=Z,36nm,0.8s,mb5.0
AKTO ⇑S **S** **04 10 54.1 -1.0**
comp=Z,9.1nm,1.4s
AKTO Aktyubinsk 24.93 282 P **P** **04 06 30.6 -0.7**
comp=Z,217nm,1.0s,mb5.6,baz=80,slow=8.4,SNR=174
AKTO LR LR 04 16 42.5
comp=Z,9µm,19.8s,MS5.3,baz=69,slow=38
AKTO Aktyubinsk 24.93 282 P **P** **04 06 29.8 -1.5**
AKTO 04 10 59.2
AKTO pmax pmax
comp=Z,36nm,0.8s,mb5.0
AKTO smax
comp=N,41nm,2.5s
NJ2 Nanjing 25.20 135 *e*P **P** **04 06 34.3 +0.3**
NJ2 pP pP 04 06 41.5 +6.6
NJ2 sP sP 04 06 43.6 +8.3
NJ2 PP 04 07 12.8
NJ2 S **S** **04 10 55.0 -4.7**
NJ2 sS sS 04 11 05.5 +4.3
NJ2 pmax pmax
comp=Z,170nm,0.9s,mb5.6
NJ2 pmax pmax
comp=Z,2µm,4.8s
NJ2 LR LR
comp=N,10µm,13.7s,MS5.6
NJ2 LR LR
comp=E,9µm,12.0s,MS5.6
NJ2 LR LR
comp=Z,56µm,12.5s,MS6.3
KSRS Korea Array 25.54 114 P **P** **04 06 36.9 -0.1**
comp=Z,75nm,1.0s,mb5.2,baz=318,slow=8.7,SNR=54
KSRS Lg 04 14 28.9
comp=Z,45nm,1.3s,baz=313,slow=28,SNR=7.2
KSRS LR LR 04 17 39.5
comp=Z,3µm,19.6s,MS4.8,baz=314,slow=39
SDNR Sundarnagar 25.89 225 *e*PKP **P** **04 06 41.5 +1.2**
GUN Gumba 26.00 205 *e*P **P** **04 06 40.6 -0.7**
comp=Z,383nm,1.0s,mb5.9
TAPN Taplejung 26.09 202 *e*P **P** **04 06 41.1 -1.0**
comp=Z,164nm,0.8s,mb5.6
JIRN Jiri 26.16 205 *e*P **P** **04 06 42.2 -0.5**
comp=Z,280nm,1.1s,mb5.7
BHK Bhakra 26.20 226 *e*PKP **P** **04 06 42.8 -0.3**
GKN Gorkha 26.26 208 *e*P **P** **04 06 42.5 -1.1**
comp=Z,410nm,1.3s,mb5.8
KKN Kakani 26.28 207 *e*P **P** **04 06 42.8 -1.0**
comp=Z,247nm,0.9s,mb5.7
PTH Pithoragarh 26.29 217 *e*PKP **P** **04 06 42.2 -1.7**
PKIN Phulchoki 26.45 206 *e*P **P** **04 06 44.0 -1.3**
comp=Z,224nm,1.1s,mb5.6
PKI Pulchoki 26.45 206 *e*P **P** **04 06 44.5 -0.9**
comp=Z,625nm,1.4s,mb6.0
DMN Daman 26.50 207 *e*P **P** **04 06 45.0 -0.8**
comp=Z,639nm,1.5s,mb5.9
GYA Guiyang 26.56 163⇓ *i*P **P** **04 06 45.9 -0.4**
GYA pP pP 04 06 55.0 +7.8
GYA PP 04 07 30.5
GYA PcP PcP 04 10 09.4 -1.3
GYA S **S** **04 11 21.5 +0.2**
GYA SS 04 12 32.5
GYA pmax pmax
comp=Z,40nm,1.0s,mb4.9
GYA pmax pmax
comp=Z,410nm,6.0s
GYA LR LR
comp=N,6µm,11.2s
GYA LR LR
comp=E,4µm,9.3s
GYA LR LR
comp=Z,6µm,13.0s,MS5.3
ODAN Odare 26.64 202 *e*P **P** **04 06 45.9 -1.1**
comp=Z,481nm,1.0s,mb6.0
RAMN Ramite 26.74 203 *e*P **P** **04 06 46.6 -1.3**
comp=Z,552nm,1.1s,mb6.0
KOLN Koldanda 26.78 210 *e*P **P** **04 06 46.5 -1.9**
comp=Z,151nm,0.9s,mb5.5
SSE Sheshan 27.04 132 P **P** **04 06 50.8 +0.1**
SSE S **S** **04 11 29.5 +0.5**
SSE pmax pmax
comp=Z,23nm,1.1s,mb4.6
SSE pmax pmax
comp=Z,350nm,10.2s
SSE LR LR
comp=N,8µm,17.4s,MS5.7
SSE LR LR
comp=E,16µm,17.4s,MS5.7
SSE LR LR
comp=Z,9µm,14.8s,MS5.5
SHL Shillong 27.08 193 *e*PKP **P** **04 06 51.0 0.0**
SHL *ex* x 04 15 32.0
KMI Kunming 27.32 171⇑ P **P** **04 06 54.6 +1.4**
KMI pP pP 04 07 03.8 +10
KMI PP 04 07 42.3
KMI S **S** **04 11 32.0 -1.4**
KMI SS 04 12 47.5
KMI pmax pmax
comp=Z,77nm,1.1s,mb5.2
KMI pmax pmax
comp=Z,450nm,3.6s
KMI LR LR
comp=N,6µm,11.5s,MS5.6
KMI LR LR
comp=E,7µm,10.3s,MS5.6
KMI LR LR
comp=Z,5µm,13.6s,MS5.3
KBL Kabul 27.32 241 *e*P **P** **04 06 52.0 -1.1**
comp=Z,53nm,1.0s,mb5.0
KBL Kabul 27.32 241 *e*P **P** **04 06 52.0 -1.2**
KBL pmax pmax
comp=Z,53nm,1.0s,mb5.0
NDI New Delhi 28.24 222 *e*PKP **P** **04 07 02.0 +0.6**
NDI *e*S **S** **04 11 49.5 +1.7**
YSS Yuzh-Sakhalins 29.01 83 PFAKE 04 07 20.0 +12
YSS LR LR
comp=Z,2µm,19.0s,MS4.8
SEY Seymchan 30.02 48 *i* P **P** **04 07 17.3 +0.4**
ASAJ Asahikawa 30.31 88 P **P** **04 07 17.5 -2.1**
comp=Z,6.1nm,0.9s,mb4.3,baz=309,slow=14,SNR=3.1
ASAJ LR LR 04 19 55.6
comp=Z,3µm,20.2s,MS4.9,baz=185,slow=37
ASAJ Asahikawa 30.31 88 P **P** **04 07 17.5 -2.1**
ASAJ pmax pmax
comp=Z,6.0nm,0.9s
ASAJ MLR MLR
comp=Z,3µm,20.2s
VAN Vannovskaya 31.25 259⇓ *i*P **P** **04 07 29.0 +1.0**
VAN *e*S ScS 04 18 01.6 -1.6
AJM Ajmer 31.25 224 *e*PKP **P** **04 07 27.9 -0.2**
ABKT Ailbek 31.25 259 P **P** **04 07 29.3 +1.3**
comp=Z,648nm,0.9s,mb6.5,SNR=17
GZH Guangzhou 31.37 152 P **P** **04 07 23.8 -5.4**
GZH S **S** **04 12 24.6 -12**
GZH LR LR
comp=N,13µm,12.2s
GZH LR LR
comp=E,5µm,7.3s
QZH Quanzhou 31.38 143 P **P** **04 07 30.6 +1.3**
QZH S **S** **04 12 37.3 +0.1**
QZH LR LR
comp=N,15µm,10.4s
QZH LR LR
comp=E,12µm,16.4s
QZH LR LR
comp=Z,21µm,12.7s,MS6.0
ERM Erimo 31.80 91 PFAKE 04 07 40.0 +7.2
ERM LR LR
comp=Z,5µm,20.0s,MS5.2
QUE Quetta 31.81 238 *e*P **P** **04 07 34.0 +1.0**
QUE *e*S **S** **04 12 47.0 +3.1**
MAJO Matsushiro 32.16 103 *e*P **P** **04 07 35.9 -0.1**
comp=Z,11nm,1.0s,mb4.6
MAJO LR LR
comp=Z,7µm,19.0s,MS5.3
MAJO Matsushiro 32.16 103 *e*P **P** **04 07 35.9 -0.1**
MAJO pmax pmax
comp=Z,11nm,1.0s,mb4.6
MAJO MLR MLR
comp=Z,7µm,19.0s,MS5.3
MAT Matsushiro 32.16 103 P **P** **04 07 35.1 -0.9**
MAT S **S** **04 12 37.0 -12**
CHRT Chiangrai 32.35 177 ⇓P **P** **04 07 37.0 -0.8**
comp=Z,129nm,1.3s,mb5.6
KLMR Klimovskoe 32.40 309 *e*P **P** **04 07 37.2 -0.6**
KLMR *e* 04 08 42.8
KLMR *e*S **S** **04 12 53.6 +1.2**
KLMR pmax pmax
comp=Z,185nm,1.5s,mb5.7
KLMR pmax pmax
comp=Z,150nm,7.5s
KLMR MLR MLR
comp=Z,9µm,11.0s,MS5.7
TATO Taipei 32.49 138 PFAKE 04 07 50.0 +11
TATO LR LR
comp=Z,5µm,22.0s,MS5.1
YHNB Yeheng 32.72 138 *e*P **P** **04 07 40.0 -1.0**
comp=Z,134nm,1.1s,mb5.8
YHNB LR LR
comp=Z,6µm,20.0s,MS5.3
BHPL Bhopal 33.05 217 *e*PKP **P** **04 07 43.2 -0.7**
BHPL AMb AMB 04 07 48.5
comp=Z,121nm,1.2s,mb5.7
SSLB Suanglung 33.34 140 *e*P **P** **04 07 45.2 -1.2**
comp=Z,256nm,1.4s,mb6.0
CHG Chiang Mai 33.38 179 ⇑P **P** **04 07 48.4 +1.6**
comp=Z,17nm,1.0s,mb4.9
CHTO Chiang Mai 33.38 179 *e*P **P** **04 07 46.3 -0.6**
comp=Z,14nm,1.0s,mb4.8
CHTO LR LR
comp=Z,7µm,19.0s,MS5.4
CHTO Chiang Mai 33.38 179 *e*P **P** **04 07 46.3 -0.5**
CHTO pmax pmax
comp=Z,14nm,1.0s,mb4.8
CHTO MLR MLR
comp=Z,7µm,19.0s,MS5.4
CHTO Chiang Mai 33.38 179 P **P** **04 07 44.7 -2.1**
comp=Z,630nmcomp=Z,21nm,1.1s,mb5.0
CHTO Chiang Mai 33.38 179 P **P** **04 07 49.2 +2.3**
SNR=6.0
TPUB Ta-pu 33.65 141 *e*P **P** **04 07 47.8 -1.3**
comp=Z,128nm,1.1s,mb5.8
CM31 Chiang Mai Arr 33.74 179 *e*P **P** **04 07 51.2 +1.3**
comp=Z,15nm,0.9s,mb4.9
CM31 LR LR
comp=Z,7µm,19.0s,MS5.4
CMAR Chiang Mai Arr 33.74 179 P **P** **04 07 48.3 -1.6**
CMAR LR LR 04 21 17.8
CMAR Chiang Mai Arr 33.74 179 P **P** **04 07 48.3 -1.6**
comp=Z,14nm,1.0s,mb4.8,baz=355,slow=8.3,SNR=30
CMAR LR LR 04 21 17.8
comp=Z,6µm,19.4s,MS5.3,baz=355,slow=36
CMAR Chiang Mai Arr 33.74 179 P **P** **04 07 48.3 -1.6**
CMAR pmax pmax
comp=Z,15nm,1.0s
CMAR MLR MLR
comp=Z,6µm,19.4s
YULB Yu-li 33.83 140 *e*P **P** **04 07 49.8 -0.9**
comp=Z,154nm,1.2s,mb5.8
APA Apatity 34.01 322⇑ *i*P **P** **04 07 52.8 +1.0**
APA *i* 04 09 12.0
APA *i* 04 10 30.0
APA *i* S **S** **04 13 16.0 -1.3**
APA *i* SS SS 04 15 32.0 -12
APA pmax pmax
comp=Z,76nm,1.2s,mb5.5
APA MLR MLR
comp=Z,12µm,16.0s,MS5.7
TWG Pinlang 34.25 140 *e*P **P** **04 07 54.4 0.0**
comp=Z,217nm,1.3s,mb5.9
VRHR Novokhopersk 34.32 291 *e*P **P** **04 07 53.3 -1.4**
VRHR *e**SP sP 04 07 59.1 +3.1
VRHR *e*S **S** **04 13 19.5 -3.0**
VRHR pmax pmax
comp=Z,70nm,0.7s,mb5.7
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,30nm,0.5s
VRHR smax
comp=N,190nm,2.1s
VRHR smax
comp=Z,90nm,2.3s
VRHR smax
comp=E,160nm,1.6s
QIZ Qiongzhong 34.40 160 P **P** **04 07 56.9 +1.2**
QIZ sP sP 04 08 05.5 +8.5
QIZ PP PP 04 09 14.5 +1.0
QIZ S **S** **04 13 24.9 +0.7**
QIZ pmax pmax
comp=Z,38nm,1.3s,mb5.2
QIZ pmax pmax
comp=Z,300nm,5.8s
QIZ LR LR
comp=N,6µm,18.0s,MS5.5
QIZ LR LR
comp=E,2µm,13.8s,MS5.5
QIZ LR LR
comp=Z,8µm,16.8s,MS5.5
QIZ Qiongzhong 34.40 160 *e*P **P** **04 07 57.4 +1.7**
comp=Z,115nm,1.2s,mb5.7
QIZ LR LR
comp=Z,8µm,20.0s,MS5.5
MAK Makhachkala 34.75 275 *e*P **P** **04 08 01.8 +3.3**
MAK *e*PPP 04 09 22.3
MAK *e* 04 10 26.6
MAK *e*S **S** **04 13 28.9 -0.3**
MAK *e*SS SS 04 15 34.5 -25
MAK *e* 04 18 14.8
MAK pmax pmax
comp=Z,556nm,1.8s,mb6.2
MAK MLR MLR
comp=Z,11µm,12.0s,MS5.8
MOS Moscow 34.77 300 *e*P **P** **04 07 59.3 +0.8**
MOS *e* 04 09 17.5
MOS *e*PPP 04 09 33.8
MOS *e*S **S** **04 13 30.4 +1.2**
MOS *e*SS SS 04 15 45.9 -13
MOS pmax pmax
comp=Z,300nm,2.4s,mb5.8
MOS pmax pmax
comp=Z,101nm,1.4s,mb5.6
MOS MLR MLR
comp=Z,9µm,13.0s,MS5.7
BILL Bilibino 35.20 37 *e*P **P** **04 08 03.3 +1.1**
comp=Z,36nm,0.9s,mb5.3
BILL Bilibino 35.20 37 *e*P **P** **04 08 03.3 +1.1**
BILL pmax pmax
comp=Z,36nm,0.9s,mb5.3
VOR Voronezh 35.44 293 P **P** **04 08 04.0 -0.3**
VOR pmax pmax
comp=Z,140nm,1.0s,mb5.8
OBN Obninsk 35.55 300 *e*P **P** **04 08 04.4 -0.9**
comp=Z,48nm,0.9s,mb5.4
OBN LR LR
comp=Z,7µm,19.0s,MS5.4
OBN Obninsk 35.55 300⇑ *e*P **P** **04 08 05.1 -0.2**
OBN *e* 04 09 19.5
OBN *i* S **S** **04 13 46.1 +4.8**
OBN pmax pmax
comp=Z,84nm,1.7s,mb5.4
OBN MLR MLR
comp=Z,4µm,14.0s,MS5.4
OBN Obninsk 35.55 300 P **P** **04 08 05.6 +0.3**
comp=Z,258nm,0.9s,mb6.2,SNR=5.0
VSR Storozhevoye 35.67 292 *e*P **P** **04 08 05.4 -1.0**
VSR *i* *SP sP 04 08 12.1 +4.4
VSR *e*S **S** **04 13 41.9 -1.4**
VSR pmax pmax
comp=Z,40nm,0.8s,mb5.4
VSR pmax pmax
comp=N,40nm,1.2s
VSR pmax pmax
comp=E,50nm,1.0s
VSR smax
comp=N,280nm,2.8s
VSR smax
comp=Z,80nm,1.5s
VSR smax
comp=E,70nm,1.1s
VSR MLR MLR
comp=Z,10µm,11.0s,MS5.8
VSR MLR MLR
comp=N,5µm,12.0s,MS5.7
VSR MLR MLR
comp=E,7µm,14.0s,MS5.7
VORD Divnogorie 35.71 292 *e*P **P** **04 08 05.7 -1.0**
VORD *e**SP sP 04 08 12.7 +4.7
VORD *e*S **S** **04 13 43.3 -0.5**
VORD pmax pmax
comp=Z,70nm,0.9s,mb5.6
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,50nm,0.8s
VORD smax
comp=E,630nm,4.5s
VORD smax
comp=Z,90nm,1.5s
VORD smax
comp=N,450nm,2.3s
VORD MLR MLR
comp=Z,11µm,13.0s,MS5.8
VORD MLR MLR
comp=N,4µm,12.0s,MS5.6
VORD MLR MLR

comp=E,5µm,10.0s,MS5.6
JOF Joensuu 35.72 314 *e*P **P** **04 08 04.7 -1.9**
JOF Joensuu 35.72 314 *e*p **P** **04 08 04.7 -1.9**
comp=E,1.4nm,0.4s,mb4.2
PET Petropavlovsk 35.75 64 *e*P **P** **04 08 07.2 +0.1**
comp=E,52nm,1.1s,mb5.4
PET LR LR
comp=Z,2µm,20.0s,MS4.8
PET Petropavlovsk 35.75 64 *d i*P **P** **04 08 10.1 +3.0**
PET *e*S **S** **04 13 42.1 -2.4**
PET pmax pmax
comp=Z,600nm,2.6s,mb6.1
PET pmax pmax
comp=Z,200nm,12.6s
PET pmax pmax
comp=Z,85nm,1.2s,mb5.5
PET MLR MLR
comp=Z,4µm,13.0s,MS5.4
KEV Kevo 36.04 326 *e*P **P** **04 08 08.1 -1.3**
comp=Z,68nm,0.9s,mb5.6
KEV LR LR
comp=Z,4µm,22.0s,MS5.2
KEV Kevo 36.04 326 *e*P **P** **04 08 08.1 -1.3**
KEV pmax pmax
comp=Z,68nm,0.9s,mb5.6
KEV MLR MLR
comp=Z,4µm,22.0s,MS5.2
KEV Kevo 36.04 326 *e*p **P** **04 08 07.9 -1.5**
comp=Z,2.7nm,0.5s,mb4.4
VIS Vishakhapatnam 36.40 204 *e*PKP **P** **04 08 12.6 -0.3**
VIS AMb AMB 04 08 19.9
comp=Z,36nm,1.1s,mb5.2
ARCES ARCESS Array B 36.60 326 P **P** **04 08 13.7 -0.4**
comp=Z,31nm,0.8s,mb5.2,baz=52,slow=6.5,SNR=34
ARCES LR LR 04 24 56.7
comp=Z,4µm,20.0s,MS5.2,baz=257,slow=39
ARCES ARCESS Array B 36.60 326 P **P** **04 08 13.7 -0.4**
ARCES pmax pmax
comp=Z,31nm,0.8s
ARCES MLR MLR
comp=Z,4µm,20.0s
ARE0 ARCESS Array S 36.60 326 *e*P **P** **04 08 14.0 -0.1**
DGRG David-gareji 36.91 274 P **P** **04 08 18.1 +1.0**
PUL Pulkovo 37.10 309⇑ *e*P **P** **04 08 20.1 +1.7**
MTA Mtatsminda 37.12 275 P **P** **04 08 20.2 +1.3**
TBLG Delisi 37.14 275 *e*P **P** **04 08 19.1 +0.1**
TBLG Delisi 37.14 275 P **P** **04 08 19.2 +0.2**
KIV Kislovodsk 37.14 280 P **P** **04 08 20.4 +1.4**
comp=Z,731nm,1.0s,mb6.5,SNR=9.0
KIV Kislovodsk 37.14 280 *e*P **P** **04 08 19.2 +0.2**
comp=Z,142nm,1.0s,mb5.8
KIV LR LR
comp=Z,3µm,21.0s,MS5.0
KIV Kislovodsk 37.14 280⇑ *e*P **P** **04 08 19.2 +0.2**
KIV *e* 04 09 44.1
KIV *i* S **S** **04 14 05.6 -0.3**
KIV *i* SS SS 04 16 42.6 -5.3
KIV pmax pmax
comp=Z,106nm,1.2s,mb5.5
KIV MLR MLR
comp=Z,6µm,20.0s,MS5.4
GOR Gori 37.38 276 P **P** **04 08 21.9 +0.8**
KTK1 Kautokeino 37.49 325 *e*P **P** **04 08 21.9 +0.2**
KTK1 AMB AMB 04 08 24.0
comp=Z,221nm,1.8s,mb5.7
KTK1 *e*S **S** **04 14 08.5 -2.2**
KTK1 AMS AMS 04 25 35.2
comp=Z,15µm,18.7s,MS5.8
BJO Bjornoya 37.69 334 *e*P **P** **04 08 20.6 -2.7**
BJO *e*S **S** **04 14 15.0 +1.5**
BJO AMS AMS 04 27 55.6
comp=Z,6µm,17.6s,MS5.4
LATR Latur 37.79 215 *e*PKP **P** **04 08 23.1 -1.6**
LATR *ex* x 04 13 56.5
SPITS Spitsbergen Ar 37.82 341 P **P** **04 08 24.1 -0.3**
SPITS Spitsbergen Ar 37.82 341 P **P** **04 08 24.1 -0.3**
comp=Z,72nm,0.9s,mb5.4,baz=106,slow=28,SNR=24
SPITS Spitsbergen Ar 37.82 341 P **P** **04 08 24.1 -0.3**
SPITS pmax pmax
comp=Z,72nm,0.9s
HYB Hyderabad 38.05 211 *i* P **P** **04 08 25.5 -1.4**
HYB *e*S **S** **04 14 16.0 -4.1**
HYB LR LR 04 24 20.0
comp=Z,5.6nm,12.0s
GNI Garni 38.06 273 *e*P **P** **04 08 28.6 +1.8**
comp=Z,152nm,1.2s,mb5.6
GNI LR LR
comp=Z,7µm,22.0s,MS5.4
GNI Garni 38.06 273⇑ *e*P **P** **04 08 29.0 +2.1**
GNI pmax pmax
comp=Z,32nm,0.9s
GNI MLR MLR
comp=Z,5µm,17.0s
GNI Garni 38.06 273 P **P** **04 08 34.7 +7.9**
SNR=5.8
FINES FINESS Array B 38.50 313 P **P** **04 08 29.6 -0.7**
comp=Z,39nm,0.9s,mb5.1,baz=77,slow=7.1,SNR=62
FINES LR LR 04 26 11.4
comp=Z,6µm,18.7s,MS5.5,baz=75,slow=39
FINES FINESS Array B 38.50 313 P **P** **04 08 29.6 -0.7**
FINES pmax pmax
comp=Z,39nm,0.9s
FINES MLR MLR
comp=Z,6µm,18.7s
KBS Kingsbay 38.58 342 *e*P **P** **04 08 30.9 +0.2**
KBS *e*S **S** **04 14 27.8 +0.8**
KBS *e*SS SS 04 17 17.7 +1.9
KBS AMS AMS 04 28 01.1
comp=Z,4µm,14.2s,MS5.4
KBS Kingsbay 38.58 342 *e*P **P** **04 08 30.2 -0.6**
comp=Z,103nm,1.1s,mb5.5
KBS LR LR
comp=Z,5µm,19.0s,MS5.3
KBS Kingsbay 38.58 342 *e*P **P** **04 08 30.2 -0.6**
KBS pmax pmax
comp=Z,103nm,1.1s,mb5.5
KBS MLR MLR
comp=Z,5µm,19.0s,MS5.3
POO Poona 38.69 219 *e*PKP **P** **04 08 32.5 +0.2**
POO AMb AMB 04 08 36.9
comp=Z,72nm,1.9s,mb5.1
TRO Tromso 38.83 327 *e*P **P** **04 08 34.2 +1.3**
TRO AMB AMB 04 08 41.1
comp=Z,76nm,1.9s,mb5.1
TRO *e*ScP ScP 04 14 32.0 -0.6
TRO *e*SS SS 04 17 24.7 +3.6
TRO AMS AMS 04 26 22.4
comp=Z,4µm,16.1s,MS5.4
SOC Sochi 39.14 281 *d i*P **P** **04 08 37.1 +1.2**
SOC *e**PP pP 04 08 39.0 +2.2
SOC *e**SP sP 04 08 41.1 +3.9
SOC *e* 04 10 04.2
SOC *e*PPP 04 10 26.0
SOC *e* 04 10 43.8
SOC *e*S **S** **04 14 36.8 +0.7**
SOC *e**SS sS 04 14 42.5 +4.8
SOC *e* 04 18 48.2
SOC pmax pmax
comp=Z,32nm,0.6s,mb5.2
SOC MLR MLR
comp=Z,7µm,13.0s,MS5.7
KAD Karad 39.67 217 *e*PKP **P** **04 08 39.8 -0.7**
KAD AMb AMB 04 08 45.0
comp=Z,51nm,1.1s,mb5.2
ANN Anapa 39.84 284 *c i*P **P** **04 08 41.2 -0.5**
ANN *i* *PP pP 04 08 45.1 +2.5
ANN *e* 04 10 11.7
ANN *i* S **S** **04 14 46.8 +0.2**
ANN *e*SS SS 04 17 41.5 -0.6
ANN pmax pmax
comp=Z,179nm,1.3s,mb5.6
ANN MLR MLR
comp=Z,4µm,13.0s,MS5.5
MICGM Minsk 40.39 302 *e*P **P** **04 08 45.0 -1.1**
MNK Minsk 40.41 302 *e*P **P** **04 08 45.0 -1.3**
MNK *e* 04 10 16.0
MNK *e*S **S** **04 14 54.0 -1.0**
MNK *e*SSS 04 18 20.0
MNK MLR MLR
comp=Z,16µm,14.0s,MS6.0
MNK MLR MLR
comp=E,17µm,10.0s
NACGM Naroch 40.78 303 *e*P **P** **04 08 46.0 -3.3**
BANOM Banah 40.96 246 P **P** **04 08 56.4 +5.2**
SNR=12

AKASG Malin Array Be 41.48 296 P **P** **04 08 53.8 -1.4**
comp=E,12nm,0.6s,mb4.7,baz=54,slow=8.6,SNR=41
AKASG LR LR 04 27 08.0
comp=E,7µm,19.6s,MS5.5,baz=65,slow=38
AKASG Malin Array Be 41.48 296 P **P** **04 08 53.8 -1.3**
AKASG pmax pmax
comp=Z,12nm,0.6s
AKASG MLR MLR
comp=Z,7µm,19.6s
AKBB Malin Array Si 41.48 296 *e*P **P** **04 08 54.3 -0.8**
KIEV Kiev 41.49 296 *e*P **P** **04 08 54.3 -0.9**
comp=Z,24nm,0.9s,mb4.8
KIEV LR LR
comp=Z,4µm,22.0s,MS5.3
KIEV Kiev 41.49 296 *e*P **P** **04 08 54.3 -0.9**
KIEV pmax pmax
comp=Z,25nm,0.9s,mb4.8
KIEV MLR MLR
comp=Z,4µm,22.0s,MS5.3
MOR8 Moi Rana 41.58 323 *e*P **P** **04 08 54.1 -1.6**
MOR8 AMB AMB 04 08 56.3
comp=Z,66nm,1.1s,mb5.2
SIM Simferopol' 41.72 286 *ce*P **P** **04 08 56.6 -0.6**
SIM 04 10 35.1
SIM S **S** **04 15 15.7 +1.1**
SIM SS SS 04 18 13.1 -6.5
SIM pmax pmax
comp=Z,63nm,1.1s,mb5.2
SIM MLR MLR
comp=Z,3µm,21.0s,MS5.2
HATD Hatta, Dubai 41.91 246 P **P** **04 09 03.9 +5.0**
SNR=6.4
NAZ Nazwa, Dubai 42.05 246 P **P** **04 09 03.7 +3.6**
SNR=11
ASHO Ashiyiah 42.06 246 P **P** **04 09 01.9 +1.7**
SNR=21
HOQ Hoqain 42.24 243 P **P** **04 09 04.2 +2.5**
SNR=13
SMDO Samad 42.26 242 P **P** **04 09 07.4 +5.6**
SNR=13
ASUD Al Ashush, Dub 42.52 246 P **P** **04 09 08.7 +4.8**
SNR=9.4
BHD Baghdad 42.70 265 *i* x **P** **04 09 07.0 +1.7**
BHD *i* x PP 04 10 42.0 -2.1
BHD *i* x **S** **04 15 28.3 -1.0**
ARQ Araqi 42.87 244 P **P** **04 09 11.7 +4.9**
SNR=23
BSY Bisya 42.97 243 P **P** **04 09 13.6 +6.0**
SNR=8.0
MALT Malatya 43.06 276 *e*P **P** **04 09 08.7 +0.5**
comp=Z,85nm,1.1s,mb5.4
MALT *e*PcP PcP 04 10 57.9 -0.3
MALT LR LR
comp=Z,5µm,20.0s,MS5.4
MALT Malatya 43.06 276 *e*P **P** **04 09 08.7 +0.5**
MALT *e* 04 10 57.9
MALT pmax pmax
comp=Z,85nm,1.1s,mb5.4
MALT MLR MLR
comp=Z,5µm,20.0s,MS5.4
MALT Malatya 43.06 276 ⇓ *i*P **P** **04 09 10.9 +2.7**
MALT Malatya 43.06 276 P **P** **04 09 09.0 +0.8**
comp=Z,956nmcomp=Z,72nm,1.2s,mb5.3
NSS Namsos 43.21 321 *e*P **P** **04 09 07.8 -1.2**
NSS *e*SS SS 04 18 50.4 +2.2
NSS AMS AMS 04 28 45.4
comp=Z,8µm,16.5s,MS5.7
MIB Mutribah 43.32 259 *e*P **P** **04 09 09.7 -0.7**
MIB AMb AMB 04 09 16.1
comp=Z,397nm,1.0s,mb6.1
KBD Kabd 43.56 258 *e*P **P** **04 09 11.6 -0.8**
KBD AMb AMB 04 09 18.3
comp=Z,195nm,1.0s,mb5.8
KIS Kishinev 43.66 292 *e*P **P** **04 09 13.0 +0.1**
KIS Kishinev 43.66 292 *e*PP PP 04 10 56.0 +1.8
KIS *e*S **S** **04 15 44.0 +0.9**
KIS *e*ScS 04 18 00.0
KIS *e*LQ 04 21 40.0
KIS LRM 04 28 40.0
comp=Z,10µm,13.0s
QRN Al-Qurain 43.74 258 *e*P **P** **04 09 12.6 -1.2**
QRN AMb AMB 04 09 19.5
comp=Z,335nm,1.0s,mb6.0
NAY Al-Naaiem 43.78 259 *e*P **P** **04 09 13.0 -1.1**
NAY AMb AMB 04 09 19.6
comp=Z,306nm,1.0s,mb6.0
RDF Al-Radifah 43.83 258 *e*P **P** **04 09 14.0 -0.5**
RDF AMb AMB 04 09 20.6
comp=Z,430nm,0.9s,mb6.2
TLCR 44.69 290⇑ P **P** **04 09 21.5 +0.3**
TLCR 44.69 290⇑ *i*P **P** **04 09 21.5 +0.3**
LVV L'vov 44.78 298⇑ *i*P **P** **04 09 23.1 +1.2**
LVV *e*S **S** **04 16 02.1 +2.8**
LVV *e* 04 19 23.7
LVV MLR MLR
comp=Z,6µm,14.0s,MS5.7
LVV MLR MLR
comp=N,4µm,15.0s,MS5.7
LVV MLR MLR
comp=E,5µm,15.0s,MS5.7
WAR Warsaw 45.08 302 *e*P **P** **04 09 25.9 +1.7**
WAR LMZ 04 28 01.2
comp=E,6µm,18.3s
CFR Carcaliu 45.08 290⇑ P **P** **04 09 25.4 +1.0**
CFR Carcaliu 45.08 290⇑ *i*P **P** **04 09 25.4 +1.1**
BR131 Keskin Array S 45.09 281 *e*P **P** **04 09 24.4 -0.1**
comp=E,44nm,0.9s,mb5.3
BR131 LR LR
comp=Z,3µm,22.0s,MS5.2
BRTR Keskin Array B 45.09 281 P **P** **04 09 24.1 -0.3**
comp=Z,21nm,0.9s,mb5.0,baz=72,slow=4.0,SNR=72
BRTR LR LR 04 31 57.6
comp=Z,3µm,18.2s,MS5.3,baz=224,slow=41
BRTR Keskin Array B 45.09 281 P **P** **04 09 24.1 -0.4**
BRTR pmax pmax
comp=Z,21nm,0.9s
BRTR MLR MLR
comp=Z,3µm,18.2s
TESR 45.17 293 ⇓ P **P** **04 09 26.0 +1.0**
TESR 45.17 293 ⇓ *i*P **P** **04 09 26.0 +1.0**
NOA NORSAR Array B 45.17 317 P **P** **04 09 24.1 -0.7**
comp=Z,66nm,0.8s,mb5.5,baz=60,slow=8.0,SNR=198
NOA LR LR 04 29 43.1
comp=Z,6µm,18.1s,MS5.6,baz=55,slow=38
NOA NORSAR Array B 45.17 317 P **P** **04 09 24.1 -0.7**
NOA pmax pmax
comp=Z,66nm,0.8s
NOA MLR MLR
comp=Z,6µm,18.2s
DAG Danmarks Havn 45.27 343⇑ *i*P **P** **04 09 25.5 0.0**
comp=Z,127nm,1.4s,mb5.6
TIRR Tirgusor 45.34 289⇑ P **P** **04 09 20.6 -5.8**
TIRR Tirgusor 45.34 289⇑ *i*P **P** **04 09 20.6 -5.8**
BUR08 Bucovina Ar. S 45.34 295 *e*P **P** **04 09 26.3 -0.1**
BUR01 Bucovina Ar. S 45.35 295 P **P** **04 09 27.3 +0.9**
BURAR Bucovina Array 45.35 295⇑ P **P** **04 09 27.3 +0.9**
BURAR Bucovina Array 45.35 295 P **P** **04 09 26.9 +0.5**
BURAR Bucovina Array 45.35 295⇑ *i*P **P** **04 09 27.3 +0.9**
VRI Vrinciaia 45.49 292 ⇓ P **P** **04 09 29.0 +1.5**
VRI Vrinciaia 45.49 292 ⇓ *i*P **P** **04 09 29.0 +1.4**
PLOR Plostina 45.55 292⇑ P **P** **04 09 33.4 +5.4**
PLOR Plostina 45.55 292⇑ *i*P **P** **04 09 33.4 +5.4**
TNA Tin City 45.58 36 *e*P **P** **04 09 29.4 +1.4**
comp=Z,88nm,1.1s,mb5.6
KWP Kalwaria Pacla 45.60 298 *e*P **P** **04 09 29.5 +1.1**
KWP LMZ 04 29 35.9
KWP Kalwaria Pacla 45.60 298 *e*P **P** **04 09 28.9 +0.5**
comp=Z,90nm,1.0s,mb5.7
KWP LR LR
comp=Z,3µm,20.0s,MS5.2
KWP Kalwaria Pacla 45.60 298 *e*P **P** **04 09 28.9 +0.5**
KWP pmax pmax
comp=Z,90nm,1.0s,mb5.7
KWP MLR MLR
comp=Z,3µm,20.0s,MS5.2
KWP Kalwaria Pacla 45.60 298 ⇓ *i*P **P** **04 09 30.0 +1.6**
OSL Oslo 45.95 316 *e*P **P** **04 09 31.6 +0.6**
MLR Muntele Rosu 46.16 292 ⇓ P **P** **04 09 34.3 +1.5**
MLR Muntele Rosu 46.16 292 ⇓ *i*P **P** **04 09 34.3 +1.5**
DOPR Dopca 46.20 293⇑ *i*P **P** **04 09 35.4 +2.3**
UZH Uzhgorod 46.39 297 *e*P **P** **04 09 34.8 +0.2**
UZH *e* 04 11 14.2
UZH *e* 04 11 27.8
UZH *i* S **S** **04 16 17.4 -5.1**
UZH *e* 04 19 20.0
UZH *i* SS SS 04 19 41.6 -6.0
GKP Gorka Klasztor 46.46 305 *e*P **P** **04 09 35.6 +0.5**
GKP *e*PP PP 04 11 22.2 -1.6
GKP *e*S **S** **04 16 19.9 -3.5**
GKP *e*sS sS 04 16 26.6 +1.6
GKP LMZ 04 30 48.3
comp=Z,15µm,16.6s
STHS Stebnicka Huta 46.51 299 *e*P **P** **04 09 37.2 +1.6**
comp=Z,13nm,1.1s,mb4.8
STHS *e* 04 09 44.3
STHS Stebnicka Huta 46.51 299 *e*P **P** **04 09 37.2 +1.6**
STHS *e* 04 09 44.3
STHS pmax pmax
comp=Z,13nm,1.1s,mb4.8
STHS Stebnicka Huta 46.51 299 *e*P **P** **04 09 37.2 +1.6**
STHS *e*pP pP 04 09 44.3 +7.8
TRPA Tarpa 46.54 297 ⇓ *i*P **P** **04 09 37.2 +1.4**
JMIC Jan Mayen 46.57 334 *e*S **S** **04 16 27.8 +3.2**
JMIC *e*SS SS 04 19 55.9 +6.0
JMIC AMS AMS 04 31 15.9
comp=Z,3µm,14.0s,MS5.4
KONO Kongsberg 46.58 316 *e*P **P** **04 09 32.7 -3.3**
KONO AMB AMB 04 09 41.9
comp=Z,44nm,2.2s,mb5.0
KONO *e*S **S** **04 16 25.0 -0.1**
KONO *e*SS SS 04 19 54.8 +4.4
KONO AMS AMS 04 31 11.5
comp=Z,13µm,14.4s,MS6.0
KONO Kongsberg 46.58 316 PFAKE 04 09 50.0 +14
KONO LR LR
comp=Z,6µm,21.0s,MS5.5
CRVS Cervenica-Dubn 46.69 298 *e*P **P** **04 09 37.2 +0.3**
comp=Z,19nm,1.3s,mb4.9
CRVS *e* 04 09 42.4
CRVS *e*SS SS 04 19 58.7 +6.3
CRVS LR LR
comp=Z,3µm,17.6s,MS5.3
CRVS Cervenica-Dubn 46.69 298 *e*P **P** **04 09 37.2 +0.3**
CRVS *e* 04 09 42.4
CRVS pmax pmax
comp=Z,19nm,1.3s,mb4.9
CRVS Cervenica-Dubn 46.69 298 *e*P **P** **04 09 37.2 +0.3**
CRVS *e*pP pP 04 09 42.4 +4.5
CRVS *e*SS SS 04 19 58.7 +6.3
VOIR 46.70 292 ⇓ P **P** **04 09 38.7 +1.6**
VOIR 46.70 292 ⇓ P **P** **04 09 38.9 +1.8**
VOIR 46.70 292 ⇓ *i*P **P** **04 09 38.7 +1.6**
OJC Ojcow 46.83 300 *e*P **P** **04 09 37.4 -0.7**
OJC *e*S **S** **04 16 28.7 -0.1**
OJC L 04 28 57.8
comp=Z,3.9nm,21.6s
KULM Kulim 46.87 177 *e*P **P** **04 09 40.1 +1.4**
comp=Z,96nm,1.1s,mb5.6
KULM LR LR
comp=Z,4µm,19.0s,MS5.5
KULM Kulim 46.87 177 P **P** **04 09 40.7 +2.1**
KULM Kulim 46.87 177 P **P** **04 09 40.2 +1.6**
comp=Z,1µmcomp=Z,77nm,1.2s,mb5.5
KTGM Kuala Trenggan 46.96 173 P **P** **04 09 41.7 +2.3**
NIE Niedzica 47.01 299 *e*P **P** **04 09 39.8 +0.3**
PALK Pallekele 47.09 204 *e*P **P** **04 09 40.9 +0.5**
comp=Z,38nm,1.1s,mb5.2
PALK Pallekele 47.09 204 *e*P **P** **04 09 40.9 +0.5**
PALK pmax pmax
comp=Z,38nm,1.1s,mb5.2
HWQ Hawqa 47.20 273 *e*P **P** **04 09 42.1 +1.0**
DRGR 47.22 295⇑ P **P** **04 09 42.1 +1.0**
DRGR 47.22 295⇑ *i*P **P** **04 09 42.1 +1.0**
FOO Floro 47.41 320 *e*P **P** **04 09 39.5 -2.8**
FOO *e*S **S** **04 16 38.1 +1.4**
FOO *e*SS SS 04 20 06.2 +2.5
FOO AMS AMS 04 31 35.0
comp=Z,14µm,14.4s,MS6.1
KECS Kecovo 47.46 298 *e*P **P** **04 09 43.8 +0.8**
comp=Z,13nm,1.1s,mb4.8
KECS *e* 04 09 48.3
KECS Kecovo 47.46 298 *e*P **P** **04 09 43.8 +0.8**
KECS *e* 04 09 48.3
KECS pmax pmax
comp=Z,13nm,1.1s,mb4.8
KECS Kecovo 47.46 298 *e*P **P** **04 09 43.8 +0.8**
KECS *e*pP pP 04 09 48.3 +4.4
SZH Strazhica 47.49 289 P **P** **04 09 48.9 +5.6**
JMB Yambol 47.60 288 P **P** **04 09 44.2 0.0**
JMB Yambol 47.60 288 P **P** **04 09 44.2 0.0**
BHL Bhannes 47.63 273 *e*P **P** **04 09 44.8 +0.3**
RGN Rugen 47.68 308 *e*P **P** **04 09 44.8 +0.2**
comp=Z,68nm,0.8s,mb5.7
IPM Ipoh 47.68 176 P **P** **04 09 45.7 +0.7**
comp=Z,652nmcomp=Z,38nm,1.2s,mb5.3
KDM Kudat 47.74 155 P **P** **04 09 48.2 +2.7**
RAC Raciborz 47.76 301 *e*P **P** **04 09 45.4 +0.1**
RAC *e*S **S** **04 16 42.2 +0.2**
RAC Raciborz 47.76 301 *e*P **P** **04 09 45.4 +0.1**
RAC *e*S **S** **04 16 42.2 +0.2**
RAC MLR MLR
comp=E,5µm,14.0s
RAC MLR MLR
comp=Z,3µm,14.0s,MS5.4
RCY Rachaya 47.81 272 *e*P **P** **04 09 46.4 +0.4**
PHNC Paralimni 47.89 275 P **P** **04 09 48.2 +1.7**
OKC Ostrava-Krasne 47.92 301 *e*P **P** **04 09 46.9 +0.3**
OKC *e*S **S** **04 16 47.2 +2.8**
OKC MLR MLR
comp=Z,5µm,11.7s,MS5.7
OKC Ostrava-Krasne 47.92 301 *e*P **P** **04 09 46.9 +0.3**
OKC *e*S **S** **04 16 47.2 +2.8**
OKC AMS AMS 04 31 10.0
comp=Z,5µm,11.7s
BER Bergen 47.97 318 *e*P **P** **04 09 46.4 -0.4**
BER *e*S **S** **04 16 47.1 +2.4**
BER *e*SS SS 04 20 16.4 +3.6
BER AMS AMS 04 31 55.9
comp=Z,11µm,14.8s,MS6.0
PSZ Piszkesteto 48.11 298 *e*P **P** **04 09 50.0 +1.9**
comp=Z,44nm,1.4s,mb5.3
PSZ LR LR
comp=Z,3µm,22.0s,MS5.3
PSZ Piszkesteto 48.11 298 ⇓ P **P** **04 09 45.9 -2.1**
PSZ Piszkesteto 48.11 298 ⇓ *i*P **P** **04 09 45.9 -2.1**
PSZ Piszkesteto 48.11 298 ⇓ *e*P **P** **04 09 49.6 +1.6**
MAMC Mammari 48.28 276 P **P** **04 09 50.6 +1.1**
MORC Moravsky Berou 48.28 301 *e*P **P** **04 09 49.3 0.0**
comp=Z,39nm,1.3s,mb5.3
MORC Moravsky Berou 48.28 301 *e*P **P** **04 09 49.3 0.0**
MORC pmax pmax
comp=Z,39nm,1.3s,mb5.3
MORC Moravsky Berou 48.28 301⇑ *i*P **P** **04 09 50.2 +0.9**
KSP Ksiaz 48.31 303 *e*P **P** **04 09 50.5 +0.9**
KSP *e*PP PP 04 11 40.9 -0.8
KSP LMZ 04 31 49.1
comp=Z,17µm,14.9s
KSP Ksiaz 48.31 303 *e*P **P** **04 09 49.7 +0.2**
KSP *e* 04 11 38.4
KSP *e*S **S** **04 16 49.8 0.0**
KSP *e*SS SS 04 20 18.7 +0.1
KSP MLR MLR
comp=Z,10µm,19.9s,MS5.8
VYHS Vyhne 48.34 299 *e*P **P** **04 09 50.1 +0.3**
comp=Z,17nm,1.1s,mb5.0
VYHS *e* 04 09 55.4
VYHS *e*S **S** **04 16 52.1 +1.8**
VYHS *e*SS SS 04 20 23.3 +4.0
VYHS LR LR
comp=Z,7µm,15.4s,MS5.8
VYHS Vyhne 48.34 299 *e*P **P** **04 09 50.1 +0.3**
VYHS *e* 04 09 55.4
VYHS *e*S **S** **04 16 52.1 +1.8**
VYHS pmax pmax
comp=Z,17nm,1.1s,mb5.0
VYHS MLR MLR
comp=Z,7µm,15.4s,MS5.8
VYHS Vyhne 48.34 299 *e*P **P** **04 09 50.1 +0.3**
VYHS *e*pP pP 04 09 55.4 +4.6
VYHS *e*S **S** **04 16 52.1 +1.8**
VYHS *e*SS SS 04 20 23.3 +4.0
CSS Prodhromos 48.35 276 P **P** **04 09 50.4 +0.4**
comp=Z,1.1nm,1.0s,mb3.8
MMAI Mount Meron Ar 48.39 272 P **P** **04 09 49.0 -1.4**
comp=Z,8.6nm,0.5s,mb5.0,baz=52,slow=9.5,SNR=20
MMAI LR LR 04 30 50.7
comp=Z,2µm,19.7s,MS5.1,baz=5.0,slow=37

KKM Kota Kinabalu 48.42 156 *e*P **P 04 09 51.9 +1.2**
comp=Z,22nm,1.0s,mb5.2
KKM LR LR
comp=Z,4μm,21.0s,MS5.3
KKM Kota Kinabalu 48.42 156 P **P 04 09 53.2 +2.5**
KOLL Kolacno 48.53 299 *e*P **P 04 09 53.1 +1.9**
KOLL Kolacno 48.53 299 *e*P **P 04 09 53.1 +1.9**
BZS Buzias 48.53 294 ⇑P **P 04 09 51.4 +0.1**
BZS Buzias 48.53 294 ⇑*i*P **P 04 09 51.4 +0.1**
DPC Dobruska-Polom 48.58 302 *e*P **P 04 09 52.3 +0.7**
DPC *e* 04 11 42.1
DPC MLR MLR
comp=Z,6μm,10.3s,MS5.9
DPC Dobruska-Polom 48.58 302 *e*P **P 04 09 52.3 +0.7**
DPC *e*PP PP 04 11 42.1 -2.0
DPC AMS AMS 04 33 10.0
comp=Z,6μm,10.3s
RUE Ruedersdorf 48.64 306 *e*P **P 04 09 52.0 0.0**
comp=Z,71nm,1.1s,mb5.6
RUE *e*S **S 04 16 51.3 -3.1**
RUE Ruedersdorf 48.64 306 *e*P **P 04 09 50.0 -2.0**
comp=Z,46nm,1.0s,mb5.5
UPC Upice 48.65 303 *e*P **P 04 09 52.6 +0.4**
UPC Upice 48.65 303 *e*P **P 04 09 52.6 +0.4**
ALFC Alevga 48.66 276 P **P 04 09 51.6 -0.9**
comp=Z,0.6nm,0.8s
KDZ Kurdzhali 48.79 288 P **P 04 09 54.8 +1.5**
TPTI 48.84 181 P **P 04 09 53.1 -0.9**
comp=Z,20nm,1.2s,mb5.0
ALN Alexandroupoli 48.89 287 P **P 04 09 52.4 -1.7**
ALN Alexandroupoli 48.89 287 P **P 04 09 52.4 -1.7**
PLD Plovdiv 48.92 289 P **P 04 09 53.8 -0.5**
PLD Plovdiv 48.92 289 P **P 04 09 53.8 -0.5**
FRIM Kepong 48.94 175 P **P 04 09 57.0 +2.3**
PGB Panagyurishte 48.95 290 *e*P **P 04 10 01.6 +7.0**
PPCY Paphos 49.00 276 P **P 04 09 52.9 -2.2**
VRAC Vranov 49.05 301 ⇓P **P 04 09 56.8 +1.5**
VRAC Vranov 49.05 301 ⇓*i*P **P 04 09 56.8 +1.5**
SDKM Sandakan 49.06 155 P **P 04 09 57.8 +2.2**
RZN Rozhen 49.17 288 P **P 04 10 03.6 +7.3**
PVCC Panska Ves 49.38 303 *e*P **P 04 09 58.2 +0.4**
PVCC *e* 04 11 48.3
PVCC MLR MLR
comp=Z,7μm,12.2s,MS5.8
PVCC Panska Ves 49.38 303 *e*P **P 04 09 58.2 +0.4**
PVCC *e*PP PP 04 11 48.3 -3.1
PVCC AMS AMS 04 32 30.0
comp=Z,7μm,12.2s
ZST Bratislava 49.45 300 *e*P **P 04 10 00.0 +1.7**
comp=Z,26nm,1.5s,mb5.0
ZST *e* 04 10 07.3
ZST *e*S **S 04 17 14.2 +8.3**
ZST LR LR
comp=Z,8μm,13.2s,MS5.9
ZST Bratislava 49.45 300 *e*P **P 04 10 00.0 +1.7**
ZST *e* 04 10 07.3
ZST *e*S **S 04 17 14.2 +8.3**
ZST pmax pmax
comp=Z,26nm,1.5s,mb5.0
ZST MLR MLR
comp=Z,8μm,13.2s,MS5.9
ZST Bratislava 49.45 300 *e*P **P 04 10 00.0 +1.7**
ZST *e*pP pP 04 10 07.3 +8.0
ZST *e*S **S 04 17 14.2 +8.3**
BSEG Bad Segeberg 49.48 309 *e*P **P 04 09 58.7 +0.3**
comp=Z,73nm,1.0s,mb5.7
BSEG Bad Segeberg 49.48 309 *e*P **P 04 09 58.7 +0.3**
BSEG pmax pmax
comp=Z,73nm,1.0s,mb5.7
VTS Vitosha 49.48 290 ⇑P **P 04 09 59.7 +1.0**
VTS Vitosha 49.48 290 ⇑*i*P **P 04 09 59.7 +1.1**
VTS Vitosha 49.48 290 P **P 04 09 59.6 +1.0**
BRG Berggiesshubel 49.50 304 *e*P **P 04 09 58.4 -0.2**
comp=Z,46nm,1.5s,mb5.3
BRG *e*S **S 04 17 03.3 -3.2**
BRG Berggiesshubel 49.50 304 *i*P **P 04 09 59.4 +0.7**
comp=Z,47nm,1.5s,mb5.3
BRG PP PP 04 11 52.0 -0.5
BRG SS SS 04 20 36.0 -1.8
BRG
comp=N,8μm,12.8s
BRG
comp=E,10μm,15.0s
BRG
comp=Z,6μm,15.0s
BRG Berggiesshubel 49.50 304 *i*P **P 04 09 59.4 +0.8**
BRG 04 11 52.0
BRG SS SS 04 20 36.0 -1.8
BRG pmax pmax
comp=Z,28nm,1.5s,mb5.1
BRG MLR MLR
comp=N,5μm,12.8s,MS5.9
BRG MLR MLR
comp=E,6μm,15.0s,MS5.9
BRG MLR MLR
comp=Z,4μm,15.0s,MS5.5
TREC Trest 49.65 302 *e*P **P 04 10 00.3 +0.5**
TREC *e* 04 11 53.0
TREC MLR MLR
comp=Z,6μm,13.4s,MS5.8
TREC Trest 49.65 302 *e*P **P 04 10 00.3 +0.5**
TREC *e*PP PP 04 11 53.0 -0.8
TREC AMS AMS 04 32 50.0
comp=Z,6μm,13.4s
CLL Collm 49.72 305 *e*P **P 04 09 59.9 -0.4**
comp=Z,44nm,1.2s,mb5.4
CLL *e*S **S 04 17 06.4 -3.2**
CLL Collm 49.72 305 *i*P **P 04 10 00.0 -0.3**
comp=Z,44nm,1.2s,mb5.4
CLL *e*S **S 04 17 09.0 -0.6**
CLL LR LR
comp=Z,10μm,19.0s,MS5.8
CLL Collm 49.72 305 *i*P **P 04 10 00.0 -0.3**
CLL *e*S **S 04 17 09.0 -0.6**
CLL pmax pmax
comp=Z,44nm,1.2s,mb5.4
CLL MLR MLR
comp=Z,10μm,19.0s,MS5.8
PRU Pruhonice 49.72 303 *e*P **P 04 10 01.2 +0.9**
PRU *e* 04 11 53.4
PRU *e*S **S 04 17 15.3 +5.6**
PRU MLR MLR
comp=Z,9μm,12.4s,MS6.0
PRU Pruhonice 49.72 303 *e*P **P 04 10 01.2 +0.9**
PRU *e*PP PP 04 11 53.4 -1.1
PRU *e*S **S 04 17 15.3 +5.6**
PRU AMS AMS 04 32 40.0
comp=Z,9μm,12.4s
KAVA Kavala 49.73 288 P **P 04 10 00.2 -0.3**
MMB Musomiste 49.81 289 P **P 04 10 02.6 +1.4**
PKSM Moragy 49.82 297 ⇓P **P 04 10 02.1 +1.0**
PKSM Moragy 49.82 297 ⇓*i*P **P 04 10 02.1 +0.9**
MYLDM Lahad Datu 49.85 153 P **P 04 10 02.8 +1.1**
comp=Z,2μmcomp=Z,63nm,1.6s,mb5.4
SOP Sopron 50.05 299⇑*e*P **P 04 10 04.4 +1.5**
SRS Serrai 50.19 289 P **P 04 10 02.3 -1.7**
SRS Serrai 50.19 289 P **P 04 10 02.3 -1.7**
KGM Kluang 50.26 173 P **P 04 10 07.3 +2.6**
COLD Coldfoot 50.33 28 *e*P **P 04 10 04.5 -0.3**
comp=Z,14nm,1.0s,mb4.9
DAV Davao City (W) 50.36 144 PFAKE 04 10 20.0 +14
DAV LR LR
comp=Z,3μm,20.0s,MS5.3
NRDL Niedersach Rie 50.44 308 *e*P **P 04 10 05.0 -0.8**
comp=Z,51nm,1.2s,mb5.4
NRDL *e*S **S 04 17 16.6 -3.0**
BTM Bintulu 50.45 161 P **P 04 10 08.7 +2.4**
SOH Sokhos 50.52 288 P **P 04 10 05.3 -1.2**
SOH Sokhos 50.52 288 P **P 04 10 05.3 -1.2**
MYKOM Kota Tinggi 50.52 173 P **P 04 10 09.4 +2.7**
MYKOM Kota Tinggi 50.52 173 P **P 04 10 09.7 +2.9**
comp=Z,884nmcomp=Z,57nm,1.3s,mb5.3
TANN Tannenbergstha 50.53 304 *e*P **P 04 10 06.5 0.0**
comp=Z,39nm,1.5s,mb5.1
TSM Tawau 50.53 154 P **P 04 10 08.5 +1.7**
KNT Kendrikon 50.56 289 P **P 04 10 06.0 -0.9**
KNT Kendrikon 50.56 289 P **P 04 10 06.0 -0.9**
WERD Werda 50.59 304 *e*P **P 04 10 06.9 0.0**
comp=Z,29nm,1.4s,mb5.0
GUNZ Gunzen 50.63 304 *e*P **P 04 10 07.3 +0.1**
comp=Z,40nm,1.5s,mb5.1
NKC Novy Kostel 50.65 304 *e*P **P 04 10 08.2 +0.8**
NKC *e*S **S 04 17 24.0 +1.4**
NKC MLR MLR
comp=Z,8μm,12.4s,MS6.0
NKC Novy Kostel 50.65 304 *e*P **P 04 10 08.2 +0.8**
NKC *e*S **S 04 17 24.0 +1.4**
NKC AMS AMS 04 33 40.0
comp=Z,8μm,12.4s
WERN Wernitzgruen 50.65 304 *e*P **P 04 10 07.5 +0.1**
comp=Z,44nm,1.4s,mb5.2
VAY Valandovo 50.65 289 P **P 04 10 06.5 -1.0**
VAY Valandovo 50.65 289 P **P 04 10 06.5 -1.0**
VAY Valandovo 50.65 289 *e*P **P 04 10 07.6 +0.1**
CLZ Clausthal 50.70 307 *e*P **P 04 10 07.9 +0.1**
comp=Z,43nm,1.1s,mb5.3
CLZ *e*S **S 04 17 21.2 -2.1**
CLZ Clausthal 50.70 307 *e*P **P 04 10 07.9 +0.1**
CLZ *e*S **S 04 17 21.2 -2.1**
CLZ pmax pmax
comp=Z,43nm,1.1s,mb5.3
LRW Lerwick 50.73 320 P **P 04 10 08.9 +1.0**
LRW AMB AMB 04 10 09.6
comp=Z,68nm,1.2s,mb5.5
LRW AMS AMS 04 33 54.7
comp=Z,6μm,17.1s
LRW Lerwick 50.73 320 *e*P **P 04 10 08.9 +1.0**
LRW AMB AMB 04 10 09.6
comp=Z,68nm,1.2s,mb5.5
LRW AMS AMS 04 33 54.7
comp=Z,6μm,17.1s,MS5.7
KHC Kasperske Hory 50.74 302 *e*P **P 04 10 08.9 +0.8**
comp=Z,19nm,1.0s,mb5.0
KHC Kasperske Hory 50.74 302 *e*P **P 04 10 08.5 +0.4**
KHC *e* 04 12 02.7
KHC *e*S **S 04 17 24.2 +0.3**
KHC MLR MLR
comp=Z,7μm,12.3s,MS5.9
KHC Kasperske Hory 50.74 302 *e*P **P 04 10 08.5 +0.4**
KHC *e*PP PP 04 12 02.7 -1.1
KHC *e*S **S 04 17 24.2 +0.3**
KHC AMS AMS 04 33 10.0
comp=Z,7μm,12.3s
GSI Gunungsitoli 50.78 181 P **P 04 10 06.4 -2.3**
comp=Z,79nm,1.0s,mb5.6
MOX Moxa 50.82 305 *e*P **P 04 10 09.3 +0.7**
comp=Z,51nm,1.4s,mb5.3
MOX *e* 04 10 57.6
MOX *e*S **S 04 17 31.0 +6.1**
MOX
comp=Z,5μm,19.0s
MOX Moxa 50.82 305 *e*P **P 04 10 08.7 +0.1**
comp=Z,63nm,1.5s,mb5.3
MOX *e*S **S 04 17 21.7 -3.2**
WAL1 Walls 50.83 321 *e*P **P 04 10 08.4 -0.1**
GEC2 GERESS Array S 50.85 302 *e*P **P 04 10 08.8 -0.1**
comp=Z,36nm,1.7s,mb5.0
GEC2 *e*S **S 04 17 21.9 -3.5**
GEC2 GERESS Array S 50.85 302 *e*P **P 04 10 08.8 -0.1**
GEC2 *e*S **S 04 17 21.9 -3.5**
GEC2 pmax pmax
comp=Z,36nm,1.7s,mb5.0
SKO Skopje 50.89 291 *e*P **P 04 10 07.9 -1.4**
GRG Griva 50.98 289 P **P 04 10 09.7 -0.3**
GRG Griva 50.98 289 P **P 04 10 09.7 -0.3**
SBUM Sibu 51.01 162 P **P 04 10 13.7 +3.3**
SBUM Sibu 51.01 162 P **P 04 10 10.7 +0.3**
comp=Z,1μmcomp=Z,54nm,1.1s,mb5.4
WET Wettzell 51.09 303 *e*P **P 04 10 11.0 +0.3**
comp=Z,50nm,1.7s,mb5.2
WET *e*S **S 04 17 25.4 -3.4**
WET Wettzell 51.09 303 *e*P **P 04 10 11.0 +0.3**
WET *e*S **S 04 17 25.4 -3.4**
WET pmax pmax
comp=Z,50nm,1.7s,mb5.2
AOS Alonnisos 51.27 286 P **P 04 10 11.6 -0.6**
AOS Alonnisos 51.27 286 P **P 04 10 11.6 -0.6**
MNSI Mandailing Nat 51.30 178 P **P 04 10 10.9 -1.7**
comp=Z,961nmcomp=Z,63nm,1.2s,mb5.4
TTA Tatalina 51.34 34 *e*P **P 04 10 12.4 +0.1**
comp=Z,56nm,1.4s,mb5.3
TTA Tatalina 51.34 34 *e*P **P 04 10 12.5 +0.1**
TTA pmax pmax
comp=Z,56nm,1.4s,mb5.3
KRUS Krusevo 51.39 290 *e*P **P 04 10 13.9 +0.9**
UBBA Unterbreizbach 51.52 306 *e*S **S 04 17 31.4 -3.2**
XOR Xorichti 51.55 287 P **P 04 10 13.3 -1.0**
XOR Xorichti 51.55 287 P **P 04 10 13.3 -1.0**
BIA Bitola 51.57 290 *e*P **P 04 10 15.1 +0.7**
GRA1 Grafenberg Arr 51.60 304 *e*P **P 04 10 15.0 +0.4**
comp=Z,122nm,1.6s,mb5.6
GRA1 LR LR
comp=Z,8μm,18.8s,MS5.7
GRF Grafenberg Arr 51.60 304 *e*P **P 04 10 15.0 +0.4**
comp=Z,122nm,1.6s,mb5.6
GRF *e*L 04 33 59.4
comp=Z,8μm,18.8s
GRF Grafenberg Arr 51.60 304 *e*P **P 04 10 15.0 +0.4**
GRF pmax pmax
comp=Z,122nm,1.6s,mb5.6
GRF MLR MLR
comp=Z,8μm,18.8s,MS5.7
GRF Grafenberg Arr 51.60 304 *e*P **P 04 10 15.0 +0.4**
GRF pmax pmax
comp=Z,122nm,1.6s,mb5.6
GRF MLR MLR
comp=Z,8μm,18.8s,MS5.7
SOFL Sornfelli, Far 51.66 325 P **P 04 10 15.3 +0.5**
SOFL AMB AMB 04 10 16.1
comp=Z,144nm,1.2s,mb5.8
SOFL AMS AMS 04 32 20.4
comp=Z,3μm,19.7s
SOFL Sornfelli, Far 51.66 325 *e*P **P 04 10 15.3 +0.5**
SOFL AMB AMB 04 10 16.1
comp=Z,144nm,1.2s,mb5.8
SOFL AMS AMS 04 32 20.4
comp=Z,3μm,19.7s,MS5.3
FNA Florina 51.69 290 P **P 04 10 13.8 -1.5**
FNA Florina 51.69 290 P **P 04 10 13.8 -1.5**
IBBN Ibbenburen 51.69 309 *e*P **P 04 10 14.8 -0.4**
comp=Z,56nm,1.0s,mb5.5
BKNI Bangkinang 51.81 176 P **P 04 10 17.1 +0.7**
comp=Z,2μmcomp=Z,216nm,1.1s,mb6.0
SUMG Summit 51.86 345 *e*P **P 04 10 15.7 -0.5**
comp=Z,44nm,1.3s,mb5.2
THL Klokotos Trika 52.11 288 P **P 04 10 16.3 -2.2**
ATHU Athens Univers 52.12 285 P **P 04 10 16.8 -1.8**
ATH Athens Observa 52.16 285 P **P 04 10 16.8 -2.0**
TIR Tirane 52.20 291 PFAKE 04 10 30.0 +11
TIR LR LR
comp=Z,6μm,19.0s,MS5.6
BPAW Bear Paw Mtn. 52.22 31 *e*P **P 04 10 18.8 -0.1**
comp=Z,5.7nm,1.2s,mb4.4
AGG Agios Georgios 52.28 287 P **P 04 10 17.6 -2.2**
AGG Agios Georgios 52.28 287 P **P 04 10 17.6 -2.2**
WTSB Winterswijk 52.37 309 *e*P **P 04 10 20.1 -0.1**
comp=Z,59nm,1.3s,mb5.3
BUG Bochum--Univer 52.47 308 *e*P **P 04 10 20.9 -0.1**
comp=Z,57nm,1.2s,mb5.4
FUR Furstenfeldbru 52.53 303 *e*P **P 04 10 21.7 +0.2**
comp=Z,108nm,1.8s,mb5.5
FUR Furstenfeldbru 52.53 303 *e*P **P 04 10 21.7 +0.2**
FUR pmax pmax
comp=Z,108nm,1.8s,mb5.5
PPI Padang Panjang 52.56 177 P **P 04 10 22.7 +0.7**
comp=Z,33nm,1.8s,mb5.0
LTK Loutraki 52.57 286 P **P 04 10 19.7 -2.2**
DSF Desfina 52.57 287 P **P 04 10 20.0 -1.9**
COLA College 52.65 29 *e*P **P 04 10 21.4 -0.7**
comp=Z,27nm,0.8s,mb5.2
COLA LR LR
comp=Z,3μm,22.0s,MS5.2
COLA College 52.65 29 *e*P **P 04 10 21.4 -0.7**
COLA pmax pmax
comp=Z,27nm,0.8s,mb5.2
COLA MLR MLR
comp=Z,3μm,22.0s,MS5.2
PPLA Purkeypile 52.66 33 *e*P **P 04 10 23.9 +1.7**
comp=Z,23nm,0.9s,mb5.1
TNS Taunus Mts 52.66 306 *e*P **P 04 10 22.6 +0.2**
comp=Z,75nm,1.3s,mb5.5
TNS *e*S **S 04 17 47.2 -3.1**
TNS Taunus Mts 52.66 306 *e*P **P 04 10 22.6 +0.2**
TNS *e*S **S 04 17 47.2 -3.1**
TNS pmax pmax
comp=Z,75nm,1.3s,mb5.5
DID Didima 52.75 285 P **P 04 10 22.9 -0.4**
TRI Trieste 52.79 299 PFAKE 04 10 40.0 +17
TRI LR LR
comp=Z,6μm,21.0s,MS5.6
TOD Tromm 52.88 305 *e*P **P 04 10 25.0 +1.0**
TRF Thorofare Moun 52.90 32 *e*P **P 04 10 24.2 +0.3**
comp=Z,6.1nm,0.9s,mb4.5
WTTA Wattenberg 52.92 302⇑*i*pP pP 04 10 25.7 +0.3
comp=Z,43nm,1.3s
EFP Efpalio 52.92 287 P **P 04 10 23.1 -1.4**
GUR Goura 52.99 286 P **P 04 10 22.7 -2.3**
LAKA Lakka 53.01 287 P **P 04 10 23.2 -1.9**
ILAR Eielson Array 53.02 29 P **P 04 10 24.1 -0.8**
comp=Z,40nm,1.0s,mb5.3,baz=314,slow=4.4,SNR=201
ILAR LR LR 04 34 27.1
comp=Z,4μm,18.6s,MS5.5,baz=153,slow=38
ILAR Eielson Array 53.02 29 P **P 04 10 24.1 -0.7**
ILAR pmax pmax
comp=Z,40nm,1.0s
ILAR MLR MLR
comp=Z,4μm,18.6s
PDSI Padang 53.02 177 P **P 04 10 25.8 +0.4**
comp=Z,8μmcomp=Z,52nm,1.1s,mb5.3
IGT Igoumenitsa 53.11 289 P **P 04 10 24.0 -1.9**
IGT Igoumenitsa 53.11 289 P **P 04 10 24.0 -1.9**
MCK McKinley 53.13 31 *e*P **P 04 10 26.1 +0.4**
comp=Z,60nm,1.2s,mb5.4
MCK McKinley 53.13 31 *e*P **P 04 10 26.1 +0.4**
MCK pmax pmax
comp=Z,60nm,1.2s,mb5.4
MCD Coleburn Disti 53.20 319 *e*P **P 04 10 26.3 0.0**
STKI Sintang 53.20 163 P **P 04 10 29.8 +3.1**
comp=Z,70nm,1.2s,mb5.5
STU Stuttgart 53.22 304 *e*P **P 04 10 26.3 -0.2**
comp=Z,60nm,1.2s,mb5.4
STU Stuttgart 53.22 304 *e*P **P 04 10 26.1 -0.4**
comp=Z,55nm,1.0s,mb5.4
STU Stuttgart 53.22 304 *e*P **P 04 10 26.2 -0.3**
STU pmax pmax
comp=Z,55nm,1.0s,mb5.4
MME1 Meikle Cairn 53.26 318⇓*e*P **P 04 10 27.4 +0.7**
ABH Alteburg 53.33 306 *e*P **P 04 10 28.5 +1.2**
MVH1 Achvaich 53.35 319⇓*e*P **P 04 10 28.3 +0.9**
SISI Saibi 53.40 179 P **P 04 10 29.3 +1.1**
comp=Z,148nm,1.0s,mb5.8
RSC Scourie 53.45 320 *e*P **P 04 10 29.4 +1.2**
HGN Heimansgroeve 53.55 308 *e*P **P 04 10 28.3 -0.6**
comp=Z,39nm,1.4s,mb5.1
HGN Heimansgroeve 53.55 308 *e*PP PP 04 12 39.1 +10
HGN Heimansgroeve 53.55 308 *e*S **S 04 18 04.2 +1.7**
FETA Feichten 53.55 302 *i*pP pP 04 10 30.5 +0.5
comp=Z,30nm,1.2s,SNR=7.3
GUMO Guam 53.56 118 PFAKE 04 10 40.0 +11
GUMO LR LR
comp=Z,2μm,19.0s,MS5.3
MEM Membach 53.62 308 P **P 04 10 29.9 +0.5**
comp=Z,20nm,1.3s,mb4.9
RUP Ruppelstein 53.69 306 *e*P **P 04 10 31.1 +1.1**
MDO Dochfour 53.74 319 *e*P **P 04 10 30.3 +0.1**
INK Inuvik 53.80 21 *e*P **P 04 10 30.0 -0.6**
comp=Z,60nm,0.9s,mb5.5
INK Inuvik 53.80 21 *e*P **P 04 10 30.0 -0.5**
INK pmax pmax
comp=Z,60nm,0.9s
DAVA Damuels 53.82 303⇑*i*P **P 04 10 30.9 -0.1**
comp=Z,39nm,0.9s,mb5.3,SNR=9.7
SPAK Spaichingen-Ko 53.86 304 *e*P **P 04 10 31.9 +0.7**
BFO Black Forest 53.94 304 *e*P **P 04 10 31.4 -0.5**
comp=Z,36nm,1.5s,mb5.1
BFO Black Forest 53.94 304 *e*P **P 04 10 31.4 -0.5**
BFO pmax pmax
comp=Z,36nm,1.5s,mb5.1
RRR Rubha Reidh 54.04 320 *e*P **P 04 10 33.2 +0.8**
GVD Gavdhos 54.04 282 *e*P **P 04 10 31.9 -0.9**
comp=Z,254nm,1.1s,mb6.1
ESY Stoneypath 54.04 317⇓*e*P **P 04 10 33.0 +0.5**
KAC Achnashellach 54.08 320 *e*P **P 04 10 33.1 +0.4**
BCLA Clavier 54.08 308 P **P 04 10 33.9 +1.1**
RSO Redoubt South 54.15 35 *e*P **P 04 10 34.6 +1.3**
WLF Walferdange 54.16 307 *e*P **P 04 10 33.8 +0.4**
comp=Z,49nm,1.8s,mb5.1
WLF Walferdange 54.16 307 PFAKE 04 10 50.0 +17
WLF LR LR
comp=Z,6μm,19.0s,MS5.7
EBH Black Hill 54.19 318⇓*e*P **P 04 10 34.2 +0.7**
EDI Edinburgh 54.28 317 *e*P **P 04 10 34.6 +0.4**
EDI AMB AMB 04 10 35.8
comp=Z,43nm,1.8s,mb5.1
EDI AMS AMS 04 36 18.5
comp=Z,8μm,15.9s,MS5.9
EBL Broad Law 54.32 317 *e*P **P 04 10 34.5 0.0**
KPL Plockton 54.33 320 *e*P **P 04 10 34.9 +0.3**
KPL AMB AMB 04 10 35.7
comp=Z,59nm,1.5s,mb5.3
KPL AMS AMS 04 35 53.0
comp=Z,4μm,16.9s,MS5.6
RRH Rhenigidale 54.34 321 *e*P **P 04 10 34.3 -0.3**
BORG Borgarnes 54.36 333 PFAKE 04 10 50.0 +15
BORG LR LR
comp=Z,3μm,20.0s,MS5.4
FELD Feldberg im Sc 54.40 304 *e*P **P 04 10 35.2 0.0**
CDF Champ du Feu 54.42 305 *e*P **P 04 10 35.7 +0.4**
comp=Z,38nm,1.2s,mb4.9
CDF Champ du Feu 54.42 305 *e*P **P 04 10 35.7 +0.4**
comp=Z,19nm,1.2s,mb4.9
CDF Champ du Feu 54.42 305 *e*P **P 04 10 35.7 +0.4**
CDF pmax pmax
comp=Z,19nm,1.2s,mb4.9
EAU Auchinoon 54.44 317⇓*e*P **P 04 10 35.1 -0.2**
SNF Seneffe 54.52 309 P **P 04 10 36.6 +0.6**
comp=Z,17nm,1.7s,mb4.8
GIVF Givet 54.52 308 *e*P **P 04 10 36.5 +0.4**
comp=Z,170nm,1.8s,mb5.5
GIVF Givet 54.52 308 *e*P **P 04 10 36.5 +0.4**
comp=Z,85nm,1.8s,mb5.5
GIVF Givet 54.52 308 *e*P **P 04 10 36.5 +0.4**
GIVF pmax pmax
comp=Z,85nm,1.8s,mb5.5
EAB Aberfoyle 54.58 318 *e*P **P 04 10 36.3 0.0**
XAL Allendale 54.58 316⇓*e*P **P 04 10 36.4 0.0**
PMR Palmer 54.60 33 *e*P **P 04 10 36.3 -0.2**
comp=Z,41nm,1.1s,mb5.4
PMR Palmer 54.60 33 *e*P **P 04 10 36.3 -0.1**
PMR pmax pmax
comp=Z,41nm,1.1s,mb5.4
ECH Echery 54.61 305 *e*P **P 04 10 37.4 +0.7**
ECH Echery 54.61 305 *e*P **P 04 10 36.5 -0.3**
comp=Z,10nm,0.8s,mb4.9
ECH LR LR
comp=Z,5μm,19.0s,MS5.6
ECH Echery 54.61 305 *e*P **P 04 10 36.5 -0.2**
ECH pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
ECH MLR MLR
comp=Z,5μm,19.0s,MS5.6
DOU Dourbes 54.64 308 P **P 04 10 37.5 +0.6**
comp=Z,10nm,1.9s,mb4.5
EGAK Eagle 54.66 27 *e*P **P 04 10 36.6 -0.3**
comp=Z,85nm,1.4s,mb5.6
EGAK LR LR
comp=Z,2μm,22.0s,MS5.2
KAR1 Arisaig 54.68 319 *e*P **P 04 10 37.8 +0.7**
ESK Eskdalemuir 54.69 317 P **P 04 10 36.7 -0.5**
ESK AMS AMS 04 36 41.0
comp=Z,9μm,16.0s
ESK Eskdalemuir 54.69 317 AMB AMB 04 10 36.4
comp=Z,42nm,2.9s,mb5.0
ESK *e*P 04 10 36.7
ESK AMS AMS 04 36 41.0
comp=Z,9μm,16.0s,MS6.0
ESK Eskdalemuir 54.69 317 *e*P **P 04 10 36.7 -0.5**
comp=Z,84nm,1.6s,mb5.5
ESK LR LR
comp=Z,5μm,20.0s,MS5.6
ESK Eskdalemuir 54.69 317 *e*P **P 04 10 36.7 -0.5**
ESK pmax pmax
comp=Z,83nm,1.6s,mb5.5
ESK MLR MLR
comp=Z,5μm,20.0s,MS5.6
ESK Eskdalemuir 54.69 317 AMB AMB 04 10 36.4
comp=Z,42nm,2.9s,mb5.0
ECK Cauldkaine Hil 54.75 316 *e*P **P 04 10 36.7 -1.0**
RC01 Rabbit Creek A 54.76 33 *e*P **P 04 10 37.8 +0.2**
comp=Z,57nm,1.0s,mb5.5
PAX Paxson 54.76 30 *e*P **P 04 10 35.1 -2.5**
comp=Z,63nm,1.0s,mb5.6
PAX Paxson 54.76 30 *e*P **P 04 10 35.2 -2.4**
PAX pmax pmax
comp=Z,63nm,1.0s,mb5.6

BAIF Baives 54.85 308 *e*P P **04 10 38.9 +0.5**
comp=Z,51nm,1.1s,mb5.2
BAIF Baives 54.85 308 *e*P P **04 10 38.9 +0.5**
comp=Z,26nm,1.1s,mb5.2
BAIF Baives 54.85 308 *e*P P **04 10 38.9 +0.5**
BAIF pmax pmax
comp=Z,26nm,1.1s,mb5.2
PGBU Glenifferbraes 54.89 318 *e*P P **04 10 38.9 +0.3**
PGBU AMB AMB 04 10 40.2
comp=Z,119nm,1.3s,mb5.8
PGBU AMS AMS 04 36 37.4
comp=Z,5µm,15.6s,MS5.7
HPK Haverah Park 54.93 315‖ *e*P P **04 10 39.5 +0.5**
HPK AMB AMB 04 10 40.4
comp=Z,80nm,1.9s,mb5.4
HPK AMS AMS 04 37 43.8
comp=Z,4µm,14.3s,MS5.7
HINF Hinteralfeld 55.02 305 *e*P P **04 10 40.0 +0.3**
comp=Z,45nm,1.2s,mb5.1
HINF Hinteralfeld 55.02 305 *e*P P **04 10 40.0 +0.3**
comp=Z,22nm,1.2s,mb5.1
HINF Hinteralfeld 55.02 305 *e*P P **04 10 40.0 +0.3**
HINF pmax pmax
comp=Z,22nm,1.2s,mb5.1
HAU Haudompre 55.15 305 *e*P P **04 10 41.1 +0.4**
comp=Z,122nm,1.5s,mb5.4
HAU *e*MLR MLR
comp=Z,7µm,22.2s,MS5.4
HAU Haudompre 55.15 305 *e*P P **04 10 41.1 +0.4**
comp=Z,61nm,1.5s,mb5.4
HAU LR LR
comp=Z,7µm,22.3s,MS5.7
HAU Haudompre 55.15 305 *e*P P **04 10 41.1 +0.4**
HAU pmax pmax
comp=Z,61nm,1.5s,mb5.4
HAU MLR MLR
comp=Z,7µm,22.3s,MS5.7
AQU L'Aquila 55.18 296 PFAKE 04 10 50.0 +9.1
AQU LR LR
comp=Z,5µm,20.0s,MS5.6
THEF They Montfort 55.19 306 *e*P P **04 10 42.1 +1.2**
MENT Mentasta 55.32 29 *e*P P **04 10 41.3 -0.4**
LOMF Lomont 55.35 304 *e*P P **04 10 43.2 +1.1**
XDE Dent Fell 55.37 316‖ *e*P P **04 10 43.7 +1.6**
CUC Castrocucco 55.40 292 PFAKE 04 10 50.0 +7.4
CUC LR LR
comp=Z,3µm,20.0s,MS5.4
TIP Timpagrande 55.41 291 *e*P P **04 10 42.7 +0.1**
comp=Z,46nm,1.2s,mb5.4
TIP LR LR
comp=Z,4µm,20.0s,MS5.5
MEZF Maizieres J'vi 55.47 306 *e*P P **04 10 43.7 +0.8**
comp=Z,58nm,1.0s,mb5.2
MEZF Maizieres J'vi 55.47 306 *e*P P **04 10 43.7 +0.8**
comp=Z,58nm,1.0s,mb5.6
MENF Mencas 55.50 310 *e*P P **04 10 43.6 +0.5**
SEW Seward 55.57 34 *e*P P **04 10 43.5 0.0**
comp=Z,110nm,1.1s,mb5.8
CWF Charnwood Fore 55.62 313 *e*P P **04 10 42.4 -1.5**
CWF AMB AMB 04 10 43.3
comp=Z,26nm,1.5s,mb5.0
CWF AMS AMS 04 38 59.7
comp=Z,5µm,12.6s,MS5.8
GAL1 Galloway 55.63 317 AMS AMS 04 37 01.9
comp=Z,8µm,16.0s,MS5.9
DAWY Dawson 55.70 27 *e*P P **04 10 43.9 -0.5**
STNC Stoke 55.77 314 AMS AMS 04 37 08.7
comp=Z,4µm,15.7s,MS5.6
KSI Kapahiang 55.83 175 P P **04 10 46.2 +0.4**
comp=Z,180nm,1.0s,mb6.0
PBKI Pangkalan Bun 55.94 164 P P **04 10 49.9 +3.2**
PCI Palu 56.03 154 P P **04 10 50.9 +3.6**
comp=Z,1µmcomp=Z,85nm,1.1s,mb5.7
DIV Divide 56.04 32 *e*P P **04 10 47.2 +0.4**
comp=Z,86nm,1.5s,mb5.6
KDAK Kodiak Island 56.12 38 *e*P P **04 10 47.1 -0.3**
comp=Z,36nm,0.8s,mb5.5
KDAK LR LR
comp=Z,4µm,20.0s,MS5.5
KDAK Kodiak Island 56.12 38 P P **04 10 47.1 -0.3**
comp=Z,43nm,0.9s,mb5.5,baz=360,slow=6.3,SNR=4.2
CABF La Chapelle 56.22 304 *e*P P **04 10 48.6 +0.3**
comp=Z,28nm,1.1s,mb4.9
CABF La Chapelle 56.22 304 *e*P P **04 10 48.6 +0.3**
comp=Z,14nm,1.1s,mb4.9
CABF La Chapelle 56.22 304 *e*P P **04 10 48.6 +0.3**
CABF pmax pmax
comp=Z,14nm,1.1s,mb4.9
OHAK Old Harbor 56.25 38 *e*P P **04 10 47.9 -0.5**
comp=Z,148nm,1.0s,mb6.0
WPM1 Penmaenmawr 56.40 315 *e*P P **04 10 49.1 -0.4**
CEL Celeste 56.53 291 PFAKE 04 11 00.0 +9.3
CEL LR LR
comp=Z,5µm,20.0s,MS5.6
BMRM Bremner River 56.54 31 *e*P P **04 10 50.5 +0.1**
comp=Z,40nm,1.1s,mb5.4
WOL Wolverton 56.55 312 AMS AMS 04 38 06.9
comp=Z,6µm,13.4s,MS5.8
GMM Mts of Mourne 56.59 317‖ *e*P P **04 10 51.4 +0.5**
WLF1 Llynfaes 56.59 315 *e*P P **04 10 51.1 +0.2**
WLF1 AMB AMB 04 10 52.3
comp=Z,238nm,2.0s,mb5.9
WLF1 AMS AMS 04 38 19.3
comp=Z,20µm,14.5s,MS6.4
LPL La Plagne 56.63 303 *e*P P **04 10 51.9 +0.6**
comp=Z,19nm,0.8s,mb4.9
LPL La Plagne 56.63 303 *e*P P **04 10 51.9 +0.6**
comp=Z,9.4nm,0.8s,mb4.9
LPL La Plagne 56.63 303 *e*P P **04 10 51.9 +0.6**
LPL pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LPG La Plagne 56.63 303 *e*P P **04 10 52.1 +0.8**
comp=Z,31nm,0.9s,mb5.0
LPG La Plagne 56.63 303 *e*P P **04 10 52.1 +0.8**
comp=Z,15nm,0.9s,mb5.0
LPG La Plagne 56.63 303 *e*P P **04 10 52.1 +0.8**
LPG pmax pmax
comp=Z,15nm,0.9s,mb5.0
SWN1 Swindon 56.68 313 P P **04 10 51.9 +0.3**
SWN1 AMB AMB 04 10 52.8
comp=Z,110nm,1.8s,mb5.6
SWN1 AMS AMS 04 38 17.3
comp=Z,5µm,16.6s
SWN1 Swindon 56.68 313‖ *e*P P **04 10 51.9 +0.3**
SWN1 AMB AMB 04 10 52.8
comp=Z,110nm,1.8s,mb5.6
SWN1 AMS AMS 04 38 17.3
comp=Z,5µm,16.6s,MS5.7
MDSI Maura Dua 56.76 173 P P **04 10 52.3 -0.2**
comp=Z,18nm,1.2s,mb5.0
TNTI Ternate 56.84 144 P P **04 10 55.9 +2.8**
comp=Z,103nm,1.2s,mb5.7
MCH1 Michaelchurch 56.88 314 P P **04 10 53.0 0.0**
MCH1 AMB AMB 04 11 03.7
comp=Z,65nm,2.2s,mb5.3
MCH1 AMS AMS 04 38 46.4
comp=Z,6µm,13.4s
MCH1 Michaelchurch 56.88 314 *e*P P **04 10 53.0 0.0**
MCH1 AMB AMB 04 11 03.7
comp=Z,65nm,2.2s,mb5.3
MCH1 AMS AMS 04 38 46.4
comp=Z,6µm,13.4s,MS5.8
LOR Lormes 56.90 306 *e*P P **04 10 52.9 -0.2**
comp=Z,37nm,1.1s,mb5.0
LOR *e*MLR MLR
comp=Z,6µm,22.5s,MS5.3
LOR Lormes 56.90 306 *e*P P **04 10 52.9 -0.2**
comp=Z,19nm,1.1s,mb5.0
LOR LR LR
comp=Z,6µm,22.5s,MS5.6
LOR Lormes 56.90 306 *e*P P **04 10 52.9 -0.2**
LOR pmax pmax
comp=Z,19nm,1.1s,mb5.0
LOR MLR MLR
comp=Z,6µm,22.5s,MS5.6
HTR Trewern Hill 56.94 314 *e*P P **04 10 53.2 -0.2**
KLSI 57.01 172 P P **04 10 52.5 -1.7**
comp=Z,43nm,1.4s,mb5.3
HGH Gray Hill 57.05 313 *e*P P **04 10 53.8 -0.4**
MBDF Montbardon 57.14 302 *e*P P **04 10 56.1 +1.2**
comp=Z,52nm,0.9s,mb5.3
MBDF Montbardon 57.14 302 *e*P P **04 10 56.1 +1.2**
comp=Z,26nm,0.9s,mb5.3
MBDF Montbardon 57.14 302 *e*P P **04 10 56.1 +1.2**
MBDF pmax pmax
comp=Z,26nm,0.9s,mb5.3
SSF Saint Saulge 57.21 306 *e*P P **04 10 55.3 -0.1**
comp=Z,52nm,1.3s,mb5.1
SSF Saint Saulge 57.21 306 *e*P P **04 10 55.3 -0.1**
comp=Z,26nm,1.3s,mb5.1
SSF Saint Saulge 57.21 306 *e*P P **04 10 55.3 -0.1**
SSF pmax pmax
comp=Z,26nm,1.3s,mb5.1
SAOF Saorge 57.24 301 *e*P P **04 10 57.0 +1.4**
SMF Signal de Mont 57.33 305 *e*P P **04 10 56.0 -0.2**
comp=Z,39nm,1.0s,mb5.1
SMF Signal de Mont 57.33 305 *e*P P **04 10 56.0 -0.2**
comp=Z,20nm,1.0s,mb5.1
SMF Signal de Mont 57.33 305 *e*P P **04 10 56.0 -0.2**
SMF pmax pmax
comp=Z,20nm,1.0s,mb5.1
SBF Sospel 57.38 301 *e*P P **04 10 56.8 +0.1**
comp=Z,165nm,1.3s,mb5.6
SBF Sospel 57.38 301 *e*P P **04 10 56.8 +0.1**
comp=Z,83nm,1.3s,mb5.6
SBF Sospel 57.38 301 *e*P P **04 10 56.8 +0.1**
SBF pmax pmax
comp=Z,83nm,1.3s,mb5.6
LUCF Luceram 57.41 301 *e*P P **04 10 57.3 +0.5**
AVF Avril sur Loir 57.48 306 *e*P P **04 10 57.1 -0.2**
comp=Z,19nm,0.8s,mb4.9
AVF Avril sur Loir 57.48 306 *e*P P **04 10 57.1 -0.2**
comp=Z,9.7nm,0.8s,mb4.9
AVF Avril sur Loir 57.48 306 *e*P P **04 10 57.1 -0.2**
AVF pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
ORIF Oris-en-Rattie 57.48 303 *e*P P **04 10 57.4 +0.1**
comp=Z,44nm,0.8s,mb5.2
ORIF *e*MLR MLR
comp=Z,7µm,21.8s,MS5.4
ORIF Oris-en-Rattie 57.48 303 *e*P P **04 10 57.4 +0.1**
comp=Z,22nm,0.8s,mb5.2
ORIF Oris-en-Rattie 57.48 303 *e*P P **04 10 57.4 +0.1**
ORIF pmax pmax
comp=Z,22nm,0.8s,mb5.2
MVIF Mont Vial 57.51 301 *e*P P **04 10 56.8 -0.8**
BGF Bois d'Agland 57.89 306 *e*P P **04 11 00.2 0.0**
comp=Z,38nm,1.0s,mb5.1
BGF Bois d'Agland 57.89 306 *e*P P **04 11 00.2 0.0**
comp=Z,19nm,1.0s,mb5.1
BGF Bois d'Agland 57.89 306 *e*P P **04 11 00.2 0.0**
BGF pmax pmax
comp=Z,19nm,1.0s,mb5.1
HEX Exmoor 57.89 313 *e*P P **04 11 00.3 +0.2**
PLDF La Plantade 57.91 305 *e*P P **04 11 02.1 +1.8**
SSB Saint Sauveur 57.92 304 PFAKE 04 11 10.0 +10
SSB LR LR
comp=Z,5µm,19.0s,MS5.7
LDF La Druitiere 57.92 309 *e*P P **04 10 59.9 -0.5**
comp=Z,19nm,0.7s,mb5.0
LDF La Druitiere 57.92 309 *e*P P **04 10 59.9 -0.5**
comp=Z,9.6nm,0.7s,mb4.9
LDF La Druitiere 57.92 309 *e*P P **04 10 59.9 -0.5**
LDF pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
FLN La Foliniere 57.98 310 *e*P P **04 11 00.3 -0.4**
comp=Z,116nm,1.1s,mb5.5
FLN *e*MLR MLR
comp=Z,4µm,18.0s,MS5.3
FLN La Foliniere 57.98 310 *e*P P **04 11 00.3 -0.4**
comp=Z,58nm,1.1s,mb5.5
FLN LR LR
comp=Z,4µm,18.0s,MS5.6
FLN La Foliniere 57.98 310 *e*P P **04 11 00.3 -0.4**
FLN pmax pmax
comp=Z,58nm,1.1s,mb5.5
FLN MLR MLR
comp=Z,4µm,18.0s,MS5.6
FRF La Foret Royal 58.01 301 *e*P P **04 11 00.8 -0.2**
comp=Z,118nm,1.2s,mb5.5
FRF La Foret Royal 58.01 301 *e*P P **04 11 00.8 -0.2**
comp=Z,59nm,1.2s,mb5.5
TTSI Tana Toraja 58.07 154 P P **04 11 02.7 +0.9**
AGO Saint Agoulin 58.10 305 *e*P P **04 11 02.7 +1.1**
VIVF Saint-Julien-l 58.14 303 *e*P P **04 11 01.9 -0.1**
comp=Z,51nm,1.2s,mb5.1
VIVF Saint-Julien-l 58.14 303 *e*P P **04 11 01.9 -0.1**
comp=Z,25nm,1.2s,mb5.1
VIVF Saint-Julien-l 58.14 303 *e*P P **04 11 01.9 -0.1**
VIVF pmax pmax
comp=Z,25nm,1.2s,mb5.1
HTL Hartland 58.25 314 AMS AMS 04 39 31.7
comp=Z,5µm,13.7s,MS5.8
SMRF Simiane la Rot 58.28 302 *e*P P **04 11 02.8 -0.2**
comp=Z,45nm,1.1s,mb5.1
SMRF Simiane la Rot 58.28 302 *e*P P **04 11 02.8 -0.2**
comp=Z,45nm,1.1s,mb5.4
PYM Petit Puy Mans 58.37 305 *e*P P **04 11 03.7 +0.2**
TCF Toulx Ste Croi 58.39 306 *e*P P **04 11 03.9 +0.2**
comp=Z,35nm,1.0s,mb5.0
TCF Toulx Ste Croi 58.39 306 *e*P P **04 11 03.9 +0.2**
comp=Z,18nm,1.0s,mb5.0
TCF Toulx Ste Croi 58.39 306 *e*P P **04 11 03.9 +0.2**
TCF pmax pmax
comp=Z,18nm,1.0s,mb5.1
DYA Yadsworthy 58.40 313 AMS AMS 04 39 36.9
comp=Z,6µm,13.3s,MS5.9
GRR Gorron 58.42 309 *e*P P **04 11 03.3 -0.5**
comp=Z,45nm,1.0s,mb5.2
GRR Gorron 58.42 309 *e*P P **04 11 03.3 -0.5**
comp=Z,22nm,1.0s,mb5.2
GRR Gorron 58.42 309 *e*P P **04 11 03.3 -0.5**
GRR pmax pmax
comp=Z,22nm,1.0s,mb5.1
JSA Saint Aubin 58.47 311 AMS AMS 04 39 23.9
comp=Z,4µm,11.5s,MS5.7
SPSI Sidrap Palu 58.94 155 P P **04 11 09.1 +1.3**
comp=Z,1µmcomp=Z,64nm,1.4s,mb5.5
WDD Wield Dalam 58.98 290 PFAKE 04 11 20.0 +12
WDD LR LR
comp=Z,4µm,20.0s,MS5.5
LASF Ste Croix 59.10 303 *e*P P **04 11 09.0 +0.3**
comp=Z,48nm,1.1s,mb5.1
CCA1 Carnmenellis 59.16 313 AMS AMS 04 40 13.3
comp=Z,5µm,13.0s,MS5.8
PNL Penuula 59.18 30 *e*P P **04 11 10.1 +1.2**
comp=Z,91nm,1.2s,mb5.7
SGMF Saint Gilles 59.31 310 *e*P P **04 11 09.8 -0.3**
comp=Z,81nm,1.1s,mb5.4
SGMF Saint Gilles 59.31 310 *e*P P **04 11 09.8 -0.3**
comp=Z,40nm,1.1s,mb5.4
SGMF Saint Gilles 59.31 310 *e*P P **04 11 09.8 -0.3**
SGMF pmax pmax
comp=Z,40nm,1.1s,mb5.4
MFF Saint Martin d 59.33 308 *e*P P **04 11 10.4 +0.2**
comp=Z,145nm,1.5s,mb5.5
MFF Saint Martin d 59.33 308 *e*P P **04 11 10.4 +0.2**
comp=Z,72nm,1.5s,mb5.5
MFF Saint Martin d 59.33 308 *e*P P **04 11 10.4 +0.2**
MFF pmax pmax
comp=Z,72nm,1.5s,mb5.5
VSL Villasalto 59.35 296 PFAKE 04 11 20.0 +10
VSL LR LR
comp=Z,3µm,19.0s,MS5.5
CAF Calviac 59.42 305 *e*P P **04 11 11.5 +0.6**
comp=Z,83nm,1.6s,mb5.2
CAF Calviac 59.42 305 *e*P P **04 11 11.5 +0.6**
comp=Z,42nm,1.6s,mb5.2
CAF Calviac 59.42 305 *e*P P **04 11 11.5 +0.6**
CAF pmax pmax
comp=Z,42nm,1.6s,mb5.2
RJF Les Rejaudoux 59.43 305 *e*P P **04 11 11.6 +0.7**
RJF *e*MLR MLR
comp=Z,6µm,20.8s,MS5.4
RJF Les Rejaudoux 59.43 305 *e*P P **04 11 11.6 +0.7**
RJF MLR MLR
comp=Z,6µm,20.8s,MS5.7
ROSF Rostrenen 59.59 311 *e*P P **04 11 11.8 -0.2**
comp=Z,122nm,1.3s,mb5.5
ROSF Rostrenen 59.59 311 *e*P P **04 11 11.8 -0.2**
comp=Z,61nm,1.3s,mb5.5
ROSF Rostrenen 59.59 311 *e*P P **04 11 11.8 -0.2**
ROSF pmax pmax
comp=Z,61nm,1.3s,mb5.5
QUIF Quistinic 59.84 310 *e*P P **04 11 13.6 -0.1**
comp=Z,82nm,1.0s,mb5.4
QUIF Quistinic 59.84 310 *e*P P **04 11 13.6 -0.1**
comp=Z,41nm,1.0s,mb5.4
QUIF Quistinic 59.84 310 *e*P P **04 11 13.6 -0.1**
QUIF pmax pmax
comp=Z,41nm,1.0s,mb5.4
KAPI Kappang 59.94 155 *e*P P **04 11 14.5 -0.2**
comp=Z,58nm,1.1s,mb5.5
KAPI LR LR
comp=Z,1µm,20.0s,MS5.1
BST Brest 59.98 311 *e*P P **04 11 14.8 +0.1**
SMRI Semarang 60.00 166 P P **04 11 18.3 +3.2**
comp=Z,86nm,1.2s,mb5.7
LFF La Frestale 60.08 306 *e*P P **04 11 16.0 +0.6**
MTLF Montolieu 60.46 303 *e*P P **04 11 17.2 -0.9**
comp=Z,78nm,1.6s,mb5.2
MTLF Montolieu 60.46 303 *e*P P **04 11 17.2 -0.9**
comp=Z,39nm,1.6s,mb5.2
MTLF Montolieu 60.46 303 *e*P P **04 11 17.2 -0.9**
MTLF pmax pmax
comp=Z,39nm,1.6s,mb5.2
NGJI Ngawi 60.48 165 P P **04 11 21.5 +3.2**
comp=Z,98nm,1.3s,mb5.7
SKAG Skagway 60.56 28 *e*P P **04 11 18.6 +0.1**
comp=Z,69nm,1.1s,mb5.7
SJI Sawahan 60.88 165 P P **04 11 22.9 +1.8**
comp=Z,7µmcomp=Z,53nm,1.3s,mb5.5
PWJI Pagerwojo 61.17 165 P P **04 11 23.5 +0.4**
comp=Z,70nm,1.2s,mb5.7
EPF Esparros 61.64 304 *e*P P **04 11 26.4 +0.3**
comp=Z,32nm,1.0s,mb5.1
EPF Esparros 61.64 304 *e*P P **04 11 26.4 +0.3**
comp=Z,16nm,1.0s,mb5.1
EPF Esparros 61.64 304 *e*P P **04 11 26.4 +0.3**
EPF pmax pmax
comp=Z,16nm,1.0s,mb5.1
GMJI Gumukmas 61.70 163 P P **04 11 27.7 +1.0**
comp=Z,55nm,1.2s,mb5.5
EMIR Miracle 61.84 303 P P **04 11 27.8 +0.4**
comp=Z,12nm,0.8s,mb5.1
WAKE Wake Island 61.85 95 PFAKE 04 11 40.0 +12
WAKE LR LR
comp=Z,1µm,21.0s,MS5.0
EBIE Bielsa 61.99 304 P P **04 11 29.7 +1.2**
comp=Z,7.6nm,1.0s,mb4.8
KEST Kesra 62.04 293 *e*P P **04 11 29.4 +0.6**
KEST Kesra 62.04 293 P P **04 11 29.1 +0.3**
comp=Z,4.4nm,1.0s,mb4.5,baz=316,slow=7.4,SNR=4.8
KEST LR LR 04 40 03.2
comp=Z,1µm,18.8s,MS5.1,baz=164,slow=38
BAKI Biak 62.07 136 P P **04 11 28.6 -0.6**
comp=Z,3µmcomp=Z,162nm,0.8s,mb6.2
ETSF Etsaut 62.19 305 *e*P P **04 11 29.4 -0.4**
comp=Z,38nm,1.3s,mb5.1
ETSF Etsaut 62.19 305 *e*P P **04 11 29.4 -0.4**
comp=Z,19nm,1.3s,mb5.1
ETSF Etsaut 62.19 305 *e*P P **04 11 29.4 -0.4**
ETSF pmax pmax
comp=Z,19nm,1.3s,mb5.1
SJPF Ste Jean 62.37 305 *e*P P **04 11 30.3 -0.7**
EPOB Poblet 62.48 303 P P **04 11 31.7 0.0**
comp=Z,13nm,0.9s,mb5.1
SIT Sitka 62.56 30 *e*P P **04 11 32.8 +0.8**
comp=Z,16nm,0.8s,mb5.2
SIT Sitka 62.56 30 *e*P P **04 11 32.8 +0.8**
SIT pmax pmax
comp=Z,16nm,0.8s,mb5.2
YKA Yellowknife Ar 62.70 16 P P **04 11 31.9 -0.9**
comp=Z,16nm,1.0s,mb5.1,baz=334,slow=6.9,SNR=31
YKA Yellowknife Ar 62.70 16 P P **04 11 31.9 -0.9**
YKA pmax pmax
comp=Z,16nm,1.0s
DLBC Dease Lake 62.91 26 *e*P P **04 11 34.7 +0.4**
ESAC San Caprasio 63.01 304 P P **04 11 36.1 +0.9**
comp=Z,14nm,0.6s,mb5.3
DGAR Diego Garcia 63.38 209 PFAKE 04 11 50.0 +12
DGAR LR LR
comp=Z,3µm,22.0s,MS5.4
ELAN Lanestosa 63.38 307 P P **04 11 38.3 +0.6**
comp=Z,11nm,0.8s,mb5.0
EMOS Mosqueruela 64.00 303 P P **04 11 42.2 +0.3**
comp=Z,12nm,0.8s,mb5.0
COCO West Island 64.20 181 PFAKE 04 12 00.0 +17
COCO LR LR
comp=Z,2µm,20.0s,MS5.2
EARI Arriondas 64.20 308 P P **04 11 44.1 +1.0**
comp=Z,9.7nm,0.7s,mb4.9
ETOR Torete 64.48 304 P P **04 11 44.7 -0.3**
comp=Z,13nm,0.6s,mb5.1
ETOR Torete 64.48 304 P P **04 11 44.7 -0.2**
ETOR pmax pmax
comp=Z,13nm,0.6s,mb5.1
MIDW Midway 64.95 76 PFAKE 04 12 00.0 +12
MIDW LR LR
comp=Z,967nm,21.0s,MS5.0
GUD Guadarrama 65.67 305 P P **04 11 53.7 +1.0**
comp=Z,8.8nm,0.8s,mb4.8
GUD Guadarrama 65.67 305 P P **04 11 53.7 +1.0**
GUD pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ETOB Tobarra 65.84 302 P P **04 11 55.2 +1.4**
comp=Z,7.0nm,0.8s,mb4.7
PBRG Braganca 66.07 308 *e*P P **04 11 56.2 +1.0**
comp=Z,42nm,1.6s,mb5.2
ESDC Sonseca Array 66.30 305 P P **04 11 56.2 -0.5**
comp=Z,8.7nm,0.9s,mb4.8
ESDC Sonseca Array 66.30 305 P P **04 11 56.4 -0.4**
comp=Z,11nm,0.9s,mb4.9,baz=41,slow=6.7,SNR=49
ESDC LR LR 04 40 55.4
comp=Z,3µm,19.6s,MS5.4,baz=60,slow=36
EVIA Vianos 66.33 303 P P **04 11 58.3 +1.3**
comp=Z,7.3nm,0.8s,mb4.8
EVIA Vianos 66.33 303 P P **04 11 58.3 +1.3**
EVIA pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
PAB San Pablo 66.59 305 *e*P P **04 11 59.1 +0.5**
comp=Z,15nm,1.3s,mb4.9
PAB LR LR
comp=Z,3µm,20.0s,MS5.5
PAB San Pablo 66.59 305 *e*P P **04 11 59.1 +0.5**
PAB pmax pmax
comp=Z,15nm,1.3s,mb4.9
PAB MLR MLR
comp=Z,3µm,20.0s,MS5.5
ELOB Lobios 66.66 309 P P **04 12 00.5 +1.4**
comp=Z,13nm,0.9s,mb5.0
MVO Moncorvo 66.70 308 *e*P P **04 11 59.4 +0.1**
comp=Z,28nm,1.8s,mb5.0
MVO Moncorvo 66.70 308 *e*PP PP 04 14 21.8 -3.8
MVO *e*S S 04 20 54.5 +3.0
MVO *e*LQ 04 31 31.1
MVO *e*LR LR 04 36 12.6
comp=Z,5µm,20.0s
EZAM Zamans 66.75 309 P P **04 12 00.2 +0.6**
comp=Z,52nm,1.1s,mb5.5
EZAM Zamans 66.75 309 P P **04 12 00.2 +0.6**
EZAM pmax pmax
comp=Z,52nm,1.1s,mb5.5
PCAB Cabril 66.76 309 *e*P P **04 12 00.8 +1.1**
comp=Z,55nm,1.0s,mb5.5
PVRL Vila Real 66.95 308 *e*P P **04 12 02.0 +1.1**
comp=Z,47nm,1.4s,mb5.3
EPLA Plasencia 67.07 306 P P **04 12 01.7 +0.1**
comp=Z,9.9nm,0.9s,mb4.8
EPLA Plasencia 67.07 306 P P **04 12 01.7 0.0**
EPLA pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
EQES Quesada 67.26 303 P P **04 12 03.5 +0.6**
comp=Z,8.1nm,0.8s,mb4.8
MSEY Mahe Island 67.27 227 PFAKE 04 12 20.0 +17
MSEY LR LR
comp=Z,1µm,19.0s,MS5.1
EBAN Banos Encina 67.35 303 P P **04 12 04.7 +1.2**
comp=Z,7.0nm,0.8s,mb4.7
EBAN Banos Encina 67.35 303 P P **04 12 04.7 +1.2**
EBAN pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
PVIS Viseu 67.46 308 *e*P P **04 12 05.1 +1.0**
comp=Z,30nm,1.3s,mb5.2
MTE Manteigas 67.53 307 *e*P P **04 12 05.1 +0.5**
comp=Z,48nm,1.5s,mb5.3
MTE *e*S S 04 21 04.8 +3.2
MTE *e*LQ 04 32 24.4
MTE *e*LR LR 04 36 59.0
comp=Z,4µm,18.0s
MTE Manteigas 67.53 307 PFAKE 04 12 20.0 +15
MTE LR LR
comp=Z,4µm,21.0s,MS5.6
EADA Adamuz 67.76 304 P P **04 12 06.8 +0.7**
comp=Z,6.1nm,0.9s,mb4.6
ECOG Cogollos-Vega 67.91 303 P P **04 12 07.1 +0.1**
comp=Z,5.0nm,0.8s,mb4.6
ECOG Cogollos-Vega 67.91 303 P P **04 12 07.1 +0.1**
ECOG pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
PCBR Castelo Branco 67.93 307 *e*P P **04 12 08.2 +1.1**

comp=Z,26nm,1.9s,mb4.9
PMRV Marv??o 68.21 307 *e*P P 04 12 09.7 +0.9
comp=Z,22nm,2.0s,mb4.8
PMRV *e*S S 04 21 13.7 +4.0
PMRV *e*LQ 04 33 46.5
PMRV *e*LR LR 04 38 16.4
comp=Z,3µm,18.0s
ERON Agron 68.23 303 P P 04 12 08.6 -0.4
comp=Z,5.9nm,0.8s,mb4.7
ELOJ Sierra Loja 68.31 303 P P 04 12 09.4 -0.1
comp=Z,2.6nm,0.7s,mb4.4
ELOJ Sierra Loja 68.31 303 P P 04 12 09.4 -0.2
ELOJ pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
EBAD Badajoz 68.53 306 P P 04 12 11.3 +0.4
comp=Z,11nm,0.8s,mb4.8
PESTR Estremoz 68.74 306 *e*P P 04 12 13.0 +0.8
comp=Z,20nm,1.4s,mb4.8
PESTR *e*S S 04 21 19.8 +3.8
PESTR *e*SS SS 04 25 41.6 +1.9
PESTR *e*LQ 04 32 58.9
PESTR *e*LR LR 04 37 46.3
comp=Z,3µm,20.0s
PBAR Barrancos 69.00 305 *e*P P 04 12 15.0 +1.2
comp=Z,29nm,1.6s,mb5.0
PBAR *e*S S 04 21 24.7 +5.6
PBAR *e*SS SS 04 25 46.0 +2.2
PBAR *e*LQ 04 35 34.2
PBAR *e*LR LR 04 38 11.0
comp=Z,3µm,18.0s
EMIJ Mijas 69.08 303 P P 04 12 13.2 -1.1
comp=Z,6.8nm,0.7s,mb4.7
EMIN Mina Concepcio 69.12 305 P P 04 12 15.7 +1.1
comp=Z,8.9nm,0.8s,mb4.8
EVO Evora 69.20 306 *e*P P 04 12 16.4 +1.3
comp=Z,28nm,1.0s,mb4.8
EVO *e*MLR MLR
comp=Z,5µm,20.0s,MS5.5
EVO Evora 69.20 306 *e*P P 04 12 15.8 +0.7
comp=Z,17nm,1.6s,mb4.7
EVOP Sao Brissos 69.26 306 *e*P P 04 12 15.9 +0.4
EVOP *e*PP PP 04 14 47.9 -0.1
EVOP *e*S S 04 21 21.8 -0.5
EVOP *e*SS SS 04 25 49.6 +1.8
EVOP *e*SS SS 04 25 49.6 +1.8
EVOP AMS AMS 04 40 40.1
comp=E,9µm,19.8s
EVOP Sao Brissos 69.26 306 *e*P P 04 12 15.8 +0.3
ESPR Espera 69.40 304 P P 04 12 17.2 +0.9
comp=E,17nm,0.9s,mb5.0
PMAFR Mafra 69.50 307 *e*P P 04 12 17.6 +0.7
comp=E,81nm,1.3s,mb5.5
PMAFR *e*S S 04 21 28.1 +3.1
PMAFR *e*SS SS 04 25 55.7 +4.2
PMAFR *e*LQ 04 33 51.1
PMAFR *e*LR LR 04 38 03.8
comp=E,3µm,18.0s
PBEJ Beja 69.52 306 *e*P P 04 12 18.1 +1.0
comp=E,34nm,1.3s,mb5.1
EJIF Jimena Fronter 69.53 303 P P 04 12 17.3 +0.2
comp=E,9.9nm,0.9s,mb4.7
EJIF Jimena Fronter 69.53 303 P P 04 12 17.3 +0.2
EJIF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
LIS Lisbon 69.62 307 *e*P P 04 12 18.2 +0.5
LIS *e*SS SS 04 25 54.9 +1.6
LIS AMS AMS 04 41 12.5
comp=E,9µm,22.8s
LIS Lisbon 69.62 307 *e*P P 04 12 18.2 +0.5
LIS *e*SS SS 04 25 54.9 +1.6
EGRO El Granado 69.71 305 P P 04 12 19.0 +0.7
comp=E,8.3nm,0.7s,mb4.8
MESJ Messejana 69.84 306 *e*P P 04 12 19.2 +0.1
MESJ *e*PP PP 04 14 53.4 +0.4
MESJ *e*S S 04 21 28.8 -0.4
MESJ *e*S S 04 21 28.8 -0.4
MESJ AMS AMS 04 40 55.8
comp=E,8µm,21.9s
MESJ Messejana 69.84 306 *e*P P 04 12 19.1 0.0
SFS San Fernando 69.89 304 PFAKE 04 12 30.0 +11
SFS LR LR
comp=Z,10µm,19.0s,MS6.1
PCVE Castro Verde 69.92 306 *e*P P 04 12 20.4 +0.9
comp=Z,28nm,1.4s,mb5.0
PCVE *e*S S 04 21 34.0 +4.0
PCVE *e*SS SS 04 25 59.9 +2.0
PCVE *e*LQ 04 34 23.8
PCVE *e*LR LR 04 38 37.0
comp=Z,3µm,18.0s
PVAQ Vaqueiros 69.93 305 *e*P P 04 12 20.6 +1.0
comp=Z,30nm,1.7s,mb5.0
PVAQ *e*S S 04 21 32.9 +2.7
PVAQ *e*SS SS 04 26 01.3 +3.1
PVAQ *e*LQ 04 33 40.7
PVAQ *e*LR LR 04 38 10.6
comp=Z,3µm,22.0s
PBDV Barranco-do-Ve 70.16 305 *e*S S 04 21 36.3 +3.4
PBDV *e*SS SS 04 26 03.8 +2.0
PBDV *e*LQ 04 33 54.1
PBDV *e*LR LR 04 38 09.5
comp=Z,3µm,20.0s
MORF Marmelete 70.47 306 *e*LQ 04 37 19.6
MORF *e*LR LR 04 40 25.7
comp=Z,4µm,18.0s
MORF Marmelete 70.47 306 *e*P P 04 12 23.5 +0.6
PFVI Vila Bisbo 70.70 306 *e*S S 04 21 40.8 +1.7
PFVI *e*SS SS 04 26 13.6 +3.6
PFVI *e*LQ 04 35 02.8
PFVI *e*LR LR 04 39 03.9
comp=Z,4µm,18.0s
KAKA Kakadu 71.14 145 *e*P P 04 12 28.7 +1.6
comp=Z,43nm,0.9s,mb5.4
KAKA Kakadu 71.14 145 *e*P P 04 12 28.4 +1.3
comp=Z,288nm,1.3s,mb6.0
KAKA Kakadu 71.14 145 P P 04 12 29.0 +1.9
comp=Z,539nmcomp=Z,74nm,1.1s,mb5.5
EDM Edmonton 71.63 19 *e*P P 04 12 28.6 -1.0
FFC Flin Flon 72.07 12 P P 04 12 31.4 -0.9
comp=Z,166nm,1.1s,mb5.9,SNR=5.6
FFC Flin Flon 72.07 12 *e*P P 04 12 30.9 -1.4
comp=Z,72nm,1.5s,mb5.4
FFC LR LR
comp=Z,3µm,20.0s,MS5.5
FFC Flin Flon 72.07 12 *e*P P 04 12 30.9 -1.4
FFC pmax pmax
comp=Z,72nm,1.5s,mb5.4
FFC MLR MLR
comp=Z,3µm,20.0s,MS5.5
SCHQ Schefferville 72.55 351 *e*P P 04 12 33.9 -1.2
comp=Z,74nm,1.3s,mb5.5
SCHQ Schefferville 72.55 351 P P 04 12 34.0 -1.1
comp=Z,32nm,1.0s,mb5.2,baz=15,slow=8.3,SNR=15
SCHQ LR LR 04 45 49.6
comp=Z,2µm,18.5s,MS5.5,baz=263,slow=37
KNA Kununurra 72.74 149 P P 04 12 37.6 +0.9
comp=Z,1µmcomp=Z,162nm,1.1s,mb5.8
A05A Maple Falls 73.46 26 ⇓P P 04 12 40.5 -0.1
baz=73
KMBO Kilima Mbogo 73.54 246 *e*P P 04 12 40.4 -1.2
comp=Z,8.2nm,0.9s,mb4.7
KMBO LR LR
comp=Z,2µm,20.0s,MS5.3
KMBO Kilima Mbogo 73.54 246 P P 04 12 41.0 -0.5
comp=Z,9.3nm,1.0s,mb4.7,baz=179,slow=24,SNR=10
KMBO LR LR 04 45 18.0
comp=Z,2µm,21.1s,MS5.3,baz=72,slow=36
KMBO Kilima Mbogo 73.54 246 *e*P P 04 12 40.4 -1.2
KMBO pmax pmax
comp=Z,8.0nm,0.9s
KMBO MLR MLR
comp=Z,2µm,20.0s
KMBO Kilima Mbogo 73.54 246 P P 04 12 43.0 +1.5
SNR=5.5
TAM Tamanrasset 73.88 286 *e*P P 04 12 43.2 -0.3
comp=Z,19nm,1.4s,mb4.8
TAM LR LR
comp=Z,2µm,19.0s,MS5.4
TAM Tamanrasset 73.88 286 *e*P P 04 12 43.2 -0.3
TAM pmax pmax
comp=Z,19nm,1.4s,mb4.8
TAM MLR MLR
comp=Z,2µm,19.0s,MS5.4
FITZ Fitzroy Crossi 74.03 153 *e*P P 04 12 45.6 +1.4
comp=Z,41nm,1.1s,mb5.3
FITZ Fitzroy Crossi 74.03 153 P P 04 12 45.5 +1.3
comp=Z,66nm,1.2s,mb5.4

B06A Marblemount 74.06 26 ⇓P P 04 12 44.2 0.0
baz=74
OSD Olympics--Snow 74.08 28 P P 04 12 45.9 +1.6
JCW Jim Creek 74.24 27 P P 04 12 45.2 0.0
PMG Port Moresby 74.34 129 PFAKE 04 13 00.0 +14
PMG LR LR
comp=Z,2µm,21.0s,MS5.3
NLWA Neilton Lookou 74.42 28 *e*P P 04 12 46.9 +0.6
comp=Z,20nm,0.9s,mb5.1
NLWA LR LR
comp=Z,1µm,19.0s,MS5.3
GNW Green Mountain 74.56 27 *e*P P 04 12 47.6 +0.5
comp=Z,22nm,1.2s,mb5.0
B08A Colville Reser 74.78 25 ⇑P P 04 12 48.4 0.0
baz=74,SNR=23
D05A Enumclaw 75.14 27 ⇑P P 04 12 51.4 +1.0
baz=75,SNR=5.9
A12A Yaak River Ran 75.15 22 ⇑P P 04 12 50.6 +0.1
baz=75,SNR=10
GSM Grass Mountain 75.18 27 P P 04 12 51.6 +0.9
ETW Entiat 75.21 26 P P 04 12 51.0 +0.1
E03A Lebam 75.27 28 ⇓P P 04 12 52.1 +0.9
baz=75
NEW Newport 75.42 24 ⇑P P 04 12 51.6 -0.5
baz=75,SNR=7.1
NEW Newport 75.42 24 *e*P P 04 12 50.9 -1.2
comp=Z,7.6nm,0.9s,mb4.6
NEW LR LR
comp=Z,3µm,19.0s,MS5.5
NEW Newport 75.42 24 *e*P P 04 12 50.9 -1.2
NEW pmax pmax
comp=Z,8.0nm,0.9s
NEW MLR MLR
comp=Z,3µm,19.0s
WALA Waterton Lakes 75.43 21 *e*P P 04 12 51.2 -0.9
comp=Z,0.7nm,1.0s
A13A Flathead Natio 75.44 22 ⇓P P 04 12 51.8 -0.4
baz=75
FMW Mont Fremont 75.46 27 P P 04 12 53.2 +0.9
MBWA Marble Bar 75.49 159 PFAKE 04 13 00.0 +7.4
MBWA LR LR
comp=Z,904nm,20.0s,MS5.1
C09A Chrisman Ranch 75.57 24 ⇑P P 04 12 53.3 +0.4
baz=75,SNR=7.7
LON Longmire 75.59 27 *e*P P 04 12 53.3 +0.3
comp=Z,11nm,0.9s,mb4.8
LON Longmire 75.59 27 *e*P P 04 12 53.3 +0.3
LON pmax pmax
comp=Z,11nm,0.9s,mb4.8
A14A Double T Ranch 75.62 21 ⇑P P 04 12 52.2 -0.9
baz=75,SNR=18
WPW White Pass 75.71 27 P P 04 12 54.9 +1.2
A15A Johnson Ranch, 75.77 20 ⇑P P 04 12 52.5 -1.5
baz=75,SNR=46
OD2 Odessa Site #2 75.84 25 *e*P P 04 12 54.2 -0.3
comp=Z,61nm,1.8s,mb5.2
NAC Naches 75.88 27 P P 04 12 55.7 +1.0
B13A Whitefish 75.95 22 ⇓P P 04 12 54.7 -0.4
baz=76,SNR=13
A16A West Butte Ran 76.03 20 ⇓P P 04 12 54.1 -1.4
baz=76
C11A Tepee Creek (N 76.03 23 ⇓P P 04 12 55.1 -0.5
baz=76,SNR=14
D08A Wollman Farm, 76.09 25 ⇑P P 04 12 56.2 +0.3
baz=76,SNR=6.8
F04A Amboy 76.16 28 ⇓P P 04 12 56.1 -0.2
baz=76
MXC Moxie City 76.17 26 P P 04 12 57.4 +1.0
ASR Mount Adams--S 76.20 27 P P 04 12 57.7 +1.2
A17A Triple J Farms 76.22 19 ⇓P P 04 12 55.6 -1.0
baz=76,SNR=22
BLMT Blacktail Moun 76.32 22 *e*P P 04 12 57.3 +0.1
comp=Z,26nm,0.8s,mb5.2
C12B Naegeli Ranch, 76.34 23 ⇓P P 04 12 57.4 +0.1
baz=76,SNR=13
BSMT Bassoo Peak 76.37 22 *e*P P 04 12 57.7 +0.3
comp=Z,34nm,0.8s,mb5.3
A18A Metzger Ranch, 76.41 19 ⇓P P 04 12 56.7 -1.0
baz=76,SNR=12
B15A Bradely Ranch, 76.43 21 ⇑P P 04 12 56.7 -1.1
baz=76,SNR=13
B16A M & M Farms, S 76.52 20 ⇓P P 04 12 57.6 -0.7
baz=76
RSW Rattlesnake Hi 76.53 26 *e*P P 04 12 58.5 +0.1
comp=Z,7.2nm,0.6s,mb4.8
YBMT Yellow Bay 76.53 22 *e*P P 04 12 58.0 -0.4
comp=Z,19nm,1.0s,mb5.0
COEN Coen 76.54 135 *e*P P 04 13 00.1 +1.4
COEN Coen 76.54 135 *e*P P 04 13 00.1 +1.3
comp=Z,216nm,1.1s,mb6.0
COEN Coen 76.54 135 P P 04 13 00.6 +1.9
comp=Z,88nm,1.2s,mb5.6
HAWA Hanford 76.54 26 PFAKE 04 13 10.0 +12
HAWA LR LR
comp=Z,2µm,19.0s,MS5.5
C13A Hot Springs 76.58 22 ⇓P P 04 12 59.0 +0.3
baz=76
JTMT Jette 76.58 22 *e*P P 04 12 58.4 -0.3
comp=Z,34nm,1.0s,mb5.2
C14A Swan Lake 76.68 21 ⇓P P 04 12 57.7 -1.5
baz=76,SNR=14
E09A Wood Farm, Sta 76.80 25 ⇓P P 04 13 00.2 +0.3
baz=76,SNR=5.9
G04A Mulino 76.81 28 ⇓P P 04 13 00.2 +0.2
baz=76
B17A L&G Farms, Che 76.82 19 ⇑P P 04 12 58.9 -1.1
baz=76,SNR=23
SWMT Swartz Lake 76.87 22 *e*P P 04 12 59.9 -0.4
comp=Z,40nm,1.0s,mb5.3
F07A Phinny Hill Vi 76.89 26 ⇓P P 04 13 01.8 +1.3
baz=76
B18A Beardsley Farm 76.93 19 ⇓P P 04 13 00.5 -0.1
baz=76
C15A Salmond Ranch, 76.93 21 ⇑P P 04 12 59.2 -1.5
baz=76,SNR=13
HOOD Mount Hood Mea 76.94 28 *e*P P 04 13 01.2 +0.5
comp=Z,51nm,1.1s,mb5.4
VFP Flag Point 77.00 28 P P 04 13 02.3 +1.2
C16A Fuhringer Ranc 77.09 20 ⇓P P 04 13 00.8 -0.8
baz=77,SNR=11
COR Corvallis 77.13 29 PFAKE 04 13 10.0 +8.2
COR LR LR
comp=Z,1µm,21.0s,MS5.3
D13A Huson 77.16 22 ⇓P P 04 13 02.0 +0.1
baz=77,SNR=14
ULM Lac du Bonnet 77.17 9 P P 04 12 59.3 -2.7
comp=Z,13nm,0.9s,mb4.9,baz=344,slow=5.2,SNR=7.7
ULM LR LR 04 47 05.7
comp=Z,2µm,19.4s,MS5.5,baz=354,slow=36
SLMT Seeley Lake 77.24 22 *e*P P 04 13 01.6 -0.8
comp=Z,31nm,1.2s,mb5.1
EGMT Eagleton 77.29 19 ⇓P P 04 13 01.8 -0.8
baz=77,SNR=6.1
EGMT Eagleton 77.29 19 *e*P P 04 13 01.2 -1.5
comp=Z,44nm,1.4s,mb5.2
EGMT LR LR
comp=Z,2µm,21.0s,MS5.4
H04A Detroit Lake 77.37 28 ⇓P P 04 13 03.5 +0.3
baz=77,SNR=5.7
D14A Greenough 77.39 22 ⇑P P 04 13 02.4 -0.8
baz=77,SNR=26
C17A Wharram Farm, 77.46 20 ⇑P P 04 13 02.0 -1.6
baz=77,SNR=28
MSO Missoula 77.53 22 ⇓P P 04 13 03.2 -0.8
baz=77,SNR=14
MSO Missoula 77.53 22 *e*P P 04 13 02.9 -1.1
comp=Z,22nm,1.1s,mb5.0
MSO LR LR
comp=Z,2µm,19.0s,MS5.4
E12A Beaver Dam Sad 77.53 23 ⇓P P 04 13 03.5 -0.5
baz=77,SNR=6.6
F10A Beach Ranch, E 77.53 24 ⇑P P 04 13 04.5 +0.4
baz=77,SNR=22
CHMT Chamberlain Mo 77.60 21 *e*P P 04 13 03.5 -1.0
comp=Z,17nm,1.4s,mb4.8
D15A Lincoln 77.64 21 ⇑P P 04 13 04.1 -0.6
baz=77,SNR=11
G08A Pilot Rock 77.71 26 ⇑P P 04 13 04.8 -0.3
baz=77,SNR=16
E13A Victor 77.83 22 ⇑P P 04 13 05.2 -0.5
baz=78,SNR=17
DGMT Dagmar 77.85 15 ⇓P P 04 13 05.3 -0.5
baz=78,SNR=17
DGMT Dagmar 77.85 15 *e*P P 04 13 04.8 -1.0
comp=Z,113nm,1.1s,mb5.7
DGMT LR LR
comp=Z,4µm,21.0s,MS5.7

D16A Dana Ranch, Ca 77.86 20 ⇓P P 04 13 05.1 -0.7
baz=78,SNR=10
D17A Six Diamond Ra 77.93 20 ⇑P P 04 13 05.5 -0.7
baz=78,SNR=13
VIPM Ingram Point 77.98 27 P P 04 13 07.6 +1.0
E14A Clinton 78.02 22 ⇑P P 04 13 06.4 -0.3
baz=78,SNR=9.8
D18A Linhart Farms, 78.07 19 ⇓P P 04 13 06.5 -0.5
baz=78,SNR=13
HRY Holter Researc 78.11 21 *e*P P 04 13 06.4 -0.8
comp=Z,15nm,0.9s,mb4.9
E15A Deer Lodge 78.20 21 ⇓P P 04 13 07.1 -0.7
baz=78,SNR=11
F12A Elk City 78.22 23 ⇑P P 04 13 05.7 -2.2
baz=78,SNR=8.9
E16A East Helena 78.31 21 ⇑P P 04 13 08.3 0.0
baz=78,SNR=6.4
D20A Manuel Ranch, 78.50 18 ⇓P P 04 13 08.8 -0.5
baz=78
WRA Warramunga Arr 78.50 145 P P 04 13 06.7 -2.9
comp=Z,44nm,1.1s,mb5.3,baz=346,slow=6.0,SNR=41
WRA LR LR 04 50 55.9
comp=Z,712nm,21.8s,MS5.0,baz=320,slow=38
WRA Warramunga Arr 78.50 145 P P 04 13 06.7 -2.9
WRA pmax pmax
comp=Z,44nm,1.1s
WRA MLR MLR
comp=Z,712nm,21.8s
E17A Martinsdale 78.55 20 ⇓P P 04 13 08.8 -0.9
baz=78,SNR=9.1
BMO Blue Mountains 78.56 25 *e*P P 04 13 09.3 -0.5
comp=Z,35nm,1.4s,mb5.1
BMO LR LR
comp=Z,1µm,20.0s,MS5.2
E18A Harlowton 78.65 19 ⇓P P 04 13 10.1 -0.2
baz=78,SNR=11
I07A Izee 78.68 27 ⇓P P 04 13 10.2 -0.3
baz=78,SNR=20
F15A Butte 78.79 21 ⇓P P 04 13 10.6 -0.5
baz=78,SNR=8.5
G12A Big Creek, Yel 78.80 23 ⇑P P 04 13 09.6 -1.4
baz=78,SNR=5.3
LRM Limekiln Ridge 78.81 21 *e*P P 04 13 10.6 -0.6
comp=Z,133nm,1.5s,mb5.7
E19A Rath Farm, Rou 78.97 19 ⇓P P 04 13 11.5 -0.5
baz=79
HUMO Hull Mountain 79.03 30 PFAKE 04 13 20.0 +7.6
HUMO LR LR
comp=Z,2µm,22.0s,MS5.3
E20A Meyer Farm, Mu 79.06 18 ⇑P P 04 13 11.6 -1.0
baz=79
G13A Cobalt 79.09 23 ⇑P P 04 13 11.8 -0.9
baz=79,SNR=22
AGMN Agassiz Nation 79.11 9 *e*P P 04 13 10.5 -2.2
comp=Z,19nm,1.0s,mb5.0
AGMN LR LR
comp=Z,2µm,20.0s,MS5.5
F17A Fitzpatrick Pl 79.12 20 ⇓P P 04 13 12.7 -0.1
baz=79,SNR=11
G14A Jackson 79.13 22 ⇑P P 04 13 13.4 +0.4
baz=79
BOZ Bozeman (W) 79.16 21 ⇑P P 04 13 13.1 0.0
baz=79,SNR=12
BOZ Bozeman (W) 79.16 21 *e*P P 04 13 12.7 -0.4
comp=Z,15nm,1.2s,mb4.8
BOZ LR LR
comp=Z,1µm,19.0s,MS5.3
BOZ Bozeman (W) 79.16 21 *e*P P 04 13 12.7 -0.4
BOZ pmax pmax
comp=Z,15nm,1.2s,mb4.8
BOZ MLR MLR
comp=Z,1µm,19.0s,MS5.3
DLMT Dillon 79.22 22 *e*P P 04 13 12.4 -1.0
comp=Z,37nm,1.1s,mb5.2
LAO LASA Array 79.23 17 ⇓P P 04 13 13.1 -0.4
baz=79,SNR=9.2
LAO LASA Array 79.23 17 *e*P P 04 13 12.8 -0.7
comp=Z,17nm,0.9s,mb5.0
LAO LR LR
comp=Z,3µm,19.0s,MS5.6
F18A Big Timber 79.32 19 ⇑P P 04 13 13.4 -0.5
baz=79,SNR=20
G15A Dillon 79.43 22 ⇓P P 04 13 14.4 -0.2
baz=79,SNR=22
GCMT Greycliff 79.44 19 *e*P P 04 13 14.2 -0.4
comp=Z,35nm,1.2s,mb5.2
H12A Diamond D Ranc 79.45 23 ⇓P P 04 13 14.1 -0.6
baz=79,SNR=8.0
G16A Moss Hill, Enn 79.52 21 ⇑P P 04 13 14.3 -0.7
baz=79,SNR=26
F19A Roth Farm, Mol 79.53 19 ⇑P P 04 13 14.4 -0.6
baz=79,SNR=16
K05A Summer Lake 79.54 28 ⇓P P 04 13 16.3 +1.1
baz=79,SNR=12
H13A Challis 79.59 23 ⇓P P 04 13 14.4 -1.0
baz=79,SNR=14
J08A Circle Bar Ran 79.64 26 ⇑P P 04 13 16.0 +0.3
baz=79
G17A Pierce Place, 79.67 20 ⇓P P 04 13 16.2 +0.3
baz=79,SNR=20
MCMT McKenzie Canyo 79.67 22 *e*P P 04 13 15.3 -0.5
comp=Z,14nm,1.0s,mb4.8
F20A Billings 79.73 18 ⇓P P 04 13 15.5 -0.6
baz=79,SNR=6.9
H14A Leadore 79.75 22 ⇑P P 04 13 15.9 -0.4
baz=79,SNR=32
EYMN Ely 79.83 7 *e*P P 04 13 15.0 -1.7
comp=Z,24nm,1.0s,mb5.1
EYMN LR LR
comp=Z,2µm,19.0s,MS5.5
YBH Yreka Blue Hor 79.91 30 PFAKE 04 13 30.0 +13
YBH LR LR
comp=Z,1µm,20.0s,MS5.3
H15A Lima 79.91 22 ⇓P P 04 13 17.0 -0.2
baz=80,SNR=38
I12A Atlanta 80.10 24 ⇑P P 04 13 18.0 -0.2
baz=80,SNR=45
H16A Russell Place, 80.14 21 ⇓P P 04 13 18.4 0.0
baz=80,SNR=16
RLMT Red Lodge 80.16 19 ⇓P P 04 13 17.8 -0.7
baz=80,SNR=20
RLMT Red Lodge 80.16 19 *e*P P 04 13 17.8 -0.8
comp=Z,47nm,1.2s,mb5.3
RLMT LR LR
comp=Z,2µm,19.0s,MS5.4
I13A Wildhorse Cree 80.23 23 ⇑P P 04 13 18.3 -0.6
baz=80,SNR=14
MFID Camas Ranch 80.28 24 ⇓P P 04 13 19.1 -0.1
baz=80,SNR=18
WVOR Wild Horse Val 80.45 27 *e*P P 04 13 20.1 0.0
comp=Z,29nm,1.1s,mb5.1
WVOR LR LR
comp=Z,1µm,20.0s,MS5.2
WVOR Wild Horse Val 80.45 27 *e*P P 04 13 20.1 0.0
WVOR pmax pmax
comp=Z,29nm,1.1s,mb5.1
WVOR MLR MLR
comp=Z,1µm,20.0s,MS5.2
LKWY Lake 80.46 20 *e*P P 04 13 19.0 -1.1
comp=Z,30nm,0.8s,mb5.3
LKWY LR LR
comp=Z,3µm,20.0s,MS5.6
LKWY Lake 80.46 20 *e*P P 04 13 19.0 -1.1
LKWY pmax pmax
comp=Z,30nm,0.8s,mb5.3
LKWY MLR MLR
comp=Z,3µm,20.0s,MS5.6
G21A Lodge Grass 80.47 18 ⇑P P 04 13 19.4 -0.7
baz=80,SNR=5.8
MOD Modoc 80.47 28 *e*P P 04 13 20.6 +0.3
comp=Z,29nm,1.2s,mb5.1
MOD LR LR
comp=Z,1µm,19.0s,MS5.2
YFT Old Faithful 80.47 21 *e*P P 04 13 20.8 +0.6
comp=Z,26nm,1.1s,mb5.1
HLID Hailey 80.49 23 ⇑P P 04 13 20.1 -0.2
baz=80,SNR=18
HLID Hailey 80.49 23 *e*P P 04 13 19.3 -1.0
comp=Z,11nm,1.0s,mb4.7
HLID LR LR
comp=Z,2µm,21.0s,MS5.5
J13A Cove Ranch, Pi 80.70 23 ⇑P P 04 13 21.4 -0.1
baz=80,SNR=24
FLWY Flagg Ranch 80.85 21 *e*P P 04 13 22.4 +0.1
comp=Z,34nm,1.0s,mb5.2
I16A Newdale 80.88 21 ⇑P P 04 13 22.8 +0.4
baz=80,SNR=24
HNR Honiara 80.89 118 PFAKE 04 13 30.0 +7.2

HNR LR LR
comp=Z,1µm,22.0s,MS5.2
IMW Indian Meadow 80.98 21 *eP* **P 04 13 23.0 +0.1**
comp=Z,34nm,1.0s,mb5.2
WDC Whiskeytown Da 81.01 30 PFAKE 04 13 30.0 +6.8
WDC LR LR
comp=Z,1µm,20.0s,MS5.3
H20A Greybull 81.03 19 ⇑P **P 04 13 22.4 -0.8**
baz=81,SNR=14
I17A Pilgrim Ck. 81.04 21 ⇓P **P 04 13 23.9 +0.6**
baz=81,SNR=6.5
H21A Big Horn, Sher 81.07 18 ⇓P **P 04 13 22.7 -0.7**
baz=81,SNR=14
MOOW Moose Ponds 81.16 21 *eP* **P 04 13 23.9 0.0**
comp=Z,35nm,1.3s,mb5.1
DCID1 Drake Creek 81.21 21 *eP* **P 04 13 24.0 -0.2**
comp=Z,77nm,1.1s,mb5.5
LOHW Long Hollow 81.32 21 *eP* **P 04 13 24.5 -0.2**
comp=Z,17nm,1.0s,mb4.9
L10A Juniper Basin 81.36 25 ⇑P **P 04 13 25.4 +0.4**
baz=81,SNR=10
TPAW Teton Pass 81.36 21 *eP* **P 04 13 25.1 +0.1**
comp=Z,47nm,1.4s,mb5.2
RRI2 Red Ridge 81.42 21 *eP* **P 04 13 25.0 -0.3**
comp=Z,21nm,1.3s,mb4.9
J16A Bone 81.42 22 ⇓P **P 04 13 25.4 +0.1**
baz=81,SNR=9.4
SNOW Snow King Moun 81.43 21 *eP* **P 04 13 26.1 +0.8**
comp=Z,22nm,1.1s,mb5.0
REDW Red Top Meadow 81.51 21 *eP* **P 04 13 26.3 +0.6**
comp=Z,25nm,1.3s,mb5.0
I20A Worland 81.52 19 ⇓P **P 04 13 24.8 -1.0**
baz=81,SNR=8.6
K14A Jones Ranch, D 81.75 23 ⇓P **P 04 13 27.1 +0.1**
baz=81,SNR=14
K15A Arbon 81.77 22 ⇓P **P 04 13 27.2 0.0**
baz=81,SNR=10
ASAR Alice Springs 81.80 147 P **P 04 13 26.2 -1.1**
comp=Z,44nm,1.1s,mb5.3,baz=350,slow=5.4,SNR=40
ASAR Alice Springs 81.80 147 P **P 04 13 26.2 -1.1**
ASAR pmax pmax
comp=Z,44nm,1.1s
I21A Big Trails, Te 81.81 18 ⇑P **P 04 13 26.2 -1.1**
baz=81,SNR=26
COWI Conover 81.82 5 *eP* **P 04 13 24.6 -2.7**
comp=Z,16nm,1.0s,mb4.9
COWI LR LR
comp=Z,3µm,20.0s,MS5.6
J18A Kendall Valley 81.83 20 ⇓P **P 04 13 27.2 -0.3**
baz=81,SNR=16
K16A Soda Springs 81.85 22 ⇓P **P 04 13 28.4 +0.8**
baz=82,SNR=5.6
M10A I.L. Ranch, Tu 81.86 26 ⇓P **P 04 13 28.4 +0.7**
baz=82
AHID Auburn Hatcher 82.02 21 PFAKE 04 13 40.0 +12
AHID LR LR
comp=Z,2µm,19.0s,MS5.4
RSSD Black Hills 82.10 16 *eP* **P 04 13 27.7 -1.1**
comp=Z,37nm,1.4s,mb5.1
RSSD LR LR
comp=Z,3µm,19.0s,MS5.6
RSSD Black Hills 82.10 16 *eP* **P 04 13 27.7 -1.2**
RSSD pmax pmax
comp=Z,37nm,1.4s,mb5.1
RSSD MLR MLR
comp=Z,3µm,19.0s,MS5.6
L14A Malta 82.22 23 ⇑P **P 04 13 29.7 +0.2**
baz=82,SNR=7.4
PKME Peaks-Kenny Pk 82.26 351 *eP* **P 04 13 29.6 -0.1**
comp=Z,36nm,1.0s,mb5.3
PKME LR LR
comp=Z,2µm,20.0s,MS5.5
HOPS Hopland 82.29 31 PFAKE 04 13 40.0 +10
HOPS LR LR
comp=Z,2µm,20.0s,MS5.4
BW06 Boulder Array 82.36 20 ⇓P **P 04 13 29.9 -0.4**
baz=82,SNR=5.8
BW06 Boulder Array 82.36 20 PFAKE 04 13 40.0 +10
BW06 LR LR
comp=Z,1µm,21.0s,MS5.3
K18A Toltan Ranch, 82.38 21 ⇓P **P 04 13 29.9 -0.4**
baz=82,SNR=7.7
L15A Malad City 82.45 22 ⇓P **P 04 13 30.5 -0.2**
baz=82,SNR=15
M13A Montello 82.63 24 ⇓P **P 04 13 31.8 +0.1**
baz=82,SNR=10.0
M13A Montello 82.63 24 *eP* **P 04 13 31.3 -0.4**
comp=Z,16nm,1.1s,mb5.0
M14A Sheep Mountain 82.69 23 ⇑P **P 04 13 32.3 +0.3**
baz=82,SNR=9.5
BMN Battle Mountai 82.70 26 *eP* **P 04 13 31.4 -0.7**
comp=Z,34nm,1.4s,mb5.2
BMN LR LR
comp=Z,2µm,19.0s,MS5.5
BMN Battle Mountai 82.70 26 *eP* **P 04 13 31.4 -0.7**
BMN pmax pmax
comp=Z,34nm,1.4s,mb5.2
BMN MLR MLR
comp=Z,2µm,19.0s,MS5.5
K20A Yellowstone Ra 82.71 19 ⇑P **P 04 13 31.0 -1.1**
baz=82,SNR=9.4
M15A Larsen Ranch, 82.95 23 ⇑P **P 04 13 32.7 -0.6**
baz=83
HWUT Hardware Ranch 83.02 22 *eP* **P 04 13 33.1 -0.6**
comp=Z,20nm,0.9s,mb5.1
HWUT LR LR
comp=Z,1µm,20.0s,MS5.3
WCN Washoe City 83.03 29 ⇑P **P 04 13 34.0 +0.2**
baz=83,SNR=8.5
L18A Fontenelle, Gr 83.06 21 ⇓P **P 04 13 33.3 -0.6**
baz=83
K22A Casper 83.08 18 ⇓P **P 04 13 32.8 -1.2**
baz=83,SNR=5.1
N13A Wendover, West 83.09 24 ⇓P **P 04 13 34.0 -0.1**
baz=83,SNR=11
N13A Wendover, West 83.09 24 *eP* **P 04 13 33.8 -0.3**
comp=Z,26nm,0.9s,mb5.3
MCCM Marconi Confer 83.12 31 PFAKE 04 13 50.0 +16
MCCM LR LR
comp=Z,1µm,20.0s,MS5.3
LONY Lake Ozonia 83.30 355 *eP* **P 04 13 34.6 -0.5**
comp=Z,20nm,1.0s,mb5.1
LONY LR LR
comp=Z,1µm,20.0s,MS5.3
CTA Charters Tower 83.31 135 P **P 04 13 34.4 -0.9**
comp=Z,32nm,1.1s,mb5.3,baz=346,slow=4.0,SNR=13
CTA Charters Tower 83.31 135 P **P 04 13 34.4 -0.9**
CTA pmax pmax
comp=Z,32nm,1.1s
CTAO Charters Tower 83.31 135 *eP* **P 04 13 36.4 +1.1**
comp=Z,38nm,1.1s,mb5.3
CTAO LR LR
comp=Z,817nm,21.0s,MS5.1
CTAO Charters Tower 83.31 135 *eP* **P 04 13 36.4 +1.1**
CTAO pmax pmax
comp=Z,38nm,1.1s,mb5.3
CTAO MLR MLR
comp=Z,817nm,21.0s,MS5.1
CTAO Charters Tower 83.31 135 P **P 04 13 36.8 +1.5**
BGU Big Grassy Mou 83.32 23 *eP* **P 04 13 36.1 +0.9**
comp=Z,12nm,1.2s,mb4.8
N14A Grayback Hills 83.35 23 ⇑P **P 04 13 35.6 +0.1**
baz=83,SNR=13
LBNH Lisbon 83.50 353 *eP* **P 04 13 36.4 +0.3**
comp=Z,34nm,1.3s,mb5.2
LBNH LR LR
comp=Z,2µm,22.0s,MS5.5
LBNH Lisbon 83.50 353 *eP* **P 04 13 36.4 +0.3**
LBNH pmax pmax
comp=Z,35nm,1.3s,mb5.2
LBNH MLR MLR
comp=Z,2µm,22.0s,MS5.5
O12A Currie 83.51 25 ⇑P **P 04 13 36.3 0.0**
baz=83,SNR=23
ECSD EROS Data Cent 83.53 11 *eP* **P 04 13 34.3 -2.0**
comp=Z,32nm,1.0s,mb5.4
ECSD LR LR
comp=Z,1µm,20.0s,MS5.3
L21A Rawlins 83.58 19 ⇑P **P 04 13 36.5 0.0**
baz=83,SNR=7.7
ABPO Ambohimpanom 83.63 228 PFAKE 04 13 50.0 +13
ABPO LR LR
comp=Z,959nm,19.0s,MS5.2
P10A Eureka 83.66 26 ⇓P **P 04 13 37.2 +0.1**
baz=83
L22A Ellis Ranch, M 83.69 18 ⇑P **P 04 13 36.9 -0.3**
baz=83,SNR=7.5
N16A Rees Ranch, Co 83.73 22 ⇓P **P 04 13 37.3 -0.1**
baz=83,SNR=8.5
L23A Garrett 83.75 18 ⇑P **P 04 13 36.9 -0.5**
baz=83,SNR=8.0
N17A Moffit Pass 83.82 22 ⇑P **P 04 13 38.1 +0.2**
baz=83,SNR=5.7
P11A Circle Ranch, 83.92 26 ⇑P **P 04 13 38.7 +0.3**
baz=84,SNR=6.0
NCB Newcomb 83.92 354 PFAKE 04 13 50.0 +12
NCB LR LR
comp=Z,2µm,19.0s,MS5.5
JLU Jordanelle 84.00 22 *eP* **P 04 13 39.3 +0.5**
comp=Z,17nm,1.2s,mb5.0
CMB Columbia Colle 84.01 30 *eP* **P 04 13 39.3 +0.5**
comp=Z,11nm,1.2s,mb4.9
CMB LR LR
comp=Z,1µm,22.0s,MS5.2
CMB Columbia Colle 84.01 30 *eP* **P 04 13 39.3 +0.5**
CMB pmax pmax
comp=Z,11nm,1.2s,mb4.9
CMB MLR MLR
comp=Z,1µm,22.0s,MS5.2
N18A Larsen Ranch, 84.04 21 ⇓P **P 04 13 38.8 -0.2**
baz=84,SNR=6.8
DUG Dugway 84.06 23 ⇓P **P 04 13 39.0 -0.1**
baz=84,SNR=24
DUG Dugway 84.06 23 *eP* **P 04 13 38.4 -0.7**
comp=Z,33nm,1.1s,mb5.4
DUG LR LR
comp=Z,1µm,21.0s,MS5.3
DUG Dugway 84.06 23 *eP* **P 04 13 38.4 -0.7**
DUG pmax pmax
comp=Z,33nm,1.1s,mb5.4
DUG MLR MLR
comp=Z,1µm,21.0s,MS5.3
NVAR Mina Array Bea 84.26 28 P **P 04 13 39.9 -0.2**
comp=Z,5.8nm,0.9s,mb4.7,baz=312,slow=3.6,SNR=39
P13A Bates Ranch, G 84.46 24 ⇑P **P 04 13 40.9 -0.2**
baz=84,SNR=16
NLU North Lily Min 84.47 23 *eP* **P 04 13 40.8 -0.3**
comp=Z,18nm,1.1s,mb5.1
N20A Spence Gulch, 84.48 20 ⇓P **P 04 13 41.0 -0.2**
baz=84,SNR=10
M24A Cheyenne 84.54 17 ⇑P **P 04 13 41.6 +0.2**
baz=84,SNR=9.1
O17A Robinson Place 84.55 22 ⇑P **P 04 13 42.3 +0.7**
baz=84,SNR=19
P14A Drum Mountains 84.57 24 ⇓P **P 04 13 41.6 -0.1**
baz=84,SNR=16
PHWY Pilot Hill 84.58 18 *eP* **P 04 13 41.4 -0.4**
comp=Z,90nm,1.9s,mb5.6
Q11A Duckwater 84.61 26 ⇑P **P 04 13 41.9 0.0**
baz=84,SNR=14
Q12A Willow Creek R 84.64 25 ⇓P **P 04 13 42.1 0.0**
baz=84,SNR=15
O18A Roosevelt 84.65 21 ⇑P **P 04 13 42.2 +0.2**
baz=84,SNR=8.7
N21A Black Mountain 84.71 19 ⇑P **P 04 13 42.0 -0.4**
baz=84,SNR=8.9
P15A Leamington 84.78 23 ⇓P **P 04 13 42.7 -0.1**
baz=84,SNR=6.7
O19A Miners Draw (B 84.81 21 ⇓P **P 04 13 42.5 -0.3**
baz=84,SNR=16
SAO San Andreas Ge 84.84 31 PFAKE 04 13 50.0 +6.9
SAO LR LR
comp=Z,1µm,21.0s,MS5.3
N23A Red Feather La 84.89 18 ⇑P **P 04 13 43.4 +0.1**
baz=84,SNR=8.2
JFWS Jewell Farm 84.92 6 *eP* **P 04 13 41.4 -2.0**
comp=Z,38nm,0.9s,mb5.5
JFWS LR LR
comp=Z,2µm,21.0s,MS5.5
JFWS Jewell Farm 84.92 6 *eP* **P 04 13 41.4 -2.0**
JFWS pmax pmax
comp=Z,38nm,0.9s,mb5.5
JFWS MLR MLR
comp=Z,2µm,21.0s,MS5.5
Q13A Wheeler Ranch, 84.93 25 ⇑P **P 04 13 43.1 -0.5**
baz=85,SNR=10
R10A Warm Springs 84.95 27 ⇑P **P 04 13 43.6 -0.1**
baz=85,SNR=7.9
Q14A Sevier Lake (B 85.09 24 ⇓P **P 04 13 44.3 0.0**
baz=85,SNR=14
R11A Troy Canyon, C 85.09 26 ⇓P **P 04 13 44.2 -0.1**
baz=85,SNR=21
O20A White River Ci 85.16 20 ⇑P **P 04 13 44.2 -0.4**
baz=85,SNR=11
P18A Preston Nutter 85.20 22 ⇓P **P 04 13 44.6 -0.2**
baz=85,SNR=6.9
S10A Tonopah Range, 85.21 27 ⇓P **P 04 13 45.0 +0.1**
baz=85,SNR=36
P17A Butcher Ranch, 85.24 22 ⇑P **P 04 13 45.0 -0.1**
baz=85,SNR=9.2
KLBR Kellerbirin 85.24 163 *eP* **P 04 13 43.8 -1.0**
comp=Z,23nm,1.0s,mb5.3
TMUT Trail Mountain 85.30 22 *eP* **P 04 13 45.6 +0.2**
comp=Z,12nm,1.0s,mb5.0
Q15A Fillmore 85.30 23 ⇓P **P 04 13 45.4 0.0**
baz=85,SNR=6.9
P19A Cripple Cowboy 85.48 21 ⇓P **P 04 13 45.6 -0.6**
baz=85,SNR=17
OGNE Ogallala 85.53 15 ⇓P **P 04 13 45.1 -1.4**
baz=85,SNR=9.8
OGNE Ogallala 85.53 15 *eP* **P 04 13 45.3 -1.2**
comp=Z,25nm,0.8s,mb5.5
OGNE LR LR
comp=Z,3µm,22.0s,MS5.6
O23A Lake Granby, G 85.55 18 ⇑P **P 04 13 46.8 +0.2**
baz=85,SNR=8.4
SRU San Rafael 85.64 22 *eP* **P 04 13 45.9 -1.2**
comp=Z,7.2nm,0.9s,mb4.9
SRU San Rafael 85.64 22 *eP* **P 04 13 45.9 -1.1**
SRU pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
Q16A Castle Valley 85.67 23 ⇑P **P 04 13 47.3 +0.1**
baz=85,SNR=12
R13A O'Grain Ranch, 85.68 25 ⇓P **P 04 13 47.2 0.0**
baz=85
SCIA State Center 85.69 8 *eP* **P 04 13 46.3 -1.0**
comp=Z,35nm,1.0s,mb5.5
SCIA LR LR
comp=Z,2µm,20.0s,MS5.5
S11A Rachel 85.71 26 ⇓P **P 04 13 47.5 +0.1**
baz=85,SNR=7.4
Q18A Rafter H Ranch 85.73 22 ⇑P **P 04 13 47.1 -0.4**
baz=85,SNR=11
P20A De Beque 85.74 20 ⇑P **P 04 13 46.8 -0.7**
baz=85
BINY Binghamton 85.78 356 *eP* **P 04 13 47.1 -0.6**
comp=Z,44nm,1.1s,mb5.6
BINY LR LR
comp=Z,2µm,22.0s,MS5.4
AAM Ann Arbor 85.80 1 *eP* **P 04 13 45.6 -2.2**
comp=Z,15nm,0.7s,mb5.3
AAM LR LR
comp=Z,3µm,20.0s,MS5.7
AAM Ann Arbor 85.80 1 *eP* **P 04 13 45.6 -2.2**
AAM pmax pmax
comp=Z,15nm,0.7s,mb5.3
AAM MLR MLR
comp=Z,3µm,20.0s,MS5.7
MSU Marysvale 85.81 23 *eP* **P 04 13 48.1 +0.2**
comp=Z,17nm,1.1s,mb5.2
MSU Marysvale 85.81 23 *eP* **P 04 13 48.1 +0.2**
MSU pmax pmax
comp=Z,17nm,1.1s,mb5.2
MVU Marysvale 85.81 23 PFAKE 04 14 00.0 +12
MVU LR LR
comp=Z,2µm,20.0s,MS5.4
GRAC Grapevine Rang 85.86 28 ⇑P **P 04 13 48.6 +0.5**
baz=86,SNR=21
P22A Eagle 85.98 19 ⇓P **P 04 13 48.6 -0.2**
baz=86,SNR=18
ERPA Erie 85.99 359 PFAKE 04 14 00.0 +11
ERPA LR LR
comp=Z,4µm,19.0s,MS5.8
ISCO Idaho Springs 86.01 18 ⇑P **P 04 13 48.6 -0.2**
baz=86,SNR=14
ISCO Idaho Springs 86.01 18 *eP* **P 04 13 48.5 -0.3**
comp=Z,16nm,1.1s,mb5.2
ISCO LR LR
comp=Z,2µm,19.0s,MS5.6
ISCO Idaho Springs 86.01 18 *eP* **P 04 13 48.6 -0.3**
ISCO pmax pmax
comp=Z,16nm,1.1s,mb5.2
ISCO MLR MLR
comp=Z,2µm,19.0s,MS5.6
R15A Junction 86.07 24 ⇑P **P 04 13 50.1 +0.9**
baz=86,SNR=18
ARUT Antelope Range 86.18 25 *eP* **P 04 13 49.6 -0.2**
comp=Z,4.9nm,0.7s,mb4.8
ARUT Antelope Range 86.18 25 *eP* **P 04 13 49.6 -0.2**
ARUT pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
R16A Teasdale 86.20 23 ⇓P **P 04 13 50.1 +0.3**
baz=86,SNR=35
T11A Corn Creek, Al 86.23 26 ⇑P **P 04 13 50.1 +0.1**
baz=86,SNR=14
R17A Hanksville Air 86.25 22 ⇑P **P 04 13 49.3 -0.8**
baz=86,SNR=16
S13A Holt Ranch, En 86.27 25 ⇑P **P 04 13 50.2 0.0**
baz=86,SNR=22
Q20A Ridgley Place, 86.28 20 ⇑P **P 04 13 49.4 -0.8**
baz=86,SNR=6.3
SMCO Snowmass 86.34 19 *eP* **P 04 13 50.2 -0.4**
comp=Z,92nm,1.6s,mb5.8
P23A Jefferson 86.38 18 ⇓P **P 04 13 51.0 +0.3**
baz=86,SNR=10
VES Vestal, Richgr 86.43 30 ⇑P **P 04 13 49.8 -1.2**
baz=86
NWAO Narrogin (SRO) 86.45 164 PFAKE 04 14 00.0 +9.2
NWAO LR LR
comp=Z,1µm,20.0s,MS5.2
DAC Darwin (Calif) 86.47 28 PFAKE 04 14 00.0 +8.8
DAC LR LR
comp=Z,2µm,20.0s,MS5.4
FURC Furnace Creek, 86.50 28 P **P 04 13 51.5 +0.2**
baz=86,SNR=11
Q21A Lamborn Mesa, 86.55 20 ⇓P **P 04 13 51.6 +0.1**
baz=86
P25A Willow Gulch B 86.56 17 P **P 04 13 51.0 -0.6**
baz=86,SNR=9.1
S15A Panguitch 86.56 24 ⇓P **P 04 13 52.4 +0.8**
baz=86,SNR=8.6
Q22A Crested Butte, 86.66 19 ⇓P **P 04 13 52.6 +0.6**
baz=86,SNR=22
PV04 Paradox Valley 86.69 21 *eP* **P 04 13 52.7 +0.5**
U10A Ash Meadows, A 86.69 27 ⇑P **P 04 13 53.1 +0.8**
baz=86,SNR=12
MPMC Manual Prospec 86.70 28 ⇓P **P 04 13 52.4 0.0**
baz=86,SNR=18
S16A Weppner Ranch, 86.70 23 ⇑P **P 04 13 52.7 +0.4**
baz=86,SNR=20
R19A Curley Farm, L 86.70 21 ⇓P **P 04 13 52.6 +0.2**
baz=86,SNR=28
FORT Forrest 86.73 155 *eP* **P 04 13 50.4 -1.8**
comp=Z,19nm,0.7s,mb5.4
FORT Forrest 86.73 155 *eP* **P 04 13 50.5 -1.7**
comp=Z,28nm,0.8s,mb5.5
T13A Saint George 86.79 25 ⇓P **P 04 13 53.0 +0.2**
baz=86,SNR=17
Q23A Hartsel 86.83 19 ⇓P **P 04 13 52.9 -0.1**
baz=86
T14A Hurricane 86.96 25 ⇑P **P 04 13 54.3 +0.7**
baz=87,SNR=8.3
S17A Black Ridge (B 86.98 23 P **P 04 13 53.9 +0.2**
baz=87,SNR=11
R20A Redvale 87.00 21 P **P 04 13 54.0 +0.3**
baz=87,SNR=14
R21A Cimarron 87.00 20 ⇑P **P 04 13 54.2 +0.4**
baz=87,SNR=30
PV01 Paradox Valley 87.01 21 *eP* **P 04 13 53.7 -0.1**
comp=Z,3µm,1.3s
PKM Peak Mountain 87.08 30 ⇑P **P 04 13 55.0 +0.8**
baz=87,SNR=5.3
S18A Hurst Farm, Bl 87.11 22 ⇓P **P 04 13 54.2 -0.2**
baz=87,SNR=26
Q25A Bedland, Calha 87.12 17 ⇓P **P 04 13 53.9 -0.5**
baz=87,SNR=11
T15A Red Dirt Ranch 87.18 24 ⇑P **P 04 13 54.3 -0.3**
baz=87,SNR=5.6
LRMC Laurel Mountai 87.18 29 ⇑P **P 04 13 55.4 +0.7**
baz=87,SNR=9.0
SHOC Shoshone 87.19 27 ⇓P **P 04 13 55.0 +0.2**
baz=87,SNR=8.3
S19A Harvey Farm, M 87.25 21 ⇑P **P 04 13 54.8 -0.2**
baz=87,SNR=6.8
R22A Saguache, Gunn 87.30 19 ⇑P **P 04 13 55.5 +0.2**
baz=87,SNR=9.2
HDIL Hopedale 87.33 6 PFAKE 04 14 10.0 +15
HDIL LR LR
comp=Z,2µm,21.0s,MS5.6
U13A Pakoon Wash 87.34 25 ⇑P **P 04 13 55.9 +0.4**
baz=87,SNR=5.3
U14A Mt Trumbull 87.54 25 P **P 04 13 57.2 +0.8**
baz=87,SNR=15
T17A Navajo Res., N 87.58 23 ⇑P **P 04 13 56.4 -0.3**
baz=87
GSC Goldstone 87.60 28 *eP* **P 04 13 56.8 +0.1**
comp=Z,7.2nm,1.0s,mb4.9
GSC Goldstone 87.60 28 *eP* **P 04 13 56.8 +0.1**
GSC pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
R24A Sanders Place, 87.62 18 ⇓P **P 04 13 56.6 -0.2**
baz=87,SNR=8.8
S21A Coal Bank Pass 87.63 20 P **P 04 13 57.1 +0.3**
baz=87,SNR=28
EDW2 Edwards Air Fo 87.65 29 ⇓P **P 04 13 57.4 +0.4**
baz=87,SNR=9.9
T18A Mexican Hat 87.67 22 ⇓P **P 04 13 56.9 -0.1**
baz=87,SNR=24
S22A 4UR Ranch, Cre 87.75 20 ⇑P **P 04 13 57.5 +0.1**
baz=87,SNR=19
V12A Nelson 87.75 26 ⇓P **P 04 13 58.6 +1.2**
baz=87,SNR=7.4
U15A North Rim 87.76 24 ⇓P **P 04 13 57.9 +0.5**
baz=87,SNR=7.6
V13A Grand Canyon W 87.87 26 ⇓P **P 04 13 58.2 +0.2**
baz=88,SNR=7.6
MVCO Mesa Verde 87.91 21 ⇑P **P 04 13 58.1 -0.1**
baz=88,SNR=8.0
MVCO Mesa Verde 87.91 21 *eP* **P 04 13 57.9 -0.3**
comp=Z,21nm,1.1s,mb5.3
MVCO LR LR
comp=Z,2µm,22.0s,MS5.4
CBKS Cedar Bluff 87.97 14 *eP* **P 04 13 57.6 -0.8**
comp=Z,32nm,1.0s,mb5.5
CBKS LR LR
comp=Z,4µm,20.0s,MS5.8
CBKS Cedar Bluff 87.97 14 *eP* **P 04 13 57.6 -0.8**
CBKS pmax pmax
comp=Z,32nm,1.0s,mb5.5
CBKS MLR MLR
comp=Z,4µm,20.0s,MS5.8
U17A Shonto 88.00 23 ⇓P **P 04 13 58.8 +0.2**
baz=88,SNR=8.2
SDCO Great Sand Dun 88.02 19 ⇓P **P 04 13 58.5 -0.2**
baz=88
SDCO Great Sand Dun 88.02 19 *eP* **P 04 13 58.2 -0.4**
comp=Z,80nm,1.7s,mb5.7
SDCO LR LR
comp=Z,2µm,20.0s,MS5.5
KSU1 Kansas State U 88.11 11 *eP* **P 04 13 58.2 -0.9**
comp=Z,14nm,0.7s,mb5.3
KSU1 LR LR
comp=Z,2µm,20.0s,MS5.5
T19A Beclabito 88.16 22 ⇓P **P 04 13 59.4 +0.1**
baz=88,SNR=32
S24A Houchin Ranch, 88.18 18 ⇓P **P 04 13 59.5 +0.1**
baz=88,SNR=11
HEC Hector,Ludlow 88.18 28 ⇓P **P 04 14 00.3 +0.8**
baz=88,SNR=6.0
QLP Quilpie 88.23 140 *eP* **P 04 14 01.5 +1.9**
MWC Mount Wilson 88.24 29 *eP* **P 04 14 00.0 +0.3**
comp=Z,18nm,1.0s,mb5.2
MWC Mount Wilson 88.24 29 *eP* **P 04 14 00.0 +0.2**
MWC pmax pmax
comp=Z,18nm,1.0s,mb5.3
LDFC Landfair 88.29 27 *eP* **P 04 13 59.7 -0.3**
comp=Z,14nm,0.9s,mb5.2
S25A Robets Cordova 88.31 18 ⇑P **P 04 13 58.4 -1.6**
baz=88,SNR=9.6
V14A Boquillas Ranc 88.31 25 ⇓P **P 04 14 00.4 +0.4**
baz=88,SNR=22
U16A Tuba City 88.32 23 ⇓P **P 04 13 59.6 -0.5**
baz=88,SNR=6.5
BFSC Mount Baldy Ra 88.34 29 ⇑P **P 04 14 00.7 +0.4**
baz=88,SNR=6.3
U18A Rough Rock, Ch 88.36 22 ⇓P **P 04 14 00.7 +0.4**
baz=88,SNR=11
V15A Kaibab Nationa 88.37 24 ⇓P **P 04 14 01.1 +0.7**
baz=88,SNR=11
GMRC Granite Mounta 88.42 27 ⇓P **P 04 14 00.6 0.0**
baz=88,SNR=6.0
MCWV Mont Chateau 88.44 358 *eP* **P 04 14 00.2 -0.5**
comp=Z,33nm,1.0s,mb5.5
MCWV LR LR

comp=Z,4μm,21.0s,MS5.8
T22A Edith 88.44 20 ⇑P **P 04 14 00.5 -0.2**
baz=88,SNR=9.1
T23A Casias Ranch, 88.60 19 ⇑P **P 04 14 01.9 +0.5**
baz=88,SNR=7.1
W13A Hualapai Mount 88.60 26 P **P 04 14 01.6 +0.2**
baz=88,SNR=12
U20A Newcomb 88.71 21 ⇓P **P 04 14 01.7 -0.3**
baz=88,SNR=6.0
W14A Seligman 88.71 25 ⇓P **P 04 14 02.5 +0.5**
baz=88,SNR=7.8
T25A Trinidad 88.81 18 ⇑P **P 04 14 02.1 -0.4**
baz=88,SNR=7.5
U21A Nageezi 88.84 21 P **P 04 14 02.6 0.0**
baz=88,SNR=20
WUAZ Wupatki 88.86 24 PFAKE 04 14 10.0 +7.3
WUAZ LR LR
comp=Z,1μm,19.0s,MS5.4
V17A Tonalea, Kykot 88.90 23 ⇑P **P 04 14 03.1 +0.2**
baz=88,SNR=12
W15A Williams 88.95 25 ⇓P **P 04 14 04.9 +1.7**
baz=89,SNR=7.5
V18A Ganado 89.02 23 ⇓P **P 04 14 03.6 +0.2**
baz=89,SNR=11
BELC Belle Mtn. Jos 89.05 28 ⇑P **P 04 14 03.8 +0.2**
baz=89,SNR=6.7
U22A Llaves 89.06 20 ⇓P **P 04 14 04.1 +0.5**
baz=89,SNR=7.5
MURC Murrieta 89.07 29 ⇑P **P 04 14 04.2 +0.5**
baz=89
IRM Iron Mountain 89.14 27 ⇓P **P 04 14 04.7 +0.6**
baz=89,SNR=13
OLIL Olney 89.22 5 *e*P **P 04 14 03.9 -0.4**
comp=Z,62nm,1.1s,mb5.8
W16A Flagstaff 89.22 24 ⇓P **P 04 14 04.8 +0.4**
baz=89,SNR=12
U23A El Rito 89.25 19 ⇑P **P 04 14 04.4 -0.1**
baz=89,SNR=16
V20A Brimhall 89.27 21 ⇓P **P 04 14 04.8 +0.1**
baz=89,SNR=11
PFO Pinyon Flat Ob 89.28 28 ⇑P **P 04 14 05.5 +0.8**
baz=89,SNR=7.8
PFO Pinyon Flat Ob 89.28 28 *e*P **P 04 14 04.8 +0.1**
comp=Z,12nm,1.1s,mb5.1
PFO LR LR
comp=Z,2μm,19.0s,MS5.5
PFO Pinyon Flat Ob 89.28 28 *e*P **P 04 14 04.8 +0.1**
PFO pmax pmax
comp=Z,12nm,1.1s,mb5.1
PFO MLR MLR
comp=Z,2μm,19.0s,MS5.5
X14A Yava 89.46 25 P **P 04 14 06.0 +0.5**
baz=89,SNR=10
V22A San Miguel Ran 89.50 20 ⇓P **P 04 14 05.9 +0.2**
baz=89,SNR=8.7
BC3 Big Chuckawall 89.53 28 ⇑P **P 04 14 06.2 +0.4**
baz=89,SNR=5.4
U25A Circle Dot Ran 89.53 18 ⇓P **P 04 14 05.9 +0.1**
baz=89,SNR=11
X15A Humboldt 89.62 25 P **P 04 14 06.8 +0.6**
baz=89,SNR=13
U26A Atchley Ranch, 89.66 18 P **P 04 14 06.4 0.0**
baz=89,SNR=13
CCM Cathedral Cave 89.68 7 *e*P **P 04 14 05.0 -1.5**
comp=Z,27nm,1.0s,mb5.5
CCM LR LR
comp=Z,1μm,21.0s,MS5.3
CCM Cathedral Cave 89.68 7 *e*P **P 04 14 05.0 -1.5**
CCM pmax pmax
comp=Z,27nm,1.0s,mb5.5
CCM MLR MLR
comp=Z,1μm,21.0s,MS5.3
WCI Wyandotte Cave 89.80 4 *e*P **P 04 14 06.5 -0.6**
comp=Z,42nm,0.9s,mb5.8
WCI LR LR
comp=Z,3μm,20.0s,MS5.7
WCI Wyandotte Cave 89.80 4 *e*P **P 04 14 06.5 -0.5**
WCI pmax pmax
comp=Z,42nm,0.9s,mb5.8
WCI MLR MLR
comp=Z,3μm,20.0s,MS5.7
FVM French Village 89.82 7 *e*P **P 04 14 06.3 -0.9**
comp=Z,40nm,1.2s,mb5.6
FVM French Village 89.82 7 *e*P **P 04 14 06.3 -0.8**
FVM pmax pmax
comp=Z,40nm,1.2s,mb5.6
CBN Corbin 89.82 356 *e*P **P 04 14 07.4 +0.2**
comp=Z,22nm,0.3s,mb6.0
CBN LR LR
comp=Z,1μm,19.0s,MS5.4
Y13A Salome 89.83 26 ⇓P **P 04 14 07.5 +0.2**
baz=90,SNR=9.6
X16A Lo Mia Camp, P 89.88 24 ⇓P **P 04 14 08.1 +0.6**
baz=90,SNR=11
Y14A Wickenburg 89.94 25 ⇑P **P 04 14 08.2 +0.4**
baz=90,SNR=7.4
MONP Monument Peak 89.97 29 ⇑P **P 04 14 08.8 +0.9**
baz=90,SNR=5.3
USIN University of 90.00 5 *e*P **P 04 14 07.7 -0.3**
comp=Z,22nm,0.7s,mb5.6
V25A Rancho No Teng 90.04 18 ⇑P **P 04 14 08.8 +0.6**
baz=90,SNR=9.5
Y15A Casa Rosa Ranc 90.10 25 ⇓P **P 04 14 09.3 +0.8**
baz=90,SNR=6.1
SIUC Southern Illin 90.17 6 *e*P **P 04 14 09.0 +0.2**
comp=Z,25nm,0.7s,mb5.7
LSZ Lusaka 90.20 245 PFAKE 04 14 20.0 +11
LSZ LR LR
comp=Z,2μm,20.0s,MS5.5
V26A Tequesquite Ra 90.23 18 ⇑P **P 04 14 08.8 -0.3**
baz=90,SNR=12
W23A Werner Place, 90.39 20 P **P 04 14 10.7 +0.9**
baz=90,SNR=9.3
Y16A Circle Bar Ran 90.39 24 P **P 04 14 10.7 +0.8**
baz=90,SNR=12
Z13A Yuma Proving G 90.46 26 ⇑P **P 04 14 10.6 +0.4**
baz=90,SNR=11
X20A Quemado 90.47 22 P **P 04 14 11.2 +0.9**
baz=90,SNR=23
W24A Lazy 6 Ranch, 90.49 19 ⇓P **P 04 14 10.3 0.0**
baz=90,SNR=7.0
ANMO Albuquerque 90.52 20 *e*P **P 04 14 10.7 +0.2**
comp=Z,42nm,1.4s,mb5.6
ANMO LR LR
comp=Z,1μm,20.0s,MS5.4
ANMO Albuquerque 90.52 20 *e*P **P 04 14 10.7 +0.2**
ANMO pmax pmax
comp=Z,42nm,1.4s
ANMO MLR MLR
comp=Z,1μm,20.0s
Y17A Roosevelt 90.72 24 ⇓P **P 04 14 12.4 +0.9**
baz=90,SNR=7.5
X21A Alamocita Cree 90.72 21 ⇓P **P 04 14 12.6 +1.2**
baz=90,SNR=11
Y18A Canyon Day Jun 90.84 23 P **P 04 14 13.5 +1.6**
baz=90,SNR=5.2
Y19A Nutrioso 90.86 23 ⇑P **P 04 14 13.4 +1.3**
baz=90,SNR=8.5
BLA Blacksburg 90.89 359 *e*P **P 04 14 12.0 -0.1**
comp=Z,14nm,1.0s,mb5.2
BLA LR LR
comp=Z,3μm,20.0s,MS5.8
BLA Blacksburg 90.89 359 *e*P **P 04 14 12.0 -0.2**
BLA pmax pmax
comp=Z,14nm,1.0s,mb5.2
BLA MLR MLR
comp=Z,3μm,20.0s,MS5.8
LAZ Ladron 90.91 21 *e*P **P 04 14 13.5 +1.2**
comp=Z,13nm,1.4s,mb5.1
W27A Bowe Ranch, En 91.08 17 ⇓P **P 04 14 13.0 -0.1**
baz=91,SNR=8.1
Y20A Horse Springs, 91.11 22 ⇓P **P 04 14 14.6 +1.4**
baz=91,SNR=7.5
Y21A Point of Rocks 91.17 21 ⇑P **P 04 14 14.9 +1.4**
baz=91,SNR=16
LENM Lemitar 91.17 21 *e*P **P 04 14 14.8 +1.3**
comp=Z,12nm,1.3s,mb5.1
PARMO Parma 91.18 6 *e*P **P 04 14 12.8 -0.7**
BNM Barren Site 91.26 20 *e*P **P 04 14 15.1 +1.2**
comp=Z,17nm,1.4s,mb5.2
Y22A Socorro 91.39 21 ⇑P **P 04 14 15.0 +0.5**
baz=91,SNR=16
AMTX Amarillo 91.50 16 ⇑P **P 04 14 15.3 +0.2**
baz=91,SNR=7.6
AMTX Amarillo 91.50 16 *e*P **P 04 14 15.1 +0.1**
comp=Z,10.0nm,0.9s,mb5.2
Y23A Lovelace Mesa, 91.59 20 ⇑P **P 04 14 16.4 +0.9**
baz=91,SNR=6.8

Y24A Capitan 91.72 19 P **P 04 14 17.1 +1.0**
baz=91,SNR=5.2
117A Oracle 91.82 24 ⇓P **P 04 14 17.4 +0.9**
baz=92,SNR=7.1
Z20A Nine Sixteen R 91.82 22 ⇓P **P 04 14 17.5 +1.0**
baz=91,SNR=9.6
WVT Waverly 91.82 5 *e*P **P 04 14 15.5 -1.0**
comp=Z,15nm,0.9s,mb5.3
WVT LR LR
comp=Z,2μm,20.0s,MS5.7
WVT Waverly 91.82 5 *e*P **P 04 14 15.5 -1.0**
WVT pmax pmax
comp=Z,15nm,0.9s,mb5.3
WVT MLR MLR
comp=Z,2μm,20.0s,MS5.7
Z21A St. Cloud Mine 91.84 21 P **P 04 14 17.9 +1.3**
baz=92,SNR=11
118A Homack Ranch, 91.94 23 ⇓P **P 04 14 18.0 +0.9**
baz=92,SNR=6.6
119A Ashpeak Ranch, 91.98 23 ⇓P **P 04 14 18.1 +0.8**
baz=92,SNR=5.8
STKA Stephens Creek 91.99 144 P **P**
comp=Z,13nm,1.1s,mb5.2,baz=120,slow=4.4,SNR=5.1
TUC Tucson 92.05 24 *e*P **P 04 14 18.2 +0.6**
comp=Z,8.2nm,1.3s,mb4.9
TUC LR LR
comp=Z,1μm,19.0s,MS5.4
TUC Tucson 92.05 24 *e*P **P 04 14 18.2 +0.6**
TUC pmax pmax
comp=Z,8.0nm,1.3s,mb4.9
TUC MLR MLR
comp=Z,1μm,19.0s,MS5.4
WMOK Wichita Mounta 92.11 14 *e*P **P 04 14 17.4 -0.4**
comp=Z,25nm,1.2s,mb5.4
WMOK LR LR
comp=Z,2μm,20.0s,MS5.6
WMOK Wichita Mounta 92.11 14 *e*P **P 04 14 17.4 -0.4**
WMOK pmax pmax
comp=Z,25nm,1.2s,mb5.4
WMOK MLR MLR
comp=Z,2μm,20.0s,MS5.6
MSTX Muleshoe 92.20 17 P **P 04 14 18.3 +0.1**
baz=92,SNR=8.1
217A Green Valley 92.56 24 P **P 04 14 20.8 +0.8**
baz=92,SNR=8.3
218A Dragoon 92.56 24 P **P 04 14 20.8 +0.8**
baz=92,SNR=9.8
121A Cookes Peak, D 92.56 22 ⇓P **P 04 14 21.2 +1.2**
baz=92,SNR=5.8
CPCT Cooper Cave 92.63 2 *e*P **P 04 14 19.5 -0.7**
Z26A Caprock 92.65 18 ⇓P **P 04 14 20.1 -0.3**
baz=92,SNR=6.3
DBIC Dimbokro 92.67 284 PFAKE 04 14 30.0 +9.3
DBIC LR LR
comp=Z,1μm,20.0s,MS5.4
DBIC Dimbokro 92.67 284 LR LR 05 00 45.5
comp=Z,1μm,20.3s,MS5.4,baz=13,slow=39
219A White Tail Can 92.73 23 ⇓P **P 04 14 21.5 +0.7**
baz=92,SNR=10
CNNC Cliffs of the 92.80 357 *e*P **P 04 14 21.1 +0.1**
comp=Z,7.7nm,0.3s,mb5.6
CNNC LR LR
comp=Z,2μm,19.0s,MS5.5
SWET Sewanee 92.82 3 *e*P **P 04 14 20.1 -1.0**
124A Stringfield Ra 92.91 20 ⇓P **P 04 14 21.5 0.0**
baz=92
MIAR Mount Ida 92.95 10 *e*P **P 04 14 21.6 -0.2**
comp=Z,5.0nm,1.1s,mb4.9
MIAR LR LR
comp=Z,2μm,19.0s,MS5.6
MIAR Mount Ida 92.95 10 *e*P **P 04 14 21.6 -0.1**
MIAR pmax pmax
comp=Z,5.0nm,1.1s,mb4.9
MIAR MLR MLR
comp=Z,2μm,19.0s,MS5.6
220A Playas Peak, P 92.99 22 ⇓P **P 04 14 22.8 +0.9**
baz=93,SNR=14
318A Bisbee 93.08 24 ⇓P **P 04 14 22.5 +0.2**
baz=93,SNR=9.3
125A Gardner Draw, 93.11 19 P **P 04 14 21.9 -0.6**
baz=93,SNR=6.7
319A Douglas 93.32 23 P **P 04 14 24.2 +0.7**
baz=93,SNR=7.3
320A Kipp Ranch, An 93.53 23 ⇑P **P 04 14 25.2 +0.8**
baz=93,SNR=5.7
225A Deer Hill, Car 93.61 19 ⇑P **P 04 14 24.5 -0.3**
baz=93,SNR=5.2
GDL2 Guadalupe Moun 93.61 19 *e*P **P 04 14 24.8 0.0**
comp=Z,2.5nm,0.9s,mb4.6
MNTX Cornudas Mount 93.89 20 ⇑P **P 04 14 25.9 -0.2**
baz=94,SNR=8.7
MNTX Cornudas Mount 93.89 20 *e*P **P 04 14 26.1 0.0**
comp=Z,6.7nm,1.2s,mb5.0
MNTX LR LR
comp=Z,1μm,19.0s,MS5.5
325A Bean Ranch, Si 94.29 20 ⇓P **P 04 14 27.4 -0.5**
baz=94,SNR=9.0
BBSR BB Station 94.40 346 PFAKE 04 14 40.0 +12
BBSR LR LR
comp=Z,1μm,20.0s,MS5.4
326A Caldwell Ranch 94.55 19 ⇑P **P 04 14 28.7 -0.4**
baz=94,SNR=13
GOGA Godfrey 94.68 1 PFAKE 04 14 40.0 +10
GOGA LR LR
comp=Z,3μm,19.0s,MS5.7
DZM Mont Dzumac 94.80 120 *e*P **P 04 14 33.5 +3.3**
comp=Z,57nm,1.2s,mb5.9
DZM *e*SS SS 04 32 14.9 +5.8
comp=Z,391nm,29.1s
DZM *e*LR LR 04 45 24.6
comp=Z,2μm,25.4s
425A Indio Mountain 94.85 20 ⇑P **P 04 14 30.6 0.0**
baz=94,SNR=14
LRAL Lakeview Retre 94.95 4 PFAKE 04 14 40.0 +9.1
LRAL LR LR
comp=Z,3μm,20.0s,MS5.8
NHSC New Hope 94.98 359 PFAKE 04 14 40.0 +8.9
NHSC LR LR
comp=Z,4μm,20.0s,MS5.8
426A McDonald Obser 95.16 19 ⇓P **P 04 14 32.0 +0.1**
baz=95,SNR=6.8
428A Kincaid Ranch, 95.37 18 P **P 04 14 33.5 +0.6**
baz=95,SNR=6.4
VBMS Vicksburg 95.54 7 PFAKE 04 14 40.0 +6.4
VBMS LR LR
comp=Z,2μm,21.0s,MS5.5
NATX Nacogdoches 95.58 11 PFAKE 04 14 40.0 +6.1
NATX LR LR
comp=Z,2μm,20.0s,MS5.6
527A Woodward Ranch 95.75 19 ⇓P **P 04 14 35.0 +0.3**
baz=95,SNR=8.0
528A Cox Ranch, San 95.90 18 ⇑P **P 04 14 34.8 -0.5**
baz=96,SNR=6.3
JCT Junction City 96.12 16 *e*P **P 04 14 35.6 -0.7**
comp=Z,2.5nm,0.6s,mb4.8
JCT LR LR
comp=Z,4μm,20.0s,MS5.8
JCT Junction City 96.12 16 *e*P **P 04 14 35.6 -0.7**
JCT pmax pmax
comp=Z,3.0nm,0.6s,mb4.9
JCT MLR MLR
comp=Z,4μm,20.0s,MS5.8
626A Big Bend Ranch 96.22 19 ⇑P **P 04 14 37.0 +0.2**
baz=96,SNR=6.0
627A Terlingua Ranc 96.47 19 ⇑P **P 04 14 38.1 +0.1**
baz=96,SNR=8.2
TXAR Lajitas Array 96.53 19 P **P 04 14 38.0 -0.2**
comp=Z,1.9nm,1.1s,mb4.5,baz=341,slow=2.7,SNR=12
TXAR PKKPbc PKKPbc 04 31 22.9 +2.9
comp=Z,0.9nm,1.0s,baz=151,slow=8.5,SNR=4.2
TXAR LR LR 04 59 49.6
comp=Z,2μm,19.5s,MS5.5,baz=140,slow=36
628A Black Gap, Mar 96.54 18 ⇑P **P 04 14 38.1 -0.1**
baz=96,SNR=5.0
BRAL Brewton 96.96 5 PFAKE 04 14 50.0 +10
BRAL LR LR
comp=Z,3μm,19.0s,MS5.8
XMAS Kiritimati 97.16 77 PFAKE 04 14 50.0 +8.7
XMAS LR LR
comp=Z,1μm,20.0s,MS5.4
HKT Hockley 97.23 12 PFAKE 04 14 50.0 +8.7
HKT LR LR
comp=Z,1μm,19.0s,MS5.5
MSVF Nonsavu 97.81 109 PFAKE 04 14 50.0 +6.0
MSVF LR LR
comp=Z,620nm,19.0s,MS5.1
CAN Canberra 97.85 140 PFAKE 04 14 50.0 +6.3
CAN LR LR
comp=Z,906nm,19.0s,MS5.3
KVTX Kingsville 99.30 14 PFAKE 04 15 00.0 +9.3
KVTX LR LR
comp=Z,2μm,19.0s,MS5.5
TSUM Tsumeb 99.37 251 PFAKE 04 15 00.0 +9.1
TSUM LR LR
comp=Z,2μm,20.0s,MS5.5
LBTB Lobatse 99.48 241 PFAKE 04 15 00.0 +8.7
LBTB LR LR
comp=Z,786nm,19.0s,MS5.2
DWPF Disney 99.97 360 PFAKE 04 15 00.0 +6.2
DWPF LR LR
comp=Z,3μm,20.0s,MS5.8
AFI Afiamalu 100.89 99 PFAKE 04 15 10.0 +12
AFI LR LR
comp=Z,1μm,20.0s,MS5.4
BOSA Boshof 102.53 239 PFAKE 04 15 20.0 +15
BOSA LR LR
comp=Z,735nm,20.0s,MS5.2
GRTK Grand Turk 105.95 350 PFAKE 04 19 40.0 +7.4
GRTK LR LR
comp=Z,2μm,21.0s,MS5.6
TEIG Tepich 107.61 6 PFAKE 04 19 50.0 +14
TEIG LR LR
comp=Z,2μm,20.0s,MS5.6
SUR Sutherland 107.85 240 PFAKE 04 19 50.0 +14
SUR LR LR
comp=Z,1μm,20.0s,MS5.5
GTBY Guantanamo Bay 107.88 353 PFAKE 04 19 50.0 +14
GTBY LR LR
comp=Z,970nm,19.0s,MS5.4
ANWB Willy Bob 108.21 340 PFAKE 04 19 50.0 +13
ANWB LR LR
comp=Z,884nm,22.0s,MS5.3
SDDR Presa de Saban 108.47 349 PFAKE 04 19 50.0 +13
SDDR LR LR
comp=Z,1μm,20.0s,MS5.5
SJG San Juan 108.61 344 PFAKE 04 19 50.0 +12
SJG LR LR
comp=Z,870nm,21.0s,MS5.3
MTDJ Mount Denham 109.71 356 PFAKE 04 19 50.0 +10
MTDJ LR LR
comp=Z,1μm,21.0s,MS5.5
FDF Fort de France 110.92 339 PFAKE 04 19 50.0 +8.0
FDF LR LR
comp=Z,838nm,21.0s,MS5.3
BBGH Gun Hill 112.08 337 PFAKE 04 20 00.0 +16
BBGH LR LR
comp=Z,2μm,21.0s,MS5.6
GRGR Grenville 113.55 338 PFAKE 04 20 00.0 +13
GRGR LR LR
comp=Z,789nm,20.0s,MS5.3
TGUH Tegucigalpa,Un 113.79 6 PFAKE 04 20 00.0 +13
TGUH LR LR
comp=Z,1μm,22.0s,MS5.5
SNZO South Karori 114.26 127 PFAKE 04 20 00.0 +13
SNZO LR LR
comp=Z,1μm,22.0s,MS5.5
TAOE Nuku Hiva Isla 116.08 69 *e*SP SP 04 30 31.5 -6.3
comp=Z,281nm,28.4s
TAOE *e*LR LR 04 55 05.4
comp=Z,1μm,23.9s
PPT Papeete 117.30 83 *e*SS SS 04 37 19.7 +4.0
comp=Z,792nm,30.5s
PPT *e*LQ 04 50 40.2
comp=Z,2μm,31.8s
PPT *e*LR LR 04 55 39.5
comp=Z,2μm,30.2s,baz=315
JTS JuntasAbangare 117.64 3 PFAKE 04 20 10.0 +15
JTS LR LR
comp=Z,971nm,22.0s,MS5.4
SDV Santo Domingo 118.34 347 PFAKE 04 20 10.0 +14
SDV LR LR
comp=Z,397nm,20.0s,MS5.0
CASY Casey 118.59 174 PFAKE 04 20 10.0 +15
CASY LR LR
comp=Z,673nm,19.0s,MS5.3
BCIP Isla Barro Col 118.80 358 PFAKE 04 20 10.0 +13
BCIP LR LR
comp=Z,1μm,19.0s,MS5.5
RCBR Riachuelo 120.32 304 PFAKE 04 20 10.0 +10
RCBR LR LR
comp=Z,1μm,20.0s,MS5.6
MAW Mawson 122.44 195 *e*PKPdf PKPdf 04 20 01.0 -1.4
MAW Mawson 122.44 195 PKP PKPdf 04 19 59.9 -2.5
comp=Z,4.9nm,0.9s,baz=320,slow=3.4,SNR=9.1
MAW Mawson 122.44 195 PKIKP PKPdf 04 19 59.9 -2.5
MAW pmax pmax
comp=Z,5.0nm,0.9s
DRV Dumont d'Urvil 122.76 162 SS SS 04 38 34.0 +9.0
OTAV Otavalo 127.61 356 *e*PKPdf PKPdf 04 20 13.5 -0.6
OTAV LR LR
comp=Z,746nm,20.0s,MS5.4
PAYG Puerto Ayora 128.11 11 PFAKE 04 20 30.0 +15
PAYG LR LR
comp=Z,705nm,21.0s,MS5.3
RKT Rikitea 130.34 75 *e*SS SS 04 40 02.0 +1.4
comp=Z,575nm,32.0s
RKT *e*LQ 04 56 13.2
comp=Z,477nm,39.5s
RKT *e*LR LR 05 01 40.5
comp=Z,496nm,30.8s
SBA Scott Base 136.34 163 PFAKE 04 20 40.0 +11
SBA LR LR
comp=Z,709nm,22.0s,MS5.3
NNA Nana 139.63 352 PFAKE 04 20 50.0 +14
NNA LR LR
comp=Z,666nm,20.0s,MS5.4
QSPA South Pole Qui 142.03 180 *e*PKPpre PKPpre 04 20 34.9
QSPA LR LR
comp=Z,1μm,20.0s,MS5.6
QSPA South Pole Qui 142.03 180 PKhKP PKPpre 04 20 32.2
baz=315,slow=2.7
LPAZ La Paz 142.50 338 PKP PKPpre 04 20 36.2
LPAZ *e*PKPdf PKPdf 04 20 42.0 +0.4
LPAZ LR LR
comp=Z,811nm,22.0s,MS5.4
LPAZ La Paz 142.50 338 PKhKP PKPpre 04 20 36.2
comp=Z,0.8nm,0.7s,baz=53,slow=7.0,SNR=3.9
LPAZ PKP PKPdf 04 20 41.5 -0.1
comp=Z,2.5nm,0.8s,baz=33,slow=3.8,SNR=9.2
LPAZ La Paz 142.50 338 PKIKP PKPdf 04 20 36.2 -5.4
LPAZ 04 20 41.5
LPAZ pmax pmax
comp=Z,10.0nm,0.7s
ARE Arequipa 143.35 343 *e*P PKPdf 04 20 40.0 -3.1
CPUP Villa Florida 148.20 315 *e*PKPdf PKPdf 04 20 49.7 -1.4
CPUP *e*PKPbc PKPbc 04 20 53.1 -1.2
CPUP LR LR
comp=Z,145nm,21.0s,MS4.7
CPUP Villa Florida 148.20 315 PKP PKPdf 04 20 48.7 -2.4
comp=Z,19nm,1.0s,baz=90,slow=4.0,SNR=6.4
CPUP PKPbc PKPbc 04 20 52.5 -1.8
comp=Z,13nm,0.8s,baz=10,slow=2.3,SNR=22
CPUP Villa Florida 148.20 315 PKIKP PKPdf 04 20 48.7 -2.4
CPUP 04 20 52.6
CPUP pmax pmax
comp=Z,19nm,1.0s
CPUP pmax pmax
comp=Z,13nm,0.9s
LCO Las Campanas 155.34 336 *e*PKPbc PKPdf 04 21 08.6 +6.9
LCO *e*PKPab PKPab 04 21 26.5 -0.4
LCO LR LR
comp=Z,2μm,22.0s,MS5.8
CFAA Coronel Fontan 157.09 329 PKPab PKPab 04 21 33.8 -0.6
comp=Z,1.2nm,0.9s,baz=214,slow=18,SNR=5.9
TRQA Tornquist 160.15 308 PFAKE 04 21 20.0 +13
TRQA LR LR
comp=Z,2μm,20.0s
PMSA Palmer Station 164.48 209 PFAKE 04 21 20.0 +9.1
PMSA LR LR
comp=Z,1μm,20.0s
PLCA Paso Flores 166.12 322 PFAKE 04 21 20.0 +7.0
PLCA LR LR
comp=Z,1μm,19.0s

*BJI **16** 04:06:40.0, 52°.31N×98°.16E, h6km, mB5.3/15, mb5.0/22, Ms5.4/16, Ms7 5.1/15*
*ISCJB **16** 04:06:40.7± 1.1, 52°.31N±0°.03×98°.29E±0°.04, h9km±6km, mb5.0/118, MS4.9/4, Error ellipse: s-maj=5.6km s-min=3.7km az=21.0*
*ASRS **16** 04:06:40.3± 5.0, 52°.32N×98°.17E, h15km, Ms4.8/2*

IDC **16** *04:06:40.3±0.5,52˚.23N×98˚.49E,h0km,mb4.8/18, mb1 5.0/22,mb1mx4.8/28,mbtmp4.9/22,ML4.0/1,Error ellipse: s-maj=14.3km s-min=10.8km az=17.0*
NEIC **16** *04:06:42.0±0.2,52˚.24N×98˚.29E,h10km,mb5.0/82, Error ellipse: s-maj=6.5km s-min=5.0km az=186.0*
MOS **16** *04:06:41.3±1.0,52˚.22N×98˚.28E,h17km,mb5.2/49, Error ellipse: s-maj=9.0km s-min=6.7km az=113.0*
MOS Felt (IV) at Orlik; (III) at Mondy; (II) at Irkutsk.
ISC 16 04:06:42.5±1.0,52˚.33N±0˚.03×98˚.34E±0˚.04,h9km±6km, n249,σ1⅑08/258,mb5.0/118,MS4.9/4,1C-2D,
Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ORL	**Orlik**	**0.93**	**76**	*e*Pg		**Pg**		**04 06 58.5**	**-1.8**
ORL				*e*				04 07 12.1	
ORL				pmax		pmax			
	comp=Z,31μm,0.5s								
ORL				smax					
	comp=N,67μm,0.5s								
MOY	**Mondy**	**1.77**	**111**	*e*PN		**Pn**		**04 07 13.1**	**-0.1**
MOY				*e*S		**Sn**		**04 07 36.4**	**+0.6**
ARS	**Arshan**	**2.55**	**98**	*e*PN		**Pn**		**04 07 27.7**	**+3.8**
ARS				*e*				04 08 01.2	
ARS				pmax		pmax			
	comp=Z,24μm,0.7s								
ARS				smax					
	comp=E,34μm,0.7s								
TLY	**Talaya**	**3.34**	**99**	*e*Pn		**Pb**		**04 07 40.2**	**-1.6**
TLY				*e*Sn		**Sb**		**04 08 25.5**	**+3.0**
TLY	**Talaya**	**3.34**	**99**	*e*PN		**Pb**		**04 07 41.0**	**-0.8**
TLY				*e*				04 08 24.2	
TLY				pmax		pmax			
	comp=Z,834nm,0.4s								
TLY				smax					
	comp=E,13μm,0.6s								
IRK	**Irkutsk**	**3.65**	**89**	*e*PN		**Pb**		**04 07 45.9**	**-1.1**
IRK				*e*				04 08 33.0	
IRK				pmax		pmax			
	comp=Z,5μm,0.6s								
IRK				smax					
	comp=N,50μm,0.7s								
ZAK	**Zakamensk**	**3.66**	**120**	*e*PN		**Pn**		**04 07 39.8**	**+0.6**
ZAK				*e*				04 08 32.4	
ZAK				pmax		pmax			
	comp=Z,2μm,0.8s								
ZAK				smax					
	comp=N,18μm,1.0s								
CERR	**Cheremushki**	**4.25**	**280**	*i* PN		**Pb**		**04 07 57.1**	**-0.2**
CERR	**Cheremushki**	**4.25**	**280**	*i* Pg		**Pb**		**04 07 57.1**	**-0.2**
CERR				*i* Sg		**Sb**		**04 08 48.5**	**-0.2**
TRG	**Tyrgan**	**4.91**	**82**	*e*PN		**Pn**		**04 07 58.0**	**+1.7**
TRG				*e*				04 08 11.5	
TRG				*e*				04 09 15.0	
TRG				pmax		pmax			
	comp=Z,1μm,0.7s								
TRG				smax					
	comp=N,10μm,0.8s								
OGRR	**Ongureny**	**5.75**	**73**	*e*PN		**Pn**		**04 08 09.2**	**+1.4**
OGRR				*e*				04 08 26.6	
OGRR				*e*				04 09 41.2	
OGRR				pmax		pmax			
	comp=Z,2μm,2.0s								
OGRR				smax					
	comp=E,8μm,1.6s								
SONM	**Songino Array**	**6.86**	**128**	Pn		**Pn**		**04 08 21.7**	**-1.4**
	baz=324,slow=15,SNR=2.0								
SONM				Pg		**Pb**		**04 08 43.7**	**+1.9**
	comp=E,48nm,0.3s,baz=306,slow=18,SNR=6.2								
SONM				Lg				04 10 12.3	
	comp=E,230nm,0.3s,baz=304,slow=21,SNR=11								
ULN	**Ulaanbaatar**	**7.17**	**125**	*e*Sg		**Sg**		**04 10 22.5**	**-10**
ELT	**Yel'tsovka**	**7.40**	**282**	*e*Sg		**Sg**		**04 10 29.4**	**-10**
ZALV	**Zalesovo Beam**	**8.29**	**287**	Pn		**Pn**		**04 08 44.2**	**+1.5**
	baz=104,slow=13,SNR=1.9								
ZALV				Lg				04 10 52.7	
	comp=E,16nm,0.3s,baz=107,slow=24,SNR=3.9								
UKR	**Ust'-Kan**	**8.55**	**266**	*e*Pg		Px		04 09 10.6	
UKR				*e*Sg		Sx		04 11 04.2	
NVS	**Novosibirsk**	**9.33**	**292**	*e*Sg		Sx		04 11 26.2	
MKAR	**Makanchi Array**	**11.79**	**248**	Pn		**Pn**		**04 09 31.3**	**+0.7**
MKAR				Lg				04 12 52.4	
MKAR	**Makanchi Array**	**11.79**	**248**	Pn		**Pn**		**04 09 31.3**	**+0.7**
	comp=E,0.9nm,0.3s,baz=29,slow=9.5,SNR=1.8								
MKAR				Lg				04 12 52.4	
	comp=E,2.4nm,0.3s,baz=54,slow=30,SNR=3.6								
KURK	**Kurchatov**	**12.38**	**270**	Pn		**Pn**		**04 09 40.9**	**+2.2**
	baz=75,slow=16,SNR=2.1								
HHC	**Hu-ho-hao-te**	**14.62**	**137**	*e*P		**Pn**		**04 10 11.0**	**+1.8**
HHC				pP		pP		04 10 16.1	-2.1
HHC				sP		sP		04 10 20.8	+1.3
HHC				S		**Sn**		**04 12 53.0**	**+1.8**
HHC				sS		sS		04 13 01.8	-13
HHC				SS				04 13 10.1	
HHC				LR		LR			
	comp=N,6μm,9.0s								
HHC				LR		LR			
	comp=E,3μm,6.9s								
HHC				LR		LR			
	comp=Z,3μm,7.3s								
AAK	**Ala-Archa**	**18.73**	**248**	*i* P		**Pn**		**04 11 01.0**	**-0.6**
AAK				pmax		pmax			
	comp=Z,295nm,1.9s								
YAK	**Yakutsk**	**19.37**	**48**	*e*P		**Pn**		**04 11 19.0**	**+10**
YAK				pmax		pmax			
	comp=Z,1μm,1.5s								
YAK				pmax		pmax			
	comp=N,5μm,1.9s								
YAK				pmax		pmax			
	comp=E,2μm,1.8s								
CN2	**Changchun**	**19.93**	**105**	*e*P		**Pn**		**04 11 17.8**	**+1.8**
CN2				*e*S		**Sn**		**04 14 58.4**	**-1.5**
CN2				pmax		pmax			
	comp=Z,60nm,0.8s								
CN2				pmax		pmax			
	comp=Z,200nm,5.0s								
CN2				LR		LR			
	comp=N,3μm,13.0s								
CN2				LR		LR			
	comp=E,3μm,13.0s								
CN2				LR		LR			
	comp=Z,2μm,15.0s								
KSH	**Kashi**	**20.05**	**239**	*e*P		**P**		**04 11 10.1**	**-5.5**
KSH				*e*pP				04 11 14.3	
KSH				*e*sP		sP		04 11 17.1	-2.3
KSH				*e*PP				04 11 27.8	
KSH				*e*S		**S**		**04 14 43.8**	**-17**
KSH				*e*sS		sS		04 14 48.0	-17
KSH				*e*SS				04 15 09.1	
KSH				*e*PcP		PcP		04 15 31.1	+0.1
KSH				*e*ScP		ScP		04 19 05.1	-2.0
KSH				*e*PcS		PcS		04 19 07.1	-1.3
KSH				*e*ScS		ScS		04 22 46.0	-3.6
KSH				pmax		pmax			
	comp=Z,7.0nm,0.8s								
KSH				pmax		pmax			
	comp=Z,1μm,4.7s								
KSH				LR		LR			
	comp=N,2μm,5.9s								
KSH				LR		LR			
	comp=E,3μm,9.4s								
KSH				LR		LR			
	comp=Z,3μm,6.7s								
CD2	**Chengdu**	**21.77**	**167**	P		**P**		**04 11 33.1**	**-1.1**
CD2				pP				04 11 37.3	
CD2				sP		sP		04 11 40.1	+2.1
CD2				PP				04 11 58.0	
CD2				S		**S**		**04 15 27.8**	**-7.1**
CD2				sS		sS		04 15 34.4	-4.7
CD2				SS				04 16 05.0	
CD2				pmax		pmax			
	comp=Z,40nm,0.8s,mb4.9								
CD2				pmax		pmax			
	comp=Z,710nm,9.3s								
CD2				LR		LR			
	comp=N,9μm,8.6s								
CD2				LR		LR			
	comp=E,11μm,9.2s								
CD2				LR		LR			
	comp=Z,7μm,9.0s								
MDJ	**Mudanjiang**	**21.98**	**98**	P		**P**		**04 11 35.8**	**-0.6**
MDJ				pmax		pmax			
	comp=Z,18nm,0.9s,mb4.5								
MDJ				pmax		pmax			
	comp=Z,1μm,8.4s								
ARU	**Arti**	**23.29**	**296**	*e*P		**P**		**04 11 46.2**	**-4.0**
	comp=Z,265nm,1.1s,mb5.6								
ARU	**Arti**	**23.29**	**296**	P		**P**		**04 11 51.1**	**+0.9**
ARU								04 12 17.5	
ARU				S		**S**		**04 16 04.6**	**+2.4**
ARU				SS				04 16 40.8	
HABR	**Khabarovsk**	**23.55**	**85**	P		**P**		**04 11 53.5**	**+0.5**
HABR				*e*PP				04 11 57.3	
HABR				*e*				04 15 36.3	
HABR				MLR		MLR			
	comp=Z,912nm,14.0s,MS4.4								
SOKR	**Solikamsk**	**24.02**	**304**	*e*P		**P**		**04 12 01.5**	**+4.3**
SOKR				pmax		pmax			
	comp=Z,110nm,1.2s,mb5.2								
ABKAR	**Akbulak array**	**24.27**	**278**	*e*P		**P**		**04 11 57.5**	**-2.1**
	comp=Z,14nm,0.6s,mb4.6								
AKTK	**Aktyubinsk**	**25.01**	**282**	P		**P**		**04 12 06.1**	**-0.2**
AKTO	**Aktyubinsk**	**25.01**	**282**	P		**P**		**04 12 06.1**	**-0.2**
	comp=Z,128nm,0.8s,mb5.5,baz=84,slow=8.5,SNR=15								
AKTO	**Aktyubinsk**	**25.01**	**282**	P		**P**		**04 12 06.1**	**-0.2**
AKTO				pmax		pmax			
	comp=Z,128nm,0.8s,mb5.5								
NJ2	**Nanjing**	**25.17**	**136**	*e*P		**P**		**04 12 07.1**	**-0.8**
NJ2				pP		pP		04 12 12.5	+1.8
NJ2				sP		sP		04 12 14.6	+2.8
NJ2				PP				04 12 48.9	
NJ2				pmax		pmax			
	comp=Z,60nm,0.8s,mb5.2								
KSRS	**Korea Array**	**25.47**	**114**	P		**P**		**04 12 09.6**	**-1.0**
	comp=Z,6.5nm,0.7s,mb4.3,baz=320,slow=8.4,SNR=9.6								
KSRS	**Korea Array**	**25.47**	**114**	P		**P**		**04 12 09.6**	**-1.0**
KSRS				pmax		pmax			
	comp=Z,7.0nm,0.7s,mb4.3								
GYA	**Guiyang**	**26.59**	**163**	P		**P**		**04 12 22.0**	**+1.2**
GYA				PP				04 13 05.4	
GYA				PcP		PcP		04 15 47.8	+2.9
GYA				S		**S**		**04 16 55.3**	**-0.1**
GYA				SS				04 18 03.8	
GYA				pmax		pmax			
	comp=Z,20nm,1.0s,mb4.6								
GYA				pmax		pmax			
	comp=Z,120nm,4.9s								
GYA				LR		LR			
	comp=N,1μm,14.2s,MS4.7								
GYA				LR		LR			
	comp=E,710nm,13.3s,MS4.7								
GYA				LR		LR			
	comp=Z,2μm,15.0s,MS4.8								
KMI	**Kunming**	**27.37**	**171**	P		**P**		**04 12 30.3**	**+2.5**
KMI				pmax		pmax			
	comp=Z,44nm,0.8s,mb5.0								
YHNB	**Yeheng**	**32.70**	**139**	*e*P		**P**		**04 13 14.3**	**-0.7**
	comp=Z,68nm,1.1s,mb5.5								
SSLB	**Suanglung**	**33.32**	**140**	*e*P		**P**		**04 13 18.7**	**-1.7**
	comp=Z,45nm,1.3s,mb5.2								
CMAR	**Chiang Mai Arr**	**33.80**	**179**	P		**P**		**04 13 23.7**	**-0.9**
	comp=Z,1.7nm,0.4s,mb4.3,baz=334,slow=8.6,SNR=2.9								
YULB	**Yu-li**	**33.81**	**140**	*e*P		**P**		**04 13 22.9**	**-1.8**
APA	**Apatity**	**34.02**	**322**	*e*P		**P**		**04 13 28.4**	**+2.3**
TWG	**Pinlang**	**34.24**	**141**	*e*P		**P**		**04 13 28.1**	**-0.3**
	comp=Z,54nm,1.1s,mb5.4								
QIZ	**Qiongzhong**	**34.43**	**161**	P		**P**		**04 13 29.8**	**-0.3**
QIZ				S		**S**		**04 18 58.4**	**+0.2**
QIZ				LR		LR			
	comp=N,3μm,10.4s								
QIZ				LR		LR			
	comp=Z,3μm,10.1s,MS5.3								
OBN	**Obninsk**	**35.61**	**300**	*e*P		**P**		**04 13 38.3**	**-1.7**
OBN				*e*				04 14 55.2	
OBN				*e*S		**S**		**04 19 06.8**	**-9.0**
OBN				pmax		pmax			
	comp=Z,48nm,1.3s,mb5.3								
PET	**Petropavlovsk**	**35.63**	**64**	*e*P		**P**		**04 13 33.6**	**-6.6**
PET				*e*				04 19 11.4	
PET				MLR		MLR			
	comp=Z,2μm,13.0s,MS5.2								
JOF	**Joensuu**	**35.75**	**314**	*e*P		**P**		**04 13 39.8**	**-1.2**
JOF	**Joensuu**	**35.75**	**314**	*e*p		**P**		**04 13 39.8**	**-1.2**
	comp=Z,0.8nm,0.4s,mb4.0								
KEV	**Kevo**	**36.05**	**326**	*e*P		**P**		**04 13 43.1**	**-0.4**
	comp=Z,37nm,1.0s,mb5.3								
KEV	**Kevo**	**36.05**	**326**	*e*P		**P**		**04 13 43.1**	**-0.5**
KEV				pmax		pmax			
	comp=Z,37nm,1.0s,mb5.3								
KEV	**Kevo**	**36.05**	**326**	*e*p		**P**		**04 13 42.5**	**-1.1**
	comp=Z,0.9nm,0.4s,mb4.0								
ARCES	**ARCESS Array B**	**36.60**	**326**	P		**P**		**04 13 48.5**	**+0.2**
	comp=Z,20nm,0.9s,mb5.0,baz=71,slow=7.6,SNR=6.3								
ARCES	**ARCESS Array B**	**36.60**	**326**	P		**P**		**04 13 48.5**	**+0.2**
ARCES				pmax		pmax			
	comp=Z,20nm,0.9s								
ARE0	**ARCESS Array S**	**36.60**	**326**	*e*P		**P**		**04 13 46.0**	**-2.3**
KIV	**Kislovodsk**	**37.23**	**280**	*e*P		**P**		**04 13 54.2**	**+0.3**
	comp=Z,38nm,0.7s,mb5.3								
KIV	**Kislovodsk**	**37.23**	**280**	*e*P		**P**		**04 13 54.0**	**0.0**
KIV				*e*				04 15 17.0	
KIV				*e*S		**S**		**04 19 37.1**	**-3.7**
KIV				pmax		pmax			
	comp=Z,36nm,1.0s,mb5.2								
SPITS	**Spitsbergen Ar**	**37.79**	**341**	P		**P**		**04 13 59.3**	**+1.0**
	comp=Z,13nm,0.8s,mb4.7,baz=66,slow=9.4,SNR=4.2								
SPITS	**Spitsbergen Ar**	**37.79**	**341**	P		**P**		**04 13 59.3**	**+1.0**
SPITS				pmax		pmax			
	comp=Z,13nm,0.8s								
GNI	**Garni**	**38.16**	**273**	*e*P		**P**		**04 14 07.0**	**+5.1**
	comp=Z,81nm,1.3s,mb5.3								
GNI	**Garni**	**38.16**	**273**	*i* P		**P**		**04 14 07.4**	**+5.5**
GNI				pmax		pmax			
	comp=Z,91nm,1.4s								
KAF	**Kangasniemi**	**38.20**	**314**	*e*P		**P**		**04 14 00.9**	**-1.0**
KAF	**Kangasniemi**	**38.20**	**314**	*e*p		**P**		**04 14 00.9**	**-1.0**
	comp=Z,0.8nm,0.5s								
FINES	**FINESS Array B**	**38.53**	**313**	P		**P**		**04 14 04.7**	**-0.1**
	comp=Z,6.7nm,0.6s,mb4.5,baz=70,slow=8.9,SNR=6.0								
FINES	**FINESS Array B**	**38.53**	**313**	P		**P**		**04 14 04.7**	**0.0**
FINES				pmax		pmax			
	comp=Z,7.0nm,0.6s								
ANN	**Anapa**	**39.92**	**284**	*e*P		**P**		**04 14 19.7**	**+3.2**
ANN				pmax		pmax			
	comp=Z,77nm,1.1s,mb5.3								
AKASG	**Malin Array Be**	**41.54**	**296**	P		**P**		**04 14 28.3**	**-1.5**
	comp=Z,4.1nm,0.6s,mb4.2,baz=53,slow=8.5,SNR=3.1								
AKASG	**Malin Array Be**	**41.54**	**296**	P		**P**		**04 14 28.3**	**-1.5**
AKASG				pmax		pmax			
	comp=Z,4.0nm,0.6s								
KIEV	**Kiev**	**41.55**	**296**	*e*P		**P**		**04 14 21.1**	**-8.8**
	comp=Z,16nm,0.8s,mb4.7								
KIEV	**Kiev**	**41.55**	**296**	*e*P		**P**		**04 14 21.2**	**-8.7**
KIEV				pmax		pmax			
	comp=Z,17nm,0.8s,mb4.7								
SIM	**Simferopol'**	**41.80**	**286**	P		**P**		**04 14 34.6**	**+2.6**
SIM				pmax		pmax			
	comp=Z,29nm,0.9s,mb4.9								
MALT	**Malatya**	**43.16**	**276**	*e*P		**P**		**04 14 43.6**	**+0.5**
	comp=Z,12nm,0.7s,mb4.7								
MALT	**Malatya**	**43.16**	**276**	*e*P		**P**		**04 14 43.6**	**+0.5**
MALT				pmax		pmax			
	comp=Z,12nm,0.7s,mb4.7								
MIB	**Mutribah**	**43.44**	**259**	*e*P		**P**		**04 14 47.9**	**+2.4**
MIB				AMb		AMB		04 14 51.1	
	comp=Z,107nm,1.3s,mb5.4								
QRN	**Al-Qurain**	**43.85**	**258**	*e*P		**P**		**04 14 51.8**	**+3.0**
QRN				AMb		AMB		04 14 54.4	
	comp=Z,79nm,0.5s,mb5.7								
NAY	**Al-Naaiem**	**43.89**	**259**	*e*P		**P**		**04 14 51.3**	**+2.1**
NAY				AMb		AMB		04 14 54.6	
	comp=Z,64nm,1.3s,mb5.2								
RDF	**Al-Radifah**	**43.94**	**258**	*e*P		**P**		**04 14 52.2**	**+2.6**
RDF				AMb		AMB		04 14 55.5	
	comp=Z,97nm,1.2s,mb5.4								
BR131	**Keskin Array S**	**45.18**	**281**	*e*P		**P**		**04 14 59.4**	**+0.1**
	comp=Z,21nm,1.0s,mb4.9								
BRTR	**Keskin Array B**	**45.18**	**281**	P		**P**		**04 14 59.4**	**+0.1**
	comp=Z,20nm,1.0s,mb4.9,baz=71,slow=6.7,SNR=4.0								
BRTR	**Keskin Array B**	**45.18**	**281**	P		**P**		**04 14 59.4**	**+0.1**
BRTR				pmax		pmax			
	comp=Z,20nm,1.0s								
NOA	**NORSAR Array B**	**45.20**	**317**	P		**P**		**04 14 58.6**	**-0.5**
	comp=Z,27nm,0.8s,mb5.1,baz=59,slow=7.8,SNR=15								
NOA	**NORSAR Array B**	**45.20**	**317**	P		**P**		**04 14 58.7**	**-0.5**
NOA				pmax		pmax			
	comp=Z,27nm,0.8s								
BUR08	**Bucovina Ar. S**	**45.41**	**295**	*e*P		**P**		**04 15 00.6**	**-0.4**
TNA	**Tin City**	**45.47**	**36**	*e*P		**P**		**04 15 03.2**	**+2.0**
	comp=Z,56nm,1.0s,mb5.3								
UZH	**Uzhgorod**	**46.45**	**297**	*e*P		**P**		**04 15 15.0**	**+5.8**
MMAI	**Mount Meron Ar**	**48.49**	**272**	P		**P**		**04 15 25.3**	**0.0**
	comp=Z,9.4nm,0.9s,mb4.8,baz=64,slow=6.6,SNR=3.9								
MUD	**Monsted U'grnd**	**48.58**	**312**	*i* P		**P**		**04 15 24.6**	**-1.0**
	comp=Z,20nm,0.8s,mb5.2								
COLD	**Coldfoot**	**50.22**	**28**	*e*P		**P**		**04 15 38.6**	**+0.6**
	comp=Z,26nm,0.8s,mb5.3								
TTA	**Tatalina**	**51.22**	**34**	*e*P		**P**		**04 15 46.5**	**+0.9**
	comp=Z,26nm,1.2s,mb5.0								
TTA	**Tatalina**	**51.22**	**34**	*e*P		**P**		**04 15 46.5**	**+0.8**
TTA				pmax		pmax			
	comp=Z,26nm,1.2s,mb5.0								
SUMG	**Summit**	**51.83**	**345**	*e*P		**P**		**04 15 49.3**	**-0.8**
	comp=Z,9.5nm,0.8s,mb4.8								
SUMG	**Summit**	**51.83**	**345**	*i* P		**P**		**04 15 49.8**	**-0.2**
	comp=Z,8.7nm,0.8s,mb4.7								
BPAW	**Bear Paw Mtn.**	**52.11**	**31**	*e*P		**P**		**04 15 52.8**	**+0.5**
	comp=Z,16nm,0.9s,mb4.9								
COLA	**College**	**52.55**	**29**	*e*P		**P**		**04 15 56.2**	**+0.7**
	comp=Z,14nm,0.7s,mb5.0								
COLA	**College**	**52.55**	**29**	*e*P		**P**		**04 15 56.2**	**+0.7**
COLA				pmax		pmax			
	comp=Z,14nm,0.7s,mb5.0								
PPLA	**Purkeypile**	**52.55**	**33**	*e*P		**P**		**04 15 56.8**	**+1.3**
	comp=Z,78nm,1.5s,mb5.4								
TRF	**Thorofare Moun**	**52.79**	**32**	*e*P		**P**		**04 15 58.0**	**+0.7**
	comp=Z,26nm,1.1s,mb5.1								
ILAR	**Eielson Array**	**52.91**	**29**	P		**P**		**04 15 58.9**	**+0.7**
	comp=Z,18nm,0.9s,mb5.0,baz=318,slow=3.3,SNR=19								
ILAR	**Eielson Array**	**52.91**	**29**	P		**P**		**04 15 58.9**	**+0.7**
ILAR				pmax		pmax			
	comp=Z,18nm,0.9s								
MCK	**McKinley**	**53.02**	**31**	*e*P		**P**		**04 15 56.7**	**-2.3**
	comp=Z,16nm,0.9s,mb5.0								
MCK	**McKinley**	**53.02**	**31**	*e*P		**P**		**04 15 56.7**	**-2.3**
MCK				pmax		pmax			
	comp=Z,17nm,0.9s,mb5.0								
INK	**Inuvik**	**53.70**	**21**	*e*P		**P**		**04 16 04.1**	**+0.2**
	comp=Z,28nm,0.9s,mb5.2								
INK	**Inuvik**	**53.70**	**21**	*e*P		**P**		**04 16 04.1**	**+0.1**
INK				pmax		pmax			
	comp=Z,28nm,0.9s								
RSO	**Redoubt South**	**54.04**	**35**	*e*P		**P**		**04 16 08.7**	**+2.1**
PMR	**Palmer**	**54.49**	**33**	*e*P		**P**		**04 16 10.3**	**+0.5**
	comp=Z,11nm,0.9s,mb4.8								
PMR	**Palmer**	**54.49**	**33**	*e*P		**P**		**04 16 10.3**	**+0.5**
PMR				pmax		pmax			
	comp=Z,11nm,0.9s,mb4.8								
EGAK	**Eagle**	**54.56**	**27**	*e*P		**P**		**04 16 10.2**	**-0.1**
	comp=Z,12nm,0.9s,mb4.9								
GIVF	**Givet**	**54.56**	**308**	*e*P		**P**		**04 16 11.7**	**+1.2**
PAX	**Paxson**	**54.65**	**30**	*e*P		**P**		**04 16 10.8**	**-0.1**
	comp=Z,17nm,0.8s,mb5.1								
PAX	**Paxson**	**54.65**	**30**	*e*P		**P**		**04 16 10.8**	**-0.2**
PAX				pmax		pmax			
	comp=Z,17nm,0.8s,mb5.1								
BAIF	**Baives**	**54.89**	**308**	*e*P		**P**		**04 16 12.4**	**-0.5**
	comp=Z,43nm,1.3s,mb5.0								
BAIF	**Baives**	**54.89**	**308**	*e*P		**P**		**04 16 12.4**	**-0.5**
	comp=Z,22nm,1.3s,mb5.0								
BAIF	**Baives**	**54.89**	**308**	*e*P		**P**		**04 16 12.4**	**-0.5**
BAIF				pmax		pmax			
	comp=Z,22nm,1.3s,mb5.0								
HINF	**Hinteralfeld**	**55.07**	**305**	*e*P		**P**		**04 16 14.9**	**+0.7**
HAU	**Haudompre**	**55.20**	**305**	*e*P		**P**		**04 16 14.8**	**-0.3**
MENT	**Mentasta**	**55.21**	**29**	*e*P		**P**		**04 16 14.8**	**-0.2**
SEW	**Seward**	**55.45**	**34**	*e*P		**P**		**04 16 16.9**	**+0.1**
	comp=Z,46nm,1.1s,mb5.4								
MEZF	**Maizieres J'vi**	**55.52**	**306**	*e*P		**P**		**04 16 17.4**	**0.0**
DAWY	**Dawson**	**55.60**	**27**	*e*P		**P**		**04 16 17.6**	**-0.2**
DIV	**Divide**	**55.93**	**32**	*e*P		**P**		**04 16 21.1**	**+0.9**
	comp=Z,19nm,1.0s,mb5.1								
KDAK	**Kodiak Island**	**56.00**	**38**	P		**P**		**04 16 21.3**	**+0.6**
	comp=Z,220nm,0.9s,mb6.2,SNR=5.8								
KDAK	**Kodiak Island**	**56.00**	**38**	*e*P		**P**		**04 16 21.6**	**+0.9**
	comp=Z,43nm,1.1s,mb5.4								
KDAK	**Kodiak Island**	**56.00**	**38**	P		**P**		**04 16 21.7**	**+1.0**
	comp=Z,20nm,0.6s,mb5.3,baz=332,slow=5.0,SNR=17								
KDAK	**Kodiak Island**	**56.00**	**38**	*i* P		**P**		**04 16 21.5**	**+0.8**
OHAK	**Old Harbor**	**56.13**	**38**	*e*P		**P**		**04 16 22.5**	**+0.8**
	comp=Z,64nm,1.0s,mb5.6								
LPL	**La Plagne**	**56.68**	**303**	*e*P		**P**		**04 16 26.7**	**+0.9**
LPG	**La Plagne**	**56.68**	**303**	*e*P		**P**		**04 16 27.5**	**+1.7**
MBDF	**Montbardon**	**57.20**	**302**	*e*P		**P**		**04 16 31.1**	**+1.7**
	comp=Z,32nm,1.2s,mb4.9								
MBDF	**Montbardon**	**57.20**	**302**	*e*P		**P**		**04 16 31.1**	**+1.7**
	comp=Z,16nm,1.2s,mb4.9								
MBDF	**Montbardon**	**57.20**	**302**	*e*P		**P**		**04 16 31.1**	**+1.7**
MBDF				pmax		pmax			
	comp=Z,16nm,1.2s,mb4.9								
SMF	**Signal de Mont**	**57.38**	**305**	*e*P		**P**		**04 16 31.1**	**+0.4**
AVF	**Avril sur Loir**	**57.52**	**306**	*e*P		**P**		**04 16 31.5**	**-0.2**
LDF	**La Druitiere**	**57.96**	**309**	*e*P		**P**		**04 16 33.1**	**-1.7**
	comp=Z,12nm,0.7s,mb4.7								
LDF	**La Druitiere**	**57.96**	**309**	*e*P		**P**		**04 16 33.1**	**-1.7**
	comp=Z,5

ULM	**Lac du Bonnet**	**77.09**	**9**	P		**P**	**04 18 34.0**	**-1.6**
ULM	**Lac du Bonnet**	**77.09**	**9**	P		**P**	**04 18 34.0**	**-1.6**
	comp=Z,6.2nm,0.7s,mb4.6,baz=15,slow=4.8,SNR=3.9							
SLMT	**Seeley Lake**	**77.14**	**22**	*e*P		**P**	**04 18 36.0**	**0.0**
MSO	**Missoula**	**77.43**	**22**	*e*P		**P**	**04 18 37.2**	**-0.4**
	comp=Z,9.8nm,1.1s,mb4.7							
CHMT	**Chamberlain Mo**	**77.50**	**22**	*e*P		**P**	**04 18 37.7**	**-0.3**
DGMT	**Dagmar**	**77.76**	**15**	*e*P		**P**	**04 18 39.8**	**+0.4**
	comp=Z,39nm,1.0s,mb5.3							
BMO	**Blue Mountains**	**78.45**	**25**	*e*P		**P**	**04 18 43.2**	**-0.1**
	comp=Z,11nm,1.1s,mb4.7							
WRA	**Warramunga Arr**	**78.50**	**146**	P		**P**	**04 18 41.5**	**-2.2**
	comp=Z,9.5nm,0.8s,mb4.8,baz=345,slow=6.5,SNR=8.4							
WRA	**Warramunga Arr**	**78.50**	**146**	P		**P**	**04 18 41.5**	**-2.2**
WRA				pmax		pmax		
	comp=Z,10.0nm,0.9s							
WB2	**Warramunga Arr**	**78.50**	**146**	*e*P		**P**	**04 18 41.0**	**-2.7**
AGMN	**Agassiz Nation**	**79.02**	**10**	*e*P		**P**	**04 18 44.6**	**-1.7**
	comp=Z,6.9nm,0.8s,mb4.6							
BOZ	**Bozeman (W)**	**79.06**	**21**	*e*P		**P**	**04 18 46.5**	**-0.1**
	comp=Z,2.2nm,0.6s,mb4.3							
BOZ	**Bozeman (W)**	**79.06**	**21**	*e*P		**P**	**04 18 46.5**	**-0.1**
BOZ				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb4.2							
LAO	**LASA Array**	**79.14**	**17**	*e*P		**P**	**04 18 46.6**	**-0.5**
	comp=Z,8.8nm,0.9s,mb4.7							
EYMN	**Ely**	**79.75**	**7**	*e*P		**P**	**04 18 48.9**	**-1.5**
	comp=Z,8.5nm,0.8s,mb4.7							
RLMT	**Red Lodge**	**80.06**	**19**	*e*P		**P**	**04 18 51.5**	**-0.6**
	comp=Z,19nm,1.2s,mb4.9							
WVOR	**Wild Horse Val**	**80.34**	**27**	*e*P		**P**	**04 18 54.0**	**+0.3**
	comp=Z,10.0nm,1.0s,mb4.7							
WVOR	**Wild Horse Val**	**80.34**	**27**	*e*P		**P**	**04 18 54.0**	**+0.4**
WVOR				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.7							
MOD	**Modoc**	**80.36**	**28**	*e*P		**P**	**04 18 54.4**	**+0.7**
	comp=Z,15nm,1.1s,mb4.8							
HLID	**Hailey**	**80.39**	**24**	*e*P		**P**	**04 18 53.4**	**-0.5**
	comp=Z,6.7nm,1.1s,mb4.5							
FLWY	**Flagg Ranch**	**80.76**	**21**	*e*P		**P**	**04 18 56.0**	**+0.2**
	comp=Z,13nm,0.8s,mb4.9							
IMW	**Indian Meadow**	**80.88**	**21**	*e*P		**P**	**04 18 57.8**	**+1.3**
	comp=Z,15nm,1.1s,mb4.8							
MOOW	**Moose Ponds**	**81.06**	**21**	*e*P		**P**	**04 18 57.3**	**-0.2**
	comp=Z,13nm,1.2s,mb4.7							
DCID1	**Drake Creek**	**81.11**	**21**	*e*P		**P**	**04 18 58.2**	**+0.5**
	comp=Z,22nm,1.0s,mb5.0							
LOHW	**Long Hollow**	**81.22**	**21**	*e*P		**P**	**04 18 58.3**	**-0.1**
	comp=Z,5.3nm,0.9s,mb4.5							
RRI2	**Red Ridge**	**81.32**	**21**	*e*P		**P**	**04 18 58.9**	**0.0**
	comp=Z,17nm,1.4s,mb4.8							
SNOW	**Snow King Moun**	**81.33**	**21**	*e*P		**P**	**04 18 59.3**	**+0.3**
	comp=Z,15nm,1.3s,mb4.8							
ASAR	**Alice Springs**	**81.80**	**147**	P		**P**	**04 18 58.9**	**-2.5**
	comp=Z,6.1nm,1.1s,mb4.5,baz=345,slow=5.1,SNR=4.3							
ASAR	**Alice Springs**	**81.80**	**147**	P		**P**	**04 18 58.9**	**-2.5**
ASAR				pmax		pmax		
	comp=Z,6.0nm,1.1s							
RSSD	**Black Hills**	**82.01**	**16**	*e*P		**P**	**04 19 01.7**	**-0.8**
	comp=Z,4.5nm,0.6s,mb4.6							
RSSD	**Black Hills**	**82.01**	**16**	*e*P		**P**	**04 19 01.7**	**-0.8**
RSSD				pmax		pmax		
	comp=Z,4.0nm,0.6s,mb4.5							
PKME	**Peaks-Kenny Pk**	**82.21**	**351**	*e*P		**P**	**04 19 03.5**	**0.0**
	comp=Z,18nm,0.9s,mb5.0							
HWUT	**Hardware Ranch**	**82.92**	**22**	*e*P		**P**	**04 19 07.3**	**0.0**
	comp=Z,16nm,1.1s,mb5.0							
LONY	**Lake Ozonia**	**83.24**	**355**	*e*P		**P**	**04 19 07.9**	**-1.0**
	comp=Z,9.3nm,1.0s,mb4.8							
CTAO	**Charters Tower**	**83.28**	**135**	*e*P		**P**	**04 19 07.9**	**-1.3**
	comp=Z,8.7nm,0.9s,mb4.8							
CTAO	**Charters Tower**	**83.28**	**135**	*e*P		**P**	**04 19 07.9**	**-1.3**
CTAO				pmax		pmax		
	comp=Z,9.0nm,0.9s,mb4.8							
ECSD	**EROS Data Cent**	**83.45**	**11**	*e*P		**P**	**04 19 09.3**	**-0.7**
	comp=Z,14nm,0.9s,mb5.0							
DUG	**Dugway**	**83.96**	**23**	*e*P		**P**	**04 19 12.8**	**+0.1**
	comp=Z,20nm,1.1s,mb5.2							
DUG	**Dugway**	**83.96**	**23**	*e*P		**P**	**04 19 12.8**	**+0.1**
DUG				pmax		pmax		
	comp=Z,20nm,1.1s,mb5.2							
NVAR	**Mina Array Bea**	**84.15**	**28**	P		**P**	**04 19 14.2**	**+0.6**
	comp=Z,3.6nm,0.9s,mb4.5,baz=329,slow=4.1,SNR=5.0							
PHWY	**Pilot Hill**	**84.49**	**18**	*e*P		**P**	**04 19 15.5**	**+0.2**
	comp=Z,6.8nm,0.8s,mb4.8							
JFWS	**Jewell Farm**	**84.85**	**6**	*e*P		**P**	**04 19 15.6**	**-1.5**
	comp=Z,17nm,0.8s,mb5.2							
JFWS	**Jewell Farm**	**84.85**	**6**	*e*P		**P**	**04 19 15.6**	**-1.5**
JFWS				pmax		pmax		
	comp=Z,17nm,0.8s,mb5.2							
OGNE	**Ogallala**	**85.44**	**15**	*e*P		**P**	**04 19 19.4**	**-0.7**
	comp=Z,15nm,0.6s,mb5.3							
SRU	**San Rafael**	**85.54**	**22**	*e*P		**P**	**04 19 18.4**	**-2.2**
	comp=Z,13nm,1.3s,mb5.0							
SRU	**San Rafael**	**85.54**	**22**	*e*P		**P**	**04 19 18.4**	**-2.2**
SRU				pmax		pmax		
	comp=Z,13nm,1.3s,mb5.0							
MSU	**Marysvale**	**85.71**	**24**	*e*P		**P**	**04 19 21.8**	**+0.3**
BINY	**Binghamton**	**85.72**	**356**	*e*P		**P**	**04 19 21.1**	**-0.4**
	comp=Z,14nm,0.9s,mb5.2							
ISCO	**Idaho Springs**	**85.91**	**18**	*e*P		**P**	**04 19 22.4**	**0.0**
	comp=Z,6.0nm,0.9s,mb4.8							
ISCO	**Idaho Springs**	**85.91**	**18**	*e*P		**P**	**04 19 22.5**	**0.0**
ISCO				pmax		pmax		
	comp=Z,6.0nm,0.9s,mb4.8							
SMCO	**Snowmass**	**86.25**	**19**	*e*P		**P**	**04 19 24.5**	**+0.4**
	comp=Z,9.8nm,0.9s,mb5.0							
MVCO	**Mesa Verde**	**87.81**	**21**	*e*P		**P**	**04 19 32.0**	**+0.2**
	comp=Z,11nm,1.0s,mb5.0							
CBKS	**Cedar Bluff**	**87.88**	**14**	*e*P		**P**	**04 19 31.4**	**-0.7**
	comp=Z,14nm,0.7s,mb5.3							
CBKS	**Cedar Bluff**	**87.88**	**14**	*e*P		**P**	**04 19 31.4**	**-0.7**
CBKS				pmax		pmax		
	comp=Z,14nm,0.7s,mb5.3							
SDCO	**Great Sand Dun**	**87.92**	**19**	*e*P		**P**	**04 19 32.1**	**-0.2**
	comp=Z,7.4nm,0.9s,mb4.9							
OLIL	**Olney**	**89.14**	**5**	*e*P		**P**	**04 19 37.6**	**-0.4**
	comp=Z,40nm,1.2s,mb5.6							
PFO	**Pinyon Flat Ob**	**89.18**	**28**	*e*P		**P**	**04 19 39.3**	**+1.0**
	comp=Z,8.0nm,1.1s,mb5.0							
PFO	**Pinyon Flat Ob**	**89.18**	**28**	*e*P		**P**	**04 19 39.3**	**+1.0**
PFO				pmax		pmax		
	comp=Z,8.0nm,1.1s,mb5.0							
CCM	**Cathedral Cave**	**89.60**	**8**	*e*P		**P**	**04 19 38.7**	**-1.5**
	comp=Z,11nm,0.9s,mb5.2							
CCM	**Cathedral Cave**	**89.60**	**8**	*e*P		**P**	**04 19 38.7**	**-1.5**
CCM				pmax		pmax		
	comp=Z,11nm,0.9s,mb5.2							
WCI	**Wyandotte Cave**	**89.73**	**4**	*e*P		**P**	**04 19 39.7**	**-1.1**
	comp=Z,13nm,0.9s,mb5.2							
WCI	**Wyandotte Cave**	**89.73**	**4**	*e*P		**P**	**04 19 39.7**	**-1.1**
WCI				pmax		pmax		
	comp=Z,13nm,0.9s,mb5.3							
FVM	**French Village**	**89.74**	**7**	*e*P		**P**	**04 19 40.2**	**-0.6**
	comp=Z,7.7nm,0.8s,mb5.1							
FVM	**French Village**	**89.74**	**7**	*e*P		**P**	**04 19 40.3**	**-0.6**
FVM				pmax		pmax		
	comp=Z,8.0nm,0.8s,mb5.1							
USIN	**University of**	**89.93**	**5**	*e*P		**P**	**04 19 40.9**	**-0.9**
SIUC	**Southern Illin**	**90.09**	**6**	*e*P		**P**	**04 19 42.4**	**-0.1**
	comp=Z,33nm,1.1s,mb5.6							
ANMO	**Albuquerque**	**90.43**	**20**	*e*P		**P**	**04 19 44.3**	**+0.2**
	comp=Z,28nm,1.4s,mb5.4							
ANMO	**Albuquerque**	**90.43**	**20**	*e*P		**P**	**04 19 44.3**	**+0.2**
ANMO				pmax		pmax		
	comp=Z,28nm,1.4s							
LAZ	**Ladron**	**90.81**	**21**	*e*P		**P**	**04 19 46.8**	**+0.9**
BLA	**Blacksburg**	**90.83**	**359**	*e*P		**P**	**04 19 44.2**	**-1.8**
	comp=Z,6.9nm,0.9s,mb5.0							
BLA	**Blacksburg**	**90.83**	**359**	*e*P		**P**	**04 19 44.2**	**-1.7**
BLA				pmax		pmax		
	comp=Z,7.0nm,0.9s,mb5.0							
AMTX	**Amarillo**	**91.41**	**16**	*e*P		**P**	**04 19 48.9**	**+0.2**
	comp=Z,6.6nm,0.8s,mb5.0							
WVT	**Waverly**	**91.75**	**5**	*e*P		**P**	**04 19 49.5**	**-0.8**
	comp=Z,4.2nm,0.8s,mb4.8							
WVT	**Waverly**	**91.75**	**5**	*e*P		**P**	**04 19 49.5**	**-0.7**
WVT				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.8							
WMOK	**Wichita Mounta**	**92.02**	**14**	*e*P		**P**	**04 19 51.1**	**-0.4**
	comp=Z,6.6nm,1.0s,mb4.9							
WMOK	**Wichita Mounta**	**92.02**	**14**	*e*P		**P**	**04 19 51.1**	**-0.4**
WMOK				pmax		pmax		
	comp=Z,7.0nm,1.0s,mb5.0							
MAW	**Mawson**	**122.53**	**195**	*e*PKPdf		PKPdf	04 25 34.2	-2.4
CPUP	**Villa Florida**	**148.23**	**315**	PKPbc		PKPbc	04 26 25.9	-2.7
	comp=Z,4.6nm,0.8s,baz=357,slow=3.6,SNR=4.8							

ISCJB ***16*** *04:31:49.8±0.3,32.°85N±0.°02×116.°16W±0.°02,h11km±3km, Error ellipse: s-maj=3.1km s-min=2.7km az=157.9*
NEIC ***16*** *04:31:50.8,32.°83N×116.°18W,h12km,ML2.9(PAS), After PAS.*
NEIC Felt in the Ocotillo area.
ECX ***16*** *04:31:51.2±0.6,32.°83N×116.°17W,h4km,MD2.9,ML2.2*
ISC 16 04:31:49.7±0.3,32.86N±0.°02×116.°17W±0.°02,h9km±3km, n38,σ1s03/63,16C-19D,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CRR	**Carrizo Plain**	**0.17**	**82**	*i*P		**Pg**	**04 31 54.6**	**+1.2**
DVTC	**Desert V Tower**	**0.21**	**164**	⇓P		**Pg**	**04 31 54.3**	**+0.3**
	baz=0.2,SNR=387							
DVTC				⇓S		**Sg**	**04 31 57.6**	**+0.7**
	baz=0.2							
MONP	**Monument Peak**	**0.21**	**278**	⇓P		**Pg**	**04 31 54.9**	**+0.8**
	baz=0.2,SNR=1000							
MONP				⇑S		**Sg**	**04 31 58.6**	**+1.5**
	baz=0.2							
RMX	**La Rumorosa**	**0.27**	**164**	⇓*i*P		**Pg**	**04 31 55.5**	**+0.3**
RMX				*e*S		**Sg**	**04 31 59.0**	**+0.3**
YUH	**Yuha Desert**	**0.30**	**136**	⇑*i*P		**Pg**	**04 31 56.2**	**+0.6**
SWSC	**Sam W. Stewart**	**0.32**	**76**	⇑P		**Pg**	**04 31 57.0**	**+0.9**
	baz=0.3,SNR=209							
SWSC				⇑S		**Sg**	**04 32 01.7**	**+1.2**
	baz=0.3							
COK	**Cook Ranch**	**0.37**	**92**	⇑*i*P		**Pg**	**04 31 58.4**	**+1.3**
SGL	**Mount Signal**	**0.43**	**119**	*e*P		**Pg**	**04 31 58.7**	**+0.6**
BAR	**Barrett**	**0.46**	**247**	*e*Pg		**Pg**	**04 31 58.9**	**+0.2**
BAR				*e*Sg		**Sg**	**04 32 04.8**	**0.0**
BAR	**Barrett**	**0.46**	**247**	⇓*i*P		**Pg**	**04 31 59.2**	**+0.5**
CBX	**Cerro Bola**	**0.69**	**217**	*e*P		**Pg**	**04 32 03.1**	**+0.1**
CBX				*e*S		**Sg**	**04 32 12.1**	**+0.1**
CBX				*e*			04 32 13.1	
	comp=N,1μm,0.2s							
CBX				*e*			04 32 13.5	
	comp=E,1μm,0.1s							
PFO	**Pinyon Flat Ob**	**0.78**	**342**	⇓P		**Pg**	**04 32 05.3**	**+0.5**
	baz=0.8,SNR=333							
PFO				⇓S		**Sg**	**04 32 16.2**	**+1.2**
	baz=0.8							
PFO	**Pinyon Flat Ob**	**0.78**	**342**	*e*Pg		**Pg**	**04 32 05.5**	**+0.6**
PFO				*e*Sg		**Sg**	**04 32 15.4**	**+0.3**
109C	**Camp Elliot, M**	**0.79**	**272**	⇓P		**Pg**	**04 32 04.6**	**-0.3**
	baz=0.8,SNR=62							
109C				⇑S		**Sg**	**04 32 15.2**	**0.0**
	baz=0.8							
CPBX	**Cerro Prieto**	**0.85**	**121**	*e*P		**Pg**	**04 32 05.7**	**-0.5**
CPBX				*e*S		**Sg**	**04 32 17.5**	**+0.2**
CPBX				*e*			04 32 18.1	
	comp=N,829nm,0.3s							
RDX	**Rancho Dawling**	**0.95**	**168**	⇓*e*P		**Pg**	**04 32 07.2**	**-0.9**
RDX				*e*S		**Sg**	**04 32 19.3**	**-1.1**
RDX				*e*			04 32 22.6	
	comp=E,318nm,0.4s							
BC3	**Big Chuckawall**	**0.99**	**37**	⇓P		**Pg**	**04 32 08.4**	**-0.5**
	baz=1.0,SNR=14							
BC3				⇑S		**Sg**	**04 32 21.1**	**-0.7**
	baz=1.0							
MURC	**Murrieta**	**1.14**	**311**	⇑S		**Sg**	**04 32 26.4**	**+0.1**
	baz=1.1							
BELC	**Belle Mtn. Jos**	**1.14**	**7**	⇓P		**Pg**	**04 32 10.9**	**-0.8**
	baz=1.2,SNR=57							
GLA	**Glamis**	**1.14**	**80**	⇓P		**Pg**	**04 32 10.2**	**-1.5**
	baz=1.2,SNR=21							
GLA	**Glamis**	**1.14**	**80**	*e*Pn		**Pn**	**04 32 10.1**	**-1.8**
GLA				*e*Sn		**Sn**	**04 32 24.1**	**-3.6**
PBX	**Punta Banda**	**1.21**	**203**	*e*P		**Pb**	**04 32 11.9**	**-0.9**
PBX				*e*S		**Sg**	**04 32 27.8**	**-0.9**
PBX				⇑*e*			04 32 29.5	
	comp=N,228nm,0.2s							
ECNX	**Esteban Cantu**	**1.25**	**197**	⇓*e*P		**Pn**	**04 32 12.6**	**-0.8**
ECNX				*e*P			04 32 09.3	
ECNX				*e*S		**Sb**	**04 32 23.5**	**-6.4**
ECNX				*e*S		**Sb**	**04 32 28.9**	**-0.9**
112A	**Yuma**	**1.38**	**103**	⇑Pb		**Pb**	**04 32 14.4**	**-1.3**
	baz=1.4,SNR=31							
BBRC	**Big Bear Solar**	**1.53**	**336**	⇓Pb		**Pb**	**04 32 17.6**	**-0.7**
	baz=1.6							
BBRC				⇑Sb		**Sb**	**04 32 38.8**	**+1.0**
	baz=1.6							
BFSC	**Mount Baldy Ra**	**1.85**	**318**	⇓Sb		**Sb**	**04 32 47.7**	**+0.6**
	baz=1.9							
SPX	**San Pedro Mart**	**1.91**	**161**	*e*PN		**Pn**	**04 32 24.4**	**+2.0**
SPX				*e*S		**Sn**	**04 32 48.9**	**+2.3**
GMRC	**Granite Mounta**	**1.96**	**12**	⇑P		**Pn**	**04 32 22.7**	**-0.4**
	baz=2.0,SNR=6.3							
GMRC				⇓Sb		**Sb**	**04 32 51.5**	**+1.4**
	baz=2.0							
SCI	**San Clemente I**	**2.00**	**274**	⇓P		**Pn**	**04 32 23.8**	**0.0**
	baz=2.0,SNR=8.5							
113A	**Mohawk Valley,**	**2.02**	**92**	⇓Pb		**Pb**	**04 32 24.9**	**-1.8**
	baz=2.0							
MWC	**Mount Wilson**	**2.08**	**311**	*e*Pg		**Pg**	**04 32 27.4**	**-2.3**
MWC				*e*Sg		**Sg**	**04 32 55.3**	**-1.4**
RRX	**Edison Barstow**	**2.13**	**341**	⇑S		**Sn**	**04 32 57.6**	**+5.6**
	baz=2.2							
Z13A	**Yuma Proving G**	**2.14**	**80**	⇓Pn		**Pn**	**04 32 24.3**	**-1.3**
	baz=2.1							
DECC	**Green Verdugo**	**2.27**	**308**	⇑Sb		**Sb**	**04 33 00.6**	**+1.4**
	baz=2.3							
NEE2	**Needles Airpor**	**2.30**	**34**	⇑S		**Sn**	**04 33 03.0**	**+6.8**
	baz=2.3							
LDFC	**Landfair**	**2.38**	**21**	*e*Pn		**Pn**	**04 32 30.6**	**+1.7**
LDFC				*e*Pg		**Pg**	**04 32 35.8**	**+0.4**
GSC	**Goldstone**	**2.49**	**348**	*e*Pn		**Pn**	**04 32 30.4**	**0.0**
GSC				*e*Pg		**Pg**	**04 32 36.8**	**-0.6**
GSC				*e*Sg		**Sg**	**04 33 09.0**	**-0.8**
ISA	**Isabella**	**3.38**	**326**	*e*Pn		**Pn**	**04 32 43.5**	**+0.7**
ISA				*e*Pg		**Pg**	**04 32 53.0**	**-1.6**
ISA				*e*Sg		**Sg**	**04 33 34.6**	**-3.8**

ISCJB ***16*** *04:38:53.6±2.1, 13.°3N±0.°1×124.°8E±0.°1, h25km±12km, mb3.7/3, Error ellipse: s-maj=24.8km s-min=10.0km az=143.5*
IDC ***16*** *04:38:53.5±3.3, 12.°85N×124.°32E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/18, mbtmp3.6/3, Error ellipse: s-maj=272.7km s-min=26.3km az=64.0*
MAN ***16*** *04:38:54, 13.°21N×124.°64E, h11km, mb4.4, ML3.2, MS3.1*
ISC 16 04:38:54.0±1.9,13.24N±0.°09×124.7E±0.°1,h13km±9km,n6, σ0s85/9,mb3.7/3,1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.67**	**302**	*e*P		**Pg**	**04 39 06.6**	**-0.5**
PVCP				*e*S		**Sg**	**04 39 11.6**	**-4.5**
CNP	**Catarman**	**0.73**	**186**	*e*P		**Pg**	**04 39 08.3**	**+0.1**
CNP				*e*S		**Sg**	**04 39 18.2**	**+0.4**
GQP	**Guinayangan**	**2.33**	**287**	⇓*e*P		**Pn**	**04 39 32.1**	**+0.2**
GQP				*e*S		**Sn**	**04 40 00.3**	**-0.2**
WRA	**Warramunga Arr**	**34.30**	**164**	P		**P**	**04 45 39.1**	**-1.1**
	0.5nm,0.8s,mb3.5,baz=345,slow=8.9,SNR=3.0							
ASAR	**Alice Springs**	**37.76**	**166**	P		**P**	**04 46 09.2**	**-0.5**
	0.4nm,0.4s,mb3.5,baz=340,slow=7.3,SNR=13							
MKAR	**Makanchi Array**	**48.78**	**322**	P		**P**	**04 47 40.6**	**+2.0**
	1.1nm,0.8s,mb3.9,baz=123,slow=6.7,SNR=8.2							

ISK ***16*** *04:39:03.9,36.°86N×29.°23E,h8km,MD2.9*
ISCJB ***16*** *04:39:04.1±0.7,36.°83N±0.°03×29.°25E±0.°04,h0km±7km, Error ellipse: s-maj=5.7km s-min=5.3km az=43.5*
CSEM ***16*** *04:39:04.3±0.2,36.°84N×29.°25E,h5km,MD2.9,Error ellipse: s-maj=5.1km s-min=3.9km az=7.0*
DDA ***16*** *04:39:05.0,36.°89N×29.°26E,h7km±5km,Md3.0*
ISC 16 04:39:04.5±0.7,36.82N±0.°04×29.24E±0.°04,h3km±6km, n34,σ0s93/51,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.39**	**31**	*e*PG		**Pg**	**04 39 11.0**	**-1.0**
GLHS				*e*SG		**Sg**	**04 39 17.6**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.39**	**31**	*e*Pg		**Pg**	**04 39 11.0**	**-1.0**
GLHS				*e*Sg		**Sg**	**04 39 17.6**	**+0.5**
GOLH	**Golhisar**	**0.48**	**31**	*i*P		**Pg**	**04 39 11.6**	**-2.2**
GOLH				*i*S		**Sg**	**04 39 20.2**	**+0.1**
GOLH	**Golhisar**	**0.48**	**31**	*i*P		**Pg**	**04 39 11.6**	**-2.2**
GOLH				*i*S		**Sg**	**04 39 20.2**	**+0.1**
ELL	**Elmali**	**0.54**	**98**	*e*PG		**Pg**	**04 39 14.9**	**0.0**
ELL				*e*SG		**Sg**	**04 39 23.7**	**+1.8**
ELL	**Elmali**	**0.54**	**98**	*e*Pg		**Pg**	**04 39 14.9**	**+0.1**
ELL				*e*Sg		**Sg**	**04 39 23.7**	**+1.9**
AKAS	**Kas**	**0.66**	**154**	*i*P		**Pg**	**04 39 16.9**	**-0.2**
AKAS				*i*S		**Sg**	**04 39 30.1**	**+4.5**
AKAS	**Kas**	**0.66**	**154**	*i*P		**Pg**	**04 39 16.9**	**-0.2**
AKAS				*i*S		**Sg**	**04 39 30.1**	**+4.5**
YER	**Yerkesik**	**0.83**	**292**	*e*PG		**Pg**	**04 39 19.8**	**-0.7**
YER	**Yerkesik**	**0.83**	**292**	*e*Pg		**Pg**	**04 39 19.8**	**-0.6**
DNZL	**Cakiroluk**	**0.88**	**350**	*i*P		**Pg**	**04 39 21.4**	**0.0**
DNZL				*i*S		**Sg**	**04 39 34.3**	**+1.5**
DNZL	**Cakiroluk**	**0.88**	**350**	*i*P		**Pg**	**04 39 21.4**	**0.0**
DNZL				*i*S		**Sg**	**04 39 34.3**	**+1.5**
KORT	**Korkueli**	**0.90**	**78**	*i*P		**Pg**	**04 39 22.3**	**+0.5**
KORT				*i*S		**Sg**	**04 39 39.0**	**+5.5**
KORT	**Korkueli**	**0.90**	**78**	*i*P		**Pg**	**04 39 22.3**	**+0.5**
BCK	**Bucak**	**1.25**	**59**	*e*PN		**Pn**	**04 39 28.7**	**-0.1**
BCK	**Bucak**	**1.25**	**59**	*e*Pn		**Pn**	**04 39 28.7**	**-0.1**
MLSB	**Milas**	**1.27**	**292**	*e*PN		**Pn**	**04 39 28.3**	**-0.7**
MLSB	**Milas**	**1.27**	**292**	*e*Pn		**Pn**	**04 39 28.3**	**-0.7**
DAT	**Datca**	**1.34**	**266**	*e*PN		**Pn**	**04 39 29.7**	**-0.4**
DAT	**Datca**	**1.34**	**266**	*e*Pn		**Pn**	**04 39 29.7**	**-0.4**
AYDN	**Tasoluk**	**1.37**	**308**	*i*P		**Pn**	**04 39 30.2**	**-0.3**
AYDN				*i*S		**Sb**	**04 39 49.7**	**+1.0**
AYDN	**Tasoluk**	**1.37**	**308**	*i*P		**Pn**	**04 39 30.2**	**-0.3**
AYDN				*i*S		**Sb**	**04 39 49.7**	**+1.0**
BDRM	**Kayabasi**	**1.46**	**280**	*i*P		**Pn**	**04 39 32.6**	**+0.8**
BDRM				*i*S		**Sn**	**04 39 53.6**	**+2.2**
BDRM	**Kayabasi**	**1.46**	**280**	*i*P		**Pn**	**04 39 32.6**	**+0.9**
BDRM				*i*S		**Sn**	**04 39 53.6**	**+2.2**
KHL	**Karahalli**	**1.51**	**8**	*e*PN		**Pn**	**04 39 31.5**	**-1.0**
KHL	**Karahalli**	**1.51**	**8**	*e*Pn		**Pn**	**04 39 31.5**	**-0.9**
KHAL	**Karahalli**	**1.56**	**7**	*i*P		**Pn**	**04 39 32.3**	**-0.7**
KHAL				*i*S		**Sn**	**04 39 54.0**	**+0.3**
KHAL	**Karahalli**	**1.56**	**7**	*i*P		**Pn**	**04 39 32.3**	**-0.7**
KHAL				*i*S		**Sn**	**04 39 54.0**	**+0.3**
BODT	**Bodrum**	**1.57**	**279**	*e*PN		**Pn**	**04 39 32.6**	**-0.5**
BODT	**Bodrum**	**1.57**	**279**	*e*Pn		**Pn**	**04 39 32.7**	**-0.5**
KULA	**Kula-Manisa**	**1.75**	**345**	*e*PN		**Pn**	**04 39 34.8**	**-0.9**
KULA	**Kula-Manisa**	**1.75**	**345**	*e*Pn		**Pn**	**04 39 34.8**	**-0.9**
HDMB	**Hadim**	**2.60**	**86**	*e*PN		**Pn**	**04 39 47.4**	**-0.1**
HDMB	**Hadim**	**2.60**	**86**	*e*Pn		**Pn**	**04 39 47.4**	**0.0**

ISCJB ***16*** *04:46:42.7±1.1,16.°64S±0.°06×174.°60W±0.°04, h128km±9km,mb4.8/80,Error ellipse: s-maj=11.0km s-min=5.1km az=149.9*
BJI ***16*** *04:46:43.9,17.°20S×173.°81W,h176km,mB5.1/13, mb4.8/22*
IDC ***16*** *04:46:45.4±2.0,16.°85S×174.°45W,h144km±17km, mb4.4/12,mb1 4.7/14,mb1mx4.6/17,mbtmp4.5/14,MS3.4/1, Ms1 3.4/1,ms1mx2.7/22,Error ellipse: s-maj=20.2km s-min=11.4km az=129.0*
NEIC ***16*** *04:46:46.3±0.8,16.°63S×174.°61W,h149km±6km,mb4.8/60, Error ellipse: s-maj=7.6km s-min=3.5km az=149.0*
SZGRF ***16*** *04:46:48.9,17.°75S×175.°60W,h188km,Tonga Islands*
**ISC 16 04:46:45.7±1.2,16.68S±0.°06×174.59W±0.°04, h142km±11km,h186km±2.1km;pP-P,n644,σ0s53/507, mb4.7/80,119C-110D,

baz=74,SNR=5.8
CMB Columbia Colle 74.48 42 eP P 04 58 08.2 -0.3
OHCM Honcut 74.57 40 eP P 04 58 09.1 +0.1
PFO Pinyon Flat Ob 74.63 47 ⇑P P 04 58 09.2 -0.3
baz=75,SNR=8.2
PFO Pinyon Flat Ob 74.63 47 eP P 04 58 09.1 -0.5
21nm,1.2s,mb4.6
WDC Whiskeytown Da 74.69 39 eP P 04 58 09.5 -0.2
27nm,1.1s,mb4.8
TPUB Ta-pu 74.74 300 eP P 04 58 09.9 -0.5
16nm,0.6s,mb4.8
SWSC Sam W. Stewart 74.74 48 P P 04 58 09.8 -0.3
baz=75,SNR=7.3
LRMC Laurel Mountai 74.79 45 P P 04 58 10.5 +0.1
baz=75,SNR=11
BELC Belle Mtn. Jos 75.16 47 P P 04 58 12.5 0.0
baz=75,SNR=19
MPMC Manual Prospec 75.25 45 P P 04 58 13.3 +0.2
baz=75,SNR=69
MTUM Tungsten Hills 75.26 43 eP P 04 58 13.4 +0.3
GSC Goldstone 75.30 46 P P 04 58 13.2 -0.1
baz=75,SNR=28
GSC Goldstone 75.30 46 eP P 04 58 13.1 -0.2
YBH Yreka Blue Hor 75.31 38 eP P 04 58 13.7 +0.5
30nm,0.8s,mb5.0
TIN Tinemaha 75.31 44 P P 04 58 14.0 +0.6
baz=76,SNR=10
WAKR Walker 75.36 42 eP P 04 58 13.8 +0.2
BC3 Big Chuckawall 75.36 48 ⇓P P 04 58 13.9 +0.1
baz=76,SNR=9.7
HEC Hector,Ludlow 75.37 46 P P 04 58 13.6 -0.1
baz=76,SNR=11
112A Yuma 75.41 49 ⇑P P 04 58 14.2 +0.2
baz=76
GLA Glamis 75.50 49 ⇑P P 04 58 14.9 +0.4
baz=76
GLA Glamis 75.50 49 eP P 04 58 15.1 +0.6
WCN Washoe City 75.62 41 ⇑P P 04 58 15.6 +0.6
baz=76,SNR=30
HUMO Hull Mountain 75.72 37 eP P 04 58 16.0 +0.5
GMRC Granite Mounta 75.81 47 P P 04 58 16.1 -0.2
baz=76,SNR=22
IRM Iron Mountain 75.84 47 P P 04 58 16.5 0.0
baz=76,SNR=23
GRAC Grapevine Rang 75.85 44 P P 04 58 16.8 +0.3
baz=76,SNR=37
FURC Furnace Creek, 75.90 45 P P 04 58 16.5 -0.2
baz=76,SNR=26
SHOC Shoshone 75.98 45 ⇑P P 04 58 16.8 -0.4
baz=76,SNR=11
NVAR Mina Array Bea 76.04 42 P P 04 58 17.6 +0.1
30nm,0.8s,mb5.0,baz=226,slow=9.4,SNR=193
PAHR Pah Rah Range 76.09 41 eP P 04 58 17.8 +0.1
113A Mohawk Valley, 76.12 49 ⇓P P 04 58 18.0 0.0
baz=76,SNR=6.0
U10A Ash Meadows, A 76.23 45 P P 04 58 18.9 +0.3
baz=76,SNR=23
KSRS Korea Array 76.28 316 P P 04 58 19.4 +0.5
4.9nm,1.0s,mb4.1,baz=125,slow=5.9,SNR=9.5
LDFC Landfair 76.35 47 eP P 04 58 20.0 +0.7
214A Organ Pipe Nat 76.41 50 P P 04 58 19.8 0.0
baz=76,SNR=7.7
Z13A Yuma Proving G 76.41 49 P P 04 58 19.7 0.0
baz=77,SNR=15
V11A Goodsprings 76.53 46 P P 04 58 20.4 +0.1
baz=77,SNR=16
Y13A Salome 76.60 48 ⇓P P 04 58 21.0 +0.2
baz=77,SNR=13
PDMCI Parker Dam,Lak 76.63 48 P P 04 58 20.9 0.0
baz=77,SNR=14
W12A Cal Nev Ari 76.64 47 ⇑P P 04 58 21.2 +0.3
baz=77,SNR=9.8
114A Black Gap (USA 76.75 50 ⇓P P 04 58 21.2 -0.4
baz=77,SNR=8.6
MOD Modoc 76.83 38 eP P 04 58 21.9 +0.1
V12A Nelson 76.87 46 P P 04 58 22.3 +0.1
baz=77,SNR=18
S10A Tonopah Range, 76.87 44 P P 04 58 22.2 0.0
baz=77,SNR=40
U11A Corn Creek 76.88 45 ⇑P P 04 58 22.5 +0.3
baz=77,SNR=8.2
K05A Summer Lake 76.98 38 ⇑P P 04 58 23.1 +0.5
baz=77,SNR=17
Z14A Wintersburg 77.01 49 ⇓P P 04 58 23.1 0.0
baz=77,SNR=7.2
W13A Hualapai Mount 77.22 47 P P 04 58 24.4 +0.2
baz=77,SNR=19
Y14A Wickenburg 77.25 49 P P 04 58 24.3 -0.1
baz=77,SNR=21
R10A Warm Springs 77.27 43 P P 04 58 24.8 +0.4
baz=77,SNR=52
S11A Rachel 77.28 44 P P 04 58 24.6 +0.1
baz=77,SNR=18
T11A Corn Creek, Al 77.42 45 P P 04 58 25.6 +0.4
baz=78,SNR=55
216A Three Points, 77.44 51 P P 04 58 25.8 +0.3
baz=78,SNR=13
H04A Detroit Lake 77.46 35 P P 04 58 25.1 -0.2
baz=78,SNR=6.6
U12A Valley of Fire 77.46 46 P P 04 58 25.9 +0.4
baz=78,SNR=26
Q10A Clear Creek Ra 77.50 43 P P 04 58 25.8 +0.1
baz=78,SNR=13
116A Eloy 77.52 50 ⇑P P 04 58 25.8 -0.1
baz=78
V13A Grand Canyon W 77.54 46 ⇑P P 04 58 26.0 0.0
baz=78,SNR=23
X14A Yava 77.60 48 P P 04 58 26.6 +0.3
baz=78,SNR=22
Y15A Casa Rosa Ranc 77.75 49 P P 04 58 27.4 +0.2
baz=78,SNR=21
R11A Troy Canyon, C 77.77 44 P P 04 58 27.0 -0.2
baz=78,SNR=29
217A Green Valley 77.81 51 P P 04 58 27.6 +0.1
baz=78,SNR=25
W14A Seligman 77.84 47 P P 04 58 28.3 +0.6
baz=78,SNR=36
U13A Pakoon Wash 77.84 46 P P 04 58 28.1 +0.5
baz=78,SNR=36
BMN Battle Mountai 77.87 41 eP P 04 58 27.4 -0.3
31nm,0.9s,mb4.9
S12A Delamar Landin 77.87 45 ⇓P P 04 58 28.3 +0.6
baz=78,SNR=27
P10A Eureka 77.90 42 ⇓P P 04 58 28.0 +0.2
baz=78
Q11A Duckwater 78.00 43 P P 04 58 28.5 +0.1
baz=78,SNR=56
V14A Boquillas Ranc 78.04 47 P P 04 58 29.2 +0.5
baz=78,SNR=52
X15A Humboldt 78.08 48 P P 04 58 29.4 +0.4
baz=78,SNR=28
TUC Tucson 78.08 51 eP P 04 58 28.5 -0.5
Z16A Peralta Trail, 78.11 50 P P 04 58 29.6 +0.5
baz=78,SNR=15
WVOR Wild Horse Val 78.14 39 eP P 04 58 28.8 -0.3
34nm,1.0s,mb4.9
HOOD Mount Hood Mea 78.15 35 eP P 04 58 29.1 0.0
T13A Saint George 78.20 45 P P 04 58 29.9 +0.3
baz=78,SNR=34
VIPM Ingram Point 78.23 36 P P 04 58 29.4 -0.2
117A Oracle 78.24 51 P P 04 58 30.3 +0.4
baz=78,SNR=19
318A Bisbee 78.27 52 P P 04 58 30.2 +0.1
baz=78,SNR=20
P11A Circle Ranch, 78.32 42 ⇑P P 04 58 30.4 +0.3
baz=78,SNR=7.0
Y16A Circle Bar Ran 78.33 49 P P 04 58 30.6 +0.3
baz=78,SNR=14
U14A Mt Trumbull 78.39 46 P P 04 58 31.2 +0.6
baz=78,SNR=65
W15A Williams 78.40 48 ⇓P P 04 58 31.7 +0.9
baz=78,SNR=5.1
R12A Pony Springs, 78.41 44 P P 04 58 31.0 +0.3
baz=79,SNR=28
218A Dragoon 78.48 52 P P 04 58 31.6 +0.3
baz=79,SNR=25
S13A Holt Ranch, En 78.52 45 P P 04 58 31.6 +0.3
baz=79,SNR=26
I07A Izee 78.61 37 P P 04 58 31.8 +0.2
baz=79,SNR=15
X16A Lo Mia Camp, P 78.62 49 P P 04 58 32.4 +0.5
baz=79,SNR=33
Q12A Willow Creek R 78.64 43 P P 04 58 32.0 +0.1
baz=79,SNR=16
OSD Olympics--Snow 78.66 32 P P 04 58 32.2 +0.4
Y17A Roosevelt 78.70 50 ⇑P P 04 58 31.9 -0.5
baz=79,SNR=8.2
R13A O'Grain Ranch, 78.76 44 P P 04 58 33.2 +0.6
baz=79,SNR=15
319A Douglas 78.78 52 P P 04 58 33.2 +0.3
baz=79,SNR=15
J08A Circle Bar Ran 78.78 38 ⇑P P 04 58 32.6 0.0
baz=79
T14A Hurricane 78.78 46 P P 04 58 33.4 +0.7
baz=79,SNR=5.7
V15A Kaibab Nationa 78.79 47 P P 04 58 33.5 +0.7
baz=79,SNR=44
P12A McGill 78.82 43 ⇓P P 04 58 33.2 +0.3
baz=79
CCUT Cedar City 78.84 45 eP P 04 58 33.4 +0.3
118A Homack Ranch, 78.85 51 ⇑P P 04 58 33.6 +0.4
baz=79
W16A Flagstaff 78.89 48 P P 04 58 34.0 +0.7
baz=79,SNR=15
M10A I.L. Ranch, Tu 78.91 40 ⇓P P 04 58 33.7 +0.4
baz=79
ARUT Antelope Range 78.91 45 eP P 04 58 33.5 +0.1
24nm,1.0s,mb4.8
LON Longmire 78.96 34 eP P 04 58 33.3 -0.2
U15A North Rim 79.01 47 P P 04 58 34.7 +0.7
baz=79,SNR=49
X17A Forest Lakes 79.04 49 P P 04 58 35.0 +0.8
baz=79,SNR=18
WPW White Pass 79.07 34 P P 04 58 34.0 0.0
219A White Tail Can 79.08 52 ⇑P P 04 58 34.6 0.0
baz=79,SNR=22
S14A Cedar City 79.08 45 ⇑P P 04 58 35.0 +0.6
baz=79,SNR=11
Q13A Wheeler Ranch, 79.13 44 ⇓P P 04 58 34.7 0.0
baz=79,SNR=26
D05A Enumclaw 79.14 33 P P 04 58 34.6 +0.1
baz=79,SNR=5.4
WUAZ Wupatki 79.20 48 ⇑P P 04 58 35.7 +0.6
baz=79,SNR=13
WUAZ Wupatki 79.20 48 eP P 04 58 35.3 +0.2
39nm,1.2s,mb4.9
T15A Red Dirt Ranch 79.24 46 P P 04 58 35.8 +0.5
baz=79,SNR=27
L10A Juniper Basin 79.26 40 P P 04 58 35.2 0.0
baz=79,SNR=23
320A Kipp Ranch, An 79.33 53 ⇑P P 04 58 36.4 +0.5
baz=80,SNR=15
Y18A Canyon Day Jun 79.33 50 ⇓P P 04 58 36.3 +0.4
baz=80,SNR=22
MDJ Mudanjiang 79.35 323 P P 04 58 36.8 +1.2
MDJ pP pP 04 59 19.8 +8.8
MDJ sP sP 04 59 40.5 +14
MDJ PP PP 05 01 36.8 -1.1
MDJ S S 05 08 22.6 -1.9
MDJ sS sS 05 09 39.6 +14
MDJ pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
MDJ pmax pmax
comp=Z,140nm,12.2s
O12A Currie 79.36 42 ⇑P P 04 58 35.8 0.0
baz=80,SNR=18
P13A Bates Ranch, G 79.40 43 P P 04 58 36.1 0.0
baz=80,SNR=25
119A Ashpeak Ranch, 79.40 51 ⇓P P 04 58 36.5 +0.3
baz=80,SNR=11
220A Playas Peak, P 79.59 52 P P 04 58 37.9 +0.6
baz=80,SNR=22
G08A Pilot Rock 79.64 36 P P 04 58 37.1 -0.1
baz=80,SNR=32
Q14A Sevier Lake (B 79.64 44 P P 04 58 37.6 +0.2
baz=80,SNR=30
V17A Tonalea, Kykot 79.67 48 ⇑P P 04 58 37.8 +0.1
baz=80
U16A Tuba City 79.68 47 ⇑P P 04 58 38.2 +0.5
baz=80,SNR=17
X18A Snowflake 79.75 49 P P 04 58 38.5 +0.4
baz=80,SNR=14
O13A Hicks Ranch, I 79.78 43 ⇓P P 04 58 38.4 +0.3
baz=80,SNR=7.3
120A U Bar Ranch, L 79.80 52 ⇑P P 04 58 38.7 +0.3
baz=80,SNR=8.6
JCW Jim Creek 79.81 33 eP P 04 58 38.1 0.0
T16A Glen Canyon Da 79.83 47 ⇑P P 04 58 39.3 +0.8
baz=80,SNR=21
R15A Junction 79.92 45 ⇑P P 04 58 39.8 +0.9
baz=80,SNR=10
RSW Rattlesnake Hi 79.95 35 eP P 04 58 39.2 +0.3
HAWA Hanford 79.98 35 eP P 04 58 38.9 -0.2
Y19A Nutrioso 79.99 50 P P 04 58 40.2 +0.8
baz=80,SNR=40
N13A Wendover, West 80.02 42 ⇓P P 04 58 39.6 +0.2
baz=80,SNR=12
N13A Wendover, West 80.02 42 eP P 04 58 39.0 -0.4
comp=Z,49nm,1.0s,mb5.1
NJ2 Nanjing 80.03 308 eP P 04 58 40.3 +0.7
NJ2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
Z20A Nine Sixteen R 80.09 51 P P 04 58 40.6 +0.6
baz=80,SNR=26
P14A Drum Mountains 80.09 44 ⇓P P 04 58 39.7 -0.2
baz=80,SNR=29
MSU Marysvale 80.14 45 eP P 04 58 40.7 +0.6
S16A Weppner Ranch, 80.14 46 ⇑P P 04 58 40.6 +0.5
baz=80,SNR=17
X19A St. Johns 80.18 50 ⇑P P 04 58 41.2 +0.8
baz=80
221A Mesquite Ranch 80.21 52 ⇓P P 04 58 41.4 +0.8
baz=80,SNR=5.1
U17A Shonto 80.23 47 ⇓P P 04 58 41.2 +0.5
baz=80,SNR=12
Q15A Fillmore 80.25 44 ⇓P P 04 58 41.1 +0.5
baz=80,SNR=9.9
ETW Entiat 80.28 34 eP P 04 58 40.6 0.0
E08A Dider Farm, El 80.30 35 ⇑P P 04 58 40.7 -0.1
baz=80,SNR=5.6
M13A Montello 80.31 42 ⇑P P 04 58 41.1 +0.1
baz=80,SNR=5.6
V18A Ganado 80.33 48 P P 04 58 41.5 +0.4
baz=80,SNR=27
T17A Navajo Res., N 80.33 47 ⇑P P 04 58 41.7 +0.6
baz=80,SNR=24
BMO Blue Mountains 80.33 37 eP P 04 58 40.4 -0.5
LNOR Lincton Mounta 80.36 36 eP P 04 58 40.7 -0.4
MFID Camas Ranch 80.40 39 ⇓P P 04 58 41.1 -0.3
baz=81,SNR=27
121A Cookes Peak, D 80.44 52 ⇓P P 04 58 42.1 +0.2
baz=81,SNR=13
R16A Teasdale 80.50 45 ⇓P P 04 58 42.8 +0.8
baz=81,SNR=19
EPH Ephrata 80.53 34 P P 04 58 41.6 -0.3
WTV Waterville 80.54 34 P P 04 58 41.6 -0.4
CBSW Chelan Butte S 80.56 34 P P 04 58 41.6 -0.5
DUG Dugway 80.58 43 P P 04 58 42.1 -0.2
baz=81,SNR=12
DUG Dugway 80.58 43 eP P 04 58 41.3 -1.1
comp=Z,16nm,1.1s,mb4.6
PMR Palmer 80.60 12 eP P 04 58 41.4 -0.6
Y20A Horse Springs, 80.62 50 ⇑P P 04 58 43.4 +0.7
baz=81,SNR=42
TTA Tatalina 80.68 8 eP P 04 58 42.0 -0.3
comp=Z,4.2nm,0.8s,mb4.1
TTA epP pP 04 59 28.2 +10
U18A Rough Rock, Ch 80.71 48 P P 04 58 43.5 +0.3
baz=81,SNR=19
D08A Wollman Farm, 80.71 35 ⇑P P 04 58 42.6 -0.3
baz=81,SNR=17
X20A Quemado 80.82 50 ⇓P P 04 58 44.4 +0.6
baz=81,SNR=24
E09A Wood Farm, Sta 80.82 36 ⇑P P 04 58 43.1 -0.4
baz=81,SNR=8.2
Z21A St. Cloud Mine 80.87 51 ⇑P P 04 58 45.3 +1.2
baz=81,SNR=29
M14A Sheep Mountain 80.91 42 P P 04 58 44.0 -0.1
baz=81,SNR=28
V19A Window Rock 80.96 49 ⇑P P 04 58 44.9 +0.3
baz=81
Q16A Castle Valley 81.02 45 ⇑P P 04 58 45.4 +0.6
baz=81,SNR=7.3
F10A Beach Ranch, E 81.02 36 P P 04 58 43.9 -0.7
baz=81,SNR=32
OD2 Odessa Site #2 81.03 35 eP P 04 58 44.2 -0.4
I12A Atlanta 81.03 39 P P 04 58 44.7 0.0
baz=81,SNR=37
T18A Mexican Hat 81.05 47 P P 04 58 45.4 +0.4
baz=81,SNR=72
R17A Hanksville Air 81.09 46 ⇑P P 04 58 44.8 -0.3
baz=81,SNR=14
122A Conniff Cattle 81.10 52 ⇑P P 04 58 46.1 +0.8
baz=81,SNR=5.7
U19A Dine' College, 81.12 48 P P 04 58 45.7 +0.4
baz=81,SNR=33
Y21A Point of Rocks 81.18 51 ⇑P P 04 58 46.5 +0.7
baz=81,SNR=21
TMUT Trail Mountain 81.19 45 eP P 04 58 46.6 +1.0
S18A Hurst Farm, Bl 81.23 46 ⇑P P 04 58 45.6 -0.3
baz=81,SNR=6.7
L14A Malta 81.26 41 ⇑P P 04 58 45.6 -0.3
baz=81
B08A Colville Reser 81.27 34 ⇑P P 04 58 44.9 -1.0
baz=81,SNR=15
X21A Alamocita Cree 81.30 50 ⇓P P 04 58 46.4 0.0
baz=81,SNR=14
CN2 Changchun 81.34 321 eP P 04 58 47.4 +1.1
CN2 eS S 05 08 44.5 -0.9
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
CN2 pmax pmax
comp=Z,200nm,6.0s
HLID Hailey 81.34 40 ⇑P P 04 58 46.5 +0.1
baz=82,SNR=40
HLID Hailey 81.34 40 eP P 04 58 46.1 -0.2
comp=Z,20nm,0.9s,mb4.8
J13A Cove Ranch, Pi 81.40 40 P P 04 58 46.9 +0.3
baz=82,SNR=32
V20A Brimhall 81.42 49 ⇑P P 04 58 47.3 +0.3
baz=82,SNR=8.5
HVU Hansel Valley 81.42 42 eP P 04 58 46.9 +0.1
O16A Springville 81.44 44 ⇓P P 04 58 47.4 +0.4
baz=82
T19A Beclabito 81.50 48 ⇑P P 04 58 47.9 +0.5
baz=82,SNR=32
C09A Chrisman Ranch 81.51 35 ⇑P P 04 58 46.7 -0.4
baz=82,SNR=6.8
CTU Camp Tracy 81.53 43 eP P 04 58 48.5 +1.1
SRU San Rafael 81.56 45 ⇑P P 04 58 47.6 +0.1
baz=82,SNR=14
SRU San Rafael 81.56 45 eP P 04 58 47.8 +0.2
K14A Jones Ranch, D 81.57 41 P P 04 58 47.5 0.0
baz=82,SNR=19
P17A Butcher Ranch, 81.59 45 ⇑P P 04 58 48.0 +0.2
baz=82,SNR=6.4
H12A Diamond D Ranc 81.61 39 ⇑P P 04 58 47.5 -0.3
baz=82,SNR=23
R18A Canyonlands Na 81.63 46 ⇓P P 04 58 48.0 0.0
baz=82,SNR=7.9
U20A Newcomb 81.65 48 ⇓P P 04 58 47.8 -0.3
baz=82,SNR=16
G12A Big Creek, Yel 81.65 38 ⇑P P 04 58 47.7 -0.2
baz=82
Y22A Socorro 81.68 51 ⇓P P 04 58 48.5 +0.2
baz=82,SNR=19
JLU Jordanelle 81.68 43 eP P 04 58 48.3 +0.1
W21A San Fidel 81.70 50 ⇓P P 04 58 48.8 +0.3
baz=82,SNR=9.9
DAU Daniels Canyon 81.71 44 eP P 04 58 48.9 +0.5
I13A Wildhorse Cree 81.71 39 P P 04 58 48.3 0.0
baz=82,SNR=16
LAZ Ladron 81.75 51 eP P 04 58 49.0 +0.3
comp=Z,14nm,1.5s,mb4.3
LENM Lemitar 81.77 51 eP P 04 58 49.5 +0.7
L15A Malad City 81.78 42 P P 04 58 48.2 -0.5
baz=82,SNR=17
Q18A Rafter H Ranch 81.82 45 ⇑P P 04 58 48.8 -0.1
baz=82,SNR=15
425A Indio Mountain 81.83 55 ⇓P P 04 58 49.4 +0.2
baz=82,SNR=24
N16A Rees Ranch, Co 81.83 43 ⇑P P 04 58 49.4 +0.4
baz=82,SNR=7.0
S19A Harvey Farm, M 81.85 47 P P 04 58 49.2 0.0
baz=82,SNR=22
MNTX Cornudas Mount 81.91 54 P P 04 58 49.5 -0.1
baz=82,SNR=23
MNTX Cornudas Mount 81.91 54 eP P 04 58 49.1 -0.5
comp=Z,13nm,1.1s,mb4.5
O17A Robinson Place 81.95 44 P P 04 58 50.0 +0.4
baz=82,SNR=24
224A Cornudas Mount 81.96 53 ⇑P P 04 58 50.1 +0.2
baz=82,SNR=17
H13A Challis 81.98 39 ⇑P P 04 58 49.5 -0.1
baz=82,SNR=20
626A Big Bend Ranch 81.99 56 ⇑P P 04 58 50.2 +0.1
baz=82,SNR=11
P18A Preston Nutter 82.00 45 ⇓P P 04 58 50.1 +0.3
baz=82,SNR=9.6
V21A Milan 82.02 49 P P 04 58 50.5 +0.3
baz=82,SNR=18
BNM Barren Site 82.02 51 eP P 04 58 50.3 +0.2
comp=Z,22nm,1.2s,mb4.7
R19A Curley Farm, L 82.03 46 ⇓P P 04 58 50.3 +0.2
baz=82,SNR=32
F12A Elk City 82.04 37 P P 04 58 49.5 -0.5
baz=82,SNR=86
K15A Arbon 82.05 41 ⇓P P 04 58 49.9 -0.2
baz=82,SNR=13
MVCO Mesa Verde 82.05 47 ⇓P P 04 58 50.4 +0.2
baz=82,SNR=5.5
MVCO Mesa Verde 82.05 47 eP P 04 58 50.0 -0.2
comp=Z,9.1nm,1.0s,mb4.4
325A Bean Ranch, Si 82.08 54 P P 04 58 50.4 -0.1
baz=82,SNR=22
TRF Thorofare Moun 82.09 11 eP P 04 58 48.8 -1.0
comp=Z,14nm,0.8s,mb4.6
LPM Los Pinos Moun 82.09 51 eP P 04 58 51.0 +0.5
HWUT Hardware Ranch 82.11 42 eP P 04 58 49.6 -0.8
comp=Z,13nm,1.0s,mb4.5
E12A Beaver Dam Sad 82.22 37 ⇓P P 04 58 49.6 -1.3
baz=82,SNR=12
526A Mary Lane Ranc 82.23 56 P P 04 58 51.5 +0.1
baz=82,SNR=18
W22A Albuquerque 82.25 50 ⇓P P 04 58 51.9 +0.6
baz=82,SNR=6.9
N17A Moffit Pass 82.25 43 ⇑P P 04 58 51.2 0.0
baz=82,SNR=13
TXAR Lajitas Array 82.27 56 P P 04 58 51.4 -0.2
TXAR Lajitas Array 82.27 56 P P 04 58 51.4 -0.1
comp=Z,8.3nm,1.1s,mb4.3,baz=217,slow=6.1,SNR=38
124A Stringfield Ra 82.28 53 ⇑P P 04 58 51.8 +0.2
baz=82
G13A Cobalt 82.28 38 P P 04 58 50.9 -0.3
baz=82,SNR=22
U21A Nageezi 82.29 48 P P 04 58 52.0 +0.5
baz=82,SNR=61
SKAG Skagway 82.32 19 eP P 04 58 51.6 +0.5
comp=Z,3.4nm,0.7s,mb4.1
PV04 Paradox Valley 82.32 46 eP P 04 58 52.0 +0.4
Y23A Lovelace Mesa, 82.35 51 P P 04 58 51.8 -0.1
baz=82,SNR=12
NEW Newport 82.41 35 ⇑P P 04 58 51.0 -0.8
baz=83,SNR=6.7
PV01 Paradox Valley 82.43 47 eP P 04 58 51.6 -0.6
comp=Z,3µm,1.1s
O18A Roosevelt 82.47 44 ⇑P P 04 58 52.5 +0.2
baz=83,SNR=7.2
J15A Blackfoot 82.48 41 ⇑P P 04 58 52.8 +0.6
baz=83
ANMO Albuquerque 82.50 50 eP P 04 58 52.7 +0.1
225A Deer Hill, Car 82.51 53 ⇓P P 04 58 52.9 +0.2
baz=83,SNR=13
426A McDonald Obser 82.53 55 P P 04 58 53.0 +0.1
baz=83,SNR=29
H14A Leadore 82.54 39 ⇓P P 04 58 52.9 +0.3
baz=83,SNR=16
627A Terlingua Ranc 82.54 56 P P 04 58 53.1 +0.2
baz=83,SNR=19
R20A Redvale 82.59 47 P P 04 58 52.9 -0.1
baz=83,SNR=16
MCK McKinley 82.59 11 eP P 04 58 51.8 -0.6
comp=Z,18nm,0.8s,mb4.8
V22A San Miguel Ran 82.60 49 ⇓P P 04 58 53.3 +0.2
baz=83,SNR=5.5
M17A Scullys Gap (B 82.63 43 ⇓P P 04 58 52.7 -0.4
baz=83,SNR=6.1
T21A Navajo Lake 82.63 48 P P 04 58 53.7 +0.4
baz=83,SNR=13
C11A Tepee Creek (N 82.64 35 P P 04 58 52.6 -0.4
baz=83,SNR=37
527A Woodward Ranch 82.64 56 P P 04 58 53.2 -0.3
baz=83,SNR=16
D12A Red Ives Fores 82.70 36 ⇑P P 04 58 52.4 -1.0
baz=83,SNR=18
K16A Soda Springs 82.72 41 P P 04 58 54.1 +0.5
baz=83,SNR=14
I15A Monteview 82.76 40 ⇑P P 04 58 54.1 +0.4
baz=83
S21A Coal Bank Pass 82.76 47 P P 04 58 54.1 +0.3
baz=83,SNR=54
HYT Haines Junctio 82.77 17 eP P 04 58 53.9 +0.5
L17A Cokeville 82.80 42 P P 04 58 53.5 -0.5

baz=83,SNR=8.4
Y24A **Capitan** 82.81 52 P P 04 58 54.5 +0.2
baz=83,SNR=41
G14A **Jackson** 82.82 39 ⇓P P 04 58 54.2 +0.2
baz=83
W23A **Werner Place,** 82.82 50 P P 04 58 54.4 +0.1
baz=83,SNR=22
U22A **Llaves** 82.84 49 P P 04 58 54.6 +0.2
baz=83,SNR=11
P19A **Cripple Cowboy** 82.86 45 P P 04 58 54.2 -0.1
baz=83,SNR=13
125A **Gardner Draw,** 82.87 53 P P 04 58 54.6 0.0
baz=83,SNR=10.0
GDL2 **Guadalupe Moun** 82.90 54 *e*P P 04 58 55.1 +0.3
J16A **Bone** 82.93 41 P P 04 58 54.9 +0.3
baz=83,SNR=32
628A **Black Gap, Mar** 82.96 57 ⇑P P 04 58 55.0 -0.1
baz=83,SNR=14
MENT **Mentasta** 82.96 14 *e*P P 04 58 54.0 -0.3
MCMT **McKenzie Canyo** 82.97 39 *e*P P 04 58 54.8 0.0
comp=Z,15nm,1.0s,mb4.7
H15A **Lima** 82.98 39 ⇑P P 04 58 55.3 +0.4
baz=83,SNR=28
M18A **Lyman** 83.00 43 ⇓P P 04 58 55.0 0.0
baz=83,SNR=24
C12B **Naegeli Ranch,** 83.00 36 P P 04 58 54.4 -0.5
baz=83,SNR=7.8
Q20A **Ridgley Place,** 83.00 46 P P 04 58 55.0 -0.1
baz=83,SNR=21
N18A **Larsen Ranch,** 83.03 44 ⇑P P 04 58 54.9 -0.3
baz=83,SNR=13
E13A **Victor** 83.04 37 ⇑P P 04 58 54.3 -0.8
baz=83,SNR=37
226A **Malaga, Loving** 83.05 54 P P 04 58 55.5 0.0
baz=83,SNR=12
V23A **Ortiz Mt. (NFS** 83.05 50 ⇑P P 04 58 55.9 +0.5
baz=83,SNR=18
O19A **Miners Draw (B** 83.08 44 P P 04 58 55.2 -0.3
baz=83,SNR=13
T22A **Edith** 83.09 48 ⇓P P 04 58 55.8 +0.2
baz=83,SNR=13
427A **Hayter Ranch,** 83.10 55 P P 04 58 56.0 +0.2
baz=83,SNR=20
K17A **Gardner Place,** 83.10 42 P P 04 58 55.4 -0.1
baz=83,SNR=17
RRI2 **Red Ridge** 83.15 41 *e*P P 04 58 55.9 +0.1
F14A **Wisdom** 83.18 38 P P 04 58 55.7 -0.2
baz=83,SNR=10
P20A **De Beque** 83.19 45 ⇑P P 04 58 56.2 +0.1
baz=83
D13A **Huson** 83.24 37 ⇑P P 04 58 55.5 -0.6
baz=83,SNR=28
R21A **Cimarron** 83.25 47 P P 04 58 56.8 +0.4
baz=83,SNR=53
L18A **Fontenelle, Gr** 83.26 43 P P 04 58 56.0 -0.4
baz=83,SNR=8.2
CLNB **Carlsbad** 83.30 54 *e*P P 04 58 56.8 0.0
comp=Z,1.8nm,0.9s,mb3.8
U23A **El Rito** 83.30 49 P P 04 58 57.0 +0.3
baz=83,SNR=50
528A **Cox Ranch, San** 83.31 56 ⇑P P 04 58 56.8 -0.1
baz=83,SNR=14
DLBC **Dease Lake** 83.31 22 *e*P P 04 58 56.1 -0.1
I16A **Newdale** 83.31 40 P P 04 58 57.1 +0.5
baz=84,SNR=46
N19A **John Jarvie Ra** 83.32 44 P P 04 58 56.1 -0.6
baz=84,SNR=10
126A **Clayton Basin,** 83.35 53 ⇓P P 04 58 57.1 0.0
baz=84,SNR=8.5
DCID1 **Drake Creek** 83.36 41 *e*P P 04 58 57.3 +0.5
G15A **Dillon** 83.36 39 P P 04 58 56.8 0.0
baz=84,SNR=48
W24A **Lazy 6 Ranch,** 83.39 50 ⇓P P 04 58 57.1 0.0
baz=84,SNR=34
MSO **Missoula** 83.39 37 P P 04 58 55.9 -1.0
baz=84,SNR=12
MSO **Missoula** 83.39 37 *e*P P 04 58 56.1 -0.8
DLMT **Dillon** 83.40 39 *e*P P 04 58 56.6 -0.4
comp=Z,23nm,0.8s,mb5.0
E14A **Clinton** 83.43 38 ⇓P P 04 58 56.5 -0.6
baz=84,SNR=26
Q21A **Lamborn Mesa,** 83.45 46 P P 04 58 54.1 -3.3
baz=84,SNR=11
REDW **Red Top Meadow** 83.45 41 *e*P P 04 58 57.1 -0.2
TPAW **Teton Pass** 83.45 41 *e*P P 04 58 57.5 +0.2
BSMT **Bassoo Peak** 83.47 36 *e*P P 04 58 56.6 -0.7
S22A **4UR Ranch, Cre** 83.48 48 ⇓P P 04 58 57.9 +0.3
baz=84,SNR=50
C13A **Hot Springs** 83.49 36 ⇑P P 04 58 56.6 -0.8
baz=84
J17A **Brown Place, J** 83.54 41 ⇓P P 04 58 57.7 0.0
baz=84,SNR=26
SNOW **Snow King Moun** 83.56 41 *e*P P 04 58 57.7 -0.2
comp=Z,41nm,0.9s,mb5.2
O20A **White River Ci** 83.59 45 ⇑P P 04 58 57.7 -0.4
baz=84,SNR=14
K18A **Toltan Ranch,** 83.61 42 P P 04 58 57.8 +0.1
baz=84,SNR=48
428A **Kincaid Ranch,** 83.61 55 ⇓P P 04 58 58.6 +0.1
baz=84,SNR=8.5
CPRX **Cap Rock** 83.63 53 *e*P P 04 58 58.4 0.0
comp=Z,2.1nm,0.9s,mb3.9
M19A **Rock Springs** 83.63 43 ⇓P P 04 58 58.0 -0.2
baz=84,SNR=6.8
Z26A **Caprock** 83.64 53 P P 04 58 58.4 -0.1
baz=84,SNR=24
X25A **Clemmons Ranch** 83.65 51 ⇓P P 04 58 58.2 -0.3
baz=84,SNR=16
IMW **Indian Meadow** 83.66 41 *e*P P 04 58 58.3 -0.1
comp=Z,28nm,0.8s,mb5.0
JTMT **Jette** 83.69 36 *e*P P 04 58 57.4 -1.0
MOOW **Moose Ponds** 83.71 41 *e*P P 04 58 58.0 -0.6
comp=Z,13nm,1.2s,mb4.5
V24A **Rampart Ranch,** 83.71 50 ⇑P P 04 58 59.2 +0.4
baz=84,SNR=18
F15A **Butte** 83.71 38 ⇑P P 04 58 58.4 -0.2
baz=84,SNR=16
SWMT **Swartz Lake** 83.72 36 *e*P P 04 58 57.9 -0.7
T23A **Casias Ranch,** 83.72 49 ⇑P P 04 58 59.1 +0.2
baz=84,SNR=8.1
LRM **Limekiln Ridge** 83.73 38 *e*P P 04 58 58.3 -0.3
LOHW **Long Hollow** 83.73 41 *e*P P 04 58 58.3 -0.4
comp=Z,16nm,1.0s,mb4.7
R22A **Saguache, Gunn** 83.74 47 ⇑P P 04 58 59.8 +0.8
baz=84,SNR=24
328A **Wristen Ranch,** 83.78 55 P P 04 58 58.8 -0.5
baz=84,SNR=9.6
D14A **Greenough** 83.78 37 ⇑P P 04 58 57.8 -1.0
baz=84,SNR=18
L19A **Farson** 83.79 43 P P 04 58 58.7 -0.3
baz=84,SNR=32
G16A **Moss Hill, Enn** 83.81 39 P P 04 58 59.0 -0.1
baz=84,SNR=18
COLA **College** 83.83 11 *e*P P 04 58 57.6 -1.1
comp=Z,24nm,0.8s,mb5.0
CHMT **Chamberlain Mo** 83.83 37 *e*P P 04 58 58.1 -1.0
comp=Z,13nm,1.0s,mb4.6
SLMT **Seeley Lake** 83.87 37 *e*P P 04 58 58.2 -1.1
127A **Arkansas Junct** 83.87 53 ⇓P P 04 58 59.4 -0.3
baz=84,SNR=10
H16A **Russell Place,** 83.88 40 P P 04 59 00.1 +0.7
baz=84,SNR=45
I17A **Pilgrim Ck.** 83.90 41 ⇑P P 04 59 00.3 +0.7
baz=84,SNR=6.9
J18A **Kendall Valley** 83.90 42 ⇓P P 04 58 59.6 0.0
baz=84,SNR=82
FLWY **Flagg Ranch** 83.91 41 *e*P P 04 58 59.9 +0.2
N20A **Spence Gulch,** 83.91 44 ⇑P P 04 58 59.6 -0.1
baz=84,SNR=23
YBMT **Yellow Bay** 83.91 36 *e*P P 04 58 58.4 -1.1
ILAR **Eielson Array** 83.92 12 P P 04 58 58.4 -0.8
comp=Z,4.1nm,0.6s,mb4.3,baz=232,slow=6.2,SNR=92
Q22A **Crested Butte,** 83.92 47 P P 04 58 59.8 0.0
baz=84,SNR=30
B13A **Whitefish** 83.93 36 P P 04 58 58.6 -1.0
baz=84,SNR=6.8
BW06 **Boulder Array** 83.98 42 ⇑P P 04 58 59.5 -0.5
baz=84,SNR=30
U24A **Moreno Valley** 84.00 49 ⇑P P 04 59 00.9 +0.6
baz=84,SNR=6.0
YFT **Old Faithful** 84.01 40 *e*P P 04 59 01.8 +1.7
SMCO **Snowmass** 84.02 46 *e*P P 04 59 00.2 -0.2
comp=Z,23nm,1.1s,mb4.8
Y26A **Elida** 84.03 52 ⇑P P 04 59 00.3 -0.2
baz=84,SNR=5.9
YMR **Madison River** 84.03 40 *e*P P 04 59 00.5 +0.2
comp=Z,64nm,1.4s,mb5.2
W25A **X Bar L Ranch,** 84.09 51 P P 04 59 00.1 -0.7
baz=84,SNR=13
BOZ **Bozeman (W)** 84.13 39 P P 04 59 00.5 -0.2
baz=84,SNR=22
BOZ **Bozeman (W)** 84.13 39 *e*P P 04 59 00.2 -0.5
comp=Z,16nm,1.0s,mb4.7
H17A **Grant Village** 84.14 40 ⇓P P 04 59 01.5 +0.7
baz=84,SNR=8.1
O21A **Pagoda** 84.15 45 P P 04 59 00.8 -0.1
baz=84,SNR=6.5
F16A **Kennard Place,** 84.20 39 P P 04 59 00.9 -0.1
baz=84,SNR=16
V25A **Rancho No Teng** 84.24 50 ⇑P P 04 59 01.2 -0.3
baz=84,SNR=18
M20A **Sweetwater, Wa** 84.27 44 ⇑P P 04 59 01.5 0.0
baz=84,SNR=8.1
A13A **Flathead Natio** 84.27 35 ⇑P P 04 59 01.0 -0.3
baz=84
I18A **Diamond G Ranc** 84.27 41 ⇓P P 04 59 01.5 +0.1
baz=84,SNR=7.4
X26A **CR and CF Fran** 84.30 52 ⇓P P 04 59 01.8 0.0
baz=84,SNR=6.2
D15A **Lincoln** 84.33 37 ⇓P P 04 59 01.5 -0.2
baz=84,SNR=18
P22A **Eagle** 84.36 46 ⇓P P 04 59 01.7 -0.3
baz=84,SNR=14
N21A **Black Mountain** 84.37 45 P P 04 59 01.9 -0.1
baz=84,SNR=26
L20A **Wamsutter** 84.41 43 ⇓P P 04 59 02.3 +0.1
baz=84,SNR=17
K19A **Absolon Red Bu** 84.47 42 ⇓P P 04 59 01.5 -0.9
baz=85,SNR=10
G17A **Pierce Place,** 84.50 40 ⇑P P 04 59 02.9 +0.3
baz=85,SNR=9.4
HRY **Holter Researc** 84.56 38 *e*P P 04 59 02.7 -0.1
S24A **Houchin Ranch,** 84.58 48 P P 04 59 03.4 +0.2
baz=85,SNR=7.3
B14A **Marquette Ranc** 84.59 36 ⇓P P 04 59 02.1 -0.8
baz=85,SNR=24
WALA **Waterton Lakes** 84.61 35 *e*P P 04 59 02.5 -0.6
U25A **Circle Dot Ran** 84.63 50 P P 04 59 03.2 -0.2
baz=85,SNR=11
C15A **Salmond Ranch,** 84.66 37 P P 04 59 02.5 -0.8
baz=85,SNR=18
Q23A **Hartsel** 84.69 47 ⇓P P 04 59 03.9 +0.2
baz=85
K20A **Yellowstone Ra** 84.71 43 ⇓P P 04 59 02.9 -0.8
baz=85,SNR=14
O22A **Kremmling** 84.76 46 ⇓P P 04 59 03.8 -0.2
baz=85,SNR=12
V26A **Tequesquite Ra** 84.83 50 ⇑P P 04 59 04.1 -0.4
baz=85,SNR=5.4
A14A **Double T Ranch** 84.84 35 P P 04 59 03.5 -0.6
baz=85,SNR=21
F17A **Fitzpatrick Pl** 84.84 39 P P 04 59 04.6 +0.3
baz=85,SNR=14
MSTX **Muleshoe** 84.84 52 ⇓P P 04 59 04.3 -0.3
baz=85,SNR=20
M21A **Separation Pea** 84.87 44 ⇑P P 04 59 04.1 -0.4
baz=85,SNR=10
X27A **F and S Farms,** 84.87 52 ⇑P P 04 59 04.5 -0.2
baz=85,SNR=7.6
D16A **Dana Ranch, Ca** 84.89 38 ⇑P P 04 59 04.3 -0.2
baz=85,SNR=13
DAWY **Dawson** 84.94 15 *e*P P 04 59 03.9 -0.5
B15A **Bradely Ranch,** 84.97 36 ⇑P P 04 59 03.7 -1.2
baz=85,SNR=12
RWWY **Rawlins** 85.01 44 *e*P P 04 59 04.1 -1.1
comp=Z,22nm,1.2s,mb4.8
L21A **Rawlins** 85.03 44 ⇓P P 04 59 04.6 -0.7
baz=85,SNR=6.9
N22A **Wattenberg Ran** 85.11 45 ⇑P P 04 59 05.4 -0.4
baz=85,SNR=10
U26A **Atchley Ranch,** 85.11 50 ⇓P P 04 59 05.6 -0.3
baz=85,SNR=10
EGAK **Eagle** 85.13 14 *e*P P 04 59 04.5 -0.8
comp=Z,12nm,1.1s,mb4.5
S25A **Robets Cordova** 85.15 49 P P 04 59 05.5 -0.5
baz=85,SNR=7.2
C16A **Fuhringer Ranc** 85.17 37 ⇓P P 04 59 05.2 -0.6
baz=85,SNR=15
G18A **Lazy EL Ranch,** 85.22 40 ⇓P P 04 59 06.3 +0.1
baz=85,SNR=9.9
A15A **Johnson Ranch,** 85.23 36 P P 04 59 05.2 -1.0
baz=85,SNR=18
RLMT **Red Lodge** 85.31 40 ⇓P P 04 59 06.7 +0.1
baz=86,SNR=6.8
RLMT **Red Lodge** 85.31 40 *e*P P 04 59 06.4 -0.2
comp=Z,12nm,1.1s,mb4.5
GCMT **Greycliff** 85.39 39 *e*P P 04 59 06.4 -0.6
comp=Z,6.9nm,1.2s,mb4.3
F18A **Big Timber** 85.42 39 ⇓P P 04 59 07.1 -0.1
baz=86,SNR=6.7
D17A **Six Diamond Ra** 85.46 38 P P 04 59 07.2 -0.1
baz=86,SNR=14
I20A **Worland** 85.46 42 ⇓P P 04 59 07.0 -0.5
baz=86,SNR=10
N23A **Red Feather La** 85.50 45 P P 04 59 07.4 -0.3
baz=86,SNR=6.9
BJI **Beijing** 85.52 314 P P 04 59 08.4 +0.6
BJI S S 05 09 22.5 -5.1
BJI pmax pmax
comp=Z,15nm,1.1s,mb4.6
BJI pmax pmax
comp=Z,280nm,9.3s
BJI LR LR
comp=N,280nm,17.0s
BJI LR LR
comp=E,260nm,18.2s
BJI LR LR
comp=Z,190nm,27.4s
COLD **Coldfoot** 85.58 9 *e*P P 04 59 07.5 0.0
comp=Z,4.1nm,0.8s,mb4.2
E18A **Harlowton** 85.62 39 P P 04 59 08.3 +0.2
baz=86,SNR=7.3
C17A **Wharram Farm,** 85.66 38 P P 04 59 07.7 -0.5
baz=86,SNR=38
L22A **Ellis Ranch, M** 85.68 44 P P 04 59 08.4 -0.1
baz=86,SNR=6.3
O24A **Longmont** 85.75 46 ⇓P P 04 59 08.9 -0.1
baz=86
JCT **Junction City** 85.81 57 ⇓P P 04 59 09.1 -0.3
baz=86,SNR=8.7
JCT **Junction City** 85.81 57 *e*P P 04 59 08.8 -0.6
comp=Z,12nm,1.0s,mb4.6
A16A **West Butte Ran** 85.85 36 ⇓P P 04 59 08.7 -0.5
baz=86
I21A **Big Trails, Te** 85.93 42 ⇑P P 04 59 08.8 -0.9
baz=86,SNR=12
B17A **L&R Farms, Che** 85.97 37 ⇓P P 04 59 09.0 -0.8
baz=86,SNR=7.8
D18A **Linhart Farms,** 86.00 38 P P 04 59 10.2 +0.2
baz=86,SNR=5.6
P25A **Willow Gulch B** 86.12 47 P P 04 59 10.2 -0.6
baz=86,SNR=11
L23A **Garrett** 86.20 44 ⇑P P 04 59 10.5 -0.6
baz=86,SNR=7.0
MAW **Mawson** 86.22 199 *e*P P 04 59 09.9 -0.9
comp=Z,1.8nm,0.9s,mb3.8
MAW **Mawson** 86.22 199 P P 04 59 10.2 -0.6
comp=Z,6.8nm,0.8s,mb4.4,baz=126,slow=6.9,SNR=18
E19A **Rath Farm, Rou** 86.25 39 ⇓P P 04 59 10.9 -0.4
baz=86
A17A **Triple J Farms** 86.36 36 ⇓P P 04 59 11.2 -0.5
baz=86,SNR=17
EGMT **Eagleton** 86.44 38 ⇓P P 04 59 11.5 -0.6
baz=87
H21A **Big Horn, Sher** 86.47 41 ⇓P P 04 59 11.7 -0.6
baz=87
B18A **Beardsley Farm** 86.61 37 P P 04 59 12.2 -0.7
baz=87,SNR=7.3
E20A **Meyer Farm, Mu** 86.67 39 ⇓P P 04 59 12.7 -0.6
baz=87
A18A **Metzger Ranch,** 86.83 37 ⇓P P 04 59 13.3 -0.7
baz=87,SNR=12
D20A **Manuel Ranch,** 86.94 39 ⇓P P 04 59 14.4 -0.2
baz=87
EDM **Edmonton** 87.17 32 *e*P P 04 59 14.3 -1.2
E21A **Keefer Ranch,** 87.33 40 ⇑P P 04 59 16.7 +0.2
baz=88
GYA **Guiyang** 87.64 298 P P 04 59 18.8 +0.4
GYA pP pP 05 00 04.3 +10
GYA sP sP 05 00 24.0 +15
GYA PP PP 05 02 49.4 +3.5
GYA SKS 05 09 26.8
GYA S S 05 09 42.9 -5.7
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
GYA pmax pmax
comp=Z,90nm,5.9s
LAO **LASA Array** 87.92 40 P P 04 59 19.5 +0.2
baz=88,SNR=11
LAO **LASA Array** 87.92 40 *e*P P 04 59 19.1 -0.2
comp=Z,20nm,0.8s,mb5.0
XAN **Xi'an** 88.45 306 P P 04 59 23.3 +1.2
XAN pmax pmax
comp=Z,3.0nm,1.3s,mb4.0
XAN pmax pmax
comp=Z,150nm,12.6s
HHC **Hu-ho-hao-te** 89.06 313 *e*P P 04 59 26.1 +1.3
HHC pP pP 05 00 13.3 +12
HHC sP sP 05 00 32.9 +17
HHC PP PP 05 03 01.3 +4.3
HHC SKS 05 09 35.5
HHC S S 05 09 56.1 -5.3
HHC pmax pmax
comp=Z,14nm,0.7s,mb5.0
HHC pmax pmax
comp=Z,250nm,4.4s
INK **Inuvik** 89.78 14 *e*P P 04 59 26.1 -1.4
comp=Z,4.9nm,0.9s,mb4.4
DGMT **Dagmar** 89.94 39 ⇓P P 04 59 28.7 0.0
baz=90,SNR=12
DGMT **Dagmar** 89.94 39 *e*P P 04 59 28.0 -0.7
comp=Z,29nm,0.9s,mb5.2
KMI **Kunming** 90.55 296 P P 04 59 33.5 +1.4
KMI pmax pmax
comp=Z,13nm,0.8s,mb5.0
SYO **Syowa Base** 91.12 192⇑ *e*P P 04 59 31.0 -2.9
CD2 **Chengdu** 91.50 302 P P 04 59 35.4 -1.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CD2 pmax pmax
comp=Z,80nm,5.2s
YKA **Yellowknife Ar** 91.72 24 P P 04 59 34.9 -1.7
YKA **Yellowknife Ar** 91.72 24 P P 04 59 34.9 -1.7
comp=Z,7.1nm,1.1s,mb4.6,baz=238,slow=4.3,SNR=8.8
CMAR **Chiang Mai Arr** 91.93 289 P P 04 59 40.2 +1.6
comp=Z,1.6nm,0.3s,mb4.5,baz=112,slow=1.9,SNR=6.1
CHTO **Chiang Mai** 92.03 289 *e*P P 04 59 39.9 +0.8
comp=Z,4.9nm,0.7s,mb4.7
LZH **Lanzhou** 93.06 307 *e*P P 04 59 45.0 +1.5
LZH pP pP 05 00 32.1 +12
LZH sP sP 05 00 51.8 +17
LZH PP PP 05 03 34.1 +5.4
LZH pmax pmax
comp=Z,20nm,1.5s,mb5.0
LZH pmax pmax
comp=Z,93nm,6.2s
UALR **University of** 93.19 55 *e*P P 04 59 43.8 -0.3
comp=Z,17nm,0.9s,mb5.2
SONM **Songino Array** 95.03 318 P P 04 59 52.8 +0.5
comp=Z,0.8nm,0.6s,mb4.1,baz=95,slow=1.6,SNR=3.6
MKAR **Makanchi Array** 110.90 314 PKiKP PKiKP 05 05 00.6 -1.3
comp=Z,0.9nm,0.6s,baz=218,slow=0.5,SNR=8.3
KURK **Kurchatov** 113.34 318 *e*PKP PKiKP 05 05 05.4 -1.1
KSH **Kashi** 115.31 306 *e*PKPbc PKPdf 05 05 22.6 +12
KSH *e*PP PP 05 06 08.9 -4.8
KSH *es*PKP 05 06 21.3
KSH *e*PKS 05 08 58.1
KSH *e*SKS SKSdf 05 12 17.4 +7.8
KSH *e*SKKS SKKSac 05 12 45.3 -15
KSH *e*SS SS 05 21 25.6 -35
KSH AMB AMB
comp=Z,110nm,6.8s
KSH LR LR
comp=N,100nm,5.5s
KSH LR LR
comp=E,88nm,6.2s
KSH LR LR
comp=Z,100nm,4.4s
BVAR **Borovoye Array** 118.18 322 PKP PKPdf 05 05 13.2 -2.5
comp=Z,2.3nm,0.6s,baz=35,slow=2.1,SNR=7.4
BRVK **Borovoye** 118.24 322 *e*PKPdf PKPdf 05 05 15.2 -0.6
KBL **Kabul** 120.82 301 *e*PKPdf PKPdf 05 05 21.4 0.0
ARU **Arti** 123.82 328 *e*PKPdf PKPdf 05 05 26.1 -0.3
ABKAR **Akbulak array** 125.44 319 *e*PKPdf PKPdf 05 05 29.1 -0.7
ARCES **ARCESS Array B** 125.71 351 PKP PKPdf 05 05 28.6 -1.1
comp=Z,3.6nm,0.7s,baz=27,slow=1.4,SNR=5.5
FINES **FINESS Array B** 132.93 347 PKP PKPdf 05 05 42.8 -0.9
comp=Z,0.6nm,0.5s,baz=117,slow=0.4,SNR=5.0
NOA **NORSAR Array B** 135.51 356 PKP PKPdf 05 05 47.9 -0.6
NOA **NORSAR Array B** 135.51 356 PKP PKPdf 05 05 47.9 -0.6
comp=Z,0.9nm,0.9s,baz=16,slow=1.6,SNR=3.7
AKASG **Malin Array Be** 141.06 336 PKP PKPpre 05 05 53.4
AKASG PKP PKPdf 05 05 58.7 -0.3
AKASG **Malin Array Be** 141.06 336 PKhKP PKPpre 05 05 53.4
comp=Z,0.8nm,0.5s,baz=40,slow=4.6,SNR=4.5
AKASG PKP PKPdf 05 05 58.7 -0.3
comp=Z,0.9nm,0.5s,baz=39,slow=3.6,SNR=4.5
MALT **Malatya** 143.93 313 *e*PKPdf PKPdf 05 06 03.7 -0.8
KMBO **Kilima Mbogo** 143.94 244 *e*PKPdf PKPdf 05 06 04.2 -1.1
KMBO **Kilima Mbogo** 143.94 244 PKP PKPdf 05 06 04.6 -0.7
comp=Z,3.7nm,0.7s,baz=180,slow=24,SNR=7.1
NRDL **Niedersach Rie** 144.08 355 *e*PKPbc PKPdf 05 06 03.0 -1.3
IBBN **Ibbenburen** 144.41 358 *e*PKPbc PKPdf 05 06 04.0 -0.9
OJC **Ojcow** 144.59 344 *e*PKP PKPdf 05 06 03.6 -1.7
CLZ **Clausthal** 144.70 355 *e*PKPbc PKPdf 05 06 04.0 -1.4
KSP **Ksiaz** 144.82 348 *e*PKP PKPdf 05 06 04.9 -0.7
STHS **Stebnicka Huta** 144.91 342 *e*PKP PKPdf 05 06 06.1 +0.3
STHS **Stebnicka Huta** 144.91 342 *e*PKP PKPdf 05 06 06.1 +0.3
CLL **Collm** 144.93 352 *e*PKPbc PKPdf 05 06 04.4 -1.4
CLL **Collm** 144.93 352⇑ *i*PKP PKPdf 05 06 04.6 -1.2
CLL **Collm** 144.93 352⇑ *i*PKPdf PKPdf 05 06 04.6 -1.2
comp=Z,10.0nm,0.7s
CLL *e*PKiKP PKiKP 05 06 10.0 +0.3
CLL *ep*PKPdf pPKPdf 05 06 43.0 -0.7
BURAR **Bucovina Array** 145.10 336 ⇓P PKPbc 05 06 06.7 +0.7
BURAR **Bucovina Array** 145.10 336 ⇓*i*P PKPbc 05 06 06.7 +0.7
UPC **Upice** 145.20 348 *e*PKP PKPdf 05 06 06.3 0.0
UPC *ep*PKP pPKPdf 05 06 55.0 +11
BRG **Berggiesshubel** 145.21 351 *e*PKPbc PKPdf 05 06 05.7 -0.5
BRG **Berggiesshubel** 145.21 351 *e*PKP PKPdf 05 06 05.4 -0.9
comp=Z,12nm,1.2s
BRG pPKP pPKPdf 05 06 50.0 +5.8
comp=Z,12nm,1.7s
BRG *e* 05 06 54.2
comp=Z,7.8nm,1.3s
BRG *e* 05 22 59.2
comp=Z,6.3nm,1.2s
BRG
comp=N,210nm,19.3s
BRG
comp=E,122nm,18.4s
BRG
comp=Z,324nm,22.2s
DPC **Dobruska-Polom** 145.28 348 *e*PKP PKPdf 05 06 06.7 +0.3
DPC *ex* x 05 06 52.7
BUG **Bochum--Univer** 145.29 358 *e*PKPbc PKPbc 05 06 05.9 -0.6
CRVS **Cervenica-Dubn** 145.30 341 *e*PKP PKPdf 05 06 07.1 +0.6
CRVS **Cervenica-Dubn** 145.30 341 *e*PKP PKPdf 05 06 07.1 +0.6
OKC **Ostrava-Krasne** 145.36 345 *e*PKP PKPdf 05 06 06.8 +0.2
TESR 145.42 334 ⇓P PKPdf 05 06 07.2 +0.4
TESR 145.42 334⇓ *i*P PKPdf 05 06 07.2 +0.4
PVCC **Panska Ves** 145.44 350 *e*PKP PKPdf 05 06 06.9 +0.2
PVCC *ep*PKP pPKPdf 05 06 55.5 +11
TLCR 145.46 330 ⇓P PKPdf 05 06 07.3 +0.4
TLCR 145.46 330⇓ *i*P PKPdf 05 06 07.3 +0.4
MORC **Moravsky Berou** 145.56 346 *e*PKPbc PKPbc 05 06 06.9 -0.5
MORC **Moravsky Berou** 145.56 346⇓ *i*P PKPdf 05 06 07.6 +0.7
MOX **Moxa** 145.76 353 *e*PKP PKPdf 05 06 07.7 +0.5
comp=Z,20nm,1.3s
MOX *e* 05 06 56.2
MOX **Moxa** 145.76 353 *e*PKPbc PKPbc 05 06 07.4 -0.5
MOX *ep*PKPbc pPKPbc 05 06 55.7 +10
WERD **Werda** 145.86 352 *e*PKPbc PKPbc 05 06 07.6 -0.7
WERD *ep*PKPbc pPKPbc 05 06 56.1 +11
TANN **Tannenbergstha** 145.88 352 *e*PKPbc PKPbc 05 06 08.0 -0.3
TANN *ep*PKPbc pPKPbc 05 06 56.3 +11
VRI **Vrincioaia** 145.89 333 ⇓P PKPdf 05 06 08.4 +0.8
VRI **Vrincioaia** 145.89 333⇓ *i*P PKPdf 05 06 08.4 +0.8
PLOR **Plostina** 145.94 333⇓ *i*P PKPdf 05 06 07.1 -0.6
GUNZ **Gunzen** 145.94 352 *e*PKPbc PKPbc 05 06 07.9 -0.6
GUNZ *ep*PKPbc pPKPbc 05 06 56.9 +11
PRU **Pruhonice** 145.97 349 *e*PKP PKPdf 05 06 09.1 +1.5
PRU *ep*PKP pPKPdf 05 06 57.2 +12
KECS **Kecovo** 145.97 342 *e*PKP PKPdf 05 06 09.2 +1.5
KECS **Kecovo** 145.97 342 *e*PKP PKPdf 05 06 09.2 +1.5
WERN **Wernitzgruen** 146.01 352 *e*PKPbc PKPbc 05 06 08.8 +0.1
WERN *ep*PKPbc pPKPbc 05 06 56.7 +11
NKC **Novy Kostel** 146.06 352 *e*PKP PKPdf 05 06 07.8 0.0
NKC *ex* x 05 06 57.9
MEM **Membach** 146.16 359 PKP PKPdf 05 06 08.9 +1.0

VRAC	**Vranov**	**146.21**	**347**	⇓*P*		PKPdf	05 06 09.7	+1.6
VRAC	**Vranov**	**146.21**	**347**	⇓*iP*		PKPdf	05 06 09.7	+1.6
SNF	**Seneffe**	**146.25**	**1**	PKP		PKPdf	05 06 08.9	+0.8
BCLA	**Clavier**	**146.35**	**0**	PKP		PKPdf	05 06 10.2	+1.9
BR131	**Keskin Array S**	**146.40**	**319**	*e*PKPbc		PKPbc	05 06 10.2	0.0
BRTR	**Keskin Array B**	**146.40**	**319**	PKPbc		PKPbc	05 06 11.3	+1.1
	comp=Z,12nm,0.8s,baz=134,slow=3.1,SNR=47							
BRTR				pPKPbc		pPKPbc		
	comp=Z,4.7nm,0.8s,baz=124,slow=2.2,SNR=5.0							
VYHS	**Vyhne**	**146.43**	**344**	*e*PKP		PKPdf	05 06 09.8	+1.3
VYHS	**Vyhne**	**146.43**	**344**	*e*PKP		PKPdf	05 06 09.8	+1.3
TNS	**Taunus Mts**	**146.46**	**356**	*e*PKPbc		PKPbc	05 06 09.7	-0.3
MLR	**Muntele Rosu**	**146.53**	**333**	⇓*P*		PKPab	05 06 11.4	-0.2
MLR	**Muntele Rosu**	**146.53**	**333**	⇓*iP*		PKPab	05 06 11.4	-0.2
PSZ	**Piszkesteto**	**146.65**	**342**	*e*PKPbc		PKPbc	05 06 10.4	-0.2
PSZ	**Piszkesteto**	**146.65**	**342**	⇑*iP*		PKPab	05 06 11.4	-0.6
GIVF	**Givet**	**146.66**	**1**	*e*PKP1		PKPbc	05 06 10.1	-0.5
	comp=Z,30nm,1.0s							
DOU	**Dourbes**	**146.66**	**1**	PKP		PKPdf	05 06 10.3	+1.5
BAIF	**Baives**	**146.69**	**1**	⇑*iPKP1*		PKPbc	05 06 10.4	-0.3
	comp=Z,18nm,0.9s							
DRGR		**146.72**	**338**	⇑*P*		PKPdf	05 06 10.7	+1.7
DRGR		**146.72**	**338**	⇑*iP*		PKPdf	05 06 10.7	+1.7
DRGR		**146.72**	**338**	⇓*iP*		PKPdf	05 06 10.7	+1.7
GRA1	**Grafenberg Arr**	**146.74**	**353**	*e*PKPbc		PKPbc	05 06 10.2	-0.6
GRF	**Grafenberg Arr**	**146.74**	**353**	*e*PKPbc		PKPbc	05 06 10.2	-0.6
VOIR		**146.95**	**334**	⇓*P*		PKPbc	05 06 12.2	+0.6
VOIR		**146.95**	**334**	⇓*iP*		PKPbc	05 06 12.1	+0.5
KHC	**Kasperske Hory**	**146.96**	**350**	*e*PKPbc		PKPdf	05 06 09.5	+0.2
KHC	**Kasperske Hory**	**146.96**	**350**	*e*PKP		PKPdf	05 06 09.5	+0.2
KHC				*ep*PKP		pPKPdf	05 06 59.7	+12
WLF	**Walferdange**	**147.10**	**359**	*e*PKPbc		PKPbc	05 06 12.0	+0.1
WLF				*ep*PKPbc		pPKPbc	05 07 00.6	+11
WLF	**Walferdange**	**147.10**	**359**	*e*PKPbc		PKPbc	05 06 11.7	-0.1
GEC2	**GERESS Array S**	**147.22**	**350**	*e*PKPbc		PKPbc	05 06 11.8	-0.4
ROSF	**Rostrenen**	**147.64**	**11**	*e*PKP1		PKPbc	05 06 12.1	-1.3
FLN	**La Foliniere**	**147.65**	**7**	*e*PKP1		PKPbc	05 06 12.4	-1.0
	comp=Z,32nm,0.7s							
SGMF	**Saint Gilles**	**147.84**	**10**	*e*PKP1		PKPbc	05 06 12.9	-1.0
	comp=Z,72nm,1.2s							
LDF	**La Druitiere**	**147.85**	**7**	*e*PKP1		PKPbc	05 06 12.9	-1.0
	comp=Z,9.0nm,0.6s							
GRR	**Gorron**	**147.97**	**8**	*e*PKP1		PKPbc	05 06 13.6	-0.6
	comp=Z,91nm,1.2s							
QUIF	**Quistinic**	**148.06**	**11**	*e*PKP1		PKPbc	05 06 13.5	-1.0
BZS	**Buzias**	**148.12**	**338**	⇓*P*		PKPbc	05 06 14.7	-0.1
BZS	**Buzias**	**148.12**	**338**	⇓*iP*		PKPbc	05 06 14.6	-0.2
FUR	**Furstenfeldbru**	**148.24**	**353**	*e*PKPbc		PKPbc	05 06 14.6	-0.4
CDF	**Champ du Feu**	**148.32**	**358**	*e*PKP1		PKPbc	05 06 14.8	-0.4
	comp=Z,22nm,1.0s							
BFO	**Black Forest**	**148.35**	**356**	*e*PKPbc		PKPbc	05 06 14.7	-0.5
BFO				*ep*PKPbc		pPKPbc	05 07 03.1	+10
MMAI	**Mount Meron Ar**	**148.45**	**307**	PKPbc		PKPbc	05 06 16.9	+0.9
	comp=Z,11nm,0.6s,baz=64,slow=5.7,SNR=24							
MMAI				PKPab		PKPab	05 06 21.3	+1.6
	comp=Z,11nm,0.6s,baz=69,slow=5.4,SNR=17							
HAU	**Haudompre**	**148.75**	**359**	*e*PKP1		PKPbc	05 06 15.9	-0.4
	comp=Z,27nm,1.1s							
HINF	**Hinteralfeld**	**148.93**	**358**	*e*PKP1		PKPbc	05 06 16.0	-0.7
	comp=Z,6.4nm,0.7s							
MOTA	**Moosalm**	**149.06**	**352**	⇓*iPKiKP*		PKiKP	05 06 17.0	-1.3
	comp=Z,22nm,1.3s							
WTTA	**Wattenberg**	**149.07**	**352**	⇑*iPKPbc*		PKPbc	05 06 15.7	-1.4
	comp=Z,12nm,0.8s							
DAVA	**Damuels**	**149.26**	**354**	⇑*iPKiKP*		PKiKP	05 06 17.4	-1.3
	comp=Z,21nm,1.1s,SNR=8.1							
FETA	**Feichten**	**149.43**	**353**	⇑*iPKiKP*		PKiKP	05 06 17.7	-1.4
	comp=Z,26nm,1.1s,SNR=6.9							
LOR	**Lormes**	**149.47**	**2**	⇑*iPKP1*		PKPbc	05 06 17.8	-0.3
	comp=Z,29nm,1.1s							
SSF	**Saint Saulge**	**149.67**	**3**	⇑*iPKP1*		PKPbc	05 06 18.4	-0.2
	comp=Z,51nm,1.1s							
MFF	**Saint Martin d**	**149.81**	**8**	*e*PKP1		PKPbc	05 06 18.3	-0.7
	comp=Z,55nm,1.2s							
AVF	**Avril sur Loir**	**149.93**	**3**	⇑*iPKP1*		PKPbc	05 06 18.5	-0.7
	comp=Z,16nm,0.9s							
VTS	**Vitosha**	**150.03**	**333**	⇓*iP*		PKPbc	05 06 20.0	+0.4
SMF	**Signal de Mont**	**150.10**	**2**	⇑*iPKP1*		PKPbc	05 06 19.0	-0.6
	comp=Z,25nm,1.1s							
BGF	**Bois d'Agland**	**150.14**	**4**	⇑*iPKP1*		PKPbc	05 06 19.3	-0.4
	comp=Z,48nm,1.1s							
CABF	**La Chapelle**	**150.15**	**359**	*e*PKP1		PKPbc	05 06 20.0	+0.2
	comp=Z,64nm,1.0s							
TCF	**Toulx Ste Croi**	**150.36**	**4**	⇑*iPKP1*		PKPbc	05 06 19.7	-0.6
	comp=Z,33nm,1.1s							
LPL	**La Plagne**	**151.23**	**358**	*e*PKP1		PKPbc	05 06 22.9	+0.5
	comp=Z,38nm,1.1s							
LPG	**La Plagne**	**151.25**	**358**	⇑*iPKP1*		PKPbc	05 06 23.0	+0.6
	comp=Z,22nm,1.0s							
RJF	**Les Rejaudoux**	**151.28**	**6**	⇑*iPKP1*		PKPbc	05 06 22.1	-0.4
	comp=Z,46nm,1.4s							
SSB	**Saint Sauveur**	**151.48**	**1**	*e*PKPbc		PKPbc	05 06 23.0	+0.1
LFF	**La Frestale**	**151.56**	**7**	*e*PKP1		PKPbc	05 06 22.5	-0.6
	comp=Z,46nm,1.1s							
CAF	**Calviac**	**151.70**	**5**	*e*PKP1		PKPbc	05 06 23.0	-0.5
	comp=Z,20nm,1.0s							
ORIF	**Oris-en-Rattie**	**151.85**	**359**	*e*PKP1		PKPbc	05 06 23.8	0.0
	comp=Z,25nm,1.1s							
VIVF	**Saint-Julien-l**	**151.91**	**1**	⇑*iPKP1*		PKPbc	05 06 23.7	-0.2
	comp=Z,31nm,1.2s							
MBDF	**Montbardon**	**152.02**	**358**	⇑*iPKP1*		PKPbc	05 06 24.0	-0.2
	comp=Z,17nm,0.9s							
PCAB	**Cabril**	**152.51**	**22**	*e*PKPbc		PKPbc	05 06 25.1	-0.3
LASF	**Ste Croix**	**152.66**	**2**	*e*PKP1		PKPbc	05 06 24.9	-0.7
	comp=Z,19nm,1.0s							
SMRF	**Simiane la Rot**	**152.79**	**360**	*e*PKP1		PKPbc	05 06 26.1	+0.2
	comp=Z,47nm,1.3s							
PVRL	**Vila Real**	**153.00**	**22**	*e*PKPbc		PKPbc	05 06 26.2	-0.3
PVRL	**Vila Real**	**153.00**	**22**	*e*PKPab		PKPab	05 06 37.9	-0.3
MTLF	**Montolieu**	**153.29**	**5**	*e*PKP1		PKPbc	05 06 26.6	-0.4
MVO	**Moncorvo**	**153.35**	**21**	*e*PKPdf		PKPdf	05 06 20.3	+0.7
MVO	**Moncorvo**	**153.35**	**21**	*e*PKPbc		PKPbc	05 06 27.1	-0.1
MTE	**Manteigas**	**153.83**	**23**	*e*PKPdf		PKPdf	05 06 19.5	-0.8
MTE	**Manteigas**	**153.83**	**23**	*e*PKPbc		PKPbc	05 06 28.0	-0.3
PTOM	**Tomar**	**154.17**	**25**	*e*PKPab		PKPab	05 06 42.5	-0.7
PMAFR	**Mafra**	**154.36**	**27**	*e*PKPdf		PKPdf	05 06 19.8	-1.3
PMAFR	**Mafra**	**154.36**	**27**	*e*PKPab		PKPab	05 06 43.3	-0.8
PMRV	**Marv??o**	**154.74**	**24**	*e*PKPab		PKPab	05 06 45.0	-0.7
PESTR	**Estremoz**	**155.14**	**25**	*e*PKPab		PKPab	05 06 46.7	-0.7
EVO	**Evora**	**155.25**	**26**	*e*PKP2		PKPab	05 06 46.9	-1.0
	comp=Z,21nm,1.1s							
ESDC	**Sonseca Array**	**155.68**	**18**	PKP		PKPdf	05 06 22.5	-0.4
	comp=Z,0.1nm,0.4s,baz=346,slow=5.0,SNR=3.8							
ESDC				PKPbc		PKPdf	05 06 31.5	+8.6
	comp=Z,1.3nm,0.9s,baz=325,slow=1.6,SNR=5.3							
ESDC				PKPab		PKPab	05 06 49.1	-0.6
	comp=Z,3.7nm,0.8s,baz=324,slow=3.6,SNR=18							
PVAQ	**Vaqueiros**	**156.33**	**27**	*e*PKPab		PKPab	05 06 52.1	-0.5

MOS 16 05:03:06.8±1.4, 52°.42N×99°.28E, h16km, mb4.3/1, 2C, Error ellipse: s-maj=36.5km s-min=22.5km az=24.0, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORL	**Orlik**	**0.34**	**70**	*e*PG	Pg	05 03 14.5	+0.6
ORL				pmax	pmax		
	comp=Z,215nm,0.2s						
MOY	**Mondy**	**1.30**	**125**	⇑*iPG*	Pg	05 03 27.4	-4.4
ARS	**Arshan**	**2.00**	**103**	*e*PN	Pn	05 03 41.7	+1.8
TLY	**Talaya**	**2.79**	**104**	⇑*iPN*	Pn	05 03 55.0	+4.2
TLY				*e*		05 04 38.5	
TLY				pmax	pmax		
	comp=Z,26nm,0.4s						
TLY				smax			
	comp=N,113nm,0.8s						
ZAK	**Zakamensk**	**3.23**	**128**	*e*PN	Pn	05 03 59.7	+2.9
ZAK				*e*		05 04 46.8	
ZAK				pmax	pmax		
	comp=Z,15nm,0.4s						
ZAK				smax			
	comp=N,147nm,0.4s						
OGRR	**Ongureny**	**5.17**	**73**	*e*PN	Pn	05 04 25.4	+2.1
OGRR				*e*		05 04 42.4	
OGRR				pmax	pmax		
	comp=Z,15nm,0.3s						

*ISCJB **16** 05:03:51.9±1.6, 7°.02S×0°.04×157°.55E±0°.03, h5km±9km, mb5.2/103, MS4.5/27, Error ellipse: s-maj=7.1km s-min=5.1km az=170.0*
*IDC **16** 05:03:52.1±0.5, 7°.02S×157°.71E, h0km, mb4.9/16, mb1 5.0/16, mb1mx5.0/17, mbtmp4.9/16, MS4.4/14, Ms1 4.4/14, ms1mx4.2/20, Error ellipse: s-maj=20.7km s-min=14.9km az=113.0*
*MOS **16** 05:03:56.8±1.2, 6°.88S×157°.61E, h33km, mb5.3/22, Error ellipse: s-maj=11.0km s-min=8.7km az=82.7*
*BJI **16** 05:03:57.1, 6°.81S×157°.70E, h35km, mB5.3/25, mb5.0/42, Ms5.1/28, Ms7 4.7/28*
*NEIC **16** 05:03:58.5±1.3, 7°.02S×157°.63E, h41km±12km, mb5.2/49, Error ellipse: s-maj=7.3km s-min=6.0km az=137.0*
*GCMT **16** 05:03:59.8±0.3, 6°.90S×157°.76E, h40km±1km, MW5.1, Moment Tensor Solution. s40,c48; s55,c70; Moment tensor: Scale 10^{16}Nm; M_{rr}4.14±.28; $M_{\theta\theta}$-3.08±.18; $M_{\phi\phi}$-1.06±.21; $M_{r\theta}$-3.76±.22; $M_{r\phi}$1.04±.15; $M_{\theta\phi}$0.31±.18; Best double couple: $M_0$5.40000×10^{16} NP1:ϕ_s120.00000°, δ24.00000°, λ107.00000°. NP2:ϕ_s281.00000°, δ67.00000°, λ82.00000°. Principal axes: T 5.7500, Plg67.0000°, Azm177.0000°; N -0.7700, Plg7.0000°, Azm284.0000°; P -4.9800, Plg22.0000°, Azm17.0000°; Data Used: ll IU CN G IC.*
*DJA **16** 05:04:19, 7°.20S×156°.94E, h201km, mb5.0/31*

ISC 16 05:03:56.1±1.6, 7°.04S±0°.04×157°.60E±0°.03, h22km±11km, h36km±1.4km: pP-P, n273, σ1§01/239, mb5.2/103, MS4.5/27, 30C-35D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.32**	**136**	*e*Pn	**Pn**	**05 04 47.9**	**+1.0**
HNR				*e*Sn	**Sn**	**05 05 34.0**	**+8.2**
PMG	**Port Moresby**	**10.60**	**256**	*e*Pn	**Pn**	**05 06 34.0**	**+7.1**
PMG	**Port Moresby**	**10.60**	**256**	*i* P	Px	05 06 37.4	
PMG	**Port Moresby**	**10.60**	**256**	P	**Pn**	**05 06 34.6**	**+7.8**
	58nm,1.0s						
COEN	**Coen**	**15.75**	**243**	*e*P	**Pn**	**05 07 42.2**	**+5.3**
	3µm,1.9s						
COEN	**Coen**	**15.75**	**243**	P	**Pn**	**05 07 42.6**	**+5.7**
	6µm386nm,1.6s						
CTA	**Charters Tower**	**17.01**	**219**	P	**Pn**	**05 07 57.9**	**+5.1**
	2.1nm,0.3s,baz=44,slow=13,SNR=48						
CTAO	**Charters Tower**	**17.01**	**219**	*e*P	**Pn**	**05 07 57.6**	**+4.8**
	60nm,0.8s						
CTAO	**Charters Tower**	**17.01**	**219**	*e*P	**Pn**	**05 07 57.6**	**+4.8**
CTAO				pmax	pmax		
	comp=Z,60nm,0.8s						
CTAO	**Charters Tower**	**17.01**	**219**	P	**Pn**	**05 07 57.8**	**+5.0**
	comp=Z,1µmcomp=Z,84nm,0.9s						
NOUC	**Port Laguerre**	**17.17**	**152**	*e*P	**Pn**	**05 07 54.9**	**+0.1**
DZM	**Mont Dzumac**	**17.21**	**151**	*e*P	**Pn**	**05 07 54.2**	**-1.1**
KWAJ	**Kwajalein Atol**	**18.64**	**33**	*e*P	**Pn**	**05 08 11.3**	**-1.6**
	comp=Z,230nm,0.6s						
EIDS	**Eidsvold**	**19.26**	**198**	*e*P	**Pn**	**05 08 22.2**	**+1.8**
	comp=Z,156nm,1.0s						
MSVF	**Nonsavu**	**22.60**	**120**	P	**P**	**05 08 55.9**	**+0.4**
	comp=Z,625nm,0.8s,mb6.1,SNR=17						
MSVF	**Nonsavu**	**22.60**	**120**	*e*P	**P**	**05 08 54.8**	**-0.7**
	comp=Z,92nm,0.9s,mb5.2						
ARMA	**Armidale**	**23.92**	**193**	*e*P	**P**	**05 09 10.0**	**+1.3**
ARMA				*e*		05 09 20.9	
ARMA	**Armidale**	**23.92**	**193**	*e*P	**P**	**05 09 10.0**	**+1.3**
	comp=Z,145nm,0.9s,mb5.4						
ARMA				*e*		05 09 20.8	
GUMO	**Guam**	**24.08**	**328**	*e*P	**P**	**05 09 10.6**	**+0.4**
	comp=Z,185nm,1.4s,mb5.3						
GUMO	**Guam**	**24.08**	**328**	LR	LR	05 17 52.0	
	comp=Z,477nm,18.0s,MS4.0,baz=345,slow=35						
GUMO	**Guam**	**24.08**	**328**	*e*P	**P**	**05 09 10.6**	**+0.4**
GUMO				pmax	pmax		
	comp=Z,185nm,1.4s,mb5.3						
TLE	**Tual**	**24.75**	**272**	P	**P**	**05 09 17.9**	**+1.5**
	comp=Z,423nm,0.9s,mb6.0						
KAKA	**Kakadu**	**25.41**	**255**	*e*P	**P**	**05 09 21.8**	**-0.6**
	comp=Z,32nm,0.6s,mb5.0						
KAKA	**Kakadu**	**25.41**	**255**	*e*P	**P**	**05 09 22.0**	**-0.4**
	comp=Z,119nm,0.6s,mb5.6						
KAKA	**Kakadu**	**25.41**	**255**	P	**P**	**05 09 22.1**	**-0.3**
	comp=Z,760nmcomp=Z,107nm,0.7s,mb5.5						
WRA	**Warramunga Arr**	**25.95**	**238**	P	**P**	**05 09 27.6**	**+0.3**
	comp=Z,40nm,0.8s,mb5.0,baz=63,slow=9.6,SNR=90						
WRA				PcP	PcP	05 12 55.3	-0.5
	comp=Z,5.4nm,0.6s,baz=67,slow=2.7,SNR=9.0						
WRA				LR	LR	05 19 19.0	
	comp=Z,1µm,20.9s,MS4.5,baz=65,slow=36						
WRA	**Warramunga Arr**	**25.95**	**238**	P	**P**	**05 09 27.6**	**+0.3**
WRA						05 12 55.3	
ASAR	**Alice Springs**	**28.12**	**231**	P	**P**	**05 09 46.5**	**-0.3**
	comp=Z,9.3nm,0.8s,mb4.5,baz=64,slow=9.1,SNR=82						
STKA	**Stephens Creek**	**28.87**	**209**	P	**P**	**05 09 53.2**	**-0.1**
	comp=Z,26nm,1.0s,mb4.9,baz=33,slow=12,SNR=14						
STKA				LR	LR	05 21 20.0	
	comp=Z,1µm,18.2s,MS4.5,baz=18,slow=36						
CNB	**Canberra Magne**	**29.14**	**194**	*e*P	**P**	**05 09 57.4**	**+1.7**
KNA	**Kununurra**	**29.53**	**250**	*e*P	**P**	**05 09 59.7**	**+0.3**
	comp=Z,92nm,0.8s,mb5.6						
KNA	**Kununurra**	**29.53**	**250**	P	**P**	**05 09 59.8**	**+0.4**
	comp=Z,3µmcomp=Z,411nm,0.8s,mb6.2						
AFI	**Afiamalu**	**30.85**	**105**	LR	LR	05 21 28.2	
	comp=Z,531nm,18.3s,MS4.2,baz=273,slow=34						
TOO	**Toolangi**	**32.32**	**198**	*e*P	**P**	**05 10 24.7**	**+1.0**
FITZ	**Fitzroy Crossi**	**33.01**	**248**	*e*P	**P**	**05 10 29.1**	**-1.0**
	comp=Z,58nm,1.2s,mb5.4						
FITZ	**Fitzroy Crossi**	**33.01**	**248**	P	**P**	**05 10 29.5**	**-0.6**
	comp=Z,17nm,0.6s,mb5.2,baz=85,slow=7.4,SNR=55						
FITZ				LR	LR	05 23 16.7	
	comp=Z,708nm,20.9s,MS4.3,baz=75,slow=35						
FITZ	**Fitzroy Crossi**	**33.01**	**248**	P	**P**	**05 10 29.5**	**-0.6**
	comp=Z,75nm,1.0s,mb5.6						
DAV	**Davao City (W)**	**34.88**	**293**	LR	LR	05 22 34.3	
	comp=Z,326nm,20.3s,MS4.1,baz=288,slow=32						
URZ	**Urewera**	**35.75**	**153**	LR	LR	05 23 30.1	
	comp=Z,1µm,19.0s,MS4.7,baz=139,slow=33						
FORT	**Forrest**	**36.37**	**226**	*e*P	**P**	**05 10 58.9**	**0.0**
	comp=Z,27nm,0.7s,mb5.3						
FORT	**Forrest**	**36.37**	**226**	*e*P	**P**	**05 10 59.3**	**+0.4**
	comp=Z,49nm,0.9s,mb5.4						
PCI	**Palu**	**38.14**	**278**	P	**P**	**05 11 15.2**	**+1.0**
	comp=Z,83nm,0.9s,mb5.4						
RPZ	**Rata Peaks**	**38.39**	**164**	*e*P	**P**	**05 11 15.6**	**-0.2**
	comp=Z,41nm,1.0s,mb5.1						
RPZ	**Rata Peaks**	**38.39**	**164**	P	**P**	**05 11 15.6**	**-0.3**
	comp=Z,39nm,0.8s,mb5.2,baz=138,slow=1.2,SNR=12						
MBWA	**Marble Bar**	**39.19**	**245**	*e*P	**P**	**05 11 21.9**	**-1.0**
	comp=Z,69nm,1.3s,mb5.2						
KKM	**Kota Kinabalu**	**43.29**	**286**	*e*P	**P**	**05 11 56.8**	**+0.1**
	comp=Z,24nm,0.9s,mb4.9						
KKM	**Kota Kinabalu**	**43.29**	**286**	P	**P**	**05 11 56.8**	**+0.1**
	comp=Z,29nm,0.9s,mb5.0						
KLBR	**Kellerberrin**	**44.45**	**231**	*e*P	**P**	**05 12 05.0**	**-0.9**
	comp=Z,17nm,0.6s,mb5.0						
KLBR				*e*	pP	05 12 13.0	+0.4
PWJI	**Pagerwojo**	**45.39**	**266**	P	**P**	**05 12 12.8**	**-0.8**
	comp=Z,69nm,2.7s,mb5.0						
NWAO	**Narrogin (SRO)**	**45.42**	**230**	*e*P	**P**	**05 12 13.0**	**-0.5**
	comp=Z,31nm,1.0s,mb5.1						
NWAO				*e*		05 12 25.1	
NWAO	**Narrogin (SRO)**	**45.42**	**230**	P	**P**	**05 12 13.2**	**-0.3**
	comp=Z,11nm,0.7s,mb4.8,baz=72,slow=7.4,SNR=8.9						
NWAO	**Narrogin (SRO)**	**45.42**	**230**	*e*P	**P**	**05 12 13.0**	**-0.5**
NWAO				*e*		05 12 25.1	
NWAO				pmax	pmax		
	comp=Z,31nm,1.0s						
SJI	**Sawahan**	**45.44**	**266**	P	**P**	**05 12 11.8**	**-2.2**
	comp=Z,6µmcomp=Z,101nm,0.7s,mb5.7						
PCJI	**Pacitan**	**46.01**	**265**	P	**P**	**05 12 17.0**	**-1.5**
	comp=Z,207nm,1.2s,mb5.9						
SBUM	**Sibu**	**46.26**	**280**	P	**P**	**05 12 15.3**	**-5.2**
	comp=Z,9.2nm,1.1s,mb4.6						
NACB	**Ninganchiao**	**46.86**	**313**	*e*P	**P**	**05 12 26.2**	**+1.2**
	comp=Z,45nm,1.1s,mb5.3						
MAJO	**Matsushiro**	**47.02**	**339**	*e*P	**P**	**05 12 24.7**	**-1.3**
	comp=Z,10nm,0.9s,mb4.8						
MAJO	**Matsushiro**	**47.02**	**339**	*e*P	**P**	**05 12 24.7**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
MAT	**Matsushiro**	**47.02**	**339**	P	**P**	**05 12 24.7**	**-1.2**
SSLB	**Suanglung**	**47.10**	**312**	*e*P	**P**	**05 12 26.6**	**-0.2**
	comp=Z,31nm,0.9s,mb5.2						
YHNB	**Yeheng**	**47.32**	**313**	*e*P	**P**	**05 12 29.6**	**+1.1**
	comp=Z,22nm,0.8s,mb5.1						
YHNB				*e*		05 12 40.1	
BJII	**Banjamegara**	**47.50**	**267**	P	**P**	**05 12 29.3**	**-0.8**
	comp=Z,56nm,1.3s,mb5.3						
CISI	**Cisompet, Garu**	**49.36**	**266**	P	**P**	**05 12 42.2**	**-2.3**
	comp=Z,129nm,0.9s,mb6.0						
LEM	**Lembang**	**49.60**	**267**	P	**P**	**05 12 44.3**	**-2.0**
	comp=Z,52nm,1.3s,mb5.4						
TPI	**Tanjungpandan**	**49.92**	**272**	P	**P**	**05 12 48.1**	**-0.7**
	comp=Z,41nm,1.2s,mb5.3						
CBJI	**Citeko**	**50.38**	**267**	P	**P**	**05 12 48.9**	**-3.4**
	comp=Z,167nm,0.8s,mb6.1						
KSRS	**Korea Array**	**52.23**	**330**	P	**P**	**05 13 05.9**	**+0.2**
	comp=Z,6.9nm,1.0s,mb4.5,baz=148,slow=8.5,SNR=14						
KSRS				LR	LR	05 34 42.5	
	comp=Z,210nm,19.4s,MS4.2,baz=135,slow=35						
ASAJ	**Asahikawa**	**52.69**	**346**	LR	LR	05 34 18.8	
	comp=Z,837nm,19.9s,MS4.8,baz=180,slow=35						
MDSI	**Maura Dua**	**53.19**	**270**	P	**P**	**05 13 11.3**	**-2.0**
	comp=Z,21nm,1.2s,mb4.9						
NJ2	**Nanjing**	**53.62**	**319**	*e*P	**P**	**05 13 17.9**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
QIZ	**Qiongzhong**	**53.72**	**300**	*e*P	**P**	**05 13 17.6**	**+0.6**
QIZ				*e*S	**S**	**05 20 50.5**	**+0.2**
QIZ				LR	LR		
	comp=N,160nm,15.9s,MS4.2						
QIZ				LR	LR		
	comp=E,94nm,15.4s,MS4.2						
QIZ				LR	LR		
	comp=Z,290nm,19.4s,MS4.3						
YSS	**Yuzh-Sakhalins**	**55.35**	**348**	*e*P	**P**	**05 13 29.9**	**+1.6**
	comp=Z,20nm,0.7s,mb5.3						
YSS				*e*		05 13 41.3	
YSS	**Yuzh-Sakhalins**	**55.35**	**348**	⇑*eP*	**P**	**05 13 28.8**	**+0.5**
YSS				*e*		05 13 41.0	
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.4						
WHN	**Wuhan**	**55.80**	**314**	P	**P**	**05 13 33.0**	**+1.1**
SDSI	**Sungai Dareh**	**56.33**	**274**	P	**P**	**05 13 34.3**	**-1.7**
	comp=Z,35nm,1.1s,mb5.3						
PPI	**Padang Panjang**	**57.41**	**274**	P	**P**	**05 13 41.8**	**-1.9**
	comp=Z,38nm,1.2s,mb5.3						
IPM	**Ipoh**	**57.61**	**280**	P	**P**	**05 13 43.8**	**-1.3**
	comp=Z,29nm,1.1s,mb5.2						
KULM	**Kulim**	**58.14**	**281**	P	**P**	**05 13 47.6**	**-1.2**
	comp=Z,25nm,1.3s,mb5.1						
CN2	**Changchun**	**58.37**	**333**	*e*P	**P**	**05 13 49.5**	**-0.3**
CN2				*e*S	**S**	**05 21 50.8**	**-0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,300nm,16.0s,MS4.6						
CN2				LR	LR		
	comp=E,200nm,16.0s,MS4.6						
CN2				LR	LR		
	comp=Z,300nm,21.0s,MS4.4						
MNSI	**Mandailing Nat**	**58.40**	**275**	P	**P**	**05 13 48.1**	**-2.6**
	comp=Z,43nm,0.9s,mb5.5						
GYA	**Guiyang**	**59.55**	**306**	P	**P**	**05 13 59.6**	**+1.2**
GYA				pP	pP	05 14 11.4	+6.1
GYA				sP	sP	05 14 16.0	+8.1
GYA				PcP	PcP	05 14 47.6	+1.9
GYA				PP	PP	05 16 15.3	+5.2
GYA				ScP	ScP	05 18 44.3

comp=Z,160nm,9.2s
LZH LR LR
comp=N,640nm,17.0s
LZH LR LR
comp=Z,740nm,19.2s,MS4.9
NIKO Nikolski 66.21 21 *e*P **P 05 14 41.1 -1.1**
comp=Z,32nm,1.1s,mb5.3
UNV Unalaska Valle 67.77 22 *e*P **P 05 14 50.6 -1.4**
comp=Z,82nm,1.8s,mb5.5
SEY Seymchan 69.89 357⇑ *e*P **P 05 15 05.5 +0.4**
ULN Ulaanbaatar 70.45 327 *e*P **P 05 15 10.3 +1.5**
comp=Z,44nm,1.5s,mb5.2
ULN Ulaanbaatar 70.45 327 *e*P **P 05 15 10.3 +1.5**
ULN pmax pmax
comp=Z,44nm,1.5s,mb5.2
ULN Ulaanbaatar 70.45 327 P **P 05 15 10.2 +1.4**
comp=Z,20nm,1.1s,mb5.0
GTA Gaotai 70.55 316 ⇑P **P 05 15 10.9 +1.2**
GTA pP pP 05 15 21.9 +5.2
GTA sP sP 05 15 25.9 +6.6
GTA PP PP 05 17 50.8 +4.6
GTA S S 05 24 22.6 +0.4
GTA sS sS 05 24 39.4 +5.7
GTA pmax pmax
comp=Z,11nm,0.6s,mb5.0
GTA pmax pmax
comp=Z,200nm,4.8s
GTA LR LR
comp=N,120nm,14.7s,MS4.4
GTA LR LR
comp=E,110nm,17.7s,MS4.4
GTA LR LR
comp=Z,280nm,21.3s,MS4.5
SONM Songino Array 70.79 326 P **P 05 15 12.1 +1.2**
comp=Z,12nm,1.0s,mb4.8,baz=138,slow=6.2,SNR=30
SONM LR LR 05 43 38.6
comp=Z,328nm,21.9s,MS4.5,baz=254,slow=34
SBA Scott Base 70.94 178 *e*P **P 05 15 12.6 +1.2**
comp=Z,45nm,1.1s,mb5.3
SBA Scott Base 70.94 178 *e*P **P 05 15 12.6 +1.2**
SBA pmax pmax
comp=Z,45nm,1.1s,mb5.3
SHL Shillong 71.55 300 *e*PKP **P 05 15 17.0 +1.0**
YAK Yakutsk 72.17 347 *e*P **P 05 15 19.4 +0.4**
comp=Z,32nm,0.8s,mb5.3
YAK Yakutsk 72.17 347 *e*P **P 05 15 17.2 -1.8**
YAK pmax pmax
comp=Z,25nm,0.9s,mb5.1
CHGN Chignik 72.72 24 *e*P **P 05 15 20.0 -2.3**
LSA Lhasa 73.44 304 P **P 05 15 28.3 +1.1**
ZAK Zakamensk 73.91 327 *e*P **P 05 15 28.9 -0.6**
ZAK pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
TAPN Taplejung 75.65 300 *e*P **P 05 15 40.9 +0.8**
comp=Z,136nm,1.2s,mb5.8
ODAN Odare 75.79 300 *e*P **P 05 15 41.8 +0.9**
comp=Z,104nm,0.8s,mb5.8
KDAK Kodiak Island 76.10 25 *e*P **P 05 15 41.7 -0.3**
comp=Z,12nm,0.9s,mb4.8
KDAK Kodiak Island 76.10 25 *e*P **P 05 15 41.7 -0.3**
KDAK pmax pmax
comp=Z,12nm,0.9s,mb4.8
RAMN Ramite 76.49 300 *e*P **P 05 15 45.5 +0.6**
JIRN Jiri 77.03 300 *e*P **P 05 15 48.9 +1.0**
GUN Gumba 77.36 301 *e*P **P 05 15 50.8 +1.0**
comp=Z,79nm,0.8s,mb5.7
PKI Pulchoki 77.68 300 *e*P **P 05 15 52.0 +0.4**
comp=Z,42nm,0.8s,mb5.4
PKIN Phulchoki 77.69 300 *e*P **P 05 15 52.8 +1.2**
comp=Z,27nm,0.7s,mb5.3
KKN Kakani 77.84 300 *e*P **P 05 15 53.1 +0.6**
comp=Z,41nm,0.8s,mb5.4
DMN Daman 77.95 300 *e*P **P 05 15 54.0 +0.9**
comp=Z,129nm,1.0s,mb5.8
TTA Tatalina 78.17 20 *e*P **P 05 15 53.4 -0.1**
GKN Gorkha 78.45 300 *e*P **P 05 15 56.2 +0.4**
comp=Z,133nm,1.0s,mb5.8
KOLN Koldanda 79.28 300 *e*P **P 05 16 00.6 +0.2**
comp=Z,51nm,0.9s,mb5.5
PMR Palmer 79.81 23 *e*P **P 05 16 02.0 -0.5**
comp=Z,49nm,1.8s,mb5.1
PMR Palmer 79.81 23 *e*P **P 05 16 02.0 -0.5**
PMR pmax pmax
comp=Z,49nm,1.8s,mb5.1
TRF Thorofare Moun 80.50 21 *e*P **P 05 16 05.4 -0.8**
comp=Z,8.3nm,0.8s,mb4.7
WMQ Urumqi 80.63 316 *e*P **P 05 16 08.8 +1.5**
WMQ pP pP 05 16 19.3 +4.9
WMQ sP sP 05 16 22.8 +5.8
WMQ pmax pmax
comp=Z,15nm,1.2s,mb4.8
WMQ pmax pmax
comp=Z,220nm,6.2s
WMQ LR LR
comp=N,120nm,23.0s
WMQ LR LR
comp=Z,110nm,24.0s,MS4.1
BPAW Bear Paw Mtn. 80.65 20 *e*P **P 05 16 04.5 -2.5**
comp=Z,4µm,1.2s
MCK McKinley 81.15 21 *e*P **P 05 16 08.5 -1.2**
comp=Z,19nm,0.9s,mb5.0
MCK McKinley 81.15 21 *e*P **P 05 16 08.5 -1.2**
MCK pmax pmax
comp=Z,19nm,0.9s,mb5.0
COLA College 82.20 21 *e*P **P 05 16 13.5 -1.7**
comp=Z,8.0nm,0.8s,mb4.7
COLA College 82.20 21 *e*P **P 05 16 13.5 -1.7**
COLA pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
ILAR Eielson Array 82.48 21 P **P 05 16 14.6 -2.1**
comp=Z,2.7nm,0.8s,mb4.2,baz=253,slow=5.2,SNR=26
ILAR PKKPbc PKKPbc 05 34 41.7 -4.3
comp=Z,0.4nm,0.7s,baz=359,slow=0.5,SNR=6.3
ILAR LR LR 05 48 50.0
comp=Z,297nm,20.0s,MS4.7,baz=260,slow=33
MENT Mentasta 82.66 23 *e*P **P 05 16 17.7 0.0**
QSPA South Pole Qui 82.94 180 *e*P **P 05 16 18.7 -0.2**
comp=Z,52nm,1.1s,mb5.5
HYT Haines Junctio 84.25 26 *e*P **P 05 16 26.8 +0.9**
EGAK Eagle 84.57 22 *e*P **P 05 16 27.3 -0.2**
comp=Z,61nm,1.8s,mb5.4
SKAG Skagway 84.68 28 *e*P **P 05 16 28.6 +0.6**
comp=Z,22nm,1.4s,mb5.1
DAWY Dawson 84.91 23 *e*P **P 05 16 29.7 +0.5**
MK31 Makanchi Array 85.15 318 *e*P **P 05 16 30.5 -0.3**
MKAR Makanchi Array 85.15 318 P **P 05 16 30.6 -0.1**
comp=Z,9.6nm,0.8s,mb5.0,baz=104,slow=5.4,SNR=73
MAW Mawson 85.35 203 *e*P **P 05 16 31.0 -0.4**
comp=Z,3.0nm,0.8s,mb4.5
MAW Mawson 85.35 203 P **P 05 16 31.2 -0.2**
comp=Z,11nm,0.7s,mb5.1,baz=92,slow=6.7,SNR=35
MAW LR LR 05 48 18.6
comp=Z,302nm,21.4s,MS4.7,baz=194,slow=31
MAW Mawson 85.35 203 *e*P **P 05 16 31.0 -0.4**
MAW pmax pmax
comp=Z,3.0nm,0.8s
ZALV Zalesovo Beam 85.67 326 P **P 05 16 32.0 -1.2**
comp=Z,1.3nm,0.4s,mb4.5,baz=112,slow=6.5,SNR=5.7
ZALV LR LR 05 53 12.5
comp=Z,94nm,19.6s,MS4.2,baz=245,slow=34
DLBC Dease Lake 86.87 30 *e*P **P 05 16 40.4 +1.4**
KSH Kashi 88.02 310 ⇓P **P 05 16 47.6 +2.7**
KSH *e*pP pP 05 17 00.5 +8.4
KSH *e*sP sP 05 17 05.6 +11
KSH *e*PP PP 05 20 17.1 +5.4
KSH *e*SKS 05 27 09.1
KSH *e*S S 05 27 26.0 -1.6
KSH *e*sS sS 05 27 48.6 +9.2
KSH *e*SS SS 05 33 19.1 +3.1
KSH pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
KSH pmax pmax
comp=Z,130nm,8.7s
KSH LR LR
comp=N,320nm,13.3s,MS5.0
KSH LR LR
comp=E,180nm,12.8s,MS5.0
KSH LR LR
comp=Z,130nm,7.1s
KURK Kurchatov 88.47 321 *e*P **P 05 16 45.9 -0.9**
KURK Kurchatov 88.47 321⇑ *e*P **P 05 16 46.3 -0.5**
KURK pmax pmax
comp=Z,7.0nm,1.2s,mb4.8
KURK MLR MLR
comp=Z,176nm,19.0s,MS4.5
ISA Isabella 89.15 54 *e*P **P 05 16 50.1 -0.3**
comp=Z,5.9nm,1.1s,mb4.8
ISA Isabella 89.15 54 *e*P **P 05 16 50.1 -0.3**
ISA pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
MWC Mount Wilson 89.26 56 *e*P **P 05 16 51.5 +0.6**
comp=Z,34nm,1.2s,mb5.6
MWC Mount Wilson 89.26 56 *e*P **P 05 16 51.5 +0.6**
MWC pmax pmax
comp=Z,34nm,1.2s,mb5.5
AAK Ala-Archa 89.67 313⇓ *e*P **P 05 16 53.9 +1.2**
AAK pmax pmax
comp=Z,4.0nm,1.7s,mb4.5
AAK MLR MLR
comp=Z,99nm,23.0s,MS4.2
AAK Ala-Archa 89.67 313 P **P 05 16 53.7 +1.0**
NVAR Mina Array Bea 89.72 51 P **P 05 16 53.4 +0.3**
comp=Z,1.9nm,0.8s,mb4.5,baz=244,slow=6.3,SNR=14
MPMC Manual Prospec 90.00 54 ⇓P **P 05 16 55.1 +0.7**
baz=90
WVOR Wild Horse Val 90.12 47 *e*P **P 05 16 54.8 +0.1**
comp=Z,11nm,1.1s,mb5.1
WVOR Wild Horse Val 90.12 47 *e*P **P 05 16 54.8 +0.1**
WVOR pmax pmax
comp=Z,11nm,1.1s,mb5.1
BAR Barrett 90.18 57 *e*P **P 05 16 54.7 -0.5**
comp=Z,15nm,1.2s,mb5.2
BAR *e* 05 17 06.9
J08A Circle Bar Ran 90.38 46 ⇓P **P 05 16 56.0 0.0**
baz=90
MONP Monument Peak 90.42 57 ⇑P **P 05 16 55.7 -0.7**
baz=90,SNR=5.6
GSC Goldstone 90.44 55 ⇓P **P 05 16 57.0 +0.5**
baz=90
GSC Goldstone 90.44 55 *e*P **P 05 16 56.6 +0.2**
comp=Z,20nm,1.6s,mb5.2
GSC *e* 05 17 05.6
GSC Goldstone 90.44 55 *e*P **P 05 16 56.6 +0.2**
GSC *e* 05 17 05.6
GSC pmax pmax
comp=Z,20nm,1.6s,mb5.2
PFO Pinyon Flat Ob 90.49 56 *e*P **P 05 16 57.9 +1.2**
comp=Z,15nm,1.2s,mb5.2
PFO Pinyon Flat Ob 90.49 56 *e*P **P 05 16 57.9 +1.2**
PFO pmax pmax
comp=Z,15nm,1.2s,mb5.2
FURC Furnace Creek, 90.56 53 ⇓P **P 05 16 56.7 -0.3**
baz=91
OD2 Odessa Site #2 90.87 42 *e*P **P 05 16 57.2 -0.9**
BELC Belle Mtn. Jos 90.92 56 ⇓P **P 05 16 58.4 -0.3**
baz=91,SNR=8.5
SWSC Sam W. Stewart 90.94 57 ⇓P **P 05 16 58.9 +0.1**
baz=91
SHOC Shoshone 90.95 54 ⇓P **P 05 16 57.8 -1.0**
baz=91
S10A Tonopah Range, 90.98 52 ⇓P **P 05 16 58.2 -0.7**
baz=91
U10A Ash Meadows, A 90.98 54 ⇑P **P 05 16 59.5 +0.6**
baz=91
E09A Wood Farm, Sta 91.11 43 ⇑P **P 05 16 59.1 -0.2**
baz=91
GMRC Granite Mounta 91.30 55 ⇑P **P 05 17 00.4 0.0**
baz=91,SNR=7.9
BC3 Big Chuckawall 91.32 56 ⇓P **P 05 17 01.1 +0.6**
baz=91
BMO Blue Mountains 91.44 45 *e*P **P 05 17 00.2 -0.7**
comp=Z,2.4nm,0.7s,mb4.6
BMO Blue Mountains 91.44 45 *e*P **P 05 17 00.2 -0.7**
BMO pmax pmax
comp=Z,2.0nm,0.7s,mb4.6
V11A Goodsprings 91.62 54 ⇑P **P 05 17 02.1 +0.1**
baz=92,SNR=6.9
IRM Iron Mountain 91.64 56 ⇑P **P 05 17 02.8 +0.8**
baz=92
L10A Juniper Basin 91.65 48 ⇓P **P 05 17 01.9 0.0**
baz=92
F10A Beach Ranch, E 91.66 44 ⇑P **P 05 17 01.2 -0.7**
baz=92
GLA Glamis 91.77 57 ⇑P **P 05 17 02.2 -0.4**
baz=92
LDFC Landfair 91.79 55 *e*P **P 05 17 03.0 +0.3**
comp=Z,62nm,1.3s,mb5.8
R11A Troy Canyon, C 91.83 52 ⇓P **P 05 17 02.4 -0.4**
baz=92
Q11A Duckwater 91.84 51 ⇓P **P 05 17 02.7 -0.2**
baz=92
T11A Corn Creek, Al 91.97 53 ⇓P **P 05 17 03.6 +0.1**
baz=92
V12A Nelson 92.08 54 ⇑P **P 05 17 03.6 -0.5**
baz=92
S12A Delamar Landin 92.31 53 ⇓P **P 05 17 04.9 -0.2**
baz=92
PDMCI Parker Dam,Lak 92.48 56 ⇑P **P 05 17 05.7 -0.3**
baz=92
P12A McGill 92.49 51 ⇑P **P 05 17 06.5 +0.7**
baz=92
R12A Pony Springs, 92.59 52 ⇓P **P 05 17 07.0 +0.7**
baz=93
Y13A Salome 92.69 56 ⇑P **P 05 17 07.8 +0.9**
baz=93
O12A Currie 92.71 50 ⇑P **P 05 17 08.1 +1.3**
baz=93
Z13A Yuma Proving G 92.76 57 ⇓P **P 05 17 06.6 -0.7**
baz=93
W13A Hualapai Mount 92.79 55 ⇓P **P 05 17 06.5 -0.8**
baz=93,SNR=5.5
V13A Grand Canyon W 92.79 54 ⇑P **P 05 17 06.8 -0.5**
baz=93,SNR=6.2
I12A Atlanta 92.85 46 ⇑P **P 05 17 07.3 -0.1**
baz=93
G12A Big Creek, Yel 92.87 45 ⇑P **P 05 17 06.9 -0.6**
baz=93
T13A Saint George 92.99 53 ⇑P **P 05 17 08.9 +0.7**
baz=93,SNR=14
S13A Holt Ranch, En 93.09 53 ⇑P **P 05 17 09.4 +0.7**
baz=93
D12A Red Ives Fores 93.09 43 ⇑P **P 05 17 07.8 -0.7**
baz=93
Q13A Wheeler Ranch, 93.12 51 ⇓P **P 05 17 09.5 +0.7**
baz=93
SYO Syowa Base 93.12 199⇓ *e*X **P 05 17 05.4 -2.7**
M13A Montello 93.28 49 ⇓P **P 05 17 09.1 -0.3**
baz=93
M13A Montello 93.28 49 *e*P **P 05 17 10.0 +0.6**
comp=Z,16nm,1.2s,mb5.3
M13A *e* 05 17 21.0
HLID Hailey 93.34 47 ⇓P **P 05 17 09.9 +0.2**
baz=93
HLID Hailey 93.34 47 *e*P **P 05 17 10.1 +0.4**
comp=Z,6.9nm,1.2s,mb5.0
ARUT Antelope Range 93.44 53 *e*P **P 05 17 11.2 +0.9**
comp=Z,7.6nm,1.2s,mb5.0
ARUT Antelope Range 93.44 53 *e*P **P 05 17 11.2 +0.9**
ARUT pmax pmax
comp=Z,8.0nm,1.2s,mb5.0
V14A Boquillas Ranc 93.48 55 ⇓P **P 05 17 09.9 -0.6**
baz=94
U14A Mt Trumbull 93.50 54 ⇓P **P 05 17 10.9 +0.3**
baz=94,SNR=8.2
I13A Wildhorse Cree 93.59 46 ⇓P **P 05 17 11.1 +0.2**
baz=94
G13A Cobalt 93.64 45 ⇑P **P 05 17 09.8 -1.2**
baz=94
Q14A Sevier Lake (B 93.70 51 ⇓P **P 05 17 11.3 -0.2**
baz=94,SNR=5.5
BVAR Borovoye Array 93.89 323 P **P 05 17 09.9 -2.1**
comp=Z,3.6nm,0.9s,mb4.8,baz=116,slow=6.8,SNR=11
M14A Sheep Mountain 93.90 49 ⇓P **P 05 17 12.4 +0.1**
baz=94
BRVK Borovoye 93.96 323 *e*P **P 05 17 10.6 -1.7**
comp=Z,10.0nm,1.3s,mb5.1
BRVK Borovoye 93.96 323 *ce*P **P 05 17 11.1 -1.2**
BRVK pmax pmax
comp=Z,9.0nm,1.7s,mb4.9
BRVK MLR MLR
comp=Z,242nm,26.0s,MS4.5
L14A Malta 94.04 48 ⇑P **P 05 17 12.9 0.0**
baz=94
X15A Humboldt 94.07 56 ⇓P **P 05 17 14.5 +1.2**
baz=94,SNR=5.2
K14A Jones Ranch, D 94.14 48 ⇑P **P 05 17 13.7 +0.4**
baz=94
U15A North Rim 94.22 54 ⇓P **P 05 17 14.1 +0.2**
baz=94,SNR=5.8
H15A Lima 94.72 46 ⇑P **P 05 17 15.9 0.0**
baz=95
S16A Weppner Ranch, 94.89 53 ⇓P **P 05 17 16.4 -0.6**
baz=95
EDM Edmonton 95.01 37 *e*P **P 05 17 17.0 -0.1**
R16A Teasdale 95.03 52 ⇓P **P 05 17 18.4 +0.8**
baz=95,SNR=6.3
YKA Yellowknife Ar 95.17 28 P **P 05 17 16.5 -1.2**
comp=Z,3.7nm,0.8s,mb4.9,baz=268,slow=4.7,SNR=9.5
I16A Newdale 95.48 47 ⇓P **P 05 17 19.8 +0.3**
baz=96
IMW Indian Meadow 95.88 47 *e*P **P 05 17 22.4 +1.1**
comp=Z,4.2nm,0.9s,mb4.9
IMW *e* 05 17 32.5
PV01 Paradox Valley 97.31 52 *e*P **P 05 17 28.2 +0.2**
comp=Z,740nm,1.5s
PV01 *e* 05 17 39.4
TXAR Lajitas Array 101.01 62 P Pdif 05 17 44.2 +0.1
comp=Z,0.3nm,0.8s,baz=338,slow=1.0,SNR=2.7
TXAR PKKPbc PKKPbc 05 33 56.8 -0.1
comp=Z,0.6nm,0.9s,baz=108,slow=2.8,SNR=4.3
AKASG Malin Array Be 119.07 325 PKP PKPdf 05 22 41.9 -1.4
comp=Z,1.4nm,0.6s,baz=58,slow=4.0,SNR=5.7
KMBO Kilima Mbogo 119.94 265 PKP PKPdf 05 22 46.5 +0.4
comp=Z,1.2nm,0.6s,baz=181,slow=24,SNR=3.8
BR131 Keskin Array S 120.34 312 *e*PKPdf PKPdf 05 22 46.0 -0.1
BRTR Keskin Array B 120.34 312 PKP PKPdf 05 22 45.8 -0.3
comp=Z,2.4nm,0.8s,baz=131,slow=2.1,SNR=14
NOA NORSAR Array B 120.58 342 PKP PKPdf 05 22 45.2 -0.7
comp=Z,1.8nm,0.9s,baz=46,slow=2.0,SNR=7.1
NOA PKKPbc PKKPbc 05 32 52.5 -1.1
comp=Z,1.0nm,0.8s,baz=168,slow=0.5,SNR=4.1
MMAI Mount Meron Ar 120.69 304 PKP PKPdf 05 22 46.2 -0.8
comp=Z,0.2nm,0.3s,baz=78,slow=7.8,SNR=4.7
BOSA Boshof 121.99 230 PKP PKPdf 05 22 49.6 0.0
comp=Z,4.7nm,0.6s,baz=137,slow=2.8,SNR=13
BOSA Boshof 121.99 230 *e*PKIKP PKPdf 05 22 49.7 0.0
LBTB Lobatse 123.46 234 *e*PKPdf PKPdf 05 22 52.4 -0.2
DPC Dobruska-Polom 126.13 330 *e*PKIKP PKPdf 05 22 54.8 -2.1
DPC Dobruska-Polom 126.13 330 *e*PKPdf PKPdf 05 22 54.8 -2.1
PVCC Panska Ves 126.86 331 *e*PKIKP PKPdf 05 22 59.4 +1.1
PVCC Panska Ves 126.86 331 *e*PKPdf PKPdf 05 22 59.4 +1.1
CLL Collm 127.06 333 *e*PKIKP PKPdf 05 22 58.0 -0.7
CLL Collm 127.06 333 *e*PKPdf PKPdf 05 22 58.0 -0.7
CLL epPKPdf pPKPdf 05 23 11.0 +5.0
KHC Kasperske Hory 128.27 331 *e*PKIKP PKPdf 05 23 02.0 +1.0
KHC *e* 05 23 10.3
KHC Kasperske Hory 128.27 331 *e*PKPdf PKPdf 05 23 02.0 +1.0
KHC epPKP pPKPdf 05 23 10.3 +1.9
ROSC El Rosal 128.32 89 *e*PKPdf PKPdf 05 23 01.5 -0.7
ROSC El Rosal 128.32 89 PKP PKPdf 05 23 01.9 -0.3
comp=Z,5.2nm,0.7s,baz=117,slow=6.8,SNR=4.7
LPAZ La Paz 129.16 118 PKP PKPdf 05 23 03.9 +0.2
comp=Z,5.7nm,0.8s,baz=259,slow=1.2,SNR=26
LPAZ SKPbc 05 26 24.0
comp=Z,3.5nm,1.0s,baz=275,slow=2.7,SNR=6.6
LPAZ La Paz 129.16 118 *e*PKIKP PKPdf 05 23 03.6 -0.1
CPUP Villa Florida 132.58 136 PKP PKPdf 05 23 08.8 -1.2
comp=Z,1.2nm,0.6s,baz=328,slow=3.5,SNR=3.8
ESDC Sonseca Array 143.53 336 PKP PKPdf 05 23 27.4 -2.3
comp=Z,0.3nm,0.5s,baz=34,slow=3.4,SNR=5.2
MTE Manteigas 144.22 340 *e*PKP PKPdf 05 23 30.1 -0.7
PCBR Castelo Branco 144.70 340 *e*PKP PKPdf 05 23 31.4 -0.2
PMRV Marv??o 145.04 340 *e*PKP PKPdf 05 23 31.3 -0.9
PTOM Tomar 145.21 341 *e*PKP PKPdf 05 23 31.8 -0.7
PESTR Estremoz 145.61 339 *e*PKP PKPdf 05 23 32.9 -0.3
PBAR Barrancos 146.03 338 *e*PKP PKPdf 05 23 34.7 +0.7
EVO Evora 146.06 340 *e*PKP PKPdf 05 23 34.9 +0.9
PBEJ Beja 146.46 339 *e*PKP PKPdf 05 23 36.3 +1.6
PCVE Castro Verde 146.87 339 *e*PKP PKPab 05 23 38.1 -0.4
PVAQ Vaqueiros 146.96 338 *e*PKP PKPdf 05 23 37.2 +1.6
TAM Tamanrasset 148.90 303 *e*PKPdf PKPdf 05 23 39.9 +0.8
TAM *e*PKPbc PKPbc 05 23 44.1 +0.9

ISK ***16*** *05:05:41.1,37˚.37N×38˚.60E,h19km,MD2.8*
CSEM ***16*** *05:05:41.2±0.2,37˚.34N×38˚.63E,h22km±1km, MD2.8, Error ellipse: s-maj=6.1km s-min=5.1km az=107.0*
DDA ***16*** *05:05:42.6,37˚.48N×39˚.06E,h7km±4km, Md2.8*
ISCJB ***16*** *05:05:43.2±1.1,37˚.41N±0˚.07×38˚.93E±0˚.10,h20km±8km, Error ellipse: s-maj=16.0km s-min=8.0km az=135.9*

ISC 16 05:05:42.0±1.3,37˚33N±0˚.08×38˚.80E±0˚.08,h24km±5km, n15,σ1s09/24,2D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.11**	**8**	*e*PG	**Pb**	**05 05 46.3**	**-0.3**
URFA				*e*SG	**Sb**	**05 05 50.1**	**+0.4**
URFA	**Urfa**	**0.11**	**8**	*e*Pg	**Pb**	**05 05 46.3**	**-0.3**
URFA				*e*Sg	**Sb**	**05 05 50.2**	**+0.5**
MALT	**Malatya**	**1.03**	**343**	*e*PG	**Pn**	**05 06 00.3**	**-0.6**
MALT				*e*SG	**Sb**	**05 06 13.5**	**-0.7**
MALT	**Malatya**	**1.03**	**343**	*i*P	**Pn**	**05 06 04.6**	**+3.7**
MALT	**Malatya**	**1.03**	**343**	*e*Pg	**Pn**	**05 06 00.3**	**-0.6**
MALT	**Malatya**	**1.03**	**343**	*i*P	**Pn**	**05 06 04.6**	**+3.7**
MALT				*e*Sg	**Sb**	**05 06 13.5**	**-0.7**
MYA	**Malatya**	**1.04**	**343**	*e*PG	**Pn**	**05 06 01.0**	**-0.1**
MYA	**Malatya**	**1.04**	**343**	*e*Pg	**Pn**	**05 06 01.0**	**-0.1**
ELZG	**Elazig**	**1.18**	**7**	*i*P	**Pn**	**05 06 03.0**	**0.0**
ELZG				*i*S	**Sn**	**05 06 17.2**	**-1.0**
ELZG	**Elazig**	**1.18**	**7**	*i*P	**Pn**	**05 06 03.0**	**0.0**
ELZG				*i*S	**Sn**	**05 06 17.2**	**-1.0**
AKCD	**Akcadag**	**1.19**	**324**	*i*P	**Pn**	**05 06 05.3**	**+2.1**
AKCD				*i*S	**Sn**	**05 06 20.0**	**+1.4**
AKCD	**Akcadag**	**1.19**	**324**	*i*P	**Pn**	**05 06 05.3**	**+2.1**
AKCD				*i*S	**Sn**	**05 06 20.0**	**+1.4**
KMRS	**Kahramanmaras**	**1.52**	**277**	*e*PN	**Pn**	**05 06 05.2**	**-2.6**
KMRS	**Kahramanmaras**	**1.52**	**277**	*e*Pn	**Pn**	**05 06 05.2**	**-2.6**
MARD	**Mardin**	**1.58**	**90**	*i*P	**Pn**	**05 06 09.1**	**+0.6**
MARD				*i*S	**Sn**	**05 06 28.0**	**-0.1**

ATH ***16*** *05:12:42.0,36˚.61N×21˚.31E,h17km±2km, MD3.7/9*
NEIC ***16*** *05:12:42.0,36˚.61N×21˚.31E,h17km, MD3.7(ATH), After ATH.*
THE ***16*** *05:12:42.6,36˚.70N×21˚.23E,h1km±3km, ML2.7/2, Error ellipse: s-maj=6.4km s-min=2.0km az=187.0*
CSEM ***16*** *05:12:42.8±1.1,36˚.62N×21˚.27E,h14km±1km, MD3.7, Error ellipse: s-maj=23.2km s-min=12.2km az=24.0*

ISC 16 05:12:41.9±1.6,36˚.61N±0˚.08×21˚.26E±0˚.06,h8km±5km, n35,σ1s04/51,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.48**	**53**	*e*PB	**Pg**	**05 12 50.3**	**-1.0**
PYL				*e*SB	**Sg**	**05 12 57.8**	**+0.2**
PYL	**PYLOS**	**0.48**	**53**	P	**Pg**	**05 12 50.4**	**-0.9**
PYL	**PYLOS**	**0.48**	**53**	P	**Pg**	**05 12 50.4**	**-0.9**
PYL				*e*Sb	**Sg**	**05 12 57.8**	**+0.2**
ITM	**Ithomi**	**0.78**	**43**	*e*Pn	**Pg**	**05 12 56.4**	**-0.6**
ITM				*e*Sn	**Sg**	**05 13 07.2**	**0.0**
ITM	**Ithomi**	**0.78**	**43**	*e*PN	**Pg**	**05 12 56.4**	**-0.6**
ITM				*e*SN	**Sg**	**05 13 07.2**	**0.0**
ITM	**Ithomi**	**0.78**	**43**	P	**Pg**	**05 12 56.4**	**-0.6**
ITM	**Ithomi**	**0.78**	**43**	P	**Pg**	**05 12 56.4**	**-0.6**
VLX	**Vlachokerasia**	**1.18**	**49**	*e*PN	**Pn**	**05 13 03.5**	**-1.2**
VLX				*e*SN	**Sn**	**05 13 19.0**	**-1.9**
VLX	**Vlachokerasia**	**1.18**	**49**	P	**Pg**	**05 13 03.4**	**-1.1**
VLX				S	**Sg**	**05 13 20.9**	**+1.1**
VLX	**Vlachokerasia**	**1.18**	**49**	P	**Pg**	**05 13 03.4**	**-1.1**
VLX				S	**Sg**	**05 13 20.9**	**+1.1**
VLI	**Veliai**	**1.35**	**85**	*e*Pn	**Pn**	**05 13 07.2**	**+0.1**
VLI				*e*Sn	**Sn**	**05 13 25.3**	**+0.1**
VLI	**Veliai**	**1.35**	**85**	*e*PN	**Pn**	**05 13 07.2**	**+0.1**
VLI				*e*SN	**Sn**	**05 13 25.3**	**+0.1**
VLI	**Veliai**	**1.35**	**85**	*e*Pn	**Pn**	**05 13 07.2**	**+0.1**
VLI				*e*Sn	**Sn**	**05 13 25.3**	**+0.1**
RLS	**Riolos of Patr**	**1.46**	**6**	*e*Pn	**Pn**	**05 13 09.4**	**+0.8**
RLS	**Riolos of Patr**	**1.46**	**6**	*e*PN	**Pn**	**05 13 09.4**	**+0.8**
RLS	**Riolos of Patr**	**1.46**	**6**	*e*Pn	**Pn**	**05 13 09.4**	**+0.8**
GUR	**Goura**	**1.58**	**33**	*e*PB	**Pn**	**05 13 09.9**	**-0.4**
GUR	**Goura**	**1.58**	**33**	P	**Pn**	**05 13 09.9**	**-0.4**
GUR				S	**Sn**	**05 13 31.4**	**+0.4**
GUR	**Goura**	**1.58**	**33**	P	**Pn**	**05 13 09.9**	**-0.4**
GUR				S	**Sn**	**05 13 31.4**	**+0.4**
VLS	**Valsamata**	**1.66**	**341**	P	**Pg**	**05 13 15.6**	**+1.8**
VLS	**Valsamata**	**1.66**	**341**	P	**Pn**	**05 13 10.3**	**-1.0**
VLS				S	**Sn**	**05 13 32.1**	**-0.7**
VLS	**Valsamata**	**1.66**	**341**	P	**Pn**	**05 13 10.3**	**-1.0**
VLS				S	**Sn**	**05 13 32.1**	**-0.7**
DID	**Didima**	**1.82**	**60**	*e*PN	**Pn**	**05 13 14.1**	**+0.6**
DID	**Didima**	**1.82**	**60**	P	**Pn**	**05 13 14.4**	**+0.9**
DID				S	**Sn**	**05 13 37.8**	**+1.1**
DID	**Didima**	**1.82**	**60**	*e*Pn	**Pn**	**05 13 14.1**	**+0.6**
DID	**Didima**	**1.82**	**60**	P	**Pn**	**05 13 14.4**	**+0.9**
DID				S	**Sn**	**05 13 37.8**	**+1.1**

EFP	**Efpalio**	**1.89**	**16**	*e*PN	**Pn**	**05 13 15.7**	**+1.2**
EFP	**Efpalio**	**1.89**	**16**	*e*Pn	**Pn**	**05 13 15.7**	**+1.2**
LTK	**Loutraki**	**1.96**	**43**	*e*PN	**Pn**	**05 13 16.2**	**+0.7**
LTK	**Loutraki**	**1.96**	**43**	*e*Pn	**Pn**	**05 13 16.2**	**+0.7**
DSF	**Desfina**	**2.06**	**29**	P	**Pn**	**05 13 18.1**	**+1.2**
DSF	**Desfina**	**2.06**	**29**	P	**Pn**	**05 13 18.1**	**+1.2**
AGG	**Agios Georgios**	**2.56**	**19**	*e*Pb	**Pb**	**05 13 25.8**	**-2.3**
AGG	**Agios Georgios**	**2.56**	**19**	*e*PB	**Pb**	**05 13 25.8**	**-2.3**
IGT	**Igoumenitsa**	**3.01**	**346**	P	**Pn**	**05 13 34.4**	**+4.5**

ISCJB **16** *05:22:39.3±0.7, 52°.3N±0°.2×97°.85E±0°.06, h10km, Error ellipse: s-maj=23.4km s-min=4.8km az=7.0*
ASRS **16** *05:22:47.0±1.2, 52°.33N×97°.93E, h15km, Ms3.5/3*
MOS **16** *05:22:56.9±1.0, 52°.37N×99°.68E, h17km, mb4.4/1, Error ellipse: s-maj=16.7km s-min=13.9km az=13.9*

ISC 16 05:22:40.5±0.7, 52°.1N±0°.2×97°.91E±0°.06, h10km, n17, σ1§42/16, 1C-1D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORL	**Orlik**	**1.24**	**69⇓**	*i*PG	**Pn**	**05 23 02.4**	**-1.5**
ORL				pmax	pmax		
	comp=Z,826nm,0.3s						
MOY	**Mondy**	**1.96**	**102⇑**	*i*PG	**Pn**	**05 23 14.9**	**+1.1**
ARS	**Arshan**	**2.79**	**92**	*e*PN	**Pb**	**05 23 29.9**	**-0.6**
TLY	**Talaya**	**3.58**	**95**	*e*PN	**Pb**	**05 23 42.5**	**-1.3**
TLY				pmax	pmax		
	comp=Z,20nm,0.2s						
ZAK	**Zakamensk**	**3.79**	**115**	*e*PN	**Pn**	**05 23 40.1**	**+1.1**
ZAK				*e*		05 24 34.2	
ZAK				pmax	pmax		
	comp=Z,54nm,0.5s						
ZAK				smax			
	comp=N,602nm,0.8s						
IRK	**Irkutsk**	**3.92**	**86**	*e*PN	**Pb**	**05 23 47.8**	**-1.8**
IRK				pmax	pmax		
	comp=Z,221nm,0.3s						
CERR	**Cheremushki**	**4.04**	**283**	*e*PN	**Pg**	**05 24 00.1**	**+2.2**
CERR	**Cheremushki**	**4.04**	**283**	*e*Pn	**Pb**	**05 23 49.0**	**-2.7**
CERR				*i* Pg	**Pg**	**05 24 00.1**	**+2.2**
CERR				*i* Sg	**Sg**	**05 24 50.7**	**+0.6**
TRG	**Tyrgan**	**5.20**	**80**	*e*PN	**Pn**	**05 23 58.6**	**+0.3**
TRG				*e*		05 24 12.6	
TRG				pmax	pmax		
	comp=Z,46nm,0.5s						
OGRR	**Ongureny**	**6.06**	**72**	*e*PN	**Pn**	**05 24 12.2**	**+2.1**
OGRR				*e*		05 24 29.1	
OGRR				pmax	pmax		
	comp=Z,44nm,0.5s						
ELT	**Yel'tsovka**	**7.19**	**284**	*e*PN	**Pg**	**05 24 56.5**	**-1.6**
ELT				*e*		05 26 31.0	
ELT	**Yel'tsovka**	**7.19**	**284**	*e*Pg	**Pg**	**05 24 56.5**	**-1.6**
ELT				*e*Sg	**Sg**	**05 26 31.0**	**-0.1**
UKR	**Ust'-Kan**	**8.28**	**267**	*e*P	Px	05 25 17.1	
UKR				*e*		05 27 05.9	
UKR	**Ust'-Kan**	**8.28**	**267**	*e*Pg	Px	05 25 17.1	
UKR				*e*Sg	Sx	05 27 05.9	
YLYR	**Ulyunkhan**	**8.37**	**66**	*e*PG	Px	05 25 12.3	
YLYR				pmax	pmax		
	comp=Z,20nm,1.4s						
KMO	**Kumora**	**8.69**	**59**	*e*PN	**Pn**	**05 24 47.5**	**+1.4**
KMO				*e*		05 25 17.3	
KMO				pmax	pmax		
	comp=Z,20nm,0.5s						
NVS	**Novosibirsk**	**9.17**	**293**	*e*Sg	Sx	05 27 29.9	

DDA **16** *05:29:11.9, 39°.57N×32°.84E, h7km±4km, Md3.0*
ISCJB **16** *05:29:13.4±0.6, 39°.67N±0°.03×32°.91E±0°.04, h2km±6km, Error ellipse: s-maj=5.1km s-min=4.4km az=145.8*
ISK **16** *05:29:13.1, 39°.71N×32°.90E, h9km, MD3.1*
CSEM **16** *05:29:13.2±0.2, 39°.68N×32°.89E, h2km, MD3.1, Error ellipse: s-maj=5.7km s-min=5.2km az=81.0*

ISC 16 05:29:13.8±0.5, 39°.69N±0°.03×32°.93E±0°.04, h2km±6km, n40, σ0§96/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBAL	**Bala**	**0.21**	**133**	*i* P	**Pg**	**05 29 17.2**	**-0.5**
BBAL				*i* S	**Sg**	**05 29 20.9**	**+0.5**
BBAL	**Bala**	**0.21**	**133**	*i* P	**Pg**	**05 29 17.2**	**-0.5**
BBAL				*i* S	**Sg**	**05 29 20.9**	**+0.5**
LOD	**Lodumlu**	**0.24**	**329**	*e*PG	**Pg**	**05 29 17.6**	**-0.7**
LOD				*e*SG	**Sg**	**05 29 22.1**	**+0.6**
LOD	**Lodumlu**	**0.24**	**329**	*e*Pg	**Pg**	**05 29 17.6**	**-0.8**
LOD				*e*Sg	**Sg**	**05 29 22.1**	**+0.6**
ELDT	**Eldivan**	**0.89**	**25**	*i* P	**Pg**	**05 29 30.8**	**0.0**
ELDT				*i* S	**Sg**	**05 29 46.6**	**+4.2**
ELDT	**Eldivan**	**0.89**	**25**	*i* P	**Pg**	**05 29 30.8**	**-0.1**
ELDT				*i* S	**Sg**	**05 29 46.6**	**+4.2**
SVRH	**Sivrihisar-ESK**	**1.11**	**258**	*e*PN	**Pg**	**05 29 34.5**	**-0.5**
SVRH	**Sivrihisar-ESK**	**1.11**	**258**	*e*Pn	**Pg**	**05 29 34.5**	**-0.5**
SGKT	**Sivrigoynuk**	**1.11**	**323**	*i* P	**Pg**	**05 29 34.2**	**-0.8**
SGKT				*e*S	**Sg**	**05 29 50.9**	**+1.4**
SGKT	**Sivrigoynuk**	**1.11**	**323**	*i* P	**Pg**	**05 29 34.2**	**-0.8**
SGKT				*e*S	**Sg**	**05 29 50.9**	**+1.5**
CDAG	**Cicekdag**	**1.12**	**93**	*i* P	**Pg**	**05 29 33.8**	**-1.4**
CDAG				*i* S	**Sg**	**05 29 50.5**	**+0.8**
CDAG	**Cicekdag**	**1.12**	**93**	*i* P	**Pg**	**05 29 33.8**	**-1.4**
CDAG				*i* S	**Sg**	**05 29 50.5**	**+0.8**
KIZT	**Kizilcal**	**1.14**	**226**	*e*PN	**Pg**	**05 29 34.9**	**-0.8**
KIZT				*e*SN	**Sg**	**05 29 51.7**	**+1.3**
KIZT	**Kizilcal**	**1.14**	**226**	*e*Pn	**Pg**	**05 29 34.9**	**-0.7**
KIZT				*e*Sn	**Sg**	**05 29 51.7**	**+1.3**
CORM	**Corum**	**1.40**	**69**	*e*PN	**Pn**	**05 29 39.3**	**-1.1**
CORM	**Corum**	**1.40**	**69**	*e*Pn	**Pn**	**05 29 39.3**	**-1.1**
ILGA	**Ilgaz**	**1.49**	**24**	*i* P	**Pn**	**05 29 43.1**	**+1.5**
ILGA	**Ilgaz**	**1.49**	**24**	*i* P	**Pn**	**05 29 43.1**	**+1.5**
MDU	**Mudurnu**	**1.53**	**301**	*e*PN	**Pn**	**05 29 40.7**	**-1.4**
MDU	**Mudurnu**	**1.53**	**301**	*e*Pn	**Pn**	**05 29 40.7**	**-1.4**
LADK	**Ladik-KONYA**	**1.55**	**197**	*e*PN	**Pn**	**05 29 42.4**	**0.0**
LADK	**Ladik-KONYA**	**1.55**	**197**	*e*Pn	**Pn**	**05 29 42.4**	**+0.1**
SULT	**Sultanhani-AKS**	**1.55**	**163**	*e*PN	**Pn**	**05 29 43.1**	**+0.6**
SULT	**Sultanhani-AKS**	**1.55**	**163**	*e*Pn	**Pn**	**05 29 43.1**	**+0.7**
SAFT	**Safranbolu**	**1.56**	**353**	*e*PN	**Pn**	**05 29 40.7**	**-1.9**
SAFT	**Safranbolu**	**1.56**	**353**	*e*Pn	**Pn**	**05 29 40.7**	**-1.9**
TOS	**Tosya**	**1.59**	**32**	*e*PN	**Pn**	**05 29 42.6**	**-0.3**
TOS	**Tosya**	**1.59**	**32**	*e*Pn	**Pn**	**05 29 42.6**	**-0.3**
CTKT	**Corum**	**1.71**	**56**	*i* P	**Pn**	**05 29 45.0**	**+0.4**
CTKT	**Corum**	**1.71**	**56**	*i* P	**Pn**	**05 29 45.0**	**+0.4**
KONT	**Konya--Tatoy**	**1.79**	**194**	*e*PN	**Pn**	**05 29 45.0**	**-0.7**
KONT	**Konya--Tatoy**	**1.79**	**194**	*e*Pn	**Pn**	**05 29 45.0**	**-0.7**
YOZ	**Yozgat**	**1.85**	**91**	*e*PN	**Pn**	**05 29 46.4**	**-0.1**
YOZ	**Yozgat**	**1.85**	**91**	*e*Pn	**Pn**	**05 29 46.4**	**-0.1**
BALT	**Daday**	**1.88**	**11**	*i* P	**Pn**	**05 29 48.5**	**+1.6**
BALT	**Daday**	**1.88**	**11**	*i* P	**Pn**	**05 29 48.5**	**+1.5**
HDMB	**Hadim**	**2.74**	**187**	*e*PN	**Pn**	**05 29 59.8**	**+1.1**
HDMB	**Hadim**	**2.74**	**187**	*e*Pn	**Pn**	**05 29 59.8**	**+1.1**
SVSK	**Karacayir**	**3.15**	**84**	*e*PN	**Pn**	**05 30 04.6**	**+0.2**
SVSK	**Karacayir**	**3.15**	**84**	*e*Pn	**Pn**	**05 30 04.6**	**+0.3**

JMA 16 05:36:53.1±0.1, 29°.17N×140°.77E, h148km, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.42**	**149**	P	Pn	05 37 33.4	+0.3
CBIJ				*e*S	Sn	05 38 04.6	+0.8
JHHJ	**Haha-jima-NKT**	**2.82**	**153**	P	Pn	05 37 38.6	+0.5
JHHJ				*e*S	Sn	05 38 12.5	-0.4
BSO1	**Boso 1**	**5.47**	**2**	P	Pn	05 38 14.1	+1.5
BSO1				*e*S	Sn	05 39 15.0	+0.2
BSO3	**Boso 3**	**5.62**	**358**	P	Pn	05 38 15.5	+0.9
BSO3				*e*S	Sn	05 39 20.0	+1.6
BSO4	**Boso 4**	**5.81**	**356**	P	Pn	05 38 18.9	+1.7
JOD2	**Odawara 2**	**6.24**	**347**	P	Pn	05 38 24.6	+1.7
JOD2				*e*S	Sn	05 39 32.0	-1.2
JHU	**Hanno**	**6.78**	**350**	P	Pn	05 38 30.3	+0.2
JRY	**Ryogami san**	**7.01**	**347**	P	Pn	05 38 33.7	+0.6
JAG	**Ashikaga**	**7.32**	**352**	P	Pn	05 38 36.0	-1.3
JAG				S	Sn	05 39 56.4	-2.7
JHO	**Hitachi**	**7.42**	**359**	P	Pn	05 38 38.2	-0.5
JHO				S	Sn	05 39 56.3	-5.3
JFK	**Kawauchi**	**8.18**	**1**	*e*S	Sn	05 40 13.0	-6.7

ISCJB **16** *05:43:34.7±1.6, 13°.2N±0°.1×124°.6E±0°.1, h9km±11km, mb3.5/3, Error ellipse: s-maj=28.0km s-min=7.8km az=143.8*
IDC **16** *05:43:36.8±3.4, 12°.61N×123°.82E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.4/18, mbtmp3.5/3, Error ellipse: s-maj=295.1km s-min=28.7km az=64.0*

ISC 16 05:43:35.8±1.4, 13°.18N±0°.09×124°.5E±0°.1, h7km±8km, n6, σ1§08/9, mb3.5/3, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.54**	**320**	*e*P	**Pg**	**05 43 46.9**	**+0.7**
PVCP				*e*S	**Sg**	**05 43 51.9**	**-1.3**
CNP	**Catarman**	**0.69**	**167**	*e*P	**Pg**	**05 43 49.0**	**0.0**
CNP				*e*S	**Sg**	**05 43 58.3**	**+0.4**
GQP	**Guinayangan**	**2.13**	**290⇓**	*e*P	**Pn**	**05 44 12.8**	**+0.9**
GQP				*e*S	**Sn**	**05 44 38.3**	**-0.3**
WRA	**Warramunga Arr**	**34.31**	**163**	P	**P**	**05 50 21.6**	**-1.5**
	0.4nm,0.8s,mb3.4,baz=342,slow=8.5,SNR=3.8						
ASAR	**Alice Springs**	**37.76**	**166**	P	**P**	**05 50 51.9**	**-0.8**
	0.3nm,0.5s,mb3.3,baz=345,slow=7.1,SNR=7.4						
MKAR	**Makanchi Array**	**48.68**	**322**	P	**P**	**05 52 23.1**	**+2.4**
	0.4nm,0.4s,mb3.6,baz=110,slow=8.3,SNR=4.0						

DDA **16** *06:11:39.0, 39°.42N×33°.03E, h9km±2km, Md2.9*
ISCJB **16** *06:11:40.3±0.6, 39°.45N±0°.03×33°.05E±0°.04, h7km±4km, Error ellipse: s-maj=5.3km s-min=4.1km az=137.8*
ISK **16** *06:11:40.5, 39°.50N×33°.01E, h15km, MD3.1*
CSEM **16** *06:11:40.2±0.2, 39°.46N×33°.04E, h5km, MD2.9, Error ellipse: s-maj=4.2km s-min=3.6km az=125.0*

ISC 16 06:11:40.7±0.5, 39°.46N±0°.03×33°.05E±0°.04, h8km±4km, n38, σ0§83/56, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBAL	**Bala**	**0.10**	**36**	*i* P	**Pg**	**06 11 42.5**	**-0.5**
BBAL				*i* S	**Sg**	**06 11 44.7**	**+0.1**
BBAL	**Bala**	**0.10**	**36**	*i* P	**Pg**	**06 11 42.5**	**-0.6**
BBAL				*i* S	**Sg**	**06 11 44.7**	**0.0**
LOD	**Lodumlu**	**0.48**	**333**	*e*PG	**Pg**	**06 11 49.1**	**-0.9**
LOD				*e*SG	**Sg**	**06 11 56.4**	**+0.1**
LOD	**Lodumlu**	**0.48**	**333**	*e*Pg	**Pg**	**06 11 49.1**	**-0.9**
LOD				*e*Sg	**Sg**	**06 11 56.4**	**+0.1**
CDAG	**Cicekdag**	**1.04**	**81**	*i* P	**Pg**	**06 11 58.9**	**-1.7**
CDAG				*i* S	**Sg**	**06 12 14.2**	**+0.1**
CDAG	**Cicekdag**	**1.04**	**81**	*i* P	**Pg**	**06 11 58.9**	**-1.7**
CDAG				*i* S	**Sg**	**06 12 14.2**	**+0.1**
ELDT	**Eldivan**	**1.07**	**16**	*i* P	**Pg**	**06 12 00.5**	**-0.7**
ELDT				*i* S	**Sg**	**06 12 16.4**	**+1.3**
ELDT	**Eldivan**	**1.07**	**16**	*i* P	**Pg**	**06 12 00.5**	**-0.7**
ELDT				*i* S	**Sg**	**06 12 16.4**	**+1.3**
KIZT	**Kizilcal**	**1.08**	**238**	*e*PG	**Pg**	**06 12 02.2**	**+0.8**
KIZT				*e*SG	**Sg**	**06 12 17.0**	**+1.6**
KIZT	**Kizilcal**	**1.08**	**238**	*e*Pg	**Pg**	**06 12 02.2**	**+0.8**
KIZT				*e*Sg	**Sg**	**06 12 17.0**	**+1.6**
SVRH	**Sivrihisar-ESK**	**1.18**	**270**	*e*PN	**Pn**	**06 12 02.2**	**-1.3**
SVRH				*e*SN	**Sn**	**06 12 18.8**	**-1.0**
SVRH	**Sivrihisar-ESK**	**1.18**	**270**	*e*Pn	**Pn**	**06 12 02.3**	**-1.2**
SVRH				*e*Sn	**Sn**	**06 12 18.8**	**-1.0**
SULT	**Sultanhani-AKS**	**1.31**	**164**	*e*PN	**Pn**	**06 12 05.7**	**+0.3**
SULT	**Sultanhani-AKS**	**1.31**	**164**	*e*Pn	**Pn**	**06 12 05.7**	**+0.3**
SGKT	**Sivrigoynuk**	**1.35**	**326**	*i* P	**Pn**	**06 12 05.4**	**-0.4**
SGKT				*i* S	**Sb**	**06 12 23.7**	**+0.2**
SGKT	**Sivrigoynuk**	**1.35**	**326**	*i* P	**Pn**	**06 12 05.4**	**-0.4**
SGKT				*i* S	**Sb**	**06 12 23.7**	**+0.1**
LADK	**Ladik-KONYA**	**1.37**	**203**	*e*PN	**Pn**	**06 12 05.7**	**-0.4**
LADK	**Ladik-KONYA**	**1.37**	**203**	*e*Pn	**Pn**	**06 12 05.7**	**-0.4**
CORM	**Corum**	**1.41**	**59**	*e*PN	**Pn**	**06 12 06.7**	**-0.1**
CORM	**Corum**	**1.41**	**59**	*e*Pn	**Pn**	**06 12 06.7**	**0.0**
KONT	**Konya--Tatoy**	**1.61**	**200**	*e*PN	**Pn**	**06 12 09.3**	**-0.1**
KONT	**Konya--Tatoy**	**1.61**	**200**	*e*Pn	**Pn**	**06 12 09.3**	**-0.1**
ILGA	**Ilgaz**	**1.67**	**18**	*i* P	**Pn**	**06 12 11.8**	**+1.5**
ILGA				*i* S	**Sn**	**06 12 33.4**	**+1.6**
ILGA	**Ilgaz**	**1.67**	**18**	*i* P	**Pn**	**06 12 11.8**	**+1.5**
ILGA				*i* S	**Sn**	**06 12 33.4**	**+1.6**
MDU	**Mudurnu**	**1.73**	**306**	*e*PN	**Pn**	**06 12 10.1**	**-1.0**
MDU	**Mudurnu**	**1.73**	**306**	*e*Pn	**Pn**	**06 12 10.1**	**-1.0**
TOS	**Tosya**	**1.74**	**25**	*e*PN	**Pn**	**06 12 11.1**	**-0.1**
TOS	**Tosya**	**1.74**	**25**	*e*Pn	**Pn**	**06 12 11.1**	**-0.1**
YOZ	**Yozgat**	**1.77**	**84**	*e*PN	**Pn**	**06 12 11.6**	**0.0**
YOZ	**Yozgat**	**1.77**	**84**	*e*Pn	**Pn**	**06 12 11.6**	**0.0**
CTKT	**Corum**	**1.77**	**49**	*i* P	**Pn**	**06 12 12.1**	**+0.5**
CTKT				*i* S	**Sn**	**06 12 33.5**	**-0.8**
CTKT	**Corum**	**1.77**	**49**	*i* P	**Pn**	**06 12 12.1**	**+0.5**
CTKT				*i* S	**Sn**	**06 12 33.5**	**-0.8**
SAFT	**Safranbolu**	**1.80**	**351**	*e*PN	**Pn**	**06 12 12.1**	**+0.1**
SAFT	**Safranbolu**	**1.80**	**351**	*e*Pn	**Pn**	**06 12 12.1**	**+0.1**
HDMB	**Hadim**	**2.53**	**190**	*e*PN	**Pn**	**06 12 22.7**	**+0.5**
HDMB	**Hadim**	**2.53**	**190**	*e*Pn	**Pn**	**06 12 22.7**	**+0.6**
SVSK	**Karacayir**	**3.08**	**80**	*e*PN	**Pn**	**06 12 30.2**	**+0.6**
SVSK	**Karacayir**	**3.08**	**80**	*e*Pn	**Pn**	**06 12 30.3**	**+0.6**

ISCJB **16** *06:18:49.1±0.7, 10°.92N±0°.05×62°.28W±0°.03, h84km±7km, Error ellipse: s-maj=8.4km s-min=4.8km az=175.0*
FUNV **16** *06:18:50.5, 10°.91N×62°.19W, h72km, MW2.8*
TRN **16** *06:18:53.4, 11°.02N×62°.10W, h62km, MD2.8*
NEIC **16** *06:18:53.4, 11°.02N×62°.10W, h62km, MD2.8(TRN), After TRN.*

ISC 16 06:18:50.2±0.7, 10°.94N±0°.05×62°.27W±0°.03, h76km±8km, n21, σ1§01/37, 1C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.29**	**170⇑**	*i*P	**Pn**	**06 19 01.9**	**-0.2**
GUIV				*e*S	**Sn**	**06 19 09.7**	**-1.0**
TCE	**Chacachacare**	**0.56**	**115**	*e*P	**Pn**	**06 19 05.2**	**+1.0**
TCE				*e*S	**Sn**	**06 19 14.1**	**-0.4**
TCE	**Chacachacare**	**0.56**	**115**	*e*P	**Pn**	**06 19 05.2**	**+1.0**
TCE				*e*S	**Sn**	**06 19 14.1**	**-0.4**
TRN	**Trinidad (W)**	**0.90**	**108**	*e*P	**Pn**	**06 19 09.1**	**+1.2**
TRN				*e*S	**Sn**	**06 19 20.5**	**-0.5**
TRN	**Trinidad (W)**	**0.90**	**108**	*e*P	**Pn**	**06 19 09.1**	**+1.2**
TRN				*e*S	**Sn**	**06 19 20.5**	**-0.5**
ITEV	**Isla Los Testi**	**0.94**	**296⇓**	*e*P	**Pn**	**06 19 08.6**	**+0.3**
ITEV				*e*S	**Sn**	**06 19 22.2**	**+0.4**
CRUV	**Carupano**	**0.98**	**255⇓**	*e*P	**Pn**	**06 19 08.9**	**+0.1**
CRUV				*e*S	**Sn**	**06 19 22.5**	**-0.2**
GUNV	**Guanoco**	**1.01**	**221**	*e*P	**Pn**	**06 19 09.7**	**+0.5**
GUNV				*e*S	**Sn**	**06 19 24.3**	**+0.9**
TPP	**Pointe-a-Pierr**	**1.02**	**127**	*e*P	**Pn**	**06 19 11.6**	**+2.4**
TPP				*e*S	**Sn**	**06 19 24.0**	**+0.6**
TPP	**Pointe-a-Pierr**	**1.02**	**127**	*e*P	**Pn**	**06 19 11.6**	**+2.4**
TPP				*e*S	**Sn**	**06 19 24.0**	**+0.6**
TBH	**Brigand Hill**	**1.27**	**111**	*e*P	**Pn**	**06 19 13.4**	**+1.0**
TBH				*e*S	**Sn**	**06 19 28.5**	**-0.6**
TBH	**Brigand Hill**	**1.27**	**111**	*e*P	**Pn**	**06 19 13.4**	**+1.0**
TBH				*e*S	**Sn**	**06 19 28.5**	**-0.6**
GRW	**Mount Saint Ca**	**1.35**	**26**	*e*P	**Pn**	**06 19 15.2**	**+1.7**
GRW				*e*S	**Sn**	**06 19 29.7**	**-1.3**
GRW	**Mount Saint Ca**	**1.35**	**26**	*e*P	**Pn**	**06 19 15.2**	**+1.7**
GRW				*e*S	**Sn**	**06 19 29.7**	**-1.3**
TOSP	**Speyside**	**1.74**	**78**	*e*P	**Pn**	**06 19 18.3**	**-0.3**
TOSP				*e*S	**Sn**	**06 19 38.7**	**-1.4**
PCRV	**Puerto La Cruz**	**2.44**	**252**	*e*P	**Pn**	**06 19 28.3**	**+0.4**
GURV	**El Guri**	**3.26**	**194**	*e*S	**Sn**	**06 20 12.6**	**-4.1**
CUPV	**Cœpira**	**3.57**	**256**	*e*P	**Pn**	**06 19 44.3**	**+1.1**
CUPV				*e*S	**Sn**	**06 20 22.8**	**-1.5**
LUEV	**Luepa**	**5.12**	**171**	*e*P	**Pn**	**06 20 02.8**	**-1.7**
CAOV	**Caicara del Or**	**5.37**	**228**	*e*P	**Pn**	**06 20 06.9**	**-1.0**
BAUV	**El Baul**	**6.02**	**251**	*e*P	**Pn**	**06 20 15.8**	**-0.9**

NEIC **16** *06:18:54.0, 16°.84N×100°.30W, h8km, MD3.5(MEX), After MEX.*

MEX 16 06:18:54.1±1.0, 16°.84N×100°.29W, h9km±6km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.21**	**7**	*i* P	Pg	06 18 57.6	-0.7
CAIG				*e*S	Sg	06 19 01.4	+0.2
CAIG	**El Cayaco**	**0.21**	**7**	*i* P	Pg	06 18 57.6	-0.7
CAIG				*e*S	Sg	06 19 01.4	+0.2
ACX	**Acapulco**	**0.42**	**86**	*i* P	Pg	06 19 01.1	-1.2
ACX				*e*S	Sg	06 19 07.3	-0.5
ACX	**Acapulco**	**0.42**	**86**	*i* P	Pg	06 19 01.1	-1.2
ACX				*e*S	Sg	06 19 07.0	-0.8
MEIG	**Mezcala**	**1.25**	**31**	*i* P	Pn	06 19 13.4	-4.4
MEIG				*i* S	Sb	06 19 30.2	-4.0
ZIIG	**Zihuatanejo**	**1.35**	**304**	*e*P	Pn	06 19 16.9	-2.2
ZIIG				*i* S	Sb	06 19 32.9	-4.1
ZIIG	**Zihuatanejo**	**1.35**	**304**	*e*P	Pn	06 19 16.9	-2.2
ZIIG				*i* S	Sb	06 19 32.9	-4.1
PLIG	**Platanillo**	**1.72**	**26**	*e*P	Pn	06 19 20.4	-3.8
PLIG				*i* S	Sn	06 19 44.1	-2.2
PLIG	**Platanillo**	**1.72**	**26**	*e*P	Pn	06 19 20.4	-3.8
PLIG				*i* S	Sn	06 19 42.5	-3.7
PNIG	**Pinotepa**	**2.12**	**102**	*e*P	Pn	06 19 25.9	-3.8
PNIG				*i* S	Sn	06 19 56.6	+0.3
PNIG	**Pinotepa**	**2.12**	**102**	*e*P	Pn	06 19 25.9	-3.8
PNIG				*i* S	Sn	06 19 56.6	+0.3

ISCJB **16** *06:21:48.7±0.4, 38°.37N±0°.02×22°.32E±0°.03, h14km±4km, Error ellipse: s-maj=3.8km s-min=3.3km az=14.9*
CSEM **16** *06:21:48.9±0.1, 38°.38N×22°.30E, h10km, ML1.9/10, Error ellipse: s-maj=1.9km s-min=1.8km az=32.0*
ATH **16** *06:21:49.3, 38°.37N×22°.32E, h10km±7km, MD2.7/8*
THE **16** *06:21:49.4, 38°.36N×22°.32E, h9km±1km, ML1.9/10, Error ellipse: s-maj=1.6km s-min=0.4km az=316.0*

ISC 16 06:21:49.3±0.6, 38°.37N±0°.02×22°.31E±0°.03, h14km±6km, n37, σ0§42/76, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KALE	**Kalithea**	**0.13**	**278**	P	**Pg**	**06 21 52.5**	**-0.3**
KALE				S	**Sg**	**06 21 54.9**	**-0.4**
KALE	**Kalithea**	**0.13**	**278**	P	**Pg**	**06 21 52.5**	**-0.3**
KALE				S	**Sg**	**06 21 54.9**	**-0.4**
DSF	**Desfina**	**0.18**	**77**	P	**Pg**	**06 21 53.2**	**-0.2**
DSF				S	**Sg**	**06 21 56.3**	**0.0**
DSF	**Desfina**	**0.18**	**77**	P	**Pg**	**06 21 53.2**	**-0.2**
DSF				S	**Sg**	**06 21 56.3**	**0.0**
TRIZ	**Trizonia**	**0.18**	**268**	P	**Pg**	**06 21 53.2**	**-0.3**
TRIZ				S	**Sg**	**06 21 56.4**	**-0.1**
TRIZ	**Trizonia**	**0.18**	**268**	P	**Pg**	**06 21 53.2**	**-0.3**
TRIZ				S	**Sg**	**06 21 56.4**	**-0.1**
LAKA	**Lakka**	**0.29**	**243**	P	**Pg**	**06 21 55.2**	**-0.1**
LAKA				S	**Sg**	**06 21 59.2**	**-0.2**
LAKA	**Lakka**	**0.29**	**243**	P	**Pg**	**06 21 55.2**	**-0.1**
LAKA				S	**Sg**	**06 21 59.2**	**-0.2**
EFP	**Efpalio**	**0.32**	**280**	*e*PG	**Pg**	**06 21 55.5**	**-0.4**
EFP				*e*SB	**Sg**	**06 22 00.9**	**+0.6**
EFP	**Efpalio**	**0.32**	**280**	P	**Pg**	**06 21 55.5**	**-0.4**
EFP				S	**Sg**	**06 22 00.8**	**+0.5**
EFP	**Efpalio**	**0.32**	**280**	P	**Pg**	**06 21 55.5**	**-0.4**
EFP				S	**Sg**	**06 22 00.8**	**+0.5**
UPR	**University Cam**	**0.42**	**258**	*e*PB	**Pg**	**06 21 57.8**	**+0.2**
UPR	**University Cam**	**0.42**	**258**	P	**Pg**	**06 21 57.8**	**+0.2**
UPR				S	**Sg**	**06 22 04.0**	**+0.7**
UPR	**University Cam**	**0.42**	**258**	P	**Pg**	**06 21 57.8**	**+0.2**
UPR				S	**Sg**	**06 22 04.0**	**+0.7**
GUR	**Goura**	**0.44**	**176**	*e*PG	**Pg**	**06 21 57.5**	**-0.4**
GUR				*e*SB	**Sg**	**06 22 04.0**	**+0.2**
GUR	**Goura**	**0.44**	**176**	P	**Pg**	**06 21 57.5**	**-0.4**
GUR				S	**Sg**	**06 22 03.2**	**-0.6**
GUR	**Goura**	**0.44**	**176**	P	**Pg**	**06 21 57.5**	**-0.4**
GUR				S	**Sg**	**06 22 03.2**	**-0.6**
GUR				*e*Sb	**Sg**	**06 22 04.0**	**+0.2**
LKR	**Lokris**	**0.61**	**63**	*e*PB	**Pg**	**06 22 00.5**	**-0.7**
LKR				*e*SB	**Sg**	**06 22 09.5**	**+0.2**

IDC **16** *07:16:21.5±1.7,5°.61N×61°.25E,h0km,mb4.0/9,mb1 4.1/9, mb1mx3.8/22,mbtmp4.0/9,MS4.1/3,Ms1 4.1/3, ms1mx3.5/28,Error ellipse: s-maj=52.5km s-min=22.8km az=54.0*

ISCJB **16** *07:16:22.7±0.9,5°.8N±0°.1×61°.5E±0°.1,h10km,mb3.9/11, MS4.1/3,Error ellipse: s-maj=20.0km s-min=19.1km az=142.4*

NEIC **16** *07:16:24.4±0.8,5°.80N×61°.46E,h10km,mb4.3/2,Error ellipse: s-maj=19.0km s-min=17.5km az=206.0*

ISC 16 07:16:24.5±0.9,5°.8N±0°.1×61°.5E±0°.1,h10km,n16, σ0s84/13,mb3.9/11,MS4.1/3,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**25.16**	**255**	*e*P		**P**	**07 21 51.0**	**+0.7**
	20nm,1.8s,mb4.3							
CMAR	**Chiang Mai Arr**	**38.62**	**68**	P		**P**	**07 23 50.5**	**+2.2**
	0.7nm,0.3s,mb3.8,baz=251,slow=9.2,SNR=3.9							
BRTR	**Keskin Array B**	**42.06**	**327**	P		**P**	**07 24 16.2**	**-0.3**
	0.9nm,0.8s,mb3.4,baz=134,slow=8.8,SNR=5.0							
ABKAR	**Akbulak array**	**43.32**	**359**	*e*P		**P**	**07 24 27.2**	**+0.7**
	2.6nm,0.9s,mb4.0							
AKTK	**Aktyubinsk**	**44.58**	**357**	P		**P**	**07 24 36.7**	**+0.1**
AKTO	**Aktyubinsk**	**44.58**	**357**	P		**P**	**07 24 36.7**	**+0.1**
	0.7nm,0.5s,mb3.7,baz=150,slow=20,SNR=3.1							
MKAR	**Makanchi Array**	**44.60**	**20**	P		**P**	**07 24 37.5**	**+0.6**
	0.3nm,0.2s,mb3.7,baz=207,slow=9.0,SNR=4.0							
LBTB	**Lobatse**	**46.44**	**227**	LR		LR	07 41 15.0	
	comp=Z,254nm,18.9s,MS4.2,baz=118,slow=32							
KURK	**Kurchatov**	**47.00**	**15**	P		**P**	**07 24 55.2**	**-0.6**
KURK	**Kurchatov**	**47.00**	**15**	P		**P**	**07 24 55.2**	**-0.6**
	0.7nm,0.2s,mb4.2,baz=206,slow=7.4,SNR=2.6							
TSUM	**Tsumeb**	**49.86**	**239**	LR		LR	07 44 50.9	
	comp=Z,171nm,18.4s,MS4.1,baz=321,slow=34							
ZALV	**Zalesovo Beam**	**51.61**	**17**	P		**P**	**07 25 29.8**	**-1.1**
	0.5nm,0.4s,mb3.8,baz=188,slow=8.7,SNR=2.4							
SUR	**Sutherland**	**54.20**	**223**	LR		LR	07 47 32.7	
	comp=Z,179nm,20.5s,MS4.1,baz=26,slow=35							
ARCES	**ARCESS Array B**	**67.84**	**347**	P		**P**	**07 27 21.9**	**-0.6**
	4.8nm,1.1s,mb4.4,baz=120,slow=6.3,SNR=3.4							
WRA	**Warramunga Arr**	**76.00**	**112**	P		**P**	**07 28 11.5**	**-1.0**
	2.2nm,0.9s,mb4.1,baz=292,slow=5.0,SNR=6.1							
ASAR	**Alice Springs**	**76.38**	**116**	P		**P**	**07 28 14.2**	**-0.3**
	0.9nm,0.7s,mb3.8,baz=288,slow=5.5,SNR=14							

BJI **16** *07:25:49.1,5°.23N×60°.57E,h10km,mB5.2/40,mb4.9/43, Ms5.1/50,Ms7 5.0/47*

SZGRF **16** *07:25:51.9,4°.50N×61°.57E,h33km,mb5.2,MS4.4, Carlsberg Ridge*

MOS **16** *07:25:54.5±1.2,5°.62N×61°.09E,h10km,mb5.3/45,Error ellipse: s-maj=9.3km s-min=4.2km az=114.6*

ISCJB **16** *07:25:54.7±0.8,5°.61N±0°.04×61°.14E±0°.03,h10km±5km, mb4.9/132,MS4.7/64,Error ellipse: s-maj=6.5km s-min=4.2km az=18.8*

IDC **16** *07:25:55.2±0.5,5°.75N×61°.32E,h0km,mb4.5/25, mb1 4.6/26,mb1mx4.5/27,mbtmp4.5/26,ML4.4/1,MS4.7/23, Ms1 4.7/23,ms1mx4.5/28,Error ellipse: s-maj=13.5km s-min=12.1km az=145.0*

NEIC **16** *07:25:56.9±0.3,5°.72N×61°.21E,h10km,mb5.2/51,Error ellipse: s-maj=9.0km s-min=7.4km az=216.0*

TEH **16** *07:25:57.0,5°.64N×61°.28E,h10km*

GCMT **16** *07:25:58.3±0.1,5°.71N×61°.23E,h12km,MW5.4,Moment Tensor Solution. s62,c86; s99,c215; Moment tensor: Scale 10^17Nm; Mrr-1.35±.02; Mθθ0.95±.02; Mφφ0.40±.02; Mrθ0.65±.05; Mθφ-0.56±.01; Mφr-0.11±.06; Best double couple: M0 1.50000×10^17 NP1:ϕs130.00000°,δ33.00000°, λ-75.00000°. NP2:ϕs293.00000°,δ58.00000°, λ-100.00000°. Principal axes: T 1.4400, Plg13.0000°, Azm29.0000°; N 0.0900, Plg8.0000°, Azm298.0000°; P -1.5200, Plg75.0000°, Azm176.0000°; Data Used: ll IU IC G CN. Surface waves from 108 sta.*

DJA **16** *07:26:18,5°.63N×61°.24E,h199km,mb4.6/20*

ISC 16 07:25:58.1±0.9,5°.65N±0°.04×61°.20E±0°.03,h17km±5km, h17km±2.0km:pP-P,n368,σ1s15/398,mb4.9/132,MS4.7/64, 21C-20D,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSEY	**Mahe Island**	**11.73**	**209**	*e*Pn		**Pn**	**07 28 44.6**	**-0.2**
MSEY				*e*Sn		**Sn**	**07 30 50.5**	**-5.0**
MNGI	**Mangalore**	**15.27**	**61**	*e*PKP		**Pn**	**07 29 31.8**	**-1.1**
MNGI				*i* x		x	07 32 56.0	
JMDO	**Jabal Madar**	**16.89**	**350**	Pn		**Pn**	**07 29 56.2**	**+2.5**
	SNR=12							
KAD	**Karad**	**17.20**	**47**	*e*PKP		**Pn**	**07 29 56.4**	**-1.2**
KAD				AMb		AMB	07 30 12.1	
	comp=Z,68nm,1.3s							
BSY	**Bisya**	**17.43**	**348**	Pn		**Pn**	**07 30 02.7**	**+2.2**
	SNR=36							
SMDO	**Samad**	**17.57**	**350**	Pn		**Pn**	**07 30 03.1**	**+0.8**
	SNR=13							
ARQ	**Araqi**	**18.16**	**346**	Pn		**Pn**	**07 30 10.4**	**+1.0**
	SNR=23							
HOQ	**Hoqain**	**18.22**	**349**	Pn		**Pn**	**07 30 11.1**	**+0.8**
	SNR=29							
ATD	**Arta Tunnel**	**19.06**	**289**	P		**Pn**	**07 30 20.4**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=90,slow=20,SNR=2.9							
ATD				LR		LR	07 36 45.2	
	comp=Z,1μm,18.6s,baz=84,slow=34							
PALK	**Pallekele**	**19.45**	**84**	*e*P		**Pn**	**07 30 26.5**	**+1.3**
	comp=Z,29nm,1.1s							
PALK	**Pallekele**	**19.45**	**84**	*e*P		**Pn**	**07 30 26.5**	**+1.3**
PALK				pmax		pmax		
	comp=Z,29nm,1.1s							
ASHO	**Ashiyiah**	**19.56**	**346**	P		**Pn**	**07 30 26.3**	**-0.2**
	SNR=18							
LATR	**Latur**	**19.64**	**48**	*e*PKP		**Pn**	**07 30 25.4**	**-2.1**
LATR				AMb		AMB	07 30 33.5	
	comp=Z,61nm,1.6s							
HATD	**Hatta, Dubai**	**19.68**	**346**	P		**Pn**	**07 30 28.9**	**+1.1**
	SNR=23							
NAZ	**Nazwa, Dubai**	**19.95**	**345**	P		**Pn**	**07 30 30.1**	**-1.0**
	SNR=12							
HYB	**Hyderabad**	**20.61**	**54**	*i* P		**P**	**07 30 36.5**	**-0.2**
HYB				*e*S		**S**	**07 34 26.0**	**-0.6**
HYB				LR		LR	07 36 50.0	
	comp=Z,8.7nm,16.0s							
AKL	**Akola**	**21.44**	**44**	*e*PKP		**P**	**07 30 44.1**	**-1.4**
AKL				*ex*		x	07 30 50.7	
	comp=Z,96nm,1.6s							
AKL				*i* x		x	07 36 10.7	
IBND	**Bandar-abas**	**22.13**	**349**	*e*P		**P**	**07 30 49.2**	**-3.7**
AAE	**Adis Abeba**	**22.50**	**280**	*e*P		**P**	**07 31 01.2**	**+4.2**
AAE				*e*S		**S**	**07 35 14.9**	**+11**
NGP	**Nagpur**	**23.17**	**47**	*e*PKP		**P**	**07 31 03.9**	**-0.1**
NGP				*ex*		x	07 35 20.5	
BHPL	**Bhopal**	**23.47**	**40**	*e*PKP		**P**	**07 31 06.2**	**-0.9**
BHPL				AMb		AMB	07 31 16.5	
	comp=Z,72nm,1.3s,mb4.9							
AJM	**Ajmer**	**24.37**	**30**	*e*PKP		**P**	**07 31 15.2**	**-0.2**
ISRV	**Sarvestan**	**24.81**	**343**	*e*P		**P**	**07 31 20.5**	**+1.1**
KMBO	**Kilima Mbogo**	**24.84**	**255**	*e*P		**P**	**07 31 23.0**	**+3.2**
	comp=Z,169nm,2.0s,mb5.2							
KMBO	**Kilima Mbogo**	**24.84**	**255**	P		**P**	**07 31 22.4**	**+2.6**
	comp=Z,9.8nm,1.0s,mb4.3,baz=180,slow=24,SNR=16							
KMBO				LR		LR	07 39 55.1	
	comp=Z,3μm,21.0s,MS4.8,baz=91,slow=34							
KMBO	**Kilima Mbogo**	**24.84**	**255**	*e*P		**P**	**07 31 23.0**	**+3.2**
KMBO				pmax		pmax		
	comp=Z,169nm,2.0s							
KMBO	**Kilima Mbogo**	**24.84**	**255**	P		**P**	**07 31 23.5**	**+3.7**
	SNR=14							
IPAR	**Pars**	**25.26**	**343**	*e*P		**P**	**07 31 23.0**	**-0.5**
QRN	**Al-Qurain**	**26.19**	**333**	*e*P		**P**	**07 31 30.6**	**-1.2**
QRN				AMb		AMB	07 31 34.7	
	comp=Z,105nm,1.0s,mb5.3							
KHET	**Khetri**	**26.27**	**30**	*e*PKP		**P**	**07 31 32.3**	**-0.3**
IBAF	**Bafgh**	**26.34**	**349**	*e*P		**P**	**07 31 33.5**	**+0.3**
RDF	**Al-Radifah**	**26.51**	**332**	*e*P		**P**	**07 31 34.2**	**-0.6**
RDF				AMb		AMB	07 31 38.2	
	comp=Z,80nm,1.9s,mb4.9							
KBD	**Kabd**	**26.66**	**333**	*e*P		**P**	**07 31 35.3**	**-0.8**
KUDL	**Kundal**	**26.67**	**31**	*e*PKP		**P**	**07 31 34.8**	**-1.4**
KUDL				AMb		AMB	07 31 44.7	
	comp=Z,42nm,1.5s,mb4.7							
NAY	**Al-Naaiem**	**26.93**	**332**	*e*P		**P**	**07 31 38.2**	**-0.3**
NAY				AMb		AMB	07 31 43.6	
	comp=Z,27nm,2.2s,mb4.4							
SONA	**Sohna**	**27.07**	**32**	*e*PKP		**P**	**07 31 39.2**	**-0.6**
SONA				AMb		AMB	07 31 42.3	
	comp=Z,14nm,0.6s,mb4.6							
AYAN	**Aya Nagar**	**27.27**	**32**	*e*PKP		**P**	**07 31 41.9**	**+0.2**
MIB	**Mutribah**	**27.36**	**333**	*e*P		**P**	**07 31 41.1**	**-1.3**
MIB				AMb		AMB	07 31 48.2	
	comp=Z,41nm,1.2s,mb4.8							
KBL	**Kabul**	**29.65**	**13**	*e*P		**P**	**07 32 05.2**	**+2.5**
	comp=Z,220nm,2.5s,mb5.5							
KBL	**Kabul**	**29.65**	**13**	*e*P		**P**	**07 32 05.3**	**+2.5**
KBL				pmax		pmax		
	comp=Z,220nm,2.5s,mb5.4							
KLP	**Kalpa**	**30.31**	**30**	*e*PKP		**P**	**07 32 09.7**	**+1.0**
KLP				AMb		AMB	07 32 20.8	
	comp=Z,59nm,1.3s,mb5.2							
CAL	**Calcutta**	**31.12**	**55**	*e*PKP		**P**	**07 32 15.5**	**-0.4**
CAL				*ex*		x	07 37 42.5	
EIL	**Elat**	**34.41**	**317**	P		**P**	**07 32 45.5**	**+0.8**
	comp=Z,4.5nm,0.9s,mb4.4,baz=43,slow=1.8,SNR=6.6							
EIL				LR		LR	07 46 12.2	
	comp=Z,2μm,18.8s,MS4.8,baz=121,slow=35							
ASF	**Jabal al Asfar**	**34.81**	**322**	LR		LR	07 46 11.3	
	comp=Z,1μm,19.9s,MS4.6,baz=183,slow=35							
TPTI		**35.95**	**92**	P		**P**	**07 32 59.5**	**+1.4**
	comp=Z,14nm,1.3s,mb4.8							
KSH	**Kashi**	**36.26**	**19**	P		**P**	**07 32 57.1**	**-3.3**
KSH				*e*pP		pP	07 33 01.8	-4.0
KSH				*e*sP		sP	07 33 04.3	-3.6
KSH				*e*PP		PP	07 34 18.0	-5.1
KSH				*e*PcP		PcP	07 35 25.3	-0.1
KSH				*e*S		**S**	**07 38 32.6**	**-7.6**
KSH				*e*ScP		ScP	07 39 09.3	-2.0
KSH				*e*PcS		PcS	07 39 11.4	-1.5
KSH				*e*ScS		ScS	07 43 13.1	-4.0
KSH				pmax		pmax		
	comp=Z,2.0nm,0.5s,mb4.3							
KSH				pmax		pmax		
	comp=Z,150nm,4.1s							
KSH				LR		LR		
	comp=N,2μm,19.9s							
KSH				LR		LR		
	comp=E,590nm,12.3s							
KSH				LR		LR		
	comp=Z,1μm,16.3s,MS4.8							
MMAI	**Mount Meron Ar**	**36.31**	**322**	LR		LR	07 47 09.1	
	comp=Z,1μm,19.7s,MS4.7,baz=140,slow=35							
LSA	**Lhasa**	**37.02**	**46**	P		**P**	**07 33 08.1**	**+1.1**
LSA				sP		sP	07 33 20.1	+5.6
LSA				PP		PP	07 34 37.4	+5.8
LSA				LR		LR		
	comp=E,3μm,33.5s							
LSA				LR		LR		
	comp=Z,2μm,28.3s							
GNI	**Garni**	**37.41**	**339**	*e*P		**P**	**07 33 13.1**	**+3.0**
	comp=Z,92nm,1.5s,mb5.4							
GNI	**Garni**	**37.41**	**339**	P		**P**	**07 33 12.0**	**+1.8**
	comp=Z,3.0nm,0.3s,mb4.5,baz=49,slow=16,SNR=3.8							
GNI	**Garni**	**37.41**	**339**	*ce*P		**P**	**07 33 12.4**	**+2.3**
GNI				pmax		pmax		
	comp=Z,63nm,1.7s							
UCH	**Uchtor**	**38.30**	**16**	P		**P**	**07 33 19.1**	**+1.4**
	SNR=7.4							
KZA	**Kyzart**	**38.37**	**17**	P		**P**	**07 33 20.2**	**+1.9**
	SNR=14							
EKS2	**Erkin-Say**	**38.51**	**15**	P		**P**	**07 33 20.8**	**+1.3**
	SNR=26							
MALT	**Malatya**	**38.53**	**331**	*e*P		**P**	**07 33 21.3**	**+1.6**
	comp=Z,217nm,2.6s,mb5.4							
MALT	**Malatya**	**38.53**	**331**	*e*P		**P**	**07 33 21.3**	**+1.6**
MALT				pmax		pmax		
	comp=Z,217nm,2.6s,mb5.4							
MALT	**Malatya**	**38.53**	**331**	*ij P*		**P**	**07 33 22.3**	**+2.6**
MALT	**Malatya**	**38.53**	**331**	P		**P**	**07 33 21.3**	**+1.6**
	comp=Z,468nmcomp=Z,23nm,1.8s,mb4.6							
AAK	**Ala-Archa**	**38.67**	**16**	P		**P**	**07 33 22.3**	**+1.5**
	comp=Z,81nm,0.8s,mb5.5,SNR=10							
AAK	**Ala-Archa**	**38.67**	**16**	*e*P		**P**	**07 33 21.5**	**+0.7**
	comp=Z,42nm,1.4s,mb5.0							
AAK	**Ala-Archa**	**38.67**	**16**	P		**P**	**07 33 21.1**	**+0.3**
	comp=Z,3.8nm,0.4s,mb4.5,baz=211,slow=5.0,SNR=13							
AAK	**Ala-Archa**	**38.67**	**16**	*de*P		**P**	**07 33 22.3**	**+1.5**
AAK				pmax		pmax		
	comp=Z,25nm,2.5s,mb4.5							
AAK	**Ala-Archa**	**38.67**	**16**	P		**P**	**07 33 22.0**	**+1.2**
	comp=Z,154nmcomp=Z,5.8nm,2.2s,mb3.9							
LSZ	**Lusaka**	**38.75**	**237**	*e*P		**P**	**07 33 24.3**	**+2.4**
	comp=Z,79nm,2.0s,mb5.1							
LSZ	**Lusaka**	**38.75**	**237**	P		**P**	**07 33 23.4**	**+1.5**
	comp=Z,4.3nm,1.0s,mb4.2,baz=49,slow=8.8,SNR=5.5							
LSZ				LR		LR	07 47 55.1	
	comp=Z,3μm,18.6s,MS5.2,baz=57,slow=34							
LSZ	**Lusaka**	**38.75**	**237**	*e*P		**P**	**07 33 24.3**	**+2.5**
LSZ				pmax		pmax		
	comp=Z,79nm,2.0s,mb5.1							
TBLG	**Delisi**	**38.81**	**340**	*e*P		**P**	**07 33 21.5**	**-0.5**
KBK	**Karagaybulak**	**38.82**	**16**	P		**P**	**07 33 23.8**	**+1.7**
	SNR=9.0							
ULHL	**Ulahol**	**38.82**	**18**	P		**P**	**07 33 23.2**	**+1.2**
	SNR=7.0							
FRU	**Bishkek**	**38.89**	**16**	*e*P		**P**	**07 33 24.0**	**+1.4**
FRU				pmax		pmax		
	comp=Z,140nm,2.2s,mb5.3							
FRU				pmax		pmax		
	comp=E,1μm,17.0s							
CMAR	**Chiang Mai Arr**	**38.95**	**68**	P		**P**	**07 33 23.4**	**0.0**
	comp=E,5.2nm,0.8s,mb4.3,baz=258,slow=9.4,SNR=29							
CMAR				PcP		PcP	07 35 33.5	-0.6
	comp=E,1.8nm,0.3s,baz=251,slow=4.8,SNR=6.1							
CMAR				LR		LR	07 48 05.8	
	comp=E,901nm,21.3s,MS4.6,baz=264,slow=34							
CMAR	**Chiang Mai Arr**	**38.95**	**68**	P		**P**	**07 33 23.5**	**0.0**
CMAR							07 35 33.5	
CHTO	**Chiang Mai**	**39.04**	**67**	*e*P		**P**	**07 33 25.1**	**+0.9**
	comp=E,19nm,1.2s,mb4.7							
CHTO	**Chiang Mai**	**39.04**	**67**	*e*P		**P**	**07 33 25.1**	**+0.9**
CHTO				pmax		pmax		
	comp=Z,19nm,1.2s,mb4.7							
CHTO	**Chiang Mai**	**39.04**	**67**	P		**P**	**07 33 25.1**	**+0.9**
	comp=Z,604nmcomp=Z,18nm,2.7s,mb4.3							
CHTO	**Chiang Mai**	**39.04**	**67**	P		**P**	**07 33 25.4**	**+1.2**
	SNR=7.3							
MAK	**Makhachkala**	**39.09**	**344**	*e*P		**P**	**07 33 31.5**	**+7.2**
MAK				*e*			07 34 57.7	
MAK				*e*PPP			07 35 19.8	
MAK				*e*			07 35 30.6	
MAK				*e*S		**S**	**07 39 31.0**	**+8.0**
MAK				*e*			07 43 34.4	
MAK				pmax		pmax		
	comp=Z,284nm,1.8s,mb5.7							
MAK				MLR		MLR		
	comp=Z,658nm,18.0s,MS4.5							
TKM2	**Tokmak 2**	**39.25**	**17**	P		**P**	**07 33 26.5**	**+0.9**
	SNR=6.3							
USP	**Ospenovka**	**39.27**	**15**	P		**P**	**07 33 26.6**	**+0.9**
	SNR=7.2							
KULM	**Kulim**	**39.27**	**89**	*e*P		**P**	**07 33 25.6**	**-0.7**
	comp=Z,21nm,0.9s,mb4.9							
KULM	**Kulim**	**39.27**	**89**	P		**P**	**07 33 25.9**	**-0.4**
	comp=Z,26nm,0.9s,mb4.9							
PPI	**Padang Panjang**	**39.61**	**98**	P		**P**	**07 33 30.9**	**+1.8**
	comp=Z,27nm,1.2s,mb4.8							
BKNI	**Bangkinang**	**40.12**	**96**	P		**P**	**07 33 34.5**	**+1.1**
	comp=Z,40nm,1.1s,mb5.1							
SDSI	**Sungai Dareh**	**40.70**	**98**	P		**P**	**07 33 38.7**	**+0.5**
	comp=Z,1μmcomp=Z,21nm,1.2s,mb4.6							
KIV	**Kislovodsk**	**41.48**	**340**	⇑*iP*		**P**	**07 33 45.9**	**+1.8**
KIV				*i*			07 35 28.5	
KIV				*i* S		**S**	**07 40 00.6**	**+1.8**
KIV				*i* SS		SS	07 43 04.5	+1.0
KIV				pmax		pmax		
	comp=Z,9.0nm,1.0s,mb4.3							
KIV				MLR		MLR		
	comp=Z,700nm,17.0s,MS4.6							
BR131	**Keskin Array S**	**42.04**	**328**	*e*P		**P**	**07 33 50.0**	**+1.2**
BRTR	**Keskin Array B**	**42.04**	**328**	P		**P**	**07 33 48.7**	**-0.1**
	comp=Z,8.5nm,0.8s,mb4.4,baz=148,slow=9.8,SNR=45							
BRTR				LR		LR	07 51 38.4	
	comp=Z,983nm,19.7s,MS4.7,baz=119,slow=37							
SOC	**Sochi**	**42.26**	**337**	*e*P		**P**	**07 33 49.8**	**-0.7**
SOC				*e*			07 35 31.0	
SOC				*e*PPP			07 36 01.5	
SOC				*e*S		**S**	**07 40 09.1**	**-1.2**
SOC				*e*SS		SS	07 43 12.7	-6.2
SOC				pmax		pmax		
	comp=Z,7.0nm,0.4s,mb4.6							
SOC				MLR		MLR		
	comp=Z,873nm,19.0s,MS4.7							
ABKAR	**Akbulak array**	**43.47**	**359**	*e*P		**P**	**07 34 00.6**	**+0.4**
	comp=Z,15nm,0.9s,mb4.7							
MDSI	**Maura Dua**	**44.09**	**102**	P		**P**	**07 34 07.1**	**+1.4**
	comp=Z,16nm,1.8s,mb4.5							
ANN	**Anapa**	**44.18**	**336**	*e*P		**P**	**07 34 05.7**	**-0.3**
ANN				*e*			07 35 50.4	
ANN				*e*S		**S**	**07 40 39.3**	**+0.8**
ANN				*e*SS		SS	07 44 01.5	+4.9
ANN				*e*SSS			07 44 45.8	
ANN				pmax		pmax		
	comp=Z,296nm,8.1s							
ANN				MLR		MLR		
	comp=Z,605nm,22.0s,MS4.5							
KMI	**Kunming**	**44.23**	**60**	P		**P**	**07 34 07.9**	**+1.1**
KMI				pP		pP	07 34 17.6	+5.4
KMI				PP		PP	07 35 51.1	+1.1
KMI				S		**S**	**07 40 39.3**	**-0.5**
KMI				pmax		pmax		
	comp=Z,20nm,0.7s,mb5.0							
KMI				pmax		pmax		
	comp=Z,230nm,4.6s							
KMI				LR		LR		
	comp=N,750nm,17.5s,MS4.9							
KMI				LR		LR		
	comp=E,950nm,18.6s,MS4.9							
KMI				LR		LR		
	comp=Z,1μm,18.6s,MS4.9							
WMQ	**Urumqi**	**44.59**	**27**	P		**P**	**07 34 10.5**	**+1.2**
WMQ				pP		pP	07 34 15.0	+0.3
WMQ				sP		sP	07 34 17.5	+0.7
WMQ				PcP		PcP	07 35 52.8	+0.7
WMQ				PP		PP	07 35 55.8	+2.3
WMQ				ScP		ScP	07 39 44.1	+0.3
WMQ				S		**S**	**07 40 45.4**	**+1.0**
WMQ				SS		SS	07 43 56.9	-7.7
WMQ				ScS		ScS	07 44 05.5	-1.1
WMQ				pmax		pmax		
	comp=Z,51nm,1.2s,mb5.2							
WMQ				pmax		pmax		
	comp=Z,450nm,4.0s							
WMQ				LR		LR		
	comp=N,1μm,24.3s,MS5.0							
WMQ				LR		LR		
	comp=E,2μm,20.8s,MS5.0							
WMQ				LR		LR		
	comp=Z,1μm,22.2s,MS4.8							
KASI	**Kota Agung**	**44.63**	**104**	P		**P**	**07 34 10.5**	**+0.4**
	comp=Z,47nm,1.4s,mb5.1							
KLSI		**44.67**	**102**	P		**P**	**07 34 11.6**	**+1.2**
	comp=Z,34nm,1.5s,mb5.0							
AKTK	**Aktyubinsk**	**44.72**	**357**	P		**P**	**07 34 09.4**	**-0.7**
AKTO	**Aktyubinsk**	**44.72**	**357**	P		**P**	**07 34 09.4**	**-0.7**
	comp=Z,9.3nm,0.9s,mb4.6,baz=170,slow=8.0,SNR=23							
MKAR	**Makanchi Array**	**44.85**	**21**	P		**P**	**07 34 10.0**	**-1.3**
MKAR				PcP		PcP	07 35 52.7	-0.2
MKAR				LR		LR	07 54 22.6	
MKAR	**Makanchi Array**	**44.85**	**21**	P		**P**	**07 34 10.0**	**-1.3**
	comp=Z,4.8nm,0.8s,mb4.3,baz=206,slow=8.0,SNR=26							
MKAR				PcP		PcP	07 35 52.7	-0.2
	comp=Z,1.8nm,0.7s,baz=237,slow=4.2,SNR=4.9							
MKAR				LR		LR	07 54 22.6	
	comp=Z,440nm,19.8s,MS4.4,baz=202,slow=38							
MKAR	**Makanchi Array**	**44.85**	**21**	P		**P**	**07 34 10.0**	**-1.3**
MKAR							07 35 52.7	
PPBI	**Pangkal Pinang**	**45.55**	**99**	P		**P**	**07 34 18.1**	**+0.7**
SIM	**Simferopol'**	**45.73**	**333**	P		**P**	**07 34 20.0**	**+1.7**
SIM							07 36 08.0	
SIM				S		**S**	**07 41 07.7**	**+6.8**
SIM				pmax		pmax		
	comp=Z,140nm,10.6s							
SIM				MLR		MLR		
	comp=Z,340nm,19.0s,MS4.3							
CD2	**Chengdu**	**47.16**	**52**	P		**P**	**07 34 29.1**	**-0.7**
CD2				pP		pP	07 34 33.6	-1.6
CD2				sP		sP	07 34 36.1	-1.3
CD2				PP		PP	07 36 19.5	-1.3
CD2				ScP		ScP	07 39 53.3	-1.4
CD2				S		**S**	**07 41 19.9**	**-1.9**
CD2				ScS		ScS	07 44 20.3	-3.4
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb5.0							
CD2				pmax		pmax		
	comp=Z,210nm,6.5s							
CD2				LR		LR		
	comp=N,460nm,16.7s,MS4.8							
CD2				LR		LR		
	comp=E,680nm,16.6s,MS4.8							
CD2				LR		LR		
	comp=Z,1μm,18.1s,MS5.0							
KURK	**Kurchatov**	**47.23**	**15**	P		**P**	**07 34 29.6**	**-0.4**
	comp=Z,41nm,0.8s,mb5.4,SNR=5.1							
KURK	**Kurchatov**	**47.23**	**15**	*e*P		**P**	**07 34 29.7**	**-0.2**
	comp=Z,73nm,2.2s,mb5.2							
KURK	**Kurchatov**	**47.23**	**15**	*e*P		**P**	**07 34 30.0**	**0.0**
KURK				pmax		pmax		
	comp=Z,26nm,2.5s,mb4.7							
BVAR	**Borovoye Array**	**47.83**	**7**	P		**P**	**07 34 33.8**	**-0.8**
	comp=Z,1.3nm,0.7s,mb4.1,baz=179,slow=7.4,SNR=9.3							
BVAR				PcP		PcP	07 36 02.8	-0.4
	comp=Z,2.4nm,0.8s,baz=172,slow=3.0,SNR=6.0							
BRVK	**Borovoye**	**47.85**	**7**	P		**P**	**07 34 35.1**	**+0.4**
	comp=Z,47nm,1.8s

comp=Z,450nm,15.0s,MS4.6
VSR MLR MLR
comp=N,290nm,20.0s
VSR MLR MLR
comp=E,170nm,12.0s
QIZ Qiongzhong 49.18 70 P **P** **07 34 45.3 -0.3**
QIZ S **S** **07 41 52.8 +2.1**
QIZ pmax pmax
comp=Z,18nm,2.1s,mb4.7
QIZ LR LR
comp=N,340nm,18.1s
QIZ LR LR
comp=E,210nm,24.1s
QIZ LR LR
comp=Z,630nm,37.5s
LZH Lanzhou 49.44 46 *e*P **P** **07 34 46.8 -0.5**
LZH pP pP 07 34 50.0 -2.8
LZH sP sP 07 34 51.3 -3.6
LZH PP PP 07 36 41.5 -0.1
LZH S **S** **07 41 52.1 -1.8**
LZH pmax pmax
comp=Z,25nm,1.2s,mb5.1
LZH pmax pmax
comp=Z,240nm,7.1s
LZH LR LR
comp=N,640nm,17.0s
LZH LR LR
comp=Z,740nm,19.2s,MS4.7
VAY Valandovo 49.47 322 *e*P **P** **07 34 46.4 -1.0**
TSUM Tsumeb 49.53 239 *e*P **P** **07 34 50.8 +2.5**
comp=Z,7.0nm,0.8s,mb4.7
TSUM Tsumeb 49.53 239 P **P** **07 34 49.5 +1.2**
comp=Z,9.2nm,0.9s,mb4.8,baz=31,slow=8.2,SNR=7.8
KIS Kishinev 49.72 331 *e*P **P** **07 34 50.0 +0.8**
KIS Kishinev 49.72 331 P **P** **07 34 50.0 +0.8**
KIS *e* 07 36 50.0
KIS *e* 07 42 02.0
VTS Vitosha 49.83 323 ⇑P **P** **07 34 51.0 +0.9**
VTS Vitosha 49.83 323 ⇑*i*P **P** **07 34 51.0 +0.9**
VRI Vrincioaia 49.97 329 ⇑P **P** **07 34 52.7 +1.5**
VRI Vrincioaia 49.97 329 ⇑*i*P **P** **07 34 52.7 +1.5**
PLOR Plostina 50.00 329 P **P** **07 34 53.0 +1.6**
PLOR Plostina 50.00 329 ⇑*i*P **P** **07 34 52.7 +1.3**
MLR Muntele Rosu 50.12 328 ⇓P **P** **07 34 53.7 +1.4**
MLR Muntele Rosu 50.12 328 P **P** **07 34 54.1 +1.8**
MLR Muntele Rosu 50.12 328 ⇓*i*P **P** **07 34 53.7 +1.4**
TESR 50.45 329 ⇓P **P** **07 34 55.5 +0.8**
TESR 50.45 329 ⇓*i*P **P** **07 34 55.5 +0.7**
VOIR 50.56 327 ⇑P **P** **07 34 56.7 +1.0**
VOIR 50.56 327 P **P** **07 34 56.8 +1.1**
VOIR 50.56 327 ⇑*i*P **P** **07 34 56.7 +1.0**
ARU Arti 50.69 358 *e*P **P** **07 34 56.3 -0.1**
comp=Z,119nm,1.9s,mb5.5
ARU Arti 50.69 358 *d i*P **P** **07 34 56.2 -0.2**
ARU *e* 07 36 12.5
ARU *e* 07 36 53.4
ARU PPP 07 37 48.7
ARU S **S** **07 42 10.8 +0.2**
ARU SS SS 07 45 45.5 +0.3
ARU pmax pmax
comp=Z,54nm,2.5s,mb5.0
ARU MLR MLR
comp=Z,920nm,19.0s,MS4.8
SBUM Sibu 50.98 91 P **P** **07 35 00.0 +0.6**
comp=Z,19nm,1.1s,mb5.0
SVE Sverdlovsk 51.04 360 *e*P **P** **07 34 59.1 0.0**
NGJI Ngawi 51.79 104 P **P** **07 35 05.9 +0.5**
comp=Z,58nm,2.5s,mb5.1
ZALV Zalesovo Beam 51.84 18 P **P** **07 35 03.3 -1.8**
comp=Z,5.0nm,0.8s,mb4.5,baz=217,slow=7.2,SNR=23
ZALV PcP PcP 07 36 16.5 -1.4
comp=Z,1.7nm,0.6s,baz=235,slow=4.6,SNR=2.5
ZALV LR LR 07 57 39.0
comp=Z,735nm,20.9s,MS4.7,baz=24,slow=37
ZALV Zalesovo Beam 51.84 18 P **P** **07 35 03.3 -1.8**
ZALV 07 36 16.5
BUR01 Bucovina Ar. S 51.91 330 P **P** **07 35 07.5 +1.7**
BURAR Bucovina Array 51.91 330 ⇓P **P** **07 35 06.9 +1.1**
BURAR Bucovina Array 51.91 330 ⇓*i*P **P** **07 35 06.9 +1.1**
NVS Novosibirsk 52.17 16 *e*P **P** **07 35 06.9 -0.6**
NVS *e*S **S** **07 42 27.3 -3.8**
NVS pmax pmax
comp=Z,97nm,2.6s,mb5.3
NVS pmax pmax
comp=N,92nm,2.3s
NVS smax
comp=E,49nm,2.5s
SJI Sawahan 52.17 104 P **P** **07 35 06.1 -2.1**
comp=E,33nm,3.0s,mb4.7
AKASG Malin Array Be 52.24 335 P **P** **07 35 07.0 -1.1**
comp=E,0.3nm,0.3s,mb3.7,baz=127,slow=6.4,SNR=18
AKASG LR LR 07 59 21.3
comp=E,434nm,20.4s,MS4.5,baz=115,slow=38
KIEV Kiev 52.24 335 *e*P **P** **07 35 08.2 0.0**
comp=E,9.6nm,1.1s,mb4.6
KIEV Kiev 52.24 335 *e*P **P** **07 35 08.2 0.0**
KIEV pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
XAN Xi'an 52.38 51 P **P** **07 35 08.4 -1.1**
XAN sP sP 07 35 13.8 -3.3
XAN PP PP 07 37 05.5 -2.8
XAN S **S** **07 42 32.9 -1.9**
XAN pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
XAN pmax pmax
comp=Z,57nm,6.0s
XAN LR LR
comp=N,600nm,19.2s,MS4.7
XAN LR LR
comp=E,330nm,20.5s,MS4.7
XAN LR LR
comp=Z,390nm,20.5s,MS4.4
BZS Buzias 52.56 326 ⇓P **P** **07 35 11.4 +0.8**
BZS Buzias 52.56 326 ⇓*i*P **P** **07 35 11.4 +0.8**
DRGR 52.68 327 ⇓P **P** **07 35 11.8 +0.3**
DRGR 52.68 327 P **P** **07 35 12.7 +1.2**
DRGR 52.68 327 ⇓*i*P **P** **07 35 11.8 +0.3**
GZH Guangzhou 53.09 65 P **P** **07 35 18.5 +3.5**
GZH S **S** **07 42 50.8 +5.9**
GZH LR LR
comp=N,630nm,19.8s,MS4.8
GZH LR LR
comp=E,410nm,18.6s,MS4.8
OBN Obninsk 53.15 343 ⇑*e*P **P** **07 35 14.8 0.0**
OBN *e* 07 37 17.7
OBN *i* S **S** **07 42 50.9 +6.4**
OBN *e*SS SS 07 46 20.3 -3.8
OBN pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
MOS Moscow 53.38 344 *e*P **P** **07 35 14.3 -2.2**
MOS *e* 07 37 15.3
MOS pmax pmax
comp=Z,46nm,0.9s,mb5.4
SOKR Solikamsk 53.90 357 *c i*P **P** **07 35 21.0 +0.8**
SOKR S **S** **07 42 58.9 +4.4**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SOKR MLR MLR
comp=Z,1μm,19.0s,MS5.0
LVV L'vov 53.97 331 *e*P **P** **07 35 21.0 +0.1**
UZH Uzhgorod 54.06 329 *e*P **P** **07 35 21.8 +0.2**
UZH *e* 07 35 24.2
PKSM Moragy 54.59 325 ⇓P **P** **07 35 26.5 +1.0**
PKSM Moragy 54.59 325 ⇓*i*P **P** **07 35 26.5 +1.0**
CRVS Cervenica-Dubn 54.66 329 *e*P **P** **07 35 27.0 +1.0**
comp=Z,79nm,2.2s,mb5.3
CRVS Cervenica-Dubn 54.66 329 *e*P **P** **07 35 27.0 +1.0**
CRVS pmax pmax
comp=Z,79nm,2.2s,mb5.4
CRVS Cervenica-Dubn 54.66 329 *e*P **P** **07 35 27.0 +1.0**
PSZ Piszkesteto 54.88 327 *e*P **P** **07 35 27.6 0.0**
comp=Z,6.6nm,0.8s,mb4.7
PSZ Piszkesteto 54.88 327 ⇑P **P** **07 35 28.0 +0.4**
PSZ Piszkesteto 54.88 327 ⇑*i*P **P** **07 35 28.0 +0.4**
PSZ Piszkesteto 54.88 327 ⇓*e*P **P** **07 35 27.4 -0.2**
KECS Kecovo 54.91 328 *e*P **P** **07 35 28.4 +0.6**
comp=Z,3.5nm,1.0s,mb4.3
KECS Kecovo 54.91 328 *e*P **P** **07 35 28.4 +0.6**
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
KECS Kecovo 54.91 328 *e*P **P** **07 35 28.4 +0.6**
STHS Stebnicka Huta 55.09 329 *e*P **P** **07 35 30.4 +1.3**
comp=Z,5.8nm,1.1s,mb4.5
STHS Stebnicka Huta 55.09 329 *e*P **P** **07 35 30.4 +1.3**
STHS pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
STHS Stebnicka Huta 55.09 329 *e*P **P** **07 35 30.4 +1.3**
WHN Wuhan 55.65 57 P **P** **07 35 33.0 -0.4**
WHN S **S** **07 43 18.3 -0.8**
WHN LR LR
comp=N,1μm,12.9s,MS5.2
WHN LR LR
comp=E,440nm,12.0s,MS5.2
WHN LR LR
comp=Z,3μm,31.6s
BTO Baotou 55.79 44 *e*P **P** **07 35 32.9 -1.4**
VYHS Vyhne 55.80 327 *e*P **P** **07 35 34.6 +0.4**
comp=Z,62nm,2.4s,mb5.2
VYHS Vyhne 55.80 327 *e*P **P** **07 35 34.6 +0.4**
VYHS pmax pmax
comp=Z,62nm,2.4s,mb5.2
VYHS Vyhne 55.80 327 *e*P **P** **07 35 34.6 +0.4**
KOLL Kolacno 56.08 327 *e*P **P** **07 35 36.9 +0.7**
KOLL Kolacno 56.08 327 *e*P **P** **07 35 36.9 +0.7**
KEST Kesra 56.15 310 LR LR 08 01 46.9
comp=Z,149nm,18.8s,MS4.1,baz=23,slow=38
GCIS Gornji Cirnik 56.17 323 *e*P **P** **07 35 41.1 +4.2**
BOJS Bojanci 56.21 323 *e*P **P** **07 35 37.9 +0.7**
BOJS *i* pP 07 35 44.5 +1.7
TAM Tamanrasset 56.25 294 *e*P **P** **07 35 40.5 +2.6**
comp=Z,21nm,1.4s,mb5.0
TAM Tamanrasset 56.25 294 *e*P **P** **07 35 40.5 +2.6**
TAM pmax pmax
comp=Z,21nm,1.4s,mb5.0
OJC Ojcow 56.33 329 *e*P **P** **07 35 37.2 -0.7**
ZST Bratislava 56.57 326 *e*P **P** **07 35 39.8 +0.1**
comp=Z,118nm,2.5s,mb5.5
ZST Bratislava 56.57 326 *e*P **P** **07 35 39.8 +0.1**
ZST pmax pmax
comp=Z,118nm,2.5s,mb5.5
ZST Bratislava 56.57 326 *e*P **P** **07 35 39.8 +0.1**
SOP Sopron 56.59 325 ⇓*e*P **P** **07 35 39.9 0.0**
VISS Visnje 56.61 323 *i* P **P** **07 35 40.1 0.0**
VISS *i* 07 35 47.3
OKC Ostrava-Krasne 56.95 328 *e*P **P** **07 35 42.0 -0.4**
OKC MLR MLR
comp=Z,500nm,25.7s,MS4.5
OKC Ostrava-Krasne 56.95 328 *e*P **P** **07 35 42.0 -0.4**
OKC AMS AMS 07 59 20.0
comp=Z,500nm,25.7s
HHC Hu-ho-hao-te 56.96 44 *e*P **P** **07 35 43.3 +0.7**
HHC pP pP 07 35 47.5 -0.7
HHC sP sP 07 35 50.4 +0.1
HHC PP PP 07 37 50.5 +1.2
HHC PcS PcS 07 40 37.4 -1.2
HHC S **S** **07 43 33.6 -2.5**
HHC ScS ScS 07 45 28.8 -2.6
HHC pmax pmax
comp=Z,23nm,0.7s,mb5.3
HHC pmax pmax
comp=Z,250nm,4.7s
HHC LR LR
comp=N,1μm,16.8s,MS5.2
HHC LR LR
comp=E,710nm,12.9s,MS5.2
HHC LR LR
comp=Z,950nm,14.9s,MS5.0
SONM Songino Array 56.99 35 P **P** **07 35 42.8 +0.1**
comp=Z,4.3nm,0.8s,mb4.5,baz=230,slow=7.1,SNR=12
SONM LR LR 08 00 57.1
comp=Z,2μm,18.4s,MS5.2,baz=262,slow=37
MORC Moravsky Berou 57.23 328 *e*P **P** **07 35 44.3 -0.1**
comp=Z,132nm,2.3s,mb5.6
MORC Moravsky Berou 57.23 328 ⇑P **P** **07 35 44.9 +0.5**
MORC Moravsky Berou 57.23 328 ⇑*i*P **P** **07 35 44.9 +0.5**
ULN Ulaanbaatar 57.38 35 P **P** **07 35 45.3 -0.2**
comp=Z,7.9nm,1.8s,mb4.5
KLMR Klimovskoe 57.45 348 *e*P **P** **07 35 42.0 -3.7**
KLMR *e*S **S** **07 43 39.5 -2.5**
KLMR pmax pmax
comp=Z,65nm,2.0s,mb5.3
KLMR MLR MLR
comp=Z,809nm,20.0s,MS4.8
VRAC Vranov 57.48 327 ⇑P **P** **07 35 47.1 +1.0**
VRAC Vranov 57.48 327 ⇑*i*P **P** **07 35 47.1 +1.0**
TLY Talaya 57.74 30 *e*P **P** **07 35 48.3 +0.4**
TLY *e*S **S** **07 43 46.4 +0.3**
TLY *e*SS SS 07 47 41.2 +4.5
TLY pmax pmax
comp=Z,25nm,1.9s,mb4.9
TLY pmax pmax
comp=Z,1μm,20.0s
TREC Trest 58.07 326 *e*P **P** **07 35 50.2 -0.1**
TREC MLR MLR
comp=Z,500nm,27.4s,MS4.5
TREC Trest 58.07 326 *e*P **P** **07 35 50.2 -0.1**
TREC AMS AMS 08 01 40.0
comp=Z,500nm,27.4s
QZH Quanzhou 58.14 64 P **P** **07 35 53.3 +2.0**
QZH S **S** **07 43 54.0 +1.8**
QZH LR LR
comp=N,1μm,15.2s,MS5.2
QZH LR LR
comp=E,710nm,14.7s,MS5.2
QZH LR LR
comp=Z,1μm,19.6s,MS5.1
DPC Dobruska-Polom 58.21 328 *e*P **P** **07 35 50.8 -0.4**
DPC MLR MLR
comp=Z,600nm,25.0s,MS4.6
DPC Dobruska-Polom 58.21 328 *e*P **P** **07 35 50.8 -0.4**
DPC AMS AMS 08 00 00.0
comp=Z,600nm,25.0s
UPC Upice 58.46 328 *e*P **P** **07 35 53.2 +0.2**
UPC *e* pP 07 35 59.9 +1.4
UPC Upice 58.46 328 *e*P **P** **07 35 53.2 +0.2**
UPC epP pP 07 35 59.9 +1.4
KSP Ksiaz 58.50 328 *e*P **P** **07 35 53.3 +0.1**
KSP Ksiaz 58.50 328 *e*P **P** **07 35 53.1 -0.2**
KSP MLR MLR
comp=Z,2μm,22.8s,MS5.0
GEC2 GERESS Array S 58.83 325 *e*P **P** **07 35 54.4 -1.2**
comp=Z,8.0nm,1.3s,mb4.6
GEC2 GERESS Array S 58.83 325 *e*P **P** **07 35 54.4 -1.2**
GEC2 pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
PRU Pruhonice 58.96 327 *e*P **P** **07 35 56.9 +0.4**
PRU *e*S **S** **07 44 03.8 +1.7**
PRU MLR MLR
comp=Z,400nm,21.8s,MS4.5
PRU Pruhonice 58.96 327 *e*P **P** **07 35 56.9 +0.4**
PRU *ex* x 07 36 06.2
PRU *e*S **S** **07 44 03.8 +1.7**
PRU AMS AMS 07 59 50.0
comp=Z,400nm,21.8s
KHC Kasperske Hory 59.05 326 *e*P **P** **07 35 56.3 -0.8**
comp=Z,26nm,1.7s,mb5.0
KHC Kasperske Hory 59.05 326 *e*P **P** **07 35 55.9 -1.2**
KHC *e* pP 07 36 02.8 +0.1
KHC *e*S **S** **07 43 59.3 -3.9**
KHC MLR MLR
comp=Z,500nm,24.5s,MS4.5
KHC Kasperske Hory 59.05 326 *e*P **P** **07 35 55.9 -1.2**
KHC *ep*P pP 07 36 02.8 +0.1
KHC *ex* x 07 36 07.9
KHC *e*S **S** **07 43 59.3 -3.9**
KHC AMS AMS 08 02 00.0
comp=Z,500nm,24.5s
TORD Torodi Ar. Bea 59.06 282 P **P** **07 35 58.2 +0.4**
comp=Z,2.7nm,0.8s,mb4.4,baz=97,slow=4.7,SNR=19
TORD PcP PcP 07 36 47.6 +1.0
comp=Z,3.4nm,0.8s,baz=72,slow=4.3,SNR=6.5
TORD LR LR 08 02 40.8
comp=Z,952nm,18.0s,MS5.0,baz=90,slow=37
PVCC Panska Ves 59.24 327 *e*P **P** **07 35 57.9 -0.5**
PVCC MLR MLR
comp=Z,500nm,18.0s,MS4.7
PVCC Panska Ves 59.24 327 *e*P **P** **07 35 57.9 -0.5**
PVCC AMS AMS 08 00 40.0
comp=Z,500nm,18.0s
WET Wettzell 59.45 325 *e*P **P** **07 35 58.4 -1.5**
comp=Z,8.0nm,1.4s,mb4.6
WET Wettzell 59.45 325 *e*P **P** **07 35 58.4 -1.5**
WET pmax pmax
comp=Z,8.0nm,1.4s,mb4.6
NJ2 Nanjing 59.75 56 *e*P **P** **07 36 03.8 +1.5**
NJ2 pP pP 07 36 08.5 +0.6
NJ2 sP sP 07 36 09.9 -0.1
NJ2 PP PP 07 38 15.3 +1.0
NJ2 S **S** **07 44 10.0 -2.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
NJ2 pmax pmax
comp=Z,250nm,3.6s
NJ2 LR LR
comp=N,750nm,27.4s
NJ2 LR LR
comp=E,1μm,32.5s
NJ2 LR LR
comp=Z,3μm,28.4s,MS5.3
BRG Berggiesshubel 59.76 327 *e*P **P** **07 36 01.5 -0.5**
comp=Z,22nm,1.8s,mb4.9
BRG Berggiesshubel 59.76 327 *e*P **P** **07 35 54.3 -7.7**
comp=Z,19nm,1.9s,mb4.8
BRG *e* 07 36 14.1
comp=Z,56nm,2.2s
BRG S **S** **07 44 17.0 +4.7**
BRG
comp=N,489nm,26.8s
BRG
comp=E,277nm,20.7s
BRG
comp=Z,648nm,26.2s
BRG Berggiesshubel 59.76 327 *e*P **P** **07 35 54.3 -7.7**
BRG S **S** **07 44 17.0 +4.7**
BRG pmax pmax
comp=Z,11nm,1.9s,mb4.6
BRG MLR MLR
comp=N,293nm,26.8s
BRG MLR MLR
comp=E,166nm,20.7s
BRG MLR MLR
comp=Z,388nm,26.2s,MS4.4
FUR Furstenfeldbru 59.90 324 *e*P **P** **07 36 02.2 -0.8**
comp=Z,61nm,1.1s,mb5.5
FUR Furstenfeldbru 59.90 324 *e*P **P** **07 36 02.2 -0.8**
FUR pmax pmax
comp=Z,61nm,1.1s,mb5.5
BJI Beijing 59.93 47 P **P** **07 36 03.0 -0.4**
BJI PP PP 07 38 14.6 -1.1
BJI S **S** **07 44 16.3 +1.4**
BJI SS SS 07 48 14.3 +2.8
BJI pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
BJI pmax pmax
comp=Z,200nm,5.2s
BJI LR LR
comp=N,710nm,21.3s,MS5.0
BJI LR LR
comp=E,870nm,18.2s,MS5.0
BJI LR LR
comp=Z,960nm,22.5s,MS4.9
NKC Novy Kostel 60.24 326 *e*P **P** **07 36 05.1 -0.2**
NKC *e* pP 07 36 11.9 +1.0
NKC Novy Kostel 60.24 326 *e*P **P** **07 36 05.1 -0.2**
NKC *ep*P pP 07 36 11.9 +1.0
WERN Wernitzgruen 60.31 326 *e*P **P** **07 36 05.7 -0.1**
comp=Z,23nm,1.1s,mb5.1
TANN Tannenbergstha 60.33 326 *e*P **P** **07 36 05.6 -0.3**
comp=Z,70nm,2.2s,mb5.3
GUNZ Gunzen 60.37 326 *e*P **P** **07 36 06.0 -0.2**
comp=Z,24nm,1.2s,mb5.1
WERD Werda 60.43 326 *e*P **P** **07 36 06.1 -0.5**
comp=Z,131nm,2.8s,mb5.5
CLL Collm 60.49 327 *e*P **P** **07 36 06.9 -0.1**
comp=Z,44nm,1.8s,mb5.2
CLL *e*S **S** **07 44 27.8 +6.1**
CLL Collm 60.49 327 *i* P **P** **07 36 06.9 -0.1**
comp=Z,119nm,2.6s,mb5.5
CLL *e*S **S** **07 44 24.0 +2.3**
CLL Collm 60.49 327 *i* P **P** **07 36 06.9 -0.1**
CLL *e*S **S** **07 44 24.0 +2.3**
CLL pmax pmax
comp=Z,119nm,2.6s,mb5.5
CLL Collm 60.49 327 *i* P **P** **07 36 06.9 -0.1**
comp=Z,119nm,2.6s,mb5.5
CLL *e* 07 36 15.0
CLL *e* 07 36 19.0
comp=Z,90nm,2.1s
CLL *e*PP PP 07 38 21.0 +0.6
CLL *e*S **S** **07 44 24.0 +2.3**
CLL *e*PS 07 44 43.0
CLL *e*SS SS 07 48 28.0 +8.1
CLL *e*SSS 07 51 17.0
CLL L 08 06 00.0
comp=Z,200nm,20.0s
GRA1 Grafenberg Arr 60.66 325 *e*P **P** **07 36 07.0 -1.2**
comp=Z,18nm,1.1s,mb5.1
GRA1 LR LR
comp=Z,300nm,19.5s,MS4.5
GRF Grafenberg Arr 60.66 325 *e*P **P** **07 36 07.0 -1.2**
comp=Z,18nm,1.1s,mb5.1
GRF *e*L 08 06 39.4
comp=Z,299nm,19.5s
GRF Grafenberg Arr 60.66 325 *e*P **P** **07 36 07.0 -1.2**
GRF pmax pmax
comp=Z,18nm,1.1s,mb5.1
GRF MLR MLR
comp=Z,300nm,19.5s,MS4.5
GRF Grafenberg Arr 60.66 325 *e*P **P** **07 36 07.0 -1.2**
GRF pmax pmax
comp=Z,18nm,1.1s,mb5.1
GRF MLR MLR
comp=Z,300nm,19.5s,MS4.5
RUE Ruedersdorf 60.71 329 *e*P **P** **07 36 08.1 -0.4**
comp=Z,30nm,1.1s,mb5.3
RUE *e*S **S** **07 44 30.1 +5.6**
MRSI Marisa 60.84 93 P **P** **07 36 09.2 -0.9**
comp=Z,25nm,1.1s,mb5.2
MOX Moxa 60.91 326 *e*P **P** **07 36 10.0 +0.1**
comp=Z,32nm,2.0s,mb5.1
MOX *e*S **S** **07 44 33.0 +5.9**
MOX
comp=Z,100nm,20.0s
MOX Moxa 60.91 326 *e*P **P** **07 36 09.5 -0.4**
comp=Z,46nm,2.1s,mb5.2
MOX *e*S **S** **07 44 32.9 +5.8**
MOX Moxa 60.91 326 *e*P **P** **07 36 10.0 +0.1**
MOX *e*S **S** **07 44 33.0 +5.9**
MOX pmax pmax
comp=Z,20nm,2.0s,mb4.9
MOX MLR MLR
comp=Z,32μm,20.0s
MBDF Montbardon 61.23 319 *e*P **P** **07 36 10.1 -2.1**
STU Stuttgart 61.40 324 *e*S **S** **07 44 35.5 +2.1**
SSE Sheshan 61.49 58 P **P** **07 36 10.3 -3.9**
SSE PcP PcP 07 36 52.3 -3.8
SSE S **S** **07 44 30.0 -5.2**
SSE pmax pmax
comp=Z,13nm,0.8s,mb5.1
SSE pmax pmax
comp=Z,130nm,7.3s
SSE LR LR
comp=N,440nm,20.2s,MS4.8
SSE LR LR
comp=E,620nm,20.2s,MS4.8
SSE LR LR
comp=Z,760nm,19.7s,MS4.9
FINES FINESS Array B 61.52 342 P **P** **07 36 12.8 -1.0**
comp=Z,2.4nm,0.7s,mb4.4,baz=83,slow=4.4,SNR=6.2
FINES LR LR 08 06 12.3
comp=Z,355nm,19.4s,MS4.5,baz=138,slow=39
LPG La Plagne 61.54 319 *e*P **P** **07 36 12.2 -2.1**
LPL La Plagne 61.56 319 *e*P **P** **07 36 12.2 -2.2**
comp=Z,46nm,1.3s,mb5.2
LPL La Plagne 61.56 319 *e*P **P** **07 36 12.2 -2.2**
comp=Z,23nm,1.3s,mb5.2
LPL La Plagne 61.56 319 *e*P **P** **07 36 12.2 -2.2**
LPL pmax pmax
comp=Z,23nm,1.3s,mb5.2
BSD Bornholm Skovb 61.63 332 *i* P sP 07 36 25.0 +2.7
BSD *i* S **S** **07 44 36.9 +0.8**
BSD
comp=Z,330nm,20.0s
BFO Black Forest 61.72 323 *e*P **P** **07 36 15.2 -0.2**
comp=Z,49nm,1.6s,mb5.4
BFO Black Forest 61.72 323 *e*P **P** **07 36 15.2 -0.2**
BFO pmax pmax
comp=Z,49nm,1.6s,mb5.4
CLZ Clausthal 62.18 327 *e*P **P** **07 36 18.5 +0.1**
comp=Z,31nm,1.3s,mb5.3
CLZ Clausthal 62.18 327 *e*P **P** **07 36 18.5 +0.1**
CLZ pmax pmax
comp=Z,31nm,1.3s,mb5.3
ECH Echery 62.38 322 *e*P **P** **07 36 19.8 0.0**

comp=Z,89nm,2.1s,mb5.5
ECH Echery 62.38 322 *e*P **P** **07 36 19.8 -0.1**
ECH pmax pmax
comp=Z,89nm,2.1s,mb5.5
CDF Champ du Feu 62.40 323 *e*P **P** **07 36 18.3 -1.6**
comp=Z,62nm,1.2s,mb5.3
CDF Champ du Feu 62.40 323 *e*P **P** **07 36 18.3 -1.6**
comp=Z,31nm,1.2s,mb5.3
CDF Champ du Feu 62.40 323 *e*P **P** **07 36 18.3 -1.6**
CDF pmax pmax
comp=Z,31nm,1.2s,mb5.3
CABF La Chapelle 62.40 320 *e*P **P** **07 36 18.8 -1.2**
comp=Z,120nm,1.0s,mb5.7
CABF La Chapelle 62.40 320 *e*P **P** **07 36 18.8 -1.2**
comp=Z,60nm,1.0s,mb5.7
CABF La Chapelle 62.40 320 *e*P **P** **07 36 18.8 -1.2**
CABF pmax pmax
comp=Z,60nm,1.0s,mb5.7
HINF Hinteralfeld 62.41 322 *e*P **P** **07 36 17.9 -2.1**
comp=Z,133nm,1.9s,mb5.4
HINF Hinteralfeld 62.41 322 *e*P **P** **07 36 17.9 -2.1**
comp=Z,66nm,1.9s,mb5.4
HINF Hinteralfeld 62.41 322 *e*P **P** **07 36 17.9 -2.1**
HINF pmax pmax
comp=Z,67nm,1.9s,mb5.5
TNS Taunus Mts 62.49 325 *e*P **P** **07 36 20.4 -0.1**
comp=Z,32nm,1.6s,mb5.2
TNS Taunus Mts 62.49 325 *e*P **P** **07 36 20.4 -0.1**
TNS pmax pmax
comp=Z,32nm,1.6s,mb5.2
NRDL Niedersach Rie 62.64 328 *e*P **P** **07 36 20.5 -1.0**
comp=Z,65nm,2.0s,mb5.4
HAU Haudompre 62.79 322 *e*P **P** **07 36 20.3 -2.3**
HAU *e*MLR MLR
comp=Z,292nm,22.5s,MS4.1
HAU Haudompre 62.79 322 *e*P **P** **07 36 20.3 -2.3**
HAU MLR MLR
comp=Z,290nm,22.5s,MS4.4
COP Copenhagen 63.12 331 *i*P sP 07 36 35.6 +3.3
COP *i*S **S** **07 44 59.5 +4.6**
COP
comp=Z,150nm,26.0s
BSEG Bad Segeberg 63.25 329 *e*P **P** **07 36 25.4 -0.1**
comp=Z,190nm,3.1s
BSEG *e*S **S** **07 45 00.4 +3.9**
BSEG Bad Segeberg 63.25 329 *e*P **P** **07 36 25.4 -0.1**
BSEG *e*S **S** **07 45 00.4 +3.9**
BSEG pmax pmax
comp=Z,190nm,3.1s
BUG Bochum–Univer 63.70 326 *e*P **P** **07 36 28.9 +0.3**
comp=Z,129nm,2.2s,mb5.6
MEZF Maizieres J'vi 63.78 322 *e*P **P** **07 36 27.6 -1.6**
comp=Z,53nm,1.1s,mb5.2
MEZF Maizieres J'vi 63.78 322 *e*P **P** **07 36 27.6 -1.6**
comp=Z,53nm,1.1s,mb5.5
IBBN Ibbenburen 63.82 327 *e*P **P** **07 36 29.8 +0.5**
comp=Z,139nm,2.2s,mb5.6
SMF Signal de Mont 63.85 320 *e*P **P** **07 36 27.3 -2.3**
LOR Lormes 64.06 320 *e*P **P** **07 36 29.0 -2.0**
comp=Z,50nm,1.2s,mb5.1
LOR *e*MLR MLR
comp=Z,296nm,19.8s,MS4.2
LOR Lormes 64.06 320 *e*P **P** **07 36 29.0 -2.0**
comp=Z,25nm,1.2s,mb5.1
LOR LR LR
comp=Z,300nm,19.8s,MS4.5
LOR Lormes 64.06 320 *e*P **P** **07 36 29.0 -2.0**
LOR pmax pmax
comp=Z,25nm,1.2s,mb5.1
LOR MLR MLR
comp=Z,300nm,19.8s,MS4.5
MEM Membach 64.07 324 P **P** **07 36 31.7 +0.7**
comp=Z,14nm,2.1s,mb4.6
SSF Saint Saulge 64.22 320 *e*P **P** **07 36 29.9 -2.1**
comp=Z,90nm,1.5s,mb5.3
SSF Saint Saulge 64.22 320 *e*P **P** **07 36 29.9 -2.1**
comp=Z,45nm,1.5s,mb5.3
SSF Saint Saulge 64.22 320 *e*P **P** **07 36 29.9 -2.1**
SSF pmax pmax
comp=Z,45nm,1.5s,mb5.3
AVF Avril sur Loir 64.22 320 *e*P **P** **07 36 29.7 -2.3**
BCLA Clavier 64.40 324 P **P** **07 36 33.9 +0.7**
comp=Z,21nm,2.3s,mb4.8
BGF Bois d'Agland 64.46 319 *e*P **P** **07 36 32.0 -1.7**
comp=Z,48nm,1.1s,mb5.2
BGF Bois d'Agland 64.46 319 *e*P **P** **07 36 32.0 -1.7**
comp=Z,24nm,1.1s,mb5.1
BGF Bois d'Agland 64.46 319 *e*P **P** **07 36 32.0 -1.7**
BGF pmax pmax
comp=Z,24nm,1.1s,mb5.1
GIVF Givet 64.55 324 *e*P **P** **07 36 32.7 -1.5**
APA Apatity 64.65 349⇑ *i*P **P** **07 36 39.4 +4.9**
APA *i* 07 37 10.0
APA *i* 07 39 00.0
APA *i*PPP 07 40 34.0
APA *i*S **S** **07 45 20.0 +6.6**
APA pmax pmax
comp=Z,92nm,1.6s,mb5.6
APA MLR MLR
comp=Z,1μm,20.0s,MS5.0
DOU Dourbes 64.69 324 P **P** **07 36 35.9 +0.8**
comp=Z,27nm,2.3s,mb4.9
BAIF Baives 64.90 323 *e*P **P** **07 36 34.9 -1.5**
comp=Z,39nm,1.1s,mb5.1
BAIF Baives 64.90 323 *e*P **P** **07 36 34.9 -1.5**
comp=Z,20nm,1.0s,mb5.1
BAIF Baives 64.90 323 *e*P **P** **07 36 34.9 -1.5**
BAIF pmax pmax
comp=Z,20nm,1.0s,mb5.1
SNF Seneffe 65.03 324 P **P** **07 36 38.0 +0.8**
MUD Monsted U'grnd 65.08 331 *i*P sP 07 36 48.4 +3.2
MUD *i*S S 07 45 22.0 +2.8
MUD
comp=Z,310nm,23.0s
NWAO Narrogin (SRO) 65.50 130 *e*P **P** **07 36 40.5 -0.2**
comp=Z,21nm,1.0s,mb5.1
NWAO Narrogin (SRO) 65.50 130 *e*P **P** **07 36 40.5 -0.1**
NWAO pmax pmax
comp=Z,21nm,1.0s
DBIC Dimbokro 65.64 275 *e*P **P** **07 36 43.8 +1.8**
comp=Z,10.0nm,0.9s,mb4.8
DBIC Dimbokro 65.64 275 P **P** **07 36 42.3 +0.4**
comp=Z,5.5nm,0.8s,mb4.6,baz=85,slow=5.8,SNR=4.6
DBIC LR LR 08 04 27.0
comp=Z,908nm,21.4s,MS4.9,baz=71,slow=35
DBIC Dimbokro 65.64 275 *e*P **P** **07 36 43.8 +1.9**
DBIC pmax pmax
comp=Z,10.0nm,0.9s
SNY Shenyang 65.81 47 ⇓P **P** **07 36 40.6 -1.9**
SNY S S 07 45 25.8 -2.8
SNY pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
SNY pmax pmax
comp=Z,190nm,3.6s
SNY LR LR
comp=N,380nm,17.2s,MS4.9
SNY LR LR
comp=E,560nm,19.1s,MS4.9
SNY LR LR
comp=Z,520nm,17.6s,MS4.8
LBMI Labuha 66.49 93 P **P** **07 36 46.7 -0.7**
comp=Z,54nm,1.0s,mb5.5
NOA NORSAR Array B 66.62 336 P **P** **07 36 46.5 -0.8**
comp=Z,2.4nm,0.8s,mb4.3,baz=121,slow=6.8,SNR=7.1
NOA LR LR 08 07 56.8
comp=Z,308nm,21.9s,MS4.5,baz=110,slow=38
LDF La Druitiere 67.03 321 *e*P **P** **07 36 48.1 -2.1**
comp=Z,15nm,0.9s,mb4.7
LDF La Druitiere 67.03 321 *e*P **P** **07 36 48.1 -2.1**
comp=Z,7.3nm,0.9s,mb4.7
LDF La Druitiere 67.03 321 *e*P **P** **07 36 48.1 -2.1**
LDF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
FLN La Foliniere 67.31 321 *e*P **P** **07 36 49.9 -2.1**
FLN *e*MLR MLR
comp=Z,252nm,20.2s,MS4.1
FLN La Foliniere 67.31 321 *e*P **P** **07 36 49.9 -2.1**
FLN MLR MLR
comp=Z,250nm,20.3s,MS4.4
ESDC Sonseca Array 67.37 311 P **P** **07 36 52.7 +0.2**
ESDC LR LR 08 04 07.6
ESDC Sonseca Array 67.37 311 P **P** **07 36 52.7 +0.2**
comp=Z,3.7nm,0.8s,mb4.5,baz=84,slow=5.8,SNR=20
ESDC LR LR 08 04 07.6
comp=Z,83nm,20.6s,MS3.9,baz=195,slow=34
ESLA Sonseca Array 67.37 311 *e*P **P** **07 36 53.1 +0.6**
comp=Z,2.5nm,1.0s,mb4.2
CN2 Changchun 67.64 45 *e*P **P** **07 36 55.5 +1.4**
CN2 *e*S S 07 45 51.9 +1.3
CN2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.2
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,700nm,20.0s,MS4.9
CN2 LR LR
comp=E,300nm,20.0s,MS4.9
CN2 LR LR
comp=Z,300nm,19.0s,MS4.5
FITZ Fitzroy Crossi 67.78 112 *e*P **P** **07 36 55.4 0.0**
comp=Z,20nm,1.1s,mb5.0
FITZ Fitzroy Crossi 67.78 112 P **P** **07 36 53.4 -2.1**
comp=Z,39nm,1.4s,mb5.2
ARCES ARCESS Array B 67.93 347 P **P** **07 36 53.6 -1.9**
comp=Z,5.5nm,0.8s,mb4.6,baz=156,slow=6.1,SNR=10
ARCES LR LR 08 10 58.0
comp=Z,473nm,19.4s,MS4.7,baz=333,slow=40
KSRS Korea Array 68.15 52 P **P** **07 36 55.2 -2.3**
comp=Z,6.3nm,0.8s,mb4.7,baz=262,slow=7.6,SNR=16
ROSF Rostrenen 68.96 320 *e*P **P** **07 37 00.1 -2.2**
MDJ Mudanjiang 70.72 45 P **P** **07 37 13.8 +0.5**
MDJ pP pP 07 37 15.8 -3.1
MDJ sP sP 07 37 18.4 -2.6
MDJ PcP PcP 07 37 34.3 +0.2
MDJ PP PP 07 39 48.3 -1.7
MDJ S S 07 46 26.0 -1.1
MDJ ScS ScS 07 47 17.3 +1.1
MDJ pmax pmax
comp=Z,9.0nm,1.8s,mb4.4
MDJ pmax pmax
comp=Z,86nm,5.7s
MDJ LR LR
comp=N,780nm,18.6s
MDJ LR LR
comp=E,410nm,28.0s
MDJ LR LR
comp=Z,1μm,17.5s,MS5.2
KLR Kul'dur 73.08 40 *e*P **P** **07 37 22.2 -5.1**
KAKA Kakadu 73.09 105 P **P** **07 37 27.5 -0.5**
MAW Mawson 73.09 179 *e*P **P** **07 37 28.6 +1.6**
comp=Z,1.6nm,1.0s,mb3.9
MAW Mawson 73.09 179 P **P** **07 37 28.3 +1.4**
comp=Z,4.2nm,0.9s,mb4.4,baz=305,slow=9.3,SNR=8.6
MAW LR LR 08 01 47.2
comp=Z,818nm,21.4s,MS5.0,baz=336,slow=29
MAW Mawson 73.09 179 *e*P **P** **07 37 28.6 +1.7**
MAW pmax pmax
comp=Z,2.0nm,1.0s
YAK Yakutsk 75.03 27 *e*P **P** **07 37 37.8 -0.7**
YAK *e* 07 37 53.3
YAK *e* 07 40 24.8
YAK *e*PPP 07 42 11.8
YAK *e*S S 07 47 11.2 -4.3
YAK *e* 07 47 46.1
YAK *e*SSS 07 55 18.3
YAK pmax pmax
comp=Z,13nm,1.1s,mb4.8
YAK pmax pmax
comp=Z,171nm,3.9s
YAK pmax pmax
comp=E,21nm,2.0s
YAK pmax pmax
comp=N,42nm,4.3s
YAK smax
comp=E,116nm,9.8s
YAK MLR MLR
comp=Z,767nm,20.0s,MS5.0
YAK MLR MLR
comp=E,599nm,22.0s,MS4.9
YAK MLR MLR
comp=N,126nm,17.0s,MS4.9
SYO Syowa Base 75.98 188⇓ *e*P **P** **07 37 43.5 -0.2**
WRA Warramunga Arr 76.21 112 P **P** **07 37 45.2 -0.8**
comp=N,17nm,0.9s,mb5.0,baz=289,slow=5.0,SNR=46
WRA LR LR 08 06 25.9
comp=N,231nm,22.0s,MS4.5,baz=245,slow=32
WB2 Warramunga Arr 76.22 112 *e*P **P** **07 37 46.1 0.0**
ASAR Alice Springs 76.57 116 P **P** **07 37 47.2 -0.8**
comp=N,12nm,0.9s,mb4.8,baz=285,slow=5.0,SNR=61
TIXI Tiksi 77.73 17 *e*P **P** **07 37 51.9 -1.7**
comp=N,9.3nm,1.0s,mb4.7
TIXI Tiksi 77.73 17 *e*P **P** **07 37 52.2 -1.4**
TIXI *e*S S 07 47 41.7 -3.1
TIXI pmax pmax
comp=Z,27nm,2.0s,mb4.8
TIXI MLR MLR
comp=Z,435nm,16.0s,MS4.9
YUK Yuzh-Kuril'sk 82.27 46⇓ *i*P **P** **07 38 24.0 +5.3**
SCO Scoresbysund 82.42 340 *i*P sP 07 38 31.1 +4.3
STKA Stephens Creek 84.84 123 P **P** **07 38 32.3 +0.1**
comp=Z,6.3nm,0.8s,mb4.8,baz=269,slow=5.0,SNR=7.7
STKA LR LR 08 11 51.0
comp=Z,804nm,20.5s,MS5.1,baz=98,slow=32
CTAO Charters Tower 87.29 110 *e*P **P** **07 38 44.2 -0.3**
comp=Z,4.9nm,0.9s,mb4.7
CTAO Charters Tower 87.29 110 *e*P **P** **07 38 44.2 -0.3**
CTAO pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
SUMG Summit 87.54 343 *i*P sP 07 38 57.6 +5.1
SUMG *i*S 07 39 27.9
SUMG *e*S S 07 49 24.9 0.0
DZM Mont Dzumac 106.22 111 *e*LR LR 08 15 16.5
comp=Z,273nm,28.5s
ILAR Eielson Array 106.74 12 PP PP 07 44 36.3 -0.6
comp=Z,0.3nm,0.8s,baz=310,slow=4.7,SNR=5.1
FFC Flin Flon 118.23 349 *i*PKIKP PKPdf 07 44 46.0 +1.7
LAO LASA Array 126.71 349 *e*PKPdf PKPdf 07 45 01.9 +1.0
SMCO Snowmass 134.08 347 *e*PKPdf PKPdf 07 45 15.0 0.0
NVAR Mina Array Bea 136.15 359 PKP PKPdf 07 45 19.7 +0.8
comp=Z,1.3nm,0.8s,baz=332,slow=0.6,SNR=10
TXAR Lajitas Array 142.30 338 PKiKP PKPpre 07 45 24.8
comp=Z,0.9nm,0.7s,baz=66,slow=2.7,SNR=12
TXAR PKP PKPdf 07 45 30.6 +0.2
comp=Z,0.7nm,0.7s,baz=50,slow=2.7,SNR=6.9
TXAR Lajitas Array 142.30 338 PKIKP PKPdf 07 45 30.6 +0.2
PPT Papeete 147.67 114 *e*LR LR 08 34 28.9
comp=Z,356nm,26.8s
RKT Rikitea 156.66 140 *e*LR LR 08 38 38.4
comp=Z,311nm,24.2s
TAOE Nuku Hiva Isla 158.59 100 *e*LR LR 08 39 30.0
comp=Z,277nm,26.5s

IDC 16 07:29:43.7±2.0, 5.58N×61.24E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/20, mbtmp3.7/5, Error ellipse: s-maj=66.5km s-min=26.9km az=57.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BRTR	**Keskin Array B**	**42.12**	**328**	P		P	07 37 37.9	+0.1
	1.0nm,0.9s,baz=135,slow=8.6,SNR=3.8							
MKAR	**Makanchi Array**	**44.89**	**20**	P		P	07 38 00.3	+0.3
	0.2nm,0.2s,baz=213,slow=8.7,SNR=2.1							
ZALV	**Zalesovo Beam**	**51.89**	**17**	P		P	07 38 53.5	-0.4
	0.2nm,0.3s,baz=204,slow=7.3,SNR=2.2							
WRA	**Warramunga Arr**	**76.14**	**112**	P		P	07 41 34.4	+0.2
	1.3nm,0.8s,baz=281,slow=5.5,SNR=4.8							
ASAR	**Alice Springs**	**76.50**	**116**	P		P	07 41 36.3	+0.1
	0.9nm,0.8s,baz=280,slow=5.2,SNR=7.2							

MOS 16 07:38:34.9±2.2, 52.44N×98.95E, h16km, mb4.3/1, 1D, Error ellipse: s-maj=29.8km s-min=18.7km az=10.8, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ORL	**Orlik**	**0.54**	**79**	⇓*i*PG		Pg	07 38 45.6	+0.1
ORL				*e*			07 38 59.4	
ORL				pmax	pmax			
	comp=Z,256nm,0.2s							
ORL				smax				
	comp=N,744nm,0.3s							
MOY	**Mondy**	**1.48**	**121**	*e*PG		Pg	07 38 58.6	-4.8
MOY				*e*			07 39 21.8	
MOY				pmax	pmax			
	comp=Z,54nm,0.4s							
MOY				smax				
	comp=N,920nm,0.7s							
ARS	**Arshan**	**2.20**	**102**	*e*PN		Pn	07 39 13.4	+2.7
ARS				*e*			07 39 46.8	
ARS				pmax	pmax			
	comp=Z,114nm,0.3s							
ARS				smax				
	comp=E,1μm,0.4s							
TLY	**Talaya**	**3.00**	**103**	*e*PN		Pn	07 39 26.3	+4.7
TLY				*e*S		Sn	07 39 58.9	+1.7
TLY				*e*			07 40 09.6	
TLY				pmax	pmax			
	comp=Z,19nm,0.4s							
TLY				smax				
	comp=N,242nm,0.8s							
IRK	**Irkutsk**	**3.27**	**91**	*e*PN		Pn	07 39 31.0	+5.6
IRK				*e*			07 40 19.3	
IRK				pmax	pmax			
	comp=Z,20nm,0.2s							
IRK				smax				
	comp=N,490nm,0.6s							
ZAK	**Zakamensk**	**3.41**	**126**	*e*PN		Pn	07 39 29.1	+1.8
ZAK				*e*			07 40 17.9	
ZAK				pmax	pmax			
	comp=Z,14nm,0.3s							
ZAK				smax				
	comp=N,139nm,0.9s							
OGRR	**Ongureny**	**5.35**	**74**	*e*PN		Pn	07 39 55.4	+1.4
OGRR				*e*			07 40 12.3	
NIZ	**Nizh Angarsk**	**7.07**	**58**	*e*P*		Pb	07 40 46.4	+9.3
NIZ				pmax	pmax			
	comp=Z,7.0nm,0.3s							

ISK 16 07:43:25.9, 40.58N×34.79E, h5km, MD3.0
ISCJB 16 07:43:26.4±0.5, 40.59N±0.03×34.77E±0.05, h6km±4km, Error ellipse: s-maj=6.7km s-min=4.9km az=150.4
DDA 16 07:43:26.2, 40.61N×34.73E, h7km±2km, MD3.0
CSEM 16 07:43:26.4±0.2, 40.60N×34.78E, h2km, MD3.0, Error ellipse: s-maj=5.7km s-min=4.0km az=47.0

ISC 16 07:43:26.9±0.5, 40.59N±0.03×34.76E±0.04, h5km±4km, n29, σ0 s70/41, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CTKT	**Corum**	**0.04**	**33**	*i*P		**Pg**	**07 43 27.9**	**-0.1**
CTKT				*i*S		**Sg**	**07 43 29.2**	**+0.4**
CTKT	**Corum**	**0.04**	**33**	*i*P		**Pg**	**07 43 27.9**	**-0.1**
CTKT				*i*S		**Sg**	**07 43 29.2**	**+0.4**
CORM	**Corum**	**0.43**	**194**	*e*PG		**Pg**	**07 43 34.8**	**-0.2**
CORM				*e*SG		**Sg**	**07 43 41.2**	**+0.6**
CORM	**Corum**	**0.43**	**194**	*e*Pg		**Pg**	**07 43 34.8**	**-0.3**
CORM				*e*Sg		**Sg**	**07 43 41.2**	**+0.6**
TOS	**Tosya**	**0.72**	**308**	*e*PG		**Pg**	**07 43 40.2**	**-0.4**
TOS				*e*SG		**Sg**	**07 43 51.1**	**+1.2**
TOS	**Tosya**	**0.72**	**308**	*e*Pg		**Pg**	**07 43 40.2**	**-0.4**
TOS				*e*Sg		**Sg**	**07 43 51.1**	**+1.2**
CANT	**Cankiri**	**0.87**	**271**	*e*PG		**Pg**	**07 43 43.6**	**+0.1**
BYBT	**Boyabat**	**0.88**	**0**	*e*PG		**Pg**	**07 43 44.0**	**+0.3**
BYBT	**Boyabat**	**0.88**	**0**	*e*Pg		**Pg**	**07 43 44.0**	**+0.3**
ILGA	**Ilgaz**	**0.92**	**300**	*i*P		**Pg**	**07 43 44.9**	**+0.5**
ILGA				*i*S		**Sg**	**07 43 56.3**	**-0.1**
ILGA	**Ilgaz**	**0.92**	**300**	*i*P		**Pg**	**07 43 44.9**	**+0.4**
ILGA				*i*S		**Sg**	**07 43 56.3**	**-0.1**
ELDT	**Eldivan**	**1.02**	**265**	*i*P		**Pg**	**07 43 46.3**	**-0.2**
ELDT				*i*S		**Sg**	**07 43 59.1**	**-0.7**
ELDT	**Eldivan**	**1.02**	**265**	*i*P		**Pg**	**07 43 46.3**	**-0.2**
ELDT				*i*S		**Sg**	**07 43 59.1**	**-0.7**
YOZ	**Yozgat**	**1.04**	**156**	*e*PG		**Pg**	**07 43 45.1**	**-1.7**
YOZ	**Yozgat**	**1.04**	**156**	*e*Pg		**Pg**	**07 43 45.1**	**-1.7**
KVT	**Kavak**	**1.09**	**63**	*e*PN		**Pg**	**07 43 46.9**	**-0.8**
KVT	**Kavak**	**1.09**	**63**	*e*Pn		**Pg**	**07 43 46.9**	**-0.8**
BALT	**Daday**	**1.40**	**313**	*i*P		**Pn**	**07 43 52.3**	**-0.8**
BALT				*e*S		**Sb**	**07 44 11.2**	**-0.5**
BALT	**Daday**	**1.40**	**313**	*i*P		**Pn**	**07 43 52.3**	**-0.8**
BALT				*e*S		**Sb**	**07 44 11.2**	**-0.5**
BZK	**Bozkurt**	**1.48**	**337**	*e*PN		**Pn**	**07 43 53.8**	**-0.4**
BZK	**Bozkurt**	**1.48**	**337**	*e*Pn		**Pn**	**07 43 53.8**	**-0.4**
SAFT	**Safranbolu**	**1.70**	**293**	*e*PN		**Pn**	**07 43 57.5**	**+0.4**
SAFT	**Safranbolu**	**1.70**	**293**	*e*Pn		**Pn**	**07 43 57.5**	**+0.3**
SVSK	**Karacayir**	**1.84**	**111**	*e*PN		**Pn**	**07 43 59.4**	**+0.3**
SVSK	**Karacayir**	**1.84**	**111**	*e*Pn		**Pn**	**07 43 59.4**	**+0.3**
SARI	**SarD1z-Kayseri**	**2.42**	**141**	*e*PN		**Pn**	**07 44 08.7**	**+1.6**
SARI	**SarD1z-Kayseri**	**2.42**	**141**	*e*Pn		**Pn**	**07 44 08.7**	**+1.6**
SULT	**Sultanhani-AKS**	**2.58**	**202**	*e*PN		**Pn**	**07 44 09.7**	**+0.4**
SULT	**Sultanhani-AKS**	**2.58**	**202**	*e*Pn		**Pn**	**07 44 09.7**	**+0.5**

NEIC 16 07:44:44.1, 38.12S×176.22E, h165km, MG3.9(WEL), After WEL.

WEL 16 07:44:44.8±0.4, 38.12S×176.23E, h158km±3km, ML3.9/16, 4C, Error ellipse: s-maj=2.1km s-min=2.1km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RRRZ	**Republican Roa**	**0.32**	**135**	⇑PN		Pn	07 45 06.5	+0.3
OPRZ	**Ohinepanea**	**0.37**	**44**	⇑PN		Pn	07 45 06.6	+0.1
OPRZ						SN	07 45 24.7	+1.7
PRRZ	**Plateau Road**	**0.40**	**161**	⇑PN		Pn	07 45 06.9	+0.3
ALRZ	**Allen Road**	**0.46**	**169**	PN		Pn	07 45 07.0	+0.3
URZ	**Urewera**	**0.71**	**102**	PN		Pn	07 45 07.8	-0.3
URZ						SN	07 45 25.8	-0.2
URZ	**Urewera**	**0.71**	**102**	P		Pn	07 45 07.8	-0.3
KATZ	**Kakaramea**	**0.95**	**206**	PN		Pn	07 45 10.2	+0.3
KATZ	**Kakaramea**	**0.95**	**206**	P		Pn	07 45 10.2	+0.3
RAHZ	**Arahi**	**1.04**	**140**	PN		Pn	07 45 11.2	+0.6
MWZ	**Matawai**	**1.05**	**102**	PN		Pn	07 45 10.5	-0.1
MWZ						SN	07 45 30.2	-0.2
MWZ	**Matawai**	**1.05**	**102**	P		Pn	07 45 10.5	-0.1
BKZ	**Black Stump Fm**	**1.07**	**169**	⇑PN		Pn	07 45 10.8	-0.1
BKZ						SN	07 45 30.5	-0.4
BKZ	**Black Stump Fm**	**1.07**	**169**	P		Pn	07 45 10.7	-0.1
BKZ						S	07 45 30.5	-0.4
KRVZ	**Karewarewa**	**1.08**	**205**	PN		Pn	07 45 10.9	0.0
NMHZ	**Naumai**	**1.08**	**155**	PN		Pn	07 45 11.8	+0.9
WTVZ	**West Tongariro**	**1.12**	**206**	PN		Pn	07 45 11.2	0.0
OTVZ	**Oturere**	**1.14**	**203**	PN		Pn	07 45 11.7	+0.4
NGZ	**Ngauruhoe**	**1.17**	**205**	PN		Pn	07 45 12.0	+0.4
NGZ	**Ngauruhoe**	**1.17**	**205**	P		Pn	07 45 12.0	+0.3
WPVZ	**Whakapapa**	**1.21**	**206**	PN		Pn	07 45 12.1	+0.1
TUVZ	**Tukino**	**1.23**	**201**	PN		Pn	07 45 12.5	+0.2
TUVZ	**Tukino**	**1.23**	**201**	P		Pn	07 45 12.5	+0.2
TRVZ	**Turoa**	**1.30**	**204**	PN		Pn	07 45 13.0	+0.1
MKAZ	**Moumakai**	**1.31**	**320**	PN		Pn	07 45 13.1	+0.1
MKAZ	**Moumakai**	**1.31**	**320**	P		Pn	07 45 13.1	+0.1
MOVZ	**Moawhango**	**1.34**	**196**	PN		Pn	07 45 12.8	-0.5
MOVZ	**Moawhango**	**1.34**	**196**	P		Pn	07 45 12.8	-0.5
BHHZ	**Black Hill Sta**	**1.38**	**185**	PN		Pn	07 45 13.3	-0.4
KNZ	**Kokohu**	**1.45**	**129**	PN		Pn	07 45 14.4	0.0
KNZ	**Kokohu**	**1.45**	**129**	P		Pn	07 45 14.4	0.0
PRGZ	**Paritu Road**	**1.53**	**122**	PN		Pn	07 45 15.1	0.0
VRZ	**Vera Road**	**1.53**	**228**	PN		Pn	07 45 15.3	+0.1
VRZ	**Vera Road**	**1.53**	**228**	P		Pn	07 45 15.3	+0.1
CNGZ	**Carnagh Statio**	**1.60**	**104**	PN		Pn	07 45 16.4	+0.5
PUZ	**Puketiti**	**1.60**	**89**	PN		Pn	07 45 15.3	-0.6
PUZ	**Puketiti**	**1.60**	**89**	P		Pn	07 45 15.3	-0.6
MHGZ	**Mahia Peninsul**	**1.67**	**129**	PN		Pn	07 45 16.9	+0.2
CKHZ	**Cape Kidnapper**	**1.68**	**157**	PN		Pn	07 45 16.8	+0.1
MXZ	**Matakaoa Point**	**1.74**	**72**	PN		Pn	07 45 17.3	0.0
MXZ	**Matakaoa Point**	**1.74**	**72**	P		Pn	07 45 17.3	-0.1
KAHZ	**Kahuranaki**	**1.75**	**163**	PN		Pn	07 45 17.5	0.0
PNHZ	**Pukenui**	**1.80**	**181**	PN		Pn	07 45 17.2	-0.8
WAZ	**Wanganui**	**1.90**	**210**	PN		Pn	07 45 18.6	-0.6
WAZ	**Wanganui**	**1.90**	**210**	P		Pn	07 45 18.6	-0.6
TSZ	**Takapari Road**	**1.95**	**186**	PN		Pn	07 45 18.8	-1.0
TSZ	**Takapari Road**	**1.95**	**186**	P		Pn	07 45 18.8	-1.0
WPHZ	**Waipukurau**	**1.95**	**175**	PN		Pn	07 45 19.0	-0.8
PXZ	**Pawanui**	**1.98**	**166**	PN		Pn	07 45 19.4	-0.6
PRHZ	**Porangahau**	**2.17**	**172**	PN		Pn	07 45 21.4	-0.9
DVHZ	**Dannevirke**	**2.18**	**181**	PN		Pn	07 45 21.1	-1.3
POWZ	**Post Office Ro**	**2.30**	**189**	PN		Pn	07 45 22.3	-1.5
BFZ	**Birch Farm**	**2.56**	**180**	PN		Pn	07 45 25.2	-1.7
MRZ	**Mangatainoka R**	**2.59**	**191**	PN		Pn	07 45 25.3	-2.0
MRZ	**Mangatainoka R**	**2.59**	**191**	P		Pn	07 45 25.3	-2.0
TIWZ	**Tintock**	**2.67**	**186**	PN		Pn	07 45 26.3	-2.0
OGWZ	**Otaki Gorge**	**2.82**	**197**	PN		Pn	07 45 27.9	-2.2
HOWZ	**Holdsworth Sta**	**2.83**	**191**	PN		Pn	07 45 27.8	-2.4
KIW	**Kapiti Island**	**2.92**	**200**	PN		Pn	07 45 29.0	-2.4
KIW	**Kapiti Island**	**2.92**	**200**	P		Pn	07 45 29.0	-2.4
TMWZ	**Te Maipa**	**3.00**	**185**	PN		Pn	07 45 29.8	-2.5
CAW	**Cannon Point**	**3.12**	**196**	PN		Pn	07 45 31.1	-2.7
CAW	**Cannon Point**	**3.12**	**196**	P		Pn	07 45 31.1	-2.7
TRWZ	**Traveller**	**3.31**	**187**	PN		Pn	07 45 33.4	-2.8
MSWZ	**Moikau Station**	**3.38**	**193**	PN		Pn	07 45 34.0	-3.1

MSWZ	**Moikau Station**	**3.38 193**	P	Pn	07 45 34.0	-3.1
SNZO	**South Karori**	**3.40 200**	PN	Pn	07 45 34.1	-3.3
PLWZ	**Palliser**	**3.53 192**	PN	Pn	07 45 35.6	-3.5
TUWZ	**Tuamarina**	**3.75 207**	PN	Pn	07 45 38.5	-3.3
NNZ	**Nelson**	**3.80 214**	PN	Pn	07 45 38.8	-3.7
NNZ	**Nelson**	**3.80 214**	P	Pn	07 45 38.8	-3.7
BSWZ	**Blackbirch Sta**	**4.02 206**	*e*PN	Pn	07 45 42.5	-2.9
BSWZ	**Blackbirch Sta**	**4.02 206**	*e*P	Pn	07 45 42.5	-2.9
KHZ	**Kahutara**	**4.76 205**	PN	Pn	07 45 51.4	-3.7
KHZ	**Kahutara**	**4.76 205**	P	Pn	07 45 51.4	-3.7

JMA 16 07:50:03.5, 26°.51N×130°.14E, h46km, M3.9, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMZ	**Minamidaito 2**	**1.19**	**125**	P	Pn	07 50 24.2	+0.5
JMZ				*e*S	Sn	07 50 38.9	+0.2
JTK	**Tokunoshima**	**1.66**	**320**	P	Pn	07 50 31.0	+0.9
JTK				*e*S	Sn	07 50 50.0	-0.1
JOW	**Kunigami**	**1.70**	**281**	P	Pn	07 50 31.6	+0.9
JOW				*e*S	Sn	07 50 51.4	+0.2
JZK	**Kikaishima**	**1.80**	**355**	*e*S	Sn	07 50 55.0	+1.2
JAM	**Amami Oshima**	**1.95**	**346**	P	Pn	07 50 35.0	+0.8
JAM				*e*S	Sn	07 50 57.3	-0.2
JIH	**Iheya**	**2.01**	**286**	P	Pn	07 50 36.1	+1.1
JIH				*e*S	Sn	07 50 59.3	+0.4
JJT2	**Tamagusuku 2**	**2.18**	**261**	P	Pn	07 50 38.5	+1.3
JJT2				*e*S	Sn	07 51 04.1	+1.1
NAH1	**Naha**	**2.22**	**263**	P	Pn	07 50 38.6	+0.8
NAH1				*e*S	Sn	07 51 04.7	+0.7
JAGN	**Aguni-jima**	**2.60**	**272**	P	Pn	07 50 44.1	+1.1
JAGN				*e*S	Sn	07 51 14.0	+0.7
JKE	**Kume jima 2**	**3.01**	**267**	P	Pn	07 50 49.1	+0.4
JKE				*e*S	Sn	07 51 23.4	-0.2

IDC 16 07:57:39.4±1.1, 5°.47N×61°.40E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/20, mbtmp3.9/7, MS3.9/10, Ms1 3.9/10, ms1mx3.7/31, Error ellipse: s-maj=37.8km s-min=24.1km az=43.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMAI	**Mount Meron Ar**	**36.57**	**322**	LR	LR	08 19 02.7	
	comp=Z,143nm,18.7s,baz=125,slow=35						
GNI	**Garni**	**37.64**	**339**	LR	LR	08 20 38.6	
	comp=Z,118nm,19.6s,baz=234,slow=37						
CMAR	**Chiang Mai Arr**	**38.83**	**67**	LR	LR	08 18 59.7	
	comp=Z,150nm,19.2s,baz=231,slow=33						
BRTR	**Keskin Array B**	**42.30**	**328**	P	P	08 05 33.4	-1.5
	0.3nm,0.3s,baz=122,slow=14,SNR=2.8						
BRTR				LR	LR	08 23 34.3	
	comp=Z,92nm,20.5s,baz=288,slow=37						
AKTO	**Aktyubinsk**	**44.90**	**357**	LR	LR	08 24 51.3	
	comp=Z,161nm,20.1s,baz=353,slow=36						
MKAR	**Makanchi Array**	**44.94**	**20**	P	P	08 05 55.0	-1.1
	0.2nm,0.2s,baz=226,slow=7.8,SNR=3.1						
MKAR				LR	LR	08 25 18.4	
	comp=Z,100nm,20.2s,baz=175,slow=37						
LBTB	**Lobatse**	**46.16**	**227**	LR	LR	08 22 09.5	
	comp=Z,455nm,20.4s,baz=88,slow=32						
KURK	**Kurchatov**	**47.34**	**15**	LR	LR	08 27 03.5	
	comp=Z,126nm,21.7s,baz=240,slow=37						
ZALV	**Zalesovo Beam**	**51.95**	**17**	P	P	08 06 51.3	+1.3
	0.5nm,0.4s,baz=219,slow=9.2,SNR=3.9						
ZALV				LR	LR	08 30 47.6	
	comp=Z,86nm,18.4s,baz=226,slow=38						
AKASG	**Malin Array Be**	**52.49**	**335**	P	P	08 06 55.8	+1.7
	0.2nm,0.2s,baz=132,slow=7.0,SNR=4.4						
SUR	**Sutherland**	**53.90**	**223**	LR	LR	08 30 10.3	
	comp=Z,140nm,19.0s,baz=32,slow=36						
TGY	**Tagaytay City**	**59.16**	**77**	LR	LR	08 30 39.5	
	comp=Z,7.2nm,19.9s,baz=242,slow=34						
DBIC	**Dimbokro**	**65.85**	**275**	P	P	08 08 27.6	+0.2
	6.3nm,0.9s,baz=94,slow=8.5,SNR=3.8						
WRA	**Warramunga Arr**	**75.96**	**112**	P	P	08 09 29.4	+0.6
	3.5nm,1.1s,baz=283,slow=5.3,SNR=4.9						
ASAR	**Alice Springs**	**76.31**	**116**	P	P	08 09 30.4	-0.4
	2.1nm,1.0s,baz=285,slow=4.6,SNR=7.6						

BJI ***16*** *08:17:21.5, 5°.16N×60°.47E, h10km, mB5.0/14, mb4.6/21, Ms4.8/20, Ms7 4.6/20*
ISCJB ***16*** *08:17:27.7±1.6, 5°.64N±0°.06×61°.27E±0°.04, h5km±10km, mb4.5/52, MS4.5/12, Error ellipse: s-maj=10.9km s-min=7.5km az=178.7*
IDC ***16*** *08:17:29.2±0.6, 5°.74N×61°.39E, h0km, mb4.1/20, mb1 4.3/20, mb1mx4.2/25, mbtmp4.1/20, Error ellipse: s-maj=17.2km s-min=15.0km az=67.0*
NEIC ***16*** *08:17:30.6±0.4, 5°.67N×61°.34E, h10km, mb4.6/20, Error ellipse: s-maj=9.6km s-min=9.2km az=76.0*
ISC 16 08:17:31.1±1.8, 5°.66N±0°.06×61°.33E±0°.04, h13km±11km, h15km±1.4km:pP-P, n113, σ1§05/118, mb4.5/52, MS4.5/12, 15C-6D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSEY	**Mahe Island**	**11.81**	**210**	*e*Pn	**Pn**	**08 20 18.3**	**-1.1**
LATR	**Latur**	**19.54**	**48**	*e*PKP	**Pn**	**08 21 59.5**	**-0.4**
LATR				AMb	AMB	08 22 09.4	
	comp=Z,32nm,1.6s						
MDRS	**Chennai**	**20.06**	**67**	*e*PKP	**P**	**08 22 03.8**	**-0.5**
HYB	**Hyderabad**	**20.50**	**54**	*i* P	**P**	**08 22 15.0**	**+5.9**
AKL	**Akola**	**21.34**	**44**	*ex*	**P**	**08 22 12.9**	**-5.3**
AKL				AMb	AMB	08 22 42.6	
	comp=Z,42nm,1.9s,mb4.5						
BHPL	**Bhopal**	**23.38**	**40**	*e*PKP	**P**	**08 22 39.2**	**-0.6**
BHPL				AMb	AMB	08 22 45.2	
	comp=Z,40nm,1.3s,mb4.7						
VIS	**Vishakhapatnam**	**24.62**	**59**	*e*PKP	**P**	**08 22 51.3**	**-0.1**
KMBO	**Kilima Mbogo**	**24.97**	**255**	*e*P	**P**	**08 22 57.0**	**+2.4**
	comp=Z,49nm,1.8s,mb4.7						
KHET	**Khetri**	**26.19**	**30**	*e*PKP	**P**	**08 23 05.5**	**-0.1**
KHET				AMb	AMB	08 23 14.2	
	comp=Z,18nm,1.3s,mb4.4						
KUDL	**Kundal**	**26.59**	**31**	*e*PKP	**P**	**08 23 08.2**	**-1.0**
KUDL				AMb	AMB	08 23 15.8	
	comp=Z,30nm,1.2s,mb4.7						
SONA	**Sohna**	**26.99**	**32**	*e*PKP	**P**	**08 23 13.3**	**+0.5**
SONA				AMb	AMB	08 23 14.6	
	comp=Z,5.4nm,0.5s,mb4.4						
AYAN	**Aya Nagar**	**27.20**	**32**	*e*PKP	**P**	**08 23 14.2**	**-0.4**
AYAN				AMb	AMB	08 23 17.2	
	comp=Z,5.0nm,0.3s,mb4.5						
KBL	**Kabul**	**29.61**	**13**	*e*P	**P**	**08 23 38.4**	**+2.2**
	comp=Z,2.4nm,0.4s,mb4.3						
KLP	**Kalpa**	**30.23**	**30**	*e*PKP	**P**	**08 23 42.5**	**+0.8**
KLP				AML	AML	08 23 48.5	
	comp=Z,28nm,0.7s						
KSH	**Kashi**	**36.21**	**19**	*e*P	**P**	**08 24 28.6**	**-5.0**
KSH				*e*pP	pP	08 24 32.0	-5.6
KSH				*e*sP	sP	08 24 36.4	-2.8
KSH				*e*PP	PP	08 25 50.3	-5.8
KSH				*e*PcP	PcP	08 26 55.0	-4.0
KSH				*e*S	**S**	**08 30 03.3**	**-10**
KSH				*e*ScP	ScP	08 30 40.3	-5.1
KSH				*e*PcS	PcS	08 30 42.1	-4.4
KSH				*e*ScS	ScS	08 34 44.1	-7.0
KSH				pmax	pmax		
	comp=Z,20nm,2.0s,mb4.7						
KSH				LR	LR		
	comp=N,230nm,7.6s						
KSH				LR	LR		
	comp=E,180nm,6.4s						
KSH				LR	LR		
	comp=Z,350nm,11.3s,MS4.4						
LSA	**Lhasa**	**36.92**	**46**	P	**P**	**08 24 40.8**	**+0.9**
MALT	**Malatya**	**38.59**	**331**	*e*P	**P**	**08 24 56.1**	**+2.3**
	comp=Z,4.5nm,0.9s,mb4.2						
AAK	**Ala-Archa**	**38.63**	**16**	*e*P	**P**	**08 24 55.8**	**+1.7**
	comp=Z,3.6nm,0.6s,mb4.3						
AAK	**Ala-Archa**	**38.63**	**16**	P	**P**	**08 24 54.6**	**+0.5**
	comp=Z,1.5nm,0.3s,mb4.2,baz=202,slow=9.9,SNR=4.6						
CMAR	**Chiang Mai Arr**	**38.83**	**68**	P	**P**	**08 24 57.1**	**+1.0**
	comp=Z,0.7nm,0.4s,mb3.8,baz=270,slow=9.1,SNR=12						
LSZ	**Lusaka**	**38.87**	**237**	*e*P	**P**	**08 24 58.7**	**+2.2**
	comp=Z,6.4nm,1.1s,mb4.3						
LSZ	**Lusaka**	**38.87**	**237**	P	**P**	**08 24 58.3**	**+1.8**
	comp=Z,2.3nm,0.8s,mb4.0,baz=65,slow=8.4,SNR=4.9						
CHTO	**Chiang Mai**	**38.91**	**67**	*e*P	**P**	**08 24 57.6**	**+0.7**
	comp=Z,4.0nm,0.8s,mb4.2						
BR131	**Keskin Array S**	**42.10**	**328**	*e*P	**P**	**08 25 23.3**	**+0.4**
	comp=Z,2.0nm,0.8s,mb3.8						
BRTR	**Keskin Array B**	**42.10**	**328**	P	**P**	**08 25 23.1**	**+0.1**
	comp=Z,3.2nm,0.9s,mb4.0,baz=146,slow=9.0,SNR=17						
ABKAR	**Akbulak array**	**43.46**	**359**	*e*P	**P**	**08 25 34.2**	**+0.4**
	comp=Z,11nm,0.9s,mb4.6						
KMI	**Kunming**	**44.12**	**59**	P	**P**	**08 25 40.6**	**+1.1**
KMI				pP	pP	08 25 44.9	+1.4
KMI				sP	sP	08 25 46.3	+1.2
KMI				PP	PP	08 27 25.3	+2.9
KMI				S	**S**	**08 32 14.8**	**+2.5**
KMI				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
KMI				pmax	pmax		
	comp=Z,73nm,3.4s						
KMI				LR	LR		
	comp=N,310nm,20.1s,MS4.5						
KMI				LR	LR		
	comp=E,510nm,19.2s,MS4.5						
KMI				LR	LR		
	comp=Z,570nm,19.2s,MS4.5						
WMQ	**Urumqi**	**44.52**	**27**	*e*P	**P**	**08 25 42.6**	**+0.2**
WMQ				pP	pP	08 25 47.1	+0.6
WMQ				sP	sP	08 25 49.6	+1.6
WMQ				PcP	PcP	08 27 26.3	+0.7
WMQ				PP	PP	08 27 27.8	+1.4
WMQ				*e*S	**S**	**08 32 16.9**	**-0.7**
WMQ				ScS	ScS	08 35 37.9	-2.5
WMQ				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.9						
WMQ				pmax	pmax		
	comp=Z,280nm,4.5s						
WMQ				LR	LR		
	comp=N,580nm,23.8s,MS4.6						
WMQ				LR	LR		
	comp=E,600nm,20.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,630nm,20.3s,MS4.5						
AKTK	**Aktyubinsk**	**44.71**	**357**	P	**P**	**08 25 44.2**	**+0.4**
AKTO	**Aktyubinsk**	**44.71**	**357**	P	**P**	**08 25 44.2**	**+0.4**
	comp=Z,5.9nm,1.1s,mb4.3,baz=178,slow=8.4,SNR=14						
MKAR	**Makanchi Array**	**44.79**	**20**	P	**P**	**08 25 44.2**	**-0.3**
	comp=Z,0.3nm,0.3s,mb3.5,baz=212,slow=10.0,SNR=8.0						
CD2	**Chengdu**	**47.05**	**52**	P	**P**	**08 26 02.5**	**-0.1**
CD2				pP	pP	08 26 07.0	+0.3
CD2				sP	sP	08 26 09.5	+1.2
CD2				PP	PP	08 27 52.8	-0.6
CD2				ScP	ScP	08 31 27.1	-1.5
CD2				S	**S**	**08 32 52.8**	**-1.6**
CD2				ScS	ScS	08 35 53.9	-3.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,200nm,8.8s						
CD2				LR	LR		
	comp=N,550nm,18.8s,MS4.8						
CD2				LR	LR		
	comp=E,680nm,18.4s,MS4.8						
CD2				LR	LR		
	comp=Z,850nm,19.1s,MS4.7						
KURK	**Kurchatov**	**47.18**	**15**	*e*P	**P**	**08 26 03.2**	**-0.1**
	comp=Z,10nm,1.6s,mb4.5						
KURK	**Kurchatov**	**47.18**	**15**	P	**P**	**08 26 02.5**	**-0.8**
	comp=Z,0.8nm,0.4s,mb4.0,baz=214,slow=7.8,SNR=8.2						
BVAR	**Borovoye Array**	**47.80**	**7**	P	**P**	**08 26 07.8**	**-0.3**
	comp=Z,0.4nm,0.5s,mb3.8,baz=164,slow=7.5,SNR=5.4						
GYA	**Guiyang**	**47.89**	**59**	*e*P	**P**	**08 26 11.3**	**+2.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
GTA	**Gaotai**	**48.29**	**40**	*e*P	**P**	**08 26 12.4**	**+0.3**
GTA				pP	pP	08 26 16.0	-0.2
GTA				sP	sP	08 26 18.8	+1.1
GTA				S	**S**	**08 33 12.9**	**+1.2**
GTA				SS	SS	08 36 38.9	-2.5
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
GTA				LR	LR		
	comp=N,1μm,18.1s,MS5.0						
GTA				LR	LR		
	comp=E,950nm,17.2s,MS5.0						
GTA				LR	LR		
	comp=Z,1μm,19.9s,MS4.9						
QIZ	**Qiongzhong**	**49.05**	**70**	P	**P**	**08 26 17.3**	**-1.0**
QIZ				LR	LR		
	comp=E,160nm,24.1s						
QIZ				LR	LR		
	comp=Z,370nm,31.5s						
LZH	**Lanzhou**	**49.34**	**46**	*e*P	**P**	**08 26 16.0**	**-4.3**
LZH				pP	pP	08 26 19.3	-5.0
LZH				sP	sP	08 26 20.8	-5.1
LZH				*e*PP	PP	08 28 11.3	-3.0
LZH				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.9						
LZH				pmax	pmax		
	comp=Z,52nm,6.5s						
LZH				LR	LR		
	comp=E,230nm,15.0s						
LZH				LR	LR		
	comp=Z,320nm,18.3s,MS4.3						
VTS	**Vitosha**	**49.89**	**323**	⇑P	**P**	**08 26 25.0**	**+0.7**
VTS	**Vitosha**	**49.89**	**323**	⇑*i*P	**P**	**08 26 25.0**	**+0.7**
VRI	**Vrincioaia**	**50.02**	**329**	⇑P	**P**	**08 26 27.6**	**+2.3**
VRI	**Vrincioaia**	**50.02**	**329**	⇑*i*P	**P**	**08 26 27.6**	**+2.3**
PLOR	**Plostina**	**50.05**	**329**	⇑*i*P	**P**	**08 26 27.3**	**+1.8**
MLR	**Muntele Rosu**	**50.18**	**328**	⇑P	**P**	**08 26 27.6**	**+1.1**
MLR	**Muntele Rosu**	**50.18**	**328**	⇑*i*P	**P**	**08 26 27.6**	**+1.1**
VOIR		**50.62**	**327**	⇓P	**P**	**08 26 30.1**	**+0.3**
VOIR		**50.62**	**327**	⇓*i*P	**P**	**08 26 30.1**	**+0.3**
ARU	**Arti**	**50.68**	**358**	*e*P	**P**	**08 26 29.5**	**-0.5**
	comp=Z,2.8nm,0.8s,mb4.2						
ZALV	**Zalesovo Beam**	**51.79**	**17**	P	**P**	**08 26 37.5**	**-1.0**
	comp=Z,2.7nm,0.9s,mb4.2,baz=271,slow=7.0,SNR=6.5						
XAN	**Xi'an**	**52.28**	**51**	P	**P**	**08 26 41.1**	**-1.3**
XAN				pP	pP	08 26 51.3	+4.8
XAN				pmax	pmax		
	comp=Z,19nm,6.0s						
XAN				LR	LR		
	comp=N,400nm,22.2s,MS4.5						
XAN				LR	LR		
	comp=E,140nm,18.0s,MS4.5						
XAN				LR	LR		
	comp=Z,170nm,19.2s,MS4.1						
AKASG	**Malin Array Be**	**52.29**	**335**	P	**P**	**08 26 41.9**	**-0.3**
	comp=Z,0.2nm,0.3s,mb3.5,baz=119,slow=6.5,SNR=8.0						
BZS	**Buzias**	**52.62**	**326**	⇑P	**P**	**08 26 45.0**	**+0.3**
BZS	**Buzias**	**52.62**	**326**	⇑*i*P	**P**	**08 26 45.0**	**+0.2**
DRGR		**52.74**	**327**	⇑P	**P**	**08 26 46.3**	**+0.6**
DRGR		**52.74**	**327**	⇑*i*P	**P**	**08 26 46.3**	**+0.7**
PKSM	**Moragy**	**54.66**	**325**	⇑P	**P**	**08 27 00.2**	**+0.5**
PKSM	**Moragy**	**54.66**	**325**	⇑*i*P	**P**	**08 27 00.2**	**+0.5**
CRVS	**Cervenica-Dubn**	**54.71**	**329**	*e*P	**P**	**08 27 01.8**	**+1.7**
	comp=Z,12nm,1.3s,mb4.8						
CRVS	**Cervenica-Dubn**	**54.71**	**329**	*e*P	**P**	**08 27 01.8**	**+1.7**
PSZ	**Piszkesteto**	**54.94**	**327**	⇓*e*P	**P**	**08 26 53.6**	**-8.1**
KECS	**Kecovo**	**54.97**	**328**	*e*P	**P**	**08 27 04.2**	**+2.3**
KECS	**Kecovo**	**54.97**	**328**	*e*P	**P**	**08 27 04.2**	**+2.3**
STHS	**Stebnicka Huta**	**55.15**	**329**	*e*P	**P**	**08 27 04.7**	**+1.5**
	comp=Z,4.6nm,1.4s,mb4.3						
STHS	**Stebnicka Huta**	**55.15**	**329**	*e*P	**P**	**08 27 04.7**	**+1.5**
VYHS	**Vyhne**	**55.85**	**327**	*e*P	**P**	**08 27 07.4**	**-0.9**
	comp=Z,6.2nm,1.3s,mb4.5						
VYHS	**Vyhne**	**55.85**	**327**	*e*P	**P**	**08 27 07.4**	**-0.9**
VYHS				*e*pP	pP	08 27 13.8	+1.4
SOP	**Sopron**	**56.66**	**325**	⇓*e*P	**P**	**08 27 10.8**	**-3.3**
HHC	**Hu-ho-hao-te**	**56.86**	**44**	*e*P	**P**	**08 27 17.8**	**+2.2**
HHC				pP	pP	08 27 22.4	+2.7
HHC				sP	sP	08 27 25.1	+3.8
HHC				PP	PP	08 29 25.4	+3.3
HHC				S	**S**	**08 35 08.0**	**-1.0**
HHC				ScS	ScS	08 37 03.3	-1.7
HHC				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
HHC				pmax	pmax		
	comp=Z,99nm,3.9s						
HHC				LR	LR		
	comp=N,770nm,14.5s,MS5.0						
HHC				LR	LR		
	comp=E,520nm,13.9s,MS5.0						
HHC				LR	LR		
	comp=Z,710nm,15.8s,MS4.9						
SONM	**Songino Array**	**56.91**	**35**	P	**P**	**08 27 14.2**	**-1.7**
	comp=Z,1.0nm,0.6s,mb4.0,baz=211,slow=8.1,SNR=5.0						
VRAC	**Vranov**	**57.53**	**327**	⇑P	**P**	**08 27 20.2**	**-0.1**
VRAC	**Vranov**	**57.53**	**327**	⇑*i*P	**P**	**08 27 20.2**	**0.0**
DPC	**Dobruska-Polom**	**58.26**	**328**	*e*P	**P**	**08 27 25.3**	**0.0**
UPC	**Upice**	**58.52**	**328**	*e*P	**P**	**08 27 27.0**	**-0.1**
PRU	**Pruhonice**	**59.02**	**327**	*e*P	**P**	**08 27 29.9**	**-0.7**
KHC	**Kasperske Hory**	**59.11**	**325**	*e*P	**P**	**08 27 29.9**	**-1.3**
TORD	**Torodi Ar. Bea**	**59.19**	**282**	P	**P**	**08 27 33.0**	**+0.6**
	comp=Z,3.1nm,1.1s,mb4.3,baz=94,slow=6.1,SNR=9.6						
BJI	**Beijing**	**59.83**	**47**	P	**P**	**08 27 36.5**	**+0.1**
BJI				S	**S**	**08 35 49.3**	**+1.5**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
BJI				pmax	pmax		
	comp=Z,85nm,5.6s						
BJI				LR	LR		
	comp=N,370nm,20.9s,MS4.7						
BJI				LR	LR		
	comp=E,480nm,18.5s,MS4.7						
BJI				LR	LR		
	comp=Z,450nm,30.2s						
NKC	**Novy Kostel**	**60.30**	**326**	*e*P	**P**	**08 27 39.8**	**+0.4**
CLL	**Collm**	**60.55**	**327**	⇓*i*P	**P**	**08 27 41.9**	**+0.8**
	comp=Z,12nm,1.7s,mb4.8						
CLL	**Collm**	**60.55**	**327**	⇓*i*P	**P**	**08 27 41.9**	**+0.8**
	comp=Z,12nm,1.7s,mb4.8						
LPG	**La Plagne**	**61.62**	**319**	*e*P	**P**	**08 27 47.1**	**-1.4**
LPL	**La Plagne**	**61.64**	**319**	*e*P	**P**	**08 27 47.4**	**-1.2**
CDF	**Champ du Feu**	**62.46**	**323**	*e*P	**P**	**08 27 53.5**	**-0.6**
	comp=Z,69nm,1.6s,mb5.2						
CDF	**Champ du Feu**	**62.46**	**323**	*e*P	**P**	**08 27 53.5**	**-0.6**
	comp=Z,35nm,1.6s,mb5.2						
CABF	**La Chapelle**	**62.48**	**320**	*e*P	**P**	**08 27 53.8**	**-0.4**
	comp=Z,51nm,1.0s,mb5.3						
CABF	**La Chapelle**	**62.48**	**320**	*e*P	**P**	**08 27 53.8**	**-0.4**
	comp=Z,25nm,1.0s,mb5.3						
HINF	**Hinteralfeld**	**62.48**	**322**	*e*P	**P**	**08 27 53.0**	**-1.2**
MEZF	**Maizieres J'vi**	**63.85**	**322**	*e*P	**P**	**08 28 02.8**	**-0.5**
SMF	**Signal de Mont**	**63.92**	**320**	*e*P	**P**	**08 28 02.7**	**-1.1**
LOR	**Lormes**	**64.14**	**320**	*e*P	**P**	**08 28 04.2**	**-1.0**
	comp=Z,25nm,1.2s,mb4.8						
LOR				*e*MLR	MLR		
	comp=Z,190nm,21.8s,MS3.9						
LOR	**Lormes**	**64.14**	**320**	*e*P	**P**	**08 28 04.2**	**-1.0**
	comp=Z,13nm,1.2s,mb4.8						
LOR				LR	LR		
	comp=Z,190nm,21.8s,MS4.2						
SSF	**Saint Saulge**	**64.29**	**320**	*e*P	**P**	**08 28 05.0**	**-1.2**
BGF	**Bois d'Agland**	**64.54**	**319**	*e*P	**P**	**08 28 07.3**	**-0.6**
BAIF	**Baives**	**64.97**	**323**	*e*P	**P**	**08 28 10.0**	**-0.6**
	comp=Z,61nm,1.6s,mb5.1						
BAIF	**Baives**	**64.97**	**323**	*e*P	**P**	**08 28 10.0**	**-0.6**
	comp=Z,30nm,1.6s,mb5.1						
NOA	**NORSAR Array B**	**66.66**	**336**	P	**P**	**08 28 20.1**	**-1.2**
	comp=Z,0.9nm,0.8s,mb3.8,baz=148,slow=6.5,SNR=3.6						
LDF	**La Drutiere**	**67.11**	**321**	*e*P	**P**	**08 28 23.1**	**-1.3**
FLN	**La Foliniere**	**67.38**	**321**	*e*P	**P**	**08 28 25.1**	**-1.1**
FLN				*e*MLR	MLR		
	comp=Z,160nm,21.2s,MS3.9						
FLN	**La Foliniere**	**67.38**	**321**	*e*P	**P**	**08 28 25.1**	**-1.1**
FLN				LR	LR		
	comp=Z,160nm,21.3s,MS4.2						
ESDC	**Sonseca Array**	**67.46**	**311**	P	**P**	**08 28 26.8**	**0.0**
	comp=Z,1.6nm,0.7s,mb4.2,baz=85,slow=5.5,SNR=11						
ARCES	**ARCESS Array B**	**67.94**	**347**	P	**P**	**08 28 28.6**	**-0.7**
	comp=Z,3.3nm,1.0s,mb4.3,baz=193,slow=3.7,SNR=4.9						
KSRS	**Korea Array**	**68.05**	**52**	P	**P**	**08 28 29.1**	**-1.5**
	comp=Z,3.5nm,1.0s,mb4.4,baz=264,slow=7.6,SNR=5.9						
ROSF	**Rostrenen**	**69.03**	**320**	*e*P	**P**	**08 28 35.0**	**-1.5**
MDJ	**Mudanjiang**	**70.63**	**45**	P	**P**	**08 28 46.3**	**-0.1**
MDJ				pP	pP	08 28 49.5	-1.1
MDJ				sP	sP	08 28 50.9	-1.2
MDJ				PcP	PcP	08 29 07.5	+0.1
MDJ				PP	PP	08 31 22.9	0.0
MDJ				S	S	08 37 59.5	-0.7
MDJ				ScS	ScS	08 38 49.6	-0.1
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
MDJ				pmax	pmax		
	comp=Z,82nm,6.6s						
MDJ				LR	LR		
	comp=N,440nm,17.6s,MS4.7						
MDJ				LR	LR		
	comp=E,150nm,22.2s,MS4.7						
MDJ				LR	LR		
	comp=Z,570nm,16.8s						
MAW	**Mawson**	**73.10**	**179**	P	**P**	**08 29 01.8**	**+1.1**
	comp=Z,2.3nm,0.3s,mb4.6,baz=36,slow=9.2,SNR=44						
YAK	**Yakutsk**	**74.96**	**27**	*e*P	**P**	**08 29 11.3**	**-0.5**
	comp=Z,12nm,0.7s,mb4.9						
WRA	**Warramunga Arr**	**76.10**	**112**	P	**P**	**08 29 18.9**	**-0.2**
	comp=Z,9.5nm,1.1s,mb4.6,baz=291,slow=5.0,SNR=21						
ASAR	**Alice Springs**	**76.46**	**116**	P	**P**	**08 29 20.9**	**-0.3**
	comp=Z,4.6nm,0.9s,mb4.4,baz=286,slow=5.3,SNR=23						
STKA	**Stephens Creek**	**84.74**	**123**	P	**P**	**08 30 05.5**	**0.0**
	comp=Z,1.9nm,0.7s,mb4.3,baz=322,slow=12,SNR=2.9						
CTAO	**Charters Tower**	**87.18**	**110**	*e*P	**P**	**08 30 16.9**	**-0.8**
	comp=Z,5.9nm,1.0s,mb4.8						
TXAR	**Lajitas Array**	**142.34**	**338**	PKP	PKPdf	08 37 05.3	+1.1
TXAR	**Lajitas Array**	**142.34**	**338**	PKhKP	PKPpre	08 36 59.1

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.44**	**121**	P	**Pn**	**08 18 57.1**	**+0.1**
YOJ				S	**Sn**	**08 19 08.8**	**+0.3**
TWB1	**Santiao Chiao** baz=300	**0.64**	**300**	⇑*i*P	**Pn**	**08 18 58.4**	**-0.1**
TWB1				S	**Sn**	**08 19 10.7**	**-0.5**
ILA	**Ilan** baz=277	**0.78**	**276**	*e*P	**Pn**	**08 18 59.4**	**-0.4**
ILA				*e*S	**Sn**	**08 19 13.5**	**+0.1**
ENA	**Nanau** baz=253	**0.82**	**252**	P	**Pn**	**08 19 00.3**	**+0.1**
ENA				*e*S	**Sn**	**08 19 13.8**	**-0.4**
NWF	**Wu-fen Shan** baz=297	**0.83**	**297**	⇑*i*P	**Pn**	**08 19 00.6**	**+0.2**
NWF				*e*S	**Sn**	**08 19 14.2**	**-0.2**
TWE	**Neicheng** baz=273	**0.85**	**272**	*i* P	**Pn**	**08 19 00.7**	**+0.2**
TWE				*e*S	**Sn**	**08 19 14.2**	**-0.4**
EHP	**Heping Village** baz=245	**0.87**	**244**	*e*P	**Pn**	**08 19 00.4**	**-0.3**
EHP				*e*S	**Sn**	**08 19 14.8**	**-0.2**
ENTT	**Nioudou** baz=268	**0.94**	**267**	*i* P	**Pn**	**08 19 01.8**	**+0.4**
TWA	**Mucha** baz=288	**0.97**	**288**	*i* P	**Pn**	**08 19 01.8**	**+0.1**
TWA				S	**Sn**	**08 19 16.4**	**-0.5**
TAP1	**Taipei** baz=290	**1.04**	**290**	*e*P	**Pn**	**08 19 02.3**	**-0.2**
TAP1				*e*S	**Sn**	**08 19 18.2**	**0.0**
TWY	**Chenhua** baz=303	**1.08**	**303**	P	**Pn**	**08 19 03.0**	**+0.1**
TWY				*e*S	**Sn**	**08 19 18.4**	**-0.5**
IRIF	**Iriomote-Funau**	**1.09**	**109**	P	**Pn**	**08 19 03.1**	**+0.1**
IRIF				S	**Sn**	**08 19 19.6**	**+0.4**
TWD	**Chiawan** baz=238	**1.10**	**237**	*i* P	**Pn**	**08 19 02.9**	**-0.3**
TWD				S	**Sn**	**08 19 18.7**	**-0.6**
NSK	**Sanguang** baz=270	**1.13**	**270**	*i* P	**Pn**	**08 19 03.8**	**+0.3**
NSK				*i* S	**Sn**	**08 19 19.8**	**-0.2**
NNS	**Nan Shan** baz=258	**1.14**	**258**	*i* P	**Pn**	**08 19 03.9**	**+0.2**
NNS				*e*S	**Sn**	**08 19 20.1**	**-0.2**
TWS1	**Kuangyinshan** baz=291	**1.15**	**291**	*i* P	**Pn**	**08 19 03.8**	**+0.1**
TWS1				*i* S	**Sn**	**08 19 20.4**	**0.0**
HWA	**Hwalien** baz=233	**1.15**	**232**	P	**Pn**	**08 19 03.7**	**-0.1**
HWA				S	**Sn**	**08 19 20.8**	**+0.4**
HATJ	**Hateruma jima**	**1.27**	**120**	P	**Pn**	**08 19 06.3**	**+1.2**
HATJ				*e*S	**Sn**	**08 19 23.9**	**+1.1**
ESF	**Shoufeng Towns** baz=232	**1.29**	**231**	*e*P	**Pn**	**08 19 05.3**	**-0.1**
ESF				*e*S	**Sn**	**08 19 23.0**	**-0.2**
NCU	**National Centr** baz=283	**1.31**	**283**	P	**Pn**	**08 19 06.2**	**+0.5**
NCU				*i* S	**Sn**	**08 19 24.6**	**+0.8**
WHF	**Hehuan Shan** baz=247	**1.33**	**246**	*i* P	**Pn**	**08 19 06.3**	**+0.5**
WHF				*e*S	**Sn**	**08 19 24.4**	**+0.2**
JKRS	**Kuro-shima**	**1.36**	**109**	P	**Pn**	**08 19 06.8**	**+0.6**
JKRS				*e*S	**Sn**	**08 19 25.9**	**+1.1**
TWT	**Tachien** baz=252	**1.37**	**252**	P	**Pn**	**08 19 07.0**	**+0.8**
TWT				S	**Sn**	**08 19 25.6**	**+0.6**
TEGC	**Jichi Village** baz=225	**1.37**	**225**	*e*P	**Pn**	**08 19 06.6**	**+0.2**
TEGC				*e*S	**Sn**	**08 19 25.1**	**0.0**
ESL	**Shilin** baz=231	**1.38**	**231**	*i* P	**Pn**	**08 19 05.9**	**-0.5**
ESL				*e*S	**Sn**	**08 19 24.7**	**-0.4**
JIJ	**Ishigaki jima**	**1.44**	**103**	P	**Pn**	**08 19 07.5**	**+0.3**
JIJ				*e*S	**Sn**	**08 19 26.5**	**-0.1**
NSTT	**Nanjuang** baz=268	**1.46**	**268**	*i* P	**Pn**	**08 19 07.6**	**+0.3**
NSTT				*i* S	**Sn**	**08 19 26.6**	**-0.2**
HSN	**Hsinchu** baz=276	**1.48**	**275**	*e*P	**Pn**	**08 19 08.2**	**+0.5**
HSN				*e*S	**Sn**	**08 19 27.0**	**-0.5**
EHY	**Hungye** baz=225	**1.66**	**225**	*i* P	**Pn**	**08 19 09.2**	**-0.7**
EHY				*e*S	**Sn**	**08 19 31.1**	**-0.2**
TWQ1	**Liyutan** baz=259	**1.70**	**259**	*i* P	**Pn**	**08 19 10.8**	**+0.5**
TWQ1				S	**Sn**	**08 19 32.1**	**-0.1**
SMLT	**Sun Moon Lake** baz=243	**1.75**	**243**	P	**Pn**	**08 19 11.8**	**+0.8**
TYC	**Yuchr** baz=244	**1.77**	**244**	*i* P	**Pn**	**08 19 12.2**	**+0.9**
TYC				S	**Sn**	**08 19 34.3**	**+0.4**
TWF1	**Yuli** baz=222	**1.79**	**222**	*i* P	**Pn**	**08 19 10.9**	**-0.5**
TWF1				*e*S	**Sn**	**08 19 33.4**	**-0.8**
TCU	**Taichung** baz=253	**1.83**	**253**	P	**Pn**	**08 19 12.3**	**+0.3**
TCU				*e*S	**Sn**	**08 19 35.0**	**-0.2**
JTJ	**Tarama**	**1.91**	**91**	P	**Pn**	**08 19 13.9**	**+0.8**
JTJ				*e*S	**Sn**	**08 19 37.5**	**+0.4**
YUS	**Yu-Shan** baz=232	**1.92**	**232**	*i* P	**Pn**	**08 19 14.3**	**+1.1**
YUS				*e*S	**Sn**	**08 19 37.7**	**+0.4**
CHKT	**Chengkung** baz=216	**1.94**	**216**	*i* P	**Pn**	**08 19 12.9**	**-0.6**
ALS	**Alishan** baz=235	**2.02**	**235**	*i* P	**Pn**	**08 19 15.7**	**+1.3**
ALS				*e*S	**Sn**	**08 19 39.5**	**0.0**
CHN5	**Tsauling** baz=239	**2.06**	**239**	*i* P	**Pn**	**08 19 16.2**	**+1.1**
CHN5				*e*S	**Sn**	**08 19 41.4**	**+0.9**
ELDTW	**Lidau** baz=224	**2.08**	**224**	*i* P	**Pn**	**08 19 15.1**	**-0.2**
ELDTW				*e*S	**Sn**	**08 19 40.2**	**-0.7**
CHN4	**Tsaushan** baz=234	**2.27**	**234**	*e*P	**Pn**	**08 19 18.8**	**+1.1**
CHN4				*e*S	**Sn**	**08 19 44.4**	**-0.9**
STYT	**Tauyuan** baz=228	**2.27**	**228**	*i* P	**Pn**	**08 19 18.8**	**+1.0**
STYT				*e*S	**Sn**	**08 19 45.0**	**-0.4**
WTCT	**Ta-ch'eng** baz=249	**2.27**	**249**	*e*P	**Pn**	**08 19 18.1**	**+0.4**
WTCT				*e*S	**Sn**	**08 19 44.9**	**-0.4**
CHY	**Chiayi** baz=239	**2.31**	**240**	*e*P	**Pn**	**08 19 19.2**	**+0.9**
CHY				*e*S	**Sn**	**08 19 45.5**	**-0.9**
WTP	**Ta-pu** baz=232	**2.31**	**232**	*i* P	**Pn**	**08 19 19.3**	**+1.0**
WTP				*e*S	**Sn**	**08 19 46.4**	**0.0**
TWG	**Pinlang** baz=217	**2.33**	**217**	*i* P	**Pn**	**08 19 17.7**	**-0.8**
CHN1	**Nanshi** baz=232	**2.42**	**232**	*e*P	**Pn**	**08 19 20.4**	**+0.8**
CHN1				*e*S	**Sn**	**08 19 48.7**	**-0.1**
JMJ	**Miyako jima 2**	**2.45**	**87**	*e*S	**Sn**	**08 19 49.3**	**-0.4**
ECL	**Taimali** baz=216	**2.57**	**216**	*i* P	**Pn**	**08 19 20.8**	**-0.9**
ECL				*e*S	**Sn**	**08 19 51.6**	**-0.8**
SSD	**Sandimen** baz=223	**2.64**	**223**	*e*P	**Pn**	**08 19 23.5**	**+0.8**
SSD				*e*S	**Sn**	**08 19 53.6**	**-0.5**
TAI1	**Yung-k'ang** baz=233	**2.72**	**233**	*e*P	**Pn**	**08 19 25.0**	**+1.3**
TWM1	**Shoushan** baz=227	**2.73**	**227**	*e*P	**Pn**	**08 19 24.3**	**+0.6**
EAST	**Anshuo** baz=215	**2.80**	**215**	*i* P	**Pn**	**08 19 24.3**	**-0.5**
EAST				*e*S	**Sn**	**08 19 56.7**	**-1.2**
LAY	**Lan-yu** baz=200	**2.81**	**200**	P	**Pn**	**08 19 24.3**	**-0.6**
LAY				*e*S	**Sn**	**08 19 57.2**	**-0.8**
SCZT	**Fangliau** baz=218	**2.94**	**219**	*e*P	**Pn**	**08 19 27.1**	**+0.6**
SCZT				*e*S	**Sn**	**08 20 00.5**	**-0.6**
PNG	**Penghu** baz=248	**3.00**	**249**	P	**Pn**	**08 19 26.4**	**-0.9**
PNG				*e*S	**Sn**	**08 20 01.5**	**-1.1**
TWK1	**Hengchun** baz=211	**3.19**	**211**	*e*P	**Pn**	**08 19 29.9**	**-0.1**
QZH	**Quanzhou**	**3.65**	**275**	Pn	**Pn**	**08 19 34.4**	**-1.7**
QZH				Sn	**Sn**	**08 20 13.5**	**-4.7**
QZH	comp=N,140nm,0.4s			smax			
QZH	comp=E,70nm,0.2s			smax			
KNM	**Kinmen** baz=266	**3.80**	**267**	*e*P	**Pn**	**08 19 40.1**	**+1.9**
JKE	**Kume jima 2**	**4.12**	**66**	P	**Pn**	**08 19 42.7**	**+0.3**
JAGN	**Aguni-jima**	**4.60**	**65**	P	**Pn**	**08 19 48.8**	**-0.1**
JAGN				*e*S	**Sn**	**08 20 39.8**	**-1.4**
JIH	**Iheya**	**5.37**	**63**	P	**Pn**	**08 19 58.9**	**-0.5**
JOW	**Kunigami**	**5.54**	**66**	P	**Pn**	**08 20 00.4**	**-1.3**
JOW				*e*S	**Sn**	**08 21 01.8**	**-2.4**
JTK	**Tokunoshima**	**6.48**	**60**	P	**Pn**	**08 20 12.3**	**-2.2**
JAM	**Amami Oshima**	**7.29**	**58**	P	**Pn**	**08 20 22.9**	**-2.5**
KSRS	**Korea Array** comp=E,0.3nm,0.3s,baz=195,slow=13,SNR=5.1	**13.51**	**18**	P	**Pn**	**08 21 51.3**	**+2.1**
WRA	**Warramunga Arr** comp=E,2.0nm,0.7s,mb4.0,baz=347,slow=8.7,SNR=10	**45.81**	**165**	P	**P**	**08 26 53.0**	**-0.6**
WRA				PcP	PcP	08 28 27.9	-1.5
	comp=E,0.3nm,0.4s,baz=348,slow=3.5,SNR=6.2						
ASAR	**Alice Springs** comp=E,0.4nm,0.6s,mb3.5,baz=343,slow=9.0,SNR=7.8	**49.30**	**166**	P	**P**	**08 27 21.1**	**+0.6**

ISCJB ***16*** *08:20:18.7±0.5,5.63N±0.09×61.26E±0.08,h10km, mb4.5/28, MS4.4/16, Error ellipse: s-maj=13.7km s-min=11.0km az=18.5*

IDC ***16*** *08:20:19.4±0.7,5.60N×61.38E, h0km, mb4.1/16, mb1 4.2/17, mb1mx4.1/25, mbtmp4.1/17, ML4.1/1, MS4.4/17, Ms1 4.4/17, ms1mx4.3/26, Error ellipse: s-maj=18.5km s-min=17.3km az=173.0*

NEIC ***16*** *08:20:21.0±0.6,5.71N×61.33E, h10km, mb5.0/12, Error ellipse: s-maj=13.3km s-min=12.5km az=170.0*

GCMT ***16*** *08:20:23.0±0.2,5.69N×61.37E, h12km, MW5.2, Moment Tensor Solution. s49,c68; s88,c155; Moment tensor: Scale 10¹⁶Nm; Mrr-6.55±.16; Mθθ4.46±.15; Mϕϕ2.09±.15; Mrθ3.48±.42; Mrϕ-2.57±.12; Mθϕ-2.29±.48; Best double couple: Mo7.60000×10¹⁶ NP1:ϕs122.00000°, δ28.00000°, λ-91.00000°. NP2:ϕs303.00000°, δ62.00000°, λ-90.00000°. Principal axes: T 7.3500, Plg17.0000°, Azm33.0000°; N 0.4500, Plg0.0000°, Azm123.0000°; P -7.8000, Plg73.0000°, Azm214.0000°; Data Used: ll IU G IC CN.*

ISC 16 08:20:20.9±0.5,5.65N±0.09×61.30E±0.08, h10km, (h15km±1.4km: pP-P), n76, σ1.9s05/67, mb4.5/28, MS4.4/16, 6C-2D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel** 0.6nm,0.3s,baz=162,slow=6.4,SNR=2.0	**19.16**	**289**	P	**Pn**	**08 24 44.7**	**-0.8**
ATD				LR	LR	08 31 01.1	
	comp=Z,442nm,21.7s,baz=270,slow=33						
KMBO	**Kilima Mbogo**	**24.94**	**255**	*e*P	**P**	**08 25 47.4**	**+2.7**
ASF	**Jabal al Asfar** comp=Z,489nm,18.9s,MS4.3,baz=6.8,slow=35	**34.88**	**322**	LR	LR	08 40 56.2	
MMAI	**Mount Meron Ar** comp=Z,570nm,19.8s,MS4.3,baz=135,slow=35	**36.37**	**322**	LR	LR	08 41 43.4	
AAK	**Ala-Archa**	**38.64**	**16**	P	**P**	**08 27 46.5**	**+2.0**
AAK				LR	LR	08 44 56.1	
AAK	**Ala-Archa** 2.2nm,0.3s,mb4.3,baz=238,slow=9.5,SNR=3.0	**38.64**	**16**	P	**P**	**08 27 46.5**	**+2.0**
AAK				LR	LR	08 44 56.1	
	comp=Z,739nm,19.8s,MS4.5,baz=214,slow=38						
LSZ	**Lusaka** 3.2nm,0.9s,mb4.0,baz=72,slow=8.0,SNR=3.7	**38.84**	**237**	P	**P**	**08 27 48.3**	**+1.7**
LSZ				LR	LR	08 41 39.1	
	comp=Z,2μm,19.2s,MS5.0,baz=60,slow=33						
CMAR	**Chiang Mai Arr** 0.6nm,0.3s,mb3.7,baz=268,slow=9.9,SNR=3.4	**38.85**	**68**	P	**P**	**08 27 47.3**	**+0.7**
CMAR				LR	LR	08 41 41.2	
	comp=Z,507nm,21.0s,MS4.3,baz=253,slow=33						
BRTR	**Keskin Array B** 2.0nm,0.9s,mb3.8,baz=140,slow=9.7,SNR=5.2	**42.09**	**328**	P	**P**	**08 28 14.0**	**+0.8**
BRTR				PP	PP	08 29 56.3	+5.6
	0.6nm,0.5s,baz=139,slow=12,SNR=4.2						
BRTR				LR	LR	08 46 03.0	
	comp=Z,427nm,18.9s,MS4.3,baz=120,slow=37						
ABKAR	**Akbulak array**	**43.47**	**359**	*e*P	**P**	**08 28 23.1**	**-1.1**
AKTK	**Aktyubinsk**	**44.72**	**357**	P	**P**	**08 28 35.0**	**+0.8**
AKTO	**Aktyubinsk** 3.7nm,0.8s,mb4.3,baz=197,slow=9.8,SNR=5.7	**44.72**	**357**	P	**P**	**08 28 35.0**	**+0.8**
MKAR	**Makanchi Array** comp=Z,419nm,18.2s,MS4.4,baz=194,slow=38	**44.81**	**20**	LR	LR	08 48 55.2	
BOSA	**Boshof** comp=Z,1μm,18.2s,MS5.0,baz=46,slow=34	**48.63**	**224**	LR	LR	08 48 09.2	
TSUM	**Tsumeb** 13nm,1.1s,mb4.9	**49.62**	**239**	*e*P	**P**	**08 29 16.3**	**+3.4**
TSUM	**Tsumeb** 6.6nm,0.9s,mb4.7,baz=40,slow=0.8,SNR=4.8	**49.62**	**239**	P	**P**	**08 29 14.6**	**+1.7**
VRI	**Vrincioaia**	**50.02**	**329**	⇑P	**P**	**08 29 18.3**	**+2.7**
VRI	**Vrincioaia**	**50.02**	**329**	⇑*i*P	**P**	**08 29 18.3**	**+2.7**
PLOR	**Plostina**	**50.05**	**329**	⇑*i*P	**P**	**08 29 17.5**	**+1.7**
MLR	**Muntele Rosu**	**50.18**	**328**	⇑*i*P	**P**	**08 29 24.0**	**+7.2**
ZALV	**Zalesovo Beam**	**51.81**	**17**	P	**P**	**08 29 28.9**	**0.0**
ZALV				LR	LR	08 51 08.3	
ZALV	**Zalesovo Beam** 0.4nm,0.4s,mb3.7,baz=238,slow=4.9,SNR=2.4	**51.81**	**17**	P	**P**	**08 29 28.9**	**0.0**
ZALV				LR	LR	08 51 08.3	
	comp=Z,469nm,21.0s,MS4.5,baz=216,slow=36						
BURAR	**Bucovina Array**	**51.97**	**330**	⇓P	**P**	**08 29 35.8**	**+5.6**
BURAR	**Bucovina Array**	**51.97**	**330**	⇓*i*P	**P**	**08 29 35.8**	**+5.6**
AKASG	**Malin Array Be** 0.2nm,0.3s,mb3.6,baz=136,slow=7.2,SNR=4.8	**52.29**	**335**	P	**P**	**08 29 33.2**	**+0.7**
AKASG				LR	LR	08 53 44.5	
	comp=Z,280nm,19.0s,MS4.3,baz=115,slow=38						
KIEV	**Kiev** 27nm,1.5s,mb5.0	**52.29**	**335**	*e*P	**P**	**08 29 33.0**	**+0.5**
BZS	**Buzias**	**52.62**	**326**	⇑P	**P**	**08 29 35.7**	**+0.7**
BZS	**Buzias**	**52.62**	**326**	⇑*i*P	**P**	**08 29 35.7**	**+0.7**
CRVS	**Cervenica-Dubn** 20nm,1.6s,mb4.9	**54.71**	**329**	*e*P	**P**	**08 29 52.6**	**+2.3**
CRVS				*e*		08 29 57.5	
CRVS	**Cervenica-Dubn**	**54.71**	**329**	*e*P	**P**	**08 29 52.6**	**+2.3**
CRVS				*e*pP	pP	08 29 57.5	+4.0
VYHS	**Vyhne** 12nm,1.6s,mb4.7	**55.85**	**327**	*e*P	**P**	**08 29 58.9**	**+0.3**
VYHS				*e*		08 30 03.9	
VYHS	**Vyhne**	**55.85**	**327**	*e*P	**P**	**08 29 58.9**	**+0.3**
VYHS				*e*pP	pP	08 30 03.9	+2.1
KEST	**Kesra** comp=Z,102nm,18.2s,MS4.0,baz=313,slow=38	**56.23**	**310**	LR	LR	08 55 29.5	
SONM	**Songino Array** 0.8nm,0.5s,mb4.0,baz=232,slow=6.6,SNR=3.1	**56.93**	**35**	P	**P**	**08 30 06.9**	**+0.6**
OKC	**Ostrava-Krasne** 300nm,23.4s	**57.00**	**328**	*e*P	**P**	**08 30 07.4**	**+0.6**
OKC				AMS	AMS	08 53 40.0	
TREC	**Trest**	**58.13**	**326**	AMS	AMS	08 51 30.0	
	300nm,28.7s						
DPC	**Dobruska-Polom**	**58.26**	**328**	*e*P	**P**	**08 30 15.0**	**-0.6**
DPC				AMS	AMS	08 54 50.0	
	300nm,22.2s						
UPC	**Upice**	**58.51**	**328**	*e*P	**P**	**08 30 21.8**	**+4.4**
PRU	**Pruhonice**	**59.02**	**327**	*e*P	**P**	**08 30 22.1**	**+1.2**
PRU				AMS	AMS	08 51 40.0	
	300nm,27.0s						
KHC	**Kasperske Hory**	**59.10**	**326**	*e*P	**P**	**08 30 21.1**	**-0.4**
KHC				*e*PP	PP	08 32 29.5	-2.6
KHC				AMS	AMS	08 52 00.0	
	300nm,21.4s						
TORD	**Torodi Ar. Bea** 2.1nm,0.9s,mb4.2,baz=88,slow=5.6,SNR=5.1	**59.17**	**282**	P	**P**	**08 30 22.8**	**+0.2**
TORD				PcP	PcP	08 31 11.5	+0.4
	1.4nm,1.0s,baz=56,slow=4.1,SNR=2.8						
TORD				LR	LR	08 54 49.4	
	comp=Z,397nm,18.5s,MS4.6,baz=95,slow=35						
PVCC	**Panska Ves** 200nm,22.6s	**59.30**	**327**	AMS	AMS	08 54 50.0	
BRG	**Berggiesshubel** 24nm,1.9s,mb4.9	**59.82**	**327**	*e*P	**P**	**08 30 27.0**	**+0.6**
BRG							
	comp=N,237nm,29.3s						
BRG							
	comp=E,124nm,17.4s						
BRG							
	comp=Z,276nm,23.2s						
NKC	**Novy Kostel**	**60.30**	**326**	*e*P	**P**	**08 30 28.9**	**-0.8**
CLL	**Collm** comp=Z,36nm,2.1s,mb5.1	**60.55**	**327**	*i* P	**P**	**08 30 33.0**	**+1.6**
CLL				*i* pP	pP	08 30 36.6	+2.0
	comp=Z,61nm,2.2s						
LPG	**La Plagne**	**61.61**	**319**	*e*P	**P**	**08 30 37.7**	**-1.0**
LPL	**La Plagne** comp=Z,57nm,1.5s,mb5.2	**61.63**	**319**	*e*P	**P**	**08 30 37.8**	**-1.1**
LPL	**La Plagne** comp=Z,28nm,1.5s,mb5.2	**61.63**	**319**	*e*P	**P**	**08 30 37.8**	**-1.1**
CDF	**Champ du Feu** comp=Z,138nm,1.8s,mb5.5	**62.46**	**323**	*e*P	**P**	**08 30 43.9**	**-0.5**
CDF	**Champ du Feu** comp=Z,69nm,1.8s,mb5.5	**62.46**	**323**	*e*P	**P**	**08 30 43.9**	**-0.5**
CABF	**La Chapelle** comp=Z,178nm,1.5s,mb5.7	**62.47**	**320**	*e*P	**P**	**08 30 44.3**	**-0.2**
CABF	**La Chapelle** comp=Z,89nm,1.5s,mb5.7	**62.47**	**320**	*e*P	**P**	**08 30 44.3**	**-0.2**
HINF	**Hinteralfeld** comp=Z,84nm,1.9s,mb5.2	**62.47**	**322**	*e*P	**P**	**08 30 43.6**	**-0.9**
HINF	**Hinteralfeld** comp=Z,42nm,1.9s,mb5.2	**62.47**	**322**	*e*P	**P**	**08 30 43.6**	**-0.9**
HAU	**Haudompre**	**62.86**	**322**	*e*P	**P**	**08 30 45.8**	**-1.2**
MEZF	**Maizieres J'vi**	**63.85**	**322**	*e*P	**P**	**08 30 53.0**	**-0.6**
SMF	**Signal de Mont**	**63.92**	**320**	*e*P	**P**	**08 30 53.0**	**-1.1**
LOR	**Lormes**	**64.13**	**320**	*e*P	**P**	**08 30 54.6**	**-0.9**
SSF	**Saint Saulge** comp=Z,42nm,1.4s,mb5.0	**64.28**	**320**	*e*P	**P**	**08 30 55.3**	**-1.2**
SSF	**Saint Saulge** comp=Z,21nm,1.4s,mb5.0	**64.28**	**320**	*e*P	**P**	**08 30 55.3**	**-1.2**
AVF	**Avril sur Loir**	**64.28**	**320**	*e*P	**P**	**08 30 55.1**	**-1.4**
BGF	**Bois d'Agland**	**64.53**	**319**	*e*P	**P**	**08 30 57.5**	**-0.6**
GIVF	**Givet**	**64.61**	**324**	*e*P	**P**	**08 30 58.1**	**-0.5**
BAIF	**Baives** comp=Z,46nm,1.4s,mb5.0	**64.96**	**323**	*e*P	**P**	**08 31 00.3**	**-0.6**
BAIF	**Baives** comp=Z,23nm,1.4s,mb5.0	**64.96**	**323**	*e*P	**P**	**08 31 00.3**	**-0.6**
NOA	**NORSAR Array B** comp=E,1.7nm,0.9s,mb4.1,baz=122,slow=6.8,SNR=4.1	**66.66**	**336**	P	**P**	**08 31 12.0**	**+0.4**
NOA				LR	LR	09 02 10.1	
	comp=Z,186nm,20.9s,MS4.3,baz=110,slow=38						
FLN	**La Foliniere**	**67.38**	**321**	*e*P	**P**	**08 31 15.9**	**-0.5**
ESDC	**Sonseca Array** comp=Z,0.8nm,0.7s,mb3.9,baz=85,slow=6.0,SNR=6.3	**67.45**	**311**	P	**P**	**08 31 16.2**	**-0.9**
ESDC				LR	LR	09 03 17.8	
	comp=Z,71nm,19.7s,MS3.9,baz=115,slow=38						
ESLA	**Sonseca Array** comp=Z,4.4nm,1.4s,mb4.3	**67.45**	**311**	*e*P	**P**	**08 31 15.9**	**-1.2**
ARCES	**ARCESS Array B** comp=Z,226nm,20.5s,MS4.4,baz=272,slow=37	**67.95**	**347**	LR	LR	09 02 26.5	
KSRS	**Korea Array** comp=Z,1.4nm,0.8s,mb4.0,baz=250,slow=8.6,SNR=3.8	**68.07**	**52**	P	**P**	**08 31 20.7**	**-0.3**
KSRS				LR	LR	09 04 17.4	
	comp=Z,374nm,19.3s,MS4.6,baz=268,slow=39						
ROSF	**Rostrenen**	**69.03**	**320**	*e*P	**P**	**08 31 25.6**	**-1.2**
MAW	**Mawson** comp=Z,1.4nm,0.7s,mb4.0,baz=315,slow=11,SNR=5.1	**73.09**	**179**	P	**P**	**08 31 50.9**	**-0.1**
WRA	**Warramunga Arr** comp=Z,2.4nm,0.8s,mb4.2,baz=290,slow=4.8,SNR=5.0	**76.11**	**112**	P	**P**	**08 32 08.6**	**-0.9**
ASAR	**Alice Springs** comp=Z,1.9nm,0.8s,mb4.1,baz=290,slow=3.8,SNR=8.7	**76.48**	**116**	P	**P**	**08 32 10.3**	**-1.2**
TXAR	**Lajitas Array** comp=Z,0.3nm,0.8s,baz=117,slow=3.1,SNR=3.2	**142.34**	**338**	PKhKP	PKPpre	08 39 50.7	
TXAR				PKP	PKPdf	08 39 55.0	+0.4
	comp=Z,0.3nm,0.6s,baz=5.7,slow=5.0,SNR=4.1						

NIED ***16*** *08:20:00,40.50N×141.50E, h80km, Mw4.2 Best double couple: Mo2.31000×10¹⁵ NP1:ϕs15.00000°, δ87.00000°, λ-96.00000°. NP2:ϕs258.00000°, δ7.00000°, λ-27.00000°.*

SZGRF ***16*** *08:20:26.6,40.79N×142.21E, h33km, mb4.6, Near east coast of eastern Honshu, Japan*

ISCJB ***16*** *08:20:29.8±0.3,40.52N±0.03×141.48E±0.05, h89km±2km, mb4.5/51, Error ellipse: s-maj=6.6km s-min=4.0km az=19.0*

IDC ***16*** *08:20:29.4±1.6,40.41N×141.39E, h74km±14km, mb3.9/18, mb1 4.1/20, mb1mx4.0/28, mbtmp4.0/20, MS4.5/1, Ms1 4.5/1, ms1mx2.9/27, Error ellipse: s-maj=14.7km s-min=10.1km az=104.0*

MOS ***16*** *08:20:30.0±0.9,40.59N×141.33E, h88km, mb4.4/24, Error ellipse: s-maj=10.1km s-min=6.5km az=102.9*

JMA ***16*** *08:20:30.5±0.1,40.50N×141.53E, h81km±1km, M4.0 Broadband fault plane solution: P waves. NP1: ϕs151.00000°, δ19.00000°, λ-112.00000°. NP2: ϕs354.00000°, δ72.00000°, λ-83.00000°. Principal axes: T Plg27.0000°, Azm78.0000°; N Plg7.0000°, Azm172.0000°; P Plg62.0000°, Azm275.0000°;*

JMA Felt II J1.

BJI ***16*** *08:20:31.0,40.58N×141.62E, h116km, mB4.9/14, mb4.9/18*

NEIC ***16*** *08:20:31.3±0.7,40.50N×141.44E, h89km±6km, mb4.6/14, MW4.2(NIED), Error ellipse: s-maj=9.6km s-min=6.9km az=145.0*

NEIC Recorded [2 JMA] in Aomori and Iwate.

ISC 16 08:20:30.8±0.3, 40.52N±0.03×141.50E±0.05, h83km±2km, h94km±1.8km: pP-P, n128, σ0.96/147, mb4.5/51, 12C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JANG	**Nango**	**0.15**	**177**	⇓P	**Pn**	**08 20 42.1**	**-0.7**
JANG				S	**Sn**	**08 20 50.4**	**-1.2**
JTM	**Tenmabayashi**	**0.42**	**309**	⇑P	**Pn**	**08 20 43.8**	**-0.5**
JTM				S	**Sn**	**08 20 53.8**	**-0.4**
JAH	**Hinai**	**0.74**	**244**	⇑P	**Pn**	**08 20 46.7**	**-0.5**
JAH				S	**Sn**	**08 20 59.3**	**0.0**
JOT	**Ohata**	**0.93**	**338**	⇑P	**Pn**	**08 21 49.1**	**-0.1**
JOT				S	**Sn**	**08 21 03.4**	**+0.5**
JOM	**Ohasama**	**1.06**	**189**	P	**Pn**	**08 20 50.4**	**-0.4**
JOM				S	**Sn**	**08 21 05.1**	**-0.6**
JIW	**Iwasaki**	**1.14**	**274**	⇑P	**Pn**	**08 20 51.9**	**+0.2**
JSR	**Shiriuchi**	**1.30**	**321**	⇑P	**Pn**	**08 20 53.8**	**+0.1**
JSR				*e*S	**Sn**	**08 21 11.4**	**+0.5**
JKB	**Kayabe**	**1.41**	**346**	⇑P	**Pn**	**08 20 55.5**	**+0.4**
JKB				S	**Sn**	**08 21 14.1**	**+0.7**
JMK	**Ichinoseki**	**1.58**	**188**	⇑P	**Pn**	**08 20 56.9**	**-0.4**
JMK				*e*S	**Sn**	**08 21 16.8**	**-0.6**
ERM	**Erimo**	**1.94**	**39**	*e*Pn	**Pn**	**08 21 02.3**	**+0.3**
ERM				*e*Sn	**Sn**	**08 21 27.7**	**+1.9**
ERM	**Erimo**	**1.94**	**39**	*e*P	**Pn**	**08 21 02.9**	**+0.9**
ASAJ	**Asahikawa** 16nm,0.3s,baz=220,slow=13,SNR=84	**3.68**	**12**	P	**Pn**	**08 21 25.9**	**+0.5**
ASAJ				S	**Sn**	**08 22 09.4**	**+1.7**
	16nm,0.3s,baz=224,slow=24,SNR=5.7						
ASAJ	**Asahikawa**	**3.68**	**12**	P	**P

YUK	**Yuzh-Kuril'sk**	**4.77**	**41**	*i* P		**Pn**	**08 21 41.0**	**+0.8**
YUK				*i* S		**Sn**	**08 22 32.1**	**-2.1**
YUK				pmax	pmax			
	comp=N,150nm,0.5s							
YUK				pmax	pmax			
	comp=E,70nm,0.5s							
YUK				pmax	pmax			
	comp=Z,290nm,0.5s							
YUK				pmax	pmax			
	comp=Z,310nm,0.8s							
YUK				smax				
	comp=N,510nm,0.4s							
YUK				smax				
	comp=E,650nm,0.4s							
YUK				smax				
	comp=N,280nm,0.4s							
YUK				smax				
	comp=E,2μm,1.6s							
YSS	**Yuzh-Sakhalins**	**6.49**	**8**	*e*Pn		**Pn**	**08 22 03.4**	**-0.3**
	comp=E,33nm,0.2s							
YSS	**Yuzh-Sakhalins**	**6.49**	**8**	*e*P		**Pn**	**08 22 03.4**	**-0.2**
YSS				*e*			08 23 21.0	
JHJ	**Hachijo jima 2**	**7.52**	**191**	P		**Pn**	**08 22 14.2**	**-3.5**
	comp=E,17nm,0.3s,baz=51,slow=23,SNR=2.2							
JHJ				S		**Sn**	**08 23 36.0**	**-5.3**
	comp=E,12nm,0.3s,baz=78,slow=21,SNR=1.7							
VLA	**Vladivostok**	**7.63**	**293**	*i* P		**Pn**	**08 22 23.3**	**+4.1**
HABR	**Khabarovsk**	**9.19**	**332**	*e*P		**Pn**	**08 22 38.5**	**-1.8**
HABR				*e*S		**Sn**	**08 24 19.8**	**-2.1**
HABR				pmax	pmax			
	comp=N,36nm,2.5s							
HABR				pmax	pmax			
	comp=E,34nm,2.1s							
HABR				pmax	pmax			
	comp=Z,65nm,2.9s							
MDJ	**Mudanjiang**	**9.69**	**299**	P		**Pn**	**08 22 49.1**	**+1.8**
MDJ				pmax	pmax			
	comp=Z,46nm,1.1s							
MDJ				pmax	pmax			
	comp=Z,96nm,14.0s							
MDJ	**Mudanjiang**	**9.69**	**299**	*e*Pn		**Pn**	**08 22 49.5**	**+2.2**
	comp=Z,45nm,0.9s							
KSRS	**Korea Array**	**11.01**	**258**	P		**Pn**	**08 23 06.9**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=65,slow=14,SNR=4.9							
KSRS				LR	LR		08 27 00.1	
	comp=Z,56nm,18.3s,baz=35,slow=36							
KSRS	**Korea Array**	**11.01**	**258**	*e*P		**Pn**	**08 23 06.5**	**+1.3**
KLR	**Kul'dur**	**11.11**	**325**	*e*P		**Pn**	**08 23 06.8**	**+0.2**
BJT	**Baijiatuau**	**19.33**	**277**	*e*P		**Pn**	**08 24 47.2**	**-3.9**
	comp=Z,11nm,0.6s							
BJT	**Baijiatuau**	**19.33**	**277**	*e*P		**Pn**	**08 24 47.3**	**-3.9**
BJT				pmax	pmax			
	comp=Z,11nm,0.6s							
NJ2	**Nanjing**	**20.08**	**252**	*e*P		**P**	**08 24 58.1**	**+0.6**
NJ2				pP			08 25 17.3	
NJ2				PP			08 25 21.9	
NJ2				S		**S**	**08 28 33.3**	**-5.3**
NJ2				pmax	pmax			
	comp=Z,40nm,0.6s							
NJ2				pmax	pmax			
	comp=Z,90nm,4.3s							
NJ2				LR	LR			
	comp=N,610nm,28.2s							
NJ2				LR	LR			
	comp=E,310nm,16.3s							
NJ2				LR	LR			
	comp=Z,7μm,20.9s							
SONM	**Songino Array**	**26.05**	**298**	P		**P**	**08 25 55.9**	**-0.3**
	comp=Z,2.5nm,0.5s,mb3.9,baz=90,slow=8.8,SNR=8.1							
SONM	**Songino Array**	**26.05**	**298**	P		**P**	**08 25 55.9**	**-0.2**
SONM				pmax	pmax			
	comp=Z,3.0nm,0.5s							
ZAK	**Zakamensk**	**28.29**	**303**	*e*P		**P**	**08 26 14.8**	**-1.3**
ZAK				pmax	pmax			
	comp=Z,2.0nm,1.2s,mb3.5							
GYA	**Guiyang**	**32.04**	**255**	P		**P**	**08 26 51.0**	**+1.5**
GYA				pP	pP		08 27 11.6	+2.8
GYA				PP	PP		08 28 00.3	-3.0
GYA				PcP	PcP		08 29 37.8	+0.5
GYA				S	**S**		**08 31 55.0**	**-0.4**
GYA				PcS	PcS		08 33 22.9	+0.6
GYA				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.6							
GYA				pmax	pmax			
	comp=Z,90nm,4.6s							
GYA				LR	LR			
	comp=N,480nm,15.2s							
GYA				LR	LR			
	comp=E,440nm,14.3s							
GYA				LR	LR			
	comp=Z,410nm,16.0s							
QIZ	**Qiongzhong**	**34.55**	**241**	P		**P**	**08 27 12.3**	**+0.9**
QIZ				S		**S**	**08 32 36.3**	**+1.9**
QIZ				LR	LR			
	comp=E,160nm,24.1s							
QIZ				LR	LR			
	comp=Z,370nm,32.5s							
KMI	**Kunming**	**35.70**	**257**	P		**P**	**08 27 21.3**	**+0.1**
KMI				pP	pP		08 27 42.6	+1.9
KMI				PP	PP		08 28 42.4	-1.4
KMI				S	**S**		**08 32 46.5**	**-5.4**
KMI				pmax	pmax			
	comp=Z,11nm,0.7s,mb4.9							
KMI				pmax	pmax			
	comp=Z,71nm,5.4s							
KMI				LR	LR			
	comp=N,400nm,16.8s							
KMI				LR	LR			
	comp=E,500nm,16.2s							
KMI				LR	LR			
	comp=Z,570nm,18.6s							
ZALV	**Zalesovo Beam**	**39.69**	**309**	P		**P**	**08 27 54.0**	**-0.5**
	comp=Z,9.1nm,0.5s,mb4.8,baz=94,slow=8.4,SNR=13							
ZALV				PcP	PcP		08 29 59.5	-0.1
	comp=Z,2.1nm,0.4s,baz=108,slow=3.4,SNR=4.5							
ZALV	**Zalesovo Beam**	**39.69**	**309**	P		**P**	**08 27 54.1**	**-0.4**
ZALV							08 29 59.5	
ZALV				pmax	pmax			
	comp=Z,9.0nm,0.5s,mb4.9							
MK31	**Makanchi Array**	**42.41**	**299**	*i* P		**P**	**08 28 16.2**	**-0.7**
MK31				pmax	pmax			
	comp=Z,7.0nm,0.5s,mb4.7							
MKAR	**Makanchi Array**	**42.41**	**299**	P		**P**	**08 28 16.5**	**-0.4**
	comp=Z,6.3nm,0.5s,mb4.6,baz=84,slow=9.9,SNR=41							
MKAR				ScP	ScP		08 33 50.3	-1.4
	comp=Z,0.2nm,0.3s,baz=60,slow=8.5,SNR=4.5							
MKAR	**Makanchi Array**	**42.41**	**299**	*e*P		**P**	**08 28 16.7**	**-0.2**
MKAR				pmax	pmax			
	comp=Z,6.0nm,0.5s							
CMAR	**Chiang Mai Arr**	**42.55**	**252**	P		**P**	**08 28 18.2**	**-0.2**
	comp=Z,1.4nm,0.3s,mb4.1,baz=43,slow=7.7,SNR=7.6							
CMAR	**Chiang Mai Arr**	**42.55**	**252**	P		**P**	**08 28 18.2**	**-0.2**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
KURK	**Kurchatov**	**43.91**	**305**	P		**P**	**08 28 28.8**	**-0.2**
	comp=Z,38nm,0.7s,mb5.2,baz=80,slow=8.5,SNR=72							
KURK	**Kurchatov**	**43.91**	**305**	*ce*P		**P**	**08 28 28.5**	**-0.4**
KURK				pmax	pmax			
	comp=Z,53nm,1.2s,mb5.2							
OHAK	**Old Harbor**	**44.20**	**45**	*e*P		**P**	**08 28 31.3**	**+0.2**
	comp=Z,5.3nm,0.7s,mb4.4							
KDAK	**Kodiak Island**	**44.51**	**44**	P		**P**	**08 28 34.1**	**+0.5**
	comp=Z,3.5nm,0.7s,mb4.2,baz=252,slow=6.8,SNR=4.1							
KDAK	**Kodiak Island**	**44.51**	**44**	*i* P		**P**	**08 28 34.4**	**+0.8**
TAPN	**Taplejung**	**45.87**	**271**	*e*P		**P**	**08 28 45.9**	**+1.1**
ODAN	**Odare**	**46.37**	**270**	*e*P		**P**	**08 28 49.6**	**+0.9**
	comp=Z,14nm,0.6s,mb4.9							
ILAR	**Eielson Array**	**46.54**	**34**	P		**P**	**08 28 50.2**	**+0.6**
	comp=Z,0.5nm,0.6s,mb3.4,baz=272,slow=5.8,SNR=8.7							
JIRN	**Jiri**	**46.87**	**272**	*e*P		**P**	**08 28 53.8**	**+1.1**
	comp=Z,34nm,0.6s,mb5.2							
RAMN	**Ramite**	**46.92**	**271**	*e*P		**P**	**08 28 53.2**	**+0.1**
	comp=Z,52nm,0.7s,mb5.4							
GUN	**Gumba**	**46.98**	**272**	*e*P		**P**	**08 28 54.5**	**+1.0**
	comp=Z,83nm,0.7s,mb5.6							
KKN	**Kakani**	**47.50**	**273**	*e*P		**P**	**08 28 57.8**	**+0.3**
	comp=Z,50nm,0.7s,mb5.3							
PKI	**Pulchoki**	**47.51**	**272**	*e*P		**P**	**08 28 58.1**	**+0.5**
PKIN	**Phulchoki**	**47.52**	**272**	*e*P		**P**	**08 28 58.5**	**+0.8**
	comp=Z,18nm,0.6s,mb5.1							
DMN	**Daman**	**47.72**	**273**	*e*P		**P**	**08 29 00.1**	**+0.8**
GKN	**Gorkha**	**47.88**	**273**	*e*P		**P**	**08 29 00.4**	**-0.1**
VOSK	**Vostochnaya**	**48.06**	**310**	P		**P**	**08 28 56.2**	**-5.3**
VOSK				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.6							
BVA0	**Borovoye Array**	**48.33**	**310**	*i* P		**P**	**08 29 03.0**	**-0.6**
BVA0				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.2							
BVAR	**Borovoye Array**	**48.33**	**310**	P		**P**	**08 29 03.2**	**-0.4**
BVAR				PcP	PcP		08 30 29.2	+0.1
BVAR	**Borovoye Array**	**48.33**	**310**	P		**P**	**08 29 03.2**	**-0.4**
	comp=Z,6.2nm,0.4s,mb4.8,baz=71,slow=7.8,SNR=32							
BVAR				PcP	PcP		08 30 29.2	+0.1
	comp=Z,1.1nm,0.5s,baz=112,slow=1.6,SNR=3.0							
BVAR	**Borovoye Array**	**48.33**	**310**	*e*P		**P**	**08 29 03.3**	**-0.3**
BVAR				pmax	pmax			
	comp=Z,6.0nm,0.4s							
BRVK	**Borovoye**	**48.38**	**310**	*e*P		**P**	**08 29 03.5**	**-0.5**
	comp=Z,2.9nm,0.5s,mb4.4							
BRVK	**Borovoye**	**48.38**	**310**	*e*P		**P**	**08 29 03.5**	**-0.5**
BRVK				pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.4							
KOLN	**Koldanda**	**48.79**	**274**	*e*P		**P**	**08 29 07.7**	**+0.2**
	comp=Z,8.9nm,0.4s,mb5.0							
AAK	**Ala-Archa**	**48.97**	**296**	*e*P		**P**	**08 29 08.7**	**0.0**
	comp=Z,4.6nm,0.4s,mb4.8							
AAK	**Ala-Archa**	**48.97**	**296**	P		**P**	**08 29 09.1**	**+0.4**
	comp=Z,3.0nm,0.3s,mb4.7,baz=76,slow=4.2,SNR=3.4							
AAK	**Ala-Archa**	**48.97**	**296**	*ce*P		**P**	**08 29 08.8**	**+0.1**
AAK				pmax	pmax			
	comp=Z,5.0nm,1.7s,mb4.2							
KSH	**Kashi**	**49.12**	**291**	*i* P		**P**	**08 29 13.9**	**+4.0**
KSH				*e*pP	pP		08 29 37.0	+6.7
KSH				*e*PcP	PcP		08 30 34.1	+1.9
KSH				*e*PP	PP		08 31 10.3	+6.3
KSH				*e*ScP	ScP		08 34 19.1	-0.6
KSH				*e*PcS	PcS		08 34 29.4	+0.8
KSH				*e*S	**S**		**08 36 12.8**	**+4.0**
KSH				*e*sS	sS		08 36 54.3	+11
KSH				*e*ScS	ScS		08 38 52.8	-1.0
KSH				*e*SS	SS		08 39 42.8	+2.3
KSH				pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.6							
KSH				pmax	pmax			
	comp=Z,87nm,5.0s							
KSH				LR	LR			
	comp=N,170nm,10.6s							
KSH				LR	LR			
	comp=E,170nm,9.6s							
KSH				LR	LR			
	comp=Z,130nm,7.4s							
INK	**Inuvik**	**51.27**	**28**	*e*P		**P**	**08 29 26.2**	**+0.5**
	comp=Z,1.9nm,0.6s,mb4.3							
INK	**Inuvik**	**51.27**	**28**	P		**P**	**08 29 26.8**	**+1.1**
	comp=Z,1.8nm,0.5s,mb4.4,baz=294,slow=8.2,SNR=15							
INK	**Inuvik**	**51.27**	**28**	P		**P**	**08 29 26.8**	**+1.1**
INK				pmax	pmax			
	comp=Z,2.0nm,0.5s							
KK31	**Karatay Array**	**51.50**	**298**	*i* P		**P**	**08 29 26.8**	**-1.0**
KK31				pmax	pmax			
	comp=Z,8.0nm,0.6s,mb4.9							
SVE	**Sverdlovsk**	**52.62**	**317**	*e*P		**P**	**08 29 35.9**	**+0.1**
SVE				pmax	pmax			
	comp=Z,12nm,0.8s,mb5.0							
ARU	**Arti**	**53.83**	**317**	*e*P		**P**	**08 29 44.2**	**-0.5**
	comp=Z,26nm,1.4s,mb5.1							
ARU	**Arti**	**53.83**	**317**	*d i*P		**P**	**08 29 44.4**	**-0.3**
ARU				*e*			08 31 47.7	
ARU				S		**S**	**08 37 13.7**	**+0.7**
ARU				SS	SS		08 40 52.9	-1.4
ARU				pmax	pmax			
	comp=Z,24nm,1.2s,mb5.1							
AB31	**Akbulak array**	**55.79**	**308**	*i* P		**P**	**08 29 58.2**	**-0.8**
AB31				pmax	pmax			
	comp=Z,9.0nm,0.4s,mb5.2							
ABKAR	**Akbulak array**	**55.79**	**308**	*e*P		**P**	**08 29 58.3**	**-0.7**
KBL	**Kabul**	**56.30**	**289**	*e*P		**P**	**08 30 01.9**	**-0.9**
	comp=Z,16nm,0.8s,mb5.1							
KBL	**Kabul**	**56.30**	**289**	*e*P		**P**	**08 30 01.9**	**-0.9**
KBL				pmax	pmax			
	comp=Z,16nm,0.8s,mb5.1							
AKTK	**Aktyubinsk**	**56.44**	**310**	P		**P**	**08 30 03.1**	**-0.4**
AKTO	**Aktyubinsk**	**56.44**	**310**	P		**P**	**08 30 03.1**	**-0.4**
	comp=Z,6.5nm,0.7s,mb4.8,baz=72,slow=5.8,SNR=12							
AKTO	**Aktyubinsk**	**56.44**	**310**	*i* P		**P**	**08 30 02.7**	**-0.9**
AKTO				pmax	pmax			
	comp=Z,1.0nm,0.8s,mb3.9							
WRA	**Warramunga Arr**	**60.52**	**188**	P		**P**	**08 30 30.6**	**-1.6**
	comp=Z,1.2nm,0.3s,mb4.4,baz=6.4,slow=7.2,SNR=10							
WRA	**Warramunga Ar**	**60.52**	**188**	P		**P**	**08 30 30.6**	**-1.6**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.3s							
JOF	**Joensuu**	**62.94**	**331**	*e*P		**P**	**08 30 45.9**	**-2.1**
JOF				pmax	pmax			
	comp=Z,1.0nm,0.3s,mb4.2							
JOF	**Joensuu**	**62.94**	**331**	*ep*		**P**	**08 30 45.9**	**-2.1**
	comp=Z,1.3nm,0.3s,mb4.3							
ASAR	**Alice Springs**	**64.25**	**188**	P		**P**	**08 30 55.9**	**-1.0**
	comp=Z,0.6nm,0.3s,mb3.9,baz=2.1,slow=6.8,SNR=19							
ASAR	**Alice Springs**	**64.25**	**188**	*e*P		**P**	**08 30 56.0**	**-1.0**
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
VRHR	**Novokhopersk**	**65.18**	**317**	*e*P		**P**	**08 31 01.1**	**-1.7**
VRHR				pmax	pmax			
	comp=E,3.0nm,0.4s							
VRHR				pmax	pmax			
	comp=Z,6.0nm,0.4s,mb4.8							
VRHR				pmax	pmax			
	comp=N,8.0nm,0.6s							
KAF	**Kangasniemi**	**65.25**	**332**	*e*P		**P**	**08 31 00.1**	**-3.0**
KAF				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.0							
KAF	**Kangasniemi**	**65.25**	**332**	*ep*		**P**	**08 31 00.1**	**-3.0**
	comp=Z,1.0nm,0.4s,mb4.0							
FINES	**FINESS Array B**	**65.78**	**332**	P		**P**	**08 31 06.0**	**-0.5**
	comp=Z,2.6nm,0.6s,mb4.3,baz=27,slow=10,SNR=18							
FINES				LR	LR		09 02 15.2	
	comp=Z,374nm,20.6s,baz=134,slow=38							
FINES	**FINESS Array B**	**65.78**	**332**	P		**P**	**08 31 06.0**	**-0.5**
FINES				pmax	pmax			
	comp=Z,3.0nm,0.6s							
FINES				MLR	MLR			
	comp=Z,374nm,20.6s							
VSR	**Storozhevoye**	**66.38**	**318**	*e*P		**P**	**08 31 09.9**	**-0.6**
VSR				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.7							
VSR				pmax	pmax			
	comp=N,6.0nm,0.4s							
VSR				pmax	pmax			
	comp=E,20nm,1.0s							
NOA	**NORSAR Array B**	**71.01**	**337**	P		**P**	**08 31 38.6**	**-0.5**
	comp=E,0.6nm,0.4s,mb3.8,baz=40,slow=8.1,SNR=6.3							
NOA	**NORSAR Array B**	**71.01**	**337**	P		**P**	**08 31 38.7**	**-0.4**
NOA				pmax	pmax			
	comp=Z,1.0nm,0.4s							
AKASG	**Malin Array Be**	**71.60**	**322**	P		**P**	**08 31 42.2**	**-0.7**
AKASG	**Malin Array Be**	**71.60**	**322**	P		**P**	**08 31 42.2**	**-0.7**
	comp=Z,1.6nm,0.4s,mb4.2,baz=45,slow=6.1,SNR=12							
AKASG	**Malin Array Be**	**71.60**	**322**	P		**P**	**08 31 42.2**	**-0.7**
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.4s							
NVAR	**Mina Array Bea**	**72.86**	**54**	P		**P**	**08 31 52.6**	**+1.9**
	comp=Z,0.4nm,0.6s,mb3.4,baz=285,slow=6.1,SNR=5.2							
BRTR	**Keskin Array B**	**76.61**	**311**	P		**P**	**08 32 12.2**	**0.0**
	comp=Z,0.6nm,0.5s,mb3.6,baz=55,slow=5.7,SNR=5.0							
MORC	**Moravsky Berou**	**77.49**	**327**	*e*P		**P**	**08 32 17.9**	**+1.0**
	comp=Z,2.3nm,0.6s,mb4.1							
MORC	**Moravsky Berou**	**77.49**	**327**	*e*P		**P**	**08 32 17.9**	**+0.9**
MORC				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.0							
CLL	**Collm**	**78.12**	**330**	⇑ *i*P		**P**	**08 32 20.4**	**0.0**
	comp=Z,7.0nm,1.0s,mb4.3							
CLL	**Collm**	**78.12**	**330**	⇑ *i*P		**P**	**08 32 20.4**	**0.0**
CLL				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.3							
CLL	**Collm**	**78.12**	**330**	⇑ *i*P		**P**	**08 32 20.4**	**0.0**
	comp=Z,7.0nm,1.0s,mb4.3							
PV10	**Paradox Valley**	**78.43**	**49**	*e*P		**P**	**08 32 24.4**	**+2.0**
	comp=Z,51nm,0.8s,mb5.3							
GRA1	**Grafenberg Arr**	**80.09**	**330**	*e*P		**P**	**08 32 32.1**	**+0.8**
	comp=Z,8.0nm,1.0s,mb4.5							
GRF	**Grafenberg Arr**	**80.09**	**330**	*e*P		**P**	**08 32 32.1**	**+0.8**
	comp=Z,8.0nm,1.0s,mb4.5							
GRF	**Grafenberg Arr**	**80.09**	**330**	*e*P		**P**	**08 32 32.1**	**+0.8**
GRF				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.5							
GRF	**Grafenberg Arr**	**80.09**	**330**	*e*P		**P**	**08 32 32.1**	**+0.8**
GRF				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.5							
CDF	**Champ du Feu**	**82.63**	**331**	*e*P		**P**	**08 32 44.0**	**-0.7**
LOR	**Lormes**	**84.82**	**333**	*e*P		**P**	**08 32 55.7**	**-0.2**
LPL	**La Plagne**	**85.25**	**330**	*e*P		**P**	**08 32 57.9**	**-0.2**
	comp=Z,6.7nm,0.7s,mb4.4							
LPL	**La Plagne**	**85.25**	**330**	*e*P		**P**	**08 32 57.9**	**-0.2**
	comp=Z,3.3nm,0.7s,mb4.4							
LPL	**La Plagne**	**85.25**	**330**	*e*P		**P**	**08 32 57.9**	**-0.2**
LPL				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.3							
LPG	**La Plagne**	**85.26**	**330**	*e*P		**P**	**08 32 58.0**	**-0.2**
	comp=Z,1.5nm,1.0s,mb4.6							
LPG	**La Plagne**	**85.26**	**330**	*e*P		**P**	**08 32 58.0**	**-0.2**
	comp=Z,7.7nm,1.0s,mb4.6							
LPG	**La Plagne**	**85.26**	**330**	*e*P		**P**	**08 32 58.0**	**-0.2**
LPG				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.6							
SMF	**Signal de Mont**	**85.36**	**332**	*e*P		**P**	**08 32 57.9**	**-0.7**
AVF	**Avril sur Loir**	**85.41**	**333**	*e*P		**P**	**08 32 58.1**	**-0.8**
	comp=Z,13nm,0.9s,mb4.6							
AVF	**Avril sur Loir**	**85.41**	**333**	*e*P		**P**	**08 32 58.1**	**-0.8**
	comp=Z,6.7nm,0.9s,mb4.6							
AVF	**Avril sur Loir**	**85.41**	**333**	*e*P		**P**	**08 32 58.1**	**-0.8**
AVF				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.6							
TXAR	**Lajitas Array**	**87.94**	**52**	P		**P**	**08 33 12.0**	**+0.5**
	comp=Z,0.2nm,0.5s,mb3.4,baz=278,slow=3.6,SNR=5.1							
LPAZ	**La Paz**	**144.76**	**55**	PKP		PKPdf	08 39 58.3	0.0
	comp=Z,0.7nm,0.5s,baz=7.0,slow=4.4,SNR=8.5							
LPAZ	**La Paz**	**144.76**	**55**	*e*PKIKP		PKPdf	08 39 58.2	-0.1
LPAZ				pmax	pmax			
	comp=Z,1.0nm,0.5s							

ISCJB ***16*** *08:26:21.7±0.8,5°.5N±0°.1×61°.24E±0°.10,h10km,mb4.3/22, Error ellipse: s-maj=20.0km s-min=13.9km az=12.2*

IDC ***16*** *08:26:22.0±1.0,5°.42N×61°.29E,h0km,mb3.8/12, mb1 4.0/12,mb1mx3.9/21,mbtmp3.8/12,MS4.0/1, Ms1 4.0/1,ms1mx3.4/26,Error ellipse: s-maj=30.1km s-min=20.1km az=31.0*

NEIC ***16*** *08:26:24.0±0.6,5°.52N×61°.30E,h10km,mb5.1/9,Error ellipse: s-maj=14.2km s-min=10.7km az=180.0*

GCMT ***16*** *08:26:25.5±0.3,5°.75N×61°.29E,h23km,MW5.1,Moment Tensor Solution. s26,c29; s74,c105; Moment tensor: Scale 10*^{16}*Nm; Mrr=6.55±.39; Mθθ=3.80±.23; Mϕϕ=2.75±.23; Mrθ=1.55±.32; Mθϕ=-1.08±.11; Mϕr=0.37±.36; Best double couple: M=5.70000×10*^{16} *NP1:ϕs=127.00000°,δ39.00000°, λ=-79.00000°. NP2:ϕs=293.00000°,δ51.00000°, λ=-99.00000°. Principal axes: T 4.5900, Plg6.0000°, Azm29.0000°; N 2.2100, Plg7.0000°, Azm299.0000°; P -6.8100, Plg81.0000°, Azm160.0000°; Data Used: IU II IC G CN.*

ISC 16 08:26:24.1±0.7,5°.5N±0°.1×61°.31E±0°.09,h10km,n35, σ0s81/34,mb4.3/22,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**24.92**	**255**	*e*P	**P**		**08 31 49.6**	**+2.0**
AAK	**Ala-Archa**	**38.78**	**16**	*e*P	**P**		**08 33 50.2**	**+1.4**
	2.1nm,0.4s,mb4.2							
CMAR	**Chiang Mai Arr**	**38.90**	**67**	P	**P**		**08 33 51.7**	**+1.5**
	0.5nm,0.4s,mb3.6,baz=275,slow=9.9,SNR=3.1							
BRTR	**Keskin Array B**	**42.22**	**328**	P	**P**		**08 34 18.3**	**+0.9**
	1.5nm,1.0s,mb3.6,baz=153,slow=13,SNR=6.3							
ABKAR	**Akbulak array**	**43.61**	**359**	*e*P	**P**		**08 34 29.1**	**+0.6**
AKTK	**Aktyubinsk**	**44.86**	**357**	P	**P**		**08 34 39.0**	**+0.6**
AKTO	**Aktyubinsk**	**44.86**	**357**	P	**P**		**08 34 39.0**	**+0.6**
	3.0nm,0.7s,mb4.2,baz=174,slow=8.2,SNR=7.5							
MKAR	**Makanchi Array**	**44.94**	**20**	P	**P**		**08 34 38.8**	**-0.4**
	0.2nm,0.3s,mb3.4,baz=208,slow=4.9,SNR=3.0							
KURK	**Kurchatov**	**47.33**	**15**	P	**P**		**08 34 56.7**	**-1.3**
	1.3nm,1.0s,mb3.8,baz=213,slow=8.1,SNR=3.0							
KURK				LR	LR		08 55 57.3	
	comp=Z,197nm,21.1s,baz=220,slow=38							
ARU	**Arti**	**50.83**	**358**	*e*P	**P**		**08 35 24.4**	**-0.2**
	21nm,1.7s,mb4.8							
ZALV	**Zalesovo Beam**	**51.94**	**17**	P	**P**		**08 35 31.7**	**-1.3**
	0.4nm,0.3s,mb3.8,baz=239,slow=7.8,SNR=3.1							
AKASG	**Malin Array Be**	**52.42**	**335**	P	**P**		**08 35 36.8**	**+0.1**
	0.3nm,0.2s,mb3.8,baz=128,slow=6.3,SNR=5.1							
SONM	**Songino Array**	**57.05**	**35**	P	**P**		**08 36 10.7**	**+0.4**
	0.9nm,0.9s,mb3.8,baz=204,slow=3.2,SNR=2.8							
TORD	**Torodi Ar. Bea**	**59.20**	**282**	P	**P**		**08 36 25.9**	**-0.1**
	1.5nm,1.1s,mb4.0,baz=117,slow=1.7,SNR=6.6							
CLL	**Collm**	**60.67**	**327**	*e*P	**P**		**08 36 36.0**	**+0.6**
CLL				*i*	pP		08 36 40.3	+1.6
	comp=Z,28nm,1.9s							
LPG	**La Plagne**	**61.73**	**319**	*e*P	**P**		**08 36 41.9**	**-0.8**
	comp=Z,18nm,1.2s,mb4.8							
LPG	**La Plagne**	**61.73**	**319**	*e*P	**P**		**08 36 41.9**	**-0.8**
	comp=Z,9.3nm,1.2s,mb4.8							
LPL	**La Plagne**	**61.74**	**319**	*e*P	**P**		**08 36 42.2**	**-0.6**
	comp=Z,38nm,1.4s,mb5.0							
LPL	**La Plagne**	**61.74**	**319**	*e*P	**P**		**08 36 42.2**	**-0.6**
	comp=Z,19nm

h109km±11km, Error ellipse: s-maj=10.5km s-min=6.3km az=6.7
*CSEM **16** 08:42:02.5±0.5, 36°.85N×31°.12E, h108km±5km, MD2.9, Error ellipse: s-maj=7.0km s-min=4.3km az=178.0*
*ISK **16** 08:42:02.8, 36°.94N×31°.10E, h104km, MD2.9*
*DDA **16** 08:42:03.3, 36°.79N×31°.05E, h6km±7km, Md2.9*
ISC 16 08:42:02.8±1.2, **36°.87N**±0°.06×**31°.12E**±0°.05, **h109**km±11km, **n24**, σ0°71/38, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KORT	**Korkueli**	**0.63**	**282**	*i*	P	**Pn**	**08 42 21.2**	**+0.8**
KORT				*i*	S	**Sn**	**08 42 35.6**	**+2.0**
KORT	**Korkueli**	**0.63**	**282**	*i*	P	**Pn**	**08 42 21.2**	**+0.8**
KORT				*i*	S	**Sn**	**08 42 35.6**	**+2.0**
BCK	**Bucak**	**0.72**	**324**	*e*	PG	**Pn**	**08 42 21.0**	**-0.2**
BCK				*e*	SG	**Sn**	**08 42 33.8**	**-1.3**
BCK	**Bucak**	**0.72**	**324**	*e*	Pg	**Pn**	**08 42 21.0**	**-0.2**
BCK				*e*	Sg	**Sn**	**08 42 33.8**	**-1.2**
ELL	**Elmali**	**0.98**	**263**	*e*	PG	**Pn**	**08 42 24.2**	**+0.6**
ELL				*e*	SG	**Sn**	**08 42 39.1**	**-0.2**
ELL	**Elmali**	**0.98**	**263**	*e*	Pg	**Pn**	**08 42 24.2**	**+0.6**
ELL				*e*	Sg	**Sn**	**08 42 39.1**	**-0.2**
HDMB	**Hadim**	**1.10**	**85**	*e*	PN	**Pn**	**08 42 25.4**	**+0.5**
HDMB				*e*	SN	**Sn**	**08 42 41.9**	**+0.2**
HDMB	**Hadim**	**1.10**	**85**	*e*	Pn	**Pn**	**08 42 25.4**	**+0.5**
HDMB				*e*	Sn	**Sn**	**08 42 41.9**	**+0.2**
GAZI	**Gazipasa**	**1.16**	**123**	*i*	P	**Pn**	**08 42 25.7**	**+0.1**
GAZI				*i*	S	**Sn**	**08 42 41.9**	**-0.9**
GAZI	**Gazipasa**	**1.16**	**123**	*i*	P	**Pn**	**08 42 25.7**	**+0.1**
GAZI				*i*	S	**Sn**	**08 42 41.9**	**-0.9**
GOLH	**Golhisar**	**1.29**	**287**	*i*	P	**Pn**	**08 42 27.0**	**-0.1**
GOLH				*i*	S	**Sn**	**08 42 45.6**	**+0.1**
GOLH	**Golhisar**	**1.29**	**287**	*i*	P	**Pn**	**08 42 27.0**	**-0.1**
GOLH				*i*	S	**Sn**	**08 42 45.6**	**+0.1**
AKAS	**Kas**	**1.37**	**243**	*i*	P	**Pn**	**08 42 27.3**	**-0.7**
AKAS				*i*	S	**Sn**	**08 42 46.4**	**-0.7**
AKAS	**Kas**	**1.37**	**243**	*i*	P	**Pn**	**08 42 27.3**	**-0.7**
AKAS				*i*	S	**Sn**	**08 42 46.4**	**-0.7**
KONT	**Konya--Tatoy**	**1.46**	**42**	*e*	PN	**Pn**	**08 42 29.0**	**0.0**
KONT	**Konya--Tatoy**	**1.46**	**42**	*e*	Pn	**Pn**	**08 42 29.0**	**0.0**
LADK	**Ladik-KONYA**	**1.66**	**37**	*e*	PN	**Pn**	**08 42 30.7**	**-0.7**
LADK	**Ladik-KONYA**	**1.66**	**37**	*e*	Pn	**Pn**	**08 42 30.7**	**-0.7**
KIZT	**Kizilcal**	**2.09**	**17**	*e*	PN	**Pn**	**08 42 36.5**	**-0.4**
KIZT	**Kizilcal**	**2.09**	**17**	*e*	Pn	**Pn**	**08 42 36.5**	**-0.4**
IKL	**Isikli**	**2.16**	**106**	*e*	PN	**Pn**	**08 42 38.6**	**+0.8**
IKL	**Isikli**	**2.16**	**106**	*e*	Pn	**Pn**	**08 42 38.6**	**+0.8**
SVRH	**Sivrihisar-ESK**	**2.59**	**7**	*e*	PN	**Pn**	**08 42 43.7**	**+0.4**
SVRH	**Sivrihisar-ESK**	**2.59**	**7**	*e*	Pn	**Pn**	**08 42 43.7**	**+0.4**

*IDC **16** 08:52:07.8±1.1, 35°.09N×46°.45E, h0km, mb3.8/8, mb1 3.8/13, mb1mx3.8/25, mbtmp3.7/13, ML3.7/5, MS2.9/1, Ms1 2.9/1, ms1mx2.5/34, Error ellipse: s-maj=22.6km s-min=13.2km az=148.0*
*ISCJB **16** 08:52:09.1±0.8, 35°.09N±0°.03×46°.45E±0°.03, h14km±6km, mb3.7/9, Error ellipse: s-maj=5.1km s-min=4.6km az=26.9*
*THR **16** 08:52:10.6±0.4, 35°.24N×46°.53E, h14km±10km, ML3.7*
*CSEM **16** 08:52:10.2±0.2, 35°.06N×46°.53E, h15km, ML3.9, Error ellipse: s-maj=7.4km s-min=4.7km az=39.0*
*NEIC **16** 08:52:10.3±1.0, 35°.30N×46°.45E, h10km, ML3.7(THR), Error ellipse: s-maj=17.5km s-min=11.7km az=152.0*
*TEH **16** 08:52:10.5, 35°.11N×46°.51E, h9km*
ISC 16 08:52:10.0±0.9, **35°.13N**±0°.03×**46°.49E**±0°.03, **h7**km±7km, **n94**, σ1°11/100, **mb3.7/9, 8C-4D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ILIN	**Lien**	**0.44**	**118**	*e*	Pg	**Pg**	**08 52 16.7**	**-1.8**
ILIN				*e*	Sg	**Sg**	**08 52 24.7**	**+0.4**
ILIN				*e*			08 52 26.2	
	comp=N,42μm,0.1s							
ILIN	**Lien**	**0.44**	**118**	*e*	Pg	**Pg**	**08 52 16.7**	**-1.8**
ILIN				*e*	Sg	**Sg**	**08 52 24.7**	**+0.4**
IVIS	**Veis**	**0.67**	**153**	*e*	Pg	**Pg**	**08 52 21.7**	**-1.2**
IVIS				*e*			08 52 36.5	
	comp=Z,59μm,0.1s							
IVIS	**Veis**	**0.67**	**153**	*e*	Pg	**Pg**	**08 52 21.7**	**-1.2**
IGHG	**Ghaleghazi**	**0.80**	**175**	*e*	Pg	**Pg**	**08 52 24.7**	**-0.7**
IGHG				*e*			08 52 49.3	
	comp=Z,57μm,0.2s							
IGHG	**Ghaleghazi**	**0.80**	**175**	*e*	Pg	**Pg**	**08 52 24.7**	**-0.7**
IKOM	**Komasi**	**1.27**	**138**	*e*	Pg	**Pn**	**08 52 32.9**	**-1.3**
IKOM				*e*	Sg	**Sg**	**08 52 51.1**	**+0.2**
IKOM				*e*			08 52 57.3	
	comp=Z,43μm,0.2s							
IKOM	**Komasi**	**1.27**	**138**	*e*	Pg	**Pn**	**08 52 32.9**	**-1.3**
IKOM				*e*	Sg	**Sg**	**08 52 51.1**	**+0.2**
ZNJK	**Zanjan**	**2.36**	**49**	*e*	Pn	**Pg**	**08 52 49.7**	**+0.5**
ZNJK				*e*	Sg	**Sb**	**08 53 21.7**	**-0.4**
BHD	**Baghdad**	**2.55**	**224**	*ex*		**Pn**	**08 52 52.0**	**+0.2**
BHD				*i*	x	x	08 53 25.0	
BHD	**Baghdad**	**2.55**	**224**	*e*	Pn	**Pn**	**08 52 52.0**	**+0.2**
IAZR	**Azarshahr**	**2.58**	**351**	*e*	Pn	**Pn**	**08 52 52.1**	**-0.1**
IAZR				*e*			08 53 35.6	
	comp=Z,15μm,0.3s							
IAZR	**Azarshahr**	**2.58**	**351**	*e*	Pn	**Pn**	**08 52 52.1**	**-0.1**
IRAZ	**Razeghan**	**2.83**	**83**	*e*	Pn	**Pn**	**08 52 56.5**	**+0.9**
IRAZ				*e*			08 53 05.2	
	comp=Z,5μm,0.3s							
IRAZ	**Razeghan**	**2.83**	**83**	*e*	Pn	**Pn**	**08 52 56.5**	**+0.9**
ISRB	**Sarab**	**2.85**	**19**	*e*	Pn	**Pn**	**08 52 56.5**	**+0.5**
ISRB				*e*			08 53 38.2	
	comp=Z,4μm,0.2s							
ASAO	**Ashtian**	**2.97**	**100**	*e*	Pn	**Pn**	**08 52 59.4**	**+1.9**
ASAO					AML	AML	08 54 03.6	
	comp=N,209nm,0.7s							
ITBZ	**Tabriz**	**3.11**	**355**	*e*	Pn	**Pn**	**08 52 59.1**	**-0.4**
ITBZ				*e*			08 53 56.0	
	comp=Z,2μm,0.2s							
ITBZ	**Tabriz**	**3.11**	**355**	*e*	Pn	**Pn**	**08 52 59.1**	**-0.4**
CUKT	**Cukurca**	**3.15**	**313**	*e*	PN	**Pn**	**08 52 59.1**	**-0.9**
CUKT	**Cukurca**	**3.15**	**313**	*e*	Pn	**Pn**	**08 52 59.1**	**-0.9**
IHRS	**Heris**	**3.21**	**8**	*e*	Pn	**Pn**	**08 53 01.4**	**+0.5**
IHRS				*e*	Pn	**Pn**	**08 53 01.7**	**+0.8**
IHRS				*e*			08 53 56.6	
	comp=N,5μm,0.4s							
IHRS				*e*			08 54 19.1	
	comp=Z,2μm,0.4s							
IHRS	**Heris**	**3.21**	**8**	*e*	Pn	**Pn**	**08 53 01.7**	**+0.8**
ISHB	**Shabestar**	**3.23**	**348**	*e*	Pn	**Pn**	**08 53 01.9**	**+0.8**
ISHB				*e*			08 54 00.1	
	comp=Z,5μm,0.4s							
SHGR	**Shooshtar-Gavs**	**3.58**	**147**	*e*	Pn	**Pn**	**08 53 08.7**	**+2.8**
SHGR					AML	AML	08 54 22.4	
	comp=E,135nm,0.6s							
IMRD	**Marand**	**3.63**	**350**	*e*	Pn	**Pn**	**08 53 07.6**	**+0.9**
IMRD				*e*			08 54 09.8	
	comp=Z,5μm,0.3s							
IMRD	**Marand**	**3.63**	**350**	*e*	Pn	**Pn**	**08 53 07.6**	**+0.9**
THKV	**Tehran--Karaj**	**3.67**	**76**	*e*	Pn	**Pn**	**08 53 08.2**	**+1.1**
GRMI	**Germi**	**3.84**	**17**	*e*	Pn	**Pn**	**08 53 09.9**	**+0.3**
CHTH	**Charan**	**3.86**	**77**	*e*	Pn	**Pn**	**08 53 11.2**	**+1.3**
GHVR	**GHOM**	**4.01**	**98**	*e*	Pn	**Pn**	**08 53 13.0**	**+1.2**
GHVR					AML	AML	08 54 33.7	
	comp=N,95nm,0.8s							
VANB	**Van**	**4.26**	**325**	*e*	PN	**Pn**	**08 53 16.7**	**+1.4**
VANB	**Van**	**4.26**	**325**	*e*	Pn	**Pn**	**08 53 16.7**	**+1.4**
IVRN	**Varamin**	**4.30**	**90**	*e*	Pn	**Pn**	**08 53 16.1**	**-0.8**
IVRN				*e*	Pn	**Pn**	**08 53 16.2**	**+0.3**
IVRN				*e*			08 53 51.2	
	comp=Z,802nm,0.3s							
IVRN	**Varamin**	**4.30**	**90**	*e*	Pn	**Pn**	**08 53 15.1**	**-0.8**
IDMV	**Damavand**	**4.55**	**83**	*e*	Pn	**Pn**	**08 53 18.3**	**-1.1**
IDMV				*e*			08 53 36.2	
	comp=Z,868nm,0.3s							
IDMV	**Damavand**	**4.55**	**83**	*e*	Pn	**Pn**	**08 53 18.3**	**-1.1**
IKLH	**Kolahrood**	**4.59**	**112**	*e*	Pn	**Pn**	**08 53 18.8**	**-1.0**
IKLH	**Kolahrood**	**4.59**	**112**	*e*	Pn	**Pn**	**08 53 18.8**	**-1.0**
ISFB	**Sefidab**	**4.80**	**98**	*e*	Pn	**Pn**	**08 53 21.5**	**-1.2**
ISFB	**Sefidab**	**4.80**	**98**	*e*	Pn	**Pn**	**08 53 21.5**	**-1.2**
IFIR	**Firoozkooh**	**5.14**	**82**	*e*	Pn	**Pn**	**08 53 27.8**	**+0.3**
IFIR	**Firoozkooh**	**5.14**	**82**	*e*	Pn	**Pn**	**08 53 27.8**	**+0.3**
GNI	**Garni**	**5.20**	**345**	*e*	P	**Pb**	**08 53 41.1**	**-1.1**
GNI	**Garni**	**5.20**	**345**	Pg		**Pb**	**08 53 43.9**	**+2.6**
	comp=Z,2.1nm,0.3s,baz=165,slow=8.5,SNR=5.0							
GNI				Lg			08 54 56.5	
	comp=Z,0.6nm,0.3s,baz=9.0,slow=16,SNR=3.6							
AGRB	**Hanur-Agry**	**5.24**	**329**	*e*	P	**Pn**	**08 53 31.2**	**+2.4**
AGRB	**Hanur-Agry**	**5.24**	**329**	*e*	P	**Pn**	**08 53 31.2**	**+2.4**
IZEF	**Zefreh**	**5.34**	**113**	*e*	Pn	**Pn**	**08 53 29.3**	**-0.8**
IZEF				*e*			08 55 16.7	
	comp=Z,316nm,0.4s							
IZEF	**Zefreh**	**5.34**	**113**	*e*	Pn	**Pn**	**08 53 29.3**	**-0.8**
MIB	**Mutribah**	**5.36**	**172**	*e*	P	**Pn**	**08 53 31.5**	**+1.1**
MIB					AML	AML	08 54 33.5	
	comp=Z,24nm,0.4s							
IGAR	**Gharneh**	**5.36**	**119**	*e*	Pn	**Pn**	**08 53 29.5**	**-1.0**
IGAR				*e*			08 53 50.4	
	comp=Z,297nm,0.1s							
NASN	**Na'in**	**5.74**	**112**	*e*	Pn	**Pn**	**08 53 37.6**	**+1.9**
NAY	**Al-Naaiem**	**5.90**	**174**	*e*	P	**Pn**	**08 53 38.5**	**+0.7**
KBD	**Kabd**	**6.02**	**170**	*e*	P	**Pn**	**08 53 40.1**	**+0.6**
RDF	**Al-Radifah**	**6.25**	**171**	*e*	P	**Pn**	**08 53 43.7**	**+1.0**
RDF					AML	AML	08 54 54.8	
	comp=Z,24nm,0.4s							
QRN	**Al-Qurain**	**6.48**	**169**	*e*	P	**Pn**	**08 53 46.8**	**+1.0**
QRN					AML	AML	08 54 59.1	
	comp=Z,22nm,0.3s							
MALT	**Malatya**	**7.21**	**299**	*e*	Pn	**Pn**	**08 53 55.1**	**-0.7**
	comp=Z,2.0nm,0.5s							
MALT	**Malatya**	**7.21**	**299**	*e*	Pn	**Pn**	**08 53 55.1**	**-0.7**
	comp=Z,2.0nm,0.5s							
ASF	**Jabal al Asfar**	**8.52**	**252**		Pn	**Pn**	**08 54 14.1**	**+0.2**
	comp=Z,1.6nm,0.3s,baz=282,slow=12,SNR=10							
ASF					Lg		08 56 36.6	
	comp=Z,0.4nm,0.3s,baz=172,slow=22,SNR=2.2							
ASF					LR	LR	08 58 10.1	
	comp=Z,72nm,19.4s,baz=142,slow=43							
MMAI	**Mount Meron Ar**	**9.43**	**260**		Pn	**Pn**	**08 54 26.7**	**+0.4**
	comp=Z,1.3nm,0.3s,baz=96,slow=19,SNR=6.1							
MMAI					Lg		08 57 03.7	
	comp=Z,1.3nm,0.3s,baz=4.2,slow=39,SNR=3.9							
EIL	**Elat**	**11.16**	**244**		Lg		08 58 02.9	
	comp=Z,0.2nm,0.3s,baz=126,slow=17,SNR=3.6							
BRTR	**Keskin Array B**	**11.20**	**298**		Pn	**Pn**	**08 54 51.0**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=123,slow=16,SNR=3.1							
BRTR	**Keskin Array B**	**11.20**	**298**		Pn	**Pn**	**08 54 51.0**	**+0.5**
AKTK	**Aktyubinsk**	**17.45**	**25**		Pn	**Pn**	**08 56 12.8**	**-0.9**
AKTK	**Aktyubinsk**	**17.45**	**25**		Pn	**Pn**	**08 56 12.9**	**-0.9**
AKTO	**Aktyubinsk**	**17.45**	**25**		Pn	**Pn**	**08 56 12.8**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=213,slow=12,SNR=2.4							
VOIR		**19.27**	**309**		P	**Pn**	**08 56 35.8**	**-0.3**
VOIR		**19.27**	**309**		P	**Pn**	**08 56 35.8**	**-0.3**
AKASG	**Malin Array Be**	**19.98**	**326**		P	**Pn**	**08 56 40.6**	**-3.9**
	comp=Z,0.6nm,0.3s,baz=128,slow=10,SNR=5.4							
AKASG	**Malin Array Be**	**19.98**	**326**		P	**Pn**	**08 56 40.5**	**-3.9**
BURAR	**Bucovina Array**	**20.18**	**315**		P	**P**	**08 56 47.2**	**+2.2**
BURAR	**Bucovina Array**	**20.18**	**315**		P	**P**	**08 56 47.2**	**+2.2**
BUR08	**Bucovina Ar. S**	**20.21**	**315**	*e*	P	**P**	**08 56 46.6**	**+1.3**
BUR08	**Bucovina Ar. S**	**20.21**	**315**	*e*	P	**P**	**08 56 46.6**	**+1.3**
DRGR		**21.32**	**310**		P	**P**	**08 56 56.6**	**-0.7**
DRGR		**21.32**	**310**		P	**P**	**08 56 56.6**	**-0.7**
BVAR	**Borovoye Array**	**24.61**	**36**		P	**P**	**08 57 30.9**	**+0.2**
	comp=Z,0.7nm,0.6s,mb3.4,baz=211,slow=5.0,SNR=3.2							
BVAR	**Borovoye Array**	**24.61**	**36**		P	**P**	**08 57 30.9**	**+0.2**
MORC	**Moravsky Berou**	**25.69**	**314**		P	**P**	**08 57 40.3**	**-0.3**
MORC	**Moravsky Berou**	**25.69**	**314**		P	**P**	**08 57 40.3**	**-0.3**
KURK	**Kurchatov**	**27.94**	**46**		P	**P**	**08 57 59.7**	**-1.1**
	comp=Z,0.5nm,0.4s,mb3.5,baz=252,slow=9.0,SNR=6.9							
KURK	**Kurchatov**	**27.94**	**46**		P	**P**	**08 57 59.7**	**-1.1**
MKAR	**Makanchi Array**	**29.20**	**55**		P	**P**	**08 58 11.1**	**-1.0**
	comp=Z,0.3nm,0.2s,mb3.6,baz=247,slow=10,SNR=2.2							
MKAR	**Makanchi Array**	**29.20**	**55**		P	**P**	**08 58 11.1**	**-0.9**
FINES	**FINESS Array B**	**29.37**	**340**		P	**P**	**08 58 11.4**	**-2.0**
	comp=Z,2.6nm,0.8s,mb4.0,baz=132,slow=10,SNR=5.6							
FINES	**FINESS Array B**	**29.37**	**340**		P	**P**	**08 58 11.4**	**-2.0**
ARCES	**ARCESS Array B**	**36.35**	**348**		P	**P**	**08 59 12.2**	**-2.0**
	comp=Z,1.4nm,0.7s,mb4.0,baz=153,slow=9.5,SNR=5.7							
ARCES	**ARCESS Array B**	**36.35**	**348**		P	**P**	**08 59 12.2**	**-2.1**
ESDC	**Sonseca Array**	**39.91**	**292**		P	**P**	**08 59 42.6**	**-2.1**
	comp=Z,1.6nm,0.8s,mb3.8,baz=69,slow=8.4,SNR=9.1							
ESDC	**Sonseca Array**	**39.91**	**292**		P	**P**	**08 59 42.5**	**-2.1**
TORD	**Torodi Ar. Bea**	**45.88**	**253**		P	**P**	**09 00 32.0**	**-1.3**
	comp=Z,0.6nm,0.8s,mb3.6,baz=38,slow=10,SNR=3.9							
DBIC	**Dimbokro**	**54.92**	**251**		P	**P**	**09 01 40.6**	**-1.2**
	comp=Z,4.1nm,1.0s,mb4.4,baz=20,slow=16,SNR=3.2							
DBIC	**Dimbokro**	**54.92**	**251**		P	**P**	**09 01 40.6**	**-1.2**
ILAR	**Eielson Array**	**79.88**	**6**		P	**P**	**09 04 18.2**	**-0.8**
	comp=Z,0.3nm,0.9s,mb3.2,baz=305,slow=6.4,SNR=3.6							

*ISCJB **16** 09:10:28.5±0.6, 24°.36N±0°.04×122°.43E±0°.02, h66km±10km, Error ellipse: s-maj=7.2km s-min=3.1km az=174.2*
*TAP **16** 09:10:28.3, 24°.35N×122°.47E, h48km±1km, ML2.9, D*
*JMA **16** 09:10:28.8±0.2, 24°.61N×122°.49E, h71km±1km, M1.9*
ISC 16 09:10:29.0±0.6, **24°.36N**±0°.04×**122°.43E**±0°.02, **h64**km±10km, **n28**, σ0°44/51, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YOJ	**Yonaguni jima**	**0.54**	**79**		P	**Pn**	**09 10 41.7**	**0.0**
YOJ					eS	**Sn**	**09 10 51.1**	**+0.1**
ENA	**Nanau**	**0.63**	**276**	*e*	P	**Pn**	**09 10 42.6**	**0.0**
	baz=276							
ENA					eS	**Sn**	**09 10 52.8**	**+0.2**
	baz=276							
TWB1	**Santiao Chiao**	**0.76**	**328**	*e*	P	**Pn**	**09 10 43.8**	**-0.4**
	baz=326							
TWB1					eS	**Sn**	**09 10 55.5**	**+0.2**
	baz=326							
TWE	**Neicheng**	**0.78**	**297**	*e*	P	**Pn**	**09 10 44.6**	**+0.2**
	baz=297							
TWD	**Chiawan**	**0.81**	**250**		P	**Pn**	**09 10 44.4**	**-0.5**
	baz=251							
TWD					eS	**Sn**	**09 10 56.2**	**-0.3**
	baz=251							
ENTT	**Nioudou**	**0.83**	**290**	*e*	P	**Pn**	**09 10 44.5**	**-0.6**
	baz=289							
ENTT					eS	**Sn**	**09 10 56.8**	**-0.2**
	baz=289							
NWF	**Wu-fen Shan**	**0.92**	**320**	*e*	P	**Pn**	**09 10 45.7**	**-0.5**
	baz=318							
NWF					eS	**Sn**	**09 10 58.3**	**-0.6**
	baz=318							
NNS	**Nan Shan**	**0.96**	**275**	*e*	P	**Pn**	**09 10 46.8**	**+0.1**
	baz=275							
NNS					eS	**Sn**	**09 10 59.9**	**0.0**
	baz=275							
TWA	**Mucha**	**0.98**	**309**	*e*	P	**Pn**	**09 10 47.3**	**+0.3**
	baz=308							
TWA					eS	**Sn**	**09 11 00.4**	**+0.1**
	baz=308							
NSK	**Sanguang**	**1.02**	**288**	*e*	P	**Pn**	**09 10 47.5**	**0.0**
	baz=287							
NSK					eS	**Sn**	**09 11 01.3**	**+0.1**
	baz=287							
ESL	**Shilin**	**1.06**	**239**	*e*	P	**Pn**	**09 10 47.4**	**-0.6**
	baz=240							
WHF	**Hehuan Shan**	**1.08**	**259**		P	**Pn**	**09 10 48.3**	**0.0**
	baz=259							
WHF					S	**Sn**	**09 11 02.8**	**+0.2**
	baz=259							
TWT	**Tachien**	**1.15**	**265**	*e*	P	**Pn**	**09 10 49.8**	**+0.7**
	baz=265							
TWT					eS	**Sn**	**09 11 04.7**	**+0.6**
	baz=265							
IRIF	**Iriomote-Funau**	**1.19**	**91**		P	**Pn**	**09 10 49.3**	**-0.4**
IRIF					eS	**Sn**	**09 11 04.9**	**-0.2**
HATJ	**Hateruma jima**	**1.29**	**103**		P	**Pn**	**09 10 51.7**	**+0.6**
HATJ					eS	**Sn**	**09 11 09.1**	**+1.5**
EHY	**Hungye**	**1.32**	**230**	*e*	P	**Pn**	**09 10 51.4**	**0.0**
	baz=231							
NSTT	**Nanjuang**	**1.33**	**282**	*e*	P	**Pn**	**09 10 52.1**	**+0.6**
	baz=281							
NSTT					eS	**Sn**	**09 11 08.8**	**+0.5**
	baz=281							
TWF1	**Yuli**	**1.44**	**226**		P	**Pn**	**09 10 52.3**	**-0.7**
	baz=227							
JKRS	**Kuro-shima**	**1.45**	**95**		P	**Pn**	**09 10 53.4**	**+0.3**
JKRS					eS	**Sn**	**09 11 11.5**	**+0.2**
TYC	**Yuchr**	**1.50**	**253**	*e*	P	**Pn**	**09 10 54.4**	**+0.5**
	baz=253							
TYC					eS	**Sn**	**09 11 12.6**	**0.0**
	baz=253							
JIJ	**Ishigaki jima**	**1.56**	**90**		P	**Pn**	**09 10 54.3**	**-0.4**
JIJ					eS	**Sn**	**09 11 13.3**	**-0.7**
CHKT	**Chengkung**	**1.59**	**218**	*e*	P	**Pn**	**09 10 54.9**	**-0.1**
	baz=219							
YUS	**Yu-Shan**	**1.60**	**238**	*e*	P	**Pn**	**09 10 55.3**	**+0.1**
	baz=238							
YUS					eS	**Sn**	**09 11 14.6**	**-0.4**
	baz=238							
ALS	**Alishan**	**1.71**	**241**	*e*	P	**Pn**	**09 10 56.9**	**+0.2**
	baz=241							
ALS					eS	**Sn**	**09 11 17.6**	**+0.1**
	baz=241							
CHN5	**Tsauling**	**1.77**	**245**	*e*	P	**Pn**	**09 10 57.8**	**+0.3**
	baz=245							
CHN5					eS	**Sn**	**09 11 19.6**	**+0.6**
	baz=245							
TWG	**Pinlang**	**1.98**	**219**	*e*	P	**Pn**	**09 10 59.6**	**-0.7**
	baz=220							
TWG					eS	**Sn**	**09 11 23.4**	**-0.6**
	baz=220							
JTJ	**Tarama**	**2.09**	**82**		P	**Pn**	**09 11 01.9**	**+0.1**
JTJ					eS	**Sn**	**09 11 26.4**	**-0.4**
CHN1	**Nanshi**	**2.10**	**236**	*e*	P	**Pn**	**09 11 02.5**	**+0.6**
	baz=237							
CHN1					eS	**Sn**	**09 11 26.7**	**-0.2**
	baz=237							

*ISK **16** 09:22:39.4, 37°.57N×35°.09E, h5km, ML1.4*
*ISCJB **16** 09:22:40.1±0.9, 37°.60N±0°.05×35°.06E±0°.07, h10km, Error ellipse: s-maj=9.7km s-min=4.4km az=42.7*
*DDA **16** 09:22:40.3, 37°.56N×35°.07E, h7km±4km, Md2.8*
*CSEM **16** 09:22:41.0±0.4, 37°.55N×35°.07E, h2km, ML1.4, Error ellipse: s-maj=11.7km s-min=6.1km az=138.0*
ISC 16 09:22:41.1±0.9, **37°.57N**±0°.05×**35°.06E**±0°.07, **h10**km, **n12**, σ0°90/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KARA	**Karaisali**	**0.31**	**181**	*e*	PG	**Pg**	**09 22 46.1**	**-1.1**
KARA				*e*	SG	**Sg**	**09 22 52.1**	**+0.8**
KARA	**Karaisali**	**0.31**	**181**	*e*	Pg	**Pg**	**09 22 46.1**	**-1.1**
KARA				*e*	Sg	**Sg**	**09 22 52.2**	**+0.9**
GULE	**Gulek**	**0.36**	**219**	*i*	P	**Pg**	**09 22 47.1**	**-1.1**
GULE				*i*	S	**Sg**	**09 22 53.3**	**+0.2**
GULE	**Gulek**	**0.36**	**219**	*i*	P	**Pg**	**09 22 47.2**	**-1.0**
GULE				*i*	S	**Sg**	**09 22 53.3**	**+0.2**
KOZT	**Kozan**	**0.61**	**98**	*e*	PG	**Pg**	**09 22 52.0**	**-0.9**
KOZT				*e*	SG	**Sg**	**09 23 01.3**	**+0.4**
KOZT	**Kozan**	**0.61**	**98**	*e*	Pg	**Pg**	**09 22 52.1**	**-0.8**
KOZT				*e*	Sg	**Sg**	**09 23 01.3**	**+0.3**
PINB	**Pinarbasi**	**1.53**	**43**	*i*	P	**Pg**	**09 23 09.8**	**-0.6**
PINB				*i*	S	**Sg**	**09 23 31.1**	**+0.8**
PINB	**Pinarbasi**	**1.53**	**43**	*i*	P	**Pg**	**09 23 09.8**	**-0.6**
PINB				*i*	S	**Sg**	**09 23 31.1**	**+0.8**
SARI	**SarD1z-Kayseri**	**1.70**	**49**	*e*	PN	**Pn**	**09 23 06.1**	**-4.7**
SARI	**SarD1z-Kayseri**	**1.70**	**49**	*e*	Pn	**Pn**	**09 23 06.1**	**-4.7**
IKL	**Isikli**	**1.73**	**220**	*e*	PN	**Pn**	**09 23 12.6**	**+1.5**
IKL	**Isikli**	**1.73**	**220**	*e*	Pn	**Pn**	**09 23 12.6**	**+1.5**

*ISCJB **16** 09:32:07.9±0.6, 38°.48N±0°.03×21°.82E±0°.04, h12km±6km, Error ellipse: s-maj=5.2km s-min=4.1km az=41.3*
*CSEM **16** 09:32:07.8±0.2, 38°.47N×21°.84E, h15km, ML1.6/6, Error ellipse: s-maj=5.9km s-min=4.5km az=127.0*
*NEIC **16** 09:32:08.4, 38°.49N×21°.78E, h5km, MD2.9(ATH), After ATH.*
*ATH **16** 09:32:08.4, 38°.49N×21°.78E, h5km±3km, MD2.9/6*
*THE **16** 09:32:08.0, 38°.45N×21°.83E, h14km±1km, ML1.6/6, Error ellipse: s-maj=1.5km s-min=0.6km az=172.0*
ISC 16 09:32:08.4±0.6, **38°.47N**±0°.03×**21°.83E**±0°.04, **h12**km±6km, **n31**, σ0°56/56, **Greece**

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

Ms1 3.3/4,ms1mx2.9/30,Error ellipse: s-maj=31.7km s-min=18.8km az=151.0
NEIC ***16*** *09:45:55.2±0.6,83.62N×114.55E,h10km,mb3.9/1,Error ellipse: s-maj=17.3km s-min=10.7km az=157.0*
ISC 16 09:45:55.5±0.7,83.7N±0.1×114.2E±0.6,h10km,n16,σ0.972/14,mb3.6/9,MS3.2/4,North of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPITS	**Spitsbergen Ar**	**14.23**	**304**	Pn	**Pn**	**09 49 17.5**	**+0.9**
	baz=319,slow=8.5,SNR=2.4						
SPITS					**Sn**	**09 51 53.6**	**-0.6**
	baz=27,slow=13,SNR=6.3						
ILAR	**Eielson Array**	**27.06**	**69**	P	**P**	**09 51 38.1**	**+0.7**
	0.3nm,0.7s,mb2.9,baz=340,slow=9.2,SNR=4.6						
ILAR				LR	LR	10 04 06.7	
	comp=Z,30nm,18.8s,MS2.9,baz=318,slow=40						
ZALV	**Zalesovo Beam**	**30.81**	**214**	LR	LR	10 05 28.8	
	comp=Z,38nm,20.1s,MS3.0,baz=120,slow=38						
KURK	**Kurchatov**	**34.45**	**221**	P	**P**	**09 52 43.0**	**+0.4**
	0.4nm,0.5s,mb3.6,baz=18,slow=6.8,SNR=3.0						
MKAR	**Makanchi Array**	**38.10**	**216**	P	**P**	**09 53 12.8**	**-1.1**
MKAR	**Makanchi Array**	**38.10**	**216**	P	**P**	**09 53 12.8**	**-1.1**
	0.4nm,0.4s,mb3.5,baz=7.4,slow=8.6,SNR=6.6						
VRAC	**Vranov**	**42.12**	**285**	LR	LR	10 14 41.5	
	comp=Z,66nm,19.5s,MS3.5,baz=189,slow=41						
GNI	**Garni**	**48.07**	**255**	LR	LR	10 16 50.1	
	comp=Z,43nm,22.0s,MS3.4,baz=272,slow=39						
BOZ	**Bozeman (W)**	**49.17**	**42**	*e*P	**P**	**09 54 43.1**	**+0.2**
	1.0nm,0.8s,mb3.9						
BRTR	**Keskin Array B**	**49.71**	**266**	P	**P**	**09 54 48.2**	**+1.1**
	0.9nm,0.7s,mb3.9,baz=342,slow=3.5,SNR=4.1						
ESDC	**Sonseca Array**	**53.74**	**302**	P	**P**	**09 55 17.4**	**+0.2**
ESDC	**Sonseca Array**	**53.74**	**302**	P	**P**	**09 55 17.4**	**+0.2**
	0.1nm,0.3s,mb3.3,baz=342,slow=12,SNR=5.4						
NVAR	**Mina Array Bea**	**55.81**	**49**	P	**P**	**09 55 32.2**	**0.0**
	0.3nm,0.7s,mb3.4,baz=357,slow=2.9,SNR=3.8						
PV01	**Paradox Valley**	**56.86**	**40**	*e*P	**P**	**09 55 39.7**	**0.0**
	340nm,0.8s						
TXAR	**Lajitas Array**	**65.94**	**36**	P	**P**	**09 56 39.9**	**-1.3**
	1.3nm,0.9s,mb4.0,baz=349,slow=5.0,SNR=11						
TORD	**Torodi Ar. Bea**	**79.45**	**294**	P	**P**	**09 58 00.9**	**-0.7**
	0.8nm,0.7s,mb3.8,baz=357,slow=5.2,SNR=8.5						

NEIC ***16*** *09:46:14.4,16.13N×94.92W,h57km,MD3.8(MEX),After MEX.*
MEX 16 09:46:14.5±0.6,16.13N×94.93W,h55km±16km,MD3.8,1D,Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.96**	**2**	*i* P	Pn	09 46 30.0	-1.8
CMIG				*i* S	Sn	09 46 42.7	-1.9
CMIG	**Matias Romero**	**0.96**	**2**	*i* P	Pn	09 46 30.0	-1.8
CMIG				*i* S	Sn	09 46 42.7	-1.9
HUIG	**Huatulco**	**1.19**	**253**	*i* P	Pn	09 46 33.1	-1.8
HUIG				*i* S	Sn	09 46 48.4	-1.8
HUIG	**Huatulco**	**1.19**	**253**	*i* P	Pn	09 46 33.1	-1.8
HUIG				*i* S	Sn	09 46 48.4	-1.8
PCIG		**1.69**	**104**	⇓*i* P	Pn	09 46 40.5	-1.2
PCIG				*i* S	Sn	09 46 60.0	-2.4
TGIG		**1.85**	**69**	*i* P	Pn	09 46 42.3	-1.5
TGIG				*i* S	Sn	09 47 04.2	-1.9
VHO	**Vista Hermosa**	**1.97**	**299**	*i* P	Pn	09 46 44.8	-0.7
VHO				*i* S	Sn	09 47 07.9	-1.2
VHO	**Vista Hermosa**	**1.97**	**299**	*i* P	Pn	09 46 44.8	-0.7
VHO				*i* S	Sn	09 47 07.9	-1.2
SCX	**San Cristobal**	**2.28**	**74**	*e*P	Pn	09 46 48.8	-0.9
SCX				*i* S	Sn	09 47 15.7	-0.9
SCX	**San Cristobal**	**2.28**	**74**	*e*P	Pn	09 46 48.8	-0.9
SCX				*i* S	Sn	09 47 15.7	-0.9
PNIG	**Pinotepa**	**3.09**	**275**	*e*P	Pn	09 46 59.4	-1.3
PNIG				*i* S	Sn	09 47 33.5	-3.0
PNIG	**Pinotepa**	**3.09**	**275**	*e*P	Pn	09 46 59.4	-1.3
PNIG				*i* S	Sn	09 47 33.5	-3.0
UTMO	**Huajuapan**	**3.23**	**302**	*i* P	Pn	09 47 02.7	0.0
UTMO				*i* S	Sn	09 47 36.0	-4.0
PPM	**Popocatepetl**	**4.58**	**310**	*e*P	Pn	09 47 20.6	-0.7
PPM				*i* S	Sn	09 48 13.2	0.0
PPM	**Popocatepetl**	**4.58**	**310**	*e*P	Pn	09 47 20.6	-0.7
PPM				*i* S	Sn	09 48 13.2	0.0

DDA ***16*** *09:48:14.8,36.29N×37.11E,h8km±4km,Md2.8*
ISCJB ***16*** *09:48:17.6±1.1,36.38N±0.05×37.02E±0.06,h5km±7km, Error ellipse: s-maj=10.5km s-min=6.1km az=44.1*
CSEM ***16*** *09:48:20.7±1.0,36.46N×37.19E,h2km,MD2.8,Error ellipse: s-maj=20.6km s-min=14.8km az=177.0*
ISK ***16*** *09:48:21.0,36.53N×37.21E,h5km,MD3.1*
ISC 16 09:48:17.9±1.1,36.37N±0.05×36.99E±0.07,h6km±7km,n24,σ1.923/35,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUZU	**Kuzuini**	**0.41**	**10**	*i* P	**Pg**	**09 48 24.8**	**-1.0**
KUZU				*i* S	**Sg**	**09 48 31.7**	**+0.6**
KUZU	**Kuzuini**	**0.41**	**10**	*i* P	**Pg**	**09 48 24.8**	**-1.0**
KUZU				*i* S	**Sg**	**09 48 31.7**	**+0.6**
YAYL	**Yayladag**	**0.79**	**245**	*i* P	**Pg**	**09 48 31.3**	**-1.8**
YAYL				*i* S	**Sg**	**09 48 43.8**	**+0.4**
YAYL	**Yayladag**	**0.79**	**245**	*i* P	**Pg**	**09 48 31.3**	**-1.8**
YAYL				*i* S	**Sg**	**09 48 43.8**	**+0.5**
GAZ	**Gaziantep**	**0.82**	**13**	*e*PG	**Pg**	**09 48 34.0**	**+0.4**
GAZ	**Gaziantep**	**0.82**	**13**	*e*Pg	**Pg**	**09 48 34.1**	**+0.5**
GZT	**Gaziantep**	**1.08**	**25**	*i* P	**Pg**	**09 48 36.0**	**-2.7**
GZT				*i* S	**Sg**	**09 48 52.1**	**-0.8**
KMRS	**Kahramanmaras**	**1.13**	**356**	*e*PG	**Pg**	**09 48 40.6**	**+0.9**
KMRS				*e*SG	**Sg**	**09 48 55.1**	**+0.7**
KMRS	**Kahramanmaras**	**1.13**	**356**	*e*Pg	**Pg**	**09 48 40.6**	**+0.9**
KMRS				*e*Sg	**Sg**	**09 48 55.1**	**+0.7**
ANDN	**Andirin**	**1.31**	**337**	*i* P	**Pn**	**09 48 42.8**	**0.0**
ANDN				*i* S	**Sb**	**09 48 58.2**	**-1.8**
ANDN	**Andirin**	**1.31**	**337**	*i* P	**Pn**	**09 48 42.8**	**+0.1**
ANDN				*i* S	**Sb**	**09 48 58.2**	**-1.8**
KRTS	**Karatas**	**1.32**	**279**	*e*PN	**Pg**	**09 48 48.6**	**+5.4**
KRTS	**Karatas**	**1.32**	**279**	*e*PN	**Pg**	**09 48 48.6**	**+5.4**
KOZT	**Kozan**	**1.45**	**320**	*e*PN	**Pg**	**09 48 49.0**	**+3.4**
URFA	**Urfa**	**1.81**	**53**	*e*PN	**Pn**	**09 48 49.7**	**0.0**
URFA				*e*SN	**Sn**	**09 49 11.7**	**-1.3**
URFA	**Urfa**	**1.81**	**53**	*e*Pn	**Pn**	**09 48 49.7**	**0.0**
URFA				*e*Sn	**Sn**	**09 49 11.7**	**-1.3**
MALT	**Malatya**	**2.25**	**30**	*e*PN	**Pn**	**09 48 57.7**	**+2.0**
MALT	**Malatya**	**2.25**	**30**	*e*Pn	**Pn**	**09 48 57.7**	**+2.0**
MYA	**Malatya**	**2.26**	**30**	*e*PN	**Pn**	**09 48 57.5**	**+1.6**
MYA	**Malatya**	**2.26**	**30**	*e*Pn	**Pn**	**09 48 57.5**	**+1.7**
SARI	**SarD1z-Kayseri**	**2.31**	**354**	*e*PN	**Pn**	**09 48 56.0**	**-0.5**
SARI	**SarD1z-Kayseri**	**2.31**	**354**	*e*Pn	**Pn**	**09 48 56.0**	**-0.5**
SVRC	**Sivrice-ELAZID**	**2.72**	**42**	*e*PN	**Pn**	**09 49 02.9**	**+0.7**
SVRC	**Sivrice-ELAZID**	**2.72**	**42**	*e*Pn	**Pn**	**09 49 02.9**	**+0.7**

ISK ***16*** *10:01:06.8,39.48N×28.16E,h5km,MD2.9*
ISCJB ***16*** *10:01:07.6±0.5,39.49N±0.03×28.19E±0.04,h0km±5km, Error ellipse: s-maj=5.6km s-min=3.6km az=137.8*
DDA ***16*** *10:01:07.5,39.51N×28.20E,h7km±5km,Md3.0*
CSEM ***16*** *10:01:07.7±0.1,39.47N×28.17E,h2km,MD3.0,Error ellipse: s-maj=3.8km s-min=2.2km az=45.0*
ISC 16 10:01:08.2±0.5,39.49N±0.03×28.18E±0.04,h4km±5km,n43,σ0.983/58,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.26**	**63**	*i* P	**Pg**	**10 01 12.9**	**-0.3**
DURS				*i* S	**Sg**	**10 01 18.7**	**+2.0**
DURS	**Dursunbey**	**0.26**	**63**	*i* P	**Pg**	**10 01 12.9**	**-0.3**
DURS				*i* S	**Sg**	**10 01 18.7**	**+2.1**
BALB	**Balikesir**	**0.28**	**304**	*e*PG	**Pg**	**10 01 13.4**	**-0.2**
BALB	**Balikesir**	**0.28**	**304**	*e*Pg	**Pg**	**10 01 13.4**	**-0.2**
BALY	**Balya**	**0.50**	**301**	*i* P	**Pg**	**10 01 16.8**	**-1.0**
BALY				*i* S	**Sg**	**10 01 25.1**	**+0.8**
BALY	**Balya**	**0.50**	**301**	*i* P	**Pg**	**10 01 16.8**	**-1.0**
BALY				*i* S	**Sg**	**10 01 25.1**	**+0.8**
DEMI	**Demirci**	**0.61**	**136**	*i* P	**Pg**	**10 01 19.2**	**-0.7**
DEMI				*i* S	**Sg**	**10 01 27.9**	**+0.1**
DEMI	**Demirci**	**0.61**	**136**	*i* P	**Pg**	**10 01 19.2**	**-0.7**
DEMI				*i* S	**Sg**	**10 01 27.9**	**+0.1**
GONE	**Gonen-Balikesi**	**0.68**	**326**	*e*PG	**Pg**	**10 01 20.4**	**-0.8**
GONE				*e*SG	**Sg**	**10 01 31.6**	**+1.6**
GONE	**Gonen-Balikesi**	**0.68**	**326**	*e*Pg	**Pg**	**10 01 20.4**	**-0.8**
GONE				*e*Sg	**Sg**	**10 01 31.6**	**+1.6**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTX	**Karacabey (Bur**	**0.79**	**10**	*e*PG	**Pg**	**10 01 23.7**	**+0.2**
KCTX	**Karacabey (Bur**	**0.79**	**10**	*e*Pg	**Pg**	**10 01 23.7**	**+0.3**
BNT	**Bandirma**	**0.89**	**347**	*e*PG	**Pg**	**10 01 24.8**	**-0.6**
BNT	**Bandirma**	**0.89**	**347**	*e*Pg	**Pg**	**10 01 24.8**	**-0.5**
EDC	**Edincik**	**0.89**	**345**	*e*PG	**Pg**	**10 01 24.6**	**-0.8**
EDC	**Edincik**	**0.89**	**345**	*e*Pg	**Pg**	**10 01 24.6**	**-0.8**
ULDT	**Uludag**	**0.99**	**48**	*i* P	**Pg**	**10 01 23.6**	**-3.6**
ULDT				*i* S	**Sg**	**10 01 39.4**	**-0.6**
MDNY	**Mudanya-Bursa**	**1.04**	**31**	*e*PG	**Pg**	**10 01 28.4**	**+0.2**
MDNY	**Mudanya-Bursa**	**1.04**	**31**	*e*Pg	**Pg**	**10 01 28.4**	**+0.3**
KULA	**Kula-Manisa**	**1.04**	**158**	*e*PG	**Pg**	**10 01 27.0**	**-1.1**
KULA				*e*SG	**Sg**	**10 01 43.7**	**+2.1**
KULA	**Kula-Manisa**	**1.04**	**158**	*e*Pg	**Pg**	**10 01 27.0**	**-1.2**
KULA				*e*Sg	**Sg**	**10 01 43.7**	**+2.1**
GDZ	**Gediz**	**1.09**	**111**	*i* P	**Pg**	**10 01 28.6**	**-0.5**
GDZ				*i* S	**Sg**	**10 01 43.6**	**+0.4**
GDZ	**Gediz**	**1.09**	**111**	*i* P	**Pg**	**10 01 28.6**	**-0.5**
GDZ				*i* S	**Sg**	**10 01 43.6**	**+0.4**
ARMT	**Armutlu**	**1.20**	**26**	*e*PN	**Pn**	**10 01 30.9**	**-0.9**
ARMT				*e*SN	**Sn**	**10 01 48.8**	**+0.3**
ARMT	**Armutlu**	**1.20**	**26**	*e*Pn	**Pn**	**10 01 30.9**	**-0.9**
ARMT				*e*Sn	**Sn**	**10 01 48.8**	**+0.3**
GEMT	**Gemlik**	**1.23**	**39**	*e*PN	**Pn**	**10 01 32.0**	**-0.1**
GEMT	**Gemlik**	**1.23**	**39**	*e*Pn	**Pn**	**10 01 32.0**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.42**	**328**	*e*PN	**Pn**	**10 01 35.1**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.42**	**328**	*e*Pn	**Pn**	**10 01 35.1**	**+0.3**
EZN	**Ezine**	**1.47**	**284**	*e*PN	**Pn**	**10 01 35.9**	**+0.5**
EZN	**Ezine**	**1.47**	**284**	*e*Pn	**Pn**	**10 01 35.9**	**+0.5**
KHAL	**Karahalli**	**1.52**	**137**	*i* P	**Pn**	**10 01 35.3**	**-0.8**
KHAL	**Karahalli**	**1.52**	**137**	*i* P	**Pn**	**10 01 35.3**	**-0.8**
ALT	**Altintas**	**1.56**	**105**	*e*PN	**Pn**	**10 01 36.4**	**-0.3**
ALT	**Altintas**	**1.56**	**105**	*e*Pn	**Pn**	**10 01 36.4**	**-0.3**
KHL	**Karahalli**	**1.57**	**137**	*e*PN	**Pn**	**10 01 37.2**	**+0.4**
KHL	**Karahalli**	**1.57**	**137**	*e*Pn	**Pn**	**10 01 37.2**	**+0.4**
GELI	**Tayfur-Gelibol**	**1.59**	**305**	*e*PN	**Pn**	**10 01 37.5**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.59**	**305**	*e*Pn	**Pn**	**10 01 37.5**	**+0.3**
CTKS	**Kestanelik-??a**	**1.77**	**8**	*e*PN	**Pn**	**10 01 39.6**	**0.0**
CTKS	**Kestanelik-??a**	**1.77**	**8**	*e*Pn	**Pn**	**10 01 39.6**	**0.0**
GULT	**Gulveren**	**2.03**	**62**	*e*PN	**Pn**	**10 01 43.7**	**+0.5**
GULT	**Gulveren**	**2.03**	**62**	*e*Pn	**Pn**	**10 01 43.7**	**+0.5**

ISCJB ***16*** *10:19:44.0±0.4,43.35N±0.03×17.38E±0.04,h10km, Error ellipse: s-maj=5.9km s-min=2.3km az=37.1*
BEO ***16*** *10:19:44.5±0.6,43.45N×17.36E,h4km±2km,ML2.7/4*
CSEM ***16*** *10:19:44.3±0.2,43.42N×17.43E,h2km,ML2.7/10,Error ellipse: s-maj=7.1km s-min=3.1km az=45.0*
PDG ***16*** *10:19:47.1±0.4,43.28N×17.51E,h8km±1km,ML2.7/10, Error ellipse: s-maj=1.5km s-min=2.5km az=0.0*
NEIC ***16*** *10:19:47.1,43.28N×17.51E,h8km,ML2.7(PDG),After PDG.*
ISC 16 10:19:44.4±0.8,43.36N±0.04×17.36E±0.04,h6km±7km,n48,σ0.991/82,14C-7D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.55**	**153**	*i* Pg	**Pg**	**10 19 54.0**	**-0.9**
STON	**Ston**	**0.55**	**153**	*i* Pg	**Pg**	**10 19 54.0**	**-0.9**
TREB	**Trebinje**	**0.97**	**131**	*e*Pg	**Pg**	**10 20 03.0**	**0.0**
TREB				*i* Sn	**Sg**	**10 20 19.9**	**+4.4**
TREB	**Trebinje**	**0.97**	**131**	*e*Pg	**Pg**	**10 20 03.0**	**0.0**
TREB				*i* Sn	**Sg**	**10 20 19.9**	**+4.4**
BRY	**Bratogost**	**0.98**	**118**	⇑*i*Pg	**Pg**	**10 20 02.0**	**-1.2**
BRY				*e*Sg	**Sg**	**10 20 16.5**	**+0.6**
BRY	**Bratogost**	**0.98**	**118**	⇑*i*Pg	**Pg**	**10 20 02.0**	**-1.2**
BRY				*e*Sg	**Sg**	**10 20 16.5**	**+0.6**
UPM	**Unac-Piva**	**1.14**	**97**	⇑*i*Pg	**Pg**	**10 20 05.2**	**-1.1**
UPM				*e*Sg	**Sg**	**10 20 22.8**	**+1.7**
UPM	**Unac-Piva**	**1.14**	**97**	⇑*i*Pg	**Pg**	**10 20 05.2**	**-1.1**
HCY	**Herceg Novi**	**1.24**	**137**	⇑*i*Pg	**Pn**	**10 20 07.0**	**-1.2**
HCY				*e*Sg	**Sg**	**10 20 25.3**	**+1.2**
HCY	**Herceg Novi**	**1.24**	**137**	⇑*i*Pg	**Pn**	**10 20 07.0**	**-1.2**
HCY				*e*Sg	**Sg**	**10 20 25.3**	**+1.2**
NKY	**Niksic**	**1.32**	**114**	⇑*i*Pg	**Pn**	**10 20 08.8**	**-0.5**
NKY				*e*Sg	**Sg**	**10 20 28.3**	**+1.6**
NKY	**Niksic**	**1.32**	**114**	⇑*i*Pg	**Pn**	**10 20 08.8**	**-0.5**
NKY				*e*Sg	**Sg**	**10 20 28.3**	**+1.6**
BLY	**Banja Luka**	**1.39**	**355**	*i* Pg	**Pn**	**10 20 08.7**	**-1.7**
BLY	**Banja Luka**	**1.39**	**355**	*e*Pn	**Pn**	**10 20 09.7**	**-0.7**
BLY				*e*Sn	**Sn**	**10 20 28.4**	**-0.7**
BLY	**Banja Luka**	**1.39**	**355**	*i* Pg	**Pn**	**10 20 08.7**	**-1.7**
BLY	**Banja Luka**	**1.39**	**355**	*e*Pn	**Pn**	**10 20 09.7**	**-0.7**
BLY				*e*Sn	**Sn**	**10 20 28.4**	**-0.7**
PLE	**Pljevlja**	**1.48**	**90**	⇓*i*Pg	**Pg**	**10 20 12.8**	**0.0**
PLE				*e*Sg	**Sg**	**10 20 34.0**	**+2.0**
PLE	**Pljevlja**	**1.48**	**90**	⇓*i*Pg	**Pg**	**10 20 12.8**	**0.0**
BUM	**Brajici-Budva**	**1.55**	**133**	⇑*i*Pg	**Pg**	**10 20 13.5**	**-0.6**
BUM				*e*Sg	**Sg**	**10 20 35.4**	**+1.3**
BUM	**Brajici-Budva**	**1.55**	**133**	⇑*i*Pg	**Pg**	**10 20 13.5**	**-0.6**
BUM				*e*Sg	**Sg**	**10 20 35.4**	**+1.3**
BBLS	**Lazići**	**1.57**	**70**	*e*Pg	**Pn**	**10 20 12.2**	**-0.6**
BBLS				*e*Sg	**Sn**	**10 20 32.8**	**-0.5**
BBLS	**Lazići**	**1.57**	**70**	*e*Pg	**Pn**	**10 20 12.2**	**-0.6**
BBLS				*e*Sg	**Sn**	**10 20 32.8**	**-0.5**
PDG	**Podgorica**	**1.68**	**123**	*e*Pg	**Pb**	**10 20 15.9**	**+0.3**
PDG				*i* Sg	**Sg**	**10 20 39.0**	**+0.8**
PDG	**Podgorica**	**1.68**	**123**	*e*Pg	**Pb**	**10 20 15.9**	**+0.3**
PDG				*e*Sg	**Sg**	**10 20 38.6**	**+0.4**
TTG	**Podgorica**	**1.68**	**123**	⇑*i*Pg	**Pb**	**10 20 15.8**	**+0.2**
TTG				*e*Sg	**Sg**	**10 20 38.6**	**+0.4**
TTG	**Podgorica**	**1.68**	**123**	⇑*i*Pg	**Pb**	**10 20 15.8**	**+0.2**
TTG				*e*Sg	**Sg**	**10 20 38.6**	**+0.4**
BEY	**Berane**	**1.92**	**104**	⇓*i*Pn	**Pb**	**10 20 19.5**	**-0.3**
IVA	**Berane**	**1.92**	**104**	⇓*i*Pn	**Pb**	**10 20 19.5**	**-0.3**
IVA				*e*Sn	**Sg**	**10 20 45.2**	**-0.8**
IVA	**Berane**	**1.92**	**104**	⇓*i*Pn	**Pb**	**10 20 19.5**	**-0.3**
IVA				*e*Sn	**Sg**	**10 20 45.2**	**-0.8**
ULC	**Ulcinj**	**1.97**	**134**	⇓*i*Pn	**Pn**	**10 20 19.0**	**+0.7**
ULC				*e*Sn	**Sg**	**10 20 46.3**	**-1.4**
ULC	**Ulcinj**	**1.97**	**134**	⇓*i*Pn	**Pn**	**10 20 19.0**	**+0.7**
ULC				*e*Sn	**Sg**	**10 20 46.3**	**-1.4**
DIVS	**Divibare**	**2.04**	**68**	*e*Pg	**Pn**	**10 20 20.9**	**+1.6**
DIVS				*e*Sg	**Sg**	**10 20 49.1**	**-0.9**
DIVS	**Divibare**	**2.04**	**68**	*e*Pg	**Pn**	**10 20 20.9**	**+1.6**
DIVS				*e*Sg	**Sg**	**10 20 49.1**	**-0.9**
PVY	**Plav**	**2.06**	**111**	⇑*i*Pn	**Pb**	**10 20 21.8**	**-0.4**
PVY				*e*Sn	**Sg**	**10 20 48.8**	**-1.8**
PVY	**Plav**	**2.06**	**111**	⇑*i*Pn	**Pb**	**10 20 21.8**	**-0.4**
NVLJ	**Novalja**	**2.17**	**305**	*i* Pn	**Pn**	**10 20 21.1**	**+0.1**
NVLJ				Sn	**Sb**	**10 20 50.9**	**-0.1**
NVLJ	**Novalja**	**2.17**	**305**	*i* Pn	**Pn**	**10 20 21.0**	**0.0**
NVLJ				Sn	**Sb**	**10 20 50.9**	**-0.1**
BOJS	**Bojanci**	**2.62**	**326**	*i* Pn	**Pn**	**10 20 27.7**	**+0.5**
BOJS				*i* Sn	**Sn**	**10 21 00.2**	**+0.8**
BOJS	**Bojanci**	**2.62**	**326**	Pn	**Pn**	**10 20 27.7**	**+0.4**
BOJS				*i* Sn	**Sn**	**10 21 00.2**	**+0.8**
CRES	**Cresnjev**	**2.82**	**332**	*i* Pn	**Pn**	**10 20 30.1**	**+0.2**
CRES	**Cresnjev**	**2.82**	**332**	*i* Pn	**Pn**	**10 20 30.1**	**+0.2**
VISS	**Visnje**	**3.04**	**324**	*i* Pn	**Pn**	**10 20 33.5**	**+0.5**
VISS	**Visnje**	**3.04**	**324**	*i* Pn	**Pn**	**10 20 33.5**	**+0.6**
SKDS	**Skadanscina**	**3.25**	**314**	*i* Pn	**Pn**	**10 20 35.6**	**-0.2**
SKDS				*i* Sn	**Sn**	**10 21 14.9**	**+0.1**
VOY	**Vojsko**	**3.64**	**318**	*e*Pn	**Pn**	**10 20 41.8**	**+0.5**
VOY				*e*Sn	**Sn**	**10 21 24.8**	**+0.3**
VOY	**Vojsko**	**3.64**	**318**	*e*Pn	**Pn**	**10 20 41.8**	**+0.5**
VOY				*e*Sn	**Sn**	**10 21 24.8**	**+0.3**
PERS	**Pernice**	**3.64**	**335**	*i* Pn	**Pn**	**10 20 41.6**	**+0.3**
PERS	**Pernice**	**3.64**	**335**	*i* Pn	**Pn**	**10 20 41.6**	**+0.3**

ISCJB ***16*** *10:21:18.4±0.4,41.35N±0.02×3.11E±0.02,h9km±2km, Error ellipse: s-maj=3.2km s-min=2.3km az=28.7*
CSEM ***16*** *10:21:19.5±0.1,41.37N×3.06E,h2km,ML3.6/4,Error ellipse: s-maj=2.8km s-min=2.0km az=114.0*
MDD ***16*** *10:21:21.1±0.5,41.40N×3.09E,h6km±3km,mbLg3.7/29, Error ellipse: s-maj=4.0km s-min=2.6km az=118.0,PRIMO*
NEIC ***16*** *10:21:21.5,41.41N×3.07E,h8km,ML3.8(STR), MN3.4(MDD),After MDD.*
NEIC Felt at Barcelona and Palafrugell.
INMG ***16*** *10:21:21.5±1.1,41.33N×2.98E,h0km,ML3.1,Error ellipse: s-maj=5.5km s-min=2.1km az=71.0*
MRB ***16*** *10:21:21.5,41.41N×3.07E,h18km±1km,ML3.8/11*
STR ***16*** *10:21:25.0±0.4,41.66N×3.06E,h10km,Ml3.8,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 16 10:21:20.3±0.4,41.40N±0.02×3.07E±0.02,h11km±2km,n290,σ1.906/446,14C-4D,Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCAS	**Cassa de la Se**	**0.50**	**345**	Pg	**Pg**	**10 21 30.6**	**+0.5**
CCAS				Lg		10 21 38.1	
	3µm,0.2s						
CCAS	**Cassa de la Se**	**0.50**	**345**	Pg	**Pg**	**10 21 30.6**	**+0.5**
CCAS				Lg		10 21 38.1	
	3µm,0.2s						
CCAS	**Cassa de la Se**	**0.50**	**345**	P	**Pg**	**10 21 30.6**	**+0.5**
CCAS				S	**Sg**	**10 21 38.2**	**+1.5**
	3µm,0.2s						
CFON	**Fontmartina**	**0.60**	**307**	P	**Pg**	**10 21 32.7**	**+0.7**
CFON				S	**Sg**	**10 21 40.1**	**+0.3**
CFON	**Fontmartina**	**0.60**	**307**	⇓Pg	**Pg**	**10 21 32.7**	**+0.7**
	552nm,0.3s,SNR=18						
CFON				Lg		10 21 40.1	
	846nm,0.3s,SNR=30						
CFON	**Fontmartina**	**0.60**	**307**	⇓Pg	**Pg**	**10 21 32.7**	**+0.7**
	552nm,0.3s,SNR=18						
CFON				Lg		10 21 40.1	
	846nm,0.3s,SNR=30						
CFON	**Fontmartina**	**0.60**	**307**	P	**Pg**	**10 21 32.7**	**+0.7**
CFON				Lg		10 21 40.1	
	846nm,0.3s,SNR=30						
CFON				S	**Sg**	**10 21 40.1**	**+0.2**
CBEU	**Beuda**	**0.90**	**341**	Pg	**Pg**	**10 21 38.2**	**+0.4**
CBEU				Lg		10 21 49.9	
	4µm,0.3s						
CBEU	**Beuda**	**0.90**	**341**	Pg	**Pg**	**10 21 38.2**	**+0.4**
CBEU				Lg		10 21 49.9	
	4µm,0.3s						
CBEU	**Beuda**	**0.90**	**341**	P	**Pg**	**10 21 38.3**	**+0.5**
CBEU				S	**Sg**	**10 21 49.9**	**+0.3**
	4µm,0.3s						
CPAL	**Palau Saverder**	**0.91**	**4**	Pg	**Pg**	**10 21 38.2**	**+0.3**
CPAL				Lg		10 21 49.8	
	2µm,0.2s						
CPAL	**Palau Saverder**	**0.91**	**4**	Pg	**Pg**	**10 21 38.2**	**+0.3**
CPAL				Lg		10 21 49.8	
	2µm,0.2s						
CPAL	**Palau Saverder**	**0.91**	**4**	P	**Pg**	**10 21 38.2**	**+0.3**
CPAL				S	**Sg**	**10 21 49.9**	**+0.1**
	2µm,0.2s						
CORI	**Orista**	**0.96**	**307**	Pg	**Pg**	**10 21 39.2**	**+0.5**
CORI				Lg		10 21 51.1	
	3µm,0.4s						
CORI	**Orista**	**0.96**	**307**	Pg	**Pg**	**10 21 39.2**	**+0.5**
CORI				Lg		10 21 51.1	
	3µm,0.4s						
CORI	**Orista**	**0.96**	**307**	P	**Pg**	**10 21 39.2**	**+0.5**
CORI				S	**Sg**	**10 21 51.1**	**-0.1**
	3µm,0.4s						
EJON	**La Jonquera**	**1.05**	**353**	P	**Pb**	**10 21 40.4**	**-0.1**
EJON				S	**Sb**	**10 21 53.7**	**-0.6**
EJON	**La Jonquera**	**1.05**	**353**	Pg	**Pg**	**10 21 40.4**	**-0.2**
	853nm,0.3s,S

LRDF Sn Sg 10 22 10.5 -0.8
LRDF Laroque-de-Fa 1.59 346 Pn Pn 10 21 48.1 -0.2
LRDF Sn Sg 10 22 10.5 -0.8
LRDF Laroque-de-Fa 1.59 346 Pn Pn 10 21 48.1 -0.2
LRDF Sg Sg 10 22 10.5 -0.8
PAND Andorre 1.60 315 Pn Pn 10 21 49.1 +0.7
PAND Sn Sn 10 22 09.7 +0.7
PAND Andorre 1.60 315 Pn Pn 10 21 49.1 +0.7
PAND Sn Sn 10 22 09.7 +0.7
ETOS Mallorca 1.64 187 P Pn 10 21 49.4 +0.4
ETOS S Sn 10 22 08.6 -1.6
ETOS Mallorca 1.64 187 ⇓Pg Pg 10 21 49.4 -2.4
38nm,0.3s,SNR=18
ETOS Lg 10 22 08.1
148nm,0.5s,SNR=12
ETOS Mallorca 1.64 187 ⇓Pg Pg 10 21 49.4 -2.4
38nm,0.3s,SNR=18
ETOS Lg 10 22 08.1
148nm,0.5s,SNR=12
ETOS Mallorca 1.64 187 P Pn 10 21 49.4 +0.3
ETOS Lg 10 22 08.1
148nm,0.5s,SNR=12
ETOS S Sn 10 22 08.6 -1.5
FNEB N^bias 1.66 335 Pn Pn 10 21 49.6 +0.3
FNEB Sn Sn 10 22 10.3 -0.3
FNEB N^bias 1.66 335 Pn Pn 10 21 49.6 +0.3
FNEB Sn Sn 10 22 10.3 -0.3
FNEB N^bias 1.66 335 P Pn 10 21 49.6 +0.3
FNEB S Sn 10 22 10.3 -0.3
CSOR Sort 1.75 305 P Pn 10 21 52.5 +2.1
CSOR S Sn 10 22 13.5 +0.9
CSOR Sort 1.75 305 ⇑Pn Pn 10 21 51.2 +0.8
28nm,0.2s,SNR=18
CSOR Pg Pg 10 21 53.9 +0.1
164nm,0.2s,SNR=7.9
CSOR Lg 10 22 15.4
346nm,0.3s,SNR=14
CSOR Sort 1.75 305 ⇑Pn Pn 10 21 51.2 +0.8
28nm,0.2s,SNR=18
CSOR Pg Pg 10 21 53.9 +0.1
164nm,0.2s,SNR=7.9
CSOR Lg 10 22 15.4
346nm,0.3s,SNR=14
CSOR Sort 1.75 305 P Pn 10 21 51.2 +0.8
CSOR Sort 1.75 305 Pg Pg 10 21 53.9 +0.1
164nm,0.2s,SNR=7.9
CSOR S Sn 10 22 13.5 +0.9
CSOR Lg 10 22 15.4
346nm,0.3s,SNR=14
LPEF Le Peyrat 1.77 331 Pn Pn 10 21 51.6 +0.7
LPEF Sn Sn 10 22 10.9 -2.4
LPEF Le Peyrat 1.77 331 Pn Pn 10 21 51.6 +0.7
LPEF Sn Sn 10 22 10.9 -2.4
CAVN Les Avellanes 1.81 286 Pn Pn 10 21 51.9 +0.6
CAVN Sn Sn 10 22 14.2 +0.1
CAVN Les Avellanes 1.81 286 Pn Pn 10 21 51.9 +0.6
CAVN Sn Sn 10 22 14.2 +0.1
CAVN Les Avellanes 1.81 286 P Pn 10 21 51.9 +0.6
CAVN S Sn 10 22 14.2 +0.1
CEST Esterri de Car 1.81 312 Pn Pn 10 21 52.3 +1.0
CEST Esterri de Car 1.81 312 Pn Pn 10 21 52.3 +1.1
CEST Esterri de Car 1.81 312 P Pn 10 21 52.4 +1.1
GRBF Gourbit 1.84 322 Pn Pn 10 21 52.9 +1.2
GRBF Sn Sn 10 22 15.3 +0.4
GRBF Gourbit 1.84 322 Pn Pn 10 21 52.9 +1.2
GRBF Sn Sn 10 22 15.3 +0.4
CTRE Tremp 1.95 299 P Pn 10 21 54.2 +0.9
MTLF Montolieu 2.04 342 Pn Pn 10 21 54.4 -0.1
MTLF Pg Pg 10 21 58.9 -0.5
MTLF Sn Sn 10 22 18.1 -1.8
MTLF Lg 10 22 25.1
473nm,0.5s
MTLF Montolieu 2.04 342 Pn Pn 10 21 54.4 -0.1
MTLF Pg Pg 10 21 58.9 -0.5
MTLF Sn Sn 10 22 18.1 -1.8
MTLF Lg 10 22 25.1
473nm,0.5s
ERTA Horta de San J 2.12 259 P Pn 10 21 55.8 +0.2
ERTA S Sn 10 22 21.2 -0.5
ERTA S Sn 10 22 30.3 +8.6
ERTA Horta de San J 2.12 259 Pn Pn 10 21 55.8 +0.2
12nm,0.4s,SNR=28
ERTA Sn Sn 10 22 21.2 -0.5
33nm,0.3s,SNR=5.8
ERTA Lg 10 22 29.5
102nm,0.2s,SNR=7.9
ERTA Horta de San J 2.12 259 Pn Pn 10 21 55.8 +0.2
12nm,0.4s,SNR=28
ERTA Sn Sn 10 22 21.2 -0.5
33nm,0.3s,SNR=5.8
ERTA Lg 10 22 29.5
102nm,0.2s,SNR=7.9
ERTA Horta de San J 2.12 259 Pn Pn 10 21 55.8 +0.3
12nm,0.4s,SNR=28
ERTA Sn Sn 10 22 21.2 -0.6
33nm,0.3s,SNR=5.8
ERTA Lg 10 22 29.5
102nm,0.2s,SNR=7.9
MLS Moulis 2.14 317 Pn Pn 10 21 58.1 +2.2
MLS Sg Sg 10 22 27.8 -1.3
MLS Moulis 2.14 317 Pn Pn 10 21 58.1 +2.2
MLS Moulis 2.14 317 Pn Pn 10 21 58.1 +2.2
MLS Moulis 2.14 317 Pn Pn 10 21 58.1 +2.2
MLS Sg Sg 10 22 27.8 -1.3
CMAS Mas de Barbera 2.19 253 P Pn 10 21 56.1 -0.5
MELF Melles 2.26 311 Pn Pn 10 21 59.6 +2.0
MELF Melles 2.26 311 Pn Pn 10 21 59.6 +2.0
MELF Melles 2.26 311 Pn Pn 10 21 59.6 +2.0
MELF Melles 2.26 311 Pn Pn 10 21 59.6 +2.0
RESF Ens 2.47 306 Pn Pn 10 22 02.1 +1.6
RESF Ens 2.47 306 Sn Pn 10 22 02.1 +1.6
RESF Ens 2.47 306 Pn Pn 10 22 02.1 +1.6
RESF Ens 2.47 306 Pn Pn 10 22 02.1 +1.6
EBIE Bielsa 2.53 301 P Pn 10 22 06.6 +5.4
EBIE S Sn 10 22 39.5 +7.4
EBIE Bielsa 2.53 301 ⇑Pn Pn 10 22 02.5 +1.2
6.9nm,0.3s,SNR=18
EBIE Pg Pg 10 22 07.6 -1.3
53nm,0.2s,SNR=7.9
EBIE Lg 10 22 39.5
133nm,0.2s,SNR=9.3
EBIE Bielsa 2.53 301 ⇑Pn Pn 10 22 02.5 +1.2
6.9nm,0.3s,SNR=18
EBIE Pg Pg 10 22 07.6 -1.3
53nm,0.2s,SNR=7.9
EBIE Lg 10 22 39.5
133nm,0.2s,SNR=9.3
EBIE Bielsa 2.53 301 P Pn 10 22 02.4 +1.1
EPF Esparros 2.60 310 Pn Pn 10 22 03.7 +1.5
EPF Pg Pg 10 22 09.3 -0.9
EPF Sn Sn 10 22 31.4 -2.4
EPF Lg 10 22 43.0
230nm,0.3s
EPF Esparros 2.60 310 Pn Pn 10 22 03.7 +1.5
EPF Pg Pg 10 22 09.3 -0.9
EPF Sn Sn 10 22 31.4 -2.4
EPF Lg 10 22 43.0
230nm,0.3s
ESAC San Caprasio 2.68 278 P Pn 10 22 04.3 +1.0
ESAC S Sn 10 22 44.9 +9.3
ESAC San Caprasio 2.68 278 ⇑Pn Pn 10 22 04.3 +1.0
80nm,0.2s,SNR=18
ESAC Pg Pg 10 22 10.7 -0.9
222nm,0.2s,SNR=7.9
ESAC Lg 10 22 45.6
2µm,0.4s,SNR=7.3
ESAC San Caprasio 2.68 278 ⇑Pn Pn 10 22 04.3 +1.0
80nm,0.2s,SNR=18
ESAC Pg Pg 10 22 10.7 -0.9
222nm,0.2s,SNR=7.9
ESAC Lg 10 22 45.6
2µm,0.4s,SNR=7.3
ESAC San Caprasio 2.68 278 Pn Pn 10 22 04.3 +1.0
80nm,0.2s,SNR=18
VIEF Viey 2.71 304 Pn Pn 10 22 05.1 +1.4
VIEF Viey 2.71 304 Pn Pn 10 22 05.1 +1.4
VIEF Viey 2.71 304 Pn Pn 10 22 05.1 +1.4
VIEF Viey 2.71 304 Pn Pn 10 22 05.1 +1.4
EIBI Ibiza 2.72 210 P Pn 10 22 04.3 +0.5
EIBI S Sn 10 22 34.1 -2.5
EIBI Ibiza 2.72 210 Pn Pn 10 22 04.3 +0.5
24nm,0.3s,SNR=45
EIBI Sn Sn 10 22 33.3 -3.3
48nm,0.3s,SNR=7.0

EIBI Ibiza 2.72 210 Pn Pn 10 22 04.3 +0.5
24nm,0.3s,SNR=45
EIBI Sn Sn 10 22 33.3 -3.3
48nm,0.3s,SNR=7.0
EIBI Ibiza 2.72 210 Pn Pn 10 22 04.3 +0.5
24nm,0.3s,SNR=45
EIBI Sn Sn 10 22 33.3 -3.3
48nm,0.3s,SNR=7.0
EIBI S Sn 10 22 34.1 -2.5
LASF Ste Croix 2.73 12 Pn Pn 10 22 03.7 -0.3
LASF Sn Sn 10 22 34.2 -2.8
LASF Lg 10 22 47.4
118nm,0.5s
LASF Ste Croix 2.73 12 Pn Pn 10 22 03.7 -0.3
LASF Sn Sn 10 22 34.2 -2.8
LASF Lg 10 22 47.4
118nm,0.5s
LABF Labassere 2.77 307 Pn Pn 10 22 07.4 +2.9
LABF Labassere 2.77 307 Pn Pn 10 22 07.4 +2.9
LABF Labassere 2.77 307 Pn Pn 10 22 07.4 +2.9
LABF Labassere 2.77 307 Pn Pn 10 22 07.4 +2.9
EMOS Mosqueruela 2.88 250 P Pn 10 22 07.2 +1.1
EMOS S Sg 10 22 57.0 +4.1
EMOS Mosqueruela 2.88 250 Pn Pn 10 22 07.2 +1.1
4.8nm,0.4s,SNR=30
EMOS Pg Pg 10 22 16.2 +0.7
14nm,0.4s,SNR=7.9
EMOS Sn Sn 10 22 38.9 -1.7
28nm,0.4s
EMOS Mosqueruela 2.88 250 Pn Pn 10 22 07.2 +1.1
4.8nm,0.4s,SNR=30
EMOS Pg Pg 10 22 16.2 +0.7
14nm,0.4s,SNR=7.9
EMOS Sn Sn 10 22 38.9 -1.7
28nm,0.4s
EMOS Mosqueruela 2.88 250 Pn Pn 10 22 07.2 +1.1
4.8nm,0.4s,SNR=30
FDAF Les Forges d'A 3.06 299 Pn Pn 10 22 09.7 +1.2
FDAF Les Forges d'A 3.06 299 Pn Pn 10 22 09.7 +1.2
REYF Montagne du Re 3.07 304 Pn Pn 10 22 10.3 +1.7
REYF Montagne du Re 3.07 304 Pn Pn 10 22 10.3 +1.7
REYF Montagne du Re 3.07 304 Pn Pn 10 22 10.3 +1.7
REYF Montagne du Re 3.07 304 Pn Pn 10 22 10.3 +1.7
ETSF Etsaut 3.09 300 Pn Pn 10 22 10.1 +1.2
ETSF Pg Pg 10 22 19.0 -0.5
ETSF Lg 10 22 58.0
256nm,0.4s
ETSF Etsaut 3.09 300 Pn Pn 10 22 10.1 +1.2
ETSF Pg Pg 10 22 19.0 -0.5
ETSF Lg 10 22 58.0
256nm,0.4s
SMRF Simiane la Rot 3.17 35 Pn Pn 10 22 10.3 +0.3
SMRF Sn Sn 10 22 45.8 -1.9
SMRF Lg 10 23 00.6
92nm,0.4s
SMRF Simiane la Rot 3.17 35 Pn Pn 10 22 10.3 +0.3
SMRF Sn Sn 10 22 45.8 -1.9
SMRF Lg 10 23 00.6
92nm,0.4s
LMR La Mourre 3.19 52 Pn Pn 10 22 10.8 +0.4
LMR Sn Sn 10 22 46.2 -2.2
55nm,0.4s
LMR La Mourre 3.19 52 Pn Pn 10 22 10.8 +0.4
LMR Sn Sn 10 22 46.2 -2.2
55nm,0.4s
FRF La Foret Royal 3.41 50 Pn Pn 10 22 13.5 +0.1
FRF Sn Sn 10 22 52.2 -1.5
23nm,0.2s
FRF La Foret Royal 3.41 50 Pn Pn 10 22 13.5 +0.1
FRF Sn Sn 10 22 52.2 -1.5
23nm,0.2s
LARF Larrau 3.43 300 Pn Pn 10 22 14.5 +0.9
LARF Larrau 3.43 300 Pn Pn 10 22 14.5 +0.9
ORDF Ordiarp 3.48 303 Pn Pn 10 22 15.6 +1.3
ORDF Ordiarp 3.48 303 Pn Pn 10 22 15.6 +1.3
ORDF Ordiarp 3.48 303 Pn Pn 10 22 15.6 +1.3
ORDF Ordiarp 3.48 303 Pn Pn 10 22 15.6 +1.3
ECHE Chera 3.57 241 ⇑Pn Pn 10 22 16.0 +0.5
11nm,0.3s,SNR=18
ECHE Sn Sn 10 22 57.9 +0.2
23nm,0.5s,SNR=7.9
ECHE Chera 3.57 241 ⇑Pn Pn 10 22 16.0 +0.5
11nm,0.3s,SNR=18
ECHE Sn Sn 10 22 57.9 +0.2
23nm,0.5s,SNR=7.9
ECHE Chera 3.57 241 Pn Pn 10 22 16.0 +0.4
11nm,0.3s,SNR=18
ECHE Sn Sn 10 22 57.9 +0.2
23nm,0.5s,SNR=7.9
IPRE Itoiz 3.58 295 Lg 10 23 15.1
76nm,0.4s,SNR=8.0
IPRE Itoiz 3.58 295 Lg 10 23 15.1
76nm,0.4s,SNR=8.0
IPRE Itoiz 3.58 295 Lg 10 23 15.1
76nm,0.4s,SNR=8.0
CAF Calviac 3.60 349 Pn Pn 10 22 16.3 +0.4
CAF Pg Pg 10 22 27.7 -1.5
CAF Sn Sn 10 22 55.1 -3.3
CAF Calviac 3.60 349 Pn Pn 10 22 16.3 +0.4
CAF Pg Pg 10 22 27.7 -1.5
CAF Sn Sn 10 22 55.1 -3.3
VIVF Saint-Julien-l 3.65 18 Pn Pn 10 22 16.7 +0.1
VIVF Sn Sn 10 22 56.8 -2.7
VIVF Saint-Julien-l 3.65 18 Pn Pn 10 22 16.7 +0.1
VIVF Sn Sn 10 22 56.8 -2.7
IUNC Unciti 3.66 293 ⇑Pn Pn 10 22 18.0 +1.2
18nm,0.2s,SNR=18
IUNC Pg Pg 10 22 30.6 +0.1
56nm,0.3s,SNR=7.9
IUNC Sn Sn 10 23 00.9 +1.0
SNR=7.9
IUNC Lg 10 23 17.0
149nm,0.4s,SNR=11
IUNC Unciti 3.66 293 ⇑Pn Pn 10 22 18.0 +1.2
18nm,0.2s,SNR=18
IUNC Pg Pg 10 22 30.6 +0.1
56nm,0.3s,SNR=7.9
IUNC Sn Sn 10 23 00.9 +1.0
SNR=7.9
IUNC Lg 10 23 17.0
149nm,0.4s,SNR=11
IUNC Unciti 3.66 293 Pn Pn 10 22 18.0 +1.2
18nm,0.2s,SNR=18
IUNC Unciti 3.66 293 Pg Pg 10 22 30.6 +0.1
56nm,0.3s,SNR=7.9
IUNC Sn Sn 10 23 00.9 +1.0
SNR=7.9
IUNC Lg 10 23 17.0
149nm,0.4s,SNR=11
EBEN Beniarda 3.70 224 Pn Pn 10 22 17.4 +0.1
3.0nm,0.5s,SNR=17
EBEN Pg Pg 10 22 27.3 -3.8
4.5nm,0.3s,SNR=7.9
EBEN Sn Sn 10 22 58.2 -2.6
5.2nm,0.4s
EBEN Beniarda 3.70 224 Pn Pn 10 22 17.4 +0.1
3.0nm,0.5s,SNR=17
EBEN Pg Pg 10 22 27.3 -3.8
4.5nm,0.3s,SNR=7.9
EBEN Sn Sn 10 22 58.2 -2.6
5.2nm,0.4s
EBEN Beniarda 3.70 224 Pn Pn 10 22 17.4 +0.1
3.0nm,0.5s,SNR=17
OSSF Osses 3.71 301 Pn Pn 10 22 18.4 +0.9
OSSF Osses 3.71 301 Pn Pn 10 22 18.4 +0.9
OSSF Osses 3.71 301 Pn Pn 10 22 18.4 +0.9
OSSF Osses 3.71 301 Pn Pn 10 22 18.4 +0.9
EARA Aranguren 3.72 293 Pn Pn 10 22 18.8 +1.2
7.8nm,0.3s,SNR=7.4
EARA Pg Pg 10 22 30.2 -1.4
38nm,0.3s,SNR=7.9
EARA Lg 10 23 18.6
223nm,0.8s,SNR=8.8
EARA Aranguren 3.72 293 Pn Pn 10 22 18.8 +1.2
7.8nm,0.3s,SNR=7.4
EARA Pg Pg 10 22 30.2 -1.4
38nm,0.3s,SNR=7.9
EARA Lg 10 23 18.6
223nm,0.8s,SNR=8.8
EARA Aranguren 3.72 293 Pn Pn 10 22 18.8 +1.2
7.8nm,0.3s,SNR=7.4
IUSE Utxeti 3.77 296 Pn Pn 10 22 19.4 +1.2
3.7nm,0.3s,SNR=9.6
IUSE Pg Pg 10 22 30.7 -1.7
25nm,0.2s,SNR=7.9
IUSE Lg 10 23 20.9
78nm,0.4s,SNR=8.3
IUSE Utxeti 3.77 296 Pn Pn 10 22 19.4 +1.2
3.7nm,0.3s,SNR=9.6
IUSE Utxeti 3.77 296 Pn Pn 10 22 19.4 +1.2
3.7nm,0.3s,SNR=9.6
IUSE Pg Pg 10 22 30.7 -1.7
25nm,0.2s,SNR=7.9
IUSE Lg 10 23 20.9
78nm,0.4s,SNR=8.3
IUSE Utxeti 3.77 296 Pn Pn 10 22 19.4 +1.2
3.7nm,0.3s,SNR=9.6
LBL Lubilhac 3.83 2 Pn Pn 10 22 20.2 +1.1
LBL Lubilhac 3.83 2 Pn Pn 10 22 20.2 +1.1
ELIZ Elizondo 3.84 299 Pn Pn 10 22 20.5 +1.3
46nm,0.2s,SNR=55
ELIZ Lg 10 23 21.8
102nm,0.3s
ELIZ Elizondo 3.84 299 Pn Pn 10 22 20.5 +1.3
46nm,0.2s,SNR=55
ELIZ Lg 10 23 21.8
102nm,0.3s
ELIZ Elizondo 3.84 299 Pn Pn 10 22 20.5 +1.2
46nm,0.2s,SNR=55
ELIZ Lg 10 23 21.8
102nm,0.3s
EALK Alkurruntz 3.85 300 ⇑Pn Pn 10 22 20.9 +1.5
44nm,0.4s,SNR=18
EALK Pg Pg 10 22 32.5 -1.5
84nm,0.5s,SNR=7.9
EALK Lg 10 23 21.8
305nm,0.4s
EALK Alkurruntz 3.85 300 ⇑Pn Pn 10 22 20.9 +1.5
44nm,0.4s,SNR=18
EALK Pg Pg 10 22 32.5 -1.5
84nm,0.5s,SNR=7.9
EALK Lg 10 23 21.8
305nm,0.4s
EALK Alkurruntz 3.85 300 Pn Pn 10 22 20.9 +1.5
44nm,0.4s,SNR=18
MVIF Mont Vial 3.91 49 Pn Pn 10 22 20.7 +0.5
MVIF Mont Vial 3.91 49 Pn Pn 10 22 20.7 +0.5
ETOR Torete 3.92 263 Pn Pn 10 22 20.9 +0.6
24nm,0.3s,SNR=26
ETOR Pg Pg 10 22 34.0 -1.3
53nm,0.3s,SNR=7.9
ETOR Lg 10 23 25.7
123nm,0.4s
ETOR Torete 3.92 263 Pn Pn 10 22 20.9 +0.6
24nm,0.3s,SNR=26
ETOR Pg Pg 10 22 34.0 -1.3
53nm,0.3s,SNR=7.9
ETOR Lg 10 23 25.7
123nm,0.4s
ETOR Torete 3.92 263 Pn Pn 10 22 20.9 +0.6
24nm,0.3s,SNR=26
REVF Revere 3.94 52 Pn Pn 10 22 21.1 +0.5
REVF Revere 3.94 52 Pn Pn 10 22 21.1 +0.5
LUCF Luceram 4.02 50 Pn Pn 10 22 22.0 +0.3
LUCF Luceram 4.02 50 Pn Pn 10 22 22.0 +0.3
SSB Saint Sauveur 4.02 15 ePn Pn 10 22 21.8 0.0
SSB eSn Sn 10 23 05.5 -3.3
SSB Saint Sauveur 4.02 15 ePn Pn 10 22 21.8 +0.1
SSB eSn Sn 10 23 05.5 -3.3
TOUF Mont Tournerai 4.03 48 Pn Pn 10 22 22.7 +0.8
TOUF Mont Tournerai 4.03 48 Pn Pn 10 22 22.7 +0.8
AUTN L'Aution 4.12 50 Pn Pn 10 22 23.5 +0.3
AUTN L'Aution 4.12 50 Pn Pn 10 22 23.5 +0.3
SAOF Saorge 4.19 50 Pn Pn 10 22 24.9 +0.8
SAOF Saorge 4.19 50 Pn Pn 10 22 24.9 +0.8
ETOB Tobarra 4.49 234 ⇑Pn Pn 10 22 28.8 +0.6
5.8nm,0.3s,SNR=18
ETOB Sn Sn 10 23 17.6 -2.8
8.2nm,0.5s
ETOB Tobarra 4.49 234 ⇑Pn Pn 10 22 28.8 +0.6
5.8nm,0.3s,SNR=18
ETOB Sn Sn 10 23 17.6 -2.8
8.2nm,0.5s
ETOB Tobarra 4.49 234 Pn Pn 10 22 28.8 +0.6
5.8nm,0.3s,SNR=18
ETOB Sn Sn 10 23 17.6 -2.8
8.2nm,0.5s
PLDF La Plantade 4.58 5 Pn Pn 10 22 30.3 +0.8
PLDF La Plantade 4.58 5 Pn Pn 10 22 30.3 +0.8
AGO Saint Agoulin 4.65 0 Pn Pn 10 22 31.5 +1.1
AGO Saint Agoulin 4.65 0 Pn Pn 10 22 31.5 +1.1
EMUR La Murta 4.87 225 Pn Pn 10 22 33.4 0.0
4.3nm,0.3s,SNR=7.0
EMUR Sn Sn 10 23 26.0 -3.7
4.8nm,0.6s
EMUR La Murta 4.87 225 Pn Pn 10 22 33.4 0.0
4.3nm,0.3s,SNR=7.0
EMUR Sn Sn 10 23 26.0 -3.7
4.8nm,0.6s
EMUR La Murta 4.87 225 Pn Pn 10 22 33.4 0.0
4.3nm,0.3s,SNR=7.0
EMUR S Sn 10 23 26.0 -3.7
4.8nm,0.6s
EVIA Vianos 5.09 239 Pn Pn 10 22 37.0 +0.5
2.3nm,0.2s,SNR=7.9
EVIA Sn Sn 10 23 34.4 -0.9
8.4nm,0.4s,SNR=6.3
EVIA Vianos 5.09 239 Pn Pn 10 22 37.0 +0.5
2.3nm,0.2s,SNR=7.9
EVIA Sn Sn 10 23 34.4 -0.9
8.4nm,0.4s,SNR=6.3
EVIA Vianos 5.09 239 Pn Pn 10 22 37.0 +0.5
2.3nm,0.2s,SNR=7.9
EVIA Sn Sn 10 23 34.4 -0.8
8.4nm,0.4s,SNR=6.3
ELAN Lanestosa 5.16 293 Pn Pn 10 22 38.1 +0.8
12nm,0.3s,SNR=34
ELAN Sn Sn 10 23 34.7 -2.1
25nm,0.4s
ELAN Lg 10 24 06.3
31nm,0.3s,SNR=7.9
ELAN Lanestosa 5.16 293 Pn Pn 10 22 38.1 +0.8
12nm,0.3s,SNR=34
ELAN Sn Sn 10 23 34.7 -2.1
25nm,0.4s
ELAN Lg 10 24 06.3
31nm,0.3s,SNR=7.9
ELAN Lanestosa 5.16 293 Pn Pn 10 22 38.1 +0.7
12nm,0.3s,SNR=34
ELAN Sn Sn 10 23 34.7 -2.1
25nm,0.4s
ELAN Lg 10 24 06.3
31nm,0.3s,SNR=7.9
GUD Guadarrama 5.52 264 Pn Pn 10 22 43.0 +0.7
12nm,0.2s,SNR=7.9
GUD Sn Sn 10 23 45.0 -0.7
25nm,0.6s,SNR=7.9
GUD Guadarrama 5.52 264 Pn Pn 10 22 43.0 +0.7
12nm,0.2s,SNR=7.9
GUD Sn Sn 10 23 45.0 -0.7
25nm,0.6s,SNR=7.9
GUD Guadarrama 5.52 264 Pn Pn 10 22 43.0 +0.7
12nm,0.2s,SNR=7.9
GUD Sn Sn 10 23 45.0 -0.7
25nm,0.6s,SNR=7.9
ESDC Sonseca Array 5.63 254 P Pn 10 22 44.1 +0.2
ESDC S Sn 10 23 44.6 -3.8
ESDC Sonseca Array 5.63 254 Pn Pn 10 22 44.1 +0.2
1.6nm,0.3s,baz=73,slow=14,SNR=22
ESDC Sonseca Array 5.63 254 Pn Pn 10 22 44.1 +0.2
1.6nm,0.3s,baz=73,slow=14,SNR=22
ESDC Sonseca Array 5.63 254 Pn Pn 10 22 44.1 +0.2
1.6nm,0.3s,slow=14,SNR=22
EHUE Huescar 5.65 233 Pn Pn 10 22 44.8 +0.6
2.9nm,0.2s,SNR=7.9
EHUE Sn Sn 10 23 46.0 -3.1
1.2nm,0.2s,SNR=7.9
EHUE Huescar 5.65 233 Pn Pn 10 22 44.8 +0.6
2.9nm,0.2s,SNR=7.9
EHUE Sn Sn 10 23 46.0 -3.1
1.2nm,0.2s,SNR=7.9
EHUE Huescar 5.65 233 Pn Pn 10 22 44.8 +0.6
2.9nm,0.2s,SNR=7.9
EQES Quesada 5.95 235 Pn Pn 10 22 48.6 +0.4
0.4nm,0.1s,SNR=7.9
EQES Sn Sn 10 23 52.9 -3.5
1.1nm,0.2s,SNR=7.9
EQES Quesada 5.95 235 Pn Pn 10 22 48.6 +0.4
0.4nm,0.1s,SNR=7.9
EQES Sn Sn 10 23 52.9 -3.5
1.1nm,0.2s,SNR=7.9
EQES Quesada 5.95 235 Pn Pn 10 22 48.7 +0.4
0.4nm,0.1s,SNR=7.9
PAB San Pablo 5.96 254 ePn Pn 10 22 48.8 +0.5
3.2nm,0.4s

PAB	**San Pablo**	**5.96**	**254**	*e*Pn		**Pn**	**10 22 48.8**	**+0.5**
	3.2nm,0.4s							
EBAN	**Banos Encina**	**6.19**	**241**	Pn		**Pn**	**10 22 51.9**	**+0.3**
	1.0nm,0.1s,SNR=7.9							
EBAN	**Banos Encina**	**6.19**	**241**	Pn		**Pn**	**10 22 51.9**	**+0.3**
	1.0nm,0.1s,SNR=7.9							
EBAN	**Banos Encina**	**6.19**	**241**	Pn		**Pn**	**10 22 51.9**	**+0.3**
	1.0nm,0.1s,SNR=7.9							
EARI	**Arriondas**	**6.42**	**290**	Pn		**Pn**	**10 22 55.2**	**+0.5**
	3.0nm,0.3s,SNR=40							
EARI				Sn		**Sn**	**10 24 03.5**	**-4.4**
	22nm,0.6s							
EARI	**Arriondas**	**6.42**	**290**	Pn		**Pn**	**10 22 55.2**	**+0.5**
	3.0nm,0.3s,SNR=40							
EARI				Sn		**Sn**	**10 24 03.5**	**-4.4**
	22nm,0.6s							
EARI	**Arriondas**	**6.42**	**290**	Pn		**Pn**	**10 22 55.2**	**+0.5**
	3.0nm,0.3s,SNR=40							
EBER	**Berja**	**6.46**	**228**	Pn		**Pn**	**10 22 57.1**	**+1.9**
	2.2nm,0.3s,SNR=5.8							
EBER	**Berja**	**6.46**	**228**	Pn		**Pn**	**10 22 57.1**	**+1.9**
	2.2nm,0.3s,SNR=5.8							
EBER	**Berja**	**6.46**	**228**	Pn		**Pn**	**10 22 57.1**	**+1.9**
	2.2nm,0.3s,SNR=5.8							
EQUE	**Quentar**	**6.56**	**232**	Pn		**Pn**	**10 22 57.1**	**+0.5**
	1.5nm,0.4s,SNR=9.8							
EQUE				Sn		**Sn**	**10 24 08.6**	**-2.8**
	2.3nm,0.3s,SNR=4.0							
EQUE	**Quentar**	**6.56**	**232**	Pn		**Pn**	**10 22 57.1**	**+0.5**
	1.5nm,0.4s,SNR=9.8							
EQUE				Sn		**Sn**	**10 24 08.6**	**-2.8**
	2.3nm,0.3s,SNR=4.0							
EQUE	**Quentar**	**6.56**	**232**	Pn		**Pn**	**10 22 57.1**	**+0.4**
	1.5nm,0.4s,SNR=9.8							
EADA	**Adamuz**	**6.72**	**244**	Pn		**Pn**	**10 22 57.3**	**-1.5**
	0.4nm,0.1s,SNR=7.9							
EADA				Sn		**Sn**	**10 24 10.2**	**-5.1**
	0.4nm,0.1s,SNR=7.9							
EADA	**Adamuz**	**6.72**	**244**	Pn		**Pn**	**10 22 57.3**	**-1.5**
	0.4nm,0.1s,SNR=7.9							
EADA				Sn		**Sn**	**10 24 10.2**	**-5.1**
	0.4nm,0.1s,SNR=7.9							
EADA	**Adamuz**	**6.72**	**244**	Pn		**Pn**	**10 22 57.3**	**-1.5**
	0.4nm,0.1s,SNR=7.9							
EPLA	**Plasencia**	**7.08**	**262**	Pn		**Pn**	**10 23 03.2**	**-0.5**
	1.7nm,0.4s,SNR=6.5							
EPLA	**Plasencia**	**7.08**	**262**	Pn		**Pn**	**10 23 03.2**	**-0.5**
	1.7nm,0.4s,SNR=6.5							
EPLA	**Plasencia**	**7.08**	**262**	Pn		**Pn**	**10 23 03.2**	**-0.5**
	1.7nm,0.4s,SNR=6.5							
ECAL	**Calabor**	**7.37**	**277**	Pn		**Pn**	**10 23 07.4**	**-0.3**
	5.0nm,0.3s,SNR=22							
ECAL				Sn		**Sn**	**10 24 25.8**	**-5.3**
	4.3nm,0.3s							
ECAL				Lg			10 25 15.9	
	23nm,0.4s,SNR=7.9							
ECAL	**Calabor**	**7.37**	**277**	Pn		**Pn**	**10 23 07.4**	**-0.3**
	5.0nm,0.3s,SNR=22							
ECAL				Sn		**Sn**	**10 24 25.8**	**-5.3**
	4.3nm,0.3s							
ECAL				Lg			10 25 15.9	
	23nm,0.4s,SNR=7.9							
ECAL	**Calabor**	**7.37**	**277**	Pn		**Pn**	**10 23 07.4**	**-0.3**
	5.0nm,0.3s,SNR=22							
PBRG	**Braganca**	**7.37**	**276**	*e*Pn		**Pn**	**10 23 07.5**	**-0.2**
PBRG	**Braganca**	**7.37**	**276**	Pn		**Pn**	**10 23 07.5**	**-0.2**
PBRG	**Braganca**	**7.37**	**276**	Pn		**Pn**	**10 23 07.5**	**-0.2**
PBRG	**Braganca**	**7.37**	**276**	*e*Pn		**Pn**	**10 23 07.5**	**-0.2**
MVO	**Moncorvo**	**7.61**	**272**	*e*Pn		**Pn**	**10 23 11.0**	**-0.1**
MVO				*e*Sn		**Sn**	**10 24 33.3**	**-4.0**
MVO				A			10 25 33.5	
	11nm,0.5s							
MVO	**Moncorvo**	**7.61**	**272**	Pn		**Pn**	**10 23 11.0**	**0.0**
	2.5nm,0.3s,SNR=8.7							
MVO				Sn		**Sn**	**10 24 32.3**	**-5.0**
	11nm,0.4s							
MVO	**Moncorvo**	**7.61**	**272**	Pn		**Pn**	**10 23 11.0**	**0.0**
	2.5nm,0.3s,SNR=8.7							
MVO				Sn		**Sn**	**10 24 32.3**	**-5.0**
	11nm,0.4s							
MVO	**Moncorvo**	**7.61**	**272**	Pn		**Pn**	**10 23 11.0**	**-0.1**
	2.5nm,0.3s,SNR=8.7							
CDF	**Champ du Feu**	**7.62**	**22**	Pn		**Pn**	**10 23 09.7**	**-1.4**
CDF				Sn		**Sn**	**10 24 32.9**	**-4.4**
	1.2nm,0.3s							
CDF	**Champ du Feu**	**7.62**	**22**	Pn		**Pn**	**10 23 09.7**	**-1.4**
CDF				Sn		**Sn**	**10 24 32.9**	**-4.4**
	1.2nm,0.3s							
FLN	**La Foliniere**	**7.78**	**342**	Pn		**Pn**	**10 23 12.6**	**-0.7**
FLN	**La Foliniere**	**7.78**	**342**	Pn		**Pn**	**10 23 12.6**	**-0.7**
EPON	**Pontenova**	**7.81**	**288**	Pn		**Pn**	**10 23 13.5**	**-0.3**
	1.5nm,0.2s,SNR=7.9							
EPON				Sn		**Sn**	**10 24 36.2**	**-5.9**
	1.7nm,0.2s,SNR=7.9							
EPON	**Pontenova**	**7.81**	**288**	Pn		**Pn**	**10 23 13.5**	**-0.3**
	1.5nm,0.2s,SNR=7.9							
EPON				Sn		**Sn**	**10 24 36.2**	**-5.9**
	1.7nm,0.2s,SNR=7.9							
EPON	**Pontenova**	**7.81**	**288**	Pn		**Pn**	**10 23 13.5**	**-0.3**
	1.5nm,0.2s,SNR=7.9							
QUIF	**Quistinic**	**7.88**	**328**	Pn		**Pn**	**10 23 14.6**	**-0.2**
QUIF	**Quistinic**	**7.88**	**328**	Pn		**Pn**	**10 23 14.6**	**-0.2**
SGMF	**Saint Gilles**	**7.93**	**332**	Pn		**Pn**	**10 23 15.1**	**-0.3**
SGMF	**Saint Gilles**	**7.93**	**332**	Pn		**Pn**	**10 23 15.1**	**-0.3**
PMRV	**Marv??o**	**8.22**	**260**	*e*Pn		**Pn**	**10 23 19.2**	**-0.3**
PMRV	**Marv??o**	**8.22**	**260**	Pn		**Pn**	**10 23 19.2**	**-0.3**
PMRV	**Marv??o**	**8.22**	**260**	Pn		**Pn**	**10 23 19.2**	**-0.3**
PMRV	**Marv??o**	**8.22**	**260**	*e*Pn		**Pn**	**10 23 19.2**	**-0.3**
ROSF	**Rostrenen**	**8.27**	**329**	Pn		**Pn**	**10 23 19.8**	**-0.2**
ROSF	**Rostrenen**	**8.27**	**329**	Pn		**Pn**	**10 23 19.8**	**-0.2**
ELOB	**Lobios**	**8.35**	**277**	Pn		**Pn**	**10 23 20.7**	**-0.5**
	4.8nm,0.5s,SNR=14							
ELOB				Sn		**Sn**	**10 24 50.2**	**-5.3**
	2.8nm,0.5s,SNR=6.0							
ELOB	**Lobios**	**8.35**	**277**	Pn		**Pn**	**10 23 20.7**	**-0.5**
	4.8nm,0.5s,SNR=14							
ELOB				Sn		**Sn**	**10 24 50.2**	**-5.3**
	2.8nm,0.5s,SNR=6.0							
ELOB	**Lobios**	**8.35**	**277**	Pn		**Pn**	**10 23 20.7**	**-0.5**
	4.8nm,0.5s,SNR=14							
PESTR	**Estremoz**	**8.55**	**256**	*e*Pn		**Pn**	**10 23 23.6**	**-0.3**
PESTR	**Estremoz**	**8.55**	**256**	Pn		**Pn**	**10 23 23.6**	**-0.3**
PESTR	**Estremoz**	**8.55**	**256**	Pn		**Pn**	**10 23 23.6**	**-0.3**
PESTR	**Estremoz**	**8.55**	**256**	*e*Pn		**Pn**	**10 23 23.6**	**-0.3**
BAIF	**Baives**	**8.70**	**5**	Pn		**Pn**	**10 23 26.0**	**+0.1**
BAIF	**Baives**	**8.70**	**5**	Pn		**Pn**	**10 23 26.0**	**+0.1**
GIVF	**Givet**	**8.79**	**7**	Pn		**Pn**	**10 23 27.0**	**-0.1**
GIVF				Sn		**Sn**	**10 24 59.9**	**-6.1**
GIVF	**Givet**	**8.79**	**7**	Pn		**Pn**	**10 23 27.0**	**-0.1**
GIVF				Sn		**Sn**	**10 24 59.9**	**-6.1**

TAP 16 10:21:48.9,21°.15N×122°.38E, h115km±1km, ML3.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**1.17**	**319**	*e*P	Pn	10 22 10.2	-2.1
	baz=320						
TSEB	**Hengchuen, Pin**	**1.56**	**299**	*e*P	Pn	10 22 15.7	-1.0
	baz=298						
TWK1	**Hengchun**	**1.66**	**299**	*e*P	Pn	10 22 16.3	-1.6
	baz=299						
EAST	**Anshuo**	**1.88**	**311**	*e*P	Pn	10 22 17.2	-3.4
	baz=311						
ECL	**Taimali**	**1.96**	**318**	*e*P	Pn	10 22 21.4	-0.2
	baz=314						
SCZT	**Fangliau**	**2.04**	**307**	*e*P	Pn	10 22 21.4	-1.1
	baz=311						
TWG	**Pinlang**	**2.06**	**324**	*e*P	Pn	10 22 23.2	+0.4
	baz=316						
TWG				*e*S	Sn	10 22 48.5	-0.3
	baz=316						
CHKT	**Chengkung**	**2.16**	**334**	*e*P	Pn	10 22 24.5	+0.4
	baz=339						
CHKT				*e*S	Sn	10 22 49.4	-1.6
	baz=339						
SSD	**Sandimen**	**2.27**	**315**	*e*P	Pn	10 22 25.9	+0.4
	baz=315						
SSD				*e*S	Sn	10 22 53.2	-0.4
	baz=315						
ELDTW	**Lidau**	**2.39**	**328**	*e*P	Pn	10 22 28.0	+0.9
	baz=328						
ELDTW				*e*S	Sn	10 22 55.9	-0.4
	baz=328						
TWF1	**Yuli**	**2.41**	**336**	*e*P	Pn	10 22 27.5	+0.2
	baz=338						
TWF1				*e*S	Sn	10 22 56.1	-0.8
	baz=338						
EHY	**Hungye**	**2.54**	**338**	*e*P	Pn	10 22 29.4	+0.4
	baz=341						
EHY				*e*S	Sn	10 22 59.3	-0.5
	baz=341						
WTP	**Ta-pu**	**2.65**	**322**	P	Pn	10 22 31.8	+1.3
	baz=312						
WTP				*e*S	Sn	10 23 04.1	+1.7
	baz=312						
CHN1	**Nanshi**	**2.66**	**320**	*e*P	Pn	10 22 32.2	+1.8
	baz=320						
CHN1				*e*S	Sn	10 23 02.1	-0.3
	baz=320						
YUS	**Yu-Shan**	**2.68**	**331**	*e*P	Pn	10 22 32.8	+2.0
	baz=334						
CHN4	**Tsaushan**	**2.75**	**323**	*e*P	Pn	10 22 34.9	+3.2
	baz=313						
CHN4				*e*S	Sn	10 23 04.3	-0.3
	baz=313						
ESL	**Shilin**	**2.79**	**342**	*e*P	Pn	10 22 32.6	+0.3
	baz=347						
CHN5	**Tsauling**	**2.90**	**328**	*e*P	Pn	10 22 35.5	+1.8
	baz=317						
CHN5				*e*S	Sn	10 23 10.1	+1.9
	baz=317						
TYC	**Yuchr**	**3.08**	**333**	*e*P	Pn	10 22 37.1	+1.0
	baz=322						
TYC				*e*S	Sn	10 23 11.7	-0.9
	baz=322						
WHF	**Hehuan Shan**	**3.16**	**341**	*e*P	Pn	10 22 38.9	+1.8
	baz=348						
WHF				*e*S	Sn	10 23 13.3	-0.9
	baz=348						
TWQ1	**Liyutan**	**3.51**	**335**	*e*P	Pn	10 22 42.3	+0.5
	baz=335						
ENTT	**Nioudou**	**3.56**	**348**	*e*P	Pn	10 22 42.9	+0.5
	baz=348						
TWB1	**Santiao Chiao**	**3.86**	**355**	*e*P	Pn	10 22 46.8	+0.4
	baz=357						

BJI ***16*** *10:27:35.2, 54°.42N×163°.58W, h46km, mB4.9/7, mb4.7/12, Ms4.5/7, Ms7 4.3/7*
IDC ***16*** *10:27:35.3±4.8, 54°.46N×163°.77W, h40km±39km, mb3.8/16, mb1 3.9/19, mb1mx3.9/28, mbtmp3.8/19, ML3.8/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/38, Error ellipse: s-maj=27.3km s-min=16.2km az=36.0*
NEIC ***16*** *10:27:36.9, 54°.17N×163°.58W, h53km, mb4.4/12, ML3.9(AEIC), After AEIC.*
ISCJB ***16*** *10:27:37.2±0.4, 54°.35N±0°.05×163°.60W±0°.05, h71km±3km, mb4.2/33, Error ellipse: s-maj=9.0km s-min=3.7km az=157.9*

ISC 16 10:27:38.4±0.4, 54°.31N±0°.05×163°.61W±0°.05, h65km±3km, h57km±3.4km:pP-P, n77, σ1.923/85, mb4.2/33, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FALS	**False Pass**	**0.56**	**11**	P	**Pn**	**10 27 51.2**	**-0.2**
FALS				S	**Sn**	**10 28 03.0**	**+2.0**
AKA	**Akutan**	**1.28**	**263**	P	**Pn**	**10 27 59.6**	**-0.6**
AKA				S	**Sn**	**10 28 17.6**	**+0.9**
AKUT	**Akutan**	**1.28**	**263**	P	**Pn**	**10 27 59.5**	**-0.8**
AKUT				S	**Sn**	**10 28 17.8**	**+1.1**
AKLV	**Akutan Long Va**	**1.39**	**265**	P	**Pn**	**10 27 60.0**	**-1.7**
AKLV				S	**Sn**	**10 28 19.8**	**+0.7**
AKGG	**Akutan Green G**	**1.40**	**267**	P	**Pn**	**10 28 00.5**	**-1.4**
AKGG				S	**Sn**	**10 28 20.8**	**+1.3**
UNV	**Unalaska Valle**	**1.77**	**256**	P	**Pn**	**10 28 05.7**	**-1.1**
UNV				S	**Sn**	**10 28 27.7**	**-0.5**
SDPT	**Sand Point**	**2.09**	**59**	P	**Pn**	**10 28 10.5**	**-0.6**
NIKO	**Nikolski**	**3.40**	**249**	P	**Pn**	**10 28 27.8**	**-1.1**
CHGN	**Chignik**	**3.58**	**54**	*e*Pn	**Pn**	**10 28 31.1**	**-0.2**
CHGN				*e*Sn	**Sn**	**10 29 12.3**	**-0.1**
SPIA	**Saint Paul Isl**	**4.73**	**310**	P	**Pn**	**10 28 48.6**	**+1.6**
OHAK	**Old Harbor**	**6.51**	**59**	*e*Pn	**Pn**	**10 29 09.2**	**-2.3**
ATKA	**Atka Island**	**6.69**	**256**	*e*Pn	**Pn**	**10 29 14.1**	**+0.1**
KDAK	**Kodiak Island**	**7.09**	**56**	*e*Pn	**Pn**	**10 29 18.3**	**-1.0**
KDAK	**Kodiak Island**	**7.09**	**56**	P	**Pn**	**10 29 17.2**	**-2.0**
	1.9nm,0.3s,baz=239,slow=8.4,SNR=14						
KDAK				S	**Sn**	**10 30 32.7**	**-5.6**
	0.8nm,0.3s,baz=249,slow=23,SNR=6.0						
RSO	**Redoubt South**	**8.50**	**39**	*e*Pn	**Pn**	**10 29 42.1**	**+3.4**
TTA	**Tatalina**	**9.50**	**21**	*e*Pn	**Pn**	**10 29 52.7**	**+0.4**
SLKM	**Skilak Lake**	**9.52**	**44**	*e*Pn	**Pn**	**10 29 52.4**	**0.0**
SEW	**Seward**	**9.62**	**47**	*e*Pn	**Pn**	**10 29 52.1**	**-1.8**
SEW				*e*Sn	**Sn**	**10 31 34.9**	**-5.3**
GAMB	**Gambell**	**10.36**	**340**	*e*Pn	**Pn**	**10 30 05.8**	**+1.8**
PPLA	**Purkeypile**	**10.46**	**30**	*e*Pn	**Pn**	**10 30 07.5**	**+2.3**
	15nm,1.1s						
PMR	**Parker**	**10.59**	**41**	*e*Pn	**Pn**	**10 30 05.6**	**-1.4**
AMKA	**Amchitka**	**10.74**	**261**	*e*Pn	**Pn**	**10 30 08.2**	**-1.0**
TRF	**Thorofare Moun**	**11.44**	**31**	*e*Pn	**Pn**	**10 30 19.5**	**+0.8**
	29nm,1.2s						
BPAW	**Bear Paw Mtn.**	**11.73**	**28**	*e*Pn	**Pn**	**10 30 23.6**	**+0.9**
	9.8nm,0.9s						
MCK	**McKinley**	**12.06**	**33**	*e*Pn	**Pn**	**10 30 31.1**	**+3.9**
PAX	**Paxson**	**12.78**	**40**	*e*Pn	**Pn**	**10 30 34.7**	**-2.3**
	5.6nm,0.6s						
COLA	**College**	**13.21**	**30**	*e*Pn	**Pn**	**10 30 41.9**	**-0.9**
	8.8nm,0.9s						
ILAR	**Eielson Array**	**13.43**	**32**	P	**Pn**	**10 30 42.0**	**-3.7**
	0.1nm,0.3s,baz=228,slow=12,SNR=8.4						
PNL	**Peninsula**	**14.20**	**58**	*e*Pn	**Pn**	**10 30 54.5**	**-1.4**
	10nm,0.5s						
COLD	**Coldfoot**	**14.47**	**21**	*e*Pn	**Pn**	**10 31 00.6**	**+1.3**
EGAK	**Eagle**	**15.38**	**38**	*e*Pn	**Pn**	**10 31 13.1**	**+2.0**
	9.8nm,1.0s						
HYT	**Haines Junctio**	**15.38**	**54**	*e*P	**Pn**	**10 31 16.5**	**+5.4**
DAWY	**Dawson**	**15.69**	**42**	*e*Pn	**Pn**	**10 31 14.3**	**-0.7**
DLBC	**Dease Lake**	**18.93**	**64**	P	**Pn**	**10 31 56.0**	**+1.2**
	0.1nm,0.3s,baz=252,slow=14,SNR=5.5						
INK	**Inuvik**	**19.83**	**33**	*e*P	**Pn**	**10 32 01.3**	**-4.2**
	4.9nm,0.6s						
INK	**Inuvik**	**19.83**	**33**	P	**Pn**	**10 32 01.2**	**-4.3**
	0.7nm,0.3s,baz=233,slow=8.2,SNR=43						
INK				PcP	PcP	10 36 17.9	-0.3
	0.2nm,0.3s,baz=130,slow=1.8,SNR=5.5						
INK				LR	LR	10 40 30.5	
	comp=Z,60nm,20.0s,baz=253,slow=39						
YKA	**Yellowknife Ar**	**26.34**	**52**	P	**P**	**10 33 07.1**	**-0.7**
	1.5nm,0.6s,mb3.6,baz=275,slow=9.8,SNR=6.9						
YBH	**Yreka Blue Hor**	**29.67**	**98**	P	**P**	**10 33 39.3**	**+1.7**
	2.2nm,0.8s,mb3.9,baz=0.0,slow=6.1,SNR=3.8						
MOD	**Modoc**	**30.96**	**96**	*e*P	**P**	**10 33 50.1**	**+1.0**
	2.9nm,0.8s,mb4.1						
CMB	**Columbia Colle**	**33.45**	**101**	*e*P	**P**	**10 34 12.2**	**+1.3**
	3.9nm,1.2s,mb4.1						
WAKR	**Walker**	**33.68**	**100**	*e*P	**P**	**10 34 14.4**	**+1.6**
NVAR	**Mina Array Bea**	**34.38**	**99**	P	**P**	**10 34 20.0**	**+1.0**
	1.8nm,0.6s,mb4.1,baz=307,slow=8.4,SNR=19						
NVAR				PcP	PcP	10 36 53.4	+0.2
	0.3nm,0.6s,baz=318,slow=3.9,SNR=3.7						
ISA	**Isabella**	**36.20**	**102**	*e*P	**P**	**10 34 34.8**	**+0.2**
	12nm,1.4s,mb4.6						
GSC	**Goldstone**	**37.41**	**101**	*e*P	**P**	**10 34 45.6**	**+0.7**
	6.2nm,0.9s,mb4.5						
MWC	**Mount Wilson**	**37.47**	**104**	*e*P	**P**	**10 34 45.8**	**+0.4**
	12nm,1.3s,mb4.7						
BAR	**Barrett**	**39.38**	**104**	*e*P	**P**	**10 35 02.2**	**+0.8**
	8.4nm,1.0s,mb4.5						
TUC	**Tucson**	**43.04**	**99**	*e*P	**P**	**10 35 32.6**	**+1.2**
	18nm,2.3s,mb4.4						
SUMG	**Summit**	**47.86**	**19**	*e*P	**P**	**10 36 09.2**	**+0.3**
	17nm,1.3s,mb4.7						
SUMG	**Summit**	**47.86**	**19**	*i* P	**P**	**10 36 09.3**	**+0.3**
	5.0nm,0.8s,mb4.4						
WMOK	**Wichita Mounta**	**48.32**	**86**	*e*P	**P**	**10 36 12.7**	**-0.4**
	3.5nm,0.6s,mb4.4						
TXAR	**Lajitas Array**	**49.37**	**95**	P	**P**	**10 36 21.0**	**-0.1**
	0.7nm,0.4s,mb3.9,baz=295,slow=5.6,SNR=33						
TXAR				PcP	PcP	10 37 42.4	-0.4
	0.4nm,0.6s,baz=221,slow=1.3,SNR=6.2						
BJI	**Beijing**	**53.44**	**290**	P	**P**	**10 36 51.8**	**+0.4**
BJI				S	**S**	**10 44 19.9**	**+1.1**
BJI				SS	SS	10 48 01.9	+2.9
BJI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
BJI				pmax	pmax		
	comp=Z,63nm,3.9s						
BJI				LR	LR		
	comp=N,86nm,25.0s						
BJI				LR	LR		
	comp=E,120nm,26.9s						
BJI				LR	LR		
	comp=Z,28nm,22.3s						
HHC	**Hu-ho-hao-te**	**55.39**	**293**	*e*P	**P**	**10 37 07.3**	**+1.8**
HHC				pP	pP	10 37 23.0	+0.6
HHC				sP	sP	10 37 30.0	+0.2
HHC				PP	PP	10 39 12.3	+2.8
HHC				*e*S	**S**	**10 44 44.6**	**-0.3**
HHC				sS	sS	10 45 11.5	-2.0
HHC				ScS	ScS	10 46 47.9	-0.5
HHC				SS	SS	10 48 27.3	-2.3
HHC				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.3						
HHC				pmax	pmax		
	comp=Z,71nm,3.8s						
HHC				LR	LR		
	comp=N,150nm,13.9s						
HHC				LR	LR		
	comp=E,110nm,11.2s						
HHC				LR	LR		
	comp=Z,89nm,15.7s						
ARCES	**ARCESS Array B**	**56.29**	**356**	P	**P**	**10 37 10.4**	**-1.1**
	comp=Z,1.9nm,0.8s,mb4.2,baz=21,slow=7.7,SNR=3.0						
CBN	**Corbin**	**58.04**	**68**	*e*P	**P**	**10 37 25.2**	**+0.9**
	comp=Z,62nm,0.3s						
ZALV	**Zalesovo Beam**	**58.25**	**320**	P	**P**	**10 37 24.6**	**-0.9**
	comp=Z,0.4nm,0.4s,mb3.8,baz=0.0,slow=3.3,SNR=2.4						
LZH	**Lanzhou**	**63.00**	**295**	*e*P	**P**	**10 37 59.1**	**+1.0**
LZH				pP	pP	10 38 14.6	-0.7
LZH				sP	sP	10 38 23.5	+0.9
LZH				*e*PP	PP	10 40 19.0	+2.1
LZH				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.7						
LZH				LR	LR		
	comp=N,200nm,16.3s						
LZH				LR	LR		
	comp=Z,290nm,19.5s						
KURK	**Kurchatov**	**63.14**	**321**	P	**P**	**10 37 58.5**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.6,baz=30,slow=7.8,SNR=5.1						
BVAR	**Borovoye Array**	**64.05**	**327**	P	**P**	**10 38 02.7**	**-2.1**
	comp=Z,1.0nm,0.6s,mb3.9,baz=39,slow=9.3,SNR=4.7						
FINES	**FINESS Array B**	**64.34**	**355**	P	**P**	**10 38 04.9**	**-1.7**
	comp=Z,2.7nm,0.8s,mb4.2,baz=21,slow=7.3,SNR=13						
MKAR	**Makanchi Array**	**64.89**	**316**	P	**P**	**10 38 09.3**	**-1.1**
	comp=Z,0.3nm,0.2s,mb3.7,baz=38,slow=4.6,SNR=4.0						
NOA	**NORSAR Array B**	**64.93**	**3**	P	**P**	**10 38 09.4**	**-1.0**
	comp=Z,1.4nm,0.8s,mb3.9,baz=358,slow=6.4,SNR=6.2						
WMQ	**Urumqi**	**64.97**	**311**	*e*P	**P**	**10 38 12.9**	**+1.9**
WMQ				pP	pP	10 38 28.9	+0.7
WMQ				sP	sP	10 38 36.1	+0.6
WMQ				PcP	PcP	10 38 45.3	+1.8
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.4						
WMQ				pmax	pmax		
	comp=Z,64nm,4.2s						
CD2	**Chengdu**	**66.98**	**291**	P	**P**	**10 38 23.8**	**-0.3**
CD2				pP	pP	10 38 40.3	-1.1
CD2				sP	sP	10 38 47.1	-1.6
CD2				PP	PP	10 40 53.3	+1.4
CD2				ScP		10 42 48.9	
CD2				S	S	10 47 10.0	-2.3
CD2				sS	sS	10 47 37.9	-3.8
CD2				ScS	ScS	10 48 11.9	-3.8
CD2				SS	SS	10 51 30.6	-0.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
CD2				pmax	pmax		
	comp=Z,100nm,5.7s						
CD2				LR	LR		
	comp=N,150nm,18.6s						
CD2				LR	LR		
	comp=E,210nm,17.7s						
CD2				LR	LR		
	comp=Z,190nm,21.1s						
GYA	**Guiyang**	**68.80**	**286**	*e*P	**P**	**10 38 37.3**	**+1.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
ABKAR	**Akbulak array**	**70.50**	**331**	*e*P	**P**	**10 38 44.9**	**-0.7**
	comp=Z,1.8nm,0.5s,mb4.2						
KMI	**Kunming**	**72.05**	**288**	P	**P**	**10 38 57.1**	**+1.8**
KMI				pP	pP	10 39 09.0	-3.9
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
AKASG	**Malin Array Be**	**74.81**	**352**	P	**P**	**10 39 09.0**	**-2.2**
	comp=Z,1.8nm,0.6s,mb4.0,baz=4.4,slow=5.0,SNR=5.7						
ESDC	**Sonseca Array**	**84.77**	**16**	P	**P**	**10 40 04.8**	**-0.4**
	comp=Z,0.5nm,0.6s,mb3.6,baz=346,slow=4.5,SNR=3.2						
BRTR	**Keskin Array B**	**85.17**	**347**	P	**P**	**10 40 05.9**	**-1.3**
	comp=Z,0.8nm,0.7s,mb3.8,baz=355,slow=3.0,SNR=5.5						
WRA	**Warramunga Arr**	**90.94**	**236**	P	**P**	**10 40 33.3**	**-1.6**
WRA	**Warramunga Arr**	**90.94**	**236**	P	**P**	**10 40 33.3**	**-1.6**
	comp=Z,0.4nm,0.6s,mb3.7,baz=35,slow=6.0,SNR=4.3						
ASAR	**Alice Springs**	**94.31**	**235**	P	**P**	**10 40 49.2**	**-1.1**
**

GB1A Boringuen Arri 1.17 109 *i* P Pn 11 02 26.8 -0.8
GPS3 Bodega del ICE 1.22 112 *i* P Pn 11 02 27.8 -0.5
GPS1 Guardaparques 1.23 110 *i* P Pn 11 02 27.8 -0.6
GPS1 *i* S Sn 11 02 45.7 +1.9
GPS2 Hotel Rincˆ‡n 1.23 111 *i* P Pn 11 02 28.1 -0.4
GPS2 *i* S Sn 11 02 45.6 +1.7
LEON Leon 1.25 343⇓ *e*P Pn 11 02 29.5 +0.6
LEON AML AML 11 02 56.7
comp=Z,20µm,0.5s
CNGN Cerro Negro 1.30 352⇑ *e*P Pn 11 02 30.1 +0.7
CNGN AML AML 11 02 53.9
comp=Z,4µm,0.7s
LIM1 Limonal 1.34 112 *i* P Pn 11 02 29.6 -0.4
LIM1 *i* S Sn 11 02 48.4 +1.7
GUAB Guayabo de Bag 1.36 111 *i* P Pn 11 02 29.3 -1.0
GUAB *i* S Sn 11 02 48.7 +1.6
MESS Mesas 1.38 110 *i* P Pn 11 02 30.9 +0.3
VCR Vista de Mar 1.39 141⇓ *e*P Pn 11 02 28.9 -1.7
TELN Telica 1.42 348 *e*P Pn 11 02 32.3 +1.2
CUI Cuipilapa 1.44 112 *i* P Pn 11 02 31.1 -0.2
BOAB BOACO BROADBAN .49 34 *e*P Pn 11 02 33.2 +1.1
CRIN San Cristobal 1.57 341 *e*P Pn 11 02 33.8 +0.6
CRIN AML AML 11 02 58.2
comp=Z,9µm,0.4s
PTEN Parque Tenorio 1.58 108 *i* P Pn 11 02 33.9 +0.6
JTS JuntasAbangare 1.79 120 *e*Pn Pn 11 02 36.0 -0.1
JTS *e*Sn Sn 11 03 03.3 +5.6
JTS JuntasAbangare 1.79 120 *e*P Pn 11 02 36.8 +0.6
CASO Castillo 1.92 114 *i* P Pn 11 02 39.2 +1.4
JCR Jicaral 1.93 134 *e*P Pn 11 02 37.4 -0.7
JCR *e*S Sn 11 03 06.7 +5.4
CGA2 Cerro Gallo 2 2.34 120 *e*P Pn 11 02 45.1 +1.4
CGA2 *e*S Sn 11 03 19.1 +7.8
CNCH Conchagua 2.42 328 *e*P Pn 11 02 45.4 +0.5
PRS1 Puriscal 2.49 119 *e*P Pn 11 02 47.6 +1.8
LAJ Bijagual 2.71 119 *e*P Pn 11 02 45.7 -3.1
BLLM Bellamira 2.78 323 *e*P Pn 11 02 50.5 +0.6
VSM San Miguel 2.79 322 *e*P Pn 11 02 50.6 +0.6
QCR Quepos 2.92 127 *e*P Pn 11 02 52.1 +0.4
TGUH Tegucigalpa,Un 2.93 346 *e*Pn Pn 11 02 53.2 +1.4
TGUH *e*Sn Sn 11 03 28.0 +2.3
TGUH Tegucigalpa,Un 2.93 346 *e*P Pn 11 02 53.3 +1.5
URSC Urasca 3.02 117 *e*P Pn 11 02 54.4 +1.3
CAHU Cacacuatique 3.04 327 *e*P Pn 11 02 54.3 +0.9
CAHU *e*S Sn 11 03 28.1 +0.7
SNVI San Vicente 3.29 317 *e*P Pn 11 02 58.7 +1.8
LFRS El Faro 3.45 314 *e*P Pn 11 02 59.1 +0.1
BOQS Boqueron 3.69 313 *e*P Pn 11 03 04.3 +2.1
BOQS *e*S Sn 11 03 44.2 -0.2
SBLS San Blas 4.00 311 *e*P Pn 11 03 07.4 +0.8
SBLS *e*S Sn 11 03 52.7 +0.4
SNJE San Jose 4.01 312 *e*P Pn 11 03 08.1 +1.4
ACR Cerro Adams 4.17 127 *e*P Pn 11 03 10.6 +1.8
RBDL Robledal 4.23 313 *e*P Pn 11 03 11.1 +1.3
RBDL *e*S Sn 11 03 58.2 +0.2
BRU2 Volcan 4.47 122 *e*P Pn 11 03 15.2 +2.1
BCIP Isla Barro Col 6.88 107 *e*Pn Pn 11 03 46.8 +0.5
CMIG Matias Romero 10.00 307 Pn Pn 11 04 29.6 +0.7
comp=Z,3.8nm,0.3s,baz=112,slow=10.0,SNR=33
CMIG Sn Sn 11 06 16.3 -3.6
comp=Z,0.6nm,0.3s,baz=126,slow=19,SNR=1.1
OTAV Otavalo 13.53 143 *e*Pn Pn 11 05 20.5 +3.2
ROSC El Rosal 13.62 117 LR LR 11 10 26.1
comp=Z,743nm,18.3s,baz=355,slow=37
SDV Santo Domingo 15.81 97 Pn Pn 11 05 47.9 +0.1
comp=Z,19nm,0.9s
SDV *e*pP pP 11 06 00.8 +0.1
ATAH Atahualpa 19.93 156 P Pn 11 06 35.5 -3.0
comp=Z,1.6nm,0.4s,baz=25,slow=17,SNR=2.2
ATAH pP pP 11 06 47.0 +0.7
comp=Z,9.7nm,0.8s,baz=312,slow=3.4,SNR=6.3
ATAH LR LR 11 13 30.6
comp=Z,1µm,19.9s,baz=338,slow=34
HKT Hockley 20.57 336 *e*P P 11 06 44.1 +0.8
comp=Z,63nm,1.1s
HKT *e*pP 11 06 53.8
SJG San Juan 20.86 68 LR LR 11 13 53.0
comp=Z,468nm,21.2s,MS3.8,baz=253,slow=34
VBMS Vicksburg 21.23 351 *e*P P 11 06 53.5 +3.0
comp=Z,65nm,0.8s,mb5.0
VBMS *e*pP 11 07 03.8
PCRV Puerto La Cruz 21.53 91 P P 11 06 52.9 -1.0
comp=Z,12nm,0.9s,mb4.3,baz=287,slow=11,SNR=2.9
PCRV pP 11 07 01.4
comp=Z,16nm,0.7s,baz=198,slow=15,SNR=3.5
LRAL Lakeview Retre 21.73 359 *e*P P 11 06 57.0 +1.1
comp=Z,15nm,0.8s,mb4.5
NATX Nacogdoches 21.79 341 *e*P P 11 06 57.3 +0.7
comp=Z,98nm,0.7s,mb5.3
NATX *e*pP 11 07 07.3
GOGA Godfrey 22.28 7 *e*P P 11 07 02.3 +0.6
comp=Z,92nm,1.8s,mb4.9
JCT Junction City 22.80 329 ⇓P P 11 07 06.9 -0.4
baz=23
JCT Junction City 22.80 329 *e*P P 11 07 05.9 -1.4
comp=Z,13nm,0.8s,mb4.4
JSC Jenkinsville 23.46 11 *e*P P 11 07 14.0 -0.1
628A Black Gap, Mar 23.74 322 P P 11 07 16.2 -0.5
baz=24,SNR=17
SWET Sewanee 23.91 1 *e*P P 11 07 17.6 -0.6
627A Terlingua Ranc 24.02 322 ⇓P P 11 07 19.3 +0.1
baz=24,SNR=22
UALR University of 24.05 348 *e*P P 11 07 18.4 -1.1
comp=Z,58nm,0.6s,mb5.2
UALR *e*pP 11 07 28.7
MIAR Mount Ida 24.11 346 *e*P P 11 07 19.1 -0.8
comp=Z,37nm,0.8s,mb4.9
TXAR Lajitas Array 24.11 321 P P 11 07 19.6 -0.4
comp=Z,15nm,0.7s,mb4.5,baz=137,slow=9.6,SNR=199
TXAR PcP PcP 11 11 01.6 +0.8
comp=Z,2.7nm,1.1s,baz=132,slow=3.7,SNR=4.7
528A Cox Ranch, San 24.18 324 ⇑P P 11 07 20.2 -0.5
baz=24,SNR=12
CPCT Cooper Cave 24.20 4 *e*P P 11 07 20.9 +0.1
TKL Tuckaleechee C 24.47 5 *e*P P 11 07 22.9 -0.4
TKL *e*pP 11 07 34.4
TKL Tuckaleechee C 24.47 5 P P 11 07 22.5 -0.7
comp=Z,16nm,0.9s,mb4.4,baz=174,slow=12,SNR=19
TKL LR LR 11 16 55.0
comp=Z,478nm,21.1s,MS4.0,baz=221,slow=37
HBAR Harrisburg 24.53 352 *e*P P 11 07 23.2 -0.6
428A Kincaid Ranch, 24.54 325 P P 11 07 24.2 +0.3
baz=24,SNR=12
626A Big Bend Ranch 24.55 321 P P 11 07 23.9 -0.2
baz=25,SNR=40
527A Woodward Ranch 24.65 322 ⇓P P 11 07 25.1 +0.1
baz=25,SNR=9.5
WVT Waverly 24.84 357 *e*P P 11 07 25.1 -1.5
comp=Z,15nm,1.3s,mb4.4
526A Mary Lane Ranc 24.88 322 ⇑P P 11 07 27.4 +0.3
baz=25,SNR=14
NNA Nana 24.97 157 *e*P pP 11 07 38.2 -0.2
comp=Z,33nm,1.1s
NNA Nana 24.97 157 pP pP 11 07 37.9 -0.5
comp=Z,13nm,0.7s,baz=3.5,slow=8.2,SNR=4.1
NNA LR LR 11 16 18.1
comp=Z,238nm,21.6s,MS3.7,baz=234,slow=34
427A Hayter Ranch, 25.04 324 ⇑P P 11 07 28.9 +0.4
baz=25,SNR=5.9
GLAT Glass 25.08 355 *e*P P 11 07 27.4 -1.4
GLAT *e*pP pP 11 07 38.2 -1.1
328A Wristen Ranch, 25.10 326 P P 11 07 28.7 -0.4
baz=25,SNR=23
426A McDonald Obser 25.28 323 ⇑P P 11 07 31.1 +0.4
baz=25,SNR=7.5
PARMO Parma 25.51 354 *e*P P 11 07 32.3 -0.5
PARMO *e*pP pP 11 07 41.9 -1.3
326A Caldwell Ranch 25.72 324 P P 11 07 34.6 -0.1
baz=26,SNR=14
227A Bennet, Jal 25.85 326 ⇓P P 11 07 35.9 +0.1
baz=26
425A Indio Mountain 25.94 321 ⇑P P 11 07 36.0 -0.7
baz=26
WMOK Wichita Mounta 25.95 336 *e*P P 11 07 35.4 -1.4
comp=Z,88nm,1.0s,mb5.2
WMOK *e*pP pP 11 07 47.5 +0.3
226A Malaga, Loving 26.34 325 ⇑P P 11 07 40.7 +0.4
baz=26,SNR=14
325A Bean Ranch, Si 26.34 322 ⇓P P 11 07 40.0 -0.3
baz=26
CLNB Carlsbad 26.36 325 *e*P P 11 07 40.1 -0.4
comp=Z,2.5nm,0.6s,mb3.9
CLNB *e*pP pP 11 07 50.4 -0.6
127A Arkansas Junct 26.39 327 P P 11 07 40.4 -0.3
baz=26,SNR=6.2
SIUC Southern Illin 26.50 355 *e*P P 11 07 41.2 -0.5
comp=Z,38nm,0.8s,mb5.0
SIUC *e*pP pP 11 07 51.3 -0.8
GDL2 Guadalupe Moun 26.59 325 *e*P P 11 07 42.7 +0.1
126A Clayton Basin, 26.73 326 ⇓P P 11 07 43.5 -0.3
baz=27,SNR=6.9
225A Deer Hill, Car 26.79 324 ⇓P P 11 07 45.1 +0.8
baz=27,SNR=13
MNTX Cornudas Mount 26.82 322 P P 11 07 44.0 -0.7
baz=27,SNR=12
MNTX Cornudas Mount 26.82 322 *e*P P 11 07 43.4 -1.2
comp=Z,47nm,1.8s,mb4.7
WCI Wyandotte Cave 26.91 0 *e*P P 11 07 44.5 -0.9
comp=Z,24nm,0.8s,mb4.8
WCI *e*pP pP 11 07 55.4 -0.4
CCM Cathedral Cave 27.07 352 *e*P P 11 07 45.0 -1.8
comp=Z,26nm,1.0s,mb4.7
CCM *e*PcP PcP 11 11 06.6 -0.7
125A Gardner Draw, 27.09 325 ⇑P P 11 07 46.6 -0.5
baz=27,SNR=16
MSTX Muleshoe 27.10 329 ⇓P P 11 07 46.0 -1.1
baz=27,SNR=10
224A Cornudas Mount 27.17 323 ⇑P P 11 07 47.1 -0.7
baz=27,SNR=16
Z26A Caprock 27.18 327 ⇑P P 11 07 47.3 -0.5
baz=27,SNR=8.7
AMTX Amarillo 27.31 332 ⇑P P 11 07 47.9 -1.1
baz=27,SNR=13
AMTX Amarillo 27.31 332 *e*P P 11 07 48.0 -1.0
comp=Z,45nm,1.2s,mb4.9
AMTX *e*PcP PcP 11 11 08.5 +0.5
OLIL Olney 27.45 357 *e*P P 11 07 49.5 -0.6
comp=Z,22nm,0.8s,mb4.7
OLIL *e*pP pP 11 07 59.7 -0.9
124A Stringfield Ra 27.58 324 P P 11 07 51.9 +0.4
baz=28,SNR=22
Z25A Roswell 27.59 326 ⇓P P 11 07 51.6 0.0
baz=28,SNR=16
X26A CR and CF Fran 28.08 329 ⇓P P 11 07 55.1 -0.8
baz=28
W27A Bowe Ranch, En 28.11 330 P P 11 07 55.7 -0.5
baz=28,SNR=17
Y24A Capitan 28.47 326 ⇑P P 11 07 59.5 +0.1
baz=28,SNR=19
320A Kipp Ranch, An 28.56 318 ⇓P P 11 08 00.6 +0.4
baz=29,SNR=7.3
Y23A Lovelace Mesa, 28.82 325 P P 11 08 02.6 +0.1
baz=29,SNR=13
Z22A Elephant Butte 28.86 323 ⇓P P 11 08 03.2 +0.3
baz=29
121A Cookes Peak, D 28.87 321 ⇓P P 11 08 03.4 +0.5
baz=29
220A Playas Peak, P 28.92 319 ⇑P P 11 08 04.2 +0.8
baz=29
W25A X Bar L Ranch, 28.93 329 ⇓P P 11 08 03.2 -0.3
baz=29,SNR=10
V26A Tequesquite Ra 29.05 330 ⇑P P 11 08 04.0 -0.6
baz=29,SNR=13
KSU1 Kansas State U 29.20 344 *e*P P 11 08 04.4 -1.4
comp=Z,36nm,1.0s,mb5.0
KSU1 *e*pP pP 11 08 14.4 -1.8
BNM Barren Site 29.31 324 *e*P P 11 08 07.0 +0.2
comp=Z,1.8nm,0.5s,mb4.1
BNM *e*PcP PcP 11 11 13.0 +0.1
HDIL Hopedale 29.33 356 *e*P P 11 08 05.7 -1.3
comp=Z,41nm,0.6s,mb5.3
HDIL *e*pP pP 11 08 15.9 -1.5
Y22A Socorro 29.35 324 P P 11 08 07.8 +0.6
baz=29,SNR=6.7
SDMD Soldier's Deli 29.38 15 *e*P P 11 08 07.2 -0.2
comp=Z,18nm,0.8s,mb4.8
W24A Lazy 6 Ranch, 29.42 327 ⇓P P 11 08 08.0 +0.2
baz=29,SNR=5.8
V25A Rancho No Teng 29.50 329 P P 11 08 08.6 +0.1
baz=30,SNR=10
U26A Atchley Ranch, 29.51 331 ⇓P P 11 08 08.6 0.0
baz=30
LENM Lemitar 29.52 324 *e*P P 11 08 08.0 -0.7
comp=Z,5.0nm,0.7s,mb4.3
318A Bisbee 29.60 316 ⇓P P 11 08 10.5 +1.1
baz=30
V24A Rampart Ranch, 29.75 328 ⇑P P 11 08 10.7 0.0
baz=30
LAZ Laron 29.78 324 *e*P P 11 08 11.5 +0.5
comp=Z,1.1nm,0.6s,mb3.8
W23A Werner Place, 29.78 326 ⇑P P 11 08 11.5 +0.5
baz=30,SNR=19
ANMO Albuquerque 29.80 326 *e*P P 11 08 11.5 +0.3
comp=Z,4.4nm,0.8s,mb4.2
ANMO *e*pP pP 11 08 20.3 -1.3
ANMO *e*PcP PcP 11 11 14.6 +0.4
ANMO Albuquerque 29.80 326 P P 11 08 11.6 +0.5
comp=Z,4.7nm,0.7s,mb4.3,baz=144,slow=5.2,SNR=24
ANMO pP pP 11 08 20.7 -0.9
comp=Z,4.1nm,0.8s,baz=156,slow=6.1,SNR=6.5
ANMO PcP PcP 11 11 14.4 +0.2
comp=Z,1.6nm,0.8s,baz=126,slow=5.4,SNR=3.2
ANMO LR LR 11 24 06.0
comp=Z,186nm,20.0s,MS3.7,baz=282,slow=44
U25A Circle Dot Ran 29.84 330 ⇑P P 11 08 11.9 +0.4
baz=30,SNR=8.5
CBKS Cedar Bluff 29.91 339 *e*P P 11 08 11.0 -1.2
comp=Z,11nm,0.8s,mb4.6
119A Ashpak Ranch, 29.98 319 ⇓P P 11 08 13.6 +0.7
baz=30
MVL Millersville 30.06 16 *e*P P 11 08 12.6 -0.7
comp=Z,15nm,0.9s,mb4.7
Y20A Horse Springs, 30.16 322 ⇓P P 11 08 15.2 +0.8
baz=30,SNR=5.9
X21A Alamocita Cree 30.19 323 P P 11 08 15.1 +0.5
baz=30,SNR=7.2
V23A Ortiz Mt. (NFS 30.24 327 ⇓P P 11 08 15.6 +0.6
baz=30
118A Homack Ranch, 30.33 318 ⇑P P 11 08 16.7 +0.8
baz=30
T25A Trinidad 30.43 331 ⇑P P 11 08 17.2 +0.5
baz=30
TUC Tucson 30.66 317 *e*P P 11 08 18.9 0.0
comp=Z,3.4nm,0.8s,mb4.2
U23A El Rito 30.68 328 ⇓P P 11 08 19.6 +0.6
baz=31,SNR=22
V22A San Miguel Ran 30.75 326 ⇓P P 11 08 20.0 +0.4
baz=31
117A Oracle 30.79 317 ⇑P P 11 08 20.6 +0.6
baz=31
S25A Robets Cordova 30.86 332 ⇓P P 11 08 20.4 -0.1
baz=31,SNR=6.3
U22A Llaves 31.07 327 ⇑P P 11 08 23.1 +0.7
baz=31,SNR=9.1
X19A St. Johns 31.07 322 ⇑P P 11 08 22.8 +0.4
baz=31
V21A Milan 31.08 325 ⇓P P 11 08 22.9 +0.5
baz=31,SNR=6.6
Y18A Canyon Day Jun 31.10 320 P P 11 08 23.4 +0.7
baz=31,SNR=7.2
SCIA State Center 31.14 350 *e*P P 11 08 21.3 -1.6
comp=Z,15nm,0.6s,mb5.0
SCIA *e*pP pP 11 08 31.6 -1.8
T23A Casias Ranch, 31.15 329 ⇑P P 11 08 23.5 +0.4
baz=31
S24A Hochin Ranch, 31.21 331 ⇓P P 11 08 24.2 +0.6
baz=31,SNR=5.3
ERPA Erie 31.32 9 *e*P P 11 08 23.6 -0.9
comp=Z,40nm,0.6s,mb5.4
ERPA *e*pP pP 11 08 34.6 -0.4
116A Eloy 31.43 316 ⇓P P 11 08 26.2 +0.6
baz=31
SDCO Great Sand Dun 31.43 330 ⇑P P 11 08 26.0 +0.4
baz=31
SDCO Great Sand Dun 31.43 330 *e*P P 11 08 25.4 -0.2
comp=Z,5.9nm,0.7s,mb4.5
SDCO *e*PcP PcP 11 11 19.4 +1.1
V20A Brimhall 31.54 324 ⇓P P 11 08 27.2 +0.7
baz=32
X18A Snowflake 31.54 321 ⇓P P 11 08 27.6 +1.0
baz=32
T22A Edith 31.58 328 ⇑P P 11 08 27.3 +0.5
baz=32
R24A Sanders Place, 31.63 331 ⇓P P 11 08 27.9 +0.6
baz=32
JFWS Jewell Farm 31.75 355 *e*P P 11 08 27.0 -1.3
comp=Z,30nm,0.8s,mb5.2
JFWS *e*pP pP 11 08 36.9 -1.9
Q25A Bedland, Calha 31.80 333 ⇓P P 11 08 28.7 -0.1
baz=32,SNR=5.8
214A Organ Pipe Nat 31.84 314 ⇓P P 11 08 29.7 +0.5
baz=32
T21A Navajo Lake 31.89 327 ⇓P P 11 08 30.3 +0.7
baz=32
X17A Forest Lakes 31.95 320 ⇓P P 11 08 31.1 +0.9
baz=32
Y16A Circle Bar Ran 32.09 319 ⇓P P 11 08 31.8 +0.4
baz=32
S22A 4UR Ranch, Cre 32.09 329 ⇓P P 11 08 31.9 +0.5
baz=32,SNR=9.0
BINY Binghamton 32.22 15 *e*P P 11 08 32.1 -0.3
comp=Z,27nm,1.0s,mb5.0
P25A Willow Gulch B 32.26 334 ⇑P P 11 08 32.9 +0.1
baz=32
U19A Dine' College, 32.31 324 ⇑P P 11 08 33.5 +0.2
baz=32,SNR=10
X16A Lo Mia Camp, P 32.41 319 ⇑P P 11 08 35.0 +0.8
baz=32,SNR=13
R22A Saguache, Gunn 32.43 329 ⇑P P 11 08 35.0 +0.7
baz=32,SNR=9.7
S21A Coal Bank Pass 32.53 328 ⇑P P 11 08 35.4 +0.2
baz=32,SNR=5.9
MVCO Mesa Verde 32.57 326 ⇑P P 11 08 35.9 +0.4
baz=33,SNR=5.8
MVCO Mesa Verde 32.57 326 *e*P P 11 08 35.7 +0.1
comp=Z,8.1nm,0.7s,mb4.8
T19A Beclabito 32.59 325 ⇑P P 11 08 36.7 +1.0
baz=33,SNR=8.5
V17A Tonalea, Kykot 32.79 322 P P 11 08 38.0 +0.6
baz=33,SNR=8.6
LPAZ La Paz 32.82 146 P P 11 08 38.9 +1.0
LPAZ pP pP 11 08 48.0 -0.5
LPAZ LR LR 11 22 38.0
LPAZ La Paz 32.82 146 P P 11 08 38.9 +1.0
comp=Z,0.6nm,0.5s,mb3.8,baz=286,slow=7.4,SNR=2.2
LPAZ pP pP 11 08 48.0 -0.5
comp=Z,3.6nm,1.0s,baz=331,slow=7.8,SNR=6.8
LPAZ LR LR 11 22 38.0
comp=Z,363nm,18.6s,MS4.1,baz=228,slow=38
P23A Jefferson 32.89 332 P P 11 08 39.2 +0.9
baz=33,SNR=6.2
X15A Humboldt 32.96 319 ⇑P P 11 08 39.7 +0.7
baz=33
Q22A Crested Butte, 33.00 330 P P 11 08 39.6 +0.4
baz=33,SNR=14
ISCO Idaho Springs 33.13 333 *e*P P 11 08 40.4 0.0
comp=Z,4.5nm,1.0s,mb4.3
R20A Redvale 33.23 328 ⇓P P 11 08 42.0 +0.7
baz=33,SNR=7.0
SMCO Snowmass 33.27 330 *e*P P 11 08 41.8 +0.1
comp=Z,8.7nm,1.1s,mb4.6
T18A Mexican Hat 33.28 325 P P 11 08 42.0 +0.2
baz=33,SNR=10
PV01 Paradox Valley 33.29 327 *e*P P 11 08 42.0 +0.1
comp=Z,243nm,0.7s
S19A Harvey Farm, M 33.31 326 ⇑P P 11 08 42.2 +0.2
baz=33,SNR=10
U16A Tuba City 33.34 322 ⇑P P 11 08 43.1 +0.8
baz=33,SNR=7.9
P22A Eagle 33.50 331 ⇓P P 11 08 43.9 +0.3
baz=34,SNR=6.0
ECSD EROS Data Cent 33.56 347 *e*P P 11 08 41.6 -2.5
comp=Z,26nm,1.0s,mb5.1
ECSD *e*pP pP 11 08 52.1 -2.6
PV04 Paradox Valley 33.66 327 *e*P P 11 08 45.7 +0.6
T17A Navajo Res., N 33.72 324 ⇑P P 11 08 45.9 +0.2
baz=34,SNR=5.5
S18A Hurst Farm, Bl 33.74 325 P P 11 08 46.4 +0.6
baz=34,SNR=15
V15A Kaibab Nationa 33.76 321 ⇓P P 11 08 46.7 +0.7
baz=34,SNR=8.3
R19A Curley Farm, L 33.77 327 P P 11 08 45.9 -0.2
baz=34,SNR=13
ACCN Adirondack Com 33.94 17 *e*P P 11 08 47.6 +0.2
comp=Z,33nm,1.5s,mb5.0
SADO Sadowa 34.04 9 P P 11 08 46.5 -1.7
comp=Z,16nm,0.8s,mb5.0,baz=211,slow=8.2,SNR=12
SADO pP pP 11 08 56.0 -2.8
comp=Z,10nm,0.8s,baz=209,slow=7.1,SNR=5.2
M24A Cheyenne 34.16 335 ⇑P P 11 08 49.2 -0.1
baz=34,SNR=5.8
R18A Canyonlands Na 34.19 326 ⇑P P 11 08 49.4 -0.3
baz=34,SNR=6.6
V14A Boquillas Ranc 34.23 320 ⇑P P 11 08 50.6 +0.5
baz=34
N22A Wattenberg Ran 34.32 333 ⇑P P 11 08 50.8 +0.1
baz=34
W13A Hualapai Mount 34.41 318 ⇓P P 11 08 52.1 +0.5
baz=34
O20A White River Ci 34.63 330 ⇓P P 11 08 54.0 +0.5
baz=35,SNR=7.8
R17A Hanksville Air 34.66 326 ⇓P P 11 08 54.2 +0.5
baz=35
N21A Black Mountain 34.77 331 ⇑P P 11 08 55.5 +0.8
baz=35,SNR=7.6
Q18A Rafter H Ranch 34.83 327 ⇓P P 11 08 55.1 -0.1
baz=35,SNR=6.4
LONY Lake Ozonia 34.84 15 *e*P P 11 08 54.1 -1.1
comp=Z,39nm,1.4s,mb5.1
COWI Conover 34.84 357 *e*P P 11 08 52.8 -2.4
comp=Z,15nm,0.8s,mb5.0
R16A Teasdale 35.00 325 P P 11 08 57.4 +0.7
baz=35,SNR=24
SRU San Rafael 35.05 327 P P 11 08 57.4 +0.3
baz=35,SNR=10
SRU San Rafael 35.05 327 *e*P P 11 08 57.4 +0.3
comp=Z,12nm,0.6s,mb5.0
L23A Garrett 35.06 335 P P 11 08 56.8 -0.3
baz=35,SNR=8.1
S15A Panguitch 35.09 323 ⇑P P 11 08 58.4 +0.9
baz=35,SNR=9.9
N20A Spence Gulch, 35.18 331 ⇑P P 11 08 58.4 +0.2
baz=35,SNR=11
U13A Pakoon Wash 35.26 320 ⇓P P 11 08 59.8 +0.8
baz=35
Q16A Castle Valley 35.27 326 ⇓P P 11 08 59.4 +0.5
baz=35,SNR=7.1
P18A Preston Nutter 35.27 327 ⇑P P 11 08 59.3 +0.3
baz=35,SNR=9.3
L22A Ellis Ranch, M 35.30 334 ⇓P P 11 08 59.8 +0.6
baz=35,SNR=8.2
RWWY Rawlins 35.37 333 *e*P P 11 09 00.2 +0.4
comp=Z,10.0nm,0.8s,mb4.8
P17A Butcher Ranch, 35.42 327 ⇑P P 11 09 00.6 +0.3
baz=35,SNR=15
MSU Marysvale 35.55 324 *e*P P 11 09 02.2 +0.8
TMUT Trail Mountain 35.55 326 *e*P P 11 09 02.8 +1.3
comp=Z,72nm,2.4s,mb5.2
CCUT Cedar City 35.61 322 *e*P P 11 09 03.6 +1.7
comp=Z,48nm,2.8s,mb4.9
L21A Rawlins 35.66 333 ⇑P P 11 09 02.1 -0.2
baz=36,SNR=7.2
N19A John Jarvie Ra 35.67 330 ⇓P P 11 09 02.6 +0.2
baz=36,SNR=6.5
ARUT Antelope Range 35.81 322 *e*P P 11 09 02.2 -1.5
comp=Z,5.1nm,0.8s,mb4.5
ARUT *e*pP pP 11 09 12.9 -1.4
S13A Holt Ranch, En 35.93 322 ⇓P P 11 09 05.3 +0.7
baz=36
O17A Robinson Place 35.95 328 ⇑P P 11 09 05.3 +0.5
baz=36,SNR=11
N18A Larsen Ranch, 35.98 330 ⇓P P 11 09 05.4 +0.4
baz=36,SNR=5.7
P16A Fountain Green 36.02 326 ⇑P P 11 09 06.3 +0.9
baz=36
RSSD Black Hills 36.11 338 *e*P P 11 09 05.7 -0.5
comp=Z,7.0nm,0.6s,mb4.8
L20A Wamsutter 36.13 332 ⇓P P 11 09 05.8 -0.6
baz=36
MPU Maple Canyon 36.29 327 *e*P P 11 09 08.9 +1.2
comp=Z,13nm,0.9s,mb4.9
O16A Springville 36.36 327 ⇑P P 11 09 08.9 +0.6
baz=36,SNR=6.7
DAU Daniels Canyon 36.38 327 *e*P P 11 09 09.3 +0.9
R13A O'Grain Ranch, 36.38 322 ⇓P P 11 09 09.7 +1.2
baz=36,SNR=7.0
Q14A Sevier Lake (B 36.51 324 ⇓P P 11 09 10.4 +0.9
baz=36,SNR=6.4
N17A Moffit Pass 36.54 328 ⇑P P 11 09 10.1 +0.3
baz=37
JLU Jordanelle 36.62 327 *e*P P 11 09 11.5 +1.0
comp=Z,5.7nm,0.9s,mb4.4
K20A Yellowstone Ra 36.65 333 ⇑P P 11 09 10.4 -0.4
baz=37,SNR=8.3
L19A Farson 36.68 331 ⇑P P 11 09 11.0 0.0
baz=37,SNR=5.2
MWC Mount Wilson 36.77 314 *e*P P 11 09 14.1 +2.2
comp=Z,9.9nm,1.1s,mb4.5
P14A Drum Mountains 36.79 325 ⇓P P 11 09 12.8 +0.8
baz=37,SNR=9.4

M17A	Scullys Gap (B	36.85	329	⇓P		P	11 09 12.4	-0.1	
	baz=37,SNR=7.2								
EYMN	Ely	36.86	354	eP		P	11 09 09.7	-2.7	
	comp=Z,14nm,1.3s,mb4.6								
L18A	Fontenelle, Gr	36.88	330	P		P	11 09 12.6	-0.1	
	baz=37,SNR=7.3								
Q13A	Wheeler Ranch,	36.92	323	⇑P		P	11 09 13.8	+0.8	
	baz=37								
K19A	Absolon Red Bu	37.01	332	⇑P		P	11 09 13.0	-0.8	
	baz=37,SNR=9.8								
DUG	Dugway	37.06	326	⇑P		P	11 09 15.3	+1.0	
	baz=37								
DUG	Dugway	37.06	326	eP		P	11 09 14.8	+0.4	
	comp=Z,4.6nm,0.9s,mb4.3								
I21A	Big Trails, Te	37.12	335	⇑P		P	11 09 14.0	-0.7	
	baz=37,SNR=5.5								
S11A	Rachel	37.14	320	⇑P		P	11 09 15.9	+0.9	
	baz=37								
FURC	Furnace Creek,	37.17	318	⇓P		P	11 09 15.5	+0.3	
	baz=37								
P13A	Bates Ranch, G	37.24	324	⇑P		P	11 09 16.4	+0.5	
	baz=37,SNR=8.6								
BW06	Boulder Array	37.29	332	⇓P		P	11 09 16.0	-0.2	
	baz=37,SNR=8.7								
BW06	Boulder Array	37.29	332	eP		P	11 09 15.6	-0.6	
	comp=Z,4.3nm,0.7s,mb4.4								
HWUT	Hardware Ranch	37.40	328	eP		P	11 09 17.1	-0.1	
	comp=Z,13nm,0.9s,mb4.8								
L17A	Cokeville	37.42	330	⇑P		P	11 09 17.2	-0.1	
	baz=37,SNR=8.9								
K18A	Toltan Ranch,	37.42	331	⇓P		P	11 09 17.6	+0.4	
	baz=37,SNR=23								
I20A	Worland	37.59	334	⇓P		P	11 09 18.3	-0.3	
	baz=38,SNR=10								
L16A	Fish Haven	37.63	329	⇑P		P	11 09 19.1	0.0	
	baz=38,SNR=7.8								
H21A	Big Horn, Sher	37.69	336	⇓P		P	11 09 18.5	-1.0	
	baz=38,SNR=10								
BGU	Big Grassy Mou	37.69	326	eP		P	11 09 18.9	-0.7	
	comp=Z,19nm,1.5s,mb4.6								
BGU				ePcP		PcP	11 11 37.1	+0.8	
N14A	Grayback Hills	37.72	326	⇑P		P	11 09 20.5	+0.6	
	baz=38,SNR=6.9								
P12A	McGill	37.78	323	⇓P		P	11 09 21.1	+0.8	
	baz=38								
AGMN	Agassiz Nation	37.79	350	eP		P	11 09 17.9	-2.4	
	comp=Z,26nm,0.9s,mb5.0								
ISA	Isabella	37.81	315	eP		P	11 09 22.9	+2.1	
	comp=Z,18nm,2.0s,mb4.5								
S10A	Tonopah Range,	37.84	320	⇑P		P	11 09 21.8	+0.8	
	baz=38								
J18A	Kendall Valley	37.85	332	⇓P		P	11 09 20.6	-0.3	
	baz=38,SNR=32								
R10A	Warm Springs	37.88	320	⇑P		P	11 09 21.8	+0.5	
	baz=38								
K17A	Gardner Place,	37.93	330	⇑P		P	11 09 21.4	-0.2	
	baz=38,SNR=8.6								
H20A	Greybull	37.97	335	⇓P		P	11 09 21.1	-0.7	
	baz=38								
AHID	Auburn Hatcher	38.03	330	eP		P	11 09 22.8	+0.4	
	comp=Z,11nm,0.6s,mb4.8								
L15A	Malad City	38.11	328	P		P	11 09 22.8	-0.3	
	baz=38,SNR=8.6								
I18A	Diamond G Ranc	38.14	332	P		P	11 09 23.2	-0.1	
	baz=38,SNR=10								
HVU	Hansel Valley	38.16	328	eP		P	11 09 24.8	+1.2	
	comp=Z,7.0nm,0.9s,mb4.4								
O12A	Currie	38.20	324	⇓P		P	11 09 23.9	0.0	
	baz=38,SNR=5.2								
M14A	Sheep Mountain	38.27	327	⇓P		P	11 09 24.4	0.0	
	baz=38,SNR=23								
Q10A	Clear Creek Ra	38.27	321	⇓P		P	11 09 25.1	+0.6	
	baz=38,SNR=7.2								
N13A	Wendover, West	38.29	325	P		P	11 09 25.2	+0.6	
	baz=38,SNR=11								
N13A	Wendover, West	38.29	325	eP		P	11 09 25.4	+0.7	
	comp=Z,26nm,0.9s,mb5.0								
J17A	Brown Place, J	38.29	331	⇑P		P	11 09 24.7	+0.1	
	baz=38,SNR=17								
REDW	Red Top Meadow	38.36	331	eP		P	11 09 24.8	-0.4	
	comp=Z,22nm,0.8s,mb4.9								
SNOW	Snow King Moun	38.39	331	eP		P	11 09 25.6	+0.1	
	comp=Z,22nm,0.9s,mb4.9								
LOHW	Long Hollow	38.43	332	eP		P	11 09 25.6	-0.2	
	comp=Z,5.6nm,0.6s,mb4.5								
TPAW	Teton Pass	38.50	331	eP		P	11 09 26.4	0.0	
	comp=Z,9.6nm,0.8s,mb4.6								
RRI2	Red Ridge	38.57	331	eP		P	11 09 27.2	+0.2	
	comp=Z,54nm,1.9s,mb5.0								
L14A	Malta	38.58	328	⇑P		P	11 09 27.3	+0.2	
	baz=39,SNR=12								
MOOW	Moose Ponds	38.60	332	eP		P	11 09 26.8	-0.4	
	comp=Z,6.6nm,0.8s,mb4.4								
M13A	Montello	38.61	326	eP		P	11 09 28.0	+0.6	
	comp=Z,29nm,1.6s,mb4.8								
G20A	Bridger	38.65	335	⇑P		P	11 09 26.7	-0.9	
	baz=39								
J16A	Bone	38.66	330	⇑P		P	11 09 27.6	-0.1	
	baz=39,SNR=9.4								
K15A	Arbon	38.68	329	⇓P		P	11 09 27.7	-0.3	
	baz=39								
IMW	Indian Meadow	38.80	332	eP		P	11 09 28.7	-0.2	
	comp=Z,5.4nm,0.8s,mb4.3								
FLWY	Flagg Ranch	38.84	332	eP		P	11 09 29.3	+0.1	
	comp=Z,10nm,0.8s,mb4.6								
K14A	Jones Ranch, D	38.91	328	⇑P		P	11 09 29.4	-0.5	
	baz=39,SNR=18								
RLMT	Red Lodge	39.01	334	⇓P		P	11 09 30.0	-0.7	
	baz=39,SNR=9.4								
RLMT	Red Lodge	39.01	334	eP		P	11 09 30.0	-0.6	
	comp=Z,10.0nm,0.8s,mb4.6								
F20A	Billings	39.10	336	⇓P		P	11 09 30.6	-0.8	
	baz=39,SNR=5.4								
LAO	LASA Array	39.11	338	⇑P		P	11 09 30.3	-1.1	
	baz=39,SNR=8.0								
LAO	LASA Array	39.11	338	eP		P	11 09 29.9	-1.5	
	comp=Z,9.5nm,0.6s,mb4.7								
J15A	Blackfoot	39.15	330	⇓P		P	11 09 31.7	-0.1	
	baz=39,SNR=14								
YFT	Old Faithful	39.18	332	eP		P	11 09 33.9	+1.8	
	comp=Z,8.1nm,0.9s,mb4.5								
NVAR	Mina Array Bea	39.23	319	P		P	11 09 33.2	+0.6	
	comp=Z,3.4nm,0.6s,mb4.3,baz=131,slow=7.2,SNR=43								
NVAR				PcP		PcP	11 11 41.9	+0.7	
	comp=Z,4.6nm,0.8s,baz=131,slow=4.4,SNR=16								
G18A	Lazy EL Ranch,	39.29	334	⇑P		P	11 09 32.1	-0.9	
	baz=39,SNR=9.9								
E21A	Keefer Ranch,	39.30	337	⇓P		P	11 09 31.9	-1.1	
	baz=39								
YMR	Madison River	39.41	332	eP		P	11 09 34.3	+0.3	
	comp=Z,12nm,0.8s,mb4.7								
F19A	Roth Farm, Mol	39.47	335	⇑P		P	11 09 33.1	-1.3	
	baz=40,SNR=12								
H16A	Russell Place,	39.56	332	P		P	11 09 35.5	+0.2	
	baz=40,SNR=11								
J14A	Carey	39.64	329	⇑P		P	11 09 36.2	+0.3	
	baz=40,SNR=16								
E20A	Meyer Farm, Mu	39.67	337	⇓P		P	11 09 35.8	-0.3	
	baz=40								
ULM	Lac du Bonnet	39.68	351	eP		P	11 09 33.4	-2.7	
ULM	Lac du Bonnet	39.68	351	P		P	11 09 32.8	-3.3	
	comp=Z,19nm,0.7s,mb5.0,baz=161,slow=8.4,SNR=12								
ULM				pP		pP	11 09 43.4	-3.5	
	comp=Z,14nm,0.7s,baz=185,slow=9.9,SNR=5.9								
ULM				LR		LR	11 27 09.4		
	comp=Z,171nm,18.5s,MS3.9,baz=45,slow=38								
BMN	Battle Mountai	39.76	322	eP		P	11 09 38.3	+1.4	
G17A	Pierce Place,	39.81	333	⇓P		P	11 09 38.0	+0.7	
	baz=40,SNR=10								
F18A	Big Timber	39.83	335	⇓P		P	11 09 36.8	-0.6	
	baz=40,SNR=14								
E19A	Rath Farm, Rou	39.89	336	⇓P		P	11 09 37.2	-0.7	
	baz=40								
DGMT	Dagmar	39.98	342	⇓P		P	11 09 37.8	-0.8	
	baz=40,SNR=18								
DGMT	Dagmar	39.98	342	eP		P	11 09 37.4	-1.3	
	comp=Z,46nm,0.6s,mb5.4								
WAKR	Walker	40.01	318	eP		P	11 09 41.4	+2.3	
J13A	Cove Ranch, Pi	40.03	328	⇑P		P	11 09 39.5	+0.3	
	baz=40								
H15A	Lima	40.15	331	⇑P		P	11 09 40.9	+0.7	
	baz=40,SNR=36								
D20A	Manuel Ranch,	40.16	337	⇑P		P	11 09 39.6	-0.6	
	baz=40								
G16A	Moss Hill, Enn	40.22	332	⇑P		P	11 09 41.1	+0.4	
	baz=40,SNR=19								
F17A	Fitzpatrick Pl	40.23	334	⇓P		P	11 09 40.6	-0.2	
	baz=40,SNR=7.5								
HLID	Hailey	40.27	328	⇓P		P	11 09 41.2	0.0	
	baz=40,SNR=15								
HLID	Hailey	40.27	328	eP		P	11 09 41.3	+0.1	
	comp=Z,5.6nm,0.6s,mb4.5								
I13A	Wildhorse Cree	40.37	329	⇓P		P	11 09 41.8	-0.2	
	baz=40,SNR=16								
CMB	Columbia Colle	40.38	317	eP		P	11 09 44.0	+1.9	
	comp=Z,3.8nm,1.0s,mb4.1								
MCMT	McKenzie Canyo	40.41	331	eP		P	11 09 42.4	+0.2	
	comp=Z,5.1nm,0.7s,mb4.4								
MCMT				ePP		PP	11 09 53.5	+0.6	
E18A	Harlowton	40.44	335	⇑P		P	11 09 41.9	-0.6	
	baz=40,SNR=5.6								
BOZ	Bozeman (W)	40.46	333	P		P	11 09 42.1	-0.6	
	baz=40,SNR=23								
BOZ	Bozeman (W)	40.46	333	eP		P	11 09 42.0	-0.7	
	comp=Z,6.8nm,0.7s,mb4.5								
G15A	Dillon	40.49	332	⇑P		P	11 09 43.1	+0.2	
	baz=40,SNR=16								
H14A	Leadore	40.50	330	P		P	11 09 43.4	+0.3	
	baz=40,SNR=15								
DLMT	Dillon	40.69	332	eP		P	11 09 44.3	-0.3	
	comp=Z,6.0nm,0.8s,mb4.3								
DLMT				ePcP		PcP	11 11 46.7	+0.9	
E17A	Martinsdale	40.75	334	⇓P		P	11 09 44.3	-0.8	
	baz=41,SNR=5.7								
I12A	Atlanta	40.81	328	⇑P		P	11 09 45.5	-0.1	
	baz=41,SNR=11								
D18A	Linhart Farms,	40.90	336	P		P	11 09 46.0	-0.2	
	baz=41,SNR=14								
H13A	Challis	40.90	329	⇓P		P	11 09 46.2	-0.2	
	baz=41,SNR=9.2								
LRM	Limekiln Ridge	40.97	332	eP		P	11 09 46.8	-0.1	
F15A	Butte	41.00	332	P		P	11 09 47.0	-0.1	
	baz=41,SNR=14								
G14A	Jackson	41.01	331	⇓P		P	11 09 47.0	-0.2	
	baz=41								
E16A	East Helena	41.16	334	⇓P		P	11 09 48.1	-0.4	
	baz=41,SNR=6.9								
H12A	Diamond D Ranc	41.19	329	⇑P		P	11 09 48.6	-0.2	
	baz=41,SNR=6.6								
D17A	Six Diamond Ra	41.23	335	P		P	11 09 48.6	-0.4	
	baz=41,SNR=17								
G13A	Cobalt	41.27	330	P		P	11 09 48.9	-0.5	
	baz=41,SNR=6.2								
HRY	Holter Researc	41.37	334	eP		P	11 09 49.7	-0.4	
D16A	Dana Ranch, Ca	41.49	334	⇑P		P	11 09 51.1	-0.1	
	baz=42,SNR=9.1								
E15A	Deer Lodge	41.51	333	⇑P		P	11 09 50.7	-0.6	
	baz=42,SNR=15								
EGMT	Eagleton	41.55	336	⇑P		P	11 09 50.9	-0.8	
	baz=42,SNR=6.5								
EGMT	Eagleton	41.55	336	eP		P	11 09 50.9	-0.7	
C17A	Wharram Farm,	41.64	335	⇓P		P	11 09 51.6	-0.7	
	baz=42,SNR=17								
WVOR	Wild Horse Val	41.84	324	eP		P	11 09 53.8	-0.3	
	comp=Z,9.1nm,0.8s,mb4.5								
G12A	Big Creek, Yel	41.84	329	⇑P		P	11 09 53.4	-0.6	
	baz=42								
E14A	Clinton	41.89	332	⇑P		P	11 09 53.9	-0.5	
	baz=42,SNR=11								
D15A	Lincoln	41.92	333	⇓P		P	11 09 54.1	-0.6	
	baz=42,SNR=8.7								
CHMT	Chamberlain Mo	42.15	333	eP		P	11 09 55.9	-0.7	
B17A	L&G Farms, Che	42.18	336	⇓P		P	11 09 55.4	-1.3	
	baz=42,SNR=6.6								
C16A	Fuhringer Ranc	42.18	335	⇑P		P	11 09 56.0	-0.8	
	baz=42,SNR=5.3								
E13A	Victor	42.23	331	⇑P		P	11 09 56.4	-0.8	
	baz=42,SNR=20								
F12A	Elk City	42.25	330	P		P	11 09 56.5	-0.8	
	baz=42,SNR=17								
A18A	Metzger Ranch,	42.31	337	⇓P		P	11 09 56.8	-1.1	
	baz=42,SNR=9.4								
J08A	Circle Bar Ran	42.33	325	⇓P		P	11 09 57.8	-0.3	
	baz=42,SNR=5.7								
D14A	Greenough	42.40	333	⇓P		P	11 09 57.2	-1.3	
	baz=42								
MSO	Missoula	42.40	332	⇑P		P	11 09 57.9	-0.7	
	baz=42,SNR=8.0								
MSO	Missoula	42.40	332	eP		P	11 09 57.9	-0.7	
	comp=Z,4.3nm,0.8s,mb4.1								
C15A	Salmond Ranch,	42.53	334	P		P	11 09 59.2	-0.4	
	baz=42,SNR=8.9								
A17A	Triple J Farms	42.66	337	⇓P		P	11 09 59.7	-1.0	
	baz=43,SNR=15								
LCO	Las Campanas	42.80	159	eP		pP	11 10 12.2	-0.6	
E12A	Beaver Dam Sad	42.87	330	⇑P		P	11 10 01.2	-1.2	
	baz=43								
B15A	Bradely Ranch,	42.92	335	⇓P		P	11 10 01.7	-1.1	
	baz=43,SNR=6.6								
D12A	Red Ives Fores	43.23	331	⇓P		P	11 10 04.0	-1.3	
	baz=43								
JTMT	Jette	43.24	333	eP		P	11 10 04.7	-0.7	
I07A	Izee	43.36	325	⇑P		P	11 10 05.9	-0.5	
	baz=43								
F10A	Beach Ranch, E	43.39	329	P		P	11 10 05.6	-1.0	
	baz=43,SNR=9.7								
A15A	Johnson Ranch,	43.51	335	⇑P		P	11 10 06.7	-0.9	
	baz=44,SNR=40								
C12B	Naegeli Ranch,	43.76	332	⇓P		P	11 10 09.2	-0.4	
	baz=44								
B13A	Whitefish	43.79	333	⇓P		P	11 10 09.1	-0.8	
	baz=44,SNR=9.9								
A14A	Double T Ranch	43.79	334	⇑P		P	11 10 09.3	-0.5	
	baz=44,SNR=22								
YBH	Yreka Blue Hor	43.88	320	P		P	11 10 10.2	-0.5	
	comp=Z,2.3nm,0.9s,mb3.9,baz=74,slow=7.4,SNR=4.0								
RPN	Rapa Nui	44.07	210	LR		LR	11 23 48.0		
	comp=Z,330nm,18.6s,MS4.3,baz=285,slow=29								
A13A	Flathead Natio	44.19	334	⇑P		P	11 10 12.6	-0.4	
	baz=44								
C11A	Teton Creek (N	44.22	331	⇑P		P	11 10 12.5	-0.8	
	baz=44								
B12A	Libby	44.37	332	P		P	11 10 14.1	-0.4	
	baz=44,SNR=7.4								
A12A	Yaak River Ran	44.74	333	⇓P		P	11 10 17.0	-0.3	
	baz=45								
HAWA	Hanford	44.86	328	eP		P	11 10 18.0	-0.4	
NEW	Newport	44.93	331	eP		P	11 10 17.6	-1.3	
OD2	Odessa Site #2	45.10	329	eP		P	11 10 19.2	-1.0	
	comp=Z,8.3nm,0.9s,mb4.6								
C09A	Chesman Ranch	45.16	330	⇑P		P	11 10 20.3	-0.5	
	baz=45								
H04A	Detroit Lake	45.25	324	⇓P		P	11 10 20.9	-0.6	
	baz=45								
HOOD	Mount Hood Mea	45.33	325	eP		P	11 10 23.3	+1.1	
G04A	Mulino	45.73	325	⇓P		P	11 10 25.2	-0.1	
	baz=46								
B08A	Colville Reser	46.06	330	⇓P		P	11 10 26.8	-1.0	
	baz=46,SNR=6.0								
ETW	Entiat	46.06	328	eP		P	11 10 27.6	-0.3	
	comp=Z,5.4nm,0.8s,mb4.5								
SCHQ	Schefferville	46.21	16	P		P	11 10 26.3	-2.6	
	comp=Z,2.6nm,0.3s,mb4.6,baz=234,slow=5.2,SNR=12								
SCHQ				pP		pP	11 10 36.5	-3.3	
	comp=Z,5.5nm,0.9s,baz=225,slow=9.0,SNR=2.9								
SCHQ				LR		LR	11 29 42.9		
	comp=Z,473nm,20.5s,MS4.4,baz=26,slow=36								
CPUP	Villa Florida	46.88	143	P		P	11 10 33.5	-1.1	
CPUP				pP		pP	11 10 42.9	-2.5	
CPUP				LR		LR	11 33 19.3		
CPUP	Villa Florida	46.88	143	P		P	11 10 33.5	-1.1	
	comp=Z,3.3nm,0.7s,mb4.4,baz=315,slow=9.0,SNR=9.5								
CPUP				pP		pP	11 10 42.9	-2.5	
	comp=Z,2.0nm,0.6s,baz=322,slow=12,SNR=2.9								
CPUP				LR		LR	11 33 19.3		
	comp=Z,170nm,18.4s,MS4.0,baz=60,slow=40								
B06A	Marblemount	47.24	329	⇑P		P	11 10 36.0	-1.1	
	baz=47								
PLCA	Paso Flores	53.75	165	P		P	11 11 26.9	+0.6	
	comp=Z,1.7nm,0.8s,mb4.0,baz=8.1,slow=7.1,SNR=2.2								
PLCA				pP		pP	11 11 35.8	-1.5	
	comp=Z,6.1nm,1.0s,baz=349,slow=7.0,SNR=5.4								
PLCA				LR		LR	11 29 40.9		
	comp=Z,97nm,20.9s,MS3.8,baz=263,slow=31								
YKA	Yellowknife Ar	55.04	345	P		P	11 11 32.7	-2.8	
	comp=Z,4.5nm,0.7s,mb4.6,baz=140,slow=7.3,SNR=14								
YKA				pP		pP	11 11 42.6	-3.8	
	comp=Z,2.6nm,0.8s,baz=138,slow=7.8,SNR=5.5								
TAOE	Nuku Hiva Isla	56.94	252	eLR		LR	11 28 01.9		
	comp=Z,233nm,24.6s								
RKT	Rikitea	58.42	234	eT			12 14 50.3		
	comp=Z,3.4nm,0.3s								
INK	Inuvik	64.66	342	LR		LR	11 46 39.8		
	comp=Z,144nm,18.0s,MS4.2,baz=96,slow=41								
EGAK	Eagle	65.30	337	eP		P	11 12 43.2	-2.4	
	comp=Z,3.4nm,0.9s,mb4.4								
PAX	Paxson	66.23	335	eP		P	11 12 50.2	-1.5	
	comp=Z,3.6nm,0.7s,mb4.5								
ILAR	Eielson Array	67.52	336	P		P	11 12 57.7	-2.1	
ILAR				pP		pP	11 13 07.9	-3.2	
ILAR	Eielson Array	67.52	336	P		P	11 12 57.7	-2.1	
	comp=Z,4.1nm,0.8s,mb4.5,baz=136,slow=4.3,SNR=64								
ILAR				pP		pP	11 13 07.9	-3.2	
	comp=Z,2.5nm,0.7s,baz=112,slow=4.9,SNR=8.9								
COLA	College	67.94	336	eP		P	11 13 00.3	-2.2	
	comp=Z,4.1nm,0.8s,mb4.5								
MCK	McKinley	67.97	335	P		P	11 13 00.8	-1.9	
	comp=Z,9.0nm,0.9s,mb4.8								
TRF	Thorofare Moun	68.44	334	eP		P	11 13 04.2	-1.5	
	comp=Z,8.5nm,0.9s,mb4.8								
PPT	Papeete	68.52	246	eLR		LR	11 33 24.6		
	comp=Z,174nm,23.2s								
PPT	Papeete	68.52	246	LR		LR	11 37 02.8		
	comp=Z,137nm,19.1s,MS4.2,baz=110,slow=30								
BPAW	Bear Paw Mtn.	68.95	335	eP		P	11 13 07.0	-1.7	
	comp=Z,7.7nm,0.7s,mb4.7								
BPAW				epP		pP	11 13 17.1	-3.0	
CHGN	Chignik	70.71	326	eP		P	11 13 18.5	-1.3	
FALS	False Pass	73.37	324	eP		P	11 13 34.5	-1.3	
	comp=Z,59nm,0.6s,mb5.7								
UNV	Unalaska Valle	75.13	323	eP		P	11 13 45.4	-0.6	
	comp=Z,21nm,0.8s,mb5.1								
UNV				ePP		PP	11 16 33.8	-0.5	
ESDC	Sonseca Array	77.24	52	P		P	11 13 55.6	-2.7	
	comp=Z,0.2nm,0.5s,baz=283,slow=6.4,SNR=2.8								
NOA	NORSAR Array B	84.01	29	LR		LR	11 50 47.6		
	comp=Z,96nm,18.6s,MS4.2,baz=280,slow=35								
CLL	Collm	87.22	38	eP		P	11 14 50.0	-0.3	
CLL	Collm	87.22	38	eP		P	11 14 50.0	-0.3	
CLL				LmV			11 53 00.0		
	comp=Z,100nm,19.0s								
KEST	Kesra	88.24	54	LR		LR	11 48 58.6		
	comp=Z,59nm,19.0s,MS4.0,baz=241,slow=32								
FINES	FINESS Array B	90.68	26	LR		LR	11 55 35.7		
	comp=Z,157nm,19.0s,MS4.5,baz=166,slow=36								
AKASG	Malin Array Be	97.01	35	LR		LR	12 00 11.7		
	comp=Z,131nm,18.0s,MS4.5,baz=280,slow=36								
CN2	Changchun	118.00	334	ePKP		PKPdf	11 20 51.0	+0.2	
CN2				AMB		AMB			
	comp=Z,200nm,5.0s								
SONM	Songino Array	120.11	350	PKP		PKPdf	11 20 53.2	-1.5	
	comp=Z,0.6nm,0.6s,baz=311,slow=1.4,SNR=4.0								
MKAR	Makanchi Array	121.40	9	PKP		PKPdf	11 20 55.0	-2.3	
	comp=Z,0.3nm,0.2s,baz=309,slow=1.8,SNR=5.1								
KSRS	Korea Array	121.80	328	PKP		PKPdf	11 20 57.5	-0.9	
	comp=Z,2.3nm,0.8s,baz=55,slow=0.5,SNR=8.6								
KSRS				pPKP		pPKPdf	11 21 06.3	-4.1	
	comp=Z,2.3nm,0.9s,baz=326,slow=1.0,SNR=5.1								
BJI	Beijing	124.83	339	PKP		PKPdf	11 21 04.6	+0.5	
BJI				PP		PP	11 22 51.3	+0.4	
BJI				SS		SS	11 39 43.3	+0.8	
BJI				LR		LR			
	comp=N,110nm,27.7s,MS4.5								
BJI				LR		LR			
	comp=E,96nm,25.8s,MS4.5								
BJI				LR		LR			
	comp=Z,86nm,27.4s,MS4.3								
WMQ	Urumqi	124.98	5	ePKP		PKPdf	11 21 04.6	+0.4	
WMQ				LR		LR			
	comp=N,140nm,22.5s								
WMQ				LR		LR			
	comp=Z,110nm,20.0s								
HHC	Hu-ho-hao-te	125.57	343	ePKP		PKPdf	11 21 04.8	-0.7	
HHC				sPKP			11 21 19.1		
HHC				PP		PP	11 22 57.8	+2.1	
HHC				PKS			11 24 40.1		
HHC				SKS		SKSdf	11 28 11.9	-2.7	
HHC				SKKS		SKKSac	11 29 46.3	-6.1	
HHC				AMB		AMB			
	comp=Z,49nm,4.7s								
HHC				LR		LR			
	comp=N,130nm,18.0s								
HHC				LR		LR			
	comp=E,130nm,13.3s								
HHC				LR		LR			
	comp=Z,110nm,16.3s								
KSH	Kashi	126.97	17	ePKP		PKPdf	11 21 10.1	+1.9	
KSH				epP			11 21 24.3		
KSH				ePKS			11 24 45.3		
KSH				eSKS		SKSdf	11 28 16.8	-0.5	
KSH				AMB		AMB			
	comp=Z,40nm,6.5s								
KSH				LR		LR			
	comp=Z

BCIP	**Isla Barro Col**	**6.87**	**106**	*e*Pn		**Pn**	11 05 56.4	**+1.5**
CMIG	**Matias Romero**	**10.04**	**307**	P		**Pn**	11 06 39.0	**+0.7**
	3.5nm,0.3s,baz=210,slow=20,SNR=6.1							
CMIG				S		**Sn**	11 08 29.6	**+0.1**
	0.3nm,0.3s,baz=316,slow=15,SNR=0.6							
HKT	**Hockley**	**20.62**	**336**	*e*P		**P**	11 08 51.1	**-0.6**
	47nm,1.7s							
HKT				*e*pP			11 09 01.6	
PCRV	**Puerto La Cruz**	**21.53**	**90**	P		**P**	11 09 02.1	**+0.6**
	8.2nm,1.0s,mb4.1,baz=307,slow=7.0,SNR=4.1							
NATX	**Nacogdoches**	**21.85**	**341**	*e*P		**P**	11 09 04.0	**-0.8**
	26nm,0.6s,mb4.8							
NATX				*e*pP			11 09 15.7	
JSC	**Jenkinsville**	**23.53**	**11**	*e*P		**P**	11 09 22.1	**0.0**
UALR	**University of**	**24.11**	**348**	*e*P		**P**	11 09 27.1	**-0.3**
	23nm,0.6s,mb4.8							
UALR				*e*pP			11 09 38.0	
TXAR	**Lajitas Array**	**24.16**	**321**	P		**P**	11 09 28.8	**+0.9**
TXAR				PcP		PcP	11 13 10.2	+2.5
TXAR	**Lajitas Array**	**24.16**	**321**	P		**P**	11 09 28.8	**+0.9**
	4.8nm,0.7s,mb4.1,baz=136,slow=9.6,SNR=7.7							
TXAR				PcP		PcP	11 13 10.2	+2.5
	0.5nm,0.8s,baz=174,slow=9.1,SNR=3.4							
MIAR	**Mount Ida**	**24.17**	**346**	*e*P		**P**	11 09 27.5	**-0.4**
CPCT	**Cooper Cave**	**24.26**	**4**	*e*P		**P**	11 09 30.0	**+1.3**
TKL	**Tuckaleechee C**	**24.53**	**5**	P		**P**	11 09 31.7	**+0.5**
	2.1nm,0.4s,mb4.0,baz=164,slow=13,SNR=4.0							
PARMO	**Parma**	**25.57**	**354**	*e*P		**P**	11 09 40.8	**+0.2**
PARMO				*e*pP		pP	11 09 50.8	-3.5
HDIL	**Hopedale**	**29.40**	**356**	*e*P		**P**	11 10 13.9	**-0.9**
	12nm,0.6s,mb4.8							
HDIL				*e*pP		pP	11 10 24.6	-4.0
ANMO	**Albuquerque**	**29.85**	**326**	P		**P**	11 10 20.6	**+1.6**
	0.8nm,0.5s,mb3.7,baz=90,slow=7.3,SNR=3.8							
SDCO	**Great Sand Dun**	**31.49**	**330**	*e*P		**P**	11 10 34.2	**+0.8**
	2.3nm,0.7s,mb4.1							
SADO	**Sadowa**	**34.10**	**9**	P		**P**	11 10 55.5	**-0.6**
	7.5nm,0.7s,mb4.8,baz=194,slow=7.0,SNR=6.0							
HWUT	**Hardware Ranch**	**37.46**	**329**	*e*P		**P**	11 11 25.0	**+0.1**
	11nm,0.8s,mb4.7							
HWUT				*e*pP		pP	11 11 36.0	-2.9
HWUT				*e*PcP		PcP	11 13 44.4	+1.9
SNOW	**Snow King Moun**	**38.44**	**331**	*e*P		**P**	11 11 33.4	**+0.3**
	4.5nm,0.8s,mb4.2							
TPAW	**Teton Pass**	**38.56**	**331**	*e*P		**P**	11 11 35.4	**+1.3**
	3.6nm,0.9s,mb4.1							
MOOW	**Moose Ponds**	**38.66**	**332**	*e*P		**P**	11 11 34.1	**-0.9**
	2.0nm,0.7s,mb4.0							
IMW	**Indian Meadow**	**38.86**	**332**	*e*P		**P**	11 11 37.1	**+0.5**
	1.1nm,0.6s,mb3.8							
IMW				*e*pP		pP	11 11 50.7	0.0
IMW				*e*sP		sP	11 11 55.6	-1.5
IMW				*e*PcP		PcP	11 13 49.3	+2.5
RLMT	**Red Lodge**	**39.07**	**334**	*e*P		**P**	11 11 38.5	**+0.1**
	4.4nm,0.8s,mb4.2							
NVAR	**Mina Array Bea**	**39.28**	**319**	PcP		PcP	11 13 50.9	+2.6
	1.8nm,0.7s,baz=133,slow=4.0,SNR=8.8							
ULM	**Lac du Bonnet**	**39.74**	**351**	P		**P**	11 11 42.0	**-1.9**
	5.2nm,0.5s,mb4.5,baz=162,slow=8.4,SNR=3.4							
GCMT	**Greyciliff**	**39.77**	**335**	*e*P		**P**	11 11 42.9	**-1.4**
	3.2nm,0.7s,mb4.2							
HLID	**Hailey**	**40.32**	**328**	P		**P**	11 11 45.2	**-3.6**
	3.3nm,0.8s,mb4.2							
MCMT	**McKenzie Canyo**	**40.46**	**331**	*e*P		**P**	11 11 51.1	**+1.1**
BOZ	**Bozeman (W)**	**40.52**	**333**	*e*P		**P**	11 11 51.0	**+0.6**
	3.2nm,0.7s,mb4.1							
HRY	**Holter Researc**	**41.42**	**334**	*e*P		**P**	11 11 58.3	**+0.4**
	3.5nm,0.8s,mb4.0							
SCHQ	**Schefferville**	**46.27**	**16**	P		**P**	11 12 35.3	**-1.3**
	1.9nm,0.4s,mb4.4,baz=239,slow=5.9,SNR=8.2							
CPUP	**Villa Florida**	**46.83**	**143**	P		**P**	11 12 42.5	**+1.1**
	0.7nm,0.4s,mb4.0,baz=318,slow=5.3,SNR=3.8							
YKA	**Yellowknife Ar**	**55.10**	**345**	P		**P**	11 13 41.1	**-1.9**
	1.7nm,0.7s,mb4.2,baz=165,slow=5.8,SNR=4.2							
ILAR	**Eielson Array**	**67.58**	**336**	P		**P**	11 15 06.5	**-0.7**
	1.9nm,0.6s,mb4.3,baz=132,slow=4.3,SNR=16							
KSRS	**Korea Array**	**121.86**	**328**	PKP		PKPdf	11 23 06.6	+1.3
	1.1nm,0.7s,baz=346,slow=1.8,SNR=3.7							
ASAR	**Alice Springs**	**139.61**	**247**	PKhKP		PKPpre	11 23 35.1	
	0.5nm,0.8s,baz=124,slow=4.6,SNR=3.5							
ASAR				PKP		PKPdf	11 23 40.9	+1.8
	0.4nm,0.6s,baz=95,slow=2.2,SNR=5.1							
WRA	**Warramunga Arr**	**139.76**	**252**	PKP		PKPdf	11 23 41.3	+1.8
	1.0nm,0.6s,baz=90,slow=2.5,SNR=7.4							
WRA				pPKP		pPKPdf	11 23 51.8	-4.0
	0.7nm,0.5s,baz=89,slow=2.6,SNR=4.6							
FITZ	**Fitzroy Crossi**	**148.16**	**254**	PKPbc		PKPbc	11 23 59.4	+2.0
	2.6nm,0.6s,baz=150,slow=5.7,SNR=4.9							
CMAR	**Chiang Mai Arr**	**150.10**	**350**	PKPbc		PKPbc	11 24 03.0	+0.6
	1.4nm,0.7s,baz=342,slow=2.8,SNR=5.2							

NEIC ***16*** *11:06:57.4,34.96N×24.92E,h5km,MD3.6(ATH), After ATH.*
CSEM ***16*** *11:06:57.4,34.96N×24.92E,h5km,MD3.6, After ATH*

ATH 16 11:06:57.4,34.96N×24.92E,h5km,MD3.6/3,Crete

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
GVD	**Gavdhos**	**0.69**	**260**	*e*Pg		Pg	11 07 13.2	+2.5
GVD				*e*Sg		Sg	11 07 23.4	+3.6
VAM	**Vamos**	**0.74**	**307**	*e*Pb		Pb	11 07 12.1	-0.7
VAM				*e*Sb		Sb	11 07 22.4	-0.8
VAM	**Vamos**	**0.74**	**307**	*e*PB		Pb	11 07 12.1	-0.7
VAM				*e*SB		Sb	11 07 22.4	-0.8
VAM	**Vamos**	**0.74**	**307**	*e*Pb		Pb	11 07 12.1	-0.7
VAM				*e*Sb		Sb	11 07 22.4	-0.8
KYTH	**Kithira**	**2.02**	**311**	*e*Pg		Pg	11 07 35.1	-1.1
KYTH	**Kithira**	**2.02**	**311**	*e*PG		Pg	11 07 35.1	-1.1
KYTH	**Kithira**	**2.02**	**311**	*e*Pg		Pg	11 07 35.1	-1.1
VLI	**Veliai**	**2.38**	**318**	*e*Pn		Pn	11 07 39.4	+2.3
VLI				*e*Sn		Sn	11 08 11.2	+4.5
VLI	**Veliai**	**2.38**	**318**	*e*PN		Pn	11 07 39.4	+2.3
VLI				*e*SN		Sn	11 08 11.2	+4.5
VLI	**Veliai**	**2.38**	**318**	*e*Pn		Pn	11 07 39.4	+2.3
VLI				*e*Sn		Sn	11 08 11.2	+4.5
DID	**Didima**	**2.88**	**332**	*e*PN		Pn	11 07 46.8	+2.8
DID	**Didima**	**2.88**	**332**	*e*Pn		Pn	11 07 46.8	+2.8
GUR	**Goura**	**3.62**	**326**	*e*PB		Pb	11 07 57.8	-4.1
GUR	**Goura**	**3.62**	**326**	*e*Pb		Pb	11 07 57.8	-4.1

DJA 16 11:07:35,2.27S×100.53E,h15km,MLv4.0/6,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KRJI	**Kerinci**	**0.95**	**79**	P		Pb	11 07 51.4	-1.7
KRJI				S		Sb	11 08 05.2	-0.3
PDSI	**Padang**	**1.35**	**357**	P		Pn	11 07 57.0	-2.3
PDSI				S		Sn	11 08 13.6	-3.4
SDSI	**Sungai Dareh**	**1.60**	**34**	P		Pn	11 08 01.6	-1.2
SISI	**Saibi**	**1.72**	**303**	P		Pn	11 08 04.5	+0.1
PPI	**Padang Panjang**	**1.81**	**356**	P		Pn	11 08 05.3	-0.3
PPI				S		Sn	11 08 27.8	-0.5
BKNI	**Bangkinang**	**2.63**	**11**	P		Pn	11 08 18.4	+1.5
BKNI				S		Sn	11 08 53.8	+5.2

NEIC ***16*** *11:21:51.9±1.5,40.45N×127.12W,h10km, MD3.2(NCEDC),Error ellipse: s-maj=19.3km s-min=8.1km az=72.0*
IDC ***16*** *11:21:52.5±2.3,40.77N×127.06W,h0km,mb3.0/2, mb1 3.5/4,mb1mx3.4/23,mbtmp3.2/4,ML2.7/1,Error ellipse: s-maj=35.8km s-min=22.0km az=25.0*

ISC 16 11:21:53.6±2.4,40.42N±0.05×127.1W±0.1,h25km±25km, n26,σ1s05/32,mb3.0/2,1D,Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KRMB	**Red Mountain**	**2.66**	**64**	P		**Pn**	11 22 34.1	**-0.7**
KSXB	**Camp Six Broad**	**2.81**	**59**	P		**Pn**	11 22 35.5	**-1.4**
KTRM	**Thompson Ridge**	**3.18**	**61**	⇓P		**Pn**	11 22 41.2	**-0.7**
HOPS	**Hopland**	**3.41**	**113**	*e*Pn		**Pn**	11 22 44.6	**-0.6**
HOPS				*e*Sn		**Sn**	11 23 25.0	**+0.1**
WDC	**Whiskeytown Da**	**3.48**	**86**	*e*Pn		**Pn**	11 22 46.2	**+0.1**
WDC				*e*Sn		**Sn**	11 23 25.3	**-1.1**
YBH	**Yreka Blue Hor**	**3.57**	**67**	Pn		**Pn**	11 22 47.2	**0.0**
	18nm,0.3s,baz=271,slow=9.0,SNR=296							
YBH				Sn		**Sn**	11 23 29.9	**+1.3**
	0.8nm,0.3s,baz=121,slow=13,SNR=4.0							
HUMO	**Hull Mountain**	**3.80**	**54**	P		**Pn**	11 22 49.7	**-0.8**
DBO	**Dodson Butte**	**3.95**	**46**	P		**Pn**	11 22 51.5	**-1.0**
MCCM	**Marconi Confer**	**3.98**	**123**	*e*Pn		**Pn**	11 22 52.4	**-0.6**
MCCM				*e*Sn		**Sn**	11 23 36.4	**-2.4**
TAKO	**Tahkenitch**	**4.01**	**33**	P		**Pn**	11 22 52.3	**-1.1**
BUOR	**Burton Butte**	**4.10**	**61**	P		**Pn**	11 22 56.0	**+1.5**
MPOR	**Mary's Peak**	**4.86**	**32**	P		**Pn**	11 23 04.2	**-0.7**
IRO	**Indian Ridge**	**5.08**	**43**	P		**Pn**	11 23 08.1	**+0.1**
FRIS	**Frissel Point**	**5.30**	**43**	P		**Pn**	11 23 11.3	**+0.3**
MOD	**Modoc**	**5.34**	**72**	*e*Pn		**Pn**	11 23 11.3	**-0.3**
	7.9nm,0.8s							
CMB	**Columbia Colle**	**5.73**	**112**	*e*Pn		**Pn**	11 23 19.0	**+2.0**
	6.4nm,0.8s							
SAO	**San Andreas Ge**	**5.73**	**128**	*e*Pn		**Pn**	11 23 16.0	**-1.0**
	6.7nm,0.5s							
SAO				*e*Sn		**Sn**	11 24 22.1	**+0.1**
WVOR	**Wild Horse Val**	**6.67**	**70**	*e*Pn		**Pn**	11 23 29.1	**-0.8**
	5.5nm,0.9s							
NVAR	**Mina Array Bea**	**7.09**	**103**	Pn		**Pn**	11 23 39.2	**+3.5**
	0.1nm,0.3s,baz=280,slow=14,SNR=6.6							
LON	**Longmire**	**7.40**	**29**	*e*Pn		**Pn**	11 23 40.3	**+0.4**
	5.9nm,0.5s							
ISA	**Isabella**	**8.29**	**122**	*e*Pn		**Pn**	11 23 53.6	**+1.5**
	4.0nm,0.5s							
ISA				*e*Sn		**Sn**	11 25 26.4	**+1.4**
JCW	**Jim Creek**	**8.61**	**24**	*e*Pn		**Pn**	11 23 57.6	**+1.1**
	4.0nm,0.2s							
ETW	**Entiat**	**8.68**	**32**	*e*Pn		**Pn**	11 23 58.7	**+1.2**
	6.8nm,0.8s							
MCMT	**McKenzie Canyo**	**11.38**	**63**	*e*Pn		**Pn**	11 24 36.1	**+1.6**
	1.0nm,0.8s							
TXAR	**Lajitas Array**	**22.11**	**113**	P		**P**	11 26 51.9	**+4.9**
	0.9nm,0.9s,mb3.2,baz=295,slow=8.9,SNR=3.8							
ILAR	**Eielson Array**	**26.95**	**341**	P		**P**	11 27 32.5	**-0.2**
	0.2nm,0.6s,mb2.8,baz=153,slow=9.6,SNR=4.9							

IDC 16 11:32:08.6±29.0,16.83S×178.87W,h456km±348km, mb3.3/7,mb1 3.6/7,mb1mx3.4/15,mbtmp3.3/7,Error ellipse: s-maj=114.3km s-min=54.3km az=2.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**38.78**	**240**	P		P	11 38 52.4	-0.3
	0.8nm,0.4s,baz=94,slow=12,SNR=4.9							
WRA	**Warramunga Arr**	**44.41**	**259**	P		P	11 39 37.4	-0.3
	1.4nm,0.5s,baz=91,slow=6.9,SNR=23							
ASAR	**Alice Springs**	**44.67**	**253**	P		P	11 39 39.6	-0.1
	7.9nm,0.4s,baz=89,slow=8.1,SNR=186							
FITZ	**Fitzroy Crossi**	**52.78**	**260**	P		P	11 40 40.7	+0.3
	4.5nm,1.1s,baz=56,slow=9.8,SNR=6.9							
NVAR	**Mina Array Bea**	**78.96**	**44**	P		P	11 43 24.8	+0.7
	0.8nm,0.7s,baz=222,slow=9.2,SNR=8.7							
ILAR	**Eielson Array**	**84.94**	**13**	P		P	11 43 53.8	-0.3
	0.3nm,0.4s,baz=224,slow=5.3,SNR=13							
TXAR	**Lajitas Array**	**85.79**	**58**	P		P	11 43 58.9	-0.2
	0.5nm,0.7s,baz=220,slow=7.5,SNR=8.3							

IDC 16 11:47:42.9±1.3,2.79N×127.81E,h0km,mb3.6/5, mb1 3.8/5,mb1mx3.6/17,mbtmp3.6/5,Error ellipse: s-maj=123.4km s-min=20.1km az=70.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.48**	**164**	P		P	11 52 54.2	-0.3
	1.4nm,0.5s,baz=344,slow=11,SNR=23							
ASAR	**Alice Springs**	**26.95**	**168**	P		P	11 53 26.2	-0.1
	0.2nm,0.4s,baz=347,slow=7.8,SNR=2.9							
STKA	**Stephens Creek**	**36.88**	**160**	P		P	11 54 53.3	0.0
	0.9nm,0.4s,baz=350,slow=9.6,SNR=6.6							
SONM	**Songino Array**	**48.53**	**341**	P		P	11 56 27.8	+0.1
	0.2nm,0.4s,baz=150,slow=6.0,SNR=2.2							
MKAR	**Makanchi Array**	**58.94**	**325**	P		P	11 57 44.4	+0.3
	0.2nm,0.5s,baz=127,slow=8.1,SNR=2.6							

NEIC ***16*** *11:57:57.5,39.06S×174.91E,h227km,MG4.2(WEL), After WEL.*

WEL 16 11:57:58.2±0.3,39.09S×174.95E,h222km±2km,ML4.2/20, 1C-3D,Error ellipse: s-maj=2.1km s-min=1.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
VRZ	**Vera Road**	**0.15**	**255**	PN		Pn	11 58 26.4	-0.6
VRZ				*e*SN		S	11 58 48.4	-1.1
VRZ	**Vera Road**	**0.15**	**255**	P		Pn	11 58 26.4	-0.6
VRZ				S		S	11 58 49.6	+0.1
PKVZ	**Pokaka**	**0.37**	**123**	PN		Pn	11 58 27.5	+0.1
TWVZ	**Taurewa**	**0.38**	**88**	⇓PN		Pn	11 58 27.3	-0.2
TWVZ				*e*SN		S	11 58 49.1	-1.1
RAEZ	**Rainy Point**	**0.47**	**245**	PN		Pn	11 58 27.6	-0.1
WPVZ	**Whakapapa**	**0.48**	**104**	⇓PN		Pn	11 58 27.8	0.0
MHEZ	**Mangahewa**	**0.48**	**271**	PN		Pn	11 58 27.7	-0.1
WTVZ	**West Tongariro**	**0.50**	**94**	PN		Pn	11 58 27.8	-0.1
MTVZ	**Mangateitei**	**0.51**	**126**	PN		Pn	11 58 27.8	0.0
TRVZ	**Turoa**	**0.51**	**115**	PN		Pn	11 58 28.0	+0.1
NGZ	**Ngauruhoe**	**0.52**	**100**	PN		Pn	11 58 27.9	0.0
NGZ				SN		S	11 58 51.2	+0.2
NGZ	**Ngauruhoe**	**0.52**	**100**	P		Pn	11 58 27.9	0.0
NGZ				S		S	11 58 51.2	+0.2
KRVZ	**Karewarewa**	**0.54**	**91**	PN		Pn	11 58 27.9	-0.1
OTVZ	**Oturere**	**0.56**	**98**	PN		Pn	11 58 28.4	+0.3
HIZ	**Hauiti**	**0.58**	**353**	⇓PN		Pn	11 58 27.5	-0.7
HIZ				SN		S	11 58 50.0	-1.5
HIZ	**Hauiti**	**0.58**	**353**	P		Pn	11 58 27.4	-0.8
HIZ				S		S	11 58 50.0	-1.4
TUVZ	**Tukino**	**0.58**	**109**	PN		Pn	11 58 28.3	+0.2
TUVZ	**Tukino**	**0.58**	**109**	P		Pn	11 58 28.3	+0.2
DREZ	**Durham Road**	**0.59**	**260**	PN		Pn	11 58 28.0	-0.1
KATZ	**Kakaramea**	**0.59**	**80**	PN		Pn	11 58 27.9	-0.2
KATZ	**Kakaramea**	**0.59**	**80**	P		Pn	11 58 27.9	-0.3
KATZ				S		S	11 58 52.0	+0.6
WAZ	**Wanganui**	**0.67**	**177**	⇑PN		Pn	11 58 28.8	+0.4
WAZ				SN		S	11 58 51.5	-0.7
WAZ	**Wanganui**	**0.67**	**177**	P		Pn	11 58 28.8	+0.4
RATZ	**Rangitukua**	**0.68**	**72**	PN		Pn	11 58 28.1	-0.4
RATZ	**Rangitukua**	**0.68**	**72**	P		Pn	11 58 28.1	-0.4
NEZ	**North Egmont**	**0.69**	**254**	PN		Pn	11 58 28.7	+0.2
NEZ	**North Egmont**	**0.69**	**254**	P		Pn	11 58 28.7	+0.2
DFE	**Dawson Falls**	**0.70**	**250**	PN		Pn	11 58 28.8	+0.2
DFE	**Dawson Falls**	**0.70**	**250**	P		Pn	11 58 28.8	+0.2
MOVZ	**Moawhango**	**0.70**	**117**	PN		Pn	11 58 28.3	-0.3
MOVZ	**Moawhango**	**0.70**	**117**	P		Pn	11 58 28.3	-0.3
WATZ	**Wairara**	**0.72**	**59**	PN		Pn	11 58 28.6	-0.1
WATZ	**Wairara**	**0.72**	**59**	P		Pn	11 58 28.6	-0.1
PKE	**Pukeiti**	**0.75**	**261**	PN		Pn	11 58 28.8	-0.1
PKE	**Pukeiti**	**0.75**	**261**	P		Pn	11 58 28.8	0.0
NRZ	**Ngariki Road**	**0.83**	**252**	P		Pn	11 58 25.1	-4.1
BHHZ	**Black Hill Sta**	**0.95**	**115**	PN		Pn	11 58 29.7	-0.2
BKZ	**Black Stump Fm**	**1.21**	**94**	PN		Pn	11 58 31.2	-0.4
BKZ	**Black Stump Fm**	**1.21**	**94**	P		Pn	11 58 31.2	-0.4
ALRZ	**Allen Road**	**1.21**	**65**	PN		Pn	11 58 30.7	-0.9
TSZ	**Takapari Road**	**1.25**	**141**	PN		Pn	11 58 32.1	+0.2
TSZ				SN		S	11 58 57.0	-1.3
PNHZ	**Pukenui**	**1.27**	**131**	PN		Pn	11 58 32.2	+0.1
MCHZ	**McNeill Hill**	**1.41**	**105**	PN		Pn	11 58 33.6	+0.6
NMHZ	**Naumai**	**1.45**	**91**	PN		Pn	11 58 33.9	+0.5
POWZ	**Post Office Ro**	**1.45**	**154**	PN		Pn	11 58 33.3	-0.1
WPHZ	**Waipukurau**	**1.51**	**131**	PN		Pn	11 58 34.2	+0.3
DVHZ	**Dannevirke**	**1.54**	**143**	PN		Pn	11 58 34.0	-0.1
MRZ	**Mangatainoka R**	**1.65**	**163**	PN		Pn	11 58 34.6	-0.4
MRZ				SN		S	11 59 02.1	-2.0
MRZ	**Mangatainoka R**	**1.65**	**163**	P		Pn	11 58 34.6	-0.4
KAHZ	**Kahuranaki**	**1.65**	**116**	PN		Pn	11 58 35.7	+0.6
RAHZ	**Arahi**	**1.68**	**85**	PN		Pn	11 58 35.2	-0.1
OGWZ	**Otaki Gorge**	**1.74**	**174**	PN		Pn	11 58 35.7	-0.2
CKHZ	**Cape Kidnapper**	**1.75**	**110**	PN		Pn	11 58 34.8	+0.4
PXZ	**Pawanui**	**1.76**	**123**	PN		Pn	11 58 36.1	+0.1
PRHZ	**Porangahau**	**1.76**	**133**	PN		Pn	11 58 36.1	+0.1
KIW	**Kapiti Island**	**1.77**	**181**	PN		Pn	11 58 35.7	-0.5
KIW	**Kapiti Island**	**1.77**	**181**	P		Pn	11 58 35.7	-0.5
TIWZ	**Tintock**	**1.84**	**157**	PN		Pn	11 58 36.4	-0.3
HOWZ	**Holdsworth Sta**	**1.86**	**167**	PN		Pn	11 58 36.4	-0.6
BFZ	**Birch Farm**	**1.88**	**148**	P		Pn	11 58 36.8	-0.4
URZ	**Urewera**	**1.88**	**65**	PN		Pn	11 58 35.7	-1.6
URZ	**Urewera**	**1.88**	**65**	P		Pn	11 58 35.7	-1.6
CAW	**Cannon Point**	**2.02**	**177**	PN		Pn	11 58 38.0	-0.5
CAW	**Cannon Point**	**2.02**	**177**	P		Pn	11 58 38.0	-0.5
MTW	**Mount Morrison**	**2.11**	**169**	PN		Pn	11 58 38.6	-0.8
MTW	**Mount Morrison**	**2.11**	**169**	P		Pn	11 58 38.6	-0.8
KNZ	**Kokohu**	**2.12**	**89**	PN		Pn	11 58 39.2	-0.4
TMWZ	**Te Maipa**	**2.15**	**161**	PN		Pn	11 58 39.1	-0.6
MWZ	**Matawai**	**2.15**	**70**	PN		Pn	11 58 38.7	-1.2
MWZ	**Matawai**	**2.15**	**70**	P		Pn	11 58 38.7	-1.2
WEL	**Wellington**	**2.20**	**183**	PN		Pn	11 58 39.5	-0.8
WEL	**Wellington**	**2.20**	**183**	P		Pn	11 58 39.5	-0.8
SNZO	**South Karori**	**2.23**	**185**	PN		Pn	11 58 39.7	-0.9
SNZO	**South Karori**	**2.23**	**185**	P		Pn	11 58 39.7	-0.9
PRGZ	**Paritu Road**	**2.29**	**87**	PN		Pn	11 58 41.0	-0.3
MHGZ	**Mahia Peninsul**	**2.30**	**93**	PN		Pn	11 58 41.3	-0.1
BHW	**Baring Head**	**2.32**	**181**	PN		Pn	11 58 40.5	-1.0
BHW	**Baring Head**	**2.32**	**181**	P		Pn	11 58 40.5	-1.0
PAWZ	**Paruwai Farm**	**2.32**	**171**	PN		Pn	11 58 40.8	-0.7
MSWZ	**Moikau Station**	**2.34**	**174**	PN		Pn	11 58 40.8	-0.8
MSWZ	**Moikau Station**	**2.34**	**174**	P		Pn	11 58 40.8	-0.9
TRWZ	**Traveller**	**2.38**	**166**	PN		Pn	11 58 41.4	-0.8
NNZ	**Nelson**	**2.44**	**209**	PN		Pn	11 58 41.8	-1.0
NNZ	**Nelson**	**2.44**	**209**	P		Pn	11 58 41.8	-1.0
TUWZ	**Tuamarina**	**2.46**	**198**	PN		Pn	11 58 42.2	-0.8
PLWZ	**Palliser**	**2.49**	**175**	PN		Pn	11 58 42.3	-1.0
BSWZ	**Blackbirch Sta**	**2.75**	**197**	PN		Pn	11 58 45.4	-0.7
BSWZ	**Blackbirch Sta**	**2.75**	**197**	P		Pn	11 58 45.4	-0.7
PUZ	**Puketiti**	**2.79**	**70**	PN		Pn	11 58 45.0	-1.6
PUZ	**Puketiti**	**2.79**	**70**	P		Pn	11 58 45.0	-1.6
THZ	**Tophouse**	**3.10**	**210**	PN		Pn	11 58 48.6	-1.4
THZ	**Tophouse**	**3.10**	**210**	P		Pn	11 58 48.6	-1.4
KHZ	**Kahutara**	**3.50**	**197**	PN		Pn	11 58 53.4	-1.3
KHZ	**Kahutara**	**3.50**	**197**	P		Pn	11 58 53.4	-1.2
LTZ	**Lake Taylor**	**4.21**	**208**	PN		Pn	11 59 01.3	-2.0
LTZ	**Lake Taylor**	**4.21**	**208**	P		Pn	11 59 01.3	-2.0
CRLZ	**Canterbury Las**	**4.81**	**201**	PN		Pn	11 59 07.9	-2.8
CRLZ	**Canterbury Las**	**4.81**	**201**	P		Pn	11 59 07.9	-2.8
MQZ	**McQueen's Wall**	**4.93**	**200**	PN		Pn	11 59 09.0	-3.1
MQZ	**McQueen's Wall**	**4.93**	**200**	P		Pn	11 59 09.0	-3.1
WVZ	**Waitaha Valley**	**5.10**	**217**	PN		Pn	11 59 11.6	-2.7
WVZ	**Waitaha Valley**	**5.10**	**217**	P		Pn	11 59 11.6	-2.7
RPZ	**Rata Peaks**	**5.47**	**211**	PN		Pn	11 59 16.0	-2.9
RPZ	**Rata Peaks**	**5.47**	**211**	P		Pn	11 59 16.0	-3.0
FOZ	**Fox Glacier**	**5.97**	**220**	PN		Pn	11 59 20.9	-4.5
FOZ	**Fox Glacier**	**5.97**	**220**	P		Pn	11 59 20.9	-4.4
LBZ	**Lake Benmore**	**6.38**	**212**	PN		Pn	11 59 27.2	-3.3
ODZ	**Otahua Downs**	**6.76**	**207**	PN		Pn	11 59 33.3	-2.1

Error ellipse: s-maj=24.7km s-min=15.3km az=86.0
*ISCJB **16** 12:32:00.8±0.7,36°.55S±0'.05×177°.62E±0'.09,h246km±4km, mb4.1/5,Error ellipse: s-maj=12.1km s-min=8.1km az=165.1*
*WEL **16** 12:32:00.6±0.3,36°.28S×177°.85E,h219km±2km,ML4.9/22, Error ellipse: s-maj=3.0km s-min=2.7km az=0.0*

ISC 16 12:32:01.4±0.7,36°.53S±0'.05×177°.65E±0'.09,h240km±4km, n82,σ1§00/87,mb4.1/5,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**1.06 200**		*e*Pn	**Pn**	**12 32 34.9**	**-0.7**
MXZ	**Matakaoa Point**	**1.15 153**		PN	**Pn**	**12 32 34.7**	**-1.5**
MXZ				SN	**S**	**12 33 01.0**	**-2.6**
KUZ	**Kuaotunu**	**1.57 262**		PN	**Pn**	**12 32 38.0**	**-1.2**
KUZ				SN	**S**	**12 33 07.4**	**-1.5**
OPRZ	**Ohinepanea**	**1.58 213**		PN	**Pn**	**12 32 39.4**	**+0.2**
PUZ	**Puketiti**	**1.61 163**		PN	**Pn**	**12 32 38.8**	**-0.7**
PUZ				SN	**S**	**12 33 08.5**	**-1.1**
EDRZ	**Edgecumbe**	**1.73 205**		PN	**Pn**	**12 32 41.4**	**+0.9**
URZ	**Urewera**	**1.78 194**		PN	**Pn**	**12 32 40.9**	**0.0**
URZ				SN	**S**	**12 33 12.2**	**+0.1**
URZ	**Urewera**	**1.78 194**		*e*Pn	**Pn**	**12 32 40.9**	**0.0**
URZ				S	**S**	**12 33 11.5**	**-0.6**
URZ	**Urewera**	**1.78 194**		P	**Pn**	**12 32 41.1**	**+0.2**
	449nm,0.3s,baz=340,slow=3.9,SNR=2026						
URZ				S	**S**	**12 33 11.5**	**-0.6**
	229nm,0.3s,baz=47,slow=23,SNR=29						
MWZ	**Matawai**	**1.80 183**		PN	**Pn**	**12 32 41.1**	**-0.1**
MWZ				SN	**S**	**12 33 13.1**	**+0.6**
KARZ	**Kaharoa**	**1.86 217**		PN	**Pn**	**12 32 42.7**	**+1.0**
TARZ	**Mount Tarawera**	**1.93 208**		PN	**Pn**	**12 32 43.9**	**+1.6**
CNGZ	**Carnagh Statio**	**2.00 167**		PN	**Pn**	**12 32 43.4**	**+0.5**
RRRZ	**Republican Roa**	**2.02 206**		PN	**Pn**	**12 32 44.4**	**+1.3**
MKAZ	**Moumakai**	**2.08 253**		PN	**Pn**	**12 32 43.9**	**+0.2**
PRRZ	**Plateau Road**	**2.20 207**		PN	**Pn**	**12 32 46.0**	**+1.1**
ALRZ	**Allen Road**	**2.28 207**		PN	**Pn**	**12 32 46.8**	**+1.2**
PRGZ	**Paritu Road**	**2.39 176**		PN	**Pn**	**12 32 47.2**	**+0.5**
RAHZ	**Arahi**	**2.42 191**		PN	**Pn**	**12 32 48.0**	**+0.9**
KNZ	**Kokohu**	**2.48 180**		PN	**Pn**	**12 32 48.0**	**+0.3**
WTAZ	**Waiatarua**	**2.51 260**		PN	**Pn**	**12 32 48.6**	**+0.6**
MHGZ	**Mahia Peninsul**	**2.62 176**		PN	**Pn**	**12 32 49.7**	**+0.6**
NMHZ	**Naumai**	**2.65 194**		PN	**Pn**	**12 32 50.6**	**+1.3**
WCZ	**Waipu Caves**	**2.74 281**		PN	**Pn**	**12 32 49.3**	**-1.1**
BKZ	**Black Stump Fm**	**2.79 199**		PN	**Pn**	**12 32 51.2**	**+0.4**
BKZ				SN	**S**	**12 33 31.8**	**+1.9**
MCHZ	**McNeill Hill**	**3.00 194**		PN	**Pn**	**12 32 54.1**	**+0.9**
OTVZ	**Oturere**	**3.06 210**		PN	**Pn**	**12 32 55.1**	**+1.3**
NGZ	**Ngauruhoe**	**3.10 211**		PN	**Pn**	**12 32 55.7**	**+1.5**
WPVZ	**Whakapapa**	**3.15 211**		PN	**Pn**	**12 32 56.2**	**+1.5**
CKHZ	**Cape Kidnapper**	**3.15 188**		PN	**Pn**	**12 32 55.6**	**+0.7**
TUVZ	**Tukino**	**3.15 209**		PN	**Pn**	**12 32 55.9**	**+1.0**
BHHZ	**Black Hill Sta**	**3.21 203**		PN	**Pn**	**12 32 55.8**	**+0.4**
BHHZ				SN	**S**	**12 33 38.7**	**+0.4**
TRVZ	**Turoa**	**3.22 210**		PN	**Pn**	**12 32 56.5**	**+0.9**
KAHZ	**Kahuranaki**	**3.31 190**		PN	**Pn**	**12 32 57.6**	**+0.9**
MTVZ	**Mangateitei**	**3.33 211**		PN	**Pn**	**12 32 58.4**	**+1.5**
VRZ	**Vera Road**	**3.46 221**		PN	**Pn**	**12 33 00.4**	**+2.1**
OUZ	**Omahuta**	**3.55 290**		*e*Pn	**Pn**	**12 32 57.9**	**-1.5**
PXZ	**Pawanui**	**3.55 190**		PN	**Pn**	**12 32 59.4**	**+0.1**
PNHZ	**Pukenui**	**3.56 198**		PN	**Pn**	**12 32 59.6**	**+0.1**
WPHZ	**Waipukurau**	**3.65 195**		PN	**Pn**	**12 33 00.8**	**+0.2**
TSZ	**Takapari Road**	**3.76 200**		PN	**Pn**	**12 33 01.7**	**-0.1**
PRHZ	**Porangahau**	**3.81 192**		PN	**Pn**	**12 33 02.7**	**+0.3**
WAZ	**Wanganui**	**3.84 212**		PN	**Pn**	**12 33 03.6**	**+0.8**
DVHZ	**Dannevirke**	**3.94 197**		PN	**Pn**	**12 33 03.6**	**-0.3**
POWZ	**Post Office Ro**	**4.13 200**		PN	**Pn**	**12 33 06.1**	**-0.1**
BFZ	**Birch Farm**	**4.29 194**		PN	**Pn**	**12 33 07.8**	**-0.3**
MRZ	**Mangatainoka R**	**4.43 201**		PN	**Pn**	**12 33 09.2**	**-0.6**
MRZ				SN	**S**	**12 34 04.0**	**-0.2**
TIWZ	**Tintock**	**4.46 198**		PN	**Pn**	**12 33 09.9**	**-0.2**
HOWZ	**Holdsworth Sta**	**4.67 200**		PN	**Pn**	**12 33 11.9**	**-0.7**
OGWZ	**Otaki Gorge**	**4.70 204**		PN	**Pn**	**12 33 12.5**	**-0.5**
TMWZ	**Te Maipa**	**4.77 196**		PN	**Pn**	**12 33 13.6**	**-0.3**
KIW	**Kapiti Island**	**4.83 206**		PN	**Pn**	**12 33 14.1**	**-0.5**
CAW	**Cannon Point**	**4.99 203**		PN	**Pn**	**12 33 15.8**	**-0.9**
TRWZ	**Traveller**	**5.09 197**		PN	**Pn**	**12 33 17.4**	**-0.5**
MSWZ	**Moikau Station**	**5.22 200**		PN	**Pn**	**12 33 18.4**	**-1.1**
WELZ	**Wellington**	**5.25 204**		PN	**Pn**	**12 33 18.9**	**-1.0**
SNZO	**South Karori**	**5.29 205**		PN	**Pn**	**12 33 19.2**	**-1.2**
SNZO	**South Karori**	**5.29 205**		*e*Pn	**Pn**	**12 33 19.4**	**-1.0**
BHW	**Baring Head**	**5.33 203**		PN	**Pn**	**12 33 19.6**	**-1.3**
PLWZ	**Palliser**	**5.37 200**		PN	**Pn**	**12 33 20.1**	**-1.2**
TUWZ	**Tuamarina**	**5.68 209**		PN	**Pn**	**12 33 23.8**	**-1.4**
NNZ	**Nelson**	**5.74 214**		PN	**Pn**	**12 33 24.5**	**-1.5**
BSWZ	**Blackbirch Sta**	**5.95 208**		PN	**Pn**	**12 33 27.4**	**-1.1**
THZ	**Tophouse**	**6.39 214**		PN	**Pn**	**12 33 33.5**	**-0.6**
KHZ	**Kahutara**	**6.68 207**		PN	**Pn**	**12 33 36.4**	**-1.3**
LTZ	**Lake Taylor**	**7.49 212**		PN	**Pn**	**12 33 47.1**	**-1.0**
MQZ	**McQueen's Vall**	**8.12 207**		PN	**Pn**	**12 33 54.2**	**-1.9**
RPZ	**Rata Peaks**	**8.77 213**		*e*PN	**Pn**	**12 34 03.2**	**-1.1**
RPZ	**Rata Peaks**	**8.77 213**		P	**Pn**	**12 34 03.0**	**-1.4**
	0.9nm,0.3s,baz=25,slow=14,SNR=6.2						
RPZ				S	**S**	**12 35 39.2**	**-4.3**
	4.3nm,0.3s,baz=18,slow=22,SNR=12						
ODZ	**Otahua Downs**	**10.02 210**		PN	**Pn**	**12 34 19.9**	**-0.3**
MSVF	**Nonsavu**	**18.73 1**		P	**P**	**12 35 58.8**	**-3.8**
	5.6nm,0.8s						
STKA	**Stephens Creek**	**30.07 268**		P	**P**	**12 37 50.2**	**+1.7**
	2.8nm,0.7s,mb4.0,baz=97,slow=13,SNR=3.8						
ASAR	**Alice Springs**	**39.64 276**		P	**P**	**12 39 11.3**	**+1.1**
	8.6nm,0.6s,mb4.4,baz=117,slow=8.1,SNR=172						
WRA	**Warramunga Arr**	**41.21 282**		P	**P**	**12 39 23.5**	**+0.4**
	8.2nm,0.5s,mb4.4,baz=120,slow=7.8,SNR=118						
WRA				PcP	PcP	12 41 16.9	-0.3
	0.6nm,0.6s,baz=120,slow=2.9,SNR=3.9						
QSPA	**South Pole Qui**	**53.59 180**		P	**P**	**12 41 02.9**	**+5.6**
	2.3nm,0.6s,mb3.9,baz=209,slow=0.6,SNR=27						
CMAR	**Chiang Mai Arr**	**92.11 291**		P	**P**	**12 44 44.0**	**+0.3**
	0.4nm,0.4s,mb3.7,baz=168,slow=4.6,SNR=4.0						
MKAR	**Makanchi Array**	**118.84 309**		PKP	PKPdf	12 50 19.1	-1.6
	0.2nm,0.4s,baz=202,slow=0.8,SNR=4.0						
KURK	**Kurchatov**	**122.54 312**		PKP	PKPdf	12 50 25.6	-2.0
	0.5nm,0.3s,baz=113,slow=2.4,SNR=3.1						
MMAI	**Mount Meron Ar**	**148.92 275**		PKPbc	PKPbc	12 51 21.7	+0.9
	0.6nm,0.3s,baz=88,slow=7.8,SNR=4.1						
FINES	**FINESS Array B**	**149.33 333**		PKPbc	PKPbc	12 51 17.1	-3.8
	3.3nm,0.6s,baz=119,slow=1.7,SNR=8.1						
BRTR	**Keskin Array B**	**151.63 287**		PKPbc	PKPbc	12 51 26.5	-0.5
	0.7nm,0.6s,baz=136,slow=2.9,SNR=4.5						
TORD	**Torodi Ar. Bea**	**156.43 190**		PKPab	PKPab	12 51 58.5	+0.9
	0.4nm,0.4s,baz=166,slow=3.7,SNR=4.4						

*NEIC **16** 12:32:53.2, 17°.42N×95°.11W,h147km,MD3.8(MEX),After MEX.*

MEX 16 12:32:53.5±0.7,17°.43N×95°.10W,h143km±16km,MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VHO	**Vista Hermosa**	**1.60 258**		*i* P	Pn	12 33 23.0	-0.6
VHO				*i* S	Sn	12 33 44.9	-1.7
VHO	**Vista Hermosa**	**1.60 258**		*i* P	Pn	12 33 23.0	-0.6
VHO				*i* S	Sn	12 33 44.9	-1.7
HUIG	**Huatulco**	**1.91 210**		*e*P	Pn	12 33 25.1	-2.0
HUIG				*e*S	Sn	12 33 51.1	-1.9
HUIG	**Huatulco**	**1.91 210**		*e*P	Pn	12 33 25.1	-2.0
HUIG				*e*S	Sn	12 33 51.1	-1.9
TGIG		**2.00 108**		*e*P	Pn	12 33 27.6	-0.7
TGIG				*e*S	Sn	12 33 52.7	-2.1
PCIG		**2.49 133**		*e*P	Pn	12 33 33.7	-0.5
PCIG				*e*S	Sn	12 34 03.6	-1.8
UTMO	**Huajuapan**	**2.61 279**		*i* P	Pn	12 33 34.1	-1.5
UTMO				*i* S	Sn	12 34 05.5	-2.5
PNIG	**Pinotepa**	**3.07 251**		*i* P	Pn	12 33 39.9	-1.6
PNIG				*i* S	Sn	12 34 16.9	-1.7
PNIG	**Pinotepa**	**3.07 251**		*i* P	Pn	12 33 39.9	-1.6
PNIG				*i* S	Sn	12 34 16.9	-1.7
PPM	**Popocatepetl**	**3.73 297**		*i* P	Pn	12 33 51.4	+1.4
PPM				*i* S	Sn	12 34 30.9	-2.9
PPM	**Popocatepetl**	**3.73 297**		*i* P	Pn	12 33 51.4	+1.4
PPM				*i* S	Sn	12 34 30.9	-2.9

BJI 16 13:07:27.6,39°.22N×101°.03E,h27km,ML3.6/8,Ms3.3/1, Ms7 3.3/1,Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	**Gaotai**	**0.96 282**		Pg	Pn	13 07 45.8	+0.5
GTA				Sg	Sb	13 07 58.5	+0.6
GTA					smax		
	comp=N,340nm,0.4s						
GTA					smax		
	comp=E,370nm,0.3s						
LZH	**Lanzhou**	**3.84 144**		Pg	Pn	13 08 34.8	+10
LZH				Sg	Sn	13 09 20.3	+11
LZH					smax		
	comp=N,150nm,1.0s						
LZH					smax		
	comp=E,250nm,1.0s						
LZH				LR	LR		
	comp=N,270nm,5.0s						
LZH				LR	LR		
	comp=Z,280nm,6.7s						

*IDC **16** 13:36:28.8±1.4, 10°.57S×163°.17E,h0km,mb4.2/7, mb1 4.5/8,mb1mx4.3/15,mbtmp4.3/8,ML4.4/1,MS3.5/2, Ms1 3.5/2,ms1mx3.1/18,Error ellipse: s-maj=51.2km s-min=22.9km az=131.0*
*ISCJB **16** 13:36:35.2±3.4, 10°.6S±0'.1×163°.0E±0'.2,h62km±26km, mb4.3/14,Error ellipse: s-maj=27.7km s-min=17.7km az=15.6*
*NEIC **16** 13:36:38.4±3.2, 10°.38S×162°.86E,h66km±25km, mb4.5/8, Error ellipse: s-maj=28.7km s-min=14.0km az=108.0*

ISC 16 13:36:35.7±3.3,10°.5S±0'.1×163°.1E±0'.2,h51km±25km,n27, σ1§03/23,mb4.3/14,MS3.5/2,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.26 290**		*e*Pn	**Pn**	**13 37 24.8**	**+0.5**
HNR				*e*Sn	**Sn**	**13 38 02.4**	**+0.5**
PMG	**Port Moresby**	**15.71 273**		*e*P	**Pn**	**13 40 11.3**	**-2.4**
CTA	**Charters Tower**	**18.77 238**		P	**Pn**	**13 40 51.2**	**-0.5**
CTA	**Charters Tower**	**18.77 238**		P	**Pn**	**13 40 51.2**	**-0.4**
	0.8nm,0.3s,baz=66,slow=13,SNR=22						
CTAO	**Charters Tower**	**18.77 238**		*e*P	**Pn**	**13 40 52.6**	**+1.0**
	42nm,1.2s						
STKA	**Stephens Creek**	**29.06 220**		P	**P**	**13 42 32.1**	**+0.9**
	2.1nm,1.2s,mb3.7						
STKA	**Stephens Creek**	**29.06 220**		P	**P**	**13 42 32.9**	**+1.7**
	1.5nm,0.6s,mb3.9,baz=24,slow=12,SNR=3.8						
WRA	**Warramunga Arr**	**29.20 248**		P	**P**	**13 42 32.2**	**-0.5**
	1.9nm,0.8s,mb3.9,baz=79,slow=9.4,SNR=15						
URZ	**Urewera**	**30.34 158**		LR	LR	13 51 51.3	
	comp=Z,119nm,19.6s,MS3.5,baz=251,slow=30						
ASAR	**Alice Springs**	**30.69 241**		P	**P**	**13 42 45.3**	**-0.5**
	4.9nm,0.7s,mb4.4,baz=72,slow=10,SNR=59						
MAJO	**Matsushiro**	**52.35 335**		*e*P	**P**	**13 45 41.8**	**-0.8**
	17nm,1.4s,mb4.8						
KSRS	**Korea Array**	**58.01 327**		LR	LR	14 07 26.8	
	comp=Z,35snn,18.7s,MS3.5,baz=180,slow=32						
KMI	**Kunming**	**68.62 302**		P	**P**	**13 47 33.0**	**-0.8**
KMI				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
CMAR	**Chiang Mai Arr**	**69.50 294**		P	**P**	**13 47 41.2**	**+1.8**
	comp=Z,2.8nm,1.0s,mb4.2,baz=105,slow=4.7,SNR=12						
CHTO	**Chiang Mai**	**69.62 295**		*e*P	**P**	**13 47 38.7**	**-1.5**
	comp=Z,5.4nm,1.1s,mb4.4						
HIA	**Hailar**	**70.66 332**		P	**P**	**13 47 47.0**	**+1.2**
	comp=Z,7.5nm,0.8s,mb4.7						
ULN	**Ulaanbaatar**	**76.36 325**		*e*P	**P**	**13 48 20.3**	**+0.9**
	comp=Z,1.4nm,0.3s,mb4.4						
SONM	**Songino Array**	**76.72 325**		P	**P**	**13 48 22.5**	**+1.1**
	comp=Z,2.1nm,1.1s,mb4.0,baz=125,slow=4.0,SNR=7.6						
BILL	**Bilibino**	**78.41 1**		*e*P	**P**	**13 48 30.2**	**-0.2**
	comp=Z,5.9nm,0.4s,mb4.9						
QSPA	**South Pole Qui**	**79.46 180**		*e*P	**P**	**13 48 40.2**	**+4.1**
EGAK	**Eagle**	**85.83 21**		*e*P	**P**	**13 49 08.2**	**-1.1**
	comp=Z,6.8nm,1.3s,mb4.7						
NVAR	**Mina Array Bea**	**87.72 50**		P	**P**	**13 49 19.3**	**+0.1**
	comp=Z,0.1nm,0.4s,mb3.4,baz=246,slow=6.8,SNR=3.8						
MK31	**Makanchi Array**	**91.36 317**		*e*P	**P**	**13 49 35.3**	**-0.7**
MKAR	**Makanchi Array**	**91.36 317**		P	**P**	**13 49 36.6**	**+0.5**
	comp=Z,1.3nm,0.6s,mb4.4,baz=96,slow=6.7,SNR=9.4						
NOA	**NORSAR Array B**	**125.51 344**		PKP	PKPdf	13 55 31.1	+0.3
	comp=Z,0.4nm,0.7s,baz=30,slow=2.9,SNR=2.5						
KEST	**Kesra**	**145.39 321**		PKPbc	PKPbc	13 56 09.5	+1.1
	comp=Z,1.7nm,0.9s,baz=0.0,slow=2.0,SNR=3.9						
ESDC	**Sonseca Array**	**148.78 340**		PKPbc	PKPbc	13 56 18.6	+0.8
	comp=Z,0.6nm,0.5s,baz=20,slow=3.7,SNR=3.9						

OTT 16 13:40:04.9±0.5,70°.52N×71°.87W,h18km,MN3.5/6, 123km west from Clyde River, Nu Baffin Island Seismic Zone, Nt.,Baffin Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GIFN	**Gifford Fjord,**	**3.36 265**		PN	Pn	13 40 56.1	-0.2
GIFN				SN	Sn	13 41 30.8	-4.8
GIFN				SG	Sg	13 41 37.6	-15
GIFN				Trac		13 41 45.9	
	comp=Z,47nm,0.1s						
ILON	**Igloolik, Nuna**	**3.62 256**		PN	Pn	13 40 59.8	-0.1
ILON				SN	Sn	13 41 36.0	-6.0
ILON				LG		13 41 45.2	
ILON				Trac		13 41 49.8	
	comp=Z,35nm,0.2s						
LAIN	**Lailor River,**	**4.28 256**		PN	Pn	13 41 08.3	-0.7
LAIN				SN	Sn	13 41 52.0	-6.4
LAIN				LG		13 42 08.2	
LAIN				Trac		13 42 09.9	
	comp=Z,42nm,0.3s						
SRLN	**Sarcpa Lake, N**	**4.48 249**		PN	Pn	13 41 09.2	-2.6
SRLN				SN	Sn	13 41 57.6	-5.7
SRLN				LG		13 42 13.0	
SRLN				Trac		13 42 16.3	
	comp=Z,37nm,0.2s						
QILN	**Qililugaq Expl**	**6.57 241**		PN	Pn	13 41 39.4	-1.0
QILN				SN	Sn	13 42 47.8	-6.9
QILN				LG		13 43 19.1	
QILN				Trac		13 43 21.9	
	comp=Z,18nm,0.3s						
FRB	**Frobisher Bay**	**6.93 168**		SN	Sn	13 43 07.0	+3.5
FRB				LG		13 43 41.9	
FRB				Trac		13 43 52.8	
	comp=Z,12nm,0.3s						
WAGN	**Wager Bay**	**8.01 243**		SN	Sn	13 43 22.0	-8.0
WAGN				LG		13 44 01.2	
RES	**Resolute Bay**	**8.02 312**		PN	Pn	13 42 04.9	+4.7
RES				SN	Sn	13 43 24.0	-6.2
RES				LG		13 44 06.3	
STLN	**Stellar Camp,**	**8.24 257**		SN	Sn	13 43 23.2	-12
STLN				LG		13 44 08.8	
SEDN	**First Sedna Si**	**10.48 235**		PN	Pn	13 42 31.0	-2.9
SEDN				SN	Sn	13 44 18.6	-12
SEDN				LG		13 45 20.9	
CB31	**Cambridge Bay**	**11.47 279**		PN	Pn	13 42 46.8	-0.7
CB31				SN	Sn	13 44 40.3	-15
CB31				LG		13 45 44.5	
CB31				Trac		13 45 56.0	
	comp=Z,8.3nm,0.3s						

MAN 16 13:43:13,10°.59N×124°.09E,h1km,mb4.3,ML3.1,MS2.9, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.30 205**		*e*P	Pg	13 43 27.2	+8.4
LLP				*e*S	Sg	13 43 42.1	+19
OCLP	**Ormoc**	**0.68 48**		*e*P	Pg	13 43 27.4	+1.4
OCLP				*e*S	Sg	13 43 41.5	+6.6
TBP	**Tagbilaran**	**0.92 194**		*e*P	Pg	13 43 31.1	+0.4
TBP				*e*S	Sg	13 43 48.1	+5.3
CNP	**Catarman**	**1.99 16**		*e*P	Pn	13 43 48.9	+1.1
CNP				*e*S	Sn	13 44 18.6	+5.3

*NEIC **16** 14:06:57.4, 39°.39N×20°.27E,h35km,MD3.5(ATH),After ATH.*
*CSEM **16** 14:06:57.4, 39°.39N×20°.27E,h35km,MD3.5,After ATH*

ATH 16 14:06:57.4,39°.39N×20°.27E±4km,h35km,MD3.5/5, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEK	**Kerkira**	**0.49 312**		*e*Pb	Pn	14 07 07.8	-0.1
KEK				*e*Sb	Sn	14 07 16.5	+1.4
KEK	**Kerkira**	**0.49 312**		*e*PB	Pn	14 07 07.8	-0.1
KEK				*e*SB	Sn	14 07 16.5	+1.4
KEK	**Kerkira**	**0.49 312**		*e*Pb	Pn	14 07 07.8	-0.1
KEK				*e*Sb	Sn	14 07 16.5	+1.4
JAN	**Janina**	**0.52 59**		*e*Pn	Pn	14 07 08.3	0.0
JAN				*e*Sn	Sn	14 07 17.0	+1.0
JAN	**Janina**	**0.52 59**		*e*PN	Pn	14 07 08.3	0.0
JAN				*e*SN	Sn	14 07 17.0	+1.0
JAN	**Janina**	**0.52 59**		*e*Pn	Pn	14 07 08.3	0.0
JAN				*e*Sn	Sn	14 07 17.0	+1.0
VLS	**Valsamata**	**1.24 168**		*e*Pn	Pn	14 07 20.3	+2.1
VLS				*e*Sn	Sn	14 07 37.2	+3.6
VLS	**Valsamata**	**1.24 168**		*e*PN	Pn	14 07 20.3	+2.1
VLS				*e*SN	Sn	14 07 37.2	+3.6
VLS	**Valsamata**	**1.24 168**		*e*Pn	Pn	14 07 20.3	+2.1
VLS				*e*Sn	Sn	14 07 37.2	+3.6
EVR	**Evrytania**	**1.29 111**		*e*Pn	Pn	14 07 20.7	+1.9
EVR	**Evrytania**	**1.29 111**		*e*PN	Pn	14 07 20.7	+1.9
EVR	**Evrytania**	**1.29 111**		*e*Pn	Pn	14 07 20.7	+1.9
THL	**Klokotos Trika**	**1.36 82**		*e*PN	Pn	14 07 21.6	+1.7
THL	**Klokotos Trika**	**1.36 82**		*e*Pn	Pn	14 07 21.6	+1.7
AGG	**Agios Georgios**	**1.64 102**		*e*Pb	Pn	14 07 26.0	+2.3
AGG	**Agios Georgios**	**1.64 102**		*e*PB	Pn	14 07 26.0	+2.3
AGG	**Agios Georgios**	**1.64 102**		*e*Pb	Pn	14 07 26.0	+2.3

*CSEM **16** 14:08:16.0±0.4,27°.99N×52°.81E,h10km,ML4.2,Error ellipse: s-maj=14.7km s-min=5.4km az=6.0*
*ISCJB **16** 14:08:17.3±0.5,27°.64N±0'.03×52°.73E±0'.07,h10km,Error ellipse: s-maj=9.4km s-min=4.1km az=16.8*
*TEH **16** 14:08:18.3,27°.53N×52°.75E,h20km*
*SGS **16** 14:08:18.1,28°.07N×52°.65E,h16km*
*OMAN **16** 14:08:52.9±99.0,26°.11N×55°.08E,h6km,Error ellipse: s-maj=726.1km s-min=2.0km az=323.0*

ISC 16 14:08:19.0±0.5,27°.64N±0'.03×52°.78E±0'.07,h10km,n21, σ1§02/24,1D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISRV	**Sarvestan**	**1.76 10**		*e*Pn	**Pn**	**14 08 48.8**	**-0.8**
ISRV				*e*Sg	**Sg**	**14 09 16.7**	**+1.1**
ISRV				*e*		14 09 22.2	
	comp=Z,4μm,0.2s						
IPAR	**Pars**	**2.21 6**		*e*Pn	**Pn**	**14 08 55.6**	**-0.1**
IPAR				*e*Sg	**Sg**	**14 09 31.0**	**+1.0**
IPAR				*e*		14 09 35.2	
	comp=Z,1μm,0.4s						
SLWS		**3.42 215**		P	**Pn**	**14 09 14.0**	**+1.6**
SLWS		**3.42 215**		P	**Pn**	**14 09 14.0**	**+1.6**
BANOM	**Banah**	**3.58 118**		P	**Pn**	**14 09 14.2**	**-0.5**
	SNR=17						
BANOM	**Banah**	**3.58 118**		⇓P	**Pn**	**14 09 14.2**	**-0.5**
	SNR=17						
BTHS		**3.98 206**		P	**Pn**	**14 09 21.5**	**+1.4**
BTHS		**3.98 206**		P	**Pn**	**14 09 21.5**	**+1.4**
IMEH	**Mehriz**	**4.07 23**		*e*Pn	**Pn**	**14 09 20.8**	**-0.5**
IMEH				*e*		14 09 35.3	
	comp=Z,195nm,0.1s						
HATD	**Hatta, Dubai**	**4.12 132**		P	**Pn**	**14 09 21.9**	**-0.1**
	SNR=6.2						
HATD	**Hatta, Dubai**	**4.12 132**		P	**Pn**	**14 09 21.9**	**-0.1**
	SNR=6.2						
ASHO	**Ashiyiah**	**4.17 134**		P	**Pn**	**14 09 22.5**	**-0.2**
	SNR=19						
ASHO	**Ashiyiah**	**4.17 134**		P	**Pn**	**14 09 22.5**	**-0.2**
	SNR=19						
IBAF	**Bafgh**	**4.62 31**		*e*Pn	**Pn**	**14 09 28.1**	**-0.9**
IBAF				*e*		14 09 28.6	
	comp=Z,254nm,0.1s						
IZEF	**Zefreh**	**5.25 356**		*e*Pn	**Pn**	**14 09 36.8**	**-0.8**
IZEF				*e*		14 10 41.1	
	comp=Z,47nm,0.2s						
HRDDS		**5.57 213**		S	**Sn**	**14 10 46.5**	**+0.4**
HRDDS		**5.57 213**		P	**Pn**	**14 09 43.1**	**+1.1**
ASYS		**7.49 271**		P	**Pn**	**14 10 05.7**	**-2.6**
ASYS		**7.49 271**		P	**Pn**	**14 10 05.7**	**-2.6**
LYLS		**7.51 223**		P	**Pn**	**14 10 09.0**	**+0.4**
LYLS		**7.51 223**		P	**Pn**	**14 10 09.0**	**+0.4**
LYLS				S	**Sn**	**14 11 32.2**	**-1.6**

*IDC **16** 14:12:38.7±2.4, 16°.38S×173°.35W,h0km,mb3.8/6, mb1 4.1/7,mb1mx3.9/17,mbtmp3.8/7,ML2.0/1,MS3.0/1, Ms1 3.0/1,ms1mx2.8/17,Error ellipse: s-maj=120.1km s-min=20.7km az=140.0*
*NEIC **16** 14:12:40.7±1.0, 16°.30S×173°.29W,h15km,mb4.6/1,Error ellipse: s-maj=45.2km s-min=16.7km az=134.0*
*ISCJB **16** 14:12:41.7±0.9, 16

MOS ***16*** *14:29:36.9±1.2,52.°22N×98.°24E,h13km,mb4.6/5,Error ellipse: s-maj=12.3km s-min=8.9km az=177.8*
MOS Felt (II) at Orlik.
IDC ***16*** *14:29:36.7±0.8,52.°09N×98.°12E,h0km,mb3.7/8, mb1 3.7/12,mb1mx3.6/26,mbtmp3.5/12,ML3.2/4,MS2.9/5, Ms1 2.9/5,ms1mx2.6/30,Error ellipse: s-maj=24.6km s-min=13.7km az=8.0*
NEIC ***16*** *14:29:38.3±5.0,52.°18N×98.°19E,h11km±35km,mb3.7/1, Error ellipse: s-maj=20.2km s-min=9.7km az=189.0*
ASRS ***16*** *14:29:38.1±2.4,52.°22N×98.°02E,h15km,Ms3.8/4*
ISCJB ***16*** *14:29:38.5±0.8,52.°35N±0.°05×98.°26E±0.°04,h24km±7km, mb3.6/9,Error ellipse: s-maj=8.2km s-min=4.3km az=3.2*
BJI ***16*** *14:29:39.1,52.°25N×97.°82E,h9km,mB4.3/2,mb4.2/3, ML4.7/1,Ms4.1/3,Ms7 4.0/2*

ISC 16 14:29:38.3±1.2,52.°22N±0.°05×98.°27E±0.°04,h9km±8km, n52,σ1§11/60,mb3.6/9,2C-1D,Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ORL	**Orlik**	**0.99**	**71**	⇓ *i*	PG		**Pg**	**14 29 57.0**	**-0.4**
ORL					*e*			14 30 11.0	
ORL	comp=Z,1μm,0.2s				pmax	pmax			
ORL	comp=N,8μm,0.4s				smax				
MOY	**Mondy**	**1.77**	**107**	⇑ *i*	PN		**Pn**	**14 30 09.2**	**0.0**
MOY					*e*			14 30 33.2	
MOY	comp=Z,1μm,0.5s				pmax	pmax			
MOY	comp=N,12μm,0.9s				smax				
ARS	**Arshan**	**2.58**	**95**	*e*	PN		**Pn**	**14 30 21.5**	**+1.2**
ARS					*e*			14 30 57.8	
ARS	comp=Z,971nm,0.4s				pmax	pmax			
ARS	comp=N,16μm,0.4s				smax				
TLY	**Talaya**	**3.37**	**97**	*e*	PN		**Pn**	**14 30 33.9**	**+2.8**
TLY					*e*	Sg	**Sg**	**14 31 20.8**	**-5.7**
TLY	**Talaya**	**3.37**	**97**	*c i*	PN		**Pb**	**14 30 37.2**	**-1.0**
TLY					*e*			14 31 20.9	
TLY	comp=Z,197nm,0.4s				pmax	pmax			
TLY	comp=N,2μm,0.7s				smax				
ZAK	**Zakamensk**	**3.64**	**118**	*e*	PN		**Pn**	**14 30 34.2**	**-0.7**
ZAK					*e*			14 30 40.8	
ZAK					*e*			14 31 29.5	
ZAK	comp=Z,156nm,0.5s				pmax	pmax			
ZAK	comp=N,1μm,1.1s				smax				
IRK	**Irkutsk**	**3.69**	**87**	*e*	PN		**Pb**	**14 30 42.6**	**-1.0**
IRK					*e*			14 31 30.4	
IRK	comp=Z,375nm,0.7s				pmax	pmax			
IRK	comp=N,5μm,0.5s				smax				
CERR	**Cheremushki**	**4.23**	**281**	*e*	PN		**Pn**	**14 30 43.1**	**+0.1**
CERR				*i*				14 30 52.4	
CERR				*i*				14 31 45.8	
CERR	**Cheremushki**	**4.23**	**281**	*e*	Pn		**Pn**	**14 30 43.1**	**+0.1**
CERR				*i*	Pg		**Pb**	**14 30 52.4**	**-0.5**
CERR				*i*	Sg		**Sb**	**14 31 45.8**	**+1.7**
TRG	**Tyrgan**	**4.96**	**81**	*e*	PN		**Pn**	**14 30 53.4**	**+0.4**
TRG					*e*			14 31 07.4	
TRG					*e*	S	**Sn**	**14 31 49.8**	**-0.7**
TRG					*e*			14 32 10.7	
TRG	comp=Z,100nm,0.3s				pmax	pmax			
TRG	comp=N,2μm,1.2s				smax				
KAB	**Kabansk**	**5.17**	**89**	*e*	PN		**Pb**	**14 31 12.9**	**+4.1**
KAB	comp=Z,135nm,0.4s				pmax	pmax			
OGRR	**Ongureny**	**5.82**	**72**	*e*	PN		**Pn**	**14 31 05.6**	**+0.9**
OGRR					*e*			14 31 23.8	
OGRR					*e*			14 32 37.8	
OGRR	comp=Z,80nm,0.5s				pmax	pmax			
OGRR	comp=N,2μm,0.9s				smax				
SONM	**Songino Array**	**6.83**	**127**		PN		**Pn**	**14 31 17.0**	**-1.7**
SONM	comp=N,0.2nm,0.3s,baz=309,slow=16,SNR=2.8				Pg		**Pb**	**14 31 37.6**	**+0.5**
SONM	comp=N,11nm,0.3s,baz=306,slow=16,SNR=24				Lg			14 33 10.2	
SONM	comp=N,23nm,0.3s,baz=304,slow=30,SNR=7.2				LR	LR		14 33 55.6	
SONM	**Songino Array**	**6.83**	**127**		PN		**Pn**	**14 31 17.0**	**-1.6**
SONM								14 31 37.6	
SONM	comp=Z,11nm,0.3s				pmax	pmax			
SYVR	**Suvo**	**7.23**	**74**	*e*	P		**Pn**	**14 31 25.2**	**+1.1**
ELT	**Yel'tsovka**	**7.38**	**283**	*e*	Sn		**Sn**	**14 32 46.3**	**-3.6**
ELT					*e*	Sg	**Sb**	**14 33 22.1**	**+7.6**
NIZ	**Nizh Angarsk**	**7.53**	**57**	*e*	P		**Pn**	**14 31 29.0**	**+0.8**
YLYR	**Ulyunkhan**	**8.12**	**66**	*e*	P		**Pn**	**14 31 37.5**	**+1.2**
YLYR					*e*	S	**Sn**	**14 33 07.5**	**-0.7**
YLYR	comp=Z,33nm,1.0s				pmax	pmax			
YLYR	comp=N,643nm,1.5s				smax				
ZAA0	**Zalesovo Array**	**8.28**	**287**	*e*	Pn		**Pn**	**14 31 36.9**	**-1.7**
ZAA0					*e*	Sg	**Sn**	**14 33 51.5**	**+39**
ZALV	**Zalesovo Beam**	**8.28**	**287**		Pn		**Pn**	**14 31 39.0**	**+0.4**
ZALV	comp=N,0.4nm,0.3s,baz=99,slow=9.2,SNR=4.7				Lg			14 33 52.2	
ZALV	comp=N,4.2nm,0.3s,baz=106,slow=22,SNR=7.6				LR	LR		14 34 57.5	
KMO	**Kumora**	**8.44**	**59**	*e*	P		**Pn**	**14 31 42.0**	**+1.3**
KMO	comp=Z,41nm,0.4s				pmax	pmax			
UKR	**Ust'-Kan**	**8.51**	**267**	*e*	Pg		Px	14 32 09.0	
UKR					*e*	Sg	Sx	14 33 57.1	
NVS	**Novosibirsk**	**9.33**	**292**	*e*	Pg		Px	14 32 23.4	
NVS					*e*	Sn	**Sn**	**14 33 36.8**	**-1.0**
NVS					*e*	Sg	Sn	14 34 22.4	+45
MK31	**Makanchi Array**	**11.71**	**249**	*e*	Pn		**Pn**	**14 32 26.6**	**+1.0**
MKAR	**Makanchi Array**	**11.71**	**249**		Pn		**Pn**	**14 32 22.2**	**-3.4**
MKAR					Pg		Pn	14 33 08.7	+43
MKAR					Lg			14 35 40.5	
MKAR					LR	LR		14 36 56.7	
MKAR	**Makanchi Array**	**11.71**	**249**		Pn		**Pn**	**14 32 22.2**	**-3.4**
MKAR	comp=Z,0.1nm,0.3s,baz=68,slow=16,SNR=2.3				Pg		Pn	14 33 08.7	+43
MKAR	comp=Z,0.6nm,0.3s,baz=66,slow=17,SNR=8.5				Lg			14 35 40.5	
MKAR	comp=Z,0.5nm,0.3s,baz=55,slow=33,SNR=4.4				LR	LR		14 36 56.7	
KURK	**Kurchatov**	**12.35**	**271**	*e*	Pn		**Pn**	**14 32 32.0**	**-2.2**
KURK					Lg			14 36 00.1	
KURK	**Kurchatov**	**12.35**	**271**		Pn		**Pn**	**14 32 33.2**	**-0.9**
KURK	comp=Z,0.2nm,0.3s,baz=76,slow=16,SNR=25				Lg			14 36 00.1	
KURK	**Kurchatov**	**12.35**	**271**	*e*	P		**Pn**	**14 32 33.1**	**-1.0**
GTA	**Gaotai**	**12.86**	**175**	*e*	P		Px	14 33 29.1	
GTA					pP			14 33 33.3	
GTA					sP			14 33 36.1	
GTA					S		**Sn**	**14 35 10.3**	**+5.9**
GTA					sS			14 35 15.1	
GTA	comp=Z,2.0nm,0.8s				pmax	pmax			
GTA	comp=N,140nm,8.6s				LR	LR			
GTA	comp=E,760nm,9.3s				LR	LR			
GTA	comp=Z,150nm,8.6s				LR	LR			
LZH	**Lanzhou**	**16.61**	**164**	*e*	P		**Pn**	**14 33 30.8**	**-0.5**
LZH	comp=Z,19nm,1.2s				pmax	pmax			
LZH	comp=Z,45nm,4.0s				pmax	pmax			
LZH	comp=E,300nm,7.0s				LR	LR			
LZH					LR	LR			
	comp=Z,330nm,8.2s								
BVAR	**Borovoye Array**	**16.91**	**284**		Pn		**Pn**	**14 33 36.1**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=96,slow=13,SNR=4.6								
BVAR	comp=Z,0.5nm,0.3s,baz=82,slow=21,SNR=3.6				Lg			14 38 31.4	
AAK	**Ala-Archa**	**18.65**	**248**		Lg			14 39 22.8	
	comp=Z,0.3nm,0.3s,baz=232,slow=12,SNR=1.9								
AAK					LR		LR	14 40 22.4	
	comp=Z,46nm,19.2s,baz=106,slow=35								
YAK	**Yakutsk**	**19.47**	**47**		P		**Pn**	**14 34 03.8**	**-2.5**
YAK	**Yakutsk**	**19.47**	**47**	*e*	P		**Pn**	**14 34 05.7**	**-0.6**
YAK					*e*	S	**Sn**	**14 37 48.7**	**+4.1**
YAK	comp=Z,2.0nm,1.0s				pmax	pmax			
YAK	comp=N,21nm,2.7s				smax				
YAK	comp=E,48nm,3.0s				smax				
KSH	**Kashi**	**19.96**	**239**	*e*	P		**Pn**	**14 34 16.3**	**+4.0**
KSH					*e*	pP	pP	14 34 20.9	+7.8
KSH					*e*	sP	sP	14 34 22.3	+8.1
KSH					*e*	PP		14 34 35.8	
KSH					*e*	S	**Sn**	**14 37 58.1**	**+1.4**
KSH					*e*	sS	sS	14 38 05.1	+6.1
KSH					*e*	PcP	PcP	14 38 25.6	-1.2
KSH					*e*	SS		14 38 30.9	
KSH					*e*	ScP	ScP	14 42 01.1	-1.8
KSH						PcS	PcS	14 42 02.6	-1.6
KSH					*e*	ScS	ScS	14 45 43.6	-1.7
KSH	comp=Z,2.0nm,0.7s				pmax	pmax			
KSH	comp=Z,73nm,4.5s				pmax	pmax			
KSH	comp=N,98nm,6.0s				LR	LR			
KSH	comp=E,120nm,5.1s				LR	LR			
KSH	comp=Z,140nm,5.6s				LR	LR			
ARU	**Arti**	**23.30**	**296**		P		**P**	**14 34 47.6**	**+1.3**
ABKAR	**Akbulak array**	**24.25**	**278**	*e*	P		**P**	**14 34 54.4**	**-0.9**
	comp=Z,1.5nm,0.7s,mb3.5								
AKTK	**Aktyubinsk**	**25.00**	**282**		P		**P**	**14 35 01.6**	**-0.5**
AKTO	**Aktyubinsk**	**25.00**	**282**		P		**P**	**14 35 01.6**	**-0.5**
	comp=Z,3.2nm,0.5s,mb4.1,baz=94,slow=12,SNR=13								
AKTO	**Aktyubinsk**	**25.00**	**282**		P		**P**	**14 35 01.6**	**-0.5**
AKTO	comp=Z,3.0nm,0.5s,mb4.1				pmax	pmax			
KSRS	**Korea Array**	**25.46**	**114**		P		**P**	**14 35 06.6**	**+0.1**
	comp=Z,1.5nm,0.9s,mb3.5,baz=320,slow=11,SNR=4.1								
KSRS					LR		LR	14 45 34.8	
	comp=Z,28nm,20.2s,baz=235,slow=38								
FINES	**FINESS Array B**	**38.57**	**313**		P		**P**	**14 36 59.4**	**-1.6**
	comp=Z,2.7nm,1.0s,mb3.9,baz=182,slow=12,SNR=2.5								
FINES	**FINESS Array B**	**38.57**	**313**		P		**P**	**14 36 59.4**	**-1.6**
FINES	comp=Z,3.0nm,1.0s				pmax	pmax			
BRTR	**Keskin Array B**	**45.16**	**281**		P		**P**	**14 37 55.4**	**+0.3**
	comp=Z,1.6nm,0.9s,mb3.9,baz=63,slow=8.3,SNR=6.7								
BRTR	**Keskin Array B**	**45.16**	**281**		P		**P**	**14 37 55.4**	**+0.3**
BRTR	comp=Z,2.0nm,0.9s				pmax	pmax			
NOA	**NORSAR Array B**	**45.24**	**317**		P		**P**	**14 37 55.2**	**-0.3**
NOA	**NORSAR Array B**	**45.24**	**317**		P		**P**	**14 37 55.2**	**-0.3**
	comp=Z,0.8nm,0.8s,mb3.6,baz=60,slow=9.8,SNR=3.1								
NOA	**NORSAR Array B**	**45.24**	**317**		P		**P**	**14 37 55.2**	**-0.3**
NOA	comp=Z,1.0nm,0.8s				pmax	pmax			
ILAR	**Eielson Array**	**53.02**	**29**		P		**P**	**14 38 55.7**	**+0.7**
	comp=Z,0.1nm,0.5s,mb3.0,baz=316,slow=2.5,SNR=2.1								
WRA	**Warramunga Arr**	**78.43**	**146**		P		**P**	**14 41 37.9**	**-1.4**
	comp=Z,0.3nm,0.8s,mb3.3,baz=346,slow=6.2,SNR=2.2								
ASAR	**Alice Springs**	**81.73**	**147**		P		**P**	**14 41 58.1**	**+1.1**
	comp=Z,0.3nm,0.8s,mb3.3,baz=350,slow=5.1,SNR=3.8								

IDC 16 14:37:58.6±8.8,11.°01S×163.°59E,h0km,mb3.7/3, mb1 3.8/3,mb1mx3.5/14,mbtmp3.7/3,Error ellipse: s-maj=265.8km s-min=54.9km az=122.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**29.51**	**249**		P		P	14 44 04.6	-0.3
	0.4nm,0.7s,baz=80,slow=9.3,SNR=3.0								
ASAR	**Alice Springs**	**30.93**	**242**		P		P	14 44 17.7	+0.3
	0.8nm,0.8s,baz=68,slow=10,SNR=12								
MKAR	**Makanchi Array**	**92.05**	**317**		P		P	14 51 09.6	0.0
	0.3nm,0.6s,baz=104,slow=6.1,SNR=3.6								

KRSC 16 14:50:57.2±0.7,54.°18N×161.°53E,h40km±30km,ML4.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.40**	**17**	*i*	P		Pn	14 51 06.8	+0.2
MKZ				*i*	S		Sn	14 51 13.6	+0.5
KII	**Karymskiy**	**1.23**	**264**	*i*	P		Pn	14 51 18.8	+0.9
KII				*e*	S		Sn	14 51 34.3	+1.0
SPN	**Mys Shipunski**	**1.41**	**220**		P		Pn	14 51 20.2	-0.1
SPN				*e*	S		Sn	14 51 36.7	-0.9
NLC	**Nalytchevo**	**1.65**	**233**	*i*	P		Pn	14 51 24.0	+0.4
NLC				*e*	S		Sn	14 51 43.8	+0.3
BZGR	**Bezymyannyi-Gr**	**1.83**	**345**	*e*	P		Pn	14 51 27.3	+1.2
BZGR				*e*	S		Sn	14 51 49.1	+1.2
ZLN	**Zelenaya**	**1.89**	**348**		P		Pn	14 51 28.3	+1.4
ZLN					S		Sn	14 51 50.9	+1.5
AVH	**Avacha**	**1.90**	**242**	*i*	P		Pn	14 51 28.8	+1.8
AVH				*e*	S		Sn	14 51 51.7	+2.1
KPT	**Kopyto**	**1.94**	**338**		P		Pn	14 51 29.4	+1.8
KPT					S		Sn	14 51 52.6	+1.9
PET	**Petropavlovsk**	**2.07**	**237**	*e*	P		Pn	14 51 30.5	+1.1
PET				*e*	S		Sn	14 51 54.8	+0.9
KOZ	**Kozyrevsk**	**2.11**	**334**		P		Pn	14 51 31.3	+1.4
KOZ					S		Sn	14 51 56.3	+1.4
KRSR	**Krestovskiy**	**2.12**	**345**		P		Pn	14 51 30.8	+0.8
KRSR					S		Sn	14 51 54.7	-0.3
KBTR	**Krutoberegovo**	**2.16**	**19**	*e*	P		Pn	14 51 31.1	+0.4
KBTR				*e*	S		Sn	14 51 55.4	-0.8
GNL	**Ganaly**	**2.18**	**259**	*i*	P		Pn	14 51 32.7	+1.9
GNL				*e*	S		Sn	14 51 58.3	+1.8
KLY	**Klyuchi**	**2.20**	**347**		P		Pn	14 51 31.8	+0.7
KLY				*e*	S		Sn	14 51 56.9	-0.1
SRDR	**Sredinnyy**	**2.38**	**335**		P		Pn	14 51 34.8	+1.2
SRDR					S		Sn	14 52 01.9	+0.4
SRKR	**Sorokina**	**2.49**	**355**		P		Pn	14 51 36.4	+1.3
SRKR					S		Sn	14 52 04.5	+0.3
GRL	**Gorelyy**	**2.64**	**233**		P		Pn	14 51 39.1	+1.9
BKI	**Bering**	**2.77**	**67**		S		Sn	14 52 07.7	-3.6
MIPR	**Malaya Ipel'ka**	**3.44**	**238**		P		Pn	14 51 50.6	+2.4

ISCJB ***16*** *14:53:07.0±0.8,38.°60N±0.°04×31.°10E±0.°04,h3km±8km, Error ellipse: s-maj=7.5km s-min=5.4km az=10.6*
ISK ***16*** *14:53:07.1,38.°67N×31.°07E,h22km,MD2.7*
CSEM ***16*** *14:53:07.1±0.3,38.°60N×31.°07E,h10km,MD2.4, Error ellipse: s-maj=7.1km s-min=5.7km az=174.0*
DDA ***16*** *14:53:09.8,38.°77N×30.°90E,h7km±1km,Md2.4*

ISC 16 14:53:07.5±0.8,38.°61N±0.°04×31.°08E±0.°04,h9km±6km, n20,σ0§96/32,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BOLV	**Bolvadin**	**0.15**	**317**	*i*	P		**Pg**	**14 53 11.6**	**+0.8**
BOLV				*i*	S		**Sg**	**14 53 13.6**	**+0.7**
BOLV	**Bolvadin**	**0.15**	**317**	*i*	P		**Pg**	**14 53 11.6**	**+0.8**
BOLV				*i*	S		**Sg**	**14 53 13.6**	**+0.7**
KIZT	**Kizilcal**	**0.68**	**66**	*e*	PG		**Pg**	**14 53 21.4**	**+0.8**
KIZT				*e*	SG		**Sg**	**14 53 30.5**	**+0.9**
KIZT	**Kizilcal**	**0.68**	**66**	*e*	Pg		**Pg**	**14 53 21.5**	**+0.8**
KIZT				*e*	Sg		**Sg**	**14 53 30.5**	**+0.9**
ALT	**Altintas**	**0.88**	**301**	*e*	PG		**Pg**	**14 53 23.8**	**-0.7**
ALT	**Altintas**	**0.88**	**301**	*e*	Pg		**Pg**	**14 53 23.8**	**-0.6**
SVRH	**Sivrihisar-ESK**	**0.90**	**22**	*e*	PG		**Pg**	**14 53 24.5**	**-0.4**
SVRH				*e*	SG		**Sg**	**14 53 36.7**	**0.0**
SVRH	**Sivrihisar-ESK**	**0.90**	**22**	*e*	Pg		**Pg**	**14 53 24.5**	**-0.4**
SVRH				*e*	Sg		**Sg**	**14 53 36.7**	**0.0**
ESKT	**Eskisehir**	**0.93**	**349**	*i*	P		**Pg**	**14 53 24.5**	**-0.9**
ESKT				*i*	S		**Sg**	**14 53 35.3**	**-2.1**
SEYT	**Eskypehyr**	**0.93**	**349**	*i*	P		**Pg**	**14 53 24.5**	**-0.9**
SEYT				*i*	S		**Sg**	**14 53 35.3**	**-2.1**
LADK	**Ladik-KONYA**	**1.09**	**112**	*e*	PN		**Pg**	**14 53 28.0**	**-0.5**
LADK	**Ladik-KONYA**	**1.09**	**112**	*e*	Pn		**Pg**	**14 53 28.0**	**-0.5**
KONT	**Konya--Tatoy**	**1.21**	**123**	*e*	PN		**Pn**	**14 53 30.1**	**-0.5**
KONT	**Konya--Tatoy**	**1.21**	**123**	*e*	Pn		**Pn**	**14 53 30.1**	**-0.5**
KHL	**Karahalli**	**1.25**	**257**	*e*	PN		**Pn**	**14 53 29.2**	**-2.1**
KHL	**Karahalli**	**1.25**	**257**	*e*	Pn		**Pn**	**14 53 29.2**	**-2.1**
KHAL	**Karahalli**	**1.27**	**260**	*i*	P		**Pn**	**14 53 31.9**	**+0.4**
KHAL				*i*	S		**Sb**	**14 53 49.1**	**+1.0**
KHAL	**Karahalli**	**1.27**	**260**	*i*	P		**Pn**	**14 53 31.9**	**+0.4**
KHAL				*i*	S		**Sb**	**14 53 49.1**	**+1.0**
BORA	**Eskisehir**	**1.36**	**339**	*i*	P		**Pn**	**14 53 33.5**	**+0.8**
BORA				*i*	S		**Sb**	**14 53 51.6**	**+1.0**
BORA	**Eskisehir**	**1.36**	**339**	*i*	P		**Pn**	**14 53 33.5**	**+0.8**
BORA				*i*	S		**Sb**	**14 53 51.7**	**+1.0**

JMA 16 14:55:26.7±0.3,31.°84N×141.°39E,h0km,M3.6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.84**	**314**		P		Pn	14 55 59.8	+0.3
JHJ2					S		Sn	14 56 23.8	+0.3
BSO1	**Boso 1**	**2.83**	**353**		P		Pn	14 56 14.3	+1.2
JOD2	**Odawara 2**	**3.92**	**331**		P		Pn	14 56 30.9	+2.8
JHU	**Hanno**	**4.37**	**337**		P		Pn	14 56 36.1	+1.8
JHU					S		Sn	14 57 27.3	+1.4
JYT	**Yasato**	**4.49**	**348**		P		Pn	14 56 37.6	+1.7
JRY	**Ryogami san**	**4.65**	**334**		P		Pn	14 56 39.8	+1.6
JHO	**Hitachi**	**4.81**	**352**		P		Pn	14 56 40.2	-0.1
JHO					S		Sn	14 57 37.7	+1.0
JAG	**Ashikaga**	**4.85**	**341**		S		Sn	14 57 40.7	+3.0

IDC ***16*** *15:32:34.9±1.1,16.°16S×173.°40W,h0km,mb3.9/7, mb1 4.1/8,mb1mx4.0/17,mbtmp3.9/8,ML1.7/1,Error ellipse: s-maj=59.5km s-min=19.3km az=139.0*
NEIC ***16*** *15:32:37.1±1.0,16.°08S×173.°40W,h15km,Error ellipse: s-maj=54.7km s-min=14.5km az=138.0*
ISCJB ***16*** *15:32:38.0±1.0,15.°8S±0.°3×173.°5W±0.°3,h33km,mb4.0/7, Error ellipse: s-maj=53.0km s-min=9.2km az=137.5*

ISC 16 15:32:39.5±1.1,15.°9S±0.°3×173.°4W±0.°3,h35km,n11, σ1§44/12,mb4.0/7,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.52**	**38**		Pn		**Pn**	**15 33 18.0**	**+0.1**
AFI				*e*	Sn		**Sn**	**15 33 45.5**	**-1.9**
AFI					Sn		**Sn**	**15 33 46.2**	**-1.1**
AFI	**Afiamalu**	**2.52**	**38**		Pn		**Pn**	**15 33 18.0**	**+0.1**
	6.7nm,0.3s,baz=211,slow=18,SNR=25								
AFI	45nm,0.3s,baz=90,slow=20,SNR=14				Sn		**Sn**	**15 33 46.2**	**-1.1**
STKA	**Stephens Creek**	**43.81**	**240**		P		**P**	**15 40 40.3**	**-1.9**
	2.9nm,1.1s,mb3.9,baz=77,slow=14,SNR=3.0								
WRA	**Warramunga Arr**	**49.76**	**257**		P		**P**	**15 41 28.1**	**-0.8**
	0.5nm,0.5s,mb3.8,baz=94,slow=6.8,SNR=7.3								
ASAR	**Alice Springs**	**49.98**	**252**		P		**P**	**15 41 29.9**	**-0.7**
	1.9nm,0.5s,mb4.4,baz=92,slow=7.8,SNR=30								
FITZ	**Fitzroy Crossi**	**58.13**	**258**		P		**P**	**15 42 32.1**	**+2.0**
	1.7nm,0.7s,mb4.2,baz=102,slow=9.3,SNR=2.9								
NVAR	**Mina Array Bea**	**74.69**	**42**		P		**P**	**15 44 18.6**	**+3.0**
	0.8nm,0.7s,mb3.7,baz=225,slow=10,SNR=6.1								
ILAR	**Eielson Array**	**82.94**	**11**		P		**P**	**15 45 02.2**	**+2.0**
	0.4nm,0.6s,mb3.6,baz=224,slow=6.2,SNR=12								
MAW	**Mawson**	**87.32**	**199**		P		**P**	**15 45 22.0**	**-0.4**
	0.8nm,0.7s,mb4.1,baz=121,slow=12,SNR=3.9								
ARCES	**ARCESS Array B**	**125.11**	**352**		PKP		PKPdf	15 51 37.3	+1.8
	4.3nm,0.9s,baz=338,slow=1.3,SNR=3.9								
BRTR	**Keskin Array B**	**146.56**	**321**		PKPbc		PKPbc	15 52 19.9	+2.4
	2.1nm,0.8s,baz=81,slow=2.3,SNR=13								

IDC ***16*** *15:33:29.3±1.2,8.°07S×120.°30E,h0km,mb3.7/6, mb1 3.9/8,mb1mx3.7/18,mbtmp3.7/8,ML3.6/2,MS3.7/5, Ms1 3.7/5,ms1mx3.1/31,Error ellipse: s-maj=114.9km s-min=17.3km az=57.0*
ISCJB ***16*** *15:33:31.5±0.8,8.°05S±0.°1×120.°7E±0.°2,h33km,mb3.7/6, MS3.7/5,Error ellipse: s-maj=34.6km s-min=6.2km az=149.2*
NEIC ***16*** *15:33:32.0±0.8,8.°02S×120.°49E,h20km,mb4.3/1,Error ellipse: s-maj=52.4km s-min=9.1km az=59.0*

ISC 16 15:33:33.9±0.8,8.°0S±0.°1×120.°6E±0.°3,h35km,n16, σ1§16/15,mb3.7/6,MS3.7/5,Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.06**	**344**	*e*	Pn		**Pn**	**15 34 19.1**	**-0.7**
KAPI				*e*	Sn		**Sn**	**15 34 54.9**	**-0.4**
FITZ	**Fitzroy Crossi**	**11.20**	**154**		Pn		**Pn**	**15 36 09.6**	**-2.0**
	0.1nm,0.3s,baz=333,slow=11,SNR=3.4								
FITZ	0.4nm,0.3s,baz=234,slow=19,SNR=3.6				Sn		**Sn**	**15 38 06.7**	**-8.8**
WRA	**Warramunga Arr**	**17.85**	**133**		P		**Pn**	**15 37 39.1**	**-0.5**
	0.4nm,0.3s,baz=303,slow=13,SNR=13								
WRA	0.1nm,0.3s,baz=308,slow=23,SNR=3.2				S		**S**	**15 40 51.4**	**-12**
WB2	**Warramunga Arr**	**17.86**	**133**	*e*	Pn		**Pn**	**15 37 39.0**	**-0.8**
ASAR	**Alice Springs**	**20.15**	**142**		P		**P**	**15 38 07.5**	**+2.3**
	1.8nm,0.4s,baz=320,slow=11,SNR=71								
STKA	**Stephens Creek**	**30.78**	**143**		P		**P**	**15 39 48.5**	**+2.2**
STKA	**Stephens Creek**	**30.78**	**143**		P		**P**	**15 39 48.5**	**+2.2**
	2.6nm,0.9s,mb4.1,baz=328,slow=6.8,SNR=3.4								
CMAR	**Chiang Mai Arr**	**33.86**	**321**		P		**P**	**15 40 13.3**	**-0.1**
	0.4nm,0.6s,mb3.5,baz=167,slow=5.9,SNR=4.6								
CMAR	comp=Z,59nm,19.0s,MS3.3,baz=185,slow=42				LR		LR	15 57 21.7	
KSRS	**Korea Array**	**45.71**	**8**		LR		LR	16 01 52.4	
	comp=Z,38nm,19.5s,MS3.4,baz=200,slow=37								
RPZ	**Rata Peaks**	**56.48**	**138**		LR		LR	16 07 05.3	
	comp=Z,96nm,18.1s,MS3.9,baz=14,slow=36								
SONM	**Songino Array**	**56.97**	**349**		P		**P**	**15 43 17.3**	**+1.5**
	0.6nm,1.0s,mb3.6,baz=187,slow=5.8,SNR=2.3								
MKAR	**Makanchi Array**	**64.29**	**332**		P		**P**	**15 44 05.5**	**-0.2**
	0.4n

*NEIC **16** 16:23:22.2±1.2, 36.96N×71.08E, h67km±11km, mb4.0/3, Error ellipse: s-maj=14.6km s-min=8.4km az=136.0*

ISC 16 16:23:18.1±0.6, **36.71N**±0.03×**71.12E**±0.06, **h43**km±9km, **n66**, σ1s**23**/**76**, **mb3.8**/13, **8C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.75**	**219**	*eP*			**Pn**	**16 24 07.7**	**+8.1**
KBL				*eS*			**Sn**	**16 24 31.7**	**+0.2**
AML	**Almayashu** SNR=213	**5.77**	**19**	P			**Pn**	**16 24 45.7**	**+4.6**
UCH	**Uchtor** SNR=59	**6.11**	**24**	P			**Pn**	**16 24 50.4**	**+4.7**
KZA	**Kyzart** SNR=44	**6.24**	**30**	P			**Pn**	**16 24 52.3**	**+4.7**
EKS2	**Erkin-Say** SNR=63	**6.29**	**18**	P			**Pn**	**16 24 53.1**	**+4.9**
KK31	**Karatay Array** 17nm,0.4s,baz=182,slow=14,SNR=366	**6.41**	**356**	⇑Pn			**Pn**	**16 24 53.0**	**+3.2**
KK31	16nm,0.5s,baz=186,slow=24,SNR=4.2			⇑Sn			**Sn**	**16 26 01.6**	**0.0**
AAK	**Ala-Archa** SNR=5.8	**6.46**	**23**	P			**Pn**	**16 24 55.9**	**+5.3**
AAK	**Ala-Archa**	**6.46**	**23**	*e*Sn			**Sn**	**16 26 04.2**	**+1.2**
AAK				S			**Sn**	**16 26 07.3**	**+4.3**
AAK	**Ala-Archa** 16nm,0.3s,baz=174,slow=6.4,SNR=50	**6.46**	**23**	P			**Pn**	**16 24 55.3**	**+4.7**
AAK	2.1nm,0.3s,baz=326,slow=22,SNR=9.2			S			**Sn**	**16 26 07.3**	**+4.3**
AAK				LR			LR	16 27 47.9	
	comp=Z,63nm,18.8s,baz=49,slow=41								
KBK	**Karagaybulak** SNR=13	**6.63**	**25**	P			**Pn**	**16 24 58.2**	**+5.3**
ULHL	**Ulahol** SNR=9.1	**6.80**	**34**	P			**Pn**	**16 25 00.6**	**+5.4**
CHMS	**Chumysh** SNR=74	**6.88**	**23**	P			**Pn**	**16 25 00.7**	**+4.4**
USP	**Ospenovka** SNR=10	**7.05**	**21**	P			**Pn**	**16 25 02.4**	**+3.8**
SDNR	**Sundarnagar**	**7.10**	**135**	*e*PKP			**Pn**	**16 25 05.5**	**+6.1**
SDNR				*e*S			**Sn**	**16 26 20.5**	**+1.6**
KLP	**Kalpa**	**7.84**	**129**	*e*PKP			**Pn**	**16 25 07.7**	**-1.9**
KLP				*e*S			**Sn**	**16 26 28.0**	**-9.0**
KLP	comp=E,82nm,0.7s			AML	AML		AML	16 27 08.3	
KLP	comp=N,78nm,0.6s			AML	AML		AML	16 27 09.7	
JOSI	**Joshimath**	**9.33**	**129**	*e*S			**Sn**	**16 27 04.8**	**-8.8**
JOSI	comp=E,72nm,0.6s			AML	AML		AML	16 27 38.8	
JOSI	comp=N,81nm,0.6s			AML	AML		AML	16 27 39.0	
KHET	**Khetri**	**9.47**	**154**	*e*S			**Sn**	**16 27 10.4**	**-6.6**
KUDL	**Kundal**	**9.66**	**151**	*e*PKP			**Pn**	**16 25 32.3**	**-2.3**
KUDL				*e*S			**Sn**	**16 27 15.0**	**-6.8**
SONA	**Sohna**	**9.82**	**148**	*ex*			**Pn**	**16 25 38.9**	**+2.2**
SONA				*e*S			**Sn**	**16 27 16.9**	**-8.7**
MK31	**Makanchi Array** 16nm,0.4s,baz=224,slow=15,SNR=29	**13.06**	**36**	⇑Pn			**Pn**	**16 26 22.3**	**+1.4**
MK31	**Makanchi Array**	**13.06**	**36**	*e*Pn			**Pn**	**16 26 20.7**	**-0.3**
MKAR	**Makanchi Array** comp=N,0.6nm,0.3s,baz=224,slow=15,SNR=28	**13.06**	**36**	P			**Pn**	**16 26 22.1**	**+1.1**
KOLN	**Koldanda**	**13.80**	**127**	*e*P			**Pn**	**16 26 31.8**	**+0.7**
GKN	**Gorkha** comp=N,81nm,0.5s	**14.33**	**123**	*e*P			**Pn**	**16 26 38.7**	**+0.4**
DMN	**Daman** comp=N,42nm,0.6s	**14.90**	**124**	*e*P			**Pn**	**16 26 46.0**	**+0.1**
KKN	**Kakani**	**14.90**	**123**	*e*P			**Pn**	**16 26 45.8**	**-0.1**
AB31	**Akbulak array** comp=N,1.1nm,0.4s,baz=137,slow=13,SNR=48	**14.95**	**331**	⇑Pn			**Pn**	**16 26 44.3**	**-2.1**
AB31	comp=N,4.4nm,0.6s,baz=51,slow=48,SNR=7.2			⇑Sn			**Sn**	**16 29 23.9**	**-6.8**
ABKAR	**Akbulak array** comp=N,2.8nm,0.5s	**14.95**	**331**	*e*Pn			**Pn**	**16 26 44.5**	**-1.8**
ABKAR				*e*Sn			**Sn**	**16 29 14.0**	**-17**
KURK	**Kurchatov** comp=N,0.5nm,0.3s,baz=208,slow=10,SNR=25	**15.00**	**19**	P			**Pn**	**16 26 45.8**	**-1.2**
PKIN	**Phulchoki** comp=N,34nm,0.5s	**15.12**	**123**	*e*P			**Pn**	**16 26 48.0**	**-0.7**
PKI	**Pulchoki** comp=N,9.8nm,0.2s	**15.13**	**123**	*e*P			**Pn**	**16 26 49.2**	**+0.3**
GUN	**Gumba**	**15.24**	**121**	*e*P			**Pn**	**16 26 51.2**	**+1.0**
JIRN	**Jiri** comp=N,36nm,0.4s	**15.61**	**121**	*e*P			**Pn**	**16 26 54.5**	**-0.6**
VOSK	**Vostochnaya** comp=N,8.6nm,0.9s	**16.02**	**360**	⇓Pn			**Pn**	**16 26 58.7**	**-1.4**
ZRNK	**Zerenda** comp=N,7.3nm,0.6s	**16.31**	**355**	⇑Pn			**Pn**	**16 27 04.2**	**+0.4**
BVA0	**Borovoye Array** comp=N,0.8nm,0.7s,baz=186,slow=17,SNR=24	**16.33**	**358**	⇑Pn			**Pn**	**16 27 03.6**	**-0.4**
BVAR	**Borovoye Array** comp=N,1.1nm,0.3s,baz=162,slow=12,SNR=19	**16.33**	**358**	P			**Pn**	**16 27 03.0**	**-1.0**
RAMN	**Harate**	**16.34**	**122**	*e*P			**Pn**	**16 27 00.9**	**-3.5**
BRVK	**Borovoye** comp=N,9.7nm,0.8s	**16.36**	**358**	*e*Pn			**Pn**	**16 27 03.6**	**-0.9**
AKTK	**Aktyubinsk**	**16.65**	**330**	P			**Pn**	**16 27 07.7**	**-0.5**
AKTK				S			S	16 30 00.8	-21
AKTO	**Aktyubinsk** comp=N,1.7nm,0.6s	**16.65**	**330**	⇑Pn			**Pn**	**16 27 10.1**	**+1.9**
AKTO	**Aktyubinsk** comp=N,2.2nm,0.3s,baz=137,slow=8.3,SNR=32	**16.65**	**330**	P			**Pn**	**16 27 07.7**	**-0.5**
AKTO	comp=N,0.1nm,0.3s,baz=220,slow=20,SNR=3.6			S			S	16 30 00.8	-21
TAPN	**Taplejung** comp=N,18nm,0.4s	**16.86**	**119**	*e*P			**Pn**	**16 27 08.4**	**-2.5**
ODAN	**Odare** comp=N,26nm,0.8s	**16.94**	**121**	*e*P			**Pn**	**16 27 08.6**	**-3.3**
LSA	**Lhasa**	**18.14**	**107**	P			**Pn**	**16 27 32.3**	**+5.6**
ZAA0	**Zalesovo Array**	**19.69**	**25**	*e*P			**Pn**	**16 27 43.3**	**-1.8**
ZALV	**Zalesovo Beam**	**19.69**	**25**	P			**Pn**	**16 27 43.7**	**-1.4**
ZALV	**Zalesovo Beam** comp=N,5.1nm,0.3s,baz=217,slow=11,SNR=85	**19.69**	**25**	P			**Pn**	**16 27 43.7**	**-1.4**
GNI	**Garni** comp=N,6.0nm,0.8s	**20.93**	**288**	P			**P**	**16 27 59.9**	**+2.9**
ARU	**Arti** comp=N,4.5nm,0.6s,mb4.0	**21.47**	**341**	*e*P			**P**	**16 28 03.2**	**+0.5**
SONM	**Songino Array** comp=N,1.1nm,0.7s,mb3.6,baz=277,slow=9.5,SNR=6.0	**28.14**	**56**	P			**P**	**16 29 07.1**	**+1.1**
ULN	**Ulaanbaatar**	**28.58**	**56**	P			**P**	**16 29 11.3**	**+1.4**
BRTR	**Keskin Array B** comp=N,0.3nm,0.4s,mb3.4,baz=97,slow=8.4,SNR=4.9	**29.47**	**287**	P			**P**	**16 29 19.4**	**+1.5**
AKASG	**Malin Array Be** comp=N,0.8nm,0.3s,mb4.1,baz=82,slow=7.9,SNR=5.6	**32.89**	**309**	P			**P**	**16 29 47.9**	**0.0**
JOF	**Joensuu** comp=N,1.4nm,0.3s,mb4.4	**35.74**	**330**	*ep*			**P**	**16 30 12.4**	**0.0**
FINES	**FINESS Array B** comp=N,2.4nm,0.9s,mb4.0,baz=131,slow=10.0,SNR=4.8	**37.37**	**326**	P			**P**	**16 30 27.4**	**+1.1**
KEV	**Kevo** comp=N,0.6nm,0.4s,mb3.6	**40.65**	**338**	*ep*			**P**	**16 30 53.5**	**-0.1**
ARCES	**ARCESS Array B** comp=N,2.2nm,0.5s,mb4.1,baz=116,slow=8.2,SNR=24	**40.99**	**337**	P			**P**	**16 30 57.0**	**+0.6**
NOA	**NORSAR Array B**	**44.28**	**323**	P			**P**	**16 31 22.9**	**-0.2**
NOA	**NORSAR Array B** comp=N,1.6nm,0.6s,mb4.0,baz=96,slow=7.9,SNR=11	**44.28**	**323**	P			**P**	**16 31 22.9**	**-0.2**
ESDC	**Sonseca Array** comp=N,0.1nm,0.4s,mb3.2,baz=64,slow=7.5,SNR=6.1	**57.45**	**298**	P			**P**	**16 33 03.1**	**+0.5**
TORD	**Torodi Ar. Bea**	**65.82**	**269**	P			**P**	**16 33 58.0**	**-1.3**
TORD	**Torodi Ar. Bea** comp=N,0.5nm,0.5s,mb3.9,baz=52,slow=5.4,SNR=10	**65.82**	**269**	P			**P**	**16 33 58.0**	**-1.3**
ILAR	**Eielson Array**	**74.56**	**16**	P			**P**	**16 34 52.3**	**+0.4**
ILAR	**Eielson Array** comp=N,0.2nm,0.8s,mb3.1,baz=319,slow=4.9,SNR=4.1	**74.56**	**16**	P			**P**	**16 34 52.3**	**+0.4**
YKA	**Yellowknife Ar** comp=N,1.3nm,0.5s,mb4.1,baz=352,slow=5.1,SNR=4.1	**81.04**	**3**	P			**P**	**16 35 27.9**	**-0.1**

*IDC **16** 16:31:12.2±2.5, 4.01S×131.73E, h0km, mb3.7/3, mb1 3.8/5, mb1mx3.6/15, mbtmp3.6/5, ML3.5/2, Error ellipse: s-maj=117.9km s-min=26.2km az=69.0*

*NEIC **16** 16:31:18.7±3.1, 4.30S×131.09E, h35km±31km, mb4.4/1, Error ellipse: s-maj=26.4km s-min=15.8km az=216.0*

ISC 16 16:31:16.9±4.3, **4.27S**±0.07×**131.1E**±0.1, **h21**km±32km, **n12**, σ0**77**/**16**, **mb3.8**/4, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.49**	**171**	*e*Pn			**Pn**	**16 33 19.9**	**+1.2**
KAKA				*e*Sn			**Sn**	**16 34 54.0**	**0.0**
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=38,slow=11,SNR=17	**14.75**	**201**	Pn			**Pn**	**16 34 44.1**	**-0.3**
FITZ	0.1nm,0.3s,baz=168,slow=11,SNR=1.9			Sn			**Sn**	**16 37 22.1**	**-5.1**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=353,slow=13,SNR=8.8	**15.89**	**169**	Pn			**Pn**	**16 34 57.5**	**-1.9**
WRA				Sn			**Sn**	**16 37 50.0**	**-5.1**
	0.1nm,0.3s,baz=321,slow=7.4,SNR=3.3								
ASAR	**Alice Springs** 0.3nm,0.3s,baz=352,slow=11,SNR=38	**19.47**	**172**	P			**Pn**	**16 35 43.6**	**-0.2**
ASAR	0.0nm,0.3s,baz=354,slow=25,SNR=3.6			S			**Sn**	**16 39 22.0**	**+0.3**
CTAO	**Charters Tower**	**21.57**	**138**	*e*P			**P**	**16 36 05.9**	**+0.7**
HNR	**Honiara**	**29.09**	**102**	*e*P			**P**	**16 37 16.2**	**-0.1**
NWAO	**Narrogin (SRO)** 6.2nm,1.0s,mb4.4	**31.32**	**203**	P			**P**	**16 37 35.8**	**0.0**
CMAR	**Chiang Mai Arr** 1.1nm,0.9s,mb3.6,baz=139,slow=5.9,SNR=9.0	**38.91**	**306**	P			**P**	**16 38 42.6**	**+1.3**
MKAR	**Makanchi Array**	**66.58**	**326**	P			**P**	**16 42 05.6**	**+0.1**
MKAR	**Makanchi Array** 0.2nm,0.4s,mb3.5,baz=116,slow=8.2,SNR=3.7	**66.58**	**326**	P			**P**	**16 42 05.6**	**+0.1**
KURK	**Kurchatov**	**70.79**	**328**	P			**P**	**16 42 31.0**	**-0.6**
BVAR	**Borovoye Array** 0.6nm,0.8s,mb3.6,baz=122,slow=7.2,SNR=4.3	**76.36**	**327**	P			**P**	**16 43 03.8**	**-0.6**

GUC 16 16:59:44.3±0.7, **20.50S**×**69.46W**, **h118**km±4km, **MD3.5, ML3.1, 2C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**0.45**	**299**	⇓*i*P			Pn	17 00 02.8	+1.0
HMBC				*i* S			Sn	17 00 16.6	+1.8
HMBC	comp=E,358nm,0.2s			AML	AML		AML	17 00 20.0	
PB01	**Plate Boundary**	**0.55**	**182**	⇑*i*P			Pn	17 00 03.0	+0.7
PB01				*i* S			Sn	17 00 16.5	+0.6
PB01	comp=E,2μm,0.2s			AML	AML		AML	17 00 17.5	
PSGC	**Pisagua**	**1.09**	**325**	⇓*i*P			Pn	17 00 07.8	+0.8
PSGC				*i* S			Sn	17 00 25.2	+1.0
PSGC	comp=N,229nm,0.1s			AML	AML		AML	17 00 27.6	
MNMC	**Miæe Miæ**	**1.36**	**355**	*e*P			Pn	17 00 10.7	+0.6
MNMC				*i* S			Sn	17 00 31.0	+1.5
MNMC	comp=E,1μm,0.3s			AML	AML		AML	17 00 31.6	
PB04	**Plate Boundary**	**1.76**	**181**	*e*P			Pn	17 00 18.1	+3.4
PB04				*i* S			Sn	17 00 43.4	+5.5
PB04	comp=N,121nm,0.1s			AML	AML		AML	17 00 45.8	
CEN1	**Los Morros**	**2.96**	**193**	⇑*i*P			Pn	17 00 31.5	+1.5
CEN1				*i* S			Sn	17 01 09.3	+4.0
CEN1				*i* S			Sn	17 01 09.3	+4.0
CEN1	comp=E,13nm,0.5s			AML	AML		AML	17 01 29.0	

IDC 16 17:08:46.1±16.0, **21.21S**×**176.72W**, **h418**km±134km, **mb3.5**/4, **mb1 3.8**/4, **mb1mx3.4**/13, **mbtmp3.5**/4, **Error ellipse: s-maj=205.3km s-min=54.2km az=141.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ASAR	**Alice Springs** 3.0nm,0.7s,baz=89,slow=8.4,SNR=66	**45.52**	**257**	P			P	17 16 27.1	+0.5
WRA	**Warramunga Arr** 2.8nm,0.6s,baz=97,slow=7.6,SNR=43	**45.69**	**262**	P			P	17 16 27.2	-0.7
ILAR	**Eielson Array** 1.3nm,1.1s,baz=221,slow=4.4,SNR=5.2	**88.75**	**12**	P			P	17 20 53.5	+0.3
CMAR	**Chiang Mai Arr** 1.5nm,0.8s,baz=131,slow=2.5,SNR=10.0	**91.48**	**289**	P			P	17 21 06.8	-0.1
AKASG	**Malin Array Be** 1.3nm,0.5s,baz=46,slow=3.1,SNR=6.7	**144.21**	**332**	PKP			PKPdf	17 27 30.4	-2.5
BRTR	**Keskin Array B** 0.5nm,0.6s,baz=154,slow=5.1,SNR=3.7	**148.20**	**312**	PKPbc			PKPbc	17 27 43.5	-0.4
MMAI	**Mount Meron Ar** 1.2nm,0.5s,baz=54,slow=7.3,SNR=3.2	**149.20**	**299**	PKPbc			PKPbc	17 27 47.1	+0.5

*ISCJB **16** 17:11:33.7±0.6, 57.69N±0.08×154.9W±0.1, h91km±13km, mb3.5/2, Error ellipse: s-maj=17.1km s-min=6.7km az=140.9*

*IDC **16** 17:11:36.4±3.8, 57.98N×154.77W, h85km±60km, mb3.2/2, mb1 3.2/3, mb1mx3.0/21, mbtmp3.1/3, ML3.6/1, Error ellipse: s-maj=68.6km s-min=26.5km az=96.0*

*NEIC **16** 17:11:37.3, 57.70N×154.94W, h67km, ML2.9(AEIC), After AEIC.*

ISC 16 17:11:35.1±0.6, **57.68N**±0.08×**155.0W**±0.1, **h81**km±13km, **n17**, σ0**55**/**23**, **mb3.5**/2, **Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.01**	**116**	P			**Pn**	**17 11 54.2**	**0.0**
OHAK				S			**Sn**	**17 12 08.3**	**-0.2**
KDAK	**Kodiak Island**	**1.27**	**84**	P			**Pn**	**17 11 57.8**	**+0.4**
KDAK				S			**Sn**	**17 12 14.5**	**+0.2**
KDAK	**Kodiak Island** 12nm,0.3s,baz=265,slow=5.7,SNR=197	**1.27**	**84**	P			**Pn**	**17 11 57.8**	**+0.4**
KDAK	44nm,0.3s,baz=81,slow=23,SNR=88			S			**Sn**	**17 12 14.1**	**-0.2**
AUL	**Augustine Lava**	**1.88**	**24**	P			**Pn**	**17 12 05.6**	**+0.2**
CHGN	**Chignik**	**2.35**	**235**	*e*Pn			**Pn**	**17 12 11.6**	**+0.1**
CHGN				*e*Sn			**Sn**	**17 12 38.9**	**-0.6**
RSO	**Redoubt South**	**3.01**	**21**	*e*Pn			**Pn**	**17 12 21.0**	**+0.5**
SLKM	**Skilak Lake**	**3.74**	**39**	P			**Pn**	**17 12 30.5**	**+0.2**
SEW	**Seward**	**3.75**	**47**	*e*Pn			**Pn**	**17 12 29.6**	**-0.8**
SEW				*e*Sn			**Sn**	**17 13 08.3**	**-5.0**
SDPT	**Sand Point**	**3.85**	**235**	P			**Pn**	**17 12 32.6**	**+0.7**
RC01	**Rabbit Creek A**	**4.33**	**36**	P			**Pn**	**17 12 38.7**	**+0.3**
PMR	**Palmer**	**4.91**	**34**	P			**Pn**	**17 12 46.3**	**+0.1**
TRF	**Thorofare Moun**	**6.23**	**20**	P			**Pn**	**17 13 04.5**	**+0.3**
BMRM	**Bremner River**	**6.24**	**54**	P			**Pn**	**17 13 04.8**	**+0.5**
RND	**Reindeer**	**6.48**	**25**	P			**Pn**	**17 13 07.6**	**-0.1**
ILAR	**Eielson Array** 0.4nm,0.3s,baz=216,slow=14,SNR=11	**8.10**	**25**	P			**Pn**	**17 13 28.1**	**-1.6**
ILAR	0.3nm,0.3s,baz=211,slow=29,SNR=5.8			S			**Sn**	**17 14 52.9**	**-6.6**
SONM	**Songino Array** 0.5nm,0.7s,mb3.7,baz=46,slow=8.5,SNR=3.8	**55.34**	**306**	P			**P**	**17 21 00.6**	**+0.6**
MKAR	**Makanchi Array** 0.2nm,0.4s,mb3.3,baz=48,slow=6.5,SNR=4.0	**65.60**	**321**	P			**P**	**17 22 09.2**	**-0.7**

*NEIC **16** 17:41:51.4, 32.63S×71.95W, h15km, ML3.4(GUC), After GUC.*

GUC 16 17:41:51.4±0.5, **32.63S**×**71.95W**, **h15**km±3km, **MD3.5, ML3.4, 9C-10D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.47**	**147**	⇓*i*P			Pg	17 41 59.5	-1.3
IHA				*i* S			Sg	17 42 05.0	-2.2
IHA	**Instituto Hidr**	**0.47**	**147**	⇓*i*P			Pg	17 41 59.5	-1.3
IHA				*i* S			Sg	17 42 06.0	-2.2
CHNG	**Los Chungos**	**0.83**	**27**	*e*P			Pb	17 42 05.0	-2.6
CHNG				*i* S			Sg	17 42 15.3	-3.3
ROCH	**El Roble**	**0.86**	**114**	⇓*i*P			Pb	17 42 05.5	-2.5
ROCH				*i* S			Sb	17 42 16.5	-2.8
JACH	**Jahuel**	**1.14**	**93**	⇑*i*P			Pn	17 42 09.9	-2.9
JACH				*i* S			Sb	17 42 24.3	-3.2
JACH	**Jahuel**	**1.14**	**93**	⇑*i*P			Pn	17 42 09.9	-2.9
JACH				*i* S			Sb	17 42 24.3	-3.2
PEL	**Peldehue**	**1.18**	**116**	⇑*i*P			Pn	17 42 10.8	-2.5
PEL				*i* S			Sb	17 42 25.5	-3.1
PEL	comp=N,4μm,0.3s			AML	AML		AML	17 42 27.8	
TACH	**Talagante**	**1.33**	**141**	⇓*i*P			Pn	17 42 13.0	-2.4
TACH				*i* S			Sn	17 42 29.4	-3.5
TACH	**Talagante**	**1.33**	**141**	⇓*i*P			Pn	17 42 13.0	-2.4
TACH				*i* S			Sn	17 42 29.4	-3.5
SAN	**Santiago**	**1.36**	**128**	⇑*i*P			Pn	17 42 13.5	-2.3
SAN	**Santiago**	**1.36**	**128**	⇑*i*P			Pn	17 42 13.5	-2.3
LNV	**Longovilo**	**1.40**	**161**	⇑*i*P			Pn	17 42 13.7	-2.7
LNV				*i* S			Sn	17 42 31.0	-3.6
LNV	**Longovilo**	**1.40**	**161**	⇑*i*P			Pn	17 42 13.7	-2.7
LNV				*i* S			Sn	17 42 31.0	-3.6
CLCH	**Cerro Calan**	**1.41**	**123**	⇓*i*P			Pn	17 42 14.2	-2.3
CLCH				*i* S			Sn	17 42 31.9	-3.0
CLCH	comp=E,733nm,0.5s			AML	AML		AML	17 42 38.3	
ANTU	**Antumapu**	**1.45**	**131**	*e*P			Pn	17 42 15.0	-2.1
ANTU				*i* S			Sn	17 42 32.8	-3.0
ANTU	**Antumapu**	**1.45**	**131**	*e*P			Pn	17 42 15.0	-2.1
ANTU				*i* S			Sn	17 42 32.8	-3.0
ANTU	comp=E,636nm,0.3s			AML	AML		AML	17 42 38.7	
PCH	**Pirque**	**1.56**	**130**	⇓*i*P			Pn	17 42 16.9	-1.7
PCH				*i* S			Sn	17 42 36.2	-2.3
PCH	**Pirque**	**1.56**	**130**	⇓*i*P			Pn	17 42 16.9	-1.7
PCH				*i* S			Sn	17 42 36.2	-2.3
CHCH	**Chadas Angostu**	**1.69**	**141**	*e*P			Pn	17 42 18.9	-1.5
CHCH				*i* S			Sn	17 42 39.5	-2.3
CHCH	**Chadas Angostu**	**1.69**	**141**	*e*P			Pn	17 42 18.9	-1.5
CHCH				*i* S			Sn	17 42 39.5	-2.3
CACH	**El Canelo**	**1.86**	**143**	⇓*i*P			Pn	17 42 22.3	-0.5
CACH				*i* S			Sn	17 42 46.0	0.0
CACH	**El Canelo**	**1.86**	**143**	⇓*i*P			Pn	17 42 22.3	-0.5
CACH				*i* S			Sn	17 42 46.0	0.0
LMEL	**Las Melosas**	**1.90**	**130**	⇑*i*P			Pn	17 42 22.5	-0.8
LMEL				*i* S			Sn	17 42 45.8	-1.2
LMEL	**Las Melosas**	**1.90**	**130**	⇑*i*P			Pn	17 42 22.5	-0.8
LMEL				*i* S			Sn	17 42 45.8	-1.2
LMEL				AML	AML		AML	17 42 49.1	
	comp=E,609nm,0.1s								

*IDC **16** 17:58:41.0±1.1, 51.92N×98.39E, h0km, mb3.6/5, mb1 3.5/10, mb1mx3.4/26, mbtmp3.4/10, ML2.9/4, MS2.6/1, Ms1 2.6/1, ms1mx2.1/31, Error ellipse: s-maj=22.3km s-min=12.7km az=175.0*

*BJI **16** 17:58:40.3, 52.68N×97.72E, h17km, mb4.0/3, Ms3.9/3, Ms7 3.7/2*

*ASRS **16** 17:58:40.4±3.7, 52.45N×98.17E, h15km, Ms3.6/3*

*ISCJB **16** 17:58:41.9±1.3, 52.28N±0.06×98.29E±0.05, h12km±9km, mb3.9/7, Error ellipse: s-maj=11.0km s-min=5.1km az=7.3*

*NEIC **16** 17:58:42.0±0.6, 51.95N×98.45E, h10km, mb4.3/3, Error ellipse: s-maj=16.9km s-min=8.9km az=186.0*

*MOS **16** 17:58:41.0±2.0, 52.09N×98.30E, h14km, mb4.5/5, Error ellipse: s-maj=13.1km s-min=10.2km az=6.4*

ISC 16 17:58:42.2±1.2, **52.22N**±0.06×**98.32E**±0.04, **h5**km±9km, **n46**, σ1s**25**/**53**, **mb3.9**/7, **1D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ORL	**Orlik**	**0.97**	**70**	⇓*i*PG			**Pg**	**17 58 59.8**	**-1.0**
ORL				*e*				17 59 13.8	
ORL	comp=E,1μm,0.5s			pmax	pmax				
ORL	comp=N,2μm,0.6s			smax					
MOY	**Mondy**	**1.75**	**108**	*e*PN			**Pn**	**17 59 12.7**	**-0.5**
MOY				*e*				17 59 36.5	
MOY	comp=Z,332nm,0.5s			pmax	pmax				
MOY	comp=N,10μm,1.3s			smax					
ARS	**Arshan**	**2.55**	**95**	*e*PN			**Pn**	**17 59 26.8**	**+2.6**
ARS				*e*				18 00 01.9	
ARS	comp=Z,1μm,0.5s			pmax	pmax				
ARS	comp=N,8μm,0.6s			smax					
TLY	**Talaya**	**3.34**	**97**	*e*Pn			**Pn**	**17 59 40.3**	**+5.2**
TLY				*e*Sn			**Sn**	**18 00 16.3**	**+1.2**
TLY	**Talaya**	**3.34**	**97**	*i* P			**Pn**	**17 59 40.3**	**+5.2**
TLY				*e*				18 00 23.9	
TLY	comp=Z,50nm,0.4s			pmax	pmax				
TLY	comp=N,500nm,0.4s			smax					
ZAK	**Zakamensk**	**3.62**	**119**	*e*PN			**Pn**	**17 59 37.9**	**-1.0**
ZAK				*e*				17 59 45.4	
ZAK				*e*				18 00 33.7	
ZAK	comp=Z,81nm,0.6s			pmax	pmax				
ZAK	comp=E,724nm,1.1s			smax					
IRK	**Irkutsk**	**3.66**	**87**	*e*PN			**Pb**	**17 59 46.3**	**-1.1**
IRK				*e*				18 00 33.7	
IRK	comp=Z,259nm,0.4s			pmax	pmax				
IRK	comp=N,2μm,0.4s			smax					
KAB	**Kabansk**	**5.14**	**89**	*e*PN			**Pb**	**18 00 13.9**	**+1.4**
KAB				*e*				18 01 21.8	
KAB	comp=Z,250nm,1.1s			pmax	pmax				
KAB	comp=N,3μm,1.4s			smax					
SONM	**Songino Array** comp=N,0.1nm,0.3s,baz=270,slow=8.6,SNR=2.8	**6.81**	**127**	Pn			**Pn**	**18 00 19.6**	**-3.1**
SONM	comp=N,3.4nm,0.3s,baz=309,slow=17,SNR=30			Pg			**Pb**	**18 00 41.3**	**+0.4**
SONM	comp=N,9.9nm,0.3s,baz=299,slow=29,SNR=8.7			Lg				18 02 11.5	
SONM	comp=N,46nm,18.7s,baz=150,slow=40			LR	LR			18 03 05.2	
SONM	**Songino Array**	**6.81**	**127**	PN			**Pn**	**18 00 19.6**	**-3.1**
SONM								18 00 41.3	
SONM	comp=Z,3.0nm,0.3s			pmax	pmax				
ULN	**Ulaanbaatar**	**7.12**	**124**	*e*PN			**Pn**	**18 00 28.7**	**+1.8**
ELT	**Yel'tsovka**	**7.41**	**283**	*i* P			**Pb**	**18 00 51.3**	**+0.2**
ELT	**Yel'tsovka**	**7.41**	**283**	*i* Pg			**Pb**	**18 00 51.3**	**+0.2**
ELT				*e*Sg			**Sb**	**18 02 28.4**	**+8.8**
NIZ	**Nizh Angarsk**	**7.51**	**57**	*e*P			**Pn**	**18 00 33.5**	**+1.2**
ZALV	**Zalesovo Beam** comp=Z,0.1nm,0.3s,baz=73,sl

	comp=E,9.0nm,10.0s						
KSH	**Kashi**	**19.99**	**239**	*e*P	**Pn**	**18 03 17.4**	**+0.4**
KSH				*e*pP	pP	18 03 21.1	+4.4
KSH				*e*PP		18 03 35.1	
KSH				*e*S	**Sn**	**18 06 55.3**	**-6.6**
KSH				*e*PcP	PcP	18 07 33.5	+2.1
KSH				*e*ScP	ScP	18 11 08.1	+0.1
KSH				*e*PcS	PcS	18 11 10.0	+1.3
KSH				*e*ScS	ScS	18 14 48.1	-2.3
KSH				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,78nm,3.1s						
KSH				LR	LR		
	comp=N,85nm,7.0s						
KSH				LR	LR		
	comp=E,91nm,5.2s						
KSH				LR	LR		
	comp=Z,86nm,5.0s						
ARU	**Arti**	**23.32**	**296**	*e*P	**P**	**18 03 51.1**	**+0.2**
	comp=Z,10nm,1.4s,mb4.1						
ARU	**Arti**	**23.32**	**296**	*e*P	**P**	**18 03 51.1**	**+0.2**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.0						
AKTK	**Aktyubinsk**	**25.02**	**282**	P	**P**	**18 04 07.2**	**+0.4**
AKTO	**Aktyubinsk**	**25.02**	**282**	P	**P**	**18 04 07.2**	**+0.4**
	comp=Z,2.1nm,0.5s,mb3.9,baz=83,slow=11,SNR=6.7						
AKTO	**Aktyubinsk**	**25.02**	**282**	P	**P**	**18 04 07.2**	**+0.4**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
YSS	**Yuzh-Sakhalins**	**28.93**	**83**	*e*P	**P**	**18 04 39.8**	**-2.1**
	comp=Z,51nm,1.4s,mb5.1						
YSS	**Yuzh-Sakhalins**	**28.93**	**83**	*e*P	**P**	**18 04 39.8**	**-2.2**
YSS				pmax	pmax		
	comp=Z,51nm,1.4s,mb5.1						
MAJO	**Matsushiro**	**32.06**	**103**	P	**P**	**18 05 04.8**	**-5.0**
FINES	**FINESS Array B**	**38.59**	**313**	P	**P**	**18 06 08.4**	**+2.8**
	comp=Z,2.2nm,0.9s,mb3.9,baz=103,slow=12,SNR=4.1						
FINES	**FINESS Array B**	**38.59**	**313**	P	**P**	**18 06 08.4**	**+2.8**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**45.19**	**281**	P	**P**	**18 07 00.4**	**+0.5**
	comp=Z,0.7nm,0.7s,mb3.6,baz=66,slow=6.0,SNR=6.5						
BRTR	**Keskin Array B**	**45.19**	**281**	P	**P**	**18 07 00.4**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**45.26**	**317**	P	**P**	**18 07 01.2**	**+1.1**
	comp=Z,1.2nm,0.9s,mb3.7,baz=62,slow=7.8,SNR=3.9						
NOA	**NORSAR Array B**	**45.26**	**317**	P	**P**	**18 07 01.2**	**+1.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR	**Eielson Array**	**53.01**	**29**	P	**P**	**18 07 59.2**	**-0.1**
	comp=Z,0.2nm,0.7s,mb3.1,baz=308,slow=3.3,SNR=3.0						

IDC 16 18:05:53.8±6.7, 11°26S×163°92E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.8/14, mbtmp3.8/4, Error ellipse: s-maj=179.5km s-min=44.9km az=119.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**19.13**	**241**	P	Pn	18 10 23.1	+3.7
	0.3nm,0.3s,baz=79,slow=11,SNR=7.7						
WRA	**Warramunga Arr**	**29.73**	**249**	P	P	18 12 01.9	-0.1
	0.9nm,0.8s,baz=80,slow=9.5,SNR=4.4						
ASAR	**Alice Springs**	**31.10**	**243**	P	P	18 12 14.5	+0.3
	1.9nm,0.8s,baz=71,slow=10.0,SNR=18						
CMAR	**Chiang Mai Arr**	**70.56**	**294**	P	P	18 17 11.1	-0.1
	0.3nm,0.7s,baz=118,slow=5.2,SNR=4.3						
MKAR	**Makanchi Array**	**92.46**	**317**	P	P	18 19 06.8	+0.1
	0.3nm,0.7s,baz=102,slow=6.0,SNR=3.3						

*IDC **16** 18:16:59.7±1.5,6°99S×150°62E, h0km, mb4.0/9, mb1 4.2/9, mb1mx4.1/15, mbtmp4.1/9, MS3.3/4, Ms1 3.3/4, ms1mx2.9/23, Error ellipse: s-maj=51.9km s-min=19.5km az=113.0*

*ISCJB **16** 18:17:01.1±6.2,7°0S±0°1×150°5E±0°1, h16km±43km, mb4.2/13, MS3.3/3, Error ellipse: s-maj=27.8km s-min=14.6km az=35.8*

*NEIC **16** 18:17:05.5±0.7,7°06S×150°59E, h40km, mb4.5/5, Error ellipse: s-maj=22.5km s-min=9.4km az=115.0*

ISC 16 18:17:03.0±5.9, 7°0S±0°1×150°6E±0°1, h19km±37km, n21, σ0s80/19, mb4.2/13, MS3.3/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.14**	**234**	*e*Pn	**Pn**	**18 18 06.1**	**+0.8**
PMG				*e*Sn	**Sn**	**18 18 52.9**	**-0.3**
CTA	**Charters Tower**	**13.67**	**197**	LR	LR	18 24 23.4	
	comp=Z,58nm,19.4s,baz=54,slow=32						
WRA	**Warramunga Arr**	**20.34**	**229**	P	**P**	**18 21 37.8**	**-0.6**
	5.4nm,0.8s,baz=48,slow=10,SNR=39						
GUMO	**Guam**	**21.23**	**345**	LR	LR	18 29 16.3	
	comp=Z,44nm,19.6s,MS2.9,baz=187,slow=35						
ASAR	**Alice Springs**	**23.04**	**222**	P	**P**	**18 22 06.7**	**-0.6**
	1.9nm,0.5s,mb3.8,baz=56,slow=8.7,SNR=49						
STKA	**Stephens Creek**	**26.13**	**198**	*e*P	**P**	**18 22 34.7**	**-1.3**
	1.3nm,1.0s,mb3.4						
STKA				LR	LR	18 32 46.4	
STKA	**Stephens Creek**	**26.13**	**198**	P	**P**	**18 22 36.3**	**+0.4**
	2.3nm,0.7s,mb3.8,baz=15,slow=10,SNR=4.0						
STKA				LR	LR	18 32 46.3	
	comp=Z,92nm,20.4s,MS3.3,baz=205,slow=36						
FITZ	**Fitzroy Crossi**	**26.68**	**243**	P	**P**	**18 22 41.3**	**+0.2**
	3.5nm,0.4s,mb4.2,baz=69,slow=6.8,SNR=22						
URZ	**Urewera**	**39.31**	**146**	LR	LR	18 37 15.4	
	comp=Z,118nm,20.0s,MS3.7,baz=323,slow=31						
MAJO	**Matsushiro**	**44.84**	**346**	*e*P	**P**	**18 25 14.4**	**-1.6**
	6.5nm,1.0s,mb4.4						
KULM	**Kulim**	**51.29**	**282**	*e*P	**P**	**18 26 02.7**	**-3.7**
	7.7nm,0.9s,mb4.6						
SONM	**Songino Array**	**67.03**	**329**	P	**P**	**18 27 55.4**	**+0.6**
	0.7nm,0.5s,mb3.9,baz=136,slow=3.1,SNR=7.3						
MK31	**Makanchi Array**	**80.54**	**320**	*e*P	**P**	**18 29 15.0**	**+1.0**
MKAR	**Makanchi Array**	**80.54**	**320**	P	**P**	**18 29 14.3**	**+0.2**
	0.4nm,0.7s,mb3.5,baz=90,slow=8.6,SNR=4.3						
ZALV	**Zalesovo Beam**	**81.76**	**327**	P	**P**	**18 29 20.0**	**-0.4**
	0.3nm,0.3s,mb3.7,baz=85,slow=4.6,SNR=2.7						
QSPA	**South Pole Qui**	**82.97**	**180**	*e*P	**P**	**18 29 27.1**	**+0.8**
	2.9nm,0.9s,mb4.3						
MCK	**McKinley**	**83.74**	**23**	*e*P	**P**	**18 29 30.4**	**-0.1**
	10nm,1.1s,mb4.9						
KURK	**Kurchatov**	**84.14**	**323**	*e*P	**P**	**18 29 32.7**	**-0.1**
	4.5nm,1.2s,mb4.5						
AAK	**Ala-Archa**	**84.58**	**314**	*e*P	**P**	**18 29 36.8**	**+1.6**
ILAR	**Eielson Array**	**85.02**	**22**	P	**P**	**18 29 36.5**	**-0.4**
	2.2nm,0.8s,mb4.3,baz=255,slow=5.1,SNR=24						
BVAR	**Borovoye Array**	**89.67**	**323**	P	**P**	**18 29 59.4**	**-0.3**
	0.6nm,0.5s,mb4.2,baz=112,slow=3.5,SNR=6.1						

MAN 16 18:18:14, 18°55N×120°64E, h16km, mb4.1, ML2.9, MS2.6, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APYP	**Conner**	**0.90**	**140**	*e*P	Pb	18 18 31.4	+0.2
APYP				*e*S	Sb	18 18 44.1	+1.2
ABRA	**Dolores**	**0.90**	**175**	*e*P	Pb	18 18 29.3	-1.9
ABRA				*e*S	Sb	18 18 48.0	+5.0
SGCP	**Mt. Cagua**	**1.37**	**103**	*e*P	Pn	18 18 37.7	-0.8
CAUP	**Cauayan**	**1.96**	**145**	*e*P	Pn	18 18 48.5	+1.9
BALP	**Baler**	**2.93**	**162**	*e*P	Pn	18 19 01.1	+1.1

*VIE **16** 18:27:40.3±5.6, 43°97N×18°13E, h10km, mb2.9/1, ML2.1/1, Error ellipse: s-maj=64.5km s-min=8.0km az=167.0 28 km NW of Sarajevo*

*ISCJB **16** 18:27:42.8±0.5, 44°13N±0°02×17°85E±0°04, h13km±5km, Error ellipse: s-maj=4.5km s-min=3.8km az=141.5*

*CSEM **16** 18:27:43.0±0.2, 44°14N×17°78E, h10km, ML2.5, Error ellipse: s-maj=5.5km s-min=3.6km az=71.0*

*BEO **16** 18:27:44.2±0.4, 44°14N×17°77E, h22km±5km, ML2.5/5*

ISC 16 18:27:43.8±0.5, 44°12N±0°03×17°81E±0°04, h15km±5km, n31, σ1s03/50, 12C-5D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLY	**Banja Luka**	**0.77**	**325**	⇑*i*Pg	**Pg**	**18 27 58.3**	**-0.5**
BLY				*i* Sg	**Sg**	**18 28 10.9**	**+2.0**
BLY	**Banja Luka**	**0.77**	**325**	⇑*i*Pg	**Pg**	**18 27 58.3**	**-0.5**
BBLS	**Lazići**	**1.18**	**102**	⇑*i*Pg	**Pg**	**18 28 05.7**	**-0.9**
BBLS				*i* Sg	**Sg**	**18 28 23.4**	**+1.4**
BBLS	**Lazići**	**1.18**	**102**	⇑*i*Pg	**Pg**	**18 28 05.7**	**-0.9**
BBLS				*i* Sg	**Sg**	**18 28 23.4**	**+1.4**
STON	**Ston**	**1.25**	**184**	*e*Pg	**Pg**	**18 28 06.4**	**-1.5**
STON				Sg	**Sg**	**18 28 25.0**	**+0.7**
STON	**Ston**	**1.25**	**184**	*e*Pg	**Pg**	**18 28 06.4**	**-1.6**
STON				Sg	**Sg**	**18 28 25.0**	**+0.7**
TREB	**Trebinje**	**1.46**	**164**	⇑*i*Pg	**Pg**	**18 28 11.1**	**-0.8**
TREB				*i* Sg	**Sg**	**18 28 31.2**	**+0.3**
TREB	**Trebinje**	**1.46**	**164**	⇑*i*Pg	**Pg**	**18 28 11.1**	**-0.8**
DIVS	**Divibare**	**1.57**	**90**	*e*Pn	**Pn**	**18 28 11.0**	**-0.2**
DIVS				*i* Sg	**Sg**	**18 28 34.8**	**+0.3**
DIVS	**Divibare**	**1.57**	**90**	*e*Pn	**Pn**	**18 28 11.0**	**-0.2**
DIVS				*i* Sg	**Sg**	**18 28 34.8**	**+0.3**
FGSL	**Fruska Gora**	**1.77**	**53**	⇑*i*Pn	**Pn**	**18 28 13.0**	**-0.8**
FGSL				*i* Sg	**Sg**	**18 28 40.4**	**-0.2**
FRGS	**Fruska Gora**	**1.77**	**53**	⇑*i*Pn	**Pn**	**18 28 13.0**	**-0.8**
FRGS				*i* Sg	**Sg**	**18 28 40.4**	**-0.2**
RHK3	**Tenkes**	**1.79**	**10**	*e*Pn	**Pn**	**18 28 11.4**	**-2.8**
RHK3				*e*Sn	**Sn**	**18 28 38.4**	**+1.7**
TRUS	**Trudelj**	**1.87**	**86**	⇓*i*Pn	**Pn**	**18 28 15.9**	**+0.6**
TRUS				*i* Sg	**Sg**	**18 28 44.8**	**+0.7**
TRUS	**Trudelj**	**1.87**	**86**	⇓*i*Pn	**Pn**	**18 28 15.9**	**+0.6**
TRUS				*i* Sg	**Sg**	**18 28 44.8**	**+0.7**
PDG	**Podgorica**	**2.00**	**147**	⇑*i*Pn	**Pn**	**18 28 17.9**	**+0.9**
PDG				*i* Sg	**Sg**	**18 28 48.5**	**+0.4**
PDG	**Podgorica**	**2.00**	**147**	⇑*i*Pn	**Pn**	**18 28 17.9**	**+0.9**
PDG				*i* Sg	**Sg**	**18 28 48.5**	**+0.4**
NVLJ	**Novalja**	**2.15**	**283**	*i* Pn	**Pn**	**18 28 21.8**	**+2.7**
NVLJ				Sn	**Sn**	**18 28 52.1**	**+6.6**
NVLJ	**Novalja**	**2.15**	**283**	*i* Pn	**Pn**	**18 28 21.8**	**+2.7**
PKSM	**Moragy**	**2.17**	**15**	⇓*i*P	**P**	**18 28 17.8**	**-1.6**
PKSM	**Moragy**	**2.17**	**15**	⇓*i*Pn	**Pn**	**18 28 17.9**	**-1.5**
PKS9	**Tamasi**	**2.49**	**8**	*e*Pn	**Pn**	**18 28 22.6**	**-1.1**
BZS	**Buzias**	**3.09**	**60**	⇓*i*P	**Pn**	**18 28 32.2**	**+0.2**
PKSG		**3.29**	**7**	⇑*e*Pn	**Pn**	**18 28 34.2**	**-0.6**
VOY	**Vojsko**	**3.37**	**306**	*e*Pn	**Pg**	**18 28 47.7**	**-0.6**
VOY				*e*Sn	**Sg**	**18 29 37.5**	**+5.6**
ARSA	**Arzberg**	**3.51**	**334**	⇑*i*Pn	**Pn**	**18 28 38.3**	**+0.5**
ARSA	**Arzberg**	**3.51**	**334**	Pn	**Pn**	**18 28 38.3**	**+0.5**
VYHS	**Vyhne**	**4.43**	**9**	*e*PN	**Pn**	**18 28 49.8**	**-0.6**
VYHS				*e*SN	**Sn**	**18 29 42.8**	**+1.2**
VYHS	**Vyhne**	**4.43**	**9**	*e*Pn	**Pn**	**18 28 49.8**	**-0.6**
VYHS				*e*Sn	**Sn**	**18 29 42.8**	**+1.2**
KOLL	**Kolacno**	**4.48**	**5**	*e*PN	**Pn**	**18 28 50.8**	**-0.2**
KOLL	**Kolacno**	**4.48**	**5**	*e*Pn	**Pn**	**18 28 50.8**	**-0.2**

*ISCJB **16** 18:30:35.1±0.4, 7°41S±0°07×120°24E±0°05, h385km±7km, mb3.5/5, Error ellipse: s-maj=10.5km s-min=8.4km az=174.5*

*NEIC **16** 18:30:35.9±1.1, 7°19S×120°39E, h392km±15km, mb4.0/1, Error ellipse: s-maj=31.0km s-min=12.5km az=69.0*

*IDC **16** 18:30:35.1±2.5, 7°42S×120°15E, h374km±29km, mb3.2/5, mb1 3.3/7, mb1mx3.1/19, mbtmp3.2/7, Error ellipse: s-maj=38.6km s-min=11.8km az=61.0*

*DJA **16** 18:30:36, 7°50S×120°26E, h366km, mb4.4/9*

ISC 16 18:30:35.9±0.4, 7°44S±0°06×120°26E±0°05, h378km±7km, n28, σ0s91/31, mb3.5/5, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKSI	**Bulukumba**	**2.10**	**356**	P	**Pn**	**18 31 30.7**	**+0.2**
MMRI	**Maumere**	**2.29**	**122**	P	**Pn**	**18 31 30.7**	**-1.1**
KAPI	**Kappang**	**2.46**	**348**	Pn	**Pn**	**18 31 33.3**	**+0.2**
	3µm,0.5s,SNR=54						
KAPI	**Kappang**	**2.46**	**348**	*e*Pn	**Pn**	**18 31 33.0**	**-0.1**
KAPI				*e*S	**S**	**18 32 17.6**	**-1.5**
SPSI	**Sidrap Palu**	**3.48**	**352**	P	**Pn**	**18 31 42.7**	**+1.0**
KDI	**Kendari**	**4.18**	**34**	P	**Pn**	**18 31 48.9**	**+0.5**
TTSI	**Tana Toraja**	**4.38**	**354**	P	**Pn**	**18 31 50.9**	**+0.4**
KHKI	**Kahang-Kahang**	**4.70**	**258**	P	**Pn**	**18 31 53.9**	**+0.2**
SRBI	**Singaraja**	**5.05**	**262**	P	**Pn**	**18 31 57.9**	**+0.6**
	0.3nm75nm,1.9s						
BYJI	**Banyuwangi**	**5.90**	**262**	P	**Pn**	**18 32 05.9**	**-0.7**
	1.0nm206nm,1.3s						
GMJI	**Gumukmas**	**6.81**	**263**	P	**Pn**	**18 32 16.6**	**-0.2**
	0.3nm44nm,0.7s						
NLAI	**Namlea**	**7.98**	**59**	P	**Pn**	**18 32 31.8**	**+1.5**
	684nm29nm,0.7s						
MRSI	**Marisa**	**8.04**	**12**	P	**Pn**	**18 32 31.0**	**+0.1**
	426nm59nm,0.8s						
PWJI	**Pagerwojo**	**8.40**	**265**	P	**Pn**	**18 32 34.9**	**-0.3**
	71nm,2.1s						
SJI	**Sawahan**	**8.43**	**267**	P	**Pn**	**18 32 36.7**	**+1.2**
	4µm142nm,0.7s						
PCJI	**Pacitan**	**9.03**	**265**	P	**Pn**	**18 32 42.2**	**-0.4**
	93nm,2.4s						
UGM	**Wanagama**	**9.66**	**267**	P	**Pn**	**18 32 50.3**	**+0.3**
FITZ	**Fitzroy Crossi**	**11.82**	**154**	P	**Pn**	**18 33 15.3**	**+0.1**
	0.6nm,0.3s,baz=331,slow=8.1,SNR=17						
KAKA	**Kakadu**	**13.08**	**115**	*e*P	**P**	**18 33 28.6**	**+0.2**
MBWA	**Marble Bar**	**13.65**	**182**	*e*P	**P**	**18 33 37.9**	**+3.4**
KKM	**Kota Kinabalu**	**13.99**	**343**	*e*P	**P**	**18 33 34.8**	**-3.4**
WRA	**Warramunga Arr**	**18.46**	**134**	P	**P**	**18 34 26.1**	**-0.3**
	0.4nm,0.3s,baz=315,slow=11,SNR=18						
WRA				S	**S**	**18 37 35.0**	**-2.1**
	0.1nm,0.3s,baz=308,slow=19,SNR=4.0						
ASAR	**Alice Springs**	**20.78**	**142**	P	**P**	**18 34 49.2**	**+0.3**
	3.5nm,0.6s,baz=319,slow=9.0,SNR=85						
ASAR				S	**S**	**18 38 17.7**	**+2.0**
	0.4nm,0.8s,baz=325,slow=24,SNR=4.1						
NWAO	**Narrogin (SRO)**	**25.52**	**186**	P	**P**	**18 35 30.7**	**-0.9**
	3.6nm,0.7s,mb3.7,baz=17,slow=11,SNR=3.2						
STKA	**Stephens Creek**	**31.41**	**144**	P	**P**	**18 36 24.1**	**+0.6**
	2.6nm,0.4s,mb3.9,baz=311,slow=8.6,SNR=19						
MAJO	**Matsushiro**	**46.88**	**20**	P	**P**	**18 38 24.1**	**-5.6**
	10nm,1.2s,mb3.9						
SONM	**Songino Array**	**56.38**	**349**	P	**P**	**18 39 38.2**	**-0.8**
	0.4nm,0.7s,mb2.8,baz=158,slow=9.2,SNR=3.0						
MKAR	**Makanchi Array**	**63.66**	**332**	P	**P**	**18 40 27.8**	**-0.2**
	0.2nm,0.5s,mb3.0,baz=140,slow=7.9,SNR=5.8						

*IDC **16** 18:33:37.4±9.2, 33°35S×178°74W, h49km±91km, mb3.3/2, mb1 3.6/3, mb1mx3.5/13, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=85.9km s-min=60.3km az=160.0*

ISC 16 18:33:35.5±2.6, 33°3S±0°1×178°7W±0°4, h35km, n10, σ0s74/9, mb3.4/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNGZ	**Carnagh Statio**	**5.73**	**205**	*e*PN	**Pn**	**18 34 58.4**	**+0.4**
MWZ	**Matawai**	**5.87**	**211**	*e*PN	**Pn**	**18 34 59.5**	**-0.4**
URZ	**Urewera**	**6.00**	**214**	P	**Pn**	**18 35 03.2**	**+1.6**
	1.7nm,0.3s,baz=218,slow=22,SNR=16						
URZ				S	**Sn**	**18 36 09.9**	**+0.9**
	2.6nm,0.3s,baz=300,slow=21,SNR=6.2						
URZ	**Urewera**	**6.00**	**214**	*e*PN	**Pn**	**18 35 01.2**	**-0.4**
URZ				SN	**Sn**	**18 36 08.0**	**-1.0**
KNZ	**Kokohu**	**6.40**	**207**	*e*PN	**Pn**	**18 35 06.7**	**-0.5**
NNZ	**Nelson**	**10.10**	**217**	*e*SN	Sx	18 37 43.4	
MQZ	**McQueen's Vall**	**12.38**	**211**	*e*SN	Sx	18 38 33.5	
ASAR	**Alice Springs**	**42.48**	**270**	P	**P**	**18 41 28.2**	**+0.8**
	0.3nm,0.6s,mb3.1,baz=107,slow=7.7,SNR=3.0						
WRA	**Warramunga Arr**	**43.74**	**276**	P	**P**	**18 41 36.8**	**-0.8**
	0.4nm,0.3s,mb3.6,baz=116,slow=8.0,SNR=4.7						
FINES	**FINESS Array B**	**147.68**	**338**	PKPbc	PKPbc	18 53 14.7	-0.7
	1.4nm,0.7s,baz=27,slow=4.7,SNR=8.4						

IDC 16 18:36:27.2±1.6, 6°79S×150°92E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/14, mbtmp3.8/5, Error ellipse: s-maj=69.3km s-min=26.5km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.73**	**229**	P	P	18 41 08.9	-0.6
	1.1nm,0.6s,baz=56,slow=11,SNR=5.7						
ASAR	**Alice Springs**	**23.43**	**222**	P	P	18 41 38.8	+0.5
	0.8nm,0.7s,baz=57,slow=8.9,SNR=6.7						
STKA	**Stephens Creek**	**26.43**	**198**	P	P	18 42 05.9	+0.1
	2.6nm,0.8s,baz=26,slow=13,SNR=3.2						
FITZ	**Fitzroy Crossi**	**27.08**	**243**	P	P	18 42 11.5	-0.3
	2.2nm,0.7s,baz=70,slow=9.5,SNR=6.5						
ILAR	**Eielson Array**	**84.70**	**22**	P	P	18 49 03.0	+0.3
	0.8nm,0.8s,baz=260,slow=4.8,SNR=8.0						

*IDC **16** 18:58:43.7±0.8, 11°16N×126°64E, h0km, mb3.9/13, mb1 4.0/13, mb1mx3.9/20, mbtmp3.9/13, MS2.8/1, Ms1 2.8/1, ms1mx1.9/30, Error ellipse: s-maj=42.7km s-min=15.5km az=67.0*

*ISCJB **16** 18:58:46.8±0.6, 11°19N±0°07×126°66E±0°09, h33km, mb4.0/15, Error ellipse: s-maj=13.2km s-min=9.3km az=150.3*

*MAN **16** 18:58:51, 11°55N×126°38E, h28km, mb4.9, ML3.9, MS3.9*

*NEIC **16** 18:58:56.3±0.5, 10°99N×126°30E, h100km, mb4.8/2, Error ellipse: s-maj=22.5km s-min=9.9km az=70.0*

ISC 16 18:58:49.4±0.6, 11°15N±0°08×126°45E±0°10, h35km, n30, σ1s07/31, mb4.0/15, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**1.09**	**294**	*e*P	**Pn**	**18 59 07.7**	**-0.5**
OCLP	**Ormoc**	**1.81**	**267**	*e*P	**Pn**	**18 59 20.2**	**+2.1**
CNP	**Catarman**	**2.21**	**308**	*e*P	**Pn**	**18 59 23.1**	**-0.6**
CNP				*e*S	**Sn**	**18 59 46.0**	**-3.8**
BUTP	**Butuan**	**2.32**	**201**	*e*P	**Pn**	**18 59 33.5**	**+8.3**
TBP	**Tagbilaran**	**2.93**	**241**	*e*P	**Pn**	**18 59 35.5**	**+2.0**
TBP				*e*S	**Sn**	**19 00 01.5**	**-6.1**
PVCP	**Virac**	**3.31**	**317**	*e*P	**Pn**	**18 59 36.9**	**-1.8**
BUKP	**Musuan**	**3.53**	**203**	*e*P	**Pn**	**18 59 49.5**	**+7.7**
GUIM	**Jordan**	**3.83**	**262**	*e*P	**Pn**	**18 59 51.2**	**+5.3**
GUMO	**Guam**	**18.15**	**80**	LR	LR	19 08 23.4	
	comp=Z,30nm,20.8s,baz=275,slow=32						
CMAR	**Chiang Mai Arr**	**27.54**	**289**	P	**P**	**19 04 34.1**	**+0.9**
	0.3nm,0.6s,mb3.1,baz=101,slow=8.4,SNR=3.7						
WRA	**Warramunga Arr**	**31.86**	**166**	P	**P**	**19 05 10.1**	**-1.3**
WRA	**Warramunga Arr**	**31.86**	**166**	P	**P**	**19 05 10.1**	**-1.3**
	1.2nm,0.7s,mb3.8,baz=334,slow=9.4,SNR=9.0						
ASAR	**Alice Springs**	**35.37**	**168**	P	**P**	**19 05 41.0**	**-0.8**
	1.0nm,0.7s,mb3.9,baz=352,slow=7.2,SNR=35						
GTA	**Gaotai**	**36.76**	**325**	*e*P	**P**	**19 05 55.1**	**+1.4**
GTA				pP	pP	19 05 59.4	-4.5
GTA				sP	sP	19 06 02.5	-5.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.9						
SONM	**Songino Array**	**40.26**	**339**	P	**P**	**19 06 23.3**	**+0.4**
	comp=Z,0.5nm,0.6s,mb3.5,baz=160,slow=9.7,SNR=5.5						
NWAO	**Narrogin (SRO)**	**44.71**	**191**	P	**P**	**19 06 58.8**	**-0.4**
	comp=Z,18nm,1.4s,mb4.7						
STKA	**Stephens Creek**	**45.18**	**162**	P	**P**	**19 07 02.7**	**-0.2**
STKA	**Stephens Creek**	**45.18**	**162**	P	**P**	**19 07 02.7**	**-0.2**
	comp=Z,1.1nm,0.5s,mb3.9,baz=156,slow=16,SNR=3.3						
MK31	**Makanchi Array**	**51.44**	**322**	*e*P	**P**	**19 07 52.1**	**+1.0**
MKAR	**Makanchi Array**	**51.44**	**322**	P	**P**	**19 07 52.3**	**+1.2**
	comp=Z,1.6nm,0.6s,mb4.1,baz=116,slow=8.3,SNR=29						
ZALV	**Zalesovo Beam**	**53.94**	**331**	P	**P**	**19 08 09.6**	**0.0**
	comp=Z,1.1nm,0.6s,mb4.0,baz=119,slow=7.1,SNR=5.5						
KURK	**Kurchatov**	**55.45**	**325**	*e*P	**P**	**19 08 20.6**	**+0.2**
	comp=Z,11nm,1.0s,mb4.8						
KURK				*e*	pP	19 08 32.0	+0.9
KURK	**Kurchatov**	**55.45**	**325**	P	**P**	**19 08 21.4**	**+0.9**
	comp=Z,3.8nm,0.5s,mb4.7,baz=126,slow=7.0,SNR=38						
BVAR	**Borovoye Array**	**61.05**	**325**	P	**P**	**19 09 00.1**	**+0.5**
	comp=Z,0.7nm,0.5s,mb4.0,baz=149,slow=6.4,SNR=5.9						
BRVK	**Borovoye**	**61.12**	**325**	P	**P**	**19 09 00.0**	**0.0**
NIKO	**Nikolski**	**66.00**	**37**	P	**P**	**19 09 35.8**	**+3.5**
ILAR	**Eielson Array**	**78.57**	**26**	P	**P**	**19 10 46.9**	**-0.3**
	comp=Z,0.4nm,0.7s,mb3.4,baz=241,slow=7.0,SNR=4.2						
ARCES	**ARCESS Array B**	**83.43**	**340**	P	**P**	**19 11 12.0**	**-0.9**
	comp=Z,4.8nm,0.9s,mb4.5,baz=155,slow=5.5,SNR=4.4						
BRTR	**Keskin Array B**	**85.11**	**309**	P	**P**	**19 11 21.5**	**-0.6**
	comp=Z,0.4nm,0.6s,mb3.7,baz=61,slow=3.1,SNR=3.6						
FINES	**FINESS Array B**	**85.20**	**332**	P	**P**	**19 11 20.9**	**-1.2**
	comp=Z,1.6nm,0.9s,mb4.2,baz=24,slow=5.2,SNR=4.9						

*CSEM **16** 19:03:00.4±0.4, 78°32N×22°42E, h10km, ML2.2, Error ellipse: s-maj=13.8km s-min=4.5km az=42.0*

*BER **16** 19:03:00.5±3.2, 78°35N×22°64E, h2km±40km, MD2.6, ML1.9, ML2.2(NAO)*

*NAO **16** 19:

BHK	**Bhakra**	**1.78**	**320**	*ex*	**Pn**	19 16 40.0	**-3.2**
BHK				*eS*	**Sn**	19 17 04.4	**-0.5**
SONA	**Sohna**	**1.90**	**198**	*e*PKP	**Pn**	19 16 44.1	**-0.7**
SONA				*eS*	**Sn**	19 17 08.9	**+0.9**
SONA				*eS*	**Sn**	19 17 09.0	**+1.0**
SONA	comp=N,453nm,0.2s			AML	AML	19 17 09.6	
SONA	comp=E,328nm,0.2s			AML	AML	19 17 09.7	
PTH	**Pithoragarh**	**2.19**	**103**	*e*PKP	**Pn**	19 16 53.0	**+4.2**
PTH				*eS*	**Sn**	19 17 18.8	**+3.7**
KUDL	**Kundal**	**2.22**	**211**	*ex*	**Pn**	19 16 44.7	**-4.5**
KUDL				*eS*	**Sn**	19 17 14.4	**-1.3**
KUDL	comp=E,204nm,0.5s			AML	AML	19 17 17.7	
KUDL	comp=N,160nm,0.4s			AML	AML	19 17 18.4	
KHET	**Khetri**	**2.62**	**221**	*e*PKP	**Pn**	19 16 54.5	**-0.3**
KHET				*eS*	**Sn**	19 17 25.8	**+0.1**
KHET	comp=N,47nm,0.3s			AML	AML	19 17 30.3	
KHET	comp=E,70nm,0.3s			AML	AML	19 17 31.4	
AGRA	**Agra**	**2.83**	**177**	*ex*	**Sn**	19 17 37.2	**+6.4**
AGRA	comp=N,295nm,0.1s			AML	AML	19 17 46.4	
AGRA	comp=E,406nm,0.4s			AML	AML	19 17 49.0	
AJM	**Ajmer**	**4.51**	**218**	*ex*	**Pn**	19 17 25.0	**+4.3**
AJM				*i* x	x	19 18 25.0	
KOLN	**Koldanda**	**5.60**	**113**	*e*Pn	**Pn**	19 17 36.5	**+0.8**
KOLN	comp=E,42nm,0.3s			*e*Sn	**Sn**	19 18 39.3	**0.0**
GKN	**Gorkha**	**6.36**	**107**	*e*Pn	**Pn**	19 17 47.2	**+1.1**
GKN	comp=E,140nm,0.3s			*e*Sn	**Sn**	19 18 57.5	**-0.4**
DMN	**Daman**	**6.89**	**109**	*e*Pn	**Pn**	19 17 54.5	**+1.1**
DMN	comp=E,28nm,0.3s			*e*Sn	**Sn**	19 19 10.4	**-0.5**
KKN	**Kakani**	**6.96**	**107**	*e*Pn	**Pn**	19 17 55.6	**+1.1**
KKN	comp=E,91nm,0.5s			*e*Sn	**Sn**	19 19 11.8	**-1.0**
PKIN	**Phulchoki**	**7.14**	**108**	*e*Pn	**Pn**	19 17 57.8	**+0.9**
PKIN	comp=E,48nm,0.3s			*e*Sn	**Sn**	19 19 16.7	**-0.4**
PKI	**Pulchoki**	**7.15**	**108**	*e*Pn	**Pn**	19 17 57.8	**+0.8**
PKI	comp=E,74nm,0.5s			*e*Sn	**Sn**	19 19 16.5	**-0.9**
GUN	**Gumba**	**7.42**	**105**	*e*Pn	**Pn**	19 18 02.1	**+1.3**
GUN	comp=E,99nm,0.6s			*e*Sn	**Sn**	19 19 24.5	**+0.4**
JIRN	**Jiri**	**7.77**	**106**	*e*Pn	**Pn**	19 18 06.5	**+1.0**
JIRN	comp=E,59nm,0.3s			*e*Sn	**Sn**	19 19 31.8	**-0.8**
RAMN	**Ramite**	**8.37**	**110**	*e*Pn	**Pn**	19 18 13.6	**-0.1**
RAMN	comp=E,92nm,0.3s			*e*Sn	**Sn**	19 19 44.4	**-3.0**
ODAN	**Odare**	**9.05**	**108**	*e*Pn	**Pn**	19 18 23.8	**+0.7**
ODAN	comp=E,60nm,0.6s			*e*Sn	**Sn**	19 20 01.6	**-2.6**
TAPN	**Taplejung**	**9.14**	**105**	*e*Pn	**Pn**	19 18 24.8	**+0.5**
TAPN	comp=E,59nm,0.6s			*e*Sn	**Sn**	19 20 04.4	**-2.0**
KSH	**Kashi**	**9.54**	**352**	P	**Pn**	19 18 28.9	**-0.9**
KSH				S	**Sn**	19 20 02.3	**-14**
KSH	comp=N,13nm,0.6s			smax			
KSH	comp=E,23nm,0.7s			smax			
POO	**Poona**	**12.02**	**198**	*e*PKP	Sx	19 22 15.0	
MK31	**Makanchi Array**	**17.07**	**11**	*e*Pn	**Pn**	19 20 07.1	**-3.7**
MK31				*e*Sn	**Sn**	19 23 08.4	**-11**
MKAR	**Makanchi Array**	**17.07**	**11**	P	**Pn**	19 20 09.8	**-1.0**
MKAR	comp=E,0.2nm,0.3s,baz=202,slow=12,SNR=8.3			S	**Sn**	19 23 12.1	**-7.6**
KURK	comp=E,0.1nm,0.3s,baz=188,slow=24,SNR=6.1 **Kurchatov**	**20.64**	**2**	P	**P**	19 20 50.2	**-1.3**
KURK	comp=E,1.6nm,0.7s,baz=191,slow=9.8,SNR=5.4			LR	LR	19 29 19.0	
CHTO	comp=E,25nm,19.7s,baz=165,slow=38 **Chiang Mai**	**22.26**	**115**	P	**P**	19 21 03.2	**-5.9**
CMAR	comp=E,2.3nm,1.0s,mb3.6 **Chiang Mai Arr**	**22.46**	**116**	P	**P**	19 21 13.1	**+1.9**
PALK	comp=E,0.3nm,0.5s,mb3.0,baz=306,slow=9.6,SNR=3.3 **Pallekele**	**22.84**	**172**	P	**P**	19 21 16.6	**+1.3**
ABKAR	comp=E,32nm,1.2s,mb4.6 **Akbulak array**	**23.46**	**330**	*e*P	**P**	19 21 22.1	**+0.5**
ZAA0	comp=E,1.5nm,0.7s,mb3.5 **Zalesovo Array**	**24.41**	**10**	*e*P	**P**	19 21 30.8	**+0.6**
ZALV	**Zalesovo Beam**	**24.41**	**10**	P	**P**	19 21 30.9	**+0.7**
AKTK	comp=E,0.5nm,0.4s,mb3.3,baz=216,slow=12,SNR=3.5 **Aktyubinsk**	**25.18**	**329**	P	**P**	19 21 37.1	**-0.1**
AKTO	**Aktyubinsk**	**25.18**	**329**	P	**P**	19 21 37.1	**-0.1**
FINES	comp=E,0.7nm,0.3s,mb3.6,baz=142,slow=12,SNR=3.6 **FINESS Array B**	**45.94**	**328**	P	**P**	19 24 34.1	**-0.4**
ARCES	comp=E,2.9nm,0.9s,mb4.2,baz=121,slow=7.4,SNR=5.7 **ARCESS Array B**	**49.22**	**338**	P	**P**	19 25 00.5	**+0.7**
TNA	comp=E,5.4nm,1.0s,mb4.5,baz=109,slow=7.1,SNR=12 **Tin City**	**72.25**	**23**	*e*P	**P**	19 27 35.9	**-0.8**
WRA	**Warramunga Arr**	**73.72**	**125**	P	**P**	19 27 45.5	**-0.5**
ILAR	comp=E,0.3nm,0.5s,mb3.5,baz=325,slow=5.9,SNR=4.1 **Eielson Array**	**79.28**	**18**	P	**P**	19 28 16.8	**0.0**
	comp=E,0.4nm,0.7s,mb3.4,baz=309,slow=4.8,SNR=4.4						

NEIC **16** *19:23:36.5±3.4, 6.˝49S×130.˚23E, h125km±35km, Error ellipse: s-maj=38.4km s-min=28.0km az=63.0*
ISCJB **16** *19:23:39.3±2.5, 6.˝7S±0.˚1×130.˚4E±0.˚2, h175km±27km, Error ellipse: s-maj=27.5km s-min=19.0km az=167.4*
IDC **16** *19:23:41.5±5.5, 6.˝75S×130.˚01E, h176km±53km, mb3.7/1, mb1 3.0/4, mb1mx2.9/15, mbtmp2.9/4, Error ellipse: s-maj=63.6km s-min=22.8km az=71.0*
ISC 16 19:23:39.3±2.0, 6.˝7S±0.˚1×130.˚3E±0.˚2, h150km±17km, n6, σ1§00/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KAKA	**Kakadu**	**6.32**	**160**	*e*Pn		**Pn**	**19 25 10.3**	**+0.1**
KAKA				*e*Sn		**Sn**	**19 26 20.1**	**-1.4**
FITZ	**Fitzroy Crossi**	**12.16**	**201**	P		**Pn**	**19 26 28.6**	**+0.9**
FITZ				*e*Sn		**Sn**	**19 28 35.7**	**-6.5**
FITZ				S		**Sn**	**19 28 41.4**	**-0.8**
FITZ	**Fitzroy Crossi**	**12.16**	**201**	P		**Pn**	**19 26 28.6**	**+0.9**
FITZ	0.4nm,0.3s,baz=32,slow=11,SNR=23			S		**Sn**	**19 28 41.4**	**-0.8**
WRA	0.1nm,0.3s,baz=290,slow=12,SNR=3.2 **Warramunga Arr**	**13.71**	**164**	P		**Pn**	**19 26 48.8**	**+1.2**
WRA	0.1nm,0.3s,baz=346,slow=14,SNR=6.3			S		**Sn**	**19 29 14.5**	**-5.1**
ASAR	0.4nm,0.3s,baz=338,slow=22,SNR=6.7 **Alice Springs**	**17.20**	**169**	P		**Pn**	**19 27 31.8**	**+1.2**
ASAR	0.1nm,0.3s,baz=345,slow=8.5,SNR=12			S		**S**	**19 30 41.0**	**-0.2**
MKAR	0.1nm,0.3s,baz=343,slow=26,SNR=7.0 **Makanchi Array**	**68.14**	**327**	P		**P**	**19 34 21.8**	**-1.3**
	0.9nm,0.4s,baz=113,slow=8.1,SNR=25							

NEIC **16** *19:25:08.8, 37.˚46S×177.˚12E, h2km, ML3.8(WEL), After WEL.*
WEL 16 19:25:08.3±0.3, 37.˚44S×177.˚17E, h2km, ML3.8/11, Error ellipse: s-maj=2.5km s-min=1.8km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
WIZ	**White Island**	**0.09**	**170**	P*		Pg	19 25 09.5	-0.4
WIZ				*eS*		Sg	19 25 11.2	+0.1
WIZ	**White Island**	**0.09**	**170**	P		Pg	19 25 09.5	-0.5
OPRZ	**Ohinepanea**	**0.63**	**230**	PG		Pg	19 25 19.8	-0.6
OPRZ				*e*SG		Sg	19 25 28.4	-0.2
MARZ	**Manawahe**	**0.67**	**216**	P*		Pg	19 25 21.0	-0.1
MARZ	**Manawahe**	**0.67**	**216**	P		Pg	19 25 21.0	-0.1
MARZ				S		Sg	19 25 27.7	-2.1
EDRZ	**Edgecumbe**	**0.75**	**207**	P*		Pb	19 25 22.6	-1.4
EDRZ	**Edgecumbe**	**0.75**	**207**	P		Pg	19 25 22.6	0.0
MYRZ	**Mayor Island**	**0.76**	**282**	P*		Pb	19 25 22.9	-1.2
TGRZ	**Tauranga**	**0.78**	**248**	P*		Pb	19 25 23.2	-1.3
TGRZ				S*		Sb	19 25 35.1	-0.5
URZ	**Urewera**	**0.82**	**183**	P*		Pb	19 25 23.1	-2.1
URZ	**Urewera**	**0.82**	**183**	P		Pg	19 25 23.1	-0.9
LIRZ	**Lichensteins R**	**0.84**	**228**	P*		Pb	19 25 24.2	-1.4
LIRZ	**Lichensteins R**	**0.84**	**228**	P		Pg	19 25 24.2	-0.2
MKRZ	**Makatiti**	**0.89**	**218**	P*		Pb	19 25 25.7	-0.7
MKRZ	**Makatiti**	**0.89**	**218**	P		Pg	19 25 25.7	+0.3
MXZ	**Matakaoa Point**	**0.91**	**98**	P*		Pb	19 25 24.7	-2.1
OMRZ	**Omania**	**0.92**	**223**	P*		Pb	19 25 25.4	-1.5
KARZ	**Kaharoa**	**0.94**	**231**	P*		Pb	19 25 25.7	-1.5
KARZ	**Kaharoa**	**0.94**	**231**	P		Pg	19 25 25.7	-0.5
MWZ	**Matawai**	**0.94**	**163**	P*		Pb	19 25 25.2	-2.0
MWZ	**Matawai**	**0.94**	**163**	P		Pg	19 25 25.2	-1.0
TARZ	**Mount Tarawera**	**0.95**	**213**	P*		Pb	19 25 26.8	-0.7
PUZ	**Puketiti**	**1.07**	**127**	P*		Pb	19 25 29.2	-0.3
PUZ	**Puketiti**	**1.07**	**127**	P		Pg	19 25 29.2	+0.5
CNGZ	**Carnagh Statio**	**1.32**	**142**	*e*P*		Pb	19 25 34.3	+0.4
KUZ	**Kuaotunu**	**1.35**	**300**	*e*P*		Pb	19 25 30.7	-3.5
KUZ	**Kuaotunu**	**1.35**	**300**	P		Pn	19 25 30.8	-3.3
TOZ	**Tahuroa Road**	**1.36**	**257**	P*		Pb	19 25 31.3	-3.0
TOZ	**Tahuroa Road**	**1.36**	**257**	P		Pn	19 25 31.3	-2.9
PRGZ	**Paritu Road**	**1.58**	**159**	PN		Pn	19 25 37.8	+0.5
KNZ	**Kokohu**	**1.63**	**166**	PN		Pn	19 25 38.2	+0.3
KNZ	**Kokohu**	**1.63**	**166**	P		Pn	19 25 38.5	+0.6
MKAZ	**Moumakai**	**1.63**	**281**	PN		Pn	19 25 35.2	-2.7
MKAZ	**Moumakai**	**1.63**	**281**	P		Pn	19 25 35.2	-2.8
NMHZ	**Naumai**	**1.68**	**190**	PN		Pn	19 25 38.0	-0.6
BKZ	**Black Stump Fm**	**1.80**	**197**	*e*P*		Pb	19 25 38.9	-3.1
WCZ	**Waipu Caves**	**2.72**	**303**	PN		Pn	19 25 50.7	-2.3

CSEM **16** *19:26:36.7, 30.˚84N×57.˚45E, h21km, ML3.5, After TEH*
TEH 16 19:26:36.7, 30.˚84N×57.˚45E, h21km, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
IBAF	**Bafgh**	**1.78**	**295**	*e*Sg		Sn	19 27 32.2	+4.0
IBAF				*e*Pn		Pn	19 27 06.5	+0.3
IBAF	comp=Z,4μm,0.1s			*e*			19 27 33.9	
IKOO	**Kooshah**	**2.06**	**40**	*e*Sg		Sn	19 27 41.2	+6.0
IKOO				*e*Pn		Pn	19 27 09.7	-0.4
IKOO	comp=Z,5μm,0.2s			*e*			19 27 46.4	
ITEG	**Tejag**	**2.33**	**28**	*e*Pn		Pn	19 27 13.8	0.0
ITEG				*e*Sg		Sn	19 27 50.3	+8.5
ITEG	comp=Z,2μm,0.1s			*e*			19 27 52.6	
ITEG	**Tejag**	**2.33**	**28**	*e*Pn		Pn	19 27 13.8	0.0
ITEG				*e*Sg		Sn	19 27 50.3	+8.5
IMEH	**Mehriz**	**2.50**	**284**	*e*Pn		Pn	19 27 16.2	+0.2
IMEH	comp=Z,2μm,0.2s			*e*			19 27 54.4	
IMEH	**Mehriz**	**2.50**	**284**	*e*Pn		Pn	19 27 16.2	+0.2
IDAH	**Dahanechah**	**2.80**	**47**	*e*Pn		Pn	19 27 24.5	+4.3
IDAH	comp=Z,940nm,0.2s			*e*			19 27 33.6	
IDAH	**Dahanechah**	**2.80**	**47**	*e*Pn		Pn	19 27 24.5	+4.3
ICHK	**Chekchek**	**2.95**	**299**	*e*Pn		Pn	19 27 22.8	+0.5
ICHK	comp=Z,1μm,0.3s			*e*			19 28 15.0	
ICHK	**Chekchek**	**2.95**	**299**	*e*Pn		Pn	19 27 22.8	+0.5
ISRV	**Sarvestan**	**4.03**	**250**	*e*Pn		Pn	19 27 37.3	+0.2
ISRV	comp=Z,262nm,0.3s			*e*			19 29 04.2	
ISRV	**Sarvestan**	**4.03**	**250**	*e*Pn		Pn	19 27 37.3	+0.2

NEIC **16** *19:51:57.7±0.7, 4.˚12S×129.˚93E, h10km, mb4.0/2, Error ellipse: s-maj=24.0km s-min=11.5km az=60.0*
ISCJB **16** *19:52:01.6±1.0, 4.˚20S±0.˚06×129.˚96E±0.˚07, h53km±10km, mb3.8/6, Error ellipse: s-maj=13.6km s-min=8.5km az=147.3*
DJA **16** *19:52:03, 4.˚42S×129.˚82E, h25km, MLv3.5/4*
IDC **16** *19:52:07.4±4.2, 4.˚38S×129.˚72E, h86km±39km, mb3.5/5, mb1 3.7/7, mb1mx3.5/16, mbtmp3.6/7, Error ellipse: s-maj=41.8km s-min=12.1km az=69.0*
ISC 16 19:52:04.6±1.1, 4.˚26S±0.˚06×129.˚93E±0.˚07, h70km±11km, n17, σ1§15/21, mb3.8/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BNDI	**Bandanaira**	**0.26**	**185**	P		**Pn**	**19 52 08.8**	**-6.7**
NLAI	**Namlea**	**3.00**	**290**	P		**Pn**	**19 52 48.5**	**-1.3**
NLAI				S		**Sn**	**19 53 26.0**	**+1.4**
TLE	**Tual**	**3.11**	**116**	P		**Pn**	**19 52 51.6**	**+0.3**
FITZ	**Fitzroy Crossi**	**14.38**	**197**	P		**Pn**	**19 55 24.4**	**-0.3**
FITZ	0.2nm,0.3s,baz=31,slow=13,SNR=12			S		**Sn**	**19 58 03.4**	**+0.5**
WRA	0.1nm,0.3s,baz=211,slow=19,SNR=1.7 **Warramunga Arr**	**16.17**	**165**	P		**Pn**	**19 55 44.1**	**-3.4**
WRA	0.3nm,0.3s,baz=334,slow=14,SNR=23			S		**S**	**19 58 39.9**	**-16**
ASAR	0.4nm,0.3s,baz=346,slow=24,SNR=5.9 **Alice Springs**	**19.67**	**169**	P		**Pn**	**19 56 29.7**	**-0.3**
ASAR	1.3nm,0.3s,baz=350,slow=11,SNR=180			S		**S**	**20 00 05.9**	**-0.4**
CTA	0.1nm,0.3s,baz=252,slow=5.7,SNR=5.1 **Charters Tower**	**22.37**	**136**	P		**P**	**19 56 58.2**	**+1.1**
CTAO	3.8nm,0.8s,mb3.8,baz=302,slow=13,SNR=3.0 **Charters Tower**	**22.37**	**136**	*e*P		**P**	**19 56 57.9**	**+0.8**
STKA	5.4nm,0.9s,mb3.9 **Stephens Creek**	**29.57**	**160**	P		**P**	**19 58 04.5**	**+1.6**
HNR	1.1nm,0.5s,mb3.7,baz=328,slow=15,SNR=4.7 **Honiara**	**30.23**	**101**	P		**P**	**19 58 08.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**37.97**	**307**	P		**P**	**19 59 14.7**	**-1.2**
CHTO	0.6nm,0.7s,mb3.5,baz=150,slow=7.6,SNR=5.3 **Chiang Mai**	**38.17**	**308**	*e*P		**P**	**19 59 15.8**	**-1.8**
MKAR	1.8nm,0.8s,mb4.0 **Makanchi Array**	**65.92**	**326**	P		**P**	**20 02 44.7**	**+1.5**
MKAR	**Makanchi Array**	**65.92**	**326**	P		**P**	**20 02 44.7**	**+1.5**
KURK	0.4nm,0.3s,mb3.7,baz=108,slow=6.9,SNR=4.5 **Kurchatov**	**70.16**	**328**	P		**P**	**20 03 11.3**	**+1.6**
KURK	**Kurchatov**	**70.16**	**328**	P		**P**	**20 03 11.3**	**+1.6**
ARU	1.0nm,0.7s,mb3.8,baz=128,slow=5.8,SNR=5.6 **Arti**	**83.36**	**328**	*e*P		**P**	**20 04 23.1**	**-0.8**

NEIC 16 19:54:26.4, 55.˚10N×165.˚36W, h193km, mb3.9/2, After AEIC., Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
AKGG	**Akutan Green G**	**0.97**	**202**	P		Pn	19 54 53.9	-1.3
AKGG				S		Sn	19 55 16.0	-1.4
AKA	**Akutan**	**0.99**	**194**	P		Pn	19 54 54.9	-0.5
AKUT	**Akutan**	**0.99**	**194**	P		Pn	19 54 54.7	-0.7
AKUT				*e*Sn		Sn	19 55 15.1	-2.5
AKUT				S		Sn	19 55 16.9	-0.8
AKLV	**Akutan Long Va**	**1.00**	**200**	P		Pn	19 54 53.8	-1.6
FALS	**False Pass**	**1.15**	**101**	*e*Pn		Pn	19 54 54.9	-1.5
FALS				*e*Sn		Sn	19 55 18.9	-0.7
UNV	**Unalaska Valle**	**1.42**	**208**	*e*Pn		Pn	19 54 57.7	-1.0
UNV				*e*Sn		Sn	19 55 21.4	-2.3
SDPT	**Sand Point**	**2.81**	**83**	*e*Pn		Pn	19 55 04.7	-8.6
SDPT				*e*Sn		Sn	19 55 43.4	-6.5
NIKO	**Nikolski**	**2.96**	**225**	*e*Pn		Pn	19 55 15.9	+0.8
NIKO				*e*Sn		Sn	19 55 50.7	-2.4
OHAK	**Old Harbor**	**7.07**	**68**	*e*Pn		Pn	19 56 04.8	-2.5
OHAK	11nm,1.6s			*e*Sn		Sn	19 57 18.2	-9.0
KDAK	**Kodiak Island**	**7.58**	**64**	*e*Pn		Pn	19 56 11.8	-2.0
KDAK				*e*Sn		Sn	19 57 30.7	-8.5
RSO	**Redoubt South**	**8.61**	**46**	*e*Pn		Pn	19 56 23.0	-4.4
TTA	**Tatalina**	**9.21**	**28**	*e*Pn		Pn	19 56 35.9	+0.8
PAX	**Paxson**	**12.88**	**44**	*e*Pn		Pn	19 57 22.8	+0.5
INK	6.6nm,1.0s **Inuvik**	**19.75**	**35**	*e*P		P	19 58 42.3	+1.2

IDC **16** *19:59:07.5±0.8, 34.˚96N×74.˚06E, h0km, mb3.8/12, mb1 4.0/17, mb1mx3.9/26, mbtmp3.8/17, ML3.8/5, Error ellipse: s-maj=22.6km s-min=14.9km az=65.0*
BJI **16** *19:59:08.0, 34.˚61N×74.˚02E, h27km, ML3.3/4*
ISCJB **16** *19:59:11.5±0.7, 35.˚12N±0.˚04×74.˚16E±0.˚05, h40km±9km, mb3.6/13, Error ellipse: s-maj=8.5km s-min=4.5km az=144.6*
NEIC **16** *19:59:12.1±3.4, 35.˚04N×74.˚05E, h30km±24km, mb3.5/2, Error ellipse: s-maj=12.4km s-min=10.4km az=162.0*
NNC **16** *19:59:12.6±6.0, 35.˚05N×72.˚59E, h0km, mb3.7, mpv3.8, Error ellipse: s-maj=65.6km s-min=49.4km az=42.0*
ISC 16 19:59:11.0±1.9, 35.˚00N±0.˚04×73.˚99E±0.˚07, h23km±15km, n56, σ1§05/66, mb3.6/13, 5C-2D, Pakistan

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

JMU	**Jammu**	**2.40**	**161**	*e*PKP		**Pn**	**19 59 53.5**	**+4.6**
JMU				*eS*		**Sn**	**20 00 22.5**	**+5.0**
KBL	**Kabul**	**4.10**	**265**	*e*Pn		**Pn**	**20 00 14.2**	**+2.0**
KBL				*e*Sn		**Sn**	**20 01 05.9**	**+6.4**
BHK	**Bhakra**	**4.11**	**150**	*eS*		**Sn**	**20 01 04.0**	**+4.2**
SDNR	**Sundarnagar**	**4.29**	**144**	*e*PKP		**Pn**	**20 00 19.5**	**+4.6**
SDNR				*ex*		x	20 00 26.5	
KSH	**Kashi**	**4.78**	**19**	Pn		**Pn**	**20 00 21.3**	**-0.3**
KSH				Sn		**Sn**	**20 01 05.3**	**-11**
KSH	comp=N,41nm,1.0s			smax				
KSH	comp=E,39nm,0.8s			smax				
KLP	**Kalpa**	**4.97**	**133**	*e*PKP		**Pn**	**20 00 27.7**	**+3.5**
KLP				*eS*		**Sn**	**20 01 23.4**	**+2.4**
KLP	comp=E,255nm,0.4s			AML	AML	20 01 30.9		
KLP	comp=N,17nm,0.2s			AML	AML	20 01 31.0		
JOSI	**Joshimath**	**6.45**	**132**	*e*PKP		**Pn**	**20 00 47.6**	**+3.0**
JOSI				*ex*		x	20 01 52.9	
JOSI	comp=N,73nm,0.4s			AML	AML	20 02 13.4		
JOSI	comp=E,88nm,0.3s			AML	AML	20 02 13.5		
KHET	**Khetri**	**7.08**	**167**	*eS*		**Sn**	**20 02 11.1**	**-1.8**
KUDL	**Kundal**	**7.16**	**162**	*e*PKP		**Pn**	**20 00 52.9**	**-1.4**
KUDL				*eS*		**Sn**	**20 02 10.0**	**-4.9**
AAK	**Ala-Archa**	**7.63**	**3**	Pn		**Pn**	**20 00 58.4**	**-2.3**
AAK				Sn		**Sn**	**20 02 29.9**	**+3.4**
AAK	**Ala-Archa**	**7.63**	**3**	Pn		**Pn**	**20 01 05.2**	**+4.4**
AAK	comp=E,1.3nm,0.3s,baz=271,slow=4.0,SNR=3.6			Sn		**Sn**	**20 02 29.9**	**+3.4**
KK31	comp=E,0.6nm,0.3s,baz=247,slow=14,SNR=2.0 **Karatay Array**	**8.53**	**343**	⇑Pn		**Pn**	**20 01 14.4**	**+1.3**
KK31	comp=E,1.3nm,0.3s,baz=172,slow=13,SNR=4.4			⇑Sn		**Sn**	**20 02 48.0**	**-0.6**
KOLN	comp=E,2.1nm,0.4s,baz=172,slow=24,SNR=5.5 **Koldanda**	**10.92**	**129**	*e*P		**Pn**	**20 01 46.2**	**+0.3**
GKN	**Gorkha**	**11.45**	**125**	*e*P		**Pn**	**20 01 52.8**	**-0.3**
DMN	comp=E,16nm,0.3s **Daman**	**12.02**	**125**	*e*P		**Pn**	**20 02 00.6**	**-0.3**
KKN	comp=E,16nm,0.4s **Kakani**	**12.02**	**124**	*e*P		**Pn**	**20 02 00.1**	**-0.9**
PKIN	comp=E,17nm,0.5s **Phulchoki**	**12.24**	**124**	*e*P		**Pn**	**20 02 03.5**	**-0.4**
PKI	comp=E,21nm,0.4s **Pulchoki**	**12.25**	**124**	*e*P		**Pn**	**20 02 03.4**	**-0.7**
GUN	comp=E,13nm,0.4s **Gumba**	**12.36**	**122**	*e*P		**Pn**	**20 02 06.3**	**+0.7**
JIRN	comp=E,14nm,0.4s **Jiri**	**12.73**	**122**	*e*P		**Pn**	**20 02 09.4**	**-1.3**
MK31	comp=E,34nm,0.5s **Makanchi Array**	**13.34**	**25**	Pn		**Pn**	**20 02 27.9**	**+9.0**
MK31	comp=E,0.6nm,0.5s,baz=208,slow=12,SNR=6.3 **Makanchi Array**	**13.34**	**25**	*e*Pn		**Pn**	**20 02 20.3**	**+1.5**
MKAR	**Makanchi Array**	**13.34**	**25**	Pn		**Pn**	**20 02 19.4**	**+0.6**
MKAR	**Makanchi Array**	**13.34**	**25**	Pn		**Pn**	**20 02 19.4**	**+0.6**
RAMN	comp=E,0.1nm,0.3s,baz=209,slow=15,SNR=4.1 **Ramite**	**13.46**	**123**	*e*P		**Pn**	**20 02 16.3**	**-4.3**
TAPN	**Taplejung**	**13.99**	**119**	*e*P		**Pn**	**20 02 24.2**	**-3.7**
ODAN	comp=E,23nm,0.5s **Odare**	**14.06**	**122**	*e*P		**Pn**	**20 02 24.0**	**-4.9**
KURK	comp=E,1.1nm,0.7s **Kurchatov**	**16.07**	**11**	*e*Pn		**Pn**	**20 02 54.4**	**-0.9**
KURK	**Kurchatov**	**16.07**	**11**	Pn		**Pn**	**20 02 51.6**	**-3.7**
AB31	comp=E,0.1nm,0.3s,baz=198,slow=12,SNR=11 **Akbulak array**	**17.61**	**328**	⇑Pn		**Pn**	**20 03 13.7**	**-1.0**
AB31	comp=E,1.9nm,0.7s,baz=131,slow=13,SNR=20			⇓Sn		**Sn**	**20 06 20.4**	**-10**
ABKAR	comp=E,0.4nm,0.5s,baz=130,slow=25,SNR=2.9 **Akbulak array**	**17.61**	**328**	*e*Pn		**Pn**	**20 03 13.9**	**-0.8**
ABKAR	comp=E,1.9nm,0.6s			*e*Sn		**Sn**	**20 06 19.9**	**-10**
VOSK	**Vostochnaya**	**17.85**	**354**	⇑Pn		**Pn**	**20 03 18.2**	**+0.6**
BVA0	comp=E,3.2nm,0.9s **Borovoye Array**	**18.20**	**353**	⇑Pn		**Pn**	**20 03 21.9**	**0.0**
BVAR	comp=E,0.4nm,0.6s,baz=156,slow=9.6,SNR=19 **Borovoye Array**	**18.20**	**353**	P		**Pn**	**20 03 23.0**	**+1.0**
BRVK	comp=E,1.9nm,0.3s,baz=154,slow=9.2,SNR=21 **Borovoye**	**18.25**	**353**	*e*Pn		**Pn**	**20 03 22.1**	**-0.4**
ZRNK	comp=E,2.8nm,0.6s **Zerenda**	**18.29**	**350**	⇓Pn		**Pn**	**20 03 23.4**	**+0.3**
AKTK	comp=E,1.9nm,0.5s **Aktyubinsk**	**19.32**	**328**	P		**Pn**	**20 03 35.1**	**-0.4**
AKTO	**Aktyubinsk**	**19.32**	**328**	Pn		**Pn**	**20 03 35.2**	**-0.3**
AKTO	comp=E,0.5nm,0.5s **Aktyubinsk**	**19.32**	**328**	P		**Pn**	**20 03 35.1**	**-0.4**
ZALV	comp=E,0.7nm,0.3s,baz=129,slow=13,SNR=11 **Zalesovo Beam**	**20.42**	**19**	P		**P**	**20 03 46.1**	**-0.2**
GTA	comp=E,3.6nm,0.4s,baz=213,slow=10,SNR=19 **Gaotai**	**21.01**	**70**	*e*P		**P**	**20 03 53.3**	**+0.4**
GTA				pP			20 03 56

FCH				*i* S	Sb	20 17 47.7	0.0	
FCH	**Farellones**	**1.35**	**117**	⇓*i* P	Pn	20 17 29.6	-0.3	
FCH				*i* S	Sb	20 17 47.7	0.0	
FCH				AML	AML	20 17 52.0		
	comp=N,824nm,0.2s							
PCH	**Pirque**	**1.36**	**132**	*i* P	Pn	20 17 29.6	-0.4	
PCH				*i* S	Sn	20 17 47.7	-0.2	
PCH	**Pirque**	**1.36**	**132**	*i* P	Pn	20 17 29.6	-0.4	
PCH				*i* S	Sn	20 17 47.7	-0.2	
CACH	**El Canelo**	**1.69**	**146**	⇓*i* P	Pn	20 17 35.2	+0.7	
CACH				*i* S	Sn	20 17 57.9	+1.9	
CACH	**El Canelo**	**1.69**	**146**	⇓*i* P	Pn	20 17 35.2	+0.7	
CACH				*i* S	Sn	20 17 57.9	+1.9	
LMEL	**Las Melosas**	**1.70**	**132**	*i* P	Pn	20 17 35.1	+0.3	
LMEL				*i* S	Sn	20 17 57.4	+0.9	
LMEL	**Las Melosas**	**1.70**	**132**	*i* P	Pn	20 17 35.1	+0.3	
LMEL				*i* S	Sn	20 17 57.4	+0.9	
LMEL				AML	AML	20 18 02.5		
	comp=N,1µm,0.1s							
TLL	**Tololo Astrono**	**2.66**	**17**	⇓*i* P	Pn	20 17 49.4	+1.6	
TLL				*i* S	Sn	20 18 22.9	+3.0	
TLL	**Tololo Astrono**	**2.66**	**17**	⇓*i* P	Pn	20 17 49.4	+1.6	
TLL				*i* S	Sn	20 18 22.9	+3.0	
TLL				AML	AML	20 18 31.9		
	comp=N,175nm,0.4s							

PRE 16 20:21:44.0±1.1, **19°.77S**×**23°.14E**, **h5**km, **ML3.6**, **Botswana**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSNA	**Messina**	**6.92**	**113**	*e*P	Pn	20 23 28.0	+1.9
MSNA				*e*S	Sn	20 24 42.8	-2.5
MSNA				AML	AML	20 25 27.0	
	comp=Z,62nm,0.8s						
KSR	**Koster**	**6.97**	**151**	*e*P	Pn	20 23 28.2	+1.3
KSR				*e*S	Sn	20 24 43.7	-2.8
KSR				AML	AML	20 25 27.4	
	comp=Z,49nm,0.5s						
SLR	**Silverton**	**7.60**	**142**	*e*P	Pn	20 23 37.2	+1.8
SLR				*e*S	Sn	20 24 59.1	-2.9
SLR				AML	AML	20 25 47.4	
	comp=Z,37nm,0.5s						
SWZ	**Schweizer**	**7.64**	**165**	*e*P	Pn	20 23 37.5	+1.5
SWZ				*e*S	Sn	20 24 59.8	-3.3
SWZ				AML	AML	20 25 53.9	
	comp=Z,31nm,0.8s						
PRYS	**Parys**	**8.11**	**152**	*e*P	Pn	20 23 43.4	+1.0
PRYS				*e*S	Sn	20 25 10.7	-3.8
PRYS				AML	AML	20 26 06.8	
	comp=Z,36nm,0.6s						
UPI	**Upington**	**8.72**	**191**	*e*P	Pn	20 23 52.8	+2.0
UPI				*e*S	Sn	20 25 26.0	-3.5
UPI				AML	AML	20 25 31.9	
	comp=Z,11nm,0.5s						
BOSA	**Boshof**	**9.01**	**168**	*e*P	Pn	20 23 55.9	+1.1
BOSA				*e*S	Sn	20 25 32.2	-4.5
BOSA				AML	AML	20 26 33.5	
	comp=Z,28nm,0.6s						
SEK	**Senekal**	**9.45**	**155**	*e*P	Pn	20 24 01.7	+0.9
SEK				*e*S	Sn	20 25 42.9	-4.5
SEK				AML	AML	20 26 46.8	
	comp=Z,58nm,0.5s						
PKA	**Prieska**	**9.86**	**182**	*e*P	Pn	20 24 07.5	+1.1
PKA				*e*S	Sn	20 25 52.3	-5.3
PKA				AML	AML	20 26 58.9	
	comp=Z,18nm,0.7s						
POGA	**Pongola**	**10.84**	**136**	*e*P	Pn	20 24 22.1	+2.2
POGA				*e*S	Sn	20 26 17.4	-4.2
POGA				AML	AML	20 27 50.4	
	comp=Z,20nm,0.6s						
HVD	**Gariep Dam**	**10.99**	**169**	*e*P	Pn	20 24 23.1	+1.2
HVD				*e*S	Sn	20 26 19.4	-6.0
HVD				AML	AML	20 27 39.7	
	comp=Z,35nm,0.7s						
KOMG	**Komaggas**	**11.22**	**206**	*e*P	Pn	20 24 26.3	+1.2
KOMG				*e*S	Sn	20 26 25.4	-5.5
KOMG				AML	AML	20 27 51.2	
	comp=Z,7.2nm,0.7s						
SUR	**Sutherland**	**12.73**	**189**	*e*P	Pn	20 24 46.8	+1.1
SUR				*e*S	Sn	20 27 01.8	-6.0
SUR				AML	AML	20 29 01.3	
	comp=Z,4.6nm,0.7s						
SOE	**Somerset East**	**13.07**	**171**	*e*P	Pn	20 24 51.3	+1.0
SOE				*e*S	Sn	20 27 10.1	-6.0
SOE				AML	AML	20 28 44.4	
	comp=Z,17nm,0.9s						

TIR **16** *20:21:47.8*±*2.4, 40°.17N*×*21°.44E, h18*km±*11km*
SOF **16** *20:21:47.4, 40°.34N*×*21°.34E, h8*km*, MD3.3*
ISCJB **16** *20:21:48.6*±*0.3, 40°.21N*±*0°.01*×*21°.51E*±*0°.02, h4*km±*2km, mb3.6/4, Error ellipse: s-maj=2.0km s-min=1.7km az=149.0*
CSEM **16** *20:21:49.4*±*0.1, 40°.23N*×*21°.49E, h10*km*, ML3.3/26, Error ellipse: s-maj=2.9km s-min=2.3km az=44.0*
THE **16** *20:21:49.9, 40°.23N*×*21°.51E, h10*km±*1*km*, ML3.3/26, Error ellipse: s-maj=1.2km s-min=0.6km az=330.0*
ATH **16** *20:21:49.2, 40°.21N*×*21°.48E, h25*km*, ML3.8*
NEIC **16** *20:21:49.2, 40°.21N*×*21°.48E, h25*km*, ML3.8(ATH), ML3.4(PDG), After ATH.*
PDG **16** *20:21:49.8*±*0.7, 40°.22N*×*21°.60E, h11*km±*1*km*, ML3.4/10, Error ellipse: s-maj=0.9km s-min=1.4km az=0.0*
SKO **16** *20:21:50.3, 40°.21N*×*21°.48E, h5*km*, M2.8, ML3.2*
IDC **16** *20:21:51.3*±*4.1, 40°.18N*×*21°.23E, h51*km*±*36*km*, mb3.4/5, mb1 3.6/8, mb1mx3.3/24, mbtmp3.4/8, ML3.2/2, Error ellipse: s-maj=39.5km s-min=23.5km az=1.0*

ISC 16 20:21:49.6±0.3, **40°.21N**±0°.01×**21°.50E**±0°.02, **h7**km±2km, **n270**, σ1s**29**/398, **mb3.6**/4, **30C-6D**, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KZN	**Kozani**	**0.23**	**64**	*e*Pb	**Pg**	**20 21 55.8**	**+1.6**
KZN				*e*Sb	**Sg**	**20 22 01.1**	**+3.8**
KZN	**Kozani**	**0.23**	**64**	*e*PB	**Pg**	**20 21 55.8**	**+1.6**
KZN				*e*SB	**Sg**	**20 22 01.1**	**+3.8**
KZN	**Kozani**	**0.23**	**64**	P	**Pg**	**20 21 55.8**	**+1.6**
KZN				S	**Sg**	**20 21 58.8**	**+1.5**
KZN	**Kozani**	**0.23**	**64**	P	**Pg**	**20 21 55.8**	**+1.6**
KZN				S	**Sg**	**20 21 58.8**	**+1.5**
NEST	**Nestorio**	**0.40**	**302**	P	**Pg**	**20 21 56.8**	**-0.6**
NEST				S	**Sg**	**20 22 03.2**	**+0.6**
NEST	**Nestorio**	**0.40**	**302**	P	**Pg**	**20 21 56.8**	**-0.6**
NEST				S	**Sg**	**20 22 03.2**	**+0.6**
FNA	**Florina**	**0.58**	**351**	P	**Pg**	**20 22 00.1**	**-0.8**
FNA				S	**Sg**	**20 22 09.0**	**+0.5**
FNA	**Florina**	**0.58**	**351**	P	**Pg**	**20 22 00.1**	**-0.8**
FNA				S	**Sg**	**20 22 09.0**	**+0.5**
KBN	**Korca**	**0.69**	**308**	*e*PG	**Pg**	**20 22 00.8**	**-1.9**
KBN				*i* SG	**Sg**	**20 22 11.8**	**+0.1**
KBN	**Korca**	**0.69**	**308**	*e*Pg	**Pg**	**20 22 00.8**	**-1.9**
	SNR=97						
KBN				*i* Sg	**Sg**	**20 22 11.8**	**+0.1**
	SNR=97						
LSK	**Leskovik**	**0.69**	**266**	*e*PG	**Pg**	**20 22 00.6**	**-2.2**
LSK				*i* SG	**Sg**	**20 22 11.3**	**-0.5**
LSK	**Leskovik**	**0.69**	**266**	*e*Pg	**Pg**	**20 22 00.6**	**-2.2**
	SNR=98						
LSK				*i* Sg	**Sg**	**20 22 11.3**	**-0.5**
	SNR=98						
JAN	**Janina**	**0.74**	**222**	*e*Pb	**Pg**	**20 22 02.8**	**-1.0**
JAN				*e*Sn	**Sg**	**20 22 14.1**	**+0.7**
JAN	**Janina**	**0.74**	**222**	*e*PB	**Pg**	**20 22 02.8**	**-1.0**
JAN				*e*SN	**Sg**	**20 22 14.1**	**+0.7**
JAN	**Janina**	**0.74**	**222**	*e*Pb	**Pg**	**20 22 02.8**	**-1.0**
JAN				*e*Sn	**Sg**	**20 22 14.1**	**+0.7**
THL	**Klokotos Trika**	**0.75**	**148**	*e*PN	**Pg**	**20 22 04.0**	**0.0**
THL				*e*SN	**Sg**	**20 22 15.3**	**+1.5**
THL	**Klokotos Trika**	**0.75**	**148**	P	**Pg**	**20 22 03.7**	**-0.3**
THL				S	**Sg**	**20 22 14.7**	**+0.9**
THL	**Klokotos Trika**	**0.75**	**148**	P	**Pg**	**20 22 03.7**	**-0.3**
THL	**Klokotos Trika**	**0.75**	**148**	*e*Pn	**Pg**	**20 22 04.0**	**0.0**
THL				S	**Sg**	**20 22 14.7**	**+0.9**
THL				*e*Sn	**Sg**	**20 22 15.3**	**+1.5**
LIT	**Litokhoron**	**0.77**	**97**	*e*Pn	**Pg**	**20 22 03.8**	**-0.5**
LIT				*e*Sn	**Sg**	**20 22 16.0**	**+1.7**
LIT	**Litokhoron**	**0.77**	**97**	*e*PN	**Pg**	**20 22 03.8**	**-0.5**
LIT				*e*SN	**Sg**	**20 22 16.0**	**+1.7**
LIT	**Litokhoron**	**0.77**	**97**	P	**Pg**	**20 22 03.3**	**-1.0**
LIT				S	**Sg**	**20 22 15.1**	**+0.8**
LIT	**Litokhoron**	**0.77**	**97**	P	**Pg**	**20 22 03.3**	**-1.0**
LIT	**Litokhoron**	**0.77**	**97**	*e*Pn	**Pg**	**20 22 03.8**	**-0.5**
LIT				S	**Sg**	**20 22 15.1**	**+0.8**
LIT				*e*Sn	**Sg**	**20 22 16.0**	**+1.7**
BIA	**Bitola**	**0.82**	**351**	*i* Pg	**Pg**	**20 22 04.9**	**-0.5**
BIA				*i* Sg	**Sg**	**20 22 16.8**	**+0.7**
BIA				*e*Lg		20 22 17.4	
	comp=E,688nm,0.4s						
BIA				*e*Lg		20 22 17.4	
	comp=N,300nm,0.2s						
GRG	**Griva**	**1.02**	**42**	P	**Pg**	**20 22 08.6**	**-0.5**
GRG	**Griva**	**1.02**	**42**	P	**Pg**	**20 22 08.7**	**-0.4**
GRG				S	**Sg**	**20 22 23.0**	**+0.7**
GRG	**Griva**	**1.02**	**42**	P	**Pg**	**20 22 08.6**	**-0.5**
GRG				S	**Sg**	**20 22 23.0**	**+0.7**
IGT	**Igoumenitsa**	**1.12**	**234**	P	**Pg**	**20 22 09.4**	**-1.7**
IGT				S	**Sg**	**20 22 28.2**	**+2.6**
IGT	**Igoumenitsa**	**1.12**	**234**	P	**Pg**	**20 22 09.4**	**-1.7**
IGT				S	**Sg**	**20 22 28.2**	**+2.6**
KRUS	**Krusevo**	**1.18**	**351**	*i* Pg	**Pg**	**20 22 11.0**	**-1.1**
SRN	**Sarande**	**1.19**	**255**	*e*PN	**Pn**	**20 22 09.8**	**-2.9**
SRN				*i* SN	**Sn**	**20 22 28.2**	**-1.0**
SRN	**Sarande**	**1.19**	**255**	*e*Pn	**Pn**	**20 22 09.8**	**-2.9**
	SNR=58						
SRN				*i* Sn	**Sn**	**20 22 28.2**	**-1.0**
	SNR=58						
THE	**Thessaloniki**	**1.20**	**69**	P	**Pb**	**20 22 11.7**	**-0.9**
THE	**Thessaloniki**	**1.20**	**69**	P	**Pb**	**20 22 11.8**	**-0.8**
THE				S	**Sg**	**20 22 29.1**	**+1.0**
THE	**Thessaloniki**	**1.20**	**69**	P	**Pb**	**20 22 11.8**	**-0.8**
THE				S	**Sg**	**20 22 29.1**	**+1.0**
HORT	**Hortiatis**	**1.28**	**72**	P	**Pn**	**20 22 12.9**	**-1.0**
HORT	**Hortiatis**	**1.28**	**72**	P	**Pn**	**20 22 12.8**	**-1.1**
HORT				S	**Sb**	**20 22 30.5**	**-0.3**
HORT	**Hortiatis**	**1.28**	**72**	P	**Pn**	**20 22 12.9**	**-1.0**
HORT				S	**Sb**	**20 22 30.5**	**-0.3**
EVR	**Evrytania**	**1.31**	**169**	*e*Pn	**Pn**	**20 22 13.5**	**-0.8**
EVR	**Evrytania**	**1.31**	**169**	*e*PN	**Pn**	**20 22 13.5**	**-0.8**
EVR	**Evrytania**	**1.31**	**169**	*e*Pn	**Pn**	**20 22 13.5**	**-0.8**
AGG	**Agios Georgios**	**1.34**	**151**	*e*Pn	**Pn**	**20 22 14.3**	**-0.5**
AGG				*e*Sn	**Sn**	**20 22 33.3**	**+0.4**
AGG	**Agios Georgios**	**1.34**	**151**	*e*PN	**Pn**	**20 22 14.3**	**-0.5**
AGG				*e*SN	**Sn**	**20 22 33.3**	**+0.4**
AGG	**Agios Georgios**	**1.34**	**151**	P	**Pn**	**20 22 14.2**	**-0.6**
AGG				S	**Sb**	**20 22 33.0**	**+0.5**
AGG	**Agios Georgios**	**1.34**	**151**	*e*Pn	**Pn**	**20 22 14.3**	**-0.5**
AGG				S	**Sb**	**20 22 33.0**	**+0.5**
AGG				*e*Sn	**Sn**	**20 22 33.3**	**+0.4**
VAY	**Valandovo**	**1.38**	**36**	P	**Pn**	**20 22 13.8**	**-1.5**
VAY				S	**Sb**	**20 22 32.7**	**-0.9**
VAY	**Valandovo**	**1.38**	**36**	*i* Pn	**Pn**	**20 22 14.6**	**-0.6**
VAY				*i* Sg	**Sg**	**20 22 34.1**	**+0.2**
VAY				*e*Lg		20 22 38.1	
	comp=N,788nm,1.0s						
VAY				*e*Lg		20 22 39.0	
	comp=E,405nm,0.7s						
VAY	**Valandovo**	**1.38**	**36**	P	**Pn**	**20 22 13.8**	**-1.5**
VAY				S	**Sb**	**20 22 32.7**	**-0.9**
KEK	**Kerkira**	**1.40**	**250**	*e*Pn	**Pn**	**20 22 14.9**	**-0.6**
KEK				*e*Sn	**Sn**	**20 22 33.7**	**-0.4**
KEK	**Kerkira**	**1.40**	**250**	*e*PN	**Pn**	**20 22 14.9**	**-0.6**
KEK				*e*SN	**Sn**	**20 22 33.7**	**-0.4**
KEK	**Kerkira**	**1.40**	**250**	P	**Pn**	**20 22 14.7**	**-0.8**
KEK				S	**Sb**	**20 22 35.2**	**+1.2**
KEK	**Kerkira**	**1.40**	**250**	*e*Pn	**Pn**	**20 22 14.9**	**-0.6**
KEK				*e*Sn	**Sn**	**20 22 33.7**	**-0.4**
KEK				S	**Sb**	**20 22 35.2**	**+1.2**
KNT	**Kendrikon**	**1.43**	**48**	P	**Pn**	**20 22 14.8**	**-1.2**
KNT				S	**Sn**	**20 22 33.6**	**-1.4**
KNT	**Kendrikon**	**1.43**	**48**	P	**Pn**	**20 22 14.8**	**-1.2**
KNT				S	**Sn**	**20 22 33.6**	**-1.4**
SOH	**Sokhos**	**1.54**	**66**	*e*Pn	**Pn**	**20 22 17.5**	**0.0**
SOH	**Sokhos**	**1.54**	**66**	*e*PN	**Pn**	**20 22 17.5**	**0.0**
SOH	**Sokhos**	**1.54**	**66**	P	**Pn**	**20 22 17.5**	**0.0**
SOH				S	**Sn**	**20 22 38.3**	**+0.5**
SOH	**Sokhos**	**1.54**	**66**	P	**Pn**	**20 22 17.5**	**0.0**
SOH				S	**Sn**	**20 22 38.3**	**+0.5**
XOR	**Xorichti**	**1.55**	**122**	P	**Pn**	**20 22 16.6**	**-1.0**
XOR	**Xorichti**	**1.55**	**122**	P	**Pn**	**20 22 16.9**	**-0.7**
XOR				S	**Sn**	**20 22 38.3**	**+0.3**
XOR	**Xorichti**	**1.55**	**122**	P	**Pn**	**20 22 16.9**	**-0.7**
XOR				S	**Sn**	**20 22 38.3**	**+0.3**
LKD2	**Lefkada island**	**1.56**	**205**	P	**Pn**	**20 22 18.6**	**+0.9**
LKD2				S	**Sn**	**20 22 38.5**	**+0.4**
LKD2	**Lefkada island**	**1.56**	**205**	P	**Pn**	**20 22 18.6**	**+0.9**
LKD2				S	**Sn**	**20 22 38.5**	**+0.4**
NEO	**Neokhori**	**1.60**	**123**	*e*Pb	**Pb**	**20 22 17.7**	**-1.8**
NEO	**Neokhori**	**1.60**	**123**	*e*PB	**Pb**	**20 22 17.7**	**-1.8**
NEO	**Neokhori**	**1.60**	**123**	*e*Pb	**Pb**	**20 22 17.7**	**-1.8**
TIR	**Tirane**	**1.69**	**313**	P	**Pn**	**20 22 21.9**	**+2.5**
TIR	**Tirane**	**1.69**	**313**	P	**Pn**	**20 22 21.9**	**+2.5**
PAIG	**Paliouri**	**1.70**	**99**	P	**Pn**	**20 22 18.5**	**-1.1**
PAIG	**Paliouri**	**1.70**	**99**	P	**Pn**	**20 22 18.6**	**-1.0**
PAIG				S	**Sn**	**20 22 40.4**	**-1.2**
PAIG	**Paliouri**	**1.70**	**99**	P	**Pn**	**20 22 18.6**	**-1.0**
PAIG				S	**Sn**	**20 22 40.4**	**-1.2**
SKO	**Skopje**	**1.77**	**359**	*i* Pn	**Pn**	**20 22 21.5**	**+0.9**
SKO				*i* Sg	**Sg**	**20 22 46.4**	**+0.1**
SKO				*e*Lg		20 22 47.5	
	comp=E,185nm,0.6s						
SKO				*e*Lg		20 22 49.4	
	comp=N,200nm,0.8s						
EFP	**Efpalio**	**1.80**	**170**	*e*PN	**Pn**	**20 22 21.8**	**+0.7**
EFP	**Efpalio**	**1.80**	**170**	P	**Pn**	**20 22 21.7**	**+0.6**
EFP				S	**Sn**	**20 22 44.5**	**+0.3**
EFP	**Efpalio**	**1.80**	**170**	P	**Pn**	**20 22 21.7**	**+0.6**
EFP				S	**Sn**	**20 22 44.5**	**+0.3**
SRS	**Serrai**	**1.83**	**60**	P	**Pn**	**20 22 20.7**	**-0.8**
SRS	**Serrai**	**1.83**	**60**	P	**Pn**	**20 22 20.5**	**-1.0**
SRS				S	**Sn**	**20 22 43.5**	**-1.5**
SRS	**Serrai**	**1.83**	**60**	P	**Pn**	**20 22 20.5**	**-1.0**
SRS				S	**Sn**	**20 22 43.5**	**-1.5**
KALE	**Kalithea**	**1.88**	**164**	P	**Pn**	**20 22 21.7**	**-0.4**
KALE				S	**Sn**	**20 22 45.9**	**-0.2**
KALE	**Kalithea**	**1.88**	**164**	P	**Pn**	**20 22 21.7**	**-0.4**
KALE				S	**Sn**	**20 22 45.9**	**-0.2**
TRIZ	**Trizonia**	**1.89**	**166**	P	**Pn**	**20 22 22.0**	**-0.3**
TRIZ				S	**Sn**	**20 22 46.2**	**-0.1**
TRIZ	**Trizonia**	**1.89**	**166**	P	**Pn**	**20 22 22.0**	**-0.3**
TRIZ				S	**Sn**	**20 22 46.2**	**-0.1**
OUR	**Ouranopolis**	**1.91**	**85**	P	**Pn**	**20 22 22.0**	**-0.5**
OUR	**Ouranopolis**	**1.91**	**85**	P	**Pn**	**20 22 21.5**	**-1.0**
OUR				S	**Sn**	**20 22 46.1**	**-0.6**
OUR	**Ouranopolis**	**1.91**	**85**	P	**Pn**	**20 22 21.5**	**-1.0**
OUR				S	**Sn**	**20 22 46.1**	**-0.6**
ATAL	**Atalanti**	**1.92**	**142**	P	**Pn**	**20 22 22.1**	**-0.5**
ATAL				S	**Sn**	**20 22 47.8**	**+0.8**
ATAL	**Atalanti**	**1.92**	**142**	P	**Pn**	**20 22 22.1**	**-0.5**
ATAL				S	**Sn**	**20 22 47.8**	**+0.8**
UPR	**University Cam**	**1.93**	**173**	*e*PN	**Pn**	**20 22 23.5**	**+0.7**
UPR	**University Cam**	**1.93**	**173**	*e*Pn	**Pn**	**20 22 23.5**	**+0.7**
LKR	**Lokris**	**1.94**	**143**	*e*Pb	**Pn**	**20 22 22.5**	**-0.4**
LKR	**Lokris**	**1.94**	**143**	*e*PB	**Pn**	**20 22 22.5**	**-0.4**
LKR	**Lokris**	**1.94**	**143**	P	**Pn**	**20 22 22.5**	**-0.4**
LKR				S	**Sn**	**20 22 48.5**	**+0.9**
LKR	**Lokris**	**1.94**	**143**	*e*Pb	**Pn**	**20 22 22.5**	**-0.4**
LKR				S	**Sn**	**20 22 48.5**	**+0.9**
DSF	**Desfina**	**1.96**	**156**	P	**Pn**	**20 22 23.0**	**-0.2**
DSF				S	**Sn**	**20 22 49.2**	**+1.1**
DSF	**Desfina**	**1.96**	**156**	P	**Pn**	**20 22 23.0**	**-0.2**
DSF				S	**Sn**	**20 22 49.2**	**+1.1**
LAKA	**Lakka**	**2.00**	**169**	P	**Pn**	**20 22 24.0**	**+0.3**
LAKA				S	**Sn**	**20 22 49.4**	**+0.4**
LAKA	**Lakka**	**2.00**	**169**	P	**Pn**	**20 22 24.0**	**+0.3**
LAKA				S	**Sn**	**20 22 49.4**	**+0.4**
AOS	**Alonnisos**	**2.11**	**119**	P	**Pn**	**20 22 23.9**	**-1.4**
AOS	**Alonnisos**	**2.11**	**119**	P	**Pn**	**20 22 24.0**	**-1.3**
AOS				S	**Sn**	**20 22 51.9**	**+0.2**
AOS	**Alonnisos**	**2.11**	**119**	P	**Pn**	**20 22 24.0**	**-1.3**
AOS				S	**Sn**	**20 22 51.9**	**+0.2**
NVR	**Nevrokopi**	**2.13**	**57**	*e*Pn	**Pn**	**20 22 25.5**	**0.0**
NVR	**Nevrokopi**	**2.13**	**57**	*e*PN	**Pn**	**20 22 25.5**	**0.0**
NVR	**Nevrokopi**	**2.13**	**57**	*e*Pn	**Pn**	**20 22 25.5**	**0.0**
RLS	**Riolos of Patr**	**2.15**	**181**	P	**Pn**	**20 22 28.5**	**+2.7**
RLS	**Riolos of Patr**	**2.15**	**181**	P	**Pn**	**20 22 28.5**	**+2.7**
VLS	**Valsamata**	**2.15**	**199**	P	**Pn**	**20 22 26.4**	**+0.6**
VLS	**Valsamata**	**2.15**	**199**	P	**Pn**	**20 22 25.7**	**-0.1**
VLS	**Valsamata**	**2.15**	**199**	P	**Pn**	**20 22 25.7**	**-0.1**
MMB	**Musomiste**	**2.18**	**50**	*i* P	**Pn**	**20 22 25.4**	**-0.9**
MMB	**Musomiste**	**2.18**	**50**	*i* P	**Pn**	**20 22 25.4**	**-0.9**
PUK	**Puka**	**2.20**	**327**	*e*PN	**Pn**	**20 22 27.6**	**+1.1**
PUK				*i* SN	**Sn**	**20 22 56.6**	**+2.6**
PUK	**Puka**	**2.20**	**327**	*e*Pn	**Pn**	**20 22 27.6**	**+1.1**
	SNR=58						
PUK				*i* Sn	**Sn**	**20 22 56.6**	**+2.6**
	SNR=58						
GUR	**Goura**	**2.36**	**164**	*e*PN	**Pn**	**20 22 28.1**	**-0.6**
GUR	**Goura**	**2.36**	**164**	P	**Pn**	**20 22 29.0**	**+0.3**
GUR				S	**Sn**	**20 22 58.3**	**+0.4**
GUR	**Goura**	**2.36**	**164**	*e*Pn	**Pn**	**20 22 28.1**	**-0.6**
GUR	**Goura**	**2.36**	**164**	P	**Pn**	**20 22 29.0**	**+0.3**
GUR				S	**Sn**	**20 22 58.3**	**+0.4**
BCI	**Bajram Curri**	**2.41**	**334**	*e*PN	**Pn**	**20 22 33.4**	**+3.9**
KAVA	**Kavala**	**2.43**	**70**	P	**Pn**	**20 22 28.5**	**-1.2**
KAVA				S	**Sn**	**20 22 58.2**	**-1.4**
KAVA	**Kavala**	**2.43**	**70**	P	**Pn**	**20 22 28.5**	**-1.2**
KAVA				S	**Sn**	**20 22 58.2**	**-1.4**
ULC	**Ulcinj**	**2.44**	**317**	⇑*i* Pn	**Pn**	**20 22 31.2**	**+1.3**
ULC				*e*Sn	**Sn**	**20 23 03.2**	**+3.2**
ULC	**Ulcinj**	**2.44**	**317**	⇑*i* Pn	**Pn**	**20 22 31.2**	**+1.3**
ULC				*e*Sn	**Sn**	**20 23 03.2**	**+3.2**
LTK	**Loutraki**	**2.46**	**152**	*e*PN	**Pn**	**20 22 29.1**	**-1.0**
LTK	**Loutraki**	**2.46**	**152**	P	**Pn**	**20 22 29.4**	**-0.7**
LTK				S	**Sn**	**20 23 00.2**	**-0.2**
LTK	**Loutraki**	**2.46**	**152**	*e*Pn	**Pn**	**20 22 29.1**	**-1.0**
LTK	**Loutraki**	**2.46**	**152**	P	**Pn**	**20 22 29.4**	**-0.7**
LTK				S	**Sn**	**20 23 00.2**	**-0.2**
BARS	**Barje**	**2.62**	**5**	*e*Pn	**Pn**	**20 22 31.6**	**-0.7**
PVY	**Plav**	**2.65**	**335**	⇑*i* Pn	**Pn**	**20 22 33.6**	**+0.9**
PVY				*e*Sn	**Sn**	**20 23 08.1**	**+3.0**
PVY	**Plav**	**2.65**	**335**	⇑*i* Pn	**Pn**	**20 22 33.6**	**+0.9**
PVY				*e*Sn	**Sn**	**20 23 08.1**	**+3.0**
VTS	**Vitosha**	**2.71**	**28**	⇑P	**Pn**	**20 22 33.8**	**+0.2**
VTS	**Vitosha**	**2.71**	**28**	P	**Pn**	**20 22 33.6**	**+0.1**
VTS	**Vitosha**	**2.71**	**28**	⇑*i* P	**Pn**	**20 22 33.8**	**+0.3**
VTS	**Vitosha**	**2.71**	**28**	*i* P	**Pn**	**20 22 33.0**	**-0.5**
VTS	**Vitosha**	**2.71**	**28**	*i* P	**Pn**	**20 22 33.0**	**-0.5**
PDG	**Podgorica**	**2.79**	**324**	⇑*i* Pn	**Pn**	**20 22 35.8**	**+1.2**
PDG				*e*Sn	**Sn**	**20 23 11.3**	**+2.8**
TTG	**Podgorica**	**2.79**	**324**	⇑*i* Pn	**Pn**	**20 22 35.8**	**+1.2**
TTG				*e*Sn	**Sn**	**20 23 11.3**	**+2.8**
TTG	**Podgorica**	**2.79**	**324**	⇑*i* Pn	**Pn**	**20 22 35.8**	**+1.2**
TTG				*e*Sn	**Sn**	**20 23 11.3**	**+2.8**
ATH	**Athens Observa**	**2.82**	**142**	*e*Pn	**Pn**	**20 22 35.0**	**-0.1**
ATH	**Athens Observa**	**2.82**	**142**	*e*PN	**Pn**	**20 22 35.0**	**-0.1**
ATH	**Athens Observa**	**2.82**	**142**	*e*Pn	**Pn**	**20 22 35.0**	**-0.1**
PTL	**Penteli**	**2.83**	**139**	*e*Pn	**Pn**	**20 22 35.2**	**0.0**
PTL	**Penteli**	**2.83**	**139**	*e*PN	**Pn**	**20 22 35.2**	**0.0**
PTL	**Penteli**	**2.83**	**139**	*e*Pn	**Pn**	**20 22 35.2**	**0.0**
RZN	**Rozhen**	**2.85**	**58**	*i* P	**Pn**	**20 22 36.1**	**+0.6**
RZN	**Rozhen**	**2.85**	**58**	*i* P	**Pn**	**20 22 36.1**	**+0.6**
ATHU	**Athens Univers**	**2.86**	**141**	P	**Pn**	**20 22 36.3**	**+0.7**
ATHU				S	**Sn**	**20 23 10.0**	**-0.2**
ATHU	**Athens Univers**	**2.86**	**141**	P	**Pn**	**20 22 36.3**	**+0.7**
ATHU				S	**Sn**	**20 23 10.0**	**-0.2**
BUM	**Brajici-Budva**	**2.87**	**318**	⇑*i* Pn	**Pn**	**20 22 37.5**	**+1.8**
BUM				*e*Sn	**Sn**	**20 23 13.7**	**+3.2**
BUM	**Brajici-Budva**	**2.87**	**318**	⇑*i* Pn	**Pn**	**20 22 37.5**	**+1.8**
BUM				*e*Sn	**Sn**	**20 23 13.7**	**+3.2**
NAIG	**Nisos Aigina**	**2.89**	**147**	*e*Pn	**Pn**	**20 22 36.1**	**0

VOIR		**5.84**	**25**	⇓*iP*	**Pn**	**20 23 19.6**	**+3.0**
MLR	**Muntele Rosu**	**6.21**	**30**	⇑P	**Pn**	**20 23 23.9**	**+2.3**
MLR	**Muntele Rosu**	**6.21**	**30**	P	**Pn**	**20 23 23.6**	**+1.9**
	comp=N,0.6nm,0.3s,baz=244,slow=12,SNR=9.4						
MLR				S	**Sn**	**20 24 34.5**	**+1.7**
	baz=255,slow=20,SNR=2.3						
MLR	**Muntele Rosu**	**6.21**	**30**	⇑*iP*	**Pn**	**20 23 23.9**	**+2.3**
PKSM	**Moragy**	**6.36**	**342**	⇑P	**Pn**	**20 23 22.2**	**-1.4**
PKSM	**Moragy**	**6.36**	**342**	⇑*iP*	**Pn**	**20 23 22.2**	**-1.3**
PKSM	**Moragy**	**6.36**	**342**	⇑P	**Pn**	**20 23 22.2**	**-1.4**
AQU	**L'Aquila**	**6.46**	**292**	*ePn*	**Pn**	**20 23 26.3**	**+1.2**
	comp=N,18nm,0.9s						
AQU				*e*Sn	**Sn**	**20 24 33.2**	**-5.9**
AQU	**L'Aquila**	**6.46**	**292**	*ePn*	**Pn**	**20 23 26.3**	**+1.2**
	comp=N,18nm,0.9s						
KHAL	**Karahalli**	**6.47**	**104**	*i* P	**Pn**	**20 23 27.0**	**+1.8**
KHAL	**Karahalli**	**6.47**	**104**	*i* P	**Pn**	**20 23 27.0**	**+1.8**
NVLJ	**Novalja**	**6.56**	**314**	*ePn*	**Pn**	**20 23 24.3**	**-2.1**
NVLJ				Sn	**Sn**	**20 24 35.5**	**-5.9**
NVLJ	**Novalja**	**6.56**	**314**	*ePn*	**Pn**	**20 23 24.2**	**-2.2**
TIRR	**Tirgusor**	**6.66**	**48**	Pn	**Pn**	**20 23 33.6**	**+5.9**
PLOR	**Plostina**	**6.79**	**32**	⇑*iP*	**Pn**	**20 23 31.5**	**+2.0**
VRI	**Vrincioaia**	**6.83**	**32**	⇑P	**Pn**	**20 23 32.0**	**+1.8**
VRI	**Vrincioaia**	**6.83**	**32**	⇑*iP*	**Pn**	**20 23 32.0**	**+1.9**
BOJS	**Bojanci**	**7.01**	**321**	*i* Pn	**Pn**	**20 23 36.3**	**+3.8**
BOJS				*i* Sn	**Sn**	**20 24 50.0**	**-2.4**
VISS	**Visnje**	**7.42**	**321**	*i* Pn	**Pn**	**20 23 39.2**	**+1.0**
VISS				*i* Sn	**Sn**	**20 25 00.8**	**-1.9**
VISS	**Visnje**	**7.42**	**321**	*i* Pn	**Pn**	**20 23 39.2**	**+1.0**
VISS				*i* Sn	**Sn**	**20 25 00.8**	**-1.9**
CEY	**Cerknica**	**7.58**	**319**	*i* Pn	**Pn**	**20 23 39.4**	**-1.0**
CEY				*i* Sn	**Sn**	**20 25 02.2**	**-4.3**
CEY	**Cerknica**	**7.58**	**319**	*i* Pn	**Pn**	**20 23 39.4**	**-1.0**
PSZ	**Piszkesteto**	**7.80**	**352**	*ePn*	**Pn**	**20 23 41.6**	**-1.8**
	comp=N,5.3nm,0.6s						
PSZ	**Piszkesteto**	**7.80**	**352**	⇑*iP*	**Pn**	**20 23 42.6**	**-0.8**
PSZ	**Piszkesteto**	**7.80**	**352**	*ePn*	**Pn**	**20 23 41.6**	**-1.8**
	comp=N,5.3nm,0.6s						
PSZ	**Piszkesteto**	**7.80**	**352**	⇑*iP*	**Pn**	**20 23 42.6**	**-0.8**
KECS	**Kecovo**	**8.31**	**355**	*ePn*	**Pn**	**20 23 53.6**	**+3.2**
KECS	**Kecovo**	**8.31**	**355**	*e*PN	**Pn**	**20 23 53.6**	**+3.2**
VYHS	**Vyhne**	**8.50**	**348**	*ePn*	**Pn**	**20 23 53.4**	**+0.3**
VYHS	**Vyhne**	**8.50**	**348**	*e*PN	**Pn**	**20 23 53.4**	**+0.3**
VYHS	**Vyhne**	**8.50**	**348**	*ePn*	**Pn**	**20 23 53.4**	**+0.3**
BRTR	**Keskin Array B**	**9.34**	**89**	P	**Pn**	**20 24 05.0**	**+0.5**
	comp=N,0.1nm,0.3s,baz=270,slow=8.6,SNR=3.1						
BRTR	**Keskin Array B**	**9.34**	**89**	P	**Pn**	**20 24 05.1**	**+0.6**
DAVOX	**Davos/Dischmat**	**10.69**	**312**	P	**Pn**	**20 24 20.5**	**-2.5**
	baz=146,slow=7.3,SNR=2.2						
DAVOX				S	**Sn**	**20 26 14.8**	**-8.1**
	comp=N,0.1nm,0.3s,baz=217,slow=4.0,SNR=3.1						
DAVOX	**Davos/Dischmat**	**10.69**	**312**	P	**Pn**	**20 24 20.5**	**-2.5**
HFS	**Hagfors**	**20.54**	**349**	P	**P**	**20 26 24.2**	**-4.1**
	comp=N,1.0nm,0.6s,baz=164,slow=13,SNR=5.1						
FINES	**FINESS Array B**	**21.45**	**6**	P	**Pn**	**20 26 34.3**	**-3.9**
	comp=N,0.7nm,0.5s,mb3.3,baz=184,slow=9.0,SNR=4.7						
NB2	**NORSAR Subarra**	**21.80**	**346**	P	**P**	**20 26 38.6**	**-3.3**
	comp=N,1.0nm,0.6s,mb3.4,SNR=6.7						
NOA	**NORSAR Array B**	**21.80**	**346**	P	**P**	**20 26 39.0**	**-3.0**
	comp=N,2.1nm,0.8s,mb3.6,baz=163,slow=11,SNR=6.5						
NOA	**NORSAR Array B**	**21.80**	**346**	P	**P**	**20 26 39.0**	**-2.9**
EKA	**Eskdalemuir Ar**	**22.27**	**321**	P	**P**	**20 26 44.3**	**-2.7**
	comp=N,1.8nm,0.8s,mb3.6,baz=122,slow=9.7,SNR=6.3						
EKA	**Eskdalemuir Ar**	**22.27**	**321**	P	**P**	**20 26 44.3**	**-2.7**
ARCES	**ARCESS Array B**	**29.47**	**3**	P	**P**	**20 27 50.4**	**-3.4**
	comp=N,2.3nm,1.0s,mb3.9,baz=182,slow=10,SNR=5.1						

IDC ***16*** *20:43:47.6±0.6, 12.°96N×124.°54E, h0km, mb3.9/13, mb1 4.1/14, mb1mx4.0/20, mbtmp4.0/14, ML4.5/1, MS3.4/6, Ms1 3.4/6, ms1mx3.2/18, Error ellipse: s-maj=30.7km s-min=13.7km az=66.0*

ISCJB ***16*** *20:43:49.8±0.9, 13.°06N±0.°03×124.°46E±0.°05, h22km±7km, mb4.2/22, MS3.4/4, Error ellipse: s-maj=7.8km s-min=4.9km az=174.1*

NEIC ***16*** *20:43:49.1±0.5, 12.°91N×124.°49E, h10km, mb4.5/10, Error ellipse: s-maj=13.1km s-min=8.6km az=79.0*

NEIC Felt [II PIVS] at Sorsogon, Luzon.

MAN ***16*** *20:43:49, 13.°11N×124.°36E, h11km, mb5.0, ML4.0, MS4.0*

MAN INTENSITY II - SORSOGON CITY.

ISC 16 20:43:50.1±0.9, 13.°03N±0.°03×124.°42E±0.°04, h10km±5km, n60, σ1$20/61, mb4.2/22, MS3.4/4, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.57**	**156**	*eP*	**Pg**	**20 44 02.7**	**+1.5**
PVCP	**Virac**	**0.62**	**335**	*eP*	**Pg**	**20 44 00.4**	**-1.6**
MMPH	**Masbate**	**1.03**	**229**	⇑*iP*	**Pg**	**20 44 08.8**	**-1.1**
MMPH				*e*S	**Sg**	**20 44 22.2**	**-1.1**
AUQP	**San Andres**	**1.73**	**280**	*eP*	**Pn**	**20 44 21.5**	**+1.4**
OCLP	**Ormoc**	**1.98**	**175**	*eP*	**Pn**	**20 44 25.6**	**+1.9**
GQP	**Guinayangan**	**2.11**	**294**	⇓*eP*	**Pn**	**20 44 25.9**	**+0.4**
GQP				*e*S	**Sn**	**20 44 53.1**	**+1.4**
RCP	**Roxas**	**2.20**	**228**	⇓*eP*	**Pn**	**20 44 26.7**	**0.0**
RCP				*i* S	**Sn**	**20 44 53.0**	**-0.9**
OTRP	**Odiongan**	**2.44**	**254**	*eP*	**Pn**	**20 44 29.5**	**-0.5**
BOAC	**Boac**	**2.55**	**280**	*eP*	**Pn**	**20 44 31.1**	**-0.3**
LLP	**Lapu-Lapu**	**2.74**	**189**	*eP*	**Pn**	**20 44 33.8**	**-0.3**
LLP				*e*S	**Sn**	**20 45 08.7**	**+1.5**
POLP	**Polilio Island**	**2.94**	**305**	*eP*	**Pn**	**20 44 38.3**	**+1.5**
GUIM	**Jordan**	**2.99**	**217**	*eP*	**Pn**	**20 44 38.2**	**+0.6**
LQP	**Lukban**	**3.00**	**291**	*eP*	**Pg**	**20 44 48.6**	**+1.0**
TGY	**Tagaytay City**	**3.55**	**288**	Pn	**Pn**	**20 44 47.9**	**+2.6**
	39nm,0.3s,baz=118,slow=9.6,SNR=8.7						
BALP	**Baler**	**3.85**	**315**	*eP*	**Pn**	**20 44 48.2**	**-1.2**
CUYO	**Cuyo Island**	**3.98**	**237**	*eP*	**Pn**	**20 44 51.0**	**-0.1**
LUBP	**Lubang**	**4.12**	**280**	*eP*	**Pn**	**20 44 57.3**	**+4.1**
BUTP	**Butuan**	**4.21**	**164**	*eP*	**Pn**	**20 45 03.1**	**+8.8**
BUSP	**Coron**	**4.25**	**257**	*eP*	**Pn**	**20 44 54.4**	**-0.5**
PALP	**Palanan**	**4.45**	**335**	*eP*	**Pn**	**20 44 56.1**	**-1.5**
CAUP	**Cauayan**	**4.63**	**327**	*eP*	**Pn**	**20 44 59.2**	**-0.9**
SCZP	**Santa Cruz**	**5.15**	**302**	*eP*	**Pn**	**20 45 08.8**	**+1.5**
BUKP	**Musuan**	**5.16**	**173**	*eP*	**Pn**	**20 45 10.0**	**+2.6**
ENPP	**El Nido**	**5.21**	**250**	*eP*	**Pn**	**20 45 09.0**	**+0.8**
PAGZ	**Pagadian**	**5.25**	**191**	*eP*	**Pn**	**20 45 09.9**	**+1.2**
APYP	**Conner**	**5.70**	**328**	*eP*	**Pn**	**20 45 14.7**	**-0.1**
ABRA	**Dolores**	**5.82**	**322**	*eP*	**Pn**	**20 45 16.9**	**+0.4**
DAV	**Davao City (W)**	**6.04**	**169**	LR	LR	20 48 10.5	
	comp=Z,738nm,19.0s,baz=358,slow=44						
KKM	**Kota Kinabalu**	**10.68**	**230**	P	**Pn**	**20 46 20.9**	**-2.1**
YHNB	**Yeheng**	**11.93**	**346**	*ePn*	**Pn**	**20 46 42.3**	**+2.1**
	16nm,0.4s						
GUMO	**Guam**	**19.91**	**86**	LR	LR	20 54 46.2	
	comp=Z,40nm,19.1s,baz=88,slow=33						
KSRS	**Korea Array**	**24.52**	**7**	P	**P**	**20 49 10.8**	**+1.1**
	3.2nm,0.9s,mb3.8,baz=187,slow=8.5,SNR=4.4						
KSRS				LR	LR	20 58 09.0	
	comp=Z,69nm,20.9s,MS3.1,baz=190,slow=35						
KULM	**Kulim**	**24.68**	**254**	P	**P**	**20 49 10.8**	**-0.6**
	6.9nm,1.0s,mb4.1						
CMAR	**Chiang Mai Arr**	**25.10**	**286**	P	**P**	**20 49 13.6**	**-1.5**
	0.9nm,0.7s,mb3.4,baz=95,slow=8.1,SNR=6.2						
WRA	**Warramunga Arr**	**34.19**	**163**	P	**P**	**20 50 33.6**	**-2.2**
WRA				PcP	PcP	20 53 10.8	-2.0
WRA	**Warramunga Arr**	**34.19**	**163**	P	**P**	**20 50 33.6**	**-2.2**
	0.9nm,0.5s,mb3.9,baz=341,slow=8.9,SNR=21						
WRA				PcP	PcP	20 53 10.8	-2.0
	0.6nm,0.6s,baz=332,slow=3.0,SNR=6.0						
ULN	**Ulaanbaatar**	**37.63**	**341**	*eP*	**P**	**20 51 07.6**	**+2.6**
	2.9nm,0.3s,mb4.5						
ASAR	**Alice Springs**	**37.63**	**166**	P	**P**	**20 51 04.7**	**-0.7**
	2.0nm,0.3s,mb4.3,baz=340,slow=7.1,SNR=61						
ASAR				PcP	PcP	20 53 20.0	-2.9
	0.7nm,0.6s,baz=344,slow=2.6,SNR=5.3						
SONM	**Songino Array**	**37.82**	**340**	P	**P**	**20 51 06.9**	**+0.3**
	1.4nm,0.8s,mb3.7,baz=158,slow=9.6,SNR=9.4						
SONM				LR	LR	21 06 24.7	
	comp=Z,50nm,21.8s,MS3.3,baz=159,slow=36						
NWAO	**Narrogin (SRO)**	**46.21**	**188**	P	**P**	**20 52 13.9**	**-1.5**
	6.3nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**47.59**	**160**	*eP*	**P**	**20 52 24.5**	**-1.6**
	0.9nm,0.7s,mb3.9						
STKA	**Stephens Creek**	**47.59**	**160**	P	**P**	**20 52 25.0**	**-1.1**
	2.4nm,0.4s,mb4.6,baz=340,slow=3.8,SNR=13						
MKAR	**Makanchi Array**	**48.75**	**322**	P	**P**	**20 52 35.7**	**+0.8**
MKAR	**Makanchi Array**	**48.75**	**322**	P	**P**	**20 52 35.7**	**+0.8**
	1.5nm,0.5s,mb4.3,baz=119,slow=8.5,SNR=24						
ZALV	**Zalesovo Beam**	**51.35**	**331**	P	**P**	**20 52 54.2**	**-0.3**
ZALV				LR	LR	21 14 47.1	
ZALV	**Zalesovo Beam**	**51.35**	**331**	P	**P**	**20 52 54.2**	**-0.3**
	1.2nm,0.5s,mb4.0,baz=111,slow=8.1,SNR=6.4						
ZALV				LR	LR	21 14 47.1	
	comp=Z,39nm,18.3s,MS3.5,baz=62,slow=36						
KURK	**Kurchatov**	**52.78**	**325**	*eP*	**P**	**20 53 05.1**	**-0.2**
	12nm,1.0s,mb4.8						
KBL	**Kabul**	**54.30**	**303**	*eP*	**P**	**20 53 16.6**	**-0.1**
	2.0nm,0.6s,mb4.2						
BVAR	**Borovoye Array**	**58.38**	**325**	P	**P**	**20 53 45.5**	**0.0**
	0.6nm,0.5s,mb3.9,baz=126,slow=6.2,SNR=5.6						
BRVK	**Borovoye**	**58.45**	**325**	*eP*	**P**	**20 53 50.3**	**+4.3**
	4.2nm,1.0s,mb4.4						
ABKAR	**Akbulak array**	**63.62**	**319**	*eP*	**P**	**20 54 20.5**	**-0.7**
	2.2nm,0.7s,mb4.3						
ARU	**Arti**	**65.94**	**326**	*eP*	**P**	**20 54 34.5**	**-1.7**
	4.4nm,0.8s,mb4.5						
BPAW	**Bear Paw Mtn.**	**76.02**	**27**	*eP*	**P**	**20 55 37.0**	**-0.3**
	2µm,0.6s						
ILAR	**Eielson Array**	**77.76**	**26**	P	**P**	**20 55 45.8**	**-1.3**
	0.4nm,0.8s,mb3.4,baz=229,slow=6.9,SNR=4.6						
ARCES	**ARCESS Array B**	**80.99**	**339**	P	**P**	**20 56 04.2**	**-0.4**
	3.4nm,1.0s,mb4.2,baz=82,slow=7.4,SNR=4.6						
BRTR	**Keskin Array B**	**82.39**	**309**	P	**P**	**20 56 14.2**	**+1.6**
	0.1nm,0.3s,mb3.2,baz=132,slow=2.1,SNR=2.4						
FINES	**FINESS Array B**	**82.61**	**331**	P	**P**	**20 56 12.5**	**-0.8**
	6.1nm,1.1s,mb4.5,baz=61,slow=5.0,SNR=6.3						
BUR08	**Bucovina Ar. S**	**86.59**	**318**	*eP*	**P**	**20 56 32.9**	**-0.8**
RES	**Resolute Bay**	**89.10**	**10**	P	**P**	**20 56 39.3**	**-5.9**
	16nm,0.9s,mb5.3						
NOA	**NORSAR Array B**	**89.49**	**333**	LR	LR	21 40 24.0	
	comp=Z,37nm,18.7s,MS3.8,baz=280,slow=38						

WEL 16 21:04:00.1±0.7, 38.°59S×175.°28E, h211km±6km, ML3.6/13, 1C, Error ellipse: s-maj=5.7km s-min=5.1km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FWVZ	**Far West T-bar**	**0.70**	**162**	⇑PN	Pn	21 04 29.9	+0.6
TRVZ	**Turoa**	**0.74**	**164**	PN	Pn	21 04 28.6	-0.9
MOVZ	**Moawhango**	**0.90**	**156**	PN	Pn	21 04 30.3	0.0
BHHZ	**Black Hill Sta**	**1.09**	**146**	PN	Pn	21 04 31.4	-0.1
BKZ	**Black Stump Fm**	**1.11**	**122**	PN	Pn	21 04 31.8	+0.1
BKZ				SN	S	21 04 55.5	-0.8
WAZ	**Wanganui**	**1.19**	**191**	PN	Pn	21 04 32.4	+0.1
NMHZ	**Naumai**	**1.29**	**114**	PN	Pn	21 04 34.0	+1.0
NMHZ				SN	S	21 04 59.6	+0.9
MCHZ	**McNeill Hill**	**1.40**	**128**	PN	Pn	21 04 34.6	+0.8
MCHZ				SN	S	21 05 00.9	+0.7
URZ	**Urewera**	**1.47**	**78**	PN	Pn	21 04 34.1	-0.5
PNHZ	**Pukenui**	**1.50**	**152**	PN	Pn	21 04 34.5	-0.3
PNHZ				SN	S	21 05 00.5	-1.4
TSZ	**Takapari Road**	**1.56**	**160**	PN	Pn	21 04 34.9	-0.3
TSZ				SN	S	21 05 00.9	-1.9
WPHZ	**Waipukurau**	**1.73**	**149**	PN	Pn	21 04 36.4	-0.3
WPHZ				SN	S	21 05 03.9	-1.5
KAHZ	**Kahuranaki**	**1.73**	**135**	PN	Pn	21 04 36.9	+0.2
MWZ	**Matawai**	**1.78**	**83**	PN	Pn	21 04 37.0	-0.3
MWZ				SN	S	21 05 04.4	-1.8
DVHZ	**Dannevirke**	**1.84**	**158**	SN	S	21 05 04.8	-2.6
PXZ	**Pawanui**	**1.89**	**140**	PN	Pn	21 04 37.8	-0.5
PXZ				SN	S	21 05 06.1	-2.1
KNZ	**Kokohu**	**1.92**	**104**	PN	Pn	21 04 38.4	-0.2
PRHZ	**Porangahau**	**1.98**	**148**	PN	Pn	21 04 38.5	-0.7
PRHZ				SN	S	21 05 07.8	-2.0
MRZ	**Mangatainoka R**	**2.08**	**174**	PN	Pn	21 04 38.8	-1.4
MRZ				SN	S	21 05 08.4	-3.3
BFZ	**Birch Farm**	**2.22**	**161**	SN	S	21 05 11.3	-2.9
OGWZ	**Otaki Gorge**	**2.23**	**182**	PN	Pn	21 04 40.5	-1.2
TIWZ	**Tintock**	**2.23**	**168**	SN	S	21 05 11.2	-3.3
KIW	**Kapiti Island**	**2.29**	**187**	PN	Pn	21 04 40.6	-1.7
HOWZ	**Holdsworth Sta**	**2.31**	**176**	PN	Pn	21 04 40.9	-1.7
HOWZ				SN	S	21 05 12.3	-3.7
CAW	**Cannon Point**	**2.52**	**184**	PN	Pn	21 04 43.0	-1.8
TMWZ	**Te Maipa**	**2.56**	**170**	PN	Pn	21 04 43.3	-1.9
MTW	**Mount Morrison**	**2.57**	**176**	PN	Pn	21 04 43.2	-2.2
SNZO	**South Karori**	**2.75**	**189**	PN	Pn	21 04 45.1	-2.4
MSWZ	**Moikau Station**	**2.82**	**180**	PN	Pn	21 04 45.9	-2.3
PLWZ	**Palliser**	**2.98**	**180**	PN	Pn	21 04 47.4	-2.6
NNZ	**Nelson**	**3.01**	**209**	PN	Pn	21 04 47.6	-2.8
TUWZ	**Tuamarina**	**3.02**	**199**	PN	Pn	21 04 48.3	-2.2
BSWZ	**Blackbirch Sta**	**3.30**	**199**	PN	Pn	21 04 51.5	-2.3
THZ	**Tophouse**	**3.66**	**209**	PN	Pn	21 04 54.5	-3.5
KHZ	**Kahutara**	**4.05**	**199**	PN	Pn	21 04 59.8	-3.0
LTZ	**Lake Taylor**	**4.77**	**208**	PN	Pn	21 05 08.0	-3.8
MQZ	**McQueen's Vall**	**5.49**	**200**	PN	Pn	21 05 15.7	-5.1
MQZ				SN	S	21 06 15.6	-9.3

ISCJB ***16*** *21:12:26.9±1.2, 12.°9N±0.°1×124.°1E±0.°2, h10km, mb3.3/3, Error ellipse: s-maj=30.4km s-min=12.8km az=159.1*

IDC ***16*** *21:12:27.9±3.5, 12.°75N×123.°89E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/18, mbtmp3.4/3, Error ellipse: s-maj=305.8km s-min=28.7km az=64.0*

ISC 16 21:12:28.6±1.0, 13.°0N±0.°2×124.°3E±0.°4, h10km, n5, σ0$65/5, mb3.3/3, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.59**	**348**	*eP*	**Pg**	**21 12 39.9**	**-0.3**
CNP	**Catarman**	**0.62**	**143**	*eP*	**Pg**	**21 12 41.0**	**+0.4**
WRA	**Warramunga Arr**	**34.21**	**163**	P	**P**	**21 19 14.2**	**-0.4**
	0.3nm,0.5s,mb3.5,baz=343,slow=8.1,SNR=6.0						
ASAR	**Alice Springs**	**37.65**	**165**	P	**P**	**21 19 43.6**	**-0.4**
	0.2nm,0.5s,mb3.1,baz=341,slow=7.3,SNR=5.5						
MKAR	**Makanchi Array**	**48.68**	**322**	P	**P**	**21 21 13.8**	**+0.7**
	0.3nm,0.7s,mb3.5,baz=113,slow=8.9,SNR=3.9						

MAN 16 21:13:02, 17.°36N×120.°23E, h28km, mb4.3, ML3.1, MS2.9, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**0.54**	**58**	*eP*	Pb	21 13 14.4	+1.4
SIPP	**Brgy, Tapao**	**0.60**	**21**	⇑*iP*	Pb	21 13 15.2	+1.2
SIPP				*i* S	Sb	21 13 24.5	+2.3
APYP	**Conner**	**1.09**	**63**	*eP*	Pn	21 13 24.1	+2.8
BALP	**Baler**	**2.06**	**141**	*eP*	Pn	21 13 36.0	+1.2

GUC 16 21:18:58.5±0.8, 23.°86S×67.°14W, h225km, ML3.8, 4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB04	**Plate Boundary**	**2.68**	**306**	⇓*iP*	Pn	21 19 56.4	+10
PB04				*i* S	S	21 20 38.3	+15
CEN1	**Los Morros**	**2.84**	**279**	⇓*iP*	Pn	21 19 52.9	+5.2
CEN1				*i* S	S	21 20 32.8	+6.4
CEN1				AML	AML	21 20 33.2	
	comp=E,63nm,0.2s						
ANCH	**Antofagasta**	**3.00**	**273**	⇓*iP*	Pn	21 19 51.2	+1.7
ANCH				*i* S	S	21 20 31.5	+1.9
ANCH				AML	AML	21 20 32.7	
	comp=N,211nm,0.0s						
PB01	**Plate Boundary**	**3.54**	**322**	*eP*	Pn	21 19 59.9	+4.1
PB01				*i* S	S	21 20 46.0	+5.0
HMBC	**Humberston**	**4.38**	**324**	*eP*	Pn	21 20 09.2	+3.3
HMBC				*i* S	S	21 21 02.3	+3.1
PSGC	**Pisagua**	**5.06**	**326**	⇓*iP*	Pn	21 20 16.9	+2.4
PSGC				*i* S	S	21 21 16.8	+2.2
MNMC	**Miæe Miæ**	**5.23**	**334**	*i* P	Pn	21 20 20.5	+4.0

IDC ***16*** *21:29:27.7±0.5, 15.°86N×147.°20E, h0km, mb5.1/20, mb1 5.1/22, mb1mx5.1/24, mbtmp5.1/22, ML4.5/2, MS4.7/28, Ms1 4.7/28, ms1mx4.5/36, Error ellipse: s-maj=18.1km s-min=12.7km az=104.0*

ISCJB ***16*** *21:29:30.5±1.0, 15.°88N±0.°03×147.°01E±0.°02, h17km±7km, mb5.2/191, MS4.8/63, Error ellipse: s-maj=5.2km s-min=3.4km az=173.7*

MOS ***16*** *21:29:32.4±1.1, 15.°93N×146.°97E, h33km, mb5.4/55, MS4.9/15, Error ellipse: s-maj=9.5km s-min=5.9km az=103.1*

GCMT ***16*** *21:29:33.9±0.2, 15.°64N×147.°63E, h12km, MW5.1, Moment Tensor Solution. s46,c64; s89,c155; Moment tensor: Scale 10^16 Nm; Mrr 5.01±.10; Mθθ 0.57±.10; Mφφ -5.59±.09; Mre 1.67±.38; Mθφ 0.20±.09; Mθr 3.08±.27; Best double couple: M0 6.40000×10^16 NP1: φs 161.00000°, δ32.00000°, λ,61.00000°. NP2: φs 15.00000°, δ62.00000°, λ,107.00000°. Principal axes: T 6.3200, Plg68.0000°, Azm319.0000°; N 0.1000, Plg15.0000°, Azm186.0000°; P -6.4300, Plg15.0000°, Azm92.0000°; Data Used: II IU IC G CN.*

BJI ***16*** *21:29:34.2, 15.°95N×147.°21E, h52km, mB5.3/41, mb5.3/56, Ms5.0/64, Ms7 4.7/57*

TEH ***16*** *21:29:35.0, 15.°89N×146.°86E, h35km*

NEIC ***16*** *21:29:35.7±1.5, 15.°83N×147.°02E, h50km±13km, mb5.1/98, Error ellipse: s-maj=6.2km s-min=5.8km az=127.0*

DJA ***16*** *21:29:41, 15.°70N×146.°96E, h85km, mb5.2/25*

ISC 16 21:29:33.4±1.1, 15.°86N±0.°03×147.°06E±0.°02, h27km±7km, h34km±1.4km: pP-P, n545, σ1$00/530, mb5.2/191, MS4.8/63, 81C-76D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.10**	**223**	*ePn*	**Pn**	**21 30 21.1**	**+0.5**
GUMO				*e*Sn	**Sn**	**21 30 59.5**	**+2.7**
GUMO	**Guam**	**3.10**	**223**	Pn	**Pn**	**21 30 21.1**	**+0.4**
	70nm,0.3s,baz=159,slow=2.3,SNR=46						
GUMO				Sn	**Sn**	**21 31 00.3**	**+3.5**
	204nm,0.3s,baz=175,slow=23,SNR=12						
GUMO				LR	LR	21 31 13.0	
	comp=Z,5µm,21.3s,baz=67,slow=33						
GUMO	**Guam**	**3.10**	**223**	P	**Pn**	**21 30 25.3**	**+4.7**
JHJ	**Hachijo jima 2**	**18.40**	**340**	P	**Pn**	**21 33 46.4**	**-0.4**
	4.9nm,0.3s,baz=67,slow=13,SNR=2.4						
BAKI	**Biak**	**20.11**	**214**	P	**P**	**21 34 08.3**	**+3.0**
	3µm98nm,1.6s						
MAJO	**Matsushiro**	**22.05**	**341**	*eP*	**P**	**21 34 24.5**	**-1.6**
	60nm,0.9s,mb5.0						
MAJO	**Matsushiro**	**22.05**	**341**	*eP*	**P**	**21 34 24.5**	**-1.7**
MAJO				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.0						
MAT	**Matsushiro**	**22.05**	**341**	P	**P**	**21 34 24.3**	**-1.9**
MAT				S	**S**	**21 38 29.0**	**+0.9**
DAV	**Davao City (W)**	**22.77**	**250**	P	**P**	**21 34 35.6**	**+1.5**
	comp=Z,163nm,1.9s,mb5.1						
DAV				LR	LR	21 41 46.4	
DAV	**Davao City (W)**	**22.77**	**250**	P	**P**	**21 34 32.2**	**-1.8**
	comp=Z,130nm,0.5s,mb5.7,baz=248,slow=2.6,SNR=3.5						
DAV				LR	LR	21 41 46.4	
	comp=Z,2µm,19.5s,MS4.5,baz=356,slow=32						
TNTI	**Ternate**	**24.54**	**234**	P	**P**	**21 34 49.8**	**-1.3**
TNTI	**Ternate**	**24.54**	**234**	P	**P**	**21 34 50.3**	**-0.8**
	comp=Z,1µmcomp=Z,97nm,0.9s,mb5.3						
PMG	**Port Moresby**	**25.10**	**180**	*eP*	**P**	**21 34 54.8**	**-1.4**
	comp=Z,33nm,0.7s,mb5.0						
PMG	**Port Moresby**	**25.10**	**180**	*ceP*	**P**	**21 34 56.8**	**+0.6**
PMG				pmax	pmax		
	comp=Z,56nm,0.8s						
PMG	**Port Moresby**	**25.10**	**180**	P	**P**	**21 34 56.4**	**+0.2**
	comp=Z,1µmcomp=Z,82nm,1.0s,mb5.2						
NACB	**Ninganchiao**	**25.29**	**293**	*eP*	**P**	**21 34 58.8**	**+1.0**
	comp=Z,13nm,0.9s,mb4.5						
YULB	**Yu-li**	**25.37**	**291**	*eP*	**P**	**21 34 58.8**	**+0.2**
	comp=Z,10.0nm,0.7s,mb4.5						
TWG	**Pinlang**	**25.46**	**290**	*eP*	**P**	**21 34 59.1**	**-0.3**
	comp=Z,18nm,0.8s,mb4.7						
**TAT

GZH LR LR
comp=N,640nm,11.7s,MS4.7
GZH LR LR
comp=E,910nm,15.2s,MS4.7
GZH LR LR
comp=Z,2µm,16.1s,MS4.9
SNY Shenyang 32.84 327 ⇓P **P 21 36 05.1 +0.2**
SNY S **S 21 41 23.6 +3.0**
SNY pmax pmax
comp=Z,230nm,12.0s
SNY LR LR
comp=N,2µm,15.7s
SNY LR LR
comp=E,2µm,21.1s
SNY LR LR
comp=Z,2µm,19.1s,MS4.9
TTSI Tana Toraja 32.85 237 P **P 21 36 05.4 +0.2**
comp=Z,576nmcomp=Z,28nm,1.1s,mb5.1
TTSI Tana Toraja 32.85 237 P **P 21 36 06.3 +1.1**
comp=Z,571nmcomp=Z,28nm,1.1s,mb5.1
WHN Wuhan 33.28 302 P **P 21 36 10.0 +1.1**
WHN S **S 21 41 32.0 +4.2**
WHN LR LR
comp=N,2µm,11.8s,MS5.1
WHN LR LR
comp=E,2µm,16.0s,MS5.1
WHN LR LR
comp=Z,2µm,10.9s
CN2 Changchun 33.36 331 *e*P **P 21 36 10.3 +0.9**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,700nm,13.0s,MS4.7
CN2 LR LR
comp=E,800nm,13.0s,MS4.7
CN2 LR LR
comp=Z,900nm,15.0s,MS4.6
SPSI Sidrap Palu 33.43 236 P **P 21 36 10.0 -0.3**
comp=Z,25nm,0.9s,mb5.2
MTSU Mount Surprise 33.89 185 *e*P **P 21 36 13.6 -0.6**
comp=Z,109nm,0.8s,mb5.8
HABR Khabarovsk 33.99 346*ce*P **P 21 36 14.2 -0.5**
HABR *e**SP sP 21 36 26.2 +0.3
HABR *e*S **S 21 41 36.6 -1.6**
HABR *e**SS sS 21 41 51.4 +0.2
HABR *e*SS SS 21 43 43.3 -22
HABR pmax pmax
comp=Z,105nm,1.8s,mb5.5
HABR pmax pmax
comp=N,61nm,2.2s
HABR pmax pmax
comp=E,56nm,1.9s
HABR MLR MLR
comp=Z,1µm,16.0s,MS4.7
KLR Kul'dur 35.55 343 *e*P **P 21 36 23.0 -5.2**
KLR *e*S **S 21 41 55.0 -7.3**
KLR *e*SSS 21 44 24.5
QIZ Qiongzhong 35.60 281 P **P 21 36 27.8 -1.3**
QIZ PP PP 21 37 48.4 -1.8
QIZ S **S 21 42 01.3 -2.6**
QIZ pmax pmax
comp=Z,12nm,1.8s,mb4.5
QIZ pmax pmax
comp=Z,250nm,7.7s
QIZ LR LR
comp=N,420nm,16.1s,MS4.4
QIZ LR LR
comp=E,370nm,18.2s,MS4.4
QIZ LR LR
comp=Z,820nm,17.9s,MS4.5
CTAO Charters Tower 35.73 181 *e*P **P 21 36 30.6 +0.5**
comp=Z,15nm,1.0s,mb4.9
CTAO Charters Tower 35.73 181 *e*P **P 21 36 30.6 +0.5**
CTAO pmax pmax
comp=Z,15nm,1.0s,mb4.9
CTAO Charters Tower 35.73 181 P **P 21 36 31.0 +0.9**
comp=Z,28nm,1.7s,mb4.9
BJI Beijing 36.09 318 P **P 21 36 31.3 -1.7**
BJI PP PP 21 37 54.8 -0.5
BJI S **S 21 42 07.5 -3.3**
BJI pmax pmax
comp=Z,16nm,0.9s,mb5.0
BJI pmax pmax
comp=Z,260nm,3.7s
BJI LR LR
comp=N,1µm,21.5s,MS4.8
BJI LR LR
comp=E,1µm,18.6s,MS4.8
BJI LR LR
comp=Z,1µm,24.0s
SBUM Sibu 36.80 252 P **P 21 36 39.8 +0.4**
comp=Z,482nmcomp=Z,16nm,3.3s
TIY Taiyuan 37.49 312 *e*P **P 21 36 46.3 +1.4**
TIY pP pP 21 36 56.1 +3.2
TIY sP sP 21 37 00.8 +4.6
TIY S **S 21 42 33.3 +1.1**
TIY SS SS 21 45 05.0 -12
TIY pmax pmax
comp=Z,300nm,5.0s
TIY LR LR
comp=N,760nm,13.7s,MS4.8
TIY LR LR
comp=E,680nm,13.1s,MS4.8
TIY LR LR
comp=Z,900nm,15.1s,MS4.7
WRA Warramunga Arr 37.71 200 P **P 21 36 44.9 -2.1**
comp=Z,5.7nm,0.9s,mb4.3,baz=22,slow=8.9,SNR=15
WRA LR LR 21 51 39.4
comp=Z,720nm,20.1s,MS4.5,baz=35,slow=35
PET Petropavlovsk 38.19 11 *e*P **P 21 36 53.2 +2.5**
PET *e*S **S 21 42 44.6 +2.2**
PET pmax pmax
comp=Z,39nm,1.4s,mb4.9
PET pmax pmax
comp=Z,100nm,13.2s
PET MLR MLR
comp=Z,2µm,19.0s,MS4.9
PET MLR MLR
comp=Z,2µm,14.0s
XAN Xi'an 38.75 305 P **P 21 36 55.8 +0.1**
XAN pP pP 21 37 07.9 +4.3
XAN sP sP 21 37 12.6 +5.7
XAN PP PP 21 38 29.8 +5.2
XAN S **S 21 42 49.5 -1.9**
XAN SS SS 21 45 37.1 -5.6
XAN pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
XAN pmax pmax
comp=Z,70nm,7.8s
XAN LR LR
comp=N,550nm,20.5s,MS4.4
XAN LR LR
comp=E,220nm,18.8s,MS4.4
XAN LR LR
comp=Z,340nm,18.0s,MS4.2
GYA Guiyang 38.98 293 P **P 21 36 59.1 +1.4**
GYA pP pP 21 37 08.9 +3.3
GYA sP sP 21 37 12.9 +4.0
GYA PP PP 21 38 33.3 +6.1
GYA PcP PcP 21 39 09.6 +1.7
GYA S **S 21 42 56.5 +1.5**
GYA sS sS 21 43 11.8 +3.6
GYA SS SS 21 45 40.3 -7.1
GYA pmax pmax
comp=Z,40nm,0.8s,mb5.2
GYA pmax pmax
comp=Z,300nm,6.1s
GYA LR LR
comp=N,470nm,15.8s,MS4.6
GYA LR LR
comp=E,590nm,15.2s,MS4.6
GYA LR LR
comp=Z,470nm,14.9s,MS4.4
KHKI Kahang-Kahang 39.36 234 P **P 21 36 59.0 -2.0**
comp=Z,2µmcomp=Z,133nm,0.9s,mb5.7
KHKI Kahang-Kahang 39.36 234 P **P 21 36 59.5 -1.5**
comp=Z,2µmcomp=Z,133nm,0.9s,mb5.7
FITZ Fitzroy Crossi 39.80 213 P **P 21 37 04.3 -0.3**
comp=Z,14nm,1.1s,mb4.6
BTO Baotou 40.45 315 *e*P **P 21 37 08.9 -0.8**
ASAR Alice Springs 41.34 198 P **P 21 37 15.3 -1.8**
comp=Z,6.6nm,1.1s,mb4.2,baz=32,slow=6.8,SNR=19
SJI Sawahan 42.09 239 P **P 21 37 24.2 +0.7**
comp=Z,68nm,1.1s,mb5.2

CD2 Chengdu 42.20 299 ⇑*i*P **P 21 37 25.0 +0.7**
CD2 pP pP 21 37 34.8 +2.5
CD2 sP sP 21 37 38.8 +3.3
CD2 PP PP 21 39 05.9 +3.7
CD2 ScP ScP 21 43 06.9 -0.3
CD2 S **S 21 43 41.4 -1.6**
CD2 SS SS 21 46 43.5 -8.0
CD2 ScS ScS 21 47 22.8 -2.3
CD2 pmax pmax
comp=Z,90nm,1.1s,mb5.3
CD2 pmax pmax
comp=Z,280nm,9.0s
CD2 LR LR
comp=N,1µm,16.2s,MS5.0
CD2 LR LR
comp=E,940nm,17.2s,MS5.0
CD2 LR LR
comp=Z,1µm,16.7s,MS4.8
DZM Mont Dzumac 42.21 153 *e*P **P 21 37 23.0 -1.3**
comp=Z,129nm,1.4s,mb5.4
DZM *e*LQ 21 47 09.6
comp=Z,1µm,24.1s
DZM *e*LR LR 21 49 01.4
comp=Z,2µm,22.4s
PWJI Pagerwojo 42.22 238 P **P 21 37 24.4 -0.1**
comp=Z,142nm,0.8s,mb5.6
PWJI Pagerwojo 42.22 238 P **P 21 37 24.2 -0.3**
comp=Z,142nm,0.8s,mb5.6
QLP Quilpie 42.28 184 *e*P **P 21 37 23.4 -1.4**
KMI Kunming 42.37 290 P **P 21 37 28.1 +2.4**
KMI pP pP 21 37 38.3 +4.6
KMI S **S 21 43 48.6 +3.0**
KMI sS sS 21 44 05.5 +6.7
KMI pmax pmax
comp=Z,20nm,1.1s,mb4.7
KMI pmax pmax
comp=Z,260nm,4.3s
KMI LR LR
comp=N,450nm,16.5s,MS4.6
KMI LR LR
comp=E,460nm,14.5s,MS4.6
KMI LR LR
comp=Z,660nm,15.9s,MS4.6
LZH Lanzhou 43.33 306 ⇑P **P 21 37 34.8 +1.4**
LZH pP pP 21 37 44.8 +3.4
LZH sP sP 21 37 48.5 +3.9
LZH PP PP 21 39 17.6 +3.3
LZH S **S 21 43 58.1 -1.4**
LZH SS SS 21 47 05.8 -7.8
LZH pmax pmax
comp=Z,79nm,1.1s,mb5.4
LZH pmax pmax
comp=Z,570nm,4.6s
LZH LR LR
comp=E,1µm,12.7s
LZH LR LR
comp=Z,1µm,16.5s,MS5.0
BJII Banjamegara 43.58 241 P sP 21 37 49.7 +2.8
CHRT Chiangrai 45.06 282 ⇑P **P 21 37 48.0 +0.5**
comp=Z,132nm,0.8s,mb5.8
NST Nakhon Sawan 45.09 276 ⇑P **P 21 37 49.5 +1.8**
comp=Z,67nm,0.8s,mb5.5
MSVF Nonsavu 45.24 136 *e*P **P 21 37 46.5 -2.3**
comp=Z,40nm,1.6s,mb5.0
MBWA Marble Bar 45.53 217 *e*P **P 21 37 51.0 0.0**
comp=Z,21nm,1.1s,mb5.0
ULN Ulaanbaatar 45.80 323 *e*P **P 21 37 52.0 -0.8**
comp=Z,14nm,1.0s,mb4.9
ULN *e* 21 39 26.3
ULN *e*ScP ScP 21 43 24.1 +2.6
ULN Ulaanbaatar 45.80 323 P **P 21 37 53.7 +0.8**
comp=Z,396nmcomp=Z,21nm,1.8s,mb4.8
CHTO Chiang Mai 45.92 281 *e*P **P 21 37 54.6 +0.3**
comp=Z,17nm,0.7s,mb5.1
CHTO Chiang Mai 45.92 281 *e*P **P 21 37 54.6 +0.3**
CHTO pmax pmax
comp=Z,17nm,0.7s,mb5.1
CHTO Chiang Mai 45.92 281 P **P 21 37 55.1 +0.8**
comp=Z,669nmcomp=Z,36nm,0.8s,mb5.3
CM31 Chiang Mai Arr 45.95 280 P **P 21 37 54.9 +0.4**
comp=Z,25nm,0.8s,mb5.2
CMAR Chiang Mai Arr 45.95 280 P **P 21 37 55.2 +0.7**
comp=Z,25nm,0.8s,mb5.2,baz=76,slow=6.2,SNR=145
CMAR PcP PcP 21 39 32.6 +1.5
comp=Z,5.7nm,0.8s,baz=92,slow=2.3,SNR=4.4
CMAR LR LR 21 58 00.0
comp=Z,481nm,18.8s,MS4.5,baz=274,slow=37
CMAR Chiang Mai Arr 45.95 280 P **P 21 37 55.2 +0.7**
CMAR 21 39 32.7
BDT Bhumibol Dam 45.99 279 P **P 21 37 57.0 +2.1**
comp=Z,18nm,0.9s,mb5.0
SONM Songino Array 46.17 323 P **P 21 37 55.7 -0.1**
comp=Z,15nm,0.7s,mb5.0,baz=132,slow=7.2,SNR=52
SONM ScP ScP 21 43 22.7 -0.4
comp=Z,1.1nm,0.9s,baz=150,slow=2.6,SNR=5.1
SONM LR LR 21 57 18.3
comp=Z,2µm,19.2s,MS5.0,baz=114,slow=36
ARMA Armidale 46.22 175 *e*P **P 21 37 56.1 -0.2**
SNG Songkhla 46.23 265 P **P 21 37 59.0 +2.2**
comp=Z,100nm,0.8s,mb5.8
IPM Ipoh 46.59 261 P **P 21 38 00.3 +0.7**
comp=Z,785nmcomp=Z,31nm,1.5s,mb5.0
IPM Ipoh 46.59 261 P **P 21 38 01.5 +1.9**
comp=Z,787nmcomp=Z,30nm,1.5s,mb5.0
KLSI 46.60 247 P **P 21 37 58.9 -0.8**
comp=Z,90nm,1.1s,mb5.6
CGJI Cibinong 46.65 245 P pP 21 38 09.7 +1.6
KULM Kulim 46.71 262 *e*P **P 21 38 01.9 +1.4**
comp=Z,37nm,0.9s,mb5.3
KULM Kulim 46.71 262 P **P 21 38 01.8 +1.2**
comp=Z,822nmcomp=Z,53nm,0.9s,mb5.5
KULM Kulim 46.71 262 P **P 21 38 02.8 +2.2**
comp=Z,814nmcomp=Z,53nm,0.9s,mb5.5
MDSI Maura Dua 47.00 248 P **P 21 38 01.7 -1.1**
comp=Z,795nmcomp=Z,28nm,1.0s,mb5.2
MDSI Maura Dua 47.00 248 P **P 21 38 02.2 -0.6**
comp=Z,794nmcomp=Z,28nm,1.0s,mb5.2
SEY Seymchan 47.16 3⇓*e*P **P 21 38 05.2 +1.9**
GTA Gaotai 47.32 309 ⇓P **P 21 38 06.1 +1.1**
GTA pP pP 21 38 16.4 +3.3
GTA sP sP 21 38 20.8 +4.5
GTA S **S 21 44 55.9 -1.2**
GTA SS SS 21 48 11.9 -13
GTA pmax pmax
comp=Z,15nm,0.7s,mb5.0
GTA pmax pmax
comp=Z,410nm,6.2s
GTA LR LR
comp=N,740nm,18.1s,MS5.0
GTA LR LR
comp=E,1µm,15.8s,MS5.0
GTA LR LR
comp=Z,340nm,17.0s,MS4.4
YAK Yakutsk 47.74 349 *e*P **P 21 38 07.2 -0.6**
comp=Z,74nm,0.9s,mb5.7
YAK Yakutsk 47.74 349 *e*P **P 21 38 08.1 +0.3**
YAK *e* 21 39 32.0
YAK *e* 21 39 58.4
YAK *e*S **S 21 45 04.1 +1.9**
YAK *e* 21 47 52.7
YAK pmax pmax
comp=Z,88nm,0.9s,mb5.8
YAK pmax pmax
comp=N,30nm,1.0s
YAK pmax pmax
comp=E,11nm,1.4s
YAK smax
comp=N,102nm,2.5s
YAK smax
comp=E,238nm,2.2s
STKA Stephens Creek 47.75 186 *e*P **P 21 38 08.1 -0.2**
comp=E,4.1nm,1.0s,mb4.4
STKA Stephens Creek 47.75 186 P **P 21 38 06.0 -2.2**
comp=E,12nm,0.8s,mb5.0,baz=351,slow=5.6,SNR=16
STKA LR LR 21 56 59.4
comp=E,648nm,19.2s,MS4.6,baz=3.3,slow=35
PPI Padang Panjang 48.83 255 P **P 21 38 16.7 -0.3**
comp=E,3µmcomp=E,18nm,0.9s,mb5.1
MNSI Mandailing Nat 49.15 257 P **P 21 38 23.8 +4.4**
comp=E,825nmcomp=E,15nm,0.9s,mb5.0
ZAK Zakamensk 49.19 324 *e*P **P 21 38 18.1 -1.1**
ZAK *e* 21 48 10.8
ZAK pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
BBOO Buckleboo 49.53 192 *e*P **P 21 38 20.7 -1.2**
comp=Z,16nm,0.7s,mb5.2

IRK Irkutsk 49.57 327 *e*P **P 21 38 21.2 -0.9**
IRK pmax pmax
comp=Z,43nm,1.9s,mb5.2
TLY Talaya 49.62 326 *e*P **P 21 38 21.8 -0.7**
comp=Z,28nm,1.3s,mb5.1
TLY Talaya 49.62 326 *e*P **P 21 38 22.3 -0.2**
TLY *e*S **S 21 45 30.0 +0.8**
TLY *e* 21 48 14.4
TLY pmax pmax
comp=Z,16nm,0.9s,mb5.0
TLY MLR MLR
comp=Z,1µm,19.0s,MS4.9
TLY Talaya 49.62 326 P **P 21 38 22.0 -0.5**
comp=Z,77nm,0.8s,mb5.8,SNR=5.2
FORT Forrest 49.84 202 *e*P **P 21 38 24.2 -0.2**
comp=Z,16nm,0.7s,mb5.2
FORT Forrest 49.84 202 *e*P **P 21 38 24.4 +0.1**
comp=Z,23nm,0.9s,mb5.2
GSI Gunungsitoli 50.86 258 P **P 21 38 32.6 +0.1**
comp=Z,72nm,0.8s,mb5.7
GSI Gunungsitoli 50.86 258 P **P 21 38 33.4 +0.9**
CNB Canberra Magne 50.94 178 *e*P **P 21 38 33.6 +1.0**
MOY Mondy 51.07 325 *e*P **P 21 38 33.8 +0.4**
MOY pmax pmax
comp=Z,54nm,1.4s,mb5.3
SHL Shillong 52.20 290 *e*PKP **P 21 38 44.0 +1.7**
UNV Unalaska Valle 52.28 33 *e*P **P 21 38 43.4 +1.0**
comp=Z,23nm,1.1s,mb5.0
LSA Lhasa 52.90 295 P **P 21 38 49.3 +1.9**
LSA S **S 21 46 17.1 +2.0**
LSA LR LR
comp=Z,510nm,17.5s,MS4.6
TOO Toolangi 53.16 182 *e*P **P 21 38 51.1 +2.0**
KLBR Kellerberrin 54.93 211 *e*P **P 21 39 01.7 -0.4**
comp=Z,71nm,1.9s,mb5.4
TAPN Taplejung 55.91 292 *e*P **P 21 39 10.7 +1.3**
comp=Z,44nm,0.7s,mb5.6
SDPT Sand Point 56.09 33 *e*P **P 21 39 07.7 -2.5**
comp=Z,27nm,0.9s,mb5.3
ODAN Odare 56.21 292 *e*P **P 21 39 12.5 +1.0**
comp=Z,109nm,1.0s,mb5.8
TIXI Tiksi 56.82 353 *e*P **P 21 39 15.2 0.0**
comp=Z,16nm,1.0s,mb5.0
TIXI Tiksi 56.82 353 *e*P **P 21 39 15.1 0.0**
TIXI *e*S **S 21 47 07.0 +0.5**
TIXI *e* 21 49 01.1
TIXI *e*SS SS 21 50 55.5 +0.9
TIXI pmax pmax
comp=Z,13nm,0.8s,mb5.0
TIXI MLR MLR
comp=Z,670nm,17.0s,MS4.8
RAMN Ramite 56.91 292 *e*P **P 21 39 18.5 +2.0**
comp=Z,74nm,0.9s,mb5.7
WMQ Urumqi 57.16 312 P **P 21 39 19.8 +1.8**
WMQ pP pP 21 39 29.9 +3.7
WMQ sP sP 21 39 33.8 +4.4
WMQ PcP PcP 21 40 14.5 +2.1
WMQ PP PP 21 41 28.0 +3.0
WMQ ScP ScP 21 44 10.1 -0.5
WMQ S **S 21 47 10.1 -1.6**
WMQ ScS ScS 21 49 02.8 -2.9
WMQ SS SS 21 51 00.0 -0.8
WMQ pmax pmax
comp=Z,76nm,1.1s,mb5.6
WMQ pmax pmax
comp=Z,410nm,4.0s
WMQ LR LR
comp=N,530nm,18.1s,MS4.8
WMQ LR LR
comp=E,510nm,18.0s,MS4.8
WMQ LR LR
comp=Z,640nm,18.6s,MS4.8
JIRN Jiri 57.25 293 *e*P **P 21 39 20.3 +1.4**
comp=Z,129nm,0.9s,mb6.0
GUN Gumba 57.52 293 *e*P **P 21 39 22.5 +1.7**
comp=Z,129nm,0.8s,mb6.0
PKI Pulchoki 57.95 293 *e*P **P 21 39 25.4 +1.6**
comp=Z,92nm,1.0s,mb5.8
PKIN Phulchoki 57.96 293 *e*P **P 21 39 26.0 +2.1**
comp=Z,55nm,0.7s,mb5.7
KKN Kakani 58.05 293 *e*P **P 21 39 25.3 +0.7**
comp=Z,62nm,0.8s,mb5.7
DMN Daman 58.21 293 *e*P **P 21 39 26.5 +0.8**
comp=Z,116nm,0.9s,mb5.9
GKN Gorkha 58.61 293 *e*P **P 21 39 29.2 +0.7**
comp=Z,182nm,1.0s,mb6.1
KOLN Koldanda 59.54 293 *e*P **P 21 39 36.8 +1.9**
comp=Z,105nm,0.8s,mb5.9
OHAK Old Harbor 60.50 33 *e*P **P 21 39 40.2 -0.7**
comp=Z,53nm,1.4s,mb5.5
KDAK Kodiak Island 61.03 32 *e*P **P 21 39 43.0 -1.5**
comp=Z,6.6nm,0.8s,mb4.8
KDAK Kodiak Island 61.03 32 P **P 21 39 42.0 -2.6**
comp=Z,5.2nm,0.5s,mb4.9,baz=270,slow=3.9,SNR=7.5
KDAK Kodiak Island 61.03 32 *i*P **P 21 39 43.8 -0.7**
ZALV Zalesovo Beam 61.05 323 P **P 21 39 43.1 -1.6**
comp=Z,15nm,0.7s,mb5.2,baz=102,slow=6.5,SNR=50
ZALV PcP PcP 21 40 26.4 -1.3
comp=Z,4.6nm,0.6s,baz=98,slow=4.5,SNR=4.1
ZALV LR LR 22 05 45.1
comp=Z,671nm,20.5s,MS4.8,baz=313,slow=36
ZALV PKPPKP 22 09 16.1
comp=Z,0.3nm,0.4s,baz=270,slow=3.9,SNR=4.1
ZALV Zalesovo Beam 61.05 323 P **P 21 39 43.1 -1.7**
ZALV 21 40 26.4
TTA Tatalina 61.20 26 *e*P **P 21 39 45.4 -0.2**
comp=Z,34nm,1.5s,mb5.3
TTA Tatalina 61.20 26 *e*P **P 21 39 45.4 -0.2**
TTA pmax pmax
comp=Z,34nm,1.5s,mb5.3
MK31 Makanchi Array 61.37 315 *e*P **P 21 39 47.0 -0.1**
MK31 *e* 21 44 29.9
MK31 Makanchi Array 61.37 315 *i*P **P 21 39 46.7 -0.3**
MK31 pmax pmax
comp=Z,37nm,0.8s,mb5.6
MKAR Makanchi Array 61.37 315 P **P 21 39 46.6 -0.4**
MKAR ScP ScP 21 44 29.8 +0.6
MKAR LR LR 22 05 34.6
MKAR P'P' 22 09 10.8
MKAR Makanchi Array 61.37 315 P **P 21 39 46.6 -0.4**
comp=Z,32nm,0.9s,mb5.5,baz=94,slow=6.9,SNR=156
MKAR ScP ScP 21 44 29.8 +0.6
comp=Z,3.5nm,0.9s,baz=104,slow=4.6,SNR=5.2
MKAR LR LR 22 05 34.6
comp=Z,486nm,21.9s,MS4.6,baz=94,slow=35
MKAR PKPPKP 22 09 10.8
comp=Z,0.2nm,0.2s,baz=308,slow=3.5,SNR=4.1
NVS Novosibirsk 62.15 324⇓*i*P **P 21 39 51.8 -0.4**
NVS *e* 21 40 27.3
NVS *i*S **S 21 48 16.8 +1.0**
NVS *i* 21 49 40.6
NVS pmax pmax
comp=N,48nm,1.9s
NVS pmax pmax
comp=E,110nm,1.9s
NVS pmax pmax
comp=Z,94nm,1.9s,mb5.6
NVS smax
comp=N,18nm,2.0s
NVS smax
comp=E,28nm,2.0s
PPLA Purkeypile 62.82 27 *e*P **P 21 39 56.6 +0.2**
comp=E,50nm,1.4s,mb5.5
SEW Seward 63.24 30 *e*P **P 21 39 58.8 -0.5**
comp=E,39nm,0.9s,mb5.5
RC01 Rabbit Creek A 63.37 29 *e*P **P 21 39 58.1 -2.1**
comp=E,46nm,1.1s,mb5.5
BPAW Bear Paw Mtn. 63.72 26 *e*P **P 21 40 01.4 -1.1**
comp=E,73nm,1.5s,mb5.5
PMR Palmer 63.79 29 *e*P **P 21 40 01.7 -1.2**
comp=E,34nm,1.3s,mb5.2
PMR Palmer 63.79 29 *e*P **P 21 40 01.7 -1.2**
PMR pmax pmax
comp=Z,34nm,1.3s,mb5.2
TRF Thorofare Moun 63.81 26 *e*P **P 21 40 02.1 -0.9**
comp=Z,18nm,0.9s,mb5.1
KURK Kurchatov 64.25 319 *e*P **P 21 40 05.5 -0.7**
comp=Z,138nm,0.9s,mb6.0
KURK Kurchatov 64.25 319 LR LR 22 08 49.5
comp=Z,1µm,18.6s,MS5.2,baz=105,slow=37
KURK PKPPKP 22 09 00.8
comp=Z,0.2nm,0.3s,baz=296,slow=3.5,SNR=4.2
KURK Kurchatov 64.25 319 *e*P **P 21 40 05.2 -0.9**
MCK McKinley 64.47 26 *e*P **P 21 40 08.0 +0.6**
comp=Z,66nm,1.7s,mb5.4
MCK McKinley 64.47 26 *e*P **P 21 40 08.0 +0.6**

MCK pmax pmax
comp=Z,66nm,1.7s,mb5.4
COLD Coldfoot 65.05 22 *eP* **P 21 40 11.4 +0.3**
comp=Z,26nm,1.1s,mb5.2
DIV Divide 65.25 30 *eP* **P 21 40 12.3 -0.1**
comp=Z,23nm,0.9s,mb5.2
COLA College 65.25 25 *eP* **P 21 40 10.7 -1.7**
comp=Z,10.0nm,0.9s,mb4.8
COLA College 65.25 25 *eP* **P 21 40 10.7 -1.7**
COLA pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
HYB Hyderabad 65.33 282 *i* P **P 21 40 13.5 -0.3**
ULHL Ulahol 65.37 310 P **P 21 40 14.8 +1.2**
SNR=9.9
KSH Kashi 65.58 307 ⇓ *i* P **P 21 40 17.9 +2.9**
KSH *ep*P pP 21 40 28.3 +4.9
KSH *e*PcP PcP 21 40 49.5 +2.9
KSH *e*PP PP 21 42 44.3 +4.9
KSH *e*ScP 21 44 48.4
KSH *e*PcS 21 44 52.4
KSH S S 21 48 58.8 -0.1
KSH *e*ScS ScS 21 50 07.1 -2.1
KSH *e*SS SS 21 53 14.1 +1.2
KSH pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
KSH pmax pmax
comp=Z,280nm,2.8s,mb5.8
KSH LR LR
comp=N,390nm,15.8s,MS4.9
KSH LR LR
comp=E,340nm,11.4s,MS4.9
KSH LR LR
comp=Z,220nm,10.8s,MS4.6
ILAR Eielson Array 65.62 25 P **P 21 40 12.4 -2.4**
ILAR LR LR 22 05 18.0
ILAR P'P' 22 09 01.6
ILAR Eielson Array 65.62 25 P **P 21 40 12.4 -2.4**
comp=Z,14nm,1.1s,mb4.9,baz=250,slow=5.8,SNR=56
ILAR LR LR 22 05 18.0
comp=Z,534nm,19.7s,MS4.8,baz=273,slow=33
ILAR PKPPKP 22 09 01.6
comp=Z,0.4nm,0.9s,baz=105,slow=1.3,SNR=4.4
BMRM Bremner River 65.77 30 *eP* **P 21 40 15.7 -0.2**
comp=Z,26nm,1.0s,mb5.2
PAX Paxson 65.79 28 *eP* **P 21 40 14.3 -1.6**
comp=Z,33nm,1.2s,mb5.2
PAX Paxson 65.79 28 *eP* **P 21 40 14.4 -1.5**
PAX pmax pmax
comp=Z,33nm,1.2s,mb5.2
KZA Kyzart 66.11 309 P **P 21 40 19.6 +1.1**
SNR=47
KBK Karagaybulak 66.33 310 P **P 21 40 21.1 +1.2**
SNR=19
CHMS Chumysh 66.48 310 P **P 21 40 21.6 +0.9**
SNR=12
MENT Mentasta 66.56 28 *eP* **P 21 40 21.4 +0.5**
FRU Bishkek 66.58 310 *i* P **P 21 40 22.0 +0.6**
FRU pmax pmax
comp=Z,120nm,2.1s,mb5.6
UCH Uchtor 66.66 309 P **P 21 40 23.1 +1.2**
SNR=46
USP Ospenovka 66.66 311 P **P 21 40 22.8 +0.9**
SNR=22
AAK Ala-Archa 66.67 310 P **P 21 40 23.7 +1.7**
comp=Z,90nm,0.9s,mb5.8,SNR=5.8
AAK Ala-Archa 66.67 310 *eP* **P 21 40 22.7 +0.7**
comp=Z,9.4nm,0.8s,mb4.9
AAK Ala-Archa 66.67 310 LR LR 22 11 46.4
comp=Z,929nm,18.1s,MS5.0,baz=70,slow=38
AAK Ala-Archa 66.67 310 *eP* **P 21 40 21.7 -0.3**
AAK pmax pmax
comp=Z,16nm,1.7s,mb4.8
AAK Ala-Archa 66.67 310 P **P 21 40 22.6 +0.6**
comp=Z,90nmcomp=Z,5.1nm,0.9s,mb4.5
EKS2 Erkin-Say 67.20 310 P **P 21 40 26.1 +0.7**
SNR=20
AML Almayashu 67.27 309 P **P 21 40 26.3 +0.5**
SNR=61
EGAK Eagle 68.02 26 *eP* **P 21 40 30.2 +0.1**
comp=Z,33nm,1.2s,mb5.2
PNL Peninsula 68.14 32 *eP* **P 21 40 30.2 -0.7**
comp=Z,46nm,1.4s,mb5.3
DAWY Dawson 68.67 27 *eP* **P 21 40 34.2 +0.1**
BVAR Borovoye Array 69.48 321 P **P 21 40 38.5 -0.9**
comp=Z,46nm,0.8s,mb5.4,baz=96,slow=7.6,SNR=159
POO Poona 69.54 284 ⇑ *i* P **P 21 40 38.5 -1.9**
comp=Z,30nm,1.0s,mb5.2
BRVK Borovoye 69.55 321 *eP* **P 21 40 39.4 -0.5**
comp=Z,42nm,0.8s,mb5.4
BRVK Borovoye 69.55 321 *eP* **P 21 40 39.4 -0.4**
BRVK pmax pmax
comp=Z,42nm,0.8s,mb5.4
KK31 Karatay Array 69.58 311 *i* P **P 21 40 39.9 -0.4**
KK31 pmax pmax
comp=Z,42nm,0.8s,mb5.4
SKAG Skagway 70.19 32 *eP* **P 21 40 44.0 +0.3**
ZRNK Zerenda 70.32 321 *i* P **P 21 40 44.5 -0.1**
ZRNK pmax pmax
comp=Z,98nm,1.4s,mb5.5
PPT Papeete 70.72 115 *e*S S 21 50 02.6 +1.8
comp=Z,303nm,24.0s
PPT *e*LR LR 22 02 05.6
comp=Z,1µm,27.5s,baz=286
PPT Papeete 70.72 115 LR LR 22 10 31.9
comp=Z,733nm,18.6s,MS5.0,baz=311,slow=35
KBL Kabul 71.44 302 *eP* **P 21 40 51.7 -0.1**
comp=Z,20nm,0.9s,mb5.0
KBL Kabul 71.44 302 *eP* **P 21 40 51.7 -0.1**
KBL pmax pmax
comp=Z,20nm,0.9s,mb5.0
INK Inuvik 71.47 23 *eP* **P 21 40 49.7 -1.6**
comp=Z,28nm,1.0s,mb5.1
INK Inuvik 71.47 23 LR LR 22 09 04.4
comp=Z,303nm,19.2s,MS4.6,baz=269,slow=33
INK Inuvik 71.47 23 *eP* **P 21 40 49.7 -1.6**
INK pmax pmax
comp=Z,28nm,1.0s
DLBC Dease Lake 72.94 33 *eP* **P 21 41 00.0 -0.2**
BBB Bella Bella 74.49 40 LR LR 22 07 18.9
comp=Z,351nm,20.1s,MS4.7,baz=111,slow=30
SVE Sverdlovsk 74.94 325 ⇑ *eP* **P 21 41 12.1 +0.1**
SVE *e* 21 41 24.1
SVE *e* 21 43 59.9
SVE *e*PPP 21 45 49.1
SVE *e*S S 21 50 43.9 -3.8
SVE *e* 21 51 23.9
SVE pmax pmax
comp=Z,43nm,0.9s,mb5.4
SVE MLR MLR
comp=Z,577nm,18.0s,MS4.9
TAOE Nuku Hiva Isla 76.12 103 *e*LR LR 22 04 50.9
comp=Z,2µm,24.9s,baz=301
ARU Arti 76.12 325 *eP* **P 21 41 17.7 -1.1**
comp=Z,50nm,0.8s,mb5.5
ARU Arti 76.12 325 *d* i P **P 21 41 17.7 -1.1**
ARU *e* 21 44 06.6
ARU *e*PPP 21 45 55.0
ARU S S 21 50 59.3 -1.5
ARU SS SS 21 55 47.6 -6.2
ARU SSS 21 59 14.5
ARU pmax pmax
comp=Z,70nm,1.0s,mb5.5
ARU MLR MLR
comp=Z,933nm,19.0s,MS5.1
ARU Arti 76.12 325 P **P 21 41 17.5 -1.3**
comp=Z,399nm,0.8s,mb6.4,SNR=24
AB31 Akbulak array 76.30 318 *i* P **P 21 41 18.6 -1.3**
AB31 pmax pmax
comp=Z,26nm,0.6s,mb5.3
ABKAR Akbulak array 76.30 318 *eP* **P 21 41 18.5 -1.4**
comp=Z,28nm,0.7s,mb5.3
SOKR Solikamsk 76.62 328 *c* i P **P 21 41 21.7 +0.2**
SOKR S S 21 51 04.7 -1.4
SOKR pmax pmax
comp=Z,20nm,0.9s,mb5.0
SOKR MLR MLR
comp=Z,1µm,23.0s,MS5.1
AKTO Aktyubinsk 77.35 319 *i* P **P 21 41 23.2 -2.6**
AKTO pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
IMYA Miami 78.38 305 *eP* **P 21 41 31.7 -0.2**
GNW Green Mountain 78.55 44 *eP* **P 21 41 33.2 +0.6**
comp=Z,11nm,1.1s,mb4.7
JCW Jim Creek 79.02 43 *eP* **P 21 41 35.0 -0.2**
TDL Tradedollar La 79.19 45 P **P 21 41 38.4 +2.3**
IPAY Payeh 79.23 305 *eP* **P 21 41 38.1 +1.6**

IAKL Akhelmad 79.39 305 *eP* **P 21 41 38.8 +1.4**
LON Longmire 79.39 44 *eP* **P 21 41 37.2 0.0**
comp=Z,7.0nm,1.1s,mb4.5
LON Longmire 79.39 44 *eP* **P 21 41 37.2 0.0**
LON pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
HUMO Hull Mountain 79.43 49 *eP* **P 21 41 38.4 +0.9**
comp=Z,12nm,1.4s,mb4.6
IKRD Kardeh 79.54 305 *eP* **P 21 41 34.3 -3.9**
ABKT Ailbek 79.61 307 P **P 21 41 39.4 +0.8**
comp=Z,247nm,0.8s,mb6.2,SNR=18
YBH Yreka Blue Hor 79.79 50 P **P 21 41 40.4 +0.9**
comp=Z,5.0nm,0.9s,mb4.4
YBH Yreka Blue Hor 79.79 50 LR LR 22 09 17.1
comp=Z,533nm,21.0s,MS4.9,baz=314,slow=30
YBH Yreka Blue Hor 79.79 50 P **P 21 41 40.4 +0.9**
YBH pmax pmax
comp=Z,5.0nm,0.9s
YKA Yellowknife Ar 79.88 28 P **P 21 41 37.0 -2.5**
comp=Z,12nm,1.0s,mb4.8,baz=287,slow=5.6,SNR=13
YKA Yellowknife Ar 79.88 28 P **P 21 41 37.0 -2.5**
NAC Naches 80.05 44 P **P 21 41 42.4 +1.6**
ITEG Tejag 80.17 301 *eP* **P 21 41 42.0 +0.3**
B08A Colville Reser 80.68 42 ⇑ P **P 21 41 43.6 -0.5**
baz=80
LTIM Timbered Crate 80.81 50 P **P 21 41 45.8 +0.8**
ALE Alert 80.84 4 P **P 21 41 45.0 +0.6**
comp=Z,98nm,0.8s,mb5.8,SNR=5.0
K05A Summer Lake 80.89 48 ⇓ P **P 21 41 45.3 -0.1**
baz=81
RSW Rattlesnake Hi 80.96 44 *eP* **P 21 41 46.4 +0.8**
HAWA Hanford 81.00 44 *eP* **P 21 41 47.1 +1.2**
comp=Z,26nm,1.4s,mb5.0
D08A Wollman Farm, 81.25 44 ⇑ P **P 21 41 47.1 -0.1**
baz=81
OD2 Odessa Site #2 81.31 43 *eP* **P 21 41 47.8 +0.3**
MOD Modoc 81.51 49 *eP* **P 21 41 48.3 -0.4**
comp=Z,7.7nm,1.1s,mb4.5
I07A Izee 81.56 47 ⇓ P **P 21 41 48.4 -0.5**
baz=81
G08A Pilot Rock 81.65 45 ⇓ P **P 21 41 49.1 -0.2**
baz=82
RES Resolute Bay 81.86 14 LR LR 22 17 04.2
comp=Z,297nm,21.6s,MS4.6,baz=294,slow=35
E09A Wood Farm, Sta 81.90 44 ⇑ P **P 21 41 50.0 -0.7**
baz=82
NEW Newport 82.13 42 ⇓ P **P 21 41 51.7 -0.2**
baz=82
NEW Newport 82.13 42 *eP* **P 21 41 51.8 0.0**
comp=Z,15nm,0.9s,mb4.9
NEW Newport 82.13 42 *eP* **P 21 41 51.8 0.0**
NEW pmax pmax
comp=Z,15nm,0.9s
SPITS Spitsbergen Ar 82.16 351 LR LR 22 21 32.9
comp=Z,326nm,19.2s,MS4.7,baz=40,slow=38
CMB Columbia Colle 82.37 53 *eP* **P 21 41 53.1 -0.2**
WVOR Wild Horse Val 82.58 48 *eP* **P 21 41 53.6 -0.7**
comp=Z,15nm,1.1s,mb5.0
WVOR Wild Horse Val 82.58 48 *eP* **P 21 41 53.6 -0.7**
WVOR pmax pmax
comp=Z,15nm,1.1s,mb4.9
C11A Tepee Creek (N 82.80 42 ⇓ P **P 21 41 55.3 0.0**
baz=83
EDM Edmonton 83.07 37 P **P 21 41 56.2 -0.4**
IBAF Bafgh 83.10 301 *eP* **P 21 41 57.3 +0.1**
PKM Peak Mountain 83.59 56 ⇑ P **P 21 41 59.7 0.0**
baz=84,SNR=8.8
E12A Beaver Dam Sad 83.64 44 ⇑ P **P 21 41 59.7 -0.1**
baz=84
A13A Flathead Natio 83.68 41 ⇑ P **P 21 41 59.9 +0.1**
baz=84
BSMT Bassoo Peak 83.75 42 *eP* **P 21 41 59.9 -0.4**
B13A Whitefish 83.81 42 ⇑ P **P 21 42 00.5 0.0**
baz=84,SNR=9.9
NVAR Mina Array Bea 83.86 52 P **P 21 42 00.7 -0.3**
comp=Z,4.6nm,0.9s,mb4.6,baz=266,slow=5.8,SNR=15
ISHM Shahmirzad 83.87 305 *eP* **P 21 42 01.8 +0.7**
C13A Hot Springs 83.94 42 ⇓ P **P 21 42 01.4 +0.2**
baz=84
WALA Waterton Lakes 83.96 41 *eP* **P 21 42 02.3 +1.0**
comp=Z,0.6nm,1.3s
BLMT Blacktail Moun 83.98 42 *eP* **P 21 42 01.8 +0.4**
F12A Elk City 84.04 44 ⇑ P **P 21 42 02.4 +0.6**
baz=84
JTMT Jette 84.11 42 *eP* **P 21 42 01.7 -0.4**
APA Apatity 84.11 339 ⇑ *i* P **P 21 42 01.6 -0.1**
APA *e* 21 45 20.0
APA *e*PPP 21 47 18.0
APA *e*S S 21 52 20.0 -4.4
APA *e*PS 21 53 22.0
APA *e*SS SS 21 57 46.0 -6.6
APA pmax pmax
comp=Z,11nm,0.9s,mb5.0
APA MLR MLR
comp=Z,500nm,22.0s,MS4.8
G12A Big Creek, Yel 84.17 45 ⇓ P **P 21 42 02.4 -0.1**
baz=84
D13A Huson 84.18 43 ⇓ P **P 21 42 02.4 -0.1**
baz=84,SNR=6.7
ILAS Lasjerd 84.24 305 *eP* **P 21 42 03.8 +0.8**
YBMT Yellow Bay 84.25 42 *eP* **P 21 42 03.5 +0.7**
A14A Double T Ranch 84.29 41 ⇓ P **P 21 42 03.1 +0.2**
baz=84,SNR=8.6
MFID Camas Ranch 84.31 47 ⇑ P **P 21 42 03.2 0.0**
baz=84
IFIR Firoozkooh 84.34 305 *eP* **P 21 42 03.8 +0.3**
SWMT Swartz Lake 84.36 42 *eP* **P 21 42 03.5 +0.2**
C14A Swan Lake 84.45 42 ⇓ P **P 21 42 03.8 +0.1**
baz=84
KLMR Klimovskoe 84.56 332 *eP* **P 21 42 03.1 -1.0**
KLMR *e*S S 21 52 23.5 -5.6
KLMR pmax pmax
comp=Z,68nm,1.5s,mb5.6
KLMR pmax pmax
comp=Z,62nm,7.0s
KLMR MLR MLR
comp=Z,723nm,17.0s,MS5.1
H12A Diamond D Ranc 84.66 45 ⇓ P **P 21 42 05.0 +0.1**
baz=84,SNR=7.5
I12A Atlanta 84.68 46 ⇑ P **P 21 42 04.7 -0.3**
baz=84
A15A Johnson Ranch, 84.72 41 ⇓ P **P 21 42 05.8 +0.7**
baz=85,SNR=12
G13A Cobalt 84.92 45 P **P 21 42 05.6 -0.6**
baz=85,SNR=17
KEV Kevo 85.02 342 *eP* **P 21 42 05.7 -0.6**
comp=Z,28nm,0.6s,mb5.6
KEV Kevo 85.02 342 *eP* **P 21 42 05.1 -1.1**
KEV pmax pmax
comp=Z,5.0nm,0.4s,mb5.0
KEV Kevo 85.02 342 *eP* **P 21 42 05.7 -0.5**
KEV pmax pmax
comp=Z,28nm,0.6s,mb5.6
KEV Kevo 85.02 342 *ep* **P 21 42 05.1 -1.1**
comp=Z,5.0nm,0.4s,mb5.0
CHMT Chamberlain Mo 85.03 43 *eP* **P 21 42 07.6 +0.9**
B15A Bradely Ranch, 85.04 41 ⇑ P **P 21 42 06.5 -0.3**
baz=85,SNR=15
EDW2 Edwards Air Fo 85.05 55 ⇑ P **P 21 42 07.3 +0.2**
baz=85,SNR=7.8
H13A Challis 85.06 45 ⇑ P **P 21 42 07.1 +0.1**
baz=85
ISFB Sefidab 85.09 304 *eP* **P 21 42 07.5 +0.2**
MPMC Manual Prospec 85.12 54 ⇑ P **P 21 42 06.7 -0.7**
baz=85,SNR=11
C15A Salmond Ranch, 85.18 42 ⇑ P **P 21 42 06.9 -0.5**
baz=85,SNR=11
HLID Hailey 85.25 46 ⇑ P **P 21 42 08.0 +0.1**
baz=85,SNR=8.2
HLID Hailey 85.25 46 *eP* **P 21 42 07.4 -0.5**
comp=Z,8.5nm,1.3s,mb4.7
S10A Tonopah Range, 85.29 52 ⇓ P **P 21 42 08.0 -0.3**
baz=85,SNR=17
I13A Wildhorse Cree 85.35 46 P **P 21 42 08.6 +0.2**
baz=85,SNR=6.7
IZEF Zefreh 85.41 303 *eP* **P 21 42 09.7 +0.8**
A16A West Butte Ran 85.44 40 ⇑ P **P 21 42 08.5 -0.2**
baz=85
RKT Rikitea 85.49 115 *e*S S 21 52 42.1 +2.5
comp=Z,429nm,33.2s
RKT *e*LR LR 22 08 44.3
comp=Z,586nm,23.2s,baz=289
FURC Furnace Creek, 85.49 54 ⇑ P **P 21 42 09.6 +0.3**
baz=85
B16A M & M Farms, S 85.55 41 ⇑ P **P 21 42 09.2 0.0**
baz=85,SNR=6.7

E15A Deer Lodge 85.58 43 ⇓ P P **P 21 42 09.3 -0.1**
baz=85,SNR=13
ARCES ARCESS Array B 85.58 343 P **P 21 42 08.6 -0.5**
comp=Z,40nm,0.8s,mb5.7,baz=66,slow=5.8,SNR=66
ARE0 ARCESS Array S 85.58 343 *eP* **P 21 42 09.2 +0.2**
H14A Leadore 85.65 45 P **P 21 42 09.9 0.0**
baz=86,SNR=20
C16A Fuhringer Ranc 85.72 42 ⇓ P **P 21 42 09.8 -0.3**
baz=86,SNR=12
IGAR Gharneh 85.78 302 *eP* **P 21 42 10.6 -0.2**
F15A Butte 85.86 44 ⇑ P **P 21 42 11.3 +0.5**
baz=86,SNR=9.1
GSC Goldstone 85.86 55 ⇓ P **P 21 42 11.8 +0.6**
baz=86,SNR=8.4
LRM Limekiln Ridge 85.89 44 *eP* **P 21 42 10.8 -0.3**
IKLH Kolahrood 85.90 303 *eP* **P 21 42 11.8 +0.4**
U10A Ash Meadows, A 85.92 53 ⇓ P **P 21 42 11.6 +0.2**
baz=86
R11A Troy Canyon, C 85.93 51 P **P 21 42 11.0 -0.4**
baz=86,SNR=9.5
MCMT McKenzie Canyo 85.94 45 *eP* **P 21 42 11.1 -0.2**
comp=Z,4.6nm,0.9s,mb4.7
DLMT Dillon 85.94 44 *eP* **P 21 42 12.3 +1.0**
comp=Z,4.4nm,0.9s,mb4.7
J14A Carey 85.94 46 ⇑ P **P 21 42 11.7 +0.4**
baz=86,SNR=12
O12A Currie 85.99 49 ⇓ P **P 21 42 11.7 0.0**
baz=86,SNR=7.4
HRY Holter Researc 86.02 43 *eP* **P 21 42 11.3 -0.3**
G15A Dillon 86.07 44 ⇓ P **P 21 42 11.4 -0.6**
baz=86,SNR=6.7
M13A Montello 86.08 48 ⇓ P **P 21 42 12.4 +0.3**
baz=86,SNR=8.5
M13A Montello 86.08 48 *eP* **P 21 42 12.8 +0.7**
comp=Z,8.3nm,1.1s,mb4.9
D16A Dana Ranch, Ca 86.09 42 ⇓ P **P 21 42 12.1 0.0**
baz=86,SNR=22
H15A Lima 86.14 45 ⇓ P **P 21 42 12.3 -0.1**
baz=86,SNR=11
MAK Makhachkala 86.15 313 *eP* **P 21 42 09.7 -2.7**
MAK *e*PPP 21 47 36.8
MAK *e*S SKSac 21 52 31.4 -5.5
MAK *e*SS SS 21 58 29.5 +5.6
MAK MLR MLR
comp=Z,988nm,18.0s,MS5.2
B17A L&G Farms, Che 86.16 41 P **P 21 42 11.7 -0.6**
baz=86,SNR=23
HEC Hector,Ludlow 86.37 55 ⇑ P **P 21 42 13.9 +0.2**
baz=86,SNR=5.1
C17A Wharram Farm, 86.40 41 ⇑ P **P 21 42 14.0 +0.4**
baz=86,SNR=5.5
F16A Kennard Place, 86.45 43 ⇓ P **P 21 42 13.9 +0.1**
baz=86,SNR=8.0
BOZ Bozeman (W) 86.49 44 ⇓ P **P 21 42 13.9 -0.2**
baz=86,SNR=12
BOZ Bozeman (W) 86.49 44 *eP* **P 21 42 13.6 -0.4**
comp=Z,11nm,1.1s,mb5.0
BOZ Bozeman (W) 86.49 44 *eP* **P 21 42 13.6 -0.4**
BOZ pmax pmax
comp=Z,11nm,1.1s,mb5.0
G16A Moss Hill, Enn 86.51 44 ⇑ P **P 21 42 14.1 0.0**
baz=86,SNR=14
L14A Malta 86.54 47 ⇓ P **P 21 42 14.4 +0.1**
baz=86,SNR=9.4
A18A Metzger Ranch, 86.54 40 ⇑ P **P 21 42 14.1 -0.1**
baz=86
D17A Six Diamond Ra 86.61 42 ⇓ P **P 21 42 14.5 -0.1**
baz=86,SNR=29
M14A Sheep Mountain 86.63 48 ⇓ P **P 21 42 14.9 +0.1**
baz=86,SNR=9.6
J15A Blackfoot 86.67 46 ⇓ P **P 21 42 15.3 +0.3**
baz=86,SNR=13
E17A Martinsdale 86.73 43 ⇑ P **P 21 42 14.5 -0.7**
baz=87,SNR=5.7
B18A Beardsley Farm 86.77 41 ⇓ P **P 21 42 15.2 -0.1**
baz=87,SNR=9.1
P13A Bates Ranch, G 86.77 50 ⇓ P **P 21 42 14.5 -1.0**
baz=87,SNR=13
MONP Monument Peak 86.86 57 ⇓ P **P 21 42 16.0 -0.1**
baz=87
BELC Belle Mtn. Jos 86.87 56 ⇑ P **P 21 42 15.9 -0.2**
baz=87
EGMT Eagleton 86.91 41 ⇑ P **P 21 42 16.0 0.0**
baz=87,SNR=6.5
EGMT Eagleton 86.91 41 *eP* **P 21 42 15.9 -0.1**
comp=Z,32nm,1.3s,mb5.4
N14A Grayback Hills 86.94 48 ⇑ P **P 21 42 16.8 +0.4**
baz=87,SNR=5.8
HVU Hansel Valley 86.95 47 *eP* **P 21 42 16.4 +0.1**
comp=Z,15nm,1.2s,mb5.1
HVU Hansel Valley 86.95 47 *eP* **P 21 42 16.4 +0.1**
HVU pmax pmax
comp=Z,15nm,1.2s,mb5.1
BGU Big Grassy Mou 87.03 48 P **P 21 42 15.8 -0.9**
comp=Z,3.8nm,0.9s,mb4.6
F17A Fitzpatrick Pl 87.05 43 ⇓ P **P 21 42 17.0 +0.2**
baz=87,SNR=5.8
H16A Russell Place, 87.06 44 ⇑ P **P 21 42 17.3 +0.5**
baz=87,SNR=6.3
JOF Joensuu 87.13 336 *eP* **P 21 42 14.3 -2.4**
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.9
JOF Joensuu 87.13 336 *ep* **P 21 42 14.3 -2.4**
comp=Z,2.8nm,0.4s,mb4.8
L15A Malad City 87.15 47 ⇓ P **P 21 42 18.0 +0.7**
baz=87,SNR=6.3
I16A Newdale 87.17 45 ⇓ P **P 21 42 18.1 +0.7**
baz=87,SNR=9.0
VRHR Novokhopersk 87.18 323 *eP* **P 21 42 14.8 -2.4**
VRHR pmax pmax
comp=E,8.0nm,0.8s
VRHR pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
VRHR pmax pmax
comp=N,9.0nm,0.6s
YMR Madison River 87.26 44 *eP* **P 21 42 18.4 +0.7**
comp=N,23nm,0.4s,mb5.8
J16A Bone 87.28 46 ⇑ P **P 21 42 18.2 +0.3**
baz=87,SNR=7.4
M15A Larsen Ranch, 87.28 48 ⇓ P **P 21 42 18.0 +0.1**
baz=87,SNR=9.0
E18A Harlowton 87.31 42 ⇓ P **P 21 42 18.1 +0.1**
baz=87,SNR=16
SPUT South Promonto 87.33 48 *eP* **P 21 42 16.1 -2.1**
comp=N,10nm,1.1s,mb5.0
YFT Old Faithful 87.42 45 *eP* **P 21 42 20.5 +2.0**
comp=N,11nm,0.8s,mb5.1
DUG Dugway 87.42 49 ⇑ P **P 21 42 18.4 -0.3**
baz=87,SNR=14
DUG Dugway 87.42 49 *eP* **P 21 42 17.7 -0.9**
comp=N,25nm,1.4s,mb5.2
DUG Dugway 87.42 49 *eP* **P 21 42 17.7 -1.0**
DUG pmax pmax
comp=Z,25nm,1.4s,mb5.2
P14A Drum Mountains 87.42 50 ⇓ P **P 21 42 18.9 +0.2**
baz=87,SNR=5.5
YNR Norris Junctio 87.44 44 *eP* **P 21 42 19.2 +0.6**
comp=Z,48nm,1.3s,mb5.6
K16A Soda Springs 87.44 46 ⇑ P **P 21 42 19.7 +1.0**
baz=87,SNR=6.4
RRI2 Red Ridge 87.46 46 *eP* **P 21 42 19.2 +0.5**
comp=Z,12nm,1.0s,mb5.1
Q14A Sevier Lake (B 87.46 50 ⇓ P **P 21 42 19.0 +0.1**
baz=87,SNR=13
IMW Indian Meadow 87.53 45 *eP* **P 21 42 19.3 +0.2**
comp=Z,7.5nm,0.9s,mb4.9
MOS Moscow 87.54 328 *eP* **P 21 42 18.2 -0.7**
MOS *e* 21 45 42.3
MOS *e* 21 52 53.1
T13A Saint George 87.60 52 ⇓ P **P 21 42 20.0 +0.4**
baz=88,SNR=6.5
H17A Grant Village 87.61 44 ⇓ P **P 21 42 22.2 +2.7**
baz=88,SNR=6.8
FLWY Flagg Ranch 87.64 45 *eP* **P 21 42 19.7 +0.1**
comp=Z,12nm,0.9s,mb5.1
TPAW Teton Pass 87.66 45 *eP* **P 21 42 20.1 +0.3**
comp=Z,6.7nm,1.1s,mb4.8
F18A Big Timber 87.67 43 ⇑ P **P 21 42 19.8 0.0**
baz=88,SNR=8.1
ARUT Antelope Range 87.71 51 *eP* **P 21 42 20.1 0.0**
comp=Z,10nm,1.1s,mb5.0
ARUT Antelope Range 87.71 51 *eP* **P 21 42 20.1 0.0**
ARUT pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
MOOW Moose Ponds 87.72 45 *eP* **P 21 42 19.7 -0.3**
comp=Z,5.7nm,0.8s,mb4.8
GCMT Greycliff 87.74 43 *eP* **P 21 42 20.2 +0.2**

comp=Z,13nm,1.2s,mb5.0
U13A Pakoon Wash 87.74 53 ⇓P **P 21 42 21.5 +1.2**
baz=88,SNR=5.8
REDW Red Top Meadow 87.77 46 *e*P **P 21 42 20.7 +0.4**
comp=Z,12nn,1.4s,mb5.0
CCUT Cedar City 87.85 52 *e*P **P 21 42 21.2 +0.5**
comp=Z,7.6nm,1.2s,mb4.8
LOHW Long Hollow 87.86 45 *e*P **P 21 42 20.6 -0.1**
comp=Z,6.9nm,1.3s,mb4.7
HWUT Hardware Ranch 87.86 47 *e*P **P 21 42 21.5 +0.8**
HWUT *e* pP 21 42 29.6 +0.2
NLU North Lily Min 88.03 49 *e*P **P 21 42 21.6 0.0**
comp=Z,12nm,1.1s,mb5.0
E19A Rath Farm, Rou 88.08 42 ⇑P **P 21 42 21.6 -0.1**
baz=88
DGRG David-gareji 88.14 313 P **P 21 42 20.1 -1.9**
RLMT Red Lodge 88.24 43 ⇓P **P 21 42 23.8 +1.4**
baz=88,SNR=8.1
RLMT Red Lodge 88.24 43 P **P 21 42 21.5 -0.9**
comp=Z,21nm,1.3s,mb5.2
D20A Manuel Ranch, 88.26 41 ⇑P **P 21 42 22.5 0.0**
baz=88
JLU Jordanelle 88.27 48 *e*P **P 21 42 22.4 -0.3**
comp=Z,12nm,1.0s,mb5.1
JLU *e* pP 21 42 31.3 -0.1
U14A Mt Trumbull 88.34 53 ⇑P **P 21 42 24.0 +0.9**
baz=88
OBN Obninsk 88.35 327 ⇓*e*P **P 21 42 22.2 -0.6**
OBN Obninsk 88.35 327 ⇑*e*P **P 21 42 22.2 -0.6**
OBN *e* 21 45 47.3
OBN *i* S SKSac 21 52 53.3 +3.4
OBN *i* PS 21 54 05.1
OBN *i* SS SS 21 58 49.2 -6.1
OBN pmax pmax
comp=Z,31nm,1.7s,mb5.3
OBN MLR MLR
comp=Z,600nm,17.0s,MS5.1
J18A Kendall Valley 88.40 45 ⇓P **P 21 42 23.1 -0.1**
baz=88,SNR=12
MSU Marysvale 88.43 50 *e*P **P 21 42 23.8 +0.3**
MTA Matsminda 88.46 313 P **P 21 42 23.0 -0.6**
DAU Daniels Canyon 88.48 48 *e*P **P 21 42 27.4 +3.7**
TBLG Delisi 88.49 313 *e*P **P 21 42 23.4 -0.3**
TBLG Delisi 88.49 313 P **P 21 42 23.5 -0.2**
M17A Scullys Gap (B 88.54 47 ⇓P **P 21 42 24.0 0.0**
baz=88,SNR=5.1
VSR Storozhevoye 88.56 323 *e*P **P 21 42 22.3 -1.5**
VSR *e*S SKSac 21 52 49.3 -2.0
VSR pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
VSR pmax pmax
comp=N,5.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,1.2s
VSR smax
comp=E,130nm,3.9s
VSR smax
comp=Z,100nm,3.8s
VSR smax
comp=N,70nm,3.5s
VSR MLR MLR
comp=Z,760nm,17.0s,MS5.2
VSR MLR MLR
comp=N,130nm,11.0s
VSR MLR MLR
comp=E,310nm,20.0s
K18A Toltan Ranch, 88.58 46 ⇑P **P 21 42 25.0 +0.9**
baz=88,SNR=5.7
V14A Boquillas Ranc 88.64 53 ⇑P **P 21 42 25.5 +0.9**
baz=88,SNR=9.0
FFC Flin Flon 88.77 33 *e*P **P 21 42 25.9 +1.1**
comp=E,26nm,1.1s,mb5.5
FFC Flin Flon 88.77 33 *e*P **P 21 42 25.9 +1.2**
FFC pmax pmax
comp=Z,26nm,1.1s,mb5.5
W14A Seligman 88.80 54 ⇑P **P 21 42 26.3 +1.0**
baz=89,SNR=5.7
GOR Gori 88.84 313 P **P 21 42 24.7 -0.7**
BW06 Boulder Array 88.87 46 ⇑P **P 21 42 25.6 +0.1**
baz=89
G20A Bridger 88.90 43 ⇓P **P 21 42 26.0 +0.4**
baz=89
O17A Robinson Place 88.92 48 ⇓P **P 21 42 25.7 -0.1**
baz=89,SNR=6.4
U15A North Rim 89.02 52 ⇑P **P 21 42 26.5 +0.2**
baz=89
R16A Teasdale 89.02 50 ⇑P **P 21 42 26.6 +0.4**
baz=89
Q16A Castle Valley 89.04 50 ⇓P **P 21 42 27.0 +0.6**
baz=89,SNR=7.2
S16A Weppner Ranch, 89.12 51 ⇓P **P 21 42 26.9 +0.1**
baz=89,SNR=6.9
KIV Kislovodsk 89.12 316 *e*P **P 21 42 25.5 -1.2**
KIV Kislovodsk 89.12 316 ⇑*e*P **P 21 42 25.4 -1.3**
KIV *i* S SKSac 21 52 54.8 -0.1
KIV *i* SS SS 21 59 11.6 +4.4
KIV pmax pmax
comp=Z,28nm,1.0s,mb5.5
KIV Kislovodsk 89.12 316 P **P 21 42 25.0 -1.7**
comp=Z,160nm,0.9s,mb6.3,SNR=11
X14A Yava 89.18 54 ⇓P **P 21 42 27.6 +0.4**
baz=89,SNR=7.0
Y14A Wickenburg 89.26 55 ⇓P **P 21 42 27.4 -0.1**
baz=89,SNR=7.0
K19A Absolon Red Bu 89.34 46 ⇑P **P 21 42 27.2 -0.5**
baz=89,SNR=11
N18A Larsen Ranch, 89.42 47 ⇑P **P 21 42 27.9 -0.2**
baz=89,SNR=5.7
W15A Williams 89.44 54 ⇑P **P 21 42 29.9 +1.5**
baz=89,SNR=6.6
SRU San Rafael 89.45 49 *e*P **P 21 42 27.9 -0.4**
comp=Z,2.3nm,0.6s,mb4.7
SRU San Rafael 89.45 49 *e*P **P 21 42 27.9 -0.4**
SRU pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
KAF Kangasniemi 89.52 336 *e*P **P 21 42 25.5 -2.6**
KAF pmax pmax
comp=Z,2.0nm,0.3s,mb4.9
KAF Kangasniemi 89.52 336 *e*p **P 21 42 25.5 -2.6**
comp=Z,1.9nm,0.3s,mb4.9
IGHG Ghaleghazi 89.58 306 *e*P **P 21 42 27.0 -2.0**
X15A Humboldt 89.69 54 ⇓P **P 21 42 30.1 +0.6**
baz=90,SNR=8.0
K20A Yellowstone Ra 89.75 46 ⇑P **P 21 42 29.3 -0.3**
baz=90,SNR=15
Y15A Casa Rosa Ranc 89.78 55 ⇓P **P 21 42 30.1 +0.1**
baz=90
H21A Big Horn, Sher 89.89 43 ⇑P **P 21 42 30.8 +0.6**
baz=90
T17A Navajo Res., N 89.96 52 ⇑P **P 21 42 32.2 +1.5**
baz=90,SNR=5.5
FINES FINESS Array B 89.99 336 P **P 21 42 27.8 -2.5**
comp=Z,8.8nm,0.5s,mb5.4,baz=64,slow=4.9,SNR=63
FINES LR LR 22 25 41.8
comp=Z,422nm,19.3s,MS4.9,baz=320,slow=38
U16A Tuba City 90.00 52 ⇓P **P 21 42 31.0 +0.1**
baz=90,SNR=5.5
I21A Big Trails, Te 90.03 44 ⇑P **P 21 42 30.4 -0.5**
baz=90,SNR=5.6
214A Organ Pipe Nat 90.05 57 ⇑P **P 21 42 31.4 +0.2**
baz=90
R18A Canyonlands Na 90.16 50 ⇑P **P 21 42 32.2 +0.6**
baz=90,SNR=5.8
S18A Hurst Farm, Bl 90.33 51 ⇑P **P 21 42 32.6 +0.1**
baz=90,SNR=6.6
P19A Cripple Cowboy 90.39 49 ⇓P **P 21 42 33.4 +0.7**
baz=90,SNR=7.0
Y16A Circle Bar Ran 90.48 55 ⇓P **P 21 42 33.0 -0.3**
baz=90,SNR=6.0
L21A Rawlins 90.67 46 ⇑P **P 21 42 33.7 -0.2**
baz=90,SNR=7.7
HAKT HAKKARI 90.68 309 *i* P **P 21 42 32.1 -1.9**
HAKT *i* P 21 42 33.2
O20A White River Ci 90.73 48 ⇓P **P 21 42 33.9 -0.4**
baz=91
M21A Separation Pea 90.81 46 ⇓P **P 21 42 34.8 +0.2**
baz=91,SNR=8.2
DBAD Bademkaya 90.88 313 *i* P **P 21 42 34.1 -0.8**
DDEM Demirkent 90.89 313 *i* P **P 21 42 34.3 -0.6**
V18A Ganado 91.06 52 ⇑P **P 21 42 35.7 -0.2**
baz=91
Q20A Ridgley Place, 91.12 49 ⇓P **P 21 42 36.0 -0.1**
baz=91,SNR=13
PV01 Paradox Valley 91.22 50 *e*P **P 21 42 36.7 +0.1**
comp=Z,760nm,1.2s
SOC Sochi 91.25 316 *e*P **P 21 42 33.5 -3.1**
SOC *e*PPP 21 48 12.5
SOC *e*S SKSac 21 53 01.7 -5.6
SOC *e*SS SS 21 59 47.0 +9.0
SOC pmax pmax
comp=Z,21nm,0.9s,mb5.5
SOC MLR MLR
comp=Z,478nm,17.0s,MS5.0
T19A Beclabito 91.35 51 ⇓P **P 21 42 38.8 +1.6**
baz=91,SNR=8.1
117A Oracle 91.50 56 ⇑P **P 21 42 38.3 +0.3**
baz=91
TUC Tucson 91.55 56 *e*P **P 21 42 40.0 +1.7**
comp=Z,13nm,1.4s,mb5.1
TUC Tucson 91.55 56 *e*P **P 21 42 40.0 +1.8**
TUC pmax pmax
comp=Z,13nm,1.4s,mb5.1
BHD Baghdad 91.64 305 *ex* x 21 42 17.5
BHD *ex* x 21 53 00.0
SUMG Summit 91.70 2 *e*P **P 21 42 36.9 -1.2**
comp=Z,11nm,1.0s,mb5.1
SUMG Summit 91.70 2 *i* P **P 21 42 37.2 -0.9**
comp=Z,7.8nm,0.9s,mb5.0
217A Green Valley 91.71 56 ⇑P **P 21 42 41.1 +2.2**
baz=92
L23A Garrett 91.76 45 ⇓P **P 21 42 38.7 -0.2**
baz=92,SNR=5.8
R21A Cimarron 91.88 49 ⇓P **P 21 42 40.7 +1.1**
baz=92,SNR=6.9
SMCO Snowmass 92.00 48 *e*P **P 21 42 39.7 -0.5**
comp=Z,7.2nm,1.1s,mb4.9
N23A Red Feather La 92.07 47 ⇑P **P 21 42 40.4 -0.1**
baz=92,SNR=7.6
RSSD Black Hills 92.07 43 *e*P **P 21 42 39.6 -0.7**
comp=Z,13nm,1.2s,mb5.1
RSSD Black Hills 92.07 43 *e*P **P 21 42 39.7 -0.7**
RSSD pmax pmax
comp=Z,13nm,1.2s,mb5.1
PHWY Pilot Hill 92.25 46 *e*P **P 21 42 41.8 +0.6**
218A Dragoon 92.26 56 ⇓P **P 21 42 43.9 +2.4**
baz=92
ANN Anapa 92.26 318 *d i*P **P 21 42 40.3 -0.9**
ANN *e*S SKSac 21 53 10.1 -2.8
ANN pmax pmax
comp=Z,18nm,0.9s,mb5.4
ANN MLR MLR
comp=Z,578nm,22.0s,MS5.0
318A Bisbee 92.48 56 ⇓P **P 21 42 42.5 0.0**
baz=92
U21A Nageezi 92.52 51 ⇑P **P 21 42 42.5 -0.2**
baz=92
S22A 4UR Ranch, Cre 92.64 50 ⇓P **P 21 42 42.8 -0.3**
baz=92,SNR=6.0
ISCO Idaho Springs 92.73 47 *e*P **P 21 42 43.7 +0.1**
comp=Z,3.4nm,0.9s,mb4.8
ISCO Idaho Springs 92.73 47 *e*P **P 21 42 43.7 +0.2**
ISCO pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
N24A Carr 92.84 46 ⇑P **P 21 42 44.0 +0.1**
baz=93
T22A Edith 92.87 50 ⇑P **P 21 42 44.8 +0.6**
baz=93
Y20A Horse Springs, 92.89 54 ⇓P **P 21 42 43.0 -1.4**
baz=93
KELT Kelkit 92.93 313 *i* P **P 21 42 42.3 -2.1**
KELT *i* P 21 42 43.0
Z20A Nine Sixteen R 93.01 55 ⇑P **P 21 42 45.0 +0.1**
baz=93
120A U Bar Ranch, L 93.18 55 ⇑P **P 21 42 45.8 +0.1**
baz=93
Y21A Point of Rocks 93.40 53 ⇓P **P 21 42 46.8 +0.1**
baz=93
220A Playas Peak, P 93.49 56 ⇑P **P 21 42 47.2 0.0**
baz=93
Z21A St. Cloud Mine 93.66 54 ⇑P **P 21 42 48.0 +0.1**
baz=94
KEMA Kemaliye 93.82 312 *i* P **P 21 42 48.0 -0.6**
ANMO Albuquerque 93.98 52 *e*P **P 21 42 51.0 +1.7**
comp=Z,14nm,1.8s,mb5.1
ANMO Albuquerque 93.98 52 LR LR 22 17 29.6
comp=Z,266nm,21.7s,MS4.7,baz=103,slow=31
ANMO Albuquerque 93.98 52 *e*P **P 21 42 51.0 +1.6**
ANMO pmax pmax
comp=Z,14nm,1.8s
ULM Lac du Bonnet 94.18 35 LR LR 22 28 02.1
comp=Z,268nm,18.5s,MS4.7,baz=193,slow=37
MALT Malatya 94.26 312 *e*P **P 21 42 48.9 -1.7**
comp=Z,4.6nm,0.8s,mb5.0
MALT Malatya 94.26 312 *e*P **P 21 42 48.9 -1.7**
MALT pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
MALT Malatya 94.26 312 P **P 21 42 50.3 -0.3**
SIM Simferopol' 94.31 319 P **P 21 42 49.4 -1.3**
SIM S SKSac 21 53 27.3 +3.1
SIM pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
AKASG Malin Array Be 94.37 326 P **P 21 42 48.2 -2.6**
comp=Z,0.3nm,0.4s,mb4.1,baz=51,slow=7.3,SNR=3.6
AKASG LR LR 22 28 13.3
comp=Z,534nm,19.2s,MS5.0,baz=75,slow=37
AKCD Akcadag 94.63 312 *i* P **P 21 42 51.6 -0.6**
W24A Lazy B Ranch, 94.67 52 ⇓P **P 21 42 52.4 -0.2**
baz=94
V25A Rancho No Teng 95.02 51 ⇓P **P 21 42 54.3 +0.2**
baz=95
GZT Gaziantep 95.27 311 *i* P **P 21 42 52.6 -2.7**
NOA NORSAR Array B 95.67 340 P **P 21 42 54.3 -2.2**
comp=Z,1.2nm,0.8s,mb4.3,baz=51,slow=4.2,SNR=19
NOA PP PP 21 46 47.0 -0.3
comp=Z,4.7nm,0.9s,baz=37,slow=7.6,SNR=6.3
NOA LR LR 22 30 16.4
comp=Z,315nm,19.5s,MS4.8,baz=65,slow=38
NOA NORSAR Array B 95.67 340 P **P 21 42 54.3 -2.2**
NOA 21 46 47.0
224A Cornudas Mount 95.80 55 ⇑P **P 21 42 57.7 -0.1**
baz=96
FRB Frobisher Bay 96.01 15 LR LR 22 22 32.8
comp=Z,242nm,21.5s,MS4.6,baz=35,slow=33
MNTX Cornudas Mount 96.05 55 ⇑P **P 21 42 59.1 +0.1**
baz=96
MNTX Cornudas Mount 96.05 55 P **P 21 42 58.5 -0.5**
comp=Z,3.0nm,1.0s,mb4.7
BR131 Keskin Array S 97.02 315 *e*P **P 21 43 01.7 -1.4**
comp=Z,3.5nm,0.9s,mb4.8
BRTR Keskin Array B 97.02 315 P **P 21 43 00.6 -2.5**
comp=Z,3.1nm,0.9s,mb4.8,baz=92,slow=2.8,SNR=18
BRTR PKKPbc PKKPbc 21 59 44.5 +0.2
comp=Z,0.5nm,0.8s,baz=220,slow=8.9,SNR=4.1
BRTR LR LR 22 30 33.1
comp=Z,166nm,20.1s,MS4.5,baz=249,slow=38
TXAR Lajitas Array 98.34 56 PKKPbc PKKPbc 21 59 40.5 0.0
comp=Z,0.3nm,0.9s,baz=191,slow=3.3,SNR=3.8
TXAR LR LR 22 19 31.7
comp=Z,325nm,21.4s,MS4.8,baz=300,slow=31
MMAI Mount Meron Ar 98.69 308 P **P 21 43 09.4 -1.4**
comp=Z,6.2nm,0.9s,mb5.2,baz=30,slow=6.8,SNR=10
MMAI LR LR 22 33 08.0
comp=Z,249nm,18.4s,MS4.7,baz=65,slow=39
OKC Ostrava-Krasne 100.63 329 AMS AMS 22 32 20.0
comp=Z,600nm,15.9s
DPC Dobruska-Polom 101.18 330 *e*PP PP 21 47 34.7 +5.0
DPC AMS AMS 22 31 00.0
comp=Z,700nm,18.7s
PVCC Panska Ves 101.88 331 AMS AMS 22 33 20.0
comp=Z,600nm,15.3s
BRG Berggiesshubel 101.93 332 *e*PKP PKiKP 21 47 37.7 -10
comp=Z,11nm,1.7s
BRG
comp=N,533nm,20.7s
BRG
comp=E,321nm,15.1s
BRG
comp=Z,703nm,17.1s
CLL Collm 102.04 333 *e*Pdif Pdif 21 43 25.0 -0.2
CLL *e*PP PP 21 47 34.0 -2.2
CLL *e*PKiKP PKiKP 21 47 47.0 -0.8
CLL *e*SKSac SKSac 21 54 04.0 +0.8
CLL *e*Sdif Sdif 21 55 02.0 -4.1
CLL *e*PS PS 21 56 39.0 -3.0
CLL *e*SS SS 22 02 00.0 -10
CLL LmV 22 32 00.0
comp=Z,800nm,18.7s
PRU Pruhonice 102.26 331 AMS AMS 22 30 30.0
comp=Z,500nm,23.1s
TREC Trest 102.29 330 AMS AMS 22 32 20.0
comp=Z,700nm,19.9s
NKC Novy Kostel 103.06 332 AMS AMS 22 33 00.0
comp=Z,700nm,18.4s
MOX Moxa 103.13 333 *e*PKP PKiKP 21 47 45.2 -4.6
comp=Z,32nm,2.0s
MOX
comp=Z,600nm,20.0s
KHC Kasperske Hory 103.31 331 *e*P Pdif 21 43 35.5 +4.6
KHC *e* 21 47 46.3
KHC MLR MLR
comp=Z,700nm,20.3s,MS5.2
KHC Kasperske Hory 103.31 331 *e*PDIFF Pdif 21 43 35.5 +4.6
KHC *ex* x 21 46 09.0
KHC *e*PP PP 21 47 46.3 +0.5
KHC AMS AMS 22 32 10.0
comp=Z,700nm,20.3s
GRF Grafenberg Arr 104.00 332 *e*PP PP 21 47 50.5 -0.3
ESDC Sonseca Array 118.50 335 PKP PKPdf 21 48 18.9 -0.1
comp=Z,0.2nm,0.5s,baz=40,slow=2.5,SNR=4.6
ESDC PP PP 21 49 32.5 -2.5
comp=Z,0.4nm,0.7s,baz=6.7,slow=5.9,SNR=4.0
LSZ Lusaka 121.31 262 *e*PKPdf PKPdf 21 48 25.3 +0.3
TAM Tamanrasset 126.22 315 *e*PKPdf PKPdf 21 48 34.6 +0.2
CFAA Coronel Fontan 144.28 122 PKP PKPdf 21 49 04.0 -3.6
comp=Z,0.7nm,0.7s,baz=226,slow=5.4,SNR=12
DBIC Dimbokro 144.30 307 PKP PKPdf 21 49 05.2 -3.0
comp=Z,14nm,0.5s,baz=36,slow=3.0,SNR=35
DBIC Dimbokro 144.30 307 *e*PKIKP PKPdf 21 49 05.4 -2.7
KIC Kosan Boka 144.41 306 *e*P PKPdf 21 49 05.5 -2.8
comp=Z,79nm,0.9s
TIC Toumodi 144.44 307 *e*P PKPdf 21 49 06.5 -1.9
comp=Z,57nm,1.0s
LIC Lamto 144.71 306 *e*P PKPdf 21 49 07.4 -1.5
comp=Z,148nm,1.0s
TRQA Tornquist 146.20 136 *e*PKPdf PKPdf 21 49 09.8 -0.9
LPAZ La Paz 146.21 96 PKPbc PKPbc 21 49 12.4 +0.1
comp=Z,11nm,1.0s,baz=280,slow=1.8,SNR=19
LPAZ La Paz 146.21 96 *e*PKP2 PKPbc 21 49 13.0 +0.7
SIV San Ignacio 152.95 94 PKPbc PKPbc 21 49 28.2 -1.1
comp=Z,6.4nm,1.0s,baz=65,slow=2.2,SNR=5.8

ISCJB **16** *21:38:56.1±1.1, 8.°32S±0.°08×75.°2W±0.°1, h138km±18km, mb3.5/2, Error ellipse: s-maj=20.7km s-min=9.7km az=147.4*
NEIC **16** *21:38:56.5±1.0, 8.°20S×75.°02W, h120km±13km, Error ellipse: s-maj=20.3km s-min=10.6km az=58.0*
IDC **16** *21:38:56.4±2.3, 8.°28S×75.°17W, h120km±24km, mb3.5/2, mb1 3.8/6, mb1mx3.6/18, mbtmp3.6/6, Error ellipse: s-maj=29.7km s-min=11.8km az=58.0*
ISC 16 21:38:57.0±1.1, 8.°31S±0.°08×75.°2W±0.°1, h131km±18km, n11, σ0.°84/12, mb3.5/2, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.40**	**290**	P		**Pn**	**21 39 50.0**	**+1.1**
	44nm,0.3s,baz=131,slow=5.0,SNR=82							
ATAH				S		**Sn**	**21 40 28.1**	**-0.9**
	46nm,0.3s,baz=351,slow=15,SNR=9.3							
NNA	**Nana**	**4.01**	**204**	*e*Pn		**Pn**	**21 39 58.3**	**+1.3**
NNA				*e*S		**Sn**	**21 40 42.1**	**-1.3**
NNA	**Nana**	**4.01**	**204**	P		**Pn**	**21 39 58.1**	**+1.1**
	5.5nm,0.3s,baz=7.2,slow=6.7,SNR=9.3							
NNA				S		**Sn**	**21 40 43.2**	**-0.2**
	41nm,0.3s,baz=310,slow=20,SNR=18							
OTAV	**Otavalo**	**9.10**	**339**	*e*Pn		**Pn**	**21 41 05.1**	**-0.3**
LPAZ	**La Paz**	**10.49**	**140**	P		**Pn**	**21 41 24.2**	**+0.3**
	0.5nm,0.3s,baz=338,slow=9.0,SNR=13							
SIV	**San Ignacio**	**15.75**	**120**	P		**Pn**	**21 42 30.8**	**-0.8**
	1.4nm,0.3s,baz=312,slow=13,SNR=26							
TXAR	**Lajitas Array**	**46.41**	**325**	P		**P**	**21 47 11.4**	**+0.8**
	1.1nm,0.7s,mb3.6,baz=150,slow=8.5,SNR=11							
YKA	**Yellowknife Ar**	**76.84**	**342**	P		**P**	**21 50 33.5**	**-0.6**
YKA	**Yellowknife Ar**	**76.84**	**342**	P		**P**	**21 50 33.5**	**-0.6**
	0.6nm,0.5s,mb3.5,baz=146,slow=6.7,SNR=4.3							
ASAR	**Alice Springs**	**137.37**	**221**	PKP		PKPdf	21 58 08.1	+2.1
	0.2nm,0.5s,baz=131,slow=2.6,SNR=2.7							
WRA	**Warramunga Arr**	**139.60**	**226**	PKhKP		PKPpre	21 58 04.1	
	0.4nm,0.7s,baz=121,slow=3.2,SNR=4.9							
WRA				PKP		PKPdf	21 58 10.9	+0.8
	0.2nm,0.3s,baz=115,slow=2.3,SNR=5.1							

ISCJB **16** *21:43:03.9±3.4, 22.°9N±0.°7×9.°4E±°, h102km±20km, mb3.6/4, Error ellipse: s-maj=190.4km s-min=13.3km az=143.7*
IDC **16** *21:43:08.2±4.8, 23.°11N×94.°03E, h118km±39km, mb3.2/4, mb1 3.2/5, mb1mx2.9/22, mbtmp3.0/5, Error ellipse: s-maj=147.1km s-min=17.5km az=58.0*
ISC 16 21:43:05.6±3.2, 23.°0N±0.°7×9.°4E±°, h97km±18km, n6, σ1.°9/31/7, mb3.6/4, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SHL	**Shillong**	**3.04**	**329**	*e*PN		**Pn**	**21 43 53.0**	**+1.2**
SHL				*e*SN		**Sn**	**21 44 26.0**	**-1.5**
CMAR	**Chiang Mai Arr**	**6.70**	**131**	P		**Pn**	**21 44 41.7**	**+0.3**
	0.1nm,0.3s,baz=310,slow=14,SNR=2.8							
MKAR	**Makanchi Array**	**25.48**	**342**	P		**P**	**21 48 25.0**	**+0.5**
	0.7nm,0.8s,mb3.1,baz=162,slow=9.4,SNR=6.4							
BVAR	**Borovoye Array**	**34.85**	**335**	P		**P**	**21 49 47.8**	**+0.8**
	1.8nm,0.9s,mb3.9,baz=88,slow=11,SNR=6.3							
WRA	**Warramunga Arr**	**58.29**	**134**	P		**P**	**21 52 49.1**	**-1.3**
	0.4nm,0.5s,mb3.7,baz=323,slow=7.3,SNR=7.1							
ASAR	**Alice Springs**	**60.67**	**137**	P		**P**	**21 53 06.5**	**-0.1**
	0.3nm,0.5s,mb3.5,baz=316,slow=6.9,SNR=6.2							

CASC 16 21:53:00.2±1.0, 13.°69N×89.°21W, h6km±2km, MD3.5, ML3.1, 1C-2D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SNET	**Serv Nac Est T**	**0.02**	**257**	*e*P		Pg	21 53 01.9	+0.6
SNET				*e*S		Sg	21 53 03.5	+1.4
SNET				AML		AML	21 53 04.9	
	comp=Z,5μm,0.2s							
BQQS	**Boqueron**	**0.08**	**304**	⇑*i*P		Pg	21 53 02.9	+0.9
BQQS				*e*S		Sg	21 53 04.5	+1.2
LFRS	**El Faro**	**0.16**	**115**	⇓*i*P		Pg	21 53 04.3	+0.8
SNVI	**San Vicente**	**0.37**	**102**	*e*P		Pg	21 53 08.3	+0.9
SNVI				*e*S		Sg	21 53 13.1	+0.8
SNJE	**San Jose**	**0.42**	**295**	*i* P		Pg	21 53 09.0	+0.6
SBLS	**San Blas**	**0.42**	**290**	*e*P		Pg	21 53 09.2	+0.8
SBLS				*e*S		Sg	21 53 15.8	+1.8
RBDL	**Robledal**	**0.62**	**312**	⇓*i*P		Pg	21 53 12.1	-0.1
CAHU	**Cacacuatique**	**0.98**	**85**	*e*P		Pg	21 53 18.7	-0.2

JMA 16 22:02:44.8±0.6, 44.°68N×149.°98E, h30km, M3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**3.33**	**248**	P		Pn	22 03 33.6	-1.1
NEM2				*e*S		Sn	22 04 09.9	-3.3
JRA	**Rausu**	**3.56**	**260**	P		Pn	22 03 39.6	+1.6
JNK	**Nakash**	**3.94**	**256**	P		Pn	22 03 43.4	+0.2
JNK				*e*S		Sn	22 04 27.5	-0.9
JAK	**Akkeshi**	**4.18**	**248**	P		Pn	22 03 45.5	-0.9
JAK				*e*S		Sn	22 04 30.3	-3.9
JAR	**Ashorobuto**	**4.69**	**255**	P		Pn	22 03 54.2	+0.7
JOB	**Onbets**	**4.79**	**250**	P		Pn	22 03 54.8	0.0
JOB				*e*S		Sn	22 04 47.1	-2.2
JMP	**Maruseppu**	**4.80**	**264**	P		Pn	22 03 57.4	+2.5
JCH	**Churui**	**5.23**	**249**	P		Pn	22 04 00.4	-0.4
JCH				*e*S		Sn	22 04 56.8	-3.3
JNB	**Noboribetsu**	**6.86**	**254**	P		Pn	22 04 23.9	+0.6
JKB	**Kayabe**	**7.10**	**250**	P		Pn	22 04 26.1	-0.5
JKB				*e*S		Sn	22 05 40.7	-5.5
JANG	**Nango**	**7.59**	**238**	*e*S		Sn	22 05 48.6	-10
JTM	**Tenmabayashi**	**7.63**	**242**	*e*S		Sn	22 05 51.1	-8.0
OFUJ	**Ofunato**	**8.35**	**231**	*e*S		Sn	22 06 08.2	-8.7
JRG	**Rokugo**	**8.73**	**236**	*e*S		Sn	22 06 18.0	-8.2
JIO	**Ouri**	**8.97**	**229**	*e*S		Sn	22 06 20.4	-12

ISK **16** *22:11:09.1, 37.°03N×29.°12E, h5km, MD2.6*
CSEM **16** *22:11:09.9±0.4, 36.°95N×29.°13E, h5km, MD2.8, Error ellipse: s-maj=8.4km s-min=6.7km az=33.0*
ISCJB **16** *22:11:10.2±0.8, 36.°94N±0.°04×29.°13E±0.°04, h10km, Error ellipse: s-maj=6.1km s-min=4.8km az=26.8*
DDA **16** *22:11:10.4, 36.°96N×29.°16E, h7km±2km, Md2.8*
ISC 16 22:11:10.6±0.8, 36.°95N±0.°04×29.°12E±0.°04, h2km±12km, n16, σ1.°08/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.37**	**56**	*e*PG	**Pg**	**22 11 16.0**	**-1.6**
GLHS				*e*SG	**Sg**	**22 11 22.8**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.37**	**56**	*e*Pg	**Pg**	**22 11 16.0**	**-1.6**
GLHS				*e*Sg	**Sg**	**22 11 22.8**	**+0.4**
GOLH	**Golhisar**	**0.46**	**51**	*i* P	**Pg**	**22 11 17.3**	**-2.0**
GOLH				*i* S	**Sg**	**22 11 25.4**	**+0.2**
GOLH	**Golhisar**	**0.46**	**51**	*i* P	**Pg**	**22 11 17.3**	**-2.0**
GOLH				*i* S	**Sg**	**22 11 25.5**	**+0.2**
ELL	**Elmali**	**0.67**	**107**	*e*PG	**Pg**	**22 11 23.2**	**-0.1**
ELL				*e*SG	**Sg**	**22 11 34.7**	**+2.8**
ELL	**Elmali**	**0.67**	**107**	*e*Pg	**Pg**	**22 11 23.2**	**-0.1**
ELL				*e*Sg	**Sg**	**22 11 34.7**	**+2.8**
DNZL	**Cakiroluk**	**0.74**	**356**	*i* P	**Pg**	**22 11 24.2**	**-0.6**
DNZL				*i* S	**Sg**	**22 11 35.4**	**+1.0**
DNZL	**Cakiroluk**	**0.74**	**356**	*i* P	**Pg**	**22 11 24.2**	**-0.6**
DNZL				*i* S	**Sg**	**22 11 35.4**	**+1.0**
AKAS	**Kas**	**0.81**	**151**	*i* P	**Pg**	**22 11 26.3**	**+0.1**
AKAS				*i* S	**Sg**	**22 11 44.2**	**+7.5**
AKAS	**Kas**	**0.81**	**151**	*i* P	**Pg**	**22 11 26.3**	**+0.1**
MLSB	**Milas**	**1.13**	**288**	*e*PN	**Pg**	**22 11 31.3**	**-0.9**
MLSB	**Milas**	**1.13**	**288**	*e*Pn	**Pg**	**22 11 31.3**	**-0.9**
AYDN	**Tasoluk**	**1.22**	**306**	*i* P	**Pg**	**22 11 33.6**	**-0.3**
AYDN				*i* S	**Sg**	**22 11 51.4**	**+1.7**
AYDN	**Tasoluk**	**1.22**	**306**	*i* P	**Pg**	**22 11 33.6**	**-0.3**
AYDN				*i* S	**Sg**	**22 11 51.4**	**+1.7**
KHAL	**Karahalli**	**1.45**	**12**	*i* P	**Pn**	**22 11 37.6**	**-0.2**
KHAL				*i* S	**Sb**	**22 11 57.4**	**+0.2**
KHAL	**Karahalli**	**1.45**	**12**	*i* P	**Pn**	**22 11 37.6**	**-0.2**
KHAL				*i* S	**Sb**	**22 11 57.3**	**+0.2**

IGQ 16 22:39:02.9, 2°.49S×80°.12W, h12km±6km, Mb4.4, Ms4.2, 3C-5D, Error ellipse: s-maj=7.8km s-min=1.8km az=124.3, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**1.56**	**337**	S	Sn	22 39 51.8	+1.1
CHIS	**Cerro-Chispas-**	**1.56**	**337**	P	Pn	22 39 31.1	+0.6
RIOE	**Riobamba**	**1.66**	**64**	S	Sn	22 39 51.8	-1.2
RIOE	**Riobamba**	**1.66**	**64**	P	Pn	22 39 33.2	+1.4
PECV	**Mancha de Ca P**	**1.71**	**2**	⇑S	Sn	22 39 54.8	+0.5
PECV	**Mancha de Ca P**	**1.71**	**2**	⇑P	Pn	22 39 34.1	+1.5
IGUA	**Igualata**	**1.78**	**56**	P	Pn	22 39 35.3	+1.8
BMAS	**Trigal station**	**1.91**	**59**	P	Pn	22 39 37.4	+2.1
BIL2	**Estacion Bilba**	**1.91**	**57**	S	Sn	22 40 01.1	+1.7
BIL2	**Estacion Bilba**	**1.91**	**57**	P	Pn	22 39 37.7	+2.3
ARRY	**Arrayan**	**1.93**	**59**	P	Pn	22 39 37.1	+1.5
MACE	**Macas**	**1.93**	**83**	⇓S	Sn	22 40 01.8	+2.0
MACE	**Macas**	**1.93**	**83**	⇓P	Pn	22 39 38.1	+2.5
PATA	**Patacocha**	**1.95**	**60**	P	Pn	22 39 37.8	+1.9
JUI6	**Juive**	**1.96**	**57**	S	Sn	22 40 02.7	+2.2
JUI6	**Juive**	**1.96**	**57**	P	Pn	22 39 38.2	+2.2
RETU	**Refugio**	**1.96**	**58**	P	Pn	22 39 38.9	+2.8
ULBA	**Ulba**	**2.00**	**59**	P	Pn	22 39 39.3	+2.7
RUN5	**Runtun**	**2.00**	**58**	P	Pn	22 39 39.2	+2.6
PISA	**Pisayambo**	**2.24**	**51**	P	Pn	22 39 43.5	+3.6
CAMI	**Rancho Maria**	**2.42**	**42**	P	Pn	22 39 46.3	+3.9
MAG1	**Magdalena**	**2.43**	**8**	P	Pn	22 39 44.2	+1.7
NAS2	**Nasa**	**2.47**	**42**	P	Pn	22 39 47.4	+4.4
TAMB	**Tambo**	**2.50**	**44**	P	Pn	22 39 47.3	+3.9
VC1	**Cotopaxi 1**	**2.51**	**43**	P	Pn	22 39 47.5	+3.9
COV1	**Cotopaxi Volc**	**2.54**	**44**	P	Pn	22 39 47.0	+3.0
PITA	**Cotopaxi Volc**	**2.55**	**41**	P	Pn	22 39 48.1	+3.9
JUA2	**San Juan 2**	**2.72**	**34**	⇑P	Pn	22 39 49.9	+3.4
TERV	**Terraza Guagua**	**2.75**	**33**	P	Pn	22 39 50.2	+3.3
GGP	**Refugio Guagua**	**2.76**	**33**	P	Pn	22 39 49.9	+2.9
PINO	**Pino**	**2.77**	**33**	⇓P	Pn	22 39 50.2	+3.1
ANTI	**Antisana**	**2.82**	**44**	P	Pn	22 39 51.4	+3.5
YANA	**Yana**	**2.82**	**33**	P	Pn	22 39 51.0	+3.2
GOLV	**Golondrinas**	**2.86**	**20**	P	Pn	22 39 48.8	+0.4
OTAV	**Otavalo**	**3.18**	**32**	⇓S	Sn	22 40 33.1	+2.4
OTAV	**Otavalo**	**3.18**	**32**	⇓P	Pn	22 39 55.9	+3.0
CAYR	**Refugio Cayamb**	**3.26**	**40**	P	Pn	22 39 58.1	+4.2
COTA	**Cotacachi**	**3.32**	**32**	P	Pn	22 39 58.1	+3.3
CHAR	**Charly**	**3.42**	**46**	P	Pn	22 40 01.2	+5.1

CASC 16 22:42:13.4±1.9, 12°.38N×87°.79W, h64km±32km, MD3.5, ML3.1, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.79**	**66**	⇑*e*P	Pn	22 42 29.4	+0.5
CRIN				*e*S	Sn	22 42 41.8	+1.3
CRIN				AML	AML	22 42 46.5	
	comp=Z,427nm,0.3s						
LEON	**Leon**	**0.88**	**87**	*e*P	Pn	22 42 29.3	-0.8
LEON				*e*S	Sn	22 42 41.9	-0.5
CNCH	**Conchagua**	**0.89**	**357**	*i* P	Pn	22 42 30.4	+0.1
CNCH				*e*S	Sn	22 42 43.0	+0.2
TELN	**Telica**	**0.96**	**76**	*e*P	Pn	22 42 31.5	+0.4
TELN				*e*S	Sn	22 42 45.2	+0.9
CNGN	**Cerro Negro**	**1.07**	**83**	*e*P	Pn	22 42 32.2	-0.4
CNGN				*e*S	Sn	22 42 47.2	+0.4
BLLM	**Bellamira**	**1.15**	**337**	*e*P	Pn	22 42 33.7	+0.2
BLLM				*e*S	Sn	22 42 49.2	+0.6
COPN	**Copaltepe**	**1.19**	**99**	*e*P	Pn	22 42 33.9	-0.1
MOMN	**Momotombo**	**1.22**	**88**	*e*P	Pn	22 42 34.8	+0.4
MOMN				*e*S	Sn	22 42 50.3	+0.1
CSAN		**1.35**	**98**	*e*P	Pn	22 42 36.6	+0.4
CSAN				*e*S	Sn	22 42 53.5	+0.2
CAHU	**Cacacuatique**	**1.45**	**343**	*e*P	Pn	22 42 38.9	+1.4
CAHU				*e*S	Sn	22 42 58.1	+2.5
XAVN	**Gruta Xavier**	**1.45**	**99**	*e*P	Pn	22 42 37.7	+0.2
LFRS	**El Faro**	**1.75**	**315**	*e*P	Pn	22 42 42.6	+0.9
LFRS				*e*S	Sn	22 43 03.1	+0.1

IDC 16 23:56:07.7±2.4, 14°.76N×119°.64E, h77km±25km, mb3.3/5, mb1 3.5/5, mb1mx3.2/19, mbtmp3.3/5, Error ellipse: s-maj=44.3km s-min=21.1km az=48.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**1.41**	**117**	P	Pn	23 56 30.2	-1.5
	132nm,0.3s,baz=346,slow=5.2,SNR=7.5						
TGY				S	Sn	23 56 50.3	+0.4
	167nm,0.3s,baz=212,slow=19,SNR=5.7						
CMAR	**Chiang Mai Arr**	**20.17**	**283**	P	P	00 00 37.0	+0.9
	0.3nm,0.5s,baz=97,slow=12,SNR=2.8						
WRA	**Warramunga Arr**	**37.39**	**157**	P	P	00 03 13.4	+0.1
	0.7nm,0.6s,baz=332,slow=10.0,SNR=3.9						
ASAR	**Alice Springs**	**40.66**	**160**	P	P	00 03 40.4	-0.1
	0.4nm,0.6s,baz=340,slow=7.3,SNR=6.0						
FINES	**FINESS Array B**	**78.87**	**331**	P	P	00 08 02.2	0.0
	1.8nm,1.0s,baz=81,slow=5.7,SNR=5.6						
NOA	**NORSAR Array B**	**85.85**	**332**	P	P	00 08 38.7	0.0
	0.6nm,0.6s,baz=70,slow=4.6,SNR=4.2						

*IDC **17** 00:05:35.0±0.9, 12°.98N×124°.62E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.9/21, mbtmp3.9/11, MS3.0/2, Ms1 3.0/2, ms1mx2.3/34, Error ellipse: s-maj=37.9km s-min=17.9km az=67.0*

*ISCJB **17** 00:05:36.1±1.4, 13°.01N±0°.05×124°.48E±0°.06, h15km±10km, mb4.0/12, Error ellipse: s-maj=10.9km s-min=7.4km az=160.8*

*NEIC **17** 00:05:36.1±0.8, 13°.01N×124°.72E, h10km, mb4.4/1, Error ellipse: s-maj=30.6km s-min=14.9km az=58.0*

*MAN **17** 00:05:39, 12°.81N×124°.34E, h17km, mb4.7, ML3.6, MS3.6*

ISC 17 00:05:35.8±1.2, 13°.01N±0°.04×124°.42E±0°.06, h2km±7km, n27, σ1§19/29, mb4.0/12, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.55**	**155**	*e*P	**Pg**	**00 05 48.7**	**+2.4**
PVCP	**Virac**	**0.64**	**336**	*e*P	**Pg**	**00 05 46.2**	**-2.0**
MMPH	**Masbate**	**1.01**	**231**	*i* P	**Pg**	**00 05 54.8**	**-0.4**
MMPH				*i* S	**Sg**	**00 06 08.2**	**-0.2**
AUQP	**San Andres**	**1.73**	**281**	*e*P	**Pn**	**00 06 07.4**	**+0.4**
OCLP	**Ormoc**	**1.95**	**175**	*e*P	**Pn**	**00 06 19.1**	**+9.1**
GQP	**Guinayangan**	**2.12**	**295**	⇓*e*P	**Pn**	**00 06 11.5**	**-0.8**
GQP				*e*S	**Sn**	**00 06 39.1**	**-0.1**
OTRP	**Odiongan**	**2.43**	**255**	*e*P	**Pn**	**00 06 17.0**	**+0.4**
BOAC	**Boac**	**2.55**	**280**	*e*P	**Pn**	**00 06 20.2**	**+2.0**
LLP	**Lapu-Lapu**	**2.71**	**190**	*e*P	**Pn**	**00 06 19.1**	**-1.3**
LLP				*e*S	**Sn**	**00 06 53.2**	**-0.6**
POLP	**Polilio Island**	**2.96**	**306**	*e*P	**Pn**	**00 06 27.4**	**+3.6**
GUIM	**Jordan**	**2.97**	**217**	*e*P	**Pn**	**00 06 24.0**	**0.0**
TGY	**Tagaytay City**	**3.56**	**288**	P	**Pn**	**00 06 35.9**	**+3.7**
	14nm,0.3s,baz=304,slow=7.3,SNR=3.7						
BUKP	**Musuan**	**5.13**	**173**	*e*P	**Pn**	**00 06 58.9**	**+5.1**
DAV	**Davao City (W)**	**6.01**	**169**	LR	LR	00 09 26.9	
	comp=Z,138nm,20.3s,baz=319,slow=39						
KSRS	**Korea Array**	**24.55**	**7**	P	**P**	**00 10 56.5**	**-0.4**
	0.9nm,0.8s,mb3.4,baz=181,slow=11,SNR=3.1						
KSRS				LR	LR	00 19 59.5	
	comp=Z,38nm,20.2s,baz=260,slow=35						
CMAR	**Chiang Mai Arr**	**25.10**	**286**	P	**P**	**00 11 02.8**	**+0.6**
	0.4nm,0.3s,mb3.4,baz=90,slow=7.5,SNR=4.4						
WRA	**Warramunga Arr**	**34.16**	**163**	P	**P**	**00 12 19.8**	**-2.8**
	0.6nm,0.3s,mb3.9,baz=340,slow=9.3,SNR=5.2						
ASAR	**Alice Springs**	**37.61**	**166**	P	**P**	**00 12 51.8**	**-0.3**
	0.3nm,0.3s,mb3.5,baz=345,slow=7.2,SNR=5.6						
SONM	**Songino Array**	**37.84**	**340**	P	**P**	**00 12 54.6**	**+0.8**
	2.0nm,1.1s,mb3.8,baz=156,slow=7.8,SNR=8.6						
MKAR	**Makanchi Array**	**48.77**	**322**	P	**P**	**00 14 21.6**	**-0.5**
	5.6nm,0.8s,mb4.6,baz=120,slow=8.8,SNR=10						
MKAR				PcP	PcP	00 15 49.0	+1.9
	1.1nm,0.7s,baz=108,slow=4.0,SNR=5.3						
ZALV	**Zalesovo Beam**	**51.37**	**331**	P	**P**	**00 14 40.8**	**-1.0**
	1.5nm,0.7s,mb4.0,baz=112,slow=5.2,SNR=7.2						
KURK	**Kurchatov**	**52.80**	**325**	P	**P**	**00 14 52.8**	**+0.3**
	6.7nm,0.8s,mb4.6,baz=124,slow=7.5,SNR=46						
BVAR	**Borovoye Array**	**58.40**	**325**	P	**P**	**00 15 32.5**	**-0.3**
	1.7nm,0.8s,mb4.2,baz=125,slow=13,SNR=9.6						
BVAR				PcP	PcP	00 16 24.9	+1.4
	1.0nm,0.7s,baz=142,slow=5.4,SNR=4.7						
ABKAR	**Akbulak array**	**63.64**	**319**	*e*P	**P**	**00 16 06.6**	**-1.9**
	2.1nm,0.7s,mb4.3						
ARU	**Arti**	**65.96**	**326**	P	**P**	**00 16 25.2**	**+1.7**
	6.8nm,0.6s,mb4.8						
BRTR	**Keskin Array B**	**82.41**	**309**	P	**P**	**00 18 02.0**	**+2.1**
	0.4nm,0.7s,mb3.5,baz=116,slow=5.2,SNR=3.3						
BUR08	**Bucovina Ar. S**	**86.61**	**318**	*e*P	**P**	**00 18 21.2**	**+0.2**

*IDC **17** 00:41:02.1±0.7, 34°.34N×69°.60E, h0km, mb4.2/15, mb1 4.3/20, mb1mx4.3/26, mbtmp4.2/20, ML3.9/5, MS3.3/13, Ms1 3.4/13, ms1mx3.2/27, Error ellipse: s-maj=15.7km s-min=14.2km az=107.0*

*BJI **17** 00:41:03.0, 34°.47N×69°.34E, h7km, mB4.4/5, mb4.5/7, Ms4.1/4, Ms7 3.9/2*

*NEIC **17** 00:41:04.2±1.1, 34°.32N×69°.42E, h10km, mb4.1/6, Error ellipse: s-maj=17.0km s-min=9.7km az=168.0*

*ISCJB **17** 00:41:04.3±0.3, 34°.17N±0°.03×69°.66E±0°.04, h33km, mb4.1/24, MS3.3/10, Error ellipse: s-maj=5.7km s-min=3.6km az=139.4*

*MOS **17** 00:41:05.1±1.3, 34°.29N×69°.40E, h33km, mb4.5/20, Error ellipse: s-maj=13.1km s-min=6.8km az=83.7*

*NNC **17** 00:41:07.3±6.9, 34°.27N×69°.84E, h54km±76km, mb4.0, mpv4.9, Error ellipse: s-maj=63.3km s-min=36.4km az=52.0*

ISC 17 00:41:06.8±0.7, 34°.20N±0°.04×69°.70E±0°.05, h38km±7km, n116, σ1§51/128, mb4.1/24, MS3.3/10, 7C-7D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**0.64**	**303**	*e*Pg	**Pn**	**00 41 11.5**	**-7.9**
KBL				*e*S	**Sn**	**00 41 18.4**	**-10**
BHK	**Bhakra**	**6.30**	**114**	*e*PKP	**Pn**	**00 42 37.0**	**-0.2**
BHK				*e*S	**Sn**	**00 43 47.6**	**-0.3**
SDNR	**Sundarnagar**	**6.69**	**112**	*ex*	**Pn**	**00 42 45.5**	**+3.1**
SDNR				*ex*	x	00 44 00.5	
KSH	**Kashi**	**7.31**	**42**	Pn	**Pn**	**00 42 50.0**	**-1.0**
KSH				Sn	**Sn**	**00 44 06.3**	**-6.4**
KSH				smax			
	comp=N,140nm,0.8s						
KSH				smax			
	comp=E,310nm,1.4s						
NDI	**New Delhi**	**8.45**	**129**	*ex*	**Pn**	**00 43 08.0**	**+1.3**
NDI				*ex*	x	00 44 43.5	
AML	**Almayashu**	**8.52**	**20**	P	**Pn**	**00 43 10.4**	**+2.8**
	SNR=80						
AML	**Almayashu**	**8.52**	**20**	*e*Pn	**Pn**	**00 43 09.3**	**+1.7**
UCH	**Uchtor**	**8.87**	**24**	P	**Pn**	**00 43 15.9**	**+3.6**
	SNR=77						
UCH	**Uchtor**	**8.87**	**24**	*e*Pn	**Pn**	**00 43 15.1**	**+2.8**
KK31	**Karatay Array**	**8.92**	**4**	Pn	**Pn**	**00 43 13.8**	**+0.9**
	comp=E,24nm,0.5s,baz=196,slow=14,SNR=391						
KK31				⇓Sn	**Sn**	**00 44 52.6**	**+0.6**
	comp=E,16nm,0.6s,baz=189,slow=26,SNR=4.3						
EKS2	**Erkin-Say**	**9.04**	**20**	P	**Pn**	**00 43 17.2**	**+2.6**
	SNR=25						
EKS2	**Erkin-Say**	**9.04**	**20**	Pn	**Pn**	**00 43 15.7**	**+1.1**
	comp=E,17nm,0.6s						
EKS2				*e*S	**Sn**	**00 44 52.2**	**-2.8**
AAK	**Ala-Archa**	**9.22**	**23**	P	**Pn**	**00 43 20.6**	**+3.4**
	SNR=14						
AAK	**Ala-Archa**	**9.22**	**23**	*e*Pn	**Pn**	**00 43 18.2**	**+1.0**
	comp=E,20nm,0.6s						
AAK				*e*S	**Sn**	**00 45 04.7**	**+5.0**
AAK	**Ala-Archa**	**9.22**	**23**	Pn	**Pn**	**00 43 19.1**	**+1.9**
	comp=E,3.4nm,0.3s,baz=199,slow=7.8,SNR=20						
AAK				Sn	**Sn**	**00 45 03.5**	**+3.9**
	baz=144,slow=19,SNR=2.5						
AAK				LR	LR	00 46 34.0	
	comp=E,196nm,18.4s,baz=206,slow=36						
AAK	**Ala-Archa**	**9.22**	**23**	*ce*P	**Pn**	**00 43 20.3**	**+3.1**
AAK				pmax	pmax		
	comp=Z,11nm,0.7s						
KBK	**Karagaybulak**	**9.39**	**24**	P	**Pn**	**00 43 24.5**	**+5.0**
	SNR=13						
FRU	**Bishkek**	**9.44**	**23**	*e*P	**Pn**	**00 43 25.5**	**+5.3**
FRU				*e*S	**Sn**	**00 45 15.0**	**+10**
FRU				pmax	pmax		
	comp=Z,80nm,1.9s						
FRU				smax			
	comp=E,570nm,2.2s						
CHMS	**Chumysh**	**9.63**	**23**	P	**Pn**	**00 43 27.9**	**+5.1**
	SNR=14						
USP	**Ospenovka**	**9.80**	**21**	P	**Pn**	**00 43 27.7**	**+2.6**
	SNR=15						
TKM2	**Tokmak 2**	**9.86**	**26**	P	**Pn**	**00 43 28.1**	**+2.3**
	SNR=38						
TKM2	**Tokmak 2**	**9.86**	**26**	*e*Pn	**Pn**	**00 43 28.0**	**+2.1**
	comp=E,19nm,0.6s						
TKM2	**Tokmak 2**	**9.86**	**26**	*e*P	**Pn**	**00 43 28.0**	**+2.1**
TKM2				pmax	pmax		
	comp=Z,19nm,0.6s						
PTH	**Pithoragarh**	**10.07**	**115**	*ex*	**Pn**	**00 43 30.3**	**+1.4**
PTH				*ex*	x	00 45 26.0	
KOLN	**Koldanda**	**13.53**	**115**	*e*P	**Pn**	**00 44 15.4**	**-0.8**
GKN	**Gorkha**	**14.21**	**112**	*e*P	**Pn**	**00 44 24.5**	**-0.9**
DMN	**Daman**	**14.76**	**112**	*e*P	**Pn**	**00 44 31.8**	**-1.1**
	comp=Z,74nm,0.7s						
KKN	**Kakani**	**14.81**	**111**	*e*P	**Pn**	**00 44 31.8**	**-1.7**
	comp=Z,55nm,0.8s						
PKIN	**Phulchoki**	**15.00**	**112**	*e*P	**Pn**	**00 44 35.2**	**-0.9**
	comp=Z,41nm,0.6s						
PKI	**Pulchoki**	**15.01**	**112**	*e*P	**Pn**	**00 44 34.8**	**-1.4**
	comp=Z,68nm,0.7s						
GUN	**Gumba**	**15.21**	**110**	*e*P	**Pn**	**00 44 38.4**	**-0.4**
JIRN	**Jiri**	**15.57**	**110**	*e*P	**Pn**	**00 44 43.1**	**-0.4**
	comp=Z,57nm,0.7s						
MK31	**Makanchi Array**	**15.79**	**33**	Pn	**Pn**	**00 44 45.9**	**-0.3**
	comp=Z,9.7nm,0.8s,baz=215,slow=10,SNR=73						
MK31	**Makanchi Array**	**15.79**	**33**	*e*P	**Pn**	**00 44 46.7**	**+0.5**
MKAR	**Makanchi Array**	**15.79**	**33**	Pn	**Pn**	**00 44 45.9**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=214,slow=9.8,SNR=19						
MKAR				LR	LR	00 50 18.8	
	comp=Z,55nm,19.9s,baz=222,slow=35						
RAMN	**Ramite**	**16.24**	**112**	*e*P	**Pn**	**00 44 50.3**	**-1.8**
	comp=Z,52nm,0.7s						
AB31	**Akbulak array**	**16.69**	**337**	⇓Pn	**Pn**	**00 44 55.3**	**-2.3**
	comp=Z,5.2nm,0.7s,baz=134,slow=13,SNR=49						
AB31				⇑Sn	**Sn**	**00 48 01.6**	**-0.2**
	comp=Z,5.8nm,1.1s,baz=169,slow=25,SNR=4.5						
ABKAR	**Akbulak array**	**16.69**	**337**	*e*P	**Pn**	**00 44 53.3**	**-4.3**
	comp=Z,3.5nm,0.5s						
ABKAR				*e*S	**S**	**00 47 53.8**	**-18**
ODAN	**Odare**	**16.90**	**111**	*e*P	**Pn**	**00 44 59.7**	**-0.7**
	comp=Z,46nm,0.8s						
TAPN	**Taplejung**	**16.91**	**109**	*e*P	**Pn**	**00 45 00.1**	**-0.4**
	comp=Z,30nm,0.7s						
WMQ	**Urumqi**	**16.94**	**50**	P	**Pn**	**00 45 03.8**	**+3.0**
WMQ				pP	pP	00 45 07.8	-4.2
WMQ				sP	sP	00 45 10.8	-6.0
WMQ				PP		00 45 18.6	
WMQ				S	**S**	**00 48 20.0**	**+3.0**
WMQ				pmax	pmax		
	comp=Z,32nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,190nm,6.2s						
WMQ				LR	LR		
	comp=N,330nm,10.2s						
WMQ				LR	LR		
	comp=E,230nm,8.9s						
WMQ				LR	LR		
	comp=Z,370nm,9.5s						
KURK	**Kurchatov**	**17.75**	**19**	⇓Pn	**Pn**	**00 45 09.3**	**-1.5**
	comp=Z,7.4nm,0.8s						
KURK	**Kurchatov**	**17.75**	**19**	*e*Pn	**Pn**	**00 45 09.5**	**-1.2**
	comp=Z,9.1nm,0.9s						
KURK	**Kurchatov**	**17.75**	**19**	P	**Pn**	**00 45 09.1**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=210,slow=10,SNR=17						
KURK	**Kurchatov**	**17.75**	**19**	*e*P	**Pn**	**00 45 10.0**	**-0.8**
KURK				pmax	pmax		
	comp=Z,14nm,1.7s						
AKTK	**Aktyubinsk**	**18.34**	**336**	P	**Pn**	**00 45 16.0**	**-2.0**
AKTK				LR	LR	00 53 19.2	
AKTO	**Aktyubinsk**	**18.34**	**336**	⇑Pn	**Pn**	**00 45 16.2**	**-1.8**
	comp=Z,1.9nm,0.9s						
AKTO				⇑Sn	**Sn**	**00 48 43.4**	**+1.7**
	comp=Z,0.7nm,1.4s						
AKTO	**Aktyubinsk**	**18.34**	**336**	P	**Pn**	**00 45 16.0**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=141,slow=9.9,SNR=30						
AKTO				LR	LR	00 53 19.2	
	comp=Z,90nm,21.1s,baz=13,slow=41						
VOSK	**Vostochnaya**	**18.54**	**2**	⇓Pn	**Pn**	**00 45 18.2**	**-2.2**
	comp=Z,14nm,1.1s						
LSA	**Lhasa**	**18.74**	**98**	P	**Pn**	**00 45 27.0**	**+3.9**
ZRNK	**Zerenda**	**18.75**	**359**	⇓Pn	**Pn**	**00 45 21.0**	**-1.9**
	comp=Z,15nm,0.8s						
BVA0	**Borovoye Array**	**18.83**	**1**	⇑Pn	**Pn**	**00 45 22.0**	**-1.8**
	comp=Z,1.4nm,0.7s,baz=186,slow=13,SNR=43						
BVAR	**Borovoye Array**	**18.83**	**1**	P	**Pn**	**00 45 22.0**	**-1.8**
	comp=Z,1.1nm,0.3s,baz=172,slow=12,SNR=14						
BVAR	**Borovoye Array**	**18.83**	**1**	P	**Pn**	**00 45 22.0**	**-1.9**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**18.86**	**1**	*e*Pn	**Pn**	**00 45 22.5**	**-1.7**
	comp=Z,11nm,0.8s						
BRVK	**Borovoye**	**18.86**	**1**	*de*P	**Pn**	**00 45 22.2**	**-2.0**
BRVK				pmax	pmax		
	comp=Z,17nm,1.2s						
DGRG	**David-gareji**	**20.49**	**298**	P	**P**	**00 45 42.2**	**+0.8**
GNI	**Garni**	**20.72**	**294**	*e*P	**P**	**00 45 44.1**	**+0.2**
	comp=Z,23nm,1.0s						
GNI	**Garni**	**20.72**	**294**	P	**P**	**00 45 46.1**	**+2.2**
	comp=Z,5.5nm,0.7s,baz=172,slow=19,SNR=3.3						
GNI				LR	LR	00 53 56.8	
	comp=Z,56nm,21.2s,MS2.9,baz=262,slow=38						
GNI	**Garni**	**20.72**	**294**	*ce*P	**P**	**00 45 48.5**	**+4.7**
GNI				pmax	pmax		
	comp=Z,35nm,1.5s						
MTA	**Mtatsminda**	**20.97**	**298**	P	**P**	**00 45 47.2**	**+0.7**
TBLG	**Delisi**	**21.02**	**298**	*e*P	**P**	**00 45 48.4**	**+1.4**
TBLG	**Delisi**	**21.02**	**298**	P	**P**	**00 45 48.5**	**+1.5**
GOR	**Gori**	**21.53**	**299**	P	**P**	**00 45 55.4**	**+2.8**
ZAA0	**Zalesovo Array**	**22.45**	**24**	*e*P	**P**	**00 46 01.4**	**-0.8**
ZALV	**Zalesovo Beam**	**22.45**	**24**	P	**P**	**00 46 01.4**	**-0.8**
	comp=Z,6.8nm,0.5s,mb4.4,baz=222,slow=10,SNR=20						
ZALV				S	**S**	**00 50 07.3**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=219,slow=18,SNR=3.9						
ZALV				LR	LR	00 55 03.1	
	comp=Z,55nm,19.5s,MS3.0,baz=216,slow=38						
ZALV	**Zalesovo Beam**	**22.45**	**24**	P	**P**	**00 46 01.4**	**-0.8**
ZALV				S	**S**	**00 50 07.3**	**+0.7**
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.3						
ZALV				smax			
	comp=N,1.0nm,0.6s						
NVS	**Novosibirsk**	**22.71**	**21**	⇑*i*P	**P**	**00 46 06.4**	**+1.5**
NVS				*e**PP		00 46 27.6	
NVS				*e*		00 46 40.3	
NVS				*e*S	**S**	**00 50 00.9**	**-10**
NVS				pmax	pmax		
	comp=N,14nm,1.0s						
NVS				pmax	pmax		
	comp=E,10.0n

ARCES					pmax	pmax		
	comp=Z,4.0nm,0.9s							
CLL	**Collm**	**43.85**	**311**	*e*P	**P**		**00 49 12.0**	**+3.0**
CLL	**Collm**	**43.85**	**311**	*e*(sP)	pP		00 49 12.0	-7.9
NOA	**NORSAR Array B**	**45.60**	**325**	P	**P**		**00 49 21.4**	**-1.5**
	comp=Z,1.6nm,0.7s,mb4.0,baz=99,slow=8.0,SNR=8.5							
NOA				LR	LR		01 10 05.1	
	comp=Z,62nm,19.1s,MS3.6,baz=100,slow=38							
NOA	**NORSAR Array B**	**45.60**	**325**	P	**P**		**00 49 21.4**	**-1.5**
NOA				pmax	pmax			
	comp=Z,2.0nm,0.7s							
NOA				MLR	MLR			
	comp=Z,62nm,19.1s							
YAK	**Yakutsk**	**46.46**	**34**	*e*P	**P**		**00 49 32.4**	**+2.8**
KSRS	**Korea Array**	**46.68**	**68**	PcP	PcP		00 51 05.9	+0.9
	comp=Z,1.8nm,0.9s,baz=316,slow=3.6,SNR=3.1							
KSRS				LR	LR		01 11 08.7	
	comp=Z,58nm,18.2s,MS3.6,baz=267,slow=39							
KEST	**Kesra**	**48.78**	**290**	P	**P**		**00 49 49.1**	**+1.1**
	comp=Z,0.8nm,0.6s,mb3.9,baz=357,slow=6.9,SNR=7.3							
ESDC	**Sonseca Array**	**57.61**	**299**	P	**P**		**00 50 52.9**	**0.0**
	comp=Z,0.1nm,0.4s,mb3.2,baz=71,slow=6.2,SNR=3.9							
BOSA	**Boshof**	**75.30**	**220**	P	**P**		**00 52 46.6**	**+0.7**
	comp=Z,3.2nm,0.8s,mb4.3,baz=42,slow=15,SNR=5.9							
BOSA	**Boshof**	**75.30**	**220**	P	**P**		**00 52 46.6**	**+0.7**
BOSA				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.3							
INK	**Inuvik**	**76.34**	**9**	P	**P**		**00 52 51.4**	**0.0**
	comp=Z,5.1nm,0.9s,mb4.5,baz=356,slow=9.1,SNR=4.7							
INK	**Inuvik**	**76.34**	**9**	P	**P**		**00 52 51.4**	**0.0**
INK				pmax	pmax			
	comp=Z,5.0nm,0.9s							
ILAR	**Eielson Array**	**77.28**	**15**	P	**P**		**00 52 56.2**	**-0.5**
	comp=Z,2.5nm,0.9s,mb4.1,baz=315,slow=4.7,SNR=16							
ILAR				PP	PP		00 55 54.2	+3.8
	comp=Z,0.3nm,0.7s,baz=321,slow=7.0,SNR=4.1							
ILAR	**Eielson Array**	**77.28**	**15**	P	**P**		**00 52 56.2**	**-0.5**
ILAR							00 55 54.2	
ILAR				pmax	pmax			
	comp=Z,3.0nm,1.0s							
WRA	**Warramunga Arr**	**81.71**	**121**	P	**P**		**00 53 23.1**	**+1.6**
	comp=Z,2.3nm,0.8s,mb4.1,baz=328,slow=4.7,SNR=5.6							
WRA	**Warramunga Arr**	**81.71**	**121**	P	**P**		**00 53 23.1**	**+1.6**
WRA				pmax	pmax			
	comp=Z,2.0nm,0.9s							
KDAK	**Kodiak Island**	**81.73**	**21**	P	**P**		**00 53 21.5**	**+0.4**
	comp=Z,4.6nm,0.9s,mb4.4,baz=332,slow=2.9,SNR=4.1							
KDAK	**Kodiak Island**	**81.73**	**21**	P	**P**		**00 53 21.5**	**+0.4**
KDAK				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.4							
YKA	**Yellowknife Ar**	**83.58**	**2**	P	**P**		**00 53 27.8**	**-2.8**
	comp=Z,1.9nm,0.8s,mb4.3,baz=358,slow=5.8,SNR=2.8							
YKA	**Yellowknife Ar**	**83.58**	**2**	P	**P**		**00 53 27.8**	**-2.8**
YKA				pmax	pmax			
	comp=Z,2.0nm,0.8s							
ASAR	**Alice Springs**	**83.84**	**124**	P	**P**		**00 53 34.0**	**+1.6**
	comp=Z,2.3nm,0.8s,mb4.4,baz=313,slow=4.7,SNR=19							
ASAR	**Alice Springs**	**83.84**	**124**	P	**P**		**00 53 34.1**	**+1.6**
ASAR				pmax	pmax			
	comp=Z,2.0nm,0.8s							
STKA	**Stephens Creek**	**94.30**	**126**	LR	LR		01 39 32.0	
	comp=Z,82nm,18.9s,MS4.2,baz=206,slow=37							

*ISCJB **17** 01:19:56.0±0.8, 37.46N±0.03×20.92E±0.05, h10km, Error ellipse: s-maj=5.9km s-min=3.9km az=144.9*
*NEIC **17** 01:19:56.5, 37.50N×20.93E, h7km, MD3.5(ATH), After ATH.*
*ATH **17** 01:19:56.5, 37.50N×20.93E, h7km±2km, MD3.5/12*
*CSEM **17** 01:19:56.6±0.4, 37.46N×20.92E, h0km, ML2.1/7, Error ellipse: s-maj=7.9km s-min=4.3km az=56.0*
*THE **17** 01:19:56.7, 37.46N×20.90E, h0km±2km, ML2.1/7, Error ellipse: s-maj=3.1km s-min=1.1km az=220.0*

ISC 17 01:19:55.7±0.8, 37.43N±0.03×20.88E±0.05, h5km±5km, n61, σ1§09/89, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KFL	**Anninata**	**0.68**	**354**	P		**Pg**	**01 20 08.7**	**0.0**
KFL	**Anninata**	**0.68**	**354**	P		**Pg**	**01 20 08.7**	**0.0**
RLS	**Riolos of Patr**	**0.78**	**36**	*e*Pg		**Pg**	**01 20 09.6**	**-1.0**
RLS				*e*Sb		**Sg**	**01 20 19.5**	**-1.2**
RLS	**Riolos of Patr**	**0.78**	**36**	*e*PG		**Pg**	**01 20 09.6**	**-1.0**
RLS				*e*SB		**Sg**	**01 20 19.5**	**-1.2**
RLS	**Riolos of Patr**	**0.78**	**36**	*e*Pg		**Pg**	**01 20 09.6**	**-1.0**
RLS				*e*Sb		**Sg**	**01 20 19.5**	**-1.2**
VLS	**Valsamata**	**0.78**	**343**	*e*Pb		**Pg**	**01 20 10.5**	**-0.1**
VLS				*e*Sb		**Sg**	**01 20 20.6**	**-0.1**
VLS	**Valsamata**	**0.78**	**343**	*e*PB		**Pg**	**01 20 10.5**	**-0.1**
VLS				*e*SB		**Sg**	**01 20 20.6**	**-0.1**
VLS	**Valsamata**	**0.78**	**343**	P		**Pg**	**01 20 10.5**	**-0.1**
VLS				S		**Sg**	**01 20 22.2**	**+1.5**
VLS	**Valsamata**	**0.78**	**343**	P		**Pg**	**01 20 10.5**	**-0.1**
VLS				*e*Sb		**Sg**	**01 20 20.6**	**-0.1**
VLS				S		**Sg**	**01 20 22.2**	**+1.5**
ITM	**Ithomi**	**0.87**	**107**	*e*Pb		**Pg**	**01 20 13.2**	**+0.8**
ITM	**Ithomi**	**0.87**	**107**	*e*PB		**Pg**	**01 20 13.2**	**+0.8**
ITM	**Ithomi**	**0.87**	**107**	P		**Pg**	**01 20 13.3**	**+0.9**
ITM	**Ithomi**	**0.87**	**107**	P		**Pg**	**01 20 13.3**	**+0.9**
PYL	**PYLOS**	**0.87**	**128**	*e*PG		**Pg**	**01 20 13.2**	**+0.8**
PYL	**PYLOS**	**0.87**	**128**	P		**Pg**	**01 20 12.9**	**+0.5**
PYL	**PYLOS**	**0.87**	**128**	P		**Pg**	**01 20 12.9**	**+0.5**
PYL	**PYLOS**	**0.87**	**128**	*e*Pg		**Pg**	**01 20 13.2**	**+0.8**
LAKA	**Lakka**	**1.19**	**47**	P		**Pg**	**01 20 18.3**	**-0.1**
LAKA				S		**Sg**	**01 20 35.6**	**+1.8**
LAKA	**Lakka**	**1.19**	**47**	P		**Pg**	**01 20 18.3**	**-0.1**
LAKA				S		**Sg**	**01 20 35.6**	**+1.8**
VLX	**Vlachokerasia**	**1.20**	**93**	*e*PG		**Pg**	**01 20 18.0**	**-0.6**
VLX	**Vlachokerasia**	**1.20**	**93**	P		**Pg**	**01 20 18.6**	**0.0**
VLX				S		**Sg**	**01 20 35.6**	**+1.5**
VLX	**Vlachokerasia**	**1.20**	**93**	*e*Pg		**Pg**	**01 20 18.0**	**-0.6**
VLX	**Vlachokerasia**	**1.20**	**93**	P		**Pg**	**01 20 18.6**	**0.0**
VLX				S		**Sg**	**01 20 35.6**	**+1.5**
GUR	**Goura**	**1.26**	**66**	*e*PG		**Pg**	**01 20 18.8**	**-1.1**
GUR	**Goura**	**1.26**	**66**	P		**Pn**	**01 20 19.2**	**-0.8**
GUR				S		**Sb**	**01 20 38.8**	**+2.3**
GUR	**Goura**	**1.26**	**66**	*e*Pg		**Pg**	**01 20 18.8**	**-1.1**
GUR	**Goura**	**1.26**	**66**	P		**Pn**	**01 20 19.2**	**-0.8**
GUR				S		**Sb**	**01 20 38.8**	**+2.3**
EFP	**Efpalio**	**1.28**	**39**	*e*PB		**Pb**	**01 20 19.4**	**-0.9**
EFP	**Efpalio**	**1.28**	**39**	P		**Pn**	**01 20 19.3**	**-0.9**
EFP				S		**Sb**	**01 20 38.3**	**+1.3**
EFP	**Efpalio**	**1.28**	**39**	P		**Pn**	**01 20 19.3**	**-0.9**
EFP				S		**Sb**	**01 20 38.3**	**+1.3**
LKD2	**Lefkada island**	**1.37**	**353**	P		**Pn**	**01 20 21.5**	**+0.1**
LKD2				S		**Sg**	**01 20 41.6**	**+2.0**
LKD2	**Lefkada island**	**1.37**	**353**	P		**Pn**	**01 20 21.5**	**+0.1**
LKD2				S		**Sg**	**01 20 41.6**	**+2.0**
KALE	**Kalithea**	**1.38**	**46**	P		**Pn**	**01 20 21.3**	**-0.3**
KALE				S		**Sg**	**01 20 40.6**	**+0.6**
KALE	**Kalithea**	**1.38**	**46**	P		**Pn**	**01 20 21.3**	**-0.3**
KALE				S		**Sg**	**01 20 40.6**	**+0.6**
DSF	**Desfina**	**1.63**	**53**	P		**Pg**	**01 20 26.7**	**-0.2**
DSF				S		**Sg**	**01 20 48.4**	**+0.4**
DSF	**Desfina**	**1.63**	**53**	P		**Pg**	**01 20 26.7**	**-0.2**
DSF				S		**Sg**	**01 20 48.4**	**+0.4**
EVR	**Evrytania**	**1.65**	**26**	*e*Pb		**Pb**	**01 20 26.6**	**0.0**
EVR	**Evrytania**	**1.65**	**26**	*e*PB		**Pb**	**01 20 26.6**	**0.0**
EVR	**Evrytania**	**1.65**	**26**	*e*Pb		**Pb**	**01 20 26.6**	**0.0**
VLI	**Velíai**	**1.79**	**113**	*e*Pn		**Pg**	**01 20 30.5**	**+0.5**
VLI	**Veliai**	**1.79**	**113**	*e*PN		**Pg**	**01 20 30.5**	**+0.5**
VLI	**Veliai**	**1.79**	**113**	*e*Pn		**Pg**	**01 20 30.5**	**+0.5**
DID	**Didima**	**1.88**	**87**	*e*PN		**Pb**	**01 20 30.1**	**-0.3**
DID	**Didima**	**1.88**	**87**	P		**Pb**	**01 20 30.1**	**-0.3**
DID				S		**Sg**	**01 20 54.4**	**-1.5**
DID	**Didima**	**1.88**	**87**	P		**Pb**	**01 20 30.1**	**-0.3**
DID				S		**Sg**	**01 20 54.4**	**-1.5**
AGG	**Agios Georgios**	**1.96**	**35**	P		**Pg**	**01 20 33.1**	**0.0**
AGG	**Agios Georgios**	**1.96**	**35**	P		**Pb**	**01 20 31.2**	**-0.5**
AGG				S		**Sg**	**01 20 56.5**	**-2.0**
AGG	**Agios Georgios**	**1.96**	**35**	P		**Pb**	**01 20 31.2**	**-0.5**
AGG				S		**Sg**	**01 20 56.5**	**-2.0**
LKR	**Lokris**	**2.07**	**53**	P		**Pn**	**01 20 32.8**	**+1.8**
LKR	**Lokris**	**2.07**	**53**	P		**Pb**	**01 20 31.9**	**-1.8**
LKR				S		**Sb**	**01 20 58.8**	**-0.9**
LKR	**Lokris**	**2.07**	**53**	P		**Pb**	**01 20 31.9**	**-1.8**
LKR				S		**Sb**	**01 20 58.8**	**-0.9**
KYTH	**Kithira**	**2.08**	**123**	*e*Pn		**Pb**	**01 20 33.6**	**-0.2**
KYTH	**Kithira**	**2.08**	**123**	*e*PN		**Pb**	**01 20 33.6**	**-0.2**
KYTH	**Kithira**	**2.08**	**123**	*e*Pn		**Pb**	**01 20 33.6**	**-0.2**
JAN	**Janina**	**2.22**	**359**	*e*Pn		**Pb**	**01 20 34.9**	**-1.4**
JAN	**Janina**	**2.22**	**359**	*e*PN		**Pb**	**01 20 34.9**	**-1.4**
JAN	**Janina**	**2.22**	**359**	*e*Pn		**Pb**	**01 20 34.9**	**-1.4**
GRG	**Griva**	**3.71**	**18**	P		**Pn**	**01 20 55.7**	**+2.1**
GRG	**Griva**	**3.71**	**18**	P		**Pn**	**01 20 55.7**	**+2.1**
SRS	**Serrai**	**4.24**	**29**	P		**Pn**	**01 21 05.5**	**+4.6**
SRS	**Serrai**	**4.24**	**29**	P		**Pn**	**01 21 05.5**	**+4.6**

*ROM **17** 01:36:52.8±0.3, 38.42N×14.84E, h203km±4km, Ml3.8/30, Error ellipse: s-maj=6.2km s-min=3.7km az=130.0*
*ISCJB **17** 01:36:53.5±0.2, 38.44N±0.02×14.84E±0.02, h198km±2km, mb3.9/14, Error ellipse: s-maj=3.8km s-min=2.7km az=149.9*
*PDG **17** 01:36:54.4±1.2, 38.38N×15.05E, h190km±4km, ML3.8/10, Error ellipse: s-maj=2.2km s-min=3.8km az=0.0*
*NEIC **17** 01:36:54.9±0.3, 38.46N×14.89E, h198km±4km, mb3.9/38, Error ellipse: s-maj=5.6km s-min=3.7km az=178.0*
*IDC **17** 01:36:54.0±0.8, 38.54N×14.76E, h196km±10km, mb3.3/10, mb1 3.3/18, mb1mx3.2/31, mbtmp3.2/18, Error ellipse: s-maj=15.1km s-min=10.5km az=118.0*
*CSEM **17** 01:36:55.0±0.1, 38.54N×14.85E, h200km, mb4.3/7, mb3.3, Error ellipse: s-maj=3.0km s-min=2.4km az=172.0*

ISC 17 01:36:54.5±0.2, 38.46N±0.02×14.83E±0.02, h193km±2km, n384, σ1§02/433, mb3.9/14, 53C-35D, Sicily

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
LLI	**Lipari**	**0.09**	**96**	Pg		**Pn**	**01 37 20.4**	**+0.7**
	1µm,0.6s							
SLNA	**Salina**	**0.11**	**1**	Pg		**Pn**	**01 37 19.0**	**-0.7**
	226nm,0.3s							
VPL	**Vulcano Piano**	**0.14**	**122**	*i*Pg		**Pn**	**01 37 19.9**	**+0.1**
VPL				Sg		**Sn**	**01 37 40.2**	**+1.0**
VPL	**Vulcano Piano**	**0.14**	**122**	*i*Pg		**Pn**	**01 37 19.9**	**+0.1**
VPL				Sg		**Sn**	**01 37 40.2**	**+1.0**
IFIL	**Filicudi I Eol**	**0.23**	**298**	Pg		**Pn**	**01 37 19.8**	**-0.1**
	648nm,0.7s							
IFIL	**Filicudi I Eol**	**0.23**	**298**	Pg		**Pn**	**01 37 19.8**	**-0.1**
	648nm,0.7s							
MILZ	**Milazzo**	**0.36**	**120**	*i*Pg		**Pn**	**01 37 19.5**	**-0.7**
MILZ				Sg		**Sn**	**01 37 38.4**	**-1.6**
	1µm,0.3s							
MILZ	**Milazzo**	**0.36**	**120**	*i*Pg		**Pn**	**01 37 19.5**	**-0.7**
MSRU	**Castanea**	**0.57**	**110**	*i*Pg		**Pn**	**01 37 20.1**	**-0.8**
MSRU				Sg		**Sn**	**01 37 40.5**	**-0.8**
	1µm,0.3s							
MSRU	**Castanea**	**0.57**	**110**	*i*Pg		**Pn**	**01 37 20.1**	**-0.8**
MSRU				Sg		**Sn**	**01 37 40.5**	**-0.8**
	1µm,0.3s							
MMME	**Mongiuffi-Meli**	**0.62**	**147**	Pg		**Pn**	**01 37 21.4**	**+0.2**
MMME				Sg		**Sn**	**01 37 43.3**	**+1.6**
	2µm,1.0s							
SCLL	**Scilla**	**0.72**	**106**	*i*Pg		**Pn**	**01 37 20.2**	**-1.5**
	133nm,0.3s							
SCLL	**Scilla**	**0.72**	**106**	*i*Pg		**Pn**	**01 37 20.2**	**-1.5**
	133nm,0.3s							
ESLN	**Serra La Nave**	**0.77**	**172**	Pg		**Pn**	**01 37 22.7**	**+0.7**
	1µm,0.7s							
GALF	**Gagliano Caste**	**0.77**	**196**	Pg		**Pn**	**01 37 22.5**	**+0.5**
	1µm,0.4s							
GIB	**Gibilmanna**	**0.79**	**234**	*i*Pg		**Pn**	**01 37 20.4**	**-1.7**
	105nm,0.3s							
GIB	**Gibilmanna**	**0.79**	**234**	*i*Pg		**Pn**	**01 37 20.4**	**-1.7**
	105nm,0.3s							
MSCL	**Scilla**	**0.79**	**106**	Pg		**Pn**	**01 37 21.7**	**-0.3**
MTTG	**Motta San Giov**	**0.82**	**123**	*i*Pg		**Pn**	**01 37 22.3**	**+0.1**
MTTG				Sg		**Sn**	**01 37 44.8**	**+1.2**
	990nm,0.6s							
JOPP	**Joppolo**	**0.84**	**79**	Pg		**Pn**	**01 37 21.9**	**-0.4**
JOPP				Sg		**Sn**	**01 37 44.5**	**+0.6**
	998nm,0.5s							
CEL	**Celeste**	**0.86**	**103**	*e*Pn		**Pn**	**01 37 22.0**	**-0.4**
CEL				*e*Sn		**Sn**	**01 37 43.8**	**-0.2**
CEL	**Celeste**	**0.86**	**103**	Pg		**Pn**	**01 37 21.8**	**-0.7**
CEL				Sg		**Sn**	**01 37 43.5**	**-0.5**
	2µm,0.8s							
CEL	**Celeste**	**0.86**	**103**	Pg		**Pn**	**01 37 21.8**	**-0.7**
CEL	**Celeste**	**0.86**	**103**	*e*Pn		**Pn**	**01 37 22.0**	**-0.5**
CEL				*e*Sn		**Sn**	**01 37 43.8**	**-0.2**
ECNV	**Catenanuova**	**0.86**	**186**	Pg		**Pn**	**01 37 23.2**	**+0.7**
	790nm,0.6s							
ECNV	**Catenanuova**	**0.86**	**186**	Pg		**Pn**	**01 37 23.2**	**+0.7**
	790nm,0.6s							
VAE	**Valguarnera**	**1.03**	**199**	P		**Pn**	**01 37 24.2**	**+0.5**
VAE	**Valguarnera**	**1.03**	**199**	P		**Pn**	**01 37 24.2**	**+0.5**
	27nm,0.3s,baz=108,slow=5.4,SNR=53							
VAE	**Valguarnera**	**1.03**	**199**	P		**Pn**	**01 37 24.2**	**+0.5**
SOI	**Samo**	**1.04**	**111**	*i*Pg		**Pn**	**01 37 22.5**	**-1.2**
SOI	**Samo**	**1.04**	**111**	*i*Pg		**Pn**	**01 37 22.5**	**-1.2**
MPAZ	**Palizzi**	**1.05**	**118**	*i*Pg		**Pn**	**01 37 23.7**	**-0.1**
MPAZ				Sg		**Sn**	**01 37 46.2**	**-0.2**
	969nm,0.3s							
MPAZ	**Palizzi**	**1.05**	**118**	*i*Pg		**Pn**	**01 37 23.7**	**-0.1**
HCRL	**Carlentini**	**1.18**	**172**	*i*Pg		**Pn**	**01 37 24.6**	**-0.2**
	890nm,1.1s							
HCRL	**Carlentini**	**1.18**	**172**	*i*Pg		**Pn**	**01 37 24.6**	**-0.2**
	890nm,1.1s							
HAGA	**Augusta**	**1.20**	**168**	*i*Pg		**Pn**	**01 37 24.6**	**-0.3**
HAGA				Sg		**Sn**	**01 37 47.6**	**-0.8**
	691nm,0.6s							
HAGA	**Augusta**	**1.20**	**168**	*i*Pg		**Pn**	**01 37 24.6**	**-0.3**
HAGA				Sg		**Sn**	**01 37 47.6**	**-0.8**
	691nm,0.6s							
AGST	**Augusta-Monte**	**1.24**	**165**	Pg		**Pn**	**01 37 24.7**	**-0.5**
	918nm,1.2s							
AGST	**Augusta-Monte**	**1.24**	**165**	Pg		**Pn**	**01 37 24.7**	**-0.5**
	918nm,1.2s							
PLAC	**Placanica**	**1.26**	**90**	*i*Pg		**Pn**	**01 37 25.4**	**0.0**
PLAC				Sg		**Sn**	**01 37 48.7**	**-0.6**
	2µm,0.5s							
PLAC	**Placanica**	**1.26**	**90**	*i*Pg		**Pn**	**01 37 25.4**	**0.0**
HVZN	**Vizzini**	**1.28**	**184**	Pg		**Pn**	**01 37 25.1**	**-0.5**
	1µm,0.7s							
HVZN	**Vizzini**	**1.28**	**184**	Pg		**Pn**	**01 37 25.1**	**-0.5**
	1µm,0.7s							
RAFF	**Raffo Rosso**	**1.28**	**197**	*i*Pg		**Pn**	**01 37 25.6**	**0.0**
RAFF				Sg		**Sn**	**01 37 49.9**	**+0.2**
	506nm,0.9s							
RAFF	**Raffo Rosso**	**1.28**	**197**	*i*Pg		**Pn**	**01 37 25.6**	**0.0**
RAFF				Sg		**Sn**	**01 37 49.9**	**+0.2**
	506nm,0.9s							
GRI	**Girifalco**	**1.30**	**73**	Pg		**Pn**	**01 37 25.8**	**+0.1**
GRI				Sg		**Sn**	**01 37 50.0**	**+0.2**
	1µm,0.4s							
GRI	**Girifalco**	**1.30**	**73**	Pg		**Pn**	**01 37 25.8**	**+0.1**
SSY	**Sortino**	**1.31**	**172**	*i*Pg		**Pn**	**01 37 25.6**	**-0.3**
	453nm,0.5s							
SSY	**Sortino**	**1.31**	**172**	*i*Pg		**Pn**	**01 37 25.6**	**-0.3**
	453nm,0.5s							
USI	**Ustica**	**1.32**	**282**	*i*Pg		**Pn**	**01 37 25.5**	**-0.3**
	172nm,0.4s							
USI	**Ustica**	**1.32**	**282**	*i*Pg		**Pn**	**01 37 25.5**	**-0.3**
	172nm,0.4s							
CORL	**Corleone**	**1.33**	**246**	*i*Pg		**Pn**	**01 37 25.7**	**-0.2**
	209nm,0.3s							
CORL	**Corleone**	**1.33**	**246**	*i*Pg		**Pn**	**01 37 25.7**	**-0.2**
	209nm,0.3s							
CARO	**Carolei**	**1.35**	**53**	*i*Pg		**Pn**	**01 37 26.0**	**-0.1**
	1µm,0.4s							
CARO	**Carolei**	**1.35**	**53**	*i*Pg		**Pn**	**01 37 26.0**	**-0.1**
	1µm,0.4s							
SERS	**Sersale**	**1.56**	**68**	*i*Pg		**Pn**	**01 37 28.4**	**+0.4**
SERS				Sg		**Sn**	**01 37 53.6**	**-0.4**
	716nm,0.5s							
SERS	**Sersale**	**1.56**	**68**	*i*Pg		**Pn**	**01 37 28.4**	**+0.4**
SERS				Sg		**Sn**	**01 37 53.6**	**-0.4**
	716nm,0.5s							
TIP	**Timpagrande**	**1.67**	**64**	*e*Pn		**Pn**	**01 37 29.2**	**+0.2**
TIP				*e*Sn		**Sn**	**01 37 51.6**	**-4.2**
TIP	**Timpagrande**	**1.67**	**64**	*e*Pn		**Pn**	**01 37 29.2**	**+0.2**
TIP				*e*Sn		**Sn**	**01 37 51.7**	**-4.1**
CUC	**Castrocucco**	**1.72**	**26**	*e*Pn		**Pn**	**01 37 30.0**	**+0.6**
CUC				*e*Sn		**Sn**	**01 37 56.6**	**-0.1**
CUC	**Castrocucco**	**1.72**	**26**	*e*Pn		**Pn**	**01 37 30.0**	**+0.6**
CUC				*e*Sn		**Sn**	**01 37 56.6**	**-0.2**
MGR	**Morigerati**	**1.77**	**18**	*i*Pg		**Pn**	**01 37 31.0**	**+1.0**
	46nm,0.7s							
MGR	**Morigerati**	**1.77**	**18**	*i*Pg		**Pn**	**01 37 31.0**	**+1.0**
	46nm,0.7s							
ERC	**Erice**	**1.81**	**257**	Pg		**Pn**	**01 37 28.5**	**-2.0**
	247nm,0.7s							
LADO	**San Nicola del**	**1.87**	**63**	*i*Pg		**Pn**	**01 37 31.1**	**+0.1**
LADO				Sg		**Sn**	**01 37 58.0**	**-1.4**
	815nm,0.7s							
LADO	**San Nicola del**	**1.87**	**63**	*i*Pg		**Pn**	**01 37 31.1**	**+0.1**
LADO				Sg		**Sn**	**01 37 58.0**	**-1.4**
	815nm,0.7s							
SIRI	**Monte Sirino -**	**1.90**	**25**	Pg		**Pn**	**01 37 32.1**	**+0.8**
	79nm,0.5s							
SIRI	**Monte Sirino -**	**1.90**	**25**	Pg		**Pn**	**01 37 32.1**	**+0.8**
	79nm,0.5s							
MTSN	**Montesano sull**	**1.94**	**21**	Pg		**Pn**	**01 37 32.7**	**+1.0**
MTSN	**Montesano sull**	**1.94**	**21**	Pg		**Pn**	**01 37 32.7**	**+1.0**
SCHR	**S. Chirico Rap**	**1.99**	**29**	*i*Pg		**Pn**	**01 37 33.6**	**+1.4**
	52nm,0.8s							
SCHR	**S. Chirico Rap**	**1.99**	**29**	*i*Pg		**Pn**	**01 37 33.6**	**+1.4**
	52nm,0.8s							
ORI	**Oriolo Calabro**	**2.04**	**38**	Pg		**Pn**	**01 37 34.8**	**+2.1**
	276nm,0.5s							
ORI	**Oriolo Calabro**	**2.04**	**38**	Pg		**Pn**	**01 37 34.8**	**+2.1**
	276nm,0.5s							
CRAC	**Cracо**	**2.28**	**33**	*i*Pg		**Pn**	**01 37 36.8**	**+1.5**
	355nm,0.3s							
CRAC	**Cracо**	**2.28**	**33**	*i*Pg		**Pn**	**01 37 36.8**	**+1.5**
	355nm,0.3s							
MIGL	**Miglionico**	**2.48**	**30**	*i*Pg		**Pn**	**01 37 38.0**	**+0.4**
	657nm,1.5s							
SG1	**Sgolgore (BA)**	**2.78**	**30**	*e*P		**Pn**	**01 37 40.8**	**-0.2**
TAR1	**Taranto**	**2.81**	**42**	*e*P		**Pn**	**01 37 39.3**	**-2.0**
CDT	**Castel del Mon**	**2.85**	**23**	*e*P		**Pn**	**01 37 42.3**	**+0.5**
BAI	**Bari**	**3.08**	**30**	*e*P		**Pn**	**01 37 45.0**	**+0.4**
PE1	**Pezze di Greco**	**3.08**	**40**	*e*P		**Pn**	**01 37 43.6**	**-1.0**
AQU	**L'Aquila**	**4.04**	**345**	*e*Pn		**Pn**	**01 37 54.9**	**-1.5**
AQU	**L'Aquila**	**4.04**	**345**	*e*Pn		**Pn**	**01 37 54.9**	**-1.5**
KEK	**Kerkira**	**4.06**	**70**	P		**Pn**	**01 37 56.3**	**-0.4**
KEK	**Kerkira**	**4.06**	**70**	*e*P		**Pn**	**01 37 56.3**	**-0.4**
KEK	**Kerkira**	**4.06**	**70**	P		**Pn**	**01 37 56.3**	**-0.4**
KEK	**Kerkira**	**4.06**	**70**	P		**Pn**	**01 37 56.3**	**-0.4**
IGT	**Igoumenitsa**	**4.42**	**74**	P		**Pn**	**01 38 01.3**	**+0.1**
IGT	**Igoumenitsa**	**4.42**	**74**	P		**Pn**	**01 38 01.3**	**+0.1**
IGT	**Igoumenitsa**	**4.42**	**74**	P		**Pn**	**01 38 01.3**	**+0.1**
VLS	**Valsamata**	**4.54**	**92**	P		**Pn**	**01 38 02.3**	**-0.4**
VLS	**Valsamata**	**4.54**	**92**	*e*P		**Pn**	**01 38 02.6**	**-0.1**
VLS	**Valsamata**	**4.54**	**92**	P		**Pn**	**01 38 02.3**	**-0.4**
VLS	**Valsamata**	**4.54**	**92**	P		**Pn**	**01 38 02.3**	**-0.4**
LKD2	**Lefkada island**	**4.58**	**84**	P		**Pn**	**01 38 03.1**	**-0.1**
LKD2	**Lefkada island**	**4.58**	**84**	P		**Pn**	**01 38 03.1**	**-0.1**
TIR	**Tirane**	**4.83**	**52**	P		**Pn**	**01 38 06.4**	**0.0**
TIR	**Tirane**	**4.83**	**52**	P		**Pn**	**01 38 06.4**	**0.0**
TIR	**Tirane**	**4.83**	**52**	P		**Pn**	**01 38 06.4**	**0.0**
JAN	**Janina**	**4.84**	**74**	*e*P		**Pn**	**01 38 06.7**	**+0.2**
ULC	**Ulcinj**	**4.87**	**43**	*i*Pn		**Pn**	**01 38 06.9**	**0.0**
ULC				*e*Sn		**Sn**	**01 39 02.1**	**-1.9**
ULC	**Ulcinj**	**4.87**	**43**	*i*Pn		**Pn**	**01 38 06.9**	**0

VTS	Vitosha	7.60	54	P	Pn	01 38 43.4	+1.1
FRF	La Foret Royal	8.02	312	eP	Pn	01 38 56.6	+8.8
PKSM	Moragy	8.25	19	⇑P	Pn	01 38 51.4	+0.6
PKSM	Moragy	8.25	19	⇑iP	Pn	01 38 51.4	+0.6
PKSM	Moragy	8.25	19	⇑iP	Pn	01 38 51.4	+0.6
MPEP	Malo Peshtene	8.33	51	P	Pn	01 38 52.3	+0.4
MBDF	Montbardon	8.70	319	eP	Pn	01 39 01.7	+5.0
	8.8nm,0.7s						
MBDF	Montbardon	8.70	319	eP	Pn	01 39 01.7	+5.0
	4.4nm,0.7s						
BZS	Buzias	8.76	33	⇑P	Pn	01 38 58.1	+0.8
BZS	Buzias	8.76	33	⇑iP	Pn	01 38 58.1	+0.7
BZS	Buzias	8.76	33	⇑iP	Pn	01 38 58.1	+0.7
DAVOX	Davos/Dischmat	9.08	338	P	Pn	01 39 00.2	-1.5
	0.1nm,0.3s,baz=11,slow=19,SNR=2.2						
DAVOX	Davos/Dischmat	9.08	338	P	Pn	01 39 00.2	-1.5
LPG	La Plagne	9.26	322	eP	Pn	01 39 09.3	+5.4
	5.7nm,0.5s						
LPG	La Plagne	9.26	322	eP	Pn	01 39 09.3	+5.4
	2.8nm,0.5s						
LPL	La Plagne	9.28	322	eP	Pn	01 39 08.6	+4.4
ORIF	Oris-en-Rattie	9.30	317	eP	Pn	01 39 13.5	+9.0
	7.1nm,0.6s						
ORIF	Oris-en-Rattie	9.30	317	eP	Pn	01 39 13.5	+9.0
	3.5nm,0.6s						
VIVF	Saint-Julien-l	9.93	313	eP	Pn	01 39 21.4	+8.7
	8.0nm,0.7s						
VIVF	Saint-Julien-l	9.93	313	eP	Pn	01 39 21.4	+8.7
	4.0nm,0.7s						
VOIR		10.32	44	⇑P	Pn	01 39 19.0	+1.3
VOIR		10.32	44	⇑iP	Pn	01 39 19.0	+1.3
VOIR		10.32	44	⇑iP	Pn	01 39 19.0	+1.3
CABF	La Chapelle	10.39	324	eP	Pn	01 39 20.2	+1.6
CABF	La Chapelle	10.39	324	eP	Pn	01 39 20.2	+1.6
VYHS	Vyhne	10.45	15	eP	Pn	01 39 21.9	+2.5
VYHS	Vyhne	10.45	15	ePN	Pn	01 39 21.9	+2.5
MLR	Muntele Rosu	10.85	46	⇓P	Pn	01 39 25.0	+0.4
MLR	Muntele Rosu	10.85	46	P	Pn	01 39 24.0	-0.6
	0.1nm,0.3s,baz=323,slow=20,SNR=2.1						
MLR	Muntele Rosu	10.85	46	⇓iP	Pn	01 39 25.0	+0.4
MLR	Muntele Rosu	10.85	46	⇓iP	Pn	01 39 25.0	+0.4
EPOB	Poblet	10.96	290	P	Pn	01 39 34.1	+8.1
	0.7nm,0.4s						
HINF	Hinteralfeld	11.02	331	eP	Pn	01 39 26.6	-0.1
HINF	Hinteralfeld	11.02	331	eP	Pn	01 39 26.6	-0.1
CDF	Champ du Feu	11.36	334	eP	Pn	01 39 26.3	-4.8
HAU	Haudompre	11.37	330	eP	Pn	01 39 29.6	-1.6
	7.2nm,0.7s						
HAU	Haudompre	11.37	330	eP	Pn	01 39 29.6	-1.6
	3.6nm,0.7s						
HAU	Haudompre	11.37	330	eP	Pn	01 39 29.6	-1.6
	3.6nm,0.7s						
PLOR	Plostina	11.46	46	⇑iP	Pn	01 39 32.9	+0.4
PLOR	Plostina	11.46	46	⇑iP	Pn	01 39 32.9	+0.4
MORC	Moravsky Berou	11.48	9	ePn	Pn	01 39 31.4	-1.3
MORC	Moravsky Berou	11.48	9	ePn	Pn	01 39 31.5	-1.2
SMF	Signal de Mont	11.51	319	eP	Pn	01 39 33.9	+0.8
	3.9nm,0.4s						
SMF	Signal de Mont	11.51	319	eP	Pn	01 39 33.9	+0.8
	2.0nm,0.4s						
SMF	Signal de Mont	11.51	319	eP	Pn	01 39 33.9	+0.8
	2.0nm,0.4s						
VRI	Vrincioaia	11.52	46	⇓P	Pn	01 39 34.3	+1.2
VRI	Vrincioaia	11.52	46	⇓iP	Pn	01 39 34.3	+1.1
VRI	Vrincioaia	11.52	46	⇓iP	Pn	01 39 34.3	+1.1
AVF	Avril sur Loir	11.86	318	eP	Pn	01 39 37.2	-0.3
	6.1nm,0.7s						
AVF	Avril sur Loir	11.86	318	eP	Pn	01 39 37.2	-0.3
	3.0nm,0.7s						
BURAR	Bucovina Array	11.89	36	⇑P	Pn	01 39 40.0	+2.2
BURAR	Bucovina Array	11.89	36	⇑iP	Pn	01 39 40.0	+2.1
BURAR	Bucovina Array	11.89	36	⇑iP	Pn	01 39 40.0	+2.1
BUR08	Bucovina Ar. S	11.90	36	ePn	Pn	01 39 40.4	+2.3
EPF	Esparros	11.90	297	eP	Px	01 39 49.4	
	9.0nm,0.9s						
LOR	Lormes	11.92	321	eP	Pn	01 39 42.7	+4.4
LOR	Lormes	11.92	321	eP	Pn	01 39 42.7	+4.4
EBIE	Bielsa	11.94	295	P	Pn	01 39 45.5	+6.9
	8.8nm,0.7s						
EBIE	Bielsa	11.94	295	P	Pn	01 39 45.5	+6.9
	8.8nm,0.7s						
SSF	Saint Saulge	11.96	320	eP	Pn	01 39 42.9	+4.1
	8.5nm,0.7s						
SSF	Saint Saulge	11.96	320	eP	Pn	01 39 42.9	+4.1
	4.3nm,0.7s						
SSF	Saint Saulge	11.96	320	eP	Pn	01 39 42.9	+4.1
	4.2nm,0.7s						
TCF	Toulx Ste Croi	12.17	314	eP	Pn	01 39 47.6	+6.1
	5.6nm,0.6s						
TCF	Toulx Ste Croi	12.17	314	eP	Pn	01 39 47.6	+6.1
	2.8nm,0.6s						
TCF	Toulx Ste Croi	12.17	314	eP	Pn	01 39 47.6	+6.1
	2.8nm,0.6s						
LFF	La Frestale	12.36	306	eP	Pn	01 39 49.8	+5.9
LFF	La Frestale	12.36	306	eP	Pn	01 39 49.8	+5.9
ETSF	Etsaut	12.50	296	eP	Pn	01 39 51.1	+5.4
	4.4nm,0.4s						
ETSF	Etsaut	12.50	296	eP	Pn	01 39 51.1	+5.4
	2.2nm,0.4s						
ETSF	Etsaut	12.50	296	eP	Pn	01 39 51.1	+5.4
	2.2nm,0.4s						
CLL	Collm	12.92	355	eP	Pn	01 39 57.0	+6.1
CLL	Collm	12.92	355	e(P)	Pn	01 39 57.0	+6.1
SJPF	Ste Jean	13.03	296	eP	Pn	01 39 57.2	+4.9
	13nm,0.8s						
SJPF	Ste Jean	13.03	296	eP	Pn	01 39 57.2	+4.9
	6.7nm,0.8s						
SJPF	Ste Jean	13.03	296	eP	Pn	01 39 57.2	+4.9
	6.7nm,0.8s						
ETOR	Torete	13.23	286	P	Pn	01 39 57.7	+2.8
	4.3nm,0.7s						
ETOR	Torete	13.23	286	P	Pn	01 39 57.7	+2.8
	4.3nm,0.7s						
EALK	Alkurruntz	13.25	296	P	Pn	01 40 00.4	+5.2
	9.7nm,0.5s						
EALK	Alkurruntz	13.25	296	P	Pn	01 40 00.4	+5.2
	9.7nm,0.5s						
ELIZ	Elizondo	13.25	296	P	Pn	01 39 59.9	+4.7
	32nm,0.7s						
ELIZ	Elizondo	13.25	296	P	Pn	01 39 59.9	+4.7
	32nm,0.7s						
EVIA	Vianos	13.57	276	P	Pn	01 40 02.8	+3.6
	5.3nm,0.6s						
EVIA	Vianos	13.57	276	P	Pn	01 40 02.8	+3.5
	5.3nm,0.6s						
MFF	Saint Martin d	13.71	311	eP	Pn	01 40 03.7	+2.9
MFF	Saint Martin d	13.71	311	eP	Pn	01 40 03.7	+2.9
BAIF	Baives	13.86	330	eP	Pn	01 40 04.2	+1.5
	8.7nm,0.8s						
BAIF	Baives	13.86	330	eP	Pn	01 40 04.2	+1.5
	4.3nm,0.8s						
BAIF	Baives	13.86	330	eP	Pn	01 40 04.2	+1.5
	4.3nm,0.8s						
EQES	Quesada	14.11	273	P	Pn	01 40 09.6	+3.7
	0.3nm,0.4s						
EQES	Quesada	14.11	273	P	Pn	01 40 09.6	+3.6
	0.3nm,0.4s						
ELAN	Lanestosa	14.62	295	P	Pn	01 40 15.1	+2.9
	0.7nm,0.5s						
ELAN	Lanestosa	14.62	295	P	Pn	01 40 15.1	+2.9
	0.7nm,0.5s						
ESDC	Sonseca Array	14.66	281	P	Pn	01 40 14.2	+1.6
	1.0nm,0.8s						
ESDC	Sonseca Array	14.66	281	P	Pn	01 40 12.4	-0.2
	baz=82,slow=11,SNR=4.9						
ESDC	Sonseca Array	14.66	281	P	Pn	01 40 14.2	+1.6
	1.0nm,0.8s						
BR131	Keskin Array S	14.66	79	ePn	Pn	01 40 14.4	+1.7
	1.5nm,0.8s						
BR131	Keskin Array S	14.66	79	ePn	Pn	01 40 14.4	+1.7
	1.5nm,0.8s						
BRTR	Keskin Array B	14.66	79	P	Pn	01 40 13.8	+1.1
	0.2nm,0.3s,baz=266,slow=13,SNR=20						
BRTR	Keskin Array B	14.66	79	P	Pn	01 40 13.9	+1.2
GUD	Guadarrama	14.81	284	P	Pn	01 40 17.0	+2.4
	0.9nm,0.3s						
GUD	Guadarrama	14.81	284	P	Pn	01 40 17.0	+2.5
	0.9nm,0.3s						
LDF	La Druitiere	14.82	318	eP	Pn	01 40 14.5	0.0
	4.8nm,0.5s						
LDF	La Druitiere	14.82	318	eP	Pn	01 40 14.5	0.0
	2.4nm,0.5s						
LDF	La Druitiere	14.82	318	eP	Pn	01 40 14.5	0.0
	2.4nm,0.5s						
GRR	Gorron	15.09	316	eP	Pn	01 40 18.9	+1.0
	10nm,0.5s						
GRR	Gorron	15.09	316	eP	Pn	01 40 18.9	+1.0
	5.2nm,0.5s						
GRR	Gorron	15.09	316	eP	Pn	01 40 18.9	+1.0
	5.2nm,0.5s						
FLN	La Foliniere	15.11	318	eP	Pn	01 40 19.3	+1.2
FLN	La Foliniere	15.11	318	eP	Pn	01 40 19.3	+1.2
EMIJ	Mijas	15.67	269	P	Pn	01 40 25.3	+0.2
	1.3nm,0.3s						
EMIJ	Mijas	15.67	269	P	Pn	01 40 25.3	+0.2
	1.3nm,0.3s						
EARI	Arriondas	15.90	294	P	Pn	01 40 28.7	+0.9
	0.6nm,0.5s						
EARI	Arriondas	15.90	294	P	Pn	01 40 28.7	+0.9
	0.6nm,0.5s						
KIEV	Kiev	15.92	35	ePn	Pn	01 40 26.9	-1.0
KIEV	Kiev	15.92	35	ePn	Pn	01 40 26.9	-1.0
AKASG	Malin Array Be	15.93	35	P	Pn	01 40 27.1	-1.0
	2.4nm,0.3s,baz=227,slow=10,SNR=7.9						
AKASG	Malin Array Be	15.93	35	P	Pn	01 40 27.0	-1.1
AKBB	Malin Array Si	15.93	35	ePn	Pn	01 40 26.9	-1.1
AKBB	Malin Array Si	15.93	35	ePn	Pn	01 40 27.0	-1.1
SGMF	Saint Gilles	15.96	313	eP	Pn	01 40 29.1	+0.7
	30nm,0.7s						
SGMF	Saint Gilles	15.96	313	eP	Pn	01 40 29.1	+0.7
	15nm,0.7s						
SGMF	Saint Gilles	15.96	313	eP	Pn	01 40 29.1	+0.7
	15nm,0.7s						
QUIF	Quistinic	16.14	312	eP	Pn	01 40 31.8	+1.2
QUIF	Quistinic	16.14	312	eP	Pn	01 40 31.8	+1.2
ROSF	Rostrenen	16.42	313	eP	Pn	01 40 33.0	-0.9
ROSF	Rostrenen	16.42	313	eP	Pn	01 40 33.0	-0.9
ESPR	Espera	16.46	271	P	Pn	01 40 34.3	-0.3
	1.2nm,0.3s						
ESPR	Espera	16.46	271	P	Pn	01 40 34.3	-0.3
	1.2nm,0.3s						
ECAL	Calabor	16.84	289	P	Pn	01 40 39.0	0.0
	1.7nm,0.3s						
ECAL	Calabor	16.84	289	P	Pn	01 40 39.0	0.0
	1.7nm,0.3s						
EMIN	Mina Concepcio	16.94	274	P	Pn	01 40 40.2	-0.1
	0.8nm,0.3s						
EMIN	Mina Concepcio	16.94	274	P	Pn	01 40 40.2	-0.1
	0.8nm,0.3s						
MVO	Moncorvo	17.01	286	P	Pn	01 40 41.0	0.0
MVO	Moncorvo	17.01	286	P	Pn	01 40 41.0	-0.1
EBAD	Badajoz	17.08	278	P	Pn	01 40 40.8	-1.1
	0.7nm,0.3s						
EBAD	Badajoz	17.08	278	P	Pn	01 40 40.8	-1.1
	0.7nm,0.3s						
PMRV	Marv??o	17.32	280	eP	Pn	01 40 43.3	-1.4
	12nm,1.5s						
PMRV	Marv??o	17.32	280	eP	Pn	01 40 43.3	-1.4
	12nm,1.5s						
MTE	Manteigas	17.39	283	eP	Pn	01 40 44.5	-1.1
	18nm,1.3s						
MTE	Manteigas	17.39	283	eP	Pn	01 40 44.5	-1.1
	18nm,1.3s						
PESTR	Estremoz	17.52	278	eP	Pn	01 40 46.5	-0.6
	12nm,2.0s						
PESTR	Estremoz	17.52	278	eP	Pn	01 40 46.5	-0.6
	12nm,2.0s						
PVRL	Vila Real	17.53	286	eP	Pn	01 40 45.9	-1.3
	24nm,1.8s						
PVRL	Vila Real	17.53	286	eP	Pn	01 40 45.9	-1.3
	24nm,1.8s						
MMAI	Mount Meron Ar	17.55	102	P	Pn	01 40 45.9	-1.6
	0.5nm,0.3s,baz=314,slow=9.0,SNR=3.1						
PCAB	Cabril	17.78	288	eP	Pn	01 40 49.4	-0.8
PCAB	Cabril	17.78	288	eP	Pn	01 40 49.4	-0.8
ELOB	Lobios	17.82	288	P	Pn	01 40 49.1	-1.5
	0.8nm,0.4s						
ELOB	Lobios	17.82	288	P	Pn	01 40 49.1	-1.5
	0.8nm,0.4s						
PBEJ	Beja	17.83	276	eP	Pn	01 40 49.1	-1.7
	12nm,1.8s						
PBEJ	Beja	17.83	276	eP	Pn	01 40 49.1	-1.7
	12nm,1.8s						
EVO	Evora	17.88	277	eP	Pn	01 40 50.0	-1.4
	6.1nm,0.7s						
EVO	Evora	17.88	277	eP	Pn	01 40 49.4	-2.0
	9.0nm,2.0s						
EVO	Evora	17.88	277	eP	Pn	01 40 49.4	-2.0
	9.0nm,2.0s						
PTO	Porto	18.20	286	eP	P	01 40 53.8	+1.1
	40nm,1.5s						
PTO	Porto	18.20	286	eP	P	01 40 53.8	+1.1
	40nm,1.5s						
MALT	Malatya	18.49	83	eP	P	01 40 57.5	+1.5
	3.3nm,0.6s						
MALT	Malatya	18.49	83	⇓iP	P	01 40 57.6	+1.6
MALT	Malatya	18.49	83	⇓iP	P	01 40 57.6	+1.6
ASF	Jabal al Asfar	19.05	103	P	P	01 41 01.5	-0.6
	0.1nm,0.3s,baz=90,slow=1.0,SNR=2.8						
EKA	Eskdalemuir Ar	20.78	330	P	P	01 41 19.0	-1.3
	1.9nm,0.5s,baz=137,slow=12,SNR=16						
EKA	Eskdalemuir Ar	20.78	330	P	P	01 41 19.0	-1.3
ESK	Eskdalemuir	20.79	330	eP	P	01 41 19.3	-1.1
	6.6nm,0.8s						
ESK	Eskdalemuir	20.79	330	eP	P	01 41 19.3	-1.1
	6.6nm,0.8s						
HFS	Hagfors	21.71	358	P	P	01 41 27.9	-2.1
	1.2nm,0.5s,mb3.7,baz=183,slow=13,SNR=14						
HFS	Hagfors	21.71	358	P	P	01 41 27.9	-2.2
NB2	NORSAR Subarra	22.72	355	P	P	01 41 38.6	-0.9
	0.6nm,0.5s,mb3.4,baz=162,slow=9.8,SNR=3.8						
NOA	NORSAR Array B	22.72	355	P	P	01 41 37.0	-2.4
	1.1nm,0.8s,mb3.5,baz=192,slow=10,SNR=4.6						
NOA	NORSAR Array B	22.72	355	P	P	01 41 37.0	-2.5
FINES	FINESS Array B	24.05	13	P	P	01 41 50.7	-0.9
FINES	FINESS Array B	24.05	13	P	P	01 41 50.7	-0.9
	0.8nm,0.3s,mb3.9,baz=191,slow=9.0,SNR=16						
FINES	FINESS Array B	24.05	13	P	P	01 41 50.7	-0.9
TORD	Torodi Ar. Bea	27.78	208	P	P	01 42 25.5	0.0
	0.6nm,0.5s,mb3.5,baz=21,slow=9.3,SNR=16						
ARCES	ARCESS Array B	31.67	7	P	P	01 42 57.1	-2.0
	1.9nm,0.8s,mb3.7,baz=187,slow=8.6,SNR=4.7						
ARCES	ARCESS Array B	31.67	7	P	P	01 42 57.2	-2.0
ABKAR	Akbulak array	33.81	57	eP	P	01 43 17.8	-0.2
	0.8nm,0.4s,mb3.6						
ABKAR	Akbulak array	33.81	57	eP	P	01 43 17.8	-0.2
	0.8nm,0.4s,mb3.6						
DBIC	Dimbokro	36.32	214	eP	P	01 43 39.2	-0.6
	3.0nm,0.5s,mb4.1						
DBIC	Dimbokro	36.32	214	P	P	01 43 39.0	-0.8
	2.4nm,0.4s,mb4.1,baz=267,slow=19,SNR=10						
DBIC	Dimbokro	36.32	214	eP	P	01 43 39.2	-0.6
	3.0nm,0.5s,mb4.1						
TIC	Toumodi	36.41	215	eP	P	01 43 42.1	+1.5
	42nm,1.3s,mb4.8						
TIC	Toumodi	36.41	215	eP	P	01 43 42.1	+1.5
	42nm,1.3s,mb4.8						
KIC	Kosan Boka	36.54	214	eP	P	01 43 41.4	-0.3
	124nm,1.9s,mb5.1						
KIC	Kosan Boka	36.54	214	eP	P	01 43 41.4	-0.3
	124nm,1.9s,mb5.1						
LIC	Lamto	36.79	214	eP	P	01 43 43.6	-0.2
	106nm,1.6s,mb5.1						
LIC	Lamto	36.79	214	eP	P	01 43 43.6	-0.2
	106nm,1.6s,mb5.1						
BVAR	Borovoye Array	40.38	50	P	P	01 44 12.7	-0.5
BVAR	Borovoye Array	40.38	50	P	P	01 44 12.7	-0.5
	0.3nm,0.3s,mb3.1,baz=291,slow=4.3,SNR=3.7						
BVAR	Borovoye Array	40.38	50	P	P	01 44 12.7	-0.5
KURK	Kurchatov	45.69	53	eP	P	01 44 55.5	-0.3
	1.4nm,0.6s,mb3.5						
KURK	Kurchatov	45.69	53	eP	P	01 44 55.5	-0.3
	1.4nm,0.6s,mb3.5						
ZALV	Zalesovo Beam	48.82	48	P	P	01 45 18.5	-1.4
	0.6nm,0.3s,mb3.4,baz=309,slow=9.1,SNR=3.3						
ZALV	Zalesovo Beam	48.82	48	P	P	01 45 18.5	-1.4
MK31	Makanchi Array	48.95	57	eP	P	01 45 20.6	-0.4
MK31	Makanchi Array	48.95	57	eP	P	01 45 20.6	-0.4
MKAR	Makanchi Array	48.95	57	P	P	01 45 20.9	-0.1
	0.5nm,0.3s,mb3.3,baz=295,slow=6.9,SNR=6.2						

*ISCJB **17** 01:46:35.7±0.7, 35°.63N±0°.06×27°.26E±0°.05, h6km±6km, Error ellipse: s-maj=11.5km s-min=4.6km az=146.3*
*ATH **17** 01:46:35.4, 35°.61N×27°.26E, h19km±1km, MD3.4/6*
*NEIC **17** 01:46:35.4, 35°.61N×27°.26E, h19km, MD3.4(ATH), After ATH.*
*CSEM **17** 01:46:35.7±0.5, 35°.48N×27°.37E, h15km, MD3.4, Error ellipse: s-maj=16.7km s-min=6.1km az=148.0*
*DDA **17** 01:46:36.0, 35°.70N×27°.37E, h16km±1km, Md2.7*
ISC 17 01:46:36.3±0.7, **35°.60N**±0°.07×**27°.28E**±0°.06, **h8**km±5km,

n31, σ0**°96**/49, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.11	240	ePb	Pg	01 46 39.1	+0.3
KARP				eSb	Sg	01 46 42.1	+1.5
KARP	Karpathos	0.11	240	ePB	Pg	01 46 39.1	+0.3
KARP				eSB	Sg	01 46 42.1	+1.5
KARP	Karpathos	0.11	240	ePb	Pg	01 46 39.1	+0.3
KARP				eSb	Sg	01 46 42.1	+1.5
ARG	Arkhangelos	0.92	48	ePn	Pg	01 46 53.2	-0.8
ARG	Arkhangelos	0.92	48	ePN	Pg	01 46 53.2	-0.8
ARG	Arkhangelos	0.92	48	ePn	Pg	01 46 53.2	-0.8
ZKR	Zakros	0.99	241	ePn	Pg	01 46 53.9	-1.4
ZKR				eSn	Sg	01 47 07.8	-0.4
ZKR	Zakros	0.99	241	ePN	Pg	01 46 53.9	-1.4
ZKR				eSN	Sg	01 47 07.8	-0.4
ZKR	Zakros	0.99	241	ePn	Pg	01 46 53.9	-1.4
ZKR				eSn	Sg	01 47 07.8	-0.4
NPS	Neapolis	1.40	257	ePn	Sn	01 47 01.3	-0.8
NPS				eSn	Sn	01 47 20.4	-0.3
NPS	Neapolis	1.40	257	ePN	Pn	01 47 01.3	-0.8
NPS				eSN	Sn	01 47 20.4	-0.3
NPS	Neapolis	1.40	257	ePn	Pn	01 47 01.3	-0.8
NPS				eSn	Sn	01 47 20.4	-0.3
BDRM	Kayabasi	1.47	5	iP	Pn	01 47 03.8	+0.8
BDRM				iS	Sn	01 47 21.4	-0.9
BDRM	Kayabasi	1.47	5	iP	Pn	01 47 03.8	+0.8
BDRM				iS	Sn	01 47 21.4	-1.0
IDI	Anoyia	1.97	262	ePn	Pn	01 47 10.0	+0.1
IDI				eSn	Sn	01 47 35.8	+1.0
IDI	Anoyia	1.97	262	ePN	Pn	01 47 10.0	+0.1
IDI				eSN	Sn	01 47 35.8	+1.0
IDI	Anoyia	1.97	262	ePn	Pn	01 47 10.0	+0.1
IDI				eSn	Sn	01 47 35.8	+1.0
AKAS	Kas	1.99	71	iP	Pn	01 47 08.6	-1.7
AKAS				iS	Sn	01 47 36.6	+1.3
AKAS	Kas	1.99	71	iP	Pn	01 47 08.6	-1.6
APE	Apeiranthos	2.03	317	ePb	Pb	01 47 10.2	-3.2
APE	Apeiranthos	2.03	317	ePB	Pb	01 47 10.2	-3.2
SIVA	Sivas	2.10	255	ePn	Pn	01 47 12.1	+0.4
SIVA	Sivas	2.10	255	ePN	Pn	01 47 12.1	+0.4
SIVA	Sivas	2.10	255	ePn	Pn	01 47 12.1	+0.4
AYDN	Tasoluk	2.11	13	iP	Pn	01 47 12.0	+0.1
AYDN				iS	Sn	01 47 39.2	+0.9
AYDN	Tasoluk	2.11	13	iP	Pn	01 47 12.0	+0.1
AYDN				iS	Sn	01 47 39.2	+0.9
GOLH	Golhisar	2.46	48	iP	Pn	01 47 17.2	+0.5
GOLH				iS	Sn	01 47 55.0	+8.1
GOLH	Golhisar	2.46	48	iP	Pn	01 47 17.2	+0.5
VAM	Vamos	2.52	266	ePn	Pn	01 47 17.5	+0.1
VAM	Vamos	2.52	266	ePN	Pn	01 47 17.5	+0.1
VAM	Vamos	2.52	266	ePn	Pn	01 47 17.5	+0.1

*IDC **17** 01:47:50.0±0.9, 6°.83N×127°.10E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.8/20, mbtmp4.0/8, Error ellipse: s-maj=23.4km s-min=13.2km az=36.0*
*NEIC **17** 01:47:56.0±5.0, 6°.72N×126°.96E, h39km±41km, mb4.3/4, Error ellipse: s-maj=70.3km s-min=7.6km az=66.0*
*ISCJB **17** 01:47:58.7±1.2, 6°.49N±0°.07×126°.6E±0°.1, h77km±9km, mb3.9/12, Error ellipse: s-maj=18.8km s-min=9.9km az=161.9*
ISC 17 01:47:59.3±1.2, **6°.51N**±0°.07×**126°.6E**±0°.1, **h65**km±10km, **n20**, σ0**°95**/26, **mb3.9**/12, **2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	0.58	318	eP	Pn	01 48 11.0	-1.5
MATI				eS	Sn	01 48 15.6	-6.6
DAV	Davao City (W)	1.20	298	Pg	Pn	01 48 19.3	-0.8
	126nm,0.3s,baz=185,slow=1.5,SNR=14						
DAV				Lg		01 48 37.7	
	172nm,0.3s,baz=82,slow=23,SNR=6.5						
DMPH	Davao City--Mi	1.26	297	⇑eP	Pn	01 48 21.5	+0.5
DMPH				eS	Sn	01 48 38.7	+1.4
KCP	Kidapawan	1.62	288	⇑eP	Pn	01 48 26.1	+0.4
KCP				iS	Sn	01 48 45.8	+0.1
GSPH	General Santos	1.74	256	⇓iP	Pn	01 48 25.6	-1.7
GSPH				eS	Sn	01 48 45.7	-2.8
BUKP	Musuan	2.08	311	eP	Pn	01 48 32.7	+0.7
BUKP				eS	Sn	01 48 50.7	-6.1
CGP	Cagayan de Oro	2.73	315	eP	Pn	01 48 41.6	+0.7
CGP				iS	Sn	01 49 13.8	+1.0
FITZ	Fitzroy Crossi	24.48	182	P	P	01 53 13.6	+1.2
	6.4nm,1.0s,mb3.9,baz=54,slow=8.7,SNR=5.4						
WRA	Warramunga Arr	27.36	164	P	P	01 53 38.5	+0.1
	0.8nm,0.5s,mb3.5,baz=345,slow=1.0,SNR=4.1						
ASAR	Alice Springs	30.82	167	P	P	01 54 09.4	+0.3
	0.2nm,0.3s,mb3.3,baz=345,slow=7.3,SNR=10						
ASAR	

BOQS	**Boqueron**	**2.58**	**299**	*eP*	**Pn**	**02 23 27.4**	**-0.8**
BOQS				*eS*	**Sn**	**02 23 59.6**	**0.0**
JCR	**Jicaral**	**3.18**	**145**	*eP*	**Pn**	**02 23 36.6**	**+0.5**
JCR				*eS*	**Sn**	**02 24 11.6**	**-2.0**
CGA2	**Cerro Gallo 2**	**3.46**	**135**	*eP*	**Pn**	**02 23 41.3**	**+1.5**
CGA2				*eS*	**Sn**	**02 24 21.0**	**+0.7**
PRS1	**Puriscal**	**3.59**	**133**	*eP*	**Pn**	**02 23 43.3**	**+1.7**
MRL	**Marmol**	**3.70**	**315**	*eP*	**Pn**	**02 23 43.8**	**+0.9**
IXG	**Ixpaco**	**3.79**	**297**	*eP*	**Pn**	**02 23 43.7**	**-0.5**
IXG				*eS*	**Sn**	**02 24 28.5**	**+0.3**
LAJ	**Bijagual**	**3.81**	**133**↑	*eP*	**Pn**	**02 23 43.0**	**-1.4**
URSC	**Urasca**	**4.08**	**130**	*eP*	**Pn**	**02 23 49.1**	**+1.0**
QCR	**Quepos**	**4.09**	**137**	*eP*	**Pn**	**02 23 49.2**	**+1.0**
FUG	**Fuego 3**	**4.25**	**298**	*eP*	**Pn**	**02 23 50.4**	**+0.1**
BUS	**Buena Vista**	**4.28**	**132**	*eP*	**Pn**	**02 23 53.0**	**+2.3**
TP2	**Tecpan 2**	**4.56**	**301**	*eP*	**Pn**	**02 23 55.5**	**+1.0**
TP2				*eS*	**Sn**	**02 24 47.9**	**+1.2**
CMIG	**Matias Romero**	**8.93**	**302**	P	**Pn**	**02 24 51.0**	**-2.5**
	comp=N,1.5nm,0.3s,baz=126,slow=12,SNR=65						
CMIG				S	**Sn**	**02 26 22.5**	**-10**
	comp=N,0.2nm,0.3s,baz=241,slow=19,SNR=2.4						
TXAR	**Lajitas Array**	**22.86**	**320**	P	**P**	**02 27 38.3**	**-2.3**
	comp=N,0.2nm,0.5s,baz=140,slow=7.1,SNR=2.7						
ASAR	**Alice Springs**	**139.71**	**248**	PKP	PKPdf	02 41 59.8	-2.1
	comp=N,0.3nm,0.6s,baz=105,slow=1.8,SNR=4.8						
WRA	**Warramunga Arr**	**139.73**	**254**	PKP	PKPdf	02 42 00.3	-1.6
	comp=N,0.5nm,0.4s,baz=91,slow=2.1,SNR=4.8						

ISCJB ***17*** *02:38:21.4±1.3, 13.°20N±0.°08×124.°6E±0.°1, h7km±8km, mb3.5/4, Error ellipse: s-maj=22.7km s-min=6.6km az=148.9*

IDC ***17*** *02:38:22.7±1.4, 12.°51N×123.°36E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/18, mbtmp3.5/4, Error ellipse: s-maj=168.6km s-min=20.8km az=68.0*

MAN ***17*** *02:38:22, 13.°23N×124.°55E, h10km, mb4.5, ML3.3, MS3.2*

ISC 17 02:38:22.4±1.3, 13.°18N±0.°08×124.°5E±0.°1, h3km±8km, n7, σ1°21/10, mb3.5/4, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.53**	**322**	*eP*	**Pg**	**02 38 33.2**	**+0.6**
PVCP				*eS*	**Sg**	**02 38 38.0**	**-1.5**
CNP	**Catarman**	**0.68**	**166**	*eP*	**Pg**	**02 38 36.3**	**+0.8**
CNP				*eS*	**Sg**	**02 38 44.5**	**+0.1**
GQP	**Guinayangan**	**2.12**	**290**↑	*eP*	**Pn**	**02 38 58.9**	**+0.1**
GQP				*eS*	**Sn**	**02 39 26.0**	**+0.4**
WRA	**Warramunga Arr**	**34.31**	**163**	P	**P**	**02 45 09.0**	**-1.3**
	0.3nm,0.3s,mb3.8,baz=336,slow=10,SNR=2.9						
SONM	**Songino Array**	**37.71**	**340**	P	**P**	**02 45 41.4**	**+2.3**
	0.3nm,0.4s,mb3.3,baz=160,slow=8.9,SNR=2.0						
ASAR	**Alice Springs**	**37.76**	**166**	P	**P**	**02 45 37.0**	**-2.8**
	0.3nm,0.5s,mb3.3,baz=342,slow=7.4,SNR=5.1						
MKAR	**Makanchi Array**	**48.67**	**322**	P	**P**	**02 47 08.5**	**+0.6**
	0.7nm,0.8s,mb3.6,baz=118,slow=9.6,SNR=6.8						

JMA 17 02:59:43.5±0.4, 44.°56N×149.°95E, h30km, M3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**3.26**	**250**	P	Pn	03 00 31.8	-0.8
NEM2				*eS*	Sn	03 01 07.8	-2.6
JRA	**Rausu**	**3.52**	**262**	P	Pn	03 00 37.7	+1.6
JAK	**Akkeshi**	**4.11**	**249**	P	Pn	03 00 43.7	-0.5
JAK				*eS*	Sn	03 01 28.4	-2.9
JAR	**Ashorobuto**	**4.64**	**256**	P	Pn	03 00 52.3	+0.8
JAR				*eS*	Sn	03 01 45.0	+0.7
JMP	**Maruseppu**	**4.76**	**266**	P	Pn	03 00 55.3	+2.1
JKB	**Kayabe**	**7.04**	**251**	P	Pn	03 01 23.9	-0.5
JKB				*eS*	Sn	03 02 38.8	-4.6
JTM	**Tenmabayashi**	**7.55**	**243**	*eS*	Sn	03 02 49.4	-6.6
JTH	**Tanohata**	**7.57**	**235**	*eS*	Sn	03 02 47.9	-8.5
JRG	**Rokugo**	**8.64**	**237**	*eS*	Sn	03 03 15.5	-7.4
JIO	**Ouri**	**8.88**	**230**	*eS*	Sn	03 03 18.7	-10

ISCJB ***17*** *02:59:45.8±0.7, 36.°96N±0.°05×29.°18E±0.°04, h5km±8km, Error ellipse: s-maj=7.7km s-min=5.2km az=4.0*

ISK ***17*** *02:59:45.6, 37.°01N×29.°19E, h10km, MD2.8*

CSEM ***17*** *02:59:45.8±0.2, 36.°98N×29.°19E, h5km, MD2.8, Error ellipse: s-maj=5.0km s-min=3.2km az=16.0*

DDA ***17*** *02:59:47.3, 37.°05N×29.°12E, h7km±2km, Md2.6*

ISC 17 02:59:46.2±0.6, 36.°98N±0.°05×29.°18E±0.°04, h6km±7km, n20, σ0°71/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**55**	*ePG*	**Pg**	**02 59 51.5**	**-0.8**
GLHS				*eSG*	**Sg**	**02 59 56.6**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.31**	**55**	*ePg*	**Pg**	**02 59 51.5**	**-0.8**
GLHS				*eSg*	**Sg**	**02 59 56.6**	**+0.2**
ELL	**Elmali**	**0.63**	**111**	*ePG*	**Pg**	**02 59 58.1**	**-0.1**
ELL				*eSG*	**Sg**	**03 00 07.5**	**+1.0**
ELL	**Elmali**	**0.63**	**111**	*ePg*	**Pg**	**02 59 58.2**	**-0.1**
ELL				*eSg*	**Sg**	**03 00 07.5**	**+1.0**
YER	**Yerkesik**	**0.73**	**283**	*ePG*	**Pg**	**03 00 00.3**	**+0.1**
YER				*eSG*	**Sg**	**03 00 10.9**	**+1.1**
YER	**Yerkesik**	**0.73**	**283**	*ePg*	**Pg**	**03 00 00.3**	**0.0**
YER				*eSg*	**Sg**	**03 00 10.9**	**+1.1**
AKAS	**Kas**	**0.82**	**155**	*iP*	**Pg**	**03 00 01.2**	**-0.6**
AKAS				*iS*	**Sg**	**03 00 17.9**	**+5.4**
AKAS	**Kas**	**0.82**	**155**	*iP*	**Pg**	**03 00 01.2**	**-0.6**
AYDN	**Tasoluk**	**1.24**	**304**	*iP*	**Pg**	**03 00 09.3**	**-0.7**
AYDN				*iS*	**Sg**	**03 00 25.8**	**-0.2**
AYDN	**Tasoluk**	**1.24**	**304**	*iP*	**Pg**	**03 00 09.3**	**-0.7**
AYDN				*iS*	**Sg**	**03 00 25.8**	**-0.3**
DAT	**Datca**	**1.31**	**260**	*ePN*	**Pn**	**03 00 11.5**	**+0.6**
DAT	**Datca**	**1.31**	**260**	*ePn*	**Pn**	**03 00 11.5**	**+0.6**
KHL	**Karahalli**	**1.37**	**11**	*ePN*	**Pn**	**03 00 10.6**	**-1.2**
KHL	**Karahalli**	**1.37**	**11**	*ePn*	**Pn**	**03 00 10.6**	**-1.3**
KHAL	**Karahalli**	**1.42**	**10**	*iP*	**Pn**	**03 00 13.2**	**+0.8**
KHAL				*iS*	**Sb**	**03 00 32.1**	**+0.9**
KHAL	**Karahalli**	**1.42**	**10**	*iP*	**Pn**	**03 00 13.2**	**+0.8**
KHAL				*iS*	**Sb**	**03 00 32.1**	**+0.9**
BODT	**Bodrum**	**1.50**	**274**	*ePN*	**Pn**	**03 00 13.2**	**-0.3**
BODT	**Bodrum**	**1.50**	**274**	*ePn*	**Pn**	**03 00 13.2**	**-0.3**
KULA	**Kula-Manisa**	**1.59**	**345**	*ePN*	**Pn**	**03 00 14.2**	**-0.6**
KULA	**Kula-Manisa**	**1.59**	**345**	*ePn*	**Pn**	**03 00 14.3**	**-0.5**

GUC 17 03:09:09.0±0.7, 23.°63S×67.°20W, h225km, ML3.7, 2C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.51**	**302**	*eP*	Pn	03 10 02.5	+7.9
PB04				*iS*	S	03 10 43.0	+13
PB04				AML	AML	03 10 51.6	
	comp=N,81nm,0.1s						
CEN1	**Los Morros**	**2.77**	**274**↑	*iP*	Pn	03 10 00.8	+3.4
CEN1				*iS*	S	03 10 39.7	+4.3
ANCH	**Antofagasta**	**2.94**	**268**↑	*iP*	Pn	03 09 57.4	-1.9
ANCH				*iS*	S	03 10 36.5	-2.4
HMBC	**Humberston**	**4.17**	**323**	*eP*	Pn	03 10 16.5	+2.7
HMBC				*eS*	S	03 11 07.9	+2.9
PSGC	**Pisagua**	**4.85**	**325**	*eP*	Pn	03 10 25.2	+3.0
PSGC				*iS*	S	03 11 23.9	+3.7
MNMC	**Miæe Miæ**	**5.00**	**333**	*eP*	Pn	03 10 27.7	+3.6
MNMC				*iS*	S	03 11 28.1	+4.3

ISCJB ***17*** *03:12:22.8±1.1, 13.°3N±0.°2×50.°96E±0.°08, h10km, mb3.6/3, Error ellipse: s-maj=23.1km s-min=11.4km az=10.4*

IDC ***17*** *03:12:22.7±2.0, 13.°16N×51.°03E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.5/21, mbtmp3.8/4, ML4.3/1, Error ellipse: s-maj=85.5km s-min=25.1km az=166.0*

ISC 17 03:12:24.9±1.1, 13.°4N±0.°2×50.°96E±0.°08, h10km, n6, σ0°72/7, mb3.6/3, 1C, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**2.14**	**300**	*iP*	**Pn**	**03 13 00.2**	**-0.5**
MUKL				*e*		03 13 00.2	
	baz=171,slow=8.6						
MUKL				*iS*	**Sn**	**03 13 27.0**	**-0.3**
MUKL				AML	AML	03 13 29.1	
	comp=N,772nm,0.7s						
LBOS		**5.56**	**275**↑	*iP*	**Pn**	**03 13 49.1**	**+1.3**
ATD	**Arta Tunnel**	**8.14**	**258**	Pn	**Pn**	**03 14 22.9**	**-0.4**
	comp=N,3.8nm,0.3s,baz=158,slow=17,SNR=14						
MKAR	**Makanchi Array**	**42.38**	**32**	P	**P**	**03 20 20.4**	**+0.9**
	comp=N,0.2nm,0.3s,mb3.2,baz=213,slow=8.7,SNR=4.0						
CMAR	**Chiang Mai Arr**	**46.31**	**77**	P	**P**	**03 20 50.5**	**-0.8**
	comp=N,0.5nm,0.3s,mb3.9,baz=276,slow=10,SNR=7.3						
TORD	**Torodi Ar. Bea**	**47.88**	**276**	P	**P**	**03 21 03.5**	**-0.1**
	comp=N,0.6nm,0.8s,mb3.7,baz=72,slow=8.1,SNR=4.7						

ISK ***17*** *03:14:30.9, 35.°25N×27.°08E, h10km, MD3.4*

ATH ***17*** *03:14:30.2, 35.°20N×27.°16E, h5km±4km, MD3.5/8*

ISCJB ***17*** *03:14:30.7±0.9, 35.°23N±0.°05×27.°15E±0.°04, h2km±6km, Error ellipse: s-maj=8.6km s-min=4.3km az=152.8*

NEIC ***17*** *03:14:30.3, 35.°20N×27.°16E, h5km, MD3.5(ATH), After ATH.*

CSEM ***17*** *03:14:31.2±0.4, 35.°26N×27.°11E, h2km, MD3.5, Error ellipse: s-maj=11.6km s-min=4.7km az=154.0*

DDA ***17*** *03:14:32.5, 35.°38N×27.°44E, h7km±1km*

ISC 17 03:14:31.1±0.9, 35.°25N±0.°05×27.°13E±0.°04, h0km±6km, n53, σ1°14/78, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.30**	**5**	*ePb*	**Pg**	**03 14 37.0**	**0.0**
KARP				*eSb*	**Sg**	**03 14 42.7**	**+1.8**
KARP	**Karpathos**	**0.30**	**5**	*ePB*	**Pg**	**03 14 37.0**	**0.0**
KARP				*eSB*	**Sg**	**03 14 42.7**	**+1.8**
KARP	**Karpathos**	**0.30**	**5**	*ePb*	**Pg**	**03 14 37.0**	**0.0**
KARP				*eSb*	**Sg**	**03 14 42.7**	**+1.8**
ZKR	**Zakros**	**0.76**	**260**	*ePg*	**Pg**	**03 14 45.0**	**-0.6**
ZKR				*eSb*	**Sg**	**03 14 56.7**	**+1.3**
ZKR	**Zakros**	**0.76**	**260**	*ePG*	**Pg**	**03 14 45.0**	**-0.6**
ZKR				*eSB*	**Sg**	**03 14 56.7**	**+1.3**
ZKR	**Zakros**	**0.76**	**260**	*ePg*	**Pg**	**03 14 45.0**	**-0.6**
ZKR				*eSb*	**Sg**	**03 14 56.7**	**+1.3**
NPS	**Neapolis**	**1.24**	**271**	*ePb*	**Pb**	**03 14 54.8**	**-0.6**
NPS				*eSb*	**Sb**	**03 15 11.3**	**-0.6**
NPS	**Neapolis**	**1.24**	**271**	*ePB*	**Pb**	**03 14 54.8**	**-0.6**
NPS				*eSB*	**Sb**	**03 15 11.3**	**-0.6**
NPS	**Neapolis**	**1.24**	**271**	*ePb*	**Pb**	**03 14 54.8**	**-0.6**
NPS				*eSb*	**Sb**	**03 15 11.3**	**-0.6**
ARG	**Arkhangelos**	**1.27**	**40**	*ePb*	**Pb**	**03 14 55.0**	**-0.8**
ARG				*eSb*	**Sb**	**03 15 12.3**	**-0.3**
ARG	**Arkhangelos**	**1.27**	**40**	*ePB*	**Pb**	**03 14 55.0**	**-0.8**
ARG				*eSB*	**Sb**	**03 15 12.3**	**-0.3**
ARG	**Arkhangelos**	**1.27**	**40**	*ePb*	**Pb**	**03 14 55.0**	**-0.8**
ARG				*eSb*	**Sb**	**03 15 12.3**	**-0.3**
DAT	**Datca**	**1.53**	**14**	*ePN*	**Pn**	**03 14 58.6**	**-1.0**
DAT				*eSN*	**Sn**	**03 15 19.7**	**-0.4**
DAT	**Datca**	**1.53**	**14**	*ePn*	**Pn**	**03 14 58.6**	**-1.0**
DAT				*eSn*	**Sn**	**03 15 19.7**	**-0.4**
BODT	**Bodrum**	**1.82**	**5**	*ePN*	**Pn**	**03 15 03.7**	**+0.1**
BODT				*eSN*	**Sn**	**03 15 26.7**	**-0.7**
BODT	**Bodrum**	**1.82**	**5**	*ePn*	**Pn**	**03 15 03.7**	**+0.1**
BODT				*eSn*	**Sn**	**03 15 26.7**	**-0.7**
IDI	**Anoyia**	**1.83**	**272**	*ePg*	**Pg**	**03 15 05.1**	**-1.1**
IDI				*eSn*	**Sn**	**03 15 30.9**	**+3.3**
IDI	**Anoyia**	**1.83**	**272**	*ePG*	**Pg**	**03 15 05.1**	**-1.1**
IDI				*eSN*	**Sn**	**03 15 30.9**	**+3.3**
IDI	**Anoyia**	**1.83**	**272**	*ePg*	**Pg**	**03 15 05.1**	**-1.1**
BDRM	**Kayabasi**	**1.83**	**8**	*iP*	**Pn**	**03 15 04.2**	**+0.3**
BDRM	**Kayabasi**	**1.83**	**8**	*iS*	**Sn**	**03 15 28.0**	**+0.3**
BDRM	**Kayabasi**	**1.83**	**8**	*iP*	**Pn**	**03 15 04.2**	**+0.4**
BDRM				*iS*	**Sn**	**03 15 28.0**	**+0.3**
SIVA	**Sivas**	**1.91**	**264**	*ePn*	**Pn**	**03 15 06.7**	**+1.8**
SIVA	**Sivas**	**1.91**	**264**	*ePN*	**Pn**	**03 15 06.7**	**+1.8**
SIVA	**Sivas**	**1.91**	**264**	*ePn*	**Pn**	**03 15 06.7**	**+1.8**
YER	**Yerkesik**	**2.10**	**26**	*ePN*	**Pn**	**03 15 07.6**	**0.0**
YER	**Yerkesik**	**2.10**	**26**	*ePn*	**Pn**	**03 15 07.6**	**0.0**
APE	**Apeiranthos**	**2.23**	**325**	*ePN*	**Pn**	**03 15 09.2**	**-0.1**
APE				*eSN*	**Sn**	**03 15 35.7**	**-1.9**
APE	**Apeiranthos**	**2.23**	**325**	*ePb*	**Pb**	**03 15 08.5**	**-3.8**
APE	**Apeiranthos**	**2.23**	**325**	*ePB*	**Pb**	**03 15 08.5**	**-3.8**
APE	**Apeiranthos**	**2.23**	**325**	*ePn*	**Pn**	**03 15 09.2**	**-0.1**
APE				*eSn*	**Sn**	**03 15 35.7**	**-1.8**
AKAS	**Kas**	**2.25**	**63**	*iP*	**Pn**	**03 15 08.6**	**-0.9**
AKAS	**Kas**	**2.25**	**63**	*iS*	**Sn**	**03 15 36.4**	**-1.5**
AKAS	**Kas**	**2.25**	**63**	*iP*	**Pn**	**03 15 08.6**	**-0.9**
AKAS				*iS*	**Sn**	**03 15 36.3**	**-1.6**
VAM	**Vamos**	**2.40**	**275**	*ePg*	**Pg**	**03 15 15.1**	**-2.0**
VAM	**Vamos**	**2.40**	**275**	*ePG*	**Pg**	**03 15 15.1**	**-2.0**
VAM	**Vamos**	**2.40**	**275**	*ePg*	**Pg**	**03 15 15.1**	**-2.0**
AYDN	**Tasoluk**	**2.49**	**14**	*iP*	**Pn**	**03 15 14.3**	**+1.5**
AYDN	**Tasoluk**	**2.49**	**14**	*iS*	**Sn**	**03 15 43.6**	**-0.2**
AYDN	**Tasoluk**	**2.49**	**14**	*iP*	**Pn**	**03 15 14.3**	**+1.6**
AYDN				*iS*	**Sn**	**03 15 43.6**	**-0.2**
KARN	**Karanos**	**2.63**	**274**	*ePN*	**Pn**	**03 15 16.7**	**+1.9**
KARN	**Karanos**	**2.63**	**274**	*ePn*	**Pn**	**03 15 16.7**	**+1.9**
ELL	**Elmali**	**2.71**	**56**	*ePN*	**Pn**	**03 15 16.2**	**+0.4**
ELL	**Elmali**	**2.71**	**56**	*ePn*	**Pn**	**03 15 16.2**	**+0.3**
GOLH	**Golhisar**	**2.80**	**44**	*iP*	**Pn**	**03 15 17.4**	**+0.3**
GOLH	**Golhisar**	**2.80**	**44**	*iS*	**Sn**	**03 15 56.4**	**+4.9**
GOLH	**Golhisar**	**2.80**	**44**	*iP*	**Pn**	**03 15 17.4**	**+0.3**
GOLH				*iS*	**Sn**	**03 15 56.4**	**+4.9**
DNZL	**Cakiroluk**	**2.89**	**32**	*iP*	**Pn**	**03 15 21.8**	**+3.5**
DNZL	**Cakiroluk**	**2.89**	**32**	*iS*	**Sn**	**03 15 56.3**	**+2.5**
DNZL	**Cakiroluk**	**2.89**	**32**	*iP*	**Pn**	**03 15 21.8**	**+3.5**
DNZL				*iS*	**Sn**	**03 15 56.3**	**+2.5**
KULA	**Kula-Manisa**	**3.49**	**20**	*ePN*	**Pn**	**03 15 26.1**	**-0.5**
HDMB	**Hadim**	**4.67**	**67**	*ePN*	**Pn**	**03 15 43.4**	**+0.7**
HDMB	**Hadim**	**4.67**	**67**	*ePn*	**Pn**	**03 15 43.4**	**+0.6**

ISCJB ***17*** *03:16:00.0±0.7, 13.°0N±0.°1×51.°06E±0.°07, h10km, mb3.8/12, MS3.3/9, Error ellipse: s-maj=19.1km s-min=9.5km az=170.9*

IDC ***17*** *03:16:00.3±1.0, 13.°06N×51.°15E, h0km, mb3.8/9, mb1 4.0/10, mb1mx3.8/21, mbtmp3.8/10, ML4.5/1, MS3.4/11, Ms1 3.4/11, ms1mx3.2/32, Error ellipse: s-maj=31.5km s-min=20.1km az=9.0*

NEIC ***17*** *03:16:01.8±0.5, 13.°01N×51.°12E, h10km, mb3.9/3, Error ellipse: s-maj=13.9km s-min=9.0km az=169.0*

CSEM ***17*** *03:16:01.8, 13.°01N×51.°12E, h10km, mb3.9/3, After NEIC*

ISC 17 03:16:01.8±0.7, 13.°0N±0.°1×51.°09E±0.°07, h10km, n37, σ0°63/30, mb3.8/12, MS3.3/9, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDHA	**Al Bayda'**	**5.46**	**281**	*iP*	**Pn**	**03 17 22.7**	**-0.6**
LBOS		**5.75**	**279**	*iP*	**Pn**	**03 17 26.7**	**-0.6**
ATD	**Arta Tunnel**	**8.19**	**261**	Pn	**Pn**	**03 18 01.2**	**+0.4**
	5.9nm,0.3s,baz=220,slow=23,SNR=7.2						
ATD				LR	LR	03 20 27.4	
	comp=Z,638nm,19.4s,baz=215,slow=32						
ATD	**Arta Tunnel**	**8.19**	**261**	Pn	**Pn**	**03 18 01.2**	**+0.4**
KMBO	**Kilima Mbogo**	**19.63**	**225**	LR	LR	03 28 02.4	
	comp=Z,201nm,19.7s,baz=90,slow=37						
EIL	**Elat**	**22.34**	**320**	LR	LR	03 28 36.1	
	comp=Z,40nm,18.3s,MS2.9,baz=111,slow=34						
ASF	**Jabal al Asfar**	**23.10**	**328**	LR	LR	03 31 06.9	
	comp=Z,32nm,21.5s,MS2.7,baz=304,slow=39						
MALT	**Malatya**	**27.61**	**338**	*eP*	**P**	**03 21 50.3**	**+0.9**
	3.1nm,1.1s,mb3.9						
MALT	**Malatya**	**27.61**	**338**	*eP*	**P**	**03 21 50.3**	**+0.9**
	3.1nm,1.1s,mb3.9						
GNI	**Garni**	**27.62**	**349**	LR	LR	03 34 49.8	
	comp=Z,87nm,21.1s,MS3.3,baz=263,slow=41						
BRTR	**Keskin Array B**	**30.75**	**333**	P	**P**	**03 22 17.6**	**+0.3**
	0.4nm,0.8s,mb3.3,baz=163,slow=10,SNR=3.1						
BRTR	**Keskin Array B**	**30.75**	**333**	P	**P**	**03 22 17.6**	**+0.3**
UCH	**Uchtor**	**35.52**	**31**	*eP*	**P**	**03 22 59.6**	**+0.8**
	1.4nm,0.9s,mb3.9						
UCH	**Uchtor**	**35.52**	**31**	*eP*	**P**	**03 22 59.6**	**+0.7**
	1.4nm,0.9s,mb3.9						
ABKAR	**Akbulak array**	**36.88**	**10**	*eP*	**P**	**03 23 10.2**	**-0.2**
	1.6nm,0.8s,mb3.9						
ABKAR	**Akbulak array**	**36.88**	**10**	*eP*	**P**	**03 23 10.2**	**-0.2**
	1.6nm,0.8s,mb3.9						
MK31	**Makanchi Array**	**42.67**	**32**	*eP*	**P**	**03 23 58.8**	**+0.1**
MK31	**Makanchi Array**	**42.67**	**32**	*eP*	**P**	**03 23 58.8**	**+0.1**
MKAR	**Makanchi Array**	**42.67**	**32**	P	**P**	**03 23 58.3**	**-0.4**
	0.4nm,0.6s,mb3.3,baz=218,slow=7.7,SNR=5.9						
MKAR				LR	LR	03 44 52.6	
	comp=Z,44nm,18.2s,MS3.4,baz=45,slow=41						
MKAR	**Makanchi Array**	**42.67**	**32**	P	**P**	**03 23 58.3**	**-0.4**
CMAR	**Chiang Mai Arr**	**46.28**	**77**	P	**P**	**03 24 27.6**	**-0.4**
	0.5nm,0.3s,mb4.0,baz=278,slow=8.8,SNR=4.7						
CMAR	**Chiang Mai Arr**	**46.28**	**77**	P	**P**	**03 24 27.5**	**-0.4**
TORD	**Torodi Ar. Bea**	**48.05**	**276**	P	**P**	**03 24 42.9**	**+1.0**
	0.7nm,0.9s,mb3.7,baz=85,slow=8.4,SNR=5.0						
TORD				LR	LR	03 44 19.7	
	comp=Z,41nm,21.1s,MS3.4,baz=70,slow=35						
TORD	**Torodi Ar. Bea**	**48.05**	**276**	P	**P**	**03 24 42.9**	**+1.1**
BOSA	**Boshof**	**48.33**	**211**	LR	LR	03 48 03.8	
	comp=Z,88nm,18.5s,MS3.8,baz=354,slow=40						
FINES	**FINESS Array B**	**51.65**	**345**	P	**P**	**03 25 06.9**	**-1.6**
	1.8nm,0.8s,mb4.0,baz=168,slow=9.8,SNR=4.2						
FINES				LR	LR	03 50 16.0	
	comp=Z,27nm,19.7s,MS3.3,baz=309,slow=40						
FINES	**FINESS Array B**	**51.65**	**345**	P	**P**	**03 25 06.9**	**-1.6**
ESDC	**Sonseca Array**	**55.04**	**309**	P	**P**	**03 25 34.0**	**+0.2**
	1.2nm,0.8s,mb4.0,baz=97,slow=7.2,SNR=7.5						
ESDC	**Sonseca Array**	**55.04**	**309**	P	**P**	**03 25 34.0**	**+0.2**
DBIC	**Dimbokro**	**55.39**	**269**	LR	LR	03 47 50.8	
	comp=Z,53nm,21.4s,MS3.6,baz=244,slow=34						
NOA	**NORSAR Array B**	**55.99**	**338**	LR	LR	03 53 36.6	
	comp=Z,19nm,19.4s,MS3.2,baz=135,slow=40						
SONM	**Songino Array**	**57.39**	**41**	P	**P**	**03 25 50.8**	**+0.4**
	0.6nm,0.6s,mb3.8,baz=232,slow=7.3,SNR=5.4						
SONM	**Songino Array**	**57.39**	**41**	P	**P**	**03 25 50.8**	**+0.4**
WRA	**Warramunga Arr**	**88.16**	**111**	P	**P**	**03 28 53.5**	**-0.1**
	0.5nm,0.5s,mb4.0,baz=297,slow=4.1,SNR=3.1						
WRA	**Warramunga Arr**	**88.16**	**111**	P	**P**	**03 28 53.5**	**-0.1**
ASAR	**Alice Springs**	**88.70**	**115**	P	**P**	**03 28 55.9**	**-0.2**
	0.2nm,0.5s,mb3.7,baz=294,slow=5.0,SNR=3.5						
ASAR	**Alice Springs**	**88.70**	**115**	P	**P**	**03 28 55.9**	**-0.2**

IDC ***17*** *03:48:18.9±1.0, 12.°66N×145.°06E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.8/20, mbtmp3.7/7, MS3.4/1, Ms1 3.4/1, ms1mx2.6/34, Error ellipse: s-maj=36.1km s-min=15.7km az=87.0*

ISCJB ***17*** *03:48:24.8±1.9, 12.°7N±0.°1×145.°1E±0.°3, h61km±14km, mb3.8/8, Error ellipse: s-maj=43.2km s-min=18.4km az=180.0*

NEIC ***17*** *03:48:24.8±1.8, 12.°73N×145.°02E, h41km±15km, mb4.2/1, Error ellipse: s-maj=25.2km s-min=13.2km az=91.0*

ISC 17 03:48:25.7±2.0, 12.°7N±0.°1×145.°1E±0.°3, h52km±15km, n15, σ0°75/11, mb3.8/8, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.92**	**348**	Pn	**Pn**	**03 48 40.7**	**-1.7**
	239nm,0.3s,baz=156,slow=6.9,SNR=126						
GUMO				Sn	**Sn**	**03 48 55.9**	**+1.3**
	634nm,0.3s,baz=342,slow=19,SNR=40						
MAJO	**Matsushiro**	**24.54**	**347**	*eP*	**P**	**03 53 40.1**	**-0.3**
	6.4nm,0.9s,mb4.2						
KSRS	**Korea Array**	**29.04**	**331**	LR	LR	04 05 49.3	
	comp=Z,60nm,18.2s,baz=140,slow=36						
WRA	**Warramunga Arr**	**34.10**	**198**	P	**P**	**03 55 05.4**	**-0.1**
	1.2nm,0.6s,mb4.0,baz=23,slow=10.0,SNR=5.1						
ASAR	**Alice Springs**	**37.74**	**197**	P	**P**	**03 55 37.5**	**+0.9**
	0.3nm,0.5s,mb3.3,baz=22,slow=8.8,SNR=4.8						
CMAR	**Chiang Mai Arr**	**44.71**	**283**	P	**P**	**03 56 33.6**	**-0.4**
	0.9nm,0.4s,mb4.0,baz=77,slow=5.8,SNR=4.0						
SONM	**Songino Array**	**47.58**	**325**	P	**P**	**03 56 55.8**	**-0.3**
	0.2nm,0.3s,mb3.6,baz=120,slow=8.5,SNR=3.0						
MKAR	**Makanchi Array**	**62.27**	**316**	P	**P**	**03 58 42.

KASI				S		Sn	04 10 54.5	+0.2
KLSI		2.41	80	P		Pn	04 10 31.5	-0.3
KLI	**Kotabumi**	2.51	84	P		Pn	04 10 33.3	+0.2
BLSI	**Bandar Lampung**	2.89	95	P		Pn	04 10 38.5	+0.1
KRJI	**Kerinci**	3.13	343	P		Pn	04 10 43.9	+2.2
RBSI	**Rajabasa**	3.45	102	P		Pn	04 10 46.4	+0.3
CGJI	**Cibinong**	3.64	114	P		Pn	04 10 47.4	-1.3
CGJI				S		Sn	04 11 31.4	+0.9
SBJI	**Serang**	3.89	105	P		Pn	04 10 52.5	+0.4
SDSI	**Sungai Dareh**	4.26	347	P		Pn	04 10 57.5	+0.3
PDSI	**Padang**	4.58	336	P		Pn	04 11 01.5	-0.2
PPBI	**Pangkal Pinang**	4.78	52	P		Pn	04 11 04.2	-0.2
SISI	**Saibi**	4.98	319	P		Pn	04 11 11.5	+4.4
	0.6nm125nm,0.8s							
PPI	**Padang Panjang**	5.02	337	P		Pn	04 11 07.7	0.0
	0.8nm2µm130nm,0.8s							
LEM	**Lembang**	5.51	108	P		Pn	04 11 16.4	+2.1
	0.5nm2µm156nm,1.2s							
BKNI	**Bangkinang**	5.56	346	P		Pn	04 11 17.8	+2.7
	0.7nm1µm130nm,0.6s							
TPI	**Tanjungpandan**	5.78	66	P		Pn	04 11 17.0	-1.1
	0.2nm25nm,0.8s							
CISI	**Cisompet, Garu**	5.95	114	P		Pn	04 11 19.0	-1.4
	1.1nm5µm242nm,0.6s							
JCJI	**Jatiwangi**	6.04	103	P		Pn	04 11 24.2	+2.5
	0.9nm109nm,0.6s							
MNSI	**Mandailing Nat**	6.49	335	P		Pn	04 11 26.8	-1.1
	0.3nm2µm48nm,0.6s							
MYKOM	**Kota Tinggi**	7.02	12	P		Pn	04 11 35.8	+0.7
	0.1nm26nm,0.7s							
BJII	**Banjamegara**	7.64	107	P		Pn	04 11 44.2	+0.6
	0.3nm36nm,0.7s							
GSI	**Gunungsitoli**	7.96	323	P		Pn	04 11 46.6	-1.5
	0.3nm45nm,0.4s							
SMRI	**Semarang**	8.27	104	P		Pn	04 11 53.8	+1.6
	72nm,1.8s							
UGM	**Wanagama**	8.58	109	P		Pn	04 11 56.1	-0.4
	187nm,1.8s							
PCJI	**Pacitan**	9.28	110	P		Pn	04 12 05.0	-1.1
	86nm,1.7s							
SJI	**Sawahan**	9.71	106	P		Pn	04 12 12.4	+0.4
	7µm40nm,0.8s							
TPTI		9.79	328	P		Pn	04 12 12.5	-0.6
	9.3nm,0.9s							
PWJI	**Pagerwojo**	9.82	108	P		Pn	04 12 13.1	-0.4
	82nm,1.4s							
KULM	**Kulim**	10.47	351	P		Pn	04 12 24.0	+1.5
	12nm,1.4s							
GMJI	**Gumukmas**	11.45	106	P		Pn	04 12 36.3	+0.5
	59nm,1.4s							
JAGI	**Jajag, Banyuwa**	12.18	107	P		Pn	04 12 45.0	-0.8
	73nm,1.2s							
SRBI	**Singaraja**	13.11	104	P		Pn	04 12 58.9	+0.4
	117nm,1.2s							
KHKI	**Kahang-Kahang**	13.55	104	P		Pn	04 13 04.3	-0.2
CMAR	**Chiang Mai Arr**	23.66	352	P		P	04 15 00.8	-1.2
	5.1nm,0.5s,mb4.2,baz=183,slow=9.1,SNR=20							
FITZ	**Fitzroy Crossi**	26.16	121	P		P	04 15 24.8	0.0
	3.7nm,0.7s,mb4.0,baz=243,slow=5.1,SNR=10							
NWAO	**Narrogin (SRO)**	30.98	155	LR		LR	04 25 48.8	
	comp=Z,95nm,21.0s,baz=341,slow=31							
WRA	**Warramunga Arr**	34.43	118	P		P	04 16 37.7	-0.2
	1.5nm,0.4s,mb4.3,baz=100,slow=15,SNR=8.8							
WRA				PcP		PcP	04 19 13.4	+0.7
	1.0nm,0.5s,baz=304,slow=2.2,SNR=6.4							
TAPN	**Taplejung**	35.24	337	*eP*		P	04 16 45.4	+0.6
	20nm,0.6s,mb5.2							
RAMN	**Ramite**	35.33	335	*eP*		P	04 16 46.3	+0.7
ASAR	**Alice Springs**	35.55	124	P		P	04 16 47.9	+0.4
	1.5nm,0.5s,mb4.2,baz=293,slow=7.6,SNR=21							
JIRN	**Jiri**	36.13	335	*eP*		P	04 16 53.2	+0.8
GUN	**Gumba**	36.48	335	*eP*		P	04 16 56.3	+0.9
	30nm,0.4s,mb5.6							
KKN	**Kakani**	36.63	334	*eP*		P	04 16 57.3	+0.6
	9.3nm,0.5s,mb4.9							
GKN	**Gorkha**	37.10	334	*eP*		P	04 17 01.6	+1.0
	8.6nm,0.3s,mb5.1							
KOLN	**Koldanda**	37.37	332	*eP*		P	04 17 03.9	+0.9
CTA	**Charters Tower**	45.19	113	P		P	04 18 07.2	-0.1
	5.4nm,0.9s,mb4.4,baz=287,slow=14,SNR=3.3							
STKA	**Stephens Creek**	45.34	131	*eP*		P	04 18 08.2	-0.1
	1.7nm,0.6s,mb4.0							
STKA	**Stephens Creek**	45.34	131	P		P	04 18 08.6	+0.2
	9.1nm,0.5s,mb4.8,baz=302,slow=7.0,SNR=38							
KSRS	**Korea Array**	48.59	27	P		P	04 18 33.8	+0.2
	1.3nm,0.8s,mb4.0,baz=217,slow=7.5,SNR=4.6							
SONM	**Songino Array**	52.84	3	P		P	04 19 06.0	+0.6
	5.0nm,0.7s,mb4.6,baz=183,slow=8.7,SNR=20							
SONM				PcP		PcP	04 20 14.1	0.0
	1.3nm,0.5s,baz=189,slow=3.7,SNR=4.2							
ULN	**Ulaanbaatar**	52.92	4	*eP*		P	04 19 04.0	-2.0
	2.7nm,0.7s,mb4.3							
TKM2	**Tokmak 2**	53.61	336	*eP*		P	04 19 10.9	-0.3
	5.3nm,0.6s,mb4.7							
AML	**Almayashu**	53.77	334	*eP*		P	04 19 12.9	+0.6
	2.7nm,0.6s,mb4.3							
EKS2	**Erkin-Say**	54.17	334	*eP*		P	04 19 15.4	+0.2
	4.4nm,0.8s,mb4.4							
MK31	**Makanchi Array**	54.66	343	*eP*		P	04 19 18.0	-0.6
MKAR	**Makanchi Array**	54.66	343	P		P	04 19 18.3	-0.4
MKAR	**Makanchi Array**	54.66	343	P		P	04 19 18.3	-0.4
	4.3nm,0.6s,mb4.7,baz=147,slow=8.0,SNR=50							
KURK	**Kurchatov**	59.25	343	*eP*		P	04 19 50.0	-1.1
	2.3nm,0.7s,mb4.3							
KURK	**Kurchatov**	59.25	343	P		P	04 19 50.3	-0.8
	1.1nm,0.5s,mb4.1,baz=185,slow=5.8,SNR=7.7							
ZALV	**Zalesovo Beam**	60.66	348	P		P	04 20 00.3	-0.5
	7.4nm,0.6s,mb5.0,baz=173,slow=7.4,SNR=16							
BVAR	**Borovoye Array**	63.90	339	P		P	04 20 21.6	-0.8
	1.7nm,0.4s,mb4.4,baz=142,slow=9.0,SNR=10.0							
BRVK	**Borovoye**	63.97	339	*eP*		P	04 20 21.5	-1.4
	2.8nm,0.4s,mb4.7							
ABKAR	**Akbulak array**	65.48	331	*eP*		P	04 20 32.5	-0.4
	6.3nm,0.6s,mb4.8							
AKTK	**Aktyubinsk**	67.20	331	P		P	04 20 43.6	-0.1
AKTO	**Aktyubinsk**	67.20	331	P		P	04 20 43.6	-0.2
	0.6nm,0.3s,mb4.0,baz=169,slow=10,SNR=3.3							
BR131	**Keskin Array S**	77.14	313	*eP*		P	04 21 43.4	-0.1
	1.1nm,0.8s,mb3.8							
BR131				*e*		pP	04 21 56.0	-1.6
BRTR	**Keskin Array B**	77.14	313	P		P	04 21 43.6	+0.2
	1.2nm,0.7s,mb4.0,baz=130,slow=7.0,SNR=9.7							
FINES	**FINESS Array B**	87.94	332	P		P	04 22 39.6	+0.4
	1.4nm,0.5s,mb4.4,baz=84,slow=4.6,SNR=16							
HFS	**Hagfors**	93.73	330	P		P	04 23 06.4	+0.3
	0.9nm,0.7s,mb4.3,baz=90,slow=5.2,SNR=4.4							
NVAR	**Mina Array Bea**	130.41	42	PKP		PKPdf	04 29 00.8	+0.4
	0.3nm,0.7s,baz=289,slow=3.3,SNR=3.5							
WMOK	**Wichita Mounta**	144.63	31	*e*PKPdf		PKPdf	04 29 24.3	-2.3
CCM	**Cathedral Cave**	144.95	19	*e*PKPdf		PKPdf	04 29 25.3	-1.8
BLO	**Bloomington**	145.16	12	*e*PKPbc		PKPbc	04 29 26.0	-1.0
TXAR	**Lajitas Array**	145.56	43	PKPbc		PKPbc	04 29 29.1	+0.5
	6.5nm,0.6s,baz=266,slow=0.7,SNR=87							
WCI	**Wyandotte Cave**	146.11	12	*e*PKPbc		PKPbc	04 29 29.4	-0.5
MIAR	**Mount Ida**	147.21	25	*e*PKPbc		PKPbc	04 29 32.6	-0.6
MIAR				*e*PKPab		PKPab	04 29 34.4	-0.6
JCT	**Junction City**	147.26	37	*e*PKPbc		PKPbc	04 29 33.5	-0.1
WVT	**Waverly**	147.75	16	*e*PKPbc		PKPbc	04 29 33.8	-0.8

IDC 17 04:10:31.8±2.2, 4°22S×152°54E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/13, mbtmp3.6/4, Error ellipse: s-maj=99.8km s-min=28.7km az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	23.64	227	P		P	04 15 44.1	-1.0
	1.0nm,0.4s,baz=52,slow=9.6,SNR=5.5							
ASAR	**Alice Springs**	26.40	221	P		P	04 16 11.7	+1.4
	0.5nm,0.5s,baz=56,slow=8.3,SNR=7.7							
MKAR	**Makanchi Array**	79.72	319	P		P	04 22 42.6	+1.0
	1.3nm,0.8s,baz=117,slow=5.3,SNR=3.4							
ILAR	**Eielson Array**	81.72	22	P		P	04 22 52.4	+0.4
	0.6nm,1.2s,baz=246,slow=6.7,SNR=3.0							
TORD	**Torodi Ar. Bea**	149.88	289	PKPbc		PKPbc	04 30 22.9	-2.2
	0.7nm,0.8s,baz=88,slow=1.6,SNR=5.2							

*BJI **17** 04:12:31.6, 12°.98N×124°.47E, h12km, mB4.7/7, mb4.6/18, Ms4.3/8, Ms7 4.1/8*
*IDC **17** 04:12:31.8±0.8, 13°.01N×124°.37E, h0km, mb4.1/15, mb1 4.2/16, mb1mx4.1/22, mbtmp4.1/16, ML4.7/1, MS3.8/12, Ms1 3.9/12, ms1mx3.6/29, Error ellipse: s-maj=31.2km s-min=15.9km az=65.0*

*MAN **17** 04:12:32, 13°.02N×124°.30E, h2km, mb5.0, ML4.0, MS4.0*
MAN INTENSITY II - IROSIN SORSOGON; BOBON CATARMAN SAMAR.
*NEIC **17** 04:12:33.1±0.3, 13°.00N×124°.37E, h10km, mb4.5/11, Error ellipse: s-maj=13.3km s-min=6.1km az=61.0*
NEIC Felt [II PIVS] at Bobon and Catarman. Also felt [II PIVS] at Irosin, Luzon.

ISC 17 04:12:33.7±0.9, 13°.04N±0°.03×124°.39E±0°.05, h9km±5km, n61, σ1°03/59, mb4.2/27, MS3.8/11, 2C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CNP	**Catarman**	0.58	153	*eP*		Pg	04 12 46.3	+1.3
PVCP	**Virac**	0.60	337	*eP*		Pg	04 12 43.5	-1.8
MMPH	**Masbate**	1.01	228	↑*P*		Pg	04 12 51.6	-1.4
MMPH				*eS*		Sg	04 13 05.7	-0.5
AUQP	**San Andres**	1.70	280	*eP*		Pn	04 13 04.3	+0.8
OCLP	**Ormoc**	1.98	174	*eP*		Pn	04 13 10.0	+2.6
GQP	**Guinayangan**	2.08	295	↓*eP*		Pn	04 13 08.4	-0.3
GQP				*eS*		Sn	04 13 34.3	-0.4
RCP	**Roxas**	2.18	228	↓*eP*		Pn	04 13 10.6	+0.6
RCP				*eS*		Sn	04 13 39.6	+2.5
OTRP	**Odiongan**	2.41	254	*eP*		Pn	04 13 13.5	+0.3
BOAC	**Boac**	2.52	280	*eP*		Pn	04 13 14.1	-0.6
LLP	**Lapu-Lapu**	2.73	189	*eP*		Pn	04 13 17.7	0.0
LLP				*eS*		Sn	04 13 49.4	-1.5
POLP	**Polilio Island**	2.92	306	*eP*		Pn	04 13 22.8	+2.6
GUIM	**Jordan**	2.98	217	*eP*		Pn	04 13 22.1	+1.0
TBP	**Tagbilaran**	3.36	189	*eP*		Pn	04 13 26.3	-0.1
TBP				*eS*		Sn	04 14 06.6	+0.1
TGY	**Tagaytay City**	3.52	288	Pn		Pn	04 13 28.6	0.0
	68nm,0.3s,baz=146,slow=18,SNR=1.8							
BALP	**Baler**	3.83	315	*eP*		Pn	04 13 35.2	+2.4
CUYO	**Cuyo Island**	3.95	237	*eP*		Pn	04 13 33.7	-0.8
BUSP	**Coron**	4.22	256	*eP*		Pn	04 13 37.4	-0.7
CAUP	**Cauayan**	4.61	328	*eP*		Pn	04 13 44.1	+0.5
BUKP	**Musuan**	5.17	173	*eP*		Pn	04 13 57.2	+6.1
PAGZ	**Pagadian**	5.25	191	*eP*		Pn	04 13 53.9	+1.6
APYP	**Conner**	5.68	328	*eP*		Pn	04 14 00.2	+2.0
DAV	**Davao City (W)**	6.04	169	LR		LR	04 16 58.1	
	comp=Z,2µm,18.1s,baz=135,slow=44							
WHN	**Wuhan**	19.74	334	↑↑*P*		Pn	04 17 05.5	+0.3
WHN				pmax		pmax		
	comp=Z,110nm,1.7s							
WHN				LR		LR		
	comp=N,1µm,16.8s							
WHN				LR		LR		
	comp=E,510nm,15.2s							
WHN				LR		LR		
	comp=Z,650nm,14.8s							
GUMO	**Guam**	19.94	86	LR		LR	04 22 37.0	
	comp=Z,184nm,21.2s,baz=232,slow=30							
CBIJ	**Chichi jima**	21.75	47	LR		LR	04 24 01.5	
	comp=Z,165nm,21.8s,MS3.4,baz=314,slow=32							
KSRS	**Korea Array**	24.52	7	P		P	04 17 53.5	0.0
	comp=Z,1.6nm,0.7s,mb3.7,baz=189,slow=10,SNR=6.8							
KSRS				LR		LR	04 27 50.8	
	comp=Z,118nm,18.1s,MS3.4,baz=18,slow=38							
CMAR	**Chiang Mai Arr**	25.07	286	P		P	04 17 58.0	-0.6
	comp=Z,0.8nm,0.3s,mb3.7,baz=99,slow=7.5,SNR=6.9							
CMAR				LR		LR	04 29 24.8	
	comp=Z,152nm,18.8s,MS3.5,baz=104,slow=40							
LZH	**Lanzhou**	29.47	325	*eP*		P	04 18 40.0	+2.0
LZH				pP		pP	04 18 45.0	+4.2
LZH				sP		sP	04 18 47.3	+5.3
LZH				pmax		pmax		
	comp=Z,19nm,1.3s,mb4.7							
GTA	**Gaotai**	34.07	325	*eP*		P	04 19 19.0	+0.6
GTA				pP		pP	04 19 22.8	+1.5
GTA				sP		sP	04 19 25.3	+2.9
GTA				pmax		pmax		
	comp=Z,4.0nm,1.1s,mb4.3							
GTA				LR		LR		
	comp=N,220nm,18.9s,MS4.1							
GTA				LR		LR		
	comp=E,200nm,16.5s,MS4.1							
GTA				LR		LR		
	comp=Z,260nm,19.2s,MS4.0							
WRA	**Warramunga Arr**	34.20	163	P		P	04 19 19.0	-0.7
	comp=Z,0.8nm,0.6s,mb3.8,baz=339,slow=9.2,SNR=3.5							
ULN	**Ulaanbaatar**	37.62	341	*eP*		P	04 19 49.3	+0.6
	comp=Z,6.4nm,0.9s,mb4.3							
ASAR	**Alice Springs**	37.64	166	P		P	04 19 48.9	-0.3
	comp=Z,0.8nm,0.4s,mb3.9,baz=344,slow=7.1,SNR=6.6							
SONM	**Songino Array**	37.80	340	P		P	04 19 50.5	+0.2
	comp=Z,1.5nm,0.7s,mb3.8,baz=141,slow=9.3,SNR=2.4							
SONM				LR		LR	04 37 50.2	
	comp=Z,229nm,19.0s,MS4.0,baz=129,slow=40							
FORT	**Forrest**	43.70	175	*eP*		P	04 20 37.8	-1.3
	comp=Z,7.4nm,0.8s,mb4.5							
STKA	**Stephens Creek**	47.60	160	P		P	04 21 09.4	-0.5
	comp=Z,2.0nm,0.8s,mb4.2,baz=344,slow=7.4,SNR=2.9							
MK31	**Makanchi Array**	48.73	322	*eP*		P	04 21 18.6	+0.1
MKAR	**Makanchi Array**	48.73	322	P		P	04 21 18.5	0.0
	comp=Z,13nm,0.7s,mb5.1,baz=122,slow=8.7,SNR=34							
ZALV	**Zalesovo Beam**	51.33	331	P		P	04 21 37.6	-0.5
	comp=Z,3.0nm,0.7s,mb4.4,baz=133,slow=6.3,SNR=3.8							
ZALV				LR		LR	04 45 52.4	
	comp=Z,73nm,20.7s,MS3.7,baz=98,slow=39							
TKM2	**Tokmak 2**	51.41	315	*eP*		P	04 21 38.3	-0.7
	comp=Z,2.8nm,0.8s,mb4.2							
AML	**Almayashu**	52.48	313	*eP*		P	04 21 47.2	+0.2
	comp=Z,2.1nm,0.8s,mb4.1							
EKS2	**Erkin-Say**	52.59	314	*eP*		P	04 21 47.3	-0.5
	comp=Z,1.7nm,0.7s,mb4.1							
KURK	**Kurchatov**	52.76	325	*eP*		P	04 21 48.6	-0.3
	comp=Z,30nm,1.0s,mb5.2							
KURK	**Kurchatov**	52.76	325	P		P	04 21 48.8	-0.1
	comp=Z,13nm,1.0s,mb4.8,baz=122,slow=7.5,SNR=31							
KBL	**Kabul**	54.27	303	*eP*		P	04 21 59.5	-0.8
	comp=Z,7.1nm,0.8s,mb4.7							
BVAR	**Borovoye Array**	58.36	325	P		P	04 22 28.9	-0.2
	comp=Z,2.2nm,0.6s,mb4.4,baz=120,slow=8.8,SNR=8.4							
BRVK	**Borovoye**	58.43	325	*eP*		P	04 22 29.9	+0.3
	comp=Z,6.2nm,0.9s,mb4.6							
ABKAR	**Akbulak array**	63.59	319	*eP*		P	04 23 03.5	-1.3
	comp=Z,3.4nm,0.6s,mb4.5							
AKTK	**Aktyubinsk**	65.03	320	P		P	04 23 13.7	-0.6
AKTO	**Aktyubinsk**	65.03	320	P		P	04 23 13.7	-0.6
	comp=Z,2.7nm,0.8s,mb4.3,baz=106,slow=7.8,SNR=8.1							
ARU	**Arti**	65.92	326	*eP*		P	04 23 18.6	-1.2
	comp=Z,6.6nm,0.7s,mb4.8							
RPZ	**Rata Peaks**	70.69	146	LR		LR	04 57 06.7	
	comp=Z,208nm,18.4s,MS4.4,baz=123,slow=38							
ILAR	**Eielson Array**	77.77	26	P		P	04 24 30.8	-0.1
ILAR	**Eielson Array**	77.77	26	P		P	04 24 30.8	-0.1
	comp=Z,0.5nm,0.9s,mb3.5,baz=258,slow=4.5,SNR=5.3							
JOF	**Joensuu**	79.90	332	*ep*		P	04 24 45.1	+2.5
	comp=Z,2.1nm,0.5s,mb4.3							
ARCES	**ARCESS Array B**	80.98	339	P		P	04 24 47.6	-0.7
	comp=Z,1.7nm,0.8s,mb4.0,baz=70,slow=5.9,SNR=2.5							
MMAI	**Mount Meron Ar**	82.18	302	LR		LR	05 07 56.1	
	comp=Z,45nm,18.6s,MS3.9,baz=140,slow=40							
BR131	**Keskin Array S**	82.37	309	*eP*		P	04 24 55.0	-1.2
	comp=Z,0.4nm,0.5s,mb3.6							
BRTR	**Keskin Array B**	82.37	309	P		P	04 24 55.1	-1.2
	comp=Z,0.7nm,0.8s,mb3.6,baz=82,slow=3.5,SNR=3.4							
BRTR				LR		LR	05 07 18.2	
	comp=Z,46nm,18.6s,MS3.9,baz=274,slow=40							
FINES	**FINESS Array B**	82.60	331	P		P	04 24 56.0	-1.0
	comp=Z,0.7nm,0.4s,mb4.1,baz=72,slow=6.6,SNR=7.2							
AKASG	**Malin Array Be**	83.27	320	LR		LR	05 06 21.6	
	comp=Z,74nm,19.5s,MS4.1,baz=70,slow=39							
BORG	**Borgarnes**	98.22	346	LR		LR	05 13 58.4	
	comp=Z,46nm,19.1s,MS4.0,baz=17,slow=38							

*ISCJB **17** 04:18:59.8±0.7, 13°.06N±0°.09×124°.3E±0°.2, h33km, mb3.7/6, Error ellipse: s-maj=26.3km s-min=6.8km az=155.3*
*IDC **17** 04:18:59.3±1.4, 12°.52N×123°.57E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/19, mbtmp3.6/6, Error ellipse: s-maj=67.6km s-min=21.1km az=63.0*

ISC 17 04:19:00.2±0.8, 13°.1N±0°.1×124°.4E±0°.3, h35km, n8, σ0°75/10, mb3.7/6, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PVCP	**Virac**	0.50	334	*eP*		Pn	04 19 11.1	+0.2
PVCP				*eS*		Sn	04 19 17.8	-0.5
CNP	**Catarman**	0.69	156	*eP*		Pn	04 19 13.2	-0.1
CNP				*eS*		Sn	04 19 21.7	-1.0
CMAR	**Chiang Mai Arr**	25.03	285	P		P	04 24 20.6	-0.6
	1.1nm,0.4s,mb3.8,baz=106,slow=8.6,SNR=5.4							
WRA	**Warramunga Arr**	34.30	163	P		P	04 25 43.9	+0.5
	0.7nm,1.1s,mb3.5,baz=332,slow=10,SNR=2.3							
SONM	**Songino Array**	37.70	340	P		P	04 26 18.1	+5.9
	0.3nm,0.6s,mb3.2,baz=157,slow=7.8,SNR=2.9							
ASAR	**Alice Springs**	37.75	166	P		P	04 26 14.2	+1.3
	0.3nm,0.4s,mb3.4,baz=344,slow=7.5,SNR=4.1							
MKAR	**Makanchi Array**	48.64	322	P		P	04 27 44.9	+4.3
	1.3nm,0.7s,mb4.1,baz=118,slow=8.9,SNR=10							
KURK	**Kurchatov**	52.67	325	P		P	04 28 16.5	+5.6
	0.5nm,0.3s,mb4.0,baz=122,slow=8.3,SNR=3.8							

*IDC **17** 04:31:49.4±5.6, 43°.93N×86°.95E, h0km, mb1 3.2/3, mb1mx3.1/24, mbtmp3.2/3, ML3.1/3, Error ellipse: s-maj=77.7km s-min=28.2km az=19.0*
*ISCJB **17** 04:31:50.7±0.9, 44°.1N±0°.1×87°.2E±0°.2, h10km, Error ellipse: s-maj=24.3km s-min=5.8km az=39.1*
*BJI **17** 04:31:51.9, 44°.05N×87°.17E, h15km, ML3.1/7*

ISC 17 04:31:51.7±1.6, 44°.0N±0°.2×87°.1E±0°.2, h10km, n5, σ1°05/7, 2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WMQ	**Urumqi**	0.46	111	Pg		**Pg**	**04 31 59.3**	**-1.3**
WMQ				Sg		**Sg**	**04 32 07.3**	**+0.7**
WMQ				smax				
	comp=N,3µm,0.5s							
MK31	**Makanchi Array**	4.41	311	↓Pn		Pn	04 32 58.6	0.0
	comp=N,0.2nm,0.2s,baz=129,slow=15,SNR=2.7							
MK31				↓Lg			04 34 09.9	
	comp=N,4.8nm,0.5s,baz=127,slow=27,SNR=5.1							
MKAR	**Makanchi Array**	4.41	311	P		Pn	04 32 58.4	-0.1
	comp=N,0.5nm,0.3s,baz=128,slow=14,SNR=23							
MKAR				Sn		**Sn**	**04 33 50.9**	**+1.0**
	comp=N,1.3nm,0.3s,baz=136,slow=16,SNR=5.0							
MKAR				Lg			04 34 07.0	
	comp=N,3.0nm,0.3s,baz=131,slow=28,SNR=7.0							
ZALV	**Zalesovo Beam**	10.09	352	Pn		Pn	04 34 14.6	-1.8
	comp=N,0.3nm,0.3s,baz=174,slow=15,SNR=6.8							
SONM	**Songino Array**	13.96	67	Pn		Pn	04 35 10.7	+1.2
	comp=N,0.1nm,0.3s,baz=261,slow=9.6,SNR=2.5							

*ISCJB **17** 04:35:05.2±0.5, 1°.59N±0°.04×127°.33E±0°.05, h161km±4km, mb4.1/19, Error ellipse: s-maj=9.0km s-min=6.0km az=154.0*
*IDC **17** 04:35:05.0±3.2, 1°.53N×127°.29E, h144km±29km, mb3.8/9, mb1 3.8/10, mb1mx3.7/18, mbtmp3.7/10, Error ellipse: s-maj=49.8km s-min=10.1km az=73.0*
*NEIC **17** 04:35:08.6±2.3, 1°.44N×127°.12E, h175km±21km, mb4.3/9, Error ellipse: s-maj=28.6km s-min=7.4km az=62.0*
*DJA **17** 04:35:08, 1°.61N×127°.23E, h127km, mb4.7/14*

ISC 17 04:35:06.5±0.5, 1°.57N±0°.04×127°.30E±0°.05, h155km±4km, n51, σ1°01/60, mb4.1/19, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	0.80	175	P		Pn	04 35 28.9	-1.4
TNTI				S		Sn	04 35 49.5	+1.0
LBMI	**Labuha**	2.20	175	P		Pn	04 35 47.2	+2.8
LBMI				S		Sn	04 36 13.9	+0.3
MNI	**Manado**	2.46	267	P		Pn	04 35 47.0	-0.4
SGSI	**Sangihe**	2.75	320

CEN1	**Los Morros**	**2.64**	**284**	⇓	*i*P	Pn	04 51 53.5	+5.2
CEN1					*i*S	Sn	04 52 30.2	+6.6
CEN1					AML	AML	04 52 31.3	
	comp=N,153nm,0.3s							
ANCH	**Antofagasta**	**2.77**	**277**	⇑	*i*P	Pn	04 51 51.1	+1.4
ANCH					*i*S	Sn	04 52 28.0	+1.7
MECH	**Mejillones**	**2.94**	**288**		*e*P	Pn	04 51 57.0	+5.3
MECH					*e*S	Sn	04 52 35.5	+5.6
MECH					AML	AML	04 52 42.7	
	comp=E,171nm,0.6s							
PB01	**Plate Boundary**	**3.55**	**327**	⇑	*i*P	Pn	04 52 03.6	+4.6
PB01					*i*S	Sn	04 52 47.6	+4.5
HMBC	**Humberston**	**4.39**	**328**	⇑	*i*P	Sn	04 52 13.1	+3.5
HMBC					*i*S	Sn	04 53 05.4	+3.4
PSGC	**Pisagua**	**5.09**	**330**		*e*P	Pn	04 52 22.1	+3.7
PSGC					*e*S	Sn	04 53 21.4	+3.4
MNMC	**Miæe Miæ**	**5.29**	**337**		*e*P	Pn	04 52 24.6	+3.6
MNMC					*i*S	Sn	04 53 26.9	+4.3

*BEO **17** 05:00:47.7±0.3,45°.40N×21°.15E,h18km±3km, ML2.6/8*
*CSEM **17** 05:00:48.3±0.1,45°.34N×21°.05E,h10km, MD3.4/3, Error ellipse: s-maj=3.6km s-min=3.3km az=119.0*
*ISCJB **17** 05:00:49.1±0.4,45°.38N±0°.02×21°.07E±0°.03,h24km±4km, Error ellipse: s-maj=3.5km s-min=3.1km az=141.5*
*BUC **17** 05:00:51.9±1.2,45°.58N×21°.32E,h17km±8km, MD3.4/3, Error ellipse: s-maj=12.0km s-min=7.3km az=26.0*
*NEIC **17** 05:00:52.2,45°.58N×21°.25E,h14km, ML2.6(BUC), After BUC.*

ISC 17 05:00:48.8±0.4,45°.35N±0°.02×21°.07E±0°.03,h14km±3km, n108,σ1°.17/161,32C-22D,Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIM	**Timisoara**	**0.40**	**16**	⇑ *i*P	**Pg**	**05 00 56.9**	**0.0**
TIM	**Timisoara**	**0.40**	**16**	*i*S	**Sg**	**05 01 02.4**	**0.0**
TIM	**Timisoara**	**0.40**	**16**	⇑ *i*P	**Pg**	**05 00 56.9**	**0.0**
TIM	**Timisoara**	**0.40**	**16**	*i* Pg	**Pg**	**05 00 56.9**	**0.0**
BZS	**Buzias**	**0.47**	**55**	*e*Pg	**Pg**	**05 00 57.1**	**-1.0**
BZS				*e*Sg	**Sg**	**05 01 03.7**	**-0.8**
BZS	**Buzias**	**0.47**	**55**	⇓P	**Pg**	**05 00 57.0**	**-1.1**
BZS				S	**Sg**	**05 01 03.2**	**-1.2**
BZS	**Buzias**	**0.47**	**55**	⇓ *i*P	**Pg**	**05 00 57.2**	**-0.9**
BZS				S	**Sg**	**05 01 02.6**	**-1.9**
BZS	**Buzias**	**0.47**	**55**	⇓ *i*P	**Pg**	**05 00 57.2**	**-0.9**
BZS				*i*S	**Sg**	**05 01 02.6**	**-1.9**
BZS	**Buzias**	**0.47**	**55**	*e*Pg	**Pg**	**05 00 57.1**	**-1.0**
BZS				S	**Sg**	**05 01 03.2**	**-1.3**
BZS				*e*Sg	**Sg**	**05 01 03.7**	**-0.8**
BEO	**Beograd**	**0.68**	**218**	*e*Pg	**Pg**	**05 01 02.2**	**+0.1**
BEO				*e*Sg	**Sg**	**05 01 13.3**	**+2.2**
BEO	**Beograd**	**0.68**	**218**	*e*Pg	**Pg**	**05 01 02.2**	**+0.1**
BEO				*e*Sg	**Sg**	**05 01 13.3**	**+2.2**
FGSL	**Fruska Gora**	**0.91**	**258**	*e*Pg	**Pg**	**05 01 06.1**	**-0.2**
FGSL				*e*Sg	**Sg**	**05 01 19.9**	**+1.7**
FRGS	**Fruska Gora**	**0.91**	**258**	*e*Pg	**Pg**	**05 01 06.1**	**-0.2**
FRGS				*e*Sg	**Sg**	**05 01 19.9**	**+1.7**
SVIS	**Svilajnac**	**1.09**	**174**	*e*Pg	**Pg**	**05 01 07.7**	**-2.1**
SVIS				*e*Sg	**Sg**	**05 01 23.6**	**-0.3**
DEV	**Deva**	**1.40**	**67**	⇓P	**Pn**	**05 01 13.2**	**-0.6**
DEV				S	**Sn**	**05 01 31.5**	**-0.5**
DEV	**Deva**	**1.40**	**67**	⇑ *i*P	**Pn**	**05 01 13.3**	**-0.5**
DEV	**Deva**	**1.40**	**67**	S	**Sn**	**05 01 30.4**	**-1.6**
DEV	**Deva**	**1.40**	**67**	⇑ *i*P	**Pn**	**05 01 13.3**	**-0.5**
DEV				*i*S	**Sn**	**05 01 30.4**	**-1.6**
DEV	**Deva**	**1.40**	**67**	*i* Pn	**Pn**	**05 01 13.3**	**-0.5**
DEV				S	**Sn**	**05 01 31.5**	**-0.5**
DIVS	**Divibare**	**1.47**	**212**	*e*Pg	**Pg**	**05 01 13.6**	**-3.3**
DIVS				*e*Sg	**Sg**	**05 01 35.4**	**-0.6**
GRUS	**Gruza**	**1.48**	**190**	*e*Pg	**Pg**	**05 01 15.0**	**-2.2**
GRUS				*e*Sg	**Sg**	**05 01 37.3**	**+0.8**
GRUS	**Gruza**	**1.48**	**190**	*e*Pg	**Pg**	**05 01 15.0**	**-2.2**
GRUS				*e*Sg	**Sg**	**05 01 37.3**	**+0.8**
PKS6	**Bocsa**	**1.63**	**321**	⇑ *e*Pn	**Pn**	**05 01 16.7**	**-0.3**
PKS6				⇑ *e*Sn	**Sn**	**05 01 38.3**	**+0.4**
PKS2	**Kecel**	**1.73**	**312**	*e*Pn	**Pn**	**05 01 18.3**	**0.0**
PKS2				*e*Sn	**Sn**	**05 01 44.8**	**+4.7**
DRGR		**1.84**	**38**	*e*Pg	**Pn**	**05 01 19.2**	**-0.7**
DRGR				*i* Sg	**Sg**	**05 01 42.1**	**-6.0**
DRGR		**1.84**	**38**	⇓P	**Pn**	**05 01 19.2**	**-0.8**
DRGR				S	**Sn**	**05 01 41.3**	**-1.8**
DRGR		**1.84**	**38**	⇓ *i*P	**Pn**	**05 01 19.2**	**-0.7**
DRGR		**1.84**	**38**	S	**Sn**	**05 01 41.3**	**-1.7**
DRGR		**1.84**	**38**	⇓ *i*P	**Pn**	**05 01 19.2**	**-0.7**
DRGR				*i* S	**Sn**	**05 01 41.3**	**-1.7**
DRGR		**1.84**	**38**	⇓ *i*Pn	**Pn**	**05 01 19.2**	**-0.7**
DRGR				*i* S	**Sn**	**05 01 41.3**	**-1.7**
BBLS	**Lazići**	**1.90**	**219**	*e*Pg	**Pg**	**05 01 22.0**	**-3.2**
BBLS				*e*Sg	**Sg**	**05 01 49.8**	**0.0**
BBLS	**Lazići**	**1.90**	**219**	*e*Pg	**Pg**	**05 01 22.0**	**-3.2**
PKSM	**Moragy**	**1.90**	**298**	*e*Pn	**Pn**	**05 01 21.0**	**+0.2**
PKSM	**Moragy**	**1.90**	**298**	⇑P	**Pn**	**05 01 25.4**	**+4.6**
PKSM				S	**Sn**	**05 01 50.0**	**+5.5**
PKSM	**Moragy**	**1.90**	**298**	⇑ *i*P	**Pn**	**05 01 25.4**	**+4.6**
PKSM	**Moragy**	**1.90**	**298**	S	**Sn**	**05 01 49.9**	**+5.4**
PKSM	**Moragy**	**1.90**	**298**	⇑ *i*P	**Pn**	**05 01 25.4**	**+4.6**
PKSM				*i* S	**Sn**	**05 01 49.9**	**+5.4**
PKSM	**Moragy**	**1.90**	**298**	⇓ *e*Pn	**Pn**	**05 01 21.1**	**+0.3**
PKSM				S	**Sn**	**05 01 50.0**	**+5.5**
PKSM				⇓ *e*Sn	**Sn**	**05 01 52.8**	**+8.3**
RHK3	**Tenkes**	**2.05**	**286**	⇑ *e*Pn	**Pn**	**05 01 22.0**	**-0.7**
RHK3				⇑ *e*Sn	**Sn**	**05 01 55.0**	**+7.0**
PKS7	**Kunszentmiklos**	**2.15**	**323**	⇑ *e*Pn	**Pn**	**05 01 25.3**	**+1.1**
PKS7				*e*Sn	**Sn**	**05 01 50.0**	**-0.7**
PKS9	**Tamasi**	**2.30**	**304**	*e*Pn	**Pn**	**05 01 30.6**	**+4.3**
PKS9				*e*Sn	**Sn**	**05 01 59.9**	**+5.5**
ZAPS	**Zavoj**	**2.36**	**151**	*e*Pn	**Pn**	**05 01 26.8**	**-0.2**
ZAPS				*e*Sn	**Sn**	**05 01 54.5**	**-1.3**
MDB	**Medias**	**2.45**	**70**	S	**Sn**	**05 01 59.8**	**+1.7**
BUD	**Budapest**	**2.56**	**327**	⇑ *e*Pn	**Pn**	**05 01 28.4**	**-1.4**
BUD				*e*Sg	**Sg**	**05 02 18.2**	**+7.2**
BUD	**Budapest**	**2.56**	**327**	⇑ *e*Pn	**Pn**	**05 01 28.4**	**-1.4**
BUD				⇑ *e*Sn	**Sg**	**05 02 18.2**	**+7.2**
BARS	**Barje**	**2.59**	**168**	*e*Pn	**Pn**	**05 01 29.1**	**-1.1**
BARS	**Barje**	**2.59**	**168**	*e*Pn	**Pn**	**05 01 29.1**	**-1.1**
PSZ	**Piszkesteto**	**2.69**	**343**	⇑P	**Pn**	**05 01 31.9**	**+0.2**
PSZ				S	**Sn**	**05 02 03.2**	**-0.8**
PSZ	**Piszkesteto**	**2.69**	**343**	⇑ *i*P	**Pn**	**05 01 32.4**	**+0.8**
PSZ	**Piszkesteto**	**2.69**	**343**	S	**Sn**	**05 02 03.6**	**-0.4**
PSZ	**Piszkesteto**	**2.69**	**343**	⇑ *i*P	**Pn**	**05 01 32.4**	**+0.8**
PSZ				*i* S	**Sn**	**05 02 03.6**	**-0.4**
PSZ	**Piszkesteto**	**2.69**	**343**	⇓ *e*Pn	**Pn**	**05 01 31.7**	**+0.1**
PSZ				*e*Sn	**Sn**	**05 02 03.7**	**-0.3**
PSZ	**Piszkesteto**	**2.69**	**343**	⇑P	**Pn**	**05 01 31.9**	**+0.3**
PSZ				⇓ *e*Sn	**Sn**	**05 02 03.7**	**-0.3**
PKSG		**2.76**	**319**	*e*Pn	**Pn**	**05 01 32.5**	**0.0**
VOIR		**2.81**	**87**	⇑P	**Pn**	**05 01 35.0**	**+1.8**
VOIR				S	**Sn**	**05 02 08.4**	**+1.6**
VOIR		**2.81**	**87**	⇓ *i*P	**Pn**	**05 01 35.0**	**+1.8**
VOIR		**2.81**	**87**	S	**Sn**	**05 02 08.4**	**+1.6**
VOIR		**2.81**	**87**	⇓ *i*P	**Pn**	**05 01 35.0**	**+1.8**
VOIR		**2.81**	**87**	⇓ *i*Pn	**Pn**	**05 01 35.0**	**+1.8**
VOIR				S	**Sn**	**05 02 08.4**	**+1.6**
BMR	**Baia Mare**	**2.87**	**35**	S	**Sn**	**05 02 04.8**	**-3.5**
BMR	**Baia Mare**	**2.87**	**35**	⇑ *i*P	**Pn**	**05 01 35.8**	**+1.8**
BMR	**Baia Mare**	**2.87**	**35**	*i* S	**Sn**	**05 02 04.8**	**-3.5**
TRPA	**Tarpa**	**2.96**	**19**	⇑ *i*P	**Pn**	**05 01 35.1**	**-0.2**
TRPA	**Tarpa**	**2.96**	**19**	S	**Sn**	**05 02 07.2**	**-3.4**
TRPA	**Tarpa**	**2.96**	**19**	⇑ *i*P	**Pn**	**05 01 35.1**	**-0.2**
TRPA				*i* S	**Sn**	**05 02 07.2**	**-3.4**
TRPA	**Tarpa**	**2.96**	**19**	*i* Pn	**Pn**	**05 01 35.1**	**-0.2**
DOPR	**Dopca**	**3.09**	**77**	⇓ *i*P	**Pn**	**05 01 38.2**	**+1.1**
DOPR	**Dopca**	**3.09**	**77**	S	**Sn**	**05 02 14.5**	**+0.6**
DOPR	**Dopca**	**3.09**	**77**	⇓ *i*P	**Pn**	**05 01 38.2**	**+1.1**
DOPR	**Dopca**	**3.09**	**77**	⇓ *i*P	**Pn**	**05 01 38.2**	**+1.1**
VTS	**Vitosha**	**3.16**	**150**	⇓P	**Pn**	**05 01 43.2**	**+5.2**
VTS				S	**Sn**	**05 02 23.7**	**+8.2**
VTS	**Vitosha**	**3.16**	**150**	⇑ *i*P	**Pn**	**05 01 43.3**	**+5.3**
VTS	**Vitosha**	**3.16**	**150**	S	**Sn**	**05 02 22.5**	**+7.0**
VTS	**Vitosha**	**3.16**	**150**	⇑ *i*P	**Pn**	**05 01 43.3**	**+5.3**
VTS				*i* S	**Sn**	**05 02 22.5**	**+7.0**
VTS	**Vitosha**	**3.16**	**150**	*i* Pn	**Pn**	**05 01 43.3**	**+5.3**
BEHE	**Becsehely**	**3.20**	**292**	*e*Sn	**Sg**	**05 02 35.5**	**+4.0**
MLR	**Muntele Rosu**	**3.44**	**86**	⇑P	**Pn**	**05 01 44.0**	**+2.2**
MLR				S	**Sn**	**05 02 22.4**	**0.0**
MLR	**Muntele Rosu**	**3.44**	**86**	⇓ *i*P	**Pn**	**05 01 44.0**	**+2.1**
MLR	**Muntele Rosu**	**3.44**	**86**	S	**Sn**	**05 02 23.8**	**+1.4**
MLR	**Muntele Rosu**	**3.44**	**86**	⇓ *i*P	**Pn**	**05 01 44.0**	**+2.1**
MLR	**Muntele Rosu**	**3.44**	**86**	⇓ *i*Pn	**Pn**	**05 01 44.0**	**+2.1**
MLR				S	**Sn**	**05 02 22.4**	**0.0**
STON	**Ston**	**3.46**	**226**	*e*Pn	**Pn**	**05 01 41.3**	**-0.9**
STON				Sn	**Sn**	**05 02 22.6**	**-0.4**
STON	**Ston**	**3.46**	**226**	*e*Pn	**Pn**	**05 01 41.3**	**-0.9**
STON				Sn	**Sn**	**05 02 22.6**	**-0.4**
VYHS	**Vyhne**	**3.50**	**335**	*e*Pn	**Pn**	**05 01 43.3**	**+0.6**
VYHS				*e*Sn	**Sn**	**05 02 22.4**	**-1.4**
VYHS	**Vyhne**	**3.50**	**335**	*e*PN	**Pn**	**05 01 43.3**	**+0.6**
VYHS				*e*SN	**Sn**	**05 02 22.4**	**-1.4**
VYHS	**Vyhne**	**3.50**	**335**	*e*Pn	**Pn**	**05 01 43.3**	**+0.6**
VYHS				*e*Sn	**Sn**	**05 02 22.4**	**-1.4**
CRVS	**Cervenica-Dubn**	**3.57**	**4**	*e*Pn	**Pn**	**05 01 44.2**	**+0.6**
CRVS				*e*Sn	**Sn**	**05 02 21.6**	**-3.9**
CRVS	**Cervenica-Dubn**	**3.57**	**4**	*e*PN	**Pn**	**05 01 44.2**	**+0.6**
CRVS				*e*SN	**Sn**	**05 02 21.6**	**-3.9**
CRVS	**Cervenica-Dubn**	**3.57**	**4**	*e*Pn	**Pn**	**05 01 44.2**	**+0.6**
CRVS				*e*Sn	**Sn**	**05 02 21.6**	**-3.9**
BURAR	**Bucovina Array**	**3.66**	**50**	⇑P	**Pn**	**05 01 45.3**	**+0.5**
BURAR	**Bucovina Array**	**3.66**	**50**	⇑ *i*P	**Pn**	**05 01 45.3**	**+0.5**
BURAR	**Bucovina Array**	**3.66**	**50**	⇑ *i*P	**Pn**	**05 01 45.3**	**+0.5**
BURAR	**Bucovina Array**	**3.66**	**50**	*i* Pn	**Pn**	**05 01 45.3**	**+0.5**
KOLL	**Kolacno**	**3.71**	**332**	*e*Pn	**Pn**	**05 01 46.1**	**+0.5**
KOLL	**Kolacno**	**3.71**	**332**	*e*PN	**Pn**	**05 01 46.1**	**+0.5**
KOLL	**Kolacno**	**3.71**	**332**	*e*Pn	**Pn**	**05 01 46.1**	**+0.5**
SOP	**Sopron**	**3.89**	**309**	*e*Sn	**Sn**	**05 02 32.3**	**-1.2**
SOP	**Sopron**	**3.89**	**309**	*e*Sn	**Sn**	**05 02 32.3**	**-1.2**
ZST	**Bratislava**	**3.94**	**318**	*e*Pn	**Pn**	**05 01 50.1**	**+1.3**
ZST	**Bratislava**	**3.94**	**318**	*e*PN	**Pn**	**05 01 50.1**	**+1.3**
ZST	**Bratislava**	**3.94**	**318**	*e*Pn	**Pn**	**05 01 50.1**	**+1.3**
VRI	**Vrincioaia**	**4.01**	**81**	⇑P	**Pn**	**05 01 51.5**	**+1.9**
VRI	**Vrincioaia**	**4.01**	**81**	⇑P	**Pn**	**05 01 51.5**	**+1.8**
VRI	**Vrincioaia**	**4.01**	**81**	⇑P	**Pn**	**05 01 51.5**	**+1.8**
VRI	**Vrincioaia**	**4.01**	**81**	*i* Pn	**Pn**	**05 01 51.5**	**+1.8**
STHS	**Stebnicka Huta**	**4.07**	**2**	*i* Pn	**Pn**	**05 01 51.0**	**+0.4**
STHS	**Stebnicka Huta**	**4.07**	**2**	*e*PN	**Pn**	**05 01 51.0**	**+0.4**
STHS	**Stebnicka Huta**	**4.07**	**2**	*e*Pn	**Pn**	**05 01 51.0**	**+0.4**

IDC 17 05:40:22.6±1.0,9°.16N×138°.77E,h0km,mb3.6/8, mb1 3.8/8,mb1mx3.7/20,mbtmp3.6/8,Error ellipse: s-maj=47.3km s-min=21.3km az=85.0,Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**29.25**	**189**	P	P	05 46 26.0	-0.4
	0.6nm,0.7s,baz=360,slow=9.9,SNR=3.6						
ASAR	**Alice Springs**	**32.97**	**188**	P	P	05 46 59.9	+0.6
	1.0nm,0.7s,baz=20,slow=12,SNR=11						
SONM	**Songino Array**	**47.26**	**331**	P	P	05 48 58.6	+1.0
	0.4nm,0.4s,baz=142,slow=4.9,SNR=2.4						
ZALV	**Zalesovo Beam**	**61.90**	**327**	P	P	05 50 44.2	+0.4
	0.6nm,0.7s,baz=101,slow=4.6,SNR=2.5						
KURK	**Kurchatov**	**64.25**	**322**	P	P	05 50 58.9	-0.6
	0.3nm,0.5s,baz=116,slow=6.2,SNR=3.8						
BVAR	**Borovoye Array**	**69.77**	**323**	P	P	05 51 34.2	-0.4
	0.4nm,0.4s,baz=101,slow=7.6,SNR=2.9						
ILAR	**Eielson Array**	**75.10**	**25**	P	P	05 52 06.6	+0.4
	0.3nm,0.7s,baz=260,slow=5.6,SNR=4.8						
NVAR	**Mina Array Bea**	**94.34**	**50**	P	P	05 53 44.2	-0.3
	0.1nm,0.3s,baz=294,slow=4.8,SNR=2.4						

NNC 17 05:53:08.1±6.0,53°.60N×85°.12E,h0km,mb3.8,mpv3.4, 7C-2D,Error ellipse: s-maj=52.8km s-min=21.3km az=61.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**4.93**	**237**	⇓Pn	Pn	05 54 24.2	+0.8
	3.9nm,1.3s						
KURK				⇑Lg		05 55 45.7	
	5.4nm,1.0s						
MK31	**Makanchi Array**	**7.05**	**196**	⇑Pn	Pn	05 54 55.8	+3.4
	1.4nm,0.6s,baz=26,slow=13,SNR=29						
MK31				⇑Sn	Sn	05 56 19.7	+6.4
	0.2nm,0.4s						
MK31				⇓Lg		05 56 49.3	
	2.9nm,1.1s,baz=31,slow=32,SNR=3.8						
VOSK	**Vostochnaya**	**8.54**	**270**	⇑Pn	Pn	05 55 12.0	-1.0
	3.5nm,1.3s						
VOSK				⇑Sn	Sn	05 56 49.6	-0.4
	2.4nm,0.8s						
ZRNK	**Zerenda**	**9.68**	**273**	⇑Pn	Pn	05 55 29.2	+0.8
	1.8nm,0.7s						
ZRNK				⇑Sn	Sn	05 57 18.5	+0.7
	1.5nm,0.8s						

*ISK **17** 05:56:02.6,38°.33N×38°.81E,h9km,MD3.1*
*ISCJB **17** 05:56:03.2±0.5,38°.33N±0°.02×38°.80E±0°.03,h1km±5km, Error ellipse: s-maj=4.3km s-min=3.2km az=152.1*
*CSEM **17** 05:56:03.3±0.2,38°.34N×38°.82E,h5km,MD3.2,Error ellipse: s-maj=4.3km s-min=3.4km az=156.0*
*DDA **17** 05:56:03.2,38°.32N×38°.80E,h7km±2km,Md3.2*

ISC 17 05:56:03.9±0.4,38°.34N±0°.02×38°.79E±0°.03,h5km±4km, n37,σ0°.89/54,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.22**	**43**	*i* P	**Pg**	**05 56 08.3**	**+0.1**
ELZG				*i* S	**Sg**	**05 56 11.7**	**+0.6**
ELZG	**Elazig**	**0.22**	**43**	*i* P	**Pg**	**05 56 08.3**	**+0.1**
ELZG				*i* S	**Sg**	**05 56 11.7**	**+0.6**
MALT	**Malatya**	**0.29**	**265**	*e*PG	**Pg**	**05 56 09.0**	**-0.5**
MALT				*e*SG	**Sg**	**05 56 13.8**	**+0.5**
MALT	**Malatya**	**0.29**	**265**	*e*Pg	**Pg**	**05 56 09.0**	**-0.5**
MALT				*e*Sg	**Sg**	**05 56 13.8**	**+0.5**
MYA	**Malataya**	**0.29**	**268**	*e*PG	**Pg**	**05 56 09.4**	**-0.1**
MYA	**Malataya**	**0.29**	**268**	*e*Pg	**Pg**	**05 56 09.4**	**-0.1**
SVRC	**Sivrice-ELAZID**	**0.41**	**84**	*e*PG	**Pg**	**05 56 10.9**	**-0.8**
SVRC				*e*SG	**Sg**	**05 56 17.2**	**+0.2**
SVRC	**Sivrice-ELAZID**	**0.41**	**84**	*e*Pg	**Pg**	**05 56 10.9**	**-0.8**
SVRC				*e*Sg	**Sg**	**05 56 17.2**	**+0.2**
AKCD	**Akcadag**	**0.69**	**267**	*i* P	**Pg**	**05 56 16.9**	**-0.2**
AKCD				*i* S	**Sg**	**05 56 27.2**	**+1.2**
AKCD	**Akcadag**	**0.69**	**267**	*i* P	**Pg**	**05 56 16.9**	**-0.2**
PTK	**Pertek**	**0.72**	**40**	*e*PG	**Pg**	**05 56 16.3**	**-1.5**
PTK				*e*SG	**Sg**	**05 56 27.5**	**+0.3**
PTK	**Pertek**	**0.72**	**40**	*e*Pg	**Pg**	**05 56 16.3**	**-1.5**
PTK				*e*Sg	**Sg**	**05 56 27.5**	**+0.2**
URFA	**Urfa**	**0.90**	**179**	*e*PG	**Pg**	**05 56 19.9**	**-1.2**
URFA				*e*SG	**Sg**	**05 56 32.8**	**+0.2**
URFA	**Urfa**	**0.90**	**179**	*e*Pg	**Pg**	**05 56 19.9**	**-1.2**
URFA				*e*Sg	**Sg**	**05 56 32.8**	**+0.1**
ATAB	**Bozova**	**0.95**	**205**	*i* P	**Pg**	**05 56 22.0**	**-0.1**
ATAB				*i* S	**Sg**	**05 56 34.8**	**+0.3**
ATAB	**Bozova**	**0.95**	**205**	*i* P	**Pg**	**05 56 22.0**	**-0.1**
KEMA	**Kemaliye**	**0.96**	**346**	*i* P	**Pg**	**05 56 21.6**	**-0.7**
KEMA				*i* S	**Sg**	**05 56 36.1**	**+1.4**
KEMA	**Kemaliye**	**0.96**	**346**	*i* P	**Pg**	**05 56 21.6**	**-0.7**
DARE	**Darende-Malaty**	**0.99**	**309**	*e*PG	**Pg**	**05 56 23.1**	**+0.3**
DARE	**Darende-Malaty**	**0.99**	**309**	*e*Pg	**Pg**	**05 56 23.1**	**+0.3**
DIYA	**Diyarbakir**	**1.12**	**111**	*i* P	**Pg**	**05 56 25.1**	**-0.3**
DIYA				*i* S	**Sg**	**05 56 41.5**	**+1.4**
DIYA	**Diyarbakir**	**1.12**	**111**	*i* P	**Pg**	**05 56 25.1**	**-0.4**
GZT	**Gaziantep**	**1.38**	**225**	*i* P	**Pn**	**05 56 28.3**	**-1.5**
GZT				*i* S	**Sb**	**05 56 49.2**	**+1.2**
EZC	**Erzincan**	**1.48**	**17**	*e*PN	**Pn**	**05 56 30.5**	**-0.6**
SARI	**SarD1z-Kayseri**	**1.68**	**282**	*e*PN	**Pn**	**05 56 35.9**	**+2.0**
SARI	**SarD1z-Kayseri**	**1.68**	**282**	*e*Pn	**Pn**	**05 56 35.9**	**+2.0**
GAZ	**Gaziantep**	**1.71**	**228**	*e*PN	**Pn**	**05 56 34.4**	**+0.1**
GAZ	**Gaziantep**	**1.71**	**228**	*e*Pn	**Pn**	**05 56 34.4**	**+0.1**
KMRS	**Kahramanmaras**	**1.71**	**242**	*e*PN	**Pn**	**05 56 33.4**	**-0.9**
KMRS	**Kahramanmaras**	**1.71**	**242**	*e*Pn	**Pn**	**05 56 33.4**	**-0.9**
MARD	**Mardin**	**1.88**	**122**	*i* P	**Pn**	**05 56 35.8**	**-0.8**
MARD				*i* S	**Sn**	**05 57 01.1**	**+0.6**
BEST	**Besiri**	**2.00**	**102**	*i* P	**Pn**	**05 56 38.1**	**-0.2**
BEST				*i* S	**Sn**	**05 57 06.5**	**+2.8**
SVSK	**Karacayir**	**2.11**	**319**	*e*PN	**Pn**	**05 56 39.3**	**-0.4**
SVSK	**Karacayir**	**2.11**	**319**	*e*PN	**Pn**	**05 56 39.3**	**-0.4**
GUMT	**Gumushane**	**2.19**	**14**	*e*PN	**Pn**	**05 56 40.3**	**-0.5**
GUMT	**Gumushane**	**2.19**	**14**	*e*Pn	**Pn**	**05 56 40.3**	**-0.5**
KOZT	**Kozan**	**2.50**	**251**	*e*PN	**Pn**	**05 56 44.2**	**-0.9**

*BJI **17** 05:56:56.0,41°.20N×124°.20W,h17km,mB5.0/10, mb4.8/14,Ms4.9/10,Ms7 4.5/10*
*IDC **17** 05:56:56.7±0.7,41°.14N×124°.15W,h0km,mb4.1/13, mb1 4.3/15,mb1mx4.2/21,mbtmp4.2/15,ML3.3/2,MS4.0/13, Ms1 4.0/13,ms1mx3.7/33,Error ellipse: s-maj=13.8km s-min=10.3km az=172.0*
*ISCJB **17** 05:56:59.6±1.1,41°.21N±0°.02×124°.11W±0°.05,h26km±7km, mb4.5/48,MS4.0/11,Error ellipse: s-maj=6.5km s-min=3.4km az=159.3*
*NEIC **17** 05:56:59.0,41°.18N×124°.20W,h17km,mb4.6/44, MW4.6(BRK),MW4.5(SLM),After NCEDC.*
NEIC Felt [IV] at Arcata, Bayside, Eureka, Orick and Trinidad; [III] at Blue Lake, Burnt Ranch, Crescent City, Ferndale, Fortuna, Klamath, Kneeland, McKinleyville and Willow Creek; [II] at Hoopa and Loleta. Also felt at Bridgeville, Carlotta, Hydesville, Orleans, Salyer, Samoa and Somes Bar.

ISC 17 05:57:01.5±1.0,41°.17N±0°.02×124°.24W±0°.05,h31km±6km, h16km±1.2km:pP-P,n211,σ1°.23/204,mb4.5/49,MS4.0/11, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHMM	**Horse Mountain**	**0.48**	**127**	*e*Pn	**Pn**	**05 57 09.5**	**-2.8**
KHMM				*e*Sn	**Sb**	**05 57 17.2**	**-1.5**
KBO	**Bosley Butte**	**1.04**	**1**	*e*Pn	**Pn**	**05 57 17.4**	**-2.6**
YBH	**Yreka Blue Hor**	**1.28**	**63**	*e*Pn	**Pn**	**05 57 20.9**	**-2.4**
YBH	**Yreka Blue Hor**	**1.28**	**63**	Pg	**Pn**	**05 57 20.7**	**-2.5**
	334nm,0.3s,baz=258,slow=13,SNR=2311						
YBH				Lg		05 57 36.1	
	312nm,0.3s,baz=254,slow=18,SNR=9.2						
WDC	**Whiskeytown Da**	**1.42**	**114**	*e*Pn	**Pn**	**05 57 23.1**	**-2.1**
KCPM	**Cahto Peak**	**1.56**	**161**	*e*Pn	**Pn**	**05 57 25.4**	**-1.7**
KEBM	**Edson Butte**	**1.71**	**358**	*e*Pn	**Pn**	**05 57 27.8**	**-1.3**
HUMO	**Hull Mountain**	**1.73**	**33**	*e*Pn	**Pn**	**05 57 27.1**	**-2.4**
HOPS	**Hopland**	**2.35**	**157**	*e*Pn	**Pn**	**05 57 37.1**	**-0.9**
OHCM	**Honcut**	**2.79**	**130**	*e*Pn	**Pn**	**05 57 41.6**	**-2.5**
MOD	**Modoc**	**3.05**	**75**	*e*Pn	**Pn**	**05 57 45.1**	**-2.5**
MCCM	**Marconi Confer**	**3.20**	**160**	*e*Pn	**Pn**	**05 57 48.5**	**-1.1**
COR	**Corvallis**	**3.49**	**11**	*e*Pn	**Pn**	**05 57 53.1**	**-0.5**
SAC	**San Andreas**	**3.85**	**158**	*e*Pn	**Pn**	**05 57 57.2**	**-1.4**
PAHR	**Pah Rah Range**	**3.98**	**110**	*e*Pn	**Pn**	**05 57 59.9**	**-0.5**
HEBO	**M

AMTX	**Amarillo**	**18.82**	**102**	*e*Pn		**Pn**	**06 01 18.1**	**-1.2**
	9.7nm,0.8s								
CBKS	**Cedar Bluff**	**18.91**	**89**	*e*Pn		**Pn**	**06 01 16.7**	**-3.6**
	38nm,0.9s								
SKAG	**Skagway**	**19.59**	**343**	*e*Pn		**Pn**	**06 01 33.1**	**+4.9**
	10nm,1.2s								
FFC	**Flin Flon**	**20.04**	**40**	*e*P		**P**	**06 01 28.5**	**-3.3**
	29nm,1.0s								
TXAR	**Lajitas Array**	**20.48**	**119**	P		**P**	**06 01 35.9**	**-0.9**
	5.3nm,0.7s,baz=296,slow=9.1,SNR=53								
TXAR				LR		LR	06 10 44.1		
	comp=Z,263nm,18.2s,MS3.6,baz=265,slow=40								
ECSD	**EROS Data Cent**	**20.51**	**74**	*e*P		**P**	**06 01 32.3**	**-4.6**
	14nm,0.8s								
WMOK	**Wichita Mounta**	**21.04**	**100**	*e*P		**P**	**06 01 39.2**	**-3.5**
	9.9nm,0.8s,mb4.2								
KSU1	**Kansas State U**	**21.20**	**86**	*e*P		**P**	**06 01 45.2**	**+0.8**
	34nm,0.8s,mb4.7								
HYT	**Haines Junctio**	**21.30**	**342**	*e*P		**P**	**06 01 49.8**	**+4.5**
AGMN	**Agassiz Nation**	**21.30**	**61**	*e*P		**P**	**06 01 41.3**	**-4.1**
	19nm,0.6s,mb4.6								
ULM	**Lac du Bonnet**	**21.68**	**56**	*e*P		**P**	**06 01 45.9**	**-3.6**
	19nm,1.0s,mb4.5								
ULM	**Lac du Bonnet**	**21.68**	**56**	P		**P**	**06 01 45.7**	**-3.8**
	12nm,0.5s,mb4.6,baz=262,slow=9.0,SNR=15								
ULM				LR		LR	06 10 56.8		
	comp=Z,684nm,19.7s,MS4.1,baz=48,slow=39								
YKA	**Yellowknife Ar**	**22.12**	**12**	P		**P**	**06 01 53.0**	**-1.1**
YKA	**Yellowknife Ar**	**22.12**	**12**	P		**P**	**06 01 53.0**	**-1.1**
	5.7nm,0.8s,mb4.1,baz=196,slow=10,SNR=12								
JCT	**Junction City**	**22.43**	**111**	*e*P		**P**	**06 01 59.3**	**+1.6**
	14nm,0.9s,mb4.4								
SCIA	**State Center**	**23.18**	**78**	*e*P		**P**	**06 02 06.5**	**+1.0**
	21nm,0.9s,mb4.6								
EYMN	**Ely**	**24.17**	**63**	*e*P		**P**	**06 02 12.9**	**-1.9**
	81nm,1.9s,mb4.8								
DAWY	**Dawson**	**24.58**	**344**	*e*P		**P**	**06 02 21.4**	**+3.1**
MENT	**Mentasta**	**24.68**	**339**	P		**P**	**06 02 21.6**	**+2.3**
MIAR	**Mount Ida**	**25.02**	**95**	*e*P		**P**	**06 02 20.4**	**-2.2**
	14nm,0.8s,mb4.5								
JFWS	**Jewell Farm**	**25.21**	**75**	*e*P		**P**	**06 02 21.8**	**-2.5**
	16nm,0.8s,mb4.6								
PMR	**Palmer**	**25.39**	**332**	*e*P		**P**	**06 02 28.6**	**+2.9**
	11nm,1.0s,mb4.3								
CCM	**Cathedral Cave**	**25.53**	**86**	*e*P		**P**	**06 02 23.0**	**-4.2**
	4.9nm,0.8s,mb4.1								
COWI	**Conover**	**25.75**	**67**	*e*P		**P**	**06 02 26.6**	**-2.6**
	5.7nm,0.8s,mb4.2								
FCC	**Fort Churchill**	**25.86**	**37**	*e*P		**P**	**06 02 29.1**	**-1.0**
	1.0nm,0.8s,mb3.4								
CHGN	**Chignik**	**26.80**	**316**	*e*P		**P**	**06 02 32.9**	**-5.6**
ILAR	**Eielson Array**	**26.99**	**339**	P		**P**	**06 02 40.5**	**+0.3**
	1.9nm,1.1s,mb3.5,baz=152,slow=7.1,SNR=13								
ILAR				PcP		PcP	06 06 01.4	+0.5	
	0.4nm,0.8s,baz=148,slow=1.8,SNR=4.5								
TRF	**Thorofare Moun**	**27.05**	**334**	*e*P		**P**	**06 02 42.0**	**+1.3**
	5.1nm,1.0s,mb4.0								
PARMO	**Parma**	**27.10**	**88**	*e*P		**P**	**06 02 39.9**	**-1.5**
INK	**Inuvik**	**27.66**	**353**	LR		LR	06 14 58.4		
	comp=Z,605nm,18.6s,MS4.2,baz=9.9,slow=39								
BPAW	**Bear Paw Mtn.**	**27.72**	**335**	*e*P		**P**	**06 02 48.5**	**+1.8**
	9.1nm,0.8s,mb4.5								
WVT	**Waverly**	**28.74**	**88**	*e*P		**P**	**06 02 54.5**	**-1.6**
	22nm,2.0s,mb4.5								
BLO	**Bloomington**	**28.75**	**81**	*e*P		**P**	**06 02 52.7**	**-3.5**
	15nm,0.9s,mb4.7								
TTA	**Tatalina**	**28.75**	**330**	*e*P		**P**	**06 02 58.1**	**+2.2**
LRAL	**Lakeview Retre**	**30.61**	**93**	*e*P		**P**	**06 03 11.0**	**-1.7**
	4.6nm,1.0s,mb4.3								
CPCT	**Cooper Cave**	**31.49**	**87**	*e*P		**P**	**06 03 19.3**	**-1.1**
GOGA	**Godfrey**	**33.11**	**90**	*e*P		**P**	**06 03 33.2**	**-1.5**
	7.7nm,0.6s,mb4.8								
MCWV	**Mont Chateau**	**33.56**	**78**	*e*P		**P**	**06 03 37.1**	**-1.4**
	82nm,2.3s,mb5.2								
BLA	**Blacksburg**	**33.93**	**82**	*e*P		**P**	**06 03 40.5**	**-1.3**
	12nm,0.8s,mb4.9								
VWCC	**Virginia Weste**	**34.25**	**82**	*e*P		**P**	**06 03 43.3**	**-1.2**
BINY	**Binghamton**	**35.67**	**72**	*e*P		**P**	**06 03 55.0**	**-1.7**
	45nm,1.4s,mb5.2								
CBN	**Corbin**	**35.85**	**79**	*e*P		**P**	**06 03 57.0**	**-1.3**
	15nm,0.8s,mb5.0								
CNNC	**Cliffs of the**	**36.56**	**84**	*e*P		**P**	**06 04 03.7**	**-0.8**
	22nm,0.4s,mb5.3								
PKME	**Peaks-Kenny Pk**	**39.60**	**65**	*e*P		**P**	**06 04 28.7**	**-1.2**
	147nm,2.4s,mb5.3								
SCHQ	**Schefferville**	**39.63**	**50**	P		**P**	**06 04 28.7**	**-1.4**
SCHQ				LR		LR	06 21 25.6		
SCHQ	**Schefferville**	**39.63**	**50**	P		**P**	**06 04 28.7**	**-1.4**
	16nm,0.7s,mb4.9,baz=273,slow=8.5,SNR=18								
SCHQ				LR		LR	06 21 25.6		
	comp=Z,757nm,18.1s,MS4.6,baz=216,slow=37								
TGUH	**Tegucigalpa,Un**	**41.96**	**119**	*e*P		**P**	**06 04 50.0**	**+0.4**
	28nm,1.1s,mb4.8								
SDDR	**Presa de Saban**	**50.03**	**100**	*e*P		**P**	**06 05 53.6**	**+0.3**
	20nm,0.9s,mb5.2								
SUMG	**Summit**	**50.06**	**23**	*e*P		**P**	**06 05 53.3**	**+0.5**
	12nm,0.9s,mb4.9								
SUMG	**Summit**	**50.06**	**23**	*i* P		**P**	**06 05 53.7**	**+0.9**
	9.8nm,0.9s,mb4.8								
ICM	**Isla Caja Muer**	**54.26**	**97**	*e*P		**P**	**06 06 24.4**	**-0.3**
SJG	**San Juan**	**54.40**	**97**	*e*P		**P**	**06 06 25.2**	**-0.5**
	24nm,0.9s,mb5.1								
ROSC	**El Rosal**	**57.34**	**115**	P		**P**	**06 06 47.5**	**+0.7**
	1.2nm,0.3s,mb4.3,baz=315,slow=5.8,SNR=4.8								
ROSC				LR		LR	06 34 27.9		
	comp=Z,45nm,21.9s,MS3.5,baz=11,slow=39								
OTAV	**Otavalo**	**58.05**	**122**	*e*P		**P**	**06 06 53.5**	**+1.7**
	5.6nm,0.6s,mb4.8								
PPT	**Papeete**	**62.98**	**207**	*e*LR		LR	06 26 09.0		
	156nm,25.5s								
PPT	**Papeete**	**62.98**	**207**	LR		LR	06 30 43.3		
	comp=Z,170nm,18.7s,MS4.2,baz=340,slow=32								
RKT	**Rikitea**	**64.73**	**191**	*e*LR		LR	06 26 55.4		
	115nm,23.5s								
NOA	**NORSAR Array B**	**71.89**	**21**	P		**P**	**06 08 21.1**	**+0.1**
	3.4nm,0.8s,mb4.3,baz=326,slow=6.1,SNR=7.9								
NOA				LR		LR	06 40 04.3		
	comp=Z,49nm,18.8s,MS3.8,baz=335,slow=36								
MDJ	**Mudanjiang**	**72.01**	**314**	P		**P**	**06 08 21.1**	**-1.0**
MDJ				pmax		pmax			
	comp=Z,5.0nm,1.0s,mb4.4								
MDJ				pmax		pmax			
	comp=Z,38nm,3.7s								
KAF	**Kangasniemi**	**74.36**	**14**	*e*p		**P**	**06 08 35.3**	**-0.4**
	comp=Z,5.2nm,0.7s,mb4.6								
JOF	**Joensuu**	**74.43**	**11**	*e*p		**P**	**06 08 35.3**	**-0.8**
	comp=Z,4.0nm,0.7s,mb4.5								
CN2	**Changchun**	**74.78**	**315**	*e*P		**P**	**06 08 33.3**	**-5.2**
FINES	**FINESS Array B**	**74.94**	**14**	P		**P**	**06 08 39.0**	**0.0**
	comp=Z,4.3nm,0.6s,mb4.5,baz=342,slow=3.7,SNR=16								
FINES				LR		LR	06 41 45.1		
	comp=Z,136nm,19.0s,MS4.3,baz=349,slow=36								
LPAZ	**La Paz**	**77.20**	**125**	P		**P**	**06 08 52.7**	**+0.2**
LPAZ	**La Paz**	**77.20**	**125**	P		**P**	**06 08 52.7**	**+0.2**
	comp=Z,1.0nm,0.6s,mb3.9,baz=320,slow=5.0,SNR=7.6								
BAIF	**Baives**	**78.54**	**31**	*e*P		**P**	**06 08 59.8**	**+0.2**
	comp=Z,7.3nm,0.8s,mb4.3								
BAIF	**Baives**	**78.54**	**31**	*e*P		**P**	**06 08 59.8**	**+0.2**
	comp=Z,3.7nm,0.8s,mb4.4								
GIVF	**Givet**	**78.74**	**31**	*e*P		**P**	**06 09 00.8**	**+0.1**
LOR	**Lormes**	**80.62**	**33**	*e*P		**P**	**06 09 11.0**	**0.0**
	comp=Z,7.0nm,0.9s,mb4.3								
LOR	**Lormes**	**80.62**	**33**	*e*P		**P**	**06 09 11.0**	**0.0**
	comp=Z,3.5nm,0.9s,mb4.3								
SSF	**Saint Saulge**	**80.64**	**33**	*e*P		**P**	**06 09 11.7**	**+0.6**
CLL	**Collm**	**80.65**	**26**	*e*P		**P**	**06 09 11.0**	**0.0**
CLL	**Collm**	**80.65**	**26**	*e*P		**P**	**06 09 11.0**	**0.0**
CLL				*e*pP		pP	06 09 17.0	-3.8	
CLL				LmV			06 47 00.0		
	comp=Z,100nm,18.1s								
SONM	**Songino Array**	**80.68**	**328**	P		**P**	**06 09 12.7**	**+1.5**
	comp=Z,0.2nm,0.3s,mb3.5,baz=66,slow=3.6,SNR=2.4								
TCF	**Toulx Ste Croi**	**80.71**	**34**	*e*P		**P**	**06 09 11.2**	**-0.3**
	comp=Z,5.1nm,0.7s,mb4.3								
TCF	**Toulx Ste Croi**	**80.71**	**34**	*e*P		**P**	**06 09 11.2**	**-0.3**
	comp=Z,2.5nm,0.7s,mb4.2								
AVF	**Avril sur Loir**	**80.80**	**33**	*e*P		**P**	**06 09 11.5**	**-0.4**
CDF	**Champ du Feu**	**81.05**	**30**	*e*P		**P**	**06 09 13.5**	**+0.3**
BRG	**Berggiesshubel**	**81.33**	**25**	*e*P		**P**	**06 09 14.9**	**+0.3**
	comp=Z,4.5nm,0.8s,mb4.4								
HINF	**Hinteralfeld**	**81.38**	**31**	*e*P		**P**	**06 09 15.4**	**+0.4**
CAF	**Calviac**	**81.72**	**35**	*e*P		**P**	**06 09 16.5**	**-0.4**
CABF	**La Chapelle**	**82.06**	**32**	*e*P		**P**	**06 09 19.2**	**+0.6**
ETSF	**Etsaut**	**82.12**	**38**	*e*P		**P**	**06 09 18.6**	**-0.4**
BJI	**Beijing**	**82.30**	**318**	P		**P**	**06 09 20.3**	**+0.3**
BJI				S		S	06 19 35.4	+2.0	
BJI				SS		SS	06 24 54.9	+2.0	
BJI				pmax		pmax			
	comp=Z,5.0nm,0.6s								
BJI				pmax		pmax			
	comp=Z,85nm,5.0s								
BJI				LR		LR			
	comp=N,150nm,17.8s								
BJI				LR		LR			
	comp=E,180nm,13.0s								
BJI				LR		LR			
	comp=Z,120nm,26.0s								
ESDC	**Sonseca Array**	**82.93**	**42**	P		**P**	**06 09 23.2**	**0.0**
	comp=Z,0.9nm,0.7s,mb3.9,baz=316,slow=5.6,SNR=8.1								
ESDC				LR		LR	06 44 16.2		
	comp=Z,94nm,18.1s,MS4.2,baz=350,slow=34								
MBDF	**Montbardon**	**83.88**	**33**	*e*P		**P**	**06 09 28.9**	**+0.9**
HHC	**Hu-ho-hao-te**	**83.95**	**321**	*e*P		**P**	**06 09 28.6**	**+0.1**
HHC				pP		pP	06 09 32.8	-5.5	
HHC				sP		sP	06 09 35.8	-6.1	
HHC				PP		PP	06 12 42.8	+1.2	
HHC				S		S	06 19 48.5	-1.7	
HHC				SS		SS	06 25 18.8	+1.5	
HHC				pmax		pmax			
	comp=Z,8.0nm,0.9s								
HHC				pmax		pmax			
	comp=Z,52nm,4.8s								
HHC				LR		LR			
	comp=N,260nm,13.2s								
HHC				LR		LR			
	comp=E,190nm,11.1s								
HHC				LR		LR			
	comp=Z,170nm,17.2s								
BVAR	**Borovoye Array**	**85.34**	**351**	P		**P**	**06 09 36.0**	**+0.8**
	comp=Z,1.1nm,0.7s,mb4.1,baz=5.2,slow=4.9,SNR=5.8								
AKASG	**Malin Array Be**	**85.61**	**17**	P		**P**	**06 09 36.2**	**-0.5**
AKASG				LR		LR	06 47 18.5		
AKASG	**Malin Array Be**	**85.61**	**17**	P		**P**	**06 09 36.2**	**-0.5**
	comp=Z,2.7nm,0.7s,mb4.6,baz=336,slow=4.1,SNR=8.6								
AKASG				LR		LR	06 47 18.5		
	comp=Z,51nm,20.6s,MS3.9,baz=185,slow=35								
NJ2	**Nanjing**	**86.78**	**311**	*e*P		**P**	**06 09 44.3**	**+1.5**
NJ2				pmax		pmax			
	comp=Z,20nm,0.5s								
MKAR	**Makanchi Array**	**89.29**	**342**	P		**P**	**06 09 55.2**	**+0.7**
	comp=Z,0.2nm,0.6s,mb3.6,baz=27,slow=3.5,SNR=3.1								
DZM	**Mont Dzumac**	**89.86**	**240**	*e*LR		LR	06 38 37.9		
	comp=Z,101nm,21.4s								
WMQ	**Urumqi**	**90.65**	**337**	P		**P**	**06 10 02.1**	**+1.2**
WMQ				pP		pP	06 10 06.9	-3.9	
WMQ				sP		sP	06 10 09.1	-5.2	
WMQ				pmax		pmax			
	comp=Z,6.0nm,1.2s								
WMQ				pmax		pmax			
	comp=Z,58nm,4.2s								
WMQ				LR		LR			
	comp=N,160nm,16.7s								
WMQ				LR		LR			
	comp=Z,160nm,17.0s								
KEST	**Kesra**	**92.42**	**36**	LR		LR	06 51 00.7		
	comp=Z,34nm,18.9s,MS3.8,baz=206,slow=35								
CD2	**Chengdu**	**95.68**	**320**	P		**P**	**06 10 24.1**	**-0.2**
CD2				pP		pP	06 10 28.5	-5.7	
CD2				sP		sP	06 10 30.8	-7.0	
CD2				PP		PP	06 14 15.1	0.0	
CD2				SKS			06 20 57.4		
CD2				S		S	06 21 34.6	-4.9	
CD2				SS		SS	06 28 03.8	-3.6	
CD2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
CD2				pmax		pmax			
	comp=Z,100nm,5.9s								
CD2				LR		LR			
	comp=N,310nm,17.6s								
CD2				LR		LR			
	comp=E,340nm,19.6s								
CD2				LR		LR			
	comp=Z,370nm,20.6s								
GYA	**Guiyang**	**97.83**	**315**	P		**P**	**06 10 33.8**	**-0.3**
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s								
KMI	**Kunming**	**100.96**	**318**	P		Pdif	06 10 49.0	+1.2	
KMI				pmax		pmax			
	comp=Z,10.0nm,0.7s								
BOSA	**Boshof**	**152.17**	**73**	PKPbc		PKPbc	06 16 54.1	+0.2	
	comp=Z,3.0nm,0.6s,baz=328,slow=4.3,SNR=11								

*IDC **17** 05:59:50.1±1.0,31.49S×177.79W,h0km,mb4.2/6, mb1 4.4/7,mb1mx4.2/14,mbtmp4.2/7,ML3.6/1,MS3.6/2, Ms1 3.5/2,ms1mx3.0/21,Error ellipse: s-maj=31.6km s-min=26.0km az=160.0*

*NEIC **17** 05:59:57.5±0.9,31.73S×177.89W,h55km,mb4.6/1,Error ellipse: s-maj=22.6km s-min=18.7km az=124.0*

ISC 17 05:59:52.2±5.8,31.75S±0.1×177.9W±0.2,h9km±37km, n18,σ1°15/14,mb4.2/6,MS3.5/2,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**7.56**	**208**	*e*P	**Pn**	**06 01 39.8**	**-2.9**
MWZ	**Matawai**	**7.56**	**208**	*e*PN	**Pn**	**06 01 39.8**	**-2.9**
URZ	**Urewera**	**7.68**	**211**	Pn	**Pn**	**06 01 45.0**	**+0.8**
	0.9nm,0.3s,baz=39,slow=6.5,SNR=4.6						
URZ				Sn	**Sn**	**06 03 10.8**	**-0.5**
	13nm,0.3s,baz=87,slow=18,SNR=12						
BFZ	**Birch Farm**	**10.09**	**206**	SN	**Sn**	**06 04 04.6**	**-5.9**
HOWZ	**Holdsworth Sta**	**10.56**	**208**	SN	**Sn**	**06 04 15.7**	**-6.4**
CTA	**Charters Tower**	**34.12**	**281**	P	**P**	**06 06 36.8**	**-0.7**
	3.9nm,0.8s,mb4.4,baz=108,slow=15,SNR=4.2						
CTA				LR	LR	06 18 58.4	
	comp=Z,72nm,18.1s,MS3.5,baz=50,slow=34						
CTAO	**Charters Tower**	**34.12**	**281**	*e*P	**P**	**06 06 37.1**	**-0.4**
	4.4nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**34.28**	**259**	P	**P**	**06 06 40.0**	**+1.3**
	2.1nm,0.6s,mb4.3,baz=106,slow=14,SNR=6.0						
STKA				LR	LR	06 17 36.6	
	comp=Z,102nm,19.3s,MS3.6,baz=203,slow=31						
ASAR	**Alice Springs**	**43.14**	**268**	P	**P**	**06 07 53.3**	**+0.1**
	0.9nm,0.4s,mb3.9,baz=107,slow=7.4,SNR=14						
WRA	**Warramunga Ar**	**44.25**	**273**	P	**P**	**06 08 02.2**	**0.0**
WRA	**Warramunga Ar**	**44.25**	**273**	P	**P**	**06 08 02.2**	**0.0**
	2.7nm,0.4s,mb4.3,baz=111,slow=8.0,SNR=20						
QSPA	**South Pole Qui**	**58.37**	**180**	P	**P**	**06 09 49.1**	**+1.8**
	2.7nm,1.0s,mb4.2,baz=53,slow=2.1,SNR=7.5						
NVAR	**Mina Array Bea**	**89.17**	**43**	P	**P**	**06 12 46.9**	**-1.2**
	1.2nm,1.0s,mb4.2,baz=231,slow=6.3,SNR=7.3						
KAF	**Kangasniemi**	**145.84**	**340**	*e*p	PKPdf	06 19 28.2	-2.4
	1.3nm,0.4s						
FINES	**FINESS Array B**	**146.43**	**339**	PKPbc	PKPbc	06 19 30.7	-2.2
	2.9nm,0.6s,baz=47,slow=4.5,SNR=25						
MMAI	**Mount Meron Ar**	**151.91**	**282**	PKPbc	PKPbc	06 19 47.7	0.0
	0.9nm,0.3s,baz=100,slow=6.0,SNR=3.5						
AKASG	**Malin Array Be**	**152.41**	**321**	PKPbc	PKPbc	06 19 46.0	-2.3
	0.3nm,0.4s,baz=45,slow=2.8,SNR=3.4						
BRTR	**Keskin Array B**	**153.29**	**296**	PKPbc	PKPbc	06 19 49.7	-0.9
	0.3nm,0.5s,baz=94,slow=4.5,SNR=3.0						

IDC 17 06:27:02.8±6.1,19.48N×145.44E,h262km±58km,mb3.1/8, mb1 3.3/9,mb1mx3.1/21,mbtmp3.1/9,Error ellipse: s-maj=39.5km s-min=23.5km az=89.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**18.15**	**341**	P	P	06 30 55.6	-0.6
	0.3nm,0.3s,baz=166,slow=9.5,SNR=4.4						
KSRS	**Korea Array**	**23.55**	**323**	P	P	06 31 49.9	+0.1
	0.4nm,0.5s,baz=151,slow=9.0,SNR=5.8						
WRA	**Warramunga Ar**	**40.66**	**196**	P	P	06 34 17.9	-0.1
	0.4nm,0.4s,baz=18,slow=8.1,SNR=3.0						
SONM	**Songino Array**	**42.39**	**321**	P	P	06 34 32.2	+0.6
	0.4nm,0.5s,baz=126,slow=7.3,SNR=2.9						
MKAR	**Makanchi Array**	**57.75**	**314**	P	P	06 36 27.1	+0.5
	0.2nm,0.3s,baz=104,slow=6.9,SNR=2.8						
KURK	**Kurchatov**	**60.53**	**318**	P	P	06 36 45.8	+0.2
	0.5nm,0.4s,baz=92,slow=7.2,SNR=3.5						
ILAR	**Eielson Array**	**63.05**	**26**	P	P	06 37 02.4	+0.3
	0.2nm,0.5s,baz=254,slow=5.8,SNR=4.9						
ARCES	**ARCESS Array B**	**81.68**	**342**	P	P	06 38 51.9	+0.3
	3.5nm,1.0s,baz=69,slow=4.0,SNR=5.7						
FINES	**FINESS Array B**	**86.08**	**335**	P	P	06 39 13.1	-0.8
	0.6nm,0.3s,baz=71,slow=3.9,SNR=16						

*IDC **17** 06:28:54.6±0.6,12.94N×124.37E,h0km,mb4.2/19, mb1 4.3/19,mb1mx4.3/25,mbtmp4.2/19,MS3.8/12, Ms1 3.8/12,ms1mx3.5/32,Error ellipse: s-maj=25.1km s-min=14.7km az=66.0*

*BJI **17** 06:28:55.4,12.71N×124.44E,h29km,mB4.9/6,mb4.6/22, Ms4.1/11,Ms7 4.0/9*

*MAN **17** 06:28:56,13.03N×124.37E,h11km,mb4.9,ML3.9,MS3.9*

MAN INTENSITY II - CABID-AN IROSIN SORSOGON; LEGASPI CITY.

*ISCJB **17** 06:28:58.4±0.6,13.05N±0.03×124.39E±0.04,h33km±4km, mb4.5/45,MS3.9/15,Error ellipse: s-maj=6.7km s-min=4.1km az=171.2*

*NEIC **17** 06:28:59.7±0.3,13.02N×124.33E,mb4.7/19,Error ellipse: s-maj=11.3km s-min=7.0km az=66.0*

NEIC Felt [II PIVS] at Irosin and Legaspi, Luzon.

*DJA **17** 06:29:07,13.19N×124.38E,h65km,mb4.8/13*

ISC 17 06:28:59.4±0.7,13.02N±0.03×124.38E±0.04,h28km±5km, h30km±2.8km:pP-P,n104,σ1°07/98,mb4.5/45,MS3.9/15, 5C-3D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.58**	**151**	*e*P	**Pb**	**06 29 09.4**	**-1.7**
CNP				*e*S	**Sb**	**06 29 20.2**	**+1.2**
PVCP	**Virac**	**0.61**	**339**	*e*P	**Pb**	**06 29 07.6**	**-3.9**
PVCP				*e*S	**Sb**	**06 29 17.6**	**-2.2**
MMPH	**Masbate**	**0.99**	**228**	*i* P	**Pn**	**06 29 15.6**	**-1.8**
MMPH				*e*S	**Sn**	**06 29 29.9**	**-0.5**
AUQP	**San Andres**	**1.68**	**280**	*e*P	**Pn**	**06 29 29.2**	**+2.3**
OCLP	**Ormoc**	**1.97**	**173**	*e*P	**Pn**	**06 29 35.0**	**+4.1**
GQP	**Guinayangan**	**2.07**	**295**	*i* eP	**Pn**	**06 29 33.0**	**+0.7**
GQP				*e*S	**Sn**	**06 30 01.8**	**+4.6**
RCP	**Roxas**	**2.16**	**228**	*e*P	**Pn**	**06 29 33.2**	**-0.3**
OTRP	**Odiongan**	**2.39**	**254**	*e*P	**Pn**	**06 29 36.1**	**-0.5**
BOAC	**Boac**	**2.50**	**280**	*e*P	**Pn**	**06 29 38.8**	**+0.6**
LLP	**Lapu-Lapu**	**2.72**	**189**	*e*P	**Pn**	**06 29 40.5**	**-0.7**
LLP				*e*S	**Sn**	**06 30 12.6**	**-0.5**
POLP	**Polilio Island**	**2.91**	**306**	*e*P	**Pn**	**06 29 46.2**	**+2.4**
GUIM	**Jordan**	**2.96**	**216**	*e*P	**Pn**	**06 29 44.7**	**+0.2**
LQP	**Lukban**	**2.96**	**292**	*e*P	**Pn**	**06 29 51.7**	**+7.1**
TBP	**Tagbilaran**	**3.35**	**189**	*e*P	**Pn**	**06 29 49.1**	**-0.7**
TGY	**Tagaytay City**	**3.51**	**288**	Pn	**Pn**	**06 29 54.9**	**+2.8**
	77nm,0.3s,baz=144,slow=13,SNR=8.1						
BALP	**Baler**	**3.83**	**315**	*e*P	**Pb**	**06 30 06.6**	**+0.3**
LUBP	**Lubang**	**4.08**	**280**	*e*P	**Pn**	**06 30 05.3**	**+5.4**
BUSP	**Coron**	**4.20**	**257**	*e*P	**Pn**	**06 30 01.7**	**+0.1**
CAUP	**Cauayan**	**4.61**	**328**	*e*P	**Pn**	**06 30 06.8**	**-0.5**
BUKP	**Musuan**	**5.16**	**172**	*e*P	**Pn**	**06 30 16.8**	**+2.1**
ENPP	**El Nido**	**5.17**	**250**	*e*P	**Pn**	**06 30 15.1**	**+0.2**
PAGZ	**Pagadian**	**5.24**	**191**	*e*P	**Pn**	**06 30 16.9**	**+1.0**
DAV	**Davao City (W)**	**6.03**	**169**	Pn	**Pn**	**06 30 29.1**	**+2.4**
DAV	**Davao City (W)**	**6.03**	**169**	Pn	**Pn**	**06 30 30.8**	**+4.0**
	23nm,0.3s,baz=270,slow=16,SNR=1.6						
MYLDM	**Lahad Datu**	**9.71**	**217**	P	**Pn**	**06 31 21.4**	**+4.1**
	49nm,1.0s						
KKM	**Kota Kinabalu**	**10.62**	**230**	P	Px	06 31 41.0	
	501nm16nm,1.1s						
YULB	**Yu-li**	**10.72**	**345**	*e*Pn	**Pn**	**06 31 28.3**	**-2.8**
	35nm,1.3s						
TPUB	**Ta-pu**	**10.82**	**341**	*e*Pn	**Pn**	**06 31 33.5**	**+1.0**
	25nm,0.8s						
SSLB	**Suanglung**	**11.19**	**344**	*e*Pn	**Pn**	**06 31 38.1**	**+0.6**
	25nm,0.8s						
MRSI	**Marisa**	**12.70**	**191**	P	Px	06 32 18.1	
PCI	**Palu**	**14.55**	**198**	P	**Pn**	**06 32 33.3**	**+10**
	66nm,1.3s						
SBUM	**Sibu**	**15.97**	**230**	P	**Pn**	**06 32 48.1**	**+5.9**
	594nm46nm,1.4s						
TTSI	**Tana Toraja**	**16.59**	**196**	P	**Pn**	**06 32 56.5**	**+6.4**
	58nm,0.9s		

comp=Z,78nm,21.0s,MS3.7,baz=172,slow=38
ZAA0 Zalesovo Array 51.34 331 *e*P **P 06 38 00.2 -0.9**
ZAA0 *e*pP pP 06 38 09.6 -0.1
ZALV Zalesovo Beam 51.34 331 P **P 06 38 00.8 -0.2**
ZALV LR LR 07 01 20.4
comp=Z,79nm,18.0s,MS3.8,baz=72,slow=38
TKM2 Tokmak 2 51.41 315 *e*P **P 06 37 59.9 -2.0**
comp=Z,4.8nm,0.9s,mb4.4
UCH Uchtor 51.94 314 *e*P **P 06 38 06.8 +1.0**
comp=Z,10nm,0.9s,mb4.8
AML Almayashu 52.48 313 *e*P **P 06 38 11.1 +1.2**
comp=Z,8.7nm,1.0s,mb4.6
EKS2 Erkin-Say 52.59 314 *e*P **P 06 38 11.2 +0.6**
comp=Z,5.7nm,0.9s,mb4.5
KURK Kurchatov 52.76 325 *e*P **P 06 38 11.8 0.0**
comp=Z,26nm,0.8s,mb5.2
KURK *e*pP pP 06 38 20.6 +0.1
KURK Kurchatov 52.76 325 P **P 06 38 12.0 +0.2**
comp=Z,8.9nm,0.8s,mb4.7,baz=118,slow=8.7,SNR=40
KBL Kabul 54.27 303 *e*P **P 06 38 21.4 -1.7**
comp=Z,7.6nm,0.7s,mb4.7
BVAR Borovoye Array 58.36 325 P **P 06 38 51.7 -0.3**
comp=Z,6.0nm,0.9s,mb4.6,baz=129,slow=8.5,SNR=22
BRVK Borovoye 58.43 325 *e*P **P 06 38 53.0 +0.6**
comp=Z,18nm,1.0s,mb5.0
ABKAR Akbulak array 58.59 319 *e*P **P 06 39 27.2 -0.3**
comp=Z,6.4nm,0.8s,mb4.7
ARU Arti 65.92 326 *e*P **P 06 39 40.5 -2.1**
comp=Z,11nm,0.7s,mb5.0
RDF Al-Radifah 72.40 296 *e*P **P 06 40 22.2 -1.1**
RDF AMb AMB 06 40 26.8
comp=Z,24nm,0.9s,mb5.1
NAY Al-Naaiem 72.63 297 *e*P **P 06 40 23.4 -1.4**
NAY AMb AMB 06 40 32.0
comp=Z,12nm,0.8s,mb4.9
KDAK Kodiak Island 75.38 33 P **P 06 40 40.1 -0.1**
comp=Z,2.8nm,0.8s,mb4.2,baz=172,slow=14,SNR=2.8
BPAW Bear Paw Mtn. 76.05 27 *e*P **P 06 40 44.6 +0.7**
comp=Z,14nm,0.8s,mb5.0
COLD Coldfoot 76.32 24 *e*P **P 06 40 46.5 +1.1**
comp=Z,3.9nm,0.8s,mb4.4
MCK McKinley 76.96 27 *e*P **P 06 40 48.3 -0.8**
comp=Z,12nm,0.9s,mb4.8
ILAR Eielson Array 77.79 26 P **P 06 40 53.5 -0.3**
comp=Z,1.1nm,0.8s,mb3.9,baz=252,slow=6.0,SNR=5.5
PAX Paxson 78.58 28 *e*P **P 06 40 58.8 +0.7**
comp=Z,2.8nm,0.9s,mb4.2
ASF Jabal al Asfar 81.08 301 LR LR 07 24 26.0
comp=Z,29nm,19.1s,MS3.7,baz=27,slow=41
MMAI Mount Meron Ar 82.18 302 P **P 06 41 18.8 +0.7**
comp=Z,0.6nm,0.3s,mb4.0,baz=91,slow=5.0,SNR=4.2
BRTR Keskin Array B 82.37 309 P **P 06 41 18.6 -0.3**
comp=Z,0.5nm,0.6s,mb3.6,baz=95,slow=5.5,SNR=3.9
INK Inuvik 82.42 22 *e*P **P 06 41 18.8 +0.1**
comp=Z,8.0nm,1.0s,mb4.6
INK Inuvik 82.42 22 P **P 06 41 18.5 -0.2**
comp=Z,4.8nm,1.0s,mb4.4,baz=278,slow=11,SNR=3.9
FINES FINESS Array B 82.60 331 P **P 06 41 19.9 +0.2**
comp=Z,1.7nm,0.9s,mb4.1,baz=93,slow=2.8,SNR=4.0
FINES LR LR 07 21 23.9
comp=Z,63nm,19.6s,MS4.0,baz=355,slow=38
AKASG Malin Array Be 83.27 320 P **P 06 41 22.1 -1.3**
comp=Z,1.1nm,0.7s,mb4.0,baz=63,slow=5.2,SNR=5.0
AKASG LR LR 07 22 39.3
comp=Z,60nm,18.8s,MS4.0,baz=75,slow=39
TESR 85.91 317⇑ *i*P **P 06 41 36.1 -0.7**
VRI Vrincioaia 86.01 316⇑ *i*P **P 06 41 37.8 +0.4**
BURAR Bucovina Array 86.57 318⇑ *i*P **P 06 41 39.8 -0.2**
BUR08 Bucovina Ar. S 86.57 318 *e*P **P 06 41 40.0 -0.1**
MLR Muntele Rosu 86.64 316 LR LR 07 24 28.8
comp=Z,106nm,20.9s,MS4.2,baz=279,slow=38
MLR Muntele Rosu 86.64 316⇑ *i*P **P 06 41 40.8 +0.3**
DLBC Dease Lake 86.98 30 P **P 06 41 42.7 +0.8**
DLBC Dease Lake 86.98 30 P **P 06 41 42.7 +0.8**
comp=Z,0.7nm,0.3s,mb4.4,baz=225,slow=15,SNR=6.9
HFS Hagfors 88.77 332 LR LR 07 23 54.0
comp=Z,85nm,20.2s,MS4.2,baz=51,slow=37
NOA NORSAR Array B 89.48 333 P **P 06 41 53.4 -0.3**
comp=Z,1.1nm,0.9s,mb4.2,baz=69,slow=4.9,SNR=2.7
DAVOX Davos/Dischmat 96.61 321 LR LR 07 31 06.2
comp=Z,79nm,20.9s,MS4.2,baz=85,slow=39
BORG Borgarnes 98.23 346 LR LR 07 29 55.8
comp=Z,48nm,18.7s,MS4.0,baz=14,slow=37
NVAR Mina Array Bea 102.28 46 P Pdif 06 42 53.0 +1.0
comp=Z,0.2nm,0.7s,baz=294,slow=4.5,SNR=2.1
TXAR Lajitas Array 117.38 47 PKP PKPdf 06 47 43.4 +0.5
comp=Z,0.6nm,0.9s,baz=2.9,slow=2.5,SNR=5.8

IDC ***17*** *06:32:10.4±2.3, 12.°96N×124.°29E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/20, mbtmp3.6/5, MS3.4/2, Ms1 3.4/2, ms1mx2.7/32, Error ellipse: s-maj=226.6km s-min=20.4km az=66.0*
ISCJB ***17*** *06:32:11.9±1.0, 13.°13N±0.°08×124.°5E±0.°1, h26km±7km, mb3.7/5, Error ellipse: s-maj=23.2km s-min=6.7km az=148.5*
MAN ***17*** *06:32:11, 13.°06N×124.°29E, h1km, mb4.3, ML3.1, MS2.9*
ISC 17 06:32:12.3±0.9, 13.°09N±0.°08×124.°4E±0.°1, h14km±7km, n10, σ0.°73/11, mb3.7/5, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.56**	**333**	*e*P		**P**	**Pg**	**06 32 22.6**	**-0.8**
PVCP				*e*S			**Sg**	**06 32 31.1**	**+0.1**
CNP	**Catarman**	**0.62**	**157**	*e*P		**P**	**Pg**	**06 32 24.6**	**+0.1**
CNP				*e*S			**Sg**	**06 32 33.0**	**+0.3**
GQP	**Guinayangan**	**2.08**	**293**⇓	*e*P		**P**	**Pn**	**06 32 47.9**	**+1.0**
GQP				*e*S			**Sn**	**06 33 12.1**	**-0.5**
GUMO	**Guam**	**19.91**	**86**	LR		LR	LR	06 42 49.8	
	comp=Z,52nm,20.1s,baz=20,slow=32								
WRA	**Warramunga Arr**	**34.24**	**163**	P		**P**	**P**	**06 38 57.0**	**-1.0**
	0.5nm,0.5s,mb3.7,baz=344,slow=8.9,SNR=2.8								
ASAR	**Alice Springs**	**37.69**	**166**	P		**P**	**P**	**06 39 27.0**	**-0.5**
	0.6nm,0.4s,mb3.7,baz=336,slow=7.0,SNR=8.3								
MKAR	**Makanchi Array**	**48.70**	**322**	P		**P**	**P**	**06 40 56.0**	**-0.3**
	0.5nm,0.7s,mb3.7,baz=116,slow=7.5,SNR=3.0								
ZALV	**Zalesovo Beam**	**51.30**	**331**	P		**P**	**P**	**06 41 16.0**	**+0.1**
	0.5nm,0.5s,mb3.7,baz=123,slow=5.3,SNR=2.4								
KURK	**Kurchatov**	**52.73**	**325**	P		**P**	**P**	**06 41 28.2**	**+1.6**
	0.5nm,0.5s,mb3.7,baz=125,slow=8.0,SNR=2.2								
EIL	**Elat**	**83.18**	**299**	LR		LR	LR	07 29 18.2	
	comp=Z,41nm,18.0s,baz=300,slow=41								

NIED ***17*** *06:37:00, 20.°90N×121.°50E, h17km, Mw4.0 Best double couple: M₀1.19000×10¹⁵ NP1:φ₀40.00000°, δ70.00000°, λ56.00000°. NP2:φ₀284.00000°, δ39.00000°, λ147.00000°.*
IDC ***17*** *06:37:18.3±1.0, 21.°31N×121.°42E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/21, mbtmp3.7/7, MS3.4/1, Ms1 3.4/1, ms1mx2.4/38, Error ellipse: s-maj=58.5km s-min=19.5km az=67.0*
JMA ***17*** *06:37:19.7±0.3, 20.°95N×121.°47E, h0km, M4.4*
NEIC ***17*** *06:37:20.1±0.7, 21.°19N×121.°10E, h10km, MG4.4(JMA), Error ellipse: s-maj=26.2km s-min=9.5km az=85.0*
ISCJB ***17*** *06:37:21.0±2.3, 21.°14N±0.°07×120.°98E±0.°07, h30km±18km, mb3.6/7, Error ellipse: s-maj=14.5km s-min=7.7km az=139.6*
ISC 17 06:37:20.9±2.5, 21.°15N±0.°07×120.°94E±0.°08, h14km±16km, n22, σ1.°09/27, mb3.6/7, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.67**	**4**	*e*Pn		**P**	**Pn**	**06 37 48.1**	**-1.5**
TPUB	**Ta-pu**	**2.16**	**353**	*e*Pn		**P**	**Pn**	**06 37 55.5**	**-0.9**
YULB	**Yu-li**	**2.25**	**8**	*e*Pn		**P**	**Pn**	**06 37 55.6**	**-2.1**
SSLB	**Suanglung**	**2.62**	**0**	*e*Pn		**P**	**Pn**	**06 38 02.6**	**-0.2**
NACB	**Ninganchiao**	**3.07**	**11**	*e*Pn		**P**	**Pn**	**06 38 08.8**	**-0.1**
YHNB	**Yeheng**	**3.52**	**7**	*e*Pn		**P**	**Pn**	**06 38 15.2**	**+0.1**
YOJ	**Yonaguni jima**	**3.81**	**30**	P		**P**	**Pn**	**06 38 20.9**	**+1.8**
YOJ				*e*S			**Sn**	**06 39 06.5**	**+2.8**
TATO	**Taipei**	**3.84**	**8**	*e*Pn		**P**	**Pn**	**06 38 23.2**	**+3.7**
HATJ	**Hateruma jima**	**3.92**	**42**	P		**P**	**Pn**	**06 38 21.0**	**+0.3**
HATJ				*e*S			**Sn**	**06 39 05.5**	**-1.0**
IRIF	**Iriomote-Funau**	**4.09**	**39**	P		**P**	**Pn**	**06 38 23.2**	**+0.3**
IRIF				*e*S			**Sn**	**06 39 11.8**	**+1.3**
JKRS	**Kuro-shima**	**4.18**	**42**	P		**P**	**Pn**	**06 38 24.3**	**+0.1**
JKRS				*e*S			**Sn**	**06 39 12.7**	**-0.2**
JIJ	**Ishigaki jima**	**4.36**	**42**	P		**P**	**Pn**	**06 38 26.9**	**+0.3**
JIJ				*e*S			**Sn**	**06 39 16.5**	**-0.7**
JTJ	**Tarama**	**4.91**	**44**	P		**P**	**Pn**	**06 38 34.8**	**+0.6**
JTJ				*e*S			**Sn**	**06 39 30.1**	**-0.8**
KSRS	**Korea Array**	**17.34**	**19**	P		**P**	**Pn**	**06 41 22.9**	**+0.4**
	0.2nm,0.3s,baz=201,slow=10,SNR=11								
CBIJ	**Chichi jima**	**20.27**	**69**	LR		LR	LR	06 47 48.9	
	comp=Z,99nm,19.7s,baz=106,slow=32								
SONM	**Songino Array**	**29.09**	**340**	P		**P**	**P**	**06 43 21.5**	**+0.6**
	1.5nm,0.7s,mb3.8,baz=153,slow=9.7,SNR=6.6								
MKAR	**Makanchi Array**	**40.40**	**319**	P		**P**	**P**	**06 44 59.5**	**+1.1**
	0.7nm,0.6s,mb3.5,baz=114,slow=9.6,SNR=4.5								
ZALV	**Zalesovo Beam**	**42.69**	**329**	P		**P**	**P**	**06 45 16.9**	**-0.2**
	1.4nm,0.6s,mb3.9,baz=114,slow=7.1,SNR=5.7								
WRA	**Warramunga Arr**	**42.89**	**161**	P		**P**	**P**	**06 45 17.6**	**-1.5**
	0.5nm,0.6s,mb3.5,baz=345,slow=9.5,SNR=6.3								
KURK	**Kurchatov**	**44.30**	**322**	P		**P**	**P**	**06 45 30.8**	**+0.7**
	0.8nm,0.7s,mb3.6,baz=113,slow=8.9,SNR=3.4								
ASAR	**Alice Springs**	**46.30**	**163**	P		**P**	**P**	**06 45 47.5**	**+1.2**
	0.6nm,0.8s,mb3.6,baz=345,slow=6.9,SNR=4.6								
ILAR	**Eielson Array**	**72.01**	**27**	P		**P**	**P**	**06 48 41.5**	**-2.3**
	0.1nm,0.5s,mb3.0,baz=278,slow=5.2,SNR=4.5								

ISCJB ***17*** *06:48:15.6±0.4, 24.°35N±0.°02×122.°13E±0.°02, h4km±3km, Error ellipse: s-maj=2.9km s-min=2.4km az=149.0*
NEIC ***17*** *06:48:15.8±3.6, 24.°30N×122.°09E, h10km, MG3.0(JMA), Error ellipse: s-maj=36.0km s-min=9.8km az=89.0*
JMA ***17*** *06:48:16.7±0.4, 24.°88N×122.°16E, h33km, M3.0*
TAP ***17*** *06:48:17.1, 24.°36N×122.°01E, h23km, ML3.7, B*
ISC 17 06:48:16.4±0.4, 24.°35N±0.°02×122.°12E±0.°02, h10km±3km, n51, σ0.°85/91, 1C-6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.35**	**263**	P		**P**	**Pg**	**06 48 23.3**	**+0.1**
	baz=263								
EHP				*i* S			**Sg**	**06 48 28.1**	**+0.2**
	baz=263								
ENA	**Nanau**	**0.35**	**282**⇓	*i*P			**Pg**	**06 48 23.3**	**0.0**
	baz=291								
ENA				S			**Sg**	**06 48 27.8**	**-0.2**
	baz=291								
NACB	**Ninganchiao**	**0.51**	**250**	*e*Pg			**Pg**	**06 48 25.3**	**-1.0**
NACB				*e*Sg			**Sg**	**06 48 31.7**	**-1.3**
ILA	**Ilan**	**0.53**	**321**	⇑P			**Pg**	**06 48 27.5**	**+0.8**
	baz=329								
ILA				*e*S			**Sg**	**06 48 34.0**	**+0.3**
	baz=329								
TWD	**Chiawan**	**0.55**	**240**	*e*P			**Pg**	**06 48 27.1**	**+0.1**
	baz=235								
TWD				*e*S			**Sg**	**06 48 35.2**	**+1.0**
	baz=235								
TWE	**Neicheng**	**0.55**	**312**⇓	*i*P			**Pg**	**06 48 27.2**	**+0.1**
	baz=325								
TWE				S			**Sg**	**06 48 33.9**	**-0.4**
	baz=325								
ENTT	**Nioudou**	**0.58**	**300**⇓	*i*P			**Pg**	**06 48 27.5**	**-0.1**
	baz=306								
ENTT				*e*S			**Sg**	**06 48 34.6**	**-0.6**
	baz=306								
HWA	**Hwalien**	**0.60**	**231**	*e*P			**Pg**	**06 48 28.8**	**+0.8**
	baz=223								
HWA				*e*S			**Sg**	**06 48 37.9**	**+2.1**
	baz=223								
TWB1	**Santiao Chiao**	**0.66**	**350**	*e*P			**Pg**	**06 48 30.2**	**+1.0**
	baz=353								
TWB1				*e*S			**Sg**	**06 48 37.8**	**-0.1**
	baz=353								
NNS	**Nan Shan**	**0.68**	**277**	⇓P			**Pg**	**06 48 29.2**	**-0.4**
	baz=283								
NNS				*e*S			**Sg**	**06 48 37.3**	**-1.2**
	baz=283								
YHNB	**Yeheng**	**0.74**	**295**	*e*Pg			**Pg**	**06 48 30.1**	**-0.7**
YHNB				*e*Sg			**Sg**	**06 48 39.9**	**-0.6**
NSK	**Sanguang**	**0.76**	**295**⇓	*i*P			**Pg**	**06 48 30.7**	**-0.4**
	baz=299								
NSK				S			**Sg**	**06 48 39.8**	**-1.2**
	baz=299								
NWF	**Wu-fen Shan**	**0.78**	**337**	P			**Pg**	**06 48 32.1**	**+0.7**
	baz=337								
NWF				S			**Sg**	**06 48 42.4**	**+0.9**
	baz=337								
TWA	**Mucha**	**0.79**	**322**	*e*P			**Pg**	**06 48 32.1**	**+0.5**
	baz=336								
TWA				*e*S			**Sg**	**06 48 41.4**	**-0.5**
	baz=336								
WHF	**Hehuan Shan**	**0.81**	**255**	P			**Pg**	**06 48 31.6**	**-0.3**
	baz=259								
WHF				*e*S			**Sg**	**06 48 42.9**	**+0.5**
	baz=259								
YOJ	**Yonaguni jima**	**0.82**	**82**	P			**Pg**	**06 48 32.8**	**+0.6**
YOJ				S			**Sg**	**06 48 44.3**	**+1.3**
YOJ	**Yonaguni jima**	**0.82**	**82**	*e*P			**Pg**	**06 48 33.3**	**+1.1**
	baz=76								
YOJ				*e*S			**Sg**	**06 48 45.0**	**+2.1**
	baz=76								
ESL	**Shilin**	**0.82**	**229**	⇓P			**Pg**	**06 48 32.0**	**-0.3**
	baz=223								
ESL				*e*S			**Sg**	**06 48 42.9**	**-0.1**
	baz=223								
TATO	**Taipei**	**0.84**	**317**	*e*Pg			**Pg**	**06 48 32.2**	**-0.5**
TATO				*e*Sg			**Sg**	**06 48 43.2**	**-0.4**
TWT	**Tachien**	**0.86**	**264**	*e*P			**Pg**	**06 48 33.2**	**+0.1**
	baz=266								
TWT				*e*S			**Sg**	**06 48 44.2**	**-0.1**
	baz=266								
TAP1	**Taipei**	**0.87**	**322**	*e*P			**Pg**	**06 48 33.8**	**+0.6**
	baz=320								
TAP1				*e*S			**Sg**	**06 48 45.1**	**+0.6**
	baz=320								
TWS1	**Kuangyinshan**	**0.98**	**320**	*e*P			**Pg**	**06 48 35.6**	**+0.4**
	baz=338								
TWS1				*e*S			**Sg**	**06 48 48.6**	**+0.7**
	baz=338								
TWY	**Chenhua**	**1.03**	**333**	*e*P			**Pg**	**06 48 36.8**	**+0.6**
	baz=339								
TWY				*e*S			**Sg**	**06 48 49.6**	**-0.1**
	baz=339								
NCU	**National Centr**	**1.04**	**306**	*e*P			**Pg**	**06 48 36.0**	**-0.5**
	baz=315								
NCU				*e*S			**Sg**	**06 48 51.7**	**+1.6**
	baz=315								
NSTT	**Nanjuang**	**1.05**	**285**	*e*P			**Pg**	**06 48 36.6**	**-0.1**
	baz=287								
NSTT				*e*S			**Sg**	**06 48 49.9**	**-0.5**
	baz=287								
EHY	**Hungye**	**1.11**	**221**	*e*P			**Pb**	**06 48 36.4**	**-1.4**
	baz=216								
HSN	**Hsinchu**	**1.14**	**293**	*e*P			**Pb**	**06 48 37.2**	**-0.9**
	baz=298								
SSLB	**Suanglung**	**1.20**	**242**	*e*Pg			**Pg**	**06 48 37.9**	**-1.6**
SSLB				*e*Sg			**Sg**	**06 48 54.7**	**-0.4**
SMLT	**Sun Moon Lake**	**1.21**	**247**	*e*P			**Pb**	**06 48 38.5**	**-0.9**
	baz=245								
YULB	**Yu-li**	**1.22**	**218**	*e*Pg			**Pg**	**06 48 37.2**	**-2.5**
YULB				*e*Sg			**Sg**	**06 48 57.0**	**+1.5**
TWQ1	**Liyutan**	**1.23**	**270**	*e*P			**Pn**	**06 48 40.0**	**+0.3**
	baz=270								
TWQ1				*e*S			**Sb**	**06 48 55.5**	**-0.1**
	baz=270								
TYC	**Yuchr**	**1.23**	**249**	*e*P			**Pn**	**06 48 38.6**	**-1.1**
	baz=234								
TYC				*e*S			**Sb**	**06 48 55.3**	**-0.5**
	baz=234								
TWF1	**Yuli**	**1.25**	**217**	*e*P			**Pn**	**06 48 37.7**	**-2.2**
	baz=227								
TCU	**Taichung**	**1.33**	**261**	*e*P			**Pn**	**06 48 40.9**	**-0.1**
	baz=261								
TCU				*e*S			**Sb**	**06 48 59.6**	**+1.0**
	baz=261								
YUS	**Yu-Shan**	**1.37**	**231**	*e*P			**Pn**	**06 48 41.1**	**-0.5**
	baz=228								
YUS				*e*S			**Sb**	**06 48 59.1**	**-0.6**
	baz=228								
WNT	**Mingjian**	**1.39**	**250**	*e*P			**Pn**	**06 48 42.0**	**0.0**
	baz=249								
ALS	**Alishan**	**1.47**	**235**	*e*P			**Pn**	**06 48 42.9**	**0.0**
	baz=232								
IRIF	**Iriomote-Funau**	**1.47**	**90**	P			**Pn**	**06 48 42.2**	**-0.8**
IRIF				*e*S			**Sn**	**06 49 01.7**	**-0.7**
CHN5	**Tsauling**	**1.52**	**241**	P			**Pn**	**06 48 44.1**	**+0.5**
	baz=223								
CHN5				*e*S			**Sn**	**06 49 04.4**	**+0.9**
	baz=223								
HATJ	**Hateruma jima**	**1.57**	**101**	P			**Pn**	**06 48 45.6**	**+1.2**
CHN4	**Tsaushan**	**1.71**	**235**	*e*P			**Pn**	**06 48 47.3**	**+0.9**
	baz=232								
CHN4				*e*S			**Sn**	**06 49 09.5**	**+1.1**
	baz=232								
TPUB	**Ta-pu**	**1.72**	**233**	*e*Pn			**Pn**	**06 48 46.1**	**-0.3**
TPUB				*e*Sn			**Sn**	**06 49 10.9**	**+2.5**
JKRS	**Kuro-shima**	**1.73**	**93**	P			**Pn**	**06 48 46.4**	**-0.2**
JKRS				S			**Sn**	**06 49 08.7**	**-0.1**
WTP	**Ta-pu**	**1.76**	**232**	*e*P			**Pn**	**06 48 47.5**	**+0.4**
	baz=229								
WTP				*e*S			**Sn**	**06 49 10.2**	**+0.6**
	baz=229								
CHY	**Chiayi**	**1.77**	**242**	*e*P			**Pn**	**06 48 47.4**	**+0.3**
	baz=227								
JIJ	**Ishigaki jima**	**1.85**	**89**	P			**Pn**	**06 48 47.3**	**-0.9**
JIJ				*e*S			**Sn**	**06 49 09.7**	**-1.9**
CHN1	**Nanshi**	**1.86**	**232**	*e*P			**Pn**	**06 48 48.7**	**+0.3**
	baz=230								
CHN1				*e*S			**Sn**	**06 49 13.7**	**+1.6**
	baz=230								
TWM1	**Shoushan**	**2.18**	**226**	*e*P			**Pn**	**06 48 53.3**	**+0.6**
	baz=223								
EAST	**Anshuo**	**2.28**	**211**	*e*P			**Pn**	**06 48 54.3**	**+0.1**
	baz=208								
JTJ	**Tarama**	**2.37**	**83**	P			**Pn**	**06 48 55.4**	**0.0**
JTJ				*e*S			**Sn**	**06 49 24.6**	**0.0**
PNG	**Penghu**	**2.47**	**252**	*e*P			**Pn**	**06 48 55.6**	**-1.2**
	baz=251								

NEIC ***17*** *06:49:59.8, 31.°33S×71.°67W, h3km, ML3.2(GUC), After GUC.*
GUC 17 06:49:59.8±0.3, 31.°33S×71.°67W, h3km±1km, MD3.7, ML3.2, 3C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.57**	**166**⇑	*i*P			Pg	06 50 11.4	+0.6
CHNG				*i* S			Sg	06 50 20.1	+1.9
OVCH	**Ovalle**	**0.82**	**29**	P			Pg	06 50 17.0	+1.4
OVCH				*i* S			Sg	06 50 28.3	+2.2
OVCH	**Ovalle**	**0.82**	**29**⇓	*i*P			Pg	06 50 17.0	+1.4
OVCH				*i* S			Sg	06 50 28.3	+2.2
OVCH					AML	AML		06 50 31.4	
	comp=N,907nm,0.3s								
CLCH	**Cerro Calan**	**2.27**	**155**	*e*P			Pn	06 50 39.3	+1.1
CLCH				*i* S			Sn	06 51 09.1	+2.4
CLCH					AML	AML		06 51 18.3	
	comp=E,286nm,0.6s								
SAN	**Santiago**	**2.28**	**158**		AML	AML		06 51 18.3	
	comp=N,147nm,0.7s								
FCH	**Farellones**	**2.31**	**150**	*i* P			Pn	06 50 40.0	+1.3
FCH				*i* S			Sn	06 51 10.7	+3.1
FCH	**Farellones**	**2.31**	**150**	*i* P			Pn	06 50 40.0	+1.3
FCH				*i* S			Sn	06 51 10.7	+3.1
FCH					AML	AML		06 51 21.3	
	comp=E,193nm,0.3s								
ANTU	**Antumapu**	**2.40**	**159**⇑	*i*P			Pn	06 50 41.4	+1.5
ANTU				*i* S			Sn	06 51 12.9	+3.1
ANTU	**Antumapu**	**2.40**	**159**⇑	*i*P			Pn	06 50 41.4	+1.5
ANTU				*i* S			Sn	06 51 12.9	+3.1
ANTU					AML	AML		06 51 21.4	
	comp=E,202nm,0.4s								
TACH	**Talagante**	**2.40**	**165**⇓	*i*P			Pn	06 50 41.0	+1.0
TACH				*i* S			Sn	06 51 12.4	+2.6
TACH	**Talagante**	**2.40**	**165**⇓	*i*P			Pn	06 50 41.0	+1.0
TACH				*i* S			Sn	06 51 12.4	+2.6
LCO	**Las Campanas**	**2.45**	**20**	*e*Pn			Pn	06 50 40.9	+0.2
LCO				*e*Sn			Sn	06 51 13.2	+2.0
LMEL	**Las Melosas**	**2.80**	**154**⇓	*i*P			Pn	06 50 46.9	+1.4
LMEL				*i* S			Sn	06 51 22.7	+3.0
LMEL	**Las Melosas**	**2.80**	**154**⇓	*i*P			Pn	06 50 46.9	+1.4
LMEL				*i* S			Sn	06 51 22.7	+3.0
LMEL					AML	AML		06 51 35.5	
	comp=N,200nm,0.4s								

DDA ***17*** *07:05:55.9, 37.°89N×27.°51E, h10km±3km, Md2.9*
ISK ***17*** *07:05:55.4, 37.°88N×27.°47E, h6km, MD3.2*
ISCJB ***17*** *07:05:56.1±0.3, 37.°87N±0.°02×27.°50E±0.°04, h10km, Error ellipse: s-maj=4.4km s-min=2.6km az=164.3*
CSEM ***17*** *07:05:56.0±0.2, 37.°88N×27.°50E, h2km, MD2.9, Error ellipse: s-maj=5.8km s-min=3.3km az=78.0*
ISC 17 07:05:56.3±0.4, 37.°89N±0.°02×27.°51E±0.°04, h1km±5km, n40, σ0.°96/62, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.29**	**229**	*i* P			**Pg**	**07 06 02.0**	**+0.2**
GCAM				*i* S			**Sg**	**07 06 06.1**	**+0.6**
GCAM	**G?zelcaml?**	**0.29**	**229**	*i* P			**Pg**	**07 06 02.0**	**+0.2**
GCAM				*i* S			**Sg**	**07 06 06.1**	**+0.5**
AYDN	**Tasoluk**	**0.37**	**128**	*i* P			**Pg**	**07 06 03.6**	**+0.2**
AYDN				*i* P				07 06 03.8	
AYDN				*i* S			**Sg**	**07 06 08.1**	**-0.1**
AYDN	**Tasoluk**	**0.37**	**128**	*i* P			**Pg**	**07 06 03.6**	**+0.2**
AYDN				*i* S			**Sg**	**07 06 08.1**	**-0.1**
IZM	**Izmir**	**0.54**	**339**	*e*PG			**Pg**	**07 06 06.9**	**+0.2**
IZM				*e*SG			**Sg**	**07 06 14.4**	**+0.7**
IZM	**Izmir**	**0.54**	**339**	*e*Pg			**Pg**	**07 06 06.9**	**+0.2**
IZM				*e*Sg			**Sg**	**07 06 14.5**	**+0.8**
KDAG	**Bornova**	**0.55**	**340**	*i* P			**Pg**	**07 06 05.8**	**-0.9**
KDAG	**Bornova**	**0.55**	**340**	*i* P			**Pg**	**07 06 05.8**	**-1.0**
BLCB	**Balcova**	**0.62**	**323**	*e*PG			**Pg**	**07 06 08.0**	**-0.1**
BLCB				*e*SG			**Sg**	**07 06 16.3**	**+0.2**
BLCB	**Balcova**	**0.62**	**323**	*e*Pg			**Pg**	**07 06 08.0

PRRZ	Plateau Road	1.80	205	PN	Pn	07 13 07.2 +0.3
RAHZ	Arahi	2.06	186	PN	Pn	07 13 10.1 +0.4
PRGZ	Paritu Road	2.09	169	PN	Pn	07 13 10.2 0.0
KNZ	Kokohu	2.16	174	PN	Pn	07 13 10.8 -0.2
NMHZ	Naumai	2.27	191	PN	Pn	07 13 13.0 +0.8
MHGZ	Mahia Peninsul	2.32	169	PN	Pn	07 13 12.9 +0.1
BKZ	Black Stump Fm	2.40	196	PN	Pn	07 13 13.8 +0.1
MCHZ	McNeill Hill	2.62	191	PN	Pn	07 13 16.9 +0.5
TUVZ	Tukino	2.75	209	PN	Pn	07 13 18.9 +1.0
FWVZ	Far West T-bar	2.78	210	PN	Pn	07 13 19.4 +1.1
CKHZ	Cape Kidnapper	2.80	184	PN	Pn	07 13 18.3 -0.2
BHHZ	Black Hill Sta	2.81	201	PN	Pn	07 13 18.6 -0.1
WNVZ	Wahianoa	2.82	209	PN	Pn	07 13 19.7 +0.8
MOWZ	Moawhango	2.83	208	PN	Pn	07 13 19.2 +0.2
KAHZ	Kahuranaki	2.95	187	PN	Pn	07 13 20.1 -0.3
PNHZ	Pukenui	3.17	196	PN	Pn	07 13 22.4 -0.8
PXZ	Pawanui	3.18	187	PN	Pn	07 13 22.0 -1.4
WPHZ	Waipukurau	3.27	192	PN	Pn	07 13 23.4 -1.0
TSZ	Takapari Road	3.37	199	PN	Pn	07 13 24.6 -1.1
PRHZ	Porangahau	3.44	189	PN	Pn	07 13 25.6 -1.0
DVHZ	Dannevirke	3.55	195	PN	Pn	07 13 26.3 -1.6
POWZ	Post Office Ro	3.73	199	PN	Pn	07 13 29.3 -1.0
BFZ	Birch Farm	3.91	193	PN	Pn	07 13 30.7 -1.8
MRZ	Mangatainoka R	4.04	200	PN	Pn	07 13 32.2 -2.0
TIWZ	Tintock	4.07	196	PN	Pn	07 13 32.8 -1.8
HOWZ	Holdsworth Sta	4.27	199	PN	Pn	07 13 34.9 -2.4
OGWZ	Otaki Gorge	4.30	203	PN	Pn	07 13 35.6 -1.9
TMWZ	Te Maipa	4.39	195	PN	Pn	07 13 36.4 -2.3
KIW	Kapiti Island	4.42	205	PN	Pn	07 13 37.3 -1.9
MTW	Mount Morrison	4.52	198	PN	Pn	07 13 37.8 -2.7
CAW	Cannon Point	4.59	202	PN	Pn	07 13 38.9 -2.6
TRWZ	Traveller	4.71	196	PN	Pn	07 13 40.4 -2.6
MSWZ	Moikau Station	4.83	199	PN	Pn	07 13 41.7 -2.8
SNZO	South Karori	4.89	204	PN	Pn	07 13 42.4 -2.9
PLWZ	Palliser	4.97	199	PN	Pn	07 13 43.3 -3.1
TUWZ	Tuamarina	5.27	209	PN	Pn	07 13 48.0 -2.3
NNZ	Nelson	5.33	214	PN	Pn	07 13 49.1 -2.0
KHZ	Kahutara	6.28	207	PN	Pn	07 14 00.7 -2.8
MQZ	McQueen's Vall	7.72	206	SN	Sn	07 15 39.3 -10

DDA ***17*** *07:13:10.0,37°.00N×29°.18E,h20km±4km,Md3.4*
IDC ***17*** *07:13:09.9±1.4,36°.90N×29°.16E,h0km,mb3.2/1,*
mb1 3.6/4,mb1mx3.4/22,mbtmp3.4/4,ML3.4/3,Error
ellipse: s-maj=25.7km s-min=22.1km az=140.0
ISCJB ***17*** *07:13:10.6±0.5,37°.02N±0°.02×29°.16E±0°.02,h6km±4km,*
mb3.6/2,Error ellipse: s-maj=3.8km s-min=3.0km
az=178.7
ISK ***17*** *07:13:10.4,37°.01N×29°.16E,h11km,MD3.5*
NEIC ***17*** *07:13:10.0,37°.02N×29°.16E,h10km,MD3.5(ISK),After*
ISK.
CSEM ***17*** *07:13:10.4±0.2,36°.99N×29°.14E,h2km,MD3.5,Error*
ellipse: s-maj=4.3km s-min=3.0km az=11.0

ISC 17 07:13:11.3±0.4,37°.01N±0°.02×29°.16E±0°.02,h6km±3km,
n99,σ1s05/129,mb3.6/2,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.31	62	ePG		Pg	Pg	07 13 16.7	-0.6
GLHS				eSG		Sg	Sg	07 13 22.1	+0.8
GLHS	Glhisar (BURDU	0.31	62	ePg		Pg	Pg	07 13 16.7	-0.6
GLHS				eSg		Sg	Sg	07 13 22.1	+0.8
GOH	Golhisar	0.39	55	iP		Pg	Pg	07 13 17.2	-1.7
GOLH				iS		Sg	Sg	07 13 24.9	+0.9
GOLH	Golhisar	0.39	55	iP		Pg	Pg	07 13 17.2	-1.7
GOLH				iS		Sg	Sg	07 13 24.9	+0.9
TURN	Turunc	0.47	253	iP		Pg	Pg	07 13 24.4	+4.1
TURN				iS		Sg	Sg	07 13 36.6	+10
ELL	Elmali	0.66	114	ePG		Pg	Pg	07 13 22.9	-1.0
ELL				eSG		Sg	Sg	07 13 33.9	+1.4
ELL	Elmali	0.66	114	ePg		Pg	Pg	07 13 22.9	-1.1
ELL				eSg		Sg	Sg	07 13 33.9	+1.4
DNZL	Cakiroluk	0.68	353	iP		Pg	Pg	07 13 23.4	-1.0
DNZL				iS		Sg	Sg	07 13 32.9	-0.4
DNZL	Cakiroluk	0.68	353	iP		Pg	Pg	07 13 23.4	-1.0
DNZL				iS		Sg	Sg	07 13 32.9	-0.4
YER	Yerkesik	0.71	280	ePG		Pg	Pg	07 13 24.5	-0.5
YER				eSG		Sg	Sg	07 13 35.7	+1.5
YER	Yerkesik	0.71	280	ePg		Pg	Pg	07 13 24.5	-0.5
DENT	Denizli	0.74	352	ePG		Pg	Pg	07 13 24.5	-1.2
DENT	Denizli	0.74	352	ePg		Pg	Pg	07 13 24.5	-1.2
AKAS	Kas	0.86	155	iP		Pg	Pg	07 13 26.0	-1.8
AKAS				iS		Sg	Sg	07 13 42.7	+3.8
AKAS	Kas	0.86	155	iP		Pg	Pg	07 13 26.0	-1.8
KSL	Kastellorizon	0.93	158	eP		Pg	Pg	07 13 29.5	+0.4
KORT	Korkueli	0.95	90	iP		Pg	Pg	07 13 29.2	-0.4
KORT				iS		Sg	Sg	07 13 45.0	+3.0
KORT	Korkueli	0.95	90	iP		Pg	Pg	07 13 29.2	-0.4
KORT				iS		Sg	Sg	07 13 45.0	+3.0
MLSB	Milas	1.14	285	ePN		Pn	Pn	07 13 32.9	-0.9
MLSB	Milas	1.14	285	ePn		Pn	Pn	07 13 32.9	-0.9
ARG	Arkhangelos	1.15	227	eP		Pg	Pg	07 13 31.5	-1.9
AYDN	Tasoluk	1.21	303	iP		Pg	Pg	07 13 33.4	-1.1
AYDN				iS		Sg	Sg	07 13 52.4	+2.2
AYDN	Tasoluk	1.21	303	iP		Pg	Pg	07 13 33.4	-1.1
AYDN				iS		Sg	Sg	07 13 52.4	+2.3
BCK	Bucak	1.23	68	ePN		Pn	Pn	07 13 34.0	-1.0
BCK	Bucak	1.23	68	ePn		Pn	Pn	07 13 34.0	-1.0
DAT	Datca	1.30	258	ePN		Pn	Pn	07 13 34.5	-1.5
DAT	Datca	1.30	258	ePn		Pn	Pn	07 13 34.5	-1.5
KHL	Karahalli	1.34	12	ePN		Pn	Pn	07 13 35.8	-0.8
KHL	Karahalli	1.34	12	ePn		Pn	Pn	07 13 35.8	-0.8
ISP	Isparta	1.35	53	ePN		Pn	Pn	07 13 36.3	-0.5
ISP	Isparta	1.35	53	ePn		Pn	Pn	07 13 36.6	-0.1
ISP				eS		Sb	Sb	07 13 56.1	+1.5
ISP	Isparta	1.35	53	ePn		Pn	Pn	07 13 36.6	-0.2
ISP				eS		Sb	Sb	07 13 56.1	+1.5
BDRM	Kayabasi	1.37	273	iP		Pn	Pn	07 13 36.9	-0.1
BDRM				iS		Sb	Sb	07 13 56.2	+1.0
BDRM	Kayabasi	1.37	273	iP		Pn	Pn	07 13 36.9	-0.1
BDRM				iS		Sb	Sb	07 13 56.2	+1.0
KHAL	Karahalli	1.38	11	iP		Pn	Pn	07 13 35.5	-1.6
KHAL				iS		Sb	Sb	07 13 56.5	+1.1
KHAL	Karahalli	1.38	11	iP		Pn	Pn	07 13 35.5	-1.6
KHAL				iS		Sb	Sb	07 13 56.5	+1.1
BODT	Bodrum	1.48	272	ePN		Pn	Pn	07 13 37.6	-0.9
BODT	Bodrum	1.48	272	ePn		Pn	Pn	07 13 37.6	-0.9
KULA	Kula-Manisa	1.55	345	ePN		Pn	Pn	07 13 38.5	-0.9
KULA	Kula-Manisa	1.55	345	ePn		Pn	Pn	07 13 38.6	-0.9
IZM	Izmir	2.04	313	ePN		Pn	Pn	07 13 45.6	-0.7
IZM	Izmir	2.04	313	ePn		Pn	Pn	07 13 45.6	-0.6
GDZ	Gediz	2.09	7	iP		Pn	Pn	07 13 45.5	-1.3
GDZ	Gediz	2.09	7	iP		Pn	Pn	07 13 45.5	-1.4
AKHS	Akhisar	2.14	331	iP		Pn	Pn	07 13 47.2	-0.5
AKHS				iS		Sn	Sn	07 14 14.0	-0.6
AKHS	Akhisar	2.14	331	iP		Pn	Pn	07 13 47.2	-0.4
AKHS				iS		Sn	Sn	07 14 14.0	-0.6
BLCB	Balcova	2.17	310	ePN		Pn	Pn	07 13 48.0	+0.1
BLCB	Balcova	2.17	310	ePn		Pn	Pn	07 13 48.0	+0.1
ALT	Altintas	2.17	20	ePN		Pn	Pn	07 13 47.9	-0.1
ALT	Altintas	2.17	20	ePn		Pn	Pn	07 13 47.9	-0.1
KARP	Karpathos	2.18	228	eP		Pn	Pn	07 13 49.0	+0.9
BOLV	Bolvadin	2.21	39	iP		Pn	Pn	07 13 49.0	+0.4
BOLV	Bolvadin	2.21	39	iP		Pn	Pn	07 13 49.0	+0.4
GAZI	Gazipasa	2.66	106	iP		Pn	Pn	07 13 56.2	+1.5
GAZI	Gazipasa	2.66	106	iP		Pn	Pn	07 13 56.2	+1.5
HDMB	Hadim	2.67	90	ePN		Pn	Pn	07 13 55.0	+0.2
HDMB	Hadim	2.67	90	ePn		Pn	Pn	07 13 55.0	+0.2
KONT	Konya--Tatoy	2.71	69	ePN		Pn	Pn	07 13 55.4	0.0
KONT	Konya--Tatoy	2.71	69	ePn		Pn	Pn	07 13 55.4	0.0
LADK	Ladik-KONYA	2.81	64	ePN		Pn	Pn	07 13 56.4	-0.4
LADK	Ladik-KONYA	2.81	64	ePn		Pn	Pn	07 13 56.4	-0.4
CHOS	Chios island	2.82	300	eP		Pn	Pn	07 13 56.0	-0.9
KIZT	Kizilcal	2.85	48	ePN		Pn	Pn	07 13 56.8	-0.4
KIZT	Kizilcal	2.85	48	ePn		Pn	Pn	07 13 56.8	-0.5
APE	Apeiranthos	2.90	272	ePN		Pn	Pn	07 13 57.4	-0.7
APE	Apeiranthos	2.90	272	eP		Pn	Pn	07 13 58.0	-0.1
APE	Apeiranthos	2.90	272	ePn		Pn	Pn	07 13 57.4	-0.7
BALY	Balya	2.98	337	iP		Pn	Pn	07 13 59.2	+0.1
BALY				iS		Sn	Sn	07 14 35.5	+0.3
BALY	Balya	2.98	337	iP		Pn	Pn	07 13 59.2	+0.1
BALY				iS		Sn	Sn	07 14 35.5	+0.4
ZKR	Zakros	3.04	232	eP		Pn	Pn	07 14 01.5	+1.5
GONE	Gonen-Balikesi	3.24	340	ePN		Pn	Pn	07 14 02.5	-0.2
GONE	Gonen-Balikesi	3.24	340	ePn		Pn	Pn	07 14 02.5	-0.2
NPS	Neapolis	3.36	240	eP		Pn	Pn	07 14 05.0	+0.6
YLV	Yalova	3.55	3	ePN		Pn	Pn	07 14 08.0	+1.1
YLV	Yalova	3.55	3	ePn		Pn	Pn	07 14 08.0	+1.0
GULT	Gulveren	3.57	17	ePN		Pn	Pn	07 14 07.6	+0.3
GULT	Gulveren	3.57	17	ePn		Pn	Pn	07 14 07.6	+0.3
IKL	Isikli	3.72	101	ePN		Pn	Pn	07 14 09.5	+0.2
IKL	Isikli	3.72	101	ePn		Pn	Pn	07 14 09.5	+0.2
IDI	Anoyia	3.86	245	eP		Pn	Pn	07 14 12.5	+1.3
LFK	Lefkose	3.94	115	ePN		Pn	Pn	07 14 12.3	0.0
LFK	Lefkose	3.94	115	ePn		Pn	Pn	07 14 12.3	0.0
GELI	Tayfur-Gelibol	3.98	329	ePN		Pn	Pn	07 14 13.7	+0.9
GELI	Tayfur-Gelibol	3.98	329	ePn		Pn	Pn	07 14 13.7	+0.9
SIVA	Sivas	4.05	242	eP		Pn	Pn	07 14 15.0	+1.2
GADA	Gvkgeada	4.07	322	ePN		Pn	Pn	07 14 15.0	+0.8
GADA	Gvkgeada	4.07	322	ePn		Pn	Pn	07 14 15.0	+0.9
BR131	Keskin Array S	4.44	51	ePn		Pn	Pn	07 14 19.6	+0.4
BR131				eSn		Sn	Sn	07 15 11.9	+0.7
BR131	Keskin Array S	4.44	51	ePn		Pn	Pn	07 14 19.6	+0.4
BR131				eSn		Sn	Sn	07 15 11.9	+0.7
BRTR	Keskin Array B 0.5nm,0.3s,baz=232,slow=14,SNR=17	4.44	51	Pn		Pn	Pn	07 14 20.4	+1.2
BRTR				Sn		Sn	Sn	07 15 14.6	+3.4
	0.2nm,0.3s,baz=228,slow=24,SNR=8.4								
BRTR	Keskin Array B	4.44	51	Pn		Pn	Pn	07 14 20.5	+1.3
BRTR				Sn		Sn	Sn	07 15 14.6	+3.4
KARN	Karanos	4.53	251	eP		Pn	Pn	07 14 21.5	+1.0
MMAI	Mount Meron Ar 2.9nm,0.3s,baz=310,slow=13,SNR=6.8	6.49	126	Pn		Pn	Pn	07 14 47.2	-0.2
MMAI				Sn		Sn	Sn	07 16 00.1	-1.7
	1.0nm,0.3s,baz=317,slow=18,SNR=2.5								
MLR	Muntele Rosu	8.81	345	Pn		Pn	Pn	07 15 21.3	+2.1
MLR	Muntele Rosu 0.1nm,0.3s,baz=167,slow=12,SNR=3.6	8.81	345	Pn		Pn	Pn	07 15 21.3	+2.1
MLR	Muntele Rosu	8.81	345	Pn		Pn	Pn	07 15 21.3	+2.2
TORD	Torodi Ar. Bea 1.0nm,0.4s,mb4.1,baz=34,slow=8.5,SNR=14	34.17	233	P		P	P	07 19 56.4	-1.1
MKAR	Makanchi Array 0.3nm,0.8s,mb3.1,baz=258,slow=7.1,SNR=2.6	40.05	59	P		P	P	07 20 46.2	-0.9
MKAR	Makanchi Array	40.05	59	P		P	P	07 20 46.2	-0.9

ISCJB ***17*** *07:15:14.0±0.7,44°.52N±0°.02×7°.25E±0°.05,h14km±6km,*
Error ellipse: s-maj=6.0km s-min=3.7km az=172.5
CSEM ***17*** *07:15:14.7±0.1,44°.52N×7°.23E,h10km,ML3.0/5,Error*
ellipse: s-maj=2.7km s-min=1.7km az=89.0
ROM ***17*** *07:15:14.8±0.1,44°.54N×7°.23E,h9km±3km,Md2.4/7,*
Ml2.2/6,Error ellipse: s-maj=5.1km s-min=2.3km az=40.0
STR ***17*** *07:15:15.5±0.4,44°.49N×7°.20E,h5km,Ml2.3,Error ellipse:*
s-maj=0.0km s-min=0.0km az=0.0

ISC 17 07:15:14.7±0.6,44°.52N±0°.02×7°.24E±0°.05,h12km±6km,
n26,σ0s41/46,4C-2D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DOI	San Damiano	0.02	159	↓iPg		Pg	Pg	07 15 17.0	+0.2
DOI				Sg		Sg	Sg	07 15 18.0	-0.2
	5µm,0.1s								
DOI	San Damiano	0.02	159	↓iPg		Pg	Pg	07 15 17.0	+0.2
DOI				Sg		Sg	Sg	07 15 18.0	-0.2
	5µm,0.1s								
PZZ	Stroppo	0.09	260	↑iPg		Pg	Pg	07 15 17.8	+0.4
PZZ				Sg		Sg	Sg	07 15 19.4	+0.1
	2µm,0.2s								
PZZ	Stroppo	0.09	260	↑iPg		Pg	Pg	07 15 17.8	+0.4
PZZ				Sg		Sg	Sg	07 15 19.4	+0.1
	2µm,0.2s								
SURF	Saint Ours	0.31	262	Pg		Pg	Pg	07 15 21.5	+0.6
SURF				Sg		Sg	Sg	07 15 24.8	-0.3
SURF	Saint Ours	0.31	262	Pg		Pg	Pg	07 15 21.5	+0.6
SURF				Sg		Sg	Sg	07 15 24.8	-0.3
TOUF	Mont Tournerai	0.51	179	Pg		Pg	Pg	07 15 24.9	+0.2
TOUF	Mont Tournerai	0.51	179	Pg		Pg	Pg	07 15 24.9	+0.2
AUTN	L'Aution	0.55	165	Pg		Pg	Pg	07 15 25.4	+0.1
AUTN				Sg		Sg	Sg	07 15 32.1	-0.4
AUTN	L'Aution	0.55	165	Pg		Pg	Pg	07 15 25.4	+0.1
AUTN				Sg		Sg	Sg	07 15 32.1	-0.4
SAOF	Saorge	0.58	157	Pg		Pg	Pg	07 15 25.9	-0.2
SAOF				Sg		Sg	Sg	07 15 32.7	-1.0
SAOF	Saorge	0.58	157	Pg		Pg	Pg	07 15 25.9	-0.2
SAOF				Sg		Sg	Sg	07 15 32.7	-1.0
RSP	Reno Superiore	0.63	2	↑iPg		Pg	Pg	07 15 26.8	-0.1
RSP				Sg		Sg	Sg	07 15 35.0	-0.1
	37nm,0.2s								
RSP	Reno Superiore	0.63	2	↑iPg		Pg	Pg	07 15 26.8	-0.1
RSP				Sg		Sg	Sg	07 15 35.0	-0.1
	37nm,0.2s								
MVIF	Mont Vial	0.63	186	Pg		Pg	Pg	07 15 27.0	+0.1
MVIF				Sg		Sg	Sg	07 15 35.5	+0.3
MVIF	Mont Vial	0.63	186	Pg		Pg	Pg	07 15 27.0	+0.1
MVIF				Sg		Sg	Sg	07 15 35.5	+0.3
LUCF	Luceram	0.64	173	Pg		Pg	Pg	07 15 27.1	+0.1
LUCF				Sg		Sg	Sg	07 15 35.3	-0.1
LUCF	Luceram	0.64	173	Pg		Pg	Pg	07 15 27.1	+0.1
LUCF				Sg		Sg	Sg	07 15 35.3	-0.1
MONC	Moncucco Torin 63nm,0.6s	0.74	41	Pg		Pg	Pg	07 15 29.9	+0.9
MONC	Moncucco Torin 63nm,0.6s	0.74	41	Pg		Pg	Pg	07 15 29.9	+0.9
CALN	Calern	0.81	198	Pg		Pg	Pg	07 15 30.5	+0.2
CALN	Calern	0.81	198	Pg		Pg	Pg	07 15 30.5	+0.2
QLNO	Quiliano	0.82	104	Pg		Pg	Pg	07 15 30.7	+0.2
QLNO				Sg		Sg	Sg	07 15 41.6	+0.4
	41nm,0.3s								
QLNO	Quiliano	0.82	104	Pg		Pg	Pg	07 15 30.7	+0.2
QLNO				Sg		Sg	Sg	07 15 41.6	+0.4
	41nm,0.3s								
LSD	Lago del Serru	0.94	356	Pg		Pg	Pg	07 15 32.2	-0.6
LSD				Sg		Sg	Sg	07 15 44.5	-0.6
LSD	Lago del Serru	0.94	356	Pg		Pg	Pg	07 15 32.2	-0.6
LSD				Sg		Sg	Sg	07 15 44.5	-0.6

ISCJB ***17*** *07:18:01.4±1.2,56°.35S±0°.2×26°.7W±0°.4,h10km,mb4.3/4,*
Error ellipse: s-maj=35.1km s-min=24.2km az=154.5
IDC ***17*** *07:18:01.4±1.9,56°.39S×26°.77W,h0km,mb4.3/1,*
mb1 4.5/1,mb1mx3.8/11,mbtmp4.3/1,Error ellipse:
s-maj=76.5km s-min=40.5km az=1.0
NEIC ***17*** *07:18:06.8±0.6,56°.35S×26°.73W,h35km,mb4.4/2,Error*
ellipse: s-maj=24.9km s-min=18.3km az=57.0

ISC 17 07:18:03.5±1.2,56°.3S±0°.2×26°.7W±0°.4,h10km,n10,
σ0s24/4,mb4.3/4,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TRQA	Tornquist 11nm,1.1s,mb4.5	29.70	293	P		P	P	07 24 09.2	-0.2
QSPA	South Pole Qui 2.6nm,0.6s,mb4.3	33.91	180	eP		P	P	07 24 45.9	0.0
QSPA				ePP		PP	PP	07 26 00.8	-1.6
QSPA				ePcP		PcP	PcP	07 27 24.2	+0.3
LPAZ	La Paz 1.9nm,0.5s,mb4.3,baz=151,slow=4.9,SNR=27	50.78	305	P		P	P	07 27 03.9	+0.2
TORD	Torodi Ar. Bea 1.2nm,0.5s,mb4.1,baz=201,slow=6.6,SNR=23	73.17	29	P		P	P	07 29 34.1	0.0
INK	Inuvik baz=105,slow=5.4	146.21	320	PKPbc		PKPbc	PKPbc	07 37 41.4	-1.0
SONM	Songino Array 0.9nm,0.6s,baz=236,slow=1.6,SNR=4.1	150.46	87	PKPbc		PKPbc	PKPbc	07 37 54.1	0.0
ILAR	Eielson Array 2.2nm,1.0s,baz=115,slow=0.6,SNR=19	150.52	311	PKPbc		PKPbc	PKPbc	07 37 52.6	-1.1
KDAK	Kodiak Island	151.20	296	ePKPbc		PKPbc	PKPbc	07 37 56.5	+0.9
OHAK	Old Harbor	151.36	294	ePKPbc		PKPbc	PKPbc	07 37 54.8	-1.1
BPAW	Bear Paw Mtn.	152.14	309	ePKPbc		PKPbc	PKPbc	07 37 56.6	-0.9
BPAW				ePKPab		PKPab	PKPab	07 38 06.4	-0.9

ISCJB ***17*** *07:21:24.9±0.3,38°.14N±0°.02×21°.60E±0°.03,h18km±4km,*
Error ellipse: s-maj=4.0km s-min=3.3km az=156.7
NEIC ***17*** *07:21:24.1,38°.15N×21°.57E,h23km,MD3.1(ATH),After*
ATH.
ATH ***17*** *07:21:24.1,38°.15N×21°.57E,h23km±1km,MD3.1/17*
THE ***17*** *07:21:24.6,38°.11N×21°.63E,h16km,ML2.4/9,Error*
ellipse: s-maj=1.0km s-min=0.5km az=25.0
CSEM ***17*** *07:21:24.5±0.2,38°.16N×21°.59E,h20km,MD3.1,Error*
ellipse: s-maj=4.7km s-min=4.1km az=166.0

ISC 17 07:21:24.8±0.4,38°.14N±0°.02×21°.60E±0°.03,h17km±2km,
n66,σ1s07/109,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.14	231	ePb		Pg	Pg	07 21 29.0	+0.3
RLS				eSb		Sg	Sg	07 21 32.7	+1.4
RLS	Riolos of Patr	0.14	231	ePB		Pg	Pg	07 21 29.0	+0.3
RLS				eSB		Sg	Sg	07 21 32.7	+1.4
RLS	Riolos of Patr	0.14	231	ePb		Pg	Pg	07 21 29.0	+0.3
UPR	University Cam	0.20	46	ePB		Pg	Pg	07 21 29.8	+0.2
UPR				eSB		Sg	Sg	07 21 34.0	+1.0
UPR	University Cam	0.20	46	P		Pg	Pg	07 21 29.9	+0.3
UPR				S		Sg	Sg	07 21 33.4	+0.4
UPR	University Cam	0.20	46	P		Pg	Pg	07 21 29.9	+0.3
UPR				S		Sg	Sg	07 21 33.4	+0.4
UPR				eSb		Sg	Sg	07 21 34.0	+1.0
LAKA	Lakka	0.31	72	P		Pg	Pg	07 21 31.1	-0.4
LAKA				S		Sg	Sg	07 21 36.1	+0.1
LAKA	Lakka	0.31	72	P		Pg	Pg	07 21 31.1	-0.4
LAKA				S		Sg	Sg	07 21 36.1	+0.1
EFP	Efpalio	0.37	40	ePB		Pg	Pg	07 21 32.0	-0.5
EFP				eSB		Sg	Sg	07 21 38.4	+0.7
EFP	Efpalio	0.37	40	P		Pg	Pg	07 21 32.1	-0.4
EFP				S		Sg	Sg	07 21 38.4	+0.7
EFP	Efpalio	0.37	40	P		Pg	Pg	07 21 32.1	-0.4
EFP				S		Sg	Sg	07 21 38.4	+0.7
TRIZ	Trizonia	0.43	59	P		Pg	Pg	07 21 33.0	-0.6
TRIZ				S		Sg	Sg	07 21 39.8	+0.3
TRIZ	Trizonia	0.43	59	P		Pg	Pg	07 21 33.0	-0.6
TRIZ				S		Sg	Sg	07 21 39.8	+0.3
KALE	Kalithea	0.49	60	P		Pg	Pg	07 21 33.9	-0.7
KALE				S		Sg	Sg	07 21 41.4	+0.1
KALE	Kalithea	0.49	60	P		Pg	Pg	07 21 33.9	-0.7
KALE				S		Sg	Sg	07 21 41.4	+0.1
GUR	Goura	0.62	109	ePB		Pb	Pb	07 21 35.9	-1.2
GUR				eSN		Sg	Sg	07 21 45.9	+0.6
GUR	Goura	0.62	109	P		Pg	Pg	07 21 35.6	-1.4
GUR				S		Sg	Sg	07 21 45.3	0.0
GUR	Goura	0.62	109	P		Pg	Pg	07 21 35.6	-1.4
GUR	Goura	0.62	109	ePb		Pb	Pb	07 21 35.9	-1.2
GUR				S		Sg	Sg	07 21 45.3	0.0
KFL	Anninata	0.64	267	P		Pg	Pg	07 21 37.2	-0.2
KFL	Anninata	0.64	267	P		Pg	Pg	07 21 37.2	-0.2
DSF	Desfina	0.78	70	P		Pb	Pb	07 21 38.4	-1.4
DSF				S		Sb	Sb	07 21 50.0	-0.1
DSF	Desfina	0.78	70	P		Pb	Pb	07 21 38.4	-1.4
DSF				S		Sb	Sb	07 21 50.0	-0.1
EVR	Evrytania	0.79	12	ePn		Pn	Pn	07 21 39.9	-1.2
EVR	Evrytania	0.79	12	ePN		Pn	Pn	07 21 39.9	-1.2
EVR	Evrytania	0.79	12	ePn		Pn	Pn	07 21 39.9	-1.2
VLS	Valsamata	0.80	273	ePn		Pn	Pn	07 21 38.8	-2.4
VLS				eSn		Sn	Sn	07 21 51.0	-1.6
VLS	Valsamata	0.80	273	ePN		Pn	Pn	07 21 38.8	-2.4
VLS				eSN		Sn	Sn	07 21 51.0	-1.6
VLS	Valsamata	0.80	273	P		Pb	Pb	07 21 39.3	-0.8
VLS				S		Sb	Sb	07 21 52.5	+1.9
VLS	Valsamata	0.80	273	ePn		Pn	Pn	07 21 38.8	-2.4
VLS	Valsamata	0.80	273	P		Pb	Pb	07 21 39.3	-0.8
VLS				eSn		Sn	Sn	07

MLSB	**Milas**	**1.12**	**286**	*e*PN		**Pn**	**07 30 50.3**	**-2.4**
MLSB	**Milas**	**1.12**	**286**	*e*Pn		**Pn**	**07 30 50.3**	**-2.5**
AYDN	**Tasoluk**	**1.20**	**304**	*i* P		**Pg**	**07 30 52.0**	**-1.0**
AYDN				*i* S		**Sg**	**07 31 10.6**	**+2.0**
AYDN	**Tasoluk**	**1.20**	**304**	*i* P		**Pg**	**07 30 52.0**	**-1.0**
AYDN				*i* S		**Sg**	**07 31 10.6**	**+2.0**
BCK	**Bucak**	**1.25**	**68**	*e*PN		**Pn**	**07 30 53.2**	**-1.4**
BCK	**Bucak**	**1.25**	**68**	*e*Pn		**Pn**	**07 30 53.2**	**-1.4**
KHL	**Karahalli**	**1.36**	**13**	*e*PN		**Pn**	**07 30 54.9**	**-1.2**
KHL	**Karahalli**	**1.36**	**13**	*e*Pn		**Pn**	**07 30 54.9**	**-1.2**
ISP	**Isparta**	**1.39**	**53**	*e*PN		**Pn**	**07 30 55.8**	**-0.5**
ISP	**Isparta**	**1.39**	**53**	*e*Pn		**Pn**	**07 30 55.5**	**-0.8**
ISP				*e*S		**Sg**	**07 31 16.4**	**+1.8**
ISP	**Isparta**	**1.39**	**53**	P		**Pn**	**07 30 55.9**	**-0.5**
ISP				S		**Sg**	**07 31 15.6**	**+1.1**
ISP	**Isparta**	**1.39**	**53**	P		**Pn**	**07 30 55.9**	**-0.5**
ISP				S		**Sg**	**07 31 15.6**	**+1.1**
KHAL	**Karahalli**	**1.41**	**12**	*i* P		**Pn**	**07 30 54.6**	**-2.0**
KHAL				*i* S		**Sg**	**07 31 15.9**	**+0.7**
KHAL	**Karahalli**	**1.41**	**12**	*i* P		**Pn**	**07 30 54.7**	**-2.0**
KHAL				*i* S		**Sg**	**07 31 15.9**	**+0.7**
KULA	**Kula-Manisa**	**1.56**	**346**	*e*PN		**Pn**	**07 30 57.7**	**-1.1**
KULA	**Kula-Manisa**	**1.56**	**346**	*e*Pn		**Pn**	**07 30 57.7**	**-1.2**
IZM	**Izmir**	**2.04**	**314**	*e*PN		**Pn**	**07 31 04.9**	**-0.5**
IZM	**Izmir**	**2.04**	**314**	*e*Pn		**Pn**	**07 31 04.9**	**-0.5**
KARP	**Karpathos**	**2.15**	**228**	*e*P		**Pn**	**07 31 06.5**	**-0.4**
AKHS	**Akhisar**	**2.15**	**331**	*i* P		**Pn**	**07 31 06.2**	**-0.8**
AKHS				*i* S		**Sn**	**07 31 33.8**	**-0.5**
AKHS	**Akhisar**	**2.15**	**331**	*i* P		**Pn**	**07 31 06.2**	**-0.7**
AKHS				*i* S		**Sn**	**07 31 33.8**	**-0.4**
BLCB	**Balcova**	**2.16**	**311**	*e*PN		**Pn**	**07 31 07.0**	**-0.1**
BLCB	**Balcova**	**2.16**	**311**	P		**Pn**	**07 31 06.6**	**-0.5**
BLCB				S		**Sn**	**07 31 34.5**	**0.0**
BLCB	**Balcova**	**2.16**	**311**	P		**Pn**	**07 31 06.6**	**-0.5**
BLCB	**Balcova**	**2.16**	**311**	*e*Pn		**Pn**	**07 31 07.0**	**-0.1**
BLCB				S		**Sn**	**07 31 34.5**	**0.0**
BOLV	**Bolvadin**	**2.25**	**39**	*i* P		**Pn**	**07 31 09.2**	**+1.0**
BOLV	**Bolvadin**	**2.25**	**39**	*i* P		**Pn**	**07 31 09.2**	**+1.0**
DURS	**Dursunbey**	**2.66**	**349**	*i* P		**Pn**	**07 31 13.4**	**-0.4**
DURS	**Dursunbey**	**2.66**	**349**	*i* P		**Pn**	**07 31 13.4**	**-0.5**
GAZI	**Gazipasa**	**2.67**	**105**	*i* P		**Pn**	**07 31 14.6**	**+0.5**
GAZI	**Gazipasa**	**2.67**	**105**	*i* P		**Pn**	**07 31 14.6**	**+0.5**
HDMB	**Hadim**	**2.69**	**90**	*e*PN		**Pn**	**07 31 13.7**	**-0.6**
HDMB	**Hadim**	**2.69**	**90**	*e*Pn		**Pn**	**07 31 13.7**	**-0.6**
CHOS	**Chios island**	**2.81**	**301**	*e*P		**Pn**	**07 31 16.5**	**+0.5**
CHOS	**Chios island**	**2.81**	**301**	P		**Pn**	**07 31 16.5**	**+0.5**
CHOS				S		**Sn**	**07 31 51.8**	**+1.4**
CHOS	**Chios island**	**2.81**	**301**	P		**Pn**	**07 31 16.5**	**+0.5**
CHOS				S		**Sn**	**07 31 51.8**	**+1.4**
BALB	**Balikesir**	**2.82**	**340**	*e*PN		**Pn**	**07 31 16.0**	**-0.1**
BALB	**Balikesir**	**2.82**	**340**	*e*Pn		**Pn**	**07 31 16.0**	**-0.1**
LADK	**Ladik-KONYA**	**2.84**	**64**	*e*PN		**Pn**	**07 31 16.0**	**-0.4**
LADK	**Ladik-KONYA**	**2.84**	**64**	*e*Pn		**Pn**	**07 31 16.0**	**-0.4**
KIZT	**Kizilcal**	**2.88**	**48**	*e*PN		**Pn**	**07 31 17.4**	**+0.5**
KIZT	**Kizilcal**	**2.88**	**48**	*e*Pn		**Pn**	**07 31 17.4**	**+0.5**
APE	**Apeiranthos**	**2.88**	**273**	*e*PN		**Pn**	**07 31 16.9**	**-0.1**
APE	**Apeiranthos**	**2.88**	**273**	*e*P		**Pn**	**07 31 17.0**	**0.0**
APE	**Apeiranthos**	**2.88**	**273**	P		**Pn**	**07 31 15.4**	**-1.6**
APE				S		**Sn**	**07 31 51.9**	**-0.3**
APE	**Apeiranthos**	**2.88**	**273**	P		**Pn**	**07 31 15.4**	**-1.6**
APE	**Apeiranthos**	**2.88**	**273**	*e*Pn		**Pn**	**07 31 16.9**	**-0.1**
APE				S		**Sn**	**07 31 51.9**	**-0.3**
BALY	**Balya**	**2.99**	**337**	*i* P		**Pn**	**07 31 18.2**	**-0.3**
BALY	**Balya**	**2.99**	**337**	*i* P		**Pn**	**07 31 18.2**	**-0.2**
ZKR	**Zakros**	**3.01**	**232**	*e*P		**Pn**	**07 31 21.0**	**+2.2**
ERMK	**Ermenek**	**3.06**	**95**	*i* P		**Pn**	**07 31 22.7**	**+3.3**
ERMK				*i* S		**Sn**	**07 32 04.3**	**+7.8**
ERMK	**Ermenek**	**3.06**	**95**	*i* P		**Pn**	**07 31 22.7**	**+3.3**
SVRH	**Sivrihisar-ESK**	**3.09**	**37**	*e*PN		**Pn**	**07 31 18.9**	**-1.0**
SVRH	**Sivrihisar-ESK**	**3.09**	**37**	*e*Pn		**Pn**	**07 31 18.9**	**-1.0**
PRK	**Paraskevi**	**3.19**	**316**	*e*P		**Pn**	**07 31 21.0**	**-0.1**
GONE	**Gonen-Balikesi**	**3.25**	**340**	*e*PN		**Pn**	**07 31 22.1**	**+0.1**
GONE	**Gonen-Balikesi**	**3.25**	**340**	*e*Pn		**Pn**	**07 31 22.1**	**0.0**
NPS	**Neapolis**	**3.33**	**240**	*e*P		**Pn**	**07 31 24.0**	**+0.9**
GEMT	**Gemlik**	**3.44**	**1**	*e*PN		**Pn**	**07 31 24.0**	**-0.6**
GEMT	**Gemlik**	**3.44**	**1**	*e*Pn		**Pn**	**07 31 24.0**	**-0.6**
BNT	**Bandirma**	**3.49**	**345**	*e*PN		**Pn**	**07 31 25.1**	**-0.3**
BNT	**Bandirma**	**3.49**	**345**	*e*Pn		**Pn**	**07 31 25.1**	**-0.2**
XRY	**Khrisi**	**3.50**	**234**	*e*P		**Pn**	**07 31 27.0**	**+1.6**
LEF	**Lefka**	**3.57**	**120**	*e*PN		**Pn**	**07 31 27.1**	**+0.6**
LEF	**Lefka**	**3.57**	**120**	*e*Pn		**Pn**	**07 31 27.1**	**+0.6**
GULT	**Gulveren**	**3.60**	**17**	*e*PN		**Pn**	**07 31 26.8**	**0.0**
GULT	**Gulveren**	**3.60**	**17**	*e*Pn		**Pn**	**07 31 26.8**	**-0.1**
SULT	**Sultanhani-AKS**	**3.69**	**70**	*e*PN		**Pn**	**07 31 28.7**	**+0.7**
SULT	**Sultanhani-AKS**	**3.69**	**70**	*e*Pn		**Pn**	**07 31 28.7**	**+0.7**
IKL	**Isikli**	**3.74**	**100**	*e*PN		**Pn**	**07 31 30.1**	**+1.3**
IKL	**Isikli**	**3.74**	**100**	*e*Pn		**Pn**	**07 31 30.1**	**+1.3**
IDI	**Anoyia**	**3.83**	**245**	*e*P		**Pn**	**07 31 31.5**	**+1.5**
LFK	**Lefkose**	**3.95**	**114**	*e*PN		**Pn**	**07 31 32.5**	**+0.8**
LFK	**Lefkose**	**3.95**	**114**	*e*Pn		**Pn**	**07 31 32.5**	**+0.8**
GELI	**Tayfur-Gelibol**	**3.98**	**329**	*e*PN		**Pn**	**07 31 32.5**	**+0.3**
GELI	**Tayfur-Gelibol**	**3.98**	**329**	*e*Pn		**Pn**	**07 31 32.5**	**+0.4**
RKY	**Sarkoy-Tekirda**	**3.99**	**338**	*e*PN		**Pn**	**07 31 32.5**	**+0.2**
RKY	**Sarkoy-Tekirda**	**3.99**	**338**	*e*Pn		**Pn**	**07 31 32.5**	**+0.3**
SIVA	**Sivas**	**4.02**	**242**	*e*P		**Pn**	**07 31 35.5**	**+2.9**
GADA	**Gvkgeada**	**4.08**	**323**	*e*PN		**Pn**	**07 31 33.4**	**+0.1**
GADA	**Gvkgeada**	**4.08**	**323**	*e*Pn		**Pn**	**07 31 33.4**	**0.0**
VAM	**Vamos**	**4.29**	**250**	*e*P		**Pn**	**07 31 34.5**	**-1.8**
EREN	**Erenkoy**	**4.33**	**108**	*e*PN		**Pn**	**07 31 38.5**	**+1.7**
EREN	**Erenkoy**	**4.33**	**108**	*e*Pn		**Pn**	**07 31 38.6**	**+1.8**
ENEZ	**Enez**	**4.40**	**329**	*e*PN		**Pn**	**07 31 37.8**	**-0.1**
ENEZ	**Enez**	**4.40**	**329**	*e*Pn		**Pn**	**07 31 37.8**	**-0.1**
BR131	**Keskin Array S**	**4.47**	**51**	*e*PN		**Pn**	**07 31 39.0**	**+1.0**
BR131				*e*Sn		**Sn**	**07 32 32.5**	**+1.1**
BR131	**Keskin Array S**	**4.47**	**51**	*e*Pn		**Pn**	**07 31 39.8**	**+1.0**
BR131				*e*Sn		**Sn**	**07 32 32.5**	**+1.0**
BRTR	**Keskin Array B**	**4.47**	**51**	Pn		**Pn**	**07 31 39.3**	**+0.5**
	1.0nm,0.3s,baz=236,slow=17,SNR=15							
BRTR				Sn		**Sn**	**07 32 32.5**	**+1.1**
	0.9nm,0.3s,baz=234,slow=25,SNR=9.6							
BRTR	**Keskin Array B**	**4.47**	**51**	Pn		**Pn**	**07 31 39.3**	**+0.5**
BRTR				Sn		**Sn**	**07 32 32.5**	**+1.1**
KARN	**Karanos**	**4.50**	**251**	*e*P		**Pn**	**07 31 42.5**	**+3.2**
ALN	**Alexandroupoli**	**4.58**	**329**	*e*P		**Pn**	**07 31 42.5**	**+2.2**
MMAI	**Mount Meron Ar**	**6.50**	**126**	Pn		**Pn**	**07 32 06.1**	**-0.6**
	2.8nm,0.3s,baz=313,slow=12,SNR=6.0							
MMAI				Sn		**Sn**	**07 33 19.3**	**-2.1**
	2.0nm,0.3s,baz=310,slow=26,SNR=3.3							
TIRR	**Tirgusor**	**7.48**	**356**	‖ *i*P		**Pn**	**07 32 24.6**	**+4.5**
MLR	**Muntele Rosu**	**8.82**	**345**	Pn		**Pn**	**07 32 38.4**	**-0.1**
	0.2nm,0.3s,baz=162,slow=16,SNR=1.9							
MLR	**Muntele Rosu**	**8.82**	**345**	‖ *i*P		**Pn**	**07 32 43.2**	**+4.7**
MLR	**Muntele Rosu**	**8.82**	**345**	Pn		**Pn**	**07 32 38.4**	**-0.1**
TORD	**Torodi Ar. Bea**	**34.14**	**233**	P		**P**	**07 37 15.4**	**-1.1**
	2.1nm,0.8s,mb4.1,baz=37,slow=8.4,SNR=18							
MKAR	**Makanchi Array**	**40.08**	**59**	P		**P**	**07 38 04.8**	**-1.9**
	0.3nm,0.7s,mb3.2,baz=264,slow=9.6,SNR=2.9							

IDC 17 07:31:41.5±3.9, 4°65'S×145°15'E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.5/15, mbtmp3.5/4, Error ellipse: s-maj=106.1km s-min=31.6km az=103.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.49**	**214**	P	Pn	07 35 58.1	-1.2
	0.3nm,0.3s,baz=35,slow=11,SNR=14						
ASAR	**Alice Springs**	**21.80**	**209**	P	P	07 36 35.9	+0.6
	0.3nm,0.7s,baz=35,slow=7.4,SNR=4.0						
FITZ	**Fitzroy Crossi**	**23.30**	**233**	P	P	07 36 50.6	-0.7
	3.2nm,0.9s,baz=53,slow=10,SNR=7.5						
MKAR	**Makanchi Array**	**75.29**	**321**	P	P	07 43 27.2	+0.7
	0.4nm,0.7s,baz=110,slow=7.0,SNR=4.5						

DDA 17 07:33:01.5,36°.99N×29°.20E,h6km±2km, Md2.8
ISCJB 17 07:33:02.3±0.6, 37°.00N±0°.04×29°.20E±0°.03, h7km±6km, Error ellipse: s-maj=6.3km s-min=4.6km az=8.9
CSEM 17 07:33:02.1±0.2, 37°.02N×29°.24E, h12km, MD2.8, Error ellipse: s-maj=5.1km s-min=3.9km az=12.0
ISK 17 07:33:02.3, 37°.08N×29°.20E, h12km, MD2.8
ISC 17 07:33:02.6±0.6, 37°.00N±0°.04×29°.21E±0°.04, h11km±5km, n26, σ1§00/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**56**	*e*PG	**Pg**	**07 33 08.0**	**-0.3**
GLHS				*e*SG	**Sg**	**07 33 12.3**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.28**	**56**	*e*Pg	**Pg**	**07 33 08.0**	**-0.3**
GLHS				*e*Sg	**Sg**	**07 33 12.3**	**+0.2**
GOLH	**Golhisar**	**0.37**	**50**	*i* P	**Pg**	**07 33 08.9**	**-1.0**
GOLH				*i* S	**Sg**	**07 33 15.9**	**+1.1**
GOLH	**Golhisar**	**0.37**	**50**	*i* P	**Pg**	**07 33 08.9**	**-1.0**
GOLH				*i* S	**Sg**	**07 33 15.9**	**+1.1**
ELL	**Elmali**	**0.62**	**114**	*e*PG	**Pg**	**07 33 14.6**	**0.0**
ELL				*e*SG	**Sg**	**07 33 25.3**	**+2.6**
ELL	**Elmali**	**0.62**	**114**	*e*Pg	**Pg**	**07 33 14.6**	**0.0**
DNZL	**Cakiroluk**	**0.70**	**350**	*i* P	**Pg**	**07 33 15.1**	**-1.1**
DNZL				*i* S	**Sg**	**07 33 26.0**	**+0.6**
DNZL	**Cakiroluk**	**0.70**	**350**	*i* P	**Pg**	**07 33 15.1**	**-1.1**
DNZL				*i* S	**Sg**	**07 33 26.0**	**+0.7**
YER	**Yerkesik**	**0.75**	**281**	*e*PG	**Pg**	**07 33 17.8**	**+0.7**
YER				*e*SG	**Sg**	**07 33 27.4**	**+0.5**
YER	**Yerkesik**	**0.75**	**281**	*e*Pg	**Pg**	**07 33 17.8**	**+0.7**
YER				*e*Sg	**Sg**	**07 33 27.4**	**+0.5**
DENT	**Denizli**	**0.76**	**350**	*e*PG	**Pg**	**07 33 15.8**	**-1.6**
DENT	**Denizli**	**0.76**	**350**	*e*Pg	**Pg**	**07 33 15.8**	**-1.6**
AKAS	**Kas**	**0.83**	**157**	*i* P	**Pg**	**07 33 17.5**	**-1.2**
AKAS				*i* S	**Sg**	**07 33 35.8**	**+6.3**
AKAS	**Kas**	**0.83**	**157**	*i* P	**Pg**	**07 33 17.5**	**-1.1**
BCK	**Bucak**	**1.20**	**67**	*e*PN	**Pn**	**07 33 24.9**	**-0.4**
BCK	**Bucak**	**1.20**	**67**	*e*Pn	**Pn**	**07 33 24.9**	**-0.4**
AYDN	**Tasoluk**	**1.25**	**302**	*i* P	**Pn**	**07 33 25.2**	**-0.8**
AYDN				*i* S	**Sb**	**07 33 43.0**	**+0.8**
AYDN	**Tasoluk**	**1.25**	**302**	*i* P	**Pn**	**07 33 25.2**	**-0.8**
AYDN				*i* S	**Sb**	**07 33 43.0**	**+0.7**
KHL	**Karahalli**	**1.34**	**11**	*e*PN	**Pn**	**07 33 26.1**	**-1.2**
KHL	**Karahalli**	**1.34**	**11**	*e*Pn	**Pn**	**07 33 26.1**	**-1.3**
KHAL	**Karahalli**	**1.39**	**9**	*i* P	**Pn**	**07 33 27.6**	**-0.3**
KHAL				*i* S	**Sb**	**07 33 48.1**	**+1.8**
KHAL	**Karahalli**	**1.39**	**9**	*i* P	**Pn**	**07 33 27.6**	**-0.3**
KHAL				*i* S	**Sb**	**07 33 48.1**	**+1.8**
BDRM	**Kayabasi**	**1.41**	**273**	*i* P	**Pn**	**07 33 28.3**	**0.0**
BDRM				*i* S	**Sn**	**07 33 48.1**	**+1.2**
BDRM	**Kayabasi**	**1.41**	**273**	*i* P	**Pn**	**07 33 28.3**	**0.0**
BDRM				*i* S	**Sn**	**07 33 48.1**	**+1.2**
KULA	**Kula-Manisa**	**1.57**	**344**	*e*PN	**Pn**	**07 33 29.7**	**-0.8**
KULA	**Kula-Manisa**	**1.57**	**344**	*e*Pn	**Pn**	**07 33 29.7**	**-0.8**

ISK 17 07:35:08.9, 39°.58N×29°.49E, h9km, MD2.8
ISCJB 17 07:35:09.2±0.4, 39°.63N±0°.02×29°.45E±0°.03, h0km, Error ellipse: s-maj=3.6km s-min=3.1km az=39.8
CSEM 17 07:35:09.0±0.2, 39°.61N×29°.45E, h1km, MD2.8, Error ellipse: s-maj=4.5km s-min=4.2km az=136.0
ISC 17 07:35:09.5±0.4, 39°.63N±0°.02×29°.45E±0°.03, h0km, n51, σ1§19/64, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.54**	**177**	*i* P	**Pg**	**07 35 19.9**	**+0.1**
GDZ	**Gediz**	**0.54**	**177**	*i* P	**Pg**	**07 35 19.9**	**+0.1**
GDZ	**Gediz**	**0.54**	**177**	*i* P	**Pg**	**07 35 19.9**	**0.0**
GDZ				*i* S	**Sg**	**07 35 28.6**	**+1.7**
ULDT	**Uludag**	**0.56**	**335**	*i* P	**Pg**	**07 35 19.0**	**-1.3**
ULDT	**Uludag**	**0.56**	**335**	*i* P	**Pg**	**07 35 19.0**	**-1.3**
ULDT	**Uludag**	**0.56**	**335**	*i* P	**Pg**	**07 35 19.0**	**-1.3**
ULDT				*i* S	**Sg**	**07 35 27.2**	**-0.4**
CAVI	**Cavuskoy**	**0.65**	**28**	*e*PG	**Pg**	**07 35 21.9**	**0.0**
CAVI				*e*SG	**Sg**	**07 35 31.8**	**+1.5**
CAVI	**Cavuskoy**	**0.65**	**28**	*e*Pg	**Pg**	**07 35 21.9**	**0.0**
CAVI				*e*Sg	**Sg**	**07 35 31.8**	**+1.5**
DURS	**Dursunbey**	**0.75**	**268**	*i* P	**Pg**	**07 35 23.2**	**-0.7**
DURS	**Dursunbey**	**0.75**	**268**	*i* P	**Pg**	**07 35 23.2**	**-0.7**
DURS	**Dursunbey**	**0.75**	**268**	*i* P	**Pg**	**07 35 23.2**	**-0.7**
DURS				*i* S	**Sg**	**07 35 34.7**	**+1.1**
BORA	**Eskisehir**	**0.81**	**72**	*i* P	**Pg**	**07 35 25.3**	**+0.2**
BORA	**Eskisehir**	**0.81**	**72**	*i* P	**Pg**	**07 35 25.3**	**+0.2**
BORA	**Eskisehir**	**0.81**	**72**	*i* P	**Pg**	**07 35 25.3**	**+0.2**
BORA				*i* S	**Sg**	**07 35 37.6**	**+1.9**
DEMI	**Demirci**	**0.82**	**224**	*i* P	**Pg**	**07 35 25.4**	**+0.3**
DEMI	**Demirci**	**0.82**	**224**	*i* P	**Pg**	**07 35 25.4**	**+0.3**
DEMI	**Demirci**	**0.82**	**224**	*i* P	**Pg**	**07 35 25.5**	**+0.4**
DEMI				*i* S	**Sg**	**07 35 38.3**	**+2.6**
GEMT	**Gemlik**	**0.83**	**346**	*e*PG	**Pg**	**07 35 26.3**	**+1.0**
GEMT	**Gemlik**	**0.83**	**346**	*e*Pg	**Pg**	**07 35 26.3**	**+0.9**
ADVT	**Abdulvahap**	**0.83**	**16**	*e*PG	**Pg**	**07 35 26.0**	**+0.5**
ADVT	**Abdulvahap**	**0.83**	**16**	*e*Pg	**Pg**	**07 35 26.0**	**+0.5**
MDNY	**Mudanya-Bursa**	**0.85**	**330**	*e*PG	**Pg**	**07 35 26.9**	**+1.0**
MDNY	**Mudanya-Bursa**	**0.85**	**330**	*e*Pg	**Pg**	**07 35 26.9**	**+1.0**
YLV	**Yalova**	**0.94**	**357**	*e*PG	**Pg**	**07 35 28.5**	**+1.1**
YLV				*e*SG	**Sg**	**07 35 42.9**	**+3.3**
YLV	**Yalova**	**0.94**	**357**	*e*Pg	**Pg**	**07 35 28.5**	**+1.0**
YLV				*e*Sg	**Sg**	**07 35 42.9**	**+3.3**
ARMT	**Armutlu**	**1.04**	**335**	*e*PN	**Pn**	**07 35 29.5**	**-1.8**
ARMT				*e*SN	**Sn**	**07 35 45.7**	**-0.7**
ARMT	**Armutlu**	**1.04**	**335**	*e*Pn	**Pn**	**07 35 29.5**	**-1.8**
ARMT				*e*Sn	**Sn**	**07 35 45.7**	**-0.8**
KCTX	**Karacabey (Bur**	**1.05**	**307**	*e*PN	**Pn**	**07 35 29.8**	**-1.6**
KCTX	**Karacabey (Bur**	**1.05**	**307**	*e*Pn	**Pn**	**07 35 29.8**	**-1.7**
ESKT	**Eskisehir**	**1.09**	**95**	*i* P	**Pg**	**07 35 30.1**	**-0.2**
ESKT	**Eskisehir**	**1.09**	**95**	*i* P	**Pg**	**07 35 30.1**	**-0.2**
SEYT	**Eskypehyr**	**1.09**	**95**	*i* P	**Pg**	**07 35 30.1**	**-0.3**
SEYT				*i* S	**Sg**	**07 35 48.5**	**+4.0**
GULT	**Gulveren**	**1.15**	**45**	*e*PN	**Pn**	**07 35 31.8**	**-1.0**
GULT	**Gulveren**	**1.15**	**45**	*e*Pn	**Pn**	**07 35 31.8**	**-1.0**
BALB	**Balikesir**	**1.21**	**271**	*e*PN	**Pn**	**07 35 32.6**	**-1.1**
BALB	**Balikesir**	**1.21**	**271**	*e*Pn	**Pn**	**07 35 32.6**	**-1.0**
KULA	**Kula-Manisa**	**1.27**	**209**	*e*PN	**Pn**	**07 35 33.4**	**-1.1**
KULA	**Kula-Manisa**	**1.27**	**209**	*e*Pn	**Pn**	**07 35 33.4**	**-1.1**
KHL	**Karahalli**	**1.31**	**177**	*e*PN	**Pn**	**07 35 33.3**	**-1.6**
KHL	**Karahalli**	**1.31**	**177**	*e*Pn	**Pn**	**07 35 33.3**	**-1.7**
BALY	**Balya**	**1.41**	**275**	*i* P	**Pn**	**07 35 36.4**	**-0.1**
BALY	**Balya**	**1.41**	**275**	*i* P	**Pn**	**07 35 36.4**	**-0.1**
BALY	**Balya**	**1.41**	**275**	*i* P	**Pn**	**07 35 36.4**	**-0.1**
BALY				*i* S	**Sg**	**07 35 56.7**	**+1.8**
GONE	**Gonen-Balikesi**	**1.42**	**288**	*e*PN	**Pn**	**07 35 35.6**	**-0.9**
GONE	**Gonen-Balikesi**	**1.42**	**288**	*e*Pn	**Pn**	**07 35 35.6**	**-0.9**
MDU	**Mudurnu**	**1.59**	**58**	*e*PN	**Pn**	**07 35 37.9**	**-1.0**
MDU	**Mudurnu**	**1.59**	**58**	*e*Pn	**Pn**	**07 35 37.9**	**-1.0**
SVRH	**Sivrihisar-ESK**	**1.62**	**96**	*e*PN	**Pn**	**07 35 37.9**	**-1.3**
SVRH	**Sivrihisar-ESK**	**1.62**	**96**	*e*Pn	**Pn**	**07 35 37.9**	**-1.3**
RKY	**Sarkoy-Tekirda**	**2.03**	**302**	*e*PN	**Pn**	**07 35 45.3**	**+0.3**
RKY	**Sarkoy-Tekirda**	**2.03**	**302**	*e*Pn	**Pn**	**07 35 45.3**	**+0.3**

ISCJB 17 07:35:48.5±1.5, 15°.05S±0°.5×179°.0W±0°.3, h447km±20km, mb3.8/11, Error ellipse: s-maj=82.4km s-min=17.2km az=150.0
NEIC 17 07:35:49.2±1.4, 15°.15S×178°.79W, h447km±18km, mb4.0/3, Error ellipse: s-maj=69.9km s-min=14.8km az=150.0
IDC 17 07:35:51.7±7.1, 15°.05S×178°.96W, h474km±83km, mb3.3/8, mb1 3.6/8, mb1mx3.4/16, mbtmp3.3/8, Error ellipse: s-maj=78.3km s-min=21.9km az=151.0
ISC 17 07:35:49.3±1.5, 15°.1S±0°.5×178°.9W±0°.3, h443km±20km, n18, σ0§76/13, mb3.8/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.98**	**227**	*e*Pn	**P**	**07 37 03.6**	**-0.1**
EIDS	**Eidsvold**	**29.94**	**245**	*e*P	**P**	**07 41 20.1**	**+0.4**
	6.8nm,1.0s,mb3.9						
ARMA	**Armidale**	**31.09**	**235**	*e*P	**P**	**07 41 29.8**	**+0.2**
	4.7nm,0.8s,mb3.9						
CTAO	**Charters Tower**	**33.58**	**256**	*e*P	**P**	**07 41 53.6**	**+2.5**
	9.3nm,1.0s,mb4.1						
STKA	**Stephens Creek**	**39.68**	**238**	P	**P**	**07 42 41.5**	**-0.1**
	1.5nm,0.4s,mb3.7,baz=86,slow=5.9,SNR=5.9						
WB2	**Warramunga Arr**	**44.77**	**257**	*e*P	**P**	**07 43 21.2**	**-0.9**
WRA	**Warramunga Arr**	**44.78**	**257**	P	**P**	**07 43 21.4**	**-0.8**
	1.2nm,0.4s,mb3.6,baz=94,slow=8.1,SNR=14						
ASAR	**Alice Springs**	**45.20**	**252**	P	**P**	**07 43 24.6**	**-0.9**
	8.0nm,0.5s,mb4.3,baz=84,slow=8.5,SNR=102						
FITZ	**Fitzroy Crossi**	**53.10**	**259**	P	**P**	**07 44 24.9**	**+0.5**
	5.2nm,1.0s,mb3.7,baz=103,slow=5.5,SNR=2.9						
YBH	**Yreka Blue Hor**	**76.61**	**40**	P	**P**	**07 46 53.5**	**+0.4**
	0.7nm,0.5s,mb3.6,baz=278,slow=10,SNR=8.3						
NVAR	**Mina Array Bea**	**77.69**	**44**	P	**P**	**07 46 59.2**	**+0.1**
	0.9nm,0.6s,mb3.5,baz=227,slow=8.9,SNR=11						
ILAR	**Eielson Array**	**83.22**	**13**	P	**P**	**07 47 27.0**	**-0.4**
	1.1nm,0.5s,mb3.8,baz=230,slow=5.3,SNR=22						
TXAR	**Lajitas Array**	**84.86**	**58**	P	**P**	**07 47 36.3**	**-0.1**
	0.5nm,0.7s,mb3.4,baz=218,slow=7.1,SNR=8.7						
ARCES	**ARCESS Array B**	**123.44**	**350**	PKP	PKPdf	07 53 53.4	-1.1
ARCES	**ARCESS Array B**	**123.44**	**350**	PKP	PKPdf	07 53 53.4	-1.1
	0.8nm,0.5s,baz=29,slow=1.2,SNR=8.2						
HFS	**Hagfors**	**134.06**	**351**	PKP	PKPdf	07 54 15.9	+1.0
	2.2nm,1.1s,baz=60,slow=3.8,SNR=4.2						
BRTR	**Keskin Array B**	**142.43**	**317**	PKP	PKPdf	07 54 28.7	-2.2
BRTR	**Keskin Array B**	**142.43**	**317**	PKP	PKPdf	07 54 28.7	-2.2
	1.9nm,0.9s,baz=85,slow=1.5,SNR=9.1						

ISCJB 17 07:48:34.3±0.4, 39°.61N±0°.02×29°.40E±0°.03, h0km, Error ellipse: s-maj=3.7km s-min=3.4km az=45.0
CSEM 17 07:48:34.4±0.2, 39°.62N×29°.41E, h1km, MD2.8, Error ellipse: s-maj=4.7km s-min=4.0km az=66.0
ISK 17 07:48:35.1, 39°.61N×29°.35E, h14km, MD2.8
ISC 17 07:48:34.6±0.4, 39°.61N±0°.03×29°.41E±0°.03, h0km, n42, σ1§16/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.52**	**174**	*i* P	**Pg**	**07 48 44.2**	**-0.4**
GDZ	**Gediz**	**0.52**	**174**	*i* P	**Pg**	**07 48 44.2**	**-0.4**
GDZ				*i* S	**Sg**	**07 48 52.6**	**+1.2**
ULDT	**Uludag**	**0.57**	**339**	*i* P	**Pg**	**07 48 43.7**	**-1.9**
ULDT	**Uludag**	**0.57**	**339**	*i* P	**Pg**	**07 48 43.7**	**-1.9**
ULD

OSCH	**Osorno**	**0.70**	**266**	⇓ *i*P		**Pg**	**08 02 04.7**	**-1.1**
OSCH				*i* S		**Sg**	**08 02 14.4**	**-0.5**
OSCH	**Osorno**	**0.70**	**266**	⇓ *i*P		**Pg**	**08 02 04.7**	**-1.1**
OSCH				*i* S		**Sg**	**08 02 14.4**	**-0.5**
PMCH	**Puerto Montt**	**1.09**	**208**	⇑ *i*P		**Pg**	**08 02 11.6**	**-1.6**
PMCH				*i* S		**Sg**	**08 02 27.7**	**+0.3**
PMCH	**Puerto Montt**	**1.09**	**208**	⇑ *i*P		**Pg**	**08 02 11.6**	**-1.6**
PMCH				*i* S		**Sg**	**08 02 27.7**	**+0.3**
PMCH				AML	AML		08 02 33.7	
	comp=E,6μm,0.5s							
ILCA	**Isla Las Cabra**	**1.55**	**189**	⇑ *i*P		**Pn**	**08 02 18.7**	**-1.3**
ILCA				*i* S		**Sn**	**08 02 41.1**	**+1.0**
ILCA				AML	AML		08 02 47.4	
	comp=N,1μm,0.9s							
TRQA	**Tornquist**	**8.31**	**76**	*e*Pn		**Pn**	**08 03 52.1**	**-0.8**
	comp=N,13nm,0.6s							
CFAA	**Coronel Fontan**	**9.47**	**21**	Pn		**Pn**	**08 04 08.3**	**-0.4**
	comp=N,0.8nm,0.3s,baz=196,slow=11,SNR=54							
USHA	**Ushuaia**	**14.53**	**171**	LR	LR		08 11 28.4	
	comp=N,563nm,18.4s,baz=52,slow=40							
LPAZ	**La Paz**	**24.41**	**10**	P		**P**	**08 07 11.7**	**+0.7**
	comp=N,1.3nm,0.7s,mb3.5,baz=164,slow=6.4,SNR=10							
LPAZ				ScP	ScP		08 14 30.5	+1.8
	comp=N,0.5nm,0.6s,baz=150,slow=2.6,SNR=3.8							
PMSA	**Palmer Station**	**24.74**	**172**	LR	LR		08 16 24.4	
	comp=N,335nm,19.0s,MS3.9,baz=8.2,slow=35							
SIV	**San Ignacio**	**26.30**	**25**	P		**P**	**08 07 27.0**	**-1.1**
	comp=N,3.6nm,0.8s,mb4.0,baz=225,slow=7.6,SNR=14							
QSPA	**South Pole Qui**	**49.72**	**180**	P		**P**	**08 10 45.4**	**+1.4**
	comp=N,3.7nm,0.8s,mb4.5,baz=144,slow=2.8,SNR=24							
MAW	**Mawson**	**66.98**	**163**	P		**P**	**08 12 44.7**	**0.0**
	comp=N,1.6nm,0.7s,mb4.2,baz=201,slow=2.7,SNR=3.5							
MAW				LR	LR		08 40 03.0	
	comp=N,62nm,20.7s,MS3.8,baz=122,slow=34							
LRAL	**Lakeview Retre**	**74.46**	**347**	*e*P		**P**	**08 13 30.4**	**-0.2**
	comp=N,3.0nm,0.6s,mb4.4							
JCT	**Junction City**	**75.14**	**336**	*e*P		**P**	**08 13 35.5**	**+1.0**
	comp=N,3.4nm,0.7s,mb4.4							
TXAR	**Lajitas Array**	**75.39**	**332**	P		**P**	**08 13 36.9**	**+0.9**
	comp=N,0.7nm,0.6s,mb3.8,baz=156,slow=8.6,SNR=12							
DBIC	**Dimbokro**	**77.48**	**70**	P		**P**	**08 13 47.9**	**-0.4**
	comp=N,5.2nm,0.5s,mb4.7,baz=201,slow=17,SNR=10							
ANMO	**Albuquerque**	**81.46**	**332**	P		**P**	**08 14 10.8**	**+1.4**
ANMO	**Albuquerque**	**81.46**	**332**	P		**P**	**08 14 10.8**	**+1.4**
	comp=N,2.2nm,0.7s,mb4.2,baz=144,slow=4.3,SNR=8.0							
TORD	**Torodi Ar. Bea**	**86.59**	**70**	P		**P**	**08 14 35.3**	**-0.8**
	comp=N,1.1nm,1.0s,mb4.0,baz=230,slow=3.9,SNR=4.1							
ECSD	**EROS Data Cent**	**86.72**	**343**	*e*P		**P**	**08 14 35.0**	**-1.0**
	comp=N,11nm,1.3s,mb4.9							
NVAR	**Mina Array Bea**	**89.17**	**326**	P		**P**	**08 14 50.5**	**+2.7**
	comp=N,0.9nm,1.1s,mb4.0,baz=148,slow=5.3,SNR=4.5							
HWUT	**Hardware Ranch**	**89.21**	**332**	*e*P		**P**	**08 14 48.7**	**+0.8**
	comp=N,8.2nm,1.4s,mb4.9							
WRA	**Warramunga Arr**	**114.96**	**208**	PKP	PKiKP		08 20 33.3	-0.5
	comp=N,0.3nm,0.3s,baz=137,slow=17,SNR=6.2							
ILAR	**Eielson Array**	**119.90**	**332**	PKP	PKPdf		08 20 42.0	+0.2
	comp=N,0.2nm,0.7s,baz=162,slow=2.6,SNR=5.1							
BRTR	**Keskin Array B**	**124.94**	**65**	PKP	PKPdf		08 20 52.0	-0.2
	comp=N,0.5nm,0.5s,baz=187,slow=1.6,SNR=3.8							
ABKAR	**Akbulak array**	**145.51**	**59**	*e*PKPbc	PKPbc		08 21 29.6	-0.5
BVAR	**Borovoye Array**	**151.84**	**51**	PKPbc	PKPbc		08 21 45.9	-0.7
	comp=N,0.8nm,0.6s,baz=284,slow=38,SNR=3.4							
BVAR				PKPab	PKPab		08 21 52.3	-3.5
	comp=N,1.4nm,0.7s,baz=326,slow=2.1,SNR=7.1							

NIED ***17*** *08:14:00,42.90N×145.50E,h41km,Mw3.6 Best double couple: M₀2.45000×10¹⁴ NP1:φs38.00000°,δ69.00000°, λ86.00000°. NP2:φs230.00000°,δ21.00000°,λ101.00000°.*

JMA 17 08:14:11.8±0.1, 42.89N×145.46E, h44km±1km, M3.7, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.52**	**23**	P	Pn	08 14 22.8	-0.1
NEM2				*e*S	Sn	08 14 30.2	-0.6
JAK	**Akkeshi**	**0.57**	**281**	P	Pn	08 14 23.7	+0.1
JAK				*e*S	Sn	08 14 32.4	+0.4
JNK	**Nakash**	**0.88**	**322**	P	Pn	08 14 27.7	-0.1
JNK				*e*S	Sn	08 14 38.7	-0.7
JRA	**Rausu**	**1.08**	**347**	P	Pn	08 14 30.6	+0.2
JRA				*e*S	Sn	08 14 44.1	-0.1
JOB	**Onbets**	**1.19**	**271**	P	Pn	08 14 32.1	+0.1
JOB				*e*S	Sn	08 14 47.3	+0.3
JAR	**Ashorobuto**	**1.30**	**289**	P	Pn	08 14 33.8	+0.3
JAR				*e*S	Sn	08 14 49.8	+0.1
JTKR	**Abashiri--Toko**	**1.56**	**314**	P	Pn	08 14 38.0	+0.9
JCH	**Churui**	**1.57**	**261**	P	Pn	08 14 37.0	-0.1
JCH				*e*S	Sn	08 14 56.3	+0.1

DJA 17 08:19:46,4.94S×103.02E,h51km,MLv3.7/7,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.58**	**354**	P	Pn	08 19 58.8	+0.5
MNAI				S	Sn	08 20 08.9	+1.8
LWLI	**Liwa**	**1.04**	**94**	P	Pn	08 20 04.8	+0.5
LWLI				S	Sn	08 20 18.1	+0.3
MDSI	**Maura Dua**	**1.24**	**69**	P	Pn	08 20 07.9	+0.9
MDSI				S	Sn	08 20 23.9	+1.3
KSI	**Kapahiang**	**1.35**	**342**	P	Pn	08 20 09.0	+0.5
KSI				S	Sn	08 20 25.9	+0.6
KASI	**Kota Agung**	**1.58**	**112**	P	Pn	08 20 11.9	+0.3
KASI				S	Sn	08 20 30.4	-0.6
KLSI		**1.72**	**82**	P	Pn	08 20 14.6	+1.0
KLSI				S	Sn	08 20 35.8	+1.4
BKNI	**Bangkinang**	**5.59**	**339**	P	Pn	08 21 08.2	+1.5
BKNI				S	Sn	08 22 12.3	+2.6

DJA 17 08:56:20,9.79S×111.64E,h30km,MLv3.5/6,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**1.65**	**344**	P	Pn	08 56 46.9	0.0
PWJI	**Pagerwojo**	**1.76**	**5**	P	Pn	08 56 49.4	+0.9
SJI	**Sawahan**	**2.05**	**4**	P	Pn	08 56 53.5	+1.1
UGM	**Wanagama**	**2.17**	**329**	P	Pn	08 56 55.6	+1.5
UGM				S	Sn	08 57 23.1	+3.2
GMJI	**Gumukmas**	**2.33**	**50**	P	Pn	08 56 57.5	+1.1
NGJI	**Ngawi**	**2.41**	**356**	P	Pn	08 57 03.0	+5.5
JAGI	**Jajag, Banyuwa**	**2.81**	**62**	P	Pn	08 57 04.7	+1.8

KRSC 17 09:10:03.9±0.7,54.07N×161.21E,h38km±27km,ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.57**	**32**	*e*P	Pn	09 10 15.4	-0.2
MKZ				*i* S	Sn	09 10 23.2	-0.6
KII	**Karymskiy**	**1.04**	**269**	*e*P	Pn	09 10 22.5	+0.6
KII				*i* S	Sn	09 10 35.2	0.0
SPN	**Mys Shipunski**	**1.20**	**216**	*e*P	Pn	09 10 24.1	-0.1
SPN				*i* S	Sn	09 10 38.4	-0.8
NLC	**Nalytchevo**	**1.43**	**232**	*e*P	Pn	09 10 27.7	+0.4
NLC				*i* S	Sn	09 10 45.0	+0.2
AVH	**Avacha**	**1.68**	**242**	*e*P	Pn	09 10 32.5	+1.8
AVH				*i* S	Sn	09 10 53.2	+2.3
PET	**Petropavlovsk**	**1.85**	**237**	*e*P	Pn	09 10 34.3	+1.2
PET				*i* S	Sn	09 10 56.2	+1.0
GNL	**Ganaly**	**1.97**	**260**	*e*P	Pn	09 10 36.4	+1.7
GNL				*i* S	Sn	09 11 00.1	+1.9
KPT	**Kopyto**	**1.98**	**344**	*e*P	Pn	09 10 36.6	+1.7
KOZ	**Kozyrevsk**	**2.14**	**339**	*e*P	Pn	09 10 38.1	+1.1
KOZ				*i* S	Sn	09 11 03.0	+0.8
KRSR	**Krestovskiy**	**2.18**	**351**	*e*P	Pn	09 10 38.6	+1.0
KLY	**Klyuchi**	**2.27**	**352**	*e*P	Pn	09 10 39.6	+0.8
KLY				*i* S	Sn	09 11 06.1	+0.6
KBTR	**Krutoberegovo**	**2.33**	**23**	*e*P	Pn	09 10 41.3	+1.6
KBTR				*i* S	Sn	09 11 08.4	+1.3
MIPR	**Malaya Ipel'ka**	**3.23**	**238**	*e*P	Pn	09 10 55.0	+3.0

ISCJB ***17*** *09:18:34.8±1.6,32.25N±0.04×104.98E±0.07, h15km±11km,mb3.8/10, Error ellipse: s-maj=9.6km s-min=6.9km az=165.5*
IDC ***17*** *09:18:34.3±0.9,32.31N×104.90E,h0km,mb3.8/9, mb1 3.9/11,mb1mx3.7/24,mbtmp3.7/11,ML3.4/2, Error ellipse: s-maj=34.6km s-min=16.8km az=57.0*

NEIC ***17*** *09:18:35.9±0.6,32.32N×105.01E,h10km,mb3.7/1, Error ellipse: s-maj=19.6km s-min=11.0km az=54.0*
BJI ***17*** *09:18:36.5,32.32N×104.92E,h15km,mb4.0/1,ML3.7/13*

ISC 17 09:18:34.9±1.1, 32.31N±0.03×104.95E±0.06, h1km±7km, n20,σ15.28/29, mb3.9/10, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.73**	**216**	Pn	**Pn**	**09 19 06.6**	**+0.5**
CD2				Pg	**Pg**	**09 19 09.5**	**+1.5**
CD2				Sg	**Sg**	**09 19 29.6**	**-0.9**
CD2				*s*max			
	comp=N,4μm,0.6s						
XAN	**Xi'an**	**3.75**	**62**	Pn	**Pn**	**09 19 37.1**	**+3.3**
XAN				Sn	**Sn**	**09 20 16.6**	**-2.0**
XAN				Sg	**Sb**	**09 20 30.9**	**+3.1**
XAN				*s*max			
	comp=N,110nm,0.9s						
XAN				*s*max			
	comp=E,64nm,0.8s						
LZH	**Lanzhou**	**3.88**	**347**	Pg	**Pg**	**09 19 47.8**	**-1.4**
LZH				Sn	**Sn**	**09 20 24.3**	**+2.6**
LZH				Sg	**Sg**	**09 20 37.6**	**-1.8**
LZH				*s*max			
	comp=N,190nm,0.5s						
LZH				*s*max			
	comp=E,290nm,0.7s						
GYA	**Guiyang**	**6.02**	**165**	Pn	**Pn**	**09 20 07.3**	**+2.2**
GYA				Pg	**Pg**	**09 20 26.3**	**-4.0**
GYA				Sn	**Sn**	**09 21 12.8**	**-1.9**
GYA				*s*max			
	comp=N,80nm,0.8s						
GYA				*s*max			
	comp=E,60nm,0.7s						
GTA	**Gaotai**	**8.22**	**331**	*e*P	**Pn**	**09 20 36.3**	**+1.1**
GTA				pP		09 20 39.4	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
WHN	**Wuhan**	**8.22**	**100**	*e*P	**Pn**	**09 20 36.5**	**+1.2**
WHN				S	**Sn**	**09 22 04.3**	**-4.6**
SONM	**Songino Array**	**15.54**	**4**	Pn	**Pn**	**09 22 15.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=180,slow=8.6,SNR=2.6						
KSRS	**Korea Array**	**19.52**	**68**	P	**Pn**	**09 23 05.0**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=252,slow=12,SNR=3.1						
MK31	**Makanchi Array**	**22.57**	**316**	*e*P	**P**	**09 23 37.3**	**+0.8**
MKAR	**Makanchi Array**	**22.57**	**316**	P	**P**	**09 23 37.1**	**+0.7**
	comp=Z,0.9nm,0.7s,mb3.4,baz=189,slow=11,SNR=8.4						
TKM2	**Tokmak 2**	**25.43**	**303**	*e*P	**P**	**09 24 03.2**	**-0.8**
KURK	**Kurchatov**	**26.73**	**321**	P	**P**	**09 24 16.1**	**+0.4**
	comp=Z,0.7nm,0.6s,mb3.5,baz=121,slow=11,SNR=3.7						
ABKAR	**Akbulak array**	**37.43**	**310**	*e*P	**P**	**09 25 50.2**	**+0.8**
	comp=Z,0.8nm,0.6s,mb3.6						
ARCES	**ARCESS Array B**	**56.46**	**335**	P	**P**	**09 28 17.4**	**-0.5**
	comp=Z,3.0nm,0.9s,mb4.3,baz=68,slow=11,SNR=3.5						
FINES	**FINESS Array B**	**56.97**	**326**	P	**P**	**09 28 20.1**	**-1.5**
	comp=Z,1.6nm,0.8s,mb4.1,baz=99,slow=6.2,SNR=6.1						
WRA	**Warramunga Arr**	**59.09**	**147**	P	**P**	**09 28 36.6**	**-0.3**
	comp=Z,1.3nm,0.5s,mb4.2,baz=342,slow=7.6,SNR=32						
ASAR	**Alice Springs**	**62.16**	**150**	P	**P**	**09 28 57.8**	**0.0**
	comp=Z,0.6nm,0.4s,mb4.2,baz=330,slow=6.5,SNR=18						
NOA	**NORSAR Array B**	**64.03**	**327**	P	**P**	**09 29 08.8**	**-1.0**
	comp=Z,1.1nm,0.8s,mb4.2,baz=73,slow=6.6,SNR=3.6						
ILAR	**Eielson Array**	**68.44**	**26**	P	**P**	**09 29 37.2**	**-0.8**
	comp=Z,0.2nm,0.7s,mb3.4,baz=289,slow=5.6,SNR=3.1						
YKA	**Yellowknife Ar**	**80.33**	**17**	P	**P**	**09 30 46.2**	**-1.1**
	comp=Z,0.7nm,0.6s,mb3.8,baz=329,slow=4.7,SNR=2.8						

IDC ***17*** *09:34:00.5±1.1,8.27N×93.48E,h0km,mb4.0/11, mb1 4.1/12,mb1mx3.9/22,mbtmp3.9/12,ML4.1/1, Error ellipse: s-maj=40.8km s-min=19.9km az=55.0*
ISCJB ***17*** *09:34:03.8±0.8,8.3N±0.1×93.7E±0.1,h35km,mb4.0/13, Error ellipse: s-maj=23.4km s-min=11.8km az=144.6*

ISC 17 09:34:05.8±0.8, 8.2N±0.1×93.7E±0.1, h35km, n26, σ0.81/27, mb4.0/13, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.39**	**26**	Pn	**Pn**	**09 36 46.0**	**-0.2**
	0.4nm,0.3s,baz=218,slow=12,SNR=2.8						
VIS	**Vishakhapatnam**	**13.78**	**314**	*i* P	**Pn**	**09 37 23.4**	**+4.6**
VIS				*i* S	**Sn**	**09 39 39.8**	**-11**
VIS				*i* S	**Sn**	**09 39 40.0**	**-11**
VIS				*ex*	x	09 39 44.4	
	comp=N,26nm,0.4s						
VIS				*ex*	x	09 39 47.7	
	comp=E,27nm,0.4s						
BWNR	**Bhubaneshwar**	**14.19**	**329**	*e*PKP	**Pn**	**09 37 26.0**	**+1.6**
BWNR				*e*S	**Sn**	**09 39 52.0**	**-8.6**
ODAN	**Odare**	**19.45**	**343**	*e*P	**Pn**	**09 38 31.8**	**+0.9**
RAMN	**Ramite**	**19.78**	**341**	*e*P	**Pn**	**09 38 35.2**	**+0.4**
TAPN	**Taplejung**	**19.83**	**344**	*e*P	**Pn**	**09 38 34.9**	**-0.5**
PKI	**Pulchoki**	**20.75**	**339**	*e*P	**P**	**09 38 45.2**	**+1.5**
DMN	**Daman**	**20.90**	**338**	*e*P	**P**	**09 38 45.6**	**+0.4**
KKN	**Kakani**	**21.00**	**339**	*e*P	**P**	**09 38 47.1**	**+0.8**
GKN	**Gorkha**	**21.43**	**338**	*e*P	**P**	**09 38 50.7**	**-0.2**
KOLN	**Koldanda**	**21.63**	**335**	*e*P	**P**	**09 38 53.4**	**+0.3**
MKAR	**Makanchi Array**	**39.63**	**348**	P	**P**	**09 41 33.5**	**-0.6**
	comp=E,0.8nm,0.5s,mb3.7,baz=178,slow=8.0,SNR=5.2						
SONM	**Songino Array**	**40.92**	**13**	P	**P**	**09 41 44.3**	**-0.4**
	comp=E,3.6nm,0.7s,mb4.1,baz=197,slow=8.1,SNR=9.6						
KURK	**Kurchatov**	**44.15**	**346**	P	**P**	**09 42 10.1**	**-0.8**
	comp=E,0.8nm,0.6s,mb3.7,baz=170,slow=7.0,SNR=5.4						
KURK				PcP	PcP	09 43 55.5	0.0
	comp=E,0.4nm,0.4s,baz=168,slow=2.9,SNR=3.1						
ZALV	**Zalesovo Beam**	**46.14**	**353**	P	**P**	**09 42 26.4**	**-0.3**
	comp=E,3.9nm,0.4s,mb4.7,baz=179,slow=9.0,SNR=22						
WRA	**Warramunga Arr**	**48.87**	**125**	P	**P**	**09 42 49.4**	**+1.0**
	comp=E,0.2nm,0.4s,mb3.5,baz=301,slow=9.9,SNR=6.2						
MJAR	**Matsushiro Arr**	**49.28**	**48**	PcP	PcP	09 44 14.5	+0.6
	comp=E,1.5nm,0.7s,baz=238,slow=2.2,SNR=5.8						
ASAR	**Alice Springs**	**50.52**	**130**	P	**P**	**09 43 02.2**	**+1.3**
	comp=E,0.2nm,0.6s,mb3.3,baz=307,slow=7.3,SNR=4.8						
BRTR	**Keskin Array B**	**61.83**	**311**	P	**P**	**09 44 20.6**	**-0.9**
	comp=E,0.6nm,0.6s,mb3.9,baz=125,slow=8.2,SNR=4.7						
JOF	**Joensuu**	**70.32**	**334**	*ep*	**P**	**09 45 14.8**	**-0.8**
	comp=E,2.7nm,0.6s,mb4.3						
FINES	**FINESS Array B**	**72.17**	**332**	P	**P**	**09 45 26.2**	**-0.6**
	comp=E,1.1nm,0.4s,mb4.1,baz=90,slow=5.3,SNR=11						
KAF	**Kangasniemi**	**72.25**	**333**	*ep*	**P**	**09 45 26.6**	**-0.7**
	comp=E,1.3nm,0.4s,mb4.2						
ARCES	**ARCESS Array B**	**74.77**	**340**	P	**P**	**09 45 41.6**	**-0.4**
	comp=E,4.4nm,1.0s,mb4.3,baz=100,slow=6.7,SNR=8.5						
NOA	**NORSAR Array B**	**79.18**	**331**	P	**P**	**09 46 06.4**	**-0.5**
	comp=E,1.2nm,0.6s,mb4.0,baz=95,slow=5.1,SNR=5.9						
ILAR	**Eielson Array**	**94.60**	**22**	P	**P**	**09 47 21.5**	**-1.2**
	comp=E,0.4nm,0.8s,mb3.9,baz=292,slow=3.6,SNR=5.9						
TXAR	**Lajitas Array**	**139.10**	**23**	PKP	PKPdf	09 53 31.5	+1.9
	comp=E,0.1nm,0.4s,baz=275,slow=0.8,SNR=7.9						

ISCJB ***17*** *09:56:56.0±0.5,40.56N±0.02×34.79E±0.04,h1km±8km, Error ellipse: s-maj=4.5km s-min=4.1km az=170.0*
DDA ***17*** *09:56:55.8,40.56N×34.81E,h13km±2km,Md3.1*
ISK ***17*** *09:56:56.0,40.57N×34.83E,h5km,MD3.2*
CSEM ***17*** *09:56:56.8±0.1,40.56N×34.81E,h2km,MD3.1, Error ellipse: s-maj=2.3km s-min=1.8km az=151.0*

ISC 17 09:56:56.7±0.5, 40.57N±0.02×34.81E±0.04, h10km±7km, n37,σ0.92/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.06**	**343**	*i* P	**Pg**	**09 56 58.4**	**-0.4**
CTKT	**Corum**	**0.06**	**343**	*i* P	**Pg**	**09 56 58.4**	**-0.4**
CORM	**Corum**	**0.41**	**200**	*e*PG	**Pg**	**09 57 05.1**	**+0.4**
CORM				*e*SG	**Sg**	**09 57 12.2**	**+1.9**
CORM	**Corum**	**0.41**	**200**	*e*Pg	**Pg**	**09 57 05.1**	**+0.3**
CORM				*e*Sg	**Sg**	**09 57 12.2**	**+2.0**
BYBT	**Boyabat**	**0.90**	**358**	*e*PG	**Pg**	**09 57 14.4**	**+0.4**
BYBT				*e*SG	**Sg**	**09 57 27.2**	**+1.4**
BYBT	**Boyabat**	**0.90**	**358**	*e*Pg	**Pg**	**09 57 14.4**	**+0.4**
BYBT				*e*Sg	**Sg**	**09 57 27.2**	**+1.4**
CANT	**Cankiri**	**0.91**	**273**	*e*PG	**Pg**	**09 57 14.5**	**+0.4**
ILGA	**Ilgaz**	**0.96**	**301**	*i* P	**Pg**	**09 57 14.9**	**-0.3**
ILGA				*i* S	**Sg**	**09 57 28.8**	**+1.1**
ILGA	**Ilgaz**	**0.96**	**301**	*i* P	**Pg**	**09 57 14.9**	**-0.3**
ILGA				*i* S	**Sg**	**09 57 28.8**	**+1.1**
CDAG	**Cicekdag**	**1.00**	**200**	*i* P	**Pg**	**09 57 15.1**	**-0.8**
CDAG				*i* S	**Sg**	**09 57 28.9**	**-0.1**
CDAG	**Cicekdag**	**1.00**	**200**	*i* P	**Pg**	**09 57 15.1**	**-0.8**
CDAG				*i* S	**Sg**	**09 57 28.9**	**0.0**
YOZ	**Yozgat**	**1.00**	**157**	*e*PG	**Pg**	**09 57 15.4**	**-0.6**
YOZ	**Yozgat**	**1.00**	**157**	*e*Pg	**Pg**	**09 57 15.4**	**-0.6**
ELDT	**Eldivan**	**1.06**	**266**	*i* P	**Pg**	**09 57 16.6**	**-0.4**
ELDT				*i* S	**Sg**	**09 57 30.5**	**-0.3**
ELDT	**Eldivan**	**1.06**	**266**	*i* P	**Pg**	**09 57 16.6**	**-0.4**
ELDT				*i* S	**Sg**	**09 57 30.5**	**-0.3**
KVT	**Kavak**	**1.07**	**61**	*e*PG	**Pg**	**09 57 17.1**	**-0.1**
KVT	**Kavak**	**1.07**	**61**	*e*Pg	**Pg**	**09 57 17.1**	**-0.1**
TOKT	**Tokat**	**1.34**	**100**	*e*PN	**Pg**	**09 57 22.8**	**+0.3**
TOKT	**Tokat**	**1.34**	**100**	*e*Pn	**Pg**	**09 57 22.8**	**+0.3**
BALT	**Daday**	**1.45**	**312**	*i* P	**Pg**	**09 57 22.7**	**-1.8**
BALT				*i* S	**Sg**	**09 57 42.5**	**-0.8**
BALT	**Daday**	**1.45**	**312**	*i* P	**Pg**	**09 57 22.7**	**-1.8**
BALT				*i* S	**Sg**	**09 57 42.5**	**-0.8**
BZK	**Bozkurt**	**1.52**	**337**	*e*PN	**Pg**	**09 57 25.9**	**+0.1**
BZK	**Bozkurt**	**1.52**	**337**	*e*Pn	**Pg**	**09 57 25.9**	**+0.1**
BBAL	**Bala**	**1.65**	**232**	*i* P	**Pg**	**09 57 26.7**	**-1.6**
BBAL				*i* S	**Sg**	**09 57 50.1**	**+0.4**
BBAL	**Bala**	**1.65**	**232**	*i* P	**Pg**	**09 57 26.7**	**-1.7**
BBAL				*i* S	**Sg**	**09 57 50.1**	**+0.3**
LOD	**Lodumlu**	**1.71**	**247**	*e*PN	**Pb**	**09 57 27.9**	**-0.3**
LOD	**Lodumlu**	**1.71**	**247**	*e*Pn	**Pb**	**09 57 27.9**	**-0.2**
SAFT	**Safranbolu**	**1.75**	**293**	*e*PN	**Pb**	**09 57 29.4**	**+0.7**
SAFT	**Safranbolu**	**1.75**	**293**	*e*Pn	**Pb**	**09 57 29.5**	**+0.7**
SVSK	**Karacayir**	**1.79**	**111**	*e*PN	**Pb**	**09 57 29.7**	**+0.1**
SVSK	**Karacayir**	**1.79**	**111**	*e*Pn	**Pb**	**09 57 29.7**	**+0.1**
SGKT	**Sivrigoynuk**	**2.10**	**271**	*i* P	**Pb**	**09 57 33.1**	**-1.7**
SGKT				*i* S	**Sg**	**09 58 05.0**	**+0.9**
SGKT	**Sivrigoynuk**	**2.10**	**271**	*i* P	**Pb**	**09 57 33.1**	**-1.7**
SARI	**SarD1z-Kayseri**	**2.38**	**142**	*e*PN	**Pb**	**09 57 39.0**	**-0.7**
SARI	**SarD1z-Kayseri**	**2.38**	**142**	*e*Pn	**Pb**	**09 57 39.0**	**-0.6**
SULT	**Sultanhani-AKS**	**2.57**	**203**	*e*PN	**Pn**	**09 57 40.3**	**+2.0**
SULT	**Sultanhani-AKS**	**2.57**	**203**	*e*Pn	**Pn**	**09 57 40.3**	**+2.0**

ISCJB ***17*** *09:57:21.4±0.4,26.60N±0.06×126.37E±0.06, h120km±5km,mb3.6/8, Error ellipse: s-maj=13.0km s-min=3.6km az=142.3*
JMA ***17*** *09:57:23.2±0.2,26.60N×126.38E,h113km±2km,M3.3*
IDC ***17*** *09:57:26.5±4.5,26.66N×126.36E,h152km±42km,mb3.3/8, mb1 3.4/9,mb1mx3.3/22,mbtmp3.3/9, Error ellipse: s-maj=31.5km s-min=18.4km az=74.0*

ISC 17 09:57:22.5±0.4, 26.60N±0.06×126.36E±0.06, h114km±5km, n26,σ0.85/43, mb3.6/8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.47**	**125**	P	**Pn**	**09 57 40.3**	**+0.7**
JKE				*e*S	**Sn**	**09 57 52.8**	**+0.4**
JAGN	**Aguni-jima**	**0.79**	**91**	P	**Pn**	**09 57 42.6**	**+0.6**
JAGN				S	**Sn**	**09 57 56.8**	**+0.1**
NAH1	**Naha**	**1.25**	**108**	P	**Pn**	**09 57 47.5**	**+0.8**
NAH1				S	**Sn**	**09 58 04.6**	**-0.5**
JJT2	**Tamagusuku 2**	**1.33**	**110**	P	**Pn**	**09 57 48.7**	**+1.2**
JJT2				S	**Sn**	**09 58 07.1**	**+0.6**
JIH	**Iheya**	**1.50**	**73**	P	**Pn**	**09 57 50.3**	**+0.8**
JIH				*e*S	**Sn**	**09 58 09.6**	**-0.5**
JOW	**Kunigami**	**1.73**	**82**	P	**Pn**	**09 57 52.8**	**+0.6**
JOW				S	**Sn**	**09 58 14.0**	**-0.9**
JMJ	**Miyako jima 2**	**2.02**	**209**	P	**Pn**	**09 57 56.8**	**+0.9**
JMJ				S	**Sn**	**09 58 21.6**	**+0.1**
JOGS	**Gusukube**	**2.02**	**205**	P	**Pn**	**09 57 57.0**	**+1.0**
JOGS				S	**Sn**	**09 58 21.9**	**+0.3**
JTJ	**Tarama**	**2.46**	**218**	P	**Pn**	**09 58 02.0**	**+0.5**
JTJ				S	**Sn**	**09 58 30.5**	**-1.0**
JTK

TSZ	Takapari Road	9.34	198	*e*P		Pn	10 06 16.2	-0.5
TSZ	Takapari Road	9.34	198	*e*PN		Pn	10 06 16.2	-0.5
PRHZ	Porangahau	9.37	195	PN		Pn	10 06 17.7	+0.6
BFZ	Birch Farm	9.85	196	P		Pn	10 06 22.6	-0.3
BFZ	Birch Farm	9.85	196	PN		Pn	10 06 22.6	-0.3
MRZ	Mangatainoka R	10.01	199	*e*P		Pn	10 06 22.4	-2.3
MRZ	Mangatainoka R	10.01	199	*e*PN		Pn	10 06 22.4	-2.4
TIWZ	Tintock	10.03	197	*e*PN		Pn	10 06 24.8	-0.2
OGWZ	Otaki Gorge	10.27	200	*e*PN		Pn	10 06 27.0	-0.8
KIW	Kapiti Island	10.38	201	P		Pn	10 06 29.9	+0.6
KIW	Kapiti Island	10.38	201	*e*PN		Pn	10 06 29.8	+0.5
MTW	Mount Morrison	10.49	198	P		Pn	10 06 31.5	+1.0
SNZO	South Karori	10.86	201	*e*Pn		Pn	10 06 33.0	-1.9
SNZO				*e*Sn		S	10 08 37.2	+0.7
TUWZ	Tuamarina	11.21	203	*e*PN		Pn	10 06 39.1	0.0
NNZ	Nelson	11.22	206	*e*PN		Pn	10 06 39.5	+0.2
NNZ				SN		S	10 08 44.2	-0.4
KHZ	Kahutara	12.23	202	*e*Pn		Pn	10 06 52.0	+0.7
KHZ				*e*Sn		S	10 09 07.7	+0.9
KHZ	Kahutara	12.23	202	*e*PN		Pn	10 06 51.6	+0.3
KHZ				SN		S	10 09 07.2	+0.4
LTZ	Lake Taylor	12.99	205	SN		S	10 09 23.0	+0.1
MSVF	Nonsavu 11nm,0.8s	13.53	353	*e*Pn		Pn	10 06 58.7	-8.3
MQZ	McQueen's Vall	13.67	202	SN		S	10 09 35.7	-1.0
ODZ	Otahua Downs	15.53	205	SN		S	10 10 20.6	+6.6
STKA	Stephens Creek 1.1nm,1.1s,mb3.0	32.44	259	*e*P		P	10 10 08.5	+2.2
STKA	Stephens Creek 2.3nm,0.7s,mb3.5,baz=106,slow=11,SNR=4.2	32.44	259	P		P	10 10 07.1	+0.8
ASAR	Alice Springs 1.5nm,0.7s,mb3.3,baz=105,slow=7.4,SNR=28	41.17	269	P		P	10 11 19.2	-0.1
ASAR				PcP	PcP		10 13 09.1	-2.2
	0.7nm,0.6s,baz=110,slow=4.3,SNR=5.4							
WRA	Warramunga Arr 2.7nm,0.4s,mb3.7,baz=111,slow=8.0,SNR=46	42.24	274	P		P	10 11 27.5	-0.5
FORT	Forrest 5.7nm,0.6s,mb3.9	43.99	257	*e*P		P	10 11 41.5	-0.2
FITZ	Fitzroy Crossi 30nm,1.7s,mb4.2	50.46	272	*e*P		P	10 12 31.0	-0.3
CASY	Casey 2.6nm,0.6s,mb3.7	53.51	208	*e*P		P	10 12 52.9	0.0
QSPA	South Pole Qui 13nm,1.2s,mb4.2	58.88	180	*e*P		P	10 13 31.6	+1.4
NVAR	Mina Array Bea 0.4nm,0.6s,mb3.5,baz=203,slow=6.4,SNR=4.6	90.15	44	P		P	10 16 24.3	-4.6
MKAR	Makanchi Array 0.9nm,0.5s,baz=203,slow=1.9,SNR=7.3	116.85	10	PKP	PKPdf		10 22 06.8	-4.0
BVAR	Borovoye Array 2.1nm,0.5s,baz=135,slow=0.2,SNR=12	125.66	315	PKP	PKPdf		10 22 24.5	-3.1
ARU	Arti	132.50	320	*e*PKPdf	PKPdf		10 22 37.5	-3.0
ARCES	ARCESS Array B 1.7nm,0.7s,baz=61,slow=2.6,SNR=11	138.97	347	PKhKP	PKPpre		10 22 40.9	
ARCES				PKP	PKPdf		10 22 48.4	-3.7
	3.7nm,0.8s,baz=77,slow=5.4,SNR=5.1							
JOF	Joensuu 1.5nm,0.3s	142.46	337	*e*p	PKPdf		10 22 50.6	-8.0
KAF	Kangasniemi 12nm,0.4s	144.66	339	*e*p	PKPdf		10 22 56.6	-5.9
OBN	Obninsk	144.73	323	*e*PKPdf	PKPdf		10 22 59.1	-3.7
FINES	FINESS Array B 19nm,0.6s,baz=50,slow=3.9,SNR=133	145.24	338	PKPbc	PKPbc		10 22 59.6	-4.4
MALT	Malatya	147.65	293	*e*PKPbc	PKPbc		10 23 09.6	-2.0
NOA	NORSAR Array B 5.2nm,0.8s,baz=16,slow=4.2,SNR=19	149.25	349	PKPbc	PKPbc		10 23 10.5	-4.3
MMAI	Mount Meron Ar 4.1nm,0.5s,baz=99,slow=5.2,SNR=8.2	149.86	283	PKPbc	PKPbc		10 23 15.9	-1.4
AKASG	Malin Array Be 3.6nm,0.5s,baz=49,slow=3.3,SNR=13	150.76	320	PKPbc	PKPbc		10 23 15.1	-3.7
AKASG				PKPab	PKPab		10 23 22.4	-4.9
	0.2nm,0.3s,baz=58,slow=4.9,SNR=4.5							
BRTR	Keskin Array B 3.4nm,0.6s,baz=132,slow=4.1,SNR=14	151.29	297	PKPbc	PKPbc		10 23 17.4	-3.0
BRTR				PKPab	PKPab		10 23 27.0	-2.9
	1.5nm,0.8s,baz=74,slow=5.3,SNR=5.8							
BRG	Berggiesshubel 5.0nm,1.1s	157.73	336	*e*(P)	PKPab		10 23 50.4	-6.6
SSF	Saint Saulge 2.6nm,0.5s	163.93	351	*e*PKP2	PKPab		10 24 19.0	-5.2
AVF	Avril sur Loir	164.22	351	*e*PKP2	PKPab		10 24 20.1	-5.3
SMF	Signal de Mont 11nm,0.8s	164.29	350	*e*PKP2	PKPab		10 24 20.6	-5.2

MAN 17 10:28:01,13°10N×124°40E, h3km, mb4.4, ML3.3, MS3.2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVCP	Virac	0.55	335	*e*P	Pg	10 28 11.8	+0.2
CNP	Catarman	0.64	156	*e*P	Pg	10 28 14.4	+1.2
AUQP	San Andres	1.69	278	*e*P	Pn	10 28 32.9	+1.4
GQP	Guinayangan	2.06	293	*e*P	Pn	10 28 37.5	+1.0
GQP				*e*S	Sn	10 29 04.8	+2.0
OTRP	Odiongan	2.43	253	*e*P	Pn	10 28 41.1	-0.6
POLP	Polillo Island	2.88	304	*e*P	Pn	10 29 51.6	+3.8
GUIM	Jordan	3.03	116	*e*P	Pn	10 28 50.1	+0.3
BALP	Baler	3.79	314	*e*P	Pn	10 28 49.8	-11
CAUP	Cauayan	4.56	327	*e*P	Pn	10 29 12.2	+1.2

ISC 17 10:51:07.4±0.5, 46°40N±0°03×13°01E±0°04, h10km, n13, σ0.46/25, 7C-3D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUSE	Fusea	0.02	343	*i*Pg	Pg	10 51 08.9	-0.3
FUSE				*i* Sg	Sg	10 51 10.1	-0.3
MPRI	Monte Prat	0.15	185	*i*Pg	Pg	10 51 10.6	-0.2
MPRI				Sg	Sg	10 51 13.4	+0.3
ZOU	Zoufplan	0.16	351	*e*Pg	Pg	10 51 11.1	+0.1
ZOU				*e*Sg	Sg	10 51 14.0	+0.6
PLRO	Paularo	0.18	32	*i*Pg	Pg	10 51 11.2	-0.1
PLRO				*i* Sg	Sg	10 51 14.1	+0.1
BAD	Bernadia	0.23	134	*e*Pg	Pg	10 51 11.7	-0.4
BAD				*e*Sg	Sg	10 51 15.2	0.0
VINO	Villanova	0.23	126	*e*Pg	Pg	10 51 11.7	-0.5
VINO				*e*Sg	Sg	10 51 15.4	0.0
COLI	Coloredo	0.37	136	*e*Pg	Pg	10 51 14.2	-0.4
COLI				*e*Sg	Sg	10 51 20.2	+0.8
LSR	Lussari	0.37	77	*e*Pg	Pg	10 51 14.2	-0.5
LSR				*e*Sg	Sg	10 51 20.1	+0.6
ROBS	Robic	0.38	113	*i* Pg	Pg	10 51 14.3	-0.6
ROBS				*i* Sg	Sg	10 51 19.9	0.0
ROBS	comp=Z,3.0nm,0.1s						
CIMO	Cimolais	0.40	258	*e*Pg	Pg	10 51 15.1	-0.2
CIMO				*e*Sg	Sg	10 51 21.4	+0.8
DRE	Drenchia	0.49	117	*e*Pg	Pg	10 51 16.2	-0.7
DRE				*e*Sg	Sg	10 51 23.8	+0.3
CADS	Cadrg	0.53	108	*i* Pg	Pg	10 51 17.1	-0.6
CADS				*i* Sg	Sg	10 51 25.4	+0.7
CADS	comp=Z,9.0nm,0.2s						
VOJS	Vojsko	0.71	121	*i* Sg	Sg	10 51 30.9	+0.6

NEIC 17 10:58:56.0, 18°13N×100°32W, h36km, MD3.6(MEX), After MEX.

MEX 17 10:58:56.0±0.8, 18°13N×100°32W, h36km±47km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	Mezcala	0.69	107	*i* P	Pn	10 59 08.1	-1.2
MEIG				*i* S	Sn	10 59 16.2	-2.6
CAIG	El Cayaco	1.07	177	*i* P	Pn	10 59 13.2	-1.4
CAIG				*i* S	Sn	10 59 25.6	-2.6
CAIG	El Cayaco	1.07	177	*i* P	Pn	10 59 13.2	-1.4
CAIG				*i* S	Sn	10 59 25.6	-2.6
ZIIG	Zihuatanejo	1.21	245	*e*P	Pn	10 59 13.5	-2.9
ZIIG				*i* S	Sn	10 59 28.6	-3.0
ZIIG	Zihuatanejo	1.21	245	*e*P	Pn	10 59 16.7	+0.3
ZIIG				*i* S	Sn	10 59 28.6	-3.0
ACX	Acapulco	1.32	161	*e*P	Pn	10 59 15.4	-2.6
ACX	Acapulco	1.32	161	*e*P	Pn	10 59 15.4	-2.6
MZVM		1.48	44	*e*P	Pn	10 59 17.9	-2.2
MZVM				*i* S	Sn	10 59 37.0	-1.2
PPM	Popocatepetl	1.86	59	*i* P	Pn	10 59 24.3	-1.0
PPM				*i* S	Sn	10 59 46.6	-1.0
PPM	Popocatepetl	1.86	59	*i* P	Pn	10 59 24.3	-1.0
PPM				*i* S	Sn	10 59 46.6	-1.0
UTMO	Huajuapan	2.41	97	*i* P	Pn	10 59 32.0	-0.9
UTMO				*i* S	Sn	10 59 59.9	-1.3
PNIG	Pinotepa	2.71	129	*i* P	Pn	10 59 34.6	-2.5
PNIG				*i* S	Sn	11 00 09.2	+0.5
PNIG	Pinotepa	2.71	129	*i* P	Pn	10 59 34.6	-2.5
PNIG				*i* S	Sn	11 00 09.2	+0.5

DDA 17 11:10:47.6, 36°97N×29°22E, h7km±6km, Md3.2
ISK 17 11:10:47.7, 37°03N×29°15E, h5km, MD3.1
CSEM 17 11:10:48.9±0.2, 37°05N×29°13E, h2km, MD3.1, Error ellipse: s-maj=5.6km s-min=3.7km az=3.0
ISCJB 17 11:10:49.5±0.4, 37°04N±0°03×29°18E±0°03, h10km, Error ellipse: s-maj=4.3km s-min=3.2km az=6.2

ISC 17 11:10:49.3±0.5, 37°02N±0°03×29°14E±0°03, h2km±5km, n43, σ1.17/64, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.31	64	*e*PG	Pg	11 10 54.5	-0.8
GLHS				*e*SG	Sg	11 11 00.1	+0.7
GLHS	Glhisar (BURDU	0.31	64	*e*Pg	Pg	11 10 54.5	-0.8
GLHS				*e*Sg	Sg	11 11 00.1	+0.7
GOLH	Golhisar	0.40	57	*i* P	Pg	11 10 55.2	-1.7
GOLH				*i* S	Sg	11 11 02.4	+0.3
GOLH	Golhisar	0.40	57	*i* P	Pg	11 10 55.2	-1.7
GOLH				*i* S	Sg	11 11 02.4	+0.3
TURN	Turunc	0.46	251	*i* P	Pg	11 11 03.1	+5.0
TURN				*i* S	Sg	11 11 14.2	+10
ELL	Elmali	0.67	114	*e*PG	Pg	11 11 01.1	-1.1
ELL				*e*SG	Sg	11 11 12.1	+1.2
ELL	Elmali	0.67	114	*e*Pg	Pg	11 11 01.1	-1.1
ELL				*e*Sg	Sg	11 11 12.1	+1.2
DNZL	Cakiroluk	0.67	353	*i* P	Pg	11 11 01.3	-0.9
DNZL				*i* S	Sg	11 11 12.3	+1.3
DNZL	Cakiroluk	0.67	353	*i* P	Pg	11 11 01.3	-0.9
DNZL				*i* S	Sg	11 11 12.3	+1.4
YER	Yerkesik	0.70	280	*e*PG	Pg	11 11 02.0	-0.7
YER	Yerkesik	0.70	280	*e*Pg	Pg	11 11 02.0	-0.7
DENT	Denizli	0.74	353	*e*PG	Pg	11 11 02.9	-0.6
DENT	Denizli	0.74	353	*e*Pg	Pg	11 11 02.9	-0.6
AKAS	Kas	0.87	155	*i* P	Pg	11 11 04.1	-1.9
AKAS				*i* S	Sg	11 11 19.3	+2.1
AKAS	Kas	0.87	155	*i* P	Pg	11 11 04.1	-1.9
AKAS				*i* S	Sg	11 11 19.3	+2.1
MLSB	Milas	1.13	284	*e*PN	Pg	11 11 10.2	-0.7
MLSB	Milas	1.13	284	*e*Pn	Pg	11 11 10.2	-0.7
AYDN	Tasoluk	1.19	303	*i* P	Pg	11 11 11.7	-0.5
AYDN				*i* S	Sg	11 11 30.4	+2.8
AYDN	Tasoluk	1.19	303	*i* P	Pg	11 11 11.7	-0.5
AYDN				*i* S	Sg	11 11 30.4	+2.7
BCK	Bucak	1.23	69	*e*PN	Pn	11 11 12.4	-1.1
BCK	Bucak	1.23	69	*e*Pn	Pn	11 11 12.4	-1.2
DAT	Datca	1.29	257	*e*PN	Pn	11 11 14.1	-0.2
DAT				*e*SN	Sn	11 11 33.2	+1.1
DAT	Datca	1.29	257	*e*Pn	Pn	11 11 14.1	-0.2
DAT				*e*Sn	Sn	11 11 33.2	+1.1
KHL	Karahalli	1.33	13	*e*PN	Pn	11 11 13.4	-1.5
KHL	Karahalli	1.33	13	*e*Pn	Pn	11 11 13.5	-1.5
ISP	Isparta	1.36	53	*e*PN	Pn	11 11 15.4	+0.1
ISP				*e*SN	Sn	11 11 35.2	+1.3
ISP	Isparta	1.36	53	*e*Pn	Pn	11 11 15.4	+0.1
ISP				*e*Sn	Sn	11 11 35.2	+1.3
BDRM	Kayabasi	1.36	272	*i* P	Pn	11 11 15.2	-0.1
BDRM				*i* S	Sg	11 11 34.4	+1.4
BDRM	Kayabasi	1.36	272	*i* P	Pn	11 11 15.2	-0.1
BDRM				*i* S	Sg	11 11 34.4	+1.4
KHAL	Karahalli	1.38	11	*i* P	Pn	11 11 13.5	-2.0
KHAL				*i* S	Sg	11 11 35.9	+2.3
KHAL	Karahalli	1.38	11	*i* P	Pn	11 11 13.5	-2.0
KHAL				*i* S	Sg	11 11 35.9	+2.4
BODT	Bodrum	1.47	272	*e*PN	Pn	11 11 16.1	-0.7
BODT	Bodrum	1.47	272	*e*Pn	Pn	11 11 16.1	-0.7
KULA	Kula-Manisa	1.54	346	*e*PN	Pn	11 11 17.1	-0.7
KULA	Kula-Manisa	1.54	346	*e*Pn	Pn	11 11 17.1	-0.7
ALT	Altintas	2.17	20	*e*PN	Pn	11 11 26.7	+0.3
ALT	Altintas	2.17	20	*e*Pn	Pn	11 11 26.7	+0.3
HDMB	Hadim	2.68	90	*e*PN	Pn	11 11 33.6	+0.2
HDMB	Hadim	2.68	90	*e*Pn	Pn	11 11 33.6	+0.2
KONT	Konya--Tatoy	2.72	69	*e*PN	Pn	11 11 34.5	+0.5
KONT	Konya--Tatoy	2.72	69	*e*Pn	Pn	11 11 34.5	+0.5
IKL	Isikli	3.73	101	*e*PN	Pn	11 11 49.2	+1.2
IKL	Isikli	3.73	101	*e*Pn	Pn	11 11 49.2	+1.2

ATH 17 11:20:49.4, 41°02N×21°55E, h5km, MD3.2/4
ISCJB 17 11:21:00.5±0.5, 40°41N±0°03×21°89E±0°04, h10km, Error ellipse: s-maj=4.5km s-min=4.0km az=147.9
SKO 17 11:21:00.2, 40°29N×21°70E, h4km
CSEM 17 11:21:00.9±0.1, 40°41N×21°89E, h5km, ML1.8/5, Error ellipse: s-maj=2.5km s-min=2.0km az=43.0
THE 17 11:21:01.0, 40°41N×21°90E, h7km±3km, ML1.8/5, Error ellipse: s-maj=3.9km s-min=0.6km az=224.0

ISC 17 11:21:01.1±0.8, 40°41N±0°03×21°89E±0°04, h10km±15km, n19, σ0.45/33, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	Kozani	0.14	221	*e*PB	Pg	11 21 03.9	-0.4
KZN				*e*SB	Sg	11 21 14.5	+8.0
KZN	Kozani	0.14	221	P	Pg	11 21 03.7	-0.6
KZN				S	Sg	11 21 06.5	0.0
KZN	Kozani	0.14	221	*e*Pb	Pg	11 21 03.9	-0.4
KZN				S	Sg	11 21 06.5	0.0
FNA	Florina	0.54	314	P	Pg	11 21 11.2	-0.4
FNA				S	Sg	11 21 18.8	+0.1
FNA	Florina	0.54	314	P	Pg	11 21 11.2	-0.4
FNA				S	Sg	11 21 18.8	+0.1
LIT	Litokhoron	0.55	124	*e*PB	Pg	11 21 11.7	-0.2
LIT	Litokhoron	0.55	124	P	Pg	11 21 11.2	-0.7
LIT				S	Sg	11 21 19.1	-0.1
LIT	Litokhoron	0.55	124	P	Pg	11 21 11.2	-0.7
LIT	Litokhoron	0.55	124	*e*Pb	Pg	11 21 11.7	-0.2
LIT				S	Sg	11 21 19.1	-0.1
NEST	Nestorio	0.64	271	P	Pg	11 21 13.2	-0.3
NEST				S	Sg	11 21 22.5	+0.6
NEST	Nestorio	0.64	271	P	Pg	11 21 13.2	-0.3
NEST				S	Sg	11 21 22.5	+0.6
GRG	Griva	0.67	35	P	Pg	11 21 14.1	0.0
GRG				S	Sg	11 21 23.3	+0.4
GRG	Griva	0.67	35	P	Pg	11 21 14.1	0.0
GRG				S	Sg	11 21 23.3	+0.4
THL	Klokotos Trika	0.85	173	*e*PG	Pg	11 21 17.3	-0.2
THL	Klokotos Trika	0.85	173	P	Pg	11 21 17.4	-0.1
THL				S	Sg	11 21 29.6	+1.0
THL	Klokotos Trika	0.85	173	*e*Pg	Pg	11 21 17.3	-0.2
THL				S	Sg	11 21 29.6	+1.0
VAY	Valandovo	1.05	29	*e*Pg	Pg	11 21 21.4	+0.1
VAY				*e*Sg	Sg	11 21 39.3	+4.4
AGG	Agios Georgios	1.43	166	*e*PG	Pg	11 21 28.1	-0.4
AGG	Agios Georgios	1.43	166	*e*Pg	Pg	11 21 28.1	-0.4

DJA 17 11:34:06, 5°17S×102°27E, h49km, MLv3.7/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	1.05	40	P	Pn	11 34 23.1	-1.4
MNAI				S	Sn	11 34 36.6	-1.5
KSI	Kapahiang	1.54	12	P	Pn	11 34 30.9	-0.2
KSI				S	Sn	11 34 50.8	+0.8
LWLI	Liwa	1.79	85	P	Pn	11 34 34.6	+0.2
LWLI				S	Sn	11 34 56.8	+0.8
MDSI	Maura Dua	2.02	70	P	Pn	11 34 37.7	+0.1
MDSI				S	Sn	11 35 03.0	+1.3
KASI	Kota Agung	2.25	99	P	Pn	11 34 40.8	+0.1
KASI				S	Sn	11 35 08.2	+1.0
KLSI		2.50	79	P	Pn	11 34 44.5	+0.3
KLSI				S	Sn	11 35 15.0	+1.6

ATH 17 11:44:50.7, 38°01N×21°51E, h27km, ML2.5
NEIC 17 11:44:50.7, 38°01N×21°51E, h27km, ML2.5(ATH), After ATH.
ISCJB 17 11:44:51.6±0.4, 38°00N±0°02×21°51E±0°03, h21km±3km, Error ellipse: s-maj=3.7km s-min=3.4km az=44.7
CSEM 17 11:44:51.6±0.2, 38°01N×21°51E, h20km, ML2.5, Error ellipse: s-maj=3.2km s-min=3.0km az=43.0
THE 17 11:44:51.5, 37°99N×21°52E, h10km±1km, ML2.6/10, Error ellipse: s-maj=1.4km s-min=0.8km az=344.0

ISC 17 11:44:51.3±0.5, 37°99N±0°02×21°50E±0°03, h16km±2km, n72, σ0.99/140, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.07	339	*e*Pb	Pg	11 44 55.3	+0.9
RLS				*e*Sb	Sg	11 44 59.0	+2.6
RLS	Riolos of Patr	0.07	339	*e*PB	Pg	11 44 55.3	+0.9
RLS				*e*SB	Sg	11 44 59.0	+2.6
RLS	Riolos of Patr	0.07	339	*e*Pb	Pg	11 44 55.3	+0.9
RLS				*e*Sb	Sg	11 44 59.0	+2.6
UPR	University Cam	0.37	37	*e*PB	Pg	11 44 59.0	+0.1
UPR				*e*SB	Sg	11 45 05.3	+1.2
UPR	University Cam	0.37	37	P	Pg	11 44 59.0	+0.1
UPR				S	Sg	11 45 04.8	+0.7
UPR	University Cam	0.37	37	P	Pg	11 44 59.0	+0.1
UPR				S	Sg	11 45 04.8	+0.7
UPR				*e*Sb	Sg	11 45 05.3	+1.2
LAKA	Lakka	0.45	56	P	Pg	11 44 59.9	-0.5
LAKA				S	Sg	11 45 06.0	-0.5
LAKA	Lakka	0.45	56	P	Pg	11 44 59.9	-0.5
LAKA				S	Sg	11 45 06.0	-0.5
EFP	Efpalio	0.54	36	*e*PN	Pg	11 45 01.4	-0.6
EFP				*e*SN	Sg	11 45 09.8	+0.5
EFP	Efpalio	0.54	36	P	Pg	11 45 01.4	-0.6
EFP				S	Sg	11 45 10.3	+1.0
EFP	Efpalio	0.54	36	P	Pg	11 45 01.4	-0.6
EFP				S	Sg	11 45 10.3	+1.0
KFL	Anninata	0.58	282	P	Pg	11 45 03.5	+0.9
KFL	Anninata	0.58	282	P	Pg	11 45 03.5	+0.9
TRIZ	Trizonia	0.59	50	P	Pg	11 45 02.0	-0.9
TRIZ				S	Sg	11 45 10.1	-0.6
TRIZ	Trizonia	0.59	50	P	Pg	11 45 02.0	-0.9
TRIZ				S	Sg	11 45 10.1	-0.6
KALE	Kalithea	0.65	51	P	Pg	11 45 03.0	-1.0
KALE				S	Sg	11 45 12.8	+0.3
KALE	Kalithea	0.65	51	P	Pg	11 45 03.0	-1.0
KALE				S	Sg	11 45 12.8	+0.3
GUR	Goura	0.67	94	*e*PB	Pg	11 45 03.2	-1.2
GUR				*e*SN	Sn	11 45 13.3	+0.1
GUR	Goura	0.67	94	P	Pg	11 45 03.2	-1.2
GUR				S	Sg	11 45 13.2	0.0
GUR	Goura	0.67	94	P	Pg	11 45 03.2	-1.2
GUR				S	Sg	11 45 13.2	0.0
VLS	Valsamata	0.74	285	*e*Pn	Pg	11 45 05.4	-0.4
VLS				*e*Sn	Sn	11 45 17.0	-1.2
VLS	Valsamata	0.74	285	*e*PN	Pg	11 45 05.4	-0.4
VLS				*e*SN	Sn	11 45 17.0	-1.2
VLS	Valsamata	0.74	285	P	Pg	11 45 05.4	-0.4
VLS				S	Sn	11 45 17.0	-1.2
VLS	Valsamata	0.74	285	P	Pg	11 45 05.4	-0.4
VLS				S	Sn	11 45 17.0	-1.2
ITM	Ithomi	0.87	157	*e*Pn	Pn	11 45 08.4	-0.6
ITM				*e*Sn	Sn	11 45 20.7	-0.7
ITM	Ithomi	0.87	157	*e*PN	Pn	11 45 08.4	-0.6
ITM				*e*SN	Sn	11 45 20.7	-0.7
ITM	Ithomi	0.87	157	*e*Pn	Pn	11 45 08.4	-0.6
ITM				*e*Sn	Sn	11 45 20.7	-0.7
DSF	Desfina	0.91	62	P	Pb	11 45 07.3	-1.5
DSF				S	Sb	11 45 21.4	+0.7
DSF	Desfina	0.91	62	P	Pb	11 45 07.3	-1.5
DSF				S	Sb	11 45 21.4	+0.7
VLX	Vlachokerasia	0.93	131	*e*PN	Pn	11 45 09.6	-0.1
VLX				*e*SN	Sn	11 45 22.4	-0.3
VLX	Vlachokerasia	0.93	131	P	Pn	11 45 09.6	-0.1
VLX				S	Sb	11 45 23.3	+2.1
VLX	Vlachokerasia	0.93	131	P	Pn	11 45 09.6	-0.1
VLX				*e*Sn	Sn	11 45 22.4	-0.3
VLX				S	Sb	11 45 23.3	+2.1
EVR	Evrytania	0.96	15	*e*Pn	Pn	11 45 09.1	-1.1
EVR	Evrytania	0.96	15	*e*PN	Pn	11 45 09.1	-1.1
EVR	Evrytania	0.96	15	*e*Pn	Pn	11 45 09.1	-1.1
LKD2	Lefkada island	1.04	321	P	Pb	11 45 10.7	-0.2
LKD2				S	Sb	11 45 26.3	+2.0
LKD2	Lefkada island	1.04	321	P	Pb	11 45 10.7	-0.2
LKD2				S	Sb	11 45 26.3	+2.0
PYL	PYLOS	1.11	170	*e*PN	Pn	11 45 11.9	-0.3
PYL				*e*SN	Sn	11 45 27.8	+0.7
PYL	PYLOS	1.11	170	P	Pb	11 45 11.6	-0.5
PYL	PYLOS	1.11	170	P	Pb	11 45 11.6	-0.5
PYL	PYLOS	1.11	170	*e*Pn	Pn	11 45 11.9	-0.3
PYL				*e*Sn	Sn	11 45 27.8	+0.7
LTK	Loutraki	1.16	88	*e*PN	Pn	11 45 12.1	-0.8
LTK				*e*SN	Sn	11 45 28.3	-0.1
LTK	Loutraki	1.16	88	P	Pn	11 45 12.0	-0.9
LTK				S	Sb	11 45 28.5	+0.7
LTK	Loutraki	1.16	88	*e*Pn	Pn	11 45 12.1	-0.8
LTK				*e*Sn	Sn	11 45 28.3	-0.1
AGG	Agios Georgios	1.22	32	*e*Pn	Pn	11 45 13.6	-0.2
AGG				*e*Sn	Sn	11 45 29.3	-0.7
AGG	Agios Georgios	1.22	32	*e*PN	Sn	11 45 29.2	-0.8
AGG				*e*SN	Sn	11 45 29.2	-0.8
AGG	Agios Georgios	1.22	32	P	Pn	11 45 13.4	-0.4
AGG				S	Sb	11 45 31.8	+2.2
AGG	Agios Georgios	1.

2.0nm,0.4s,baz=59,slow=11,SNR=14
ILAR Eielson Array 84.46 23 P P 12 05 55.6 +0.3
0.4nm,0.8s,baz=246,slow=5.4,SNR=8.5
TORD Torodi Ar. Bea 145.41 286 PKPbc PKPbc 12 13 00.8 -1.3
0.3nm,0.6s,baz=61,slow=3.2,SNR=2.8

*IDC **17** 11:55:34.4±2.3, 19°.08S×170°.08E, h0km, mb4.2/6, mb1 4.4/6, mb1mx4.0/14, mbtmp4.2/6, Error ellipse: s-maj=94.2km s-min=29.5km az=148.0*
*ISCJB **17** 11:55:45.4±1.6, 17°.2S±0°.1×168°.6E±0°.3, h33km, mb4.1/6, Error ellipse: s-maj=37.1km s-min=18.5km az=12.2*
ISC 17 11:55:47.2±1.6, **17°.2S**±0°.1×**168.7E**±0°.3, **h35km, n9, σ0$68/8, mb4.2/6, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.30**	**203**	*e*P		**Pn**	**11 57 03.4**	**-0.4**
NOUC	**Port Laguerre**	**5.38**	**204**	*e*P		**Pn**	**11 57 05.5**	**+0.6**
CTA	**Charters Tower**	**21.42**	**259**	P		**P**	**12 00 37.0**	**+4.8**
	4.8nm,0.9s,mb3.8,baz=72,slow=15,SNR=5.0							
STKA	**Stephens Creek**	**28.54**	**234**	P		**P**	**12 01 33.6**	**-6.0**
	2.8nm,0.7s,mb4.1,baz=76,slow=7.8,SNR=9.9							
WRA	**Warrumunga Arr**	**32.61**	**260**	P		**P**	**12 02 16.2**	**+0.4**
	2.2nm,0.6s,mb4.3,baz=97,slow=8.4,SNR=12							
ASAR	**Alice Springs**	**33.14**	**253**	P		**P**	**12 02 19.1**	**-1.3**
	11nm,0.5s,mb5.1,baz=81,slow=8.9,SNR=245							
FITZ	**Fitzroy Crossi**	**40.94**	**262**	P		**P**	**12 03 27.3**	**+0.6**
	2.3nm,0.5s,mb4.1,baz=81,slow=6.4,SNR=8.2							
ILAR	**Eielson Array**	**88.44**	**17**	P		**P**	**12 08 35.2**	**0.0**
	0.2nm,0.6s,mb3.5,baz=236,slow=5.9,SNR=3.7							
ARCES	**ARCESS Array B**	**122.94**	**345**	PKP		PKPdf	**12 14 35.5**	**-3.6**
	5.0nm,1.1s,baz=35,slow=3.3,SNR=3.8							

*NEIC **17** 11:56:39.1±0.7, 6°.36N×72°.48W, h196km±7km, mb4.0/15, Error ellipse: s-maj=17.0km s-min=7.3km az=131.0*
*IDC **17** 11:56:39.9±1.0, 6°.72N×72°.98W, h159km±11km, mb3.6/8, mb1 3.9/11, mb1mx3.7/19, mbtmp3.7/11, Error ellipse: s-maj=20.8km s-min=12.7km az=138.0*
*ISCJB **17** 11:56:40.9±0.6, 6°.96N±0°.06×72°.89W±0°.05, h174km±5km, mb3.9/21, Error ellipse: s-maj=10.9km s-min=7.8km az=160.7*
*FUNV **17** 11:56:42.1, 6°.95N×73°.06W, h169km, MW4.1*
ISC 17 11:56:41.5±0.6, **6°.92N**±0°.06×**72°.93W**±0°.05, **h162**km±5km, **n191, σ0$70/198, mb4.0/21, 70C-58D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.12**	**33**	↓*i*P		**Pn**	**11 57 09.4**	**+1.0**
CAPV				*e*S		**Sn**	**11 57 30.0**	**+11**
VIGV	**El Vigia**	**2.46**	**39**	↓*e*P		**Pn**	**11 57 23.8**	**+1.1**
VIGV				*e*S		**Sn**	**11 57 53.9**	**+2.9**
SOCV	**Socops**	**2.46**	**56**	↓*e*P		**Pn**	**11 57 24.0**	**+1.3**
SOCV				*e*S		**Sn**	**11 57 54.9**	**+3.9**
ROSC	**El Rosal**	**2.48**	**214**	*e*P		**Pn**	**11 57 21.3**	**-1.6**
ROSC				*e*Sn		**Sn**	**11 57 47.6**	**-3.7**
ROSC	**El Rosal**	**2.48**	**214**	P		**Pn**	**11 57 21.3**	**-1.7**
	93nm,0.3s,baz=90,slow=23,SNR=298							
ROSC				S		**Sn**	**11 57 49.8**	**-1.6**
	159nm,0.3s,baz=80,slow=19,SNR=16							
SDV	**Santo Domingo**	**3.00**	**49**	*e*Pn		**Pn**	**11 57 30.7**	**+1.4**
SDV				*e*Sn		**Sn**	**11 58 07.7**	**+3.7**
ELOV	**Elorza**	**3.42**	**88**	*e*P		**Pn**	**11 57 35.0**	**+0.4**
ELOV				*e*S		**Sn**	**11 58 15.7**	**+1.6**
VIRV	**Villa del Rosa**	**3.60**	**8**	*e*P		**Pn**	**11 57 36.2**	**-0.7**
VIRV				*e*S		**Sn**	**11 58 16.0**	**-2.4**
QARV	**Quebrada Arrib**	**4.04**	**36**	*e*P		**Pn**	**11 57 43.6**	**+1.0**
QARV				*e*S		**Sn**	**11 58 27.6**	**-1.4**
SANV	**Sanarito**	**4.23**	**52**	*e*P		**Pn**	**11 57 46.0**	**+0.9**
SANV				*e*S		**Sn**	**11 58 32.7**	**-0.8**
CURV	**Curarigua**	**4.25**	**44**	*e*P		**Pn**	**11 57 45.9**	**+0.5**
CURV				*e*S		**Sn**	**11 58 32.4**	**-1.7**
DABV	**Dabajuro**	**4.58**	**30**	*e*P		**Pn**	**11 57 49.4**	**-0.2**
DABV				*e*S		**Sn**	**11 58 38.0**	**-3.9**
TEPV	**Terepaima**	**4.78**	**50**	*e*P		**Pn**	**11 57 52.6**	**+0.3**
SIQV	**Siquisique**	**4.82**	**40**	*e*P		**Pn**	**11 57 53.0**	**+0.2**
SIQV				*e*S		**Sn**	**11 58 45.1**	**-2.8**
IMOV	**Isla Los Monje**	**5.76**	**20**	*e*P		**Pn**	**11 58 04.2**	**-1.0**
JACV	**Jacura**	**5.79**	**44**	*e*P		**Pn**	**11 58 05.0**	**-0.6**
MONV	**Montecano**	**5.79**	**30**	*e*P		**Pn**	**11 58 05.3**	**-0.3**
MONV				*e*S		**Sn**	**11 59 06.4**	**-4.8**
TURV	**Turiamo**	**6.14**	**55**	*e*P		**Pn**	**11 58 09.4**	**-0.7**
CUPV	**Cœpira**	**7.72**	**66**	*e*P		**Pn**	**11 58 30.1**	**-1.1**
OTAV	**Otavalo**	**8.62**	**220**	*e*Pn		**Pn**	**11 58 40.0**	**-3.1**
PCRV	**Puerto La Cruz**	**8.82**	**68**	P		**Pn**	**11 58 47.4**	**+1.7**
	1.9nm,0.3s,baz=23,slow=4.2,SNR=13							
PCRV				S		**Sn**	**12 00 26.8**	**+2.8**
	1.0nm,0.3s,baz=45,slow=16,SNR=2.6							
ICM	**Isla Caja Muer**	**12.57**	**29**	*e*Pn		**Pn**	**11 59 33.9**	**-1.0**
SJG	**San Juan**	**12.94**	**30**	*e*Pn		**Pn**	**11 59 39.5**	**-0.1**
SJG	**San Juan**	**12.94**	**30**	P		**Pn**	**11 59 39.9**	**+0.4**
	2.7nm,0.3s,baz=209,slow=19,SNR=6.8							
TEIG	**Tepich**	**19.91**	**313**	*e*P		**P**	**12 01 04.0**	**+3.3**
	9.1nm,0.5s							
LPAZ	**La Paz**	**23.54**	**168**	pP		pP	12 02 07.2	-1.1
	2.3nm,0.7s,baz=352,slow=13,SNR=10							
SIV	**San Ignacio**	**25.61**	**153**	pP		pP	12 02 26.9	-2.6
	1.3nm,0.7s,baz=318,slow=9.6,SNR=5.9							
SIV				PcP		PcP	12 05 22.4	-0.4
	0.8nm,0.5s,baz=251,slow=9.2,SNR=6.6							
WVT	**Waverly**	**32.12**	**337**	*e*P		**P**	**12 02 53.9**	**+0.4**
	3.9nm,0.3s,mb4.6							
SIUC	**Southern Illin**	**34.04**	**337**	*e*P		**P**	**12 03 10.6**	**+0.5**
	5.2nm,0.4s,mb4.6							
CCM	**Cathedral Cave**	**35.16**	**334**	*e*P		**P**	**12 03 19.6**	**-0.2**
	8.3nm,0.7s,mb4.5							
628A	**Black Gap, Mar**	**36.04**	**312**	↑P		**P**	**12 03 26.9**	**-0.5**
	baz=37							
528A	**Cox Ranch, San**	**36.34**	**313**	↓P		**P**	**12 03 29.2**	**-0.7**
	baz=37							
627A	**Terlingua Ranc**	**36.39**	**312**	↓P		**P**	**12 03 30.3**	**-0.1**
	baz=37							
WMOK	**Wichita Mounta**	**36.51**	**323**	*e*P		**P**	**12 03 30.3**	**-1.1**
	1.8nm,0.6s,mb3.9							
TXAR	**Lajitas Array**	**36.54**	**311**	P		**P**	**12 03 31.2**	**-0.4**
TXAR				PcP		PcP	12 05 52.3	+0.6
TXAR	**Lajitas Array**	**36.54**	**311**	P		**P**	**12 03 31.2**	**-0.4**
	0.8nm,0.4s,mb3.7,baz=126,slow=9.1,SNR=20							
TXAR				PcP		PcP	12 05 52.3	+0.6
	0.1nm,0.5s,baz=140,slow=6.7,SNR=3.9							
428A	**Kincaid Ranch,**	**36.58**	**314**	↓P		**P**	**12 03 31.5**	**-0.4**
	baz=37							
527A	**Woodward Ranch**	**36.93**	**313**	↑P		**P**	**12 03 34.2**	**-0.7**
	baz=38							
626A	**Big Bend Ranch**	**37.00**	**311**	↓P		**P**	**12 03 35.0**	**-0.5**
	baz=38							
328A	**Wristen Ranch,**	**37.03**	**315**	↓P		**P**	**12 03 35.2**	**-0.5**
	baz=38,SNR=5.4							
427A	**Hayter Ranch,**	**37.16**	**314**	↑P		**P**	**12 03 35.7**	**-1.2**
	baz=38							
526A	**Mary Lane Ranc**	**37.23**	**312**	↑P		**P**	**12 03 36.7**	**-0.7**
	baz=38							
426A	**McDonald Obser**	**37.51**	**313**	↓P		**P**	**12 03 39.6**	**-0.3**
	baz=38							
326A	**Caldwell Ranch**	**37.83**	**314**	↑P		**P**	**12 03 42.8**	**+0.4**
	baz=39							
127A	**Arkansas Junct**	**38.16**	**316**	↑P		**P**	**12 03 45.6**	**+0.3**
	baz=39							
425A	**Indio Mountain**	**38.27**	**312**	↓P		**P**	**12 03 45.8**	**-0.4**
	baz=39							
MSTX	**Muleshoe**	**38.53**	**318**	↑P		**P**	**12 03 47.9**	**-0.4**
	baz=39							
225A	**Deer Hill, Car**	**38.86**	**314**	↑P		**P**	**12 03 51.0**	**-0.1**
	baz=40							
Z26A	**Caprock**	**38.93**	**317**	P		**P**	**12 03 51.3**	**-0.3**
	baz=40,SNR=9.0							
MNTX	**Cornudas Mount**	**39.04**	**313**	P		**P**	**12 03 52.6**	**0.0**
	baz=40,SNR=7.4							
125A	**Gardner Draw,**	**39.05**	**315**	P		**P**	**12 03 52.6**	**0.0**
	baz=40,SNR=5.3							
224A	**Cornudas Mount**	**39.34**	**314**	P		**P**	**12 03 55.6**	**+0.6**
	baz=40,SNR=12							
Z25A	**Roswell**	**39.44**	**316**	↓P		**P**	**12 03 55.9**	**+0.1**
	baz=40,SNR=5.6							
X26A	**CR and CF Fran**	**39.57**	**318**	↓P		**P**	**12 03 57.0**	**+0.1**
	baz=40							
124A	**Stringfield Ra**	**39.63**	**315**	↓P		**P**	**12 03 57.4**	**0.0**
	baz=40							
Y24A	**Capitan**	**40.30**	**316**	P		**P**	**12 04 03.7**	**+0.8**
	baz=41,SNR=7.4							
V26A	**Tequesquite Ra**	**40.31**	**320**	↑P		**P**	**12 04 03.1**	**+0.1**
	baz=41							
W25A	**X Bar L Ranch,**	**40.39**	**319**	↓P		**P**	**12 04 04.2**	**+0.4**
	baz=41,SNR=5.8							
Z23A	**Rita Site, Whi**	**40.48**	**315**	↓P		**P**	**12 04 05.0**	**+0.5**
	baz=41							
U26A	**Atchley Ranch,**	**40.65**	**321**	↑P		**P**	**12 04 05.7**	**-0.1**
	baz=42							
Y23A	**Lovelace Mesa,**	**40.73**	**316**	↓P		**P**	**12 04 06.9**	**+0.4**
	baz=42							
V25A	**Rancho No Teng**	**40.87**	**319**	↑P		**P**	**12 04 08.1**	**+0.5**
	baz=42							
V24A	**Rampart Ranch,**	**41.23**	**319**	↑P		**P**	**12 04 11.7**	**+1.2**
	baz=42							
220A	**Playas Peak, P**	**41.45**	**312**	↓P		**P**	**12 04 13.3**	**+0.9**
	baz=42							
LAZ	**Ladron**	**41.74**	**316**	*e*P		**P**	**12 04 15.0**	**+0.3**
120A	**U Bar Ranch, L**	**41.84**	**312**	↓P		**P**	**12 04 16.3**	**+0.7**
	baz=43							
X21A	**Alamocita Cree**	**42.21**	**315**	↓P		**P**	**12 04 18.4**	**-0.1**
	baz=43							
318A	**Bisbee**	**42.33**	**310**	↓P		**P**	**12 04 19.4**	**-0.2**
	baz=43							
SDCO	**Great Sand Dun**	**42.59**	**321**	↓P		**P**	**12 04 22.4**	**+0.8**
	baz=43							
SDCO	**Great Sand Dun**	**42.59**	**321**	*e*P		**P**	**12 04 22.4**	**+0.9**
	33nm,3.0s							
218A	**Dragoon**	**42.62**	**311**	↑P		**P**	**12 04 22.4**	**+0.6**
	baz=43							
R24A	**Sanders Place,**	**42.65**	**322**	↓P		**P**	**12 04 23.2**	**+1.2**
	baz=44							
118A	**Homack Ranch,**	**42.87**	**312**	↓P		**P**	**12 04 24.6**	**+0.7**
	baz=44							
P25A	**Willow Gulch B**	**42.90**	**324**	↑P		**P**	**12 04 24.7**	**+0.7**
	baz=44							
Y19A	**Nutrioso**	**42.99**	**314**	↓P		**P**	**12 04 26.0**	**+1.1**
	baz=44							
U21A	**Nageezi**	**43.21**	**318**	↑P		**P**	**12 04 27.1**	**+0.5**
	baz=44							
117A	**Oracle**	**43.41**	**311**	↑P		**P**	**12 04 28.5**	**+0.3**
	baz=44							
S22A	**4UR Ranch, Cre**	**43.43**	**320**	↓P		**P**	**12 04 27.9**	**-0.4**
	baz=44							
T21A	**Navajo Lake**	**43.45**	**319**	↓P		**P**	**12 04 29.0**	**+0.6**
	baz=44							
Y18A	**Canyon Day Jun**	**43.47**	**313**	↓P		**P**	**12 04 28.3**	**-0.4**
	baz=44							
W19A	**Sanders**	**43.68**	**315**	↑P		**P**	**12 04 30.5**	**+0.1**
	baz=44							
P23A	**Jefferson**	**43.81**	**323**	↑P		**P**	**12 04 30.7**	**-0.6**
	baz=45							
ISCO	**Idaho Springs**	**43.94**	**323**	↑P		**P**	**12 04 32.3**	**-0.1**
	baz=45							
ISCO	**Idaho Springs**	**43.94**	**323**	*e*P		**P**	**12 04 33.0**	**+0.7**
	1.5nm,0.8s,mb3.7							
S21A	**Coal Bank Pass**	**44.00**	**319**	↑P		**P**	**12 04 33.3**	**+0.4**
	baz=45							
116A	**Eloy**	**44.13**	**311**	↓P		**P**	**12 04 34.1**	**+0.1**
	baz=45							
Q22A	**Crested Butte,**	**44.15**	**321**	↓P		**P**	**12 04 34.6**	**+0.5**
	baz=45							
U19A	**Dine' College,**	**44.18**	**317**	↑P		**P**	**12 04 34.2**	**-0.1**
	baz=45							
X17A	**Forest Lakes**	**44.30**	**313**	↓P		**P**	**12 04 35.4**	**+0.1**
	baz=45							
T19A	**Beclabito**	**44.35**	**317**	↓P		**P**	**12 04 35.8**	**+0.2**
	baz=45							
P22A	**Eagle**	**44.50**	**322**	↓P		**P**	**12 04 37.4**	**+0.6**
	baz=45							
Y16A	**Circle Bar Ran**	**44.57**	**312**	↑P		**P**	**12 04 38.0**	**+0.5**
	baz=45							
R20A	**Redvale**	**44.68**	**319**	↑P		**P**	**12 04 39.1**	**+0.9**
	baz=46							
O22A	**Kremmling**	**44.73**	**323**	↑P		**P**	**12 04 39.1**	**+0.6**
	baz=46,SNR=5.8							
Q20A	**Ridgley Place,**	**45.07**	**320**	↑P		**P**	**12 04 41.5**	**+0.2**
	baz=46							
T18A	**Mexican Hat**	**45.09**	**317**	↓P		**P**	**12 04 41.3**	**-0.2**
	baz=46							
Y15A	**Casa Rosa Ranc**	**45.23**	**312**	↑P		**P**	**12 04 42.9**	**+0.2**
	baz=46							
WUAZ	**Wupatki**	**45.29**	**314**	*e*P		**P**	**12 04 43.9**	**+0.8**
	4.6nm,0.9s,mb4.1							
R19A	**Curley Farm, L**	**45.31**	**319**	↑P		**P**	**12 04 43.6**	**+0.3**
	baz=46,SNR=8.4							
X15A	**Humboldt**	**45.41**	**313**	↑P		**P**	**12 04 44.5**	**+0.4**
	baz=46							
U16A	**Tuba City**	**45.43**	**315**	↓P		**P**	**12 04 44.5**	**+0.3**
	baz=46							
Y14A	**Wickenburg**	**45.72**	**312**	↑P		**P**	**12 04 46.1**	**-0.4**
	baz=46							
R18A	**Canyonlands Na**	**45.78**	**319**	↑P		**P**	**12 04 46.8**	**-0.1**
	baz=47							
V15A	**Kaibab Nationa**	**46.00**	**314**	↑P		**P**	**12 04 49.4**	**+0.7**
	baz=47							
N20A	**Spence Gulch,**	**46.17**	**323**	↓P		**P**	**12 04 49.5**	**-0.4**
	baz=47							
R17A	**Hanksville Air**	**46.33**	**318**	↓P		**P**	**12 04 51.2**	**-0.1**
	baz=47							
W14A	**Seligman**	**46.37**	**313**	↑P		**P**	**12 04 51.1**	**-0.5**
	baz=47							
SRU	**San Rafael**	**46.59**	**319**	↑P		**P**	**12 04 52.6**	**-0.6**
	baz=47							
R16A	**Teasdale**	**46.77**	**318**	↑P		**P**	**12 04 54.9**	**+0.2**
	baz=48							
ULM	**Lac du Bonnet**	**47.26**	**340**	P		**P**	**12 04 57.5**	**-0.7**
	2.9nm,0.4s,mb4.3,baz=138,slow=5.6,SNR=4.1							
O17A	**Robinson Place**	**47.33**	**320**	↓P		**P**	**12 04 58.9**	**0.0**
	baz=48							
K20A	**Yellowstone Ra**	**47.34**	**324**	↑P		**P**	**12 04 59.2**	**+0.2**
	baz=48							
MSU	**Marysvale**	**47.36**	**318**	*e*P		**P**	**12 05 00.1**	**+0.9**
BC3	**Big Chuckawall**	**47.44**	**310**	↑P		**P**	**12 04 59.0**	**-0.9**
	baz=48							
I21A	**Big Trails, Te**	**47.48**	**326**	↓P		**P**	**12 04 60.0**	**0.0**
	baz=48							
U13A	**Pakoon Wash**	**47.56**	**314**	↑P		**P**	**12 05 00.5**	**-0.3**
	baz=48							
L19A	**Farson**	**47.59**	**323**	↑P		**P**	**12 05 01.4**	**+0.5**
	baz=48							
M18A	**Lyman**	**47.62**	**322**	↑P		**P**	**12 05 01.4**	**+0.3**
	baz=48							
K19A	**Absolon Red Bu**	**47.73**	**324**	↑P		**P**	**12 05 02.0**	**0.0**
	baz=49							
N17A	**Moffit Pass**	**47.81**	**321**	↓P		**P**	**12 05 03.5**	**+0.9**
	baz=49							
O16A	**Springville**	**47.82**	**320**	↑P		**P**	**12 05 02.7**	**0.0**
	baz=49							
L18A	**Fontenelle, Gr**	**47.89**	**323**	↓P		**P**	**12 05 03.7**	**+0.5**
	baz=49,SNR=5.9							
SCHQ	**Schefferville**	**48.03**	**5**	P		**P**	**12 05 03.9**	**-0.1**
SCHQ	**Schefferville**	**48.03**	**5**	P		**P**	**12 05 03.9**	**-0.1**
	3.5nm,0.5s,mb4.2,baz=196,slow=7.7,SNR=5.5							
I20A	**Worland**	**48.03**	**326**	↓P		**P**	**12 05 04.4**	**+0.2**
	baz=49							
BW06	**Boulder Array**	**48.11**	**324**	↑P		**P**	**12 05 04.9**	**0.0**
	baz=49							
H20A	**Greybull**	**48.30**	**327**	↑P		**P**	**12 05 06.1**	**-0.2**
	baz=49							
Q14A	**Sevier Lake (B**	**48.34**	**318**	↑P		**P**	**12 05 06.7**	**0.0**
	baz=49							
L17A	**Cokeville**	**48.50**	**322**	↑P		**P**	**12 05 08.0**	**+0.1**
	baz=49,SNR=6.1							
HWUT	**Hardware Ranch**	**48.64**	**321**	*e*P		**P**	**12 05 08.4**	**-0.5**
	1.7nm,0.8s,mb3.7							
J18A	**Kendall Valley**	**48.65**	**324**	↓P		**P**	**12 05 08.7**	**-0.3**
	baz=50							
L16A	**Fish Haven**	**48.79**	**322**	↓P		**P**	**12 05 10.1**	**0.0**
	baz=50							
J17A	**Brown Place, J**	**49.14**	**324**	↑P		**P**	**12 05 12.5**	**-0.2**
	baz=50							
DGMT	**Dagmar**	**49.15**	**333**	↑P		**P**	**12 05 13.1**	**+0.3**
	baz=50							
REDW	**Red Top Meadow**	**49.23**	**324**	*e*P		**P**	**12 05 13.7**	**+0.3**
	2.1nm,0.4s,mb4.1							
LOHW	**Long Hollow**	**49.23**	**324**	*e*P		**P**	**12 05 14.0**	**+0.6**
F20A	**Billings**	**49.24**	**328**	↑P		**P**	**12 05 13.2**	**-0.3**
	baz=50							
N14A	**Grayback Hills**	**49.25**	**320**	↓P		**P**	**12 05 13.2**	**-0.5**
	baz=50							
TPAW	**Teton Pass**	**49.36**	**324**	*e*P		**P**	**12 05 14.6**	**+0.2**
	1.5nm,0.5s,mb3.9							
L15A	**Malad City**	**49.37**	**321**	↑P		**P**	**12 05 14.3**	**-0.3**
	baz=50							
MOOW	**Moose Ponds**	**49.39**	**324**	*e*P		**P**	**12 05 14.0**	**-0.7**
	1.6nm,0.9s,mb3.6							
RLMT	**Red Lodge**	**49.40**	**326**	↓P		**P**	**12 05 14.5**	**-0.2**
	baz=50							
IMW	**Indian Meadow**	**49.59**	**324**	*e*P		**P**	**12 05 16.4**	**+0.2**
	1.5nm,0.4s,mb4.0							
J16A	**Bone**	**49.62**	**323**	↑P		**P**	**12 05 16.4**	**0.0**
	baz=50							
G18A	**Lazy EL Ranch,**	**49.69**	**326**	↑P		**P**	**12 05 16.3**	**-0.5**
	baz=50							
E20A	**Meyer Farm, Mu**	**49.69**	**329**	↓P		**P**	**12 05 16.9**	**+0.1**
	baz=50							
K15A	**Arbon**	**49.84**	**322**	↓P		**P**	**12 05 18.3**	**+0.2**
	baz=51							
O12A	**Currie**	**49.97**	**318**	↑P		**P**	**12 05 17.9**	**-1.1**
	baz=51							
E19A	**Rath Farm, Rou**	**50.00**	**328**	↑P		**P**	**12 05 19.3**	**+0.1**
	baz=51							
M13A	**Montello**	**50.15**	**320**	↑P		**P**	**12 05 20.1**	**-0.3**
	baz=51							
M13A	**Montello**	**50.15**	**320**	*e*P		**P**	**12 05 20.2**	**-0.2**
	3.5nm,0.7s,mb4.1							
K14A	**Jones Ranch, D**	**50.16**	**322**	↓P		**P**	**12 05 20.5**	**+0.1**
	baz=51							
J15A	**Blackfoot**	**50.19**	**323**	↑P		**P**	**12 05 20.7**	**0.0**
	baz=51							
H16A	**Russell Place,**	**50.25**	**325**	↓P		**P**	**12 05 21.5**	**+0.4**
	baz=51							
E18A	**Harlowton**	**50.67**	**328**	↓P		**P**	**12 05 24.0**	**-0.2**
	baz=52							
J14A	**Carey**	**50.80**	**322**	↑P		**P**	**12 05 24.6**	**-0.7**
	baz=52							
G16A	**Moss Hill, Enn**	**50.88**	**325**	↓P		**P**	**12 05 25.6**	**-0.3**
	baz=52							
BOZ	**Bozeman (W)**	**51.04**	**326**	↓P		**P**	**12 05 26.6**	**-0.3**
	baz=52							
E17A	**Martinsdale**	**51.11**	**327**	↓P		**P**	**12 05 27.6**	**+0.1**
	baz=52							
D17A	**Six Diamond Ra**	**51.45**	**328**	↑P		**P**	**12 05 29.7**	**-0.3**
	baz=52							
HLID	**Hailey**	**51.48**	**322**	↑P		**P**	**12 05 30.5**	**+0.2**
	baz=52							
HLID	**Hailey**	**51.48**	**322**	*e*P		**P**	**12 05 30.6**	**+0.3**
	1.0nm,0.5s,mb3.7							
I13A	**Wildhorse Cree**	**51.49**	**323**	↑P		**P**	**12 05 29.9**	**-0.4**
	baz=52							
NVAR	**Mina Array Bea**	**51.55**	**314**	P		**P**	**12 05 31.3**	**+0.3**
NVAR	**Mina Array Bea**	**51.55**	**314**	P		**P**	**12 05 31.3**	**+0.3**
	0.6nm,0.6s,mb3.4,baz=125,slow=7.6,SNR=7.6							
E16A	**East Helena**	**51.60**	**327**	↓P		**P**	**12 05 31.4**	**+0.3**
	baz=52							
B18A	**Beardsley Farm**	**51.77**	**329**	↑P		**P**	**12 05 32.8**	**+0.4**
	baz=53							
C17A	**Wharram Farm,**	**51.79**	**328**	↑P		**P**	**12 05 32.3**	**-0.3**
	baz=53							
I12A	**Atlanta**	**52.04**	**322**	↓P		**P**	**12 05 34.3**	**-0.2**
	baz=53							
G13A	**Cobalt**	**52.21**	**324**	↑P		**P**	**12 05 35.2**	**-0.5**
	baz=53							
MFID	**Camas Ranch**	**52.27**	**321**	↑P		**P**	**12 05 35.7**	**-0.4**
	baz=53							
H12A	**Diamond D Ranc**	**52.28**	**323**	↑P		**P**	**12 05 36.3**	**+0.1**
	baz=53							
E14A	**Clinton**	**52.54**	**325**	↑P		**P**	**12 05 37.3**	**-0.8**
	baz=53							
F13A	**Darby**	**52.66**	**324**	↓P		**P**	**12 05 38.8**	**-0.2**
	baz=54							
C14A	**Swan Lake**	**53.47**	**327**	↑P		**P**	**12 05 44.9**	**0.0**
	baz=54							
A15A	**Johnson Ranch,**	**53.66**	**328**	↑P		**P**	**12 05 46.0**	**-0.3**
	baz=54							
D12A	**Red Ives Fores**	**53.95**	**325**	↑P		**P**	**12 05 48.0**	**-0.4**
	baz=55							
F10A	**Beach Ranch, E**	**54.45**	**323**	↑P		**P**	**12 05 51.6**	**-0.5**
	baz=55							
I07A	**Izee**	**54.91**	**320**	↑P		**P**	**12 05 55.2**	**-0.2**
	baz=56							
G08A	**Pilot Rock**	**55.16**	**322**	↓P		**P**	**12 05 57.0**	**-0.1**
	baz=56							
A12A	**Yaak River Ran**	**55.18**	**327**	↓P		**P**	**12 05 57.0**	**-0.2**
	baz=56							
YKA	**Yellowknife Ar**	**63.24**	**340**	P		**P**	**12 06 51.9**	**-0.4**
	2.6nm,0.6s,mb4.3,baz=132,slow=6.5,SNR=24							
TORD	**Torodi Ar. Bea**	**73.53**	**78**	P		**P**	**12 07 55.7**	**-1.5**
	0.2nm,0.3s,mb3.3,baz=284,slow=6.5,SNR=2.4							
ILAR	**Eielson Array**	**76.95**	**335**	P		**P**	**12 08 15.2**	**-0.5**
	0.5nm,1.0s,mb3.1,baz=107,slow=4.6,SNR=5.8							
ARCES	**ARCESS Array B**	**86.52**	**20**	P		**P**	**12 09 05.9**	**+0.1**
	3.3nm,1.0s,mb4.1,baz=268,slow=4.2,SNR=4

OUR				S	Sg	12 24 31.6	-3.2			
OUR	**Ouranopolis**	**1.41**	**296**	P	Pn	12 24 13.9	-2.2			
OUR				S	Sg	12 24 31.6	-3.2			
AOS	**Alonnisos**	**1.47**	**249**	P	Pn	12 24 15.1	-1.8			
AOS				S	Sb	12 24 34.2	-2.4			
AOS	**Alonnisos**	**1.47**	**249**	P	Pn	12 24 15.1	-1.8			
AOS				S	Sb	12 24 34.2	-2.4			
RKY	**Sarkoy-Tekirda**	**1.52**	**50**	*e*PN	Pn	12 24 16.9	-0.7			
RKY				*e*SN	Sn	12 24 38.3	+0.3			
RKY	**Sarkoy-Tekirda**	**1.52**	**50**	*e*Pn	Pn	12 24 17.0	-0.6			
RKY				*e*Sn	Sn	12 24 38.3	+0.3			
BALY	**Balya**	**1.53**	**89**	*i* P	Pn	12 24 16.7	-1.0			
BALY				*i* S	Sn	12 24 37.6	-0.5			
BALY	**Balya**	**1.53**	**89**	*i* P	Pn	12 24 16.7	-1.0			
BALY				*i* S	Sn	12 24 37.6	-0.5			
KAVA	**Kavala**	**1.54**	**326**	P	Pn	12 24 16.0	-1.9			
KAVA				S	Sn	12 24 34.4	-4.0			
KAVA	**Kavala**	**1.54**	**326**	P	Pn	12 24 16.0	-1.9			
URLA	**Izmir**	**1.55**	**151**	*i* P	Pn	12 24 15.6	-2.4			
URLA				*i* S	Sn	12 24 35.7	-3.0			
URLA	**Izmir**	**1.55**	**151**	*i* P	Pn	12 24 15.6	-2.4			
URLA				*i* S	Sn	12 24 35.7	-3.0			
GONE	**Gonen-Balikesi**	**1.61**	**78**	*e*PN	Pn	12 24 18.8	0.0			
GONE	**Gonen-Balikesi**	**1.61**	**78**	*e*Pn	Pn	12 24 18.8	0.0			
MFT	**Murefte**	**1.65**	**49**	*e*PN	Pn	12 24 18.6	-0.7			
MFT	**Murefte**	**1.65**	**49**	*e*Pn	Pn	12 24 18.6	-0.7			
BLCB	**Balcova**	**1.72**	**140**	*e*PN	Pn	12 24 20.2	-0.2			
BLCB	**Balcova**	**1.72**	**140**	*e*Pn	Pn	12 24 20.2	-0.2			
EDC	**Edincik**	**1.82**	**69**	*e*PN	Pn	12 24 21.8	+0.1			
EDC	**Edincik**	**1.82**	**69**	*e*Pn	Pn	12 24 21.8	+0.1			
IZM	**Izmir**	**1.83**	**136**	*e*PN	Pn	12 24 22.1	+0.2			
IZM	**Izmir**	**1.83**	**136**	*e*Pn	Pn	12 24 22.1	+0.3			
BNT	**Bandirma**	**1.86**	**69**	*e*PN	Pn	12 24 22.1	-0.2			
AKS	**Akhisar**	**1.88**	**116**	*e*PN	Pn	12 24 23.0	+0.4			
AKS	**Akhisar**	**1.88**	**116**	*e*Pn	Pn	12 24 23.0	+0.4			
TKR	**Tekirdag**	**1.92**	**48**	*e*PN	Pn	12 24 23.4	+0.3			
TKR	**Tekirdag**	**1.92**	**48**	*e*Pn	Pn	12 24 23.4	+0.2			
KDZ	**Kurdzhali**	**1.93**	**355**	P	Pn	12 24 21.4	-1.9			
KDZ	**Kurdzhali**	**1.93**	**355**	P	Pn	12 24 21.4	-1.9			
SOH	**Sokhos**	**2.07**	**303**	*e*P	Pn	12 24 26.6	+1.5			
SOH	**Sokhos**	**2.07**	**303**	*e*P	Pn	12 24 26.6	+1.5			
SOH				*e*S	Sn	12 24 54.6	+3.1			
RZN	**Rozhen**	**2.09**	**341**	P	Pn	12 24 24.1	-1.3			
RZN	**Rozhen**	**2.09**	**341**	P	Pn	12 24 24.1	-1.3			
NVR	**Nevrokopi**	**2.12**	**321**	*e*P	Pn	12 24 26.9	+1.1			
NVR				*e*S	Sn	12 24 54.0	+1.3			
NVR	**Nevrokopi**	**2.12**	**321**	*e*P	Pn	12 24 26.9	+1.1			
NVR				*e*S	Sn	12 24 54.0	+1.3			
KCTX	**Karacabey (Bur**	**2.15**	**75**	*e*PN	Pn	12 24 25.7	-0.6			
KCTX	**Karacabey (Bur**	**2.15**	**75**	*e*Pn	Pn	12 24 25.7	-0.6			
PTL	**Penteli**	**2.17**	**220**	*e*P	Pn	12 24 27.2	+0.7			
PTL				*e*S	Sn	12 24 54.2	+0.2			
PTL	**Penteli**	**2.17**	**220**	*e*P	Pn	12 24 27.2	+0.7			
PTL				*e*S	Sn	12 24 54.2	+0.2			
DURS	**Dursunbey**	**2.19**	**92**	*i* P	Pn	12 24 26.2	-0.6			
DURS				*i* S	Sn	12 24 54.4	-0.1			
DURS	**Dursunbey**	**2.19**	**92**	*i* P	Pn	12 24 26.2	-0.6			
DURS				*i* S	Sn	12 24 54.4	-0.1			
EDRB	**Edirne**	**2.28**	**21**	*e*PN	Pn	12 24 29.0	+0.9			
EDRB	**Edirne**	**2.28**	**21**	*e*Pn	Pn	12 24 29.0	+0.9			
LKR	**Lokris**	**2.31**	**243**	*e*P	Pn	12 24 30.9	+2.4			
LKR				*e*S	Sn	12 24 59.6	+2.0			
LKR	**Lokris**	**2.31**	**243**	*e*P	Pn	12 24 30.9	+2.4			
LKR				*e*S	Sn	12 24 59.6	+2.0			
VLY	**Voula,Athens**	**2.36**	**218**	*e*P	Pn	12 24 30.5	+1.4			
VLY				*e*S	Sn	12 24 59.2	+0.5			
VLY	**Voula,Athens**	**2.36**	**218**	*e*P	Pn	12 24 30.5	+1.4			
VLY				*e*S	Sn	12 24 59.2	+0.5			
MMB	**Musomiste**	**2.37**	**323**	*i* P	Pn	12 24 29.4	+0.2			
MMB	**Musomiste**	**2.37**	**323**	*i* P	Pn	12 24 29.4	+0.2			
SLVT	**Silivri**	**2.47**	**52**	*e*PN	Pn	12 24 30.3	-0.4			
SLVT	**Silivri**	**2.47**	**52**	*e*Pn	Pn	12 24 30.3	-0.4			
DEMI	**Demirci**	**2.48**	**105**	*i* P	Pn	12 24 30.6	-0.1			
DEMI				*i* S	Sn	12 25 01.9	+0.3			
DEMI	**Demirci**	**2.48**	**105**	*i* P	Pn	12 24 30.6	-0.2			
DEMI				*i* S	Sn	12 25 01.9	+0.3			
PLD	**Plovdiv**	**2.48**	**344**	P	Pn	12 24 35.2	+4.3			
PLD	**Plovdiv**	**2.48**	**344**	P	Pn	12 24 35.2	+4.3			
MDNY	**Mudanya-Bursa**	**2.57**	**74**	*e*PN	Pn	12 24 32.2	+0.1			
MDNY	**Mudanya-Bursa**	**2.57**	**74**	*e*Pn	Pn	12 24 32.2	+0.1			
ARMT	**Armutlu**	**2.61**	**70**	*e*PN	Pn	12 24 32.6	+0.1			
ARMT	**Armutlu**	**2.61**	**70**	*e*Pn	Pn	12 24 32.6	0.0			
APE	**Apeiranthos**	**2.65**	**182**	*e*P	Pn	12 24 32.2	-0.9			
APE	**Apeiranthos**	**2.65**	**182**	*e*P	Pn	12 24 32.2	-0.9			
CTKS	**Kestanelik-??a**	**2.66**	**54**	*e*PN	Pn	12 24 34.0	+0.8			
CTKS	**Kestanelik-??a**	**2.66**	**54**	*e*Pn	Pn	12 24 34.0	+0.7			
AGG	**Agios Georgios**	**2.66**	**256**	*e*P	Pn	12 24 35.7	+2.4			
AGG				*e*S	Sn	12 25 08.7	+2.6			
AGG	**Agios Georgios**	**2.66**	**256**	*e*P	Pn	12 24 35.7	+2.4			
AGG				*e*S	Sn	12 25 08.7	+2.6			
JMB	**Yambol**	**2.83**	**14**	*e*P	Pn	12 24 40.0	+4.3			
JMB	**Yambol**	**2.83**	**14**	*e*P	Pn	12 24 40.0	+4.3			
YLV	**Yalova**	**2.98**	**72**	*e*PN	Pn	12 24 38.6	+0.9			
YLV	**Yalova**	**2.98**	**72**	*e*Pn	Pn	12 24 38.6	+0.9			
KLYT	**Kilyos**	**3.01**	**58**	*e*PN	Pn	12 24 38.7	+0.6			
KLYT	**Kilyos**	**3.01**	**58**	*e*Pn	Pn	12 24 38.7	+0.6			
SILT	**Sile**	**3.37**	**64**	*e*PN	Pn	12 24 43.4	+0.4			
SILT	**Sile**	**3.37**	**64**	*e*Pn	Pn	12 24 43.4	+0.3			
VTS	**Vitosha**	**3.41**	**328**	*e*P	Pg	12 24 55.5	+0.9			

IDC 17 12:32:57.1±36.0**, 27°36S×174°10W, h0km, mb4.5/3, mb1 4.7/3, mb1mx4.1/12, mbtmp4.5/3, MS3.2/1, Ms1 3.2/1, ms1mx2.9/16, Error ellipse: s-maj=687.1km s-min=157.6km az=93.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**13.56**	**10**	LR	LR	12 39 44.9	
	comp=Z,92nm,19.6s,baz=207,slow=30						
STKA	**Stephens Creek**	**38.58**	**252**	P	P	12 40 21.4	-0.3
	3.4nm,0.3s,baz=104,slow=12,SNR=9.4						
ASAR	**Alice Springs**	**46.80**	**262**	P	P	12 41 28.2	-0.5
	1.6nm,0.4s,baz=104,slow=7.8,SNR=5.3						
WRA	**Warramunga Arr**	**47.53**	**267**	P	P	12 41 35.0	+0.5
	7.7nm,0.5s,baz=108,slow=7.6,SNR=11						

*BJI **17** 12:33:21.9,29.˚155S×178.˚28W,h301km,mB4.7/14, mb4.5/21*
*ISCJB **17** 12:33:23.0±0.5,29.˚66S±0.˚03×179.˚14W±0.˚05, h295km±5km, mb4.6/60, Error ellipse: s-maj=6.8km s-min=4.9km az=31.1*
*NEIC **17** 12:33:23.3±0.8,29.˚53S×179.˚10W,h291km±9km, mb4.7/45, Error ellipse: s-maj=10.4km s-min=7.1km az=140.0*
*IDC **17** 12:33:27.1±0.5,29.˚30S×179.˚14W,h325km±4km, mb4.0/13, mb1 4.2/15, mb1mx4.2/16, mbtmp4.1/15, Error ellipse: s-maj=13.6km s-min=9.7km az=165.0*

ISC 17 12:33:23.5±0.6**, 29°64S**±0°04×**179°15W**±0°05**, h288**km±6km**, h312**km±12.4km**: pP-P, n390**,σ1s**00**/282**, mb4.6**/60**, 63C-38D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**8.19**	**194**	*e*P	Pn	12 35 21.9	+2.8
MXZ				S	S	12 36 53.3	+0.5
MXZ	**Matakaoa Point**	**8.19**	**194**	*e*PN	Pn	12 35 21.9	+2.8
MXZ				SN	S	12 36 53.3	+0.5
OUZ	**Omahuta**	**8.28**	**226**	*e*Pn	Pn	12 35 29.8	+9.4
	22nm,0.6s						
WCZ	**Waipu Caves**	**8.34**	**219**	P	Pn	12 35 30.4	+9.4
WCZ	**Waipu Caves**	**8.34**	**219**	PN	Pn	12 35 30.4	+9.4
PUZ	**Puketiti**	**8.69**	**194**	*e*P	Pn	12 35 25.9	+0.6
PUZ	**Puketiti**	**8.69**	**194**	*e*PN	Pn	12 35 25.9	+0.6
OPRZ	**Ohinepanea**	**8.93**	**202**	PN	Pn	12 35 31.1	+2.7
CNGZ	**Carnagh Statio**	**9.09**	**193**	*e*PN	Pn	12 35 31.4	+1.0
MWZ	**Matawai**	**9.10**	**197**	P	Pn	12 35 31.6	+1.1
MWZ	**Matawai**	**9.10**	**197**	*e*PN	Pn	12 35 29.3	-1.2
URZ	**Urewera**	**9.14**	**199**	P	Pn	12 35 31.9	+0.9
URZ				*e*Pn	Pn	12 35 35.5	+4.5
URZ				*e*S	S	12 37 18.2	+3.6
URZ	**Urewera**	**9.14**	**199**	P	Pn	12 35 32.2	+1.2
	12nm,0.3s,baz=262,slow=2.1,SNR=23						
URZ				S	S	12 37 15.9	+1.3
	81nm,0.3s,baz=258,slow=22,SNR=17						
URZ	**Urewera**	**9.14**	**199**	PN	Pn	12 35 31.9	+1.0
TARZ	**Mount Tarawera**	**9.30**	**202**	*e*PN	Pn	12 35 40.0	+7.0
PRRZ	**Plateau Road**	**9.58**	**202**	*e*PN	Pn	12 35 40.2	+3.8
PRGZ	**Paritu Road**	**9.58**	**194**	*e*PN	Pn	12 35 39.1	+2.7
KNZ	**Kokohu**	**9.72**	**195**	P	Pn	12 35 38.1	0.0
KNZ	**Kokohu**	**9.72**	**195**	*e*PN	Pn	12 35 38.1	0.0
RAHZ	**Arahi**	**9.77**	**198**	*e*PN	Pn	12 35 38.1	-0.6
MHGZ	**Mahia Peninsul**	**9.80**	**194**	*e*PN	Pn	12 35 42.5	+3.5
NMHZ	**Naumai**	**10.01**	**198**	PN	Pn	12 35 42.1	+0.4
BKZ	**Black Stump Fm**	**10.16**	**200**	P	Pn	12 35 43.8	+0.2
BKZ	**Black Stump Fm**	**10.16**	**200**	PN	Pn	12 35 43.8	+0.2
MCHZ	**McNeill Hill**	**10.37**	**198**	PN	Pn	12 35 46.1	+0.1
KRVZ	**Karewarewa**	**10.37**	**203**	PN	Pn	12 35 50.8	+4.7
OTVZ	**Oturere**	**10.42**	**203**	*e*PN	Pn	12 35 48.1	+1.4
CKHZ	**Cape Kidnapper**	**10.47**	**196**	*e*PN	Pn	12 35 47.0	-0.3
WPVZ	**Whakapapa**	**10.50**	**203**	*e*PN	Pn	12 35 50.1	+2.4
TUVZ	**Tukino**	**10.52**	**203**	*e*P	Pn	12 35 51.4	+3.4
TUVZ	**Tukino**	**10.52**	**203**	*e*PN	Pn	12 35 51.4	+3.5
MOVZ	**Moawhango**	**10.61**	**202**	*e*PN	Pn	12 35 49.0	-0.1
KAHZ	**Kahuranaki**	**10.65**	**197**	PN	Pn	12 35 48.9	-0.6
VRZ	**Vera Road**	**10.72**	**206**	P	Pn	12 35 54.4	+4.0
VRZ	**Vera Road**	**10.72**	**206**	PN	Pn	12 35 54.4	+4.0
PXZ	**Pawanui**	**10.88**	**196**	*e*PN	Pn	12 35 50.0	-2.3
PNHZ	**Pukenui**	**10.94**	**199**	*e*PN	Pn	12 35 52.4	-0.7
WPHZ	**Waipukurau**	**11.02**	**198**	*e*PN	Pn	12 35 54.1	+0.1
PKE	**Pukeiti**	**11.09**	**209**	PN	Pn	12 36 00.5	+5.6
TSZ	**Takapari Road**	**11.14**	**200**	P	Pn	12 35 53.8	-1.8
TSZ	**Takapari Road**	**11.14**	**200**	PN	Pn	12 35 53.8	-1.9
POWZ	**Post Office Ro**	**11.51**	**200**	*e*PN	Pn	12 36 01.6	+1.5
BFZ	**Birch Farm**	**11.64**	**198**	*e*PN	Pn	12 36 00.8	-0.9
MRZ	**Mangatainoka R**	**11.81**	**200**	*e*PN	Pn	12 36 01.2	-2.6
HOWZ	**Holdsworth Sta**	**12.05**	**200**	*e*PN	Pn	12 36 04.3	-2.3
OGWZ	**Otaki Gorge**	**12.08**	**201**	*e*PN	Pn	12 36 05.0	-2.0
OGWZ				SN	S	12 38 18.7	-2.7
MSVF	**Nonsavu**	**12.12**	**347**	*e*Pn	Pn	12 36 07.1	-0.7
	713nm,1.3s						
MSVF				*e*S	S	12 38 20.4	-2.4
MTW	**Mount Morrison**	**12.29**	**199**	*e*PN	Pn	12 36 07.9	-1.7
CAW	**Cannon Point**	**12.38**	**201**	P	Pn	12 36 09.1	-1.6
CAW	**Cannon Point**	**12.38**	**201**	PN	Pn	12 36 09.1	-1.6
TRWZ	**Traveller**	**12.46**	**198**	PN	Pn	12 36 10.6	-1.1
MSWZ	**Moikau Station**	**12.60**	**200**	*e*PN	Pn	12 36 13.2	-0.2
SNZO	**South Karori**	**12.67**	**202**	*e*P	Pn	12 36 11.9	-2.4
SNZO				*e*Pn	Pn	12 36 15.8	+1.6
SNZO	**South Karori**	**12.67**	**202**	*e*PN	Pn	12 36 11.9	-2.4
TUWZ	**Tuamarina**	**13.04**	**204**	*e*PN	Pn	12 36 16.4	-2.2
NNZ	**Nelson**	**13.06**	**206**	*e*P	Pn	12 36 17.4	-1.5
NNZ	**Nelson**	**13.06**	**206**	*e*PN	Pn	12 36 17.4	-1.5
KHZ	**Kahutara**	**14.05**	**203**	*e*Pn	Pn	12 36 29.9	-0.9
	77nm,0.4s						
KHZ				*e*S	S	12 39 02.4	-3.3
KHZ	**Kahutara**	**14.05**	**203**	PN	Pn	12 36 28.5	-2.3
LTZ	**Lake Taylor**	**14.82**	**205**	PN	Pn	12 36 39.4	-0.6
DZM	**Mont Dzumac**	**14.99**	**297**	*e*P	Pn	12 36 44.0	+1.7
NOUC	**Port Laguerre**	**15.09**	**296**	*e*P	Pn	12 36 45.4	+2.0
MQZ	**McQueen's Vall**	**15.49**	**203**	*e*PN	Pn	12 36 46.5	-1.5
MQZ				SN	S	12 39 30.4	-4.5
WVZ	**Waitaha Valley**	**15.68**	**208**	*e*PN	Pn	12 36 49.9	-0.2
RPZ	**Rata Peaks**	**16.08**	**206**	*e*P	P	12 36 54.7	+1.9
	17nm,0.7s						
RPZ	**Rata Peaks**	**16.08**	**206**	P	P	12 36 53.6	+0.7
	1.2nm,0.3s,baz=349,slow=5.2,SNR=7.0						
RPZ				S	S	12 39 44.4	-2.3
	6.7nm,0.3s,baz=339,slow=21,SNR=15						
FOZ	**Fox Glacier**	**16.52**	**210**	*e*PN	Pn	12 36 58.6	-1.2
AFI	**Afiamalu**	**17.07**	**25**	*e*P	P	12 37 00.3	-3.6
	247nm,1.0s						
AFI	**Afiamalu**	**17.07**	**25**	P	P	12 37 00.5	-3.4
	18nm,0.3s,baz=267,slow=3.8,SNR=27						
AFI				S	S	12 39 51.0	-16
	4.2nm,0.3s,baz=41,slow=19,SNR=5.1						
JCZ	**Jackson Bay**	**17.33**	**210**	*e*PN	P	12 37 08.0	+1.6
ODZ	**Otahua Downs**	**17.37**	**205**	*e*PN	P	12 37 09.8	+3.0
WKZ	**Wanaka**	**17.82**	**208**	PN	P	12 37 16.1	+4.4
RAR	**Rarotonga**	**19.39**	**69**	P	P	12 37 28.7	0.0
	0.8nm,0.3s,baz=255,slow=8.7,SNR=3.2						
ARMA	**Armidale**	**25.29**	**261**	*e*P	P	12 38 28.4	+4.2
ARMA	**Armidale**	**25.29**	**261**	*e*P	P	12 38 28.9	+4.8
	198nm,2.5s,mb5.1						
EIDS	**Eidsvold**	**26.71**	**272**	*e*P	P	12 38 39.9	+3.0
EIDS	**Eidsvold**	**26.71**	**272**	*e*P	P	12 38 40.6	+3.7
	6.7nm,0.9s,mb4.1						
TBI	**Tubuai**	**27.25**	**84**	*e*T		13 05 49.0	
	23nm,0.3s						
RMQ	**Roma**	**28.45**	**268**	*e*P	P	12 38 55.6	+3.3
	4.5nm,0.5s,mb4.2						
PAE	**Paea**	**29.50**	**73**	*e*T		13 08 29.5	
	8.1nm,0.3s						
PPT	**Papeete**	**29.55**	**73**	*e*LR	LR	12 46 26.9	
	101nm,24.0s						
PPT				*e*T		13 08 33.8	
	9.2nm,0.4s						
PPT	**Papeete**	**29.55**	**73**	P	P	12 39 00.6	-1.5
	15nm,0.6s,mb4.7,baz=229,slow=11,SNR=3.0						
CMSA	**Cobar Meteorol**	**30.25**	**257**	*e*P	P	12 39 10.4	+2.3
CTA	**Charters Tower**	**32.70**	**279**	P	P	12 39 31.1	+1.6
	5.9nm,0.4s,mb4.4,baz=93,slow=12						
CTAO	**Charters Tower**	**32.70**	**279**	*e*P	P	12 39 31.6	+2.1
	6.0nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**33.69**	**256**	*e*P	P	12 39 40.5	+2.5
	2.1nm,0.6s,mb3.8						
STKA	**Stephens Creek**	**33.69**	**256**	P	P	12 39 39.8	+1.8
	6.8nm,0.4s,mb4.5,baz=94,slow=9.6,SNR=54						
STKA				ScP	ScP	12 45 24.4	-2.9
	3.9nm,0.8s,baz=139,slow=5.7,SNR=4.7						
BBOO	**Buckleboo**	**38.23**	**254**	*e*P	P	12 40 17.2	+1.0
	2.9nm,0.4s,mb4.1						
ASAR	**Alice Springs**	**42.16**	**267**	P	P	12 40 48.9	+0.4
	6.5nm,0.5s,mb4.1,baz=102,slow=6.8,SNR=170						
ASAR				ScP	ScP	12 45 56.9	-2.7
	2.3nm,0.9s,baz=115,slow=5.1,SNR=6.9						
ASAR				S	S	12 46 44.0	-2.3
	1.5nm,1.0s,baz=111,slow=17,SNR=6.5						
WB2	**Warramunga Arr**	**43.07**	**272**	*e*P	P	12 40 56.6	+0.9
WRA	**Warramunga Arr**	**43.08**	**272**	P	P	12 40 55.1	-0.7
WRA				pP	pP	12 42 02.4	+7.6
WRA				ScP	ScP	12 45 59.7	-3.6
WRA				S	S	12 46 55.9	-3.8
WRA	**Warramunga Arr**	**43.08**	**272**	P	P	12 40 55.1	-0.7
	3.1nm,0.3s,mb4.0,baz=110,slow=8.0,SNR=40						
WRA				pP	pP	12 42 02.4	+7.6
	1.9nm,0.3s,baz=108,slow=8.0,SNR=0.9						
WRA				ScP	ScP	12 45 59.7	-3.6
	5.1nm,0.9s,baz=109,slow=4.0,SNR=11						
WRA				S	S	12 46 55.9	-3.8
	2.4nm,0.7s,baz=108,slow=13,SNR=5.0						
FORT	**Forrest**	**45.29**	**255**	*e*P	P	12 41 13.3	+0.2
	24nm,0.6s,mb4.6						
FORT	**Forrest**	**45.29**	**255**	*e*P	P	12 41 13.0	-0.1
	27nm,0.6s,mb4.7						
SBA	**Scott Base**	**48.72**	**184**	*e*P	P	12 41 43.7	+4.9
	7.5nm,0.7s,mb4.1						
FITZ	**Fitzroy Crossi**	**51.37**	**270**	*e*P	P	12 41 59.7	+0.3
	6.1nm,0.7s,mb4.0						
FITZ				*e*		12 43 22.8	
MEEK	**Meekatharra**	**54.39**	**257**	*e*P	P	12 42 20.8	-0.5
MBWA	**Marble Bar**	**55.32**	**264**	*e*P	P	12 42 27.8	-0.2
MBWA	**Marble Bar**	**55.32**	**264**	*e*P	P	12 42 27.9	-0.1
	9.8nm,0.6s,mb4.4						
MORW	**Morawa**	**55.80**	**253**	*e*P	P	12 42 31.2	-0.1
QSPA	**South Pole Qui**	**60.47**	**180**	P	P	12 43 05.9	+3.2
	8.4nm,0.6s,mb4.4,baz=5.8,slow=0.8,SNR=96						
QSPA				pP	pP	12 44 15.5	+9.4
	13nm,1.0s,baz=64,slow=0.8,SNR=4.9						
MAW	**Mawson**	**72.67**	**201**	*e*P	P	12 44 21.3	+1.7
	1.1nm,0.7s,mb3.6						
MAW	**Mawson**	**72.67**	**201**	P	P	12 44 21.0	+1.4
	3.0nm,0.5s,mb4.2,baz=121,slow=7.6,SNR=12						
MJAR	**Matsushiro Arr**	**77.05**	**326**	P	P	12 44 43.1	-1.8
	15nm,1.1s,mb4.7,baz=159,slow=4.6,SNR=24						
MAJO	**Matsushiro**	**77.06**	**326**	*e*P	P	12 44 43.6	-1.4
	32nm,1.2s,mb4.9						
MAT	**Matsushiro**	**77.06**	**326**	P	P	12 44 42.6	-2.3
MAT				eS	S	12 54 05.6	-3.6
SYO	**Syowa Base**	**77.63**	**193**	*e*P	P	12 44 47.2	-0.5
SYO	**Syowa Base**	**77.63**	**193**	ePcP	PcP	12 44 54.2	-2.5
VNA3	**Neumayer Olymp**	**79.13**	**177**	*e*P	P	12 44 54.2	-1.6
VNA3				*e*		12 46 10.2	
VNA1	**Neumayer--Stat**	**79.79**	**177**	*e*P	P	12 44 58.4	-1.0
ATKA	**Atka Island**	**81.60**	**3**	*e*P	P	12 45 07.4	-1.6
	94nm,1.1s,mb5.4						
KSRS	**Korea Array**	**83.13**	**320**	P	P	12 45 16.9	-0.4
	6.5nm,1.0s,mb4.4,baz=142,slow=5.0,SNR=18						
YSS	**Yuzh-Sakhalins**	**83.63**	**335**	*e*P	P	12 45 19.8	+0.3
	60nm,1.0s,mb5.4						
QIZ	**Qiongzhong**	**83.77**	**296**	P	P	12 45 20.6	-0.3
QIZ				S	S	12 55 18.5	-0.8
QIZ				pmax	pmax		
	comp=Z,80nm,5.7s						
NJ2	**Nanjing**	**85.00**	**311**	*e*P	P	12 45 27.3	+0.6
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.1						
PKM	**Peak Mountain**	**85.13**	**45**	⇑P	P	12 45 27.9	+0.6
	baz=85,SNR=5.1						
SAO	**San Andreas Ge**	**85.39**	**43**	*e*P	P	12 45 28.0	-0.6
	comp=Z,14nm,1.1s,mb4.7						
SAO				*e*	pP	12 46 37.4	+0.7
BAR	**Barrett**	**85.70**	**49**	*e*P	P	12 45 29.7	-0.5
	comp=Z,84nm,2.6s,mb5.1						
MWC	**Mount Wilson**	**85.79**	**47**	*e*P	P	12 45 30.5	-0.1
	comp=Z,21nm,1.4s,mb4.8						
ARVC	**Arvin**	**85.89**	**46**	⇓P	P	12 45 31.3	+0.2
	baz=86,SNR=5.6						
MURC	**Murrieta**	**85.94**	**48**	⇑P	P	12 45 31.6	+0.3
	baz=86,SNR=5.4						
MONP	**Monument Peak**	**86.00**	**49**	⇑P	P	12 45 32.4	+0.8
	baz=86,SNR=6.2						
BFSC	**Mount Baldy Ra**	**86.06**	**47**	P	P	12 45 31.8	-0.1
	baz=86,SNR=12						
SDPT	**Sand Point**	**86.14**	**11**	*e*P	P	12 45 30.7	-1.0
	comp=Z,47nm,1.0s,mb5.3						
VES	**Vestal, Richgr**	**86.20**	**45**	⇓P	P	12 45 32.1	-0.5
	baz=86,SNR=6.9						
EDW2	**Edwards Air Fo**	**86.26**	**46**	⇑P	P	12 45 32.5	-0.4
	baz=86,SNR=12						
PFO	**Pinyon Flat Ob**	**86.43**	**48**	⇑P	P	12 45 33.5	-0.2
	baz=86,SNR=5.4						
PFO	**Pinyon Flat Ob**	**86.43**	**48**	*e*P	P	12 45 33.6	-0.1
	comp=Z,11nm,1.2s,mb4.5						
ISA	**Isabella**	**86.46**	**45**	⇓P	P	12 45 33.3	-0.5
	baz=86,SNR=18						
ISA	**Isabella**	**86.46**	**45**	*e*P	P	12 45 33.3	-0.5
	comp=Z,20nm,1.2s,mb4.8						
CMB	**Columbia Colle**	**86.86**	**43**	*e*P	P	12 45 34.5	-1.2
	comp=Z,6.9nm,1.0s,mb4.4						
BELC	**Belle. Mtn. Jos**	**86.97**	**48**	⇑P	P	12 45 36.1	-0.2
	baz=87,SNR=13						
BC3	**Big Chuckawall**	**87.11**	**48**	⇑P	P	12 45 37.4	+0.4
	baz=87,SNR=10						
GSC	**Goldstone**	**87.27**	**46**

CCUT	**Cedar City**	**90.84**	**46**	*e*P		**P**		**12 45 54.5**	**+0.2**
	comp=Z,111nm,1.4s,mb4.5									
Q12A	**Willow Creek R**	**90.85**	**45**	⇑P		**P**		**12 45 54.6**	**+0.3**
	baz=91									
R13A	**O'Grain Ranch,**	**90.85**	**46**	⇓P		**P**		**12 45 55.2**	**+0.9**
	baz=91									
U15A	**North Rim**	**90.85**	**48**	⇑P		**P**		**12 45 54.7**	**+0.3**
	baz=91									
WUAZ	**Wupatki**	**90.91**	**49**	⇑P		**P**		**12 45 55.4**	**+0.7**
	baz=91									
WUAZ	**Wupatki**	**90.91**	**49**	*e*P		**P**		**12 45 54.8**	**+0.1**
	comp=Z,3.2nm,1.0s,mb4.1									
120A	**U Bar Ranch, L**	**91.04**	**53**	⇑P		**P**		**12 45 55.8**	**+0.5**
	baz=91,SNR=7.3									
T15A	**Red Dirt Ranch**	**91.15**	**47**	⇑P		**P**		**12 45 56.3**	**+0.5**
	baz=91									
I07A	**Izee**	**91.37**	**38**	⇓P		**P**		**12 45 56.2**	**-0.4**
	baz=92									
Z20A	**Nine Sixteen R**	**91.39**	**52**	⇑P		**P**		**12 45 57.9**	**+0.9**
	baz=92,SNR=8.6									
Y19A	**Nutrioso**	**91.42**	**51**	⇑P		**P**		**12 45 57.6**	**+0.5**
	baz=92,SNR=6.1									
U16A	**Tuba City**	**91.44**	**49**	⇓P		**P**		**12 45 58.0**	**+0.9**
	baz=92									
G06A	**Carlson Farm,**	**91.54**	**37**	⇑P		**P**		**12 45 57.1**	**-0.2**
	baz=92									
P13A	**Bates Ranch, G**	**91.60**	**45**	⇓P		**P**		**12 45 57.4**	**-0.4**
	baz=92									
O12A	**Currie**	**91.66**	**44**	⇑P		**P**		**12 45 57.6**	**-0.4**
	baz=92									
BJI	**Beijing**	**91.69**	**316**	P		**P**		**12 45 58.0**	**-0.2**
BJI				S		S		12 56 32.5	-0.6
BJI				pmax		pmax				
	comp=Z,11nm,1.2s,mb4.7									
BJI				pmax		pmax				
	comp=Z,86nm,3.9s									
BJI				LR		LR				
	comp=N,100nm,26.0s									
BJI				LR		LR				
	comp=E,72nm,28.7s									
BJI				LR		LR				
	comp=Z,55nm,28.3s									
Q14A	**Sevier Lake (B**	**91.77**	**45**	⇓P		**P**		**12 45 58.6**	**+0.1**
	baz=92									
Y20A	**Horse Springs,**	**91.99**	**52**	⇑P		**P**		**12 46 00.9**	**+1.2**
	baz=92,SNR=9.6									
MSU	**Marysvale**	**92.17**	**46**	*e*P		**P**		**12 46 00.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**92.21**	**290**	P		**P**		**12 46 01.6**	**+0.5**
	comp=Z,0.5nm,0.4s,mb3.8,baz=111,slow=3.1,SNR=5.0									
P14A	**Drum Mountains**	**92.26**	**45**	⇑P		**P**		**12 46 00.5**	**-0.3**
	baz=92									
N13A	**Wendover, West**	**92.34**	**43**	*e*P		**P**		**12 46 01.2**	**+0.1**
	comp=Z,4.4nm,0.7s,mb4.5									
G08A	**Pilot Rock**	**92.46**	**38**	⇑P		**P**		**12 46 01.2**	**-0.4**
	baz=92									
Y21A	**Point of Rocks**	**92.53**	**52**	⇓P		**P**		**12 46 03.0**	**+0.8**
	baz=93,SNR=6.7									
KMI	**Kunming**	**92.59**	**297**	P		**P**		**12 46 03.4**	**+0.7**
KMI				pmax		pmax				
	comp=Z,6.0nm,1.4s,mb4.3									
Z22A	**Elephant Butte**	**92.60**	**53**	⇑P		**P**		**12 46 02.8**	**+0.3**
	baz=93,SNR=6.4									
M13A	**Montello**	**92.68**	**43**	⇑P		**P**		**12 46 02.2**	**-0.5**
	baz=93									
M13A	**Montello**	**92.68**	**43**	*e*P		**P**		**12 46 02.2**	**-0.5**
	comp=Z,8.3nm,1.0s,mb4.6									
X21A	**Alamocita Cree**	**92.70**	**52**	⇑P		**P**		**12 46 03.1**	**+0.1**
	baz=93									
DUG	**Dugway**	**92.78**	**45**	⇑P		**P**		**12 46 02.8**	**-0.4**
	baz=93									
DUG	**Dugway**	**92.78**	**45**	*e*P		**P**		**12 46 02.3**	**-0.9**
	comp=Z,1.3nm,0.8s,mb3.9									
TXAR	**Lajitas Array**	**92.82**	**58**	P		**P**		**12 46 02.8**	**-0.8**
	comp=Z,0.7nm,1.0s,mb3.5,baz=193,slow=5.1,SNR=7.9									
TXAR				PP		PP		12 49 47.6	-3.1
	comp=Z,0.2nm,0.8s,baz=191,slow=7.9,SNR=3.5									
T18A	**Mexican Hat**	**92.84**	**48**	⇑P		**P**		**12 46 03.4**	**-0.1**
	baz=93									
MNTX	**Cornudas Mount**	**92.85**	**55**	⇑P		**P**		**12 46 03.6**	**-0.2**
	baz=93									
526A	**Mary Lane Ranc**	**92.90**	**57**	⇑P		**P**		**12 46 04.2**	**+0.2**
	baz=93									
N14A	**Grayback Hills**	**92.95**	**44**	⇑P		**P**		**12 46 04.0**	**0.0**
	baz=93									
MFID	**Camas Ranch**	**92.98**	**41**	⇑P		**P**		**12 46 03.9**	**-0.2**
	baz=93									
627A	**Terlingua Ranc**	**93.09**	**58**	⇑P		**P**		**12 46 04.6**	**-0.3**
	baz=93									
BGU	**Big Grassy Mou**	**93.09**	**44**	*e*P		**P**		**12 46 03.7**	**-0.9**
	comp=Z,10.0nm,1.7s,mb4.5									
M14A	**Sheep Mountain**	**93.25**	**43**	⇑P		**P**		**12 46 05.0**	**-0.3**
	baz=93									
N15A	**Stansbury Isla**	**93.38**	**44**	⇑P		**P**		**12 46 06.0**	**+0.1**
	baz=94									
SRU	**San Rafael**	**93.56**	**47**	*e*P		**P**		**12 46 06.5**	**-0.3**
	comp=Z,2.5nm,0.8s,mb4.3									
I12A	**Atlanta**	**93.61**	**41**	⇑P		**P**		**12 46 06.6**	**-0.3**
	baz=94									
HVU	**Hansel Valley**	**93.76**	**43**	*e*P		**P**		**12 46 07.3**	**-0.4**
	comp=Z,19nm,1.6s,mb4.9									
M15A	**Larsen Ranch,**	**93.77**	**44**	⇓P		**P**		**12 46 06.9**	**-0.8**
	baz=94									
HLID	**Hailey**	**93.88**	**41**	⇓P		**P**		**12 46 08.3**	**+0.2**
	baz=94									
HLID	**Hailey**	**93.88**	**41**	*e*P		**P**		**12 46 07.9**	**-0.3**
	comp=Z,6.3nm,1.6s,mb4.4									
ANMO	**Albuquerque**	**93.88**	**52**	*e*P		**P**		**12 46 07.8**	**-0.6**
	comp=Z,3.6nm,1.3s,mb4.2									
U21A	**Nageezi**	**93.89**	**50**	⇑P		**P**		**12 46 08.2**	**-0.3**
	baz=94									
J13A	**Cove Ranch, Pi**	**93.92**	**41**	⇓P		**P**		**12 46 08.6**	**+0.2**
	baz=94									
Y24A	**Capitan**	**94.03**	**53**	⇓P		**P**		**12 46 09.3**	**+0.2**
	baz=94									
TTA	**Tatalina**	**94.08**	**10**	*e*P		**P**		**12 46 07.5**	**-1.1**
PV10	**Paradox Valley**	**94.09**	**48**	*e*P		**P**		**12 46 09.2**	**0.0**
PMR	**Palmer**	**94.10**	**14**	*e*P		**P**		**12 46 06.5**	**-2.2**
	comp=Z,4.6nm,1.1s,mb4.4									
L15A	**Malad City**	**94.13**	**43**	⇓P		**P**		**12 46 09.0**	**-0.3**
	baz=94									
PV04	**Paradox Valley**	**94.19**	**48**	*e*P		**P**		**12 46 09.8**	**+0.1**
H12A	**Diamond D Ranc**	**94.24**	**40**	⇓P		**P**		**12 46 09.2**	**-0.6**
	baz=94									
J14A	**Carey**	**94.25**	**42**	⇑P		**P**		**12 46 10.1**	**+0.2**
	baz=94									
H13A	**Challis**	**94.59**	**40**	⇑P		**P**		**12 46 11.9**	**+0.5**
	baz=95									
I14A	**Mackay**	**94.66**	**41**	⇑P		**P**		**12 46 12.1**	**+0.3**
	baz=95									
CD2	**Chengdu**	**94.84**	**303**	P		**P**		**12 46 14.0**	**+1.1**
CD2				pmax		pmax				
	comp=Z,10.0nm,0.5s,mb5.2									
CD2				pmax		pmax				
	comp=Z,90nm,9.0s									
G13A	**Cobalt**	**94.92**	**40**	⇑P		**P**		**12 46 12.4**	**-0.5**
	baz=95									
J15A	**Blackfoot**	**94.93**	**42**	⇓P		**P**		**12 46 13.5**	**+0.5**
	baz=95									
R21A	**Cimarron**	**95.05**	**48**	⇑P		**P**		**12 46 13.9**	**+0.3**
	baz=95									
H14A	**Leadore**	**95.12**	**41**	⇓P		**P**		**12 46 14.7**	**+0.8**
	baz=95									
S22A	**4UR Ranch, Cre**	**95.18**	**49**	⇑P		**P**		**12 46 14.9**	**+0.6**
	baz=95									
TRF	**Thorofare Moun**	**95.56**	**13**	*e*P		**P**		**12 46 12.9**	**-2.5**
	comp=Z,8.6nm,1.3s,mb4.7									
REDW	**Red Top Meadow**	**95.84**	**43**	*e*P		**P**		**12 46 14.9**	**-2.2**
	comp=Z,6.3nm,1.3s,mb4.6									
K18A	**Toltan Ranch,**	**95.91**	**44**	⇓P		**P**		**12 46 17.5**	**+0.1**
	baz=96									
MCK	**McKinley**	**96.08**	**13**	*e*P		**P**		**12 46 16.4**	**-1.2**
	comp=Z,4.9nm,1.0s,mb4.6									
LOHW	**Long Hollow**	**96.13**	**43**	*e*P		**P**		**12 46 17.6**	**-0.8**
COLA	**College**	**97.31**	**13**	*e*P		**P**		**12 46 20.8**	**-2.4**
	comp=Z,4.3nm,1.0s,mb4.6									
ILAR	**Eielson Array**	**97.41**	**13**	P		**P**		**12 46 21.9**	**-1.8**
	comp=Z,2.3nm,1.1s,mb4.3,baz=230,slow=4.9,SNR=9.5									
ILAR				PP		PP		12 50 24.8	-0.5
	comp=Z,1.0nm,1.0s,baz=212,slow=8.0,SNR=4.2									
GTA	**Gaotai**	**101.89**	**309**	*e*P		Pdif		12 46 44.0	-0.3
GTA				pmax		pmax				
	comp=Z,3.0nm,0.4s									
WMQ	**Urumqi**	**111.97**	**309**	*e*PKP		PKiKP		12 51 23.1	-1.1
MKAR	**Makanchi Array**	**116.52**	**311**	PKP		PKPdf		12 51 30.8	-2.0
MKAR				PKKPbc		PKKPbc		13 02 02.2	-0.1
MKAR	**Makanchi Array**	**116.52**	**311**	PKP		PKPdf		12 51 30.8	-2.0
	comp=Z,0.6nm,0.3s,baz=48,slow=2.1,SNR=9.3									
MKAR				PKKPbc		PKKPbc		13 02 02.2	-0.1
	comp=Z,0.3nm,0.5s,baz=283,slow=3.6,SNR=3.8									
ZALV	**Zalesovo Beam**	**116.81**	**319**	PKP		PKPdf		12 51 31.0	-2.2
	comp=Z,0.5nm,0.3s,baz=108,slow=3.2,SNR=3.2									
BOSA	**Boshof**	**117.56**	**204**	PKP		PKPdf		12 51 35.6	0.0
	comp=Z,1.8nm,0.7s,baz=185,slow=4.0,SNR=6.1									
KSH	**Kashi**	**119.00**	**301**	*e*PKP		PKPdf		12 51 37.3	-0.5
KSH				*es*PKP				12 53 18.0		
KSH				*e*PKS				12 55 12.4		
KSH				*e*SKS		SKSdf		12 58 20.0	-1.9
KSH				AMB		AMB				
	comp=Z,110nm,4.3s									
KSH				LR		LR				
	comp=N,37nm,7.9s									
KSH				LR		LR				
	comp=E,30nm,3.6s									
KSH				LR		LR				
	comp=Z,40nm,3.4s									
KURK	**Kurchatov**	**119.81**	**314**	*e*PKPdf		PKPdf		12 51 37.0	-2.0
BVAR	**Borovoye Array**	**125.17**	**316**	PKP		PKPdf		12 51 47.7	-1.5
	comp=Z,1.6nm,0.4s,baz=105,slow=2.3,SNR=16									
BVAR				pPKP		pPKPdf		12 53 08.7	+7.0
	comp=Z,0.7nm,0.6s,baz=56,slow=2.6,SNR=2.2									
BRVK	**Borovoye**	**125.23**	**316**	*e*PKPdf		PKPdf		12 51 47.8	-1.5
ARU	**Arti**	**131.87**	**321**	*e*PKPdf		PKPdf		12 52 01.4	-0.5
KEV	**Kevo**	**137.16**	**347**	*ep*		PKPdf		12 52 08.2	-3.2
ARCES	**ARCESS Array B**	**137.63**	**347**	PKP		PKPdf		12 52 12.4	+0.1
ARCES	**ARCESS Array B**	**137.63**	**347**	PKhKP		PKPpre		12 52 01.9		
	comp=Z,0.7nm,0.3s,baz=66,slow=3.4,SNR=17									
ARCES				PKP		PKPdf		12 52 12.4	+0.1
	comp=Z,3.6nm,0.9s,baz=98,slow=0.9,SNR=8.6									
JOF	**Joensuu**	**141.34**	**338**	*ep*		PKPdf		12 52 11.5	-7.7
	comp=Z,1.8nm,0.4s									
KAF	**Kangasniemi**	**143.50**	**340**	*ep*		PKPdf		12 52 18.0	-5.0
	comp=Z,1.8nm,0.3s									
FINES	**FINESS Array B**	**144.09**	**340**	PKP		PKPdf		12 52 20.6	-3.5
	comp=Z,20nm,0.4s,baz=56,slow=4.1,SNR=301									
MALT	**Malatya**	**147.84**	**296**	*e*PKPbc		PKPbc		12 52 34.3	-0.3
NB2	**NORSAR Subarra**	**147.84**	**351**	PKP		PKPdf		12 52 31.8	+1.3
	baz=14,slow=2.8									
NOA	**NORSAR Array B**	**147.84**	**351**	PKPbc		PKPbc		12 52 31.8	-2.0
	comp=Z,9.7nm,0.7s,baz=17,slow=4.3,SNR=24									
NAO01	**NORSAR Array S**	**148.08**	**351**	*e*PKPbc		PKPbc		12 52 33.0	-1.4
AKASG	**Malin Array Be**	**150.09**	**323**	PKPbc		PKPbc		12 52 37.8	-1.9
	comp=Z,3.2nm,0.3s,baz=53,slow=2.4,SNR=50									
AKASG				PKPab		PKPab		12 52 45.2	-1.5
	comp=Z,1.6nm,0.3s,baz=48,slow=4.6,SNR=9.8									
AKASG				pPKPbc		pPKPbc		12 53 58.5	+6.7
	comp=Z,1.5nm,0.5s,baz=55,slow=2.0,SNR=2.3									
AKBB	**Malin Array Si**	**150.09**	**323**	*e*PKPbc		PKPbc		12 52 38.0	-1.7
KIEV	**Kiev**	**150.11**	**323**	*e*PKPbc		PKPbc		12 52 38.1	-1.7
MMAI	**Mount Meron Ar**	**150.38**	**285**	PKPbc		PKPbc		12 52 41.4	+0.4
	comp=Z,9.1nm,0.4s,baz=65,slow=5.9,SNR=23									
MMAI				PKPab		PKPab		12 52 47.8	-0.7
	comp=Z,3.4nm,0.5s,baz=64,slow=6.6,SNR=3.4									
MMAI				pPKPbc		pPKPbc		12 54 01.3	+8.3
	comp=Z,6.4nm,0.7s,baz=160,slow=2.7,SNR=4.1									
BR131	**Keskin Array S**	**151.36**	**299**	*e*PKPbc		PKPbc		12 52 41.8	-1.3
BRTR	**Keskin Array B**	**151.36**	**299**	PKPbc		PKPbc		12 52 41.7	-1.4
	comp=Z,1.9nm,0.3s,baz=126,slow=3.2,SNR=28									
BRTR				PKPab		PKPab		12 52 51.0	-1.4
	comp=Z,1.2nm,0.8s,baz=106,slow=4.5,SNR=5.7									
BRTR				pPKPbc		pPKPbc		12 54 01.8	+6.6
	comp=Z,5.2nm,1.1s,baz=129,slow=4.0,SNR=4.9									
BUR08	**Bucovina Ar. S**	**154.00**	**321**	*e*PKPbc		PKPbc		12 52 48.7	+0.1
BUR08				*e*PKPab		PKPab		12 53 03.0	-0.4
KWP	**Kalwaria Pacla**	**154.05**	**326**	*e*PKPab		PKPab		12 53 02.3	-1.1
PSN	**Preselentsi**	**154.12**	**310**	P		PKPab		12 53 03.1	-0.9
BSEG	**Bad Segeberg**	**154.76**	**347**	*e*PKPab		PKPab		12 53 04.7	-1.6
STHS	**Stebnicka Huta**	**154.90**	**328**	*e*PKP		PKPbc		12 52 51.0	+0.6
STHS				*e*				12 53 07.4		
CRVS	**Cervenica-Dubn**	**155.15**	**326**	*e*PKP		PKPab		12 53 07.5	-0.7
JMB	**Yambol**	**155.68**	**309**	P		PKPab		12 53 10.5	-0.2
SZH	**Strazhica**	**155.78**	**311**	P		PKPab		12 53 10.3	-0.8
OKC	**Ostrava-Krasne**	**155.95**	**332**	*e*PKPAB		PKPab		12 53 09.7	-1.8
LIC	**Lamto**	**156.06**	**165**	*e*P		PKPab		12 53 13.7	+0.8
	comp=Z,83nm,1.8s									
NRDL	**Niedersach Rie**	**156.16**	**346**	*e*PKPab		PKPab		12 53 09.5	-2.9
PVL	**Pavlikeni**	**156.20**	**311**	P		PKPab		12 53 13.3	+0.4
UPC	**Upice**	**156.24**	**336**	*e*PKPAB		PKPab		12 53 11.6	-1.2
DPC	**Dobruska-Polom**	**156.25**	**335**	*e*PKPDF		PKPdf		12 52 41.9	-1.3
DPC				*e*PKPAB		PKPab		12 53 12.0	-0.8
KIC	**Kosan Boka**	**156.25**	**166**	*e*P		PKPab		12 53 14.1	+0.4
	comp=Z,65nm,1.5s									
TIC	**Toumodi**	**156.47**	**165**	*e*P		PKPab		12 53 11.5	-3.1
	comp=Z,58nm,1.3s									
CLL	**Collm**	**156.53**	**341**	*i* PKP		PKPdf		12 52 41.1	-2.5
CLL	**Collm**	**156.53**	**341**	*e*PKPdf		PKPdf		12 52 41.0	-2.6
CLL				*e*PKPdif		PKPdf		12 52 53.0	+9.4
	comp=Z,17nm,1.7s									
CLL				⇑*i*PKPab		PKPab		12 53 12.3	-1.7
	comp=Z,20nm,1.1s									
CLL				*e*(pPKPab)				12 54 19.0		
PSZ	**Piszkesteto**	**156.58**	**326**	*e*PKPab		PKPab		12 53 13.6	-0.8
PSZ	**Piszkesteto**	**156.58**	**326**⇑	*e*PKP		PKPab		12 53 13.2	-1.2
BRG	**Berggiesshubel**	**156.62**	**339**	*e*PKPab		PKPab		12 53 13.1	-1.3
BRG	**Berggiesshubel**	**156.62**	**339**	*e*PKP		PKPdf		12 52 42.5	-1.2
	comp=Z,15nm,1.7s									
BRG	**Berggiesshubel**	**156.62**	**339**	*i* PKP		PKPab		12 53 12.8	-1.6
	comp=Z,22nm,1.3s									
VYHS	**Vyhne**	**156.66**	**329**	*e*PKP		PKPab		12 53 14.0	-0.7
CLZ	**Clausthal**	**156.72**	**345**	*e*PKPab		PKPab		12 53 13.4	-1.4
PVCC	**Panska Ves**	**156.72**	**337**	*e*PKPAB		PKPab		12 53 13.8	-1.0
IBBN	**Ibbenburen**	**156.78**	**349**	*e*PKPab		PKPab		12 53 13.3	-1.7
PRU	**Pruhonice**	**157.19**	**337**	*e*PKPAB		PKPab		12 53 16.1	-0.8
WTSB	**Winterswijk**	**157.26**	**350**	*e*PKP		PKPab		12 53 15.1	-2.0
	comp=Z,26nm,1.3s									
PGB	**Panagyurishte**	**157.26**	**311**	P		PKPab		12 53 17.1	-0.4
TREC	**Trest**	**157.43**	**334**	*e*PKPAB		PKPab		12 53 16.7	-1.2
TANN	**Tannenbergstha**	**157.48**	**340**	*e*PKPab		PKPab		12 53 17.1	-1.0
WERD	**Werda**	**157.49**	**341**	*e*PKPab		PKPab		12 53 17.0	-1.2
MOX	**Moxa**	**157.51**	**342**	*e*PKP		PKPab		12 53 16.5	-1.7
	comp=Z,26nm,1.6s									
MOX	**Moxa**	**157.51**	**342**	*e*PKPab		PKPab		12 53 16.8	-1.4
GUNZ	**Gunzen**	**157.56**	**340**	*e*PKPab		PKPab		12 53 17.4	-1.1
WERN	**Wernitzgruen**	**157.62**	**340**	*e*PKPab		PKPab		12 53 17.7	-1.0
NKC	**Novy Kostel**	**157.64**	**340**	*e*PKPAB		PKPab		12 53 17.6	-1.2
ZST	**Bratislava**	**157.65**	**331**	*e*PKP		PKPab		12 53 17.7	-1.3
BUG	**Bochum--Univer**	**157.70**	**349**	*e*PKPab		PKPab		12 53 16.9	-2.1
VTS	**Vitosha**	**157.87**	**312**	P		PKPab		12 53 19.5	-0.7
MMB	**Musomiste**	**157.98**	**309**	P		PKPab		12 53 19.6	-1.1
KHC	**Kasperske Hory**	**158.25**	**337**	*e*PKPab		PKPab		12 53 20.2	-1.3
KHC	**Kasperske Hory**	**158.25**	**337**	*e*PKPAB		PKPab		12 53 20.1	-1.4
SOP	**Sopron**	**158.28**	**330**⇑	*e*PKP		PKPab		12 53 20.4	-1.3
GEC2	**GERESS Array S**	**158.45**	**336**	*e*PKPab		PKPab		12 53 21.1	-1.3
WET	**Wettzell**	**158.47**	**338**	*e*PKPab		PKPab		12 53 21.6	-0.8
GRF	**Grafenberg Arr**	**158.48**	**341**	*e*PKPab		PKPab		12 53 21.6	-0.9
HGN	**Heimansgroeve**	**158.56**	**351**	*e*PKP		PKPab		12 53 21.0	-1.8
	comp=Z,27nm,1.2s									
TNS	**Taunus Mts**	**158.65**	**347**	*e*PKPab		PKPab		12 53 21.5	-1.7
MEM	**Membach**	**158.70**	**351**	PKPab		PKPab		12 53 21.4	-1.9
BCLA	**Clavier**	**158.97**	**352**	PKPab		PKPab		12 53 23.2	-1.4
SNF	**Seneffe**	**158.99**	**354**	PKPab		PKPab		12 53 23.2	-1.5
GIVF	**Givet**	**159.34**	**353**	*e*PKP2		PKPab		12 53 23.3	-2.9
	comp=Z,46nm,1.3s									
DOU	**Dourbes**	**159.37**	**353**	PKPab		PKPab		12 53 25.0	-1.3
BAIF	**Baives**	**159.45**	**354**	*e*PKP2		PKPab		12 53 24.0	-2.6
	comp=Z,67nm,1.5s									
WLF	**Walferdange**	**159.60**	**350**	*e*PKPab		PKPab		12 53 26.0	-1.3
FUR	**Furstenfeldbru**	**159.84**	**339**	*e*PKPab		PKPab		12 53 27.4	-1.0
STU	**Stuttgart**	**159.85**	**344**	*e*PKPab		PKPab		12 53 26.8	-1.7
BFO	**Black Forest**	**160.47**	**345**	*e*PKPab		PKPab		12 53 29.5	-1.7
CDF	**Champ du Feu**	**160.61**	**347**	*e*PKP2		PKPab		12 53 29.1	-2.7
FLN	**La Foliniere**	**160.87**	**3**	*e*PKP2		PKPab		12 53 28.6	-4.3
MEZF	**Maizieres J'vi**	**160.89**	**351**	*e*PKP2		PKPab		12 53 30.5	-2.5
	comp=Z,131nm,1.6s									
LDF	**La Druitiere**	**161.06**	**2**	*e*PKP2		PKPab		12 53 28.9	-4.8
ROSF	**Rostrenen**	**161.06**	**9**	*e*PKP2		PKPab		12 53 31.0	-2.7
	comp=Z,102nm,1.5s									
HAU	**Haudompre**	**161.18**	**349**	*e*PKP2		PKPab		12 53 31.5	-2.8
	comp=Z,19nm,1.0s									
SGMF	**Saint Gilles**	**161.22**	**7**	*e*PKP2		PKPab		12 53 31.7	-2.8
	comp=Z,181nm,1.6s									
GRR	**Gorron**	**161.23**	**4**	*e*PKP2		PKPab		12 53 30.5	-4.0
HINF	**Hinteralfeld**	**161.27**	**347**	*e*PKP2		PKPab		12 53 31.8	-2.9
	comp=Z,6.5nm,0.9s									
LOR	**Lormes**	**162.24**	**353**	*e*PKP2		PKPab		12 53 36.2	-2.7
	comp=Z,17nm,1.1s									
SSF	**Saint Saulge**	**162.48**	**354**	*e*PKP2		PKPab		12 53 37.4	-2.6
	comp=Z,52nm,1.3s									
CABF	**La Chapelle**	**162.57**	**348**	*e*PKP2		PKPab		12 53 38.3	-2.1
	comp=Z,20nm,1.2s									
AVF	**Avril sur Loir**	**162.76**	**354**	*e*PKP2		PKPab		12 53 38.4	-2.8
	comp=Z,44nm,1.3s									
SMF	**Signal de Mont**	**162.86**	**353**	*e*PKP2		PKPab		12 53 39.0	-2.7
	comp=Z,79nm,1.2s									
BGF	**Bois d'Agland**	**163.04**	**355**	*e*PKP2		PKPab		12 53 39.7	-2.7
	comp=Z,45nm,1.3s									
MFF	**Saint Martin d**	**163.04**	**2**	*e*PKP2		PKPab		12 53 38.2	-4.3
	comp=Z,68nm,1.5s									
TCF	**Toulx Ste Croi**	**163.34**	**357**	*e*PKP2		PKPab		12 53 40.9	-2.9
	comp=Z,50nm,1.6s									
LPL	**La Plagne**	**163.49**	**345**	*e*PKP2		PKPab		12 53 42.9	-1.6
	comp=Z,35nm,1.3s									
LPG	**La Plagne**	**163.50**	**345**	*e*PKP2		PKPab		12 53 43.0	-1.5
	comp=Z,38nm,1.3s									
TORD	**Torodi Ar. Bea**	**163.57**	**183**	PKP		PKPdf		12 52 51.6	-0.9
	comp=Z,3.2nm,1.1s,baz=287,slow=1.9,SNR=8.1									
TORD				PKPab		PKPab		12 53 45.8	+0.3
	comp=Z,3.4nm,0.5s,baz=181,slow=3.4,SNR=33									
TORD				pPKPab		pPKPab		12 55 02.2	+7.4
	comp=Z,3.4nm,1.1s,baz=189,slow=4.2,SNR=5.2									
MBDF	**Montbardon**	**164.23**	**344**	*e*PKP2		PKPab		12 53 45.6	-2.2
ORIF	**Oris-en-Rattie**	**164.24**	**347**	*e*PKP2		PKPab		12 53 45.8	-2.0
	comp=Z,123nm,1.9s									
RJF	**Les Rejaudoux**	**164.35**	**358**	*e*PKP2		PKPab		12 53 45.4	-2.9
	comp=Z,45nm,1.6s									
VIVF	**Saint-Julien-l**	**164.51**	**350**	*e*PKP2		PKPab		12 53 46.8	-2.2
	comp=Z,38nm,1.3s									
LFF	**La Frestale**	**164.72**	**0**	*e*PKP2		PKPab		12 53 47.1	-2.8
SBF	**Sospel**	**164.86**	**341**	*e*PKP2		PKPab		12 53 47.9	-2.7
	comp=Z,89nm,1.1s									
SMRF	**Simiane la Rot**	**165.20**	**347**	*e*PKP2		PKPab		12 53 50.3	-1.8
	comp=Z,19nm,1.2s									
FRF	**La Foret Royal**	**165.35**	**343**	*e*PKP2		PKPab		12 53 50.2	-2.6
	comp=Z,100nm,1.7s									
LASF	**Ste Croix**	**165.39**	**351**	*e*PKP2		PKPab		12 53 49.2	-3.7
	comp=Z,20nm,1.4s									
LMR	**La Mourre**	**165.60**	**343**	*e*PKP2		PKPab		12 53 51.5	-2.4
	comp=Z,38nm,1.0s									
EVO	**Evora**	**168.49**

ACX					*e*S		Sg	13 02 16.6	-1.4
CAIG	**El Cayaco**	**0.33**	**303**		*e*P		Pg	13 02 18.7	-0.9
CAIG					*e*S		Sg	13 02 25.0	+0.9
CAIG	**El Cayaco**	**0.33**	**303**		*e*P		Pg	13 02 18.7	-0.9
CAIG					⇑*e*S		Sg	13 02 25.0	+0.9
MEIG	**Mezcala**	**1.11**	**18**		*e*P		Pb	13 02 29.9	-4.3
MEIG					*e*S		Sb	13 02 45.2	-3.4
PLIG	**Platanillo**	**1.58**	**17**		*e*P		Pn	13 02 38.2	-2.8
PLIG					*i* S		Sn	13 02 58.2	-3.3
PLIG	**Platanillo**	**1.58**	**17**		*e*P		Pn	13 02 38.1	-2.9
PLIG					*i* S		Sn	13 02 58.2	-3.3
ZIIG	**Zihuatanejo**	**1.60**	**298**		*e*P		Pn	13 02 38.9	-2.4
ZIIG					*i* S		Sn	13 02 58.8	-3.1
ZIIG	**Zihuatanejo**	**1.60**	**298**		*e*P		Pn	13 02 38.9	-2.4
ZIIG					*i* S		Sn	13 02 58.0	-3.9
PNIG	**Pinotepa**	**1.83**	**105**		*e*P		Pn	13 02 41.3	-3.2
PNIG					*i* S		Sn	13 03 04.2	-3.5
PNIG	**Pinotepa**	**1.83**	**105**		*e*P		Pn	13 02 41.3	-3.2
PNIG					*i* S		Sn	13 03 04.2	-3.5
YAIG	**Yautepec**	**2.17**	**23**		*i* P		Pn	13 02 44.7	-4.4
YAIG					*i* S		Sn	13 03 12.4	-3.4
YAIG	**Yautepec**	**2.17**	**23**		*i* P		Pn	13 02 44.7	-4.4
YAIG					*i* S		Sn	13 03 12.4	-3.4
UTMO	**Huajuapan**	**2.29**	**65**		*i* P		Pn	13 02 45.9	-4.8
UTMO					*i* S		Sn	13 03 14.1	-4.7
MZVM		**2.42**	**17**		*e*P		Pn	13 02 52.1	-0.4
MZVM					*i* S		Sn	13 03 21.8	-0.3
PPM	**Popocatepetl**	**2.54**	**30**		*i* P		Pn	13 02 56.1	+1.9
PPM					*i* S		Sn	13 03 28.9	+3.8
PPM	**Popocatepetl**	**2.54**	**30**		*i* P		Pn	13 02 56.1	+1.9
PPM					*i* S		Sn	13 03 28.9	+3.8
PBVM	**Pinon**	**2.70**	**18**		*e*P		Pn	13 02 58.6	+2.2
PBVM	**Pinon**	**2.70**	**18**		*e*P		Pn	13 02 58.6	+2.2
PTVM	**Pico Tres Padr**	**2.83**	**17**		*e*P		Pn	13 02 55.9	-2.3
PTVM					*i* S		Sn	13 03 34.9	+2.6
PTVM	**Pico Tres Padr**	**2.83**	**17**		*e*P		Pn	13 02 55.9	-2.3
PTVM					*i* S		Sn	13 03 34.9	+2.6
TPIG	**Tehuac#an**	**2.93**	**58**		*e*P		Pn	13 02 59.8	+0.2
TPIG					*i* S		Sn	13 03 30.6	-4.2
IIO	**Organos**	**2.96**	**24**		*i* P		Pn	13 02 57.1	-2.9
IIO					*i* S		Sn	13 03 34.1	-1.4
IIO	**Organos**	**2.96**	**24**		*i* P		Pn	13 02 57.1	-2.9
IIO					*i* S		Sn	13 03 34.1	-1.4
MOIG	**Morelia**	**3.02**	**338**		*e*P		Pn	13 03 01.5	+0.7
MOIG					*i* S		Sn	13 03 41.8	+4.7
MOIG	**Morelia**	**3.02**	**338**		*e*P		Pn	13 03 01.5	+0.7
MOIG					*i* S		Sn	13 03 41.8	+4.7
DEIG	**Demacu**	**3.53**	**15**		*e*P		Pn	13 03 10.0	+2.2

IDC 17 13:18:03.0±1.6, 4°88S×143°04E, h0km, mb3.6/4, mb1 4.0/5, mb1mx3.7/14, mbtmp3.8/5, ML4.0/1, Error ellipse: s-maj=69.0km s-min=25.3km az=115.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.21**	**209**	P		Pn	13 22 05.0	+0.1
	0.5nm,0.3s,baz=31,slow=13,SNR=6.9						
ASAR	**Alice Springs**	**20.66**	**204**	P		P	13 22 44.4	-0.1
	0.9nm,0.5s,baz=30,slow=12,SNR=24						
FITZ	**Fitzroy Crossi**	**21.50**	**231**	P		P	13 22 53.8	+0.1
	1.9nm,0.7s,baz=44,slow=13,SNR=4.1						
MKAR	**Makanchi Array**	**74.15**	**321**	P		P	13 29 42.0	+0.6
	0.3nm,0.5s,baz=112,slow=7.8,SNR=4.0						
ILAR	**Eielson Array**	**86.03**	**24**	P		P	13 30 44.9	-0.3
	0.8nm,0.7s,baz=258,slow=4.5,SNR=16						

*ATH **17** 13:18:46.6, 39°79N×26°88E, h34km±4km, MD3.2/3*
*ISCJB **17** 13:18:48.0±0.5, 39°71N±0°02×25°59E±0°04, h18km±5km, Error ellipse: s-maj=4.7km s-min=3.8km az=175.2*
*CSEM **17** 13:18:48.2±0.3, 39°71N×25°59E, h19km, MD3.0, Error ellipse: s-maj=7.4km s-min=5.8km az=96.0*
*THE **17** 13:18:49.1, 39°70N×25°65E, h26km±2km, ML2.1/5, Error ellipse: s-maj=3.0km s-min=0.8km az=104.0*
*DDA **17** 13:18:49.2, 39°84N×25°76E, h26km±1km, Md3.0*
*ISK **17** 13:18:49.1, 39°77N×25°71E, h5km, MD2.9*
ISC 17 13:18:47.6±0.7, 39°73N±0°02×25°58E±0°04, h12km±4km, n37, σ0§94/68, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.39**	**73**	*i* P		**Pg**	**13 18 55.2**	**-0.1**
BOZC				*i* S		**Sg**	**13 19 00.3**	**-0.2**
GADA	**Gvkgeada**	**0.53**	**28**	*e*Pg		**Pg**	**13 18 57.6**	**-0.3**
GADA				*e*Sg		**Sg**	**13 19 04.9**	**0.0**
GADA	**Gvkgeada**	**0.53**	**28**	*e*Pg		**Pg**	**13 18 57.6**	**-0.3**
GADA				*e*Sg		**Sg**	**13 19 04.9**	**0.0**
EZN	**Ezine**	**0.59**	**80**	*e*PG		**Pg**	**13 18 59.2**	**+0.1**
EZN				*e*SG		**Sg**	**13 19 05.5**	**-1.3**
EZN	**Ezine**	**0.59**	**80**	*e*Pg		**Pg**	**13 18 59.2**	**+0.1**
EZN				*e*Sg		**Sg**	**13 19 05.5**	**-1.3**
PRK	**Paraskevi**	**0.72**	**132**	*e*PN		**Pn**	**13 19 01.1**	**-2.5**
PRK				*e*SN		**Sg**	**13 19 11.5**	**+0.4**
PRK	**Paraskevi**	**0.72**	**132**	*i* P		**Pg**	**13 19 11.2**	**-0.4**
PRK				*i* S		**Sg**	**13 19 11.4**	**+0.3**
PRK	**Paraskevi**	**0.72**	**132**	*e*Pn		**Pn**	**13 19 01.1**	**-2.5**
PRK				*e*Sn		**Sg**	**13 19 11.5**	**+0.4**
AYVA	**Ayvalik**	**0.96**	**116**	*i* P		**Pg**	**13 19 06.4**	**+0.3**
AYVA				*i* S		**Sg**	**13 19 19.6**	**+1.0**
AYVA	**Ayvalik**	**0.96**	**116**	*i* P		**Pg**	**13 19 06.4**	**+0.3**
AYVA				*i* S		**Sg**	**13 19 19.6**	**+1.0**
GELI	**Tayfur-Gelibol**	**0.96**	**46**	*e*PG		**Pg**	**13 19 06.4**	**+0.2**
GELI				*e*SG		**Sg**	**13 19 18.8**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.96**	**46**	*e*Pg		**Pg**	**13 19 06.4**	**+0.2**
GELI				*e*Sg		**Sg**	**13 19 18.8**	**+0.1**
ENEZ	**Enez**	**1.10**	**23**	*e*PG		**Pg**	**13 19 08.8**	**-0.1**
ENEZ				*e*SG		**Sg**	**13 19 23.4**	**+0.2**
ENEZ	**Enez**	**1.10**	**23**	*e*Pg		**Pg**	**13 19 08.8**	**0.0**
ENEZ				*e*Sg		**Sg**	**13 19 23.4**	**+0.2**
ALN	**Alexandroupoli**	**1.22**	**17**	*e*PN		**Pn**	**13 19 09.9**	**-0.6**
ALN				*e*SN		**Sn**	**13 19 26.5**	**-0.4**
ALN	**Alexandroupoli**	**1.22**	**17**	*e*Pn		**Pn**	**13 19 09.8**	**-0.7**
ALN				S		**Sb**	**13 19 26.3**	**-0.1**
ALN	**Alexandroupoli**	**1.22**	**17**	*e*Pn		**Pn**	**13 19 09.9**	**-0.6**
ALN				*e*Sn		**Sn**	**13 19 26.5**	**-0.4**
CHOS	**Chios island**	**1.39**	**164**	*e*PB		**Pb**	**13 19 12.7**	**-0.8**
CHOS				*e*SN		**Sn**	**13 19 33.6**	**+2.6**
CHOS	**Chios island**	**1.39**	**164**	P		**Pn**	**13 19 11.7**	**-1.1**
CHOS				S		**Sn**	**13 19 28.5**	**-2.5**
CHOS	**Chios island**	**1.39**	**164**	P		**Pn**	**13 19 11.7**	**-1.1**
CHOS	**Chios island**	**1.39**	**164**	*e*Pb		**Pb**	**13 19 12.7**	**-0.8**
CHOS				S		**Sn**	**13 19 28.5**	**-2.5**
CHOS				*e*Sn		**Sn**	**13 19 33.6**	**+2.6**
AOS	**Alonnisos**	**1.43**	**248**	P		**Pn**	**13 19 13.7**	**+0.4**
AOS				S		**Sn**	**13 19 32.3**	**+0.4**
AOS	**Alonnisos**	**1.43**	**248**	P		**Pn**	**13 19 13.7**	**+0.4**
AOS				S		**Sn**	**13 19 32.3**	**+0.4**
KAVA	**Kavala**	**1.51**	**328**	P		**Pn**	**13 19 14.5**	**+0.1**
KAVA				S		**Sn**	**13 19 33.4**	**-0.5**
KAVA	**Kavala**	**1.51**	**328**	P		**Pn**	**13 19 14.5**	**+0.1**
KAVA				S		**Sn**	**13 19 33.4**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.56**	**51**	*e*PN		**Pn**	**13 19 17.5**	**+2.4**
RKY	**Sarkoy-Tekirda**	**1.56**	**51**	*e*Pn		**Pn**	**13 19 17.5**	**+2.4**
SART	**Tekirdag**	**1.56**	**51**	*i* P		**Pn**	**13 19 14.5**	**-0.6**
SART				*i* S		**Sn**	**13 19 33.8**	**-1.5**
SART	**Tekirdag**	**1.56**	**51**	*i* P		**Pn**	**13 19 14.5**	**-0.6**
SART				*i* S		**Sn**	**13 19 33.8**	**-1.4**
BALY	**Balya**	**1.58**	**89**	*i* P		**Pn**	**13 19 15.3**	**0.0**
BALY				*i* S		**Sn**	**13 19 35.6**	**0.0**
BALY	**Balya**	**1.58**	**89**	*i* P		**Pn**	**13 19 15.3**	**0.0**
BALY				*i* S		**Sn**	**13 19 35.6**	**0.0**
GONE	**Gonen-Balikesi**	**1.65**	**78**	*e*PN		**Pn**	**13 19 17.9**	**+1.5**
GONE	**Gonen-Balikesi**	**1.65**	**78**	*e*Pn		**Pn**	**13 19 17.9**	**+1.5**
DURS	**Dursunbey**	**2.24**	**92**	*i* P		**Pn**	**13 19 24.8**	**+0.3**
DURS				*i* S		**Sn**	**13 19 53.0**	**+1.0**
DURS	**Dursunbey**	**2.24**	**92**	*i* P		**Pn**	**13 19 24.8**	**+0.3**
DURS				*i* S		**Sn**	**13 19 53.0**	**+1.0**
EDRB	**Edirne**	**2.30**	**22**	*e*PN		**Pn**	**13 19 27.8**	**+2.5**
EDRB	**Edirne**	**2.30**	**22**	*e*Pn		**Pn**	**13 19 27.8**	**+2.6**

WEL 17 13:33:12.9±0.6, 38°19S×175°94E, h179km±4km, ML3.5/7, 1C, Error ellipse: s-maj=4.0km s-min=3.4km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**0.93**	**95**	PN		Pn	13 33 39.7	-0.2
URZ					SN	Sn	13 34 00.5	-0.2
TWVZ	**Taurewa**	**0.97**	**204**	PN		Pn	13 33 40.6	+0.4
NGZ	**Ngauruhoe**	**1.02**	**195**	PN		Pn	13 33 40.8	+0.2
WPVZ	**Whakapapa**	**1.06**	**197**	PN		Pn	13 33 41.2	+0.3
BKZ	**Black Stump Fm**	**1.07**	**156**	PN		Pn	13 33 41.0	0.0
TUVZ	**Tukino**	**1.10**	**192**	PN		Pn	13 33 41.6	+0.3
TUVZ					SN	Sn	13 34 03.2	-0.1
FWVZ	**Far West T-bar**	**1.11**	**196**	PN		Pn	13 33 41.6	+0.3
NMHZ	**Naumai**	**1.14**	**144**	PN		Pn	13 33 42.5	+1.0
RAHZ	**Arahi**	**1.16**	**129**	PN		Pn	13 33 42.2	+0.5
PKVZ	**Pokaka**	**1.20**	**203**	PN		Pn	13 33 42.2	+0.2
MOVZ	**Moawhango**	**1.23**	**187**	PN		Pn	13 33 42.0	-0.3
MWZ	**Matawai**	**1.26**	**97**	PN		Pn	13 33 42.5	-0.1
BHHZ	**Black Hill Sta**	**1.30**	**176**	PN		Pn	13 33 42.6	-0.3
VRZ	**Vera Road**	**1.32**	**224**	*e*PN		Pn	13 33 42.8	-0.2
MCHZ	**McNeill Hill**	**1.39**	**155**	PN		Pn	13 33 44.3	+0.6
KNZ	**Kokohu**	**1.60**	**122**	PN		Pn	13 33 45.6	0.0
PRGZ	**Paritu Road**	**1.69**	**116**	PN		Pn	13 33 46.4	-0.2
CKHZ	**Cape Kidnapper**	**1.72**	**149**	PN		Pn	13 33 47.0	+0.2
CKHZ					SN	Sn	13 34 12.4	-0.8
WAZ	**Wanganui**	**1.73**	**205**	PN		Pn	13 33 46.6	-0.4
PNHZ	**Pukenui**	**1.74**	**173**	PN		Pn	13 33 46.5	-0.6
KAHZ	**Kahuranaki**	**1.77**	**156**	PN		Pn	13 33 47.4	+0.1
CNGZ	**Carnagh Statio**	**1.81**	**100**	PN		Pn	13 33 48.3	+0.5
MHGZ	**Mahia Peninsul**	**1.82**	**123**	PN		Pn	13 33 48.1	+0.2
TSZ	**Takapari Road**	**1.87**	**179**	PN		Pn	13 33 47.8	-0.7
WPHZ	**Waipukurau**	**1.92**	**168**	PN		Pn	13 33 48.4	-0.6
MXZ	**Matakaoa Point**	**1.98**	**72**	PN		Pn	13 33 49.1	-0.4
PXZ	**Pawanui**	**1.98**	**159**	PN		Pn	13 33 49.2	-0.4
DVHZ	**Dannevirke**	**2.12**	**175**	PN		Pn	13 33 49.9	-1.2
PRHZ	**Porangahau**	**2.15**	**166**	PN		Pn	13 33 50.6	-0.8
POWZ	**Post Office Ro**	**2.21**	**183**	PN		Pn	13 33 50.8	-1.3
MRZ	**Mangatainoka R**	**2.49**	**186**	⇑PN		Pn	13 33 53.5	-1.8
BFZ	**Birch Farm**	**2.50**	**175**	PN		Pn	13 33 53.8	-1.7
TIWZ	**Tintock**	**2.59**	**181**	PN		Pn	13 33 54.7	-1.7
OGWZ	**Otaki Gorge**	**2.70**	**192**	PN		Pn	13 33 55.8	-1.9
HOWZ	**Holdsworth Sta**	**2.73**	**187**	PN		Pn	13 33 55.9	-2.2
KIW	**Kapiti Island**	**2.79**	**196**	PN		Pn	13 33 56.5	-2.3
TMWZ	**Te Maipa**	**2.92**	**181**	PN		Pn	13 33 58.2	-2.2
MTW	**Mount Morrison**	**2.99**	**186**	PN		Pn	13 33 58.6	-2.7
CAW	**Cannon Point**	**3.00**	**193**	PN		Pn	13 33 58.8	-2.5
TRWZ	**Traveller**	**3.22**	**183**	PN		Pn	13 34 01.4	-2.7
PAWZ	**Paruwai Farm**	**3.22**	**187**	PN		Pn	13 34 01.1	-2.9
WEL	**Wellington**	**3.23**	**196**	PN		Pn	13 34 01.5	-2.6
SNZO	**South Karori**	**3.26**	**197**	PN		Pn	13 34 01.6	-3.0
MSWZ	**Moikau Station**	**3.27**	**189**	PN		Pn	13 34 01.7	-2.9
PLWZ	**Palliser**	**3.42**	**189**	PN		Pn	13 34 03.3	-3.2
TUWZ	**Tuamarina**	**3.59**	**205**	PN		Pn	13 34 05.4	-3.2
NNZ	**Nelson**	**3.62**	**212**	PN		Pn	13 34 05.8	-3.2
BSWZ	**Blackbirch Sta**	**3.87**	**204**	PN		Pn	13 34 09.1	-3.1
KHZ	**Kahutara**	**4.61**	**203**	PN		Pn	13 34 18.3	-3.4
LTZ	**Lake Taylor**	**5.38**	**210**	PN		Pn	13 34 27.3	-4.3
CRLZ	**Canterbury Las**	**5.94**	**204**	PN		Pn	13 34 33.9	-5.1
MQZ	**McQueen's Vall**	**6.05**	**203**	PN		Pn	13 34 35.2	-5.2
WVZ	**Waitaha Valley**	**6.29**	**217**	PN		Pn	13 34 39.2	-4.2
FOZ	**Fox Glacier**	**7.16**	**219**	PN		Pn	13 34 49.4	-5.6
LBZ	**Lake Benmore**	**7.56**	**213**	*e*PN		Pn	13 34 55.2	-5.0
ODZ	**Otahua Downs**	**7.92**	**208**	PN		Pn	13 35 00.1	-4.8
EAZ	**Earnscleugh**	**8.61**	**213**	*e*PN		Pn	13 35 08.2	-5.8

*ISCJB **17** 14:02:32.2±0.8, 34°09N±0°03×69°45E±0°05, h15km±6km, mb4.0/21, MS3.2/7, Error ellipse: s-maj=7.5km s-min=3.3km az=143.3*
*NNC **17** 14:02:33.6±7.5, 33°83N×69°23E, h45km±65km, mb3.9, Error ellipse: s-maj=58.8km s-min=23.3km az=33.0*
*IDC **17** 14:02:33.1±0.7, 34°28N×69°53E, h0km, mb4.0/14, mb1 4.2/19, mb1mx4.1/28, mbtmp4.1/19, ML4.0/5, MS3.1/9, Ms1 3.1/9, ms1mx2.8/42, Error ellipse: s-maj=17.4km s-min=16.3km az=52.0*
*NEIC **17** 14:02:35.0±1.9, 34°23N×69°43E, h12km±11km, mb4.3/5, Error ellipse: s-maj=11.6km s-min=8.7km az=149.0*
NEIC Felt at Kabul.
*BJI **17** 14:02:34.5, 34°35N×69°37E, h18km, mB4.2/5, mb4.1/7, Ms3.7/7, Ms7 3.5/6*
*MOS **17** 14:02:36.5±1.0, 34°30N×69°42E, h33km, mb4.4/16, Error ellipse: s-maj=14.1km s-min=6.2km az=83.4*
ISC 17 14:02:32.3±0.9, 34°05N±0°03×69°37E±0°04, h3km±5km, n115, σ1§44/129, mb4.0/21, MS3.2/7, 12C-12D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**0.56**	**331**	*e*P		**Pg**	**14 02 43.2**	**+0.1**
KBL				*e*S		**Sg**	**14 02 48.9**	**-1.4**
CEP	**Cherat**	**2.13**	**95**	P		**Pb**	**14 03 11.4**	**-0.1**
CEP				S		**Sg**	**14 03 42.0**	**+1.4**
THW	**Thamme Wali**	**2.35**	**122**	⇓P		**Pb**	**14 03 15.9**	**+0.6**
CHCP	**Chirah Chowk**	**3.27**	**96**	⇓P		**Pn**	**14 03 28.3**	**+3.9**
SARP	**Sargodha**	**3.50**	**126**	P		**Pn**	**14 03 31.0**	**+3.4**
SARP				S		**Sb**	**14 04 15.0**	**-2.7**
BHK	**Bhakra**	**6.50**	**112**	*e*PKP		**Pn**	**14 04 07.6**	**-1.2**
SDNR	**Sundarnagar**	**6.89**	**110**	*e*PKP		**Pn**	**14 04 15.5**	**+1.3**
SDNR				*e*S		**Sn**	**14 05 33.5**	**+0.4**
SMLA	**Simla**	**7.20**	**112**	*i* P		**Pn**	**14 04 20.7**	**+2.2**
SMLA				*i* S		**Sn**	**14 05 40.4**	**-0.4**
SMLA				⇓			14 05 42.1	
	comp=N,1μm,0.4s							
SMLA				⇓			14 05 42.5	
	comp=E,2μm,0.4s							
KSH	**Kashi**	**7.60**	**42**	Pn		**Pn**	**14 04 21.1**	**-2.9**
KSH				Sn		Sx	14 05 18.5	
KSH				smax				
	comp=N,92nm,0.4s							
KSH				smax				
	comp=E,96nm,1.0s							
KLP	**Kalpa**	**7.89**	**106**	*e*PKP		**Pn**	**14 04 28.8**	**+0.8**
KLP				*e*S		**Sn**	**14 05 53.5**	**-4.2**
KLP				AML		AML	14 06 57.7	
	comp=E,222nm,0.5s							
KLP				AML		AML	14 06 59.4	
	comp=N,160nm,0.9s							
KHET	**Khetri**	**8.12**	**135**	*e*PKP		**Pn**	**14 04 33.6**	**+2.5**
KHET				*e*S		**Sn**	**14 05 59.1**	**-4.4**
KUDL	**Kundal**	**8.48**	**132**	*e*PKP		**Pn**	**14 04 34.9**	**-1.2**
KUDL				*e*S		**Sn**	**14 06 05.3**	**-7.0**
NDI	**New Delhi**	**8.58**	**126**	*e*PKP		**Pn**	**14 04 38.5**	**+1.1**
NDI				*e*S		**Sn**	**14 06 15.0**	**+0.2**
AYAN	**Aya Nagar**	**8.65**	**128**	*e*PKP		**Pn**	**14 04 39.6**	**+1.2**
AYAN				*e*S		**Sn**	**14 06 10.5**	**-6.1**
AML	**Almayashu**	**8.76**	**22**	P		**Pn**	**14 04 41.5**	**+1.7**
	SNR=35							
AML	**Almayashu**	**8.76**	**22**	*e*P		**Pn**	**14 04 40.6**	**+0.8**
	comp=N,46nm,0.5s							
AML				*e*S		**Sn**	**14 06 18.8**	**-0.2**
KK31	**Karatay Array**	**9.08**	**5**	P		**Pn**	**14 04 45.5**	**+1.2**
	comp=N,18nm,0.5s,baz=191,slow=13,SNR=324							
KK31				⇑S		**Sn**	**14 06 29.2**	**+2.2**
	comp=N,13nm,0.8s,baz=189,slow=24							
KK31	**Karatay Array**	**9.08**	**5**	*ce*P		**Pn**	**14 04 45.4**	**+1.1**
KK31				pmax		pmax		
	comp=Z,15nm,0.3s							
UCH	**Uchtor**	**9.11**	**25**	P		**Pn**	**14 04 47.3**	**+2.7**
	SNR=14							
UCH	**Uchtor**	**9.11**	**25**	*e*P		**Pn**	**14 04 45.5**	**+0.9**
KZA	**Kyzart**	**9.26**	**28**	P		**Pn**	**14 04 48.5**	**+1.8**
	SNR=12							
EKS2	**Erkin-Say**	**9.27**	**21**	P		**Pn**	**14 04 49.0**	**+2.2**
	SNR=10							
EKS2	**Erkin-Say**	**9.27**	**21**	*e*P		**Pn**	**14 04 47.4**	**+0.6**
	comp=Z,11nm,0.5s							
JOSI	**Joshimath**	**9.30**	**109**	*e*PKP		**Pn**	**14 04 49.6**	**+2.3**
JOSI				*e*S		**Sn**	**14 06 23.0**	**-10**
JOSI				AML		AML	14 07 35.0	
	comp=N,215nm,0.8s							
JOSI				AML		AML	14 07 35.4	
	comp=E,158nm,0.8s							
AAK	**Ala-Archa**	**9.47**	**24**	P		**Pn**	**14 04 51.6**	**+2.1**
	SNR=11							
AAK	**Ala-Archa**	**9.47**	**24**	Pn		**Pn**	**14 04 49.1**	**-0.4**
	comp=E,2.6nm,0.3s,baz=199,slow=7.1,SNR=21							
AAK				Sn		**Sn**	**14 06 35.4**	**-1.0**
	comp=E,0.7nm,0.3s,baz=315,slow=19,SNR=4.6							
AAK				LR		LR	14 08 06.6	
	comp=E,78nm,18.4s,baz=211,slow=36							
AAK	**Ala-Archa**	**9.47**	**24**	*d*P		**Pn**	**14 04 51.5**	**+2.0**
AAK				pmax		pmax		
	comp=Z,8.0nm,0.7s							
KBK	**Karagaybulak**	**9.64**	**25**	P		**Pn**	**14 04 56.1**	**+4.2**
	SNR=8.3							
FRU	**Bishkek**	**9.69**	**24**	*e*P		**Pn**	**14 04 54.0**	**+1.5**
FRU				*e*S		**Sn**	**14 06 46.0**	**+4.2**
FRU				pmax		pmax		
	comp=Z,40nm,2.0s							
FRU				smax				
	comp=E,230nm,2.0s							
CHMS	**Chumysh**	**9.88**	**24**	P		**Pn**	**14 04 57.9**	**+2.7**
	SNR=17							
AGRA	**Agra**	**10.04**	**130**	*e*S		**Sn**	**14 06 41.8**	**-8.7**
AGRA				AML		AML	14 08 10.5	
	comp=E,51nm,0.3s							
AGRA				AML		AML	14 08 12.1	
	comp=N,56nm,0.2s							
USP	**Ospenovka**	**10.04**	**22**	P		**Pn**	**14 04 59.2**	**+1.9**
	SNR=19							
TKM2	**Tokmak 2**	**10.11**	**27**	P		**Pn**	**14 05 00.9**	**+2.5**
	SNR=21							
TKM2	**Tokmak 2**	**10.11**	**27**	*e*P		**Pn**	**14 04 59.8**	**+1.5**
	comp=N,16nm,0.6s							
TKM2	**Tokmak 2**	**10.11**	**27**	*e*P		**Pn**	**14 04 59.8**	**+1.5**
TKM2				pmax		pmax		
	comp=Z,16nm,0.6s							
KOLN	**Koldanda**	**13.72**	**113**	*e*P		**Pn**	**14 05 47.3**	**-0.5**
	comp=Z,20nm,0.5s							
GKN	**Gorkha**	**14.41**	**111**	*e*P		**Pn**	**14 05 56.3**	**-0.9**
	comp=Z,41nm,0.5s							
DMN	**Daman**	**14.96**	**111**	*e*P		**Pn**	**14 06 02.8**	**-1.9**
	comp=Z,65nm,0.7s							
KKN	**Kakani**	**15.01**	**110**	*e*P		**Pn**	**14 06 03.3**	**-2.1**
	comp=Z,35nm,0.5s							
PKIN	**Phulchoki**	**15.20**	**111**	*e*P		**Pn**	**14 06 06.5**	**-1.5**
	comp=Z,48nm,0.5s							
PKI	**Pulchoki**	**15.21**	**111**	*e*P		**Pn**	**14 06 06.4**	**-1.7**
	comp=Z,61nm,0.6s							
GUN	**Gumba**	**15.42**	**109**	*e*P		**Pn**	**14 06 10.0**	**-0.8**
	comp=Z,29nm,0.4s							
JIRN	**Jiri**	**15.78**	**109**	*e*P		**Pn**	**14 06 13.9**	**-1.6**
	comp=Z,75nm,0.6s							
MK31	**Makanchi Array**	**16.06**	**34**	⇑P		**Pn**	**14 06 19.2**	**+0.2**
	comp=Z,9.1nm,1.0s,baz=224,slow=11,SNR=51							
MK31	**Makanchi Array**	**16.06**	**34**	*ce*P		**Pn**	**14 06 19.3**	**+0.3**
MK31				pmax		pmax		
	comp=Z,3.0nm,0.5s							
MKAR	**Makanchi Array**	**16.06**	**34**	Pn		**Pn**	**14 06 17.4**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=213,slow=12,SNR=24							
MKAR	**Makanchi Array**	**16.06**	**34**	P		**Pn**	**14 06 17.5**	**-1.5**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
RAMN	**Ramite**	**16.44**	**111**	*e*P		**Pn**	**14 06 22.0**	**-2.1**
	comp=Z,37nm,0.6s							
AB31	**Akbulak array**	**16.72**	**338**	⇑P		**Pn**	**14 06 26.7**	**-0.8**
	comp=Z,2.8nm,0.6s,baz=156,slow=10,SNR=77							
AB31				⇑S		**Sn**	**14 09 30.9**	**-2.7**
	comp=Z,2.0nm,0.8s,baz=176,slow=26,SNR=4.7							
AB31	**Akbulak array**	**16.72**	**338**	*i* P		**Pn**	**14 06 26.7**	**-0.8**
AB31				pmax		pmax		
	comp=Z,4.0nm,0.4s							
ABKAR	**Akbulak array**	**16.72**	**338**	*e*P		**Pn**	**14 06 26.4**	**-1.0**
	comp=Z,3.6nm,0.6s							
ODAN	**Odare**	**17.10**	**110**	*e*P		**Pn**	**14 06 30.1**	**-2.3**
	comp=Z,20nm,0.5s							
TAPN

comp=Z,0.6nm,0.8s,mb3.4,baz=113,slow=8.2,SNR=4.4
CMAR Chiang Mai Arr 30.59 113 P **P** **14 08 49.8 +2.2**
comp=Z,2.0nm,0.9s,mb4.0,baz=299,slow=8.5,SNR=11
CMAR Chiang Mai Arr 30.59 113 P **P** **14 08 49.8 +2.2**
CMAR pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 30.86 52 P **P** **14 08 49.0 -0.7**
comp=Z,0.6nm,0.9s,mb3.4,baz=250,slow=8.6,SNR=2.8
ULN Ulaanbaatar 31.30 52 ⇑*iP* **P** **14 08 54.4 +0.9**
FINES FINESS Array B 38.81 328 P **P** **14 09 58.9 +0.8**
comp=Z,1.7nm,0.8s,mb3.9,baz=133,slow=8.1,SNR=3.6
FINES FINESS Array B 38.81 328 P **P** **14 09 58.9 +0.8**
FINES pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 42.92 339 P **P** **14 10 32.4 +0.5**
comp=Z,2.6nm,0.8s,mb4.0,baz=123,slow=8.8,SNR=6.2
ARCES ARCESS Array B 42.92 339 P **P** **14 10 32.4 +0.5**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
HFS Hagfors 44.20 324 LR LR 14 30 56.5
comp=Z,51nm,18.1s,MS3.5,baz=123,slow=39
NOA NORSAR Array B 45.56 325 P **P** **14 10 52.6 -0.5**
comp=Z,1.3nm,0.7s,mb4.0,baz=99,slow=8.0,SNR=6.0
NOA LR LR 14 31 26.6
comp=Z,38nm,18.2s,MS3.4,baz=105,slow=38
NOA NORSAR Array B 45.56 325 P **P** **14 10 52.6 -0.5**
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA MLR MLR
comp=Z,38nm,18.2s
KSRS Korea Array 46.99 68 LR LR 14 33 16.0
comp=Z,32nm,19.1s,MS3.3,baz=260,slow=39
TIXI Tiksi 48.54 211 ⇑*iP* **P** **14 11 16.2 0.0**
SPITS Spitsbergen Ar 49.58 348 LR LR 14 35 17.6
comp=Z,49nm,18.9s,MS3.5,baz=160,slow=40
MAJO Matsushiro 55.13 66 *eP* **P** **14 12 15.5 +10**
YSS Yuzh-Sakhalins 55.35 53 *eP* **P** **14 12 16.2 +8.9**
ESDC Sonseca Array 57.44 299 P **P** **14 12 23.6 +1.2**
comp=Z,0.5nm,0.7s,mb3.6,baz=72,slow=7.0,SNR=3.4
TORD Torodi Ar. Bea 64.33 269 P **P** **14 13 11.1 +1.5**
comp=Z,1.4nm,0.7s,mb4.1,baz=47,slow=5.0,SNR=9.1
COLD Coldfoot 74.68 15 *eP* **P** **14 14 12.7 0.0**
comp=Z,3.2nm,0.9s,mb4.2
BOSA Boshof 75.01 219 P **P** **14 14 19.8 +4.7**
comp=Z,2.2nm,0.7s,mb4.2,baz=29,slow=13,SNR=4.3
BOSA Boshof 75.01 219 P **P** **14 14 19.8 +4.7**
BOSA pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
COLA College 77.19 15 *eP* **P** **14 14 27.0 -0.2**
comp=Z,4.2nm,0.8s,mb4.4
COLA College 77.19 15 *eP* **P** **14 14 27.0 -0.1**
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ILAR Eielson Array 77.49 15 P **P** **14 14 28.1 -0.7**
comp=Z,1.3nm,0.9s,mb3.8,baz=326,slow=3.7,SNR=12
ILAR Eielson Array 77.49 15 P **P** **14 14 28.1 -0.7**
ILAR pmax pmax
comp=Z,1.0nm,1.0s
DAWY Dawson 79.60 12 P **P** **14 14 40.3 -0.2**
WRA Warramunga Arr 81.87 121 P **P** **14 14 53.2 0.0**
WRA Warramunga Arr 81.87 121 P **P** **14 14 53.2 0.0**
comp=Z,1.0nm,0.5s,mb4.0,baz=327,slow=5.0,SNR=6.5
WRA Warramunga Arr 81.87 121 P **P** **14 14 53.2 0.0**
WRA pmax pmax
comp=Z,1.0nm,0.5s
YKA Yellowknife Ar 83.74 2 P **P** **14 15 02.8 +0.5**
comp=Z,0.9nm,0.6s,mb4.0,baz=353,slow=5.5,SNR=5.8
YKA Yellowknife Ar 83.74 2 P **P** **14 15 02.8 +0.5**
YKA pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 83.98 124 P **P** **14 15 05.2 +1.0**
comp=Z,1.3nm,0.5s,mb4.3,baz=315,slow=4.8,SNR=30
ASAR Alice Springs 83.98 124 P **P** **14 15 05.2 +1.1**
ASAR pmax pmax
comp=Z,1.0nm,0.5s

NEIC ***17*** *14:04:12.6, 15.86N×98.91W, h8km, MD3.6(MEX), After MEX.*

MEX 17 14:04:12.6±0.4, 15.86N×98.91W, h8km±8km, MD3.6, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.92**	**55**	*i* P		Pg 14 04 28.2	-2.2
PNIG				*i* S		Sg 14 04 40.0	-2.4
PNIG	**Pinotepa**	**0.92**	**55**	*i* P		Pg 14 04 28.2	-2.2
PNIG				*i* S		Sg 14 04 40.0	-2.4
ACX	**Acapulco**	**1.35**	**318**	*i* P		Pn 14 04 34.6	-3.3
ACX				*i* S		Sb 14 04 52.0	-3.8
ACX	**Acapulco**	**1.35**	**318**	*i* P		Pn 14 04 34.6	-3.3
ACX				*i* S		Sb 14 04 52.0	-3.8
CAIG	**El Cayaco**	**1.76**	**313**	*i* P		Pn 14 04 40.8	-2.6
CAIG				*i* S		Sn 14 05 01.2	-4.8
CAIG	**El Cayaco**	**1.76**	**313**	*i* P		Pn 14 04 40.8	-2.6
CAIG				*i* S		Sn 14 05 01.2	-4.8
MEIG	**Mezcala**	**2.16**	**342**	*eP*		Pn 14 04 46.2	-2.8
MEIG				*i* S		Sn 14 05 12.1	-4.0
UTMO	**Huajuapan**	**2.23**	**28**	*i* P		Pn 14 04 47.0	-3.0
UTMO				*i* S		Sn 14 05 13.6	-4.2
VHO	**Vista Hermosa**	**2.42**	**60**	*i* P		Pn 14 04 49.4	-3.1
VHO				*i* S		Sn 14 05 18.1	-4.2
VHO	**Vista Hermosa**	**2.42**	**60**	*i* P		Pn 14 04 49.4	-3.1
VHO				*i* S		Sn 14 05 18.1	-4.2
HUIG	**Huatulco**	**2.70**	**92**	*i* P		Pn 14 04 52.3	-4.2
HUIG				*i* S		Sn 14 05 26.4	-3.0
HUIG	**Huatulco**	**2.70**	**92**	*i* P		Pn 14 04 52.3	-4.2
HUIG				*i* S		Sn 14 05 26.4	-3.0
PPM	**Popocatepetl**	**3.20**	**5**	*eP*		Pn 14 05 01.1	-2.2
PPM				*i* S		Sn 14 05 40.8	-0.9
PPM	**Popocatepetl**	**3.20**	**5**	*eP*		Pn 14 05 01.1	-2.2
PPM				*i* S		Sn 14 05 40.8	-0.9

IDC 17 14:22:49.0±13.0, 7.93S×123.48E, h180km±138km, mb3.2/2, mb1 3.3/4, mb1mx3.1/16, mbtmp3.1/4, Error ellipse: s-maj=128.3km s-min=41.5km az=59.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.92**	**140**	P		Pn 14 26 24.1	+0.8
	0.2nm,0.3s,baz=319,slow=12,SNR=5.0						
WRA				S		S 14 29 22.1	+1.9
	0.2nm,0.3s,baz=315,slow=26,SNR=4.1						
ASAR	**Alice Springs**	**18.57**	**149**	P		P 14 26 52.9	+0.5
	0.4nm,0.3s,baz=318,slow=11,SNR=24						
STKA	**Stephens Creek**	**29.19**	**147**	P		P 14 28 32.8	-0.9
	1.4nm,0.6s,baz=345,slow=10,SNR=3.3						
MKAR	**Makanchi Array**	**65.63**	**330**	P		P 14 33 14.0	+0.3
	0.2nm,0.6s,baz=145,slow=8.1,SNR=2.9						

BJI ***17*** *14:25:07.0, 14.50N×92.00W, h64km, mB5.1/3*
IDC ***17*** *14:25:07.4±0.7, 14.73N×91.77W, h62km±5km, mb4.1/12, mb1 4.3/13, mb1mx4.1/20, mbtmp4.1/13, MS3.7/16, Ms1 3.8/16, ms1mx3.7/24, Error ellipse: s-maj=19.6km s-min=9.3km az=49.0*
CASC ***17*** *14:25:07.2±1.4, 14.62N×92.22W, h77km±12km, MD4.9, ML3.9, mb4.7(NEIC)*
NEIC ***17*** *14:25:08.2±0.3, 14.55N×91.98W, mb4.7/85, MD4.9(MEX), Error ellipse: s-maj=7.1km s-min=4.7km az=211.0*
NEIC Felt at Mazatenango, Quetzaltenango, Panajachel, Retalhuleu, San Marcos, San Pedro la Laguna, Solola and Totonicapan.
MEX ***17*** *14:25:09.8±0.6, 14.41N×92.22W, h69km±8km, MD4.9*
GCMT ***17*** *14:25:09.2±0.3, 14.62N×92.05W, h70km±2km, MW5.0, Moment Tensor Solution. s52,c64; s85,c121; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.37±.14; $M_{\theta\theta}$0.89±.15; $M_{\phi\phi}$1.48±.17; $M_{r\theta}$2.57±.07; $M_{\theta\phi}$-0.66±.14; $M_{\phi r}$-2.25±.09; Best double couple: $M_0$4.00000×10^{16} NP1:ϕ_s152.00000°, δ17.00000°, λ-73.00000°. NP2:ϕ_s314.00000°, δ74.00000°, λ-95.00000°. Principal axes: T 3.7500, Plg29.0000°, Azm48.0000°; N 0.5400, Plg5.0000°, Azm315.0000°; P -4.2900, Plg61.0000°, Azm217.0000°; Data Used: ll IU G CN IC.*
ISCJB ***17*** *14:25:09.2±0.2, 14.62N±0.03×92.02W±0.03, h78km±2km, mb4.6/82 Error ellipse: s-maj=6.8km s-min=2.2km az=33.0*
SZGRF ***17*** *14:25:25.0, 14.05N×92.19W, h33km, mb4.9, Near coast of Chiapas, Mexico*
ISC 17 14:25:10.8±0.2, 14.72N±0.04×91.99W±0.02, h69km±2km, h66km±.5km: pP-P, n487, o0.97/463, mb4.6/82, 99C-104D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.32**	**305**	*i* P		**Pn 14 25 20.9**	**-1.1**
THIG				*i* S		**Sn 14 25 30.3**	**+0.1**
JAT	**Jato**	**0.53**	**139**	*eP*		**Pn 14 25 22.2**	**-1.5**
TP2	**Tecpan 2**	**0.94**	**86**	*eP*		**Pn 14 25 29.9**	**+1.5**
FG6		**1.08**	**98**	*eP*		**Pn 14 25 30.5**	**+0.3**
FUG	**Fuego 3**	**1.14**	**104**	*eP*		**Pn 14 25 30.6**	**-0.4**
PCG	**Pacaya**	**1.38**	**103**	*eP*		**Pn 14 25 34.3**	**+0.2**
GCG	**Guatemala City**	**1.42**	**95**	*eP*		**Pn 14 25 34.9**	**+0.3**
GCG				*eS*		**Sn 14 25 55.6**	**+3.1**
PCIG		**1.54**	**310**	*i* P		**Pn 14 25 35.0**	**-1.2**
PCIG				*i* S		**Sn 14 25 54.5**	**-0.9**
NBG	**Las Nubes**	**1.60**	**95**	*eP*		**Pn 14 25 38.1**	**+1.2**
SCX	**San Cristobal**	**2.10**	**343**	*i* P		**Pn 14 25 45.6**	**+1.9**
SCX				*i* S		**Sn 14 26 13.2**	**+4.3**
SCX	**San Cristobal**	**2.10**	**343**	*i* P		**Pn 14 25 45.6**	**+1.9**
SCX				*i* S		**Sn 14 26 13.2**	**+4.3**
MRL	**Marmol**	**2.25**	**81**	*eP*		**Pn 14 25 47.0**	**+1.2**
TGIG		**2.32**	**332**	*i* P		**Pn 14 25 47.2**	**+0.5**
TGIG				*i* S		**Sn 14 26 15.5**	**+1.3**
RTR	**El Retiro**	**2.42**	**110**	*eP*		**Pn 14 25 47.2**	**-0.9**
SBLS	**San Blas**	**2.46**	**111**	*eP*		**Pn 14 25 48.1**	**-0.5**
SNJE	**San Jose**	**2.46**	**110**	*eP*		**Pn 14 25 48.0**	**-0.7**
MTO2	**Montecristo 2**	**2.56**	**97**	*eP*		**Pn 14 25 49.5**	**-0.5**
BOQS	**Boqueron**	**2.81**	**110**	*eP*		**Pn 14 25 53.0**	**-0.3**
BOQS				*eS*		**Sn 14 26 29.7**	**+3.6**
SNET	**Serv Nac Est T**	**2.87**	**111**	*eP*		**Pn 14 25 53.5**	**-0.6**
LFRS	**El Faro**	**3.04**	**111**	*eP*		**Pn 14 25 56.4**	**-0.1**
SNVI	**San Vicente**	**3.25**	**109**	*eP*		**Pn 14 25 59.1**	**-0.2**
SNVI				*eS*		**Sn 14 26 40.7**	**+3.8**
CMIG	**Matias Romero**	**3.65**	**311**	P		**Pn 14 26 03.6**	**-1.2**
	56nm,0.3s,baz=122,slow=12,SNR=252						
CMIG				S		**Sn 14 26 46.8**	**+0.1**
	510nm,0.3s,baz=101,slow=21,SNR=19						
CMIG				LR	LR	14 27 36.2	
	comp=Z,865nm,21.9s,baz=234,slow=39						
CAHU	**Cacacuatique**	**3.78**	**104**	*eP*		**Pn 14 26 06.2**	**-0.5**
VSM	**San Miguel**	**3.83**	**109**	*eP*		**Pn 14 26 07.4**	**+0.2**
BLLM	**Bellamira**	**3.86**	**109**	*eP*		**Pn 14 26 07.7**	**+0.1**
BLLM				*eS*		**Sn 14 26 55.0**	**+3.2**
HUIG	**Huatulco**	**4.11**	**285**	*eP*		**Pn 14 26 07.4**	**-3.7**
HUIG				*i* S		**Sn 14 26 52.4**	**-5.6**
HUIG	**Huatulco**	**4.11**	**285**	*eP*		**Pn 14 26 07.4**	**-3.7**
HUIG				*i* S		**Sn 14 26 52.4**	**-5.6**
CNCH	**Conchagua**	**4.28**	**109**	*eP*		**Pn 14 26 13.5**	**+0.1**
TGUH	**Tegucigalpa,Un**	**4.62**	**98**	*eP*		**Pn 14 26 16.5**	**-1.6**
TGUH	**Tegucigalpa,Un**	**4.62**	**98**	*eP*		**Pn 14 26 16.4**	**+0.3**
OXX	**Oaxaca**	**5.12**	**298**	*eP*		**Pn 14 26 26.1**	**+1.1**
OXX				*i* S		**Sn 14 27 20.0**	**-2.8**
OXX	**Oaxaca**	**5.12**	**298**	*eP*		**Pn 14 26 26.1**	**+1.1**
OXX				*i* S		**Sn 14 27 20.0**	**-2.8**
VHO	**Vista Hermosa**	**5.13**	**298**	*i* P		**Pn 14 26 24.0**	**-1.0**
VHO				*i* S		**Sn 14 27 19.7**	**-3.3**
VHO	**Vista Hermosa**	**5.13**	**298**	*i* P		**Pn 14 26 24.0**	**-1.0**
VHO				*i* S		**Sn 14 27 19.7**	**-3.3**
CRIN	**San Cristobal**	**5.20**	**112**	*eP*		**Pn 14 26 26.4**	**+0.3**
CNGN	**Cerro Negro**	**5.60**	**113**	*eP*		**Pn 14 26 30.6**	**-0.9**
CNGN				*eS*		**Sn 14 27 36.6**	**+2.1**
CNGN				AML	AML	14 27 43.6	
	comp=Z,312nm,0.5s						
MOMN	**Momotombo**	**5.78**	**113**	*eP*		**Pn 14 26 34.1**	**+0.2**
COPN	**Copaltepe**	**5.83**	**115**	*eP*		**Pn 14 26 33.8**	**-0.8**
CSAN		**5.97**	**114**	*eP*		**Pn 14 26 36.5**	**-0.2**
XAVN	**Gruta Xavier**	**6.08**	**114**	*eP*		**Pn 14 26 39.0**	**+1.0**
TISN	**Laguna Tiscapa**	**6.13**	**114**	*eP*		**Pn 14 26 38.8**	**+0.1**
HUEN		**6.13**	**112**	*eP*		**Pn 14 26 38.3**	**-0.5**
PNIG	**Pinotepa**	**6.14**	**286**	*eP*		**Pn 14 26 34.4**	**-4.6**
PNIG				*i* S		**Sn 14 27 42.1**	**-5.8**
PNIG	**Pinotepa**	**6.14**	**286**	*eP*		**Pn 14 26 34.4**	**-4.6**
PNIG				*i* S		**Sn 14 27 42.1**	**-5.8**
MGAN	**Managua**	**6.14**	**114**	*eP*		**Pn 14 26 37.9**	**-1.1**
MGAN				*eS*		**Sn 14 27 49.2**	**+1.3**
CRUN	**El Crucero**	**6.17**	**115**	*eP*		**Pn 14 26 40.1**	**+0.8**
TPIG	**Tehuac#an**	**6.33**	**306**	*eP*		**Pn 14 26 42.2**	**+0.7**
UTMO	**Huajuapan**	**6.38**	**300**	*i* P		**Pn 14 26 41.7**	**-0.5**
UTMO				*i* S		**Sn 14 27 52.6**	**-1.0**
APON	**Apoyo**	**6.40**	**115**	*eP*		**Pn 14 26 43.1**	**+0.6**
APON				AML	AML	14 28 17.1	
	comp=Z,62nm,0.6s						
TEIG	**Tepich**	**6.52**	**32**	*eP*		**Pn 14 26 44.6**	**+0.5**
	comp=Z,368nm,0.6s						
TEIG	**Tepich**	**6.52**	**32**	*eP*		**Pn 14 26 44.0**	**-0.1**
LVIG	**Laguna Verde**	**6.53**	**320**	*eP*		**Pn 14 26 40.6**	**-3.7**
LVIG				*i* S		**Sn 14 27 52.7**	**-4.6**
LVIG	**Laguna Verde**	**6.53**	**320**	*eP*		**Pn 14 26 40.6**	**-3.7**
LVIG				*i* S		**Sn 14 27 52.7**	**-4.6**
SSN	**San Juan del S**	**6.88**	**119**	*eP*		**Pn 14 26 48.1**	**-0.9**
CONN	**Concepcion**	**6.95**	**116**	*eP*		**Pn 14 26 49.7**	**-0.2**
PPM	**Popocatepetl**	**7.68**	**305**	*i* P		**Pn 14 27 00.3**	**+0.4**
PPM				*i* S		**Sn 14 28 29.9**	**+4.4**
PPM	**Popocatepetl**	**7.68**	**305**	*eP*		**Pn 14 26 57.3**	**-2.7**
PPM				*i* P		14 27 00.3	
PPM				*i* S		**Sn 14 28 29.9**	**+4.4**
ACX	**Acapulco**	**7.87**	**287**	*i* P		**Pn 14 27 00.4**	**-1.6**
ACX	**Acapulco**	**7.87**	**287**	*i* P		**Pn 14 27 00.9**	**-1.6**
YAIG	**Yautepec**	**7.93**	**302**	*eP*		**Pn 14 27 03.4**	**0.0**
YAIG				*i* S		**Sn 14 28 31.8**	**+0.1**
YAIG	**Yautepec**	**7.93**	**302**	*eP*		**Pn 14 27 03.4**	**0.0**
YAIG				*i* S		**Sn 14 28 31.8**	**+0.1**
MEIG	**Mezcala**	**7.99**	**295**	*i* P		**Pn 14 27 05.0**	**+0.8**
MEIG				*i* S		**Sn 14 28 31.4**	**-1.7**
IIO	**Organos**	**8.05**	**308**	*eP*		**Pn 14 27 07.4**	**+2.4**
IIO	**Organos**	**8.05**	**308**	*eP*		**Pn 14 27 07.4**	**+2.4**
JTS	**JuntasAbangare**	**8.16**	**122**	*eP*		**Pn 14 27 05.5**	**-1.0**
	comp=Z,74nm,0.7s						
JTS	**JuntasAbangare**	**8.16**	**122**	*eP*		**Pn 14 27 06.1**	**-0.4**
MZVM		**8.23**	**304**	*eP*		**Pn 14 27 06.8**	**-0.7**
JCR	**Jicaral**	**8.28**	**125**	*eP*		**Pn 14 27 08.1**	**-0.2**
CAIG	**El Cayaco**	**8.29**	**287**	*eP*		**Pn 14 27 04.4**	**-3.9**
CAIG				*i* S		**Sn 14 28 37.0**	**-3.6**
CAIG	**El Cayaco**	**8.29**	**287**	*eP*		**Pn 14 27 04.4**	**-3.9**
CAIG				*i* S		**Sn 14 28 37.0**	**-3.6**
PTVM	**Pico Tres Padr**	**8.36**	**306**	*eP*		**Pn 14 27 08.8**	**-0.4**
PTVM	**Pico Tres Padr**	**8.36**	**306**	*eP*		**Pn 14 27 08.8**	**-0.4**
CGA2	**Cerro Gallo 2**	**8.71**	**122**	*eP*		**Pn 14 27 14.7**	**+0.6**
CGA2				*eS*		**Sn 14 28 55.8**	**+5.0**
DEIG	**Demacu**	**8.71**	**311**	*i* P		**Pn 14 27 14.3**	**+0.2**
DEIG				*i* S		**Sn 14 28 51.1**	**+0.3**
PRS1	**Puriscal**	**8.86**	**121**	*eP*		**Pn 14 27 17.5**	**+1.5**
LAJ	**Bijagual**	**9.08**	**121**	*eP*		**Pn 14 27 15.2**	**-4.0**
QCR	**Quepos**	**9.29**	**124**	*eP*		**Pn 14 27 21.8**	**-0.2**
URSC	**Urasca**	**9.38**	**120**	*eP*		**Pn 14 27 23.0**	**-0.2**
BUS	**Buena Vista**	**9.54**	**122**	*eP*		**Pn 14 27 26.3**	**+0.8**
ZIIG	**Zihuatanejo**	**9.54**	**289**	*i* P		**Pn 14 27 23.6**	**-1.8**
ZIIG	**Zihuatanejo**	**9.54**	**289**	*i* P		**Pn 14 27 23.6**	**-1.8**
MOIG	**Morelia**	**10.08**	**301**	*i* P		**Pn 14 27 34.9**	**+2.2**
MOIG				*i* S		**Sn 14 29 21.4**	**-2.7**
MOIG	**Morelia**	**10.08**	**301**	*i* P		**Pn 14 27 34.9**	**+2.2**
MOIG				*i* S		**Sn 14 29 21.4**	**-2.7**
ACR	**Cerro Adams**	**10.53**	**124**	*eP*		**Pn 14 27 40.0**	**+1.0**
ACR				*eS*		**Sn 14 29 37.7**	**+2.3**
BRU2	**Volcan**	**10.84**	**122**	*eP*		**Pn 14 27 43.2**	**0.0**
MMIG	**Aquila**	**11.45**	**290**	*i* P		**Pn 14 27 50.9**	**-0.6**
MMIG				*i* S		**Sn 14 29 52.5**	**-5.3**
LNIG	**Linares**	**12.32**	**326**	*eP*		**Pn 14 28 02.0**	**-1.4**
BCIP	**Isla Barro Col**	**13.11**	**114**	*eP*		**Pn 14 28 12.6**	**-1.5**
	comp=Z,7.9nm,0.6s						
HKT	**Hockley**	**15.56**	**347**	*eP*		**Pn 14 28 46.5**	**+0.4**
	comp=Z,67nm,1.6s						
DWPF	**Disney**	**16.54**	**35**	*eP*		**Pn 14 28 58.9**	**+0.5**
	comp=Z,101nm,0.9s						
NATX	**Nacogdoches**	**17.14**	**352**	*eP*		**Pn 14 29 05.3**	**-0.4**
	comp=Z,58nm,0.8s						
JCT	**Junction City**	**17.25**	**337**	⇑P		**Pn 14 29 08.1**	**+0.9**
	baz=17,SNR=9.3						
JCT	**Junction City**	**17.25**	**337**	*eP*		**Pn 14 29 07.8**	**+0.7**
	comp=Z,19nm,0.6s						
VBMS	**Vicksburg**	**17.47**	**4**	*eP*		**Pn 14 29 11.2**	**+1.3**
	comp=Z,43nm,0.4s						
HPIG		**17.62**	**316**	*i* P		**Pn 14 29 13.7**	**+2.0**
628A	**Black Gap, Mar**	**17.81**	**327**	⇑P		**Pn 14 29 15.2**	**+1.2**
	baz=18,SNR=27						
627A	**Terlingua Ranc**	**18.05**	**326**	⇓P		**Pn 14 29 18.1**	**+1.2**
	baz=18,SNR=41						
TXAR	**Lajitas Array**	**18.11**	**325**	P		**Pn 14 29 16.2**	**-1.4**
TXAR				ScP	ScP	14 37 17.8	-0.1
TXAR	**Lajitas Array**	**18.11**	**325**	P		**Pn 14 29 16.2**	**-1.4**
	comp=Z,0.8nm,0.3s,baz=154,slow=12,SNR=185						
TXAR				ScP	ScP	14 37 17.8	-0.1
	baz=141,slow=4.4,SNR=9.4						
528A	**Cox Ranch, San**	**18.30**	**329**	⇓P		**Pn 14 29 20.1**	**+0.2**
	baz=18						
626A	**Big Bend Ranch**	**18.54**	**325**	⇓P		**Pn 14 29 23.3**	**+0.5**
	baz=19,SNR=68						
527A	**Woodward Ranch**	**18.71**	**327**	⇑P		**Pn 14 29 25.4**	**+0.5**
	baz=19,SNR=22						
428A	**Kincaid Ranch,**	**18.72**	**330**	⇑P		**Pn 14 29 25.2**	**+0.3**
	baz=19,SNR=13						
LRAL	**Lakeview Retre**	**18.79**	**13**	*eP*		**Pn 14 29 25.7**	**-0.1**
	comp=Z,78nm,1.1s						
526A	**Mary Lane Ranc**	**18.90**	**326**	⇑P		**Pn 14 29 27.6**	**+0.5**
	baz=19,SNR=10						
427A	**Hayter Ranch,**	**19.17**	**329**	⇑P		**Pn 14 29 30.1**	**-0.2**
	baz=19,SNR=12						
328A	**Wristen Ranch,**	**19.32**	**331**	⇓P		**Pn 14 29 31.6**	**-0.5**
	baz=20,SNR=21						
426A	**McDonald Obser**	**19.35**	**327**	⇑P		**Pn 14 29 32.3**	**-0.1**
	baz=20,SNR=21						
OTAV	**Otavalo**	**19.66**	**136**	*eP*		**Pn 14 29 32.8**	**-3.5**
	comp=Z,8.1nm,0.7s						
MIAR	**Mount Ida**	**19.79**	**356**	*eP*		**Pn 14 29 35.0**	**-2.7**
	comp=Z,140nm,1.4s						
425A	**Indio Mountain**	**19.95**	**325**	⇓P		**Pn 14 29 38.3**	**-1.2**
	baz=20,SNR=46						
ROSC	**El Rosal**	**19.95**	**118**	P		**Pn 14 29 35.7**	**-4.0**
	comp=Z,0.7nm,0.3s,baz=90,slow=20,SNR=2.0						
UALR	**University of**	**19.97**	**359**	*eP*		**Pn 14 29 37.4**	**-2.3**
	comp=Z,56nm,0.8s						
227A	**Bennet, Jal**	**20.07**	**331**	⇑P		**P 14 29 39.7**	**+1.1**
	baz=20,SNR=15						
GOGA	**Godfrey**	**20.15**	**21**	*eP*		**P 14 29 38.3**	**-1.2**
	comp=Z,51nm,0.8s						
SDDR	**Presa de Saban**	**20.26**	**75**	*eP*		**P 14 29 40.6**	**-0.2**
	comp=Z,15nm,0.6s						
325A	**Bean Ranch, Si**	**20.40**	**327**	⇓P		**P 14 29 42.6**	**+0.5**
	baz=21,SNR=36						
226A	**Malaga, Loving**	**20.50**	**329**	⇑P		**P 14 29 44.1**	**+0.9**
	baz=21,SNR=22						
CLNB	**Carlsbad**	**20.56**	**330**	*eP*		**P 14 29 44.5**	**+0.6**
	comp=Z,6.1nm,0.8s						
127A	**Arkansas Junct**	**20.66**	**332**	⇑P		**P 14 29 45.6**	**+0.7**
	baz=21,SNR=7.0						
GDL2	**Guadalupe Moun**	**20.74**	**329**	*eP*		**P 14 29 46.2**	**+0.4**
	comp=Z,18nm,0.7s						
WMOK	**Wichita Mounta**	**20.85**	**344**	*eP*		**P 14 29 45.4**	**-1.6**
	comp=Z,43nm,1.2s						
MNTX	**Cornudas Mount**	**20.87**	**326**	⇓P		**P 14 29 46.9**	**-0.3**
	baz=21,SNR=60						
MNTX	**Cornudas Mount**	**20.87**	**326**	*eP*		**P 14 29 46.4**	**-0.8**
	comp=Z,84nm,1.7s						
225A	**Deer Hill, Car**	**20.90**	**328**	⇑P		**P 14 29 48.3**	**+0.8**
	baz=21						
126A	**Clayton Basin,**	**20.94**	**331**	⇑P		**P 14 29 48.8**	**+0.9**
	baz=21,SNR=7.6						
SWET	**Sewanee**	**21.12**	**14**	*eP*		**P 14 29 49.1**	**-0.8**
224A	**Cornudas Mount**	**21.24**	**327**	⇓P		**P 14 29 51.3**	**+0.1**
	baz=21,SNR=102						
125A	**Gardner Draw,**	**21.26**	**329**	⇓P		**P 14 29 51.6**	**+0.2**
	baz=21,SNR=24						
Z26A	**Caprock**	**21.44**	**332**	⇓P		**P 14 29 53.0**	**-0.3**
	baz=22,SNR=13						
MSTX	**Muleshoe**	**21.50**	**335**	⇑P		**P 14 29 53.0**	**-1.0**
	baz=22,SNR=7.4						
WVT	**Waverly**	**21.64**	**9**	*eP*		**P 14 29 52.9**	**-2.6**
	comp=Z,27nm,1.0s,mb4.5						
124A	**Stringfield Ra**	**21.69**	**328**	P		**P 14 29 56.6**	**+0.6**
	baz=22,SNR=119						
CPCT	**Cooper Cave**	**21.70**	**17**	*eP*		**P 14 29 56.4**	**+0.3**
UTMT	**University of**	**21.71**	**7**	P		**P 14 29 54.1**	**-2.1**
JSC	**Jenkinsville**	**21.75**	**25**	P		**P 14 29 56.6**	**-0.1**
Z25A	**Roswell**	**21.79**	**330**	⇓P		**P 14 29 56.7**	**-0.4**
	baz=22,SNR=14						
AMTX	**Amarillo**	**21.89**	**338**	⇑P		**P 14 29 57.3**	**-0.8**
	baz=22,SNR=10						
AMTX	**Amarillo**	**21.89**	**338**	*eP*		**P 14 29 57.1**	**-1.0**
	comp=Z,36nm,0.8s,mb4.8						
Y26A	**Elida**	**21.91**	**333**	⇓P		**P 14 29 58.0**	**-0.4**
	baz=22						
123A	**Bell Site, Whi**	**22.07**	**326**	⇑P		**P 14 30 00.3**	**+0.3**
	baz=22						
TKL	**Tuckaleechee C**	**22.11**	**18**	P		**P 14 29 58.2**	**-2.2**
TKL	

baz=24,SNR=20
Y20A **Horse Springs,** 24.18 325 ⇑P P 14 30 21.6 +0.8
baz=24,SNR=25
118A **Homack Ranch,** 24.21 321 ⇓P P 14 30 21.7 +0.7
baz=24
X21A **Alamocita Cree** 24.27 327 ⇓P P 14 30 22.7 +1.1
baz=24,SNR=28
TUC **Tucson** 24.50 319 *e*P P 14 30 23.4 -0.2
comp=Z,17nm,0.8s,mb4.4
V23A **Ortiz Mt. (NFS** 24.50 331 ⇓P P 14 30 25.5 +1.9
baz=25,SNR=7.8
117A **Oracle** 24.64 319 ⇓P P 14 30 25.2 +0.2
baz=25,SNR=21
BLA **Blacksburg** 24.65 23 *e*P P 14 30 23.3 -1.7
comp=Z,35nm,0.9s,mb4.8
Y19A **Nutrioso** 24.71 324 ⇑P P 14 30 26.8 +1.2
baz=25,SNR=45
X20A **Quemado** 24.72 326 ⇑P P 14 30 26.8 +1.1
baz=25,SNR=30
216A **Three Points,** 24.73 317 ⇑P P 14 30 25.7 -0.1
baz=25,SNR=17
BLO **Bloomington** 24.83 10 *e*P P 14 30 24.7 -1.9
comp=Z,20nm,0.8s,mb4.6
T25A **Trinidad** 24.91 336 ⇓P P 14 30 27.8 +0.5
baz=25,SNR=8.5
U23A **El Rito** 24.98 332 ⇑P P 14 30 28.3 +0.2
baz=25,SNR=8.6
SJG **San Juan** 25.01 79 LR LR 14 39 58.3
comp=Z,150nm,20.3s,baz=278,slow=36
Y18A **Canyon Day Jun** 25.04 322 ⇓P P 14 30 29.2 +0.6
baz=25,SNR=24
X19A **St. Johns** 25.08 325 P P 14 30 30.0 +1.1
baz=25,SNR=11
116A **Eloy** 25.25 318 ⇑P P 14 30 30.6 +0.1
baz=26,SNR=9.6
U22A **Llaves** 25.33 331 ⇑P P 14 30 31.6 +0.4
baz=26,SNR=7.9
Y17A **Roosevelt** 25.46 321 ⇓P P 14 30 32.6 +0.2
baz=26,SNR=5.2
X18A **Snowflake** 25.52 324 ⇓P P 14 30 33.6 +0.6
baz=26,SNR=11
Z16A **Peralta Trail,** 25.58 320 ⇓P P 14 30 33.8 +0.3
baz=26,SNR=9.2
214A **Organ Pipe Nat** 25.61 316 ⇓P P 14 30 33.9 +0.2
baz=26,SNR=6.7
U21A **Nageezi** 25.75 330 ⇑P P 14 30 35.2 +0.2
baz=26,SNR=8.2
HDIL **Hopedale** 25.85 5 P P 14 30 33.5 -2.3
comp=Z,32nm,0.9s,mb4.8
SDCO **Great Sand Dun** 25.88 335 ⇓P P 14 30 36.2 +0.1
baz=26
SDCO **Great Sand Dun** 25.88 335 *e*P P 14 30 35.0 -1.0
comp=Z,22nm,1.4s,mb4.4
X17A **Forest Lakes** 25.89 322 ⇑P P 14 30 36.5 +0.3
baz=26,SNR=11
Y16A **Circle Bar Ran** 25.98 321 ⇑P P 14 30 37.4 +0.4
baz=26,SNR=7.2
114A **Black Gap (USA** 26.14 317 ⇑P P 14 30 38.8 +0.2
baz=26,SNR=10
X16A **Lo Mia Camp, P** 26.32 322 P P 14 30 41.0 +0.8
baz=26,SNR=18
U19A **Dine' College,** 26.43 327 ⇓P P 14 30 41.4 +0.3
baz=27,SNR=11
S22A **4UR Ranch, Cre** 26.44 333 ⇓P P 14 30 41.6 +0.4
baz=27,SNR=5.8
Y15A **Casa Rosa Ranc** 26.55 320 ⇓P P 14 30 42.6 +0.4
baz=27,SNR=11
Z14A **Wintersburg** 26.56 318 ⇑P P 14 30 42.8 +0.4
baz=27,SNR=6.2
113A **Mohawk Valley,** 26.74 316 ⇓P P 14 30 44.0 0.0
baz=27,SNR=7.3
MVCO **Mesa Verde** 26.78 330 ⇑P P 14 30 45.2 +0.9
baz=27,SNR=8.6
MVCO **Mesa Verde** 26.78 330 *e*P P 14 30 44.8 +0.5
comp=Z,86nm,1.4s,mb5.1
W16A **Flagstaff** 26.84 323 ⇑P P 14 30 45.5 +0.7
baz=27,SNR=6.4
X15A **Humboldt** 26.85 321 ⇑P P 14 30 45.3 +0.4
baz=27,SNR=13
U18A **Rough Rock, Ch** 26.87 327 ⇑P P 14 30 45.6 +0.5
baz=27
Z13A **Yuma Proving G** 26.93 317 ⇑P P 14 30 45.7 0.0
baz=27,SNR=10
Y14A **Wickenburg** 26.97 319 ⇓P P 14 30 46.1 +0.1
baz=27,SNR=10
WUAZ **Wupatki** 27.05 323 ⇓P P 14 30 47.4 +0.7
baz=27,SNR=13
WUAZ **Wupatki** 27.05 323 *e*P P 14 30 47.1 +0.5
comp=Z,19nm,1.0s,mb4.6
PCRV **Puerto La Cruz** 27.08 96 LR LR 14 43 13.2
comp=Z,131nm,18.7s,baz=293,slow=40
X14A **Yava** 27.24 320 ⇑P P 14 30 48.7 +0.3
baz=27,SNR=13
W15A **Williams** 27.33 322 ⇓P P 14 30 50.4 +1.1
baz=28,SNR=5.7
U16A **Tuba City** 27.35 325 ⇓P P 14 30 50.2 +0.8
baz=28
T18A **Mexican Hat** 27.42 328 P P 14 30 51.0 +1.0
baz=28,SNR=8.2
Y13A **Salome** 27.42 318 P P 14 30 50.5 +0.5
baz=28,SNR=14
S19A **Harvey Farm, M** 27.52 330 P P 14 30 51.8 +0.9
baz=28,SNR=7.3
PV01 **Paradox Valley** 27.55 331 *e*P P 14 30 53.1 +1.9
comp=Z,3µm,1.5s
GLA **Glamis** 27.62 315 ⇑P P 14 30 52.3 +0.4
baz=28,SNR=5.8
GLA **Glamis** 27.62 315 *e*P P 14 30 51.7 -0.1
comp=Z,40nm,1.3s,mb4.8
V15A **Kaibab Nationa** 27.72 323 ⇓P P 14 30 53.4 +0.7
baz=28,SNR=22
T17A **Navajo Res., N** 27.80 326 ⇓P P 14 30 54.2 +0.8
baz=28,SNR=16
W14A **Seligman** 27.85 321 ⇑P P 14 30 54.4 +0.5
baz=28,SNR=13
S18A **Hurst Farm, Bl** 27.90 328 ⇑P P 14 30 54.8 +0.5
baz=28,SNR=14
PV04 **Paradox Valley** 27.92 331 *e*P P 14 30 55.0 +0.5
PDMCI **Parker Dam,Lak** 27.93 318 ⇑P P 14 30 54.9 +0.3
baz=28,SNR=15
R19A **Curley Farm, L** 28.01 330 ⇑P P 14 30 55.5 +0.3
baz=28,SNR=6.3
V14A **Boquillas Ranc** 28.15 322 ⇓P P 14 30 57.3 +0.8
baz=28,SNR=30
U15A **North Rim** 28.21 324 ⇑P P 14 30 58.0 +1.0
baz=28,SNR=17
W13A **Hualapai Mount** 28.27 320 ⇓P P 14 30 58.3 +0.7
baz=28,SNR=11
S17A **Black Ridge (B** 28.28 327 ⇑P P 14 30 58.0 +0.4
baz=28,SNR=7.8
BC3 **Big Chuckawall** 28.40 316 P P 14 30 58.9 +0.1
baz=29,SNR=32
IRM **Iron Mountain** 28.50 317 ⇓P P 14 30 59.9 +0.3
baz=29,SNR=8.7
MONP **Monument Peak** 28.64 313 ⇑P P 14 31 00.9 0.0
baz=29,SNR=5.9
T15A **Red Dirt Ranch** 28.68 324 ⇓P P 14 31 02.1 +0.9
baz=29,SNR=21
U14A **Mt Trumbull** 28.72 323 ⇓P P 14 31 02.4 +0.8
baz=29,SNR=20
S16A **Weppner Ranch,** 28.76 326 ⇓P P 14 31 02.7 +0.8
baz=29,SNR=11
R17A **Hanksville Air** 28.82 328 ⇓P P 14 31 02.7 +0.2
baz=29,SNR=12
V13A **Grand Canyon W** 28.82 321 ⇓P P 14 31 03.2 +0.6
baz=29
BELC **Belle Mtn. Jos** 28.97 316 ⇓P P 14 31 04.4 +0.6
baz=29,SNR=7.0
W12A **Cal Nev Ari** 29.02 319 P P 14 31 05.0 +0.7
baz=29,SNR=15
LDFC **Landfair** 29.03 318 *e*P P 14 31 05.7 +1.3
comp=Z,47nm,1.0s,mb5.1
PFO **Pinyon Flat Ob** 29.06 315 ⇓P P 14 31 04.5 -0.1
baz=29
Q18A **Rafter H Ranch** 29.07 330 ⇓P P 14 31 04.7 +0.1
baz=29,SNR=5.2
T14A **Hurricane** 29.11 324 ⇑P P 14 31 05.9 +0.8
baz=29,SNR=24
R16A **Teasdale** 29.12 327 ⇓P P 14 31 05.9 +0.8
baz=29,SNR=21
S15A **Panguitch** 29.14 325 ⇓P P 14 31 05.6 +0.3
baz=29,SNR=5.5
U13A **Pakoon Wash** 29.19 322 ⇑P P 14 31 06.6 +0.9
baz=29,SNR=17
GMRC **Granite Mounta** 29.21 317 ⇓P P 14 31 06.4 +0.4
baz=29,SNR=14
SRU **San Rafael** 29.26 330 *e*P P 14 31 07.2 +0.8
comp=Z,5.1nm,1.2s,mb4.0

V12A **Nelson** 29.28 320 ⇓P P 14 31 07.2 +0.7
baz=30,SNR=39
Q16A **Castle Valley** 29.43 329 ⇑P P 14 31 09.1 +1.2
baz=30,SNR=12
U12A **Valley of Fire** 29.54 321 ⇑P P 14 31 09.9 +1.1
baz=30,SNR=8.4
T13A **Saint George** 29.56 323 P P 14 31 10.2 +1.2
baz=30,SNR=16
CCUT **Cedar City** 29.61 324 *e*P P 14 31 10.6 +1.2
comp=Z,26nm,1.0s,mb4.8
N20A **Spence Gulch,** 29.63 335 ⇑P P 14 31 10.2 +0.7
baz=30,SNR=5.2
S14A **Cedar City** 29.65 325 ⇑P P 14 31 10.8 +0.9
baz=30,SNR=12
MSU **Marysvale** 29.65 327 *e*P P 14 31 10.3 +0.5
comp=Z,4.4nm,0.7s,mb4.2
HEC **Hector,Ludlow** 29.68 317 ⇓P P 14 31 10.8 +0.7
baz=30,SNR=6.8
V11A **Goodsprings** 29.71 319 ⇑P P 14 31 11.1 +0.7
baz=30,SNR=5.4
TUQ **Turquoise Moun** 29.78 318 ⇓P P 14 31 11.1 +0.1
baz=30,SNR=15
ARUT **Antelope Range** 29.82 324 *e*P P 14 31 12.5 +1.2
comp=Z,29nm,0.9s,mb4.9
S13A **Holt Ranch, En** 29.92 324 ⇑P P 14 31 13.5 +1.3
baz=30,SNR=38
Q15A **Fillmore** 30.12 327 P P 14 31 14.8 +0.8
baz=30,SNR=13
O17A **Robinson Place** 30.21 331 ⇓P P 14 31 15.3 +0.6
baz=30
BFSC **Mount Baldy Ra** 30.24 315 ⇓P P 14 31 14.9 -0.2
baz=30
GSC **Goldstone** 30.27 317 ⇓P P 14 31 14.9 -0.4
baz=30,SNR=5.1
SHOC **Shoshone** 30.29 319 ⇑P P 14 31 15.8 +0.3
baz=30,SNR=6.2
R13A **O'Grain Ranch,** 30.39 324 ⇓P P 14 31 17.9 +1.5
baz=31,SNR=29
T11A **Corn Creek, Al** 30.49 322 ⇓P P 14 31 17.9 +0.7
baz=31,SNR=7.3
S12A **Delamar Landin** 30.51 323 ⇑P P 14 31 18.6 +1.2
baz=31,SNR=5.7
Q14A **Sevier Lake (B** 30.59 326 ⇓P P 14 31 19.0 +0.9
baz=31,SNR=12
O16A **Springville** 30.59 330 ⇓P P 14 31 18.7 +0.6
baz=31,SNR=6.1
DAU **Daniels Canyon** 30.63 330 *e*P P 14 31 18.9 +0.5
comp=Z,10nm,1.4s,mb4.4
U10A **Ash Meadows, A** 30.64 319 ⇑P P 14 31 19.4 +0.8
baz=31,SNR=17
EDW2 **Edwards Air Fo** 30.82 315 ⇓P P 14 31 20.1 -0.2
baz=31,SNR=6.9
R12A **Pony Springs,** 30.86 324 ⇓P P 14 31 21.8 +1.4
baz=31,SNR=13
P14A **Dry Mountains** 30.91 327 ⇓P P 14 31 22.1 +1.2
baz=31,SNR=19
Q13A **Wheeler Ranch,** 30.97 325 ⇓P P 14 31 22.2 +0.8
baz=31,SNR=18
S11A **Rachel** 31.07 322 ⇑P P 14 31 23.3 +0.9
baz=31,SNR=14
MPMC **Manual Prospec** 31.17 318 ⇓P P 14 31 23.7 +0.4
baz=31,SNR=34
DUG **Dugway** 31.23 328 *e*P P 14 31 24.1 +0.4
comp=Z,11nm,1.4s,mb4.4
P13A **Bates Ranch, G** 31.32 326 P P 14 31 25.9 +1.4
baz=32,SNR=20
COWI **Conover** 31.37 4 *e*P P 14 31 22.8 -2.1
comp=Z,13nm,0.8s,mb4.7
R11A **Troy Canyon, C** 31.44 323 ⇑P P 14 31 26.6 +1.0
baz=32,SNR=20
ISA **Isabella** 31.59 316 P P 14 31 27.5 +0.5
baz=32,SNR=8.9
ISA **Isabella** 31.59 316 *e*P P 14 31 27.3 +0.3
comp=Z,14nm,1.3s,mb4.5
GRAC **Grapevine Rang** 31.66 319 P P 14 31 28.7 +1.2
baz=32,SNR=8.5
HWUT **Hardware Ranch** 31.71 331 *e*P P 14 31 28.6 +0.7
comp=Z,3.5nm,0.9s,mb4.1
S10A **Tonopah Range,** 31.76 321 P P 14 31 29.6 +1.2
baz=32,SNR=30
CWC **Cottonwood Cre** 31.78 318 ⇓P P 14 31 28.4 -0.3
baz=32
L17A **Cokeville** 31.79 333 ⇑P P 14 31 28.1 -0.5
baz=32
Q11A **Duckwater** 31.81 324 ⇓P P 14 31 29.6 +0.7
baz=32,SNR=23
R10A **Warm Springs** 31.82 322 ⇑P P 14 31 29.7 +0.8
baz=32,SNR=18
BGU **Big Grassy Mou** 31.89 329 *e*P P 14 31 29.9 +0.4
comp=Z,3.5nm,0.7s,mb4.2
PKM **Peak Mountain** 32.09 314 ⇓P P 14 31 31.6 +0.2
baz=32,SNR=7.9
VES **Vestal, Richgr** 32.10 316 ⇑P P 14 31 31.7 +0.3
baz=32,SNR=20
Q10A **Clear Creek Ra** 32.23 323 ⇑P P 14 31 33.6 +1.0
baz=32,SNR=16
O12A **Currie** 32.29 326 ⇓P P 14 31 33.7 +0.6
baz=32,SNR=12
L15A **Malad City** 32.40 331 ⇓P P 14 31 33.5 -0.5
baz=33,SNR=6.9
HVU **Hansel Valley** 32.41 330 *e*P P 14 31 34.9 +0.8
comp=Z,8.6nm,0.9s,mb4.5
N13A **Wendover, West** 32.43 328 ⇓P P 14 31 35.4 +1.1
baz=33
N13A **Wendover, West** 32.43 328 *e*P P 14 31 35.1 +0.8
comp=Z,17nm,1.0s,mb4.7
H21A **Big Horn, Sher** 32.44 340 ⇑P P 14 31 33.0 -1.3
baz=33
M14A **Sheep Mountain** 32.48 329 ⇑P P 14 31 35.1 +0.4
baz=33,SNR=22
M13A **Montello** 32.78 328 ⇓P P 14 31 37.9 +0.5
baz=33,SNR=22
M13A **Montello** 32.78 328 *e*P P 14 31 37.6 +0.3
comp=Z,14nm,0.8s,mb4.8
REDW **Red Top Meadow** 32.80 334 *e*P P 14 31 36.9 -0.6
comp=Z,29nm,1.1s,mb5.0
L14A **Malta** 32.83 330 ⇓P P 14 31 37.3 -0.4
baz=33,SNR=20
SNOW **Snow King Moun** 32.84 334 *e*P P 14 31 37.8 0.0
comp=Z,34nm,1.0s,mb5.1
LOHW **Long Hollow** 32.90 335 *e*P P 14 31 38.0 -0.4
comp=Z,1.7nm,0.6s,mb4.0
TPAW **Teton Pass** 32.95 334 *e*P P 14 31 38.1 -0.6
comp=Z,18nm,1.1s,mb4.8
K15A **Arbon** 33.00 332 ⇑P P 14 31 38.6 -0.6
baz=33
MOOW **Moose Ponds** 33.07 335 *e*P P 14 31 39.5 -0.3
comp=Z,1.1nm,0.7s,mb3.8
NVAR **Mina Array Bea** 33.12 320 P P 14 31 40.3 -0.1
comp=Z,32nm,0.9s,mb5.2,baz=137,slow=8.8,SNR=211
NVAR PcP PcP 14 34 20.9 -1.2
comp=Z,2.4nm,0.8s,baz=142,slow=4.3,SNR=4.5
NVAR ScP ScP 14 38 00.7 +0.2
comp=Z,0.9nm,0.6s,baz=125,slow=4.2,SNR=7.8
K14A **Jones Ranch, D** 33.19 331 ⇓P P 14 31 40.6 -0.2
baz=33,SNR=7.1
IMW **Indian Meadow** 33.27 335 P P 14 31 41.9 +0.3
comp=Z,6.3nm,1.1s,mb4.4
J15A **Blackfoot** 33.52 333 ⇑P P 14 31 43.5 -0.2
baz=34
BMN **Battle Mountai** 33.77 324 *e*P P 14 31 46.5 +0.5
comp=Z,32nm,1.4s,mb5.0
G18A **Lazy EL Ranch,** 33.92 338 ⇑P P 14 31 46.5 -0.7
baz=34
J14A **Carey** 33.95 331 ⇓P P 14 31 47.6 +0.2
baz=34
M10A **I.L. Ranch, Tu** 34.14 326 ⇑P P 14 31 50.2 +1.1
baz=34
CMB **Columbia Colle** 34.20 318 *e*P P 14 31 49.4 -0.3
comp=Z,15nm,1.1s,mb4.7
J13A **Cove Ranch, Pi** 34.31 331 ⇓P P 14 31 50.2 -0.4
baz=34,SNR=6.2
WCN **Washoe City** 34.55 320 ⇓P P 14 31 53.4 +0.6
baz=35,SNR=10
HLID **Hailey** 34.55 331 ⇓P P 14 31 52.8 +0.1
baz=35,SNR=10
HLID **Hailey** 34.55 331 *e*P P 14 31 52.7 +0.1
comp=Z,7.3nm,1.0s,mb4.5
I13A **Wildhorse Cree** 34.68 331 ⇑P P 14 31 54.8 +1.0
baz=35,SNR=8.2
MCMT **McKenzie Canyo** 34.83 334 *e*P P 14 31 55.9 +0.9
comp=Z,7.1nm,1.1s,mb4.4
G15A **Dillon** 34.95 334 ⇓P P 14 31 56.3 +0.2
baz=35,SNR=5.6
BOZ **Bozeman (W)** 34.99 336 *e*P P 14 31 55.7 -0.7
comp=Z,3.6nm,1.3s,mb4.0
I12A **Atlanta** 35.07 330 ⇓P P 14 31 56.6 -0.6
baz=35,SNR=34

DLMT **Dillon** 35.15 334 *e*P P 14 31 57.5 -0.3
comp=Z,7.2nm,1.1s,mb4.4
H13A **Challis** 35.25 332 ⇑P P 14 31 58.6 0.0
baz=35,SNR=16
LRM **Limekiln Ridge** 35.47 335 *e*P P 14 31 59.6 -0.9
comp=Z,17nm,0.9s,mb4.9
H12A **Diamond D Ranc** 35.51 331 P P 14 32 01.0 +0.1
baz=36,SNR=20
ULM **Lac du Bonnet** 35.57 356 P P 14 32 01.7 +0.3
comp=Z,2.4nm,0.5s,mb4.3,baz=186,slow=9.2,SNR=2.0
ULM LR LR 14 50 35.6
comp=Z,76nm,18.2s,baz=194,slow=43
D17A **Six Diamond Ra** 35.89 338 P P 14 32 03.4 -0.8
baz=36,SNR=6.2
WVOR **Wild Horse Val** 35.90 326 *e*P P 14 32 04.0 -0.3
comp=Z,16nm,1.0s,mb4.9
HRY **Holter Researc** 35.95 337 *e*P P 14 32 04.0 -0.6
comp=Z,4.4nm,0.7s,mb4.4
PKME **Peaks-Kenny Pk** 35.98 28 *e*P P 14 32 02.2 -2.7
G12A **Big Creek, Yel** 36.17 332 ⇓P P 14 32 06.2 -0.3
baz=36
F13A **Darby** 36.23 333 ⇓P P 14 32 06.5 -0.5
baz=36
EGMT **Eagleton** 36.32 340 ⇓P P 14 32 07.0 -0.8
baz=36
EGMT **Eagleton** 36.32 340 *e*P P 14 32 06.0 -1.7
comp=Z,20nm,1.1s,mb5.0
J08A **Circle Bar Ran** 36.45 327 ⇓P P 14 32 08.3 -0.6
baz=37,SNR=28
MOD **Modoc** 36.49 323 *e*P P 14 32 08.7 -0.7
comp=Z,9.0nm,0.8s,mb4.8
F12A **Elk City** 36.62 332 ⇑P P 14 32 10.0 -0.3
baz=37,SNR=24
CHMT **Chamberlain Mo** 36.68 335 *e*P P 14 32 10.0 -0.9
comp=Z,1.8nm,1.0s,mb4.0
E13A **Victor** 36.69 334 ⇑P P 14 32 10.3 -0.6
baz=37
C16A **Fuhringer Ranc** 36.83 338 ⇓P P 14 32 11.4 -0.7
baz=37
D14A **Greenough** 36.91 335 ⇑P P 14 32 12.1 -0.7
baz=37
E12A **Beaver Dam Sad** 37.26 333 ⇑P P 14 32 14.9 -0.9
baz=37,SNR=12
B16A **M & M Farms, S** 37.33 338 ⇑P P 14 32 15.4 -1.0
baz=38
A17A **Triple J Farms** 37.43 340 ⇓P P 14 32 15.8 -1.4
baz=38
I07A **Izee** 37.48 327 ⇓P P 14 32 17.4 -0.3
baz=38,SNR=20
D12A **Red Ives Fores** 37.66 334 ⇓P P 14 32 18.4 -0.8
baz=38
F10A **Beach Ranch, E** 37.69 331 ⇓P P 14 32 18.5 -0.9
baz=38,SNR=31
BSMT **Bassoo Peak** 38.05 335 *e*P P 14 32 22.1 -0.3
A15A **Johnson Ranch,** 38.17 338 ⇓P P 14 32 22.5 -0.9
baz=38
VIPM **Ingram Point** 38.36 326 P P 14 32 24.6 -0.6
A14A **Double T Ranch** 38.42 337 ⇓P P 14 32 25.0 -0.5
baz=39
C11A **Tepee Creek (N** 38.66 334 ⇑P P 14 32 26.8 -0.7
baz=39,SNR=16
LPAZ **La Paz** 38.79 142 *e*P P 14 32 26.2 -2.7
comp=Z,7.2nm,0.7s,mb4.6
LPAZ **La Paz** 38.79 142 P P 14 32 26.3 -2.7
comp=Z,6.8nm,0.6s,mb4.6,baz=323,slow=6.5,SNR=34
LPAZ LR LR 14 48 20.8
comp=Z,126nm,20.1s,baz=45,slow=36
B12A **Libby** 38.87 335 ⇑P P 14 32 29.0 -0.3
baz=39
IRO **Indian Ridge** 38.93 325 P P 14 32 29.8 -0.1
BROR **Big Rock Looko** 39.21 325 P P 14 32 31.3 -0.9
D08A **Wollman Farm,** 39.28 331 ⇑P P 14 32 31.9 -0.9
baz=40
H04A **Detroit Lake** 39.33 326 ⇑P P 14 32 32.4 -0.7
baz=40,SNR=14
NEW **Newport** 39.36 333 ⇑P P 14 32 32.4 -0.9
baz=40
OD2 **Odessa Site #2** 39.42 331 P P 14 32 33.3 -0.6
HOOD **Mount Hood Mea** 39.45 327 *e*P P 14 32 34.6 +0.4
comp=Z,63nm,1.0s,mb5.4
C09A **Chrisman Ranch** 39.52 332 ⇑P P 14 32 34.2 -0.5
baz=40
VLL **Laurance Lake** 39.56 327 P P 14 32 36.1 +1.0
G04A **Mulino** 39.82 326 ⇑P P 14 32 36.5 -0.8
baz=40
NAC **Naches** 39.98 329 P P 14 32 38.9 +0.4
F04A **Amboy** 40.26 327 ⇓P P 14 32 40.1 -0.8
baz=40
ETW **Entiat** 40.34 330 *e*P P 14 32 41.7 +0.1
comp=Z,5.6nm,0.7s,mb4.5
B08A **Colville Reser** 40.41 332 ⇑P P 14 32 41.3 -0.8
baz=41
LON **Longmire** 40.48 328 *e*P P 14 32 42.2 -0.6
comp=Z,13nm,0.9s,mb4.8
D05A **Enumclaw** 40.87 329 ⇓P P 14 32 45.0 -0.9
baz=41
B06A **Marblemount** 41.53 330 ⇑P P 14 32 50.4 -0.9
baz=42
EDM **Edmonton** 41.96 341 *e*P P 14 32 52.7 -2.0
NLWA **Neilton Lookou** 41.97 328 *e*P P 14 32 54.2 -0.7
comp=Z,9.9nm,0.9s,mb4.5
SIV **San Ignacio** 43.18 134 P P 14 33 01.7 -3.3
comp=Z,16nm,0.7s,mb4.9,baz=312,slow=8.3,SNR=83
SIV PcP PcP 14 34 51.0 -2.6
comp=Z,4.5nm,0.8s,baz=340,slow=2.4,SNR=3.7
SCHQ **Schefferville** 44.55 21 P P 14 33 11.4 -4.1
comp=Z,3.4nm,0.9s,mb4.1,baz=212,slow=5.2,SNR=2.7
RPN **Rapa Nui** 44.88 202 LR LR 14 46 04.8
comp=Z,14nm,21.7s,baz=205,slow=28
YKA **Yellowknife Ar** 50.33 347 P P 14 33 58.0 -2.3
YKA pP pP 14 34 14.6 -3.3
YKA ScP ScP 14 39 06.0 -2.0
YKA **Yellowknife Ar** 50.33 347 P P 14 33 58.0 -2.3
comp=Z,4.0nm,0.8s,mb4.4,baz=150,slow=7.3,SNR=22
YKA pP pP 14 34 14.5 -3.3
comp=Z,2.9nm,0.7s,baz=149,slow=7.4,SNR=6.9
YKA ScP ScP 14 39 06.0 -2.0
comp=Z,1.4nm,0.9s,baz=140,slow=4.4,SNR=5.2
CFAA **Coronel Fontan** 51.39 154 P P 14 34 05.8 -2.9
comp=Z,1.0nm,0.8s,mb3.9,baz=326,slow=6.6,SNR=18
CFAA LR LR 14 50 11.2
comp=Z,12nm,19.3s,baz=12,slow=29
DLBC **Dease Lake** 52.00 336 *e*P P 14 34 13.2 +0.3
TAOE **Nuku Hiva Isla** 53.18 247 *e*LR LR 14 49 39.9
comp=Z,332nm,27.6s
RKT **Rikitea** 56.42 229 *e*LR LR 14 51 15.6
comp=Z,528nm,28.0s,baz=53
RKT *e*T 15 34 44.3
comp=Z,4.0nm,0.3s
PNL **Peninsula** 56.64 333 *e*P P 14 34 46.1 -0.4
comp=Z,38nm,1.6s,mb5.2
BMRM **Bremner River** 59.53 333 *e*P P 14 35 06.1 -0.6
comp=Z,6.2nm,0.7s,mb4.8
EGAK **Eagle** 60.05 338 *e*P P 14 35 08.2 -2.0
comp=Z,3.0nm,0.8s,mb4.4
MENT **Mentasta** 60.09 336 *e*P P 14 35 09.4 -1.1
PAX **Paxson** 60.81 335 *e*P P 14 35 13.8 -1.7
comp=Z,8.7nm,0.8s,mb4.8
SEW **Seward** 61.36 331 *e*P P 14 35 17.8 -1.5
comp=Z,4.0nm,0.5s,mb4.7
PMR **Palmer** 61.78 333 *e*P P 14 35 20.6 -1.4
comp=Z,19nm,1.3s,mb5.0
RC01 **Rabbit Creek A** 61.86 332 *e*P P 14 35 21.2 -1.3
comp=Z,14nm,0.9s,mb5.0
KDAK **Kodiak Island** 62.11 328 *e*P P 14 35 22.9 -1.4
comp=Z,4.8nm,0.5s,mb4.8
ILAR **Eielson Array** 62.19 337 P P 14 35 22.8 -1.9
comp=Z,6.4nm,0.9s,mb4.6,baz=121,slow=5.0,SNR=60
ILAR PcP PcP 14 36 00.6 -3.5
comp=Z,7.8nm,1.1s,baz=115,slow=2.8,SNR=4.2
ILAR ScP ScP 14 39 58.4 -1.8
comp=Z,0.4nm,0.8s,baz=126,slow=1.9,SNR=4.6
ILAR LR LR 15 04 47.6
comp=Z,56nm,20.9s,baz=134,slow=38
COLA **College** 62.60 337 *e*P P 14 35 25.5 -2.0
comp=Z,7.8nm,0.9s,mb4.6
PMOR **Pomariorio Ree** 62.66 244 *e*T 15 42 32.0
comp=Z,2.7nm,0.3s
TRF **Thorofare Moun** 62.99 335 *e*P P 14 35 28.7 -1.4
comp=Z,32nm,1.3s,mb5.1
RSO **Redoubt South** 63.03 331 *e*P P 14 35 28.9 -1.4
BPAW **Bear Paw Mtn.** 63.53 335 *e*P P 14 35 31.4 -2.2
comp=Z,10nm,0.9s,mb4.7
PPLA **Purkeypile** 63.59 334 *e*P P 14 35 31.9 -2.2
comp=Z,16nm,1.2s,mb4.7
COLD **Coldfoot** 64.47 338 *e*P P 14 35 38.2 -1.5
comp=Z,9.3nm,1.1s,mb4.5
PPT **Papeete** 65.23 242 *e*LR LR 14 55 03.1

comp=Z,423nm,28.0s,baz=58
PPT Papeete 65.23 242 LR LR 14 55 44.3
comp=Z,239nm,19.3s,baz=80,slow=28
TTA Tatalina 65.26 333 *e*P **P 14 35 42.4 -2.5**
comp=Z,23nm,1.2s,mb4.9
USHA Ushuaia 72.11 166 P **P 14 36 24.2 -3.3**
comp=Z,21nm,1.1s,mb4.9,baz=349,slow=5.2,SNR=3.2
EKA Eskdalemuir Ar 77.38 36 P **P 14 36 53.5 -4.6**
comp=Z,1.7nm,0.8s,mb3.8,baz=272,slow=6.0,SNR=5.8
EKA pP pP 14 37 11.4 -5.4
comp=Z,4.2nm,0.8s,baz=280,slow=6.5,SNR=4.3
ESDC Sonseca Array 79.26 52 P **P 14 37 04.9 -4.0**
comp=Z,0.5nm,0.6s,mb3.5,baz=284,slow=6.2,SNR=5.9
ESDC pP pP 14 37 22.4 -5.2
comp=Z,1.6nm,0.8s,baz=273,slow=4.1,SNR=3.0
ESDC LR LR 15 06 53.7
comp=Z,58nm,21.1s,baz=90,slow=32
FLN La Foliniere 80.07 42⇑*i*P pP 14 37 33.5 +1.7
comp=Z,80nm,1.2s
FLN *e*MLR MLR
comp=Z,138nm,21.2s
FLN La Foliniere 80.07 42⇑*i*P pP 14 37 33.5 +1.7
FLN LR LR
comp=Z,140nm,21.3s
LDF La Druitiere 80.33 42 *e*P pP 14 37 34.5 +1.2
comp=Z,26nm,1.3s
LFF La Frestale 81.66 46 *e*P pP 14 37 42.1 +1.7
comp=Z,28nm,1.0s
RJF Les Rejaudoux 82.12 45 *e*P pP 14 37 44.4 +1.6
comp=Z,30nm,1.3s
RJF *e*MLR MLR
comp=Z,98nm,21.8s
RJF Les Rejaudoux 82.12 45 *e*P pP 14 37 44.4 +1.6
RJF LR LR
comp=Z,100nm,21.8s
TCF Toulx Ste Croi 82.37 44 *e*P pP 14 37 45.3 +1.2
comp=Z,28nm,1.3s
BGF Bois d'Agland 82.73 44⇑*i*P pP 14 37 47.2 +1.1
comp=Z,38nm,1.1s
BAIF Baives 82.78 40 *e*P pP 14 37 54.2 +8.0
AVF Avril sur Loir 83.02 44 *e*P pP 14 37 48.3 +0.8
comp=Z,22nm,1.1s
SSF Saint Saulge 83.06 43⇑*i*P pP 14 37 48.8 +1.1
comp=Z,19nm,1.0s
MTLF Montolieu 83.06 47 *e*P pP 14 37 49.3 +1.5
comp=Z,21nm,1.2s
LOR Lormes 83.24 43⇑*i*P pP 14 37 50.0 +1.3
comp=Z,34nm,1.1s
LOR *e*MLR MLR
comp=Z,53nm,21.2s
LOR Lormes 83.24 43⇑*i*P pP 14 37 50.0 +1.3
LOR LR LR
comp=Z,50nm,21.3s
SMF Signal de Mont 83.38 44 *e*P pP 14 37 50.2 +0.8
comp=Z,23nm,1.1s
MEZF Maizieres J'vi 83.70 42 *e*P pP 14 37 51.9 +0.9
comp=Z,22nm,1.0s
AFI Afiamalu 83.90 254 LR LR 15 04 21.8
comp=Z,140nm,19.9s,baz=75,slow=28
VIVF Saint-Julien-l 84.40 45 *e*P pP 14 37 56.8 +2.1
comp=Z,28nm,1.1s
HAU Haudompre 84.67 42⇑*i*P pP 14 37 57.5 +1.5
comp=Z,26nm,1.0s
HAU *e*MLR MLR
comp=Z,63nm,20.5s
HAU Haudompre 84.67 42⇑*i*P pP 14 37 57.5 +1.5
HAU LR LR
comp=Z,60nm,20.5s
HINF Hinteralfeld 85.05 42⇑*i*P pP 14 37 59.3 +1.4
comp=Z,9.6nm,1.1s
CDF Champ du Feu 85.15 41⇑*i*P pP 14 38 00.0 +1.6
comp=Z,16nm,1.1s
ORIF Oris-en-Rattie 85.21 45 *e*P pP 14 37 58.8 0.0
ORIF *e*MLR MLR
comp=Z,121nm,23.0s
ARCES ARCESS Array B 85.45 18 P **P 14 37 37.2 -3.3**
ARCES ARCESS Array B 85.45 18 P **P 14 37 37.2 -3.3**
comp=Z,4.5nm,1.0s,mb4.3,baz=352,slow=7.7,SNR=4.3
DBIC Dimbokro 85.57 84 LR LR 15 09 12.3
comp=Z,88nm,21.1s,baz=281,slow=31
LPL La Plagne 85.62 44 *e*P pP 14 38 01.2 +0.4
LPG La Plagne 85.64 44 *e*P pP 14 38 02.8 +1.9
comp=Z,15nm,1.1s
LMR La Mourre 86.08 46 *e*P pP 14 38 03.2 0.0
comp=Z,77nm,1.2s
GRA1 Grafenberg Arr 87.23 39 *e*P pP 14 38 10.9 +2.3
GRF Grafenberg Arr 87.23 39 *e*P pP 14 38 10.9 +2.3
comp=Z,7.0nm,1.1s
TORD Torodi Ar. Bea 90.20 76 LR LR 15 11 32.5
comp=Z,97nm,20.3s,baz=255,slow=31
KEST Kesra 90.45 53 LR LR 15 10 46.0
comp=Z,30nm,20.9s,baz=306,slow=30
AKASG Malin Array Be 97.12 33 LR LR 15 23 45.1
comp=Z,46nm,20.1s,baz=45,slow=36
DZM Mont Dzumac 105.92 251 *e*LR LR 15 14 12.3
comp=Z,189nm,24.8s
CN2 Changchun 112.47 332 *e*PKP PKiKP 14 43 36.8 -2.5
KSRS Korea Array 115.96 325 PKP PKPdf 14 43 43.3 -2.9
comp=Z,0.8nm,0.6s,baz=356,slow=2.6,SNR=4.9
MKAR Makanchi Array 118.56 4 PKP PKPdf 14 43 47.2 -3.6
comp=Z,0.6nm,0.6s,baz=29,slow=2.8,SNR=7.4
BOSA Boshof 120.65 115 PKP PKPdf 14 43 52.0 -3.4
comp=Z,4.6nm,0.9s,baz=162,slow=1.1,SNR=8.6
WMQ Urumqi 121.75 0 *e*PKP PKPdf 14 43 54.8 -2.3
MAW Mawson 124.67 169 PKP PKPdf 14 43 58.0 -3.9
comp=Z,1.0nm,0.4s,baz=311,slow=4.6,SNR=4.1
KSH Kashi 124.89 11 *e*PKPbc PKPdf 14 44 08.9 +5.6
KSH *es*PKP 14 44 47.3
KSH *e*PP PP 14 45 47.1 -3.5
KSH *e*PKS 14 47 44.1
KSH *e*SKS SKSdf 14 51 09.5 +0.1
KSH *e*SKKS SKKSac 14 52 26.9 -17
KSH *e*SS SS 15 02 09.0 -31
KSH AMB AMB
comp=Z,87nm,4.9s
KSH LR LR
comp=N,47nm,4.8s
KSH LR LR
comp=E,57nm,4.2s
KSH LR LR
comp=Z,65nm,4.3s
LZH Lanzhou 127.30 344 *e*PKP PKPdf 14 44 04.9 -3.1
STKA Stephens Creek 128.42 241 PKP PKPdf 14 44 07.3 -2.8
comp=Z,4.3nm,0.7s,baz=44,slow=1.5,SNR=8.7
CD2 Chengdu 132.17 342 PKP PKPdf 14 44 14.0 -3.4
GYA Guiyang 135.23 336 *e*Pdif Pdif 14 41 20.0 -4.9
GYA PKP PKPdf 14 44 20.0 -3.3
GYA sPKP 14 45 01.3
GYA PP PP 14 47 01.8 +3.7
GYA AMB AMB
comp=Z,90nm,8.0s
WRA Warramunga Arr 135.58 256 PKP PKPpre 14 44 06.5
WRA PKP PKPdf 14 44 20.7 -3.3
WRA Warramunga Arr 135.58 256 PKhKP PKPpre 14 44 06.5
comp=Z,0.4nm,0.7s,baz=87,slow=2.2,SNR=2.7
WRA PKP PKPdf 14 44 20.7 -3.3
comp=Z,1.3nm,0.6s,baz=85,slow=1.6,SNR=10.0
ASAR Alice Springs 135.91 251 PKhKP PKPpre 14 44 06.7
comp=Z,0.4nm,0.8s,baz=110,slow=3.8,SNR=5.7
ASAR PKP PKPdf 14 44 21.2 -3.3
comp=Z,1.0nm,0.8s,baz=81,slow=1.1,SNR=12
ASAR pPKP pPKPdf 14 44 41.6 -2.7
comp=Z,0.8nm,0.8s,baz=102,slow=2.1,SNR=4.3
FITZ Fitzroy Crossi 143.79 259 PKP PKPdf 14 44 34.1 -4.8
comp=Z,9.5nm,0.7s,baz=120,slow=2.5,SNR=23
CHTO Chiang Mai 144.98 342 *e*PKP PKPdf 14 44 37.3 -3.8
CM31 Chiang Mai Arr 145.32 342 *e*PKP PKPdf 14 44 38.6 -3.1
CMAR Chiang Mai Arr 145.32 342 PKPbc PKPbc 14 44 39.0 -2.4
comp=Z,11nm,0.8s,baz=339,slow=3.7,SNR=76
NWAO Narrogin (SRO) 147.87 231 PKPbc PKPbc 14 44 44.9 -3.7
comp=Z,14nm,0.8s,baz=118,slow=6.9,SNR=5.0

*ISCJB **17** 14:40:10.7±1.1, 13˚.08N±0˚.04×124˚.43E±0˚.07, h15km±8km, mb3.8/6, MS4.2/3, Error ellipse: s-maj=11.1km s-min=5.9km az=177.7*
*IDC **17** 14:40:10.4±1.3, 12˚.86N×124˚.14E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/20, mbtmp3.7/6, ML4.1/1, MS4.1/3, Ms1 4.1/3, ms1mx3.4/23, Error ellipse: s-maj=70.9km s-min=19.3km az=64.0*
*MAN **17** 14:40:10, 13˚.08N×124˚.31E, h1km*
*NEIC **17** 14:40:11.7±0.7, 12˚.92N×124˚.25E, h10km, mb4.6/1, Error ellipse: s-maj=26.9km s-min=10.7km az=59.0*
ISC 17 14:40:10.7±1.0, 13˚.06N±0˚.03×124˚.38E±0˚.06, h2km±6km,
n23, σ1§14/24, mb3.8/6, MS4.2/3, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.58**	**337**	*e*P	**Pg**	**14 40 21.3**	**-0.5**
PVCP				*e*S	**Sg**	**14 40 26.8**	**-2.6**
CNP	**Catarman**	**0.61**	**153**	*e*P	**Pg**	**14 40 24.0**	**+1.5**
CNP				*e*S	**Sg**	**14 40 38.0**	**+7.6**
MMPH	**Masbate**	**1.02**	**227**⇑	*i*P	**Pg**	**14 40 29.6**	**-0.6**
MMPH				*i* S	**Sg**	**14 40 44.1**	**+0.7**
AUQP	**San Andres**	**1.68**	**279**	*e*P	**Pn**	**14 40 43.0**	**+1.8**
OCLP	**Ormoc**	**2.01**	**174**	*e*P	**Pn**	**14 40 49.4**	**+3.8**
GQP	**Guinayangan**	**2.06**	**294**§	*e*P	**Pn**	**14 40 45.8**	**-0.6**
GQP				*e*S	**Sn**	**14 41 14.7**	**+1.9**
RCP	**Roxas**	**2.19**	**227**§	*e*P	**Sn**	**14 41 13.9**	**-1.9**
LLP	**Lapu-Lapu**	**2.76**	**189**	*e*P	**Sn**	**14 41 28.9**	**-1.0**
POLP	**Polilio Island**	**2.90**	**305**	*e*P	**Pn**	**14 40 59.9**	**+2.0**
GUIM	**Jordan**	**2.99**	**216**	*e*P	**Pn**	**14 40 59.4**	**+0.2**
TGY	**Tagaytay City**	**3.51**	**288**	Pn	**Pn**	**14 41 05.3**	**-1.0**
	20nm,0.3s,baz=156,slow=20,SNR=3.0						
BALP	**Baler**	**3.81**	**315**	*e*P	**Pn**	**14 41 10.2**	**-0.2**
PALP	**Palanan**	**4.41**	**335**	*e*P	Px	14 41 41.1	
CAUP	**Cauayan**	**4.58**	**328**	*e*P	**Pn**	**14 41 21.6**	**+0.5**
WRA	**Warramunga Arr**	**34.23**	**163**	P	**P**	**14 46 57.7**	**-0.4**
	0.6nm,0.8s,mb3.6,baz=322,slow=13,SNR=3.2						
ASAR	**Alice Springs**	**37.67**	**166**	P	**P**	**14 47 25.9**	**-1.6**
	0.3nm,0.4s,mb3.4,baz=343,slow=7.1,SNR=20						
SONM	**Songino Array**	**37.78**	**340**	P	**P**	**14 47 28.9**	**+0.7**
	0.4nm,0.6s,mb3.4,baz=169,slow=8.8,SNR=3.4						
HNR	**Honiara**	**41.79**	**121**	LR	LR	15 04 23.5	
	comp=Z,159nm,19.6s,MS3.9,baz=338,slow=35						
MK31	**Makanchi Array**	**48.70**	**322**	*e*P	**P**	**14 48 56.7**	**+0.1**
MKAR	**Makanchi Array**	**48.70**	**322**	P	**P**	**14 48 56.8**	**+0.3**
	1.7nm,0.7s,mb4.2,baz=125,slow=8.6,SNR=17						
MKAR				LR	LR	15 11 21.7	
	comp=Z,193nm,21.4s,MS4.1,baz=112,slow=38						
ZALV	**Zalesovo Beam**	**51.30**	**331**	P	**P**	**14 49 15.9**	**-0.3**
	0.3nm,0.4s,mb3.6,baz=142,slow=5.4,SNR=2.3						
KURK	**Kurkutov**	**52.73**	**325**	*e*P	**P**	**14 49 27.2**	**+0.3**
	7.9nm,1.0s,mb4.6						
PPT	**Papeete**	**90.18**	**108**	LR	LR	15 33 13.6	
	comp=Z,168nm,18.3s,MS4.5,baz=336,slow=35						

*IDC **17** 14:41:04.7±0.5, 12˚.95N×124˚.40E, h0km, mb4.4/21, mb1 4.5/22, mb1mx4.4/24, mbtmp4.4/22, ML4.3/1, MS4.0/2, Ms1 4.0/2, ms1mx3.3/22, Error ellipse: s-maj=22.2km s-min=13.1km az=70.0*
*MAN **17** 14:41:06, 13˚.05N×124˚.31E, h10km, mb5.0, ML3.9, MS4.0*
MAN INTENSITY II - CABID-AN IROSIN SORSOGON.
*NEIC **17** 14:41:06.8±0.3, 12˚.99N×124˚.30E, h10km, mb4.9/28, Error ellipse: s-maj=9.8km s-min=6.9km az=73.0*
NEIC Felt [II PIVS] at Irosin, Luzon.
*GCMT **17** 14:41:07.5±0.3, 13˚.09N×124˚.36E, h12km, MW4.7, Moment Tensor Solution. s14,c14; s60,c93; Moment tensor: Scale 10^16Nm; Mrr-0.76±.08; Mθθ1.43±.05; Mφφ-0.67±.07; Mrθ0.00±.20; Mrφ1.01±.05; Mθφ0.31±.23; Best double couple: M0 1.60000×10^16 NP1:φs109.00000°, δ67.00000°, λ-21.00000°. NP2:φs208.00000°, δ71.00000°, λ-155.00000°. Principal axes: T 1.8400, Plg3.0000°, Azm338.0000°; N -0.5900, Plg59.0000°, Azm243.0000°; P -1.2500, Plg31.0000°, Azm69.0000°; Data Used: IC IU II G CN.*
*MOS **17** 14:41:08.5±0.9, 13˚.04N×124˚.34E, h33km, mb5.1/28 Error ellipse: s-maj=13.5km s-min=6.6km az=122.4*
*ISCJB **17** 14:41:09.8±0.5, 13˚.06N±0˚.02×124˚.34E±0˚.04, h43km±4km, mb4.8/90, MS4.2/14, Error ellipse: s-maj=6.0km s-min=3.9km az=162.1*
*BJI **17** 14:41:11.5, 12˚.86N×124˚.28E, h68km, mB4.8/34, mb4.7/51, Ms4.5/42, Ms7 4.3/40*
*DJA **17** 14:41:13, 13˚.26N×124˚.40E, h45km, mb5.0/27*
ISC 17 14:41:11.9±0.5, 13˚.02N±0˚.03×124˚.31E±0˚.04, h47km±4km, h60km±2.8km:pP-P, n222, σ1§22/235, mb4.8/90, MS4.2/14, 15C-16D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.59**	**345**	*e*P	**Pn**	**14 41 17.0**	**-7.2**
CNP	**Catarman**	**0.61**	**146**	*e*P	**Pn**	**14 41 19.6**	**-4.9**
MMPH	**Masbate**	**0.94**	**226**§	*e*P	**Pn**	**14 41 25.1**	**-3.7**
MMPH				*i* S	**Sn**	**14 41 40.0**	**-1.3**
AUQP	**San Andres**	**1.62**	**281**	*e*P	**Pn**	**14 41 38.6**	**+0.5**
OCLP	**Ormoc**	**1.98**	**172**	*e*P	**Pn**	**14 41 42.0**	**-1.0**
GQP	**Guinayangan**	**2.02**	**296**§	*e*P	**Pn**	**14 41 41.7**	**-1.9**
GQP				*e*S	**Sn**	**14 42 09.0**	**+1.5**
RCP	**Roxas**	**2.11**	**227**	*i* S	**Sn**	**14 42 09.6**	**-0.3**
LLP	**Lapu-Lapu**	**2.71**	**187**	*e*P	**Pn**	**14 41 51.7**	**-1.3**
LLP				*e*S	**Sn**	**14 42 23.8**	**-0.8**
POLP	**Polilio Island**	**2.86**	**307**	*e*P	**Pn**	**14 41 57.5**	**+2.4**
LQP	**Lukban**	**2.91**	**292**§	*e*P	**Pn**	**14 41 58.7**	**+3.0**
GUIM	**Jordan**	**2.92**	**216**	*e*P	**Pn**	**14 41 55.2**	**-0.7**
TBP	**Tagbilaran**	**3.34**	**188**	*e*P	**Pn**	**14 41 57.8**	**-3.9**
TGY	**Tagaytay City**	**3.46**	**288**	Pn	**Pn**	**14 42 02.6**	**-0.7**
	27nm,0.3s,baz=116,slow=6.6,SNR=4.9						
BALP	**Baler**	**3.79**	**316**	*e*P	**Pn**	**14 42 06.4**	**-1.4**
SNPH	**Sibulan**	**3.81**	**196**	*e*P	**Pn**	**14 42 11.0**	**+2.9**
LUBP	**Lubang**	**4.02**	**281**	*e*P	**Pn**	**14 42 14.9**	**+3.8**
CGP	**Cagayan de Oro**	**4.55**	**175**	*e*P	**Pn**	**14 42 15.7**	**-2.7**
CAUP	**Cauayan**	**4.58**	**329**	*e*P	**Pn**	**14 42 16.8**	**-1.9**
DMPH	**Davao City--Mi**	**6.02**	**169**§	*e*P	**Pn**	**14 42 41.4**	**+2.9**
DAV	**Davao City (W)**	**6.04**	**168**	Pn	**Pn**	**14 42 38.7**	**-0.1**
DAV				LR	LR	14 45 32.2	
DAV	**Davao City (W)**	**6.04**	**168**	Pn	**Pn**	**14 42 38.7**	**-0.1**
	15nm,0.3s,baz=255,slow=15,SNR=2.5						
DAV				LR	LR	14 45 32.2	
	comp=Z,3μm,19.0s,baz=173,slow=45						
DAV	**Davao City (W)**	**6.04**	**168**	P	**Pn**	**14 42 44.3**	**+5.5**
	1.4nm5μm324nm,0.9s						
SGSI	**Sangihe**	**9.35**	**173**	P	**Pn**	**14 43 26.7**	**+2.5**
	2μm143nm,1.5s						
MYLDM	**Lahad Datu**	**9.68**	**217**	P	**Pn**	**14 43 33.1**	**+4.4**
	67nm,1.1s						
TWG	**Pinlang**	**10.22**	**343**	*e*P	**Pn**	**14 43 35.5**	**-0.5**
	11nm,0.6s						
YULB	**Yu-li**	**10.70**	**345**	*e*P	**Pn**	**14 43 41.7**	**-0.9**
TPUB	**Ta-pu**	**10.80**	**342**	*e*P	**Pn**	**14 43 47.1**	**+3.0**
	21nm,0.8s						
SSLB	**Suanglung**	**11.17**	**344**	*e*P	**Pn**	**14 43 52.4**	**+3.3**
	16nm,0.8s						
KMSI	**Cibinong**	**12.37**	**182**	P	**Pn**	**14 44 09.4**	**+3.9**
KMSI	**Cibinong**	**12.37**	**182**	P	**Pn**	**14 44 11.4**	**+5.9**
	2μm176nm,1.3s						
TNTI	**Ternate**	**12.54**	**166**	P	**Pn**	**14 44 06.1**	**-1.7**
TNTI	**Ternate**	**12.54**	**166**	P	**Pn**	**14 44 06.8**	**-1.0**
MRSI	**Marisa**	**12.68**	**191**	P	Px	14 44 23.9	
	340nm23nm,1.4s						
MRSI	**Marisa**	**12.68**	**191**	P	Px	14 44 24.4	
QZH	**Quanzhou**	**13.03**	**336**	*e*P	**Pn**	**14 44 18.8**	**+4.4**
QZH				S	**Sn**	**14 46 44.0**	**+6.0**
QZH				LR	LR		
	comp=N,2μm,16.9s						
QZH				LR	LR		
	comp=E,2μm,16.6s						
QZH				LR	LR		
	comp=Z,2μm,20.9s						
LBMI	**Labuha**	**13.94**	**167**	P	**Pn**	**14 44 28.3**	**+1.4**
	comp=Z,681nmcomp=Z,49nm,1.1s						
LBMI	**Labuha**	**13.94**	**167**	P	**Pn**	**14 44 28.1**	**+1.2**
	comp=Z,680nmcomp=Z,49nm,1.1s						
LUWI	**Luwuk**	**14.06**	**186**	P	**Pn**	**14 44 31.4**	**+2.9**
LUWI	**Luwuk**	**14.06**	**186**	P	**Pn**	**14 44 31.3**	**+2.8**
	comp=Z,952nmcomp=Z,94nm,1.1s						
QIZ	**Qiongzhong**	**15.13**	**295**	P	**Pn**	**14 44 41.9**	**-0.8**
QIZ				S	**S**	**14 47 27.4**	**-17**
QIZ				pmax	pmax		
	comp=Z,9.0nm,1.7s						
QIZ				pmax	pmax		
	comp=Z,110nm,7.5s						
QIZ				LR	LR		
	comp=N,800nm,16.2s						
QIZ				LR	LR		
	comp=Z,630nm,14.5s						
SBUM	**Sibu**	**15.92**	**230**	P	**Pn**	**14 44 53.5**	**+0.5**
	comp=Z,737nmcomp=Z,56nm,1.4s						
TTSI	**Tana Toraja**	**16.57**	**196**	P	**Pn**	**14 45 03.4**	**+2.2**
	comp=Z,919nmcomp=Z,109nm,0.9s						
SPSI	**Sidrap Palu**	**17.47**	**195**	P	**Pn**	**14 45 16.6**	**+4.3**
	comp=Z,1μmcomp=Z,54nm,1.0s						
STKI	**Sintang**	**18.10**	**226**	P	**Pn**	**14 45 22.5**	**+2.4**
	comp=Z,35nm,0.7s						
SSE	**Sheshan**	**18.22**	**351**	P	**Pn**	**14 45 20.3**	**-1.1**
SSE				S	**S**	**14 48 45.5**	**-1.7**
SSE				pmax	pmax		
	comp=Z,16nm,0.7s						
SSE				pmax	pmax		
	comp=Z,230nm,7.5s						
SSE				LR	LR		
	comp=N,350nm,17.0s						
SSE				LR	LR		
	comp=E,700nm,17.0s						
SSE				LR	LR		
	comp=Z,570nm,18.0s						
BAKI	**Biak**	**18.34**	**140**	P	**Pn**	**14 45 22.2**	**-0.8**
	comp=Z,1μmcomp=Z,73nm,2.4s						
NJ2	**Nanjing**	**19.59**	**346**	*e*P	**Pn**	**14 45 36.8**	**-1.1**
NJ2				pP	pP	14 45 53.3	+6.1
NJ2				PP		14 45 56.3	
NJ2				sP	sP	14 46 05.9	+13
NJ2				S	**S**	**14 49 07.0**	**-7.9**
NJ2				sS	sS	14 49 31.0	-1.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,200nm,5.5s						
NJ2				LR	LR		
	comp=N,550nm,10.9s						
NJ2				LR	LR		
	comp=E,450nm,10.8s						
NJ2				LR	LR		
	comp=Z,300nm,10.8s						
WHN	**Wuhan**	**19.72**	**334**	P	**Pn**	**14 45 39.5**	**+0.1**
WHN				S	**S**	**14 49 21.3**	**+3.9**
WHN				LR	LR		
	comp=N,830nm,13.7s						
WHN				LR	LR		
	comp=E,740nm,9.4s						
WHN				LR	LR		
	comp=Z,2μm,21.0s						
GYA	**Guiyang**	**21.29**	**312**	P	**P**	**14 45 54.8**	**+0.2**
GYA				pP		14 46 10.3	
GYA				sP	sP	14 46 20.6	+8.9
GYA				S	**S**	**14 49 42.0**	**-6.6**
GYA				PcP	PcP	14 49 58.5	+0.5
GYA				sS	sS	14 50 06.8	+0.2
GYA				ScP	ScP	14 53 28.0	-3.3
GYA				PcS	PcS	14 53 35.6	-0.7
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
GYA				pmax	pmax		
	comp=Z,120nm,4.6s						
GYA				LR	LR		
	comp=N,770nm,13.8s,MS4.4						
GYA				LR	LR		
	comp=E,690nm,12.2s,MS4.4						
GYA				LR	LR		
	comp=Z,870nm,15.9s,MS4.2						
CBIJ	**Chichi jima**	**21.82**	**47**	LR	LR	14 52 43.4	
	comp=Z,164nm,19.6s,MS3.4,baz=308,slow=32						
MYKOM	**Kota Tinggi**	**23.13**	**243**	P	**P**	**14 46 14.9**	**+0.6**
	comp=Z,500nmcomp=Z,73nm,0.9s,mb5.1						
KMI	**Kunming**	**23.64**	**304**	P	**P**	**14 46 19.4**	**+0.3**
KMI				pP		14 46 34.9	
KMI				sP	sP	14 46 42.5	+5.7
KMI				PP		14 46 52.8	
KMI				PcP	PcP	14 50 04.5	+1.7
KMI				S	**S**	**14 50 26.3**	**-4.1**
KMI				sS	sS	14 50 49.3	-1.5
KMI				SS		14 51 15.1	
KMI				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.4						
KMI				pmax	pmax		
	comp=Z,150nm,6.8s						
KMI				LR	LR		
	comp=N,510nm,22.0s						
KMI				LR	LR		
	comp=E,520nm,16.5s						
KMI				LR	LR		
	comp=Z,520nm,14.6s						
NGJI	**Ngawi**	**23.95**	**213**	P	**P**	**14 46 27.5**	**+5.6**
	comp=Z,125nm,1.2s,mb5.2						
SJI	**Sawahan**	**24.10**	**212**	P	**P**	**14 46 28.5**	**+5.2**
	comp=Z,108nm,0.8s,mb5.3						
PWJI	**Pagerwojo**	**24.32**	**211**	P	**P**	**14 46 29.1**	**+3.7**
	comp=Z,87nm,1.2s,mb5.1						
IPM	**Ipoh**	**24.51**	**252**	P	**P**	**14 46 27.3**	**+0.1**
	comp=Z,29nm,1.3s,mb4.6						
KSRS	**Korea Array**	**24.54**	**7**	P	**P**	**14 46 27.9**	**+0.7**
	comp=Z,4.8nm,0.6s,mb4.2,baz=184,slow=11,SNR=13						
KULM	**Kulim**	**24.57**	**254**	*e*P	**P**	**14 46 27.3**	**-0.4**
	comp=Z,46nm,1.3s,mb4.8						
KULM	**Kulim**	**24.57**	**254**	P	**P**	**14 46 28.1**	**+0.3**
	comp=Z,31nm,1.4s,mb4.7						
PCJI	**Pacitan**	**24.79**	**212**	P	**P**	**14 46 32.6**	**+2.9**
	comp=Z,160nm,0.9s,mb5.5						
BJII	**Banjamegara**	**24.89**	**216**	P	**P**	**14 46 34.3**	**+3.7**
	comp=Z,64nm,1.3s,mb5.0						
CM31	**Chiang Mai Arr**	**25.00**	**286**	*e*P	**P**	**14 46 29.6**	**-2.0**
	comp=Z,7.7nm,0.8s,mb4.3						
CMAR	**Chiang Mai Arr**	**25.00**	**286**	P	**P**	**14 46 31.1**	**-0.5**
	comp=Z,5.6nm,1.0s,mb4.1,baz=97,slow=8.0,SNR=14						
CMAR				PcP	PcP	14 50 06.5	+0.7
	comp=Z,2.2nm,0.7s,baz=112,slow=1.3,SNR=5.0						
CHTO	**Chiang Mai**	**25.05**	**287**	P	**P**	**14 46 30.7**	**-1.4**
XAN	**Xi'an**	**25.17**	**329**	P	**P**	**14 46 32.5**	**-0.5**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
CD2	**Chengdu**	**26.00**	**316**	P	**P**	**14 46 41.8**	**+1.3**
CD2				pP	pP	14 46 56.1	+3.3
CD2				sP	sP	14 47 03.5	+5.1
CD2				PP		14 47 24.3	
CD2				PcP	PcP	14 50 09.8	+1.9
CD2				S	**S**	**14 51 05.1**	**-3.0**
CD2				sS	sS	14 51 30.0	+1.2
CD2				SS		14 52 14.4	
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
CD2				pmax	pmax		
	comp=Z,100nm,6.2s						
CD2				LR	LR		
	comp=N,870nm,21.6s,MS4.4						
CD2				LR	LR		
	comp=E,940nm,20.6s,MS4.4						
CD2				LR	LR		
	comp=Z,840nm,21.6s,MS4.2						
KLSI		**26.23**	**229**	P	**P**	**14 46 45.7**	**+2.9**
	comp=Z,49nm,1.3s,mb4.9						
MDSI	**Maura Dua**	**26.51**	**230**	P	**P**	**14 46 50.1**	**+4.9**
	comp=Z,25nm,0.9s,mb4.8						
MAJO	**Matsushiro**	**26.54**	**26**	*e*P	**P**	**14 46 46.0**	**+0.7**
	comp=Z,4.8nm,0.4s,mb4.4						
MAJO	**Matsushiro**	**26.54**	**26**	*e*P	**P**	**14 46 46.0**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.4						
MAT	**Matsushiro**	**26.54**	**26**	P	**P**	**14 46 47.8**	**+2.5**
MAT				*e*S	Sx	14 52 06.0	
MJAR	**Matsushiro Arr**	**26.54**	**26**	P	**P**	**14 46 43.9**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=204,slow=8.0,SNR=4.8						
MJAR				PcP	PcP	14 50 10.0	+1.0
	comp=Z,1.6nm,0.8s,baz=195,slow=2.7,SNR=3.8						
TSI	**Tuntungan**	**27.15**	**252**	P	**P**	**14 46 53.3**	**+2.2**
KSI	**Kapahiang**	**27.20**	**234**	P	**P**	**14 46 56.3**	**+4.8**
	comp=Z,8μmcomp=Z,127nm,0.8s,mb5.5						
PPI	**Padang Panjang**	**27.24**	**242**	P	**P**	**14 46 56.7**	**+4.9**
	comp=Z,4μmcomp=Z,29nm,1.1s,mb4.7						
BJT	**Baijiatuao**	**27.83**	**347**	*e*P	**P**	**14 46 56.7**	**-0.2**
	comp=Z,18nm,0.9s,mb4.7						
BJT	**Baijiatuao**	**27.83**	**347**	*e*P	**P**	**14 46 56.7**	**-0.2**
BJT				pmax	pmax		
	comp=Z,17nm,0.9s	

LZH SS SS 14 53 33.0 -36
LZH pmax pmax
comp=Z,37nm,1.5s,mb4.9
LZH pmax pmax
comp=Z,96nm,4.3s
LZH LR LR
comp=E,540nm,13.6s
LZH LR LR
comp=Z,670nm,15.3s,MS4.4
HHC Hu-ho-hao-te 29.89 340 *eP* **P 14 47 18.3 +3.2**
HHC pP pP 14 47 32.9 +5.4
HHC sP sP 14 47 40.3 +7.2
HHC PP PP 14 48 17.6 -5.6
HHC *eS* **S 14 52 09.6 +0.5**
HHC sS sS 14 52 35.3 +5.4
HHC SS SS 14 53 50.5 -27
HHC PcS PcS 14 54 01.4 +0.9
HHC pmax pmax
comp=Z,20nm,1.2s,mb4.7
HHC pmax pmax
comp=Z,48nm,3.6s
HHC LR LR
comp=N,240nm,11.6s,MS4.3
HHC LR LR
comp=E,310nm,12.0s,MS4.3
HHC LR LR
comp=Z,370nm,17.0s,MS4.1
CN2 Changchun 30.69 2 *eP* **P 14 47 25.3 +3.2**
MDJ Mudanjiang 31.81 7 P **P 14 47 32.6 +0.6**
MDJ pP pP 14 47 47.3 +2.9
MDJ sP sP 14 47 54.8 +4.8
MDJ PP PP 14 48 45.3 +0.8
MDJ S **S 14 52 39.3 +0.3**
MDJ sS sS 14 53 04.9 +5.0
MDJ ScP ScP 14 54 00.3 -1.6
MDJ PcS PcS 14 54 06.6 -0.1
MDJ pmax pmax
comp=Z,6.0nm,1.4s,mb4.2
MDJ LR LR
comp=N,170nm,16.5s,MS3.9
MDJ LR LR
comp=E,190nm,20.4s,MS3.9
MDJ LR LR
comp=Z,190nm,19.3s,MS3.8
GTA Gaotai 34.04 325 P **P 14 47 52.6 +1.0**
GTA pP pP 14 48 08.8 +4.7
GTA sP sP 14 48 16.1 +6.4
GTA PcP PcP 14 50 28.1 -0.5
GTA S **S 14 53 13.3 -0.6**
GTA sS sS 14 53 38.5 +3.7
GTA pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
GTA pmax pmax
comp=Z,82nm,4.5s
GTA LR LR
comp=N,340nm,15.8s,MS4.3
GTA LR LR
comp=E,280nm,16.3s,MS4.3
GTA LR LR
comp=Z,430nm,16.4s,MS4.3
WRA Warramunga Arr 34.21 163 P **P 14 47 50.7 -2.5**
comp=Z,0.9nm,0.6s,mb3.9,baz=342,slow=9.7,SNR=4.5
WRA PcP PcP 14 50 28.9 -0.4
comp=Z,0.9nm,0.6s,baz=343,slow=2.9,SNR=2.8
LSA Lhasa 34.89 304 P **P 14 47 59.4 +0.3**
TAPN Taplejung 37.04 298 *eP* **P 14 48 17.4 -0.1**
ODAN Odare 37.19 297 *eP* **P 14 48 17.9 -0.9**
comp=Z,26nm,0.9s,mb5.0
ULN Ulaanbaatar 37.60 341 *eP* **P 14 48 21.4 -0.6**
comp=Z,11nm,0.8s,mb4.6
ULN Ulaanbaatar 37.60 341 *eP* **P 14 48 21.4 -0.6**
ULN pmax pmax
comp=Z,11nm,0.8s,mb4.6
ULN Ulaanbaatar 37.60 341 P **P 14 48 23.3 +1.3**
comp=Z,15nm,1.1s,mb4.6
ASAR Alice Springs 37.65 166 P **P 14 48 21.3 -1.3**
comp=Z,1.4nm,0.5s,mb4.0,baz=343,slow=6.7,SNR=17
ASAR PcP PcP 14 50 38.4 -1.1
comp=Z,0.7nm,0.7s,baz=352,slow=1.9,SNR=2.4
SONM Songino Array 37.79 340 P **P 14 48 24.1 +0.5**
comp=Z,6.1nm,0.9s,mb4.3,baz=158,slow=10,SNR=14
RAMN Ramite 37.90 297 *eP* **P 14 48 24.3 -0.5**
comp=Z,14nm,0.5s,mb4.9
JIRN Jiri 38.42 298 *eP* **P 14 48 28.8 -0.4**
GUN Gumba 38.75 298 *eP* **P 14 48 31.8 -0.2**
comp=Z,55nm,0.8s,mb5.3
PKI Pulchoki 39.07 298 *eP* **P 14 48 33.8 -0.9**
PKIN Phulchoki 39.09 298 *eP* **P 14 48 34.1 -0.7**
comp=Z,19nm,0.7s,mb4.9
KKN Kakani 39.24 298 *eP* **P 14 48 35.2 -0.8**
DMN Daman 39.34 298 *eP* **P 14 48 36.2 -0.7**
MEEK Meekatharra 39.81 188 *eP* **P 14 48 43.4 +2.7**
GKN Gorkha 39.84 298 *eP* **P 14 48 39.7 -1.3**
KOLN Koldanda 40.68 298 *eP* **P 14 48 47.3 -0.7**
TLY Talaya 42.02 341 *eP* **P 14 49 03.4 +4.8**
TLY *eS* **S 14 55 23.1 +9.0**
TLY pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
TLY MLR MLR
comp=Z,255nm,21.0s,MS4.1
MORW Morawa 42.60 191 *eP* **P 14 49 02.0 -1.6**
QLP Quilpie 43.87 154 *eP* **P 14 49 12.1 -1.8**
WMQ Urumqi 43.89 321 P **P 14 49 15.3 +1.4**
WMQ pP pP 14 49 30.6 +4.0
WMQ sP sP 14 49 37.8 +5.6
WMQ PP PP 14 50 59.6 +2.9
WMQ *eS* **S 14 55 41.0 -0.9**
WMQ SS SS 14 58 50.3 -9.2
WMQ ScS ScS 14 59 06.1 -2.7
WMQ pmax pmax
comp=Z,29nm,1.1s,mb4.9
WMQ pmax pmax
comp=Z,120nm,4.1s
WMQ LR LR
comp=N,250nm,18.7s,MS4.3
WMQ LR LR
comp=E,300nm,18.0s,MS4.3
WMQ LR LR
comp=Z,330nm,19.5s,MS4.2
NWAO Narrogin (SRO) 46.19 188 P **P 14 49 32.2 +0.1**
comp=Z,5.9nm,0.8s,mb4.5,baz=13,slow=6.7,SNR=2.8
EIDS Eidsvold 46.23 146 *eP* **P 14 49 29.9 -2.7**
BBOO Buckleboo 46.94 166 *eP* **P 14 49 36.6 -1.4**
comp=Z,6.6nm,0.5s,mb4.8
STKA Stephens Creek 47.62 160 *eP* **P 14 49 42.4 -1.0**
comp=Z,1.4nm,0.8s,mb4.0
STKA Stephens Creek 47.62 160 P **P 14 49 41.5 -1.9**
comp=Z,5.5nm,0.8s,mb4.6,baz=337,slow=9.0,SNR=6.0
STKA Stephens Creek 47.62 160 *eP* **P 14 49 42.4 -1.0**
STKA pmax pmax
comp=Z,1.0nm,0.8s
PET Petropavlovsk 48.35 27 *eP* **P 14 49 57.7 +8.9**
PET *eS* **S 14 56 53.2 +7.6**
MK31 Makanchi Array 48.69 322 *eP* **P 14 49 52.3 +0.8**
MKAR Makanchi Array 48.69 322 P **P 14 49 52.1 +0.6**
comp=Z,27nm,0.8s,mb5.3,baz=122,slow=8.7,SNR=122
MKAR PcP PcP 14 51 16.1 -0.2
comp=Z,6.5nm,0.7s,baz=107,slow=3.7,SNR=3.7
CMSA Cobar Meteorol 48.82 156 *eP* **P 14 49 52.5 -0.2**
YAK Yakutsk 49.09 3 *eP* **P 14 49 54.5 +0.2**
comp=Z,11nm,0.6s,mb5.1
YAK Yakutsk 49.09 3 *eP* **P 14 49 53.5 -0.8**
YAK pmax pmax
comp=Z,12nm,1.0s,mb4.9
YAK pmax pmax
comp=N,4.0nm,1.4s
YAK pmax pmax
comp=E,2.0nm,1.4s
KSH Kashi 49.98 311 ⇑P **P 14 50 04.0 +2.5**
KSH pP pP 14 50 19.5 +5.0
KSH *e*sP sP 14 50 26.8 +6.8
KSH *e*PcP PcP 14 51 24.3 +3.2
KSH *e*PP PP 14 52 00.0 +3.2
KSH *e*ScP ScP 14 55 13.1 0.0
KSH *e*PcS PcS 14 55 19.8 +1.8
KSH *e*S **S 14 57 07.9 -1.1**
KSH *e*sS sS 14 57 34.8 +4.1
KSH *e*ScS ScS 14 59 46.6 -2.4
KSH *e*SS SS 15 00 37.5 -4.9
KSH pmax pmax
comp=Z,11nm,1.0s,mb4.8
KSH pmax pmax
comp=Z,42nm,5.5s
KSH LR LR
comp=N,640nm,22.5s
KSH LR LR
comp=E,130nm,8.7s
KSH LR LR
comp=Z,590nm,22.9s,MS4.5
ZALV Zalesovo Beam 51.31 331 P **P 14 50 11.4 +0.2**
comp=Z,4.0nm,0.5s,mb4.6,baz=116,slow=6.8,SNR=15
TKM2 Tokmak 2 51.37 315 P **P 14 50 12.2 +0.2**
SNR=8.5
UCH Uchtor 51.89 314 P **P 14 50 17.3 +1.5**
SNR=19
CHMS Chumysh 51.98 315 P **P 14 50 16.7 +0.2**
SNR=6.3
FRU Bishkek 52.02 315 *eP* **P 14 50 16.0 -0.8**
AAK Ala-Archa 52.04 314 *c iP* **P 14 50 18.2 +1.3**
AAK pmax pmax
comp=Z,8.0nm,1.7s,mb4.4
USP Ospenovka 52.24 315 P **P 14 50 19.2 +0.7**
SNR=7.0
AML Almayashu 52.44 314 P **P 14 50 21.1 +1.2**
SNR=16
EKS2 Erkin-Say 52.55 314 P **P 14 50 21.6 +0.9**
SNR=12
EKS2 Erkin-Say 52.55 314 *eP* **P 14 50 21.6 +0.9**
comp=Z,14nm,0.9s,mb4.9
EKS2 Erkin-Say 52.55 314 *eP* **P 14 50 21.6 +0.9**
EKS2 pmax pmax
comp=Z,14nm,0.9s,mb4.9
NVS Novosibirsk 52.58 331 ⇑*iP* **P 14 50 20.6 -0.1**
NVS pmax pmax
comp=N,14nm,1.1s
NVS pmax pmax
comp=E,17nm,1.1s
NVS pmax pmax
comp=Z,21nm,1.1s,mb5.0
KURK Kurchatov 52.73 325 *eP* **P 14 50 22.5 +0.6**
comp=Z,81nm,1.0s,mb5.6
KURK Kurchatov 52.73 325 ⇓*iP* **P 14 50 21.7 -0.2**
KBL Kabul 54.22 303 *eP* **P 14 50 32.5 -0.6**
comp=Z,16nm,0.8s,mb5.0
KBL Kabul 54.22 303 *eP* **P 14 50 32.5 -0.6**
KBL pmax pmax
comp=Z,16nm,0.8s,mb5.0
BVAR Borovoye Array 58.33 325 P **P 14 51 02.5 +0.4**
comp=Z,7.4nm,0.8s,mb4.7,baz=110,slow=8.7,SNR=36
BVAR PcP PcP 14 51 52.4 -0.3
comp=Z,6.5nm,0.7s,baz=114,slow=3.5,SNR=1.8
BRVK Borovoye 58.40 325 *eP* **P 14 51 02.2 -0.3**
comp=Z,21nm,0.8s,mb5.2
BRVK Borovoye 58.40 325 *d iP* **P 14 51 02.4 -0.1**
BRVK pmax pmax
comp=Z,31nm,1.3s,mb5.2
TIXI Tiksi 58.66 2 *eP* **P 14 51 03.9 -0.2**
comp=Z,5.6nm,0.8s,mb4.7
TIXI Tiksi 58.66 2 *eP* **P 14 51 02.6 -1.5**
TIXI pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
TIXI MLR MLR
comp=Z,228nm,18.0s,MS4.3
ABKAR Akbulak array 63.55 319 *eP* **P 14 51 36.9 -0.7**
comp=Z,9.1nm,0.6s,mb5.0
SVE Sverdlovsk 64.87 327 ⇓*eP* **P 14 51 46.5 +0.4**
SVE pmax pmax
comp=Z,29nm,0.6s,mb5.5
ARU Arti 65.89 326 *eP* **P 14 51 52.0 -0.6**
comp=Z,39nm,0.6s,mb5.6
ARU Arti 65.89 326 *d iP* **P 14 51 51.8 -0.9**
ARU *e*PP pP 14 52 00.5 -5.6
ARU S S 15 00 37.5 +1.2
ARU pmax pmax
comp=Z,23nm,1.2s,mb5.1
SOKR Solikamsk 67.52 329 *eP* **P 14 52 01.1 -1.9**
SOKR pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
KBD Kabd 72.19 297 *eP* **P 14 52 31.5 -0.8**
KBD AMb AMB 14 52 37.1
comp=Z,35nm,0.8s,mb5.3
RDF Al-Radifah 72.34 296 *eP* **P 14 52 32.1 -1.2**
RDF AMb AMB 14 52 38.0
comp=Z,53nm,0.7s,mb5.5
MIB Mutribah 72.44 297 *eP* **P 14 52 32.7 -1.2**
MIB AMb AMB 14 52 33.8
comp=Z,60nm,0.8s,mb5.6
MIB AML AML 14 52 38.4
comp=Z,38nm,0.6s
NAY Al-Naaiem 72.58 297 *eP* **P 14 52 33.5 -1.2**
NAY AMb AMB 14 52 39.5
comp=Z,37nm,0.8s,mb5.4
KIV Kislovodsk 75.09 312 *eP* **P 14 52 49.1 +0.1**
comp=Z,14nm,0.8s,mb4.9
KIV Kislovodsk 75.09 312 ⇓*eP* **P 14 52 49.0 0.0**
KIV *i* 14 52 54.3
KIV *e* pP 14 53 01.7 -1.0
KIV pmax pmax
comp=Z,22nm,1.2s,mb5.0
KIV MLR MLR
comp=Z,200nm,19.0s,MS4.4
VRHR Novokhopersk 75.41 320 *eP* **P 14 52 49.5 -1.2**
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,20nm,0.6s
KLMR Klimovskoe 76.20 330 *eP* **P 14 52 54.7 -0.4**
KLMR pmax pmax
comp=Z,32nm,1.2s,mb5.1
COLD Coldfoot 76.34 24 *eP* **P 14 52 57.3 +1.5**
comp=Z,4.0nm,0.9s,mb4.3
TRF Thorofare Moun 76.40 27 P **P 14 52 56.3 +0.2**
comp=Z,26nm,1.9s,mb4.8
VSR Storozhevoye 76.94 320 *eP* **P 14 52 58.5 -1.0**
VSR pmax pmax
comp=E,4.0nm,0.6s
VSR pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
VSR pmax pmax
comp=N,8.0nm,0.7s
SEW Seward 76.95 31 *eP* **P 14 53 02.2 +2.9**
comp=N,6.3nm,0.9s,mb4.5
MCK McKinley 76.99 27 *eP* **P 14 52 59.8 +0.3**
comp=N,11nm,0.9s,mb4.8
MCK McKinley 76.99 27 *eP* **P 14 52 59.8 +0.3**
MCK pmax pmax
comp=Z,11nm,0.9s,mb4.8
COLA College 77.40 26 P **P 14 53 03.0 +1.3**
comp=Z,3.0nm,0.9s,mb4.2
COLA College 77.40 26 P **P 14 53 03.0 +1.3**
COLA pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
ILAR Eielson Array 77.82 26 P **P 14 53 04.2 +0.1**
comp=Z,0.7nm,0.8s,mb3.6,baz=246,slow=5.9,SNR=9.3
OBN Obninsk 78.15 324 ⇓*eP* **P 14 53 05.8 -0.3**
OBN *e* 14 53 10.8
OBN pmax pmax
comp=Z,50nm,2.1s,mb5.1
OBN MLR MLR
comp=Z,100nm,18.0s,MS4.2
APA Apatity 78.42 337 ⇑*eP* **P 14 53 08.0 +0.7**
APA pmax pmax
comp=Z,13nm,1.0s,mb4.8
MALT Malatya 78.86 307 *eP* **P 14 53 11.3 +0.9**
comp=Z,5.1nm,0.8s,mb4.5
MALT Malatya 78.86 307 *eP* **P 14 53 11.3 +0.9**
MALT pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MALT Malatya 78.86 307 ⇓*iP* **P 14 53 10.2 -0.2**
MALT Malatya 78.86 307 P **P 14 53 11.6 +1.2**
comp=Z,8.1nm,1.3s,mb4.5
CASY Casey 79.74 186 *eP* **P 14 53 17.0 +2.6**
comp=Z,5.5nm,0.4s,mb4.8
JOF Joensuu 79.88 332 *eP* **P 14 53 15.2 -0.2**
JOF pmax pmax
comp=Z,11nm,0.8s,mb4.8
JOF Joensuu 79.88 332 *ep* **P 14 53 15.2 -0.2**
comp=Z,11nm,0.8s,mb4.8
ARCES ARCESS Array B 80.96 339 P **P 14 53 20.6 -0.6**
comp=Z,3.9nm,1.0s,mb4.3,baz=79,slow=6.8,SNR=3.9
MMAI Mount Meron Ar 82.13 302 P **P 14 53 28.9 +0.8**
comp=Z,3.9nm,0.7s,mb4.5,baz=96,slow=6.8,SNR=4.3
KAF Kangasniemi 82.31 332 *eP* **P 14 53 32.1 +3.7**
KAF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
KAF Kangasniemi 82.31 332 *ep* **P 14 53 32.1 +3.7**
comp=Z,7.6nm,0.7s,mb4.7
BRTR Keskin Array B 82.32 309 P **P 14 53 28.1 -0.8**
comp=Z,1.8nm,0.6s,mb4.2,baz=106,slow=4.9,SNR=10
FINES FINESS Array B 82.57 331 P **P 14 53 29.8 0.0**
comp=Z,2.4nm,0.6s,mb4.4,baz=46,slow=4.0,SNR=3.9
AKASG Malin Array Be 83.23 320 P **P 14 53 32.0 -1.4**
comp=Z,2.5nm,0.6s,mb4.5,baz=67,slow=4.6,SNR=5.1
ISP Isparta 85.08 308 *eP* **P 14 53 42.5 -0.5**
comp=Z,12nm,0.8s,mb5.1
ISP Isparta 85.08 308 *eP* **P 14 53 42.6 -0.5**
ISP pmax pmax
comp=Z,12nm,0.8s,mb5.1
ISP Isparta 85.08 308 ⇓*iP* **P 14 53 45.9 +2.8**
TESR 85.86 317 ⇑P **P 14 53 46.6 -0.2**
TESR 85.86 317 ⇑*iP* **P 14 53 46.6 -0.2**
VRI Vrincioaia 85.97 316 ⇓P **P 14 53 48.0 +0.6**
VRI Vrincioaia 85.97 316 ⇓*iP* **P 14 53 48.0 +0.7**
PLOR Plostina 86.03 316 ⇓P **P 14 53 48.3 +0.7**
PLOR Plostina 86.03 316 ⇓*iP* **P 14 53 48.3 +0.7**
BURAR Bucovina Array 86.53 318 ⇑P **P 14 53 50.1 +0.1**
BURAR Bucovina Array 86.53 318 ⇑*iP* **P 14 53 50.1 +0.1**
BUR08 Bucovina Ar. S 86.53 318 *eP* **P 14 53 50.0 0.0**
MLR Muntele Rosu 86.60 316 P **P 14 53 50.6 +0.2**
comp=Z,1.6nm,0.4s,mb4.7,baz=130,slow=7.3,SNR=6.7
MLR Muntele Rosu 86.60 316 ⇓P **P 14 53 51.3 +0.9**
MLR Muntele Rosu 86.60 316 ⇓*iP* **P 14 53 51.3 +0.9**
KMBO Kilima Mbogo 87.39 268 P **P 14 53 55.5 +0.6**
comp=Z,3.9nm,0.7s,mb4.7,baz=180,slow=20,SNR=2.5
UZH Uzhgorod 88.12 320 *d iP* **P 14 53 57.6 -0.1**
UZH *e* 14 54 02.8
DRGR 88.40 318 ⇑P **P 14 54 00.3 +1.3**
DRGR 88.40 318 ⇑*iP* **P 14 54 00.3 +1.3**
STHS Stebnicka Huta 88.53 320 *eP* **P 14 53 58.8 -0.8**
comp=Z,2.7nm,1.1s,mb4.5
STHS Stebnicka Huta 88.53 320 *eP* **P 14 53 58.8 -0.8**
STHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.5
STHS Stebnicka Huta 88.53 320 *eP* **P 14 53 58.8 -0.8**
CRVS Cervenica-Dubn 88.56 320 *eP* **P 14 54 00.1 +0.4**
comp=Z,7.7nm,0.9s,mb5.0
CRVS Cervenica-Dubn 88.56 320 *eP* **P 14 54 00.1 +0.4**
CRVS pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
CRVS Cervenica-Dubn 88.56 320 *eP* **P 14 54 00.1 +0.4**
VTS Vitosha 89.29 314 ⇑P **P 14 54 07.8 +4.5**
VTS Vitosha 89.29 314 ⇑*iP* **P 14 54 07.8 +4.5**
NOA NORSAR Array B 89.46 333 P **P 14 54 03.4 -0.3**
comp=Z,1.3nm,0.6s,mb4.4,baz=67,slow=4.7,SNR=4.1
VYHS Vyhne 90.33 320 *eP* **P 14 54 06.7 -1.4**
comp=Z,8.8nm,2.2s,mb4.7
VYHS *e* 14 54 13.0
VYHS Vyhne 90.33 320 *eP* **P 14 54 06.7 -1.4**
VYHS *e* 14 54 13.0
VYHS pmax pmax
comp=Z,9.0nm,2.2s,mb4.7
VYHS Vyhne 90.33 320 *eP* **P 14 54 06.7 -1.4**
VYHS *ep*P pP 14 54 13.0 -9.1
YKA Yellowknife Ar 92.02 23 P **P 14 54 15.2 -0.4**
comp=Z,0.6nm,0.8s,mb4.0,baz=301,slow=4.1,SNR=3.6
CLL Colim 92.75 324 P **P 14 54 23.0 +3.8**
CLL Colim 92.75 324 *e*(sP) PcP 14 54 23.0 +3.1
comp=Z,12nm,1.7s
KHC Kasperske Hory 93.32 322 *eP* **P 14 54 22.3 +0.4**
KHC AMS AMS 15 41 30.0
comp=Z,100nm,15.5s
LPG La Plagne 99.09 321 *eP* **P 14 54 52.9 +4.7**
comp=Z,10nm,0.9s,mb5.0
LPG La Plagne 99.09 321 *eP* **P 14 54 52.9 +4.7**
comp=Z,5.1nm,0.9s,mb5.0
LPG La Plagne 99.09 321 *eP* **P 14 54 52.9 +4.7**
LPG pmax pmax
comp=Z,5.0nm,0.9s,mb5.0
LPL La Plagne 99.09 321 *eP* **P 14 54 52.9 +4.7**
comp=Z,6.8nm,0.7s,mb5.0
LPL La Plagne 99.09 321 *eP* **P 14 54 52.9 +4.7**
comp=Z,3.4nm,0.7s,mb5.0
LPL La Plagne 99.09 321 *eP* **P 14 54 52.9 +4.7**
LPL pmax pmax
comp=Z,3.0nm,0.7s,mb4.9
NVAR Mina Array Bea 102.33 46 P Pdif 14 55 03.4 +1.0
comp=Z,0.1nm,0.3s,baz=272,slow=6.2,SNR=2.7
TXAR Lajitas Array 117.42 47 PKP PKPdf 14 59 51.6 -1.5
comp=Z,2.5nm,0.9s,baz=267,slow=3.5,SNR=2.3
LPAZ La Paz 167.53 107 PKP PKPdf 15 01 14.5 +0.7
comp=Z,0.3nm,0.5s,baz=258,slow=2.6,SNR=2.2

IDC ***17*** *15:04:53.5±6.9, 20.°99S×178.°76W, h555km±75km, mb3.1/4, mb1 3.4/5, mb1mx3.0/14, mbtmp3.2/5, Error ellipse: s-maj=47.4km s-min=34.0km az=19.0*
ISCJB ***17*** *15:04:58.6±1.4, 21.°2S±0.°2×179.°0W±0.°2, h625km±16km, mb3.6/4, Error ellipse: s-maj=32.3km s-min=21.3km az=22.3*
NEIC ***17*** *15:04:59.2±1.6, 21.°09S×178.°93W, h619km±15km, Error ellipse: s-maj=31.9km s-min=19.7km az=116.0*
ISC 17 15:04:59.1±1.5, 21.°2S±0.°2×178.°9W±0.°2, h612km±16km, n19, σ1°28/12, mb3.6/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.45**	**320**	*eP*	**P**	**15 08 28.5**	**-0.2**
DZM	**Mont Dzumac**	**13.64**	**264**	*eP*	**P**	**15 07 55.8**	**+1.5**
OUZ	**Omahuta**	**15.47**	**204**	*eP*	**P**	**15 08 13.7**	**+2.8**
URZ	**Urewera**	**17.38**	**190**	*eP*	**P**	**15 08 27.1**	**-1.3**
URZ	**Urewera**	**17.38**	**190**	P	**P**	**15 08 27.0**	**-1.3**
	1.8nm,0.3s,baz=49,slow=9.3,SNR=9.9						
EIDS	**Eidsvold**	**27.84**	**256**	P	**P**	**15 10 01.3**	**-0.4**
STKA	**Stephens Creek**	**36.72**	**245**	*eP*	**P**	**15 11 16.8**	**+0.4**
	0.3nm,0.5s,mb3.1						
STKA	**Stephens Creek**	**36.72**	**245**	P	**P**	**15 11 16.5**	**0.0**
	1.2nm,0.4s,mb3.7,baz=88,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**43.53**	**258**	P	**P**	**15 12 10.0**	**-0.6**
	3.6nm,0.5s,mb4.1,baz=93,slow=8.3,SNR=139						
ASAR				PcP	PcP	15 13 44.4	+0.1
	0.5nm,0.6s,baz=98,slow=3.8,SNR=5.4						
WRA	**Warramunga Arr**	**43.66**	**263**	P	**P**	**15 12 10.5**	**-1.2**
	1.6nm,0.3s,mb4.0,baz=97,slow=7.2,SNR=49						
PPLA	**Purkeypile**	**86.40**	**12**	*eP*	**P**	**15 16 39.4**	**+2.1**
ILAR	**Eielson Array**	**89.15**	**13**	P	**P**	**15 16 48.9**	**-1.2**
	0.1nm,0.4s,mb3.0,baz=213,slow=5.4,SNR=7.5						
BVAR	**Borovoye Array**	**119.02**	**320**	PKP	PKPdf	15 22 38.4	-0.7
	0.4nm,0.3s,baz=107,slow=3.5,SNR=4.1						
ARCES	**ARCESS Array B**	**129.41**	**349**	PKP	PKPdf	15 22 57.8	-0.7
	2.6nm,0.9s,baz=355,slow=6.1,SNR=4.0						
FINES	**FINESS Array B**	**136.15**	**343**	PKP	PKPdf	15 23 11.5	+0.1
	4.1nm,1.1s,baz=116,slow=8.7,SNR=3.6						
NOA	**NORSAR Array B**	**139.52**	**352**	PKhKP	PKPpre	15 23 10.8	
	0.6nm,0.6s,baz=17,slow=1.8,SNR=2.7						
AKASG	**Malin Array Be**	**143.16**	**330**	PKP	PKPdf	15 23 21.6	-2.8
	1.7nm,0.3s,baz=42,slow=4.3,SNR=11						
BRTR	**Keskin Array B**	**146.63**	**311**	PKPbc	PKPbc	15 23 32.9	-0.5
	0.5nm,0.5s,baz=144,slow=6.1,SNR=4.1						
MMAI	**Mount Meron Ar**	**147.38**	**298**	PKPbc	PKPbc	15 23 36.2	+0.6
	0.9nm,0.4s,baz=98,slow=4.4,SNR=2.8						

IDC ***17*** *15:20:35.6±1.0, 34.°55N×73.°22E, h0km, mb3.7/7, mb1 3.7/11, mb1mx3.5/27, mbtmp3.6/11, ML3.5/4, MS2.5/1, Ms1 2.5/1, ms1mx2.2/38, Error ellipse: s-maj=29.2km s-min=18.7km az=59.0*
ISCJB ***17*** *15:20:39.4±0.9, 34.°72N±0.°05×73.°53E±0.°08, h41km±11km, mb3.5/6, Error ellipse: s-maj=13.3km s-min=5.4km az=143.5*
NEIC ***17*** *15:20:44.7±1.3, 34.°68N×73.°22E, h72km±12km, mb3.4/1, Error ellipse: s-maj=12.4km s-min=10.8km az=119.0*
NNC ***17*** *15:20:45.9±3.0, 34.°99N×72.°03E, h0km, mb3.5, mpv3.9, Error ellipse: s-maj=33.4km s-min=25.2km az=88.0*
ISC 17 15:20:39.9±1.7, 34.°68N±0.°05×73.°44E±0.°08, h27km±15km, n35, σ1°16/39, mb3.5/6, 6D, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMU	**Jammu**	**2.31**	**148**	*eS*	**Sb**	**15 21 49.0**	**+0.1**
KBL	**Kabul**	**3.63**	**269**	*eP*	**Pn**	**15 21 36.4**	**+2.0**
SDNR	**Sundarnagar**	**4.34**	**136**	*ex*	**Pn**	**15 21 46.5**	**+2.4**
SDNR				*ex*	**Sn**	**15 22 37.5**	**+3.7**
SMLA	**Simla**	**4.73**	**138**	*i x*	**Pn**	**15 21 51.4**	**+1.9**
SMLA				*i x*	x	15 22 47.0	
SMLA				⇓		15 22 50.0	
	comp=E,794nm,0.2s						
SMLA				⇓		15 22 50.2	
	comp=N,720nm,0.2s						
KSH	**Kashi**	**5.23**	**22**	Pn	**Pn**	**15 21 57.6**	**+1.2**
KSH				Sn	**Sn**	**15 22 50.1**	**-5.7**
KSH				smax			
	comp=N,23nm,0.3s						
KSH				smax			

	comp=E,22nm,0.2s							
AML	**Almayashu**	**7.44**	**1**	*e*P		**Pn**	**15 22 30.8**	**+4.1**
	comp=E,5.3nm,0.4s							
EKS2	**Erkin-Say**	**7.97**	**2**	*e*P		**Pn**	**15 22 38.9**	**+4.9**
KK31	**Karatay Array**	**8.71**	**346**	⇓P		**Pn**	**15 22 46.2**	**+2.1**
	comp=E,1.8nm,0.3s,baz=170,slow=13,SNR=77							
KK31				⇓S		**Sn**	**15 24 21.0**	**-0.5**
	comp=E,2.0nm,0.4s,baz=171,slow=22,SNR=8.3							
GKN	**Gorkha**	**11.65**	**122**	*e*P		**Pn**	**15 23 24.1**	**-0.4**
	comp=E,7.7nm,0.3s							
DMN	**Daman**	**12.22**	**122**	*e*P		**Pn**	**15 23 31.3**	**-0.9**
	comp=E,12nm,0.4s							
KKN	**Kakani**	**12.23**	**121**	*e*P		**Pn**	**15 23 31.8**	**-0.6**
	comp=E,8.5nm,0.4s							
PKIN	**Phulchoki**	**12.45**	**121**	*e*P		**Pn**	**15 23 33.9**	**-1.4**
	comp=E,5.3nm,0.4s							
PKI	**Pulchoki**	**12.46**	**121**	*e*P		**Pn**	**15 23 35.6**	**+0.1**
	comp=E,7.3nm,0.3s							
GUN	**Gumba**	**12.59**	**119**	*e*P		**Pn**	**15 23 37.5**	**+0.2**
	comp=E,21nm,0.5s							
JIRN	**Jiri**	**12.96**	**119**	*e*P		**Pn**	**15 23 42.1**	**-0.2**
	comp=E,21nm,0.5s							
RAMN	**Ramite**	**13.68**	**121**	*e*P		**Pn**	**15 23 50.7**	**-1.4**
MKAR	**Makanchi Array**	**13.82**	**26**	Pn		**Pn**	**15 23 54.5**	**+0.5**
	comp=E,0.0nm,0.3s,baz=200,slow=12,SNR=2.3							
TAPN	**Taplejung**	**14.24**	**117**	*e*P		**Pn**	**15 23 58.5**	**-1.3**
ODAN	**Odare**	**14.29**	**119**	*e*P		**Pn**	**15 23 59.4**	**-1.1**
	comp=E,7.1nm,0.5s							
KURK	**Kurchatov**	**16.46**	**12**	*e*P		**Pn**	**15 24 32.6**	**+3.7**
KURK	**Kurchatov**	**16.46**	**12**	Pn		**Pn**	**15 24 27.3**	**-1.5**
	comp=E,0.0nm,0.3s,baz=203,slow=11,SNR=2.6							
AB31	**Akbulak array**	**17.64**	**330**	P		**Pn**	**15 24 41.8**	**-1.9**
	comp=E,0.3nm,0.3s,baz=195,slow=1.8,SNR=20							
AB31				⇓S		**Sn**	**15 27 49.9**	**-9.4**
	comp=E,0.6nm,0.7s							
ABKAR	**Akbulak array**	**17.64**	**330**	*e*P		**Pn**	**15 24 42.9**	**-0.8**
	comp=E,1.0nm,0.4s							
BVAR	**Borovoye Array**	**18.47**	**354**	P		**Pn**	**15 24 53.8**	**+0.1**
	comp=E,0.5nm,0.3s,baz=158,slow=9.0,SNR=6.9							
BVAR				LR		LR	15 32 00.5	
	comp=E,15nm,20.2s,baz=124,slow=37							
AKTK	**Aktyubinsk**	**19.35**	**329**	P		**Pn**	**15 25 03.2**	**-1.2**
AKTO	**Aktyubinsk**	**19.35**	**329**	⇓P		**Pn**	**15 25 03.6**	**-0.8**
	comp=E,0.5nm,0.8s							
AKTO	**Aktyubinsk**	**19.35**	**329**	P		**Pn**	**15 25 03.2**	**-1.2**
	comp=E,0.5nm,0.3s,baz=148,slow=10,SNR=9.7							
ZAA0	**Zalesovo Array**	**20.86**	**19**	*e*P		**P**	**15 25 20.5**	**+1.0**
ZALV	**Zalesovo Beam**	**20.86**	**19**	P		**P**	**15 25 20.7**	**+1.1**
	comp=E,2.2nm,0.5s,baz=211,slow=11,SNR=13							
CMAR	**Chiang Mai Arr**	**27.84**	**119**	P		**P**	**15 26 27.9**	**+0.8**
	comp=E,0.5nm,0.9s,mb3.1,baz=302,slow=10,SNR=3.2							
FINES	**FINESS Array B**	**40.10**	**327**	P		**P**	**15 28 12.7**	**-0.1**
	comp=E,0.9nm,0.6s,mb3.6,baz=119,slow=14,SNR=3.5							
ARCES	**ARCESS Array B**	**43.58**	**338**	P		**P**	**15 28 41.8**	**+0.6**
	comp=E,1.1nm,0.7s,mb3.7,baz=112,slow=7.6,SNR=9.8							
TORD	**Torodi Ar. Bea**	**67.70**	**271**	P		**P**	**15 31 33.5**	**-1.7**
	comp=E,0.7nm,0.6s,mb3.9,baz=44,slow=6.4,SNR=5.7							
WRA	**Warramunga Arr**	**79.34**	**123**	P		**P**	**15 32 44.0**	**+0.6**
	comp=E,0.4nm,0.6s,mb3.5,baz=324,slow=5.0,SNR=4.8							
ASAR	**Alice Springs**	**81.58**	**126**	P		**P**	**15 32 56.0**	**+0.7**
	comp=E,0.2nm,0.6s,mb3.2,baz=308,slow=5.0,SNR=5.6							

*GUC **17** 15:25:55.5±0.8,31.60°×68.59°W,h145km,MD3.7,ML4.0*
*ISCJB **17** 15:25:56.8±0.5,31.77°S±0.05°×68.34°W±0.07,h112km±5km, mb3.8/6,Error ellipse: s-maj=10.7km s-min=6.3km az=32.4*
*IDC **17** 15:25:57.0±0.8,31.83°S×68.29°W,h104km±4km,mb3.7/5, mb1 3.9/7,mb1mx3.8/15,mbtmp3.7/7,Error ellipse: s-maj=29.2km s-min=19.8km az=69.0*
*NEIC **17** 15:25:57.5±0.5,31.82°S×68.32°W,h108km±5km,mb3.7/1, MD3.7(GUC),Error ellipse: s-maj=11.6km s-min=6.3km az=109.0*

ISC 17 15:25:57.7±0.5,31.78°S±0.05°×68.32°W±0.07°,h108km±5km, n45,σ0°93/52,mb3.8/6,11C-9D,San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.19**	**22**	P			**Pn**	**15 26 12.8**	**0.0**
	65nm,0.3s,baz=207,slow=4.5,SNR=5073								
CFAA				S			**Sn**	**15 26 24.3**	**+0.3**
	119nm,0.3s,baz=11,slow=19,SNR=158								
FCH	**Farellones**	**2.27**	**227**	⇑*i*P			**Pn**	**15 26 34.6**	**+0.7**
FCH				*i* S			**Sn**	**15 27 04.7**	**+3.0**
FCH	**Farellones**	**2.27**	**227**	⇑*i*P			**Pn**	**15 26 34.6**	**+0.7**
FCH				*i* S			**Sn**	**15 27 04.7**	**+3.0**
FCH				AML		AML		15 27 08.8	
	comp=E,446nm,0.3s								
PEL	**Peldehue**	**2.41**	**235**	⇓*i*P			**Pn**	**15 26 35.4**	**-0.5**
PEL				*i* S			**Sn**	**15 27 05.0**	**-0.2**
CLCH	**Cerro Calan**	**2.46**	**229**	⇓*i*P			**Pn**	**15 26 35.9**	**-0.6**
CLCH				*i* S			**Sn**	**15 27 07.6**	**+1.2**
CLCH				AML		AML		15 27 12.0	
	comp=E,564nm,0.7s								
CLCH				AML		AML		15 27 16.4	
	comp=E,715nm,0.5s								
ROCH	**El Roble**	**2.56**	**242**	⇓*i*P			**Pn**	**15 26 37.0**	**-0.8**
ROCH				*i* S			**Sn**	**15 27 08.2**	**-0.4**
ROCH	**El Roble**	**2.56**	**242**	⇑*i*P			**Pn**	**15 26 37.0**	**-0.8**
ROCH				⇓*i*P				15 26 37.0	
ROCH				*i* S			**Sn**	**15 27 08.0**	**-0.7**
ROCH				*i* S			**Sn**	**15 27 08.2**	**-0.4**
ROCH				AML		AML		15 27 13.5	
	comp=N,592nm,0.3s								
SAN	**Santiago**	**2.58**	**229**	*e*P			**Pn**	**15 26 37.7**	**-0.3**
SAN				*i* S			**Sn**	**15 27 09.2**	**+0.2**
SAN	**Santiago**	**2.58**	**229**	*e*P			**Pn**	**15 26 37.7**	**-0.3**
SAN				*i* S			**Sn**	**15 27 09.2**	**+0.2**
LMEL	**Las Melosas**	**2.60**	**217**	⇑*i*P			**Pn**	**15 26 38.4**	**+0.2**
LMEL	**Las Melosas**	**2.60**	**217**	⇑*i*P			**Pn**	**15 26 38.4**	**+0.2**
PCH	**Pirque**	**2.60**	**225**	⇑*i*P			**Pn**	**15 26 38.5**	**+0.2**
PCH	**Pirque**	**2.60**	**225**	⇑*i*P			**Pn**	**15 26 38.5**	**+0.2**
ANTU	**Antumapu**	**2.64**	**227**	AML		AML		15 27 17.6	
	comp=N,485nm,0.5s								
CHNG	**Los Chungos**	**2.71**	**267**	⇓*i*P			**Pn**	**15 26 36.5**	**-3.2**
CHNG				*i* S			**Sn**	**15 27 08.0**	**-4.0**
CHNG				AML		AML		15 27 17.8	
	comp=E,355nm,0.4s								
OVCH	**Ovalle**	**2.73**	**295**	⇓*i*P			**Pn**	**15 26 40.3**	**+0.3**
OVCH				*i* S			**Sn**	**15 27 11.8**	**-0.7**
OVCH	**Ovalle**	**2.73**	**295**	⇓*i*P			**Pn**	**15 26 40.3**	**+0.3**
OVCH				*i* S			**Sn**	**15 27 11.8**	**-0.7**
OVCH				AML		AML		15 27 13.3	
	comp=N,1μm,0.6s								
TACH	**Talagante**	**2.89**	**229**	⇑*i*P			**Pn**	**15 26 41.2**	**-0.8**
TACH	**Talagante**	**2.89**	**229**	⇑*i*P			**Pn**	**15 26 41.2**	**-0.8**
CHCH	**Chadas Angostu**	**2.91**	**222**	⇑*i*P			**Pn**	**15 26 42.3**	**0.0**
CHCH	**Chadas Angostu**	**2.91**	**222**	⇑*i*P			**Pn**	**15 26 42.3**	**0.0**
CACH	**El Canelo**	**3.01**	**219**	⇓*i*P			**Pn**	**15 26 44.0**	**+0.3**
CACH				*i* S			**Sn**	**15 27 20.6**	**+1.4**
CACH	**El Canelo**	**3.01**	**219**	⇓*i*P			**Pn**	**15 26 44.0**	**+0.3**
CACH				*i* S			**Sn**	**15 27 20.6**	**+1.4**
LCCH	**Las Cruces**	**3.22**	**238**	*e*P			**Pn**	**15 26 44.6**	**-1.8**
LCCH	**Las Cruces**	**3.22**	**238**	*e*P			**Pn**	**15 26 44.6**	**-1.8**
LCO	**Las Campanas**	**3.44**	**323**	*e*P			**Pn**	**15 26 49.9**	**+0.4**
LPAZ	**La Paz**	**15.43**	**1**	*e*P			**Pn**	**15 29 30.0**	**+0.6**
LPAZ	**La Paz**	**15.43**	**1**	P			**Pn**	**15 29 30.4**	**+0.9**
	comp=N,0.4nm,0.3s,baz=184,slow=6.4,SNR=8.7								
SIV	**San Ignacio**	**17.05**	**24**	P			**Pn**	**15 29 49.5**	**0.0**
	comp=N,0.5nm,0.3s,baz=213,slow=12,SNR=24								
VNA3	**Neumayer Olymp**	**50.26**	**159**	*e*			**P**	**15 34 39.8**	**-2.7**
VNA3				*e*				15 34 43.4	
VNA3				*e*			pP	15 35 06.1	-1.8
TXAR	**Lajitas Array**	**69.44**	**327**	P			**P**	**15 36 54.9**	**+0.7**
	comp=N,0.7nm,0.6s,mb3.6,baz=153,slow=8.4,SNR=15								
BOSA	**Boshof**	**78.29**	**116**	P			**P**	**15 37 45.8**	**-0.3**
	comp=N,3.8nm,1.1s,mb4.0,baz=243,slow=4.5,SNR=3.0								
LBTB	**Lobatse**	**80.35**	**113**	*e*P			**P**	**15 37 57.3**	**0.0**
LBTB	**Lobatse**	**80.35**	**113**	P			**P**	**15 37 57.2**	**-0.1**
	comp=N,0.9nm,0.3s,mb4.0,baz=246,slow=7.6,SNR=3.2								
TORD	**Torodi Ar. Bea**	**80.50**	**68**	P			**P**	**15 37 57.5**	**-0.6**
TORD				pP			pP	15 38 25.4	-0.3
TORD	**Torodi Ar. Bea**	**80.50**	**68**	P			**P**	**15 37 57.5**	**-0.6**
	comp=N,0.7nm,0.7s,mb3.6,baz=236,slow=6.9,SNR=3.4								
TORD				pP			pP	15 38 25.4	-0.3
	comp=N,1.6nm,0.7s,baz=215,slow=4.8,SNR=6.8								
NVAR	**Mina Array Bea**	**83.93**	**323**	P			**P**	**15 38 16.5**	**+1.0**
	comp=N,0.8nm,0.8s,mb3.6,baz=161,slow=6.3,SNR=5.9								
MCMT	**McKenzie Canyo**	**86.34**	**330**	*e*P			**P**	**15 38 28.6**	**+1.3**
	comp=N,0.6nm,0.6s,mb3.7								
ASAR	**Alice Springs**	**120.91**	**204**	PKP		PKPdf		15 44 35.9	-1.9
	comp=N,0.3nm,0.5s,baz=137,slow=1.6,SNR=6.9								
WRA	**Warramunga Arr**	**124.17**	**206**	PKP		PKPdf		15 44 42.7	-1.4
WRA				pPKP		pPKPdf		15 45 11.4	-2.1
WRA	**Warramunga Arr**	**124.17**	**206**	PKP		PKPdf		15 44 42.7	-1.4
	comp=N,0.7nm,0.5s,baz=160,slow=1.6,SNR=10								
WRA				pPKP		pPKPdf		15 45 11.4	-2.1
	comp=N,0.3nm,0.6s,baz=159,slow=1.7,SNR=2.2								
EKS2	**Erkin-Say**	**148.17**	**59**	*e*PKPbc		PKPbc		15 45 31.6	+0.8
ZALV	**Zalesovo Beam**	**150.68**	**33**	PKPbc		PKPbc		15 45 36.7	+0.1
ZALV				pPKPbc		pPKPbc		15 46 05.7	-0.1
ZALV	**Zalesovo Beam**	**150.68**	**33**	PKPbc		PKPbc		15 45 36.7	+0.1
	comp=N,4.5nm,0.6s,baz=309,slow=3.0,SNR=28								
ZALV				pPKPbc		pPKPbc		15 46 05.7	0.0
	comp=N,2.7nm,0.6s,baz=318,slow=3.3,SNR=7.4								
MKAR	**Makanchi Array**	**152.96**	**48**	PKPbc		PKPbc		15 45 41.8	-0.2
	comp=N,1.1nm,0.9s,baz=318,slow=1.6,SNR=5.1								
MKAR				PKPab		PKPab		15 45 53.1	-0.6
	comp=N,0.7nm,0.6s,baz=296,slow=3.7,SNR=5.9								
MKAR				pPKPbc		pPKPbc		15 46 10.2	-1.1
	comp=N,0.2nm,0.5s,baz=325,slow=2.3,SNR=1.8								

*ISCJB **17** 15:28:01.8±0.7,6.52N±0.10°×60.0E±0.2,h10km,mb3.6/10, MS3.5/5,Error ellipse: s-maj=22.0km s-min=13.8km az=11.0*
*IDC **17** 15:28:01.8±1.9,6.49N×59.95E,h0km,mb3.6/9,mb1 3.7/9, mb1mx3.6/22,mbtmp3.6/9,MS3.4/6,Ms1 3.5/6, ms1mx3.2/34,Error ellipse: s-maj=49.5km s-min=25.9km az=49.0*
*NEIC **17** 15:28:04.1±0.6,6.53N×60.05E,h10km,mb4.4/1,Error ellipse: s-maj=19.2km s-min=13.6km az=108.0*

ISC 17 15:28:03.9±0.7,6.54N±0.10°×60.0E±0.2,h10km,n15, σ0°88/13,mb3.6/10,MS3.5/5,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSEY	**Mahe Island**	**12.02**	**202**	*e*P			**Pn**	**15 30 55.6**	**+0.2**
ATD	**Arta Tunnel**	**17.64**	**288**	LR		LR		15 38 09.0	
	comp=Z,71nm,19.5s,baz=175,slow=34								
MMAI	**Mount Meron Ar**	**34.87**	**322**	LR		LR		15 48 58.0	
	comp=Z,102nm,19.1s,MS3.6,baz=115,slow=36								
EKS2	**Erkin-Say**	**37.98**	**17**	*e*P			**P**	**15 35 24.7**	**+2.8**
	9.0nm,1.2s,mb4.4								
CMAR	**Chiang Mai Arr**	**39.73**	**69**	P			**P**	**15 35 37.6**	**+0.6**
	2.6nm,1.2s,mb3.8,baz=260,slow=8.9,SNR=7.6								
CMAR				LR		LR		15 51 42.5	
	comp=Z,69nm,18.5s,MS3.5,baz=308,slow=36								
BRTR	**Keskin Array B**	**40.65**	**328**	P			**P**	**15 35 44.5**	**+0.1**
	0.2nm,0.4s,mb3.1,baz=176,slow=3.9,SNR=2.5								
BRTR				LR		LR		15 52 48.2	
	comp=Z,52nm,20.3s,MS3.4,baz=356,slow=36								
MKAR	**Makanchi Array**	**44.45**	**22**	P			**P**	**15 36 13.4**	**-1.7**
	0.2nm,0.5s,mb3.1,baz=193,slow=4.4,SNR=2.5								
MKAR				LR		LR		15 55 55.4	
	comp=Z,58nm,20.1s,MS3.5,baz=50,slow=38								
KURK	**Kurchatov**	**46.69**	**16**	P			**P**	**15 36 32.5**	**-0.2**
	0.5nm,0.8s,mb3.5,baz=215,slow=8.2,SNR=2.9								
AKASG	**Malin Array Be**	**50.93**	**335**	P			**P**	**15 37 05.1**	**-0.2**
	0.2nm,0.3s,mb3.6,baz=143,slow=7.9,SNR=3.3								
ZALV	**Zalesovo Beam**	**51.37**	**19**	P			**P**	**15 37 08.3**	**-0.3**
ZALV				LR		LR		16 00 05.6	
ZALV	**Zalesovo Beam**	**51.37**	**19**	P			**P**	**15 37 08.3**	**-0.3**
	0.3nm,0.2s,mb3.8,baz=254,slow=5.4,SNR=4.3								
ZALV				LR		LR		16 00 05.6	
	comp=Z,36nm,19.0s,MS3.4,baz=240,slow=37								
SONM	**Songino Array**	**56.96**	**36**	P			**P**	**15 37 50.0**	**+0.5**
	0.6nm,0.9s,mb3.6,baz=288,slow=5.9,SNR=3.3								
WRA	**Warramunga Arr**	**77.65**	**112**	P			**P**	**15 40 00.6**	**-0.6**
	1.2nm,1.1s,mb3.7,baz=277,slow=7.4,SNR=2.7								
ASAR	**Alice Springs**	**78.04**	**116**	P			**P**	**15 40 03.2**	**-0.1**
ASAR	**Alice Springs**	**78.04**	**116**	P			**P**	**15 40 03.2**	**-0.1**
	0.6nm,0.8s,mb3.6,baz=283,slow=5.7,SNR=4.9								

*IDC **17** 15:37:27.2±4.6,38.11N×75.54E,h0km,mb3.7/2, mb1 3.6/4,mb1mx3.3/24,mbtmp3.5/4,ML3.2/2,MS3.9/1, Ms1 3.9/1,ms1mx2.4/28,Error ellipse: s-maj=82.1km s-min=40.2km az=175.0*
*NEIC **17** 15:37:30.8±2.9,37.82N×75.75E,h35km,Error ellipse: s-maj=38.3km s-min=20.6km az=200.0*

ISC 17 15:37:29.1±2.2,37.7N±0.2×75.6E±0.2,h35km,n13, σ1°93/13,mb3.6/2,1C-2D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**4.65**	**350**	*e*P			**Pn**	**15 38 36.7**	**-0.1**
AML	**Almayashu**	**4.71**	**342**	*e*P			**Pn**	**15 38 37.4**	**-0.2**
AAK	**Ala-Archa**	**5.05**	**351**	*e*P			**Pn**	**15 38 43.1**	**+0.9**
EKS2	**Erkin-Say**	**5.20**	**345**	*e*P			**Pn**	**15 38 45.0**	**+0.7**
	3.2nm,0.7s								
KK31	**Karatay Array**	**6.69**	**326**	⇓Pn			**Pn**	**15 39 04.8**	**-0.1**
	0.8nm,0.4s,baz=137,slow=11,SNR=25								
KK31				⇓Sn			**Sn**	**15 40 20.2**	**+0.3**
	1.0nm,0.5s,baz=142,slow=14,SNR=3.1								
KK31				⇑Lg				15 40 43.7	
	5.2nm,1.0s								
MKAR	**Makanchi Array**	**10.38**	**26**	Pn			**Pn**	**15 39 52.7**	**-2.7**
	0.1nm,0.3s,baz=202,slow=15,SNR=3.7								
BVAR	**Borovoye Array**	**15.80**	**348**	Pn			**Pn**	**15 41 09.8**	**+1.2**
	0.3nm,0.3s,baz=153,slow=11,SNR=11								
AB31	**Akbulak array**	**16.21**	**321**	Pn			**Pn**	**15 41 12.6**	**-1.4**
	0.3nm,0.4s,baz=109,slow=16,SNR=4.4								
ZALV	**Zalesovo Beam**	**17.49**	**18**	P			**Pn**	**15 41 29.0**	**-1.0**
	0.2nm,0.3s,baz=214,slow=10,SNR=3.4								
SONM	**Songino Array**	**24.64**	**56**	P			**P**	**15 42 47.7**	**+1.6**
	0.5nm,0.7s,mb3.2,baz=255,slow=9.8,SNR=4.1								
FINES	**FINESS Array B**	**38.65**	**324**	P			**P**	**15 44 48.5**	**-0.3**
FINES	**FINESS Array B**	**38.65**	**324**	P			**P**	**15 44 48.5**	**-0.3**
	2.9nm,1.0s,mb4.0,baz=120,slow=11,SNR=4.5								
DAV	**Davao City (W)**	**54.47**	**111**	LR		LR		16 11 23.1	
	comp=Z,108nm,20.0s,baz=326,slow=37								

*ISCJB **17** 15:39:07.0±0.4,52.25S±0.06°×4.4W±0.1,h10km,mb4.8/30, MS5.2/28,Error ellipse: s-maj=11.1km s-min=8.9km az=179.9*
*IDC **17** 15:39:06.7±0.5,52.90S×4.57W,h0km,mb4.4/14, mb1 4.4/14,mb1mx4.4/17,mbtmp4.4/14,MS5.0/20, Ms1 5.0/20,ms1mx5.0/21,Error ellipse: s-maj=18.2km s-min=16.9km az=114.0*
*NEIC **17** 15:39:08.4±0.3,52.87S×4.45W,h10km,mb5.0/15, MS5.1/8,Error ellipse: s-maj=12.0km s-min=10.7km az=149.0*
*GCMT **17** 15:39:12.6,52.94S×4.09W,h15km,MW5.6,Moment Tensor Solution. s80,c138; s56,c62; Moment tensor: Scale 10^17Nm; Mrr=0.05±.04; Mθθ=3.17±.04; Mφφ=3.22±.04; Mrθ=0.21±.11; Mθφ=0.38±.03; Mφr=-0.32±.11; Best double couple: Mo=3.20000×10^17 NP1:φs=228.00000°,δ=83.00000°, λ=1.00000°. NP2:φs=138.00000°,δ=89.00000°,λ=173.00000°. Principal axes: T 3.2700, Plg5.0000°, Azm93.0000°; N -0.0600, Plg83.0000°, Azm311.0000°; P -3.2100, Plg4.0000°, Azm184.0000°; Data Used: II IU IC G CN. Surface waves: sta=110, comp=223, per= 50.*

ISC 17 15:39:08.6±0.4,52.94S±0.06°×4.4W±0.1,h10km,n103, σ1°96/43,mb4.8/30,MS5.2/28,1D,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**17.86**	**184**	*e*			**Pn**	**15 43 16.6**	**-0.2**
MAIT	**Maitri**	**19.33**	**164**	*e*P			**Pn**	**15 43 35.2**	**+0.6**
MAIT				*e*S			**Sn**	**15 47 19.0**	**+8.0**
SYO	**Syowa Base**	**25.92**	**145**	⇓*e*P			**P**	**15 44 38.2**	**-2.2**
SUR	**Sutherland**	**27.44**	**52**	LR		LR		15 52 30.3	
	comp=Z,2μm,20.1s,MS4.6,baz=40,slow=29								
PMSA	**Palmer Station**	**31.74**	**225**	LR		LR		15 55 53.5	
	comp=Z,1μm,18.2s,MS4.6,baz=115,slow=32								
BOSA	**Boshof**	**32.70**	**54**	*e*P			**P**	**15 45 40.6**	**-0.3**
	29nm,1.6s,mb5.0								
BOSA				LR		LR			
	comp=Z,2μm,22.0s,MS4.8								
BOSA	**Boshof**	**32.70**	**54**	P			**P**	**15 45 40.5**	**-0.4**
	comp=Z,6.4nm,1.1s,mb4.5,baz=234,slow=6.7,SNR=4.3								
BOSA				PcP		PcP		15 48 27.9	+1.5
	comp=Z,3.1nm,0.8s,baz=243,slow=2.3,SNR=2.4								
BOSA				LR		LR		15 55 15.8	
	comp=Z,1μm,21.0s,MS4.6,baz=218,slow=30								
MAW	**Mawson**	**34.44**	**141**	*e*P			**P**	**15 45 55.2**	**-0.5**
	comp=Z,2.1nm,0.6s,mb4.2								
MAW				LR		LR			
	comp=Z,5μm,19.0s,MS5.3								
MAW	**Mawson**	**34.44**	**141**	P			**P**	**15 45 55.3**	**-0.4**
	comp=Z,8.3nm,1.0s,mb4.6,baz=259,slow=8.8,SNR=13								
MAW				LR		LR		15 57 17.0	
	comp=Z,3μm,19.6s,MS5.1,baz=271,slow=32								
LBTB	**Lobatse**	**35.89**	**51**	*e*P			**P**	**15 46 08.8**	**+0.1**
	comp=Z,12nm,0.9s,mb4.8								
LBTB				LR		LR			
	comp=Z,2μm,19.0s,MS4.8								
LBTB	**Lobatse**	**35.89**	**51**	P			**P**	**15 46 08.5**	**-0.1**
	comp=Z,6.8nm,0.7s,mb4.7,baz=240,slow=7.9,SNR=4.0								
LBTB				PcP		PcP		15 48 36.7	+1.0
	comp=Z,3.9nm,0.9s,baz=197,slow=5.0,SNR=1.7								
LBTB				LR		LR		15 59 22.0	
	comp=Z,648nm,18.2s,MS4.4,baz=224,slow=34								
USHA	**Ushuaia**	**36.61**	**241**	LR		LR		15 58 05.1	
	comp=Z,3μm,18.8s,MS5.1,baz=78,slow=31								
QSPA	**South Pole Qui**	**37.31**	**180**	P			**P**	**15 46 21.0**	**+0.7**
	comp=Z,16nm,0.8s,mb4.9,baz=225,slow=4.6,SNR=72								
QSPA				PcP		PcP		15 48 40.7	+1.6
	comp=Z,11nm,0.9s,baz=280,slow=2.0,SNR=3.9								
QSPA				LR		LR		16 00 48.3	
	comp=Z,7μm,19.9s,MS5.5,baz=200,slow=35								
TSUM	**Tsumeb**	**37.76**	**35**	*e*P			**P**	**15 46 23.5**	**-1.1**
	comp=Z,21nm,1.0s,mb4.8								
TSUM				LR		LR			
	comp=Z,2μm,19.0s,MS5.0								
TSUM	**Tsumeb**	**37.76**	**35**	P			**P**	**15 46 25.1**	**+0.4**
	comp=Z,24nm,1.1s,mb4.8,baz=189,slow=10,SNR=10								
TSUM				LR		LR		15 58 22.8	
	comp=Z,2μm,20.7s,MS4.9,baz=201,slow=31								
TRQA	**Tornquist**	**41.84**	**267**	*e*P			**P**	**15 46 58.2**	**-0.1**
	comp=Z,40nm,1.4s,mb4.9								
TRQA				LR		LR			
	comp=Z,5μm,22.0s,MS5.4								
PLCA	**Paso Flores**	**45.28**	**258**	P			**P**	**15 47 25.6**	**-0.5**
	comp=Z,5.1nm,1.1s,mb4.3,baz=126,slow=8.7,SNR=4.6								
PLCA				LR		LR		16 05 04.0	
	comp=Z,4μm,19.6s,MS5.3,baz=117,slow=34								
LSZ	**Lusaka**	**45.54**	**47**	*e*P			**P**	**15 47 26.3**	**-2.0**
	comp=Z,13nm,1.1s,mb4.8								
SBA	**Scott Base**	**49.36**	**178**	*e*P			**P**	**15 47 58.6**	**+1.2**
	comp=Z,28nm,1.0s,mb5.2								
SBA				LR		LR			
	comp=Z,3μm,20.0s,MS5.3								
CFAA	**Coronel Fontan**	**49.98**	**269**	P			**P**	**15 48 01.6**	**-1.1**
	comp=Z,1.5nm,0.2s,mb4.6,baz=143,slow=8.5,SNR=7.1								
CFAA				LR		LR		16 05 38.8	
	comp=Z,422nm,22.0s,MS4.4,baz=130,slow=32								
CASY	**Casey**	**51.35**	**152**	*e*P			**P**	**15 48 13.6**	**+1.1**
CASY	**Casey**	**51.35**	**152**	*e*P			**P**	**15 48 13.7**	**+1.1**
	comp=Z,14nm,1.0s,mb4.9								
ABPO	**Ambohimpanom**	**52.19**	**70**	*e*P			**P**	**15 48 21.5**	**+2.1**
	comp=Z,19nm,1.5s,mb4.8								
LIC	**Lamto**	**58.94**	**359**	*e*P			**P**	**15 49 11.8**	**+3.9**
	comp=Z,82nm,1.0s,mb5.7								
KIC	**Kosan Bo

PPT	**Papeete**	**103.59**	**214**	*e*PP	PP	15 57 25.1	-0.2
	comp=Z,41nm,23.0s							
PPT	**Papeete**	**103.59**	**214**	*e*PS	PS	16 06 37.7	+2.7
	comp=Z,617nm,26.0s							
PPT				*e*SS	SS	16 12 15.7	+5.9
	comp=Z,217nm,26.5s							
PPT				*e*LQ		16 22 30.3		
	comp=Z,1μm,36.0s							
PPT				*e*LR	LR	16 27 13.5		
	comp=Z,559nm,21.2s							
NKC	**Novy Kostel**	**103.78**	**11**	AMS	AMS	16 36 30.0		
	comp=Z,700nm,20.6s							
PRU	**Pruhonice**	**103.80**	**12**	*e*PP	PP	15 57 27.5	0.0
PRU				*e*SKS		16 03 50.9		
PRU				*e*SP	SP	16 06 37.6	+1.5
PRU				*e*SS	SS	16 12 18.6	+4.7
PRU				AMS	AMS	16 38 20.0		
	comp=Z,600nm,21.7s							
PRA	**Prague**	**103.86**	**12**	PP	PP	15 57 27.0	-1.0
PRA				AMS	AMS	16 40 00.0		
OKC	**Ostrava-Krasne**	**104.17**	**15**	*e*SKS		16 04 01.1		
OKC				*e*SP	SP	16 06 48.7	+8.7
OKC				*e*SS	SS	16 12 24.1	+5.1
OKC				AMS	AMS	16 41 00.0		
	comp=Z,400nm,17.1s							
PVCC	**Panska Ves**	**104.33**	**12**	*e*SKS		16 03 57.1		
PVCC				*e*SP	SP	16 06 36.9	-4.8	
PVCC				*e*SS	SS	16 12 22.5	+1.3	
PVCC				AMS	AMS	16 38 40.0		
	comp=Z,500nm,16.0s							
DPC	**Dobruska-Polom**	**104.39**	**14**	*e*PP	PP	15 57 36.8	+4.9	
DPC				*e*SKS		16 03 59.2		
DPC				*e*SP	SP	16 06 34.8	-7.5	
DPC				AMS	AMS	16 36 50.0		
	comp=Z,500nm,25.6s							
DZM	**Mont Dzumac**	**104.89**	**171**	*e*SP	SP	16 06 45.5	-2.0	
	comp=Z,231nm,24.9s							
DZM				*e*LR	LR	16 27 50.2		
	comp=Z,4μm,24.5s							
CLL	**Collm**	**104.90**	**11**	*e*PP	PP	15 57 36.0	+0.3	
CLL				*e*SKSac	SKSac	16 03 55.0	+1.0	
CLL				*e*PS	PS	16 06 52.0	+3.1	
CLL				*e*SS	SS	16 12 35.0	+6.0	
CLL				LmV		16 41 00.0		
	comp=Z,600nm,18.2s							
KSH	**Kashi**	**115.24**	**57**	PKP	PKiKP	15 57 54.8	+5.3	
FINES	**FINESS Array B**	**116.58**	**16**	PKP	PKPdf	15 57 51.3	0.0	
	comp=Z,2.7nm,0.8s,baz=198,slow=8.7,SNR=4.3							
TXAR	**Lajitas Array**	**118.22**	**282**	PKP	PKPdf	15 57 56.1	+0.6	
	comp=Z,0.6nm,0.9s,baz=181,slow=7.4,SNR=4.7							
QIZ	**Qiongzhong**	**119.56**	**97**	PKP	PKPdf	15 57 58.6	+0.2	
QIZ				PP	PP	15 59 21.1	+0.3	
QIZ				SKS	SKSdf	16 05 10.5	+0.1	
QIZ				SS	SS	16 15 46.3	+2.0	
QIZ				LR	LR			
	comp=N,490nm,17.2s,MS5.2							
QIZ				LR	LR			
	comp=E,150nm,17.9s,MS5.2							
QIZ				LR	LR			
	comp=Z,730nm,18.5s,MS5.3							
KMI	**Kunming**	**119.87**	**87**	PKP	PKPdf	15 58 00.3	+1.5	
BVAR	**Borovoye Array**	**122.59**	**44**	PKP	PKPdf	15 58 03.4	+0.2	
	comp=Z,0.6nm,0.6s,baz=262,slow=4.5,SNR=4.1							
GYA	**Guiyang**	**123.23**	**89**	Pdif	Pdif	15 54 37.8	+0.6	
GYA				PKP	PKPdf	15 58 05.5	+0.2	
GYA				PP	PP	15 59 50.4	+4.5	
GYA				PKS		16 01 41.0		
GYA				SKKS	SKKSac	16 06 41.3	-3.1	
GYA				SS	SS	16 16 33.4	+2.1	
GYA				AMB	AMB			
	comp=Z,280nm,7.9s							
GYA				LR	LR			
	comp=N,6μm,20.8s,MS6.3							
GYA				LR	LR			
	comp=E,5μm,21.2s,MS6.3							
GYA				LR	LR			
	comp=Z,8μm,22.9s,MS6.3							
MK31	**Makanchi Array**	**123.68**	**56**	PKPdf	PKPdf	15 58 08.7	+3.3	
MKAR	**Makanchi Array**	**123.68**	**56**	PKP	PKPdf	15 58 03.9	-1.6	
	comp=Z,0.2nm,0.4s,baz=261,slow=3.8,SNR=2.5							
ARCES	**ARCESS Array B**	**124.10**	**12**	PKP	PKPdf	15 58 04.3	-1.2	
	comp=Z,2.7nm,0.9s,baz=199,slow=2.5,SNR=3.9							
ECSD	**EROS Data Cent**	**124.41**	**299**	PKPdf	PKPdf	15 58 10.7	+3.8	
CD2	**Chengdu**	**124.70**	**83**	PKP	PKPdf	15 58 10.9	+3.0	
CD2				PP	PP	16 00 02.8	+7.1	
CD2				PKS		16 01 46.3		
CD2				SKS	SKSdf	16 05 21.5	+1.9	
CD2				SKKS	SKKSac	16 06 54.8	+1.2	
CD2				SS	SS	16 16 55.3	+5.4	
CD2				AMB	AMB			
	comp=Z,110nm,8.8s							
CD2				LR	LR			
	comp=N,530nm,24.0s							
CD2				LR	LR			
	comp=E,670nm,18.1s							
CD2				LR	LR			
	comp=Z,840nm,21.6s,MS5.4							
SDCO	**Great Sand Dun**	**125.27**	**288**	*e*PKPdf	PKPdf	15 58 11.1	+2.4	
SMCO	**Snowmass**	**127.08**	**288**	*e*PKPdf	PKPdf	15 58 13.0	+0.7	
PV01	**Paradox Valley**	**127.31**	**286**	*e*PKPdf	PKPdf	15 58 16.0	+3.3	
GTA	**Gaotai**	**128.22**	**73**	*e*PKP	PKPdf	15 58 20.0	+5.6	
LZH	**Lanzhou**	**128.35**	**79**	*e*PKP	PKPdf	15 58 15.6	+0.9	
LZH				sPKP		15 58 21.0		
LZH				LR	LR			
	comp=N,620nm,17.7s							
LZH				LR	LR			
	comp=Z,1μm,19.4s,MS5.5							
ZALV	**Zalesovo Beam**	**129.60**	**50**	PKP	PKPdf	15 58 14.8	-1.7	
	comp=Z,0.3nm,0.3s,baz=198,slow=0.9,SNR=2.8							
MSU	**Marysvale**	**129.67**	**284**	*e*PKPdf	PKPdf	15 58 17.2	+0.1	
DAU	**Daniels Canyon**	**130.38**	**286**	*e*PKPdf	PKPdf	15 58 20.5	+2.1	
TPAW	**Teton Pass**	**132.16**	**290**	*e*PKPdf	PKPdf	15 58 22.8	+1.0	
MOOW	**Moose Ponds**	**132.20**	**290**	*e*PKPdf	PKPdf	15 58 22.5	+0.7	
NVAR	**Mina Array Bea**	**133.24**	**280**	PKP	PKPdf	15 58 21.9	-2.0	
NVAR	**Mina Array Bea**	**133.24**	**280**	PKP	PKPdf	15 58 21.9	-2.0	
	comp=Z,0.5nm,0.9s,baz=134,slow=3.9,SNR=3.5							
CHMT	**Chamberlain Mo**	**135.51**	**292**	*e*PKPdf	PKPdf	15 58 31.1	+3.2	
HHC	**Hu-ho-hao-te**	**136.04**	**79**	*e*PKP	PKPdf	15 58 27.3	-1.8	
HHC				PP	PP	16 01 10.4	+1.1	
HHC				PKS		16 02 01.6		
HHC				SKS	SKSdf	16 05 34.3	-5.4	
HHC				AMB	AMB			
	comp=Z,97nm,5.3s							
HHC				LR	LR			
	comp=N,550nm,16.8s,MS5.4							
HHC				LR	LR			
	comp=E,230nm,13.3s,MS5.4							
HHC				LR	LR			
	comp=Z,500nm,16.1s,MS5.3							
SONM	**Songino Array**	**137.16**	**68**	PKhKP	PKPpre	15 58 25.7		
	comp=Z,0.1nm,0.4s,baz=248,slow=6.1,SNR=2.6							
SONM				PKP	PKPdf	15 58 31.4	+0.5	
	comp=Z,0.4nm,0.6s,baz=251,slow=4.4,SNR=3.3							
YKA	**Yellowknife Ar**	**143.31**	**313**	PKhKP	PKPpre	15 58 36.6		
	comp=Z,1.6nm,0.9s,baz=91,slow=2.2,SNR=7.6							
YKA				PKP	PKPdf	15 58 42.1	+0.6	
	comp=Z,5.4nm,0.9s,baz=100,slow=3.7,SNR=17							
MDJ	**Mudanjiang**	**149.05**	**87**	PKPbc	PKPdf	15 58 50.6	-1.3	
MDJ				AMB	AMB			
	comp=Z,42nm,4.3s							
MAT	**Matsushiro**	**149.24**	**107**	PKP	PKPdf	15 58 55.0	+2.5	
MJAR	**Matsushiro Arr**	**149.24**	**107**	PKPbc	PKPbc	15 58 58.3	+1.5	
	comp=Z,3.4nm,0.9s,baz=203,slow=3.0,SNR=8.5							
DLBC	**Dease Lake**	**149.58**	**302**	*e*PKPbc	PKPbc	15 58 57.4	+0.5	
INK	**Inuvik**	**151.75**	**322**	*e*PKPbc	PKPbc	15 59 00.5	-1.3	
INK	**Inuvik**	**151.75**	**322**	PKPbc	PKPbc	15 59 00.6	-1.1	
	comp=Z,15nm,1.0s,baz=52,slow=3.7,SNR=15							
ILAR	**Eielson Array**	**157.65**	**317**	PKP	PKPdf	15 59 01.7	-1.9	
	comp=Z,0.1nm,0.4s,baz=298,slow=1.9,SNR=5.3							
ILAR				PKPab	PKPab	15 59 35.0	-1.0	
	comp=Z,4.0nm,0.9s,baz=78,slow=2.9,SNR=21							

IDC ***17*** *15:50:21.6±1.1,2.°92N×129.°08E,h0km,mb3.8/7, mb1 4.0/7,mb1mx3.8/19,mbtmp3.8/7,Error ellipse: s-maj=47.4km s-min=17.7km az=72.0*
NEIC ***17*** *15:50:26.5±0.6,2.°89N×129.°05E,h35km,mb4.3/1,Error ellipse: s-maj=17.1km s-min=9.5km az=77.0*
ISCJB ***17*** *15:50:42.1±1.9,2.°8N±0.°1×129.°0E±0.°2,h214km±16km, mb3.6/8,Error ellipse: s-maj=33.3km s-min=13.0km az=157.0*
DJA ***17*** *15:50:47,2.°72N×128.°53E,h209km,MLv4.4/3*
ISC 17 15:50:43.2±1.8,**2.°8N**±0.°1×**129.°0E**±0.°2,**h207**km±16km,**n14,σ0s88/15,mb3.6/7,Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.53**	**219**	P	**Pn**	**15 51 29.5**	**+1.6**
TNTI				S	**Sn**	**15 52 03.1**	**+0.2**
SGSI	**Sangihe**	**3.54**	**285**	P	**Pn**	**15 51 39.6**	**-0.1**
MNI	**Manado**	**4.32**	**252**	P	**Pn**	**15 51 47.7**	**-1.5**
KMSI	**Cibinong**	**5.43**	**247**	P	**Pn**	**15 52 02.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**20.98**	**189**	P	**P**	**15 55 08.9**	**-1.7**
	1.9nm,0.8s,baz=31,slow=9.0,SNR=2.3						
WRA	**Warramunga Arr**	**23.17**	**167**	P	**P**	**15 55 31.2**	**-0.4**
WRA	**Warramunga Arr**	**23.17**	**167**	P	**P**	**15 55 31.2**	**-0.4**
	1.0nm,0.4s,mb3.7,baz=344,slow=10,SNR=18						
ASAR	**Alice Springs**	**26.70**	**170**	P	**P**	**15 56 03.9**	**+0.4**
	1.2nm,0.5s,mb3.8,baz=353,slow=7.2,SNR=50						
CMAR	**Chiang Mai Arr**	**33.28**	**300**	P	**P**	**15 57 02.0**	**+0.6**
	1.1nm,0.8s,mb3.4,baz=114,slow=7.2,SNR=7.9						
CHTO	**Chiang Mai**	**33.43**	**301**	*e*P	**P**	**15 57 03.2**	**+0.5**
MJAR	**Matsushiro Arr**	**34.69**	**13**	P	**P**	**15 57 12.1**	**-1.2**
	1.1nm,0.8s,mb3.4,baz=182,slow=8.3,SNR=3.9						
STKA	**Stephens Creek**	**36.48**	**162**	P	**P**	**15 57 29.4**	**+0.9**
	2.5nm,0.9s,mb3.7,baz=321,slow=7.9,SNR=5.8						
MKAR	**Makanchi Array**	**59.62**	**325**	P	**P**	**16 00 25.9**	**+0.5**
	0.6nm,0.4s,mb3.5,baz=123,slow=5.3,SNR=4.3						
KURK	**Kurchatov**	**63.76**	**327**	*e*P	**P**	**16 00 53.3**	**+0.4**
	1.6nm,0.6s,mb3.8						

MAN 17 15:52:00,13.°17N×124.°46E,h4km,mb4.6,ML3.5,MS3.4, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.52**	**325**	*e*P	Pg	15 52 11.2	+1.2
CNP	**Catarman**	**0.69**	**163**	*e*P	Pg	15 52 13.8	+0.6
AUQP	**San Andres**	**1.75**	**275**	*e*P	Pn	15 52 32.2	+1.1
GQP	**Guinayangan**	**2.09**	**291**	*e*P	Pn	15 52 36.8	+0.9
GQP				*e*S	Sn	15 53 01.3	-1.0
BOAC	**Boac**	**2.56**	**277**	*e*P	Pn	15 52 44.6	+2.3
POLP	**Polilio Island**	**2.90**	**303**	*e*P	Pn	15 52 51.4	+4.4
GUIM	**Jordan**	**3.12**	**216**	*e*P	Pn	15 52 49.3	-0.8
CAUP	**Cauayan**	**4.54**	**326**	*e*P	Pn	15 53 10.5	+1.0

BUC ***17*** *16:24:53.4±3.0,45.°56N×20.°97E,h7km±15km,MD2.6/2, Error ellipse: s-maj=38.3km s-min=18.9km az=2.0*
BEO ***17*** *16:24:54.4±0.3,45.°36N×21.°13E,h11km±2km,ML2.2/6*
CSEM ***17*** *16:24:54.1±0.3,45.°34N×21.°14E,h10km,ML2.2, Error ellipse: s-maj=7.1km s-min=4.6km az=122.0*
ISC 17 16:24:54.2±0.5,**45.°32N**±0.°02×**21.°12E**±0.°04,**h5**km±4km, **n33,σ1s21/51,6C-6D,Romania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIM	**Timisoara**	**0.42**	**10**	S	**Sg**	**16 25 11.3**	**+3.5**
BZS	**Buzias**	**0.46**	**50**	*i*Pg	**Pg**	**16 25 02.7**	**-0.3**
BZS				*e*Sg	**Sg**	**16 25 09.9**	**+0.9**
BZS	**Buzias**	**0.46**	**50**	*i*P	**Pg**	**16 25 02.7**	**-0.3**
BZS				*i*S	**Sg**	**16 25 10.1**	**+1.1**
BZS	**Buzias**	**0.46**	**50**	*i*P	**Pg**	**16 25 02.7**	**-0.3**
BZS				*i*S	**Sg**	**16 25 10.1**	**+1.1**
BZS	**Buzias**	**0.46**	**50**	*i*P	**Pg**	**16 25 02.7**	**-0.3**
BZS				*e*Sg	**Sg**	**16 25 09.9**	**+0.9**
FRGS	**Fruska Gora**	**0.94**	**260**	*e*Pg	**Pg**	**16 25 12.8**	**+0.5**
FRGS				*e*Sg	**Sg**	**16 25 25.7**	**+1.2**
FRGS	**Fruska Gora**	**0.94**	**260**	*e*Pg	**Pg**	**16 25 12.8**	**+0.5**
FRGS				*e*Sg	**Sg**	**16 25 25.7**	**+1.2**
SVIS	**Svilajnac**	**1.06**	**176**	*i*Pg	**Pg**	**16 25 14.2**	**-0.3**
SVIS				*e*Sg	**Sg**	**16 25 29.5**	**+1.2**
TRUS	**Trudelj**	**1.21**	**205**	*e*Pg	**Pg**	**16 25 16.0**	**-1.4**
TRUS				*e*Sg	**Sg**	**16 25 33.2**	**+0.1**
TRUS	**Trudelj**	**1.21**	**205**	*e*Pg	**Pg**	**16 25 16.0**	**-1.4**
TRUS				*e*Sg	**Sg**	**16 25 33.2**	**+0.1**
DEV	**Deva**	**1.37**	**65**	S	**Sb**	**16 25 37.0**	**-1.1**
DEV	**Deva**	**1.37**	**65**	*i*S	**Sb**	**16 25 37.0**	**-1.1**
DEV	**Deva**	**1.37**	**65**	S	**Sb**	**16 25 37.0**	**-1.1**
DIVS	**Divibare**	**1.47**	**214**	*i*Pg	**Pg**	**16 25 20.3**	**-2.0**
DIVS				*i*Sg	**Sg**	**16 25 41.2**	**-0.1**
BOLS	**Boljevac**	**1.61**	**158**	*i*Pg	**Pg**	**16 25 22.9**	**-2.1**
BOLS				*e*Sg	**Sg**	**16 25 46.0**	**+0.1**
DRGR		**1.84**	**36**	*e*Pn	**Pn**	**16 25 24.5**	**-1.9**
DRGR				*e*Sn	**Sn**	**16 25 47.7**	**-2.3**
DRGR		**1.84**	**36**	*i*P	**Pn**	**16 25 25.0**	**-1.4**
DRGR				*i*S	**Sn**	**16 25 47.6**	**-2.4**
DRGR		**1.84**	**36**	*i*P	**Pn**	**16 25 25.0**	**-1.4**
DRGR				*i*S	**Sn**	**16 25 47.6**	**-2.4**
DRGR		**1.84**	**36**	*e*Pn	**Pn**	**16 25 24.5**	**-1.9**
DRGR		**1.84**	**36**	*i*P	**Pn**	**16 25 25.0**	**-1.4**
DRGR				*e*Sn	**Sn**	**16 25 47.7**	**-2.3**
PKSM	**Moragy**	**1.95**	**298**	S	**Sn**	**16 25 52.2**	**-0.5**
PKSM	**Moragy**	**1.95**	**298**	*e*Pn	**Pn**	**16 25 28.7**	**+0.8**
ZAPS	**Zavoj**	**2.32**	**152**	*e*Pn	**Pn**	**16 25 33.3**	**+0.3**
ZAPS				*i*Sn	**Sn**	**16 26 01.7**	**-0.2**
BARS	**Barje**	**2.56**	**168**	*e*Pn	**Pn**	**16 25 36.0**	**-0.3**
BARS				*e*Sn	**Sn**	**16 26 08.8**	**+1.1**
BARS	**Barje**	**2.56**	**168**	*e*Pn	**Pn**	**16 25 36.0**	**-0.3**
BARS				*e*Sn	**Sn**	**16 26 08.8**	**+1.1**
VOIR		**2.77**	**86**	S	**Sn**	**16 26 15.6**	**+2.6**
VOIR		**2.77**	**86**	*i*P	**Pn**	**16 25 42.1**	**+2.9**
VOIR		**2.77**	**86**	*i*S	**Sn**	**16 26 15.6**	**+2.6**
VOIR		**2.77**	**86**	S	**Sn**	**16 26 15.6**	**+2.6**
VTS	**Vitosha**	**3.12**	**150**	*e*Pn	**Pn**	**16 25 44.7**	**+0.7**
VTS	**Vitosha**	**3.12**	**150**	*e*Pn	**Pn**	**16 25 44.7**	**+0.7**
MLR	**Muntele Rosu**	**3.40**	**85**	S	**Sg**	**16 26 42.9**	**-0.6**
BURAR	**Bucovina Array**	**3.64**	**50**	S	**Sg**	**16 26 52.0**	**+0.8**

MAN 17 16:27:56,9.°48N×122.°23E,h40km,mb4.6,ML3.5,MS3.5, 1C,Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**1.00**	**98**	*i*P	Pn	16 28 13.2	-0.4
SNPH				*i*S	Sn	16 28 27.4	+0.8
GUIM	**Jordan**	**1.19**	**17**	*e*P	Pn	16 28 17.2	+1.0
GUIM				*e*S	Sn	16 28 32.6	+1.5
TBP	**Tagbilaran**	**1.63**	**83**	*e*P	Pn	16 28 23.2	+1.1
TBP				*e*S	Sn	16 28 39.6	-2.2
IPIL	**Ipil**	**1.72**	**169**	*e*P	Pn	16 28 23.8	+0.3
IPIL				*e*S	Sn	16 28 36.9	-7.3
CUYO	**Cuyo Island**	**1.81**	**319**	*e*P	Pn	16 28 26.2	+1.5
LLP	**Lapu-Lapu**	**1.90**	**64**	*e*P	Pn	16 28 26.9	+0.9
LLP				*e*S	Sn	16 28 50.1	+1.4
PAGZ	**Pagadian**	**1.99**	**145**	*e*P	Pn	16 28 29.4	+2.2
OCLP	**Ormoc**	**2.81**	**56**	*e*P	Pn	16 28 40.2	+1.7
BUSP	**Coron**	**3.20**	**322**	*e*P	Pn	16 28 45.3	+1.5
ENPP	**El Nido**	**3.25**	**302**	*e*P	Pn	16 28 46.0	+1.6

DDA ***17*** *16:34:16.8,39.°43N×33.°11E,h4km±2km,Md2.8*
CSEM ***17*** *16:34:16.7±0.2,39.°40N×33.°09E,h2km,MD2.8,Error ellipse: s-maj=6.4km s-min=4.7km az=149.0*
ISCJB ***17*** *16:34:17.6±0.6,39.°44N±0.°04×33.°06E±0.°05,h10km,Error ellipse: s-maj=6.2km s-min=4.6km az=144.8*
ISK ***17*** *16:34:17.1,39.°48N×33.°07E,h11km,MD2.8*
ISC 17 16:34:16.8±1.1,**39.°40N**±0.°05×**33.°06E**±0.°05,**h1**km±9km, **n19,σ0s67/30,1C,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBAL	**Bala**	**0.15**	**18**	*i*Pg	**Pg**	**16 34 19.7**	**0.0**
BBAL				*i*Sg	**Sg**	**16 34 21.1**	**-0.5**
LOD	**Lodumlu**	**0.54**	**335**	*e*Pg	**Pg**	**16 34 27.0**	**+0.5**
LOD				*e*Sg	**Sg**	**16 34 33.3**	**-0.8**
LOD	**Lodumlu**	**0.54**	**335**	*e*Pg	**Pg**	**16 34 27.6**	**+0.5**
LOD				*e*Sg	**Sg**	**16 34 33.3**	**-0.8**
CDAG	**Cicekdag**	**1.04**	**77**	*e*P	**Pg**	**16 34 36.0**	**-0.7**
CDAG				*e*S	**Sg**	**16 34 50.2**	**+0.2**
CDAG	**Cicekdag**	**1.04**	**77**	*e*P	**Pg**	**16 34 36.0**	**-0.6**
CDAG				*e*S	**Sg**	**16 34 50.2**	**+0.1**
KIZT	**Kizilcal**	**1.06**	**241**	*e*PN	**Pn**	**16 34 38.4**	**-0.3**
KIZT				*e*SN	**Sn**	**16 34 54.0**	**-0.1**
KIZT	**Kizilcal**	**1.06**	**241**	*e*Pn	**Pn**	**16 34 38.4**	**-0.3**
KIZT				*e*Sn	**Sn**	**16 34 54.0**	**-0.1**
ELDT	**Eldivan**	**1.12**	**14**	*e*P	**Pg**	**16 34 39.4**	**+1.1**
ELDT				*e*S	**Sg**	**16 34 53.6**	**+0.8**
ELDT	**Eldivan**	**1.12**	**14**	*e*P	**Pg**	**16 34 39.4**	**+1.1**
ELDT				*e*S	**Sg**	**16 34 53.7**	**+0.8**
SVRH	**Sivrihisar-ESK**	**1.19**	**273**	*e*PN	**Pn**	**16 34 40.7**	**+0.1**
SVRH	**Sivrihisar-ESK**	**1.19**	**273**	*e*Pn	**Pn**	**16 34 40.7**	**+0.1**
CORM	**Corum**	**1.44**	**57**	*e*PN	**Pn**	**16 34 42.7**	**-1.2**
CORM	**Corum**	**1.44**	**57**	*e*Pn	**Pn**	**16 34 42.7**	**-1.2**
KONT	**Konya--Tatoy**	**1.55**	**201**	*e*PN	**Pn**	**16 34 46.4**	**+0.8**
KONT	**Konya--Tatoy**	**1.55**	**201**	*e*Pn	**Pn**	**16 34 46.4**	**+0.9**
YOZ	**Yozgat**	**1.76**	**81**	*e*PN	**Pn**	**16 34 48.6**	**+0.2**
YOZ	**Yozgat**	**1.76**	**81**	*e*Pn	**Pn**	**16 34 48.6**	**+0.2**
CTKT	**Corum**	**1.80**	**47**	*e*P	**Pn**	**16 34 48.1**	**-0.9**
CTKT				*e*S	**Sn**	**16 35 13.3**	**+0.8**
CTKT	**Corum**	**1.80**	**47**	*e*P	**Pn**	**16 34 48.1**	**-0.9**
CTKT				*e*S	**Sn**	**16 35 13.3**	**+0.8**

IDC ***17*** *16:54:11.2±1.6,5.°63S×130.°92E,h0km,mb4.2/3, mb1 4.3/6,mb1mx3.9/15,mbtmp4.1/6,ML4.0/3,Error ellipse: s-maj=71.2km s-min=20.2km az=67.0*
ISCJB ***17*** *16:54:27.9±0.7,6.°29S±0.°04×130.°26E±0.°09,h160km±9km, mb3.8/3,Error ellipse: s-maj=14.2km s-min=6.6km az=170.5*
NEIC ***17*** *16:54:27.9±2.1,6.°22S×130.°21E,h139km±23km,mb4.8/2, Error ellipse: s-maj=24.3km s-min=13.1km az=50.0*
DJA ***17*** *16:54:30,6.°32S×130.°28E,h156km,mb4.4/6*
ISC 17 16:54:28.5±0.7,**6.°29S**±0.°05×**130.°31E**±0.°09,**h148**km±10km, **n24,σ1s19/31,mb3.8/3,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.80**	**347**	P	**Pn**	**16 55 01.6**	**+0.3**
NLAI	**Namlea**	**4.41**	**313**	P	**Pn**	**16 55 40.0**	**+5.9**
KAKA	**Kakadu**	**6.72**	**162**	*e*P	**Pn**	**16 56 05.6**	**+0.8**
	43nm,0.4s						
KAKA				*e*S	**Sn**	**16 57 16.7**	**-3.6**
KAKA	**Kakadu**	**6.72**	**162**	P	**Pn**	**16 56 06.2**	**+1.4**
	1.4nm5μm50nm,0.6s						
KAKA				S	**Sn**	**16 57 19.4**	**-0.9**
	1.4nm5μm50nm,0.6s						
BAKI	**Biak**	**7.69**	**49**	P	**Pn**	**16 56 16.2**	**-1.7**
	0.1nm33nm,0.9s						
KNA	**Kununurra**	**9.52**	**189**	P	**Pn**	**16 56 44.4**	**+2.2**
	913nm40nm,1.2s						
KNA				S	**Sn**	**16 58 25.9**	**-1.9**
	913nm40nm,1.2s						
MRSI	**Marisa**	**10.72**	**309**	P	**Pn**	**16 56 59.0**	**+0.8**
PCI	**Palu**	**11.74**	**297**	P	Px	16 57 51.6	
FITZ	**Fitzroy Crossi**	**12.59**	**201**	*e*P	**Pn**	**16 57 22.4**	**-0.2**
FITZ				Sn	**Sn**	**16 59 37.2**	**-4.6**
FITZ	**Fitzroy Crossi**	**12.59**	**201**	Pn	**Pn**	**16 57 23.2**	**+0.6**
	0.4nm,0.3s,baz=19,slow=11,SNR=27						
FITZ				Sn	**Sn**	**16 59 37.2**	**-4.6**
	0.7nm,0.3s,baz=305,slow=16,SNR=4.9						
FITZ	**Fitzroy Crossi**	**12.59**	**201**	P	**Pn**	**16 57 24.1**	**+1.5**
	35nm,1.3s						
FITZ				S	**Sn**	**16 59 37.4**	**-4.4**
	35nm,1.3s						
WRA	**Warramunga Arr**	**14.12**	**164**	Pn	**Pn**	**16 57 41.3**	**-0.8**
	0.4nm,0.3s,baz=348,slow=12,SNR=11						
WRA				Sn	**Sn**	**17 00 08.7**	**-10**
	2.0nm,0.3s,baz=298,slow=3.8,SNR=11						
COEN	**Coen**	**14.77**	**122**	*e*P	**Pn**	**16 57 51.7**	**+1.4**
COEN	**Coen**	**14.77**	**122**	P	**Pn**	**16 57 53.0**	**+2.7**
	49nm,1.0s						
ASAR	**Alice Springs**	**17.62**	**169**	P	**Pn**	**16 58 26.8**	**+1.9**
	1.7nm,0.3s,baz=350,slow=10,SNR=145						
ASAR				S	**S**	**17 01 34.2**	**-4.9**
	0.3nm,0.3s,baz=359,slow=26,SNR=5.4						
KKM	**Kota Kinabalu**	**18.66**	**311**	*e*P	**P**	**16 58 34.8**	**-0.5**
	9.7nm,0.4s						
KKM	**Kota Kinabalu**	**18.66**	**311**	P	**P**	**16 58 35.4**	**+0.2**
STKA	**Stephens Creek**	**27.55**	**159**	*e*P	**P**	**17 00 02.7**	**+1.1**
	0.3nm,0.4s,mb3.4						
STKA	**Stephens Creek**	**27.55**	**159**	P	**P**	**17 00 02.1**	**+0.6**
	1.8nm,0.3s,mb4.3,baz=326,slow=11,SNR=17						
CMAR	**Chiang Mai Arr**	**39.52**	**309**	P	**P**	**17 01 44.4**	**-0.7**
	0.5nm,0.5s,mb3.5,baz=127,slow=8.6,SNR=4.8						
MK31	**Makanchi Array**	**67.81**	**327**	*e*P	**P**	**17 05 09.8**	**-0.6**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.03**	**227**	P	P	17 21 08.9	-0.5
	0.9nm,0.9s,baz=51,slow=9.2,SNR=3.5						
ASAR	**Alice Springs**	**26.79**	**221**	P	P	17 21 35.1	+0.7
	0.3nm,0.9s,baz=56,slow=8.6,SNR=2.9						
CMAR	**Chiang Mai Arr**	**57.59**	**295**	P	P	17 25 45.2	+0.5
	0.5nm,0.8s,baz=117,slow=5.4,SNR=4.7						
BVAR	**Borovoye Array**	**88.63**	**323**	P	P	17 28 46.8	-0.7
	1.0nm,0.8s,baz=91,slow=5.9,SNR=4.3						

IDC ***17*** *17:17:23.7±0.9, 13°.81N×91°.52W, h0km, mb4.4/10, mb1 4.6/12, mb1mx4.4/21, mbtmp4.4/12, ML3.7/2, MS4.3/4, Ms1 4.3/4, ms1mx3.6/26, Error ellipse: s-maj=32.3km s-min=15.0km az=49.0*

ISCJB ***17*** *17:17:24.9±0.3, 13°.67N±0°.04×91°.90W±0°.02, h10km, mb4.6/66, MS4.4/7, Error ellipse: s-maj=6.0km s-min=2.1km az=23.9*

CASC ***17*** *17:17:27.4±1.5, 13°.51N×91°.96W, h57km±49km, MD4.4, ML4.2, mb4.6(NEIC)*

NEIC ***17*** *17:17:33.3±0.9, 13°.89N×91°.58W, h69km±8km, mb4.6/64, MD4.7(SNET), MD4.3(MEX), Error ellipse: s-maj=10.2km s-min=4.8km az=48.0*

NEIC Felt [II] at Sonsonate, El Salvador.

MEX ***17*** *17:17:34.0±1.5, 13°.88N×92°.47W, h14km±785km, MD4.3*

ISC 17 17:17:26.9±1.0, 13°.78N±0°.04×91°.84W±0°.02, h7km±6km, n360, σ0°.91/363, mb4.6/64, MS4.4/7, 77C-85D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JAT	**Jato**	**0.57**	**20**	⇑*eP*	**Pg**	**17 17 44.3**	**+6.4**
FUG	**Fuego 3**	**1.17**	**55**	*eP*	**Pg**	**17 17 51.6**	**+2.2**
THIG		**1.19**	**340**	*i P*	**Pb**	**17 17 49.6**	**-0.3**
THIG				*i S*	**Sg**	**17 18 03.8**	**-1.6**
FG6		**1.21**	**50**	*eP*	**Pb**	**17 17 52.3**	**+2.2**
TP2	**Tecpan 2**	**1.27**	**38**	*eP*	**Pn**	**17 17 53.7**	**+2.6**
PCG	**Pacaya**	**1.34**	**63**	*eP*	**Pn**	**17 17 54.0**	**+1.9**
IXG	**Ixpaco**	**1.40**	**74**	*eP*	**Pn**	**17 17 53.4**	**+0.5**
NBG	**Las Nubes**	**1.65**	**61**	*eP*	**Pn**	**17 17 59.3**	**+2.9**
RBDL	**Robledal**	**2.11**	**81**	*eP*	**Pn**	**17 18 03.3**	**+0.6**
RBDL				*eS*	**Sn**	**17 18 30.7**	**+1.4**
RTR	**El Retiro**	**2.13**	**87**	*eP*	**Pn**	**17 18 02.6**	**-0.3**
SBLS	**San Blas**	**2.15**	**88**	*eP*	**Pn**	**17 18 02.8**	**-0.4**
SBLS				*eS*	**Sn**	**17 18 32.2**	**+2.0**
SNJE	**San Jose**	**2.17**	**87**	*eP*	**Pn**	**17 18 02.9**	**-0.6**
SNJE				*eS*	**Sn**	**17 18 32.2**	**+1.5**
PCIG		**2.33**	**325**	*i P*	**Pn**	**17 18 03.8**	**-2.0**
PCIG				*i S*	**Sn**	**17 18 25.9**	**-8.8**
MRL	**Marmol**	**2.44**	**58**	⇑*eP*	**Pn**	**17 18 10.3**	**+3.1**
MTO2	**Montecristo 2**	**2.48**	**75**	*eP*	**Pn**	**17 18 08.4**	**+0.6**
BOQS	**Boqueron**	**2.48**	**91**	*eP*	**Pn**	**17 18 07.6**	**-0.2**
SNET	**Serv Nac Est T**	**2.53**	**92**	*eP*	**Pn**	**17 18 08.1**	**-0.4**
SNET				*eS*	**Sn**	**17 18 39.6**	**-0.1**
SNET				AML	AML	17 19 08.5	
	comp=Z,645nm,0.8s						
LFRS	**El Faro**	**2.70**	**93**	*eP*	**Pn**	**17 18 10.1**	**-0.7**
LBRS	**Las Brisas**	**2.71**	**91**	*eP*	**Pn**	**17 18 11.3**	**+0.3**
SNVI	**San Vicente**	**2.92**	**93**	*eP*	**Pn**	**17 18 14.6**	**+0.8**
SNVI				*eS*	**Sn**	**17 18 50.6**	**+1.4**
SCX	**San Cristobal**	**3.04**	**345**	*i P*	**Pn**	**17 18 16.9**	**+1.5**
SCX				*i S*	**Sn**	**17 18 51.3**	**-0.7**
SCX	**San Cristobal**	**3.04**	**345**	*i P*	**Pn**	**17 18 16.9**	**+1.5**
SCX				*i S*	**Sn**	**17 18 51.3**	**-0.7**
TGIG		**3.23**	**338**	*i P*	**Pn**	**17 18 18.0**	**-0.1**
TGIG				*i S*	**Sn**	**17 18 52.5**	**-4.3**
VSM	**San Miguel**	**3.48**	**95**	*eP*	**Pn**	**17 18 21.2**	**-0.3**
BLLM	**Bellamira**	**3.52**	**95**	*eP*	**Pn**	**17 18 21.9**	**-0.1**
BLLM				*eS*	**Sn**	**17 19 04.1**	**+0.2**
CAHU	**Cacacuatique**	**3.52**	**90**	*eP*	**Pn**	**17 18 22.1**	**-0.1**
CNCH	**Conchagua**	**3.93**	**97**	⇓*eP*	**Pn**	**17 18 27.0**	**-0.6**
CMIG	**Matias Romero**	**4.41**	**319**	Pn	**Pn**	**17 18 33.6**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=132,slow=10,SNR=25						
TGUH	**Tegucigalpa,Un**	**4.44**	**86**	*eP*	**Pn**	**17 18 35.0**	**+0.2**
TGUH	**Tegucigalpa,Un**	**4.44**	**86**	*eP*	**Pn**	**17 18 34.3**	**-0.4**
HUIG	**Huatulco**	**4.58**	**296**	*i P*	**Pn**	**17 18 32.5**	**-4.2**
HUIG				*i S*	**Sn**	**17 19 14.0**	**-16**
HUIG	**Huatulco**	**4.58**	**296**	*i P*	**Pn**	**17 18 32.5**	**-4.2**
HUIG				*i S*	**Sn**	**17 19 14.0**	**-16**
CRIN	**San Cristobal**	**4.78**	**102**	*eP*	**Pn**	**17 18 38.4**	**-1.0**
CNGN	**Cerro Negro**	**5.17**	**104**	*eP*	**Pn**	**17 18 44.4**	**-0.3**
MOMN	**Momotombo**	**5.34**	**104**	*eP*	**Pn**	**17 18 46.3**	**-0.8**
CSAN		**5.51**	**106**	*eP*	**Pn**	**17 18 47.8**	**-1.7**
CSAN				AML	AML	17 19 50.9	
	comp=Z,1μm,0.3s						
HUEN		**5.70**	**104**	*eP*	**Pn**	**17 18 51.0**	**-1.1**
VHO	**Vista Hermosa**	**5.74**	**305**	*i P*	**Pn**	**17 18 49.8**	**-2.8**
VHO				*i S*	**Sn**	**17 19 48.5**	**-10**
VHO	**Vista Hermosa**	**5.74**	**305**	*i P*	**Pn**	**17 18 49.8**	**-2.8**
VHO				*i S*	**Sn**	**17 19 48.5**	**-10**
SSN	**San Juan del S**	**6.34**	**112**	*eP*	**Pn**	**17 19 00.3**	**-0.6**
CONN	**Concepcion**	**6.45**	**109**	*eP*	**Pn**	**17 19 01.4**	**-1.0**
PNIG	**Pinotepa**	**6.61**	**294**	*i P*	**Pn**	**17 19 03.9**	**-0.7**
PNIG				*i S*	**Sn**	**17 20 08.7**	**-11**
PNIG	**Pinotepa**	**6.61**	**294**	*i P*	**Pn**	**17 19 03.9**	**-0.7**
PNIG				*i S*	**Sn**	**17 20 08.7**	**-11**
UTMO	**Huajuapan**	**7.01**	**306**	*eP*	**Pn**	**17 19 07.5**	**-2.6**
UTMO				*i S*	**Sn**	**17 20 19.6**	**-11**
TPIG	**Tehuac#an**	**7.03**	**312**	*eP*	**Pn**	**17 19 12.0**	**+1.6**
TPIG				*i S*	**Sn**	**17 20 27.0**	**-3.6**
TEIG	**Tepich**	**7.26**	**27**	*eP*	**Pn**	**17 19 15.6**	**+2.2**
	comp=Z,190nm,0.8s						
TEIG	**Tepich**	**7.26**	**27**	*eP*	**Pn**	**17 19 16.2**	**+2.7**
LVIG	**Laguna Verde**	**7.36**	**324**	*eP*	**Pn**	**17 19 05.6**	**-9.2**
LVIG	**Laguna Verde**	**7.36**	**324**	*eP*	**Pn**	**17 19 05.6**	**-9.2**
JTS	**JuntasAbangare**	**7.58**	**117**	*eP*	**Pn**	**17 19 17.6**	**-0.2**
	comp=Z,57nm,1.1s						
URSC	**Urasca**	**8.81**	**116**	*eP*	**Pn**	**17 19 35.2**	**+0.4**
BUS	**Buena Vista**	**8.96**	**117**	*eP*	**Pn**	**17 19 36.8**	**0.0**
ACR	**Cerro Adams**	**9.91**	**120**	*eP*	**Pn**	**17 19 48.8**	**-1.2**
HKT	**Hockley**	**16.51**	**348**	*eP*	**Pn**	**17 21 17.9**	**-1.2**
	comp=Z,155nm,2.5s						
NATX	**Nacogdoches**	**18.08**	**352**	*eP*	**Pn**	**17 21 37.6**	**-1.1**
JCT	**Junction City**	**18.17**	**337**	⇑P	**Pn**	**17 21 41.0**	**+1.2**
	baz=18,SNR=5.2						
JCT	**Junction City**	**18.17**	**337**	*eP*	**Pn**	**17 21 41.2**	**+1.4**
	comp=Z,8.0nm,0.8s						
628A	**Black Gap, Mar**	**18.68**	**329**	⇑P	**Pn**	**17 21 47.2**	**+1.2**
	baz=19,SNR=16						
OTAV	**Otavalo**	**18.89**	**134**	*eP*	**Pn**	**17 21 49.6**	**+0.9**
	comp=Z,6.0nm,1.1s						
627A	**Terlingua Ranc**	**18.91**	**327**	⇑P	**Pn**	**17 21 50.0**	**+1.1**
	baz=19,SNR=33						
TXAR	**Lajitas Array**	**18.96**	**327**	P	**Pn**	**17 21 49.8**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=152,slow=11,SNR=36						
626A	**Big Bend Ranch**	**19.39**	**326**	⇓P	**Pn**	**17 21 54.7**	**+0.1**
	baz=20,SNR=34						
ROSC	**El Rosal**	**19.40**	**116**	P	**Pn**	**17 21 54.6**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=84,slow=22,SNR=5.7						
527A	**Woodward Ranch**	**19.58**	**328**	⇑P	**Pn**	**17 21 57.0**	**+0.1**
	baz=20,SNR=19						
428A	**Kincaid Ranch,**	**19.60**	**331**	⇓P	**Pn**	**17 21 57.5**	**+0.4**
	baz=20,SNR=16						
LRAL	**Lakeview Retre**	**19.67**	**12**	*eP*	**Pn**	**17 21 56.9**	**-1.0**
	comp=Z,7.2nm,0.9s						
526A	**Mary Lane Ranc**	**19.76**	**327**	⇑P	**Pn**	**17 21 59.0**	**-0.1**
	baz=20,SNR=19						
427A	**Hayter Ranch,**	**20.05**	**330**	⇓P	**P**	**17 22 01.6**	**+0.8**
	baz=20,SNR=8.4						
328A	**Wristen Ranch,**	**20.21**	**332**	⇓P	**P**	**17 22 03.2**	**+0.8**
	baz=20,SNR=28						
426A	**McDonald Obser**	**20.21**	**328**	⇑P	**P**	**17 22 03.6**	**+1.1**
	baz=20,SNR=17						
326A	**Caldwell Ranch**	**20.71**	**329**	⇑P	**P**	**17 22 08.6**	**+0.7**
	baz=21,SNR=22						
MIAR	**Mount Ida**	**20.73**	**356**	*eP*	**P**	**17 22 05.1**	**-3.0**
	comp=Z,9.1nm,0.8s						
425A	**Indio Mountain**	**20.81**	**327**	⇑P	**P**	**17 22 09.9**	**+0.9**
	baz=21,SNR=10						
UALR	**University of**	**20.91**	**359**	*eP*	**P**	**17 22 08.9**	**-1.1**
	comp=Z,21nm,0.8s						
227A	**Bennet, Jal**	**20.96**	**332**	⇑P	**P**	**17 22 11.6**	**+1.0**
	baz=21,SNR=21						
GOGA	**Godfrey**	**20.97**	**20**	*eP*	**P**	**17 22 09.6**	**-1.1**
	comp=Z,19nm,0.8s						
325A	**Bean Ranch, Si**	**21.26**	**328**	⇓P	**P**	**17 22 14.0**	**+0.1**
	baz=21,SNR=27						
226A	**Malaga, Loving**	**21.38**	**330**	⇑P	**P**	**17 22 15.9**	**+0.8**
	baz=21,SNR=43						
CLNB	**Carlsbad**	**21.44**	**331**	*eP*	**P**	**17 22 16.4**	**+0.6**
	comp=Z,12nm,1.0s,mb4.2						
127A	**Arkansas Junct**	**21.55**	**333**	P	**P**	**17 22 16.8**	**-0.1**
	baz=22,SNR=8.6						
GDL2	**Guadalupe Moun**	**21.62**	**330**	*eP*	**P**	**17 22 17.9**	**+0.2**
	comp=Z,30nm,1.0s,mb4.7						
MNTX	**Cornudas Mount**	**21.73**	**327**	⇑P	**P**	**17 22 18.4**	**-0.5**
	baz=22,SNR=32						
MNTX	**Cornudas Mount**	**21.73**	**327**	*eP*	**P**	**17 22 17.6**	**-1.3**
	comp=Z,11nm,0.8s,mb4.3						
225A	**Deer Hill, Car**	**21.77**	**329**	⇓P	**P**	**17 22 19.9**	**+0.5**
	baz=22						
WMOK	**Wichita Mounta**	**21.79**	**344**	*eP*	**P**	**17 22 16.8**	**-2.7**
	comp=Z,22nm,1.2s,mb4.5						
126A	**Clayton Basin,**	**21.83**	**331**	P	**P**	**17 22 19.8**	**-0.1**
	baz=22,SNR=13						
SWET	**Sewanee**	**22.00**	**13**	*eP*	**P**	**17 22 20.3**	**-1.4**
224A	**Cornudas Mount**	**22.10**	**328**	P	**P**	**17 22 22.8**	**-0.1**
	baz=22,SNR=46						
125A	**Gardner Draw,**	**22.14**	**330**	P	**P**	**17 22 22.8**	**-0.5**
	baz=22,SNR=47						
GNAR	**Gosnell**	**22.15**	**4**	*eP*	**P**	**17 22 23.4**	**0.0**
Z26A	**Caprock**	**22.33**	**332**	P	**P**	**17 22 24.6**	**-0.7**
	baz=22,SNR=34						
MSTX	**Muleshoe**	**22.41**	**336**	P	**P**	**17 22 25.1**	**-1.1**
	baz=22,SNR=17						
WVT	**Waverly**	**22.54**	**8**	*eP*	**P**	**17 22 24.8**	**-2.7**
	comp=Z,16nm,0.8s,mb4.5						
CPCT	**Cooper Cave**	**22.56**	**16**	*eP*	**P**	**17 22 26.8**	**-0.9**
124A	**Stringfield Ra**	**22.57**	**329**	P	**P**	**17 22 28.6**	**+0.8**
	baz=23,SNR=62						
Z25A	**Roswell**	**22.68**	**331**	P	**P**	**17 22 28.7**	**-0.3**
	baz=23,SNR=25						
Y26A	**Elida**	**22.81**	**334**	P	**P**	**17 22 29.9**	**-0.6**
	baz=23,SNR=16						
AMTX	**Amarillo**	**22.82**	**339**	⇓P	**P**	**17 22 29.5**	**-0.9**
	baz=23,SNR=26						
AMTX	**Amarillo**	**22.82**	**339**	*eP*	**P**	**17 22 29.1**	**-1.3**
	comp=Z,38nm,0.8s,mb4.9						
TKL	**Tuckaleechee C**	**22.96**	**17**	P	**P**	**17 22 30.4**	**-1.5**
	comp=Z,23nm,0.9s,mb4.6,baz=188,slow=10.0,SNR=36						
TKL				LR	LR	17 32 32.0	
	comp=Z,602nm,19.8s,MS4.0,baz=34,slow=40						
X27A	**F and S Farms,**	**23.14**	**336**	P	**P**	**17 22 32.7**	**-1.1**
	baz=23,SNR=9.8						
320A	**Kipp Ranch, An**	**23.24**	**321**	⇑P	**P**	**17 22 35.6**	**+0.5**
	baz=23						
221A	**Mesquite Ranch**	**23.29**	**324**	⇑P	**P**	**17 22 35.9**	**+0.5**
	baz=23						
X26A	**CR and CF Fran**	**23.34**	**334**	P	**P**	**17 22 35.0**	**-1.1**
	baz=23,SNR=20						
122A	**Conniff Cattle**	**23.37**	**326**	⇑P	**P**	**17 22 37.1**	**+0.8**
	baz=23						
Z23A	**Rita Site, Whi**	**23.41**	**328**	⇑P	**P**	**17 22 37.3**	**+0.6**
	baz=24,SNR=24						
W27A	**Bowe Ranch, En**	**23.49**	**336**	⇑P	**P**	**17 22 36.9**	**-0.6**
	baz=24,SNR=33						
Y24A	**Capitan**	**23.55**	**331**	P	**P**	**17 22 38.0**	**-0.2**
	baz=24,SNR=14						
220A	**Playas Peak, P**	**23.65**	**322**	P	**P**	**17 22 39.4**	**+0.3**
	baz=24,SNR=13						
121A	**Cookes Peak, D**	**23.68**	**325**	⇓P	**P**	**17 22 39.6**	**+0.2**
	baz=24,SNR=9.9						
X25A	**Clemmons Ranch**	**23.69**	**333**	⇓P	**P**	**17 22 39.3**	**-0.2**
	baz=24,SNR=5.2						
319A	**Douglas**	**23.73**	**320**	⇑P	**P**	**17 22 39.7**	**-0.2**
	baz=24,SNR=12						
Z22A	**Elephant Butte**	**23.78**	**327**	⇓P	**P**	**17 22 40.9**	**+0.6**
	baz=24,SNR=8.1						
W26A	**Owens Ranch, T**	**23.79**	**335**	⇓P	**P**	**17 22 39.6**	**-0.8**
	baz=24						
Y23A	**Lovelace Mesa,**	**23.85**	**330**	⇑P	**P**	**17 22 41.5**	**+0.5**
	baz=24,SNR=38						
SIUC	**Southern Illin**	**23.95**	**5**	*eP*	**P**	**17 22 39.2**	**-2.5**
	comp=Z,58nm,1.0s,mb5.0						
X24A	**Lazy VL Ranch,**	**24.07**	**332**	P	**P**	**17 22 43.0**	**+0.1**
	baz=24,SNR=5.8						
219A	**White Tail Can**	**24.15**	**322**	P	**P**	**17 22 44.2**	**+0.4**
	baz=24,SNR=11						
120A	**U Bar Ranch, L**	**24.17**	**323**	⇑P	**P**	**17 22 45.0**	**+1.1**
	baz=24,SNR=8.3						
CCM	**Cathedral Cave**	**24.18**	**1**	*eP*	**P**	**17 22 41.1**	**-2.8**
	comp=Z,16nm,0.8s,mb4.5						
W25A	**X Bar L Ranch,**	**24.19**	**334**	P	**P**	**17 22 43.6**	**-0.4**
	baz=24,SNR=20						
Z21A	**St. Cloud Mine**	**24.20**	**326**	⇓P	**P**	**17 22 45.3**	**+1.1**
	baz=24						
318A	**Bisbee**	**24.22**	**320**	P	**P**	**17 22 44.5**	**+0.1**
	baz=24,SNR=6.5						
BNM	**Barren Site**	**24.31**	**329**	*eP*	**P**	**17 22 45.4**	**+0.3**
	comp=Z,58nm,1.5s,mb4.8						
Y22A	**Socorro**	**24.31**	**328**	⇑P	**P**	**17 22 46.2**	**+1.1**
	baz=24,SNR=22						
USIN	**University of**	**24.37**	**8**	*eP*	**P**	**17 22 42.8**	**-2.8**
	comp=Z,42nm,0.8s,mb4.9						
V26A	**Tequesquite Ra**	**24.41**	**336**	P	**P**	**17 22 46.6**	**+0.5**
	baz=24,SNR=8.4						
LENM	**Lemitar**	**24.50**	**329**	*eP*	**P**	**17 22 47.8**	**+0.9**
	comp=Z,18nm,1.1s,mb4.4						
Z20A	**Nine Sixteen R**	**24.56**	**324**	⇓P	**P**	**17 22 48.2**	**+0.7**
	baz=25,SNR=7.3						
W24A	**Lazy 6 Ranch,**	**24.60**	**333**	P	**P**	**17 22 48.1**	**+0.3**
	baz=25,SNR=20						
218A	**Dragoon**	**24.62**	**320**	P	**P**	**17 22 48.7**	**+0.7**
	baz=25,SNR=6.2						
Y21A	**Point of Rocks**	**24.74**	**327**	⇓P	**P**	**17 22 50.6**	**+1.6**
	baz=25,SNR=9.4						
LAZ	**Ladron**	**24.77**	**329**	*eP*	**P**	**17 22 49.9**	**+0.6**
	comp=Z,8.1nm,1.0s,mb4.2						
V25A	**Rancho No Teng**	**24.79**	**335**	P	**P**	**17 22 49.6**	**+0.2**
	baz=25,SNR=17						
WCI	**Wyandotte Cave**	**24.84**	**10**	*eP*	**P**	**17 22 47.2**	**-2.7**
	comp=Z,29nm,0.7s,mb4.9						
ANMO	**Albuquerque**	**24.87**	**330**	*eP*	**P**	**17 22 50.0**	**-0.3**
	comp=Z,6.4nm,0.8s,mb4.2						
ANMO	**Albuquerque**	**24.87**	**330**	P	**P**	**17 22 50.2**	**0.0**
	comp=Z,6.2nm,0.8s,mb4.2,baz=146,slow=13,SNR=23						
W23A	**Werner Place,**	**24.90**	**331**	P	**P**	**17 22 51.5**	**+1.0**
	baz=25,SNR=6.4						
U26A	**Atchley Ranch,**	**24.92**	**337**	P	**P**	**17 22 50.2**	**-0.5**
	baz=25,SNR=25						
217A	**Green Valley**	**24.97**	**319**	⇓P	**P**	**17 22 51.5**	**+0.4**
	baz=25						
V24A	**Rampart Ranch,**	**24.97**	**333**	⇓P	**P**	**17 22 51.7**	**+0.6**
	baz=25,SNR=9.3						
118A	**Homack Ranch,**	**25.03**	**322**	⇓P	**P**	**17 22 51.7**	**0.0**
	baz=25						
Y20A	**Horse Springs,**	**25.04**	**326**	⇓P	**P**	**17 22 52.5**	**+0.8**
	baz=25,SNR=18						
OLIL	**Olney**	**25.07**	**7**	*eP*	**P**	**17 22 49.5**	**-2.5**
	comp=Z,45nm,0.8s,mb5.0						
X21A	**Alamocita Cree**	**25.13**	**328**	⇓P	**P**	**17 22 53.7**	**+1.1**
	baz=25,SNR=19						
U25A	**Circle Dot Ran**	**25.18**	**336**	⇑P	**P**	**17 22 53.0**	**-0.1**
	baz=25						
TUC	**Tucson**	**25.30**	**320**	*eP*	**P**	**17 22 54.5**	**+0.3**
	comp=Z,9.6nm,1.2s,mb4.2						
V23A	**Ortiz Mt. (NFS**	**25.39**	**332**	⇑P	**P**	**17 22 56.1**	**+1.1**
	baz=26,SNR=15						
BLA	**Blacksburg**	**25.46**	**22**	*eP*	**P**	**17 22 53.4**	**-2.2**
	comp=Z,8.3nm,0.8s,mb4.3						
Y19A	**Nutrioso**	**25.56**	**325**	⇑P	**P**	**17 22 57.6**	**+1.1**
	baz=26,SNR=12						
X20A	**Quemado**	**25.58**	**327**	P	**P**	**17 22 58.2**	**+1.5**
	baz=26,SNR=9.7						
T25A	**Trinidad**	**25.83**	**336**	⇓P	**P**	**17 22 59.6**	**+0.6**
	baz=26,SNR=14						
V22A	**San Miguel Ran**	**25.87**	**331**	⇓P	**P**	**17 23 00.5**	**+1.2**
	baz=26,SNR=6.4						
Y18A	**Canyon Day Jun**	**25.87**	**323**	⇑P	**P**	**17 23 00.1**	**+0.7**
	baz=26						
U23A	**El Rito**	**25.88**	**333**	⇑P	**P**	**17 23 00.2**	**+0.7**
	baz=26,SNR=20						
U22A	**Llaves**	**26.22**	**332**	⇓P	**P**	**17 23 03.6**	**+1.1**
	baz=26,SNR=12						
S25A	**Robets Cordova**	**26.29**	**337**	⇓P	**P**	**17 23 03.4**	**+0.2**
	baz=26,SNR=8.6						
T22A	**Edith**	**26.77**	**332**	⇑P	**P**	**17 23 07.5**	**+0.1**
	baz=27,SNR=8.3						
SDCO	**Great Sand Dun**	**26.79**	**335**	⇑P	**P**	**17 23 07.9**	**+0.3**
	baz=27						
SDCO	**Great Sand Dun**	**26.79**	**335**	*eP*	**P**	**17 23 07.6**	**0.0**
	comp=Z,5.1nm,1.3s,mb3.9						
PCRV	**Puerto La Cruz**	**26.84**	**95**	P	**P**	**17 23 04.0**	**-4.4**
	comp=Z,13nm,0.9s,mb4.5,baz=263,slow=13,SNR=2.2						
T21A	**Navajo Lake**	**27.04**	**332**	P	**P**	**17 23 11.1**	**+1.3**
	baz=27,SNR=5.8						
X16A	**Lo Mia Camp, P**	**27.15**	**323**	⇑P	**P**	**17 23 11.5**	**+0.6**
	baz=27						
S22A	**4UR Ranch, Cre**	**27.34**	**333**	⇑P	**P**	**17 23 12.6**	**0.0**
	baz=27,SNR=14						
MVCO	**Mesa Verde**	**27.67**	**330**	⇓P	**P**	**17 23 15.9**	**+0.4**
	baz=28,SNR=10.0						
MVCO	**Mesa Verde**	**27.67**	**330**	*eP*	**P**	**17 23 15.4**	**-0.1**
	comp=Z,30nm,1.2s,mb4.8						
X15A	**Humboldt**	**27.67**	**322**	⇓P	**P**	**17 23 15.4**	**-0.2**
	baz=28						
S21A	**Coal Bank Pass**	**27.70**	**332**	⇑P	**P**	**17 23 15.9**	**+0.1**
	baz=28						
Q24A	**Divide**	**27.71**	**337**	⇓P	**P**	**17 23 15.2**	**-0.6**
	baz=28						
WUAZ	**Wupatki**	**27.89**	**324**	⇓P	**P**	**17 23 17.7**	**+0.2**
	baz=28						
WUAZ	**Wupatki**	**27.89**	**324**	*eP*	**P**	**17 23 17.0**	**-0.5**
	comp=Z,13nm,1.1s,mb4.5						
Q23A	**Hartsel**	**27.92**	**336**	⇑P	**P**	**17 23 17.6**	**-0.1**
	baz=28						
T18A	**Mexican Hat**	**28.29**	**329**	⇓P	**P**	**17 23 21.2**	**+0.1**
	baz=28						
P23A	**Jefferson**	**28.32**	**337**	⇑P	**P**	**17 23 21.9**	**+0.5**
	baz=28,SNR=8.0						
GLA	**Glamis**	**28.40**	**316**	⇓P	**P**	**17 23 22.2**	**+0.1**
	baz=28						
R20A	**Redvale**	**28.40**	**332**	⇓P	**P**	**17 23 23.1**	**+1.0**
	baz=28						
S19A	**Harvey Farm, M**	**28.40**	**330**	⇑P	**P**	**17 23 22.6**	**+0.5**
	baz=28,SNR=8.3						
PV01	**Paradox Valley**	**28.44**	**332**	*eP*	**P**	**17 23 23.5**	**+1.1**
	comp=Z,1μm,1.4s						
V15A	**Kaibab Nationa**	**28.56**	**324**	⇑P	**P**	**17 23 24.1**	**+0.6**
	baz=29,SNR=6.9						
SMCO	**Snowmass**	**28.61**	**335**	*eP*	**P**	**17 23 24.1**	**+0.2**
	comp=Z,7.0nm,1.3s,mb4.2						
T17A	**Navajo Res., N**	**28.66**	**327**	⇑P	**P**	**17 23 25.0**	**+0.6**
	baz=29						
PV04	**Paradox Valley**	**28.81**	**331**	*eP*	**P**	**17 23 25.8**	**+0.1**
R19A	**Curley Farm, L**	**28.89**	**331**	⇑P	**P**	**17 23 26.9**	**+0.5**
	baz=29,SNR=5.6						
DVTC	**Desert V Tower**	**29.04**	**314**	⇓P	**P**	**17 23 28.4**	**+0.6**
	baz=29						
U15A	**North Rim**	**29.06**	**325**	⇓P	**P**	**17 23 28.9**	**+1.0**
	baz=29,SNR=6.2						
BC3	**Big Chuckawall**	**29.18**	**317**	⇓P	**P**	**17 23 29.2**	**+0.2**
	baz=29						
R18A	**Canyonlands Na**	**29.27**	**330**	⇓P	**P**	**17 23 29.0**	**-0.8**
	baz=29						
O22A	**Kremmling**	**29.28**	**337**	⇓P	**P**	**17 23 29.5**	**-0.4**
	baz=29						
T15A	**Red Dirt Ranch**	**29.53**	**325**	⇓P	**P**	**17 23 32.7**	**+0.6**
	baz=30,SNR=7.2						
U14A	**Mt Trumbull**	**29.56**	**323**	⇓P	**P**	**17 23 33.1**	**+0.7**
	baz=30						
S16A	**Weppner Ranch,**	**29.62**	**327**	⇓P	**P**	**17 23 33.4**	**+0.5**
	baz=30						
V13A	**Grand Canyon W**	**29.64**	**322**	⇓P	**P**	**17 23 33.8**	**+0.6**
	baz=30,SNR=5.2						
BELC	**Belle Mtn. Jos**	**29.75**	**317**	⇓P	**P**	**17 23 33.6**	**-0.5**
	baz=30,SNR=6.1						
Q18A	**Rafter H Ranch**	**29.95**	**331**	⇑P	**P**	**17 23 36.3**	**+0.5**
	baz=30,SNR=5.8						
R16A	**Teasdale**	**29.99**	**328**	P	**P**	**17 23 37.2**	**+1.1**
	baz=30,SNR=8.1						
S15A	**Panguitch**	**30.00**	**326**	⇑P	**P**	**17 23 36.3**	**0.0**
	baz=30						
U13A	**Pakoon Wash**	**30.01**	**323**	⇑P	**P**	**17 23 37.4**	**+1.0**
	baz=30,SNR=5.4

baz=33,SNR=17
H20A Greybull 33.57 339 ⇑P P 17 24 06.8 -0.7
baz=34
J17A Brown Place, J 33.65 335 ⇓P P 17 24 08.8 +0.5
baz=34,SNR=7.5
M13A Montello 33.66 329 P P 17 24 09.1 +0.7
comp=Z,10nm,0.9s,mb4.8
REDW Red Top Meadow 33.71 335 eP P 17 24 08.4 -0.3
comp=Z,31nm,1.2s,mb5.1
L14A Malta 33.72 331 ⇑P P 17 24 08.6 -0.2
baz=34,SNR=18
SNOW Snow King Moun 33.75 335 eP P 17 24 08.9 -0.2
comp=Z,30nm,1.1s,mb5.1
LOHW Long Hollow 33.81 335 eP P 17 24 09.2 -0.5
comp=Z,12nm,1.3s,mb4.7
TPAW Teton Pass 33.85 335 eP P 17 24 09.9 -0.1
comp=Z,17nm,1.2s,mb4.9
RRI2 Red Ridge 33.89 334 eP P 17 24 10.1 -0.2
comp=Z,15nm,1.2s,mb4.8
K15A Arbon 33.89 332 ⇑P P 17 24 10.7 +0.3
baz=34,SNR=10
NVAR Mina Array Bea 33.94 321 P P 17 24 11.2 +0.3
comp=Z,5.9nm,0.8s,mb4.5,baz=131,slow=7.8,SNR=24
K14A Jones Ranch, D 34.08 331 P P 17 24 12.2 +0.2
baz=34,SNR=14
IMW Indian Meadow 34.18 335 eP P 17 24 12.8 -0.1
comp=Z,2.0nm,0.8s,mb4.1
I16A Newdale 34.39 334 ⇑P P 17 24 14.8 +0.1
baz=34
J15A Blackfoot 34.41 333 ⇓P P 17 24 15.1 +0.2
baz=34,SNR=10.0
RLMT Red Lodge 34.57 338 ⇓P P 17 24 15.8 -0.4
baz=35
J14A Carey 34.84 332 ⇑P P 17 24 19.0 +0.4
baz=35,SNR=10
G18A Lazy EL Ranch, 34.84 338 ⇑P P 17 24 17.9 -0.7
baz=35
CMB Columbia Colle 35.00 319 eP P 17 24 19.7 -0.4
comp=Z,4.6nm,1.2s,mb4.3
M10A I.L. Ranch, Tu 35.00 327 ⇓P P 17 24 20.7 +0.7
baz=35
F19A Roth Farm, Mol 35.09 339 ⇓P P 17 24 19.7 -1.0
baz=35
J13A Cove Ranch, Pi 35.20 331 ⇓P P 17 24 21.9 +0.1
baz=35,SNR=6.4
I14A Mackay 35.28 333 ⇓P P 17 24 23.3 +0.9
baz=35
GCMT Greycliff 35.29 338 eP P 17 24 20.4 -2.0
comp=Z,2.1nm,0.8s,mb4.1
E20A Meyer Farm, Mu 35.38 340 ⇓P P 17 24 22.3 -0.9
baz=35
F18A Big Timber 35.40 338 ⇓P P 17 24 22.3 -1.0
baz=35
HLID Hailey 35.44 331 ⇑P P 17 24 24.0 +0.3
baz=36,SNR=16
HLID Hailey 35.44 331 eP P 17 24 23.5 -0.3
comp=Z,7.1nm,1.0s,mb4.5
H15A Lima 35.48 334 ⇑P P 17 24 24.2 +0.1
baz=36,SNR=7.8
E19A Rath Farm, Rou 35.56 340 ⇓P P 17 24 23.9 -0.9
baz=36
I13A Wildhorse Cree 35.58 332 ⇓P P 17 24 25.6 +0.6
baz=36,SNR=15
G16A Moss Hill, Enn 35.63 336 ⇓P P 17 24 25.6 +0.2
baz=36
MCMT McKenzie Canyo 35.74 334 eP P 17 24 26.8 +0.5
comp=Z,10nm,1.0s,mb4.7
F17A Fitzpatrick Pl 35.75 337 ⇑P P 17 24 26.2 -0.2
baz=36
H14A Leadore 35.79 333 ⇓P P 17 24 26.8 0.0
baz=36,SNR=10
G15A Dillon 35.86 335 ⇑P P 17 24 27.4 +0.1
baz=36,SNR=9.8
D20A Manuel Ranch, 35.90 341 ⇑P P 17 24 27.1 -0.6
baz=36
BOZ Bozeman (W) 35.91 336 ⇑P P 17 24 27.2 -0.5
baz=36
I12A Atlanta 35.96 331 P P 17 24 28.4 +0.2
baz=36,SNR=22
MFID Camas Ranch 36.01 330 ⇓P P 17 24 28.0 -0.6
baz=36
E18A Harlowton 36.04 339 ⇑P P 17 24 28.4 -0.5
baz=36
DLMT Dillon 36.06 335 eP P 17 24 28.5 -0.5
comp=Z,21nm,1.5s,mb4.8
H13A Challis 36.14 332 P P 17 24 30.5 +0.7
baz=36,SNR=24
LRM Limekiln Ridge 36.38 335 eP P 17 24 31.2 -0.6
comp=Z,50nm,1.1s,mb5.4
H12A Diamond R Ranc 36.40 332 P P 17 24 32.2 +0.2
baz=36,SNR=23
F15A Butte 36.41 335 ⇑P P 17 24 32.0 -0.1
baz=36,SNR=5.8
G13A Cobalt 36.55 333 ⇓P P 17 24 33.3 +0.1
baz=37
WVOR Wild Horse Val 36.76 326 eP P 17 24 34.1 -1.0
comp=Z,6.6nm,1.1s,mb4.4
D17A Six Diamond Ra 36.82 338 ⇓P P 17 24 34.6 -0.9
baz=37
G12A Big Creek, Yel 37.06 332 ⇓P P 17 24 37.5 -0.1
baz=37,SNR=10
F13A Darby 37.13 334 ⇓P P 17 24 37.8 -0.4
baz=37
EGMT Eagleton 37.25 340 ⇑P P 17 24 39.0 -0.1
baz=37
EGMT Eagleton 37.25 340 eP P 17 24 38.6 -0.6
E14A Clinton 37.28 335 ⇑P P 17 24 39.2 -0.3
baz=37
J08A Circle Bar Ran 37.31 327 P P 17 24 39.8 0.0
baz=37,SNR=23
D15A Lincoln 37.41 337 ⇓P P 17 24 40.0 -0.5
baz=37
F12A Elk City 37.51 333 P P 17 24 41.1 -0.3
baz=38,SNR=35
CHMT Chamberlain Mo 37.59 336 eP P 17 24 41.2 -0.9
comp=Z,1.9nm,0.9s,mb3.8
E13A Victor 37.59 334 P P 17 24 41.8 -0.3
baz=38,SNR=10.0
MSO Missoula 37.80 335 P P 17 24 43.5 -0.4
baz=38,SNR=5.6
MSO Missoula 37.80 335 eP P 17 24 42.7 -1.1
comp=Z,12nm,1.4s,mb4.4
D14A Greenough 37.83 336 ⇓P P 17 24 43.1 -0.9
baz=38
LPAZ La Paz 37.97 141 P P 17 24 44.5 -1.1
comp=Z,0.9nm,0.9s,mb3.5,baz=333,slow=6.0,SNR=3.1
E12A Beaver Dam Sad 38.16 333 P P 17 24 46.2 -0.7
baz=38,SNR=15
D13A Huson 38.22 335 ⇓P P 17 24 46.9 -0.5
baz=38,SNR=9.9
I07A Izee 38.35 327 ⇑P P 17 24 48.2 -0.3
baz=38,SNR=8.9
B15A Bradely Ranch, 38.48 338 ⇑P P 17 24 49.1 -0.4
baz=38
D12A Red Ives Fores 38.56 334 ⇑P P 17 24 49.4 -0.9
baz=39
F10A Beach Ranch, E 38.58 331 P P 17 24 50.0 -0.4
baz=39,SNR=19
C13A Hot Springs 38.74 335 ⇓P P 17 24 50.7 -1.0
baz=39
A15A Johnson Ranch, 39.09 338 P P 17 24 54.0 -0.7
baz=39,SNR=5.2
B13A Whitefish 39.25 336 ⇓P P 17 24 55.5 -0.6
baz=39
A14A Double T Ranch 39.34 338 P P 17 24 56.1 -0.7
baz=39,SNR=6.4
C11A Tepee Creek (N 39.56 334 P P 17 24 58.3 -0.4
baz=40,SNR=14
OD2 Odessa Site #2 40.31 332 eP P 17 25 03.7 -1.2
comp=Z,30nm,1.3s,mb4.9
HOOD Mount Hood Mea 40.31 327 eP P 17 25 05.7 +0.7
comp=Z,34nm,0.9s,mb5.1
B08A Colville Reser 41.31 332 ⇓P P 17 25 12.4 -0.6
baz=41
LON Longmire 41.36 329 eP P 17 25 12.9 -0.6
comp=Z,9.8nm,0.9s,mb4.4
D05A Enumclaw 41.74 329 ⇑P P 17 25 16.5 -0.2
baz=42
B06A Marblemount 42.42 331 ⇑P P 17 25 21.6 -0.6
baz=42
SIV San Ignacio 42.43 133 P P 17 25 19.1 -3.5
comp=Z,3.9nm,0.7s,mb4.1,baz=303,slow=9.1,SNR=27
EDM Edmonton 42.89 341 eP P 17 25 24.2 -1.7
SCHQ Schefferville 45.37 20 eP P 17 25 41.8 -3.9
comp=Z,24nm,0.8s,mb5.1
SCHQ Schefferville 45.37 20 P P 17 25 42.1 -3.7
comp=Z,22nm,0.8s,mb5.0,baz=216,slow=6.1,SNR=16
SCHQ LR LR 17 45 48.9
comp=Z,737nm,20.1s,MS4.6,baz=256,slow=38
YKA Yellowknife Ar 51.27 347 P P 17 26 29.3 -1.9
YKA Yellowknife Ar 51.27 347 P P 17 26 29.3 -1.9
comp=Z,6.4nm,0.7s,mb4.7,baz=148,slow=7.4,SNR=48
DLBC Dease Lake 52.92 336 eP P 17 26 43.7 +0.2
PAX Paxson 61.72 335 eP P 17 27 44.0 -1.6
comp=Z,4.8nm,0.9s,mb4.6
RC01 Rabbit Creek A 62.76 332 eP P 17 27 50.1 -2.6
comp=Z,12nm,1.1s,mb4.9
ILAR Eielson Array 63.10 337 P P 17 27 53.3 -1.6
comp=Z,2.0nm,0.9s,mb4.2,baz=106,slow=5.4,SNR=23
TRF Thorofare Moun 63.90 335 eP P 17 27 58.9 -1.3
comp=Z,13nm,0.9s,mb5.0
RSO Redoubt South 63.92 331 eP P 17 27 59.4 -0.9
BPAW Bear Paw Mtn. 64.44 335 eP P 17 28 01.4 -2.2
comp=Z,7.9nm,1.0s,mb4.7
PPLA Purkeypile 64.50 334 eP P 17 28 01.9 -2.2
ESDC Sonseca Array 79.73 52 P P 17 29 30.9 -4.9
comp=Z,0.1nm,0.3s,baz=292,slow=5.4,SNR=4.3
SPITS Spitsbergen Ar 80.27 11 LR LR 18 07 00.4
comp=Z,225nm,19.8s,MS4.5,baz=285,slow=37
NOA NORSAR Array B 84.26 28 LR LR 18 05 20.7
comp=Z,67nm,21.8s,MS4.0,baz=270,slow=34
CN2 Changchun 113.36 331 ePKP PKiKP 17 35 58.8 -7.0
MKAR Makanchi Array 119.48 5 PKP PKPdf 17 36 13.8 -3.7
comp=Z,0.4nm,0.8s,baz=43,slow=2.8,SNR=4.1
BJI Beijing 120.45 335 PKP PKPdf 17 36 17.9 -1.7
BJI PP PP 17 37 43.3 -1.7
BJI SS SS 17 54 07.6 -6.0
BJI LR LR
comp=N,110nm,13.5s,MS4.8
BJI LR LR
comp=E,110nm,13.4s,MS4.8
BJI LR LR
comp=Z,43nm,17.7s,MS4.1
HHC Hu-ho-hao-te 121.48 339 ePKP PKPdf 17 36 13.9 -7.7
HHC sPKP 17 36 43.9
HHC AMB AMB
comp=Z,100nm,8.9s
HHC LR LR
comp=N,81nm,12.4s,MS4.7
HHC LR LR
comp=E,88nm,15.9s,MS4.7
HHC LR LR
comp=Z,82nm,14.9s,MS4.5
WMQ Urumqi 122.68 0 ePKP PKPdf 17 36 20.6 -3.2
WMQ LR LR
comp=N,79nm,20.8s,MS4.4
WMQ LR LR
comp=E,47nm,22.3s,MS4.4
WMQ LR LR
comp=Z,82nm,21.7s,MS4.3
NJ2 Nanjing 125.77 328 ePKP PKPdf 17 36 23.6 -6.4
KSH Kashi 125.77 12 ePKP PKPdf 17 36 30.3 +0.5
KSH ePKS 17 40 05.3
KSH AMB AMB
comp=Z,70nm,7.1s
CD2 Chengdu 133.10 342 PKP PKPdf 17 36 44.9 +0.9
WRA Warramunga Arr 135.49 256 PKP PKPdf 17 36 45.3 -3.4
comp=Z,0.5nm,0.8s,baz=127,slow=1.8,SNR=4.0
ASAR Alice Springs 135.74 250 PKP PKPdf 17 36 46.2 -2.9
comp=Z,0.5nm,0.9s,baz=109,slow=2.7,SNR=3.5
KMI Kunming 138.80 340 PKP PKPdf 17 36 55.0 +0.2
CHTO Chiang Mai 145.91 342 ePKP PKPdf 17 37 04.7 -2.9
CM31 Chiang Mai Arr 146.25 341 PKP PKPdf 17 37 06.7 -1.4
CMAR Chiang Mai Arr 146.25 341 PKPbc PKPbc 17 37 06.6 -2.5
comp=Z,4.8nm,0.8s,baz=347,slow=3.7,SNR=27

DJA 17 17:19:51,1°22N×99°54E,h26km,MLv3.5/8,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNSI	**Mandailing Nat**	**0.42**	**175**	P		Pb 17 20 01.9	+1.9
BKNI	**Bangkinang**	**1.74**	**121**	P		Pn 17 20 19.7	+0.1
PPI	**Padang Panjang**	**1.87**	**153**	P		Pn 17 20 20.8	-0.6
GSI	**Gunungsitoli**	**1.97**	**272**	P		Pn 17 20 37.9	+15
PDSI	**Padang**	**2.31**	**156**	P		Pn 17 20 28.2	+0.8
SISI	**Saibi**	**2.57**	**190**	P		Pn 17 20 33.0	+2.0
SDSI	**Sungai Dareh**	**2.85**	**139**	P		Pn 17 20 37.1	+2.2
TPTI		**3.11**	**311**	P		Pn 17 20 38.7	+0.3
KULM	**Kulim**	**4.19**	**15**	P		Pn 17 20 54.7	+1.4

*NIED **17** 17:37:00,24.°10N×121.°70E,h44km,Mw4.1 Best double couple: M₀1.60000×10¹⁵ NP1:φ₉169.00000°,δ60.00000°, λ55.00000°. NP2:φ₉43.00000°,δ45.00000°,λ134.00000°.*
*IDC **17** 17:37:49.1±0.7,23.°97N×121.°81E,h0km,mb4.0/15, mb1 4.1/17,mb1mx4.0/23,mbtmp3.9/17,ML2.9/1,MS3.1/3, Ms1 3.2/3,ms1mx2.9/44,Error ellipse: s-maj=22.3km s-min=15.2km az=67.0*
*BJI **17** 17:37:52.8,23.°90N×121.°86E,h28km,mB4.5/12,mb4.2/21, ML3.6/3,Ms3.7/17,Ms7 3.5/16*
*ISCJB **17** 17:37:55.6±0.2,23.°99N±0.°02×121.°77E±0.°01,h52km±2km, mb4.0/22,MS3.3/5,Error ellipse: s-maj=2.8km s-min=1.9km az=144.1*
*NEIC **17** 17:37:55.1±0.7,23.°96N×121.°83E,h40km±5km,mb4.1/4, Error ellipse: s-maj=8.9km s-min=5.8km az=99.0*
NEIC Recorded [3 TAP] in Hua-lien and I-lan; [2 TAP] in Nan-t'ou and T'ai-chung; [1 TAP] in Chang-hua.
*TAP **17** 17:37:56.1,24.°00N×121.°70E,h43km,ML4.6,B*
*JMA **17** 17:37:56.4±0.2,24.°09N×121.°75E,h71km,M4.1*

ISC 17 17:37:56.5±0.2,24.°00N±0.°02×121.°76E±0.°01,h44km±2km, n129,σ1s08/191,mb4.0/22,MS3.3/5,28C-7D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.14**	**259**	⇓*i*P		**Pn 17 38 03.3**	**-0.6**
TWD	**Chiawan**	**0.17**	**297**	⇓*i*P		**Pn 17 38 03.3**	**-0.7**
TWD				S		**Sn 17 38 08.7**	**-0.7**
NACB	**Ninganchiao**	**0.23**	**318**	*e*Pg		**Pn 17 38 02.9**	**-1.6**
NACB				*e*Sg		**Sn 17 38 08.6**	**-1.5**
ESF	**Shoufeng Towns**	**0.27**	**240**	P		**Pn 17 38 04.0**	**-0.8**
EHP	**Heping Village**	**0.30**	**357**	*e*P		**Pn 17 38 04.8**	**-0.4**
EHP				*e*S		**Sn 17 38 11.8**	**+0.5**
ESL	**Shilin**	**0.35**	**238**	⇓*i*P		**Pn 17 38 04.5**	**-1.2**
TEGC	**Jichi Village**	**0.36**	**215**	*e*P		**Pn 17 38 05.3**	**-0.5**
TEGC				*e*S		**Sn 17 38 13.1**	**+0.9**
ENA	**Nanau**	**0.42**	**358**	⇓*i*P		**Pn 17 38 06.1**	**-0.4**
WHF	**Hehuan Shan**	**0.47**	**287**	⇓*i*P		**Pn 17 38 06.4**	**-0.7**
NNS	**Nan Shan**	**0.56**	**321**	⇓*i*P		**Pn 17 38 07.8**	**-0.4**
NNS				*e*S		**Sn 17 38 15.5**	**-1.1**
TWT	**Tachien**	**0.59**	**295**	⇑*i*P		**Pn 17 38 08.4**	**-0.2**
TWT				*e*S		**Sn 17 38 15.9**	**-1.3**
EHY	**Hungye**	**0.64**	**219**	⇑*i*P		**Pn 17 38 07.6**	**-1.6**
ENTT	**Nioudou**	**0.66**	**344**	⇑*i*P		**Pn 17 38 09.4**	**-0.1**
ENTT				*e*S		**Sn 17 38 18.5**	**-0.3**
TWE	**Neicheng**	**0.72**	**353**	⇑*i*P		**Pn 17 38 10.4**	**+0.1**
TWE				*e*S		**Sn 17 38 20.4**	**+0.1**
YULB	**Yu-li**	**0.74**	**215**	*e*Pg		**Pn 17 38 08.3**	**-2.3**
YHNB	**Yeheng**	**0.75**	**332**	*e*Pg		**Pn 17 38 10.4**	**-0.3**
YHNB				*e*Sg		**Sn 17 38 19.8**	**-1.2**
NSK	**Sanguang**	**0.76**	**331**	⇑*i*P		**Pn 17 38 10.8**	**-0.1**
NSK				*e*S		**Sn 17 38 20.5**	**-0.8**
SSLB	**Suanglung**	**0.77**	**254**	*e*Pg		**Pn 17 38 09.9**	**-1.1**
SSLB				*e*Sg		**Sn 17 38 19.1**	**-2.4**
TWF1	**Yuli**	**0.78**	**213**	⇑*i*P		**Pn 17 38 09.5**	**-1.5**
SMLT	**Sun Moon Lake**	**0.80**	**261**	⇑*i*P		**Pn 17 38 10.8**	**-0.5**
TYC	**Yuchr**	**0.83**	**263**	⇑*i*P		**Pn 17 38 11.2**	**-0.7**

baz=255
baz=314
baz=314
baz=240
baz=203
baz=203
baz=10.0
baz=287
baz=327
baz=327
baz=294
baz=294
baz=222
baz=349
baz=349
baz=349
baz=335
baz=335
baz=220
baz=255
baz=264
baz=264
baz=228
baz=228
baz=319
baz=319
baz=292
baz=292
baz=189
baz=348
baz=348
baz=263
baz=263
baz=279
baz=279
baz=233
baz=233
baz=24
baz=24
baz=350
baz=350
baz=214
baz=214
baz=352
baz=352
baz=239
baz=239
baz=322
baz=334
baz=334
baz=346
baz=346
baz=254
baz=254
baz=68
baz=68
baz=228
baz=230
baz=230
baz=344
baz=235
baz=235
baz=248
baz=248
baz=274
baz=274
baz=203
baz=235
baz=235
baz=268
baz=246
baz=246
baz=248
baz=248
baz=200
baz=221
baz=221
baz=236
baz=237
baz=237
baz=225
baz=225
baz=201
baz=219
baz=200
baz=194
baz=194
baz=184
baz=258
baz=258
comp=N,440nm,0.7s
comp=E,330nm,0.8s

QZH LR LR
comp=N,490nm,5.0s
QZH LR LR
comp=E,720nm,7.9s
QZH LR LR
comp=Z,1μm,16.7s
KNM Kinmen 3.06 278 ⇑*iP* **Pn 17 38 43.0 +0.5**
baz=276
KNM *e*S **Sn 17 39 18.1 +0.3**
baz=276
JMJ Miyako jima 2 3.32 75 P **Pn 17 38 47.2 +1.2**
JMJ S **Sn 17 39 25.4 +1.2**
JMJ Miyako jima 2 3.32 75 *e*P **Pn 17 38 46.5 +0.5**
baz=76
JOGS Gusukube 3.41 76 P **Pn 17 38 48.5 +1.3**
JOGS *e*S **Sn 17 39 27.7 +1.3**
JKE Kume jima 2 5.11 62 P **Pn 17 39 11.1 +0.6**
JAGN Aguni-jima 5.59 61 P **Pn 17 39 17.6 +0.5**
JAGN *e*S **Sn 17 40 19.5 -0.6**
JIH Iheya 6.37 60 P **Pn 17 39 27.6 -0.2**
JIH *e*S **Sn 17 40 39.4 +0.2**
JOW Kunigami 6.53 63 P **Pn 17 39 29.2 -0.8**
JOW *e*S **Sn 17 40 41.7 -1.5**
JOW Kunigami 6.53 63 *e*P **Pn 17 39 29.2 -0.8**
baz=66
JTK Tokunoshima 7.49 58 P **Pn 17 39 41.5 -1.7**
GZH Guangzhou 7.78 265 P **Pn 17 39 41.9 -5.2**
GZH S **Sn 17 41 00.3 -14**
GZH smax
comp=N,100nm,1.0s
GZH smax
comp=E,63nm,0.9s
JAM Amami Oshima 8.30 56 P **Pn 17 39 52.5 -1.8**
JAM *e*S **Sn 17 41 24.3 -2.4**
JMZ Minamidaito 2 8.78 76 P **Pn 17 39 57.2 -3.6**
QIZ Qiongzhong 12.14 248 P **Pn 17 40 46.4 -0.6**
QIZ S **Sn 17 43 02.1 +1.1**
QIZ LR LR
comp=N,130nm,13.3s
QIZ LR LR
comp=E,160nm,20.9s
QIZ Qiongzhong 12.14 248 P **Pn 17 40 47.4 +0.5**
GYA Guiyang 13.88 283 P **Pn 17 41 12.0 +1.4**
GYA pmax pmax
comp=Z,10.0nm,0.7s
KSRS Korea Array 14.41 20 Pn **Pn 17 41 13.5 -4.2**
comp=Z,0.1nm,0.3s,baz=202,slow=12,SNR=3.6
KSRS LR LR 17 46 48.0
comp=Z,50nm,19.8s,baz=25,slow=37
BJI Beijing 16.67 345 P **Pn 17 41 47.3 +0.4**
BJI S **S 17 44 52.5 -8.0**
BJI pmax pmax
comp=Z,2.0nm,0.9s
BJI pmax pmax
comp=Z,200nm,11.0s
BJI LR LR
comp=N,150nm,12.4s
BJI LR LR
comp=E,170nm,12.0s
BJI LR LR
comp=Z,130nm,19.3s
KMI Kunming 17.34 278 P **Pn 17 41 55.9 +0.6**
KMI pP pP 17 42 04.5 -2.3
KMI sP sP 17 42 09.4 -3.0
KMI S **S 17 45 06.6 -7.8**
KMI sS sS 17 45 19.5 -12
KMI SS 17 45 28.8
KMI pmax pmax
comp=Z,4.0nm,0.8s
KMI pmax pmax
comp=Z,33nm,3.1s
KMI LR LR
comp=N,100nm,17.8s
KMI LR LR
comp=E,190nm,14.5s
KMI LR LR
comp=Z,160nm,15.9s
CD2 Chengdu 17.39 297 P **Pn 17 41 56.4 +0.6**
CD2 pP pP 17 42 04.1 -3.1
CD2 sP sP 17 42 08.8 -4.1
CD2 PP 17 42 11.1
CD2 S **S 17 45 07.0 -8.2**
CD2 sS sS 17 45 19.4 -13
CD2 SS 17 45 28.9
CD2 pmax pmax
comp=Z,10.0nm,0.4s
CD2 pmax pmax
comp=Z,100nm,5.1s
CD2 LR LR
comp=N,200nm,16.8s
CD2 LR LR
comp=E,310nm,17.5s
CD2 LR LR
comp=Z,290nm,17.1s
HHC Hu-ho-hao-te 18.85 335 *e*P **Pn 17 42 14.5 +0.9**
HHC pP pP 17 42 22.4 -0.9
HHC sP sP 17 42 27.0 -2.0
HHC PP 17 42 31.3
HHC S **S 17 45 41.6 -3.0**
HHC sS sS 17 45 53.6 -8.0
HHC SS 17 46 06.8
HHC pmax pmax
comp=Z,11nm,0.9s
HHC pmax pmax
comp=Z,140nm,4.4s
HHC LR LR
comp=N,91nm,5.9s
HHC LR LR
comp=E,110nm,4.2s
HHC LR LR
comp=Z,110nm,6.7s
MJAR Matsushiro Arr 18.89 45 P **Pn 17 42 12.0 -2.1**
comp=Z,0.0nm,0.3s,baz=246,slow=8.1,SNR=2.9
LZH Lanzhou 19.60 312 *e*P **Pn 17 42 25.4 +2.8**
LZH pP pP 17 42 33.9 +2.3
LZH sP sP 17 42 37.8 +0.6
LZH pmax pmax
comp=Z,13nm,1.0s
CN2 Changchun 19.98 8 *e*P **Pn 17 42 27.5 +0.5**
MDJ Mudanjiang 21.54 15 P **P 17 42 41.3 -0.5**
MDJ pP 17 42 49.3
MDJ sP sP 17 42 53.4 -4.8
MDJ S **S 17 46 38.6 +0.7**
MDJ sS sS 17 46 52.3 -3.0
MDJ ScP ScP 17 50 17.6 +1.1
MDJ pmax pmax
comp=Z,5.0nm,0.6s,mb4.1
MDJ pmax pmax
comp=Z,42nm,3.7s
MDJ LR LR
comp=N,87nm,16.3s,MS3.4
MDJ LR LR
comp=E,55nm,14.0s,MS3.4
MDJ LR LR
comp=Z,94nm,15.2s,MS3.3
CHTO Chiang Mai 21.85 261 *e*P **P 17 42 46.5 +1.0**
comp=Z,4.6nm,1.0s,mb3.9
CMAR Chiang Mai Arr 21.96 260 P **P 17 42 46.9 +0.2**
comp=Z,1.2nm,0.8s,mb3.4,baz=62,slow=8.1,SNR=9.8
CMAR LR LR 17 51 41.1
comp=Z,57nm,20.2s,MS3.0,baz=190,slow=38
GTA Gaotai 24.09 315 *e*P **P 17 43 11.1 +3.3**
GTA pP 17 43 22.0
GTA sP sP 17 43 26.0 +1.1
GTA S **S 17 47 29.8 +7.5**
GTA pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
GTA LR LR
comp=N,100nm,15.6s,MS3.5
GTA LR LR
comp=E,110nm,17.7s,MS3.5
GTA LR LR
comp=Z,160nm,16.8s,MS3.6
GUMO Guam 24.17 111 LR LR 17 52 14.9
comp=Z,66nm,18.6s,MS3.1,baz=90,slow=36
ULN Ulaanbaatar 26.53 337 *e*P **P 17 43 30.0 +0.1**
comp=Z,1.7nm,0.4s,mb3.9
SONM Songino Array 26.74 337 P **P 17 43 31.6 -0.2**
comp=Z,1.4nm,0.8s,mb3.5,baz=154,slow=9.2,SNR=9.0
LSA Lhasa 27.84 288 P **P 17 43 43.5 +1.6**
WMQ Urumqi 34.16 314 *e*P **P 17 44 39.4 +2.1**
WMQ pP pP 17 44 49.0 -0.3
WMQ sP sP 17 44 53.0 -1.6
WMQ pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
WMQ pmax pmax
comp=Z,47nm,4.0s
WMQ LR LR
comp=N,80nm,21.0s,MS3.5
WMQ LR LR
comp=E,54nm,22.0s,MS3.5
WMQ LR LR
comp=Z,83nm,22.0s,MS3.4
MK31 Makanchi Array 38.83 316 *e*P **P 17 45 17.1 0.0**
MKAR Makanchi Array 38.83 316 P **P 17 45 16.9 -0.2**
MKAR Makanchi Array 38.83 316 P **P 17 45 16.9 -0.2**
comp=Z,2.0nm,0.6s,mb4.0,baz=104,slow=11,SNR=28
ZAA0 Zalesovo Array 40.68 327 *e*P **P 17 45 31.2 -1.2**
ZALV Zalesovo Beam 40.68 327 P **P 17 45 31.1 -1.3**
comp=Z,3.6nm,0.8s,mb4.1,baz=111,slow=8.1,SNR=16
KURK Kurchatov 42.57 320 *e*P **P 17 45 47.3 -0.6**
comp=Z,2.7nm,0.5s,mb4.2
WRA Warramunga Arr 45.37 163 P **P 17 46 08.9 -1.7**
comp=Z,0.7nm,0.4s,mb3.9,baz=345,slow=8.7,SNR=7.4
BVAR Borovoye Array 48.15 321 P **P 17 46 31.7 -0.3**
comp=Z,2.0nm,0.5s,mb4.4,baz=105,slow=8.5,SNR=18
BRVK Borovoye 48.22 321 *e*P **P 17 46 31.9 -0.7**
ASAR Alice Springs 48.83 165 P **P 17 46 35.9 -1.7**
comp=Z,0.9nm,0.8s,mb3.9,baz=346,slow=6.7,SNR=18
ABKAR Akbulak array 53.94 314 *e*P **P 17 47 15.5 -0.2**
comp=Z,4.1nm,0.6s,mb4.5
STKA Stephens Creek 58.71 160 P **P 17 47 48.1 -1.6**
comp=Z,1.1nm,0.5s,mb4.1,baz=308,slow=24,SNR=3.8
PPLA Purkeypile 67.14 30 *e*P **P 17 48 46.7 +1.3**
ILAR Eielson Array 69.13 27 P **P 17 48 57.2 -0.6**
comp=Z,0.3nm,0.4s,mb3.5,baz=270,slow=4.7,SNR=13
FINES FINESS Array B 71.87 330 P **P 17 49 13.4 -1.1**
comp=Z,1.8nm,0.7s,mb4.1,baz=46,slow=5.5,SNR=8.1
DAWY Dawson 72.46 27 *e*P **P 17 49 18.1 +0.1**
AKASG Malin Array Be 73.35 318 P **P 17 49 21.9 -1.7**
AKASG Malin Array Be 73.35 318 P **P 17 49 21.9 -1.7**
comp=Z,0.5nm,0.5s,mb3.7,baz=67,slow=5.5,SNR=3.9
BRTR Keskin Array B 73.70 307 P **P 17 49 24.6 -1.2**
comp=Z,0.8nm,0.8s,mb3.7,baz=97,slow=5.0,SNR=6.0
NOA NORSAR Array B 78.63 332 P **P 17 49 52.1 -1.3**
comp=Z,1.0nm,0.9s,mb3.8,baz=59,slow=5.3,SNR=3.5
YKA Yellowknife Ar 82.93 23 P **P 17 50 15.8 -0.5**
comp=Z,3.3nm,0.6s,mb4.5,baz=313,slow=5.0,SNR=28
NVAR Mina Array Bea 96.20 43 P **P 17 51 20.3 +0.2**
comp=Z,0.2nm,0.4s,mb3.9,baz=278,slow=3.6,SNR=4.3

DJA 17 17:48:36,0.22S×123.06E,h64km,MLv3.5/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.87**	**199**	P	Pn	17 48 52.5	0.0
LUWI				S	Sn	17 49 05.6	+0.9
MRSI	**Marisa**	**1.32**	**302**	P	Pn	17 48 59.8	+1.4
MRSI				S	Sn	17 49 16.6	+1.5
APSI	**Ampana**	**1.57**	**244**	P	Pn	17 49 02.6	+0.9

IDC ***17*** *17:58:17.8±0.7, 38.42N×70.34E, h0km, mb3.8/13, mb1 4.0/19, mb1mx4.0/28, mbtmp3.9/19, ML3.8/6, Error ellipse: s-maj=13.0km s-min=11.4km az=1.0*
NNC ***17*** *17:58:20.8±3.6, 38.81N×70.14E, h0km, mb4.3, mpv4.5, Error ellipse: s-maj=35.1km s-min=22.9km az=55.0*
BJI ***17*** *17:58:21.5, 38.76N×70.40E, h20km, mB4.6/3, mb4.3/6, ML3.8/4*
MOS ***17*** *17:58:22.8±1.1, 38.81N×70.36E, h33km, mb4.3/13, Error ellipse: s-maj=11.6km s-min=7.1km az=85.8*
ISCJB ***17*** *17:58:24.5±0.8, 38.73N±0.04×70.31E±0.05, h56km±8km, mb4.0/23, Error ellipse: s-maj=7.3km s-min=6.6km az=28.8*
NEIC ***17*** *17:58:25.9±1.1, 38.76N×70.35E, h53km±11km, mb4.5/3, Error ellipse: s-maj=11.8km s-min=9.2km az=169.0*

ISC 17 17:58:25.9±0.7, 38.76N±0.04×70.26E±0.05, h50km±7km, n101,σ1s30/115, mb4.0/23, 18C-11D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.26**	**37**	P	**Pn**	**17 59 29.4**	**+1.2**
	SNR=333						
AML	**Almayashu**	**4.26**	**37**	*e*P	**Pn**	**17 59 29.4**	**+1.1**
KBL	**Kabul**	**4.33**	**193**	*e*P	**Pn**	**17 59 29.8**	**+0.7**
KK31	**Karatay Array**	**4.34**	**2**	⇑Pn	**Pn**	**17 59 31.3**	**+2.0**
	12nm,0.4s,baz=179,slow=12,SNR=321						
KK31				⇓Sn	**Sn**	**18 00 25.5**	**+6.9**
	22nm,0.3s,baz=188,slow=33,SNR=6.7						
KK31				⇑Lg		18 00 40.2	
	132nm,0.6s,baz=177,slow=31,SNR=3.9						
KSH	**Kashi**	**4.50**	**79**	Pn	**Pn**	**17 59 27.4**	**-4.1**
KSH				Sn	**Sn**	**18 00 12.8**	**-10**
KSH				smax			
	comp=N,350nm,1.1s						
KSH				smax			
	comp=E,210nm,0.8s						
EKS2	**Erkin-Say**	**4.72**	**33**	P	**Pn**	**17 59 37.0**	**+2.5**
	SNR=16						
EKS2	**Erkin-Say**	**4.72**	**33**	*e*P	**Pn**	**17 59 36.1**	**+1.6**
UCH	**Uchtor**	**4.74**	**42**	P	**Pn**	**17 59 36.4**	**+1.6**
	SNR=121						
UCH	**Uchtor**	**4.74**	**42**	*e*P	**Pn**	**17 59 36.1**	**+1.3**
AAK	**Ala-Archa**	**5.03**	**38**	P	**Pn**	**17 59 42.1**	**+3.4**
	SNR=31						
AAK	**Ala-Archa**	**5.03**	**38**	*e*P	**Pn**	**17 59 40.2**	**+1.5**
AAK				Sn	**Sn**	**18 00 45.1**	**+10**
AAK	**Ala-Archa**	**5.03**	**38**	Pn	**Pn**	**17 59 41.1**	**+2.4**
	comp=E,6.5nm,0.3s,baz=209,slow=7.5,SNR=68						
AAK				Sn	**Sn**	**18 00 45.1**	**+10**
	comp=E,8.4nm,0.3s,baz=52,slow=18,SNR=2.9						
AAK	**Ala-Archa**	**5.03**	**38**	PN	**Pn**	**17 59 41.1**	**+2.4**
AAK						18 00 45.1	
AAK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
AAK				smax			
	comp=N,8.0nm,0.3s						
FRU	**Bishkek**	**5.24**	**38**	⇓*i*PN	**Pn**	**17 59 44.0**	**+2.4**
FRU				*i* S	**Sn**	**18 00 49.0**	**+8.3**
FRU				pmax	pmax		
	comp=Z,130nm,2.0s						
FRU				smax			
	comp=N,700nm,2.0s						
KBK	**Karagaybulak**	**5.27**	**41**	P	**Pn**	**17 59 44.4**	**+2.3**
	SNR=54						
CHMS	**Chumysh**	**5.43**	**37**	P	**Pn**	**17 59 48.3**	**+4.1**
	SNR=66						
USP	**Ospenovka**	**5.52**	**34**	P	**Pn**	**17 59 46.3**	**+0.8**
	SNR=11						
ULHL	**Ulahol**	**5.73**	**51**	P	**Pn**	**17 59 49.0**	**+0.6**
	SNR=9.5						
KNDC	**Almaty**	**6.75**	**47**	⇑Pn	**Pn**	**18 00 06.8**	**+4.6**
	comp=N,79nm,0.6s						
KNDC				⇑Lg		18 01 53.2	
	comp=N,56nm,1.2s						
SDNR	**Sundarnagar**	**9.09**	**141**	*e*PKP	**Pn**	**18 00 32.5**	**-1.9**
MK31	**Makanchi Array**	**11.93**	**44**	⇓Pn	**Pn**	**18 01 13.2**	**+0.1**
	comp=N,2.9nm,0.7s,baz=226,slow=14,SNR=25						
MK31	**Makanchi Array**	**11.93**	**44**	*e*P	**Pn**	**18 01 11.0**	**-2.1**
MKAR	**Makanchi Array**	**11.93**	**44**	Pn	**Pn**	**18 01 12.5**	**-0.6**
	comp=N,0.2nm,0.3s,baz=227,slow=14,SNR=25						
AB31	**Akbulak array**	**12.84**	**328**	⇑Pn	**Pn**	**18 01 23.1**	**-2.5**
	comp=N,16nm,0.5s,baz=167,slow=12,SNR=339						
AB31				⇓Sn	**Sn**	**18 03 42.8**	**-4.1**
	comp=N,9.3nm,0.5s,baz=163,slow=22,SNR=8.1						
ABKAR	**Akbulak array**	**12.84**	**328**	*e*P	**Pn**	**18 01 23.1**	**-2.5**
	comp=N,27nm,0.4s						
KURK	**Kurchatov**	**13.33**	**24**	⇑Pn	**Pn**	**18 01 28.6**	**-3.7**
	comp=N,3.7nm,1.1s						
KURK				⇑Lg		18 05 20.2	
	comp=N,24nm,1.1s,baz=177,slow=31						
KURK	**Kurchatov**	**13.33**	**24**	Pn	**Pn**	**18 01 27.1**	**-5.2**
	comp=N,0.1nm,0.3s,baz=214,slow=12,SNR=14						
KURK	**Kurchatov**	**13.33**	**24**	P	**Pn**	**18 01 30.4**	**-1.9**
VOSK	**Vostochnaya**	**13.97**	**2**	⇓Pn	**Pn**	**18 01 40.1**	**-0.9**
	comp=N,2.3nm,0.7s						
VOSK				⇓Sn	**Sn**	**18 04 11.0**	**-3.3**
	comp=N,4.4nm,1.3s						
ZRNK	**Zerenda**	**14.22**	**357**	⇓Pn	**Pn**	**18 01 43.3**	**-0.9**
	comp=N,1.3nm,0.4s						
ZRNK				⇑Sn	**Sn**	**18 04 15.3**	**-5.0**
	comp=N,3.0nm,0.6s						
BVA0	**Borovoye Array**	**14.27**	**0**	Pn	**Pn**	**18 01 44.8**	**-0.1**
	comp=N,0.4nm,0.6s,baz=161,slow=12,SNR=14						
BVA0				Sn	**Sn**	**18 04 22.4**	**+0.9**
	comp=N,0.4nm,0.5s,baz=161,slow=19,SNR=3.5						
BVAR	**Borovoye Array**	**14.27**	**0**	Pn	**Pn**	**18 01 42.7**	**-2.2**
	comp=N,0.7nm,0.3s,baz=159,slow=11,SNR=13						
BVAR				Sn	**Sn**	**18 04 18.1**	**-3.4**
	comp=N,0.6nm,0.3s,baz=209,slow=33,SNR=3.7						
BVAR	**Borovoye Array**	**14.27**	**0**	P	**Pn**	**18 01 42.7**	**-2.2**
BVAR						18 04 18.1	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
BRVK	**Borovoye**	**14.30**	**0**	*e*P	**Pn**	**18 01 45.5**	**+0.1**
AKTK	**Aktyubinsk**	**14.55**	**327**	Pn	**Pn**	**18 01 47.4**	**-1.3**
AKTK				Sn	**Sn**	**18 04 23.9**	**-4.4**
AKTO	**Aktyubinsk**	**14.55**	**327**	⇓Pn	**Pn**	**18 01 47.5**	**-1.1**
	comp=N,2.3nm,0.5s						
AKTO				⇑Sn	**Sn**	**18 04 25.2**	**-3.2**
	comp=N,1.5nm,0.8s						
AKTO	**Aktyubinsk**	**14.55**	**327**	Pn	**Pn**	**18 01 47.4**	**-1.3**
	comp=N,1.7nm,0.3s,baz=139,slow=14,SNR=20						
AKTO				Sn	**Sn**	**18 04 23.9**	**-4.4**
	comp=N,0.4nm,0.3s,baz=70,slow=13,SNR=5.5						
AKTO	**Aktyubinsk**	**14.55**	**327**	P	**Pn**	**18 01 47.4**	**-1.2**
AKTO						18 04 23.9	
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
GKN	**Gorkha**	**16.08**	**128**	*e*P	**Pn**	**18 02 01.5**	**-7.1**
KKN	**Kakani**	**16.63**	**127**	*e*P	**Pn**	**18 02 08.8**	**-6.7**
	comp=Z,13nm,0.6s						
DMN	**Daman**	**16.65**	**128**	*e*P	**Pn**	**18 02 09.9**	**-5.9**
PKIN	**Phulchoki**	**16.86**	**127**	*e*P	**Pn**	**18 02 12.1**	**-6.2**
	comp=Z,12nm,0.5s						
PKI	**Pulchoki**	**16.87**	**127**	*e*P	**Pn**	**18 02 12.8**	**-5.7**
JIRN	**Jiri**	**17.30**	**125**	*e*P	**Pn**	**18 02 17.4**	**-6.4**
RAMN	**Ramite**	**18.05**	**126**	*e*P	**Pn**	**18 02 27.7**	**-5.4**
ZALV	**Zalesovo Beam**	**18.15**	**28**	P	**Pn**	**18 02 32.4**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=225,slow=12,SNR=21						
ZALV	**Zalesovo Beam**	**18.15**	**28**	P	**Pn**	**18 02 32.4**	**-1.7**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NVS	**Novosibirsk**	**18.32**	**24**	*e*P	**Pn**	**18 02 34.9**	**-1.2**
NVS				pmax	pmax		
	comp=N,4.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TAPN	**Taplejung**	**18.50**	**123**	*e*P	**Pn**	**18 02 30.7**	**-7.8**
	comp=Z,17nm,0.6s						
ODAN	**Odare**	**18.62**	**125**	*e*P	**Pn**	**18 02 33.6**	**-6.4**
	comp=Z,16nm,0.7s						
DGRG	**David-gareji**	**19.21**	**286**	P	**Pn**	**18 02 45.9**	**-1.0**
ARU	**Arti**	**19.31**	**340**	*c iP*	**Pn**	**18 02 47.6**	**-0.4**
ARU				S	**S**	**18 06 18.7**	**-3.5**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GNI	**Garni**	**19.74**	**282**	P	**Pn**	**18 02 54.1**	**+0.8**
	comp=Z,30nm,1.3s						
GNI	**Garni**	**19.74**	**282**	P	**Pn**	**18 02 54.1**	**+0.8**
GNI				pmax	pmax		
	comp=Z,29nm,1.3s						
MIB	**Mutribah**	**20.90**	**252**	*e*P	**P**	**18 03 04.3**	**+0.2**
MIB				AMb	AMB	18 03 05.3	
	comp=Z,46nm,0.9s						
RDF	**Al-Radifah**	**21.22**	**249**	*e*P	**P**	**18 03 07.7**	**+0.2**
RDF				AMb	AMB	18 03 08.6	
	comp=Z,31nm,0.8s,mb4.7						
NAY	**Al-Naaiem**	**21.27**	**250**	*e*P	**P**	**18 03 08.1**	**+0.1**
NAY				AMb	AMB	18 03 12.2	
	comp=Z,22nm,0.5s,mb4.7						
KIV	**Kislovodsk**	**21.29**	**293**	*e*P	**P**	**18 03 07.7**	**-0.4**
	comp=Z,11nm,0.8s,mb4.2						
KIV	**Kislovodsk**	**21.29**	**293**	⇓*i*P	**P**	**18 03 15.5**	**+7.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.2						
GTA	**Gaotai**	**22.91**	**79**	*e*P	**P**	**18 03 25.3**	**0.0**
GTA				pP		18 03 30.0	
GTA				sP	sP	18 03 32.3	-11
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.9						
GTA				pmax	pmax		
	comp=Z,99nm,3.8s						
VRHR	**Novokhopersk**	**23.57**	**311**	*e*P	**P**	**18 03 37.6**	**+5.9**
VRHR				pmax	pmax		
	comp=E,10.0nm,0.8s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
VRHR				pmax	pmax		
	comp=N,4.0nm,0.4s						
VSR	**Storozhevoye**	**25.07**	**310**	*e*P	**P**	**18 03 44.8**	**-0.6**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.4						
VSR				pmax	pmax		
	comp=N,4.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.0s						
ZAK	**Zakamensk**	**26.02**	**53**	*e*P	**P**	**18 03 54.8**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.6						
SONM	**Songino Array**	**27.60**	**59**	P	**P**	**18 04 08.2**	**-0.1**
	comp=Z,0.7nm,0.5s,mb3.5,baz=264,slow=9.0,SNR=8.3						
SONM	**Songino Array**	**27.60**	**59**	P	**P**	**18 04 08.2**	**-0.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**28.26**	**284**	P	**P**	**18 04 14.3**	**+0.1**
	comp=Z,0.4nm,0.7s,mb3.2,baz=74,slow=9.1,SNR=4.1						
AKASG	**Malin Array Be**	**31.11**	**306**	P	**P**	**18 04 38.5**	**-0.8**
	comp=Z,2.1nm,0.7s,mb4.1,baz=83,slow=6.4,SNR=6.7						
AKASG	**Malin Array Be**	**31.11**	**306**	P	**P**	**18 04 38.5**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VRI	**Vrincioaia**	**32.64**	**297**	⇓P	**P**	**18 04 48.8**	**-4.0**
VRI	**Vrincioaia**	**32.64**	**297**	⇓*i*P	**P**	**18 04 48.8**	**-4.1**
TESR		**32.66**	**298**	⇑P	**P**	**18 04 54.6**	**+1.5**
TESR		**32.66**	**298**	⇑*i*P	**P**	**18 04 54.6**	**+1.5**
PLOR	**Plostina**	**32.70**	**297**	⇑P	**P**	**18 04 55.9**	**+2.6**
PLOR	**Plostina**	**32.70**	**297**	⇑*i*P	**P**	**18 04 55.8**	**+2.5**
MLR	**Muntele Rosu**	**33.21**	**296**	⇑P	**P**	**18 05 00.1**	**+2.3**
MLR	**Muntele Rosu**	**33.21**	**296**	⇑*i*P	**P**	**18 05 00.2**	**+2.3**
JOF	**Joensuu**	**33.63**	**329**	*e*P	**P**	**18 05 02.0**	**+0.7**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
JOF	**Joensuu**	**33.63**	**329**	*ep*	**P**	**18 05 02.0**	**+0.7**
	comp=Z,1.9nm,0.4s,mb4.4						
VOIR		**33.84**	**296**	⇑P	**P**	**18 05 05.4**	**+2.0**
VOIR		**33.84**	**296**	⇑*i*P	**P**	**18 05 05.4**	**+2.0**
FINES	**FINESS Array B**	**35.29**	**325**	P	**P**	**18 05 16.1**	**+0.5**
	comp=Z,0.7nm,0.3s,mb4.1,baz=116,slow=9.1,SNR=9.7						
FINES	**FINESS Array B**	**35.29**	**325**	P	**P**	**18 05 16.2**	**+0.5**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES	**ARCESS Array B**	**38.84**	**337**	P	**P**	**18 05 46.5**	**+0.8**
	comp=Z,0.7nm,0.4s,mb3.7,baz=96,slow=11,SNR=17						
ARCES	**ARCESS Array B**	**38.84**	**337**	P	**P**	**18 05 46.5**	**+0.9**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NOA	**NORSAR Array B**	**42.24**	**322**	P	**P**	**18 06 14.4**	**+0.7**
	comp=Z,1.6nm,0.7s,mb3.8,baz=94,slow=8.1,SNR=5.3						
NOA	**NORSAR Array B**	**42.24**	**322**	P	**P**	**18 06 14.5**	**+0.7**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YAK	**Yakutsk**	**42.49**	**37**	*e*P	**P**	**18 06 15.5**	**-0.3**
	comp=Z,9.1nm,0.6s,mb4.6						
YAK	**Yakutsk**	**42.49**	**37**	*e*P	**P**	**18 06 15.5**	**-0.3**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.6						
TIXI	**Tiksi**	**43.91**	**23**	*e*P	**P**	**18 06 26.7**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
KSRS	**Korea Array**	**44.73**	**73**	P	**P**	**18 06 33.8**	**-0.4**
	comp=Z,1.0nm,0.7s,mb3.8,baz=282,slow=5.2,SNR=4.5						
KSRS	**Korea Array**	**44.73**	**73**	P	**P**	**18 06 33.8**	**-0.4**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.8						
MJAR	**Matsushiro Arr**	**52.70**	**70**	P	**P**	**18 07 34.9**	**-0.5**
	comp=Z,0.7nm,0.2s,mb4.2,baz=293,slow=11,SNR=23						
MJAR	**Matsushiro Arr**	**52.70**	**70**	P	**P**	**18 07 34.9**	**-0.4**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.2s						
ESDC	**Sonseca Array**	**55.91**	**296**	P	**P**	**18 07 59.4**	**+0.7**
	comp=Z,0.8nm,0.5s,mb4.0,baz=57,slow=7.6,SNR=14						
DAV	**Davao City (W)**	**58.81**	**107**	P	**P**	**18 08 15.8**	**-3.6**
	comp=Z,366nm,0.5s,baz=324,slow=2.5,SNR=21						
TOA0	**Torodi Ar. Sit**	**65.22**	**267**	*e*P	**P**	**18 09 02.2**	**-0.2**
TORD	**Torodi Ar. Bea**	**65.22**	**267**	P	**P**	**18 09 02.2**	**-0.2**
TORD	**Torodi Ar. Bea**	**65.22**	**267**	P	**P**	**18 09 02.2**	**-0.2**
	comp=Z,1.2nm,0.5s,mb4.2,baz=49,slow=5.7,SNR=21						
YKA	**Yellowknife Ar**	**79.02**	**2**	P	**P**	**18 10 24.7**	**+0.6**

comp=Z,0.3nm,0.5s,mb3.5,baz=351,slow=5.3,SNR=7.8

WRA	**Warramunga Arr**	**83.68**	**122**	P	**P**	**18 10 49.0**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.9,baz=327,slow=4.9,SNR=2.9						
ASAR	**Alice Springs**	**86.02**	**125**	P	**P**	**18 10 59.0**	**-2.1**
	comp=Z,0.1nm,0.7s,mb3.2,baz=319,slow=4.1,SNR=3.3						

*ISCJB **17** 18:12:42.0±0.4,43°.76N±0°.04×105°.20W±0°.05, h0km, mb3.7/5, Error ellipse: s-maj=5.2km s-min=5.0km az=26.7*
*NEIC **17** 18:12:43.5±0.3,43°.74N×105°.24W, h0km, ML3.3, Error ellipse: s-maj=3.9km s-min=3.8km az=173.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
*IDC **17** 18:12:43.5±1.0,43°.73N×105°.40W, h0km, mb3.6/5, mb1 3.7/9, mb1mx3.5/23, mbtmp3.5/9, ML3.0/4, Error ellipse: s-maj=24.2km s-min=13.1km az=138.0*

ISC 17 18:12:43.7±0.4, 43°.76N±0°.04×105°.21W±0°.05, h0km, n47, σ0°96/47, mb3.7/5, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.92**	**67**	*e*Pg	**Pg**	**18 13 02.6**	**+1.3**
PHWY	**Pilot Hill**	**2.47**	**184**	*e*Pn	**Pn**	**18 13 24.4**	**-0.7**
RWWY	**Rawlins**	**2.54**	**216**	*e*Pn	**Pn**	**18 13 26.5**	**+0.3**
LAO	**LASA Array**	**3.01**	**347**	*e*Pn	**Pn**	**18 13 33.1**	**+0.5**
RLMT	**Red Lodge**	**3.21**	**296**	*e*Pn	**Pn**	**18 13 35.3**	**0.0**
BW06	**Boulder Array**	**3.33**	**254**	*e*Pn	**Pn**	**18 13 36.2**	**-0.7**
OGNE	**Ogallala**	**3.67**	**139**	*e*Pn	**Pn**	**18 13 41.9**	**+0.3**
GCMT	**Greycliff**	**3.77**	**304**	*e*Pn	**Pn**	**18 13 42.9**	**-0.1**
LKWY	**Lake**	**3.82**	**284**	*e*Pn	**Pn**	**18 13 44.1**	**+0.4**
LOHW	**Long Hollow**	**3.92**	**270**	*e*Pn	**Pn**	**18 13 45.0**	**0.0**
ISCO	**Idaho Springs**	**3.97**	**185**	*e*Pn	**Pn**	**18 13 44.4**	**-1.4**
FLWY	**Flagg Ranch**	**3.98**	**277**	*e*Pn	**Pn**	**18 13 45.0**	**-0.9**
MOOW	**Moose Ponds**	**4.01**	**272**	*e*Pn	**Pn**	**18 13 46.2**	**-0.1**
SNOW	**Snow King Moun**	**4.04**	**268**	*e*Pn	**Pn**	**18 13 47.5**	**+0.8**
REDW	**Red Top Meadow**	**4.12**	**266**	*e*Pn	**Pn**	**18 13 46.3**	**-1.6**
IMW	**Indian Meadow**	**4.15**	**274**	*e*Pn	**Pn**	**18 13 49.4**	**+1.2**
TPAW	**Teton Pass**	**4.18**	**268**	*e*Pn	**Pn**	**18 13 48.6**	**0.0**
DCID1	**Drake Creek**	**4.34**	**270**	Pn	**Pn**	**18 13 52.9**	**+2.1**
RRI2	**Red Ridge**	**4.46**	**267**	*e*Pn	**Pn**	**18 13 52.6**	**+0.1**
DGMT	**Dagmar**	**4.76**	**8**	*e*Pn	**Pn**	**18 13 56.7**	**+0.1**
BOZ	**Bozeman (W)**	**4.95**	**295**	*e*Pn	**Pn**	**18 13 57.7**	**-1.5**
HWUT	**Hardware Ranch** 13nm,0.6s	**5.16**	**247**	*e*Pn	**Pn**	**18 13 58.6**	**-3.5**
EGMT	**Eagleton** 27nm,0.5s	**5.31**	**325**	*e*Pn	**Pn**	**18 14 03.8**	**-0.4**
HRY	**Holter Researc** 11nm,0.4s	**5.53**	**305**	*e*Pn	**Pn**	**18 14 07.3**	**+0.1**
LRM	**Limekiln Ridge** 18nm,0.4s	**5.55**	**294**	*e*P	**Pn**	**18 14 07.5**	**+0.1**
MCMT	**McKenzie Canyo** 1.3nm,0.5s	**5.59**	**284**	P	**Pn**	**18 14 10.1**	**+2.2**
DAU	**Daniels Canyon** 10nm,0.5s	**5.61**	**235**	*e*Pn	**Pn**	**18 14 10.2**	**+1.9**
JLU	**Jordanelle** 7.6nm,0.6s	**5.61**	**238**	P	**Pn**	**18 14 12.1**	**+3.8**
HVU	**Hansel Valley** 4.9nm,0.6s	**5.91**	**253**	Pn	**Pn**	**18 14 12.0**	**-0.5**
SDCO	**Great Sand Dun** 2.2nm,0.6s	**6.01**	**182**	*e*Pn	**Pn**	**18 14 14.0**	**+0.2**
PV04	**Paradox Valley**	**6.05**	**209**	*e*Pn	**Pn**	**18 14 13.9**	**-0.4**
SRU	**San Rafael** 14nm,0.5s	**6.13**	**222**	*e*P	**Pn**	**18 14 14.8**	**-0.6**
PV01	**Paradox Valley** 389nm,0.5s	**6.17**	**205**	*e*P	**Pn**	**18 14 16.1**	**+0.1**
ECSD	**EROS Data Cent** 6.8nm,0.5s	**6.22**	**87**	*e*P	**Pn**	**18 14 16.4**	**-0.4**
TMUT	**Trail Mountain** 7.7nm,0.5s	**6.34**	**227**	*e*P	**Pn**	**18 14 18.2**	**-0.1**
CHMT	**Chamberlain Mo** 2.2nm,0.5s	**6.49**	**302**	*e*P	**Pn**	**18 14 18.8**	**-1.5**
DUG	**Dugway** 3.8nm,0.5s	**6.69**	**240**	*e*P	**Pn**	**18 14 22.0**	**-1.2**
ULM	**Lac du Bonnet** 1.8nm,0.3s,baz=236,slow=12,SNR=8.0	**9.09**	**41**	Pn	**Pn**	**18 14 55.6**	**-0.4**
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=51,slow=13,SNR=4.9	**11.22**	**246**	Pn	**Pn**	**18 15 25.4**	**+0.2**
YBH	**Yreka Blue Hor** 0.2nm,0.3s,baz=69,slow=8.6,SNR=3.8	**13.03**	**267**	Pn	**Pn**	**18 15 52.7**	**+2.8**
TXAR	**Lajitas Array** 0.0nm,0.3s,baz=4.8,slow=12,SNR=2.2	**14.45**	**175**	Pn	**Pn**	**18 16 11.2**	**+1.8**
YKA	**Yellowknife Ar** 0.1nm,0.3s,baz=154,slow=9.4,SNR=5.8	**19.55**	**347**	P	**Pn**	**18 17 14.2**	**+0.4**
ILAR	**Eielson Array** 0.1nm,0.5s,mb3.0,baz=119,slow=8.6,SNR=3.2	**31.28**	**327**	P	**P**	**18 19 05.5**	**+0.7**
ARCES	**ARCESS Array B** 1.2nm,0.5s,mb4.3,baz=337,slow=5.9,SNR=12	**61.38**	**18**	P	**P**	**18 22 59.9**	**-0.9**
ZALV	**Zalesovo Beam** 0.5nm,0.5s,mb3.9,baz=0.0,slow=7.2,SNR=2.7	**82.29**	**354**	P	**P**	**18 25 06.0**	**-0.6**
SONM	**Songino Array** 0.3nm,0.6s,mb3.7,baz=5.3,slow=6.8,SNR=3.6	**84.63**	**339**	P	**P**	**18 25 18.8**	**0.0**
MKAR	**Makanchi Array** 0.2nm,0.5s,mb3.6,baz=22,slow=4.7,SNR=3.5	**89.59**	**355**	P	**P**	**18 25 42.0**	**-0.8**

*DDA **17** 18:13:02.5,36°.91N×29°.20E, h6km±4km, Md3.0*
*ISCJB **17** 18:13:04.9±0.5,37°.10N±0°.03×29°.14E±0°.03, h4km±5km, Error ellipse: s-maj=5.0km s-min=3.9km az=7.5*
*ISK **17** 18:13:04.4,37°.11N×29°.13E, h8km, MD3.1*
*CSEM **17** 18:13:04.8±0.2,37°.08N×29°.13E, h8km, MD3.1, Error ellipse: s-maj=5.1km s-min=3.4km az=8.0*

ISC 17 18:13:05.4±0.5, 37°.12N±0°.03×29°.13E±0°.03, h4km±5km, n49, σ1°05/66, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.29**	**83**	*e*Pg	**Pg**	**18 13 10.4**	**-0.7**
GLHS				*e*Sg	**Sg**	**18 13 15.5**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.29**	**83**	*e*Pg	**Pg**	**18 13 10.4**	**-0.7**
GLHS				*e*Sg	**Sg**	**18 13 15.5**	**+0.6**
GOLH	**Golhisar**	**0.36**	**71**	*i* P	**Pg**	**18 13 11.3**	**-1.0**
GOLH				*i* S	**Sg**	**18 13 19.0**	**+1.9**
GOLH	**Golhisar**	**0.36**	**71**	*i* P	**Pg**	**18 13 11.3**	**-1.1**
GOLH				*i* S	**Sg**	**18 13 19.0**	**+1.9**
DNZL	**Cakiroluk**	**0.57**	**353**	*i* P	**Pg**	**18 13 17.1**	**+0.7**
DNZL				*i* S	**Sg**	**18 13 30.1**	**+6.2**
DNZL	**Cakiroluk**	**0.57**	**353**	*i* P	**Pg**	**18 13 17.1**	**+0.7**
DNZL				*i* S	**Sg**	**18 13 30.1**	**+6.3**
DENT	**Denizli**	**0.64**	**353**	*e*PG	**Pg**	**18 13 16.9**	**-0.8**
DENT	**Denizli**	**0.64**	**353**	*e*Pg	**Pg**	**18 13 16.9**	**-0.7**
YER	**Yerkesik**	**0.68**	**271**	*e*PG	**Pg**	**18 13 18.6**	**+0.1**
YER	**Yerkesik**	**0.68**	**271**	*e*Pg	**Pg**	**18 13 18.6**	**+0.1**
ELL	**Elmali**	**0.72**	**121**	*e*PG	**Pg**	**18 13 18.2**	**-1.1**
ELL				*e*SG	**Sg**	**18 13 29.3**	**+0.7**
ELL	**Elmali**	**0.72**	**121**	*e*Pg	**Pg**	**18 13 18.2**	**-1.1**
ELL				*e*Sg	**Sg**	**18 13 29.3**	**+0.6**
AKAS	**Kas**	**0.96**	**157**	*i* P	**Pg**	**18 13 21.9**	**-2.0**
AKAS				*i* S	**Sg**	**18 13 37.9**	**+1.6**
AKAS	**Kas**	**0.96**	**157**	*i* P	**Pg**	**18 13 21.9**	**-2.0**
AKAS				*i* S	**Sg**	**18 13 37.9**	**+1.5**
KORT	**Korkueli**	**0.98**	**97**	*i* P	**Pg**	**18 13 24.0**	**-0.2**
KORT				*i* S	**Sg**	**18 13 43.2**	**+6.3**
KORT	**Korkueli**	**0.98**	**97**	*i* P	**Pg**	**18 13 24.0**	**-0.2**
KSL	**Kastellorizon**	**1.03**	**159**	*e*P	**Pg**	**18 13 25.5**	**+0.3**
MLSB	**Milas**	**1.10**	**280**	*e*PN	**Pg**	**18 13 26.1**	**-0.3**
MLSB	**Milas**	**1.10**	**280**	*e*Pn	**Pg**	**18 13 26.1**	**-0.3**
AYDN	**Tasoluk**	**1.14**	**299**	*i* P	**Pg**	**18 13 27.2**	**0.0**
AYDN				*i* S	**Sg**	**18 13 45.3**	**+3.4**
AYDN	**Tasoluk**	**1.14**	**299**	*i* P	**Pg**	**18 13 27.2**	**0.0**
AYDN				*i* S	**Sg**	**18 13 45.3**	**+3.4**
BCK	**Bucak**	**1.21**	**73**	*e*PN	**Pn**	**18 13 28.9**	**-0.1**
BCK	**Bucak**	**1.21**	**73**	*e*Pn	**Pn**	**18 13 28.9**	**-0.1**
ARG	**Arkhangelos**	**1.21**	**222**	*e*P	**Pg**	**18 13 25.5**	**-3.2**
KHL	**Karahalli**	**1.24**	**14**	*e*PN	**Pn**	**18 13 28.4**	**-1.0**
KHL	**Karahalli**	**1.24**	**14**	*e*Pn	**Pn**	**18 13 28.4**	**-1.0**
KHAL	**Karahalli**	**1.28**	**13**	*i* P	**Pn**	**18 13 30.9**	**+0.9**
KHAL				*i* S	**Sg**	**18 13 51.4**	**+4.9**
KHAL	**Karahalli**	**1.28**	**13**	*i* P	**Pn**	**18 13 30.9**	**+0.9**
KHAL				*i* S	**Sg**	**18 13 51.4**	**+4.9**
DAT	**Datca**	**1.31**	**253**	*e*PN	**Pn**	**18 13 28.9**	**-1.5**
DAT	**Datca**	**1.31**	**253**	*e*Pn	**Pn**	**18 13 28.9**	**-1.5**
ISP	**Isparta**	**1.31**	**57**	*e*PN	**Pn**	**18 13 30.2**	**-0.2**
ISP	**Isparta**	**1.31**	**57**	*e*Pn	**Pn**	**18 13 30.2**	**-0.2**
BDRM	**Kayabasi**	**1.35**	**268**	*i* P	**Pn**	**18 13 31.1**	**+0.1**
BDRM				*i* S	**Sb**	**18 13 50.3**	**+1.4**
BDRM	**Kayabasi**	**1.35**	**268**	*i* P	**Pn**	**18 13 31.1**	**+0.1**
BDRM				*i* S	**Sb**	**18 13 50.3**	**+1.4**
KULA	**Kula-Manisa**	**1.44**	**345**	*e*PN	**Pn**	**18 13 31.6**	**-0.6**
KULA	**Kula-Manisa**	**1.44**	**345**	*e*Pn	**Pn**	**18 13 31.6**	**-0.6**
BODT	**Bodrum**	**1.46**	**268**	*e*PN	**Pn**	**18 13 31.6**	**-0.9**
BODT	**Bodrum**	**1.46**	**268**	*e*Pn	**Pn**	**18 13 31.6**	**-0.9**
IZM	**Izmir**	**1.96**	**311**	*e*PN	**Pn**	**18 13 38.4**	**-0.9**
ALT	**Altintas**	**2.08**	**21**	*e*PN	**Pn**	**18 13 40.9**	**-0.1**
ALT	**Altintas**	**2.08**	**21**	*e*Pn	**Pn**	**18 13 40.9**	**-0.1**
KARP	**Karpathos**	**2.24**	**226**	*e*P	**Pn**	**18 13 43.0**	**-0.2**
HDMB	**Hadim**	**2.69**	**92**	*e*PN	**Pn**	**18 13 49.6**	**+0.3**
HDMB	**Hadim**	**2.69**	**92**	*e*Pn	**Pn**	**18 13 49.6**	**+0.3**
CHOS	**Chios island**	**2.75**	**298**	*e*P	**Pn**	**18 13 52.0**	**+1.8**
APE	**Apeiranthos**	**2.88**	**270**	*e*P	**Pn**	**18 13 51.0**	**-1.0**
ZKR	**Zakros**	**3.10**	**231**	*e*P	**Pn**	**18 13 56.0**	**+1.0**
IDI	**Anoyia**	**3.89**	**243**	*e*P	**Pn**	**18 14 07.0**	**+1.1**
KARN	**Karanos**	**4.55**	**249**	*e*P	**Pn**	**18 14 18.5**	**+3.5**

DJA 17 18:28:26, 4°.19N×97°.02E, h20km, MLv3.9/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPTI		**0.94**	**170**	P	Pb	18 28 42.7	-0.9
TPTI				S	Sb	18 28 54.8	-0.8
TSI	**Tuntungan**	**1.69**	**114**	P	Pn	18 28 55.7	+1.3
TSI				S	Sn	18 29 17.0	+1.6
GSI	**Gunungsitoli**	**2.92**	**169**	P	Pn	18 29 14.4	+3.1
KULM	**Kulim**	**3.78**	**73**	P	Pn	18 29 23.0	-0.2
IPM	**Ipoh**	**4.00**	**86**	P	Pn	18 29 26.1	-0.2
MNSI	**Mandailing Nat**	**4.23**	**143**	P	Pn	18 29 30.9	+1.5

*IDC **17** 18:30:06.9±1.8,7°.11S×150°.63E, h0km, mb3.7/9, mb1 3.9/9, mb1mx3.8/16, mbtmp3.7/9, Error ellipse: s-maj=60.7km s-min=22.9km az=121.0*
*ISCJB **17** 18:30:10.1±1.4,7°.15S±0°.2×150°.7E±0°.2, h33km, mb3.7/8, Error ellipse: s-maj=41.2km s-min=10.4km az=41.5*
*NEIC **17** 18:30:15.0±3.0,7°.25S×150°.62E, h63km±22km, Error ellipse: s-maj=39.3km s-min=17.9km az=113.0*

ISC 17 18:30:11.7±1.4, 7°.2S±0°.2×150°.8E±0°.2, h35km, n11, σ0°69/11, mb3.7/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.18**	**238**	*e*P	**Pn**	**18 31 14.6**	**+1.7**
PMG				*e*S	**Sn**	**18 32 00.3**	**-0.2**
WRA	**Warramunga Arr** 0.6nm,0.6s,baz=50,slow=11,SNR=6.0	**20.34**	**230**	P	**P**	**18 34 45.0**	**-0.2**
ASAR	**Alice Springs** 0.6nm,0.4s,mb3.3,baz=56,slow=9.2,SNR=26	**23.02**	**223**	P	**P**	**18 35 12.8**	**-0.9**
FITZ	**Fitzroy Crossi** 2.3nm,0.8s,mb3.8,baz=58,slow=11,SNR=4.1	**26.75**	**244**	P	**P**	**18 35 48.3**	**-0.1**
CMAR	**Chiang Mai Arr** 0.2nm,0.4s,mb3.5,baz=100,slow=9.2,SNR=3.5	**57.11**	**297**	P	**P**	**18 39 54.8**	**-0.3**
SONM	**Songino Array** 0.3nm,0.5s,mb3.6,baz=145,slow=5.4,SNR=3.7	**67.30**	**329**	P	**P**	**18 41 03.2**	**+0.4**
MKAR	**Makanchi Array** 0.6nm,1.0s,mb3.5,baz=159,slow=6.2,SNR=2.7	**80.81**	**320**	P	**P**	**18 42 21.9**	**+0.1**
ZALV	**Zalesovo Beam** 0.4nm,0.4s,mb3.7,baz=107,slow=4.8,SNR=2.9	**82.03**	**327**	P	**P**	**18 42 27.1**	**-1.0**
ILAR	**Eielson Array** 1.1nm,0.8s,mb4.0,baz=254,slow=5.1,SNR=13	**85.14**	**22**	P	**P**	**18 42 44.5**	**+0.8**
BVAR	**Borovoye Array** 0.4nm,0.5s,mb4.0,baz=98,slow=10,SNR=3.0	**89.94**	**323**	P	**P**	**18 43 07.0**	**-0.2**
TORD	**Torodi Ar. Bea** 1.5nm,0.6s,baz=52,slow=2.9,SNR=20	**149.00**	**283**	PKPbc	PKPbc	18 49 57.9	+0.8

*NNC **17** 18:34:02.0±2.5,38°.21N×70°.74E, h0km, mb3.6, mpv3.9, Error ellipse: s-maj=25.3km s-min=17.8km az=105.0*

ISC 17 18:34:04.1±4.0, 38°.4N±0°.3×71°.5E±0°.1, h35km, n8, σ0°80/11, 4C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu** SNR=76	**4.08**	**23**	P	**Pn**	**18 35 04.7**	**+0.7**
UCH	**Uchtor** SNR=11	**4.46**	**30**	P	**Pn**	**18 35 08.6**	**-0.5**
EKS2	**Erkin-Say** SNR=17	**4.59**	**21**	P	**Pn**	**18 35 11.6**	**+0.6**
KK31	**Karatay Array** 9.9nm,0.5s,baz=168,slow=12,SNR=134	**4.76**	**351**	P	**Pn**	**18 35 16.8**	**+3.5**
KK31				⇑S	**Sn**	**18 36 15.5**	**+8.3**
AAK	**Ala-Archa** SNR=7.7	**4.80**	**27**	P	**Pn**	**18 35 13.6**	**-0.3**
CHMS	**Chumysh** SNR=9.6	**5.21**	**27**	P	**Pn**	**18 35 18.7**	**-0.7**
AB31	**Akbulak array** 0.9nm,0.7s,baz=168,slow=11,SNR=11	**13.67**	**326**	P	**Pn**	**18 37 14.5**	**-0.9**
AB31				⇑S	**Sn**	**18 39 45.7**	**-0.2**
AKTO	**Aktyubinsk** 0.1nm,0.5s	**15.39**	**326**	⇑P	**Pn**	**18 37 39.1**	**+0.7**
AKTO				⇑S	**S**	**18 40 29.0**	**-14**
	0.3nm,0.9s						

*THE **17** 18:39:58.8,38°.81N×27°.24E, h0km±1km, ML2.3/3, Error ellipse: s-maj=2.8km s-min=1.0km az=90.0*
*ISCJB **17** 18:39:59.7±0.4,38°.85N±0°.02×27°.18E±0°.02, h2km±4km, Error ellipse: s-maj=3.3km s-min=3.1km az=23.7*
*DDA **17** 18:39:59.5,38°.85N×27°.18E, h7km±3km, Md2.9*
*ISK **17** 18:39:59.2,38°.86N×27°.21E, h2km, MD2.9*
*CSEM **17** 18:39:59.8±0.2,38°.86N×27°.18E, h2km, ML2.3/3, Error ellipse: s-maj=3.0km s-min=3.0km az=108.0*

ISC 17 18:40:00.2±0.3, 38°.84N±0°.02×27°.19E±0°.02, h4km±4km, n57, σ0°96/89, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAG	**Bornova**	**0.44**	**172**	*i* P	**Pg**	**18 40 07.8**	**-0.9**
KDAG				*i* S	**Sg**	**18 40 15.1**	**+0.7**
KDAG	**Bornova**	**0.44**	**172**	*i* P	**Pg**	**18 40 07.8**	**-0.9**
KDAG				*i* S	**Sg**	**18 40 15.1**	**+0.7**
IZM	**Izmir**	**0.45**	**173**	PG	**Pg**	**18 40 08.9**	**+0.2**
IZM	**Izmir**	**0.45**	**173**	*i* Pg	**Pg**	**18 40 08.9**	**+0.1**
BLCB	**Balcova**	**0.47**	**194**	*e*PG	**Pg**	**18 40 09.9**	**+0.7**
BLCB				*e*SG	**Sg**	**18 40 17.0**	**+1.7**
BLCB	**Balcova**	**0.47**	**194**	P	**Pg**	**18 40 07.5**	**-1.7**
BLCB				S	**Sg**	**18 40 15.3**	**0.0**
BLCB	**Balcova**	**0.47**	**194**	P	**Pg**	**18 40 07.5**	**-1.7**
BLCB	**Balcova**	**0.47**	**194**	*e*Pg	**Pg**	**18 40 09.9**	**+0.7**
BLCB				S	**Sg**	**18 40 15.3**	**0.0**
BLCB				*e*Sg	**Sg**	**18 40 17.0**	**+1.7**
AKS	**Akhisar**	**0.49**	**85**	PG	**Pg**	**18 40 09.2**	**-0.3**
AKS				*e*SG	**Sg**	**18 40 16.8**	**+0.9**
AKS	**Akhisar**	**0.49**	**85**	*i* Pg	**Pg**	**18 40 09.3**	**-0.3**
AKS				*e*Sg	**Sg**	**18 40 16.8**	**+0.9**
AKHS	**Akhisar**	**0.49**	**86**	*i* P	**Pg**	**18 40 10.2**	**+0.6**
AKHS				*i* S	**Sg**	**18 40 17.3**	**+1.4**
AKHS	**Akhisar**	**0.49**	**86**	*i* P	**Pg**	**18 40 10.1**	**+0.5**
AKHS				*i* S	**Sg**	**18 40 17.3**	**+1.3**
AYVA	**Ayvalik**	**0.61**	**320**	*i* P	**Pg**	**18 40 11.4**	**-0.4**
AYVA				*i* S	**Sg**	**18 40 20.0**	**+0.3**
AYVA	**Ayvalik**	**0.61**	**320**	*i* P	**Pg**	**18 40 11.4**	**-0.4**
AYVA				*i* S	**Sg**	**18 40 20.0**	**+0.3**
URLA	**Izmir**	**0.67**	**224**	*i* P	**Pg**	**18 40 11.5**	**-1.5**
URLA				*i* S	**Sg**	**18 40 21.9**	**+0.2**
URLA	**Izmir**	**0.67**	**224**	*i* P	**Pg**	**18 40 11.5**	**-1.5**
URLA				*i* S	**Sg**	**18 40 21.9**	**+0.2**
PRK	**Paraskevi**	**0.82**	**300**	P	**Pg**	**18 40 16.0**	**+0.1**
PRK				S	**Sg**	**18 40 28.9**	**+2.3**
PRK	**Paraskevi**	**0.82**	**300**	P	**Pg**	**18 40 16.0**	**+0.1**
BALY	**Balya**	**0.96**	**20**	*i* P	**Pg**	**18 40 17.6**	**-1.0**
BALY				*i* S	**Sg**	**18 40 32.9**	**+1.9**
BALY	**Balya**	**0.96**	**20**	*i* P	**Pg**	**18 40 17.6**	**-1.0**
BALY				*i* S	**Sg**	**18 40 32.9**	**+1.9**
BALB	**Balikesir**	**0.96**	**34**	*e*PG	**Pg**	**18 40 17.6**	**-1.0**
BALB				*e*SG	**Sg**	**18 40 31.8**	**+0.7**
BALB	**Balikesir**	**0.96**	**34**	*e*Pg	**Pg**	**18 40 17.6**	**-1.0**
BALB				*e*Sg	**Sg**	**18 40 31.8**	**+0.7**
CHOS	**Chios island**	**1.00**	**243**	P	**Pg**	**18 40 18.6**	**-0.7**
CHOS				S	**Sg**	**18 40 33.4**	**+1.2**
CHOS	**Chios island**	**1.00**	**243**	P	**Pg**	**18 40 18.6**	**-0.7**
CHOS				S	**Sg**	**18 40 33.4**	**+1.2**
EZN	**Ezine**	**1.19**	**326**	*e*PN	**Pn**	**18 40 22.9**	**-0.6**
EZN	**Ezine**	**1.19**	**326**	*e*Pn	**Pn**	**18 40 22.9**	**-0.6**
KULA	**Kula-Manisa**	**1.20**	**105**	*e*PN	**Pn**	**18 40 22.7**	**-0.9**
KULA	**Kula-Manisa**	**1.20**	**105**	*e*Pn	**Pn**	**18 40 22.7**	**-0.9**
DEMI	**Demirci**	**1.21**	**80**	*i* P	**Pg**	**18 40 22.3**	**-1.0**
DEMI				*i* S	**Sg**	**18 40 39.1**	**+0.1**
DEMI	**Demirci**	**1.21**	**80**	*i* P	**Pg**	**18 40 22.3**	**-1.0**
DEMI				*i* S	**Sg**	**18 40 39.1**	**+0.1**
DURS	**Dursunbey**	**1.25**	**52**	*i* P	**Pg**	**18 40 23.0**	**-1.2**
DURS				*i* S	**Sg**	**18 40 40.6**	**+0.1**
DURS	**Dursunbey**	**1.25**	**52**	*i* P	**Pg**	**18 40 23.0**	**-1.2**
DURS				*i* S	**Sg**	**18 40 40.6**	**+0.1**
GONE	**Gonen-Balikesi**	**1.26**	**18**	*e*PN	**Pn**	**18 40 23.6**	**-1.0**
GONE	**Gonen-Balikesi**	**1.26**	**18**	*e*Pn	**Pn**	**18 40 23.6**	**-1.0**
AYDN	**Tasoluk**	**1.30**	**155**	*i* P	**Pg**	**18 40 24.4**	**-0.6**
AYDN				*i* S	**Sg**	**18 40 41.1**	**-0.8**
AYDN	**Tasoluk**	**1.30**	**155**	*i* P	**Pg**	**18 40 24.4**	**-0.7**
AYDN				*i* S	**Sg**	**18 40 41.1**	**-0.8**
BOZC	**Bozcaada**	**1.33**	**319**	*i* P	**Pn**	**18 40 25.0**	**-0.5**
BOZC				*i* S	**Sg**	**18 40 42.5**	**-0.5**
EDC	**Edincik**	**1.59**	**19**	*e*PN	**Pn**	**18 40 29.1**	**0.0**
EDC	**Edincik**	**1.59**	**19**	*e*Pn	**Pn**	**18 40 29.1**	**0.0**
MLSB	**Milas**	**1.61**	**163**	*e*PN	**Pn**	**18 40 29.9**	**+0.6**
MLSB	**Milas**	**1.61**	**163**	*e*Pn	**Pn**	**18 40 30.0**	**+0.7**
GELI	**Tayfur-Gelibol**	**1.65**	**341**	*e*PN	**Pn**	**18 40 29.0**	**-0.9**
GELI	**Tayfur-Gelibol**	**1.65**	**341**	*e*Pn	**Pn**	**18 40 29.0**	**-0.9**
GADA	**Gvkgeada**	**1.68**	**324**	*e*PN	**Pn**	**18 40 30.9**	**+0.6**
GADA	**Gvkgeada**	**1.68**	**324**	*e*Pn	**Pn**	**18 40 30.9**	**+0.7**
KCTX	**Karacabey (Bur**	**1.68**	**32**	*e*PN	**Pn**	**18 40 30.0**	**-0.3**
KCTX	**Karacabey (Bur**	**1.68**	**32**	*e*Pn	**Pn**	**18 40 30.0**	**-0.3**
BODT	**Bodrum**	**1.78**	**177**	*e*PN	**Pn**	**18 40 32.4**	**+0.7**
BODT	**Bodrum**	**1.78**	**177**	*e*Pn	**Pn**	**18 40 32.4**	**+0.8**
BDRM	**Kayabasi**	**1.79**	**173**	*i* P	**Pn**	**18 40 34.6**	**+2.9**
BDRM				*i* S	**Sn**	**18 41 00.3**	**+5.5**
BDRM	**Kayabasi**	**1.79**	**173**	*i* P	**Pn**	**18 40 34.6**	**+2.9**
BDRM				*i* S	**Sn**	**18 41 00.3**	**+5.5**
ARMT	**Armutlu**	**2.15**	**36**	*e*PN	**Pn**	**18 40 37.3**	**+0.5**
ARMT	**Armutlu**	**2.15**	**36**	*e*Pn	**Pn**	**18 40 37.3**	**+0.5**
ALN	**Alexandroupoli**	**2.23**	**337**	P	**Pn**	**18 40 35.9**	**-2.0**
ALN				S	**Sn**	**18 41 06.8**	**+0.9**
ALN	**Alexandroupoli**	**2.23**	**337**	P	**Pn**	**18 40 35.9**	**-2.0**
ALN				S	**Sn**	**18 41 06.8**	**+0.9**
YLV	**Yalova**	**2.41**	**44**	*e*PN	**Pn**	**18 40 41.0**	**+0.7**
YLV	**Yalova**	**2.41**	**44**	*e*Pn	**Pn**	**18 40 41.0**	**+0.7**

*ISCJB **17** 18:41:41.3±0.5,6°.87N±0°.05×73°.01W±0°.06, h166km±5km, mb3.8/8, Error ellipse: s-maj=11.2km s-min=5.8km az=42.3*
*IDC **17** 18:41:41.5±1.3,6°.78N×72°.97W, h156km±14km, mb3.6/6, mb1 3.9/9, mb1mx3.6/20, mbtmp3.7/9, Error ellipse: s-maj=28.0km s-min=15.8km az=127.0*
*FUNV **17** 18:41:41.9,6°.78N×73°.15W, h164km, MW4.0*
*NEIC **17** 18:41:42.4±0.6,6°.73N×72°.93W, h169km±7km, mb4.0/3, Error ellipse: s-maj=13.7km s-min=7.3km az=130.0*

ISC 17 18:41:42.3±0.5, 6°.85N±0°.05×72°.98W±0°.06, h160km±5km, n44, σ0°91/49, mb3.8/8, 1C-13D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.21**	**33**	⇓*i* P	**Pn**	**18 42 11.0**	**+1.2**
CAPV				*e*S	**Sn**	**18 42 32.1**	**+1.2**
ROSC	**El Rosal**	**2.39**	**214**	*e*P	**Pn**	**18 42 23.4**	**+0.7**
ROSC				S	**Sn**	**18 42 52.5**	**-1.3**
ROSC	**El Rosal** 117nm,0.3s,baz=301,slow=4.5,SNR=40	**2.39**	**214**	P	**Pn**	**18 42 22.6**	**0.0**
ROSC				S	**Sn**	**18 42 52.5**	**-1.3**
	230nm,0.3s

*CSEM **17** 19:07:00.1±0.1,47.27N×14.35E,h2km,ML2.8/10,Error ellipse: s-maj=2.1km s-min=1.6km az=90.0*
*BGR **17** 19:07:00.8±0.4,47.26N×14.39E,h5km,ML2.2/11,Error ellipse: s-maj=3.3km s-min=3.3km az=26.0*
*VIE **17** 19:07:00.1±0.4,47.21N×14.36E,h5km±34km,mb1.4/7, ML2.2/8,Error ellipse: s-maj=1.8km s-min=1.3km az=16.0*
7 km W of Unzmarkt felt 3 ems98 at Scheifling / STYRIA
*PRU **17** 19:07:02.5,47.34N×14.44E,h0km,M2.2*
ISC 17 19:07:00.2±0.3,47.27N±0.01×14.36E±0.03,h10km,n62, σ0s86/96,11C-5D,Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOA	**Molln**	**0.59**	**354**	*e*Pg	**Pg**	**19 07 12.7**	**+1.0**
	SNR=13						
MOA	**Molln**	**0.59**	**354**	⇑*i*Pg	**Pg**	**19 07 12.6**	**+1.0**
	2.8nm,0.1s,SNR=24						
MOA				⇓*e*Sg	**Sg**	**19 07 22.3**	**+2.9**
	5.8nm,0.1s						
MOA	**Molln**	**0.59**	**354**	Pg	**Pg**	**19 07 12.6**	**+0.9**
	2.8nm,0.1s,SNR=24						
MOA				*e*Sg	**Sg**	**19 07 22.0**	**+2.6**
	baz=173						
KBA	**Koelnbreinsper**	**0.72**	**255**	*e*Pg	**Pg**	**19 07 13.9**	**-0.1**
	SNR=13						
KBA				*e*Sg	**Sg**	**19 07 22.9**	**-0.6**
KBA	**Koelnbreinsper**	**0.72**	**255**	⇓*e*Pg	**Pg**	**19 07 14.0**	**-0.1**
	4.0nm,0.1s,SNR=20						
KBA				⇓*i*Sg	**Sg**	**19 07 22.9**	**-0.5**
	12nm,0.1s						
KBA	**Koelnbreinsper**	**0.72**	**255**	Pg	**Pg**	**19 07 13.9**	**-0.2**
	SNR=13						
KBA				Sg	**Sg**	**19 07 22.9**	**-0.5**
	12nm,0.1s						
SOKA	**Soboth**	**0.75**	**142**	⇑*i*Pg	**Pg**	**19 07 14.4**	**-0.2**
	1.6nm,0.1s						
SOKA				⇑*i*Sg	**Sg**	**19 07 23.8**	**-0.5**
	16nm,0.1s						
SOKA	**Soboth**	**0.75**	**142**	Pg	**Pg**	**19 07 14.4**	**-0.2**
	1.6nm,0.1s						
SOKA				Sg	**Sg**	**19 07 23.8**	**-0.5**
	16nm,0.1s						
ARSA	**Arzberg**	**0.79**	**91**	*e*Pg	**Pg**	**19 07 15.3**	**-0.2**
	SNR=9.6						
ARSA				*e*Sg	**Sg**	**19 07 25.4**	**-0.5**
ARSA	**Arzberg**	**0.79**	**91**	⇓*e*Pg	**Pg**	**19 07 15.4**	**-0.1**
	2.3nm,0.1s,SNR=15						
ARSA				⇑*i*Sg	**Sg**	**19 07 25.8**	**0.0**
	4.4nm,0.1s						
ARSA	**Arzberg**	**0.79**	**91**	Pg	**Pg**	**19 07 15.4**	**-0.1**
	2.3nm,0.1s,SNR=15						
ARSA				Sg	**Sg**	**19 07 25.8**	**0.0**
	4.4nm,0.1s						
MYKA	**Terra Mystica**	**0.80**	**218**	⇑*i*Pg	**Pg**	**19 07 15.4**	**-0.3**
	3.9nm,0.1s						
MYKA				⇓*i*Sg	**Sg**	**19 07 25.4**	**-0.8**
	15nm,0.1s						
MYKA	**Terra Mystica**	**0.80**	**218**	Pg	**Pg**	**19 07 15.4**	**-0.3**
	3.9nm,0.1s						
MYKA				Sg	**Sg**	**19 07 25.4**	**-0.8**
	15nm,0.1s						
PERS	**Pernice**	**0.81**	**140**	*i* Pg	**Pg**	**19 07 16.3**	**+0.4**
PERS				*i* Sg	**Sg**	**19 07 25.9**	**-0.6**
PERS							
	comp=Z,14nm,0.1s						
PERS	**Pernice**	**0.81**	**140**	*i* Pg	**Pg**	**19 07 16.3**	**+0.4**
PERS				*i* Sg	**Sg**	**19 07 26.0**	**-0.5**
	comp=Z,14nm,0.1s						
MOZS	**Mozjanca**	**0.97**	**177**	*i* Pg	**Pg**	**19 07 18.8**	**-0.2**
MOZS				*i* Sg	**Sg**	**19 07 31.0**	**-0.6**
MOZS							
	comp=Z,6.0nm,0.1s						
LSR	**Lussari**	**0.97**	**216**	⇑*e*Pg	**Pg**	**19 07 19.0**	**0.0**
LSR				*e*Sg	**Sg**	**19 07 31.5**	**-0.1**
LSR	**Lussari**	**0.97**	**216**	*e*Pg	**Pg**	**19 07 19.0**	**+0.1**
LSR				*e*Sg	**Sg**	**19 07 31.5**	**-0.1**
PLRO	**Paularo**	**1.10**	**230**	⇑*i*Pg	**Pg**	**19 07 21.0**	**-0.3**
PLRO				*i* Sg	**Sg**	**19 07 35.4**	**-0.1**
PLRO	**Paularo**	**1.10**	**230**	*i* Pg	**Pg**	**19 07 21.0**	**-0.3**
PLRO				*i* Sg	**Sg**	**19 07 35.4**	**-0.1**
CADS	**Cadrg**	**1.12**	**203**	*i* Pg	**Pg**	**19 07 21.4**	**-0.3**
CADS	**Cadrg**	**1.12**	**203**	*i* Pg	**Pg**	**19 07 21.4**	**-0.4**
GROS	**Grobnik**	**1.12**	**135**	*i* Sg	**Sg**	**19 07 36.2**	**-0.1**
GROS	**Grobnik**	**1.12**	**135**	*i* Sg	**Sg**	**19 07 36.2**	**-0.1**
CRNS	**Crni Vrh**	**1.19**	**183**	*i* Pg	**Pg**	**19 07 23.4**	**+0.4**
VOY	**Vojsko**	**1.27**	**195**	*e*Pg	**Pg**	**19 07 24.8**	**+0.1**
VOY				*e*Sg	**Sg**	**19 07 42.4**	**+1.2**
VOY				*e*		19 07 43.8	
VOY	**Vojsko**	**1.27**	**195**	*e*Pg	**Pg**	**19 07 24.8**	**+0.1**
VOY				*e*Sg	**Sg**	**19 07 42.4**	**+1.2**
ABTA	**Abfaltersbach**	**1.37**	**248**	⇑*i*Pg	**Pg**	**19 07 26.0**	**-0.4**
	comp=Z,0.5nm,0.1s						
ABTA				⇑*i*Sg	**Sg**	**19 07 44.5**	**+0.3**
	comp=Z,3.9nm,0.2s						
ABTA	**Abfaltersbach**	**1.37**	**248**	Pg	**Pg**	**19 07 26.0**	**-0.4**
	comp=Z,0.5nm,0.1s						
ABTA				Sg	**Sg**	**19 07 44.5**	**+0.3**
	comp=Z,3.9nm,0.2s						
GEC2	**GERESS Array S**	**1.64**	**345**	*e*Pg	**Pg**	**19 07 31.9**	**+0.2**
	SNR=9.5						
GEC2				*e*Sg	**Sg**	**19 07 53.5**	**+0.5**
GEC2	**GERESS Array S**	**1.64**	**345**	Pg	**Pg**	**19 07 31.9**	**+0.2**
	SNR=9.5						
GEC2				Sg	**Sg**	**19 07 53.5**	**+0.5**
WTTA	**Wattenberg**	**1.85**	**271**	*e*Pg	**Pg**	**19 07 36.7**	**+0.9**
	SNR=7.8						
WTTA				*e*Sg	**Sg**	**19 08 01.7**	**+1.8**
WTTA	**Wattenberg**	**1.85**	**271**	⇑*i*Pg	**Pg**	**19 07 35.6**	**-0.2**
	comp=Z,4.5nm,0.2s						
WTTA				⇑*i*Sg	**Sg**	**19 08 00.9**	**+1.1**
	comp=Z,6.1nm,0.4s						
WTTA	**Wattenberg**	**1.85**	**271**	Pg	**Pg**	**19 07 35.6**	**-0.2**
	comp=Z,4.5nm,0.2s						
WTTA				Sg	**Sg**	**19 08 00.9**	**+1.1**
	comp=Z,6.1nm,0.4s						
KHC	**Kasperske Hory**	**1.94**	**345**	*e*PG	**Pg**	**19 07 36.5**	**-0.9**
KHC				*e*SG	**Sg**	**19 08 01.4**	**-1.1**
	comp=Z,6.1nm,0.2s						
KHC	**Kasperske Hory**	**1.94**	**345**	Pg	**Pg**	**19 07 36.5**	**-0.9**
KHC				Sg	**Sg**	**19 08 01.4**	**-1.1**
	comp=Z,6.1nm,0.2s						
WET	**Wettzell**	**2.13**	**333**	*e*Pg	**Pg**	**19 07 41.9**	**+0.9**
	SNR=4.0						
WET				*e*Sg	**Sg**	**19 08 08.3**	**-0.2**
WET	**Wettzell**	**2.13**	**333**	Pg	**Pg**	**19 07 41.9**	**+0.9**
	SNR=4.0						
WET				Sg	**Sg**	**19 08 08.3**	**-0.2**
TREC	**Trest**	**2.17**	**20**	*e*Pn	**Pn**	**19 07 38.1**	**+1.8**
	baz=200						
KRUC	**Moravsky**	**2.26**	**36**	*e*Pn	**Pn**	**19 07 39.2**	**+1.6**
	baz=217						
KRUC				*e*Sn	**Sn**	**19 08 07.6**	**+2.2**
	baz=217						
VRAC	**Vranov**	**2.53**	**35**	*e*Pn	**Pn**	**19 07 41.6**	**+0.3**
	baz=216						
VRAC				*e*Sg	**Sg**	**19 08 18.9**	**-2.6**
	comp=Z,2.8nm,0.3s,baz=216						
PRU	**Pruhonice**	**2.73**	**2**	*e*SG	**Sg**	**19 08 26.0**	**-1.8**
PRU	**Pruhonice**	**2.73**	**2**	Sg	**Sg**	**19 08 26.0**	**-1.8**
ROTZ	**Rotzenmuhle**	**2.88**	**331**	*e*Sg	**Sg**	**19 08 32.6**	**-0.3**
ROTZ	**Rotzenmuhle**	**2.88**	**331**	Sg	**Sg**	**19 08 32.6**	**-0.2**
GRA1	**Grafenberg Arr**	**3.20**	**320**	Sg	**Sg**	**19 08 44.1**	**+1.1**
GRF	**Grafenberg Arr**	**3.20**	**320**	*e*Sg	**Sg**	**19 08 44.1**	**+1.0**
NKC	**Novy Kostel**	**3.23**	**338**	*e*SG	**Sg**	**19 08 43.8**	**-0.1**
	comp=Z,6.3nm,0.4s						
NKC	**Novy Kostel**	**3.23**	**338**	Sg	**Sg**	**19 08 43.8**	**-0.1**
	comp=Z,6.3nm,0.4s						
WERN	**Wernitzgruen**	**3.30**	**337**	*e*Sg	**Sg**	**19 08 45.2**	**-0.8**
WERN	**Wernitzgruen**	**3.30**	**337**	Sg	**Sg**	**19 08 45.2**	**-0.9**
GUNZ	**Gunzen**	**3.38**	**337**	*e*Sg	**Sg**	**19 08 48.5**	**-0.1**
GUNZ	**Gunzen**	**3.38**	**337**	Sg	**Sg**	**19 08 48.5**	**-0.2**
TANN	**Tannenbergstha**	**3.39**	**339**	*e*Sg	**Sg**	**19 08 48.3**	**-0.9**
TANN	**Tannenbergstha**	**3.39**	**339**	Sg	**Sg**	**19 08 48.3**	**-0.8**
WERD	**Werda**	**3.46**	**338**	*e*Sg	**Sg**	**19 08 50.6**	**-0.8**
WERD	**Werda**	**3.46**	**338**	Sg	**Sg**	**19 08 50.6**	**-0.8**
BRG	**Berggieshubel**	**3.62**	**356**	Sg	**Sg**	**19 08 57.2**	**+0.7**
	comp=Z,1.7nm,0.5s						
MOX	**Moxa**	**3.84**	**333**	*e*SG	**Sg**	**19 09 02.7**	**-0.6**
MOX	**Moxa**	**3.84**	**333**	*e*Sg	**Sg**	**19 09 02.6**	**-0.7**
MOX	**Moxa**	**3.84**	**333**	Sg	**Sg**	**19 09 02.6**	**-0.7**
CLL	**Collm**	**4.14**	**348**	*e*Sg	**Sg**	**19 09 13.0**	**-0.2**

*NEIC **17** 19:13:04.7, 19.73N×65.02W, h185km,MD3.8(RSPR),*
After RSPR.
RSPR 17 19:13:04.7,19.73N×65.02W,h185km±13km,MD3.8/5, 8C-2D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STVI	**Saint Thomas**	**1.37**	**177**	⇑*e*P	**Pn**	19 13 36.2	+0.2
STVI				*e*S	Sn	19 14 00.5	+0.3
STVI	**Saint Thomas**	**1.37**	**177**	⇑*e*P	**Pn**	19 13 36.2	+0.2
STVI				*e*S	Sn	19 14 00.5	+0.3
HUMP	**Col San Antoni**	**1.76**	**206**	⇑*e*P	**Pn**	19 13 39.8	+0.1
HUMP				*e*S	Sn	19 14 06.9	+0.1
HUMP	**Col San Antoni**	**1.76**	**206**	⇑*e*P	**Pn**	19 13 39.8	+0.1
HUMP				*e*S	Sn	19 14 06.9	+0.1
SJG	**San Juan**	**1.93**	**214**	⇑*e*P	**Pn**	19 13 41.5	0.0
SJG				*e*S	Sn	19 14 10.9	+1.0
SJG	**San Juan**	**1.93**	**214**	⇑*e*P	**Pn**	19 13 41.5	0.0
SJG				*e*S	Sn	19 14 10.9	+1.0
CELP	**Cerrillos**	**2.21**	**222**	⇑*e*P	**Pn**	19 13 44.6	+0.2
CELP	**Cerrillos**	**2.21**	**222**	⇑*e*P	**Pn**	19 13 44.6	+0.2
CRPR	**Cabo Rojo, PR**	**2.62**	**229**	⇓*e*P	**Pn**	19 13 49.7	+0.7
CRPR	**Cabo Rojo, PR**	**2.62**	**229**	⇓*e*P	**Pn**	19 13 49.7	+0.7

*IDC **17** 19:16:02.7±0.9,7.23S×155.55E,h0km,mb4.0/12, mb1 4.1/13,mb1mx4.1/17,mbtmp4.0/13,ML3.9/1,MS3.1/3, Ms1 3.1/3,ms1mx2.7/25,Error ellipse: s-maj=29.0km s-min=19.9km az=119.0*
*ISCJB **17** 19:16:07.4±2.1,7.2S±0.1×155.57E±0.08,h40km±20km, mb4.3/16,Error ellipse: s-maj=20.2km s-min=13.3km az=171.0*
*NEIC **17** 19:16:10.3±1.5,7.25S×155.59E,h56km±15km,mb4.5/1, Error ellipse: s-maj=15.8km s-min=10.9km az=169.0*
ISC 17 19:16:10.1±1.7,7.3S±0.1×155.61E±0.08,h52km±17km, n29,σ0s99/27,mb4.3/16,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.81**	**117**	Pn	**Pn**	**19 17 19.4**	**-0.6**
HNR				LR	LR	19 18 58.9	
HNR	**Honiara**	**4.81**	**117**	Pn	**Pn**	**19 17 18.8**	**-1.2**
	5.4nm,0.3s,baz=281,slow=10,SNR=3.6						
HNR				LR	LR	19 18 58.9	
	comp=Z,129nm,21.1s,baz=252,slow=36						
PMG	**Port Moresby**	**8.63**	**255**	*e*P	**Pn**	**19 18 12.8**	**+0.4**
CTA	**Charters Tower**	**15.66**	**214**	Pn	**Pn**	**19 19 49.1**	**+1.7**
	0.1nm,0.3s,baz=34,slow=7.3,SNR=1.7						
CTA				LR	LR	19 24 03.2	
	comp=Z,54nm,21.3s,baz=253,slow=31						
WRA	**Warramunga Arr**	**24.18**	**236**	P	**P**	**19 21 20.9**	**-0.8**
	2.3nm,0.8s,mb3.7,baz=62,slow=9.0,SNR=9.3						
MSVF	**Nonsavu**	**24.23**	**118**	*e*P	**P**	**19 21 23.8**	**+1.5**
	23nm,1.5s,mb4.4						
ASAR	**Alice Springs**	**26.46**	**230**	P	**P**	**19 21 40.3**	**-2.2**
	0.3nm,0.6s,baz=61,slow=10,SNR=4.2						
STKA	**Stephens Creek**	**27.77**	**206**	P	**P**	**19 21 54.4**	**+0.3**
STKA	**Stephens Creek**	**27.77**	**206**	P	**P**	**19 21 54.4**	**+0.3**
	2.5nm,1.1s,mb3.8,baz=39,slow=6.5,SNR=2.8						
FITZ	**Fitzroy Crossi**	**31.11**	**247**	P	**P**	**19 22 21.9**	**-2.0**
	1.8nm,0.6s,mb4.0,baz=122,slow=17,SNR=5.9						
AFI	**Afiamalu**	**32.71**	**104**	LR	LR	19 33 30.0	
	comp=Z,57nm,18.8s,baz=69,slow=32						
MJAR	**Matsushiro Arr**	**46.52**	**341**	P	**P**	**19 24 32.0**	**-0.5**
	1.1nm,0.7s,mb3.9,baz=167,slow=8.3,SNR=4.3						
CMAR	**Chiang Mai Arr**	**61.44**	**295**	P	**P**	**19 26 21.9**	**+0.2**
	0.8nm,0.6s,mb4.0,baz=122,slow=6.0,SNR=7.7						
SONM	**Songino Array**	**69.88**	**327**	P	**P**	**19 27 15.7**	**+0.2**
	0.5nm,0.4s,mb3.8,baz=135,slow=6.2,SNR=5.6						
TAPN	**Taplejung**	**74.05**	**301**	*e*P	**P**	**19 27 40.4**	**-0.6**
ODAN	**Odare**	**74.18**	**300**	*e*P	**P**	**19 27 42.2**	**+0.5**
	19nm,0.7s,mb5.1						
KKN	**Kakani**	**76.24**	**301**	*e*P	**P**	**19 27 54.0**	**+0.4**
DMN	**Daman**	**76.34**	**301**	*e*P	**P**	**19 27 54.8**	**+0.7**
	15nm,0.8s,mb5.0						
GKN	**Gorkha**	**76.85**	**301**	*e*P	**P**	**19 27 57.3**	**+0.3**
	22nm,1.0s,mb5.0						
KOLN	**Koldanda**	**77.67**	**300**	*e*P	**P**	**19 28 04.8**	**+3.2**
	22nm,0.7s,mb5.2						
ILAR	**Eielson Array**	**83.39**	**21**	P	**P**	**19 28 29.9**	**-1.5**
	0.3nm,0.4s,mb3.7,baz=248,slow=5.1,SNR=7.2						
MK31	**Makanchi Array**	**83.99**	**319**	*e*P	**P**	**19 28 35.4**	**+0.5**
MKAR	**Makanchi Array**	**83.99**	**319**	P	**P**	**19 28 35.3**	**+0.4**
	1.7nm,0.7s,mb4.3,baz=102,slow=6.1,SNR=20						
ZALV	**Zalesovo Beam**	**84.73**	**326**	P	**P**	**19 28 38.4**	**0.0**
ZALV	**Zalesovo Beam**	**84.73**	**326**	P	**P**	**19 28 38.4**	**0.0**
	1.8nm,0.5s,mb4.5,baz=118,slow=6.3,SNR=10						
BVAR	**Borovoye Array**	**92.86**	**323**	P	**P**	**19 29 16.6**	**-0.6**
	1.3nm,0.7s,mb4.5,baz=90,slow=4.4,SNR=8.6						
YKA	**Yellowknife Ar**	**96.28**	**28**	P	**P**	**19 29 33.0**	**+0.4**
YKA	**Yellowknife Ar**	**96.28**	**28**	P	**P**	**19 29 33.0**	**+0.4**
	0.9nm,0.8s,mb4.3,baz=266,slow=4.5,SNR=5.4						
TORD	**Torodi Ar. Bea**	**153.68**	**285**	PKPbc	PKPbc	19 36 04.1	-0.2
	0.4nm,0.5s,baz=67,slow=2.0,SNR=6.9						

*IDC **17** 19:20:42.3±1.7,2.85S×129.44E,h0km,mb3.8/3, mb1 4.1/5,mb1mx3.7/18,mbtmp3.9/5,ML4.1/2,Error ellipse: s-maj=111.5km s-min=22.3km az=74.0*
*ISCJB **17** 19:20:45.8±1.7,2.95S±0.08×129.3E±0.1,h39km±17km, mb3.9/4,Error ellipse: s-maj=26.6km s-min=10.1km az=156.4*
*NEIC **17** 19:20:47.5±1.1,2.91S×129.27E,h35km,mb4.2/1,Error ellipse: s-maj=25.3km s-min=13.2km az=69.0*
*DJA **17** 19:20:49,2.72S×129.37E,h59km,MLv4.1/6*
ISC 17 19:20:48.3±1.4,2.88S±0.08×129.4E±0.1,h43km±15km, n19,σ1s17/19,mb3.9/4,Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.73**	**161**	P	**Pn**	**19 21 19.8**	**+3.9**
NLAI	**Namlea**	**2.28**	**261**	P	**Pn**	**19 21 25.5**	**+2.1**
TNTI	**Ternate**	**4.13**	**331**	P	**Pn**	**19 21 48.7**	**-0.2**
MNI	**Manado**	**6.23**	**314**	P	**Pn**	**19 22 17.4**	**-0.3**
	0.2nm1µm29nm,0.8s						
LUWI	**Luwuk**	**6.82**	**285**	P	**Pn**	**19 22 25.9**	**0.0**
	0.2nm43nm,0.7s						
MRSI	**Marisa**	**8.12**	**294**	P	**Pn**	**19 22 43.3**	**-0.5**
KAPI	**Kappang**	**9.81**	**257**	P	**Pn**	**19 23 03.8**	**-3.1**
KAKA	**Kakadu**	**10.24**	**163**	*e*P	**Pn**	**19 23 11.9**	**-0.9**
KAKA	**Kakadu**	**10.24**	**163**	P	**Pn**	**19 23 12.9**	**+0.2**
	21nm,0.8s						
KNA	**Kununurra**	**12.81**	**183**	P	**Pn**	**19 23 51.4**	**+3.6**
FITZ	**Fitzroy Crossi**	**15.56**	**193**	*e*P	**Pn**	**19 24 26.4**	**+1.6**
FITZ	**Fitzroy Crossi**	**15.56**	**193**	Pn	**Pn**	**19 24 25.6**	**+0.8**
	0.4nm,0.3s,baz=21,slow=13,SNR=11						
WRA	**Warramunga Arr**	**17.65**	**164**	P	**Pn**	**19 24 48.4**	**-2.6**
WRA	**Warramunga Arr**	**17.65**	**164**	P	**Pn**	**19 24 48.4**	**-2.6**
	1.0nm,0.3s,baz=345,slow=13,SNR=16						
MBWA	**Marble Bar**	**20.45**	**207**	*e*P	**P**	**19 25 21.3**	**-0.9**
ASAR	**Alice Springs**	**21.13**	**168**	P	**P**	**19 25 29.4**	**-0.3**
	4.3nm,0.4s,mb4.1,baz=352,slow=12,SNR=85						
MKAR	**Makanchi Array**	**64.45**	**326**	P	**P**	**19 31 21.0**	**+0.6**
	0.4nm,0.5s,mb3.7,baz=120,slow=7.8,SNR=8.9						
ZALV	**Zalesovo Beam**	**67.63**	**333**	P	**P**	**19 31 40.8**	**+0.3**
	0.3nm,0.3s,mb3.7,baz=117,slow=5.0,SNR=3.1						
KURK	**Kurchatov**	**68.69**	**328**	*e*P	**P**	**19 31 47.6**	**+0.3**
	1.2nm,0.5s,mb4.1						

*SKO **17** 19:46:58.5,40.21N×25.14E,h6km*
*NEIC **17** 19:46:58.9,40.12N×24.80E,h16km,MD3.6(ATH),After ATH.*
*ATH **17** 19:46:58.9,40.12N×24.80E,h16km±2km,MD3.6/8*
*ISCJB **17** 19:46:59.4±0.5,40.14N±0.02×24.89E±0.02,h5km±3km, Error ellipse: s-maj=3.2km s-min=2.3km az=20.4*
*DDA **17** 19:46:59.9,40.37N×24.89E,h1km,Md3.2*
*CSEM **17** 19:46:59.8±0.1,40.12N×24.87E,h5km,MD3.3,Error ellipse: s-maj=3.3km s-min=2.5km az=11.0*
*ISK **17** 19:47:00.1,40.06N×25.03E,h5km,MD3.3*
*SOF **17** 19:47:01.8,40.32N×24.92E,h16km,MD2.8*
*THE **17** 19:47:01.1,40.14N×24.92E,h15km±1km,ML3.0/14,Error ellipse: s-maj=1.9km s-min=0.8km az=295.0*
ISC 17 19:47:00.1±0.4,40.12N±0.02×24.88E±0.02,h6km±3km, n136,σ1s03/188,10C-10D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.72**	**288**	P	**Pg**	**19 47 14.9**	**+1.0**
OUR				S	**Sg**	**19 47 26.7**	**+3.4**
OUR	**Ouranopolis**	**0.72**	**288**	P	**Pg**	**19 47 14.9**	**+1.0**
OUR				S	**Sg**	**19 47 26.7**	**+3.4**
GADA	**Gvkgeada**	**0.79**	**84**	*e*PG	**Pg**	**19 47 14.2**	**-1.0**
GADA				*e*SG	**Sg**	**19 47 24.9**	**-0.6**
GADA	**Gvkgeada**	**0.79**	**84**	*e*Pg	**Pg**	**19 47 14.2**	**-1.0**
GADA				*e*Sg	**Sg**	**19 47 24.9**	**-0.5**
KAVA	**Kavala**	**0.92**	**343**	P	**Pg**	**19 47 18.1**	**+0.3**
KAVA				S	**Sg**	**19 47 30.1**	**+0.4**
KAVA	**Kavala**	**0.92**	**343**	P	**Pg**	**19 47 18.1**	**+0.3**
KAVA				S	**Sg**	**19 47 30.1**	**+0.4**
PAIG	**Paliouri**	**0.94**	**259**	P	**Pg**	**19 47 18.9**	**+0.8**
PAIG				S	**Sg**	**19 47 32.1**	**+1.8**
PAIG	**Paliouri**	**0.94**	**259**	P	**Pg**	**19 47 18.9**	**+0.8**
PAIG				S	**Sg**	**19 47 32.1**	**+1.8**
BOZC	**Bozcaada**	**0.94**	**107**	*i* P	**Pg**	**19 47 18.9**	**+0.7**
BOZC				*i* S	**Sg**	**19 47 32.0**	**+1.5**
RDO	**Rodhopi**	**1.14**	**26**	*e*Pn	**Pg**	**19 47 20.9**	**-1.2**
RDO	**Rodhopi**	**1.14**	**26**	*e*PN	**Pg**	**19 47 20.9**	**-1.2**
RDO	**Rodhopi**	**1.14**	**26**	P	**Pg**	**19 47 20.5**	**-1.6**
RDO				S	**Sg**	**19 47 36.3**	**-0.6**
RDO	**Rodhopi**	**1.14**	**26**	P	**Pg**	**19 47 20.5**	**-1.6**
RDO	**Rodhopi**	**1.14**	**26**	*e*Pn	**Pg**	**19 47 20.9**	**-1.2**
RDO				S	**Sg**	**19 47 36.3**	**-0.6**
EZN	**Ezine**	**1.15**	**104**	*e*PG	**Pg**	**19 47 21.1**	**-1.1**
EZN				*e*SG	**Sg**	**19 47 35.9**	**-1.2**
EZN	**Ezine**	**1.15**	**104**	*e*Pg	**Pg**	**19 47 21.1**	**-1.1**
EZN				*e*Sg	**Sg**	**19 47 35.9**	**-1.2**
ENEZ	**Enez**	**1.15**	**57**	*e*PN	**Pg**	**19 47 21.8**	**-0.4**
ENEZ	**Enez**	**1.15**	**57**	*e*Pn	**Pg**	**19 47 21.8**	**-0.4**
SIGR	**SIGRI**	**1.18**	**140**	P	**Pg**	**19 47 22.5**	**-0.2**
SIGR				S	**Sg**	**19 47 38.6**	**+0.6**
SIGR	**SIGRI**	**1.18**	**140**	P	**Pg**	**19 47 22.5**	**-0.2**
SIGR				S	**Sg**	**19 47 38.6**	**+0.6**
ALN	**Alexandroupoli**	**1.18**	**49**	P	**Pg**	**19 47 20.8**	**-2.0**
ALN				S	**Sg**	**19 47 38.1**	**-0.1**
ALN	**Alexandroupoli**	**1.18**	**49**	P	**Pg**	**19 47 20.8**	**-2.0**
ALN				S	**Sg**	**19 47 38.1**	**-0.1**
AOS	**Alonnisos**	**1.22**	**219**	P	**Pg**	**19 47 22.9**	**-0.6**
AOS				S	**Sg**	**19 47 40.3**	**+1.0**
AOS	**Alonnisos**	**1.22**	**219**	P	**Pg**	**19 47 22.9**	**-0.6**
AOS				S	**Sg**	**19 47 40.3**	**+1.0**
GELI	**Tayfur-Gelibol**	**1.25**	**77**	*e*PN	**Pn**	**19 47 23.3**	**-0.8**
GELI	**Tayfur-Gelibol**	**1.25**	**77**	*e*Pn	**Pn**	**19 47 23.3**	**-0.8**
SOH	**Sokhos**	**1.36**	**302**	*e*Pn	**Pn**	**19 47 24.0**	**-1.5**
SOH	**Sokhos**	**1.36**	**302**	*e*PN	**Pn**	**19 47 24.0**	**-1.5**
SOH	**Sokhos**	**1.36**	**302**	P	**Pn**	**19 47 25.1**	**-0.4**
SOH				S	**Sb**	**19 47 44.0**	**+0.5**
SOH	**Sokhos**	**1.36**	**302**	*e*Pn	**Pn**	**19 47 24.0**	**-1.5**
SOH	**Sokhos**	**1.36**	**302**	P	**Pn**	**19 47 25.1**	**-0.4**
SOH				S	**Sb**	**19 47 44.0**	**+0.5**
PRK	**Paraskevi**	**1.39**	**129**	P	**Pn**	**19 47 25.1**	**-0.8**
PRK				S	**Sb**	**19 47 43.5**	**-0.8**
PRK	**Paraskevi**	**1.39**	**129**	P	**Pn**	**19 47 25.1**	**-0.8**
PRK				S	**Sb**	**19 47 43.5**	**-0.8**
SRS	**Serrai**	**1.40**	**316**	P	**Pn**	**19 47 25.2**	**-0.9**
SRS				S	**Sb**	**19 47 43.3**	**-1.3**
SRS	**Serrai**	**1.40**	**316**	P	**Pn**	**19 47 25.2**	**-0.9**
SRS				S	**Sb**	**19 47 43.3**	**-1.3**
HORT	**Hortiatis**	**1.44**	**290**	P	**Pn**	**19 47 26.4**	**-0.3**
HORT				S	**Sb**	**19 47 46.5**	**+0.7**
HORT	**Hortiatis**	**1.44**	**290**	P	**Pn**	**19 47 26.4**	**-0.3**
HORT				S	**Sb**	**19 47 46.5**	**+0.7**
NVR	**Nevrokopi**	**1.45**	**328**	*e*Pn	**Pn**	**19 47 26.1**	**-0.7**
NVR				*e*Sn	**Sn**	**19 47 45.0**	**-1.1**
NVR	**Nevrokopi**	**1.45**	**328**	*e*PN	**Pn**	**19 47 26.1**	**-0.7**
NVR				*e*SN	**Sn**	**19 47 45.0**	**-1.1**
NVR	**Nevrokopi**	**1.45**	**328**	*e*Pn	**Pn**	**19 47 26.1**	**-0.7**
NVR			

VTS	Vitosha	2.77	334	*e*P	Pn	19 47 45.4	+0.4
VTS	Vitosha	2.77	334	*e*P	Pn	19 47 45.4	+0.4
CTKS	Kestanelik-??a	2.98	67	*e*PN	Pn	19 47 49.2	+1.4
CTKS	Kestanelik-??a	2.98	67	*e*Pn	Pn	19 47 49.3	+1.5
KRUS	Krusevo	3.03	296	*e*Pn	Pn	19 47 48.5	+0.1
PVL	Pavlikeni	3.11	6	*e*P	Pn	19 47 57.2	+7.5
SZH	Strazhica	3.24	14	P	Pn	19 47 51.0	-0.5
SZH	Strazhica	3.24	14	P	Pn	19 47 51.0	-0.5
BARS	Barje	3.54	321	⇑*i*Pn	Pn	19 47 55.9	+0.3
VOIR		5.32	1	⇑P	Pn	19 48 20.2	+0.3
VOIR		5.32	1	⇑*i*P	Pn	19 48 20.2	+0.3
VOIR		5.32	1	⇑P	Pn	19 48 20.2	+0.3
MLR	Muntele Rosu	5.43	8	⇑P	Pn	19 48 22.4	+1.0
MLR	Muntele Rosu	5.43	8	⇑P	Pn	19 48 22.5	+1.1
MLR	Muntele Rosu	5.43	8	⇑P	Pn	19 48 22.5	+1.1
PLOR	Plostina	5.88	12	⇓*i*P	Pn	19 48 29.2	+1.6
PLOR	Plostina	5.88	12	⇓*i*P	Pn	19 48 29.2	+1.6
VRI	Vrincioaia	5.90	13	⇑*i*P	Pn	19 48 29.6	+1.6
VRI	Vrincioaia	5.90	13	⇑*i*P	Pn	19 48 29.6	+1.6
VRI	Vrincioaia	5.90	13	⇑P	Pn	19 48 29.6	+1.6
BZS	Buzias	5.99	338	⇓P	Pn	19 48 28.9	-0.3
BZS	Buzias	5.99	338	⇓*i*P	Pn	19 48 29.0	-0.2
BZS	Buzias	5.99	338	⇓P	Pn	19 48 29.0	-0.2
BURAR	Bucovina Array	7.50	2	⇓P	Pn	19 48 51.2	+1.3
BURAR	Bucovina Array	7.50	2	⇓*i*P	Pn	19 48 51.2	+1.3
BURAR	Bucovina Array	7.50	2	⇓P	Pn	19 48 51.2	+1.3

IDC **17** *19:58:10.6±1.0, 13°.11N×124°.68E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/21, mbtmp3.8/9, ML3.6/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/22, Error ellipse: s-maj=37.3km s-min=17.7km az=67.0*
MAN **17** *19:58:12, 13°.15N×124°.36E, h22km, mb5.2, ML4.2, MS4.4*
ISCJB **17** *19:58:13.9±0.7, 13°.11N±0°.03×124°.42E±0°.06, h29km±5km, mb3.9/12, Error ellipse: s-maj=10.0km s-min=4.8km az=168.1*
BJI **17** *19:58:15.0, 13°.00N×124°.50E, h46km, mb4.6/3*
NEIC **17** *19:58:17.0±2.0, 13°.02N×124°.54E, h46km±18km, mb4.4/4, Error ellipse: s-maj=34.0km s-min=8.9km az=57.0*

ISC 17 19:58:14.2±0.7, 13°.09N±0°.03×124°.40E±0°.06, h17km±5km, n38, σ1♀26/40, mb3.9/12, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	Virac	0.56	335	*e*P	Pg	19 58 23.4	-1.9
PVCP				*e*S	Sg	19 58 33.9	+1.1
CNP	Catarman	0.63	156	*e*P	Pg	19 58 26.1	-0.6
CNP				*e*S	Sg	19 58 36.0	+1.0
MMPH	Masbate	1.04	226	⇓*e*P	Pb	19 58 31.6	-2.2
MMPH				*i* S	Sb	19 58 46.1	-1.2
AUQP	San Andres	1.69	278	*e*P	Pn	19 58 44.7	+1.7
OCLP	Ormoc	2.03	174	*e*P	Pn	19 58 50.1	+2.4
OTRP	Odiongan	2.43	253	*e*P	Pn	19 58 55.9	+2.7
BOAC	Boac	2.51	279	*e*P	Pn	19 58 54.5	+0.2
LLP	Lapu-Lapu	2.79	189	*e*P	Pn	19 58 59.7	+1.6
LLP				*e*S	Sn	19 59 30.9	-0.4
POLP	Polilio Island	2.89	305	*e*P	Pn	19 59 01.4	+1.8
GUIM	Jordan	3.02	216	*e*P	Pn	19 59 01.2	-0.1
TGY	Tagaytay City	3.51	287	Pn	Pn	19 59 11.5	+3.4
	5.0nm,0.3s,baz=158,slow=12,SNR=4.6						
BALP	Baler	3.80	314	*e*P	Pn	19 59 09.4	-2.6
CUYO	Cuyo Island	3.98	236	*e*P	Pn	19 59 14.0	-0.6
BUSP	Coron	4.24	256	*e*P	Pn	19 59 17.5	-0.6
PALP	Palanan	4.39	335	*e*P	Pn	19 59 18.7	-1.4
CAUP	Cauayan	4.57	327	*e*P	Pn	19 59 20.1	-2.6
BUKP	Musuan	5.22	173	*e*P	Pn	19 59 38.2	+6.6
APYP	Conner	5.64	328	*e*P	Pn	19 59 38.1	+0.8
ABRA	Dolores	5.76	322	*e*P	Pn	19 59 40.5	+1.5
DAV	Davao City (W)	6.09	169	P	Pn	19 59 43.1	-0.4
	413nm,0.4s						
DAV	Davao City (W)	6.09	169	LR	LR	20 02 13.7	
	comp=Z,111nm,21.0s,baz=344,slow=40						
GUMO	Guam	19.93	86	LR	LR	20 09 01.3	
	comp=Z,35nm,19.4s,baz=268,slow=33						
KSRS	Korea Array	24.47	7	P	P	20 03 30.6	-1.8
	1.6nm,0.8s,mb3.5,baz=183,slow=9.7,SNR=3.7						
CMAR	Chiang Mai Arr	25.06	286	P	P	20 03 38.1	+0.2
	0.6nm,0.7s,mb3.3,baz=96,slow=8.4,SNR=5.5						
WRA	Warramunga Array	34.25	163	P	P	20 04 56.5	-2.9
	0.4nm,0.8s,mb3.4,baz=350,slow=9.0,SNR=2.9						
ASAR	Alice Springs	37.69	166	P	P	20 05 29.0	+0.1
	0.3nm,0.5s,mb3.3,baz=3,slow=8.9,SNR=6.9						
SONM	Songino Array	37.76	340	P	P	20 05 29.3	+0.1
	1.2nm,0.9s,mb3.6,baz=151,slow=9.5,SNR=6.5						
SONM				LR	LR	20 20 14.5	
	comp=Z,28nm,19.4s,baz=311,slow=35						
MK31	Makanchi Array	48.69	322	*e*P	P	20 06 58.6	+1.0
MKAR	Makanchi Array	48.69	322	P	P	20 06 58.5	+0.9
	5.2nm,0.8s,mb4.6,baz=122,slow=8.8,SNR=46						
ZALV	Zalesovo Beam	51.29	331	P	P	20 07 16.5	-0.7
	2.0nm,0.8s,mb4.1,baz=120,slow=8.8,SNR=5.8						
UCH	Uchtor	51.91	314	*e*P	P	20 07 23.4	+1.4
	2.4nm,0.8s,mb4.2						
KURK	Kurchatov	52.72	325	*e*P	P	20 07 28.2	+0.3
	11nm,0.9s,mb4.8						
KBL	Kabul	54.25	303	*e*P	P	20 07 39.1	-0.4
BVAR	Borovoye Array	58.32	325	P	P	20 08 07.9	-0.3
	1.7nm,0.9s,mb4.1,baz=103,slow=6.4,SNR=6.5						
ABKAR	Akbulak array	63.56	319	*e*P	P	20 08 43.4	-0.5
	1.1nm,0.7s,mb4.0						
ARU	Arti	65.88	326	*e*P	P	20 08 58.1	-0.7
	3.6nm,0.8s,mb4.5						
BURAR	Bucovina Array	86.53	318	⇓*i*P	P	20 10 56.7	+0.2
BUR08	Bucovina Ar. S	86.53	318	*e*P	P	20 10 56.8	+0.3

DDA **17** *20:02:10.5, 38°.16N×26°.69E, h7km±5km, Md2.9*
ISCJB **17** *20:02:11.4±0.7, 38°.21N±0°.04×26°.71E±0°.05, h7km±6km, Error ellipse: s-maj=6.7km s-min=6.4km az=151.3*
ISK **17** *20:02:11.2, 38°.18N×26°.76E, h4km, MD2.9*
CSEM **17** *20:02:11.2±0.3, 38°.20N×26°.71E, h5km, MD2.9, Error ellipse: s-maj=6.4km s-min=4.5km az=104.0*

ISC 17 20:02:11.5±0.7, 38°.20N±0°.04×26°.70E±0°.05, h8km±5km, n31, σ0♀80/43, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.18	333	*i* P	Pg	20 02 14.8	-0.5
URLA				*i* S	Sg	20 02 18.2	+0.3
URLA	Izmir	0.18	333	*i* P	Pg	20 02 14.8	-0.6
URLA				*i* S	Sg	20 02 18.2	+0.3
BLCB	Balcova	0.33	55	*e*PG	Pg	20 02 18.0	0.0
BLCB				*e*SG	Sg	20 02 22.7	+0.3
BLCB	Balcova	0.33	55	*e*Pg	Pg	20 02 18.0	0.0
BLCB				*e*Sg	Sg	20 02 22.7	+0.4
IZM	Izmir	0.48	65	*e*PG	Pg	20 02 20.8	-0.1
IZM				*e*SG	Sg	20 02 27.7	+0.4
IZM	Izmir	0.48	65	*e*Pg	Pg	20 02 20.8	-0.1
IZM				*e*Sg	Sg	20 02 27.7	+0.4
AYDN	Tasoluk	1.07	120	*i* P	Pg	20 02 32.1	0.0
AYDN				*i* S	Sg	20 02 46.4	+0.3
AYDN	Tasoluk	1.07	120	*i* P	Pg	20 02 32.1	-0.1
AYDN				*i* S	Sg	20 02 46.3	+0.2
AKS	Akhisar	1.10	52	*e*PG	Pg	20 02 32.2	-0.6
AKS	Akhisar	1.10	52	*e*Pg	Pg	20 02 32.2	-0.6
BODT	Bodrum	1.23	157	*e*PN	Pn	20 02 34.6	-0.3
BODT	Bodrum	1.23	157	*e*Pn	Pn	20 02 34.6	-0.4
MLSB	Milas	1.24	136	*e*PN	Pn	20 02 34.8	-0.2
MLSB	Milas	1.24	136	*e*Pn	Pn	20 02 34.8	-0.3
BDRM	Kayabasi	1.27	152	*i* P	Pn	20 02 33.9	-1.7
BDRM				*i* S	Sb	20 02 52.0	-0.2
BDRM	Kayabasi	1.27	152	*i* P	Pn	20 02 33.9	-1.7
BDRM				*i* S	Sb	20 02 52.0	-0.2
APE	Apeiranthos	1.46	220	*e*PN	Pn	20 02 39.9	+1.7
APE	Apeiranthos	1.46	220	*e*Pn	Pn	20 02 39.9	+1.8
KULA	Kula-Manisa	1.57	78	*e*PN	Pn	20 02 40.1	+0.5
KULA	Kula-Manisa	1.57	78	*e*Pn	Pn	20 02 40.1	+0.4
DAT	Datca	1.62	154	*e*PN	Pn	20 02 40.6	+0.2
DAT	Datca	1.62	154	*e*Pn	Pn	20 02 40.6	+0.2
YER	Yerkesik	1.64	130	*e*PN	Pn	20 02 41.5	+0.9
YER	Yerkesik	1.64	130	*e*Pn	Pn	20 02 41.6	+1.0
BALY	Balya	1.70	25	*i* P	Pn	20 02 40.5	-0.9
BALY				*i* S	Sn	20 03 03.9	+0.6
BALY	Balya	1.70	25	*i* P	Pn	20 02 40.5	-0.9
BALY				*i* S	Sn	20 03 03.9	+0.6
BOZC	Bozcaada	1.72	343	*i* P	Pn	20 02 36.4	-5.3
DURS	Dursunbey	1.97	44	*i* P	Pn	20 02 41.8	-3.3
DURS	Dursunbey	1.97	44	*i* P	Pn	20 02 41.8	-3.3
KHAL	Karahalli	2.20	85	*i* P	Pn	20 02 52.4	+4.1
KHAL	Karahalli	2.20	85	*i* P	Pn	20 02 52.4	+4.1

IDC **17** *20:06:18.8±1.5, 6°.75N×75°.97W, h0km, mb3.6/1, mb1 3.7/2, mb1mx3.3/16, mbtmp3.4/2, ML1.4/1, Error ellipse: s-maj=93.8km s-min=25.5km az=54.0*
ISCJB **17** *20:06:28.4±0.8, 6°.97N±0°.08×73°.52W±0°.10, h131km±10km, Error ellipse: s-maj=19.2km s-min=8.6km az=36.8*
FUNV **17** *20:06:31.2, 7°.02N×73°.62W, h114km, MW3.6*

ISC 17 20:06:29.7±0.8, 7°.01N±0°.07×73°.53W±0°.10, h122km±11km, n16, σ1♀26/22, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	Capacho	1.48	55	⇓*e*P	Pn	20 06 58.3	+1.4
CAPV				*e*S	Sn	20 07 18.6	+0.9
ROSC	El Rosal	2.28	200	P	Pn	20 07 01.2	-5.5
	1.8nm,0.3s,baz=72,slow=19,SNR=3.2						
ROSC				Sn	Sn	20 07 33.7	-1.6
	6.9nm,0.3s,baz=275,slow=22,SNR=8.0						
VIGV	El Vigia	2.81	50	*e*P	Pn	20 07 15.0	+1.4
SOCV	Socops	2.94	64	*e*P	Pn	20 07 16.7	+1.5
SOCV				*e*S	Sn	20 07 50.0	-0.3
VIRV	Villa del Rosa	3.64	18	*e*P	Pn	20 07 24.1	-0.4
VIRV				*e*S	Sn	20 08 04.2	-2.8
QARV	Quebrada Arrib	4.35	43	*e*P	Pn	20 07 34.8	+0.9
QARV				*e*S	Sn	20 08 21.6	-2.3
CURV	Curarigua	4.62	50	*e*P	Pn	20 07 38.5	+0.9
CURV				*e*S	Sn	20 08 27.8	-2.6
SIQV	Siquisique	5.16	45	*e*P	Pn	20 07 45.5	+0.7
SIQV				*e*S	Sn	20 08 40.0	-3.3
MAPV	Macapo	5.75	60	*e*P	Pn	20 07 54.0	+1.2
BAUV	El Baul	5.77	70	*e*P	Pn	20 07 52.8	-0.2
IMOV	Isla Los Monje	5.91	26	*e*P	Pn	20 07 55.3	+0.3
MONV	Montecano	6.04	35	*e*P	Pn	20 07 56.6	-0.1
CAOV	Caicara del Or	7.16	87	*e*P	Pn	20 08 11.0	-0.8
CUPV	Cepira	8.23	68	*e*P	Pn	20 08 25.4	-1.0
YKA	Yellowknife Ar	62.95	340	P	P	20 16 43.1	+0.2
	0.3nm,0.5s,baz=134,slow=6.8,SNR=5.7						
WRA	Warramunga Arr	150.07	242	PKPbc	PKPbc	20 26 05.8	-1.2
	1.0nm,1.2s,baz=94,slow=2.2,SNR=5.5						

IDC 17 20:08:34.0±2.2, 11°.30S×109°.87E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.6/17, mbtmp3.6/6, Error ellipse: s-maj=114.5km s-min=20.4km az=45.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.06	113	P	P	20 14 00.1	-0.2
	0.7nm,0.9s,baz=288,slow=10,SNR=9.6						
ASAR	Alice Springs	25.97	121	P	P	20 14 09.1	+0.6
	0.5nm,0.7s,baz=295,slow=9.2,SNR=8.1						
CMAR	Chiang Mai Arr	31.47	340	P	P	20 14 59.1	+1.6
	0.4nm,0.7s,baz=177,slow=7.8,SNR=4.0						
MKAR	Makanchi Array	62.87	339	P	P	20 19 01.4	-0.4
	0.3nm,0.4s,baz=141,slow=7.7,SNR=9.1						
ZALV	Zalesovo Beam	68.39	344	P	P	20 19 36.1	-1.1
	0.5nm,0.4s,baz=167,slow=6.8,SNR=3.5						
BRTR	Keskin Array B	86.78	311	P	P	20 21 20.8	+0.4
	0.2nm,0.4s,baz=134,slow=6.2,SNR=3.5						

IDC 17 20:38:43.6±5.1, 2°.65S×138°.92E, h0km, mb3.0/2, mb1 3.4/3, mb1mx3.2/13, mbtmp3.2/3, ML3.5/1, Error ellipse: s-maj=204.1km s-min=32.3km az=87.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	17.76	194	P	Pn	20 42 52.4	-0.1
	0.2nm,0.3s,baz=16,slow=13,SNR=6.8						
ASAR	Alice Springs	21.45	193	P	P	20 43 33.9	+0.3
	0.4nm,0.8s,baz=12,slow=11,SNR=3.7						
MKAR	Makanchi Array	69.87	322	P	P	20 49 56.4	+0.1
	0.1nm,0.5s,baz=116,slow=6.6,SNR=3.3						

DDA **17** *20:40:30.6, 36°.99N×29°.13E, h7km±6km, Md3.0*
ISCJB **17** *20:40:32.3±0.5, 37°.04N±0°.03×29°.16E±0°.03, h5km±5km, Error ellipse: s-maj=5.0km s-min=3.9km az=9.3*
ISK **17** *20:40:32.5, 37°.08N×29°.17E, h9km, MD3.0*
CSEM **17** *20:40:32.8±0.2, 37°.07N×29°.16E, h10km, MD3.0, Error ellipse: s-maj=5.2km s-min=3.5km az=7.0*

ISC 17 20:40:32.9±0.5, 37°.05N±0°.03×29°.16E±0°.03, h9km±5km, n36, σ0♀92/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLHS	Glhisar (BURDU	0.29	68	*e*PG	Pg	20 40 38.2	-0.5
GLHS				*e*SG	Sg	20 40 43.5	+0.8
GLHS	Glhisar (BURDU	0.29	68	*e*Pg	Pg	20 40 38.2	-0.6
GLHS				*e*Sg	Sg	20 40 43.5	+0.8
GOLH	Golhisar	0.37	60	*i* P	Pg	20 40 38.8	-1.5
GOLH				*i* S	Sg	20 40 45.4	+0.1
GOLH	Golhisar	0.37	60	*i* P	Pg	20 40 38.8	-1.4
GOLH				*i* S	Sg	20 40 45.4	+0.2
DNZL	Cakiroluk	0.65	352	*i* P	Pg	20 40 44.8	-0.6
DNZL				*i* S	Sg	20 40 55.0	+1.1
DNZL	Cakiroluk	0.65	352	*i* P	Pg	20 40 44.8	-0.6
DNZL				*i* S	Sg	20 40 55.0	+1.1
ELL	Elmali	0.67	116	*e*PG	Pg	20 40 46.0	+0.1
ELL				*e*SG	Sg	20 40 55.6	+1.0
ELL	Elmali	0.67	116	*e*Pg	Pg	20 40 46.0	+0.1
ELL				*e*Sg	Sg	20 40 55.6	+0.9
YER	Yerkesik	0.70	277	*e*PG	Pg	20 40 47.4	+0.9
YER				*e*SG	Sg	20 40 57.1	+1.4
YER	Yerkesik	0.70	277	*e*Pg	Pg	20 40 47.4	+0.9
YER				*e*Sg	Sg	20 40 57.2	+1.5
DENT	Denizli	0.71	352	*e*PG	Pg	20 40 46.0	-0.7
DENT	Denizli	0.71	352	*e*Pg	Pg	20 40 46.0	-0.7
AKAS	Kas	0.89	156	*i* P	Pg	20 40 47.3	-2.7
AKAS				*i* S	Sg	20 41 01.7	+0.1
AKAS	Kas	0.89	156	*i* P	Pg	20 40 47.3	-2.7
AKAS				*i* S	Sg	20 41 01.7	+0.1
MLSB	Milas	1.13	283	*e*PN	Pg	20 40 53.7	-0.9
MLSB	Milas	1.13	283	*e*Pn	Pg	20 40 53.7	-0.9
AYDN	Tasoluk	1.19	301	*i* P	Pb	20 40 54.0	-1.6
AYDN				*i* S	Sb	20 41 10.4	-0.6
AYDN	Tasoluk	1.19	301	*i* P	Pb	20 40 54.0	-1.6
AYDN				*i* S	Sb	20 41 10.4	-0.6
BCK	Bucak	1.21	70	*e*PN	Pn	20 40 55.6	-0.4
BCK	Bucak	1.21	70	*e*Pn	Pn	20 40 55.6	-0.4
KHL	Karahalli	1.30	13	*e*PN	Pn	20 40 57.0	-0.3
KHL	Karahalli	1.30	13	*e*Pn	Pn	20 40 57.0	-0.3
DAT	Datca	1.31	256	*e*PN	Pn	20 40 58.4	+1.2
DAT	Datca	1.31	256	*e*Pn	Pn	20 40 58.4	+1.1
ISP	Isparta	1.33	54	*e*PN	Pn	20 40 58.0	+0.3
ISP	Isparta	1.33	54	*e*Pn	Pn	20 40 58.0	+0.4
KHAL	Karahalli	1.35	11	*i* P	Pn	20 40 58.0	+0.1
KHAL				*i* S	Sb	20 41 16.4	+0.8
KHAL	Karahalli	1.35	11	*i* P	Pn	20 40 58.0	+0.2
KHAL				*i* S	Sb	20 41 16.4	+0.8
BDRM	Kayabasi	1.37	271	*i* P	Pn	20 40 52.5	-5.6
BDRM				*i* S	Sb	20 41 17.1	+0.8
BODT	Bodrum	1.48	271	*e*PN	Pn	20 40 59.2	-0.4
BODT	Bodrum	1.48	271	*e*Pn	Pn	20 40 59.2	-0.4
KULA	Kula-Manisa	1.52	345	*e*PN	Pn	20 40 59.3	-0.9
KULA	Kula-Manisa	1.52	345	*e*Pn	Pn	20 40 59.3	-0.9
IZM	Izmir	2.02	312	*e*PN	Pn	20 41 06.6	-0.4
HDMB	Hadim	2.67	91	*e*PN	Pn	20 41 17.3	+1.3
HDMB	Hadim	2.67	91	*e*Pn	Pn	20 41 17.3	+1.3

IDC **17** *20:46:43.9±0.4, 13°.01N×124°.33E, h0km, mb4.9/22, mb1 4.9/24, mb1mx4.9/26, mbtmp4.9/24, ML4.8/2, MS4.9/24, Ms1 4.9/24, ms1mx4.8/30, Error ellipse: s-maj=19.9km s-min=10.1km az=71.0*
NEIC **17** *20:46:45.6±0.1, 12°.97N×124°.30E, h10km, mb5.2/70, Error ellipse: s-maj=5.3km s-min=3.7km az=66.0*
NEIC Felt [IV PIVS] at Virac, Catanduanes. Felt [III PIVS] at Legaspi and Sorsogon, Luzon.
ISCJB **17** *20:46:46.7±0.5, 13°.10N±0°.02×124°.41E±0°.02, h27km±3km, mb5.2/167, MS5.1/71, Error ellipse: s-maj=4.0km s-min=2.6km az=170.2*
MAN **17** *20:46:46, 13°.08N×124°.28E, h13km, mb5.7, ML4.7, MS5.2*
MAN INTENSITY IV - VIRAC CATANDUANES; INTENSITY III - SORSOGN CITY LEGASPI CITY; INTENSITY II - LIGNON HILL.
BJI **17** *20:46:46.2, 12°.99N×124°.43E, h29km, mB5.3/37, mb5.1/62, Ms5.4/77, Ms7 5.1/67*
DJA **17** *20:46:48, 13°.31N×124°.35E, h10km, mb5.4/38*
GCMT **17** *20:46:48.0±0.1, 13°.11N×124°.34E, h14km, MW5.4, Moment Tensor Solution. s90,c161; s99,c207; Moment tensor: Scale 10¹⁷Nm; Mrr=0.36±.03; Mθθ=1.38±.03; Mφφ=1.02±.03; Mrθ=0.15±.05; Mrφ=1.39±.02; Mθφ=0.11±.05; Best double couple: M₀1.80000×10¹⁷ NP1:φ₁110.00000°, δ86.00000°, λ2.00000°. NP2:φ₂20.00000°, δ88.00000°, λ176.00000°. Principal axes: T 2.0300, Plg4.0000°, Azm335.0000°; N -0.3800, Plg85.0000°, Azm176.0000°; P -1.6600, Plg2.0000°, Azm65.0000°; Data Used: II IU IC G CN. Surface waves from 104 sta.*
MOS **17** *20:46:49.4±0.9, 13°.36N×124°.23E, h33km, mb5.4/59, MS5.2/28 Error ellipse: s-maj=9.2km s-min=5.0km az=118.6*

ISC 17 20:46:49.9±0.3, 13°.06N±0°.02×124°.39E±0°.03, h39km±2km, h39km±2.4km: pP-P, n506, σ1♀13/485, mb5.2/167, MS5.1/71, 54C-26D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	Virac	0.58	337	*e*P	Pn	20 46 56.5	-5.2
CNP	Catarman	0.61	154	*e*P	Pn	20 46 60.0	-2.1
MMPH	Masbate	1.02	227	⇓*e*P	Pn	20 47 05.0	-2.8
MMPH				*e*S	Sn	20 47 18.6	-2.3
AUQP	San Andres	1.69	279	*e*P	Pn	20 47 18.7	+1.7
BESP	Borongan	1.77	145	*e*P	Pn	20 47 17.9	-0.1
OCLP	Ormoc	2.01	174	*e*P	Pn	20 47 21.7	+0.4
GQP	Guinayangan	2.07	294	⇓*e*P	Pn	20 47 22.1	0.0
GQP				*e*S	Sn	20 47 48.8	+2.1
GQP	Guinayangan	2.07	294	⇓*e*P	Sn	20 47 40.2	-6.5
RCP	Roxas	2.19	227	⇑*e*P	Pn	20 47 22.3	-1.6
RCP				*i* S	Sn	20 47 50.1	+0.4
OTRP	Odiongan	2.41	254	*e*P	Pn	20 47 25.0	-1.9
LLP	Lapu-Lapu	2.76	189	*e*P	Pn	20 47 30.5	-1.1
LLP				*e*S	Sn	20 48 02.8	-0.9
POLP	Polilio Island	2.90	305	*e*P	Pn	20 47 34.6	+1.0
LQP	Lukban	2.96	291	⇑*e*P	Pn	20 47 36.3	+1.9
GUIM	Jordan	2.99	216	*e*P	Pn	20 47 34.6	-0.2
TBP	Tagbilaran	3.39	189	*e*P	Pn	20 47 39.5	-0.8
TBP				*i* S	Sn	20 48 20.1	+0.8
TGY	Tagaytay City	3.52	288	Pn	Pn	20 47 40.5	-1.6
	43nm,0.3s,baz=27,slow=0.2,SNR=37						
TGY	Tagaytay City	3.52	288	⇑*i*P	Pn	20 47 46.7	+4.7
BALP	Baler	3.81	315	*e*P	Pn	20 47 44.5	-1.7
SNPH	Sibuan	3.86	197	⇑*e*P	Pn	20 47 46.2	-0.6
CUYO	Cuyo Island	3.96	237	*e*P	Pn	20 47 46.9	-1.2
PCPH	Palayan	4.05	308	⇑*e*P	Pn	20 47 47.6	-1.7
PCPH				*e*S	Sn	20 48 37.2	+1.6
BUSP	Coron	4.22	256	*e*P	Pn	20 47 50.5	-1.3
BUTP	Butuan	4.24	163	*e*P	Pn	20 47 55.5	+3.5
PALP	Palanan	4.41	335	*e*P	Pn	20 47 53.5	-0.8
CGP	Cagayan de Oro	4.58	176	*e*P	Pn	20 47 55.2	-1.5
CAUP	Cauayan	4.59	328	*e*P	Pn	20 47 55.5	-1.3
BCPH	Baguio City Da	4.95	312	⇓*e*P	Pn	20 48 05.6	+3.9
SCZP	Santa Cruz	5.11	302	*e*P	Pn	20 48 04.0	0.0
BUKP	Musuan	5.19	173	*e*P	Pn	20 48 06.9	+1.9
ENPP	El Nido	5.19	250	*e*P	Pn	20 48 03.9	-1.2
PAGZ	Pagadian	5.27	191	*e*P	Pn	20 48 06.1	-0.1
BOLP	Bolinao	5.45	308	*e*P	Pn	20 48 08.6	0.0
IPIL	Ipil	5.54	199	*e*P	Pn	20 48 09.4	-0.4
APYP	Conner	5.66	328	*e*P	Pn	20 48 10.1	-1.4
ABRA	Dolores	5.78	323	*e*P	Pn	20 48 13.4	+0.2
DMPH	Davao City--Mi	6.04	169	⇑*e*P	Pn	20 48 19.8	+3.1
KCP	Kidapawan	6.05	173	⇑*e*P	Pn	20 48 18.1	+1.2
DAV	Davao City (W)	6.07	169	P	Pn	20 48 15.1	-2.0
DAV	Davao City (W)	6.07	169	Pn	Pn	20 48 16.0	-1.1
	52nm,0.3s,baz=77,slow=4.3,SNR=1.9						
DAV				LR	LR	20 51 02.4	
	comp=Z,22μm,19.4s,baz=92,slow=43						
SIPP	Brgy, Tapao	6.14	322	⇑*e*P	Pn	20 48 20.3	+2.1
SIPP				*i* S	Px	20 48 33.2	
MATI	Mati	6.35	163	*e*P	Pn	20 48 23.6	+2.7
PIP	Pasuquin	6.37	326	⇑*e*P	Pn	20 48 20.1	-1.2
BATP	Bataraza	7.73	237	*e*P	Pn	20 48 40.4	+0.4
MYLDM	Lahad Datu	9.75

NJ2 pP pP 20 51 24.8 +0.4
NJ2 sP sP 20 51 27.8 -1.5
NJ2 PP 20 51 31.4
NJ2 S **S** **20 54 59.5 +6.0**
NJ2 pmax pmax
comp=Z,50nm,1.0s
NJ2 pmax pmax
comp=Z,370nm,5.3s
NJ2 LR LR
comp=N,3μm,12.2s
NJ2 LR LR
comp=E,7μm,14.0s
NJ2 LR LR
comp=Z,4μm,16.4s
WHN Wuhan 19.72 334 ⇑P **Pn** **20 51 17.4 -0.4**
WHN S **S** **20 54 59.1 +2.7**
WHN pmax pmax
comp=Z,810nm,1.9s
WHN pmax pmax
comp=Z,3μm,3.5s
WHN LR LR
comp=N,7μm,12.4s
WHN LR LR
comp=E,2μm,10.3s
WHN LR LR
comp=Z,13μm,19.6s
GUMO Guam 19.93 86 *e*P **Pn** **20 51 21.1 +0.6**
comp=Z,246nm,1.0s
GUMO Guam 19.93 86 P **Pn** **20 51 21.4 +0.9**
comp=Z,3.1nm,0.3s,baz=195,slow=6.7,SNR=16
GUMO LR LR 20 57 13.7
comp=Z,3μm,20.9s,baz=263,slow=32
GUMO Guam 19.93 86 *e*P **Pn** **20 51 21.1 +0.6**
GUMO pmax pmax
comp=Z,246nm,1.0s
GUMO Guam 19.93 86 P **Pn** **20 51 22.0 +1.5**
comp=Z,9μmcomp=Z,384nm,1.3s
GYA Guiyang 21.32 311 ⇑*i*P **P** **20 51 33.0 -0.5**
GYA pP 20 51 45.3
GYA PP 20 52 01.6
GYA S **S** **20 55 29.1 +0.9**
GYA PcP PcP 20 55 38.9 +1.9
GYA sS sS 20 55 41.0 -3.1
GYA SS 20 56 01.8
GYA ScP ScP 20 59 12.0 +0.9
GYA pmax pmax
comp=Z,60nm,1.0s,mb4.9
GYA pmax pmax
comp=Z,520nm,8.4s
GYA LR LR
comp=N,6μm,19.8s,MS5.2
GYA LR LR
comp=E,7μm,21.0s,MS5.2
GYA LR LR
comp=Z,5μm,23.8s,MS4.8
MMRI Maumere 21.66 186 P sP 20 51 52.0 0.0
comp=Z,3μmcomp=Z,136nm,1.7s
CBIJ Chichi jima 21.74 47 LR LR 20 58 12.9
comp=Z,1μm,19.0s,MS4.4,baz=44,slow=32
KTGM Kuala Trenggan 22.33 252 P **P** **20 51 45.0 +0.6**
KMMI Kalianget 22.50 208 P **P** **20 51 50.4 +4.2**
comp=Z,278nm,1.4s,mb5.5
TPI Tanjungpandan 22.87 228 P **P** **20 51 51.3 +1.2**
comp=Z,1μmcomp=Z,122nm,1.0s,mb5.3
SRBI Singaraja 22.90 204 P **P** **20 51 51.2 +0.8**
comp=Z,2μmcomp=Z,309nm,0.8s,mb5.8
MYKOM Kota Tinggi 23.21 243 P **P** **20 51 54.4 +0.7**
MYKOM Kota Tinggi 23.21 243 P **P** **20 51 55.4 +1.6**
comp=Z,2μmcomp=Z,174nm,1.0s,mb5.5
KGM Kluang 23.57 244 P **P** **20 51 57.2 0.0**
KMI Kunming 23.68 304 ⇑P **P** **20 51 58.3 +0.2**
KMI pP 20 52 09.0
KMI PP 20 52 31.0
KMI S **S** **20 56 06.4 -3.9**
KMI sS sS 20 56 25.3 -2.8
KMI SS 20 56 57.9
KMI pmax pmax
comp=Z,54nm,0.8s,mb5.0
KMI pmax pmax
comp=Z,210nm,3.1s
KMI LR LR
comp=N,5μm,17.5s,MS5.2
KMI LR LR
comp=E,4μm,14.1s,MS5.2
KMI LR LR
comp=Z,6μm,15.8s,MS5.1
GMJI Gumukmas 23.82 208 P **P** **20 52 04.0 +4.5**
comp=Z,129nm,1.1s,mb5.3
NGJI Ngawi 24.02 213 P **P** **20 52 04.7 +3.4**
comp=Z,339nm,1.1s,mb5.7
SNG Songkhla 24.11 258 ⇑P **P** **20 52 02.0 -0.2**
comp=Z,100nm,0.8s,mb5.3
SJI Sawahan 24.17 212 P **P** **20 52 04.4 +1.8**
comp=Z,2μmcomp=Z,225nm,1.0s,mb5.6
SMRI Semarang 24.31 216 P **P** **20 52 06.8 +2.8**
comp=Z,160nm,1.5s,mb5.2
PWJI Pagerwojo 24.39 212 P **P** **20 52 05.8 +1.1**
comp=Z,309nm,1.1s,mb5.7
JHJ Hachijo jima 2 24.42 33 LR LR 21 00 46.8
comp=Z,3μm,18.9s,MS4.8,baz=61,slow=34
KSRS Korea Array 24.50 7 P **P** **20 52 06.2 +0.7**
comp=Z,28nm,0.9s,mb4.7,baz=183,slow=10,SNR=54
KSRS LR LR 21 01 11.9
comp=Z,2μm,18.2s,MS4.6,baz=188,slow=35
FRIM Kepong 24.53 249 P **P** **20 52 05.9 -0.1**
CHRT Chiangrai 24.53 289 P **P** **20 52 08.0 +2.0**
IPM Ipoh 24.59 252 P **P** **20 52 06.6 -0.1**
IPM Ipoh 24.59 252 P **P** **20 52 07.2 +0.6**
comp=Z,2μmcomp=Z,62nm,1.9s,mb4.8
KULM Kulim 24.66 254 *e*P **P** **20 52 07.5 +0.3**
comp=Z,99nm,1.3s,mb5.2
KULM Kulim 24.66 254 P **P** **20 52 07.0 -0.1**
KULM Kulim 24.66 254 P **P** **20 52 08.6 +1.4**
comp=Z,2μmcomp=Z,74nm,2.3s,mb4.8
BDT Bhumibol Dam 24.85 283 P **P** **20 52 03.5 -5.4**
comp=Z,8.9nm,0.9s,mb4.3
PCJI Pacitan 24.86 213 P **P** **20 52 11.7 +2.7**
comp=Z,329nm,0.9s,mb5.8
BJII Banjamegara 24.96 217 P **P** **20 52 13.6 +3.7**
comp=Z,3μmcomp=Z,197nm,1.4s,mb5.4
CM31 Chiang Mai Arr 25.06 286 *e*P **P** **20 52 09.9 -0.9**
comp=Z,92nm,1.3s,mb5.2
CMAR Chiang Mai Arr 25.06 286 P **P** **20 52 08.8 -2.0**
comp=Z,22nm,1.0s,mb4.6,baz=97,slow=7.6,SNR=76
CMAR PcP PcP 20 55 46.1 +1.1
comp=Z,3.4nm,0.6s,baz=90,slow=0.9,SNR=15
CMAR ScP ScP 20 59 24.8 +3.7
comp=Z,2.0nm,0.8s,baz=57,slow=1.4,SNR=9.9
CMAR LR LR 21 02 23.1
comp=Z,2μm,18.8s,MS4.6,baz=99,slow=38
CMAR Chiang Mai Arr 25.06 286 P **P** **20 52 08.8 -2.0**
CMAR 20 55 46.1
CHTO Chiang Mai 25.11 286 *e*P **P** **20 52 09.8 -1.5**
comp=Z,23nm,1.1s,mb4.6
CHTO Chiang Mai 25.11 286 *e*P **P** **20 52 09.8 -1.5**
CHTO pmax pmax
comp=Z,23nm,1.1s,mb4.6
CHTO Chiang Mai 25.11 286 P **P** **20 52 10.2 -1.1**
comp=Z,912nmcomp=Z,35nm,1.9s,mb4.6
JCJI Jatiwangi 25.17 220 P **P** **20 52 20.4 +8.6**
comp=Z,145nm,1.2s,mb5.4
XAN Xi'an 25.18 329 P **P** **20 52 11.5 -0.2**
XAN PP 20 52 49.3
XAN S **S** **20 56 40.9 +6.6**
XAN pmax pmax
comp=Z,16nm,1.5s,mb4.3
XAN pmax pmax
comp=Z,99nm,11.9s
XAN LR LR
comp=N,2μm,12.8s,MS4.8
XAN LR LR
comp=E,960nm,15.4s,MS4.8
XAN LR LR
comp=Z,1μm,16.6s,MS4.5
LEM Lembang 25.84 221 P **P** **20 52 23.6 +5.7**
comp=Z,88nm,1.0s,mb5.2
DL2 Dalian 25.86 355 P **P** **20 52 20.3 +2.5**
DL2 S **S** **20 56 51.5 +6.5**
DL2 pmax pmax
comp=Z,50nm,0.9s,mb5.0
DL2 pmax pmax
comp=Z,220nm,3.6s
DL2 LR LR
comp=E,4μm,15.7s
DL2 LR LR
comp=Z,3μm,13.6s,MS4.9

CD2 Chengdu 26.03 316 ⇑P **P** **20 52 19.0 -0.4**
CD2 pP pP 20 52 28.3 -1.9
CD2 sP sP 20 52 32.4 -2.5
CD2 PP 20 53 00.4
CD2 S **S** **20 56 45.3 -2.5**
CD2 sS sS 20 57 00.8 -5.0
CD2 SS 20 57 52.4
CD2 pmax pmax
comp=Z,190nm,1.0s,mb5.6
CD2 pmax pmax
comp=Z,310nm,6.5s
CD2 LR LR
comp=N,10μm,21.6s,MS5.5
CD2 LR LR
comp=E,10μm,23.5s,MS5.5
CD2 LR LR
comp=Z,7μm,23.0s,MS5.2
CBJI Citeko 26.04 223 P pP 20 52 30.1 -0.4
comp=Z,237nm,1.0s
KLSI 26.31 229 P **P** **20 52 26.0 +3.8**
comp=Z,89nm,1.4s,mb5.1
BKNI Bangkinang 26.37 243 P **P** **20 52 24.9 +2.1**
comp=Z,1μmcomp=Z,114nm,1.1s,mb5.3
MAJO Matsushiro 26.47 26 *e*P **P** **20 52 22.0 -1.4**
comp=Z,176nm,2.0s,mb5.2
MAJO Matsushiro 26.47 26 *e*P **P** **20 52 22.0 -1.4**
MAJO pmax pmax
comp=Z,176nm,2.0s,mb5.2
MAT Matsushiro 26.47 26 P **P** **20 52 21.8 -1.6**
MAT S **S** **20 56 59.0 +4.3**
MJAR Matsushiro Arr 26.47 26 P **P** **20 52 22.1 -1.3**
comp=Z,8.3nm,1.0s,mb4.2,baz=203,slow=8.6,SNR=17
MJAR PcP PcP 20 55 49.1 +1.2
comp=Z,6.1nm,0.7s,baz=179,slow=2.2,SNR=15
MDSI Maura Dua 26.59 230 P **P** **20 52 26.1 +1.4**
comp=Z,620nmcomp=Z,54nm,1.0s,mb5.0
SDSI Sungai Dareh 26.68 240 P **P** **20 52 27.3 +1.8**
comp=Z,831nmcomp=Z,31nm,1.5s,mb4.6
TIY Taiyuan 26.77 339 *e*P **P** **20 52 23.9 -2.2**
TIY pP pP 20 52 33.6 -3.2
TIY sP sP 20 52 37.5 -4.0
TIY S **S** **20 56 51.8 -7.6**
TIY pmax pmax
comp=Z,280nm,4.1s
TIY LR LR
comp=N,2μm,12.0s,MS5.0
TIY LR LR
comp=E,1μm,12.7s,MS5.0
TIY LR LR
comp=Z,5μm,23.8s
LWLI Liwa 27.03 230 P **P** **20 52 31.8 +3.2**
comp=Z,124nm,0.8s,mb5.5
KSI Kapahiang 27.28 234 P **P** **20 52 33.4 +2.5**
comp=Z,5μmcomp=Z,225nm,2.5s,mb5.3
PPI Padang Panjang 27.32 242 P **P** **20 52 32.6 +1.3**
comp=Z,3μmcomp=Z,76nm,1.2s,mb5.1
MNSI Mandailing Nat 27.43 246 P **P** **20 52 34.3 +2.0**
BJT Baijiatuao 27.81 346 *e*P **P** **20 52 35.6 +0.2**
comp=Z,56nm,0.8s,mb5.2
BJT Baijiatuao 27.81 346 *e*P **P** **20 52 35.6 +0.2**
BJT pmax pmax
comp=Z,56nm,0.8s
BJI Beijing 27.83 346 P **P** **20 52 35.6 0.0**
BJI S **S** **20 57 20.1 +4.0**
BJI pmax pmax
comp=Z,60nm,1.7s,mb5.0
BJI pmax pmax
comp=Z,380nm,3.6s
BJI LR LR
comp=N,3μm,18.5s,MS5.2
BJI LR LR
comp=E,4μm,15.2s,MS5.2
BJI LR LR
comp=Z,2μm,20.9s
SNY Shenyang 28.67 359 ⇑P **P** **20 52 43.8 +0.8**
SNY S **S** **20 57 30.3 +1.1**
SNY LR LR
comp=N,3μm,16.8s,MS5.4
SNY LR LR
comp=E,6μm,15.0s,MS5.4
SNY LR LR
comp=Z,4μm,15.0s,MS5.2
LZH Lanzhou 29.45 325 ⇑P **P** **20 52 50.6 +0.6**
LZH pP pP 20 52 59.1 -1.7
LZH sP sP 20 53 04.5 -1.0
LZH PP PP 20 53 47.8 -9.2
LZH S **S** **20 57 43.3 +1.6**
LZH SS SS 20 59 17.1 -31
LZH pmax pmax
comp=Z,210nm,1.8s,mb5.6
LZH pmax pmax
comp=Z,480nm,4.0s
LZH LR LR
comp=N,6μm,15.8s
LZH LR LR
comp=Z,6μm,16.2s,MS5.3
HHC Hu-ho-hao-te 29.88 340 ⇑P **P** **20 52 54.8 +1.1**
HHC pP pP 20 53 03.9 -0.7
HHC sP sP 20 53 08.3 -1.0
HHC PP PP 20 53 53.0 -8.7
HHC S **S** **20 57 49.9 +1.6**
HHC sS sS 20 58 05.4 -0.9
HHC SS SS 20 59 27.1 -29
HHC pmax pmax
comp=Z,55nm,0.8s,mb5.3
HHC pmax pmax
comp=Z,160nm,3.7s
HHC LR LR
comp=N,3μm,19.6s,MS5.1
HHC LR LR
comp=E,2μm,17.3s,MS5.1
HHC LR LR
comp=Z,4μm,20.2s,MS5.0
BTO Baotou 30.20 338 *e*P **P** **20 52 55.8 -0.8**
BTO S **S** **20 57 51.3 -2.0**
BTO LR LR
comp=N,750nm,12.8s,MS4.7
BTO LR LR
comp=E,1μm,17.8s,MS4.7
VLA Vladivostok 30.65 11 *ce*P **P** **20 53 01.5 +1.0**
VLA pmax pmax
comp=Z,72nm,1.7s,mb5.2
CN2 Changchun 30.65 2 *e*P **P** **20 52 58.6 -1.9**
CN2 *e*S **S** **20 57 58.4 -1.8**
CN2 pmax pmax
comp=Z,20nm,1.2s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,2μm,16.0s,MS5.2
CN2 LR LR
comp=E,4μm,16.0s,MS5.2
CN2 LR LR
comp=Z,2μm,17.0s,MS4.8
FITZ Fitzroy Crossi 30.99 178 P **P** **20 53 01.7 -2.0**
comp=Z,3.8nm,0.7s,mb4.4,baz=29,slow=4.1,SNR=13
FITZ PcP PcP 20 55 59.9 +0.5
comp=Z,3.1nm,0.6s,baz=349,slow=4.9,SNR=3.1
FITZ LR LR 21 07 54.7
comp=Z,647nm,19.1s,MS4.3,baz=345,slow=41
MDJ Mudanjiang 31.76 7 P **P** **20 53 11.3 +1.0**
MDJ pP pP 20 53 20.0 -1.2
MDJ sP sP 20 53 24.0 -1.8
MDJ S **S** **20 58 20.0 +2.4**
MDJ sS sS 20 58 35.0 -0.7
MDJ ScP ScP 20 59 42.9 +1.4
MDJ PcS PcS 20 59 46.6 +1.2
MDJ pmax pmax
comp=Z,31nm,1.2s,mb5.0
MDJ LR LR
comp=N,1μm,16.2s
MDJ LR LR
comp=E,2μm,21.6s
MDJ LR LR
comp=Z,2μm,18.6s,MS4.7
MDJ Mudanjiang 31.76 7 *e*P **P** **20 53 10.9 +0.6**
comp=Z,69nm,1.3s,mb5.3
COEN Coen 32.66 145 *e*P **P** **20 53 16.8 -1.7**
COEN Coen 32.66 145 *e*P **P** **20 53 16.8 -1.7**
comp=Z,371nm,1.3s,mb6.2
SHL Shillong 33.01 297 *e*PKP **P** **20 53 20.4 -1.1**
ERM Erimo 33.15 26 *d i*P **P** **20 53 22.4 -0.1**
ERM pmax pmax
comp=Z,27nm,1.1s,mb5.1
GTA Gaotai 34.05 325 ⇑P **P** **20 53 31.0 +0.6**
GTA pP pP 20 53 42.0 +0.7
GTA sP sP 20 53 46.6 +0.6
GTA PcP PcP 20 56 09.3 +1.8
GTA S **S** **20 58 56.0 +2.6**
GTA pmax pmax
comp=Z,28nm,1.4s,mb5.0
GTA pmax pmax
comp=Z,180nm,4.7s
GTA LR LR
comp=N,3μm,18.1s,MS5.2
GTA LR LR
comp=E,2μm,14.6s,MS5.2
GTA LR LR
comp=Z,4μm,15.5s,MS5.3
WRA Warramunga Arr 34.22 163 P **P** **20 53 29.2 -2.8**
comp=Z,7.9nm,0.7s,mb4.7,baz=328,slow=10,SNR=57
WRA PcP PcP 20 56 08.3 0.0
comp=Z,6.7nm,0.6s,baz=342,slow=3.1,SNR=11
LSA Lhasa 34.94 304 P **P** **20 53 40.8 +2.6**
LSA sP sP 20 53 47.9 -5.9
LSA S **S** **20 58 58.8 -8.5**
LSA LR LR
comp=N,2μm,30.1s
LSA LR LR
comp=E,1μm,17.8s
LSA LR LR
comp=Z,2μm,18.9s
HIA Hailar 36.30 355 *e*P **P** **20 53 49.8 +0.1**
comp=Z,28nm,1.1s,mb5.1
HIA Hailar 36.30 355 *e*P **P** **20 53 49.8 +0.2**
HIA pmax pmax
comp=Z,28nm,1.1s
HABR Khabarovsk 36.40 12 *e*P **P** **20 53 49.2 -1.3**
HABR 20 56 13.3
HABR *e*S **S** **20 59 26.8 -2.4**
HABR *e*SS SS 21 01 58.1 -11
HABR *e*SSS 21 02 15.3
HABR *e* 21 04 01.2
HABR pmax pmax
comp=E,63nm,2.2s
HABR pmax pmax
comp=N,53nm,1.7s
HABR pmax pmax
comp=Z,79nm,2.1s,mb5.3
HABR MLR MLR
comp=Z,863nm,18.0s,MS4.6
KLR Kul'dur 36.57 8 *e*P **P** **20 53 48.0 -3.9**
KLR *e* 20 55 18.0
KLR *e*S **S** **20 59 28.0 -3.8**
KLR MLR MLR
comp=E,4μm,14.5s
MTSU Mount Surprise 36.70 147 *e*P **P** **20 53 53.0 -0.4**
comp=E,23nm,0.4s,mb5.3
TAPN Taplejung 37.09 298 *e*P **P** **20 53 56.4 -0.2**
comp=E,81nm,1.1s,mb5.5
YSS Yuzh-Sakhalins 37.15 21 ⇓*e*P **P** **20 53 57.7 +0.9**
YSS Yuzh-Sakhalins 37.15 21 ⇑*e*P **P** **20 53 57.0 +0.2**
YSS *e* 20 54 12.8
YSS *e*S **S** **20 59 40.0 -0.6**
YSS MLR MLR
comp=Z,1μm,16.0s,MS4.7
YSS MLR MLR
comp=N,2μm,17.0s,MS5.0
YSS MLR MLR
comp=E,1μm,15.0s,MS5.0
ODAN Odare 37.24 297 *e*P **P** **20 53 57.2 -0.7**
comp=E,113nm,0.9s,mb5.7
ULN Ulaanbaatar 37.59 341 *e*P **P** **20 54 00.5 -0.2**
comp=E,37nm,0.9s,mb5.1
ULN Ulaanbaatar 37.59 341 *e*P **P** **20 54 00.5 -0.1**
ULN pmax pmax
comp=Z,37nm,0.9s,mb5.1
ASAR Alice Springs 37.67 166 P **P** **20 54 00.8 -0.6**
comp=Z,7.6nm,0.3s,mb4.8,baz=344,slow=6.6,SNR=131
ASAR PcP PcP 20 56 17.9 -0.5
comp=Z,6.6nm,0.8s,baz=4.3,slow=2.9,SNR=5.9
SONM Songino Array 37.78 340 P **P** **20 54 03.0 +0.8**
SONM PcP PcP 20 56 19.4 +1.0
SONM LR LR 21 10 21.9
SONM Songino Array 37.78 340 P **P** **20 54 03.0 +0.8**
comp=Z,13nm,0.8s,mb4.7,baz=160,slow=7.8,SNR=99
SONM PcP PcP 20 56 19.4 +1.0
comp=Z,1.6nm,0.8s,baz=184,slow=2.5,SNR=3.5
SONM LR LR 21 10 21.9
comp=Z,3μm,19.6s,MS5.1,baz=153,slow=38
SONM Songino Array 37.78 340 P **P** **20 54 03.0 +0.8**
SONM 20 56 19.4
RAMN Ramite 37.95 297 *e*P **P** **20 54 03.7 -0.2**
comp=Z,67nm,0.9s,mb5.4
JIRN Jiri 38.47 298 *e*P **P** **20 54 07.9 -0.4**
GUN Gumba 38.80 298 *e*P **P** **20 54 11.0 -0.1**
comp=Z,208nm,1.0s,mb5.8
PKI Pulchoki 39.12 298 *e*P **P** **20 54 12.8 -1.0**
comp=Z,50nm,1.0s,mb5.2
PKIN Phulchoki 39.13 298 *e*P **P** **20 54 13.7 -0.2**
comp=Z,38nm,0.6s,mb5.3
KKN Kakani 39.28 298 *e*P **P** **20 54 14.3 -0.9**
comp=Z,87nm,1.2s,mb5.4
CTA Charters Tower 39.34 146 P **P** **20 54 15.7 +0.1**
comp=Z,9.3nm,0.7s,mb4.6,baz=340,slow=12,SNR=12
CTA LR LR 21 13 43.6
comp=Z,2μm,18.1s,MS5.0,baz=339,slow=41
CTAO Charters Tower 39.34 146 *e*P **P** **20 54 15.3 -0.3**
comp=Z,23nm,1.1s,mb4.8
CTAO Charters Tower 39.34 146 *e*P **P** **20 54 15.4 -0.2**
CTAO pmax pmax
comp=Z,23nm,1.1s,mb4.8
DMN Daman 39.39 298 *e*P **P** **20 54 15.1 -1.0**
comp=Z,89nm,1.1s,mb5.4
CIT Chita 39.83 350 *e*P **P** **20 54 20.2 +0.9**
CIT *e* 20 54 36.8
CIT pmax pmax
comp=Z,124nm,2.0s,mb5.3
MEEK Meekatharra 39.85 188 *e*P **P** **20 54 17.7 -2.1**
GKN Gorkha 39.89 298 *e*P **P** **20 54 19.0 -1.2**
comp=Z,90nm,1.0s,mb5.5
KOLN Koldanda 40.73 297 *e*P **P** **20 54 26.3 -0.8**
comp=Z,48nm,0.8s,mb5.2
ZAK Zakamensk 41.02 339 *e*P **P** **20 54 28.9 -0.3**
ZAK *e* 20 56 05.1
ZAK pmax pmax
comp=Z,6.0nm,1.0s,mb4.2
HNR Honiara 41.78 121 LR LR 21 08 49.0
comp=Z,1μm,21.7s,MS4.8,baz=296,slow=32
TLY Talaya 42.01 341 *e*P **P** **20 54 37.8 +0.5**
comp=Z,21nm,0.9s,mb4.8
TLY Talaya 42.01 341 *c i*P **P** **20 54 37.7 +0.5**
TLY *e* 21 04 31.7
TLY pmax pmax
comp=Z,24nm,1.0s,mb4.8
TLY MLR MLR
comp=Z,1μm,17.0s,MS4.9
TLY Talaya 42.01 341 P **P** **20 54 38.8 +1.6**
comp=Z,123nm,0.8s,mb5.6,SNR=12
IRK Irkutsk 42.30 342 ⇓*i*P **P** **20 54 40.0 +0.4**
IRK pmax pmax
comp=Z,57nm,1.7s,mb4.9
MORW Morawa 42.65 191 *e*P **P** **20 54 40.8 -1.9**
MOY Mondy 42.89 339 *e*P **P** **20 54 45.6 +1.2**
MOY pmax pmax
comp=Z,83nm,2.0s,mb5.1
FORT Forrest 43.73 175 *e*P **P** **20 54 49.8 -1.6**
comp=Z,40nm,0.6s,mb5.3
FORT Forrest 43.73 175 *e*P **P** **20 54 49.9 -1.5**
comp=Z,40nm,0.6s,mb5.3
QLP Quilpie 43.87 154 *e*P **P** **20 54 50.7 -1.9**
WMQ Urumqi 43.91 321 P **P** **20 54 53.6 +0.8**
WMQ pP pP 20 55 03.5 -0.4
WMQ sP sP 20 55 07.4 -1.1
WMQ PP PP 20 56 37.8 +2.3
WMQ ScP ScP 21 00 27.3 +0.1
WMQ S **S** **21 01 22.3 +0.8**
WMQ sS sS 21 01 39.3 -0.7
WMQ SS SS 21 04 32.0 -6.9
WMQ pmax pmax
comp=Z,57nm,1.2s,mb5.2
WMQ pmax pmax
comp=Z,300nm,3.6s
WMQ LR LR
comp=N,4μm,26.0s
WMQ LR LR
comp=E,4μm,18.7s
WMQ LR LR
comp=Z,3μm,20.6s
HYB Hyderabad 44.36 282 *i* P **P** **20 54 57.0 +0.2**
HYB *e*S **S** **21 01 28.0 -0.8**
EIDS Eidsvold 46.21 146 *e*P **P** **20 55 10.6 -0.7**

EIDS Eidsvold 46.21 146 *e*P P **20 55 10.4 -0.9**
comp=Z,28nm,0.9s,mb5.2
NWAO Narrogin (SRO) 46.23 188 P P **20 55 09.7 -1.6**
comp=Z,20nm,0.6s,mb5.2,baz=14,slow=7.1,SNR=19
NWAO LR LR 21 17 16.7
comp=Z,477nm,18.7s,MS4.5,baz=13,slow=40
LATR Latur 46.24 283 *ex* P **20 55 10.5 -1.2**
BBOO Buckleboo 46.95 167 *e*P P **20 55 15.8 -1.1**
comp=Z,54nm,0.7s,mb5.6
SDNR Sundarnagar 47.16 301 *ex* P **20 55 17.5 -1.2**
STKA Stephens Creek 47.62 160 *e*P P **20 55 21.6 -0.6**
comp=Z,8.0nm,0.9s,mb4.8
STKA Stephens Creek 47.62 160 P P **20 55 22.5 +0.3**
comp=Z,34nm,0.8s,mb5.4,baz=338,slow=7.4,SNR=54
STKA LR LR 21 15 20.4
comp=Z,1μm,21.0s,MS4.9,baz=79,slow=36
PET Petropavlovsk 48.29 27 *e*P P **20 55 27.6 +0.6**
comp=Z,41nm,1.1s,mb5.4
PET Petropavlovsk 48.29 27 *e*P P **20 55 30.9 +3.8**
PET *e* 20 57 21.5
PET *e*S **S** **21 02 28.1 +4.0**
PET pmax pmax
comp=Z,100nm,10.5s
PET pmax pmax
comp=Z,23nm,0.9s,mb5.2
PET pmax pmax
comp=Z,100nm,15.6s
MK31 Makanchi Array 48.71 322 *e*P P **20 55 31.1 +0.6**
MKAR Makanchi Array 48.71 322 P P **20 55 31.1 +0.6**
comp=Z,91nm,0.8s,mb5.8,baz=120,slow=7.8,SNR=541
MKAR PcP PcP 20 56 55.5 +0.3
comp=Z,7.4nm,0.7s,baz=103,slow=4.3,SNR=4.7
MKAR LR LR 21 17 02.1
comp=Z,2μm,20.9s,MS5.1,baz=122,slow=37
MKAR Makanchi Array 48.71 322 P P **20 55 31.1 +0.7**
MKAR 20 56 55.5
CMSA Cobar Meteorol 48.82 156 *e*P P **20 55 31.6 +0.1**
YAK Yakutsk 49.05 3 *e*P P **20 55 32.5 -0.2**
comp=Z,41nm,0.9s,mb5.5
YAK Yakutsk 49.05 3 *e*P P **20 55 32.4 -0.4**
YAK *e**PP pP 20 55 38.3 -5.7
YAK *e* 20 56 58.3
YAK *e* 20 57 26.9
YAK *e*S **S** **21 02 33.6 -0.9**
YAK *e* 21 05 22.8
YAK pmax pmax
comp=E,4.0nm,1.3s
YAK pmax pmax
comp=Z,40nm,1.0s,mb5.4
YAK pmax pmax
comp=N,19nm,1.0s
YAK pmax pmax
comp=Z,258nm,5.5s
YAK pmax pmax
comp=E,46nm,3.0s
YAK pmax pmax
comp=N,93nm,2.8s
YAK smax
comp=N,138nm,5.4s
YAK smax
comp=E,308nm,8.9s
YAK MLR MLR
comp=N,1μm,16.0s,MS5.1
YAK MLR MLR
comp=Z,2μm,17.0s,MS5.1
YAK MLR MLR
comp=E,452nm,12.0s,MS5.1
KSH Kashi 50.02 311⇑ *i*P **P** **20 55 42.5 +1.9**
KSH *e*pP pP 20 55 55.3 +3.5
KSH *e*PcP PcP 20 57 02.1 +2.0
KSH *e*PP PP 20 57 39.1 +3.3
KSH *e*ScP ScP 21 00 52.8 -0.2
KSH PcS PcS 21 00 57.8 +0.8
KSH *e*S **S** **21 02 48.6 -0.3**
KSH *e*sS sS 21 03 09.3 +1.8
KSH *e*ScS ScS 21 05 27.1 -1.8
KSH *e*SS SS 21 06 18.4 -3.8
KSH pmax pmax
comp=Z,22nm,1.0s,mb5.1
KSH pmax pmax
comp=Z,86nm,2.9s,mb5.3
KSH LR LR
comp=N,1μm,15.2s,MS5.3
KSH LR LR
comp=E,1μm,13.2s,MS5.3
KSH LR LR
comp=Z,2μm,15.7s,MS5.3
ARMA Armidale 50.55 149 *e*P P **20 55 45.2 +0.5**
ARMA Armidale 50.55 149 *e*P P **20 55 45.1 +0.5**
comp=Z,38nm,0.9s,mb5.3
ULHL Ulahol 50.72 314 P P **20 55 47.4 +1.6**
SNR=9.1
ZALV Zalesovo Beam 51.31 331 P P **20 55 50.0 0.0**
comp=Z,22nm,0.9s,mb5.1,baz=116,slow=6.8,SNR=102
ZALV PcP PcP 20 57 04.7 +0.1
comp=Z,5.5nm,0.9s,baz=123,slow=2.4,SNR=1.8
ZALV LR LR 21 20 05.2
comp=Z,1μm,19.7s,MS4.9,baz=130,slow=39
ZALV Zalesovo Beam 51.31 331 P P **20 55 50.1 +0.1**
ZALV 20 57 04.7
KBK Karagaybulak 51.76 314 P P **20 55 54.9 +1.3**
SNR=28
UCH Uchtor 51.92 314 P P **20 55 56.7 +1.9**
SNR=88
CHMS Chumysh 52.01 315 P P **20 55 56.0 +0.5**
SNR=40
FRU Bishkek 52.05 315⇑ *i*P P **20 55 56.0 +0.2**
FRU *e* 21 03 19.0
FRU pmax pmax
comp=Z,60nm,1.8s,mb5.2
AAK Ala-Archa 52.07 314 P P **20 55 57.7 +1.8**
comp=Z,124nm,1.1s,mb5.8,SNR=7.9
AAK Ala-Archa 52.07 314 P P **20 55 57.4 +1.5**
SNR=6.3
AAK Ala-Archa 52.07 314 *e*P P **20 55 56.2 +0.3**
comp=Z,25nm,1.0s,mb5.1
AAK Ala-Archa 52.07 314 LR LR 21 18 17.3
comp=Z,2μm,21.4s,MS5.2,baz=82,slow=36
AAK Ala-Archa 52.07 314*c i*P P **20 55 56.6 +0.7**
AAK pmax pmax
comp=Z,21nm,1.7s,mb4.8
ARPS Mount Arapiles 52.22 162 *e*P P **20 55 56.6 -0.4**
comp=Z,58nm,0.7s,mb5.6
USP Osenovka 52.27 315 P P **20 55 58.0 +0.6**
SNR=41
YNG Young 52.34 155 *e*P P **20 55 58.7 +0.8**
comp=Z,6.9nm,0.9s,mb4.6
AML Almayashu 52.47 313 P P **20 56 00.0 +1.1**
SNR=48
EKS2 Erkin-Say 52.58 314 P P **20 56 00.8 +1.1**
SNR=43
NVS Novosibirsk 52.59 331⇑ *i*P P **20 55 58.8 -0.7**
NVS *e*S **S** **21 03 26.2 +2.4**
NVS pmax pmax
comp=N,91nm,1.5s
NVS pmax pmax
comp=E,108nm,1.5s
NVS pmax pmax
comp=Z,132nm,1.5s,mb5.6
NVS smax
comp=N,184nm,2.2s
NVS smax
comp=E,56nm,3.0s
KURK Kurchatov 52.74 325 P P **20 56 01.0 +0.3**
comp=E,2μm,1.0s
KURK Kurchatov 52.74 325 *e*P P **20 56 01.3 +0.5**
comp=E,235nm,0.9s,mb6.1
KURK Kurchatov 52.74 325*c i*P P **20 56 01.0 +0.3**
KURK pmax pmax
comp=Z,430nm,1.2s,mb6.2
SEY Seymchan 53.61 15⇑ *e*P P **20 56 08.7 +1.8**
CNB Canberra Magne 53.61 155 *e*P P **20 56 08.1 +0.8**
DZM Mont Dzumac 54.03 130 *e*P P **20 56 11.1 +0.4**
comp=Z,76nm,1.3s,mb5.5
DZM *e*S **S** **21 03 45.1 +0.7**
comp=Z,257nm,34.8s
DZM *e*LQ 21 09 45.2
comp=Z,3μm,29.1s
DZM *e*LR LR 21 11 54.9
comp=Z,1μm,24.6s
TOO Toolangi 54.12 159 *e*P P **20 56 11.6 +0.6**
KBL Kabul 54.26 303 *e*P P **20 56 12.1 -0.1**
comp=Z,45nm,0.8s,mb5.5
KBL Kabul 54.26 303 *e*P P **20 56 12.1 -0.1**
KBL pmax pmax
comp=Z,45nm,0.8s,mb5.5

BVAR Borovoye Array 58.34 325 P P **20 56 41.2 +0.3**
BVAR PcP PcP 20 57 30.7 -0.9
BVAR ⇑*e* 21 26 29.8
BVAR Borovoye Array 58.34 325 P P **20 56 41.2 +0.3**
comp=Z,27nm,0.9s,mb5.3,baz=117,slow=8.7,SNR=132
BVAR PcP PcP 20 57 30.7 -0.9
comp=Z,13nm,1.0s,baz=116,slow=6.6,SNR=2.5
BVAR PKP2bc 21 26 29.8
comp=Z,0.5nm,0.7s,baz=258,slow=4.0,SNR=3.8
BVAR Borovoye Array 58.34 325 P P **20 56 41.2 +0.3**
BVAR 20 57 30.7
BRVK Borovoye 58.41 325 P P **20 56 41.1 -0.3**
comp=Z,456nm,0.9s,SNR=49
BRVK Borovoye 58.41 325 *e*P P **20 56 41.7 +0.2**
comp=Z,89nm,1.0s,mb5.8
BRVK Borovoye 58.41 325*c i*P P **20 56 41.8 +0.4**
BRVK pmax pmax
comp=Z,169nm,1.7s,mb5.8
TIXI Tiksi 58.62 2 *e*P P **20 56 42.0 -0.6**
comp=Z,24nm,1.0s,mb5.2
TIXI Tiksi 58.62 2*c i*P P **20 56 42.3 -0.3**
TIXI *e*S **S** **21 04 42.9 -0.9**
TIXI *e**SS sS 21 05 04.8 +1.9
TIXI pmax pmax
comp=Z,34nm,1.1s,mb5.3
TIXI MLR MLR
comp=Z,2μm,18.0s,MS5.3
MSVF Nonsavu 61.16 119 P P **20 57 03.0 +2.1**
comp=Z,275nm,0.8s,mb6.4,SNR=9.3
MSVF Nonsavu 61.16 119 *e*P P **20 57 03.1 +2.2**
comp=Z,38nm,0.9s,mb5.5
MSVF Nonsavu 61.16 119 P P **20 57 03.9 +3.0**
comp=Z,275nm,0.8s,mb6.4,SNR=9.3
ABKT Ailbek 63.42 306 P P **20 57 16.5 +0.7**
comp=Z,324nm,0.9s,SNR=38
ABKAR Akbulak array 63.58 319 *e*P P **20 57 16.4 -0.2**
comp=Z,16nm,0.6s,mb5.2
SVE Sverdlovsk 64.88 327⇓ *e*P P **20 57 25.3 +0.3**
SVE *e* 20 57 56.0
SVE *e* 20 59 43.2
SVE *e*S **S** **21 05 58.3 -5.2**
SVE pmax pmax
comp=Z,130nm,1.0s,mb5.9
SVE MLR MLR
comp=Z,2μm,20.0s,MS5.2
ARU Arti 65.90 326 *e*P P **20 57 31.1 -0.4**
comp=Z,79nm,0.7s,mb5.8
ARU Arti 65.90 326*c i*P P **20 57 31.1 -0.5**
ARU *e**PP pP 20 57 44.3 +1.1
ARU *e* 20 58 01.8
ARU *e* 20 59 52.6
ARU PPP 21 01 30.8
ARU S S 21 06 15.1 -0.8
ARU 21 07 15.2
ARU pmax pmax
comp=Z,75nm,1.0s,mb5.7
ARU MLR MLR
comp=Z,1μm,17.0s,MS5.2
ARU Arti 65.90 326 P P **20 57 31.2 -0.4**
comp=Z,708nm,0.6s,SNR=31
SOKR Solikamsk 67.53 329*c i*P P **20 57 41.6 -0.3**
SOKR S S 21 06 37.1 +1.6
SOKR pmax pmax
comp=Z,30nm,0.9s,mb5.3
SOKR MLR MLR
comp=Z,800nm,16.0s,MS5.0
MAK Makhachkala 71.65 311 *e*P P **20 58 10.7 +3.0**
MAK *e* 20 58 29.5
MAK *e*S S 21 07 23.2 -1.4
MAK *e* 21 08 14.3
MAK *e*SSS 21 15 10.6
MAK pmax pmax
comp=Z,332nm,1.6s,mb6.0
UMR Umm Al-Rimmam 72.19 297 *e*P P **20 58 10.2 -0.9**
UMR AMb AMB 20 58 12.2
comp=Z,113nm,1.1s,mb5.7
KBD Kabd 72.24 297 *e*P P **20 58 10.8 -0.7**
KBD AMb AMB 20 58 14.7
comp=Z,73nm,1.1s,mb5.5
RDF Al-Radifah 72.39 296 *e*P P **20 58 11.5 -0.9**
RDF AMb AMB 20 58 13.4
comp=Z,170nm,1.0s,mb5.9
MIB Mutribah 72.49 297 *e*P P **20 58 12.1 -0.9**
MIB AMb AMB 20 58 16.0
comp=Z,143nm,1.0s,mb5.9
NAY Al-Naaiem 72.63 297 *e*P P **20 58 12.7 -1.1**
NAY AMb AMB 20 58 14.1
comp=Z,75nm,1.0s,mb5.6
TTA Tatalina 73.73 28 *e*P P **20 58 19.6 0.0**
comp=Z,14nm,1.1s,mb4.8
TTA Tatalina 73.73 28 *e*P P **20 58 19.6 0.0**
TTA pmax pmax
comp=Z,14nm,1.1s,mb4.8
GNI Garni 73.84 308 *e*P P **20 58 21.1 +0.4**
comp=Z,72nm,1.4s,mb5.4
GNI Garni 73.84 308*c i*P P **20 58 21.4 +0.7**
GNI pmax pmax
comp=Z,59nm,1.7s
OHAK Old Harbor 74.98 34 *e*P P **20 58 28.0 +1.1**
comp=Z,18nm,0.9s,mb5.0
KIV Kislovodsk 75.12 312 *e*P P **20 58 28.7 +0.7**
comp=Z,45nm,1.0s,mb5.3
KIV Kislovodsk 75.12 312*c i*P P **20 58 27.9 -0.2**
KIV *i* pP 20 58 38.7 -1.2
KIV *e*S S 21 08 06.1 +2.3
KIV pmax pmax
comp=Z,51nm,1.0s,mb5.4
KIV MLR MLR
comp=Z,2μm,18.0s,MS5.4
KIV Kislovodsk 75.12 312 P P **20 58 28.2 +0.1**
comp=Z,233nm,1.0s,mb6.1,SNR=13
RSO Redoubt South 75.22 31 P P **20 58 29.1 +0.8**
KDAK Kodiak Island 75.35 33 *e*P P **20 58 30.1 +1.0**
comp=Z,21nm,1.0s,mb5.0
KDAK Kodiak Island 75.35 33 *i* P P **20 58 32.2 +3.1**
VRHR Novokhopersk 75.43 320 *e*P P **20 58 28.8 -0.9**
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=Z,40nm,0.8s,mb5.4
VRHR pmax pmax
comp=E,30nm,1.1s
PPLA Purkeypile 75.48 28 *e*P P **20 58 30.9 +1.2**
comp=E,28nm,1.3s,mb5.0
BPAW Bear Paw Mtn. 76.01 27 *e*P P **20 58 34.1 +1.4**
KLMR Klimovskoe 76.21 330 *e*P P **20 58 32.5 -1.5**
KLMR *e*S S 21 08 08.1 -7.1
KLMR pmax pmax
comp=Z,104nm,1.6s,mb5.5
KLMR pmax pmax
comp=Z,28nm,4.4s
KLMR MLR MLR
comp=Z,1μm,17.0s,MS5.3
COLD Coldfoot 76.28 24 *e*P P **20 58 36.0 +1.7**
comp=Z,16nm,1.1s,mb4.8
TRF Thorofare Moun 76.33 27 *e*P P **20 58 34.7 +0.1**
comp=Z,84nm,1.7s,mb5.4
RC01 Rabbit Creek A 76.69 30 *e*P P **20 58 35.9 -0.8**
comp=Z,2μm,0.7s
SEW Seward 76.88 31 *e*P P **20 58 38.2 +0.4**
comp=Z,17nm,0.9s,mb5.0
VORD Divnogorie 76.90 320 *e*P P **20 58 37.0 -1.1**
VORD pmax pmax
comp=Z,20nm,1.0s,mb5.0
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD MLR MLR
comp=Z,500nm,13.0s,MS5.0
VORD MLR MLR
comp=N,730nm,18.0s,MS5.2
VORD MLR MLR
comp=E,640nm,18.0s,MS5.2
MCK McKinley 76.93 27 *e*P P **20 58 37.8 -0.1**
comp=E,37nm,1.0s,mb5.3
MCK McKinley 76.93 27 *e*P P **20 58 37.8 -0.2**
MCK pmax pmax
comp=Z,37nm,1.0s,mb5.3
PMR Palmer 76.95 29 *e*P P **20 58 38.5 +0.3**
comp=Z,19nm,1.0s,mb5.0
PMR Palmer 76.95 29 *e*P P **20 58 38.5 +0.4**
PMR pmax pmax
comp=Z,19nm,1.0s,mb5.0
VSR Storozhevoye 76.96 320 *e*P P **20 58 37.4 -1.0**
VSR *e* 21 08 53.9
VSR pmax pmax
comp=Z,20nm,0.7s,mb5.2
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,20nm,1.5s
VSR MLR MLR
comp=Z,960nm,17.0s,MS5.2
VSR MLR MLR
comp=N,220nm,14.0s,MS5.0
VSR MLR MLR
comp=E,390nm,13.0s,MS5.0
SOC Sochi 77.29 312 *e*P P **20 58 40.6 +0.2**
SOC *e**PP pP 20 58 56.8 +4.5
SOC *e* 21 01 37.5
SOC *e*PPP 21 03 19.4
SOC *e*S S 21 08 21.5 -6.2
SOC *e* 21 08 48.4
SOC pmax pmax
comp=Z,24nm,0.6s,mb5.3
SOC MLR MLR
comp=Z,2μm,20.0s,MS5.4
COLA College 77.33 26 *e*P P **20 58 39.2 -1.0**
comp=Z,12nm,1.0s,mb4.8
COLA College 77.33 26 *e*P P **20 58 39.2 -1.0**
COLA pmax pmax
comp=Z,13nm,1.0s,mb4.8
MOS Moscow 77.51 325 *e*P P **20 58 38.8 -2.6**
MOS *e* pP 20 58 48.9 -4.4
MOS pmax pmax
comp=Z,41nm,1.1s,mb5.3
MOS MLR MLR
comp=E,1μm,19.0s
MOS MLR MLR
comp=Z,1μm,16.0s,MS5.3
ILAR Eielson Array 77.75 26 P P **20 58 41.7 -0.9**
comp=Z,2.8nm,0.8s,mb4.2,baz=254,slow=5.9,SNR=24
OBN Obninsk 78.17 324⇑ *i*P P **20 58 44.4 -0.7**
OBN LR LR
comp=Z,900nm,17.0s,MS5.2
OBN Obninsk 78.17 324*c i*P P **20 58 44.3 -0.8**
OBN *i* pP 20 58 55.9 -1.0
OBN *e*S S 21 08 39.1 +2.4
OBN pmax pmax
comp=Z,63nm,1.6s,mb5.3
OBN MLR MLR
comp=Z,900nm,17.0s,MS5.2
APA Apatity 78.41 337⇑ *i*P P **20 58 46.5 +0.3**
APA *i* pP 20 58 58.6 +0.5
APA pmax pmax
comp=Z,34nm,1.3s,mb5.1
APA MLR MLR
comp=Z,2μm,18.0s,MS5.5
PAX Paxson 78.54 28 *e*P P **20 58 47.8 +0.8**
comp=Z,16nm,1.0s,mb4.9
PAX Paxson 78.54 28 *e*P P **20 58 47.8 +0.8**
PAX pmax pmax
comp=Z,16nm,1.0s,mb4.9
DIV Divide 78.60 30 *e*P P **20 58 48.4 +1.0**
comp=Z,30nm,1.0s,mb5.2
ANN Anapa 78.79 314 *e*P P **20 58 47.2 -1.5**
ANN *e**PP pP 20 59 02.5 +1.9
ANN *e* 21 01 45.7
ANN *e*S S 21 08 42.3 -1.5
ANN *e*SS SS 21 13 50.1 +1.5
ANN pmax pmax
comp=Z,72nm,1.6s,mb5.3
ANN MLR MLR
comp=N,1μm,21.0s,MS5.2
ANN MLR MLR
comp=E,696nm,21.0s,MS5.2
ANN MLR MLR
comp=Z,924nm,21.0s,MS5.1
MALT Malatya 78.90 307 *e*P P **20 58 50.3 +0.8**
comp=Z,14nm,1.0s,mb4.8
MALT Malatya 78.90 307 *e*P P **20 58 50.3 +0.8**
MALT pmax pmax
comp=Z,14nm,1.0s,mb4.8
BMRM Bremner River 79.19 30 *e*P P **20 58 51.2 +0.7**
comp=Z,25nm,1.1s,mb5.1
JOF Joensuu 79.88 332 *e*P P **20 58 53.3 -1.0**
JOF pmax pmax
comp=Z,19nm,0.9s,mb5.0
JOF Joensuu 79.88 332 *e*p P **20 58 53.3 -1.0**
comp=Z,19nm,0.9s,mb5.0
EGAK Eagle 80.19 26 *e*P P **20 58 56.5 +0.6**
comp=Z,7.1nm,0.8s,mb4.7
KEV Kevo 80.39 340 *e*P P **20 58 55.1 -1.8**
KEV pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KEV Kevo 80.39 340 *e*p P **20 58 55.1 -1.8**
comp=Z,4.1nm,0.7s,mb4.5
ARCES ARCESS Array B 80.95 339 P P **20 59 00.2 +0.2**
ARCES LR LR 21 40 05.7
ARCES ARCESS Array B 80.95 339 P P **20 59 00.2 +0.2**
comp=Z,3.7nm,0.7s,mb4.4,baz=76,slow=7.8,SNR=16
ARCES LR LR 21 40 05.7
comp=Z,884nm,19.1s,MS5.1,baz=145,slow=40
ARE0 ARCESS Array S 80.95 339 *e*P P **20 59 00.9 +0.9**
DAWY Dawson 81.07 26 *e*P P **20 59 02.0 +1.3**
SIM Simferopol' 81.10 314*c i*P P **20 59 00.9 -0.3**
SIM *i* S S 21 09 09.7 +1.6
SIM pmax pmax
comp=Z,20nm,0.9s,mb5.0
SIM MLR MLR
comp=Z,770nm,20.0s,MS5.0
KBS Kingsbay 81.47 350 *e*S S 21 09 15.8 +5.0
KBS AMS AMS 21 39 15.1
comp=Z,1μm,21.6s,MS5.3
KTK1 Kautokeino 81.86 339 *e*P P **20 59 04.9 +0.1**
KTK1 *e*S S 21 09 18.8 +3.6
PNL Peninsula 81.96 31 *e*P P **20 59 06.6 +1.2**
comp=Z,25nm,1.1s,mb5.0
MMAI Mount Meron Ar 82.17 302 P P **20 59 08.1 +1.0**
comp=Z,43nm,1.2s,mb5.3,baz=79,slow=9.4,SNR=19
MMAI LR LR 21 41 59.0
comp=Z,418nm,18.7s,MS4.8,baz=65,slow=40
KAF Kangasniemi 82.32 332 *e*P P **20 59 06.6 -0.7**
KAF pmax pmax
comp=Z,21nm,0.9s,mb5.1
KAF Kangasniemi 82.32 332 *e*p P **20 59 06.6 -0.7**
comp=Z,21nm,0.9s,mb5.1
BR131 Keskin Array S 82.35 309 *e*P P **20 59 06.7 -1.2**
comp=Z,1.7nm,0.6s,mb4.2
BRTR Keskin Array B 82.35 309 P P **20 59 07.0 -1.0**
comp=Z,2.8nm,0.9s,mb4.2,baz=102,slow=3.9,SNR=15
BRTR PP PP 21 02 16.6 -0.2
comp=Z,2.6nm,1.0s,baz=101,slow=6.4,SNR=4.5
BRTR PKKPbc PKKPbc 21 17 36.8 +1.2
comp=Z,0.5nm,0.7s,baz=57,slow=4.6,SNR=4.9
BRTR LR LR 21 41 23.2
comp=Z,604nm,20.4s,MS5.0,baz=303,slow=40
BRTR Keskin Array B 82.35 309 P P **20 59 07.0 -0.9**
BRTR 21 02 16.7
INK Inuvik 82.38 22 *e*P P **20 59 08.0 +0.5**
comp=Z,18nm,1.0s,mb5.0
INK Inuvik 82.38 22 *e*P P **20 59 08.0 +0.5**
INK pmax pmax
comp=Z,18nm,1.0s
FINES FINESS Array B 82.58 331 P P **20 59 07.8 -0.8**
FINES LR LR 21 39 36.2
FINES FINESS Array B 82.58 331 P P **20 59 07.8 -0.8**
comp=Z,11nm,0.8s,mb4.9,baz=60,slow=4.3,SNR=22
FINES LR LR 21 39 36.2
comp=Z,1μm,18.2s,MS5.4,baz=186,slow=38
MIR Mirnyy 82.69 192 *e*P P **20 59 07.0 -1.9**
MIR pmax pmax
comp=Z,33nm,1.0s,mb5.3
TRO Tromso 83.15 340 *e*P P **20 59 12.3 +0.9**
TRO *e*S S 21 09 32.2 +3.9
TRO AMS AMS 21 41 00.8
comp=Z,812nm,17.0s,MS5.2
MICGM Minsk 83.23 324⇓ *e*P P **20 59 11.0 -1.2**
AKASG Malin Array Be 83.25 320 P P **20 59 11.3 -1.1**
AKASG LR LR 21 40 35.0
AKASG Malin Array Be 83.25 320 P P **20 59 11.3 -1.0**
comp=Z,11nm,0.9s,mb4.9,baz=65,slow=4.9,SNR=22
AKASG LR LR 21 40 35.0
comp=Z,866nm,19.1s,MS5.1,baz=60,slow=39
AKBB Malin Array Si 83.25 320 *e*P P **20 59 11.6 -0.7**
MNK Minsk 83.25 324⇓ *e*P P **20 59 11.0 -1.3**
KIEV Kiev 83.27 320 *e*P P **20 59 11.2 -1.3**
comp=Z,11nm,0.8s,mb5.0
KIEV Kiev 83.27 320 *e*P P **20 59 11.2 -1.2**
KIEV pmax pmax
comp=Z,11nm,0.8s,mb4.9

NACGM	**Naroch**	**83.76**	**325**	*e*P		**P**	**20 59 13.0**	**-1.9**
SKAG	**Skagway**	**84.02**	**30**	*e*P		**P**	**20 59 18.6**	**+2.4**
	comp=Z,47nm,1.4s,mb5.4							
KIS	**Kishinev**	**84.32**	**317**	*e*P		**P**	**20 59 17.0**	**-0.9**
KIS				*e*S		S	21 09 40.0	-0.9
KIS	**Kishinev**	**84.32**	**317**	*e*PS			21 10 42.0	
KIS				LRM			21 40 10.0	
	comp=Z,2μm,20.0s							
KIS	**Kishinev**	**84.32**	**317**	*e*P		**P**	**20 59 17.0**	**-0.9**
KIS				*e*S		S	21 09 40.0	-0.9
KIS				*e*PS			21 10 42.0	
KIS				MLR	MLR			
	comp=N,300nm,20.0s,MS5.4							
KIS				MLR	MLR			
	comp=E,2μm,20.0s,MS5.4							
KIS				MLR	MLR			
	comp=Z,2μm,20.0s,MS5.6							
KIS				MLR	MLR			
	comp=Z,2μm,20.0s							
SIT	**Sitka**	**84.67**	**33**	*e*P		**P**	**20 59 20.5**	**+1.1**
	comp=Z,21nm,0.9s,mb5.3							
SIT	**Sitka**	**84.67**	**33**	*e*P		**P**	**20 59 20.5**	**+1.1**
SIT				pmax	pmax			
	comp=Z,21nm,0.9s,mb5.3							
IAS	**Iasi**	**85.11**	**317**	P		**P**	**20 59 22.1**	**+0.2**
ISP	**Isparta**	**85.12**	**308**	*e*P		**P**	**20 59 20.9**	**-1.3**
	comp=Z,49nm,1.1s,mb5.5							
ISP	**Isparta**	**85.12**	**308**	P		**P**	**20 59 21.4**	**-0.8**
ISP	**Isparta**	**85.12**	**308**	⇑*i*P		**P**	**20 59 21.1**	**-1.1**
TESR		**85.89**	**317**	⇓P		**P**	**20 59 25.7**	**-0.1**
TESR		**85.89**	**317**	⇓*i*P		**P**	**20 59 25.7**	**-0.1**
VRI	**Vrincioaia**	**86.00**	**316**	⇓P		**P**	**20 59 26.5**	**+0.2**
VRI	**Vrincioaia**	**86.00**	**316**	⇓*i*P		**P**	**20 59 26.5**	**+0.2**
PLOR	**Plostina**	**86.05**	**316**	⇓P		**P**	**20 59 26.6**	**0.0**
PLOR	**Plostina**	**86.05**	**316**	⇓*i*P		**P**	**20 59 26.5**	**-0.1**
PRD	**Provadia**	**86.19**	**313**	P		**P**	**20 59 26.7**	**-0.7**
BURAR	**Bucovina Array**	**86.55**	**318**	⇑P		**P**	**20 59 29.3**	**+0.3**
BURAR	**Bucovina Array**	**86.55**	**318**	⇑*i*P		**P**	**20 59 29.3**	**+0.3**
BUR01	**Bucovina Ar. S**	**86.55**	**318**	P		**P**	**20 59 29.6**	**+0.6**
BUR08	**Bucovina Ar. S**	**86.55**	**318**	*e*P		**P**	**20 59 29.3**	**+0.3**
SULR		**86.62**	**315**	⇑P		**P**	**20 59 29.2**	**-0.2**
SULR		**86.62**	**315**	⇑*i*P		**P**	**20 59 29.2**	**-0.2**
MLR	**Muntele Rosu**	**86.62**	**316**	⇑P		**P**	**20 59 29.2**	**-0.3**
MLR	**Muntele Rosu**	**86.62**	**316**	⇑*i*P		**P**	**20 59 29.2**	**-0.2**
LVV	**L'vov**	**86.70**	**320**	*i* P		**P**	**20 59 29.6**	**-0.1**
LVV				*e*S		S	21 10 04.6	+0.4
LVV				*e*			21 10 58.0	
DLBC	**Dease Lake**	**86.95**	**30**	*e*P		**P**	**20 59 32.1**	**+1.4**
SZH	**Strazhica**	**87.21**	**314**	P		**P**	**20 59 31.6**	**-0.7**
VOIR		**87.25**	**316**	⇓P		**P**	**20 59 34.4**	**+2.0**
VOIR		**87.25**	**316**	⇓*i*P		**P**	**20 59 34.4**	**+1.9**
KMBO	**Kilima Mbogo**	**87.46**	**268**	*e*P		**P**	**20 59 34.6**	**+0.5**
	comp=Z,17nm,1.2s,mb5.2							
KMBO	**Kilima Mbogo**	**87.46**	**268**	P		**P**	**20 59 34.8**	**+0.6**
	comp=Z,7.0nm,0.9s,mb4.9,baz=360,slow=24,SNR=9.5							
KMBO				LR		LR	21 37 41.0	
	comp=Z,520nm,20.1s,MS4.9,baz=270,slow=35							
KMBO	**Kilima Mbogo**	**87.46**	**268**	*e*P		**P**	**20 59 34.6**	**+0.5**
KMBO				pmax	pmax			
	comp=Z,17nm,1.2s							
KWP	**Kalwaria Pacla**	**87.58**	**320**	*e*P		**P**	**20 59 34.2**	**+0.2**
KWP				LMZ			21 42 21.2	
	comp=Z,1μm,22.6s							
KWP	**Kalwaria Pacla**	**87.58**	**320**	*e*P		**P**	**20 59 33.6**	**-0.3**
	comp=Z,54nm,1.1s,mb5.7							
KWP	**Kalwaria Pacla**	**87.58**	**320**	⇓*i*P		**P**	**20 59 34.0**	**0.0**
PVL	**Pavlikeni**	**87.65**	**314**	P		**P**	**20 59 34.4**	**0.0**
BMR	**Baia Mare**	**87.65**	**318**	P		**P**	**20 59 35.3**	**+0.9**
KDZ	**Kurdzhali**	**88.01**	**312**	P		**P**	**20 59 35.4**	**-0.8**
UZH	**Uzhgorod**	**88.14**	**320**	*d i*P		**P**	**20 59 36.4**	**-0.2**
UZH				*e*			21 03 08.8	
UZH				*e*PPP			21 05 05.0	
UZH				*e*			21 09 58.0	
UZH				*e*S		S	21 10 14.5	-3.6
UZH				*e*PS			21 11 22.5	
UZH				*e*SSS			21 19 40.2	
DRGR		**88.42**	**318**	⇓P		**P**	**20 59 38.1**	**0.0**
DRGR		**88.42**	**318**	⇓*i*P		**P**	**20 59 38.1**	**+0.1**
RZN	**Rozhen**	**88.50**	**312**	P		**P**	**20 59 37.6**	**-0.9**
STHS	**Stebnicka Huta**	**88.55**	**320**	*e*P		**P**	**20 59 40.0**	**+1.4**
	comp=Z,6.3nm,1.2s,mb4.8							
STHS	**Stebnicka Huta**	**88.55**	**320**	*e*P		**P**	**20 59 40.0**	**+1.4**
STHS				pmax	pmax			
	comp=Z,6.0nm,1.2s,mb4.8							
STHS	**Stebnicka Huta**	**88.55**	**320**	*e*P		**P**	**20 59 40.0**	**+1.4**
CRVS	**Cervenica-Dubn**	**88.58**	**320**	*e*P		**P**	**20 59 39.1**	**+0.4**
	comp=Z,32nm,1.3s,mb5.5							
CRVS	**Cervenica-Dubn**	**88.58**	**320**	*e*P		**P**	**20 59 39.1**	**+0.4**
CRVS				pmax	pmax			
	comp=Z,32nm,1.3s,mb5.5							
CRVS	**Cervenica-Dubn**	**88.58**	**320**	*e*P		**P**	**20 59 39.1**	**+0.4**
PGB	**Panagyurishte**	**88.66**	**313**	P		**P**	**20 59 38.4**	**-0.8**
NIE	**Niedzica**	**89.13**	**321**	*e*P		**P**	**20 59 41.9**	**+0.6**
OJC	**Ojcow**	**89.18**	**322**	*e*P		**P**	**20 59 41.3**	**-0.2**
MMB	**Musomiste**	**89.24**	**313**	P		**P**	**20 59 40.6**	**-1.4**
VTS	**Vitosha**	**89.32**	**314**	⇓P		**P**	**20 59 41.9**	**-0.4**
VTS	**Vitosha**	**89.32**	**314**	⇓*i*P		**P**	**20 59 41.9**	**-0.5**
VTS	**Vitosha**	**89.32**	**314**	P		**P**	**20 59 41.8**	**-0.6**
NOA	**NORSAR Array B**	**89.46**	**333**	P		**P**	**20 59 41.1**	**-1.5**
	comp=Z,5.8nm,0.8s,mb5.0,baz=67,slow=4.7,SNR=15							
NOA				LR		LR	21 43 05.1	
	comp=Z,2μm,20.6s,MS5.5,baz=55,slow=38							
PSZ	**Piszkesteto**	**89.88**	**319**	*e*P		**P**	**20 59 44.1**	**-0.8**
	comp=Z,11nm,1.1s,mb5.1							
PSZ	**Piszkesteto**	**89.88**	**319**	⇓P		**P**	**20 59 44.4**	**-0.5**
PSZ	**Piszkesteto**	**89.88**	**319**	⇓*i*P		**P**	**20 59 44.4**	**-0.5**
VAY	**Valandovo**	**90.15**	**313**	*e*P		**P**	**20 59 44.8**	**-1.5**
BSD	**Bornholm Skovb**	**90.17**	**327**	*i* P		PP	21 03 33.6	+14
BSD								
	comp=Z,2μm,17.0s							
PPT	**Papeete**	**90.17**	**108**	*e*SP		SP	21 11 45.8	+1.3
	comp=Z,318nm,26.0s							
PPT				*e*LR		LR	21 28 38.6	
	comp=Z,876nm,24.8s							
PPT	**Papeete**	**90.17**	**108**	LR		LR	21 33 45.4	
	comp=Z,451nm,20.3s,MS4.9,baz=270,slow=31							
JMIC	**Jan Mayen**	**90.31**	**346**	AMS		AMS	21 44 00.5	
	comp=Z,857nm,9.3s							
OKC	**Ostrava-Krasne**	**90.31**	**322**	*e*P		**P**	**20 59 47.0**	**+0.2**
OKC				*e*			21 10 40.6	
OKC				MLR		MLR		
	comp=Z,600nm,18.5s,MS5.1							
OKC	**Ostrava-Krasne**	**90.31**	**322**	*e*P		**P**	**20 59 47.0**	**+0.2**
OKC				*e*S		S	21 10 40.6	+2.3
OKC				AMS		AMS	21 44 50.0	
	comp=Z,600nm,18.5s							
VYHS	**Vyhne**	**90.36**	**320**	*e*P		**P**	**20 59 47.2**	**+0.1**
	comp=Z,29nm,2.4s,mb5.2							
VYHS				*e*PP		PP	21 03 26.4	+5.2
VYHS	**Vyhne**	**90.36**	**320**	*e*P		**P**	**20 59 47.2**	**+0.1**
VYHS				pmax	pmax			
	comp=Z,29nm,2.4s,mb5.2							
VYHS	**Vyhne**	**90.36**	**320**	*e*P		**P**	**20 59 47.2**	**+0.1**
VYHS				*e*PP		PP	21 03 26.4	+5.2
MORC	**Moravsky Berou**	**90.70**	**322**	*e*P		**P**	**20 59 48.0**	**-0.6**
	comp=Z,4.9nm,1.1s,mb4.8							
MORC	**Moravsky Berou**	**90.70**	**322**	*e*P		**P**	**20 59 48.0**	**-0.6**
MORC				pmax	pmax			
	comp=Z,5.0nm,1.1s,mb4.8							
SKO	**Skopje**	**90.76**	**313**	*e*P		**P**	**20 59 48.3**	**-0.8**
KONO	**Kongsberg**	**90.81**	**333**	*e*SKS			21 10 23.2	
KONO				AMS		AMS	21 43 48.7	
	comp=Z,2μm,21.5s,MS5.4							
KSP	**Ksiaz**	**91.05**	**323**	*e*P		**P**	**20 59 50.1**	**-0.1**
KSP				LMZ			21 43 17.1	
	comp=Z,2μm,18.5s							
KSP	**Ksiaz**	**91.05**	**323**	*e*P		**P**	**20 59 50.0**	**-0.2**
KSP				*e*S		S	21 10 48.0	+2.9
KRUS	**Krusevo**	**91.09**	**313**	*e*P		**P**	**20 59 49.3**	**-1.3**
BIA	**Bitola**	**91.14**	**313**	*e*P		**P**	**20 59 50.2**	**-0.6**
DPC	**Dobruska-Polom**	**91.22**	**322**	*e*P		**P**	**20 59 51.4**	**+0.4**
DPC				*e*			21 10 43.2	
DPC				MLR		MLR		
	comp=Z,900nm,19.5s,MS5.2							
DPC	**Dobruska-Polom**	**91.22**	**322**	*e*P		**P**	**20 59 51.4**	**+0.4**
DPC				*e*S		S	21 10 43.2	-3.4
DPC				AMS		AMS	21 41 20.0	
	comp=Z,900nm,19.5s							
COP	**Copenhagen**	**91.22**	**328**	*i* P		PP	21 03 37.1	+9.3
COP								
	comp=Z,540nm,22.0s							
MAW	**Mawson**	**91.68**	**200**	LR		LR	21 39 16.9	
	comp=Z,250nm,21.1s,MS4.6,baz=55,slow=34							
FOO	**Floro**	**91.79**	**335**	*e*SKS			21 10 28.4	
FOO				AMS		AMS	21 43 09.8	
	comp=Z,1μm,23.5s,MS5.3							
YKA	**Yellowknife Ar**	**91.96**	**23**	P		**P**	**20 59 54.9**	**+0.7**
	comp=Z,1.9nm,0.8s,mb4.5,baz=300,slow=4.4,SNR=6.5							
YKA				PKKP		PKKPbc	21 17 09.3	-3.9
	comp=Z,0.8nm,0.7s,baz=125,slow=2.7,SNR=5.7							
YKA	**Yellowknife Ar**	**91.96**	**23**	P		**P**	**20 59 54.9**	**+0.7**
YKA							21 17 09.4	
TIR	**Tirane**	**92.08**	**313**	*e*P		**P**	**20 59 55.0**	**-0.2**
	comp=Z,23nm,0.8s,mb5.6							
TIR	**Tirane**	**92.08**	**313**	*e*P		**P**	**20 59 55.0**	**-0.2**
TIR				pmax	pmax			
	comp=Z,23nm,0.8s,mb5.6							
TREC	**Trest**	**92.12**	**322**	*e*P		**P**	**20 59 55.5**	**+0.3**
TREC				*e*			21 10 54.6	
TREC				MLR		MLR		
	comp=Z,900nm,19.7s,MS5.2							
TREC	**Trest**	**92.12**	**322**	*e*P		**P**	**20 59 55.5**	**+0.3**
TREC				*e*S		S	21 10 54.6	-0.2
TREC				AMS		AMS	21 44 20.0	
	comp=Z,900nm,19.7s							
PVCC	**Panska Ves**	**92.18**	**323**	*e*P		**P**	**20 59 55.8**	**+0.3**
PVCC				MLR		MLR		
	comp=Z,1μm,15.2s,MS5.4							
PVCC	**Panska Ves**	**92.18**	**323**	*e*P		**P**	**20 59 55.8**	**+0.3**
PVCC				AMS		AMS	21 44 00.0	
	comp=Z,1μm,15.2s							
BER	**Bergen**	**92.31**	**334**	*e*SKS			21 10 31.1	
BER				AMS		AMS	21 44 34.9	
	comp=Z,2μm,19.7s,MS5.5							
BRG	**Berggiesshubel**	**92.41**	**324**	*e*P		**P**	**20 59 55.6**	**-0.9**
	comp=Z,8.3nm,1.2s,mb4.9							
BRG				*e*			21 03 36.8	
	comp=Z,11nm,1.5s							
BRG				S		SKSac	21 10 36.0	+9.0
BRG				SS		SS	21 17 11.0	+2.9
BRG								
	comp=N,1μm,17.9s							
BRG								
	comp=E,1μm,19.1s							
BRG								
	comp=Z,1μm,17.0s							
BRG	**Berggiesshubel**	**92.41**	**324**	*e*P		**P**	**20 59 55.6**	**-0.9**
BRG				*e*			21 03 36.8	
BRG				SS		SS	21 17 11.0	+2.9
BRG				pmax	pmax			
	comp=Z,5.0nm,1.2s,mb4.7							
BRG				pmax	pmax			
	comp=Z,7.0nm,1.5s,mb4.8							
BRG				MLR		MLR		
	comp=N,788nm,17.9s,MS5.3							
BRG				MLR		MLR		
	comp=E,667nm,19.1s,MS5.3							
BRG				MLR		MLR		
	comp=Z,609nm,17.0s,MS5.1							
PRU	**Pruhonice**	**92.41**	**323**	*e*P		**P**	**20 59 57.5**	**+0.9**
PRU				*e*			21 10 32.3	
PRU				*e*			21 12 08.9	
PRU				MLR		MLR		
	comp=Z,800nm,19.0s,MS5.2							
PRU	**Pruhonice**	**92.41**	**323**	*e*P		**P**	**20 59 57.5**	**+0.9**
PRU				*e*SKS			21 10 32.3	
PRU				*e*SP		SP	21 12 08.9	+1.3
PRU				AMS		AMS	21 44 40.0	
	comp=Z,800nm,19.0s							
MUD	**Monsted U'grnd**	**92.51**	**330**	*i* P		PP	21 03 50.0	+12
CLL	**Collm**	**92.77**	**324**	*i* P		**P**	**20 59 57.3**	**-0.9**
	comp=Z,13nm,1.6s,mb5.1							
CLL				LR		LR		
	comp=Z,1μm,21.4s,MS5.3							
CLL	**Collm**	**92.77**	**324**	*i* P		**P**	**20 59 57.3**	**-0.9**
CLL				pmax	pmax			
	comp=Z,13nm,1.6s,mb5.1							
CLL				MLR		MLR		
	comp=Z,1μm,21.4s,MS5.3							
CLL	**Collm**	**92.77**	**324**	*i* P		**P**	**20 59 57.3**	**-0.9**
	comp=Z,13nm,1.6s,mb5.1							
CLL				*e*			21 03 34.0	
CLL				*e*PP		PP	21 03 39.0	-1.1
	comp=Z,10.0nm,1.1s							
CLL				*e*SKSac		SKSac	21 10 33.0	+4.0
CLL				*e*SP		SP	21 12 08.0	-3.4
CLL				*e*SS		SS	21 17 30.0	+17
CLL				*e*SSS			21 20 51.0	
CLL				LmV			21 44 00.0	
	comp=Z,1μm,21.4s							
KHC	**Kasperske Hory**	**93.33**	**322**	*e*P		**P**	**21 00 00.5**	**-0.3**
	comp=Z,4.0nm,1.2s,mb4.7							
KHC	**Kasperske Hory**	**93.33**	**322**	*e*P		**P**	**21 00 00.8**	**0.0**
KHC				*e*			21 10 33.0	
KHC				MLR		MLR		
	comp=Z,800nm,20.1s,MS5.2							
KHC	**Kasperske Hory**	**93.33**	**322**	*e*P		**P**	**21 00 00.8**	**0.0**
KHC				*e*SKS			21 10 33.0	
KHC				*ex*		x	21 11 59.7	
KHC				AMS		AMS	21 42 30.0	
	comp=Z,800nm,20.1s							
PERS	**Pernice**	**93.38**	**319**	*i* P		**P**	**21 00 00.7**	**-0.4**
SOKA	**Soboth**	**93.42**	**319**	⇑*i*PcP		PcP	21 00 00.9	-0.9
	comp=Z,9.0nm,1.0s							
MOA	**Molln**	**93.43**	**321**	⇑*i*PcP		PcP	21 00 01.7	-0.2
	comp=Z,22nm,1.1s,SNR=9.4							
MBAR	**Mbarara**	**93.69**	**270**	⇑*i*P		**P**	**21 00 02.7**	**-0.5**
BOJS	**Bojanci**	**93.73**	**318**	*i* P		**P**	**21 00 02.5**	**-0.3**
MOX	**Moxa**	**93.84**	**324**	*e*P		**P**	**21 00 03.0**	**-0.1**
	comp=Z,15nm,1.6s,mb5.2							
MOX								
	comp=Z,1μm,22.0s							
MOX	**Moxa**	**93.84**	**324**	*e*P		**P**	**21 00 03.0**	**-0.1**
MOX				pmax	pmax			
	comp=Z,26nm,1.6s,mb5.4							
MOX				MLR		MLR		
	comp=Z,15μm,22.0s,MS6.4							
VISS	**Visnje**	**93.88**	**319**	*i* P		**P**	**21 00 03.2**	**-0.2**
LJU	**Ljubljana**	**93.99**	**319**	*i* P		**P**	**21 00 03.3**	**-0.6**
KBA	**Koelnbreinsper**	**94.32**	**320**	⇓*i*PcP		PcP	21 00 04.8	-1.0
	comp=Z,14nm,1.0s							
VOY	**Vojsko**	**94.40**	**319**	*e*P		**P**	**21 00 05.2**	**-0.6**
GRA1	**Grafenberg Arr**	**94.49**	**323**	*e*P		**P**	**21 00 06.4**	**+0.3**
	comp=Z,7.0nm,1.2s,mb5.0							
GRA1				LR		LR		
	comp=Z,2μm,20.6s,MS5.5							
GRF	**Grafenberg Arr**	**94.49**	**323**	*e*P		**P**	**21 00 06.4**	**+0.3**
	comp=Z,7.0nm,1.2s,mb5.0							
GRF				*e*L			21 44 27.5	
	comp=Z,2μm,20.6s							
GRF	**Grafenberg Arr**	**94.49**	**323**	*e*P		**P**	**21 00 06.4**	**+0.3**
GRF				pmax	pmax			
	comp=Z,7.0nm,1.2s,mb5.0							
GRF				MLR		MLR		
	comp=Z,2μm,20.6s,MS5.5							
GRF	**Grafenberg Arr**	**94.49**	**323**	*e*P		**P**	**21 00 06.4**	**+0.3**
GRF				pmax	pmax			
	comp=Z,7.0nm,1.2s,mb5.0							
GRF				MLR		MLR		
	comp=Z,2μm,20.6s,MS5.5							
TRI	**Trieste**	**94.61**	**319**	*e*P		**P**	**21 00 06.3**	**-0.5**
	comp=Z,8.2nm,0.8s,mb5.2							
TRI	**Trieste**	**94.61**	**319**	*e*P		**P**	**21 00 06.3**	**-0.5**
TRI				pmax	pmax			
	comp=Z,8.0nm,0.8s,mb5.2							
ABTA	**Abfaltersbach**	**94.97**	**320**	⇑*i*P		**P**	**21 00 07.4**	**-1.0**
	comp=Z,16nm,1.1s,mb5.3,SNR=7.6							
WTTA	**Wattenberg**	**95.30**	**321**	⇑*i*PcP		PcP	21 00 09.8	-0.4
	comp=Z,21nm,1.3s,SNR=6.7							
MOTA	**Moosalm**	**95.59**	**321**	⇑*i*PcP		PcP	21 00 10.5	-0.9
	comp=Z,12nm,1.3s,SNR=6.9							
FETA	**Feichten**	**95.96**	**321**	⇑*i*PcP		PcP	21 00 12.7	-0.4
	comp=Z,9.6nm,0.9s,SNR=7.1							
AQU	**L'Aquila**	**96.20**	**316**	*e*P		**P**	**21 00 14.4**	**+0.3**
	comp=Z,10nm,0.8s,mb5.3							
AQU	**L'Aquila**	**96.20**	**316**	*e*P		**P**	**21 00 14.4**	**+0.3**
AQU				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb5.3							
TAOE	**Nuku Hiva Isla**	**97.24**	**97**	*e*LR		LR	21 31 57.4	
	comp=Z,895nm,31.2s							
LPG	**La Plagne**	**99.11**	**321**	*e*P		**P**	**21 00 27.6**	**+0.5**
	comp=Z,11nm,0.8s,mb5.1							
LPG	**La Plagne**	**99.11**	**321**	*e*P		**P**	**21 00 27.6**	**+0.5**
	comp=Z,5.4nm,0.8s,mb5.1							
LPG	**La Plagne**	**99.11**	**321**	*e*P		**P**	**21 00 27.6**	**+0.5**
LPG				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb5.1							
LPL	**La Plagne**	**99.11**	**321**	*e*P		**P**	**21 00 27.5**	**+0.3**
	comp=Z,9.7nm,0.8s,mb5.1							
LPL	**La Plagne**	**99.11**	**321**	*e*P		**P**	**21 00 27.5**	**+0.3**
	comp=Z,4.8nm,0.8s,mb5.1							
LPL	**La Plagne**	**99.11**	**321**	*e*P		**P**	**21 00 27.5**	**+0.3**
LPL				pmax	pmax			
	comp=Z,5.0nm,0.8s,mb5.1							
ORIF	**Oris-en-Rattie**	**99.93**	**321**	*e*P		Pdif	21 00 30.8	+0.2
	comp=Z,9.2nm,0.9s							
ORIF	**Oris-en-Rattie**	**99.93**	**321**	*e*P		Pdif	21 00 30.8	+0.2
	comp=Z,4.6nm,0.9s							
ORIF	**Oris-en-Rattie**	**99.93**	**321**	*e*P		Pdif	21 00 30.8	+0.2
ORIF				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.9							
NVAR	**Mina Array Bea**	**102.25**	**46**	P		Pdif	21 00 43.6	+2.7
	comp=Z,0.6nm,0.7s,baz=275,slow=5.6,SNR=5.7							
RKT	**Rikitea**	**104.67**	**111**	*e*SS		SS	21 20 07.1	+4.6
	comp=Z,220nm,29.8s							
RKT				*e*LQ			21 30 54.6	
	comp=Z,782nm,30.4s							
RKT				*e*LR		LR	21 35 19.8	
	comp=Z,664nm,26.2s,baz=284							
ESDC	**Sonseca Array**	**108.90**	**320**	PP		PP	21 05 42.5	+0.3
	comp=Z,1.8nm,0.9s,baz=48,slow=7.1,SNR=5.8							
MNTX	**Cornudas Mount**	**114.78**	**46**	*e*PKiKP		PKiKP	21 05 28.4	+1.5
JFWS	**Jewell Farm**	**115.89**	**28**	*e*PKPdf		PKPdf	21 05 28.8	+0.1
TXAR	**Lajitas Array**	**117.34**	**47**	PKP		PKPdf	21 05 33.5	+1.6
	comp=Z,2.4nm,0.8s,baz=281,slow=0.2,SNR=19							
TXAR				PKKPab		PKKPab	21 15 59.1	-1.1
	comp=Z,1.1nm,1.0s,baz=145,slow=4.6,SNR=5.3							
CCM	**Cathedral Cave**	**119.17**	**32**	*e*PKPdf		PKPdf	21 05 35.8	+0.7
JCT	**Junction City**	**119.33**	**44**	*e*PKPdf		PKPdf	21 05 37.3	+1.6
MIAR	**Mount Ida**	**120.49**	**36**	*e*PKPdf		PKPdf	21 05 38.2	+0.5
WCI	**Wyandotte Cave**	**121.44**	**28**	*e*PKPdf		PKPdf	21 05 40.2	+0.7
BINY	**Binghamton**	**121.91**	**18**	*e*PKPdf		PKPdf	21 05 41.2	+1.0
HKT	**Hockley**	**122.29**	**42**	PKPdf		PKPdf	21 05 42.3	+0.9
WVT	**Waverly**	**122.39**	**31**	*e*PKPdf		PKPdf	21 05 42.0	+0.7
CPCT	**Cooper Cave**	**124.53**	**29**	*e*PKPdf		PKPdf	21 05 46.8	+1.3
TKL	**Tuckaleechee C**	**124.70**	**28**	*e*PKPdf		PKPdf	21 05 46.8	+1.0
BLA	**Blacksburg**	**124.82**	**24**	*e*PKPdf		PKPdf	21 05 46.8	+0.8
LRAL	**Lakeview Retre**	**125.24**	**32**	*e*PKPdf		PKPdf	21 05 47.9	+1.0
DBIC	**Dimbokro**	**125.91**	**288**	PKP		PKPdf	21 05 48.1	-0.6
	comp=Z,3.1nm,0.5s,baz=346,slow=7.4,SNR=6.4							
KIC	**Kosan Boka**	**125.91**	**288**	*e*PKP1		PKPdf	21 05 49.3	+0.6
	comp=Z,48nm,1.2s							
TIC	**Toumodi**	**126.07**	**288**	*e*PKP1		PKPdf	21 05 48.7	-0.3
	comp=Z,121nm,1.6s							
LIC	**Lamto**	**126.23**	**288**	*e*PKP1		PKPdf	21 05 49.9	+0.6
	comp=Z,103nm,1.6s							
GOGA	**Godfrey**	**126.70**	**29**	*e*PKPdf		PKPdf	21 05 51.2	+1.5
JSC	**Jenkinsville**	**126.98**	**27**	*e*PKPdf		PKPdf	21 05 52.0	+1.7
SDDR	**Presa de Saban**	**144.61**	**26**	*e*PKPdf		PKPdf	21 06 24.2	+0.9
CRPR	**Cabo Rojo, PR**	**147.11**	**20**	*e*PKPbc		PKPbc	21 06 31.3	+1.6
SJG	**San Juan**	**147.33**	**19**	*e*PKPbc		PKPbc	21 06 30.9	+0.7
BCIP	**Isla Barro Col**	**147.34**	**49**	*e*PKPbc		PKPbc	21 06 31.2	+0.8
ICM	**Isla Caja Muer**	**147.41**	**20**	PKPbc		PKPbc	21 06 31.7	+1.2
FDF	**Fort de France**	**151.85**	**11**	*e*PKPdf		PKPdf	21 06 36.2	+1.1
FDF				*e*PKPbc		PKPbc	21 06 42.3	+0.8
SDV	**Santo Domingo**	**153.58**	**35**	*e*PKPdf		PKPdf	21 06 39.5	+1.8
LPAZ	**La Paz**	**167.47**	**106**	PKP		PKPdf	21 06 54.1	+1.4
	comp=Z,4.2nm,0.9s,baz=11,slow=2.3,SNR=10							
LPAZ	**La Paz**	**167.47**	**106**	*e*PKIKP		PKPdf	21 06 54.6	+1.9

GUC 17 20:49:30.7±0.6, 23.95°N×67.55°W, h220 km, ML4.0, 3C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CEN1	**Los Morros**	**2.49**	**282**	⇓*i*P		Pn	20 50 18.4	+2.6
CEN1				*i* S		S	20 50 54.4	+3.3
CEN1				AML		AML	20 50 56.3	
	comp

ARG	Arkhangelos	0.87	105	eP	Pg	20 54 34.7	-1.2
ARG				eS	Sg	20 54 46.7	-0.4
ARG	Arkhangelos	0.87	105	P	Pg	20 54 34.8	-1.1
ARG				S	Sg	20 54 45.6	-1.5
ARG	Arkhangelos	0.87	105	P	Pg	20 54 34.8	-1.1
ARG				eS	Sg	20 54 46.7	-0.4
KARP	Karpathos	0.90	176	eP	Pg	20 54 36.9	+0.5
KARP				eS	Sg	20 54 48.9	+0.9
KARP	Karpathos	0.90	176	eP	Pg	20 54 36.9	+0.5
KARP				eS	Sg	20 54 48.9	+0.9
MLSB	Milas	1.01	33	ePG	Pg	20 54 38.6	-0.1
MLSB	Milas	1.01	33	ePg	Pg	20 54 38.6	-0.1
YER	Yerkesik	1.18	54	ePN	Pn	20 54 41.3	-0.8
YER	Yerkesik	1.18	54	ePn	Pn	20 54 41.3	-0.9
GCAM	G?zelcaml?	1.26	5	iP	Pn	20 54 42.8	-0.5
GCAM				iS	Sg	20 55 00.1	+0.3
GCAM	G?zelcaml?	1.26	5	iP	Pn	20 54 42.8	-0.5
GCAM				iS	Sg	20 55 00.1	+0.3
THR1	Thera Island	1.32	267	P	Pn	20 54 43.7	-0.4
THR1	Thera Island	1.32	267	P	Pn	20 54 43.7	-0.4
THR3	Thira Island,	1.36	269	P	Pn	20 54 44.6	-0.1
THR3	Thira Island,	1.36	269	P	Pn	20 54 44.6	-0.1
AYDN	Tasoluk	1.37	27	iP	Pn	20 54 43.7	-1.0
AYDN				iS	Sb	20 55 03.5	+0.6
AYDN	Tasoluk	1.37	27	iP	Pn	20 54 43.7	-1.1
AYDN				iS	Sb	20 55 03.5	+0.6
APE	Apeiranthos	1.40	297	ePN	Pn	20 54 46.0	+0.8
APE	Apeiranthos	1.40	297	eP	Pn	20 54 47.6	+2.4
APE				eS	Sb	20 55 08.2	+4.4
APE	Apeiranthos	1.40	297	P	Pn	20 54 44.8	-0.4
APE				S	Sb	20 55 03.2	-0.6
APE	Apeiranthos	1.40	297	P	Pn	20 54 44.8	-0.4
APE	Apeiranthos	1.40	297	ePn	Pn	20 54 46.0	+0.8
APE				S	Sb	20 55 03.2	-0.6
THR5	Thira Island,	1.41	269	P	Pn	20 54 44.9	-0.4
THR5	Thira Island,	1.41	269	P	Pn	20 54 44.9	-0.4
ZKR	Zakros	1.50	208	eP	Pn	20 54 46.3	-0.3
ZKR	Zakros	1.50	208	P	Pn	20 54 46.4	-0.2
ZKR				S	Sn	20 55 07.0	+0.5
ZKR	Zakros	1.50	208	eP	Pn	20 54 46.3	-0.3
ZKR				S	Sn	20 55 07.0	+0.5
NPS	Neapolis	1.68	226	eP	Pn	20 54 48.7	-0.4
NPS				eS	Sn	20 55 10.1	-0.8
NPS	Neapolis	1.68	226	eP	Pn	20 54 48.7	-0.4
NPS				eS	Sn	20 55 10.1	-0.8
BLCB	Balcova	1.94	359	ePN	Pn	20 54 53.6	+1.0
BLCB	Balcova	1.94	359	ePn	Pn	20 54 53.6	+1.0
URLA	Izmir	1.95	349	iP	Pn	20 54 49.4	-3.4
URLA				iS	Sn	20 55 24.9	+7.3
URLA	Izmir	1.95	349	iP	Pn	20 54 49.4	-3.4
IZM	Izmir	1.96	4	ePN	Pn	20 54 53.9	+1.1
IZM	Izmir	1.96	4	ePn	Pn	20 54 53.9	+1.1
DNZL	Cakiroluk	2.00	51	iP	Pn	20 54 51.9	-1.5
DNZL				iS	Sn	20 55 22.3	+3.6
DNZL	Cakiroluk	2.00	51	iP	Pn	20 54 51.9	-1.5
DNZL				iS	Sn	20 55 22.3	+3.6
DENT	Denizli	2.03	49	ePN	Pn	20 54 54.7	+0.8
DENT	Denizli	2.03	49	ePn	Pn	20 54 54.7	+0.8
AKAS	Kas	2.04	95	iP	Pn	20 54 46.2	-7.8
AKAS				iS	Sn	20 55 19.9	+0.1
GLHS	Gihisar (BURDU	2.06	69	ePN	Pn	20 54 54.7	+0.5
GLHS	Gihisar (BURDU	2.06	69	ePn	Pn	20 54 54.7	+0.4
IDI	Anoyia	2.13	238	eP	Pn	20 54 56.0	+0.8
IDI	Anoyia	2.13	238	eP	Pn	20 54 56.0	+0.8
GOLH	Golhisar	2.13	67	iP	Pn	20 54 55.4	+0.1
GOLH				iS	Sn	20 55 22.1	+0.1
GOLH	Golhisar	2.13	67	iP	Pn	20 54 55.4	+0.1
GOLH				iS	Sn	20 55 22.1	+0.1
ELL	Elmali	2.29	82	ePN	Pn	20 54 58.1	+0.7
ELL	Elmali	2.29	82	ePn	Pn	20 54 58.1	+0.7
KULA	Kula-Manisa	2.42	31	ePN	Pn	20 54 59.7	+0.5
KULA	Kula-Manisa	2.42	31	ePn	Pn	20 54 59.7	+0.5
KHAL	Karahalli	2.71	44	iP	Pn	20 55 00.1	-3.1
KHAL				iS	Sn	20 55 36.0	-0.3
KHAL	Karahalli	2.71	44	iP	Pn	20 55 00.1	-3.1
KHAL				iS	Sn	20 55 36.0	-0.3
HDMB	Hadim	4.37	82	ePN	Pn	20 55 27.0	+1.0
HDMB	Hadim	4.37	82	ePn	Pn	20 55 27.0	+1.0

MOS ***17*** *20:54:40.3±0.9, 9.°02S×119.°18E, h33km, mb4.9/15, Error ellipse: s-maj=15.5km s-min=8.2km az=113.5*
IDC ***17*** *20:54:45.2±1.6, 9.°11S×119.°29E, h62km±14km, mb4.5/23, mb1 4.5/24, mb1mx4.5/26, mbtmp4.5/24, MS4.7/1, Ms1 4.9/1, ms1mx3.5/25, Error ellipse: s-maj=17.6km s-min=8.7km az=59.0*
ISCJB ***17*** *20:54:47.9±0.4, 9.°23S±0.°03×119.°06E±0.°03, h102km±4km, mb4.8/67, Error ellipse: s-maj=4.6km s-min=4.0km az=27.8*
NEIC ***17*** *20:54:49.0±1.5, 9.°14S×119.°15E, h97km±13km, mb4.6/18, Error ellipse: s-maj=13.1km s-min=7.0km az=64.0*
NEIC Felt [III] at Waingapu. Also felt [III] at Dompu, Sumbawa.
DJA ***17*** *20:54:48, 9.°47S×119.°07E, h52km, mb5.4/34*
BJI ***17*** *20:54:48.9, 9.°10S×119.°20E, h105km, mB5.2/10, mb4.8/39*
ISC 17 20:54:49.1±0.4, 9.°27S±0.°03×119.°06E±0.°03, h98km±3km, h108km±2.7km; pP-P, n187, σ1°35/189, mb4.8/65, 2C-10D, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	Maumere	3.20	79	P	Pn	20 55 37.1	-0.4
MMRI				S	Sn	20 56 14.6	-0.2
DNP	Denpasar	3.85	278	P	Pn	20 55 45.2	-1.0
IGBI	Denpasar	3.89	276	P	Pn	20 55 44.6	-2.2
IGBI				S	Sn	20 56 29.6	-1.9
SRBI	Singaraja	3.98	287	P	Pn	20 55 45.3	-2.7
SRBI				S	Sn	20 56 35.3	+1.6
BKSI	Bulukumba	4.06	15	P	Pn	20 55 47.8	-1.3
BKSI				S	Sn	20 56 32.3	-3.2
KAPI	Kappang	4.28	9	ePn	Pn	20 55 49.6	-2.4
KAPI				eS	Sn	20 56 36.3	-4.6
KAPI	Kappang	4.28	9	P	Pn	20 55 49.7	-2.4
KAPI				S	Sn	20 56 36.2	-4.7
NBBI	Negara	4.48	281	P	Pn	20 55 53.7	-1.0
BBSI	Bau Bau	5.12	43	P	Pn	20 56 02.8	-0.6
	4.0nm1μm,0.9s						
GMJI	Gumukmas	5.64	280	P	Pn	20 56 06.7	-3.8
	9.1nm664nm,1.1s						
TTSI	Tana Toraja	6.23	7	P	Pn	20 56 19.4	+0.9
	3.1nm8μm357nm,0.8s						
KDI	Kendari	6.35	34	P	Pn	20 56 20.5	+0.3
	1.1nm328nm,0.8s						
KBKI	Kotabaru	6.59	334	P	Pn	20 56 22.9	-0.5
	1.2nm4μm193nm,0.4s						
KRKI	Karangkates	6.62	279	P	Pn	20 56 24.4	+0.5
	21nm2μm,0.6s						
PWJI	Pagerwojo	7.28	279	P	Pn	20 56 33.3	+0.5
	7.2nm422nm,1.0s						
SJI	Sawahan	7.37	281	P	Pn	20 56 34.3	+0.2
	5.0nm7μm478nm,0.8s						
NGJI	Ngawi	7.75	284	P	Pn	20 56 42.2	+2.9
	7.2nm243nm,1.2s						
LUWI	Luwuk	8.97	25	P	Pn	20 56 57.8	+2.0
	194nm,0.9s						
BJII	Banjamegara	9.45	281	P	Pn	20 57 03.4	+1.0
	131nm,0.8s						
NLAI	Namlea	9.98	54	P	Pn	20 57 13.1	+3.5
	5μm379nm,1.0s						
MRSI	Marisa	10.09	17	P	Pn	20 57 11.6	+0.4
	120nm,1.1s						
FITZ	Fitzroy Crossi	10.86	145	ePn	Pn	20 57 17.1	-4.4
	121nm,0.6s						
FITZ	Fitzroy Crossi	10.86	145	P	Pn	20 57 16.6	-4.9
	30nm,0.3s,baz=336,slow=9.7,SNR=241						
FITZ				S	Sn	20 59 12.8	-8.3
	18nm,0.3s,baz=197,slow=20,SNR=9.7						
FITZ	Fitzroy Crossi	10.86	145	P	Pn	20 57 17.1	-4.4
	366nm,0.7s						
KMSI	Cibinong	10.93	27	P	Pn	20 57 24.2	+1.6
	291nm,0.8s						
CISI	Cisompet, Garu	11.25	278	P	Pn	20 57 25.1	-1.8
	3μm213nm,0.9s						
KNA	Kununurra	11.46	125	eP	Pn	20 57 25.3	-4.3
	221nm,0.4s						
KNA	Kununurra	11.46	125	P	Pn	20 57 25.7	-3.9
	2μm,0.6s						
MBWA	Marble Bar	11.84	177	eP	Pn	20 57 29.5	-5.2
MBWA				eS	Sn	20 59 29.3	-16
MBWA	Marble Bar	11.84	177	eP	Pn	20 57 29.7	-5.0
	140nm,0.7s						
MBWA				eS	Sn	20 59 29.2	-16
MBWA	Marble Bar	11.84	177	P	Pn	20 57 31.3	-3.5
	95nm,1.2s						
STKI	Sintang	11.96	320	P	Pn	20 57 37.2	+0.9
	145nm,1.7s						
MNI	Manado	12.10	29	P	Pn	20 57 40.9	+2.7
	136nm,0.9s						
CBJI	Citeko	12.42	282	P	Pn	20 57 38.8	-3.7
	7μm304nm,0.9s						
TNTI	Ternate	12.96	40	P	Pn	20 57 50.4	+0.8
	167nm,1.6s						
SBUM	Sibu	13.49	329	P	Pn	20 57 58.3	+1.8
	34nm,2.1s						
MYLDM	Lahad Datu	14.36	358	P	Pn	20 58 13.8	+5.9
MYLDM	Lahad Datu	14.36	358	P	Pn	20 58 13.4	+5.5
	76nm,2.2s						
KLI	Kotabumi	14.76	286	P	Pn	20 58 16.2	+3.3
	102nm,1.0s						
KLSI		14.93	287	P	Pn	20 58 17.1	+1.9
	95nm,0.9s						
LWLI	Liwa	15.47	285	P	Pn	20 58 23.6	+1.6
	3μm193nm,0.9s						
KKM	Kota Kinabalu	15.47	349	eP	Pn	20 58 23.4	+1.4
	26nm,0.6s						
KKM	Kota Kinabalu	15.47	349	P	Pn	20 58 25.2	+3.2
	54nm,1.8s						
MDSI	Maura Dua	15.52	287	P	Pn	20 58 27.3	+4.7
KDM	Kudat	16.23	352	P	Pn	20 58 34.1	+2.7
KSI	Kapahiang	17.28	288	P	Pn	20 58 46.4	+2.0
	165nm,0.5s						
MEEK	Meekatharra	17.28	181	eP	Pn	20 58 46.3	+2.0
MEEK				eS	S	21 01 36.4	-21
WRA	Warramunga Arr	18.18	127	P	Pn	20 58 52.8	-2.4
	5.8nm,0.3s,baz=299,slow=14,SNR=70						
WRA				S	S	21 02 07.8	-10
	4.3nm,0.3s,baz=305,slow=23,SNR=11						
MYKOM	Kota Tinggi	18.72	305	P	Pn	20 59 03.8	+2.1
MYKOM	Kota Tinggi	18.72	305	P	Pn	20 59 02.8	+1.2
	30nm,1.3s						
BAKI	Biak	18.76	66	P	Pn	20 59 01.3	-0.9
	158nm,1.1s						
KRJI	Kerinci	18.90	291	P	Pn	20 59 03.2	-0.6
	6μm359nm,1.1s						
KGM	Kluang	19.28	305	P	Pn	20 59 10.3	+2.1
MORW	Morawa	19.90	188	eP	Pn	20 59 13.0	-2.4
MORW				eS	S	21 02 35.1	-17
ASAR	Alice Springs	20.16	137	P	P	20 59 15.6	-0.1
	27nm,0.5s,baz=311,slow=9.5,SNR=128						
ASAR				S	S	21 02 54.6	-2.3
	24nm,0.9s,baz=312,slow=22,SNR=7.8						
FRIM	Kepong	21.36	305	P	P	20 59 29.8	+1.1
KTGM	Kuala Trenggan	21.50	312	P	P	20 59 32.5	+2.3
KMBL	Kambalda	22.15	174	eP	P	20 59 35.7	-1.2
	126nm,0.7s,mb5.3						
KMBL				eS	S	21 03 29.4	-5.2
KLBR	Kellerberrin	22.25	183	eP	P	20 59 38.1	+0.1
	15nm,0.4s,mb4.7						
KLBR				eS	S	21 03 30.0	-6.3
IPM	Ipoh	22.57	306	P	P	20 59 40.7	-0.9
	31nm,1.4s,mb4.5						
FORT	Forrest	22.99	160	eP	P	20 59 44.6	-0.9
TGY	Tagaytay City	23.29	5	P	P	20 59 48.6	+0.3
	122nm,0.4s,mb5.6,baz=195,slow=6.1,SNR=7.8						
NWAO	Narrogin (SRO)	23.61	184	eP	P	20 59 50.9	-0.2
	27nm,0.6s,mb4.8						
NWAO	Narrogin (SRO)	23.61	184	P	P	20 59 51.3	+0.2
	9.0nm,0.5s,mb4.4,baz=5.2,slow=10,SNR=15						
NWAO				S	S	21 04 02.5	+4.1
	14nm,0.4s,baz=225,slow=5.7,SNR=4.3						
NWAO	Narrogin (SRO)	23.61	184	eP	P	20 59 50.9	-0.2
NWAO				pmax	pmax		
	comp=Z,27nm,0.6s						
COEN	Coen	24.07	103	eP	P	20 59 55.5	0.0
	comp=Z,224nm,0.5s,mb5.8						
COEN	Coen	24.07	103	P	P	20 59 55.8	+0.3
MTSU	Mount Surprise	26.04	112	eP	P	21 00 14.2	+0.8
	comp=Z,36nm,0.6s,mb5.0						
BBOO	Buckleboo	28.21	149	eP	P	21 00 32.4	-0.3
	comp=Z,1.5nm,0.7s,mb3.6						
BBOO	Buckleboo	28.21	149	eP	P	21 00 32.4	-0.3
	comp=Z,14nm,1.2s,mb4.4						
CTA	Charters Tower	28.37	115	P	P	21 00 33.8	-0.5
	comp=Z,11nm,1.0s,mb4.3,baz=323,slow=9.1,SNR=4.2						
STKA	Stephens Creek	30.71	140	eP	P	21 00 55.4	+0.6
	comp=Z,5.7nm,0.6s,mb4.5						
STKA	Stephens Creek	30.71	140	P	P	21 00 55.5	+0.7
	comp=Z,24nm,0.6s,mb5.1,baz=310,slow=9.3,SNR=70						
STKA	Stephens Creek	30.71	140	eP	P	21 00 55.4	+0.6
STKA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CMSA	Cobar Meteorol	33.21	136	eP	P	21 01 17.8	+1.1
CMAR	Chiang Mai Arr	33.96	324	P	P	21 01 23.1	-0.2
	comp=Z,2.4nm,0.5s,mb4.2,baz=152,slow=7.0,SNR=13						
CMAR				ScP	ScP	21 07 38.8	+3.0
	comp=Z,1.5nm,0.8s,baz=179,slow=3.6,SNR=6.9						
CMAR				LR	LR	21 16 02.1	
	comp=Z,1μm,18.8s,baz=130,slow=38						
QZH	Quanzhou	34.00	359	P	P	21 01 23.4	-0.2
CHTO	Chiang Mai	34.24	325	eP	P	21 01 26.0	+0.3
	comp=Z,6.2nm,1.0s,mb4.4						
CHTO	Chiang Mai	34.24	325	eP	P	21 01 26.0	+0.3
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
ARPS	Mount Arapiles	34.29	147	eP	P	21 01 27.0	+0.9
	comp=Z,23nm,0.5s,mb5.3						
TOO	Toolangi	36.92	144	eP	P	21 01 49.5	+1.0
ARMA	Armidale	36.95	129	eP	P	21 01 51.6	+2.7
ARMA	Armidale	36.95	129	eP	P	21 01 51.6	+2.7
GYA	Guiyang	37.50	342	P	P	21 01 55.0	+1.5
GYA				pP	pP	21 02 20.8	+4.8
GYA				sP	sP	21 02 32.4	+5.2
GYA				PP	PP	21 03 25.8	+4.8
GYA				PcP	PcP	21 04 11.6	+1.6
GYA				S	S	21 07 36.5	+1.3
GYA				ScP	ScP	21 07 47.4	-1.1
GYA				PcS	PcS	21 07 58.9	+0.2
GYA				ScS	ScS	21 11 55.0	-2.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
KMI	Kunming	37.70	335	P	P	21 01 57.3	+2.1
KMI				pP	pP	21 02 21.9	+4.2
KMI				sP	sP	21 02 35.8	+6.9
KMI				PP	PP	21 03 29.6	+6.3
KMI				S	S	21 07 39.9	+1.5
KMI				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.3						
KMI				pmax	pmax		
	comp=Z,4μm,14.9s						
KMI				LR	LR		
	comp=N,970nm,11.9s						
KMI				LR	LR		
	comp=E,1μm,11.9s						
KMI				LR	LR		
	comp=Z,1μm,10.7s						
CNB	Canberra Magne	37.90	138	eP	P	21 01 57.7	+0.8
WHN	Wuhan	39.84	354	P	P	21 02 12.8	-0.2
HNR	Honiara	40.33	94	P	P	21 02 19.2	+1.9
	comp=Z,26nm,0.4s,mb5.5,baz=229,slow=9.3,SNR=2.5						
NJ2	Nanjing	41.08	360	eP	P	21 02 23.6	+0.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
CD2	Chengdu	42.56	340	P	P	21 02 35.8	+0.5
SHL	Shillong	43.57	323	ePKP	P	21 02 42.9	-0.7
XAN	Xi'an	44.13	348	P	P	21 02 47.3	-0.6
XAN				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb3.8						
LSA	Lhasa	47.15	326	P	P	21 03 11.5	-0.2
KSRS	Korea Array	47.21	10	P	P	21 03 11.6	-0.5
	comp=Z,9.5nm,0.7s,mb4.6,baz=190,slow=9.6,SNR=32						
ODAN	Odare	47.26	320	eP	P	21 03 12.2	-0.5
	comp=Z,27nm,0.6s,mb5.2						
LZH	Lanzhou	47.33	343	‖P	P	21 03 13.9	+0.9
LZH				pP	pP	21 03 39.8	+3.5
LZH				sP	sP	21 03 53.1	+5.7
LZH				pmax	pmax		
	comp=Z,57nm,1.4s,mb5.1						
LZH				pmax	pmax		
	comp=Z,260nm,5.0s						
TAPN	Taplejung	47.41	321	eP	P	21 03 13.9	+0.1
	comp=Z,74nm,0.6s,mb5.6						
RAMN	Ramite	47.83	320	eP	P	21 03 15.8	-1.3
	comp=Z,36nm,0.6s,mb5.4						
JIRN	Jiri	48.58	320	eP	P	21 03 22.8	-0.1
	comp=Z,41nm,0.5s,mb5.6						
GUN	Gumba	48.95	320	eP	P	21 03 25.5	-0.2
	comp=Z,44nm,0.6s,mb5.6						
MAJO	Matsushiro	48.99	20	eP	P	21 03 23.2	-2.6
MAT	Matsushiro	48.99	20	P	P	21 03 23.1	-2.7
MJAR	Matsushiro Arr	48.99	20	P	P	21 03 23.3	-2.6
	comp=Z,3.4nm,0.7s,mb4.4,baz=196,slow=7.7,SNR=7.6						
MJAR				ScP	ScP	21 08 37.7	+2.9
	comp=Z,1.2nm,0.7s,baz=195,slow=4.7,SNR=4.0						
PKI	Pulchoki	49.02	319	eP	P	21 03 24.7	-1.5
	comp=Z,17nm,0.5s,mb5.3						
PKIN	Phulchoki	49.03	319	eP	P	21 03 25.2	-1.1
	comp=Z,20nm,0.5s,mb5.3						
BJI	Beijing	49.13	357	P	P	21 03 26.0	-0.8
BJI				S	S	21 10 26.8	+2.2
BJI				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.3						
BJI				LR	LR		
	comp=N,590nm,15.4s						
BJI				LR	LR		
	comp=E,690nm,15.4s						
BJI				LR	LR		
	comp=Z,450nm,15.4s						
DMN	Daman	49.24	319	eP	P	21 03 26.6	-1.3
	comp=Z,8.5nm,0.4s,mb5.0						
KKN	Kakani	49.25	319	eP	P	21 03 27.5	-0.5
GKN	Gorkha	49.81	319	eP	P	21 03 30.9	-1.3
	comp=Z,22nm,0.3s,mb5.5						
KOLN	Koldanda	50.33	318	eP	P	21 03 34.1	-2.1
	comp=Z,20nm,0.5s,mb5.3						
HHC	Hu-ho-hao-te	50.34	353	eP	P	21 03 35.5	-0.5
HHC				pP	pP	21 04 01.5	+2.0
HHC				sP	sP	21 04 14.0	+3.5
HHC				PP	PP	21 05 33.6	+1.1
HHC				eS	S	21 10 38.3	-3.2
HHC				sS	sS	21 11 24.8	+2.9
HHC				ScS	ScS	21 13 11.8	-5.6
HHC				SS	SS	21 14 11.1	-5.6
HHC				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
HHC				LR	LR		
	comp=N,510nm,12.6s						
HHC				LR	LR		
	comp=E,430nm,14.1s						
HHC				LR	LR		
	comp=Z,300nm,11.7s						
GTA	Gaotai	51.62	341	‖P	P	21 03 46.3	+0.7
GTA				pP	pP	21 04 07.0	-2.2
GTA				ScS	ScS	21 13 22.8	-3.5
GTA				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.4						
CN2	Changchun	53.13	6	eP	P	21 03 58.3	+1.6
MDJ	Mudanjiang	54.47	9	P	P	21 04 07.0	+0.6
MDJ				pP	pP	21 04 31.3	+1.1
MDJ				sP	sP	21 04 42.5	+1.4
MDJ				PP	PP	21 06 10.3	+0.6
MDJ				ScP	ScP	21 08 57.9	-0.4
MDJ				PcS	PcS	21 09 08.8	+0.6
MDJ				S	S	21 11 38.8	+1.1
MDJ				ScS	ScS	21 13 46.0	-0.1
MDJ				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
RPZ	Rata Peaks	56.57	137	P	P	21 04 22.7	+1.0
	comp=Z,14nm,0.5s,mb5.3,baz=51,slow=12,SNR=6.9						
CASY	Casey	57.23	184	eP	P	21 04 26.3	+0.4
	comp=Z,14nm,1.3s,mb4.8						
ULN	Ulaanbaatar	57.87	350	eP	P	21 04 30.2	-0.3
	comp=Z,5.4nm,0.6s,mb4.8						
ULN	Ulaanbaatar	57.87	350	eP	P	21 04 30.2	-0.3
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
SONM	Songino Array	57.95	350	P	P	21 04 30.8	-0.3
	comp=Z,13nm,0.7s,mb5.1,baz=167,slow=8.6,SNR=96						
SONM				ScP	ScP	21 09 17.1	+3.5
	comp=Z,0.5nm,0.8s,baz=149,slow=3.4,SNR=2.4						
KLR	Kul'dur	59.30	10	eP	P	21 04 40.7	+0.2
WMQ	Urumqi	60.02	334	eP	P	21 04 47.6	+2.1
WMQ				pP	pP	21 05 13.1	+3.4
WMQ				sP	sP	21 05 24.9	+4.4
WMQ				PcP	PcP	21 05 32.8	+2.2
WMQ				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
WMQ				LR	LR		
	comp=N,510nm,18.4s						
WMQ				LR	LR		
	comp=E,440nm,18.0s						
WMQ				LR	LR		
	comp=Z,450nm,18.0s						
ZAK	Zakamensk	60.97	349	eP	P	21 04 50.9	-0.9
TLY	Talaya	62.14	349	eP	P	21 04 59.5	-0.2
TLY				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
KSH	Kashi	62.85	324	‖iP	P	21 05 03.5	-1.2
KSH				epP	pP	21 05 30.6	+1.5
KSH				ePcP	PcP	21 05 42.3	+0.1
KSH				esP	sP	21 05 43.4	+3.6
KSH				ePP	PP	21 07 23.9	-0.3
KSH				eScP	ScP	21 09 33.0	-2.6
KSH				ePcS	PcS	21 09 44.0	-1.6
KSH				eS	S	21 13 18.6	-8.0
KSH				eScS	ScS	21 14 41.4	-6.9
KSH				pmax	pmax		
	comp=Z,29nm,1.9s,mb4.9						
KSH				pmax	pmax		
	comp=Z,180nm,6.5s						
KSH				LR	LR		
	comp=N,160nm,6.8s						
KSH				LR	LR		
	comp=E,250nm,8.8s						
KSH				LR	LR		
	comp=Z,240nm,7.4s						
KBL	Kabul	64.32	315	eP	P	21 05 11.4	-3.0
	comp=Z,16nm,0.5s,mb5.1						
KBL	Kabul	64.32	315	eP	P	21 05 11.4	-3.1
KBL				pmax	pmax		
	comp=Z,16nm,0.5s,mb5.1						
MK31	Makanchi Array	64.72	333	eP	P	21 05 15.9	-0.9
MKAR	Makanchi Array	64.72	333	P	P	21 05 15.9	-0.9
	comp=Z,9.9nm,0.7s,mb4.8,baz=151,slow=6.2,SNR=48						
AAK	Ala-Archa	65.73	325	eP	P	21 05 22.3	-1.1
	comp=Z,10nm,1.0s,mb4.6						
AAK	Ala-Archa	65.73	325	P	P	21 05 23.1	-0.4
	comp=Z,2.3nm,0.5s,mb4.3,baz=218,slow=5.1,SNR=7.4						
AAK	Ala-Archa	65.73	325	deP	P

comp=Z,10.0nm,1.2s,mb4.4
SEY Seymchan 76.40 15 *e*P P 21 06 26.8 -0.6
SYO Syowa Base 77.63 201 *e*P P 21 06 34.4 +0.1
SYO Syowa Base 77.63 201 *e*PcP PcP 21 06 44.0 -0.1
ABKAR Akbulak array 77.81 325 *e*P P 21 06 33.9 -1.7
comp=Z,4.6nm,0.5s,mb4.5
RDF Al-Radifah 78.61 302 *e*P P 21 06 39.2 -1.4
RDF AMb AMB 21 06 42.5
comp=Z,48nm,0.5s,mb5.6
NAY Al-Naaiem 78.97 302 *e*P P 21 06 40.9 -1.6
NAY AMb AMB 21 06 42.8
comp=Z,16nm,0.6s,mb5.0
MIB Mutribah 79.05 303 *e*P P 21 06 41.3 -1.6
MIB AMb AMB 21 06 43.7
comp=Z,25nm,0.7s,mb5.2
QSPA South Pole Qui 80.73 180 *e*P P 21 06 52.5 +1.5
comp=Z,14nm,1.0s,mb4.7
QSPA South Pole Qui 80.73 180 P P **21 06 52.7 +1.6**
comp=Z,4.2nm,0.8s,mb4.3,baz=329,slow=2.9,SNR=15
TIXI Tiksi 81.00 3 *e*P P 21 06 50.5 -2.0
comp=Z,5.4nm,0.8s,mb4.4
TIXI Tiksi 81.00 3 *e*P P 21 06 49.9 -2.6
TIXI pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
KMBO Kilima Mbogo 81.73 270 *e*P P 21 06 59.2 +1.5
comp=Z,5.2nm,1.0s,mb4.3
KMBO Kilima Mbogo 81.73 270 P P **21 06 59.4 +1.7**
comp=Z,4.3nm,1.0s,mb4.2,baz=177,slow=22,SNR=4.8
KMBO Kilima Mbogo 81.73 270 *e*P P 21 06 59.2 +1.5
KMBO pmax pmax
comp=Z,5.0nm,1.0s
ARU Arti 82.12 331 *e*P P 21 06 57.0 -1.7
comp=Z,7.9nm,1.1s,mb4.5
ARU Arti 82.12 331 *c i*P P 21 06 57.3 -1.4
ARU 21 10 04.2
ARU S S 21 17 03.9 -1.5
ARU pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
MBAR Mbarara 88.25 270 *i*P P 21 07 30.7 +0.5
LSZ Lusaka 88.43 255 *e*P P 21 07 32.0 +1.0
comp=Z,4.6nm,0.6s,mb4.7
LSZ Lusaka 88.43 255 *e*P P 21 07 32.0 +1.0
LSZ pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
BOSA Boshof 88.93 241 P P 21 07 35.1 +1.9
comp=Z,4.9nm,0.7s,mb4.6,baz=140,slow=6.5,SNR=8.0
MMAI Mount Meron Ar 89.72 303 P P 21 07 37.8 +1.1
comp=Z,2.4nm,0.5s,mb4.6,baz=84,slow=7.6,SNR=7.8
BRTR Keskin Array B 92.35 310 P P 21 07 48.6 -0.2
comp=Z,0.9nm,0.7s,mb4.1,baz=147,slow=3.4,SNR=4.3
FINES FINESS Array B 99.50 331 P Pdif 21 08 20.2 -0.8
comp=Z,3.0nm,1.1s,baz=113,slow=11,SNR=3.0
ARCES ARCESS Array B 99.86 339 P Pdif 21 08 21.7 -0.9
comp=Z,0.7nm,0.7s,baz=72,slow=5.8,SNR=4.6
ILAR Eielson Array 100.05 26 P Pdif 21 08 21.9 -1.5
comp=Z,0.3nm,0.7s,baz=220,slow=5.4,SNR=3.9
YKA Yellowknife Ar 114.41 24 PKP PKiKP 21 13 17.1 0.0
YKA Yellowknife Ar 114.41 24 PKP PKiKP 21 13 17.1 0.0
comp=Z,0.3nm,0.4s,baz=297,slow=1.9,SNR=4.6
TORD Torodi Ar. Bea 118.57 280 PKP PKPdf 21 13 26.9 +0.3
comp=Z,1.7nm,0.6s,baz=42,slow=2.0,SNR=23
ESDC Sonseca Array 121.13 311 PKP PKPdf 21 13 31.7 +0.9
ESDC Sonseca Array 121.13 311 PKP PKPdf 21 13 31.7 +0.9
comp=Z,0.4nm,0.7s,baz=40,slow=1.6,SNR=3.0
NVAR Mina Array Bea 121.14 51 PKP PKPdf 21 13 31.8 +1.0
comp=Z,0.3nm,0.5s,baz=291,slow=2.8,SNR=3.1
FFC Flin Flon 124.21 27 *i* PKIKP PKPdf 21 13 40.1 +3.9
TXAR Lajitas Array 135.33 57 PKP PKPdf 21 13 59.7 +1.6
TXAR SKPbc SKPbc 21 17 22.8 +2.3
TXAR Lajitas Array 135.33 57 PKP PKPdf 21 13 59.7 +1.6
comp=Z,0.3nm,0.5s,baz=275,slow=1.9,SNR=3.5
TXAR SKPbc SKPbc 21 17 22.8 +2.3
comp=Z,0.8nm,0.9s,baz=246,slow=1.3,SNR=4.1
WVT Waverly 143.77 38 *e* PKPpre PKPpre 21 14 09.5
CPCT Cooper Cave 146.20 36 *e* PKPbc PKPbc 21 14 18.3 -0.3
LRAL Lakeview Retre 146.27 42 *e* PKPbc PKPbc 21 14 19.8 +0.9
TKL Tuckaleechee C 146.48 35 *e* PKPdf PKPdf 21 14 17.5 -0.4
GOGA Godfrey 148.25 38 PKPbc PKPbc 21 14 23.8 -0.6
LPAZ La Paz 153.63 164 PKP PKPdf 21 14 32.1 +2.4
comp=Z,0.6nm,0.7s,baz=268,slow=6.6,SNR=3.1
LPAZ PKPbc PKPbc 21 14 40.6 +3.2
comp=Z,1.6nm,0.9s,baz=207,slow=2.3,SNR=5.7

IDC 17 21:09:21.5±2.1, 6°16S×129°71E, h0km, mb4.0/1, mb1 4.0/4, mb1mx3.7/16, mbtmp3.9/4, ML3.8/3, Error ellipse: s-maj=93.3km s-min=26.5km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.52**	**198**	Pn	Pn	21 12 22.5	+1.4
	0.6nm,0.3s,baz=44,slow=12,SNR=28						
WRA	**Warramunga Arr**	**14.42**	**162**	Pn	Pn	21 12 45.7	-1.3
	0.4nm,0.3s,baz=342,slow=13,SNR=13						
WRA				Sn	Sn	21 15 11.8	-16
	1.4nm,0.3s,baz=342,slow=22,SNR=14						
ASAR	**Alice Springs**	**17.87**	**167**	P	Pn	21 13 31.4	-0.3
	0.5nm,0.3s,baz=350,slow=10,SNR=22						
ASAR				S	Sn	21 16 36.5	-15
	0.4nm,0.3s,baz=354,slow=28,SNR=7.8						
MKAR	**Makanchi Array**	**67.37**	**327**	P	P	21 20 18.6	+0.1
	0.9nm,0.5s,baz=122,slow=7.5,SNR=18						

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*ISCJB **17** 21:23:08.6±0.5, 21°08S×0°02×70°38W±0°06, h56km±5km, mb4.8/86, Error ellipse: s-maj=9.0km s-min=4.1km az=177.8*
*IDC **17** 21:23:09.6±0.6, 20°98S×70°31W, h51km±5km, mb4.3/13, mb1 4.4/15, mb1mx4.2/19, mbtmp4.3/15, MS3.4/2, Ms1 3.5/2, ms1mx3.4/14, Error ellipse: s-maj=22.0km s-min=14.0km az=82.0*
*NEIC **17** 21:23:10.1, 20°97S×70°34W, h65km, mb4.9/75, After GUC.*
NEIC Felt [II] at Iquique and Tocopilla.
*GUC **17** 21:23:10.1±0.4, 20°97S×70°34W, h65km±7km, ML4.8*
*BJI **17** 21:23:11.1, 21°00S×70°30W, h64km, mB5.3/11, Ms5.2/8, Ms7 5.2/9*
ISC 17 21:23:09.3±0.5, 21°08S±0°02×70°32W±0°06, h47km±5km, h56km±4.5km: pP-P, n436, σ0°76/419, mb4.8/86, 118C-95D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**Plate Boundary**	**0.77**	**87**	*i*P	Pn	21 23 26.0	+2.1
PB01				*i* S	Sn	21 23 38.3	+3.8
PB01				AML	AML	21 23 39.5	
	comp=N,54μm,0.7s						
HMBC	**Humberston**	**0.90**	**27**	*e*P	Pn	21 23 26.4	+0.8
HMBC				*i* S	Sn	21 23 38.8	+1.4
HMBC				AML	AML	21 23 43.8	
	comp=E,57μm,0.4s						
MACH	**Maria Elena**	**1.22**	**155**	*e*P	Pn	21 23 31.2	+1.2
MACH				*i* S	Sn	21 23 46.9	+1.5
PSGC	**Pisagua**	**1.49**	**7**	*e*P	Pn	21 23 33.9	+0.2
PSGC				*i* S	Sn	21 23 51.7	-0.3
MECH	**Mejillones**	**2.01**	**183**	*e*P	Pn	21 23 40.5	-0.3
MECH				*e*S	Sn	21 24 02.7	-2.2
MNMC	**Miæe Miæ**	**2.06**	**19**	*e*P	Pn	21 23 42.4	+0.9
MNMC				*i* S	Sn	21 24 06.8	+0.9
MNMC				AML	AML	21 24 25.9	
	comp=E,10μm,0.4s						
CEN1	**Los Morros**	**2.30**	**177**	*e*P	Pn	21 23 43.3	-1.4
CEN1				*e*S	Sn	21 24 10.8	-1.0
ARE	**Arequipa**	**4.73**	**346**	*i*P	Pn	21 24 17.4	-0.8
ARE				*i* S	Sn	21 25 01.7	-10
LPAZ	**La Paz**	**5.20**	**24**	*e*Pn	Pn	21 24 28.5	+3.8
LPAZ				*e*Sn	Sn	21 25 21.9	-1.4
LPAZ	**La Paz**	**5.20**	**24**	P	Pn	21 24 28.5	+3.9
	comp=E,3.4nm,0.3s,baz=203,slow=7.3,SNR=71						
LPAZ				LR	LR	21 26 39.6	
	comp=E,355nm,20.4s,baz=208,slow=41						
SIV	**San Ignacio**	**10.12**	**62**	P	Pn	21 25 31.9	-0.2
	comp=E,6.0nm,0.3s,baz=253,slow=12,SNR=117						
CFAA	**Coronel Fontan**	**10.64**	**170**	P	Pn	21 25 35.8	-3.3
	comp=E,0.1nm,0.3s,baz=348,slow=13,SNR=9.2						
CFAA				S	Sn	21 27 28.8	-8.2
	comp=E,0.2nm,0.3s,baz=3.2,slow=18,SNR=2.5						
NNA	**Nana**	**11.00**	**324**	*e*Pn	Pn	21 25 43.0	-1.1
NNA				*e*Sn	Sn	21 27 37.0	-8.7
NNA	**Nana**	**11.00**	**324**	P	Pn	21 25 41.6	-2.5
	comp=E,1.2nm,0.3s,baz=285,slow=20,SNR=2.4						
NNA				S	Sn	21 27 38.5	-7.3
	comp=E,6.2nm,0.3s,baz=273,slow=6.0,SNR=10						
NNA				LR	LR	21 29 45.1	
	comp=E,250nm,21.4s,baz=151,slow=36						
TRQA	**Tornquist**	**18.39**	**159**	*e*P	Pn	21 27 20.5	-0.2
	comp=E,152nm,2.2s						
PLCA	**Paso Flores**	**19.59**	**181**	*e*P	Pn	21 27 35.0	-0.2
	comp=E,6.8nm,0.9s						
OTAV	**Otavalo**	**22.63**	**338**	*e*P	P	21 28 05.4	-1.0
	comp=E,12nm,1.0s,mb4.3						
ROSC	**El Rosal**	**26.08**	**351**	P	P	21 28 37.8	-0.9
	comp=E,3.8nm,0.4s,mb4.3,baz=270,slow=20,SNR=2.4						
SDV	**Santo Domingo**	**29.78**	**359**	*e*P	P	21 29 09.9	-1.8
	comp=E,6.2nm,1.3s,mb4.2						
PCRV	**Puerto La Cruz**	**31.56**	**11**	P	P	21 29 26.7	-0.7
	comp=E,9.4nm,0.7s,mb4.7,baz=270,slow=3.0,SNR=3.4						
USHA	**Ushuaia**	**33.73**	**178**	P	P	21 29 46.0	0.0
	comp=E,26nm,1.1s,mb5.0,baz=344,slow=13,SNR=3.6						
RCBR	**Riachuelo**	**36.62**	**70**	*e*P	P	21 30 12.2	+0.7
	comp=E,31nm,0.7s,mb5.2						
SJG	**San Juan**	**39.17**	**6**	P	P	21 30 30.3	-2.5
SJG	**San Juan**	**39.17**	**6**	P	P	21 30 30.3	-2.4
	comp=E,7.8nm,0.7s,mb4.5,baz=321,slow=3.8,SNR=4.2						
TEIG	**Tepich**	**44.66**	**336**	*e*P	P	21 31 16.3	-1.3
	comp=E,11nm,0.5s,mb4.9						
DWPF	**Disney**	**50.07**	**347**	*e*P	P	21 31 58.8	-0.8
JSC	**Jenkinsville**	**56.03**	**349**	*e*P	P	21 32 40.6	-2.8
LRAL	**Lakeview Retre**	**56.12**	**343**	*e*P	P	21 32 42.1	-1.9
	comp=E,4.6nm,0.8s,mb4.6						
CPCT	**Cooper Cave**	**57.81**	**346**	*e*P	P	21 32 55.0	-1.0
TKL	**Tuckaleechee C**	**57.85**	**347**	*e*P	P	21 32 54.3	-2.0
SWET	**Sewanee**	**57.92**	**345**	*e*P	P	21 32 55.0	-1.7
JCT	**Junction City**	**58.58**	**330**	*i*P	P	21 33 01.1	-0.4
	baz=59						
JCT	**Junction City**	**58.58**	**330**	*e*P	P	21 33 00.8	-0.7
	comp=E,10nm,1.0s,mb4.8						
BLA	**Blacksburg**	**58.76**	**351**	*e*P	P	21 33 00.2	-2.3
	comp=E,11nm,1.0s,mb4.8						
WVT	**Waverly**	**59.27**	**344**	*e*P	P	21 33 03.7	-2.4
	comp=E,15nm,0.7s,mb5.1						
628A	**Black Gap, Mar**	**59.27**	**327**	*i*P	P	21 33 05.8	-0.4
	baz=59						
UALR	**University of**	**59.36**	**339**	*e*P	P	21 33 05.1	-1.6
	comp=E,22nm,1.1s,mb5.1						
627A	**Terlingua Ranc**	**59.50**	**326**	*i*P	P	21 33 07.5	-0.3
	baz=60						
TXAR	**Lajitas Array**	**59.55**	**326**	P	P	21 33 07.3	-0.8
TXAR				PcP	PcP	21 33 55.3	+0.1
TXAR	**Lajitas Array**	**59.55**	**326**	P	P	21 33 07.3	-0.8
	comp=E,3.2nm,0.8s,mb4.4,baz=146,slow=8.7,SNR=36						
TXAR				PcP	PcP	21 33 55.3	+0.1
	comp=E,0.7nm,0.7s,baz=158,slow=2.6,SNR=3.4						
MIAR	**Mount Ida**	**59.58**	**338**	*e*P	P	21 33 07.2	-1.0
	comp=E,29nm,0.8s,mb5.4						
528A	**Cox Ranch, San**	**59.76**	**327**	*i*P	P	21 33 09.0	-0.7
	baz=60						
626A	**Big Bend Ranch**	**59.97**	**326**	*i*P	P	21 33 10.6	-0.4
	baz=60,SNR=24						
527A	**Woodward Ranch**	**60.17**	**327**	*i*P	P	21 33 12.0	-0.4
	baz=60						
428A	**Kincaid Ranch,**	**60.17**	**328**	P	P	21 33 11.8	-0.6
	baz=60,SNR=7.1						
526A	**Mary Lane Ranc**	**60.35**	**326**	*i*P	P	21 33 13.3	-0.3
	baz=60,SNR=14						
427A	**Hayter Ranch,**	**60.63**	**327**	P	P	21 33 15.0	-0.6
	baz=61,SNR=7.7						
328A	**Wristen Ranch,**	**60.77**	**328**	*i*P	P	21 33 15.8	-0.7
	baz=61,SNR=15						
426A	**McDonald Obser**	**60.80**	**327**	*i*P	P	21 33 16.3	-0.4
	baz=61,SNR=11						
WCI	**Wyandotte Cave**	**60.88**	**346**	*e*P	P	21 33 14.8	-2.3
	comp=E,11nm,0.9s,mb5.0						
MCWV	**Mont Chateau**	**61.08**	**352**	*e*P	P	21 33 17.9	-0.4
	comp=E,25nm,0.8s,mb5.4						
SIUC	**Southern Illin**	**61.13**	**343**	*e*P	P	21 33 17.5	-1.3
	comp=E,42nm,1.1s,mb5.5						
326A	**Caldwell Ranch**	**61.30**	**327**	P	P	21 33 19.6	-0.5
	baz=61,SNR=6.9						
425A	**Indio Mountain**	**61.39**	**326**	P	P	21 33 20.2	-0.5
	baz=62,SNR=23						
227A	**Bennet, Jal**	**61.52**	**328**	P	P	21 33 21.4	-0.2
	baz=62,SNR=6.7						
FVM	**French Village**	**61.72**	**342**	*e*P	P	21 33 21.4	-1.4
	comp=E,30nm,0.9s,mb5.4						
WMOK	**Wichita Mounta**	**61.75**	**334**	*e*P	P	21 33 21.6	-1.5
	comp=E,5.5nm,1.1s,mb4.6						
BLO	**Bloomington**	**61.83**	**346**	*e*P	P	21 33 21.4	-2.1
	comp=E,20nm,0.7s,mb5.4						
325A	**Bean Ranch, Si**	**61.85**	**327**	*i*P	P	21 33 23.2	-0.6
	baz=62,SNR=54						
226A	**Malaga, Loving**	**61.96**	**328**	*i*P	P	21 33 24.5	0.0
	baz=62,SNR=11						
CLNB	**Carlsbad**	**62.01**	**328**	P	P	21 33 21.7	-3.2
	comp=E,1.2nm,0.4s,mb4.4						
CCM	**Cathedral Cave**	**62.03**	**341**	*e*P	P	21 33 23.2	-1.7
	comp=E,15nm,0.9s,mb5.1						
GDL2	**Guupe Mun**	**62.20**	**328**	*e*P	P	21 33 26.0	-0.2
MNTX	**Cornudas Mount**	**62.32**	**326**	*i*P	P	21 33 25.8	-1.1
	baz=62,SNR=18						
MNTX	**Cornudas Mount**	**62.32**	**326**	*e*P	P	21 33 25.5	-1.4
	comp=E,16nm,1.3s,mb5.0						
225A	**Deer Hill, Car**	**62.36**	**327**	*i*P	P	21 33 27.0	-0.2
	baz=62						
126A	**Clayton Basin,**	**62.39**	**328**	*i*P	P	21 33 27.1	-0.3
	baz=62,SNR=9.6						
Z27A	**Tatum**	**62.54**	**329**	*i*P	P	21 33 27.3	-1.1
	baz=63						
224A	**Cornudas Mount**	**62.69**	**327**	*i*P	P	21 33 28.5	-0.9
	baz=63						
125A	**Gardner Draw,**	**62.72**	**328**	P	P	21 33 28.6	-1.0
	baz=63,SNR=11						
MSTX	**Muleshoe**	**62.87**	**330**	P	P	21 33 29.8	-0.8
	baz=63,SNR=11						
Z26A	**Caprock**	**62.88**	**329**	P	P	21 33 29.9	-0.7
	baz=63,SNR=10						
ALLY	**Allegheny Colle**	**63.07**	**352**	*e*P	P	21 33 31.1	-0.6
	comp=E,36nm,1.0s,mb5.5						
AMTX	**Amarillo**	**63.13**	**331**	*e*P	P	21 33 31.2	-1.0
	comp=E,5.7nm,0.8s,mb4.8						
124A	**Stringfield Ra**	**63.15**	**327**	*i*P	P	21 33 32.2	-0.2
	baz=63						
BINY	**Binghamton**	**63.18**	**355**	*e*P	P	21 33 32.5	+0.1
	comp=E,20nm,1.1s,mb5.2						
Z25A	**Roswell**	**63.25**	**328**	*i*P	P	21 33 32.4	-0.6
	baz=63,SNR=14						
TRY	**Troy**	**63.57**	**357**	*e*P	P	21 33 35.4	+0.4
X26A	**CR and CF Fran**	**63.84**	**330**	*i*P	P	21 33 36.4	-0.5
	baz=64,SNR=8.3						
W27A	**Bowe Ranch, En**	**63.91**	**330**	*i*P	P	21 33 36.6	-0.8
	baz=64,SNR=5.2						
Z23A	**Rita Site, Whi**	**63.99**	**327**	*i*P	P	21 33 37.8	-0.2
	baz=64,SNR=7.0						
220A	**Playas Peak, P**	**64.15**	**324**	*i*P	P	21 33 39.0	0.0
	baz=64,SNR=17						
X25A	**Clemmons Ranch**	**64.23**	**329**	*i*P	P	21 33 38.6	-0.9
	baz=64,SNR=6.4						
121A	**Cookes Peak, D**	**64.23**	**325**	*i*P	P	21 33 39.3	-0.3
	baz=64,SNR=9.3						
Z22A	**Elephant Butte**	**64.37**	**326**	*i*P	P	21 33 40.6	+0.2
	baz=64,SNR=7.8						
Y23A	**Lovelace Mesa,**	**64.44**	**327**	*i*P	P	21 33 40.6	-0.3
	baz=65,SNR=8.0						
318A	**Bisbee**	**64.61**	**323**	*i*P	P	21 33 42.2	+0.1
	baz=65,SNR=22						
219A	**White Tail Can**	**64.62**	**324**	*i*P	P	21 33 42.3	+0.2
	baz=65,SNR=13						
W25A	**X Bar L Ranch,**	**64.69**	**329**	*i*P	P	21 33 41.7	-0.9
	baz=65,SNR=6.6						
120A	**U Bar Ranch, L**	**64.70**	**325**	*i*P	P	21 33 42.3	-0.4
	baz=65,SNR=6.7						
KSU1	**Kansas State U**	**64.73**	**338**	*e*P	P	21 33 42.9	+0.2
Z21A	**St. Cloud Mine**	**64.78**	**326**	*i*P	P	21 33 43.6	+0.5
	baz=65,SNR=9.5						
V26A	**Tequesquite Ra**	**64.85**	**330**	P	P	21 33 42.9	-0.6
	baz=65,SNR=13						
BNM	**Barren Site**	**64.90**	**327**	*e*P	P	21 33 42.5	-1.4
	comp=E,11nm,1.3s,mb4.7						
Y22A	**Socorro**	**64.90**	**327**	*i*P	P	21 33 44.3	+0.3
	baz=65,SNR=7.9						
LPM	**Los Pinos Moun**	**65.03**	**327**	*e*P	P	21 33 45.0	+0.3
218A	**Dragoon**	**65.04**	**323**	P	P	21 33 45.6	+0.8
	baz=65,SNR=5.8						
Z20A	**Nine Sixteen R**	**65.11**	**325**	P	P	21 33 46.2	+0.9
	baz=65,SNR=10						
V25A	**Rancho No Teng**	**65.27**	**330**	P	P	21 33 45.9	-0.3
	baz=65,SNR=6.4						
U26A	**Atchley Ranch,**	**65.32**	**331**	P	P	21 33 46.2	-0.4
	baz=66,SNR=7.5						
Y21A	**Point of Rocks**	**65.32**	**326**	*i*P	P	21 33 47.5	+0.8
	baz=66,SNR=8.9						
217A	**Green Valley**	**65.33**	**323**	P	P	21 33 47.2	+0.5
	baz=66,SNR=8.2						
LAZ	**Ladron**	**65.36**	**327**	*e*P	P	21 33 47.5	+0.7
	comp=E,11nm,1.3s,mb4.7						
ANMO	**Albuquerque**	**65.45**	**328**	*e*P	P	21 33 47.5	+0.1
	comp=E,9.3nm,1.1s,mb4.7						
V24A	**Rampart Ranch,**	**65.49**	**329**	P	P	21 33 47.3	-0.4
	baz=66,SNR=7.9						
118A	**Homack Ranch,**	**65.50**	**324**	P	P	21 33 48.2	+0.4
	baz=66,SNR=5.5						
Y20A	**Horse Springs,**	**65.61**	**326**	P	P	21 33 49.2	+0.7
	baz=66,SNR=10						
U25A	**Circle Dot Ran**	**65.63**	**330**	P	P	21 33 48.4	-0.2
	baz=66,SNR=20						
CBKS	**Cedar Bluff**	**65.66**	**335**	*e*P	P	21 33 48.3	-0.4
	comp=E,32nm,0.9s,mb5.3						
TUC	**Tucson**	**65.71**	**323**	*e*P	P	21 33 49.4	+0.2
	comp=E,13nm,1.4s,mb4.8						
X21A	**Alamocita Cree**	**65.72**	**327**	P	P	21 33 50.2	+1.0
	baz=66,SNR=11						
W22A	**Albuquerque**	**65.75**	**328**	*i*P	P	21 33 50.4	+1.0
	baz=66						
216A	**Three Points,**	**65.86**	**322**	*i*P	P	21 33 50.6	+0.4
	baz=66						
117A	**Oracle**	**65.88**	**323**	P	P	21 33 50.8	+0.5
	baz=66,SNR=11						
V23A	**Ortiz Mt. (NFS**	**65.94**	**329**	P	P	21 33 51.4	+0.8
	baz=66,SNR=5.2						
Y19A	**Nutrioso**	**66.11**	**325**	*i*P	P	21 33 52.0	+0.3
	baz=66,SNR=25						
X20A	**Quemado**	**66.17**	**326**	P	P	21 33 53.0	+0.9
	baz=66,SNR=6.5						
W21A	**San Fidel**	**66.17**	**327**	*i*P	P	21 33 52.8	+0.7
	baz=66						
JFWS	**Jewell Farm**	**66.28**	**344**	*e*P	P	21 33 51.3	-1.3
	comp=E,15nm,0.8s,mb5.1						
Y18A	**Canyon Day Jun**	**66.40**	**324**	*i*P	P	21 33 54.1	+0.5
	baz=66						
U23A	**El Rito**	**66.42**	**329**	P	P	21 33 54.2	+0.6
	baz=67,SNR=6.8						
116A	**Eloy**	**66.42**	**322**	*i*P	P	21 33 54.2	+0.5
	baz=66						
V22A	**San Miguel Ran**	**66.43**	**328**	P	P	21 33 54.5	+0.8
	baz=67,SNR=19						
X19A	**St. Johns**	**66.49**	**325**	*i*P	P	21 33 54.9	+0.8
	baz=67						
214A	**Organ Pipe Nat**	**66.61**	**321**	*i*P	P	21 33 55.7	+0.7
	baz=67						
S25A	**Robets Cordova**	**66.67**	**331**	P	P	21 33 55.2	0.0
	baz=67,SNR=10						
U22A	**Llaves**	**66.78**	**328**	P	P	21 33 56.9	+1.0
	baz=67,SNR=7.4						
Y17A	**Roosevelt**	**66.78**	**324**	P	P	21 33 56.9	+0.8
	baz=67,SNR=16						
Z16A	**Peralta Trail,**	**66.84**	**323**	*i*P	P	21 33 57.1	+0.7
	baz=67,SNR=6.0						
S24A	**Houchin Ranch,**	**67.01**	**330**	P	P	21 33 58.0	+0.5
	baz=67,SNR=8.4						
V20A	**Brimhall**	**67.12**	**327**	P	P	21 33 58.6	+0.5
	baz=67,SNR=6.1						
U21A	**Nageezi**	**67.21**	**328**	P	P	21 33 59.2	+0.6
	baz=67,SNR=9.7						
SDCO	**Great Sand Dun**	**67.23**	**330**	*i*P	P	21 33 59.1	+0.3
	baz=67						
SDCO	**Great Sand Dun**	**67.23**	**330**	*e*P	P	21 33 58.7	-0.1
	comp=E,16nm,1.0s,mb5.0						
114A	**Black Gap (USA**	**67.23**	**322**	P	P	21 33 59.7	+0.8
	baz=67,SNR=6.2						
Y16A	**Circle Bar Ran**	**67.27**	**324**	*i*P	P	21 33 58.9	-0.2
	baz=67						
V19A	**Window Rock**	**67.36**	**327**	*i*P	P	21 33 58.5	-1.1
	baz=68						
R24A	**Sanders Place,**	**67.44**	**331**	P	P	21 34 00.6	+0.5
	baz=68,SNR=7.4						
T21A	**Navajo Lake**	**67.59**	**328**	*i*P	P	21 34 01.9	+0.8
	baz=68						
U20A	**Newcomb**	**67.60**	**327**	*i*P	P	21 34 01.6	+0.4
	baz=68,SNR=7.4						
X16A	**Lo Mia Camp, P**	**67.65**	**324**	P	P	21 34 02.5	+1.0
	baz=68,SNR=5.7						
S22A	**4UR Ranch, Cre**	**67.85**	**329**	*i*P	P	21 34 03.0	+0.3
	baz=68,SNR=8.9						
Q24A	**Divide**	**68.06**	**331**	*i*P	P	21 34 03.7	-0.3
	baz=68,SNR=7.9						
P25A	**Willow Gulch B**	**68.08**	**332**	*i*P	P	21 34 04.2	+0.1
	baz=68,SNR=10						
X15A	**Humboldt**	**68.14**	**324**	*i*P	P	21 34 05.0	+0.5
	baz=68,SNR=12						
Y14A	**Wickenburg**	**68.17**	**323**	*i*P	P	21 34 05.1	+0.4
	baz=68						
W16A	**Flagstaff**	**68.20**	**324**	*i*P	P	21 34 04.9	0.0
	baz=68,SNR=10						
R22A	**Saguache, Gunn**	**68.20**	**330**	*i*P	P	21 34 05.4	+0.5
	baz=68,SNR=6.0						
T19A	**Beclabito**	**68.21**	**327**	P	P	21 34 05.1	+0.2
	baz=68,SNR=8.6						
MVCO	**Mesa Verde**	**68.24**	**328**	*i*P	P	21 34 05.0	-0.2
	baz=68,SNR=10.0						
MVCO	**Mesa Verde**	**68.24**	**328**	*e*P	P	21 34 05.5	+0.4
	comp=E,15nm,0.8s,mb5.1						
S21A	**Coal Bank Pass**	**68.25**	**329**	*i*P	P	21 34 05.3	+0.1
	baz=68,SNR=11						
WUAZ	**Wupatki**	**68.43**	**325**	*i*P	P	21 34 06.9	+0.5
	baz=69,SNR=11						
WUAZ	**Wupatki**	**68.43**	**325**	*e*P	P	21 34 07.2	+0.8
	comp=E,16nm,0.9s,mb5.1						
X14A	**Yava**	**68.49**	**323**	*i*P	P	21 34 07.0	+0.2
	baz=69,SNR=8.5

TIC	Toumodi	69.72	74	*e*P		P	21 34 23.7	+8.8			
	comp=E,6.2nm,0.3s,mb5.0										
R18A	Canyonlands Na	69.85	328	⇑P		P	21 34 15.0	-0.2			
	baz=70,SNR=8.2										
KIC	Kosan Boka	69.85	75	*e*P		P	21 34 19.5	+3.8			
	comp=E,14nm,0.4s,mb5.3										
DBIC	Dimbokro	69.88	74	P		P	21 34 15.7	-0.2			
	comp=E,4.5nm,0.7s,mb4.5,baz=210,slow=8.1,SNR=4.4										
PFO	Pinyon Flat Ob	69.94	320	⇑P		P	21 34 16.1	+0.3			
	baz=70										
PFO	Pinyon Flat Ob	69.94	320	*e*P		P	21 34 16.2	+0.4			
	comp=E,7.6nm,1.1s,mb4.5										
M24A	Cheyenne	69.98	333	P		P	21 34 16.4	+0.6			
	baz=70,SNR=7.3										
P20A	De Beque	69.99	329	⇑P		P	21 34 16.0	0.0			
	baz=70,SNR=5.0										
N23A	Red Feather La	69.99	332	⇑P		P	21 34 16.3	+0.3			
	baz=70,SNR=5.3										
U14A	Mt Trumbull	70.08	324	⇑P		P	21 34 16.7	+0.1			
	baz=70,SNR=12										
T15A	Red Dirt Ranch	70.09	325	⇑P		P	21 34 16.1	-0.6			
	baz=70,SNR=6.3										
V13A	Grand Canyon W	70.11	323	⇑P		P	21 34 17.5	+0.8			
	baz=70,SNR=14										
PHWY	Pilot Hill	70.11	333	*e*P		P	21 34 17.2	+0.5			
	comp=E,29nm,1.6s,mb5.0										
N22A	Wattenberg Ran	70.14	332	⇑P		P	21 34 17.1	+0.2			
	baz=70,SNR=8.6										
S16A	Weppner Ranch,	70.21	326	⇑P		P	21 34 17.6	+0.2			
	baz=70,SNR=7.9										
R17A	Hanksville Air	70.28	327	P		P	21 34 18.4	+0.6			
	baz=70,SNR=9.0										
GMRC	Granite Mounta	70.29	322	⇓P		P	21 34 18.6	+0.7			
	baz=70,SNR=8.3										
P19A	Cripple Cowboy	70.37	329	P		P	21 34 19.1	+0.7			
	baz=70,SNR=6.0										
O20A	White River Ci	70.42	330	⇑P		P	21 34 19.1	+0.6			
	baz=71,SNR=5.0										
T14A	Hurricane	70.50	325	⇑P		P	21 34 20.1	+0.9			
	baz=71,SNR=6.5										
V12A	Nelson	70.50	323	⇓P		P	21 34 19.6	+0.4			
	baz=71,SNR=7.6										
U13A	Pakoon Wash	70.51	324	⇓P		P	21 34 19.9	+0.7			
	baz=71,SNR=6.1										
Q18A	Rafter H Ranch	70.52	328	P		P	21 34 19.8	+0.6			
	baz=71,SNR=5.0										
SRU	San Rafael	70.72	328	P		P	21 34 20.8	+0.4			
	baz=71,SNR=14										
SRU	San Rafael	70.72	328	*e*P		P	21 34 20.9	+0.4			
	comp=E,14nm,0.8s,mb4.9										
U12A	Valley of Fire	70.84	323	P		P	21 34 22.1	+0.9			
	baz=71,SNR=11										
Q16A	Castle Valley	70.90	327	⇑P		P	21 34 21.6	+0.1			
	baz=71										
V11A	Goodsprings	70.91	322	⇑P		P	21 34 21.7	0.0			
	baz=71,SNR=7.1										
T13A	Saint George	70.92	324	⇓P		P	21 34 21.9	+0.2			
	baz=71,SNR=7.3										
R15A	Junction	70.93	326	⇑P		P	21 34 22.5	+0.7			
	baz=71										
O19A	Miners Draw (B	70.96	330	⇓P		P	21 34 21.7	-0.2			
	baz=71,SNR=5.8										
P18A	Preston Nutter	70.98	328	⇓P		P	21 34 22.5	+0.5			
	baz=71,SNR=17										
N20A	Spence Gulch,	70.98	330	⇑P		P	21 34 22.3	+0.4			
	baz=71,SNR=8.5										
CCUT	Cedar City	71.01	325	*e*P		P	21 34 23.9	+1.6			
	comp=E,17nm,0.8s,mb5.0										
MSU	Marysvale	71.10	326	*e*P		P	21 34 23.8	+1.0			
P17A	Butcher Ranch,	71.11	328	⇓P		P	21 34 23.0	+0.2			
	baz=71,SNR=8.5										
RWWY	Rawlins	71.19	332	*e*P		P	21 34 22.9	-0.3			
	comp=E,4.9nm,0.8s,mb4.5										
M21A	Separation Pea	71.19	331	⇑P		P	21 34 23.3	+0.1			
	baz=71,SNR=5.9										
S13A	Holt Ranch, En	71.30	325	⇓P		P	21 34 25.0	+1.0			
	baz=71,SNR=18										
GSC	Goldstone	71.33	321	⇑P		P	21 34 24.4	+0.2			
	baz=72,SNR=6.5										
GSC	Goldstone	71.33	321	*e*P		P	21 34 25.4	+1.2			
	comp=E,41nm,1.8s,mb5.1										
N19A	John Jarvie Ra	71.45	330	P		P	21 34 25.0	+0.1			
	baz=72,SNR=14										
M20A	Sweetwater, Wa	71.47	331	⇑P		P	21 34 25.0	+0.1			
	baz=72										
L21A	Rawlins	71.48	332	⇑P		P	21 34 24.4	-0.6			
	baz=72,SNR=10										
O17A	Robinson Place	71.66	328	⇓P		P	21 34 26.5	+0.4			
	baz=72,SNR=19										
K22A	Casper	71.67	333	⇓P		P	21 34 25.9	-0.2			
	baz=72										
T11A	Corn Creek, Al	71.80	324	⇓P		P	21 34 27.9	+1.0			
	baz=72,SNR=13										
R13A	O'Grain Ranch,	71.80	325	⇓P		P	21 34 28.0	+1.0			
	baz=72,SNR=7.9										
RSSD	Black Hills	71.86	335	*e*P		P	21 34 27.3	+0.1			
	comp=E,28nm,0.4s,mb5.5										
L20A	Wamsutter	71.95	331	⇑P		P	21 34 27.8	0.0			
	baz=72										
Q14A	Sevier Lake (B	72.03	326	⇑P		P	21 34 29.0	+0.6			
	baz=72,SNR=13										
O16A	Springville	72.04	328	⇓P		P	21 34 29.0	+0.6			
	baz=72,SNR=6.0										
DAU	Daniels Canyon	72.08	328	*e*P		P	21 34 29.5	+0.9			
NLU	North Lily Min	72.14	327	*e*P		P	21 34 30.1	+1.2			
	comp=E,22nm,1.6s,mb4.8										
FURC	Furnace Creek,	72.18	322	⇓P		P	21 34 28.7	-0.5			
	baz=72,SNR=7.3										
R12A	Pony Springs,	72.25	325	⇑P		P	21 34 30.2	+0.5			
	baz=72										
MPMC	Manual Prospec	72.25	321	P		P	21 34 30.3	+0.6			
	baz=72,SNR=7.6										
N17A	Moffit Pass	72.28	329	⇑P		P	21 34 30.6	+0.8			
	baz=72,SNR=9.9										
M18A	Lyman	72.29	330	⇓P		P	21 34 30.2	+0.3			
	baz=72										
P14A	Drum Mountains	72.37	327	⇑P		P	21 34 30.8	+0.4			
	baz=72,SNR=18										
Q13A	Wheeler Ranch,	72.39	326	⇑P		P	21 34 29.1	-1.4			
	baz=72,SNR=7.1										
K20A	Yellowstone Ra	72.47	332	⇑P		P	21 34 30.4	-0.4			
	baz=73,SNR=9.5										
L19A	Farson	72.49	331	⇑P		P	21 34 30.7	-0.3			
	baz=73,SNR=8.2										
N16A	Rees Ranch, Co	72.53	328	⇓P		P	21 34 30.8	-0.5			
	baz=73										
ISA	Isabella	72.56	321	⇑P		P	21 34 31.4	-0.2			
	baz=73,SNR=7.5										
ISA	Isabella	72.56	321	*e*P		P	21 34 32.4	+0.8			
	comp=E,14nm,0.9s,mb4.9										
M17A	Scullys Gap (B	72.61	329	⇓P		P	21 34 31.4	-0.3			
	baz=73,SNR=8.2										
L18A	Fontenelle, Gr	72.66	330	⇓P		P	21 34 32.3	+0.2			
	baz=73,SNR=17										
DUG	Dugway	72.69	327	⇓P		P	21 34 32.7	+0.4			
	baz=73,SNR=14										
DUG	Dugway	72.69	327	*e*P		P	21 34 33.0	+0.7			
	comp=E,27nm,1.5s,mb5.0										
AGMN	Agassiz Nation	72.76	342	*e*P		P	21 34 31.3	-1.1			
	comp=E,7.7nm,0.8s,mb4.7										
P13A	Bates Ranch, G	72.76	326	⇓P		P	21 34 33.7	+1.0			
	baz=73,SNR=9.9										
R11A	Troy Canyon, C	72.80	324	⇓P		P	21 34 33.4	+0.4			
	baz=73,SNR=13										
K19A	Absolon Red Bu	72.83	331	⇑P		P	21 34 32.9	-0.1			
	baz=73										
PKM	Peak Mountain	72.85	319	⇑P		P	21 34 34.1	+0.7			
	baz=73,SNR=7.5										
I21A	Big Trails, Te	72.94	333	P		P	21 34 33.4	-0.3			
	baz=73,SNR=15										
S10A	Tonopah Range,	73.05	323	⇑P		P	21 34 34.9	+0.5			
	baz=73,SNR=9.6										
N15A	Stansbury Isla	73.07	328	⇑P		P	21 34 34.5	+0.1			
	baz=73,SNR=5.8										
BW06	Boulder Array	73.10	331	P		P	21 34 34.3	-0.3			
	baz=73,SNR=5.6										
BW06	Boulder Array	73.10	331	*e*P		P	21 34 34.5	-0.1			
	comp=E,9.6nm,1.4s,mb4.5										
HWUT	Hardware Ranch	73.14	329	*e*P		P	21 34 35.0	+0.1			
	comp=E,11nm,0.8s,mb4.8										
Q11A	Duckwater	73.19	325	⇓P		P	21 34 35.5	+0.3			
	baz=73,SNR=13										
L17A	Cokeville	73.19	330	⇑P		P	21 34 34.6	-0.5			
	baz=73,SNR=6.9										
K18A	Toltan Ranch,	73.22	330	⇓P		P	21 34 35.6	+0.2			
	baz=73,SNR=8.5										
BGU	Big Grassy Mou	73.35	328	*e*P		P	21 34 34.4	-1.7			
	comp=E,10nm,1.2s,mb4.6										
SPUT	South Promonto	73.35	328	*e*P		P	21 34 34.4	-1.7			
	comp=E,25nm,1.4s,mb5.0										
N14A	Grayback Hills	73.37	327	⇓P		P	21 34 36.4	+0.2			
	baz=74,SNR=14										
I20A	Worland	73.41	332	⇑P		P	21 34 36.0	-0.4			
	baz=74,SNR=6.5										
M15A	Larsen Ranch,	73.46	328	⇑P		P	21 34 36.7	-0.1			
	baz=74,SNR=13										
Q10A	Clear Creek Ra	73.58	324	⇑P		P	21 34 37.9	+0.4			
	baz=74,SNR=6.6										
J18A	Kendall Valley	73.66	331	⇓P		P	21 34 37.8	-0.1			
	baz=74,SNR=15										
K17A	Gardner Place,	73.72	330	⇓P		P	21 34 38.3	+0.1			
	baz=74,SNR=5.2										
O12A	Currie	73.74	326	P		P	21 34 39.0	+0.6			
	baz=74,SNR=16										
H20A	Greybull	73.78	333	⇑P		P	21 34 38.1	-0.5			
	baz=74,SNR=6.6										
L15A	Malad City	73.84	329	⇑P		P	21 34 38.8	-0.2			
	baz=74,SNR=14										
HVU	Hansel Valley	73.86	328	*e*P		P	21 34 39.5	+0.4			
	comp=E,8.0nm,0.8s,mb4.7										
M14A	Sheep Mountain	73.94	328	⇑P		P	21 34 39.6	+0.1			
	baz=74,SNR=13										
I18A	Diamond G Ranc	73.95	331	⇑P		P	21 34 40.0	+0.4			
	baz=74,SNR=13										
K16A	Soda Springs	74.09	330	⇓P		P	21 34 41.1	+0.7			
	baz=74,SNR=16										
REDW	Red Top Meadow	74.16	330	*e*P		P	21 34 41.0	+0.2			
	comp=E,31nm,1.8s,mb4.9										
LOHW	Long Hollow	74.24	331	*e*P		P	21 34 41.5	+0.2			
	comp=E,6.2nm,0.8s,mb4.6										
M13A	Montello	74.24	327	P		P	21 34 41.4	+0.1			
	baz=74,SNR=5.5										
M13A	Montello	74.24	327	*e*P		P	21 34 41.4	0.0			
	comp=E,3.8nm,0.8s,mb4.4										
L14A	Malta	74.28	328	P		P	21 34 41.6	+0.1			
	baz=74,SNR=8.5										
TPAW	Teton Pass	74.30	331	*e*P		P	21 34 40.8	-0.9			
	comp=E,5.1nm,0.7s,mb4.6										
NVAR	Mina Array Bea	74.36	323	P		P	21 34 42.9	+0.7			
	comp=E,5.4nm,0.8s,mb4.5,baz=152,slow=6.7,SNR=33										
RRI2	Red Ridge	74.36	330	*e*P		P	21 34 40.8	-1.2			
	comp=E,48nm,1.4s,mb5.2										
K15A	Arbon	74.43	329	⇑P		P	21 34 42.8	+0.4			
	baz=75										
J16A	Bone	74.44	330	⇑P		P	21 34 43.0	+0.5			
	baz=75										
ULM	Lac du Bonnet	74.53	343	P		P	21 34 41.3	-1.6			
	comp=E,3.1nm,0.5s,mb4.5,baz=198,slow=2.5,SNR=3.5										
IMW	Indian Meadow	74.61	331	*e*P		P	21 34 44.0	+0.6			
	comp=E,34nm,1.8s,mb5.0										
FLWY	Flagg Ranch	74.65	331	*e*P		P	21 34 44.5	+0.8			
	comp=E,22nm,0.8s,mb5.1										
RLMT	Red Lodge	74.83	333	⇓P		P	21 34 44.7	0.0			
	baz=75,SNR=13										
RLMT	Red Lodge	74.83	333	*e*P		P	21 34 45.0	+0.3			
	comp=E,10nm,0.8s,mb4.8										
I16A	Newdale	74.85	330	⇓P		P	21 34 44.8	0.0			
	baz=75,SNR=6.1										
LAO	LASA Array	74.85	335	⇑P		P	21 34 44.4	-0.4			
	baz=75										
LAO	LASA Array	74.85	335	*e*P		P	21 34 43.3	-1.5			
	comp=E,33nm,1.4s,mb5.1										
F20A	Billings	74.90	334	⇑P		P	21 34 44.9	-0.2			
	baz=75										
J15A	Blackfoot	74.93	330	⇑P		P	21 34 45.4	+0.1			
	baz=75,SNR=13										
WAKR	Walker	75.06	322	*e*P		P	21 34 47.3	+1.2			
E21A	Keefer Ranch,	75.07	335	⇑P		P	21 34 46.2	+0.2			
	baz=75										
G18A	Lazy EL Ranch,	75.12	332	P		P	21 34 46.4	+0.1			
	baz=75,SNR=12										
F19A	Roth Farm, Mol	75.28	333	P		P	21 34 47.4	+0.1			
	baz=75,SNR=7.9										
CMB	Columbia Colle	75.29	321	*e*P		P	21 34 47.9	+0.4			
	comp=E,15nm,1.8s,mb4.6										
H16A	Russell Place,	75.38	331	⇑P		P	21 34 48.3	+0.5			
	baz=76,SNR=9.0										
J14A	Carey	75.39	329	⇓P		P	21 34 47.8	-0.1			
	baz=76,SNR=10										
E20A	Meyer Farm, Mu	75.46	334	⇑P		P	21 34 48.4	+0.2			
	baz=76										
GCMT	Greycliff	75.54	333	*e*P		P	21 34 48.0	-0.8			
	comp=E,3.5nm,0.6s,mb4.5										
DGMT	Dagmar	75.58	337	*e*P		P	21 34 49.5	+0.6			
	comp=E,16nm,0.8s,mb5.0										
F18A	Big Timber	75.65	333	⇑P		P	21 34 49.5	+0.1			
	baz=76,SNR=17										
SCHQ	Schefferville	75.66	2	P		P	21 34 47.9	-1.3			
	comp=E,1.3nm,0.6s,mb4.1,baz=234,slow=14,SNR=3.6										
E19A	Rath Farm, Rou	75.70	334	⇓P		P	21 34 49.7	+0.1			
	baz=76										
J13A	Cove Ranch, Pi	75.76	329	⇓P		P	21 34 50.0	-0.1			
	baz=76,SNR=6.0										
I14A	Mackay	75.81	329	⇑P		P	21 34 51.4	+1.1			
	baz=76										
PAHR	Pah Rah Range	75.85	323	*e*P		P	21 34 51.7	+1.0			
	comp=E,22nm,0.8s,mb5.1										
D20A	Manuel Ranch,	75.94	334	⇓P		P	21 34 51.1	+0.1			
	baz=76										
SBA	Scott Base	76.00	191	P		P	21 34 50.8	-0.3			
HLID	Hailey	76.00	329	⇓P		P	21 34 51.9	+0.5			
	baz=76,SNR=14										
HLID	Hailey	76.00	329	*e*P		P	21 34 52.2	+0.7			
G16A	Moss Hill, Enn	76.04	331	⇑P		P	21 34 52.1	+0.5			
	baz=76										
F17A	Fitzpatrick Pl	76.06	332	⇑P		P	21 34 51.9	+0.2			
	baz=76,SNR=7.3										
I13A	Withorsee Cree	76.12	329	⇑P		P	21 34 52.8	+0.7			
	baz=76,SNR=13										
MCMT	McKenzie Canyo	76.21	330	*e*P		P	21 34 51.3	-1.3			
	comp=E,7.4nm,1.3s,mb4.5										
E18A	Harlowton	76.25	333	⇓P		P	21 34 52.7	-0.1			
	baz=76,SNR=5.8										
BOZ	Bozeman (W)	76.28	332	⇓P		P	21 34 52.8	-0.1			
	baz=76,SNR=6.0										
H14A	Leadore	76.29	330	⇑P		P	21 34 53.6	+0.6			
	baz=76,SNR=6.6										
G15A	Dillon	76.30	331	⇑P		P	21 34 53.2	+0.1			
	baz=76,SNR=7.8										
F16A	Kennard Place,	76.39	332	⇑P		P	21 34 53.6	0.0			
	baz=76										
I12A	Atlanta	76.52	328	⇓P		P	21 34 54.7	+0.3			
	baz=77,SNR=8.8										
E17A	Martinsdale	76.58	332	⇓P		P	21 34 55.1	+0.5			
	baz=77,SNR=9.8										
MFID	Camas Ranch	76.59	328	⇑P		P	21 34 55.2	+0.4			
	baz=77,SNR=6.2										
H13A	Challis	76.67	329	⇑P		P	21 34 55.6	+0.4			
	baz=77										
D18A	Linhart Farms,	76.71	334	⇓P		P	21 34 55.5	+0.1			
	baz=77										
LRM	Limekiln Ridge	76.78	331	*e*P		P	21 34 56.5	+0.7			
H12A	Diamond D Ranc	76.94	329	⇓P		P	21 34 57.2	+0.4			
	baz=77,SNR=7.3										
D17A	Six Diamond Ra	77.04	333	⇑P		P	21 34 57.2	0.0			
	baz=77,SNR=13										
G13A	Cobalt	77.05	330	⇓P		P	21 34 57.8	+0.5			
	baz=77,SNR=36										
F14A	Wisdom	77.19	331	⇓P		P	21 34 58.9	+0.8			
	baz=77										
D16A	Dana Ranch, Ca	77.32	332	⇓P		P	21 34 59.2	+0.4			
	baz=78,SNR=12										
E15A	Deer Lodge	77.33	331	⇑P		P	21 34 58.9	+0.1			
	baz=78										
EGMT	Eagleton	77.34	334	⇓P		P	21 34 58.5	-0.4			
	baz=78										
EGMT	Eagleton	77.34	334	*e*P		P	21 34 58.9	0.0			
	comp=E,14nm,1.3s,mb4.7										
SYO	Syowa Base	77.35	160	⇑*e*P		pP	21 35 11.9	-0.5			
C17A	Wharram Farm,	77.45	333	⇓P		P	21 34 59.3	-0.2			
	baz=78										
G12A	Big Creek, Yel	77.60	329	⇓P		P	21 35 00.3	-0.1			
	baz=78										
F13A	Darby	77.62	330	⇑P		P	21 35 00.5	0.0			
	baz=78										
B18A	Beardsley Farm	77.65	334	⇑P		P	21 35 00.4	-0.2			
	baz=78										
E14A	Clinton	77.71	331	⇓P		P	21 35 00.8	-0.2			
	baz=78										
D15A	Lincoln	77.75	332	⇓P		P	21 35 01.4	+0.2			
	baz=78										
MOD	Modoc	77.86	324	*e*P		P	21 35 02.6	+0.7			
J08A	Circle Bar Ran	77.89	326	⇓P		P	21 35 02.0	0.0			
	baz=78										
B17A	L&G Farms, Che	77.98	334	⇓P		P	21 35 01.8	-0.7			
	baz=78										
C16A	Fuhringer Ranc	78.00	333	⇑P		P	21 35 02.0	-0.5			
	baz=78,SNR=5.7										
F12A	Elk City	78.03	330	⇓P		P	21 35 02.7	0.0			
	baz=78,SNR=5.4										
E13A	Victor	78.04	331	⇓P		P	21 35 02.9	0.0			
	baz=78,SNR=8.6										
A18A	Metzger Ranch,	78.09	335	⇑P		P	21 35 02.7	-0.4			
	baz=78										
MSO	Missoula	78.22	331	⇑P		P	21 35 04.4	+0.6			
	baz=78										
MSO	Missoula	78.22	331	*e*P		P	21 35 04.6	+0.8			
	comp=E,7.5nm,1.4s,mb4.4										
C15A	Salmond Ranch,	78.35	332	⇑P		P	21 35 04.8	+0.3			
	baz=78,SNR=14										
TORD	Torodi Ar. Bea	78.45	71	P		P	21 35 05.2	-0.6			
	comp=E,1.5nm,0.4s,mb4.3,baz=253,slow=4.8,SNR=13										
A17A	Triple J Farms	78.46	334	⇓P		P	21 35 04.8	-0.3			
	baz=79,SNR=8.4										
D13A	Huson	78.65	331	⇓P		P	21 35 06.5	+0.3			
	baz=79										
K05A	Summer Lake	78.74	325	⇓P		P	21 35 06.4	-0.4			
	baz=79,SNR=6.1										
B15A	Bradely Ranch,	78.74	333	⇓P		P	21 35 06.3	-0.3			
	baz=79,SNR=8.2										
SWMT	Swartz Lake	78.76	331	*e*P		P	21 35 07.4	+0.7			
A16A	West Butte Ran	78.83	334	P		P	21 35 07.2	0.0			
	baz=79,SNR=13										
C14A	Swan Lake	78.84	332	⇑P		P	21 35 07.0	-0.3			
	baz=79										
I07A	Izee	78.93	326	⇑P		P	21 35 07.7	-0.1			
	baz=79,SNR=8.8										
D12A	Red Ives Fores	79.03	330	⇓P		P	21 35 08.5	+0.3			
	baz=79										
B14A	Marquette Ranc	79.08	332	⇑P		P	21 35 08.5	-0.1			
	baz=79										
F10A	Beach Ranch, E	79.13	329	⇑P		P	21 35 09.1	+0.3			
	baz=79,SNR=6.4										
C13A	Hot Springs	79.14	331	⇓P		P	21 35 09.4	+0.5			
	baz=79										
BSMT	Bassoo Peak	79.37	331	*e*P		P	21 35 11.0	+0.9			
G08A	Pilot Rock	79.50	327	P		P	21 35 11.2	+0.4			
	baz=80,SNR=6.4										
A14A	Double T Ranch	79.61	333	⇑P		P	21 35 11.1	-0.3			
	baz=80										
B13A	Whitefish	79.62	332	⇓P		P	21 35 10.9	-0.6			
	baz=80,SNR=5.9										
WALA	Waterton Lakes	79.89	333	*e*P		P	21 35 11.4	-1.5			
E09A	Wood Farm, Sta	79.96	329	⇓P		P	21 35 13.1	-0.3			
	baz=80										
A13A	Flathead Natio	80.01	332	⇓P		P	21 35 13.7	+0.2			
	baz=80										
C11A	Tepee Creek (N	80.03	331	⇓P		P	21 35 13.9	+0.3			
	baz=80										
B12A	Libby	80.19	331	⇓P		P	21 35 14.9	+0.4			
	baz=80										
G06A	Carlson Farm,	80.31	327	⇑P		P	21 35 15.8	+0.5			
	baz=80										
HAWA	Hanford	80.56	328	*e*P		P	21 35 17.0	+0.5			
A12A	Yaak River Ran	80.56	332	P		P	21 35 17.1	+0.7			
	baz=81,SNR=5.4										
RSW	Rattlesnake Hi	80.59	328	*e*P		P	21 35 17.7	+1.0			
NEW	Newport	80.73	330	*e*P		P	21 35 15.8	-1.6			
OD2	Odessa Site #2	80.86	329	*e*P		P	21 35 18.3	+0.2			
HOOD	Mount Hood Mea	80.90	326	*e*P		P	21 35 19.3	+0.9			
	comp=E,30nm,1.4s,mb5.0										
C09A	Chrisman Ranch	80.94	330	⇑P		P	21 35 19.0	+0.5			
	baz=81,SNR=6.9										
TSUM

GYA			PKPab	PKPab	21 44 44.3	-0.8
GYA			PKS		21 46 43.6	
GYA			PP	PP	21 48 37.5	+1.3
GYA			SKKS	SKKSac	21 55 19.3	-0.6
GYA			SS	SS	22 09 47.8	-3.0
GYA			AMB	AMB		
	comp=Z,120nm,8.0s					
GYA			LR	LR		
	comp=N,130nm,22.8s					
GYA			LR	LR		
	comp=E,110nm,21.0s					
GYA			LR	LR		
	comp=Z,120nm,23.8s					

ISCJB **17** *21:28:36.3±0.6,34.°9S±0.°1×108.°3W±0.°1, h10km, mb4.3/12, MS4.5/7, Error ellipse: s-maj=17.8km s-min=12.3km az=25.8*
IDC **17** *21:28:36.4±0.7,34.°92S×108.°32W, h0km, mb4.2/8, mb1 4.3/8, mb1mx4.3/15, mbtmp4.2/8, MS4.4/8, Ms1 4.4/8, ms1mx4.3/12, Error ellipse: s-maj=24.0km s-min=21.9km az=163.0*
NEIC **17** *21:28:38.0±0.5,34.°81S×108.°29W, h10km, mb4.5/4, Error ellipse: s-maj=16.4km s-min=11.2km az=202.0*
GCMT **17** *21:28:43.4±0.2,35.°04S×108.°26W, h18km±1km, MW5.2, Moment Tensor Solution. s45,c57; s79,c124; Moment tensor: Scale 10¹⁶Nm; Mrr-1.30±.20; Mθθ-1.02±.17; Mφφ2.32±.18; Mrθ-2.29±.43; Mrφ-5.31±.15; Mθφ-2.83±.44; Best double couple: M₀6.70000×10¹⁶ NP1:φs103.00000°, δ62.00000°, λ-162.00000°. NP2:φs5.00000°, δ74.00000°, λ-29.00000°. Principal axes: T 6.3500, Plg8.0000°, Azm56.0000°; N 0.7400, Plg57.0000°, Azm159.0000°; P -7.0800, Plg32.0000°, Azm321.0000°; Data Used: ll IU G IC CN.*

ISC 17 21:28:38.3±0.6,34.°9S±0.°1×108.°3W±0.°1, h10km, n37, σ0=97/17, mb4.3/12, MS4.5/7, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**7.76**	**353**	LR	LR	21 32 51.8	
	comp=Z,1μm,18.1s,baz=153,slow=33						
PTCN	**Pitcairn Islan**	**21.22**	**291**	P	**P**	**21 33 23.7**	**-0.5**
RKT	**Rikitea**	**26.02**	**290**	*e*T		22 00 49.5	
	1.2nm,0.2s						
PLCA	**Paso Flores**	**30.23**	**112**	*e*P	**P**	**21 34 51.9**	**+2.8**
	3.0nm,0.6s,mb4.2						
LCO	**Las Campanas**	**32.30**	**90**	*e*P	**P**	**21 35 07.2**	**-0.2**
	22nm,1.5s,mb4.8						
CFAA	**Coronel Fontan**	**33.51**	**96**	P	**P**	**21 35 17.1**	**-0.9**
	0.3nm,0.5s,mb3.5,baz=254,slow=9.2,SNR=5.3						
USHA	**Ushuaia**	**33.98**	**138**	LR	LR	21 45 09.1	
	comp=Z,1μm,19.1s,MS4.7,baz=14,slow=29						
NNA	**Nana**	**36.50**	**59**	*e*P	**P**	**21 35 42.4**	**-1.5**
	6.3nm,0.6s,mb4.6						
TAOE	**Nuku Hiva Isla**	**38.98**	**304**	*e*LR	LR	21 46 53.6	
	902nm,26.7s						
TAOE				*e*LR	LR	21 46 53.6	
	902nm,26.7s						
TAOE	**Nuku Hiva Isla**	**38.98**	**304**	P	**P**	**21 36 05.0**	**+0.1**
MEH	**Mehetia**	**39.15**	**285**	*e*T		22 17 14.4	
	78nm,0.2s						
PMSA	**Palmer Station**	**39.96**	**152**	P	**P**	**21 36 12.2**	**-0.3**
TIAR	**Tiarei**	**40.34**	**285**	*e*T		22 18 43.6	
	15nm,0.3s						
LPAZ	**La Paz**	**40.35**	**73**	*e*P	**P**	**21 36 16.7**	**+0.4**
	6.6nm,0.7s,mb4.5						
LPAZ				LR	LR	21 48 53.9	
LPAZ	**La Paz**	**40.35**	**73**	P	**P**	**21 36 17.5**	**+1.2**
	6.7nm,0.7s,mb4.5,baz=244,slow=4.5,SNR=30						
LPAZ				LR	LR	21 48 53.9	
	comp=Z,497nm,20.7s,MS4.3,baz=20,slow=30						
PPT	**Papeete**	**40.51**	**284**	*e*LQ		21 45 37.5	
	2μm,30.0s						
PPT				*e*LQ		21 45 37.5	
	2μm,30.0s						
PPT				*e*LR	LR	21 47 20.7	
	421nm,23.8s						
PPT				*e*LR	LR	21 47 20.7	
	421nm,23.8s						
PPT	**Papeete**	**40.51**	**284**	LR	LR	21 48 44.5	
	comp=Z,394nm,19.5s,MS4.3,baz=180,slow=30						
SIV	**San Ignacio**	**46.14**	**78**	P	**P**	**21 37 02.3**	**-0.8**
	3.0nm,0.7s,mb4.3,baz=240,slow=8.5,SNR=13						
ROSC	**El Rosal**	**50.82**	**46**	*e*P	**P**	**21 37 39.7**	**+0.6**
ROSC				LR	LR	21 55 18.0	
ROSC	**El Rosal**	**50.82**	**46**	P	**P**	**21 37 41.0**	**+1.9**
	11nm,0.7s,mb4.9,baz=96,slow=23,SNR=8.9						
ROSC				LR	LR	21 55 18.0	
	comp=Z,200nm,20.1s,MS4.1,baz=181,slow=32						
QSPA	**South Pole Qui**	**55.35**	**180**	P	**P**	**21 38 11.8**	**+0.2**
	1.8nm,1.1s,mb4.0,baz=139,slow=9.3,SNR=2.7						
TXAR	**Lajitas Array**	**63.99**	**4**	P	**P**	**21 39 12.2**	**+0.4**
	0.2nm,0.5s,mb3.4,baz=191,slow=8.6,SNR=5.3						
NVAR	**Mina Array Bea**	**73.50**	**352**	P	**P**	**21 40 12.1**	**+1.2**
	4.2nm,1.1s,mb4.3,baz=180,slow=8.2,SNR=14						
DZM	**Mont Dzumac**	**74.00**	**254**	*e*LR	LR	22 02 41.1	
	486nm,30.6s						
DZM				*e*LR	LR	22 02 41.1	
	486nm,30.6s						
MAW	**Mawson**	**77.64**	**177**	LR	LR	22 14 10.8	
	comp=Z,164nm,18.4s,MS4.4,baz=300,slow=35						
HLID	**Hailey**	**78.24**	**355**	*e*P	**P**	**21 40 37.8**	**0.0**
	6.6nm,1.3s,mb4.4						
ULM	**Lac du Bonnet**	**85.45**	**8**	P	**P**	**21 41 14.5**	**-1.1**
	3.1nm,0.7s,mb4.6,baz=185,slow=3.2,SNR=3.0						
STKA	**Stephens Creek**	**86.65**	**233**	LR	LR	22 14 08.0	
	comp=Z,232nm,20.8s,MS4.6,baz=205,slow=32						
WRA	**Warramunga Arr**	**99.36**	**238**	LR	LR	22 23 07.7	
	comp=Z,346nm,21.0s,MS4.8,baz=180,slow=33						
FINES	**FINESS Array B**	**140.83**	**33**	PKP	PKPdf	21 48 08.2	+0.7
	0.9nm,0.7s,baz=325,slow=3.0,SNR=4.2						
AKASG	**Malin Array Be**	**145.57**	**49**	PKPbc	PKPbc	21 48 14.2	-2.2
	1.7nm,0.7s,baz=268,slow=4.4,SNR=5.2						
BRTR	**Keskin Array B**	**149.49**	**69**	PKPbc	PKPbc	21 48 26.6	-0.9
	2.0nm,0.9s,baz=264,slow=1.7,SNR=10						
CMAR	**Chiang Mai Arr**	**150.82**	**243**	PKPbc	PKPbc	21 48 31.8	+0.4
	1.5nm,1.0s,baz=197,slow=2.8,SNR=9.0						
CMAR				PKPab	PKPab	21 48 37.9	-0.7
	1.8nm,0.9s,baz=215,slow=1.8,SNR=6.1						
SONM	**Songino Array**	**151.16**	**307**	PKPbc	PKPbc	21 48 30.4	-0.9
	2.4nm,1.0s,baz=119,slow=2.7,SNR=11						
ZALV	**Zalesovo Beam**	**158.80**	**338**	PKPab	PKPab	21 49 10.0	-1.4
	0.3nm,0.4s,baz=358,slow=4.5,SNR=4.3						
BVAR	**Borovoye Array**	**161.81**	**3**	PKPab	PKPab	21 49 24.2	-0.3
	0.8nm,0.8s,baz=328,slow=5.3,SNR=5.1						
MKAR	**Makanchi Array**	**165.65**	**329**	PKPab	PKPab	21 49 41.2	-0.4
	1.0nm,1.1s,baz=17,slow=8.9,SNR=4.2						

DDA **17** *22:11:20.9,37.°01N×29.°18E, h7km±4km, Md3.0*
ISK **17** *22:11:20.5,37.°09N×29.°13E, h8km, MD2.7*
ISCJB **17** *22:11:21.4±0.6,37.°05N±0.°03×29.°15E±0.°04, h10km, Error ellipse: s-maj=4.8km s-min=3.8km az=42.1*
CSEM **17** *22:11:21.1±0.1,36.°99N×29.°12E, h2km, MD2.7, Error ellipse: s-maj=2.6km s-min=1.9km az=23.0*

ISC 17 22:11:21.5±0.6,37.°02N±0.°04×29.°13E±0.°04, h8km±16km, n20, σ0=98/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.32**	**66**	*e*PG	**Pg**	**22 11 26.6**	**-1.2**
GLHS				*e*SG	**Sg**	**22 11 32.1**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.32**	**66**	*e*Pg	**Pg**	**22 11 26.6**	**-1.2**
GLHS				*e*Sg	**Sg**	**22 11 32.2**	**+0.1**
GOLH	**Golhisar**	**0.41**	**58**	*i* P	**Pg**	**22 11 27.8**	**-1.6**
GOLH				*i* S	**Sg**	**22 11 34.8**	**+0.1**
GOLH	**Golhisar**	**0.41**	**58**	*i* P	**Pg**	**22 11 27.8**	**-1.5**
GOLH				*i* S	**Sg**	**22 11 34.8**	**+0.1**
DNZL	**Cakiroluk**	**0.67**	**354**	*i* P	**Pg**	**22 11 33.9**	**-0.5**
DNZL				*i* S	**Sg**	**22 11 44.2**	**+1.2**
DNZL	**Cakiroluk**	**0.67**	**354**	*i* P	**Pg**	**22 11 33.9**	**-0.4**
DNZL				*i* S	**Sg**	**22 11 44.2**	**+1.1**
ELL	**Elmali**	**0.68**	**114**	*e*PG	**Pg**	**22 11 34.4**	**-0.2**
ELL				*e*SG	**Sg**	**22 11 45.0**	**+1.5**
ELL	**Elmali**	**0.68**	**114**	*e*Pg	**Pg**	**22 11 34.4**	**-0.2**
ELL				*e*Sg	**Sg**	**22 11 45.0**	**+1.5**
YER	**Yerkesik**	**0.69**	**280**	*e*PG	**Pg**	**22 11 34.6**	**-0.1**
YER	**Yerkesik**	**0.69**	**280**	*e*Pg	**Pg**	**22 11 34.6**	**-0.1**
DENT	**Denizli**	**0.73**	**354**	*e*PG	**Pg**	**22 11 33.7**	**-1.8**
DENT	**Denizli**	**0.73**	**354**	*e*Pg	**Pg**	**22 11 33.7**	**-1.9**
AKAS	**Kas**	**0.88**	**154**	*i* P	**Pg**	**22 11 37.8**	**-0.5**
AKAS				*i* S	**Sg**	**22 11 53.3**	**+3.6**
AKAS	**Kas**	**0.88**	**154**	*i* P	**Pg**	**22 11 37.8**	**-0.5**
AKAS				*i* S	**Sg**	**22 11 53.3**	**+3.6**
AYDN	**Tasoluk**	**1.18**	**303**	*i* P	**Pg**	**22 11 43.8**	**-0.3**
AYDN				*i* S	**Sg**	**22 12 00.2**	**+0.7**
AYDN	**Tasoluk**	**1.18**	**303**	*i* P	**Pg**	**22 11 43.8**	**-0.3**
AYDN				*i* S	**Sg**	**22 12 00.2**	**+0.7**
DAT	**Datca**	**1.28**	**257**	*e*PN	**Pn**	**22 11 45.5**	**-0.1**
DAT	**Datca**	**1.28**	**257**	*e*Pn	**Pn**	**22 11 45.6**	**0.0**
KHAL	**Karahalli**	**1.38**	**12**	*i* P	**Pg**	**22 11 49.2**	**+1.4**
KHAL				*i* S	**Sg**	**22 12 06.2**	**+0.5**
KHAL	**Karahalli**	**1.38**	**12**	*i* P	**Pg**	**22 11 49.2**	**+1.4**
KHAL				*i* S	**Sg**	**22 12 06.2**	**+0.5**

ISCJB **17** *22:27:01.0±1.1,35.°75S±0.°2×104.°9W±0.°3, h10km, mb4.0/6, MS4.2/4, Error ellipse: s-maj=29.6km s-min=24.3km az=4.9*
IDC **17** *22:27:02.2±2.4,35.°47S×105.°03W, h0km, mb3.9/4, mb1 4.1/4, mb1mx4.0/11, mbtmp3.9/4, MS4.1/4, Ms1 4.1/4, ms1mx3.9/7, Error ellipse: s-maj=70.8km s-min=42.2km az=9.0*
NEIC **17** *22:27:03.1±0.8,35.°64S×104.°87W, h10km, mb4.4/2, Error ellipse: s-maj=22.5km s-min=20.4km az=108.0*
GCMT **17** *22:27:07.4±0.4,35.°51S×105.°10W, h18km±1km, MW4.9, Moment Tensor Solution. s19,c21; s65,c94; Moment tensor: Scale 10¹⁶Nm; Mrr-0.50±.16; Mθθ-0.56±.14; Mφφ1.07±.14; Mrθ-0.28±.33; Mθφ-2.89±.12; Mφr-0.39±.31; Best double couple: M₀3.10000×10¹⁶ NP1:φs98.00000°, δ81.00000°, λ-174.00000°. NP2:φs7.00000°, δ84.00000°, λ-9.00000°. Principal axes: T 3.2600, Plg2.0000°, Azm53.0000°; N -0.4200, Plg79.0000°, Azm154.0000°; P -2.8400, Plg11.0000°, Azm323.0000°; Data Used: ll IU G CN.*

ISC 17 22:27:03.3±1.1,35.°6S±0.°2×104.°9W±0.°3, h10km, n12, σ0=73/8, mb4.0/6, MS4.2/4, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**29.55**	**87**	*e*P	**P**	**22 33 06.8**	**-1.3**
	2.6nm,0.5s,mb4.2						
LPAZ	**La Paz**	**37.98**	**69**	P	**P**	**22 34 22.4**	**+1.0**
LPAZ	**La Paz**	**37.98**	**69**	P	**P**	**22 34 22.4**	**+1.0**
	3.1nm,1.2s,mb3.9,baz=236,slow=3.6,SNR=6.6						
ROSC	**El Rosal**	**49.46**	**42**	P	**P**	**22 35 54.3**	**+0.5**
	2.8nm,0.5s,mb4.6,baz=90,slow=20,SNR=3.5						
ROSC				LR	LR	22 52 51.3	
	comp=Z,235nm,19.9s,MS4.2,baz=205,slow=31						
QSPA	**South Pole Qui**	**54.56**	**180**	P	**P**	**22 36 31.3**	**+0.3**
	5.3nm,1.2s,mb4.5						
TXAR	**Lajitas Array**	**64.64**	**1**	P	**P**	**22 37 40.8**	**-0.2**
	0.2nm,0.7s,mb3.3,baz=179,slow=7.5,SNR=4.3						
TXAR				LR	LR	22 59 24.9	
	comp=Z,93nm,18.2s,MS4.0,baz=195,slow=30						
NVAR	**Mina Array Bea**	**74.74**	**349**	P	**P**	**22 38 42.7**	**-0.3**
NVAR	**Mina Array Bea**	**74.74**	**349**	P	**P**	**22 38 42.7**	**-0.3**
	0.9nm,0.9s,mb3.7,baz=172,slow=8.2,SNR=3.9						
STKA	**Stephens Creek**	**88.36**	**231**	LR	LR	23 14 29.5	
	comp=Z,162nm,19.6s,MS4.5,baz=45,slow=32						
SCHQ	**Schefferville**	**95.87**	**21**	LR	LR	23 16 37.3	
	comp=Z,64nm,20.9s,MS4.1,baz=111,slow=31						
BRTR	**Keskin Array B**	**147.15**	**70**	PKPbc	PKPbc	22 46 47.3	+0.9
	1.2nm,1.0s,baz=276,slow=2.8,SNR=3.3						
SONM	**Songino Array**	**153.85**	**307**	PKPbc	PKPbc	22 47 02.3	0.0
	0.3nm,0.4s,baz=54,slow=2.5,SNR=2.7						

ISCJB **17** *22:44:07.0±0.6,39.°98N±0.°06×40.°66E±0.°03, h10km, Error ellipse: s-maj=8.4km s-min=3.4km az=4.8*
DDA **17** *22:44:06.8,39.°97N×40.°70E, h6km±6km, Md2.8*
ISK **17** *22:44:06.7,40.°11N×40.°70E, h5km, MD2.9*
CSEM **17** *22:44:08.2±0.2,40.°08N×40.°61E, h12km, MD2.8, Error ellipse: s-maj=7.8km s-min=4.6km az=176.0*

ISC 17 22:44:07.7±0.5,40.°03N±0.°07×40.°69E±0.°03, h8km±7km, n19, σ0=90/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOPT	**Kop Dagi**	**0.14**	**266**	*i* P	**Pg**	**22 44 11.8**	**+1.0**
KOPT				*i* S	**Sg**	**22 44 16.4**	**+3.5**
KOPT	**Kop Dagi**	**0.14**	**266**	*i* P	**Pg**	**22 44 11.8**	**+1.0**
KOPT				*i* S	**Sg**	**22 44 16.4**	**+3.5**
EZM	**Erzurum**	**0.54**	**103**	PG	**Pg**	**22 44 18.2**	**+0.2**
EZM				*e*SG	**Sg**	**22 44 25.3**	**+0.3**
ERZM	**Erzurum**	**0.54**	**103**	*i* P	**Pg**	**22 44 17.0**	**-1.1**
ERZM				*i* S	**Sg**	**22 44 24.5**	**-0.6**
GUMT	**Gumushane**	**1.02**	**295**	*e*PG	**Pg**	**22 44 26.5**	**-0.7**
GUMT				*e*SG	**Sg**	**22 44 40.1**	**-0.4**
GUMT	**Gumushane**	**1.02**	**295**	*e*Pg	**Pg**	**22 44 26.5**	**-0.7**
GUMT				*e*Sg	**Sg**	**22 44 40.1**	**-0.4**
EZC	**Erzincan**	**1.06**	**255**	*e*PN	**Pg**	**22 44 27.7**	**-0.4**
KELT	**Kelkit**	**1.10**	**277**	*i* P	**Pg**	**22 44 27.6**	**-1.3**
KELT				*i* S	**Sg**	**22 44 43.4**	**+0.2**
KELT	**Kelkit**	**1.10**	**277**	*i* P	**Pg**	**22 44 27.6**	**-1.3**
KELT				*i* S	**Sg**	**22 44 43.4**	**+0.2**
DDEM	**Demirkent**	**1.19**	**43**	*e*P	**Pb**	**22 44 31.8**	**+1.4**
DDEM				*i* S	**Sb**	**22 44 46.9**	**+1.0**
DDEM	**Demirkent**	**1.19**	**43**	*e*P	**Pb**	**22 44 31.8**	**+1.4**
DDEM				*i* S	**Sb**	**22 44 46.8**	**+1.0**
DBAD	**Bademkaya**	**1.25**	**38**	*i* P	**Pn**	**22 44 30.8**	**-0.6**
DBAD	**Bademkaya**	**1.25**	**38**	*i* P	**Pn**	**22 44 30.8**	**-0.6**
PTK	**Pertek**	**1.51**	**222**	*e*PN	**Pn**	**22 44 36.4**	**+1.3**
PTK	**Pertek**	**1.51**	**222**	*e*Pn	**Pn**	**22 44 36.4**	**+1.4**
BCA	**Borcka**	**1.58**	**26**	*e*PN	**Pn**	**22 44 35.6**	**-0.4**
BCA	**Borcka**	**1.58**	**26**	*e*Pn	**Pn**	**22 44 35.6**	**-0.4**
ESPY	**Espiye-Giresun**	**1.74**	**301**	*e*PN	**Pn**	**22 44 37.3**	**-0.7**
ESPY	**Espiye-Giresun**	**1.74**	**301**	*e*Pn	**Pn**	**22 44 37.3**	**-0.8**

IDC **17** *22:51:07.3±0.9,58.°32S×25.°34W, h0km, mb4.2/5, mb1 4.2/5, mb1mx4.0/12, mbtmp4.2/5, Error ellipse: s-maj=36.4km s-min=25.6km az=32.0*
ISCJB **17** *22:51:10.4±0.7,58.°4S±0.°1×25.°4W±0.°2, h35km, mb4.2/8, Error ellipse: s-maj=20.9km s-min=12.4km az=173.6*
NEIC **17** *22:51:12.2±0.3,58.°33S×25.°37W, h35km, mb4.2/7, Error ellipse: s-maj=13.2km s-min=7.5km az=177.0*

ISC 17 22:51:12.3±0.7,58.°4S±0.°1×25.°4W±0.°2, h35km, n20, σ0=46/14, mb4.2/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMSA	**Palmer Station**	**19.20**	**234**	*e*P	**Pn**	**22 55 33.0**	**-0.8**
	25nm,1.0s						
TRQA	**Tornquist**	**31.17**	**295**	*e*P	**P**	**22 57 27.5**	**-0.1**
	4.8nm,1.2s,mb4.2						
PLCA	**Paso Flores**	**33.41**	**282**	*e*P	**P**	**22 57 47.4**	**+0.2**
	3.5nm,0.9s,mb4.3						
MAW	**Mawson**	**37.68**	**141**	*e*P	**P**	**22 58 24.4**	**+0.8**
	0.3nm,0.3s,mb3.5						
MAW	**Mawson**	**37.68**	**141**	P	**P**	**22 58 24.6**	**+1.0**
	1.1nm,0.4s,mb4.0,baz=267,slow=18,SNR=6.4						
SUR	**Sutherland**	**40.42**	**70**	P	**P**	**22 58 46.1**	**-0.7**
LCO	**Las Campanas**	**42.73**	**293**	P	**P**	**22 59 06.0**	**+0.2**
BOSA	**Boshof**	**45.70**	**72**	*e*P	**P**	**22 59 29.5**	**0.0**
	2.4nm,0.6s,mb4.3						
BOSA	**Boshof**	**45.70**	**72**	P	**P**	**22 59 29.5**	**0.0**
	1.9nm,0.6s,mb4.2,baz=202,slow=13,SNR=7.1						
TSUM	**Tsumeb**	**50.07**	**57**	*e*P	**P**	**23 00 03.1**	**-0.3**
	2.8nm,0.9s,mb4.3						
LPAZ	**La Paz**	**52.53**	**305**	*e*P	**P**	**23 00 22.4**	**+0.5**
	0.8nm,0.7s,mb3.8						
LPAZ	**La Paz**	**52.53**	**305**	P	**P**	**23 00 22.4**	**+0.5**
	0.6nm,0.5s,mb3.8,baz=168,slow=3.4,SNR=3.2						
DBIC	**Dimbokro**	**66.95**	**22**	P	**P**	**23 02 01.1**	**0.0**
	4.4nm,0.8s,mb4.5,baz=265,slow=17,SNR=5.3						
TORD	**Toroidi Ar. Bea**	**74.67**	**27**	P	**P**	**23 02 48.1**	**+0.2**
	1.0nm,0.4s,mb4.1,baz=198,slow=6.2,SNR=32						
FINES	**FINESS Array B**	**126.02**	**28**	PKP	PKPdf	23 10 08.3	-0.7
FINES	**FINESS Array B**	**126.02**	**28**	PKP	PKPdf	23 10 08.3	-0.7
	1.3nm,0.8s,baz=116,slow=8.7,SNR=7.9						
BVAR	**Borovoye Array**	**135.21**	**59**	PKP	PKPdf	23 10 26.7	0.0
	0.5nm,0.5s,baz=95,slow=1.8,SNR=4.3						
YKA	**Yellowknife Ar**	**138.56**	**315**	PKP	PKPdf	23 10 32.6	0.0
	0.6nm,0.5s,baz=129,slow=2.4,SNR=4.6						
SONM	**Songino Array**	**149.84**	**89**	PKPbc	PKPbc	23 10 57.4	-0.1
	1.5nm,0.4s,baz=232,slow=3.8,SNR=12						
ILAR	**Eielson Array**	**152.38**	**308**	PKPbc	PKPbc	23 11 02.5	-0.2
	1.3nm,0.9s,baz=130,slow=2.5,SNR=11						
ILAR				PKPab	PKPab	23 11 15.4	+2.2
	1.1nm,0.8s,baz=140,slow=2.6,SNR=7.6						

DDA **17** *22:55:53.4,36.°52N×26.°08E, h16km±6km, Md3.4*
CSEM **17** *22:55:57.4±0.3,36.°73N×26.°48E, h154km±4km, MD3.4, Error ellipse: s-maj=5.7km s-min=4.0km az=152.0*
ISCJB **17** *22:55:57.5±0.6,36.°74N±0.°04×26.°46E±0.°03, h147km±7km, Error ellipse: s-maj=6.1km s-min=4.4km az=163.2*
THE **17** *22:55:59.9,36.°75N×26.°50E, h163km±7km, ML2.7/2, Error ellipse: s-maj=7.2km s-min=1.4km az=100.0*
HLW **17** *22:55:59.9,36.°42N×26.°82E, h19km±36km, Ml3.0*
ISK **17** *22:56:01.9,36.°91N×26.°58E, h106km, MD3.4*

ISC 17 22:55:58.2±0.6,36.°74N±0.°04×26.°47E±0.°03, h145km±7km, n63, σ0=95/88, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BODT	**Bodrum**	**0.75**	**64**	*e*PG	**Pn**	**22 56 20.2**	**-0.3**
APE	**Apeiranthos**	**0.82**	**294**	*e*PG	**Pn**	**22 56 22.0**	**+0.9**
APE				*e*SG	**Sn**	**22 56 37.2**	**-1.2**
APE	**Apeiranthos**	**0.82**	**294**	P	**Pn**	**22 56 21.6**	**+0.6**
APE	**Apeiranthos**	**0.82**	**294**	P	**Pn**	**22 56 21.6**	**+0.6**
BDRM	**Kayabasi**	**0.85**	**67**	*i* P	**Pn**	**22 56 21.8**	**+0.6**
BDRM	**Kayabasi**	**0.85**	**67**	*i* P	**Pn**	**22 56 21.8**	**+0.6**
THR2	**Thira island,**	**0.88**	**251**	P	**Pn**	**22 56 22.5**	**+1.0**
THR2	**Thira island,**	**0.88**	**251**	P	**Pn**	**22 56 22.5**	**+1.0**
THR1	**Thera Island**	**0.89**	**246**	P	**Pn**	**22 56 22.5**	**+0.9**
THR1	**Thera Island**	**0.89**	**246**	P	**Pn**	**22 56 22.5**	**+0.9**
DAT	**Datca**	**0.89**	**90**	*e*PG	**Pn**	**22 56 21.9**	**+0.3**
THR3	**Thira Island,**	**0.92**	**249**	P	**Pn**	**22 56 22.9**	**+1.1**
THR3	**Thira Island,**	**0.92**	**249**	P	**Pn**	**22 56 22.9**	**+1.1**
MLSB	**Milas**	**1.19**	**62**	*e*PG	**Pn**	**22 56 24.2**	**0.0**
MLSB	**Milas**	**1.19**	**62**	*e*Pg	**Pn**	**22 56 24.8**	**+0.6**
ARG	**Arkhangelos**	**1.44**	**111**	P	**Pn**	**22 56 27.1**	**+0.4**
ARG				S	**Sn**	**22 56 47.5**	**-0.9**
ARG	**Arkhangelos**	**1.44**	**111**	P	**Pn**	**22 56 27.1**	**+0.4**
ARG				S	**Sn**	**22 56 47.5**	**-0.9**
AYDN	**Tasoluk**	**1.46**	**50**	*i* P	**Pn**	**22 56 27.6**	**+0.7**
AYDN	**Tasoluk**	**1.46**	**50**	*i* P	**Pn**	**22 56 27.6**	**+0.7**
YER	**Yerkesik**	**1.51**	**74**	*e*PN	**Pn**	**22 56 28.0**	**+0.7**
YER	**Yerkesik**	**1.51**	**74**	*e*Pn	**Pn**	**22 56 28.0**	**+0.6**
URLA	**Izmir**	**1.62**	**4**	*i* P	**Pn**	**22 56 27.6**	**-1.1**
URLA				*i* S	**Sn**	**22 56 50.7**	**-1.4**
URLA	**Izmir**	**1.62**	**4**	*i* P	**Pn**	**22 56 27.6**	**-1.1**
URLA				*i* S	**Sn**	**22 56 50.7**	**-1.4**
ZKR	**Zakros**	**1.63**	**187**	P	**Pn**	**22 56 29.6**	**+0.7**
ZKR				S	**Sn**	**22 56 53.2**	**+0.9**
ZKR	**Zakros**	**1.63**	**187**	P	**Pn**	**22 56 29.6**	**+0.7**
ZKR				S	**Sn**	**22 56 53.2**	**+0.9**
CHOS	**Chios island**	**1.68**	**349**	P	**Pn**	**22 56 29.5**	**+0.2**
CHOS				S	**Sn**	**22 56 53.0**	**-0.2**
CHOS	**Chios island**	**1.68**	**349**	P	**Pn**	**22 56 29.5**	**+0.2**
CHOS				S	**Sn**	**22 56 53.0**	**-0.2**
BLCB	**Balcova**	**1.71**	**15**	*e*PN	**Pn**	**22 56 30.1**	**+0.4**
BLCB	**Balcova**	**1.71**	**15**	*e*Pn	**Pn**	**22 56 30.1**	**+0.5**
IZM	**Izmir**	**1.77**	**21**	*e*PN	**Pn**	**22 56 29.5**	**-0.9**
DNZL	**Cakiroluk**	**2.27**	**64**	*i* P	**Pn**	**22 56 37.0**	**+0.4**
DNZL				*i* S	**Sn**	**22 57 05.3**	**-0.1**
DNZL	**Cakiroluk**	**2.27**	**64**	*i* P	**Pn**	**22 56 37.0**	**+0.8**
DNZL				*i* S	**Sn**	**22 57 05.3**	**-0.1**
KARN	**Karanos**	**2.46**	**238**	P	**Pn**	**22 56 39.0**	**+0.4**
KARN				S	**Sn**	**22 57 08.9**	**-0.7**
KARN	**Karanos**	**2.46**	**238**	P	**Pn**	**22 56 39.0**	**+0.4**
KARN				S	**Sn**	**22 57 08.9**	**-0.7**
GLHS	**Glhisar (BURDU**	**2.46**	**79**	*e*PN	**Pn**	**22 56 39.4**	**+0.8**
GLHS	**Glhisar (BURDU**	**2.46**	**79**	*e*Pn	**Pn**	**22 56 39.4**	**+0.8**
KULA	**Kula-Manisa**	**2.48**	**44**	*e*PN	**Pn**	**22 56 38.7**	**-0.1**
KULA	**Kula-Manisa**	**2.48**	**44**	*e*Pn	**Pn**	**22 56 38.7**	**-0.2**
GOLH	**Golhisar**	**2.53**	**78**	*i* P	**Pn**	**22 56 39.4**	**0.0**
GOLH				*i* S	**Sn**	**22 57 09.0**	**-2.1**
GOLH	**Golhisar**	**2.53**	**78**	*i* P	**Pn**	**22 56 39.4**	**0.0**
GOLH				*i* S	**Sn**	**22 57 09.0**	**-2.1**
AKAS	**Kas**	**2.58**	**100**	*i* P	**

PTVM			*i* S	Sn	23 17 50.4	+1.7
ZIIG	**Zihuatanejo**	**3.89 293**	*e*P	Pn	23 17 06.3	-2.0
ZIIG			*i* S	Sn	23 17 46.1	-7.3
ZIIG	**Zihuatanejo**	**3.89 293**	*e*P	Pn	23 17 06.3	-2.0
ZIIG			*i* S	Sn	23 17 46.1	-7.3

ISK ***17*** *23:40:41.7, 37.°00N×29.°50E, h29km, MD2.6*
ISCJB ***17*** *23:40:45.2±0.5, 37.°09N±0.°03×29.°70E±0.°05, h3km±8km, Error ellipse: s-maj=7.1km s-min=4.0km az=142.2*
DDA ***17*** *23:40:45.1, 37.°10N×29.°70E, h7km±4km, Md3.0*
CSEM ***17*** *23:40:45.0±0.3, 37.°09N×29.°72E, h2km, MD2.6, Error ellipse: s-maj=7.3km s-min=4.8km az=52.0*

ISC 17 23:40:45.4±0.5,**37.°10N**±0.°03×**29.°71E**±0.°05,**h7**km±6km, **n19,**σ**1°01/35, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.18**	**288**	*e*PG	**Pg**	**23 40 48.0**	**-1.2**
GLHS				*e*SG	**Sg**	**23 40 52.1**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.18**	**288**	*e*Pg	**Pg**	**23 40 48.0**	**-1.1**
GLHS				*e*Sg	**Sg**	**23 40 52.1**	**+0.5**
GOLH	**Golhisar**	**0.18**	**318**	*i* P	**Pg**	**23 40 47.5**	**-1.7**
GOLH				*i* S	**Sg**	**23 40 51.2**	**-0.5**
GOLH	**Golhisar**	**0.18**	**318**	*i* P	**Pg**	**23 40 47.5**	**-1.7**
GOLH				*i* S	**Sg**	**23 40 51.2**	**-0.5**
ELL	**Elmali**	**0.39**	**156**	*e*PG	**Pg**	**23 40 52.0**	**-1.0**
ELL				*e*SG	**Sg**	**23 40 58.1**	**+0.1**
ELL	**Elmali**	**0.39**	**156**	*e*Pg	**Pg**	**23 40 52.0**	**-0.9**
ELL				*e*Sg	**Sg**	**23 40 58.1**	**+0.1**
KORT	**Korkueli**	**0.52**	**101**	*i* P	**Pg**	**23 40 55.9**	**+0.4**
KORT				*i* S	**Sg**	**23 41 05.9**	**+3.6**
KORT	**Korkueli**	**0.52**	**101**	*i* P	**Pg**	**23 40 55.9**	**+0.4**
KORT				*i* S	**Sg**	**23 41 05.9**	**+3.6**
BCK	**Bucak**	**0.79**	**63**	*e*PG	**Pg**	**23 40 59.7**	**-0.9**
BCK	**Bucak**	**0.79**	**63**	*e*Pg	**Pg**	**23 40 59.7**	**-0.8**
DNZL	**Cakiroluk**	**0.79**	**318**	*i* P	**Pg**	**23 41 02.2**	**+1.5**
DNZL				*i* S	**Sg**	**23 41 11.9**	**+0.9**
DNZL	**Cakiroluk**	**0.79**	**318**	*i* P	**Pg**	**23 41 02.2**	**+1.5**
DNZL				*i* S	**Sg**	**23 41 11.9**	**+0.9**
AKAS	**Kas**	**0.87**	**186**	*i* P	**Pg**	**23 41 01.2**	**-0.9**
AKAS				*i* S	**Sg**	**23 41 15.0**	**+1.5**
AKAS	**Kas**	**0.87**	**186**	*i* P	**Pg**	**23 41 01.2**	**-1.0**
AKAS				*i* S	**Sg**	**23 41 15.0**	**+1.5**
YER	**Yerkesik**	**1.14**	**272**	*e*PG	**Pg**	**23 40 59.7**	**-7.7**
KHAL	**Karahalli**	**1.28**	**352**	*e*P	**Pn**	**23 41 09.0**	**-0.7**
KHAL				*i* S	**Sg**	**23 41 27.5**	**+0.9**
KHAL	**Karahalli**	**1.28**	**352**	*e*P	**Pn**	**23 41 09.0**	**-0.7**
KHAL				*i* S	**Sg**	**23 41 27.5**	**+0.9**
AYDN	**Tasoluk**	**1.56**	**291**	*i* P	**Pn**	**23 41 14.4**	**+0.8**
AYDN				*i* S	**Sn**	**23 41 33.5**	**-0.6**
AYDN	**Tasoluk**	**1.56**	**291**	*i* P	**Pn**	**23 41 14.4**	**+0.8**
AYDN				*i* S	**Sn**	**23 41 33.5**	**-0.6**

MAN 17 23:53:16,8.°99N×122.°95E,h26km,mb4.2,ML3.1,MS2.8, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.45**	**39**	⇑*i*P	Pb	23 53 27.0	+1.6
SNPH				*i* S	Sb	23 53 35.3	+3.6
TBP	**Tagbilaran**	**1.13**	**52**	*e*P	Pn	23 53 37.6	+1.4
TBP				*e*S	Sn	23 53 52.4	+1.5
PAGZ	**Pagadian**	**1.22**	**159**	*e*P	Pn	23 53 38.0	+0.7
PAGZ				*e*S	Sn	23 53 53.7	+0.8
GUIM	**Jordan**	**1.66**	**348**	*e*P	Pn	23 53 44.3	+0.9
GUIM				*e*S	Sn	23 54 01.9	-2.0

ISCJB ***17*** *23:58:32.9±0.6, 10.°29N±0.°02×69.°67W±0.°02, h13km±3km, mb4.0/23, MS3.4/8, Error ellipse: s-maj=3.2km s-min=3.0km az=139.1*
NEIC ***17*** *23:58:33.6, 10.°24N×69.°68W, h5km, mb4.4/10, MW4.6(CAR), After CAR.*
NEIC Felt at Barquisimeto.
IDC ***17*** *23:58:33.3±0.6, 10.°50N×69.°79W, h0km, mb3.8/12, mb1 4.1/15, mb1mx4.0/23, mbtmp4.0/15, ML4.1/1, MS3.4/9, Ms1 3.4/9, ms1mx3.3/27, Error ellipse: s-maj=17.2km s-min=15.4km az=36.0*
FUNV ***17*** *23:58:33.8, 10.°25N×69.°69W, h2km, MW4.6*

ISC 17 23:58:33.7±0.4,**10.°26N**±0.°02×**69.°68W**±0.°02,**h7**km±3km, **n102,**σ**0°93/129,mb4.0/23,MS3.4/8,9C-6D,Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CURV	**Curarigua**	**0.37**	**228**	*e*P	**Pg**	**23 58 40.3**	**-0.6**
CURV				*e*S	**Sg**	**23 58 45.4**	**-0.5**
CURV	**Curarigua**	**0.37**	**228**	⇑*i*P	**Pg**	**23 58 39.9**	**-1.0**
CURV				*e*S	**Sg**	**23 58 45.4**	**-0.5**
SIQV	**Siquisique**	**0.40**	**342**	*e*P	**Pg**	**23 58 41.3**	**-0.3**
SIQV				*e*S	**Sg**	**23 58 47.7**	**+0.8**
SIQV	**Siquisique**	**0.40**	**342**	⇓*i*P	**Pg**	**23 58 41.5**	**-0.1**
SIQV				*e*S	**Sg**	**23 58 47.7**	**+0.8**
TEPV	**Terepaima**	**0.57**	**122**	⇓*e*P	**Pg**	**23 58 44.6**	**0.0**
TEPV				*e*S	**Sg**	**23 58 53.3**	**+1.2**
SANV	**Sanarito**	**0.77**	**169**	*e*P	**Pg**	**23 58 47.0**	**-1.5**
SANV				*e*S	**Sg**	**23 58 58.1**	**-0.5**
SANV	**Sanarito**	**0.77**	**169**	⇓*e*P	**Pg**	**23 58 48.0**	**-0.5**
SANV				*e*S	**Sg**	**23 58 59.2**	**+0.6**
QARV	**Quebrada Arrib**	**0.83**	**266**	*e*P	**Pg**	**23 58 49.1**	**-0.6**
QARV				*e*S	**Sg**	**23 59 01.0**	**+0.5**
QARV	**Quebrada Arrib**	**0.83**	**266**	⇓*e*P	**Pg**	**23 58 49.5**	**-0.3**
QARV				*e*S	**Sg**	**23 59 01.0**	**+0.5**
DABV	**Dabajuro**	**1.15**	**305**	*e*P	**Pg**	**23 58 55.1**	**-0.6**
DABV				*e*S	**Sg**	**23 59 11.4**	**+0.8**
DABV	**Dabajuro**	**1.15**	**305**	*e*P	**Pg**	**23 58 55.6**	**-0.1**
DABV				*e*S	**Sg**	**23 59 11.4**	**+0.8**
JACV	**Jacura**	**1.17**	**46**	*e*P	**Pg**	**23 58 55.9**	**-0.3**
JACV				*e*S	**Sg**	**23 59 12.7**	**+1.2**
JACV	**Jacura**	**1.17**	**46**	⇑*e*P	**Pg**	**23 58 56.5**	**+0.3**
JACV				*e*S	**Sg**	**23 59 12.7**	**+1.2**
MAPV	**Macapo**	**1.28**	**110**	⇓*e*P	**Pn**	**23 58 58.1**	**+0.1**
SDV	**Santo Domingo**	**1.66**	**215**	*e*Pn	**Pn**	**23 59 03.7**	**+0.4**
SDV				*e*Sn	**Sn**	**23 59 27.9**	**+3.1**
MONV	**Montecano**	**1.71**	**350**	*e*P	**Pn**	**23 59 03.5**	**-0.4**
MONV				*e*S	**Sn**	**23 59 26.2**	**+0.2**
MONV	**Montecano**	**1.71**	**350**	⇓*e*P	**Pn**	**23 59 03.4**	**-0.5**
MONV				*e*S	**Sn**	**23 59 26.2**	**+0.2**
TURV	**Turiamo**	**1.82**	**84**	*e*P	**Pn**	**23 59 04.7**	**-0.8**
TURV				*e*S	**Sn**	**23 59 28.5**	**-0.3**
TURV	**Turiamo**	**1.82**	**84**	⇑*e*P	**Pn**	**23 59 04.8**	**-0.7**
TURV				*e*S	**Sn**	**23 59 28.8**	**-0.1**
BAUV	**El Baul**	**2.08**	**129**	*e*P	**Pn**	**23 59 09.7**	**+0.7**
VIGV	**El Vigia**	**2.18**	**230**	*e*P	**Pn**	**23 59 10.2**	**-0.2**
VIGV				*e*S	**Sn**	**23 59 37.0**	**-0.7**
VIGV	**El Vigia**	**2.18**	**230**	⇑*e*P	**Pn**	**23 59 12.1**	**+1.7**
VIGV				*e*S	**Sn**	**23 59 36.9**	**-0.8**
SOCV	**Socops**	**2.28**	**211**	*e*P	**Pn**	**23 59 11.3**	**-0.5**
SOCV				*e*S	**Sn**	**23 59 39.0**	**-1.2**
SOCV	**Socops**	**2.28**	**211**	*e*P	**Pn**	**23 59 12.5**	**+0.6**
SOCV				*e*S	**Sn**	**23 59 38.8**	**-1.4**
IMOV	**Isla Los Monje**	**2.40**	**330**	*e*P	**Pn**	**23 59 13.4**	**-0.1**
IMOV				*e*S	**Sn**	**23 59 43.0**	**-0.2**
IMOV	**Isla Los Monje**	**2.40**	**330**	*e*P	**Pn**	**23 59 13.3**	**-0.2**
IMOV				*e*S	**Sn**	**23 59 43.0**	**-0.2**
VIRV	**Villa del Rosa**	**2.69**	**275**	*e*P	**Pn**	**23 59 16.9**	**-0.5**
VIRV				*e*S	**Sn**	**23 59 49.3**	**-1.1**
VIRV	**Villa del Rosa**	**2.69**	**275**	⇓*e*P	**Pn**	**23 59 16.9**	**-0.6**
VIRV				*e*S	**Sn**	**23 59 49.3**	**-1.1**
ELOV	**Elorza**	**3.25**	**177**	*e*P	**Pn**	**23 59 24.1**	**-1.0**
ELOV	**Elorza**	**3.25**	**177**	*e*P	**Pn**	**23 59 24.9**	**-0.2**
MERV	**Las Mercedes**	**3.48**	**106**	*e*P	**Pn**	**23 59 28.1**	**-0.3**
CAPV	**Capacho**	**3.53**	**228**	*e*P	**Pn**	**23 59 28.4**	**-0.6**
CAPV	**Capacho**	**3.53**	**228**	⇑*e*P	**Pn**	**23 59 30.2**	**+1.2**
ORCV	**Isla La Orchil**	**3.75**	**65**	*e*P	**Pn**	**23 59 30.8**	**-1.3**
CUPV	**Cœpira**	**3.84**	**93**	⇑*e*P	**Pn**	**23 59 34.0**	**+0.8**
CAOV	**Caicara del Or**	**4.42**	**131**	⇓*e*P	**Pn**	**23 59 41.0**	**-0.3**
PCRV	**Puerto La Cruz**	**4.97**	**91**	Pn	**Pn**	**23 59 50.5**	**+1.7**
	6.5nm,0.3s,baz=295,slow=4.7,SNR=20						
PCRV				Sn	**Sn**	**00 00 47.8**	**+1.3**
	11nm,0.3s,baz=259,slow=20,SNR=6.0						
PCRV				Lg		00 01 17.1	
	13nm,0.3s,baz=61,slow=20,SNR=3.7						
PCRV	**Puerto La Cruz**	**4.97**	**91**	*e*P	**Pn**	**23 59 49.2**	**+0.4**
PRGV	**PARIAGUAN**	**5.19**	**106**	*e*P	**Pn**	**23 59 51.0**	**-0.8**
IBAV	**Isla La Blanqu**	**5.24**	**72**	⇑*e*P	**Pn**	**23 59 50.8**	**-1.8**
GUNV	**Guanoco**	**6.63**	**90**	*e*P	**Pn**	**00 00 10.7**	**-1.0**
GURV	**El Guri**	**6.97**	**110**	*e*P	**Pn**	**00 00 14.1**	**-2.3**
ROSC	**El Rosal**	**7.08**	**221**	*e*Pn	**Pn**	**00 00 18.7**	**+0.9**
ROSC				*e*Sn	**Sn**	**00 01 38.4**	**-0.2**
ROSC	**El Rosal**	**7.08**	**221**	*e*Pn	**Pn**	**00 00 20.8**	**+3.0**
	13nm,0.3s,baz=92,slow=11,SNR=24						
ROSC				Sn	**Sn**	**00 01 40.1**	**+1.5**
	5.4nm,0.3s,baz=120,slow=16,SNR=4.4						
CRPR	**Cabo Rojo, PR**	**8.09**	**18**	*e*Pn	**Pn**	**00 00 31.0**	**-0.7**
	9.5nm,0.7s						
CRPR				Sn	**Sn**	**00 02 02.8**	**-0.7**
ICM	**Isla Caja Muer**	**8.18**	**22**	*e*Pn	**Pn**	**00 00 32.9**	**0.0**
ICM				*e*Sn	**Sn**	**00 02 05.0**	**-0.7**
OBIP	**Obispado Ponce**	**8.29**	**21**	*e*Pn	**Pn**	**00 00 34.7**	**+0.3**
CELP	**Cerrillos**	**8.33**	**21**	*e*Pn	**Pn**	**00 00 32.6**	**-2.3**
LRS	**Lares**	**8.44**	**19**	*e*Pn	**Pn**	**00 00 36.8**	**+0.3**
SJG	**San Juan**	**8.52**	**23**	Pn	**Pn**	**00 00 36.3**	**-1.3**
SJG				Sn	**Sn**	**00 02 01.7**	**-12**
SJG				LR	LR	00 04 14.0	
SJG	**San Juan**	**8.52**	**23**	Pn	**Pn**	**00 00 36.3**	**-1.3**
	6.5nm,0.3s,baz=196,slow=15,SNR=8.9						
SJG				Sn	**Sn**	**00 02 01.7**	**-12**
	4.1nm,0.3s,baz=12,slow=20,SNR=3.3						
SJG				LR	LR	00 04 14.0	
	comp=Z,192nm,19.0s,baz=238,slow=41						
AOPR	**Arecibo Observ**	**8.52**	**19**	*e*Pn	**Pn**	**00 00 37.3**	**-0.3**
HUMP	**Col San Antoni**	**8.67**	**25**	*e*Pn	**Pn**	**00 00 38.4**	**-1.2**
SDDR	**Presa de Saban**	**8.81**	**350**	*e*Pn	**Pn**	**00 00 42.7**	**+1.2**
SDDR				*e*Sn	**Sn**	**00 02 19.9**	**-1.2**
STVI	**Saint Thomas**	**9.25**	**29**	*e*Pn	**Pn**	**00 00 48.0**	**+0.4**
BCIP	**Isla Barro Col**	**10.07**	**265**	*e*Pn	**Pn**	**00 00 58.1**	**-0.8**
BCIP				*e*Sn	**Sn**	**00 02 52.4**	**+0.1**
BBGH	**Gun Hill**	**10.32**	**73**	Pn	**Pn**	**00 01 02.9**	**+0.6**
TEIG	**Tepich**	**20.47**	**301**	*e*P	**P**	**00 03 12.7**	**+0.5**
PAYG	**Puerto Ayora**	**23.20**	**243**	P	**P**	**00 03 41.5**	**0.0**
	16nm,0.8s,mb4.5						
NNA	**Nana**	**23.22**	**198**	*e*P	**P**	**00 03 41.4**	**-0.3**
CMIG	**Matias Romero**	**25.39**	**288**	LR	LR	00 14 45.8	
	comp=Z,76nm,22.0s,MS3.2,baz=273,slow=39						
LPAZ	**La Paz**	**26.43**	**177**	P	**P**	**00 04 16.2**	**+5.0**
	0.6nm,0.5s,mb3.4,baz=21,slow=8.6,SNR=4.5						
LPAZ				LR	LR	00 16 28.3	
	comp=Z,49nm,19.2s,MS3.1,baz=125,slow=40						
SIV	**San Ignacio**	**27.44**	**162**	P	**P**	**00 04 24.4**	**+3.9**
	0.4nm,0.6s,mb3.1,baz=348,slow=14,SNR=3.1						
TKL	**Tuckaleechee C**	**28.34**	**335**	LR	LR	00 18 38.8	
	comp=Z,92nm,18.5s,MS3.4,baz=269,slow=43						
WVT	**Waverly**	**30.56**	**330**	*e*P	**P**	**00 04 48.2**	**+0.1**
SIUC	**Southern Illin**	**32.50**	**330**	P	**P**	**00 05 04.2**	**-0.8**
MIAR	**Mount Ida**	**32.57**	**322**	*e*P	**P**	**00 05 05.2**	**-0.5**
WMOK	**Wichita Mounta**	**36.04**	**317**	*e*P	**P**	**00 05 36.0**	**+0.2**
TXAR	**Lajitas Array**	**36.98**	**306**	P	**P**	**00 05 43.7**	**-0.3**
TXAR	**Lajitas Array**	**36.98**	**306**	P	**P**	**00 05 43.7**	**-0.3**
	0.6nm,0.8s,mb3.5,baz=116,slow=5.7,SNR=5.2						
MNTX	**Cornudas Mount**	**39.30**	**308**	*e*P	**P**	**00 06 03.8**	**+0.3**
	3.2nm,1.2s,mb3.9						
ANMO	**Albuquerque**	**41.54**	**312**	*e*P	**P**	**00 06 22.4**	**+0.4**
SDCO	**Great Sand Dun**	**42.22**	**316**	*e*P	**P**	**00 06 27.9**	**+0.3**
	7.0nm,1.6s,mb4.0						
AGMN	**Agassiz Nation**	**43.82**	**335**	*e*P	**P**	**00 06 40.9**	**+0.6**
	8.0nm,0.8s,mb4.5						
SCHQ	**Schefferville**	**44.51**	**2**	P	**P**	**00 06 44.7**	**-1.0**
	4.6nm,0.9s,mb4.3,baz=143,slow=5.1,SNR=2.2						
PV01	**Paradox Valley**	**44.52**	**315**	*e*P	**P**	**00 06 52.5**	**+6.4**
	922nm,1.4s						
ULM	**Lac du Bonnet**	**45.36**	**337**	LR	LR	00 27 51.8	
	comp=Z,70nm,20.2s,MS3.6,baz=147,slow=39						
HWUT	**Hardware Ranch**	**48.20**	**318**	*e*P	**P**	**00 07 15.9**	**+0.9**
	8.6nm,1.6s,mb4.5						
LOHW	**Long Hollow**	**48.56**	**321**	*e*P	**P**	**00 07 20.3**	**+2.5**
	3.7nm,1.0s,mb4.4						
REDW	**Red Top Meadow**	**48.59**	**320**	*e*P	**P**	**00 07 19.1**	**+1.1**
	7.8nm,1.0s,mb4.7						
TPAW	**Teton Pass**	**48.72**	**320**	*e*P	**P**	**00 07 20.4**	**+1.4**
	2.5nm,0.8s,mb4.3						
BOZ	**Bozeman (W)**	**50.23**	**322**	P	**P**	**00 07 30.9**	**+0.5**
	4.6nm,1.6s,mb4.3						
MCMT	**McKenzie Canyo**	**50.57**	**321**	*e*P	**P**	**00 07 34.0**	**+1.0**
	0.8nm,0.7s,mb3.8						
HLID	**Hailey**	**50.96**	**319**	*e*P	**P**	**00 07 36.5**	**+0.4**
NVAR	**Mina Array Bea**	**51.65**	**311**	P	**P**	**00 07 40.4**	**-0.9**
	0.1nm,0.4s,mb3.1,baz=97,slow=7.5,SNR=2.1						
FCC	**Fort Churchill**	**51.82**	**344**	*e*P	**P**	**00 07 42.0**	**-0.1**
YKA	**Yellowknife Ar**	**61.29**	**338**	P	**P**	**00 08 48.3**	**-1.3**
YKA	**Yellowknife Ar**	**61.29**	**338**	P	**P**	**00 08 48.3**	**-1.3**
	0.8nm,0.7s,mb4.0,baz=130,slow=6.6,SNR=4.0						
DBIC	**Dimbokro**	**64.13**	**88**	P	**P**	**00 09 09.8**	**+0.4**
DBIC	**Dimbokro**	**64.13**	**88**	P	**P**	**00 09 09.8**	**+0.4**
	3.1nm,0.7s,mb4.4,baz=247,slow=9.9,SNR=4.6						
ESDC	**Sonseca Array**	**64.85**	**51**	P	**P**	**00 09 15.4**	**+1.7**
	0.3nm,0.6s,mb3.5,baz=271,slow=6.0,SNR=2.5						
SUMG	**Summit**	**65.02**	**10**	*i* P	**P**	**00 09 16.3**	**+2.2**
	4.8nm,0.8s,mb4.6						
TORD	**Torodi Ar. Bea**	**69.75**	**80**	P	**P**	**00 09 45.4**	**+0.3**
TORD	**Torodi Ar. Bea**	**69.75**	**80**	P	**P**	**00 09 45.4**	**+0.3**
	0.7nm,0.5s,mb3.8,baz=291,slow=6.5,SNR=21						
ILAR	**Eielson Array**	**75.33**	**334**	P	**P**	**00 10 16.6**	**-0.8**
	0.3nm,0.7s,mb3.3,baz=102,slow=3.8,SNR=4.3						
ILAR				LR	LR	00 44 29.8	
	comp=Z,41nm,18.7s,MS3.8,baz=89,slow=37						
NOA	**NORSAR Array B**	**76.68**	**30**	P	**P**	**00 10 25.8**	**+0.5**
	1.1nm,0.9s,mb3.8,baz=287,slow=4.1,SNR=3.0						
NOA				LR	LR	00 39 42.0	
	comp=Z,15nm,19.8s,MS3.3,baz=255,slow=32						
PPT	**Papeete**	**83.59**	**251**	LR	LR	00 38 40.7	
	comp=Z,17nm,21.4s,MS3.4,baz=29,slow=29						
FINES	**FINESS Array B**	**83.81**	**29**	P	**P**	**00 11 04.9**	**+1.2**
	3.2nm,1.0s,mb4.4,baz=335,slow=8.4,SNR=3.5						
FINES				LR	LR	00 41 04.7	
	comp=Z,27nm,19.9s,MS3.6,baz=194,slow=30						
STKA	**Stephens Creek**	**143.97**	**229**	PKP	PKPdf	00 18 13.2	+2.6
	1.4nm,0.8s,baz=312,slow=2.7,SNR=3.1						
CMAR	**Chiang Mai Arr**	**149.33**	**22**	PKPbc	PKPbc	00 18 23.5	-0.9
	0.7nm,0.3s,baz=343,slow=5.8,SNR=2.6						
ASAR	**Alice Springs**	**153.86**	**236**	PKPbc	PKPbc	00 18 33.4	-1.3
	0.6nm,0.7s,baz=92,slow=3.0,SNR=5.2						
WRA	**Warramunga Arr**	**154.93**	**245**	PKPbc	PKPbc	00 18 36.2	-0.8
	0.4nm,0.3s,baz=100,slow=2.7,SNR=3.9						

CASC 18 00:03:24.4±1.3,**9.°54N×84.°05W,h55km±7km,MD3.5,5D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QCR	**Quepos**	**0.16**	**224**	⇓*e*P	Pn	00 03 33.3	+0.2
QCR				*e*S	Sn	00 03 39.3	0.0
BUS	**Buena Vista**	**0.29**	**87**	⇓*e*P	Pn	00 03 34.6	+0.7
LAJ	**Bijagual**	**0.33**	**348**	*e*P	Pn	00 03 37.0	+2.7
LAJ				*e*S	Sn	00 03 46.2	+4.8
URSC	**Urasca**	**0.40**	**43**	⇓*e*P	Pn	00 03 35.2	+0.3
PRS1	**Puriscal**	**0.51**	**330**	⇓*e*P	Pn	00 03 35.9	-0.2
CGA2	**Cerro Gallo 2**	**0.62**	**319**	*e*P	Pn	00 03 37.8	+0.3
CGA2				*e*S	Sn	00 03 48.4	+1.5
JCR	**Jicaral**	**1.09**	**287**	*e*P	Pn	00 03 43.3	-0.1
JCR				*e*S	Sn	00 03 58.9	+1.3
JTS	**JuntasAbangare**	**1.16**	**310**	*e*P	Pn	00 03 44.2	-0.2
JTS				*e*S	Sn	00 03 59.6	+0.3
ACR	**Cerro Adams**	**1.24**	**135**	⇓*e*P	Pn	00 03 46.1	+0.6
ACR				*e*S	Sn	00 04 03.2	+2.0

ISCJB ***18*** *00:13:21.8±0.6, 39.°42N±0.°02×39.°13E±0.°04, h0km±6km, Error ellipse: s-maj=5.9km s-min=3.5km az=10.5*
CSEM ***18*** *00:13:21.9±0.2, 39.°42N×39.°12E, h2km, MD3.1, Error ellipse: s-maj=5.4km s-min=3.5km az=104.0*
ISK ***18*** *00:13:21.2, 39.°40N×39.°14E, h2km, MD3.1*
DDA ***18*** *00:13:21.4, 39.°45N×39.°13E, h7km±5km, Md3.2*

ISC 18 00:13:22.5±0.5,**39.°43N**±0.°02×**39.°13E**±0.°05,**h6**km±5km, **n32,**σ**0°83/50,3C,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.37**	**27**	PG	**Pg**	**00 13 29.9**	**+0.2**
KEMA	**Kemaliye**	**0.52**	**253**	⇑*i*P	**Pg**	**00 13 32.3**	**-0.3**
KEMA				*i* S	**Sg**	**00 13 40.5**	**+1.2**
KEMA	**Kemaliye**	**0.52**	**253**	*i* P	**Pg**	**00 13 32.3**	**-0.3**
KEMA				*i* S	**Sg**	**00 13 40.5**	**+1.1**
PTK	**Pertek**	**0.57**	**159**	*e*PG	**Pg**	**00 13 32.8**	**-0.7**
PTK				*e*SG	**Sg**	**00 13 40.9**	**0.0**
PTK	**Pertek**	**0.57**	**159**	*e*Pg	**Pg**	**00 13 32.8**	**-0.7**
PTK				*e*Sg	**Sg**	**00 13 40.9**	**0.0**
KELT	**Kelkit**	**0.73**	**7**	⇑*i*P	**Pg**	**00 13 35.0**	**-1.6**
KELT				*i* S	**Sg**	**00 13 45.5**	**-0.5**
KELT	**Kelkit**	**0.73**	**7**	*i* P	**Pg**	**00 13 35.0**	**-1.6**
KELT				*i* S	**Sg**	**00 13 45.5**	**-0.6**
ELZG	**Elazig**	**0.93**	**187**	⇑*i*P	**Pg**	**00 13 40.4**	**0.0**
ELZG				*i* S	**Sg**	**00 13 53.5**	**+1.0**
ELZG	**Elazig**	**0.93**	**187**	*i* P	**Pg**	**00 13 40.4**	**0.0**
ELZG				*i* S	**Sg**	**00 13 53.5**	**+1.0**
SVRC	**Sivrice-ELAZID**	**1.05**	**173**	*e*PG	**Pg**	**00 13 41.8**	**-1.0**
SVRC				*e*SG	**Sg**	**00 13 57.0**	**+0.6**
SVRC	**Sivrice-ELAZID**	**1.05**	**173**	*e*Pg	**Pg**	**00 13 41.8**	**-1.0**
SVRC				*e*Sg	**Sg**	**00 13 57.0**	**+0.6**
GUMT	**Gumushane**	**1.07**	**14**	*e*PN	**Pg**	**00 13 43.3**	**+0.3**
GUMT	**Gumushane**	**1.07**	**14**	*e*Pn	**Pg**	**00 13 43.3**	**+0.3**
DARE	**Darende-Malaty**	**1.14**	**246**	*e*PN	**Pg**	**00 13 50.3**	**+6.0**
KOPT	**Kop Dagi**	**1.21**	**60**	*e*P	**Pg**	**00 13 45.3**	**-0.4**
KOPT				*e*S	**Sg**	**00 14 03.6**	**+2.3**
KOPT	**Kop Dagi**	**1.21**	**60**	*e*P	**Pg**	**00 13 45.3**	**-0.4**
KOPT				*e*S	**Sg**	**00 14 03.6**	**+2.2**
MYA	**Malataya**	**1.23**	**207**	*e*PN	**Pn**	**00 13 45.0**	**-1.2**
MYA	**Malataya**	**1.23**	**207**	*e*Pn	**Pn**	**00 13 45.0**	**-1.2**
MALT	**Malatya**	**1.24**	**207**	*e*PN	**Pn**	**00 13 45.4**	**-1.0**
MALT				*e*SN	**Sn**	**00 14 03.3**	**0.0**
MALT	**Malatya**	**1.24**	**207**	*e*Pn	**Pn**	**00 13 45.4**	**-0.9**
MALT				*e*Sn	**Sn**	**00 14 03.3**	**0.0**
AKCD	**Akcadag**	**1.47**	**220**	*e*P	**Pn**	**00 13 48.6**	**-0.9**
AKCD				*e*S	**Sn**	**00 14 09.7**	**+0.6**
AKCD	**Akcadag**	**1.47**	**220**	*e*P	**Pn**	**00 13 48.6**	**-0.9**
AKCD				*e*S	**Sn**	**00 14 09.6**	**+0.6**
ESPY	**Espiye-Giresun**	**1.52**	**348**	*e*PN	**Pn**	**00 13 50.9**	**+0.6**
ESPY	**Espiye-Giresun**	**1.52**	**348**	*e*Pn	**Pn**	**00 13 50.9**	**+0.7**
GRSN	**GIRESUNGRSN**	**1.64**	**336**	*e*P	**Pn**	**00 13 51.0**	**-0.9**
GRSN				*e*S	**Sn**	**00 14 13.6**	**+0.4**
GRSN	**GIRESUNGRSN**	**1.64**	**336**	*e*P	**Pn**	**00 13 51.0**	**-0.8**
GRSN				*e*S	**Sn**	**00 14 13.6**	**+0.4**
RSDY	**Resadiye-TOKAT**	**1.69**	**306**	*e*PN	**Pn**	**00 13 53.3**	**+0.7**
RSDY	**Resadiye-TOKAT**	**1.69**	**306**	*e*Pn	**Pn**	**00 13 53.3**	**+0.7**
SVSK	**Karacayir**	**1.72**	**287**	*e*PN	**Pn**	**00 13 53.5**	**+0.5**
SVSK	**Karacayir**	**1.72**	**287**	*e*Pn	**Pn**	**00 13 53.5**	**+0.6**
EZM	**Erzurum**	**1.79**	**74**	*e*PN	**Pn**	**00 13 54.4**	**+0.5**
SARI	**SarD1z-Kayseri**	**2.04**	**249**	*e*PN	**Pn**	**00 14 01.5**	**+4.2**

IDC 18 00:18:15.9±3.9,**0.°47N×132.°47E,h0km,mb3.5/3, mb1 3.6/3,mb1mx3.4/18,mbtmp3.5/3,Error ellipse: s-maj=286.

CHCH				*i* S	Sn	00 25 48.2	+2.3	
CHCH	**Chadas Angostu**	**1.83**	**156**	*e*P	Pn	00 25 24.9	+1.3	
CHCH				*i* S	Sn	00 25 48.2	+2.3	
LMEL	**Las Melosas**	**1.95**	**145**	⇑*i*P	Pn	00 25 26.6	+1.4	
LMEL				*i* S	Sn	00 25 51.5	+2.7	
LMEL	**Las Melosas**	**1.95**	**145**	⇑*i*P	Pn	00 25 26.6	+1.4	
LMEL				*i* S	Sn	00 25 51.5	+2.7	
LMEL				AML	AML	00 25 56.8		
	comp=N,834nm,0.1s							
CACH	**El Canelo**	**2.02**	**157**	⇓*i*P	Pn	00 25 28.3	+2.2	
CACH				*i* S	Sn	00 25 54.7	+4.2	
CACH	**El Canelo**	**2.02**	**157**	⇓*i*P	Pn	00 25 28.3	+2.2	
CACH				*i* S	Sn	00 25 54.7	+4.2	
LCO	**Las Campanas**	**3.32**	**13**	*e*Pn	Pn	00 25 43.6	-0.4	
LCO				*e*Sn	Sn	00 26 22.2	-0.3	

ISCJB ***18*** *00:36:21.4±0.4,58°.32S±0°.07×25°.7W±0°.1,h10km, mb4.6/19,MS3.7/3,Error ellipse: s-maj=9.6km s-min=9.4km az=167.1*

IDC ***18*** *00:36:26.8±7.3,58°.31S×25°.65W,h33km±54km,mb4.3/12, mb1 4.3/12,mb1mx4.2/17,mbtmp4.3/12,MS3.7/4, Ms1 3.7/4,ms1mx3.4/16,Error ellipse: s-maj=19.3km s-min=15.6km az=42.0*

NEIC ***18*** *00:36:27.1±1.6,58°.32S×25°.66W,h38km±13km,mb4.7/10, Error ellipse: s-maj=6.4km s-min=6.0km az=147.0*

ISC 18 00:36:23.3±0.4,58°.36S±0°.06×25°.6W±0°.1,h10km,n60, σ0°.73/33,mb4.6/19,MS3.7/3,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**19.13**	**234**	*e*P	**Pn**	**00 40 46.8**	**-0.1**
	31nm,0.9s						
PMSA	**Palmer Station**	**19.13**	**234**	LR	LR	00 46 55.2	
	comp=Z,195nm,19.9s,baz=44,slow=33						
MAIT	**Maitri**	**19.86**	**144**	*e*P	**Pn**	**00 40 54.5**	**-1.0**
TRIS	**Tristan da Cun**	**23.02**	**28**	P	**P**	**00 41 28.7**	**+0.5**
USHA	**Ushuaia**	**23.53**	**260**	P	**P**	**00 41 34.6**	**+1.3**
	13nm,0.8s,mb4.4,baz=42,slow=12,SNR=2.8						
USHA				LR	LR	00 48 49.8	
	comp=Z,353nm,20.3s,MS3.8,baz=344,slow=32						
TRQA	**Tornquist**	**31.04**	**295**	*e*P	**P**	**00 42 40.5**	**-0.4**
	4.2nm,0.9s,mb4.3						
QSPA	**South Pole Qui**	**31.89**	**180**	P	**P**	**00 42 50.0**	**+2.0**
QSPA				PcP	PcP	00 45 38.4	+0.4
QSPA	**South Pole Qui**	**31.89**	**180**	P	**P**	**00 42 50.0**	**+2.0**
	4.8nm,0.5s,mb4.5,baz=201,slow=2.5,SNR=51						
QSPA				PcP	PcP	00 45 38.4	+0.4
	4.8nm,1.1s,baz=146,slow=2.2,SNR=4.2						
PLCA	**Paso Flores**	**33.27**	**282**	*e*P	**P**	**00 43 00.6**	**0.0**
	2.7nm,0.5s,mb4.4						
MAW	**Mawson**	**37.80**	**141**	P	**P**	**00 43 39.1**	**0.0**
	3.4nm,1.1s,mb4.0,baz=273,slow=14,SNR=11						
MAW				LR	LR	00 58 39.0	
	comp=Z,95nm,18.5s,MS3.6,baz=35,slow=35						
CFAA	**Coronel Fontan**	**39.26**	**294**	P	**P**	**00 43 49.8**	**-1.9**
	0.1nm,0.3s,baz=184,slow=15,SNR=2.1						
CFAA				PcP	PcP	00 46 00.1	-0.3
	0.3nm,0.6s,baz=167,slow=5.5,SNR=3.9						
SBA	**Scott Base**	**43.83**	**184**	*e*P	**P**	**00 44 28.6**	**-0.1**
	3.0nm,0.8s,mb4.1						
BOSA	**Boshof**	**45.80**	**72**	*e*P	**P**	**00 44 44.2**	**-0.6**
	20nm,1.4s,mb4.8						
BOSA				LR	LR	00 58 47.0	
BOSA	**Boshof**	**45.80**	**72**	P	**P**	**00 44 45.0**	**+0.1**
	2.4nm,0.9s,mb4.1,baz=180,slow=5.1,SNR=4.9						
BOSA				LR	LR	00 58 47.0	
	comp=Z,72nm,19.4s,MS3.6,baz=187,slow=29						
LBTB	**Lobatse**	**48.94**	**70**	*e*P	**P**	**00 45 09.4**	**0.0**
LBTB	**Lobatse**	**48.94**	**70**	P	**P**	**00 45 09.2**	**-0.3**
	1.5nm,0.6s,mb4.2,baz=208,slow=17,SNR=2.4						
SIV	**San Ignacio**	**49.78**	**313**	P	**P**	**00 45 15.0**	**-0.9**
	1.0nm,0.5s,mb4.1,baz=167,slow=9.6,SNR=9.6						
TSUM	**Tsumeb**	**50.14**	**57**	*e*P	**P**	**00 45 18.7**	**+0.1**
	1.8nm,0.8s,mb4.2						
CASY	**Casey**	**51.45**	**159**	*e*P	**P**	**00 45 28.4**	**+0.5**
LPAZ	**La Paz**	**52.40**	**305**	P	**P**	**00 45 36.1**	**+0.6**
	2.5nm,0.5s,mb4.4,baz=143,slow=5.4,SNR=17						
RCBR	**Riachuelo**	**53.00**	**347**	*e*P	**P**	**00 45 39.3**	**-0.7**
LSZ	**Lusaka**	**58.48**	**66**	*e*P	**P**	**00 46 19.1**	**-0.2**
LIC	**Lamto**	**66.48**	**22**	*e*P	**P**	**00 47 13.1**	**+0.3**
	38nm,0.8s,mb5.5						
KIC	**Kosan Boka**	**66.67**	**23**	*e*P	**P**	**00 47 14.3**	**+0.3**
	49nm,1.3s,mb5.4						
TIC	**Toumodi**	**66.89**	**22**	*e*P	**P**	**00 47 15.8**	**+0.4**
	33nm,0.8s,mb5.4						
DBIC	**Dimbokro**	**66.95**	**23**	*e*P	**P**	**00 47 16.1**	**+0.3**
	6.7nm,0.6s,mb4.8						
DBIC	**Dimbokro**	**66.95**	**23**	P	**P**	**00 47 16.2**	**+0.4**
	6.6nm,0.6s,mb4.8,baz=140,slow=8.6,SNR=12						
TORD	**Torodi Ar. Bea**	**74.68**	**28**	P	**P**	**00 48 03.2**	**+0.5**
TORD	**Torodi Ar. Bea**	**74.68**	**28**	P	**P**	**00 48 03.2**	**+0.5**
	6.9nm,0.7s,mb4.7,baz=200,slow=6.4,SNR=67						
PCRV	**Puerto La Cruz**	**75.27**	**320**	P	**P**	**00 48 06.6**	**+0.4**
	5.2nm,0.5s,mb4.7,baz=243,slow=2.3,SNR=4.1						
STKA	**Stephens Creek**	**89.48**	**169**	*e*P	**P**	**00 49 20.2**	**0.0**
STKA	**Stephens Creek**	**89.48**	**169**	P	**P**	**00 49 20.1**	**-0.2**
	2.6nm,0.8s,mb4.6,baz=186,slow=8.0,SNR=6.7						
MBWA	**Marble Bar**	**95.74**	**148**	*e*P	**P**	**00 49 48.5**	**-0.8**
ASAR	**Alice Springs**	**96.53**	**161**	P	**P**	**00 49 52.1**	**-0.8**
	1.8nm,0.8s,mb4.6,baz=180,slow=3.9,SNR=10.0						
HWUT	**Hardware Ranch**	**122.28**	**298**	*e*PKPdf	PKPdf	00 55 17.4	-0.1
NVAR	**Mina Array Bea**	**123.04**	**291**	PKP	PKPdf	00 55 19.9	+1.0
	1.1nm,0.6s,baz=142,slow=3.1,SNR=8.5						
LOHW	**Long Hollow**	**123.40**	**300**	*e*PKPdf	PKPdf	00 55 19.9	+0.4
CMAR	**Chiang Mai Arr**	**123.46**	**110**	PKP	PKPdf	00 55 19.6	-0.8
	1.2nm,0.4s,baz=224,slow=3.3,SNR=7.3						
MOOW	**Moose Ponds**	**123.57**	**300**	*e*PKPdf	PKPdf	00 55 19.0	-0.8
FINES	**FINESS Array B**	**126.03**	**28**	PKP	PKPdf	00 55 23.2	-0.7
	1.4nm,0.5s,baz=145,slow=3.5,SNR=14						
KAF	**Kangasniemi**	**126.66**	**27**	*e*pkp	PKPdf	00 55 23.7	-1.4
JOF	**Joensuu**	**128.60**	**29**	*e*pkp	PKPdf	00 55 27.6	-1.2
	3.7nm,0.7s						
EKS2	**Erkin-Say**	**129.59**	**71**	PKPdf	PKPdf	00 55 30.9	-0.4
ARCES	**ARCESS Array B**	**132.77**	**22**	PKP	PKPdf	00 55 35.8	-0.8
	1.9nm,0.7s,baz=238,slow=2.1,SNR=13						
BVAR	**Borovoye Array**	**135.28**	**59**	PKP	PKPdf	00 55 41.4	-0.4
	0.9nm,0.5s,baz=151,slow=3.4,SNR=5.4						
YKA	**Yellowknife Ar**	**138.43**	**316**	PKP	PKPdf	00 55 46.9	-0.4
	4.8nm,0.7s,baz=132,slow=2.2,SNR=24						
ZALV	**Zalesovo Beam**	**142.59**	**66**	PKhKP	PKPpre	00 55 49.5	
	0.7nm,0.4s,baz=247,slow=4.0,SNR=5.6						
INK	**Inuvik**	**148.10**	**318**	*e*PKPbc	PKPbc	00 56 05.9	-1.5
DAWY	**Dawson**	**148.93**	**309**	*e*PKPbc	PKPbc	00 56 08.6	-1.0
EGAK	**Eagle**	**149.90**	**310**	*e*PKPdf	PKPdf	00 56 07.6	+0.5
EGAK				*e*PKPbc	PKPbc	00 56 11.4	-0.6
SONM	**Songino Array**	**149.97**	**89**	PKPbc	PKPbc	00 56 12.2	-0.5
	3.2nm,0.5s,baz=223,slow=3.4,SNR=16						
DIV	**Divide**	**150.62**	**301**	*e*PKPdf	PKPdf	00 56 08.1	-0.3
DIV				*e*PKPbc	PKPbc	00 56 13.8	0.0
ILAR	**Eielson Array**	**152.25**	**308**	PKPbc	PKPbc	00 56 16.9	-0.5
	7.2nm,0.6s,baz=144,slow=6.2,SNR=72						
KDAK	**Kodiak Island**	**152.53**	**292**	PKPbc	PKPbc	00 56 17.7	-0.6
	3.5nm,0.5s,baz=208,slow=2.5,SNR=5.4						
COLA	**College**	**152.67**	**308**	*e*PKPdf	PKPdf	00 56 11.4	+0.1
COLA				*e*PKPbc	PKPbc	00 56 18.3	0.0
MCK	**McKinley**	**152.84**	**305**	*e*PKPbc	PKPbc	00 56 18.9	+0.1
TRF	**Thorofare Moun**	**153.36**	**304**	*e*PKPbc	PKPbc	00 56 19.6	-0.4
BPAW	**Bear Paw Mtn.**	**153.81**	**306**	*e*PKPbc	PKPbc	00 56 20.4	-0.5
COLD	**Coldfoot**	**154.04**	**313**	*e*PKPbc	PKPbc	00 56 21.5	+0.2
PPLA	**Purkeypile**	**154.05**	**303**	*e*PKPbc	PKPbc	00 56 21.2	-0.3

IGQ ***18*** *00:41:26.9,1°.07S×78°.17W,h6km±1km,Mb4.9,Ms4.8, Error ellipse: s-maj=1.0km s-min=0.4km az=12.0*

ISCJB ***18*** *00:41:27.8±0.3,1°.11S±0°.02×78°.14W±0°.04,h10km, mb4.5/52,Error ellipse: s-maj=5.7km s-min=2.7km az=15.2*

IDC ***18*** *00:41:27.2±0.7,0°.96S×77°.80W,h0km,mb4.0/10, mb1 4.3/11,mb1mx4.2/19,mbtmp4.1/11,ML4.9/1,MS3.8/4, Ms1 3.8/4,ms1mx3.4/15,Error ellipse: s-maj=30.5km s-min=16.0km az=55.0*

NEIC ***18*** *00:41:31.7±2.1,1°.09S×77°.79W,h29km±15km,mb4.6/45, MD4.8(IGQ),Error ellipse: s-maj=10.5km s-min=5.8km az=64.0*

NEIC Felt at Archidona, Banos, Cusua, Juive, Latacunga, Palora, Puyo and Tena.

BJI ***18*** *00:41:35.7,1°.10S×77°.80W,h29km,mB4.9/2*

ISC 18 00:41:29.8±0.3,1°.13S±0°.02×78°.24W±0°.05,h10km,n143, σ1°.37/122,mb4.5/52,5C-22D,Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PISA	**Pisayambo**	**0.16**	**296**	⇑P	**Pg**	**00 41 32.1**	**-1.2**
RUN5	**Runtun**	**0.34**	**212**	⇑P	**Pg**	**00 41 35.5**	**-1.0**
ULBA	**Ulba**	**0.36**	**207**	⇓P	**Pg**	**00 41 35.6**	**-1.3**
JUI6	**Juive**	**0.37**	**217**	⇓P	**Pg**	**00 41 35.9**	**-1.3**
RETU	**Refugio**	**0.38**	**212**	⇓P	**Pg**	**00 41 36.4**	**-0.9**
BIL2	**Estacion Bilba**	**0.42**	**219**	⇓P	**Pg**	**00 41 36.7**	**-1.3**
ARRY	**Arrayan**	**0.43**	**209**	⇓P	**Pg**	**00 41 36.9**	**-1.4**
BMAS	**Trigal station**	**0.44**	**212**	⇓S	**Sg**	**00 41 46.0**	**+1.6**
BMAS	**Trigal station**	**0.44**	**212**	⇓P	**Pg**	**00 41 37.4**	**-1.0**
TAMB	**Tambo**	**0.45**	**344**	⇓P	**Pg**	**00 41 36.2**	**-2.4**
COV1	**Cotopaxi Volc**	**0.47**	**348**	⇓P	**Pg**	**00 41 37.4**	**-1.7**
VC1	**Cotopaxi 1**	**0.51**	**342**	⇓P	**Pg**	**00 41 37.4**	**-2.4**
CAMI	**Rancho Maria**	**0.52**	**330**	⇓P	**Pg**	**00 41 37.9**	**-2.0**
NAS2	**Nasa**	**0.53**	**335**	⇓P	**Pg**	**00 41 38.0**	**-2.1**
IGUA	**Igualata**	**0.54**	**228**	⇓P	**Pg**	**00 41 39.7**	**-0.5**
PORT	**Chimborazo Vol**	**0.63**	**238**	P	**Pg**	**00 41 41.6**	**-0.3**
ANTI	**Antisana**	**0.68**	**7**	⇑P	**Pg**	**00 41 39.1**	**-3.9**
RIOE	**Riobamba**	**0.73**	**212**	⇓S	**Sg**	**00 41 57.1**	**+3.5**
RIOE	**Riobamba**	**0.73**	**212**	⇓P	**Pg**	**00 41 42.7**	**-1.3**
JUA2	**San Juan 2**	**0.98**	**338**	P	**Pg**	**00 41 46.0**	**-2.7**
GGP	**Refugio Guagua**	**1.01**	**340**	⇓P	**Pg**	**00 41 46.6**	**-2.7**
TERV	**Terraza Guagua**	**1.01**	**339**	⇓P	**Pg**	**00 41 46.7**	**-2.6**
PINO	**Pino**	**1.03**	**339**	⇓P	**Pg**	**00 41 46.9**	**-2.8**
YANA	**Yana**	**1.05**	**342**	P	**Pg**	**00 41 47.1**	**-3.0**
MACE	**Macas**	**1.12**	**178**	⇑P	**Pb**	**00 41 49.8**	**-1.5**
MACE	**Macas**	**1.12**	**178**	⇑S	**Sb**	**00 42 05.9**	**0.0**
CAYR	**Refugio Cayamb**	**1.16**	**12**	P	**Pb**	**00 41 48.1**	**-3.9**
CHAR	**Charly**	**1.18**	**29**	⇓P	**Pb**	**00 41 48.6**	**-3.7**
LAV3	**Lava3-Reventad**	**1.19**	**31**	⇓P	**Pb**	**00 41 48.4**	**-4.1**
CONE	**Cono NE Rev Vo**	**1.21**	**30**	⇓P	**Pn**	**00 41 48.8**	**-4.0**
OTAV	**Otavalo**	**1.37**	**351**	*e*Pn	**Pn**	**00 41 52.2**	**-2.9**
OTAV				*e*Sn	**Sn**	**00 42 12.3**	**-1.0**
COTA	**Cotacachi**	**1.46**	**356**	P	**Pn**	**00 41 54.3**	**-1.9**
GOLV	**Golondrinas**	**1.60**	**326**	P	**Pn**	**00 41 57.3**	**-0.9**
PECV	**Mancha de Ca P**	**1.84**	**281**	⇓P	**Pn**	**00 42 06.0**	**+4.6**
MAG1	**Magdalena**	**1.85**	**304**	P	**Pn**	**00 42 02.3**	**+0.6**
JAMA	**Jama**	**2.14**	**294**	P	**Pn**	**00 42 04.8**	**-0.9**
CHIS	**Cerro-Chispas-**	**2.48**	**272**	P	**Pn**	**00 42 10.2**	**-0.2**
ROSC	**El Rosal**	**7.11**	**33**	*e*Pn	**Pn**	**00 43 18.1**	**+4.0**
ROSC				*e*Sn	**Sn**	**00 44 29.4**	**-5.6**
ROSC				Lg		00 45 06.8	
ROSC				LR	LR	00 46 01.2	
ROSC	**El Rosal**	**7.11**	**33**	Pn	**Pn**	**00 43 14.1**	**0.0**
	0.5nm,0.3s,baz=114,slow=20,SNR=3.9						
ROSC				Lg		00 45 06.8	
	4.6nm,0.3s,baz=73,slow=19,SNR=2.8						
ROSC				LR	LR	00 46 01.2	
	comp=Z,394nm,18.9s,baz=202,slow=41						
BCIP	**Isla Barro Col**	**10.35**	**351**	*e*Pn	**Pn**	**00 43 59.6**	**+1.1**
NNA	**Nana**	**10.88**	**173**	Pn	**Pn**	**00 44 04.1**	**-1.6**
	8.0nm,0.3s,baz=344,slow=12,SNR=14						
NNA				Sn	**Sn**	**00 45 58.8**	**-8.8**
	1.9nm,0.3s,baz=270,slow=2.0,SNR=2.7						
PAYG	**Puerto Ayora**	**12.05**	**272**	*e*Pn	**Pn**	**00 44 27.7**	**+5.9**
SDV	**Santo Domingo**	**12.51**	**37**	*e*Pn	**Pn**	**00 44 35.9**	**+7.9**
ARE	**Arequipa**	**16.63**	**157**	*e*P	**Pn**	**00 45 27.0**	**+3.9**
TGUH	**Tegucigalpa,Un**	**17.54**	**330**	Pn	**Pn**	**00 45 36.5**	**+1.9**
PCRV	**Puerto La Cruz**	**17.59**	**50**	LR	LR	00 53 00.7	
	comp=Z,450nm,19.7s,baz=39,slow=40						
LPAZ	**La Paz**	**18.06**	**147**	LR	LR	00 53 43.6	
	comp=Z,222nm,18.1s,baz=345,slow=41						
SDDR	**Presa de Saban**	**21.12**	**19**	*e*Pn	**P**	**00 46 12.2**	**-2.6**
	5.6nm,0.4s,mb4.2						
SIV	**San Ignacio**	**22.47**	**132**	P	**P**	**00 46 27.5**	**-1.9**
	14nm,0.6s,mb4.6,baz=311,slow=10,SNR=52						
SJG	**San Juan**	**22.52**	**31**	*e*P	**P**	**00 46 31.3**	**+1.4**
SJG	**San Juan**	**22.52**	**31**	P	**P**	**00 46 25.9**	**-4.0**
	6.6nm,0.8s,mb4.1,baz=341,slow=18,SNR=2.0						
CMIG	**Matias Romero**	**24.43**	**319**	P	**P**	**00 46 48.9**	**0.0**
	4.2nm,0.9s,mb3.9,baz=117,slow=8.1,SNR=7.4						
CFAA	**Coronel Fontan**	**31.75**	**164**	P	**P**	**00 47 53.8**	**-0.4**
	0.4nm,0.7s,baz=359,slow=7.9,SNR=6.4						
LRAL	**Lakeview Retre**	**34.97**	**347**	*e*P	**P**	**00 48 21.8**	**-0.5**
	6.5nm,0.9s,mb4.6						
CPCT	**Cooper Cave**	**36.86**	**351**	*e*P	**P**	**00 48 38.3**	**-0.1**
SWET	**Sewanee**	**36.86**	**349**	*e*P	**P**	**00 48 37.5**	**-1.0**
TXAR	**Lajitas Array**	**38.84**	**323**	P	**P**	**00 48 56.2**	**+1.0**
	1.2nm,0.8s,mb3.6,baz=138,slow=11,SNR=8.8						
TXAR				PcP	PcP	00 51 06.4	0.0
	1.9nm,0.7s,baz=146,slow=6.6,SNR=15						
PARMO	**Parma**	**39.09**	**345**	*e*P	**P**	**00 48 56.6**	**-0.7**
RPN	**Rapa Nui**	**39.47**	**226**	P	**P**	**00 49 02.1**	**+1.5**
WMOK	**Wichita Mounta**	**40.54**	**334**	*e*P	**P**	**00 49 09.1**	**-0.2**
	16nm,1.8s,mb4.3						
CCM	**Cathedral Cave**	**40.80**	**344**	*e*P	**P**	**00 49 09.5**	**-1.9**
	21nm,1.8s,mb4.5						
GDL2	**Guadalupe Moun**	**41.35**	**326**	*e*P	**P**	**00 49 17.8**	**+1.7**
MNTX	**Comudas Mount**	**41.57**	**324**	*e*P	**P**	**00 49 18.6**	**+0.8**
	4.4nm,1.1s,mb4.0						
AMTX	**Amarillo**	**42.01**	**331**	*e*P	**P**	**00 49 21.6**	**+0.1**
LAZ	**Ladron**	**44.54**	**325**	*e*P	**P**	**00 49 43.5**	**+1.6**
	3.6nm,1.1s,mb4.1						
LAZ				*e*PcP	PcP	00 51 23.9	-1.2
ANMO	**Albuquerque**	**44.56**	**326**	*e*P	**P**	**00 49 43.4**	**+1.4**
	8.4nm,0.9s,mb4.6						
JFWS	**Jewell Farm**	**45.16**	**348**	*e*P	**P**	**00 49 44.2**	**-2.5**
	11nm,1.1s,mb4.6						
TUC	**Tucu**	**45.31**	**320**	*e*P	**P**	**00 49 49.4**	**+1.3**
	14nm,1.7s,mb4.5						
SDCO	**Great Sand Dun**	**46.16**	**330**	*e*P	**P**	**00 49 56.4**	**+1.7**
	8.2nm,1.1s,mb4.6						
WUAZ	**Wupatki**	**47.80**	**323**	*e*P	**P**	**00 50 09.6**	**+2.0**
	12nm,1.1s,mb4.8						
ISCO	**Idaho Springs**	**47.81**	**331**	*e*P	**P**	**00 50 09.0**	**+1.4**
	25nm,2.3s,mb4.8						
SMCO	**Snowmass**	**48.00**	**330**	*e*P	**P**	**00 50 10.8**	**+1.7**
	5.6nm,1.0s,mb4.5						
PV01	**Paradox Valley**	**48.05**	**328**	*e*P	**P**	**00 50 10.6**	**+1.2**
	1um,1.6s						
PHWY	**Pilot Hill**	**48.92**	**333**	*e*P	**P**	**00 50 17.2**	**+1.1**
	14nm,1.7s,mb4.7						
SRU	**San Rafael**	**49.81**	**327**	*e*P	**P**	**00 50 24.3**	**+1.3**
	6.2nm,1.1s,mb4.5						
MSU	**Marysvale**	**50.31**	**325**	*e*P	**P**	**00 50 28.3**	**+1.5**
CCUT	**Cedar City**	**50.35**	**324**	*e*P	**P**	**00 50 29.5**	**+2.4**
	15nm,1.9s,mb4.7						
RSSD	**Black Hills**	**50.60**	**336**	*e*P	**P**	**00 50 30.0**	**+1.1**
	6.0nm,1.1s,mb4.4						
DAU	**Daniels Canyon**	**51.13**	**328**	*e*P	**P**	**00 50 34.5**	**+1.6**
JLU	**Jordanelle**	**51.37**	**328**	*e*P	**P**	**00 50 38.0**	**+3.3**
	5.2nm,0.9s,mb4.5						
DUG	**Dugway**	**51.83**	**326**	*e*P	**P**	**00 50 39.5**	**+1.4**
	26nm,1.6s,mb4.9						
BW06	**Boulder Array**	**51.99**	**331**	*e*P	**P**	**00 50 39.6**	**+0.2**
	60nm,3.0s						
HWUT	**Hardware Ranch**	**52.15**	**329**	*e*P	**P**	**00 50 41.1**	**+0.6**
	6.2nm,1.0s,mb4.5						
SPUT	**South Promonto**	**52.41**	**328**	*e*P	**P**	**00 50 43.5**	**+1.1**
	8.2nm,0.8s,mb4.7						
BGU	**Big Grassy Mou**	**52.45**	**327**	*e*P	**P**	**00 50 43.2**	**+0.4**
	8.3nm,1.2s,mb4.5						
HVU	**Hansel Valley**	**52.91**	**328**	*e*P	**P**	**00 50 48.4**	**+2.3**
	5.6nm,1.0s,mb4.5						
REDW	**Red Top Meadow**	**53.07**	**331**	*e*P	**P**	**00 50 48.5**	**+1.2**
	19nm,1.6s,mb4.8						
LOHW	**Long Hollow**	**53.13**	**331**	*e*P	**P**	**00 50 48.2**	**+0.5**
	5.6nm,1.4s,mb4.3						
MOOW	**Moose Ponds**	**53.30**	**331**	*e*P	**P**	**00 50 49.4**	**+0.4**
	3.5nm,1.0s,mb4.2						
IMW	**Indian Meadow**	**53.51**	**331**	*e*P	**P**	**00 50 51.2**	**+0.7**
	9.7nm,1.4s,mb4.5						
FLWY	**Flagg Ranch**	**53.53**	**331**	*e*P	**P**	**00 50 51.7**	**+1.0**
	8.9nm,1.0s,mb4.7						
RLMT	**Red Lodge**	**53.65**	**333**	*e*P	**P**	**00 50 51.8**	**+0.3**
	3.4nm,0.8s,mb4.3						
NVAR	**Mina Array Bea**	**53.92**	**321**	P	**P**	**00 50 55.2**	**+1.6**
	3.0nm,0.9s,mb4.2,baz=136,slow=7.5,SNR=16						
GCMT	**Greycliff**	**54.34**	**333**	*e*P	**P**	**00 50 57.0**	**+0.4**
	8.8nm,0.9s,mb4.7						
HLID	**Hailey**	**55.02**	**328**	*e*P	**P**	**00 51 02.6**	**+1.0**
	3.0nm,0.9s,mb4.3						
MCMT	**McKenzie Canyo**	**55.12**	**330**	*e*P	**P**	**00 51 03.2**	**+1.0**
	3.8nm,1.4s,mb4.2						
BOZ	**Bozeman (W)**	**55.13**	**332**	*e*P	**P**	**00 51 02.7**	**+0.4**
	6.5nm,0.8s,mb4.7						
LRM	**Limekiln Ridge**	**55.65**	**332**	*e*P	**P**	**00 51 06.8**	**+0.7**
WVOR	**Wild Horse Val**	**56.59**	**325**	*e*P	**P**	**00 51 13.2**	**+0.4**
	19nm,1.1s,mb5.0						
MSO	**Missoula**	**57.09**	**331**	*e*P	**P**	**00 51 17.1**	**+0.7**
	6.1nm,1.1s,mb4.5						
BSMT	**Bassoo Peak**	**58.23**	**332**	*e*P	**P**	**00 51 25.2**	**+1.0**
YBH	**Yreka Blue Hor**	**58.59**	**322**	*e*P	**P**	**00 51 26.5**	**-0.5**
	8.2nm,1.3s,mb4.6						
LNOR	**Lincton Mounta**	**58.61**	**328**	*e*P	**P**	**00 51 27.6**	**+0.6**
WALA	**Waterton Lakes**	**58.70**	**333**	*e*P	**P**	**00 51 27.9**	**+0.3**
	1.7nm,2.4s,mb3.6						
KHMM	**Horse Mountain**	**58.75**	**321**	*e*P	**P**	**00 51 31.1**	**+3.0**
	25nm,1.2s,mb5.1						
FFC	**Flin Flon**	**59.00**	**344**	*e*P	**P**	**00 51 30.4**	**+0.9**
	12nm,1.3s,mb4.8						
NEW	**Newport**	**59.63**	**331**	*e*P	**P**	**00 51 34.2**	**+0.2**
	7.5nm,1.1s,mb4.6						
OD2	**Odessa Site #2**	**59.84**	**329**	*e*P	**P**	**00 51 36.1**	**+0.6**
HOOD	**Mount Hood Mea**	**60.09**	**326**	*e*P	**P**	**00 51 39.4**	**+2.1**
	14nm,1.0s,mb5.0						
LON	**Longmire**	**61.06**	**327**	*e*P	**P**	**00 51 44.3**	**+0.5**
	4.6nm,0.8s,mb4.7						
EDM	**Edmonton**	**61.56**	**337**	*e*P	**P**	**00 51 45.7**	**-1.4**
YKA	**Yellowknife Ar**	**69.11**	**343**	P	**P**	**00 52 33.5**	**-2.4**
YKA	**Yellowknife Ar**	**69.11**	**343**	P	**P**	**00 52 33.5**	**-2.4**
	2.2nm,0.7s,mb4.2,baz=137,slow=5.5,SNR=11						
DLBC	**Dease Lake**	**72.02**	**334**	*e*P	**P**	**00 52 54.0**	**+0.3**
DBIC	**Dimbokro**	**73.64**	**83**	P	**P**	**00 53 00.9**	**-3.4**
	2.6nm,0.6s,mb4.3,baz=238,slow=9.5,SNR=4.4						
DBIC				LR	LR	01 25 15.8	
	comp=Z,66nm,19.2s,baz=130,slow=36						
SUMG	**Summit**	**77.71**	**11**	*e*P	**P**	**00 53 25.7**	**-0.7**
	31nm,1.3s,mb5.1						
SUMG	**Summit**	**77.71**	**11**	*i* P	**P**	**00 53 26.6**	**+0.2**
	12nm,0.8s,mb4.9						
TORD	**Torodi Ar. Bea**	**80.46**	**77**	P	**P**	**00 53 37.6**	**-5.0**
	0.1nm,0.4s,baz=293,slow=5.3,SNR=5.1						
ILAR	**Eielson Array**	**82.05**	**336**	P	**P**	**00 53 48.6**	**-1.4**
	1.4nm,0.9s,mb3.9,baz=117,slow=3.8,SNR=15						
RC01	**Rabbit Creek A**	**82.12**	**332**	*e*P	**P**	**00 53 49.9**	**-0.6**
PPLA	**Purkeypile**	**83.73**	**334**	*e*P	**P**	**00 53 58.0**	**-0.8**
	12nm,1.2s,mb4.9						
BVAR	**Borovoye Array**	**122.09**	**22**	PKP	PKPdf	01 00 23.8	-0.9
	0.7nm,0.7s,baz=126,slow=4.2,SNR=3.5						
ZALV	**Z

mb4.1/23, Error ellipse: s-maj=28.5km s-min=15.9km az=5.2

NEIC ***18*** *01:01:28.2±1.4, 12.˚33N×144.˚52E, h59km±12km, mb4.5/5, Error ellipse: s-maj=17.7km s-min=11.4km az=89.0*

IDC ***18*** *01:01:29.4±1.7, 12.˚31N×144.˚42E, h64km±15km, mb3.9/14, mb1 4.0/14, mb1mx3.9/21, mbtmp3.8/14, MS3.5/6, Ms1 3.5/6, ms1mx3.1/27, Error ellipse: s-maj=24.8km s-min=14.5km az=97.0*

ISC 18 01:01:28.9±1.6, 12.˚30N±0.˚09×144.˚6E±0.˚2, h66km±13km, n40, σ0°81/31, mb4.1/23, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.31**	**11**	*e*Pn		**Pn**	**01 01 50.1**	**-1.1**
GUMO				*e*S		**Sn**	**01 02 08.4**	**+0.4**
GUMO	**Guam**	**1.31**	**11**	P		**Pn**	**01 01 50.1**	**-1.1**
	180nm,0.3s,baz=184,slow=9.6,SNR=79							
GUMO				S		**Sn**	**01 02 09.3**	**+1.3**
	559nm,0.3s,baz=354,slow=21,SNR=46							
MJAR	**Matsushiro Arr**	**24.82**	**348**	P		**P**	**01 06 43.5**	**-1.4**
	1.1nm,0.3s,mb3.8,baz=163,slow=9.1,SNR=2.5							
MJAR				LR		LR	01 15 59.9	
	comp=Z,123nm,18.1s,baz=205,slow=35							
HNR	**Honiara**	**26.42**	**144**	LR		LR	01 15 38.3	
	comp=Z,64nm,21.0s,baz=60,slow=32							
KSRS	**Korea Array**	**29.17**	**332**	P		**P**	**01 07 24.6**	**+0.7**
	2.2nm,0.9s,mb3.8,baz=141,slow=9.9,SNR=3.0							
KSRS				LR		LR	01 18 06.0	
	comp=Z,42nm,18.0s,baz=155,slow=34							
CTA	**Charters Tower**	**32.22**	**177**	LR		LR	01 17 42.1	
	comp=Z,40nm,21.9s,baz=55,slow=30							
WRA	**Warramunga Arr**	**33.59**	**198**	P		**P**	**01 08 02.8**	**-0.1**
	2.7nm,0.7s,mb4.2,baz=21,slow=9.8,SNR=7.3							
ASAR	**Alice Springs**	**37.24**	**196**	P		**P**	**01 08 34.7**	**+0.5**
	2.1nm,0.7s,mb4.2,baz=25,slow=10,SNR=26							
CMAR	**Chiang Mai Arr**	**44.37**	**284**	P		**P**	**01 09 33.0**	**0.0**
	2.2nm,0.5s,mb4.2,baz=83,slow=6.6,SNR=8.5							
SONM	**Songino Array**	**47.65**	**326**	P		**P**	**01 09 58.9**	**+0.5**
	0.8nm,0.5s,mb3.8,baz=150,slow=7.5,SNR=6.0							
SONM				LR		LR	01 29 52.4	
	comp=Z,76nm,19.8s,baz=272,slow=36							
GTA	**Gaotai**	**47.85**	**313**	*e*P		**P**	**01 10 00.5**	**+0.4**
GTA				pP		pP	01 10 06.6	-10
GTA				sP		sP	01 10 10.3	-14
GTA				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.3							
MKAR	**Makanchi Array**	**62.25**	**317**	P		**P**	**01 11 44.1**	**+0.3**
	comp=Z,1.5nm,0.4s,mb4.3,baz=90,slow=8.4,SNR=21							
ZALV	**Zalesovo Beam**	**62.53**	**325**	P		**P**	**01 11 44.9**	**-0.6**
ZALV				PcP		PcP	01 12 24.4	+0.2
ZALV	**Zalesovo Beam**	**62.53**	**325**	P		**P**	**01 11 44.9**	**-0.6**
	comp=Z,0.8nm,0.3s,mb4.1,baz=82,slow=11,SNR=4.3							
ZALV				PcP		PcP	01 12 24.4	+0.2
	comp=Z,1.9nm,0.5s,baz=110,slow=3.7,SNR=6.5							
KURK	**Kurchatov**	**65.41**	**320**	*e*P		**P**	**01 12 04.4**	**-0.1**
	comp=Z,8.8nm,1.0s,mb4.5							
TKM2	**Tokmak 2**	**66.38**	**312**	*e*P		**P**	**01 12 10.9**	**0.0**
	comp=Z,2.5nm,0.9s,mb4.0							
UCH	**Uchtor**	**67.12**	**311**	*e*P		**P**	**01 12 17.1**	**+1.4**
	comp=Z,3.4nm,0.8s,mb4.2							
AML	**Almayashu**	**67.72**	**311**	*e*P		**P**	**01 12 20.3**	**+0.8**
	comp=Z,4.3nm,0.8s,mb4.3							
AML				*e*		pP	01 12 34.0	-3.2
ILAR	**Eielson Array**	**69.84**	**25**	P		**P**	**01 12 32.1**	**0.0**
	comp=Z,0.3nm,0.5s,mb3.4,baz=258,slow=5.6,SNR=6.1							
BVAR	**Borovoye Array**	**70.78**	**322**	P		**P**	**01 12 37.9**	**-0.3**
	comp=Z,2.0nm,0.4s,mb4.3,baz=109,slow=8.3,SNR=14							
PPT	**Papeete**	**71.43**	**113**	LR		LR	01 37 46.2	
	comp=Z,81nm,21.6s,baz=138,slow=30							
ABKAR	**Akbulak array**	**77.33**	**318**	*e*P		**P**	**01 13 16.2**	**-0.2**
	comp=Z,4.9nm,0.6s,mb4.4							
YKA	**Yellowknife Ar**	**84.12**	**27**	P		**P**	**01 13 53.9**	**+1.6**
YKA	**Yellowknife Ar**	**84.12**	**27**	P		**P**	**01 13 53.9**	**+1.6**
	comp=Z,0.5nm,0.5s,mb3.6,baz=284,slow=5.1,SNR=3.2							
KEV	**Kevo**	**87.67**	**342**	*e*p		**P**	**01 14 09.9**	**+0.1**
	comp=Z,1.5nm,0.5s,mb4.3							
ARCES	**ARCESS Array B**	**88.23**	**342**	P		**P**	**01 14 13.3**	**+0.9**
ARCES	**ARCESS Array B**	**88.23**	**342**	P		**P**	**01 14 13.3**	**+0.9**
	comp=Z,0.6nm,0.5s,mb3.9,baz=69,slow=7.9,SNR=11							
JOF	**Joensuu**	**89.36**	**335**	*e*p		**P**	**01 14 16.1**	**-1.8**
	comp=Z,2.2nm,0.6s,mb4.4							
KAF	**Kangasniemi**	**91.79**	**336**	*e*p		**P**	**01 14 28.5**	**-0.7**
	comp=Z,1.6nm,0.5s,mb4.5							
FINES	**FINESS Array B**	**92.22**	**335**	P		**P**	**01 14 30.7**	**-0.5**
FINES	**FINESS Array B**	**92.22**	**335**	P		**P**	**01 14 30.7**	**-0.5**
	comp=Z,2.9nm,0.7s,mb4.6,baz=66,slow=4.6,SNR=30							
BRTR	**Keskin Array B**	**97.77**	**313**	P		**P**	**01 14 55.8**	**-1.2**
	comp=Z,0.3nm,0.7s,mb3.9,baz=130,slow=4.5,SNR=3.0							
TORD	**Torodi Ar. Bea**	**135.37**	**303**	PKP		PKPdf	01 20 42.7	+0.5
TORD	**Torodi Ar. Bea**	**135.37**	**303**	PKP		PKPdf	01 20 42.7	+0.5
	comp=Z,0.5nm,0.9s,baz=38,slow=2.9,SNR=4.6							
DBIC	**Dimbokro**	**144.27**	**300**	PKP		PKPdf	01 20 57.8	-0.6
	comp=Z,4.7nm,0.7s,baz=156,slow=1.1,SNR=11							
KIC	**Kosan Boka**	**144.34**	**300**	*e*P		PKPdf	01 20 57.3	-1.2
	comp=Z,80nm,1.6s							
TIC	**Toumodi**	**144.43**	**300**	*e*P		PKPdf	01 20 57.8	-0.9
	comp=Z,7.2nm,0.3s							
LIC	**Lamto**	**144.65**	**300**	*e*P		PKPdf	01 20 58.8	-0.3
	comp=Z,18nm,0.4s							
LPAZ	**La Paz**	**148.04**	**101**	PKPbc		PKPbc	01 21 11.0	+3.1
LPAZ	**La Paz**	**148.04**	**101**	PKPbc		PKPbc	01 21 11.0	+3.2
	comp=Z,0.4nm,0.5s,baz=27,slow=4.5,SNR=2.3							

IDC ***18*** *01:04:09.2±4.2, 22.˚97S×179.˚82E, h485km±49km, mb3.4/10, mb1 3.6/11, mb1mx3.5/16, mbtmp3.4/11, Error ellipse: s-maj=24.1km s-min=19.0km az=50.0*

ISCJB ***18*** *01:04:12.3±1.2, 23.˚08S±0.˚07×179.˚7E±0.˚1, h537km±14km, mb3.9/14, Error ellipse: s-maj=18.5km s-min=11.2km az=9.3*

NEIC ***18*** *01:04:12.5±1.0, 23.˚07S×179.˚77E, h528km±11km, mb4.0/5, Error ellipse: s-maj=15.2km s-min=11.1km az=110.0*

ISC 18 01:04:12.8±1.1, 23.˚07S±0.˚10×179.˚8E±0.˚1, h531km±14km, n20, σ0°70/19, mb3.9/14, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.54**	**343**	*e*P		**P**	**01 05 46.9**	**+0.5**
	31nm,0.8s							
URZ	**Urewera**	**15.31**	**188**	P		**P**	**01 07 24.3**	**-1.2**
	1.7nm,0.3s,baz=67,slow=2.9,SNR=5.8							
URZ				S		**S**	**01 09 58.6**	**-5.7**
	1.5nm,0.3s,baz=7.7,slow=19,SNR=7.7							
SNZO	**South Karori**	**18.68**	**192**	P		**P**	**01 07 58.4**	**+0.9**
RPZ	**Rata Peaks**	**21.81**	**197**	P		**P**	**01 08 25.7**	**-0.2**
	11nm,0.9s,mb4.5,baz=302,slow=9.5,SNR=1.9							
CTA	**Charters Tower**	**31.26**	**269**	P		**P**	**01 09 49.9**	**+0.7**
	5.9nm,0.5s,mb4.4,baz=98,slow=10,SNR=8.2							
STKA	**Stephens Creek**	**34.83**	**247**	*e*P		**P**	**01 10 19.6**	**+0.3**
	0.5nm,0.6s,mb3.2							
STKA	**Stephens Creek**	**34.83**	**247**	P		**P**	**01 10 19.9**	**+0.6**
	2.3nm,0.4s,mb4.0,baz=103,slow=12,SNR=8.0							
ASAR	**Alice Springs**	**41.95**	**260**	P		**P**	**01 11 17.4**	**+0.2**
	0.8nm,0.6s,mb3.4,baz=92,slow=8.0,SNR=4.7							
WRA	**Warramunga Arr**	**42.24**	**265**	P		**P**	**01 11 19.0**	**-0.6**
	3.0nm,0.7s,mb4.0,baz=100,slow=8.5,SNR=6.8							
GUMO	**Guam**	**49.93**	**313**	P		**P**	**01 12 16.8**	**-1.2**
	18nm,0.4s,mb4.8,baz=170,slow=5.4,SNR=4.2							
MJAR	**Matsushiro Arr**	**71.08**	**326**	P		**P**	**01 14 36.4**	**-0.9**
	1.0nm,0.3s,mb3.8,baz=127,slow=7.8,SNR=3.9							
MAW	**Mawson**	**78.45**	**200**	P		**P**	**01 15 18.4**	**+0.2**
	0.5nm,0.5s,mb3.1,baz=104,slow=4.2,SNR=3.8							
CMB	**Columbia Colle**	**82.75**	**44**	*e*P		**P**	**01 15 40.6**	**-0.4**
	3.6nm,0.9s,mb3.9							
NVAR	**Mina Array Bea**	**84.31**	**44**	P		**P**	**01 15 49.7**	**+1.0**
	0.4nm,0.3s,mb3.4,baz=241,slow=9.2,SNR=3.3							
CMAR	**Chiang Mai Arr**	**89.03**	**290**	P		**P**	**01 16 12.4**	**+0.9**
	0.3nm,0.3s,mb3.6,baz=163,slow=6.4,SNR=4.3							
MNTX	**Cornudas Mount**	**89.92**	**55**	*e*P		**P**	**01 16 15.1**	**-0.3**
	1.3nm,0.7s,mb3.9							
TXAR	**Lajitas Array**	**90.18**	**58**	P		**P**	**01 16 17.1**	**+0.4**
	1.4nm,0.8s,mb3.8,baz=205,slow=6.6,SNR=14							
HWUT	**Hardware Ranch**	**90.38**	**44**	*e*P		**P**	**01 16 16.9**	**-0.4**
	1.2nm,0.5s,mb4.0							
BRTR	**Keskin Array B**	**146.89**	**308**	PKPbc		PKPbc	01 22 58.2	+2.6
	0.5nm,0.7s,baz=104,slow=4.5,SNR=4.2							
CLL	**Collm**	**150.00**	**343**	*i* PKPbc		PKPbc	01 23 02.2	-0.8
	comp=Z,5.0nm,0.8s							

NIED ***18*** *01:46:00, 47.˚50N×154.˚30E, h17km, Mw5.1 Best double couple: M₀5.87000×10¹⁶ NP1:φ₀226.00000°, δ80.00000°, λ113.00000°. NP2:φ₀338.00000°, δ25.00000°, λ23.00000°.*

ISCJB ***18*** *01:46:27.9±0.9, 47.˚23N±0.˚03×153.˚97E±0.˚03, h16km±6km, mb5.2/267, MS4.6/59, Error ellipse: s-maj=6.2km s-min=2.8km az=158.2*

BJI ***18*** *01:46:28.5, 47.˚37N×154.˚07E, h28km, mB5.1/35, mb5.2/52, Ms4.9/46, Ms7 4.7/49*

SKHL ***18*** *01:46:28.4±1.0, 46.˚94N×154.˚57E, h42km±1km, mb6.0/6, mbh5.6/4, Ms4.8/9, msh5.4/5*

IDC ***18*** *01:46:31.5±3.5, 47.˚22N×154.˚00E, h33km±26km, mb4.7/23, mb1 4.8/24, mb1mx4.7/27, mbtmp4.7/24, ML3.9/1, MS4.4/14, Ms1 4.4/14, ms1mx4.0/36, Error ellipse: s-maj=17.4km s-min=11.9km az=152.0*

MOS ***18*** *01:46:32.7±1.1, 47.˚15N×153.˚92E, h56km, mb5.4/113, MS4.6/33, Error ellipse: s-maj=7.5km s-min=4.1km az=107.6*

NEIC ***18*** *01:46:32.5±0.2, 47.˚26N×153.˚93E, h35km, mb5.1/154, Error ellipse: s-maj=7.7km s-min=3.5km az=172.0*

GCMT ***18*** *01:46:33.6±0.2, 47.˚21N×154.˚38E, h18km, MW5.1, Moment Tensor Solution. s60,c101; s85,c155; Moment tensor: Scale 10¹⁶Nm; Mrr4.65±.14; Mθθ-1.12±.10; Mφφ-3.53±.10; Mrθ1.06±.25; Mθφ-2.30±.07; Mφr1.89±.23; Best double couple: M₀5.30000×10¹⁶ NP1:φ₀212.00000°, δ33.00000°, λ91.00000°. NP2:φ₀30.00000°, δ57.00000°, λ89.00000°. Principal axes: T 5.1200, Plg78.0000°, Azm297.0000°; N 0.2700, Plg1.0000°, Azm31.0000°; P -5.3900, Plg12.0000°, Azm121.0000°; Data Used: II IU IC CN G.*

SZGRF ***18*** *01:46:42.6, 48.˚64N×152.˚73E, h47km, mb5.5, MS4.6, Kuril Islands, Russia*

ISC 18 01:46:31.7±0.9, 47.˚32N±0.˚03×153.˚94E±0.˚03, h27km±6km, h37km±1.7km: pP-P, n687, σ0°96/713, mb5.2/267, MS4.6/59, 152C-20D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.66**	**22**	*e*PN		**Pn**	**01 47 25.8**	**-0.7**
SKR				Op		pmax	pmax	
	comp=N,400nm,1.0s							
SKR						pmax	pmax	
	comp=E,450nm,1.0s							
SKR						pmax	pmax	
	comp=Z,1μm,1.0s							
SKR						MLR	MLR	
	comp=N,6μm,12.0s							
SKR						MLR	MLR	
	comp=E,7μm,12.0s							
SKR						MLR	MLR	
	comp=Z,8μm,12.0s							
SKR	**Severo-Kuril's**	**3.66**	**22**	*e*P		**Pn**	**01 47 25.8**	**-0.7**
SKR						AMB	AMB	01 47 34.0
	comp=Z,400nm,1.0s							
SKR						AMB	AMB	01 47 34.0
	comp=Z,450nm,1.0s							
SKR						AMB	AMB	01 47 34.0
	comp=Z,1μm,1.0s							
SKR				*e*S		**Sn**	**01 48 08.0**	**-0.8**
SKR						A	01 48 10.8	
	comp=Z,320nm,0.5s							
SKR						A	01 48 10.8	
	comp=Z,2μm,1.0s							
SKR						A	01 48 10.8	
	comp=Z,720nm,1.0s							
SKR						A	01 48 28.0	
	comp=Z,6μm,6.0s							
SKR						A	01 48 28.0	
	comp=Z,10μm,10.0s							
SKR						A	01 48 28.0	
	comp=Z,4μm,10.0s							
SKR						A	01 48 28.0	
	comp=Z,6μm,6.0s							
SKR						A	01 48 28.0	
	comp=Z,9μm,10.0s							
SKR						A	01 48 28.0	
	comp=Z,5μm,10.0s							
SKR						AMS	AMS	01 49 16.0
	comp=Z,6μm,12.0s							
SKR						AMS	AMS	01 49 16.0
	comp=Z,8μm,12.0s							
SKR						AMS	AMS	01 49 16.0
	comp=Z,6μm,12.0s							
SKR						AMS	AMS	01 49 16.0
	comp=Z,7μm,12.0s							
SKR						AMS	AMS	01 49 16.0
	comp=Z,8μm,12.0s							
KUR	**Kuril'sk**	**4.70**	**246**	*e*PN		**Pn**	**01 47 40.5**	**-0.2**
KUR				*e*S		**Sn**	**01 48 35.0**	**+0.8**
KUR				Op		pmax	pmax	
	comp=N,540nm,0.8s							
KUR						pmax	pmax	
	comp=E,460nm,0.8s							
KUR						pmax	pmax	
	comp=Z,650nm,0.8s							
KUR						smax		
	comp=N,10μm,2.0s							
KUR						smax		
	comp=E,8μm,2.0s							
KUR						smax		
	comp=N,3μm,1.0s							
KUR						smax		
	comp=E,1μm,1.0s							
KUR						MLR	MLR	
	comp=N,5μm,12.0s							
KUR						MLR	MLR	
	comp=E,7μm,12.0s							
KUR						MLR	MLR	
	comp=Z,3μm,12.0s							
KUR	**Kuril'sk**	**4.70**	**246**	*e*P		**Pn**	**01 47 40.5**	**-0.2**
KUR						AMB	AMB	01 47 49.0
	comp=Z,4μm,3.0s							
KUR						AMB	AMB	01 48 07.2
	comp=Z,540nm,0.8s							
KUR						AMB	AMB	01 48 07.2
	comp=Z,460nm,0.8s							
KUR						AMB	AMB	01 48 07.2
	comp=Z,650nm,0.8s							
KUR				*e*S		**Sn**	**01 48 35.0**	**+0.8**
KUR						A	01 48 54.0	
	comp=Z,10μm,2.0s							
KUR						A	01 48 54.0	
	comp=Z,8μm,2.0s							
KUR						A	01 49 06.2	
	comp=Z,3μm,1.0s							
KUR						A	01 49 06.2	
	comp=Z,1μm,1.0s							
KUR						AMS	AMS	01 49 59.9
	comp=Z,5μm,12.0s							
KUR						AMS	AMS	01 49 59.9
	comp=Z,7μm,12.0s							
KUR						AMS	AMS	01 49 59.9
	comp=Z,3μm,12.0s							
PET	**Petropavlovsk**	**6.47**	**26**	*e*Pn		**Pn**	**01 48 03.1**	**-1.9**
PET				*e*Sn		**Sn**	**01 49 15.7**	**-2.1**
PET	**Petropavlovsk**	**6.47**	**26**	*e*PN		**Pn**	**01 48 03.1**	**-1.9**
PET				Op		pmax	pmax	
	comp=Z,210nm,0.8s							
PET						MLR	MLR	
	comp=Z,2μm,17.0s							
PET						MLR	MLR	
	comp=Z,2μm,11.0s							
YUK	**Yuzh-Kuril'sk**	**6.54**	**243**	⇑*i* PN		**Pn**	**01 48 06.0**	**0.0**
YUK				*i* S		**Sn**	**01 49 19.8**	**+0.1**
YUK				Op		pmax	pmax	
	comp=E,156nm,0.8s							
YUK						pmax	pmax	
	comp=Z,365nm,0.8s							
YUK						pmax	pmax	
	comp=N,86nm,0.4s							
YUK						pmax	pmax	
	comp=Z,1μm,1.2s							
YUK						smax		
	comp=N,460nm,0.8s							
YUK						smax		
	comp=E,390nm,0.8s							
YUK						smax		
	comp=N,1μm,0.9s							
YUK						smax		
	comp=E,4μm,0.9s							
YUK						MLR	MLR	
	comp=N,2μm,13.0s							
YUK						MLR	MLR	
	comp=E,2μm,13.0s							
YUK						MLR	MLR	
	comp=Z,1μm,13.0s							
YUK	**Yuzh-Kuril'sk**	**6.54**	**243**	*e*P		**Pn**	**01 48 06.1**	**+0.1**
YUK						AMB	AMB	01 48 17.0
	comp=Z,2μm,2.0s							
YUK						AMB	AMB	01 48 17.0
	comp=Z,3μm,2.0s							
YUK						AMB	AMB	01 48 17.0
	comp=Z,380nm,0.5s							
YUK				*e*S		**Sn**	**01 49 19.8**	**+0.1**
YUK						A	01 49 40.0	
	comp=Z,5μm,3.0s							
YUK						A	01 49 40.0	
	comp=Z,2μm,3.0s							
YUK						A	01 49 57.4	
	comp=Z,750nm,0.8s							
YUK						A	01 49 57.4	
	comp=Z,2μm,0.8s							
YUK						AMS	AMS	01 51 09.0
	comp=Z,8μm,12.0s							
YUK						AMS	AMS	01 51 09.0
	comp=Z,5μm,12.0s							
YUK						AMS	AMS	01 51 09.0
	comp=Z,2μm,13.0s							
YUK						AMS	AMS	01 51 09.0
	comp=Z,2μm,13.0s							
YUK						AMS	AMS	01 51 09.0
	comp=Z,1μm,13.0s							
YSS	**Yuzh-Sakhalins**	**7.64**	**271**	*e*Pn		**Pn**	**01 48 25.5**	**+4.4**
YSS				*e*Sn		**Sn**	**01 49 54.8**	**+8.2**
YSS	**Yuzh-Sakhalins**	**7.64**	**271**	*e*PN		**Pn**	**01 48 25.0**	**+3.9**
YSS				Op		pmax	pmax	
	comp=Z,80nm,1.1s							
YSS						MLR	MLR	
	comp=Z,6μm,17.0s							
YSS						MLR	MLR	
	comp=N,1μm,14.0s							
YSS						MLR	MLR	
	comp=E,5μm,16.0s							
YSS	**Yuzh-Sakhalins**	**7.64**	**271**	*e*P		**Pn**	**01 48 25.0**	**+3.9**
YSS						AMB	AMB	01 48 28.4
	comp=E,80nm,1.1s							
YSS				*e*LQ			01 50 03.0	
YSS				*e*LR		LR	01 50 45.0	
YSS						AMS	AMS	01 51 11.0
	comp=E,5μm,16.0s							
YSS						AMS	AMS	01 51 11.0
	comp=E,1μm,14.0s							
YSS						AMS	AMS	01 51 11.0
	comp=E,6μm,17.0s							
UGL	**Uglegorsk**	**8.13**	**287**	*e*P		**Pn**	**01 48 33.0**	**+5.2**
UGL						AMB	AMB	01 48 36.0
	comp=E,960nm,1.5s							
UGL				sP			01 48 50.5	
UGL				*e*L			01 50 50.0	
UGL						AMS	AMS	01 51 51.0
	comp=E,2μm,15.0s							
UGL						AMS	AMS	01 51 51.0
	comp=E,6μm,15.0s							
TYV	**Tymovskoe**	**8.21**	**300**	*e*P		**Pn**	**01 48 32.0**	**+3.1**
TYV						AMB	AMB	01 48 36.5
	comp=E,48nm,1.2s							
TYV						AMB	AMB	01 48 36.5
	comp=E,160nm,1.2s							
TYV						AMB	AMB	01 48 36.5
	comp=E,200nm,1.2s							
TYV						AMB	AMB	01 48 48.0
	comp=E,800nm,10.0s							
TYV						AMB	AMB	01 48 48.0
	comp=E,5μm,16.0s							
TYV						AMS	AMS	01 52 12.0
	comp=E,4μm,14.0s							
TYV						AMS	AMS	01 52 12.0
	comp=E,6μm,14.0s							
ASAJ	**Asahikawa**	**8.55**	**252**	Pn		**Pn**	**01 48 35.0**	**+1.3**
	comp=E,1.6nm,0.3s,baz=85,slow=15,SNR=24							
ASAJ						Sn	**Sn**	**01 50 15.3**	**+6.1**
	baz=356,slow=19,SNR=1.2							
ASAJ						LR	LR	01 51 46.4
	comp=E,1μm,19.2s,baz=66,slow=37							
ERM	**Erimo**	**9.33**	**239**	*e*Pn		**Pn**	**01 48 43.0**	**-1.3**
ERM				*e*Sn		**Sn**	**01 50 18.6**	**-10**
ERM	**Erimo**	**9.33**	**239**	*d* PN		**Pn**	**01 48 41.9**	**-2.4**
OKH	**Okha**	**9.39**	**316**	*e*P		**Pn**	**01 48 48.8**	**+3.8**
OKH						AMB	AMB	01 48 53.4
	comp=E,2μm,8.0s							
OKH						AMS	AMS	01 54 08.0
	comp=E,4μm,14.0s							
OKH						AMS	AMS	01 54 08.0
	comp=E,5μm,12.0s							
OKH						AMS	AMS	01 54 08.0
	comp=E,6μm,12.0s							
NKL	**Nikolayevsk**	**10.30**	**309**	*i* P		**Pn**	**01 48 57.0**	**-0.5**
NKL						AMB	AMB	01 48 58.7
	comp=E,150nm,1.3s							
NKL						AMB	AMB	01 48 58.7
	comp=E,140nm,1.1s							
NKL						AMB	AMB	01 48 58.7
	comp=E,250nm,1.1s							
NKL						AMB	AMB	01 49 03.5
	comp=E,500nm,6.5s							
NKL						AMB	AMB	01 49 03.5
	comp=E,900nm,6.5s							
NKL						AMB	AMB	01 49 03.5
	comp=E,800nm,6.5s							
NKL				*e*S		**Sn**	**01 51 04.0**	**+12**
NKL						A	01 51 06.0	
	comp=E,500nm,5.0s							
NKL				*e*L			01 51 44.0	
NKL						AMS	AMS	01 53 28.0
	comp=E,500nm,17.0s							
NKL						AMS	AMS	01 53 28.0
	comp=E,3μm,17.0s							
NKL						AMS	AMS	01 53 28.0
	comp=E,2μm,19.0s							
TEY	**Ternei**	**12.23**	**266**	*e*P		**Pn**	**01 49 32.8**	**+8.8**
TEY						AMB	AMB	01 49 36.0
	comp=E,1μm,5.0s							
TEY				*e*LR		LR	01 53 24.0	
TEY						AMS	AMS	01 53 44.0
	comp=E,2μm,16.0s							
TEY						AMS	AMS	01 53 44.0
	comp=E,3μm,18.0s							
TEY						AMS	AMS	01 53 44.0
	comp=E,2μm,18.0s							
HABR	**Khabarovsk**	**12.73**	**282**	*e*PN		**Pn**	**01 49 28.6**	**-2.2**
HABR						MLR	MLR	
	comp=Z,3μm,16.0s							
SMY	**Shemya**	**14.03**	**60**	*e*Pn		**Pn**	**01 49 44.8**	**-3.7**
KLR	**Kul'dur**	**14.89**	**286**	*e*P		**Pn**	**01 50 02.8**	**+2.6**
KLR						MLR	MLR	
	comp=N,2μm,15.5s							
KLR						MLR	MLR	
	comp=E,3μm,15.5s							
SEY	**Seymchan**	**15.68**	**357**	⇑*i* P		**Pn**	**01 50 11.8**	**+1.4**
SEY	**Seymchan**	**15.68**	**357**	⇑*i* P		**Pn**	**01 50 11.7**	**+1.3**
MJAR	**Matsushiro Arr**	**15.87**	**233**	Pn		**Pn**	**01 50 08.9**	**-4.2**
	comp=E,0.6nm,0.3s,baz=26,slow=12,SNR=23							
MJAR	**Matsushiro Arr**	**15.87**	**233**	P		**Pn**	**01 50 08.9**	**-4.2**
MJAR						pmax	pmax	
	comp=Z,1.0nm,0.3s							
MAJO	**Matsushiro**	**15.87**	**233**	*e*Pn		**Pn**	**01 50 08.8**	**-4.3**
	comp=Z,45nm,0.8s							
MAJO	**Matsushiro**	**15.87**	**233**	*e*P		**Pn**	**01 50 08.8**	**-4.3**
MAJO

comp=Z,49nm,1.0s
ZEA Zeya 18.07 301 *e*P **Pn** **01 50 38.8 -1.8**
ZEA AMB AMB 01 50 43.5
comp=Z,44nm,0.9s
ZEA AMB AMB 01 50 43.5
comp=Z,47nm,1.0s
ZEA AMB AMB 01 50 43.5
comp=Z,58nm,1.0s
ZEA AMB AMB 01 50 47.0
comp=Z,1μm,4.0s
ZEA AMB AMB 01 50 47.0
comp=Z,300nm,5.0s
ZEA AMB AMB 01 50 47.0
comp=Z,700nm,5.0s
ZEA sP sP 01 50 57.0 +5.3
ZEA *e*S **Sn** **01 54 08.0 +6.7**
ZEA A 01 54 20.0
comp=Z,300nm,6.0s
CLNS Chul'man 20.09 309 *e*P **P** **01 51 05.3 +2.4**
CLNS *e* 01 51 20.4
CLNS *e*S **S** **01 54 49.2 +2.2**
CLNS *e* 01 55 16.0
CLNS *e*SS 01 55 21.1
CLNS pmax pmax
comp=Z,68nm,0.9s
CLNS pmax pmax
comp=E,40nm,1.0s
CLNS pmax pmax
comp=N,57nm,1.1s
CLNS pmax pmax
comp=E,44nm,1.0s
CLNS pmax pmax
comp=Z,52nm,1.1s
CLNS pmax pmax
comp=N,16nm,1.1s
CLNS smax
comp=E,1μm,14.2s
CLNS smax
comp=N,357nm,12.8s
CLNS MLR MLR
comp=E,1μm,13.0s,MS4.6
CLNS MLR MLR
comp=Z,2μm,15.0s,MS4.6
CLNS MLR MLR
comp=N,1μm,13.0s,MS4.6
YAK Yakutsk 20.16 326 *e*P **P** **01 51 01.6 -2.0**
YAK Yakutsk 20.16 326 *e*P **P** **01 51 04.7 +1.1**
YAK *e*S **S** **01 54 45.8 -2.5**
YAK *e* 01 55 22.0
YAK *e* 02 02 29.5
YAK pmax pmax
comp=Z,36nm,0.9s
YAK pmax pmax
comp=N,13nm,1.3s
YAK pmax pmax
comp=E,12nm,1.0s
YAK smax
comp=N,204nm,3.0s
YAK smax
comp=E,71nm,2.4s
YAK MLR MLR
comp=Z,2μm,16.0s,MS4.5
YAK MLR MLR
comp=N,706nm,14.0s,MS4.4
YAK MLR MLR
comp=E,1μm,14.0s,MS4.4
CN2 Changchun 20.20 270 *e*P **P** **01 51 02.6 -1.6**
CN2 *e*pP 01 51 11.3
CN2 *e*sP sP 01 51 15.8 +0.7
CN2 *e*S **S** **01 54 40.6 -8.9**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,2μm,15.0s,MS4.6
CN2 LR LR
comp=E,2μm,15.0s,MS4.6
CN2 LR LR
comp=Z,2μm,16.0s,MS4.5
ATKA Atka Island 21.05 65 *e*P **P** **01 51 13.9 +0.5**
comp=Z,279nm,2.0s,mb5.2
KSRS Korea Array 21.50 252 P **P** **01 51 17.9 -0.4**
comp=Z,21nm,0.9s,mb4.6,baz=63,slow=10,SNR=43
KSRS LR LR 01 59 46.7
comp=Z,397nm,18.2s,MS3.9,baz=172,slow=37
KSRS Korea Array 21.50 252 P **P** **01 51 17.9 -0.4**
KSRS pmax pmax
comp=Z,21nm,0.9s,mb4.6
KSRS MLR MLR
comp=Z,397nm,18.2s,MS3.9
SNY Shenyang 22.23 267 ⇑P **P** **01 51 26.5 +0.5**
SNY S **S** **01 55 23.6 -5.6**
SNY pmax pmax
comp=Z,330nm,4.1s
SNY LR LR
comp=N,1μm,17.1s,MS4.5
SNY LR LR
comp=E,930nm,17.8s,MS4.5
SNY LR LR
comp=Z,1μm,18.6s,MS4.4
INCN Inchon 22.33 254 P **P** **01 51 27.1 0.0**
comp=Z,108nm,1.1s,mb5.2
HIA Hailar 22.73 288 *e*P **P** **01 51 29.9 -1.3**
comp=Z,20nm,0.9s,mb4.5
HIA Hailar 22.73 288 *e*P **P** **01 51 29.9 -1.3**
HIA pmax pmax
comp=Z,20nm,0.9s
TIXI 27.09 343 *e*P **P** **01 52 10.2 -1.5**
comp=Z,49nm,1.8s,mb4.7
TIXI Tiksi 27.09 343 *e*P **P** **01 52 10.0 -1.6**
TIXI *e*S **S** **01 56 50.8 +3.2**
TIXI pmax pmax
comp=Z,19nm,1.3s,mb4.5
TIXI MLR MLR
comp=Z,1μm,18.0s,MS4.5
BJI Beijing 28.05 269 P **P** **01 52 20.3 -0.2**
BJI S **S** **01 57 02.6 -0.7**
BJI pmax pmax
comp=Z,14nm,1.5s,mb4.4
BJI pmax pmax
comp=Z,250nm,6.4s
BJI LR LR
comp=N,960nm,15.0s,MS4.8
BJI LR LR
comp=E,2μm,16.9s,MS4.8
BJI LR LR
comp=Z,940nm,16.7s,MS4.5
SSE Sheshan 29.83 249 P **P** **01 52 31.0 -5.4**
SSE pP pP 01 52 40.8 -3.6
SSE S **S** **01 57 28.3 -3.1**
SSE sS sS 01 57 46.3 +1.6
SSE pmax pmax
comp=Z,31nm,0.8s,mb5.1
SSE pmax pmax
comp=Z,34nm,3.9s
SSE LR LR
comp=N,520nm,21.8s,MS4.2
SSE LR LR
comp=E,290nm,21.9s,MS4.2
SSE LR LR
comp=Z,400nm,14.9s
NJ2 Nanjing 30.70 253 *e*P **P** **01 52 44.3 +0.2**
NJ2 pP pP 01 52 53.8 +1.7
NJ2 sP sP 01 52 57.8 +2.3
NJ2 PP PP 01 53 49.1 -4.5
NJ2 S **S** **01 57 42.0 -3.1**
NJ2 sS sS 01 57 58.0 -0.4
NJ2 pmax pmax
comp=Z,30nm,0.8s,mb5.2
NJ2 pmax pmax
comp=Z,180nm,4.5s
NJ2 LR LR
comp=N,380nm,25.3s
NJ2 LR LR
comp=E,160nm,18.3s
NJ2 LR LR
comp=Z,200nm,19.0s
HHC Hu-ho-hao-te 30.82 274 *e*P **P** **01 52 45.6 +0.5**
HHC pP pP 01 52 55.1 +2.0
HHC sP sP 01 52 58.8 +2.4
HHC PP PP 01 53 45.8 -8.9
HHC *e*S **S** **01 57 44.0 -2.8**
HHC sS sS 01 58 00.3 +0.3
HHC PcS PcS 01 59 21.0 -4.5
HHC SS SS 01 59 25.5 -33
HHC pmax pmax
comp=Z,36nm,1.0s,mb5.2
HHC pmax pmax
comp=Z,160nm,4.2s
HHC LR LR
comp=N,410nm,11.8s,MS4.6
HHC LR LR
comp=E,790nm,14.1s,MS4.6
HHC LR LR
comp=Z,1μm,14.2s,MS4.7
ULN Ulaanbaatar 31.25 289 P **P** **01 52 47.9 -0.9**
comp=Z,17nm,1.1s,mb4.8
ULN Ulaanbaatar 31.25 289 P **P** **01 52 48.8 +0.1**
SNR=7.6
TTA Tatalina 31.62 42 *e*P **P** **01 52 51.5 -0.5**
SONM Songino Array 31.68 289 P **P** **01 52 52.2 -0.4**
comp=Z,9.3nm,0.8s,mb4.7,baz=69,slow=8.9,SNR=57
SONM LR LR 02 06 34.4
comp=Z,1μm,19.2s,MS4.5,baz=161,slow=38
SONM Songino Array 31.68 289 P **P** **01 52 52.2 -0.4**
SONM pmax pmax
comp=Z,9.0nm,0.8s
SONM MLR MLR
comp=Z,1μm,19.2s
TLY Talaya 32.42 297 *e*P **P** **01 52 58.2 -0.9**
comp=Z,15nm,1.1s,mb4.7
TLY Talaya 32.42 297 *e*P **P** **01 52 58.9 -0.2**
TLY *e* 01 54 14.8
TLY pmax pmax
comp=Z,14nm,1.1s,mb4.7
TLY MLR MLR
comp=Z,1μm,17.0s,MS4.7
ZAK Zakamensk 32.95 294 *e*P **P** **01 53 07.1 +3.4**
RSO Redoubt South 33.07 47 *e*P **P** **01 53 04.7 +0.1**
KDAK Kodiak Island 33.31 52 *e*P **P** **01 53 04.9 -1.8**
comp=Z,27nm,1.1s,mb5.1
KDAK Kodiak Island 33.31 52 P **P** **01 53 04.9 -1.9**
comp=Z,7.3nm,0.9s,mb4.6,baz=260,slow=12,SNR=2.8
KDAK Kodiak Island 33.31 52 P **P** **01 53 04.9 -1.8**
KDAK pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
PPLA Purkeypile 33.37 42 *e*P **P** **01 53 07.6 +0.4**
comp=Z,94nm,1.2s,mb5.6
BPAW Bear Paw Mtn. 33.96 40 *e*P **P** **01 53 11.9 -0.4**
comp=Z,34nm,1.1s,mb5.2
TRF Thorofare Moun 34.25 41 *e*P **P** **01 53 14.4 -0.4**
comp=Z,28nm,0.9s,mb5.2
RC01 Rabbit Creek A 34.53 46 *e*P **P** **01 53 16.4 -0.9**
comp=Z,20nm,1.1s,mb5.0
RC01 *e*PcP PcP 01 55 50.0 -1.5
COLD Coldfoot 34.55 35 *e*P **P** **01 53 17.1 -0.2**
comp=Z,19nm,0.9s,mb5.0
WHN Wuhan 34.62 255 P **P** **01 53 16.5 -1.9**
WHN S **S** **01 58 51.8 +5.7**
WHN LR LR
comp=N,920nm,10.1s,MS5.0
WHN LR LR
comp=E,980nm,10.0s,MS5.0
WHN LR LR
comp=Z,1μm,13.9s,MS4.8
PMR Palmer 34.80 45 *e*P **P** **01 53 17.7 -1.9**
comp=Z,21nm,1.0s,mb5.0
PMR Palmer 34.80 45 *e*P **P** **01 53 17.7 -1.9**
PMR pmax pmax
comp=Z,21nm,1.0s,mb5.0
MCK McKinley 34.85 41 *e*P **P** **01 53 19.3 -0.8**
comp=Z,45nm,1.0s,mb5.3
MCK McKinley 34.85 41 *e*P **P** **01 53 19.3 -0.8**
MCK pmax pmax
comp=Z,45nm,1.0s,mb5.3
COLA College 35.34 39 *e*P **P** **01 53 24.1 -0.2**
comp=Z,76nm,1.0s,mb5.6
COLA *e* 01 53 36.8
COLA College 35.34 39 *e*P **P** **01 53 24.1 -0.2**
COLA *e* 01 53 36.8
COLA pmax pmax
comp=Z,76nm,1.0s,mb5.6
ILAR Eielson Array 35.76 39 P **P** **01 53 26.8 -1.0**
comp=Z,6.5nm,0.8s,mb4.6,baz=253,slow=8.0,SNR=45
ILAR LR LR 02 08 39.0
comp=Z,367nm,19.9s,MS4.2,baz=178,slow=37
ILAR Eielson Array 35.76 39 P **P** **01 53 26.8 -1.0**
ILAR pmax pmax
comp=Z,7.0nm,0.9s
ILAR MLR MLR
comp=Z,367nm,19.9s
QZH Quanzhou 35.79 244 P **P** **01 53 27.8 -0.7**
QZH S **S** **01 59 07.8 +3.7**
QZH LR LR
comp=Z,830nm,15.1s,MS4.6
TPUB Ta-pu 35.80 240 *e*P **P** **01 53 27.5 -1.2**
comp=Z,73nm,1.0s,mb5.6
TWG Pinlang 35.91 239 *e*P **P** **01 53 28.4 -1.2**
comp=Z,100nm,1.3s,mb5.6
XAN Xi'an 36.12 265 P **P** **01 53 31.3 0.0**
XAN pP pP 01 53 41.3 +1.9
XAN sP sP 01 53 44.9 +2.2
XAN PcP PcP 01 56 00.1 +3.4
XAN ScS ScS 02 03 48.6 +1.9
XAN pmax pmax
comp=Z,27nm,1.0s,mb5.1
XAN pmax pmax
comp=Z,31nm,8.3s
XAN LR LR
comp=N,850nm,15.3s,MS4.6
XAN LR LR
comp=E,200nm,15.3s,MS4.6
XAN LR LR
comp=Z,360nm,15.1s,MS4.3
PAX Paxson 36.44 42 *e*P **P** **01 53 33.7 0.0**
comp=Z,28nm,1.2s,mb5.1
PAX Paxson 36.44 42 *e*P **P** **01 53 33.7 0.0**
PAX pmax pmax
comp=Z,28nm,1.2s,mb5.1
DIV Divide 36.45 45 *e*P **P** **01 53 33.6 -0.2**
comp=Z,41nm,0.9s,mb5.3
BMRM Bremner River 37.03 45 *e*P **P** **01 53 38.4 -0.3**
comp=Z,42nm,0.9s,mb5.3
MENT Mentasta 37.24 42 *e*P **P** **01 53 40.4 -0.1**
ENH Enshi 38.02 260 *e*P **P** **01 53 47.1 -0.4**
comp=Z,30nm,1.0s,mb5.0
EGAK Eagle 38.21 39 *e*P **P** **01 53 47.8 -0.9**
comp=Z,60nm,0.9s,mb5.3
EGAK *e* 01 54 01.0
LZH Lanzhou 38.43 272 ⇓P **P** **01 53 52.3 +1.4**
LZH pP pP 01 54 00.8 +1.8
LZH sP sP 01 54 05.1 +2.8
LZH PP PP 01 55 22.4 +3.5
LZH S **S** **01 59 44.0 -0.2**
LZH SS SS 02 02 22.4 -11
LZH pmax pmax
comp=Z,130nm,1.0s,mb5.6
LZH pmax pmax
comp=Z,360nm,4.2s
LZH LR LR
comp=E,980nm,14.6s
LZH LR LR
comp=Z,2μm,16.0s,MS4.9
DAWY Dawson 39.05 40 *e*P **P** **01 53 55.3 -0.4**
DAWY *e* 01 54 10.3
GTA Gaotai 39.44 279 *e*P **P** **01 54 00.3 +1.0**
GTA pmax pmax
comp=Z,13nm,1.0s,mb4.6
GTA pmax pmax
comp=Z,150nm,7.7s
GTA LR LR
comp=N,820nm,13.7s,MS4.8
GTA LR LR
comp=E,550nm,16.3s,MS4.8
GTA LR LR
comp=Z,710nm,18.1s,MS4.5
PNL Peninsula 39.81 47 *e*P **P** **01 54 01.6 -0.5**
comp=Z,20nm,1.1s,mb4.8
GZH Guangzhou 40.40 248 P **P** **01 54 02.5 -4.9**
GZH S **S** **02 00 12.8 -1.2**
GZH LR LR
comp=Z,880nm,14.7s,MS4.7
INK Inuvik 40.87 33 *e*P **P** **01 54 11.2 +0.5**
comp=Z,42nm,1.3s,mb4.9
INK *e* 01 54 23.8
INK Inuvik 40.87 33 P **P** **01 54 11.1 +0.4**
comp=Z,19nm,0.9s,mb4.7,baz=294,slow=8.5,SNR=24
INK Inuvik 40.87 33 P **P** **01 54 11.1 +0.3**
INK pmax pmax
comp=Z,19nm,0.9s
CD2 Chengdu 41.49 265 ⇑P **P** **01 54 16.6 +0.3**
CD2 pP pP 01 54 26.4 +1.9
CD2 sP sP 01 54 30.4 +2.6
CD2 PP PP 01 55 55.6 +3.3
CD2 PcP PcP 01 56 15.4 +1.8
CD2 ScP ScP 02 00 01.4 -0.2
CD2 S **S** **02 00 28.3 -1.7**
CD2 sS sS 02 00 44.6 +1.1
CD2 SS SS 02 03 27.8 -6.9
CD2 pmax pmax
comp=Z,230nm,5.9s
CD2 LR LR
comp=N,840nm,17.6s,MS4.8
CD2 LR LR
comp=E,480nm,13.2s,MS4.8
CD2 LR LR
comp=Z,940nm,16.3s,MS4.8
SKAG Skagway 41.87 46 *e*P **P** **01 54 19.8 +0.7**
comp=Z,43nm,1.3s,mb4.9
GYA Guiyang 42.39 258 ⇑*i*P **P** **01 54 23.3 -0.4**
GYA pP pP 01 54 34.3 +2.4
GYA sP sP 01 54 39.8 +4.7
GYA PP PP 01 56 06.0 +4.0
GYA PcP PcP 01 56 18.4 +1.8
GYA ScP ScP 02 00 04.3 -0.9
GYA S **S** **02 00 42.0 -1.3**
GYA sS sS 02 00 58.9 +2.1
GYA SS SS 02 03 43.3 -9.3
GYA pmax pmax
comp=Z,60nm,0.9s,mb5.2
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=N,530nm,17.8s,MS4.6
GYA LR LR
comp=E,480nm,18.0s,MS4.6
GYA LR LR
comp=Z,620nm,18.8s,MS4.5
ZALV Zalesovo Beam 42.74 306 P **P** **01 54 24.7 -1.5**
comp=Z,20nm,0.7s,mb4.9,baz=64,slow=7.5,SNR=82
ZALV PcP PcP 01 56 17.1 -0.3
comp=Z,8.9nm,0.9s,baz=82,slow=3.1,SNR=7.1
ZALV ScP ScP 02 00 04.5 -1.6
comp=Z,0.5nm,0.3s,baz=20,slow=4.7,SNR=3.5
ZALV LR LR 02 13 37.1
comp=Z,652nm,18.6s,MS4.5,baz=67,slow=38
NVS Novosibirsk 43.29 307 ⇑*i*P **P** **01 54 29.1 -1.6**
NVS *e* 01 56 15.0
NVS pmax pmax
comp=E,19nm,0.8s
NVS pmax pmax
comp=Z,22nm,0.8s,mb4.9
NVS pmax pmax
comp=N,15nm,1.4s
DLBC Dease Lake 44.80 46 *e*P **P** **01 54 42.2 -0.5**
WMQ Urumqi 45.25 291 P **P** **01 54 45.6 -0.9**
WMQ pP pP 01 54 55.5 +0.8
WMQ sP sP 01 54 59.4 +1.4
WMQ PcP PcP 01 56 26.4 +0.4
WMQ PP PP 01 56 31.8 -0.5
WMQ S **S** **02 01 21.9 -2.8**
WMQ sS sS 02 01 38.3 0.0
WMQ SS SS 02 04 34.6 -13
WMQ ScS ScS 02 04 37.6 -3.4
WMQ pmax pmax
comp=Z,22nm,1.0s,mb4.9
WMQ pmax pmax
comp=Z,190nm,6.0s
WMQ LR LR
comp=N,610nm,16.0s,MS4.8
WMQ LR LR
comp=E,560nm,16.0s,MS4.8
WMQ LR LR
comp=Z,850nm,16.7s,MS4.8
QIZ Qiongzhong 45.59 247 P **P** **01 54 49.3 -0.1**
QIZ pP pP 01 54 58.5 +0.8
QIZ PP PP 01 56 36.5 +0.2
QIZ S **S** **02 01 30.1 0.0**
QIZ LR LR
comp=N,320nm,18.3s
QIZ LR LR
comp=Z,310nm,17.9s,MS4.3
KMI Kunming 45.90 260 P **P** **01 54 52.3 +0.5**
KMI pP pP 01 55 01.8 +1.7
KMI sP sP 01 55 06.3 +3.0
KMI PcP PcP 01 56 30.4 +1.8
KMI PP PP 01 56 40.3 +0.8
KMI S **S** **02 01 32.6 -1.9**
KMI sS sS 02 01 50.0 +1.9
KMI SS SS 02 04 48.9 -10
KMI pmax pmax
comp=Z,49nm,0.9s,mb5.4
KMI pmax pmax
comp=Z,190nm,3.5s
KMI LR LR
comp=N,510nm,14.2s,MS4.7
KMI LR LR
comp=E,330nm,14.2s,MS4.7
KMI LR LR
comp=Z,450nm,13.1s,MS4.6
MK31 Makanchi Array 47.18 297 *e*P **P** **01 55 01.1 -0.6**
MK31 Makanchi Array 47.18 297 *ce*P **P** **01 55 00.5 -1.1**
MK31 pmax pmax
comp=Z,53nm,0.9s,mb5.5
MKAR Makanchi Array 47.18 297 P **P** **01 55 00.3 -1.3**
comp=Z,33nm,0.9s,mb5.3,baz=64,slow=7.9,SNR=90
MKAR PcP PcP 01 56 31.9 -0.9
comp=Z,2.8nm,0.8s,baz=40,slow=4.4,SNR=2.4
MKAR LR LR 02 14 50.8
comp=Z,290nm,21.7s,MS4.2,baz=64,slow=36
MKAR Makanchi Array 47.18 297 P **P** **01 55 00.3 -1.3**
MKAR 01 56 31.9
MKAR pmax pmax
comp=Z,33nm,0.9s
MKAR MLR MLR
comp=Z,290nm,21.7s
KURK Kurchatov 47.52 304 *e*P **P** **01 55 03.0 -1.2**
comp=Z,102nm,0.9s,mb5.8
KURK Kurchatov 47.52 304 *c i*P **P** **01 55 02.6 -1.6**
ALE Alert 49.12 6 P **P** **01 55 16.6 +0.4**
comp=Z,197nm,0.9s,mb6.1,SNR=9.1
YKA Yellowknife Ar 50.13 37 P **P** **01 55 23.7 -0.3**
comp=Z,8.2nm,0.8s,mb4.8,baz=298,slow=7.6,SNR=16
YKA Yellowknife Ar 50.13 37 P **P** **01 55 23.7 -0.4**
YKA pmax pmax
comp=Z,8.0nm,0.8s
VOSK Vostochnaya 50.77 309 P **P** **01 55 27.3 -1.7**
VOSK pmax pmax
comp=Z,40nm,1.0s,mb5.3
LSA Lhasa 50.80 273 P **P** **01 55 30.9 +1.3**
LSA pmax pmax
comp=Z,120nm,0.9s,mb5.8
LSA LR LR
comp=Z,500nm,23.6s,MS4.5
BVA0 Borovoye Array 50.94 309 P **P** **01 55 29.0 -1.3**
BVA0 pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
BVAR Borovoye Array 50.94 309 P **P** **01 55 29.1 -1.2**
comp=Z,24nm,0.9s,mb5.1,baz=56,slow=8.0,SNR=96
BVAR PcP PcP 01 56 45.1 -1.2
comp=Z,7.5nm,0.9s,baz=66,slow=3.5,SNR=4.8
BVAR Borovoye Array 50.94 309 P **P** **01 55 29.1 -1.2**
BVAR 01 56 45.1
BVAR pmax pmax
comp=Z,24nm,0.9s
BRVK Borovoye 50.97 309 *e*P **P** **01 55 29.8 -0.8**
comp=Z,37nm,0.9s,mb5.3
BRVK Borovoye 50.97 309 *c i*P **P** **01 55 29.3 -1.3**
BRVK pmax pmax
comp=Z,40nm,0.8s,mb5.4
CHRT Chiangrai 51.49 257 ⇑P **P** **01 55 34.5 -0.4**
comp=Z,160nm,0.8s,mb6.0
ZRNK Zerenda 51.70 310 *i*P **P** **01 55 34.7 -1.3**
ZRNK pmax pmax
comp=Z,31nm,0.9s,mb5.2
IMP Imphal 52.07 266 *e*PKP **P** **01 55 39.0 -0.1**
CHG Chiang Mai 52.80 257 ⇑P **P** **01 55 45.2 +0.6**
comp=Z,38nm,0.9s,mb5.3
CHTO Chiang Mai 52.80 257 *e*P **P** **01 55 44.9 +0.3**
comp=Z,45nm,1.1s,mb5.3
CHTO Chiang Mai 52.80 257 *e*P **P** **01 55 44.9 +0.3**
CHTO pmax pmax
comp=Z,45nm,1.1s,mb5.3
CHTO Chiang Mai 52.80 257 P **P** **01 55 45.6 +1.1**
SNR=16
SHL Shillong 52.95 269 *e*PKP **P** **01 55 45.0 -0.6**

CM31 Chiang Mai Arr 53.05 257 *e*P P 01 55 47.2 +0.7
comp=Z,7.9nm,0.7s,mb4.8
CMAR Chiang Mai Arr 53.05 257 P P 01 55 47.3 +0.9
comp=Z,11nm,0.8s,mb4.8,baz=32,slow=7.2,SNR=46
CMAR LR LR 02 19 49.2
comp=Z,162nm,19.1s,MS4.1,baz=221,slow=38
CMAR Chiang Mai Arr 53.05 257 P P 01 55 47.3 +0.9
CMAR pmax pmax
comp=Z,11nm,0.8s
CMAR MLR MLR
comp=Z,162nm,19.2s
TKM2 Tokmak 2 53.26 296 P P 01 55 47.7 +0.1
SNR=18
CHMS Chumysh 53.73 297 P P 01 55 51.2 +0.1
SNR=7.8
JCW Jim Creek 53.76 56 *e*P P 01 55 51.8 +0.5
KBK Karagaybulak 53.80 296 P P 01 55 52.0 +0.3
SNR=7.7
SVE Sverdlovsk 53.80 317⇑ *e*P P 01 55 51.1 -0.3
SVE pmax pmax
comp=Z,37nm,0.8s,mb5.4
SVE MLR MLR
comp=Z,577nm,15.0s,MS4.8
FRU Bishkek 53.90 297 *e*P P 01 55 51.2 -1.2
FRU pmax pmax
comp=Z,50nm,1.8s,mb5.1
FRU MLR MLR
comp=Z,1μm,16.0s,MS5.0
SOKR Solikamsk 54.01 321 *d i*P P 01 55 52.3 -0.6
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SOKR MLR MLR
comp=Z,350nm,16.0s,MS4.5
AAK Ala-Archa 54.09 296 P P 01 55 53.3 -0.5
SNR=13
AAK Ala-Archa 54.09 296 *e*P P 01 55 53.2 -0.6
comp=Z,24nm,0.8s,mb5.2
AAK Ala-Archa 54.09 296 *c i*P P 01 55 53.3 -0.5
AAK pmax pmax
comp=Z,20nm,1.2s,mb4.9
NST Nakhon Sawan 54.28 253 P P 01 55 56.5 +1.0
UCH Uchtor 54.31 296 P P 01 55 56.0 +0.7
SNR=5.6
EKS2 Erkin-Say 54.51 297 P P 01 55 56.7 -0.1
SNR=22
TAPN Taplejung 54.63 273 *e*P P 01 55 58.8 +0.9
comp=Z,169nm,0.8s,mb6.1
AML Almayashu 54.86 296 P P 01 56 00.0 +0.6
SNR=16
KSH Kashi 54.96 292⇑ P P 01 56 03.8 +3.7
KSH *e*pP pP 01 56 13.9 +5.4
KSH *e*sP sP 01 56 17.8 +6.0
KSH *e*PcP PcP 01 57 05.0 +3.3
KSH *e*PP PP 01 58 08.3 +5.3
KSH *e*ScP ScP 02 01 00.3 +2.1
KSH *e*PcS PcS 02 01 03.8 +2.3
KSH *e*S **S** **02 03 41.3 +1.2**
KSH *e*sS sS 02 03 59.1 +5.2
KSH *e*ScS ScS 02 05 46.8 -0.5
KSH *e*SS SS 02 07 25.1 +1.8
KSH pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
KSH pmax pmax
comp=Z,140nm,4.4s
KSH LR LR
comp=N,480nm,13.5s,MS5.0
KSH LR LR
comp=E,630nm,13.2s,MS5.0
KSH LR LR
comp=Z,750nm,13.9s,MS4.9
ARU Arti 54.98 318 *e*P P 01 55 58.9 -1.1
comp=Z,43nm,0.8s,mb5.5
ARU Arti 54.98 318 *c i*P P 01 55 58.9 -1.1
ARU *e* 01 56 59.8
ARU *e* 01 58 01.4
ARU S **S** **02 03 40.6 +0.7**
ARU pmax pmax
comp=Z,63nm,1.0s,mb5.6
ARU MLR MLR
comp=Z,511nm,15.0s,MS4.7
ARU Arti 54.98 318 P P 01 55 59.4 -0.6
comp=Z,338nm,0.8s,mb6.4,SNR=14
ETW Entiat 54.98 55 *e*P P 01 56 02.9 +2.7
ODAN Odare 55.16 273 *e*P P 01 56 02.9 +1.1
comp=Z,102nm,1.0s,mb5.8
JIRN Jiri 55.46 275 *e*P P 01 56 05.3 +1.4
comp=Z,379nm,0.8s,mb6.5
GUN Gumba 55.51 275 *e*P P 01 56 05.3 +1.0
comp=Z,146nm,0.9s,mb6.0
EDM Edmonton 55.52 47 *e*P P 01 56 03.1 -0.8
RAMN Ramite 55.64 274 *e*P P 01 56 06.1 +0.9
comp=Z,543nm,0.9s,mb6.6
KKN Kakani 55.99 275 *e*P P 01 56 08.8 +1.0
comp=Z,226nm,0.9s,mb6.2
OD2 Odessa Site #2 56.01 55 *e*P P 01 56 10.2 +2.6
PKI Pulchoki 56.05 275 *e*P P 01 56 08.9 +0.8
comp=Z,276nm,1.0s,mb6.2
PKIN Phulchoki 56.05 275 *e*P P 01 56 09.5 +1.3
comp=Z,184nm,0.8s,mb6.2
KK31 Karatay Array 56.22 299 *ce*P P 01 56 08.2 -0.9
KK31 pmax pmax
comp=Z,15nm,0.8s,mb5.1
DMN Daman 56.23 275 *e*P P 01 56 10.8 +1.4
comp=Z,546nm,1.0s,mb6.5
GKN Gorkha 56.29 276 *e*P P 01 56 10.9 +1.0
comp=Z,476nm,0.9s,mb6.5
NEW Newport 56.38 53 *e*P P 01 56 13.2 +3.0
comp=Z,12nm,1.3s,mb4.8
NEW Newport 56.38 53 *e*P P 01 56 13.2 +3.0
NEW pmax pmax
comp=Z,12nm,1.3s
YBH Yreka Blue Hor 56.98 62 *e*P P 01 56 14.9 +0.4
comp=Z,6.2nm,1.0s,mb4.6
YBH Yreka Blue Hor 56.98 62 *e*P P 01 56 15.0 +0.4
YBH pmax pmax
comp=Z,6.0nm,1.0s
KEV Kevo 57.00 341 *e*P P 01 56 13.3 -1.0
KEV Kevo 57.00 341 *ep* P 01 56 13.3 -1.0
APA Apatity 57.04 337⇓ *e*P P 01 56 13.0 -1.6
APA *i* 01 57 09.0
APA pmax pmax
comp=Z,13nm,1.0s,mb4.9
APA MLR MLR
comp=Z,800nm,18.0s,MS4.9
KOLN Koldanda 57.15 277 *e*P P 01 56 17.1 +1.2
comp=Z,282nm,0.9s,mb6.3
ARCES ARCESS Array B 57.50 341 P P 01 56 17.3 -0.5
comp=Z,8.6nm,0.9s,mb4.8,baz=24,slow=7.2,SNR=8.2
ARCES ARCESS Array B 57.50 341 P P 01 56 17.3 -0.5
ARCES pmax pmax
comp=Z,9.0nm,0.9s
WALA Waterton Lakes 57.65 51 *e*P P 01 56 22.2 +3.1
comp=Z,0.4nm,1.1s
BSMT Basso Peak 57.90 53 P P 01 56 25.4 +4.4
BLMT Blacktail Moun 58.03 52 *e*P P 01 56 22.2 +0.3
PTH Pithoragarh 58.28 280 *e*PKP P 01 56 24.0 +0.1
YBMT Yellow Bay 58.31 52 *e*P P 01 56 26.2 +2.4
comp=Z,4.5nm,0.9s,mb4.5
MOD Modoc 58.32 61 *e*P P 01 56 26.7 +2.7
comp=Z,10nm,1.1s,mb4.8
AB31 Akbulak array 58.50 310 *ce*P P 01 56 24.1 -1.0
AB31 pmax pmax
comp=Z,50nm,1.1s,mb5.5
ABKAR Akbulak array 58.50 310 *e*P P 01 56 24.3 -0.8
comp=Z,23nm,0.9s,mb5.2
SWMT Swartz Lake 58.53 53 *e*P P 01 56 28.4 +3.1
AKTO Aktyubinsk 58.77 312 *i*P P 01 56 25.7 -1.3
TRO Tromso 58.80 343 *e*P P 01 56 26.7 -0.2
SLMT Seeley Lake 58.96 53 *e*P P 01 56 29.2 +0.8
MSO Missoula 58.97 53 *e*P P 01 56 31.5 +3.1
comp=Z,9.2nm,1.1s,mb4.7
WVOR Wild Horse Val 58.98 60 *e*P P 01 56 28.2 -0.5
comp=Z,7.8nm,1.0s,mb4.7
WVOR Wild Horse Val 58.98 60 *e*P P 01 56 28.2 -0.4
WVOR pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
CHMT Chamberlain Mo 59.29 53 *e*P P 01 56 28.4 -2.3
KLMR Klimovskoe 59.91 329 *e*P P 01 56 33.2 -1.5
KLMR *e* 01 58 45.3
KLMR *e*S **S** **02 04 45.0 +0.4**
KLMR *e*SS SS 02 08 43.9 +3.7
KLMR pmax pmax
comp=Z,34nm,1.6s,mb5.1
KLMR MLR MLR
comp=Z,363nm,14.0s,MS4.7
FFC Flin Flon 59.94 41 *e*P P 01 56 34.4 -0.6
comp=Z,21nm,1.1s,mb5.1
FFC Flin Flon 59.94 41 *i*P P 01 56 35.6 +0.6
SUMG Summit 60.10 4 *e*P P 01 56 36.7 +0.9
comp=Z,84nm,1.0s,mb5.7
SUMG Summit 60.10 4 *i*P P 01 56 36.8 +1.0
comp=Z,48nm,0.9s,mb5.5
HRY Holter Researc 60.19 52 *e*P P 01 56 37.2 +0.4
LRM Limekiln Ridge 60.41 53 *e*P P 01 56 38.0 -0.3
EGMT Eagleton 60.47 50 *e*P P 01 56 35.8 -2.9
comp=Z,13nm,1.0s,mb4.9
DLMT Dillon 60.61 54 *e*P P 01 56 42.2 +2.4
comp=Z,56nm,2.2s,mb5.3
CMB Columbia Colle 60.65 65 *e*P P 01 56 42.1 +2.0
comp=Z,5.5nm,1.0s,mb4.6
CMB Columbia Colle 60.65 65 *e*P P 01 56 42.1 +2.0
CMB pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
HLID Hailey 60.73 56 *e*P P 01 56 43.1 +2.6
comp=Z,8.2nm,1.2s,mb4.7
MCMT McKenzie Canyo 60.81 54 *e*P P 01 56 38.8 -2.3
comp=Z,2.0nm,0.9s,mb4.2
NDI New Delhi 60.84 282 *e*PKP P 01 56 42.2 +0.6
WAKR Walker 60.94 64 *e*P P 01 56 45.5 +3.4
BOZ Bozeman (W) 60.96 53 *e*P P 01 56 41.9 -0.2
comp=Z,60nm,2.1s,mb5.3
BOZ Bozeman (W) 60.96 53 *e*P P 01 56 41.9 -0.2
BOZ pmax pmax
comp=Z,60nm,2.1s,mb5.4
JOF Joensuu 61.08 334 *e*P P 01 56 41.9 -0.7
JOF pmax pmax
comp=Z,24nm,0.9s,mb5.3
JOF Joensuu 61.08 334 *ep* P 01 56 41.9 -0.7
comp=Z,24nm,0.9s,mb5.3
NVAR Mina Array Bea 61.67 63 P P 01 56 47.0 -0.1
comp=Z,1.4nm,0.7s,mb4.2,baz=298,slow=6.8,SNR=6.8
GCMT Greycliff 61.93 52 *e*P P 01 56 49.5 +0.9
comp=Z,13nm,1.3s,mb4.9
M13A Montello 62.26 58 *e*P P 01 56 51.1 +0.1
comp=Z,8.7nm,1.1s,mb4.8
KBL Kabul 62.38 292 *e*P P 01 56 51.0 -0.9
comp=Z,21nm,0.8s,mb5.3
KBL Kabul 62.38 292 *e*P P 01 56 51.0 -0.9
KBL pmax pmax
comp=Z,21nm,0.8s,mb5.3
IMW Indian Meadow 62.46 54 *e*P P 01 56 53.4 +1.2
comp=Z,14nm,1.3s,mb4.9
FLWY Flagg Ranch 62.47 54 *e*P P 01 56 55.4 +3.1
comp=Z,8.5nm,1.0s,mb4.8
SCO Scorebysund 62.48 358 *i*P P 01 56 51.9 0.0
comp=Z,26nm,1.0s,mb5.3
RLMT Red Lodge 62.58 52 *e*P P 01 56 53.9 +0.9
comp=Z,71nm,2.3s,mb5.4
RRI2 Red Ridge 62.60 55 *e*P P 01 56 53.7 +0.5
comp=Z,24nm,1.3s,mb5.2
MOR8 Moi Rana 62.65 343 *e*P P 01 56 51.9 -1.2
MOR8 AMB AMB 01 56 52.8
comp=Z,26nm,1.7s,mb5.1
MOOW Moose Ponds 62.66 54 *e*P P 01 56 51.0 -2.6
comp=Z,4.0nm,0.9s,mb4.5
TPAW Teton Pass 62.72 55 *e*P P 01 56 54.6 +0.7
comp=Z,10nm,0.9s,mb5.0
LOHW Long Hollow 62.83 54 *e*P P 01 56 55.0 +0.3
comp=Z,45nm,1.9s,mb5.3
SNOW Snow King Moun 62.84 55 *e*P P 01 56 55.6 +0.8
comp=Z,17nm,1.3s,mb5.0
REDW Red Top Meadow 62.85 55 *e*P P 01 56 54.9 +0.1
comp=Z,17nm,1.1s,mb5.1
LAO LASA Array 63.16 49 *e*P P 01 56 57.9 +1.1
comp=Z,36nm,1.6s,mb5.3
KAF Kangasniemi 63.17 335 *e*P P 01 56 56.4 -0.2
KAF pmax pmax
comp=Z,23nm,0.8s,mb5.4
KAF Kangasniemi 63.17 335 *ep* P 01 56 56.4 -0.2
comp=Z,22nm,0.8s,mb5.3
SPUT South Promonto 63.28 57 *e*P P 01 56 57.6 -0.2
comp=Z,69nm,2.4s,mb5.4
HWUT Hardware Ranch 63.59 57 *e*P P 01 56 59.9 +0.1
comp=Z,6.4nm,0.9s,mb4.7
FINES FINESS Array B 63.77 335 P P 01 57 00.1 -0.5
comp=Z,12nm,0.7s,mb5.1,baz=35,slow=7.1,SNR=56
FINES LR LR 02 29 18.8
comp=Z,676nm,18.6s,MS4.9,baz=250,slow=40
FINES FINESS Array B 63.77 335 P P 01 57 00.1 -0.5
FINES pmax pmax
comp=Z,13nm,0.7s
FINES MLR MLR
comp=Z,676nm,18.6s
DUG Dugway 63.80 58 *e*P P 01 57 00.9 -0.3
comp=Z,12nm,1.2s,mb4.8
DUG Dugway 63.80 58 *e*P P 01 57 00.9 -0.3
DUG pmax pmax
comp=Z,12nm,1.2s,mb4.8
PUL Pulkovo 63.81 332⇑ *e*P P 01 57 01.2 +0.3
BW06 Boulder Array 63.96 55 *e*P P 01 57 01.7 -0.5
comp=Z,8.1nm,1.0s,mb4.7
AJM Ajmer 64.01 282 *e*PKP P 01 57 02.0 -0.7
VIS Vishakhapatnam 64.08 268 *e*PKP P 01 57 03.9 +0.6
MOS Moscow 64.29 326 *e*P P 01 57 02.9 -1.3
MOS pmax pmax
comp=Z,30nm,1.0s,mb5.3
BHPL Bhopal 64.31 277 *e*PKP P 01 57 04.0 -0.8
JLU Jordanelle 64.32 57 *e*P P 01 57 08.3 +3.7
comp=Z,8.8nm,1.3s,mb4.6
DAU Daniels Canyon 64.55 57 *e*P P 01 57 06.2 +0.1
NGP Nagpur 64.63 274 *e*PKP P 01 57 06.2 -0.7
NGP AMb AMB 01 57 08.6
comp=Z,53nm,1.8s,mb5.3
PSI Prapat 64.83 245 LR LR 02 28 49.5
comp=Z,187nm,18.9s,MS4.3,baz=57,slow=39
OBN Obninsk 65.16 326 *i*P P 01 57 09.2 -0.6
OBN LR LR
comp=Z,300nm,18.0s,MS4.5
OBN Obninsk 65.16 326κ *i*P P 01 57 09.3 -0.5
OBN 01 57 41.0
OBN S S 02 05 50.0 -0.6
OBN *e* 02 06 34.2
OBN pmax pmax
comp=Z,75nm,2.5s,mb5.3
OBN MLR MLR
comp=Z,300nm,17.0s,MS4.6
CCUT Cedar City 65.21 61 *e*P P 01 57 11.7 +1.2
comp=Z,12nm,1.6s,mb4.7
SRU San Rafael 65.84 58 *e*P P 01 57 14.1 -0.4
RSSD Black Hills 66.03 50 *e*P P 01 57 14.7 -0.9
comp=Z,48nm,2.0s,mb5.2
RSSD Black Hills 66.03 50 *e*P P 01 57 14.7 -0.9
RSSD pmax pmax
comp=Z,48nm,2.0s,mb5.2
VRHR Novokhopersk 66.06 320 *e*P P 01 57 14.3 -1.4
VRHR pmax pmax
comp=Z,20nm,0.8s,mb5.2
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
AKL Akola 66.32 275 *e*PKP P 01 57 18.5 +0.7
AKL AMb AMB 01 57 21.1
comp=Z,50nm,1.3s,mb5.4
ABKT Ailbek 66.79 301 P P 01 57 20.4 -0.2
comp=Z,76nm,0.7s,mb5.8,SNR=6.2
VSR Storozhevoye 67.02 322 *e*P P 01 57 21.2 -0.6
VSR *e**SP sP 01 57 33.8 +0.2
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR pmax pmax
comp=Z,30nm,1.0s,mb5.3
VSR pmax pmax
comp=N,20nm,1.3s
VSR MLR MLR
comp=E,180nm,16.0s,MS4.7
VSR MLR MLR
comp=Z,410nm,16.0s,MS4.7
VSR MLR MLR
comp=N,300nm,15.0s,MS4.7
AGMN Agassiz Nation 67.13 43 *e*P P 01 57 22.0 -0.6
comp=N,27nm,1.4s,mb5.1
VORD Divnogorie 67.15 321 *e*P P 01 57 22.6 -0.1
VORD pmax pmax
comp=Z,20nm,0.6s,mb5.3
VORD pmax pmax
comp=N,40nm,0.8s
VORD pmax pmax
comp=E,80nm,0.8s
PV04 Paradox Valley 67.26 58 *e*P P 01 57 26.0 +2.4
HYB Hyderabad 67.55 272 *i*P P 01 57 26.0 +0.3
PV01 Paradox Valley 67.63 58 *e*P P 01 57 25.5 -0.4
comp=E,1μm,1.5s,mb6.7
SMCO Snowmass 67.82 56 *e*P P 01 57 26.5 -0.6
comp=E,6.9nm,0.9s,mb4.7
NOA NORSAR Array B 67.87 341 P P 01 57 27.0 -0.1
comp=E,48nm,0.9s,mb5.5,baz=27,slow=6.4,SNR=108
NOA LR LR 02 31 38.2
comp=E,403nm,18.2s,MS4.7,baz=40,slow=40
NOA NORSAR Array B 67.87 341 P P 01 57 27.0 -0.1
NOA pmax pmax
comp=Z,48nm,0.9s
NOA MLR MLR
comp=Z,403nm,18.2s
NAO01 NORSAR Array S 68.12 342 *e*P P 01 57 28.5 -0.1
comp=Z,33nm,1.0s,mb5.3
ISCO Idaho Springs 68.15 55 *e*P P 01 57 29.3 +0.1
comp=Z,6.6nm,1.0s,mb4.6
ISCO Idaho Springs 68.15 55 *e*P P 01 57 29.3 +0.1
ISCO pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
LATR Latur 68.20 274 *e*PKP P 01 57 29.8 0.0
LATR AMb AMB 01 57 32.1
comp=Z,32nm,0.7s,mb5.5
MVCO Mesa Verde 68.30 58 *e*P P 01 57 29.6 -0.5
comp=Z,30nm,1.8s,mb5.0
OSL Oslo 68.97 341 *e*P P 01 57 34.8 +0.9
WRA Warramunga Arr 69.23 200 P P 01 57 33.7 -2.3
WRA Warramunga Arr 69.23 200 P P 01 57 33.7 -2.3
comp=Z,5.2nm,1.0s,mb4.4,baz=16,slow=6.8,SNR=10
WRA Warramunga Arr 69.23 200 P P 01 57 33.7 -2.2
WRA pmax pmax
comp=Z,5.0nm,1.0s
KONO Kongsberg 69.48 342 *e*P P 01 57 37.7 +0.6
KONO AMB AMB 01 57 38.7
comp=Z,6.8nm,1.2s,mb4.5
KONO *e*S S 02 06 42.0 -0.4
KONO Kongsberg 69.48 342 *e*P P 01 57 37.3 +0.2
comp=Z,81nm,1.1s,mb5.6
KONO Kongsberg 69.48 342 *e*P P 01 57 37.3 +0.2
KONO pmax pmax
comp=Z,81nm,1.1s,mb5.6
SDCO Great Sand Dun 69.64 56 *e*P P 01 57 37.8 -0.7
comp=Z,6.7nm,1.4s,mb4.4
POO Poona 69.96 276 *e*PKP P 01 57 41.2 +0.5
POO AMb AMB 01 57 42.1
comp=Z,55nm,1.1s,mb5.4
ECSD EROS Data Cent 70.09 47 *e*P P 01 57 39.5 -1.6
comp=Z,51nm,1.8s,mb5.2
TUC Tucson 70.32 64 *e*P P 01 57 41.2 -1.5
comp=Z,6.9nm,1.3s,mb4.4
TUC Tucson 70.32 64 *e*P P 01 57 41.2 -1.5
TUC pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
KAD Karad 70.59 275 *e*PKP P 01 57 44.1 -0.4
KIV Kislovodsk 70.81 315 *e*P P 01 57 46.2 +0.7
comp=Z,38nm,1.0s,mb5.3
KIV Kislovodsk 70.81 315 *αe*P P 01 57 46.1 +0.6
KIV *e**SP sP 01 57 58.6 +1.3
KIV 01 58 06.0
KIV pmax pmax
comp=Z,45nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,900nm,16.0s,MS5.1
KIV Kislovodsk 70.81 315 P P 01 57 46.7 +1.2
comp=Z,209nm,1.0s,mb6.0,SNR=6.1
LAZ Ladron 71.04 60 *e*P P 01 57 47.1 0.0
comp=Z,2.7nm,1.2s,mb4.0
ANMO Albuquerque 71.06 59 *e*P P 01 57 46.9 -0.3
comp=Z,3.7nm,0.9s,mb4.3
ANMO Albuquerque 71.06 59 *e*P P 01 57 46.9 -0.3
ANMO pmax pmax
comp=Z,4.0nm,0.9s
DGRG David-gareji 71.31 311 P P 01 57 48.1 -0.5
AKASG Malin Array Be 71.39 327 P P 01 57 48.1 -0.8
comp=Z,41nm,0.8s,mb5.4,baz=33,slow=6.1,SNR=111
AKASG LR LR 02 31 46.4
comp=Z,439nm,18.2s,MS4.8,baz=30,slow=38
AKASG Malin Array Be 71.39 327 P P 01 57 48.1 -0.8
AKASG pmax pmax
comp=Z,41nm,0.8s
AKASG MLR MLR
comp=Z,439nm,18.2s
AKBB Malin Array Si 71.39 327 *e*P P 01 57 48.1 -0.8
KIEV Kiev 71.40 327 *e*P P 01 57 48.1 -0.9
comp=Z,45nm,0.9s,mb5.4
KIEV Kiev 71.40 327 *e*P P 01 57 48.1 -0.9
KIEV pmax pmax
comp=Z,45nm,0.9s,mb5.4
MTA Mtatsminda 71.43 312 P P 01 57 50.8 +1.5
TBLG Delisi 71.43 312 *e*P P 01 57 49.9 +0.6
TBLG Delisi 71.43 312 P P 01 57 50.0 +0.7
GOR Gori 71.56 312 P P 01 57 50.8 +0.7
BSD Bornholm Skovb 72.26 337 *i*P P 01 57 53.5 -0.6
comp=Z,54nm,1.0s,mb5.4
COP Copenhagen 72.40 338 *i*P P 01 57 54.4 -0.5
comp=Z,22nm,0.9s,mb5.1
MUD Monsted U'grnd 72.48 340 *i*P P 01 57 56.0 +0.6
comp=Z,16nm,1.2s,mb4.8
SOC Sochi 72.51 316 *i*P P 01 57 55.7 0.0
SOC Sochi 72.51 316 *c i*P P 01 57 55.8 +0.1
SOC *e* 01 58 10.0
SOC *e* 02 00 33.4
SOC *e*S S 02 07 14.6 -3.5
SOC *e* 02 08 04.2
SOC *e*SS SS 02 11 54.5 -1.5
SOC pmax pmax
comp=Z,33nm,0.9s,mb5.3
SCHQ Schefferville 72.57 23 P P 01 57 55.9 0.0
SCHQ Schefferville 72.57 23 P P 01 57 55.9 0.0
comp=Z,9.9nm,0.8s,mb4.8,baz=340,slow=5.6,SNR=7.2
GNI Garni 72.59 311 *e*P P 01 57 57.5 +1.2
comp=Z,40nm,0.9s,mb5.3
GNI *e*PP PP 02 00 38.3 +0.9
GNI Garni 72.59 311 *c i*P P 01 57 57.6 +1.3
GNI pmax pmax
comp=Z,28nm,0.7s
GNI Garni 72.59 311 P P 01 57 58.4 +2.1
SNR=10
ANN Anapa 72.64 318 *e*P P 01 57 55.9 -0.6
ANN pmax pmax
comp=Z,65nm,1.8s,mb5.3
ASAR Alice Springs 72.92 199 P P 01 57 56.6 -1.6
comp=Z,7.0nm,0.9s,mb4.6,baz=19,slow=5.3,SNR=28
ASAR Alice Springs 72.92 199 P P 01 57 56.7 -1.6
ASAR pmax pmax
comp=Z,7.0nm,1.0s
WAR Warsaw 72.96 332 *e*P P 01 57 58.9 +0.6
WAR *e*pP pP 01 58 04.6 -2.3
SCIA State Center 73.12 46 *e*P P 01 57 58.2 -1.2
comp=Z,11nm,0.4s,mb5.1
RGN Rugen 73.19 337 *e*P P 01 58 00.0 +0.4
comp=Z,94nm,1.1s,mb5.6
GKP Gorka Klasztor 73.23 335 *e*P P 01 57 60.0 +0.1
GKP LMZ 02 35 34.1
comp=Z,800nm,18.9s
SIM Simferopol' 74.00 320 *c i*P P 01 58 04.0 -0.5
SIM *e* 01 58 18.0
SIM S S 02 07 38.0 +3.1
SIM pmax pmax
comp=Z,36nm,0.8s,mb5.3
MNTX Cornudas Mount 74.00 61 *e*P P 01 58 03.5 -1.3
comp=Z,6.3nm,1.3s,mb4.4
LVV L'vov 74.00 329 *e*P P 01 58 03.8 -0.7
LVV MLR MLR
comp=Z,300nm,20.0s,MS4.6
LVV MLR MLR
comp=N,200nm,19.0s,MS4.6
LVV MLR MLR
comp=E,200nm,19.0s,MS4.6
BSEG Bad Segeberg 74.51 339 *e*P P 01 58 07.8 +0.5
comp=Z,47nm,1.3s,mb5.3
BSEG Bad Segeberg 74.51 339 *e*P P 01 58 07.8 +0.5
BSEG pmax pmax
comp=Z,47nm,1.3s,mb5.3
KIS Kishinev 74.56 324⇑ *i*P P 01 58 07.0 -0.7
comp=Z,200nm,1.0s,mb6.0
KIS *e*S S 02 07 45.0 +3.9
KIS LRM 02 35 40.0
comp=Z,500nm,16.0s
KIS Kishinev 74.56 324 P P 01 58 07.8 +0.1
KIS Kishinev 74.56 324α *i*P P 01 58 07.0 -0.7
KIS *e* 01 58 21.0
KIS *e* 02 01 05.0
KIS *e* 02 02 40.0
KIS *e*S S 02 07 45.0 +3.9
KIS pmax pmax
comp=Z,200nm,1.0s,mb6.0

KIS MLR MLR
comp=Z,500nm,16.0s,MS4.9
KWP Kalwaria Pacla 74.62 330 *i*P **P** **01 58 08.1 0.0**
comp=Z,300nm,1.3s,mb6.1
KWP *e*pP pP 01 58 13.1 -3.6
KWP LMZ 02 34 07.3
comp=Z,400nm,20.3s
KWP Kalwaria Pacla 74.62 330 *e*P **P** **01 58 08.3 +0.2**
comp=Z,152nm,1.1s,mb5.8
KWP Kalwaria Pacla 74.62 330⇑P **P** **01 58 08.4 +0.3**
KWP Kalwaria Pacla 74.62 330⇑*i*P **P** **01 58 08.4 +0.3**
IAS Iasi 74.89 325 P **P** **01 58 09.6 -0.1**
RUE Ruedersdorf 74.92 336 *e*P **P** **01 58 09.9 +0.2**
comp=Z,92nm,1.2s,mb5.6
RUE Ruedersdorf 74.92 336 *e*P **P** **01 58 10.5 +0.8**
comp=Z,54nm,1.0s,mb5.4
OJC Ojcow 75.09 332 *e*P **P** **01 58 10.9 +0.1**
STHS Stebnicka Huta 75.31 330 *e*P **P** **01 58 13.3 +1.3**
comp=Z,23nm,1.0s,mb5.1
STHS Stebnicka Huta 75.31 330 *e*P **P** **01 58 13.3 +1.3**
STHS pmax pmax
comp=Z,23nm,1.0s,mb5.1
STHS Stebnicka Huta 75.31 330 *e*P **P** **01 58 13.3 +1.3**
BUR08 Bucovina Ar. S 75.41 327 *e*P **P** **01 58 12.8 +0.1**
BUR01 Bucovina Ar. S 75.42 327 P **P** **01 58 13.3 +0.5**
BURAR Bucovina Array 75.42 327⇓P **P** **01 58 12.7 -0.1**
BURAR Bucovina Array 75.42 327⇓*i*P **P** **01 58 12.7 0.0**
WMOK Wichita Mounta 75.57 54 *e*P **P** **01 58 12.7 -1.1**
comp=Z,10nm,1.1s,mb4.7
WMOK *e*PcP PcP 01 58 25.4 -1.2
WMOK Wichita Mounta 75.57 54 *e*P **P** **01 58 12.7 -1.1**
WMOK *e* 01 58 25.4
WMOK pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
NIE Niedzica 75.62 331 *e*P **P** **01 58 14.3 +0.5**
KSP Ksiaz 75.65 334 *e*P **P** **01 58 14.0 +0.1**
comp=Z,200nm,1.5s,mb5.8
KSP LMZ 02 37 20.9
comp=Z,1μm,18.4s
KSP Ksiaz 75.65 334 *e*P **P** **01 58 13.8 -0.1**
KSP *e* 01 58 26.3
CRVS Cervenica-Dubn 75.67 330 *e*P **P** **01 58 14.1 0.0**
comp=Z,32nm,1.5s,mb5.0
CRVS LR LR
comp=Z,200nm,18.6s,MS4.5
CRVS Cervenica-Dubn 75.67 330 *e*P **P** **01 58 14.1 0.0**
RAC Raciborz 75.73 332 *e*P **P** **01 58 14.8 +0.4**
TESR 75.80 325⇑P **P** **01 58 14.8 -0.2**
TESR 75.80 325⇑*i*P **P** **01 58 14.8 -0.1**
NRDL Niedersach Rie 75.88 338 *e*P **P** **01 58 14.4 -0.8**
comp=Z,36nm,1.4s,mb5.1
OKC Ostrava-Krasne 75.96 332 *e*P **P** **01 58 16.0 +0.3**
OKC *e* 01 58 30.1
OKC MLR MLR
comp=Z,500nm,13.5s,MS5.0
OKC Ostrava-Krasne 75.96 332 *e*P **P** **01 58 16.0 +0.3**
OKC *e*pP pP 01 58 30.1 +5.7
OKC AMS AMS 02 37 10.0
comp=Z,500nm,13.5s
TRPA Tarpa 75.96 329⇑*i*P **P** **01 58 16.1 +0.3**
BMR Baia Mare 76.00 328 P **P** **01 58 17.1 +1.0**
UPC Upice 76.03 334 *e*P **P** **01 58 16.3 +0.2**
UPC *e* pP 01 58 24.6 -0.2
UPC Upice 76.03 334 *e*P **P** **01 58 16.3 +0.2**
UPC *e*pP pP 01 58 24.6 -0.2
TLCR 76.04 323⇓P **P** **01 58 17.2 +0.9**
TLCR 76.04 323⇓*i*P **P** **01 58 17.2 +0.9**
HDIL Hopedale 76.05 45 *e*P **P** **01 58 15.3 -1.1**
comp=Z,34nm,1.1s,mb5.2
DPC Dobruska-Polom 76.07 334 *e*P **P** **01 58 16.8 +0.4**
DPC *e* 01 58 30.2
DPC MLR MLR
comp=Z,700nm,18.3s,MS5.0
DPC Dobruska-Polom 76.07 334 *e*P **P** **01 58 16.8 +0.4**
DPC *e*pP pP 01 58 30.2 +5.2
DPC AMS AMS 02 36 20.0
comp=Z,700nm,18.3s
CLL Collm 76.18 336 *e*P **P** **01 58 16.7 -0.3**
comp=Z,84nm,1.0s,mb5.6
CLL *e*pP pP 01 58 30.1 +4.5
CLL Collm 76.18 336⇑*i*P **P** **01 58 16.7 -0.3**
comp=Z,84nm,1.0s,mb5.6
CLL *e*S S 02 07 54.0 -4.9
CLL Collm 76.18 336⇑*i*P **P** **01 58 16.7 -0.3**
CLL *e*S S 02 07 54.0 -4.9
CLL pmax pmax
comp=Z,84nm,1.0s,mb5.6
CLL Collm 76.18 336⇑*i*P **P** **01 58 16.7 -0.3**
comp=Z,84nm,1.0s,mb5.6
CLL *i* PcP PcP 01 58 30.4 +1.4
comp=Z,51nm,1.2s
CLL *e*PP PP 02 01 07.0 -0.4
CLL *e*S S 02 07 54.0 -4.9
CLL *e*SS SS 02 12 48.0 -3.3
CLL LmV 02 34 00.0
comp=Z,300nm,20.9s
MORC Moravsky Berou 76.20 333 *e*P **P** **01 58 17.4 +0.3**
comp=Z,53nm,1.1s,mb5.4
MORC Moravsky Berou 76.20 333 *e*P **P** **01 58 17.4 +0.3**
MORC pmax pmax
comp=Z,53nm,1.1s,mb5.4
MORC Moravsky Berou 76.20 333⇑*i*P **P** **01 58 17.6 +0.5**
BRG Berggiesshubel 76.31 335 *e*P **P** **01 58 17.6 -0.1**
comp=Z,34nm,1.2s,mb5.2
BRG Berggiesshubel 76.31 335 *i*P **P** **01 58 18.2 +0.5**
comp=Z,21nm,1.2s,mb4.9
BRG Berggiesshubel 76.31 335 *i*P **P** **01 58 18.2 +0.5**
BRG pmax pmax
comp=Z,12nm,1.2s,mb4.7
VRI Vrincioaia 76.31 325 P **P** **01 58 18.2 +0.4**
VRI Vrincioaia 76.31 325⇑*i*P **P** **01 58 19.5 +1.7**
CFR Carcaliu 76.32 324⇓P **P** **01 58 18.5 +0.6**
CFR Carcaliu 76.32 324⇓*i*P **P** **01 58 18.5 +0.6**
LIKS Likavka 76.33 331 *e*P **P** **01 58 19.3 +1.4**
comp=Z,35nm,1.0s,mb5.2
LIKS Likavka 76.33 331 *e*P **P** **01 58 19.3 +1.4**
LIKS pmax pmax
comp=Z,35nm,1.0s,mb5.2
LIKS Likavka 76.33 331 *e*P **P** **01 58 19.3 +1.4**
PLOR Plostina 76.35 325 P **P** **01 58 18.6 +0.6**
PLOR Plostina 76.35 325⇓*i*P **P** **01 58 19.0 +1.0**
CLZ Clausthal 76.40 338 *e*P **P** **01 58 18.9 +0.7**
comp=Z,79nm,1.3s,mb5.5
CLZ Clausthal 76.40 338 *e*P **P** **01 58 18.9 +0.7**
CLZ pmax pmax
comp=Z,79nm,1.3s,mb5.5
PVCC Panska Ves 76.43 335 *e*P **P** **01 58 19.0 +0.6**
PVCC MLR MLR
comp=Z,400nm,13.1s,MS4.9
PVCC Panska Ves 76.43 335 *e*P **P** **01 58 19.0 +0.6**
PVCC AMS AMS 02 35 50.0
comp=Z,400nm,13.1s
GRER 76.61 325⇑P **P** **01 58 22.0 +2.4**
GRER 76.61 325⇑*i*P **P** **01 58 22.0 +2.5**
IBBN Ibbenburen 76.62 339 *e*P **P** **01 58 19.8 +0.3**
comp=Z,82nm,1.8s,mb5.4
TXAR Lajitas Array 76.72 61 P **P** **01 58 19.3 -1.1**
comp=Z,7.0nm,0.8s,mb4.6,baz=296,slow=4.1,SNR=56
TXAR Lajitas Array 76.72 61 P **P** **01 58 19.3 -1.1**
TXAR pmax pmax
comp=Z,7.0nm,0.9s
VYHS Vyhne 76.91 331 *e*P **P** **01 58 21.6 +0.5**
comp=Z,21nm,1.2s,mb4.9
VYHS Vyhne 76.91 331 *e*P **P** **01 58 21.6 +0.5**
VYHS pmax pmax
comp=Z,21nm,1.2s,mb4.9
VYHS Vyhne 76.91 331 *e*P **P** **01 58 21.6 +0.5**
VRAC Vranov 76.91 333⇑P **P** **01 58 21.6 +0.4**
VRAC Vranov 76.91 333⇑*i*P **P** **01 58 21.6 +0.5**
PRU Pruhonice 76.92 334 *e*P **P** **01 58 21.9 +0.7**
PRU *e* 01 58 35.8
PRU MLR MLR
comp=Z,400nm,15.2s,MS4.8
PRU Pruhonice 76.92 334 *e*P **P** **01 58 21.9 +0.7**
PRU *e*pP pP 01 58 35.8 +5.9
PRU AMS AMS 02 35 50.0
comp=Z,400nm,15.2s
MLR Muntele Rosu 76.92 325⇑P **P** **01 58 22.7 +1.4**
MLR Muntele Rosu 76.92 325 P **P** **01 58 22.3 +1.0**
MLR Muntele Rosu 76.92 325⇑*i*P **P** **01 58 22.7 +1.4**
KOLL Kolacno 76.97 331 *e*P **P** **01 58 22.5 +1.0**
KOLL Kolacno 76.97 331 *e*P **P** **01 58 22.5 +1.0**
CCM Cathedral Cave 77.03 47 *e*P **P** **01 58 20.4 -1.6**
comp=Z,63nm,2.2s,mb5.2
CCM pmax pmax
comp=Z,63nm,2.2s,mb5.2
DRGR 77.04 328⇑P **P** **01 58 21.8 -0.1**
DRGR 77.04 328⇑*i*P **P** **01 58 21.8 -0.1**
PSZ Piszkesteto 77.05 330 *e*P **P** **01 58 22.5 +0.5**
comp=Z,40nm,1.2s,mb5.2
PSZ Piszkesteto 77.05 330 P **P** **01 58 22.8 +0.8**
PSZ Piszkesteto 77.05 330⇑*i*P **P** **01 58 22.4 +0.4**
PSZ Piszkesteto 77.05 330⇑*e*P **P** **01 58 22.5 +0.5**
AMRR Amara 77.11 324 P **P** **01 58 24.1 +1.8**
WERD Werda 77.15 336 *e*P **P** **01 58 22.9 +0.4**
comp=Z,40nm,1.2s,mb5.2
MOX Moxa 77.16 336 *e*P **P** **01 58 22.4 -0.1**
comp=Z,65nm,1.5s,mb5.3
MOX
comp=Z,200nm,20.0s
MOX Moxa 77.16 336 *e*P **P** **01 58 22.8 +0.3**
comp=Z,40nm,1.2s,mb5.2
MOX Moxa 77.16 336 *e*P **P** **01 58 22.4 -0.1**
MOX pmax pmax
comp=Z,65nm,1.5s,mb5.3
MOX MLR MLR
comp=Z,200nm,20.0s,MS4.4
WTSB Winterswijk 77.17 340 *e*P **P** **01 58 22.3 -0.3**
comp=Z,34nm,1.7s,mb5.0
MALT Malatya 77.18 313 *e*P **P** **01 58 24.3 +1.4**
comp=Z,120nm,1.6s,mb5.6
MALT *e*PP PP 02 01 13.3 -2.9
MALT Malatya 77.18 313⇑*i*P **P** **01 58 24.3 +1.4**
GUNZ Gunzen 77.22 336 *e*P **P** **01 58 23.3 +0.5**
comp=Z,34nm,1.0s,mb5.2
TREC Trest 77.26 334 *e*P **P** **01 58 23.2 +0.1**
TREC *e* 01 58 34.5
TREC MLR MLR
comp=Z,600nm,18.3s,MS5.0
TREC Trest 77.26 334 *e*P **P** **01 58 23.2 +0.1**
TREC *e*pP pP 01 58 34.5 +2.7
TREC AMS AMS 02 37 20.0
comp=Z,600nm,18.3s
WERN Wernitzgruen 77.27 336 *e*P **P** **01 58 23.6 +0.4**
comp=Z,34nm,1.0s,mb5.2
NKC Novy Kostel 77.30 336 *e*P **P** **01 58 23.3 0.0**
NKC Novy Kostel 77.30 336 *e*P **P** **01 58 23.3 0.0**
VOIR 77.31 326⇓P **P** **01 58 24.1 +0.7**
VOIR 77.31 326⇓*i*P **P** **01 58 24.1 +0.6**
ASHO Ashiyiah 77.32 293 P **P** **01 58 25.7 +1.8**
SNR=6.4
HOQ Hoqain 77.32 291 P **P** **01 58 24.9 +1.0**
SNR=12
NAZ Nazwa, Dubai 77.35 293 P **P** **01 58 25.6 +1.6**
SNR=5.8
SULR 77.48 325⇑P **P** **01 58 24.6 +0.2**
SULR 77.48 325⇑*i*P **P** **01 58 24.6 +0.2**
PSN Preselentsi 77.53 323 P **P** **01 58 25.1 +0.4**
BUG Bochum-Univer 77.54 339 *e*P **P** **01 58 24.9 +0.3**
comp=Z,125nm,2.2s,mb5.5
JMDO Jabal Madar 77.69 290 P **P** **01 58 27.0 +1.0**
SNR=7.1
BUD Budapest 77.72 331⇓*e*P **P** **01 58 27.1 +1.4**
ZST Bratislava 77.73 332 *e*P **P** **01 58 27.0 +1.3**
comp=Z,36nm,1.3s,mb5.1
ZST Bratislava 77.73 332 *e*P **P** **01 58 27.0 +1.3**
ZST pmax pmax
comp=Z,36nm,1.3s,mb5.1
ZST Bratislava 77.73 332 *e*P **P** **01 58 27.0 +1.3**
ASUD Al Ashush, Dub 77.82 293 P **P** **01 58 28.7 +2.0**
SNR=6.5
KHC Kasperske Hory 77.97 335 *e*P **P** **01 58 27.3 +0.2**
comp=Z,35nm,1.0s,mb5.2
KHC Kasperske Hory 77.97 335 *e*P **P** **01 58 27.3 +0.2**
KHC pmax pmax
comp=Z,35nm,1.0s,mb5.2
KHC Kasperske Hory 77.97 335 *e*P **P** **01 58 27.3 +0.2**
KHC *e*pP pP 01 58 41.1 +5.3
KHC AMS AMS 02 38 50.0
comp=Z,500nm,17.9s
BSY Bisya 77.99 290 P **P** **01 58 28.6 +1.0**
SNR=10
ARQ Araqi 78.00 291 P **P** **01 58 28.5 +0.8**
SNR=5.8
GRA1 Grafenberg Arr 78.13 336 *e*P **P** **01 58 28.7 +0.8**
comp=Z,73nm,1.0s,mb5.6
GRA1 LR LR
comp=Z,300nm,21.0s,MS4.6
GRF Grafenberg Arr 78.13 336 *e*P **P** **01 58 28.7 +0.8**
comp=Z,73nm,1.0s,mb5.6
GRF *e*L 02 36 04.4
comp=Z,346nm,21.0s
GRF Grafenberg Arr 78.13 336 *e*P **P** **01 58 28.7 +0.8**
GRF pmax pmax
comp=Z,73nm,1.0s,mb5.6
GRF MLR MLR
comp=Z,300nm,21.0s,MS4.6
GRF Grafenberg Arr 78.13 336 *e*P **P** **01 58 28.7 +0.8**
GRF pmax pmax
comp=Z,73nm,1.0s,mb5.6
GRF MLR MLR
comp=Z,300nm,21.0s,MS4.6
JCT Junction City 78.15 58 *e*P **P** **01 58 25.5 -2.9**
comp=Z,22nm,1.3s,mb4.9
JCT Junction City 78.15 58 *e*P **P** **01 58 25.5 -2.9**
JCT pmax pmax
comp=Z,22nm,1.3s,mb4.9
WET Wettzell 78.16 335 *e*P **P** **01 58 28.9 +0.8**
comp=Z,44nm,1.1s,mb5.3
WET Wettzell 78.16 335 *e*P **P** **01 58 28.9 +0.8**
WET pmax pmax
comp=Z,44nm,1.1s,mb5.3
GEC2 GERESS Array S 78.19 334 *e*P **P** **01 58 28.5 +0.2**
comp=Z,20nm,1.1s,mb5.0
GEC2 GERESS Array S 78.19 334 *e*P **P** **01 58 28.5 +0.2**
GEC2 pmax pmax
comp=Z,20nm,1.1s,mb5.0
PRD Provadia 78.25 323 P **P** **01 58 28.8 +0.1**
SOP Sopron 78.35 332⇓*e*P **P** **01 58 31.0 +1.8**
BR131 Keskin Array S 78.36 317 *e*P **P** **01 58 29.9 +0.4**
BR131 *e*PP PP 02 01 29.9 +3.8
BRTR Keskin Array B 78.36 317 P **P** **01 58 29.7 +0.3**
comp=Z,19nm,0.9s,mb5.0,baz=59,slow=3.0,SNR=97
BRTR PP PP 02 01 29.8 +3.8
comp=Z,0.7nm,0.9s,baz=75,slow=5.6,SNR=3.7
BRTR Keskin Array B 78.36 317 P **P** **01 58 29.7 +0.3**
BRTR 02 01 29.8
BRTR pmax pmax
comp=Z,19nm,0.9s
BRTR pmax pmax
comp=Z,1.0nm,0.9s
TNS Taunus Mts 78.38 338 *e*P **P** **01 58 29.9 +0.6**
comp=Z,37nm,1.1s,mb5.2
TNS Taunus Mts 78.38 338 *e*P **P** **01 58 29.9 +0.6**
TNS pmax pmax
comp=Z,37nm,1.1s,mb5.2
BZS Buzias 78.44 328⇑P **P** **01 58 29.5 -0.2**
BZS Buzias 78.44 328 P **P** **01 58 29.7 0.0**
BZS Buzias 78.44 328⇑*i*P **P** **01 58 29.5 -0.2**
HGN Heimansgroeve 78.49 340 *e*P **P** **01 58 29.2 -0.7**
comp=Z,36nm,2.4s,mb4.9
MIAR Mount Ida 78.53 51 *e*P **P** **01 58 29.0 -1.4**
comp=Z,9.4nm,0.9s,mb4.7
MIAR Mount Ida 78.53 51 *e*P **P** **01 58 29.0 -1.5**
MIAR pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
MEM Membach 78.61 340 P **P** **01 58 31.1 +0.5**
comp=Z,11nm,1.0s,mb4.7
CRAR CRAIOVA 78.73 326 P **P** **01 58 33.0 +1.7**
SZH Strazhica 78.79 324 P **P** **01 58 31.2 -0.5**
MIB Mutribah 78.85 302 *e*P **P** **01 58 32.1 -0.1**
MIB AMb AMB 01 58 34.5
comp=Z,194nm,0.9s,mb6.0
TOD Tromm 78.85 338 *e*P **P** **01 58 32.6 +0.7**
PARMO Parma 78.86 47 *e*P **P** **01 58 31.6 -0.6**
PARMO *e*PcP PcP 01 58 42.3 +1.5
MOA Molln 78.92 334 *i*P **P** **01 58 32.4 +0.1**
comp=Z,17nm,0.9s,mb5.0,SNR=15
BCLA Clavier 78.95 340 P **P** **01 58 32.1 -0.4**
comp=Z,15nm,1.0s,mb4.9
PKSM Moragy 78.96 330⇑P **P** **01 58 32.1 -0.4**
PKSM Moragy 78.96 330 P **P** **01 58 32.6 0.0**
PKSM Moragy 78.96 330⇑*i*P **P** **01 58 32.2 -0.4**
ARSA Arzberg 79.06 333⇓*i*P **P** **01 58 33.3 +0.1**
comp=Z,19nm,1.1s,mb4.9
PVL Pavlikeni 79.07 324 P **P** **01 58 33.0 -0.2**
JMB Yambol 79.19 323 P **P** **01 58 35.1 +1.2**
RUP Ruppelstein 79.20 339 *e*P **P** **01 58 33.0 -0.8**
WCI Wyandotte Cave 79.31 44 *e*P **P** **01 58 34.1 -0.5**
comp=Z,48nm,1.6s,mb5.2
WCI Wyandotte Cave 79.31 44 *e*P **P** **01 58 34.1 -0.5**
WCI pmax pmax
comp=Z,48nm,1.6s,mb5.2
NAY Al-Naaiem 79.31 302 *e*P **P** **01 58 34.8 -0.1**
NAY AMb AMB 01 58 37.1
comp=Z,88nm,1.1s,mb5.6
GIVF Givet 79.36 340 *e*P **P** **01 58 34.5 -0.2**
comp=Z,81nm,1.3s,mb5.2
GIVF Givet 79.36 340 *e*P **P** **01 58 34.5 -0.2**
comp=Z,40nm,1.3s,mb5.2
GIVF Givet 79.36 340 *e*P **P** **01 58 34.5 -0.2**
GIVF pmax pmax
comp=Z,40nm,1.3s,mb5.2
RDF Al-Radifah 79.38 301 *e*P **P** **01 58 35.4 +0.2**
RDF AMb AMB 01 58 37.8
comp=Z,225nm,1.2s,mb6.0
DOU Dourbes 79.42 340 P **P** **01 58 35.0 0.0**
WLF Walferdange 79.46 339 *e*P **P** **01 58 36.3 +1.1**
comp=Z,17nm,0.8s,mb5.0
WLF Walferdange 79.46 339 *e*P **P** **01 58 37.3 +2.1**
comp=Z,41nm,1.5s,mb5.1
WLF Walferdange 79.46 339 *e*P **P** **01 58 37.3 +2.1**
WLF pmax pmax
comp=Z,41nm,1.5s,mb5.1
FUR Furstenfeldbru 79.50 336 *e*P **P** **01 58 36.2 +0.7**
comp=Z,53nm,1.0s,mb5.4
FUR Furstenfeldbru 79.50 336 *e*P **P** **01 58 36.2 +0.7**
FUR pmax pmax
comp=Z,53nm,1.0s,mb5.4
STU Stuttgart 79.52 337 *e*P **P** **01 58 36.0 +0.4**
comp=Z,32nm,1.3s,mb5.1
STU Stuttgart 79.52 337 *e*P **P** **01 58 35.2 -0.4**
comp=Z,9.4nm,0.7s,mb4.8
STU Stuttgart 79.52 337 *e*P **P** **01 58 35.2 -0.4**
STU pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
BAIF Baives 79.54 341⇑*i*P **P** **01 58 35.7 0.0**
comp=Z,36nm,1.1s,mb4.9
BAIF Baives 79.54 341⇑*i*P **P** **01 58 35.7 0.0**
comp=Z,18nm,1.1s,mb4.9
BAIF Baives 79.54 341⇑*i*P **P** **01 58 35.7 0.0**
BAIF pmax pmax
comp=Z,18nm,1.1s,mb4.9
STKA Stephens Creek 79.61 191 LR LR 02 33 40.8
comp=Z,207nm,20.2s,MS4.5,baz=25,slow=36
LANF Langenberg 79.68 338 *e*P **P** **01 58 37.1 +0.6**
SOKA Soboth 79.72 333⇓*i*P **P** **01 58 36.8 +0.1**
comp=Z,32nm,1.1s,mb5.2
PERS Pernice 79.74 333 *i*P **P** **01 58 36.8 0.0**
KBA Koelnbreinsper 79.88 334⇑*i*P **P** **01 58 38.2 +0.6**
comp=Z,63nm,1.1s,mb5.5,SNR=43
DIM Dimitrovgrad 79.97 324 P **P** **01 58 38.4 +0.2**
NATX Nacogdoches 80.08 54 *e*P **P** **01 58 38.7 -0.2**
PGB Panagyurishte 80.09 325 P **P** **01 58 39.1 +0.3**
BFO Black Forest 80.15 338 *e*P **P** **01 58 39.5 +0.5**
comp=Z,25nm,1.1s,mb5.1
BFO Black Forest 80.15 338 *e*P **P** **01 58 39.5 +0.5**
BFO pmax pmax
comp=Z,25nm,1.1s,mb5.1
WATA Walderalm 80.17 335⇑P **P** **01 58 39.7 +0.5**
comp=Z,22nm,0.9s,mb5.1,SNR=19
WTTA Wattenberg 80.22 335⇑*i*P **P** **01 58 40.2 +0.8**
comp=Z,62nm,1.1s,mb5.5,SNR=26
WVT Waverly 80.24 46 *e*P **P** **01 58 38.7 -1.0**
comp=Z,28nm,1.8s,mb4.9
WVT Waverly 80.24 46 *e*P **P** **01 58 38.7 -1.0**
WVT pmax pmax
comp=Z,28nm,1.8s,mb4.9
SPAK Spaichingen-Ko 80.24 337 *e*P **P** **01 58 39.7 +0.2**
PLD Plovdiv 80.25 324 P **P** **01 58 39.0 -0.7**
RETA Reutte 80.26 336⇑P **P** **01 58 40.0 +0.4**
comp=Z,23nm,1.4s,mb4.9,SNR=16
MOTA Moosalm 80.30 335⇑*i*P **P** **01 58 40.1 +0.3**
comp=Z,44nm,1.0s,mb5.3,SNR=22
DIVS Divibare 80.33 328 P **P** **01 58 39.5 -0.6**
CDF Champ du Feu 80.34 338⇑*i*P **P** **01 58 40.0 -0.1**
comp=Z,26nm,1.0s,mb4.8
CDF Champ du Feu 80.34 338⇑*i*P **P** **01 58 40.0 -0.1**
comp=Z,13nm,1.0s,mb4.8
CDF Champ du Feu 80.34 338⇑*i*P **P** **01 58 40.0 -0.1**
CDF pmax pmax
comp=Z,13nm,1.0s,mb4.8
KDZ Kurdzhali 80.35 324 P **P** **01 58 41.2 +1.0**
VTS Vitosha 80.43 325 P **P** **01 58 40.7 +0.1**
VTS Vitosha 80.43 325⇑P **P** **01 58 40.6 0.0**
VTS Vitosha 80.43 325 P **P** **01 58 40.7 +0.1**
VTS Vitosha 80.43 325⇑*i*P **P** **01 58 40.6 0.0**
VTS Vitosha 80.43 325 P **P** **01 58 40.1 -0.5**
ABTA Abfaltersbach 80.43 334⇓*i*P **P** **01 58 40.2 -0.4**
comp=Z,22nm,1.2s,mb5.0,SNR=12
LJU Ljubljana 80.45 333 *i*P **P** **01 58 40.6 -0.1**
ECH Echery 80.56 338 *e*P **P** **01 58 41.7 +0.5**
ECH Echery 80.56 338 *e*P **P** **01 58 41.2 0.0**
comp=Z,13nm,0.9s,mb4.8
ECH Echery 80.56 338 *e*P **P** **01 58 41.2 0.0**
ECH pmax pmax
comp=Z,13nm,0.9s,mb4.9
VISS Visnje 80.57 332 *i*P **P** **01 58 40.5 -0.8**
RZN Rozhen 80.60 324 P **P** **01 58 41.4 -0.2**
FELD Feldberg im Sc 80.65 338 *e*P **P** **01 58 42.3 +0.6**
DAVA Damuels 80.69 336⇑*i*P **P** **01 58 42.4 +0.4**
comp=Z,33nm,1.0s,mb5.2,SNR=15
FETA Feichten 80.70 335⇑*i*P **P** **01 58 42.6 +0.6**
comp=Z,22nm,1.0s,mb5.0,SNR=22
BOJS Bojanci 80.70 332 *i*P **P** **01 58 41.3 -0.7**
ALN Alexandroupoli 80.73 323 P **P** **01 58 42.0 -0.3**
ALN Alexandroupoli 80.73 323 P **P** **01 58 42.0 -0.3**
MEZF Maizieres J'vi 80.81 340⇑*i*P **P** **01 58 42.7 +0.2**
comp=Z,65nm,1.2s,mb5.2
MEZF Maizieres J'vi 80.81 340⇑*i*P **P** **01 58 42.7 +0.2**
comp=Z,65nm,1.2s,mb5.4
THEF They Montfort 80.84 339 *e*P **P** **01 58 43.2 +0.5**
MOF Molkenrain 80.90 338 *e*P **P** **01 58 43.4 +0.4**
HAU Haudompre 80.95 339⇑*i*P **P** **01 58 43.1 -0.2**
comp=Z,41nm,1.1s,mb5.0
HAU *e*MLR MLR
comp=Z,422nm,22.5s,MS4.4
HAU Haudompre 80.95 339⇑*i*P **P** **01 58 43.1 -0.2**
comp=Z,20nm,1.1s,mb5.0
HAU LR LR
comp=Z,420nm,22.5s,MS4.7
HAU Haudompre 80.95 339⇑*i*P **P** **01 58 43.1 -0.2**
HAU pmax pmax
comp=Z,20nm,1.1s,mb5.0
HAU MLR MLR
comp=Z,420nm,22.5s,MS4.7
HINF Hinteralfeld 81.00 338⇑*i*P **P** **01 58 43.3 -0.3**
comp=Z,20nm,1.0s,mb4.7
HINF Hinteralfeld 81.00 338⇑*i*P **P** **01 58 43.3 -0.3**
comp=Z,10nm,1.0s,mb4.7
HINF Hinteralfeld 81.00 338⇑*i*P **P** **01 58 43.3 -0.3**
HINF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MMB Musomiste 81.08 325 P **P** **01 58 43.6 -0.5**
LOMF Lomont 81.44 338 *e*P **P** **01 58 46.9 +1.0**
SRS Serrai 81.53 324 P **P** **01 58 45.9 -0.6**
SRS Serrai 81.53 324 P **P** **01 58 45.9 -0.6**
FLN La Foliniere 81.76 343⇑*i*P **P** **01 58 47.3 -0.3**
comp=Z,166nm,1.7s,mb5.4
FLN *e*MLR MLR
comp=Z,371nm,18.2s,MS4.5
FLN La Foliniere 81.76 343⇑*i*P **P** **01 58 47.3 -0.3**
comp=Z,83nm,1.7s,mb5.4
FLN LR LR
comp=Z,370nm,18.3s,MS4.8
FLN La Foliniere 81.76 343⇑*i*P **P** **01 58 47.3 -0.3**
FLN pmax pmax
comp=Z,83nm,1.7s,mb5.4
FLN MLR MLR
comp=Z,370nm,18.3s,MS4.8
VAY Valandovo 81.76 325 *e*P **P** **01 58 47.2 -0.6**
KNT Kendrikon 81.77 325 P **P** **01 58 47.6 -0.2**
KNT Kendrikon 81.77 325 P **P** **01 58 47.6 -0.2**
BCI Bajram Curri 81.81 327 *e*PN **P** **01 58 47.6 -0.4**
LDF La Druitiere 81.85 343 *e*P **P** **01 58 47.3 -0.8**
comp=Z,11nm,0.9s,mb4.5
LDF La Druitiere 81.85 343 *e*P **P** **01 58 47.3 -0.8**
comp=Z,5.6nm,0.9s,mb4.5
LDF La Druitiere 81.85 343 *e*P **P** **01 58 47.3 -0.8**
LDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
SWET Sewanee 81.89 46 *e*P **P** **01 58 47.0 -1.6**
PUK Puka 82.15 327 *e*PN **P** **01 58 50.8 +1.0**

GRR	**Gorron**	**82.19**	**343**	⇑*iP*	**P**	**01 58 49.7**	**-0.2**
	comp=Z,45nm,1.1s,mb5.0							
GRR	**Gorron**	**82.19**	**343**	⇑*iP*	**P**	**01 58 49.7**	**-0.2**
	comp=Z,22nm,1.1s,mb5.0							
GRR	**Gorron**	**82.19**	**343**	⇑*iP*	**P**	**01 58 49.7**	**-0.2**
GRR				pmax	pmax			
	comp=Z,22nm,1.1s,mb5.0							
KRUS	**Krusevo**	**82.23**	**326**	*eP*	**P**	**01 58 49.2**	**-1.0**
LOR	**Lormes**	**82.24**	**340**	⇑*iP*	**P**	**01 58 50.0**	**-0.1**
	comp=Z,44nm,1.2s,mb5.0							
LOR				*e*MLR	MLR			
	comp=Z,441nm,20.8s,MS4.5							
LOR	**Lormes**	**82.24**	**340**	⇑*iP*	**P**	**01 58 50.0**	**-0.1**
	comp=Z,22nm,1.2s,mb5.0							
LOR				LR	LR			
	comp=Z,440nm,20.8s,MS4.8							
LOR	**Lormes**	**82.24**	**340**	⇑*iP*	**P**	**01 58 50.0**	**-0.1**
LOR				pmax	pmax			
	comp=Z,22nm,1.2s,mb5.0							
LOR				MLR	MLR			
	comp=Z,440nm,20.8s,MS4.8							
PHP	**Peshkopia**	**82.26**	**327**	*e*PN	**P**	**01 58 49.5**	**-0.8**
CABF	**La Chapelle**	**82.32**	**338**	*eP*	**P**	**01 58 50.9**	**+0.3**
	comp=Z,35nm,1.3s,mb4.8							
CABF	**La Chapelle**	**82.32**	**338**	*eP*	**P**	**01 58 50.9**	**+0.3**
	comp=Z,18nm,1.3s,mb4.8							
CABF	**La Chapelle**	**82.32**	**338**	*eP*	**P**	**01 58 50.9**	**+0.3**
CABF				pmax	pmax			
	comp=Z,18nm,1.3s,mb4.8							
SSF	**Saint Saulge**	**82.52**	**340**	⇑*iP*	**P**	**01 58 51.4**	**-0.2**
	comp=Z,35nm,1.2s,mb5.0							
SSF	**Saint Saulge**	**82.52**	**340**	⇑*iP*	**P**	**01 58 51.4**	**-0.2**
	comp=Z,18nm,1.2s,mb5.0							
SSF	**Saint Saulge**	**82.52**	**340**	⇑*iP*	**P**	**01 58 51.4**	**-0.2**
SSF				pmax	pmax			
	comp=Z,18nm,1.2s,mb5.0							
SGMF	**Saint Gilles**	**82.64**	**344**	⇑*iP*	**P**	**01 58 52.2**	**0.0**
	comp=Z,38nm,0.9s,mb5.1							
SGMF	**Saint Gilles**	**82.64**	**344**	⇑*iP*	**P**	**01 58 52.2**	**0.0**
	comp=Z,19nm,0.9s,mb5.1							
SGMF	**Saint Gilles**	**82.64**	**344**	⇑*iP*	**P**	**01 58 52.2**	**0.0**
SGMF				pmax	pmax			
	comp=Z,19nm,0.9s,mb5.1							
FNA	**Florina**	**82.68**	**326**	P	**P**	**01 58 51.3**	**-1.3**
FNA	**Florina**	**82.68**	**326**	P	**P**	**01 58 51.3**	**-1.3**
ROSF	**Rostrenen**	**82.69**	**345**	*eP*	**P**	**01 58 52.3**	**-0.2**
	comp=Z,117nm,1.2s,mb5.5							
ROSF	**Rostrenen**	**82.69**	**345**	*eP*	**P**	**01 58 52.3**	**-0.2**
	comp=Z,58nm,1.2s,mb5.5							
ROSF	**Rostrenen**	**82.69**	**345**	*eP*	**P**	**01 58 52.3**	**-0.2**
ROSF				pmax	pmax			
	comp=Z,58nm,1.2s,mb5.5							
TIR	**Tirane**	**82.77**	**327**	*eP*	**P**	**01 58 52.9**	**-0.1**
	comp=Z,52nm,1.0s,mb5.5							
TIR	**Tirane**	**82.77**	**327**	*eP*	**P**	**01 58 52.9**	**-0.1**
TIR				pmax	pmax			
	comp=Z,52nm,1.0s,mb5.5							
AVF	**Avril sur Loir**	**82.81**	**340**	⇑*iP*	**P**	**01 58 53.1**	**0.0**
	comp=Z,66nm,1.1s,mb5.3							
AVF	**Avril sur Loir**	**82.81**	**340**	⇑*iP*	**P**	**01 58 53.1**	**0.0**
	comp=Z,33nm,1.1s,mb5.3							
AVF	**Avril sur Loir**	**82.81**	**340**	⇑*iP*	**P**	**01 58 53.1**	**0.0**
AVF				pmax	pmax			
	comp=Z,33nm,1.1s,mb5.3							
CHOS	**Chios island**	**82.83**	**321**	P	**P**	**01 58 52.9**	**-0.5**
SMF	**Signal de Mont**	**82.83**	**340**	⇑*iP*	**P**	**01 58 53.3**	**+0.1**
	comp=Z,129nm,1.1s,mb5.5							
SMF	**Signal de Mont**	**82.83**	**340**	⇑*iP*	**P**	**01 58 53.3**	**+0.1**
	comp=Z,64nm,1.1s,mb5.6							
SMF	**Signal de Mont**	**82.83**	**340**	⇑*iP*	**P**	**01 58 53.3**	**+0.1**
SMF				pmax	pmax			
	comp=Z,64nm,1.1s,mb5.6							
MMAI	**Mount Meron Ar**	**82.86**	**312**	P	**P**	**01 58 54.3**	**+0.6**
	comp=Z,33nm,0.9s,mb5.4,baz=36,slow=7.2,SNR=37							
MMAI				LR	LR	02 40 45.6		
	comp=Z,474nm,18.0s,MS4.9,baz=25,slow=39							
KBN	**Korca**	**83.05**	**326**	*e*PN	**P**	**01 58 54.5**	**0.0**
QUIF	**Quistinic**	**83.08**	**345**	*eP*	**P**	**01 58 54.1**	**-0.4**
	comp=Z,48nm,0.9s,mb5.2							
QUIF	**Quistinic**	**83.08**	**345**	*eP*	**P**	**01 58 54.1**	**-0.4**
	comp=Z,24nm,0.9s,mb5.2							
QUIF	**Quistinic**	**83.08**	**345**	*eP*	**P**	**01 58 54.1**	**-0.4**
QUIF				pmax	pmax			
	comp=Z,24nm,0.9s,mb5.2							
NEST	**Nestorio**	**83.13**	**326**	P	**P**	**01 58 54.4**	**-0.5**
BGF	**Bois d'Agland**	**83.14**	**340**	⇑*iP*	**P**	**01 58 54.8**	**-0.1**
	comp=Z,41nm,1.2s,mb5.0							
BGF	**Bois d'Agland**	**83.14**	**340**	⇑*iP*	**P**	**01 58 54.8**	**-0.1**
	comp=Z,20nm,1.2s,mb5.0							
BGF	**Bois d'Agland**	**83.14**	**340**	⇑*iP*	**P**	**01 58 54.8**	**-0.1**
BGF				pmax	pmax			
	comp=Z,20nm,1.2s,mb5.0							
LPL	**La Plagne**	**83.17**	**337**	⇑*iP*	**P**	**01 58 55.9**	**+0.9**
	comp=Z,38nm,1.0s,mb5.1							
LPL	**La Plagne**	**83.17**	**337**	⇑*iP*	**P**	**01 58 55.9**	**+0.9**
	comp=Z,19nm,1.0s,mb5.1							
LPL	**La Plagne**	**83.17**	**337**	⇑*iP*	**P**	**01 58 55.9**	**+0.9**
LPL				pmax	pmax			
	comp=Z,19nm,1.0s,mb5.1							
LPG	**La Plagne**	**83.18**	**337**	⇑*iP*	**P**	**01 58 56.1**	**+1.0**
	comp=Z,60nm,1.1s,mb5.2							
LPG	**La Plagne**	**83.18**	**337**	⇑*iP*	**P**	**01 58 56.1**	**+1.0**
	comp=Z,30nm,1.1s,mb5.2							
LPG	**La Plagne**	**83.18**	**337**	⇑*iP*	**P**	**01 58 56.1**	**+1.0**
LPG				pmax	pmax			
	comp=Z,30nm,1.1s,mb5.2							
PLDF	**La Plantade**	**83.52**	**340**	*eP*	**P**	**01 58 58.8**	**+2.0**
TCF	**Toulx Ste Croi**	**83.55**	**341**	⇑*iP*	**P**	**01 58 56.9**	**0.0**
	comp=Z,34nm,1.0s,mb5.1							
TCF	**Toulx Ste Croi**	**83.55**	**341**	⇑*iP*	**P**	**01 58 56.9**	**0.0**
	comp=Z,17nm,1.0s,mb5.1							
TCF	**Toulx Ste Croi**	**83.55**	**341**	⇑*iP*	**P**	**01 58 56.9**	**0.0**
TCF				pmax	pmax			
	comp=Z,17nm,1.0s,mb5.1							
AGO	**Saint Agoulin**	**83.56**	**340**	*eP*	**P**	**01 58 58.9**	**+1.9**
MFF	**Saint Martin d**	**83.75**	**342**	⇑*iP*	**P**	**01 58 57.9**	**-0.1**
	comp=Z,33nm,1.1s,mb5.1							
MFF	**Saint Martin d**	**83.75**	**342**	⇑*iP*	**P**	**01 58 57.9**	**-0.1**
	comp=Z,17nm,1.1s,mb5.1							
MFF	**Saint Martin d**	**83.75**	**342**	⇑*iP*	**P**	**01 58 57.9**	**-0.1**
MFF				pmax	pmax			
	comp=Z,17nm,1.1s,mb5.1							
PYM	**Petit Puy Mans**	**83.87**	**340**	*eP*	**P**	**01 59 00.2**	**+1.6**
MBDF	**Montbardon**	**83.89**	**337**	⇑*iP*	**P**	**01 58 58.9**	**+0.2**
	comp=Z,36nm,1.2s,mb5.1							
MBDF	**Montbardon**	**83.89**	**337**	⇑*iP*	**P**	**01 58 58.9**	**+0.2**
	comp=Z,18nm,1.2s,mb5.1							
MBDF	**Montbardon**	**83.89**	**337**	⇑*iP*	**P**	**01 58 58.9**	**+0.2**
MBDF				pmax	pmax			
	comp=Z,18nm,1.2s,mb5.1							
ORIF	**Oris-en-Rattie**	**83.95**	**338**	⇑*iP*	**P**	**01 58 59.6**	**+0.6**
	comp=Z,41nm,0.9s,mb5.3							
ORIF				*e*MLR	MLR			
	comp=Z,310nm,23.0s,MS4.3							
ORIF	**Oris-en-Rattie**	**83.95**	**338**	⇑*iP*	**P**	**01 58 59.6**	**+0.6**
	comp=Z,21nm,0.9s,mb5.3							
ORIF	**Oris-en-Rattie**	**83.95**	**338**	⇑*iP*	**P**	**01 58 59.6**	**+0.6**
ORIF				pmax	pmax			
	comp=Z,21nm,0.9s,mb5.3							
SSB	**Saint Sauveur**	**83.95**	**339**	*eP*	**P**	**01 58 59.2**	**+0.2**
	comp=Z,14nm,0.9s,mb5.1							
SSB	**Saint Sauveur**	**83.95**	**339**	*eP*	**P**	**01 58 59.2**	**+0.2**
SSB				pmax	pmax			
	comp=Z,14nm,0.9s,mb5.1							
AQU	**L'Aquila**	**84.12**	**332**	*eP*	**P**	**01 59 00.3**	**+0.4**
	comp=Z,26nm,0.9s,mb5.4							
AQU	**L'Aquila**	**84.12**	**332**	*eP*	**P**	**01 59 00.3**	**+0.4**
AQU				pmax	pmax			
	comp=Z,26nm,0.9s,mb5.4							
AQU	**L'Aquila**	**84.12**	**332**	⇑*iP*	**P**	**01 59 00.8**	**+0.9**
VIVF	**Saint-Julien-l**	**84.31**	**339**	⇑*iP*	**P**	**01 59 01.2**	**+0.3**
	comp=Z,42nm,1.1s,mb5.2							
VIVF	**Saint-Julien-l**	**84.31**	**339**	⇑*iP*	**P**	**01 59 01.2**	**+0.3**
	comp=Z,21nm,1.1s,mb5.2							
VIVF	**Saint-Julien-l**	**84.31**	**339**	⇑*iP*	**P**	**01 59 01.2**	**+0.3**
VIVF				pmax	pmax			
	comp=Z,21nm,1.1s,mb5.2							
SAOF	**Saorge**	**84.37**	**336**	*eP*	**P**	**01 59 01.6**	**+0.4**
TOUF	**Mont Tournerai**	**84.43**	**337**	*eP*	**P**	**01 59 02.0**	**+0.5**
SBF	**Sospel**	**84.52**	**336**	⇑*iP*	**P**	**01 59 01.4**	**-0.5**
	comp=Z,65nm,1.1s,mb5.4							
SBF	**Sospel**	**84.52**	**336**	⇑*iP*	**P**	**01 59 01.4**	**-0.5**
	comp=Z,32nm,1.1s,mb5.4							
SBF	**Sospel**	**84.52**	**336**	⇑*iP*	**P**	**01 59 01.4**	**-0.5**
SBF				pmax	pmax			
	comp=Z,32nm,1.1s,mb5.4							
RJF	**Les Rejaudoux**	**84.63**	**341**	⇑*iP*	**P**	**01 59 02.6**	**+0.1**
	comp=Z,31nm,1.2s,mb5.0							
RJF				*e*MLR	MLR			
	comp=Z,387nm,21.2s,MS4.5							
RJF	**Les Rejaudoux**	**84.63**	**341**	⇑*iP*	**P**	**01 59 02.6**	**+0.1**
	comp=Z,16nm,1.2s,mb5.0							
RJF				LR	LR			
	comp=Z,390nm,21.3s,MS4.8							
RJF	**Les Rejaudoux**	**84.63**	**341**	⇑*iP*	**P**	**01 59 02.6**	**+0.1**
RJF				pmax	pmax			
	comp=Z,16nm,1.2s,mb5.0							
RJF				MLR	MLR			
	comp=Z,390nm,21.3s,MS4.8							
CALN	**Calern**	**84.77**	**337**	*eP*	**P**	**01 59 03.7**	**+0.5**
CAF	**Calviac**	**84.87**	**340**	⇑*iP*	**P**	**01 59 04.1**	**+0.4**
	comp=Z,28nm,1.1s,mb5.0							
CAF	**Calviac**	**84.87**	**340**	⇑*iP*	**P**	**01 59 04.1**	**+0.4**
	comp=Z,14nm,1.1s,mb5.0							
CAF	**Calviac**	**84.87**	**340**	⇑*iP*	**P**	**01 59 04.1**	**+0.4**
CAF				pmax	pmax			
	comp=Z,14nm,1.1s,mb5.0							
SMRF	**Simiane la Rot**	**84.90**	**338**	*eP*	**P**	**01 59 04.5**	**+0.6**
	comp=Z,52nm,1.3s,mb5.2							
SMRF	**Simiane la Rot**	**84.90**	**338**	*eP*	**P**	**01 59 04.5**	**+0.6**
	comp=Z,52nm,1.3s,mb5.5							
FRF	**La Foret Royal**	**85.01**	**337**	⇑*iP*	**P**	**01 59 04.1**	**-0.3**
	comp=Z,74nm,1.4s,mb5.3							
FRF	**La Foret Royal**	**85.01**	**337**	⇑*iP*	**P**	**01 59 04.1**	**-0.3**
	comp=Z,37nm,1.4s,mb5.3							
FRF	**La Foret Royal**	**85.01**	**337**	⇑*iP*	**P**	**01 59 04.1**	**-0.3**
FRF				pmax	pmax			
	comp=Z,37nm,1.4s,mb5.3							
LFF	**La Frestale**	**85.15**	**341**	⇑*iP*	**P**	**01 59 04.6**	**-0.5**
	comp=Z,80nm,1.6s,mb5.3							
LFF	**La Frestale**	**85.15**	**341**	⇑*iP*	**P**	**01 59 04.6**	**-0.5**
	comp=Z,40nm,1.6s,mb5.3							
LFF	**La Frestale**	**85.15**	**341**	⇑*iP*	**P**	**01 59 04.6**	**-0.5**
LFF				pmax	pmax			
	comp=Z,40nm,1.6s,mb5.3							
LASF	**Ste Croix**	**85.24**	**339**	⇑*iP*	**P**	**01 59 05.6**	**0.0**
	comp=Z,36nm,1.5s,mb5.0							
LMR	**La Mourre**	**85.26**	**337**	⇑*iP*	**P**	**01 59 05.6**	**-0.1**
	comp=Z,87nm,1.1s,mb5.5							
LMR	**La Mourre**	**85.26**	**337**	⇑*iP*	**P**	**01 59 05.6**	**-0.1**
	comp=Z,44nm,1.1s,mb5.5							
LMR	**La Mourre**	**85.26**	**337**	⇑*iP*	**P**	**01 59 05.6**	**-0.1**
LMR				pmax	pmax			
	comp=Z,43nm,1.1s,mb5.5							
ZKR	**Zakros**	**85.51**	**319**	P	**P**	**01 59 06.5**	**-0.6**
ZKR	**Zakros**	**85.51**	**319**	P	**P**	**01 59 06.5**	**-0.6**
TIP	**Timpagrande**	**85.80**	**328**	*eP*	**P**	**01 59 07.3**	**-1.2**
	comp=Z,15nm,0.9s,mb5.2							
MTLF	**Montolieu**	**86.33**	**340**	⇑*iP*	**P**	**01 59 10.4**	**-0.6**
	comp=Z,23nm,1.5s,mb4.9							
MTLF	**Montolieu**	**86.33**	**340**	⇑*iP*	**P**	**01 59 10.4**	**-0.6**
	comp=Z,12nm,1.5s,mb4.9							
MTLF	**Montolieu**	**86.33**	**340**	⇑*iP*	**P**	**01 59 10.4**	**-0.6**
MTLF				pmax	pmax			
	comp=Z,12nm,1.5s,mb4.9							
EPF	**Esparros**	**87.06**	**341**	⇑*iP*	**P**	**01 59 14.0**	**-0.5**
	comp=Z,14nm,1.1s,mb4.8							
EPF	**Esparros**	**87.06**	**341**	⇑*iP*	**P**	**01 59 14.0**	**-0.5**
	comp=Z,6.9nm,1.1s,mb4.8							
EPF	**Esparros**	**87.06**	**341**	⇑*iP*	**P**	**01 59 14.0**	**-0.5**
EPF				pmax	pmax			
	comp=Z,7.0nm,1.1s,mb4.8							
ETSF	**Etsaut**	**87.38**	**342**	⇑*iP*	**P**	**01 59 16.3**	**+0.2**
	comp=Z,30nm,1.4s,mb5.0							
ETSF	**Etsaut**	**87.38**	**342**	⇑*iP*	**P**	**01 59 16.3**	**+0.2**
	comp=Z,15nm,1.4s,mb5.0							
ETSF	**Etsaut**	**87.38**	**342**	⇑*iP*	**P**	**01 59 16.3**	**+0.2**
ETSF				pmax	pmax			
	comp=Z,15nm,1.4s,mb5.0							
MVO	**Moncorvo**	**90.29**	**346**	*eP*	**P**	**01 59 28.4**	**-1.5**
	comp=Z,30nm,1.8s,mb5.3							
PVRL	**Vila Real**	**90.30**	**346**	*eP*	**P**	**01 59 29.2**	**-0.7**
	comp=Z,25nm,1.9s,mb5.2							
PVIS	**Viseu**	**90.87**	**346**	*eP*	**P**	**01 59 29.1**	**-3.5**
	comp=Z,22nm,1.6s,mb5.2							
MTE	**Manteigas**	**91.12**	**346**	*eP*	**P**	**01 59 32.4**	**-1.4**
	comp=Z,32nm,1.6s,mb5.4							
ESDC	**Sonseca Array**	**91.18**	**343**	P	**P**	**01 59 32.5**	**-1.6**
ESDC	**Sonseca Array**	**91.18**	**343**	P	**P**	**01 59 32.5**	**-1.5**
	comp=Z,5.0nm,1.1s,mb4.8,baz=9.4,slow=3.8,SNR=13							
KEST	**Kesra**	**91.44**	**332**	*eP*	**P**	**01 59 34.9**	**-0.4**
KEST	**Kesra**	**91.44**	**332**	P	**P**	**01 59 35.1**	**-0.2**
	comp=Z,5.7nm,0.9s,mb4.9,baz=287,slow=3.1,SNR=18							
KEST				LR	LR	02 44 59.9		
	comp=Z,124nm,19.5s,MS4.4,baz=285,slow=38							
PMAFR	**Mafra**	**92.81**	**347**	*eP*	**P**	**01 59 42.2**	**+0.6**
	comp=Z,78nm,1.7s,mb5.9							
PBAR	**Barrancos**	**93.21**	**345**	*eP*	**P**	**01 59 41.6**	**-1.8**
	comp=Z,15nm,1.7s,mb5.1							
PCVE	**Castro Verde**	**93.91**	**346**	*eP*	**P**	**01 59 45.2**	**-1.5**
	comp=Z,26nm,1.3s,mb5.5							
PTCN	**Pitcairn Islan**	**99.16**	**117**	*eP*	**P**	**02 00 11.3**	**+0.8**
	comp=Z,464nm,0.7s							
TORD	**Torodi Ar. Bea**	**114.89**	**330**	PKP	PKiKP	02 05 07.8	-2.3
TORD				PKKPbc	PKKPbc	02 15 43.2	-1.7
TORD	**Torodi Ar. Bea**	**114.89**	**330**	PKP	PKiKP	02 05 07.8	-2.3
	comp=Z,0.5nm,0.8s,baz=14,slow=1.8,SNR=4.8							
TORD				PKKPbc	PKKPbc	02 15 43.2	-1.7
	comp=Z,0.3nm,0.7s,baz=188,slow=3.4,SNR=5.3							
LPAZ	**La Paz**	**133.58**	**63**	PKP	PKPdf	02 05 45.1	-0.6
	comp=Z,1.9nm,0.9s,baz=16,slow=4.6,SNR=6.3							
LPAZ	**La Paz**	**133.58**	**63**	PKIKP	PKPdf	02 05 45.1	-0.6
LPAZ				pmax	pmax			
	comp=Z,2.0nm,0.9s							
MAIT	**Maitri**	**150.41**	**204**	*e*PKPdif	PKPdf	02 06 16.5	+2.7
VNA1	**Neumayer--Stat**	**155.07**	**194**	*e*PKPdf	PKPab	02 06 41.2	-4.1

CSEM ***18*** *01:52:04.8±0.8, 37.30N×38.82E, h1km±6km, MD2.8, Error ellipse: s-maj=12.8km s-min=6.7km az=150.0*
ISCJB ***18*** *01:52:05.6±1.2, 37.34N±0.06×38.80E±0.07, h10km, Error ellipse: s-maj=11.2km s-min=5.3km az=141.1*
ISK ***18*** *01:52:05.3, 37.36N×38.78E, h5km, MD2.8*
DDA ***18*** *01:52:06.0, 37.33N×38.76E, h7km±5km, Md2.8*

ISC 18 01:52:06.3±1.3, 37.36N±0.07×38.80E±0.07, h3km±11km, n18, σ0969/26, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.08**	**14**	*e*PG		**Pg**		**01 52 07.5**	**-0.5**
URFA				*e*SG		**Sg**		**01 52 08.5**	**-0.5**
URFA	**Urfa**	**0.08**	**14**	*e*Pg		**Pg**		**01 52 07.5**	**-0.5**
URFA				*e*Sg		**Sg**		**01 52 08.6**	**-0.5**
ATAB	**Bozova**	**0.41**	**285**	*eP*		**Pg**		**01 52 13.6**	**-0.6**
ATAB				*eS*		**Sg**		**01 52 18.7**	**-0.9**
ATAB	**Bozova**	**0.41**	**285**	*eP*		**Pg**		**01 52 13.6**	**-0.7**
ATAB				*eS*		**Sg**		**01 52 18.7**	**-1.0**
MALT	**Malatya**	**0.99**	**343**	*e*PG		**Pg**		**01 52 25.9**	**+0.5**
MALT	**Malatya**	**0.99**	**343**	*e*Pg		**Pg**		**01 52 25.9**	**+0.5**
MYA	**Malatya**	**1.01**	**343**	*e*PG		**Pg**		**01 52 25.6**	**-0.1**
MYA	**Malatya**	**1.01**	**343**	*e*Pg		**Pg**		**01 52 25.6**	**-0.1**
SVRC	**Sivrice-ELAZID**	**1.09**	**21**	*e*PN		**Pg**		**01 52 27.6**	**+0.3**
SVRC	**Sivrice-ELAZID**	**1.09**	**21**	*e*Pn		**Pg**		**01 52 27.6**	**+0.3**
AKCD	**Akcadag**	**1.16**	**324**	*eP*		**Pg**		**01 52 28.9**	**+0.3**
AKCD				*eS*		**Sg**		**01 52 44.7**	**+1.0**
AKCD	**Akcadag**	**1.16**	**324**	*eP*		**Pg**		**01 52 28.9**	**+0.3**
AKCD				*eS*		**Sg**		**01 52 44.7**	**+1.0**
GAZ	**Gaziantep**	**1.28**	**262**	*e*PN		**Pn**		**01 52 30.0**	**-1.1**
GAZ	**Gaziantep**	**1.28**	**262**	*e*Pn		**Pn**		**01 52 30.0**	**-1.1**
KUZU	**Kuzuini**	**1.50**	**247**	*eP*		**Pg**		**01 52 36.3**	**+1.3**
KUZU				*eS*		**Sg**		**01 52 54.6**	**+0.2**
KUZU	**Kuzuini**	**1.50**	**247**	*eP*		**Pg**		**01 52 36.3**	**+1.3**
KUZU				*eS*		**Sg**		**01 52 54.6**	**+0.2**
PTK	**Pertek**	**1.60**	**17**	*e*PN		**Pn**		**01 52 35.8**	**+0.3**
PTK	**Pertek**	**1.60**	**17**	*e*Pn		**Pn**		**01 52 35.8**	**+0.3**

DJA 18 02:00:12.0±0.74N×99.77E, h10km, MLv3.5/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.20**	**286**	P		Pg		02 00 17.4	+1.2
MNSI				S		Sg		02 00 21.3	+2.3
BKNI	**Bangkinang**	**1.33**	**108**	P		Pn		02 00 35.6	-1.1
BKNI				S		Sb		02 00 53.1	-1.2
PPI	**Padang Panjang**	**1.34**	**152**	P		Pn		02 00 36.2	-0.6
PPI				S		Sb		02 00 53.7	-0.9
SDSI	**Sungai Dareh**	**2.35**	**135**	P		Pn		02 00 53.3	+2.6

NEIC ***18*** *02:03:53.1, 17.26N×101.02W, h26km, MD3.6(MEX), After MEX.*

MEX 18 02:03:52.9±0.3, 17.24N×101.03W, h30km±5km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.56**	**311**	*i* P			Pb	02 04 02.4	-1.8
ZIIG				*i* S			Sb	02 04 09.6	-2.3
ZIIG	**Zihuatanejo**	**0.56**	**311**	*i* P			Pb	02 04 02.4	-1.8
ZIIG				*i* S			Sb	02 04 09.6	-2.3
CAIG	**El Cayaco**	**0.75**	**105**	*i* P			Pb	02 04 05.1	-2.3
CAIG				*i* S			Sb	02 04 14.5	-2.9
CAIG	**El Cayaco**	**0.75**	**105**	*i* P			Pb	02 04 05.1	-2.3
CAIG				*i* S			Sb	02 04 14.5	-2.9
ACX	**Acapulco**	**1.18**	**108**	*e*P			Pn	02 04 10.3	-3.0
ACX				*i* S			Sn	02 04 23.8	-4.6
ACX	**Acapulco**	**1.18**	**108**	*e*P			Pn	02 04 10.3	-3.0
ACX				*i* S			Sn	02 04 23.8	-4.6
MMIG	**Aquila**	**2.44**	**296**	*e*P			Pn	02 04 29.5	-1.3
MMIG				*i* S			Sn	02 04 56.9	-2.8
MZVM		**2.58**	**41**	*e*P			Pn	02 04 33.4	+0.7
MZVM				*i* S			Sn	02 05 04.0	+1.0
PNIG	**Pinotepa**	**2.90**	**107**	*i* P			Pn	02 04 38.2	+1.1
PNIG				*i* S			Sn	02 05 10.1	-0.9
PNIG	**Pinotepa**	**2.90**	**107**	*i* P			Pn	02 04 38.2	+1.1
PNIG				*i* S			Sn	02 05 08.2	-2.8
PPM	**Popocatepetl**	**2.91**	**51**	*e*P			Pn	02 04 35.1	-2.2
PPM				*i* S			Sn	02 05 09.7	-1.6
PPM	**Popocatepetl**	**2.91**	**51**	*e*P			Pn	02 04 35.1	-2.2
PPM				*i* S			Sn	02 05 09.7	-1.6
UTMO	**Huajuapan**	**3.13**	**79**	*e*P			Pn	02 04 38.7	-1.5
UTMO				*i* S			Sn	02 05 14.9	-1.7

MAN ***18*** *02:15:01, 13.09N×124.55E, h11km, mb4.8, ML3.8, MS3.8*
NEIC ***18*** *02:15:03.2±0.8, 12.89N×124.55E, h10km, Error ellipse: s-maj=28.0km s-min=12.8km az=57.0*
ISCJB ***18*** *02:15:05.5±1.0, 12.85N±0.07×124.45E±0.09, h41km±10km, mb3.8/9, Error ellipse: s-maj=17.4km s-min=7.2km az=148.0*
IDC ***18*** *02:15:13.0±3.7, 12.55N×123.77E, h88km±36km, mb3.5/8, mb1 3.6/9, mb1mx3.5/21, mbtmp3.6/9, Error ellipse: s-maj=50.5km s-min=15.0km az=69.0*

ISC 18 02:15:05.7±1.3, 12.87N±0.06×124.44E±0.08, h26km±11km, n22, σ1916/24, mb3.8/9, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.42**	**149**	*e*P			**Pb**	**02 15 14.8**	**+0.2**
PLP	**Palo**	**1.78**	**163**	*e*P			**Pn**	**02 15 34.8**	**0.0**
PLP				*e*S			**Sn**	**02 15 59.6**	**+3.0**
GQP	**Guinayangan**	**2.20**	**298**	‖*e*P			**Pn**	**02 15 37.8**	**-2.7**
GQP				*e*S			**Sn**	**02 16 07.5**	**+0.6**
BOAC	**Boac**	**2.60**	**283**	*e*P			**Pn**	**02 15 47.1**	**+1.1**
GUIM	**Jordan**	**2.88**	**219**	*e*P			**Pn**	**02 15 49.9**	**0.0**
POLP	**Polilio Island**	**3.05**	**307**	*e*P			**Pn**	**02 15 52.6**	**+0.3**
TBP	**Tagbilaran**	**3.21**	**190**	*e*P			**Pn**	**02 15 55.1**	**+0.5**
TBP				*e*S			**Sn**	**02 16 30.3**	**-1.7

SEW eS Sn 02 27 19.0 +4.5
RC01 Rabbit Creek A 14.55 44 ePn Pn 02 24 40.5 -2.0
19nm,0.4s
PPLA Purkeypile 14.61 35 ePn Pn 02 24 45.5 +2.1
6.7nm,0.6s
PMR Palmer 15.05 42 ePn Pn 02 24 50.0 +0.8
49nm,1.0s
PMR Palmer 15.05 42 eP Pn 02 24 50.0 +0.8
PMR pmax pmax
comp=Z,49nm,1.0s
MID Middleton Isla 15.45 52 ePn Pn 02 24 50.4 -4.0
comp=Z,147nm,0.7s
MID Middleton Isla 15.45 52 eP Pn 02 24 50.4 -4.0
MID pmax pmax
comp=Z,147nm,0.7s
TRF Thorofare Moun 15.63 35 Pn Pn 02 24 56.9 +0.1
comp=Z,10nm,0.8s
MCK McKinley 16.29 36 ePn Pn 02 25 04.7 -0.5
MCK eS S 02 27 53.2 -23
DIV Divide 16.30 47 ePn Pn 02 25 02.7 -2.6
comp=Z,94nm,1.0s
DIV eS S 02 28 08.2 -8.3
BMRM Bremner River 16.77 48 ePn Pn 02 25 08.8 -2.5
comp=Z,70nm,0.8s
BMRM eS S 02 28 11.2 -15
PAX Paxson 17.22 41 ePn Pn 02 25 14.9 -1.9
comp=Z,44nm,0.8s
PAX eSn Sn 02 28 23.0 -4.0
PAX Paxson 17.22 41 eP Pn 02 25 14.9 -1.9
PAX e 02 28 23.0
PAX pmax pmax
comp=Z,44nm,0.8s
COLA College 17.34 34 ePn Pn 02 25 16.9 -1.5
comp=Z,42nm,0.9s
COLA College 17.34 34 eP Pn 02 25 16.9 -1.5
COLA pmax pmax
comp=Z,42nm,0.9s
ILAR Eielson Array 17.62 35 P Pn 02 25 19.2 -2.5
comp=Z,0.7nm,0.3s,baz=226,slow=11,SNR=40
ILAR PcP PcP 02 29 59.0 0.0
baz=282,slow=3.6,SNR=5.2
ILAR ScP ScP 02 33 30.9 -0.2
comp=Z,0.0nm,0.3s,baz=283,slow=2.9,SNR=6.3
MENT Mentasta 17.92 42 ePn Pn 02 25 24.0 -1.5
COLD Coldfoot 18.20 26 eP Pn 02 25 29.4 +0.6
comp=Z,37nm,0.8s
PET Petropavlovsk 18.64 285 ePn Pn 02 25 34.2 -0.1
PET Petropavlovsk 18.64 285⇓ eP Pn 02 25 34.7 +0.4
PET eS S 02 28 55.6 -8.4
PET pmax pmax
comp=Z,130nm,0.6s
PET pmax pmax
comp=Z,600nm,10.5s
PET MLR MLR
comp=Z,1μm,15.0s
PET MLR MLR
comp=Z,2μm,12.0s
PNL Peninsula 18.94 54 eP Pn 02 25 36.8 -1.1
comp=Z,171nm,0.6s
BILL Bilibino 19.50 334 eP Pn 02 25 43.9 -0.6
comp=Z,139nm,1.1s
BILL Bilibino 19.50 334 eP Pn 02 25 43.9 -0.6
BILL pmax pmax
comp=Z,139nm,1.1s
EGAK Eagle 19.74 39 eP Pn 02 25 45.0 -2.4
comp=Z,58nm,0.5s
HYT Haines Junctio 20.08 51 ePn P 02 25 50.2 +0.8
DAWY Dawson 20.15 41 eP P 02 25 48.8 -1.4
SKR Severo-Kuril's 20.71 279 eP P 02 25 56.0 -0.3
SKR e 02 26 12.5
SKR e 02 29 49.0
SKR pmax pmax
comp=Z,310nm,0.9s
SKR MLR MLR
comp=N,3μm,16.0s
SKR MLR MLR
comp=Z,3μm,16.0s,MS4.7
SIT Sitka 20.89 62 eP P 02 25 59.1 +0.9
comp=Z,52nm,0.6s
SIT Sitka 20.89 62 eP P 02 25 59.1 +0.8
SIT pmax pmax
comp=Z,52nm,0.6s
SKAG Skagway 20.97 56 eP P 02 25 60.0 +0.9
comp=Z,312nm,0.8s
CRAG Craig 22.23 66 eP P 02 26 13.9 +1.3
comp=Z,111nm,1.1s,mb5.2
SEY Seymchan 22.30 313⇑ iP P 02 26 13.4 +0.1
SEY Seymchan 22.30 313 *c* iP P 02 26 13.3 0.0
DIB Dawson Inlet, 23.00 72 T 02 49 44.6
SNR=14
DLBC Dease Lake 23.69 58 eP P 02 26 28.8 +1.2
DLBC Dease Lake 23.69 58 P P 02 26 27.2 -0.4
comp=Z,148nm,0.8s,mb5.5,baz=266,slow=10,SNR=76
DLBC ScP ScP 02 33 46.4 +0.7
comp=Z,2.3nm,0.9s,baz=226,slow=1.9,SNR=3.7
DLBC LR LR 02 36 53.9
comp=Z,923nm,18.2s,MS4.3,baz=299,slow=40
INK Inuvik 24.00 33 eP P 02 26 27.8 -2.6
comp=Z,62nm,0.5s,mb5.3
INK ePcP PcP 02 30 11.1 -0.1
INK Inuvik 24.00 33 P P 02 26 27.7 -2.6
comp=Z,60nm,0.4s,mb5.3,baz=251,slow=7.8,SNR=134
INK PcP PcP 02 30 11.3 +0.1
comp=Z,10nm,0.7s,baz=331,slow=0.5,SNR=5.9
INK LR LR 02 37 01.1
comp=Z,2μm,18.4s,MS4.6,baz=240,slow=39
INK Inuvik 24.00 33 eP P 02 26 27.8 -2.5
INK e 02 30 11.1
INK pmax pmax
comp=Z,62nm,0.5s
BBB Bella Bella 25.82 73 P P 02 26 47.9 +0.9
comp=Z,25nm,0.9s,mb4.7,baz=112,slow=8.9,SNR=12
YUK Yuzh-Kuril'sk 29.79 272⇓ iP P 02 27 13.5 -9.1
YUK pmax pmax
comp=Z,240nm,1.1s,mb5.8
YUK pmax pmax
comp=Z,215nm,1.0s,mb5.8
YUK pmax pmax
comp=N,37nm,0.5s
YUK pmax pmax
comp=E,43nm,0.5s
YUK MLR MLR
comp=E,289nm,19.0s
YUK MLR MLR
comp=Z,495nm,19.0s,MS4.2
NLWA Neilton Lookou 30.16 80 eP P 02 27 30.8 +5.0
comp=Z,34nm,1.1s,mb5.0
YSS Yuzh-Sakhalins 30.28 279⇓ eP P 02 27 27.9 +1.1
A05A Maple Falls 30.54 76 ⇑P P 02 27 28.8 -0.3
baz=30
GNW Green Mountain 30.72 79 eP P 02 27 33.7 +3.0
comp=Z,10nm,1.4s,mb4.5
JCW Jim Creek 30.98 78 eP P 02 27 35.6 +2.6
comp=Z,76nm,1.1s,mb5.4
JCW ePcP PcP 02 30 28.3 0.0
JCW eScP ScP 02 34 08.4 +0.4
YKA Yellowknife Ar 31.00 48 P P 02 27 31.8 -1.3
comp=Z,12nm,0.5s,mb5.0,baz=274,slow=7.9,SNR=63
YKA PcP PcP 02 30 27.5 -0.6
comp=Z,2.8nm,0.8s,baz=288,slow=2.7,SNR=3.9
YKA Yellowknife Ar 31.00 48 P P 02 27 31.8 -1.3
YKA 02 30 27.5
YKA pmax pmax
comp=Z,12nm,0.5s
B06A Marblemount 31.11 77 ⇑P P 02 27 34.2 0.0
baz=31
D05A Enumclaw 31.39 79 ⇓P P 02 27 36.5 -0.1
baz=31
TDL Tradedollar La 31.65 81 P P 02 27 43.5 +4.6
FMW Mount Fremont 31.70 80 P P 02 27 42.6 +3.2
LON Longmire 31.70 80 P P 02 27 38.9 -0.5
comp=Z,15nm,0.9s,mb4.8
LON e 02 27 52.8
LON Longmire 31.70 80 P P 02 27 38.9 -0.5
LON e 02 27 52.8
LON pmax pmax
comp=Z,15nm,0.9s,mb4.8
F04A Amboy 31.72 82 ⇑P P 02 27 39.8 +0.2
baz=32
ASAJ Asahikawa 31.76 274 LR LR 02 40 00.4
comp=Z,1μm,19.6s,MS4.5,baz=75,slow=35
G04A Mulino 32.05 83 ⇑P P 02 27 42.0 -0.4
baz=32
ASR Mount Adams--S 32.12 81 P P 02 27 47.3 +4.2
ETW Entiat 32.21 78 P P 02 27 44.8 +1.0
B08A Colville Reser 32.47 76 ⇑P P 02 27 46.0 -0.1
baz=32,SNR=26
H04A Detroit Lake 32.49 84 ⇓P P 02 27 46.2 -0.1
baz=32
HOOD Mount Hood Mea 32.49 82 eP P 02 27 48.0 +1.6
comp=Z,67nm,1.3s,mb5.3
ERM Erimo 32.55 271 P P 02 27 47.8 +0.9
comp=Z,266nm,0.9s,mb6.2,SNR=9.1
ERM Erimo 32.55 271 eP P 02 27 47.0 +0.2
comp=Z,54nm,1.1s,mb5.4
ERM ePcP PcP 02 30 33.2 +0.5
ERM Erimo 32.55 271 *d* iP P 02 27 46.4 -0.5
ERM pmax pmax
comp=Z,71nm,1.2s,mb5.5
TIXI Tiksi 32.58 329⇓ eP P 02 27 46.6 -0.2
TIXI Tiksi 32.58 329 eP P 02 27 45.7 -1.1
TIXI pmax pmax
comp=Z,20nm,1.4s,mb4.8
TIXI MLR MLR
comp=Z,907nm,16.0s,MS4.6
VFP Flag Point 32.61 82 P P 02 27 51.7 +4.3
YAK Yakutsk 32.77 311 eP P 02 27 46.7 -1.9
comp=Z,49nm,0.8s,mb5.5
YAK Yakutsk 32.77 311 eP P 02 27 46.6 -2.0
YAK e*PP pP 02 27 55.0 -3.9
YAK e 02 28 55.3
YAK ePPP 02 29 09.1
YAK e 02 30 36.3
YAK eS S 02 32 57.1 -5.6
YAK e 02 38 12.5
YAK pmax pmax
comp=Z,52nm,0.9s,mb5.5
YAK pmax pmax
comp=E,40nm,1.4s
YAK pmax pmax
comp=N,8.0nm,1.4s
YAK pmax pmax
comp=Z,14nm,1.0s,mb4.8
YAK pmax pmax
comp=N,15nm,1.1s
YAK pmax pmax
comp=E,12nm,1.1s
YAK smax
comp=E,348nm,16.6s
YAK smax
comp=N,127nm,14.1s
YAK MLR MLR
comp=Z,1μm,20.0s,MS4.6
YAK MLR MLR
comp=N,810nm,17.0s,MS4.7
YAK MLR MLR
comp=E,936nm,18.0s,MS4.7
RSW Rattlesnake Hi 33.22 79 eP P 02 27 54.1 +1.4
comp=E,76nm,1.2s,mb5.5
RSW eScP ScP 02 34 16.5 +0.8
VTHM Trough 33.23 82 P P 02 27 57.0 +4.2
HAWA Hanford 33.26 79 eP P 02 27 53.4 +0.4
comp=E,66nm,1.2s,mb5.4
OD2 Odessa Site #2 33.28 77 P P 02 27 53.7 +0.5
D08A Wollman Farm, 33.31 78 ⇓P P 02 27 53.3 -0.1
baz=33,SNR=7.4
C09A Chrisman Ranch 33.35 76 ⇑P P 02 27 53.7 -0.1
baz=33
YBH Yreka Blue Hor 33.76 89 eP P 02 27 59.8 +2.3
comp=E,9.5nm,1.0s,mb4.7
YBH Yreka Blue Hor 33.76 89 eP P 02 27 59.8 +2.4
YBH pmax pmax
comp=Z,10.0nm,1.0s
NEW Newport 33.83 75 ⇑P P 02 27 57.6 -0.4
baz=34,SNR=36
NEW Newport 33.83 75 eP P 02 27 58.3 +0.4
comp=Z,28nm,0.8s,mb5.2
NEW eScP ScP 02 34 18.2 +0.5
NEW Newport 33.83 75 eP P 02 27 58.3 +0.4
NEW pmax pmax
comp=Z,29nm,0.8s
EDM Edmonton 33.97 65 eP P 02 27 59.6 +0.5
E09A Wood Farm, Sta 34.04 78 ⇓P P 02 27 59.4 -0.4
baz=34
G08A Pilot Rock 34.15 81 ⇓P P 02 28 01.1 +0.3
baz=34,SNR=7.4
HABR Khabarovsk 34.22 286 eP P 02 27 59.7 -1.7
HABR e*PP pP 02 28 08.9 -2.8
HABR e*SP sP 02 28 13.6 -2.5
HABR e 02 38 20.3
HABR pmax pmax
comp=E,58nm,1.0s
HABR pmax pmax
comp=Z,80nm,1.2s,mb5.5
HABR pmax pmax
comp=N,62nm,2.4s
HABR MLR MLR
comp=Z,799nm,18.0s,MS4.5
LNOR Lincton Mounta 34.27 79 eP P 02 28 02.2 +0.4
comp=Z,10nm,0.8s,mb4.8
LNOR Lincton Mounta 34.27 79 eP P 02 28 02.2 +0.4
LNOR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
K05A Summer Lake 34.32 86 ⇑P P 02 28 02.3 0.0
baz=34
A12A Yaak River Ran 34.40 73 ⇓P P 02 28 02.8 -0.1
baz=34,SNR=18
I07A Izee 34.44 83 ⇑P P 02 28 03.4 0.0
baz=34,SNR=12
WDC Whiskeytown Da 34.52 90 eP P 02 28 05.5 +1.4
comp=Z,28nm,1.4s,mb5.0
WDC Whiskeytown Da 34.52 90 eP P 02 28 05.5 +1.4
WDC pmax pmax
comp=Z,28nm,1.4s,mb5.0
C11A Tepee Creek (N 34.54 75 ⇓P P 02 28 04.1 0.0
baz=34,SNR=8.6
F10A Beach Ranch, E 34.86 78 ⇑P P 02 28 06.6 -0.3
baz=35,SNR=8.9
C12B Naegeli Ranch, 35.07 75 ⇓P P 02 28 08.6 -0.1
baz=35,SNR=5.8
A13A Flathead Natio 35.13 72 ⇑P P 02 28 08.9 -0.3
baz=35
MOD Modoc 35.14 86 eP P 02 28 14.2 +4.8
comp=Z,12nm,0.7s,mb4.9
B13A Whitefish 35.35 73 ⇓P P 02 28 10.7 -0.4
baz=35,SNR=15
WALA Waterton Lakes 35.36 72 eP P 02 28 11.4 +0.2
comp=Z,1.8nm,1.1s,mb3.9
BSMT Bassoo Peak 35.41 74 P P 02 28 11.9 +0.3
D12A Red Ives Fores 35.45 76 ⇑P P 02 28 11.8 -0.2
baz=35
J08A Circle Bar Ran 35.46 83 ⇑P P 02 28 12.4 +0.3
baz=35
BLMT Blacktail Moun 35.58 74 eP P 02 28 12.6 -0.5
comp=Z,29nm,0.7s,mb5.3
C13A Hot Springs 35.62 74 ⇑P P 02 28 13.4 0.0
baz=35
E12A Beaver Dam Sad 35.64 77 ⇓P P 02 28 13.3 -0.3
baz=36,SNR=24
A14A Double T Ranch 35.69 72 ⇑P P 02 28 13.7 -0.3
baz=36,SNR=59
JTMT Jette 35.76 74 eP P 02 28 15.3 +0.7
comp=Z,15nm,0.8s,mb5.0
KLR Kul'dur 35.82 289 eP P 02 28 09.8 -5.3
KLR pmax pmax
comp=E,38nm,1.4s
KLR pmax pmax
comp=Z,67nm,1.4s,mb5.4
YBMT Yellow Bay 35.86 74 eP P 02 28 16.6 +1.1
comp=Z,10nm,0.7s,mb4.9
WVOR Wild Horse Val 35.87 85 eP P 02 28 16.2 +0.6
comp=Z,32nm,1.0s,mb5.2
WVOR Wild Horse Val 35.87 85 eP P 02 28 16.2 +0.6
WVOR pmax pmax
comp=Z,32nm,1.0s,mb5.2
D13A Hupson 35.97 75 ⇑P P 02 28 15.8 -0.6
baz=36
SWMT Swartz Lake 36.04 74 eP P 02 28 17.2 +0.2
comp=Z,8.4nm,0.9s,mb4.7
SWMT eScP ScP 02 34 25.8 0.0
B14A Marquette Ranc 36.06 73 ⇑P P 02 28 17.0 -0.2
baz=36
C14A Swan Lake 36.06 74 ⇑P P 02 28 16.6 -0.6
baz=36,SNR=12
A15A Johnson Ranch, 36.09 71 ⇑P P 02 28 16.7 -0.7
baz=36,SNR=29
F12A Elk City 36.16 78 ⇓P P 02 28 17.7 -0.4
baz=36,SNR=21
MSO Missoula 36.41 75 ⇓P P 02 28 19.6 -0.6
baz=36,SNR=35
MSO Missoula 36.41 75 eP P 02 28 20.1 0.0
comp=Z,27nm,1.1s,mb5.1
MSO ePcP PcP 02 30 43.4 -0.3
MSO eScP ScP 02 34 26.9 -0.3
G12A Big Creek, Yel 36.44 78 ⇑P P 02 28 20.4 -0.1
baz=36
E13A Victor 36.45 76 ⇓P P 02 28 20.1 -0.4
baz=36
SLMT Seeley Lake 36.47 74 eP P 02 28 21.1 +0.4
comp=Z,40nm,1.2s,mb5.2
SLMT eScP ScP 02 34 27.0 -0.3
B15A Bradely Ranch, 36.50 72 ⇓P P 02 28 20.6 -0.3
baz=36,SNR=17
D14A Greenough 36.54 75 ⇓P P 02 28 20.9 -0.4
baz=36,SNR=25
C15A Salmond Ranch, 36.73 73 ⇑P P 02 28 22.3 -0.7
baz=36,SNR=73
CHMT Chamberlain Mo 36.77 75 eP P 02 28 22.8 -0.5
comp=Z,8.6nm,0.6s,mb4.8
CHMT eScP ScP 02 34 28.3 -0.2
E14A Clinton 36.88 76 ⇑P P 02 28 24.0 -0.2
baz=37
H12A Diamond D Ranc 37.03 79 ⇑P P 02 28 25.1 -0.3
baz=37,SNR=7.5
MFID Camas Ranch 37.05 81 ⇑P P 02 28 25.4 -0.2
baz=37,SNR=7.7
G13A Cobalt 37.12 78 ⇑P P 02 28 25.6 -0.6
baz=37,SNR=12
D15A Lincoln 37.15 74 ⇓P P 02 28 25.8 -0.6
baz=37,SNR=28
C16A Fuhringer Ranc 37.23 73 ⇓P P 02 28 26.4 -0.7
baz=37,SNR=61
F14A Wisdom 37.26 76 ⇓P P 02 28 26.9 -0.6
baz=37,SNR=9.5
I12A Atlanta 37.27 80 ⇑P P 02 28 27.1 -0.4
baz=37,SNR=13
A17A Triple J Farms 37.29 70 ⇑P P 02 28 26.7 -0.9
baz=37,SNR=34
H13A Challis 37.38 79 ⇑P P 02 28 27.6 -0.8
baz=37
E15A Deer Lodge 37.38 75 ⇓P P 02 28 27.7 -0.7
baz=37,SNR=16
CMB Columbia Colle 37.40 92 eP P 02 28 29.5 +0.9
comp=Z,8.6nm,0.9s,mb4.6
CMB Columbia Colle 37.40 92 eP P 02 28 29.5 +0.8
CMB pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
G14A Jackson 37.50 77 ⇓P P 02 28 29.5 0.0
baz=37
B17A L&G Farms, Che 37.55 71 ⇑P P 02 28 28.7 -1.1
baz=37,SNR=37
M10A I.L. Ranch, Tu 37.68 84 ⇓P P 02 28 30.8 -0.2
baz=38
HRY Holter Researc 37.72 74 eP P 02 28 31.8 +0.5
comp=Z,17nm,0.6s,mb5.0
D16A Dana Ranch, Ca 37.73 74 ⇑P P 02 28 30.4 -0.9
baz=38,SNR=13
F15A Butte 37.77 76 ⇓P P 02 28 31.8 0.0
baz=38,SNR=8.1
A18A Metzger Ranch, 37.80 70 ⇑P P 02 28 31.4 -0.6
baz=38
LRM Limekiln Ridge 37.81 76 eP P 02 28 34.6 +2.5
comp=Z,82nm,1.1s,mb5.4
I13A Wildhorse Cree 37.82 79 ⇑P P 02 28 32.2 +0.1
baz=38,SNR=11
HLID Hailey 37.83 80 ⇑P P 02 28 32.2 0.0
baz=38,SNR=14
HLID Hailey 37.83 80 eP P 02 28 32.5 +0.2
comp=Z,37nm,1.3s,mb5.0
HLID eScP ScP 02 34 32.4 -0.1
C17A Wharram Farm, 37.89 72 ⇑P P 02 28 32.0 -0.7
baz=38,SNR=5.4
H14A Leadore 37.89 78 ⇑P P 02 28 32.4 -0.4
baz=38,SNR=9.9
BMN Battle Mountai 37.89 86 eP P 02 28 32.9 +0.1
comp=Z,10nm,0.9s,mb4.6
BMN Battle Mountai 37.89 86 eP P 02 28 32.9 +0.1
BMN pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
DLMT Dillon 37.96 76 eP P 02 28 34.2 +0.9
comp=Z,27nm,1.2s,mb4.8
J13A Cove Ranch, Pi 38.06 80 ⇑P P 02 28 34.2 0.0
baz=38,SNR=19
MCMT McKenzie Canyo 38.09 77 eP P 02 28 34.8 +0.3
comp=Z,13nm,0.7s,mb4.8
B18A Beardsley Farm 38.09 71 ⇑P P 02 28 34.0 -0.4
baz=38
G15A Dillon 38.13 77 ⇑P P 02 28 34.7 -0.1
baz=38,SNR=14
D17A Six Diamond Ra 38.17 73 ⇓P P 02 28 34.5 -0.6
baz=38,SNR=12
I14A Mackay 38.21 79 ⇑P P 02 28 35.5 0.0
baz=38
EGMT Eagleton 38.29 71 ⇓P P 02 28 35.7 -0.4
baz=38,SNR=34
EGMT Eagleton 38.29 71 eP P 02 28 36.4 +0.3
comp=Z,45nm,0.7s,mb5.3
F16A Kennard Place, 38.32 75 ⇑P P 02 28 35.9 -0.5
baz=38
H15A Lima 38.33 78 ⇑P P 02 28 36.3 -0.2
baz=38,SNR=8.4
BOZ Bozeman (W) 38.39 76 ⇑P P 02 28 36.6 -0.4
baz=38,SNR=24
BOZ Bozeman (W) 38.39 76 eP P 02 28 37.0 0.0
comp=Z,28nm,1.2s,mb4.9
BOZ eScP ScP 02 34 36.1 +1.5
BOZ Bozeman (W) 38.39 76 eP P 02 28 37.0 0.0
BOZ e 02 34 36.1
BOZ pmax pmax
comp=Z,28nm,1.2s,mb4.9
E17A Martinsdale 38.42 74 ⇓P P 02 28 37.1 -0.2
baz=38,SNR=20
NVAR Mina Array Bea 38.44 90 P P 02 28 38.2 +0.8
comp=Z,5.6nm,0.7s,mb4.4,baz=295,slow=8.4,SNR=19
NVAR PcP PcP 02 30 50.3 +0.3
comp=Z,3.5nm,1.0s,baz=75,slow=0.4,SNR=3.6
NVAR ScP ScP 02 34 35.3 +0.4
comp=Z,3.0nm,1.0s,baz=272,slow=3.8,SNR=9.0
J14A Carey 38.50 80 ⇑P P 02 28 37.9 -0.1
baz=38
G16A Moss Hill, Enn 38.51 76 ⇓P P 02 28 37.3 -0.6
baz=38,SNR=22
D18A Linhart Farms, 38.67 72 ⇑P P 02 28 39.3 0.0
baz=38,SNR=6.4
I15A Monteview 38.76 78 ⇑P P 02 28 39.9 -0.1
baz=39
F17A Fitzpatrick Pl 38.83 75 ⇑P P 02 28 40.6 0.0
baz=39,SNR=10
VLA Vladivostok 38.85 280 *de* P P 02 28 40.3 -0.5
VLA pmax pmax
comp=Z,63nm,1.0s,mb5.3
MAJO Matsushiro 38.91 267 eP P 02 28 41.2 -0.2
comp=Z,59nm,0.9s,mb5.3
MAJO Matsushiro 38.91 267 eP P 02 28 41.2 -0.3
MAJO pmax pmax
comp=Z,59nm,0.9s,mb5.3
MAT Matsushiro 38.91 267 P P 02 28 41.2 -0.3
MAT S S 02 34 33.0 -4.2
MJAR Matsushiro Arr 38.91 267 P P 02 28 40.9 -0.6
MJAR PcP PcP 02 30 50.7 -0.9
MJAR LR LR 02 43 28.4
MJAR Matsushiro Arr 38.91 267 P P 02 28 40.9 -0.6
comp=Z,17nm,0.8s,mb4.8,baz=57,slow=7.1,SNR=23
MJAR PcP PcP 02 30 50.7 -0.9
comp=Z,11nm,0.9s,baz=70,slow=1.4,SNR=9.1
MJAR LR LR 02 43 28.3
comp=Z,687nm,19.8s,MS4.5,baz=60,slow=34
E18A Harlowton 38.93 73 ⇓P P 02 28 41.4 -0.1
baz=39
G17A Pierce Place, 39.09 75 ⇓P P 02 28 42.8 0.0
baz=39
H16A Russell Place, 39.12 77 ⇓P P 02 28 42.8 -0.3
baz=39
J15A Blackfoot 39.12 79 ⇓P P 02 28 43.0 -0.1
baz=39
K14A Jones Ranch, D 39.15 81 ⇑P P 02 28 43.4 +0.1
baz=39
YMR Madison River 39.31 76 eP P 02 28 47.3 +2.6
comp=Z,61nm,1.0s,mb5.3
Q10A Clear Creek Ra 39.37 88 ⇓P P 02 28 45.7 +0.5
baz=39
F18A Big Timber 39.39 74 ⇓P P 02 28 45.0 -0.3
baz=39,SNR=6.0
L14A Malta 39.40 81 ⇑P P 02 28 45.6 +0.1
baz=39,SNR=10.0
MDJ Mudanjiang 39.41 284 P P 02 28 44.1 -1.4
MDJ pP pP 02 28 55.6 -0.4
MDJ sP sP 02 29 00.3 0.0
MDJ PP PP 02 30 14.3 -1.8
MDJ ScP ScP 02 34 37.9 -0.6

MDJ S **S** 02 34 41.6 -2.9
MDJ PcS PcS 02 34 42.9 +0.2
MDJ sS sS 02 35 00.5 -1.2
MDJ pmax pmax
comp=Z,19nm,0.9s,mb4.8
MDJ pmax pmax
comp=Z,230nm,10.9s
MDJ LR LR
comp=N,520nm,17.7s,MS4.6
MDJ LR LR
comp=E,750nm,21.2s,MS4.6
MDJ LR LR
comp=Z,1µm,20.1s,MS4.7
I16A Newdale 39.43 78 ⇓P **P 02 28 45.4 -0.3**
baz=39
YNR Norris Junctio 39.45 76 *e*P **P 02 28 46.9 +1.1**
comp=Z,48nm,1.1s,mb5.1
K15A Arbon 39.46 80 ⇑P **P 02 28 45.8 -0.2**
baz=39,SNR=8.1
GCMT Greycliff 39.48 74 *e*P **P 02 28 46.1 0.0**
comp=Z,21nm,1.2s,mb4.7
N13A Wendover, West 39.50 84 ⇑P **P 02 28 46.4 +0.1**
baz=39
N13A Wendover, West 39.50 84 *e*P **P 02 28 47.4 +1.1**
comp=Z,48nm,1.1s,mb5.1
YFT Old Faithful 39.50 77 *e*P **P 02 28 47.7 +1.4**
comp=Z,18nm,0.8s,mb4.9
O12A Currie 39.51 85 ⇓P **P 02 28 46.2 -0.2**
baz=39,SNR=18
FFC Flin Flon 39.52 58 P **P 02 28 46.6 +0.3**
comp=Z,255nm,0.6s,mb6.1,SNR=17
FFC Flin Flon 39.52 58 *e*P **P 02 28 46.2 -0.1**
comp=Z,39nm,0.9s,mb5.1
FFC Flin Flon 39.52 58 *i*P **P 02 28 46.5 +0.2**
VES Vestal, Richgr 39.60 93 ⇑P **P 02 28 47.5 +0.3**
baz=40
M14A Sheep Mountain 39.64 82 ⇓P **P 02 28 47.0 -0.5**
baz=40,SNR=8.0
J16A Bone 39.69 79 ⇓P **P 02 28 47.7 -0.1**
baz=40,SNR=9.3
H17A Grant Village 39.69 77 ⇓P **P 02 28 47.9 0.0**
baz=40
IMW Indian Meadow 39.75 77 *e*P **P 02 28 48.7 +0.4**
comp=Z,27nm,0.9s,mb5.0
R10A Warm Springs 39.76 88 ⇑P **P 02 28 48.4 -0.1**
baz=40,SNR=11
PKM Peak Mountain 39.77 95 ⇑P **P 02 28 49.3 +0.7**
baz=40
FLWY Flagg Ranch 39.79 77 *e*P **P 02 28 49.5 +0.8**
comp=Z,35nm,1.1s,mb5.0
G18A Lazy EL Ranch, 39.80 75 ⇓P **P 02 28 48.3 -0.4**
baz=40
S10A Tonopah Range, 39.80 89 ⇓P **P 02 28 49.1 +0.2**
baz=40,SNR=20
Q11A Duckwater 39.81 87 ⇑P **P 02 28 49.1 +0.1**
baz=40
RRI2 Red Ridge 39.82 78 *e*P **P 02 28 50.0 +1.1**
comp=Z,45nm,1.0s,mb5.2
HVU Hansel Valley 39.83 81 *e*P **P 02 28 50.0 +0.9**
comp=Z,17nm,0.8s,mb4.8
HVU Hansel Valley 39.83 81 *e*P **P 02 28 50.0 +1.0**
HVU pmax pmax
comp=Z,17nm,0.8s,mb4.8
F19A Roth Farm, Mol 39.88 74 ⇑P **P 02 28 48.7 -0.7**
baz=40,SNR=9.8
GRAC Grapevine Rang 39.91 91 ⇑P **P 02 28 49.8 +0.1**
baz=40
L15A Malad City 39.94 81 ⇓P **P 02 28 49.9 0.0**
baz=40
MOOW Moose Ponds 39.95 78 *e*P **P 02 28 49.1 -0.8**
comp=Z,14nm,1.1s,mb4.6
K16A Soda Springs 39.95 79 ⇑P **P 02 28 50.0 0.0**
baz=40,SNR=13
TPAW Teton Pass 39.97 78 *e*P **P 02 28 51.6 +1.5**
comp=Z,38nm,1.3s,mb5.0
RLMT Red Lodge 40.08 75 ⇑P **P 02 28 51.0 0.0**
baz=40,SNR=34
RLMT Red Lodge 40.08 75 *e*P **P 02 28 51.2 +0.2**
comp=Z,67nm,1.1s,mb5.3
ISA Isabella 40.09 93 ⇑P **P 02 28 50.9 -0.3**
baz=40
ISA Isabella 40.09 93 *e*P **P 02 28 53.1 +1.9**
comp=Z,14nm,1.0s,mb4.6
ISA Isabella 40.09 93 *e*P **P 02 28 53.1 +1.9**
ISA pmax pmax
comp=Z,14nm,1.0s,mb4.7
REDW Red Top Meadow 40.10 78 *e*P **P 02 28 52.6 +1.4**
comp=Z,34nm,1.2s,mb5.0
SNOW Snow King Moun 40.10 78 *e*P **P 02 28 52.9 +1.7**
comp=Z,21nm,1.0s,mb4.8
LOHW Long Hollow 40.11 78 *e*P **P 02 28 51.7 +0.4**
comp=Z,15nm,1.1s,mb4.6
N14A Grayback Hills 40.12 83 ⇑P **P 02 28 51.1 -0.3**
baz=40,SNR=7.9
R11A Troy Canyon, C 40.16 88 ⇑P **P 02 28 52.0 +0.1**
baz=40,SNR=10
BGU Big Grassy Mou 40.17 83 *e*P **P 02 28 53.0 +1.1**
comp=Z,24nm,1.1s,mb4.8
J17A Brown Place, J 40.18 78 ⇑P **P 02 28 52.0 +0.1**
baz=40
M15A Larsen Ranch, 40.22 82 ⇓P **P 02 28 52.2 0.0**
baz=40
JHJ Hachijo jima 2 40.22 262 LR LR 02 44 40.8
comp=Z,307nm,18.9s,MS4.2,baz=57,slow=35
ARVC Arvin 40.22 94 ⇑P **P 02 28 53.3 +1.0**
baz=40
SPUT South Promonto 40.30 82 *e*P **P 02 28 54.1 +1.1**
comp=Z,12nm,1.0s,mb4.6
F20A Billings 40.38 73 ⇓P **P 02 28 53.0 -0.5**
baz=40,SNR=7.7
MPMC Manual Prospec 40.44 92 ⇓P **P 02 28 55.2 +1.1**
baz=40,SNR=6.0
S11A Rachel 40.50 89 ⇑P **P 02 28 54.6 -0.1**
baz=40
N15A Stansbury Isla 40.51 82 ⇓P **P 02 28 54.5 -0.1**
baz=40,SNR=9.4
L16A Fish Haven 40.51 80 ⇑P **P 02 28 54.7 0.0**
baz=40,SNR=14
FURC Furnace Creek, 40.56 91 ⇑P **P 02 28 55.6 +0.4**
baz=40
HWUT Hardware Ranch 40.67 81 *e*P **P 02 28 56.7 +0.7**
comp=Z,18nm,1.1s,mb4.6
J18A Kendall Valley 40.68 78 ⇓P **P 02 28 55.8 -0.3**
baz=40,SNR=5.5
LRMC Laurel Mountai 40.69 93 ⇑P **P 02 28 56.4 +0.2**
baz=41
DUG Dugway 40.74 83 ⇑P **P 02 28 56.5 -0.1**
baz=41,SNR=17
DUG Dugway 40.74 83 *e*P **P 02 28 56.6 0.0**
comp=Z,47nm,1.0s,mb5.1
DUG Dugway 40.74 83 *e*P **P 02 28 56.6 0.0**
DUG pmax pmax
comp=Z,47nm,1.0s,mb5.1
Q13A Wheeler Ranch, 40.75 86 ⇑P **P 02 28 57.0 +0.3**
baz=41
R12A Pony Springs, 40.78 87 ⇑P **P 02 28 56.9 0.0**
baz=41
L17A Cokeville 40.80 80 ⇓P **P 02 28 57.0 -0.1**
baz=41
NOQ North Oquirrh 40.89 82 *e*P **P 02 28 58.9 +1.0**
comp=Z,19nm,0.7s,mb4.8
EDW2 Edwards Air Fo 40.90 94 ⇑P **P 02 28 58.6 +0.7**
baz=41
U10A Ash Meadows, A 40.92 91 ⇑P **P 02 28 58.6 +0.5**
baz=41
P14A Drum Mountains 40.95 84 ⇑P **P 02 28 58.0 -0.3**
baz=41
ALE Alert 41.00 11 P **P 02 28 58.6 +0.3**
comp=Z,224nm,0.6s,mb6.0,SNR=14
K18A Toltan Ranch, 41.00 78 ⇑P **P 02 28 58.6 0.0**
baz=41,SNR=6.4
LAO LASA Array 41.03 71 ⇓P **P 02 28 58.5 -0.5**
baz=41,SNR=16
LAO LASA Array 41.03 71 *e*P **P 02 28 58.9 0.0**
comp=Z,26nm,0.8s,mb4.9
T11A Corn Creek, Al 41.08 89 ⇑P **P 02 28 59.6 +0.2**
baz=41
N16A Rees Ranch, Co 41.17 82 ⇓P **P 02 29 00.5 +0.3**
baz=41
H20A Greybull 41.18 75 ⇑P **P 02 28 59.9 -0.3**
baz=41,SNR=7.5
Q14A Sevier Lake (B 41.19 85 ⇑P **P 02 29 00.4 +0.1**
baz=41,SNR=11
BW06 Boulder Array 41.22 78 ⇓P **P 02 29 00.4 -0.1**
baz=41,SNR=16
G21A Lodge Grass 41.24 73 ⇑P **P 02 29 00.3 -0.4**
baz=41,SNR=13
R13A O'Grain Ranch, 41.26 87 ⇑P **P 02 29 01.2 +0.3**
baz=41
DGMT Dagmar 41.27 68 ⇑P **P 02 29 00.5 -0.3**
baz=41
DGMT Dagmar 41.27 68 *e*P **P 02 29 00.9 +0.1**
comp=Z,21nm,0.6s,mb5.0
SHOC Shoshone 41.29 91 ⇓P **P 02 29 01.7 +0.6**
baz=41
M17A Scullys Gap (B 41.29 80 ⇑P **P 02 29 01.1 -0.1**
baz=41
JLU Jordanelle 41.33 82 *e*P **P 02 29 01.8 +0.3**
comp=Z,29nm,1.2s,mb4.8
NLU North Lily Min 41.34 83 *e*P **P 02 29 03.5 +2.0**
comp=Z,26nm,1.0s,mb4.8
GSC Goldstone 41.35 92 ⇑P **P 02 29 02.2 +0.5**
baz=41,SNR=14
GSC Goldstone 41.35 92 *e*P **P 02 29 01.9 +0.3**
comp=Z,51nm,1.0s,mb5.1
GSC Goldstone 41.35 92 *e*P **P 02 29 02.0 +0.3**
GSC pmax pmax
comp=Z,51nm,1.0s,mb5.1
I20A Worland 41.40 76 ⇑P **P 02 29 02.0 0.0**
baz=41,SNR=11
L18A Fontenelle, Gr 41.41 79 ⇑P **P 02 29 02.0 -0.1**
baz=41,SNR=5.6
P15A Leamington 41.45 84 ⇑P **P 02 29 02.5 +0.1**
baz=41
N17A Moffit Pass 41.51 81 ⇑P **P 02 29 02.6 -0.3**
baz=41
BFSC Mount Baldy Ra 41.53 94 ⇑P **P 02 29 03.6 +0.5**
baz=41
O16A Springville 41.54 82 ⇓P **P 02 29 03.5 +0.4**
baz=41
DAU Daniels Canyon 41.56 82 *e*P **P 02 29 03.5 +0.2**
comp=Z,50nm,1.2s,mb5.0
DAU Daniels Canyon 41.56 82 *e*P **P 02 29 03.5 +0.1**
DAU pmax pmax
comp=Z,50nm,1.2s,mb5.0
MPU Maple Canyon 41.57 83 *e*P **P 02 29 03.8 +0.4**
comp=Z,29nm,1.1s,mb4.8
K19A Absolon Red Bu 41.61 77 ⇑P **P 02 29 03.5 -0.2**
baz=41,SNR=29
H21A Big Horn, Sher 41.67 74 ⇑P **P 02 29 04.2 0.0**
baz=42,SNR=9.0
M18A Lyman 41.69 80 ⇓P **P 02 29 04.4 0.0**
baz=42
S13A Holt Ranch, En 41.70 87 ⇓P **P 02 29 04.5 0.0**
baz=42,SNR=8.8
FCC Fort Churchill 41.71 50 *e*P **P 02 29 04.5 +0.2**
comp=Z,3.7nm,0.7s,mb4.1
L19A Farson 41.72 79 ⇓P **P 02 29 04.3 -0.3**
baz=42,SNR=7.5
Q15A Fillmore 41.73 84 ⇑P **P 02 29 05.1 +0.4**
baz=42
TUQ Turquoise Moun 41.81 91 ⇑P **P 02 29 05.8 +0.4**
baz=42
V11A Goodsprings 41.85 90 ⇑P **P 02 29 06.0 +0.3**
baz=42
HEC Hector,Ludlow 41.96 92 ⇓P **P 02 29 06.7 +0.1**
baz=42
I21A Big Trails, Te 41.98 75 ⇓P **P 02 29 06.3 -0.4**
baz=42,SNR=10
K20A Yellowstone Ra 42.01 77 ⇑P **P 02 29 06.3 -0.7**
baz=42,SNR=21
O17A Robinson Place 42.01 82 ⇑P **P 02 29 07.0 0.0**
baz=42
U12A Valley of Fire 42.02 89 ⇓P **P 02 29 06.7 -0.4**
baz=42
CCUT Cedar City 42.03 87 *e*P **P 02 29 07.3 +0.1**
comp=Z,7.5nm,0.7s,mb4.4
T13A Saint George 42.03 88 ⇓P **P 02 29 07.4 +0.1**
baz=42,SNR=15
MSU Marysvale 42.16 85 *e*P **P 02 29 08.9 +0.7**
comp=Z,15nm,1.1s,mb4.5
MSU *e* 02 31 07.2
MSU Marysvale 42.16 85 *e*P **P 02 29 08.9 +0.7**
MSU *e* 02 31 07.2
MSU pmax pmax
comp=Z,15nm,1.1s,mb4.5
M19A Rock Springs 42.19 79 ⇑P **P 02 29 08.2 -0.3**
baz=42
N18A Larsen Ranch, 42.19 80 ⇑P **P 02 29 08.5 0.0**
baz=42,SNR=5.7
MURC Murrieta 42.24 94 ⇓P **P 02 29 09.7 +0.7**
baz=42
TMUT Trail Mountain 42.27 83 *e*P **P 02 29 09.7 +0.6**
comp=Z,39nm,0.9s,mb5.0
V12A Nelson 42.28 90 ⇓P **P 02 29 09.4 +0.1**
baz=42
CN2 Changchun 42.34 285 *e*P **P 02 29 08.9 -0.8**
CN2 *e*pP pP 02 29 21.3 +1.1
CN2 *e*sP sP 02 29 26.6 +2.1
CN2 *e*S **S 02 35 24.8 -3.2**
CN2 pmax pmax
comp=Z,40nm,0.8s,mb5.1
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,800nm,17.0s,MS4.8
CN2 LR LR
comp=E,600nm,17.0s,MS4.8
CN2 LR LR
comp=Z,1µm,22.0s,MS4.7
U13A Pakoon Wash 42.38 89 ⇓P **P 02 29 10.1 +0.1**
baz=42,SNR=22
L20A Wamsutter 42.39 78 ⇑P **P 02 29 09.9 -0.2**
baz=42
GMRC Granite Mounta 42.40 92 ⇓P **P 02 29 10.7 +0.4**
baz=42,SNR=11
O18A Roosevelt 42.41 81 ⇓P **P 02 29 10.4 +0.1**
baz=42
P17A Butcher Ranch, 42.45 83 ⇑P **P 02 29 10.8 +0.3**
baz=42
T14A Hurricane 42.51 87 ⇑P **P 02 29 11.4 +0.2**
baz=42,SNR=9.3
Q16A Castle Valley 42.52 84 ⇓P **P 02 29 10.9 -0.3**
baz=42,SNR=11
N19A John Jarvie Ra 42.54 80 ⇑P **P 02 29 11.0 -0.4**
baz=42,SNR=11
LDFC Landfair 42.55 91 *e*P **P 02 29 10.8 -0.7**
comp=Z,27nm,0.7s,mb5.1
S15A Panguitch 42.57 86 ⇓P **P 02 29 12.2 +0.7**
baz=42
P18A Preston Nutter 42.66 82 ⇑P **P 02 29 12.1 -0.1**
baz=42
HIA Hailar 42.67 295 *e*P **P 02 29 11.4 -0.9**
comp=Z,82nm,1.2s,mb5.3
HIA Hailar 42.67 295 *e*P **P 02 29 11.4 -0.8**
HIA pmax pmax
comp=Z,82nm,1.2s
PFO Pinyon Flat Ob 42.69 94 ⇑P **P 02 29 12.9 +0.3**
baz=43
PFO Pinyon Flat Ob 42.69 94 *e*P **P 02 29 13.2 +0.5**
comp=Z,3.0nm,0.8s,mb4.1
BELC Belle Mtn. Jos 42.71 93 ⇓P **P 02 29 13.1 +0.3**
baz=43
R16A Teasdale 42.73 85 ⇓P **P 02 29 13.0 +0.1**
baz=43,SNR=9.1
V13A Grand Canyon W 42.73 89 ⇓P **P 02 29 13.2 +0.2**
baz=43,SNR=12
109C Camp Elliot, M 42.78 95 ⇑P **P 02 29 14.0 +0.6**
baz=43
M20A Sweetwater, Wa 42.79 79 ⇓P **P 02 29 13.0 -0.3**
baz=43,SNR=7.7
SRU San Rafael 42.80 83 ⇑P **P 02 29 13.2 -0.2**
baz=43,SNR=33
SRU San Rafael 42.80 83 *e*P **P 02 29 14.5 +1.1**
comp=Z,30nm,0.9s,mb5.0
SRU San Rafael 42.80 83 *e*P **P 02 29 14.5 +1.0**
SRU pmax pmax
comp=Z,30nm,0.9s,mb5.0
U14A Mt Trumbull 42.86 88 ⇑P **P 02 29 14.1 +0.1**
baz=43,SNR=10
O19A Miners Draw (B 42.93 81 ⇑P **P 02 29 14.2 -0.3**
baz=43,SNR=17
T15A Red Dirt Ranch 42.97 87 ⇑P **P 02 29 15.3 +0.5**
baz=43
L21A Rawlins 43.00 78 ⇑P **P 02 29 14.6 -0.5**
baz=43,SNR=20
S16A Weppner Ranch, 43.01 85 ⇓P **P 02 29 15.2 0.0**
baz=43
Q18A Rafter H Ranch 43.05 83 ⇓P **P 02 29 15.3 -0.1**
baz=43,SNR=7.9
CBIJ Chichi jima 43.09 253 LR LR 02 43 23.4
comp=Z,589nm,21.9s,MS4.4,baz=124,slow=31
K22A Casper 43.11 76 ⇑P **P 02 29 15.4 -0.5**
baz=43,SNR=8.2
R17A Hanksville Air 43.12 84 ⇑P **P 02 29 15.6 -0.4**
baz=43,SNR=8.6
IRM Iron Mountain 43.13 92 ⇑P **P 02 29 16.2 0.0**
baz=43
N20A Spence Gulch, 43.13 79 ⇑P **P 02 29 16.2 +0.1**
baz=43
BAR Barrett 43.19 95 *e*P **P 02 29 17.6 +0.9**
comp=Z,35nm,1.1s,mb5.0
MONP Monument Peak 43.20 95 ⇓P **P 02 29 17.5 +0.7**
baz=43
M21A Separation Pea 43.22 78 ⇑P **P 02 29 16.2 -0.6**
baz=43,SNR=5.2
RWWY Rawlins 43.26 78 *e*P **P 02 29 17.2 +0.1**
comp=Z,32nm,0.9s,mb5.0
BC3 Big Chuckawall 43.28 93 ⇓P **P 02 29 17.9 +0.5**
baz=43
W13A Hualapai Mount 43.29 90 ⇓P **P 02 29 17.8 +0.4**
baz=43
U15A North Rim 43.41 87 ⇑P **P 02 29 18.4 0.0**
baz=43,SNR=20
V14A Boquillas Ranc 43.42 89 ⇓P **P 02 29 18.4 -0.1**
baz=43,SNR=10
P19A Cripple Cowboy 43.42 81 ⇑P **P 02 29 18.1 -0.4**
baz=43,SNR=12
L22A Ellis Ranch, M 43.52 77 ⇓P **P 02 29 19.1 -0.1**
baz=43
T16A Glen Canyon Da 43.53 86 ⇑P **P 02 29 19.6 +0.2**
baz=43
SWSC Sam W. Stewart 43.55 94 ⇑P **P 02 29 19.9 +0.3**
baz=44
S17A Black Ridge (B 43.55 85 ⇑P **P 02 29 19.4 -0.1**
baz=43,SNR=11
DVTC Desert V Tower 43.56 94 ⇓P **P 02 29 19.7 +0.1**
baz=44
O20A White River Ci 43.57 80 ⇑P **P 02 29 19.3 -0.3**
baz=43,SNR=22
N21A Black Mountain 43.63 79 ⇓P **P 02 29 19.8 -0.3**
baz=44,SNR=12
R18A Canyonlands Na 43.64 83 ⇓P **P 02 29 20.1 -0.1**
baz=44
PDMCI Parker Dam,Lak 43.66 91 ⇑P **P 02 29 20.6 +0.1**
baz=44
W14A Seligman 43.71 89 ⇑P **P 02 29 20.5 -0.3**
baz=44,SNR=10.0
RSSD Black Hills 43.74 73 *e*P **P 02 29 20.8 -0.2**
comp=Z,17nm,0.8s,mb4.8
RSSD Black Hills 43.74 73 *e*P **P 02 29 20.8 -0.1**
RSSD pmax pmax
comp=Z,17nm,0.8s,mb4.8
M22A Cedar Creek Ra 43.80 78 ⇓P **P 02 29 20.8 -0.7**
baz=44
P20A De Beque 43.87 81 ⇓P **P 02 29 21.7 -0.3**
baz=44
V15A Kaibab Nationa 43.87 88 ⇑P **P 02 29 22.1 0.0**
baz=44,SNR=15
L23A Garrett 43.92 76 ⇑P **P 02 29 21.9 -0.5**
baz=44,SNR=27
T17A Navajo Res., N 43.96 86 ⇑P **P 02 29 22.7 -0.1**
baz=44
O21A Pagoda 43.99 80 ⇑P **P 02 29 22.3 -0.8**
baz=44,SNR=6.9
S18A Hurst Farm, Bl 44.01 84 ⇑P **P 02 29 22.7 -0.5**
baz=44,SNR=16
GLA Glamis 44.07 93 ⇓P **P 02 29 24.2 +0.4**
baz=44
GLA Glamis 44.07 93 *e*P **P 02 29 24.2 +0.4**
comp=Z,43nm,1.3s,mb5.0
GLA Glamis 44.07 93 *e*P **P 02 29 24.2 +0.4**
GLA pmax pmax
comp=Z,43nm,1.3s,mb5.0
R19A Curley Farm, L 44.09 83 ⇓P **P 02 29 23.1 -0.7**
baz=44
Y13A Salome 44.17 91 ⇓P **P 02 29 24.6 +0.1**
baz=44
W15A Williams 44.23 89 ⇑P **P 02 29 25.2 +0.2**
baz=44
PV04 Paradox Valley 44.24 83 *e*P **P 02 29 24.7 -0.4**
N22A Wattenberg Ran 44.25 78 ⇓P **P 02 29 24.1 -0.9**
baz=44
Q20A Ridgley Place, 44.26 82 ⇓P **P 02 29 25.2 0.0**
baz=44
U16A Tuba City 44.31 87 ⇓P **P 02 29 25.4 -0.2**
baz=44
X14A Yava 44.32 90 ⇑P **P 02 29 25.7 0.0**
baz=44,SNR=17
T18A Mexican Hat 44.44 85 ⇑P **P 02 29 26.0 -0.6**
baz=44,SNR=17
N23A Red Feather La 44.50 78 ⇑P **P 02 29 26.6 -0.5**
baz=44,SNR=5.2
S19A Harvey Farm, M 44.51 84 ⇓P **P 02 29 27.1 -0.1**
baz=44,SNR=11
PHWY Pilot Hill 44.55 77 P **P 02 29 29.9 +2.5**
comp=Z,18nm,1.2s,mb4.8
PHWY *e* pP 02 29 38.6 +0.6
WUAZ Wupatki 44.56 88 ⇓P **P 02 29 27.3 -0.4**
baz=44,SNR=19
WUAZ Wupatki 44.56 88 *e*P **P 02 29 28.1 +0.4**
comp=Z,24nm,0.8s,mb5.1
112A Yuma 44.58 93 ⇑P **P 02 29 28.0 +0.2**
baz=44
O22A Kremmling 44.58 79 ⇑P **P 02 29 27.2 -0.5**
baz=44
Y14A Wickenburg 44.60 91 ⇓P **P 02 29 27.7 -0.2**
baz=44,SNR=9.5
PV01 Paradox Valley 44.61 83 *e*P **P 02 29 27.8 -0.2**
comp=Z,2µm,0.7s
SNY Shenyang 44.61 284 ⇓P **P 02 29 28.3 +0.3**
SNY S **S 02 35 58.6 -2.6**
SNY pmax pmax
comp=Z,32nm,2.2s,mb4.8
SNY pmax pmax
comp=Z,520nm,3.8s
SNY LR LR
comp=N,1µm,22.3s
SNY LR LR
comp=Z,1µm,23.5s,MS4.7
KSRS Korea Array 44.67 276 P **P 02 29 28.4 0.0**
comp=Z,26nm,1.0s,mb5.0,baz=57,slow=7.4,SNR=36
KSRS LR LR 02 45 56.3
comp=Z,584nm,21.1s,MS4.5,baz=49,slow=33
R20A Redvale 44.69 83 ⇓P **P 02 29 28.3 -0.4**
baz=44
Z13A Yuma Proving G 44.69 92 ⇑P **P 02 29 28.4 -0.3**
baz=45,SNR=10
X15A Humboldt 44.71 89 ⇑P **P 02 29 28.7 -0.2**
baz=45,SNR=9.5
W16A Flagstaff 44.74 88 ⇓P **P 02 29 29.4 +0.3**
baz=45
Q21A Lamborn Mesa, 44.78 81 ⇓P **P 02 29 29.1 -0.2**
baz=45
P22A Eagle 44.80 80 ⇑P **P 02 29 29.0 -0.5**
baz=45
U18A Rough Rock, Ch 44.90 86 ⇓P **P 02 29 30.5 +0.1**
baz=45
113A Mohawk Valley, 44.92 92 ⇓P **P 02 29 30.5 0.0**
baz=45
SMCO Snowmass 44.93 80 *e*P **P 02 29 32.6 +2.1**
comp=Z,13nm,1.0s,mb4.7
O23A Lake Granby, G 44.93 79 ⇑P **P 02 29 30.5 -0.1**
baz=45,SNR=42
ULM Lac du Bonnet 44.96 61 *e*P **P 02 29 29.8 -0.8**
comp=Z,28nm,1.0s,mb5.0
ULM Lac du Bonnet 44.96 61 P **P 02 29 30.1 -0.5**
comp=Z,24nm,0.9s,mb5.0,baz=300,slow=8.3,SNR=13
ULM LR LR 02 50 04.4
comp=Z,690nm,18.7s,MS4.6,baz=120,slow=38
Y15A Casa Rosa Ranc 45.00 90 ⇑P **P 02 29 31.8 +0.6**
baz=45
Z14A Wintersburg 45.02 91 ⇑P **P 02 29 31.8 +0.4**
baz=45
R21A Cimarron 45.08 82 ⇑P **P 02 29 32.0 +0.2**
baz=45
T19A Beclabito 45.16 85 ⇓P **P 02 29 32.0 -0.4**
baz=45,SNR=20
Q22A Crested Butte, 45.16 81 ⇓P **P 02 29 31.4 -1.0**
baz=45
MVCO Mesa Verde 45.24 84 ⇑P **P 02 29 32.9 -0.1**
baz=45
MVCO Mesa Verde 45.24 84 *e*P **P 02 29 32.5 -0.5**
comp=Z,18nm,1.1s,mb4.8
X16A Lo Mia Camp, P 45.24 89 ⇑P **P 02 29 33.2 +0.1**
baz=45,SNR=11
ISCO Idaho Springs 45.37 79 ⇓P **P 02 29 34.1 +0.1**
baz=45
ISCO Idaho Springs 45.37 79 *e*P **P 02 29 34.6 +0.6**
comp=Z,13nm,1.1s,mb4.7
ISCO Idaho Springs 45.37 79 *e*P **P 02 29 34.6 +0.6**
ISCO pmax pmax
comp=Z,13nm,1.1s,mb4.7
S21A Coal Bank Pass 45.38 83 ⇑P **P 02 29 34.0 -0.1**

baz=45,SNR=9.3
U19A Dine' College, 45.39 85 ⇑P P 02 29 34.0 -0.2
baz=45
114A Black Gap (USA 45.48 92 ⇓P P 02 29 34.5 -0.4
baz=45,SNR=7.8
P23A Jefferson 45.50 80 ⇓P P 02 29 35.4 +0.4
baz=45
Z15A Gila River Ind 45.56 91 ⇓P P 02 29 36.4 +0.8
baz=45
R22A Saguache, Gunn 45.66 81 ⇑P P 02 29 36.1 -0.2
baz=46
X17A Forest Lakes 45.69 88 ⇑P P 02 29 36.4 -0.2
baz=46
Q23A Hartsel 45.79 80 ⇑P P 02 29 37.7 +0.4
baz=46
115A Sonoran Desert 45.91 91 ⇑P P 02 29 38.8 +0.4
baz=46
S22A 4UR Ranch, Cre 45.92 82 ⇓P P 02 29 38.2 -0.2
baz=46,SNR=9.7
T21A Navajo Lake 45.97 83 ⇑P P 02 29 39.2 +0.4
baz=46
Z16A Peralta Trail, 45.97 90 ⇓P P 02 29 39.4 +0.5
baz=46
AGMN Agassiz Nation 46.05 64 *e*P P 02 29 38.4 -0.8
comp=Z,34nm,0.8s,mb5.3
214A Organ Pipe Nat 46.06 92 ⇑P P 02 29 40.0 +0.4
baz=46
O25A Wiggins 46.08 78 ⇑P P 02 29 40.0 +0.4
baz=46
X18A Snowflake 46.09 88 ⇓P P 02 29 39.9 +0.1
baz=46
Y17A Roosevelt 46.09 89 ⇑P P 02 29 40.1 +0.3
baz=46
V20A Brimhall 46.17 85 ⇓P P 02 29 39.9 -0.5
baz=46
U21A Nageezi 46.26 84 ⇑P P 02 29 40.6 -0.4
baz=46,SNR=20
116A Eloy 46.33 91 ⇑P P 02 29 42.4 +0.7
baz=46
T22A Edith 46.34 83 ⇑P P 02 29 41.6 -0.1
baz=46,SNR=7.7
P25A Willow Gulch B 46.42 78 ⇓P P 02 29 42.6 +0.3
baz=46
Y18A Canyon Day Jun 46.54 88 ⇓P P 02 29 43.7 +0.4
baz=46,SNR=6.6
X19A St. Johns 46.56 87 ⇑P P 02 29 44.0 +0.5
baz=46
Z17A San Carlos Hig 46.59 89 ⇑P P 02 29 44.3 +0.6
baz=46
R24A Sanders Place, 46.66 80 ⇑P P 02 29 43.8 -0.4
baz=46,SNR=9.6
V21A Milan 46.67 85 ⇓P P 02 29 44.7 +0.3
baz=46
SDCO Great Sand Dun 46.73 81 *e*P P 02 29 45.0 +0.3
comp=Z,34nm,1.3s,mb5.1
Q25A Bedland, Calha 46.75 79 ⇓P P 02 29 45.5 +0.6
baz=47
U22A Llaves 46.78 83 ⇑P P 02 29 45.3 +0.2
baz=47
OGNE Ogallala 46.82 75 ⇓P P 02 29 45.3 -0.1
baz=47
OGNE Ogallala 46.82 75 *e*P P 02 29 46.6 +1.2
comp=Z,33nm,0.8s,mb5.3
T23A Casias Ranch, 46.85 82 ⇑P P 02 29 46.2 +0.5
baz=47
Y19A Nutrioso 46.90 88 ⇑P P 02 29 46.8 +0.6
baz=47
117A Oracle 46.92 90 ⇓P P 02 29 46.6 +0.3
baz=47,SNR=8.3
S24A Houchin Ranch, 46.97 81 ⇓P P 02 29 46.8 +0.2
baz=47
X20A Quemado 46.98 87 ⇓P P 02 29 46.7 -0.1
baz=47,SNR=6.0
V22A San Miguel Ran 47.05 84 ⇓P P 02 29 47.1 -0.2
baz=47
TUC Tucson 47.07 91 *e*P P 02 29 47.4 -0.1
comp=Z,40nm,1.2s,mb5.2
TUC *e* pP 02 29 60.0 +1.9
TUC Tucson 47.07 91 *e*P **P 02 29 47.4 -0.1**
TUC *e* pP 02 30 00.0 +1.9
TUC pmax pmax
comp=Z,40nm,1.2s,mb5.2
W21A San Fidel 47.12 85 ⇑P P 02 29 47.7 -0.1
baz=47
U23A El Rito 47.22 83 ⇓P P 02 29 48.4 -0.2
baz=47,SNR=11
Z19A T-Link Ranch, 47.34 88 ⇓P P 02 29 50.4 +0.8
baz=47
118A Homack Ranch, 47.35 90 ⇓P P 02 29 49.4 -0.3
baz=47,SNR=9.0
217A Green Valley 47.42 91 ⇓P P 02 29 50.4 +0.2
baz=47
S25A Robets Cordova 47.43 80 ⇑P P 02 29 49.7 -0.5
baz=47,SNR=8.7
Y20A Horse Springs, 47.47 87 ⇓P P 02 29 50.7 +0.1
baz=47,SNR=8.5
X21A Alamocita Cree 47.48 86 ⇓P P 02 29 50.9 +0.3
baz=47,SNR=14
V23A Ortiz Mt. (NFS 47.60 84 ⇓P P 02 29 52.1 +0.5
baz=48
119A Ashpeak Ranch, 47.67 89 ⇑P P 02 29 52.1 -0.1
baz=48,SNR=9.6
218A Dragoon 47.76 90 ⇓P P 02 29 53.4 +0.6
baz=48
T25A Trinidad 47.78 81 ⇑P P 02 29 52.5 -0.4
baz=48,SNR=12
Y21A Point of Rocks 47.84 86 ⇑P P 02 29 54.1 +0.7
baz=48
Z20A Nine Sixteen R 47.88 88 ⇓P P 02 29 53.5 -0.2
baz=48,SNR=8.6
LAZ Ladron 47.91 86 *e*P P 02 29 56.3 +2.3
comp=Z,4.7nm,0.4s,mb4.9
ANMO Albuquerque 47.96 85 *e*P P 02 29 54.8 +0.4
comp=Z,19nm,1.2s,mb5.0
ANMO *e*PcP PcP 02 31 20.3 -1.9
ANMO Albuquerque 47.96 85 *e*P **P 02 29 54.8 +0.5**
ANMO *e* 02 31 20.3
ANMO pmax pmax
comp=Z,19nm,1.2s
W23A Werner Place, 48.01 84 ⇓P P 02 29 55.1 +0.3
baz=48
318A Bisbee 48.16 91 ⇑P P 02 29 56.0 0.0
baz=48,SNR=12
LENM Lemitar 48.17 86 *e*P P 02 29 57.1 +1.2
comp=Z,9.5nm,0.6s,mb5.0
V24A Rampart Ranch, 48.18 83 ⇓P P 02 29 56.0 0.0
baz=48,SNR=8.1
219A White Tail Can 48.22 90 ⇓P P 02 29 56.2 -0.3
baz=48,SNR=6.9
120A U Bar Ranch, L 48.24 89 ⇑P P 02 29 56.8 +0.3
baz=48
U25A Circle Dot Ran 48.26 82 ⇓P P 02 29 56.0 -0.7
baz=48
ECSD EROS Data Cent 48.29 69 *e*P P 02 29 55.2 -1.6
comp=Z,17nm,0.6s,mb5.3
Z21A St. Cloud Mine 48.31 87 ⇑P P 02 29 57.1 0.0
baz=48,SNR=6.9
Y22A Socorro 48.32 86 ⇑P P 02 29 57.1 -0.1
baz=48,SNR=12
W24A Lazy 6 Ranch, 48.43 84 ⇓P P 02 29 58.2 +0.2
baz=48
V25A Rancho No Teng 48.50 82 ⇑P P 02 29 58.3 -0.3
baz=48,SNR=7.1
319A Douglas 48.64 90 ⇓P P 02 30 00.0 +0.4
baz=48
EYMN Ely 48.64 62 *e*P P 02 29 58.4 -1.0
comp=Z,49nm,1.0s,mb5.5
U26A Atchley Ranch, 48.67 81 ⇓P P 02 29 59.5 -0.3
baz=48,SNR=11
220A Playas Peak, P 48.74 89 ⇓P P 02 30 00.1 -0.3
baz=49,SNR=13
121A Cookes Peak, D 48.77 88 ⇑P P 02 30 00.5 -0.1
baz=49
Z22A Elephant Butte 48.78 87 ⇓P P 02 30 00.6 -0.2
baz=49
Y23A Lovelace Mesa, 48.89 85 ⇑P P 02 30 01.0 -0.5
baz=49,SNR=6.3
W25A X Bar L Ranch, 49.01 83 ⇑P P 02 30 01.7 -0.7
baz=49,SNR=7.1
V26A Tequesquite Ra 49.04 82 ⇑P P 02 30 02.2 -0.4
baz=49
320A Kipp Ranch, An 49.13 90 ⇑P P 02 30 03.1 -0.3
baz=49,SNR=18
122A Conniff Cattle 49.14 87 ⇑P P 02 30 04.1 +0.6
baz=49
Z23A Rita Site, Whi 49.23 86 ⇓P P 02 30 04.4 +0.3
baz=49
KBS Kingsbay 49.23 359 *e*P P 02 30 04.3 +0.7
comp=Z,58nm,0.8s,mb5.7
KBS *e*PcP PcP 02 31 22.9 -3.1
KBS Kingsbay 49.23 359 *de*P **P 02 30 04.7 +1.1**
KBS pmax pmax
comp=Z,83nm,1.0s,mb5.7
Y24A Capitan 49.27 85 ⇓P P 02 30 04.0 -0.5
baz=49,SNR=6.6
X25A Clemmons Ranch 49.34 84 ⇑P P 02 30 04.4 -0.6
baz=49
222A Williams Famil 49.48 88 ⇓P P 02 30 06.1 0.0
baz=49
CBKS Cedar Bluff 49.53 76 ⇓P P 02 30 05.7 -0.7
baz=49,SNR=5.6
CBKS Cedar Bluff 49.53 76 *e*P P 02 30 06.8 +0.5
comp=Z,104nm,1.1s,mb5.8
CBKS *e* pP 02 30 18.1 +1.1
CBKS Cedar Bluff 49.53 76 *e*P **P 02 30 06.8 +0.5**
CBKS *e* pP 02 30 18.1 +1.1
CBKS pmax pmax
comp=Z,104nm,1.1s,mb5.8
TLY Talaya 49.88 306 *e*P P 02 30 09.0 +0.2
comp=Z,116nm,1.0s,mb5.9
TLY *e*PcP PcP 02 31 29.9 +1.1
TLY Talaya 49.88 306 *e*P **P 02 30 08.4 -0.4**
TLY pmax pmax
comp=Z,140nm,1.2s,mb5.9
TLY MLR MLR
comp=Z,620nm,19.0s,MS4.6
TLY Talaya 49.88 306 P P 02 30 09.6 +0.8
comp=Z,600nm,0.9s,mb6.6,SNR=45
W27A Bowe Ranch, En 49.97 82 ⇓P P 02 30 10.0 +0.2
baz=50
BJI Beijing 50.12 287 P P 02 30 09.9 -0.9
BJI S S 02 37 17.4 -2.2
BJI pmax pmax
comp=Z,25nm,1.0s,mb5.2
BJI pmax pmax
comp=Z,300nm,5.4s
BJI LR LR
comp=N,670nm,20.8s,MS4.8
BJI LR LR
comp=E,710nm,19.8s,MS4.8
BJI LR LR
comp=Z,510nm,23.0s,MS4.5
Z25A Roswell 50.15 85 ⇓P P 02 30 11.4 +0.3
baz=50
Y26A Elida 50.26 84 ⇑P P 02 30 12.3 +0.3
baz=50
ULN Ulaanbaatar 50.41 300 *e*P P 02 30 12.8 0.0
comp=Z,25nm,0.6s,mb5.4
ULN *e*PcP PcP 02 31 31.3 +0.5
ULN Ulaanbaatar 50.41 300 ⇑*i*P **P 02 30 12.5 -0.4**
ULN Ulaanbaatar 50.41 300 P P 02 30 12.9 0.0
comp=Z,580nmcomp=Z,58nm,1.6s,mb5.4
ULN Ulaanbaatar 50.41 300 P P 02 30 13.1 +0.2
SNR=16
125A Gardner Draw, 50.61 85 ⇓P P 02 30 14.7 0.0
baz=50,SNR=8.0
SONM Songino Array 50.78 300 P P 02 30 15.8 +0.1
comp=Z,27nm,0.6s,mb5.4,baz=56,slow=6.5,SNR=108
SONM PcP PcP 02 31 32.0 -0.2
comp=Z,9.2nm,0.8s,baz=46,slow=1.8,SNR=5.0
SONM ScP ScP 02 35 26.4 +1.2
comp=Z,1.2nm,0.6s,baz=5.7,slow=4.5,SNR=4.2
SONM LR LR 02 53 56.9
comp=Z,1μm,18.1s,MS5.0,baz=57,slow=39
MNTX Cornucbs Mount 50.82 87 ⇑P P 02 30 15.8 -0.4
baz=51,SNR=20
MNTX Cornucbs Mount 50.82 87 *e*P P 02 30 15.9 -0.3
comp=Z,14nm,0.8s,mb5.0
ZAK Zakamensk 50.84 305 ⇑*i*P P 02 30 16.3 +0.2
ZAK pmax pmax
comp=Z,35nm,1.2s,mb5.2
MSTX Muleshoe 50.88 83 ⇓P P 02 30 15.8 -0.8
baz=51,SNR=6.0
225A Deer Hill, Car 50.88 86 ⇑P P 02 30 16.6 0.0
baz=51,SNR=9.2
AMTX Amarillo 50.93 81 ⇑P P 02 30 16.6 -0.4
baz=51
AMTX Amarillo 50.93 81 *e*P P 02 30 17.4 +0.4
comp=Z,19nm,0.8s,mb5.1
AMTX *e* pP 02 30 28.7 +1.0
126A Clayton Basin, 51.01 85 ⇑P P 02 30 17.0 -0.6
baz=51
COWI Conover 51.04 62 *e*P P 02 30 16.5 -1.2
comp=Z,25nm,0.9s,mb5.2
MOY Mondy 51.20 307 *e*P P 02 30 19.0 +0.2
MOY pmax pmax
comp=Z,81nm,1.3s,mb5.5
KSU1 Kansas State U 51.21 74 *e*P P 02 30 17.6 -1.5
comp=Z,39nm,0.8s,mb5.4
SUMG Summit 51.27 17 *e*P P 02 30 19.5 +0.4
comp=Z,77nm,1.2s,mb5.5
SUMG Summit 51.27 17 ⇑*i*P P 02 30 19.5 +0.4
comp=Z,29nm,1.2s,mb5.1
SUMG
comp=Z,540nm,19.0s
325A Bean Ranch, Si 51.30 87 ⇓P P 02 30 19.4 -0.4
baz=51,SNR=16
226A Malaga, Loving 51.36 86 ⇓P P 02 30 19.9 -0.3
baz=51,SNR=7.8
SCIA State Center 51.39 69 *e*P P 02 30 19.2 -1.1
comp=Z,60nm,1.1s,mb5.4
425A Indio Mountain 51.70 87 ⇑P P 02 30 22.6 -0.2
baz=52,SNR=19
326A Caldwell Ranch 51.95 86 ⇑P P 02 30 24.1 -0.5
baz=52,SNR=6.9
HHC Hu-ho-hao-te 52.30 290 *e*P P 02 30 27.4 +0.3
HHC pP pP 02 30 39.8 +1.9
HHC sP sP 02 30 45.1 +3.0
HHC PP PP 02 32 26.5 +0.9
HHC S **S 02 37 45.5 -4.2**
HHC sS sS 02 38 06.5 -0.9
HHC ScS ScS 02 40 09.8 -4.0
HHC SS SS 02 41 21.4 -5.6
HHC pmax pmax
comp=Z,36nm,1.0s,mb5.3
HHC pmax pmax
comp=Z,350nm,3.8s
HHC LR LR
comp=N,420nm,16.3s,MS4.8
HHC LR LR
comp=E,460nm,14.3s,MS4.8
HHC LR LR
comp=Z,730nm,15.2s,MS4.8
426A McDonald Obser 52.37 87 ⇑P P 02 30 27.0 -0.7
baz=52,SNR=12
JFWS Jewell Farm 52.43 66 *e*P P 02 30 26.4 -1.7
comp=Z,31nm,0.8s,mb5.3
JFWS Jewell Farm 52.43 66 *e*P **P 02 30 26.4 -1.7**
JFWS pmax pmax
comp=Z,31nm,0.8s,mb5.3
328A Wristen Ranch, 52.62 85 ⇑P P 02 30 28.7 -0.9
baz=52,SNR=9.1
427A Hayter Ranch, 52.63 86 ⇑P P 02 30 29.2 -0.5
baz=52,SNR=7.0
526A Mary Lane Ranc 52.76 87 ⇑P P 02 30 30.1 -0.6
baz=53,SNR=12
WMOK Wichita Mounta 52.79 79 *e*P P 02 30 30.1 -0.7
comp=Z,29nm,0.8s,mb5.2
WMOK *e* pP 02 30 42.3 +0.7
WMOK Wichita Mounta 52.79 79 *e*P **P 02 30 30.1 -0.8**
WMOK *e* pP 02 30 42.3 +0.7
WMOK pmax pmax
comp=Z,29nm,0.8s,mb5.3
527A Woodward Ranch 52.99 87 ⇑P P 02 30 31.7 -0.7
baz=53,SNR=8.6
SSE Sheshan 53.05 275 P P 02 30 31.8 -1.0
SSE pP pP 02 30 41.6 -2.0
SSE S **S 02 37 54.9 -5.3**
SSE sS sS 02 38 11.3 -6.7
SSE pmax pmax
comp=Z,52nm,1.1s,mb5.4
SSE pmax pmax
comp=Z,200nm,4.4s
SSE LR LR
comp=N,340nm,19.8s,MS4.5
SSE LR LR
comp=E,210nm,19.9s,MS4.5
SSE LR LR
comp=Z,470nm,19.2s,MS4.5
626A Big Bend Ranch 53.09 88 ⇑P P 02 30 32.3 -0.8
baz=53,SNR=14
428A Kincaid Ranch, 53.16 86 ⇓P P 02 30 32.8 -0.8
baz=53,SNR=16
528A Cox Ranch, San 53.49 86 ⇑P P 02 30 35.3 -0.8
baz=53,SNR=10
TXAR Lajitas Array 53.53 88 P P 02 30 35.6 -0.7
TXAR ScP ScP 02 35 36.9 -0.6
TXAR LR LR 02 51 23.9
TXAR Lajitas Array 53.53 88 P P 02 30 35.6 -0.7
comp=Z,7.9nm,0.7s,mb4.8,baz=300,slow=5.3,SNR=65
TXAR ScP ScP 02 35 36.9 -0.6
comp=Z,1.3nm,1.0s,baz=298,slow=2.7,SNR=3.4
TXAR LR LR 02 51 23.9
comp=Z,339nm,18.2s,MS4.4,baz=95,slow=34
627A Terlingua Ranc 53.62 87 ⇓P P 02 30 36.3 -0.7
baz=54
NJ2 Nanjing 53.82 277 *e*P P 02 30 38.3 -0.2
NJ2 pP pP 02 30 50.8 +1.6
NJ2 sP sP 02 30 56.1 +2.6
NJ2 PP PP 02 32 41.0 +1.5
NJ2 S **S 02 38 07.0 -3.6**
NJ2 sS sS 02 38 31.0 +2.6
NJ2 pmax pmax
comp=Z,70nm,0.9s,mb5.6
NJ2 pmax pmax
comp=Z,280nm,10.4s
NJ2 LR LR
comp=N,480nm,23.8s,MS4.8
NJ2 LR LR
comp=E,870nm,26.9s,MS4.8
NJ2 LR LR
comp=Z,710nm,23.5s,MS4.7
628A Black Gap, Mar 53.90 87 ⇓P P 02 30 38.2 -0.8
baz=54,SNR=21
HDIL Hopedale 54.51 68 *e*P P 02 30 41.9 -1.5
comp=Z,61nm,0.8s,mb5.7
CCM Cathedral Cave 55.05 71 *e*P P 02 30 44.9 -2.4
comp=Z,23nm,1.1s,mb5.1
CCM Cathedral Cave 55.05 71 *e*P **P 02 30 44.9 -2.4**
CCM pmax pmax
comp=Z,23nm,1.1s,mb5.1
JCT Junction City 55.10 84 ⇓P P 02 30 46.8 -1.0
baz=55
JCT Junction City 55.10 84 *e*P P 02 30 46.4 -1.4
comp=Z,68nm,1.3s,mb5.5
JCT *e* pP 02 30 58.5 0.0
JCT Junction City 55.10 84 *e*P **P 02 30 46.4 -1.4**
JCT *e* pP 02 30 58.5 -0.1
JCT pmax pmax
comp=Z,68nm,1.3s,mb5.5
FVM French Village 55.58 71 *e*P P 02 30 49.5 -1.6
comp=Z,17nm,0.6s,mb5.2
FVM French Village 55.58 71 *e*P **P 02 30 49.5 -1.6**
FVM pmax pmax
comp=Z,17nm,0.6s,mb5.2
SCO Scoresbysund 55.66 12 *i* P P 02 30 50.8 -0.5
comp=Z,19nm,0.7s,mb5.2
SCO
comp=Z,670nm,18.0s
MIAR Mount Ida 56.06 76 *e*P P 02 30 53.6 -1.0
comp=Z,72nm,1.1s,mb5.6
MIAR *e* pP 02 31 06.1 +0.7
MIAR Mount Ida 56.06 76 *e*P **P 02 30 53.6 -1.0**
MIAR *e* pP 02 31 06.1 +0.7
MIAR pmax pmax
comp=Z,72nm,1.1s,mb5.6
SCHQ Schefferville 56.17 43 P P 02 30 54.7 -0.4
SCHQ LR LR 02 58 02.8
SCHQ Schefferville 56.17 43 P **P 02 30 54.7 -0.4**
comp=Z,84nm,0.8s,mb5.8,baz=315,slow=8.0,SNR=51
SCHQ LR LR 02 58 02.8
comp=Z,602nm,19.2s,MS4.7,baz=341,slow=39
OLIL Olney 56.41 69 *e*P P 02 30 56.0 -1.1
comp=Z,53nm,0.9s,mb5.6
SIUC Southern Illin 56.46 70 *e*P P 02 30 56.4 -1.1
comp=Z,29nm,0.8s,mb5.4
AAM Ann Arbor 56.50 63 *e*P P 02 30 56.9 -0.7
comp=Z,19nm,0.7s,mb5.2
AAM Ann Arbor 56.50 63 *e*P **P 02 30 56.9 -0.8**
AAM pmax pmax
comp=Z,19nm,0.7s,mb5.2
UALR University of 56.63 75 *e*P P 02 30 59.4 +0.7
comp=Z,34nm,1.3s,mb5.2
PARMO Parma 56.87 71 *e*P P 02 30 59.3 -1.1
BLO Bloomington 57.02 67 *e*P P 02 31 00.2 -1.2
comp=Z,31nm,0.9s,mb5.3
BLO Bloomington 57.02 67 *e*P **P 02 31 00.2 -1.2**
BLO pmax pmax
comp=Z,31nm,0.9s,mb5.3
HBAR Harrisburg 57.10 73 *e*P P 02 31 01.2 -0.8
ZAA0 Zalesovo Array 57.10 317 *e*P P 02 31 01.4 -0.4
ZAA0 *e*PcP PcP 02 31 57.0 +0.8
ZALV Zalesovo Beam 57.10 317 P P 02 31 00.7 -1.0
comp=Z,11nm,0.7s,mb5.0,baz=43,slow=6.9,SNR=29
ZALV PcP PcP 02 31 56.3 +0.1
comp=Z,22nm,0.9s,baz=42,slow=3.1,SNR=10.0
ZALV LR LR 02 56 40.8
comp=Z,432nm,20.0s,MS4.5,baz=46,slow=37
ZALV Zalesovo Beam 57.10 317 P P 02 31 00.7 -1.0
ZALV 02 31 56.3
ZALV pmax pmax
comp=Z,11nm,0.7s,mb5.0
ZALV MLR MLR
comp=Z,432nm,20.0s,MS4.5
NVS Novosibirsk 57.13 319 *e*P P 02 31 00.4 -1.5
NVS *e* 02 31 55.8
NVS *e* 02 40 49.5
NVS pmax pmax
comp=E,36nm,1.2s
NVS pmax pmax
comp=Z,48nm,1.2s,mb5.4
NVS pmax pmax
comp=N,7.0nm,0.8s
USIN University of 57.19 69 *e*P P 02 31 01.1 -1.5
comp=N,49nm,0.7s,mb5.6
NATX Nacogdoches 57.34 79 *e*P P 02 31 04.2 +0.4
comp=N,78nm,1.2s,mb5.6
WHN Wuhan 57.62 279 P P 02 31 05.0 -0.8
WHN LR LR
comp=N,280nm,3.4s
WHN LR LR
comp=E,250nm,3.3s
WHN LR LR
comp=Z,700nm,14.8s,MS4.9
HALT Halls 57.63 72 *e*P P 02 31 05.3 -0.4
HALT *e* pP 02 31 17.6 +1.0
KEV Kevo 57.79 353 *e*P P 02 31 05.5 -0.8
comp=Z,72nm,1.1s,mb5.6
KEV Kevo 57.79 353 *e*P P 02 31 05.7 -0.6
KEV pmax pmax
comp=Z,15nm,0.5s,mb5.3
KEV Kevo 57.79 353 *e*p P 02 31 05.7 -0.6
comp=Z,15nm,0.5s,mb5.3
WCI Wyandotte Cave 57.79 68 *e*P P 02 31 05.4 -1.5
comp=Z,27nm,0.9s,mb5.3
WCI Wyandotte Cave 57.79 68 *e*P **P 02 31 05.4 -1.5**
WCI pmax pmax
comp=Z,27nm,0.9s,mb5.3
HKT Hockley 57.90 81 *e*P P 02 31 05.9 -1.8
comp=Z,40nm,1.4s,mb5.3
HKT *e* 02 31 19.4
HKT Hockley 57.90 81 *e*P **P 02 31 05.9 -1.8**
HKT *e* 02 31 19.4
HKT pmax pmax
comp=Z,40nm,1.4s,mb5.3
ARCES ARCESS Array B 58.11 353 P P 02 31 08.0 -0.7
comp=Z,48nm,1.0s,mb5.5,baz=19,slow=8.2,SNR=76
ARCES LR LR 02 56 00.0
comp=Z,582nm,21.3s,MS4.7,baz=177,slow=36
ARCES ARCESS Array B 58.11 353 P **P 02 31 08.0 -0.6**
ARCES pmax pmax
comp=Z,48nm,1.0s
ARCES MLR MLR
comp=Z,582nm,21.3s
ARE0 ARCESS Array S 58.11 353 *e*P P 02 31 07.9 -0.7
WVT Waverly 58.36 71 *e*P P 02 31 09.2 -1.6
comp=Z,60nm,1.4s,mb5.4
WVT Waverly 58.36 71 *e*P **P 02 31 09.2 -1.6**
WVT pmax pmax
comp=Z,59nm,1.4s,mb5.4
TRO Tromso 58.39 356 *e*P P 02 31 10.4 -0.2
TRO AMB AMB 02 31 11.3
comp=Z,83nm,1.2s,mb5.6
SSLB Suanglung 58.43 269 *e*P P 02 31 11.1 -0.4
comp=Z,100nm,1.0s,mb5.8
XAN Xi'an 58.44 286 P P 02 31 11.0 -0.4
XAN pP pP 02 31 23.3 +1.0
XAN sP sP 02 31 29.1 +2.6
XAN PcP PcP 02 32 02.6 +0.8
XAN PP PP 02 33 21.5 +0.9

XAN S **S** **02 39 13.1 +1.3**
XAN ScS ScS 02 40 49.3 -8.8
XAN SS SS 02 43 00.1 -3.8
XAN pmax pmax
comp=Z,17nm,1.2s,mb5.0
XAN pmax pmax
comp=Z,40nm,11.8s
XAN LR LR
comp=N,440nm,21.5s,MS4.6
XAN LR LR
comp=E,71nm,18.1s,MS4.6
XAN LR LR
comp=Z,260nm,22.3s,MS4.3
ERPA Erie 58.62 61 *e*P **P** **02 31 11.6 -0.9**
comp=Z,32nm,0.8s,mb5.4
KTK1 Kautokeino 58.78 354 *e*P **P** **02 31 12.5 -0.8**
KTK1 AMB AMB 02 31 15.1
comp=Z,106nm,1.4s,mb5.7
QZH Quanzhou 59.04 272⇓ *i*P **P** **02 31 15.3 -0.4**
QZH S **S** **02 39 20.0 +0.1**
QZH pmax pmax
comp=Z,80nm,1.0s,mb5.7
QZH LR LR
comp=Z,570nm,20.7s,MS4.7
APA Apatity 59.31 350⇓ *i*P **P** **02 31 16.0 -0.9**
APA pmax pmax
comp=Z,31nm,1.0s,mb5.3
APA MLR MLR
comp=Z,500nm,16.0s,MS4.7
LONY Lake Ozonia 59.70 55 *e*P **P** **02 31 18.8 -1.2**
comp=Z,29nm,0.9s,mb5.3
GTA Gaotai 59.91 296 P **P** **02 31 21.3 -0.3**
GTA pP pP 02 31 33.4 +0.9
GTA sP sP 02 31 39.3 +2.6
GTA S **S** **02 39 28.0 -2.8**
GTA sS sS 02 39 49.4 +0.6
GTA SS SS 02 43 25.8 -1.1
GTA pmax pmax
comp=Z,45nm,0.8s,mb5.5
GTA pmax pmax
comp=Z,150nm,4.5s
GTA LR LR
comp=N,990nm,16.4s,MS5.1
GTA LR LR
comp=E,760nm,17.8s,MS5.1
GTA LR LR
comp=Z,1μm,17.8s,MS5.2
LZH Lanzhou 59.97 291⇑ P **P** **02 31 22.8 +0.8**
LZH pP pP 02 31 36.8 +3.9
LZH sP sP 02 31 41.6 +4.5
LZH *e*S **S** **02 39 29.0 -2.6**
LZH sS sS 02 39 50.0 +0.4
LZH SS SS 02 43 23.3 -4.6
LZH pmax pmax
comp=Z,150nm,1.7s,mb5.8
LZH pmax pmax
comp=Z,210nm,4.0s
LZH LR LR
comp=E,730nm,16.8s
LZH LR LR
comp=Z,1μm,18.5s,MS5.0
LOF Lofoten 60.06 358 *e*P **P** **02 31 21.7 -0.4**
SWET Sewanee 60.10 70 *e*P **P** **02 31 21.2 -1.7**
NCB Newcomb 60.34 56 *e*P **P** **02 31 23.6 -0.8**
comp=Z,68nm,1.5s,mb5.5
MCWV Mont Chateau 60.41 63 *e*P **P** **02 31 24.1 -0.9**
comp=Z,45nm,0.8s,mb5.5
BINY Binghamton 60.69 58 *e*P **P** **02 31 26.4 -0.4**
comp=Z,40nm,0.8s,mb5.6
CPCT Cooper Cave 60.75 69 *e*P **P** **02 31 25.9 -1.4**
ENH Enshi 60.76 283 *e*P **P** **02 31 27.1 -0.4**
comp=Z,43nm,0.9s,mb5.6
LRAL Lakeview Retre 61.02 73 *e*P **P** **02 31 29.6 +0.4**
comp=Z,15nm,0.9s,mb5.1
TKL Tuckaleechee C 61.03 68 *e*P **P** **02 31 27.8 -1.5**
LBNH Lisbon 61.31 54 *e*P **P** **02 31 30.0 -1.0**
comp=Z,23nm,1.1s,mb5.2
LBNH Lisbon 61.31 54 *e*P **P** **02 31 30.0 -1.0**
LBNH pmax pmax
comp=Z,23nm,1.1s,mb5.2
BLA Blacksburg 61.83 65 *e*P **P** **02 31 34.0 -0.6**
comp=Z,47nm,0.9s,mb5.6
BLA Blacksburg 61.83 65 *e*P **P** **02 31 34.0 -0.6**
BLA pmax pmax
comp=Z,47nm,0.9s,mb5.6
PKME Peaks-Kenny Pk 61.87 52 *e*P **P** **02 31 34.0 -0.7**
comp=Z,37nm,1.0s,mb5.5
MOR8 Moi Rana 62.00 358 *e*P **P** **02 31 33.7 -1.6**
MOR8 AMB AMB 02 31 34.6
comp=Z,35nm,1.1s,mb5.4
KURK Kurchatov 62.06 318 P **P** **02 31 36.4 +0.4**
comp=Z,443nm,0.8s,mb6.6,SNR=5.9
KURK Kurchatov 62.06 318 P **P** **02 31 36.1 +0.1**
KURK PcP PcP 02 32 16.1 0.0
KURK Kurchatov 62.06 318 P **P** **02 31 36.1 +0.1**
comp=Z,64nm,1.0s,mb5.7,baz=43,slow=7.1,SNR=123
KURK PcP PcP 02 32 16.1 0.0
comp=Z,18nm,0.9s,baz=34,slow=3.7,SNR=7.9
KURK Kurchatov 62.06 318*c i*P **P** **02 31 35.1 -0.9**
KURK pmax pmax
comp=Z,98nm,1.2s,mb5.8
SOKR Solikamsk 62.30 335*c i*P **P** **02 31 36.6 -0.8**
SOKR S **S** **02 39 59.9 -0.6**
SOKR pmax pmax
comp=Z,50nm,1.0s,mb5.6
SOKR MLR MLR
comp=Z,420nm,18.0s,MS4.7
CBN Corbin 62.80 62 *e*P **P** **02 31 40.9 -0.2**
comp=Z,25nm,0.7s,mb5.5
GOGA Godfrey 62.81 70 *e*P **P** **02 31 39.0 -2.2**
comp=Z,35nm,1.0s,mb5.4
GOGA Godfrey 62.81 70 *e*P **P** **02 31 39.0 -2.2**
GOGA pmax pmax
comp=Z,35nm,1.0s,mb5.4
WMQ Urumqi 63.09 307 P **P** **02 31 43.8 +0.9**
WMQ pP pP 02 31 56.8 +2.9
WMQ sP sP 02 32 02.0 +3.9
WMQ PcP PcP 02 32 21.5 +1.1
WMQ PP PP 02 34 03.8 +2.4
WMQ S **S** **02 40 08.5 -2.4**
WMQ SKS 02 41 28.8
WMQ pmax pmax
comp=Z,85nm,0.9s,mb5.9
WMQ pmax pmax
comp=Z,170nm,3.6s
WMQ LR LR
comp=N,560nm,19.8s,MS4.8
WMQ LR LR
comp=E,420nm,19.7s,MS4.8
WMQ LR LR
comp=Z,570nm,18.0s,MS4.8
MK31 Makanchi Array 63.43 313 *e*P **P** **02 31 44.4 -0.7**
MKAR Makanchi Array 63.43 313 P **P** **02 31 43.9 -1.3**
comp=Z,23nm,0.8s,mb5.4,baz=52,slow=6.3,SNR=81
MKAR LR LR 03 02 15.8
comp=Z,602nm,18.8s,MS4.8,baz=27,slow=39
MKAR Makanchi Array 63.43 313 P **P** **02 31 43.9 -1.2**
MKAR pmax pmax
comp=Z,23nm,0.8s
MKAR MLR MLR
comp=Z,602nm,18.8s
JSC Jenkinsville 63.45 68 *e*P **P** **02 31 44.4 -1.1**
BVA0 Borovoye Array 63.48 324 *i* P **P** **02 31 45.0 -0.3**
BVA0 pmax pmax
comp=Z,13nm,0.5s,mb5.3
BVAR Borovoye Array 63.48 324 P **P** **02 31 45.3 0.0**
comp=Z,68nm,0.5s,mb6.0,baz=54,slow=6.9,SNR=273
BVAR PcP PcP 02 32 22.0 +0.3
comp=Z,16nm,0.7s,baz=66,slow=5.0,SNR=5.9
BVAR Borovoye Array 63.48 324 P **P** **02 31 45.3 0.0**
BVAR 02 32 22.0
BVAR pmax pmax
comp=Z,68nm,0.5s
BRVK Borovoye 63.49 324 P **P** **02 31 45.5 +0.1**
comp=Z,401nm,1.5s,mb6.3,SNR=27
BRVK Borovoye 63.49 324 *e*P **P** **02 31 44.9 -0.5**
comp=Z,39nm,0.6s,mb5.7
BRVK *e*PcP PcP 02 32 22.2 +0.4
BRVK Borovoye 63.49 324 *e*P **P** **02 31 44.9 -0.5**
BRVK *e* 02 32 22.2
BRVK pmax pmax
comp=Z,39nm,0.6s,mb5.7
VOSK Vostochnaya 63.50 323 P **P** **02 31 44.9 -0.6**
VOSK pmax pmax
comp=Z,57nm,1.1s,mb5.5
SVE Sverdlovsk 63.57 331⇑ *e*P **P** **02 31 46.2 +0.3**
SVE pmax pmax
comp=Z,59nm,0.9s,mb5.6
NSS Namsos 63.70 359 *e*P **P** **02 31 44.9 -1.7**
NSS AMB AMB 02 31 46.2
comp=Z,54nm,1.1s,mb5.5
CD2 Chengdu 63.72 287 P **P** **02 31 47.3 0.0**
CD2 pP pP 02 32 00.1 +1.9
CD2 sP sP 02 32 05.3 +2.9
CD2 PP PP 02 34 08.5 +1.2
CD2 ScP 02 36 20.8
CD2 S **S** **02 40 14.9 -4.2**
CD2 sS sS 02 40 36.6 -0.7
CD2 ScS ScS 02 41 32.8 -5.0
CD2 SS SS 02 44 23.9 -2.8
CD2 pmax pmax
comp=Z,70nm,1.0s,mb5.7
CD2 pmax pmax
comp=Z,240nm,4.7s
CD2 LR LR
comp=N,540nm,22.5s,MS4.9
CD2 LR LR
comp=E,700nm,18.6s,MS4.9
CD2 LR LR
comp=Z,860nm,19.6s,MS4.9
ZRNK Zerenda 64.04 325 P **P** **02 31 48.6 -0.4**
ZRNK pmax pmax
comp=Z,85nm,0.6s,mb6.0
JOF Joensuu 64.04 349 *e*P **P** **02 31 48.2 -0.7**
JOF pmax pmax
comp=Z,34nm,0.4s,mb5.7
JOF Joensuu 64.04 349 *e*p **P** **02 31 48.2 -0.7**
comp=Z,34nm,0.4s,mb5.7
ARU Arti 64.51 332 *e*P **P** **02 31 51.5 -0.6**
comp=Z,49nm,0.6s,mb5.7
ARU Arti 64.51 332*c i*P **P** **02 31 51.5 -0.5**
ARU *e* 02 32 25.7
ARU *e* 02 34 16.8
ARU S **S** **02 40 29.7 +1.5**
ARU SS SS 02 44 34.6 -3.2
ARU pmax pmax
comp=Z,98nm,1.2s,mb5.7
ARU MLR MLR
comp=Z,642nm,17.0s,MS4.9
ARU Arti 64.51 332 P **P** **02 31 51.5 -0.5**
comp=Z,594nm,0.5s,SNR=14
CNNC Cliffs of the 64.66 65 *e*P **P** **02 31 53.0 -0.4**
comp=Z,26nm,0.9s,mb5.2
KLMR Klimovskoe 64.85 344*c i*P **P** **02 31 53.1 -1.1**
KLMR pmax pmax
comp=Z,90nm,1.1s,mb5.7
KLMR MLR MLR
comp=Z,711nm,20.0s,MS4.9
NHSC New Hope 64.93 68 *e*P **P** **02 31 55.5 +0.3**
comp=Z,206nm,1.3s,mb6.0
GYA Guiyang 65.23 282⇑ *i*P **P** **02 31 57.3 +0.1**
GYA pP pP 02 32 11.0 +2.8
GYA sP sP 02 32 17.8 +5.4
GYA PcP PcP 02 32 32.6 +3.2
GYA PP PP 02 34 24.4 +3.7
GYA ScP 02 36 29.0
GYA PcS 02 36 35.4
GYA S S 02 40 35.8 -2.1
GYA sS sS 02 40 56.3 +0.2
GYA SKS 02 41 46.5
GYA SS SS 02 44 50.4 -0.1
GYA pmax pmax
comp=Z,60nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,150nm,5.0s
GYA LR LR
comp=N,630nm,19.8s,MS5.0
GYA LR LR
comp=E,580nm,20.0s,MS5.0
GYA LR LR
comp=Z,720nm,18.9s,MS4.9
KAF Kangasniemi 65.35 351 *e*P **P** **02 31 56.7 -0.7**
KAF pmax pmax
comp=Z,8.0nm,0.3s,mb5.2
KAF Kangasniemi 65.35 351 *e*p **P** **02 31 56.7 -0.7**
comp=Z,7.5nm,0.3s,mb5.2
TGY Tagaytay City 65.76 262 P **P** **02 32 00.6 -0.1**
comp=Z,162nm,0.3s,mb6.5,baz=90,slow=11,SNR=4.4
FINES FINESS Array B 66.03 351 P **P** **02 32 01.1 -0.7**
comp=Z,45nm,0.8s,mb5.6,baz=18,slow=8.0,SNR=65
FINES LR LR 03 01 02.8
comp=Z,509nm,21.3s,MS4.7,baz=183,slow=36
FINES FINESS Array B 66.03 351 P **P** **02 32 01.2 -0.6**
FINES pmax pmax
comp=Z,45nm,0.8s
FINES MLR MLR
comp=Z,509nm,21.3s
TAOE Nuku Hiva Isla 66.10 147 *e*SS SS 02 45 03.0 -1.9
comp=Z,274nm,31.3s
TAOE *e*LR LR 02 52 04.8
comp=Z,850nm,21.6s
FOO Floro 66.61 2 *e*P **P** **02 32 05.1 -0.4**
NOA NORSAR Array B 67.21 359 P **P** **02 32 08.9 -0.4**
comp=Z,23nm,0.7s,mb5.3,baz=1.4,slow=6.3,SNR=94
NOA LR LR 03 03 40.6
comp=Z,233nm,20.3s,MS4.4,baz=5.0,slow=38
NOA NORSAR Array B 67.21 359 P **P** **02 32 08.9 -0.4**
NOA pmax pmax
comp=Z,23nm,0.7s
NOA MLR MLR
comp=Z,233nm,20.3s
PUL Pulkovo 67.22 349⇓ *e*P **P** **02 32 09.4 0.0**
PUL Pulkovo 67.22 349⇓ *e*P **P** **02 32 09.3 -0.1**
PUL pmax pmax
comp=Z,97nm,0.7s,mb5.9
WAL1 Walls 67.66 6 *e*P **P** **02 32 12.6 +0.5**
OSL Oslo 68.32 359 *e*P **P** **02 32 16.5 +0.2**
KMI Kunming 68.59 284⇑ P **P** **02 32 19.1 +0.5**
KMI pP pP 02 32 32.0 +2.4
KMI sP sP 02 32 36.8 +3.0
KMI PcP PcP 02 32 44.9 +1.5
KMI PP PP 02 34 52.9 +3.0
KMI S S 02 41 15.0 -3.4
KMI sS sS 02 41 36.1 -0.6
KMI SS SS 02 45 41.6 -0.9
KMI pmax pmax
comp=Z,56nm,0.8s,mb5.5
KMI pmax pmax
comp=Z,270nm,3.4s
KMI LR LR
comp=N,350nm,20.8s
KMI LR LR
comp=E,360nm,14.9s
KMI LR LR
comp=Z,350nm,22.8s,MS4.5
KONO Kongsberg 68.62 360 *e*P **P** **02 32 17.9 -0.2**
KONO AMB AMB 02 32 19.3
comp=Z,61nm,0.4s,mb5.9
KONO Kongsberg 68.62 360 *e*P **P** **02 32 18.2 0.0**
comp=Z,70nm,1.0s,mb5.5
KONO Kongsberg 68.62 360 *e*P **P** **02 32 18.2 0.0**
KONO pmax pmax
comp=Z,70nm,1.0s,mb5.5
QIZ Qiongzhong 68.83 274 P **P** **02 32 20.3 +0.1**
QIZ S S 02 41 20.8 -0.7
QIZ LR LR
comp=N,280nm,17.5s
QIZ LR LR
comp=E,120nm,23.1s
QIZ LR LR
comp=Z,320nm,22.9s
TKM2 Tokmak 2 69.44 314 P **P** **02 32 23.7 +0.1**
SNR=55
TKM2 Tokmak 2 69.44 314 *e*P **P** **02 32 23.8 +0.2**
USP Ospenovka 69.64 315 P **P** **02 32 25.1 +0.3**
SNR=83
ULHL Ulahol 69.69 313 P **P** **02 32 25.9 +0.8**
SNR=14
CHMS Chumysh 69.75 315 P **P** **02 32 25.4 -0.1**
SNR=22
MVH1 Achvaich 69.79 8 *e*P **P** **02 32 25.7 +0.3**
AKTK Aktyubinsk 69.86 329 P **P** **02 32 25.7 -0.4**
AKTO Aktyubinsk 69.86 329 P **P** **02 32 25.7 -0.4**
comp=Z,48nm,0.6s,mb5.6,baz=49,slow=6.7,SNR=147
AKTO Aktyubinsk 69.86 329 P **P** **02 32 25.5 -0.6**
AKTO pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
KBK Karagaybulak 69.94 314 P **P** **02 32 27.1 +0.5**
SNR=28
FRU Bishkek 69.94 315⇑ *i*P **P** **02 32 26.5 -0.2**
FRU pmax pmax
comp=Z,160nm,1.6s,mb5.7
MOS Moscow 70.02 343 *e*P **P** **02 32 25.7 -1.3**
MOS *e* pP 02 32 35.5 -2.5
MOS pmax pmax
comp=Z,95nm,0.7s,mb5.8
AAK Ala-Archa 70.15 315 P **P** **02 32 28.4 +0.4**
comp=Z,510nm,1.0s,mb6.4,SNR=15
AAK Ala-Archa 70.15 315 P **P** **02 32 27.0 -1.0**
SNR=26
AAK Ala-Archa 70.15 315 *e*P **P** **02 32 28.3 +0.3**
comp=Z,93nm,1.0s,mb5.7
AAK Ala-Archa 70.15 315 P **P** **02 32 28.3 +0.3**
comp=Z,63nm,0.9s,mb5.5,baz=107,slow=2.6,SNR=81
AAK Ala-Archa 70.15 315*c i*P **P** **02 32 27.7 -0.3**
AAK pmax pmax
comp=Z,40nm,0.8s,mb5.4
MCD Coleburn Disti 70.20 7 *e*P **P** **02 32 27.1 -0.9**
MDO Dochfour 70.25 8 *e*P **P** **02 32 27.9 -0.4**
AB31 Akbulak array 70.26 327 *i* P **P** **02 32 28.3 -0.2**
AB31 pmax pmax
comp=Z,36nm,0.7s,mb5.4
ABKAR Akbulak array 70.26 327 *e*P **P** **02 32 28.1 -0.4**
comp=Z,52nm,0.8s,mb5.5
EKS2 Erkin-Say 70.44 315 P **P** **02 32 30.2 +0.4**
SNR=63
EKS2 Erkin-Say 70.44 315 *e*P **P** **02 32 30.0 +0.3**
comp=Z,66nm,0.9s,mb5.6
UCH Uchtor 70.47 314 P **P** **02 32 30.8 +0.9**
SNR=34
UCH Uchtor 70.47 314 *e*P **P** **02 32 30.5 +0.6**
MME1 Meikle Cairn 70.49 7 *e*P **P** **02 32 28.6 -1.1**
OBN Obninsk 70.80 344 *e*P **P** **02 32 30.8 -0.9**
comp=Z,99nm,1.1s,mb5.7
OBN Obninsk 70.80 344*c i*P **P** **02 32 30.7 -1.0**
OBN *e* pP 02 32 40.7 -2.1
OBN *e* 02 32 51.3
OBN *e* 02 42 10.7
OBN pmax pmax
comp=Z,111nm,1.2s,mb5.7
OBN MLR MLR
comp=Z,400nm,17.0s,MS4.7
OBN Obninsk 70.80 344 P **P** **02 32 30.1 -1.6**
comp=Z,430nm,0.9s,mb6.4,SNR=5.7
AML Almayashu 70.91 315 P **P** **02 32 33.6 +1.0**
SNR=64
AML Almayashu 70.91 315 *e*P **P** **02 32 33.4 +0.8**
comp=Z,63nm,1.0s,mb5.5
KK31 Karatay Array 71.48 317 *i* P **P** **02 32 35.5 -0.5**
KK31 pmax pmax
comp=Z,37nm,0.8s,mb5.4
EAB Aberfoyle 71.49 8 *e*P **P** **02 32 35.8 -0.1**
EBH Black Hill 71.50 8 *e*P **P** **02 32 35.4 -0.6**
PPT Papeete 71.75 159 *e*S S 02 42 00.3 +5.1
comp=Z,876nm,27.8s
PPT *e*SS SS 02 46 35.9 +3.8
comp=Z,136nm,26.8s
PPT *e*LR LR 02 54 16.4
comp=Z,805nm,32.0s,baz=342
PPT Papeete 71.75 159 LR LR 02 56 59.4
comp=Z,240nm,18.9s,MS4.5,baz=316,slow=30
MUD Monsted U'grnd 71.82 0 *i* P **P** **02 32 38.1 +0.3**
comp=Z,38nm,0.8s,mb5.4
MUD
comp=Z,440nm,20.0s
MUD
comp=Z,170nm,23.0s
EDI Edinburgh 71.85 7 *e*P **P** **02 32 37.3 -0.8**
EDI AMB AMB 02 32 46.7
comp=Z,56nm,2.5s,mb5.0
PGBU Glenifferbraes 71.85 8 *e*P **P** **02 32 37.8 -0.3**
PGBU AMB AMB 02 32 37.9
comp=Z,104nm,2.3s,mb5.3
LSA Lhasa 71.87 295 P **P** **02 32 40.3 +1.7**
LSA pmax pmax
comp=Z,100nm,1.2s,mb5.6
EAU Auchinoon 71.91 8 *e*P **P** **02 32 38.4 0.0**
KSH Kashi 71.99 312⇑ *i*P **P** **02 32 42.6 +3.4**
KSH pP pP 02 32 55.3 +5.0
KSH *e*sP sP 02 33 01.3 +6.8
KSH *e*PcP PcP 02 33 02.3 +4.7
KSH *e*PP PP 02 35 24.1 +5.4
KSH *e*S S 02 41 59.3 +1.5
KSH *e*sS sS 02 42 21.9 +5.7
KSH *e*SKS 02 42 38.0
KSH *e*ScS ScS 02 42 41.4 -0.7
KSH *e*SS SS 02 46 38.9 +4.9
KSH pmax pmax
comp=Z,78nm,0.7s,mb5.8
KSH pmax pmax
comp=Z,50nm,5.6s
KSH LR LR
comp=N,520nm,14.8s,MS5.0
KSH LR LR
comp=E,280nm,11.4s,MS5.0
KSH LR LR
comp=Z,410nm,14.4s,MS4.8
EBL Broad Law 72.01 7 *e*P **P** **02 32 38.6 -0.4**
NACGM Naroch 72.40 350 *e* P **P** **02 32 37.0 -4.3**
ESK Eskdalemuir 72.45 8 *e*P **P** **02 32 40.7 -0.9**
ESK AMB AMB 02 32 43.5
comp=Z,37nm,4.0s
ESK Eskdalemuir 72.45 8 *e*P **P** **02 32 41.7 0.0**
comp=Z,19nm,0.8s,mb5.1
TNTI Ternate 72.54 248 P **P** **02 32 42.0 -0.7**
comp=Z,72nm,1.1s,mb5.5
COP Copenhagen 72.56 358⇓ *i*P **P** **02 32 43.0 +0.7**
comp=Z,22nm,0.8s,mb5.1
COP
comp=Z,130nm,18.0s
COP
comp=Z,140nm,20.0s
ECK Cauldkaine Hil 72.59 7 *e*P **P** **02 32 42.4 -0.1**
MICGM Minsk 72.67 349⇑ *i*P **P** **02 32 40.0 -2.9**
MNK Minsk 72.67 349⇑ *i*P **P** **02 32 40.0 -3.0**
MNK pmax pmax
comp=Z,360nm,1.0s,mb6.3
MNK pmax pmax
comp=N,310nm,1.0s
GAL1 Galloway 72.77 8 *e*P **P** **02 32 43.1 -0.4**
GAL1 AMB AMB 02 32 45.7
comp=Z,44nm,1.0s,mb5.3
XAL Allendale 72.98 7 *e*P **P** **02 32 44.4 -0.4**
BSD Bornholm Skovb 73.06 357 *i* P **P** **02 32 44.4 -0.9**
comp=Z,27nm,0.8s,mb5.2
BSD
comp=Z,340nm,17.0s
VRHR Novokhopersk 73.64 339 *e*P **P** **02 32 47.4 -1.3**
VRHR pmax pmax
comp=Z,60nm,0.7s,mb5.6
VRHR pmax pmax
comp=N,40nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.6s
RGN Rugen 73.68 358 *e*P **P** **02 32 49.6 +0.7**
comp=Z,128nm,0.9s,mb5.8
HPK Haverah Park 73.92 7 *e*P **P** **02 32 49.5 -0.8**
HPK AMB AMB 02 32 52.4
comp=Z,69nm,1.6s,mb5.3
VSR Storozhevoye 74.03 341 *e*P **P** **02 32 50.5 -0.5**
VSR pmax pmax
comp=N,20nm,0.5s
VSR pmax pmax
comp=Z,60nm,0.5s,mb5.8
VSR pmax pmax
comp=E,5.0nm,0.7s
VSR MLR MLR
comp=Z,480nm,19.0s,MS4.8
VSR MLR MLR
comp=N,210nm,16.0s,MS4.7
VSR MLR MLR
comp=E,260nm,16.0s,MS4.7
IMP Imphal 74.05 290 *ex* **P** **02 32 50.0 -1.5**
MYLDM Lahad Datu 74.22 258 P **P** **02 32 53.3 +0.6**
comp=E,34nm,1.3s,mb5.1
VORD Divnogorie 74.25 341 *e*P **P** **02 32 52.1 -0.2**
VORD pmax pmax
comp=Z,80nm,0.4s,mb6.0
VORD pmax pmax
comp=N,90nm,0.6s
VORD pmax pmax
comp=E,100nm,0.6s
LHO Holmfirth 74.32 7 *e*P **P** **02 32 52.3 -0.4**
BSEG Bad Segeberg 74.34 359 *e*P **P** **02 32 53.3 +0.5**
comp=Z,51nm,0.9s,mb5.5
BSEG Bad Segeberg 74.34 359 *e*P **P** **02 32 53.3 +0.5**
BSEG pmax pmax

comp=Z,51nm,0.9s,mb5.5
SHL Shillong 74.63 292 *e*PKP **P** **02 32 54.0 -0.9**
KBI1 Birley Grange 74.63 7 *e*P **P** **02 32 54.0 -0.5**
KMSI Cibinong 74.65 251 P **P** **02 32 55.1 0.0**
GKP Gorka Klasztor 74.81 355 *e*P **P** **02 32 55.5 0.0**
GKP LMZ 03 08 04.5
comp=Z,400nm,21.0s
TLE Tual 74.88 239 P **P** **02 32 57.0 +0.6**
comp=Z,133nm,3.0s,mb5.3
TGUH Tegucigalpa,Un 74.97 86 *e*P **P** **02 32 57.5 +0.5**
comp=Z,47nm,1.3s,mb5.3
CWF Charnwood Fore 75.16 7 *e*P **P** **02 32 56.5 -1.1**
CWF AMB AMB 02 33 02.7
comp=Z,33nm,4.6s
WIT Witteveen 75.44 2 *e*P **P** **02 33 01.1 +2.0**
comp=Z,275nm,1.2s,mb6.0
WAR Warsaw 75.58 353 *e*P **P** **02 33 00.5 +0.6**
TAPN Taplejung 75.60 296 *e*P **P** **02 33 00.4 -0.1**
comp=Z,216nm,1.2s,mb6.0
CHG Chiang Mai 75.65 282 ⇑P **P** **02 33 00.6 -0.3**
comp=Z,25nm,0.6s,mb5.3
CHTO Chiang Mai 75.65 282 *e*P **P** **02 33 00.5 -0.4**
comp=Z,14nm,0.7s,mb5.0
CHTO Chiang Mai 75.65 282 *e*P **P** **02 33 00.5 -0.4**
CHTO pmax pmax
comp=Z,14nm,0.7s,mb5.0
CHTO Chiang Mai 75.65 282 P **P** **02 33 00.5 -0.4**
comp=Z,526nmcomp=Z,28nm,0.9s,mb5.2
CHTO Chiang Mai 75.65 282 P **P** **02 33 01.0 +0.1**
SNR=9.7
HTR Trewern Hill 75.66 8 *e*P **P** **02 33 00.2 -0.2**
RUE Ruedersdorf 75.74 357 *e*P **P** **02 33 01.2 +0.3**
comp=Z,76nm,0.9s,mb5.6
RUE Ruedersdorf 75.74 357 *e*P **P** **02 33 01.2 +0.3**
comp=Z,136nm,1.4s,mb5.7
MCH1 Michaelchurch 75.76 8 P **P** **02 33 00.7 -0.3**
MCH1 Michaelchurch 75.76 8 AMB AMB 02 33 00.7
comp=Z,53nm,2.7s,mb5.0
MCH1 *e*P 02 33 00.7
MCH1 Michaelchurch 75.76 8 AMB AMB 02 33 00.7
comp=Z,53nm,2.7s,mb5.0
NRDL Niedersach Rie 75.79 360 *e*P **P** **02 33 00.3 -0.8**
comp=Z,30nm,0.9s,mb5.2
MRSI Marisa 75.92 252 P **P** **02 33 01.5 -1.0**
comp=Z,48nm,1.1s,mb5.3
CM31 Chiang Mai Arr 75.92 282 *e*P **P** **02 33 02.9 +0.4**
comp=Z,22nm,0.7s,mb5.2
CMAR Chiang Mai Arr 75.92 282 P **P** **02 33 02.3 -0.1**
comp=Z,38nm,0.9s,mb5.3,baz=26,slow=6.7,SNR=107
CMAR LR LR 03 07 34.3
comp=Z,225nm,21.2s,MS4.5,baz=261,slow=37
CMAR Chiang Mai Arr 75.92 282 P **P** **02 33 02.3 -0.1**
CMAR pmax pmax
comp=Z,38nm,0.9s
CMAR MLR MLR
comp=Z,225nm,21.2s
IBBN Ibbenburen 75.97 1 *e*P **P** **02 33 02.7 +0.5**
comp=Z,92nm,1.1s,mb5.6
HGH Gray Hill 76.14 8 *e*P **P** **02 33 02.7 -0.4**
ODAN Odare 76.16 296 *e*P **P** **02 33 03.6 -0.1**
comp=Z,50nm,0.8s,mb5.5
GUN Gumba 76.17 298 *e*P **P** **02 33 04.2 +0.4**
JIRN Jiri 76.20 297 *e*P **P** **02 33 04.6 +0.7**
comp=Z,228nm,0.9s,mb6.1
AKASG Malin Array Be 76.21 347 P **P** **02 33 02.5 -1.1**
AKASG LR LR 03 07 37.4
AKASG Malin Array Be 76.21 347 P **P** **02 33 02.5 -1.1**
comp=Z,38nm,0.8s,mb5.4,baz=13,slow=5.6,SNR=121
AKASG LR LR 03 07 37.4
comp=Z,621nm,21.2s,MS4.9,baz=25,slow=36
AKASG Malin Array Be 76.21 347 P **P** **02 33 02.5 -1.1**
AKASG pmax pmax
comp=Z,38nm,0.8s
AKASG MLR MLR
comp=Z,621nm,21.2s
AKBB Malin Array Si 76.21 347 *e*P **P** **02 33 02.2 -1.4**
KIEV Kiev 76.22 347 *e*P **P** **02 33 02.3 -1.3**
comp=Z,62nm,1.0s,mb5.5
KIEV Kiev 76.22 347 *e*P **P** **02 33 02.3 -1.3**
KIEV pmax pmax
comp=Z,62nm,1.0s,mb5.5
WTSB Winterswijk 76.30 2 *e*P **P** **02 33 03.8 -0.2**
comp=Z,37nm,1.4s,mb5.1
CLZ Clausthal 76.44 359 *e*P **P** **02 33 05.6 +0.7**
comp=Z,58nm,0.9s,mb5.5
CLZ Clausthal 76.44 359 *e*P **P** **02 33 05.6 +0.7**
CLZ pmax pmax
comp=Z,58nm,0.9s,mb5.5
DZM Mont Dzumac 76.52 202 *e*LR LR 02 56 59.2
comp=Z,478nm,20.9s
RAMN Ramite 76.53 296 *e*P **P** **02 33 05.9 +0.1**
comp=Z,420nm,1.3s,mb6.2
WOL Wolverton 76.58 7 P **P** **02 33 05.9 +0.2**
WOL AMB AMB 02 33 11.9
comp=Z,151nm,1.9s,mb5.6
WOL Wolverton 76.58 7 *e*P **P** **02 33 05.9 +0.2**
WOL AMB AMB 02 33 11.9
comp=Z,151nm,1.9s,mb5.6
KKN Kakani 76.59 298 *e*P **P** **02 33 06.4 +0.3**
comp=Z,128nm,1.2s,mb5.7
LUWI Luwuk 76.66 251 P **P** **02 33 02.8 -3.8**
PKI Pulchoki 76.69 298 *e*P **P** **02 33 06.9 +0.2**
comp=Z,230nm,1.1s,mb6.0
PKIN Phulchoki 76.70 298 *e*P **P** **02 33 07.4 +0.7**
comp=Z,106nm,1.0s,mb5.7
GKN Gorkha 76.78 299 *e*P **P** **02 33 07.2 0.0**
comp=Z,186nm,1.0s,mb6.0
BDT Bhumibol Dam 76.82 281 P **P** **02 33 07.0 -0.5**
comp=Z,16nm,0.8s,mb5.0
BUG Bochum-Univer 76.83 1 *e*P **P** **02 33 08.5 +1.4**
comp=Z,36nm,0.9s,mb5.3
DMN Daman 76.83 298 *e*P **P** **02 33 07.8 +0.3**
comp=Z,272nm,1.4s,mb6.0
CLL Collm 76.93 358 *e*P **P** **02 33 07.6 0.0**
comp=Z,37nm,0.7s,mb5.4
CLL Collm 76.93 358 ⇑*i*P **P** **02 33 07.5 -0.1**
comp=Z,38nm,0.8s,mb5.4
CLL Collm 76.93 358 ⇑*i*P **P** **02 33 07.5 -0.1**
CLL pmax pmax
comp=Z,38nm,0.8s,mb5.4
CLL Collm 76.93 358 ⇑*i*P **P** **02 33 07.5 -0.1**
comp=Z,38nm,0.8s,mb5.4
CLL *e*SS SS 02 48 12.0 +24
CLL LmV 03 15 00.0
comp=Z,200nm,20.2s
KSP Ksiaz 77.28 356 *e*P **P** **02 33 09.7 +0.2**
KSP LMZ 03 11 14.2
comp=Z,600nm,19.1s
KSP Ksiaz 77.28 356 ⇑*e*P **P** **02 33 09.6 0.0**
BRG Berggiesshubel 77.34 357 *e*P **P** **02 33 10.1 +0.2**
comp=Z,51nm,0.9s,mb5.5
BRG Berggiesshubel 77.34 357 *i* P **P** **02 33 10.1 +0.2**
comp=Z,33nm,1.2s,mb5.2
BRG Berggiesshubel 77.34 357 *i* P **P** **02 33 10.1 +0.2**
BRG pmax pmax
comp=Z,20nm,1.2s,mb4.9
NST Nakhon Sawan 77.34 279 P **P** **02 33 11.0 +0.5**
HGN Heimansgroeve 77.48 2 *e*P **P** **02 33 10.7 -0.1**
comp=Z,51nm,1.4s,mb5.3
KOLN Koldanda 77.52 299 *e*P **P** **02 33 11.5 +0.1**
comp=Z,56nm,0.7s,mb5.6
MOX Moxa 77.62 359 *e*P **P** **02 33 11.7 +0.2**
comp=Z,69nm,1.1s,mb5.5
MOX Moxa 77.62 359 *e*P **P** **02 33 11.9 +0.4**
comp=Z,48nm,0.8s,mb5.5
MOX Moxa 77.62 359 *e*P **P** **02 33 11.7 +0.2**
MOX pmax pmax
comp=Z,69nm,1.1s,mb5.5
UPC Upice 77.62 356 ⇑*i*P **P** **02 33 11.8 +0.3**
UPC Upice 77.62 356 ⇑*i*P **P** **02 33 11.8 +0.3**
MEM Membach 77.64 2 P **P** **02 33 10.9 -0.7**
comp=Z,28nm,1.3s,mb5.0
PVCC Panska Ves 77.66 357 ⇑*i*P **P** **02 33 12.2 +0.4**
PVCC MLR MLR
comp=Z,300nm,18.5s,MS4.7
PVCC Panska Ves 77.66 357 ⇑*i*P **P** **02 33 12.2 +0.4**
PVCC AMS AMS 03 12 50.0
comp=Z,300nm,18.5s
OJC Ojcow 77.68 353 *e*P **P** **02 33 11.9 0.0**
SNF Seneffe 77.69 3 P **P** **02 33 11.9 0.0**
comp=Z,16nm,1.4s,mb4.8
LVV L'vov 77.71 350 *e*P **P** **02 33 11.2 -0.8**
LVV MLR MLR
comp=N,400nm,22.0s,MS4.7
LVV MLR MLR
comp=Z,500nm,22.0s,MS4.8
LVV MLR MLR
comp=E,100nm,21.0s,MS4.7
DPC Dobruska-Polom 77.77 355 ⇑*i*P **P** **02 33 13.0 +0.7**
DPC *e* 02 33 29.0
DPC MLR MLR
comp=Z,300nm,15.5s,MS4.7
DPC Dobruska-Polom 77.77 355 ⇑*i*P **P** **02 33 13.0 +0.7**
DPC *es*P sP 02 33 29.0 +1.3
DPC AMS AMS 03 11 10.0
comp=Z,300nm,15.5s
BCLA Clavier 77.81 3 P **P** **02 33 12.6 0.0**
comp=Z,29nm,1.5s,mb5.0
WERD Werda 77.81 358 *e*P **P** **02 33 13.0 +0.4**
comp=Z,45nm,1.5s,mb5.2
GUNZ Gunzen 77.89 358 *e*P **P** **02 33 13.6 +0.6**
comp=Z,100nm,2.0s,mb5.4
RAC Raciborz 77.93 354 *e*P **P** **02 33 14.0 +0.8**
WERN Wernitzgruen 77.97 358 *e*P **P** **02 33 14.1 +0.6**
comp=Z,44nm,1.0s,mb5.3
NKC Novy Kostel 78.02 358 ⇑*i*P **P** **02 33 14.1 +0.4**
NKC Novy Kostel 78.02 358 ⇑*i*P **P** **02 33 14.1 +0.4**
KWP Kalwaria Pacla 78.02 351 *i* P **P** **02 33 13.8 +0.1**
KWP LMZ 03 14 20.4
comp=Z,500nm,18.9s
KWP Kalwaria Pacla 78.02 351 *e*P **P** **02 33 13.8 0.0**
comp=Z,167nm,1.0s,mb5.9
KWP Kalwaria Pacla 78.02 351 ⇑*i*P **P** **02 33 13.9 +0.1**
TNS Taunus Mts 78.06 1 *e*P **P** **02 33 14.4 +0.4**
comp=Z,44nm,1.0s,mb5.3
TNS Taunus Mts 78.06 1 *e*P **P** **02 33 14.4 +0.4**
TNS pmax pmax
comp=Z,44nm,1.0s,mb5.3
DOU Dourbes 78.11 3 P **P** **02 33 14.1 -0.1**
comp=Z,23nm,1.5s,mb4.9
GIVF Givet 78.11 3 ⇑*i*P **P** **02 33 14.3 0.0**
comp=Z,128nm,1.3s,mb5.4
GIVF Givet 78.11 3 ⇑*i*P **P** **02 33 14.3 0.0**
comp=Z,64nm,1.3s,mb5.4
GIVF Givet 78.11 3 ⇑*i*P **P** **02 33 14.3 0.0**
GIVF pmax pmax
comp=Z,64nm,1.3s,mb5.4
BAIF Baives 78.13 3 ⇑*i*P **P** **02 33 14.7 +0.3**
comp=Z,71nm,1.0s,mb5.2
BAIF Baives 78.13 3 ⇑*i*P **P** **02 33 14.7 +0.3**
comp=Z,36nm,1.0s,mb5.2
BAIF Baives 78.13 3 ⇑*i*P **P** **02 33 14.7 +0.3**
BAIF pmax pmax
comp=Z,36nm,1.0s,mb5.3
OKC Ostrava-Krasne 78.18 354 ⇑*i*P **P** **02 33 15.1 +0.5**
OKC MLR MLR
comp=Z,300nm,23.4s,MS4.5
OKC Ostrava-Krasne 78.18 354 ⇑*i*P **P** **02 33 15.1 +0.5**
OKC AMS AMS 03 15 20.0
comp=Z,300nm,23.4s
PRU Pruhonice 78.20 357 ⇑*i*P **P** **02 33 15.6 +0.8**
PRU *e* 02 33 32.0
PRU MLR MLR
comp=Z,300nm,22.9s,MS4.6
PRU Pruhonice 78.20 357 ⇑*i*P **P** **02 33 15.6 +0.8**
PRU *es*P sP 02 33 32.0 +1.8
PRU AMS AMS 03 13 10.0
comp=Z,300nm,22.9s
MORC Moravsky Berou 78.27 355 *e*P **P** **02 33 15.1 0.0**
comp=Z,36nm,0.9s,mb5.3
MORC Moravsky Berou 78.27 355 ⇓P **P** **02 33 15.9 +0.7**
MORC Moravsky Berou 78.27 355 ⇓*i*P **P** **02 33 15.9 +0.7**
STHS Stebnicka Huta 78.37 352 *e*P **P** **02 33 16.5 +0.8**
comp=Z,38nm,0.9s,mb5.3
STHS Stebnicka Huta 78.37 352 *e*P **P** **02 33 16.5 +0.8**
STHS pmax pmax
comp=Z,38nm,0.9s,mb5.3
STHS Stebnicka Huta 78.37 352 *e*P **P** **02 33 16.4 +0.7**
ABH Alteburg 78.39 1 *e*P **P** **02 33 16.1 +0.3**
NIE Niedzica 78.44 353 *e*P **P** **02 33 16.4 +0.3**
RUP Ruppelstein 78.57 2 *e*P **P** **02 33 17.4 +0.6**
GRA1 Grafenberg Arr 78.58 359 *e*P **P** **02 33 17.8 +0.9**
comp=Z,97nm,0.9s,mb5.7
GRF Grafenberg Arr 78.58 359 *e*P **P** **02 33 17.8 +0.9**
comp=Z,97nm,0.9s,mb5.7
GRF Grafenberg Arr 78.58 359 *e*P **P** **02 33 17.8 +0.9**
GRF pmax pmax
comp=Z,97nm,0.9s,mb5.7
GRF Grafenberg Arr 78.58 359 *e*P **P** **02 33 17.8 +0.9**
GRF pmax pmax
comp=Z,97nm,0.9s,mb5.7
WLF Walferdange 78.58 2 *e*P **P** **02 33 17.6 +0.7**
comp=Z,23nm,0.9s,mb5.1
TOD Tromm 78.68 0 *e*P **P** **02 33 17.8 +0.4**
VRAC Vranov 78.79 355 ⇓P **P** **02 33 18.9 +0.9**
VRAC Vranov 78.79 355 P **P** **02 33 19.0 +1.0**
VRAC Vranov 78.79 355 ⇓*i*P **P** **02 33 18.9 +0.9**
TREC Trest 78.86 356 ⇑*i*P **P** **02 33 18.6 +0.2**
TREC MLR MLR
comp=Z,300nm,20.4s,MS4.6
TREC Trest 78.86 356 ⇑*i*P **P** **02 33 18.6 +0.2**
TREC AMS AMS 03 12 40.0
comp=Z,300nm,20.4s
CRVS Cervenica-Dubn 78.86 352 *e*P **P** **02 33 18.7 +0.3**
comp=Z,25nm,1.2s,mb5.0
CRVS Cervenica-Dubn 78.86 352 *e*P **P** **02 33 18.7 +0.3**
CRVS pmax pmax
comp=Z,25nm,1.2s,mb5.0
CRVS Cervenica-Dubn 78.86 352 *e*P **P** **02 33 18.7 +0.3**
LIKS Likavka 78.90 353 *e*P **P** **02 33 19.9 +1.3**
comp=Z,46nm,0.9s,mb5.4
LIKS Likavka 78.90 353 *e*P **P** **02 33 19.9 +1.3**
LIKS pmax pmax
comp=Z,46nm,0.9s,mb5.4
LIKS Likavka 78.90 353 *e*P **P** **02 33 19.8 +1.2**
UZH Uzhgorod 79.05 351 *e*P **P** **02 33 18.1 -1.4**
UZH *e* pP 02 33 31.3 +0.6
KHC Kasperske Hory 79.09 357 *e*P **P** **02 33 20.3 +0.6**
comp=Z,93nm,1.2s,mb5.6
KHC Kasperske Hory 79.09 357 *e*P **P** **02 33 20.3 +0.6**
KHC pmax pmax
comp=Z,93nm,1.2s,mb5.6
KHC Kasperske Hory 79.09 357 ⇑*i*P **P** **02 33 20.3 +0.6**
KHC *es*P sP 02 33 36.8 +1.7
KHC AMS AMS 03 14 20.0
comp=Z,300nm,21.0s
WET Wettzell 79.10 358 *e*P **P** **02 33 20.4 +0.7**
comp=Z,53nm,1.4s,mb5.3
WET Wettzell 79.10 358 *e*P **P** **02 33 20.4 +0.7**
WET pmax pmax
comp=Z,53nm,1.4s,mb5.3
KDI Kendari 79.11 249 P **P** **02 33 20.6 +0.4**
comp=Z,32nm,1.2s,mb5.1
FLN La Foliniere 79.17 7 ⇑*i*P **P** **02 33 19.8 -0.3**
FLN *e*MLR MLR
comp=Z,461nm,19.5s,MS4.5
FLN La Foliniere 79.17 7 ⇑*i*P **P** **02 33 19.8 -0.3**
FLN MLR MLR
comp=Z,460nm,19.5s,MS4.8
KBL Kabul 79.22 314 *e*P **P** **02 33 19.8 -0.9**
comp=Z,95nm,1.1s,mb5.6
KBL Kabul 79.22 314 *e*P **P** **02 33 19.8 -0.9**
KBL pmax pmax
comp=Z,95nm,1.1s,mb5.6
LANF Langenberg 79.30 1 *e*P **P** **02 33 20.6 -0.2**
LDF La Druitiere 79.37 6 ⇑*i*P **P** **02 33 20.8 -0.4**
comp=Z,32nm,0.5s,mb5.2
LDF La Druitiere 79.37 6 ⇑*i*P **P** **02 33 20.8 -0.4**
comp=Z,16nm,0.5s,mb5.2
LDF La Druitiere 79.37 6 ⇑*i*P **P** **02 33 20.8 -0.4**
LDF pmax pmax
comp=Z,16nm,0.5s,mb5.2
ROSF Rostrenen 79.37 9 ⇑*i*P **P** **02 33 21.2 0.0**
GEC2 GERESS Array S 79.38 357 *e*P **P** **02 33 21.6 +0.4**
comp=Z,40nm,1.0s,mb5.3
GEC2 GERESS Array S 79.38 357 *e*P **P** **02 33 21.6 +0.4**
GEC2 pmax pmax
comp=Z,40nm,1.0s,mb5.3
KOLL Kolacno 79.41 354 *e*P **P** **02 33 22.3 +0.9**
KOLL Kolacno 79.41 354 *e*P **P** **02 33 22.3 +0.9**
VYHS Vyhne 79.47 354 *e*P **P** **02 33 22.2 +0.5**
comp=Z,31nm,1.1s,mb5.2
VYHS Vyhne 79.47 354 *e*P **P** **02 33 22.2 +0.5**
VYHS pmax pmax
comp=Z,31nm,1.1s,mb5.2
VYHS Vyhne 79.47 354 *e*P **P** **02 33 22.2 +0.5**
SGMF Saint Gilles 79.52 8 ⇑*i*P **P** **02 33 22.0 0.0**
comp=Z,27nm,0.6s,mb5.0
SGMF Saint Gilles 79.52 8 ⇑*i*P **P** **02 33 22.0 0.0**
comp=Z,14nm,0.6s,mb5.0
SGMF Saint Gilles 79.52 8 ⇑*i*P **P** **02 33 22.0 0.0**
SGMF pmax pmax
comp=Z,14nm,0.6s,mb5.1
STU Stuttgart 79.52 0 *e*P **P** **02 33 22.4 +0.4**
comp=Z,46nm,1.0s,mb5.4
STU Stuttgart 79.52 0 *e*P **P** **02 33 22.8 +0.8**
comp=Z,59nm,1.3s,mb5.4
STU Stuttgart 79.52 0 *e*P **P** **02 33 22.8 +0.8**
STU pmax pmax
comp=Z,59nm,1.3s,mb5.4
GRR Gorron 79.52 7 ⇑*i*P **P** **02 33 21.9 -0.1**
comp=Z,37nm,0.8s,mb5.1
GRR Gorron 79.52 7 ⇑*i*P **P** **02 33 21.9 -0.1**
comp=Z,19nm,0.8s,mb5.1
GRR Gorron 79.52 7 ⇑*i*P **P** **02 33 21.9 -0.1**
GRR pmax pmax
comp=Z,19nm,0.8s,mb5.1
TRPA Tarpa 79.53 351 ⇑*i*P **P** **02 33 22.3 +0.2**
MODS Modra-Piesok 79.69 355 *e*P **P** **02 33 24.1 +1.2**
MODS Modra-Piesok 79.69 355 *e*P **P** **02 33 24.1 +1.2**
MEZF Maizieres J'vi 79.72 3 ⇑*i*P **P** **02 33 23.4 +0.3**
comp=Z,109nm,1.3s,mb5.3
MEZF Maizieres J'vi 79.72 3 ⇑*i*P **P** **02 33 23.4 +0.3**
comp=Z,109nm,1.3s,mb5.6
BUR08 Bucovina Ar. S 79.72 349 *e*P **P** **02 33 23.0 -0.1**
BUR01 Bucovina Ar. S 79.75 349 P **P** **02 33 23.1 -0.2**
BURAR Bucovina Array 79.75 349 ⇑P **P** **02 33 23.0 -0.3**
BURAR Bucovina Array 79.75 349 ⇑*i*P **P** **02 33 23.0 -0.3**
QUIF Quistinic 79.80 9 *e*P **P** **02 33 24.0 +0.5**
CDF Champ du Feu 79.86 1 ⇑*i*P **P** **02 33 24.2 +0.3**
comp=Z,66nm,0.9s,mb5.2
CDF Champ du Feu 79.86 1 ⇑*i*P **P** **02 33 24.2 +0.3**
comp=Z,33nm,0.9s,mb5.3
CDF Champ du Feu 79.86 1 ⇑*i*P **P** **02 33 24.2 +0.3**
CDF pmax pmax
comp=Z,33nm,0.9s,mb5.3
IAS Iasi 79.87 348 P **P** **02 33 23.6 -0.4**
ZST Bratislava 79.87 355 *e*P **P** **02 33 24.9 +1.0**
comp=Z,64nm,0.9s,mb5.6
ZST Bratislava 79.87 355 *e*P **P** **02 33 24.9 +1.0**
ZST pmax pmax
comp=Z,65nm,0.9s,mb5.6
ZST Bratislava 79.87 355 *e*P **P** **02 33 24.9 +1.0**
BMR Baia Mare 79.88 350 ⇑P **P** **02 33 24.6 +0.6**
BMR Baia Mare 79.88 350 ⇑*i*P **P** **02 33 24.6 +0.6**
KIS Kishinev 79.89 347 *e*P **P** **02 33 22.0 -2.1**
KIS LRM 03 13 58.0
comp=Z,400nm,20.0s
KIS Kishinev 79.89 347 P **P** **02 33 23.7 -0.3**
KIS Kishinev 79.89 347 *e*P **P** **02 33 22.0 -2.1**
KIS *e* 02 33 40.0
BFO Black Forest 79.95 1 P **P** **02 33 25.5 +1.1**
comp=Z,138nm,1.0s,mb5.8,SNR=8.1
BFO Black Forest 79.95 1 *e*P **P** **02 33 24.8 +0.4**
comp=Z,41nm,1.2s,mb5.2
BFO Black Forest 79.95 1 *e*P **P** **02 33 24.8 +0.4**
BFO pmax pmax
comp=Z,41nm,1.2s,mb5.2
PSZ Piszkesteto 79.96 353 *e*P **P** **02 33 24.9 +0.5**
comp=Z,57nm,1.3s,mb5.3
PSZ Piszkesteto 79.96 353 P **P** **02 33 25.5 +1.1**
PSZ Piszkesteto 79.96 353 ⇓*i*P **P** **02 33 25.4 +1.0**
PSZ Piszkesteto 79.96 353 ⇑*e*P **P** **02 33 25.1 +0.7**
TTSI Tana Toraja 80.00 252 P **P** **02 33 24.4 -0.7**
comp=Z,41nm,1.6s,mb5.1
THEF They Montfort 80.02 2 *e*P **P** **02 33 25.2 +0.5**
ECH Echery 80.05 2 *e*P **P** **02 33 25.2 +0.3**
comp=Z,73nm,1.3s,mb5.5
ECH Echery 80.05 2 *e*P **P** **02 33 25.2 +0.3**
ECH pmax pmax
comp=Z,73nm,1.3s,mb5.5
KIV Kislovodsk 80.10 336 *e*P **P** **02 33 25.7 +0.4**
comp=Z,69nm,0.9s,mb5.6
KIV Kislovodsk 80.10 336 *c i*P **P** **02 33 25.6 +0.4**
KIV *e**PP pP 02 33 35.0 -1.5
KIV *e**SP sP 02 33 38.1 -2.6
KIV pmax pmax
comp=Z,80nm,1.0s,mb5.6
KIV Kislovodsk 80.10 336 P **P** **02 33 25.1 -0.1**
comp=Z,444nm,0.8s,mb6.4,SNR=18
FUR Furstenfeldbru 80.11 359 *e*P **P** **02 33 25.8 +0.6**
comp=Z,110nm,1.5s,mb5.6
FUR Furstenfeldbru 80.11 359 *e*P **P** **02 33 25.8 +0.6**
FUR pmax pmax
comp=Z,110nm,1.5s,mb5.6
LIBD Limburg 80.13 1 *e*P **P** **02 33 25.8 +0.5**
SPAK Spaichingen-Ko 80.19 0 *e*P **P** **02 33 26.0 +0.4**
HAU Haudompre 80.25 2 ⇑*i*P **P** **02 33 26.2 +0.2**
comp=Z,90nm,1.1s,mb5.3
HAU *e*MLR MLR
comp=Z,425nm,21.5s,MS4.5
HAU Haudompre 80.25 2 ⇑*i*P **P** **02 33 26.2 +0.2**
comp=Z,45nm,1.1s,mb5.3
HAU LR LR
comp=Z,430nm,21.5s,MS4.8
HAU Haudompre 80.25 2 ⇑*i*P **P** **02 33 26.2 +0.2**
HAU pmax pmax
comp=Z,45nm,1.1s,mb5.3
HAU MLR MLR
comp=Z,430nm,21.5s,MS4.8
MOA Molln 80.35 357 ⇓*i*P **P** **02 33 26.9 +0.4**
comp=Z,37nm,1.5s,mb5.1,SNR=16
FELD Feldberg im Sc 80.41 1 *e*P **P** **02 33 26.9 +0.1**
SOP Sopron 80.42 355 ⇑*e*P **P** **02 33 27.7 +0.8**
MOF Molkenrain 80.42 2 *e*P **P** **02 33 26.9 0.0**
HINF Hinteralfeld 80.45 2 ⇑*i*P **P** **02 33 27.2 +0.2**
comp=Z,35nm,0.7s,mb5.1
HINF Hinteralfeld 80.45 2 ⇑*i*P **P** **02 33 27.2 +0.2**
comp=Z,18nm,0.7s,mb5.1
HINF Hinteralfeld 80.45 2 ⇑*i*P **P** **02 33 27.2 +0.2**
HINF pmax pmax
comp=Z,17nm,0.7s,mb5.1
BUD Budapest 80.46 353 ⇑*e*P **P** **02 33 27.9 +0.8**
ANN Anapa 80.50 340 *e*P **P** **02 33 26.7 -0.7**
ANN pmax pmax
comp=Z,81nm,1.4s,mb5.5
ANN MLR MLR
comp=N,308nm,23.0s,MS4.7
ANN MLR MLR
comp=E,235nm,23.0s,MS4.7
ANN MLR MLR
comp=Z,263nm,23.0s,MS4.5
TESR 80.66 348 ⇑P **P** **02 33 27.7 -0.5**
TESR 80.66 348 ⇑*i*P **P** **02 33 27.7 -0.5**
ABKT Ailbek 80.79 323 P **P** **02 33 29.6 +0.5**
comp=Z,212nm,0.8s,mb6.1,SNR=10
RETA Reutte 80.79 359 ⇑*i*P **P** **02 33 29.5 +0.6**
comp=Z,41nm,1.2s,mb5.2,SNR=13
BBS Basel-Blauen 80.81 1 *e*P **P** **02 33 29.1 +0.1**
DRGR 80.83 351 ⇑P **P** **02 33 28.9 -0.3**
DRGR 80.83 351 P **P** **02 33 29.2 +0.1**
DRGR 80.83 351 ⇑*i*P **P** **02 33 28.9 -0.2**
ARSA Arzberg 80.90 356 ⇑*i*P **P** **02 33 30.2 +0.8**
comp=Z,65nm,1.4s,mb5.4,SNR=26
LOR Lormes 80.91 4 ⇑*i*P **P** **02 33 29.7 +0.2**
comp=Z,72nm,0.9s,mb5.3
LOR *e*MLR MLR
comp=Z,436nm,19.0s,MS4.5
LOR Lormes 80.91 4 ⇑*i*P **P** **02 33 29.7 +0.2**
comp=Z,36nm,0.9s,mb5.3
LOR LR LR
comp=Z,440nm,19.0s,MS4.8
LOR Lormes 80.91 4 ⇑*i*P **P** **02 33 29.7 +0.2**
LOR pmax pmax
comp=Z,36nm,0.9s,mb5.3
LOR MLR MLR
comp=Z,440nm,19.0s,MS4.8
LOMF Lomont 80.91 2 *e*P **P** **02 33 30.4 +0.9**
MOTA Moosalm 80.93 359 ⇑*i*P **P** **02 33 30.2 +0.5**
comp=Z,70nm,1.2s,mb5.5,SNR=39
WATA Walderalm 80.94 358 ⇓*i*P **P** **02 33 30.4 +0.7**
comp=Z,59nm,1.2s,mb5.4,SNR=16
DAVA Damuels 81.00 360 ⇑*i*P **P** **02 33 30.5 +0.5**
comp=Z,32nm,0.9s,mb5.2,SNR=12
KAKA Kakadu 81.00 236 P **P** **02 33 29.5 -0.8**
comp=Z,74nm,0.9s,mb5.6
WTTA Wattenberg 81.01 358 *i* P **P** **02 33 30.9 +0.9**
comp=Z,58nm,1.0s,mb5.5,SNR=25
SIM Simferopol' 81.01 342 *c i*P **P** **02 33 31.0 +0.9**
SIM pmax pmax
comp=Z,94nm,0.9s,mb5.7
SIM MLR MLR
comp=Z,420nm,18.3s,MS4.8
SSF Saint Saulge 81.10 4 ⇑*i*P **P** **02 33 30.9 +0.4**
comp=Z,56nm,0.6s,mb5.4
SSF Saint Saulge 81.10 4 ⇑*i*P **P** **02 33 30.9 +0.4**
comp=Z,28nm,0.6s,mb5.4

SSF Saint Saulge 81.10 4⇑*iP* P 02 33 30.9 +0.4
SSF pmax pmax
comp=Z,28nm,0.6s,mb5.4
RKT Rikitea 81.12 147 *e*LR LR 02 58 59.0
comp=Z,672nm,22.8s,baz=339
KBA Koelnbreinsper 81.15 357 *i* P P 02 33 32.1 +1.2
comp=Z,133nm,0.8s,mb5.9,SNR=94
SOC Sochi 81.16 338*c iP* P 02 33 30.8 -0.1
SOC *e*SS S 02 43 35.9 -2.0
SOC 02 52 23.4
SOC pmax pmax
comp=Z,40nm,0.7s,mb5.5
FETA Feichten 81.26 359 *i* P P 02 33 32.1 +0.7
comp=Z,66nm,0.9s,mb5.6,SNR=43
VRI Vrincioaia 81.29 348 ⇓P P 02 33 31.4 -0.1
VRI Vrincioaia 81.29 348 ⇓*iP* P 02 33 31.4 -0.2
PLOR Plostina 81.31 348 ⇑P P 02 33 31.6 -0.1
PLOR Plostina 81.31 348 ⇑*iP* P 02 33 31.6 -0.1
MFF Saint Martin d 81.35 7⇑*iP* P 02 33 32.2 +0.3
comp=Z,90nm,0.9s,mb5.4
MFF Saint Martin d 81.35 7⇑*iP* P 02 33 32.2 +0.3
comp=Z,45nm,0.9s,mb5.4
MFF Saint Martin d 81.35 7⇑*iP* P 02 33 32.2 +0.3
MFF pmax pmax
comp=Z,45nm,0.9s,mb5.4
DOPR Dopca 81.36 349⇑*iP* P 02 33 33.1 +1.2
AVF Avril sur Loir 81.36 4⇑*iP* P 02 33 32.1 +0.2
comp=Z,67nm,0.8s,mb5.3
AVF Avril sur Loir 81.36 4⇑*iP* P 02 33 32.1 +0.2
comp=Z,34nm,0.8s,mb5.3
AVF Avril sur Loir 81.36 4⇑*iP* P 02 33 32.1 +0.2
AVF pmax pmax
comp=Z,34nm,0.8s,mb5.3
SOKA Soboth 81.49 356⇑*iP* P 02 33 33.2 +0.6
comp=Z,104nm,1.5s,mb5.5
ABTA Abfaltersbach 81.50 358⇑*iP* P 02 33 33.0 +0.3
comp=Z,75nm,1.2s,mb5.5,SNR=44
SMF Signal de Mont 81.53 4⇑*iP* P 02 33 33.0 +0.2
comp=Z,74nm,0.7s,mb5.4
SMF Signal de Mont 81.53 4⇑*iP* P 02 33 33.0 +0.2
comp=Z,37nm,0.7s,mb5.4
SMF Signal de Mont 81.53 4⇑*iP* P 02 33 33.0 +0.2
SMF pmax pmax
comp=Z,37nm,0.7s,mb5.4
PERS Pernice 81.53 356 *i* P P 02 33 33.4 +0.5
BGF Bois d'Agland 81.57 5⇑*iP* P 02 33 33.3 +0.2
comp=Z,44nm,0.6s,mb5.2
BGF Bois d'Agland 81.57 5⇑*iP* P 02 33 33.3 +0.2
comp=Z,22nm,0.6s,mb5.3
BGF Bois d'Agland 81.57 5⇑*iP* P 02 33 33.3 +0.2
BGF pmax pmax
comp=Z,22nm,0.6s,mb5.3
GOR Gori 81.58 335 P P 02 33 33.8 +0.6
MYKA Terra Mystica 81.59 357⇑*iP* P 02 33 33.2 0.0
comp=Z,55nm,1.7s,mb5.2
CABF La Chapelle 81.64 2⇑*iP* P 02 33 34.2 +0.8
comp=Z,118nm,1.0s,mb5.5
CABF La Chapelle 81.64 2⇑*iP* P 02 33 34.2 +0.8
comp=Z,59nm,1.0s,mb5.5
CABF La Chapelle 81.64 2⇑*iP* P 02 33 34.2 +0.8
CABF pmax pmax
comp=Z,59nm,1.0s,mb5.5
TBLG Delisi 81.65 334 *e*P P 02 33 34.0 +0.5
TBLG Delisi 81.65 334 P P 02 33 34.0 +0.5
BKSI Bulukumba 81.66 250 P P 02 33 33.3 -0.6
comp=Z,42nm,1.1s,mb5.3
TLCR 81.67 346 ⇓P P 02 33 33.7 +0.2
TLCR 81.67 346 ⇓*iP* P 02 33 33.7 +0.1
MTA Mtatsminda 81.67 334 P P 02 33 33.7 +0.1
GRER 81.73 348 P P 02 33 35.6 +1.6
DGRG David-gareji 81.73 333 P P 02 33 33.6 -0.5
PKSM Moragy 81.75 354 ⇑P P 02 33 33.4 -0.6
PKSM Moragy 81.75 354 P P 02 33 33.9 -0.1
PKSM Moragy 81.75 354⇑*iP* P 02 33 33.4 -0.6
MLR Muntele Rosu 81.76 348 ⇑P P 02 33 34.8 +0.7
MLR Muntele Rosu 81.76 348 P P 02 33 35.4 +1.4
MLR Muntele Rosu 81.76 348⇑*iP* P 02 33 34.8 +0.8
TCF Toulx Ste Croi 81.81 5⇑*iP* P 02 33 34.4 +0.1
comp=Z,34nm,0.8s,mb5.0
TCF Toulx Ste Croi 81.81 5⇑*iP* P 02 33 34.4 +0.1
comp=Z,17nm,0.8s,mb5.0
TCF Toulx Ste Croi 81.81 5⇑*iP* P 02 33 34.4 +0.1
TCF pmax pmax
comp=Z,17nm,0.8s,mb5.0
VOIR 81.92 349 ⇑P P 02 33 35.4 +0.5
VOIR 81.92 349⇑*iP* P 02 33 35.4 +0.5
AGO Saint Agoulin 82.09 4 *e*P P 02 33 37.6 +1.8
BZS Buzias 82.10 351 ⇑P P 02 33 35.5 -0.4
BZS Buzias 82.10 351 P P 02 33 35.8 -0.1
BZS Buzias 82.10 351⇑*iP* P 02 33 35.5 -0.4
PLDF La Plantade 82.19 4 *e*P P 02 33 38.3 +2.0
PGOR Pogoanele 82.19 347⇓*iP* P 02 33 36.8 +0.4
VISS Visnje 82.37 356 *i* P P 02 33 36.4 -0.9
PYM Petit Puy Mans 82.39 4 *e*P P 02 33 38.8 +1.5
TIRR Tirgusor 82.44 346 *e*P P 02 33 37.9 +0.3
comp=Z,76nm,1.0s,mb5.6
TIRR Tirgusor 82.44 346 *e*P P 02 33 37.9 +0.3
TIRR pmax pmax
comp=Z,76nm,1.0s,mb5.6
BOJS Bojanci 82.65 356 *i* P P 02 33 38.8 0.0
SKDS Skadanscina 82.66 357 *i* P P 02 33 38.3 -0.5
LPL La Plagne 82.75 2⇑*iP* P 02 33 40.6 +1.4
comp=Z,22nm,0.9s,mb4.9
LPL La Plagne 82.75 2⇑*iP* P 02 33 40.6 +1.4
comp=Z,11nm,0.9s,mb4.9
LPL La Plagne 82.75 2⇑*iP* P 02 33 40.6 +1.4
LPL pmax pmax
comp=Z,11nm,0.9s,mb4.9
RJF Les Rejaudoux 82.75 6⇑*iP* P 02 33 39.5 +0.3
comp=Z,42nm,1.0s,mb5.1
RJF *e*MLR MLR
comp=Z,535nm,21.0s,MS4.6
RJF Les Rejaudoux 82.75 6⇑*iP* P 02 33 39.5 +0.3
comp=Z,21nm,1.0s,mb5.1
RJF LR LR
comp=Z,530nm,21.0s,MS4.9
RJF Les Rejaudoux 82.75 6⇑*iP* P 02 33 39.5 +0.3
RJF pmax pmax
comp=Z,21nm,1.0s,mb5.1
RJF MLR MLR
comp=Z,530nm,21.0s,MS4.9
LPG La Plagne 82.77 2⇑*iP* P 02 33 40.9 +1.6
comp=Z,39nm,1.0s,mb5.1
LPG La Plagne 82.77 2⇑*iP* P 02 33 40.9 +1.6
comp=Z,19nm,1.0s,mb5.1
LPG La Plagne 82.77 2⇑*iP* P 02 33 40.9 +1.6
LPG pmax pmax
comp=Z,19nm,1.0s,mb5.1
SSB Saint Sauveur 82.92 3 *e*P P 02 33 40.9 +0.8
comp=Z,21nm,0.8s,mb5.2
SSB Saint Sauveur 82.92 3 *e*P P 02 33 40.9 +0.8
SSB pmax pmax
comp=Z,21nm,0.8s,mb5.2
GDM Grand'Maison 83.05 2 *e*P P 02 33 42.0 +1.2
LFF La Frestale 83.06 6⇑*iP* P 02 33 41.3 +0.4
comp=Z,94nm,0.7s,mb5.6
LFF La Frestale 83.06 6⇑*iP* P 02 33 41.3 +0.4
comp=Z,47nm,0.7s,mb5.6
LFF La Frestale 83.06 6⇑*iP* P 02 33 41.3 +0.4
LFF pmax pmax
comp=Z,47nm,0.7s,mb5.6
GNI Garni 83.12 333 *e*P P 02 33 42.2 +1.0
comp=Z,44nm,1.0s,mb5.5
GNI Garni 83.12 333 *e*P P 02 33 42.2 +0.9
GNI pmax pmax
comp=Z,44nm,1.0s
GNI Garni 83.12 333 P P 02 33 42.9 +1.6
SNR=7.1
CAF Calviac 83.16 5⇑*iP* P 02 33 41.9 +0.5
comp=Z,45nm,0.9s,mb5.2
CAF Calviac 83.16 5⇑*iP* P 02 33 41.9 +0.5
comp=Z,23nm,0.9s,mb5.2
CAF Calviac 83.16 5⇑*iP* P 02 33 41.9 +0.5
CAF pmax pmax
comp=Z,23nm,0.9s,mb5.2
PSN Preselentsi 83.23 346 P P 02 33 42.3 +0.5
AJM Ajmer 83.24 305 *e*PKP P 02 33 41.7 -0.5
AJM AMb AMB 02 33 43.2
comp=Z,96nm,1.2s,mb5.7
ORIF Oris-en-Rattie 83.32 2⇑*iP* P 02 33 43.3 +1.1
comp=Z,45nm,0.9s,mb5.2
ORIF *e*MLR MLR
comp=Z,302nm,21.0s,MS4.3
ORIF Oris-en-Rattie 83.32 2⇑*iP* P 02 33 43.3 +1.1
comp=Z,23nm,0.9s,mb5.2
ORIF Oris-en-Rattie 83.32 2⇑*iP* P 02 33 43.3 +1.1
ORIF pmax pmax
comp=Z,23nm,0.9s,mb5.2
VIVF Saint-Julien-l 83.35 3⇑*iP* P 02 33 43.1 +0.8
comp=Z,69nm,0.8s,mb5.4
VIVF Saint-Julien-l 83.35 3⇑*iP* P 02 33 43.1 +0.8
comp=Z,34nm,0.8s,mb5.4
VIVF Saint-Julien-l 83.35 3⇑*iP* P 02 33 43.1 +0.8
VIVF pmax pmax
comp=Z,34nm,0.8s,mb5.4
MBDF Montbardon 83.54 2⇑*iP* P 02 33 44.8 +1.5
comp=Z,49nm,0.8s,mb5.4
MBDF Montbardon 83.54 2⇑*iP* P 02 33 44.8 +1.5
comp=Z,24nm,0.8s,mb5.4
MBDF Montbardon 83.54 2⇑*iP* P 02 33 44.8 +1.5
MBDF pmax pmax
comp=Z,24nm,0.8s,mb5.4
DIVS Divibare 83.75 352 P P 02 33 45.4 +1.0
SURF Saint Ours 83.78 2 *e*P P 02 33 46.3 +1.7
PRD Provadia 83.81 347 P P 02 33 44.1 -0.7
EPON Pontenova 83.89 12 P P 02 33 45.4 +0.2
comp=Z,17nm,0.6s,mb5.3
SZH Strazhica 83.95 348 P P 02 33 44.9 -0.5
EMAZ Mazaricos 84.01 13 P P 02 33 46.9 +1.1
comp=Z,20nm,1.2s,mb5.1
PVL Pavlikeni 84.07 348 P P 02 33 46.0 -0.1
LASF Ste Croix 84.09 4⇑*iP* P 02 33 47.1 +0.9
comp=Z,36nm,1.0s,mb5.1
STS Santiago 84.14 13 P P 02 33 46.5 +0.1
comp=Z,6.8nm,0.9s,mb4.8
STS Santiago 84.14 13 P P 02 33 46.5 +0.1
STS pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
EARI Arriondas 84.15 11 P P 02 33 46.8 +0.3
comp=Z,26nm,0.6s,mb5.5
SMRF Simiane la Rot 84.26 3⇑*iP* P 02 33 48.5 +1.5
comp=Z,158nm,1.2s,mb5.7
SMRF Simiane la Rot 84.26 3⇑*iP* P 02 33 48.5 +1.5
comp=Z,158nm,1.2s,mb6.0
TOUF Mont Tournerai 84.26 2 *e*P P 02 33 48.0 +1.0
AUTN L'Aution 84.28 1 *e*P P 02 33 48.0 +0.9
SAOF Saorge 84.29 1 *e*P P 02 33 47.5 +0.3
MVIF Mont Vial 84.37 2 *e*P P 02 33 48.1 +0.5
LUCF Luceram 84.38 1 *e*P P 02 33 48.5 +0.9
ELAN Lanestosa 84.41 9 P P 02 33 48.2 +0.4
comp=Z,83nm,0.7s,mb6.0
SBF Sospel 84.41 1⇑*iP* P 02 33 48.2 +0.4
comp=Z,157nm,1.1s,mb5.8
SBF Sospel 84.41 1⇑*iP* P 02 33 48.2 +0.4
comp=Z,78nm,1.1s,mb5.8
SBF Sospel 84.41 1⇑*iP* P 02 33 48.2 +0.4
SBF pmax pmax
comp=Z,78nm,1.1s,mb5.8
BHPL Bhopal 84.45 301 *e*PKP P 02 33 47.7 -0.6
CALN Calern 84.51 2 *e*P P 02 33 48.9 +0.6
REVF Revere 84.53 1 *e*P P 02 33 48.9 +0.5
OSSF Osses 84.59 8 *e*P P 02 33 48.6 -0.1
EALK Alkurruntz 84.60 8 P P 02 33 49.5 +0.7
comp=Z,17nm,0.5s,mb5.4
ELIZ Elizondo 84.66 8 P P 02 33 50.1 +1.1
comp=Z,7.9nm,0.6s,mb5.0
ELIZ Elizondo 84.66 8 P P 02 33 50.1 +1.1
ELIZ pmax pmax
comp=Z,8.0nm,0.6s,mb5.0
FRF La Foret Royal 84.70 2⇑*iP* P 02 33 49.8 +0.5
comp=Z,115nm,1.1s,mb5.6
FRF La Foret Royal 84.70 2⇑*iP* P 02 33 49.8 +0.5
comp=Z,58nm,1.1s,mb5.6
FRF La Foret Royal 84.70 2⇑*iP* P 02 33 49.8 +0.5
FRF pmax pmax
comp=Z,58nm,1.1s,mb5.6
SJPF Ste Jean 84.73 8 *e*P P 02 33 49.5 +0.1
comp=Z,38nm,0.7s,mb5.3
SJPF Ste Jean 84.73 8 *e*P P 02 33 49.5 +0.1
comp=Z,19nm,0.7s,mb5.3
SJPF Ste Jean 84.73 8 *e*P P 02 33 49.5 +0.1
SJPF pmax pmax
comp=Z,19nm,0.7s,mb5.3
MTLF Montolieu 84.75 5⇑*iP* P 02 33 50.1 +0.6
comp=Z,42nm,0.8s,mb5.3
MTLF Montolieu 84.75 5⇑*iP* P 02 33 50.1 +0.6
comp=Z,21nm,0.8s,mb5.3
MTLF Montolieu 84.75 5⇑*iP* P 02 33 50.1 +0.6
MTLF pmax pmax
comp=Z,21nm,0.8s,mb5.3
EZAM Zamans 84.84 13 P P 02 33 52.5 +2.5
comp=Z,11nm,0.7s,mb5.1
EZAM Zamans 84.84 13 P P 02 33 52.5 +2.5
EZAM pmax pmax
comp=Z,11nm,0.7s,mb5.1
LABF Labassere 84.90 7 *e*P P 02 33 50.0 -0.3
LMR La Mourre 84.92 2⇑*iP* P 02 33 51.1 +0.7
comp=Z,115nm,1.2s,mb5.6
LMR La Mourre 84.92 2⇑*iP* P 02 33 51.1 +0.7
comp=Z,57nm,1.2s,mb5.6
LMR La Mourre 84.92 2⇑*iP* P 02 33 51.1 +0.7
LMR pmax pmax
comp=Z,57nm,1.2s,mb5.6
EPF Esparros 84.94 7⇑*iP* P 02 33 50.4 -0.1
comp=Z,40nm,0.8s,mb5.3
EPF Esparros 84.94 7⇑*iP* P 02 33 50.4 -0.1
comp=Z,20nm,0.8s,mb5.3
EPF Esparros 84.94 7⇑*iP* P 02 33 50.4 -0.1
EPF pmax pmax
comp=Z,20nm,0.8s,mb5.3
VTS Vitosha 84.94 350 P P 02 33 49.9 -0.6
VTS Vitosha 84.94 350 ⇑P P 02 33 50.2 -0.3
VTS Vitosha 84.94 350 P P 02 33 49.9 -0.6
VTS Vitosha 84.94 350⇑*iP* P 02 33 50.2 -0.3
VTS Vitosha 84.94 350 P P 02 33 49.6 -0.9
ETSF Etsaut 85.00 7⇑*iP* P 02 33 51.8 +1.0
comp=Z,80nm,0.7s,mb5.7
ETSF Etsaut 85.00 7⇑*iP* P 02 33 51.8 +1.0
comp=Z,40nm,0.7s,mb5.7
ETSF Etsaut 85.00 7⇑*iP* P 02 33 51.8 +1.0
ETSF pmax pmax
comp=Z,40nm,0.7s,mb5.7
VIEF Viey 85.06 7 *e*P P 02 33 52.0 +0.9
MLS Moulis 85.06 6 *e*P P 02 33 51.6 +0.5
RESF Ens 85.16 7 *e*P P 02 33 52.7 +1.1
LRDF Laroque-de-Fa 85.17 5 *e*P P 02 33 52.6 +1.0
DIM Dimitrovgrad 85.19 348 P P 02 33 52.3 +0.5
ELOB Lobios 85.20 13 P P 02 33 52.6 +0.8
comp=Z,3.3nm,0.5s,mb4.7
PLD Plovdiv 85.25 349 P P 02 33 51.9 -0.1
EBIE Bielsa 85.26 7 P P 02 33 53.6 +1.5
comp=Z,17nm,0.6s,mb5.3
ECAL Calabor 85.31 12 P P 02 33 53.2 +0.8
comp=Z,8.8nm,0.5s,mb5.2
CARF Carcanieres 85.36 5 *e*P P 02 33 53.2 +0.6
PCAB Cabril 85.36 13 *e*P P 02 33 53.4 +0.8
comp=Z,34nm,1.6s,mb5.2
PBRG Braganca 85.44 12 *e*P P 02 33 53.0 0.0
comp=Z,41nm,1.7s,mb5.3
KNA Kununurra 85.45 237 P P 02 33 52.7 -0.5
comp=Z,105nm,0.9s,mb6.0
CLLI Llivia 85.59 5 P P 02 33 55.0 +1.3
KDZ Kurdzhali 85.60 348 P P 02 33 53.8 0.0
CSOR Sort 85.64 6 P P 02 33 55.3 +1.3
comp=Z,24nm,0.8s,mb5.5
RZN Rozhen 85.65 349 P P 02 33 54.3 +0.2
VIS Vishakhapatnam 85.67 293 *e*PKP P 02 33 53.6 -0.9
VIS AMb AMB 02 33 58.3
comp=Z,45nm,1.3s,mb5.5
VALF Valcebollere 85.67 5 *e*P P 02 33 54.8 +0.7
EJON La Jonquera 85.67 5 P P 02 33 54.3 +0.1
comp=Z,10.0nm,0.8s,mb5.1
SKO Skopje 85.73 351 *e*P P 02 33 54.2 -0.2
PVRL Vila Real 85.83 13 *e*P P 02 33 55.2 +0.2
comp=Z,36nm,1.7s,mb5.3
PTO Porto 85.84 14 *e*P P 02 33 56.0 +1.0
MMB Musomiste 85.87 349 P P 02 33 55.7 +0.6
AQU L'Aquila 85.87 357 *e*P P 02 33 55.6 +0.5
comp=Z,54nm,0.9s,mb5.8
AQU L'Aquila 85.87 357⇓*iP* P 02 33 55.6 +0.5
MVO Moncorvo 86.03 12 *e*P P 02 33 55.8 -0.2
comp=Z,39nm,1.6s,mb5.4
MVO A 03 13 19.5
comp=Z,231nm,20.0s
MVO Moncorvo 86.03 12 P P 02 33 56.5 +0.5
NVR Nevrokopi 86.09 349 *e*P P 02 33 56.8 +0.6
EMIR Miracle 86.13 6 P P 02 33 58.0 +1.6
comp=Z,12nm,0.9s,mb5.1
BRTR Keskin Array B 86.15 341 P P 02 33 56.8 +0.2
comp=Z,18nm,0.9s,mb5.3,baz=32,slow=2.2,SNR=81
BRTR PP PP 02 37 18.2 +1.9
comp=Z,2.4nm,1.0s,baz=15,slow=4.2,SNR=3.7
BRTR PKKPbc PKKPbc 02 51 52.4 -0.5
comp=Z,0.8nm,0.8s,baz=163,slow=9.0,SNR=6.6
BRTR LR LR 03 15 16.7
comp=Z,134nm,20.7s,MS4.3,baz=191,slow=38
ESAC San Caprasio 86.17 7 P P 02 33 56.8 +0.1
comp=Z,35nm,0.8s,mb5.6
WRA Warramunga Arr 86.23 231 P P 02 33 55.2 -1.8
WRA Warramunga Arr 86.23 231 P P 02 33 55.2 -1.8
comp=Z,6.3nm,0.9s,mb4.8,baz=40,slow=6.7,SNR=7.8
WRA Warramunga Ar 86.23 231 P P 02 33 55.2 -1.8
WRA pmax pmax
comp=Z,6.0nm,0.9s
ALN Alexandroupoli 86.26 347 P P 02 33 57.5 +0.4
ALN Alexandroupoli 86.26 347 *e*P P 02 33 57.2 +0.1
ALN Alexandroupoli 86.26 347 P P 02 33 57.5 +0.4
VAY Valandovo 86.26 350 P P 02 33 56.9 -0.2
VAY Valandovo 86.26 350 P P 02 33 56.9 -0.2
VAY Valandovo 86.26 350 *i* P P 02 33 57.0 -0.1
CFON Fontmartina 86.33 5 P P 02 33 58.4 +1.0
comp=Z,10.0nm,0.6s,mb5.2
KRUS Krusevo 86.35 351 *e*P P 02 33 56.9 -0.7
SRS Serrai 86.35 349 P P 02 33 57.4 -0.1
SRS Serrai 86.35 349 P P 02 33 57.4 -0.1
PVIS Viseu 86.36 13 *e*P P 02 33 57.7 +0.1
comp=Z,30nm,1.7s,mb5.2
KAVA Kavala 86.36 349 P P 02 33 57.8 +0.2
KNT Kendrikon 86.38 350 P P 02 33 58.1 +0.4
KNT Kendrikon 86.38 350 P P 02 33 58.1 +0.4
MALT Malatya 86.47 337 *e*P P 02 33 58.3 +0.1
comp=Z,38nm,1.1s,mb5.5
MALT Malatya 86.47 337 ⇓P P 02 33 59.4 +1.2
MALT Malatya 86.47 337⇓*iP* P 02 33 59.4 +1.2
MALT Malatya 86.47 337 P P 02 33 58.9 +0.7
comp=Z,421nmcomp=Z,31nm,1.4s,mb5.3
GRG Griva 86.64 350 P P 02 33 59.3 +0.4
GRG Griva 86.64 350 P P 02 33 59.3 +0.4
EPOB Poblet 86.66 6 P P 02 33 58.8 -0.2
comp=Z,20nm,0.8s,mb5.4
SOH Sokhos 86.67 349 *e*P P 02 33 59.0 -0.1
BIA Bitola 86.69 351 P P 02 33 57.8 -1.4
BIA Bitola 86.69 351 P P 02 33 57.8 -1.4
BIA Bitola 86.69 351 *e*P P 02 33 58.0 -1.2
MTE Manteigas 86.72 13 *e*P P 02 33 59.7 +0.4
comp=Z,32nm,2.0s,mb5.2
MTE A 03 15 17.6
comp=Z,308nm,18.0s
GUD Guadarrama 86.90 10 P P 02 34 00.3 +0.1
comp=Z,18nm,0.6s,mb5.5
GUD Guadarrama 86.90 10 P P 02 34 00.3 +0.1
GUD pmax pmax
comp=Z,18nm,0.6s,mb5.5
FNA Florina 86.92 351 P P 02 33 59.7 -0.6
FNA Florina 86.92 351 P P 02 33 59.7 -0.6
ETOR Torete 86.94 9 P P 02 33 59.5 -0.9
comp=Z,18nm,0.5s,mb5.6
ETOR Torete 86.94 9 P P 02 33 59.5 -0.9
ETOR pmax pmax
comp=Z,19nm,0.5s,mb5.6
OUR Ouranopolis 87.08 349 P P 02 34 00.6 -0.5
OUR Ouranopolis 87.08 349 P P 02 34 00.6 -0.5
EPLA Plasencia 87.24 12 P P 02 34 01.2 -0.7
comp=Z,27nm,0.6s,mb5.7
EPLA Plasencia 87.24 12 P P 02 34 01.2 -0.7
EPLA pmax pmax
comp=Z,27nm,0.6s,mb5.7
PCBR Castelo Branco 87.28 13 *e*P P 02 34 01.7 -0.4
comp=Z,20nm,1.6s,mb5.1
PTOM Tomar 87.36 14 *e*P P 02 34 02.3 -0.2
comp=Z,39nm,1.3s,mb5.5
LIT Litokhoron 87.48 350 P P 02 34 01.4 -1.6
LIT Litokhoron 87.48 350 *e*P P 02 34 01.5 -1.5
LIT Litokhoron 87.48 350 P P 02 34 01.4 -1.6
PAIG Paliouri 87.52 349 P P 02 34 02.4 -0.8
PAIG Paliouri 87.52 349 P P 02 34 02.4 -0.8
EMOS Mosqueruela 87.52 8 P P 02 34 04.4 +1.2
comp=Z,6.3nm,0.8s,mb4.9
PMRV Marv??o 87.69 13 *e*P P 02 34 04.4 +0.3
comp=Z,21nm,1.6s,mb5.1
PMRV A 03 17 16.9
comp=Z,280nm,18.0s
PRK Paraskevi 87.85 347 P P 02 34 04.7 -0.1
PRK Paraskevi 87.85 347 *e*P P 02 34 04.0 -0.8
PRK Paraskevi 87.85 347 P P 02 34 04.7 -0.1
ESDC Sonseca Array 87.88 10 P P 02 34 03.8 -1.1
comp=Z,12nm,0.7s,mb5.2,baz=350,slow=4.5,SNR=75
ESLA Sonseca Array 87.88 10 *e*P P 02 34 04.7 -0.2
comp=Z,4.8nm,1.0s,mb4.7
PMAFR Mafra 87.88 14 *e*P P 02 34 05.0 0.0
comp=Z,84nm,2.2s,mb5.6
PMAFR A 03 21 49.3
comp=Z,205nm,18.0s
PAB San Pablo 87.96 11 *e*P P 02 34 05.1 -0.3
comp=Z,4.9nm,0.6s,mb4.9
PAB San Pablo 87.96 11 *e*P P 02 34 05.1 -0.2
PAB pmax pmax
comp=Z,5.0nm,0.6s,mb4.9
THL Klokotos Trika 88.06 350 P P 02 34 04.5 -1.3
PSI Prapat 88.09 272 P P 02 34 05.7 -0.6
PSI Prapat 88.09 272 P P 02 34 05.7 -0.6
comp=Z,41nm,0.6s,mb5.8,baz=11,slow=3.7,SNR=33
PSI Prapat 88.09 272 P P 02 34 05.7 -0.6
PSI pmax pmax
comp=Z,41nm,0.6s,mb5.8
XOR Xorichti 88.13 349 P P 02 34 05.1 -1.0
XOR Xorichti 88.13 349 P P 02 34 05.1 -1.0
PESTR Estremoz 88.22 13 *e*P P 02 34 05.9 -0.7
comp=Z,22nm,1.4s,mb5.2
PESTR A 03 17 45.9
comp=Z,275nm,18.0s
ECHE Chera 88.25 8 P P 02 34 07.7 +1.0
comp=Z,14nm,0.6s,mb5.3
ECHE Chera 88.25 8 P P 02 34 07.7 +1.0
ECHE pmax pmax
comp=Z,14nm,0.6s,mb5.4
ETOS Mallorca 88.34 5 P P 02 34 07.5 +0.3
comp=Z,4.1nm,0.6s,mb4.8
EBAD Badajoz 88.41 13 P P 02 34 06.3 -1.1
comp=Z,7.7nm,0.9s,mb4.9
EVO Evora 88.48 14 *e*P P 02 34 08.3 +0.5
comp=Z,6.2nm,0.7s,mb4.7
EVO *e*MLR MLR
comp=Z,433nm,20.8s,MS4.5
EVO Evora 88.48 14 *e*P P 02 34 07.5 -0.3
comp=Z,24nm,1.5s,mb5.2
AGG Agios Georgios 88.56 350 *e*P P 02 34 06.9 -1.3
HYB Hyderabad 88.58 297 *i* P P 02 34 08.0 -0.6
comp=Z,130nm,1.0s,mb6.2
BKNI Bangkinang 88.72 269 P P 02 34 10.0 +0.7
CHOS Chios island 88.73 347 *e*P P 02 34 08.6 -0.4
CHOS Chios island 88.73 347 P P 02 34 09.1 +0.1
PBAR Barrancos 88.97 13 *e*P P 02 34 09.9 -0.3
comp=Z,24nm,1.1s,mb5.5
PBAR A 03 18 20.4
comp=Z,314nm,18.0s
PBEJ Beja 89.00 14 *e*P P 02 34 10.3 0.0
comp=Z,23nm,1.7s,mb5.2
FITZ Fitzroy Crossi 89.05 239 *e*P P 02 34 09.7 -0.9
comp=Z,33nm,1.0s,mb5.6
FITZ Fitzroy Crossi 89.05 239 P P 02 34 10.3 -0.3
EVIA Vianos 89.05 9 P P 02 34 11.3 +0.8
comp=Z,15nm,0.6s,mb5.5
EVIA Vianos 89.05 9 P P 02 34 11.3 +0.8
EVIA pmax pmax
comp=Z,15nm,0.6s,mb5.5
ETOB Tobarra 89.14 9 P P 02 34 11.7 +0.8
comp=Z,8.9nm,0.9s,mb5.1
SDV Santo Domingo 89.14 77 *e*P P 02 34 10.9 -0.4
comp=Z,6.7nm,0.6s,mb5.2
SDV *e*pP pP 02 34 23.5 +0.8
EBEN Beniarda 89.19 7 P P 02 34 12.7 +1.5
comp=Z,2.3nm,0.7s,mb4.6
EFP Efpalio 89.20 350 P P 02 34 11.4 +0.2
EADA Adamuz 89.29 11 P P 02 34 12.1 +0.4
comp=Z,12nm,1.0s,mb5.2
PTEO Sao Teotonio 89.35 14 *e*P P 02 34 11.8 -0.1
comp=Z,66nm,1.4s,mb5.8
PCVE Castro Verde 89.36 14 *e*P P 02 34 11.9 -0.1
comp=Z,21nm,1.6s,mb5.2
PCVE A 03 15 24.3
comp=Z,346nm,18.0s
EBAN Banos Encina 89.39 10 P P 02 34 13.7 +1.6
comp=Z,3.6nm,0.6s,mb4.9
EBAN Banos Encina 89.39 10 P P 02 34 13.7 +1.6

EBAN					pmax	pmax			
	comp=Z,4.0nm,0.6s,mb4.9								
EMIN	**Mina Concepcio**	**89.42**	**13**		P	**P**	**02 34 11.5**	**-0.8**
	comp=Z,5.9nm,0.6s,mb5.1								
EGRO	**El Granado**	**89.54**	**13**		P	**P**	**02 34 13.2**	**+0.3**
	comp=Z,7.2nm,0.7s,mb5.1								
MORF	**Marmelete**	**89.59**	**14**	*e*	P	**P**	**02 34 13.3**	**+0.2**
MORF	comp=Z,36nm,1.3s,mb5.5				A		03 16 37.1		
	comp=Z,295nm,18.0s								
ASAR	**Alice Springs**	**89.63**	**229**		P	**P**	**02 34 12.4**	**-0.8**
	comp=Z,20nm,1.0s,mb5.4,baz=45,slow=4.8,SNR=76								
ASAR	**Alice Springs**	**89.63**	**229**		P	**P**	**02 34 12.4**	**-0.8**
ASAR					pmax	pmax			
	comp=Z,20nm,1.0s								
GUR	**Goura**	**89.63**	**350**		P	**P**	**02 34 12.9**	**-0.4**
PVAQ	**Vaqueiros**	**89.64**	**14**	*e*	P	**P**	**02 34 13.2**	**-0.1**
	comp=Z,38nm,1.4s,mb5.5								
PVAQ					A		03 14 45.0		
	comp=Z,285nm,20.0s								
PFVI	**Vila Bisbo**	**89.73**	**14**		A		03 18 41.8		
	comp=Z,258nm,18.0s								
PBDV	**Barranco-do-Ve**	**89.76**	**14**		A		03 15 37.3		
	comp=Z,348nm,18.0s								
EQES	**Quesada**	**89.82**	**10**		P	**P**	**02 34 14.7**	**+0.5**
	comp=Z,8.0nm,1.2s,mb4.9								
EHUE	**Huescar**	**89.86**	**9**		P	**P**	**02 34 14.1**	**-0.2**
	comp=Z,9.0nm,1.1s,mb5.0								
EHUE	**Huescar**	**89.86**	**9**		P	**P**	**02 34 14.1**	**-0.2**
EHUE					pmax	pmax			
	comp=Z,9.0nm,1.1s,mb5.0								
DID	**Didima**	**89.96**	**349**		P	**P**	**02 34 13.2**	**-1.6**
EMUR	**La Murta**	**89.96**	**8**		P	**P**	**02 34 14.6**	**-0.2**
	comp=Z,2.9nm,0.6s,mb4.8								
ROSC	**El Rosal**	**90.07**	**82**		P	**P**	**02 34 16.6**	**+0.9**
	comp=Z,1.4nm,0.4s,mb4.6,baz=104,slow=19,SNR=3.3								
ROSC					LR	LR	03 13 13.1		
	comp=Z,53nm,19.6s,MS4.0,baz=354,slow=35								
POO	**Poona**	**90.21**	**301**	*e*	PKP	**P**	**02 34 16.1**	**-0.2**
ECOG	**Cogollos-Vega**	**90.29**	**10**		P	**P**	**02 34 16.8**	**+0.5**
	comp=Z,10.0nm,0.7s,mb5.2								
ECOG	**Cogollos-Vega**	**90.29**	**10**		P	**P**	**02 34 16.8**	**+0.5**
ECOG					pmax	pmax			
	comp=Z,10.0nm,0.7s,mb5.2								
ELOJ	**Sierra Loja**	**90.35**	**11**		P	**P**	**02 34 17.3**	**+0.7**
	comp=Z,12nm,0.8s,mb5.3								
ELOJ	**Sierra Loja**	**90.35**	**11**		P	**P**	**02 34 17.3**	**+0.7**
ELOJ					pmax	pmax			
	comp=Z,12nm,0.8s,mb5.3								
ESPR	**Espera**	**90.42**	**12**		P	**P**	**02 34 17.2**	**+0.3**
	comp=Z,2.8nm,0.6s,mb4.8								
URZ	**Urewera**	**90.61**	**190**		LR	LR	03 12 41.9		
	comp=Z,370nm,19.1s,MS4.8,baz=8.3,slow=34								
EGUA	**Guajares**	**90.73**	**10**		P	**P**	**02 34 19.1**	**+0.7**
	comp=Z,50nm,0.6s,mb6.0								
EGUA	**Guajares**	**90.73**	**10**		P	**P**	**02 34 19.1**	**+0.7**
EGUA					pmax	pmax			
	comp=Z,50nm,0.6s,mb6.0								
ENIJ	**Nijar**	**90.73**	**9**		P	**P**	**02 34 18.1**	**-0.3**
	comp=Z,2.5nm,0.5s,mb4.8								
ENIJ	**Nijar**	**90.73**	**9**		P	**P**	**02 34 18.1**	**-0.3**
ENIJ					pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.9								
EBER	**Berja**	**90.74**	**10**		P	**P**	**02 34 18.7**	**+0.3**
	comp=Z,6.7nm,0.6s,mb5.2								
EMIJ	**Mijas**	**90.85**	**11**		P	**P**	**02 34 19.5**	**+0.5**
	comp=Z,4.4nm,0.5s,mb5.0								
EJIF	**Jimena Fronter**	**90.88**	**12**		P	**P**	**02 34 20.4**	**+1.4**
	comp=Z,3.1nm,0.5s,mb4.9								
EJIF	**Jimena Fronter**	**90.88**	**12**		P	**P**	**02 34 20.4**	**+1.3**
EJIF					pmax	pmax			
	comp=Z,3.0nm,0.5s,mb4.9								
KAD	**Karad**	**91.04**	**300**	*e*	PKP	**P**	**02 34 19.5**	**-0.6**
KAD					AMb	AMB	02 34 20.6		
	comp=Z,37nm,1.4s,mb5.5								
MIB	**Mutribah**	**91.93**	**328**	*e*	P	**P**	**02 34 23.1**	**-1.0**
MIB					AMb	AMB	02 34 25.1		
	comp=Z,105nm,0.9s,mb6.2								
MMAI	**Mount Meron Ar**	**92.24**	**338**		P	**P**	**02 34 25.1**	**-0.3**
	comp=Z,28nm,0.9s,mb5.6,baz=10,slow=5.9,SNR=26								
MMAI					LR	LR	03 24 36.1		
	comp=Z,230nm,19.2s,MS4.6,baz=30,slow=41								
NAY	**Al-Naaiem**	**92.47**	**328**	*e*	P	**P**	**02 34 25.3**	**-1.3**
NAY					AMb	AMB	02 34 27.5		
	comp=Z,28nm,1.2s,mb5.5								
KEST	**Kesra**	**92.55**	**0**	*e*	P	**P**	**02 34 27.1**	**+0.3**
KEST	**Kesra**	**92.55**	**0**		P	**P**	**02 34 27.4**	**+0.6**
	comp=Z,2.3nm,0.9s,mb4.6,baz=244,slow=0.4,SNR=7.4								
RDF	**Al-Radifah**	**92.67**	**327**	*e*	P	**P**	**02 34 26.7**	**-0.8**
STKA	**Stephens Creek**	**93.49**	**219**	*e*	P	**P**	**02 34 29.5**	**-1.4**
	comp=Z,5.3nm,1.1s,mb4.9								
STKA	**Stephens Creek**	**93.49**	**219**		P	**P**	**02 34 29.6**	**-1.2**
	comp=Z,6.9nm,1.0s,mb5.0,baz=338,slow=1.1,SNR=6.7								
ASUD	**Al Ashush, Dub**	**93.69**	**319**		P	**P**	**02 34 32.0**	**-0.2**
	SNR=5.1								
ARQ	**Araqi**	**94.34**	**317**		P	**P**	**02 34 34.9**	**-0.4**
	SNR=12								
JMDO	**Jabal Madar**	**94.53**	**316**		P	**P**	**02 34 35.9**	**-0.3**
	SNR=5.3								
PALK	**Pallekele**	**95.57**	**289**	*i*	P	**P**	**02 34 43.9**	**+2.9**
TORD	**Torodi Ar. Bea**	**114.69**	**8**		PKP	PKiKP	02 39 55.3	-0.7
	comp=Z,1.7nm,0.6s,baz=341,slow=2.5,SNR=23								
TORD					PKKPbc	PKKPbc	02 50 30.9	-0.7	
	comp=Z,1.7nm,0.8s,baz=167,slow=1.7,SNR=12								
TIC	**Toumodi**	**120.21**	**17**	*e*	PKP1	PKPdf	02 40 08.7	+2.0	
	comp=Z,72nm,1.4s								
DBIC	**Dimbokro**	**120.22**	**16**		PKP	PKPdf	02 40 06.3	-0.5	
	comp=Z,5.6nm,0.9s,baz=142,slow=9.1,SNR=6.2								
DBIC	**Dimbokro**	**120.22**	**16**		PKIKP	PKPdf	02 40 06.3	-0.4	
DBIC					pmax	pmax			
	comp=Z,6.0nm,0.9s								
KIC	**Kosan Boka**	**120.54**	**16**	*e*	PKP1	PKPdf	02 40 08.2	+0.8	
	comp=Z,91nm,1.8s								
LIC	**Lamto**	**120.62**	**17**	*e*	PKP1	PKPdf	02 40 09.3	+1.8	
	comp=Z,99nm,1.7s								
KMBO	**Kilima Mbogo**	**124.10**	**326**		PKPdf	PKPdf	02 40 15.7	+1.5	
QSPA	**South Pole Qui**	**141.85**	**180**	*e*	PKPdf	PKPdf	02 40 38.8	-6.6	
TSUM	**Tsumeb**	**146.55**	**346**	*e*	PKPbc	PKPbc	02 40 57.0	+0.1	
MAW	**Mawson**	**150.18**	**218**	*e*	PKPdf	PKPbc	02 41 04.2	-0.7	
MAW	**Mawson**	**150.18**	**218**		PKPbc	PKPbc	02 41 04.4	-0.5	
	comp=Z,25nm,0.9s,baz=85,slow=1.6,SNR=38								
MAW	**Mawson**	**150.18**	**218**		PKIKP	PKPbc	02 41 04.4	-0.5	
MAW					pmax	pmax			
	comp=Z,25nm,0.9s								
LBTB	**Lobatse**	**150.28**	**329**	*e*	PKPbc	PKPbc	02 41 07.2	+0.7	
BOSA	**Boshof**	**153.73**	**327**		PKPbc	PKPbc	02 41 14.5	+0.3	
BOSA	**Boshof**	**153.73**	**327**		PKPbc	PKPbc	02 41 14.5	+0.3	
	comp=Z,13nm,0.5s,baz=15,slow=1.8,SNR=60								
BOSA	**Boshof**	**153.73**	**327**		PKIKP	PKPbc	02 41 14.5	+0.3	
BOSA					pmax	pmax			
	comp=Z,13nm,0.5s								
MAIT	**Maitri**	**161.22**	**182**	*e*	P	PKPdf	02 41 11.7	-2.6	

*IDC **18** 02:22:22.9±0.9,31°.05N×103°.42E,h0km,mb4.1/9, mb1 4.2/10,mb1mx3.9/24,mbtmp4.1/10,ML3.5/1,Error ellipse: s-maj=35.5km s-min=15.7km az=58.0*
*ISCJB **18** 02:22:23.0±1.0,31°.28N±0°.04×103°.54E±0°.05,h14km±7km, mb4.0/11,Error ellipse: s-maj=7.7km s-min=6.1km az=27.3*
*BJI **18** 02:22:23.8,31°.23N×103°.61E,h15km,ML4.2/16,Ms4.1/8, Ms7 3.6/5*
*NEIC **18** 02:22:24.9±0.5,31°.19N×103°.51E,h10km,mb4.2/2,Error ellipse: s-maj=14.9km s-min=9.6km az=57.0*
ISC 18 02:22:24.6±0.8,31°.28N±0°.03×103°.53E±0°.04,h12km±5km, n34,σ1°19/43,mb4.0/11,1C,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.42**	**152**	Pg	**Pg**	**02 22 32.4**	**-0.5**
CD2				Sg	**Sg**	**02 22 39.6**	**+1.1**
CD2				smax			
	comp=N,39μm,0.6s						
CD2				smax			
	comp=E,69μm,0.7s						
LZH	**Lanzhou**	**4.80**	**3**	⇑Pg	**Pg**	**02 23 56.5**	**-0.1**
LZH				Sg	**Sg**	**02 24 58.1**	**-0.7**
LZH				smax			
	comp=N,140nm,1.0s						
LZH				smax			
	comp=E,160nm,0.7s						
LZH				LR	LR		
	comp=E,1μm,6.4s						
LZH				LR	LR		
	comp=Z,2μm,7.3s						
ENH	**Enshi**	**5.22**	**100**	*e*	Pn	**Pn**	**02 23 43.2**	**+0.6**
	comp=Z,192nm,0.5s							
ENH				*e*	S	**Sn**	**02 24 41.9**	**-0.9**
XAN	**Xi'an**	**5.32**	**57**		Pn	**Pn**	**02 23 43.4**	**-0.4**
XAN					Sn	**Sn**	**02 24 39.4**	**-5.6**
XAN					Sg	**Sg**	**02 25 08.3**	**-7.0**
XAN					smax			
	comp=N,320nm,0.7s							
XAN					smax			
	comp=E,100nm,0.9s							
XAN					LR	LR		
	comp=N,880nm,11.6s							
XAN					LR	LR		
	comp=E,170nm,11.6s							
XAN					LR	LR		
	comp=Z,110nm,6.8s							
GYA	**Guiyang**	**5.53**	**149**		Pn	**Pn**	**02 23 46.8**	**-0.1**
GYA					Sg	**Sg**	**02 25 21.8**	**-0.5**
GYA					smax			
	comp=N,250nm,0.8s							
GYA					smax			
	comp=E,230nm,0.9s							
KMI	**Kunming**	**6.17**	**187**		Pn	**Pn**	**02 23 55.4**	**-0.3**
KMI					Sn	**Sn**	**02 25 00.8**	**-5.4**
KMI					smax			
	comp=N,36nm,1.3s							
KMI					smax			
	comp=E,49nm,1.0s							
KMI					LR	LR		
	comp=N,440nm,7.7s							
KMI					LR	LR		
	comp=E,1μm,10.3s							
WHN	**Wuhan**	**9.32**	**92**		P	**Pn**	**02 24 40.6**	**+1.7**
WHN					S	**Sn**	**02 26 17.8**	**-5.9**
WHN					LR	LR		
	comp=N,910nm,6.8s							
WHN					LR	LR		
	comp=E,950nm,7.2s							
WHN					LR	LR		
	comp=Z,620nm,12.5s							
HHC	**Hu-ho-hao-te**	**11.55**	**32**	*e*	P	**Pn**	**02 25 05.4**	**-3.9**
HHC					pP		02 25 08.8	
HHC					PP		02 25 13.5	
HHC				*e*	S	**Sn**	**02 27 14.8**	**-3.3**
HHC					sS		02 27 19.5	
HHC					SS		02 27 27.1	
HHC					pmax	pmax		
	comp=Z,21nm,0.8s							
HHC					pmax	pmax		
	comp=Z,78nm,3.6s							
HHC					LR	LR		
	comp=N,370nm,9.1s							
HHC					LR	LR		
	comp=E,410nm,7.9s							
HHC					LR	LR		
	comp=Z,250nm,7.1s							
CMAR	**Chiang Mai Arr**	**13.42**	**199**		Pn	**Pn**	**02 25 35.8**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=5.6,slow=13,SNR=6.0							
TAPN	**Taplejung**	**14.35**	**258**	*e*	P	**Pn**	**02 25 53.0**	**+5.4**
ODAN	**Odare**	**14.78**	**257**	*e*	P	**Pn**	**02 25 51.3**	**-2.3**
	comp=Z,28nm,1.0s							
GUN	**Gumba**	**15.72**	**262**	*e*	P	**Pn**	**02 26 10.2**	**+4.3**
PKI	**Pulchoki**	**16.21**	**261**	*e*	P	**Pn**	**02 26 11.0**	**-1.4**
	comp=Z,18nm,0.5s							
PKIN	**Phulchoki**	**16.22**	**261**	*e*	P	**Pn**	**02 26 11.4**	**-1.1**
	comp=Z,37nm,0.8s							
KKN	**Kakani**	**16.26**	**262**	*e*	P	**Pn**	**02 26 13.3**	**+0.4**
	comp=Z,37nm,0.8s							
DMN	**Daman**	**16.46**	**262**	*e*	P	**Pn**	**02 26 13.3**	**-2.2**
	comp=Z,32nm,0.8s							
SONM	**Songino Array**	**16.68**	**7**		Pn	**Pn**	**02 26 20.9**	**+2.7**
	comp=Z,0.2nm,0.3s,baz=195,slow=11,SNR=6.1							
GKN	**Gorkha**	**16.75**	**264**	*e*	P	**Pn**	**02 26 19.4**	**+0.3**
	comp=Z,52nm,0.8s							
KOLN	**Koldanda**	**17.69**	**264**	*e*	P	**Pn**	**02 26 24.3**	**-6.7**
	comp=Z,18nm,0.7s							
KSRS	**Korea Array**	**21.03**	**66**		P	**P**	**02 27 08.8**	**+0.5**
	comp=Z,2.7nm,0.7s,mb3.7,baz=258,slow=10,SNR=7.3							
MK31	**Makanchi Array**	**22.53**	**319**	*e*	P	**P**	**02 27 23.0**	**-1.2**
MKAR	**Makanchi Array**	**22.53**	**319**		P	**P**	**02 27 25.6**	**+1.4**
	comp=Z,5.7nm,1.0s,mb3.9,baz=112,slow=12,SNR=12							
TKM2	**Tokmak 2**	**25.01**	**306**	*e*	P	**P**	**02 27 48.9**	**+0.5**
	comp=Z,1.5nm,0.4s,mb3.9							
AAK	**Ala-Archa**	**25.70**	**304**		P	**P**	**02 27 47.3**	**-7.3**
	comp=Z,4.7nm,0.6s,mb4.2							
ZAA0	**Zalesovo Array**	**26.35**	**335**	*e*	P	**P**	**02 28 01.2**	**+0.8**
ZALV	**Zalesovo Beam**	**26.35**	**335**		P	**P**	**02 28 01.4**	**+1.0**
	comp=Z,1.3nm,0.5s,mb3.7,baz=128,slow=6.4,SNR=9.8							
KURK	**Kurchatov**	**26.81**	**324**		P	**P**	**02 28 05.9**	**+1.3**
	comp=Z,5.1nm,0.8s,mb4.1,baz=134,slow=8.9,SNR=20							
KBL	**Kabul**	**29.05**	**286**		P	**P**	**02 28 26.9**	**+2.1**
BVAR	**Borooye Array**	**32.35**	**322**		P	**P**	**02 28 54.6**	**+0.9**
	comp=Z,1.0nm,0.8s,mb3.7,baz=116,slow=10,SNR=4.1							
WRA	**Warramunga Arr**	**58.89**	**146**		P	**P**	**02 32 22.7**	**-0.9**
	comp=Z,5.6nm,0.8s,mb4.7,baz=341,slow=7.6,SNR=12							
ASAR	**Alice Springs**	**61.90**	**148**		P	**P**	**02 32 43.7**	**-0.4**
	comp=Z,1.5nm,0.8s,mb4.2,baz=344,slow=6.4,SNR=10							
ILAR	**Eielson Array**	**69.89**	**25**		P	**P**	**02 33 38.1**	**+3.0**
	comp=Z,0.7nm,0.6s,mb3.8,baz=297,slow=3.6,SNR=5.9							
STKA	**Stephens Creek**	**72.42**	**147**		P	**P**	**02 33 49.8**	**-1.0**
STKA	**Stephens Creek**	**72.42**	**147**		P	**P**	**02 33 49.8**	**-1.0**
	comp=Z,1.7nm,0.7s,mb4.1,baz=306,slow=11,SNR=4.7							

*DDA **18** 02:40:43.8,37°.02N×29°.19E,h22km±2km,Md3.5*
*CSEM **18** 02:40:44.5±0.2,37°.04N×29°.14E,h2km,MD3.4,Error ellipse: s-maj=4.4km s-min=2.9km az=14.0*
*ISK **18** 02:40:44.3,37°.05N×29°.14E,h6km,MD3.4*
*ISCJB **18** 02:40:45.3±0.3,37°.08N±0°.03×29°.14E±0°.02,h10km,Error ellipse: s-maj=3.9km s-min=2.5km az=18.8*
ISC 18 02:40:45.2±0.4,37°.08N±0°.03×29°.13E±0°.02,h0km±4km, n79,σ1°04/109,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.30**	**75**	PG	**Pg**	**02 40 50.4**	**-0.6**
GLHS				SG	**Sg**	**02 40 56.2**	**+1.3**
GLHS	**Glhisar (BURDU**	**0.30**	**75**	*i* Pg	**Pg**	**02 40 50.4**	**-0.6**
GLHS				*i* Sg	**Sg**	**02 40 56.2**	**+1.3**
GOLH	**Golhisar**	**0.38**	**65**	*i* P	**Pg**	**02 40 50.7**	**-1.7**
GOLH				*i* S	**Sg**	**02 40 58.2**	**+0.9**
GOLH	**Golhisar**	**0.38**	**65**	*i* P	**Pg**	**02 40 50.7**	**-1.7**
GOLH				*i* S	**Sg**	**02 40 58.2**	**+0.9**
TURN	**Turunc**	**0.47**	**245**	*i* P	**Pg**	**02 40 58.6**	**+4.4**
TURN				*i* S	**Sg**	**02 41 10.2**	**+10**
DNZL	**Cakiroluk**	**0.62**	**354**	*i* P	**Pg**	**02 40 57.1**	**+0.1**
DNZL				*i* S	**Sg**	**02 41 05.2**	**+0.2**
DNZL	**Cakiroluk**	**0.62**	**354**	*i* P	**Pg**	**02 40 57.1**	**+0.1**
DNZL				*i* S	**Sg**	**02 41 05.2**	**+0.2**
DENT	**Denizli**	**0.68**	**353**	*e* PG	**Pg**	**02 40 57.8**	**-0.4**
DENT	**Denizli**	**0.68**	**353**	*e* Pg	**Pg**	**02 40 57.8**	**-0.4**
YER	**Yerkesik**	**0.68**	**275**	*e* PG	**Pg**	**02 40 57.5**	**-0.8**
YER				*e* SG	**Sg**	**02 41 08.8**	**+1.7**
YER	**Yerkesik**	**0.68**	**275**	*e* Pg	**Pg**	**02 40 57.5**	**-0.7**
YER				*e* Sg	**Sg**	**02 41 08.8**	**+1.7**
ELL	**Elmali**	**0.70**	**118**	*e* PG	**Pg**	**02 40 57.2**	**-1.4**
ELL				*e* SG	**Sg**	**02 41 08.2**	**+0.5**
ELL	**Elmali**	**0.70**	**118**	*e* Pg	**Pg**	**02 40 57.2**	**-1.4**
ELL				*e* Sg	**Sg**	**02 41 08.2**	**+0.5**
AKAS	**Kas**	**0.92**	**156**	*i* P	**Pg**	**02 41 00.0**	**-2.8**
AKAS				*i* S	**Sg**	**02 41 16.9**	**+2.1**
AKAS	**Kas**	**0.92**	**156**	*i* P	**Pg**	**02 41 00.0**	**-2.8**
AKAS				*i* S	**Sg**	**02 41 16.9**	**+2.1**
KORT	**Korkueli**	**0.98**	**94**	*i* P	**Pg**	**02 41 03.0**	**-1.0**
KORT				*i* S	**Sg**	**02 41 20.1**	**+3.5**
KORT	**Korkueli**	**0.98**	**94**	*i* P	**Pg**	**02 41 03.0**	**-0.9**
KORT				*i* S	**Sg**	**02 41 20.0**	**+3.4**
MLSB	**Milas**	**1.10**	**282**	*e* PN	**Pg**	**02 41 05.9**	**-0.5**
MLSB	**Milas**	**1.10**	**282**	*e* Pn	**Pg**	**02 41 05.9**	**-0.4**
AYDN	**Tasoluk**	**1.16**	**301**	*i* P	**Pg**	**02 41 07.0**	**-0.4**
AYDN				*i* S	**Sg**	**02 41 25.2**	**+2.9**
AYDN	**Tasoluk**	**1.16**	**301**	*i* P	**Pg**	**02 41 07.0**	**-0.3**
AYDN				*i* S	**Sg**	**02 41 25.2**	**+2.9**
BCK	**Bucak**	**1.22**	**71**	*e* PN	**Pn**	**02 41 08.2**	**-1.3**
BCK	**Bucak**	**1.22**	**71**	*e* Pn	**Pn**	**02 41 08.2**	**-1.3**
KHL	**Karahalli**	**1.28**	**14**	*e* PN	**Pn**	**02 41 09.5**	**-0.8**
KHL	**Karahalli**	**1.28**	**14**	*e* Pn	**Pn**	**02 41 09.5**	**-0.8**
DAT	**Datca**	**1.29**	**255**	*e* PN	**Pn**	**02 41 09.7**	**-0.8**
DAT	**Datca**	**1.29**	**255**	*e* Pn	**Pn**	**02 41 09.7**	**-0.8**
KHAL	**Karahalli**	**1.32**	**12**	*i* P	**Pg**	**02 41 09.2**	**-1.3**
KHAL				*i* S	**Sg**	**02 41 31.1**	**+3.4**
KHAL	**Karahalli**	**1.32**	**12**	*i* P	**Pg**	**02 41 09.2**	**-1.3**
KHAL				*i* S	**Sg**	**02 41 31.1**	**+3.4**
BDRM	**Kayabasi**	**1.35**	**270**	*i* P	**Pg**	**02 41 10.7**	**-0.3**
BDRM				*i* S	**Sg**	**02 41 30.0**	**+1.5**
BDRM	**Kayabasi**	**1.35**	**270**	*i* P	**Pg**	**02 41 10.7**	**-0.4**
BDRM				*i* S	**Sg**	**02 41 30.0**	**+1.4**
BODT	**Bodrum**	**1.46**	**270**	*e* PN	**Pn**	**02 41 11.8**	**-0.9**
BODT	**Bodrum**	**1.46**	**270**	*e* Pn	**Pn**	**02 41 11.8**	**-0.9**
KULA	**Kula-Manisa**	**1.48**	**346**	*e* PN	**Pn**	**02 41 12.9**	**-0.2**
KULA	**Kula-Manisa**	**1.48**	**346**	*e* Pn	**Pn**	**02 41 12.9**	**-0.2**
IZM	**Izmir**	**1.98**	**312**	*e* PN	**Pn**	**02 41 19.4**	**-0.5**
IZM	**Izmir**	**1.98**	**312**	*e* Pn	**Pn**	**02 41 19.4**	**-0.6**
DEMI	**Demirci**	**1.99**	**351**	*i* P	**Pn**	**02 41 19.6**	**-0.5**
DEMI	**Demirci**	**1.99**	**351**	*i* P	**Pn**	**02 41 19.6**	**-0.4**
GDZ	**Gediz**	**2.03**	**8**	*i* P	**Pn**	**02 41 19.8**	**-0.8**
GDZ				*i* S	**Sn**	**02 41 47.2**	**+0.7**
GDZ	**Gediz**	**2.03**	**8**	*i* P	**Pn**	**02 41 19.8**	**-0.8**
GDZ				*i* S	**Sn**	**02 41 47.2**	**+0.6**
AKHS	**Akhisar**	**2.08**	**330**	*i* P	**Pn**	**02 41 20.1**	**-1.2**
AKHS				*i* S	**Sn**	**02 41 48.2**	**+0.4**
AKHS	**Akhisar**	**2.08**	**330**	*i* P	**Pn**	**02 41 20.1**	**-1.2**
AKHS				*i* S	**Sn**	**02 41 48.2**	**+0.3**
BLCB	**Balcova**	**2.11**	**309**	*e* PN	**Pn**	**02 41 21.2**	**-0.5**
BLCB	**Balcova**	**2.11**	**309**	*e* Pn	**Pn**	**02 41 21.2**	**-0.5**
ALT	**Altintas**	**2.12**	**21**	*e* PN	**Pn**	**02 41 21.3**	**-0.5**
ALT	**Altintas**	**2.12**	**21**	*e* Pn	**Pn**	**02 41 21.3**	**-0.5**
DURS	**Dursunbey**	**2.57**	**349**	*i* P	**Pn**	**02 41 27.7**	**-0.3**
DURS	**Dursunbey**	**2.57**	**349**	*i* P	**Pn**	**02 41 27.7**	**-0.4**
HDMB	**Hadim**	**2.69**	**91**	*e* PN	**Pn**	**02 41 29.3**	**-0.4**
HDMB	**Hadim**	**2.69**	**91**	*e* Pn	**Pn**	**02 41 29.3**	**-0.3**
GAZI	**Gazipasa**	**2.69**	**107**	*i* P	**Pn**	**02 41 29.8**	**+0.1**
GAZI				*i* S	**Sn**	**02 42 05.5**	**+2.5**
GAZI	**Gazipasa**	**2.69**	**107**	*i* P	**Pn**	**02 41 29.8**	**+0.1**
GAZI				*i* S	**Sn**	**02 42 05.5**	**+2.5**
KONT	**Konya--Tatoy**	**2.71**	**70**	*e* PN	**Pn**	**02 41 29.3**	**-0.7**
KONT	**Konya--Tatoy**	**2.71**	**70**	*e* Pn	**Pn**	**02 41 29.3**	**-0.6**
BALB	**Balikesir**	**2.74**	**339**	*e* PN	**Pn**	**02 41 30.2**	**-0.2**
BALB	**Balikesir**	**2.74**	**339**	*e* Pn	**Pn**	**02 41 30.2**	**-0.2**
KIZT	**Kizilcal**	**2.82**	**49**	*e* PN	**Pn**	**02 41 31.6**	**+0.1**
KIZT	**Kizilcal**	**2.82**	**49**	*e* Pn	**Pn**	**02 41 31.6**	**+0.1**
APE	**Apeiranthos**	**2.88**	**271**	*e* PN	**Pn**	**02 41 32.1**	**-0.2**
APE	**Apeiranthos**	**2.88**	**271**	*e* Pn	**Pn**	**02 41 32.1**	**-0.2**
BALY	**Balya**	**2.91**	**336**	*i* P	**Pn**	**02 41 32.4**	**-0.4**
BALY				*i* S	**Sn**	**02 42 08.7**	**+0.3**
BALY	**Balya**	**2.91**	**336**	*i* P	**Pn**	**02 41 32.3**	**-0.4**
BALY				*i* S	**Sn**	**02 42 08.7**	**+0.3**
ERMK	**Ermenek**	**3.06**	**97**	*i* P	**Pn**	**02 41 37.4**	**+2.6**
ERMK				*i* S	**Sg**	**02 42 19.2**	**-4.4**
ERMK	**Ermenek**	**3.06**	**97**	*i* P	**Pn**	**02 41 37.4**	**+2.6**
GONE	**Gonen-Balikesi**	**3.17**	**340**	*e* PN	**Pn**	**02 41 36.3**	**-0.1**
GONE	**Gonen-Balikesi**	**3.17**	**340**	*e* Pn	**Pn**	**02 41 36.3**	**0.0**
KCTX	**Karacabey (Bur**	**3.24**	**349**	*e* PN	**Pn**	**02 41 37.7**	**+0.4**
KCTX	**Karacabey (Bur**	**3.24**	**349**	*e* Pn	**Pn**	**02 41 37.7**	**+0.5**
YLV	**Yalova**	**3.49**	**3**	*e* PN	**Pn**	**02 41 41.9**	**+1.2**
YLV	**Yalova**	**3.49**	**3**	*e* Pn	**Pn**	**02 41 41.9**	**+1.2**
GULT	**Gulveren**	**3.52**	**17**	*e* PN	**Pn**	**02 41 41.9**	**+0.8**
GULT	**Gulveren**	**3.52**	**17**	*e* Pn	**Pn**	**02 41 41.9**	**+0.8**
IKL	**Isikli**	**3.75**	**102**	*e* PN	**Pn**	**02 41 45.4**	**+1.1**
IKL	**Isikli**	**3.75**	**102**	*e* Pn	**Pn**	**02 41 45.4**	**+1.1**
GELI	**Tayfur-Gelibol**	**3.91**	**329**	*e* PN	**Pn**	**02 41 47.0**	**+0.6**
GELI	**

AFI	**Afiamalu**	**21.30**	**93**	LR	LR	03 15 03.0	
	comp=Z,351nm,21.2s,baz=300,slow=31						
ARMA	**Armidale**	**21.49**	**217**	*e*P	**P**	**03 08 44.6**	**+1.2**
ARMA	**Armidale**	**21.49**	**217**	*e*P	**P**	**03 08 44.7**	**+1.3**
	55nm,1.2s,mb4.8						
CMSA	**Cobar Meteorol**	**25.98**	**223**	*e*P	**P**	**03 09 26.9**	**+0.2**
STKA	**Stephens Creek**	**29.01**	**227**	*e*P	**P**	**03 09 53.9**	**0.0**
	18nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**29.01**	**227**	*e*P	**P**	**03 09 53.0**	**-0.8**
	3.7nm,0.7s,mb4.2						
STKA				LR	LR	03 21 38.0	
STKA	**Stephens Creek**	**29.01**	**227**	P	**P**	**03 09 54.6**	**+0.8**
	17nm,0.7s,mb4.9,baz=36,slow=7.5,SNR=40						
STKA				LR	LR	03 21 38.0	
	comp=Z,359nm,19.1s,baz=301,slow=36						
ASAR	**Alice Springs**	**32.20**	**247**	P	**P**	**03 10 20.9**	**-1.2**
	2.8nm,0.7s,mb4.2,baz=76,slow=10,SNR=19						
RAR	**Rarotonga**	**33.18**	**108**	LR	LR	03 20 18.2	
	comp=Z,151nm,19.8s,baz=82,slow=30						
BBOO	**Buckleboo**	**33.52**	**230**	*e*P	**P**	**03 10 33.9**	**+0.3**
	19nm,0.8s,mb5.1						
FORT	**Forrest**	**39.06**	**238**	*e*P	**P**	**03 11 20.2**	**-0.7**
	26nm,0.7s,mb5.1						
PPT	**Papeete**	**42.61**	**101**	*e*LQ		03 21 55.0	
	482nm,28.0s						
PPT				*e*LR	LR	03 23 47.4	
	430nm,26.8s						
PPT	**Papeete**	**42.61**	**101**	LR	LR	03 26 30.7	
	comp=Z,46nm,18.3s,baz=153,slow=32						
KMBL	**Kambalda**	**44.33**	**239**	*e*P	**P**	**03 12 03.6**	**-0.3**
	70nm,0.8s,mb5.4						
MEEK	**Meekatharra**	**46.35**	**246**	*e*P	**P**	**03 12 19.8**	**-0.2**
TAOE	**Nuku Hiva Isla**	**52.66**	**91**	*e*LR	LR	03 28 22.0	
	239nm,24.0s						
RKT	**Rikitea**	**56.22**	**109**	*e*LR	LR	03 30 03.8	
	225nm,29.8s						
MJAR	**Matsushiro Arr**	**56.51**	**333**	P	**P**	**03 13 36.3**	**+0.7**
	1.8nm,0.9s,mb4.1,baz=166,slow=8.8,SNR=4.2						
ASAJ	**Asahikawa**	**61.41**	**341**	P	**P**	**03 14 09.1**	**-0.3**
	4.4nm,0.7s,mb4.7,baz=272,slow=7.6,SNR=6.6						
SBA	**Scott Base**	**64.22**	**180**	*e*P	**P**	**03 14 29.6**	**+1.9**
	12nm,0.9s,mb4.9						
CMAR	**Chiang Mai Arr**	**73.65**	**294**	P	**P**	**03 15 27.1**	**-0.1**
	2.5nm,1.0s,mb4.1,baz=136,slow=4.7,SNR=4.4						
QSPA	**South Pole Qui**	**76.38**	**180**	*e*P	**P**	**03 15 43.1**	**+1.2**
	12nm,0.9s,mb4.8						
ULN	**Ulaanbaatar**	**80.71**	**324**	*e*P	**P**	**03 16 05.3**	**-0.8**
	12nm,1.0s,mb4.8						
SONM	**Songino Array**	**81.07**	**324**	P	**P**	**03 16 09.7**	**+1.7**
	0.4nm,0.7s,mb3.5,baz=108,slow=4.7,SNR=2.3						
SONM				pP	pP	03 16 22.2	-2.9
	4.3nm,0.9s,baz=140,slow=6.4,SNR=11						
GTA	**Gaotai**	**81.24**	**314**	*e*P	**P**	**03 16 11.9**	**+2.7**
GTA				pP	pP	03 16 17.0	-9.3
GTA				sP	sP	03 16 20.4	-13
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
PMR	**Palmer**	**82.80**	**20**	*e*P	**P**	**03 16 15.6**	**-1.2**
TRF	**Thorofare Moun**	**83.80**	**18**	*e*P	**P**	**03 16 19.7**	**-2.3**
	comp=Z,5.8nm,1.0s,mb4.7						
MCK	**McKinley**	**84.42**	**18**	*e*P	**P**	**03 16 24.5**	**-0.6**
	comp=Z,7.8nm,0.9s,mb4.8						
TLY	**Talaya**	**84.57**	**326**	*e*P	**P**	**03 16 30.9**	**+4.8**
	comp=Z,14nm,1.0s,mb5.1						
ILAR	**Eielson Array**	**85.79**	**18**	P	**P**	**03 16 31.1**	**-0.9**
	comp=Z,5.2nm,0.6s,mb4.9,baz=238,slow=5.0,SNR=135						
ILAR				LR	LR	03 49 22.1	
	comp=Z,137nm,19.4s,baz=208,slow=32						
COLD	**Coldfoot**	**86.64**	**16**	*e*P	**P**	**03 16 36.6**	**+0.5**
	comp=Z,11nm,1.1s,mb5.0						
COLD				*e*	pP	03 16 52.2	-1.0
NVAR	**Mina Array Bea**	**87.28**	**50**	P	**P**	**03 16 43.9**	**+4.0**
	comp=Z,0.5nm,0.8s,mb3.8,baz=179,slow=4.2,SNR=3.6						
EGAK	**Eagle**	**87.62**	**20**	*e*P	**P**	**03 16 39.6**	**-1.3**
	comp=Z,7.6nm,1.1s,mb4.8						
MKAR	**Makanchi Array**	**95.77**	**317**	P	**P**	**03 17 19.7**	**+0.6**
MKAR				pP	pP	03 17 33.1	-3.3
MKAR	**Makanchi Array**	**95.77**	**317**	P	**P**	**03 17 19.7**	**+0.6**
	comp=Z,0.5nm,0.7s,mb4.1,baz=111,slow=6.6,SNR=4.4						
MKAR				pP	pP	03 17 33.1	-3.3
	comp=Z,4.8nm,1.1s,baz=102,slow=4.1,SNR=10						
ZALV	**Zalesovo Beam**	**95.96**	**324**	P	**P**	**03 17 19.3**	**-0.5**
ZALV				pP	pP	03 17 32.4	-4.7
ZALV	**Zalesovo Beam**	**95.96**	**324**	P	**P**	**03 17 19.3**	**-0.5**
	comp=Z,0.8nm,0.3s,mb4.6,baz=111,slow=2.0,SNR=3.3						
ZALV				pP	pP	03 17 32.4	-4.7
	comp=Z,3.6nm,0.8s,baz=100,slow=5.1,SNR=5.8						
TXAR	**Lajitas Array**	**96.59**	**62**	LR	LR	03 53 20.1	
	comp=Z,77nm,18.8s,baz=15,slow=31						
LPAZ	**La Paz**	**118.54**	**117**	PKP	PKPdf	03 22 41.9	+0.4
LPAZ	**La Paz**	**118.54**	**117**	PKP	PKPdf	03 22 41.9	+0.4
	comp=Z,0.8nm,0.7s,baz=298,slow=5.5,SNR=5.4						
ARCES	**ARCESS Array B**	**118.97**	**345**	PKP	PKPdf	03 22 40.2	-0.5
	comp=Z,1.4nm,0.4s,baz=84,slow=2.1,SNR=43						
FINES	**FINESS Array B**	**124.37**	**338**	PKP	PKPdf	03 22 50.9	-0.5
	comp=Z,1.0nm,0.6s,baz=90,slow=1.9,SNR=6.5						
NOA	**NORSAR Array B**	**129.33**	**345**	PKP	PKPdf	03 22 59.9	-0.9
NOA	**NORSAR Array B**	**129.33**	**345**	PKP	PKPdf	03 22 59.9	-0.9
	comp=Z,0.8nm,0.6s,baz=27,slow=2.0,SNR=3.9						
LDF	**La Druitiere**	**143.38**	**345**	*e*PKP1	PKPdf	03 23 24.7	-2.5
LOR	**Lormes**	**143.40**	**340**	*e*PKP1	PKPdf	03 23 24.6	-2.7
SSF	**Saint Saulge**	**143.70**	**340**	*e*PKP1	PKPdf	03 23 25.6	-2.2
GRR	**Gorron**	**143.75**	**345**	*e*PKP1	PKPdf	03 23 25.0	-2.9
LPL	**La Plagne**	**143.82**	**335**	*e*PKP1	PKPdf	03 23 26.1	-2.0
LPG	**La Plagne**	**143.83**	**335**	*e*PKP1	PKPdf	03 23 26.3	-1.8
ORIF	**Oris-en-Rattie**	**144.65**	**336**	*e*PKP1	PKPdf	03 23 28.9	-0.7
	comp=Z,12nm,0.9s						
SBF	**Sospel**	**144.85**	**333**	*e*PKP1	PKPdf	03 23 29.0	-0.9
	comp=Z,70nm,1.0s						
VIVF	**Saint-Julien-l**	**145.18**	**337**	*e*PKP1	PKPbc	03 23 30.6	+0.5
	comp=Z,62nm,1.5s						
MFF	**Saint Martin d**	**145.22**	**344**	*e*PKP1	PKPbc	03 23 30.2	0.0
FRF	**La Foret Royal**	**145.44**	**334**	*e*PKP1	PKPbc	03 23 30.9	-0.1
SMRF	**Simiane la Rot**	**145.55**	**335**	*e*PKP1	PKPbc	03 23 31.9	+0.5
LMR	**La Mourre**	**145.68**	**333**	*e*PKP1	PKPbc	03 23 31.7	-0.1
LASF	**Ste Croix**	**146.15**	**337**	*e*PKP1	PKPbc	03 23 33.6	+0.4
	comp=Z,30nm,1.3s						
MTLF	**Montolieu**	**147.39**	**338**	*e*PKP1	PKPbc	03 23 37.1	+0.4
	comp=Z,20nm,1.1s						
KEST	**Kesra**	**149.78**	**321**	PKPbc	PKPbc	03 23 44.1	+0.9
	comp=Z,1.8nm,0.7s,baz=260,slow=4.2,SNR=12						
ESDC	**Sonseca Array**	**152.69**	**343**	PKPbc	PKPbc	03 23 48.8	-1.0
	comp=Z,0.3nm,0.4s,baz=0.4,slow=4.5,SNR=5.1						

*ISCJB **18** 03:42:32.9±0.4,36°.97N±0°.02×29°.14E±0°.02, h5km±3km, mb3.7/3, Error ellipse: s-maj=2.9km s-min=2.4km az=10.9*
*DDA **18** 03:42:32.5, 37°.00N×29°.17E, h7km±1km, Md3.5*
*CSEM **18** 03:42:33.3±0.1,36°.99N×29°.11E, h2km, MD3.7, Error ellipse: s-maj=2.8km s-min=2.4km az=25.0*
*NEIC **18** 03:42:33.0, 37°.07N×29°.12E, h9km, MD3.6(ISK), After ISK.*
*ISK **18** 03:42:33.2, 37°.06N×29°.12E, h7km, MD3.7*
*IDC **18** 03:42:33.0±1.1, 36°.90N×29°.15E, h0km, mb3.9/3, mb1 3.9/8, mb1mx3.7/25, mbtmp3.8/8, ML3.8/5, MS2.7/3, Ms1 2.8/3, ms1mx2.5/32, Error ellipse: s-maj=21.3km s-min=17.1km az=45.0*
*THE **18** 03:42:35.9, 37°.08N×29°.16E, h3km±8km, ML2.8/1, Error ellipse: s-maj=12.8km s-min=1.9km az=93.0*
*HLW **18** 03:42:38.4, 36°.80N×29°.21E, h34km±38km, Ml3.5*

ISC 18 03:42:33.7±0.4, 37°.00N±0°.02×29°.13E±0°.02, h2km±3km, n179, σ1§07/232, mb3.7/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.34**	**61**	PG	**Pg**	**03 42 39.4**	**-0.7**
GLHS				SG	**Sg**	**03 42 45.4**	**+0.8**
GLHS	**Glhisar (BURDU**	**0.34**	**61**	*i* Pg	**Pg**	**03 42 39.5**	**-0.7**
GLHS				*i* Sg	**Sg**	**03 42 45.0**	**+0.4**
GOLH	**Golhisar**	**0.42**	**55**	*i* P	**Pg**	**03 42 40.2**	**-1.6**
GOLH				*i* S	**Sg**	**03 42 47.3**	**0.0**
GOLH	**Golhisar**	**0.42**	**55**	*i* P	**Pg**	**03 42 40.2**	**-1.6**
GOLH				*i* S	**Sg**	**03 42 47.3**	**0.0**
TURN	**Turunc**	**0.44**	**254**	*i* P	**Pg**	**03 42 47.5**	**+5.4**
TURN				*i* S	**Sg**	**03 42 59.0**	**+11**
ELL	**Elmali**	**0.67**	**111**	*e*PG	**Pg**	**03 42 45.9**	**-0.7**
ELL				*e*SG	**Sg**	**03 42 56.9**	**+1.6**
ELL	**Elmali**	**0.67**	**111**	*e*Pg	**Pg**	**03 42 45.7**	**-0.9**
ELL				*e*Sg	**Sg**	**03 42 57.2**	**+1.9**
YER	**Yerkesik**	**0.69**	**282**	*e*PG	**Pg**	**03 42 47.3**	**+0.4**
YER				*e*SG	**Sg**	**03 42 57.3**	**+1.3**
YER	**Yerkesik**	**0.69**	**282**	*e*Pg	**Pg**	**03 42 46.4**	**-0.6**
YER				*e*Sg	**Sg**	**03 42 57.0**	**+1.1**
DNZL	**Cakiroluk**	**0.70**	**355**	*i* P	**Pg**	**03 42 46.2**	**-0.9**
DNZL				*i* S	**Sg**	**03 42 58.5**	**+2.4**
DNZL	**Cakiroluk**	**0.70**	**355**	*i* P	**Pg**	**03 42 46.2**	**-0.9**
DNZL				*i* S	**Sg**	**03 42 58.5**	**+2.4**
DENT	**Denizli**	**0.76**	**354**	*e*PG	**Pg**	**03 42 47.1**	**-1.2**
DENT	**Denizli**	**0.76**	**354**	*e*Pg	**Pg**	**03 42 47.0**	**-1.3**
AKAS	**Kas**	**0.85**	**153**	*i* P	**Pg**	**03 42 48.9**	**-1.2**
AKAS				*i* S	**Sg**	**03 43 06.0**	**+4.9**
AKAS	**Kas**	**0.85**	**153**	*i* P	**Pg**	**03 42 48.9**	**-1.1**
AKAS				*i* S	**Sg**	**03 43 06.0**	**+4.9**
KSL	**Kastellorizon**	**0.92**	**156**	*e*P	**Pg**	**03 42 51.1**	**-0.2**
KORT	**Korkueli**	**0.98**	**89**	*i* P	**Pg**	**03 42 52.8**	**+0.4**
KORT				*i* S	**Sg**	**03 43 07.9**	**+2.7**
KORT	**Korkueli**	**0.98**	**89**	*i* P	**Pg**	**03 42 52.8**	**+0.3**
KORT				*i* S	**Sg**	**03 43 07.9**	**+2.7**
ARG	**Arkhangelos**	**1.12**	**226**	*e*P	**Pg**	**03 42 54.2**	**-1.0**
ARG	**Arkhangelos**	**1.12**	**226**	P	**Pg**	**03 42 54.8**	**-0.4**
ARG				S	**Sg**	**03 43 14.6**	**+4.9**
ARG	**Arkhangelos**	**1.12**	**226**	P	**Pg**	**03 42 54.8**	**-0.4**
MLSB	**Milas**	**1.12**	**286**	*e*PN	**Pg**	**03 42 54.9**	**-0.4**
MLSB	**Milas**	**1.12**	**286**	*e*Pn	**Pg**	**03 42 54.4**	**-0.8**
MLSB				*e*Sn	**Sg**	**03 43 11.0**	**+1.3**
AYDN	**Tasoluk**	**1.20**	**304**	*i* P	**Pg**	**03 42 56.0**	**-0.7**
AYDN				*i* S	**Sg**	**03 43 12.2**	**+0.1**
AYDN	**Tasoluk**	**1.20**	**304**	*i* P	**Pg**	**03 42 56.0**	**-0.7**
AYDN				*i* S	**Sg**	**03 43 12.2**	**0.0**
BCK	**Bucak**	**1.25**	**68**	*e*PN	**Pn**	**03 42 57.2**	**-1.1**
BCK	**Bucak**	**1.25**	**68**	*e*Pn	**Pn**	**03 42 57.2**	**-1.1**
BCK				*e*Sn	**Sn**	**03 43 14.7**	**-1.0**
DAT	**Datca**	**1.27**	**258**	*e*PN	**Pn**	**03 42 57.8**	**-0.7**
DAT	**Datca**	**1.27**	**258**	*e*Pn	**Pn**	**03 42 57.8**	**-0.7**
BDRM	**Kayabasi**	**1.35**	**273**	*i* P	**Pn**	**03 42 59.6**	**+0.1**
BDRM				*i* S	**Sg**	**03 43 17.5**	**+0.4**
BDRM	**Kayabasi**	**1.35**	**273**	*i* P	**Pn**	**03 42 59.6**	**0.0**
BDRM				*i* S	**Sg**	**03 43 17.5**	**+0.4**
KHL	**Karahalli**	**1.36**	**13**	*e*PN	**Pn**	**03 42 58.7**	**-1.1**
KHL	**Karahalli**	**1.36**	**13**	*e*Pn	**Pn**	**03 42 58.5**	**-1.2**
KHAL	**Karahalli**	**1.40**	**12**	*i* P	**Pn**	**03 42 59.0**	**-1.3**
KHAL				*i* S	**Sg**	**03 43 19.9**	**+1.1**
KHAL	**Karahalli**	**1.40**	**12**	*i* P	**Pn**	**03 42 59.0**	**-1.3**
KHAL				*i* S	**Sg**	**03 43 19.9**	**+1.1**
BODT	**Bodrum**	**1.46**	**273**	*e*PN	**Pn**	**03 43 00.3**	**-0.8**
BODT	**Bodrum**	**1.46**	**273**	*e*Pn	**Pn**	**03 43 00.3**	**-0.7**
KULA	**Kula-Manisa**	**1.56**	**346**	*e*PN	**Pn**	**03 43 01.3**	**-1.2**
KULA	**Kula-Manisa**	**1.56**	**346**	*e*Pn	**Pn**	**03 43 01.3**	**-1.2**
NIS1	**Nisyros Isl.**	**1.61**	**257**	P	**Pn**	**03 43 04.6**	**+1.4**
NIS1				S	**Sn**	**03 43 26.7**	**+2.1**
NIS1	**Nisyros Isl.**	**1.61**	**257**	P	**Pn**	**03 43 04.6**	**+1.4**
NIS1				S	**Sn**	**03 43 26.7**	**+2.1**
GCAM	**G?zelcaml?**	**1.67**	**296**	*i* P	**Pn**	**03 43 04.3**	**+0.4**
GCAM				*i* S	**Sn**	**03 43 30.5**	**+4.7**
GCAM	**G?zelcaml?**	**1.67**	**296**	*i* P	**Pn**	**03 43 04.3**	**+0.4**
IZM	**Izmir**	**2.04**	**314**	*e*PN	**Pn**	**03 43 08.4**	**-0.6**
IZM	**Izmir**	**2.04**	**314**	*e*Pn	**Pn**	**03 43 08.4**	**-0.6**
GDZ	**Gediz**	**2.11**	**7**	*i* P	**Pn**	**03 43 08.4**	**-1.6**
GDZ	**Gediz**	**2.11**	**7**	*i* P	**Pn**	**03 43 08.4**	**-1.6**
AKHS	**Akhisar**	**2.15**	**331**	*i* P	**Pn**	**03 43 09.4**	**-1.1**
AKHS				*i* S	**Sn**	**03 43 37.6**	**-0.2**
AKHS	**Akhisar**	**2.15**	**331**	*i* P	**Pn**	**03 43 09.4**	**-1.2**
AKHS				*i* S	**Sn**	**03 43 37.6**	**-0.2**
KAPP	**Karpathos**	**2.15**	**228**	*e*P	**Pn**	**03 43 09.1**	**+1.1**
AKS	**Akhisar**	**2.15**	**331**	*e*PN	**Pn**	**03 43 09.8**	**-0.8**
AKS	**Akhisar**	**2.15**	**331**	*e*Pn	**Pn**	**03 43 09.8**	**-0.8**
BLCB	**Balcova**	**2.16**	**311**	*e*PN	**Pn**	**03 43 09.9**	**-0.8**
BLCB	**Balcova**	**2.16**	**311**	P	**Pn**	**03 43 10.2**	**-0.5**
BLCB				S	**Sn**	**03 43 37.2**	**-0.8**
BLCB	**Balcova**	**2.16**	**311**	*e*Pn	**Pn**	**03 43 09.9**	**-0.8**
BLCB	**Balcova**	**2.16**	**311**	P	**Pn**	**03 43 10.2**	**-0.5**
BLCB				S	**Sn**	**03 43 37.2**	**-0.8**
ALT	**Altintas**	**2.20**	**20**	*e*PN	**Pn**	**03 43 10.6**	**-0.7**
ALT	**Altintas**	**2.20**	**20**	*e*Pn	**Pn**	**03 43 10.6**	**-0.6**
BOLV	**Bolvadin**	**2.25**	**39**	*i* P	**Pn**	**03 43 12.4**	**+0.5**
BOLV				*i* S	**Sn**	**03 43 40.1**	**-0.1**
BOLV	**Bolvadin**	**2.25**	**39**	*i* P	**Pn**	**03 43 12.4**	**+0.5**
BOLV				*i* S	**Sn**	**03 43 40.1**	**0.0**
DURS	**Dursunbey**	**2.65**	**349**	*i* P	**Pn**	**03 43 15.8**	**-1.6**
DURS				*i* S	**Sg**	**03 44 04.2**	**+5.3**
DURS	**Dursunbey**	**2.65**	**349**	*i* P	**Pn**	**03 43 15.8**	**-1.7**
GAZI	**Gazipasa**	**2.67**	**106**	*i* P	**Pn**	**03 43 19.7**	**+1.9**
GAZI				*i* S	**Sn**	**03 43 52.9**	**+2.2**
GAZI	**Gazipasa**	**2.67**	**106**	*i* P	**Pn**	**03 43 19.7**	**+1.9**
GAZI				*i* S	**Sn**	**03 43 52.9**	**+2.2**
HDMB	**Hadim**	**2.69**	**90**	*e*PN	**Pn**	**03 43 19.1**	**+1.1**
HDMB	**Hadim**	**2.69**	**90**	*e*Pn	**Pn**	**03 43 19.1**	**+1.1**
KONT	**Konya--Tatoy**	**2.74**	**69**	*e*PN	**Pn**	**03 43 19.1**	**+0.4**
KONT	**Konya--Tatoy**	**2.74**	**69**	*e*Pn	**Pn**	**03 43 19.1**	**+0.4**
CHOS	**Chios island**	**2.81**	**301**	*e*P	**Sn**	**03 43 50.1**	**-3.9**
CHOS	**Chios island**	**2.81**	**301**	P	**Pn**	**03 43 19.8**	**+0.2**
CHOS				S	**Sn**	**03 43 55.1**	**+1.1**
CHOS	**Chios island**	**2.81**	**301**	P	**Pn**	**03 43 19.8**	**+0.2**
CHOS				S	**Sn**	**03 43 55.1**	**+1.1**
BALB	**Balikesir**	**2.82**	**340**	*e*PN	**Pn**	**03 43 18.6**	**-1.1**
BALB	**Balikesir**	**2.82**	**340**	*e*Pn	**Pn**	**03 43 18.6**	**-1.1**
KIZT	**Kizilcal**	**2.88**	**48**	*e*PN	**Pn**	**03 43 19.8**	**-0.8**
KIZT	**Kizilcal**	**2.88**	**48**	*e*Pn	**Pn**	**03 43 19.8**	**-0.8**
APE	**Apeiranthos**	**2.88**	**273**	*e*PN	**Pn**	**03 43 20.3**	**-0.3**
APE	**Apeiranthos**	**2.88**	**273**	*e*P	**Pn**	**03 43 21.0**	**+0.4**
APE	**Apeiranthos**	**2.88**	**273**	P	**Pn**	**03 43 21.0**	**+0.4**
APE				S	**Sn**	**03 43 56.1**	**+0.3**
APE	**Apeiranthos**	**2.88**	**273**	*e*Pn	**Pn**	**03 43 20.3**	**-0.3**
APE	**Apeiranthos**	**2.88**	**273**	P	**Pn**	**03 43 21.0**	**+0.4**
APE				S	**Sn**	**03 43 56.1**	**+0.3**
BALY	**Balya**	**2.99**	**337**	*i* P	**Pn**	**03 43 21.5**	**-0.5**
BALY				*i* S	**Sg**	**03 44 11.1**	**+1.4**
BALY	**Balya**	**2.99**	**337**	*i* P	**Pn**	**03 43 21.5**	**-0.6**
ZKR	**Zakros**	**3.01**	**232**	*e*P	**Pn**	**03 43 24.4**	**+1.9**
ZKR	**Zakros**	**3.01**	**232**	P	**Pn**	**03 43 24.4**	**+1.9**
ZKR				S	**Sn**	**03 44 01.1**	**+2.0**
ZKR	**Zakros**	**3.01**	**232**	P	**Pn**	**03 43 24.4**	**+1.9**
ZKR				S	**Sn**	**03 44 01.1**	**+2.0**
ERMK	**Ermenek**	**3.06**	**95**	*i* P	**Pn**	**03 43 26.5**	**+3.4**
ERMK				*i* S	**Sn**	**03 44 06.5**	**+6.3**
ERMK	**Ermenek**	**3.06**	**95**	*i* P	**Pn**	**03 43 26.5**	**+3.5**
SVRH	**Sivrihisar-ESK**	**3.09**	**37**	*e*PN	**Pn**	**03 43 23.8**	**+0.3**
SVRH	**Sivrihisar-ESK**	**3.09**	**37**	*e*Pn	**Pn**	**03 43 23.8**	**+0.3**
GONE	**Gonen-Balikesi**	**3.25**	**340**	*e*PN	**Pn**	**03 43 24.9**	**-0.8**
GONE	**Gonen-Balikesi**	**3.25**	**340**	*e*Pn	**Pn**	**03 43 24.9**	**-0.8**
KCTX	**Karacabey (Bur**	**3.32**	**350**	*e*PN	**Pn**	**03 43 26.1**	**-0.6**
KCTX	**Karacabey (Bur**	**3.32**	**350**	*e*Pn	**Pn**	**03 43 26.1**	**-0.6**
NPS	**Neapolis**	**3.33**	**240**	*e*P	**Pn**	**03 43 27.7**	**+0.9**
ADVT	**Abdulvahap**	**3.47**	**8**	*e*PN	**Pn**	**03 43 29.0**	**+0.3**
ADVT	**Abdulvahap**	**3.47**	**8**	*e*Pn	**Pn**	**03 43 29.0**	**+0.3**
BNT	**Bandirma**	**3.49**	**345**	*e*PN	**Pn**	**03 43 28.5**	**-0.5**
BNT	**Bandirma**	**3.49**	**345**	*e*Pn	**Pn**	**03 43 28.5**	**-0.4**
ARMT	**Armutlu**	**3.57**	**357**	*e*PN	**Pn**	**03 43 29.4**	**-0.7**
ARMT	**Armutlu**	**3.57**	**357**	*e*Pn	**Pn**	**03 43 29.4**	**-0.7**
YLV	**Yalova**	**3.57**	**3**	*e*PN	**Pn**	**03 43 30.2**	**+0.1**
YLV	**Yalova**	**3.57**	**3**	*e*Pn	**Pn**	**03 43 30.2**	**+0.1**
LEF	**Lefka**	**3.58**	**120**	*e*PN	**Pn**	**03 43 31.3**	**+1.1**
LEF	**Lefka**	**3.58**	**120**	*e*Pn	**Pn**	**03 43 31.3**	**+1.1**
GULT	**Gulveren**	**3.60**	**17**	*e*PN	**Pn**	**03 43 29.9**	**-0.6**
GULT	**Gulveren**	**3.60**	**17**	*e*Pn	**Pn**	**03 43 29.9**	**-0.6**
SULT	**Sultanhani-AKS**	**3.69**	**70**	*e*PN	**Pn**	**03 43 32.7**	**+1.1**
SULT	**Sultanhani-AKS**	**3.69**	**70**	*e*Pn	**Pn**	**03 43 32.7**	**+1.0**
IKL	**Isikli**	**3.74**	**100**	*e*PN	**Pn**	**03 43 33.2**	**+0.7**
IKL	**Isikli**	**3.74**	**100**	*e*Pn	**Pn**	**03 43 33.2**	**+0.7**
IDI	**Anoyia**	**3.83**	**245**	*e*P	**Pn**	**03 43 35.2**	**+1.5**
MDU	**Mudurnu**	**3.83**	**25**	*e*PN	**Pn**	**03 43 33.8**	**+0.2**
MDU	**Mudurnu**	**3.83**	**25**	*e*Pn	**Pn**	**03 43 33.8**	**+0.1**
LFK	**Lefkose**	**3.96**	**114**	*e*PN	**Pn**	**03 43 35.9**	**+0.5**
LFK	**Lefkose**	**3.96**	**114**	*e*Pn	**Pn**	**03 43 35.9**	**+0.5**
GELI	**Tayfur-Gelibol**	**3.98**	**329**	*e*PN	**Pn**	**03 43 35.4**	**-0.3**
GELI	**Tayfur-Gelibol**	**3.98**	**329**	*e*Pn	**Pn**	**03 43 35.4**	**-0.3**
RKY	**Sarkoy-Tekirda**	**3.99**	**338**	*e*PN	**Pn**	**03 43 36.5**	**+0.7**
RKY	**Sarkoy-Tekirda**	**3.99**	**338**	*e*Pn	**Pn**	**03 43 36.5**	**+0.7**
SIVA	**Sivas**	**4.02**	**242**	*e*P	**Pn**	**03 43 38.9**	**+2.6**
LOD	**Lodumlu**	**4.06**	**44**	*e*PN	**Pn**	**03 43 37.4**	**+0.6**
LOD	**Lodumlu**	**4.06**	**44**	*e*Pn	**Pn**	**03 43 37.4**	**+0.6**
GADA	**Gvkgeada**	**4.07**	**323**	*e*PN	**Pn**	**03 43 36.5**	**-0.5**
GADA	**Gvkgeada**	**4.07**	**323**	*e*Pn	**Pn**	**03 43 36.5**	**-0.5**
CTKS	**Kestanelik-??a**	**4.26**	**354**	*e*PN	**Pn**	**03 43 39.8**	**+0.2**
CTKS	**Kestanelik-??a**	**4.26**	**354**	*e*Pn	**Pn**	**03 43 39.8**	**+0.2**
ENEZ	**Enez**	**4.40**	**329**	*e*PN	**Pn**	**03 43 41.4**	**-0.1**
ENEZ	**Enez**	**4.40**	**329**	*e*Pn	**Pn**	**03 43 41.4**	**-0.1**
BRTR	**Keskin Array B**	**4.47**	**51**	Pn	**Pn**	**03 43 42.9**	**+0.4**
	1.4nm,0.3s,baz=231,slow=16,SNR=31						
BRTR				Sn	**Sn**	**03 44 37.5**	**+2.4**
	0.6nm,0.3s,baz=225,slow=25,SNR=9.4						
BRTR	**Keskin Array B**	**4.47**	**51**	Pn	**Pn**	**03 43 42.8**	**+0.3**
BRTR				Sn	**Sn**	**03 44 37.5**	**+2.4**
BR131	**Keskin Array S**	**4.47**	**51**	*e*Pn	**Pn**	**03 43 41.5**	**-1.0**
BR131				*e*S	**Sn**	**03 44 36.2**	**+1.2**
BR131	**Keskin Array S**	**4.47**	**51**	*e*Pn	**Pn**	**03 43 41.5**	**-1.0**
BR131				*e*S	**Sn**	**03 44 36.2**	**+1.1**
ALN	**Alexandroupoli**	**4.58**	**329**	P	**Pn**	**03 43 43.7**	**-0.2**
ALN	**Alexandroupoli**	**4.58**	**329**	P	**Pn**	**03 43 43.7**	**-0.2**
KARA	**Karaisali**	**4.74**	**85**	*e*PN	**Pn**	**03 43 47.8**	**+1.6**
KARA	**Karaisali**	**4.74**	**85**	*e*Pn	**Pn**	**03 43 47.8**	**+1.6**
EDRB	**Edirne**	**5.18**	**340**	*e*PN	**Pn**	**03 43 52.5**	**+0.3**
EDRB	**Edirne**	**5.18**	**340**	*e*Pn	**Pn**	**03 43 52.5**	**+0.2**
CORM	**Corum**	**5.36**	**52**	*e*PN	**Pn**	**03 43 55.8**	**+1.2**
CORM	**Corum**	**5.36**	**52**	*e*Pn	**Pn**	**03 43 55.8**	**+1.2**
TOS	**Tosya**	**5.55**	**42**	*e*PN	**Pn**	**03 43 58.2**	**+0.9**
TOS	**Tosya**	**5.55**	**42**	*e*Pn	**Pn**	**03 43 58.2**	**+0.9**
HMAT	**Matruh**	**6.12**	**197**	P	**Pn**	**03 44 05.4**	**+0.2**
	baz=198					

*MDD **18** 04:03:01.6±4.1,34°.98N×15°.95W,h0km,mb4.4/2,Error ellipse: s-maj=144.0km s-min=34.3km az=157.0,PRIMO*
*INMG **18** 04:03:03.3±1.3,32°.63N×14°.69W,h10km,ML2.6,Error ellipse: s-maj=20.1km s-min=4.2km az=160.0*

ISC 18 04:02:59.7±0.8,33°.8N±0°.4×15°.2W±0°.3,h10km,n22, σ1§58/42,Madeira Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMPS	**Porto Santo**	**1.22**	**232**	*e*P	**Pn**	**04 03 23.3**	**+0.5**
PMPS				*e*S	**Sb**	**04 03 39.2**	**+0.5**
PMPS				A		04 03 41.5	
	112nm,0.1s						
PMAR	**Madeira**	**1.81**	**234**	*e*P	**Pn**	**04 03 29.2**	**-1.7**
PMAR				*e*S	**Sn**	**04 03 49.8**	**-4.1**
PMAR				A		04 03 53.0	
	75nm,0.2s						
FUL	**Funchal**	**1.86**	**231**	*e*P	**Pn**	**04 03 29.9**	**-1.6**
FUL				*e*S	**Sn**	**04 03 49.3**	**-5.8**
FUL				A		04 03 53.9	
	51nm,0.3s						
PFVI	**Vila Bisbo**	**6.15**	**56**	*e*P	**Pn**	**04 04 32.3**	**+1.7**
PFVI				*e*S	**Sn**	**04 05 37.8**	**-3.2**
PFVI	**Vila Bisbo**	**6.15**	**56**	P	**Pn**	**04 04 32.5**	**+1.9**
	1.4nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**04 05 38.6**	**-2.4**
	1.7nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**6.15**	**56**	P	**Pn**	**04 04 32.5**	**+1.9**
	1.4nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**04 05 38.6**	**-2.4**
	1.7nm,0.1s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**6.83**	**58**	*e*P	**Pn**	**04 04 42.6**	**+2.7**
PBDV				*e*S	**Sn**	**04 05 56.5**	**-1.2**
PBDV	**Barranco-do-Ve**	**6.83**	**58**	P	**Pn**	**04 04 42.6**	**+2.7**
PBDV				S	**Sn**	**04 05 56.5**	**-1.2**
PBDV	**Barranco-do-Ve**	**6.83**	**58**	P	**Pn**	**04 04 42.6**	**+2.7**
PBDV				S	**Sn**	**04 05 56.5**	**-1.2**
PVAQ	**Vaqueiros**	**7.06**	**57**	*e*P	**Pn**	**04 04 45.9**	**+2.9**
PVAQ				*e*S	**Sn**	**04 06 02.7**	**-0.5**
PVAQ				A		04 06 10.6	
	2.0nm,1.2s						
PVAQ	**Vaqueiros**	**7.06**	**57**	P	**Pn**	**04 04 45.9**	**+2.9**
PVAQ				S	**Sn**	**04 06 02.7**	**-0.5**
	2.0nm,1.2s						
PVAQ	**Vaqueiros**	**7.06**	**57**	P	**Pn**	**04 04 45.9**	**+2.9**
PVAQ				S	**Sn**	**04 06 02.7**	**-0.5**
	2.0nm,1.2s						
EGRO	**El Granado**	**7.28**	**57**	S	**Sn**	**04 06 08.2**	**-0.6**
	0.5nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**7.28**	**57**	S	**Sn**	**04 06 08.2**	**-0.6**
	0.5nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**7.96**	**58**	P	**Pn**	**04 04 57.2**	**+1.8**
	0.4nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**04 06 22.0**	**-3.5**
	0.2nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**7.96**	**58**	P	**Pn**	**04 04 57.2**	**+1.8**
	0.4nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**04 06 22.0**	**-3.5**
	0.2nm,0.1s,SNR=7.9						
ESPR	**Espera**	**8.21**	**66**	P	**Pn**	**04 05 03.9**	**+5.2**
	1.2nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**04 06 31.4**	**-0.1**
	1.1nm,0.1s,SNR=7.9						
ESPR	**Espera**	**8.21**	**66**	P	**Pn**	**04 05 03.9**	**+5.2**
	1.2nm,0.1s,SNR=7.9						
ESPR				S	**Sn**	**04 06 31.4**	**-0.1**
	1.1nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**8.23**	**51**	P	**Pn**	**04 04 58.6**	**-0.5**
	0.8nm,0.2s,SNR=4.0						
EBAD				S	**Sn**	**04 06 26.0**	**-6.2**
	0.2nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**8.23**	**51**	P	**Pn**	**04 04 58.6**	**-0.5**
	0.8nm,0.2s,SNR=4.0						
EBAD				S	**Sn**	**04 06 26.0**	**-6.2**
	0.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**9.63**	**60**	P	**Pn**	**04 05 20.5**	**+2.3**
	0.3nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**04 07 01.8**	**-4.6**
	0.2nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**9.63**	**60**	P	**Pn**	**04 05 20.5**	**+2.3**
	0.3nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**04 07 01.8**	**-4.6**
	0.2nm,0.2s,SNR=7.9						

*ISCJB **18** 04:03:05.0±0.6,37°.04N±0°.03×29°.16E±0°.04,h3km±7km, Error ellipse: s-maj=5.7km s-min=5.0km az=160.9*
*DDA **18** 04:03:04.6,37°.06N×29°.18E,h7km±6km,Md2.8*
*ISK **18** 04:03:04.8,37°.04N×29°.16E,h8km,MD2.8*
*CSEM **18** 04:03:04.9±0.3,37°.06N×29°.16E,h5km,MD2.8*

ISC 18 04:03:05.6±0.6,37°.05N±0°.03×29°.17E±0°.04,h9km±6km, n20,σ0§95/34,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.28**	**68**	*e*PG	**Pg**	**04 03 10.7**	**-0.4**
GLHS				*e*SG	**Sg**	**04 03 16.1**	**+1.1**
GLHS	**Glhisar (BURDU**	**0.28**	**68**	*e*Pg	**Pg**	**04 03 10.7**	**-0.5**
GLHS				*e*Sg	**Sg**	**04 03 16.1**	**+1.1**
GOLH	**Golhisar**	**0.36**	**59**	*i* P	**Pg**	**04 03 11.1**	**-1.6**
GOLH				*i* S	**Sg**	**04 03 18.0**	**+0.4**
GOLH	**Golhisar**	**0.36**	**59**	*i* P	**Pg**	**04 03 11.1**	**-1.6**
GOLH				*i* S	**Sg**	**04 03 18.0**	**+0.5**
DNZL	**Cakiroluk**	**0.65**	**351**	*i* P	**Pg**	**04 03 16.4**	**-1.6**
DNZL				*i* S	**Sg**	**04 03 27.7**	**+1.3**
DNZL	**Cakiroluk**	**0.65**	**351**	*i* P	**Pg**	**04 03 16.4**	**-1.6**
DNZL				*i* S	**Sg**	**04 03 27.7**	**+1.3**
ELL	**Elmali**	**0.67**	**117**	*e*PG	**Pg**	**04 03 18.2**	**-0.2**
ELL	**Elmali**	**0.67**	**117**	*e*Pg	**Pg**	**04 03 18.2**	**-0.2**
YER	**Yerkesik**	**0.71**	**277**	*e*PG	**Pg**	**04 03 19.0**	**-0.3**
YER				*e*SG	**Sg**	**04 03 29.1**	**+0.4**
YER	**Yerkesik**	**0.71**	**277**	*e*Pg	**Pg**	**04 03 19.0**	**-0.3**
YER				*e*Sg	**Sg**	**04 03 29.1**	**+0.5**
AKAS	**Kas**	**0.89**	**157**	*i* P	**Pg**	**04 03 16.3**	**-6.3**
AKAS				*i* S	**Sg**	**04 03 35.1**	**+0.9**
AYDN	**Tasoluk**	**1.19**	**301**	*i* P	**Pb**	**04 03 26.5**	**-1.9**
AYDN				*i* S	**Sb**	**04 03 45.6**	**+1.6**
AYDN	**Tasoluk**	**1.19**	**301**	*i* P	**Pb**	**04 03 26.5**	**-1.9**
AYDN				*i* S	**Sb**	**04 03 45.6**	**+1.6**
KHL	**Karahalli**	**1.30**	**12**	*e*PN	**Pn**	**04 03 30.1**	**+0.2**
KHL	**Karahalli**	**1.30**	**12**	*e*Pn	**Pn**	**04 03 30.1**	**+0.1**
DAT	**Datca**	**1.32**	**256**	*e*PN	**Pn**	**04 03 30.1**	**-0.1**
DAT				*e*SN	**Sn**	**04 03 48.1**	**+0.2**
DAT	**Datca**	**1.32**	**256**	*e*Pn	**Pn**	**04 03 30.1**	**-0.1**
DAT				*e*Sn	**Sn**	**04 03 48.1**	**+0.3**
KHAL	**Karahalli**	**1.34**	**11**	*i* P	**Pn**	**04 03 23.9**	**-6.6**
KHAL				*i* S	**Sb**	**04 03 48.3**	**+0.1**
BODT	**Bodrum**	**1.49**	**271**	*e*PN	**Pn**	**04 03 32.0**	**-0.5**
BODT	**Bodrum**	**1.49**	**271**	*e*Pn	**Pn**	**04 03 32.0**	**-0.5**

MAN 18 04:54:18,6°.98N×125°.96E,h53km,mb4.3,ML3.1,MS2.9, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.30**	**97**	*e*P	Pn	04 54 29.1	+1.7
MATI				*e*S	Sn	04 54 38.1	+4.0
DMPH	**Davao City--Mi**	**0.46**	**283⇑**	*e*P	Pn	04 54 31.3	+2.3
DMPH				*e*S	Sn	04 54 44.8	+8.0
BUKP	**Musuan**	**1.26**	**315**	*e*P	Pn	04 54 41.8	+2.5
BUKP				*e*S	Sn	04 54 56.8	+1.6

IDC 18 04:59:10.7±4.3,30°.88S×178°.18W,h0km,mb3.8/2, mb1 4.1/2,mb1mx3.8/12,mbtmp3.8/2,Error ellipse: s-maj=255.7km s-min=73.6km az=169.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.93**	**268**	P	P	05 07 11.4	0.0
	0.5nm,0.5s,baz=109,slow=7.9,SNR=6.0						
WRA	**Warramunga Arr**	**43.96**	**273**	P	P	05 07 19.7	-0.1
	0.8nm,0.5s,baz=113,slow=7.8,SNR=3.5						
BRTR	**Keskin Array B**	**152.68**	**298**	PKPbc	PKPbc	05 19 09.4	+0.1
	0.3nm,0.3s,baz=115,slow=2.4,SNR=4.0						

*ISCJB **18** 05:02:27.5±0.4,38°.21N±0°.02×0°.92W±0°.02,h3km±2km, Error ellipse: s-maj=3.3km s-min=2.3km az=142.3*
*MDD **18** 05:02:28.9±0.4,38°.07N×0°.79W,h0km,mbLg2.6/30,Error ellipse: s-maj=4.7km s-min=2.4km az=136.0,PRIMO*

SENTIDO LEVEMENTE EN LAS LOCALIDADES DE ALMORFA Y ALMORAD(ALICANTE).
*IDC **18** 05:02:28.9±1.9,38°.04N×0°.85W,h0km,mb3.2/1,mb1 3.1/4, mb1mx3.0/26,mbtmp3.0/4,ML3.0/3,Error ellipse: s-maj=35.9km s-min=15.9km az=44.0*
*CSEM **18** 05:02:28.5±0.2,38°.14N×0°.85W,h5km,ML2.9/24,Error ellipse: s-maj=3.8km s-min=2.5km az=138.0*
*INMG **18** 05:02:29.3±1.1,38°.09N×0°.78W,h0km,ML2.6,Error ellipse: s-maj=2.2km s-min=1.2km az=132.0*
*NEIC **18** 05:02:29.4,38°.09N×0°.79W,h1km,MN2.7(MDD),After MDD.*
NEIC Felt at Callosa de Segura, San Javier and Torrevieja.

ISC 18 05:02:28.7±0.4,38°.14N±0°.02×0°.85W±0°.02,h7km±2km, n245,σ1§16/407,4C,Spain

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMUR	**La Murta**	**0.43**	**226**	Pg	**Pg**	**05 02 37.7**	**+0.6**
EMUR				Lg		05 02 43.9	
EMUR	**La Murta**	**0.43**	**226**	Pg	**Pg**	**05 02 36.1**	**-1.0**
	27nm,0.1s,SNR=296						
EMUR				Lg		05 02 43.3	
	162nm,0.2s						
EMUR	**La Murta**	**0.43**	**226**	Pg	**Pg**	**05 02 36.1**	**-1.0**
	27nm,0.1s,SNR=296						
EMUR				Lg		05 02 43.3	
	162nm,0.2s						
EMUR	**La Murta**	**0.43**	**226**	Pg	**Pg**	**05 02 36.1**	**-1.0**
	27nm,0.1s,SNR=296						
EMUR				Lg		05 02 43.9	
CART	**Cartagena**	**0.57**	**192**	*e*Pg	**Pg**	**05 02 39.5**	**-0.2**
CART				*e*Sg	**Sg**	**05 02 46.1**	**-1.0**
CART	**Cartagena**	**0.57**	**192**	*e*Pg	**Pg**	**05 02 39.5**	**-0.2**
CART				*e*Sg	**Sg**	**05 02 46.1**	**-1.0**
EBEN	**Beniarda**	**0.74**	**41**	Pg	**Pg**	**05 02 43.5**	**+0.5**
EBEN				Lg		05 02 53.2	
EBEN	**Beniarda**	**0.74**	**41**	Pg	**Pg**	**05 02 42.6**	**-0.4**
	30nm,0.2s,SNR=174						
EBEN				Lg		05 02 53.8	
	28nm,0.2s,SNR=12						
EBEN	**Beniarda**	**0.74**	**41**	Pg	**Pg**	**05 02 42.6**	**-0.4**
	30nm,0.2s,SNR=174						
EBEN				Lg		05 02 53.8	
	28nm,0.2s,SNR=12						
EBEN	**Beniarda**	**0.74**	**41**	Pg	**Pg**	**05 02 42.6**	**-0.4**
	30nm,0.2s,SNR=174						
EBEN				Lg		05 02 53.2	
ETOB	**Tobarra**	**0.74**	**312**	Pg	**Pg**	**05 02 45.0**	**+2.0**
ETOB				Lg		05 02 55.6	
ETOB	**Tobarra**	**0.74**	**312**	Pg	**Pg**	**05 02 43.4**	**+0.4**
	80nm,0.2s,SNR=151						
ETOB				Lg		05 02 56.6	
	103nm,0.2s,SNR=22						
ETOB	**Tobarra**	**0.74**	**312**	Pg	**Pg**	**05 02 43.4**	**+0.4**
	80nm,0.2s,SNR=151						
ETOB				Lg		05 02 56.6	
	103nm,0.2s,SNR=22						
ETOB	**Tobarra**	**0.74**	**312**	Pg	**Pg**	**05 02 43.4**	**+0.4**
	80nm,0.2s,SNR=151						
ETOB				Lg		05 02 55.6	
EVIA	**Vianos**	**1.39**	**291**	Pg	**Pn**	**05 02 55.0**	**+0.4**
EVIA				Lg		05 03 16.3	
EVIA	**Vianos**	**1.39**	**291**	Pn	**Pn**	**05 02 55.0**	**+0.4**
	1.7nm,0.1s,SNR=134						
EVIA				Pg	**Pg**	**05 02 56.9**	**+1.5**
	149nm,0.3s,SNR=7.9						
EVIA				Lg		05 03 16.3	
	154nm,0.2s,SNR=17						
EVIA	**Vianos**	**1.39**	**291**	Pn	**Pn**	**05 02 55.0**	**+0.4**
	1.7nm,0.1s,SNR=134						
EVIA				Pg	**Pg**	**05 02 56.9**	**+1.5**
	149nm,0.3s,SNR=7.9						
EVIA				Lg		05 03 16.3	
	154nm,0.2s,SNR=17						
EVIA	**Vianos**	**1.39**	**291**	Pn	**Pn**	**05 02 55.0**	**+0.4**
	1.7nm,0.1s,SNR=134						
EHUE	**Huescar**	**1.42**	**257**	Pg	**Pg**	**05 02 55.3**	**-0.7**
EHUE				Lg		05 03 16.1	
EHUE	**Huescar**	**1.42**	**257**	Pg	**Pg**	**05 02 55.3**	**-0.7**
	7.9nm,0.1s,SNR=7.9						
EHUE				Lg		05 03 16.1	
	11nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**1.42**	**257**	Pg	**Pg**	**05 02 55.3**	**-0.7**
	7.9nm,0.1s,SNR=7.9						
EHUE				Lg		05 03 16.1	
	11nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**1.42**	**257**	Pg	**Pg**	**05 02 55.3**	**-0.6**
	7.9nm,0.1s,SNR=7.9						
ECHE	**Chera**	**1.45**	**356**	Pg	**Pn**	**05 02 55.7**	**+0.3**
ECHE				Lg		05 03 17.0	
ECHE	**Chera**	**1.45**	**356**	Pn	**Pn**	**05 02 55.7**	**+0.3**
	2.1nm,0.1s,SNR=52						
ECHE				Pg	**Pg**	**05 02 57.6**	**+1.1**
	48nm,0.3s,SNR=7.9						
ECHE				Lg		05 03 17.0	
	27nm,0.2s,SNR=8.5						
ECHE	**Chera**	**1.45**	**356**	Pn	**Pn**	**05 02 55.7**	**+0.3**
	2.1nm,0.1s,SNR=52						
ECHE				Pg	**Pg**	**05 02 57.6**	**+1.1**
	48nm,0.3s,SNR=7.9						
ECHE				Lg		05 03 17.0	
	27nm,0.2s,SNR=8.5						
ECHE	**Chera**	**1.45**	**356**	Pn	**Pn**	**05 02 55.7**	**+0.3**
	2.1nm,0.1s,SNR=52						
ENIJ	**Nijar**	**1.59**	**223**	Pg	**Pg**	**05 02 56.8**	**-2.4**
ENIJ	**Nijar**	**1.59**	**223**	Pn	**Pn**	**05 02 56.8**	**-0.5**
	5.5nm,0.2s,SNR=7.9						
ENIJ	**Nijar**	**1.59**	**223**	Pn	**Pn**	**05 02 56.8**	**-0.5**
	5.5nm,0.2s,SNR=7.9						
ENIJ	**Nijar**	**1.59**	**223**	Pn	**Pn**	**05 02 56.8**	**-0.6**
	5.5nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.79**	**260**	Pn	**Pn**	**05 03 00.8**	**+0.7**
EQES				Lg		05 03 27.6	
EQES	**Quesada**	**1.79**	**260**	Pn	**Pn**	**05 03 00.0**	**0.0**
	1.7nm,0.3s,SNR=7.9						
EQES				Pg	**Pg**	**05 03 02.0**	**-1.0**
	89nm,0.2s,SNR=7.9						
EQES				Lg		05 03 25.8	
	14nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.79**	**260**	Pn	**Pn**	**05 03 00.0**	**0.0**
	1.7nm,0.3s,SNR=7.9						
EQES				Pg	**Pg**	**05 03 02.0**	**-1.0**
	89nm,0.2s,SNR=7.9						
EQES				Lg		05 03 25.8	
	14nm,0.2s,SNR=7.9						
EQES	**Quesada**	**1.79**	**260**	Pn	**Pn**	**05 03 00.0**	**-0.1**
	1.7nm,0.3s,SNR=7.9						
EQES	**Quesada**	**1.79**	**260**	Pg	**Pg**	**05 03 02.0**	**-1.1**
	89nm,0.2s,SNR=7.9						
EQES				Lg		05 03 27.6	
EIBI	**Ibiza**	**1.93**	**62**	Pn	**Pn**	**05 03 01.0**	**-1.0**
EIBI				Sn	**Sn**	**05 03 25.7**	**-0.9**
EIBI	**Ibiza**	**1.93**	**62**	Pn	**Pn**	**05 03 01.0**	**-1.0**
	6.3nm,0.2s,SNR=23						
EIBI				Sn	**Sn**	**05 03 24.4**	**-2.1**
	9.1nm,0.2s,SNR=5.0						
EIBI	**Ibiza**	**1.93**	**62**	Pn	**Pn**	**05 03 01.0**	**-1.0**
	6.3nm,0.2s,SNR=23						
EIBI				Sn	**Sn**	**05 03 24.4**	**-2.1**
	9.1nm,0.2s,SNR=5.0						
EIBI	**Ibiza**	**1.93**	**62**	Pn	**Pn**	**05 03 01.0**	**-1.0**
	6.3nm,0.2s,SNR=23						
EIBI				Sn	**Sn**	**05 03 25.7**	**-0.8**
EBER	**Berja**	**2.05**	**233**	Pn	**Pn**	**05 03 03.8**	**+0.2**
EBER				Sn	**Sn**	**05 03 29.7**	**+0.4**
EBER				Lg		05 03 34.9	
EBER	**Berja**	**2.05**	**233**	Pn	**Pn**	**05 03 03.8**	**+0.2**
	5.3nm,0.2s,SNR=26						
EBER				Sn	**Sn**	**05 03 29.7**	**+0.4**
	2.6nm,0.2s,SNR=7.9						
EBER	**Berja**	**2.05**	**233**	Pn	**Pn**	**05 03 03.8**	**+0.2**
	5.3nm,0.2s,SNR=26						
EBER				Sn	**Sn**	**05 03 29.7**	**+0.3**
	2.6nm,0.2s,SNR=7.9						
EBER	**Berja**	**2.05**	**233**	Pn	**Pn**	**05 03 03.8**	**+0.2**
	5.3nm,0.2s,SNR=26						
EBER				Sn	**Sn**	**05 03 29.7**	**+0.3**
	2.6nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.24**	**7**	Pn	**Pn**	**05 03 07.3**	**+1.1**
EMOS				Sn	**Sn**	**05 03 34.2**	**+0.2**
EMOS	**Mosqueruela**	**2.24**	**7**	Pn	**Pn**	**05 03 07.3**	**+1.1**
	1.7nm,0.1s,SNR=15						
EMOS				Sn	**Sn**	**05 03 33.7**	**-0.4**
	3.6nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.24**	**7**	Pn	**Pn**	**05 03 07.3**	**+1.1**
	1.7nm,0.1s,SNR=15						
EMOS				Sn	**Sn**	**05 03 34.2**	**+0.1**
EQUE	**Quentar**	**2.26**	**246**	Pn	**Pn**	**05 03 07.7**	**+1.1**
	2.5nm,0.2s,SNR=7.9						
EQUE				Sn	**Sn**	**05 03 36.2**	**+1.5**
	1.8nm,0.2s,SNR=7.9					

PAB eSg Sg 05 04 09.2 +1.8
ETOS Mallorca 3.28 59 Pn Pn 05 03 20.6 +0.1
ETOS Sn Sn 05 03 59.1 -0.7
ETOS Mallorca 3.28 59 Pn Pn 05 03 20.6 +0.1
2.0nm,0.2s,SNR=8.7
ETOS Sn Sn 05 03 59.1 -0.8
1.5nm,0.2s,SNR=7.9
ETOS Mallorca 3.28 59 Pn Pn 05 03 20.6 +0.1
2.0nm,0.2s,SNR=8.7
ETOS Sn Sn 05 03 59.1 -0.8
1.5nm,0.2s,SNR=7.9
ETOS Mallorca 3.28 59 Pn Pn 05 03 20.6 0.0
2.0nm,0.2s,SNR=8.7
ETOS Sn Sn 05 03 59.1 -0.8
1.5nm,0.2s,SNR=7.9
EMIJ Mijas 3.50 244 Pn Pn 05 03 24.6 +1.0
EMIJ Mijas 3.50 244 Pn Pn 05 03 24.6 +1.0
0.7nm,0.2s,SNR=7.9
EMIJ Mijas 3.50 244 Pn Pn 05 03 24.6 +1.0
0.7nm,0.2s,SNR=7.9
EMIJ Mijas 3.50 244 Pn Pn 05 03 24.6 +1.0
0.7nm,0.2s,SNR=7.9
EPOB Poblet 3.53 24 Pn Pn 05 03 24.1 +0.1
EPOB Pg Pg 05 03 34.4 -2.0
EPOB Sn Sn 05 04 06.0 -0.1
EPOB Poblet 3.53 24 ⇑Pn Pn 05 03 24.1 +0.1
1.6nm,0.3s,SNR=18
EPOB Pg Pg 05 03 34.4 -2.0
SNR=7.9
EPOB Sn Sn 05 04 06.0 -0.1
0.9nm,0.2s,SNR=7.9
EPOB Poblet 3.53 24 ⇑Pn Pn 05 03 24.1 +0.1
1.6nm,0.3s,SNR=18
EPOB Pg Pg 05 03 34.4 -2.0
SNR=7.9
EPOB Sn Sn 05 04 06.0 -0.1
0.9nm,0.2s,SNR=7.9
EPOB Poblet 3.53 24 Pn Pn 05 03 24.1 +0.1
1.6nm,0.3s,SNR=18
EPOB Poblet 3.53 24 Pg Pg 05 03 34.4 -2.0
SNR=7.9
EPOB Sn Sn 05 04 06.0 0.0
0.9nm,0.2s,SNR=7.9
GUD Guadarrama 3.58 315 Pn Pn 05 03 25.9 +1.2
GUD Pg Pg 05 03 37.7 +0.4
GUD Sn Sn 05 04 07.5 +0.4
GUD Lg 05 04 25.6
GUD Guadarrama 3.58 315 Pn Pn 05 03 25.6 +0.9
0.5nm,0.2s,SNR=7.9
GUD Pg Pg 05 03 36.9 -0.4
SNR=7.9
GUD Sn Sn 05 04 07.5 +0.4
2.4nm,0.2s,SNR=7.9
GUD Lg 05 04 25.6
9.7nm,0.2s,SNR=7.9
GUD Guadarrama 3.58 315 Pn Pn 05 03 25.6 +0.9
0.5nm,0.2s,SNR=7.9
GUD Pg Pg 05 03 36.9 -0.4
SNR=7.9
GUD Sn Sn 05 04 07.5 +0.4
2.4nm,0.2s,SNR=7.9
GUD Lg 05 04 25.6
9.7nm,0.2s,SNR=7.9
GUD Guadarrama 3.58 315 Pn Pn 05 03 25.6 +1.0
0.5nm,0.2s,SNR=7.9
ESAC San Caprasio 3.58 5 Pn Pn 05 03 26.0 +1.3
ESAC Pg Pg 05 03 35.5 -1.9
ESAC Lg 05 04 25.7
ESAC San Caprasio 3.58 5 Pn Pn 05 03 26.8 +2.1
3.2nm,0.1s,SNR=7.9
ESAC Pg Pg 05 03 36.8 -0.6
26nm,0.3s,SNR=7.9
ESAC Lg 05 04 26.1
35nm,0.2s,SNR=7.9
ESAC San Caprasio 3.58 5 Pn Pn 05 03 26.8 +2.1
3.2nm,0.1s,SNR=7.9
ESAC Pg Pg 05 03 36.8 -0.6
26nm,0.3s,SNR=7.9
ESAC Lg 05 04 26.1
35nm,0.2s,SNR=7.9
ESAC San Caprasio 3.58 5 Pn Pn 05 03 26.0 +1.2
EMIR Miracle 4.18 25 Pn Pn 05 03 33.8 +0.9
EMIR Pg Pg 05 03 45.6 -3.2
EMIR Sn Sn 05 04 21.7 -0.4
EMIR Miracle 4.18 25 Pn Pn 05 03 35.2 +2.2
0.5nm,0.3s,SNR=7.9
EMIR Sn Sn 05 04 21.7 -0.4
0.9nm,0.3s,SNR=7.9
EMIR Miracle 4.18 25 Pn Pn 05 03 35.2 +2.2
0.5nm,0.3s,SNR=7.9
EMIR Sn Sn 05 04 21.7 -0.4
0.9nm,0.3s,SNR=7.9
EMIR Miracle 4.18 25 Pn Pn 05 03 33.8 +0.8
EMIR Miracle 4.18 25 Pg Pg 05 03 45.7 -3.1
EMIR Sn Sn 05 04 21.7 -0.4
0.9nm,0.3s,SNR=7.9
CFON Fontmartina 4.41 34 Pn Pn 05 03 36.8 +0.8
CFON Pg Pg 05 03 50.3 -2.8
CFON Sn Sn 05 04 28.1 +0.5
CFON Fontmartina 4.41 34 Pn Pn 05 03 35.9 -0.1
1.0nm,0.2s,SNR=19
CFON Sn Sn 05 04 25.8 -1.8
1.2nm,0.2s,SNR=7.9
CFON Fontmartina 4.41 34 Pn Pn 05 03 35.9 -0.1
1.0nm,0.2s,SNR=19
CFON Sn Sn 05 04 25.8 -1.8
1.2nm,0.2s,SNR=7.9
CFON Fontmartina 4.41 34 Pn Pn 05 03 35.9 -0.1
1.0nm,0.2s,SNR=19
CFON Fontmartina 4.41 34 Pg Pg 05 03 50.3 -2.8
CFON Sn Sn 05 04 25.8 -1.8
1.2nm,0.2s,SNR=7.9
CSOR Sort 4.49 19 Pn Pn 05 03 38.5 +1.3
CSOR Pg Pg 05 03 51.8 -2.9
CSOR Sn Sn 05 04 29.6 0.0
CSOR Sort 4.49 19 Pn Pn 05 03 38.5 +1.3
0.9nm,0.2s,SNR=7.9
CSOR Pg Pg 05 03 51.8 -2.9
SNR=7.9
CSOR Sn Sn 05 04 29.7 0.0
4.4nm,0.2s,SNR=7.9
CSOR Sort 4.49 19 Pn Pn 05 03 38.5 +1.3
0.9nm,0.2s,SNR=7.9
CSOR Pg Pg 05 03 51.8 -2.9
SNR=7.9
CSOR Sn Sn 05 04 29.7 0.0
4.4nm,0.2s,SNR=7.9
CSOR Sort 4.49 19 Pn Pn 05 03 38.5 +1.3
0.9nm,0.2s,SNR=7.9
EPLA Plasencia 4.50 297 Pn Pn 05 03 36.4 -1.0
EPLA Pg Pg 05 03 52.4 -2.5
EPLA Sn Sn 05 04 29.3 -0.6
EPLA Lg 05 04 55.2
EPLA Plasencia 4.50 297 Pn Pn 05 03 36.4 -1.0
0.5nm,0.2s,SNR=5.8
EPLA Pg Pg 05 03 52.4 -2.5
SNR=7.9
EPLA Sn Sn 05 04 27.6 -2.3
0.9nm,0.2s,SNR=7.9
EPLA Lg 05 04 51.5
3.1nm,0.2s,SNR=5.0
EPLA Plasencia 4.50 297 Pn Pn 05 03 36.4 -1.0
0.5nm,0.2s,SNR=5.8
EPLA Pg Pg 05 03 52.4 -2.5
SNR=7.9
EPLA Sn Sn 05 04 27.6 -2.3
0.9nm,0.2s,SNR=7.9
EPLA Lg 05 04 51.5
3.1nm,0.2s,SNR=5.0
EPLA Plasencia 4.50 297 Pn Pn 05 03 36.3 -1.0
0.5nm,0.2s,SNR=5.8
EBIE Bielsa 4.60 9 Pn Pn 05 03 40.9 +2.2
EBIE Bielsa 4.60 9 Pn Pn 05 03 40.9 +2.2
0.2nm,0.1s,SNR=7.9
EBIE Bielsa 4.60 9 Pn Pn 05 03 40.9 +2.2
0.2nm,0.1s,SNR=7.9
EBIE Bielsa 4.60 9 Pn Pn 05 03 40.9 +2.2
0.2nm,0.1s,SNR=7.9
EMIN Mina Concepcio 4.62 267 Pn Pn 05 03 38.5 -0.5
EMIN Pg Pg 05 03 54.2 -3.0
EMIN Sn Sn 05 04 31.1 -1.7
EMIN Lg 05 04 58.0
EMIN Mina Concepcio 4.62 267 Pn Pn 05 03 38.5 -0.5
1.1nm,0.2s,SNR=6.4
EMIN Sn Sn 05 04 31.2 -1.7
0.2nm,0.2s,SNR=7.9
EMIN Lg 05 04 58.0
0.4nm,0.4s,SNR=5.0
EMIN Mina Concepcio 4.62 267 Pn Pn 05 03 38.5 -0.5
1.1nm,0.2s,SNR=6.4
EMIN Mina Concepcio 4.62 267 Pg Pg 05 03 54.2 -3.0
EMIN Sn Sn 05 04 31.2 -1.7
0.2nm,0.2s,SNR=7.9
IUNC Unciti 4.63 354 Pn Pn 05 03 41.4 +2.3
0.9nm,0.1s,SNR=4.0
IUNC Unciti 4.63 354 Pn Pn 05 03 41.4 +2.3
0.9nm,0.1s,SNR=4.0
IUNC Unciti 4.63 354 Pn Pn 05 03 41.4 +2.2
0.9nm,0.1s,SNR=4.0
ETSF Etsaut 4.75 3 Pn Pn 05 03 42.3 +1.5
ETSF Sn Sn 05 04 35.0 -1.2
ETSF Lg 05 05 01.8
3.8nm,0.5s
ETSF Etsaut 4.75 3 Pn Pn 05 03 42.3 +1.5
ETSF Sn Sn 05 04 35.0 -1.2
ETSF Lg 05 05 01.8
3.8nm,0.5s
CLLI Llivia 4.84 26 Pn Pn 05 03 43.1 +1.2
CLLI Sn Sn 05 04 37.0 -1.3
CLLI Lg 05 05 06.2
CLLI Llivia 4.84 26 Pn Pn 05 03 43.2 +1.2
0.2nm,0.1s,SNR=7.9
CLLI Sn Sn 05 04 36.9 -1.3
0.2nm,0.2s,SNR=7.9
CLLI Lg 05 05 06.2
0.1nm,0.2s,SNR=7.9
CLLI Llivia 4.84 26 Pn Pn 05 03 43.2 +1.2
0.2nm,0.1s,SNR=7.9
CLLI Sn Sn 05 04 36.9 -1.3
0.2nm,0.2s,SNR=7.9
CLLI Lg 05 05 06.2
0.1nm,0.2s,SNR=7.9
CLLI Llivia 4.84 26 Pn Pn 05 03 43.2 +1.3
0.2nm,0.1s,SNR=7.9
CLLI Sn Sn 05 04 37.0 -1.2
EBAD Badajoz 4.88 279 Pn Pn 05 03 42.4 -0.1
EBAD Pg Pg 05 03 59.5 -2.6
EBAD Sn Sn 05 04 38.0 -1.3
EBAD Lg 05 05 06.9
EBAD Badajoz 4.88 279 Pn Pn 05 03 42.8 +0.2
1.8nm,0.2s,SNR=7.9
EBAD Pg Pg 05 04 01.0 -1.2
SNR=7.9
EBAD Lg 05 05 03.9
1.7nm,0.2s,SNR=7.9
EBAD Badajoz 4.88 279 Pn Pn 05 03 42.8 +0.2
1.8nm,0.2s,SNR=7.9
EBAD Pg Pg 05 04 01.0 -1.2
SNR=7.9
EBAD Lg 05 05 03.9
1.7nm,0.2s,SNR=7.9
EBAD Badajoz 4.88 279 Pn Pn 05 03 42.8 +0.3
1.8nm,0.2s,SNR=7.9
PBAR Barrancos 4.88 272 ePn Pn 05 03 42.1 -0.5
PBAR eSg Sg 05 05 07.2 +1.7
PBAR A 05 05 18.4
6.3nm,0.4s
PBAR Barrancos 4.88 272 Pn Pn 05 03 42.1 -0.5
PBAR Lg 05 05 07.2
6.3nm,0.4s
PBAR Barrancos 4.88 272 Pn Pn 05 03 42.1 -0.5
PBAR Lg 05 05 07.2
6.3nm,0.4s
PBAR Barrancos 4.88 272 ePn Pn 05 03 42.1 -0.5
PBAR eSg Sg 05 05 07.2 +1.7
6.3nm,0.4s
EPF Esparros 4.96 10 Pn Pn 05 03 45.1 +1.4
EPF Pg Pg 05 04 02.7 -1.1
EPF Sn Sn 05 04 40.1 -1.3
EPF Lg 05 05 07.7
2.4nm,0.4s
EPF Esparros 4.96 10 Pn Pn 05 03 45.1 +1.4
EPF Pg Pg 05 04 02.7 -1.1
EPF Sn Sn 05 04 40.1 -1.3
EPF Lg 05 05 07.7
2.4nm,0.4s
SJPF Ste Jean 4.97 357 Pn Pn 05 03 45.5 +1.7
SJPF Sn Sn 05 04 40.8 -0.8
SJPF Lg 05 05 08.3
1.4nm,0.4s
SJPF Ste Jean 4.97 357 Pn Pn 05 03 45.5 +1.7
SJPF Sn Sn 05 04 40.8 -0.8
SJPF Lg 05 05 08.3
1.4nm,0.4s
ELIZ Elizondo 5.04 354 Pn Pn 05 03 47.2 +2.5
ELIZ Elizondo 5.04 354 Pn Pn 05 03 44.9 +0.2
3.8nm,0.2s,SNR=9.6
ELIZ Pg Pg 05 04 06.0 +0.7
3.3nm,0.2s,SNR=7.9
ELIZ Elizondo 5.04 354 Pn Pn 05 03 44.9 +0.2
3.8nm,0.2s,SNR=9.6
ELIZ Pg Pg 05 04 06.0 +0.7
3.3nm,0.2s,SNR=7.9
ELIZ Elizondo 5.04 354 Pn Pn 05 03 44.9 +0.1
3.8nm,0.2s,SNR=9.6
EALK Alkurruntz 5.09 355 Pn Pn 05 03 48.1 +2.6
EALK Alkurruntz 5.09 355 Pn Pn 05 03 48.1 +2.6
0.7nm,0.1s,SNR=5.8
EALK Alkurruntz 5.09 355 Pn Pn 05 03 48.1 +2.6
0.7nm,0.1s,SNR=5.8
EALK Alkurruntz 5.09 355 Pn Pn 05 03 48.1 +2.6
0.7nm,0.1s,SNR=5.8
PMRV Marv??o 5.27 286 eSg Sg 05 05 19.0 +1.0
PMRV A 05 05 27.0
11nm,0.5s
PMRV Marv??o 5.27 286 Lg 05 05 19.0
11nm,0.5s
PMRV Marv??o 5.27 286 Lg 05 05 19.0
11nm,0.5s
PMRV Marv??o 5.27 286 eSg Sg 05 05 19.0 +1.0
11nm,0.5s
EGRO El Granado 5.29 265 Pn Pn 05 03 47.1 -1.1
EGRO El Granado 5.29 265 Pn Pn 05 03 47.1 -1.1
0.5nm,0.1s,SNR=7.9
EGRO El rado 5.29 265 Pn Pn 05 03 47.1 -1.1
0.5nm,0.1s,SNR=7.9
EGRO El Granado 5.29 265 Pn Pn 05 03 47.1 -1.1
0.5nm,0.1s,SNR=7.9
PESTR Estremoz 5.34 280 ePn Pn 05 03 49.7 +0.8
PESTR eSg Sg 05 05 20.0 -0.1
PESTR A 05 05 24.0
0.5nm,0.2s
PESTR Estremoz 5.34 280 Pn Pn 05 03 49.7 +0.8
PESTR Lg 05 05 20.0
0.5nm,0.2s
PESTR Estremoz 5.34 280 Pn Pn 05 03 49.7 +0.8
PESTR Lg 05 05 20.0
0.5nm,0.2s
PESTR Estremoz 5.34 280 ePn Pn 05 03 49.7 +0.8
PESTR eSg Sg 05 05 20.0 -0.1
0.5nm,0.2s
PCBR Castelo Branco 5.44 290 eSg Sg 05 05 22.3 -1.0
PCBR A 05 05 28.0
9.3nm,0.7s
PCBR Castelo Branco 5.44 290 Lg 05 05 22.3
4.7nm,0.7s
PCBR Castelo Branco 5.44 290 Lg 05 05 22.3
4.7nm,0.7s
PCBR Castelo Branco 5.44 290 eSg Sg 05 05 22.3 -1.0
9.3nm,0.7s
ELAN Lanestosa 5.45 340 Pn Pn 05 03 52.7 +2.4
ELAN Sn Sn 05 04 53.9 +0.6
ELAN Lanestosa 5.45 340 Pn Pn 05 03 51.9 +1.5
0.6nm,0.2s,SNR=7.1
ELAN Sn Sn 05 04 50.5 -2.8
0.4nm,0.2s,SNR=7.9
ELAN Lanestosa 5.45 340 Pn Pn 05 03 51.9 +1.5
0.6nm,0.2s,SNR=7.1
ELAN Sn Sn 05 04 50.5 -2.8
0.4nm,0.2s,SNR=7.9
ELAN Lanestosa 5.45 340 Pn Pn 05 03 51.9 +1.5
0.6nm,0.2s,SNR=7.1
ELAN Sn Sn 05 04 53.9 +0.6
PVAQ Vaqueiros 5.49 264 ePn Pn 05 03 50.2 -0.8
PVAQ eSn Sn 05 04 52.5 -1.9
PVAQ A 05 05 41.6
4.2nm,0.7s
PVAQ Vaqueiros 5.49 264 Pn Pn 05 03 50.2 -0.8
PVAQ Sn Sn 05 04 52.5 -1.9
4.2nm,0.7s
PVAQ Vaqueiros 5.49 264 Pn Pn 05 03 50.2 -0.8
PVAQ Sn Sn 05 04 52.5 -1.9
4.2nm,0.7s
PVAQ Vaqueiros 5.49 264 ePn Pn 05 03 50.2 -0.8
PVAQ eSn Sn 05 04 52.5 -1.9
4.2nm,0.7s
MVO Moncorvo 5.64 304 ePn Pn 05 03 53.6 +0.6
MVO eSn Sn 05 04 58.1 0.0
MVO eSg Sg 05 05 30.8 +0.9
MVO A 05 05 38.0
19nm,0.6s
MVO Moncorvo 5.64 304 Pn Pn 05 03 52.8 -0.2
MVO Sn Sn 05 04 56.4 -1.7
MVO Lg 05 05 31.6
MVO Moncorvo 5.64 304 Pn Pn 05 03 52.8 -0.2
0.5nm,0.3s,SNR=7.9
MVO Sn Sn 05 04 56.4 -1.7
0.2nm,0.2s,SNR=7.9
MVO Lg 05 05 31.5
1.6nm,0.2s,SNR=7.9
MVO Moncorvo 5.64 304 Pn Pn 05 03 52.8 -0.2
0.5nm,0.3s,SNR=7.9
MVO Sn Sn 05 04 56.4 -1.7
0.2nm,0.2s,SNR=7.9
MVO Lg 05 05 31.5
1.6nm,0.2s,SNR=7.9
MVO Moncorvo 5.64 304 Pn Pn 05 03 52.8 -0.2
0.5nm,0.3s,SNR=7.9
MVO eSn Sn 05 04 58.1 0.0
MVO eSg Sg 05 05 30.8 +0.9
19nm,0.6s
MTE Manteigas 5.66 296 eSg Sg 05 05 30.1 -0.5
MTE A 05 05 34.9
9.3nm,0.8s
MTE Manteigas 5.66 296 Lg 05 05 30.1
4.7nm,0.8s
MTE Manteigas 5.66 296 Lg 05 05 30.1
4.7nm,0.8s
MTE Manteigas 5.66 296 eSg Sg 05 05 30.1 -0.5
9.3nm,0.8s
MTLF Montolieu 5.69 23 Pn Pn 05 03 54.6 +1.0
MTLF Montolieu 5.69 23 Pn Pn 05 03 54.6 +1.0
PBDV Barranco-do-Ve 5.69 263 ePn Pn 05 03 53.1 -0.6
PBDV Barranco-do-Ve 5.69 263 Pn Pn 05 03 53.1 -0.6
PBDV Barranco-do-Ve 5.69 263 Pn Pn 05 03 53.1 -0.6
PBDV Barranco-do-Ve 5.69 263 ePn Pn 05 03 53.1 -0.6
PBRG Braganca 5.82 311 ePn Pn 05 03 56.3 +0.9
PBRG eSn Sn 05 05 02.2 -0.2
PBRG eSg Sg 05 05 35.2 -0.3
PBRG A 05 05 44.7
9.8nm,0.5s
PBRG Braganca 5.82 311 Pn Pn 05 03 56.3 +0.9
PBRG Sn Sn 05 05 02.2 -0.2
PBRG Lg 05 05 35.2
4.9nm,0.5s
PBRG Braganca 5.82 311 Pn Pn 05 03 56.3 +0.9
PBRG Sn Sn 05 05 02.2 -0.2
PBRG Lg 05 05 35.2
4.9nm,0.5s
PBRG Braganca 5.82 311 ePn Pn 05 03 56.3 +0.9
PBRG eSn Sn 05 05 02.2 -0.2
PBRG eSg Sg 05 05 35.2 -0.3
9.8nm,0.5s
ECAL Calabor 5.90 312 Pn Pn 05 03 57.2 +0.7
ECAL Sn Sn 05 05 02.4 -2.0
ECAL Lg 05 05 40.2
ECAL Calabor 5.90 312 Pn Pn 05 03 57.2 +0.7
1.8nm,0.3s,SNR=8.8
ECAL Sn Sn 05 05 02.4 -2.0
1.2nm,0.2s,SNR=7.9
ECAL Lg 05 05 40.2
1.4nm,0.3s,SNR=7.9
ECAL Calabor 5.90 312 Pn Pn 05 03 57.2 +0.7
1.8nm,0.3s,SNR=8.8
ECAL Sn Sn 05 05 02.4 -2.0
1.2nm,0.2s,SNR=7.9
ECAL Lg 05 05 40.2
1.4nm,0.3s,SNR=7.9
ECAL Calabor 5.90 312 Pn Pn 05 03 57.2 +0.7
1.8nm,0.3s,SNR=8.8
ECAL Sn Sn 05 05 02.4 -2.0
1.2nm,0.2s,SNR=7.9
PVIS Viseu 6.03 297 ePn Pn 05 03 58.9 +0.6
PVIS Viseu 6.03 297 Pn Pn 05 03 58.9 +0.6
PVIS Viseu 6.03 297 Pn Pn 05 03 58.9 +0.6
PVIS Viseu 6.03 297 ePn Pn 05 03 58.9 +0.6
EARI Arriondas 6.12 329 Pn Pn 05 04 00.8 +1.2
EARI Pg Pg 05 04 22.4 -3.6
EARI Sn Sn 05 05 08.2 -1.7
EARI Arriondas 6.12 329 Pn Pn 05 04 00.8 +1.2
0.3nm,0.1s,SNR=6.0
EARI Pg Pg 05 04 23.9 -2.1
SNR=4.0
EARI Sn Sn 05 05 08.2 -1.7
0.2nm,0.2s,SNR=7.9
EARI Lg 05 05 46.8
2.3nm,0.7s,SNR=7.9
EARI Arriondas 6.12 329 Pn Pn 05 04 00.8 +1.2
0.3nm,0.1s,SNR=6.0
EARI Arriondas 6.12 329 Pn Pn 05 04 00.8 +1.2
0.3nm,0.1s,SNR=6.0
MDT Midelt 6.14 211 Pn Pn 05 04 00.5 +0.6
0.3nm,0.3s,baz=68,slow=9.6,SNR=13
MDT Midelt 6.14 211 Pn Pn 05 04 00.5 +0.6
PVRL Vila Real 6.15 303 ePn Pn 05 04 01.0 +1.0
PVRL eSn Sn 05 05 09.7 -0.9
PVRL eSg Sg 05 05 49.7 +3.5
PVRL Vila Real 6.15 303 Pn Pn 05 04 01.0 +1.0
PVRL Sn Sn 05 05 09.7 -0.9
PVRL Lg 05 05 49.7
PVRL Vila Real 6.15 303 Pn Pn 05 04 01.0 +1.0
PVRL Sn Sn 05 05 09.7 -0.9
PVRL Lg 05 05 49.7
PVRL Vila Real 6.15 303 ePn Pn 05 04 01.0 +1.0
PVRL eSn Sn 05 05 09.7 -0.9
ELOB Lobios 6.67 306 Pn Pn 05 04 07.0 -0.1
ELOB Sn Sn 05 05 20.9 -2.5
ELOB Lobios 6.67 306 Pn Pn 05 04 07.0 -0.1
0.1nm,0.2s,SNR=7.9
ELOB Sn Sn 05 05 20.9 -2.5
0.1nm,0.4s,SNR=7.9
ELOB Lg 05 06 03.4
12nm,0.8s,SNR=7.9
ELOB Lobios 6.67 306 Pn Pn 05 04 07.0 -0.1
0.1nm,0.2s,SNR=7.9
ELOB Sn Sn 05 05 20.9 -2.5
0.1nm,0.4s,SNR=7.9
ELOB Lg 05 06 03.4
12nm,0.8s,SNR=7.9
ELOB Lobios 6.67 306 Pn Pn 05 04 07.0 -0.1
0.1nm,0.2s,SNR=7.9
EPON Pontenova 7.05 319 Pn Pn 05 04 12.2 -0.1
EPON Pontenova 7.05 319 Pn Pn 05 04 12.2 -0.1
0.4nm,0.2s,SNR=4.0
EPON Lg 05 06 16.6
14nm,0.9s,SNR=7.9
EPON Pontenova 7.05 319 Pn Pn 05 04 12.2 -0.1
0.4nm,0.2s,SNR=4.0
EPON Lg 05 06 16.6
14nm,0.9s,SNR=7.9
EPON Pontenova 7.05 319 Pn Pn 05 04 12.2 -0.1
0.4nm,0.2s,SNR=4.0
CAF Calviac 7.12 17 Pn Pn 05 04 13.8 +0.5
CAF Calviac 7.12 17 Pn Pn 05 04 13.8 +0.5
EMAZ Mazaricos 7.83 310 Pn Pn 05 04 23.5 +0.4
EMAZ Mazaricos 7.83 310 Pn Pn 05 04 23.5 +0.4
0.6nm,0.2s,SNR=7.9
EMAZ Mazaricos 7.83 310 Pn Pn 05 04 23.5 +0.4
0.6nm,0.2s,SNR=7.9
EMAZ Mazaricos 7.83 310 Pn Pn 05 04 23.5 +0.4
0.6nm,0.2s,SNR=7.9
KEST Kesra 8.51 103 Pn Pn 05 04 35.0 +2.6
KEST Kesra 8.51 103 Pn Pn 05 04 35.0 +2.7
0.1nm,0.3s,baz=133,slow=2.6,SNR=9.3
KEST Kesra 8.51 103 Pn Pn 05 04 35.0 +2.6
TORD Torodi Ar. Bea 25.00 174 P P 05 07 52.7 -0.5
0.6nm,1.1s,baz=351,slow=8.2,SNR=2.4

DJA 18 05:06:44.6 90S×104°47E, h70km, MLv3.5/5, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**1.25**	**77**	P	Pn	05 07 07.5	+1.9
KASI	**Kota Agung**	**1.37**	**1**	P	Pn	05 07 06.7	-0.6
KASI				S	Sn	05 07 26.1	+1.4
RBSI	**Rajabasa**	**1.64**	**50**	P	Pn	05 07 12.4	+1.5
RBSI				S	Sn	05 07 12.5	-19
SKJI	**Sukabumi**	**2.07**	**93**	P	Pn	05 07 17.4	+0.8
SKJI				S	Sn	05 07 42.2	+0.6
KLSI		**2.21**	**7**	P	Pn	05 07 19.7	+1.2
KLSI				S	Sn	05 07 50.6	+5.7
MDSI	**Maura Dua**	**2.42**	**353**	P	Pn	05 07 21.0	-0.3
MDSI				S	Sn	05 07 51.9	+2.1
MNAI	**Manna**	**2.94**	**329**	P	Pn	05 07 25.9	-2.5

*JMA **18** 05:14:46.9±0.5, 25°.79N×141°.25E, h18km, M4.5*
*BJI **18** 05:14:49.2, 25°.93N×142°.78E, h18km, mB4.8/19, mb4.6/27, Ms4.1/16, Ms7 3.9/17*
*ISCJB **18** 05:14:49.7±1.3, 26°.18N±0°.03×142°.60E±0°.06, h6km±7km, mb4.6/63, MS3.9/12, Error ellipse: s-maj=8.3km s-min=5.4km az=176.6*
*NEIC **18** 05:14:51.5±0.3, 26°.04N×142°.58E, h10km, mb4.7/18, Error ellipse: s-maj=7.9km s-min=7.2km az=110.0*
*MOS **18** 05:14:53.6±1.1, 26°.14N×142°.59E, h33km, mb4.8/30, Error ellipse: s-maj=13.3km s-min=6.2km az=108.2*
*IDC **18** 05:14:53.9±0.8, 26°.07N×142°.61E, h27km±5km, mb4.2/19, mb1 4.3/22, mb1mx4.3/25, mbtmp4.1/22, ML3.8/3, MS3.5/4, Ms1 3.5/4, ms1mx3.0/24, Error ellipse: s-maj=18.7km s-min=12.1km az=80.0*
ISC 18 05:14:53.6±1.2, 26°.10N±0°.03×142°.62E±0°.05, h21km±8km, h26km±2.6km; pP-P, n133, σ0.97/147, mb4.6/63, MS3.9/12, 5C-5D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**0.67**	**323**	P	**Pb**	**05 15 08.4**	**+1.9**
JHHJ				*e*S	**Sb**	**05 15 23.6**	**+8.3**
CBIJ	**Chichi jima**	**1.07**	**338**	Pn	**Pn**	**05 15 12.9**	**-0.4**
	493nm,0.3s,baz=135,slow=18,SNR=157						
CBIJ				Sn	**Sn**	**05 15 33.9**	**+6.4**
	842nm,0.3s,baz=287,slow=19,SNR=19						
CBIJ	**Chichi jima**	**1.07**	**338**	P	**Pn**	**05 15 13.8**	**+0.5**
CBIJ				*e*S	**Sn**	**05 15 33.9**	**+6.4**
JHJ	**Hachijo jima 2**	**7.42**	**341**	LR	LR	05 19 06.8	
	comp=Z,127nm,21.2s,baz=152,slow=34						
BSO1	**Boso 1**	**8.65**	**351**	P	**Pn**	**05 16 56.2**	**-1.2**
BSO1				*e*S	**Sn**	**05 18 35.0**	**+0.7**
BSO3	**Boso 3**	**8.87**	**349**	P	**Pn**	**05 17 00.6**	**+0.2**
JHU	**Hanno**	**10.14**	**344**	P	**Pn**	**05 17 16.7**	**-1.1**
JHU				*e*S	**Sn**	**05 19 11.3**	**+0.4**
JYT	**Yasato**	**10.31**	**349**	*e*S	**Sn**	**05 19 14.9**	**-0.2**
JRY	**Ryogami san**	**10.39**	**343**	P	**Pn**	**05 17 20.4**	**-0.9**
JRY				*e*S	**Sn**	**05 19 20.3**	**+3.2**
JHO	**Hitachi**	**10.63**	**351**	P	**Pn**	**05 17 23.4**	**-1.1**
JHO				*e*S	**Sn**	**05 19 21.0**	**-1.9**
JAG	**Ashikaga**	**10.65**	**346**	P	**Pn**	**05 17 23.3**	**-1.5**
JAG				*e*S	**Sn**	**05 19 21.5**	**-1.9**
MJAR	**Matsushiro Arr**	**11.07**	**341**	Pn	**Pn**	**05 17 30.0**	**-0.6**
MJAR	**Matsushiro Arr**	**11.07**	**341**	Pn	**Pn**	**05 17 30.0**	**-0.6**
	1.3nm,0.3s,baz=160,slow=12,SNR=11						
MJAR	**Matsushiro Arr**	**11.07**	**341**	P	**Pn**	**05 17 30.0**	**-0.7**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MAJO	**Matsushiro**	**11.07**	**341**	*e*Pn	**Pn**	**05 17 30.8**	**+0.1**
MAT	**Matsushiro**	**11.07**	**341**	P	**Pn**	**05 17 30.3**	**-0.4**
MAT				S	**Sn**	**05 19 35.5**	**+1.6**
JMK	**Ichinoseki**	**12.87**	**355**	P	**Pn**	**05 17 54.2**	**-1.1**
JMK				*e*S	**Sn**	**05 20 10.9**	**-6.9**
ERM	**Erimo**	**15.88**	**1↑**	*e*P	**Pn**	**05 18 35.7**	**-0.1**
KSRS	**Korea Array**	**16.84**	**316**	Pn	**Pn**	**05 18 49.2**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=129,slow=9.6,SNR=9.7						
KSRS				LR	LR	05 25 07.5	
	comp=Z,152nm,18.2s,baz=145,slow=36						
ASAJ	**Asahikawa**	**17.98**	**360**	P	**Pn**	**05 19 02.5**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=198,slow=6.4,SNR=3.0						
ASAJ	**Asahikawa**	**17.98**	**360**	P	**Pn**	**05 19 02.5**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**20.82**	**0**	P	**P**	**05 19 35.0**	**+1.5**
NJ2	**Nanjing**	**21.59**	**292**	*e*P	**P**	**05 19 43.5**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
NJ2				LR	LR		
	comp=Z,280nm,15.2s,MS3.8						
CN2	**Changchun**	**22.51**	**326**	*e*P	**P**	**05 19 52.4**	**+0.7**
CN2				*e*S	**S**	**05 23 54.1**	**-3.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,12.0s,MS4.0						
CN2				LR	LR		
	comp=E,200nm,12.0s,MS4.0						
CN2				LR	LR		
	comp=Z,300nm,14.0s,MS3.9						
HABR	**Khabarovsk**	**23.11**	**347**	*e*P	**P**	**05 19 56.8**	**-1.2**
HABR				*e**PP		05 20 10.2	
HABR				S	**S**	**05 24 00.4**	**-7.5**
HABR				*e*		05 31 01.8	
HABR				pmax	pmax		
	comp=Z,68nm,1.7s,mb4.8						
HABR				pmax	pmax		
	comp=N,29nm,1.3s						
HABR				pmax	pmax		
	comp=E,18nm,0.8s						
KLR	**Kul'dur**	**24.59**	**343**	*e*P	**P**	**05 20 09.0**	**-3.0**
WHN	**Wuhan**	**25.25**	**287**	P	**P**	**05 20 21.0**	**+2.8**
WHN				S	**S**	**05 24 36.1**	**-6.7**
WHN				LR	LR		
	comp=Z,260nm,20.0s,MS3.7						
BJI	**Beijing**	**26.05**	**309**	P	**P**	**05 20 25.1**	**-0.2**
BJI				S	**S**	**05 24 54.3**	**-0.9**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
BJI				pmax	pmax		
	comp=Z,68nm,3.6s						
BJI				LR	LR		
	comp=N,140nm,13.8s,MS3.7						
BJI				LR	LR		
	comp=E,100nm,16.2s,MS3.7						
BJI				LR	LR		
	comp=Z,38nm,17.9s,MS3.0						
HHC	**Hu-ho-hao-te**	**29.61**	**308**	*e*P	**P**	**05 20 58.5**	**+1.3**
HHC				pP	pP	05 21 02.8	-0.9
HHC				sP	sP	05 21 05.8	-0.5
HHC				PP	PP	05 21 54.8	-9.3
HHC				*e*S	**S**	**05 25 52.1**	**+0.7**
HHC				SS	SS	05 27 25.1	-32
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
HHC				pmax	pmax		
	comp=Z,69nm,4.5s						
HHC				LR	LR		
	comp=N,100nm,11.3s,MS3.8						
HHC				LR	LR		
	comp=E,97nm,14.5s,MS3.8						
HHC				LR	LR		
	comp=Z,85nm,14.8s,MS3.5						
QIZ	**Qiongzhong**	**31.02**	**264**	P	**P**	**05 21 09.0**	**-0.9**
QIZ				S	**S**	**05 26 14.3**	**+0.4**
QIZ				pmax	pmax		
	comp=Z,100nm,7.2s						
QIZ				LR	LR		
	comp=N,100nm,14.3s						
QIZ				LR	LR		
	comp=Z,100nm,7.7s						
GYA	**Guiyang**	**32.18**	**279**	P	**P**	**05 21 20.0**	**-0.1**
GYA				PP	PP	05 22 27.6	-5.3
GYA				PcP	PcP	05 24 10.0	+1.3
GYA				S	**S**	**05 26 31.8**	**-0.1**
GYA				ScP	ScP	05 27 53.4	+2.2
GYA				ScS	ScS	05 31 50.0	-0.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
GYA				pmax	pmax		
	comp=Z,90nm,4.6s						
GYA				LR	LR		
	comp=N,530nm,16.8s,MS4.4						
GYA				LR	LR		
	comp=E,480nm,17.0s,MS4.4						
GYA				LR	LR		
	comp=Z,520nm,15.9s,MS4.3						
CD2	**Chengdu**	**34.37**	**287**	⇑P	**P**	**05 21 38.5**	**-0.6**
CD2				pmax	pmax		
	comp=Z,60nm,0.7s,mb5.6						
CD2				pmax	pmax		
	comp=Z,170nm,5.6s						
LZH	**Lanzhou**	**34.48**	**296**	*e*P	**P**	**05 21 39.4**	**-0.6**
LZH				pP	pP	05 21 47.9	+1.4
LZH				sP	sP	05 21 53.8	+4.7
LZH				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
LZH				pmax	pmax		
	comp=Z,120nm,4.0s						
LZH				LR	LR		
	comp=E,250nm,15.8s						
LZH				LR	LR		
	comp=Z,330nm,16.1s,MS4.2						
SONM	**Songino Array**	**35.71**	**317**	P	**P**	**05 21 51.1**	**+0.7**
	comp=Z,0.9nm,0.5s,mb4.0,baz=120,slow=8.8,SNR=6.0						
SONM				PcP	PcP	05 24 18.9	+0.6
	comp=Z,1.3nm,0.8s,baz=107,slow=3.5,SNR=4.5						
SONM	**Songino Array**	**35.71**	**317**	P	**P**	**05 21 51.1**	**+0.7**
SONM						05 24 18.9	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KMI	**Kunming**	**35.88**	**277**	P	**P**	**05 21 52.8**	**+0.6**
KMI				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
SEY	**Seymchan**	**37.40**	**7↓**	*i*P	**P**	**05 22 05.7**	**+1.1**
ZAK	**Zakamensk**	**38.62**	**319**	*e*P	**P**	**05 22 15.0**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.5						
CHTO	**Chiang Mai**	**40.87**	**269**	*e*P	**P**	**05 22 34.7**	**+0.5**
	comp=Z,11nm,0.9s,mb4.5						
CHTO	**Chiang Mai**	**40.87**	**269**	*e*P	**P**	**05 22 34.7**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
CM31	**Chiang Mai Arr**	**40.98**	**268**	*e*P	**P**	**05 22 35.9**	**+0.8**
	comp=Z,3.5nm,0.6s,mb4.2						
CMAR	**Chiang Mai Arr**	**40.98**	**268**	P	**P**	**05 22 35.7**	**+0.5**
	comp=Z,4.1nm,0.7s,mb4.2,baz=74,slow=5.3,SNR=29						
CMAR				LR	LR	05 39 22.7	
	comp=Z,74nm,19.1s,MS3.6,baz=237,slow=36						
CMAR	**Chiang Mai Arr**	**40.98**	**268**	P	**P**	**05 22 35.7**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR				MLR	MLR		
	comp=Z,74nm,19.1s						
WB2	**Warramunga Arr**	**46.46**	**191**	*e*P	**P**	**05 23 18.3**	**-0.8**
WRA	**Warramunga Arr**	**46.47**	**191**	P	**P**	**05 23 17.8**	**-1.3**
	comp=Z,8.8nm,0.6s,mb4.9,baz=11,slow=8.4,SNR=30						
WRA				pP	pP	05 23 26.9	+1.2
	comp=Z,24nm,0.7s,baz=10,slow=8.6,SNR=24						
WRA	**Warramunga Arr**	**46.47**	**191**	P	**P**	**05 23 17.8**	**-1.3**
WRA				*PP	pP	05 23 27.0	+1.2
WRA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WMQ	**Urumqi**	**47.48**	**307**	*e*P	**P**	**05 23 28.4**	**+1.5**
WMQ				pP	pP	05 23 33.3	-0.3
WMQ				sP	sP	05 23 35.4	-0.8
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
WMQ				pmax	pmax		
	comp=Z,87nm,4.0s						
WMQ				LR	LR		
	comp=N,53nm,23.2s						
WMQ				LR	LR		
	comp=Z,46nm,20.5s,MS3.4						
ASAR	**Alice Springs**	**50.18**	**190**	P	**P**	**05 23 47.2**	**-0.5**
	comp=Z,0.8nm,0.7s,mb3.9,baz=9.8,slow=5.9,SNR=8.5						
ASAR				pP	pP	05 23 55.5	+1.0
	comp=Z,1.8nm,0.7s,baz=17,slow=9.2,SNR=8.7						
ASAR	**Alice Springs**	**50.18**	**190**	P	**P**	**05 23 47.3**	**-0.5**
ASAR				*PP	pP	05 23 55.5	+1.0
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZAA0	**Zalesovo Array**	**50.50**	**320**	*e*P	**P**	**05 23 49.0**	**-0.9**
ZALV	**Zalesovo Beam**	**50.50**	**320**	P	**P**	**05 23 49.1**	**-0.8**
	comp=Z,1.4nm,0.5s,mb4.3,baz=104,slow=7.5,SNR=8.8						
ZALV				pP	pP	05 23 57.2	+0.6
	comp=Z,2.3nm,0.7s,baz=93,slow=7.9,SNR=5.1						
ZALV				PcP	PcP	05 25 07.4	-0.3
	comp=Z,3.8nm,0.7s,baz=106,slow=3.4,SNR=12						
ZALV	**Zalesovo Beam**	**50.50**	**320**	P	**P**	**05 23 49.1**	**-0.8**
ZALV				*PP	pP	05 23 57.2	+0.6
ZALV						05 25 07.4	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
MKAR	**Makanchi Array**	**51.41**	**310**	P	**P**	**05 23 55.6**	**-1.3**
	comp=Z,1.1nm,0.6s,mb4.0,baz=98,slow=8.9,SNR=7.4						
MKAR				PcP	PcP	05 25 10.6	-0.6
	comp=Z,1.9nm,0.7s,baz=82,slow=6.4,SNR=6.9						
MKAR	**Makanchi Array**	**51.41**	**310**	P	**P**	**05 23 55.6**	**-1.3**
MKAR						05 25 10.6	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**53.97**	**315**	*e*P	**P**	**05 24 15.3**	**-0.4**
	comp=Z,6.2nm,0.7s,mb4.7						
KURK	**Kurchatov**	**53.97**	**315**	*c* *i*P	**P**	**05 24 15.1**	**-0.6**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
TRF	**Thorofare Moun**	**56.76**	**30**	*e*P	**P**	**05 24 36.0**	**+0.4**
	comp=Z,4.4nm,0.9s,mb4.5						
PMR	**Palmer**	**57.07**	**32**	*e*P	**P**	**05 24 37.7**	**-0.1**
	comp=Z,4.7nm,0.9s,mb4.5						
PMR	**Palmer**	**57.07**	**32**	*e*P	**P**	**05 24 37.7**	**-0.1**
PMR				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
AAK	**Ala-Archa**	**57.15**	**305↓**	*e*P	**P**	**05 24 38.4**	**-0.3**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
MCK	**McKinley**	**57.40**	**29**	*e*P	**P**	**05 24 39.8**	**-0.3**
	comp=Z,2.7nm,0.8s,mb4.3						
MCK	**McKinley**	**57.40**	**29**	*e*P	**P**	**05 24 39.8**	**-0.3**
MCK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**57.66**	**181**	P	**P**	**05 24 40.5**	**-1.8**
	comp=Z,1.3nm,0.7s,mb4.1,baz=0.0,slow=11,SNR=2.6						
ILAR	**Eielson Array**	**58.40**	**28**	P	**P**	**05 24 46.3**	**-0.8**
	comp=Z,1.7nm,0.9s,mb4.1,baz=264,slow=5.9,SNR=18						
ILAR	**Eielson Array**	**58.40**	**28**	P	**P**	**05 24 46.3**	**-0.8**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
COCO	**West Island**	**58.58**	**235**	*i*P	**P**	**05 24 54.3**	**+5.2**
VOSK	**Vostochnaya**	**58.70**	**317**	P	**P**	**05 24 48.8**	**-0.6**
VOSK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
BVA0	**Borovoye Array**	**59.04**	**318**	P	**P**	**05 24 51.8**	**0.0**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
BVAR	**Borovoye Array**	**59.04**	**318**	P	**P**	**05 24 51.8**	**0.0**
	comp=Z,9.1nm,0.7s,mb4.9,baz=93,slow=8.3,SNR=37						
BVAR	**Borovoye Array**	**59.04**	**318**	P	**P**	**05 24 51.8**	**0.0**
BVAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BRVK	**Borovoye**	**59.11**	**318**	*e*P	**P**	**05 24 52.6**	**+0.3**
	comp=Z,8.7nm,0.6s,mb5.0						
BRVK	**Borovoye**	**59.11**	**318**	*e*P	**P**	**05 24 52.6**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
BMRM	**Bremner River**	**59.21**	**33**	*e*P	**P**	**05 24 53.5**	**+0.7**
	comp=Z,9.1nm,0.8s,mb4.9						
ZRNK	**Zerenda**	**59.88**	**318**	P	**P**	**05 24 57.3**	**-0.3**
ZRNK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
KK31	**Karatay Array**	**59.99**	**306**	*i*P	**P**	**05 24 58.0**	**-0.5**
KK31				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
DAWY	**Dawson**	**61.62**	**29**	*e*P	**P**	**05 25 10.3**	**+1.1**
HYT	**Haines Junctio**	**62.69**	**33**	*e*P	**P**	**05 25 18.4**	**+2.0**
INK	**Inuvik**	**63.77**	**24**	P	**P**	**05 25 23.4**	**-0.2**
INK				*e*P		05 25 24.0	
INK	**Inuvik**	**63.77**	**24**	P	**P**	**05 25 23.4**	**-0.2**
	comp=Z,2.5nm,0.7s,mb4.4,baz=271,slow=3.5,SNR=5.4						
INK	**Inuvik**	**63.77**	**24**	P	**P**	**05 25 23.4**	**-0.1**
INK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SVE	**Sverdlovsk**	**64.25**	**323**	*e*P	**P**	**05 25 27.3**	**+0.4**
SVE				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
ARU	**Arti**	**65.45**	**323**	*e*P	**P**	**05 25 34.8**	**+0.1**
	comp=Z,22nm,0.9s,mb5.2						
ARU	**Arti**	**65.45**	**323**	*d* *i*P	**P**	**05 25 34.5**	**-0.2**
ARU				*e*		05 26 07.1	
ARU				*e*		05 27 54.9	
ARU				S	S	05 34 12.1	-5.9
ARU				SS	SS	05 38 27.7	-3.3
ARU				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
AB31	**Akbulak array**	**66.07**	**315**	*i*P	**P**	**05 25 38.0**	**-0.8**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
ABKAR	**Akbulak array**	**66.07**	**315**	*e*P	**P**	**05 25 38.4**	**-0.4**
	comp=Z,6.9nm,0.8s,mb4.7						
YKA	**Yellowknife Ar**	**72.83**	**28**	P	**P**	**05 26 20.1**	**-0.2**
	comp=Z,3.4nm,0.7s,mb4.4,baz=293,slow=5.8,SNR=6.4						
APA	**Apatity**	**73.12**	**338↓**	*e*P	**P**	**05 26 23.3**	**+1.3**
APA				*i*		05 26 33.8	
APA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
APA				MLR	MLR		
	comp=Z,400nm,15.0s,MS4.8						
KEV	**Kevo**	**74.05**	**341**	*e*P	**P**	**05 26 27.6**	**+0.2**
KEV	**Kevo**	**74.05**	**341**	*e*p	**P**	**05 26 27.6**	**+0.2**
ARCES	**ARCESS Array B**	**74.61**	**341**	P	**P**	**05 26 31.6**	**+0.9**
	comp=Z,5.3nm,0.8s,mb4.5,baz=67,slow=7.1,SNR=9.0						
ARCES	**ARCESS Array B**	**74.61**	**341**	P	**P**	**05 26 31.6**	**+0.9**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
JOF	**Joensuu**	**76.15**	**334**	*e*P	**P**	**05 26 39.3**	**-0.3**
JOF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
JOF	**Joensuu**	**76.15**	**334**	*e*p	**P**	**05 26 39.3**	**-0.3**
	comp=Z,9.0nm,0.7s,mb4.8						
NEW	**Newport**	**77.38**	**42**	*e*P	**P**	**05 26 47.4**	**+0.5**
	comp=Z,22nm,2.1s,mb4.7						
NEW	**Newport**	**77.38**	**42**	*e*P	**P**	**05 26 47.4**	**+0.6**
NEW				pmax	pmax		
	comp=Z,22nm,2.1s						
OBN	**Obninsk**	**77.57**	**326↑**	*e*P	**P**	**05 26 48.5**	**+0.7**
OBN						05 26 59.0	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.2						
KAF	**Kangasniemi**	**78.54**	**335**	*e*P	**P**	**05 26 52.2**	**-0.8**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
KAF	**Kangasniemi**	**78.54**	**335**	*e*p	**P**	**05 26 52.2**	**-0.8**
	comp=Z,4.4nm,0.5s,mb4.6						
FINES	**FINESS Array B**	**79.01**	**334**	P	**P**	**05 26 55.5**	**-0.1**
	comp=Z,6.1nm,0.7s,mb4.7,baz=58,slow=5.2,SNR=21						
FINES	**FINESS Array B**	**79.01**	**334**	P	**P**	**05 26 55.5**	**-0.1**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KIV	**Kislovodsk**	**79.02**	**314↑**	*e*P	**P**	**05 26 58.0**	**+2.0**
KIV					pP	05 27 06.0	+3.0
KIV				*e*		05 27 12.9	
KIV				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
GNI	**Garni**	**79.25**	**309↓**	*e*P	**P**	**05 26 58.0**	**+0.6**
GNI				pmax	pmax		
	comp=Z,11nm,1.7s						
JTMT	**Jette**	**79.32**	**42**	*e*P	**P**	**05 26 58.5**	**+1.0**
	comp=Z,1.4nm,0.7s,mb4.0						
CMB	**Columbia Colle**	**79.51**	**53**	*e*P	**P**	**05 26 59.2**	**+0.3**
	comp=Z,2.7nm,0.8s,mb4.2						
CMB	**Columbia Colle**	**79.51**	**53**	*e*P	**P**	**05 26 59.2**	**+0.4**
CMB				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
NVAR	**Mina Array Bea**	**80.83**	**52**	P	**P**	**05 27 06.2**	**+0.2**
	comp=Z,0.9nm,0.7s,mb3.8,baz=302,slow=5.2,SNR=9.5						
MIB	**Mutribah**	**81.70**	**299**	*e*P	**P**	**05 27 10.1**	**-0.7**
MIB				AMb	AMB	05 27 11.6	
	comp=Z,55nm,0.9s,mb5.5						
RDF	**Al-Radifah**	**81.91**	**298**	*e*P	**P**	**05 27 11.3**	**-0.5**
RDF				AMb	AMB	05 27 11.9	
	comp=Z,39nm,0.7s,mb5.4						
NAY	**Al-Naaiem**	**82.01**	**299**	*e*P	**P**	**05 27 11.7**	**-0.7**
NAY				AMb	AMB	05 27 12.9	
	comp=Z,43nm,0.8s,mb5.4						
FFC	**Flin Flon**	**82.38**	**32**	*e*P	**P**	**05 27 14.2**	**+0.5**
	comp=Z,7.5nm,1.0s,mb4.6						
FFC	**Flin Flon**	**82.38**	**32**	*i*P	**P**	**05 27 14.6**	**+0.8**
IMW	**Indian Meadow**	**83.20**	**44**	*e*P	**P**	**05 27 20.1**	**+1.8**
	comp=Z,1.4nm,0.6s,mb4.2						
FLWY	**Flagg Ranch**	**83.26**	**44**	*e*P	**P**	**05 27 15.6**	**-3.0**
	comp=Z,42nm,2.5s,mb5.0						
RLMT	**Red Lodge**	**83.62**	**43**	*e*P	**P**	**05 27 21.8**	**+1.4**
	comp=Z,3.8nm,0.8s,mb4.6						
AKASG	**Malin Array Be**	**83.65**	**324**	P	**P**	**05 27 19.8**	**-0.7**
	comp=Z,2.9nm,0.6s,mb4.6,baz=53,slow=5.2,SNR=14						
AKASG	**Malin Array Be**	**83.65**	**324**	P	**P**	**05 27 19.8**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MALT	**Malatya**	**84.46**	**310**	*e*P	**P**	**05 27 26.2**	**+1.4**
	comp=Z,9.0nm,0.9s,mb4.9						
MALT	**Malatya**	**84.46**	**310**	*e*P	**P**	**05 27 26.2**	**+1.4**
MALT				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9						
HFS	**Hagfors**	**84.49**	**337**	P	**P**	**05 27 23.3**	**-1.2**
	comp=Z,2.8nm,0.6s,mb4.6,baz=73,slow=4.8,SNR=7.7						
HFS	**Hagfors**	**84.49**	**337**	P	**P**	**05 27 23.3**	**-1.3**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NOA	**NORSAR Array B**	**84.68**	**338**	P	**P**	**05 27 24.6**	**-0.9**
	comp=Z,2.9nm,0.8s,mb4.5,baz=47,slow=4.6,SNR=11						
NOA	**NORSAR Array B**	**84.68**	**338**	P	**P**	**05 27 24.6**	**-0.9**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BR131	**Keskin Array S**	**86.97**	**313**	*e*P	**P**	**05 27 37.8**	**+0.6**
BRTR	**Keskin Array B**	**86.97**	**313**	P	**P**	**05 27 36.2**	**-1.1**
	comp=Z,1.7nm,0.7s,mb4.4,baz=73,slow=3.8,SNR=11						
BRTR	**Keskin Array B**	**86.97**	**313**	P	**P**	**05 27 36.2**	**-1.1**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KSP	**Ksiaz**	**89.97**	**329**	*e*P	**P**	**05 27 51.1**	**-0.2**
**

0.6nm,0.6s,mb3.8,baz=165,slow=9.2,SNR=4.7
MK31 Makanchi Array 59.44 332 *e*P **P 05 42 06.9 -2.2**
MKAR Makanchi Array 59.44 332 P **P 05 42 10.5 +1.4**
MKAR Makanchi Array 59.44 332 P **P 05 42 10.5 +1.4**
2.0nm,0.6s,mb4.3,baz=140,slow=8.5,SNR=4.1
ZALV Zalesovo Beam 63.88 339 P **P 05 42 38.9 -0.1**
1.7nm,0.6s,mb4.0,baz=140,slow=5.1,SNR=8.7
KURK Kurchatov 63.95 333 *e*P **P 05 42 38.8 -0.7**
1.3nm,0.8s,mb3.8
BVAR Borovoye Array 69.30 331 P **P 05 43 12.7 -0.8**
0.5nm,0.5s,mb3.6,baz=116,slow=9.8,SNR=2.8
TORD Torodi Ar. Bea 116.52 283 PKP PKPdf 05 50 51.7 +0.9
0.4nm,1.0s,baz=158,slow=0.8,SNR=3.3

*ISCJB **18** 05:36:44.6±0.4, 37.03N±0.03×29.17E±0.03, h13km±4km, Error ellipse: s-maj=4.9km s-min=4.5km az=161.9*
*CSEM **18** 05:36:44.3±0.1, 37.02N×29.17E, h15km, MD2.9, Error ellipse: s-maj=2.7km s-min=2.0km az=179.0*
*DDA **18** 05:36:44.1, 37.04N×29.12E, h7km±7km, Md2.9*
*ISK **18** 05:36:44.0, 37.04N×29.16E, h16km, MD2.9*
ISC 18 05:36:45.0±0.5, **37.03N**±0.03×**29.17E**±0.03, **h14**km±4km, **n30**, σ**1**.**11**/55, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.29**	**65**	*e*PG	**Pg**	**05 36 50.3**	**-0.8**
GLHS				*e*SG	**Sg**	**05 36 55.6**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.29**	**65**	*e*Pg	**Pg**	**05 36 50.3**	**-0.8**
GLHS				*e*Sg	**Sg**	**05 36 55.6**	**+0.3**
GOLH	**Golhisar**	**0.38**	**57**	*i* P	**Pg**	**05 36 50.8**	**-1.8**
GOLH				*i* S	**Sg**	**05 36 58.5**	**+0.7**
GOLH	**Golhisar**	**0.38**	**57**	*i* P	**Pg**	**05 36 50.8**	**-1.8**
GOLH				*i* S	**Sg**	**05 36 58.5**	**+0.8**
TURN	**Turunc**	**0.48**	**251**	*i* P	**Pg**	**05 36 55.9**	**+1.3**
TURN				*i* S	**Sg**	**05 37 08.4**	**+7.4**
TURN	**Turunc**	**0.48**	**251**	*i* P	**Pg**	**05 36 55.9**	**+1.4**
ELL	**Elmali**	**0.66**	**115**	*e*PG	**Pg**	**05 36 57.6**	**-0.3**
ELL				*e*SG	**Sg**	**05 37 07.5**	**+0.9**
ELL	**Elmali**	**0.66**	**115**	*e*Pg	**Pg**	**05 36 57.6**	**-0.3**
ELL				*e*Sg	**Sg**	**05 37 07.6**	**+1.0**
DNZL	**Cakiroluk**	**0.66**	**352**	*i* P	**Pg**	**05 36 56.7**	**-1.2**
DNZL				*i* S	**Sg**	**05 37 09.4**	**+2.7**
DNZL	**Cakiroluk**	**0.66**	**352**	*i* P	**Pg**	**05 36 56.7**	**-1.3**
DNZL				*i* S	**Sg**	**05 37 09.4**	**+2.7**
YER	**Yerkesik**	**0.71**	**278**	*e*PG	**Pg**	**05 36 58.1**	**-0.8**
YER				*e*SG	**Sg**	**05 37 08.5**	**+0.1**
YER	**Yerkesik**	**0.71**	**278**	*e*Pg	**Pg**	**05 36 58.2**	**-0.7**
YER				*e*Sg	**Sg**	**05 37 08.5**	**+0.1**
DENT	**Denizli**	**0.73**	**352**	*e*PG	**Pg**	**05 36 58.5**	**-0.7**
DENT	**Denizli**	**0.73**	**352**	*e*Pg	**Pg**	**05 36 58.5**	**-0.7**
AKAS	**Kas**	**0.87**	**156**	*i* P	**Pg**	**05 37 00.5**	**-1.4**
AKAS				*i* S	**Sg**	**05 37 15.8**	**+2.4**
AKAS	**Kas**	**0.87**	**156**	*i* P	**Pg**	**05 37 00.5**	**-1.4**
AKAS				*i* S	**Sg**	**05 37 15.8**	**+2.4**
AYDN	**Tasoluk**	**1.20**	**302**	*i* P	**Pn**	**05 37 06.5**	**-0.9**
AYDN				*i* S	**Sb**	**05 37 24.9**	**+2.0**
AYDN	**Tasoluk**	**1.20**	**302**	*i* P	**Pn**	**05 37 06.4**	**-1.0**
AYDN				*i* S	**Sb**	**05 37 24.9**	**+2.0**
DAT	**Datca**	**1.31**	**257**	*e*PN	**Pn**	**05 37 08.2**	**-0.6**
DAT				*e*SN	**Sn**	**05 37 25.9**	**-0.2**
DAT	**Datca**	**1.31**	**257**	*e*Pn	**Pn**	**05 37 08.2**	**-0.6**
DAT				*e*Sn	**Sn**	**05 37 25.9**	**-0.2**
KHL	**Karahalli**	**1.32**	**12**	*e*PN	**Pn**	**05 37 08.4**	**-0.5**
KHL	**Karahalli**	**1.32**	**12**	*e*Pn	**Pn**	**05 37 08.5**	**-0.5**
KHAL	**Karahalli**	**1.36**	**11**	*i* P	**Pn**	**05 37 09.4**	**-0.1**
KHAL				*i* S	**Sn**	**05 37 29.4**	**+2.1**
KHAL	**Karahalli**	**1.36**	**11**	*i* P	**Pn**	**05 37 09.4**	**-0.1**
KHAL				*i* S	**Sn**	**05 37 29.4**	**+2.1**
BDRM	**Kayabasi**	**1.38**	**272**	*i* P	**Pn**	**05 37 05.7**	**-4.1**
BDRM				*i* S	**Sn**	**05 37 28.4**	**+0.6**
BDRM	**Kayabasi**	**1.38**	**272**	*i* P	**Pn**	**05 37 05.7**	**-4.1**
BDRM				*i* S	**Sn**	**05 37 28.4**	**+0.6**
BODT	**Bodrum**	**1.49**	**272**	*e*PN	**Pn**	**05 37 10.7**	**-0.5**
BODT				*e*SN	**Sn**	**05 37 30.2**	**-0.2**
BODT	**Bodrum**	**1.49**	**272**	*e*Pn	**Pn**	**05 37 10.7**	**-0.6**
BODT				*e*Sn	**Sn**	**05 37 30.2**	**-0.2**
KULA	**Kula-Manisa**	**1.53**	**345**	*e*PN	**Pn**	**05 37 11.5**	**-0.4**
KULA				*e*SN	**Sn**	**05 37 31.1**	**-0.4**
KULA	**Kula-Manisa**	**1.53**	**345**	*e*Pn	**Pn**	**05 37 11.5**	**-0.4**
KULA				*e*Sn	**Sn**	**05 37 31.2**	**-0.4**

*NEIC **18** 05:51:46.9, 15.70N×95.25W, h66km, MD3.9(MEX), After MEX.*
MEX 18 05:51:47.4±0.6, **15.76N×95.22W**, **h56**km±18km, **MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.85**	**271**	*i* P	Pn	05 52 01.9	-1.5
HUIG				*i* S	Sn	05 52 13.3	-1.9
HUIG	**Huatulco**	**0.85**	**271**	*i* P	Pn	05 52 01.9	-1.5
HUIG				*i* S	Sn	05 52 13.3	-1.9
PCIG		**1.93**	**91**	*i* P	Pn	05 52 16.4	-1.4
PCIG				*i* S	Sn	05 52 39.2	-1.7
OXX	**Oaxaca**	**1.95**	**313**	*e*P	Pn	05 52 15.9	-2.2
OXX				*i* S	Sn	05 52 40.0	-1.6
OXX	**Oaxaca**	**1.95**	**313**	*e*P	Pn	05 52 15.9	-2.2
OXX				*i* S	Sn	05 52 40.0	-1.6
VHO	**Vista Hermosa**	**1.95**	**312**	*i* P	Pn	05 52 17.7	-0.5
VHO				*i* S	Sn	05 52 39.7	-1.9
VHO	**Vista Hermosa**	**1.95**	**312**	*i* P	Pn	05 52 17.7	-0.5
VHO				*i* S	Sn	05 52 39.7	-1.9
TGIG		**2.26**	**63**	*i* P	Pn	05 52 20.9	-1.4
TGIG				*i* S	Sn	05 52 46.8	-2.2
PNIG	**Pinotepa**	**2.87**	**283**	*i* P	Pn	05 52 29.2	-1.4
PNIG				*i* S	Sn	05 52 59.0	-4.9
PNIG	**Pinotepa**	**2.87**	**283**	*i* P	Pn	05 52 29.2	-1.4
PNIG				*i* S	Sn	05 53 01.0	-3.0
UTMO	**Huajuapan**	**3.22**	**310**	*i* P	Pn	05 52 32.3	-3.3
UTMO				*i* S	Sn	05 53 11.3	-1.4
TPIG	**Tehuac#an**	**3.35**	**323**	*e*P	Pn	05 52 44.9	+7.6
TPIG				*i* S	Sn	05 53 18.9	+3.1
PPM	**Popocatepetl**	**4.63**	**316**	*i* P	Pn	05 52 54.7	-0.1
PPM				*i* S	Sn	05 53 47.2	-0.1
PPM	**Popocatepetl**	**4.63**	**316**	*i* P	Pn	05 52 54.7	-0.1
PPM				*i* S	Sn	05 53 47.2	-0.1
CAIG	**El Cayaco**	**5.01**	**286**	*i* P	Pn	05 52 59.7	-0.4
CAIG				*i* S	Sn	05 54 02.0	+5.3
CAIG	**El Cayaco**	**5.01**	**286**	*i* P	Pn	05 52 59.7	-0.4
CAIG				*i* S	Sn	05 54 02.0	+5.3
MZVM		**5.13**	**312**	*e*P	Pn	05 52 58.0	-3.7

*NEIC **18** 06:18:05.8, 19.08N×65.35W, h142km, MD3.5(RSPR), After RSPR.*
RSPR 18 06:18:05.8, **19.08N×65.35W**, **h142**km±5km, **10C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STVI	**Saint Thomas**	**0.82**	**153**	*e*P	Pn	06 18 28.4	0.0
STVI	**Saint Thomas**	**0.82**	**153**	*e*P	Pn	06 18 28.4	0.0
HUMP	**Col San Antoni**	**1.05**	**207**	*e*P	Pn	06 18 29.8	-0.6
HUMP				*e*S	Sn	06 18 48.9	-0.1
HUMP	**Col San Antoni**	**1.05**	**207**	*e*P	Pn	06 18 29.8	-0.6
HUMP				*e*S	Sn	06 18 48.9	-0.1
AOPR	**Arecibo Observ**	**1.52**	**241**	*e*P	Pn	06 18 34.9	-0.2
AOPR				*e*S	Sn	06 18 57.5	+0.2
AOPR	**Arecibo Observ**	**1.52**	**241**	*e*P	Pn	06 18 34.9	-0.2
AOPR				*e*S	Sn	06 18 57.5	+0.2
CELP	**Cerrillos**	**1.54**	**229**	*e*P	Pn	06 18 34.7	-0.6
CELP				*e*S	Sn	06 18 58.1	+0.4
CELP	**Cerrillos**	**1.54**	**229**	*e*P	Pn	06 18 34.7	-0.6
CELP				*e*S	Sn	06 18 58.1	+0.4
CRPR	**Cabo Rojo, PR**	**1.98**	**238**	*e*P	Pn	06 18 40.6	+0.3
CRPR	**Cabo Rojo, PR**	**1.98**	**238**	*e*P	Pn	06 18 40.6	+0.3

*ISCJB **18** 06:29:29.5±1.1, 26.88S±0.05×177.9W±0.1, h332km±14km, mb4.1/9, Error ellipse: s-maj=18.9km s-min=6.5km az=12.8*
*IDC **18** 06:29:32.0±4.1, 26.55S×178.54W, h306km±36km, mb3.9/8, mb1 4.0/10, mb1mx3.8/15, mbtmp3.9/10, Error ellipse: s-maj=25.8km s-min=20.2km az=105.0*
*NEIC **18** 06:29:33.8±1.3, 26.73S×178.27W, h337km±13km, mb4.5/2, Error ellipse: s-maj=19.3km s-min=11.2km az=99.0*
ISC 18 06:29:31.8±1.2, **27.00S**±0.04×**178.0W**±0.1, **h337**km±12km, **n33**, σ**1**.**31**/29, **mb4.1/9, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**9.92**	**338**	*e*Pn	**Pn**	**06 31 47.2**	**-1.6**
	23nm,0.9s						
URZ	**Urewera**	**11.96**	**199**	*e*P	**Pn**	**06 32 10.8**	**-2.3**
URZ				P		06 32 18.0	
URZ				S	**S**	**06 34 25.9**	**-0.2**
URZ	**Urewera**	**11.96**	**199**	P	**Pn**	**06 32 18.0**	**+4.9**
	2.7nm,0.3s,baz=316,slow=8.8,SNR=12						
URZ				S	**S**	**06 34 25.9**	**-0.2**
	5.4nm,0.3s,baz=104,slow=19,SNR=14						
URZ	**Urewera**	**11.96**	**199**	*e*PN	**Pn**	**06 32 10.8**	**-2.3**
NMHZ	**Naumai**	**12.83**	**199**	PN	**Pn**	**06 32 22.1**	**-1.3**
AFI	**Afiamalu**	**14.26**	**25**	P	**P**	**06 32 38.5**	**-0.5**
	3.1nm,0.3s,baz=215,slow=16,SNR=7.4						
AFI				S	**S**	**06 35 06.1**	**-8.2**
	20nm,0.3s,baz=41,slow=19,SNR=10						
BFZ	**Birch Farm**	**14.46**	**198**	*e*P	**P**	**06 32 44.6**	**+3.7**
BFZ	**Birch Farm**	**14.46**	**198**	*e*PN	**Pn**	**06 32 44.6**	**+2.1**
BFZ				SN	**S**	**06 35 16.0**	**-1.7**
MRZ	**Mangatainoka R**	**14.63**	**200**	*e*P	**P**	**06 32 45.6**	**+2.8**
MRZ	**Mangatainoka R**	**14.63**	**200**	*e*PN	**Pn**	**06 32 45.6**	**+1.1**
HOWZ	**Holdsworth Sta**	**14.87**	**200**	SN	**S**	**06 35 25.5**	**-0.5**
DZM	**Mont Dzumac**	**14.98**	**286**	*e*P	**P**	**06 32 48.3**	**+1.6**
DZM	**Mont Dzumac**	**14.98**	**286**	*e*Pn	**Pn**	**06 32 49.3**	**+0.5**
	42nm,0.6s						
NOUC	**Port Laguerre**	**15.09**	**285**	*e*P	**P**	**06 32 48.6**	**+0.6**
TCW	**Tory Channel**	**15.55**	**202**	SN	**S**	**06 35 39.6**	**+0.1**
CTA	**Charters Tower**	**33.41**	**274**	P	**P**	**06 35 38.4**	**-1.6**
	5.2nm,0.3s,mb4.2,baz=98,slow=14,SNR=12						
STKA	**Stephens Creek**	**35.38**	**252**	P	**P**	**06 35 57.5**	**+0.9**
	1.2nm,0.5s,mb3.4,baz=94,slow=12,SNR=6.3						
ASAR	**Alice Springs**	**43.40**	**263**	P	**P**	**06 37 00.9**	**-1.4**
	2.7nm,0.5s,mb3.7,baz=98,slow=7.5,SNR=38						
WRA	**Warramunga Arr**	**44.08**	**269**	P	**P**	**06 37 06.1**	**-1.6**
	5.6nm,0.4s,mb4.0,baz=105,slow=6.0,SNR=24						
MJAR	**Matsushiro Arr**	**75.46**	**325**	P	**P**	**06 40 39.0**	**-0.4**
	10nm,0.7s,mb4.7,baz=161,slow=5.6,SNR=17						
MAJO	**Matsushiro**	**75.46**	**325**	*e*P	**P**	**06 40 39.7**	**+0.3**
	10nm,0.9s,mb4.6						
MAT	**Matsushiro**	**75.46**	**325**	P	**P**	**06 40 39.2**	**-0.2**
MAW	**Mawson**	**75.49**	**200**	P	**P**	**06 40 43.7**	**+4.6**
	1.9nm,0.5s,mb4.1,baz=112,slow=11,SNR=13						
KSRS	**Korea Array**	**91.77**	**319**	P	**P**	**06 41 14.4**	**+0.9**
	3.0nm,0.6s,mb4.3,baz=133,slow=5.8,SNR=7.7						
CMAR	**Chiang Mai Arr**	**92.28**	**289**	P	**P**	**06 42 07.1**	**+2.5**
	0.5nm,0.3s,mb3.9,baz=155,slow=3.0,SNR=4.6						
BVAR	**Borovoye Array**	**123.94**	**317**	PKP	PKPdf	06 47 51.3	+1.6
	1.3nm,0.6s,baz=101,slow=1.5,SNR=4.5						
ARCES	**ARCESS Array B**	**135.27**	**349**	PKP	PKPdf	06 48 12.8	+2.1
	2.7nm,1.0s,baz=72,slow=2.9,SNR=5.4						
FINES	**FINESS Array B**	**141.94**	**341**	PKhKP	PKPpre	06 48 20.2	
	1.4nm,0.6s,baz=50,slow=2.4,SNR=3.6						
NOA	**NORSAR Array B**	**145.40**	**352**	PKP	PKPdf	06 48 30.8	+1.6
	3.5nm,0.8s,baz=18,slow=2.4,SNR=8.3						
AKASG	**Malin Array Be**	**148.54**	**326**	PKPbc	PKPbc	06 48 40.0	+1.2
AKASG	**Malin Array Be**	**148.54**	**326**	PKPbc	PKPbc	06 48 40.0	+1.2
	1.7nm,0.4s,baz=44,slow=4.0,SNR=13						
MMAI	**Mount Meron Ar**	**150.54**	**290**	PKPbc	PKPbc	06 48 47.2	+3.0
	5.5nm,0.5s,baz=83,slow=4.5,SNR=10						
BRTR	**Keskin Array B**	**150.84**	**304**	PKPbc	PKPbc	06 48 46.1	+1.4
	1.1nm,0.6s,baz=136,slow=2.8,SNR=7.7						

*ISCJB **18** 06:36:49.6±0.6, 24.42N±0.05×122.92E±0.02, h60km±8km, Error ellipse: s-maj=8.6km s-min=3.7km az=6.0*
*TAP **18** 06:36:50.0, 24.45N×122.87E, h66km, ML3.5, C*
*JMA **18** 06:36:49.1±0.1, 24.52N×122.93E, h66km±1km, M3.0*
ISC 18 06:36:50.2±0.5, **24.44N**±0.05×**122.92E**±0.02, **h58**km±8km, **n40**, σ**0**.**81**/53, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.08**	**75**	P	**Pn**	**06 36 58.9**	**0.0**
YOJ				*e*S	**Sn**	**06 37 05.9**	**+0.7**
IRIF	**Iriomote-Funau**	**0.74**	**98**	P	**Pn**	**06 37 04.3**	**-0.5**
IRIF				*e*S	**Sn**	**06 37 15.7**	**+0.1**
HATJ	**Hateruma jima**	**0.89**	**115**	P	**Pn**	**06 37 06.5**	**-0.2**
HATJ				*e*S	**Sn**	**06 37 19.7**	**+0.8**
TWC	**Suao**	**0.99**	**280**	P	**Pn**	**06 37 07.4**	**-0.6**
	baz=279						
TWC				S	**Sn**	**06 37 20.0**	**-1.3**
	baz=279						
JKRS	**Kuro-shima**	**1.01**	**101**	P	**Pn**	**06 37 08.0**	**-0.3**
JKRS				*e*S	**Sn**	**06 37 22.5**	**+0.8**
ENA	**Nanau**	**1.08**	**270**	*e*P	**Pn**	**06 37 09.1**	**-0.1**
	baz=274						
ENA				*e*S	**Sn**	**06 37 23.2**	**0.0**
	baz=274						
JIJ	**Ishigaki jima**	**1.11**	**94**	P	**Pn**	**06 37 08.9**	**-0.8**
JIJ				*e*S	**Sn**	**06 37 23.1**	**-1.0**
TWE	**Neicheng**	**1.18**	**284**	*e*P	**Pn**	**06 37 10.2**	**-0.3**
	baz=290						
TWE				*e*S	**Sn**	**06 37 25.1**	**-0.6**
	baz=290						
NWF	**Wu-fen Shan**	**1.22**	**301**	*e*P	**Pn**	**06 37 10.9**	**-0.1**
	baz=294						
ENTT	**Nioudou**	**1.25**	**279**	*e*P	**Pn**	**06 37 12.2**	**+0.7**
	baz=285						
TWD	**Chiawan**	**1.26**	**254**	*e*P	**Pn**	**06 37 11.3**	**-0.4**
	baz=253						
TWA	**Mucha**	**1.33**	**294**	*e*P	**Pn**	**06 37 12.2**	**-0.3**
	baz=294						
TWA				*e*S	**Sn**	**06 37 29.1**	**-0.3**
	baz=294						
NNS	**Nan Shan**	**1.41**	**270**	*e*P	**Pn**	**06 37 13.6**	**-0.1**
	baz=260						
NSK	**Sanguang**	**1.45**	**280**	P	**Pn**	**06 37 14.6**	**+0.5**
	baz=279						
TWY	**Chenhua**	**1.46**	**305**	*e*P	**Pn**	**06 37 14.5**	**+0.2**
	baz=305						
ESL	**Shilin**	**1.50**	**246**	*e*P	**Pn**	**06 37 13.7**	**-1.1**
	baz=244						
TWS1	**Kuangyinshan**	**1.52**	**296**	*e*P	**Pn**	**06 37 15.2**	**0.0**
	baz=286						
WHF	**Hehuan Shan**	**1.54**	**259**	*e*P	**Pn**	**06 37 15.2**	**-0.2**
	baz=258						
WHF				*e*S	**Sn**	**06 37 34.2**	**-0.2**
	baz=258						
TWT	**Tachien**	**1.61**	**264**	*e*P	**Pn**	**06 37 16.4**	**+0.1**
	baz=256						
JTJ	**Tarama**	**1.63**	**83**	P	**Pn**	**06 37 16.4**	**-0.2**
JTJ				*e*S	**Sn**	**06 37 36.6**	**0.0**
EHY	**Hungye**	**1.74**	**238**	*e*P	**Pn**	**06 37 16.9**	**-1.1**
	baz=234						
NSTT	**Nanjuang**	**1.76**	**277**	*e*P	**Pn**	**06 37 18.7**	**+0.3**
	baz=276						
TWF1	**Yuli**	**1.84**	**234**	*e*P	**Pn**	**06 37 18.7**	**-0.8**
	baz=233						
CHKT	**Chengkung**	**1.96**	**227**	*e*P	**Pn**	**06 37 19.2**	**-1.8**
	baz=226						
TYC	**Yuchr**	**1.96**	**255**	*e*P	**Pn**	**06 37 21.4**	**+0.3**
	baz=247						
TWQ1	**Liyutan**	**1.96**	**268**	*e*P	**Pn**	**06 37 22.3**	**+1.2**
	baz=267						
YUS	**Yu-Shan**	**2.04**	**243**	*e*P	**Pn**	**06 37 22.7**	**+0.5**
	baz=235						
WNT	**Mingjian**	**2.12**	**255**	*e*P	**Pn**	**06 37 24.5**	**+1.2**
	baz=246						
ELDTW	**Lidau**	**2.15**	**235**	*e*P	**Pn**	**06 37 22.6**	**-1.0**
	baz=234						
ALS	**Alishan**	**2.15**	**245**	*e*P	**Pn**	**06 37 24.5**	**+0.8**
	baz=244						
CHN5	**Tsauling**	**2.22**	**248**	*e*P	**Pn**	**06 37 25.7**	**+1.1**
	baz=238						
CHN5				*e*S	**Sn**	**06 37 52.1**	**+1.2**
	baz=238						
TWG	**Pinlang**	**2.34**	**227**	*e*P	**Pn**	**06 37 25.5**	**-0.8**
	baz=234						
TWG				*e*S	**Sn**	**06 37 51.6**	**-2.3**
	baz=234						
STYT	**Tauyuan**	**2.36**	**238**	*e*P	**Pn**	**06 37 27.0**	**+0.5**
	baz=237						
CHN4	**Tsaushan**	**2.39**	**244**	*e*P	**Pn**	**06 37 28.4**	**+1.4**
	baz=236						
WTP	**Te-pu**	**2.43**	**241**	*e*P	**Pn**	**06 37 28.9**	**+1.4**
	baz=240						
CHN1	**Nanshi**	**2.52**	**241**	*e*P	**Pn**	**06 37 30.1**	**+1.3**
	baz=241						
ECL	**Taimali**	**2.58**	**225**	*e*P	**Pn**	**06 37 30.0**	**+0.5**
	baz=232						
EAST	**Anshuo**	**2.80**	**223**	*e*P	**Pn**	**06 37 31.4**	**-1.2**
	baz=230						
SCZT	**Fangliau**	**2.95**	**226**	*e*P	**Pn**	**06 37 35.9**	**+1.2**
	baz=226						
TWK1	**Hengchun**	**3.16**	**219**	*e*P	**Pn**	**06 37 37.7**	**+0.2**
	baz=219						

*DDA **18** 06:38:39.3, 38.03N×31.03E, h8km±4km, Md2.9*
*ISK **18** 06:38:40.0, 37.97N×30.92E, h2km, MD3.1*
*CSEM **18** 06:38:40.7±0.2, 37.99N×30.93E, h2km, MD3.1, Error ellipse: s-maj=3.8km s-min=3.7km az=93.0*
*ISCJB **18** 06:38:41.6±0.4, 37.97N±0.02×30.94E±0.03, h10km, Error ellipse: s-maj=3.5km s-min=3.3km az=20.1*
ISC 18 06:38:41.6±0.6, **37.99N**±0.03×**30.90E**±0.03, **h4**km±4km, **n36**, σ**0**.**98**/61, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BCK	**Bucak**	**0.58**	**205**	*e*PG	**Pg**	**06 38 52.1**	**-0.6**
BCK	**Bucak**	**0.58**	**205**	*e*Pg	**Pg**	**06 38 52.1**	**-0.7**
BOLV	**Bolvadin**	**0.73**	**3**	*i* P	**Pg**	**06 38 56.1**	**+0.6**
BOLV				*i* S	**Sg**	**06 39 09.0**	**+3.9**
BOLV	**Bolvadin**	**0.73**	**3**	*i* P	**Pg**	**06 38 56.1**	**+0.5**
KORT	**Korkueli**	**1.08**	**204**	*e*P	**Pg**	**06 39 01.8**	**-0.5**
KORT				*i* S	**Sg**	**06 39 18.0**	**+1.7**
KORT	**Korkueli**	**1.08**	**204**	*e*P	**Pg**	**06 39 01.8**	**-0.5**
KORT				*i* S	**Sg**	**06 39 18.0**	**+1.7**
KHL	**Karahalli**	**1.14**	**287**	*e*PN	**Pn**	**06 39 03.2**	**-1.0**
KHL				*e*SN	**Sn**	**06 39 19.7**	**-0.4**
KHL	**Karahalli**	**1.14**	**287**	*e*Pn	**Pn**	**06 39 03.2**	**-1.0**
KHL				*e*Sn	**Sn**	**06 39 19.7**	**-0.5**
KONT	**Konya--Tatoy**	**1.16**	**92**	*e*PN	**Pg**	**06 39 02.0**	**-1.8**
KONT				*e*SN	**Sg**	**06 39 19.2**	**+0.5**
KONT	**Konya--Tatoy**	**1.16**	**92**	*e*Pn	**Pg**	**06 39 02.0**	**-1.7**
KONT				*e*Sn	**Sg**	**06 39 19.2**	**+0.5**
KHAL	**Karahalli**	**1.17**	**289**	*i* P	**Pg**	**06 39 03.4**	**-0.7**
KHAL				*i* S	**Sg**	**06 39 23.1**	**+3.8**
KHAL	**Karahalli**	**1.17**	**289**	*i* P	**Pg**	**06 39 03.4**	**-0.7**
KHAL				*i* S	**Sg**	**06 39 23.1**	**+3.8**
KIZT	**Kizilcal**	**1.18**	**41**	*e*PN	**Pg**	**06 39 03.7**	**-0.4**
KIZT				*e*SN	**Sg**	**06 39 20.9**	**+1.5**
KIZT	**Kizilcal**	**1.18**	**41**	*e*Pn	**Pg**	**06 39 03.7**	**-0.4**
KIZT				*e*Sn	**Sg**	**06 39 20.9**	**+1.5**
ALT	**Altintas**	**1.23**	**330**	*e*PN	**Pn**	**06 39 05.0**	**-0.5**
ALT				*e*SN	**Sn**	**06 39 22.9**	**+0.4**
ALT	**Altintas**	**1.23**	**330**	*e*Pn	**Pn**	**06 39 05.0**	**-0.5**
ALT				*e*Sn	**Sn**	**06 39 22.9**	**+0.4**
GOLH	**Golhisar**	**1.30**	**235**	*i* P	**Pn**	**06 39 04.8**	**-1.7**
GOLH				*i* S	**Sg**	**06 39 23.8**	**+0.4**
GOLH	**Golhisar**	**1.30**	**235**	*i* P	**Pn**	**06 39 04.8**	**-1.7**
GOLH				*i* S	**Sg**	**06 39 23.8**	**+0.4**
ELL	**Elmali**	**1.47**	**213**	*e*PN	**Pn**	**06 39 08.4**	**-0.4**
ELL	**Elmali**	**1.47**	**213**	*e*Pn	**Pn**	**06 39 08.4**	**-0.4**
DNZL	**Cakiroluk**	**1.50**	**259**	*e*P	**Pn**	**06 39 10.2**	**+1.0**
DNZL				*e*S	**Sn**	**06 39 32.7**	**+3.6**
DNZL	**Cakiroluk**	**1.50**	**259**	*e*P	**Pn**	**06 39 10.1**	**+0.9**
DNZL				*e*S	**Sn**	**06 39 32.7**	**+3.6**
ESKT	**Eskisehir**	**1.53**	**359**	*i* P	**Pn**	**06 39 09.8**	**+0.2**
ESKT				*i* S	**Sn**	**06 39 29.1**	**-0.8**
SEYT	**Eskypehyr**	**1.53**	**359**	*i* P	**Pn**	**06 39 09.8**	**+0.2**
SEYT				*i* S	**Sn**	**06 39 29.1**	**-0.8**
GDZ	**Gediz**	**1.56**	**315**	*e*P	**Pn**	**06 39 09.3**	**-0.8**
GDZ				*i* S	**Sn**	**06 39 32.2**	**+1.5**
GDZ	**Gediz**	**1.56**	**315**	*e*P	**Pn**	**06 39 09.3**	**-0.8**
GDZ				*i* S	**Sn**	**06 39 32.2**	**+1.5**
HDMB	**Hadim**	**1.63**	**129**	*e*PN	**Pn**	**06 39 10.2**	**-0.7**
HDMB				*e*SN	**Sn**	**06 39 32.4**	**+0.1**
HDMB	**Hadim**	**1.63**	**129**	*e*Pn	**Pn**	**06 39 10.2**	**-0.7**
HDMB				*e*Sn	**Sn**	**06 39 32.4**	**+0.1**
KULA	**Kula-Manisa**	**1.84**	**287**	*e*PN	**Pn**	**06 39 13.8**	**-0.1**
KULA	**Kula-Manisa**	**1.84**	**287**	*e*PN	**Pn**	**06 39 13.8**	**-0.1**
SULT	**Sultanhani-AKS**	**2.08**	**83**	*e*PN	**Pn**	**06 39 16.9**	**-0.2**
SULT	**Sultanhani-AKS**	**2.08**	**83**	*e*Pn	**Pn**	**06 39 16.9**	**-0.2**
GAZI	**Gazipasa**	**2.09**	**147**	*i* P	**Pn**	**06 39 17.0**	**-0.3**
GAZI			

GOLH	**Golhisar**	**3.91**	**42**	*i* P		**Pn**	**06 42 34.3**	**+0.9**
GOLH				*i* S		**Sn**	**06 43 17.3**	**-0.7**
DNZL	**Cakiroluk**	**4.00**	**34**	*e*P		**Pn**	**06 42 35.8**	**+1.3**
DNZL	**Cakiroluk**	**4.00**	**34**	*e*P		**Pn**	**06 42 35.8**	**+1.2**
SWA2		**5.17**	**188**	P		**Pn**	**06 42 50.9**	**+0.2**
	baz=191							
SWA2				S		**Sn**	**06 43 44.0**	**-5.2**
	baz=191							
SWA2		**5.17**	**188**	P		**Pn**	**06 42 50.9**	**+0.2**
GAZI	**Gazipasa**	**5.29**	**68**	*e*P		**Pn**	**06 42 52.0**	**-0.2**
GAZI				*i* S		**Sn**	**06 43 46.2**	**-5.6**
GAZI	**Gazipasa**	**5.29**	**68**	*e*P		**Pn**	**06 42 52.0**	**-0.2**
HDMB	**Hadim**	**5.68**	**61**	*e*P		**Pn**	**06 42 58.4**	**+0.7**
HDMB	**Hadim**	**5.68**	**61**	*e*P		**Pn**	**06 42 58.4**	**+0.7**
AYT	**Al 'Ayyat**	**6.25**	**137**	P		**Pn**	**06 43 05.4**	**-0.1**
	baz=135							
AYT	**Al 'Ayyat**	**6.25**	**137**	P		**Pn**	**06 43 05.4**	**-0.1**
IKL	**Isikli**	**6.35**	**71**	*e*P		**Pn**	**06 43 06.1**	**-0.7**
IKL	**Isikli**	**6.35**	**71**	*e*P		**Pn**	**06 43 06.1**	**-0.7**
AWBH		**6.45**	**159**	P		**Pn**	**06 43 08.5**	**+0.2**
	baz=159							
AWBH		**6.45**	**159**	P		**Pn**	**06 43 08.5**	**+0.2**
KOT	**Kottamia**	**6.48**	**132**	P		**Pn**	**06 43 09.4**	**+0.6**
	baz=130							
KOT	**Kottamia**	**6.48**	**132**	P		**Pn**	**06 43 09.4**	**+0.7**
HSAF	**As Saff**	**6.54**	**135**	P		**Pn**	**06 43 09.1**	**-0.4**
	baz=134							
HSAF	**As Saff**	**6.54**	**135**	P		**Pn**	**06 43 09.1**	**-0.4**
HHAG	**Hagoal**	**6.63**	**130**	P		**Pn**	**06 43 11.2**	**+0.4**
	baz=128							
HHAG	**Hagoal**	**6.63**	**130**	P		**Pn**	**06 43 11.2**	**+0.4**
GLL	**Jalalah**	**6.66**	**135**	P		**Pn**	**06 43 10.8**	**-0.4**
	baz=133							
GLL	**Jalalah**	**6.66**	**135**	P		**Pn**	**06 43 10.8**	**-0.4**
HFRF	**Wahat Farafira**	**7.43**	**166**	P		**Pn**	**06 43 21.3**	**-0.3**
	baz=166							
HFRF	**Wahat Farafira**	**7.43**	**166**	P		**Pn**	**06 43 21.3**	**-0.4**
HKAT	**Jabal Katrina**	**8.82**	**129**	P		**Pn**	**06 43 40.3**	**-0.4**
	baz=128							
HKAT	**Jabal Katrina**	**8.82**	**129**	P		**Pn**	**06 43 40.3**	**-0.4**

NEIC ***18*** *06:58:47.3, 36.°19S×178.°41E, h58km, ML3.7(WEL), After WEL.*

WEL 18 06:58:48.3±0.6, 36°33S×178°41E, h83km±5km, ML3.7/5, Error ellipse: s-maj=8.6km s-min=4.2km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.24**	**184**	P*	Pn	06 59 10.3	-0.1
MXZ				S*	Sn	06 59 27.1	+0.1
MXZ	**Matakaoa Point**	**1.24**	**184**	P	Pn	06 59 10.3	-0.1
MXZ				S	Sn	06 59 27.1	0.0
PUZ	**Puketiti**	**1.75**	**184**	PN	Pn	06 59 16.5	-0.5
PUZ				SN	Sn	06 59 38.8	+0.1
PUZ	**Puketiti**	**1.75**	**184**	P	Pn	06 59 16.5	-0.5
PUZ				S	Sn	06 59 38.8	+0.1
OPRZ	**Ohinepanea**	**2.12**	**224**	PN	Pn	06 59 22.2	+0.3
MWZ	**Matawai**	**2.13**	**199**	PN	Pn	06 59 22.6	+0.7
MWZ				SN	Sn	06 59 47.5	-0.1
MWZ	**Matawai**	**2.13**	**199**	P	Pn	06 59 22.6	+0.7
CNGZ	**Carnagh Statio**	**2.16**	**184**	PN	Pn	06 59 22.8	+0.4
CNGZ				SN	Sn	06 59 46.7	-1.8
URZ	**Urewera**	**2.19**	**208**	PN	Pn	06 59 23.0	+0.2
URZ				SN	Sn	06 59 49.2	0.0
URZ	**Urewera**	**2.19**	**208**	P	Pn	06 59 23.0	+0.2
TARZ	**Mount Tarawera**	**2.44**	**218**	PN	Pn	06 59 27.9	+1.8
KNZ	**Kokohu**	**2.75**	**192**	PN	Pn	06 59 30.2	-0.1
RAHZ	**Arahi**	**2.79**	**202**	PN	Pn	06 59 31.8	+0.9
MHGZ	**Mahia Peninsul**	**2.85**	**188**	PN	Pn	06 59 31.2	-0.4
NMHZ	**Naumai**	**3.05**	**204**	PN	Pn	06 59 34.1	-0.2
BKZ	**Black Stump Fm**	**3.22**	**208**	PN	Pn	06 59 35.9	-0.7
BKZ	**Black Stump Fm**	**3.22**	**208**	P	Pn	06 59 35.9	-0.7
KAHZ	**Kahuranaki**	**3.67**	**199**	PN	Pn	06 59 40.1	-2.6

IDC ***18*** *07:07:22.6±1.9, 24.°08S×179.°93W, h493km±19km, mb3.3/5, mb1 3.6/7, mb1mx3.4/14, mbtmp3.4/7, Error ellipse: s-maj=32.2km s-min=15.8km az=151.0*

ISCJB ***18*** *07:07:23.2±1.2, 24.°08S±0.°09×179.°9W±0.°1, h513km±19km, mb3.8/5, Error ellipse: s-maj=21.2km s-min=10.1km az=29.9*

NEIC ***18*** *07:07:23.7±1.1, 24.°14S×179.°87W, h512km±14km, Error ellipse: s-maj=24.2km s-min=14.5km az=132.0*

ISC 18 07:07:22.6±1.1, 24°17S±0.°09×179°8W±0.°1, h499km±18km, n13, σ1§32/12, mb3.7/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.72**	**342**	*e*P	**P**	**07 09 08.4**	**+2.3**
	14nm,0.5s						
AFI	**Afiamalu**	**12.69**	**38**	P	**P**	**07 10 08.5**	**-0.2**
	2.2nm,0.3s,baz=312,slow=18,SNR=3.1						
AFI				S	**S**	**07 12 23.3**	**-2.3**
	3.2nm,0.3s,baz=222,slow=23,SNR=4.2						
URZ	**Urewera**	**14.30**	**190**	*e*P	**P**	**07 10 26.4**	**+1.2**
URZ				P		07 10 26.7	
URZ				S	**S**	**07 12 54.8**	**-1.1**
URZ	**Urewera**	**14.30**	**190**	P	**P**	**07 10 26.7**	**+1.5**
	1.6nm,0.3s,baz=289,slow=3.7,SNR=8.0						
URZ				S	**S**	**07 12 54.8**	**-1.1**
	1.3nm,0.3s,baz=87,slow=19,SNR=12						
STKA	**Stephens Creek**	**34.81**	**248**	P	**P**	**07 13 31.1**	**0.0**
	1.2nm,0.5s,mb3.6,baz=98,slow=14,SNR=4.3						
ASAR	**Alice Springs**	**42.20**	**261**	P	**P**	**07 14 30.6**	**-0.7**
	1.9nm,0.5s,mb3.8,baz=94,slow=7.3,SNR=22						
ASAR				ScP	ScP	07 19 16.1	-1.0
	1.3nm,0.9s,baz=104,slow=5.9,SNR=6.6						
WRA	**Warramunga Arr**	**42.59**	**266**	P	**P**	**07 14 33.1**	**-1.3**
	7.4nm,0.6s,mb4.3,baz=103,slow=8.3,SNR=31						
WRA				ScP	ScP	07 19 18.6	-0.1
	0.5nm,0.3s,baz=96,slow=3.9,SNR=5.6						
NVAR	**Mina Array Bea**	**84.80**	**44**	P	**P**	**07 19 04.9**	**+0.9**
	0.4nm,0.7s,mb3.2,baz=229,slow=8.2,SNR=5.2						
TXAR	**Lajitas Array**	**90.40**	**58**	P	**P**	**07 19 32.1**	**+1.6**
	1.1nm,0.7s,mb3.8,baz=229,slow=4.2,SNR=18						
ARCES	**ARCESS Array B**	**132.19**	**348**	PKP	PKPdf	07 25 37.9	-0.7
	2.3nm,0.9s,baz=321,slow=1.2,SNR=3.7						
BRTR	**Keskin Array B**	**147.90**	**307**	PKPbc	PKPbc	07 26 15.6	+4.2
	0.9nm,0.6s,baz=77,slow=4.3,SNR=5.4						
MMAI	**Mount Meron Ar**	**148.00**	**294**	PKPbc	PKPbc	07 26 12.1	+0.3
	1.2nm,0.3s,baz=100,slow=5.0,SNR=3.5						
TORD	**Torodi Ar. Bea**	**168.95**	**187**	PKPab	PKPab	07 27 46.5	-0.6
	0.4nm,0.8s,baz=167,slow=3.1,SNR=2.7						

ISCJB ***18*** *07:21:30.4±1.1, 26.°86N±0.°08×54.°57E±0.°05, h10km, Error ellipse: s-maj=12.1km s-min=5.8km az=3.9*

TEH ***18*** *07:21:33.3, 26.°84N×54.°85E, h9km*

KISR ***18*** *07:21:33.2±0.5, 27.°00N×54.°39E, h20km±999km, ML3.4*

ISC 18 07:21:31.8±1.1, 26°79N±0.°09×54°65E±0.°05, h10km, n8, σ1§44/14, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBND	**Bandar-abas**	**1.81**	**68**	*e*Pg	**Pn**	**07 22 02.7**	**-0.2**
IBND				*e*Pg	**Pg**	**07 22 02.8**	**-3.6**
IBND				*e*Sg	**Sn**	**07 22 24.1**	**-1.8**
IBND				*e*		07 22 34.4	
	comp=Z,12μm,0.3s						
ISRV	**Sarvestan**	**2.92**	**333**	*e*Pn	**Pn**	**07 22 20.6**	**+2.4**
ISRV				*e*		07 23 25.1	
	comp=Z,854nm,0.3s						
IPAR	**Pars**	**3.35**	**335**	*e*Pn	**Pn**	**07 22 26.4**	**+2.2**
IPAR				*e*Sg	**Sg**	**07 23 19.3**	**-0.1**
IPAR				*e*		07 23 42.7	
	comp=Z,539nm,0.5s						
IMEH	**Mehriz**	**4.58**	**360**	*e*Pn	**Pn**	**07 22 41.7**	**+0.6**
IBAF	**Bafgh**	**4.85**	**9**	*e*Pn	**Pn**	**07 22 44.8**	**0.0**
IBAF				*e*		07 22 47.7	
	comp=Z,145nm,0.2s						
QRN	**Al-Qurain**	**6.28**	**290**	*e*P	**Pn**	**07 23 05.3**	**+0.9**
QRN				*e*S	**Sn**	**07 24 14.3**	**-1.9**
QRN				AML	AML	07 24 16.6	
	comp=Z,14nm,0.3s						
NAY	**Al-Naaiem**	**6.99**	**292**	*e*P	**Pn**	**07 23 15.4**	**+1.2**
NAY				*e*S	**Sn**	**07 24 32.3**	**-1.5**
NAY				AML	AML	07 24 34.7	
	comp=Z,4.6nm,0.6s						
MIB	**Mutribah**	**7.11**	**297**	*e*P	**Pn**	**07 23 17.0**	**+1.2**
MIB				*e*S	**Sn**	**07 24 34.7**	**-2.0**
MIB				AML	AML	07 24 38.1	
	comp=Z,8.5nm,0.4s						

ISCJB ***18*** *07:28:38.0±0.6, 42.°18N±0.°03×16.°07E±0.°04, h6km±6km, Error ellipse: s-maj=5.1km s-min=4.4km az=159.6*

CSEM ***18*** *07:28:38.5±0.5, 42.°19N×16.°06E, h2km, MD2.7/22, Error ellipse: s-maj=7.5km s-min=4.8km az=31.0*

ROM ***18*** *07:28:40.6±0.5, 42.°11N×15.°93E, h6km±3km, Md2.7/22, Ml2.5/16, Error ellipse: s-maj=5.0km s-min=3.0km az=56.0*

ISC 18 07:28:38.9±0.6, 42°18N±0.°03×16°05E±0.°04, h12km±5km, n48, σ0§98/67, 6C, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAG	**Monte S. Angel**	**0.48**	**193**	*i*Pg	**Pg**	**07 28 49.7**	**+1.4**
MSAG				Sg	**Sg**	**07 28 55.8**	**+1.1**
	932nm,0.2s						
MSAG	**Monte S. Angel**	**0.48**	**193**	*i*Pg	**Pg**	**07 28 49.7**	**+1.4**
MSAG				Sg	**Sg**	**07 28 55.8**	**+1.1**
MS1	**Monte Sant'Ang**	**0.48**	**190**	*e*Pg	**Pg**	**07 28 49.5**	**+1.1**
MS1				*e*Sg	**Sg**	**07 28 56.2**	**+1.5**
SGRT	**San Giovanni R**	**0.48**	**208**	*i*Pg	**Pg**	**07 28 49.3**	**+0.9**
SGRT				Sg	**Sg**	**07 28 55.3**	**+0.5**
	742nm,0.2s						
SGRT	**San Giovanni R**	**0.48**	**208**	*i*Pg	**Pg**	**07 28 49.3**	**+0.9**
SGRT				Sg	**Sg**	**07 28 55.3**	**+0.5**
RGNG	**Rignano Grg**	**0.61**	**215**	Pg	**Pg**	**07 28 51.2**	**+0.4**
RGNG				Sg	**Sg**	**07 28 58.5**	**-0.4**
RGNG	**Rignano Grg**	**0.61**	**215**	Pg	**Pg**	**07 28 51.2**	**+0.4**
RGNG				Sg	**Sg**	**07 28 58.5**	**-0.4**
FG2	**Serracapriola**	**0.76**	**241**	Pg	**Pg**	**07 28 53.8**	**+0.1**
FG2	**Serracapriola**	**0.76**	**241**	Pg	**Pg**	**07 28 53.8**	**+0.1**
MELA	**Melanico ??? S**	**0.83**	**236**	Pg	**Pg**	**07 28 54.7**	**-0.4**
MELA				Sg	**Sg**	**07 29 05.4**	**-0.6**
	306nm,0.5s						
MELA	**Melanico ??? S**	**0.83**	**236**	Pg	**Pg**	**07 28 54.7**	**-0.4**
MELA				Sg	**Sg**	**07 29 05.4**	**-0.6**
	306nm,0.5s						
CIGN	**Sant'Elia a Pi**	**1.00**	**239**	Pg	**Pg**	**07 28 58.0**	**-0.2**
CIGN				Sg	**Sg**	**07 29 09.8**	**-1.5**
CIGN	**Sant'Elia a Pi**	**1.00**	**239**	Pg	**Pg**	**07 28 58.0**	**-0.2**
CIGN				Sg	**Sg**	**07 29 09.8**	**-1.5**
FRES	**Fresagrandinar**	**1.05**	**259**	Pg	**Pg**	**07 28 58.6**	**-0.5**
	101nm,0.5s						
FRES	**Fresagrandinar**	**1.05**	**259**	Pg	**Pg**	**07 28 58.6**	**-0.5**
	101nm,0.5s						
FG5	**Orsara di Pugl**	**1.07**	**213**	Pg	**Pg**	**07 28 59.8**	**+0.3**
	27nm,0.2s						
FG5	**Orsara di Pugl**	**1.07**	**213**	Pg	**Pg**	**07 28 59.8**	**+0.3**
	27nm,0.2s						
CDT	**Castel del Mon**	**1.11**	**171**	*e*Pg	**Pg**	**07 28 59.4**	**-0.9**
CDT				*e*Sg	**Sg**	**07 29 12.2**	**-2.5**
MRVN	**Minervino Murg**	**1.12**	**174**	Pg	**Pg**	**07 28 59.2**	**-1.3**
	75nm,0.3s						
MRVN	**Minervino Murg**	**1.12**	**174**	Pg	**Pg**	**07 28 59.2**	**-1.3**
	75nm,0.3s						
SGTA	**Sant Agata di**	**1.16**	**206**	Pg	**Pn**	**07 29 00.3**	**-0.6**
SGTA	**Sant Agata di**	**1.16**	**206**	Pg	**Pn**	**07 29 00.3**	**-0.6**
BAI	**Bari**	**1.24**	**150**	*e*Pg	**Pn**	**07 29 01.7**	**-0.3**
BAI				*e*Sg	**Sg**	**07 29 17.7**	**-1.1**
VULT	**Monte Vulture**	**1.27**	**195**	Pg	**Pn**	**07 29 03.1**	**+0.7**
VULT				Sg	**Sg**	**07 29 20.1**	**+0.4**
	133nm,0.2s						
VULT	**Monte Vulture**	**1.27**	**195**	Pg	**Pn**	**07 29 03.1**	**+0.7**
VULT				Sg	**Sg**	**07 29 20.1**	**+0.4**
AMUR	**Altamura**	**1.34**	**162**	Pg	**Pn**	**07 29 02.5**	**-0.8**
	63nm,0.4s						
AMUR	**Altamura**	**1.34**	**162**	Pg	**Pn**	**07 29 02.5**	**-0.8**
	63nm,0.4s						
ACER	**Acerenza**	**1.39**	**183**	Pg	**Pg**	**07 29 06.1**	**+0.4**
ACER				Sg	**Sg**	**07 29 24.2**	**+0.4**
	101nm,0.4s						
ACER	**Acerenza**	**1.39**	**183**	Pg	**Pg**	**07 29 06.1**	**+0.4**
ACER				Sg	**Sg**	**07 29 24.2**	**+0.4**
	101nm,0.4s						
STON	**Ston**	**1.40**	**60**	*e*Pg	**Pg**	**07 29 06.2**	**+0.3**
STON				Sg	**Sg**	**07 29 24.0**	**-0.1**
SG1	**Sgolgore (BA)**	**1.42**	**160**	*e*Pg	**Pg**	**07 29 06.8**	**+0.6**
SG1				*e*Sg	**Sg**	**07 29 25.7**	**+1.1**
MIDA	**Miranda**	**1.44**	**249**	Pg	**Pn**	**07 29 04.4**	**-0.4**
	37nm,0.4s						
MIDA	**Miranda**	**1.44**	**249**	Pg	**Pn**	**07 29 04.4**	**-0.4**
	37nm,0.4s						
MRLC	**Muro Lucano**	**1.48**	**197**	Pg	**Pn**	**07 29 04.8**	**-0.5**
	38nm,0.4s						
MCRV	**Calabrutti - M**	**1.54**	**206**	Pg	**Pn**	**07 29 04.8**	**-1.4**
	47nm,0.2s						
VAGA	**Valle Agricola**	**1.56**	**241**	Pg	**Pg**	**07 29 07.5**	**-1.3**
	39nm,0.3s						
VAGA	**Valle Agricola**	**1.56**	**241**	Pg	**Pg**	**07 29 07.5**	**-1.3**
	39nm,0.3s						
INTR	**Introdacqua**	**1.60**	**265**	Pn	**Pn**	**07 29 08.1**	**+1.1**
	83nm,0.7s						
INTR	**Introdacqua**	**1.60**	**265**	Pn	**Pn**	**07 29 08.1**	**+1.1**
	83nm,0.7s						
CERA	**Filignano**	**1.62**	**250**	Pg	**Pg**	**07 29 09.4**	**-0.7**
	38nm,0.7s						
CERA	**Filignano**	**1.62**	**250**	Pg	**Pg**	**07 29 09.4**	**-0.7**
	38nm,0.7s						
VCEL	**Villa Celiera**	**1.65**	**278**	Pn	**Pn**	**07 29 10.5**	**+2.8**
	44nm,0.3s						
VCEL	**Villa Celiera**	**1.65**	**278**	Pn	**Pn**	**07 29 10.5**	**+2.8**
	44nm,0.3s						
PE1	**Pezze di Greco**	**1.72**	**143**	*e*Pn	**Pn**	**07 29 13.4**	**+4.8**
SDI	**San Donato**	**1.73**	**255**	*i*Pn	**Pn**	**07 29 10.8**	**+2.0**
	12nm,0.2s						
SDI	**San Donato**	**1.73**	**255**	*i*Pn	**Pn**	**07 29 10.8**	**+2.0**
	12nm,0.2s						
CRAC	**Craco**	**1.83**	**171**	Pg	**Pg**	**07 29 13.3**	**-0.8**
	71nm,0.4s						
CRAC	**Craco**	**1.83**	**171**	Pg	**Pg**	**07 29 13.3**	**-0.8**
	71nm,0.4s						

ISCJB ***18*** *08:04:26.0±0.5, 32.°24N±0.°04×104.°79E±0.°07, h10km, mb3.8/6, Error ellipse: s-maj=8.5km s-min=4.6km az=20.7*

IDC ***18*** *08:04:26.3±1.0, 32.°54N×105.°43E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/22, mbtmp3.7/7, ML4.1/1, Error ellipse: s-maj=71.8km s-min=18.3km az=60.0*

BJI ***18*** *08:04:29.1, 32.°23N×104.°86E, h11km, ML3.7/12, Ms3.5/5, Ms7 3.1/4*

ISC 18 08:04:28.1±0.5, 32°21N±0.°03×104°81E±0.°05, h10km, n15, σ1§37/24, mb3.8/6, 2C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.58**	**215**	*i*Pg	**Pg**	**08 04 57.3**	**-1.1**
CD2				Sg	**Sg**	**08 05 18.8**	**-0.1**
CD2				smax			
	comp=N,7μm,0.8s						
CD2				smax			
	comp=E,2μm,0.5s						
XAN	**Xi'an**	**3.90**	**61**	Pn	**Pn**	**08 05 30.8**	**+2.8**
XAN				Sn	**Sn**	**08 06 13.3**	**-0.5**
XAN				Sg	**Sg**	**08 06 30.8**	**-2.5**
XAN				smax			
	comp=N,190nm,1.0s						
XAN				smax			
	comp=E,100nm,0.8s						
XAN				LR	LR		
	comp=N,140nm,9.7s						
XAN				LR	LR		
	comp=E,53nm,11.2s						
XAN				LR	LR		
	comp=Z,63nm,9.9s						
LZH	**Lanzhou**	**3.95**	**349**	*e*Pg	**Pg**	**08 05 43.4**	**-0.3**
LZH				Sg	**Sg**	**08 06 33.1**	**-1.7**
LZH				smax			
	comp=N,140nm,0.7s						
LZH				smax			
	comp=E,230nm,0.9s						
LZH				LR	LR		
	comp=E,490nm,6.7s						
LZH				LR	LR		
	comp=Z,600nm,8.1s						
GYA	**Guiyang**	**5.96**	**164**	Pn	**Pn**	**08 05 58.9**	**+2.6**
GYA				Pg	**Pg**	**08 06 19.4**	**-2.8**
GYA				Sn	**Sn**	**08 07 05.9**	**+1.3**
GYA				Sg	**Sg**	**08 07 35.8**	**-3.6**
GYA				smax			
	comp=N,50nm,0.6s						
GYA				smax			
	comp=E,60nm,0.7s						
WHN	**Wuhan**	**8.32**	**99**	P	**Pn**	**08 06 35.1**	**+6.3**
WHN				S	**Sn**	**08 07 58.9**	**-3.9**
HHC	**Hu-ho-hao-te**	**10.18**	**30**	*e*P	**Pn**	**08 06 54.9**	**+0.7**
HHC				S	**Sn**	**08 08 50.3**	**+1.8**
HHC				LR	LR		
	comp=N,110nm,6.1s						
HHC				LR	LR		
	comp=E,160nm,4.6s						
HHC				LR	LR		
	comp=Z,52nm,5.3s						
CMAR	**Chiang Mai Arr**	**14.68**	**203**	Pn	**Pn**	**08 08 02.6**	**+6.7**
	comp=Z,0.3nm,0.3s,baz=6.7,slow=9.6,SNR=3.8						
SONM	**Songino Array**	**15.65**	**4**	Pn	**Pn**	**08 08 10.0**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=184,slow=13,SNR=3.2						
MKAR	**Makanchi Array**	**22.56**	**317**	P	**P**	**08 09 29.3**	**+1.0**
	comp=Z,0.2nm,0.4s,mb2.9,baz=101,slow=13,SNR=3.2						
ZALV	**Zalesovo Beam**	**26.00**	**333**	P	**P**	**08 10 00.8**	**-0.1**
	comp=Z,0.8nm,0.5s,mb3.5,baz=133,slow=10,SNR=3.9						
AKTO	**Aktyubinsk**	**38.84**	**312**	⇑S	**S**	**08 17 45.9**	**-4.9**
	comp=Z,0.6nm,0.7s						
ARCES	**ARCESS Array B**	**56.50**	**336**	P	**P**	**08 14 09.5**	**-0.4**
	comp=Z,1.9nm,0.9s,mb4.1,baz=78,slow=7.6,SNR=3.7						
FINES	**FINESS Array B**	**56.99**	**326**	P	**P**	**08 14 12.8**	**-0.6**
	comp=Z,0.7nm,0.4s,mb4.0,baz=83,slow=6.0,SNR=6.0						
WRA	**Warramunga Arr**	**59.07**	**147**	P	**P**	**08 14 28.4**	**-0.1**
	comp=Z,1.4nm,0.5s,mb4.2,baz=340,slow=7.9,SNR=10						
ASAR	**Alice Springs**	**62.13**	**150**	P	**P**	**08 14 49.2**	**-0.1**
	comp=Z,0.5nm,0.6s,mb3.8,baz=333,slow=6.4,SNR=8.2						

IDC ***18*** *08:08:52.4±3.2, 9.°63S×108.°27E, h0km, mb3.9/4, mb1 3.9/4, mb1mx3.6/18, mbtmp3.9/4, Error ellipse: s-maj=185.9km s-min=29.8km az=55.0*

ISCJB ***18*** *08:09:00.8±1.3, 9.°25S±0.°09×108.°62E±0.°05, h73km±12km, mb3.9/4, Error ellipse: s-maj=15.8km s-min=6.2km az=20.9*

DJA ***18*** *08:09:03, 9.°04S×108.°66E, h101km, MLv4.0/5*

ISC 18 08:09:01.8±1.3, 9°25S±0.°09×108°59E±0.°05, h60km±12km, n16, σ0§72/24, mb4.0/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJI	**Cimerak**	**1.47**	**355**	P	**Pn**	**08 09 26.1**	**+0.1**
CISI	**Cisompet, Garu**	**1.85**	**336**	P	**Pn**	**08 09 30.1**	**-1.2**
CISI				S	**Sn**	**08 09 54.4**	**+0.8**
BJII	**Banjamegara**	**2.21**	**30**	P	**Pn**	**08 09 36.8**	**+0.7**
BJII				S	**Sn**	**08 10 01.1**	**-1.2**
YOGI	**Yogyakarta**	**2.21**	**50**	P	**Pn**	**08 09 35.8**	**-0.3**
UGM	**Wanagama**	**2.33**	**55**	P	**Pn**	**08 09 38.2**	**+0.4**
LEM	**Lembang**	**2.59**	**338**	P	**Pn**	**08 09 41.0**	**-0.4**
LEM				S	**Sn**	**08 10 11.8**	**0.0**
PCJI	**Pacitan**	**2.77**	**68**	P	**Pn**	**08 09 44.4**	**+0.7**
PCJI				S	**Sn**	**08 10 16.4**	**+0.4**
SMRI	**Semarang**	**2.86**	**40**	P	**Pn**	**08 09 44.6**	**-0.3**
SMRI				S	**Sn**	**08 10 17.2**	**-1.0**
NGJI	**Ngawi**	**3.40**	**57**	P	**Pn**	**08 09 53.1**	**+0.6**
PWJI	**Pagerwojo**	**3.41**	**69**	P	**Pn**	**08 09 52.6**	**+0.1**
PWJI				S	**Sn**	**08 10 32.2**	**+0.5**
GMJI	**Gumukmas**	**4.90**	**79**	P	**Pn**	**08 10 13.2**	**+0.3**
GMJI				S	**Sn**	**08 11 08.2**	**-0.1**
JAGI	**Jajag, Banyuwa**	**5.55**	**82**	P	**Pn**	**08 10 22.0**	**+0.1**
JAGI				S	**Sn**	**08 11 24.2**	**-0.2**
STKA	**Stephens Creek**	**37.98**	**131**	P	**P**	**08 16 12.1**	**-1.9**
	1.2nm,0.6s,mb3.8,baz=290,slow=8.1,SNR=3.5						
SONM	**Songino Array**	**56.87**	**358**	P	**P**	**08 18 41.5**	**+1.3**
	0.7nm,0.5s,mb3.9,baz=175,slow=7.5,SNR=4.5						
MKAR	**Makanchi Array**	**60.53**	**340**	P	**P**	**08 19 06.4**	**+0.7**
	1.3nm,0.6s,mb4.3,baz=145,slow=7.3,SNR=13						
KURK	**Kurchatov**	**65.14**	**340**	P	**P**	**08 19 35.8**	**-0.5**
	0.5nm,0.5s,mb3.9,baz=142,slow=6.4,SNR=4.2						

NNC ***18*** *08:23:25.6±2.8, 43.°76N×82.°99E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=27.3km s-min=16.8km az=111.0*

IDC ***18*** *08:23:28.7±2.7, 44.°13N×82.°69E, h0km, mb3.8/2, mb1 3.7/5, mb1mx3.4/25, mbtmp3.6/5, ML3.3/3, Error ellipse: s-maj=56.7km s-min=16.9km az=102.0*

BJI ***18*** *08:23:31.0, 44.°09N×83.°13E, h15km, ML3.1/6*

ISC 18 08:23:30.4±1.9, 44°1N±0.°1×82°5E±0.°2, h10km, n9, σ0§95/9, mb3.7/2, 1C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**2.75**	**357**	Pn	**Pn**	**08 24 15.4**	**+0.8**
	3.7nm,0.3s,baz=165,slow=14,SNR=306						
MK31				⇑Sn	**Sb**	**08 24 53.9**	**+0.5**
	78nm,0.6s,baz=170,slow=24,SNR=4.2						
MKAR	**Makanchi Array**	**2.75**	**357**	Pn	**Pn**	**08 24 15.5**	**+0.9**
	4.0nm,0.3s,baz=173,slow=16,SNR=82						
MKAR				Pg	**Pb**	**08 24 19.3**	**-0.4**
	4.9nm,0.3s,baz=173,slow=16,SNR=69						
MKAR				Lg		08 24 54.0	
	29nm,0.3s,baz=181,slow=28,SNR=15						
TKM2	**Tokmak 2**	**5.17**	**260**	⇓Lg		08 26

PEL	**Peldehue**	**2.90**	**15**	⇓*i*P	Pn	08 37 07.1	+0.5
PEL				*i* S	Sn	08 37 40.9	+0.1
PEL				AML	AML	08 38 00.9	
	comp=N,273nm,0.6s						
ROCH	**El Roble**	**3.01**	**9**	*e*P	Pn	08 37 08.6	+0.5
ROCH	**El Roble**	**3.01**	**9**	*e*P	Pn	08 37 08.6	+0.5
TRQA	**Tornquist**	**7.97**	**108**	*e*Pn	Pn	08 38 13.8	-1.5
	comp=N,6.1nm,0.5s						

*NEIC **18** 09:01:08.7±1.0,37.91N×71.62E,h10km,Error ellipse: s-maj=24.8km s-min=10.0km az=121.0*
*ISCJB **18** 09:01:09.2±0.8,37.78N±0.06×72.0E±0.1,h139km±12km, Error ellipse: s-maj=17.6km s-min=6.4km az=28.2*
*IDC **18** 09:01:10.7±7.0,37.82N×71.96E,h141km±61km,mb3.1/1, mb1 3.4/5,mb1mx3.0/26,mbtmp3.4/5,Error ellipse: s-maj=84.2km s-min=46.8km az=140.0*
ISC 18 09:01:10.5±0.7,37.78N±0.06×72.0E±0.1,h130km±11km, n22,σ0s92/31,2C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**3.60**	**60**	Pn	**Pn**	**09 01 59.9**	**-4.9**
KSH				Sn	**Sn**	**09 02 36.5**	**-10**
KSH				smax			
	comp=N,220nm,0.6s						
KSH				smax			
	comp=E,170nm,0.5s						
KBL	**Kabul**	**4.00**	**217**	*e*Pn	**Pn**	**09 02 09.7**	**-0.5**
KBL				*e*Sn	**Sn**	**09 02 56.3**	**-0.2**
AML	**Almayashu**	**4.55**	**17**	P	**Pn**	**09 02 18.2**	**+0.8**
	SNR=51						
AML	**Almayashu**	**4.55**	**17**	*e*Pn	**Pn**	**09 02 18.0**	**+0.6**
AML				*e*Sn	**Sn**	**09 03 06.0**	**-3.4**
UCH	**Uchtor**	**4.86**	**23**	P	**Pn**	**09 02 21.9**	**+0.3**
	SNR=30						
UCH	**Uchtor**	**4.86**	**23**	*e*Pn	**Pn**	**09 02 21.9**	**+0.3**
UCH				*e*Sn	**Sn**	**09 03 16.4**	**-0.5**
EKS2	**Erkin-Say**	**5.07**	**15**	P	**Pn**	**09 02 25.2**	**+0.7**
	SNR=28						
EKS2	**Erkin-Say**	**5.07**	**15**	*e*Pn	**Pn**	**09 02 25.2**	**+0.8**
	comp=E,20nm,0.6s						
EKS2				*e*Sn	**Sn**	**09 03 21.0**	**-1.1**
AAK	**Ala-Archa**	**5.22**	**21**	P	**Pn**	**09 02 27.5**	**+1.0**
	SNR=19						
AAK	**Ala-Archa**	**5.22**	**21**	P	**Pn**	**09 02 27.5**	**+1.0**
	comp=E,9.0nm,0.3s,baz=180,slow=6.2,SNR=29						
AAK				S	**Sn**	**09 03 25.6**	**-0.1**
	comp=E,1.2nm,0.3s,baz=313,slow=22,SNR=14						
KK31	**Karatay Array**	**5.43**	**349**	⇓P	**Pn**	**09 02 30.4**	**+1.2**
	comp=E,5.1nm,0.3s,baz=166,slow=12,SNR=68						
KK31				S	**Sn**	**09 03 29.6**	**-1.0**
	comp=E,10nm,0.4s,baz=166,slow=22,SNR=16						
CHMS	**Chumysh**	**5.63**	**21**	P	**Pn**	**09 02 32.5**	**+0.6**
	SNR=14						
USP	**Ospenovka**	**5.81**	**19**	P	**Pn**	**09 02 33.8**	**-0.6**
	SNR=9.0						
TKM2	**Tokmak 2**	**5.84**	**27**	P	**Pn**	**09 02 35.5**	**+0.8**
	SNR=5.7						
TKM2	**Tokmak 2**	**5.84**	**27**	*e*Pn	**Pn**	**09 02 34.3**	**-0.4**
	comp=E,18nm,0.9s						
MKAR	**Makanchi Array**	**11.81**	**37**	P	**Pn**	**09 03 53.4**	**-1.2**
	comp=E,0.1nm,0.3s,baz=219,slow=13,SNR=8.8						
KURK	**Kurchatov**	**13.78**	**18**	P	**Pn**	**09 04 22.6**	**+2.5**
	comp=E,0.1nm,0.3s,baz=206,slow=10,SNR=16						
AB31	**Akbulak array**	**14.38**	**327**	⇑P	**Pn**	**09 04 28.3**	**+0.6**
	comp=E,0.2nm,0.3s,baz=197,slow=8.3,SNR=14						
AB31				⇑S	**Sn**	**09 06 57.6**	**-9.1**
	comp=E,1.9nm,0.6s,baz=129,slow=25,SNR=8.5						
ABKAR	**Akbulak array**	**14.38**	**327**	*e*Pn	**Pn**	**09 04 28.4**	**+0.6**
	comp=E,0.6nm,0.3s						
ABKAR				*e*Sn	**Sn**	**09 06 58.4**	**-8.2**
BVAR	**Borovoye Array**	**15.28**	**356**	P	**Pn**	**09 04 38.8**	**-0.2**
	comp=E,0.7nm,0.3s,baz=159,slow=10,SNR=7.0						
ZALV	**Zalesovo Beam**	**18.44**	**25**	P	**P**	**09 05 15.4**	**-0.2**
	comp=E,0.5nm,0.3s,baz=219,slow=10.0,SNR=12						
TORD	**Torodi Ar. Bea**	**66.51**	**269**	P	**P**	**09 11 45.3**	**-1.2**
	comp=E,0.2nm,0.4s,baz=55,slow=5.6,SNR=4.2						

*BJI **18** 09:16:20.1,10.70S×164.60E,h6km,mB5.1/20,mb4.9/27, Ms4.6/13,Ms7 4.4/13*
*NEIC **18** 09:16:21.2±0.4,10.66S×164.59E,h10km,mb5.0/24,Error ellipse: s-maj=13.2km s-min=7.3km az=137.0*
*NOU **18** 09:16:24.1±0.7,10.27S×164.89E,h30km,MD4.5,ML4.9*
*ISCJB **18** 09:16:27.0±1.4,10.75S±0.06×164.39E±0.06,h66km±13km, mb4.7/45, Error ellipse: s-maj=11.1km s-min=8.2km az=140.0*
*IDC **18** 09:16:26.9±5.3,10.80S×164.55E,h58km±42km,mb4.2/11, mb1 4.4/12,mb1mx4.3/16,mbtmp4.2/12,ML6.3/1,MS3.9/9, Ms1 3.9/9,ms1mx3.6/28,Error ellipse: s-maj=38.0km s-min=19.8km az=113.0*
ISC 18 09:16:29.4±1.1,10.79S±0.06×164.42E±0.06,h74km±11km, h8km±3.4km:pP-P,n92,σ0s99/76,mb4.7/45,3C,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.61**	**287**	*e*Pn	**Pn**	**09 17 35.9**	**-0.7**
HNR	**Honiara**	**4.61**	**287**	P	**Pn**	**09 17 36.8**	**+0.2**
	1μm,0.3s,baz=138,slow=5.3,SNR=280						
HNR				LR	LR	09 19 25.3	
	comp=Z,2μm,19.5s,baz=111,slow=38						
DZM	**Mont Dzumac**	**11.38**	**170**	*e*P	**Pn**	**09 19 09.3**	**+0.2**
DZM				*e*S	**Sn**	**09 21 13.0**	**-1.5**
DZM				AMP		09 21 17.5	
	comp=Z,374nm,2.2s						
NOUC	**Port Laguerre**	**11.39**	**171**	*e*P	**Pn**	**09 19 09.9**	**+0.7**
NOUC				*e*S	**Sn**	**09 21 11.2**	**-3.5**
NOUC				AMP		09 21 17.1	
	comp=Z,18nm,5.1s						
BAYA	**Yate Dam**	**11.54**	**169**	*e*P	**Pn**	**09 19 12.0**	**+0.7**
LASL	**Noumea**	**11.55**	**170**	*e*P	**Pn**	**09 19 11.8**	**+0.3**
MVNO	**Noumea**	**11.58**	**171**	*e*P	**Pn**	**09 19 12.5**	**+0.7**
EIDS	**Eidsvold**	**19.24**	**219**	*e*P	**Pn**	**09 20 49.7**	**+0.2**
	comp=Z,47nm,0.9s						
CTA	**Charters Tower**	**19.78**	**240**	*e*P	**Pn**	**09 20 54.7**	**-1.3**
	comp=Z,25nm,0.9s						
CTA	**Charters Tower**	**19.78**	**240**	P	**Pn**	**09 20 55.0**	**-0.9**
	comp=Z,1.6nm,0.3s,baz=73,slow=12,SNR=14						
CTA				LR	LR	09 27 32.0	
	comp=Z,214nm,18.5s,baz=52,slow=33						
CTAO	**Charters Tower**	**19.78**	**240**	*e*P	**Pn**	**09 20 54.9**	**-1.0**
	comp=Z,40nm,1.0s						
COEN	**Coen**	**20.99**	**259**	*e*P	**P**	**09 21 07.1**	**+0.3**
	comp=Z,122nm,0.9s						
ARMA	**Armidale**	**22.87**	**209**	*e*P	**P**	**09 21 28.2**	**+1.5**
ARMA	**Armidale**	**22.87**	**209**	*e*P	**P**	**09 21 28.2**	**+1.5**
	comp=Z,19nm,0.9s,mb4.4						
AFI	**Afiamalu**	**23.45**	**100**	LR	LR	09 29 21.0	
	comp=Z,274nm,19.6s,baz=291,slow=33						
URZ	**Urewera**	**29.62**	**160**	LR	LR	09 33 09.0	
	comp=Z,198nm,18.1s,baz=151,slow=34						
STKA	**Stephens Creek**	**29.75**	**222**	*e*P	**P**	**09 22 29.8**	**+0.9**
	comp=Z,5.5nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**29.75**	**222**	*e*P	**P**	**09 22 29.6**	**+0.8**
	comp=Z,1.6nm,0.8s,mb3.7						
STKA	**Stephens Creek**	**29.75**	**222**	P	**P**	**09 22 29.6**	**+0.8**
	comp=Z,7.1nm,0.8s,mb4.4,baz=38,slow=11,SNR=19						
STKA				LR	LR	09 33 49.3	
	comp=Z,294nm,18.5s,baz=28,slow=35						
WB2	**Warramunga Arr**	**30.34**	**249**	*e*P	**P**	**09 22 33.1**	**-1.2**
WRA	**Warramunga Arr**	**30.36**	**249**	P	**P**	**09 22 33.2**	**-1.2**
WRA	**Warramunga Arr**	**30.36**	**249**	P	**P**	**09 22 33.2**	**-1.2**
	comp=Z,3.6nm,0.5s,mb4.3,baz=80,slow=9.3,SNR=62						
GUMO	**Guam**	**31.03**	**321**	*e*P	**P**	**09 22 40.5**	**+0.1**
	comp=Z,72nm,0.5s,mb5.7						
KAKA	**Kakadu**	**31.36**	**263**	⇑*i*P	**P**	**09 22 41.6**	**-1.7**
	comp=E,16nm,0.6s,mb4.9						
ASAR	**Alice Springs**	**31.75**	**242**	P	**P**	**09 22 45.4**	**-1.3**
	comp=Z,2.2nm,0.5s,mb4.2,baz=64,slow=10.0,SNR=59						
FITZ	**Fitzroy Crossi**	**38.19**	**254**	*e*P	**P**	**09 23 40.9**	**-1.3**
	comp=Z,17nm,0.6s,mb5.0						
CBIJ	**Chichi jima**	**43.41**	**331**	LR	LR	09 40 32.1	
	comp=Z,2.1nm,19.3s,baz=107,slow=33						
PPT	**Papeete**	**45.02**	**104**	*e*LR	LR	09 37 16.1	
	comp=Z,257nm,25.2s						
NWAO	**Narrogin (SRO)**	**48.53**	**235**	LR	LR	09 44 58.5	
	comp=Z,333nm,20.1s,baz=159,slow=35						
KKM	**Kota Kinabalu**	**50.82**	**287**	*e*P	**P**	**09 25 22.7**	**-0.1**
	comp=Z,26nm,1.2s,mb5.1						
MJAR	**Matsushiro Arr**	**53.16**	**334**	P	**P**	**09 25 38.6**	**-1.2**
	comp=Z,8.3nm,0.9s,mb4.8,baz=166,slow=7.5,SNR=15						
MAJO	**Matsushiro**	**53.16**	**334**	*e*P	**P**	**09 25 38.9**	**-0.9**
	comp=Z,22nm,1.2s,mb5.1						
MAT	**Matsushiro**	**53.16**	**334**	P	**P**	**09 25 38.6**	**-1.2**
YULB	**Yu-li**	**54.16**	**309**	*e*P	**P**	**09 25 46.7**	**-0.8**
	comp=Z,8.6nm,0.8s,mb4.8						
TAOE	**Nuku Hiva Isla**	**54.59**	**93**	*e*LR	LR	09 41 41.3	
	comp=Z,479nm,28.2s						
TPUB	**Ta-pu**	**54.62**	**309**	*e*P	**P**	**09 25 49.6**	**-1.1**
	comp=Z,15nm,0.3s,mb5.5						
RKT	**Rikitea**	**58.90**	**110**	*e*S	**S**	**09 34 21.5**	**-0.3**
	comp=Z,350nm,26.8s						
RKT				*e*LR	LR	09 43 34.9	
	comp=Z,418nm,28.5s						
KSRS	**Korea Array**	**58.94**	**326**	P	**P**	**09 26 21.0**	**-0.1**
	comp=Z,2.6nm,0.9s,mb4.2,baz=144,slow=6.9,SNR=5.1						
KSRS				LR	LR	09 47 59.2	
	comp=Z,62nm,19.1s,baz=5.0,slow=32						
NJ2	**Nanjing**	**60.93**	**316**	*e*P	**P**	**09 26 36.4**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
QIZ	**Qiongzhong**	**61.42**	**299**	P	**P**	**09 26 37.8**	**-0.5**
QIZ				S	**S**	**09 35 02.0**	**+7.9**
QIZ				pmax	pmax		
	comp=Z,86nm,8.4s						
QIZ				LR	LR		
	comp=E,66nm,18.9s						
QIZ				LR	LR		
	comp=Z,160nm,25.9s						
MDJ	**Mudanjiang**	**63.52**	**333**	P	**P**	**09 26 52.4**	**+0.5**
MDJ				pP	pP	09 26 55.6	-16
MDJ				sP	sP	09 26 57.0	-22
MDJ				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,79nm,3.2s						
CN2	**Changchun**	**64.86**	**330**	*e*P	**P**	**09 27 00.9**	**+0.2**
CN2				*e*S	**S**	**09 35 40.5**	**+4.3**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
SBA	**Scott Base**	**67.06**	**179**	*e*P	**P**	**09 27 16.8**	**+2.5**
	comp=Z,106nm,2.8s,mb5.2						
GYA	**Guiyang**	**67.20**	**305**	⇑*i*P	**P**	**09 27 19.0**	**+2.9**
GYA				PcP	PcP	09 27 47.3	+3.7
GYA				PP	PP	09 29 51.3	+6.2
GYA				S	S	09 36 14.3	+9.0
GYA				SKS		09 37 12.9	
GYA				SS	SS	09 40 34.5	+8.2
GYA				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.1						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
GYA				LR	LR		
	comp=N,540nm,19.6s						
GYA				LR	LR		
	comp=E,480nm,20.2s						
GYA				LR	LR		
	comp=Z,560nm,18.7s						
BJI	**Beijing**	**67.47**	**322**	P	**P**	**09 27 19.0**	**+1.5**
BJI				S	S	09 36 16.8	+8.8
BJI				SS	SS	09 40 38.6	+8.6
BJI				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.7						
BJI				pmax	pmax		
	comp=Z,79nm,3.6s						
BJI				LR	LR		
	comp=N,130nm,24.0s						
BJI				LR	LR		
	comp=E,71nm,23.9s						
BJI				LR	LR		
	comp=Z,94nm,32.4s						
KMI	**Kunming**	**69.88**	**302**	P	**P**	**09 27 34.6**	**+1.8**
KMI				pP	pP	09 27 38.4	-14
KMI				PP	PP	09 30 13.3	+4.9
KMI				S	S	09 36 45.5	+8.3
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
KMI				pmax	pmax		
	comp=Z,74nm,4.1s						
KMI				LR	LR		
	comp=N,100nm,10.7s						
KMI				LR	LR		
	comp=E,120nm,14.3s						
KMI				LR	LR		
	comp=Z,140nm,12.6s						
HHC	**Hu-ho-hao-te**	**70.80**	**320**	*e*P	**P**	**09 27 39.8**	**+1.7**
HHC				pP	pP	09 27 44.1	-14
HHC				sP	sP	09 27 46.8	-19
HHC				PP	PP	09 30 18.6	+2.6
HHC				S	S	09 36 53.8	+6.5
HHC				sS	sS	09 37 00.0	-21
HHC				SS	SS	09 41 28.3	+7.0
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
HHC				pmax	pmax		
	comp=Z,110nm,3.6s						
HHC				LR	LR		
	comp=N,91nm,12.9s						
HHC				LR	LR		
	comp=E,110nm,13.6s						
HHC				LR	LR		
	comp=Z,87nm,17.5s						
CMAR	**Chiang Mai Arr**	**70.82**	**294**	P	**P**	**09 27 40.1**	**+1.5**
	comp=Z,0.6nm,0.4s,mb3.8,baz=114,slow=4.4,SNR=4.2						
CD2	**Chengdu**	**71.42**	**308**	P	**P**	**09 27 42.8**	**+0.8**
CD2				pP	pP	09 27 47.5	-14
CD2				sP	sP	09 27 49.8	-20
CD2				PP	PP	09 30 23.5	+2.0
CD2				S	S	09 37 00.4	+5.6
CD2				sS	sS	09 37 08.3	-20
CD2				SKS		09 37 41.3	
CD2				ScS	ScS	09 37 43.8	+3.2
CD2				SS	SS	09 41 37.5	+6.4
CD2				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
LZH	**Lanzhou**	**73.63**	**313**	*e*P	**P**	**09 27 57.8**	**+2.8**
LZH				pP	pP	09 28 02.3	-12
LZH				sP	sP	09 28 04.8	-18
LZH				pmax	pmax		
	comp=Z,22nm,1.0s,mb4.8						
ULN	**Ulaanbaatar**	**77.34**	**324**	*e*P	**P**	**09 28 16.6**	**+0.6**
	comp=Z,4.5nm,0.9s,mb4.2						
YAK	**Yakutsk**	**77.49**	**344**	*e*P	**P**	**09 28 16.5**	**0.0**
	comp=Z,41nm,0.8s,mb5.2						
SONM	**Songino Array**	**77.70**	**324**	P	**P**	**09 28 18.7**	**+0.7**
	comp=Z,2.9nm,0.7s,mb4.1,baz=141,slow=6.7,SNR=18						
GTA	**Gaotai**	**77.95**	**314**	⇑P	**P**	**09 28 20.9**	**+1.3**
GTA				pP	pP	09 28 24.6	-15
GTA				sP	sP	09 28 27.9	-20
GTA				S	S	09 38 13.4	+6.1
GTA				sS	sS	09 38 28.6	-13
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
GTA				pmax	pmax		
	comp=Z,62nm,3.6s						
GTA				LR	LR		
	comp=N,62nm,11.6s						
GTA				LR	LR		
	comp=E,61nm,15.2s						
GTA				LR	LR		
	comp=Z,64nm,16.9s						
RSO	**Redoubt South**	**78.72**	**20**	*e*P	**P**	**09 28 22.6**	**-0.7**
TTA	**Tatalina**	**79.56**	**17**	*e*P	**P**	**09 28 28.2**	**+0.3**
SEW	**Seward**	**79.62**	**22**	*e*P	**P**	**09 28 27.5**	**-0.8**
	comp=Z,9.2nm,0.9s,mb4.6						
PMR	**Palmer**	**80.77**	**21**	*e*P	**P**	**09 28 34.2**	**-0.3**
	comp=Z,11nm,0.9s,mb4.7						
TRF	**Thorofare Moun**	**81.69**	**19**	*e*P	**P**	**09 28 38.6**	**-0.7**
	comp=Z,10nm,0.9s,mb4.7						
RPN	**Rapa Nui**	**81.85**	**116**	LR	LR	09 57 28.4	
	comp=Z,59nm,20.8s,baz=140,slow=30						
BMRM	**Bremner River**	**81.99**	**23**	*e*P	**P**	**09 28 40.5**	**-0.4**
	comp=Z,7.2nm,0.7s,mb4.6						
MCK	**McKinley**	**82.32**	**19**	*e*P	**P**	**09 28 42.1**	**-0.5**
	comp=Z,15nm,0.9s,mb4.8						
DIB	**Dawson Inlet,**	**83.18**	**33**	T		11 00 14.6	
	SNR=6.0						
PNL	**Peninsula**	**83.27**	**25**	*e*P	**P**	**09 28 46.8**	**-0.8**
	comp=Z,26nm,1.3s,mb4.9						
COLA	**College**	**83.45**	**19**	*e*P	**P**	**09 28 47.3**	**-1.2**
	comp=Z,26nm,0.9s,mb5.1						
MENT	**Mentasta**	**83.56**	**21**	*e*P	**P**	**09 28 48.7**	**-0.3**
ILAR	**Eielson Array**	**83.69**	**19**	P	**P**	**09 28 48.5**	**-1.1**
	comp=Z,14nm,0.8s,mb4.9,baz=236,slow=4.3,SNR=73						
COLD	**Coldfoot**	**84.41**	**16**	*e*P	**P**	**09 28 53.4**	**+0.2**
	comp=Z,8.8nm,0.9s,mb4.6						
HYT	**Haines Junctio**	**84.70**	**25**	*e*P	**P**	**09 28 55.2**	**+0.4**
EGAK	**Eagle**	**85.59**	**20**	*e*P	**P**	**09 29 00.0**	**+0.8**
	comp=Z,38nm,0.9s,mb5.3						
TIXI	**Tiksi**	**85.60**	**349**	*e*P	**P**	**09 28 58.9**	**-0.3**
	comp=Z,8.2nm,0.6s,mb4.8						
DAWY	**Dawson**	**85.79**	**21**	*e*P	**P**	**09 28 59.8**	**-0.4**
NVAR	**Mina Array Bea**	**86.86**	**50**	P	**P**	**09 29 05.6**	**-0.5**
	comp=Z,1.4nm,0.9s,mb3.9,baz=231,slow=8.4,SNR=7.2						
WMQ	**Urumqi**	**88.00**	**315**	*e*P	**P**	**09 29 11.8**	**+0.4**
WMQ				pP	pP	09 29 16.6	-15
WMQ				sP	sP	09 29 18.8	-21
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
WMQ				pmax	pmax		
	comp=Z,100nm,4.6s						
WMQ				LR	LR		
	comp=N,59nm,22.4s						
WMQ				LR	LR		
	comp=Z,64nm,20.8s						
M13A	**Montello**	**90.69**	**48**	*e*P	**P**	**09 29 24.0**	**0.0**
	comp=Z,1.5nm,0.6s,mb4.3						
MK31	**Makanchi Array**	**92.45**	**317**	*e*P	**P**	**09 29 32.5**	**+0.4**
MKAR	**Makanchi Array**	**92.45**	**317**	P	**P**	**09 29 31.9**	**-0.2**
	comp=Z,3.0nm,0.8s,mb4.6,baz=90,slow=6.6,SNR=22						
ZALV	**Zalesovo Beam**	**92.59**	**324**	P	**P**	**09 29 31.1**	**-1.4**
	comp=Z,0.8nm,0.5s,mb4.3,baz=104,slow=4.7,SNR=5.8						
DLMT	**Dillon**	**92.71**	**44**	*e*P	**P**	**09 29 33.8**	**+0.4**
	comp=Z,12nm,1.5s,mb5.0						
DLMT				*e*pP	pP	09 29 46.2	-7.4
HRY	**Holter Researc**	**93.52**	**43**	P	**P**	**09 29 37.3**	**+0.2**
TXAR	**Lajitas Array**	**96.85**	**62**	LR	LR	10 03 55.4	
	comp=Z,72nm,20.4s,baz=170,slow=29						
ARCES	**ARCESS Array B**	**115.76**	**345**	PKP	PKPdf	09 35 02.3	-0.4
	comp=Z,1.3nm,0.4s,baz=88,slow=2.3,SNR=26						
FINES	**FINESS Array B**	**121.06**	**338**	PKP	PKPdf	09 35 11.7	-1.4
	comp=Z,1.6nm,0.7s,baz=134,slow=4.0,SNR=3.6						
NOA	**NORSAR Array B**	**126.11**	**344**	PKP	PKPdf	09 35 22.1	-0.8
	comp=Z,1.2nm,0.7s,baz=32,slow=1.8,SNR=4.7						
BRTR	**Keskin Array B**	**127.83**	**312**	PKP	PKPdf	09 35 26.6	-0.2
	comp=Z,0.5nm,0.7s,baz=124,slow=2.2,SNR=3.7						
MTLF	**Montolieu**	**144.07**	**338**	*e*PKP1	PKPdf	09 35 55.1	-1.6
ETSF	**Etsaut**	**145.44**	**340**	*e*PKP1	PKPbc	09 36 00.1	+0.9
	comp=Z,30nm,0.9s						
SJPF	**Ste Jean**	**145.46**	**341**	*e*PKP1	PKPbc	09 35 59.6	+0.3
	comp=Z,12nm,0.7s						
KEST	**Kesra**	**146.42**	**322**	*e*PKPdf	PKPdf	09 36 01.5	+0.5
KEST	**Kesra**	**146.42**	**322**	PKPbc	PKPbc	09 36 03.0	+0.6
	comp=Z,4.7nm,0.8s,baz=11,slow=1.0,SNR=17						
ESDC	**Sonseca Array**	**149.44**	**342**	PKPbc	PKPbc	09 36 09.8	-0.5
	comp=Z,0.6nm,0.4s,baz=6.7,slow=3.1,SNR=9.5						
TORD	**Torodi Ar. Bea**	**162.94**	**280**	PKP	PKPdf	09 36 24.1	0.0
	comp=Z,0.4nm,0.7s,baz=119,slow=1.5,SNR=2.3						

*IDC **18** 09:16:40.1±0.7,11.09N×88.05W,h0km,mb4.6/18, mb1 4.7/19,mb1mx4.7/21,mbtmp4.6/19,ML4.2/1,MS4.0/14, Ms1 4.0/14,ms1mx3.9/21,Error ellipse: s-maj=24.1km s-min=14.5km az=49.0*
*CASC **18** 09:16:43.9±2.8,11.10N×88.11W,h35km±999km,MD4.2, ML4.5,mb4.8(NEIC)*
*GCMT **18** 09:16:44.3±0.3,10.96N×88.23W,h12km,MW5.0, Moment Tensor Solution. s39,c50; s79,c125; Moment tensor: Scale 10¹⁶Nm; Mrr-4.36±.11; Mθθ3.32±.10; Mϕϕ1.04±.13; Mrθ0.41±.36; Mrϕ-1.49±.09; Mθϕ-0.24±.39; Best double couple: M₀4.20000×10¹⁶ NP1:φ₁116.00000°, δ42.00000°,λ-91.00000°. NP2:φ₂297.00000°,δ48.00000°, λ-89.00000°. Principal axes: T 4.0800, Plg3.0000°, Azm26.0000°; N 0.3000, Plg0.0000°, Azm116.0000°; P -4.3900, Plg87.0000°, Azm214.0000°; Data Used: IU II IC G CN.*
*ISCJB **18** 09:16:45.0±0.4,11.17N±0.03×87.95W±0.02,h34km±3km, mb4.7/131,MS4.0/15 Error ellipse: s-maj=6.3km s-min=2.6km az=34.0*
*NEIC **18** 09:16:46.9±0.5,11.11N×87.94W,h43km±4km,mb4.8/115, Error ellipse: s-maj=6.1km s-min=3.1km az=211.0*
*BJI **18** 09:16:46.8,11.60N×88.55W,h43km,mB5.2/2,Ms5.2/2, Ms7 4.8/2*
ISC 18 09:16:47.2±1.0,11.25N±0.03×87.87W±0.02,h34km±7km, n615,σ0s81/608,mb4.7/131,MS4.0/15,189C-153D,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LEON	**Leon**	**1.50**	**40**	*e*P	**Pn**	**09 17 12.1**	**+0.3**
COPN	**Copaltepe**	**1.56**	**53**	*e*P	**Pn**	**09 17 13.0**	**+0.5**
CRIN	**San Cristobal**	**1.65**	**29**	*e*P	**Pn**	**09 17 14.2**	**+0.3**
TELN	**Telica**	**1.69**	**37**	*e*P	**Pn**	**09 17 14.9**	**+0.6**
CNGN	**Cerro Negro**	**1.69**	**43**	*e*P	**Pn**	**09 17 14.4**	**0.0**
CNGN				*e*S	**Sn**	**09 17 40.6**	**+5.7**
CSAN		**1.70**	**57**	*e*P	**Pn**	**09 17 14.8**	**+0.3**
CRUN	**El Crucero**	**1.70**	**65**	*e*P	**Pn**	**09 17 15.5**	**+1.0**
MOMN	**Momotombo**	**1.74**	**48**	*e*P	**Pn**	**09 17 15.6**	**+0.5**
XAVN	**Gruta Xavier**	**1.76**	**59**	*e*P	**Pn**	**09 17 15.7**	**+0.4**
TISN	**Laguna Tiscapa**	**1.80**	**60**	*e*P	**Pn**	**09 17 16.7**	**+0.8**
MGAN	**Managua**	**1.82**	**61**	*e*P	**Pn**	**09 17 16.6**	**+0.4**
MGAN				*e*S	**Sn**	**09 17 43.4**	**+5.2**
MGAN				AML	AML	09 17 47.7	
	comp=N,7μm,0.4s						
MASN	**Masaya**	**1.84**	**66**	*e*P	**Pn**	**09 17 18.7**	**+2.2**
APON	**Apoyo**	**1.89**	**69**	*e*P	**Pn**	**09 17 18.0**	**+0.9**
SSN	**San Juan del S**	**1.98**	**88**	*e*P	**Pn**	**09 17 18.0**	**-0.3**
CNCH	**Conchagua**	**2.01**	**1**	*e*P	**Pn**	**09 17 18.2**	**-0.7**
VSM	**San Miguel**	**2.20**	**350**	*e*P	**Pn**	**09 17 20.5**	**-0.9

BRU2 eS Sn 09 19 13.3 +0.5
TBS2 5.69 115 eP Pn 09 18 15.3 +5.9
SCX San Cristobal 7.15 320 eP Pn 09 18 32.6 +3.2
SCX i S Sn 09 19 48.8 -0.7
BCIP Isla Barro Col 8.18 104 ePn Pn 09 18 43.4 -0.2
BCIP Isla Barro Col 8.18 104 eP Pn 09 18 43.5 0.0
TEIG Tepich 8.93 358 ePn Pn 09 18 56.0 +2.1
CMIG Matias Romero 8.94 311 Pn Pn 09 18 51.8 -2.3
comp=Z,2.6nm,0.3s,baz=127,slow=8.9,SNR=80
CMIG Sn Sn 09 20 28.5 -5.1
comp=Z,0.6nm,0.3s,baz=276,slow=19,SNR=2.4
HUIG Huatulco 9.18 300 i P Pn 09 18 52.5 -4.9
VHO Vista Hermosa 10.36 305 i P Pn 09 19 13.6 +0.1
PNIG Pinotepa 11.19 298 i P Pn 09 19 15.0 -10
LVIG Laguna Verde 11.78 317 eP Pn 09 19 25.7 -7.2
PPM Popocatepetl 12.96 308 eP Pn 09 19 43.5 -5.6
PLIG Platanillo 13.29 304 i P Pn 09 19 44.5 -9.1
IIO Organos 13.34 310 i P Pn 09 19 54.2 -0.1
PTVM Pico Tres Padr 13.64 309 i P Pn 09 19 59.2 +0.8
OTAV Otavalo 14.40 139 ePn Pn 09 20 08.8 +0.1
comp=Z,13nm,1.1s
ROSC El Rosal 14.83 114 eP Pn 09 20 19.5 +4.8
ROSC El Rosal 14.83 114 Pn Pn 09 20 21.5 +6.8
comp=Z,0.6nm,0.3s,baz=274,slow=22,SNR=15
MOIG Morelia 15.32 305 eP Pn 09 20 18.8 -2.2
SDV Santo Domingo 17.14 96 ePn Pn 09 20 44.7 +0.5
comp=Z,35nm,1.0s
BRAL Brewton 19.68 2 ePn Pn 09 21 18.8 +3.7
comp=Z,38nm,0.6s
HKT Hockley 20.03 339 eP P 09 21 16.6 -0.7
comp=Z,83nm,1.8s
VBMS Vicksburg 21.01 354 eP P 09 21 29.4 +1.5
comp=Z,101nm,1.1s,mb5.1
CRPR Cabo Rojo, PR 21.17 69 eP P 09 21 29.6 -0.2
comp=Z,8.9nm,0.8s,mb4.2
NATX Nacogdoches 21.35 344 eP P 09 21 31.5 -0.1
comp=Z,99nm,1.3s,mb5.0
AOPR Arecibo Observ 21.59 68 eP P 09 21 35.9 +1.6
comp=Z,19nm,0.8s,mb4.6
OBIP Obispado Ponce 21.64 69 eP P 09 21 35.7 +0.8
comp=Z,36nm,0.8s,mb4.8
CELP Cerrillos 21.68 69 eP P 09 21 37.5 +2.2
LRAL Lakeview Retre 21.70 2 eP P 09 21 35.8 +0.5
comp=Z,30nm,1.3s,mb4.6
SJG San Juan 22.08 69 eP P 09 21 40.7 +1.2
comp=Z,25nm,0.7s,mb4.8
SJG San Juan 22.08 69 P P 09 21 40.7 +1.1
comp=Z,35nm,0.2s,mb5.4,baz=308,slow=23,SNR=11
SJG LR LR 09 30 49.7
comp=Z,168nm,19.6s,MS3.5,baz=274,slow=38
JCT Junction City 22.11 332 ⇓P P 09 21 37.9 -1.9
baz=22,SNR=6.5
JCT Junction City 22.11 332 eP P 09 21 37.6 -2.2
comp=Z,19nm,0.8s,mb4.6
HUMP Col San Antoni 22.36 70 eP P 09 21 43.8 +1.2
comp=Z,19nm,0.9s,mb4.5
GOGA Godfrey 22.43 10 eP P 09 21 43.1 0.0
comp=Z,39nm,0.8s,mb4.9
PCRV Puerto La Cruz 22.86 90 P P 09 21 48.6 +0.8
comp=Z,29nm,0.8s,mb4.8,baz=254,slow=3.8,SNR=9.9
PCRV LR LR 09 32 45.9
comp=Z,166nm,18.2s,MS3.5,baz=135,slow=42
628A Black Gap, Mar 22.92 325 ⇓P P 09 21 46.8 -1.5
baz=23,SNR=16
627A Terlingua Ranc 23.18 324 ⇑P P 09 21 50.0 -1.1
baz=23,SNR=24
STVI Saint Thomas 23.24 70 eP P 09 21 52.1 +0.2
comp=Z,61nm,1.3s,mb4.9
TXAR Lajitas Array 23.25 323 P P 09 21 51.0 -0.9
comp=Z,8.1nm,0.9s,mb4.2,baz=141,slow=8.8,SNR=68
TXAR PcP PcP 09 25 38.5 -0.4
comp=Z,0.8nm,0.9s,baz=108,slow=2.9,SNR=4.8
626A Big Bend Ranch 23.69 323 ⇓P P 09 21 54.9 -1.1
baz=24,SNR=40
JSC Jenkinsville 23.71 14 eP P 09 21 56.2 0.0
428A Kincaid Ranch, 23.76 327 ⇓P P 09 21 55.9 -0.7
baz=24
MIAR Mount Ida 23.77 348 eP P 09 21 55.9 -0.8
comp=Z,39nm,0.8s,mb4.9
UALR University of 23.77 351 eP P 09 21 56.0 -0.7
comp=Z,123nm,1.6s,mb5.1
527A Woodward Ranch 23.83 324 ⇑P P 09 21 56.3 -0.9
baz=24,SNR=16
SWET Sewanee 23.92 4 eP P 09 21 58.1 0.0
526A Mary Lane Ranc 24.04 324 ⇑P P 09 21 58.1 -1.1
baz=24,SNR=12
427A Hayter Ranch, 24.24 326 ⇑P P 09 22 00.6 -0.5
baz=24,SNR=7.4
CPCT Cooper Cave 24.28 7 eP P 09 22 01.8 +0.4
HBAR Harrisburg 24.33 354 eP P 09 22 01.9 +0.1
328A Wristen Ranch, 24.34 328 ⇑P P 09 22 00.6 -1.3
baz=24,SNR=18
426A McDonald Obser 24.46 325 ⇓P P 09 22 01.6 -1.4
baz=25,SNR=7.1
TKL Tuckaleechee C 24.58 8 eP P 09 22 03.8 -0.3
TKL Tuckaleechee C 24.58 8 P P 09 22 03.5 -0.6
comp=Z,20nm,0.7s,mb4.7,baz=182,slow=12,SNR=38
TKL LR LR 09 32 18.2
comp=Z,125nm,21.1s,MS3.4,baz=228,slow=38
WVT Waverly 24.77 0 eP P 09 22 05.0 -0.8
comp=Z,19nm,1.4s,mb4.4
326A Caldwell Ranch 24.92 326 ⇓P P 09 22 06.2 -1.0
baz=25
425A Indio Mountain 25.09 323 ⇑P P 09 22 07.4 -1.5
baz=25,SNR=14
WMOK Wichita Mounta 25.41 339 eP P 09 22 10.0 -1.6
comp=Z,12nm,0.8s,mb4.5
325A Bean Ranch, Si 25.52 324 ⇓P P 09 22 11.2 -1.4
baz=26,SNR=10.0
CNNC Cliffs of the 25.55 19 eP P 09 22 12.3 -0.6
comp=Z,21nm,0.8s,mb4.7
NNA Nana 25.55 154 P P 09 22 10.6 -2.6
comp=Z,11nm,0.7s,mb4.5,baz=308,slow=5.0,SNR=4.4
226A Malaga, Loving 25.55 327 ⇓P P 09 22 12.2 -0.9
baz=26
CLNB Carlsbad 25.59 327 eP P 09 22 13.6 +0.2
comp=Z,0.6nm,0.3s,mb3.6
127A Arkansas Junct 25.64 329 ⇑P P 09 22 12.4 -1.4
baz=26,SNR=6.0
GDL2 Guadalupe Moun 25.80 326 eP P 09 22 18.2 +3.0
126A Clayton Basin, 25.96 328 ⇑P P 09 22 15.5 -1.2
baz=26
225A Deer Hill, Car 25.98 326 ⇓P P 09 22 15.9 -1.0
baz=26,SNR=9.2
MNTX Cornudas Mount 25.99 324 ⇓P P 09 22 15.9 -1.1
baz=26,SNR=16
MNTX Cornudas Mount 25.99 324 eP P 09 22 15.7 -1.3
comp=Z,9.2nm,1.0s,mb4.3
CPRX Cap Rock 26.18 328 eP P 09 22 18.8 0.0
comp=Z,31nm,0.8s,mb4.9
125A Gardner Draw, 26.31 327 ⇑P P 09 22 20.0 +0.1
baz=26,SNR=9.5
224A Cornudas Mount 26.35 325 ⇑P P 09 22 19.9 -0.3
baz=26
SIUC Southern Illin 26.38 358 eP P 09 22 19.9 -0.5
comp=Z,18nm,0.9s,mb4.6
MSTX Muleshoe 26.40 331 ⇑P P 09 22 19.7 -0.9
baz=26,SNR=15
Z26A Caprock 26.43 329 ⇓P P 09 22 20.3 -0.7
baz=27
AMTX Amarillo 26.68 334 ⇑P P 09 22 22.5 -0.6
baz=27,SNR=8.6
AMTX Amarillo 26.68 334 eP P 09 22 22.9 -0.3
comp=Z,51nm,1.1s,mb5.0
124A Stringfield Ra 26.78 326 ⇑P P 09 22 23.6 -0.5
baz=27,SNR=9.9
Z25A Roswell 26.82 327 ⇑P P 09 22 24.0 -0.5
baz=27,SNR=8.4
VWCC Virginia Weste 26.84 14 eP P 09 22 24.9 +0.3
CCM Cathedral Cave 26.86 354 eP P 09 22 23.8 -1.0
comp=Z,15nm,0.7s,mb4.6
Y26A Elida 26.87 330 ⇓P P 09 22 24.2 -0.7
baz=27,SNR=13
WCI Wyandotte Cave 26.90 3 eP P 09 22 24.4 -0.7
comp=Z,12nm,0.8s,mb4.5
X27A F and S Farms, 27.11 332 ⇑P P 09 22 26.6 -0.4
baz=27,SNR=5.0
222A Williams Famil 27.30 322 ⇓P P 09 22 28.1 -0.7
baz=27
OLIL Olney 27.37 360 eP P 09 22 29.1 -0.3
comp=Z,9.0nm,0.8s,mb4.3
W27A Bowe Ranch, En 27.44 332 ⇓P P 09 22 29.7 -0.3
baz=28,SNR=9.3
Z23A Rita Site, Whi 27.63 325 ⇑P P 09 22 32.5 +0.7
baz=28
221A Mesquite Ranch 27.64 321 ⇑P P 09 22 31.6 -0.2
baz=28
320A Kipp Ranch, An 27.65 319 ⇓P P 09 22 31.5 -0.4
baz=28,SNR=12
122A Conniff Cattle 27.66 323 ⇑P P 09 22 32.1 +0.1
baz=28
Y24A Capitan 27.70 327 ⇓P P 09 22 32.5 +0.2
baz=28,SNR=8.9
W26A Owens Ranch, T 27.79 331 ⇓P P 09 22 33.9 +0.8
baz=28
121A Cookes Peak, D 28.01 322 ⇓P P 09 22 35.8 +0.7
baz=28
220A Playas Peak, P 28.03 320 ⇓P P 09 22 35.4 +0.1
baz=28,SNR=22
Y23A Lovelace Mesa, 28.04 326 ⇑P P 09 22 35.6 +0.2
baz=28,SNR=7.6
Z22A Elephant Butte 28.04 324 ⇑P P 09 22 35.8 +0.4
baz=28
319A Douglas 28.16 319 ⇓P P 09 22 36.4 -0.1
baz=28,SNR=9.2
W25A X Bar L Ranch, 28.22 330 ⇑P P 09 22 37.1 +0.1
baz=28,SNR=9.3
V26A Tequesquite Ra 28.38 332 ⇑P P 09 22 38.3 0.0
baz=28,SNR=9.1
CBN Corbin 28.44 18 eP P 09 22 38.4 -0.5
comp=Z,16nm,0.5s,mb4.9
Z21A St. Cloud Mine 28.49 324 ⇓P P 09 22 40.4 +1.0
baz=29
BNM Barren Site 28.51 326 eP P 09 22 40.0 +0.4
120A U Bar Ranch, L 28.53 321 ⇑P P 09 22 39.9 +0.2
baz=29,SNR=10
Y22A Socorro 28.54 325 ⇑P P 09 22 40.4 +0.6
baz=29
219A White Tail Can 28.55 320 ⇑P P 09 22 39.5 -0.5
baz=29,SNR=18
318A Bisbee 28.66 318 ⇓P P 09 22 40.6 -0.3
baz=29,SNR=10
W24A Lazy 6 Ranch, 28.69 329 ⇓P P 09 22 41.5 +0.3
baz=29,SNR=6.1
V25A Rancho No Teng 28.80 331 ⇑P P 09 22 41.8 -0.3
baz=29,SNR=10
KSU1 Kansas State U 28.81 346 eP P 09 22 41.2 -0.9
comp=Z,30nm,1.2s,mb4.9
U26A Atchley Ranch, 28.85 333 ⇑P P 09 22 42.8 +0.2
baz=29
Z20A Nine Sixteen R 28.90 322 ⇓P P 09 22 43.7 +0.7
baz=29,SNR=8.3
Y21A Point of Rocks 29.00 325 ⇓P P 09 22 44.5 +0.7
baz=29,SNR=14
V24A Rampart Ranch, 29.03 330 ⇑P P 09 22 44.3 +0.1
baz=29
W23A Werner Place, 29.03 328 ⇓P P 09 22 45.3 +1.2
baz=29
ANMO Albuquerque 29.03 327 eP P 09 22 44.9 +0.7
comp=Z,0.8nm,0.7s,mb3.6
ANMO Albuquerque 29.03 327 P P 09 22 43.8 -0.4
comp=Z,0.5nm,0.5s,mb3.5,baz=124,slow=13,SNR=3.8
218A Dragoon 29.04 319 ⇑P P 09 22 44.8 +0.4
baz=29
119A Ashpeak Ranch, 29.09 321 ⇓P P 09 22 44.9 +0.1
baz=29,SNR=6.8
U25A Circle Dot Ran 29.16 332 ⇑P P 09 22 46.0 +0.7
baz=29
Y20A Horse Springs, 29.33 324 ⇑P P 09 22 47.7 +0.9
baz=30,SNR=9.9
X21A Alamcita Cree 29.38 325 ⇓P P 09 22 47.8 +0.6
baz=30,SNR=7.5
CBKS Cedar Bluff 29.42 341 ⇓P P 09 22 47.2 -0.4
baz=30
CBKS Cedar Bluff 29.42 341 eP P 09 22 46.7 -0.9
comp=Z,7.7nm,0.7s,mb4.5
217A Green Valley 29.42 317 ⇑P P 09 22 48.1 +0.4
baz=30
Z19A T-Link Ranch, 29.43 322 ⇓P P 09 22 47.9 +0.2
baz=30
V23A Ortiz Mt. (NFS 29.50 329 ⇑P P 09 22 49.3 +1.0
baz=30
TUC Tucson 29.74 318 eP P 09 22 50.5 -0.1
comp=Z,6.5nm,1.1s,mb4.3
Z18A Geronimo 29.77 320 ⇑P P 09 22 51.0 +0.2
baz=30
T25A Trinidad 29.77 333 ⇓P P 09 22 51.7 +1.0
baz=30
X20A Quemado 29.85 324 ⇓P P 09 22 52.6 +1.2
baz=30
117A Oracle 29.88 319 ⇑P P 09 22 51.5 -0.2
baz=30
Y19A Nutrioso 29.88 323 ⇑P P 09 22 52.2 +0.5
baz=30,SNR=8.0
U23A El Rito 29.96 329 ⇑P P 09 22 52.9 +0.5
baz=30,SNR=11
216A Three Points, 29.99 317 ⇓P P 09 22 52.6 -0.1
baz=30
V22A San Miguel Ran 30.00 328 ⇑P P 09 22 53.6 +0.8
baz=30
Z17A San Carlos Hig 30.18 320 ⇑P P 09 22 54.6 +0.2
baz=30,SNR=5.2
S25A Robets Cordova 30.21 333 ⇓P P 09 22 56.0 +1.4
baz=30
Y18A Canyon Day Jun 30.23 321 ⇓P P 09 22 55.4 +0.5
baz=30,SNR=15
X19A St. Johns 30.23 323 ⇓P P 09 22 55.1 +0.2
baz=30,SNR=6.2
V21A Milan 30.30 327 ⇑P P 09 22 56.7 +1.3
baz=30
U22A Llaves 30.33 329 ⇑P P 09 22 56.5 +0.8
baz=30
MVL Millersville 30.40 18 eP P 09 22 58.0 +1.8
comp=Z,7.3nm,0.8s,mb4.5
T23A Casias Ranch, 30.44 331 ⇑P P 09 22 57.3 +0.6
baz=31
116A Eloy 30.50 318 ⇓P P 09 22 57.0 -0.2
baz=31,SNR=5.5
Y17A Roosevelt 30.68 320 ⇓P P 09 22 59.1 +0.4
baz=31
X18A Snowflake 30.69 323 ⇓P P 09 22 59.7 +0.8
baz=31,SNR=6.0
V20A Brimhall 30.75 326 ⇑P P 09 23 00.3 +1.0
baz=31
SDCO Great Sand Dun 30.76 332 eP P 09 23 00.3 +0.8
comp=Z,10nm,1.5s,mb4.4
U21A Nageezi 30.78 328 ⇓P P 09 23 00.8 +1.2
baz=31
Z16A Peralta Trail, 30.81 319 ⇑P P 09 23 00.3 +0.3
baz=31
214A Organ Pipe Nat 30.88 316 ⇓P P 09 23 01.0 +0.4
baz=31
SCIA State Center 30.89 352 eP P 09 22 60.0 -0.6
comp=Z,20nm,0.6s,mb5.1
W18A Petrified Fore 30.98 324 ⇑P P 09 23 02.8 +1.4
baz=31
R24A Sanders Place, 30.98 333 ⇓P P 09 23 02.1 +0.7
baz=31
X17A Forest Lakes 31.08 321 ⇓P P 09 23 03.2 +0.9
baz=31,SNR=9.5
Q25A Bedland, Calha 31.18 335 ⇑P P 09 23 04.0 +0.9
baz=31
Y16A Circle Bar Ran 31.19 320 ⇓P P 09 23 03.7 +0.3
baz=31,SNR=12
U20A Newcomb 31.20 327 ⇓P P 09 23 04.1 +0.7
baz=31
Z15A Gila River Ind 31.25 318 ⇓P P 09 23 04.4 +0.5
baz=31
S22A 4UR Ranch, Cre 31.39 330 ⇑P P 09 23 05.7 +0.8
baz=32,SNR=6.7
114A Black Gap (USA 31.40 317 ⇓P P 09 23 05.6 +0.5
baz=32
V18A Ganado 31.51 324 ⇑P P 09 23 06.6 +0.5
baz=32
U19A Dine' College, 31.52 326 ⇑P P 09 23 06.4 +0.2
baz=32,SNR=6.0
W17A Winslow 31.52 322 ⇓P P 09 23 06.8 +0.6
baz=32
X16A Lo Mia Camp, P 31.52 321 ⇑P P 09 23 06.5 +0.2
baz=32,SNR=24
JFWS Jewell Farm 31.61 357 eP P 09 23 07.7 +0.8
comp=Z,10nm,0.9s,mb4.7
R22A Saguache, Gunn 31.73 331 ⇓P P 09 23 09.3 +1.3
baz=32
Y15A Casa Rosa Ranc 31.79 319 ⇓P P 09 23 08.5 -0.1
baz=32,SNR=8.3
S21A Coal Bank Pass 31.80 329 ⇓P P 09 23 08.9 +0.3
baz=32
T19A Beclabito 31.81 327 ⇑P P 09 23 09.5 +0.7
baz=32
Z14A Wintersburg 31.82 318 ⇑P P 09 23 09.3 +0.5
baz=32
MVCO Mesa Verde 31.82 328 ⇓P P 09 23 08.9 +0.1
baz=32
MVCO Mesa Verde 31.82 328 eP P 09 23 09.8 +1.1
comp=Z,7.9nm,1.3s,mb4.4
Q23A Hartsel 31.86 333 ⇓P P 09 23 10.2 +1.1
baz=32
U18A Rough Rock, Ch 31.98 325 ⇓P P 09 23 11.0 +0.8
baz=32
113A Mohawk Valley, 32.01 316 ⇓P P 09 23 10.9 +0.4
baz=32
W16A Flagstaff 32.03 322 ⇑P P 09 23 10.8 +0.1
baz=32,SNR=8.2
X15A Humboldt 32.06 320 ⇑P P 09 23 11.1 +0.1
baz=32,SNR=14
OGNE Ogallala 32.10 340 ⇑P P 09 23 12.5 +1.3
baz=32
Z13A Yuma Proving G 32.19 317 ⇑P P 09 23 12.4 +0.3
baz=32
Y14A Wickenburg 32.21 319 ⇓P P 09 23 11.3 -1.0
baz=32,SNR=9.5
WUAZ Wupatki 32.22 322 ⇓P P 09 23 13.1 +0.8
baz=32,SNR=13
WUAZ Wupatki 32.22 322 eP P 09 23 13.6 +1.2
comp=Z,24nm,1.0s,mb5.0
P23A Jefferson 32.24 333 ⇓P P 09 23 13.2 +0.7
baz=32,SNR=8.6
Q22A Crested Butte, 32.31 332 ⇑P P 09 23 14.1 +1.0
baz=32
112A Yuma 32.43 315 ⇑P P 09 23 14.7 +0.5
baz=32
X14A Yava 32.47 319 ⇑P P 09 23 14.5 -0.1
baz=33,SNR=11
ISCO Idaho Springs 32.50 334 ⇑P P 09 23 15.4 +0.7
baz=33
ISCO Idaho Springs 32.50 334 eP P 09 23 15.5 +0.8
comp=Z,75nm,3.0s
T18A Mexican Hat 32.50 326 ⇑P P 09 23 15.7 +0.9
baz=33,SNR=7.4
R20A Redvale 32.50 329 ⇓P P 09 23 15.8 +1.1
baz=33,SNR=7.0
U16A Tuba City 32.50 324 ⇑P P 09 23 15.5 +0.7
baz=33,SNR=16
W15A Williams 32.53 321 ⇑P P 09 23 16.0 +0.8
baz=33,SNR=9.2
BINY Binghamton 32.54 17 eP P 09 23 14.7 -0.3
comp=Z,70nm,1.9s,mb5.3
S19A Harvey Farm, M 32.55 328 ⇓P P 09 23 15.7 +0.5
baz=33,SNR=15
PV01 Paradox Valley 32.55 329 eP P 09 23 15.5 +0.3
comp=Z,674nm,1.4s
SMCO Snowmass 32.59 332 eP P 09 23 16.1 +0.5
comp=Z,7.5nm,1.3s,mb4.5
SMCO ePcP PcP 09 26 01.7 +0.3
Q21A Lamborn Mesa, 32.60 331 ⇑P P 09 23 17.0 +1.4
baz=33
P22A Eagle 32.83 333 ⇑P P 09 23 18.2 +0.6
baz=33
GLA Glamis 32.90 316 ⇑P P 09 23 18.3 0.0
baz=33
GLA Glamis 32.90 316 eP P 09 23 17.8 -0.6
comp=Z,13nm,1.0s,mb4.8
V15A Kaibab Nationa 32.90 322 ⇓P P 09 23 19.6 +1.3
baz=33,SNR=29
T17A Navajo Res., N 32.91 325 ⇑P P 09 23 19.2 +0.8
baz=33,SNR=18
PV04 Paradox Valley 32.92 329 eP P 09 23 18.3 -0.1
O23A Lake Granby, G 32.97 334 ⇑P P 09 23 19.1 +0.2
baz=33
S18A Hurst Farm, Bl 32.97 327 ⇓P P 09 23 19.4 +0.6
baz=33,SNR=7.5
R19A Curley Farm, L 33.03 328 ⇑P P 09 23 19.3 -0.1
baz=33,SNR=6.0
Q20A Ridgley Place, 33.05 330 ⇓P P 09 23 20.3 +0.7
baz=33
N24A Carr 33.06 336 ⇓P P 09 23 20.5 +0.9
baz=33
W14A Seligman 33.06 320 ⇓P P 09 23 20.2 +0.4
baz=33,SNR=15
PDMCI Parker Dam,Lak 33.17 318 ⇓P P 09 23 20.6 -0.1
baz=33,SNR=7.4
O22A Kremmling 33.20 333 ⇑P P 09 23 21.4 +0.6
baz=33
ECSD EROS Data Cent 33.24 348 eP P 09 23 18.8 -2.4
comp=Z,16nm,1.1s,mb4.9
T16A Glen Canyon Da 33.30 324 ⇓P P 09 23 22.9 +1.1
baz=33
V14A Boquillas Ranc 33.35 321 ⇑P P 09 23 23.1 +0.8
baz=34,SNR=30
S17A Black Ridge (B 33.37 326 ⇓P P 09 23 22.9 +0.5
baz=34,SNR=9.1
U15A North Rim 33.38 323 ⇓P P 09 23 23.6 +1.1
baz=34
R18A Canyonlands Na 33.43 328 ⇑P P 09 23 23.0 +0.1
baz=34
W13A Hualapai Mount 33.50 319 ⇑P P 09 23 24.1 +0.5
baz=34,SNR=12
SWSC Sam W. Stewart 33.51 314 ⇑P P 09 23 24.1 +0.4
baz=34
DVTC Desert V Tower 33.57 314 ⇓P P 09 23 24.8 +0.6
baz=34
LPAZ La Paz 33.62 144 P P 09 23 22.6 -2.1
comp=Z,2.6nm,0.9s,mb4.2,baz=343,slow=8.5,SNR=9.1
N22A Wattenberg Ran 33.69 334 ⇑P P 09 23 25.9 +0.8
baz=34
PHWY Pilot Hill 33.69 336 eP P 09 23 25.1 +0.1
comp=Z,16nm,1.5s,mb4.7
IRM Iron Mountain 33.76 317 ⇑P P 09 23 25.8 0.0
baz=34
T15A Red Dirt Ranch 33.83 323 ⇓P P 09 23 27.3 +0.9
baz=34,SNR=18
S16A Weppner Ranch, 33.87 325 ⇓P P 09 23 27.1 +0.4
baz=34,SNR=16
R17A Hanksville Air 33.88 327 ⇑P P 09 23 27.5 +0.7
baz=34,SNR=10
U14A Mt Trumbull 33.91 322 ⇑P P 09 23 28.4 +1.3
baz=34,SNR=23
P19A Cripple Cowboy 33.91 330 ⇓P P 09 23 28.1 +1.1
baz=34
MONP Monument Peak 33.92 314 ⇑P P 09 23 27.4 +0.1
baz=34
O20A White River Ci 33.95 331 ⇑P P 09 23 28.1 +0.7
baz=34,SNR=6.4
V13A Grand Canyon W 34.04 320 ⇑P P 09 23 28.9 +0.6
baz=34,SNR=20
Q18A Rafter H Ranch 34.09 328 ⇑P P 09 23 28.9 +0.4
baz=34,SNR=7.9
N21A Black Mountain 34.12 333 ⇑P P 09 23 29.7 +0.9
baz=34,SNR=8.8
R16A Teasdale 34.21 326 ⇑P P 09 23 30.4 +0.8
baz=34,SNR=13
BELC Belle Mtn. Jos 34.24 316 ⇑P P 09 23 30.5 +0.5
baz=34
S15A Panguitch 34.27 324 ⇓P P 09 23 31.4 +1.2
baz=34,SNR=13
T14A Hurricane 34.28 323 ⇓P P 09 23 31.1 +0.9
baz=34,SNR=19
LDFC Landfair 34.28 318 eP P 09 23 31.2 +0.9
SRU San Rafael 34.30 328 ⇑P P 09 23 30.9 +0.5
baz=34,SNR=6.6
SRU San Rafael 34.30 328 eP P 09 23 30.7 +0.3
comp=Z,8.8nm,1.1s,mb4.6
PFO Pinyon Flat Ob 34.34 315 ⇑P P 09 23 31.3 +0.4
baz=34
U13A Pakoon Wash 34.39 321 ⇑P P 09 23 32.0 +0.8
baz=34,SNR=19
109C Camp Elliot, M 34.41 313 ⇓P P 09 23 31.5 +0.1
baz=34
GMRC Granite Mounta 34.47 317 ⇑P P 09 23 32.2 +0.3
baz=35
L23A Garrett 34.47 336 ⇓P P 09 23 31.8 -0.1
baz=35,SNR=8.7
O19A Miners Draw (B 34.49 331 ⇓P P 09 23 32.6 +0.4
baz=35
Q16A Castle Valley 34.49 327 ⇑P P 09 23 32.2 0.0
baz=35
V12A Nelson 34.51 319 ⇓P P 09 23 32.4 +0.1
baz=35,SNR=19
N20A Spence Gulch, 34.51 332 ⇓P P 09 23 32.6 +0.4
baz=35,SNR=9.0
P18A Preston Nutter 34.54 329 ⇑P P 09 23 32.9 +0.4
baz=35
P17A Butcher Ranch, 34.67 328 ⇓P P 09 23 34.1 +0.5
baz=35,SNR=8.9
L22A Ellis Ranch, M 34.70 335 ⇓P P 09 23 34.7 +0.9
baz=35
M21A Separation Pea 34.74 334 ⇑P P 09 23 34.4 +0.2
baz=35,SNR=7.2
RWWY Rawlins 34.74 334 eP P 09 23 34.0 -0.2
comp=Z,14nm,1.1s,mb4.8
RWWY ePcP PcP 09 26 06.4 -1.0
T13A Saint George 34.74 322 ⇑P P 09 23 34.9 +0.6

baz=35,SNR=14
U12A Valley of Fire 34.75 321 ⇓P P 09 23 34.7 +0.3
baz=35
MSU Marysvale 34.75 325 eP P 09 23 35.2 +0.8
MSU ePcP PcP 09 26 06.4 -1.1
CCUT Cedar City 34.77 323 eP P 09 23 35.1 +0.6
comp=Z,19nm,1.2s,mb4.9
S14A Cedar City 34.80 324 ⇓P P 09 23 35.0 +0.3
baz=35,SNR=6.3
MURC Murrieta 34.85 314 ⇑P P 09 23 35.5 +0.2
baz=35
O18A Roosevelt 34.90 330 ⇓P P 09 23 35.8 +0.1
baz=35,SNR=6.9
V11A Goodsprings 34.95 319 ⇓P P 09 23 36.4 +0.3
baz=35
ARUT Antelope Range 34.97 323 eP P 09 23 36.6 +0.3
comp=Z,12nm,1.1s,mb4.8
N19A John Jarvie Ra 34.98 331 ⇓P P 09 23 36.8 +0.5
baz=35
M20A Sweetwater, Wa 35.00 333 ⇑P P 09 23 37.3 +0.8
baz=35
L21A Rawlins 35.03 334 ⇑P P 09 23 37.0 +0.3
baz=35,SNR=13
S13A Holt Ranch, En 35.08 323 ⇑P P 09 23 38.5 +1.2
baz=35,SNR=29
LONY Lake Ozonia 35.16 17 eP P 09 23 39.7 +1.9
comp=Z,43nm,1.7s,mb5.1
Q15A Fillmore 35.21 326 ⇓P P 09 23 39.2 +0.9
baz=35
O17A Robinson Place 35.21 329 ⇑P P 09 23 38.5 +0.2
baz=35,SNR=5.7
K22A Casper 35.25 336 ⇑P P 09 23 38.5 -0.1
baz=35,SNR=7.1
P16A Fountain Green 35.26 327 ⇓P P 09 23 38.9 +0.2
baz=35
N18A Larsen Ranch, 35.28 331 ⇓P P 09 23 38.9 -0.1
baz=35
L20A Wamsutter 35.49 333 ⇓P P 09 23 41.5 +0.9
baz=36
BFSC Mount Baldy Ra 35.52 315 ⇓P P 09 23 41.4 +0.4
baz=36
GSC Goldstone 35.53 317 ⇓P P 09 23 40.7 -0.4
baz=36
GSC Goldstone 35.53 317 eP P 09 23 40.9 -0.2
comp=Z,85nm,2.8s,mb5.2
SHOC Shoshone 35.53 318 ⇑P P 09 23 40.9 -0.2
baz=36
R13A O'Grain Ranch, 35.55 323 ⇓P P 09 23 42.3 +1.1
baz=36,SNR=20
RSSD Black Hills 35.60 340 eP P 09 23 41.6 0.0
comp=Z,5.5nm,0.8s,mb4.5
O16A Springville 35.61 328 ⇑P P 09 23 41.9 +0.2
baz=36
DAU Daniels Canyon 35.64 329 eP P 09 23 42.1 +0.1
T11A Corn Creek, Al 35.69 321 ⇑P P 09 23 42.8 +0.4
baz=36,SNR=9.9
S12A Delamar Landin 35.70 322 ⇓P P 09 23 43.4 +0.9
baz=36,SNR=18
Q14A Sevier Lake (B 35.70 325 ⇑P P 09 23 43.1 +0.6
baz=36,SNR=11
MWC Mount Wilson 35.79 315 eP P 09 23 43.9 +0.6
comp=Z,17nm,1.3s,mb4.8
N17A Moffit Pass 35.82 330 ⇓P P 09 23 43.7 +0.1
baz=36
PASC Pasadena Art C 35.85 314 eP P 09 23 44.3 +0.5
comp=Z,141nm,1.6s,mb5.7
U10A Ash Meadows, A 35.88 319 ⇓P P 09 23 44.6 +0.5
baz=36,SNR=6.9
DECC Green Verdugo 35.99 314 ⇑P P 09 23 45.9 +0.8
baz=36
P14A Drum Mountains 36.00 326 ⇓P P 09 23 46.0 +0.8
baz=36,SNR=7.7
K20A Yellowstone Ra 36.02 334 ⇓P P 09 23 44.8 -0.3
baz=36
L19A Farson 36.02 332 ⇓P P 09 23 45.7 +0.5
baz=36
R12A Pony Springs, 36.02 323 ⇑P P 09 23 46.7 +1.5
baz=36,SNR=29
N16A Rees Ranch, Co 36.08 329 ⇑P P 09 23 46.7 +1.0
baz=36
EDW2 Edwards Air Fo 36.10 316 ⇑P P 09 23 46.0 0.0
baz=36
Q13A Wheeler Ranch, 36.10 324 ⇑P P 09 23 47.1 +1.1
baz=36,SNR=12
M17A Scullys Gap (B 36.14 330 ⇑P P 09 23 46.7 +0.4
baz=36
O15A The Old Anders 36.17 327 ⇑P P 09 23 48.2 +1.6
baz=36
L18A Fontenelle, Gr 36.19 332 ⇓P P 09 23 46.9 +0.2
baz=36,SNR=7.0
FURC Furnace Creek, 36.25 319 ⇑P P 09 23 47.3 0.0
baz=36,SNR=5.7
S11A Rachel 36.27 321 ⇑P P 09 23 48.5 +1.1
baz=36,SNR=24
DUG Dugway 36.29 327 ⇑P P 09 23 49.0 +1.4
baz=36
K19A Absolon Red Bu 36.37 334 ⇓P P 09 23 47.3 -0.9
baz=36,SNR=7.1
MPMC Manual Prospec 36.42 318 ⇑P P 09 23 48.2 -0.5
baz=36,SNR=8.5
BLG Laguna Peak 36.44 314 ⇑P P 09 23 49.1 +0.2
baz=36
P13A Bates Ranch, G 36.44 325 ⇑P P 09 23 50.0 +1.2
baz=37,SNR=19
I21A Big Trails, Te 36.53 336 ⇓P P 09 23 48.9 -0.6
baz=37,SNR=5.7
R11A Troy Canyon, C 36.62 322 ⇓P P 09 23 51.8 +1.4
baz=37,SNR=28
BW06 Boulder Array 36.64 333 ⇑P P 09 23 50.7 +0.2
baz=37
BW06 Boulder Array 36.64 333 eP P 09 23 50.5 0.0
comp=Z,68nm,2.8s,mb5.0
N15A Stansbury Isla 36.64 328 ⇓P P 09 23 51.1 +0.5
baz=37
HWUT Hardware Ranch 36.69 330 eP P 09 23 50.8 -0.1
comp=Z,8.4nm,0.8s,mb4.6
HWUT ePcP PcP 09 26 12.3 -0.9
L17A Cokeville 36.72 331 ⇓P P 09 23 51.1 -0.1
baz=37,SNR=6.4
K18A Toltan Ranch, 36.75 332 ⇑P P 09 23 51.0 -0.4
baz=37,SNR=16
ARVC Arvin 36.81 315 ⇑P P 09 23 51.8 -0.3
baz=37
ISA Isabella 36.86 316 ⇑P P 09 23 52.4 -0.1
baz=37
ISA Isabella 36.86 316 eP P 09 23 52.6 +0.1
comp=Z,21nm,1.6s,mb4.7
ISA ePcP PcP 09 26 13.2 -0.7
GRAC Grapevine Rang 36.90 319 ⇑P P 09 23 53.1 +0.4
baz=37,SNR=5.5
SPUT South Promonto 36.91 329 eP P 09 23 53.6 +0.8
comp=Z,4.7nm,1.0s,mb4.3
L16A Fish Haven 36.93 330 ⇑P P 09 23 53.5 +0.5
baz=37
BGU Big Grassy Mou 36.93 328 eP P 09 23 53.4 +0.4
comp=Z,36nm,2.1s,mb4.8
N14A Grayback Hills 36.96 327 ⇑P P 09 23 53.4 +0.1
baz=37,SNR=6.4
S10A Tonopah Range, 36.96 321 ⇓P P 09 23 54.1 +0.7
baz=37,SNR=25
Q11A Duckwater 36.98 323 ⇑P P 09 23 54.4 +0.9
baz=37,SNR=17
I20A Worland 36.98 335 ⇓P P 09 23 53.2 -0.2
baz=37,SNR=16
R10A Warm Springs 37.01 322 ⇓P P 09 23 54.6 +0.9
baz=37,SNR=19
M15A Larsen Ranch, 37.02 329 ⇑P P 09 23 53.3 -0.4
baz=37,SNR=8.0
H21A Big Horn, Sher 37.12 337 ⇑P P 09 23 53.7 -0.9
baz=37,SNR=8.7
J18A Kendall Valley 37.20 333 ⇑P P 09 23 54.8 -0.4
baz=37,SNR=9.4
K17A Gardner Place, 37.25 332 ⇑P P 09 23 55.7 0.0
baz=37
VES Vestal, Richgr 37.37 316 ⇑P P 09 23 57.1 +0.3
baz=38,SNR=7.4
H20A Greybull 37.38 336 ⇑P P 09 23 56.2 -0.5
baz=38,SNR=9.0
PKM Peak Mountain 37.38 314 ⇑P P 09 23 56.4 -0.5
baz=38,SNR=5.9
L15A Malad City 37.39 329 ⇓P P 09 23 56.7 -0.2
baz=38,SNR=8.5
O12A Currie 37.40 325 ⇓P P 09 23 57.4 +0.4
baz=38,SNR=7.9
Q10A Clear Creek Ra 37.41 322 ⇓P P 09 23 58.4 +1.3
baz=38,SNR=27
PKME Peaks-Kenny Pk 37.44 22 eP P 09 23 57.0 -0.3
comp=Z,13nm,0.8s,mb4.8

I18A Diamond G Ranc 37.49 334 ⇑P P 09 23 57.6 -0.1
baz=38,SNR=7.2
P11A Circle Ranch, 37.50 324 ⇑P P 09 23 58.2 +0.3
baz=38
M14A Sheep Mountain 37.51 328 ⇑P P 09 23 57.7 -0.2
baz=38,SNR=8.8
AGMN Agassiz Nation 37.53 351 eP P 09 23 56.2 -1.8
comp=Z,18nm,0.9s,mb4.8
J17A Brown Place, J 37.63 332 ⇓P P 09 23 58.9 +0.1
baz=38,SNR=15
G21A Lodge Grass 37.69 337 ⇓P P 09 23 58.7 -0.6
baz=38
REDW Red Top Meadow 37.69 332 eP P 09 23 59.2 -0.2
comp=Z,20nm,0.9s,mb4.8
SMMC Simmler 37.72 315 ⇑P P 09 23 59.7 -0.1
baz=38
SNOW Snow King Moun 37.72 332 eP P 09 23 59.5 -0.1
comp=Z,13nm,0.7s,mb4.8
RCTC Rector, Farmer 37.73 317 ⇑P P 09 24 00.2 +0.3
baz=38
LOHW Long Hollow 37.77 333 eP P 09 23 59.7 -0.4
comp=Z,20nm,1.5s,mb4.6
TPAW Teton Pass 37.83 332 eP P 09 24 00.9 +0.2
comp=Z,21nm,1.1s,mb4.8
L14A Malta 37.84 329 ⇓P P 09 24 00.3 -0.5
baz=38,SNR=8.2
M13A Montello 37.84 327 ⇓P P 09 24 00.8 +0.1
baz=38
M13A Montello 37.84 327 eP P 09 24 00.6 -0.1
comp=Z,33nm,1.9s,mb4.7
RRI2 Red Ridge 37.89 332 eP P 09 24 00.9 -0.2
comp=Z,7.6nm,0.8s,mb4.5
MOOW Moose Ponds 37.94 333 eP P 09 24 00.9 -0.6
comp=Z,3.9nm,0.8s,mb4.2
K15A Arbon 37.97 330 ⇑P P 09 24 01.6 -0.2
baz=38,SNR=9.1
J16A Bone 37.97 331 ⇑P P 09 24 01.6 -0.2
baz=38
I17A Pilgrim Ck. 38.00 333 ⇑P P 09 24 02.9 +0.8
baz=38
IMW Indian Meadow 38.15 333 eP P 09 24 03.2 0.0
comp=Z,12nm,1.4s,mb4.4
IMW ePcP PcP 09 26 17.1 -0.5
FLWY Flagg Ranch 38.19 333 eP P 09 24 03.5 -0.1
comp=Z,19nm,1.3s,mb4.7
MLAC Mammoth Lakes 38.21 319 ⇑P P 09 24 04.5 +0.6
baz=38
NVAR Mina Array Bea 38.34 320 P P 09 24 05.7 +0.7
comp=Z,13nm,0.8s,mb4.7,baz=134,slow=7.0,SNR=120
NVAR PcP PcP 09 26 17.4 -0.9
comp=Z,2.7nm,0.7s,baz=137,slow=3.8,SNR=8.8
H17A Grant Village 38.38 334 ⇓P P 09 24 05.9 +0.7
baz=38
I16A Newdale 38.38 332 ⇓P P 09 24 05.5 +0.3
baz=38
RLMT Red Lodge 38.41 335 ⇑P P 09 24 04.1 -1.3
baz=39,SNR=7.5
RLMT Red Lodge 38.41 335 eP P 09 24 04.8 -0.6
comp=Z,14nm,1.1s,mb4.6
J15A Blackfoot 38.46 331 ⇑P P 09 24 05.5 -0.4
baz=39,SNR=7.0
F20A Billings 38.53 337 ⇑P P 09 24 05.5 -0.9
baz=39,SNR=10
YFT Old Faithful 38.54 333 eP P 09 24 07.8 +1.3
comp=Z,35nm,1.5s,mb4.9
LAO LASA Array 38.59 340 ⇑P P 09 24 06.3 -0.7
baz=39,SNR=5.4
LAO LASA Array 38.59 340 eP P 09 24 05.8 -1.2
comp=Z,24nm,1.4s,mb4.7
G18A Lazy EL Ranch, 38.69 335 ⇓P P 09 24 07.3 -0.5
baz=39,SNR=8.0
YMR Madison River 38.77 333 eP P 09 24 08.8 +0.4
comp=Z,17nm,1.0s,mb4.7
F19A Roth Farm, Mol 38.88 336 ⇑P P 09 24 09.0 -0.4
baz=39,SNR=13
H16A Russell Place, 38.92 333 ⇑P P 09 24 10.2 +0.4
baz=39
BMN Battle Mountai 38.93 323 eP P 09 24 10.5 +0.6
comp=Z,29nm,1.1s,mb4.9
J14A Carey 38.93 330 ⇑P P 09 24 09.9 +0.1
baz=39,SNR=5.5
WAKR Walker 39.10 319 eP P 09 24 12.3 +1.0
GCMT Greycliff 39.12 336 eP P 09 24 10.4 -0.9
comp=Z,4.5nm,0.9s,mb4.2
G17A Pierce Place, 39.19 334 ⇑P P 09 24 12.9 +1.0
baz=39,SNR=14
F18A Big Timber 39.23 336 ⇑P P 09 24 11.9 -0.5
baz=39,SNR=8.8
M10A I.L. Ranch, Tu 39.25 325 ⇓P P 09 24 12.9 +0.4
baz=39,SNR=6.9
J13A Cove Ranch, Pi 39.31 329 ⇓P P 09 24 12.9 -0.1
baz=39
I14A Mackay 39.34 331 ⇑P P 09 24 13.9 +0.6
baz=40
ULM Lac du Bonnet 39.44 352 P P 09 24 11.5 -2.5
comp=Z,9.1nm,0.7s,mb4.6,baz=169,slow=7.0,SNR=6.5
ULM LR LR 09 41 37.8
comp=Z,232nm,21.2s,MS4.0,baz=196,slow=38
CMB Columbia Colle 39.45 318 eP P 09 24 13.4 -0.8
comp=Z,30nm,2.1s,mb4.7
SAO San Andreas Ge 39.48 316 eP P 09 24 16.6 +2.0
comp=Z,55nm,2.5s,mb4.8
H15A Lima 39.48 332 ⇑P P 09 24 15.1 +0.6
baz=40
DGMT Dagmar 39.53 343 ⇓P P 09 24 14.1 -0.7
baz=40,SNR=12
DGMT Dagmar 39.53 343 eP P 09 24 14.2 -0.6
comp=Z,31nm,0.6s,mb5.2
HLID Hailey 39.55 329 ⇓P P 09 24 14.7 -0.3
baz=40,SNR=5.2
HLID Hailey 39.55 329 eP P 09 24 14.6 -0.4
comp=Z,21nm,2.1s,mb4.5
G16A Moss Hill, Enn 39.57 333 ⇓P P 09 24 15.9 +0.7
baz=40,SNR=11
F17A Fitzpatrick Pl 39.62 335 ⇓P P 09 24 15.5 0.0
baz=40,SNR=17
I13A Wildhorse Cree 39.66 330 ⇑P P 09 24 16.0 +0.1
baz=40,SNR=6.6
MCMT McKenzie Canyo 39.74 332 eP P 09 24 17.0 +0.5
comp=Z,7.5nm,1.0s,mb4.4
WCN Washoe City 39.77 320 ⇑P P 09 24 17.8 +0.9
baz=40
PAHR Pah Rah Range 39.78 321 eP P 09 24 18.0 +1.1
comp=Z,98nm,2.1s,mb5.2
H14A Leadore 39.82 331 ⇓P P 09 24 17.7 +0.5
baz=40,SNR=13
BOZ Bozeman (W) 39.83 334 ⇑P P 09 24 17.1 -0.2
baz=40,SNR=13
BOZ Bozeman (W) 39.83 334 eP P 09 24 16.8 -0.5
comp=Z,51nm,2.3s,mb4.8
G15A Dillon 39.83 333 ⇑P P 09 24 17.6 +0.3
baz=40,SNR=11
E18A Harlowton 39.85 336 ⇓P P 09 24 17.5 0.0
baz=40,SNR=11
F16A Kennard Place, 39.93 334 ⇓P P 09 24 17.9 -0.3
baz=40,SNR=12
DLMT Dillon 40.03 333 eP P 09 24 18.2 -0.7
comp=Z,13nm,1.2s,mb4.5
I12A Atlanta 40.08 329 ⇓P P 09 24 19.3 -0.1
baz=40,SNR=5.3
E17A Martinsdale 40.15 335 ⇑P P 09 24 19.6 -0.4
baz=40,SNR=7.9
MFID Camas Ranch 40.16 328 ⇑P P 09 24 21.1 +1.0
baz=40,SNR=5.6
H13A Challis 40.20 331 ⇓P P 09 24 20.4 -0.1
baz=40,SNR=11
LRM Limekiln Ridge 40.32 333 eP P 09 24 21.5 +0.1
D18A Linhart Farms, 40.33 337 ⇓P P 09 24 21.3 -0.1
baz=40,SNR=14
G14A Jackson 40.33 332 ⇑P P 09 24 21.1 -0.4
baz=40
F15A Butte 40.35 333 ⇓P P 09 24 21.9 +0.3
baz=40
H12A Diamond D Ranc 40.48 330 ⇑P P 09 24 22.3 -0.5
baz=41
G13A Cobalt 40.58 331 ⇓P P 09 24 23.1 -0.4
baz=41
D17A Six Diamond Ra 40.64 336 ⇑P P 09 24 23.7 -0.2
baz=41,SNR=24
F14A Wisdom 40.72 333 ⇓P P 09 24 24.6 -0.1
baz=41
HRY Holter Researc 40.75 335 eP P 09 24 24.9 0.0
E15A Deer Lodge 40.87 334 ⇑P P 09 24 25.9 -0.1
baz=41,SNR=9.2
D16A Dana Ranch, Ca 40.89 335 ⇑P P 09 24 25.9 -0.1
baz=41,SNR=18
EGMT Eagleton 40.99 338 ⇑P P 09 24 26.6 -0.3
baz=41,SNR=11

EGMT Eagleton 40.99 338 eP P 09 24 26.6 -0.3
comp=Z,34nm,1.3s,mb4.8
WVOR Wild Horse Val 41.03 325 eP P 09 24 26.6 -0.6
comp=Z,34nm,1.4s,mb4.8
C17A Wharram Farm, 41.06 336 ⇓P P 09 24 26.9 -0.5
baz=41
E14A Clinton 41.24 333 ⇓P P 09 24 28.6 -0.4
baz=41
D15A Lincoln 41.30 334 ⇓P P 09 24 29.2 -0.3
baz=42,SNR=8.8
B18A Beardsley Farm 41.31 338 ⇓P P 09 24 29.3 -0.2
baz=42,SNR=7.0
CHMT Chamberlain Mo 41.52 334 eP P 09 24 30.8 -0.4
J08A Circle Bar Ran 41.54 326 ⇑P P 09 24 30.8 -0.6
baz=42,SNR=14
F12A Elk City 41.56 331 ⇑P P 09 24 31.1 -0.4
baz=42,SNR=22
C16A Fuhringer Ranc 41.59 336 ⇑P P 09 24 31.1 -0.6
baz=42,SNR=5.4
B17A L&G Farms, Che 41.61 337 ⇑P P 09 24 31.6 -0.4
baz=42
MOD Modoc 41.66 323 eP P 09 24 32.0 -0.5
comp=Z,14nm,1.1s,mb4.5
MOD ePcP PcP 09 26 28.7 -0.2
MSO Missoula 41.76 333 ⇑P P 09 24 32.6 -0.6
baz=42,SNR=11
MSO Missoula 41.76 333 eP P 09 24 32.8 -0.4
comp=Z,7.5nm,1.1s,mb4.2
MSO ePcP PcP 09 26 28.9 -0.2
D14A Greenough 41.76 334 ⇑P P 09 24 32.2 -1.0
baz=42,SNR=5.4
A18A Metzger Ranch, 41.77 338 ⇑P P 09 24 32.6 -0.7
baz=42,SNR=14
SLMT Seeley Lake 41.88 334 eP P 09 24 33.2 -0.9
comp=Z,3.6nm,1.0s,mb4.0
C15A Salmond Ranch, 41.92 335 ⇑P P 09 24 34.3 -0.2
baz=42,SNR=13
A17A Triple J Farms 42.11 338 ⇓P P 09 24 35.2 -0.8
baz=42
D13A Huson 42.19 333 ⇑P P 09 24 36.3 -0.4
baz=42,SNR=6.5
B15A Bradely Ranch, 42.32 336 ⇓P P 09 24 36.9 -0.9
baz=42,SNR=6.6
C14A Swan Lake 42.39 334 ⇑P P 09 24 38.0 -0.3
baz=42
KCPM Cahto Peak 42.44 318 eP P 09 24 39.8 +0.9
comp=Z,16nm,1.4s,mb4.5
K05A Summer Lake 42.51 324 ⇑P P 09 24 39.2 -0.1
baz=43
D12A Red Ives Fores 42.56 332 ⇑P P 09 24 38.6 -1.2
baz=43
I07A Izee 42.58 326 ⇓P P 09 24 38.9 -1.0
baz=43,SNR=6.8
JTMT Jette 42.61 334 eP P 09 24 39.5 -0.6
comp=Z,3.5nm,0.9s,mb4.1
B14A Marquette Ranc 42.65 335 ⇑P P 09 24 40.1 -0.3
baz=43
F10A Beach Ranch, E 42.67 330 ⇓P P 09 24 39.6 -1.0
baz=43,SNR=6.1
C13A Hot Springs 42.68 333 ⇓P P 09 24 40.2 -0.5
baz=43
BSMT Bassoo Peak 42.91 333 eP P 09 24 42.0 -0.6
comp=Z,2.4nm,0.9s,mb3.9
A15A Johnson Ranch, 42.92 336 ⇓P P 09 24 42.2 -0.4
baz=43,SNR=31
YBH Yreka Blue Hor 43.01 321 eP P 09 24 41.9 -1.6
G08A Pilot Rock 43.08 328 ⇓P P 09 24 44.0 0.0
baz=43
C12B Naegeli Ranch, 43.10 333 ⇑P P 09 24 44.1 0.0
baz=43
B13A Whitefish 43.17 334 ⇑P P 09 24 44.6 0.0
baz=43
KHMM Horse Mountain 43.17 320 eP P 09 24 45.2 +0.3
comp=Z,2.2nm,0.7s,mb4.6
A14A Double T Ranch 43.20 335 ⇑P P 09 24 44.5 -0.3
baz=43,SNR=19
WALA Waterton Lakes 43.46 335 eP P 09 24 46.6 -0.4
comp=Z,0.3nm,1.0s
E09A Wood Farm, Sta 43.51 330 ⇑P P 09 24 47.7 +0.3
baz=44
A13A Flathead Natio 43.57 335 ⇓P P 09 24 47.6 -0.3
baz=44
B12A Libby 43.73 333 ⇑P P 09 24 49.2 +0.1
baz=44
E08A Dider Farm, El 43.95 329 ⇑P P 09 24 50.6 -0.3
baz=44
IRO Indian Ridge 44.07 324 P P 09 24 51.3 -0.7
HAWA Hanford 44.12 329 eP P 09 24 51.4 -0.9
comp=Z,6.9nm,1.0s,mb4.3
NEW Newport 44.26 332 ⇑P P 09 24 52.5 -1.0
baz=44
NEW Newport 44.26 332 eP P 09 24 52.4 -1.0
comp=Z,29nm,2.0s,mb4.7
D08A Wollman Farm, 44.27 330 ⇓P P 09 24 53.1 -0.4
baz=44
E07A Sunnyside 44.40 329 ⇑P P 09 24 54.6 0.0
baz=44
VFP Flag Point 44.44 326 P P 09 24 55.4 +0.5
H04A Detroit Lake 44.45 325 ⇓P P 09 24 54.0 -1.0
baz=45,SNR=7.9
C09A Chrisman Ranch 44.47 331 ⇓P P 09 24 55.0 -0.1
baz=45
HOOD Mount Hood Mea 44.55 326 eP P 09 24 56.4 +0.6
comp=Z,73nm,1.1s,mb5.4
FFC Flin Flon 44.78 348 eP P 09 24 56.5 -1.0
G04A Mulino 44.93 325 ⇑P P 09 24 58.2 -0.6
baz=45
NAC Naches 45.02 328 P P 09 24 59.6 +0.1
ASR Mount Adams--S 45.04 327 P P 09 25 00.0 +0.3
ETW Entiat 45.34 329 eP P 09 25 01.6 -0.4
F04A Amboy 45.35 326 ⇓P P 09 25 01.8 -0.3
baz=46
WPW White Pass 45.37 328 P P 09 25 02.5 +0.2
LON Longmire 45.54 327 eP P 09 25 03.0 -0.6
comp=Z,11nm,0.9s,mb4.8
D05A Enumclaw 45.92 328 ⇓P P 09 25 06.6 0.0
baz=46
F03A Seaside 45.98 326 ⇑P P 09 25 07.7 +0.6
baz=46
E03A Lebam 46.35 326 ⇑P P 09 25 09.6 -0.5
baz=46,SNR=6.9
RPW Rockport 46.50 329 eP P 09 25 09.9 -1.3
comp=Z,1.1nm,0.5s,mb4.4
B06A Marblemount 46.53 330 ⇓P P 09 25 10.7 -0.7
baz=47
JCW Jim Creek 46.54 329 eP P 09 25 10.4 -1.1
SCHQ Schefferville 46.54 17 P P 09 25 09.7 -1.7
comp=Z,8.5nm,0.5s,mb5.0,baz=216,slow=5.6,SNR=36
SCHQ PcP PcP 09 26 44.9 -0.4
comp=Z,8.0nm,0.8s,baz=235,slow=4.5,SNR=5.5
SCHQ LR LR 09 47 19.1
comp=Z,332nm,18.0s,MS4.3,baz=25,slow=39
EDM Edmonton 46.57 339 eP P 09 25 10.2 -1.5
NLWA Neilton Lookou 47.04 327 eP P 09 25 15.2 -0.2
comp=Z,36nm,1.3s,mb5.1
A05A Maple Falls 47.14 330 ⇓P P 09 25 15.6 -0.6
baz=47
OSR Olympics--Salm 47.16 327 P P 09 25 16.5 +0.2
FCC Fort Churchill 47.65 356 eP P 09 25 18.3 -1.7
PLCA Paso Flores 54.15 164 eP P 09 26 06.5 -2.6
comp=Z,16nm,0.8s,mb5.0
YKA Yellowknife Ar 54.66 345 P P 09 26 10.9 -1.6
YKA Yellowknife Ar 54.66 345 P P 09 26 10.9 -1.5
comp=Z,2.2nm,0.8s,mb4.8,baz=138,slow=7.6,SNR=15
TAOE Nuku Hiva Isla 55.70 251 eS S 09 33 53.7 -12
comp=Z,234nm,24.7s
TAOE eLR LR 09 41 59.6
comp=Z,479nm,28.2s
CRAG Craig 56.45 331 eP P 09 26 25.7 +0.2
comp=Z,6.2nm,0.6s,mb4.8
RKT Rikitea 57.38 233 eS S 09 34 23.0 -4.3
comp=Z,350nm,26.8s
RKT eLR LR 09 43 15.9
comp=Z,418nm,28.5s
HYT Haines Junctio 61.29 335 eP P 09 26 59.2 +0.2
PNL Peninsula 61.52 333 eP P 09 27 00.4 -0.2
comp=Z,8.7nm,0.9s,mb4.9
DAWY Dawson 63.73 337 eP P 09 27 14.1 -1.2
INK Inuvik 64.22 343 eP P 09 27 17.9 -0.6
comp=Z,19nm,0.8s,mb5.2
BMRM Bremner River 64.42 333 eP P 09 27 19.7 -0.2
comp=Z,52nm,1.6s,mb5.3
EGAK Eagle 64.76 338 eP P 09 27 20.9 -1.0
comp=Z,16nm,1.1s,mb5.0
MENT Mentasta 64.89 335 eP P 09 27 22.1 -0.8
PAX Paxson 65.63 335 eP P 09 27 26.7 -1.0
comp=Z,44nm,1.8s,mb5.2

SEW	**Seward**	**66.32**	**331**	*eP*		**P**	**09 27 30.9**	**-1.3**
	comp=Z,9.2nm,1.2s,mb4.7							
PMR	**Palmer**	**66.68**	**333**	*eP*		**P**	**09 27 33.7**	**-0.8**
	comp=Z,21nm,1.4s,mb5.0							
RC01	**Rabbit Creek A**	**66.78**	**332**	*eP*		**P**	**09 27 34.1**	**-1.0**
	comp=Z,24nm,1.2s,mb5.1							
ILAR	**Eielson Array**	**66.95**	**336**	P		**P**	**09 27 34.8**	**-1.2**
	comp=Z,16nm,1.0s,mb5.0,baz=124,slow=4.4,SNR=115							
KDAK	**Kodiak Island**	**67.16**	**328**	LR		LR	10 01 20.2	
	comp=Z,124nm,18.4s,MS4.2,baz=285,slow=40							
PPT	**Papeete**	**67.33**	**246**	*e*LR		LR	09 47 42.8	
	comp=Z,343nm,26.5s,baz=57							
PPT	**Papeete**	**67.33**	**246**	LR		LR	09 48 22.9	
	comp=Z,239nm,19.3s,MS4.4,baz=46,slow=28							
COLA	**College**	**67.37**	**336**	*eP*		**P**	**09 27 37.8**	**-0.9**
	comp=Z,12nm,1.2s,mb4.8							
MCK	**McKinley**	**67.37**	**335**	*eP*		**P**	**09 27 37.8**	**-0.9**
	comp=Z,18µm,1.2s							
TRF	**Thorofare Moun**	**67.83**	**335**	*eP*		**P**	**09 27 40.8**	**-0.9**
	comp=Z,68nm,1.6s,mb5.4							
SUMG	**Summit**	**67.85**	**14**	*eP*		**P**	**09 27 40.2**	**-1.5**
	comp=Z,8.2nm,0.9s,mb4.8							
RSO	**Redoubt South**	**67.99**	**331**	*eP*		**P**	**09 27 41.8**	**-1.0**
PPLA	**Purkeypile**	**68.47**	**334**	*eP*		**P**	**09 27 44.8**	**-0.9**
	comp=Z,51nm,1.5s,mb5.3							
COLD	**Coldfoot**	**69.15**	**338**	*eP*		**P**	**09 27 50.0**	**+0.1**
	comp=Z,34nm,1.2s,mb5.2							
TTA	**Tatalina**	**70.16**	**333**	*eP*		**P**	**09 27 54.6**	**-1.6**
	comp=Z,15nm,1.4s,mb4.7							
ESDC	**Sonseca Array**	**78.25**	**52**	P		**P**	**09 28 43.2**	**-0.6**
	comp=Z,0.9nm,0.5s,mb4.0,baz=284,slow=5.7,SNR=9.4							
ESDC				LR		LR	09 57 54.9	
	comp=Z,104nm,18.8s,MS4.2,baz=345,slow=32							
TIC	**Toumodi**	**81.75**	**85**	*eP*		**P**	**09 29 00.7**	**-2.5**
	comp=Z,166nm,1.8s,mb5.7							
LIC	**Lamto**	**81.82**	**85**	*eP*		**P**	**09 29 01.9**	**-1.7**
	comp=Z,73nm,1.4s,mb5.4							
DBIC	**Dimbokro**	**81.90**	**85**	P		**P**	**09 29 03.1**	**-0.9**
	comp=Z,3.7nm,0.9s,mb4.3,baz=280,slow=6.4,SNR=3.7							
DBIC				LR		LR	10 05 08.9	
	comp=Z,60nm,19.2s,MS4.0,baz=312,slow=35							
KIC	**Kosan Boka**	**82.07**	**85**	*eP*		**P**	**09 29 03.1**	**-1.8**
	comp=Z,221nm,2.0s,mb5.7							
NOA	**NORSAR Array B**	**84.61**	**29**	P		**P**	**09 29 16.5**	**-0.6**
	comp=Z,2.3nm,0.7s,mb4.4,baz=285,slow=4.9,SNR=10							
NOA				LR		LR	10 04 56.1	
	comp=Z,63nm,19.2s,MS4.0,baz=250,slow=34							
AFI	**Afiamalu**	**86.86**	**255**	LR		LR	09 57 49.7	
	comp=Z,267nm,19.0s,MS4.7,baz=315,slow=28							
TORD	**Torodi Ar. Bea**	**87.08**	**77**	P		**P**	**09 29 29.4**	**-0.9**
	comp=Z,0.5nm,0.5s,mb4.0,baz=294,slow=5.0,SNR=12							
TORD				LR		LR	10 03 51.8	
	comp=Z,56nm,19.2s,MS4.0,baz=0.0,slow=32							
ARCES	**ARCESS Array B**	**87.45**	**19**	P		**P**	**09 29 30.4**	**-0.6**
	comp=Z,1.2nm,0.4s,mb4.5,baz=278,slow=3.7,SNR=20							
CLL	**Collm**	**88.01**	**38**	*eP*		**P**	**09 29 34.0**	**0.0**
CLL				*es*P		sP	09 29 50.0	+1.4
CLL				LV			10 04 00.0	
	comp=Z,100nm,18.7s							
TAM	**Tamanrasset**	**88.80**	**67**	*eP*		**P**	**09 29 38.1**	**-0.2**
	comp=Z,7.6nm,0.9s,mb5.0							
KEST	**Kesra**	**89.29**	**54**	P		**P**	**09 29 40.9**	**+0.5**
	comp=Z,1.6nm,1.0s,mb4.3,baz=342,slow=5.8,SNR=3.9							
KEST				LR		LR	10 04 38.2	
	comp=Z,33nm,19.5s,MS3.8,baz=282,slow=32							
FINES	**FINESS Array B**	**91.22**	**26**	P		**P**	**09 29 48.2**	**-0.6**
	comp=Z,1.8nm,0.7s,mb4.5,baz=294,slow=1.4,SNR=3.3							
AKASG	**Malin Array Be**	**97.73**	**35**	LR		LR	10 10 32.6	
	comp=Z,149nm,19.7s,MS4.5,baz=290,slow=33							
DZM	**Mont Dzumac**	**108.57**	**250**	*e*LR		LR	10 06 57.0	
	comp=Z,105nm,23.0s							
KURK	**Kurchatov**	**117.18**	**10**	PKP		PKPdf	09 35 26.9	-2.0
	comp=Z,0.3nm,0.5s,baz=354,slow=2.7,SNR=4.5							
CN2	**Changchun**	**117.38**	**333**	*e*PKP		PKPdf	09 35 24.8	-4.7
CN2				PP		PP	09 36 39.9	-0.2
SONM	**Songino Array**	**119.83**	**349**	PKP		PKPdf	09 35 32.2	-2.0
	comp=Z,1.0nm,0.7s,baz=236,slow=0.5,SNR=6.0							
MKAR	**Makanchi Array**	**121.55**	**8**	PKP		PKPdf	09 35 34.6	-2.9
	comp=Z,0.4nm,0.7s,baz=346,slow=2.9,SNR=3.0							
BJI	**Beijing**	**124.31**	**338**	PKP		PKPdf	09 35 40.9	-2.1
WMQ	**Urumqi**	**125.05**	**4**	*e*PKP		PKPdf	09 35 43.1	-1.2
WMQ				LR		LR		
	comp=N,140nm,23.8s							
WMQ				LR		LR		
	comp=E,140nm,29.0s							
WMQ				LR		LR		
	comp=Z,94nm,24.8s,MS4.4							
HHC	**Hu-ho-hao-te**	**125.14**	**342**	*e*PKP		PKPdf	09 35 43.3	-1.2
HHC				sPKP			09 35 57.4	
HHC				PP		PP	09 37 36.3	+3.6
HHC				PKS			09 39 18.3	
HHC				SKS		SKSdf	09 42 49.8	-4.3
HHC				SKKS		SKKSac	09 44 24.4	-5.5
GTA	**Gaotai**	**129.10**	**352**	*e*PKP		PKPdf	09 35 51.3	-0.9
NJ2	**Nanjing**	**129.92**	**330**	*e*PKP		PKPdf	09 35 53.6	-0.3
STKA	**Stephens Creek**	**130.11**	**238**	PKP		PKPdf	09 35 51.4	-2.8
STKA	**Stephens Creek**	**130.11**	**238**	PKP		PKPdf	09 35 51.4	-2.8
	comp=Z,3nm,0.8s,baz=321,slow=23,SNR=4.0							
LZH	**Lanzhou**	**131.64**	**347**	*e*PKP		PKPdf	09 35 56.5	-0.6
CD2	**Chengdu**	**136.62**	**345**	PKP		PKPdf	09 36 05.6	-1.0
ASAR	**Alice Springs**	**138.43**	**247**	PKP		PKPdf	09 36 07.5	-2.5
ASAR	**Alice Springs**	**138.43**	**247**	PKhKP		PKPpre	09 36 02.9	
	comp=Z,2.7nm,0.9s,baz=99,slow=2.6,SNR=7.4							
ASAR				PKP		PKPdf	09 36 07.5	-2.5
	comp=Z,3.8nm,1.1s,baz=106,slow=1.8,SNR=13							
WRA	**Warramunga Arr**	**138.53**	**253**	PKP		PKPdf	09 36 06.9	-3.4
	comp=Z,3.4nm,0.8s,baz=94,slow=2.3,SNR=17							
GYA	**Guiyang**	**139.94**	**340**	*e*Pdif		Pdif	09 33 23.8	-2.6
GYA				PKP		PKPdf	09 36 09.6	-3.2
GYA				sPKP			09 36 38.0	
GYA				PP		PP	09 39 10.3	+2.5
GYA				AMB		AMB		
	comp=Z,90nm,7.8s							
KMI	**Kunming**	**142.40**	**344**	PKP		PKPdf	09 36 17.5	+0.3
CHTO	**Chiang Mai**	**149.38**	**347**	*e*PKPdf		PKPdf	09 36 28.0	-1.3
CHTO				*e*PKPbc		PKPbc	09 36 31.7	-1.9
CM31	**Chiang Mai Arr**	**149.73**	**347**	*e*PKPbc		PKPbc	09 36 33.5	-1.0
CMAR	**Chiang Mai Arr**	**149.73**	**347**	PKP		PKPdf	09 36 28.0	-1.9
	comp=Z,6.7nm,0.9s,baz=295,slow=1.4,SNR=6.5							
CMAR				PKPbc		PKPbc	09 36 33.1	-1.4
	comp=Z,9.5nm,0.8s,baz=352,slow=3.9,SNR=36							

KRSC 18 09:32:26.5±0.1, 55°68N×164°75E, h12km±11km, ML3.7,
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.84**	**124**	*e*P	Pg	09 32 42.0	-0.8
BKI				*i* S	Sg	09 32 52.9	-0.9
KBTR	**Krutoberegovo**	**1.21**	**297**	*e*P	Pn	09 32 46.9	-2.3
KBTR				*i* S	Sb	09 33 01.9	-2.9
MKZ	**Mys Kozlova**	**2.07**	**238**	*e*P	Pn	09 33 00.9	-0.1
MKZ				*i* S	Sn	09 33 25.4	-1.2
KLY	**Klyuchi**	**2.39**	**287**	*e*P	Pn	09 33 03.8	-1.6
KLY				*i* S	Sn	09 33 32.0	-2.5
BZMR	**Bezymyannaya**	**2.42**	**278**	*e*P	Pn	09 33 07.5	+1.7
BZMR				*i* S	Sn	09 33 36.4	+1.1
KPT	**Kopyto**	**2.57**	**278**	*e*P	Pn	09 33 08.9	+1.0
KPT				*i* S	Sn	09 33 40.9	+1.9
KOZ	**Kozyrevsk**	**2.77**	**280**	*e*P	Pn	09 33 12.5	+1.8
KOZ				*i* S	Sn	09 33 47.5	+3.5
SRDR	**Sredinnyy**	**2.90**	**285**	*e*P	Pn	09 33 13.5	+1.1
SRDR				*i* S	Sn	09 33 48.2	+1.1
AVH	**Avacha**	**4.26**	**238**	*e*P	Pn	09 33 33.5	+2.4
AVH				*i* S	Sn	09 34 21.8	+1.1
GNL	**Ganaly**	**4.42**	**246**	*e*P	Pn	09 33 35.5	+2.2
PET	**Petropavlovsk**	**4.45**	**236**	*e*P	Pn	09 33 35.1	+1.4
PET				*i* S	Sn	09 34 25.7	+0.4

*ISCJB **18** 09:32:31.4±0.6, 39°90N±0°04×32°36E±0°04, h8km±7km,*
Error ellipse: s-maj=7.0km s-min=5.3km az=19.2
*DDA **18** 09:32:32.0, 39°93N×32°36E, h10km±3km, Md2.8*
*ISK **18** 09:32:31.2, 39°92N×32°38E, h16km, MD3.0*
*CSEM **18** 09:32:31.6±0.1, 39°91N×32°42E, h10km, MD3.0, Error*
ellipse: s-maj=4.7km s-min=2.7km az=166.0

ISC 18 09:32:32.0±0.6, 39°90N±0°04×32°37E±0°04, h10km±6km,
n26, σ1º12/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOD	**Lodumlu**	**0.30**	**92**	*e*PG	**Pg**	**09 32 37.5**	**-0.5**
LOD				*e*SG	**Sg**	**09 32 43.3**	**+1.2**
LOD	**Lodumlu**	**0.30**	**92**	*e*Pg	**Pg**	**09 32 37.5**	**-0.5**
SGKT	**Sivrigoynuk**	**0.71**	**341**	*i* P	**Pg**	**09 32 44.0**	**-1.8**
SGKT				*i* S	**Sg**	**09 32 55.7**	**+0.5**
SGKT	**Sivrigoynuk**	**0.71**	**341**	*i* P	**Pg**	**09 32 44.0**	**-1.8**
SGKT				*i* S	**Sg**	**09 32 55.7**	**+0.6**
SVRH	**Sivrihisar-ESK**	**0.79**	**236**	*e*PG	**Pg**	**09 32 47.7**	**+0.4**
SVRH	**Sivrihisar-ESK**	**0.79**	**236**	*e*Pg	**Pg**	**09 32 47.7**	**+0.5**
ELDT	**Eldivan**	**1.00**	**54**	*i* P	**Pg**	**09 32 51.0**	**-0.2**
ELDT	**Eldivan**	**1.00**	**54**	*i* P	**Pg**	**09 32 51.0**	**-0.3**
MDU	**Mudurnu**	**1.05**	**303**	*e*PG	**Pg**	**09 32 50.8**	**-1.4**
MDU				*e*SG	**Sg**	**09 33 07.5**	**+1.7**
MDU	**Mudurnu**	**1.05**	**303**	*e*Pg	**Pg**	**09 32 50.8**	**-1.3**
MDU				*e*Sg	**Sg**	**09 33 07.5**	**+1.7**
KIZT	**Kizilcal**	**1.08**	**201**	*e*PN	**Pg**	**09 32 52.3**	**-0.5**
KIZT	**Kizilcal**	**1.08**	**201**	*e*Pn	**Pg**	**09 32 52.3**	**-0.5**
ESKT	**Eskisehir**	**1.23**	**253**	*i* P	**Pn**	**09 32 55.5**	**+0.3**
ESKT				*i* S	**Sb**	**09 33 15.8**	**+4.6**
SEYT	**Eskypehyr**	**1.23**	**253**	*i* P	**Pn**	**09 32 55.5**	**+0.3**
SEYT				*i* S	**Sb**	**09 33 15.8**	**+4.6**
SAFT	**Safranbolu**	**1.36**	**10**	*e*PN	**Pn**	**09 32 55.8**	**-1.2**
SAFT	**Safranbolu**	**1.36**	**10**	*e*Pn	**Pn**	**09 32 55.8**	**-1.2**
CDAG	**Cicekdag**	**1.57**	**99**	*i* P	**Pn**	**09 33 01.6**	**+1.8**
CDAG				*i* S	**Sn**	**09 33 24.9**	**+4.7**
CDAG	**Cicekdag**	**1.57**	**99**	*i* P	**Pn**	**09 33 01.6**	**+1.8**
CORM	**Corum**	**1.76**	**80**	*e*PN	**Pn**	**09 33 01.4**	**-1.1**
CORM	**Corum**	**1.76**	**80**	*e*Pn	**Pn**	**09 33 01.4**	**-1.1**
BALT	**Daday**	**1.81**	**25**	*i* P	**Pn**	**09 33 04.9**	**+1.8**
BALT	**Daday**	**1.81**	**25**	*i* P	**Pn**	**09 33 04.9**	**+1.8**
KONT	**Konya--Tatoy**	**1.95**	**180**	*e*PN	**Pn**	**09 33 05.1**	**0.0**
KONT	**Konya--Tatoy**	**1.95**	**180**	*e*Pn	**Pn**	**09 33 05.1**	**0.0**
YOZ	**Yozgat**	**2.29**	**96**	*e*PN	**Pn**	**09 33 08.8**	**-1.0**
YOZ	**Yozgat**	**2.29**	**96**	*e*Pn	**Pn**	**09 33 08.8**	**-0.9**

*ISCJB **18** 09:36:28.7±0.6, 36°99N±0°03×29°21E±0°03, h0km±7km,*
Error ellipse: s-maj=5.2km s-min=4.6km az=164.9
*CSEM **18** 09:36:28.4±0.3, 36°98N×29°26E, h8km, MD3.0, Error*
ellipse: s-maj=6.7km s-min=4.9km az=2.0
*ISK **18** 09:36:28.7, 37°09N×29°21E, h10km, MD2.8*
*DDA **18** 09:36:28.2, 36°97N×29°25E, h7km±5km, Md3.0*

ISC 18 09:36:28.9±0.6, 36°97N±0°04×29°24E±0°04, h7km±6km,
n29, σ1º06/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.27**	**48**	*e*PG	**Pg**	**09 36 33.6**	**-0.7**
GLHS				*e*SG	**Sg**	**09 36 38.9**	**+0.9**
GLHS	**Glhisar (BURDU**	**0.27**	**48**	*e*Pg	**Pg**	**09 36 33.6**	**-0.7**
GLHS				*e*Sg	**Sg**	**09 36 38.9**	**+0.9**
GOLH	**Golhisar**	**0.37**	**44**	*i* P	**Pg**	**09 36 34.4**	**-1.6**
GOLH				*i* S	**Sg**	**09 36 40.8**	**-0.1**
GOLH	**Golhisar**	**0.37**	**44**	*i* P	**Pg**	**09 36 34.4**	**-1.6**
GOLH				*i* S	**Sg**	**09 36 40.8**	**-0.1**
TURN	**Turunc**	**0.52**	**259**	*i* P	**Pg**	**09 36 43.8**	**+4.8**
TURN				*i* S	**Sg**	**09 36 55.7**	**+10**
ELL	**Elmali**	**0.58**	**113**	*e*PG	**Pg**	**09 36 41.2**	**+1.1**
ELL	**Elmali**	**0.58**	**113**	*e*Pg	**Pg**	**09 36 41.2**	**+1.1**
DNZL	**Cakiroluk**	**0.73**	**348**	*i* P	**Pg**	**09 36 41.9**	**-1.1**
DNZL				*i* S	**Sg**	**09 36 53.4**	**+0.9**
DNZL	**Cakiroluk**	**0.73**	**348**	*i* P	**Pg**	**09 36 41.9**	**-1.1**
DNZL				*i* S	**Sg**	**09 36 53.4**	**+0.9**
YER	**Yerkesik**	**0.79**	**282**	*e*PG	**Pg**	**09 36 43.9**	**-0.1**
YER				*e*SG	**Sg**	**09 36 55.0**	**+0.8**
YER	**Yerkesik**	**0.79**	**282**	*e*Pg	**Pg**	**09 36 43.9**	**-0.1**
YER				*e*Sg	**Sg**	**09 36 55.0**	**+0.8**
AKAS	**Kas**	**0.79**	**158**	*i* P	**Pg**	**09 36 43.5**	**-0.6**
AKAS				*i* S	**Sg**	**09 36 58.6**	**+4.1**
AKAS	**Kas**	**0.79**	**158**	*i* P	**Pg**	**09 36 43.5**	**-0.7**
DENT	**Denizli**	**0.80**	**348**	*e*PG	**Pg**	**09 36 42.0**	**-2.2**
DENT	**Denizli**	**0.80**	**348**	*e*Pg	**Pg**	**09 36 42.1**	**-2.1**
KORT	**Korkueli**	**0.89**	**88**	*i* P	**Pg**	**09 36 46.0**	**0.0**
KORT				*i* S	**Sg**	**09 37 01.3**	**+3.9**
KORT	**Korkueli**	**0.89**	**88**	*i* P	**Pg**	**09 36 46.0**	**+0.1**
MLSB	**Milas**	**1.22**	**286**	*e*PN	**Pn**	**09 36 50.7**	**-1.6**
MLSB				*e*SN	**Sn**	**09 37 07.2**	**-1.7**
MLSB	**Milas**	**1.22**	**286**	*e*Pn	**Pn**	**09 36 50.7**	**-1.5**
MLSB				*e*Sn	**Sn**	**09 37 07.2**	**-1.7**
AYDN	**Tasoluk**	**1.28**	**303**	*i* P	**Pn**	**09 36 53.0**	**-0.2**
AYDN				*i* S	**Sg**	**09 37 11.3**	**+1.0**
AYDN	**Tasoluk**	**1.28**	**303**	*i* P	**Pn**	**09 36 53.0**	**-0.2**
AYDN				*i* S	**Sg**	**09 37 11.3**	**+1.1**
DAT	**Datca**	**1.36**	**260**	*e*PN	**Pn**	**09 36 53.8**	**-0.4**
DAT				*e*SN	**Sn**	**09 37 13.3**	**+0.9**
DAT	**Datca**	**1.36**	**260**	*e*Pn	**Pn**	**09 36 53.8**	**-0.4**
DAT				*e*Sn	**Sn**	**09 37 13.3**	**+0.9**
KHAL	**Karahalli**	**1.41**	**8**	*i* P	**Pn**	**09 36 56.1**	**+1.2**
KHAL				*i* S	**Sb**	**09 37 14.4**	**+0.8**
KHAL	**Karahalli**	**1.41**	**8**	*i* P	**Pn**	**09 36 56.1**	**+1.2**
KHAL				*i* S	**Sb**	**09 37 14.4**	**+0.8**
BDRM	**Kayabasi**	**1.44**	**274**	*i* P	**Pn**	**09 36 56.6**	**+1.3**
BDRM				*i* S	**Sb**	**09 37 15.3**	**+0.7**
BDRM	**Kayabasi**	**1.44**	**274**	*i* P	**Pn**	**09 36 56.6**	**+1.2**
BDRM				*i* S	**Sb**	**09 37 15.3**	**+0.7**
BODT	**Bodrum**	**1.55**	**274**	*e*PN	**Pn**	**09 36 55.9**	**-0.9**
BODT	**Bodrum**	**1.55**	**274**	*e*Pn	**Pn**	**09 36 55.9**	**-0.9**

*ISK **18** 09:36:30.7, 39°44N×28°08E, h12km, MD2.8*
*ISCJB **18** 09:36:31.2±0.5, 39°45N±0°03×28°12E±0°04, h13km±5km,*
Error ellipse: s-maj=4.9km s-min=4.2km az=26.6
*DDA **18** 09:36:31.8, 39°44N×28°15E, h14km±5km, Md3.0*
*CSEM **18** 09:36:31.4±0.2, 39°45N×28°14E, h15km, MD3.0, Error*
ellipse: s-maj=4.5km s-min=3.6km az=98.0

ISC 18 09:36:31.8±0.5, 39°44N±0°03×28°13E±0°04, h16km±4km,
n34, σ1º08/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DURS	**Dursunbey**	**0.31**	**59**	*i* P	**Pg**	**09 36 37.5**	**-0.8**
DURS				*i* S	**Sg**	**09 36 44.7**	**+1.8**
DURS	**Dursunbey**	**0.31**	**59**	*i* P	**Pg**	**09 36 37.5**	**-0.9**
DURS				*i* S	**Sg**	**09 36 44.7**	**+1.9**
BALY	**Balya**	**0.49**	**307**	*i* P	**Pg**	**09 36 41.4**	**-0.2**
BALY				*i* S	**Sg**	**09 36 50.0**	**+1.8**
BALY	**Balya**	**0.49**	**307**	*i* P	**Pg**	**09 36 41.4**	**-0.2**
BALY				*i* S	**Sg**	**09 36 50.0**	**+1.8**
AKHS	**Akhisar**	**0.61**	**203**	*i* P	**Pg**	**09 36 44.4**	**+0.6**
AKHS				*i* S	**Sg**	**09 36 53.2**	**+1.3**
AKHS	**Akhisar**	**0.61**	**203**	*i* P	**Pg**	**09 36 44.4**	**+0.6**
AKHS				*i* S	**Sg**	**09 36 53.2**	**+1.2**
AKS	**Akhisar**	**0.61**	**203**	*e*PG	**Pg**	**09 36 43.0**	**-0.8**
AKS	**Akhisar**	**0.61**	**203**	*e*Pg	**Pg**	**09 36 43.0**	**-0.8**
GONE	**Gonen-Balikesi**	**0.69**	**331**	*e*PG	**Pg**	**09 36 44.6**	**-0.7**
GONE				*e*SG	**Sg**	**09 36 54.4**	**-0.2**
GONE	**Gonen-Balikesi**	**0.69**	**331**	*e*Pg	**Pg**	**09 36 44.6**	**-0.7**
GONE				*e*Sg	**Sg**	**09 36 54.4**	**-0.1**
KCTX	**Karacabey (Bur**	**0.84**	**12**	*e*PG	**Pg**	**09 36 47.6**	**-0.5**
KCTX				*e*SG	**Sg**	**09 37 00.3**	**+1.1**
KCTX	**Karacabey (Bur**	**0.84**	**12**	*e*Pg	**Pg**	**09 36 47.6**	**-0.5**
KCTX				*e*Sg	**Sg**	**09 37 00.3**	**+1.1**
BNT	**Bandirma**	**0.93**	**350**	*e*PG	**Pg**	**09 36 48.2**	**-1.6**
BNT	**Bandirma**	**0.93**	**350**	*e*Pg	**Pg**	**09 36 48.2**	**-1.5**
KULA	**Kula-Manisa**	**1.02**	**156**	*e*PG	**Pg**	**09 36 51.3**	**-0.1**
KULA	**Kula-Manisa**	**1.02**	**156**	*e*Pg	**Pg**	**09 36 51.3**	**-0.1**
ULDT	**Uludag**	**1.05**	**48**	*i* P	**Pg**	**09 36 50.6**	**-1.4**
ULDT				*i* S	**Sg**	**09 37 04.6**	**-1.1**
ULDT	**Uludag**	**1.05**	**48**	*i* P	**Pg**	**09 36 50.6**	**-1.4**
ULDT				*i* S	**Sg**	**09 37 04.6**	**-1.1**
MDNY	**Mudanya-Bursa**	**1.09**	**32**	*e*PN	**Pg**	**09 36 51.9**	**-1.1**
MDNY				*e*SN	**Sg**	**09 37 08.4**	**+1.2**
MDNY	**Mudanya-Bursa**	**1.09**	**32**	*e*Pn	**Pg**	**09 36 51.9**	**-1.0**
MDNY				*e*Sn	**Sg**	**09 37 08.4**	**+1.2**
GDZ	**Gediz**	**1.11**	**108**	*i* P	**Pg**	**09 36 51.9**	**-1.4**
GDZ				*i* S	**Sg**	**09 37 11.0**	**+3.3**
GDZ	**Gediz**	**1.11**	**108**	*i* P	**Pg**	**09 36 51.8**	**-1.4**
ARMT	**Armutlu**	**1.26**	**27**	*e*PN	**Pn**	**09 36 54.4**	**-0.3**
ARMT				*e*SN	**Sn**	**09 37 12.9**	**+1.7**
ARMT	**Armutlu**	**1.26**	**27**	*e*Pn	**Pn**	**09 36 54.4**	**-0.2**
ARMT				*e*Sn	**Sn**	**09 37 12.9**	**+1.7**
RKY	**Sarkoy-Tekirda**	**1.44**	**330**	*e*PN	**Pn**	**09 36 57.0**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.44**	**330**	*e*Pn	**Pn**	**09 36 57.0**	**-0.2**
EZN	**Ezine**	**1.44**	**286**	*e*PN	**Pn**	**09 36 56.5**	**-0.7**
EZN	**Ezine**	**1.44**	**286**	*e*Pn	**Pn**	**09 36 56.5**	**-0.7**
YLV	**Yalova**	**1.48**	**40**	*e*PN	**Pn**	**09 36 58.6**	**+1.0**
YLV	**Yalova**	**1.48**	**40**	*e*Pn	**Pn**	**09 36 58.6**	**+1.0**
MFT	**Murefte**	**1.49**	**335**	*e*PN	**Pn**	**09 36 57.1**	**-0.8**
MFT	**Murefte**	**1.49**	**335**	*e*Pn	**Pn**	**09 36 57.1**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.59**	**307**	*e*PN	**Pn**	**09 36 59.7**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.59**	**307**	*e*Pn	**Pn**	**09 36 59.7**	**+0.5**

*MAN **18** 09:38:25.5°26N×127°30E, h14km, mb4.9, ML3.8, MS3.9*
*ISCJB **18** 09:38:32.5±1.2, 5°73N±0°07×126°4E±0°2, h65km±9km,*
mb4.0/12, Error ellipse: s-maj=25.9km s-min=10.5km
az=169.0
*NEIC **18** 09:38:33.0±2.0, 5°77N×126°57E, h54km±17km, mb3.9/1,*
Error ellipse: s-maj=34.3km s-min=9.3km az=75.0
*IDC **18** 09:38:33.4±2.7, 5°73N×126°45E, h58km±23km, mb3.7/11,*
mb1 3.9/11, mb1mx3.7/22, mbtmp3.7/11, MS3.4/3,
Ms1 3.4/3, ms1mx2.8/33, Error ellipse: s-maj=58.8km
s-min=12.1km az=70.0

ISC 18 09:38:32.6±1.3, 5.77N±0.07×126.7E±0.1, h50km±11km,
n28, σ1º01/30, mb4.0/12, MS3.3/2, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.23**	**342**	*e*P	**Pn**	**09 38 54.6**	**+1.1**
MATI				*e*S	**Sn**	**09 39 15.9**	**+6.9**
DAV	**Davao City (W)**	**1.67**	**321**	P	**Pn**	**09 38 58.8**	**-0.7**
	95nm,0.3s,baz=97,slow=1.2,SNR=17						
DAV				S	**Sn**	**09 39 23.6**	**+3.8**
	122nm,0.3s,baz=62,slow=19,SNR=8.1						
DAV				LR	LR	09 39 49.6	
	comp=Z,2µm,18.2s,baz=223,slow=48						
GSPH	**General Santos**	**1.72**	**281**	*e*P	**Pn**	**09 38 53.3**	**-6.8**
GSPH				*i* S	**Sn**	**09 39 12.7**	**-8.2**
DMPH	**Davao City--Mi**	**1.73**	**319**	*e*P	**Pn**	**09 38 59.4**	**-0.8**
DMPH				*e*S	**Sn**	**09 39 25.6**	**+4.5**
KCP	**Kidapawan**	**1.98**	**309**	*e*P	**Pn**	**09 39 01.8**	**-1.9**
KCP				*i* S	**Sn**	**09 39 29.4**	**+2.1**
BUKP	**Musuan**	**2.62**	**323**	*e*P	**Pn**	**09 39 12.4**	**-0.1**
BUKP				*e*S	**Sn**	**09 39 50.0**	**+6.8**
CGP	**Cagayan de Oro**	**3.30**	**324**	*i*P	**Pn**	**09 39 21.6**	**-0.1**
PAGZ	**Pagadian**	**3.84**	**303**	*e*P	**Pn**	**09 39 29.2**	**-0.1**
KAPI	**Kappang**	**12.73**	**213**	*e*Pn	**Pn**	**09 41 31.1**	**+0.1**
GUMO	**Guam**	**19.56**	**65**	LR	LR	09 49 14.9	
	comp=Z,84nm,20.2s,baz=94,slow=32						
FITZ	**Fitzroy Crossi**	**23.74**	**182**	P	**P**	**09 43 41.1**	**+0.7**
	4.4nm,0.6s,mb4.0,baz=43,slow=12,SNR=9.4						
WRA	**Warramunga Arr**	**26.65**	**164**	P	**P**	**09 44 08.0**	**+1.3**
WRA	**Warramunga Arr**	**26.65**	**164**	P	**P**	**09 44 08.0**	**+1.3**
	3.9nm,0.6s,mb4.2,baz=344,slow=10.0,SNR=22						
**

MWZ **Matawai** 18.62 186 P P 09 57 11.7 -2.1
MWZ **Matawai** 18.62 186 PN P 09 57 11.7 -2.1
CNGZ **Carnagh Statio** 18.71 184 PN P 09 57 14.0 -0.6
NMHZ **Naumai** 19.45 187 PN P 09 57 20.9 -0.5
BKZ **Black Stump Fm** 19.56 188 P P 09 57 20.5 -1.8
BKZ **Black Stump Fm** 19.56 188 PN P 09 57 20.5 -1.8
VRZ **Vera Road** 19.80 192 P P 09 57 26.1 +1.6
VRZ **Vera Road** 19.80 192 PN P 09 57 26.1 +1.6
BHHZ **Black Hill Sta** 19.93 189 PN P 09 57 24.0 -1.8
PXZ **Pawanui** 20.37 187 PN P 09 57 27.8 -1.8
TSZ **Takapari Road** 20.51 189 P P 09 57 28.8 -2.1
TSZ **Takapari Road** 20.51 189 PN P 09 57 28.8 -2.1
BFZ **Birch Farm** 21.08 188 *e*P P 09 57 34.5 -1.6
BFZ **Birch Farm** 21.08 188 *e*PN P 09 57 34.5 -1.7
MRZ **Mangatainoka R** 21.15 189 P P 09 57 34.1 -2.7
MRZ **Mangatainoka R** 21.15 189 PN P 09 57 34.1 -2.7
MRZ SN S 10 00 55.7 -1.4
OGWZ **Otaki Gorge** 21.37 190 *e*PN P 09 57 36.9 -1.8
KIW **Kapiti Island** 21.46 190 PN P 09 57 36.7 -2.8
CAW **Cannon Point** 21.67 190 P P 09 57 40.6 -0.8
CAW **Cannon Point** 21.67 190 PN P 09 57 40.6 -0.9
SNZO **South Karori** 21.93 191 *e*P P 09 57 43.3 -0.4
NNZ **Nelson** 22.09 193 P P 09 57 44.7 -0.6
NNZ **Nelson** 22.09 193 PN P 09 57 44.7 -0.5
NNZ SN S 10 01 11.1 -0.9
TUWZ **Tuamarina** 22.18 192 PN P 09 57 44.6 -1.4
KHZ **Kahutara** 23.21 192 P P 09 57 53.8 -1.4
KHZ **Kahutara** 23.21 192 PN P 09 57 53.8 -1.4
LTZ **Lake Taylor** 23.83 194 P P 09 57 59.4 -1.3
LTZ **Lake Taylor** 23.83 194 PN P 09 57 59.4 -1.3
WVZ **Waitaha Valley** 24.49 196 P P 09 58 06.2 -0.4
WVZ **Waitaha Valley** 24.49 196 PN P 09 58 06.2 -0.4
RPZ **Rata Peaks** 25.01 195 *e*P P 09 58 11.3 +0.2
RPZ **Rata Peaks** 25.01 195 P P 09 58 11.3 +0.2
comp=Z,59nm,0.6s,mb5.4,baz=329,slow=1.4,SNR=32
FOZ **Fox Glacier** 25.23 198 P P 09 58 12.5 -0.6
FOZ **Fox Glacier** 25.23 198 PN P 09 58 12.5 -0.6
LBZ **Lake Benmore** 25.86 196 P P 09 58 17.9 -0.7
LBZ **Lake Benmore** 25.86 196 PN P 09 58 17.9 -0.7
JCZ **Jackson Bay** 25.97 199 P P 09 58 20.0 +0.4
JCZ **Jackson Bay** 25.97 199 PN P 09 58 20.0 +0.4
ODZ **Otahua Downs** 26.36 195 *e*P P 09 58 22.5 -0.5
WKZ **Wanaka** 26.58 197 P P 09 58 24.7 -0.3
WKZ **Wanaka** 26.58 197 PN P 09 58 24.7 -0.3
MSZ **Milford Sound** 26.76 199 P P 09 58 28.1 +1.5
MSZ **Milford Sound** 26.76 199 PN P 09 58 28.1 +1.5
EAZ **Earnscleugh** 26.87 197 P P 09 58 27.4 -0.2
EAZ **Earnscleugh** 26.87 197 PN P 09 58 27.4 -0.2
EIDS **Eidsvold** 27.17 253 *e*P P 09 58 31.8 +1.2
comp=Z,175nm,0.8s,mb5.7
MLZ **Mavora Lakes** 27.30 198 P P 09 58 32.3 +1.0
MLZ **Mavora Lakes** 27.30 198 PN P 09 58 32.3 +1.0
TUZ **Tuapeka** 27.46 196 *e*P P 09 58 33.2 +0.5
TUZ **Tuapeka** 27.46 196 *e*PN P 09 58 33.2 +0.5
ARMA **Armidale** 27.65 242 ⇑*i*P P 09 58 37.1 +2.4
ARMA **Armidale** 27.65 242 *e*P P 09 58 36.6 +2.0
comp=Z,171nm,0.8s,mb5.7
WHZ **Wether Hill Ro** 27.86 198 ⇑P P 09 58 36.7 +0.5
WHZ **Wether Hill Ro** 27.86 198 ⇑PN P 09 58 36.7 +0.5
APZ **The Paps** 28.71 197 P P 09 58 44.1 +0.5
APZ **The Paps** 28.71 197 PN P 09 58 44.1 +0.5
RIV **Riverview** 29.12 235 *e*P P 09 59 06.2 +1.7
CNB **Canberra Magne** 31.05 234 ⇑*i*P P 09 59 06.1 +2.1
CAN **Canberra** 31.32 234 *e*P P 09 59 07.4 +1.0
comp=Z,87nm,0.8s,mb5.3
CAN pmax pmax
comp=Z,87nm,0.8s,mb5.3
CTA **Charters Tower** 31.62 264 ⇑*i*P P 09 59 10.5 +1.3
comp=Z,114nm,0.3s,mb5.9
CTA **Charters Tower** 31.62 264 P P 09 59 10.5 +1.3
comp=Z,147nm,0.4s,mb5.9,baz=88,slow=10,SNR=310
CTAO **Charters Tower** 31.62 264 *e*P P 09 59 10.5 +1.3
comp=Z,357nm,1.2s,mb5.8
CTAO **Charters Tower** 31.62 264 *e*P P 09 59 10.5 +1.3
CTAO pmax pmax
comp=Z,357nm,1.2s,mb5.8
CTAO **Charters Tower** 31.62 264 P P 09 59 09.7 +0.5
comp=Z,4µmcomp=Z,280nm,1.1s,mb5.7
PMG **Port Moresby** 33.27 283 *e*P P 09 59 24.2 +1.0
comp=Z,51nm,0.8s,mb5.1
PMG **Port Moresby** 33.27 283 ⇑*i*P P 09 59 24.3 +1.0
PMG pmax pmax
comp=Z,85nm,1.2s
PMG **Port Moresby** 33.27 283 P P 09 59 24.8 +1.5
comp=Z,74nm,1.0s,mb5.2
TOO **Toolangi** 34.77 232 ⇑*i*P P 09 59 37.1 +1.5
COEN **Coen** 35.58 274 *e*P P 09 59 43.1 +0.5
comp=Z,336nm,0.6s,mb6.0
COEN **Coen** 35.58 274 P P 09 59 43.7 +1.1
comp=Z,240nm,0.7s,mb5.9
MOO **Moorlands** 35.66 223 *e*P P 09 59 43.3 +0.5
STKA **Stephens Creek** 36.36 243 ⇑*i*P P 09 59 50.5 +1.7
comp=Z,97nm,0.9s,mb5.3
STKA **Stephens Creek** 36.36 243 *e*P P 09 59 50.4 +1.6
comp=Z,40nm,1.0s,mb4.9
STKA **Stephens Creek** 36.36 243 P P 09 59 50.5 +1.7
comp=Z,121nm,0.8s,mb5.5,baz=91,slow=9.5,SNR=187
JOHN **Johnston Islan** 37.73 17 *e*P P 09 59 58.5 -1.6
WAKE **Wake Island** 40.93 341 *e*P P 10 00 24.9 -1.1
comp=Z,285nm,0.8s,mb5.8
WRA **Warramunga Arr** 42.77 262 P P 10 00 40.1 -0.4
comp=Z,35nm,0.7s,mb5.0,baz=98,slow=5.9,SNR=374
WRA PcP PcP 10 02 20.6 +0.4
comp=Z,7.0nm,0.8s,baz=92,slow=3.8,SNR=4.7
WRA ScP ScP 10 05 23.1 +2.0
comp=Z,9.9nm,0.9s,baz=89,slow=4.2,SNR=9.6
WRA S S 10 06 24.2 -2.3
comp=Z,8.7nm,0.9s,baz=97,slow=14,SNR=6.1
WRA **Warramunga Arr** 42.77 262 P P 10 00 40.1 -0.5
WRA pP 10 02 20.6 +4.9
WRA S S 10 06 24.2 -2.3
ASAR **Alice Springs** 42.78 256 P P 10 00 41.3 +0.6
comp=Z,215nm,0.6s,mb5.8,baz=90,slow=8.6,SNR=2844
ASAR ScP ScP 10 05 24.3 +3.2
comp=Z,11nm,0.8s,baz=102,slow=4.8,SNR=14
ASAR S S 10 06 25.0 -1.6
comp=Z,6.8nm,0.7s,baz=92,slow=17,SNR=24
KAKA **Kakadu** 46.00 271 *e*P P 10 01 05.4 -0.2
comp=Z,17nm,0.7s,mb4.7
KAKA **Kakadu** 46.00 271 *e*P P 10 01 05.4 -0.3
comp=Z,41nm,0.6s,mb5.1
KIP **Kipapa** 46.28 29 *e*P P 10 01 05.8 -1.8
comp=Z,852nm,2.1s,mb5.9
KIP **Kipapa** 46.28 29 *e*P P 10 01 05.8 -1.8
KIP pmax pmax
comp=Z,852nm,2.1s,mb5.9
FORT **Forrest** 47.79 246 ⇑*i*P P 10 01 19.1 +0.2
comp=Z,234nm,0.6s,mb5.9
FORT **Forrest** 47.79 246 *e*P P 10 01 19.3 +0.3
comp=Z,265nm,0.7s,mb5.9
GUMO **Guam** 47.84 311 *e*P P 10 01 19.2 -0.2
comp=Z,355nm,0.9s,mb5.9
GUMO **Guam** 47.84 311 P P 10 01 19.3 -0.1
comp=Z,280nm,0.8s,mb5.9,baz=164,slow=6.9,SNR=41
GUMO **Guam** 47.84 311 *e*P P 10 01 19.2 -0.2
GUMO pmax pmax
comp=Z,355nm,0.9s,mb5.9
GUMO **Guam** 47.84 311 P P 10 01 19.3 -0.1
comp=Z,4µmcomp=Z,510nm,1.0s,mb6.0
KNA **Kununurra** 48.73 266 P P 10 01 27.5 +1.4
comp=Z,115nm,0.9s,mb5.4
FITZ **Fitzroy Crossi** 51.18 262 ⇑*i*P P 10 01 44.7 +0.6
comp=Z,39nm,0.7s,mb4.8
FITZ **Fitzroy Crossi** 51.18 262 *e*P P 10 01 44.6 +0.5
FITZ **Fitzroy Crossi** 51.18 262 P P 10 01 44.7 +0.6
comp=Z,19nm,0.6s,mb4.6,baz=126,slow=4.2,SNR=34
FITZ **Fitzroy Crossi** 51.18 262 P P 10 01 45.0 +0.9
comp=Z,95nm,1.3s,mb5.0
MBWA **Marble Bar** 56.10 257 *e*P P 10 02 18.7 -0.2
comp=Z,64nm,0.8s,mb4.9
MBWA **Marble Bar** 56.10 257 P P 10 02 19.3 +0.4
comp=Z,113nm,0.8s,mb5.1
KLBR **Kellerberrin** 56.59 245 ⇑*i*P P 10 02 22.2 0.0
comp=Z,142nm,0.6s,mb5.4
NWAO **Narrogin (SRO)** 56.95 243 *e*P P 10 02 25.0 +0.4
comp=Z,100nm,1.2s,mb4.9
NWAO **Narrogin (SRO)** 56.95 243 P P 10 02 25.0 +0.4
comp=Z,47nm,0.6s,mb4.9,baz=112,slow=5.7,SNR=48
NWAO **Narrogin (SRO)** 56.95 243 *e*P P 10 02 25.0 +0.4
NWAO pmax pmax
comp=Z,101nm,1.2s
SBA **Scott Base** 58.48 183 *e*P P 10 02 37.1 +3.0
comp=Z,82nm,1.0s,mb4.9
SBA **Scott Base** 58.48 183 *e*P P 10 02 37.2 +3.0
SBA pmax pmax
comp=Z,82nm,1.0s,mb4.9
CBIJ **Chichi jima** 59.22 321 P P 10 02 39.5 -0.5
comp=Z,108nm,0.8s,mb5.1,baz=205,slow=3.3,SNR=4.2
CASY **Casey** 63.79 205 ⇑*i*P P 10 03 10.2 +1.0
CASY **Casey** 63.79 205 *e*P P 10 03 10.1 +0.8
comp=Z,113nm,0.9s,mb5.3
JHJ **Hachijo jima 2** 65.07 323 P P 10 03 17.6 -0.3
comp=Z,148nm,0.4s,mb5.8,baz=168,slow=6.0,SNR=29
MYLDM **Lahad Datu** 65.25 286 P P 10 03 20.4 +1.0
MYLDM **Lahad Datu** 65.25 286 P P 10 03 23.5 +4.1
comp=Z,47nm,1.1s,mb4.8
TSM **Tawau** 65.46 284 P P 10 03 21.4 +0.7
SDKM **Sandakan** 66.62 286 P P 10 03 28.9 +1.0
TGY **Tagaytay City** 67.08 295 P P 10 03 31.0 +0.3
comp=Z,143nm,0.4s,mb5.9,baz=170,slow=16,SNR=4.1
KDM **Kudat** 67.48 287 P P 10 03 34.4 +1.2
KKM **Kota Kinabalu** 67.68 285 *e*P P 10 03 34.8 +0.3
comp=Z,34nm,0.6s,mb5.0
KKM **Kota Kinabalu** 67.68 285 P P 10 03 34.9 +0.4
comp=Z,642nmcomp=Z,55nm,0.8s,mb5.1
MJAR **Matsushiro Arr** 68.47 325 P P 10 03 38.1 -0.6
comp=Z,63nm,0.6s,mb5.3,baz=160,slow=5.9,SNR=142
MAJO **Matsushiro** 68.48 325 *e*P P 10 03 38.5 -0.3
comp=Z,41nm,0.5s,mb5.2
MAJO **Matsushiro** 68.48 325 *e*P P 10 03 38.5 -0.3
MAJO pmax pmax
comp=Z,41nm,0.5s,mb5.2
MAT **Matsushiro** 68.48 325 P P 10 03 38.3 -0.5
SBUM **Sibu** 69.95 280 P P 10 03 49.0 +0.8
comp=Z,22nm,0.9s,mb4.7
ERM **Erimo** 70.24 332 P P 10 03 49.8 +0.6
comp=Z,346nm,0.7s,mb6.0,SNR=9.8
ERM **Erimo** 70.24 332 *e*P P 10 03 49.0 -0.2
QSPA **South Pole Qui** 70.29 180 P P 10 03 50.7 +1.7
comp=Z,98nm,1.0s,mb5.3,baz=22,slow=1.4,SNR=282
MIR **Mirnyy** 70.82 205 ⇑*i*P P 10 03 53.0 +0.6
MIR pmax pmax
comp=Z,115nm,1.4s,mb5.2
TWG **Pinlang** 71.34 304 *e*P P 10 03 54.2 -1.9
comp=Z,32nm,0.6s,mb5.0
YULB **Yu-li** 71.47 304 *e*P P 10 03 56.0 -0.9
comp=Z,15nm,0.8s,mb4.6
NACB **Ninganchiao** 71.65 305 *e*P P 10 03 57.2 -0.8
comp=Z,88nm,1.0s,mb5.2
ATKA **Atka Island** 71.85 4 *e*P P 10 03 56.1 -2.3
comp=Z,241nm,0.9s,mb5.6
TPUB **Ta-pu** 71.94 304 *e*P P 10 03 58.3 -1.3
comp=Z,140nm,0.8s,mb5.4
SSLB **Suanglung** 71.94 304 *e*P P 10 03 58.2 -1.5
comp=Z,47nm,0.8s,mb5.0
YHNB **Yeheng** 72.08 305 *e*P P 10 03 59.8 -0.7
comp=Z,146nm,1.4s,mb5.2
TATO **Taipei** 72.16 306 *e*P P 10 04 00.8 -0.2
SMY **Shemya** 72.37 356 *e*P P 10 03 59.7 -1.7
comp=Z,218nm,1.0s,mb5.5
SMY **Shemya** 72.37 356 *e*P P 10 03 59.7 -1.7
SMY pmax pmax
comp=Z,219nm,1.0s,mb5.5
SKR **Severo-Kuril's** 73.22 344 *e*P P 10 04 05.8 -0.6
SKR *e* 10 04 14.0
SKR pmax pmax
comp=Z,80nm,0.6s,mb5.3
UNV **Unalaska Valle** 74.24 8 *e*P P 10 04 10.2 -1.9
comp=Z,99nm,0.7s,mb5.3
QZH **Quanzhou** 74.38 304 ⇑*i*P P 10 04 13.3 -0.3
QZH pmax pmax
comp=Z,120nm,0.8s,mb5.4
YSS **Yuzh-Sakhalins** 74.38 335 *e*P P 10 04 13.3 +0.2
YSS **Yuzh-Sakhalins** 74.38 335 *i*P P 10 04 13.3 +0.2
YSS pmax pmax
comp=Z,170nm,0.8s,mb5.5
KASI **Kota Agung** 74.45 270 P P 10 04 14.4 +0.1
comp=Z,105nm,1.0s,mb5.2
AKUT **Akutan** 74.62 9 *e*P P 10 04 12.1 -2.2
PET **Petropavlovsk** 74.80 347 *e*P P 10 04 14.4 -0.9
comp=Z,55nm,0.5s,mb5.2
PET **Petropavlovsk** 74.80 347 *e*P P 10 04 14.0 -1.3
PET pmax pmax
comp=Z,104nm,0.7s,mb5.4
KSRS **Korea Array** 75.05 320 P P 10 04 17.7 +0.6
comp=Z,24nm,0.8s,mb4.7,baz=129,slow=6.3,SNR=60
MDSI **Maura Dua** 75.08 271 P P 10 04 16.8 -1.0
SDPT **Sand Point** 76.66 11 *e*P P 10 04 24.0 -1.5
NJ2 **Nanjing** 77.91 311 *e*P P 10 04 33.6 +0.7
NJ2 pmax pmax
comp=Z,100nm,1.0s,mb5.1
CHGN **Chignik** 77.95 12 *e*P P 10 04 30.8 -1.7
BSC **Santa Cruz Isl** 78.53 48 ⇓P P 10 04 36.5 +0.2
baz=79
SAC **San Andreas** 78.70 43 *e*P P 10 04 37.4 +0.4
SBC **Santa Barbara** 78.72 47 ⇓P P 10 04 37.5 +0.3
baz=79
MCCM **Marconi Confer** 78.73 43 *e*P P 10 04 36.6 -0.6
MCCM *e*PcP PcP 10 04 43.1 -0.7
SCI **San Clemente I** 78.75 49 ⇓P P 10 04 37.3 -0.1
baz=79
QIZ **Qiongzhong** 78.77 295 P P 10 04 39.0 +1.2
QIZ S S 10 13 57.4 +4.6
MDJ **Mudanjiang** 78.81 326 P P 10 04 38.3 +0.9
MDJ pmax pmax
comp=Z,82nm,1.0s,mb5.0
MDJ pmax pmax
comp=Z,120nm,5.2s
MDJ **Mudanjiang** 78.81 326 *e*P P 10 04 37.9 +0.4
comp=Z,87nm,1.1s,mb5.0
HABR **Khabarovsk** 78.86 331 *de*P P 10 04 36.7 -0.9
HABR 10 04 42.5
HABR *e**PP pP 10 06 23.2 -7.0
HABR *e**SP sP 10 07 15.5 -8.7
HABR 10 07 41.9
HABR *e*PPP 10 09 34.4
HABR S S 10 13 53.1 +0.6
HABR 10 14 10.5
HABR *e*SSS 10 22 41.4
HABR pmax pmax
comp=Z,268nm,1.7s,mb5.3
HABR pmax pmax
comp=E,113nm,2.5s
HABR pmax pmax
comp=N,75nm,2.5s
HABR MLR MLR
comp=Z,38nm,18.0s
SAO **San Andreas Ge** 78.86 44 *e*P P 10 04 37.9 0.0
comp=Z,41nm,0.8s,mb4.8
SAO **San Andreas Ge** 78.86 44 *e*P P 10 04 37.9 0.0
SAO pmax pmax
comp=Z,41nm,0.8s,mb4.8
PKM **Peak Mountain** 78.90 47 ⇑P P 10 04 38.7 +0.6
baz=79,SNR=10
BLG **Laguna Peak** 78.99 48 ⇓P P 10 04 38.5 -0.2
baz=79
SMMC **Simmler** 79.01 46 ⇑P P 10 04 39.2 +0.5
baz=79,SNR=13
CIS **Catalina Islan** 79.08 49 ⇓P P 10 04 38.8 -0.3
baz=79
HOPS **Hopland** 79.11 42 *e*P P 10 04 39.4 +0.2
comp=Z,20nm,0.7s,mb4.5
KCPM **Cahto Peak** 79.21 41 *e*P P 10 04 40.5 +0.8
FMP **Fort Macarthur** 79.32 48 ⇓P P 10 04 40.4 0.0
baz=79
OSI **Osito Adit** 79.50 47 ⇑P P 10 04 41.4 +0.1
baz=80
DECC **Green Verdugo** 79.58 48 ⇓P P 10 04 41.6 -0.2
baz=80
PASC **Pasadena Art C** 79.64 48 *e*P P 10 04 41.9 -0.2
comp=Z,46nm,0.6s,mb5.0
ARVC **Arvin** 79.71 47 ⇓P P 10 04 42.3 -0.1
baz=80,SNR=9.9
109C **Camp Elliot, M** 79.73 50 ⇓P P 10 04 42.3 -0.3
baz=80,SNR=5.6
MWC **Mount Wilson** 79.76 48 *e*P P 10 04 42.6 -0.1
comp=Z,14nm,0.6s,mb4.5
MWC **Mount Wilson** 79.76 48 *e*P P 10 04 42.6 -0.1
MWC pmax pmax
comp=Z,14nm,0.6s,mb4.5
KHMM **Horse Mountain** 79.83 40 *e*P P 10 04 43.7 +0.7
OHAK **Old Harbor** 79.91 14 *e*P P 10 04 41.4 -1.5
VES **Vestal, Richgr** 79.92 46 ⇑P P 10 04 43.2 -0.4
baz=80,SNR=24
BAR **Barrett** 79.93 50 *e*P P 10 04 43.3 -0.4
comp=Z,8.8nm,0.8s,mb4.1
MURC **Murrieta** 80.03 49 ⇑P P 10 04 44.2 0.0
baz=80,SNR=8.9
BFSC **Mount Baldy Ra** 80.05 48 ⇓P P 10 04 43.9 -0.3
baz=80,SNR=8.8
RCTC **Rector, Farmer** 80.07 46 ⇑P P 10 04 43.8 -0.5
baz=80
EDW2 **Edwards Air Fo** 80.16 48 ⇓P P 10 04 44.8 0.0
baz=80,SNR=37
MONP **Monument Peak** 80.22 50 ⇓P P 10 04 45.4 +0.3
baz=80,SNR=34
ISA **Isabella** 80.24 47 ⇓P P 10 04 45.3 +0.1
baz=80,SNR=50
DVTC **Desert V Tower** 80.33 50 ⇑P P 10 04 45.9 +0.2
baz=80,SNR=8.6
SNY **Shenyang** 80.40 321 ⇓P P 10 04 45.9 0.0
SNY pmax pmax
comp=Z,35nm,0.6s,mb4.9
WHN **Wuhan** 80.44 307 P P 10 04 47.0 +0.6
CN2 **Changchun** 80.54 323 *e*P P 10 04 46.8 +0.3
CN2 PP PP 10 08 00.6 +0.8
CN2 *e*S S 10 14 12.9 +2.9
CN2 pmax pmax
comp=Z,20nm,1.0s,mb4.5
CN2 pmax pmax
comp=Z,200nm,4.0s
PFO **Pinyon Flat Ob** 80.57 49 ⇓P P 10 04 46.9 -0.1
baz=81,SNR=7.6
BBRC **Big Bear Solar** 80.58 49 ⇓P P 10 04 47.1 +0.1
baz=81
KDAK **Kodiak Island** 80.58 15 P P 10 04 45.8 -0.6
comp=Z,295nm,0.9s,mb5.7,SNR=7.6
KDAK **Kodiak Island** 80.58 15 P P 10 04 45.5 -0.9
comp=Z,29nm,0.8s,mb4.8,baz=234,slow=3.4,SNR=20
KDAK **Kodiak Island** 80.58 15 *i*P P 10 04 45.5 -0.9
LRMC **Laurel Mountai** 80.68 47 ⇑P P 10 04 47.6 +0.1
baz=81,SNR=6.0
SWSC **Sam W. Stewart** 80.70 50 ⇓P P 10 04 47.7 +0.1
baz=81,SNR=7.6
RRX **Edison Barstow** 80.84 48 ⇑P P 10 04 48.1 -0.3
baz=81
KLR **Kul'dur** 80.92 330 *e*P P 10 04 45.0 -3.4
KLR pmax pmax
comp=E,20nm,1.2s
KLR pmax pmax
comp=Z,60nm,1.2s,mb4.9
CWC **Cottonwood Cre** 80.93 46 ⇓P P 10 04 49.1 +0.3
baz=81,SNR=29
MLAC **Mammoth Lakes** 81.07 45 ⇓P P 10 04 49.9 +0.4
baz=81,SNR=16
BELC **Belle Mtn. Jos** 81.09 49 ⇑P P 10 04 49.9 +0.2
baz=81,SNR=17
MPMC **Manual Prospec** 81.13 47 ⇑P P 10 04 50.2 +0.4
baz=81,SNR=59
TIN **Tinemaha** 81.16 46 ⇑P P 10 04 50.2 +0.3
baz=81,SNR=14
GSC **Goldstone** 81.20 48 ⇑P P 10 04 50.1 -0.1
baz=81,SNR=23
HEC **Hector,Ludlow** 81.29 48 ⇓P P 10 04 50.4 -0.2
baz=81,SNR=23
BC3 **Big Chuckawall** 81.31 50 ⇑P P 10 04 51.1 +0.3
baz=81,SNR=6.6
112A **Yuma** 81.38 51 ⇓P P 10 04 51.6 +0.4
baz=82,SNR=8.4
WCN **Washoe City** 81.39 43 ⇑P P 10 04 51.5 +0.4
baz=82,SNR=27
GLA **Glamis** 81.46 50 ⇑P P 10 04 51.9 +0.3
baz=82,SNR=19
MAW **Mawson** 81.58 200 ⇑*i*P P 10 04 52.6 +1.0
comp=Z,15nm,0.6s,mb4.6
MAW **Mawson** 81.58 200 P P 10 04 52.7 +1.1
comp=Z,19nm,0.7s,mb4.7,baz=125,slow=6.7,SNR=62
GRAC **Grapevine Rang** 81.71 46 ⇓P P 10 04 53.1 +0.3
baz=82,SNR=22
GMRC **Granite Mounta** 81.73 49 ⇓P P 10 04 52.9 0.0
baz=82,SNR=22
FURC **Furnace Creek,** 81.78 47 ⇓P P 10 04 52.8 -0.3
baz=82,SNR=16
IRM **Iron Mountain** 81.78 49 ⇓P P 10 04 53.6 +0.4
baz=82,SNR=18
NVAR **Mina Array Bea** 81.86 44 P P 10 04 53.7 +0.2
NVAR PKKPbc PKKPbc 10 23 22.1 +0.9
NVAR **Mina Array Bea** 81.86 44 P P 10 04 53.7 +0.2
comp=Z,28nm,0.8s,mb4.8,baz=224,slow=8.1,SNR=232
NVAR PKKPbc PKKPbc 10 23 22.1 +0.9
comp=Z,0.5nm,0.7s,baz=84,slow=4.5,SNR=5.7
SHOC **Shoshone** 81.88 47 ⇑P P 10 04 53.3 -0.3
baz=82,SNR=11
TUQ **Turquoise Moun** 81.89 48 ⇓P P 10 04 53.8 +0.1
baz=82,SNR=15
113A **Mohawk Valley,** 82.09 51 ⇓P P 10 04 55.1 +0.3
baz=82,SNR=18
U10A **Ash Meadows, A** 82.11 47 ⇓P P 10 04 55.1 +0.3
baz=82,SNR=25
MPOR **Mary's Peak** 82.14 37 P P 10 04 55.3 +0.5
Z13A **Yuma Proving G** 82.38 51 ⇑P P 10 04 56.5 +0.3
baz=82,SNR=22
214A **Organ Pipe Nat** 82.40 52 ⇓P P 10 04 56.7 +0.3
baz=82,SNR=19
V11A **Goodsprings** 82.44 48 ⇓P P 10 04 56.6 +0.1
baz=82,SNR=26
NEE2 **Needles Airpor** 82.47 49 ⇑P P 10 04 56.9 +0.3
baz=83,SNR=8.1
PSI **Prapat** 82.47 276 P P 10 04 56.7 -0.5
comp=Z,26nm,0.8s,mb4.7,baz=114,slow=3.5,SNR=19
W12A **Cal Nev Ari** 82.56 48 ⇑P P 10 04 57.6 +0.4
baz=83,SNR=5.8
PDMCI **Parker Dam,Lak** 82.58 50 ⇓P P 10 04 57.4 +0.1
baz=83,SNR=22
K05A **Summer Lake** 82.64 40 ⇓P P 10 04 57.9 +0.6
baz=83,SNR=69
S10A **Tonopah Range,** 82.72 46 ⇓P P 10 04 58.1 +0.2
baz=83,SNR=155
114A **Black Gap (USA** 82.73 52 ⇑P P 10 04 58.3 +0.3
baz=83,SNR=19
U11A **Corn Creek** 82.77 47 ⇑P P 10 04 58.5 +0.3
baz=83,SNR=13
V12A **Nelson** 82.79 48 ⇓P P 10 04 58.4 +0.2
baz=83,SNR=27
Z14A **Wintersburg** 82.98 51 ⇑P P 10 04 59.6 +0.3
baz=83,SNR=22
F03A **Seaside** 83.00 36 ⇓P P 10 04 59.1 0.0
baz=83,SNR=6.2
H04A **Detroit Lake** 83.03 38 ⇓P P 10 04 58.8 -0.4
baz=83,SNR=36
R10A **Warm Springs** 83.11 45 ⇓P P 10 05 00.3 +0.4
baz=83,SNR=147
S11A **Rachel** 83.15 46 ⇓P P 10 05 00.1 +0.1
baz=83,SNR=44
W13A **Hualapai Mount** 83.15 49 ⇓P P 10 05 00.5 +0.4
baz=83,SNR=33
G04A **Mulino** 83.17 37 ⇓P P 10 04 59.7 -0.3
baz=83,SNR=19
Y14A **Wickenburg** 83.22 50 ⇑P P 10 05 00.6 +0.2
baz=83,SNR=28
T11A **Corn Creek, Al** 83.30 47 ⇓P P 10 05 01.2 +0.4
baz=83,SNR=101
Q10A **Clear Creek Ra** 83.33 45 ⇑P P 10 05 01.0 +0.1
baz=83,SNR=40
U12A **Valley of Fire** 83.36 48 ⇑P P 10 05 01.6 +0.5
baz=84,SNR=15
E03A **Lebam** 83.38 35 ⇑P P 10 05 01.0 +0.1
baz=84,SNR=28
T12A **Moapa** 83.39 47 ⇑P P 10 05 01.4 +0.2
baz=84,SNR=7.8
SEW **Seward** 83.40 15 *e*P P 10 04 59.0 -1.7
comp=Z,59nm,0.9s,mb5.1
216A **Three Points,** 83.44 53 ⇑P P 10 05 02.4 +0.8
baz=84,SNR=24
V13A **Grand Canyon W** 83.46 48 ⇓P P 10 05 01.8 +0.2
baz=84,SNR=48
116A **Eloy** 83.52 52 ⇓P P 10 05 02.5 +0.5
baz=84,SNR=27
Z15A **Gila River Ind** 83.52 51 ⇑P P 10 05 02.3 +0.3
baz=84,SNR=11
X14A **Yava** 83.56 50 ⇑P P 10 05 02.7 +0.6
baz=84,SNR=38
MID **Middleton Isla** 83.61 17 *e*P P 10 05 00.5 -1.2
comp=Z,181nm,1.4s,mb5.4
MID **Middleton Isla** 83.61 17 *e*P P 10 05 00.5 -1.3
MID pmax pmax
comp=Z,181nm,1.4s,mb5.4
R11A **Troy Canyon, C** 83.62 46 ⇑P P 10 05 02.2 -0.2
baz=84,SNR=39
F04A **Amboy** 83.64 36 ⇓P P 10 05 02.1 -0.1
baz=84,SNR=18
BMN **Battle Mountai** 83.64 43 *e*P P 10 05 02.4 0.0
comp=Z,115nm,1.4s,mb5.2
BMN **Battle Mountai** 83.64 43 *e*P P 10 05 02.4 0.0
BMN pmax pmax
comp=Z,115nm,1.4s,mb5.2
Y15A **Casa Rosa Ranc** 83.71 51 ⇓P P 10 05 03.3 +0.4

baz=84,SNR=50
NLWA **Neilton Lookou** 83.73 35 *e*P P 10 05 02.5 -0.2
comp=Z,59nm,1.0s,mb5.0
S12A **Delamar Landin** 83.74 47 ⇑P P 10 05 03.7 +0.7
baz=84,SNR=86
U13A **Pakoon Wash** 83.75 48 ⇓P P 10 05 03.6 +0.5
baz=84,SNR=76
W14A **Seligman** 83.78 49 ⇓P P 10 05 04.0 +0.7
baz=84,SNR=38
217A **Green Valley** 83.81 53 ⇑P P 10 05 04.2 +0.7
baz=84,SNR=44
VIPM **Ingram Point** 83.83 38 P P 10 05 03.3 +0.1
Q11A **Duckwater** 83.83 45 ⇑P P 10 05 03.5 +0.1
baz=84,SNR=65
WVOR **Wild Horse Val** 83.84 41 *e*P P 10 05 03.3 0.0
comp=Z,54nm,1.0s,mb5.0
WVOR **Wild Horse Val** 83.84 41 *e*P P 10 05 03.3 -0.1
WVOR pmax pmax
comp=Z,54nm,1.0s,mb5.0
V14A **Boquillas Ranc** 83.97 49 ⇓P P 10 05 04.7 +0.6
baz=84,SNR=30
BJT **Baijiatuau** 84.00 316 *e*P P 10 05 04.2 +0.1
comp=Z,41nm,0.8s,mb5.0
BJT **Baijiatuau** 84.00 316 *e*P P 10 05 04.2 0.0
BJT pmax pmax
comp=Z,41nm,0.8s
BJI **Beijing** 84.00 316 P P 10 05 04.6 +0.4
BJI PP PP 10 08 28.0 0.0
BJI S S 10 14 50.1 +5.4
BJI SS SS 10 20 32.5 +3.5
BJI pmax pmax
comp=Z,68nm,0.8s,mb5.2
BJI pmax pmax
comp=Z,200nm,3.5s
ENH **Enshi** 84.01 305 *e*P P 10 05 05.0 +0.5
comp=Z,148nm,1.4s,mb5.3
X15A **Humboldt** 84.04 50 ⇓P P 10 05 05.0 +0.5
baz=84,SNR=47
TUC **Tucson** 84.08 53 *e*P P 10 05 05.1 +0.3
comp=Z,36nm,1.0s,mb4.9
TUC **Tucson** 84.08 53 *e*P P 10 05 05.1 +0.3
TUC pmax pmax
comp=Z,36nm,1.0s,mb4.9
Z16A **Peralta Trail,** 84.09 52 ⇓P P 10 05 05.2 +0.4
baz=84,SNR=25
T13A **Saint George** 84.09 47 ⇑P P 10 05 05.0 +0.3
baz=84,SNR=39
P11A **Circle Ranch,** 84.14 44 ⇓P P 10 05 05.0 +0.2
baz=84,SNR=9.6
RC01 **Rabbit Creek A** 84.20 14 *e*P P 10 05 03.1 -1.5
comp=Z,77nm,1.0s,mb5.2
117A **Oracle** 84.24 53 ⇑P P 10 05 06.2 +0.6
baz=84,SNR=19
I07A **Izee** 84.24 39 ⇓P P 10 05 05.4 +0.1
baz=84,SNR=70
R12A **Pony Springs,** 84.27 46 ⇓P P 10 05 05.8 +0.3
baz=84,SNR=45
318A **Bisbee** 84.28 54 ⇓P P 10 05 06.6 +0.8
baz=84,SNR=45
U14A **Mt Trumbull** 84.30 48 ⇑P P 10 05 06.4 +0.6
baz=84,SNR=68
Y16A **Circle Bar Ran** 84.30 51 ⇓P P 10 05 06.4 +0.6
baz=84,SNR=28
W15A **Williams** 84.35 50 ⇓P P 10 05 06.7 +0.7
baz=84,SNR=13
GNW **Green Mountain** 84.40 35 *e*P P 10 05 05.5 -0.5
comp=Z,30nm,1.1s,mb4.7
S13A **Holt Ranch, En** 84.41 47 ⇑P P 10 05 06.5 +0.2
baz=84,SNR=28
J08A **Circle Bar Ran** 84.46 40 ⇑P P 10 05 06.5 +0.2
baz=85,SNR=62
218A **Dragoon** 84.49 53 ⇑P P 10 05 07.7 +0.9
baz=85,SNR=32
WPW **White Pass** 84.58 36 P P 10 05 06.7 -0.2
X16A **Lo Mia Camp, P** 84.58 51 ⇑P P 10 05 07.8 +0.6
baz=85,SNR=52
GYA **Guiyang** 84.59 300 P P 10 05 08.3 +0.9
GYA pP pP 10 06 58.0 -4.0
GYA PP PP 10 08 35.4 +2.5
GYA SKS 10 14 42.8
GYA S S 10 14 53.6 +2.6
GYA pmax pmax
comp=Z,40nm,1.0s,mb4.9
GYA pmax pmax
comp=Z,130nm,5.7s
D05A **Enumclaw** 84.63 36 ⇓P P 10 05 07.4 +0.3
baz=85,SNR=41
R13A **O'Grain Ranch,** 84.63 46 ⇓P P 10 05 07.8 +0.5
baz=85,SNR=16
FMW **Mount Fremont** 84.65 36 P P 10 05 07.2 0.0
M10A **I.L. Ranch, Tu** 84.66 42 ⇓P P 10 05 07.7 +0.3
baz=85,SNR=48
Y17A **Roosevelt** 84.68 52 ⇑P P 10 05 08.0 +0.3
baz=85,SNR=16
T14A **Hurricane** 84.69 48 ⇑P P 10 05 07.9 +0.3
baz=85,SNR=28
V15A **Kaibab Nationa** 84.72 49 ⇑P P 10 05 08.5 +0.7
baz=85,SNR=28
Z17A **San Carlos Hig** 84.77 52 ⇓P P 10 05 08.6 +0.4
baz=85
319A **Douglas** 84.80 54 ⇓P P 10 05 09.2 +0.8
baz=85,SNR=53
ARUT **Antelope Range** 84.80 47 *e*P P 10 05 08.3 +0.1
comp=Z,12nm,0.9s,mb4.4
ARUT **Antelope Range** 84.80 47 *e*P P 10 05 08.3 +0.1
ARUT pmax pmax
comp=Z,13nm,0.9s,mb4.5
W16A **Flagstaff** 84.84 50 ⇑P P 10 05 09.0 +0.6
baz=85,SNR=8.1
RMW **Rattlesnake Mo** 84.89 35 P P 10 05 08.3 -0.1
U15A **North Rim** 84.93 49 ⇓P P 10 05 09.6 +0.7
baz=85,SNR=88
S14A **Cedar City** 84.97 47 ⇓P P 10 05 09.3 +0.3
baz=85,SNR=12
Q13A **Wheeler Ranch,** 84.99 46 ⇓P P 10 05 09.0 0.0
baz=85,SNR=31
Z18A **Geronimo** 85.00 52 ⇑P P 10 05 09.8 +0.5
baz=85,SNR=7.5
X17A **Forest Lakes** 85.01 51 ⇓P P 10 05 10.0 +0.7
baz=85,SNR=27
219A **White Tail Can** 85.09 54 ⇑P P 10 05 10.5 +0.7
baz=85,SNR=30
WUAZ **Wupatki** 85.15 50 ⇑P P 10 05 10.2 +0.2
baz=85,SNR=18
T15A **Red Dirt Ranch** 85.16 48 ⇓P P 10 05 10.3 +0.4
baz=85,SNR=58
O12A **Currie** 85.17 44 ⇑P P 10 05 09.9 0.0
baz=85,SNR=22
SIT **Sitka** 85.19 23 *e*P P 10 05 08.8 -0.8
comp=Z,28nm,1.1s,mb4.7
SIT **Sitka** 85.19 23 *e*P P 10 05 08.8 -0.8
SIT pmax pmax
comp=Z,28nm,1.1s,mb4.7
SEY **Seymchan** 85.23 348 *i* P P 10 05 08.0 -1.7
SEY **Seymchan** 85.23 348 *d* P P 10 05 08.9 -0.8
P13A **Bates Ranch, G** 85.24 45 ⇑P P 10 05 10.4 +0.2
baz=85,SNR=45
G08A **Pilot Rock** 85.25 38 ⇓P P 10 05 10.2 0.0
baz=85,SNR=66
PPLA **Purkeypile** 85.28 12 *e*P P 10 05 07.2 -2.6
comp=Z,21nm,0.7s,mb4.8
Y18A **Canyon Day Jun** 85.32 52 ⇓P P 10 05 11.6 +0.8
baz=85,SNR=17
320A **Kipp Ranch, An** 85.36 55 ⇑P P 10 05 12.3 +1.2
baz=85,SNR=63
BMRM **Bremner River** 85.38 17 *e*P P 10 05 09.2 -1.2
comp=Z,85nm,0.9s,mb5.3
119A **Ashpeak Ranch,** 85.41 53 ⇑P P 10 05 11.9 +0.7
baz=86,SNR=10.0
W17A **Winslow** 85.42 50 ⇓P P 10 05 11.7 +0.4
baz=86
E07A **Sunnyside** 85.45 37 ⇑P P 10 05 11.1 0.0
baz=86,SNR=11
S15A **Panguitch** 85.49 47 ⇓P P 10 05 12.7 +1.2
baz=86,SNR=19
Q14A **Sevier Lake (B** 85.50 46 ⇑P P 10 05 11.9 +0.3
baz=86,SNR=52
HAWA **Hanford** 85.54 37 *e*P P 10 05 11.3 -0.2
comp=Z,70nm,0.9s,mb5.3
O13A **Hicks Ranch, I** 85.60 45 ⇑P P 10 05 12.1 +0.1
baz=86,SNR=11
220A **Playas Peak, P** 85.61 54 ⇑P P 10 05 13.0 +0.7
baz=86,SNR=21
U16A **Tuba City** 85.62 49 ⇓P P 10 05 12.6 +0.4
baz=86,SNR=33
A05A **Maple Falls** 85.66 34 ⇑P P 10 05 11.3 -0.7
baz=86,SNR=7.3
Z19A **T-Link Ranch,** 85.67 52 ⇓P P 10 05 12.9 +0.3
baz=86
B06A **Marblemount** 85.69 35 ⇓P P 10 05 11.5 -0.7
baz=86,SNR=7.6
X18A **Snowflake** 85.73 51 ⇓P P 10 05 13.1 +0.3
baz=86,SNR=10
T16A **Glen Canyon Da** 85.75 48 ⇓P P 10 05 13.2 +0.4
baz=86,SNR=19
120A **U Bar Ranch, L** 85.81 53 ⇓P P 10 05 13.8 +0.6
baz=86,SNR=18
N13A **Wendover, West** 85.82 44 ⇑P P 10 05 13.0 0.0
baz=86
N13A **Wendover, West** 85.82 44 *e*P P 10 05 12.5 -0.5
comp=Z,64nm,1.1s,mb5.2
PNL **Peninsula** 85.83 19 *e*P P 10 05 11.7 -0.9
comp=Z,34nm,0.7s,mb5.1
E08A **Dider Farm, El** 85.86 37 ⇑P P 10 05 13.1 0.0
baz=86,SNR=21
P14A **Drum Mountains** 85.94 45 ⇑P P 10 05 13.6 0.0
baz=86,SNR=13
NST **Nakhon Sawan** 85.95 288 P P 10 05 16.0 +1.8
Y19A **Nutrioso** 85.98 52 ⇑P P 10 05 14.9 +0.9
baz=86,SNR=29
S16A **Weppner Ranch,** 86.04 48 ⇑P P 10 05 14.1 -0.1
baz=86,SNR=15
WTV **Waterville** 86.05 36 P P 10 05 13.5 -0.4
Z20A **Nine Sixteen R** 86.09 53 ⇑P P 10 05 15.1 +0.5
baz=86,SNR=24
M13A **Montello** 86.10 44 ⇓P P 10 05 14.7 +0.3
baz=86,SNR=41
MFID **Camas Ranch** 86.11 41 ⇑P P 10 05 14.5 +0.1
baz=86,SNR=42
Q15A **Fillmore** 86.12 46 ⇑P P 10 05 14.8 +0.3
baz=86,SNR=21
XAN **Xi'an** 86.14 308 P P 10 05 14.6 -0.1
XAN pmax pmax
comp=Z,18nm,1.4s,mb4.5
W18A **Petrified Fore** 86.15 51 ⇑P P 10 05 15.0 +0.2
baz=86
TRF **Thorofare Moun** 86.16 13 *e*P P 10 05 12.2 -1.9
comp=Z,45nm,0.4s,mb5.5
X19A **St. Johns** 86.17 51 ⇑P P 10 05 15.3 +0.4
baz=86,SNR=15
221A **Mesquite Ranch** 86.22 54 ⇑P P 10 05 16.0 +0.9
baz=86,SNR=6.5
T17A **Navajo Res., N** 86.25 49 ⇓P P 10 05 15.8 +0.6
baz=86,SNR=31
D08A **Wollman Farm,** 86.26 37 ⇓P P 10 05 14.8 -0.1
baz=86,SNR=38
V18A **Ganado** 86.28 50 ⇑P P 10 05 15.6 +0.2
baz=86,SNR=26
R16A **Teasdale** 86.39 47 ⇓P P 10 05 16.4 +0.6
baz=86,SNR=26
E09A **Wood Farm, Sta** 86.40 38 ⇓P P 10 05 15.1 -0.5
baz=86,SNR=10
W19A **Sanders** 86.40 51 ⇓P P 10 05 16.1 +0.2
baz=86
DUG **Dugway** 86.41 45 ⇑P P 10 05 15.5 -0.3
baz=86,SNR=9.0
DUG **Dugway** 86.41 45 *e*P P 10 05 15.2 -0.7
comp=Z,14nm,1.3s,mb4.4
DUG **Dugway** 86.41 45 *e*P P 10 05 15.2 -0.7
DUG pmax pmax
comp=Z,14nm,1.3s,mb4.4
121A **Cookes Peak, D** 86.45 54 ⇓P P 10 05 16.9 +0.7
baz=86,SNR=15
P15A **Leamington** 86.47 46 ⇑P P 10 05 16.3 +0.2
baz=87
N14A **Grayback Hills** 86.49 44 ⇓P P 10 05 16.1 -0.1
baz=87,SNR=5.2
S17A **Black Ridge (B** 86.56 48 ⇓P P 10 05 16.2 -0.4
baz=87,SNR=22
BPAW **Bear Paw Mtn.** 86.60 12 *e*P P 10 05 13.6 -2.5
comp=Z,26nm,0.6s,mb5.2
Y20A **Hoe Springs,** 86.61 52 ⇓P P 10 05 17.7 +0.7
baz=87,SNR=26
BGU **Big Grassy Mou** 86.63 44 *e*P P 10 05 16.6 -0.3
comp=Z,3.2nm,0.7s,mb4.1
F10A **Beach Ranch, E** 86.64 38 ⇑P P 10 05 16.3 -0.4
baz=87,SNR=92
U18A **Rough Rock, Ch** 86.65 49 ⇑P P 10 05 17.2 +0.1
baz=87,SNR=30
O15A **The Old Anders** 86.68 45 ⇓P P 10 05 17.0 -0.1
baz=87
M14A **Sheep Mountain** 86.71 44 ⇑P P 10 05 17.3 +0.1
baz=87,SNR=46
I12A **Atlanta** 86.74 41 ⇑P P 10 05 17.6 +0.3
baz=87,SNR=53
222A **Williams Famil** 86.78 54 ⇑P P 10 05 18.3 +0.5
baz=87,SNR=16
X20A **Quemado** 86.80 52 ⇓P P 10 05 18.4 +0.5
baz=87
PAX **Paxon** 86.84 15 *e*P P 10 05 15.5 -1.8
comp=Z,13nm,0.5s,mb4.8
PAX **Paxson** 86.84 15 *e*P P 10 05 15.5 -1.8
PAX pmax pmax
comp=Z,13nm,0.5s,mb4.8
Z21A **St. Cloud Mine** 86.87 53 ⇓P P 10 05 19.1 +0.9
baz=87
P16A **Fountain Green** 86.90 46 ⇓P P 10 05 18.9 +0.7
baz=87
Q16A **Castle Valley** 86.91 47 ⇑P P 10 05 18.9 +0.6
baz=87,SNR=8.4
V19A **Window Rock** 86.92 50 ⇓P P 10 05 18.6 +0.2
baz=87
N15A **Stansbury Isla** 86.95 45 ⇓P P 10 05 18.2 -0.2
baz=87,SNR=9.7
HIA **Hailar** 86.97 325 *e*P P 10 05 18.1 -0.2
comp=Z,32nm,1.2s,mb4.8
HIA **Hailar** 86.97 325 *e*P P 10 05 18.1 -0.2
HIA pmax pmax
comp=Z,32nm,1.2s
T18A **Mexican Hat** 86.98 49 ⇓P P 10 05 18.9 +0.3
baz=87,SNR=89
R17A **Hanksville Air** 86.99 47 ⇑P P 10 05 18.5 -0.1
baz=87,SNR=22
SYO **Syowa Base** 86.99 193 ⇓ *i* P P 10 05 16.6 -1.6
SYO **Syowa Base** 86.99 193 ⇓ *e* pP pP 10 07 15.4 +1.9
C09A **Chrisman Ranch** 87.04 37 ⇑P P 10 05 18.2 -0.4
baz=87,SNR=12
L14A **Malta** 87.04 43 ⇑P P 10 05 19.1 +0.3
baz=87,SNR=36
HLID **Hailey** 87.07 42 ⇑P P 10 05 19.4 +0.6
baz=87,SNR=99
U19A **Dine' College,** 87.07 50 ⇑P P 10 05 19.2 +0.2
baz=87,SNR=36
122A **Conniff Cattle** 87.12 54 ⇓P P 10 05 20.2 +0.9
baz=87,SNR=6.5
J13A **Cove Ranch, Pi** 87.13 42 ⇓P P 10 05 19.8 +0.6
baz=87,SNR=127
S18A **Hurst Farm, Bl** 87.15 48 ⇑P P 10 05 19.3 0.0
baz=87,SNR=14
Y21A **Point of Rocks** 87.18 52 ⇓P P 10 05 20.6 +1.0
baz=87,SNR=43
MENT **Mentasta** 87.25 16 *e*P P 10 05 18.4 -0.9
223A **Chaparral, Ant** 87.26 55 ⇑P P 10 05 20.6 +0.6
baz=87,SNR=5.2
M15A **Larsen Ranch,** 87.28 44 ⇑P P 10 05 19.8 -0.1
baz=87,SNR=38
KMI **Kunming** 87.28 298 P P 10 05 22.0 +1.7
KMI pP pP 10 07 11.8 -4.0
KMI PP PP 10 08 55.8 +1.5
KMI SKS 10 15 00.9
KMI S S 10 15 20.8 +4.2
KMI SS SS 10 21 21.3 +4.3
KMI pmax pmax
comp=Z,27nm,0.8s,mb4.9
KMI pmax pmax
comp=Z,150nm,3.4s
X21A **Alamocita Cree** 87.29 52 ⇓P P 10 05 20.7 +0.6
baz=87,SNR=25
O16A **Springville** 87.29 46 ⇑P P 10 05 20.1 0.0
baz=87
H12A **Diamond D Ranc** 87.30 41 ⇓P P 10 05 19.9 0.0
baz=87,SNR=89
CTU **Camp Tracy** 87.36 45 *e*P P 10 05 20.3 0.0
comp=Z,10nm,0.9s,mb4.5
V20A **Brimhall** 87.38 51 ⇑P P 10 05 20.5 0.0
baz=88,SNR=9.2
Z22A **Elephant Butte** 87.38 53 ⇑P P 10 05 21.0 +0.4
baz=88,SNR=31
I13A **Wildhorse Cree** 87.43 41 ⇓P P 10 05 21.0 +0.4
baz=88,SNR=36
SRU **San Rafael** 87.44 47 ⇓P P 10 05 20.9 +0.2
baz=88,SNR=31
T19A **Beclabito** 87.44 49 ⇓P P 10 05 21.1 +0.3
baz=88
HHC **Hu-ho-hao-te** 87.45 315 *e*P P 10 05 21.3 +0.6
HHC pP pP 10 07 14.1 -2.2
HHC sP sP 10 08 04.1 -5.5
HHC PP PP 10 08 56.4 +1.0
HHC SKS 10 14 59.3
HHC S S 10 15 17.0 -0.5
HHC sS sS 10 18 37.3 -6.2
HHC SS SS 10 21 21.5 +2.6
HHC pmax pmax
comp=Z,48nm,0.9s,mb5.1
HHC pmax pmax
comp=Z,140nm,4.3s
P17A **Butcher Ranch,** 87.46 46 ⇓P P 10 05 21.1 +0.3
baz=88,SNR=16
J14A **Carey** 87.51 42 ⇑P P 10 05 21.7 +0.8
baz=88,SNR=116
BDT **Bhumibol Dam** 87.53 289 P P 10 05 22.5 +0.9
comp=Z,18nm,0.9s,mb4.8
R18A **Canyonlands Na** 87.54 48 ⇓P P 10 05 21.3 +0.1
baz=88,SNR=39
L15A **Malad City** 87.58 44 ⇑P P 10 05 21.3 0.0
baz=88,SNR=45
U20A **Newcomb** 87.60 50 ⇓P P 10 05 21.4 -0.2
baz=88
123A **Bell Site, Whi** 87.65 54 ⇑P P 10 05 22.3 +0.4
baz=88
N16A **Rees Ranch, Co** 87.66 45 ⇑P P 10 05 22.1 +0.3
baz=88,SNR=19
H13A **Challis** 87.68 41 ⇓P P 10 05 21.7 +0.1
baz=88,SNR=63
Y22A **Socorro** 87.68 53 ⇑P P 10 05 22.1 +0.2
baz=88,SNR=18
W21A **San Fidel** 87.68 51 ⇑P P 10 05 22.3 +0.4
baz=88
F12A **Elk City** 87.69 39 ⇓P P 10 05 21.5 -0.2
baz=88,SNR=110
Q18A **Rafter H Ranch** 87.71 47 ⇓P P 10 05 21.8 -0.2
baz=88,SNR=37
LAZ **Ladron** 87.75 52 *e*P P 10 05 22.4 +0.1
comp=Z,14nm,0.6s,mb3.9
Y22D **IRIS PASSCAL I** 87.77 53 ⇑P P 10 05 22.8 +0.4
baz=88
S19A **Harvey Farm, M** 87.78 49 ⇑P P 10 05 22.4 0.0
baz=88,SNR=16
O17A **Robinson Place** 87.80 46 ⇑P P 10 05 23.1 +0.7
baz=88,SNR=92
K15A **Arbon** 87.82 43 ⇓P P 10 05 22.6 +0.2
baz=88,SNR=37
I14A **Mackay** 87.85 42 ⇑P P 10 05 23.0 +0.5
baz=88
425A **Indio Mountain** 87.87 56 ⇑P P 10 05 23.5 +0.6
baz=88,SNR=27
P18A **Preston Nutter** 87.87 47 ⇓P P 10 05 23.0 +0.3
baz=88
HWUT **Hardware Ranch** 87.92 44 *e*P P 10 05 22.4 -0.5
comp=Z,28nm,0.8s,mb5.0
COLA **College** 87.93 13 *e*P P 10 05 20.6 -1.8
comp=Z,83nm,0.9s,mb5.5
COLA **College** 87.93 13 *e*P P 10 05 20.6 -1.8
COLA pmax pmax
comp=Z,83nm,0.9s,mb5.5
MNTX **Cornudas Mount** 87.94 55 ⇓P P 10 05 23.4 +0.2
baz=88,SNR=60
MNTX **Cornudas Mount** 87.94 55 *e*P P 10 05 23.0 -0.2
comp=Z,28nm,1.0s,mb4.9
R19A **Curley Farm, L** 87.94 48 ⇓P P 10 05 23.0 0.0
baz=88,SNR=20
NEW **Newport** 87.94 37 ⇓P P 10 05 22.1 -0.8
baz=88,SNR=23
Z23A **Rita Site, Whi** 87.94 54 ⇑P P 10 05 23.5 +0.2
baz=88,SNR=8.0
G13A **Cobalt** 87.96 40 ⇓P P 10 05 22.8 -0.2
baz=88,SNR=42
224A **Cornudas Mount** 87.98 55 ⇑P P 10 05 23.9 +0.4
baz=88,SNR=45
V21A **Milan** 87.99 51 ⇓P P 10 05 23.5 +0.1
baz=88,SNR=6.4
MVCO **Mesa Verde** 87.99 49 ⇑P P 10 05 23.2 -0.1
baz=88,SNR=5.4
BNM **Barren Site** 88.02 53 *e*P P 10 05 23.5 -0.1
comp=Z,41nm,1.5s,mb4.9
CM31 **Chiang Mai Arr** 88.03 290 *e*P P 10 05 24.9 +1.0
comp=Z,20nm,0.9s,mb4.8
CMAR **Chiang Mai Arr** 88.03 290 P P 10 05 25.6 +1.6
comp=Z,16nm,0.9s,mb4.7,baz=122,slow=3.3,SNR=78
626A **Big Bend Ranch** 88.04 58 ⇓P P 10 05 24.4 +0.7
baz=88,SNR=74
ILAR **Eielson Array** 88.05 14 P P 10 05 21.1 -1.9
comp=Z,34nm,0.8s,mb5.1,baz=223,slow=4.3,SNR=428
ILAR PP PP 10 08 59.4 -0.2
comp=Z,1.2nm,1.0s,baz=225,slow=7.2,SNR=4.6
ILAR PKKP PKKPbc 10 23 04.2 -3.6
comp=Z,0.2nm,0.5s,baz=358,slow=2.6,SNR=4.8
ILAR **Eielson Array** 88.05 14 P P 10 05 21.1 -1.9
ILAR 10 08 59.4
N17A **Moffit Pass** 88.09 45 ⇑P P 10 05 23.9 +0.2
baz=88,SNR=24
325A **Bean Ranch, Si** 88.12 56 ⇑P P 10 05 24.3 +0.2
baz=88,SNR=42
BILL **Bilibino** 88.12 355 *e*P P 10 05 22.4 -0.8
comp=Z,34nm,0.7s,mb5.2
BILL **Bilibino** 88.12 355 *e*P P 10 05 22.4 -0.8
BILL pmax pmax
comp=Z,35nm,0.7s,mb5.2
CHG **Chiang Mai** 88.15 291 ⇓P P 10 05 25.8 +1.3
comp=Z,28nm,0.6s,mb5.2
CHTO **Chiang Mai** 88.15 291 P P 10 05 25.3 +0.8
comp=Z,13nm,0.8s,mb4.7
CHTO **Chiang Mai** 88.15 291 P P 10 05 25.3 +0.8
CHTO pmax pmax
comp=Z,13nm,0.8s,mb4.7
L16A **Fish Haven** 88.21 44 ⇑P P 10 05 24.2 -0.1
baz=88,SNR=30
J15A **Blackfoot** 88.23 42 ⇑P P 10 05 25.2 +0.9
baz=88,SNR=96
W22A **Albuquerque** 88.24 52 ⇑P P 10 05 25.1 +0.6
baz=88,SNR=7.6
U21A **Nageezi** 88.25 50 ⇓P P 10 05 24.7 +0.1
baz=88,SNR=52
H14A **Leadore** 88.25 41 ⇑P P 10 05 24.7 +0.3
baz=88,SNR=56
526A **Mary Lane Ranc** 88.28 57 ⇑P P 10 05 25.3 +0.5
baz=88,SNR=57
124A **Stringfield Ra** 88.30 54 ⇓P P 10 05 25.3 +0.4
baz=88,SNR=31
D12A **Red Ives Fores** 88.31 38 ⇑P P 10 05 24.1 -0.5
baz=88
TXAR **Lajitas Array** 88.32 58 P P 10 05 25.8 +0.7
comp=Z,31nm,0.8s,mb5.1,baz=220,slow=5.9,SNR=396
TXAR PKKP PKKPbc 10 23 05.8 +0.3
comp=Z,0.5nm,0.7s,baz=138,slow=3.2,SNR=7.9
O18A **Roosevelt** 88.33 46 ⇑P P 10 05 25.2 +0.3
baz=88,SNR=26
PV01 **Paradox Valley** 88.35 48 *e*P P 10 05 24.8 -0.3
comp=Z,9um,1.4s
Y23A **Lovelace Mesa,** 88.36 53 ⇓P P 10 05 25.1 0.0
baz=88,SNR=22
M17A **Scullys Gap (B** 88.45 45 ⇓P P 10 05 25.2 -0.2
baz=89,SNR=17
I15A **Monteview** 88.49 42 ⇓P P 10 05 26.3 +0.7
baz=89,SNR=41
K16A **Soda Springs** 88.50 43 ⇑P P 10 05 26.1 +0.5
baz=89,SNR=53
G14A **Jackson** 88.51 40 ⇑P P 10 05 25.7 +0.1
baz=89,SNR=28
R20A **Redvale** 88.51 48 ⇑P P 10 05 25.7 -0.1
baz=89,SNR=6.6
X23A **Hourglass Bar** 88.53 52 ⇓P P 10 05 25.8 -0.2
baz=89
225A **Deer Hill, Car** 88.54 55 ⇓P P 10 05 26.3 +0.3
baz=89,SNR=42
V22A **San Miguel Ran** 88.57 51 ⇑P P 10 05 26.0 0.0
baz=89,SNR=5.1
426A **McDonald Obser** 88.57 57 ⇑P P 10 05 26.7 +0.4
baz=89,SNR=80
C12B **Naegeli Ranch,** 88.58 38 ⇑P P 10 05 25.4 -0.4
baz=89,SNR=34
T21A **Navajo Lake** 88.58 50 ⇑P P 10 05 26.1 0.0
baz=89,SNR=7.8
627A **Terlingua Ranc** 88.59 58 ⇓P P 10 05 26.9 +0.5
baz=89,SNR=60
L17A **Cokeville** 88.61 44 ⇑P P 10 05 25.7 -0.4
baz=89,SNR=19
E13A **Victor** 88.68 39 ⇓P P 10 05 25.4 -0.9
baz=89
MCMT **McKenzie Canyo** 88.68 41 *e*P P 10 05 26.0 -0.3
comp=Z,26nm,1.1s,mb5.0
527A **Woodward Ranch** 88.69 57 ⇑P P 10 05 27.1 +0.3
baz=89,SNR=63

J16A **Bone** **88.69** **43** ⇓P **P** **10 05 27.1 +0.6**
baz=89,SNR=93
S21A **Coal Bank Pass** **88.69** **49** ⇓P **P** **10 05 26.9 +0.3**
baz=89,SNR=35
H15A **Lima** **88.70** **41** ⇑P **P** **10 05 27.0 +0.5**
baz=89,SNR=84
P19A **Cripple Cowboy** **88.74** **47** ⇑P **P** **10 05 26.7 -0.1**
baz=89,SNR=32
CD2 **Chengdu** **88.75** **303** P P **10 05 28.3 +1.2**
CD2 PP PP 10 09 07.8 +1.9
CD2 SKS 10 15 11.0
CD2 S S 10 15 33.3 +3.3
CD2 SS SS 10 21 42.8 +4.8
CD2 pmax pmax
comp=Z,20nm,0.5s,mb5.2
CD2 pmax pmax
comp=Z,70nm,5.3s
W23A **Werner Place,** **88.81** **52** ⇓P **P** **10 05 27.1 -0.1**
baz=89,SNR=9.2
U22A **Llaves** **88.81** **51** ⇑P **P** **10 05 27.1 -0.1**
baz=89,SNR=11
Y24A **Capitan** **88.82** **53** ⇑P **P** **10 05 27.4 +0.1**
baz=89,SNR=74
M18A **Lyman** **88.83** **45** ⇓P **P** **10 05 27.3 +0.1**
baz=89,SNR=68
F14A **Wisdom** **88.85** **40** ⇓P **P** **10 05 26.8 -0.4**
baz=89,SNR=19
D13A **Huson** **88.85** **38** ⇓P **P** **10 05 25.9 -1.2**
baz=89,SNR=21
326A **Caldwell Ranch** **88.87** **56** ⇑P **P** **10 05 27.3 -0.3**
baz=89,SNR=14
N18A **Larsen Ranch,** **88.89** **46** ⇓P **P** **10 05 27.3 -0.1**
baz=89,SNR=34
K17A **Gardner Place,** **88.89** **44** ⇓P **P** **10 05 27.6 +0.2**
baz=89,SNR=26
125A **Gardner Draw,** **88.89** **55** ⇓P **P** **10 05 27.6 0.0**
baz=89,SNR=15
Q20A **Ridgley Place,** **88.91** **48** ⇑P **P** **10 05 27.5 -0.1**
baz=89,SNR=27
B12A **Libby** **88.92** **37** ⇑P **P** **10 05 27.2 -0.2**
baz=89,SNR=17
O19A **Miners Draw (B** **88.95** **46** ⇑P **P** **10 05 27.6 -0.1**
baz=89,SNR=44
628A **Black Gap, Mar** **89.01** **58** ⇓P **P** **10 05 28.4 +0.1**
baz=89,SNR=29
MSO **Missoula** **89.02** **39** ⇑P **P** **10 05 26.7 -1.2**
baz=89,SNR=17
MSO **Missoula** **89.02** **39** *e*P **P** **10 05 26.7 -1.2**
comp=Z,13nm,1.1s,mb4.7
V23A **Ortiz Mt. (NFS** **89.03** **51** ⇑P **P** **10 05 28.7 +0.5**
baz=89,SNR=26
T22A **Edith** **89.05** **50** ⇓P **P** **10 05 28.1 -0.2**
baz=89,SNR=8.3
I16A **Newdale** **89.06** **42** ⇓P **P** **10 05 28.8 +0.6**
baz=89,SNR=51
G15A **Dillon** **89.06** **41** ⇓P **P** **10 05 28.3 +0.1**
baz=89,SNR=46
E14A **Clinton** **89.08** **39** ⇓P **P** **10 05 27.7 -0.4**
baz=89,SNR=37
226A **Malaga, Loving** **89.08** **55** ⇑P **P** **10 05 28.7 +0.1**
baz=89
L18A **Fontenelle, Gr** **89.08** **45** ⇓P **P** **10 05 28.3 0.0**
baz=89,SNR=13
C13A **Hot Springs** **89.08** **38** ⇓P **P** **10 05 27.4 -0.8**
baz=89,SNR=14
X24A **Lazy VL Ranch,** **89.09** **53** ⇑P **P** **10 05 28.2 -0.4**
baz=89
CLNS **Chul'man** **89.09** **333** *e*P **P** **10 05 28.3 +0.3**
CLNS pmax pmax
comp=Z,15nm,1.0s,mb4.8
CLNS pmax pmax
comp=E,4.0nm,1.2s
CLNS pmax pmax
comp=N,10.0nm,1.3s
Z25A **Roswell** **89.10** **54** ⇑P **P** **10 05 28.9 +0.3**
baz=89,SNR=31
A12A **Yaak River Ran** **89.12** **37** ⇓P **P** **10 05 28.3 0.0**
baz=89,SNR=15
427A **Hayter Ranch,** **89.14** **57** ⇑P **P** **10 05 29.4 +0.5**
baz=89,SNR=111
R21A **Cimarron** **89.18** **49** ⇓P **P** **10 05 29.2 +0.3**
baz=89,SNR=69
N19A **John Jarvie Ra** **89.18** **46** ⇑P **P** **10 05 28.4 -0.5**
baz=89,SNR=20
U23A **El Rito** **89.27** **51** ⇓P **P** **10 05 29.6 +0.2**
baz=89,SNR=24
J17A **Brown Place, J** **89.31** **43** ⇑P **P** **10 05 29.8 +0.4**
baz=89,SNR=48
MAIT **Maitri** **89.32** **184** *e*P **P** **10 05 28.8 -0.2**
CLNB **Carlsbad** **89.33** **55** *e*P **P** **10 05 29.5 -0.2**
comp=N,9.9nm,1.1s,mb4.5
528A **Cox Ranch, San** **89.35** **58** ⇑P **P** **10 05 30.1 +0.2**
baz=89,SNR=13
Q21A **Lamborn Mesa,** **89.36** **48** ⇓P **P** **10 05 30.1 +0.4**
baz=90,SNR=22
BLMT **Blacktail Moun** **89.38** **38** *e*P **P** **10 05 28.7 -0.8**
comp=N,4.4nm,0.6s,mb4.5
126A **Clayton Basin,** **89.38** **55** ⇑P **P** **10 05 29.8 -0.1**
baz=90,SNR=11
W24A **Lazy 6 Ranch,** **89.38** **52** ⇓P **P** **10 05 29.4 -0.5**
baz=90,SNR=28
F15A **Butte** **89.39** **40** ⇓P **P** **10 05 29.4 -0.2**
baz=90,SNR=16
D14A **Greenough** **89.40** **39** ⇓P **P** **10 05 28.7 -1.0**
baz=90,SNR=37
K18A **Toltan Ranch,** **89.41** **44** ⇓P **P** **10 05 30.2 +0.4**
baz=90,SNR=103
S22A **4UR Ranch, Cre** **89.42** **49** ⇓P **P** **10 05 30.6 +0.6**
baz=90,SNR=48
M19A **Rock Springs** **89.47** **45** ⇓P **P** **10 05 30.1 0.0**
baz=90,SNR=16
O20A **White River Ci** **89.48** **47** ⇑P **P** **10 05 30.4 +0.2**
baz=90,SNR=48
B13A **Whitefish** **89.50** **37** ⇓P **P** **10 05 29.2 -0.9**
baz=90,SNR=16
G16A **Moss Hill, Enn** **89.52** **41** ⇓P **P** **10 05 30.3 0.0**
baz=90,SNR=30
COLD **Coldfoot** **89.53** **11** *e*P **P** **10 05 29.1 -0.7**
comp=N,56nm,0.9s,mb5.4
E15A **Deer Lodge** **89.59** **40** ⇑P **P** **10 05 30.1 -0.5**
baz=90,SNR=15
H16A **Russell Place,** **89.61** **42** ⇓P **P** **10 05 31.6 +0.9**
baz=90,SNR=64
L19A **Farson** **89.61** **45** ⇓P **P** **10 05 31.0 +0.2**
baz=90,SNR=67
VNA1 **Neumayer--Stat** **89.64** **177** *e*P **P** **10 05 28.4 -2.1**
VNA1 *e* 10 05 31.5
VNA1 *e* pP 10 07 28.2 +1.6
X25A **Clemmons Ranch** **89.66** **53** ⇑P **P** **10 05 30.7 -0.5**
baz=90,SNR=7.8
428A **Kincaid Ranch,** **89.66** **57** ⇓P **P** **10 05 31.7 +0.5**
baz=90,SNR=16
Z26A **Caprock** **89.66** **54** ⇑P **P** **10 05 31.1 -0.1**
baz=90,SNR=47
I17A **Pilgrim Ck.** **89.67** **43** ⇓P **P** **10 05 31.7 +0.7**
baz=90,SNR=17
R22A **Saguache, Gunn** **89.68** **49** ⇑P **P** **10 05 31.8 +0.6**
baz=90,SNR=29
T23A **Casias Ranch,** **89.69** **50** ⇓P **P** **10 05 31.2 0.0**
baz=90,SNR=7.8
227A **Bennet, Jal** **89.69** **56** ⇑P **P** **10 05 31.2 -0.2**
baz=90
J18A **Kendall Valley** **89.69** **43** ⇓P **P** **10 05 31.4 +0.2**
baz=90,SNR=134
V24A **Rampart Ranch,** **89.70** **52** ⇑P **P** **10 05 31.4 +0.1**
baz=90,SNR=21
N20A **Spence Gulch,** **89.77** **46** ⇓P **P** **10 05 31.9 +0.3**
baz=90,SNR=64
YMR **Madison River** **89.77** **42** *e*P **P** **10 05 32.0 +0.5**
comp=N,26nm,1.0s,mb5.0
BW06 **Boulder Array** **89.78** **44** ⇑P **P** **10 05 31.4 -0.2**
baz=90,SNR=61
328A **Wristen Ranch,** **89.82** **57** ⇑P **P** **10 05 31.8 -0.1**
baz=90,SNR=11
A13A **Flathead Natio** **89.82** **37** ⇓P **P** **10 05 31.1 -0.4**
baz=90
BOZ **Bozeman (W)** **89.83** **41** ⇓P **P** **10 05 31.5 -0.2**
baz=90,SNR=33
BOZ **Bozeman (W)** **89.83** **41** *e*P **P** **10 05 31.4 -0.3**
comp=N,22nm,1.1s,mb4.9
BOZ **Bozeman (W)** **89.83** **41** *e*P **P** **10 05 31.4 -0.3**
BOZ pmax pmax
comp=Z,22nm,1.1s,mb4.9
Q22A **Crested Butte,** **89.84** **48** ⇓P **P** **10 05 32.3 +0.3**
baz=90,SNR=35
H17A **Grant Village** **89.89** **42** ⇑P **P** **10 05 33.4 +1.4**
baz=90,SNR=22
F16A **Kennard Place,** **89.90** **41** ⇑P **P** **10 05 32.0 0.0**
baz=90,SNR=23
127A **Arkansas Junct** **89.90** **55** ⇓P **P** **10 05 32.0 -0.4**
baz=90,SNR=17
D15A **Lincoln** **89.97** **39** ⇓P **P** **10 05 32.2 -0.1**
baz=90,SNR=30
O21A **Pagoda** **90.04** **47** ⇓P **P** **10 05 32.6 -0.2**
baz=90,SNR=12
Y26A **Elida** **90.04** **54** ⇓P **P** **10 05 32.6 -0.4**
baz=90,SNR=21
I18A **Diamond G Ranc** **90.05** **43** ⇓P **P** **10 05 32.7 -0.1**
baz=90,SNR=14
W25A **X Bar L Ranch,** **90.09** **52** ⇓P **P** **10 05 32.6 -0.6**
baz=90,SNR=54
M20A **Sweetwater, Wa** **90.12** **46** ⇓P **P** **10 05 33.2 +0.1**
baz=90,SNR=24
B14A **Marquette Ranc** **90.18** **38** ⇓P **P** **10 05 32.7 -0.5**
baz=90,SNR=79
G17A **Pierce Place,** **90.22** **41** ⇓P **P** **10 05 34.0 +0.5**
baz=90,SNR=21
V25A **Rancho No Teng** **90.23** **52** ⇑P **P** **10 05 33.5 -0.3**
baz=90,SNR=29
L20A **Wamsutter** **90.25** **45** ⇓P **P** **10 05 34.1 +0.4**
baz=90,SNR=37
N21A **Black Mountain** **90.25** **46** ⇓P **P** **10 05 34.0 +0.3**
baz=90,SNR=67
P22A **Eagle** **90.27** **48** ⇑P **P** **10 05 33.8 -0.1**
baz=90,SNR=21
K19A **Absolon Red Bu** **90.28** **44** ⇓P **P** **10 05 33.2 -0.6**
baz=90,SNR=18
C15A **Salmond Ranch,** **90.28** **39** ⇑P **P** **10 05 33.0 -0.8**
baz=90,SNR=23
X26A **CR and CF Fran** **90.31** **53** ⇓P **P** **10 05 33.4 -0.8**
baz=90,SNR=7.1
SDCO **Great Sand Dun** **90.37** **50** *e*P **P** **10 05 34.0 -0.5**
comp=Z,22nm,1.4s,mb4.8
A14A **Double T Ranch** **90.40** **37** ⇑P **P** **10 05 33.8 -0.5**
baz=90,SNR=50
K20A **Yellowstone Ra** **90.53** **44** ⇑P **P** **10 05 34.4 -0.6**
baz=91,SNR=24
S24A **Houchin Ranch,** **90.53** **50** ⇓P **P** **10 05 35.4 +0.2**
baz=91,SNR=9.8
D16A **Dana Ranch, Ca** **90.54** **40** ⇓P **P** **10 05 34.7 -0.3**
baz=91,SNR=35
F17A **Fitzpatrick Pl** **90.55** **41** ⇑P **P** **10 05 35.4 +0.4**
baz=91,SNR=24
W26A **Owens Ranch, T** **90.56** **53** ⇓P **P** **10 05 34.5 -0.9**
baz=91,SNR=13
B15A **Bradely Ranch,** **90.57** **38** ⇑P **P** **10 05 34.0 -1.1**
baz=91,SNR=24
U25A **Circle Dot Ran** **90.61** **51** ⇑P **P** **10 05 35.1 -0.4**
baz=91,SNR=22
Q23A **Hartsel** **90.62** **49** ⇑P **P** **10 05 35.7 +0.2**
baz=91,SNR=7.1
O22A **Kremmling** **90.66** **47** ⇓P **P** **10 05 35.7 0.0**
baz=91,SNR=61
E17A **Martinsdale** **90.69** **40** ⇓P **P** **10 05 35.5 -0.1**
baz=91,SNR=7.9
YAK **Yakutsk** **90.72** **339** *e*P **P** **10 05 34.5 -0.9**
comp=Z,120nm,0.8s,mb5.9
YAK **Yakutsk** **90.72** **339** *d* iP **P** **10 05 34.2 -1.2**
YAK *e* 10 09 17.6
YAK *e*PPP 10 11 17.9
YAK *e*S SKSac 10 15 16.5 +0.4
YAK *e* 10 15 49.6
YAK pmax pmax
comp=Z,96nm,0.9s,mb5.7
YAK pmax pmax
comp=N,10.0nm,0.9s
YAK pmax pmax
comp=E,13nm,1.0s
YAK pmax pmax
comp=Z,18nm,0.9s,mb5.0
YAK pmax pmax
comp=N,6.0nm,0.9s
YAK smax
comp=E,36nm,2.2s
YAK smax
comp=N,30nm,2.1s
M21A **Separation Pea** **90.72** **46** ⇑P **P** **10 05 35.8 -0.1**
baz=91,SNR=38
LZH **Lanzhou** **90.78** **308** ⇓P **P** **10 05 37.8 +1.5**
LZH pP pP 10 07 30.3 -2.3
LZH PP PP 10 09 24.0 +2.4
LZH SKS 10 15 20.0
LZH *e*S S 10 15 50.0 +2.0
LZH sS sS 10 19 11.0 -5.0
LZH SS SS 10 22 09.5 +2.7
LZH pmax pmax
comp=Z,73nm,1.0s,mb5.6
LZH pmax pmax
comp=Z,230nm,4.1s
C16A **Fuhringer Ranc** **90.80** **39** ⇓P **P** **10 05 35.3 -0.8**
baz=91,SNR=23
A15A **Johnson Ranch,** **90.80** **37** ⇑P **P** **10 05 35.3 -0.8**
baz=91,SNR=24
P23A **Jefferson** **90.81** **48** ⇓P **P** **10 05 36.9 +0.5**
baz=91,SNR=10
V26A **Tequesquite Ra** **90.83** **52** ⇓P **P** **10 05 35.7 -0.9**
baz=91,SNR=17
R24A **Sanders Place,** **90.86** **50** ⇑P **P** **10 05 36.7 +0.1**
baz=91,SNR=17
MSTX **Muleshoe** **90.86** **54** ⇑P **P** **10 05 36.3 -0.4**
baz=91,SNR=18
L21A **Rawlins** **90.88** **45** ⇓P **P** **10 05 36.2 -0.5**
baz=91,SNR=12
X27A **F and S Farms,** **90.88** **53** ⇑P **P** **10 05 36.3 -0.5**
baz=91,SNR=16
T25A **Trinidad** **90.91** **51** ⇓P **P** **10 05 36.6 -0.3**
baz=91,SNR=13
G18A **Lazy EL Ranch,** **90.95** **42** ⇑P **P** **10 05 37.1 +0.2**
baz=91,SNR=24
N22A **Wattenberg Ran** **90.99** **47** ⇑P **P** **10 05 37.7 +0.5**
baz=91,SNR=65
RLMT **Red Lodge** **91.05** **42** ⇓P **P** **10 05 37.6 +0.2**
baz=91,SNR=22
W27A **Bowe Ranch, En** **91.08** **53** ⇓P **P** **10 05 36.9 -0.8**
baz=91,SNR=25
U26A **Atchley Ranch,** **91.10** **52** ⇓P **P** **10 05 37.5 -0.3**
baz=91,SNR=23
S25A **Robets Cordova** **91.11** **50** ⇓P **P** **10 05 37.5 -0.3**
baz=91,SNR=28
GCMT **Greycliff** **91.11** **41** *e*P **P** **10 05 37.4 -0.2**
comp=Z,15nm,1.1s,mb4.8
O23A **Lake Granby, G** **91.11** **47** ⇓P **P** **10 05 38.2 +0.5**
baz=91,SNR=21
B16A **M & M Farms, S** **91.12** **38** ⇑P **P** **10 05 36.4 -1.2**
baz=91,SNR=18
D17A **Six Diamond Ra** **91.12** **40** ⇑P **P** **10 05 37.6 0.0**
baz=91,SNR=40
Q24A **Divide** **91.13** **49** ⇑P **P** **10 05 38.1 +0.2**
baz=91,SNR=7.8
F18A **Big Timber** **91.13** **41** ⇓P **P** **10 05 38.0 +0.3**
baz=91,SNR=15
ISCO **Idaho Springs** **91.15** **48** ⇑P **P** **10 05 38.3 +0.3**
baz=91,SNR=16
ISCO **Idaho Springs** **91.15** **48** *e*P **P** **10 05 37.4 -0.6**
comp=Z,7.4nm,0.9s,mb4.6
ISCO **Idaho Springs** **91.15** **48** *e*P **P** **10 05 37.4 -0.6**
ISCO pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
M22A **Cedar Creek Ra** **91.16** **46** ⇑P **P** **10 05 37.9 0.0**
baz=91
I20A **Worland** **91.25** **43** ⇓P **P** **10 05 38.1 -0.2**
baz=91,SNR=13
C17A **Wharram Farm,** **91.30** **39** ⇓P **P** **10 05 37.9 -0.6**
baz=91,SNR=47
E18A **Harlowton** **91.31** **40** ⇓P **P** **10 05 38.8 +0.3**
baz=91,SNR=27
N23A **Red Feather La** **91.38** **47** ⇓P **P** **10 05 39.3 +0.3**
baz=92,SNR=29
L22A **Ellis Ranch, M** **91.53** **46** ⇑P **P** **10 05 39.9 +0.2**
baz=92,SNR=25
H20A **Greybull** **91.57** **43** ⇓P **P** **10 05 39.1 -0.7**
baz=92,SNR=17
F19A **Roth Farm, Mol** **91.59** **41** ⇑P **P** **10 05 39.6 -0.2**
baz=92,SNR=17
B17A **L&G Farms, Che** **91.59** **39** ⇓P **P** **10 05 39.0 -0.7**
baz=92,SNR=18
O24A **Longmont** **91.66** **48** ⇓P **P** **10 05 40.7 +0.4**
baz=92,SNR=6.5
D18A **Linhart Farms,** **91.67** **40** ⇓P **P** **10 05 40.3 +0.1**
baz=92,SNR=18
I21A **Big Trails, Te** **91.73** **44** ⇑P **P** **10 05 40.0 -0.5**
baz=92,SNR=17
K22A **Casper** **91.74** **45** ⇑P **P** **10 05 40.3 -0.3**
baz=92,SNR=8.7
Q25A **Bedland, Calha** **91.75** **49** ⇑P **P** **10 05 40.3 -0.4**
baz=92
JCT **Junction City** **91.86** **58** ⇑P **P** **10 05 40.6 -0.8**
baz=92
A17A **Triple J Farms** **91.96** **38** ⇑P **P** **10 05 41.0 -0.4**
baz=92,SNR=41
AMTX **Amarillo** **92.05** **54** ⇓P **P** **10 05 41.5 -0.7**
baz=92
AMTX **Amarillo** **92.05** **54** *e*P **P** **10 05 41.6 -0.6**
comp=Z,7.8nm,0.8s,mb4.8
P25A **Willow Gulch B** **92.05** **49** ⇓P **P** **10 05 42.1 0.0**
baz=92,SNR=5.6
F20A **Billings** **92.06** **42** ⇑P **P** **10 05 41.6 -0.4**
baz=92
L23A **Garrett** **92.06** **46** ⇓P **P** **10 05 41.8 -0.3**
baz=92,SNR=32
EGMT **Eagleton** **92.08** **39** ⇑P **P** **10 05 41.8 -0.2**
baz=92,SNR=8.3
N24A **Carr** **92.09** **47** ⇓P **P** **10 05 42.5 +0.3**
baz=92
B18A **Beardsley Farm** **92.24** **39** ⇓P **P** **10 05 42.4 -0.3**
baz=92,SNR=7.6
H21A **Big Horn, Sher** **92.25** **43** ⇓P **P** **10 05 42.6 -0.3**
baz=92,SNR=6.1
O25A **Wiggins** **92.33** **48** ⇑P **P** **10 05 43.2 -0.2**
baz=92,SNR=5.0
M24A **Cheyenne** **92.39** **47** ⇑P **P** **10 05 43.8 +0.2**
baz=92,SNR=8.7
G21A **Lodge Grass** **92.40** **43** ⇑P **P** **10 05 43.4 -0.1**
baz=92
A18A **Metzger Ranch,** **92.44** **38** ⇑P **P** **10 05 43.0 -0.6**
baz=92,SNR=21
L24A **Wheatland** **92.55** **46** ⇑P **P** **10 05 44.4 0.0**
baz=93,SNR=8.1
N25A **Grover** **92.63** **47** ⇑P **P** **10 05 44.6 -0.1**
baz=93,SNR=6.7
ULN **Ulaanbaatar** **93.54** **320** *e*P **P** **10 05 48.1 -0.6**
comp=Z,28nm,1.4s,mb5.2
ULN **Ulaanbaatar** **93.54** **320** *i* P **P** **10 05 48.4 -0.3**
LAO **LASA Array** **93.65** **42** ⇑P **P** **10 05 49.7 +0.4**
baz=94,SNR=25
LAO **LASA Array** **93.65** **42** *e*P **P** **10 05 49.2 -0.1**
comp=Z,41nm,0.8s,mb5.6
SONM **Songino Array** **93.92** **320** P **P** **10 05 49.9 -0.6**
comp=Z,2.4nm,0.7s,mb4.5,baz=122,slow=4.5,SNR=22
SONM PP PP 10 09 40.9 -4.8
comp=Z,3.1nm,0.9s,baz=120,slow=6.9,SNR=8.1
SONM PKKP PKKPbc 10 22 51.3 -0.9
comp=Z,0.5nm,0.6s,baz=346,slow=4.7,SNR=4.1
RSSD **Black Hills** **94.00** **44** *e*P **P** **10 05 50.0 -0.9**
comp=Z,13nm,0.9s,mb5.0
RSSD **Black Hills** **94.00** **44** *e*P **P** **10 05 50.0 -0.9**
RSSD pmax pmax
comp=Z,13nm,0.9s,mb5.1
OGNE **Ogallala** **94.12** **48** ⇓P **P** **10 05 51.1 -0.4**
baz=94
WMOK **Wichita Mounta** **94.21** **55** *e*P **P** **10 05 52.6 +0.5**
comp=Z,1.9nm,0.8s,mb4.3
WMOK **Wichita Mounta** **94.21** **55** *e*P **P** **10 05 52.6 +0.5**
WMOK pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
CBKS **Cedar Bluff** **94.96** **51** ⇓P **P** **10 05 55.1 -0.3**
baz=95
CBKS **Cedar Bluff** **94.96** **51** *e*P **P** **10 05 54.8 -0.6**
comp=Z,49nm,1.2s,mb5.5
CBKS **Cedar Bluff** **94.96** **51** *e*P **P** **10 05 54.8 -0.6**
CBKS pmax pmax
comp=Z,49nm,1.2s,mb5.5
GTA **Gaotai** **95.00** **310** ⇓P **P** **10 05 56.0 +0.4**
GTA pP pP 10 07 50.0 -2.2
GTA pmax pmax
comp=Z,20nm,1.2s,mb5.1
DGMT **Dagmar** **95.63** **40** ⇓P **P** **10 05 58.1 -0.1**
baz=96,SNR=13
DGMT **Dagmar** **95.63** **40** *e*P **P** **10 05 58.0 -0.2**
comp=Z,62nm,1.0s,mb5.8
YKA **Yellowknife Ar** **96.68** **25** P **P** **10 06 01.2 -1.3**
comp=Z,3.0nm,0.7s,mb4.7,baz=238,slow=4.6,SNR=6.1
YKA **Yellowknife Ar** **96.68** **25** P **P** **10 06 01.3 -1.3**
ZAK **Zakamensk** **96.83** **321** *e*P **P** **10 06 01.9 -1.6**
TLY **Talaya** **97.12** **322** *e*P **P** **10 06 04.3 -0.5**
TLY pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
TIXI **Tiksi** **97.55** **346** *e*P **P** **10 06 03.9 -2.4**
comp=Z,11nm,1.0s,mb5.1
TIXI **Tiksi** **97.55** **346** *e*P **P** **10 06 04.5 -1.8**
TIXI pmax pmax
comp=Z,14nm,1.1s,mb5.2
ZALV **Zalesovo Beam** **108.70** **322** PKiKP PKiKP 10 10 56.5 -1.6
comp=Z,4.4nm,0.6s,baz=164,slow=1.2,SNR=22
ZALV PP PP 10 11 32.1 -3.0
comp=Z,1.6nm,0.7s,baz=101,slow=7.7,SNR=4.4
MK31 **Makanchi Array** **109.28** **314** *e*PKPdf PKiKP 10 10 58.1 -1.4
MKAR **Makanchi Array** **109.28** **314** Pdiff Pdif 10 07 00.0 +0.9
comp=Z,0.8nm,0.6s,baz=78,slow=4.6,SNR=4.6
MKAR PKiKP PKiKP 10 10 58.0 -1.4
comp=Z,3.4nm,0.6s,baz=164,slow=0.8,SNR=29
MKAR PKKPbc PKKPbc 10 22 06.7 -1.2
comp=Z,1.1nm,0.6s,baz=266,slow=2.0,SNR=7.1
KURK **Kurchatov** **112.14** **318** PKiKP PKiKP 10 11 03.4 -1.4
comp=Z,4.2nm,0.5s,baz=104,slow=1.8,SNR=16
KURK PP PP 10 11 53.5 -6.0
comp=Z,1.1nm,0.3s,baz=94,slow=7.0,SNR=5.8
KURK **Kurchatov** **112.14** **318** *d* iPKIKP PKiKP 10 11 03.1 -1.6
KURK pmax pmax
comp=Z,7.0nm,1.2s
KSH **Kashi** **112.87** **305** *e*PKP PKiKP 10 11 07.1 +0.6
KSH *e*PKS 10 14 42.8
KSH *e*SKS SKSdf 10 17 33.6 +4.9
KSH AMB AMB
comp=Z,81nm,5.8s
UCH **Uchtor** **114.26** **308** *e*PKPdf PKiKP 10 11 08.8 -0.2
AAK **Ala-Archa** **114.31** **309** ⇑ *e*PKIKP PKiKP 10 11 07.7 -1.4
AML **Almayashu** **114.86** **308** *e*PKPdf PKPdf 10 11 09.8 -0.4
VOSK **Vostochnaya** **116.92** **320** PKIKP PKPdf 10 11 12.3 -1.5
VOSK pmax pmax
comp=Z,11nm,0.6s
KK31 **Karatay Array** **117.26** **309** *i* PKIKP PKPdf 10 11 13.5 -1.3
KK31 pmax pmax
comp=Z,3.0nm,0.5s
BVA0 **Borovoye Array** **117.27** **320** *i* PKIKP PKPdf 10 11 13.1 -1.4
BVA0 pmax pmax
comp=Z,3.0nm,0.4s
BVAR **Borovoye Array** **117.27** **320** PKP PKPdf 10 11 13.5 -1.0
comp=Z,14nm,0.3s,baz=103,slow=2.0,SNR=54
BRVK **Borovoye** **117.33** **320** *i* PKP PKPdf 10 11 13.5 -1.1
BRVK **Borovoye** **117.33** **320** *d* iPKIKP PKPdf 10 11 13.4 -1.2
BRVK pmax pmax
comp=Z,20nm,1.0s
KBL **Kabul** **117.82** **299** *e*PKPdf PKPdf 10 11 15.9 -0.2
ZRNK **Zerenda** **118.11** **320** PKIKP PKPdf 10 11 14.7 -1.4
ZRNK pmax pmax
comp=Z,30nm,1.0s
PKME **Peaks-Kenny Pk** **118.30** **49** *e*PKPdf PKPdf 10 11 15.6 -1.2
SCHQ **Schefferville** **119.30** **38** PKP PKPdf 10 11 16.9 -1.5
comp=Z,5.1nm,0.8s,baz=91,slow=4.2,SNR=6.6
SVE **Sverdlovsk** **122.28** **325** *e*PKIKP PKPdf 10 11 23.5 -0.5
SVE pmax pmax
comp=Z,28nm,0.8s
SUMG **Summit** **122.89** **13** *e*PKPdf PKPdf 10 11 24.6 -0.2
SUMG **Summit** **122.89** **13** *i* P PKPdf 10 11 25.6 +0.8
comp=Z,8.2nm,0.9s
SOKR **Solikamsk** **123.46** **329** *d* iPKIKP PKPdf 10 11 25.2 -1.0
SOKR pmax pmax
comp=Z,50nm,0.8s
ARU **Arti** **123.49** **325** *e*PKPdf PKPdf 10 11 25.6 -0.8
ARU **Arti** **123.49** **325** *i* PKIKP PKPdf 10 11 25.6 -0.7
ARU 10 13 13.2
ARU 10 17 38.6
AB31 **Akbulak array** **124.21** **317** *i* PKIKP PKPdf 10 11 26.9 -1.1
AB31 pmax pmax
comp=Z,2.0nm,0.4s
ABKAR **Akbulak array** **124.21** **317** *e*PKPdf PKPdf 10 11 27.0 -0.9
AKTK **Aktyubinsk** **125.22** **318** PKP PKPdf 10 11 29.0 -0.8
AKTO **Aktyubinsk** **125.22** **318** PKP PKPdf 10 11 29.0 -0.8
comp=Z,1.5nm,0.8s,baz=75,slow=3.2,SNR=54
BOSA **Boshof** **126.03** **208** PKP PKPdf 10 11 32.6 +0.4
comp=Z,5.7nm,0.8s,baz=82,slow=5.3,SNR=7.0
KEV **Kevo** **127.38** **348** *e*PKIKP PKPdf 10 11 31.2 -2.2
KEV **Kevo** **127.38** **348** *e*pkp PKPdf 10 11 31.2 -2.2
ARCES **ARCESS Array B** **127.84** **349** PKP PKPdf 10 11 33.0 -1.3
ARCES PP PP 10 13 47.2 +2.5
ARCES **ARCESS Array B** **127.84** **349** PKhKP PKPpre 10 11 19.7
comp=Z,1.6nm,0.9s,baz=343,slow=3.8,SNR=3.7
ARCES PKP PKPdf 10 11 33.0 -1.3
comp=Z,12nm,0.5s,baz=70,slow=0.9,SNR=60
ARCES PP PP 10 13 47.2 +2.5
comp=Z,5.6nm,0.9s,baz=19,slow=13,SNR=4.8

ARE0 ARCESS Array S 127.84 349 *e*PKPdf PKPdf 10 11 33.5 -0.9
JOF Joensuu 131.83 341 *e*PKIKP PKPdf 10 11 38.1 -3.9
JOF *e* 10 14 17.4
JOF Joensuu 131.83 341 *e*pkp PKPdf 10 11 38.1 -3.9
KAF Kangasniemi 133.90 343 *e*PKIKP PKPdf 10 11 40.4 -5.6
KAF *e* 10 14 21.4
KAF Kangasniemi 133.90 343 *e*pkp PKPdf 10 11 40.4 -5.6
FINES FINESS Array B 134.51 343 PKP PKPdf 10 11 45.2 -1.9
FINES SKPbc SKPbc 10 14 27.7 -0.1
FINES FINESS Array B 134.51 343 PKhKP PKPpre 10 11 31.9
comp=Z,2.4nm,0.8s,baz=58,slow=4.7,SNR=3.8
FINES PKP PKPdf 10 11 45.2 -1.9
comp=Z,12nm,0.5s,baz=97,slow=2.4,SNR=10
FINES SKPbc SKPbc 10 14 27.7 -0.1
comp=Z,7.2nm,0.8s,baz=64,slow=8.7,SNR=4.3
VRHR Novokhopersk 134.77 324 *e*PKIKP PKPdf 10 11 47.1 -0.8
VRHR pmax pmax
comp=Z,20nm,0.8s
VRHR pmax pmax
comp=N,20nm,1.0s
VRHR pmax pmax
comp=E,20nm,1.0s
OBN Obninsk 135.18 331 *e*PKPdf PKPdf 10 11 47.5 -1.1
OBN Obninsk 135.18 331 ⇓*i*PKIKP PKPdf 10 11 47.6 -1.0
OBN *e* 10 14 28.3
OBN PS 10 25 01.0
OBN pmax pmax
comp=Z,47nm,1.2s
RDF Al-Radifah 135.90 291 *e*P PKPpre 10 11 36.9
MIB Mutribah 136.06 293 *e*P PKPpre 10 11 36.5
MIB AMb AMB 10 11 48.7
comp=Z,17nm,0.7s
VSR Storozhevoye 136.06 325 *e*PKIKP PKPdf 10 11 51.2 +0.9
VSR pmax pmax
comp=Z,30nm,0.9s
VSR pmax pmax
comp=N,8.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.7s
NAY Al-Naaiem 136.16 292 *e*P PKPpre 10 11 37.1
GNI Garni 136.71 308 PKP PKPdf 10 11 51.9 0.0
comp=E,5.1nm,0.4s,baz=155,slow=18,SNR=4.2
GNI Garni 136.71 308*c i*PKIKP PKPdf 10 11 52.6 +0.7
KIV Kislovodsk 137.04 314⇓*e*PKP PKPdf 10 11 52.7 +0.3
KIV Kislovodsk 137.04 314 *i*PKIKP PKPdf 10 11 53.0 +0.6
KIV pmax pmax
comp=Z,8.0nm,0.8s
TSUM Tsumeb 137.57 205 PKP PKPdf 10 11 54.9 +0.7
comp=Z,3.7nm,0.6s,baz=116,slow=4.9,SNR=5.9
TSUM PP PP 10 14 41.2 -4.7
comp=Z,5.5nm,0.9s,baz=119,slow=4.7,SNR=5.3
KMBO Kilima Mbogo 137.91 245 *e*PKPdf PKPdf 10 11 57.3 +2.3
NOA NORSAR Array B 138.00 352 PKhKP PKPpre 10 11 43.2
comp=Z,2.4nm,0.7s,baz=347,slow=2.0,SNR=11
NOA SKPbc SKPbc 10 14 37.9 -0.3
comp=Z,4.1nm,0.9s,baz=15,slow=4.5,SNR=7.1
IZAR Zarasai 138.99 338 *e*P PKPdf 10 11 47.5 -8.1
IZAR AMB AMB 10 11 48.9
comp=Z,6.6nm,0.9s
IDID Didziasalis 139.14 337 *e*P PKPdf 10 11 48.3 -7.6
IIGN Ignalina 139.30 337 *e*P PKPdf 10 11 48.9 -7.3
IIGN AMB AMB 10 11 50.9
comp=Z,8.7nm,0.6s
ANN Anapa 140.17 317 *i*PKIKP PKPdf 10 11 59.6 +1.6
ANN pmax pmax
comp=Z,37nm,1.4s
AKASG Malin Array Be 141.42 330 PKhKP PKPpre 10 11 54.1
comp=Z,25nm,0.5s,baz=45,slow=4.1,SNR=125
AKASG SKPbc SKPbc 10 14 48.6 +0.9
comp=Z,2.6nm,0.7s,baz=47,slow=2.1,SNR=4.5
KIEV Kiev 141.43 330 *e*PKPdf PKPdf 10 11 53.7 -6.4
KEMA Kemaliye 141.58 309 *i*P PKPdf 10 11 57.1 -3.7
RRH Rhenigidale 141.59 6 *e*P PKPdf 10 11 54.6 -5.6
RRR Rubha Reidh 141.73 5 *e*P PKPdf 10 11 55.0 -5.4
MVH1 Achvaich 141.78 4 *e*P PKPdf 10 11 55.1 -5.4
MYA Malataya 141.93 307 *e*P PKPdf 10 11 58.4 -3.1
MALT Malatya 141.93 307 *e*P PKPdf 10 11 58.3 -3.1
MALT Malatya 141.93 307 *e*PKPdf PKPdf 10 11 58.1 -3.3
MALT Malatya 141.93 307 ⇓*i*P PKPdf 10 11 58.1 -3.3
KAC Achnashellach 142.12 5 *e*P PKPdf 10 11 56.2 -4.9
MCD Colebum Disti 142.17 3⇓*e*P PKPdf 10 11 56.4 -4.8
SIM Simferopol' 142.17 319*c i*PKHKP PKPpre 10 11 58.0
SIM pmax pmax
comp=Z,43nm,0.8s
MDO Dochfour 142.25 4⇓*e*P PKPdf 10 11 55.8 -5.6
KPL Plockton 142.26 5 P PKPdf 10 11 56.8 -4.6
KPL Plockton 142.26 5 *e*P PKPdf 10 11 56.8 -4.6
KSB Sheil Bridge 142.40 5 *e*P PKPdf 10 11 57.0 -4.7
SVSK Karacayir 142.44 310 *e*P PKPdf 10 11 58.6 -3.7
KAR1 Arisaig 142.66 5⇓*e*P PKPdf 10 11 57.7 -4.4
KVT Kavak 142.67 313 *e*P PKPdf 10 11 59.8 -2.8
MUD Monsted U'grnd 142.72 352 *i*P PKPdf 10 11 58.8 -3.4
comp=Z,34nm,0.7s
GZT Gaziantep 142.88 306 *i*P PKPdf 10 11 59.6 -3.5
COP Copenhagen 142.92 348 *i*P PKPdf 10 11 59.4 -3.2
comp=Z,27nm,0.8s
BSD Bornholm Skovb 142.93 346⇓*i*P PKPdf 10 11 59.2 -3.4
comp=Z,67nm,0.7s
SARI SarD1z-Kayseri 143.10 309 *e*P PKPdf 10 12 01.3 -2.2
GAZ Gaziantep 143.20 306 *e*P PKPdf 10 12 02.2 -1.5
PINB Pinarbasi 143.31 309 *i*P PKPdf 10 12 02.3 -1.6
KMRS Kahramanmaras 143.33 307 *e*P PKPdf 10 12 02.3 -1.7
KUZU Kuzuini 143.42 306 *i*P PKPdf 10 12 03.1 -1.0
EBH Black Hill 143.49 3⇓*e*P PKPdf 10 12 00.8 -2.7
EAB Aberfoyle 143.50 4⇓*e*P PKPdf 10 12 00.8 -2.8
WAR Warsaw 143.65 338 *e*PKP PKPdf 10 12 03.0 -1.0
BZK Bozkurt 143.68 315 *e*P PKPdf 10 12 03.2 -1.2
ANDN Andirin 143.73 307 *i*P PKPdf 10 12 03.7 -0.9
YOZ Yozgat 143.74 311 *e*P PKPdf 10 12 03.5 -1.0
RGN Rugen 143.81 347 *e*PKPbc PKPdf 10 12 02.7 -1.5
EDI Edinburgh 143.83 3 P PKPdf 10 12 01.6 -2.6
EDI Edinburgh 143.83 3 *e*P PKPdf 10 12 01.6 -2.6
ESY Stoneypath 143.86 2⇓*e*P PKPdf 10 12 01.9 -2.3
PGBU Glenifferbraes 143.86 4 *e*P PKPdf 10 12 01.9 -2.3
EAU Auchinoon 143.89 3⇓*e*P PKPdf 10 12 02.4 -1.9
GKP Gorka Klasztor 143.98 342 *e*PKP PKPdf 10 12 03.3 -1.2
EBL Broad Law 143.98 3⇓*e*P PKPdf 10 12 02.5 -1.9
CORM Corum 144.02 312 *e*P PKPdf 10 12 05.1 +0.1
KIS Kishinev 144.04 326⇓*i*P PKPdf 10 12 01.0 -3.8
comp=Z,600nm,1.0s
TOS Tosya 144.07 314 *e*P PKPdf 10 12 05.0 -0.1
KOZT Kozan 144.15 307 *e*P PKPdf 10 12 04.2 -1.1
ILGA Ilgaz 144.28 314 *i*P PKPdf 10 12 06.0 +0.5
BALT Daday 144.28 315 *i*P PKPdf 10 12 04.7 -0.7
HTY Hatay 144.34 305 *e*P PKPdf 10 12 05.7 -0.1
CEYT Ceyhan 144.36 306 *e*P PKPdf 10 12 05.7 0.0
YAYL Yayladag 144.39 305 *i*P PKPdf 10 12 06.0 +0.2
AVNT Avonos 144.41 310 *i*P PKPdf 10 12 05.8 0.0
ESK Eskdalemuir 144.43 3 *e*P PKPdf 10 12 02.4 -2.9
ESK Eskdalemuir 144.43 3 *e*PKPbc PKPdf 10 12 03.8 -1.5
ESK Eskdalemuir 144.43 3 *i*PKIKP PKPdf 10 12 04.3 -0.9
CANT Cankiri 144.54 313 *e*P PKPdf 10 12 06.2 +0.3
ECK Cauldkaine Hil 144.57 3⇓*e*P PKPdf 10 12 04.2 -1.3
ASF Jabal al Asfar 144.70 298 PKP PKPdf 10 12 07.2 +0.8
comp=Z,60nm,0.8s,baz=338,slow=1.8,SNR=82
GAL1 Galloway 144.78 5 *e*P PKPdf 10 12 04.7 -1.2
KARA Karaisali 144.80 307 *e*P PKPdf 10 12 05.2 -1.2
GCD Castle Douglas 144.84 4 *e*P PKPdf 10 12 04.4 -1.6
SAFT Safranbolu 144.88 315 *e*P PKPdf 10 12 06.0 -0.4
BR131 Keskin Array S 144.90 312 *e*PKPbc PKPdf 10 12 06.7 +0.1
BRTR Keskin Array B 144.90 312 PKP PKPdf 10 12 06.0 -0.6
comp=Z,37nm,0.7s,baz=135,slow=4.3,SNR=180
BSEG Bad Segeberg 144.97 349 *e*PKPbc PKPdf 10 12 06.6 +0.4
GULE Gulek 145.00 307 *i*P PKPdf 10 12 06.1 -0.7
HWQ Hawqa 145.00 302 *e*P PKPdf 10 12 07.8 +0.9
KWP Kalwaria Pacla 145.09 334 *e*PKP PKPdf 10 12 07.1 +0.6
KWP Kalwaria Pacla 145.09 334 *e*PKIKP PKPdf 10 12 06.3 -0.2
KWP Kalwaria Pacla 145.09 334⇓*i*P PKPdf 10 12 07.1 +0.6
TLCR 145.16 323⇑P PKPdf 10 12 07.6 +0.8
TLCR 145.16 323⇑*i*P PKPdf 10 12 07.6 +0.8
XDE Dent Fell 145.23 3⇓*e*P PKPdf 10 12 06.4 -0.2
GMM Mts of Mourne 145.30 6 *e*P PKPdf 10 12 06.3 -0.5
RCY Rachaya 145.30 301 *e*P PKPdf 10 12 09.1 +1.6
BHL Bhannes 145.33 301 *e*P PKPdf 10 12 09.1 +1.5
GIM North Isle of 145.37 5⇓*e*P PKPdf 10 12 06.7 -0.2
BUR08 Bucovina Ar. S 145.44 329 *e*PKPbc PKPbc 10 12 08.4 0.0
BURAR Bucovina Array 145.45 329 ⇓P PKPdf 10 12 08.6 +1.4
BURAR Bucovina Array 145.45 329⇓*i*P PKPdf 10 12 08.6 +1.4
BUR01 Bucovina Ar. S 145.45 329 P PKPdf 10 12 07.9 +0.7
TESR 145.49 327 ⇓P PKPdf 10 12 08.3 +1.0
TESR 145.49 327⇓*i*P PKPdf 10 12 08.3 +1.0
CFR Carcaliu 145.55 324⇑P PKPdf 10 12 08.7 +1.2
CFR Carcaliu 145.55 324⇑*i*P PKPdf 10 12 08.7 +1.2
SULT Sultanhani-AKS 145.60 309 *e*P PKPdf 10 12 08.7 +0.9
RUE Ruedersdorf 145.61 345 *e*PKPbc PKPbc 10 12 08.4 -0.4
RUE Ruedersdorf 145.61 345 *e*PKPbc PKPbc 10 12 08.3 -0.5
SGKT Sivrigoynuk 145.62 314 *i*P PKPdf 10 12 07.0 -0.8
OJC Ojcow 145.75 337 *e*PKPdf PKPdf 10 12 07.4 -0.3
OJC *i*PKPab PKPab 10 12 09.0 -1.8
TIRR Tirgusor 145.83 323 *e*PKPbc PKPbc 10 12 08.9 -0.7
TIRR Tirgusor 145.83 323 PKP2 PKPab 10 12 09.8 -1.6
TIRR Tirgusor 145.83 323⇓*i*P PKPdf 10 12 09.4 +1.4
STHS Stebnicka Huta 145.85 335 *e*PKP PKPdf 10 12 09.5 +1.7
STHS Stebnicka Huta 145.85 335 *e*PKP PKPdf 10 12 09.5 +1.7
STHS Stebnicka Huta 145.85 335 *e*PKP PKPdf 10 12 09.5 +1.7
HPK Haverah Park 145.85 2 P PKPdf 10 12 08.6 +0.9
HPK Haverah Park 145.85 2 *e*P PKPdf 10 12 08.6 +0.9
VRI Vrincioaia 145.88 326⇑P PKPdf 10 12 09.4 +1.4
VRI Vrincioaia 145.88 326 PKP2 PKPab 10 12 10.1 -1.4
VRI Vrincioaia 145.88 326⇑*i*P PKPdf 10 12 09.4 +1.4
PLOR Plostina 145.93 326⇑PKIKP PKPdf 10 12 09.4 +1.3
PLOR Plostina 145.93 326⇑*i*P PKPdf 10 12 09.4 +1.3
UZH Uzhgorod 146.03 333 *e*PKP2 PKPbc 10 12 09.9 -0.2
DCN Croghan 146.03 8⇑*i*P PKPdf 10 12 08.8 +0.8
EREN Erenkoy 146.04 305 *e*P PKPbc 10 12 10.6 0.0
GRER 146.06 325 P PKPbc 10 12 11.4 +1.1
CRVS Cervenica-Dubn 146.17 334 *e*PKP PKPdf 10 12 10.2 +1.8
CRVS *e* 10 14 12.3
CRVS Cervenica-Dubn 146.17 334 *e*PKP PKPdf 10 12 10.2 +1.8
CRVS *e* 10 14 12.2
CRVS Cervenica-Dubn 146.17 334 *e*PKP PKPdf 10 12 10.2 +1.8
DLF Lyons Farm 146.17 7⇑*i*P PKPdf 10 12 09.2 +0.9
IKL Isikli 146.18 306 *e*P PKPdf 10 12 10.4 +1.5
NIE Niedzica 146.21 336 *e*PKP PKPbc 10 12 10.9 +0.3
BMR Baia Mare 146.22 331 P PKPbc 10 12 10.7 0.0
DSB Dublin 146.23 7 *e*PKPdf PKPdf 10 12 07.3 -1.1
DSB *e*PKPbc PKPbc 10 12 09.3 -1.2
MDU Mudurnu 146.24 315 *e*P PKPdf 10 12 09.6 +0.8
TRPA Tarpa 146.31 332⇓*i*P PKPbc 10 12 10.6 -0.3
WLF1 Llynfaes 146.38 5 *e*P PKPdf 10 12 09.3 +0.7
NRDL Niedersach Rie 146.39 349 *e*PKPbc PKPbc 10 12 09.5 -1.5
KSP Ksiaz 146.40 341 *e*PKP PKPbc 10 12 11.1 0.0
KSP Ksiaz 146.40 341 *e*PKIKP PKPdf 10 12 08.4 -0.3
KSP *i* 10 12 13.4
PSN Preselentsi 146.43 322 *e*P PKPbc 10 12 10.6 -0.8
KIZT Kizilcal 146.49 312 *e*P PKPbc 10 12 11.2 -0.5
SVRH Sivrihisar-ESK 146.49 313 *e*P PKPbc 10 12 11.1 -0.6
DOPR Dopca 146.51 327⇑*i*P PKPbc 10 12 12.0 +0.5
KONT Konya--Tatoy 146.54 310 *e*P PKPbc 10 12 11.0 -0.9
MLR Muntele Rosu 146.54 326 PKPbc PKPbc 10 12 11.1 -0.5
comp=Z,38nm,0.5s,baz=2.4,slow=6.1,SNR=46
MLR Muntele Rosu 146.54 326⇓*i*P PKPbc 10 12 11.1 -0.5
KBI1 Birley Grange 146.56 2⇓*e*P PKPdf 10 12 10.1 +1.1
WIT Witteveen 146.60 353 *e*PKP PKPbc 10 12 11.9 +0.3
comp=Z,816nm,1.4s
LFK Lefkose 146.62 305 *e*P PKPbc 10 12 11.7 -0.5
ERMK Ermenek 146.62 307 *i*P PKPdf 10 12 11.3 +1.8
OKC Ostrava-Krasne 146.66 338 *e*PKP2 PKPbc 10 12 11.6 -0.2
OKC Ostrava-Krasne 146.66 338⇓*e*PKP PKPbc 10 12 11.6 -0.2
GULT Gulveren 146.72 315 *e*P PKPbc 10 12 11.7 -0.5
UPC Upice 146.78 341 *e*PKP2 PKPbc 10 12 12.2 +0.1
UPC Upice 146.78 341⇑*e*PKP PKPbc 10 12 12.2 +0.1
UPC *e*PKPAB PKPab 10 12 15.3 +0.4
KWE Weaver Farm 146.79 2 *e*P PKPdf 10 12 10.8 +1.5
EIL Elat 146.79 294 PKPbc PKPbc 10 12 12.9 +0.1
comp=Z,34nm,0.7s,baz=351,slow=1.4,SNR=22
DPC Dobruska-Polom 146.82 341 *e*PKP2 PKPab 10 12 15.2 +0.1
DPC Dobruska-Polom 146.82 341 *e*PKPAB PKPab 10 12 15.2 +0.1
HDMB Hadim 146.82 308 *e*P PKPbc 10 12 11.9 -0.8
CSS Prodhromos 146.87 304 P PKPbc 10 12 12.6 -0.3
comp=Z,1.1nm,0.8s
CLL Collm 146.88 345 *e*PKPdf PKPdf 10 12 09.4 -0.1
CLL *e*PKPbc PKPbc 10 12 12.0 -0.3
CLL *e*PKPab PKPab 10 12 15.0 -0.3
CLL Collm 146.88 345 *e*PKP PKPdf 10 12 09.0 -0.5
CLL ⇓*i*PKP PKPbc 10 12 12.1 -0.2
CLL *e*pPKP pPKPdf 10 14 15.0 +1.4
CLL Collm 146.88 345⇓*e*PKIKP PKPdf 10 12 09.0 -0.5
CLL *i* 10 12 12.1
CLL pmax pmax
comp=Z,230nm,0.9s
CLL Collm 146.88 345 *e*PKPdf PKPdf 10 12 09.0 -0.5
CLL ⇓*i*PKPbc PKPbc 10 12 12.1 -0.2
comp=Z,230nm,0.9s
CLL *i*PKPab PKPab 10 12 14.9 -0.4
comp=Z,106nm,0.7s
CLL *e*pPKPbc pPKPbc 10 14 15.0 +0.7
CLL *e*sPKPbc 10 15 02.0
MAMC Mammari 146.89 305 P PKPbc 10 12 12.9 0.0
MORC Moravsky Berou 146.92 339 *e*PKPdf PKPdf 10 12 09.2 -0.5
MORC *e*PKPbc PKPbc 10 12 12.0 -0.5
MORC Moravsky Berou 146.92 339 PKP2 PKPbc 10 12 12.6 +0.1
MORC Moravsky Berou 146.92 339⇑*i*P PKPdf 10 12 09.7 -0.1
SILT Sile 146.93 317 *e*P PKPbc 10 12 12.3 -0.5
IBBN Ibbenburen 146.95 351 *e*PKPbc PKPbc 10 12 12.2 -0.3
IBBN *e*PKPab PKPab 10 12 15.2 -0.4
CLZ Clausthal 146.96 348 *e*PKPdf PKPdf 10 12 10.0 +0.4
CLZ *e*PKPbc PKPbc 10 12 12.5 0.0
CLZ *e*PKPab PKPab 10 12 15.5 -0.1
BRG Berggiesshubel 147.04 344 *e*PKPdf PKPdf 10 12 09.9 +0.1
BRG *e*PKPbc PKPbc 10 12 12.6 -0.2
BRG *e*PKPab PKPab 10 12 16.0 +0.1
BRG Berggiesshubel 147.04 344 *i*PKP PKPdf 10 12 09.7 -0.1
comp=Z,19nm,1.4s
BRG Berggiesshubel 147.04 344 *i*PKP PKPbc 10 12 12.6 -0.2
comp=Z,96nm,0.8s
BRG Berggiesshubel 147.04 344 *i*PKP PKPab 10 12 15.5 -0.5
comp=Z,81nm,1.0s
BRG *e*pPKP pPKPdf 10 14 07.0 -6.8
comp=Z,4.8nm,0.9s
BRG *i* 10 15 02.1
comp=Z,20nm,1.4s
BRG Berggiesshubel 147.04 344 *i*PKIKP PKPdf 10 12 09.6 -0.2
BRG *i* 10 12 15.5
BRG *e* 10 14 07.0
BRG *i* 10 15 02.2
BRG pmax pmax
comp=Z,11nm,1.4s
VOIR 147.04 327 ⇓P PKPbc 10 12 13.2 +0.3
VOIR 147.04 327 PKP2 PKPbc 10 12 13.8 +0.8
VOIR 147.04 327⇓*i*P PKPbc 10 12 13.3 +0.3
CWF Charnwood Fore 147.08 1 P PKPdf 10 12 10.1 +0.3
CWF Charnwood Fore 147.08 1 *e*P PKPdf 10 12 10.1 +0.3
HRT Hereke 147.08 316 *e*P PKPbc 10 12 12.4 -0.9
LEF Lefka 147.16 305 *e*P PKPbc 10 12 12.8 -0.8
PRD Provadia 147.17 322 *e*P PKPdf 10 12 11.8 +1.5
PVCC Panska Ves 147.18 343 *e*PKP2 PKPbc 10 12 13.3 +0.1
PVCC Panska Ves 147.18 343⇓*e*PKP PKPbc 10 12 13.3 +0.1
PVCC *e*PKPAB PKPab 10 12 16.4 -0.1
AEU East Anglia Un 147.20 359 *e*P PKPdf 10 12 11.9 +1.9
GAZI Gazipasa 147.22 307 *i*P PKPdf 10 12 12.4 +1.8
DRGR 147.23 331 ⇓P PKPbc 10 12 13.2 -0.2
DRGR 147.23 331 PKP2 PKPbc 10 12 13.4 0.0
DRGR 147.23 331⇓*i*P PKPbc 10 12 13.1 -0.3
DRGR 147.23 331⇓*i*P PKPbc 10 12 13.2 -0.2
ADVT Abdulvahap 147.23 315 *e*P PKPbc 10 12 13.3 -0.3
CAVI Cavuskoy 147.28 315 *e*P PKPbc 10 12 13.3 -0.5
ISK Istanbul-Kandi 147.35 317 *e*P PKPdf 10 12 10.9 +0.3
ALFC Alevga 147.38 305 P PKPbc 10 12 13.6 -0.6
comp=Z,3.7nm,0.6s
YLV Yalova 147.41 316 *e*P PKPbc 10 12 13.3 -0.8
WTSB Winterswijk 147.42 352 *e*PKP PKPdf 10 12 10.2 -0.2
comp=Z,29nm,0.5s
WTSB Winterswijk 147.42 352 *ex* PKPbc 10 12 13.0 -0.7
WTSB Winterswijk 147.42 352 *ex* PKPab 10 12 16.5 -0.9
BGKT Bogazkoy 147.47 317 *e*P PKPbc 10 12 13.5 -0.8
VYHS Vyhne 147.53 336 *e*PKP PKPbc 10 14 14.1 0.0
VYHS *e* 10 14 21.1
VYHS Vyhne 147.53 336 *e*PKP PKPbc 10 12 14.1 0.0
VYHS *e* 10 14 21.1
VYHS Vyhne 147.53 336 *e*PKP PKPbc 10 12 14.1 0.0
PSZ Piszkesteto 147.58 335 *e*PKPbc PKPbc 10 12 13.5 -0.8
PSZ *e*PKPab PKPab 10 12 18.3 0.0
PSZ Piszkesteto 147.58 335 PKP2 PKPbc 10 12 14.3 0.0
PSZ Piszkesteto 147.58 335⇓*i*P PKPbc 10 12 14.0 -0.3
PSZ Piszkesteto 147.58 335⇓*e*PKP PKPbc 10 12 14.1 -0.2
CTKS Kestanelik-??a 147.61 318 *e*P PKPbc 10 12 13.8 -0.8
KOLL Kolacno 147.62 337 *e*PKP PKPbc 10 12 14.6 +0.2
KOLL Kolacno 147.62 337 *e*PKP PKPbc 10 12 14.6 +0.2
KOLL Kolacno 147.62 337 *e*PKP PKPbc 10 12 14.6 +0.2
VRAC Vranov 147.64 339 ⇓P PKPbc 10 12 14.3 -0.1
VRAC Vranov 147.64 339 PKPbc PKPbc 10 12 14.1 -0.3
baz=61,slow=4.0
VRAC Vranov 147.64 339 PKP2 PKPbc 10 12 14.5 +0.1
VRAC Vranov 147.64 339⇓*i*P PKPbc 10 12 14.3 -0.1
ALT Altintas 147.65 313 *e*P PKPbc 10 12 13.9 -0.8
HTR Trewern Hill 147.66 4⇓*e*P PKPbc 10 12 13.1 -1.3
PPCY Paphos 147.66 304 P PKPbc 10 12 14.0 -0.9
PRU Pruhonice 147.67 342 *e*PKP2 PKPbc 10 12 15.0 +0.6
PRU Pruhonice 147.67 342⇑*e*PKP PKPbc 10 12 15.0 +0.6
PRU *e*PKPAB PKPab 10 12 19.1 +0.6
ARMT Armutlu 147.74 316 *e*P PKPbc 10 12 14.3 -0.6
MCH1 Michaelchurch 147.76 3 *e*P PKPbc 10 12 13.5 -1.1
MOX Moxa 147.82 346 *e*PKP PKPdf 10 12 10.8 -0.3
MOX *e* 10 12 14.4
comp=Z,71nm,1.0s
MOX Moxa 147.82 346 *e*PKPdf PKPdf 10 12 11.0 -0.1
MOX *e*PKPbc PKPbc 10 12 14.6 -0.2
MOX *e*PKPab PKPab 10 12 18.8 -0.3
WERD Werda 147.85 345 *e*PKPdf PKPdf 10 12 11.2 +0.1
WERD *e*PKPbc PKPbc 10 12 14.7 -0.2
WERD *e*PKPab PKPab 10 12 19.1 -0.1
BUG Bochum--Univer 147.87 351 *e*PKPbc PKPbc 10 12 14.4 -0.5
BUG *e*PKPab PKPab 10 12 18.5 -0.8
GUNZ Gunzen 147.92 345 *e*PKPdf PKPdf 10 12 11.4 +0.1
GUNZ *e*PKPbc PKPbc 10 12 15.1 0.0
GUNZ *e*PKPab PKPab 10 12 19.6 +0.1
WERN Wernitzgruen 147.98 345 *e*PKPbc PKPbc 10 12 15.4 +0.2
WERN *e*PKPab PKPab 10 12 19.9 +0.1
TREC Trest 148.00 341 *e*PKP2 PKPbc 10 12 15.2 -0.1
TREC Trest 148.00 341⇑*e*PKP PKPbc 10 12 15.2 -0.1
NKC Novy Kostel 148.01 345 *e*PKP2 PKPbc 10 12 15.4 +0.1
NKC Novy Kostel 148.01 345⇑*e*PKP PKPbc 10 12 15.4 +0.1
NKC *e*PKPAB PKPab 10 12 19.8 -0.1
GDZ Gediz 148.06 313 *i*P PKPbc 10 12 14.8 -1.0
JMB Yambol 148.09 321 P PKPbc 10 12 15.9 +0.1
JMB Yambol 148.09 321 P PKPbc 10 12 15.9 +0.1
JMB Yambol 148.09 321 *e*P PKPbc 10 12 15.6 -0.2
HGH Gray Hill 148.12 3⇓*e*P PKPbc 10 12 14.5 -1.0
MODS Modra-Piesok 148.20 338 *e*PKP PKPbc 10 12 16.2 +0.4
MODS *e* 10 15 04.0
MODS Modra-Piesok 148.20 338 *e*PKP PKPbc 10 12 16.2 +0.4
MODS *e* 10 15 04.0
MODS Modra-Piesok 148.20 338 *e*PKP PKPbc 10 12 16.2 +0.4
KCTX Karacabey (Bur 148.23 316 *e*P PKPbc 10 12 14.9 -1.2
BUD Budapest 148.28 335⇓*e*PKP PKPbc 10 12 15.8 -0.3
PVL Pavlikeni 148.35 323 *e*P PKPbc 10 12 15.8 -0.6
KORT Korkueli 148.38 309 *i*P PKPbc 10 12 16.3 -0.4
ZST Bratislava 148.41 338 *e*PKP PKPbc 10 12 16.5 +0.1
ZST *e* 10 14 25.8
ZST Bratislava 148.41 338 *e*PKP PKPbc 10 12 16.5 +0.1
ZST *e* 10 14 25.8
ZST Bratislava 148.41 338 *e*PKP PKPbc 10 12 16.5 +0.1
BNT Bandirma 148.46 317 *e*P PKPbc 10 12 16.2 -0.5
DURS Dursunbey 148.49 315 *i*P PKPdf 10 12 13.8 +1.2
BZS Buzias 148.61 330 ⇑P PKPbc 10 12 16.5 -0.5
BZS Buzias 148.61 330 PKP2 PKPbc 10 12 16.8 -0.2
BZS Buzias 148.61 330⇑*i*P PKPbc 10 12 16.5 -0.5
HGN Heimansgroeve 148.71 353 *e*PKP PKPbc 10 12 16.2 -0.8
comp=Z,68nm,1.1s
HGN Heimansgroeve 148.71 353 *ex* PKPab 10 12 21.9 -0.9
KHC Kasperske Hory 148.72 343 *e*PKPdf PKPdf 10 12 12.2 -0.4
KHC *e*PKPbc PKPbc 10 12 16.9 -0.2
KHC Kasperske Hory 148.72 343 *e*PKHKP PKPdf 10 12 12.5 -0.1
KHC *e* 10 12 22.2
KHC Kasperske Hory 148.72 343 *e*PKPDF PKPdf 10 12 12.5 -0.1
KHC ⇑*e*PKP PKPbc 10 12 17.2 +0.1
KHC *e*PKPAB PKPab 10 12 22.2 -0.7
KHC *ep*PKP pPKPdf 10 14 24.0 +7.2
RKY Sarkoy-Tekirda 148.76 318 *e*P PKPbc 10 12 15.9 -1.5
GONE Gonen-Balikesi 148.78 316 *e*P PKPbc 10 12 16.7 -0.9
GRA1 Grafenberg Arr 148.81 346 *e*PKPbc PKPbc 10 12 17.3 0.0
GRA1 *e*PKPab PKPab 10 12 23.4 +0.2
GRA1 *ep*PKPbc pPKPbc 10 14 26.3 +6.4
GRF Grafenberg Arr 148.81 346 *e*PKPbc PKPbc 10 12 17.3 0.0
GRF *e*PKPab PKPab 10 12 23.4 +0.2
GRF *ep*PKPbc pPKPbc 10 14 26.3 +6.4
ELL Elmali 148.81 309 *e*P PKPbc 10 12 17.5 -0.2
MEM Membach 148.85 352 PKPbc PKPbc 10 12 17.1 -0.3
MEM PKPab PKPab 10 12 22.6 -0.7
GOLH Golhisar 148.85 310 *i*P PKPbc 10 12 16.5 -1.4
TNS Taunus Mts 148.86 349 *e*PKPbc PKPbc 10 12 17.2 -0.2
TNS *e*PKPab PKPab 10 12 22.9 -0.5
BALB Balikesir 148.87 316 *e*P PKPbc 10 12 17.1 -0.7
WET Wettzell 148.90 343 *e*PKPdf PKPdf 10 12 12.8 -0.1
WET *e*PKPbc PKPbc 10 12 17.4 -0.1
WET *e*PKPab PKPab 10 12 23.9 +0.3
KULA Kula-Manisa 148.90 313 *e*P PKPbc 10 12 16.7 -1.2
GEC2 GERESS Array S 148.94 342 *e*PKPdf PKPdf 10 12 12.8 -0.2
GEC2 *e*PKPbc PKPbc 10 12 17.5 -0.2
GEC2 *ep*PKPab pPKPab 10 14 27.4 +5.0
DNZL Cakiroluk 149.02 311 *i*P PKPbc 10 12 19.0 +0.7
SOP Sopron 149.04 338⇓*e*PKP PKPbc 10 12 17.9 0.0
CONA Conrad Observa 149.07 339⇑*i*PKPdf PKPdf 10 12 12.9 -0.3
comp=Z,7.8nm,1.3s
CONA Conrad Observa 149.07 339 P PKPbc 10 12 18.1 +0.1
comp=Z,81nm,0.7s,SNR=41
CONA Conrad Observa 149.07 339 P PKPab 10 12 25.2 +0.8
comp=Z,71nm,1.3s
BCLA Clavier 149.12 353 PKPbc PKPbc 10 12 17.4 -0.6
BCLA PKPab PKPab 10 12 23.6 -0.8
SNF Seneffe 149.13 355 PKPbc PKPbc 10 12 17.8 -0.3
SNF PKPab PKPab 10 12 23.8 -0.7
MPEP Malo Peshtene 149.14 325 *e*P PKPbc 10 12 17.0 -1.3
AKAS Kas 149.24 308 *i*P PKPbc 10 12 17.1 -1.7
KDZ Kurdzhali 149.28 321 *e*P PKPbc 10 12 17.6 -1.1
AKS Akhisar 149.30 314 *e*P PKPbc 10 12 18.3 -0.6
ABH Alteburg 149.34 350 PKP PKPbc 10 12 18.3 -0.3
ALN Alexandroupoli 149.34 319 P PKPbc 10 12 17.8 -1.1
ALN Alexandroupoli 149.34 319 P PKPbc 10 12 17.8 -1.1
GELI Tayfur-Gelibol 149.36 318 *e*P PKPbc 10 12 18.1 -0.9
ENEZ Enez 149.37 319 *e*P PKPbc 10 12 18.0 -1.0
CCA1 Carnmenellis 149.38 6 P PKPbc 10 12 16.7 -1.9
CCA1 Carnmenellis 149.38 6 *e*P PKPbc 10 12 16.7 -1.9
TOD Tromm 149.39 349 PKHKP PKPbc 10 12 18.3 -0.4
PGB Panagyurishte 149.44 323 *e*P PKPbc 10 12 17.8 -1.3
PKSM Moragy 149.46 334 ⇑P PKPdf 10 12 12.9 -1.0
PKSM Moragy 149.46 334⇑*i*P PKPdf 10 12 12.9 -1.0
GIVF Givet 149.48 354 *e*PKIKP PKPdf 10 12 14.2 +0.4
DOU Dourbes 149.51 354 PKPbc PKPbc 10 12 18.8 -0.2
DOU PKPab PKPab 10 12 25.1 -1.0
BAIF Baives 149.59 355 *e*PKIKP PKPdf 10 12 13.3 -0.6
RUP Ruppelstein 149.59 351 PKHKP PKPbc 10 12 19.1 -0.1
MOA Molln 149.66 341⇑*i*PKPdf PKPdf 10 12 13.3 -0.8
comp=Z,2.1nm,0.4s,SNR=12
MOA Molln 149.66 341 P PKPbc 10 12 19.0 -0.4
comp=Z,28nm,0.6s
MOA Molln 149.66 341 P PKPab 10 12 27.3 +0.4
comp=Z,45nm,1.1s
RZN Rozhen 149.67 322 *e*P PKPbc 10 12 18.5 -1

PERS				*i* PKPbc	PKPbc	10 12 20.5	-0.8	
DAT	**Datca**	**150.50**	**311**	*e*P	PKPbc	10 12 20.6	-1.2	
DIVS	**Divibare**	**150.51**	**330**	P	PKPbc	10 12 21.3	-0.2	
BODT	**Bodrum**	**150.53**	**312**	*e*P	PKPbc	10 12 19.9	-1.9	
KBA	**Koelnbreinsper** SNR=19	**150.63**	**341**	P	PKPbc	10 12 20.7	-1.0	
BFO	**Black Forest**	**150.71**	**348**	*e*PKPbc	PKPbc	10 12 21.4	-0.4	
BFO				*e*PKPab	PKPab	10 12 30.6	-0.5	
CHOS	**Chios island**	**150.73**	**315**	P	PKPbc	10 12 21.8	-0.4	
CDF	**Champ du Feu**	**150.81**	**350**	*e*PKIKP	PKPdf	10 12 14.7	-1.2	
SPAK	**Spaichingen-Ko**	**150.84**	**348**	PKP	PKPbc	10 12 21.5	-0.6	
WATA	**Walderalm** comp=Z,11nm,1.0s,SNR=21	**150.91**	**344**	⇑*i* PKPdf	PKPdf	10 12 15.3	-0.8	
WATA	**Walderalm** comp=Z,42nm,0.5s	**150.91**	**344**	P	PKPbc	10 12 21.8	-0.6	
WATA	**Walderalm** comp=Z,47nm,1.0s	**150.91**	**344**	P	PKPab	10 12 31.8	-0.2	
MYKA	**Terra Mystica** comp=Z,4.6nm,0.9s	**150.94**	**340**	⇓*i* PKPdf	PKPdf	10 12 15.5	-0.6	
MYKA	**Terra Mystica** comp=Z,56nm,0.5s	**150.94**	**340**	P	PKPbc	10 12 21.3	-1.1	
MYKA	**Terra Mystica** comp=Z,29nm,0.8s	**150.94**	**340**	P	PKPab	10 12 31.1	-1.1	
WTTA	**Wattenberg** comp=Z,15nm,1.2s	**150.96**	**343**	⇓*i* PKPdf	PKPdf	10 12 15.5	-0.7	
WTTA	**Wattenberg** comp=Z,105nm,0.5s,SNR=47	**150.96**	**343**	P	PKPbc	10 12 22.1	-0.3	
WTTA	**Wattenberg** comp=Z,60nm,0.5s	**150.96**	**343**	P	PKPab	10 12 32.3	+0.1	
RETA	**Reutte** comp=Z,5.8nm,1.0s	**150.97**	**345**	⇑*i* PKPdf	PKPdf	10 12 15.6	-0.6	
RETA	**Reutte** comp=Z,37nm,0.6s	**150.97**	**345**	P	PKPbc	10 12 21.9	-0.6	
RETA	**Reutte** comp=Z,104nm,1.0s	**150.97**	**345**	P	PKPab	10 12 32.3	0.0	
LIBD	**Limburg**	**151.01**	**349**	PKIKP	PKPbc	10 12 22.3	-0.2	
MOTA	**Moosalm** comp=Z,8.2nm,0.9s,SNR=22	**151.02**	**344**	⇑*i* PKPdf	PKPdf	10 12 15.6	-0.6	
MOTA	**Moosalm** comp=Z,55nm,0.7s	**151.02**	**344**	P	PKPbc	10 12 21.9	-0.7	
MOTA	**Moosalm** comp=Z,49nm,0.7s	**151.02**	**344**	P	PKPab	10 12 32.3	-0.1	
ECH	**Echery**	**151.02**	**350**	PKP	PKPbc	10 12 21.4	-1.2	
ECH	**Echery**	**151.02**	**350**	*e*PKPdf	PKPdf	10 12 15.1	-1.1	
ECH				*e*PKPbc	PKPbc	10 12 21.3	-1.3	
ECH				PKP	PKPdf	10 12 21.4	+5.2	
ECH				*e*PKPab	PKPab	10 12 31.1	-1.4	
CRES	**Cresnjev**	**151.02**	**337**	*i* PKPdf	PKPdf	10 12 15.5	-0.8	
CRES				*i* PKPbc	PKPbc	10 12 22.3	-0.4	
CRES				*i*		10 12 32.2		
MEZF	**Maizieres J'vi**	**151.04**	**353**	*e*PKIKP	PKPdf	10 12 15.7	-0.5	
FLN	**La Foliniere**	**151.07**	**1**	*e*PKIKP	PKPdf	10 12 16.5	+0.2	
VAY	**Valandovo**	**151.14**	**323**	P	PKPbc	10 12 21.1	-2.0	
VAY	**Valandovo**	**151.14**	**323**	P	PKPbc	10 12 21.1	-2.0	
VAY	**Valandovo**	**151.14**	**323**	*e*PKP	PKPbc	10 12 21.3	-1.8	
LJU	**Ljubljana**	**151.16**	**339**	*i* PKPdf	PKPdf	10 12 15.8	-0.7	
LJU				*i* PKPbc	PKPbc	10 12 22.5	-0.5	
ABTA	**Abfaltersbach** comp=Z,19nm,1.0s	**151.18**	**342**	⇑*i* PKPdf	PKPdf	10 12 14.7	-1.8	
ABTA	**Abfaltersbach** comp=Z,149nm,1.1s,SNR=18	**151.18**	**342**	P	PKPbc	10 12 22.0	-1.0	
ABTA	**Abfaltersbach** comp=Z,40nm,0.7s	**151.18**	**342**	P	PKPab	10 12 32.7	-0.5	
THEF	**They Montfort**	**151.19**	**352**	PKP	PKPbc	10 12 22.0	-0.9	
FELD	**Feldberg im Sc**	**151.20**	**349**	PKP	PKPbc	10 12 22.3	-0.7	
LDF	**La Druitiere**	**151.25**	**0**	*e*PKIKP	PKPdf	10 12 16.7	+0.2	
SKO	**Skopje**	**151.32**	**325**	*e*PKP	PKPbc	10 12 23.3	-0.1	
HAU	**Haudompre** comp=Z,18nm,1.0s	**151.35**	**351**	*e*PKIKP	PKPdf	10 12 15.8	-0.9	
DAVA	**Damuels** comp=Z,11nm,1.3s	**151.37**	**346**	⇑*i* PKPdf	PKPdf	10 12 16.6	-0.1	
DAVA	**Damuels** comp=Z,46nm,0.8s,SNR=8.7	**151.37**	**346**	P	PKPbc	10 12 23.1	-0.2	
DAVA	**Damuels** comp=Z,72nm,0.7s	**151.37**	**346**	P	PKPab	10 12 33.9	-0.1	
PLE	**Pljevlja**	**151.38**	**329**	⇓*i* PKP	PKPbc	10 12 23.5	0.0	
MOF	**Molkenrain**	**151.38**	**350**	PKP	PKPbc	10 12 23.1	-0.3	
ROSF	**Rostrenen**	**151.38**	**4**	*e*PKIKP	PKPdf	10 12 15.3	-1.5	
VOY	**Vojsko**	**151.39**	**339**	*e*PKPdf	PKPdf	10 12 16.0	-0.8	
VOY				*e*PKPbc	PKPbc	10 12 22.6	-0.9	
VOY				*e*		10 12 26.0		
VOY				*e*		10 12 33.0		
FETA	**Feichten** comp=Z,15nm,1.0s,SNR=10	**151.42**	**344**	⇓*i* PKPdf	PKPdf	10 12 16.7	-0.1	
FETA	**Feichten** comp=Z,58nm,0.8s	**151.42**	**344**	P	PKPbc	10 12 23.5	0.0	
GRR	**Gorron**	**151.44**	**1**	*e*PKIKP	PKPdf	10 12 17.2	+0.4	
HINF	**Hinteralfeld** comp=Z,87nm,1.7s	**151.46**	**350**	*e*PKIKP	PKPdf	10 12 15.7	-1.2	
IVA	**Berane**	**151.47**	**328**	⇓*i* PKP	PKPbc	10 12 23.2	-0.6	
SGMF	**Saint Gilles**	**151.51**	**3**	*e*PKIKP	PKPdf	10 12 15.6	-1.3	
PVY	**Plav**	**151.64**	**328**	⇓*i* PKP	PKPbc	10 12 23.3	-0.8	
BBS	**Basel-Blauen**	**151.69**	**349**	PKP	PKPbc	10 12 23.9	-0.2	
UPM	**Unac-Piva**	**151.70**	**330**	⇓*i* PKP	PKPbc	10 12 23.2	-1.1	
TRI	**Trieste**	**151.72**	**339**	*e*PKPbc	PKPbc	10 12 23.2	-1.0	
TRI				*e*PKPab	PKPab	10 12 33.3	-2.2	
APE	**Apeiranthos**	**151.77**	**313**	⇓PKIKP	PKPbc	10 12 22.8	-1.8	
APE	**Apeiranthos**	**151.77**	**313**	⇓*i* P	PKPbc	10 12 22.8	-1.8	
SKDS	**Skadanscina**	**151.77**	**339**	*i* PKPdf	PKPdf	10 12 16.3	-1.1	
SKDS				*i* PKPbc	PKPbc	10 12 23.4	-0.9	
QUIF	**Quistinic**	**151.81**	**4**	*e*PKIKP	PKPdf	10 12 15.9	-1.5	
KRUS	**Krusevo**	**151.84**	**325**	*e*PKP	PKPbc	10 12 23.2	-1.4	
DAVOX	**Davos/Dischmat** comp=Z,11nm,1.0s,baz=337,slow=1.8,SNR=12	**151.85**	**345**	PKP	PKPdf	10 12 17.3	-0.2	
DAVOX				PKPbc	PKPbc	10 12 24.5	+0.1	
DAVOX	comp=Z,83nm,0.6s,baz=238,slow=1.9,SNR=155			PKPab	PKPab	10 12 36.2	+0.2	
LOMF	**Lomont** comp=Z,54nm,0.6s,baz=16,slow=4.6,SNR=15	**151.92**	**350**	PKP	PKPbc	10 12 24.6	0.0	
NKY	**Niksic**	**151.96**	**329**	⇓*i* PKP	PKPbc	10 12 24.0	-0.8	
LIT	**Litokhoron**	**151.98**	**321**	P	PKPbc	10 12 22.7	-2.3	
BRY	**Bratogost**	**152.11**	**330**	*e*PKP	PKPbc	10 12 24.0	-1.2	
TTG	**Podgorica**	**152.12**	**328**	⇓*i* PKP	PKPbc	10 12 24.3	-0.9	
FNA	**Florina**	**152.17**	**323**	P	PKPbc	10 12 24.5	-0.9	
LOR	**Lormes** comp=Z,29nm,1.1s	**152.38**	**354**	*e*PKIKP	PKPdf	10 12 17.7	-0.6	
BUM	**Brajici-Budva**	**152.39**	**329**	⇓*i* PKP	PKPbc	10 12 25.0	-0.8	
ULC	**Ulcinj**	**152.47**	**328**	⇓*i* PKP	PKPbc	10 12 25.0	-1.0	
HCY	**Herceg Novi**	**152.47**	**329**	⇓*i* PKP	PKPbc	10 12 24.3	-1.7	
ATAL	**Atalanti**	**152.52**	**318**	P	PKPbc	10 12 24.9	-1.3	
LKR	**Lokris**	**152.56**	**318**	P	PKPbc	10 12 24.8	-1.5	
TIR	**Tirane**	**152.60**	**326**	*e*PKPbc	PKPbc	10 12 26.1	-0.2	
SSF	**Saint Saulge**	**152.62**	**355**	*e*PKIKP	PKPdf	10 12 17.9	-0.7	
AGG	**Agios Georgios**	**152.75**	**320**	P	PKPbc	10 12 24.1	-2.6	
CABF	**La Chapelle** comp=Z,60nm,1.3s	**152.75**	**351**	*e*PKIKP	PKPdf	10 12 18.5	-0.3	
AVF	**Avril sur Loir**	**152.90**	**355**	*e*PKIKP	PKPdf	10 12 18.1	-0.9	
SMF	**Signal de Mont**	**153.00**	**354**	*e*PKIKP	PKPdf	10 12 18.2	-1.0	
DSF	**Desfina**	**153.00**	**318**	P	PKPbc	10 12 26.0	-1.3	
DID	**Didima**	**153.08**	**316**	P	PKPbc	10 12 25.6	-1.9	
BGF	**Bois d'Agland**	**153.17**	**356**	*e*PKIKP	PKPdf	10 12 19.0	-0.4	
MFF	**Saint Martin d**	**153.24**	**0**	*e*PKIKP	PKPdf	10 12 18.6	-0.9	
EFP	**Efpalio**	**153.38**	**319**	P	PKPbc	10 12 28.5	+0.4	
GUR	**Goura**	**153.40**	**318**	P	PKPbc	10 12 27.3	-0.9	
LAKA	**Lakka**	**153.45**	**319**	P	PKPbc	10 12 26.4	-1.8	
TCF	**Toulx Ste Croi** comp=Z,38nm,1.2s	**153.48**	**356**	*e*PKIKP	PKPdf	10 12 18.9	-1.0	
LPL	**La Plagne**	**153.71**	**349**	*e*PKIKP	PKPdf	10 12 19.8	-0.4	
LPG	**La Plagne**	**153.73**	**349**	*e*PKIKP	PKPdf	10 12 20.1	-0.1	
PYM	**Petit Puy Mans**	**153.96**	**355**	PKP	PKPbc	10 12 28.7	-0.4	
LBL	**Lubilhac**	**154.46**	**355**	PKP	PKPbc	10 12 28.3	-1.8	
MBDF	**Montbardon**	**154.47**	**349**	*e*PKIKP	PKPdf	10 12 20.5	-0.8	
RJF	**Les Rejaudoux** comp=Z,25nm,1.0s	**154.50**	**357**	*e*PKIKP	PKPdf	10 12 20.9	-0.4	
VIVF	**Saint-Julien-l**	**154.67**	**352**	*e*PKIKP	PKPdf	10 12 21.1	-0.5	
AQU	**L'Aquila**	**154.76**	**336**	*e*PKPdf	PKPdf	10 12 21.2	-0.6	
CAF	**Calviac** comp=Z,15nm,1.0s	**154.85**	**356**	*e*PKIKP	PKPdf	10 12 21.2	-0.6	
LFF	**La Frestale** comp=Z,58nm,1.4s	**154.89**	**359**	*e*PKIKP	PKPdf	10 12 21.0	-0.9	
SBF	**Sospel** comp=Z,79nm,1.3s	**155.16**	**347**	*e*PKIKP	PKPdf	10 12 22.2	-0.1	
SMRF	**Simiane la Rot** comp=Z,55nm,1.4s	**155.40**	**350**	*e*PKIKP	PKPdf	10 12 22.2	-0.4	
LASF	**Ste Croix** comp=Z,34nm,1.2s	**155.54**	**353**	*e*PKIKP	PKPdf	10 12 22.3	-0.5	
FRF	**La Foret Royal** comp=Z,62nm,1.4s	**155.62**	**348**	*e*PKIKP	PKPdf	10 12 21.6	-1.3	
TIP	**Timpagrande**	**155.81**	**327**	*e*PKPdf	PKPdf	10 12 20.8	-2.4	
LMR	**La Mourre**	**155.86**	**348**	*e*PKIKP	PKPdf	10 12 22.9	-0.3	
MTLF	**Montolieu** comp=Z,13nm,1.0s	**156.42**	**356**	*e*PKIKP	PKPdf	10 12 23.0	-0.9	
SJPF	**Ste Jean** comp=Z,45nm,1.3s	**156.71**	**2**	*e*PKIKP	PKPdf	10 12 24.0	-0.3	
EPF	**Esparros** comp=Z,40nm,1.3s	**156.81**	**359**	*e*PKIKP	PKPdf	10 12 23.7	-0.7	
ETSF	**Etsaut** comp=Z,22nm,1.1s	**156.94**	**1**	*e*PKIKP	PKPdf	10 12 24.1	-0.5	
PCAB	**Cabril**	**157.11**	**15**	*e*PKPab	PKPab	10 12 57.9	-0.8	
PBRG	**Braganca**	**157.32**	**13**	*e*PKPdf	PKPdf	10 12 25.4	+0.3	
PBRG	**Braganca**	**157.32**	**13**	*e*PKPab	PKPab	10 12 59.4	-0.2	
PVRL	**Vila Real**	**157.60**	**15**	*e*PKPdf	PKPdf	10 12 25.7	+0.2	
PVRL	**Vila Real**	**157.60**	**15**	*e*PKPab	PKPab	10 13 00.3	-0.5	
MVO	**Moncorvo**	**157.87**	**14**	*e*PKPdf	PKPdf	10 12 25.6	-0.2	
MVO	**Moncorvo**	**157.87**	**14**	*e*PKPab	PKPab	10 13 01.7	-0.3	
PVIS	**Viseu**	**158.08**	**16**	*e*PKPab	PKPab	10 13 02.4	-0.5	
MTE	**Manteigas**	**158.47**	**16**	*e*PKPab	PKPab	10 13 04.1	-0.5	
PTOM	**Tomar**	**158.96**	**18**	*e*PKPab	PKPab	10 13 05.9	-0.9	
PCBR	**Castelo Branco**	**159.01**	**16**	*e*PKPdf	PKPdf	10 12 27.8	+0.6	
PCBR	**Castelo Branco**	**159.01**	**16**	*e*PKPab	PKPab	10 13 06.0	-1.0	
PMAFR	**Mafra**	**159.29**	**21**	*e*PKPab	PKPab	10 13 07.4	-0.9	
PMRV	**Marv??o**	**159.42**	**16**	*e*PKPdf	PKPdf	10 12 27.1	-0.6	
PMRV	**Marv??o**	**159.42**	**16**	*e*PKPab	PKPab	10 13 08.0	-0.8	
ESDC	**Sonseca Array** comp=Z,0.3nm,0.3s,baz=347,slow=2.5,SNR=6.3	**159.88**	**9**	PKP	PKPdf	10 12 27.7	-0.5	
ESDC				PKPab	PKPab	10 13 09.7	-1.1	
ESDC	comp=Z,8.9nm,0.7s,baz=346,slow=4.2,SNR=25			PP	PP	10 16 53.6	0.0	
	comp=Z,0.3nm,0.3s,baz=341,slow=5.8,SNR=6.1							
PESTR	**Estremoz**	**159.89**	**17**	*e*PKPdf	PKPdf	10 12 28.4	+0.2	
PESTR	**Estremoz**	**159.89**	**17**	*e*PKPab	PKPab	10 13 08.8	-2.1	
EVO	**Evora** comp=Z,20nm,0.8s	**160.08**	**19**	*e*PKIKP	PKPdf	10 12 27.9	-0.5	
EVO	**Evora**	**160.08**	**19**	*e*PKPdf	PKPdf	10 12 28.9	+0.5	
EVO	**Evora**	**160.08**	**19**	*e*PKPab	PKPab	10 13 11.2	-0.5	
PBEJ	**Beja**	**160.59**	**19**	*e*PKPdf	PKPdf	10 12 29.4	+0.4	
PBEJ	**Beja**	**160.59**	**19**	*e*PKPab	PKPab	10 13 13.5	-0.5	
PBAR	**Barrancos**	**160.69**	**17**	*e*PKPdf	PKPdf	10 12 28.9	-0.2	
PBAR	**Barrancos**	**160.69**	**17**	*e*PKPab	PKPab	10 13 13.8	-0.6	
PTEO	**Sao Teotonio**	**160.75**	**21**	*e*PKPdf	PKPdf	10 12 29.7	+0.5	
PTEO	**Sao Teotonio**	**160.75**	**21**	*e*PKPab	PKPab	10 13 13.9	-0.8	
PCVE	**Castro Verde**	**160.90**	**20**	*e*PKPdf	PKPdf	10 12 29.8	+0.4	
PCVE	**Castro Verde**	**160.90**	**20**	*e*PKPab	PKPab	10 13 14.7	-0.7	
MORF	**Marmelete**	**160.99**	**21**	*e*PKPdf	PKPdf	10 12 29.8	+0.3	
MORF	**Marmelete**	**160.99**	**21**	*e*PKPab	PKPab	10 13 14.9	-0.9	
PFVI	**Vila Bisbo**	**161.09**	**22**	*e*PKPdf	PKPdf	10 12 29.9	+0.3	
PFVI	**Vila Bisbo**	**161.09**	**22**	*e*PKPab	PKPab	10 13 15.2	-1.0	
PVAQ	**Vaqueiros**	**161.21**	**19**	*e*PKPdf	PKPdf	10 12 29.8	+0.1	
PVAQ	**Vaqueiros**	**161.21**	**19**	*e*PKPab	PKPab	10 13 16.0	-0.7	
PBDV	**Barranco-do-Ve**	**161.29**	**20**	*e*PKPdf	PKPdf	10 12 30.9	+1.1	
PBDV	**Barranco-do-Ve**	**161.29**	**20**	*e*PKPab	PKPab	10 13 16.7	-0.4	
KEST	**Kesra** comp=Z,7.9nm,0.8s,baz=316,slow=1.5,SNR=19	**162.06**	**334**	PKPab	PKPab	10 13 19.9	-0.6	
LIC	**Lamto** comp=Z,127nm,1.9s	**165.70**	**160**	*e*PKP1	PKPdf	10 12 32.3	-2.2	
LIC	**Lamto** comp=Z,72nm,1.7s	**165.70**	**160**	*e*P	PKPab	10 13 37.5	+0.5	
KIC	**Kosan Boka** comp=Z,36nm,1.0s	**165.92**	**161**	*e*PKP1	PKPdf	10 12 32.8	-1.9	
KIC	**Kosan Boka** comp=Z,83nm,1.3s	**165.92**	**161**	*e*P	PKPab	10 13 38.6	+0.6	
TIC	**Toumodi** comp=Z,9.9nm,0.2s	**166.10**	**159**	*e*PKP1	PKPdf	10 12 33.4	-1.5	
TIC	**Toumodi** comp=Z,8.8nm,0.2s	**166.10**	**159**	*e*P	PKPab	10 13 39.4	+0.6	
DBIC	**Dimbokro** comp=Z,4.1nm,0.6s,baz=7.2,slow=5.8,SNR=7.7	**166.18**	**160**	PKP	PKPdf	10 12 33.6	-1.3	
DBIC				PKPab	PKPab	10 13 39.0	-0.1	
	comp=Z,3.9nm,0.7s,baz=72,slow=8.7,SNR=4.3							
MDT	**Midelt** comp=Z,5.0nm,0.8s,baz=41,slow=2.6,SNR=9.8	**166.39**	**16**	PKP	PKPdf	10 12 34.9	+0.4	
MDT				PKPab	PKPab	10 13 39.6	-0.1	
	comp=Z,25nm,0.9s,baz=349,slow=5.1,SNR=33							
TORD	**Torodi Ar. Bea**	**173.20**	**195**	PKP	PKPdf	10 12 37.2	-1.7	
TORD				PKPab	PKPab	10 14 10.6	+0.4	
TORD				PP	PP	10 18 02.9	+1.7	
TORD	**Torodi Ar. Bea** comp=Z,4.0nm,0.9s,baz=316,slow=1.0,SNR=14	**173.20**	**195**	PKP	PKPdf	10 12 37.2	-1.7	
TORD				PKPab	PKPab	10 14 10.6	+0.4	
	comp=Z,4.8nm,0.9s,baz=168,slow=4.2,SNR=13							
TORD				PP	PP	10 18 02.9	+1.7	
	comp=Z,3.7nm,1.0s,baz=178,slow=5.1,SNR=6.4							

IDC 18 10:00:26.1±42.0, **36°10N**×**81°88E**, **h0**km, **mb2.9**/1, **mb1 3.5**/3, **mb1mx3.3**/24, **mbtmp3.5**/3, **ML3.3**/2, **Error ellipse: s-maj=582.8km s-min=64.9km az=39.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**10.69**	**2**	Pn	Pn	10 03 00.8	+0.4
	0.4nm,0.3s,baz=180,slow=13,SNR=26						
ZALV	**Zalesovo Beam**	**17.96**	**6**	P	Pn	10 04 37.5	+0.5
	0.1nm,0.3s,baz=187,slow=10,SNR=4.4						
SONM	**Songino Array**	**21.57**	**49**	P	P	10 05 17.4	+0.2
	0.4nm,0.8s,baz=248,slow=15,SNR=3.5						

*ISCJB **18** 10:07:55.8±0.6, 38°56N±0°04×30°70E±0°03, h3km±7km, Error ellipse: s-maj=7.1km s-min=4.3km az=171.4*
*DDA **18** 10:07:56.2, 38°60N×30°70E, h7km±5km, Md2.9*
*ISK **18** 10:07:56.0, 38°57N×30°70E, h9km, MD2.9*
*CSEM **18** 10:07:56.1±0.3, 38°58N×30°70E, h8km, MD2.9, Error ellipse: s-maj=8.0km s-min=5.0km az=6.0*
ISC 18 10:07:56.5±0.6, **38°57N**±0°04×**30°71E**±0°03, **h6**km±7km, **n22**, σ0**°91**/33, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLV	**Bolvadin**	**0.24**	**50**	*i* P	**Pg**	**10 08 01.0**	**-0.3**
BOLV				*i* S	**Sg**	**10 08 05.2**	**+0.7**
ALT	**Altintas**	**0.68**	**316**	*e*PG	**Pg**	**10 08 09.0**	**-0.6**
ALT				*e*SG	**Sg**	**10 08 18.4**	**0.0**
ALT	**Altintas**	**0.68**	**316**	*e*Pg	**Pg**	**10 08 09.0**	**-0.6**
ALT				*e*Sg	**Sg**	**10 08 18.4**	**0.0**
KHL	**Karahalli**	**0.96**	**256**	*e*PG	**Pg**	**10 08 13.8**	**-1.3**
KHL				*e*SG	**Sg**	**10 08 28.9**	**+1.3**
KHL	**Karahalli**	**0.96**	**256**	*e*Pg	**Pg**	**10 08 13.8**	**-1.2**
KHL				*e*Sg	**Sg**	**10 08 28.9**	**+1.3**
KIZT	**Kizilcal**	**0.96**	**71**	*e*PG	**Pg**	**10 08 15.3**	**+0.2**
KIZT	**Kizilcal**	**0.96**	**71**	*e*Pg	**Pg**	**10 08 15.3**	**+0.2**
KHAL	**Karahalli**	**0.98**	**259**	*i* P	**Pg**	**10 08 14.1**	**-1.2**
KHAL				*i* S	**Sg**	**10 08 30.1**	**+2.1**
KHAL	**Karahalli**	**0.98**	**259**	*i* P	**Pg**	**10 08 14.1**	**-1.2**
KHAL				*i* S	**Sg**	**10 08 30.1**	**+2.1**
SVRH	**Sivrihisar-ESK**	**1.08**	**35**	*e*PN	**Pg**	**10 08 17.7**	**+0.4**
SVRH	**Sivrihisar-ESK**	**1.08**	**35**	*e*Pn	**Pg**	**10 08 17.7**	**+0.4**
GDZ	**Gediz**	**1.10**	**299**	*i* P	**Pg**	**10 08 15.9**	**-1.6**
GDZ				*i* S	**Sg**	**10 08 32.2**	**+0.5**
GDZ	**Gediz**	**1.10**	**299**	*i* P	**Pg**	**10 08 15.9**	**-1.6**
GDZ				*i* S	**Sg**	**10 08 32.2**	**+0.4**
BCK	**Bucak**	**1.11**	**185**	*e*PN	**Pg**	**10 08 17.4**	**-0.4**
BCK	**Bucak**	**1.11**	**185**	*e*Pn	**Pg**	**10 08 17.4**	**-0.3**
KONT	**Konya--Tatoy**	**1.44**	**115**	*e*PN	**Pn**	**10 08 22.2**	**-0.9**
KONT	**Konya--Tatoy**	**1.44**	**115**	*e*Pn	**Pn**	**10 08 22.2**	**-0.9**
KULA	**Kula-Manisa**	**1.61**	**269**	*e*PN	**Pn**	**10 08 25.1**	**-0.3**
KULA				*e*SN	**Sn**	**10 08 46.4**	**-0.1**
KULA	**Kula-Manisa**	**1.61**	**269**	*e*Pn	**Pn**	**10 08 25.2**	**-0.3**
KULA				*e*Sn	**Sn**	**10 08 46.4**	**-0.1**
GULT	**Gulveren**	**1.87**	**355**	*e*PN	**Pn**	**10 08 29.6**	**+0.6**
HDMB	**Hadim**	**2.13**	**138**	*e*PN	**Pn**	**10 08 33.7**	**+1.1**
HDMB	**Hadim**	**2.13**	**138**	*e*Pn	**Pn**	**10 08 33.7**	**+1.1**

*ISCJB **18** 10:14:57.0±0.7, 46°32N±0°07×8°41E±0°08, h13km±9km, Error ellipse: s-maj=14.0km s-min=5.0km az=140.3*
*CSEM **18** 10:14:57.5, 46°31N×8°40E, h10km, MD2.5/7, After ROM*
*ROM **18** 10:14:57.5±0.5, 46°31N×8°40E, h10km, Md2.5/7, Ml2.1/4, Error ellipse: s-maj=9.9km s-min=4.5km az=159.0*
ISC 18 10:14:57.9±0.7, **46°30N**±0°07×**8°41E**±0°09, **h18**km±8km, **n17**, σ1**°24**/26, **Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMK	**Mattmark**	**0.40**	**231**	Pg	**Pg**	**10 15 04.8**	**-1.3**
MMK				Sg	**Sg**	**10 15 12.1**	**+0.5**
MMK	**Mattmark**	**0.40**	**231**	Pg	**Pg**	**10 15 04.8**	**-1.3**
MMK				Sg	**Sg**	**10 15 12.1**	**+0.5**
TRAV	**Traversella**	**0.91**	**211**	Pg	**Pg**	**10 15 14.9**	**-0.7**
TRAV				Sg	**Sg**	**10 15 28.6**	**+0.9**
	39nm,0.4s						
TRAV	**Traversella**	**0.91**	**211**	Pg	**Pg**	**10 15 14.9**	**-0.7**
TRAV				Sg	**Sg**	**10 15 28.6**	**+0.9**
	39nm,0.4s						
MDI	**Monti di Nese**	**1.05**	**119**	Pn	**Pn**	**10 15 16.9**	**-0.6**
MDI	**Monti di Nese**	**1.05**	**119**	Pn	**Pn**	**10 15 16.9**	**-0.6**
EMV	**Vieux Emosson**	**1.08**	**258**	Pg	**Pg**	**10 15 16.3**	**-2.4**
EMV				Sg	**Sg**	**10 15 33.2**	**+0.4**
EMV	**Vieux Emosson**	**1.08**	**258**	Pg	**Pg**	**10 15 16.3**	**-2.4**
EMV				Sg	**Sg**	**10 15 33.2**	**+0.4**
MRGE	**Morge**	**1.08**	**241**	Pg	**Pg**	**10 15 15.0**	**-3.8**
MRGE				Sg	**Sg**	**10 15 35.6**	**+2.7**
	37nm,0.4s						
MRGE	**Morge**	**1.08**	**241**	Pg	**Pg**	**10 15 15.0**	**-3.8**
MRGE				Sg	**Sg**	**10 15 35.6**	**+2.7**
	37nm,0.4s						
DAVOX	**Davos/Dischmat**	**1.12**	**64**	Pn	**Pn**	**10 15 19.6**	**+1.0**
DAVOX	**Davos/Dischmat**	**1.12**	**64**	Pn	**Pn**	**10 15 19.6**	**+1.0**
LSD	**Lago del Serru** 28nm,0.5s	**1.23**	**227**	Pn	**Pn**	**10 15 20.2**	**+0.2**
LSD	**Lago del Serru** 28nm,0.5s	**1.23**	**227**	Pn	**Pn**	**10 15 20.2**	**+0.2**
RSP	**Reno Superiore** 45nm,0.7s	**1.40**	**215**	Pn	**Pn**	**10 15 22.3**	**-0.1**
RSP	**Reno Superiore** 45nm,0.7s	**1.40**	**215**	Pn	**Pn**	**10 15 22.3**	**-0.1**
DAVA	**Damuels**	**1.41**	**45**	Pg	**Pg**	**10 15 23.8**	**-1.3**
DAVA				Sg	**Sg**	**10 15 45.2**	**+1.7**
	21nm,0.4s						

CASC 18 10:17:01.7±1.5, **11°33N**×**87°98W**, **h37**km±999km, **MD3.6, ML3.1, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEON	**Leon**	**1.52**	**44**	*e*P	Pn	10 17 26.7	+0.3
COPN	**Copaltepe**	**1.61**	**58**	*e*P	Pn	10 17 27.7	+0.1
COPN				*e*S	Sn	10 17 47.4	+0.3
CRIN	**San Cristobal**	**1.64**	**34**	*e*P	Pn	10 17 28.8	+0.7
CRIN				AML	AML	10 17 40.6	
	comp=N,501nm,0.6s						
TELN	**Telica**	**1.70**	**41**	*e*P	Pn	10 17 29.6	+0.7
CNGN	**Cerro Negro**	**1.72**	**47**	*e*P	Pn	10 17 29.1	0.0
CSAN		**1.75**	**61**	*e*P	Pn	10 17 29.3	-0.3
MOMN	**Momotombo**	**1.78

GKN	Gorkha	5.51	253	*e*P	Pn	10 37 01.7	+1.9
KOLN	Koldanda	6.46	254	*e*P	Pn	10 37 14.7	+1.9
CMAR	Chiang Mai Arr	13.55	144	Pn	Pn	10 38 49.0	-1.0
	baz=319,slow=14,SNR=5.4						
MKAR	Makanchi Array	18.23	341	P	Pn	10 39 49.9	-0.6
	comp=E,0.2nm,0.3s,baz=156,slow=13,SNR=11						
SONM	Songino Array	21.79	30	P	P	10 40 30.1	+0.7
	comp=E,3.7nm,1.0s,mb3.8,baz=215,slow=12,SNR=10						
KURK	Kurchatov	22.82	340	P	P	10 40 39.5	-0.8
	comp=E,1.2nm,0.5s,mb3.6,baz=164,slow=8.9,SNR=5.7						
WRA	Warramunga Arr	64.91	134	P	P	10 46 17.6	+0.6
	comp=E,0.7nm,0.6s,mb3.9,baz=326,slow=6.6,SNR=8.5						
ASAR	Alice Springs	67.45	137	P	P	10 46 33.4	+0.1
	comp=E,0.7nm,0.8s,mb3.8,baz=324,slow=6.4,SNR=6.5						

*ISCJB **18** 11:05:54.1±0.6, 32.°62N±0.°04×105.°14E±0.°07, h10km, mb3.2/4, Error ellipse: s-maj=8.6km s-min=5.6km az=29.8*
*IDC **18** 11:05:54.1±1.2, 32.°43N×104.°82E, h0km, mb3.3/4, mb1 3.5/6, mb1mx3.4/23, mbtmp3.4/6, ML3.5/2, Error ellipse: s-maj=45.8km s-min=21.3km az=57.0*
*BJI **18** 11:05:55.3, 32.°76N×105.°08E, h12km, ML3.3/11*
ISC 18 11:05:56.0±0.6, 32.°63N±0.°04×105.°17E±0.°06, h10km, n10, σ1s16/16, mb3.2/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.10**	**216**	Pn	**Pn**	**11 06 32.5**	**+1.4**
CD2				Pg	**Pg**	**11 06 35.1**	**-1.0**
CD2				Sg	**Sg**	**11 07 02.8**	**-0.5**
CD2				smax			
	comp=N,720nm,0.8s						
CD2				smax			
	comp=E,660nm,0.7s						
XAN	**Xi'an**	**3.44**	**65**	Pn	**Pn**	**11 06 51.3**	**+1.7**
XAN				Sn	**Sn**	**11 07 29.1**	**-1.3**
XAN				Sg	**Sg**	**11 07 43.0**	**-3.4**
XAN				smax			
	comp=N,100nm,0.9s						
XAN				smax			
	comp=E,81nm,1.1s						
LZH	**Lanzhou**	**3.62**	**343**	Pg	**Pn**	**11 06 53.6**	**+1.5**
LZH				Sn	**Sn**	**11 07 34.3**	**-0.5**
LZH				Sg	**Sg**	**11 07 46.3**	**-5.9**
LZH				smax			
	comp=N,110nm,0.8s						
LZH				smax			
	comp=E,150nm,0.7s						
GTA	**Gaotai**	**8.04**	**329**	*e*P	**Pn**	**11 07 52.3**	**-0.4**
SONM	**Songino Array**	**15.22**	**3**	Pn	**Pn**	**11 09 34.8**	**+4.1**
	comp=E,0.2nm,0.3s,baz=185,slow=13,SNR=4.1						
KSRS	**Korea Array**	**19.23**	**69**	P	**Pn**	**11 10 22.9**	**+1.8**
	comp=E,0.1nm,0.3s,baz=254,slow=12,SNR=5.0						
MKAR	**Makanchi Array**	**22.48**	**316**	P	**P**	**11 10 54.3**	**-0.9**
	comp=E,0.3nm,0.6s,mb2.9,baz=114,slow=11,SNR=4.2						
ZALV	**Zalesovo Beam**	**25.78**	**332**	P	**P**	**11 11 26.6**	**-0.2**
	comp=E,0.6nm,0.5s,mb3.4,baz=140,slow=9.2,SNR=3.5						
WRA	**Warramunga Arr**	**59.25**	**148**	P	**P**	**11 15 57.9**	**+0.3**
	comp=E,0.2nm,0.6s,mb3.3,baz=342,slow=7.6,SNR=5.0						
ASAR	**Alice Springs**	**62.34**	**150**	P	**P**	**11 16 18.1**	**-0.6**
	comp=E,0.2nm,0.8s,mb3.3,baz=331,slow=6.7,SNR=6.1						

WEL 18 11:15:35.1±0.3, 37.°83S×176.°78E, h143km±2km, ML3.5/18, 6C, Error ellipse: s-maj=2.6km s-min=2.3km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.18**	**265**	PN	Pn	11 15 54.7	+0.2
OPRZ				SN	Sn	11 16 09.5	+0.3
URZ	**Urewera**	**0.50**	**149**	⇑PN	Pn	11 15 55.3	-0.3
URZ				SN	Sn	11 16 10.5	-0.8
RRRZ	**Republican Roa**	**0.55**	**202**	⇑PN	Pn	11 15 56.2	+0.3
RRRZ				SN	Sn	11 16 11.8	0.0
PRRZ	**Plateau Road**	**0.73**	**204**	⇑PN	Pn	11 15 57.2	+0.1
PRRZ				SN	Sn	11 16 14.5	+0.7
MWZ	**Matawai**	**0.78**	**131**	⇑PN	Pn	11 15 57.1	-0.2
MWZ				SN	Sn	11 16 13.8	-0.5
RAHZ	**Arahi**	**1.11**	**168**	⇑PN	Pn	11 16 00.5	+0.3
RAHZ				SN	Sn	11 16 19.8	+0.4
PUZ	**Puketiti**	**1.19**	**102**	PN	Pn	11 16 00.6	-0.4
PUZ				SN	Sn	11 16 19.3	-1.4
MXZ	**Matakaoa Point**	**1.24**	**78**	PN	Pn	11 16 01.9	+0.5
NMHZ	**Naumai**	**1.27**	**179**	PN	Pn	11 16 02.0	+0.3
CNGZ	**Carnagh Statio**	**1.30**	**121**	PN	Pn	11 16 02.6	+0.5
BKZ	**Black Stump Fm**	**1.35**	**189**	⇑PN	Pn	11 16 02.1	-0.4
KNZ	**Kokohu**	**1.38**	**150**	PN	Pn	11 16 02.8	-0.1
PRGZ	**Paritu Road**	**1.40**	**142**	PN	Pn	11 16 02.9	-0.1
MHGZ	**Mahia Peninsul**	**1.59**	**147**	PN	Pn	11 16 05.1	0.0
MCHZ	**McNeill Hill**	**1.61**	**182**	PN	Pn	11 16 05.4	0.0
NGZ	**Ngauruhoe**	**1.63**	**214**	PN	Pn	11 16 05.6	+0.1
WPVZ	**Whakapapa**	**1.68**	**215**	PN	Pn	11 16 06.1	+0.1
BHHZ	**Black Hill Sta**	**1.75**	**198**	PN	Pn	11 16 06.2	-0.7
MOVZ	**Moawhango**	**1.77**	**207**	PN	Pn	11 16 06.3	-0.8
CKHZ	**Cape Kidnapper**	**1.84**	**173**	PN	Pn	11 16 07.7	-0.2
KAHZ	**Kahuranaki**	**1.96**	**178**	PN	Pn	11 16 08.9	-0.4
PNHZ	**Pukenui**	**2.13**	**192**	PN	Pn	11 16 10.0	-1.3
PXZ	**Pawanui**	**2.20**	**178**	PN	Pn	11 16 11.1	-1.0
WPHZ	**Waipukurau**	**2.25**	**187**	PN	Pn	11 16 11.4	-1.3
TSZ	**Takapari Road**	**2.32**	**196**	PN	Pn	11 16 12.0	-1.5
PRHZ	**Porangahau**	**2.44**	**183**	PN	Pn	11 16 13.7	-1.3
DVHZ	**Dannevirke**	**2.51**	**191**	PN	Pn	11 16 13.1	-2.8
POWZ	**Post Office Ro**	**2.68**	**197**	PN	Pn	11 16 16.3	-1.8
BFZ	**Birch Farm**	**2.88**	**188**	PN	Pn	11 16 18.4	-2.2
MRZ	**Mangatainoka R**	**2.98**	**198**	PN	Pn	11 16 19.5	-2.3
TIWZ	**Tintock**	**3.02**	**193**	PN	Pn	11 16 20.3	-2.1
HOWZ	**Holdsworth Sta**	**3.22**	**197**	PN	Pn	11 16 22.1	-2.8
OGWZ	**Otaki Gorge**	**3.23**	**202**	PN	Pn	11 16 22.8	-2.3
TMWZ	**Te Maipa**	**3.34**	**192**	PN	Pn	11 16 24.1	-2.5
KIW	**Kapiti Island**	**3.36**	**205**	PN	Pn	11 16 24.0	-2.7
MTW	**Mount Morrison**	**3.47**	**196**	PN	Pn	11 16 25.0	-3.1
CAW	**Cannon Point**	**3.53**	**201**	PN	Pn	11 16 25.9	-3.1
TRWZ	**Traveller**	**3.66**	**193**	PN	Pn	11 16 27.7	-3.0
PAWZ	**Paruwai Farm**	**3.70**	**196**	PN	Pn	11 16 27.8	-3.3
SNOZ	**South Karori**	**3.83**	**204**	PN	Pn	11 16 29.2	-3.6
TCW	**Tory Channel**	**3.89**	**209**	PN	Pn	11 16 30.5	-3.2
PLWZ	**Palliser**	**3.92**	**197**	PN	Pn	11 16 30.3	-3.6
TUWZ	**Tuamarina**	**4.21**	**210**	PN	Pn	11 16 33.9	-3.9
NNZ	**Nelson**	**4.29**	**217**	PN	Pn	11 16 35.8	-3.0
KHZ	**Kahutara**	**5.21**	**207**	PN	Pn	11 16 46.9	-4.2
LTZ	**Lake Taylor**	**6.03**	**213**	PN	Pn	11 16 57.3	-4.7

*DDA **18** 11:24:56.8, 36.°95N×29.°26E, h7km±4km, Md2.9*
*ISK **18** 11:24:57.4, 37.°03N×29.°31E, h23km, MD2.9*
*CSEM **18** 11:24:57.5±0.3, 37.°01N×29.°30E, h20km, MD2.9, Error ellipse: s-maj=7.1km s-min=5.8km az=19.0*
*ISCJB **18** 11:24:58.4±0.5, 37.°06N±0.°04×29.°37E±0.°05, h33km±5km, Error ellipse: s-maj=7.1km s-min=6.4km az=148.0*
ISC 18 11:24:58.6±0.5, 37.°05N±0.°04×29.°34E±0.°06, h27km±6km, n22, σ1s23/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.17**	**51**	PG	**Pb**	**11 25 02.7**	**-1.4**
GLHS				*e*SG	**Sb**	**11 25 07.8**	**0.0**
GLHS	**Glhisar (BURDU**	**0.17**	**51**	*i* Pg	**Pb**	**11 25 02.7**	**-1.4**
GLHS				*e*Sg	**Sb**	**11 25 07.8**	**0.0**
GOLH	**Golhisar**	**0.26**	**44**	*i* P	**Pb**	**11 25 03.6**	**-1.6**
GOLH				*i* S	**Sb**	**11 25 10.1**	**+0.4**
GOLH	**Golhisar**	**0.26**	**44**	*i* P	**Pb**	**11 25 03.6**	**-1.6**
GOLH				*i* S	**Sb**	**11 25 10.1**	**+0.4**
ELL	**Elmali**	**0.55**	**123**	*e*PG	**Pb**	**11 25 09.3**	**-0.3**
ELL				*e*SG	**Sb**	**11 25 17.7**	**+0.5**
ELL	**Elmali**	**0.55**	**123**	*e*Pg	**Pb**	**11 25 09.4**	**-0.3**
ELL				*e*Sg	**Sb**	**11 25 17.7**	**+0.5**
TURN	**Turunc**	**0.61**	**253**	*i* P	**Pb**	**11 25 12.3**	**+1.5**
TURN				*i* S	**Sb**	**11 25 24.7**	**+5.7**
TURN	**Turunc**	**0.61**	**253**	*i* P	**Pb**	**11 25 12.3**	**+1.5**
DNZL	**Cakiroluk**	**0.68**	**340**	*i* P	**Pb**	**11 25 11.7**	**-0.1**
DNZL				*i* S	**Sb**	**11 25 23.2**	**+2.3**
DNZL	**Cakiroluk**	**0.68**	**340**	*i* P	**Pb**	**11 25 11.7**	**-0.1**
DNZL				*i* S	**Sb**	**11 25 23.2**	**+2.3**
AKAS	**Kas**	**0.84**	**165**	*i* P	**Pb**	**11 25 12.4**	**-2.1**
AKAS				*i* S	**Sb**	**11 25 27.9**	**+2.4**
AKAS	**Kas**	**0.84**	**165**	*i* P	**Pb**	**11 25 12.4**	**-2.2**
AKAS				*i* S	**Sb**	**11 25 27.9**	**+2.4**
YER	**Yerkesik**	**0.85**	**276**	*e*PG	**Pb**	**11 25 14.6**	**-0.1**
YER	**Yerkesik**	**0.85**	**276**	*e*Pg	**Pb**	**11 25 14.6**	**-0.1**
KHL	**Karahalli**	**1.28**	**7**	*e*PN	**Pn**	**11 25 20.5**	**-0.1**
KHL	**Karahalli**	**1.28**	**7**	*e*Pn	**Pn**	**11 25 20.5**	**-0.1**
DAT	**Datca**	**1.45**	**258**	*e*PN	**Pn**	**11 25 22.1**	**-0.8**
DAT	**Datca**	**1.45**	**258**	*e*Pn	**Pn**	**11 25 22.1**	**-0.8**
BODT	**Bodrum**	**1.62**	**271**	*e*PN	**Pn**	**11 25 24.2**	**-1.2**
BODT	**Bodrum**	**1.62**	**271**	*e*Pn	**Pn**	**11 25 24.2**	**-1.1**
HDMB	**Hadim**	**2.52**	**91**	*e*PN	**Pn**	**11 25 39.0**	**+1.3**
HDMB	**Hadim**	**2.52**	**91**	*e*Pn	**Pn**	**11 25 39.0**	**+1.3**

*NEIC **18** 12:32:55.2±1.1, 23.°93N×121.°53E, h10km, ML4.0(TAP), Error ellipse: s-maj=21.4km s-min=7.4km az=110.0*
NEIC Recorded [3 TAP] in Hua-lien and [1 TAP] in Nan-t'ou.
*ISCJB **18** 12:32:56.1±0.3, 23.°91N±0.°02×121.°54E±0.°03, h20km±3km, Error ellipse: s-maj=4.3km s-min=2.2km az=23.9*
*TAP **18** 12:32:56.2, 23.°94N×121.°46E, h17km, ML3.3, B*
ISC 18 12:32:56.2±0.3, 23.°92N±0.°01×121.°52E±0.°02, h16km±2km, n53, σ0s81/82, 12C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESF	**Shoufeng Towns**	**0.05**	**190**	*i* P	**Pg**	**12 32 59.6**	**+0.5**
ESF	baz=150			S	**Sg**	**12 33 01.9**	**+0.9**
HWA	**Hwalien**	**0.10**	**57**	⇑*i* P	**Pg**	**12 33 00.6**	**+1.1**
HWA	baz=76			*i* S	**Sg**	**12 33 03.8**	**+2.1**
ESL	**Shilin**	**0.13**	**215**	⇓*i* P	**Pg**	**12 33 00.1**	**+0.2**
ESL	baz=188			*i* S	**Sg**	**12 33 02.5**	**+0.1**
TWD	**Chiawan**	**0.17**	**25**	⇑*i* P	**Pg**	**12 33 01.0**	**+0.5**
TWD	baz=37			*i* S	**Sg**	**12 33 04.2**	**+0.8**
TEGC	**Jichi Village**	**0.21**	**174**	*e*P	**Pg**	**12 33 02.0**	**+0.9**
NACB	**Ninganchiao**	**0.26**	**16**	*e*Pn	**Pg**	**12 33 01.8**	**0.0**
WHF	**Hehuan Shan**	**0.32**	**314**	⇑*i* P	**Pg**	**12 33 02.7**	**-0.2**
WHF	baz=314			S	**Sg**	**12 33 07.0**	**-0.4**
TWT	**Tachien**	**0.45**	**317**	⇑*i* P	**Pg**	**12 33 05.3**	**0.0**
TWT	baz=312			*e*S	**Sg**	**12 33 10.8**	**-0.6**
EHY	**Hungye**	**0.45**	**203**	⇑*i* P	**Pg**	**12 33 04.3**	**-0.9**
EHY	baz=189			*e*S	**Sg**	**12 33 10.6**	**-0.8**
NNS	**Nan Shan**	**0.53**	**346**	⇑*i* P	**Pg**	**12 33 06.7**	**0.0**
NNS	baz=352			S	**Sg**	**12 33 13.5**	**-0.4**
SSLB	**Suanglung**	**0.53**	**255**	*e*Pn	**Pg**	**12 33 06.6**	**-0.2**
ENA	**Nanau**	**0.54**	**22**	⇑P	**Pg**	**12 33 06.7**	**-0.2**
ENA	baz=29			*e*S	**Sg**	**12 33 14.1**	**-0.1**
SMLT	**Sun Moon Lake**	**0.57**	**266**	⇑P	**Pg**	**12 33 07.0**	**-0.4**
SMLT	baz=263			*e*S	**Sg**	**12 33 13.6**	**-1.4**
YULB	**Yu-li**	**0.57**	**201**	*e*Pn	**Pg**	**12 33 06.8**	**-0.6**
TWF1	**Yuli**	**0.60**	**200**	⇑*e*P	**Pg**	**12 33 06.4**	**-1.7**
TWF1	baz=193			*e*S	**Sg**	**12 33 15.9**	**-0.2**
TYC	**Yuchr**	**0.60**	**268**	⇑P	**Pg**	**12 33 07.4**	**-0.7**
TYC	baz=266			*e*S	**Sg**	**12 33 14.7**	**-1.4**
YUS	**Yu-Shan**	**0.68**	**230**	*e*P	**Pg**	**12 33 09.5**	**+0.1**
YUS	baz=214			*e*S	**Sg**	**12 33 18.2**	**-0.1**
ENTT	**Nioudou**	**0.71**	**4**	P	**Pg**	**12 33 09.7**	**-0.5**
ENTT	baz=8.0			*e*S	**Sg**	**12 33 19.1**	**-0.5**
TWC	**Suao**	**0.75**	**24**	*e*P	**Pg**	**12 33 09.9**	**-0.9**
TWC	baz=29			*e*S	**Sg**	**12 33 20.4**	**-0.3**
YHNB	**Yeheng**	**0.75**	**350**	*e*Pn	**Pg**	**12 33 10.4**	**-1.8**
NSK	**Sanguang**	**0.76**	**349**	⇑P	**Pg**	**12 33 10.8**	**-0.3**
NSK	baz=345			S	**Sg**	**12 33 20.2**	**-1.0**
WNT	**Mingjian**	**0.76**	**267**	*e*P	**Pg**	**12 33 11.4**	**+0.3**
WNT	baz=267			*e*S	**Sg**	**12 33 22.0**	**+0.8**
ALS	**Alishan**	**0.77**	**238**	⇓*i* P	**Pg**	**12 33 11.2**	**0.0**
ALS	baz=225			*e*S	**Sg**	**12 33 20.9**	**-0.6**
TCU	**Taichung**	**0.80**	**286**	*e*P	**Pb**	**12 33 12.2**	**+0.4**
TCU	baz=284			*e*S	**Sg**	**12 33 24.0**	**+1.7**
TWQ1	**Liyutan**	**0.80**	**302**	*e*P	**Pb**	**12 33 11.8**	**0.0**
TWQ1	baz=303			*e*S	**Sg**	**12 33 22.8**	**+0.5**
TWE	**Neicheng**	**0.81**	**10**	*e*P	**Pb**	**12 33 11.2**	**-0.7**
TWE	baz=15			*e*S	**Sg**	**12 33 21.9**	**-0.6**
CHKT	**Chengkung**	**0.83**	**190**	*e*P	**Pb**	**12 33 10.9**	**-1.4**
CHN5	**Tsauling**	**0.83**	**247**	*e*P	**Pb**	**12 33 12.5**	**+0.1**
CHN5	baz=244			*e*S	**Sb**	**12 33 23.9**	**+0.5**
NSY	**Sanyi**	**0.85**	**306**	*e*P	**Pb**	**12 33 12.9**	**+0.3**
NSY	baz=316			*e*S	**Sb**	**12 33 24.4**	**+0.7**
NSTT	**Nanjuang**	**0.85**	**326**	⇑*i* P	**Pb**	**12 33 12.3**	**-0.2**
ELDTW	**Lidau**	**0.86**	**212**	*e*P	**Pb**	**12 33 10.8**	**-2.0**
WGK	**Gukeng**	**0.91**	**255**	*e*P	**Pb**	**12 33 13.3**	**-0.3**
CHN4	**Tsaushan**	**1.02**	**236**	*e*P	**Pb**	**12 33 16.1**	**+0.6**
CHN4	baz=221			*e*S	**Sb**	**12 33 29.9**	**+1.1**
TPUB	**Ta-pu**	**1.02**	**233**	*e*Pn	**Pb**	**12 33 15.4**	**-0.5**
STYT	**Tauyuan**	**1.03**	**223**	*e*P	**Pb**	**12 33 15.4**	**-0.2**
STYT	baz=214			*e*S	**Sb**	**12 33 28.5**	**-0.4**
TATO	**Taipei**	**1.05**	**359**	*e*Pn	**Pb**	**12 33 15.8**	**-0.5**
TWA	**Mucha**	**1.05**	**3**	*e*P	**Pb**	**12 33 16.5**	**+0.4**
WTP	**Ta-pu**	**1.07**	**231**	*e*P	**Pb**	**12 33 16.3**	**0.0**
WTP	baz=217			*e*S	**Sb**	**12 33 31.0**	**+0.9**
NCU	**National Centr**	**1.08**	**344**	*e*P	**Pb**	**12 33 17.7**	**+1.0**
CHY	**Chiayi**	**1.09**	**247**	*e*P	**Pb**	**12 33 16.7**	**+0.1**
WTCT	**Ta-ch'eng**	**1.13**	**267**	*e*P	**Pb**	**12 33 17.9**	**+0.5**
TWB1	**Santiao Chiao**	**1.16**	**22**	*e*P	**Pn**	**12 33 17.2**	**-0.6**
NWF	**Wu-fen Shan**	**1.17**	**12**	*e*P	**Pn**	**12 33 17.8**	**-0.1**
NWF	baz=15			*e*S	**Sb**	**12 33 33.0**	**0.0**
CHN1	**Nanshi**	**1.17**	**231**	*e*P	**Pn**	**12 33 18.2**	**+0.3**
CHN1	baz=228			*e*S	**Sb**	**12 33 34.3**	**+1.4**
TWG	**Pinlang**	**1.17**	**201**	*e*Pn	**Pn**	**12 33 17.4**	**-0.6**
TWG	**Pinlang**	**1.17**	**201**	*e*P	**Pn**	**12 33 17.2**	**-0.7**
TWS1	**Kuangyinshan**	**1.18**	**356**	*e*P	**Pn**	**12 33 17.2**	**-0.8**
TWS1	baz=10.0			*e*S	**Sb**	**12 33 35.9**	**+2.8**
CHN8	**Yiju**	**1.33**	**245**	*e*P	**Pn**	**12 33 21.0**	**+0.9**
	baz=240						
TWY	**Chenhua**	**1.35**	**3**	*e*P	**Pn**	**12 33 22.1**	**+1.7**
	baz=9.0						
ECL	**Taimali**	**1.42**	**202**	*e*P	**Pn**	**12 33 22.1**	**+0.7**
	baz=182						
SSD	**Sandimen**	**1.43**	**215**	*e*P	**Pn**	**12 33 21.2**	**-0.2**
	baz=210						
EAST	**Anshuo**	**1.65**	**202**	*e*P	**Pn**	**12 33 25.3**	**+0.7**
	baz=186						
SCZT	**Fangliau**	**1.75**	**208**	*e*P	**Pn**	**12 33 26.8**	**+0.8**
	baz=198						

IDC 18 12:58:36.3±1.6, 10.°82N×91.°67E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/22, mbtmp3.5/6, ML3.6/1, Error ellipse: s-maj=60.9km s-min=19.7km az=69.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.35**	**42**	Pn	Pn	13 01 07.3	+1.3
	0.1nm,0.3s,baz=234,slow=15,SNR=2.9						
MKAR	**Makanchi Array**	**36.72**	**349**	P	P	13 05 45.2	+0.1
	0.2nm,0.4s,baz=162,slow=9.2,SNR=2.8						
SONM	**Songino Array**	**38.92**	**16**	P	P	13 06 03.1	-0.5
	0.2nm,0.4s,baz=207,slow=6.2,SNR=2.8						
ZALV	**Zalesovo Beam**	**43.36**	**354**	P	P	13 06 40.1	0.0
	0.6nm,0.5s,baz=177,slow=10,SNR=2.4						
WRA	**Warramunga Arr**	**51.95**	**126**	P	P	13 07 46.9	-0.5
	0.5nm,0.5s,baz=300,slow=10,SNR=10						
WRA				PcP	PcP	13 09 00.1	0.0
	0.5nm,0.9s,baz=318,slow=3.4,SNR=3.9						
ASAR	**Alice Springs**	**53.66**	**130**	P	P	13 08 00.1	0.0
	0.8nm,0.7s,baz=304,slow=7.0,SNR=10						
ASAR				PcP	PcP	13 09 06.9	+0.4
	0.5nm,0.7s,baz=306,slow=3.1,SNR=5.5						

*NEIC **18** 13:00:52.4±1.0, 10.°83N×91.°66E, h10km, Error ellipse: s-maj=25.4km s-min=12.6km az=72.0*
IDC 18 13:00:51.2±1.8, 10.°85N×91.°72E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.5/23, mbtmp3.5/6, ML3.8/1, Error ellipse: s-maj=61.8km s-min=20.4km az=65.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.29**	**42**	Pn	Pn	13 03 21.2	+1.0
	0.2nm,0.3s,baz=235,slow=14,SNR=3.9						
MKAR	**Makanchi Array**	**36.71**	**349**	P	P	13 07 59.9	-0.1
	0.4nm,0.7s,baz=170,slow=7.1,SNR=3.4						
SONM	**Songino Array**	**38.88**	**16**	P	P	13 08 17.7	-0.6
	0.3nm,0.5s,baz=205,slow=6.2,SNR=2.7						
KURK	**Kurchatov**	**41.18**	**347**	P	P	13 08 37.4	0.0
	0.3nm,0.3s,baz=166,slow=6.2,SNR=2.1						
WRA	**Warramunga Arr**	**51.92**	**126**	P	P	13 10 01.9	-0.3
	0.4nm,0.3s,baz=305,slow=8.4,SNR=24						
WB2	**Warramunga Arr**	**51.93**	**126**	*e*P	P	13 10 02.1	-0.1
ASAR	**Alice Springs**	**53.64**	**130**	P	P	13 10 15.2	+0.3
	0.8nm,0.6s,baz=305,slow=6.3,SNR=9.3						

*JMA **18** 13:16:41.7±0.3, 23.°05N×122.°97E, h64km, M2.4*
TAP 18 13:16:42.0, 23.°03N×122.°84E, h78km±2km, ML3.4, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.35**	**41**	P	Pn	13 17 03.6	-1.8
HATJ				S	Sn	13 17 19.7	-3.2
CHKT	**Chengkung**	**1.36**	**273**	*e*P	Pn	13 17 03.8	-1.6
	baz=279						
CHKT				*e*S	Sn	13 17 19.7	-3.4
	baz=279						
YOJ	**Yonaguni jima**	**1.43**	**6**	P	Pn	13 17 05.6	-0.8
YOJ				*e*S	Sn	13 17 23.8	-1.0
TWF1	**Yuli**	**1.45**	**283**	P	Pn	13 17 05.8	-0.8
	baz=279						
TWF1				*e*S	Sn	13 17 24.1	-1.2
	baz=279						
ESL	**Shilin**	**1.51**	**301**	*e*S	Sn	13 17 24.2	-2.3
	baz=303						
IRIF	**Iriomote-Funau**	**1.54**	**32**	P	Pn	13 17 06.3	-1.4
IRIF				*e*S	Sn	13 17 24.9	-2.2
LAY	**Lan-yu**	**1.55**	**231**	*e*P	Pn	13 17 06.5	-1.4
	baz=230						
LAY				*e*S	Sn	13 17 23.8	-3.5
	baz=230						
JKRS	**Kuro-shima**	**1.61**	**42**	P	Pn	13 17 07.5	-1.2
JKRS				S	Sn	13 17 26.3	-2.6
TWG	**Pinlang**	**1.64**	**263**	P	Pn	13 17 09.2	+0.1
	baz=263						
TWG				*e*S	Sn	13 17 28.6	-1.0
	baz=263						
ELDTW	**Lidau**	**1.68**	**276**	*e*P	Pn	13 17 09.0	-0.6
	baz=276						
ENA	**Nanau**	**1.72**	**324**	*e*S	Sn	13 17 31.0	-0.4
	baz=320						
JIJ	**Ishigaki jima**	**1.79**	**42**	P	Pn	13 17 09.3	-1.7
JIJ				S	Sn	13 17 29.6	-3.4
ECL	**Taimali**	**1.79**	**256**	P	Pn	13 17 10.6	-0.5
	baz=256						
ECL				*e*S	Sn	13 17 31.9	-1.3
	baz=256						
YUS	**Yu-Shan**	**1.79**	**285**	P	Pn	13 17 11.8	+0.7
	baz=286						
WHF	**Hehuan Shan**	**1.82**	**308**	*e*S	Sn	13 17 33.5	-0.3
	baz=303						
STYT	**Tauyuan**	**1.92**	**274**	*e*P	Pn	13 17 13.1	+0.3
	baz=279						
NNS	**Nan Shan**	**1.94**	**317**	*e*S	Sn	13 17 36.3	-0.4
	baz=323						
EAST	**Anshuo**	**1.95**	**251**	P	Pn	13 17 13.2	+0.1
	baz=258						
ENTT	**Nioudou**	**1.98**	**324**	*e*S	Sn	13 17 37.7	0.0
	baz=326						
WTP	**Ta-pu**	**2.06**	**276**	*e*P	Pn	13 17 15.8	+1.1
	baz=279						
WTP				*e*S	Sn	13 17 42.5	+3.0
	baz=279						
CHN5	**Tsauling**	**2.06**	**286**	*e*P	Pn	13 17 14.9	+0.2
	baz=288						
CHN4	**Tsaushan**	**2.09**	**279**	*e*P	Pn	13 17 17.2	+2.2
	baz=284						
TSEB	**Hengchuen, Pin**	**2.12**	**238**	*e*P	Pn	13 17 15.3	-0.1
	baz=239						
NSK	**Sanguang**	**2.13**	**321**	S	Sn	13 17 40.7	-0.4
	baz=322						
CHN1	**Nanshi**	**2.13**	**275**	*e*P	Pn	13 17 17.9	+2.3
	baz=279						
CHN1				*e*S	Sn	13 17 44.7	+3.4
	baz=279						
SCZT	**Fangliau**	**2.15**	**253**	*e*P	Pn	13 17 17.2	+1.4
	baz=256						
TWK1	**Hengchun**	**2.17**	**240**	*e*P	Pn	13 17 16.1	0.0
	baz=240						
TWK1				*e*S	Sn	13 17 42.3	+0.1
	baz=240						
TWQ1	**Liyutan**	**2.30**	**305**

IGRS S Sb 13 22 32.4 -1.4

*IDC **18** 13:27:56.7±2.7, 32°.31S×68°.98W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.8/13, mbtmp3.7/3, ML4.0/1, Error ellipse: s-maj=94.1km s-min=50.9km az=34.0*
*NEIC **18** 13:28:12.6±0.7, 31°.50S×68°.60W, h102km±10km, mb4.0/2, Error ellipse: s-maj=13.4km s-min=7.9km az=79.0*
*GUC **18** 13:28:12.5±0.6, 31°.39S×69°.22W, h150km, ML3.7*

ISC 18 13:28:13.3±0.9, 31°.50S±0°.07×68°.7W±0°.1, h105km±15km, n22, σ0s96/32, mb3.3/2, 4C-3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JACH	**Jahuel**	**2.00**	**233**	*i* P	**Pn**	**13 28 45.9**	**0.0**
JACH				*i* S	**Sn**	**13 29 11.1**	**+0.1**
JACH	**Jahuel**	**2.00**	**233**	*i* P	**Pn**	**13 28 45.9**	**0.0**
JACH				*i* S	**Sn**	**13 29 11.1**	**+0.1**
FCH	**Farellones**	**2.27**	**216**	⇓*i* P	**Pn**	**13 28 52.4**	**+2.9**
FCH				*i* S	**Sn**	**13 29 20.9**	**+3.6**
PEL	**Peldehue**	**2.35**	**225**	⇓*i* P	**Pn**	**13 28 50.2**	**-0.4**
PEL				*i* S	**Sn**	**13 29 18.4**	**-0.7**
PEL				AML	AML	13 29 21.2	
	comp=E,513nm,0.5s						
CHNG	**Los Chungos**	**2.42**	**260**	⇓*i* P	**Pn**	**13 28 47.8**	**-3.7**
CHNG				*i* S	**Sn**	**13 29 14.8**	**-5.9**
CLCH	**Cerro Calan**	**2.45**	**219**	*e*P	**Pn**	**13 28 52.0**	**+0.1**
CLCH				*i* S	**Sn**	**13 29 21.5**	**+0.1**
CLCH				AML	AML	13 29 31.4	
	comp=E,289nm,0.5s						
ROCH	**El Roble**	**2.45**	**232**	*e*P	**Pn**	**13 28 51.1**	**-0.8**
ROCH				*i* S	**Sn**	**13 29 20.1**	**-1.4**
ROCH				AML	AML	13 29 26.3	
	comp=N,435nm,1.0s						
PCH	**Pirque**	**2.61**	**215**	⇑*i* P	**Pn**	**13 28 54.1**	**0.0**
PCH	**Pirque**	**2.61**	**215**	⇑*i* P	**Pn**	**13 28 54.1**	**0.0**
LMEL	**Las Melosas**	**2.67**	**208**	⇑*i* P	**Pn**	**13 28 55.1**	**+0.4**
LMEL				*i* S	**Sn**	**13 29 28.4**	**+1.8**
LMEL	**Las Melosas**	**2.67**	**208**	⇑*i* P	**Pn**	**13 28 55.1**	**+0.4**
LMEL				*i* S	**Sn**	**13 29 28.4**	**+1.8**
LMEL				AML	AML	13 29 38.6	
	comp=N,130nm,0.2s						
CHCH	**Chadas Angostu**	**2.94**	**214**	*e*P	**Pn**	**13 28 57.8**	**-0.4**
CHCH				*i* S	**Sn**	**13 29 33.0**	**+0.1**
CHCH	**Chadas Angostu**	**2.94**	**214**	*e*P	**Pn**	**13 28 57.8**	**-0.4**
CHCH				*i* S	**Sn**	**13 29 33.0**	**+0.1**
LCO	**Las Campanas**	**3.02**	**325**	*e*P	**Pn**	**13 28 59.4**	**0.0**
CACH	**El Canelo**	**3.06**	**211**	*e*P	**Pn**	**13 29 00.3**	**+0.4**
CACH	**El Canelo**	**3.06**	**211**	*e*P	**Pn**	**13 29 00.3**	**+0.4**
TRQA	**Tornquist**	**8.56**	**142**	*e*P	**Pn**	**13 30 12.8**	**-1.6**
	comp=N,7.4nm,0.6s						
LPAZ	**La Paz**	**15.15**	**2**	*e*P	**Pn**	**13 31 42.2**	**+0.5**
	comp=N,1.3nm,0.6s						
LPAZ	**La Paz**	**15.15**	**2**	Pn	**Pn**	**13 31 43.6**	**+1.9**
	comp=N,0.3nm,0.3s,baz=179,slow=6.5,SNR=6.6						
TXAR	**Lajitas Array**	**69.03**	**328**	P	**P**	**13 39 07.7**	**+0.1**
	comp=N,0.2nm,0.6s,mb3.1,baz=151,slow=9.9,SNR=4.6						
TORD	**Torodi Ar. Bea**	**80.69**	**68**	P	**P**	**13 40 14.7**	**-0.4**
	comp=N,0.6nm,0.7s,mb3.5,baz=247,slow=4.5,SNR=4.4						
ZALV	**Zalesovo Beam**	**150.61**	**32**	PKPbc	PKPbc	13 47 52.0	-0.4
	comp=N,0.2nm,0.3s,baz=294,slow=2.0,SNR=4.0						

DJA 18 13:31:31, 0°.51N×120°.89E, h160km, MLv3.9/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**1.05**	**92**	P	Pn	13 31 58.1	+1.0
MRSI				S	Sn	13 32 19.0	+1.9
APSI	**Ampana**	**1.60**	**152**	P	Pn	13 32 03.5	+1.1
APSI				S	Sn	13 32 28.7	+2.1
LUWI	**Luwuk**	**2.43**	**129**	P	Pn	13 32 12.6	+0.8
LUWI				S	Sn	13 32 44.3	+1.0

IDC 18 13:37:33.8±3.6, 25°.25N×141°.29E, h102km±24km, mb2.9/2, mb1 3.1/3, mb1mx2.9/19, mbtmp3.0/3, Error ellipse: s-maj=267.4km s-min=21.0km az=109.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.01**	**23**	P	Pn	13 38 07.5	+1.0
	8.6nm,0.3s,baz=112,slow=23,SNR=6.8						
CBIJ				S	Sn	13 38 31.9	+0.4
	22nm,0.3s,baz=305,slow=23,SNR=20						
WRA	**Warramunga Arr**	**45.42**	**189**	P	P	13 45 42.5	0.0
	4.1nm,0.4s,baz=9.6,slow=8.6,SNR=65						
ASAR	**Alice Springs**	**49.15**	**189**	P	P	13 46 10.9	-0.3
	0.2nm,0.7s,baz=11,slow=6.6,SNR=5.0						
ILAR	**Eielson Array**	**59.72**	**28**	P	P	13 47 27.4	+0.1
	0.3nm,0.8s,baz=270,slow=6.3,SNR=3.6						

*NIED **18** 13:38:00, 25°.70N×128°.90E, h8km, Mw3.8 Best double couple: M0 6.02000×10^14 NP1:φs213.00000°, δ67.00000°, λ-94.00000°. NP2:φs44.00000°, δ24.00000°, λ-80.00000°.*
*IDC **18** 13:38:50.2±3.3, 25°.97N×129°.24E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/20, mbtmp3.7/4, Error ellipse: s-maj=185.2km s-min=22.2km az=66.0*
*ISCJB **18** 13:38:53.1±0.5, 25°.65N±0°.04×128°.82E±0°.03, h33km, mb3.7/4, Error ellipse: s-maj=5.4km s-min=3.9km az=150.4*
*JMA **18** 13:38:53.9±0.3, 25°.69N×128°.85E, h49km, M3.9*

ISC 18 13:38:54.5±0.6, 25°.67N±0°.04×128°.80E±0°.04, h35km, n19, σ1s01/34, mb3.7/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJT2	**Tamagusuku 2**	**1.06**	**296**	P	**Pn**	**13 39 13.3**	**+0.5**
JJT2				*e*S	**Sn**	**13 39 27.1**	**+0.9**
NAH1	**Naha**	**1.13**	**298**	P	**Pn**	**13 39 14.1**	**+0.3**
NAH1				*e*S	**Sn**	**13 39 28.2**	**+0.1**
JOW	**Kunigami**	**1.25**	**338**	P	**Pn**	**13 39 15.7**	**+0.3**
JOW				*e*S	**Sn**	**13 39 30.0**	**-1.0**
JIH	**Iheya**	**1.55**	**331**	P	**Pn**	**13 39 20.2**	**+0.6**
JIH				*e*S	**Sn**	**13 39 38.7**	**+0.2**
JAGN	**Aguni-jima**	**1.67**	**303**	P	**Pn**	**13 39 21.8**	**+0.6**
JAGN				*e*S	**Sn**	**13 39 42.4**	**+0.9**
JKE	**Kume jima 2**	**1.93**	**290**	P	**Pn**	**13 39 24.9**	**+0.2**
JKE				*e*S	**Sn**	**13 39 46.9**	**-0.9**
JTK	**Tokunoshima**	**2.11**	**4**	P	**Pn**	**13 39 27.5**	**+0.2**
JTK				*e*S	**Sn**	**13 39 51.0**	**-1.3**
JMZ	**Minamidaito 2**	**2.19**	**86**	P	**Pn**	**13 39 27.6**	**-0.7**
JMZ				*e*S	**Sn**	**13 39 51.7**	**-2.5**
JAM	**Amami Oshima**	**2.82**	**15**	P	**Pn**	**13 39 37.2**	**+0.1**
JAM				*e*S	**Sn**	**13 40 08.4**	**-1.4**
JZK	**Kikaishima**	**2.83**	**21**	P	**Pn**	**13 39 38.5**	**+1.3**
JZK				*e*S	**Sn**	**13 40 10.2**	**+0.1**
JOGS	**Gusukube**	**3.21**	**254**	P	**Pn**	**13 39 43.2**	**+0.9**
JOGS				*e*S	**Sn**	**13 40 19.1**	**-0.2**
JMJ	**Miyako jima 2**	**3.29**	**256**	P	**Pn**	**13 39 44.3**	**+0.8**
JMJ				*e*S	**Sn**	**13 40 20.8**	**-0.6**
JTJ	**Tarama**	**3.85**	**255**	P	**Pn**	**13 39 51.3**	**+0.1**
JTJ				S	**Sn**	**13 40 33.4**	**-1.9**
JIJ	**Ishigaki jima**	**4.42**	**254**	P	**Pn**	**13 39 58.5**	**-0.6**
JIJ				*e*S	**Sn**	**13 40 46.3**	**-3.0**
JKRS	**Kuro-shima**	**4.58**	**253**	P	**Pn**	**13 40 01.3**	**+0.1**
JKRS				*e*S	**Sn**	**13 40 51.9**	**-1.3**
SONM	**Songino Array**	**28.30**	**327**	P	**P**	**13 44 45.4**	**+0.8**
	0.5nm,0.4s,mb3.5,baz=144,slow=9.7,SNR=2.5						
MKAR	**Makanchi Array**	**42.29**	**312**	P	**P**	**13 46 45.9**	**+1.3**
	0.4nm,0.6s,mb3.2,baz=93,slow=10,SNR=4.5						
WRA	**Warramunga Arr**	**45.66**	**173**	P	**P**	**13 47 13.8**	**+2.0**
	1.9nm,0.7s,mb4.1,baz=354,slow=8.5,SNR=12						
ASAR	**Alice Springs**	**49.29**	**174**	P	**P**	**13 47 43.6**	**+3.7**
	0.5nm,0.4s,mb3.9,baz=3.9,slow=15,SNR=15						

IDC 18 13:44:03.3±2.1, 6°.74S×156°.67E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.9/15, mbtmp4.0/5, Error ellipse: s-maj=77.7km s-min=23.9km az=127.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**16.68**	**216**	Pn	Pn	13 48 07.7	+9.1
	0.5nm,0.3s,baz=57,slow=12,SNR=8.2						
WRA	**Warramunga Arr**	**25.34**	**237**	P	P	13 49 32.8	+0.7
	1.3nm,0.3s,baz=64,slow=8.7,SNR=26						
ASAR	**Alice Springs**	**27.60**	**230**	P	P	13 49 52.5	0.0
	1.0nm,0.3s,baz=57,slow=9.9,SNR=25						
FITZ	**Fitzroy Crossi**	**32.28**	**247**	P	P	13 50 33.4	-0.6
	1.6nm,0.4s,baz=51,slow=8.5,SNR=14						
SONM	**Songino Array**	**70.03**	**327**	P	P	13 55 17.6	+0.6
	0.5nm,0.4s,baz=134,slow=5.1,SNR=5.4						
ILAR	**Eielson Array**	**82.53**	**21**	P	P	13 56 27.4	-0.2
	0.2nm,0.4s,baz=246,slow=5.2,SNR=12						

CASC 18 13:44:59.8±1.2, 12°.32N×87°.80W, h36km±6km, MD3.5, ML3.7, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.95**	**358**	*e*P	Pn	13 45 17.1	+0.4
CNCH				*e*S	Sn	13 45 29.8	+0.9
CNCH				AML	AML	13 45 33.4	
	comp=Z,2μm,0.4s						
CNGN	**Cerro Negro**	**1.09**	**81**	*e*P	Pn	13 45 18.4	-0.3
CNGN				*e*S	Sn	13 45 32.8	+0.3
COPN	**Copaltepe**	**1.19**	**97**	*e*P	Pn	13 45 19.9	-0.1
BLLM	**Bellamira**	**1.19**	**339**	*e*P	Pn	13 45 20.4	+0.4
BLLM				*e*S	Sn	13 45 35.4	+0.4
MOMN	**Momotombo**	**1.24**	**86**	*e*P	Pn	13 45 20.8	+0.2
CAHU	**Cacaucatique**	**1.49**	**345**	*e*P	Pn	13 45 25.0	+0.8
CAHU				*e*S	Sn	13 45 43.9	+1.5
LFRS	**El Faro**	**1.78**	**317**	*e*P	Pn	13 45 28.9	+0.7

*ISK **18** 14:02:01.3, 37°.56N×35°.04E, h5km, ML1.7*
*DDA **18** 14:02:03.0, 37°.51N×35°.09E, h7km±4km, Md2.8*
*CSEM **18** 14:02:03.6±0.2, 37°.50N×35°.05E, h10km, ML1.7, Error ellipse: s-maj=5.1km s-min=4.9km az=100.0*
*ISCJB **18** 14:02:04.3±0.6, 37°.44N±0°.06×35°.06E±0°.05, h21km±9km, Error ellipse: s-maj=9.6km s-min=6.5km az=165.7*

ISC 18 14:02:04.3±0.7, 37°.48N±0°.08×35°.06E±0°.05, h13km±11km, n18, σ0s82/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARA	**Karaisali**	**0.22**	**182**	*e*PG	**Pg**	**14 02 08.2**	**-0.8**
KARA				*e*SG	**Sg**	**14 02 13.7**	**+1.3**
KARA	**Karaisali**	**0.22**	**182**	*e*Pg	**Pg**	**14 02 08.3**	**-0.8**
KARA				*e*Sg	**Sg**	**14 02 13.7**	**+1.4**
GULE	**Gulek**	**0.30**	**229**	*i* P	**Pg**	**14 02 09.8**	**-0.6**
GULE				*i* S	**Sg**	**14 02 15.4**	**+0.8**
GULE	**Gulek**	**0.30**	**229**	*i* P	**Pg**	**14 02 09.9**	**-0.6**
GULE				*i* S	**Sg**	**14 02 15.4**	**+0.8**
KOZT	**Kozan**	**0.61**	**90**	*e*PG	**Pg**	**14 02 14.4**	**-1.8**
KOZT				*e*SG	**Sg**	**14 02 24.6**	**+0.4**
KOZT	**Kozan**	**0.61**	**90**	*e*Pg	**Pg**	**14 02 14.4**	**-1.8**
KOZT				*e*Sg	**Sg**	**14 02 24.6**	**+0.4**
CEYT	**Ceyhan**	**0.72**	**131**	*e*PG	**Pg**	**14 02 18.2**	**-0.1**
CEYT	**Ceyhan**	**0.72**	**131**	*e*Pg	**Pg**	**14 02 18.2**	**-0.1**
AVNT	**Avonos**	**1.30**	**353**	*i* P	**Pn**	**14 02 28.3**	**+0.1**
AVNT				*i* S	**Sb**	**14 02 45.8**	**+0.4**
AVNT	**Avonos**	**1.30**	**353**	*i* P	**Pn**	**14 02 28.3**	**+0.1**
AVNT				*i* S	**Sb**	**14 02 45.8**	**+0.5**
SULT	**Sultanhani-AKS**	**1.42**	**301**	*e*PN	**Pn**	**14 02 28.8**	**-0.9**
SULT	**Sultanhani-AKS**	**1.42**	**301**	*e*Pn	**Pn**	**14 02 28.8**	**-1.0**
PINB	**Pinarbasi**	**1.59**	**41**	*i* P	**Pn**	**14 02 32.2**	**0.0**
PINB				*i* S	**Sn**	**14 02 53.7**	**+1.1**
PINB	**Pinarbasi**	**1.59**	**41**	*i* P	**Pn**	**14 02 32.2**	**0.0**
PINB				*i* S	**Sn**	**14 02 53.7**	**+1.1**
SARI	**SarD1z-Kayseri**	**1.76**	**47**	*e*PN	**Pn**	**14 02 28.6**	**-5.9**
SARI	**SarD1z-Kayseri**	**1.76**	**47**	*e*Pn	**Pn**	**14 02 28.6**	**-5.8**
HDMB	**Hadim**	**2.12**	**257**	*e*PN	**Pn**	**14 02 39.3**	**-0.1**
HDMB	**Hadim**	**2.12**	**257**	*e*Pn	**Pn**	**14 02 39.3**	**-0.1**

*ISK **18** 14:07:02.0, 37°.01N×29°.19E, h2km, MD3.2*
*DDA **18** 14:07:02.4, 36°.95N×29°.23E, h7km±4km, Md3.4*
*ISCJB **18** 14:07:03.1±0.6, 36°.98N±0°.03×29°.22E±0°.03, h3km±4km, Error ellipse: s-maj=4.8km s-min=3.6km az=11.4*
*CSEM **18** 14:07:03.2±0.2, 37°.01N×29°.23E, h5km, MD3.2, Error ellipse: s-maj=6.1km s-min=4.0km az=5.0*

ISC 18 14:07:03.7±0.5, 36°.99N±0°.03×29°.22E±0°.03, h7km±4km, n44, σ1s15/67, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.28**	**53**	*e*PG	**Pg**	**14 07 08.5**	**-0.7**
GLHS				*e*SG	**Sg**	**14 07 13.6**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.28**	**53**	*e*Pg	**Pg**	**14 07 08.5**	**-0.8**
GLHS				*e*Sg	**Sg**	**14 07 13.6**	**+0.6**
GOLH	**Golhisar**	**0.37**	**48**	*i* P	**Pg**	**14 07 09.4**	**-1.5**
GOLH				*i* S	**Sg**	**14 07 16.5**	**+0.6**
GOLH	**Golhisar**	**0.37**	**48**	*i* P	**Pg**	**14 07 09.5**	**-1.6**
GOLH				*i* S	**Sg**	**14 07 16.5**	**+0.7**
TURN	**Turunc**	**0.51**	**257**	*i* P	**Pg**	**14 07 17.8**	**+4.2**
TURN				*i* S	**Sg**	**14 07 29.0**	**+8.9**
ELL	**Elmali**	**0.60**	**113**	*e*PG	**Pg**	**14 07 14.7**	**-0.7**
ELL				*e*SG	**Sg**	**14 07 24.1**	**+1.0**
ELL	**Elmali**	**0.60**	**113**	*e*Pg	**Pg**	**14 07 14.7**	**-0.6**
ELL				*e*Sg	**Sg**	**14 07 24.1**	**+0.9**
DNZL	**Cakiroluk**	**0.71**	**349**	*i* P	**Pg**	**14 07 16.7**	**-0.8**
DNZL				*i* S	**Sg**	**14 07 29.2**	**+2.4**
DNZL	**Cakiroluk**	**0.71**	**349**	*i* P	**Pg**	**14 07 16.7**	**-0.8**
DNZL				*i* S	**Sg**	**14 07 29.2**	**+2.4**
YER	**Yerkesik**	**0.76**	**281**	*e*PG	**Pg**	**14 07 18.8**	**+0.4**
YER	**Yerkesik**	**0.76**	**281**	*e*Pg	**Pg**	**14 07 18.8**	**+0.4**
DENT	**Denizli**	**0.78**	**349**	*e*PG	**Pg**	**14 07 17.3**	**-1.4**
DENT	**Denizli**	**0.78**	**349**	*e*Pg	**Pg**	**14 07 17.3**	**-1.4**
AKAS	**Kas**	**0.81**	**157**	*i* P	**Pg**	**14 07 17.5**	**-1.9**
AKAS				*i* S	**Sg**	**14 07 31.7**	**+1.8**
AKAS	**Kas**	**0.81**	**157**	*i* P	**Pg**	**14 07 17.5**	**-1.9**
AKAS				*i* S	**Sg**	**14 07 31.7**	**+1.8**
KORT	**Korkueli**	**0.91**	**89**	*i* P	**Pg**	**14 07 20.3**	**-0.8**
KORT				*i* S	**Sg**	**14 07 36.4**	**+3.5**
KORT	**Korkueli**	**0.91**	**89**	*i* P	**Pg**	**14 07 20.3**	**-0.8**
KORT				*i* S	**Sg**	**14 07 36.3**	**+3.4**
ANTB	**Antalya**	**1.15**	**94**	*e*PN	**Pn**	**14 07 25.4**	**-0.9**
ANTB				*e*SN	**Sn**	**14 07 42.8**	**+0.5**
ANTB	**Antalya**	**1.15**	**94**	*e*Pn	**Pn**	**14 07 25.4**	**-0.9**
ANTB				*e*Sn	**Sn**	**14 07 42.8**	**+0.6**
BCK	**Bucak**	**1.19**	**66**	*e*PN	**Pn**	**14 07 25.0**	**-1.7**
BCK				*e*SN	**Sn**	**14 07 43.2**	**0.0**
BCK	**Bucak**	**1.19**	**66**	*e*Pn	**Pn**	**14 07 25.0**	**-1.8**
BCK				*e*Sn	**Sn**	**14 07 43.2**	**0.0**
MLSB	**Milas**	**1.19**	**285**	*e*PN	**Pn**	**14 07 25.4**	**-1.4**
MLSB				*e*SN	**Sn**	**14 07 41.9**	**-1.4**
MLSB	**Milas**	**1.19**	**285**	*e*Pn	**Pn**	**14 07 25.4**	**-1.4**
MLSB				*e*Sn	**Sn**	**14 07 41.9**	**-1.4**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pn**	**14 07 27.8**	**-0.0**
AYDN				*i* S	**Sb**	**14 07 46.3**	**+2.0**
ISP	**Isparta**	**1.33**	**51**	*e*PN	**Pn**	**14 07 28.3**	**-0.4**
ISP	**Isparta**	**1.33**	**51**	*e*Pn	**Pn**	**14 07 28.3**	**-0.4**
DAT	**Datca**	**1.34**	**259**	*e*PN	**Pn**	**14 07 29.0**	**+0.1**
DAT	**Datca**	**1.34**	**259**	*e*Pn	**Pn**	**14 07 29.0**	**+0.1**
KHL	**Karahalli**	**1.35**	**10**	*e*PN	**Pn**	**14 07 28.0**	**-1.1**
KHL	**Karahalli**	**1.35**	**10**	*e*Pn	**Pn**	**14 07 28.0**	**-1.1**
KHAL	**Karahalli**	**1.40**	**9**	*i* P	**Pn**	**14 07 29.2**	**-0.4**
KHAL				*i* S	**Sb**	**14 07 49.7**	**+1.5**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**	**14 07 31.1**	**+1.2**
BDRM				*i* S	**Sb**	**14 07 50.0**	**+1.1**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**	**14 07 31.1**	**+1.1**
BDRM				*i* S	**Sb**	**14 07 50.0**	**+1.1**
BODT	**Bodrum**	**1.53**	**273**	*e*PN	**Pn**	**14 07 30.9**	**-0.5**
BODT	**Bodrum**	**1.53**	**273**	*e*Pn	**Pn**	**14 07 30.9**	**-0.5**
DEMI	**Demirci**	**2.09**	**349**	*i* P	**Pn**	**14 07 39.2**	**+0.1**
IZM	**Izmir**	**2.10**	**313**	*e*PN	**Pn**	**14 07 38.0**	**-1.2**
IZM	**Izmir**	**2.10**	**313**	*e*Pn	**Pn**	**14 07 38.0**	**-1.2**
HDMB	**Hadim**	**2.62**	**90**	*e*PN	**Pn**	**14 07 47.7**	**+1.3**
HDMB	**Hadim**	**2.62**	**90**	*e*Pn	**Pn**	**14 07 47.7**	**+1.3**
KONT	**Konya--Tatoy**	**2.68**	**68**	*e*PN	**Pn**	**14 07 48.4**	**+1.2**
KONT	**Konya--Tatoy**	**2.68**	**68**	*e*Pn	**Pn**	**14 07 48.4**	**+1.2**
APE	**Apeiranthos**	**2.95**	**273**	*e*PN	**Pn**	**14 07 51.8**	**+0.8**
APE	**Apeiranthos**	**2.95**	**273**	*e*Pn	**Pn**	**14 07 51.8**	**+0.8**

KRSC 18 14:11:01.5±0.9, 50°.79N×157°.99E, h74km±106km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALID	**Alaid**	**1.55**	**274**	*e*P	Pn	14 11 28.8	+1.6
ALID				*i* S	Sn	14 11 48.8	+2.2
MIPR	**Malaya Ipel'ka**	**1.68**	**333**	*e*P	Pn	14 11 30.9	+2.1
PET	**Petropavlovsk**	**2.27**	**10**	*e*P	Pn	14 11 38.7	+1.8
PET				*i* S	Sn	14 12 05.4	+1.5
AVH	**Avacha**	**2.52**	**10**	P	Pn	14 11 42.7	+2.5
GNL	**Ganaly**	**2.91**	**359**	*e*P	Pn	14 11 49.0	+3.6

*ISCJB **18** 14:11:02.7±1.0, 33°.62N±0°.02×91°.83E±0°.03, h3km±6km, mb4.6/49, MS4.8/38, Error ellipse: s-maj=3.8km s-min=3.4km az=40.8*
*SZGRF **18** 14:11:03.1, 32°.80N×93°.22E, h33km, mb4.5, Xizang*
*BJI **18** 14:11:03.4, 33°.50N×91°.73E, h13km, mB4.8/29, mb4.6/39, Ms5.2/56, Ms7 4.9/47*
*IDC **18** 14:11:03.6±0.6, 33°.60N×91°.78E, h0km, mb4.3/16, mb1 4.5/20, mb1mx4.4/27, mbtmp4.3/20, ML4.0/4, MS4.6/20, Ms1 4.6/20, ms1mx4.4/25, Error ellipse: s-maj=23.5km s-min=12.6km az=46.0*
*NEIC **18** 14:11:05.6±0.3, 33°.63N×91°.92E, h10km, mb4.7/27, Error ellipse: s-maj=10.0km s-min=6.6km az=46.0*
*MOS **18** 14:11:07.3±1.3, 33°.64N×91°.93E, h33km, mb4.8/36, MS4.7/23, Error ellipse: s-maj=10.1km s-min=5.3km az=117.4*
*GCMT **18** 14:11:10.0±0.2, 33°.65N×91°.93E, h23km, MW5.3, Moment Tension Solution. s50,c68; s87,c172; Moment tensor: Scale 10^16 Nm; Mrr-0.42±.23; Mθθ-3.15±.19; Mφφ 3.57±.20; Mrθ-1.01±.28; Mrφ 8.82±.18; Mθφ 0.15±.28; Best double couple: M0 9.50000×10^16 NP1:φs170.00000°, δ84.00000°, λ-178.00000°. NP2:φs79.00000°, δ88.00000°, λ-6.00000°. Principal axes: T 9.6700, Plg3.0000°, Azm125.0000°; N -0.3500, Plg84.0000°, Azm238.0000°; P -9.3200, Plg6.0000°, Azm34.0000°; Data Used: II CN IC IU G.*

ISC 18 14:11:04.9±1.1, 33°.65N±0°.02×91°.86E±0°.03, h3km±6km, n212, σ1s36/215, mb4.6/49, MS4.8/38, 12C-15D, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.98**	**189**	Pg	**Pb**	**14 12 11.3**	**-4.4**
LSA				Sg	**Sg**	**14 13 09.1**	**-3.8**
TAPN	**Taplejung**	**7.23**	**211**	*e*P	**Pn**	**14 12 54.5**	**+3.1**
	190nm,0.9s						
GUN	**Gumba**	**7.69**	**224**	*e*P	**Pn**	**14 12 59.6**	**+1.8**
	336nm,0.7s						
JIRN	**Jiri**	**7.71**	**221**	*e*P	**Pn**	**14 13 00.3**	**+2.2**
	421nm,0.8s						
ODAN	**Odare**	**7.79**	**211**	*e*P	**Pn**	**14 13 01.1**	**+1.9**
	201nm,0.7s						
SHL	**Shillong**	**8.05**	**180**	*e*PKP	**Pn**	**14 13 03.0**	**+0.2**
SHL				*ex*	**Sn**	**14 14 34.5**	**0.0**
RAMN	**Ramite**	**8.08**	**216**	*e*P	**Pn**	**14 13 04.0**	**+0.9**
	387nm,0.6s						
KKN	**Kakani**	**8.13**	**226**	*e*P	**Pn**	**14 13 04.9**	**+1.0**
	133nm,0.6s						
PKI	**Pulchoki**	**8.22**	**224**	*e*P	**Pn**	**14 13 06.4**	**+1.3**
	193nm,0.6s						
PKIN	**Phulchoki**	**8.22**	**224**	*e*P	**Pn**	**14 13 06.7**	**+1.6**
	283nm,0.6s						
DMN	**Daman**	**8.37**	**226**	*e*P	**Pn**	**14 13 08.7**	**+1.6**
	325nm,1.2s						
GKN	**Gorkha**	**8.38**	**230**	*e*P	**Pn**	**14 13 09.6**	**+2.3**
	204nm,0.7s						
GTA	**Gaotai**	**8.60**	**46**	⇓P	**Pn**	**14 13 11.9**	**+1.6**
GTA				pP		14 13 21.6	
GTA				sP		14 13 25.3	
GTA				S	**Sn**	**14 14 46.8**	**-1.1**
GTA				pmax	pmax		
	comp=Z,17nm,1.2s						
GTA				pmax	pmax		
	comp=Z,330nm,3.9s						
GTA				LR	LR		
	comp=N,8μm,13.7s						
GTA				LR	LR		
	comp=E,9μm,10.4s						
GTA				LR	LR		
	comp=Z,5μm,15.2s						
IMP	**Imphal**	**9.02**	**168**	*i* x	**Sn**	**14 14 59.0**	**+0.8**
KOLN	**Koldanda**	**9.21**	**233**	*e*P	**Pn**	**14 13 19.9**	**+1.2**
	comp=Z,68nm,0.7s						
LZH	**Lanzhou**	**10.14**	**73**	*e*P	**Pn**	**14 13 36.3**	**+4.9**
LZH				pP		14 13 41.8	
LZH				sP		14 13 46.0	
LZH				S	**Sn**	**14 15 31.4**	**+5.7**
LZH				sS		14 15 41.0	
LZH				SS		14 15 44.0	
LZH				pmax	pmax		
	comp=Z,61nm,1.6s						
LZH				pmax	pmax		
	comp=Z,250nm,4.3s						
LZH				LR	LR		
	comp=N,10μm,7.2s						
LZH				LR	LR		
	comp=Z,13μm,9.5s						
CD2	**Chengdu**	**10.44**	**102**	P	**Pn**	**14 13 38.4**	**+2.9**
CD2				pP		14 13 45.5	
CD2				sP		14 13

XAN LR LR
comp=Z,2μm,13.6s
KUDL Kundal 14.29 252 *ex* x 14 14 21.0
KUDL AMb AMB 14 14 24.8
comp=Z,19nm,1.2s
GYA Guiyang 14.68 115⇑ *i*P **Pn** **14 14 32.0 -1.5**
GYA pP pP 14 14 40.8 +0.1
GYA PP 14 14 48.4
GYA S **Sn** **14 17 13.8 -3.0**
GYA sS sS 14 17 27.8 -9.4
GYA SS 14 17 35.0
GYA pmax pmax
comp=Z,90nm,0.8s
GYA pmax pmax
comp=Z,160nm,3.7s
GYA LR LR
comp=N,5μm,11.8s
GYA LR LR
comp=E,3μm,9.0s
GYA LR LR
comp=Z,5μm,12.1s
KHET Khetri 14.86 252 *e*PKP **Pn** **14 14 32.8 -3.1**
KHET AMb AMB 14 14 44.4
comp=Z,26nm,0.9s
MK31 Makanchi Array 15.01 334 *e*P **Pn** **14 14 35.0 -2.9**
MKAR Makanchi Array 15.01 334 Pn **Pn** **14 14 34.8 -3.0**
comp=Z,0.4nm,0.3s,baz=143,slow=14,SNR=13
MKAR LR LR 14 20 09.3
comp=Z,1μm,19.7s,baz=149,slow=36
AAA Alma-Ata 15.10 314 *e*P **Pn** **14 14 37.6 -1.6**
AAA *e*S **Sn** **14 17 22.3 -4.6**
AAA pmax pmax
comp=Z,500nm,6.6s
AAA smax
comp=E,500nm,7.5s
AAA MLR MLR
comp=Z,3μm,14.0s
ENH Enshi 15.34 98 P **Pn** **14 14 41.3 -1.0**
comp=Z,41nm,0.6s
CHRT Chiangrai 15.43 151 ⇓P **Pn** **14 14 43.0 -0.6**
comp=Z,118nm,1.0s
KZA Kyzart 15.56 308 P **Pn** **14 14 41.5 -3.7**
SNR=80
BTO Baotou 16.05 59 *e*P **Pn** **14 14 53.3 +1.8**
CHG Chiang Mai 16.07 155 ⇓P **Pn** **14 14 55.5 +3.5**
comp=Z,17nm,0.9s
CHTO Chiang Mai 16.07 155 *e*P **Pn** **14 14 50.6 -1.4**
comp=Z,23nm,1.3s
CHTO Chiang Mai 16.07 155 *e*P **Pn** **14 14 50.6 -1.4**
CHTO pmax pmax
comp=Z,23nm,1.3s
AAK Ala-Archa 16.32 308 *e*P **Pn** **14 14 47.6 -7.3**
comp=Z,52nm,1.1s
AAK Ala-Archa 16.32 308 Pn **Pn** **14 14 47.8 -7.2**
comp=Z,2.9nm,0.3s,baz=156,slow=4.7,SNR=7.2
AAK LR LR 14 22 29.7
comp=Z,4μm,21.6s,baz=93,slow=42
AAK Ala-Archa 16.32 308⇓ *e*P **Pn** **14 14 55.0 0.0**
AAK pmax pmax
comp=Z,4.0nm,0.9s
FRU Bishkek 16.33 309 *e*P **Pn** **14 14 56.0 +0.8**
FRU pmax pmax
comp=Z,76nm,1.8s
FRU MLR MLR
comp=Z,4μm,20.0s
BHPL Bhopal 16.37 234 *e*PKP **Pn** **14 14 54.6 -1.2**
BHPL AMb AMB 14 14 59.1
comp=Z,51nm,1.7s
CM31 Chiang Mai Arr 16.40 156 *e*P **Pn** **14 14 54.9 -1.3**
comp=Z,12nm,0.7s
CMAR Chiang Mai Arr 16.40 156 Pn **Pn** **14 14 55.0 -1.2**
comp=Z,0.2nm,0.3s,baz=332,slow=12,SNR=31
CMAR LR LR 14 22 12.7
comp=Z,1μm,18.7s,baz=336,slow=41
AJM Ajmer 16.52 249 *e*PKP **Pn** **14 14 55.9 -1.7**
AJM AMb AMB 14 15 01.8
comp=Z,85nm,1.2s
NGP Nagpur 16.84 226 *ex* **Pn** **14 14 58.0 -3.8**
NGP *ex* x 14 14 59.1
comp=Z,54nm,1.5s
NGP *ex* x 14 18 00.5
HHC Hu-ho-hao-te 17.24 60 *e*P **Pn** **14 15 09.3 +2.7**
HHC pP pP 14 15 16.9 +7.9
HHC sP sP 14 15 21.9 +13
HHC *e*S **Sn** **14 18 17.4 -1.4**
HHC sS sS 14 18 32.0 +2.6
HHC SS 14 18 41.8
HHC pmax pmax
comp=Z,26nm,0.9s
HHC pmax pmax
comp=Z,270nm,3.8s
HHC LR LR
comp=N,2μm,12.1s
HHC LR LR
comp=E,6μm,13.7s
HHC LR LR
comp=Z,6μm,13.4s
BDT Bhumibol Dam 17.55 157 P **Pn** **14 15 11.5 +0.8**
SONM Songino Array 17.90 33 P **Pn** **14 15 15.1 +0.2**
comp=Z,0.2nm,0.3s,baz=215,slow=12,SNR=25
ULN Ulaanbaatar 18.23 34 *e*P **Pn** **14 15 18.7 -0.2**
comp=Z,14nm,1.0s
ULN Ulaanbaatar 18.23 34 *e*P **Pn** **14 15 18.7 -0.2**
ULN pmax pmax
comp=Z,14nm,1.0s
AKL Akola 18.43 229 *e*PKP **Pn** **14 15 20.6 -0.9**
AKL AMb AMB 14 15 25.1
comp=Z,66nm,1.4s
ZAK Zakamensk 18.71 23 *e*P **Pn** **14 15 25.3 +0.6**
ZAK pmax pmax
comp=Z,5.0nm,1.1s
WHN Wuhan 19.30 93 P **Pn** **14 15 32.8 +0.8**
WHN pmax pmax
comp=Z,230nm,1.9s
WHN pmax pmax
comp=Z,720nm,3.3s
WHN LR LR
comp=N,16μm,8.9s
WHN LR LR
comp=E,9μm,8.8s
WHN LR LR
comp=Z,7μm,10.7s
NST Nakhon Sawan 19.40 155 P **Pn** **14 15 34.0 +0.8**
comp=Z,58nm,0.9s
KURK Kurchatov 19.62 334 *e*P **Pn** **14 15 33.5 -2.2**
comp=Z,34nm,1.1s
KURK Kurchatov 19.62 334 P **Pn** **14 15 33.5 -2.2**
comp=Z,0.4nm,0.3s,baz=143,slow=11,SNR=28
KURK LR LR 14 22 57.0
comp=Z,1μm,19.7s,baz=140,slow=36
KURK Kurchatov 19.62 334*c* *i*P **Pn** **14 15 33.6 -2.1**
KURK pmax pmax
comp=Z,39nm,1.3s
TLY Talaya 19.95 22 *e*P **Pn** **14 15 41.6 +2.0**
TLY pmax pmax
comp=Z,6.0nm,1.2s
TLY MLR MLR
comp=Z,2μm,15.0s
HYB Hyderabad 20.10 220 *i* P **P** **14 15 39.5 -0.3**
HYB *e*S **S** **14 19 26.0 -0.3**
LATR Latur 20.43 226 *e*PKP **P** **14 15 41.6 -1.8**
LATR AMb AMB 14 15 45.9
comp=Z,33nm,1.2s
BJT Baijiatuan 20.44 65 *e*P **P** **14 15 44.6 +1.2**
comp=Z,32nm,0.9s
BJT Baijiatuan 20.44 65 *e*P **P** **14 15 44.6 +1.2**
BJT pmax pmax
comp=Z,32nm,0.9s
BJI Beijing 20.45 65 P **P** **14 15 45.6 +2.1**
BJI S **S** **14 19 36.4 +3.4**
BJI pmax pmax
comp=Z,22nm,1.0s
BJI pmax pmax
comp=Z,190nm,3.7s
BJI LR LR
comp=N,10μm,15.2s,MS5.3
BJI LR LR
comp=E,4μm,15.2s,MS5.3
BJI LR LR
comp=Z,2μm,18.8s,MS4.5
IRK Irkutsk 20.63 22 *e*P **P** **14 15 46.2 +0.9**
IRK pmax pmax
comp=Z,37nm,1.8s
ZAA0 Zalesovo Array 20.90 348 *e*P **P** **14 15 47.3 -0.9**
ZALV Zalesovo Beam 20.90 348 P **P** **14 15 47.3 -0.9**
comp=Z,13nm,0.8s,baz=163,slow=10,SNR=45
ZALV LR LR 14 24 34.9
comp=Z,553nm,18.6s,MS4.0,baz=335,slow=39
ZALV Zalesovo Beam 20.90 348 P **P** **14 15 47.3 -0.9**
ZALV pmax pmax
comp=Z,13nm,0.8s
ZALV MLR MLR
comp=Z,553nm,18.6s,MS4.0
GZH Guangzhou 21.60 114 P **P** **14 15 55.1 -0.9**
GZH S **S** **14 19 55.3 -0.6**
GZH LR LR
comp=N,8μm,13.7s,MS5.4
GZH LR LR
comp=E,5μm,12.7s,MS5.4
GZH LR LR
comp=Z,6μm,8.4s
QIZ Qiongzhong 21.67 128 P **P** **14 15 56.5 -0.3**
QIZ pP 14 16 04.6
QIZ S **S** **14 19 56.0 -1.4**
QIZ pmax pmax
comp=Z,28nm,1.8s,mb4.4
QIZ LR LR
comp=N,3μm,10.6s,MS4.9
QIZ LR LR
comp=E,1μm,11.0s,MS4.9
QIZ LR LR
comp=Z,4μm,8.1s
NVS Novosibirsk 22.04 347 *e*P **P** **14 16 00.0 -0.4**
NVS *e*S **S** **14 19 53.9 -10**
NVS pmax pmax
comp=Z,53nm,1.8s,mb4.7
NVS pmax pmax
comp=N,73nm,1.9s
NVS pmax pmax
comp=E,61nm,2.0s
NVS smax
comp=E,26nm,1.8s
POO Poona 22.05 231 *e*PKP **P** **14 15 59.7 -1.1**
POO AMb AMB 14 16 04.5
comp=Z,39nm,1.5s,mb4.6
NJ2 Nanjing 22.72 87 *e*P **P** **14 16 08.6 +0.7**
NJ2 pP 14 16 17.8
NJ2 sP sP 14 16 21.9 +13
NJ2 PP 14 16 38.0
NJ2 S **S** **14 20 11.0 -6.6**
NJ2 sS sS 14 20 25.0 +6.2
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.4
NJ2 pmax pmax
comp=Z,100nm,3.9s
NJ2 LR LR
comp=N,7μm,15.9s,MS5.3
NJ2 LR LR
comp=E,4μm,13.2s,MS5.3
NJ2 LR LR
comp=Z,4μm,13.9s,MS5.0
KAD Karad 22.73 229 *e*PKP **P** **14 16 06.1 -2.1**
BVAR Borovoye Array 24.71 328 P **P** **14 16 26.4 -0.7**
comp=Z,14nm,0.9s,mb4.5,baz=134,slow=10,SNR=30
BVAR Borovoye Array 24.71 328 P **P** **14 16 26.4 -0.7**
BVAR pmax pmax
comp=Z,14nm,0.9s
BRVK Borovoye 24.78 328 *e*P **P** **14 16 26.8 -1.0**
comp=Z,25nm,0.9s,mb4.7
BRVK Borovoye 24.78 328⇑ *i*P **P** **14 16 27.2 -0.5**
BRVK pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
QZH Quanzhou 24.82 103 *e*P **P** **14 16 27.3 -1.1**
QZH S **S** **14 20 57.0 +5.1**
QZH LR LR
comp=N,10μm,13.7s,MS5.5
QZH LR LR
comp=E,5μm,13.5s,MS5.5
QZH LR LR
comp=Z,6μm,10.6s,MS5.4
SSE Sheshan 24.87 88 P **P** **14 16 25.6 -3.2**
SSE sP sP 14 16 37.9 +8.0
SSE S **S** **14 20 48.4 -4.1**
SSE sS sS 14 21 02.8 +9.0
SSE pmax pmax
comp=Z,35nm,0.7s,mb5.0
SSE pmax pmax
comp=Z,34nm,3.2s
SSE LR LR
comp=N,4μm,20.3s,MS5.0
SSE LR LR
comp=E,2μm,20.3s,MS5.0
SSE LR LR
comp=Z,3μm,15.8s,MS4.9
CN2 Changchun 27.93 59 *e*P **P** **14 16 57.4 +1.1**
CN2 *ep*P pP 14 17 06.8 +10
CN2 *es*P sP 14 17 10.8 +13
CN2 *e*S **S** **14 21 37.0 -3.7**
CN2 pmax pmax
comp=Z,20nm,1.3s,mb4.6
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,3μm,15.0s,MS5.4
CN2 LR LR
comp=E,6μm,15.0s,MS5.4
CN2 LR LR
comp=Z,4μm,19.0s,MS5.0
ABKAR Akbulak array 28.29 313 *e*P **P** **14 16 57.1 -2.3**
comp=Z,1.0nm,0.5s,mb3.7
KSRS Korea Array 29.47 72 P **P** **14 17 09.7 -0.4**
comp=Z,0.8nm,0.7s,mb3.6,baz=268,slow=9.7,SNR=3.5
KSRS LR LR 14 30 08.7
comp=Z,857nm,19.2s,MS4.4,baz=97,slow=39
KSRS Korea Array 29.47 72 P **P** **14 17 09.7 -0.4**
KSRS pmax pmax
comp=Z,1.0nm,0.7s,mb3.6
KSRS MLR MLR
comp=Z,857nm,19.2s,MS4.4
AKTK Aktyubinsk 29.88 314 P **P** **14 17 12.5 -1.1**
AKTK LR LR 14 30 52.8
AKTO Aktyubinsk 29.88 314 P **P** **14 17 12.5 -1.1**
comp=Z,3.2nm,0.8s,mb4.1,baz=107,slow=9.7,SNR=8.5
AKTO LR LR 14 30 52.8
comp=Z,1μm,18.1s,MS4.6,baz=117,slow=40
AKTO Aktyubinsk 29.88 314 P **P** **14 17 12.5 -1.1**
AKTO pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
AKTO MLR MLR
comp=Z,1μm,18.1s,MS4.6
SVE Sverdlovsk 31.48 327⇓ *e*P **P** **14 17 27.9 +0.3**
SVE pmax pmax
comp=Z,15nm,0.8s,mb4.9
SVE MLR MLR
comp=Z,2μm,18.0s,MS4.7
ARU Arti 32.23 325 *e*P **P** **14 17 33.7 -0.5**
comp=Z,6.3nm,0.9s,mb4.5
ARU Arti 32.23 325*d* *i*P **P** **14 17 34.1 -0.1**
ARU *e*PPP 14 18 49.5
ARU S **S** **14 22 45.7 -2.1**
ARU pmax pmax
comp=Z,9.0nm,1.2s,mb4.5
KLR Kul'dur 33.27 50 *e*P **P** **14 17 41.2 -2.2**
KLR *e*S **S** **14 23 05.5 +1.2**
KLR MLR MLR
comp=N,2μm,10.0s,MS5.3
KLR MLR MLR
comp=E,2μm,10.0s,MS5.3
SOKR Solikamsk 34.69 329*c* *i*P **P** **14 17 58.1 +2.5**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SOKR MLR MLR
comp=Z,1μm,18.0s,MS4.7
HABR Khabarovsk 35.28 52 P Px 14 18 12.3
HABR 14 20 29.0
HABR *e*SS SS 14 25 49.8 -18
HABR 14 28 16.2
HABR MLR MLR
comp=E,2μm,14.0s,MS5.1
HABR MLR MLR
comp=N,1μm,11.0s,MS5.1
HABR MLR MLR
comp=Z,939nm,13.0s,MS4.7
MAK Makhachkala 35.67 298 *e*P **P** **14 18 03.6 -0.7**
MAK *e*S **S** **14 23 44.6 +3.2**
MAK pmax pmax
comp=Z,215nm,1.8s
MAK MLR MLR
comp=Z,2μm,14.0s,MS5.0
DGRG David-gareji 37.30 296 P **P** **14 18 20.2 +1.9**
MJAR Matsushiro Arr 37.75 72 LR LR 14 34 43.7
comp=Z,841nm,18.6s,MS4.6,baz=270,slow=38
MIB Mutribah 37.84 277 *e*P **P** **14 18 22.2 -0.8**
MIB AMb AMB 14 18 28.4
comp=Z,83nm,1.1s,mb5.4
NAY Al-Naaiem 38.09 276 *e*P **P** **14 18 23.7 -1.4**
NAY AMb AMB 14 18 30.0
comp=Z,39nm,0.9s,mb5.1
BHD Baghdad 39.33 283 *ex* x 14 18 41.7
BHD *ex* x 14 24 36.0
TIXI Tiksi 42.77 16 P **P** **14 19 01.6 -1.6**
comp=Z,1.8nm,0.6s,mb4.0
TIXI Tiksi 42.77 16 *e*P **P** **14 19 02.4 -0.8**
TIXI pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
TIXI MLR MLR
comp=Z,563nm,12.0s,MS4.7
ANN Anapa 42.88 302 *e*P **P** **14 19 06.2 +1.7**
ANN *e*S **S** **14 25 31.5 +1.8**
ANN pmax pmax
comp=Z,22nm,0.9s,mb4.9
ANN MLR MLR
comp=E,775nm,16.0s
ANN MLR MLR
comp=Z,855nm,16.0s,MS4.7
KLMR Klimovskoe 43.08 325 P **P** **14 19 02.9 -3.0**
KLMR *e*SS SS 14 28 41.2 -2.9
KLMR pmax pmax
comp=Z,25nm,1.2s,mb4.8
KLMR MLR MLR
comp=Z,1μm,20.0s,MS4.8
OBN Obninsk 43.59 317 P **P** **14 19 12.0 +1.9**
OBN *e*S **S** **14 25 40.6 +0.7**
OBN *e* 14 28 59.4
OBN pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
OBN MLR MLR
comp=Z,600nm,14.0s,MS4.7
BR131 Keskin Array S 46.38 295 *e*P **P** **14 19 32.4 -0.1**
comp=Z,2.2nm,0.7s,mb4.2
BRTR Keskin Array B 46.38 295 P **P** **14 19 31.7 -0.8**
comp=Z,3.1nm,0.9s,mb4.2,baz=101,slow=6.4,SNR=15
BRTR Keskin Array B 46.38 295 P **P** **14 19 31.7 -0.8**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
JOF Joensuu 47.30 327 *e*P **P** **14 19 38.4 -1.0**
JOF Joensuu 47.30 327 *ep* **P** **14 19 38.4 -1.0**
AKASG Malin Array Be 47.97 311 P **P** **14 19 43.3 -1.5**
comp=Z,3.2nm,0.6s,mb4.6,baz=79,slow=6.5,SNR=13
AKASG LR LR 14 44 00.7
comp=Z,2μm,18.1s,MS5.0,baz=100,slow=41
AKASG Malin Array Be 47.97 311 P **P** **14 19 43.3 -1.5**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG MLR MLR
comp=Z,2μm,18.1s
FINES FINESS Array B 49.60 325 P **P** **14 19 57.3 +0.2**
comp=Z,4.6nm,0.6s,mb4.7,baz=97,slow=6.8,SNR=18
FINES LR LR 14 42 40.3
comp=Z,882nm,18.4s,MS4.8,baz=91,slow=38
FINES FINESS Array B 49.60 325 P **P** **14 19 57.3 +0.2**
FINES pmax pmax
comp=Z,5.0nm,0.6s
FINES MLR MLR
comp=Z,883nm,18.4s
VRI Vrincioaia 50.23 304⇑P **P** **14 20 02.8 +0.6**
VRI Vrincioaia 50.23 304⇑ *i*P **P** **14 20 02.8 +0.6**
PLOR Plostina 50.29 304⇑P **P** **14 20 05.2 +2.6**
PLOR Plostina 50.29 304⇑ *i*P **P** **14 20 05.2 +2.6**
PET Petropavlovsk 50.35 46 *e*P **P** **14 20 08.5 +5.6**
PET *e*S **S** **14 27 18.0 +1.5**
PET MLR MLR
comp=Z,1μm,14.0s,MS5.0
ARCES ARCESS Array B 50.66 335 P **P** **14 20 04.9 -0.1**
comp=Z,3.3nm,0.8s,mb4.3,baz=92,slow=7.3,SNR=9.6
ARCES ARCESS Array B 50.66 335 P **P** **14 20 04.9 -0.1**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
MLR Muntele Rosu 50.84 304⇓P **P** **14 20 09.6 +2.9**
MLR Muntele Rosu 50.84 304⇓ *i*P **P** **14 20 09.6 +2.8**
BURAR Bucovina Array 50.96 307⇓P **P** **14 20 09.2 +1.6**
BURAR Bucovina Array 50.96 307⇓ *i*P **P** **14 20 09.2 +1.6**
VOIR 51.47 304⇓P **P** **14 20 13.4 +1.9**
VOIR 51.47 304⇓ *i*P **P** **14 20 13.4 +1.9**
KWP Kalwaria Pacla 52.26 310 P **P** **14 20 17.7 +0.3**
comp=Z,21nm,0.9s,mb5.1
KWP Kalwaria Pacla 52.26 310 P **P** **14 20 17.7 +0.4**
KWP pmax pmax
comp=Z,21nm,0.9s,mb5.1
KWP Kalwaria Pacla 52.26 310⇑ *i*P **P** **14 20 19.9 +2.6**
STHS Stebnicka Huta 53.24 310 *e*P **P** **14 20 24.4 -0.2**
comp=Z,4.5nm,0.9s,mb4.4
STHS Stebnicka Huta 53.24 310 *e*P **P** **14 20 24.4 -0.2**
STHS pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
STHS Stebnicka Huta 53.24 310 *e*P **P** **14 20 24.4 -0.2**
BILL Bilibino 53.46 27‖ *e*P **P** **14 20 27.1 +1.2**
BILL *e* 14 20 32.4
BILL *e* 14 28 12.4
BILL pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
BILL MLR MLR
comp=Z,800nm,17.0s,MS4.8
OJC Ojcow 54.00 311 *e*P **P** **14 20 30.6 +0.4**
VYHS Vyhne 54.98 309 *e*P **P** **14 20 39.4 +2.1**
comp=Z,6.6nm,1.4s,mb4.5
VYHS Vyhne 54.98 309 *e*P **P** **14 20 39.4 +2.1**
VYHS pmax pmax
comp=Z,7.0nm,1.4s,mb4.5
VYHS Vyhne 54.98 309 *e*P **P** **14 20 39.4 +2.1**
OKC Ostrava-Krasne 55.12 311 AMS AMS 14 47 40.0
comp=Z,700nm,27.9s
MORC Moravsky Berou 55.52 311⇓P **P** **14 20 41.3 +0.2**
MORC Moravsky Berou 55.52 311⇓ *i*P **P** **14 20 41.3 +0.1**
DPC Dobruska-Polom 56.16 312 *e*P **P** **14 20 46.4 +0.7**
DPC MLR MLR
comp=Z,700nm,13.9s,MS4.9
DPC Dobruska-Polom 56.16 312 *e*P **P** **14 20 46.4 +0.7**
DPC AMS AMS 14 48 40.0
comp=Z,700nm,13.9s
ZST Bratislava 56.18 309 *e*P Px 14 20 57.6
ZST pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
ZST Bratislava 56.18 309 *e* Px 14 20 57.6
UPC Upice 56.31 312 *e*P **P** **14 20 48.0 +1.2**
UPC Upice 56.31 312 *e*P **P** **14 20 48.0 +1.2**
NOA NORSAR Array B 56.78 325 P **P** **14 20 49.2 -0.8**
comp=Z,3.8nm,0.6s,mb4.6,baz=76,slow=5.4,SNR=25
NOA LR LR 14 47 09.4
comp=Z,1μm,19.3s,MS5.0,baz=90,slow=38
NOA NORSAR Array B 56.78 325 P **P** **14 20 49.2 -0.8**
NOA pmax pmax
comp=Z,4.0nm,0.6s
NOA MLR MLR
comp=Z,1μm,19.3s
TREC Trest 56.94 311 AMS AMS 14 49 20.0
comp=Z,1μm,18.8s
CONA Conrad Observa 57.05 309⇑ *i*pP pP 14 20 53.5 +0.5
comp=Z,14nm,0.9s
PVCC Panska Ves 57.20 312 AMS AMS 14 49 50.0
comp=Z,800nm,14.9s
PRU Pruhonice 57.35 312 AMS AMS 14 49 20.0
comp=Z,700nm,13.8s
BRG Berggiesshubel 57.50 313 *e*P **P** **14 20 55.9 +0.7**
comp=Z,4.7nm,0.7s,mb4.6
BRG
comp=N,364nm,15.2s
BRG
comp=E,1μm,23.0s
BRG
comp=Z,1μm,12.5s
BRG Berggiesshubel 57.50 313 *e*P **P** **14 20 55.9 +0.7**
BRG pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
BRG MLR MLR
comp=N,218nm,15.2s
BRG MLR MLR
comp=E,625nm,23.0s
BRG MLR MLR
comp=Z,644nm,12.5s,MS4.9
SOKA Soboth 57.94 308⇓ *i*pP pP 14 20 59.4 +0.2
comp=Z,9.6nm,1.1s
CLL Collm 57.96 313 *e*P **P** **14 20 59.0 +0.5**
comp=Z,12nm,1.6s,mb4.7
CLL LR LR
comp=Z,1μm,18.6s,MS5.1
CLL Collm 57.96 313 *e*P **P** **14 20 59.0 +0.5**

CLL				pmax	pmax			
	comp=Z,12nm,1.6s,mb4.7							
CLL				MLR	MLR			
	comp=Z,1μm,18.6s,MS5.1							
CLL	**Collm**	**57.96**	**313**	*eP*	**P**		**14 20 59.0**	**+0.5**
	comp=Z,12nm,1.6s,mb4.7							
CLL				LmV			14 50 00.0	
	comp=Z,1μm,18.6s							
KHC	**Kasperske Hory**	**58.19**	**311**	*eP*	**P**		**14 21 00.4**	**+0.3**
KHC				MLR	MLR			
	comp=Z,800nm,17.9s,MS4.9							
KHC	**Kasperske Hory**	**58.19**	**311**	*eP*	**P**		**14 21 00.4**	**+0.3**
KHC				AMS	AMS		14 49 50.0	
	comp=Z,800nm,17.9s							
GRA1	**Grafenberg Arr**	**59.50**	**312**	*eP*	**P**		**14 21 11.9**	**+2.7**
	comp=Z,9.0nm,1.2s,mb4.7							
GRF	**Grafenberg Arr**	**59.50**	**312**	*eP*	**P**		**14 21 11.9**	**+2.7**
	comp=Z,9.0nm,1.2s,mb4.7							
GRF	**Grafenberg Arr**	**59.50**	**312**	*eP*	**P**		**14 21 11.9**	**+2.7**
GRF				pmax	pmax			
	comp=Z,9.0nm,1.2s,mb4.7							
GRF	**Grafenberg Arr**	**59.50**	**312**	*eP*	**P**		**14 21 11.9**	**+2.7**
GRF				pmax	pmax			
	comp=Z,9.0nm,1.2s,mb4.7							
FETA	**Feichten**	**60.64**	**309**	⇑*i*pP	pP		14 21 17.7	-0.3
	comp=Z,6.5nm,0.9s							
KMBO	**Kilima Mbogo**	**61.82**	**248**	*eP*	**P**		**14 21 21.4**	**-4.1**
	comp=Z,7.9nm,1.0s,mb4.8							
KMBO	**Kilima Mbogo**	**61.82**	**248**	*eP*	**P**		**14 21 21.4**	**-4.1**
KMBO				pmax	pmax			
	comp=Z,8.0nm,1.0s							
LPG	**La Plagne**	**63.76**	**309**	*eP*	**P**		**14 21 39.6**	**+1.5**
	comp=Z,34nm,1.0s,mb5.0							
LPG	**La Plagne**	**63.76**	**309**	*eP*	**P**		**14 21 39.6**	**+1.5**
	comp=Z,17nm,1.0s,mb5.0							
LPG	**La Plagne**	**63.76**	**309**	*eP*	**P**		**14 21 39.6**	**+1.5**
LPG				pmax	pmax			
	comp=Z,17nm,1.0s,mb5.0							
LPL	**La Plagne**	**63.77**	**309**	*eP*	**P**		**14 21 39.6**	**+1.5**
	comp=Z,18nm,0.8s,mb4.8							
LPL	**La Plagne**	**63.77**	**309**	*eP*	**P**		**14 21 39.6**	**+1.5**
	comp=Z,8.9nm,0.8s,mb4.8							
LPL	**La Plagne**	**63.77**	**309**	*eP*	**P**		**14 21 39.6**	**+1.5**
LPL				pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.8							
SMF	**Signal de Mont**	**65.19**	**311**	*eP*	**P**		**14 21 47.7**	**+0.3**
	comp=Z,47nm,1.5s,mb5.0							
SMF	**Signal de Mont**	**65.19**	**311**	*eP*	**P**		**14 21 47.7**	**+0.3**
	comp=Z,24nm,1.5s,mb5.0							
SMF	**Signal de Mont**	**65.19**	**311**	*eP*	**P**		**14 21 47.7**	**+0.3**
SMF				pmax	pmax			
	comp=Z,24nm,1.5s,mb5.0							
AVF	**Avril sur Loir**	**65.44**	**311**	*eP*	**P**		**14 21 49.4**	**+0.4**
	comp=Z,36nm,1.2s,mb5.0							
AVF	**Avril sur Loir**	**65.44**	**311**	*eP*	**P**		**14 21 49.4**	**+0.4**
	comp=Z,18nm,1.2s,mb5.0							
AVF	**Avril sur Loir**	**65.44**	**311**	*eP*	**P**		**14 21 49.4**	**+0.4**
AVF				pmax	pmax			
	comp=Z,18nm,1.2s,mb5.0							
KEST	**Kesra**	**65.85**	**298**	P	**P**		**14 21 49.3**	**-2.5**
	comp=Z,0.7nm,0.7s,mb3.8,baz=67,slow=7.7,SNR=2.5							
KEST				LR	LR		14 56 18.5	
	comp=Z,100nm,19.9s,MS4.0,baz=103,slow=41							
TCF	**Toulx Ste Croi**	**66.36**	**311**	*eP*	**P**		**14 21 55.8**	**+0.8**
	comp=Z,25nm,1.2s,mb4.8							
TCF	**Toulx Ste Croi**	**66.36**	**311**	*eP*	**P**		**14 21 55.8**	**+0.8**
	comp=Z,12nm,1.2s,mb4.8							
TCF	**Toulx Ste Croi**	**66.36**	**311**	*eP*	**P**		**14 21 55.8**	**+0.8**
TCF				pmax	pmax			
	comp=Z,12nm,1.2s,mb4.8							
WRA	**Warramunga Arr**	**66.94**	**136**	P	**P**		**14 21 57.9**	**-1.0**
	comp=Z,8.7nm,1.1s,mb4.7,baz=333,slow=7.0,SNR=19							
WRA	**Warramunga Arr**	**66.94**	**136**	P	**P**		**14 21 57.9**	**-0.9**
WRA				pmax	pmax			
	comp=Z,9.0nm,1.1s							
WB2	**Warramunga Arr**	**66.94**	**136**	*eP*	**P**		**14 21 58.7**	**-0.2**
MTLF	**Montolieu**	**67.61**	**308**	*eP*	**P**		**14 22 02.5**	**-0.4**
COLD	**Coldfoot**	**69.15**	**22**	*eP*	**P**		**14 22 12.6**	**+0.4**
	comp=Z,6.2nm,0.9s,mb4.5							
ETSF	**Etsaut**	**69.62**	**308**	*eP*	**P**		**14 22 15.5**	**0.0**
ASAR	**Alice Springs**	**69.64**	**139**	P	**P**		**14 22 15.8**	**0.0**
	comp=Z,9.1nm,1.0s,mb4.7,baz=324,slow=6.1,SNR=66							
ASAR	**Alice Springs**	**69.64**	**139**	P	**P**		**14 22 15.8**	**0.0**
ASAR				pmax	pmax			
	comp=Z,9.0nm,1.0s							
PPLA	**Purkeypile**	**71.15**	**26**	*eP*	**P**		**14 22 24.3**	**-0.2**
COLA	**College**	**71.39**	**23**	*eP*	**P**		**14 22 25.2**	**-0.7**
	comp=Z,7.3nm,1.2s,mb4.5							
COLA	**College**	**71.39**	**23**	*eP*	**P**		**14 22 25.2**	**-0.7**
COLA				pmax	pmax			
	comp=Z,7.0nm,1.2s,mb4.5							
ILAR	**Eielson Array**	**71.77**	**23**	P	**P**		**14 22 27.2**	**-1.0**
	comp=Z,1.3nm,0.8s,mb3.9,baz=301,slow=5.4,SNR=20							
ILAR				LR	LR		14 56 30.8	
	comp=Z,329nm,18.4s,MS4.6,baz=160,slow=38							
ESDC	**Sonseca Array**	**73.42**	**307**	P	**P**		**14 22 37.9**	**-0.6**
	comp=Z,0.2nm,0.3s,mb3.5,baz=50,slow=4.0,SNR=3.4							
ESDC				LR	LR		15 00 11.6	
	comp=Z,333nm,20.1s,MS4.6,baz=5.0,slow=40							
EGAK	**Eagle**	**73.54**	**21**	*eP*	**P**		**14 22 37.6**	**-1.2**
	comp=Z,5.9nm,1.0s,mb4.5							
STKA	**Stephens Creek**	**80.28**	**139**	P	**P**		**14 23 16.1**	**-1.1**
	comp=Z,3.5nm,0.8s,mb4.3,baz=332,slow=4.2,SNR=6.4							
STKA				LR	LR		15 03 39.5	
	comp=Z,248nm,20.5s,MS4.5,baz=167,slow=39							
TOA0	**Torodi Ar. Sit**	**82.97**	**281**	*eP*	**P**		**14 23 30.8**	**-1.1**
TORD	**Torodi Ar. Bea**	**82.97**	**281**	P	**P**		**14 23 30.7**	**-1.2**
TORD				LR	LR		15 05 13.1	
TORD	**Torodi Ar. Bea**	**82.97**	**281**	P	**P**		**14 23 30.7**	**-1.2**
	comp=Z,3.2nm,0.6s,mb4.5,baz=47,slow=4.7,SNR=19							
TORD				LR	LR		15 05 13.1	
	comp=Z,446nm,18.3s,MS4.9,baz=90,slow=39							
BOSA	**Boshof**	**88.37**	**234**	LR	LR		15 02 34.0	
	comp=Z,223nm,21.2s,MS4.5,baz=40,slow=35							
SCHQ	**Schefferville**	**89.99**	**348**	LR	LR		15 06 03.3	
	comp=Z,443nm,21.9s,MS4.8,baz=187,slow=37							
DZM	**Mont Dzumac**	**90.02**	**117**	*e*LR	LR		14 53 00.2	
	comp=Z,230nm,24.6s							
DBIC	**Dimbokro**	**91.91**	**279**	LR	LR		15 08 56.0	
	comp=Z,358nm,19.5s,MS4.8,baz=39,slow=38							
ULM	**Lac du Bonnet**	**96.19**	**5**	LR	LR		15 08 53.1	
	comp=Z,352nm,21.6s,MS4.8,baz=34,slow=36							
PPT	**Papeete**	**123.09**	**90**	*e*LR	LR		15 08 14.6	
	comp=Z,407nm,26.8s							
TAOE	**Nuku Hiva Isla**	**126.28**	**75**	*e*LR	LR		15 09 40.4	
	comp=Z,297nm,25.1s							
RKT	**Rikitea**	**137.79**	**88**	*e*LR	LR		15 15 03.9	
	comp=Z,173nm,33.8s							
LPAZ	**La Paz**	**155.02**	**309**	PKPbc	PKPdf		14 31 10.4	+11
	comp=Z,0.9nm,0.9s,baz=62,slow=4.7,SNR=2.3							
LPAZ				PKPab	PKPab		14 31 27.6	+3.5
	comp=Z,0.9nm,0.8s,baz=80,slow=9.2,SNR=3.7							

IDC 18 14:33:50.1±2.0, 6°07'S×149°26'E, h0km, mb3.2/3, mb1 3.6/3, mb1mx3.4/14, mbtmp3.3/3, Error ellipse: s-maj=126.8km s-min=28.8km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.01**	**225**	P	P	14 38 25.0	+0.5
	0.7nm,0.6s,baz=49,slow=10,SNR=7.4						
ASAR	**Alice Springs**	**22.90**	**219**	P	P	14 38 54.4	-1.2
	0.7nm,0.9s,baz=54,slow=9.3,SNR=7.3						
ILAR	**Eielson Array**	**84.67**	**23**	P	P	14 46 24.6	-0.8
	0.3nm,0.8s,baz=248,slow=4.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**147.28**	**285**	PKPbc	PKPbc	14 53 37.6	+0.9
	0.3nm,0.6s,baz=69,slow=3.0,SNR=2.7						

RSPR 18 14:49:56.0, 20°27'N×70°66'W, h53km±14km, MD4.0/3, 2C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDDR	**Presa de Saban**	**1.41**	**205**	⇑*e*P	Pn	14 50 18.9	-0.4
SDDR				*e*S	Sn	14 50 35.6	-1.1
CRPR	**Cabo Rojo, PR**	**4.04**	**123**	*e*S	Sn	14 51 41.2	0.0
CELP	**Cerrillos**	**4.42**	**119**	⇑*e*P	Pn	14 51 00.5	-0.1

*IDC **18** 15:04:54.8±1.8, 10°.89N×91°.62E, h0km, mb3.7/6, mb1 3.7/7, mb1mx3.5/23, mbtmp3.6/7, ML3.4/1, Error ellipse: s-maj=63.3km s-min=19.0km az=68.0*
*NEIC **18** 15:04:56.3±1.0, 10°.92N×91°.67E, h10km, Error ellipse: s-maj=27.1km s-min=12.0km az=73.0*
*ISCJB **18** 15:04:58.5±1.3, 11°.0N±0°.1×91°.9E±0°.2, h33km, mb3.6/6, Error ellipse: s-maj=33.9km s-min=15.1km az=163.6*

ISC 18 15:05:00.4±1.3, 11°.0N±0°.1×91°.8E±0°.2, h35km, n8, σ0s66/8, mb3.6/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.18**	**42**	Pn	**Pn**	**15 07 23.6**	**-0.4**
	0.1nm,0.3s,baz=236,slow=16,SNR=3.0						
MKAR	**Makanchi Array**	**36.59**	**349**	P	**P**	**15 12 02.9**	**-0.1**
	0.6nm,0.7s,mb3.5,baz=148,slow=7.1,SNR=3.7						
SONM	**Songino Array**	**38.75**	**16**	P	**P**	**15 12 22.8**	**+1.6**
	0.3nm,0.4s,mb3.4,baz=200,slow=6.4,SNR=3.2						
ZALV	**Zalesovo Beam**	**43.22**	**354**	P	**P**	**15 12 57.1**	**-0.8**
	0.5nm,0.4s,mb3.6,baz=190,slow=5.9,SNR=2.7						
FITZ	**Fitzroy Crossi**	**44.19**	**130**	P	**P**	**15 13 06.3**	**+0.1**
	2.2nm,0.7s,mb4.0,baz=333,slow=9.0,SNR=3.5						
WRA	**Warramunga Arr**	**51.97**	**126**	P	**P**	**15 14 06.2**	**-0.2**
	0.3nm,0.3s,mb3.7,baz=301,slow=10,SNR=11						
WB2	**Warramunga Arr**	**51.98**	**126**	*e*P	**P**	**15 14 06.8**	**+0.3**
ASAR	**Alice Springs**	**53.69**	**130**	P	**P**	**15 14 18.8**	**-0.3**
	0.4nm,0.7s,mb3.5,baz=304,slow=6.9,SNR=7.1						
ASAR				PcP	PcP	15 15 26.0	+0.9
	0.6nm,0.8s,baz=310,slow=2.9,SNR=4.8						

IDC 18 15:20:31.7±7.7, 17°.21S×175°.01W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.7/15, mbtmp3.7/3, Error ellipse: s-maj=346.4km s-min=34.6km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.95**	**258**	P	P	15 29 12.3	0.0
	0.5nm,0.7s,baz=96,slow=8.7,SNR=3.7						
ASAR	**Alice Springs**	**48.10**	**253**	P	P	15 29 13.1	-0.4
	1.2nm,0.7s,baz=86,slow=8.9,SNR=18						
ILAR	**Eielson Array**	**84.51**	**12**	P	P	15 33 05.2	-0.8
	1.0nm,1.1s,baz=221,slow=7.7,SNR=3.7						
BRTR	**Keskin Array B**	**146.52**	**318**	PKPbc	PKPbc	15 40 16.5	+1.3
	0.6nm,0.7s,baz=57,slow=5.3,SNR=4.6						

SKHL 18 15:23:32.5±1.1, 56°.08N×124°.45E, h10km±6km, mb3.9/4, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KROS	**Kirovskiy**	**2.19**	**138**	*e*Pn	Pn	15 24 09.5	+0.6
KROS				*e*Pg	Pg	15 24 11.4	-3.1
KROS				AMB	AMB	15 24 11.8	
	22nm,0.4s						
KROS				AMB	AMB	15 24 11.8	
	19nm,0.4s						
KROS				AMB	AMB	15 24 11.8	
	36nm,0.4s						
KROS				*e*Sn	Sn	15 24 36.9	+0.8
KROS				*e*Sg	Sg	15 24 40.7	-2.2
KROS				A		15 24 42.4	
	62nm,0.5s						
KROS				A		15 24 42.4	
	66nm,0.5s						
ZEA	**Zeya**	**2.85**	**144**	*e*Pn	Pn	15 24 20.0	+2.0
ZEA				*e*Pg	Pg	15 24 24.0	-3.1
ZEA				AMB	AMB	15 24 25.7	
	15nm,0.3s						
ZEA				*e*Sn	Sn	15 24 52.5	+0.2
ZEA				*e*Sg	Sg	15 25 00.5	-3.4
ZEA				A		15 25 03.6	
	49nm,0.5s						
ZEA				A		15 25 03.6	
	58nm,0.5s						
ZEA				A		15 25 03.6	
	19nm,0.5s						
BMKR	**Bomnak**	**2.86**	**117**	*e*Pn	Pn	15 24 18.3	+0.3
BMKR				*e*Pg	Pg	15 24 24.0	-3.2
BMKR				AMB	AMB	15 24 24.6	
	28nm,0.4s						
BMKR				*e*Sn	Sn	15 24 53.4	+1.0
BMKR				*e*Sg	Sg	15 25 01.5	-2.6
BMKR				A		15 25 04.5	
	152nm,0.4s						
CRS	**Chara**	**3.52**	**286**	*e*rx	rx	15 24 33.0	
CRS				*e*Pg	Pg	15 24 37.9	-2.1
CRS				AMB	AMB	15 24 42.1	
	10.0nm,0.7s						
CRS				*e*Sg	Sg	15 25 23.6	-2.0
CRS				A		15 25 32.4	
	49nm,1.0s						
EKMR	**Ekimchan**	**5.79**	**118**	*e*Pg	Pg	15 25 17.0	-6.3
EKMR				*e*Sg	Sg	15 26 33.5	-4.7
EKMR				A		15 26 42.0	
	11nm,0.5s						
EKMR				A		15 26 42.0	
	6.0nm,0.5s						
EKMR				A		15 26 42.0	
	8.0nm,0.5s						

IDC 18 15:23:42.4±3.2, 17°.25S×175°.10W, h0km, mb3.8/4, mb1 4.2/4, mb1mx3.9/15, mbtmp3.8/4, Error ellipse: s-maj=173.5km s-min=26.7km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.85**	**259**	P	P	15 32 22.2	-0.2
	0.5nm,0.7s,baz=96,slow=8.1,SNR=5.0						
ASAR	**Alice Springs**	**48.00**	**253**	P	P	15 32 23.2	-0.3
	1.2nm,0.7s,baz=89,slow=7.7,SNR=15						
NVAR	**Mina Array Bea**	**76.79**	**42**	P	P	15 35 36.5	+0.5
	0.3nm,0.7s,baz=229,slow=8.2,SNR=2.3						
ILAR	**Eielson Array**	**84.58**	**12**	P	P	15 36 16.2	-0.9
	3.1nm,1.4s,baz=226,slow=4.8,SNR=3.5						
BRTR	**Keskin Array B**	**146.49**	**318**	PKPbc	PKPbc	15 43 26.8	+1.0
	0.8nm,1.0s,baz=90,slow=0.3,SNR=5.3						

*IDC **18** 15:24:07.5±4.9, 36°.25N×70°.94E, h185km±38km, mb3.3/5, mb1 3.4/10, mb1mx3.1/28, mbtmp3.3/10, Error ellipse: s-maj=49.0km s-min=29.5km az=148.0*
*ISCJB **18** 15:24:11.4±0.4, 36°.57N±0°.05×70°.85E±0°.09, h216km±7km, mb3.2/4, Error ellipse: s-maj=12.3km s-min=6.7km az=17.8*
*NEIC **18** 15:24:11.6±1.0, 36°.40N×71°.01E, h221km±9km, mb4.0/3, Error ellipse: s-maj=21.8km s-min=10.0km az=134.0*

ISC 18 15:24:12.5±0.4, 36°.56N±0°.05×70°.90E±0°.09, h208km±7km, n30, σ1s03/37, mb3.2/4, 1C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.52**	**217**	*e*P	**Pn**	**15 24 57.1**	**0.0**
KBL				*e*S	**Sn**	**15 25 30.9**	**-1.0**
CEP	**Cherat**	**2.85**	**163**	⇓P	**Pn**	**15 25 01.6**	**+0.7**
CEP				S	**Sn**	**15 25 38.0**	**-0.7**
CHCP	**Chirah Chowk**	**3.48**	**146**	P	**Pn**	**15 25 09.8**	**+1.5**
THW	**Thamme Wali**	**3.82**	**169**	P	**Pn**	**15 25 12.4**	**0.0**
KSH	**Kashi**	**4.97**	**52**	⇓*i*Pn	**Pn**	**15 25 22.9**	**-3.7**
KSH				Sn	**Sn**	**15 26 13.4**	**-12**
KSH				smax			
	comp=N,59nm,0.3s						
KSH				smax			
	comp=E,64nm,0.7s						
AML	**Almayashu**	**5.96**	**20**	P	**Pn**	**15 25 39.8**	**+0.6**
	SNR=24						
AML	**Almayashu**	**5.96**	**20**	*e*P	**Pn**	**15 25 39.7**	**+0.5**
	comp=E,49nm,0.5s						
AML				*e*S	**Sn**	**15 26 44.6**	**-3.6**
UCH	**Uchtor**	**6.31**	**25**	P	**Pn**	**15 25 44.3**	**+0.6**
	SNR=18						
EKS2	**Erkin-Say**	**6.48**	**19**	P	**Pn**	**15 25 46.8**	**+0.9**
	SNR=11						
EKS2	**Erkin-Say**	**6.48**	**19**	*e*P	**Pn**	**15 25 46.3**	**+0.4**
	comp=E,3.6nm,0.4s						
KK31	**Karatay Array**	**6.54**	**357**	P	**Pn**	**15 25 46.0**	**-0.6**
	comp=E,6.7nm,0.6s,baz=177,slow=12,SNR=62						
KK31				⇑S	**Sn**	**15 26 57.4**	**-4.1**
	comp=E,25nm,0.7s,baz=180,slow=21,SNR=14						
AAK	**Ala-Archa**	**6.67**	**23**	P	**Pn**	**15 25 49.2**	**+1.0**
	SNR=8.6						
AAK	**Ala-Archa**	**6.67**	**23**	*e*P	**Pn**	**15 25 49.0**	**+0.7**
AAK				S	**Sn**	**15 27 03.4**	**-1.1**
AAK	**Ala-Archa**	**6.67**	**23**	P	**Pn**	**15 25 48.4**	**+0.1**
	comp=E,4.5nm,0.3s,baz=198,slow=3.7,SNR=16						
AAK				S	**Sn**	**15 27 03.4**	**-1.1**
	comp=E,2.0nm,0.3s,baz=312,slow=22,SNR=14						
KBK	**Karagaybulak**	**6.84**	**26**	P	**Pn**	**15 25 51.7**	**+1.2**
	SNR=5.7						
SDNR	**Sundarnagar**	**7.13**	**133**	*e*S	**Sn**	**15 27 08.5**	**-7.1**
MK31	**Makanchi Array**	**13.29**	**36**	*e*P	**Pn**	**15 27 13.7**	**+0.7**
MKAR	**Makanchi Array**	**13.29**	**36**	P	**Pn**	**15 27 12.7**	**-0.3**
	comp=E,0.4nm,0.3s,baz=220,slow=13,SNR=16						
AB31	**Akbulak array**	**14.99**	**331**	P	**Pn**	**15 27 35.1**	**+1.1**
	comp=E,0.2nm,0.4s,baz=162,slow=12,SNR=21						
ABKAR	**Akbulak array**	**14.99**	**331**	*e*P	**Pn**	**15 27 35.2**	**+1.2**
	comp=E,1.7nm,0.5s						
KURK	**Kurchatov**	**15.20**	**19**	P	**Pn**	**15 27 34.2**	**-2.3**
	comp=E,0.2nm,0.3s,baz=206,slow=10,SNR=16						
BVAR	**Borovoye Array**	**16.46**	**359**	P	**P**	**15 27 51.9**	**+1.2**
	comp=E,0.4nm,0.3s,baz=167,slow=8.9,SNR=6.3						
AKTK	**Aktyubinsk**	**16.69**	**330**	P	**P**	**15 27 53.7**	**+0.5**
AKTO	**Aktyubinsk**	**16.69**	**330**	P	**P**	**15 27 53.7**	**+0.5**
	comp=E,0.6nm,0.3s,baz=134,slow=11,SNR=12						
ZAA0	**Zalesovo Array**	**19.89**	**25**	*e*P	**P**	**15 28 27.8**	**0.0**
ZALV	**Zalesovo Beam**	**19.89**	**25**	P	**P**	**15 28 27.6**	**-0.2**
	comp=E,4.4nm,0.4s,baz=216,slow=11,SNR=16						
ARCES	**ARCESS Array B**	**41.06**	**338**	P	**P**	**15 31 35.1**	**0.0**
	comp=E,1.3nm,0.6s,mb3.6,baz=109,slow=7.7,SNR=14						
NOA	**NORSAR Array B**	**44.28**	**323**	P	**P**	**15 32 00.0**	**-1.2**
	comp=E,0.7nm,0.7s,mb3.1,baz=96,slow=7.8,SNR=3.4						
TORD	**Torodi Ar. Bea**	**65.64**	**269**	P	**P**	**15 34 31.8**	**-2.9**
	comp=E,0.5nm,0.6s,mb3.4,baz=47,slow=7.0,SNR=6.1						
ILAR	**Eielson Array**	**74.74**	**16**	P	**P**	**15 35 28.1**	**-0.9**
	comp=E,0.3nm,0.8s,mb3.0,baz=299,slow=6.8,SNR=4.1						

*ISK **18** 15:24:25.9, 39°.85N×33°.00E, h5km, MD2.9*
*DDA **18** 15:24:26.9, 39°.86N×33°.06E, h7km±2km, Md2.8*
*CSEM **18** 15:24:26.8±0.1, 39°.86N×33°.01E, h5km, MD2.9, Error ellipse: s-maj=3.5km s-min=2.8km az=150.0*
*ISCJB **18** 15:24:27.5±0.5, 39°.87N±0°.03×32°.96E±0°.04, h10km, Error ellipse: s-maj=4.8km s-min=4.5km az=136.3*

ISC 18 15:24:27.4±0.7, 39°.87N±0°.03×32°.97E±0°.04, h0km±6km, n24, σ1s12/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOD	**Lodumlu**	**0.16**	**276**	*e*PG	**Pg**	**15 24 30.2**	**-0.2**
LOD				*e*SG	**Sg**	**15 24 34.0**	**+1.5**
LOD	**Lodumlu**	**0.16**	**276**	*e*Pg	**Pg**	**15 24 30.2**	**-0.3**
LOD				*e*Sg	**Sg**	**15 24 34.0**	**+1.5**
BBAL	**Bala**	**0.35**	**160**	*e*P	**Pg**	**15 24 33.8**	**-0.3**
BBAL				*e*S	**Sg**	**15 24 39.5**	**+0.9**
BBAL	**Bala**	**0.35**	**160**	*e*P	**Pg**	**15 24 33.8**	**-0.2**
BBAL				*e*S	**Sg**	**15 24 39.5**	**+1.0**
ELDT	**Eldivan**	**0.71**	**29**	*e*P	**Pg**	**15 24 40.5**	**-0.5**
ELDT				*e*S	**Sg**	**15 24 50.6**	**+0.4**
ELDT	**Eldivan**	**0.71**	**29**	*e*P	**Pg**	**15 24 40.5**	**-0.5**
ELDT				*e*S	**Sg**	**15 24 50.6**	**+0.4**
CDAG	**Cicekdag**	**1.11**	**102**	*e*P	**Pg**	**15 24 46.9**	**-1.7**
CDAG				*e*S	**Sg**	**15 25 04.8**	**+1.9**
CDAG	**Cicekdag**	**1.11**	**102**	*e*P	**Pg**	**15 24 46.9**	**-1.7**
CDAG				*e*S	**Sg**	**15 25 04.8**	**+1.9**
KIZT	**Kizilcal**	**1.30**	**221**	*e*PN	**Pn**	**15 24 52.0**	**-0.8**
KIZT	**Kizilcal**	**1.30**	**221**	*e*Pn	**Pn**	**15 24 52.0**	**-0.8**
CORM	**Corum**	**1.31**	**76**	*e*PN	**Pn**	**15 24 51.2**	**-1.7**
CORM	**Corum**	**1.31**	**76**	*e*Pn	**Pn**	**15 24 51.2**	**-1.7**
SAFT	**Safranbolu**	**1.38**	**351**	*e*PN	**Pn**	**15 24 53.1**	**-0.9**
SAFT	**Safranbolu**	**1.38**	**351**	*e*Pn	**Pn**	**15 24 53.1**	**-0.8**
TOS	**Tosya**	**1.41**	**34**	*e*PN	**Pn**	**15 24 54.4**	**+0.1**
TOS	**Tosya**	**1.41**	**34**	*e*Pn	**Pn**	**15 24 54.4**	**+0.1**
CTKT	**Corum**	**1.58**	**61**	*e*P	**Pn**	**15 24 55.2**	**-1.4**
CTKT				*e*S	**Sn**	**15 25 18.6**	**+0.9**
CTKT	**Corum**	**1.58**	**61**	*e*P	**Pn**	**15 24 55.2**	**-1.4**
CTKT				*e*S	**Sn**	**15 25 18.6**	**+0.8**
BALT	**Daday**	**1.69**	**11**	*e*P	**Pn**	**15 24 58.1**	**0.0**
BALT				*e*S	**Sn**	**15 25 22.6**	**+2.1**
BALT	**Daday**	**1.69**	**11**	*e*P	**Pn**	**15 24 58.2**	**+0.1**
BALT				*e*S	**Sn**	**15 25 22.6**	**+2.1**
AVNT	**Avonos**	**1.82**	**126**	*e*P	**Pn**	**15 24 59.9**	**-0.1**
AVNT				*e*S	**Sn**	**15 25 25.0**	**+1.3**
AVNT	**Avonos**	**1.82**	**126**	*e*P	**Pn**	**15 24 59.9**	**0.0**
AVNT				*e*S	**Sn**	**15 25 25.0**	**+1.3**
YOZ	**Yozgat**	**1.82**	**97**	*e*PN	**Pn**	**15 24 58.6**	**-1.4**
YOZ	**Yozgat**	**1.82**	**97**	*e*Pn	**Pn**	**15 24 58.6**	**-1.4**

*ISCJB **18** 15:27:41.3±1.0, 20°.44S±0°.07×177°.7W±0°.1, h453km±16km, mb3.9/10, Error ellipse: s-maj=15.3km s-min=9.7km az=16.1*
*IDC **18** 15:27:43.2±2.2, 20°.61S×177°.67W, h473km±24km, mb3.3/6, mb1 3.6/8, mb1mx3.4/16, mbtmp3.4/8, Error ellipse: s-maj=19.5km s-min=13.2km az=111.0*
*NEIC **18** 15:27:44.5±1.1, 20°.56S×177°.62W, h490km±13km, mb4.2/1, Error ellipse: s-maj=17.0km s-min=13.6km az=112.0*

**ISC 18 15:27:44.4±1.1, 20°.55S±0°.08×177°.7W±0°.1, h480km±15km, n45,

1.0nm,0.4s,baz=101,slow=3.5,SNR=6.0
ARCES ARCESS Array B 129.02 350 PKP PKPdf 15 45 55.7 -0.7
ARCES ARCESS Array B 129.02 350 PKP PKPdf 15 45 55.7 -0.7
1.9nm,0.7s,baz=180,slow=1.9,SNR=4.2
AKASG Malin Array Be 143.20 331 PKP PKPdf 15 46 20.1 -2.9
1.1nm,0.4s,baz=46,slow=3.6,SNR=9.0
BRTR Keskin Array B 147.09 312 PKPbc PKPbc 15 46 32.8 -0.3
0.6nm,0.4s,baz=142,slow=6.4,SNR=4.4
CLL Collm 148.18 347 PKPbc PKPbc 15 46 35.5 +0.1
comp=Z,5.0nm,0.8s
TORD Torodi Ar. Bea 172.62 175 PKP PKPdf 15 46 57.1 -1.4
comp=Z,0.5nm,0.8s,baz=159,slow=1.2,SNR=3.0
TORD PKPab PKPab 15 48 26.5 -0.5
comp=Z,0.5nm,0.8s,baz=173,slow=4.5,SNR=2.8

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*IDC **18** 15:38:02.0±0.7,5.83S×81.00W,h0km,mb4.1/11, mb1 4.3/12,mb1mx4.2/17,mbtmp4.1/12,ML3.7/1,MS4.2/17, Ms1 4.2/17,ms1mx4.2/20,Error ellipse: s-maj=26.7km s-min=15.1km az=60.0*

*GCMT **18** 15:38:07.8±0.3,5.97S×81.31W,h36km±1km,MW5.1, Moment Tensor Solution. s45,c53; s46,c64; Moment tensor: Scale 10^{16}Nm; M_{rr}3.82±.18; $M_{\theta\theta}$0.39±.12; $M_{\phi\phi}$-4.20±.15; $M_{r\theta}$0.57±.13; $M_{\theta\phi}$0.20±.12; $M_{\phi r}$-3.12±.20; Best double couple: $M_0$5.10000×10^{16} NP1:ϕ_s4.00000°, δ26.00000°,λ100.00000°. NP2:ϕ_s172.00000°,δ64.00000°, λ85.00000°. Principal axes: T 4.9400, Plg70.0000°, Azm72.0000°; N 0.3600, Plg4.0000°, Azm175.0000°; P -5.3000, Plg19.0000°, Azm266.0000°; Data Used: II IU G IC.*

*NEIC **18** 15:38:08.7±1.1,5.85S×80.92W,h48km±11km,mb4.7/34 Error ellipse: s-maj=11.3km s-min=5.2km az=59.0*

ISC 18 15:38:11.2±1.7,5.87S±0.08×80.81W±0.09,h69km±18km, n284,σ0≤46/261,mb4.5/43,105C-97D,Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**7.23**	**147**	P	**Pn**	**15 39 52.3**	**-2.0**
	69nm,1.0s						
NNA	**Nana**	**7.23**	**147**	Pn	**Pn**	**15 39 53.6**	**-0.7**
	1.4nm,0.3s,baz=309,slow=13,SNR=2.7						
NNA				Sn	**Sn**	**15 41 26.9**	**+12**
	3.1nm,0.3s,baz=140,slow=17,SNR=2.3						
NNA				LR	LR	15 42 44.2	
	comp=Z,788nm,18.2s,baz=291,slow=38						
ROSC	**El Rosal**	**12.46**	**31**	Lg		15 44 42.6	
	0.7nm,0.3s,baz=72,slow=20,SNR=2.7						
ARE	**Arequipa**	**13.94**	**140**	*eP*	**Pn**	**15 41 35.0**	**+9.5**
LPAZ	**La Paz**	**16.18**	**131**	*eP*	**Pn**	**15 41 54.5**	**+0.2**
	67nm,1.4s						
LPAZ	**La Paz**	**16.18**	**131**	Pn	**Pn**	**15 41 54.4**	**+0.1**
	0.1nm,0.3s,baz=307,slow=9.5,SNR=5.0						
LPAZ				Sn	**Sn**	**15 44 43.0**	**-10**
	0.1nm,0.3s,baz=313,slow=12,SNR=3.2						
LPAZ				LR	LR	15 49 04.6	
	comp=Z,1μm,18.6s,baz=110,slow=40						
SIV	**San Ignacio**	**21.81**	**119**	P	**P**	**15 42 58.3**	**+0.4**
	7.7nm,1.0s,mb4.0,baz=302,slow=12,SNR=16						
PCRV	**Puerto La Cruz**	**22.66**	**45**	P	**P**	**15 43 07.6**	**+0.7**
	7.9nm,0.5s,mb4.3,baz=31,slow=10.0,SNR=7.0						
PCRV				LR	LR	15 53 01.8	
	comp=Z,1μm,19.2s,baz=216,slow=40						
CMIG	**Matias Romero**	**26.72**	**329**	LR	LR	15 52 08.1	
	comp=Z,482nm,21.5s,baz=192,slow=32						
SJG	**San Juan**	**27.88**	**31**	*eP*	**P**	**15 43 53.7**	**-0.9**
	36nm,0.8s,mb5.0						
SJG	**San Juan**	**27.88**	**31**	P	**P**	**15 43 54.5**	**-0.2**
	21nm,0.2s,mb5.2,baz=306,slow=21,SNR=5.6						
CFAA	**Coronel Fontan**	**28.18**	**157**	P	**P**	**15 43 57.5**	**+0.2**
	0.4nm,0.9s,baz=320,slow=5.0,SNR=4.7						
CFAA				LR	LR	15 54 25.5	
	comp=Z,25nm,18.2s,baz=232,slow=35						
CPUP	**Villa Florida**	**30.27**	**135**	P	**P**	**15 44 17.3**	**+1.5**
	0.7nm,0.5s,mb3.5,baz=322,slow=10,SNR=3.2						
CPUP				LR	LR	15 57 57.3	
	comp=Z,448nm,19.1s,baz=301,slow=39						
PLCA	**Paso Flores**	**35.91**	**167**	P	**P**	**15 45 05.5**	**+0.7**
PLCA				LR	LR	15 56 49.9	
PLCA	**Paso Flores**	**35.91**	**167**	P	**P**	**15 45 05.5**	**+0.7**
	5.3nm,1.1s,mb4.4,baz=350,slow=11,SNR=4.6						
PLCA				LR	LR	15 56 49.9	
	comp=Z,269nm,19.9s,baz=266,slow=31						
628A	**Black Gap, Mar**	**41.06**	**330**	⇑P	**P**	**15 45 48.3**	**+0.2**
	baz=41						
627A	**Terlingua Ranc**	**41.28**	**329**	⇑P	**P**	**15 45 50.1**	**+0.2**
	baz=41						
TXAR	**Lajitas Array**	**41.33**	**329**	P	**P**	**15 45 50.0**	**-0.3**
	0.2nm,0.6s,baz=154,slow=11,SNR=2.9						
TXAR				PcP	PcP	15 47 46.9	-0.8
	0.1nm,0.4s,baz=117,slow=3.4,SNR=2.7						
TXAR				LR	LR	16 01 13.6	
	comp=Z,236nm,19.6s,baz=180,slow=34						
LPIG	**La Paz**	**41.41**	**317**	LR	LR	15 59 30.4	
	comp=Z,77nm,20.9s,slow=31						
528A	**Cox Ranch, San**	**41.56**	**331**	⇓P	**P**	**15 45 52.3**	**+0.1**
	baz=42						
626A	**Big Bend Ranch**	**41.74**	**329**	⇑P	**P**	**15 45 53.8**	**+0.1**
	baz=42						
527A	**Woodward Ranch**	**41.96**	**330**	⇓P	**P**	**15 45 55.4**	**0.0**
	baz=42						
MIAR	**Mount Ida**	**41.96**	**344**	*eP*	**P**	**15 45 55.1**	**-0.3**
	8.1nm,1.1s,mb4.4						
428A	**Kincaid Ranch,**	**41.98**	**331**	⇑P	**P**	**15 45 55.4**	**-0.2**
	baz=42						
526A	**Mary Lane Ranc**	**42.13**	**329**	⇑P	**P**	**15 45 56.7**	**-0.2**
	baz=42						
427A	**Hayter Ranch,**	**42.43**	**331**	⇓P	**P**	**15 45 59.1**	**-0.1**
	baz=43						
328A	**Wristen Ranch,**	**42.59**	**332**	⇑P	**P**	**15 46 00.7**	**+0.1**
	baz=43						
426A	**McDonald Obser**	**42.59**	**330**	⇑P	**P**	**15 46 00.6**	**0.0**
	baz=43						
425A	**Indio Mountain**	**43.17**	**329**	⇑P	**P**	**15 46 04.7**	**-0.6**
	baz=43,SNR=6.6						
325A	**Bean Ranch, Si**	**43.63**	**330**	⇑P	**P**	**15 46 08.3**	**-0.7**
	baz=44						
226A	**Malaga, Loving**	**43.76**	**331**	⇓P	**P**	**15 46 10.0**	**0.0**
	baz=44						
WMOK	**Wichita Mounta**	**43.80**	**338**	*eP*	**P**	**15 46 09.1**	**-1.2**
	5.9nm,1.0s,mb4.3						
MNTX	**Cornudas Mount**	**44.10**	**329**	⇓P	**P**	**15 46 12.0**	**-0.8**
	baz=44,SNR=6.5						
MNTX	**Cornudas Mount**	**44.10**	**329**	*eP*	**P**	**15 46 11.6**	**-1.1**
	7.1nm,1.3s,mb4.2						
224A	**Cornudas Mount**	**44.48**	**330**	⇑P	**P**	**15 46 15.3**	**-0.4**
	baz=45						
125A	**Gardner Draw,**	**44.52**	**331**	⇓P	**P**	**15 46 15.8**	**-0.2**
	baz=45						
Z26A	**Caprock**	**44.70**	**332**	⇑P	**P**	**15 46 17.6**	**0.0**
	baz=45						
MSTX	**Muleshoe**	**44.74**	**334**	⇑P	**P**	**15 46 17.5**	**-0.3**
	baz=45						
CCM	**Cathedral Cave**	**44.77**	**348**	*eP*	**P**	**15 46 16.7**	**-1.2**
	6.9nm,0.8s,mb4.4						
124A	**Stringfield Ra**	**44.95**	**330**	⇓P	**P**	**15 46 19.6**	**+0.1**
	baz=45						
Z25A	**Roswell**	**45.06**	**331**	⇑P	**P**	**15 46 20.7**	**+0.4**
	baz=45						
AMTX	**Amarillo**	**45.06**	**336**	⇓P	**P**	**15 46 20.7**	**+0.4**
	baz=45						
Y26A	**Elida**	**45.17**	**333**	⇓P	**P**	**15 46 21.2**	**-0.1**
	baz=45						
222A	**Williams Famil**	**45.31**	**328**	⇑P	**P**	**15 46 22.3**	**-0.1**
	baz=46						
320A	**Kipp Ranch, An**	**45.49**	**326**	⇑P	**P**	**15 46 24.1**	**+0.2**
	baz=46						
X26A	**CR and CF Fran**	**45.69**	**333**	⇓P	**P**	**15 46 25.8**	**+0.4**
	baz=46						
W27A	**Bowe Ranch, En**	**45.80**	**334**	⇓P	**P**	**15 46 26.2**	**+0.1**
	baz=46						
220A	**Playas Peak, P**	**45.92**	**327**	⇓P	**P**	**15 46 27.3**	**+0.1**
	baz=46						
Y24A	**Capitan**	**45.93**	**331**	⇓P	**P**	**15 46 27.2**	**0.0**
	baz=46						
319A	**Douglas**	**45.94**	**325**	⇓P	**P**	**15 46 27.5**	**+0.1**
	baz=46						
W26A	**Owens Ranch, T**	**46.12**	**334**	⇓P	**P**	**15 46 28.8**	**+0.1**
	baz=46						
Z22A	**Elephant Butte**	**46.15**	**329**	⇑P	**P**	**15 46 28.9**	**0.0**
	baz=46,SNR=5.6						
Y23A	**Lovelace Mesa,**	**46.23**	**331**	⇑P	**P**	**15 46 29.9**	**+0.2**
	baz=46						
318A	**Bisbee**	**46.39**	**325**	⇓P	**P**	**15 46 31.2**	**+0.3**
	baz=46						
219A	**White Tail Can**	**46.40**	**326**	⇓P	**P**	**15 46 31.2**	**+0.2**
	baz=46						
120A	**U Bar Ranch, L**	**46.47**	**327**	⇑P	**P**	**15 46 31.4**	**-0.1**
	baz=47						
W25A	**X Bar L Ranch,**	**46.54**	**333**	⇓P	**P**	**15 46 31.9**	**-0.1**
	baz=47						
Y22A	**Socorro**	**46.69**	**330**	⇑P	**P**	**15 46 33.2**	**0.0**
	baz=47						
V26A	**Tequesquite Ra**	**46.73**	**334**	⇓P	**P**	**15 46 33.5**	**+0.1**
	baz=47						
218A	**Dragoon**	**46.82**	**325**	⇓P	**P**	**15 46 34.1**	**-0.2**
	baz=47						
Z20A	**Nine Sixteen R**	**46.88**	**328**	⇑P	**P**	**15 46 34.6**	**-0.1**
	baz=47						
W24A	**Lazy 6 Ranch,**	**46.97**	**332**	⇓P	**P**	**15 46 35.3**	**-0.1**
	baz=47						
119A	**Ashpeak Ranch,**	**47.00**	**327**	⇑P	**P**	**15 46 35.5**	**-0.1**
	baz=47						
KSU1	**Kansas State U**	**47.08**	**343**	*eP*	**P**	**15 46 35.6**	**-0.5**
	8.4nm,0.6s,mb4.7						
Y21A	**Point of Rocks**	**47.10**	**329**	⇑P	**P**	**15 46 37.0**	**+0.6**
	baz=47						
217A	**Green Valley**	**47.12**	**324**	⇑P	**P**	**15 46 36.4**	**-0.2**
	baz=47						
V25A	**Rancho No Teng**	**47.13**	**333**	⇑P	**P**	**15 46 37.0**	**+0.5**
	baz=47						
U26A	**Atchley Ranch,**	**47.22**	**335**	⇑P	**P**	**15 46 37.2**	**0.0**
	baz=47						
ANMO	**Albuquerque**	**47.25**	**331**	P	**P**	**15 46 36.3**	**-1.3**
	5.7nm,0.9s,mb4.3						
V24A	**Rampart Ranch,**	**47.33**	**333**	⇑P	**P**	**15 46 38.6**	**+0.4**
	baz=48						
Y20A	**Horse Springs,**	**47.39**	**328**	⇑P	**P**	**15 46 38.9**	**+0.3**
	baz=48						
X21A	**Alamocita Cree**	**47.51**	**329**	⇑P	**P**	**15 46 39.6**	**+0.1**
	baz=48						
U25A	**Circle Dot Ran**	**47.51**	**334**	⇓P	**P**	**15 46 39.6**	**+0.1**
	baz=48						
117A	**Oracle**	**47.66**	**325**	⇑P	**P**	**15 46 41.0**	**+0.2**
	baz=48						
Y19A	**Nutrioso**	**47.89**	**328**	⇑P	**P**	**15 46 42.9**	**+0.4**
	baz=48						
X20A	**Quemado**	**47.94**	**329**	⇑P	**P**	**15 46 43.5**	**+0.6**
	baz=48						
T25A	**Trinidad**	**48.13**	**335**	⇑P	**P**	**15 46 45.2**	**+0.9**
	baz=48						
Y18A	**Canyon Day Jun**	**48.17**	**327**	⇑P	**P**	**15 46 45.3**	**+0.6**
	baz=48						
116A	**Eloy**	**48.20**	**324**	⇓P	**P**	**15 46 44.9**	**-0.1**
	baz=48						
V22A	**San Miguel Ran**	**48.25**	**331**	⇓P	**P**	**15 46 45.9**	**+0.7**
	baz=48						
Y17A	**Roosevelt**	**48.55**	**326**	⇓P	**P**	**15 46 47.9**	**+0.3**
	baz=49						
S25A	**Robets Cordova**	**48.58**	**335**	⇑P	**P**	**15 46 48.5**	**+0.7**
	baz=49						
S24A	**Houchin Ranch,**	**48.90**	**334**	⇓P	**P**	**15 46 50.9**	**+0.7**
	baz=49						
U21A	**Nageezi**	**49.02**	**331**	⇑P	**P**	**15 46 51.4**	**+0.3**
	baz=49						
Y16A	**Circle Bar Ran**	**49.04**	**326**	⇓P	**P**	**15 46 51.5**	**+0.1**
	baz=49						
SDCO	**Great Sand Dun**	**49.11**	**334**	*eP*	**P**	**15 46 51.5**	**-0.3**
	5.4nm,1.0s,mb4.4						
T22A	**Edith**	**49.14**	**332**	⇑P	**P**	**15 46 52.6**	**+0.6**
	baz=49						
R24A	**Sanders Place,**	**49.35**	**335**	⇑P	**P**	**15 46 54.4**	**+0.7**
	baz=50						
X16A	**Lo Mia Camp, P**	**49.42**	**326**	⇑P	**P**	**15 46 54.9**	**+0.6**
	baz=50						
113A	**Mohawk Valley,**	**49.57**	**323**	⇓P	**P**	**15 46 54.8**	**-0.6**
	baz=50						
Q25A	**Bedland, Calha**	**49.57**	**336**	⇓P	**P**	**15 46 55.4**	**+0.2**
	baz=50						
S22A	**4UR Ranch, Cre**	**49.70**	**333**	⇓P	**P**	**15 46 56.0**	**-0.3**
	baz=50						
Z13A	**Yuma Proving G**	**49.80**	**323**	⇑P	**P**	**15 46 57.0**	**-0.2**
	baz=50						
Y14A	**Wickenburg**	**49.95**	**325**	⇓P	**P**	**15 46 58.2**	**0.0**
	baz=50						
Q24A	**Divide**	**49.98**	**335**	⇓P	**P**	**15 46 58.3**	**-0.1**
	baz=50						
T19A	**Beclabito**	**50.00**	**330**	⇑P	**P**	**15 46 58.6**	**0.0**
	baz=50						
S21A	**Coal Bank Pass**	**50.08**	**332**	⇓P	**P**	**15 46 59.0**	**-0.2**
	baz=50						
WUAZ	**Wupatki**	**50.20**	**327**	*eP*	**P**	**15 46 59.1**	**-1.0**
	11nm,1.0s,mb4.7						
X14A	**Yava**	**50.27**	**325**	⇑P	**P**	**15 47 00.9**	**+0.2**
	baz=50						
U16A	**Tuba City**	**50.55**	**328**	⇓P	**P**	**15 47 03.4**	**+0.7**
	baz=51						
P23A	**Jefferson**	**50.62**	**335**	⇑P	**P**	**15 47 04.0**	**+0.8**
	baz=51						
Q22A	**Crested Butte,**	**50.65**	**334**	⇓P	**P**	**15 47 03.9**	**+0.3**
	baz=51						
T18A	**Mexican Hat**	**50.66**	**330**	⇓P	**P**	**15 47 03.7**	**+0.1**
	baz=51						
R20A	**Redvale**	**50.77**	**332**	⇑P	**P**	**15 47 05.1**	**+0.7**
	baz=51						
S19A	**Harvey Farm, M**	**50.78**	**331**	⇓P	**P**	**15 47 04.5**	**0.0**
	baz=51						
PV01	**Paradox Valley**	**50.82**	**332**	*eP*	**P**	**15 47 05.3**	**+0.6**
	208nm,1.0s						
V15A	**Kaibab Nationa**	**50.86**	**327**	⇓P	**P**	**15 47 05.8**	**+0.7**
	baz=51						
ISCO	**Idaho Springs**	**50.88**	**335**	⇓P	**P**	**15 47 05.4**	**+0.3**
	baz=51						
T17A	**Navajo Res., N**	**51.03**	**329**	⇑P	**P**	**15 47 06.8**	**+0.5**
	baz=51						
S18A	**Hurst Farm, Bl**	**51.16**	**330**	⇓P	**P**	**15 47 07.3**	**0.0**
	baz=51						
BC3	**Big Chuckawall**	**51.20**	**323**	⇓P	**P**	**15 47 07.8**	**+0.1**
	baz=51						
V14A	**Boquillas Ranc**	**51.23**	**326**	⇑P	**P**	**15 47 08.2**	**+0.3**
	baz=51						
MONP	**Monument Peak**	**51.27**	**321**	⇑P	**P**	**15 47 08.1**	**-0.1**
	baz=51						
R19A	**Curley Farm, L**	**51.27**	**331**	⇑P	**P**	**15 47 08.3**	**+0.2**
	baz=51						
W13A	**Hualapai Mount**	**51.29**	**325**	⇑P	**P**	**15 47 08.3**	**0.0**
	baz=51						
O23A	**Lake Granby, G**	**51.35**	**335**	⇓P	**P**	**15 47 08.7**	**0.0**
	baz=52						
IRM	**Iron Mountain**	**51.36**	**323**	⇓P	**P**	**15 47 09.2**	**+0.2**
	baz=52						
U15A	**North Rim**	**51.38**	**327**	⇑P	**P**	**15 47 08.9**	**-0.1**
	baz=52						
N24A	**Carr**	**51.45**	**337**	⇓P	**P**	**15 47 09.8**	**+0.3**
	baz=52						
O22A	**Kremmling**	**51.57**	**335**	⇑P	**P**	**15 47 10.3**	**-0.1**
	baz=52						
PFO	**Pinyon Flat Ob**	**51.78**	**322**	⇑P	**P**	**15 47 12.0**	**0.0**
	baz=52						
GMRC	**Granite Mounta**	**52.10**	**323**	⇑P	**P**	**15 47 14.6**	**+0.2**
	baz=52						
U13A	**Paiute Wash**	**52.28**	**326**	⇑P	**P**	**15 47 15.3**	**-0.4**
	baz=52						
Q18A	**Rafter H Ranch**	**52.33**	**331**	⇓P	**P**	**15 47 16.3**	**+0.3**
	baz=52						
R16A	**Teasdale**	**52.36**	**330**	⇓P	**P**	**15 47 16.9**	**+0.6**
	baz=52						
SRU	**San Rafael**	**52.53**	**331**	⇑P	**P**	**15 47 17.5**	**0.0**
	baz=53						
HEC	**Hector,Ludlow**	**52.53**	**323**	⇑P	**P**	**15 47 17.9**	**+0.3**
	baz=53						
T13A	**Saint George**	**52.69**	**327**	⇑P	**P**	**15 47 19.4**	**+0.6**
	baz=53						
CCUT	**Cedar City**	**52.78**	**328**	*eP*	**P**	**15 47 20.3**	**+0.9**
	7.0nm,1.1s,mb4.6						
P18A	**Preston Nutter**	**52.80**	**332**	⇓P	**P**	**15 47 19.5**	**0.0**
	baz=53						
N20A	**Spence Gulch,**	**52.86**	**334**	⇓P	**P**	**15 47 20.3**	**+0.4**
	baz=53						
MSU	**Marysvale**	**52.89**	**329**	*eP*	**P**	**15 47 19.7**	**-0.4**
	5.0nm,1.1s,mb4.5						
P17A	**Butcher Ranch,**	**52.91**	**331**	⇓P	**P**	**15 47 20.2**	**-0.1**
	baz=53						
S13A	**Holt Ranch, En**	**53.07**	**327**	⇓P	**P**	**15 47 21.7**	**+0.2**
	baz=53						
M21A	**Separation Pea**	**53.12**	**335**	⇓P	**P**	**15 47 22.2**	**+0.4**
	baz=53						
M20A	**Sweetwater, Wa**	**53.37**	**335**	⇑P	**P**	**15 47 23.8**	**+0.1**
	baz=54						
L21A	**Rawlins**	**53.42**	**335**	⇓P	**P**	**15 47 24.5**	**+0.5**
	baz=54						
O17A	**Robinson Place**	**53.48**	**332**	⇑P	**P**	**15 47 24.4**	**-0.1**
	baz=54						
EDW2	**Edwards Air Fo**	**53.57**	**322**	⇑P	**P**	**15 47 25.4**	**+0.1**
	baz=54						
R13A	**O'Grain Ranch,**	**53.57**	**328**	⇓P	**P**	**15 47 25.2**	**+0.1**
	baz=54						
T11A	**Corn Creek, Al**	**53.57**	**326**	⇑P	**P**	**15 47 25.6**	**+0.4**
	baz=54						
N18A	**Larsen Ranch,**	**53.61**	**333**	⇑P	**P**	**15 47 25.6**	**+0.2**
	baz=54						
Q14A	**Sevier Lake (B**	**53.81**	**329**	⇑P	**P**	**15 47 27.1**	**+0.2**
	baz=54						
DAU	**Daniels Canyon**	**53.90**	**331**	*eP*	**P**	**15 47 28.3**	**+0.8**
	16nm,1.4s,mb4.9						
R12A	**Pony Springs,**	**54.02**	**327**	⇓P	**P**	**15 47 28.6**	**+0.2**
	baz=54						
MPMC	**Manual Prospec**	**54.06**	**323**	⇓P	**P**	**15 47 29.1**	**+0.3**
	baz=54						
M18A	**Lyman**	**54.15**	**333**	⇓P	**P**	**15 47 29.0**	**-0.3**
	baz=54						
P14A	**Drum Mountains**	**54.16**	**329**	⇑P	**P**	**15 47 29.4**	**0.0**
	baz=54						
Q13A	**Wheeler Ranch,**	**54.17**	**328**	⇑P	**P**	**15 47 30.0**	**+0.4**
	baz=54						
L19A	**Farson**	**54.37**	**334**	⇓P	**P**	**15 47 30.9**	**0.0**
	baz=54						
O15A	**The Old Anders**	**54.38**	**330**	⇓P	**P**	**15 47 31.4**	**+0.4**
	baz=54						
M17A	**Scullys Gap (B**	**54.45**	**333**	⇑P	**P**	**15 47 31.1**	**-0.4**
	baz=55						
DUG	**Dugway**	**54.48**	**330**	⇓P	**P**	**15 47 31.8**	**0.0**
	baz=55						
DUG	**Dugway**	**54.48**	**330**	*eP*	**P**	**15 47 30.6**	**-1.2**
	4.8nm,1.2s,mb4.4						
P13A	**Bates Ranch, G**	**54.54**	**329**	⇓P	**P**	**15 47 32.0**	**-0.2**
	baz=55						
R11A	**Troy Canyon, C**	**54.57**	**327**	⇓P	**P**	**15 47 32.6**	**+0.1**
	baz=55						
GRAC	**Grapevine Rang**	**54.63**	**324**	⇑P	**P**	**15 47 32.9**	**0.0**
	baz=55						
K19A	**Absolon Red Bu**	**54.74**	**335**	⇓P	**P**	**15 47 33.8**	**+0.1**
	baz=55						
S10A	**Tonopah Range,**	**54.83**	**326**	⇓P	**P**	**15 47 34.4**	**+0.1**
	baz=55						
RKT	**Rikitea**	**54.84**	**246**	*eS*	**S**	**15 55 18.5**	**+7.5**
	262nm,26.0s						
RKT				*eLR*	LR	16 03 32.6	
	455nm,26.8s,baz=81						
I21A	**Big Trails, Te**	**54.93**	**337**	⇓P	**P**	**15 47 34.8**	**-0.2**
	baz=55,SNR=6.2						
Q11A	**Duckwater**	**54.96**	**327**	⇓P	**P**	**15 47 35.2**	**-0.1**
	baz=55						
HWUT	**Hardware Ranch**	**54.97**	**332**	*eP*	**P**	**15 47 34.8**	**-0.6**
	11nm,1.0s,mb4.9						
BW06	**Boulder Array**	**55.00**	**334**	⇑P	**P**	**15 47 35.2**	**-0.3**
	baz=55						
BW06	**Boulder Array**	**55.00**	**334**	*eP*	**P**	**15 47 34.2**	**-1.3**
	4.4nm,1.0s,mb4.4						
L17A	**Cokeville**	**55.05**	**333**	⇑P	**P**	**15 47 35.5**	**-0.3**
	baz=55						
K18A	**Toltan Ranch,**	**55.10**	**334**	⇓P	**P**	**15 47 36.5**	**+0.2**
	baz=55,SNR=8.3						
I20A	**Worland**	**55.38**	**336**	⇑P	**P**	**15 47 38.0**	**-0.2**
	baz=56						
AGMN	**Agassiz Nation**	**55.53**	**348**	*eP*	**P**	**15 47 38.2**	**-1.0**
	4.6nm,0.6s,mb4.7						
L15A	**Malad City**	**55.67**	**332**	⇑P	**P**	**15 47 40.5**	**+0.2**
	baz=56						
N13A	**Wendover, West**	**55.68**	**330**	⇓P	**P**	**15 47 40.4**	**0.0**
	baz=56						
M14A	**Sheep Mountain**	**55.74**	**331**	⇓P	**P**	**15 47 40.7**	**-0.1**
	baz=56						
I18A	**Diamond G Ranc**	**55.87**	**335**	⇑P	**P**	**15 47 41.8**	**+0.1**
	baz=56						
K16A	**Soda Springs**	**55.95**	**333**	⇑P	**P**	**15 47 42.7**	**+0.5**
	baz=56						
J17A	**Brown Place, J**	**55.98**	**334**	⇑P	**P**	**15 47 42.9**	**+0.4**
	baz=56						
M13A	**Montello**	**56.04**	**330**	⇓P	**P**	**15 47 42.6**	**-0.4**
	baz=56						
REDW	**Red Top Meadow**	**56.04**	**334**	P	**P**	**15 47 42.1**	**-0.8**
	13nm,1.1s,mb4.9						
G21A	**Lodge Grass**	**56.09**	**338**	⇓P	**P**	**15 47 42.7**	**-0.5**
	baz=56						
NVAR	**Mina Array Bea**	**56.15**	**325**	P	**P**	**15 47 44.3**	**+0.5**
	1.4nm,0.9s,mb4.0,baz=142,slow=7.1,SNR=7.0						
MOOW	**Moose Ponds**	**56.30**	**334**	*eP*	**P**	**15 47 43.9**	**-0.9**
	3.5nm,1.2s,mb4.3						
J16A	**Bone**	**56.31**	**333**	⇓P	**P**	**15 47 45.0**	**+0.2**
	baz=56,SNR=6.7						
K14A	**Jones Ranch, D**	**56.46**	**332**	⇑P	**P**	**15 47 46.0**	**0.0**
	baz=57						
IMW	**Indian Meadow**	**56.51**	**334**	*eP*	**P**	**15 47 45.9**	**-0.3**
	3.5nm,0.9s,mb4.4						
I16A	**Newdale**	**56.73**	**334**	⇓P	**P**	**15 47 47.9**	**+0.1**
	baz=57						
J15A	**Blackfoot**	**56.78**	**333**	⇑P	**P**	**15 47 47.7**	**-0.4**
	baz=57,SNR=5.7						
G18A	**Lazy EL Ranch,**	**57.08**	**336**	⇑P	**P**	**15 47 49.8**	**-0.5**
	baz=57						
J14A	**Carey**	**57.22**	**332**	⇑P	**P**	**15 47 51.1**	**-0.2**
	baz=57,SNR=7.1						
H16A	**Russell Place,**	**57.28**	**335**	⇓P	**P**	**15 47 52.0**	**+0.2**
	baz=58,SNR=9.1						
ULM	**Lac du Bonnet**	**57.40**	**349**	P	**P**	**15 47 51.7**	**-0.7**
ULM				LR	LR	16 14 27.1	
ULM	**Lac du Bonnet**	**57.40**	**349**	P	**P**	**15 47 51.7**	**-0.7**
	4.7nm,0.6s,mb4.7,baz=220,slow=4.2,SNR=3.8						
ULM				LR	LR	16 14 27.1	
	comp=Z,87nm,20.7s,baz=169,slow=38						
GCMT	**Greycliff**

F14A	**Wisdom** baz=59	**59.08**	**334**	⇑P		**P**	**15 48 04.5**	**+0.2**
WVOR	**Wild Horse Val** 7.5nm,0.9s,mb4.7	**59.11**	**328**	*e*P		**P**	**15 48 04.1**	**-0.4**
E15A	**Deer Lodge** baz=59	**59.25**	**335**	⇑P		**P**	**15 48 05.5**	**+0.1**
D16A	**Dana Ranch, Ca** baz=60,SNR=7.1	**59.28**	**336**	⇓P		**P**	**15 48 05.5**	**-0.1**
EGMT	**Eagleton** baz=60	**59.39**	**338**	⇑P		**P**	**15 48 06.3**	**-0.1**
MOD	**Modoc** 4.8nm,0.9s,mb4.5	**59.63**	**327**	P		**P**	**15 48 07.5**	**-0.6**
B18A	**Beardsley Farm** baz=60,SNR=5.7	**59.71**	**338**	⇑P		**P**	**15 48 08.4**	**-0.2**
F12A	**Elk City** baz=60	**59.88**	**333**	⇑P		**P**	**15 48 09.9**	**+0.2**
C16A	**Fuhringer Ranc** baz=60	**59.98**	**336**	⇓P		**P**	**15 48 10.4**	**0.0**
MSO	**Missoula** baz=60,SNR=6.2	**60.12**	**334**	⇑P		**P**	**15 48 11.2**	**-0.1**
MSO	**Missoula** 8.5nm,1.0s,mb4.7	**60.12**	**334**	*e*P		**P**	**15 48 11.2**	**-0.1**
D14A	**Greenough** baz=60	**60.13**	**335**	⇑P		**P**	**15 48 11.2**	**-0.3**
A18A	**Metzger Ranch,** baz=60	**60.17**	**338**	⇓P		**P**	**15 48 11.5**	**-0.2**
C15A	**Salmond Ranch,** baz=60	**60.31**	**336**	⇓P		**P**	**15 48 13.2**	**+0.5**
B16A	**M & M Farms, S** baz=61	**60.46**	**337**	⇓P		**P**	**15 48 13.3**	**-0.3**
A17A	**Triple J Farms** baz=61	**60.51**	**338**	⇓P		**P**	**15 48 13.9**	**-0.1**
K05A	**Summer Lake** baz=61	**60.51**	**327**	⇓P		**P**	**15 48 14.0**	**-0.1**
E12A	**Beaver Dam Sad** baz=61,SNR=5.6	**60.52**	**333**	⇑P		**P**	**15 48 13.9**	**-0.2**
D13A	**Huson** baz=61	**60.55**	**334**	⇑P		**P**	**15 48 14.3**	**0.0**
B15A	**Bradely Ranch,** baz=61	**60.72**	**336**	⇓P		**P**	**15 48 15.5**	**0.0**
C14A	**Swan Lake** baz=61,SNR=5.6	**60.77**	**335**	⇓P		**P**	**15 48 16.3**	**+0.5**
D12A	**Red Ives Fores** baz=61	**60.91**	**334**	⇑P		**P**	**15 48 16.6**	**-0.2**
F10A	**Beach Ranch, E** baz=61	**60.95**	**332**	⇑P		**P**	**15 48 17.1**	**0.0**
B14A	**Marquette Ranc** baz=61,SNR=8.5	**61.05**	**336**	⇓P		**P**	**15 48 17.7**	**0.0**
C13A	**Hot Springs** baz=61	**61.05**	**335**	⇑P		**P**	**15 48 17.8**	**+0.1**
BSMT	**Bassoo Peak** 3.3nm,0.9s,mb4.4	**61.28**	**335**	*e*P		**P**	**15 48 19.9**	**+0.7**
G08A	**Pilot Rock** baz=62	**61.29**	**330**	⇓P		**P**	**15 48 19.6**	**+0.2**
A15A	**Johnson Ranch,** baz=62	**61.32**	**337**	⇓P		**P**	**15 48 19.5**	**0.0**
B13A	**Whitefish** baz=62	**61.55**	**335**	⇑P		**P**	**15 48 20.9**	**-0.1**
A14A	**Double T Ranch** baz=62	**61.59**	**336**	⇓P		**P**	**15 48 21.3**	**0.0**
SCHQ	**Schefferville** comp=Z,114nm,18.6s,baz=211,slow=37	**61.59**	**9**	LR		LR	16 15 44.8	
E09A	**Wood Farm, Sta** baz=62	**61.78**	**332**	⇑P		**P**	**15 48 22.3**	**-0.3**
C11A	**Tepee Creek (N** baz=62	**61.91**	**334**	⇓P		**P**	**15 48 23.2**	**-0.3**
A13A	**Flathead Natio** baz=62	**61.96**	**336**	⇓P		**P**	**15 48 23.7**	**-0.1**
OD2	**Odessa Site #2** 12nm,1.1s,mb4.7	**62.69**	**332**	P		**P**	**15 48 26.3**	**-2.3**
PPT	**Papeete** 539nm,27.5s	**68.03**	**254**	*e*S		S	15 58 05.6	+7.3
PPT	436nm,26.0s,baz=82			*e*LR		LR	16 09 41.2	
PPT	**Papeete** comp=Z,334nm,18.0s,baz=112,slow=29	**68.03**	**254**	LR		LR	16 10 33.1	
YKA	**Yellowknife Ar** 1.9nm,0.8s,mb4.0,baz=136,slow=5.4,SNR=5.1	**72.91**	**344**	P		**P**	**15 49 31.8**	**-0.8**
DLBC	**Dease Lake**	**75.20**	**336**	*e*P		**P**	**15 49 45.5**	**-0.6**
DBIC	**Dimbokro** comp=Z,648nm,18.5s,baz=227,slow=35	**76.81**	**82**	LR		LR	16 22 58.4	
RAR	**Rarotonga** comp=Z,170nm,20.4s,baz=326,slow=28	**77.63**	**250**	LR		LR	16 14 38.7	
VNA1	**Neumayer--Stat**	**78.74**	**161**	*e*P		**P**	**15 50 04.1**	**-1.7**
INK	**Inuvik** 14nm,1.2s,mb4.7	**82.54**	**343**	*e*P		**P**	**15 50 25.3**	**-0.8**
EGAK	**Eagle** 13nm,1.1s,mb4.7	**83.16**	**338**	*e*P		**P**	**15 50 28.4**	**-0.9**
ESDC	**Sonseca Array** 0.2nm,0.3s,mb3.5,baz=251,slow=6.6,SNR=6.7	**83.68**	**49**	P		**P**	**15 50 33.3**	**+0.7**
ESDC	comp=Z,91nm,20.2s,baz=330,slow=32			LR		LR	16 22 23.6	
TORD	**Torodi Ar. Bea** 2.8nm,1.0s,mb4.1,baz=284,slow=4.9,SNR=9.3	**84.06**	**76**	P		**P**	**15 50 35.6**	**+0.6**
TORD	comp=Z,515nm,19.5s,baz=260,slow=36			LR		LR	16 27 53.1	
ILAR	**Eielson Array** 1.2nm,1.1s,mb3.7,baz=117,slow=3.5,SNR=7.1	**85.35**	**337**	P		**P**	**15 50 39.9**	**-0.6**
ILAR	comp=Z,183nm,18.6s,baz=122,slow=37			LR		LR	16 30 03.5	
BPAW	**Bear Paw Mtn.** 7.3nm,1.1s,mb4.5	**86.74**	**336**	*e*P		**P**	**15 50 46.5**	**-0.8**
NOA	**NORSAR Array B** comp=Z,62nm,21.6s,baz=255,slow=32	**96.08**	**29**	LR		LR	16 29 36.5	
ZALV	**Zalesovo Beam**	**130.66**	**11**	PKP		PKPdf	15 57 13.3	-1.0
ZALV	**Zalesovo Beam** 0.7nm,0.5s,baz=225,slow=1.3,SNR=6.1	**130.66**	**11**	PKP		PKPdf	15 57 13.3	-1.0
ASAR	**Alice Springs** 0.8nm,0.9s,baz=116,slow=2.2,SNR=3.7	**135.17**	**228**	PKhKP		PKPpre	15 57 19.3	
ASAR	0.8nm,0.9s,baz=108,slow=2.7,SNR=6.5			PKP		PKPdf	15 57 23.4	-0.3
CN2	**Changchun**	**135.73**	**333**	*e*PKP		PKPdf	15 57 20.3	-3.8
CN2				PP		PP	16 00 02.8	+0.9
WRA	**Warramunga Arr** 2.2nm,0.9s,baz=113,slow=2.5,SNR=8.0	**136.95**	**233**	PKP		PKPdf	15 57 26.9	-0.1
WMQ	**Urumqi**	**140.87**	**13**	*e*PKP		PKPdf	15 57 32.3	-1.2
BJI	**Beijing**	**142.71**	**338**	PKP		PKPdf	15 57 35.3	-1.6
BJI				SS		SS	16 19 15.8	0.0
BJI	comp=N,160nm,24.2s			LR		LR		
BJI	comp=E,110nm,23.7s			LR		LR		
HHC	**Hu-ho-hao-te**	**143.45**	**344**	*e*PKP		PKPdf	15 57 33.8	-4.4
HHC				PP		PP	16 00 48.0	-1.0
HHC				PKS			16 01 07.9	
HHC	comp=Z,43nm,7.8s			AMB		AMB		
HHC	comp=N,110nm,12.4s			LR		LR		
HHC	comp=E,120nm,17.4s			LR		LR		
HHC	comp=Z,110nm,14.5s			LR		LR		
FITZ	**Fitzroy Crossi**	**144.67**	**227**	*e*PKP		PKPdf	15 57 40.3	-0.7
FITZ	**Fitzroy Crossi** comp=Z,13nm,1.0s,baz=108,slow=6.9,SNR=6.0	**144.67**	**227**	PKP		PKPdf	15 57 40.1	-0.9
NJ2	**Nanjing**	**148.12**	**327**	*e*PKPbc		PKPdf	15 57 41.9	-4.6
CD2	**Chengdu**	**154.72**	**351**	PKPbc		PKPdf	15 57 51.5	-5.0
GYA	**Guiyang**	**158.32**	**342**	*e*PKP		PKPdf	15 57 58.0	-3.3
GYA				pPKP		pPKPdf	15 58 19.8	-1.5
GYA				PKPab		PKPab	15 58 35.4	-0.2
GYA				PKS			16 01 31.3	
GYA				PP		PP	16 02 16.8	+2.4
GYA	comp=Z,80nm,7.8s			AMB		AMB		
KMI	**Kunming**	**160.56**	**350**	PKP		PKPdf	15 58 01.9	-2.0
CMAR	**Chiang Mai Arr** comp=Z,0.6nm,0.8s,baz=227,slow=2.2,SNR=4.1	**167.49**	**1**	PKP		PKPdf	15 58 10.7	+0.4
CMAR	comp=Z,1.5nm,0.9s,baz=357,slow=5.4,SNR=8.0			PKPab		PKPab	15 59 14.9	-1.0

DDA 18 15:38:45.5,38.17N×38.00E,h7km±2km,Md2.8,1C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.14**	**333**	⇑*i*P		Pg	15 38 48.4	0.0
AKCD				*i*S		Sg	15 38 51.4	+1.0
MALT	**Malatya**	**0.36**	**67**	*e*PG		Pg	15 38 52.6	+0.1
MYA	**Malataya**	**0.37**	**65**	*e*PG		Pg	15 38 53.4	+0.8
MYA				*e*SG		Sg	15 38 59.8	+2.4
PTK	**Pertek**	**1.30**	**56**	*e*PN		Pn	15 39 11.8	+1.7

*IDC **18** 15:53:26.3±1.5, 13.01N×125.84E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/19, mbtmp3.5/5, Error ellipse: s-maj=63.4km s-min=20.2km az=64.0*
*ISCJB **18** 15:53:32.8±3.7, 13.0N±0.1×125.6E±0.3, h54km±29km, mb3.5/5, Error ellipse: s-maj=41.9km s-min=21.4km az=173.4*

ISC 18 15:53:34.0±3.6, 13.0N±0.1×125.6E±0.2, h47km±31km, n7, σ1°03/9, mb3.5/5, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**1.02**	**241**	*e*P		**Pn**	**15 53 54.4**	**+2.6**
CNP				*e*S		**Sn**	**15 54 04.2**	**-0.8**
PVCP	**Virac**	**1.50**	**293**	*e*P		**Pn**	**15 53 58.0**	**-0.5**
PVCP				*e*S		**Sn**	**15 54 08.6**	**-8.2**
CMAR	**Chiang Mai Arr** 1.0nm,0.8s,mb3.4,baz=96,slow=7.3,SNR=7.5	**26.18**	**285**	P		**P**	**15 59 05.1**	**+0.7**
WRA	**Warramunga Arr** 0.8nm,0.9s,mb3.6,baz=344,slow=9.8,SNR=3.9	**33.86**	**165**	P		**P**	**16 00 08.2**	**-4.0**
ASAR	**Alice Springs** 0.4nm,0.9s,mb3.2,baz=342,slow=8.8,SNR=3.9	**37.35**	**167**	P		**P**	**16 00 42.0**	**-0.2**
SONM	**Songino Array** 0.4nm,0.7s,mb3.3,baz=140,slow=5.6,SNR=2.0	**38.23**	**339**	P		**P**	**16 00 48.6**	**-0.7**
MKAR	**Makanchi Array** 0.7nm,0.7s,mb3.8,baz=111,slow=7.9,SNR=4.2	**49.46**	**322**	P		**P**	**16 02 19.8**	**+0.4**

WEL 18 16:18:14.6±0.1, 44.25S×169.62E, h5km, ML3.5/12, 3C-2D, Error ellipse: s-maj=1.1km s-min=0.9km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LBZ	**Lake Benmore**	**0.43**	**109**	⇓PG		Pg	16 18 23.4	+0.6
LBZ				SG		Sg	16 18 29.2	+0.7
JCZ	**Jackson Bay**	**0.64**	**286**	⇓P*		Pb	16 18 27.2	-1.1
JCZ				SG		Sg	16 18 35.2	0.0
FOZ	**Fox Glacier**	**0.69**	**4**	⇑P*		Pb	16 18 28.4	-0.7
WKZ	**Wanaka**	**0.72**	**216**	⇑P*		Pb	16 18 28.3	-1.2
WKZ				S*		Sb	16 18 38.5	-1.2
EAZ	**Earnscleugh**	**1.01**	**193**	⇑P*		Pb	16 18 33.3	-1.2
ODZ	**Otahua Downs**	**1.08**	**138**	P*		Pb	16 18 34.7	-1.0
RPZ	**Rata Peaks**	**1.17**	**63**	P*		Pb	16 18 36.4	-0.8
MSZ	**Milford Sound**	**1.28**	**250**	P*		Pb	16 18 38.5	-0.7
WVZ	**Waitaha Valley**	**1.43**	**35**	PN		Pn	16 18 40.7	-0.4
MLZ	**Mavora Lakes**	**1.50**	**223**	PN		Pn	16 18 43.1	+0.9
TUZ	**Tuapeka**	**1.71**	**180**	PN		Pn	16 18 44.0	-0.9
WHZ	**Wether Hill Ro**	**2.02**	**215**	PN		Pn	16 18 48.4	-1.0
DCZ	**Deep Cove**	**2.14**	**234**	PN		Pn	16 18 50.9	0.0
SYZ	**Scrubby Hill**	**2.31**	**188**	PN		Pn	16 18 52.4	-0.9
LTZ	**Lake Taylor**	**2.42**	**54**	PN		Pn	16 18 54.8	0.0
APZ	**The Paps**	**2.83**	**203**	PN		Pn	16 18 58.6	-1.7
DSZ	**Denniston Nort**	**2.97**	**33**	PN		Pn	16 19 02.7	+0.4

*ATH **18** 16:20:32.8, 36.81N×28.11E, h29km±7km, MD3.4/4*
*NEIC **18** 16:20:32.8, 36.81N×28.11E, h29km, MD3.4(ATH), After ATH.*
*DDA **18** 16:20:33.1, 36.79N×28.09E, h16km±1km, Md3.2*
*ISCJB **18** 16:20:33.6±0.5, 36.80N±0.02×27.99E±0.03, h10km±4km, Error ellipse: s-maj=4.1km s-min=3.8km az=5.2*
*CSEM **18** 16:20:33.5±0.2, 36.81N×28.00E, h5km, MD3.3, Error ellipse: s-maj=4.5km s-min=3.9km az=179.0*
*ISK **18** 16:20:34.0, 36.90N×27.98E, h9km, MD3.3*

ISC 18 16:20:34.2±0.5, 36.79N±0.02×28.01E±0.03, h11km±4km, n71, σ1°06/93, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.35**	**260**	*e*PG		**Pg**	**16 20 41.8**	**+0.6**
DAT	**Datca**	**0.35**	**260**	*e*Pg		**Pg**	**16 20 41.8**	**+0.6**
YER	**Yerkesik**	**0.41**	**33**	*e*PG		**Pg**	**16 20 41.2**	**-1.0**
YER				*e*SG		**Sg**	**16 20 47.1**	**-0.5**
YER	**Yerkesik**	**0.41**	**33**	*e*Pg		**Pg**	**16 20 41.2**	**-1.0**
YER				*e*Sg		**Sg**	**16 20 47.1**	**-0.5**
TURN	**Turunc**	**0.48**	**80**	*i*P		**Pg**	**16 20 37.1**	**-6.5**
TURN				*i*S		**Sg**	**16 20 39.6**	**-10**
BDRM	**Kayabasi**	**0.53**	**301**	*i*P		**Pg**	**16 20 44.4**	**0.0**
BDRM				*i*S		**Sg**	**16 20 53.7**	**+2.2**
BDRM	**Kayabasi**	**0.53**	**301**	*i*P		**Pg**	**16 20 44.4**	**-0.1**
BDRM				*i*S		**Sg**	**16 20 53.7**	**+2.2**
MLSB	**Milas**	**0.53**	**340**	*e*PG		**Pg**	**16 20 42.8**	**-1.8**
MLSB	**Milas**	**0.53**	**340**	*e*Pg		**Pg**	**16 20 42.8**	**-1.8**
ARG	**Arkhangelos**	**0.58**	**171**	*e*Pn		**Pg**	**16 20 44.7**	**-0.8**
ARG				*e*Sn		**Sg**	**16 20 54.5**	**+1.3**
ARG	**Arkhangelos**	**0.58**	**171**	*e*PN		**Pg**	**16 20 44.7**	**-0.8**
ARG				*e*SN		**Sg**	**16 20 54.5**	**+1.3**
ARG	**Arkhangelos**	**0.58**	**171**	*e*Pn		**Pg**	**16 20 44.7**	**-0.8**
BODT	**Bodrum**	**0.62**	**296**	*e*PG		**Pg**	**16 20 45.3**	**-1.0**
BODT	**Bodrum**	**0.62**	**296**	*e*Pg		**Pg**	**16 20 45.3**	**-0.9**
AYDN	**Tasoluk**	**0.87**	**353**	*i*P		**Pg**	**16 20 42.6**	**+0.4**
AYDN				*i*S		**Sg**	**16 21 02.8**	**+0.4**
AYDN	**Tasoluk**	**0.87**	**353**	*i*P		**Pg**	**16 20 50.6**	**-0.4**
AYDN				*i*S		**Sg**	**16 21 02.8**	**+0.4**
GCAM	**G?zelcaml?**	**1.10**	**326**	*i*P		**Pg**	**16 20 55.0**	**-0.3**
GCAM				*i*S		**Sg**	**16 21 11.7**	**+2.2**
GCAM	**G?zelcaml?**	**1.10**	**326**	*i*P		**Pg**	**16 20 55.0**	**-0.3**
GCAM				*i*S		**Sg**	**16 21 11.7**	**+2.2**
DNZL	**Cakiroluk**	**1.22**	**42**	*i*P		**Pn**	**16 20 56.4**	**-0.7**
DNZL				*i*S		**Sb**	**16 21 12.3**	**-0.6**
DNZL	**Cakiroluk**	**1.22**	**42**	*i*P		**Pn**	**16 20 56.4**	**-0.7**
DNZL				*i*S		**Sb**	**16 21 12.3**	**-0.6**
GLHS	**Glhisar (BURDU**	**1.25**	**73**	*e*PN		**Pn**	**16 20 58.1**	**+0.7**
GLHS	**Glhisar (BURDU**	**1.25**	**73**	*e*Pn		**Pn**	**16 20 58.2**	**+0.7**
DENT	**Denizli**	**1.26**	**40**	*e*PN		**Pn**	**16 20 57.0**	**-0.6**
DENT	**Denizli**	**1.26**	**40**	*e*Pn		**Pn**	**16 20 57.1**	**-0.6**
GOLH	**Golhisar**	**1.32**	**70**	*i*P		**Pn**	**16 20 56.0**	**-2.4**
GOLH				*i*S		**Sb**	**16 21 16.1**	**+0.3**
GOLH	**Golhisar**	**1.32**	**70**	*i*P		**Pn**	**16 20 56.4**	**-2.5**
GOLH				*i*S		**Sb**	**16 21 16.0**	**+0.2**
AKAS	**Kas**	**1.40**	**113**	*i*P		**Pn**	**16 20 58.9**	**-0.8**
AKAS				*i*S		**Sn**	**16 21 17.7**	**-0.4**
AKAS	**Kas**	**1.40**	**113**	*i*P		**Pn**	**16 20 58.9**	**-0.7**
AKAS				*i*S		**Sn**	**16 21 17.7**	**-0.4**
KARP	**Karpathos**	**1.42**	**209**	*e*Pn		**Pn**	**16 20 59.5**	**-0.4**
KARP				*e*Sn		**Sn**	**16 21 18.2**	**-0.3**
KARP	**Karpathos**	**1.42**	**209**	*e*PN		**Pn**	**16 20 59.5**	**-0.4**
KARP				*e*SN		**Sn**	**16 21 18.2**	**-0.3**
KARP	**Karpathos**	**1.42**	**209**	*e*Pn		**Pn**	**16 20 59.5**	**-0.4**
KARP				*e*Sn		**Sn**	**16 21 18.2**	**-0.3**
ELL	**Elmali**	**1.53**	**91**	*e*PN		**Pn**	**16 21 02.5**	**+1.2**
ELL	**Elmali**	**1.53**	**91**	*e*Pn		**Pn**	**16 21 02.5**	**+1.2**
IZM	**Izmir**	**1.71**	**340**	*e*PN		**Pn**	**16 21 03.2**	**-0.6**
IZM	**Izmir**	**1.71**	**340**	*e*Pn		**Pn**	**16 21 03.3**	**-0.5**
BLCB	**Balcova**	**1.77**	**334**	*e*PN		**Pn**	**16 21 04.0**	**-0.6**
BLCB	**Balcova**	**1.77**	**334**	*e*Pn		**Pn**	**16 21 04.1**	**-0.5**
KULA	**Kula-Manisa**	**1.79**	**17**	*e*PN		**Pn**	**16 21 04.6**	**-0.4**
KULA	**Kula-Manisa**	**1.79**	**17**	*e*Pn		**Pn**	**16 21 04.6**	**-0.4**
KORT	**Korkueli**	**1.89**	**83**	*i*P		**Pn**	**16 21 08.2**	**+1.9**
KORT	**Korkueli**	**1.89**	**83**	*i*P		**Pn**	**16 21 08.2**	**+1.9**
URLA	**Izmir**	**1.93**	**325**	*i*P		**Pn**	**16 21 06.1**	**-0.8**
URLA				*i*S		**Sn**	**16 21 32.1**	**+1.1**
URLA	**Izmir**	**1.93**	**325**	*i*P		**Pn**	**16 21 06.1**	**-0.7**
URLA				*i*S		**Sn**	**16 21 32.1**	**+1.1**
KHL	**Karahalli**	**1.94**	**38**	*e*PN		**Pn**	**16 21 07.3**	**+0.2**
KHL	**Karahalli**	**1.94**	**38**	*e*Pn		**Pn**	**16 21 07.3**	**+0.2**
KHAL	**Karahalli**	**1.97**	**36**	*i*P		**Pn**	**16 21 07.3**	**0.0**
KHAL	**Karahalli**	**1.97**	**36**	*i*P		**Pn**	**16 21 07.3**	**-0.1**
APE	**Apeiranthos**	**2.00**	**279**	*e*PN		**Pn**	**16 21 08.4**	**+0.5**
APE	**Apeiranthos**	**2.00**	**279**	*e*Pn		**Pn**	**16 21 07.8**	**-0.1**
APE	**Apeiranthos**	**2.00**	**279**	*e*PN		**Pn**	**16 21 07.8**	**-0.1**
APE	**Apeiranthos**	**2.00**	**279**	*e*Pn		**Pn**	**16 21 07.8**	**-0.1**
AKS	**Akhisar**	**2.09**	**356**	*e*PN		**Pn**	**16 21 08.0**	**-1.1**
AKS	**Akhisar**	**2.09**	**356**	*e*Pn		**Pn**	**16 21 08.0**	**-1.1**
ZKR	**Zakros**	**2.22**	**221**	*e*Pb		**Pb**	**16 21 11.6**	**-2.6**
ZKR	**Zakros**	**2.22**	**221**	*e*PB		**Pb**	**16 21 11.6**	**-2.6**
ZKR	**Zakros**	**2.22**	**221**	*e*Pb		**Pb**	**16 21 11.6**	**-2.6**
NPS	**Neapolis**	**2.47**	**233**	*e*PN		**Pn**	**16 21 14.5**	**+0.2**
NPS	**Neapolis**	**2.47**	**233**	*e*Pn		**Pn**	**16 21 14.5**	**+0.2**
NPS	**Neapolis**	**2.47**	**233**	*e*Pn		**Pn**	**16 21 14.5**	**+0.2**
ALT	**Altintas**	**2.80**	**36**	*e*PN		**Pn**	**16 21 19.2**	**+0.3**
ALT	**Altintas**	**2.80**	**36**	*e*Pn		**Pn**	**16 21 19.2**	**+0.3**
BALB	**Balikesir**	**2.84**	**358**	*e*PN		**Pn**	**16 21 19.4**	**0.0**
BALB	**Balikesir**	**2.84**	**358**	*e*Pn		**Pn**	**16 21 19.4**	**0.0**
GONE	**Gonen-Balikesi**	**3.26**	**356**	*e*PN		**Pn**	**16 21 24.9**	**-0.2**
GONE	**Gonen-Balikesi**	**3.26**	**356**	*e*Pn		**Pn**	**16 21 24.9**	**-0.2**
HDMB	**Hadim**	**3.59**	**86**	*e*PN		**Pn**	**16 21 32.0**	**+2.3**
HDMB	**Hadim**	**3.59**	**86**	*e*Pn		**Pn**	**16 21 32.0**	**+2.3**
KONT	**Konya--Tatoy**	**3.65**	**70**	*e*PN		**Pn**	**16 21 32.5**	**+1.9**
KONT	**Konya--Tatoy**	**3.65**	**70**	*e*Pn		**Pn**	**16 21 32.5**	**+1.9**
KIZT	**Kizilcal**	**3.71**	**55**	*e*PN		**Pn**	**16 21 32.8**	**+1.6**
KIZT	**Kizilcal**	**3.71**	**55**	*e*Pn		**Pn**	**16 21 32.8**	**+1.5**

*ISCJB **18** 16:23:57.9±0.6, 36.80N±0.04×28.09E±0.03, h10km, Error ellipse: s-maj=5.3km s-min=3.2km az=1.8*
*DDA **18** 16:23:57.9, 36.80N×28.09E, h10km±2km, Md2.8*
*ISK **18** 16:23:57.2, 36.81N×28.08E, h21km, ML2.2*
*CSEM **18** 16:23:57.7±0.2, 36.78N×28.10E, h8km, ML2.2, Error ellipse: s-maj=4.3km s-min=2.7km az=3.0*

ISC 18 16:23:58.0±0.6, 36.77N±0.04×28.10E±0.03, h10km, n22, σ0°60/41, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.39**	**23**	*e*PG		**Pg**	**16 24 05.3**	**-0.4**
YER				*e*SG		**Sg**	**16 24 11.2**	**+0.2**
YER	**Yerkesik**	**0.39**	**23**	*e*Pg		**Pg**	**16 24 05.3**	**-0.4**
YER				*e*Sg		**Sg**	**16 24 11.2**	**+0.3**
DAT	**Datca**	**0.42**	**264**	*e*PG		**Pg**	**16 24 06.2**	**0.0**
DAT				*e*SG		**Sg**	**16 24 12.9**	**+1.2**
DAT	**Datca**	**0.42**	**264**	*e*Pg		**Pg**	**16 24 06.2**	**0.0**
DAT				*e*Sg		**Sg**	**16 24 12.9**	**+1.1**
TURN	**Turunc**	**0.42**	**76**	*i*P		**Pg**	**16 24 00.8**	**-5.4**
TURN				*i*S		**Sg**	**16 24 03.6**	**-8.2**
TURN	**Turunc**	**0.42**	**76**	*i*P		**Pg**	**16 24 00.8**	**-5.5**
MLSB	**Milas**	**0.58**	**334**	*e*PG		**Pg**	**16 24 09.4**	**+0.1**
MLSB	**Milas**	**0.58**	**334**	*e*Pg		**Pg**	**16 24 09.4**	**+0.1**
BDRM	**Kayabasi**	**0.60**	**299**	*i*P		**Pg**	**16 24 08.8**	**-0.8**
BDRM				*i*S		**Sg**	**16 24 18.1**	**+0.6**
BDRM	**Kayabasi**	**0.60**	**299**	*i*P		**Pg**	**16 24 08.8**	**-0.8**
BDRM				*i*S		**Sg**	**16 24 18.1**	**+0.6**
BODT	**Bodrum**	**0.69**	**295**	*e*PG		**Pg**	**16 24 10.2**	**-1.2**
BODT				*e*SG		**Sg**	**16 24 20.4**	**0.0**
BODT	**Bodrum**	**0.69**	**295**	*e*Pg		**Pg**	**16 24 10.3**	**-1.1**
BODT				*e*Sg		**Sg**	**16 24 20.4**	**-0.1**
AYDN	**Tasoluk**	**0.90**	**349**	*i*P		**Pg**	**16 24 14.4**	**-1.0**
AYDN				*i*S		**Sg**	**16 24 27.2**	**+0.1**
AYDN	**Tasoluk**	**0.90**	**349**	*i*P		**Pg**	**16 24 14.4**	**-1.0**
AYDN				*i*S		**Sg**	**16 24 27.2**	**0.0**
GCAM	**G?zelcaml?**	**1.15**	**324**	*i*P		**Pg**	**16 24 20.1**	**0.0**
GCAM				*i*S		**Sg**	**16 24 35.6**	**+0.4**
GCAM	**G?zelcaml?**	**1.15**	**324**	*i*P		**Pg**	**16 24 20.1**	**-0.1**
GCAM				*i*S		**Sg**	**16 24 35.6**	**+0.5**
DNZL	**Cakiroluk**	**1.19**	**39**	*i*P		**Pb**	**16 24 20.4**	**-0.2**
DNZL				*i*S		**Sg**	**16 24 36.4**	**+0.1**
DNZL	**Cakiroluk**	**1.19**	**39**	*i*P		**Pb**	**16 24 20.4**	**-0.2**
DNZL				*i*S		**Sg**	**16 24 36.4**	**+0.1**
GOLH	**Golhisar**	**1.26**	**68**	*e*P		**Pn**	**16 24 21.4**	**-0.2**
GOLH				*i*S		**Sg**	**16 24 39.8**	**+1.2**
GOLH	**Golhisar**	**1.26**	**68**	*e*P		**Pn**	**16 24 21.4**	**-0.2**
GOLH				*i*S		**Sg**	**16 24 39.8**	**+1.2**
AKAS	**Kas**	**1.33**	**113**	*i*P		**Pn**	**16 24 23.1**	**+0.5**
AKAS				*i*S		**Sb**	**16 24 39.6**	**-0.5**
AKAS	**Kas**	**1.33**	**113**	*i*P		**Pn**	**16 24 23.1**	**+0.5**
AKAS				*i*S		**Sb**	**16 24 39.6**	**-0.5**

*DDA **18** 16:27:32.8, 36.96N×35.56E, h32km±2km, Md3.1*
*ISCJB **18** 16:27:33.8±0.4, 36.99N±0.03×35.60E±0.03, h23km±4km, Error ellipse: s-maj=4.8km s-min=3.7km az=9.7*
*CSEM **18** 16:27:33.7±0.1, 36.96N×35.58E, h20km, MD3.1, Error ellipse: s-maj=3.5km s-min=3.1km az=28.0*
*ISK **18** 16:27:33.1, 37.00N×35.58E, h21km, MD3.1*

ISC 18 16:27:33.8±0.4, 36.98N±0.03×35.60E±0.03, h19km±3km, n38, σ0°72/61, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.12**	**76**	PG		**Pg**	**16 27 37.9**	**+0.1**
CEYT				*e*SG		**Sg**	**16 27 41.5**	**+1.0**
CEYT	**Ceyhan**	**0.12**	**76**	*i*Pg		**Pg**	**16 27 37.9**	**+0.1**
CEYT				*e*Sg		**Sg**	**16 27 41.5**	**+1.1**
KRTS	**Karatas**	**0.45**	**204**	*e*P

*ISCJB **18** 16:41:31.8±0.7, 47.49N×8.90E±0.06, h0km, Error ellipse: s-maj=6.3km s-min=4.4km az=141.5*

ISC 18 16:41:32.1±0.7, **47.49N**±0.004×**8.90E**±0.006, **h0**km, **n12**, σ0=**65**/20, **6C, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WEIN	**Weingarten**	**0.07**	**56**	⇑*i*Pg	**Pg**	**16 41 32.5**	**-0.9**
	817nm,0.2s						
WEIN				*e*Sg	**Sg**	**16 41 34.5**	**+0.1**
	817nm,0.2s						
WEIN	**Weingarten**	**0.07**	**56**	⇑*i*Pg	**Pg**	**16 41 32.5**	**-0.9**
	817nm,0.2s						
WEIN				*e*Sg	**Sg**	**16 41 34.5**	**+0.1**
	817nm,0.2s						
WILA	**Wila**	**0.07**	**175**	*e*Pg	**Pg**	**16 41 32.7**	**-0.8**
	883nm,0.3s						
WILA				*e*Sg	**Sg**	**16 41 34.7**	**+0.3**
	883nm,0.3s						
WILA	**Wila**	**0.07**	**175**	*e*Pg	**Pg**	**16 41 32.7**	**-0.8**
	883nm,0.3s						
WILA				*e*Sg	**Sg**	**16 41 34.7**	**+0.3**
	883nm,0.3s						
STEIN	**Stein am Rhein**	**0.18**	**354**	⇑*i*Pg	**Pg**	**16 41 35.5**	**-0.1**
	42nm,0.7s						
STEIN	**Stein am Rhein**	**0.18**	**354**	⇑*i*Pg	**Pg**	**16 41 35.5**	**-0.1**
	42nm,0.7s						
TRULL	**Truellikon**	**0.22**	**317**	⇑*i*Pg	**Pg**	**16 41 36.3**	**+0.1**
	61nm,0.3s						
TRULL	**Truellikon**	**0.22**	**317**	⇑*i*Pg	**Pg**	**16 41 36.3**	**+0.1**
	61nm,0.3s						
SLE	**Schleitheim**	**0.39**	**315**	*e*Pg	**Pg**	**16 41 39.2**	**-0.3**
	31nm,0.5s						
SLE				*e*Sg	**Sg**	**16 41 45.5**	**+0.9**
	31nm,0.5s						
SLE	**Schleitheim**	**0.39**	**315**	*e*Pg	**Pg**	**16 41 39.2**	**-0.3**
	31nm,0.5s						
SLE				*e*Sg	**Sg**	**16 41 45.5**	**+0.9**
	31nm,0.5s						
LIENZ	**Kamor/St.Gall**	**0.45**	**116**	*e*Pg	**Pg**	**16 41 40.2**	**-0.4**
	28nm,0.3s						
LIENZ				*e*Sg	**Sg**	**16 41 47.7**	**+1.3**
	28nm,0.3s						
LIENZ	**Kamor/St.Gall**	**0.45**	**116**	*e*Pg	**Pg**	**16 41 40.2**	**-0.4**
	28nm,0.3s						
LIENZ				*e*Sg	**Sg**	**16 41 47.7**	**+1.3**
	28nm,0.3s						

*CSEM **18** 16:59:24.7±0.7, 36.70N×28.27E, h8km, ML2.1, Error ellipse: s-maj=13.6km s-min=7.0km az=168.0*
*ISK **18** 16:59:27.4, 36.86N×28.07E, h24km, ML2.1*
*DDA **18** 16:59:28.5, 36.81N×28.10E, h7km±1km, Md2.9*

ISC 18 16:59:24.5±2.1, **36.68N**±0.07×**28.27E**±0.05, **h10**km±50km, **n14**, σ1=**14**/26, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TURN	**Turunc**	**0.33**	**54**	*i*P	**Pg**	**16 59 31.4**	**+0.2**
TURN				*i*S	**Sg**	**16 59 33.8**	**-1.8**
TURN	**Turunc**	**0.33**	**54**	*i*P	**Pg**	**16 59 31.4**	**+0.3**
TURN				*i*S	**Sg**	**16 59 33.8**	**-1.8**
YER	**Yerkesik**	**0.46**	**2**	*e*PG	**Pg**	**16 59 35.4**	**+2.0**
YER				*e*SG	**Sg**	**16 59 40.7**	**+1.2**
YER	**Yerkesik**	**0.46**	**2**	*e*Pg	**Pg**	**16 59 35.4**	**+2.0**
YER				*e*Sg	**Sg**	**16 59 40.7**	**+1.3**
DAT	**Datca**	**0.55**	**275**	*e*PG	**Pg**	**16 59 36.8**	**+1.5**
DAT				*e*SG	**Sg**	**16 59 43.4**	**+0.8**
DAT	**Datca**	**0.55**	**275**	*e*Pg	**Pg**	**16 59 36.8**	**+1.5**
DAT				*e*Sg	**Sg**	**16 59 43.4**	**+0.8**
MLSB	**Milas**	**0.73**	**328**	*e*PG	**Pg**	**16 59 37.2**	**-1.4**
MLSB	**Milas**	**0.73**	**328**	*e*Pg	**Pg**	**16 59 37.2**	**-1.4**
BDRM	**Kayabasi**	**0.76**	**301**	*i*P	**Pg**	**16 59 38.8**	**-0.4**
BDRM				*i*S	**Sg**	**16 59 48.5**	**-0.7**
BDRM	**Kayabasi**	**0.76**	**301**	*i*P	**Pg**	**16 59 38.8**	**-0.4**
BDRM				*i*S	**Sg**	**16 59 48.5**	**-0.7**
BODT	**Bodrum**	**0.86**	**297**	*e*PG	**Pg**	**16 59 40.1**	**-0.9**
BODT				*e*SG	**Sg**	**16 59 50.8**	**-1.3**
BODT	**Bodrum**	**0.86**	**297**	*e*Pg	**Pg**	**16 59 40.1**	**-0.9**
BODT				*e*Sg	**Sg**	**16 59 50.8**	**-1.4**
AYDN	**Tasoluk**	**1.03**	**343**	*i*P	**Pg**	**16 59 45.0**	**+0.8**
AYDN				*i*S	**Sg**	**16 59 57.6**	**-0.1**
AYDN	**Tasoluk**	**1.03**	**343**	*i*P	**Pg**	**16 59 45.0**	**+0.7**
AYDN				*i*S	**Sg**	**16 59 57.6**	**0.0**

IDC 18 17:14:51.5±2.0, **0.51N×126.77E, h0**km, **mb3.5**/3, **mb1 3.8**/3, **mb1mx3.5**/17, **mbtmp3.6**/3, **Error ellipse: s-maj=165.7km s-min=24.9km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.64**	**160**	P	P	17 19 43.8	+0.3
	1.4nm,0.4s,baz=340,slow=9.9,SNR=28						
ASAR	**Alice Springs**	**25.01**	**164**	P	P	17 20 17.2	0.0
	0.9nm,0.3s,baz=344,slow=9.1,SNR=49						
MKAR	**Makanchi Array**	**60.22**	**326**	P	P	17 25 01.4	+0.1
	0.3nm,0.5s,baz=122,slow=7.7,SNR=7.2						

*ISCJB **18** 17:40:37.3±0.7, 36.96N±0.004×29.15E±0.004, h4km±8km, Error ellipse: s-maj=6.5km s-min=5.3km az=7.3*
*DDA **18** 17:40:37.1, 36.97N×29.16E, h7km±2km, Md2.8*
*ISK **18** 17:40:37.5, 37.05N×29.17E, h16km, MD2.8*
*CSEM **18** 17:40:37.5±0.1, 36.94N×29.19E, h10km, MD2.8, Error ellipse: s-maj=2.5km s-min=2.1km az=171.0*

ISC 18 17:40:37.9±0.6, **36.96N**±0.004×**29.15E**±0.004, **h10**km±6km, **n22**, σ0=**94**/34, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.34**	**55**	*e*PG	**Pg**	**17 40 44.0**	**-0.6**
GLHS	**Glhisar (BURDU**	**0.34**	**55**	*e*Pg	**Pg**	**17 40 44.0**	**-0.5**
GOLH	**Golhisar**	**0.43**	**50**	*i*P	**Pg**	**17 40 44.2**	**-2.0**
GOLH				*i*S	**Sg**	**17 40 52.3**	**+0.4**
GOLH	**Golhisar**	**0.43**	**50**	*i*P	**Pg**	**17 40 44.2**	**-2.0**
GOLH				*i*S	**Sg**	**17 40 52.3**	**+0.4**
ELL	**Elmali**	**0.64**	**109**	*e*PG	**Pg**	**17 40 50.5**	**+0.2**
ELL				*e*SG	**Sg**	**17 41 01.0**	**+2.3**
ELL	**Elmali**	**0.64**	**109**	*e*Pg	**Pg**	**17 40 50.5**	**+0.2**
YER	**Yerkesik**	**0.72**	**284**	*e*PG	**Pg**	**17 40 51.9**	**+0.1**
YER				*e*SG	**Sg**	**17 41 02.2**	**+1.1**
YER	**Yerkesik**	**0.72**	**284**	*e*Pg	**Pg**	**17 40 51.9**	**+0.2**
YER				*e*Sg	**Sg**	**17 41 02.2**	**+1.1**
DNZL	**Cakiroluk**	**0.73**	**353**	*i*P	**Pg**	**17 40 50.9**	**-1.1**
DNZL				*i*S	**Sg**	**17 41 02.1**	**+0.6**
DNZL	**Cakiroluk**	**0.73**	**353**	*i*P	**Pg**	**17 40 50.8**	**-1.2**
DNZL				*i*S	**Sg**	**17 41 02.1**	**+0.6**
AKAS	**Kas**	**0.81**	**153**	*i*P	**Pg**	**17 40 52.9**	**-0.7**
AKAS				*i*S	**Sg**	**17 41 11.3**	**+7.1**
AKAS	**Kas**	**0.81**	**153**	*i*P	**Pg**	**17 40 52.9**	**-0.7**
AYDN	**Tasoluk**	**1.23**	**305**	*i*P	**Pn**	**17 41 00.6**	**-0.5**
AYDN				*i*S	**Sb**	**17 41 17.8**	**+0.6**
AYDN	**Tasoluk**	**1.23**	**305**	*i*P	**Pn**	**17 41 00.6**	**-0.6**
AYDN				*i*S	**Sb**	**17 41 17.8**	**+0.6**
DAT	**Datca**	**1.28**	**260**	*e*PN	**Pn**	**17 41 01.6**	**-0.3**
DAT	**Datca**	**1.28**	**260**	*e*Pn	**Pn**	**17 41 01.6**	**-0.3**
KHAL	**Karahalli**	**1.43**	**11**	*i*P	**Pn**	**17 41 03.7**	**-0.2**
KHAL				*i*S	**Sn**	**17 41 23.9**	**+1.1**
KHAL	**Karahalli**	**1.43**	**11**	*i*P	**Pn**	**17 41 03.7**	**-0.2**
KHAL				*i*S	**Sn**	**17 41 23.9**	**+1.1**
BODT	**Bodrum**	**1.48**	**274**	*e*PN	**Pn**	**17 41 04.8**	**+0.2**
BODT	**Bodrum**	**1.48**	**274**	*e*Pn	**Pn**	**17 41 04.8**	**+0.2**
BLCB	**Balcova**	**2.19**	**311**	*e*PN	**Pn**	**17 41 13.3**	**-1.1**
BLCB	**Balcova**	**2.19**	**311**	*e*Pn	**Pn**	**17 41 13.3**	**-1.1**

*IDC **18** 17:46:10.3±0.7, 35.00N×81.23E, h0km, mb4.0/13, mb1 4.2/18, mb1mx4.0/28, mbtmp4.0/18, ML3.8/5, MS3.1/6, Ms1 3.2/6, ms1mx3.0/27, Error ellipse: s-maj=21.2km s-min=14.5km az=55.0*
*ISCJB **18** 17:46:12.1±2.7, 35.14N±0.07×81.34E±0.07, h20km±20km, mb4.1/22, MS3.1/4, Error ellipse: s-maj=13.1km s-min=8.7km az=33.0*
*NEIC **18** 17:46:12.2±0.5, 35.03N×81.30E, h10km, mb4.0/6, Error ellipse: s-maj=11.5km s-min=7.6km az=51.0*
*BJI **18** 17:46:17.4, 35.42N×81.62E, h14km, mB4.4/2, mb4.2/7, ML4.2/6, Ms4.0/3, Ms7 3.8/2*

ISC 18 17:46:16.1±1.1, **35.12N**±0.07×**81.37E**±0.07, **h37**km±10km, **n52**, σ0=**94**/50, **mb4.0**/22, **MS3.1**/4, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**6.14**	**317**	Pn	**Pn**	**17 47 50.4**	**+6.1**
KSH				Sn	**Sn**	**17 49 04.1**	**+11**
KSH				smax			
	comp=N,190nm,1.2s						
KSH				smax			
	comp=E,140nm,1.0s						
UCH	**Uchtor**	**8.89**	**325**	*e*P	**Pn**	**17 48 23.3**	**+1.3**
	comp=E,18nm,0.8s						
AAK	**Ala-Archa**	**9.22**	**327**	Pn	**Pn**	**17 48 26.0**	**-0.5**
	comp=E,0.5nm,0.3s,baz=146,slow=11,SNR=3.5						
AAK				Lg		17 50 59.1	
	comp=E,1.0nm,0.3s,baz=312,slow=16,SNR=2.8						
AML	**Almayashu**	**9.22**	**322**	*e*P	**Pn**	**17 48 26.9**	**+0.4**
	comp=E,25nm,0.8s						
LSA	**Lhasa**	**9.87**	**120**	P	**Pn**	**17 48 41.1**	**+5.6**
WMQ	**Urumqi**	**9.97**	**27**	*e*P	**Pn**	**17 48 38.6**	**+1.9**
WMQ				pP		17 48 42.1	
WMQ				sP		17 48 45.6	
WMQ				pmax	pmax		
	comp=Z,11nm,0.8s						
WMQ				LR	LR		
	comp=N,510nm,10.1s						
WMQ				LR	LR		
	comp=E,430nm,7.6s						
WMQ				LR	LR		
	comp=Z,580nm,10.4s						
KBL	**Kabul**	**10.15**	**270**	*e*P	**Pn**	**17 48 39.8**	**+0.5**
	comp=Z,9.5nm,0.9s						
MK31	**Makanchi Array**	**11.68**	**3**	*e*P	**Pn**	**17 48 59.5**	**-0.7**
MKAR	**Makanchi Array**	**11.68**	**3**	Pn	**Pn**	**17 48 59.0**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=178,slow=12,SNR=24						
GTA	**Gaotai**	**15.30**	**68**	P	**Pn**	**17 49 57.9**	**+8.7**
GTA				pP	pP	17 50 01.6	-1.4
GTA				sP	sP	17 50 04.8	-3.0
GTA				S	S	17 53 25.6	+33
GTA				sS	sS	17 53 29.8	+22
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,14nm,1.1s						
GTA				pmax	pmax		
	comp=Z,62nm,4.8s						
GTA				LR	LR		
	comp=N,110nm,9.2s						
GTA				LR	LR		
	comp=E,230nm,11.0s						
GTA				LR	LR		
	comp=Z,280nm,11.9s						
KURK	**Kurchatov**	**15.72**	**354**	Pn	**Pn**	**17 49 50.8**	**-3.8**
	comp=Z,0.2nm,0.3s,baz=148,slow=15,SNR=9.6						
KURK				LR	LR	17 56 26.9	
	comp=Z,96nm,19.7s,baz=265,slow=39						
ZAA0	**Zalesovo Array**	**18.98**	**6**	*e*P	**Pn**	**17 50 34.2**	**-0.9**
ZALV	**Zalesovo Beam**	**18.98**	**6**	P	**Pn**	**17 50 33.0**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=199,slow=12,SNR=21						
ZALV				LR	LR	17 59 01.8	
	comp=Z,25nm,20.6s,baz=284,slow=40						
BVAR	**Borovoye Array**	**19.52**	**340**	P	**Pn**	**17 50 40.0**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=145,slow=11,SNR=10						
BRVK	**Borovoye**	**19.58**	**340**	*e*P	**Pn**	**17 50 41.7**	**-0.5**
	comp=Z,9.7nm,0.9s						
ABKAR	**Akbulak array**	**21.15**	**318**	*e*P	**P**	**17 50 57.5**	**-0.3**
	comp=Z,3.3nm,0.8s,mb3.7						
CHTO	**Chiang Mai**	**22.50**	**132**	*e*P	**P**	**17 51 12.8**	**+0.2**
	comp=Z,4.9nm,1.2s,mb3.8						
SONM	**Songino Array**	**22.53**	**48**	P	**P**	**17 51 15.4**	**+2.8**
	comp=Z,3.7nm,1.0s,mb3.8,baz=236,slow=9.4,SNR=20						
XAN	**Xi'an**	**22.69**	**85**	P	**P**	**17 51 14.5**	**+0.1**
CM31	**Chiang Mai Arr**	**22.78**	**132**	*e*P	**P**	**17 51 14.8**	**-0.5**
	comp=Z,2.2nm,0.6s,mb3.8						
CMAR	**Chiang Mai Arr**	**22.78**	**132**	P	**P**	**17 51 15.5**	**+0.1**
	comp=Z,5.1nm,0.9s,mb3.9,baz=312,slow=11,SNR=22						
CMAR				PcP	PcP	17 55 07.6	+1.4
	comp=Z,1.0nm,0.9s,baz=309,slow=2.5,SNR=5.4						
CMAR				LR	LR	18 01 03.5	
	comp=Z,54nm,18.3s,MS3.0,baz=295,slow=39						
AKTK	**Aktyubinsk**	**22.84**	**319**	P	**P**	**17 51 15.3**	**-0.5**
AKTK				LR	LR	18 00 20.9	
AKTO	**Aktyubinsk**	**22.84**	**319**	P	**P**	**17 51 15.3**	**-0.5**
	comp=Z,0.5nm,0.2s,mb3.5,baz=124,slow=11,SNR=2.6						
AKTO				LR	LR	18 00 20.9	
	comp=Z,51nm,18.6s,MS3.0,baz=296,slow=37						
ULN	**Ulaanbaatar**	**22.95**	**48**	*e*P	**P**	**17 51 20.2**	**+3.2**
	comp=Z,15nm,1.4s,mb4.2						
ARU	**Arti**	**26.36**	**331**	*e*P	**P**	**17 51 49.2**	**+0.7**
	comp=Z,9.9nm,1.3s,mb4.2						
KSRS	**Korea Array**	**37.31**	**72**	LR	LR	18 09 36.0	
	comp=Z,18nm,18.7s,MS2.9,baz=270,slow=38						
BRTR	**Keskin Array B**	**37.83**	**291**	P	**P**	**17 53 29.5**	**+0.4**
	comp=Z,1.1nm,0.8s,mb3.6,baz=74,slow=6.6,SNR=7.8						
FINES	**FINESS Array B**	**43.40**	**325**	P	**P**	**17 54 15.3**	**+0.6**
	comp=Z,2.0nm,0.8s,mb3.9,baz=96,slow=14,SNR=3.7						
ARCES	**ARCESS Array B**	**45.74**	**336**	P	**P**	**17 54 34.3**	**+1.0**
	comp=Z,2.9nm,0.8s,mb4.2,baz=96,slow=8.4,SNR=6.0						
BRG	**Berggiesshubel**	**50.02**	**310**	*e*(P)	**P**	**17 55 07.7**	**+1.0**
	comp=Z,3.7nm,0.9s,mb4.4						
NOA	**NORSAR Array B**	**50.53**	**324**	P	**P**	**17 55 10.0**	**-0.3**
	comp=Z,1.4nm,0.8s,mb4.0,baz=88,slow=7.4,SNR=5.1						
NOA				LR	LR	18 16 42.6	
	comp=Z,37nm,21.1s,MS3.4,baz=260,slow=36						
CLL	**Collm**	**50.54**	**311**	*e*P	**P**	**17 55 11.0**	**+0.4**
CLL				*ep*P	pP	17 55 14.0	-7.5
	comp=Z,24nm,2.1s						
HINF	**Hinteralfeld**	**55.21**	**308**	*e*P	**P**	**17 55 44.4**	**-0.7**
	comp=Z,20nm,1.1s,mb4.8						
HAU	**Haudompre**	**55.48**	**308**	*e*P	**P**	**17 55 47.4**	**+0.3**
LPG	**La Plagne**	**55.94**	**305**	*e*P	**P**	**17 55 50.6**	**+0.2**
	comp=Z,19nm,1.0s,mb4.8						
LPL	**La Plagne**	**55.95**	**305**	*e*P	**P**	**17 55 50.6**	**+0.1**
	comp=Z,13nm,0.8s,mb4.7						
SBF	**Sospel**	**55.98**	**303**	*e*P	**P**	**17 55 50.5**	**-0.2**
CABF	**La Chapelle**	**56.05**	**307**	*e*P	**P**	**17 55 52.6**	**+1.4**
MBDF	**Montbardon**	**56.16**	**304**	*e*P	**P**	**17 55 52.7**	**+0.7**
MEZF	**Maizieres J'vi**	**56.18**	**309**	*e*P	**P**	**17 55 52.7**	**+0.7**
ORIF	**Oris-en-Rattie**	**56.70**	**305**	*e*P	**P**	**17 55 55.6**	**-0.3**
ILAR	**Eielson Array**	**73.53**	**19**	P	**P**	**17 57 45.5**	**+0.8**
	comp=Z,1.4nm,0.9s,mb3.9,baz=308,slow=5.5,SNR=12						
TORD	**Torodi Ar. Bea**	**74.18**	**275**	P	**P**	**17 57 48.2**	**-1.1**
TORD	**Torodi Ar. Bea**	**74.18**	**275**	P	**P**	**17 57 48.2**	**-1.1**
	comp=Z,3.3nm,1.1s,mb4.2,baz=48,slow=4.4,SNR=7.3						
WRA	**Warramunga Arr**	**74.32**	**129**	P	**P**	**17 57 49.7**	**-0.2**
	comp=Z,1.1nm,0.9s,mb3.8,baz=334,slow=5.6,SNR=4.9						
ASAR	**Alice Springs**	**76.78**	**132**	P	**P**	**17 58 02.4**	**-1.6**
	comp=Z,0.6nm,0.9s,mb3.5,baz=343,slow=3.9,SNR=4.4						
YKA	**Yellowknife Ar**	**81.88**	**7**	P	**P**	**17 58 30.4**	**-0.8**
YKA	**Yellowknife Ar**	**81.88**	**7**	P	**P**	**17 58 30.4**	**-0.8**
	comp=Z,1.4nm,0.8s,mb4.0,baz=344,slow=4.8,SNR=4.1						
BOSA	**Boshof**	**82.59**	**227**	P	**P**	**17 58 34.4**	**-0.9**
BOSA	**Boshof**	**82.59**	**227**	P	**P**	**17 58 34.4**	**-0.9**
	comp=Z,6.5nm,1.1s,mb4.6,baz=18,slow=9.4,SNR=4.0						
LPAZ	**La Paz**	**146.93**	**297**	PKPbc	PKPbc	18 05 53.9	-1.2
LPAZ	**La Paz**	**146.93**	**297**	PKPbc	PKPbc	18 05 53.9	-1.2
	comp=Z,0.8nm,0.7s,baz=90,slow=1.0,SNR=4.5						

*ISCJB **18** 18:59:31.7±0.3, 23.66N±0.01×121.66E±0.02, h29km±2km, Error ellipse: s-maj=3.0km s-min=2.0km az=38.5*
*TAP **18** 18:59:31.8, 23.69N×121.60E, h33km, ML3.4, C*
*JMA **18** 18:59:31.8±0.3, 23.65N×121.80E, h11km, M2.6*

ISC 18 18:59:32.0±0.3, **23.67N**±0.01×**121.64E**±0.02, **h27**km±2km, **n61**, σ0=**85**/112, **6C-5D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEGC	**Jichi Village**	**0.10**	**295**	*i*P	**Pb**	**18 59 37.6**	**+0.7**
	baz=290						
TEGC				S	**Sb**	**18 59 42.0**	**+1.7**
	baz=290						
ESF	**Shoufeng Towns**	**0.24**	**329**	P	**Pb**	**18 59 38.4**	**0.0**
	baz=328						
ESF				*e*S	**Sb**	**18 59 43.5**	**+0.8**
	baz=328						
ESL	**Shilin**	**0.24**	**308**	*i*P	**Pb**	**18 59 38.4**	**-0.1**
	baz=303						
ESL				*i*S	**Sb**	**18 59 42.8**	**0.0**
	baz=303						
HWA	**Hwalien**	**0.31**	**354**	⇓*i*P	**Pb**	**18 59 39.6**	**+0.2**
	baz=5.0						
HWA				S	**Sb**	**18 59 46.5**	**+2.1**
	baz=5.0						
EHY	**Hungye**	**0.33**	**241**	⇑*i*P	**Pb**	**18 59 39.6**	**-0.1**
	baz=245						
EHY				S	**Sb**	**18 59 44.8**	**-0.1**
	baz=245						
TWD	**Chiawan**	**0.41**	**354**	⇓*i*P	**Pb**	**18 59 40.7**	**-0.2**
	baz=348						
TWD				S	**Sb**	**18 59 48.3**	**+1.2**
	baz=348						
TWF1	**Yuli**	**0.44**	**225**	P	**Pb**	**18 59 41.2**	**-0.2**
	baz=231						
TWF1				S	**Sb**	**18 59 48.1**	**+0.3**
	baz=231						
WHF	**Hehuan Shan**	**0.59**	**324**	*i*P	**Pb**	**18 59 42.9**	**-0.9**
	baz=318						
WHF				*e*S	**Sb**	**18 59 50.6**	**-1.2**
	baz=318						
CHKT	**Chengkung**	**0.62**	**204**	⇓*i*P	**Pb**	**18 59 44.6**	**+0.3**
	baz=188						
CHKT				*e*S	**Sb**	**18 59 54.5**	**+1.9**
	baz=188						
YUS	**Yu-Shan**	**0.66**	**255**	⇑*i*P	**Pb**	**18 59 45.2**	**+0.2**
	baz=252						
YUS				S	**Sb**	**18 59 53.4**	**-0.3**
	baz=252						
SMLT	**Sun Moon Lake**	**0.71**	**288**	⇑*i*P	**Pb**	**18 59 45.1**	**-0.7**
	baz=291						
TWT	**Tachien**	**0.72**	**324**	P	**Pb**	**18 59 45.7**	**-0.4**
	baz=323						
TWT				*e*S	**Sb**	**18 59 54.8**	**-0.9**
	baz=323						
ELDTW	**Lidau**	**0.74**	**230**	⇓*i*P	**Pb**	**18 59 45.3**	**-1.1**
	baz=223						
ELDTW				*e*S	**Sb**	**18 59 54.5**	**-1.7**
	baz=223						
TYC	**Yuchr**	**0.76**	**288**	⇑*i*P	**Pb**	**18 59 45.7**	**-0.9**
	baz=293						
TYC				*e*S	**Sb**	**18 59 56.0**	**-0.6**
	baz=293						
ENA	**Nanau**	**0.76**	**7**	P	**Pb**	**18 59 45.9**	**-0.9**
	baz=356						
ENA				*e*S	**Sb**	**18 59 55.9**	**-0.9**
	baz=356						
ALS	**Alishan**	**0.78**	**259**	⇑*i*P	**Pb**	**18 59 47.1**	**0.0**
	baz=257						
ALS				S	**Sb**	**18 59 57.2**	**-0.1**
	baz=257						
NNS	**Nan Shan**	**0.81**	**342**	P	**Pb**	**18 59 46.5**	**-1.0**
	baz=344						
NNS				*e*S	**Sb**	**18 59 56.8**	**-1.3**
	baz=344						
CHN5	**Tsauling**	**0.89**	**266**	⇑*i*P	**Pn**	**18 59 48.6**	**-0.1**
	baz=265						
CHN5				*e*S	**Sb**	**19 00 00.7**	**+0.4**
	baz=265						
WNT	**Mingjian**	**0.90**	**284**	*e*P	**Pn**	**18 59 49.0**	**0.0**
	baz=282						
WNT				*e*S	**Sb**	**19 00 01.3**	**+0.6**
	baz=282						
STYT	**Tauyuan**	**0.95**	**239**	*e*S	**Sb**	**19 00 01.9**	**-0.2**
	baz=237						
TWC	**Suao**	**0.96**	**11**	*e*P	**Pn**	**18 59 49.8**	**0.0**
	baz=23						
TWC				*e*S	**Sb**	**19 00 03.5**	**+1.2**
	baz=23						
ENTT	**Nioudou**	**0.97**	**356**	P	**Pn**	**18 59 48.8**	**-1.1**
	baz=358						
WGK	**Gukeng**	**0.99**	**271**	*e*P	**Pn**	**18 59 50.0**	**-0.1**
	baz=270						
WGK				*e*S	**Sb**	**19 00 03.1**	**-0.1**
	baz=270						
TWG	**Pinlang**	**0.99**	**212**	⇓P	**Pn**	**18 59 48.4**	**-1.8**
	baz=210						
TWG				*e*S	**Sb**	**19 00 01.0**	**-2.2**
	baz=210						
TCU	**Taichung**	**1.00**	**299**	P	**Pn**	**18 59 50.6**	**+0.2**
	baz=297						
TCU				*e*S	**Sn**	**19 00 03.4**	**-0.2**
	baz=297						
CHN4	**Tsaushan**	**1.01**	**252**	*e*P	**Pn**	**18 59 51.5**	**+1.0**
	baz=251						
CHN4				*e*S	**Sn**	**19 00 04.2**	**+0.4**
	baz=251						
TTN	**Taitung**	**1.01**	**207**	*e*P	**Pn**	**18 59 48.5**	**-2.0**
	baz=205						
TTN				*e*S	**Sn**	**19 00 03.8**	**-0.1**
	baz=205						
WTP	**Ta-pu**	**1.03**	**246**	P	**Pn**	**18 59 51.1**	**+0.4**
	baz=251						
WTP				*e*S	**Sn**	**19 00 04.9**	**+0.6**
	baz=251						
NSK	**Sanguang**	**1.04**	**346**	P	**Pn**	**18 59 50.1**	**-0.7**
	baz=356						
NSK				*e*S	**Sn**	**19 00 02.2**	**-2.3**
	baz=356						
TWQ1	**Liyutan**	**1.04**	**311**	P	**Pn**	**18 59 51.2**	**+0.3**
	baz=309						
TWQ1				*e*S	**Sn**	**19 00 05.6**	**+1.0**
	baz=309						
TWE	**Neicheng**	**1.05**	**1**	*e*P	**Pn**	**18 59 50.0**	**-1.0**
	baz=354						
TWE				*e*S	**Sn**	**19 00 05.8**	**+1.0**
	baz=354						
NSY	**Sanyi**	**1.10**	**313**	P	**Pn**	**18 59 52.2**	**+0.6**
	baz=312						
NSY				*e*S	**Sn**	**19 00 06.2**	**+0.3**
	baz=312						
NSTT	**Nanjuang**	**1.12**	**329**	*i*P	**Pn**	**18 59 52.2**	**+0.1**
	baz=328						
NSTT				*e*S	**Sn**	**19 00 06.0**	**-0.6**
	baz=328						
CHN1	**Nanshi**	**1.13**	**245**	*e*P	**Pn**	**18 59 52.5**	**+0.4**
	baz=245						
CHN1				S	**Sn**	**19 00 08.0**	**+1.3**
	baz=245						
CHY	**Chiayi**	**1.13**	**262

TWK1	**Hengchun**	**1.88**	**204**	*e*P		**Pn**	**19 00 02.8**	**+0.4**
	baz=203								
TWK1				*e*S		**Sn**	**19 00 25.3**	**+0.1**
	baz=203								
TSEB	**Hengchuen, Pin**	**1.89**	**201**	*e*P		**Pn**	**19 00 03.5**	**+1.0**
	baz=201								
TSEB				*e*S		**Sn**	**19 00 26.2**	**+0.8**
	baz=201								
PNG	**Penghu**	**1.92**	**267**	*e*P		**Pn**	**19 00 02.5**	**-0.4**
	baz=257								
PNG				*e*S		**Sn**	**19 00 25.2**	**-0.9**
	baz=257								
HATJ	**Hateruma jima**	**2.02**	**78**	P		**Pn**	**19 00 04.3**	**0.0**
HATJ				*e*S		**Sn**	**19 00 28.3**	**-0.4**
IRIF	**Iriomote-Funau**	**2.02**	**70**	P		**Pn**	**19 00 04.9**	**+0.5**
IRIF				*e*S		**Sn**	**19 00 29.2**	**+0.4**
JKRS	**Kuro-shima**	**2.24**	**75**	P		**Pn**	**19 00 08.2**	**+0.8**
JKRS				*e*S		**Sn**	**19 00 34.9**	**+0.8**
JIJ	**Ishigaki jima**	**2.39**	**73**	P		**Pn**	**19 00 09.7**	**+0.3**
JIJ				*e*S		**Sn**	**19 00 36.6**	**-1.3**
JTJ	**Tarama**	**2.96**	**70**	P		**Pn**	**19 00 17.6**	**+0.3**
JTJ				*e*S		**Sn**	**19 00 52.0**	**+0.1**
JOGS	**Gusukube**	**3.61**	**72**	*e*S		**Sn**	**19 01 08.4**	**+0.5**

ISCJB ***18*** *19:11:50.4±0.2, 14°.39N×90°.04×89°.97W±0°.03, h231km±2km, mb4.5/57, Error ellipse: s-maj=7.9km s-min=3.2km az=33.1*

NEIC ***18*** *19:11:50.5±0.4, 14°.25N×90°.03W, mb4.7/59, Error ellipse: s-maj=8.6km s-min=5.9km az=211.0*

CASC ***18*** *19:11:50.4±2.5, 14°.15N×89°.99W, h227km±10km, MD4.3, ML3.7, mb4.7(NEIC)*

IDC ***18*** *19:11:51.1±0.6, 14°.50N×89°.66W, h234km±5km, mb3.8/14, mb1 4.0/15, mb1mx3.9/19, mbtmp3.8/15, Error ellipse: s-maj=18.6km s-min=8.8km az=59.0*

ISC 18 19:11:51.5±0.2, 14°.41N±0°.04×89°.91W±0°.03, h225km±2km, h235km±2.9km; pP-P, n366, σ0°.82/369, mb4.5/57, 106C-114D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RBDL	**Robledal**	**0.36**	**144**		*e*P		**Pn**	**19 12 20.6**	**-0.5**
NBG	**Las Nubes**	**0.46**	**293**	↑	*e*P		**Pn**	**19 12 22.1**	**+0.7**
MTO2	**Montecristo 2**	**0.53**	**91**		*e*P		**Pn**	**19 12 21.5**	**0.0**
IXG	**Ixpaco**	**0.58**	**246**	↓	*e*P		**Pn**	**19 12 21.2**	**-0.6**
SNJE	**San Jose**	**0.61**	**152**		*i* P		**Pn**	**19 12 21.5**	**-0.4**
SBLS	**San Blas**	**0.63**	**154**		*i* P		**Pn**	**19 12 21.4**	**-0.6**
GCG	**Guatemala City**	**0.63**	**286**		*e*P		**Pn**	**19 12 21.5**	**-0.5**
GCG					*e*S		**S**	**19 12 45.8**	**+0.1**
PCG	**Pacaya**	**0.68**	**269**		*e*P		**Pn**	**19 12 22.4**	**+0.3**
MRL	**Marmol**	**0.69**	**18**	↓	*i*P		**Pn**	**19 12 23.6**	**+1.4**
MRL					*e*S		**S**	**19 12 48.1**	**+1.8**
BOQS	**Boqueron**	**0.90**	**138**		*e*P		**Pn**	**19 12 23.0**	**-0.3**
FUG	**Fuego 3**	**0.91**	**273**	↑	*i*P		**Pn**	**19 12 23.0**	**-0.3**
FG6		**0.96**	**279**	↑	*e*P		**Pn**	**19 12 23.8**	**+0.2**
SNET	**Serv Nac Est T**	**0.97**	**138**		*e*P		**Pn**	**19 12 22.5**	**-1.2**
SNET					*e*S		**S**	**19 12 49.1**	**+0.3**
LBRS	**Las Brisas**	**1.07**	**128**		*i* P		**Pn**	**19 12 24.3**	**0.0**
LFRS	**El Faro**	**1.13**	**134**	↑	*i*P		**Pn**	**19 12 24.4**	**-0.3**
TP2	**Tecpan 2**	**1.14**	**289**	↑	*i*P		**Pn**	**19 12 25.4**	**+0.6**
TP2					*e*S		**S**	**19 12 49.5**	**-1.3**
SNVI	**San Vicente**	**1.30**	**127**		*e*P		**Pn**	**19 12 25.6**	**-0.3**
SNVI						AML	AML	19 13 00.1	
	comp=Z,295nm,0.2s								
JAT	**Jato**	**1.68**	**267**	↑	*i*P		**Pn**	**19 12 27.8**	**-1.1**
CAHU	**Cacaquatique**	**1.76**	**111**		*e*P		**Pn**	**19 12 30.0**	**+0.3**
BLLM	**Bellamira**	**1.88**	**120**		*e*P		**Pn**	**19 12 30.4**	**-0.5**
CNCH	**Conchagua**	**2.31**	**119**		*e*P		**Pn**	**19 12 35.1**	**+0.1**
TGUH	**Tegucigalpa,Un**	**2.58**	**97**		*e*P		**Pn**	**19 12 38.7**	**+0.9**
CNGN	**Cerro Negro**	**3.65**	**121**		*e*P		**Pn**	**19 12 50.2**	**+0.2**
CNGN					*e*S		**S**	**19 13 33.9**	**-2.4**
CNGN						AML	AML	19 13 40.6	
	comp=E,521nm,0.3s								
MOMN	**Momotombo**	**3.83**	**121**		*e*P		**Pn**	**19 12 53.9**	**+1.7**
COPN	**Copaltepe**	**3.91**	**124**		*e*P		**Pn**	**19 12 53.6**	**+0.3**
CSAN		**4.05**	**123**		*e*P		**Pn**	**19 12 56.2**	**+1.4**
CONN	**Concepcion**	**5.04**	**124**		*e*P		**Pn**	**19 13 07.9**	**+0.8**
CMIG	**Matias Romero**	**5.49**	**300**		P		**Pn**	**19 13 10.1**	**-2.6**
CMIG					S		**S**	**19 14 06.2**	**-11**
CMIG	**Matias Romero**	**5.49**	**300**		P		**Pn**	**19 13 10.1**	**-2.6**
	comp=E,3.5nm,0.3s,baz=118,slow=10,SNR=50								
CMIG					S		**S**	**19 14 06.2**	**-11**
	comp=E,31nm,0.3s,baz=114,slow=11,SNR=13								
HUIG	**Huatulco**	**6.14**	**284**		*i* P		**Pn**	**19 13 17.4**	**-3.6**
HUIG					*i* S		**S**	**19 14 21.1**	**-11**
JTS	**JuntasAbangare**	**6.34**	**130**		*e*P		**Pn**	**19 13 23.1**	**-0.4**
	comp=E,44nm,0.4s								
JTS					*e*S		**S**	**19 14 31.4**	**-5.4**
JTS	**JuntasAbangare**	**6.34**	**130**		*e*P		**Pn**	**19 13 23.2**	**-0.3**
JCR	**Jicaral**	**6.52**	**134**		*e*P		**Pn**	**19 13 26.2**	**+0.4**
JCR					*e*S		**S**	**19 14 37.1**	**-3.9**
CGA2	**Cerro Gallo 2**	**6.88**	**129**		*e*P		**Pn**	**19 13 31.9**	**+1.5**
PRS1	**Puriscal**	**7.02**	**128**		*e*P		**Pn**	**19 13 33.3**	**+1.1**
VHO	**Vista Hermosa**	**7.09**	**293**		*i* P		**Pn**	**19 13 29.0**	**-4.1**
VHO					*i* S		**S**	**19 14 45.1**	**-9.1**
LAJ	**Bijagual**	**7.24**	**128**		*e*P		**Pn**	**19 13 32.1**	**-2.9**
QCR	**Quepos**	**7.49**	**131**		*e*P		**Pn**	**19 13 39.0**	**+0.8**
URSC	**Urasca**	**7.52**	**127**		*e*P		**Pn**	**19 13 39.9**	**+1.3**
URSC					*e*S		**S**	**19 15 05.0**	**+0.7**
BUS	**Buena Vista**	**7.71**	**128**		*e*P		**Pn**	**19 13 42.3**	**+1.3**
PNIG	**Pinotepa**	**8.17**	**285**		*i* P		**Pn**	**19 13 45.4**	**-1.6**
PNIG					*i* S		**S**	**19 15 10.8**	**-8.8**
ACR	**Cerro Adams**	**8.73**	**130**		*e*P		**Pn**	**19 13 54.9**	**+0.7**
ACR					*e*S		**S**	**19 15 30.6**	**-2.3**
PPM	**Popocatepetl**	**9.55**	**300**		*i* P		**Pn**	**19 14 03.9**	**-0.8**
PPM					*i* S		**S**	**19 15 43.1**	**-9.0**
IIO	**Organos**	**9.88**	**303**		*i* P		**Pn**	**19 14 08.0**	**-0.9**
IIO					*i* S		**S**	**19 15 50.8**	**-9.1**
PBVM	**Pinon**	**10.11**	**301**		*e*P		**Pn**	**19 14 08.3**	**-3.5**
PBVM					*i* S		**S**	**19 15 59.2**	**-6.1**
CAIG	**El Cayaco**	**10.32**	**286**		*i* P		**Pn**	**19 14 09.6**	**-4.9**
CAIG					*i* S		**S**	**19 15 59.2**	**-11**
ZIIG	**Zihuatanejo**	**11.56**	**287**		*i* P		**Pn**	**19 14 31.3**	**+1.1**
ZIIG					*i* S		**S**	**19 16 33.0**	**-6.5**
MTDJ	**Mount Denham**	**12.47**	**71**		*e*P		**Pn**	**19 14 46.0**	**+4.4**
	comp=E,128nm,0.7s								
GTBY	**Guantanamo Bay**	**15.16**	**67**		*e*P		**Pn**	**19 15 16.1**	**+1.4**
	comp=E,83nm,1.3s								
HKT	**Hockley**	**16.41**	**341**		*e*P		**P**	**19 15 29.2**	**+0.9**
	comp=E,43nm,1.5s								
VBMS	**Vicksburg**	**17.74**	**358**		*e*P		**P**	**19 15 44.6**	**+1.8**
	comp=E,107nm,0.8s								
NATX	**Nacogdoches**	**17.81**	**347**		*e*P		**P**	**19 15 43.7**	**+0.1**
	comp=E,118nm,1.0s								
OTAV	**Otavalo**	**18.07**	**140**		*e*P		**P**	**19 15 44.3**	**-2.3**
	comp=E,7.7nm,0.9s								
SDDR	**Presa de Saban**	**18.40**	**73**		*e*P		**P**	**19 15 51.4**	**+1.3**
	comp=E,29nm,1.0s								
JCT	**Junction City**	**18.41**	**332**	↓	P		**P**	**19 15 49.8**	**-0.3**
	baz=18,SNR=24								
JCT	**Junction City**	**18.41**	**332**		*e*P		**P**	**19 15 49.6**	**-0.5**
	comp=E,47nm,0.6s								
LRAL	**Lakeview Retre**	**18.73**	**8**		*e*P		**P**	**19 15 54.9**	**+1.3**
	comp=E,33nm,0.8s								
628A	**Black Gap, Mar**	**19.21**	**323**	↓	P		**P**	**19 15 59.2**	**+0.4**
	baz=19,SNR=43								
627A	**Terlingua Ranc**	**19.48**	**322**	↑	P		**P**	**19 16 02.1**	**+0.5**
	baz=20,SNR=55								
TXAR	**Lajitas Array**	**19.56**	**322**		P		**P**	**19 16 03.1**	**+0.6**
	comp=E,2.2nm,0.3s,baz=145,slow=11,SNR=132								
528A	**Cox Ranch, San**	**19.67**	**325**	↓	P		**P**	**19 16 02.9**	**-0.8**
	baz=20,SNR=7.6								
GOGA	**Godfrey**	**19.80**	**16**		*e*P		**P**	**19 16 04.5**	**-0.5**
	comp=E,25nm,0.8s								
626A	**Big Bend Ranch**	**20.00**	**321**	↓	P		**P**	**19 16 07.1**	**-0.1**
	baz=20,SNR=10								
428A	**Kincaid Ranch,**	**20.05**	**326**	↓	P		**P**	**19 16 07.6**	**-0.1**
	baz=20,SNR=7.9								
527A	**Woodward Ranch**	**20.12**	**323**	↑	P		**P**	**19 16 07.7**	**-0.8**
	baz=20,SNR=7.4								
MIAR	**Mount Ida**	**20.32**	**351**		*e*P		**P**	**19 16 09.5**	**-1.0**
	comp=E,50nm,0.8s								
526A	**Mary Lane Ranc**	**20.34**	**322**	↓	P		**P**	**19 16 10.5**	**-0.3**
	baz=20,SNR=9.8								
UALR	**University of**	**20.40**	**354**		*e*P		**P**	**19 16 11.2**	**-0.2**
	comp=E,137nm,0.8s								
427A	**Hayter Ranch,**	**20.53**	**325**	↓	P		**P**	**19 16 12.1**	**-0.7**
	baz=21								
NHSC	**New Hope**	**20.61**	**24**		*e*P		**P**	**19 16 14.5**	**+0.8**
	comp=E,146nm,0.9s								
328A	**Wristen Ranch,**	**20.62**	**327**	↑	P		**P**	**19 16 12.3**	**-1.5**
	baz=21,SNR=14								
426A	**McDonald Obser**	**20.75**	**324**	↑	P		**P**	**19 16 14.0**	**-1.2**
	baz=21,SNR=8.5								
SWET	**Sewanee**	**21.03**	**9**		*e*P		**P**	**19 16 17.4**	**-0.5**
HBAR	**Harrisburg**	**21.07**	**358**		*e*P		**P**	**19 16 17.8**	**-0.6**
326A	**Caldwell Ranch**	**21.21**	**325**	↓	P		**P**	**19 16 18.7**	**-1.2**
	baz=21								
JSC	**Jenkinsville**	**21.28**	**20**		*e*P		**P**	**19 16 19.6**	**-1.0**
227A	**Bennet, Jal**	**21.37**	**327**	↓	P		**P**	**19 16 20.6**	**-1.0**
	baz=22								
425A	**Indio Mountain**	**21.40**	**322**	↓	P		**P**	**19 16 20.5**	**-1.4**
	baz=22								
CPCT	**Cooper Cave**	**21.50**	**12**		*e*P		**P**	**19 16 22.8**	**-0.2**
WVT	**Waverly**	**21.71**	**5**		*e*P		**P**	**19 16 24.1**	**-0.8**
	comp=E,61nm,1.0s,mb5.1								
WMOK	**Wichita Mounta**	**21.77**	**340**		*e*P		**P**	**19 16 22.7**	**-2.7**
	comp=E,39nm,1.1s,mb4.8								
325A	**Bean Ranch, Si**	**21.81**	**323**	↑	P		**P**	**19 16 24.8**	**-1.0**
	baz=22,SNR=7.3								
226A	**Malaga, Loving**	**21.84**	**326**	↑	P		**P**	**19 16 24.8**	**-1.3**
	baz=22								
UTMT	**University of**	**21.86**	**2**		P		**P**	**19 16 27.0**	**+0.8**
TKL	**Tuckaleechee C**	**21.86**	**14**		*e*P		**P**	**19 16 26.1**	**-0.2**
TKL	**Tuckaleechee C**	**21.86**	**14**		P		**P**	**19 16 25.8**	**-0.5**
	comp=E,49nm,0.8s,mb5.1,baz=183,slow=11,SNR=28								
127A	**Arkansas Junct**	**21.93**	**328**	↓	P		**P**	**19 16 25.9**	**-1.1**
	baz=22								
126A	**Clayton Basin,**	**22.25**	**327**	↑	P		**P**	**19 16 28.5**	**-1.3**
	baz=22								
225A	**Deer Hill, Car**	**22.28**	**325**	↑	P		**P**	**19 16 29.4**	**-0.7**
	baz=22,SNR=7.3								
MNTX	**Cornudas Mount**	**22.29**	**323**	↑	P		**P**	**19 16 29.2**	**-1.1**
	baz=22,SNR=9.0								
MNTX	**Cornudas Mount**	**22.29**	**323**		*e*P		**P**	**19 16 28.6**	**-1.6**
	comp=E,11nm,1.4s,mb4.2								
Z27A	**Tatum**	**22.37**	**330**	↑	P		**P**	**19 16 29.8**	**-1.2**
	baz=22								
125A	**Gardner Draw,**	**22.60**	**326**	↑	P		**P**	**19 16 32.4**	**-0.6**
	baz=23,SNR=11								
224A	**Ceoudas Mount**	**22.65**	**324**	↑	P		**P**	**19 16 32.0**	**-1.5**
	baz=23								
MSTX	**Muleshoe**	**22.70**	**331**	↑	P		**P**	**19 16 32.5**	**-1.4**
	baz=23,SNR=20								
Z26A	**Caprock**	**22.72**	**328**	↓	P		**P**	**19 16 32.7**	**-1.4**
	baz=23,SNR=7.6								
Y27A	**Causey**	**22.81**	**331**	↓	P		**P**	**19 16 34.1**	**-0.9**
	baz=23								
AMTX	**Amarillo**	**22.99**	**335**	↑	P		**P**	**19 16 36.0**	**-0.6**
	baz=23,SNR=15								
AMTX	**Amarillo**	**22.99**	**335**		*e*P		**P**	**19 16 35.7**	**-0.8**
	comp=E,48nm,1.0s,mb5.0								
124A	**Stringfield Ra**	**23.07**	**325**	↑	P		**P**	**19 16 37.4**	**+0.1**
	baz=23,SNR=11								
Z25A	**Roswell**	**23.11**	**327**	↓	P		**P**	**19 16 37.4**	**-0.3**
	baz=23,SNR=11								
Y26A	**Elida**	**23.16**	**329**	↓	P		**P**	**19 16 37.3**	**-0.9**
	baz=23,SNR=22								
SIUC	**Southern Illin**	**23.22**	**1**		*e*P		**P**	**19 16 38.6**	**0.0**
	comp=E,121nm,0.8s,mb5.5								
X27A	**F and S Farms,**	**23.41**	**332**	↑	P		**P**	**19 16 39.4**	**-0.9**
	baz=24								
FVM	**French Village**	**23.49**	**359**		*e*P		**P**	**19 16 39.7**	**-1.3**
	comp=E,14nm,0.6s,mb4.7								
Z24A	**Sheeppen Canyo**	**23.50**	**326**	↓	P		**P**	**19 16 41.3**	**+0.1**
	baz=24								
USIN	**University of**	**23.55**	**4**		*e*P		**P**	**19 16 41.4**	**-0.2**
	comp=E,174nm,0.7s								
CCM	**Cathedral Cave**	**23.58**	**357**		*e*P		**P**	**19 16 40.9**	**-1.1**
	comp=E,25nm,0.6s,mb5.0								
Y25A	**Mesa, Roswell**	**23.60**	**328**	↓	P		**P**	**19 16 41.8**	**-0.3**
	baz=24								
X26A	**CR and CF Fran**	**23.66**	**330**	↑	P		**P**	**19 16 41.7**	**-1.0**
	baz=24								
W27A	**Bowe Ranch, En**	**23.74**	**332**	↑	P		**P**	**19 16 42.6**	**-0.8**
	baz=24,SNR=26								
Z23A	**Rita Site, Whi**	**23.93**	**324**	↑	P		**P**	**19 16 45.5**	**+0.4**
	baz=24								
WCI	**Wyandotte Cave**	**23.94**	**7**		*e*P		**P**	**19 16 44.8**	**-0.3**
	comp=E,84nm,0.8s,mb5.4								
Y24A	**Capitan**	**23.99**	**327**	↑	P		**P**	**19 16 45.1**	**-0.6**
	baz=24,SNR=12								
X25A	**Clemmons Ranch**	**24.06**	**329**	↑	P		**P**	**19 16 45.6**	**-0.7**
	baz=24,SNR=12								
W26A	**Owens Ranch, T**	**24.08**	**331**	↑	P		**P**	**19 16 46.6**	**+0.1**
	baz=24								
ELN	**Prospectdale**	**24.15**	**18**		*e*P		**P**	**19 16 46.9**	**-0.2**
BLA	**Blacksburg**	**24.23**	**19**		*e*P		**P**	**19 16 46.8**	**-1.0**
	comp=E,28nm,1.1s,mb4.8								
OLIL	**Olney**	**24.28**	**3**		*e*P		**P**	**19 16 48.0**	**-0.2**
	comp=E,72nm,0.7s,mb5.4								
121A	**Cookes Peak, D**	**24.32**	**321**	↑	P		**P**	**19 16 47.9**	**-0.7**
	baz=24								
Y23A	**Lovelace Mesa,**	**24.33**	**326**	↓	P		**P**	**19 16 48.8**	**+0.1**
	baz=24,SNR=14								
Z22A	**Elephant Butte**	**24.34**	**323**	↑	P		**P**	**19 16 49.0**	**+0.1**
	baz=24								
220A	**Playas Peak, P**	**24.35**	**319**	↓	P		**P**	**19 16 48.8**	**-0.2**
	baz=24								
319A	**Douglas**	**24.50**	**317**	↓	P		**P**	**19 16 49.9**	**-0.4**
	baz=25								
W25A	**X Bar L Ranch,**	**24.52**	**330**	↓	P		**P**	**19 16 50.0**	**-0.4**
	baz=25,SNR=16								
V26A	**Tequesquite Ra**	**24.67**	**332**	↑	P		**P**	**19 16 51.5**	**-0.3**
	baz=25,SNR=23								
BNM	**Barren Site**	**24.80**	**325**		*e*P		**P**	**19 16 53.0**	**0.0**
	comp=E,3.6nm,0.8s,mb4.0								
BNM						*e*pP		19 17 38.2	
Y22A	**Socorro**	**24.83**	**324**	↓	P		**P**	**19 16 54.4**	**+1.0**
	baz=25								
BLO	**Bloomington**	**24.85**	**6**		*e*P		**P**	**19 16 53.1**	**-0.3**
	comp=E,13nm,0.4s,mb4.9								
120A	**U Bar Ranch, L**	**24.85**	**320**	↑	P		**P**	**19 16 53.7**	**+0.2**
	baz=25								
219A	**White Tail Can**	**24.89**	**318**	↑	P		**P**	**19 16 55.6**	**+1.8**
	baz=25								
W24A	**Lazy 6 Ranch,**	**24.98**	**329**	↑	P		**P**	**19 16 54.8**	**+0.2**
	baz=25,SNR=11								
V25A	**Rancho No Teng**	**25.09**	**331**	↓	P		**P**	**19 16 55.7**	**0.0**
	baz=25,SNR=28								
LAZ	**Ladron**	**25.27**	**325**		*e*P		**P**	**19 16 58.6**	**+1.3**
	comp=E,1.2nm,0.7s,mb3.6								
Y21A	**Point of Rocks**	**25.29**	**324**	↑	P		**P**	**19 16 57.8**	**+0.4**
	baz=25								
KSU1	**Kansas State U**	**25.30**	**348**		*e*P		**P**	**19 16 55.7**	**-1.7**
	comp=E,30nm,0.7s,mb5.0								
W23A	**Werner Place,**	**25.32**	**328**	↓	P		**P**	**19 16 58.0**	**+0.3**
	baz=25,SNR=6.2								
ANMO	**Albuquerque**	**25.32**	**327**		P		**P**	**19 16 58.1**	**+0.5**
	comp=E,1.5nm,0.6s,mb3.8,baz=153,slow=6.1,SNR=3.6								
ANMO					pP		pP	19 17 43.3	+1.8
	comp=E,1.0nm,0.3s,baz=133,slow=9.7,SNR=3.4								
V24A	**Rampart Ranch,**	**25.32**	**330**	↓	P		**P**	**19 16 58.0**	**+0.3**
	baz=25								
U25A	**Circle Dot Ran**	**25.45**	**332**	↓	P		**P**	**19 16 58.9**	**0.0**
	baz=26,SNR=12								
Y20A	**Horse Springs,**	**25.63**	**322**	↑	P		**P**	**19 17 00.9**	**+0.4**
	baz=26								
X21A	**Alamocita Cree**	**25.67**	**324**	↓	P		**P**	**19 17 01.2**	**+0.4**
	baz=26,SNR=5.1								
118A	**Homack Ranch,**	**25.76**	**318**	↓	P		**P**	**19 17 01.9**	**+0.2**
	baz=26								
217A	**Green Valley**	**25.78**	**316**	↓	P		**P**	**19 17 02.1**	**+0.3**
	baz=26								
V23A	**Ortiz Mt. (NFS**	**25.79**	**328**	↓	P		**P**	**19 17 02.0**	**+0.2**
	baz=26								
CBKS	**Cedar Bluff**	**25.81**	**342**	↑	P		**P**	**19 17 01.4**	**-0.6**
	baz=26								
T25A	**Trinidad**	**26.07**	**333**	↓	P		**P**	**19 17 04.8**	**+0.4**
	baz=26,SNR=13								
X20A	**Quemado**	**26.15**	**323**	↑	P		**P**	**19 17 06.4**	**+1.2**
	baz=26								
V22A	**San Miguel Ran**	**26.29**	**328**	↑	P		**P**	**19 17 06.9**	**+0.6**
	baz=26								
S25A	**Robets Cordova**	**26.51**	**334**	↑	P		**P**	**19 17 08.4**	**+0.1**
	baz=27,SNR=8.0								
U22A	**Llaves**	**26.62**	**328**	↑	P		**P**	**19 17 09.9**	**+0.6**
	baz=27,SNR=8.5								
T23A	**Casias Ranch,**	**26.73**	**330**	↑	P		**P**	**19 17 10.6**	**+0.3**
	baz=27								
S24A	**Houchin Ranch,**	**26.84**	**332**	↑	P		**P**	**19 17 12.1**	**+0.8**
	baz=27								
V20A	**Brimhall**	**27.04**	**325**	↑	P		**P**	**19 17 13.8**	**+0.7**
	baz=27								
SDCO	**Great Sand Dun**	**27.06**	**332**	↓	P		**P**	**19 17 13.9**	**+0.8**
	baz=27								
SDCO	**Great Sand Dun**	**27.06**	**332**		*e*P		**P**	**19 17 13.3**	**+0.2**
	comp=E,5.2nm,1.0s,mb4.1								
SDCO						*e*pP	pP	19 18 00.8	+2.9
U21A	**Nageezi**	**27.07**	**327**	↓	P		**P**	**19 17 14.1**	**+0.8**
	baz=27,SNR=6.0								
T22A	**Edith**	**27.14**	**329**	↑	P		**P**	**19 17 14.6**	**+0.7**
	baz=27								
R24A	**Sanders Place,**	**27.28**	**333**	↑	P		**P**	**19 17 15.8**	**+0.7**
	baz=27,SNR=5.7								
U20A	**Newcomb**	**27.49**	**326**	↑	P		**P**	**19 17 17.8**	**+0.8**
	baz=28								
Q25A	**Bedland, Calha**	**27.50**	**335**	↑	P		**P**	**19 17 17.2**	**+0.1**
	baz=28,SNR=6.9								
S22A	**4UR Ranch, Cre**	**27.68**	**330**	↓	P		**P**	**19 17 19.0**	**+0.3**
	baz=28,SNR=14								
U19A	**Dine' College,**	**27.81**	**325**	↓	P		**P**	**19 17 19.9**	**0.0**
	baz=28								
X16A	**Lo Mia Camp, P**	**27.84**	**319**	↑	P		**P**	**19 17 20.6**	**+0.4**
	baz=28								
P25A	**Willow Gulch B**	**27.98**	**336**	↑	P		**P**	**19 17 21.6**	**+0.3**
	baz=28								
R22A	**Saguache, Gunn**	**28.03**	**331**	↑	P		**P**	**19 17 22.1**	**+0.3**
	baz=28								
S21A	**Coal Bank Pass**	**28.09**	**329**	↓	P		**P**	**19 17 23.1**	**+0.8**
	baz=28								
Q23A	**Hartsel**	**28.16**	**333**	↓	P		**P**	**19 17 23.4**	**+0.4**
	baz=28								
V17A	**Tonalea, Kykot**	**28.25**	**322**	↑	P		**P**	**19 17 24.1**	**+0.3**
	baz=28								
JFWS	**Jewell Farm**	**28.41**	**359**		*e*P		**P**	**19 17 23.2**	**-1.9**
	comp=E,12nm,0.6s,mb4.7								
P23A	**Jefferson**	**28.55**	**334**	↓	P		**P**	**19 17 27.4**	**+1.0**
	baz=29,SNR=13								
Q22A	**Crested Butte,**	**28.61**	**332**	↓	P		**P**	**19 17 27.4**	**+0.5**
	baz=29								
R20A	**Redvale**	**28.79**	**329**	↓	P		**P**	**19 17 29.2**	**+0.7**
	baz=29								
T18A	**Mexican Hat**	**28.79**	**325**	↓	P		**P**	**19 17 29.1**	**+0.5**
	baz=29								
U16A	**Tuba City**	**28.80**	**323**	↓	P		**P**	**19 17 29.6**	**+0.9**
	baz=29								
ISCO	**Idaho Springs**	**28.81**	**334**	↑	P		**P**	**19 17 28.9**	**+0.2**
	baz=29,SNR=9.2								
ISCO	**Idaho Springs**	**28.81**	**334**		*e*P		**P**	**19 17 28.8**	**+0.2**
	comp=E,5.4nm,0.7s,mb4.3								
S19A	**Harvey Farm, M**	**28.84**	**327**	↑	P		**P**	**19 17 29.2**	**+0.2**
	baz=29								
SMCO	**Snowmass**	**28.89**	**332**		*e*P		**P**	**19 17 30.4**	**+1.0**
	comp=E,8.2nm,0.9s,mb4.4								
N25A	**Grover**	**29.07**	**337**	↑	P		**P**	**19 17 31.0**	**0.0**
	baz=29								
P22A	**Eagle**	**29.13**	**333**	↓	P		**P**	**19 17 32.1**	**+0.5**
	baz=29								
T17A	**Navajo Res., N**	**29.21**	**324**	↓	P		**P**	**19 17 32.9**	**+0.6**
	baz=29								
PV04	**Paradox Valley**	**29.21**	**328**		*e*P		**P**	**19 17 32.8**	**+0.6**
V15A	**Kaibab Nationa**	**29.21**	**321**	↓	P		**P**	**19 17 32.6**	**+0.3**
	baz=29

baz=32
L18A Fontenelle, Gr 32.49 331 ⇓P P 19 18 01.3 +0.4
baz=33
K19A Absolon Red Bu 32.68 334 ⇓P P 19 18 02.5 -0.1
baz=33
P13A Bates Ranch, G 32.73 324 ⇓P P 19 18 03.6 +0.6
baz=33,SNR=5.5
MPMC Manual Prospec 32.78 316 ⇑P P 19 18 03.4 -0.1
baz=33
I21A Big Trails, Te 32.86 337 ⇑P P 19 18 04.5 +0.4
baz=33
R11A Troy Canyon, C 32.92 321 ⇓P P 19 18 04.7 -0.1
baz=33
N15A Stansbury Isla 32.93 328 ⇑P P 19 18 04.7 -0.1
baz=33
BW06 Boulder Array 32.94 333 ⇓P P 19 18 04.2 -0.7
baz=33
HWUT Hardware Ranch 32.98 329 eP P 19 18 05.8 +0.7
comp=E,4.2nm,0.6s,mb4.2
L17A Cokeville 33.02 331 ⇑P P 19 18 05.2 -0.3
baz=33,SNR=9.9
K18A Toltan Ranch, 33.05 332 ⇑P P 19 18 06.0 +0.2
baz=33,SNR=12
L16A Fish Haven 33.22 330 ⇓P P 19 18 07.7 +0.5
baz=33
BGU Big Grassy Mou 33.22 327 eP P 19 18 07.3 0.0
comp=E,8.3nm,1.2s,mb4.1
N14A Grayback Hills 33.25 327 ⇓P P 19 18 08.3 +0.7
baz=33
P12A McGill 33.25 323 ⇓P P 19 18 08.2 +0.6
baz=33
Q11A Duckwater 33.28 322 ⇓P P 19 18 08.7 +0.8
baz=33
S10A Tonopah Range, 33.28 320 ⇑P P 19 18 08.9 +1.0
baz=33
I20A Worland 33.30 336 ⇑P P 19 18 08.2 +0.2
baz=33,SNR=6.4
M15A Larsen Ranch, 33.31 328 ⇑P P 19 18 08.9 +0.8
baz=33
H21A Big Horn, Sher 33.46 338 ⇓P P 19 18 09.4 +0.1
baz=34
J18A Kendall Valley 33.50 333 ⇓P P 19 18 10.2 +0.6
baz=34
K17A Gardner Place, 33.54 331 ⇓P P 19 18 10.4 +0.3
baz=34
L15A Malad City 33.68 329 ⇑P P 19 18 10.8 -0.4
baz=34,SNR=8.5
O12A Currie 33.69 325 ⇑P P 19 18 11.8 +0.4
baz=34
Q10A Clear Creek Ra 33.72 321 ⇓P P 19 18 12.3 +0.7
baz=34
I18A Diamond G Ranc 33.80 334 ⇑P P 19 18 12.3 0.0
baz=34
M14A Sheep Mountain 33.80 328 ⇑P P 19 18 12.3 0.0
baz=34,SNR=7.0
J17A Brown Place, J 33.93 332 ⇑P P 19 18 13.7 +0.4
baz=34,SNR=5.4
REDW Red Top Meadow 33.99 332 eP P 19 18 13.9 +0.1
comp=E,38nm,0.7s,mb5.0
SNOW Snow King Moun 34.02 332 eP P 19 18 14.9 +0.8
comp=E,31nm,0.6s,mb5.0
G21A Lodge Grass 34.03 338 ⇓P P 19 18 13.8 -0.5
baz=34
LOHW Long Hollow 34.08 333 eP P 19 18 15.6 +1.0
comp=E,9.0nm,0.6s,mb4.5
L14A Malta 34.13 328 ⇑P P 19 18 15.2 0.0
baz=34
M13A Montello 34.13 327 ⇓P P 19 18 15.2 +0.1
baz=34,SNR=6.8
M13A Montello 34.13 327 eP P 19 18 15.1 0.0
comp=E,4.4nm,0.6s,mb4.2
TPAW Teton Pass 34.13 332 eP P 19 18 15.7 +0.6
comp=E,10.0nm,0.6s,mb4.5
AGMN Agassiz Nation 34.15 353 eP P 19 18 13.8 -1.4
comp=E,50nm,0.7s,mb5.2
RRI2 Red Ridge 34.19 332 eP P 19 18 15.6 0.0
comp=E,7.4nm,0.7s,mb4.3
MOOW Moose Ponds 34.24 333 eP P 19 18 16.2 +0.2
comp=E,2.5nm,0.4s,mb4.1
K15A Arbon 34.26 330 ⇓P P 19 18 16.4 +0.2
baz=34
J16A Bone 34.27 331 ⇓P P 19 18 16.6 +0.3
baz=34,SNR=8.0
IMW Indian Meadow 34.45 333 eP P 19 18 16.1 -1.7
comp=E,9.3nm,0.5s,mb4.6
K14A Jones Ranch, D 34.47 329 ⇑P P 19 18 18.4 +0.3
baz=35
NVAR Mina Array Bea 34.66 319 P P 19 18 20.1 +0.3
comp=E,2.3nm,0.8s,mb3.8,baz=137,slow=8.1,SNR=17
NVAR pP pP 19 19 07.8 +2.2
comp=E,2.6nm,0.9s,baz=136,slow=9.2,SNR=6.2
NVAR PcP PcP 19 20 47.5 -1.1
comp=E,0.4nm,0.6s,baz=120,slow=5.3,SNR=2.7
I16A Newdale 34.68 332 ⇓P P 19 18 20.1 +0.3
baz=35
RLMT Red Lodge 34.73 336 ⇓P P 19 18 20.2 0.0
baz=35
RLMT Red Lodge 34.73 336 eP P 19 18 19.9 -0.3
comp=E,9.3nm,0.9s,mb4.3
J15A Blackfoot 34.75 331 ⇓P P 19 18 20.8 +0.4
baz=35
F20A Billings 34.87 337 ⇑P P 19 18 21.8 +0.4
baz=35
LAO LASA Array 34.97 340 ⇓P P 19 18 22.4 +0.3
baz=35
LAO LASA Array 34.97 340 eP P 19 18 22.0 -0.2
comp=E,13nm,0.9s,mb4.5
G18A Lazy EL Ranch, 35.01 336 ⇓P P 19 18 22.1 -0.5
baz=35,SNR=6.2
E21A Keefer Ranch, 35.12 339 ⇓P P 19 18 23.7 +0.1
baz=35
F19A Roth Farm, Mol 35.21 337 ⇓P P 19 18 24.0 -0.3
baz=35
J14A Carey 35.22 330 ⇓P P 19 18 24.3 -0.1
baz=35,SNR=9.0
H16A Russell Place, 35.22 333 ⇓P P 19 18 24.9 +0.5
baz=35
GCMT Greycliff 35.44 336 eP P 19 18 26.3 0.0
comp=E,3.4nm,0.4s,mb4.2
E20A Meyer Farm, Mu 35.46 338 ⇑P P 19 18 26.9 +0.5
baz=36
M10A I.L. Ranch, Tu 35.54 325 ⇑P P 19 18 27.3 +0.1
baz=36
F18A Big Timber 35.56 336 ⇑P P 19 18 27.5 +0.3
baz=36
J13A Cove Ranch, Pi 35.60 329 ⇓P P 19 18 27.9 +0.3
baz=36
I14A Mackay 35.63 330 ⇓P P 19 18 28.0 +0.1
baz=36
E19A Rath Farm, Rou 35.66 337 ⇓P P 19 18 28.2 +0.1
baz=36
H15A Lima 35.78 332 ⇑P P 19 18 29.9 +0.8
baz=36
HLID Hailey 35.84 329 ⇓P P 19 18 30.4 +0.8
baz=36
HLID Hailey 35.84 329 eP P 19 18 30.8 +1.1
comp=E,1.8nm,0.5s,mb3.9
HLID pP pP 19 19 19.6 +3.8
G16A Moss Hill, Enn 35.88 333 ⇓P P 19 18 31.2 +1.2
baz=36
I13A Wildhorse Cree 35.95 330 ⇑P P 19 18 31.3 +0.7
baz=36,SNR=8.7
DGMT Dagmar 35.96 344 ⇓P P 19 18 30.4 -0.2
baz=36,SNR=10
D20A Manuel Ranch, 35.97 339 ⇓P P 19 18 31.2 +0.5
baz=36
MCMT McKenzie Canyo 36.03 332 eP P 19 18 32.2 +0.9
comp=E,8.8nm,0.7s,mb4.4
ULM Lac du Bonnet 36.07 353 eP P 19 18 29.5 -2.0
comp=E,26nm,0.8s,mb4.8
ULM Lac du Bonnet 36.07 353 P P 19 18 29.6 -2.0
comp=E,28nm,0.8s,mb4.9,baz=171,slow=8.7,SNR=22
H14A Leadore 36.11 331 ⇓P P 19 18 32.2 +0.2
baz=36,SNR=6.6
G15A Dillon 36.13 333 ⇑P P 19 18 32.7 +0.6
baz=36
BOZ Bozeman (W) 36.13 334 ⇓P P 19 18 32.7 +0.6
baz=36
BOZ Bozeman (W) 36.13 334 eP P 19 18 32.5 +0.3
comp=E,14nm,1.3s,mb4.3
DLMT Dillon 36.33 333 eP P 19 18 31.3 -2.5
comp=E,9.5nm,0.9s,mb4.3
I12A Atlanta 36.36 329 ⇑P P 19 18 34.1 -0.1
baz=36,SNR=6.9
H13A Challis 36.49 330 ⇑P P 19 18 35.9 +0.7
baz=37
H12A Diamond D Ranc 36.77 330 ⇓P P 19 18 37.7 +0.1
baz=37
E16A East Helena 36.86 335 ⇑P P 19 18 38.6 +0.4
baz=37
LPAZ La Paz 37.32 144 eP P 19 18 42.3 -0.2
comp=E,1.3nm,0.6s,mb3.6
LPAZ La Paz 37.32 144 P P 19 18 42.5 0.0
comp=E,1.4nm,0.6s,mb3.7,baz=311,slow=6.9,SNR=9.4
B18A Beardsley Farm 37.66 338 ⇑P P 19 18 44.6 -0.3
baz=38
F12A Elk City 37.85 331 ⇓P P 19 18 45.9 -0.7
baz=38
A17A Triple J Farms 38.45 338 ⇓P P 19 18 50.5 -1.1
baz=38
B13A Whitefish 39.48 334 ⇑P P 19 18 59.8 -0.3
baz=40
A14A Double T Ranch 39.52 336 ⇓P P 19 19 00.1 -0.3
baz=40
H04A Detroit Lake 40.74 324 ⇑P P 19 19 08.9 -1.6
baz=41
SIV San Ignacio 41.52 136 P P 19 19 15.7 -1.5
comp=E,5.5nm,0.8s,mb4.0,baz=316,slow=9.2,SNR=28
SIV pP pP 19 20 04.7 +0.3
comp=E,1.5nm,0.8s,baz=310,slow=9.5,SNR=3.2
SCHQ Schefferville 44.16 19 eP P 19 19 36.3 -1.4
comp=E,67nm,1.2s,mb4.8
SCHQ Schefferville 44.16 19 P P 19 19 36.3 -1.5
comp=E,21nm,0.5s,mb4.7,baz=218,slow=6.6,SNR=38
FCC Fort Churchill 44.38 357 eP P 19 19 37.9 -1.6
comp=E,0.8nm,1.2s
CFAA Coronel Fontan 50.25 156 P P 19 20 24.5 -0.5
comp=E,0.3nm,0.6s,baz=334,slow=3.0,SNR=7.3
YKA Yellowknife Ar 51.12 346 P P 19 20 29.8 -1.2
comp=E,5.3nm,0.8s,mb4.0,baz=141,slow=7.9,SNR=20
YKA pP pP 19 21 20.0 -0.3
comp=E,2.7nm,0.7s,baz=145,slow=7.8,SNR=6.0
DLBC Dease Lake 53.13 335 eP P 19 20 45.6 -0.2
INK Inuvik 60.64 343 eP P 19 21 36.8 -1.5
ILAR Eielson Array 63.28 336 P P 19 21 54.0 -2.0
comp=E,2.7nm,0.9s,mb3.9,baz=127,slow=4.0,SNR=19
ILAR pP pP 19 22 47.6 +0.3
comp=E,1.4nm,1.0s,baz=112,slow=5.6,SNR=4.8
ILAR PP PP 19 24 17.9 -0.1
comp=E,0.4nm,0.8s,baz=100,slow=7.1,SNR=4.8
SUMG Summit 65.31 15 eP P 19 22 08.5 -0.5
comp=E,8.5nm,0.8s,mb4.4
SUMG Summit 65.31 15 iP P 19 22 08.3 -0.7
comp=E,7.9nm,0.8s
COLD Coldfoot 65.50 338 eP P 19 22 09.6 -0.8
comp=E,2.9nm,0.9s,mb3.9
ESDC Sonseca Array 77.87 52 P P 19 23 20.5 -4.0
comp=E,1.0nm,0.5s,mb3.7,baz=285,slow=5.5,SNR=9.8
NOA NORSAR Array B 82.82 29 P P 19 23 48.6 -1.8
comp=E,0.7nm,0.7s,mb3.5,baz=286,slow=5.1,SNR=3.5
DBIC Dimbokro 83.59 85 P P 19 23 51.6 -3.7
comp=E,3.7nm,1.0s,mb4.1,baz=248,slow=9.0,SNR=5.0
ARCES ARCESS Array B 85.11 19 P P 19 23 59.7 -2.1
comp=E,1.7nm,0.7s,mb3.9,baz=229,slow=1.1,SNR=5.7
CLL Collm 86.75 38 eP P 19 24 08.0 -2.2
TORD Torodi Ar. Bea 88.31 77 P P 19 24 14.1 -4.2
TORD Torodi Ar. Bea 88.31 77 P P 19 24 14.1 -4.2
comp=E,0.2nm,0.5s,baz=288,slow=4.8,SNR=7.4
ZALV Zalesovo Beam 111.77 3 PP PP 19 30 42.6 -1.7
comp=E,2.0nm,0.8s,baz=340,slow=7.9,SNR=9.7
CN2 Changchun 113.68 333 ePKP PKiKP 19 30 03.4 +0.1
CN2 PP PP 19 31 03.5 +5.2
KURK Kurchatov 114.38 8 PKP PKiKP 19 30 01.7 -2.8
comp=E,0.2nm,0.5s,baz=351,slow=2.1,SNR=2.5
MKAR Makanchi Array 118.68 6 PKP PKPdf 19 30 08.7 -4.1
comp=E,0.1nm,0.4s,baz=338,slow=3.2,SNR=2.7
BJI Beijing 120.64 337 PKP PKPdf 19 30 15.8 -1.1
BJI SS SS 19 47 56.6 -1.0
BJI LR LR
comp=N,120nm,24.3s
BJI LR LR
comp=E,110nm,25.8s
BJI LR LR
comp=Z,28nm,33.0s
HHC Hu-ho-hao-te 121.53 341 ePKP PKPdf 19 30 17.1 -1.4
HHC sPKP 19 31 37.3
HHC PP PP 19 31 53.4 +1.1
HHC PKS 19 33 51.6
HHC SKS SKSdf 19 37 05.5 -3.6
HHC SKKS SKKSac 19 38 21.3 -8.6
HHC AMB AMB
comp=Z,73nm,9.0s
WMQ Urumqi 122.02 2 ePKP PKPdf 19 30 18.8 -0.6
NJ2 Nanjing 126.21 330 ePKP PKPdf 19 30 28.1 +0.3
CD2 Chengdu 133.07 344 PKP PKPdf 19 30 39.5 -1.3
GYA Guiyang 136.30 338 ePdif Pdif 19 27 49.9 -2.4
GYA PKP PKPdf 19 30 44.3 -2.7
GYA sPKP 19 32 09.8
GYA PP PP 19 33 30.4 +1.8
GYA AMB AMB
comp=Z,80nm,7.8s
WRA Warramunga Arr 137.46 256 PKP PKPpre 19 30 36.8
WRA PKP PKPdf 19 30 48.4 -0.8
WRA Warramunga Arr 137.46 256 PKhKP PKPpre 19 30 36.8
comp=Z,0.5nm,0.7s,baz=90,slow=3.8,SNR=4.7
WRA PKP PKPdf 19 30 48.4 -0.8
comp=Z,2.1nm,0.9s,baz=86,slow=2.2,SNR=7.5
ASAR Alice Springs 137.72 251 PKhKP PKPpre 19 30 36.1
comp=Z,0.5nm,0.7s,baz=103,slow=3.7,SNR=9.6
ASAR PKP PKPdf 19 30 48.0 -1.6
comp=Z,1.0nm,0.8s,baz=93,slow=2.3,SNR=8.3
KMI Kunming 138.82 342 PKP PKPdf 19 30 49.9 -1.8
FITZ Fitzroy Crossi 145.71 259 PKPbc PKPbc 19 31 03.1 -1.7
comp=Z,11nm,0.5s,baz=133,slow=2.3,SNR=50
CMAR Chiang Mai Arr 146.20 345 PKPbc PKPbc 19 31 02.5 -3.7
comp=Z,1.1nm,0.6s,baz=336,slow=3.3,SNR=11
CMAR pPKPbc pPKPbc 19 32 03.6 +0.4
comp=Z,1.1nm,0.8s,baz=344,slow=3.6,SNR=3.5

KRSC 18 19:12:30.9±1.2, 50.72N×157.21E, h143km±142km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALID	Alaid	1.06	279	eP	Pn	19 12 58.2	+2.7
ALID				iS	Sn	19 13 18.1	+3.8
MIPR	Malaya Ipel'ka	1.58	350	eP	Pn	19 13 03.4	+2.7
AVH	Avacha	2.72	20	eP	Pn	19 13 16.8	+2.5
GNL	Ganaly	3.01	8	P	Pn	19 13 19.9	+1.9

IDC 18 19:13:30.6±2.0, 2.54S×127.09E, h0km, mb3.3/2, mb1 3.7/4, mb1mx3.5/19, mbtmp3.5/4, ML3.4/2, Error ellipse: s-maj=114.7km s-min=25.8km az=69.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	15.53	185	Pn	Pn	19 17 11.8	+0.7
	0.1nm,0.3s,baz=8.1,slow=7.1,SNR=4.0						
WRA	Warramunga Arr	18.69	158	P	Pn	19 17 51.1	+0.2
	0.1nm,0.3s,baz=336,slow=12,SNR=5.5						
ASAR	Alice Springs	22.01	163	P	P	19 18 26.0	-0.7
	0.3nm,0.3s,baz=345,slow=11,SNR=8.0						
MKAR	Makanchi Array	62.93	327	P	P	19 23 59.1	+0.2
	0.3nm,0.6s,baz=132,slow=8.5,SNR=4.7						

IDC 18 19:17:16.5±0.7, 14.19S×76.39W, h0km, mb4.2/6, mb1 4.3/10, mb1mx4.1/19, mbtmp4.1/10, ML3.6/4, MS3.7/13, Ms1 3.8/13, ms1mx3.5/23, Error ellipse: s-maj=34.6km s-min=11.3km az=63.0
NEIC 18 19:17:17.8±0.5, 14.46S×76.64W, h10km, mb4.6/5, Error ellipse: s-maj=20.4km s-min=10.1km az=60.0
ISCJB 18 19:17:21.3±2.5, 14.5S±0.1×76.5W±0.2, h53km±22km, mb4.3/11, MS3.9/9, Error ellipse: s-maj=36.6km s-min=9.3km az=151.4

ISC 18 19:17:23.4±2.0, 14.4S±0.1×76.5W±0.2, h52km±18km, n41, σ0s67/27, mb4.3/11, MS3.9/9, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	2.44	351	Pn	Pn	19 17 55.6	-5.2
	50nm,0.3s,baz=173,slow=13,SNR=42						
NNA				LR	LR	19 18 23.6	
	comp=Z,404nm,18.9s,baz=283,slow=30						
NNA				Sn	Sn	19 18 29.1	-0.4
	430nm,0.3s,baz=208,slow=9.9,SNR=18						
ARE	Arequipa	5.20	114	eP	Pn	19 18 39.0	+0.3
ARE				eS	Sn	19 19 51.0	+14
LPAZ	La Paz	8.24	104	eP	Pn	19 19 21.5	+1.1
	16nm,0.7s						
LPAZ La Paz 8.24 104 Pn Pn 19 19 19.7 -0.7
0.7nm,0.3s,baz=309,slow=7.3,SNR=22
LPAZ LR LR 19 23 06.8
comp=Z,435nm,19.1s,baz=288,slow=42
OTAV Otavalo 14.69 352 eP Pn 19 20 48.9 +0.6
6.6nm,0.8s
SIV San Ignacio 14.93 98 Pn Pn 19 20 47.4 -3.9
0.1nm,0.3s,baz=291,slow=15,SNR=2.9
CFAA Coronel Fontan 18.69 158 P Pn 19 21 37.7 -0.5
CFAA S S 19 25 12.9 +5.4
CFAA LR LR 19 27 29.9
CFAA Coronel Fontan 18.69 158 P Pn 19 21 37.7 -0.5
0.0nm,0.3s,baz=336,slow=12,SNR=8.8
CFAA S S 19 25 12.9 +5.4
0.0nm,0.3s,baz=316,slow=4.2,SNR=4.9
CFAA LR LR 19 27 29.9
comp=Z,30nm,21.0s,baz=344,slow=32
ROSC El Rosal 19.26 6 P Pn 19 21 45.0 -0.2
ROSC LR LR 19 29 54.9
ROSC El Rosal 19.26 6 P Pn 19 21 45.0 -0.2
1.1nm,0.3s,baz=89,slow=20,SNR=4.4
ROSC LR LR 19 29 54.9
comp=Z,345nm,19.9s,baz=26,slow=40
PCRV Puerto La Cruz 27.10 26 LR LR 19 34 04.6
comp=Z,242nm,21.9s,MS3.7,baz=199,slow=38
CMIG Matias Romero 36.21 329 P P 19 24 21.2 -0.2
0.9nm,0.4s,mb4.0,baz=47,slow=5.7,SNR=4.5
TEIG Tepich 36.33 341 eP P 19 24 21.9 -0.6
TXAR Lajitas Array 50.81 329 P P 19 26 17.9 -0.9
TXAR LR LR 19 46 36.4
TXAR Lajitas Array 50.81 329 P P 19 26 17.9 -0.8
2.0nm,0.7s,mb4.1,baz=149,slow=9.0,SNR=18
TXAR LR LR 19 46 36.4
comp=Z,95nm,18.5s,MS3.8,baz=190,slow=35
ANMO Albuquerque 56.76 331 P P 19 27 02.1 0.0
1.4nm,0.6s,mb4.2,baz=124,slow=4.3,SNR=5.0
SDCO Great Sand Dun 58.62 333 eP P 19 27 15.6 +0.5
7.4nm,1.4s,mb4.5
SADO Sadowa 58.95 358 LR LR 19 54 09.5
comp=Z,61nm,19.7s,MS3.7,baz=269,slow=38
DUG Dugway 63.98 330 eP P 19 27 52.0 +0.7
3.8nm,0.6s,mb4.6
NVAR Mina Array Bea 65.56 325 P P 19 28 01.1 -0.5
1.4nm,0.7s,mb4.1,baz=137,slow=6.7,SNR=11
HLID Hailey 67.33 331 eP P 19 28 13.6 +0.7
1.7nm,0.8s,mb4.1
PPT Papeete 69.97 256 LR LR 19 52 27.0
comp=Z,62nm,20.4s,MS3.9,baz=128,slow=30
YBH Yreka Blue Hor 70.28 325 LR LR 19 59 04.9
comp=Z,41nm,18.8s,MS3.7,baz=349,slow=36
BSMT Bassoo Peak 70.79 334 eP P 19 28 35.4 +1.2
2.5nm,0.9s,mb4.1
OD2 Odessa Site #2 72.20 331 eP P 19 28 43.2 +0.4
11nm,1.2s,mb4.7
DBIC Dimbokro 74.02 79 LR LR 19 58 48.9
comp=Z,138nm,21.0s,MS4.2,baz=156,slow=34
FRB Frobisher Bay 78.16 4 LR LR 20 03 29.0
comp=Z,73nm,18.2s,MS4.0,baz=311,slow=36
TORD Torodi Ar. Bea 82.07 74 P P 19 29 38.6 -0.2
11nm,0.7s,mb4.9,baz=263,slow=2.7,SNR=53
YKA Yellowknife Ar 82.26 343 P P 19 29 37.6 -1.1
1.2nm,0.8s,mb3.9,baz=135,slow=5.3,SNR=5.9
ESDC Sonseca Array 86.12 48 LR LR 20 06 31.7
comp=Z,98nm,21.7s,MS4.2,baz=340,slow=34
BOSA Boshof 93.16 120 LR LR 20 08 24.5
comp=Z,90nm,21.4s,MS4.2,baz=65,slow=33
AKTK Aktyubinsk 128.63 36 PKP PKPdf 19 36 24.6 -0.1
AKTO Aktyubinsk 128.63 36 PKP PKPdf 19 36 24.6 -0.1
0.7nm,0.6s,baz=285,slow=5.4,SNR=4.8
ABKAR Akbulak array 130.28 36 ePKPdf PKPdf 19 36 28.5 +0.7
ASAR Alice Springs 131.90 219 PKP PKPdf 19 36 32.0 +0.3
3.1nm,1.4s,baz=98,slow=2.5,SNR=4.4
WRA Warramunga Arr 134.36 222 PKP PKPdf 19 36 36.6 +0.2
1.4nm,0.8s,baz=141,slow=1.5,SNR=6.1
ZALV Zalesovo Beam 137.90 16 PKP PKPdf 19 36 41.8 -0.2
2.6nm,1.0s,baz=277,slow=2.4,SNR=8.3
KURK Kurchatov 138.55 24 PKP PKPdf 19 36 43.7 +0.5
KURK Kurchatov 138.55 24 PKP PKPdf 19 36 43.7 +0.5
0.8nm,0.6s,baz=318,slow=2.8,SNR=4.0
ULN Ulaanbaatar 146.52 356 ePKPdf PKPdf 19 36 59.3 +1.8
SONM Songino Array 146.60 357 PKPbc PKPbc 19 36 58.5 -0.6
6.4nm,0.9s,baz=343,slow=2.6,SNR=13

IDC 18 19:23:36.0±6.7, 5.14S×142.96E, h0km, mb3.2/2, mb1 3.6/3, mb1mx3.4/12, mbtmp3.3/3, ML3.3/1, Error ellipse: s-maj=148.9km s-min=37.7km az=81.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.94	209	Pn	Pn	19 27 34.4	-0.2
	0.1nm,0.3s,baz=30,slow=11,SNR=6.9						
ASAR	Alice Springs	20.38	204	P	P	19 28 14.6	+0.2
	1.0nm,0.8s,baz=32,slow=11,SNR=5.7						
CMAR	Chiang Mai Arr	49.32	300	P	P	19 32 27.3	-0.1
	0.7nm,0.6s,baz=113,slow=6.0,SNR=5.8						

IDC 18 20:28:11.7±0.5, 22.12S×68.49W, h81km±4km, mb4.5/14, mb1 4.5/15, mb1mx4.5/18, mbtmp4.5/15, MS3.6/3, Ms1 3.6/3, ms1mx2.9/21, Error ellipse: s-maj=18.2km s-min=12.4km az=77.0
ISCJB 18 20:28:14.5±0.2, 22.14S±0.03×68.53W±0.04, h120km, mb4.7/74, Error ellipse: s-maj=5.3km s-min=4.3km az=152.8
GUC 18 20:28:14.9±1.1, 22.11S×68.77W, h131km±13km, ML5.1
NEIC 18 20:28:16.5±0.2, 22.14S×68.39W, mb4.8/67, Error ellipse: s-maj=7.8km s-min=4.4km az=62.0
BJI 18 20:28:19.4, 22.10S×68.40W, h122km, mB5.2/5
GCMT 18 20:28:20.1±0.3, 22.12S×68.74W, h152km±3km, MW5.0, Moment Tensor Solution. s26,c31; s58,c81; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.32±.15; $M_{\theta\theta}$-0.11±.18; $M_{\phi\phi}$2.43±.23; $M_{r\theta}$1.09±.11; $M_{r\phi}$-3.01±.18; $M_{\theta\phi}$-2.74±.15; Best double couple: $M_0$4.60000×10^{16} NP1:$\phi_1$119.00000°, δ30.00000°, λ-131.00000°. NP2:$\phi_2$343.00000°, δ68.00000°, λ-69.00000°. Principal axes: T 5.5000, Plg20.0000°, Azm58.0000°; N -1.9000, Plg19.0000°, Azm155.0000°; P -3.6000, Plg62.0000°, Azm285.0000°; Data Used: ll G IU CN IC.

ISC 18 20:28:16.4±0.2, 22.15S±0.03×68.53W±0.05, h122km, h122km±.9km; pP-P, n137, σ1s21/127, mb4.7/74, 9C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB04	Plate Boundary	0.89	263	⇑iP	Pn	20 28 41.9	+4.3
PB04				iS	Sn	20 29 02.1	+8.4
PB04				AML	AML	20 29 04.2	
	comp=E,51μm,0.7s						
MACH	Maria Elena	1.14	268	⇑iP	Pn	20 28 38.0	-2.0
MACH				iS	Sn	20 28 55.3	-2.6
PB01	Plate Boundary	1.42	321	⇑iP	Pn	20 28 41.5	-1.6
PB01				iS	Sn	20 29 01.2	-2.1
PB01				AML	AML	20 29 02.8	
	comp=N,19μm,0.7s						
TOCH	Tocopilla	1.55	272	⇑iP	Pn	20 28 42.1	-2.4
TOCH				iS	Sn	20 29 02.2	-3.8
TOCH				AML	AML	20 29 04.0	
	comp=N,28μm,0.6s						
CEN1	Los Morros	1.97	231	eP	Pn	20 28 49.1	-0.6
CEN1				eS	Sn	20 29 16.5	+1.5
CEN1				AML	AML	20 29 17.9	
	comp=N,9μm,0.6s						
MECH	Mejillones	2.01	242	⇑iP	Pn	20 28 47.7	-2.3
MECH				iS	Sn	20 29 12.0	-3.8
MECH				AML	AML	20 29 31.6	
	comp=N,17μm,0.2s						
HMBC	Humberston	2.26	326	⇑iP	Pn	20 28 50.9	-2.3
HMBC				iS	Sn	20 29 18.6	-2.8
HMBC				AML	AML	20 29 22.4	
	comp=E,17μm,0.5s						
PSGC	Pisagua	2.95	329	⇑iP	Pn	20 28 58.9	-3.2
PSGC				iS	Sn	20 29 33.7	-3.6
PSGC				AML	AML	20 29 41.2	
	comp=E,3μm,0.3s						
MNMC	Miæe Miæ	3.17	341	⇑iP	Pn	20 29 03.5	-1.5
MNMC				iS	Sn	20 29 40.9	-1.6
MNMC				AML	AML	20 29 45.1	
	comp=N,11μm,0.2s						
LPAZ	La Paz	5.85	4	eP	Pn	20 29 41.3	+0.4
	comp=N,159nm,0.5s						
LPAZ				epP		20 30 18.6	

LPAZ La Paz 5.85 4 P **Pn** **20 29 41.5 +0.7**
comp=N,45nm,0.3s,baz=190,slow=5.1,SNR=705
LPAZ S **Sn** **20 30 32.4 -14**
comp=N,1.4nm,0.3s,baz=182,slow=16,SNR=2.5
ARE Arequipa 6.31 333 *eP* **Pn** **20 29 44.0 -3.2**
ARE *i* S **Sn** **20 30 50.0 -8.0**
LCO Las Campanas 7.10 196 *eP* **Pn** **20 29 51.7 -6.1**
comp=N,169nm,0.5s
SIV San Ignacio 9.34 50 P **Pn** **20 30 24.0 -4.1**
comp=N,64nm,0.3s,baz=242,slow=12,SNR=735
SIV S **Sn** **20 31 59.3 -12**
comp=N,1.9nm,0.3s,baz=236,slow=18,SNR=3.4
CFAA Coronel Fontan 9.42 178 P **Pn** **20 30 24.0 -5.1**
comp=N,0.9nm,0.3s,baz=353,slow=12,SNR=64
CFAA S **Sn** **20 32 02.8 -10**
comp=N,1.6nm,0.3s,baz=222,slow=14,SNR=5.6
TRQA Tornquist 16.82 162 *eP* **Pn** **20 32 03.2 -1.4**
comp=N,64nm,1.1s
PLCA Paso Flores 18.60 185 *eP* **P** **20 32 23.2 -1.0**
comp=N,33nm,0.9s
SPB Sao Paulo 19.49 98 *eP* **P** **20 32 32.8 -1.2**
comp=N,392nm,0.6s
OTAV Otavalo 24.27 335 *eP* **P** **20 33 24.0 +1.6**
comp=N,23nm,1.3s,mb4.3
ROSC El Rosal 27.44 347 P **P** **20 33 52.8 +1.9**
comp=N,2.6nm,0.3s,mb4.2,baz=284,slow=21,SNR=2.5
ROSC LR LR 20 45 03.6
comp=N,65nm,19.5s,baz=150,slow=37
USHA Ushuaia 32.63 180 P **P** **20 34 35.8 -0.5**
comp=N,8.0nm,0.7s,mb4.7,baz=345,slow=10,SNR=3.9
GRGR Grenville 34.73 12 *eP* **P** **20 34 56.1 +1.1**
RCBR Riachuelo 35.45 68 *eP* **P** **20 34 59.8 -1.5**
comp=N,86nm,1.2s,mb5.5
BIM Bigot 37.17 12 *eP* **P** **20 35 18.7 +2.9**
MVM Montagne Vaucl 37.24 12 *eP* **P** **20 35 14.6 -1.8**
FDF Fort de France 37.37 12 *eP* **P** **20 35 16.7 -0.6**
comp=N,67nm,0.4s
FDF Fort de France 37.37 12 *eP* **P** **20 35 18.4 +1.0**
SJG San Juan 40.08 4 *eP* **P** **20 35 37.3 -2.7**
comp=N,26nm,0.6s,mb5.2
SJG *e* pP 20 36 06.1 -1.4
ANWB Willy Bob 40.12 10 *eP* **P** **20 35 38.9 -1.5**
comp=N,74nm,0.5s,mb5.8
PMSA Palmer Station 42.71 177 P **P** **20 36 01.1 +0.2**
comp=N,10nm,0.9s,mb4.5,baz=351,slow=10,SNR=3.5
HKT Hockley 58.08 332 *eP* **P** **20 37 57.4 +0.4**
comp=N,7.5nm,1.1s,mb4.6
TKL Tuckaleechee C 59.28 346 *eP* **P** **20 38 03.8 -1.4**
VNA1 Neumayer--Stat 59.55 160 *e* **P** **20 38 04.1 -2.5**
JCT Junction City 60.34 329 *eP* **P** **20 38 12.4 -0.1**
comp=N,25nm,0.8s,mb5.3
JCT *e* pP 20 38 42.2 +0.2
WVT Waverly 60.77 342 *eP* **P** **20 38 13.8 -1.5**
comp=N,11nm,0.9s,mb4.9
WVT *e* pP 20 38 43.3 -1.5
TXAR Lajitas Array 61.36 325 P **P** **20 38 19.4 -0.1**
comp=N,1.8nm,0.6s,mb4.3,baz=148,slow=8.9,SNR=24
TXAR sP sP 20 38 49.1 -13
comp=N,2.6nm,0.7s,baz=148,slow=8.5,SNR=9.0
FVM French Village 63.26 341 *eP* **P** **20 38 31.1 -0.8**
comp=N,9.0nm,0.6s,mb4.9
WMOK Wichita Mounta 63.46 332 *eP* **P** **20 38 31.3 -2.0**
comp=N,3.6nm,0.8s,mb4.3
WMOK *ep*P pP 20 39 00.7 -2.3
CCM Cathedral Cave 63.58 340 *eP* **P** **20 38 33.1 -0.9**
comp=N,13nm,0.5s,mb5.0
CCM *ep*P pP 20 39 03.7 0.0
CLNB Carlsbad 63.80 327 *eP* **P** **20 38 36.4 +0.7**
comp=N,0.9nm,0.2s,mb4.2
MNTX Cornudas Mount 64.13 325 *eP* **P** **20 38 36.9 -0.9**
comp=N,12nm,1.3s,mb4.5
MNTX *ep*P pP 20 39 07.7 +0.2
BINY Binghamton 64.40 354 *eP* **P** **20 38 39.7 +0.4**
comp=N,14nm,1.0s,mb4.7
PKME Peaks-Kenny Pk 67.09 359 *eP* **P** **20 38 56.7 +0.1**
ANMO Albuquerque 67.24 327 P **P** **20 38 58.4 +0.7**
comp=N,14nm,0.8s,mb4.8
ANMO *ep*P pP 20 39 28.3 +0.7
CBKS Cedar Bluff 67.33 334 *eP* **P** **20 38 58.5 +0.3**
comp=N,15nm,0.8s,mb4.9
CBKS *ep*P pP 20 39 28.4 +0.3
QSPA South Pole Qui 68.04 180 *eP* **P** **20 39 02.6 +0.5**
comp=N,55nm,0.9s,mb5.4
QSPA South Pole Qui 68.04 180 P **P** **20 39 02.9 +0.8**
comp=N,24nm,0.5s,mb5.3,baz=160,slow=1.5,SNR=247
QSPA sP sP 20 39 32.8 -13
comp=N,4.5nm,0.5s,baz=123,slow=1.1,SNR=2.5
LIC Lamto 68.23 73 *eP* **P** **20 39 03.2 -1.2**
comp=N,103nm,1.5s,mb5.4
TIC Toumodi 68.43 73 *eP* **P** **20 39 04.6 -1.0**
comp=N,72nm,1.2s,mb5.4
KIC Kosan Boka 68.55 73 *eP* **P** **20 39 05.5 -0.9**
comp=N,113nm,1.2s,mb5.6
DBIC Dimbokro 68.58 73 *eP* **P** **20 39 05.5 -1.1**
comp=N,31nm,1.1s,mb5.0
DBIC Dimbokro 68.58 73 P **P** **20 39 05.8 -0.8**
comp=N,25nm,1.0s,mb5.0,baz=215,slow=6.7,SNR=16
DBIC sP sP 20 39 37.1 -13
comp=N,12nm,0.9s,baz=221,slow=9.0,SNR=3.3
DBIC LR LR 21 06 17.9
comp=N,50nm,19.2s,baz=173,slow=33
SDCO Great Sand Dun 68.98 329 *eP* **P** **20 39 09.2 +0.6**
comp=N,16nm,0.9s,mb4.8
SDCO *e* pP 20 39 37.6 -1.1
MVCO Mesa Verde 70.03 327 *eP* **P** **20 39 16.2 +1.2**
comp=N,43nm,1.3s,mb5.1
MVCO *ep*P pP 20 39 46.7 +1.5
ECSD EROS Data Cent 70.45 339 *eP* **P** **20 39 16.7 -0.7**
comp=N,24nm,0.6s,mb4.2
ISCO Idaho Springs 70.69 331 *eP* **P** **20 39 19.7 +0.8**
comp=N,19nm,1.4s,mb4.7
ISCO *ep*P pP 20 39 49.8 +0.7
PV01 Paradox Valley 70.78 328 *eP* **P** **20 39 20.9 +1.3**
comp=N,1μm,1.1s
PV01 *ep*P pP 20 39 51.2 +1.4
SMCO Snowmass 70.82 329 *eP* **P** **20 39 21.4 +1.7**
comp=N,16nm,1.1s,mb4.8
PHWY Pilot Hill 71.83 332 *eP* **P** **20 39 26.9 +1.1**
comp=N,4.1nm,0.8s,mb4.3
PHWY *e*PcP PcP 20 39 54.8 +11
CCUT Cedar City 72.84 324 *eP* **P** **20 39 33.8 +1.9**
comp=N,19nm,1.0s,mb4.9
CCUT *ep*P pP 20 40 04.5 +2.2
MSU Marysvale 72.92 325 *eP* **P** **20 39 33.7 +1.4**
comp=N,15nm,0.9s,mb4.8
MSU *ep*P pP 20 40 03.6 +0.9
RWWY Rawlins 72.92 331 *eP* **P** **20 39 33.1 +0.9**
comp=N,13nm,0.9s,mb4.8
RWWY *e*PcP PcP 20 40 04.3 +16
RSSD Black Hills 73.53 334 *eP* **P** **20 39 35.7 -0.1**
comp=N,13nm,1.1s,mb4.6
RSSD *e* pP 20 40 07.5 +1.3
MPU Maple Canyon 73.76 327 *eP* **P** **20 39 38.5 +1.4**
comp=N,25nm,1.3s,mb4.8
MPU *e*PcP PcP 20 40 09.8 +18
JLU Jordanelle 74.11 327 *eP* **P** **20 39 40.3 +1.1**
comp=N,26nm,1.4s,mb4.8
JLU *e*PcP PcP 20 40 10.1 +16
ISA Isabella 74.44 320 *eP* **P** **20 39 42.2 +0.9**
comp=N,4.7nm,0.8s,mb4.3
ISA *e*PcP PcP 20 40 13.1 +18
DUG Dugway 74.49 326 *eP* **P** **20 39 41.7 +0.2**
comp=N,14nm,1.1s,mb4.6
DUG *ep*P pP 20 40 12.7 +0.7
HWUT Hardware Ranch 74.92 328 *eP* **P** **20 39 44.0 +0.1**
comp=N,9.5nm,0.9s,mb4.5
HWUT *ep*P pP 20 40 14.5 +0.1
SPUT South Promonto 75.14 327 *eP* **P** **20 39 45.8 +0.7**
comp=N,6.8nm,0.9s,mb4.4
BGU Big Grassy Mou 75.14 327 *eP* **P** **20 39 46.0 +0.8**
comp=N,13nm,1.3s,mb4.5
BGU *ep*P pP 20 40 16.1 +0.3
AHID Auburn Hatcher 75.57 329 *eP* **P** **20 39 48.1 +0.5**
AHID *ep*P pP 20 40 18.4 +0.2
SYO Syowa Base 75.77 159⇑ *eP* **P** **20 39 47.1 -1.3**
LOHW Long Hollow 75.99 330 *eP* **P** **20 39 50.6 +0.7**
comp=N,12nm,1.3s,mb4.5
LOHW *ep*P pP 20 40 20.6 +0.1
ULM Lac du Bonnet 76.04 342 P **P** **20 39 49.2 -0.9**
comp=N,4.3nm,0.5s,mb4.5,baz=149,slow=6.6,SNR=5.4
ULM pP pP 20 40 12.5 -8.2
comp=N,11nm,0.6s,baz=154,slow=6.4,SNR=8.0
M13A Montello 76.05 326 *eP* **P** **20 39 50.8 +0.5**
comp=N,2.6nm,0.7s,mb4.1
TPAW Teton Pass 76.06 330 *eP* **P** **20 39 51.5 +1.2**
comp=N,24nm,1.4s,mb4.7
TPAW *ep*P pP 20 40 22.3 +1.3
RRI2 Red Ridge 76.12 329 *eP* **P** **20 39 52.0 +1.3**
comp=N,56nm,1.5s,mb5.1
RRI2 *ep*P pP 20 40 20.4 -0.9
MOOW Moose Ponds 76.16 330 *eP* **P** **20 39 51.5 +0.6**
comp=N,16nm,1.5s,mb4.5
MOOW *ep*P pP 20 40 20.7 -0.8
IMW Indian Meadow 76.36 330 *eP* **P** **20 39 53.1 +1.0**
comp=N,24nm,1.4s,mb4.7
IMW *ep*P pP 20 40 21.8 -0.9
FLWY Flagg Ranch 76.39 330 *eP* **P** **20 39 53.1 +0.9**
FLWY *ep*P pP 20 40 23.4 +0.6
LAO LASA Array 76.52 334 *eP* **P** **20 39 52.7 -0.1**
comp=N,32nm,1.4s,mb4.9
LAO *ep*P pP 20 40 19.6 -3.9
RLMT Red Lodge 76.55 332 *eP* **P** **20 39 53.9 +0.8**
comp=N,12nm,1.2s,mb4.5
RLMT *ep*P pP 20 40 20.9 -2.8
SCHQ Schefferville 76.68 1 *eP* **P** **20 39 53.0 -0.6**
comp=N,3.9nm,0.4s,mb4.5
SCHQ Schefferville 76.68 1 P **P** **20 39 53.2 -0.4**
comp=N,4.8nm,0.7s,mb4.4,baz=194,slow=9.0,SNR=5.8
YMR Madison River 76.97 330 *eP* **P** **20 39 57.6 +2.2**
comp=N,7.2nm,0.3s,mb4.9
YMR *ep*P pP 20 40 28.7 +2.6
TORD Torodi Ar. Bea 77.24 70 P **P** **20 39 56.6 -1.1**
comp=N,12nm,0.5s,mb4.9,baz=255,slow=5.4,SNR=216
TORD *ep*P pP 20 40 28.6 +0.2
comp=N,15nm,0.7s,baz=251,slow=5.6,SNR=4.7
SUR Sutherland 77.95 120 P **P** **20 40 01.9 +0.5**
comp=N,4.5nm,0.6s,mb4.4,baz=243,slow=13,SNR=7.8
MCMT McKenzie Canyo 77.96 329 *eP* **P** **20 40 02.2 +1.3**
comp=N,8.8nm,1.1s,mb4.4
MCMT *ep*P pP 20 40 32.1 +0.5
DLMT Dillon 78.24 330 *eP* **P** **20 40 03.8 +1.3**
comp=N,12nm,1.2s,mb4.5
DLMT *ep*P pP 20 40 34.1 +0.9
EGMT Eagleton 79.03 333 *eP* **P** **20 40 07.2 +0.4**
comp=N,48nm,1.8s,mb5.0
EGMT *ep*P pP 20 40 38.6 +1.0
WVOR Wild Horse Val 79.16 325 *eP* **P** **20 40 08.1 +0.5**
comp=N,4.7nm,1.1s,mb4.2
TSUM Tsumeb 79.52 106 *eP* **P** **20 40 10.1 -0.1**
comp=N,12nm,0.8s,mb4.8
SLMT Seeley Lake 80.06 331 *eP* **P** **20 40 13.5 +1.1**
comp=N,3.5nm,0.7s,mb4.3
JTMT Jette 80.80 331 *eP* **P** **20 40 17.3 +1.0**
comp=N,2.0nm,0.7s,mb4.1
JTMT *ep*P pP 20 40 48.7 +1.5
BSMT Bassoo Peak 81.11 330 *eP* **P** **20 40 19.1 +1.2**
comp=N,9.6nm,1.1s,mb4.5
BSMT *ep*P pP 20 40 48.7 -0.1
HAWA Hanford 82.35 327 *eP* **P** **20 40 24.7 +0.2**
comp=N,7.1nm,0.8s,mb4.5
HAWA *ep*P pP 20 40 56.3 +0.8
OD2 Odessa Site #2 82.63 328 *eP* **P** **20 40 26.5 +0.6**
comp=N,34nm,1.1s,mb5.1
OD2 *ep*P pP 20 40 57.5 +0.6
BOSA Boshof 82.83 118 P **P** **20 40 26.8 -0.8**
BOSA Boshof 82.83 118 P **P** **20 40 26.8 -0.8**
comp=N,8.0nm,0.8s,mb4.6,baz=255,slow=7.2,SNR=6.7
ETW Entiat 83.57 328 *eP* **P** **20 40 31.4 +0.7**
comp=N,4.6nm,0.7s,mb4.4
MAW Mawson 83.61 163 *eP* **P** **20 40 30.8 +0.1**
comp=N,7.0nm,0.6s,mb4.7
MAW Mawson 83.61 163 *eP* **P** **20 40 30.8 0.0**
comp=N,2.8nm,0.9s,mb4.1
MAW Mawson 83.61 163 P **P** **20 40 30.9 +0.1**
comp=N,14nm,0.8s,mb4.8,baz=214,slow=6.4,SNR=33
LBTB Lobatse 84.43 115 *eP* **P** **20 40 35.7 -0.1**
comp=N,5.2nm,0.7s,mb4.5
JCW Jim Creek 84.77 327 *eP* **P** **20 40 36.0 -0.7**
comp=N,7.0nm,0.6s,mb4.8
TAM Tamanrasset 84.80 63 *eP* **P** **20 40 37.9 +0.3**
comp=N,3.0nm,0.6s,mb4.4
TAM *ep*P pP 20 41 10.1 +1.4
ESDC Sonseca Array 86.05 44 P **P** **20 40 43.7 +0.4**
ESDC Sonseca Array 86.05 44 P **P** **20 40 43.7 +0.4**
comp=N,0.8nm,0.6s,mb3.8,baz=244,slow=4.9,SNR=9.0
LSZ Lusaka 90.37 107 P **P** **20 41 05.9 +1.4**
LSZ Lusaka 90.37 107 P **P** **20 41 05.9 +1.4**
comp=N,2.1nm,0.8s,mb4.3,baz=207,slow=2.3,SNR=2.6
CASY Casey 91.84 180 *eP* **P** **20 41 11.0 +0.7**
CASY Casey 91.84 180 *eP* **P** **20 41 10.9 +0.6**
comp=N,23nm,1.0s,mb5.4
YKA Yellowknife Ar 91.92 340 P **P** **20 41 10.2 -0.3**
YKA Yellowknife Ar 91.92 340 P **P** **20 41 10.2 -0.3**
comp=N,4.6nm,0.6s,mb4.9,baz=133,slow=4.5,SNR=24
URZ Urewera 94.00 226 LR LR 21 15 50.6
comp=N,52nm,21.2s,baz=118,slow=30
NWAO Narrogin (SRO) 124.95 186 PKP PKPdf 20 47 02.1 -0.5
comp=N,14nm,1.1s,baz=200,slow=5.6,SNR=3.1
ASAR Alice Springs 129.50 207 PKP PKPdf 20 47 11.0 -0.5
comp=N,5.8nm,0.9s,baz=140,slow=2.8,SNR=32
ABKAR Akbulak array 131.39 43 *e*PKPdf PKPdf 20 47 14.6 +0.4
WRA Warramunga Arr 132.57 210 PKP PKPdf 20 47 17.1 -0.3
comp=N,4.7nm,0.8s,baz=155,slow=1.7,SNR=14
BVAR Borovoye Array 136.13 35 PKP PKPdf 20 47 24.0 +1.0
comp=N,2.5nm,0.8s,baz=287,slow=2.5,SNR=12
FITZ Fitzroy Crossi 137.66 200 PKP PKPdf 20 47 27.1 +0.2
comp=N,2.7nm,0.7s,baz=207,slow=7.4,SNR=5.6
KURK Kurchatov 141.68 34 PKP PKPpre 20 47 28.4
KURK PKP PKPdf 20 47 33.6 +0.4
KURK Kurchatov 141.68 34 PKhKP PKPpre 20 47 28.4
comp=N,0.5nm,0.5s,baz=302,slow=2.5,SNR=5.4
KURK PKP PKPdf 20 47 33.6 +0.4
comp=N,1.4nm,0.6s,baz=303,slow=2.6,SNR=8.1
ZAA0 Zalesovo Array 142.39 26 *e*PKPpre PKPpre 20 47 29.8
ZALV Zalesovo Beam 142.39 26 PKhKP PKPpre 20 47 30.0
comp=N,1.5nm,0.5s,baz=332,slow=3.8,SNR=7.8
ZALV PKP PKPdf 20 47 34.8 +0.4
comp=N,7.0nm,0.5s,baz=286,slow=2.6,SNR=15
AAK Ala-Archa 143.09 48 PKP PKPdf 20 47 36.2 +0.3
AAK Ala-Archa 143.09 48 PKP PKPdf 20 47 36.2 +0.3
comp=N,1.6nm,0.4s,baz=215,slow=2.8,SNR=3.4
MK31 Makanchi Array 145.95 37 *e*PKPdf PKPdf 20 47 41.1 +0.4
MKAR Makanchi Array 145.95 37 PKPbc PKPbc 20 47 41.2 -0.4
comp=N,14nm,0.8s,baz=322,slow=2.9,SNR=78
WMQ Urumqi 150.78 37 *e*PKPbc PKPbc 20 47 55.0 +0.6
WMQ AMB AMB
comp=Z,100nm,4.8s
MJAR Matsushiro Arr 152.75 308 PKP PKPdf 20 47 53.9 +2.0
comp=Z,1.0nm,0.5s,baz=69,slow=1.7,SNR=2.6
MJAR PKPbc PKPbc 20 47 59.0 -0.1
comp=Z,5.3nm,0.9s,baz=74,slow=2.0,SNR=10
MJAR PKPab PKPab 20 48 10.2 -0.3
comp=Z,5.3nm,1.1s,baz=51,slow=1.5,SNR=5.9
MAT Matsushiro 152.75 308 P PKPbc 20 47 58.6 -0.5
SONM Songino Array 154.05 8 PKP PKPdf 20 47 54.5 +1.1
comp=Z,2.8nm,0.8s,baz=259,slow=0.6,SNR=9.4
SONM PKPbc PKPbc 20 48 02.1 +0.5
comp=Z,3.4nm,0.8s,baz=307,slow=0.8,SNR=8.3
SONM PKPab PKPab 20 48 16.2 +0.8
comp=Z,1.7nm,0.7s,baz=314,slow=2.2,SNR=3.8
SONM pPKPbc pPKPbc 20 48 23.6 -11
comp=Z,3.9nm,0.7s,baz=314,slow=2.0,SNR=7.0
PSI Prapat 157.23 146 PKPab PKPab 20 48 30.1 +0.1
comp=Z,8.1nm,0.8s,baz=241,slow=4.6,SNR=9.6
KSRS Korea Array 159.16 321 PKP PKPdf 20 48 00.0 -0.4
comp=Z,0.3nm,0.3s,baz=96,slow=1.3,SNR=4.1
KSRS PKPab PKPab 20 48 37.1 -0.7
comp=Z,3.1nm,0.8s,baz=53,slow=4.1,SNR=6.1
GTA Gaotai 160.13 27 *e*PKP PKPdf 20 48 01.9 +0.5
CMAR Chiang Mai Arr 167.69 105 PKP PKPdf 20 48 08.7 -0.2
comp=Z,1.2nm,0.9s,baz=295,slow=1.9,SNR=6.6
CMAR PKPab PKPab 20 49 15.4 -0.5
comp=Z,0.9nm,0.7s,baz=253,slow=6.3,SNR=7.7

*ISCJB **18** 20:34:48.3±3.4, 10°.2S±0°.2×161°.3E±0°.3, h103km±24km, mb3.6/6, Error ellipse: s-maj=50.1km s-min=28.6km az=33.8*

*NEIC **18** 20:34:48.0±2.7, 10°.20S×161°.43E, h90km±20km, mb3.8/1, Error ellipse: s-maj=35.0km s-min=18.6km az=123.0*

*IDC **18** 20:34:48.1±3.9, 10°.20S×161°.44E, h90km±30km, mb3.5/6, mb1 3.7/6, mb1mx3.5/17, mbtmp3.5/6, Error ellipse: s-maj=38.1km s-min=24.5km az=119.0*

ISC 18 20:34:48.3±3.6, 10°.2S×161°.4E±0°.3, h90km±27km, n8, σ0°17/9, mb3.6/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.64**	**298**	P		**Pn**		**20 35 15.7**	**-0.2**
	38nm,0.3s,baz=165,slow=5.1,SNR=14								
HNR				S		**Sn**		**20 35 37.0**	**+0.1**
	220nm,0.3s,baz=159,slow=19,SNR=12								
WRA	**Warramunga Arr**	**27.85**	**246**	P		**P**		**20 40 29.6**	**0.0**
	2.6nm,0.8s,mb3.8,baz=76,slow=9.1,SNR=9.1								
ASAR	**Alice Springs**	**29.46**	**239**	P		**P**		**20 40 43.5**	**-0.3**
	0.6nm,0.9s,mb3.2,baz=62,slow=10,SNR=5.1								
FITZ	**Fitzroy Crossi**	**35.52**	**253**	P		**P**		**20 41 36.9**	**+0.1**
	1.3nm,0.4s,mb4.2,baz=70,slow=13,SNR=9.7								
SONM	**Songino Array**	**75.52**	**325**	P		**P**		**20 46 22.8**	**0.0**
	0.9nm,0.8s,mb3.6,baz=134,slow=4.2,SNR=4.0								
QSPA	**South Pole Qui**	**79.80**	**180**	*eP*		**P**		**20 46 46.4**	**+0.3**
	1.0nm,0.7s,mb3.8								
QSPA	**South Pole Qui**	**79.80**	**180**	P		**P**		**20 46 46.3**	**+0.2**
	1.4nm,0.9s,mb3.8,baz=212,slow=0.3,SNR=5.5								
ILAR	**Eielson Array**	**84.11**	**20**	P		**P**		**20 47 08.8**	**0.0**
	0.1nm,0.4s,mb3.0,baz=234,slow=7.3,SNR=3.9								

IDC 18 20:37:43.1±1.4, 13°.63N×57°.20E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/24, mbtmp3.7/7, MS3.2/3, Ms1 3.2/3, ms1mx2.5/38, Error ellipse: s-maj=35.2km s-min=28.0km az=12.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GNI	**Garni**	**28.59**	**340**	LR		LR	LR	20 56 51.4	
	comp=Z,30nm,19.8s,baz=130,slow=40								
AAK	**Ala-Archa**	**32.54**	**24**	LR		LR		20 58 03.6	
	comp=Z,47nm,19.6s,baz=11,slow=38								
AKTO	**Aktyubinsk**	**36.71**	**1**	LR		LR		20 59 57.5	
	comp=Z,44nm,20.6s,baz=260,slow=36								
MKAR	**Makanchi Array**	**39.19**	**27**	P		P		20 45 14.2	+1.4
	0.5nm,0.6s,baz=213,slow=8.7,SNR=4.3								
CMAR	**Chiang Mai Arr**	**40.34**	**78**	P		P		20 45 23.9	+1.1
	1.6nm,0.9s,baz=276,slow=9.4,SNR=11								
KURK	**Kurchatov**	**40.88**	**21**	P		P		20 45 25.2	-1.5
	0.7nm,0.9s,baz=216,slow=8.8,SNR=2.6								
ZALV	**Zalesovo Beam**	**45.73**	**23**	P		P		20 46 04.6	-1.3
	0.6nm,0.5s,baz=224,slow=8.2,SNR=4.1								
FINES	**FINESS Array B**	**52.75**	**342**	P		P		20 46 59.1	-0.4
	2.9nm,0.8s,baz=137,slow=9.6,SNR=11								
TORD	**Torodi Ar. Bea**	**53.89**	**276**	P		P		20 47 09.6	+0.9
	0.8nm,1.0s,baz=88,slow=7.4,SNR=3.7								
ASAR	**Alice Springs**	**83.60**	**116**	P		P		20 50 12.7	-1.2
	0.4nm,0.8s,baz=285,slow=3.9,SNR=5.2								

*NEIC **18** 20:49:59.4, 19°.93N×70°.58W, h98km, MD3.8(RSPR), After RSPR.*

RSPR 18 20:49:59.4, 19°.93N×70°.58W, h98km±6km, 4C, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SDDR	**Presa de Saban**	**1.15**	**215**⇑	*eP*		Pn		20 50 20.2	-1.1
SDDR				*eS*		Sn		20 50 38.1	+0.3
SMN1	**Samana, DR**	**1.44**	**120**⇑	*eP*		Pn		20 50 23.8	-0.9
SMN1				*eS*		Sn		20 50 43.7	-0.3
GRTK	**Grand Turk**	**1.66**	**342**⇑	*eP*		Pn		20 50 27.1	-0.5
GRTK				*eS*		Sn		20 50 48.8	-0.1
AGPR	**Aguadilla, PR**	**3.59**	**113**	*eP*		Pn		20 51 02.1	+9.2
MTP	**Monte Pirata**	**5.09**	**110**⇑	*eP*		Pn		20 51 14.9	+1.6
MTP				*eP*				20 51 15.9	

*NEIC **18** 20:53:43.4, 32°.66S×71°.61W, h13km±4km, MD3.6, ML2.9(GUC), After GUC.*

GUC 18 20:53:43.4±0.6, 32°.66S×71°.61W, h13km±4km, MD3.6, ML2.9, 12C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.59**	**122**⇑	*iP*		Pg		20 53 55.4	+0.5
ROCH				*i* S		Sg		20 54 04.1	+1.4
ROCH	**El Roble**	**0.59**	**122**⇑	*iP*		Pg		20 53 55.3	+0.4
ROCH				⇑*iP*				20 53 55.4	
ROCH				*i* S		Sg		20 54 04.1	+1.4
ROCH				*i* S		Sg		20 54 04.1	+1.4
ROCH				AML		AML		20 54 04.6	
	comp=N,1μm,0.2s								
CHNG	**Los Chungos**	**0.78**	**7**⇓	*iP*		Pg		20 53 56.0	-2.6
CHNG				*i* S		Sg		20 54 07.0	-1.8
LCCH	**Las Cruces**	**0.81**	**178**	*eP*		Pg		20 53 58.2	-0.9
LCCH				*i* S		Sg		20 54 09.8	0.0
LCCH	**Las Cruces**	**0.81**	**178**	*eP*		Pg		20 53 58.2	-0.9
LCCH				*i* S		Sg		20 54 09.8	0.0
JACH	**Jahuel**	**0.85**	**92**⇑	*iP*		Pg		20 53 59.5	-0.4
JACH				*i* S		Sg		20 54 11.0	-0.1
JACH	**Jahuel**	**0.85**	**92**⇑	*iP*		Pg		20 53 59.5	-0.4
JACH				*i* S		Sg		20 54 11.0	-0.1
PEL	**Peldehue**	**0.91**	**122**⇑	*iP*		Pg		20 54 00.5	-0.5
PEL				*i* S		Sg		20 54 12.9	0.0
PEL				AML		AML		20 54 13.9	
	comp=N,1μm,0.1s								
SAN	**Santiago**	**1.12**	**135**⇑	*iP*		Pb		20 54 03.3	-1.3
SAN				*i* S		Sb		20 54 18.4	-0.7
SAN	**Santiago**	**1.12**	**135**⇑	*iP*		Pb		20 54 03.3	-1.3
SAN				*i* S		Sb		20 54 18.4	-0.7
SAN				AML		AML		20 54 22.6	
	comp=N,298nm,0.4s								
TACH	**Talagante**	**1.14**	**151**⇓	*iP*		Pb		20 54 03.5	-1.4
TACH				*i* S		Sb		20 54 17.3	-2.3
TACH	**Talagante**	**1.14**	**151**⇓	*iP*		Pb		20 54 03.5	-1.4
TACH				*i* S		Sb		20 54 17.3	-2.3
CLCH	**Cerro Calan**	**1.16**	**130**⇓	*iP*		Pb		20 54 04.1	-1.2
CLCH				*i* S		Sb		20 54 19.7	-0.5
CLCH				AML		AML		20 54 20.6	
	comp=N,525nm,0.5s								
ANTU	**Antumapu**	**1.22**	**138**	*i* S		Sb		20 54 21.4	-0.6
ANTU				AML		AML		20 54 23.7	
	comp=E,428nm,0.8s								
FCH	**Farellones**	**1.29**	**121**	*eP*		Pn		20 54 09.6	+2.5
FCH				*i* S		Sb		20 54 27.4	+3.4
FCH				AML		AML		20 54 28.6	
	comp=E,398nm,0.2s								
PCH	**Pirque**	**1.32**	**137**⇑	*iP*		Pn		20 54 06.5	-1.1
PCH				*i* S		Sb		20 54 24.4	-0.6
PCH	**Pirque**	**1.32**	**137**⇑	*iP*		Pn		20 54 06.5	-1.1
PCH				*i* S		Sb		20 54 24.4	-0.6
LMEL	**Las Melosas**	**1.67**	**136**⇑	*iP*		Pn		20 54 12.1	-0.2
LMEL				*i* S		Sn		20 54 34.4	+0.7
LMEL	**Las Melosas**	**1.67**	**136**⇑	*iP*		Pn		20 54 12.1	-0.2
LMEL				*i* S		Sn		20 54 34.4	+0.7
LMEL				AML		AML		20 54 37.8	
	comp=N,286nm,0.1s								

IDC 18 20:57:36.8±27.0, 19°.75S×174°.44W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.8/16, mbtmp4.1/4, Error ellipse: s-maj=500.5km s-min=160.1km az=74.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.90**	**263**	P		P		21 04 48.7	+1.3
	8.2nm,1.1s,baz=81,slow=12,SNR=4.1								
STKA	**Stephens Creek**	**41.12**	**244**	P		P		21 05 22.8	0.0
	2.0nm,0.9s,baz=104,slow=8.3,SNR=3.2								
ASAR	**Alice Springs**	**47.94**	**256**	P		P		21 06 16.8	-0.6
	1.5nm,0.6s,baz=97,slow=7.9,SNR=21								
WRA	**Warramunga Arr**	**48.02**	**261**	P		P		21 06 17.3	-0.8
	0.5nm,0.3s,baz=97,slow=8.0,SNR=3.5								

ISC 18 21:02:04.9±0.8, 41°.23N±0°.06×44°.08E±0°.07, h7km±19km, n7, σ0s20/10, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TBLG	**Delisi**	**0.71**	**44**	P		**Pg**		**21 02 18.4**	**-0.1**

ellipse: s-maj=17.5km s-min=8.8km az=177.0
*PDA **18** 21:11:22.4±1.3, 42°.85N×27°.77W, h0km, ML4.4, Error ellipse: s-maj=16.4km s-min=7.6km az=110.0*
*ISCJB **18** 21:11:23.0±2.8, 42°.58N±0°.03×27°.69W±0°.09, h32km±20km, mb4.1/27, MS3.4/7, Error ellipse: s-maj=11.9km s-min=4.2km az=19.2*
*CSEM **18** 21:11:24.4±0.3, 42°.63N×27°.69W, h30km, mb4.3/14, Error ellipse: s-maj=10.3km s-min=5.1km az=107.0*

ISC 18 21:11:24.1±2.8, **42°.61N**±0°.03×**27°.71W**±0°.09, **h26**km±19km, **n119**, σ0**9**94/119, **mb4.1**/27, **MS3.4**/7, **1C-2D, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSA	**Rosais**	**3.91**	**186**	*e*S	**Sn**	**21 13 07.0**	**-0.4**
ROSA	**Rosais**	**3.91**	**186**	*e*S	**Sn**	**21 13 07.0**	**-0.4**
ADH	**Angra Heroismo**	**3.97**	**175**	*e*P	**Pn**	**21 12 23.0**	**-0.2**
ADH				*e*S	**Sn**	**21 13 09.2**	**+0.3**
ADH				A		21 13 11.5	
	61nm,0.4s						
ADH	**Angra Heroismo**	**3.97**	**175**	*e*P	**Pn**	**21 12 23.0**	**-0.2**
ADH				*e*S	**Sn**	**21 13 09.2**	**+0.3**
PMAN				A		21 13 13.1	
	72nm,0.4s						
PMAN	**Manadas**	**3.99**	**184**	*e*S	**Sn**	**21 13 08.7**	**-0.6**
PCED	**Cedros**	**4.05**	**191**	*e*S	**Sn**	**21 13 11.0**	**+0.1**
PCED				A		21 13 17.3	
	191nm,0.5s						
PCED	**Cedros**	**4.05**	**191**	*e*S	**Sn**	**21 13 11.0**	**+0.1**
CALA	**Caldeira**	**4.10**	**191**	*e*S	**Sn**	**21 13 12.2**	**+0.2**
CALA	**Caldeira**	**4.10**	**191**	*e*S	**Sn**	**21 13 12.2**	**+0.2**
PID	**Ribeirinha**	**4.18**	**184**	*e*S	**Sn**	**21 13 13.6**	**-0.4**
PID	**Ribeirinha**	**4.18**	**184**	*e*S	**Sn**	**21 13 13.6**	**-0.4**
PSET	**Sete Cidades**	**5.02**	**162**	*e*P	**Pn**	**21 12 37.5**	**-0.1**
PSET				*e*S	**Sn**	**21 13 34.1**	**-0.6**
PSET				A		21 13 35.0	
	15nm,0.5s						
PSET	**Sete Cidades**	**5.02**	**162**	*e*P	**Pn**	**21 12 37.5**	**-0.1**
PSET				*e*S	**Sn**	**21 13 34.1**	**-0.6**
BART	**Pico Bartolome**	**5.21**	**157**	*e*P	**Pn**	**21 12 40.9**	**+0.7**
BART	**Pico Bartolome**	**5.21**	**157**	*e*P	**Pn**	**21 12 40.9**	**+0.7**
PSMA	**Santa Maria**	**5.95**	**160**	*e*P	**Pn**	**21 12 50.8**	**+0.4**
PSMA				*e*S	**Sn**	**21 13 57.3**	**-0.4**
PSMA				A		21 13 59.5	
	22nm,0.3s						
PSMN	**Pico do Norte,**	**5.96**	**159**	*e*P	**Pn**	**21 12 51.0**	**+0.5**
PSMN	**Pico do Norte,**	**5.96**	**159**	*e*P	**Pn**	**21 12 51.0**	**+0.5**
PMAR	**Madeira**	**13.05**	**136**	*e*P	**Pn**	**21 14 29.7**	**+2.1**
	186nm,1.5s						
PMAR	**Madeira**	**13.05**	**136**	*e*P	**Pn**	**21 14 29.7**	**+2.1**
	186nm,1.5s						
MTE	**Manteigas**	**15.27**	**92**	*e*P	**Pn**	**21 14 57.2**	**-0.5**
	7.1nm,0.8s						
SFS	**San Fernando**	**17.66**	**103**	*e*P	**Pn**	**21 15 28.5**	**+0.4**
	118nm,0.8s						
SFS	**San Fernando**	**17.66**	**103**	*e*P	**Pn**	**21 15 28.5**	**+0.3**
	118nm,0.8s						
ESDC	**Sonseca Array**	**18.11**	**91**	P	**Pn**	**21 15 32.4**	**-1.2**
	0.9nm,0.3s,baz=287,slow=13,SNR=18						
ESDC	**Sonseca Array**	**18.11**	**91**	P	**Pn**	**21 15 32.4**	**-1.2**
FLN	**La Foliniere**	**19.93**	**63**	*e*P	**Pn**	**21 15 55.6**	**+0.2**
FLN	**La Foliniere**	**19.93**	**63**	*e*P	**Pn**	**21 15 55.6**	**+0.2**
LDF	**La Druitiere**	**20.14**	**63**	*e*P	**P**	**21 15 56.5**	**+0.5**
	9.4nm,0.8s						
LDF	**La Druitiere**	**20.14**	**63**	*e*P	**P**	**21 15 56.5**	**+0.5**
	4.7nm,0.8s						
LDF	**La Druitiere**	**20.14**	**63**	*e*P	**P**	**21 15 56.5**	**+0.5**
	4.7nm,0.8s						
EKA	**Eskdalemuir Ar**	**20.40**	**43**	P	**P**	**21 15 54.5**	**-4.2**
	1.1nm,0.7s,baz=255,slow=8.0,SNR=2.7						
EPF	**Esparros**	**20.54**	**79**	*e*P	**P**	**21 15 59.2**	**-1.2**
EPF	**Esparros**	**20.54**	**79**	*e*P	**P**	**21 15 59.2**	**-1.2**
LFF	**La Frestale**	**20.63**	**74**	*e*P	**P**	**21 16 00.0**	**-1.3**
LFF	**La Frestale**	**20.63**	**74**	*e*P	**P**	**21 16 00.0**	**-1.3**
CAF	**Calviac**	**21.57**	**74**	*e*P	**P**	**21 16 12.8**	**+1.3**
CAF	**Calviac**	**21.57**	**74**	*e*P	**P**	**21 16 12.8**	**+1.3**
TCF	**Toulx Ste Croi**	**21.61**	**70**	*e*P	**P**	**21 16 11.3**	**-0.5**
TCF	**Toulx Ste Croi**	**21.61**	**70**	*e*P	**P**	**21 16 11.3**	**-0.5**
MTLF	**Montolieu**	**21.86**	**78**	*e*P	**P**	**21 16 12.1**	**-2.4**
	48nm,1.5s,mb4.4						
MTLF	**Montolieu**	**21.86**	**78**	*e*P	**P**	**21 16 12.1**	**-2.4**
	24nm,1.5s,mb4.4						
MTLF	**Montolieu**	**21.86**	**78**	*e*P	**P**	**21 16 12.1**	**-2.4**
	24nm,1.5s,mb4.4						
BGF	**Bois d'Agland**	**22.04**	**69**	*e*P	**P**	**21 16 15.6**	**-0.9**
	20nm,0.9s,mb4.2						
BGF	**Bois d'Agland**	**22.04**	**69**	*e*P	**P**	**21 16 15.6**	**-0.9**
	9.9nm,0.9s,mb4.2						
BGF	**Bois d'Agland**	**22.04**	**69**	*e*P	**P**	**21 16 15.6**	**-0.9**
	9.9nm,0.9s,mb4.2						
AVF	**Avril sur Loir**	**22.39**	**69**	*e*P	**P**	**21 16 18.7**	**-1.5**
	29nm,1.3s,mb4.2						
AVF	**Avril sur Loir**	**22.39**	**69**	*e*P	**P**	**21 16 18.7**	**-1.5**
	14nm,1.3s,mb4.2						
AVF	**Avril sur Loir**	**22.39**	**69**	*e*P	**P**	**21 16 18.7**	**-1.5**
	14nm,1.3s,mb4.2						
SSF	**Saint Saulge**	**22.49**	**68**	*e*P	**P**	**21 16 20.0**	**-1.3**
	19nm,1.0s,mb4.2						
SSF	**Saint Saulge**	**22.49**	**68**	*e*P	**P**	**21 16 20.0**	**-1.3**
	9.4nm,1.0s,mb4.2						
SSF	**Saint Saulge**	**22.49**	**68**	*e*P	**P**	**21 16 20.0**	**-1.3**
	9.4nm,1.0s,mb4.2						
SMF	**Signal de Mont**	**22.73**	**69**	*e*P	**P**	**21 16 20.0**	**-3.8**
	66nm,1.5s,mb4.5						
SMF	**Signal de Mont**	**22.73**	**69**	*e*P	**P**	**21 16 20.0**	**-3.8**
	33nm,1.5s,mb4.5						
LOR	**Lormes**	**22.73**	**67**	*e*P	**P**	**21 16 23.9**	**+0.1**
	22nm,1.0s,mb4.2						
LOR	**Lormes**	**22.73**	**67**	*e*P	**P**	**21 16 23.9**	**+0.1**
	11nm,1.0s,mb4.2						
LOR	**Lormes**	**22.73**	**67**	*e*P	**P**	**21 16 23.9**	**+0.1**
	11nm,1.0s,mb4.2						
BAIF	**Baives**	**23.13**	**60**	*e*P	**P**	**21 16 27.5**	**-0.5**
	42nm,1.3s,mb4.4						
BAIF	**Baives**	**23.13**	**60**	*e*P	**P**	**21 16 27.5**	**-0.5**
	21nm,1.3s,mb4.4						
BAIF	**Baives**	**23.13**	**60**	*e*P	**P**	**21 16 27.5**	**-0.5**
	21nm,1.3s,mb4.4						
GIVF	**Givet**	**23.53**	**60**	*e*P	**P**	**21 16 32.5**	**+0.5**
GIVF	**Givet**	**23.53**	**60**	*e*P	**P**	**21 16 32.5**	**+0.5**
MEZF	**Maizieres J'vi**	**23.56**	**64**	*e*P	**P**	**21 16 32.1**	**-0.3**
MEZF	**Maizieres J'vi**	**23.56**	**64**	*e*P	**P**	**21 16 32.1**	**-0.3**
HAU	**Haudompre**	**24.42**	**65**	*e*P	**P**	**21 16 39.2**	**-1.0**
	4.7nm,0.6s,mb3.8						
HAU	**Haudompre**	**24.42**	**65**	*e*P	**P**	**21 16 39.2**	**-1.0**
	2.3nm,0.6s,mb3.8						
HAU	**Haudompre**	**24.42**	**65**	*e*P	**P**	**21 16 39.2**	**-1.0**
	2.3nm,0.6s,mb3.8						
HINF	**Hinteralfeld**	**24.76**	**66**	*e*P	**P**	**21 16 43.0**	**-0.3**
HINF	**Hinteralfeld**	**24.76**	**66**	*e*P	**P**	**21 16 43.0**	**-0.3**
FRF	**La Foret Royal**	**25.01**	**76**	*e*P	**P**	**21 16 46.5**	**+0.9**
	14nm,0.9s,mb4.2						
FRF	**La Foret Royal**	**25.01**	**76**	*e*P	**P**	**21 16 46.5**	**+0.9**
	7.0nm,0.9s,mb4.2						
FRF	**La Foret Royal**	**25.01**	**76**	*e*P	**P**	**21 16 46.5**	**+0.9**
	7.0nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**25.04**	**64**	*e*P	**P**	**21 16 46.0**	**+0.1**
	15nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**25.04**	**64**	*e*P	**P**	**21 16 46.0**	**+0.1**
	7.6nm,0.9s,mb4.2						
CDF	**Champ du Feu**	**25.04**	**64**	*e*P	**P**	**21 16 46.0**	**+0.1**
	7.6nm,0.9s,mb4.2						
DAVOX	**Davos/Dischmat**	**26.87**	**68**	P	**P**	**21 17 04.4**	**+2.0**
	1.0nm,0.6s,mb3.5,baz=292,slow=15,SNR=3.8						
DAVOX				LR	LR	21 26 29.5	
	comp=Z,106nm,20.7s,MS3.4,baz=257,slow=34						
DAVOX	**Davos/Dischmat**	**26.87**	**68**	P	**P**	**21 17 04.4**	**+2.0**
FETA	**Feichten**	**27.43**	**67**	⇑*i*P	**P**	**21 17 07.9**	**+0.5**
	4.5nm,1.0s,mb4.0						
FETA	**Feichten**	**27.43**	**67**	P	**P**	**21 17 07.9**	**+0.5**
	4.5nm,1.0s,mb4.0						
KBA	**Koelnbreinsper**	**29.20**	**67**	⇓*i*pP	**P**	**21 17 24.4**	**+1.1**
	10nm,1.1s,mb4.5						
KBA	**Koelnbreinsper**	**29.20**	**67**	P	**P**	**21 17 24.4**	**+1.2**
	10nm,1.1s,mb4.5						
KEST	**Kesra**	**29.36**	**91**	*e*P	**P**	**21 17 25.8**	**+1.1**
KEST	**Kesra**	**29.36**	**91**	P	**P**	**21 17 26.1**	**+1.3**
	1.1nm,0.8s,mb3.6,baz=302,slow=8.8,SNR=4.2						
KEST	**Kesra**	**29.36**	**91**	*e*P	**P**	**21 17 25.8**	**+1.0**
NOA	**NORSAR Array B**	**29.68**	**38**	LR	LR	21 27 28.2	
	comp=Z,53nm,19.2s,MS3.2,baz=260,slow=33						
JMIC	**Jan Mayen**	**30.03**	**12**	LR	LR	21 26 08.6	
	comp=Z,46nm,20.5s,MS3.1,baz=40,slow=30						
HFS	**Hagfors**	**30.55**	**41**	LR	LR	21 28 16.9	
	comp=Z,128nm,19.4s,MS3.6,baz=239,slow=33						
CSNA	**Conrad Observa**	**30.80**	**65**	⇓*i*P	**P**	**21 17 37.1**	**-0.3**
	2.7nm,0.9s,mb4.1						
CSNA	**Conrad Observa**	**30.80**	**65**	P	**P**	**21 17 37.1**	**-0.3**
	2.7nm,0.9s,mb4.1						
VRAC	**Vranov**	**31.15**	**62**	LR	LR	21 29 54.1	
	comp=Z,119nm,19.6s,MS3.6,baz=260,slow=36						
OJC	**Ojcow**	**33.14**	**60**	*e*P	**P**	**21 17 58.2**	**+0.3**
OJC	**Ojcow**	**33.14**	**60**	*e*P	**P**	**21 17 58.2**	**+0.3**
NIE	**Niedzica**	**33.56**	**61**	*e*P	**P**	**21 18 02.9**	**+1.4**
NIE	**Niedzica**	**33.56**	**61**	*e*P	**P**	**21 18 02.9**	**+1.4**
FINES	**FINESS Array B**	**36.76**	**40**	LR	LR	21 31 25.2	
	comp=Z,72nm,21.5s,MS3.4,baz=91,slow=33						
ARCES	**ARCESS Array B**	**38.10**	**27**	P	**P**	**21 18 43.4**	**+3.2**
ARCES	**ARCESS Array B**	**38.10**	**27**	P	**P**	**21 18 43.4**	**+3.2**
	1.8nm,0.8s,mb3.9,baz=239,slow=8.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**38.83**	**130**	P	**P**	**21 18 48.5**	**+1.6**
	6.7nm,0.8s,mb4.4,baz=325,slow=8.3,SNR=35						
AKASG	**Malin Array Be**	**39.04**	**58**	P	**P**	**21 18 46.8**	**-1.5**
	0.4nm,0.4s,mb3.5,baz=277,slow=8.6,SNR=4.4						
AKASG	**Malin Array Be**	**39.04**	**58**	P	**P**	**21 18 46.8**	**-1.5**
BRTR	**Keskin Array B**	**45.38**	**72**	P	**P**	**21 19 41.2**	**+1.1**
	1.1nm,0.8s,mb3.7,baz=246,slow=5.3,SNR=6.8						
BRTR	**Keskin Array B**	**45.38**	**72**	P	**P**	**21 19 41.2**	**+1.1**
AKTK	**Aktyubinsk**	**56.37**	**50**	P	**P**	**21 21 03.3**	**+0.6**
AKTK	**Aktyubinsk**	**56.37**	**50**	P	**P**	**21 21 03.3**	**+0.6**
AKTO	**Aktyubinsk**	**56.37**	**50**	P	**P**	**21 21 03.3**	**+0.6**
	1.3nm,0.9s,mb4.0,baz=290,slow=12,SNR=1.8						
RRI2	**Red Ridge**	**58.58**	**302**	*e*P	**P**	**21 21 16.2**	**-2.2**
	3.4nm,0.5s,mb4.6						
TXAR	**Lajitas Array**	**60.98**	**284**	P	**P**	**21 21 35.3**	**+0.2**
	1.1nm,0.9s,mb4.0,baz=46,slow=7.3,SNR=8.7						
TXAR	**Lajitas Array**	**60.98**	**284**	P	**P**	**21 21 35.3**	**+0.2**
CCUT	**Cedar City**	**63.01**	**297**	*e*P	**P**	**21 21 48.9**	**+0.3**
	1.9nm,0.8s,mb4.3						
CCUT	**Cedar City**	**63.01**	**297**	*e*P	**P**	**21 21 48.9**	**+0.3**
	1.9nm,0.8s,mb4.3						
KURK	**Kurchatov**	**67.12**	**41**	P	**P**	**21 22 15.1**	**0.0**
	0.6nm,0.6s,mb3.8,baz=314,slow=6.7,SNR=4.6						
KURK	**Kurchatov**	**67.12**	**41**	P	**P**	**21 22 15.1**	**0.0**
LPAZ	**La Paz**	**69.41**	**222**	*e*P	**P**	**21 22 29.6**	**-0.2**
	2.6nm,1.1s,mb4.1						
LPAZ				LR	LR	21 48 25.2	
LPAZ	**La Paz**	**69.41**	**222**	P	**P**	**21 22 29.5**	**-0.2**
	0.5nm,0.7s,mb3.6,baz=329,slow=5.9,SNR=2.6						
LPAZ				LR	LR	21 48 25.2	
	comp=Z,42nm,21.2s,MS3.6,baz=70,slow=32						
LPAZ	**La Paz**	**69.41**	**222**	*e*P	**P**	**21 22 29.6**	**-0.1**
	2.6nm,1.1s,mb4.1						
MKAR	**Makanchi Array**	**71.54**	**43**	P	**P**	**21 22 42.1**	**-0.4**
	1.1nm,0.8s,mb3.8,baz=311,slow=6.3,SNR=6.0						
SONM	**Songino Array**	**81.24**	**29**	P	**P**	**21 23 37.3**	**-0.2**
	1.3nm,0.9s,mb3.9,baz=331,slow=5.2,SNR=6.5						
SONM	**Songino Array**	**81.24**	**29**	P	**P**	**21 23 37.3**	**-0.1**
GTA	**Gaotai**	**85.51**	**38**	*e*P	**P**	**21 24 00.0**	**+0.4**
GTA				pP	pP	21 24 06.0	-2.0
GTA				sP	sP	21 24 09.3	-1.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						

*IDC **18** 21:14:59.5±0.8, 34°.55N×73°.14E, h0km, mb3.9/9, mb1 4.0/14, mb1mx3.8/29, mbtmpb3.9/14, ML3.5/5, MS3.2/2, Ms1 3.2/2, ms1mx2.4/38, Error ellipse: s-maj=23.6km s-min=16.2km az=67.0*
*ISCJB **18** 21:15:03.5±0.8, 34°.71N±0°.03×73°.40E±0°.06, h38km±10km, mb3.9/10, Error ellipse: s-maj=8.8km s-min=4.1km az=154.5*
*NDI **18** 21:15:05.0±3.2, 34°.62N×72°.76E, h33km, ML3.6, mb3.5(NEIC)*
*NEIC **18** 21:15:07.2±1.0, 34°.72N×73°.26E, h53km±9km, mb3.5/3, Error ellipse: s-maj=8.8km s-min=7.1km az=193.0*
*NNC **18** 21:15:09.7±4.9, 34°.93N×73°.20E, h62km±44km, mb3.4, mpv4.6, Error ellipse: s-maj=48.0km s-min=32.2km az=47.0*

ISC 18 21:15:04.7±0.6, **34°.62N**±0°.03×**73°.29E**±0°.06, **h32**km±8km, **n60**, σ1**9**20/67, **mb3.9**/10, **3C-3D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**2.32**	**144**	*e*S	**Sn**	**21 16 15.5**	**+7.4**
KBL	**Kabul**	**3.50**	**270**	*e*Pn	**Pn**	**21 15 58.4**	**+1.5**
BHK	**Bhakra**	**4.13**	**140**	*e*S	**Sn**	**21 16 58.2**	**+5.4**
SMLA	**Simla**	**4.77**	**136**	*i* x	**Pn**	**21 16 16.2**	**+1.9**
SMLA				*i* S	**Sn**	**21 17 11.1**	**+2.6**
SMLA				*i* S	**Sn**	**21 17 11.6**	**+3.1**
SMLA				⇓		21 17 14.8	
	comp=E,713nm,0.3s						
SMLA				⇓		21 17 14.8	
	comp=N,584nm,0.3s						
KLP	**Kalpa**	**5.18**	**125**	*e*PKP	**Pn**	**21 16 25.2**	**+5.3**
KLP				*e*S	**Sn**	**21 17 23.6**	**+5.0**
KLP				AML	AML	21 17 46.9	
	comp=N,98nm,0.4s						
KLP				AML	AML	21 17 48.5	
	comp=E,93nm,0.4s						
KSH	**Kashi**	**5.34**	**23**	P	**Pn**	**21 16 21.3**	**-0.8**
KSH				S	**Sn**	**21 17 18.8**	**-3.7**
JOSI	**Joshimath**	**6.66**	**126**	*ex*	x	21 18 20.9	
JOSI				AML	AML	21 18 54.5	
	comp=N,96nm,0.5s						
JOSI				AML	AML	21 18 57.2	
	comp=E,96nm,0.5s						
NDI	**New Delhi**	**6.80**	**149**	*ex*	x	21 18 34.0	
KHET	**Khetri**	**6.87**	**161**	*e*S	**Sn**	**21 17 58.5**	**-1.7**
KUDL	**Kundal**	**7.01**	**156**	*e*S	**Sn**	**21 18 01.4**	**-2.3**
KUDL				AML	AML	21 18 46.5	
	comp=N,14nm,0.3s						
KUDL				AML	AML	21 18 54.4	
	comp=E,15nm,0.5s						
SONA	**Sohna**	**7.13**	**152**	*e*S	**Sn**	**21 18 05.9**	**-0.7**
AML	**Almayashu**	**7.51**	**2**	*e*Pn	**Pn**	**21 16 53.9**	**+2.0**
	comp=E,13nm,0.6s						
AML				*e*Sn	**Sn**	**21 18 14.2**	**-1.6**
UCH	**Uchtor**	**7.66**	**7**	*e*Pn	**Pn**	**21 16 55.0**	**+1.0**
UCH				*e*Sn	**Sn**	**21 18 20.1**	**+0.6**
EKS2	**Erkin-Say**	**8.04**	**3**	*e*Pn	**Pn**	**21 17 00.6**	**+1.4**
	comp=E,9.0nm,0.6s						
EKS2				*e*Sn	**Sn**	**21 18 27.4**	**-1.5**
AAK	**Ala-Archa**	**8.06**	**6**	Pn	**Pn**	**21 17 03.1**	**+3.7**
AAK				Sn	**Sn**	**21 18 29.9**	**+0.5**
AAK	**Ala-Archa**	**8.06**	**6**	Pn	**Pn**	**21 17 03.1**	**+3.7**
	comp=E,1.2nm,0.3s,baz=168,slow=6.0,SNR=6.2						
AAK				Sn	**Sn**	**21 18 29.9**	**+0.5**
	comp=E,0.3nm,0.3s,baz=169,slow=5.2,SNR=3.8						
AGRA	**Agra**	**8.38**	**150**	*e*S	**Sn**	**21 18 33.9**	**-3.4**
AGRA				AML	AML	21 18 58.9	
	comp=N,47nm,0.3s						
AGRA				AML	AML	21 19 02.6	
	comp=E,44nm,0.4s						
KK31	**Karatay Array**	**8.74**	**347**	⇑P	**Pn**	**21 17 09.6**	**+0.7**
	comp=E,9.5nm,0.3s,baz=153,slow=11,SNR=304						
KK31				⇑S	**Sn**	**21 18 43.4**	**-2.9**
	comp=E,6.0nm,0.5s,baz=165,slow=21,SNR=9.8						
GKN	**Gorkha**	**11.73**	**121**	*e*P	**Pn**	**21 17 49.7**	**-0.1**
DMN	**Daman**	**12.30**	**121**	*e*P	**Pn**	**21 17 57.0**	**-0.5**
	comp=E,7.4nm,0.5s						
KKN	**Kakani**	**12.31**	**120**	*e*P	**Pn**	**21 17 57.5**	**-0.2**
	comp=E,8.7nm,0.6s						
PKIN	**Phulchoki**	**12.52**	**121**	*e*P	**Pn**	**21 18 00.2**	**-0.4**
	comp=E,5.6nm,0.3s						
PKI	**Pulchoki**	**12.53**	**121**	*e*P	**Pn**	**21 18 00.5**	**-0.3**
	comp=E,11nm,0.5s						
GUN	**Gumba**	**12.67**	**118**	*e*P	**Pn**	**21 18 02.8**	**+0.1**
JIRN	**Jiri**	**13.04**	**119**	*e*P	**Pn**	**21 18 07.5**	**-0.2**
RAMN	**Ramite**	**13.75**	**120**	*e*P	**Pn**	**21 18 16.0**	**-1.4**
MK31	**Makanchi Array**	**13.94**	**27**	⇑P	**Pn**	**21 18 20.2**	**+0.4**
	comp=E,2.0nm,0.7s,baz=210,slow=11,SNR=7.2						
MK31	**Makanchi Array**	**13.94**	**27**	*e*Pn	**Pn**	**21 18 20.6**	**+0.8**
MKAR	**Makanchi Array**	**13.94**	**27**	Pn	**Pn**	**21 18 20.1**	**+0.3**
	comp=E,0.1nm,0.3s,baz=211,slow=13,SNR=9.3						
TAPN	**Taplejung**	**14.33**	**116**	*e*P	**Pn**	**21 18 25.5**	**+0.2**
ODAN	**Odare**	**14.37**	**119**	*e*P	**Pn**	**21 18 24.7**	**-1.2**
KURK	**Kurchatov**	**16.55**	**12**	*e*Pn	**Pn**	**21 18 54.2**	**0.0**
	comp=E,2.5nm,0.8s						
KURK	**Kurchatov**	**16.55**	**12**	Pn	**Pn**	**21 18 49.9**	**-4.3**
	comp=E,0.0nm,0.3s,baz=200,slow=11,SNR=7.8						
AB31	**Akbulak array**	**17.64**	**330**	P	**Pn**	**21 19 05.8**	**-2.0**
	comp=E,0.8nm,0.5s,baz=171,slow=11,SNR=9.3						
BVA0	**Borovoye Array**	**18.52**	**354**	P	**Pn**	**21 19 18.3**	**-0.2**
	comp=E,0.2nm,0.7s,baz=240,slow=43,SNR=14						
BVAR	**Borovoye Array**	**18.52**	**354**	P	**Pn**	**21 19 16.3**	**-2.2**
	comp=E,0.5nm,0.3s,baz=166,slow=10,SNR=15						
BVAR				LR	LR	21 25 57.6	
	comp=E,32nm,21.9s,baz=303,slow=35						
BRVK	**Borovoye**	**18.56**	**354**	*e*P	**Pn**	**21 19 18.1**	**-0.9**
	comp=E,2.3nm,0.6s						
AKTK	**Aktyubinsk**	**19.34**	**329**	P	**Pn**	**21 19 27.2**	**-1.3**
AKTO	**Aktyubinsk**	**19.34**	**329**	⇓P	**Pn**	**21 19 26.9**	**-1.6**
	comp=E,0.6nm,0.7s						
AKTO	**Aktyubinsk**	**19.34**	**329**	P	**Pn**	**21 19 27.2**	**-1.3**
	comp=E,0.4nm,0.3s,baz=130,slow=12,SNR=15						
ZAA0	**Zalesovo Array**	**20.96**	**19**	*e*P	**P**	**21 19 43.7**	**-1.1**
ZALV	**Zalesovo Beam**	**20.96**	**19**	P	**P**	**21 19 44.3**	**-0.5**
	comp=E,12nm,0.5s,baz=214,slow=11,SNR=65						
GNI	**Garni**	**23.29**	**292**	P	**P**	**21 20 10.5**	**+0.8**
KIV	**Kislovodsk**	**25.33**	**301**	*e*P	**P**	**21 20 28.0**	**-0.5**
CHTO	**Chiang Mai**	**27.69**	**118**	*e*P	**P**	**21 20 51.9**	**+1.9**
	comp=E,1.4nm,0.6s,mb3.8						
CM31	**Chiang Mai Arr**	**27.92**	**119**	P	**P**	**21 20 53.8**	**+1.8**
CMAR	**Chiang Mai Arr**	**27.92**	**119**	P	**P**	**21 20 54.1**	**+2.1**
	comp=E,0.4nm,0.3s,mb3.5,baz=303,slow=10.0,SNR=5.8						
BR131	**Keskin Array S**	**31.82**	**291**	P	**P**	**21 21 27.2**	**+0.9**
FINES	**FINESS Array B**	**40.08**	**327**	P	**P**	**21 22 37.3**	**+0.6**
	comp=E,2.4nm,0.8s,mb4.0,baz=123,slow=10,SNR=3.5						
PSZ	**Piszkesteto**	**41.47**	**305**	*e*P	**P**	**21 22 48.6**	**+0.2**
MORC	**Moravsky Berou**	**42.98**	**308**	*e*P	**P**	**21 23 00.9**	**+0.2**
ARCES	**ARCESS Array B**	**43.59**	**338**	P	**P**	**21 23 05.6**	**+0.3**
	comp=E,0.6nm,0.4s,mb3.7,baz=111,slow=8.0,SNR=6.9						
HFS	**Hagfors**	**45.69**	**323**	P	**P**	**21 23 21.3**	**-0.9**
	comp=E,1.2nm,0.5s,mb4.1,baz=108,slow=9.8,SNR=6.9						
VSL	**Villasalto**	**50.29**	**295**	*e*P	**P**	**21 23 58.4**	**+0.3**
	comp=E,7.0nm,0.8s,mb4.7						
WLF	**Walferdange**	**50.35**	**309**	P	**P**	**21 23 59.1**	**+0.7**
TORD	**Torodi Ar. Bea**	**67.57**	**271**	P	**P**	**21 25 56.8**	**-1.5**
	comp=E,0.7nm,0.6s,mb3.9,baz=44,slow=5.8,SNR=5.7						
FRB	**Frobisher Bay**	**77.40**	**344**	LR	LR	22 07 45.9	
	comp=E,39nm,19.5s,baz=9.5,slow=41						
BOSA	**Boshof**	**77.55**	**222**	P	**P**	**21 26 57.0**	**-0.3**
	comp=E,3.5nm,1.0s,mb4.2,baz=315,slow=4.4,SNR=3.7						
WRA	**Warramunga Arr**	**79.41**	**123**	P	**P**	**21 27 07.7**	**-0.1**
	comp=E,0.3nm,0.5s,mb3.5,baz=330,slow=4.9,SNR=3.8						
ASAR	**Alice Springs**	**81.64**	**126**	P	**P**	**21 27 19.1**	**-0.6**
	comp=E,0.2nm,0.5s,mb3.3,baz=311,slow=5.9,SNR=3.0						

*ISCJB **18** 21:23:58.0±1.0, 18°.7S±0°.1×178°.1W±0°.1, h698km±18km, mb3.8/8, Error ellipse: s-maj=20.0km s-min=14.5km az=28.5*
*NEIC **18** 21:23:59.2±0.7, 18°.67S×178°.07W, h697km±11km, mb4.1/5, Error ellipse: s-maj=13.8km s-min=9.9km az=121.0*
*IDC **18** 21:23:59.1±6.7, 18°.68S×178°.07W, h691km±76km, mb2.8/4, mb1 3.2/4, mb1mx2.9/14, mbtmp2.8/4, Error ellipse: s-maj=105.7km s-min=36.2km az=151.0*

ISC 18 21:23:59.1±1.0, **18°.7S**±0°.1×**178°.1W**±0°.1, **h691**km±18km, **n18**, σ0**9**64/16, **mb3.8**/8, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.69**	**53**	*e*P

DMN	**Daman**	**45.36**	**304**	*e*P	**P**		**22 00 09.8**	**+0.6**
	comp=Z,8.4nm,0.7s,mb4.6							
ULN	**Ulaanbaatar**	**45.60**	**341**	*e*P	**P**		**22 00 10.6**	**-0.2**
	comp=Z,3.2nm,0.8s,mb4.1							
SONM	**Songino Array**	**45.79**	**341**	P	**P**		**22 00 12.7**	**+0.5**
	comp=Z,1.6nm,0.8s,mb3.8,baz=162,slow=9.9,SNR=9.3							
GKN	**Gorkha**	**45.89**	**304**	*e*P	**P**		**22 00 13.1**	**-0.2**
	comp=Z,6.5nm,0.5s,mb4.7							
KOLN	**Koldanda**	**46.66**	**304**	*e*P	**P**		**22 00 20.2**	**+0.8**
	comp=Z,24nm,0.6s,mb5.1							
TLY	**Talaya**	**50.02**	**341**	*e*P	**P**		**22 00 43.3**	**-1.4**
	comp=Z,6.6nm,0.6s,mb4.7							
MK31	**Makanchi Array**	**56.27**	**325**	*e*P	**P**		**22 01 30.5**	**-0.3**
MKAR	**Makanchi Array**	**56.27**	**325**	P	**P**		**22 01 31.4**	**+0.7**
	comp=Z,1.2nm,0.4s,mb4.2,baz=115,slow=7.4,SNR=25							
UCH	**Uchtor**	**59.03**	**317**	*e*P	**P**		**22 01 49.2**	**-1.0**
ZAA0	**Zalesovo Array**	**59.18**	**333**	*e*P	**P**		**22 01 51.0**	**+0.1**
ZALV	**Zalesovo Beam**	**59.18**	**333**	P	**P**		**22 01 50.9**	**-0.1**
	comp=Z,2.2nm,0.5s,mb4.4,baz=138,slow=6.6,SNR=12							
AML	**Almayashu**	**59.55**	**316**	*e*P	**P**		**22 01 53.4**	**-0.4**
EKS2	**Erkin-Say**	**59.70**	**317**	*e*P	**P**		**22 01 53.0**	**-1.8**
	comp=Z,1.7nm,0.8s,mb4.1							
KURK	**Kurchatov**	**60.41**	**327**	*e*P	**P**		**22 01 59.6**	**+0.1**
	comp=Z,4.5nm,0.6s,mb4.7							
KBL	**Kabul**	**60.59**	**307**	*e*P	**P**		**22 01 59.8**	**-1.3**
	comp=Z,1.4nm,0.4s,mb4.3							
BVAR	**Borovoye Array**	**66.00**	**327**	P	**P**		**22 02 36.9**	**+0.5**
	comp=Z,2.4nm,0.6s,mb4.2,baz=136,slow=8.2,SNR=19							
BRVK	**Borovoye**	**66.07**	**327**	*e*P	**P**		**22 02 37.1**	**+0.2**
	comp=Z,3.1nm,0.7s,mb4.2							
ARU	**Arti**	**73.61**	**327**	*e*P	**P**		**22 03 23.2**	**+0.2**
	comp=Z,6.4nm,1.0s,mb4.3							
KIV	**Kislovodsk**	**82.07**	**314**	P	**P**		**22 04 10.1**	**0.0**
MALT	**Malatya**	**85.43**	**308**	*e*P	**P**		**22 04 27.3**	**-0.2**
INK	**Inuvik**	**88.64**	**22**	*e*P	**P**		**22 04 43.9**	**+1.5**
	comp=Z,2.4nm,0.6s,mb4.4							
ARCES	**ARCESS Array B**	**88.95**	**340**	P	**P**		**22 04 43.9**	**+0.1**
ARCES	**ARCESS Array B**	**88.95**	**340**	P	**P**		**22 04 43.9**	**+0.1**
	comp=Z,1.6nm,0.6s,mb4.2,baz=85,slow=6.2,SNR=20							
ARE0	**ARCESS Array S**	**88.95**	**340**	*e*P	**P**		**22 04 43.6**	**-0.2**
BRTR	**Keskin Array B**	**89.03**	**310**	P	**P**		**22 04 45.1**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.6,baz=97,slow=6.1,SNR=3.3							
KAF	**Kangasniemi**	**90.19**	**332**	*e*p	**P**		**22 04 49.8**	**+0.1**
FINES	**FINESS Array B**	**90.44**	**332**	P	**P**		**22 04 51.0**	**+0.2**
	comp=Z,1.4nm,0.4s,mb4.4,baz=57,slow=5.1,SNR=17							
AKASG	**Malin Array Be**	**90.68**	**321**	P	**P**		**22 04 52.5**	**+0.3**
	comp=Z,0.3nm,0.4s,mb3.8,baz=68,slow=5.2,SNR=4.0							
PSZ	**Piszkesteto**	**97.24**	**320**	*e*P	**P**		**22 05 22.9**	**+0.5**
	comp=Z,1.5nm,0.6s,mb4.6							
MORC	**Moravsky Berou**	**98.17**	**322**	*e*P	**P**		**22 05 26.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**122.45**	**289**	PKP	PKPdf		22 10 46.4	+0.9
	comp=Z,0.3nm,0.3s,baz=69,slow=1.9,SNR=12							

*ISCJB **18** 21:58:54.2±1.0, 11°.98N±0°.07×45°.33E±0°.08, h10km, mb3.7/4, MS3.2/5, Error ellipse: s-maj=12.8km s-min=9.1km az=139.6*
*IDC **18** 21:58:54.1±2.1, 11°.93N×45°.40E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.5/21, mbtmp3.7/5, ML3.0/1, MS3.3/5, Ms1 3.3/5, ms1mx3.0/27, Error ellipse: s-maj=54.6km s-min=27.2km az=172.0*
*CSEM **18** 21:58:55.0, 11°.99N×45°.17E, h12km, ML3.4, After DHMR*
*DHMR **18** 21:58:55.0±1.5, 11°.99N×45°.17E, h13km±9km, ML3.4*
ISC 18 21:58:56.0±1.0,**12°.02N**±0°.07×**45°.26E**±0°.08,**h10**km,**n16, σ0°99/16, mb3.7/4, MS3.2/5, 1C-1D, Western Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ADEN	**Aden**	**0.80**	**340**	*i* P		**Pg**	**21 59 10.2**	**-1.3**
ADEN				*i* S		**Sg**	**21 59 21.1**	**-0.9**
ADEN				AML		AML	21 59 23.7	
	comp=Z,1μm,0.2s							
ADEN	**Aden**	**0.80**	**340**	*i* P		**Pg**	**21 59 10.2**	**-1.3**
ADEN				*i* S		**Sg**	**21 59 21.1**	**-0.8**
	comp=Z,532nm,0.2s							
TRBA	**At Turbah**	**1.65**	**317**	⇓*i* P		**Pn**	**21 59 24.4**	**-0.5**
TRBA				*i* S		**Sn**	**21 59 46.0**	**-0.3**
TRBA				AML		AML	22 00 02.1	
	comp=E,372nm,0.6s							
LBOS		**1.84**	**360**	*i* P		**Pn**	**21 59 27.4**	**-0.3**
LBOS				*i* S		**Sn**	**21 59 54.0**	**+3.0**
BDHA	**Al Bayda'**	**1.97**	**9**	⇑*i* P		**Pn**	**21 59 29.9**	**+0.5**
BDHA				*i* S		**Sn**	**21 59 58.4**	**+4.2**
BDHA				AML		AML	22 00 05.9	
	comp=E,745nm,0.7s							
ATD	**Arta Tunnel**	**2.42**	**259**	Pn		Pn	**21 59 36.7**	**+1.1**
	comp=E,3.1nm,0.3s,baz=71,slow=12,SNR=15							
EIL	**Elat**	**20.01**	**333**	LR		LR	22 09 51.4	
	comp=E,34nm,19.9s,MS2.7,baz=104,slow=33							
GNI	**Garni**	**28.02**	**359**	LR		LR	22 17 23.7	
	comp=E,47nm,19.4s,MS3.1,baz=350,slow=40							
BRTR	**Keskin Array B**	**29.45**	**342**	P		**P**	**22 05 00.9**	**+0.9**
	comp=E,0.6nm,0.8s,mb3.4,baz=134,slow=11,SNR=4.2							
AKTO	**Aktyubinsk**	**39.71**	**13**	LR		LR	22 24 37.1	
	comp=E,41nm,18.0s,MS3.3,baz=103,slow=39							
BOSA	**Boshof**	**44.79**	**205**	LR		LR	22 25 59.1	
	comp=E,49nm,18.5s,MS3.5,baz=254,slow=36							
MKAR	**Makanchi Array**	**46.61**	**35**	P		**P**	**22 07 24.6**	**+0.3**
	comp=E,1.1nm,0.9s,mb3.8,baz=242,slow=7.8,SNR=4.9							
CMAR	**Chiang Mai Arr**	**52.04**	**76**	P		**P**	**22 08 05.0**	**-1.2**
	comp=E,0.5nm,0.4s,mb3.8,baz=283,slow=9.6,SNR=5.4							
HFS	**Hagfors**	**53.39**	**341**	LR		LR	22 35 07.8	
	comp=E,40nm,18.8s,MS3.5,baz=110,slow=41							
SONM	**Songino Array**	**61.89**	**42**	P		**P**	**22 09 15.0**	**-0.6**
SONM	**Songino Array**	**61.89**	**42**	P		**P**	**22 09 15.0**	**-0.6**
	comp=E,0.8nm,0.8s,mb3.9,baz=257,slow=5.9,SNR=4.6							

*IDC **18** 22:00:00.8±1.9, 79°.05N×91°.40W, h0km, mb3.3/2, mb1 3.9/5, mb1mx3.5/26, mbtmp3.7/5, ML3.8/3, MS3.1/3, Ms1 3.1/3, ms1mx2.7/30, Error ellipse: s-maj=42.9km s-min=24.5km az=152.0*
*OTT **18** 22:00:04.9±0.5, 78°.98N×92°.28W, h18km, ML4.0/1, 171km southwest from Eureka, Nu Sverdrup Seismic Zone.*
NEIC 18 22:00:04.9, 78°.98N×92°.28W, h18km, ML4.0(OTT)**, After OTT., Queen Elizabeth Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EUNU	**Eureka**	**1.52**	**42**	Pn		Pn	22 00 27.3	-3.8
EUNU	**Eureka**	**1.52**	**42**	PN		Pn	22 00 26.9	-4.2
EUNU				SN		Sn	22 00 43.8	-6.6
EUNU				Trac			22 00 50.0	
	comp=Z,387nm,0.7s							
RES	**Resolute Bay**	**4.36**	**189**	Pn		Pn	22 01 10.1	0.0
	4.7nm,0.3s,baz=8.4,slow=15,SNR=27							
RES				Sn		Sn	22 02 02.7	+2.5
	6.2nm,0.3s,baz=234,slow=19,SNR=6.0							
RES	**Resolute Bay**	**4.36**	**189**	PN		Pn	22 01 09.9	-0.1
RES				SN		Sn	22 01 59.5	-0.7
RES				Trac			22 02 16.2	
	comp=Z,59nm,0.3s							
RES				LG			22 02 31.6	
GIFN	**Gifford Fjord,**	**9.44**	**157**	Pn		Pn	22 02 18.6	-1.1
GIFN				Sn		Sn	22 04 00.3	-4.8
GIFN	**Gifford Fjord,**	**9.44**	**157**	PN		Pn	22 02 18.6	-1.1
GIFN				SN		Sn	22 04 01.5	-3.7
GIFN				Trac			22 04 05.7	
	comp=Z,37nm,0.6s							
GIFN				LG			22 04 50.0	
AP3N	**Apex site 3 Nu**	**9.79**	**164**	SN		Sn	22 04 09.6	-4.1
AP3N				LG			22 05 01.4	
ILON	**Igloolik, Nuna**	**10.04**	**158**	PN		Pn	22 02 27.3	-0.6
ILON				SN		Sn	22 04 16.4	-3.5
ILON				Trac			22 04 21.1	
	comp=Z,11nm,0.4s							
ILON				LG			22 05 21.3	
LAIN	**Lailor River,**	**10.19**	**162**	Pn		Pn	22 02 28.4	-1.5
LAIN				Sn		Sn	22 04 15.4	-8.0
LAIN	**Lailor River,**	**10.19**	**162**	PN		Pn	22 02 28.1	-1.8
LAIN				SN		Sn	22 04 15.4	-8.0
LAIN				Trac			22 04 25.1	
	comp=Z,47nm,0.6s							
SRLN	**Sarcpa Lake, N**	**10.75**	**162**	Pn		Pn	22 02 36.3	-1.4
SRLN	**Sarcpa Lake, N**	**10.75**	**162**	PN		Pn	22 02 36.3	-1.4
SRLN				SN		Sn	22 04 28.7	-8.6
SRLN				Trac			22 04 34.2	
	comp=Z,26nm,0.8s							
SRLN				LG			22 05 41.1	
QILN	**Qililugaq Expl**	**12.50**	**169**	Pn		Pn	22 02 59.9	-1.6
QILN				Sn		Sn	22 05 08.8	-11
QILN	**Qililugaq Expl**	**12.50**	**169**	PN		Pn	22 02 58.8	-2.7
QILN				SN		Sn	22 05 08.8	-11

SUMG	**Summit**	**14.09**	**88**	*e*Pn		Pn	22 03 18.4	-4.7
	4.8nm,0.5s							
SUMG				Sn		Sn	22 05 58.8	+0.2
SUMG	**Summit**	**14.09**	**88**	*i* P		Pn	22 03 19.0	-4.0
	5.3nm,0.9s							
INK	**Inuvik**	**15.26**	**249**	Pn		Pn	22 03 35.1	-3.7
	0.5nm,0.3s,baz=21,slow=13,SNR=2.1							
INK				Sn		Sn	22 06 16.4	-11
	0.3nm,0.3s,baz=157,slow=15,SNR=2.7							
INK				LR		LR	22 10 50.2	
	comp=Z,23nm,21.4s,baz=308,slow=42							
SEDN	**First Sedna Si**	**15.81**	**178**	PN		Pn	22 03 42.2	-3.9
IVKQ	**Ivujivik**	**17.20**	**157**	PN		Pn	22 03 58.5	-5.2
YKA	**Yellowknife Ar**	**17.87**	**215**	P		Pn	22 04 11.1	-0.8
	0.3nm,0.3s,baz=4.8,slow=11,SNR=6.3							
FCC	**Fort Churchill**	**20.32**	**183**	*e*P		P	22 04 40.7	+1.3
	0.4nm,1.3s							
ILAR	**Eielson Array**	**20.87**	**259**	P		P	22 04 46.1	+0.7
	0.4nm,0.6s,baz=26,slow=9.0,SNR=5.3							
FFC	**Flin Flon**	**24.58**	**194**	*e*P		P	22 05 22.8	-0.5
EDM	**Edmonton**	**26.87**	**209**	*e*P		P	22 05 44.2	+0.3
NOA	**NORSAR Array B**	**33.34**	**59**	LR		LR	22 19 25.0	
	comp=Z,27nm,18.7s,baz=235,slow=35							
VRAC	**Vranov**	**45.48**	**60**	LR		LR	22 26 50.6	
	comp=Z,64nm,18.4s,baz=234,slow=36							
ESDC	**Sonseca Array**	**51.07**	**83**	P		P	22 09 02.9	-2.6
	0.4nm,0.6s,baz=342,slow=7.7,SNR=5.2							

*ISCJB **18** 22:16:36.9±0.5, 37°.41N±0°.03×35°.90E±0°.03, h8km±4km, Error ellipse: s-maj=5.0km s-min=3.5km az=176.9*
*ISK **18** 22:16:36.5, 37°.46N×35°.90E, h6km, MD3.3*
*CSEM **18** 22:16:37.4±0.2, 37°.40N×35°.91E, h12km, MD3.2, Error ellipse: s-maj=5.0km s-min=3.5km az=162.0*
*DDA **18** 22:16:37.4, 37°.46N×35°.89E, h21km, Md3.2*
ISC 18 22:16:37.7±0.5,**37°.40N**±0°.03×**35°.89E**±0°.03,**h11**km±4km, **n42, σ1°91/60, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.40**	**196**	*e*PG		**Pg**	**22 16 46.5**	**+0.9**
CEYT	**Ceyhan**	**0.40**	**196**	*e*Pg		**Pg**	**22 16 46.5**	**+0.9**
ANDN	**Andirin**	**0.41**	**63**	*i* P		**Pg**	**22 16 45.2**	**-0.5**
ANDN				*i* S		**Sg**	**22 16 52.3**	**+1.2**
ANDN	**Andirin**	**0.41**	**63**	*i* P		**Pg**	**22 16 45.2**	**-0.5**
ANDN				*i* S		**Sg**	**22 16 52.3**	**+1.2**
KARA	**Karaisali**	**0.68**	**259**	*e*PG		**Pg**	**22 16 50.6**	**-0.3**
KARA				*e*SG		**Sg**	**22 17 00.6**	**+0.8**
KARA	**Karaisali**	**0.68**	**259**	*e*Pg		**Pg**	**22 16 50.6**	**-0.2**
KARA				*e*Sg		**Sg**	**22 17 00.6**	**+0.9**
KMRS	**Kahramanmaras**	**0.81**	**82**	*e*PG		**Pg**	**22 16 52.6**	**-0.8**
KMRS				*e*SG		**Sg**	**22 17 04.1**	**+0.2**
KMRS	**Kahramanmaras**	**0.81**	**82**	*e*Pg		**Pg**	**22 16 52.6**	**-0.7**
KMRS				*e*Sg		**Sg**	**22 17 04.1**	**+0.2**
GULE	**Gulek**	**0.90**	**263**	*i* P		**Pg**	**22 16 54.2**	**-0.7**
GULE				*i* S		**Sg**	**22 17 07.3**	**+0.7**
GULE	**Gulek**	**0.90**	**263**	*i* P		**Pg**	**22 16 54.2**	**-0.7**
GULE				*i* S		**Sg**	**22 17 07.3**	**+0.7**
COBT	**Iskenderun**	**0.92**	**161**	*i* P		**Pg**	**22 16 54.7**	**-0.7**
COBT				*i* S		**Sg**	**22 17 07.3**	**-0.1**
COBT	**Iskenderun**	**0.92**	**161**	*i* P		**Pg**	**22 16 54.7**	**-0.8**
GAZ	**Gaziantep**	**1.08**	**102**	*e*PN		**Pg**	**22 16 57.1**	**-1.2**
GAZ	**Gaziantep**	**1.08**	**102**	*e*Pn		**Pg**	**22 16 57.2**	**-1.2**
KUZU	**Kuzuini**	**1.13**	**123**	*i* P		**Pg**	**22 16 58.7**	**-0.7**
KUZU				*i* S		**Sg**	**22 17 14.4**	**+0.2**
KUZU	**Kuzuini**	**1.13**	**123**	*i* P		**Pg**	**22 16 58.7**	**-0.8**
HTY	**Hatay**	**1.29**	**171**	*e*PN		**Pn**	**22 17 01.6**	**0.0**
HTY	**Hatay**	**1.29**	**171**	*e*Pn		**Pn**	**22 17 01.6**	**0.0**
GZT	**Gaziantep**	**1.33**	**91**	*i* P		**Pn**	**22 17 01.1**	**-1.1**
GZT				*i* S		**Sb**	**22 17 22.2**	**+2.4**
YAYL	**Yayladag**	**1.37**	**173**	*i* P		**Pn**	**22 17 01.6**	**-1.1**
YAYL				*i* S		**Sb**	**22 17 20.4**	**-0.4**
YAYL	**Yayladag**	**1.37**	**173**	*i* P		**Pn**	**22 17 01.6**	**-1.1**
YAYL				*i* S		**Sb**	**22 17 20.4**	**-0.4**
SARI	**SarD1z-Kayseri**	**1.43**	**26**	*e*PG		**Pg**	**22 16 55.6**	**-9.5**
SARI	**SarD1z-Kayseri**	**1.43**	**26**	*e*Pg		**Pg**	**22 16 55.6**	**-10**
AVNT	**Avonos**	**1.60**	**330**	*i* P		**Pn**	**22 17 05.0**	**-1.0**
AVNT				*i* S		**Sn**	**22 17 25.7**	**-1.0**
AVNT	**Avonos**	**1.60**	**330**	*i* P		**Pn**	**22 17 04.9**	**-1.0**
AVNT				*i* S		**Sn**	**22 17 25.7**	**-0.9**
AKCD	**Akcadag**	**1.84**	**60**	*i* P		**Pn**	**22 17 07.9**	**-1.3**
AKCD				*i* S		**Sn**	**22 17 31.4**	**-1.1**
AKCD	**Akcadag**	**1.84**	**60**	*i* P		**Pn**	**22 17 07.9**	**-1.3**
AKCD				*i* S		**Sn**	**22 17 31.4**	**-1.1**
ATAB	**Bozova**	**1.92**	**87**	*i* P		**Pn**	**22 17 12.7**	**+2.5**
ATAB				*i* S		**Sn**	**22 17 37.1**	**+2.8**
SULT	**Sultanhani-AKS**	**2.04**	**294**	*e*PN		**Pn**	**22 17 12.6**	**+0.6**
SULT	**Sultanhani-AKS**	**2.04**	**294**	*e*Pn		**Pn**	**22 17 12.6**	**+0.6**
DARE	**Darende-Malaty**	**2.17**	**44**	*e*PN		**Pn**	**22 17 07.0**	**-6.6**
DARE	**Darende-Malaty**	**2.17**	**44**	*e*Pn		**Pn**	**22 17 07.0**	**-6.6**
MALT	**Malatya**	**2.21**	**65**	*e*PN		**Pn**	**22 17 14.5**	**+0.3**
MALT	**Malatya**	**2.21**	**65**	*e*Pn		**Pn**	**22 17 14.5**	**+0.3**
SVSK	**Karacayir**	**2.66**	**19**	*e*PN		**Pn**	**22 17 20.5**	**0.0**
SVSK	**Karacayir**	**2.66**	**19**	*e*Pn		**Pn**	**22 17 20.5**	**0.0**
HDMB	**Hadim**	**2.75**	**262**	*e*PN		**Pn**	**22 17 23.3**	**+1.5**
HDMB	**Hadim**	**2.75**	**262**	*e*Pn		**Pn**	**22 17 23.3**	**+1.6**
SVRC	**Sivrice-ELAZID**	**2.87**	**69**	*e*PN		**Pn**	**22 17 23.8**	**+0.4**
SVRC	**Sivrice-ELAZID**	**2.87**	**69**	*e*Pn		**Pn**	**22 17 23.8**	**+0.4**
PTK	**Pertek**	**3.14**	**61**	*e*PN		**Pn**	**22 17 27.5**	**+0.5**
PTK	**Pertek**	**3.14**	**61**	*e*Pn		**Pn**	**22 17 27.5**	**+0.5**

*ISCJB **18** 22:31:27.6±1.1, 38°.91N±0°.09×69°.9E±0°.1, h77km±28km, Error ellipse: s-maj=21.5km s-min=9.0km az=34.9*
*NEIC **18** 22:31:28.2±0.9, 38°.98N×69°.96E, h35km, mb3.8/1, Error ellipse: s-maj=14.9km s-min=10.3km az=130.0*
ISC 18 22:31:29.3±0.9,**38°.93N**±0°.08×**69°.9E**±0°.1,**h75**km±29km, **n19, σ1°06/26, 2C, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.20**	**6**	Pn		**Pn**	**22 32 31.9**	**+1.1**
	5.6nm,0.7s,baz=171,slow=11,SNR=56							
KK31				⇑Sn		**Sn**	**22 33 14.6**	**-3.9**
	11nm,0.7s,baz=185,slow=20,SNR=4.0							
KK31				⇑Lg			22 33 29.6	
	6.7nm,0.4s,baz=185,slow=31,SNR=5.7							
AML	**Almayashu**	**4.31**	**41**	P		**Pn**	**22 32 31.4**	**-0.9**
	SNR=22							
AML	**Almayashu**	**4.31**	**41**	*e*Pn		**Pn**	**22 32 30.0**	**-2.4**
AML				*e*Sn		**Sn**	**22 33 22.0**	**+0.7**
KBL	**Kabul**	**4.43**	**189**	*e*Pn		**Pn**	**22 32 34.5**	**+0.4**
KBL				*e*Sn		**Sn**	**22 33 28.8**	**+4.4**
EKS2	**Erkin-Say**	**4.75**	**37**	P		**Pn**	**22 32 38.0**	**-0.3**
	SNR=8.0							
EKS2	**Erkin-Say**	**4.75**	**37**	*e*Pn		**Pn**	**22 32 37.5**	**-0.8**
EKS2				Sn		**Sn**	**22 33 33.4**	**+1.4**
KSH	**Kashi**	**4.75**	**81**	Pn		**Pn**	**22 32 27.4**	**-11**
KSH				Sn		**Sn**	**22 33 16.5**	**-16**
KSH				smax				
	comp=N,140nm,0.9s							
KSH				smax				
	comp=E,65nm,1.0s							
UCH	**Uchtor**	**4.81**	**45**	P		**Pn**	**22 32 38.6**	**-0.6**
	SNR=20							
UCH	**Uchtor**	**4.81**	**45**	*e*Pn		**Pn**	**22 32 36.2**	**-3.0**
UCH				*e*Sn		**Sn**	**22 33 34.7**	**+1.1**
AAK	**Ala-Archa**	**5.08**	**42**	P		**Pn**	**22 32 42.5**	**-0.3**
	SNR=13							
AAK	**Ala-Archa**	**5.08**	**42**	*e*Pn		**Pn**	**22 32 40.9**	**-2.0**
	comp=E,19nm,0.5s							
AAK				*e*Sn		**Sn**	**22 33 43.0**	**+2.8**
KBK	**Karagaybulak**	**5.34**	**44**	P		**Pn**	**22 32 46.5**	**+0.1**
	SNR=27							
CHMS	**Chumysh**	**5.47**	**40**	P		**Pn**	**22 32 47.6**	**-0.6**
	SNR=18							
USP	**Ospenovka**	**5.55**	**37**	P		**Pn**	**22 32 48.9**	**-0.4**
	SNR=26							
MK31	**Makanchi Array**	**12.00**	**45**	Pn		**Pn**	**22 34 16.9**	**-0.4**
ABKAR	**Akbulak array**	**12.55**	**329**	*e*Pn		**Pn**	**22 34 25.1**	**+0.3**
	comp=E,3.9nm,0.4s							
KURK	**Kurchatov**	**13.30**	**25**	Pn		**Pn**	**22 34 33.9**	**-0.8**
BRVK	**Borovoye**	**14.13**	**1**	*e*Pn		**Pn**	**22 34 45.2**	**-0.5**
	comp=E,1.5nm,0.7s							
KIV	**Kislovodsk**	**20.97**	**293**	*e*P		**P**	**22 36 06.9**	**+0.8**
	comp=E,2.9nm,0.6s							

*ISK **18** 22:56:43.8, 36°.80N×28°.10E, h29km, ML1.9*
*ISCJB **18** 22:56:45.6±0.7, 36°.81N±0°.04×28°.07E±0°.03, h13km±10km, Error ellipse: s-maj=6.9km s-min=4.6km az=176.9*

*CSEM **18** 22:56:45.4±0.3, 36°.79N×28°.08E, h8km, ML1.9*
*DDA **18** 22:56:45.4, 36°.82N×28°.07E, h7km±2km, Md2.9*
ISC 18 22:56:46.2±0.7,**36°.82N**±0°.04×**28°.06E**±0°.04,**h18**km±8km, **n17, σ0°74/34, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.36**	**30**	*e*PG		**Pg**	**22 56 52.8**	**-1.0**
YER				*e*SG		**Sg**	**22 56 59.0**	**0.0**
YER	**Yerkesik**	**0.36**	**30**	*e*Pg		**Pg**	**22 56 52.8**	**-1.0**
YER				*e*Sg		**Sg**	**22 56 59.0**	**0.0**
DAT	**Datca**	**0.40**	**257**	*e*PG		**Pg**	**22 56 53.6**	**-0.8**
DAT				*e*SG		**Sg**	**22 57 00.7**	**+0.8**
DAT	**Datca**	**0.40**	**257**	*e*Pg		**Pg**	**22 56 53.6**	**-0.8**
DAT				*e*Sg		**Sg**	**22 57 00.7**	**+0.8**
TURN	**Turunc**	**0.44**	**83**	*i* P		**Pg**	**22 56 48.6**	**-6.6**
TURN				*i* S		**Sg**	**22 56 51.0**	**-10**
MLSB	**Milas**	**0.53**	**335**	*e*PG		**Pg**	**22 56 56.3**	**-0.5**
MLSB				*e*SG		**Sg**	**22 57 04.7**	**+0.9**
MLSB	**Milas**	**0.53**	**335**	*e*Pg		**Pg**	**22 56 56.3**	**-0.4**
MLSB				*e*Sg		**Sg**	**22 57 04.7**	**+0.9**
BDRM	**Kayabasi**	**0.55**	**297**	*i* P		**Pg**	**22 56 56.4**	**-0.8**
BDRM				*i* S		**Sg**	**22 57 05.6**	**+1.1**
BDRM	**Kayabasi**	**0.55**	**297**	*i* P		**Pg**	**22 56 56.4**	**-0.8**
BDRM				*i* S		**Sg**	**22 57 05.6**	**+1.0**
BODT	**Bodrum**	**0.65**	**292**	*e*PG		**Pg**	**22 56 57.7**	**-1.2**
BODT				*e*SG		**Sg**	**22 57 07.6**	**0.0**
BODT	**Bodrum**	**0.65**	**292**	*e*Pg		**Pg**	**22 56 57.7**	**-1.2**
BODT				*e*Sg		**Sg**	**22 57 07.6**	**0.0**
AYDN	**Tasoluk**	**0.85**	**350**	*i* P		**Pg**	**22 57 02.3**	**-0.6**
AYDN				*i* S		**Sg**	**22 57 15.0**	**+0.9**
AYDN	**Tasoluk**	**0.85**	**350**	*i* P		**Pg**	**22 57 02.3**	**-0.5**
AYDN				*i* S		**Sg**	**22 57 15.0**	**+0.9**
GOLH	**Golhisar**	**1.27**	**70**	*i* P		**Pn**	**22 57 08.9**	**-0.2**
GOLH				*i* S		**Sg**	**22 57 27.3**	**-0.1**
GOLH	**Golhisar**	**1.27**	**70**	*i* P		**Pn**	**22 57 08.9**	**-0.2**
GOLH				*i* S		**Sg**	**22 57 27.3**	**-0.2**
AKAS	**Kas**	**1.38**	**115**	*i* P		**Pn**	**22 57 11.2**	**+0.6**
AKAS				*i* S		**Sg**	**22 57 31.6**	**+0.8**
AKAS	**Kas**	**1.38**	**115**	*i* P		**Pn**	**22 57 11.2**	**+0.7**
AKAS				*i* S		**Sg**	**22 57 31.6**	**+0.9**

*IDC **18** 23:07:54.6±1.3, 38°.56N×70°.68E, h0km, mb3.8/9, mb1 4.0/15, mb1mx3.9/29, mbtmp4.0/15, ML4.0/6, MS3.1/2, Ms1 3.1/2, ms1mx2.6/28, Error ellipse: s-maj=22.6km s-min=10.7km az=151.0*
*NNC **18** 23:07:55.9±2.3, 38°.73N×70°.22E, h0km, mb4.3, mpv4.5, Error ellipse: s-maj=21.0km s-min=17.5km az=62.0*
*BJI **18** 23:07:58.8, 38°.90N×70°.50E, h42km, mb4.2/3, ML3.8/4*
*MOS **18** 23:08:00.3±1.5, 38°.95N×70°.55E, h33km, mb4.0/10, Error ellipse: s-maj=9.4km s-min=6.9km az=84.7*
*NEIC **18** 23:08:02.5±0.9, 39°.01N×70°.47E, h39km±9km, mb4.0/5, Error ellipse: s-maj=9.4km s-min=7.0km az=172.0*
*TEH **18** 23:08:36.3, 39°.55N×66°.07E, h18km*
ISC 18 23:07:54.8±1.9,**38°.66N**±0°.03×**70°.50E**±0°.04,**h0**km±13km, **n113, σ1°59/135, mb4.0/17, 11C-3D, Af

IKIA	**Kiasar**	**13.58**	**265**	*e*Pn		**Pn**	**23 11 02.4 -6.3**
IKIA				*e*			23 11 28.0
	comp=Z,43nm,0.2s						
VOSK	**Vostochnaya**	**14.07**	**1**	⇑P		**Pn**	**23 11 13.5 -1.7**
	comp=Z,3.1nm,0.8s						
VOSK				⇑S		**Sn**	**23 13 49.7 -2.3**
ZRNK	**Zerenda**	**14.34**	**356**	⇑P		**Pn**	**23 11 18.7 -0.1**
	comp=Z,3.8nm,1.0s						
BVA0	**Borovoye Array**	**14.37**	**360**	P		**Pn**	**23 11 19.4 +0.1**
	comp=Z,0.6nm,0.8s,baz=160,slow=13,SNR=11						
BVAR	**Borovoye Array**	**14.37**	**360**	Pn		**Pn**	**23 11 18.6 -0.8**
	comp=Z,0.7nm,0.3s,baz=162,slow=12,SNR=14						
BVAR	**Borovoye Array**	**14.37**	**360**	*e*P		**Pn**	**23 11 19.5 +0.2**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**14.41**	**359**	*e*Pn		**Pn**	**23 11 18.3 -1.5**
BRVK	**Borovoye**	**14.41**	**359**	*e*P		**Pn**	**23 11 19.1 -0.7**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
AKTK	**Aktyubinsk**	**14.73**	**327**	Pn		**Pn**	**23 11 23.1 -1.2**
AKTK				Sn		**Sn**	**23 14 01.1 -7.1**
AKTO	**Aktyubinsk**	**14.73**	**327**	⇑P		**Pn**	**23 11 22.7 -1.6**
	comp=Z,0.9nm,0.7s						
AKTO	**Aktyubinsk**	**14.73**	**327**	Pn		**Pn**	**23 11 23.1 -1.2**
	comp=Z,1.0nm,0.3s,baz=133,slow=14,SNR=20						
AKTO				Sn		**Sn**	**23 14 01.1 -7.1**
	comp=Z,1.2nm,0.3s,baz=152,slow=22,SNR=6.0						
AKTO	**Aktyubinsk**	**14.73**	**327**	P		**Pn**	**23 11 23.1 -1.2**
AKTO							23 14 01.1
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				smax			
	comp=N,1.0nm,0.3s						
KOLN	**Koldanda**	**15.41**	**131**	*e*P		**Pn**	**23 11 31.9 -1.6**
	comp=N,15nm,0.4s						
GKN	**Gorkha**	**15.87**	**128**	*e*P		**Pn**	**23 11 37.6 -1.9**
	comp=N,87nm,0.7s						
KKN	**Kakani**	**16.42**	**127**	*e*P		**Pn**	**23 11 44.2 -2.4**
	comp=N,18nm,0.5s						
DMN	**Daman**	**16.44**	**128**	*e*P		**Pn**	**23 11 45.5 -1.4**
	comp=N,37nm,0.9s						
PKIN	**Phulchoki**	**16.65**	**127**	*e*P		**Pn**	**23 11 48.6 -0.8**
	comp=N,13nm,0.5s						
PKI	**Pulchoki**	**16.66**	**127**	*e*P		**Pn**	**23 11 48.5 -1.1**
	comp=N,18nm,0.6s						
JIRN	**Jiri**	**17.09**	**125**	*e*P		**Pn**	**23 11 53.6 -1.4**
	comp=N,38nm,0.5s						
RAMN	**Ramite**	**17.84**	**126**	*e*P		**Pn**	**23 12 02.5 -2.0**
	comp=N,28nm,0.5s						
ZAA0	**Zalesovo Array**	**18.16**	**28**	*e*Pn		**Pn**	**23 12 06.2 -2.0**
ZALV	**Zalesovo Beam**	**18.16**	**28**	P		**Pn**	**23 12 06.4 -1.8**
	comp=N,0.7nm,0.3s,baz=228,slow=12,SNR=10						
ZALV	**Zalesovo Beam**	**18.16**	**28**	*e*P		**Pn**	**23 12 06.0 -2.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TAPN	**Taplejung**	**18.29**	**123**	*e*P		**Pn**	**23 12 08.2 -1.7**
	comp=Z,19nm,0.4s						
ODAN	**Odare**	**18.41**	**125**	*e*P		**Pn**	**23 12 10.4 -1.0**
	comp=Z,25nm,0.6s						
LSA	**Lhasa**	**19.25**	**111**	P		**Pn**	**23 12 23.1 +1.5**
DGRG	**David-gareji**	**19.41**	**286**	P		**Pn**	**23 12 25.3 +1.8**
ARU	**Arti**	**19.47**	**340**	*e*Pn		**Pn**	**23 12 20.9 -3.1**
	comp=Z,3.9nm,0.8s						
ARU	**Arti**	**19.47**	**340**	*c i*P		**Pn**	**23 12 22.8 -1.2**
ARU				S		**Sn**	**23 15 52.8 -10**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s						
MTA	**Mtatsminda**	**19.85**	**287**	P		**Pn**	**23 12 28.1 -0.6**
TBLG	**Delisi**	**19.89**	**287**	*e*P		**Pn**	**23 12 28.9 -0.3**
TBLG	**Delisi**	**19.89**	**287**	P		**Pn**	**23 12 28.9 -0.3**
GNI	**Garni**	**19.94**	**282**	*e*P		**Pn**	**23 12 30.7 +0.9**
	comp=Z,6.7nm,0.6s						
GNI	**Garni**	**19.94**	**282**	P		**Pn**	**23 12 30.8 +1.0**
	comp=Z,1.1nm,0.3s,baz=226,slow=1.5,SNR=4.9						
GNI	**Garni**	**19.94**	**282**	*i* P		**Pn**	**23 12 33.6 +3.8**
GNI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GOR	**Gori**	**20.36**	**288**	P		**P**	**23 12 38.9 +6.1**
UMR	**Umm Al-Rimmam**	**20.89**	**251**	*e*P		**P**	**23 12 40.4 +1.8**
UMR				AMb	AMB		23 12 44.3
	comp=Z,19nm,0.6s						
MIB	**Mutribah**	**21.04**	**252**	*e*P		**P**	**23 12 41.6 +1.4**
MIB				AMb	AMB		23 12 49.0
	comp=Z,22nm,0.8s,mb4.6						
NAY	**Al-Naaiem**	**21.40**	**251**	*e*P		**P**	**23 12 45.7 +1.6**
NAY				AMb	AMB		23 12 53.0
	comp=Z,7.6nm,0.7s,mb4.2						
KIV	**Kislovodsk**	**21.50**	**293**	*e*P		**P**	**23 12 47.1 +2.1**
	comp=Z,7.3nm,0.6s,mb4.2						
KIV	**Kislovodsk**	**21.50**	**293**	P		**P**	**23 12 50.0 +5.0**
KIV				*e*			23 13 01.5
KIV				S		**S**	**23 16 44.0 -0.1**
GTA	**Gaotai**	**22.75**	**79**	*e*P		**P**	**23 13 00.0 +1.6**
GTA				pP			23 13 04.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.8						
VRHR	**Novokhopersk**	**23.77**	**311**	*e*P		**P**	**23 13 10.5 +1.7**
VRHR				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.2						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.7s						
MALT	**Malatya**	**25.04**	**279**	*e*P		**P**	**23 13 24.1 +3.5**
	comp=E,2.7nm,0.9s,mb4.0						
MALT	**Malatya**	**25.04**	**279**	*e*P		**P**	**23 13 24.1 +3.6**
MALT				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
VSR	**Storozhevoye**	**25.28**	**310**	*e*P		**P**	**23 13 26.4 +3.9**
VSR				pmax	pmax		
	comp=E,6.0nm,0.9s						
VSR				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
VSR				pmax	pmax		
	comp=N,4.0nm,0.6s						
ZAK	**Zakamensk**	**25.94**	**52**	*e*P		**P**	**23 13 28.6 +0.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.6						
TLY	**Talaya**	**26.50**	**50**	P		**P**	**23 13 34.0 +0.4**
SONM	**Songino Array**	**27.50**	**59**	P		**P**	**23 13 42.3 -0.4**
	comp=Z,0.5nm,0.5s,mb3.6,baz=261,slow=9.6,SNR=5.0						
SONM				LR	LR		23 25 56.8
	comp=Z,46nm,18.2s,baz=131,slow=40						
SONM	**Songino Array**	**27.50**	**59**	P		**P**	**23 13 42.3 -0.4**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,47nm,18.2s						
ULN	**Ulaanbaatar**	**27.95**	**59**	P		**P**	**23 13 46.4 -0.2**
OBN	**Obninsk**	**28.07**	**317**	P		**P**	**23 13 47.4 -0.3**
BR131	**Keskin Array S**	**28.46**	**284**	*e*P		**P**	**23 13 53.5 +2.1**
BRTR	**Keskin Array B**	**28.46**	**284**	P		**P**	**23 13 53.1 +1.8**
	comp=Z,1.3nm,0.9s,mb3.7,baz=79,slow=7.7,SNR=7.7						
BRTR	**Keskin Array B**	**28.46**	**284**	*e*P		**P**	**23 13 56.5 +5.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	**Malin Array Be**	**31.32**	**306**	P		**P**	**23 14 19.5 +3.0**
	comp=Z,0.5nm,0.4s,mb3.8,baz=81,slow=8.5,SNR=4.3						
AKASG	**Malin Array Be**	**31.32**	**306**	P		**P**	**23 14 19.5 +3.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CHTO	**Chiang Mai**	**31.62**	**121**	*e*P		**P**	**23 14 24.4 +4.9**
TIRR	**Tirgusor**	**31.75**	**294**	*e*P		**P**	**23 14 21.5 +1.1**
CM31	**Chiang Mai Arr**	**31.88**	**121**	P		**P**	**23 14 27.4 +5.7**
BJT	**Baijiatuau**	**35.06**	**73**	*e*P		**P**	**23 14 50.8 +1.5**
KWP	**Kalwaria Pacla**	**35.45**	**304**	*e*P		**P**	**23 14 54.2 +1.7**
	comp=Z,1.2nm,0.4s,mb4.2						
KWP	**Kalwaria Pacla**	**35.45**	**304**	*e*P		**P**	**23 14 54.2 +1.7**
KWP				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
FINES	**FINESS Array B**	**35.49**	**325**	P		**P**	**23 14 52.1 -0.6**
	comp=Z,1.3nm,0.6s,mb4.1,baz=125,slow=12,SNR=5.8						
FINES	**FINESS Array B**	**35.49**	**325**	P		**P**	**23 14 52.1 -0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MORC	**Moravsky Berou**	**38.79**	**304**	P		**P**	**23 15 20.7 -0.2**
ARCES	**ARCESS Array B**	**39.01**	**337**	P		**P**	**23 15 21.7 -0.8**
	comp=Z,1.0nm,0.6s,mb3.6,baz=108,slow=7.8,SNR=7.0						
ARCES	**ARCESS Array B**	**39.01**	**337**	P		**P**	**23 15 21.7 -0.8**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**42.43**	**322**	P		**P**	**23 15 53.0 +2.1**
NOA	**NORSAR Array B**	**42.43**	**322**	P		**P**	**23 15 53.0 +2.1**
	comp=Z,1.1nm,0.5s,mb3.8,baz=94,slow=8.2,SNR=6.6						
NOA	**NORSAR Array B**	**42.43**	**322**	P		**P**	**23 15 53.0 +2.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
STU	**Stuttgart**	**44.34**	**304**	P		**P**	**23 16 07.2 +0.8**
WLF	**Walferdange**	**46.12**	**306**	P		**P**	**23 16 20.6 0.0**
YSS	**Yuzh-Sakhalins**	**51.93**	**56**	P		**P**	**23 17 06.2 +1.0**
ESDC	**Sonseca Array**	**56.12**	**296**	P		**P**	**23 17 38.9 +3.0**
	comp=Z,0.7nm,0.5s,mb4.0,baz=57,slow=7.3,SNR=10						
TORD	**Torodi Ar. Bea**	**65.39**	**267**	P		**P**	**23 18 39.0 -0.3**
	comp=Z,1.5nm,0.6s,mb4.4,baz=49,slow=6.6,SNR=18						

IDC 18 23:14:10.1±2.2, 8°.03S×151°.83E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.6/14, mbtmp3.5/4, Error ellipse: s-maj=101.6km s-min=27.9km az=126.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.67**	**233**	P	P	23 18 50.7	-1.0
	0.5nm,0.3s,baz=40,slow=9.7,SNR=5.3						
ASAR	**Alice Springs**	**23.17**	**226**	P	P	23 19 19.4	+0.9
	0.8nm,0.7s,baz=63,slow=11,SNR=6.5						
MKAR	**Makanchi Array**	**82.12**	**319**	P	P	23 26 32.6	0.0
	0.2nm,0.6s,baz=97,slow=8.8,SNR=3.1						
ILAR	**Eielson Array**	**85.49**	**22**	P	P	23 26 50.0	+0.5
	0.9nm,0.8s,baz=245,slow=5.8,SNR=9.4						
TORD	**Torodi Ar. Bea**	**150.22**	**282**	PKPbc	PKPbc	23 34 03.5	-0.6
	0.9nm,0.6s,baz=57,slow=3.3,SNR=11						

*NEIC **18** 23:34:18.3, 31°.47S×69°.34W, h157km, MG3.5(GUC), After GUC.*

GUC 18 23:34:18.3±0.9, 31°.47S×69°.34W, h157km±15km, ML3.5, 8C-2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JACH	**Jahuel**	**1.61**	**221**	*e*P	Pn	23 34 51.1	+1.6
JACH				*i* S	Sn	23 35 15.3	+1.8
JACH	**Jahuel**	**1.61**	**221**	*e*P	Pn	23 34 51.1	+1.6
JACH				*i* S	Sn	23 35 15.3	+1.8
TLL	**Tololo Astrono**	**1.81**	**315**	*e*P	Pn	23 34 53.1	+1.4
TLL				*i* S	Sn	23 35 19.2	+1.9
TLL	**Tololo Astrono**	**1.81**	**315**	*e*P	Pn	23 34 53.1	+1.4
TLL				*i* S	Sn	23 35 19.2	+1.9
TLL				AML	AML	23 35 26.8	
	comp=N,216nm,0.5s						
CHNG	**Los Chungos**	**1.89**	**257**	*e*P	Pn	23 34 52.1	-0.5
CHNG				*i* S	Sn	23 35 17.7	-1.1
FCH	**Farellones**	**2.02**	**203**	*i*P	Pn	23 34 54.8	+0.8
FCH				*i* S	Sn	23 35 23.1	+1.5
FCH				AML	AML	23 35 27.9	
	comp=N,224nm,0.3s						
PEL	**Peldehue**	**2.02**	**214**	⇓*i*P	Pn	23 34 54.4	+0.3
PEL				*i* S	Sn	23 35 22.1	+0.4
PEL				AML	AML	23 35 24.9	
	comp=E,503nm,0.4s						
ROCH	**El Roble**	**2.06**	**223**	*e*P	Pn	23 34 55.3	+0.8
ROCH				*i* S	Sn	23 35 23.9	+1.5
CLCH	**Cerro Calan**	**2.17**	**208**	*e*P	Pn	23 34 56.7	+0.9
CLCH				*i* S	Sn	23 35 25.4	+0.7
CLCH				AML	AML	23 35 28.4	
	comp=E,259nm,0.5s						
ANTU	**Antumapu**	**2.36**	**207**	*e*P	Pn	23 34 58.7	+0.7
ANTU				*i* S	Sn	23 35 29.5	+0.7
ANTU	**Antumapu**	**2.36**	**207**	*e*P	Pn	23 34 58.7	+0.7
ANTU				*i* S	Sn	23 35 29.5	+0.7
ANTU				AML	AML	23 35 33.7	
	comp=E,198nm,0.4s						
PCH	**Pirque**	**2.36**	**205**	*e*P	Pn	23 34 59.1	+1.1
PCH				*i* S	Sn	23 35 30.0	+1.2
PCH	**Pirque**	**2.36**	**205**	*e*P	Pn	23 34 59.1	+1.1
PCH				*i* S	Sn	23 35 30.0	+1.2
LMEL	**Las Melosas**	**2.48**	**197**	⇑*i*P	Pn	23 34 60.0	+0.5
LMEL				*i* S	Sn	23 35 32.2	+0.9
LMEL	**Las Melosas**	**2.48**	**197**	⇑*i*P	Pn	23 34 60.0	+0.5
LMEL				*i* S	Sn	23 35 32.2	+0.9
LMEL				AML	AML	23 35 41.8	
	comp=E,130nm,0.4s						
TACH	**Talagante**	**2.56**	**211**	⇑*i*P	Pn	23 35 00.9	+0.5
TACH				*i* S	Sn	23 35 33.7	+0.7
TACH	**Talagante**	**2.56**	**211**	⇑*i*P	Pn	23 35 00.9	+0.5
TACH				*i* S	Sn	23 35 33.7	+0.7
CHCH	**Chadas Angostu**	**2.69**	**204**	⇑*i*P	Pn	23 35 02.8	+0.8
CHCH				*i* S	Sn	23 35 37.0	+1.0
CHCH	**Chadas Angostu**	**2.69**	**204**	⇑*i*P	Pn	23 35 02.8	+0.8
CHCH				*i* S	Sn	23 35 37.0	+1.0
LCO	**Las Campanas**	**2.72**	**334**	⇑*i*P	Pn	23 35 03.5	+1.0
LCO				*i* S	Sn	23 35 37.8	+1.2
LCO	**Las Campanas**	**2.72**	**334**	⇑*i*P	Pn	23 35 03.5	+1.0
LCO				*i* S	Sn	23 35 37.8	+1.2
LCO				AML	AML	23 35 40.1	
	comp=N,312nm,0.3s						
CACH	**El Canelo**	**2.84**	**202**	*e*P	Pn	23 35 05.2	+1.2
CACH				*e*S	Sn	23 35 41.0	+1.7
CACH	**El Canelo**	**2.84**	**202**	*e*P	Pn	23 35 05.2	+1.2
CACH				*e*S	Sn	23 35 41.0	+1.7

*NEIC **18** 23:39:46.5, 16°.03N×97°.73W, h20km, MD3.7(MEX), After MEX.*

MEX 18 23:39:46.5±1.2, 16°.03N×97°.73W, h20km±78km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.52**	**313**	*i* P	Pb	23 39 55.0	-2.1
PNIG				*i* S	Sb	23 40 02.5	-1.7
PNIG	**Pinotepa**	**0.52**	**313**	*i* P	Pb	23 39 55.0	-2.1
PNIG				*i* S	Sb	23 40 02.5	-1.7
VHO	**Vista Hermosa**	**1.41**	**43**	*i* P	Pn	23 40 07.5	-3.5
VHO				*i* S	Sn	23 40 25.2	-3.7
VHO	**Vista Hermosa**	**1.41**	**43**	*i* P	Pn	23 40 07.5	-3.5
VHO				*i* S	Sn	23 40 25.2	-3.7
HUIG	**Huatulco**	**1.58**	**99**	*i* P	Pn	23 40 10.9	-2.4
HUIG				*i* S	Sn	23 40 29.0	-4.2
HUIG	**Huatulco**	**1.58**	**99**	*i* P	Pn	23 40 10.9	-2.4
HUIG				*i* S	Sn	23 40 29.0	-4.2
UTMO	**Huajuapan**	**1.79**	**358**	*i* P	Pn	23 40 15.1	-1.2
UTMO				*i* S	Sn	23 40 34.1	-4.3
PPM	**Popocatepetl**	**3.14**	**344**	*e*P	Pn	23 40 33.5	-1.2
PPM				*i* S	Sn	23 41 08.5	-3.1
PPM	**Popocatepetl**	**3.14**	**344**	*e*P	Pn	23 40 33.5	-1.2
PPM				*i* S	Sn	23 41 08.5	-3.1

IDC 18 23:45:50.6±11.0, 14°.12N×145°.32E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/19, mbtmp3.5/3, Error ellipse: s-maj=441.4km s-min=32.1km az=80.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**35.52**	**198**	P	P	23 52 48.9	-0.6
	1.0nm,0.5s,baz=22,slow=9.5,SNR=3.9						
ASAR	**Alice Springs**	**39.17**	**197**	P	P	23 53 21.1	+0.6
	0.3nm,0.4s,baz=18,slow=13,SNR=5.3						
MKAR	**Makanchi Array**	**61.41**	**316**	P	P	23 56 08.8	0.0
	0.2nm,0.5s,baz=97,slow=9.3,SNR=4.5						

*NEIC **19** 00:17:11.7, 19°.13N×66°.92W, h18km, MD3.5(RSPR), After RSPR.*

RSPR 19 00:17:11.7, 19°.13N×66°.92W, h18km±2km, MD3.5/11, 14C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.69**	**195**	⇓*e*P	Pb	00 17 23.3	-1.7
AGPR				*e*S	Sb	00 17 32.7	-1.5
AOPR	**Arecibo Observ**	**0.80**	**169**	*e*P	Pb	00 17 25.0	-2.0
AOPR				*e*S	Sb	00 17 35.3	-2.2
LRS	**Lares**	**0.84**	**175**	*e*P	Pb	00 17 25.5	-2.2
LRS				*e*S	Sb	00 17 36.3	-2.4
MPR	**Mayaguez**	**0.94**	**193**	*e*P	Pb	00 17 26.9	-2.5
OBIP	**Obispado Ponce**	**1.12**	**165**	*e*P	Pn	00 17 29.9	-2.6
OBIP				*e*S	Sb	00 17 43.6	-3.2
CRPR	**Cabo Rojo, PR**	**1.14**	**189**	*e*P	Pn	00 17 29.9	-2.8
CRPR				*e*S	Sb	00 17 44.0	-3.2
GBPR	**Guanica, Bosqu**	**1.15**	**178**	*e*P	Pn	00 17 30.6	-2.3
SJG	**San Juan**	**1.25**	**144**	*e*P	Pn	00 17 31.1	-3.1
SJG				*e*S	Sb	00 17 46.6	-3.8
ICM	**Isla Caja Muer**	**1.29**	**163**	*e*P	Pn	00 17 32.5	-2.2
ICM				*e*S	Sn	00 17 48.4	-3.2
CBYP	**Canovanas**	**1.32**	**130**	⇑*e*P	Pn	00 17 32.2	-3.0
CBYP				*e*S	Sn	00 17 49.2	-3.2
HUMP	**Col San Antoni**	**1.41**	**134**	⇑*e*P	Pn	00 17 33.5	-2.9
HUMP				*e*S	Sn	00 17 51.2	-3.4
MTP	**Monte Pirata**	**1.66**	**128**	⇑*e*P	Pn	00 17 36.7	-3.0
MTP				*e*S	Sn	00 17 56.6	-4.0
STVI	**Saint Thomas**	**2.02**	**112**	⇑*e*P	Pn	00 17 42.2	-2.6
STVI				*e*S	Sn	00 18 06.1	-3.5
SMN1	**Samana, DR**	**2.23**	**272**	⇑*e*P	Pn	00 17 45.2	-2.4
SMN1				*e*S	Sn	00 18 11.3	-3.3
TBVI	**Tortola**	**2.29**	**108**	⇑*e*P	Pn	00 17 46.6	-2.0

*BJI **19** 00:23:39.6, 3°.89N×95°.61E, h98km, mB4.4/2, mb4.7/8*
*MOS **19** 00:23:45.9±1.0, 4°.78N×95°.83E, h90km, mb4.5/22, Error ellipse: s-maj=15.1km s-min=6.6km az=116.1*
*IDC **19** 00:23:45.8±0.7, 4°.67N×95°.70E, h80km±5km, mb4.1/16, mb1 4.2/18, mb1mx4.1/24, mbtmp4.1/18, MS3.6/6, Ms1 3.6/6, ms1mx3.1/26, Error ellipse: s-maj=22.6km s-min=9.0km az=45.0*
*ISCJB **19** 00:23:46.2±0.8, 4°.65N±0°.05×95°.83E±0°.06, h98km±8km, mb4.3/47, Error ellipse: s-maj=9.8km s-min=7.0km az=151.1*
*NEIC **19** 00:23:47.9±1.2, 4°.70N×95°.76E, h98km±10km, mb4.4/14, Error ellipse: s-maj=13.5km s-min=6.4km az=59.0*
*DJA **19** 00:23:50, 4°.48N×96°.04E, h102km, mb4.9/10*
ISC 19 00:23:47.8±0.7, 4°.62N±0°.05×95°.83E±0°.06, h99km±7km, h85km±4.4km; pP-P, n133, σ0°.99/135, mb4.3/47, 10C-6D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPTI		**1.91**	**135**	P	**Pn**	**00 24 18.7**	**-0.5**
TPTI				S	**Sn**	**00 24 35.5**	**-7.6**
PSI	**Prapat**	**3.58**	**120**	P	**Pn**	**00 24 42.7**	**+1.4**
	85nm,0.3s,baz=295,slow=8.4,SNR=215						
PSI				S	**Sn**	**00 25 23.4**	**+0.7**
	21nm,0.3s,baz=330,slow=20,SNR=3.9						
KULM	**Kulim**	**4.85**	**82**	*e*Pn	**Pn**	**00 24 59.2**	**+0.8**
KULM				*e*Sn	**Sn**	**00 25 52.7**	**-0.8**
KULM	**Kulim**	**4.85**	**82**	P	**Pn**	**00 24 59.6**	**+1.1**
KULM	**Kulim**	**4.85**	**82**	P	**Pn**	**00 24 58.8**	**+0.3**
IPM	**Ipoh**	**5.18**	**91**	P	**Pn**	**00 25 03.5**	**+0.4**
IPM	**Ipoh**	**5.18**	**91**	P	**Pn**	**00 25 03.1**	**+0.1**
MNSI	**Mandailing Nat**	**5.33**	**135**	P	**Pn**	**00 25 05.1**	**0.0**
MNSI				S	**Sn**	**00 25 54.9**	**-10**
FRIM	**Kepong**	**5.94**	**103**	P	**Pn**	**00 25 13.3**	**-0.1**
BKNI	**Bangkinang**	**6.73**	**129**	P	**Pn**	**00 25 22.2**	**-1.9**
	1.2nm2μm306nm,1.1s						
PPI	**Padang Panjang**	**6.80**	**138**	P	**Pn**	**00 25 25.3**	**+0.2**
	0.3nm4μm75nm,1.0s						
KTGM	**Kuala Trenggan**	**7.31**	**84**	P	**Pn**	**00 25 33.2**	**+1.2**
SDSI	**Sungai Dareh**	**7.86**	**134**	P	**Pn**	**00 25 38.8**	**-0.6**
	0.1nm1μm38nm,0.9s						
KGM	**Kluang**	**7.91**	**109**	P	**Pn**	**00 25 40.7**	**+0.5**
MYKOM	**Kota Tinggi**	**8.49**	**109**	P	**Pn**	**00 25 48.2**	**+0.2**
MYKOM	**Kota Tinggi**	**8.49**	**109**	P	**Pn**	**00 25 47.6**	**-0.4**
	0.2nm838nm54nm,0.8s						
KSI	**Kapahiang**	**10.64**	**140**	P	**Pn**	**00 26 16.4**	**-0.9**
	119nm,0.5s						
MNAI	**Manna**	**11.41**	**141**	P	**Pn**	**00 26 25.2**	**-2.6**
	275nm,1.2s						
MDSI	**Maura Dua**	**12.30**	**137**	P	**Pn**	**00 26 37.4**	**-2.3**
	961nm78nm,1.0s						
KLSI		**12.83**	**136**	P	**Pn**	**00 26 45.5**	**-1.1**
	68nm,1.0s						
CM31	**Chiang Mai Arr**	**14.08**	**12**	Pn	**Pn**	**00 27 05.4**	**+2.5**
	12nm,0.6s						
CMAR	**Chiang Mai Arr**	**14.08**	**12**	P	**Pn**	**00 27 02.8**	**-0.2**
CMAR				LR	LR	00 32 27.5	
CMAR				ScP	ScP	00 35 41.5	+0.7
CMAR	**Chiang Mai Arr**	**14.08**	**12**	P	**Pn**	**00 27 02.7**	**-0.2**
	2.1nm,0.3s,baz=201,slow=12,SNR=13						
CMAR				LR	LR	00 32 27.5	
	comp=Z,63nm,18.5s,baz=180,slow=37						
CMAR				ScP	ScP	00 35 41.5	+0.7
	0.2nm,0.3s,baz=232,slow=3.1,SNR=5.0						
CHTO	**Chiang Mai**	**14.43**	**12**	*e*Pn	**Pn**	**00 27 09.0**	**+1.6**
	28nm,1.0s						
CHTO	**Chiang Mai**	**14.43**	**12**	*e*P	**Pn**	**00 27 09.0**	**+1.6**
CHTO				pmax	pmax		
	comp=Z,28nm,1.0s						
CHTO	**Chiang Mai**	**14.43**	**12**	P	**Pn**	**00 27 09.2**	**+1.8**
	comp=Z,321nmcomp=Z,30nm,1.0s						
PALK	**Pallekele**	**15.28**	**281**	*i* P	**Pn**	**00 27 23.7**	**+5.5**
PALK	**Pallekele**	**15.28**	**281**	P	**Pn**	**00 27 23.0**	**+4.8**
HYB	**Hyderabad**	**21.17**	**308**	*i* P	**P**	**00 28 26.5**	**+1.2**
SDKM	**Sandakan**	**21.30**	**86**	P	**P**	**00 28 31.5**	**+4.7**
KMI	**Kunming**	**21.44**	**17**	P	**P**	**00 28 31.5**	**+3.4**
KMI				pmax	pmax		
	comp=Z,13nm,1.1s,

ZALV S S 00 39 33.5 -1.5
comp=Z,1.0nm,0.5s,baz=170,slow=10,SNR=6.3
MJAR Matsushiro Arr 50.17 45 P P 00 32 34.1 +0.5
comp=Z,3.2nm,0.7s,mb4.3,baz=242,slow=8.5,SNR=5.6
NVS Novosibirsk 51.10 351 *eP* P 00 32 39.0 -1.2
NVS *eS* S 00 39 47.8 -2.5
NVS pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
NVS smax
comp=E,8.0nm,0.9s
RDF Al-Radifah 51.68 303 *eP* P 00 32 45.3 +0.3
NAY Al-Naaiem 52.04 304 *eP* P 00 32 48.1 +0.4
NAY AMb AMB 00 32 49.1
comp=Z,9.7nm,0.7s,mb4.9
MIB Mutribah 52.14 304 *eP* P 00 32 49.0 +0.6
MIB AMb AMB 00 32 50.0
comp=Z,15nm,0.9s,mb5.0
BVAR Borovoye Array 52.59 341 P P 00 32 50.2 -1.1
comp=Z,2.8nm,0.6s,mb4.5,baz=138,slow=9.4,SNR=25
BVAR pP pP 00 33 11.6 -3.6
comp=Z,1.4nm,0.8s,baz=139,slow=7.9,SNR=2.8
BVAR sP sP 00 33 18.4 -7.7
comp=Z,2.5nm,0.7s,baz=153,slow=10.0,SNR=5.3
BRVK Borovoye 52.65 341 *eP* P 00 32 50.0 -1.8
comp=Z,2.0nm,0.5s,mb4.4
BRVK Borovoye 52.65 341 *c iP* P 00 32 50.4 -1.3
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
ABKAR Akbulak array 52.87 332 *eP* P 00 32 59.5 -1.2
comp=Z,2.4nm,0.4s,mb4.6
STKA Stephens Creek 56.66 133 P P 00 33 22.7 +1.6
STKA LR LR 00 59 03.6
STKA Stephens Creek 56.66 133 P P 00 33 22.7 +1.6
comp=Z,2.7nm,0.7s,mb4.4,baz=324,slow=7.8,SNR=4.7
STKA LR LR 00 59 03.6
comp=Z,122nm,19.6s,baz=204,slow=37
GNI Garni 57.91 315⇑ *eP* P 00 33 30.5 +0.8
GNI pmax pmax
comp=Z,14nm,2.1s
SVE Sverdlovsk 59.02 338 *eP* P 00 33 36.3 -0.9
SVE pmax pmax
comp=Z,13nm,1.2s,mb4.8
ARU Arti 59.52 337 *eP* P 00 33 39.3 -1.3
ARU *e* 00 35 47.9
ARU S S 00 41 32.5 -10
KIV Kislovodsk 60.85 319 *eP* P 00 33 48.4 -1.5
comp=Z,10.0nm,1.1s,mb4.8
KIV Kislovodsk 60.85 319⇑ *eP* P 00 33 48.8 -1.1
KIV pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
BR131 Keskin Array S 65.82 312 *eP* P 00 34 22.0 -0.8
comp=Z,1.0nm,0.5s,mb3.9
BRTR Keskin Array B 65.82 312 P P 00 34 22.3 -0.5
comp=Z,1.3nm,0.6s,mb4.0,baz=137,slow=6.9,SNR=12
BRTR pP pP 00 34 43.1 -4.5
comp=Z,1.6nm,0.6s,baz=134,slow=7.7,SNR=7.5
OBN Obninsk 69.01 328 P P 00 34 42.2 -0.4
OBN *e* pP 00 35 02.1 -5.5
OBN pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
KLMR Klimovskoe 70.10 334 P P 00 34 47.1 -2.1
KLMR pmax pmax
comp=Z,17nm,1.5s,mb4.7
SEY Seymchan 71.19 24⇑ *eP* P 00 34 55.6 -0.1
AKASG Malin Array Be 71.73 322 P P 00 34 58.4 -0.9
comp=Z,0.4nm,0.3s,mb3.7,baz=94,slow=4.9,SNR=5.6
VRI Vrincioaia 72.20 317⇓ *iP* P 00 35 03.2 +1.0
PLOR Plostina 72.25 317⇓ *iP* P 00 35 04.4 +1.9
TESR 72.39 317⇓ *iP* P 00 35 03.6 +0.3
MLR Muntele Rosu 72.66 316⇓ *iP* P 00 35 06.1 +1.2
VOIR 73.27 316⇓ *iP* P 00 35 08.4 -0.1
BURAR Bucovina Array 73.57 318⇑ *iP* P 00 35 11.0 +0.7
BUR08 Bucovina Ar. S 73.59 318 *eP* P 00 35 10.6 +0.2
JOF Joensuu 74.49 335 *eP* P 00 35 14.2 -1.1
JOF pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
JOF Joensuu 74.49 335 *ep* P 00 35 14.2 -1.1
comp=Z,2.6nm,0.6s,mb4.1
DRGR 75.11 317⇓ *iP* P 00 35 20.0 +0.8
BOSA Boshof 75.33 239 LR LR 01 01 00.1
comp=Z,110nm,21.4s,baz=67,slow=30
CRVS Cervenica-Dubn 76.27 319 *eP* P 00 35 26.4 +0.6
comp=Z,10nm,1.7s,mb4.3
CRVS Cervenica-Dubn 76.27 319 *eP* P 00 35 26.4 +0.6
CRVS pmax pmax
comp=Z,10.0nm,1.7s,mb4.3
CRVS Cervenica-Dubn 76.27 319 *eP* P 00 35 26.4 +0.6
FINES FINESS Array B 76.35 332 P P 00 35 25.6 -0.3
comp=Z,3.2nm,0.7s,mb4.2,baz=110,slow=6.2,SNR=9.5
FINES LR LR 01 13 23.9
comp=Z,68nm,18.9s,baz=246,slow=39
KAF Kangasniemi 76.43 333 *eP* P 00 35 25.9 -0.5
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
KAF Kangasniemi 76.43 333 *ep* P 00 35 25.9 -0.5
comp=Z,1.7nm,0.6s,mb4.0
STHS Stebnicka Huta 76.49 320 *eP* P 00 35 29.0 +2.0
comp=Z,4.3nm,0.7s,mb4.3
STHS Stebnicka Huta 76.49 320 *eP* P 00 35 29.0 +2.0
STHS pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
STHS Stebnicka Huta 76.49 320 *eP* P 00 35 29.0 +2.0
OJC Ojcow 77.53 320 *eP* P 00 35 33.2 +0.4
PKSM Moragy 77.81 316⇑ *iP* P 00 35 34.6 +0.1
VYHS Vyhne 77.94 318 *eP* P 00 35 35.5 +0.4
comp=Z,2.4nm,1.6s,mb3.7
VYHS Vyhne 77.94 318 *eP* P 00 35 35.5 +0.4
KEV Kevo 78.44 341 *eP* P 00 35 36.4 -1.1
KEV pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
KEV Kevo 78.44 341 *ep* P 00 35 36.4 -1.1
comp=Z,3.9nm,0.7s,mb4.2
BILL Bilibino 78.48 21 *eP* P 00 35 37.0 -0.7
BILL pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
ARCES ARCESS Array B 78.88 340 P P 00 35 39.8 -0.1
comp=Z,3.8nm,0.6s,mb4.4,baz=97,slow=6.5,SNR=42
ARE0 ARCESS Array S 78.88 340 P P 00 35 38.4 -1.4
SOKA Soboth 80.34 316⇑ *iP* P 00 35 49.8 +1.5
comp=Z,5.3nm,1.2s,mb4.2
RETA Reutte 83.28 317⇑ *iP* P 00 36 03.8 +0.1
comp=Z,2.9nm,0.5s,mb4.3
NOA NORSAR Array B 83.37 331 P P 00 36 03.3 -0.5
comp=Z,1.8nm,0.9s,mb3.8,baz=90,slow=5.7,SNR=4.3
NOA LR LR 01 19 12.8
comp=Z,18nm,18.9s,baz=315,slow=40
KEST Kesra 84.48 305 P P 00 36 10.0 -0.1
comp=Z,1.4nm,0.9s,mb3.8,baz=90,slow=10,SNR=3.6
LPG La Plagne 86.09 315 *eP* P 00 36 18.7 +0.9
comp=Z,7.9nm,1.0s,mb4.3
LPG La Plagne 86.09 315 *eP* P 00 36 18.7 +0.9
comp=Z,4.0nm,1.0s,mb4.3
LPG La Plagne 86.09 315 *eP* P 00 36 18.7 +0.9
LPG pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
LPL La Plagne 86.11 315 *eP* P 00 36 18.7 +0.8
comp=Z,9.0nm,0.9s,mb4.4
LPL La Plagne 86.11 315 *eP* P 00 36 18.7 +0.8
comp=Z,4.5nm,0.9s,mb4.4
LPL La Plagne 86.11 315 *eP* P 00 36 18.7 +0.8
LPL pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
HAU Haudompre 86.25 318 *eP* P 00 36 18.6 0.0
CABF La Chapelle 86.50 316 *eP* P 00 36 20.4 +0.6
comp=Z,4.0nm,0.6s,mb4.2
CABF La Chapelle 86.50 316 *eP* P 00 36 20.4 +0.6
comp=Z,2.0nm,0.6s,mb4.2
CABF La Chapelle 86.50 316 *eP* P 00 36 20.4 +0.6
CABF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
BAIF Baives 87.54 320 *eP* P 00 36 25.4 +0.6
LOR Lormes 87.98 317 *eP* P 00 36 27.2 +0.3
SMF Signal de Mont 88.04 316 *eP* P 00 36 27.5 +0.3
SSF Saint Saulge 88.24 317 *eP* P 00 36 28.5 +0.3
BGF Bois d'Agland 88.73 316 *eP* P 00 36 30.6 +0.1
comp=Z,12nm,0.8s,mb4.7
BGF Bois d'Agland 88.73 316 *eP* P 00 36 30.6 +0.1
comp=Z,5.8nm,0.8s,mb4.7
BGF Bois d'Agland 88.73 316 *eP* P 00 36 30.6 +0.1
BGF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
TORD Torodi Ar. Bea 92.98 283 P P 00 36 51.0 +0.1
comp=Z,0.5nm,0.7s,mb3.9,baz=69,slow=5.4,SNR=4.1
TORD PKKPbc PKKPbc 00 54 02.5 +2.3
comp=Z,0.2nm,0.4s,baz=312,slow=2.9,SNR=9.0
EGMT Eagleton 122.97 20 *e*PKPdf PKPdf 00 42 33.3 +0.5
M13A Montello 126.67 28 *e*PKPdf PKPdf 00 42 40.1 0.0
NVAR Mina Array Bea 126.76 33 PKP PKPdf 00 42 39.1 -1.2
comp=Z,1.3nm,0.7s,baz=313,slow=1.2,SNR=5.0
TXAR Lajitas Array 141.40 28 PKhKP PKPpre 00 43 02.4
comp=Z,0.3nm,0.4s,baz=355,slow=1.4,SNR=8.8
TXAR SKPbc SKPbc 00 46 36.6 +0.3
comp=Z,0.3nm,0.6s,baz=24,slow=0.6,SNR=5.3
LPAZ La Paz 160.45 232 PKP PKPdf 00 43 35.1 -1.8
comp=Z,0.4nm,0.4s,baz=207,slow=4.5,SNR=4.4

*BJI **19** 00:44:35.6, 61.60N×150.70W, h59km, mB4.5/3, mb4.7/5, Ms4.5/2, Ms7 4.3/1*
*ISCJB **19** 00:44:37.8±0.3, 61.57N±0.03×150.61W±0.05, h77km±2km, mb4.1/30, Error ellipse: s-maj=4.5km s-min=4.1km az=136.2*
*NEIC **19** 00:44:39.6, 61.56N×150.67W, h60km, ML3.7(AEIC), After AEIC.*
NEIC Felt [III] at Talkeetna and [II] at Anchorage. Also felt at Wasilla and Willow.
*IDC **19** 00:44:39.3±0.7, 61.72N×150.82W, h70km±5km, mb3.7/18, mb1 3.8/22, mb1mx3.8/26, mbtmp3.7/22, MS2.7/2, Ms1 2.7/2, ms1mx2.4/27, Error ellipse: s-maj=17.5km s-min=12.7km az=37.0*

ISC 19 00:44:38.9±0.3, 61.57N±0.03×150.67W±0.05, h70km±3km, h70km±1.1km:pP-P, n94, σ0.88/108, mb4.1/30, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FIB	**Fire Island**	**0.47**	**149**	P		**Pn**	**00 44 51.7**	**+0.3**
FIB				S		**Sn**	**00 45 01.2**	**+0.7**
RC01	**Rabbit Creek A**	**0.66**	**136**	P		**Pn**	**00 44 52.6**	**-0.6**
RC01				S		**Sn**	**00 45 03.7**	**-0.1**
PMR	**Palmer**	**0.73**	**87**	P		**Pn**	**00 44 53.2**	**-0.9**
PMR				S		**Sn**	**00 45 04.3**	**-1.1**
SLKM	**Skilak Lake**	**1.08**	**168**	P		**Pn**	**00 44 57.6**	**-0.7**
SML	**Sawmill**	**1.14**	**77**	P		**Pn**	**00 44 58.6**	**-0.4**
SML				S		**Sn**	**00 45 14.2**	**0.0**
RSO	**Redoubt South**	**1.50**	**224**	*e*Pn		**Pn**	**00 45 04.1**	**+0.3**
RSO				S		Sn	**00 45 23.3**	**+0.7**
PPLA	**Purkeypile**	**1.52**	**333**	P		**Pn**	**00 45 03.9**	**-0.1**
PPLA				S		**Sn**	**00 45 22.7**	**-0.2**
SEW	**Seward**	**1.58**	**157**	P		**Pn**	**00 45 04.8**	**-0.1**
BRLK	**Bradley Lake**	**1.81**	**184**	P		**Pn**	**00 45 08.6**	**+0.7**
TRF	**Thorofare Moun**	**1.90**	**5**	P		**Pn**	**00 45 09.5**	**+0.4**
RND	**Reindeer**	**2.03**	**24**	P		**Pn**	**00 45 10.9**	**+0.1**
DHY	**Denali Highway**	**2.16**	**44**	P		**Pn**	**00 45 12.8**	**+0.2**
MCK	**McKinley**	**2.32**	**19**	P		**Pn**	**00 45 14.8**	**+0.1**
DIV	**Divide**	**2.40**	**98**	P		**Pn**	**00 45 14.6**	**-1.2**
CHUM	**Lake Minchumin**	**2.45**	**343**	P		**Pn**	**00 45 16.5**	**0.0**
BPAW	**Bear Paw Mtn.**	**2.55**	**357**	P		**Pn**	**00 45 17.3**	**-0.5**
EYAK	**Cordova Ski Ar**	**2.60**	**111**	P		**Pn**	**00 45 16.8**	**-1.8**
PAX	**Paxson**	**2.81**	**58**	P		**Pn**	**00 45 21.6**	**+0.2**
TTA	**Tatalina**	**2.85**	**301**	*e*Pn		**Pn**	**00 45 21.9**	**-0.1**
BMRM	**Bremner River**	**2.99**	**99**	*e*Pn		**Pn**	**00 45 22.3**	**-1.6**
BMRM				*e*Sn		**Sn**	**00 45 57.5**	**-1.0**
MENT	**Mentasta**	**3.53**	**64**	*e*Pn		**Pn**	**00 45 31.4**	**+0.3**
MENT				*e*Sn		**Sn**	**00 46 13.2**	**+1.6**
COLA	**College**	**3.56**	**20**	*e*Pn		**Pn**	**00 45 32.1**	**+0.6**
COLA				*e*Sn		**Sn**	**00 46 13.2**	**+0.9**
ILAR	**Eielson Array**	**3.65**	**26**	P		**Pn**	**00 45 32.6**	**-0.1**
	2.4nm,0.3s,baz=207,slow=14,SNR=110							
KDAK	**Kodiak Island**	**3.92**	**195**	P		**Pn**	**00 45 38.6**	**+2.2**
KDAK				S		**Sn**	**00 46 30.9**	**+10**
KDAK	**Kodiak Island**	**3.92**	**195**	P		**Pn**	**00 45 38.6**	**+2.2**
	9.1nm,0.3s,baz=13,slow=11,SNR=16							
KDAK				S		**Sn**	**00 46 30.9**	**+10**
	9.9nm,0.3s,baz=213,slow=16,SNR=5.9							
OHAK	**Old Harbor**	**4.56**	**198**	*e*Pn		**Pn**	**00 45 46.1**	**+0.9**
OHAK				*e*Sn		**Sn**	**00 46 35.7**	**-1.1**
EGAK	**Eagle**	**5.38**	**49**	*e*Pn		**Pn**	**00 45 56.4**	**0.0**
	3.4nm,0.8s							
EGAK				*e*Sn		**Sn**	**00 46 59.5**	**+2.7**
COLD	**Coldfoot**	**5.69**	**2**	*e*Pn		**Pn**	**00 46 01.1**	**+0.4**
	23nm,0.4s							
DAWY	**Dawson**	**5.74**	**59**	*e*Pn		**Pn**	**00 46 01.6**	**+0.2**
DAWY				*e*Sn		**Sn**	**00 47 06.8**	**+1.0**
PNL	**Peninsula**	**5.87**	**104**	*e*Pn		**Pn**	**00 46 03.7**	**+0.7**
	19nm,0.5s							
PNL				Sn		**Sn**	**00 47 08.3**	**-0.5**
SKAG	**Skagway**	**7.86**	**99**	*e*Pn		**Pn**	**00 46 29.8**	**-0.4**
	9.5nm,0.5s							
SKAG				*e*Sn		**Sn**	**00 47 58.1**	**+0.6**
INK	**Inuvik**	**9.90**	**40**	P		**Pn**	**00 46 56.8**	**-1.2**
	0.2nm,0.3s,baz=260,slow=20,SNR=3.8							
DLBC	**Dease Lake**	**10.78**	**98**	P		**Pn**	**00 47 08.2**	**-1.9**
	0.4nm,0.3s,baz=240,slow=6.4,SNR=5.2							
DLBC				LR		LR	00 50 52.4	
	comp=Z,28nm,21.1s,baz=0.2,slow=34							
BBB	**Bella Bella**	**15.42**	**117**	LR		LR	00 53 30.3	
	comp=Z,44nm,18.7s,baz=344,slow=34							
YKA	**Yellowknife Ar**	**16.81**	**71**	P		**Pn**	**00 48 31.3**	**+2.1**
	0.2nm,0.3s,baz=281,slow=9.9,SNR=3.4							
YBH	**Yreka Blue Hor**	**26.01**	**127**	P		**P**	**00 50 06.1**	**+1.2**
	1.5nm,0.8s,mb3.5,baz=326,slow=3.3,SNR=6.1							
NVAR	**Mina Array Bea**	**30.57**	**124**	P		**P**	**00 50 48.0**	**+2.4**
	1.9nm,0.6s,mb4.0,baz=318,slow=10.0,SNR=8.9							
ULM	**Lac du Bonnet**	**31.75**	**85**	P		**P**	**00 50 56.3**	**+0.5**
	1.0nm,0.3s,mb4.0,baz=341,slow=8.6,SNR=3.5							
FRB	**Frobisher Bay**	**35.35**	**50**	P		**P**	**00 51 26.9**	**0.0**
	13nm,1.2s,mb4.6,baz=312,slow=13,SNR=5.8							
SCHQ	**Schefferville**	**41.76**	**60**	P		**P**	**00 52 21.3**	**+0.6**
SCHQ	**Schefferville**	**41.76**	**60**	P		**P**	**00 52 21.3**	**+0.6**
	3.2nm,0.9s,mb4.1,baz=329,slow=12,SNR=3.6							
TXAR	**Lajitas Array**	**44.52**	**114**	P		**P**	**00 52 45.1**	**+1.9**
	1.1nm,0.6s,mb3.7,baz=326,slow=6.4,SNR=20							
ARCES	**ARCESS Array B**	**49.16**	**2**	P		**P**	**00 53 17.9**	**-0.9**
	1.6nm,0.8s,mb4.0,baz=2.5,slow=8.5,SNR=5.9							
ARCES				PcP		PcP	00 54 40.8	-0.2
	0.9nm,0.5s,baz=35,slow=3.0,SNR=6.8							
KSRS	**Korea Array**	**53.95**	**283**	P		**P**	**00 53 55.4**	**+0.4**
	0.7nm,0.4s,mb4.0,baz=10,slow=12,SNR=3.5							
SONM	**Songino Array**	**54.79**	**307**	P		**P**	**00 54 01.5**	**+0.6**
SONM				pP		pP	00 54 18.7	-0.2
SONM	**Songino Array**	**54.79**	**307**	P		**P**	**00 54 01.5**	**+0.6**
	0.6nm,0.4s,mb4.0,baz=27,slow=6.6,SNR=5.6							
SONM				pP		pP	00 54 18.7	-0.2
	2.0nm,0.8s,baz=36,slow=6.3,SNR=5.2							
ZALV	**Zalesovo Beam**	**56.78**	**324**	P		**P**	**00 54 13.9**	**-1.1**
	0.7nm,0.4s,mb4.1,baz=18,slow=7.2,SNR=4.7							
ZALV				pP		pP	00 54 30.6	-2.5
	1.1nm,0.4s,baz=21,slow=6.8,SNR=3.7							
NOA	**NORSAR Array B**	**56.94**	**10**	P		**P**	**00 54 15.4**	**-0.7**
	0.2nm,0.4s,mb3.5,baz=318,slow=4.8,SNR=2.9							
BJI	**Beijing**	**57.16**	**294**	P		**P**	**00 54 17.8**	**-0.1**
BJI				S		**S**	**01 02 07.0**	**-0.6**
BJI				SS		SS	01 05 57.3	+0.6
BJI				pmax		pmax		
	comp=Z,4.0nm,0.6s,mb4.6							
BJI				pmax		pmax		
	comp=Z,76nm,5.5s							
BJI				LR		LR		
	comp=N,140nm,13.6s							
BJI				LR		LR		
	comp=E,110nm,14.0s							
FINES	**FINESS Array B**	**57.29**	**2**	P		**P**	**00 54 17.9**	**-0.7**
	comp=E,0.7nm,0.5s,mb4.0,baz=4.3,slow=7.6,SNR=7.3							
FINES				pP		pP	00 54 36.0	-0.6
	comp=E,1.5nm,0.7s,baz=18,slow=6.6,SNR=1.7							
BVAR	**Borovoye Array**	**61.20**	**333**	P		**P**	**00 54 45.4**	**-0.3**
	comp=E,0.3nm,0.5s,mb3.6,baz=34,slow=10,SNR=2.8							
BVAR				pP		pP	00 55 03.0	-0.9
	comp=E,1.0nm,0.7s,baz=37,slow=10,SNR=4.8							
KURK	**Kurchatov**	**61.36**	**327**	pP		pP	00 55 04.8	-0.3
	comp=E,0.6nm,0.4s,baz=28,slow=6.5,SNR=2.4							
MKAR	**Makanchi Array**	**63.91**	**322**	P		**P**	**00 55 02.8**	**-1.0**
	comp=E,0.5nm,0.8s,mb3.4,baz=41,slow=6.7,SNR=3.9							
MKAR				pP		pP	00 55 21.6	-0.5
	comp=E,0.6nm,0.5s,baz=36,slow=6.4,SNR=5.0							
BAIF	**Baives**	**66.92**	**17**	*e*P		**P**	**00 55 22.4**	**-0.8**
ROSF	**Rostrenen**	**67.36**	**23**	*e*P		**P**	**00 55 25.4**	**-0.6**
	comp=E,90nm,1.2s,mb5.2							
ROSF	**Rostrenen**	**67.36**	**23**	*e*P		**P**	**00 55 25.4**	**-0.6**
	comp=E,45nm,1.2s,mb5.2							
FLN	**La Foliniere**	**67.45**	**21**	*e*P		**P**	**00 55 25.7**	**-0.8**
LDF	**La Druitiere**	**67.67**	**21**	*e*P		**P**	**00 55 27.4**	**-0.5**
	comp=E,5.9nm,0.8s,mb4.2							
LDF	**La Druitiere**	**67.67**	**21**	*e*P		**P**	**00 55 27.4**	**-0.5**
	comp=E,3.0nm,0.8s,mb4.2							
AKASG	**Malin Array Be**	**68.08**	**0**	P		**P**	**00 55 29.4**	**-1.0**
	comp=E,0.8nm,0.4s,mb3.9,baz=8.7,slow=6.9,SNR=4.1							
MEZF	**Maizieres J'vi**	**68.56**	**17**	*e*P		**P**	**00 55 32.9**	**-0.6**
CDF	**Champ du Feu**	**68.95**	**16**	*e*P		**P**	**00 55 35.7**	**-0.2**
HINF	**Hinteralfeld**	**69.48**	**16**	*e*P		**P**	**00 55 38.6**	**-0.6**
LOR	**Lormes**	**69.59**	**18**	*e*P		**P**	**00 55 39.6**	**-0.3**
	comp=E,15nm,0.9s,mb4.5							
LOR	**Lormes**	**69.59**	**18**	*e*P		**P**	**00 55 39.6**	**-0.3**
	comp=E,7.7nm,0.9s,mb4.5							
SSF	**Saint Saulge**	**69.74**	**19**	*e*P		**P**	**00 55 40.4**	**-0.4**
AVF	**Avril sur Loir**	**69.98**	**19**	*e*P		**P**	**00 55 41.7**	**-0.6**
BGF	**Bois d'Agland**	**70.13**	**19**	*e*P		**P**	**00 55 42.8**	**-0.4**
SMF	**Signal de Mont**	**70.20**	**18**	*e*P		**P**	**00 55 42.9**	**-0.7**
TCF	**Toulx Ste Croi**	**70.30**	**20**	*e*P		**P**	**00 55 43.8**	**-0.4**
CABF	**La Chapelle**	**70.56**	**17**	*e*P		**P**	**00 55 45.6**	**-0.2**
	comp=E,12nm,0.9s,mb4.4							
CABF	**La Chapelle**	**70.56**	**17**	*e*P		**P**	**00 55 45.6**	**-0.2**
	comp=E,6.1nm,0.9s,mb4.4							
LPL	**La Plagne**	**71.72**	**17**	*e*P		**P**	**00 55 54.4**	**+1.5**
LPG	**La Plagne**	**71.74**	**17**	*e*P		**P**	**00 55 54.7**	**+1.7**
VIVF	**Saint-Julien-l**	**72.07**	**18**	*e*P		**P**	**00 55 54.7**	**-0.3**
	comp=E,7.6nm,0.8s,mb4.3							
VIVF	**Saint-Julien-l**	**72.07**	**18**	*e*P		**P**	**00 55 54.7**	**-0.3**
	comp=E,3.8nm,0.8s,mb4.3							
ORIF	**Oris-en-Rattie**	**72.19**	**17**	*e*P		**P**	**00 55 56.3**	**+0.6**
MBDF	**Montbardon**	**72.50**	**17**	*e*P		**P**	**00 55 58.9**	**+1.4**
	comp=E,6.1nm,0.8s,mb4.2							
MBDF	**Montbardon**	**72.50**	**17**	*e*P		**P**	**00 55 58.9**	**+1.4**
	comp=E,3.0nm,0.8s,mb4.2							
LASF	**Ste Croix**	**72.71**	**19**	*e*P		**P**	**00 55 58.0**	**-0.8**
GYA	**Guiyang**	**72.84**	**294**	*e*P		**P**	**00 56 01.0**	**+1.2**
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.6							
SMRF	**Simiane la Rot**	**73.07**	**18**	*e*P		**P**	**00 56 02.1**	**+1.2**
EPF	**Esparros**	**73.14**	**22**	*e*P		**P**	**00 56 01.1**	**-0.2**
MTLF	**Montolieu**	**73.16**	**20**	*e*P		**P**	**00 56 01.1**	**-0.4**
	comp=Z,21nm,1.1s,mb4.6							
MTLF	**Montolieu**	**73.16**	**20**	*e*P		**P**	**00 56 01.1**	**-0.4**
	comp=Z,11nm,1.1s,mb4.6							
SBF	**Sospel**	**73.44**	**16**	*e*P		**P**	**00 56 02.9**	**-0.2**
	comp=Z,9.4nm,0.8s,mb4.4							
SBF	**Sospel**	**73.44**	**16**	*e*P		**P**	**00 56 02.9**	**-0.2**
	comp=Z,4.7nm,0.8s,mb4.4							
FRF	**La Foret Royal**	**73.63**	**17**	*e*P		**P**	**00 56 03.6**	**-0.6**
	comp=Z,17nm,1.1s,mb4.4							
FRF	**La Foret Royal**	**73.63**	**17**	*e*P		**P**	**00 56 03.6**	**-0.6**
	comp=Z,8.3nm,1.1s,mb4.4							
ESDC	**Sonseca Array**	**75.55**	**26**	P		**P**	**00 56 16.0**	**+0.6**
	comp=Z,2.4nm,0.6s,mb4.1,baz=342,slow=5.8,SNR=16							
ESDC				pP		pP	00 56 34.7	+0.5
	comp=Z,0.8nm,0.7s,baz=348,slow=6.0,SNR=3.0							
KMI	**Kunming**	**75.71**	**296**	P		**P**	**00 56 17.8**	**+1.3**
KMI				pP		pP	00 56 36.9	+1.5
KMI				pmax		pmax		
	comp=Z,12nm,0.6s,mb4.8							
BRTR	**Keskin Array B**	**79.00**	**357**	P		**P**	**00 56 34.3**	**-0.4**
	comp=Z,0.8nm,0.8s,mb3.6,baz=22,slow=7.0,SNR=6.0							
KEST	**Kesra**	**81.69**	**16**	P		**P**	**00 56 48.5**	**-0.7**
	comp=Z,1.7nm,0.8s,mb3.9,baz=49,slow=5.4,SNR=6.0							
BOSA	**Boshof**	**146.94**	**7**	PKPbc		PKPbc	01 04 11.8	-0.9
	comp=Z,3.1nm,0.7s,baz=14,slow=4.5,SNR=9.3							

GUC 19 01:04:41.5±0.3, 23.81S×66.90W, h220km, ML3.6, 1C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB04	**Plate Boundary**	**2.83**	**302**⇑	*i*P		Pn	01 05 38.5	+8.1
PB04				*i* S		S	01 06 21.9	+13
PB04				AML		AML	01 06 26.6	
	comp=N,66nm,0.4s							
CEN1	**Los Morros**	**3.06**	**277**	*e*P		Pn	01 05 37.6	+4.8
CEN1				*i* S		S	01 06 17.5	+4.4
CEN1				AML		AML	01 06 19.3	
	comp=N,40nm,1.1s							
HMBC	**Humberston**	**4.47**	**321**	*e*P		Pn	01 05 51.8	+1.9
HMBC				*i* S		S	01 06 45.9	+2.0
PSGC	**Pisagua**	**5.15**	**324**	*e*P		Pn	01 05 59.8	+1.4
PSGC				*i* S		S	01 07 00.2	+0.9
MNMC	**Miæe Miæ**	**5.29**	**331**	*e*P		Pn	01 06 03.2	+3.1
MNMC				*i* S		S	01 07 05.7	+3.3

IDC 19 01:14:37.9±1.1, 8.14S×13.41W, h0km, mb4.0/6, mb1 4.0/6, mb1mx3.8/17, mbtmp4.0/6, MS3.5/2, Ms1 3.5/2, ms1mx3.2/19, Error ellipse: s-maj=35.4km s-min=25.3km az=123.0, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DBIC	**Dimbokro**	**17.01**	**30**	LR		LR	01 22 44.5	
	comp=Z,105nm,19.0s,baz=187,slow=29							
TORD	**Torodi Ar. Bea**	**25.93**	**35**	P		P	01 20 12.2	+0.1
	2.7nm,0.7s,baz=215,slow=10,SNR=21							
TORD				LR		LR	01 28 47.4	
	comp=Z,169nm,19.0s,baz=210,slow=33							
BOSA	**Boshof**	**41.70**	**124**	P		P	01 22 27.1	-1.6
	2.9nm,0.9s,baz=310,slow=9.0,SNR=3.1							
LPAZ	**La Paz**	**53.96**	**256**	P		P	01 24 04.2	+0.2
	1.3nm,0.7s,baz=106,slow=3.0,SNR=6.6							
BRTR	**Keskin Array B**	**64.49**	**39**	P		P	01 25 17.8	+1.2
	1.9nm,1.0s,baz=235,slow=6.8,SNR=5.1							
AKASG	**Malin Array Be**	**69.23**	**27**	P		P	01 25 45.5	-1.0
	0.2nm,0.3s,baz=225,slow=7.6,SNR=2.7							
MAW	**Mawson**	**77.30**	**158**	P		P	01 26 35.3	+1.3
	1.9nm,0.8s,baz=290,slow=8.4,SNR=5.6							

*ISCJB **19** 01:26:21.9±0.8, 8.0S±0.2×13.4W±0.2, h10

FINES FINESS Array B 75.76 18 LR LR 02 11 24.8
comp=Z,64nm,20.4s,MS3.9,baz=352,slow=36
MAW Mawson 77.38 158 LR LR 02 05 36.8
comp=Z,153nm,18.8s,MS4.3,baz=107,slow=30
QSPA South Pole Qui 82.10 180 *eP* **P 01 38 43.9 0.0**
11nm,1.2s,mb4.7
ULM Lac du Bonnet 91.35 320 LR LR 02 14 10.1
comp=Z,144nm,19.2s,MS4.4,baz=57,slow=31
TXAR Lajitas Array 94.15 299 P **P 01 39 42.9 -0.2**
TXAR Lajitas Array 94.15 299 P **P 01 39 42.9 -0.2**
0.3nm,0.7s,mb3.8,baz=64,slow=6.1,SNR=1.3
TXAR LR LR 02 16 41.4
comp=Z,68nm,21.2s,MS4.1,baz=105,slow=32
MKAR Makanchi Array 99.64 44 LR LR 02 30 55.2
comp=Z,38nm,19.6s,MS3.9,baz=18,slow=39

IDC 19 02:22:02.6±1.9, 43°.01N×27°.60W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.4/25, mbtmp3.5/3, ML4.7/1, Error ellipse: s-maj=104.5km s-min=30.7km az=19.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**18.05**	**93**	P	Pn	02 26 14.9	+0.2
	0.6nm,0.3s,baz=289,slow=13,SNR=14						
TORD	**Torodi Ar. Bea**	**39.03**	**131**	P	P	02 29 30.9	-0.1
	0.7nm,0.8s,baz=319,slow=8.8,SNR=5.4						
TXAR	**Lajitas Array**	**60.96**	**284**	P	P	02 32 17.6	+0.1
	0.4nm,0.7s,baz=54,slow=7.9,SNR=3.0						

*ISCJB **19** 02:43:33.1±0.5, 26°.51N±0°.08×126°.31E±0°.07, h115km±7km, mb3.7/5, Error ellipse: s-maj=16.4km s-min=4.2km az=143.4*
*JMA **19** 02:43:34.9±0.2, 26°.53N×126°.32E, h106km±2km, M3.3*
*IDC **19** 02:44:10.3±14.0, 26°.38N×125°.75E, h509km±191km, mb2.8/5, mb1 3.0/5, mb1mx2.8/21, mbtmp2.8/5, Error ellipse: s-maj=65.5km s-min=23.4km az=75.0*
ISC 19 02:43:34.1±0.5, 26°.52N±0°.08×126°.29E±0°.07, h109km±7km, n20, σ0°91/32, mb3.7/5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.48**	**113**	P	**Pn**	**02 43 51.3**	**+0.6**
JKE				S	**Sn**	**02 44 03.4**	**+0.3**
JAGN	**Aguni-jima**	**0.85**	**85**	P	**Pn**	**02 43 54.2**	**+0.5**
JAGN				S	**Sn**	**02 44 08.5**	**0.0**
NAH1	**Naha**	**1.29**	**104**	S	**Sn**	**02 44 16.4**	**-0.4**
JJT2	**Tamagusuku 2**	**1.36**	**106**	P	**Pn**	**02 44 00.3**	**+1.1**
JJT2				*e*S	**Sn**	**02 44 18.7**	**+0.5**
JIH	**Iheya**	**1.58**	**71**	P	**Pn**	**02 44 02.6**	**+0.8**
JIH				S	**Sn**	**02 44 22.8**	**-0.1**
JOW	**Kunigami**	**1.80**	**80**	P	**Pn**	**02 44 04.7**	**+0.2**
JOW				S	**Sn**	**02 44 26.5**	**-1.2**
JMJ	**Miyako jima 2**	**1.92**	**208**	*e*S	**Sn**	**02 44 30.4**	**0.0**
JOGS	**Gusukube**	**1.92**	**205**	*e*S	**Sn**	**02 44 31.2**	**+0.7**
JTJ	**Tarama**	**2.36**	**218**	P	**Pn**	**02 44 12.6**	**+1.0**
JTJ				S	**Sn**	**02 44 39.4**	**-1.0**
JTK	**Tokunoshima**	**2.68**	**61**	P	**Pn**	**02 44 16.3**	**+0.4**
JTK				S	**Sn**	**02 44 47.2**	**-0.8**
JIJ	**Ishigaki jima**	**2.89**	**223**	P	**Pn**	**02 44 19.4**	**+0.7**
JIJ				S	**Sn**	**02 44 50.3**	**-2.7**
JKRS	**Kuro-shima**	**3.07**	**223**	P	**Pn**	**02 44 21.9**	**+0.9**
JKRS				*e*S	**Sn**	**02 44 55.0**	**-2.1**
IRIF	**Iriomote-Funau**	**3.18**	**227**	P	**Pn**	**02 44 24.1**	**+1.7**
IRIF				*e*S	**Sn**	**02 44 58.6**	**-1.1**
JAM	**Amami Oshima**	**3.50**	**57**	P	**Pn**	**02 44 26.6**	**0.0**
JAM				S	**Sn**	**02 45 05.8**	**-1.5**
JMZ	**Minamidaito 2**	**4.48**	**98**	P	**Pn**	**02 44 39.1**	**-0.8**
JMZ				*e*S	**Sn**	**02 45 23.6**	**-7.4**
SONM	**Songino Array**	**26.39**	**329**	P	**P**	**02 49 04.5**	**+4.4**
	1.1nm,0.5s,mb3.6,baz=140,slow=9.1,SNR=5.4						
MKAR	**Makanchi Array**	**40.05**	**312**	P	**P**	**02 50 58.8**	**+0.3**
	1.0nm,0.5s,mb3.9,baz=100,slow=9.8,SNR=6.5						
ZALV	**Zalesovo Beam**	**40.97**	**323**	P	**P**	**02 51 06.0**	**0.0**
	1.0nm,0.3s,mb4.1,baz=105,slow=9.0,SNR=4.6						
WRA	**Warramunga Arr**	**46.84**	**170**	P	**P**	**02 51 53.6**	**+0.4**
	0.6nm,0.3s,mb3.8,baz=351,slow=8.6,SNR=3.5						
ILAR	**Eielson Array**	**65.01**	**28**	P	**P**	**02 54 01.6**	**-0.5**
	0.2nm,0.7s,mb3.0,baz=266,slow=5.4,SNR=4.4						

*IDC **19** 03:01:42.2±1.0, 42°.95N×83°.07E, h0km, mb3.7/5, mb1 3.8/10, mb1mx3.7/27, mbtmp3.7/10, ML3.2/5, Error ellipse: s-maj=19.1km s-min=12.8km az=79.0*
*NEIC **19** 03:01:44.2±1.3, 42°.91N×83°.27E, h10km, mb3.7/1, Error ellipse: s-maj=21.3km s-min=10.3km az=146.0*
*BJI **19** 03:01:45.9, 42°.92N×83°.47E, h24km, mb4.3/3, ML3.6/6*
*NNC **19** 03:01:52.9±1.9, 43°.42N×82°.62E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=19.7km s-min=8.3km az=126.0*
ISC 19 03:01:44.5±1.1, 43°.19N±0°.05×83°.05E±0°.05, h2km±7km, n28, σ1°48/37, mb3.6/5, 4C-7D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**3.44**	**78**	*e*Pn	**Pb**	**03 02 47.5**	**+1.4**
WMQ				Sg	**Sb**	**03 03 27.0**	**-1.4**
WMQ				smax			
	comp=N,89nm,0.7s						
WMQ				smax			
	comp=E,95nm,0.6s						
MK31	**Makanchi Array**	**3.65**	**352**	⇓Pn	**Pb**	**03 02 47.2**	**-2.5**
	comp=E,1.2nm,0.3s,baz=157,slow=2.3,SNR=307						
MK31				⇓Pg	**Pg**	**03 02 54.5**	**+0.2**
	comp=E,26nm,0.7s,baz=175,slow=16,SNR=75						
MK31				⇓Lg		03 03 42.3	
	comp=E,54nm,0.7s,baz=171,slow=28,SNR=6.1						
MK31	**Makanchi Array**	**3.65**	**352**	*e*Pn	**Pb**	**03 02 46.0**	**-3.6**
MK31				*e*S	**Sn**	**03 03 21.4**	**-4.1**
MKAR	**Makanchi Array**	**3.65**	**352**	Pn	**Pn**	**03 02 45.7**	**+3.7**
MKAR				Pg	**Pg**	**03 02 54.1**	**-0.3**
MKAR				Lg		03 03 44.9	
MKAR	**Makanchi Array**	**3.65**	**352**	Pn	**Pn**	**03 02 45.7**	**+3.7**
	comp=E,1.4nm,0.3s,baz=177,slow=16,SNR=53						
MKAR				Pg	**Pg**	**03 02 54.1**	**-0.3**
	comp=E,13nm,0.3s,baz=180,slow=18,SNR=36						
MKAR				Lg		03 03 44.9	
	comp=E,12nm,0.3s,baz=175,slow=30,SNR=6.3						
TKM2	**Tokmak 2**	**5.47**	**270**	⇑Pn	**Pn**	**03 03 12.2**	**+5.2**
	comp=E,4.7nm,0.6s						
TKM2				⇓Pg	**Pg**	**03 03 25.6**	**-3.7**
	comp=E,6.7nm,0.6s						
TKM2				⇑Lg		03 04 37.3	
	comp=E,22nm,0.7s						
TKM2	**Tokmak 2**	**5.47**	**270**	*e*Pn	**Pn**	**03 03 10.7**	**+3.7**
	comp=E,9.3nm,0.5s						
TKM2				*e*S	**Sg**	**03 04 37.4**	**-2.8**
AAK	**Ala-Archa**	**6.31**	**268**	Pn	**Pn**	**03 03 18.6**	**+0.1**
	comp=E,0.6nm,0.3s,baz=153,slow=9.0,SNR=2.2						
AAK				Lg		03 05 04.3	
	comp=E,1.3nm,0.3s,baz=82,slow=18,SNR=3.0						
UCH	**Uchtor**	**6.36**	**264**	*e*Pn	**Pn**	**03 03 21.2**	**+1.9**
	comp=E,4.9nm,0.7s						
UCH				*e*S	**Sg**	**03 05 08.5**	**-0.3**
EKS2	**Erkin-Say**	**6.83**	**269**	*e*Pn	**Pn**	**03 03 33.6**	**+7.9**
EKS2				*e*S	**Sg**	**03 05 23.6**	**-0.1**
AML	**Almayashu**	**6.98**	**264**	*e*Pn	**Pn**	**03 03 27.2**	**-0.6**
AML				*e*S	**Sg**	**03 05 28.3**	**-0.3**
KURK	**Kurchatov**	**8.12**	**340**	⇓Sn	**Sn**	**03 05 15.6**	**0.0**
	comp=E,4.8nm,0.7s						
KURK				⇑Lg		03 06 00.3	
	comp=E,8.5nm,0.6s						
KURK	**Kurchatov**	**8.12**	**340**	Pn	**Pn**	**03 03 44.5**	**+1.1**
KURK				Sn	**Sn**	**03 05 14.8**	**-0.8**
KURK				Lg		03 06 06.8	
KURK	**Kurchatov**	**8.12**	**340**	Pn	**Pn**	**03 03 44.5**	**+1.1**
	comp=E,0.3nm,0.3s,baz=166,slow=12,SNR=15						
KURK				Sn	**Sn**	**03 05 14.8**	**-0.8**
	comp=E,0.3nm,0.3s,baz=162,slow=20,SNR=5.3						
KURK				Lg		03 06 06.8	
	comp=E,0.3nm,0.3s,baz=173,slow=30,SNR=5.8						
KK31	**Karatay Array**	**9.17**	**274**	⇓Lg		03 06 37.2	
	comp=E,2.7nm,0.6s,baz=74,slow=27,SNR=4.6						
ZAA0	**Zalesovo Array**	**10.83**	**6**	Pn	**Pn**	**03 04 22.9**	**+2.4**
ZALV	**Zalesovo Beam**	**10.83**	**6**	Pn	**Pn**	**03 04 21.8**	**+1.3**
	comp=E,0.4nm,0.3s,baz=184,slow=12,SNR=7.4						
ZALV				Sn	**Sn**	**03 06 20.0**	**-2.2**
	comp=E,0.5nm,0.3s,baz=176,slow=24,SNR=5.1						
ZALV				Lg		03 07 31.2	
	comp=E,0.1nm,0.3s,baz=191,slow=26,SNR=4.1						
VOSK	**Vostochnaya**	**12.49**	**324**	⇑Lg		03 08 20.9	
	comp=E,5.1nm,0.9s						
BVAR	**Borovoye Array**	**12.96**	**324**	Lg		03 08 44.8	
	comp=E,0.2nm,0.3s,baz=144,slow=23,SNR=3.2						
ZRNK	**Zerenda**	**13.53**	**321**	⇓Lg		03 08 49.8	
	comp=E,10nm,1.3s						
SONM	**Songino Array**	**16.99**	**66**	P	**Pn**	**03 05 42.8**	**-0.4**
	comp=E,0.1nm,0.3s,baz=253,slow=13,SNR=8.1						
AKTK	**Aktyubinsk**	**18.55**	**302**	P	**Pn**	**03 06 05.2**	**+2.8**
AKTO	**Aktyubinsk**	**18.55**	**302**	P	**Pn**	**03 06 05.2**	**+2.8**
	comp=E,0.1nm,0.3s,baz=93,slow=15,SNR=2.9						
ARCES	**ARCESS Array B**	**39.07**	**332**	P	**P**	**03 09 13.5**	**+1.0**
	comp=E,1.6nm,0.8s,mb3.8,baz=90,slow=8.3,SNR=9.5						
NOA	**NORSAR Array B**	**45.03**	**319**	P	**P**	**03 10 01.3**	**+0.1**
	comp=E,0.5nm,0.4s,mb3.7,baz=77,slow=8.2,SNR=3.4						
ILAR	**Eielson Array**	**65.52**	**21**	P	**P**	**03 12 27.5**	**-1.4**
	comp=E,0.4nm,0.9s,mb3.4,baz=315,slow=4.7,SNR=3.5						
TORD	**Torodi Ar. Bea**	**74.86**	**274**	P	**P**	**03 13 25.1**	**-1.8**
	comp=E,0.4nm,0.4s,mb3.7,baz=42,slow=5.1,SNR=9.0						
WRA	**Warramunga Arr**	**78.52**	**131**	P	**P**	**03 13 44.2**	**-3.2**
	comp=E,0.6nm,0.8s,mb3.6,baz=334,slow=5.4,SNR=3.7						

*IDC **19** 03:03:07.9±0.7, 42°.80N×27°.76W, h0km, mb4.0/18, mb1 4.1/19, mb1mx4.0/27, mbtmp4.0/19, MS3.5/5, Ms1 3.5/5, ms1mx3.1/28, Error ellipse: s-maj=19.3km s-min=15.7km az=178.0*
*NEIC **19** 03:03:09.2±0.3, 42°.74N×27°.73W, h10km, mb4.5/34, Error ellipse: s-maj=9.5km s-min=5.1km az=179.0*
*PDA **19** 03:03:11.3±0.7, 42°.77N×27°.69W, h0km, MD4.2, ML4.4, Error ellipse: s-maj=5.3km s-min=3.0km az=105.0*
*CSEM **19** 03:03:11.7±0.2, 42°.63N×27°.70W, h30km, mb4.4/32, Ms3.3, Error ellipse: s-maj=6.3km s-min=3.7km az=110.0*
ISC 19 03:03:12.3±1.7, 42°.61N±0°.02×27°.70W±0°.06, h33km±13km, n206, σ0°98/219, mb4.2/53, MS3.4/9, 3C-2D, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSA	**Rosais**	**3.91**	**186**	*e*P	**Pn**	**03 04 10.6**	**+0.7**
ROSA				*e*S	**Sn**	**03 04 54.2**	**-0.4**
ROSA	**Rosais**	**3.91**	**186**	*e*P	**Pn**	**03 04 10.6**	**+0.7**
ROSA				*e*S	**Sn**	**03 04 54.2**	**-0.4**
ADH	**Angra Heroismo**	**3.96**	**175**	*e*P	**Pn**	**03 04 09.4**	**-1.3**
ADH				*e*S	**Sn**	**03 04 55.5**	**-0.5**
ADH				A		03 04 56.4	
	35nm,0.3s						
ADH	**Angra Heroismo**	**3.96**	**175**	*e*P	**Pn**	**03 04 09.4**	**-1.3**
ADH				*e*S	**Sn**	**03 04 55.5**	**-0.5**
PMAN	**Manadas**	**3.98**	**184**	*e*P	**Pn**	**03 04 10.8**	**-0.1**
PMAN				*e*S	**Sn**	**03 04 56.3**	**-0.1**
PMAN				A		03 04 57.4	
	72nm,0.3s						
PMAN	**Manadas**	**3.98**	**184**	*e*P	**Pn**	**03 04 10.8**	**-0.1**
PMAN				*e*S	**Sn**	**03 04 56.3**	**-0.1**
PCED	**Cedros**	**4.05**	**191**	*e*S	**Sn**	**03 04 57.9**	**-0.2**
PCED				A		03 04 59.2	
	34nm,0.2s						
PCED	**Cedros**	**4.05**	**191**	*e*S	**Sn**	**03 04 57.9**	**-0.2**
CALA	**Caldeira**	**4.09**	**191**	*e*P	**Pn**	**03 04 12.8**	**+0.3**
CALA				*e*S	**Sn**	**03 04 59.2**	**0.0**
CALA	**Caldeira**	**4.09**	**191**	*e*P	**Pn**	**03 04 12.8**	**+0.3**
CALA				*e*S	**Sn**	**03 04 59.2**	**0.0**
HOR	**Horta**	**4.14**	**190**	*e*S	**Sn**	**03 04 59.8**	**-0.5**
HOR	**Horta**	**4.14**	**190**	*e*S	**Sn**	**03 04 59.8**	**-0.5**
PICO	**Pico**	**4.14**	**188**	*e*S	**Sn**	**03 05 00.2**	**-0.1**
PICO	**Pico**	**4.14**	**188**	*e*S	**Sn**	**03 05 00.2**	**-0.1**
PID	**Ribeirinha**	**4.17**	**184**	*e*P	**Pn**	**03 04 13.8**	**+0.2**
PID				*e*S	**Sn**	**03 05 01.1**	**-0.1**
PID	**Ribeirinha**	**4.17**	**184**	*e*P	**Pn**	**03 04 13.8**	**+0.2**
PID				*e*S	**Sn**	**03 05 01.1**	**-0.1**
PCAN	**Candelaria**	**4.18**	**188**	*e*P	**Pn**	**03 04 13.9**	**+0.2**
PCAN				*e*S	**Sn**	**03 05 00.8**	**-0.6**
PCAN				A		03 05 01.4	
	34nm,0.3s						
PCAN	**Candelaria**	**4.18**	**188**	*e*P	**Pn**	**03 04 13.9**	**+0.2**
PCAN				*e*S	**Sn**	**03 05 00.8**	**-0.6**
PSET	**Sete Cidades**	**5.01**	**162**	*e*P	**Pn**	**03 04 25.4**	**+0.3**
PSET				*e*S	**Sn**	**03 05 21.0**	**-0.9**
PSET				A		03 05 22.2	
	24nm,0.5s						
PSET	**Sete Cidades**	**5.01**	**162**	*e*P	**Pn**	**03 04 25.4**	**+0.3**
PSET				*e*S	**Sn**	**03 05 21.0**	**-0.9**
PDA	**Ponta Delgada**	**5.10**	**161**	*e*P	**Pn**	**03 04 26.4**	**+0.1**
PDA	**Ponta Delgada**	**5.10**	**161**	*e*P	**Pn**	**03 04 26.4**	**+0.1**
GRON	**Grota Negra**	**5.11**	**160**	*e*P	**Pn**	**03 04 27.5**	**+1.0**
BART	**Pico Bartolome**	**5.20**	**157**	*e*P	**Pn**	**03 04 28.0**	**+0.3**
BART				*e*S	**Sn**	**03 05 25.7**	**-0.8**
BART				A		03 05 26.6	
	27nm,0.3s						
BART	**Pico Bartolome**	**5.20**	**157**	*e*P	**Pn**	**03 04 28.0**	**+0.3**
BART				*e*S	**Sn**	**03 05 25.7**	**-0.8**
PSMA	**Santa Maria**	**5.95**	**160**	*e*P	**Pn**	**03 04 38.4**	**+0.5**
PSMA				A		03 05 43.5	
	28nm,0.4s						
PSMA				*e*S	**Sn**	**03 05 43.6**	**-1.3**
PSMN	**Pico do Norte,**	**5.95**	**159**	*e*P	**Pn**	**03 04 38.7**	**+0.6**
PSMN	**Pico do Norte,**	**5.95**	**159**	*e*P	**Pn**	**03 04 38.7**	**+0.6**
PMAR	**Madeira**	**13.04**	**136**	*e*P	**Pn**	**03 06 16.7**	**+1.6**
	147nm,1.7s						
PMAR	**Madeira**	**13.04**	**136**	*e*P	**Pn**	**03 06 16.7**	**+1.6**
	147nm,1.7s						
EVO	**Evora**	**15.50**	**99**	*e*P	**Pn**	**03 06 47.4**	**-0.9**
PESTR	**Estremoz**	**15.69**	**97**	*e*P	**Pn**	**03 06 52.0**	**+1.2**
	22nm,1.8s						
PESTR	**Estremoz**	**15.69**	**97**	*e*P	**Pn**	**03 06 52.0**	**+1.2**
	22nm,1.8s						
PBEJ	**Beja**	**15.80**	**100**	*e*P	**Pn**	**03 06 54.9**	**+2.7**
	31nm,1.7s						
PBEJ	**Beja**	**15.80**	**100**	*e*P	**Pn**	**03 06 54.9**	**+2.7**
	31nm,1.7s						
PCVE	**Castro Verde**	**15.83**	**102**	*e*P	**Pn**	**03 06 53.8**	**+1.2**
PCVE	**Castro Verde**	**15.83**	**102**	*e*P	**Pn**	**03 06 53.8**	**+1.2**
PAB	**San Pablo**	**17.86**	**92**	*e*Pn	**Pn**	**03 07 17.1**	**-0.9**
PAB	**San Pablo**	**17.86**	**92**	*e*Pn	**Pn**	**03 07 17.1**	**-0.9**
ESDC	**Sonseca Array**	**18.11**	**91**	P	**Pn**	**03 07 20.0**	**-1.1**
	1.0nm,0.3s,baz=288,slow=13,SNR=22						
ESDC	**Sonseca Array**	**18.11**	**91**	P	**Pn**	**03 07 20.0**	**-1.1**
ESLA	**Sonseca Array**	**18.11**	**91**	*e*Pn	**Pn**	**03 07 20.1**	**-1.0**
ESLA	**Sonseca Array**	**18.11**	**91**	*e*Pn	**Pn**	**03 07 20.1**	**-1.0**
SJPF	**Ste Jean**	**19.40**	**79**	*e*P	**Pn**	**03 07 36.2**	**-0.4**
	36nm,1.1s						
SJPF	**Ste Jean**	**19.40**	**79**	*e*P	**Pn**	**03 07 36.2**	**-0.4**
	18nm,1.1s						
SJPF	**Ste Jean**	**19.40**	**79**	*e*P	**Pn**	**03 07 36.2**	**-0.4**
	18nm,1.1s						
GRR	**Gorron**	**19.63**	**64**	*e*P	**Pn**	**03 07 38.5**	**-0.9**
GRR	**Gorron**	**19.63**	**64**	*e*P	**Pn**	**03 07 38.5**	**-0.9**
ETSF	**Etsaut**	**19.91**	**80**	*e*P	**Pn**	**03 07 41.3**	**-1.4**
	24nm,1.2s						
ETSF	**Etsaut**	**19.91**	**80**	*e*P	**Pn**	**03 07 41.3**	**-1.4**
	12nm,1.2s						
ETSF	**Etsaut**	**19.91**	**80**	*e*P	**Pn**	**03 07 41.3**	**-1.4**
	12nm,1.2s						
MFF	**Saint Martin d**	**19.98**	**69**	*e*P	**Pn**	**03 07 41.4**	**-2.1**
	111nm,1.7s						
MFF	**Saint Martin d**	**19.98**	**69**	*e*P	**Pn**	**03 07 41.4**	**-2.1**
	56nm,1.7s						
MFF	**Saint Martin d**	**19.98**	**69**	*e*P	**Pn**	**03 07 41.4**	**-2.1**
	56nm,1.7s						
LDF	**La Druitiere**	**20.14**	**63**	*e*P	**P**	**03 07 45.2**	**+1.8**
	16nm,0.9s						
LDF	**La Druitiere**	**20.14**	**63**	*e*P	**P**	**03 07 45.2**	**+1.8**
	7.8nm,0.9s						
LDF	**La Druitiere**	**20.14**	**63**	*e*P	**P**	**03 07 45.2**	**+1.8**
	7.8nm,0.9s						
ESK	**Eskdalemuir**	**20.37**	**43**	*e*P	**P**	**03 07 45.8**	**0.0**
ESK	**Eskdalemuir**	**20.37**	**43**	*e*P	**P**	**03 07 45.8**	**0.0**
EKA	**Eskdalemuir Ar**	**20.40**	**43**	P	**P**	**03 07 45.9**	**-0.3**
	3.6nm,0.9s,baz=244,slow=9.2,SNR=7.3						
EKA	**Eskdalemuir Ar**	**20.40**	**43**	P	**P**	**03 07 45.9**	**-0.2**
EPF	**Esparros**	**20.54**	**79**	*e*P	**P**	**03 07 46.7**	**-1.1**
	42nm,1.4s						
EPF	**Esparros**	**20.54**	**79**	*e*P	**P**	**03 07 46.7**	**-1.1**
	21nm,1.4s						
EPF	**Esparros**	**20.54**	**79**	*e*P	**P**	**03 07 46.7**	**-1.1**
	21nm,1.4s						
LFF	**La Frestale**	**20.63**	**74**	*e*P	**P**	**03 07 48.6**	**-0.1**
	82nm,1.2s						
LFF	**La Frestale**	**20.63**	**74**	*e*P	**P**	**03 07 48.6**	**-0.1**
	41nm,1.2s						
LFF	**La Frestale**	**20.63**	**74**	*e*P	**P**	**03 07 48.6**	**-0.1**
	41nm,1.2s						
MDT	**Midelt**	**20.66**	**111**	LR	LR	03 14 31.4	
	comp=Z,62nm,19.1s,MS3.0,baz=340,slow=33						
RJF	**Les Rejaudoux**	**21.16**	**73**	*e*P	**P**	**03 07 53.9**	**-0.5**
RJF				*e*MLR	MLR		
	comp=Z,199nm,18.8s,MS3.2						
RJF	**Les Rejaudoux**	**21.16**	**73**	*e*P	**P**	**03 07 53.9**	**-0.5**
RJF				LR	LR		
	comp=Z,200nm,18.8s,MS3.5						
RJF	**Les Rejaudoux**	**21.16**	**73**	*e*P	**P**	**03 07 53.9**	**-0.5**
CAF	**Calviac**	**21.57**	**74**	*e*P	**P**	**03 07 58.6**	**-0.2**
	comp=Z,35nm,1.3s,mb4.3						
CAF	**Calviac**	**21.57**	**74**	*e*P	**P**	**03 07 58.6**	**-0.2**
	comp=Z,18nm,1.3s,mb4.3						
CAF	**Calviac**	**21.57**	**74**	*e*P	**P**	**03 07 58.6**	**-0.2**
	comp=Z,18nm,1.3s,mb4.3						
TCF	**Toulx Ste Croi**	**21.61**	**70**	*e*P	**P**	**03 07 59.9**	**+0.7**
TCF	**Toulx Ste Croi**	**21.61**	**70**	*e*P	**P**	**03 07 59.9**	**+0.7**
MTLF	**Montolieu**	**21.86**	**78**	*e*P	**P**	**03 07 59.5**	**-2.4**
	comp=Z,22nm,1.2s,mb4.2						
MTLF	**Montolieu**	**21.86**	**78**	*e*P	**P**	**03 07 59.5**	**-2.4**
	comp=Z,11nm,1.2s,mb4.2						
MTLF	**Montolieu**	**21.86**	**78**	*e*P	**P**	**03 07 59.5**	**-2.4**
	comp=Z,11nm,1.2s,mb4.2						
BGF	**Bois d'Agland**	**22.04**	**69**	*e*P	**P**	**03 08 04.3**	**+0.4**
	comp=Z,41nm,1.0s,mb4.5						
BGF	**Bois d'Agland**	**22.04**	**69**	*e*P	**P**	**03 08 04.3**	**+0.4**
	comp=Z,20nm,1.0s,mb4.5						
BGF	**Bois d'Agland**	**22.04**	**69**	*e*P	**P**	**03 08 04.3**	**+0.4**
	comp=Z,20nm,1.0s,mb4.5						
AVF	**Avril sur Loir**	**22.39**	**69**	*e*P	**P**	**03 08 06.9**	**-0.7**
	comp=Z,29nm,1.2s,mb4.3						
AVF	**Avril sur Loir**	**22.39**	**69**	*e*P	**P**	**03 08 06.9**	**-0.7**
	comp=Z,14nm,1.2s,mb4.3						
AVF	**Avril sur Loir**	**22.39**	**69**	*e*P	**P**	**03 08 06.9**	**-0.7**
	comp=Z,14nm,1.2s,mb4.3						
SSF	**Saint Saulge**	**22.49**	**68**	*e*P	**P**	**03 08 08.7**	**+0.1**
	comp=Z,41nm,1.3s,mb4.4						
SSF	**Saint Saulge**	**22.49**	**68**	*e*P	**P**	**03 08 08.7**	**+0.1**
	comp=Z,20nm,1.3s,mb4.4						
SSF	**Saint Saulge**	**22.49**	**68**	*e*P	**P**	**03 08 08.7**	**+0.1**
	comp=Z,20nm,1.3s,mb4.4						
SMF	**Signal de Mont**	**22.73**	**69**	*e*P	**P**	**03 08 08.8**	**-2.3**
	comp=Z,24nm,1.1s,mb4.2						
SMF	**Signal de Mont**	**22.73**	**69**	*e*P	**P**	**03 08 08.8**	**-2.3**
	comp=Z,12nm,1.1s,mb4.2						
SMF	**Signal de Mont**	**22.73**	**69**	*e*P	**P**	**03 08 08.8**	**-2.3**
	comp=Z,12nm,1.1s,mb4.2						
LOR	**Lormes**	**22.73**	**67**	*e*P	**P**	**03 08 10.5**	**-0.7**
	comp=Z,75nm,1.5s,mb4.6						
LOR				*e*MLR	MLR		
	comp=Z,241nm,19.0s,MS3.4						
LOR	**Lormes**	**22.73**	**67**	*e*P	**P**	**03 08 10.5**	**-0.7**
	comp=Z,38nm,1.5s,mb4.6						
LOR				LR	LR		
	comp=Z,240nm,19.0s,MS3.6						
LOR	**Lormes**	**22.73**	**67**	*e*P	**P**	**03 08 10.5**	**-0.7**
	comp=Z,38nm,1.5s,mb4.6						
LASF	**Ste Croix**	**22.93**	**76**	*e*P	**P**	**03 08 12.2**	**-1.1**
	comp=Z,35nm,1.2s,mb4.4						
LASF	**Ste Croix**	**22.93**	**76**	*e*P	**P**	**03 08 12.2**	**-1.1**
	comp=Z,17nm,1.2s,mb4.4						
BAIF	**Baives**	**23.13**	**60**	*e*P	**P**	**03 08 14.2**	**-1.1**
	comp=Z,39nm,1.1s,mb4.4						
BAIF	**Baives**	**23.13**	**60**	*e*P	**P**	**03 08 14.2**	**-1.1**
	comp=Z,20nm,1.1s,mb4.5						
BAIF	**Baives**	**23.13**	**60**	*e*P	**P**	**03 08 14.2**	**-1.1**
	comp=Z,20nm,1.1s,mb4.4						
VIVF	**Saint-Julien-l**	**23.42**	**73**	*e*P	**P**	**03 08 17.2**	**-1.2**
	comp=Z,17nm,1.1s,mb4.1						
VIVF	**Saint-Julien-l**	**23.42**	**73**	*e*P	**P**	**03 08 17.2**	**-1.2**
	comp=Z,8.5nm,1.1s,mb4.1						
VIVF	**Saint-Julien-l**	**23.42**	**73**	*e*P	**P**	**03 08 17.2**	**-1.2**
	comp=Z,8.5nm,1.1s,mb4.1						
GIVF	**Givet**	**23.53**	**60**	*e*P	**P**	**03 08 19.0**	**-0.4**
GIVF	**Givet**	**23.53**	**60**	*e*P	**P**	**03 08 19.0**	**-0.4**
MEZF	**Maizieres J'vi**	**23.56**	**64**	*e*P	**P**	**03 08 19.5**	**-0.2**
	com

VYHS	Vyhne	32.71	63	*e*P		P	03 09 46.2	+4.8
OJC	Ojcow	33.14	60	*e*P		P	03 09 45.6	+0.4
OJC	Ojcow	33.14	60	*e*P		P	03 09 45.6	+0.4
NIE	Niedzica	33.56	61	*e*P		P	03 09 50.4	+1.6
NIE	Niedzica	33.56	61	*e*P		P	03 09 50.4	+1.6
TAM	Tamanrasset	33.93	115	*e*P		P	03 09 54.5	+2.2
	comp=Z,5.7nm,1.3s,mb4.3							
TAM	Tamanrasset	33.93	115	*e*P		P	03 09 54.5	+2.2
	comp=Z,5.7nm,1.3s,mb4.3							
STHS	Stebnicka Huta	34.16	61	*e*P		P	03 10 00.8	+6.7
	comp=Z,3.0nm,0.8s,mb4.3							
STHS	Stebnicka Huta	34.16	61	*e*P		P	03 10 00.8	+6.7
CRVS	Cervenica-Dubn	34.38	62	*e*P		P	03 09 59.5	+3.6
	comp=Z,4.0nm,1.2s,mb4.2							
CRVS	Cervenica-Dubn	34.38	62	*e*P		P	03 09 59.5	+3.6
KWP	Kalwaria Pacla	35.08	61	*e*P		P	03 10 02.6	+0.6
	comp=Z,12nm,1.1s,mb4.7							
KWP	Kalwaria Pacla	35.08	61	*e*P		P	03 10 02.6	+0.6
	comp=Z,12nm,1.1s,mb4.7							
FINES	FINESS Array B	36.76	40	P		P	03 10 15.9	-0.3
	comp=Z,2.3nm,0.7s,mb4.1,baz=269,slow=8.1,SNR=3.4							
FINES				LR		LR	03 23 34.1	
	comp=Z,122nm,18.2s,MS3.7,baz=344,slow=34							
FINES	FINESS Array B	36.76	40	P		P	03 10 15.9	-0.3
ARCES	ARCESS Array B	38.10	27	P		P	03 10 26.1	-1.4
	comp=Z,1.2nm,0.7s,mb3.7,baz=257,slow=11,SNR=3.8							
ARCES	ARCESS Array B	38.10	27	P		P	03 10 26.1	-1.4
TORD	Torodi Ar. Bea	38.83	130	P		P	03 10 36.0	+1.9
	comp=Z,8.4nm,0.8s,mb4.5,baz=325,slow=8.4,SNR=45							
TORD				LR		LR	03 26 02.7	
	comp=Z,61nm,18.9s,MS3.5,baz=320,slow=35							
AKASG	Malin Array Be	39.04	58	P		P	03 10 34.8	-0.8
	comp=Z,1.1nm,0.6s,mb3.8,baz=278,slow=8.3,SNR=5.3							
AKASG	Malin Array Be	39.04	58	P		P	03 10 34.8	-0.8
DBIC	Dimbokro	41.09	144	P		P	03 10 55.0	+2.0
DBIC	Dimbokro	41.09	144	P		P	03 10 55.0	+2.0
	comp=Z,3.0nm,0.8s,mb4.0,baz=32,slow=10.0,SNR=3.0							
DBIC	Dimbokro	41.09	144	P		P	03 10 55.0	+2.0
BRTR	Keskin Array B	45.38	72	P		P	03 11 28.1	+0.7
	comp=Z,1.7nm,0.9s,mb3.9,baz=278,slow=5.8,SNR=7.9							
BRTR	Keskin Array B	45.38	72	P		P	03 11 28.1	+0.7
CCM	Cathedral Cave	47.65	287	*e*P		P	03 11 44.9	-0.3
	comp=Z,8.7nm,1.0s,mb4.7							
CCM	Cathedral Cave	47.65	287	*e*P		P	03 11 44.8	-0.4
	comp=Z,10nm,1.1s,mb4.7							
MIAR	Mount Ida	50.96	284	*e*P		P	03 12 10.0	-0.6
	comp=Z,10nm,1.1s,mb4.7							
MIAR	Mount Ida	50.96	284	*e*P		P	03 12 10.0	-0.5
	comp=Z,14nm,1.5s,mb4.8							
WMOK	Wichita Mounta	54.57	287	*e*P		P	03 12 36.6	-0.6
	comp=Z,14nm,1.5s,mb4.8							
WMOK	Wichita Mounta	54.57	287	*e*P		P	03 12 36.6	-0.6
	comp=Z,14nm,1.5s,mb4.8							
AKTK	Aktyubinsk	56.37	50	P		P	03 12 49.9	-0.1
AKTK	Aktyubinsk	56.37	50	P		P	03 12 49.8	-0.1
AKTO	Aktyubinsk	56.37	50	P		P	03 12 49.9	-0.1
	comp=Z,1.6nm,0.7s,mb4.2,baz=289,slow=6.9,SNR=4.5							
NEW	Newport	59.55	309	*e*P		P	03 13 11.3	-0.9
	comp=Z,4.8nm,0.9s,mb4.5							
NEW	Newport	59.55	309	*e*P		P	03 13 11.3	-0.9
	comp=Z,4.8nm,0.9s,mb4.5							
TXAR	Lajitas Array	60.98	284	P		P	03 13 22.1	-0.2
	comp=Z,1.2nm,0.9s,mb4.0,baz=63,slow=7.0,SNR=12							
TXAR	Lajitas Array	60.98	284	P		P	03 13 22.1	-0.2
BVAR	Borovoye Array	61.66	43	P		P	03 13 26.4	-0.1
BVAR	Borovoye Array	61.66	43	P		P	03 13 26.4	-0.1
	comp=Z,0.7nm,0.5s,mb4.0,baz=261,slow=6.6,SNR=4.9							
BVAR	Borovoye Array	61.66	43	P		P	03 13 26.4	-0.1
ILAR	Eielson Array	62.93	335	P		P	03 13 34.0	-0.8
	comp=Z,0.3nm,0.8s,mb3.5,baz=42,slow=6.1,SNR=4.7							
ILAR	Eielson Array	62.93	335	P		P	03 13 34.0	-0.8
ZALV	Zalesovo Beam	67.86	36	P		P	03 14 06.8	-0.1
	comp=Z,0.4nm,0.3s,mb4.0,baz=289,slow=5.8,SNR=3.1							
LPAZ	La Paz	69.41	222	P		P	03 14 19.3	+2.4
	comp=Z,2.0nm,1.0s,mb4.0,baz=53,slow=5.4,SNR=5.7							
LPAZ	La Paz	69.41	222	P		P	03 14 19.3	+2.4
UCH	Uchtor	70.39	50	*e*P		P	03 14 24.4	+1.7
	comp=Z,4.2nm,1.1s,mb4.3							
UCH	Uchtor	70.39	50	*e*P		P	03 14 24.5	+1.7
	comp=Z,4.2nm,1.1s,mb4.3							
MKAR	Makanchi Array	71.54	43	P		P	03 14 29.4	-0.2
	comp=Z,1.1nm,0.7s,mb3.9,baz=325,slow=6.4,SNR=8.6							
LSZ	Lusaka	77.12	125	*e*P		P	03 15 03.7	+1.2
	comp=Z,4.6nm,1.1s,mb4.3							
LSZ	Lusaka	77.12	125	*e*P		P	03 15 03.7	+1.3
	comp=Z,4.6nm,1.1s,mb4.3							
SONM	Songino Array	81.24	29	P		P	03 15 24.8	+0.2
	comp=Z,1.5nm,0.9s,mb3.9,baz=324,slow=7.1,SNR=6.8							
SONM	Songino Array	81.24	29	P		P	03 15 24.8	+0.1
GTA	Gaotai	85.52	38	*e*P		P	03 15 47.0	+0.2
GTA				pP		pP	03 15 51.6	-5.7
GTA				sP		sP	03 15 54.8	-6.3
GTA				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.7							
ASAR	Alice Springs	155.72	45	PKPab		PKPab	03 23 29.4	+0.2
	comp=Z,1.1nm,0.9s,baz=334,slow=4.6,SNR=4.3							
ASAR	Alice Springs	155.72	45	PKPab		PKPab	03 23 29.4	+0.2

*IDC **19** 03:21:52.8±2.3,43°.13N×126°.45W,h0km,mb3.5/4, mb1 3.8/9,mb1mx3.6/25,mbtmp3.6/9,ML3.3/4,MS3.4/6, Ms1 3.4/6,ms1mx3.2/20,Error ellipse: s-maj=50.4km s-min=12.2km az=50.0*

*BJI **19** 03:21:53.1,43°.30N×126°.30W,h10km,mB5.1/5,mb4.9/8, Ms4.9/3,Ms7 4.5/2*

*ISCJB **19** 03:21:54.2±0.5,43°.31N±0°.03×126°.29W±0°.05,h10km, mb4.2/3,MS3.4/3,Error ellipse: s-maj=5.3km s-min=4.1km az=162.5*

*NEIC **19** 03:21:56.2±0.8,43°.32N×126°.30W,h10km,mb4.1/5,Error ellipse: s-maj=10.7km s-min=5.6km az=64.0*

ISC 19 03:21:55.5±0.5,43°.26N±0°.03×126°.41W±0°.05,h10km, (h13km±2.5km:pP-P),n62,σ1°13/75,mb4.2/3,MS3.4/3,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COR	Corvallis	2.61	58	*e*Pn	Pn	03 22 36.2	-1.5
COR				*e*S	Sn	03 23 12.0	+2.7
HUMO	Hull Mountain	2.62	103	*e*Pn	Pn	03 22 34.9	-2.9
HUMO				*e*S	Sn	03 23 09.0	-0.6
HEBO	Mount Hebo	2.73	43	*e*Pn	Pn	03 22 37.6	-1.8
HEBO				*e*S	Sn	03 23 14.1	+1.7
YBH	Yreka Blue Hor	3.13	118	*e*Pn	Pn	03 22 42.4	-2.4
YBH				*e*S	Sn	03 23 21.8	-0.5
YBH	Yreka Blue Hor	3.13	118	Pn	Pn	03 22 42.6	-2.2
	2.0nm,0.3s,baz=296,slow=13,SNR=64						
YBH				Sn	Sn	03 23 21.1	-1.2
	2.2nm,0.3s,baz=240,slow=9.8,SNR=6.3						
WDC	Whiskeytown Da	3.94	132	*e*Pn	Pn	03 22 57.8	+1.9
HOOD	Mount Hood Mea	3.99	57	*e*Pn	Pn	03 22 56.8	+0.1
HOOD				*e*S	Sn	03 23 46.4	+2.9
NLWA	Neilton Lookou	4.50	23	*e*Pn	Pn	03 23 03.1	-0.6
NLWA				*e*S	Sn	03 23 55.8	-0.4
MOD	Modoc	4.71	105	Pn	Pn	03 23 08.9	+2.4
LON	Longmire	4.78	41	*e*Pn	Pn	03 23 07.4	-0.1
LON				*e*S	Sn	03 24 03.8	+0.9
GNW	Green Mountain	4.99	29	*e*Pn	Pn	03 23 09.2	-1.2
GNW				*e*S	Sn	03 24 08.1	+0.1
PGC	Sidney	5.77	20	*e*Pn	Pn	03 23 19.7	-1.4
PGC				*e*S	Sn	03 24 26.2	-1.2
WVOR	Wild Horse Val	5.77	96	*e*Pn	Pn	03 23 18.6	-2.5
	14nm,1.2s						
RSW	Rattlesnake Hi	5.78	55	*e*Pn	Pn	03 23 20.8	-0.3
	20nm,0.4s						
RSW				*e*S	Sb	03 24 41.0	-4.4
HAWA	Hanford	5.81	55	*e*Pn	Pn	03 23 20.6	-1.0
	14nm,0.5s						
HAWA				*e*S	Sn	03 24 33.9	+5.7
JCW	Jim Creek	5.85	31	*e*Pn	Pn	03 23 21.2	-0.9
	14nm,0.3s						
JCW				*e*S	Sn	03 24 30.4	+1.3
ETW	Entiat	6.10	42	*e*Pn	Pn	03 23 26.1	+0.6
	14nm,0.5s						
ETW				*e*S	Sn	03 24 39.2	+3.9
RPW	Rockport	6.21	32	*e*Pn	Pn	03 23 26.5	-0.6
	8.2nm,0.3s						
RPW				*e*S	Sn	03 24 38.6	+0.4
LNOR	Lincton Mounta	6.37	63	*e*Pn	Pn	03 23 27.8	-1.4
	4.9nm,0.4s						
OD2	Odessa Site #2	6.82	50	*e*Pn	Pn	03 23 35.0	-0.5
CMB	Columbia Colle	6.94	137	*e*Pn	Pn	03 23 38.6	+1.4
	2.4nm,0.6s						
NVAR	Mina Array Bea	7.81	125	Pn	Pn	03 23 50.0	+0.9
	0.1nm,0.3s,baz=300,slow=14,SNR=3.3						

NEW	Newport	8.20	49	*e*Pn		Pn	03 23 53.8	-0.6
	4.6nm,0.7s							
HLID	Hailey	8.74	84	*e*Pn		Pn	03 24 01.9	+0.1
	2.7nm,0.6s							
BBB	Bella Bella	9.01	353	Pn		Pn	03 24 07.3	+1.8
	0.4nm,0.3s,baz=90,slow=20,SNR=4.1							
BBB				LR		LR	03 26 55.7	
	comp=Z,257nm,19.3s,baz=282,slow=33							
BSMT	Bassoo Peak	9.36	57	*e*Pn		Pn	03 24 09.5	-0.8
	4.3nm,0.8s							
MSO	Missoula	9.52	64	*e*Pn		Pn	03 24 12.1	-0.5
	7.0nm,1.1s							
JTMT	Jette	9.62	58	*e*Pn		Pn	03 24 13.7	-0.2
	4.1nm,0.9s							
BLMT	Blacktail Moun	9.68	56	*e*Pn		Pn	03 24 14.7	-0.1
MCMT	McKenzie Canyo	9.89	76	*e*Pn		Pn	03 24 18.3	+0.6
	2.0nm,0.9s							
SLMT	Seeley Lake	9.94	62	*e*Pn		Pn	03 24 16.5	-1.7
	7.1nm,1.1s							
CHMT	Chamberlain Mo	10.00	64	*e*Pn		Pn	03 24 18.6	-0.5
	2.2nm,0.9s							
DLMT	Dillon	10.12	73	*e*Pn		Pn	03 24 19.6	-1.2
	15nm,1.2s							
BGU	Big Grassy Mou	10.22	99	*e*Pn		Pn	03 24 22.9	+0.9
	7.4nm,1.3s							
WALA	Waterton Lakes	10.43	52	*e*Pn		Pn	03 24 26.2	+1.3
IMW	Indian Meadow	11.25	81	*e*Pn		Pn	03 24 35.9	-0.3
	9.1nm,1.3s							
TPAW	Teton Pass	11.26	84	*e*Pn		Pn	03 24 37.2	+0.8
	17nm,1.2s							
REDW	Red Top Meadow	11.34	84	*e*Pn		Pn	03 24 39.0	+1.6
	20nm,1.5s							
LOHW	Long Hollow	11.50	83	*e*Pn		Pn	03 24 40.7	+1.1
	12nm,1.3s							
DLBC	Dease Lake	15.37	353	Pn		Pn	03 25 33.4	+1.3
DLBC				*e*			03 25 38.0	
DLBC	Dease Lake	15.37	353	Pn		Pn	03 25 33.4	+1.2
	0.1nm,0.3s,baz=169,slow=11,SNR=1.7							
DLBC				LR		LR	03 30 46.6	
	comp=Z,138nm,19.9s,baz=92,slow=34							
ANMO	Albuquerque	17.54	112	*e*Pn		Pn	03 25 59.8	-0.2
	4.3nm,1.1s							
ANMO	Albuquerque	17.54	112	P		Pn	03 25 58.6	-1.4
	0.1nm,0.3s,baz=300,slow=17,SNR=4.6							
BNM	Barren Site	17.89	114	*e*Pn		Pn	03 26 00.0	-4.2
	6.7nm,1.2s							
YKA	Yellowknife Ar	20.48	16	P		P	03 26 33.8	+0.7
	2.3nm,0.9s,baz=204,slow=12,SNR=2.8							
AMTX	Amarillo	20.89	105	*e*P		P	03 26 38.3	+0.6
	10nm,1.0s							
AGMN	Agassiz Nation	21.81	66	*e*P		P	03 26 47.8	+0.3
	33nm,1.4s,mb4.6							
ULM	Lac du Bonnet	21.95	61	P		P	03 26 48.5	-0.6
ULM				LR		LR	03 35 18.8	
ULM	Lac du Bonnet	21.95	61	P		P	03 26 48.5	-0.6
	1.8nm,0.5s,mb3.8,baz=267,slow=11,SNR=4.1							
ULM				LR		LR	03 35 18.8	
	comp=Z,89nm,19.9s,MS3.2,baz=323,slow=37							
TXAR	Lajitas Array	22.91	120	P		P	03 26 59.8	+0.5
	0.4nm,0.7s,baz=318,slow=7.3,SNR=6.1							
WMOK	Wichita Mounta	23.02	102	*e*P		P	03 27 00.5	0.0
	17nm,1.4s,mb4.3							
ILAR	Eielson Array	24.46	339	P		P	03 27 12.6	-1.6
	1.1nm,0.9s,baz=153,slow=7.7,SNR=11							
ILAR				LR		LR	03 35 20.9	
	comp=Z,65nm,21.2s,baz=152,slow=33							
PPLA	Purkeypile	24.73	332	*e*P		P	03 27 16.6	+0.1
INK	Inuvik	25.39	354	LR		LR	03 37 02.4	
	comp=Z,121nm,19.7s,MS3.4,baz=110,slow=36							
CN2	Changchun	72.17	314	*e*P		P	03 33 19.9	-0.3
ZALV	Zalesovo Beam	79.54	342	LR		LR	04 08 49.0	
	comp=Z,21nm,18.9s,MS3.5,baz=82,slow=35							
BJI	Beijing	79.67	316	P		P	03 34 02.3	-0.8
BJI				PP		PP	03 37 01.8	-1.5
BJI				S		S	03 44 04.0	-1.3
BJI				SS		SS	03 49 11.8	-0.8
BJI				pmax		pmax		
	comp=Z,5.0nm,0.6s							
BJI				pmax		pmax		
	comp=Z,100nm,3.8s							
BJI				LR		LR		
	comp=N,190nm,14.0s							
BJI				LR		LR		
	comp=E,120nm,14.9s							
HHC	Hu-ho-hao-te	81.32	319	*e*P		P	03 34 11.8	-0.1
HHC				pP		pP	03 34 16.3	+1.1
HHC				sP		sP	03 34 19.0	+2.6
HHC				PP		PP	03 37 19.0	+2.1
HHC				S		S	03 44 19.0	-3.5
HHC				SKS			03 44 24.8	
HHC				SS		SS	03 49 37.0	-0.1
HHC				pmax		pmax		
	comp=Z,18nm,0.8s							
HHC				pmax		pmax		
	comp=Z,75nm,4.2s							
HHC				LR		LR		
	comp=N,82nm,13.4s							
HHC				LR		LR		
	comp=E,100nm,14.7s							
HHC				LR		LR		
	comp=Z,100nm,13.5s							
WMQ	Urumqi	88.09	336	*e*P		P	03 34 46.8	+0.7
WMQ				pP		pP	03 34 51.6	+2.2
WMQ				sP		sP	03 34 53.8	+3.2
WMQ				pmax		pmax		
	comp=Z,4.0nm,1.0s							
WMQ				pmax		pmax		
	comp=Z,38nm,4.2s							
CD2	Chengdu	93.05	319	P		P	03 35 09.3	-0.1
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
CD2				pmax		pmax		
	comp=Z,80nm,5.1s							
GYA	Guiyang	95.21	314	*e*P		P	03 35 20.6	+1.2
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
KMI	Kunming	98.33	316	P		P	03 35 35.3	+1.8
KMI				pP		pP	03 35 37.4	+0.5
KMI				sP		sP	03 35 38.4	+0.3
KMI				pmax		pmax		
	comp=Z,6.0nm,0.7s							

*IDC **19** 03:30:01.4±1.0,20°.19S×70°.53W,h0km,mb4.4/3, mb1 4.4/4,mb1mx4.1/12,mbtmp4.4/4,ML4.0/1,MS3.4/4, Ms1 3.4/4,ms1mx3.2/21,Error ellipse: s-maj=35.9km s-min=30.0km az=62.0*

*ISCJB **19** 03:30:05.9±1.1,20°.13S±0°.05×70°.6W±0°.1,h44km±11km, mb4.2/6,MS3.4/2,Error ellipse: s-maj=17.0km s-min=8.3km az=167.0*

*GUC **19** 03:30:05.2±0.8,20°.10S×70°.63W,h43km±8km,ML3.9*

*NEIC **19** 03:30:07.3±1.1,20°.24S×70°.59W,h40km±11km,mb4.1/4, Error ellipse: s-maj=15.2km s-min=9.2km az=79.0*

ISC 19 03:30:06.0±1.8,20°.15S±0°.05×70°.59W±0°.09,h28km±13km, n27,σ0s97/23,mb4.2/6,MS3.4/2,2C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HMBC	Humberston	0.67	101	↓*i*P	Pn	03 30 19.4	-0.3
HMBC				AML	AML	03 30 31.1	
	comp=N,7μm,0.7s						
PSGC	Pisagua	0.71	39	↓*i*P	Pn	03 30 19.1	-1.0
PSGC				*i* S	Sb	03 30 29.1	-0.1
PSGC				AML	AML	03 30 33.3	
	comp=N,9μm,0.7s						
PB01	Plate Boundary	1.36	131	↓*i*P	Pn	03 30 30.2	+1.1
PB01				*i* S	Sn	03 30 48.7	+2.4
PB01				AML	AML	03 30 53.4	
	comp=E,6μm,0.7s						
MACH	Maria Elena	2.18	159	↑*i*P	Pn	03 30 41.2	+0.8
LPAZ	La Paz	4.50	32	*e*Pn	Pn	03 31 16.6	+4.3
LPAZ	La Paz	4.50	32	Pn	Pn	03 31 16.3	+4.0
	comp=E,2.1nm,0.3s,baz=234,slow=8.9,SNR=59						
LPAZ				LR	LR	03 32 37.0	
	comp=E,138nm,18.1s,baz=231,slow=35						
SIV	San Ignacio	9.95	67	Pn	Pn	03 32 26.8	-0.5
	comp=E,0.7nm,0.3s,baz=274,slow=9.2,SNR=31						
NNA	Nana	10.10	323	Pn	Pn	03 32 31.2	+2.0
NNA	Nana	10.10	323	Sn	Sn	03 34 16.4	-5.1
	comp=E,1.2nm,0.3s,baz=141,slow=13,SNR=4.0						
CFAA	Coronel Fontan	11.60	170	Pn	Pn	03 32 48.2	-1.5
	comp=E,0.0nm,0.3s,baz=312,slow=16,SNR=1.9						
CFAA				Sn	Sn	03 34 50.8	-7.5
	comp=E,0.0nm,0.3s,baz=4.7,slow=15,SNR=2.0						

CPUP	Villa Florida	13.65	119	LR		LR	03 39 25.8	
	comp=E,220nm,18.5s,baz=280,slow=42							
TRQA	Tornquist	19.35	159	*e*P		Pn	03 34 29.7	-0.7
	comp=E,6.0nm,0.6s							
PLCA	Paso Flores	20.52	180	*e*P		P	03 34 41.1	-0.8
	comp=E,20nm,1.7s							
OTAV	Otavalo	21.68	338	*e*P		P	03 34 54.8	+0.2
	comp=E,3.1nm,1.0s,mb3.7							
ROSC	El Rosal	25.12	351	LR		LR	03 46 27.9	
	comp=E,82nm,18.9s,MS3.3,baz=22,slow=39							
PCRV	Puerto La Cruz	30.70	12	LR		LR	03 50 22.1	
	comp=E,112nm,18.4s,MS3.6,baz=212,slow=40							
TXAR	Lajitas Array	58.63	326	P		P	03 40 00.8	+0.1
	comp=E,0.2nm,0.8s,mb3.2,baz=156,slow=8.9,SNR=2.5							
SYO	Syowa Base	78.31	160	↑*e*P		P	03 42 03.2	+0.1
TORD	Torodi Ar. Bea	78.40	71	P		P	03 42 03.5	-1.1
TORD	Torodi Ar. Bea	78.40	71	P		P	03 42 03.5	-1.1
	comp=E,5.6nm,0.7s,mb4.6,baz=252,slow=5.5,SNR=28							
TAM	Tamanrasset	85.63	64	*e*P		P	03 42 43.2	+0.8
	comp=E,6.7nm,1.2s,mb4.8							
MAW	Mawson	86.06	164	P		P	03 42 43.2	-0.5
	comp=E,0.9nm,0.7s,mb4.1,baz=250,slow=7.5,SNR=3.9							
YKA	Yellowknife Ar	89.40	341	P		P	03 42 59.3	-0.2
	comp=E,2.7nm,0.8s,mb4.6,baz=129,slow=5.8,SNR=4.7							
MKAR	Makanchi Array	145.43	33	PKPbc	PKPbc		03 49 41.5	+0.3
	comp=E,4.6nm,0.7s,baz=321,slow=4.3,SNR=32							
MJAR	Matsushiro Arr	150.00	309	PKPbc	PKPbc		03 49 54.6	+0.5
	comp=E,1.6nm,0.7s,baz=161,slow=9.1,SNR=4.2							
SONM	Songino Array	152.28	4	PKPbc	PKPbc		03 49 59.3	+0.3
SONM	Songino Array	152.28	4	PKPbc	PKPbc		03 49 59.3	+0.3
	comp=E,1.0nm,0.5s,baz=23,slow=0.9,SNR=5.7							

GUC 19 03:39:33.9±0.7,20°.88S×69°.30W,h82km±4km,ML3.5, 2C-3D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	Plate Boundary	0.24	227	↓*i*P	Pn	03 39 46.8	+0.7
PB01				*i* S	Sn	03 39 55.8	+0.6
PB01				AML	AML	03 39 56.2	
	comp=E,9μm,0.2s						
MACH	Maria Elena	1.38	198	↑*i*P	Pn	03 39 58.7	+0.9
MACH				*i* S	Sn	03 40 17.2	+1.4
PB04	Plate Boundary	1.39	187	↓*i*P	Pn	03 40 02.4	+4.4
PB04				*i* S	Sn	03 40 24.2	+8.1
PB04				AML	AML	03 40 30.3	
	comp=N,497nm,0.2s						
PSGC	Pisagua	1.49	328	↑*i*P	Pn	03 39 59.6	+0.4
PSGC				*i* S	Sn	03 40 19.8	+1.5
PSGC				AML	AML	03 40 22.2	
	comp=E,455nm,0.4s						
MNMC	Miæe Miæ	1.76	351	↓*i*P	Pn	03 40 03.9	+1.2
MNMC				*i* S	Sn	03 40 26.2	+1.7
MNMC				AML	AML	03 40 33.9	
	comp=E,725nm,0.3s						
ANCH	Antofagasta	2.98	200	*e*P	Pn	03 40 19.9	+0.9

*ISCJB **19** 03:46:20.7±0.5,37°.10N±0°.03×28°.33E±0°.03,h9km±5km, Error ellipse: s-maj=5.7km s-min=3.7km az=0.8*

*CSEM **19** 03:46:20.7±0.2,37°.10N×28°.34E,h8km,MD3.1,Error ellipse: s-maj=5.8km s-min=3.0km az=170.0*

*ISK **19** 03:46:20.6,37°.12N×28°.33E,h8km,MD3.1*

*DDA **19** 03:46:20.5,37°.08N×28°.32E,h7km±4km,Md2.9*

ISC 19 03:46:21.1±0.5,37°.10N±0°.03×28°.34E±0°.03,h9km±5km, n29,σ0s88/46,2D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	Yerkesik	0.06	305	*e*PG	Pg	03 46 22.3	-0.7
YER				*e*SG	Sg	03 46 24.0	-0.4
YER	Yerkesik	0.06	305	*e*Pg	Pg	03 46 22.3	-0.7
YER				*e*Sg	Sg	03 46 24.0	-0.4
TURN	Turunc	0.31	138	↓*i*Pg	Pg	03 46 26.5	-0.7
TURN				*i* Sg	Sg	03 46 32.0	+0.7
MLSB	Milas	0.49	293	*e*PG	Pg	03 46 30.4	-0.3
MLSB				*e*SG	Sg	03 46 38.0	+0.8
MLSB	Milas	0.49	293	*e*Pg	Pg	03 46 30.4	-0.3
MLSB				*e*Sg	Sg	03 46 38.0	+0.9
AYDN	Tasoluk	0.67	327	*e*P	Pg	03 46 34.0	0.0
AYDN				*e*S	Sg	03 46 43.2	+0.4
AYDN	Tasoluk	0.67	327	*e*P	Pg	03 46 34.0	0.0
AYDN				*e*S	Sg	03 46 43.2	+0.4
DAT	Datca	0.72	239	*e*PG	Pg	03 46 33.9	-1.0
DAT				*e*SG	Sg	03 46 46.2	+1.9
DAT	Datca	0.72	239	*e*Pg	Pg	03 46 33.9	-1.0
DAT				*e*Sg	Sg	03 46 46.2	+1.9
BDRM	Kayabasi	0.72	267	*e*P	Pg	03 46 34.2	-0.8
BDRM				*e*

ARG	**Arkhangelos**	**1.18**	**230**	*e*P		**Pg**	**03 56 55.7**	**-1.8**
BCK	**Bucak**	**1.18**	**66**	*e*PN		**Pn**	**03 56 56.7**	**-1.4**
BCK	**Bucak**	**1.18**	**66**	*e*Pn		**Pn**	**03 56 56.7**	**-1.4**
MLSB	**Milas**	**1.21**	**285**	*e*PN		**Pn**	**03 56 57.4**	**-1.1**
MLSB	**Milas**	**1.21**	**285**	*e*Pn		**Pn**	**03 56 57.4**	**-1.1**
AYDN	**Tasoluk**	**1.27**	**302**	*e*P		**Pg**	**03 56 59.0**	**-0.3**
AYDN				*e*S		**Sg**	**03 57 16.4**	**+0.6**
AYDN	**Tasoluk**	**1.27**	**302**	*e*P		**Pg**	**03 56 59.0**	**-0.3**
AYDN				*e*S		**Sg**	**03 57 16.5**	**+0.7**
ISP	**Isparta**	**1.32**	**50**	*e*PN		**Pn**	**03 56 59.8**	**-0.3**
ISP	**Isparta**	**1.32**	**50**	*e*Pn		**Pn**	**03 56 59.8**	**-0.3**
KHL	**Karahalli**	**1.35**	**10**	*e*PN		**Pn**	**03 56 59.6**	**-0.9**
KHL	**Karahalli**	**1.35**	**10**	*e*Pn		**Pn**	**03 56 59.6**	**-0.9**
DAT	**Datca**	**1.35**	**260**	*e*PN		**Pn**	**03 57 00.0**	**-0.5**
DAT	**Datca**	**1.35**	**260**	*e*Pn		**Pn**	**03 57 00.0**	**-0.5**
KHAL	**Karahalli**	**1.40**	**8**	*e*P		**Pn**	**03 57 01.1**	**0.0**
KHAL				*e*S		**Sg**	**03 57 21.0**	**+1.2**
KHAL	**Karahalli**	**1.40**	**8**	*e*P		**Pn**	**03 57 01.1**	**0.0**
KHAL				*e*S		**Sg**	**03 57 21.0**	**+1.3**
BDRM	**Kayabasi**	**1.44**	**274**	*e*P		**Pn**	**03 57 01.8**	**+0.2**
BDRM				*e*S		**Sb**	**03 57 21.3**	**+0.5**
BDRM	**Kayabasi**	**1.44**	**274**	*e*P		**Pn**	**03 57 01.8**	**+0.2**
BDRM				*e*S		**Sb**	**03 57 21.3**	**+0.5**
BODT	**Bodrum**	**1.54**	**273**	*e*PN		**Pn**	**03 57 02.3**	**-0.8**
BODT	**Bodrum**	**1.54**	**273**	*e*Pn		**Pn**	**03 57 02.3**	**-0.8**
KULA	**Kula-Manisa**	**1.59**	**344**	*e*PN		**Pn**	**03 57 03.2**	**-0.6**
KULA	**Kula-Manisa**	**1.59**	**344**	*e*Pn		**Pn**	**03 57 03.2**	**-0.6**
IZM	**Izmir**	**2.11**	**313**	*e*PN		**Pn**	**03 57 10.3**	**-0.5**
ALT	**Altintas**	**2.18**	**18**	*e*PN		**Pn**	**03 57 11.6**	**-0.2**
ALT	**Altintas**	**2.18**	**18**	*e*Pn		**Pn**	**03 57 11.6**	**-0.2**
AKS	**Akhisar**	**2.20**	**330**	*e*PN		**Pn**	**03 57 11.7**	**-0.4**
AKS	**Akhisar**	**2.20**	**330**	*e*Pn		**Pn**	**03 57 11.7**	**-0.4**
KARP	**Karpathos**	**2.21**	**230**	*e*P		**Pn**	**03 57 12.9**	**+0.6**
BLCB	**Balcova**	**2.23**	**309**	*e*PN		**Pn**	**03 57 12.2**	**-0.4**
BLCB	**Balcova**	**2.23**	**309**	*e*Pn		**Pn**	**03 57 12.2**	**-0.4**
APE	**Apeiranthos**	**2.97**	**273**	*e*PN		**Pn**	**03 57 23.4**	**+0.7**
APE	**Apeiranthos**	**2.97**	**273**	*e*P		**Pn**	**03 57 23.2**	**+0.5**
APE	**Apeiranthos**	**2.97**	**273**	*e*Pn		**Pn**	**03 57 23.4**	**+0.7**
ZKR	**Zakros**	**3.08**	**234**	*e*P		**Pn**	**03 57 25.6**	**+1.4**
GONE	**Gonen-Balikesi**	**3.29**	**339**	*e*PN		**Pn**	**03 57 27.0**	**-0.1**
GONE	**Gonen-Balikesi**	**3.29**	**339**	*e*Pn		**Pn**	**03 57 27.0**	**-0.1**
NPS	**Neapolis**	**3.40**	**241**	*e*P		**Pn**	**03 57 28.8**	**+0.1**
VAM	**Vamos**	**4.37**	**250**	*e*P		**Pn**	**03 57 43.4**	**+1.4**
KYTH	**Kithira**	**5.04**	**264**	*e*P		**Pn**	**03 57 53.2**	**+2.1**
VLI	**Veliai**	**5.06**	**269**	*e*P		**Pn**	**03 57 52.1**	**+0.6**

GUC 19 04:01:50.4±0.7, 22°.55S×66°.77W, h260km, ML4.3, 3C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB04	**Plate Boundary**	**2.53**	**276**	⇑*i*P	Pn	04 02 47.9	+9.2
PB04				*i* S	S	04 03 31.1	+14
PB04				AML	AML	04 03 33.9	
	comp=E,194nm,0.2s						
MACH	**Maria Elena**	**2.79**	**277**	*i* S	S	04 03 24.7	+3.1
CEN1	**Los Morros**	**3.27**	**255**	⇓*i*P	Pn	04 02 48.3	+1.9
CEN1				*i* S	S	04 03 34.9	+4.0
CEN1				AML	AML	04 03 38.1	
	comp=N,186nm,0.5s						
HMBC	**Humberston**	**3.68**	**307**	⇑*i*P	Pn	04 02 53.9	+2.8
HMBC				*i* S	S	04 03 42.5	+3.3
PSGC	**Pisagua**	**4.29**	**313**	*e*P	Pn	04 03 00.6	+2.4
PSGC				*i* S	S	04 03 54.2	+2.1
MNMC	**Miæe Miæ**	**4.31**	**322**	⇑*i*P	Pn	04 03 02.1	+3.8
MNMC				*i* S	S	04 03 56.9	+4.5

IDC 19 04:13:13.3±13.0, 21°.11S×178°.14W, h500km±140km, mb2.6/3, mb1 2.9/3, mb1mx2.8/13, mbtmp2.6/3, Error ellipse: s-maj=69.6km s-min=43.3km az=86.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**44.25**	**257**	P	P	04 20 38.0	+0.1
	0.3nm,0.5s,baz=99,slow=7.7,SNR=4.3						
WRA	**Warramunga Arr**	**44.39**	**263**	P	P	04 20 38.6	-0.3
	0.5nm,0.8s,baz=96,slow=6.9,SNR=2.8						
ILAR	**Eielson Array**	**88.94**	**13**	P	P	04 25 13.6	+0.1
	0.4nm,1.0s,baz=224,slow=6.0,SNR=4.5						
ARCES	**ARCESS Array B**	**129.50**	**349**	PKP	PKPdf	04 31 24.2	+0.1
	2.4nm,1.1s,baz=58,slow=2.2,SNR=4.3						
AKASG	**Malin Array Be**	**143.48**	**331**	PKP	PKPdf	04 31 47.9	-2.5
	0.4nm,0.5s,baz=47,slow=4.3,SNR=4.1						
BRTR	**Keskin Array B**	**147.15**	**312**	PKPbc	PKPbc	04 32 00.2	+0.2
	0.4nm,0.5s,baz=98,slow=4.4,SNR=2.3						
TORD	**Torodi Ar. Bea**	**172.08**	**179**	PKPab	PKPab	04 33 51.3	-0.2
	0.3nm,0.8s,baz=145,slow=2.9,SNR=2.1						

*MOS **19** 04:13:14.2±0.7, 27°.17N×140°.13E, h433km, mb4.1/15, Error ellipse: s-maj=23.4km s-min=9.6km az=108.0*
*ISCJB **19** 04:13:16.1±0.4, 27°.22N±0°.04×140°.14E±0°.1, h454km±4km, mb3.9/30, Error ellipse: s-maj=14.9km s-min=6.0km az=168.4*
*NEIC **19** 04:13:16.3±1.0, 27°.21N×140°.21E, h438km±10km, mb4.2/2, Error ellipse: s-maj=12.1km s-min=7.9km az=81.0*
*IDC **19** 04:13:16.2±0.5, 27°.21N×140°.24E, h436km±5km, mb3.6/20, mb1 3.7/22, mb1mx3.7/26, mbtmp3.6/22, Error ellipse: s-maj=14.1km s-min=9.0km az=78.0*
*JMA **19** 04:13:17.3±0.3, 27°.38N×140°.88E, h463km±4km, M3.8*
ISC 19 04:13:17.4±0.4, 27°.26N±0°.04×140°.5E±0°.1, h451km±4km, n86,σ1°19/94, mb3.9/30, 1C-2D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.56**	**96**	P	P	**04 14 15.8**	**0.0**
	21nm,0.3s,baz=231,slon=21,SNR=21						
CBIJ				S	S	04 15 00.8	-2.4
	41nm,0.3s,baz=320,slow=23,SNR=12						
CBIJ	**Chichi jima**	**1.56**	**96**	P	P	**04 14 15.7**	**-0.1**
CBIJ				*e*S	S	**04 15 01.3**	**+1.8**
JHHJ	**Haha-jima-NKT**	**1.67**	**112**	P	P	**04 14 16.7**	**+0.3**
JHHJ				*e*S	S	**04 15 03.2**	**-0.9**
JHJ2	**Mitsune**	**5.86**	**355**	P	P	**04 14 52.7**	**+2.5**
JHJ	**Hachijo jima 2**	**5.87**	**355**	P	P	**04 14 50.2**	**-0.1**
	50nm,0.3s,baz=235,slow=22,SNR=12						
JHJ				S	S	**04 16 03.1**	**-3.1**
	10nm,0.3s,baz=67,slow=23,SNR=1.7						
TK02	**Tokai 2**	**7.06**	**341**	P	P	**04 15 04.7**	**+2.1**
BSO1	**Boso 1**	**7.38**	**3**	P	P	**04 15 06.5**	**+0.4**
BSO3	**Boso 3**	**7.52**	**0**	P	P	**04 15 07.8**	**+0.3**
BSO3				*e*S	S	**04 16 35.8**	**-2.0**
JIE	**Ise**	**7.80**	**337**	P	P	**04 15 12.9**	**+2.3**
JKN2	**Miekihoku**	**7.83**	**334**	P	P	**04 15 12.7**	**+1.9**
HMMJ	**Hamamatsu 2**	**7.92**	**344**	P	P	**04 15 13.1**	**+1.2**
JOD2	**Odawara 2**	**8.06**	**352**	P	P	**04 15 15.2**	**+1.9**
JNY	**Yasuok**	**8.37**	**345**	P	P	**04 15 17.6**	**+0.9**
JEG	**Eigenji**	**8.59**	**337**	P	P	**04 15 21.8**	**+2.8**
JHU	**Hanno**	**8.62**	**354**	P	P	**04 15 20.1**	**+0.7**
JHU				*e*S	S	**04 16 59.1**	**-0.6**
JRY	**Ryogami san**	**8.83**	**352**	P	P	**04 15 21.6**	**0.0**
JRY				*e*S	S	**04 17 03.0**	**-0.8**
JWT	**Wachi**	**9.09**	**333**	P	P	**04 15 25.6**	**+1.2**
JAG	**Ashikaga**	**9.18**	**355**	P	P	**04 15 25.2**	**-0.2**
JAG				*e*S	S	**04 17 05.5**	**-5.2**
JHO	**Hitachi**	**9.32**	**1**	P	P	**04 15 27.7**	**+0.7**
JHO				*e*S	S	**04 17 11.3**	**-2.3**
JNG	**Nsakai**	**9.34**	**348**	P	P	**04 15 26.3**	**-0.8**
MJAR	**Matsushiro Arr**	**9.45**	**349**	P	P	**04 15 27.9**	**-0.4**
	1.7nm,0.3s,baz=172,slow=9.6,SNR=8.8						
MJAR	**Matsushiro Arr**	**9.45**	**349**	P	P	**04 15 27.9**	**-0.4**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MAJO	**Matsushiro**	**9.45**	**349**	*e*P	P	**04 15 26.6**	**-1.8**
	comp=Z,9.7nm,0.4s						
MAJO	**Matsushiro**	**9.45**	**349**	*e*P	P	**04 15 26.6**	**-1.8**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.4s						
MAT	**Matsushiro**	**9.45**	**349**	P	P	**04 15 27.6**	**-0.8**
MAT				S	S	**04 17 14.5**	**-1.6**
MAT	**Matsushiro**	**9.45**	**349**	P	P	**04 15 29.2**	**+0.8**
JKSM	**Kasumi**	**9.66**	**331**	P	P	**04 15 33.9**	**+3.3**
JHS	**Saijyo**	**9.95**	**323**	P	P	**04 15 29.0**	**-4.8**
JHK	**Hiroka**	**10.03**	**353**	P	P	**04 15 34.5**	**-0.2**
JFT	**Otama**	**10.23**	**360**	P	P	**04 15 38.1**	**+1.3**
JFT				*e*S	S	**04 17 31.4**	**-0.3**
KSRS	**Korea Array**	**14.66**	**317**	P	P	**04 16 28.8**	**+4.0**
	comp=Z,0.2nm,0.3s,baz=132,slow=8.6,SNR=5.7						
WHN	**Wuhan**	**23.06**	**284**	P	P	**04 17 48.0**	**+1.5**
SONM	**Songino Array**	**33.53**	**317**	P	P	**04 19 17.5**	**-0.3**
	comp=Z,1.0nm,0.8s,mb3.3,baz=130,slow=9.4,SNR=5.2						
BILL	**Bilibino**	**43.65**	**14**	⇑*i*P	P	**04 20 41.6**	**+1.5**
BILL				pmax	pmax		
	comp=Z,14nm,1.9s,mb4.1						
WRA	**Warramunga Arr**	**47.29**	**188**	P	P	**04 21 07.8**	**-1.0**
	comp=Z,2.1nm,0.4s,mb3.9,baz=3.8,slow=7.5,SNR=22						
WRA				pP	pP	04 22 37.8	+1.7
	comp=Z,1.2nm,1.0s,baz=11,slow=8.5,SNR=2.6						
WRA	**Warramunga Arr**	**47.29**	**188**	P	P	**04 21 07.8**	**-0.9**
WRA				*PP	pP	04 22 37.8	+1.7
WRA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FITZ	**Fitzroy Crossi**	**47.32**	**199**	P	P	**04 21 08.9**	**-0.1**
	comp=Z,7.1nm,1.2s,mb4.0,baz=17,slow=6.8,SNR=2.4						
ZAA0	**Zalesovo Array**	**48.35**	**319**	*e*P	P	**04 21 15.8**	**-0.5**
ZALV	**Zalesovo Beam**	**48.35**	**319**	P	P	**04 21 15.6**	**-0.7**
	comp=Z,2.9nm,0.3s,mb4.0,baz=101,slow=7.8,SNR=12						
ZALV				PcP	PcP	04 22 33.9	-0.7
	comp=Z,1.1nm,0.3s,baz=118,slow=4.0,SNR=4.5						
ZALV	**Zalesovo Beam**	**48.35**	**319**	P	P	**04 21 15.6**	**-0.7**
ZALV						04 22 33.9	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.1						
MKAR	**Makanchi Array**	**49.18**	**310**	P	P	**04 21 22.2**	**-0.4**
	comp=Z,1.4nm,0.5s,mb3.6,baz=92,slow=9.6,SNR=14						
MKAR				PcP	PcP	04 22 37.6	-0.1
	comp=Z,0.7nm,0.6s,baz=79,slow=6.3,SNR=4.9						
MKAR	**Makanchi Array**	**49.18**	**310**	P	P	**04 21 22.2**	**-0.4**
MKAR						04 22 37.7	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	**Alice Springs**	**51.02**	**188**	P	P	**04 21 35.5**	**-0.9**
	comp=Z,0.4nm,0.3s,mb3.2,baz=1.1,slow=4.1,SNR=11						
KURK	**Kurchatov**	**51.77**	**314**	P	P	**04 21 41.4**	**-0.2**
	comp=Z,15nm,0.6s,mb4.5,baz=91,slow=7.7,SNR=39						
KURK	**Kurchatov**	**51.77**	**314**	⇓*i*P	P	**04 21 40.0**	**-1.6**
KURK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.2						
KSH	**Kashi**	**54.16**	**301**	*e*P	P	**04 22 02.1**	**+3.1**
KSH				*e*PcP	PcP	04 22 58.3	+1.5
KSH				*e*PP	PP	04 24 12.0	+5.5
KSH				*e*PcS	PcS	04 26 57.4	+0.5
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb3.9						
KSH				pmax	pmax		
	comp=Z,69nm,4.0s						
BVAR	**Borovoye Array**	**56.88**	**317**	P	P	**04 22 17.5**	**-0.2**
BVAR				PcP	PcP	04 23 07.1	0.0
BVAR	**Borovoye Array**	**56.88**	**317**	P	P	**04 22 17.5**	**-0.2**
	comp=Z,14nm,0.4s,mb4.7,baz=88,slow=6.9,SNR=63						
BVAR				PcP	PcP	04 23 07.1	0.0
	comp=Z,1.6nm,0.6s,baz=94,slow=5.8,SNR=3.0						
BVAR	**Borovoye Array**	**56.88**	**317**	P	P	**04 22 17.5**	**-0.2**
BVAR						04 23 07.1	
BVAR				pmax	pmax		
	comp=Z,15nm,0.4s						
BRVK	**Borovoye**	**56.94**	**317**	*e*P	P	**04 22 18.0**	**-0.1**
	comp=Z,9.6nm,0.6s,mb4.3						
BRVK	**Borovoye**	**56.94**	**317**	*e*P	P	**04 22 18.0**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
ILAR	**Eielson Array**	**58.31**	**29**	P	P	**04 22 27.8**	**+0.5**
	comp=Z,0.9nm,0.5s,mb3.4,baz=252,slow=5.6,SNR=16						
ILAR	**Eielson Array**	**58.31**	**29**	P	P	**04 22 27.8**	**+0.5**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
STKA	**Stephens Creek**	**58.82**	**179**	P	P	**04 22 30.6**	**-0.5**
	comp=Z,2.4nm,0.7s,mb3.6,baz=344,slow=7.5,SNR=3.5						
ARU	**Arti**	**63.34**	**322**	*d*P	P	**04 23 00.4**	**-0.4**
ARU				*e*		04 25 26.2	
ARU				*e*PPP		04 27 11.2	
ARU				S	Sx	04 31 18.8	
ARU				pmax	pmax		
	comp=Z,16nm,1.7s,mb4.3						
INK	**Inuvik**	**63.52**	**24**	P	P	**04 23 02.9**	**+1.1**
	comp=Z,1.1nm,0.5s,mb3.6,baz=287,slow=6.3,SNR=6.0						
ABKAR	**Akbulak array**	**63.87**	**314**	*e*P	P	**04 23 03.8**	**-0.5**
	comp=Z,2.5nm,0.6s,mb3.9						
AKTK	**Aktyubinsk**	**64.83**	**316**	P	P	**04 23 09.9**	**-0.5**
AKTO	**Aktyubinsk**	**64.83**	**316**	P	P	**04 23 09.9**	**-0.5**
	comp=Z,1.6nm,0.6s,mb3.8,baz=92,slow=14,SNR=6.9						
AKTO	**Aktyubinsk**	**64.83**	**316**	P	P	**04 23 09.9**	**-0.5**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
KEV	**Kevo**	**72.31**	**340**	*e*P	P	**04 23 55.6**	**0.0**
KEV				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.1						
KEV	**Kevo**	**72.31**	**340**	*e*p	P	**04 23 55.6**	**0.0**
	comp=Z,2.6nm,0.5s,mb4.0						
YKA	**Yellowknife Ar**	**72.73**	**28**	P	P	**04 23 59.0**	**+0.9**
	comp=Z,1.9nm,0.5s,mb3.9,baz=297,slow=6.1,SNR=9.5						
YKA	**Yellowknife Ar**	**72.73**	**28**	P	P	**04 23 59.0**	**+0.9**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARCES	**ARCESS Array B**	**72.88**	**341**	P	P	**04 23 59.5**	**+0.6**
	comp=Z,2.4nm,0.5s,mb4.0,baz=76,slow=8.6,SNR=40						
ARCES	**ARCESS Array B**	**72.88**	**341**	P	P	**04 23 59.5**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
JOF	**Joensuu**	**74.25**	**333**	*e*P	P	**04 24 05.7**	**-1.1**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.4						
JOF	**Joensuu**	**74.25**	**333**	*e*p	P	**04 24 05.7**	**-1.1**
	comp=Z,5.2nm,0.4s,mb4.4						
OBN	**Obninsk**	**75.51**	**325**	*e*P	P	**04 24 12.7**	**-1.4**
OBN				*e*		04 27 09.5	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
KAF	**Kangasniemi**	**76.65**	**334**	*e*P	P	**04 24 19.6**	**-0.7**
KAF				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.6						
KAF	**Kangasniemi**	**76.65**	**334**	*e*p	P	**04 24 19.6**	**-0.7**
	comp=Z,8.8nm,0.5s,mb4.5						
KIV	**Kislovodsk**	**76.80**	**313**	*e*P	P	**04 24 20.1**	**-1.4**
KIV				*e*		04 24 25.6	
KIV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
FINES	**FINESS Array B**	**77.11**	**333**	P	P	**04 24 22.5**	**-0.3**
	comp=Z,11nm,0.4s,mb4.7,baz=70,slow=4.8,SNR=80						
FINES	**FINESS Array B**	**77.11**	**333**	P	P	**04 24 22.5**	**-0.3**
FINES				pmax	pmax		
	comp=Z,11nm,0.4s						
AKASG	**Malin Array Be**	**81.57**	**323**	P	P	**04 24 46.0**	**-0.8**
	comp=Z,1.5nm,0.4s,mb3.9,baz=52,slow=5.3,SNR=13						
AKASG	**Malin Array Be**	**81.57**	**323**	P	P	**04 24 46.0**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NVAR	**Mina Array Bea**	**81.63**	**51**	P	P	**04 24 49.6**	**+2.4**
	comp=Z,0.9nm,0.6s,mb3.5,baz=299,slow=4.8,SNR=9.0						
NB2	**NORSAR Subarra**	**82.88**	**338**	P	P	**04 24 52.4**	**-0.8**
NB2	**NORSAR Subarra**	**82.88**	**338**	P	P	**04 24 52.4**	**-0.8**
NOA	**NORSAR Array B**	**82.88**	**338**	P	P	**04 24 52.3**	**-0.9**
	comp=Z,4.6nm,0.6s,mb4.2,baz=46,slow=4.8,SNR=22						
NOA	**NORSAR Array B**	**82.88**	**338**	P	P	**04 24 52.3**	**-0.9**
NOA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRTR	**Keskin Array B**	**84.75**	**312**	P	P	**04 25 02.1**	**-0.8**
	comp=Z,0.9nm,0.6s,mb3.5,baz=92,slow=2.9,SNR=5.3						
TXAR	**Lajitas Array**	**96.74**	**52**	P	P	**04 26 01.1**	**+2.3**
	comp=Z,0.1nm,0.5s,mb3.4,baz=293,slow=2.2,SNR=3.6						
TORD	**Torodi Ar. Bea**	**123.30**	**310**	PKP	PKPdf	04 31 22.4	-0.5
	comp=Z,0.5nm,0.6s,baz=54,slow=1.2,SNR=15						
LPAZ	**La Paz**	**151.37**	**73**	PKPbc	PKPbc	04 32 22.0	+2.2
LPAZ	**La Paz**	**151.37**	**73**	PKPbc	PKPbc	04 32 22.0	+2.2
	comp=Z,0.5nm,0.4s,baz=304,slow=3.0,SNR=7.0						

IDC 19 04:17:23.1±19.0, 24°.06S×179°.91W, h512km±134km, mb3.3/4, mb1 3.4/5, mb1mx3.1/15, mbtmp3.3/5, Error ellipse: s-maj=264.2km s-min=34.8km az=40.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.38**	**189**	P	P	04 20 26.2	-0.4
	0.9nm,0.3s,baz=345,slow=12,SNR=3.9						
CTA	**Charters Tower**	**31.56**	**270**	P	P	04 23 04.4	+1.0
	2.7nm,0.3s,baz=95,slow=6.9,SNR=3.8						
ASAR	**Alice Springs**	**42.09**	**261**	P	P	04 24 29.9	-0.1
	0.6nm,0.5s,baz=93,slow=6.7,SNR=6.3						
WRA	**Warramunga Arr**	**42.48**	**266**	P	P	04 24 32.6	-0.5
	2.2nm,0.7s,baz=103,slow=8.3,SNR=8.3						
FITZ	**Fitzroy Crossi**	**50.90**	**266**	P	P	04 25 36.7	-0.2
	7.8nm,1.2s,baz=110,slow=12,SNR=3.3						
TORD	**Torodi Ar. Bea**	**169.04**	**188**	PKPab	PKPab	04 37 46.6	-0.1
	0.8nm,1.1s,baz=152,slow=3.2,SNR=3.6						

*NIED **19** 04:17:00.25°.20N×128°.10E, h5km, Mw4.3 Best double couple: M0 2.79000×10^15 NP1:φs=246.00000°,δ79.00000°, λ-86.00000°. NP2:φs=46.00000°,δ11.00000°, λ-109.00000°.*
*ISCJB **19** 04:17:47.9±1.1, 25°.12N±0°.04×128°.12E±0°.05, h19km±7km, mb4.2/20, MS3.5/4, Error ellipse: s-maj=7.9km s-min=5.0km az=36.8*
*IDC **19** 04:17:47.2±0.7, 25°.08N×128°.01E, h0km, mb4.2/17, mb1 4.3/18, mb1mx4.2/26, mbtmp4.2/18, ML3.3/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/25, Error ellipse: s-maj=33.6km s-min=13.4km az=72.0*
*JMA **19** 04:17:50.2±0.1, 25°.21N×128°.14E, h59km±3km, M4.0*
*BJI **19** 04:17:54.2, 25°.46N×127°.77E, h31km, mB4.5/6, mb4.4/12, Ms3.9/6, Ms7 3.7/6*
*NEIC **19** 04:17:55.6±1.5, 24°.96N×127°.67E, h61km±14km, mb4.2/1, Error ellipse: s-maj=15.5km s-min=12.0km az=88.0*
ISC 19 04:17:49.0±1.2, 25°.19N±0°.03×128°.07E±0°.05, h13km±7km, n50,σ1°12/62, mb4.2/20, MS3.5/4, 1C, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJT2	**Tamagusuku 2**	**0.99**	**343**	P	P	**04 18 08.4**	**+0.2**
JJT2				*e*S	S	**04 18 21.6**	**+0.6**
NAH1	**Naha**	**1.07**	**342**	P	P	**04 18 09.3**	**-0.1**
NAH1				*e*S	S	**04 18 23.2**	**-0.2**
JAGN	**Aguni-jima**	**1.58**	**332**	P	P	**04 18 16.9**	**+0.1**
JAGN				*e*S	S	**04 18 36.3**	**-0.9**
JKE	**Kume jima 2**	**1.62**	**315**	P	P	**04 18 17.6**	**+0.2**
JOW	**Kunigami**	**1.65**	**6**	P	P	**04 18 16.8**	**-1.0**
JOW				S	S	**04 18 37.3**	**-1.6**
JIH	**Iheya**	**1.84**	**357**	P	P	**04 18 20.1**	**-0.3**
JIH				*e*S	S	**04 18 41.7**	**-2.0**
JOGS	**Gusukube**	**2.45**	**261**	P	P	**04 18 29.6**	**+0.8**
JOGS				*e*S	S	**04 18 59.6**	**+1.0**
JMJ	**Miyako jima 2**	**2.54**	**262**	P	P	**04 18 30.7**	**+0.7**
JMJ				*e*S	S	**04 19 00.8**	**-0.1**
JTK	**Tokunoshima**	**2.71**	**17**	P	P	**04 18 31.9**	**-0.4**
JTK				*e*S	S	**04 19 00.5**	**-4.5**
JMZ	**Minamidaito 2**	**2.92**	**77**	P	P	**04 18 31.5**	**-3.7**
JTJ	**Tarama**	**3.10**	**261**	P	P	**04 18 37.7**	**0.0**
JAM	**Amami Oshima**	**3.50**	**23**	P	P	**04 18 43.1**	**0.0**
JAM				S	S	**04 19 19.1**	**-5.3**
JZK	**Kikaishima**	**3.55**	**28**	P	P	**04 18 44.0**	**+0.1**
JIJ	**Ishigaki jima**	**3.66**	**258**	P	P	**04 18 45.1**	**-0.3**
JIJ				S	S	**04 19 24.9**	**-3.6**
JKRS	**Kuro-shima**	**3.81**	**257**	P	P	**04 18 47.3**	**-0.2**
IRIF	**Iriomote-Funau**	**4.03**	**259**	P	P	**04 18 50.0**	**-0.5**
NACB	**Ningan chiao**	**5.97**	**262**	*e*Pn	Pn	**04 19 16.1**	**-1.1**
YHNB	**Yeheng**	**6.09**	**267**	*e*Pn	Pn	**04 19 20.2**	**+1.3**
YULB	**Yu-li**	**6.43**	**255**	*e*Pn	Pn	**04 19 21.2**	**-2.3**
YULB				*e*S	Sn	**04 20 29.0**	**-7.7**
SSLB	**Suanglung**	**6.63**	**259**	*e*Pn	Pn	**04 19 24.5**	**-1.7**
SSLB				*e*S	Sn	**04 20 34.6**	**-7.1**
TWG	**Pinlang**	**6.81**	**251**	*e*Pn	Pn	**04 19 25.9**	**-2.9**
	69nm,0.3s						
TPUB	**Ta-pu**	**7.04**	**256**	*e*Pn	Pn	**04 19 31.7**	**-0.2**
	31nm,0.3s						
KSRS	**Korea Array**	**12.23**	**359**	Pn	Pn	**04 20 45.9**	**+2.9**
	0.2nm,0.3s,baz=183,slow=13,SNR=4.2						
KSRS				LR	LR	04 26 09.6	
	comp=Z,81nm,19.5s,baz=351,slow=41						
MJAR	**Matsushiro Arr**	**14.27**	**35**	Pn	Pn	**04 21 21.1**	**+10**
	0.5nm,0.3s,baz=192,slow=11,SNR=4.6						
BJT	**Baijiatuao**	**17.84**	**329**	*

h41km↓2.0km:pP-P,n167,σ1§08/165,mb4.8/54,MS4.1/17,
3C-2D,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAKI	**Biak**	**2.38**	**12**	P	**Pn**	**04 35 00.5**	**-1.7**
BAKI	**Biak**	**2.38**	**12**	P	**Pn**	**04 35 01.3**	**-0.9**
TLE	**Tual**	**3.54**	**234**	P	**Pn**	**04 35 21.3**	**+3.1**
TLE				S	**Sn**	**04 35 58.3**	**-0.6**
TLE	**Tual**	**3.54**	**234**	P	**Pn**	**04 35 21.1**	**+2.9**
TLE				S	**Sn**	**04 36 00.5**	**+1.6**
BNDI	**Bandanaira** 11nm1μm,1.4s	**5.77**	**260**	P	**Pn**	**04 35 50.7**	**+1.9**
BNDI				S	**Sn**	**04 37 04.1**	**+10**
	11nm1μm,1.4s						
BNDI	**Bandanaira** 11nm1μm,1.4s	**5.77**	**260**	P	**Pn**	**04 35 51.3**	**+2.5**
BNDI				S	**Sn**	**04 37 01.5**	**+7.7**
	11nm1μm,1.4s						
NLAI	**Namlea** 2μm132nm,0.9s	**8.49**	**272**	P	**Pn**	**04 36 27.4**	**+1.2**
NLAI	**Namlea** 2μm132nm,0.9s	**8.49**	**272**	P	**Pn**	**04 36 26.4**	**+0.2**
NLAI				S	**Sn**	**04 37 57.1**	**-3.7**
	2μm132nm,0.9s						
TNTI	**Ternate** 157nm,1.2s	**9.27**	**297**	P	**Pn**	**04 36 35.8**	**-1.2**
TNTI	**Ternate** 158nm,1.2s	**9.27**	**297**	P	**Pn**	**04 36 36.1**	**-0.9**
KAKA	**Kakadu** 60nm,0.5s	**9.64**	**199**	*e*P	**Pn**	**04 36 41.1**	**-1.0**
KAKA	**Kakadu**	**9.64**	**199**	*e*Pn	**Pn**	**04 36 41.5**	**-0.5**
KAKA				*e*Sn	**Sn**	**04 38 24.4**	**-4.7**
KAKA	**Kakadu** 2μm213nm,0.7s	**9.64**	**199**	P	**Pn**	**04 36 41.9**	**-0.2**
KAKA	**Kakadu** 2μm213nm,0.7s	**9.64**	**199**	P	**Pn**	**04 36 41.6**	**-0.5**
KMSI	**Cibinong** 5μm453nm,1.2s	**12.31**	**289**	P	**Pn**	**04 37 19.4**	**+0.9**
KMSI	**Cibinong** 5μm454nm,1.2s	**12.31**	**289**	P	**Pn**	**04 37 20.3**	**+1.8**
COEN	**Coen** 307nm,0.5s	**12.78**	**145**	*e*Pn	**Pn**	**04 37 24.1**	**-0.8**
COEN	**Coen** 308nm,0.7s	**12.78**	**145**	P	**Pn**	**04 37 24.6**	**-0.3**
COEN	**Coen** 308nm,0.7s	**12.78**	**145**	P	**Pn**	**04 37 23.7**	**-1.2**
PMG	**Port Moresby**	**12.88**	**118**	*e*P	**Pn**	**04 37 27.8**	**+1.5**
PMG	**Port Moresby** 2μm210nm,1.0s	**12.88**	**118**	P	**Pn**	**04 37 29.8**	**+3.5**
PMG	**Port Moresby** 2μm209nm,1.0s	**12.88**	**118**	P	**Pn**	**04 37 28.7**	**+2.4**
KDI	**Kendari** 98nm,1.1s	**12.96**	**268**	P	**Pn**	**04 37 26.8**	**-0.7**
KDI	**Kendari** 98nm,1.1s	**12.96**	**268**	P	**Pn**	**04 37 26.3**	**-1.2**
LUWI	**Luwuk** 142nm,1.0s	**13.05**	**281**	P	**Pn**	**04 37 26.3**	**-2.4**
LUWI	**Luwuk** 142nm,1.0s	**13.05**	**281**	P	**Pn**	**04 37 24.9**	**-3.8**
KNA	**Kununurra** 113nm,0.7s	**13.88**	**209**	*e*P	**Pn**	**04 37 38.0**	**-2.0**
KNA				*e*S	**Sn**	**04 40 01.6**	**-11**
KNA	**Kununurra** 5μm632nm,0.8s	**13.88**	**209**	P	**Pn**	**04 37 38.6**	**-1.4**
KNA	**Kununurra** 5μm632nm,0.8s	**13.88**	**209**	P	**Pn**	**04 37 38.9**	**-1.1**
MMRI	**Maumere** 87nm,1.1s	**14.22**	**248**	P	**Pn**	**04 37 45.2**	**+0.6**
MRSI	**Marisa** 785nm72nm,1.3s	**14.22**	**286**	P	**Pn**	**04 37 39.8**	**-4.8**
MRSI	**Marisa** 785nm72nm,1.3s	**14.22**	**286**	P	**Pn**	**04 37 39.7**	**-4.9**
WRA	**Warramunga Arr**	**16.36**	**184**	Pn	**Pn**	**04 38 07.8**	**-4.7**
WRA				Sn	**Sn**	**04 41 00.9**	**-12**
WRA				Lg		04 43 01.9	
WRA				LR	LR	04 44 58.1	
WRA	**Warramunga Arr** 0.8nm,0.3s,baz=4.1,slow=13,SNR=19	**16.36**	**184**	Pn	**Pn**	**04 38 07.8**	**-4.7**
WRA				Sn	**Sn**	**04 41 00.9**	**-12**
	1.8nm,0.3s,baz=9.6,slow=22,SNR=4.2						
WRA				Lg		04 43 01.9	
	baz=2.5,slow=29,SNR=3.3						
WRA				LR	LR	04 44 58.1	
	comp=Z,823nm,21.0s,baz=10.0,slow=38						
MTSU	**Mount Surprise** 481nm,1.4s	**16.84**	**150**	*e*P	**Pn**	**04 38 16.8**	**-1.8**
FITZ	**Fitzroy Crossi** 51nm,0.8s	**17.46**	**213**	*e*P	**Pn**	**04 38 24.0**	**-2.3**
FITZ				*e*S	S	04 41 23.2	-23
FITZ	**Fitzroy Crossi** 1.4nm,0.3s,baz=44,slow=14,SNR=72	**17.46**	**213**	Pn	**Pn**	**04 38 23.2**	**-3.1**
FITZ				Sn	**Sn**	**04 41 24.9**	**-15**
	11nm,0.3s,baz=212,slow=14,SNR=13						
FITZ				LR	LR	04 46 05.1	
	comp=Z,494nm,18.6s,baz=32,slow=40						
MYLDM	**Lahad Datu** 3μm169nm,1.1s	**19.15**	**297**	P	**Pn**	**04 38 47.5**	**+0.6**
MYLDM	**Lahad Datu** 3μm169nm,1.1s	**19.15**	**297**	P	**Pn**	**04 38 47.4**	**+0.5**
GUMO	**Guam** 3.4nm,0.3s,baz=190,slow=17,SNR=3.1	**19.33**	**28**	P	**Pn**	**04 38 47.9**	**-1.1**
GUMO				LR	LR	04 46 11.3	
	comp=Z,209nm,18.7s,baz=122,slow=36						
KBKI	**Kotabaru**	**19.40**	**270**	P	Px	04 39 06.1	
KBKI	**Kotabaru** 41nm,1.0s	**19.40**	**270**	P	**Pn**	**04 38 50.6**	**+0.7**
CTA	**Charters Tower** 36nm,0.8s	**19.46**	**149**	*e*P	**Pn**	**04 38 51.8**	**+1.2**
CTA	**Charters Tower**	**19.46**	**149**	P	**Pn**	**04 38 51.0**	**+0.4**
CTA				Lg		04 44 39.9	
CTA				LR	LR	04 47 08.6	
CTA	**Charters Tower** 2.0nm,0.3s,baz=327,slow=14,SNR=12	**19.46**	**149**	P	**Pn**	**04 38 51.0**	**+0.4**
CTA				Lg		04 44 39.9	
	0.5nm,0.3s,baz=264,slow=18,SNR=2.8						
CTA				LR	LR	04 47 08.6	
	comp=Z,1μm,18.6s,baz=111,slow=39						
CTAO	**Charters Tower** 63nm,1.0s	**19.46**	**149**	*e*Pn	**Pn**	**04 38 50.0**	**-0.6**
CTAO	**Charters Tower**	**19.46**	**149**	*e*P	**Pn**	**04 38 50.0**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,63nm,1.0s						
CTAO	**Charters Tower** comp=Z,73nm,1.1s	**19.46**	**149**	P	**Pn**	**04 38 51.4**	**+0.8**
CTAO	**Charters Tower** comp=Z,73nm,1.1s	**19.46**	**149**	P	**Pn**	**04 38 51.4**	**+0.8**
ASAR	**Alice Springs**	**20.09**	**185**	P	**P**	**04 38 56.9**	**+1.0**
	comp=Z,19nm,0.4s,baz=8.8,slow=12,SNR=102						
ASAR				S	**S**	**04 42 30.8**	**-8.6**
	comp=Z,3.7nm,0.8s,baz=5.0,slow=14,SNR=2.8						
KHKI	**Kahang-Kahang** comp=Z,95nm,1.2s	**20.45**	**256**	P	**P**	**04 38 56.7**	**-3.3**
KHKI	**Kahang-Kahang** comp=Z,95nm,1.2s	**20.45**	**256**	P	**P**	**04 38 57.2**	**-2.8**
KKM	**Kota Kinabalu** comp=Z,135nm,1.2s,mb5.2	**21.57**	**296**	*e*P	**P**	**04 39 11.8**	**-0.2**
KKM	**Kota Kinabalu** comp=Z,1μmcomp=Z,101nm,1.3s,mb5.1	**21.57**	**296**	P	**P**	**04 39 12.1**	**+0.1**
KKM	**Kota Kinabalu** comp=Z,1μmcomp=Z,101nm,1.3s,mb5.1	**21.57**	**296**	P	**P**	**04 39 11.7**	**-0.3**
MBWA	**Marble Bar**	**23.35**	**220**	*e*P	**P**	**04 39 31.9**	**+1.1**
MBWA	**Marble Bar** comp=Z,22nm,0.7s,mb4.7	**23.35**	**220**	*e*P	**P**	**04 39 31.5**	**+0.7**
SBUM	**Sibu** comp=Z,1μmcomp=Z,75nm,1.6s,mb4.9	**24.11**	**284**	P	**P**	**04 39 39.6**	**+1.7**
SBUM	**Sibu** comp=Z,1μmcomp=Z,75nm,1.6s,mb4.9	**24.11**	**284**	P	**P**	**04 39 39.0**	**+1.1**
BJII	**Banjamegara**	**26.05**	**261**	P	sP	04 40 12.1	+0.5
BJII	**Banjamegara**	**26.05**	**261**	P	sP	04 40 10.4	-1.2
EIDS	**Eidsvold**	**26.33**	**147**	*e*P	**P**	**04 40 00.1**	**+2.3**
EIDS	**Eidsvold** comp=Z,28nm,1.0s,mb4.7	**26.33**	**147**	*e*P	**P**	**04 40 00.5**	**+2.6**
FORT	**Forrest** comp=Z,17nm,0.6s,mb4.9	**28.02**	**194**	*e*P	**P**	**04 40 12.6**	**-0.4**
STKA	**Stephens Creek** comp=Z,3.4nm,0.4s,mb4.4	**28.76**	**169**	*e*P	**P**	**04 40 19.3**	**-0.2**
STKA	**Stephens Creek** comp=Z,13nm,1.6s,mb4.4	**28.76**	**169**	*e*P	**P**	**04 40 18.6**	**-0.9**
STKA	**Stephens Creek** comp=Z,1.8nm,0.3s,mb4.3,baz=339,slow=9.7,SNR=4.8	**28.76**	**169**	P	**P**	**04 40 19.2**	**-0.3**
STKA	**Stephens Creek**	**28.76**	**169**	*e*P	**P**	**04 40 18.6**	**-0.9**
STKA				pmax	pmax		
	comp=Z,13nm,1.6s						
MDSI	**Maura Dua**	**31.36**	**267**	P	pP	04 40 52.4	-1.7
MDSI	**Maura Dua**	**31.36**	**267**	P	**P**	**04 40 49.9**	**+7.1**
QIZ	**Qiongzhong**	**33.84**	**312**	P	**P**	**04 41 04.8**	**+0.4**
QIZ				S	**S**	**04 46 24.3**	**-1.6**
QIZ				pmax	pmax		
	comp=Z,94nm,5.4s						
SDSI	**Sungai Dareh**	**34.24**	**274**	P	**P**	**04 41 15.2**	**+7.2**
SDSI	**Sungai Dareh**	**34.24**	**274**	P	**P**	**04 41 16.7**	**+8.7**
BKNI	**Bangkinang**	**34.75**	**276**	P	pP	04 41 22.8	-1.0
DZM	**Mont Dzumac** comp=Z,228nm,26.1s	**35.14**	**124**	*e*S	**S**	**04 46 48.0**	**+2.0**
DZM				*e*LR	LR	04 50 49.8	
	comp=Z,748nm,22.7s						
PPI	**Padang Panjang**	**35.31**	**274**	P	**P**	**04 41 18.9**	**+1.6**
PPI	**Padang Panjang**	**35.31**	**274**	P	**P**	**04 41 17.5**	**+0.2**
IPM	**Ipoh**	**35.45**	**283**	P	**P**	**04 41 25.5**	**+7.0**
PSI	**Prapat** comp=Z,1.9nm,0.4s,mb4.3,baz=156,slow=9.8,SNR=4.7	**37.19**	**279**	P	**P**	**04 41 31.8**	**-1.5**
PSI				pP	pP	04 41 41.8	-3.0
	comp=Z,24nm,0.9s,baz=133,slow=2.4,SNR=13						
NJ2	**Nanjing**	**38.80**	**337**	*e*P	**P**	**04 41 49.0**	**+2.4**
NJ2				pP	pP	04 42 01.0	+2.9
NJ2				sP	sP	04 42 06.8	+3.8
NJ2				PP	PP	04 43 25.4	+9.3
NJ2				S	**S**	**04 47 43.0**	**+1.6**
NJ2				sS	sS	04 48 04.0	+3.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.0						
NJ2				pmax	pmax		
	comp=Z,150nm,4.1s						
NJ2				LR	LR		
	comp=N,230nm,19.2s,MS4.0						
NJ2				LR	LR		
	comp=E,120nm,20.8s,MS4.0						
NJ2				LR	LR		
	comp=Z,270nm,20.2s,MS4.1						
TPTI		**38.99**	**280**	P	pP	04 41 59.0	-1.0
TPTI		**38.99**	**280**	P	**P**	**04 41 56.0**	**+7.5**
MJAR	**Matsushiro Arr**	**39.94**	**3**	P	**P**	**04 41 54.5**	**-1.5**
MJAR				pP	pP	04 42 04.7	-2.9
MJAR				LR	LR	04 56 11.6	
MJAR	**Matsushiro Arr** comp=Z,0.8nm,0.3s,mb3.9,baz=185,slow=12,SNR=2.9	**39.94**	**3**	P	**P**	**04 41 54.5**	**-1.5**
MJAR				pP	pP	04 42 04.7	-2.8
	comp=Z,3.1nm,0.7s,baz=180,slow=7.7,SNR=3.9						
MJAR				LR	LR	04 56 11.5	
	comp=Z,256nm,19.5s,MS4.1,baz=135,slow=33						
MJAR	**Matsushiro Arr**	**39.94**	**3**	P	**P**	**04 41 54.5**	**-1.5**
MJAR				*PP	pP	04 42 04.7	-2.8
GYA	**Guiyang**	**40.89**	**319**	P	**P**	**04 42 06.0**	**+1.9**
GYA				pP	pP	04 42 19.8	+4.2
GYA				sP	sP	04 42 25.4	+4.9
GYA				PP	PP	04 43 45.5	+6.5
GYA				PcP	PcP	04 44 05.3	+1.1
GYA				ScP	ScP	04 47 50.0	-0.8
GYA				S	**S**	**04 48 13.4**	**+0.5**
GYA				sS	sS	04 48 37.8	+5.7
GYA				SS	SS	04 51 11.0	-4.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
GYA				pmax	pmax		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=N,470nm,17.8s,MS4.5						
GYA				LR	LR		
	comp=E,430nm,18.0s,MS4.5						
GYA				LR	LR		
	comp=Z,470nm,17.1s,MS4.4						
KSRS	**Korea Array** comp=Z,1.0nm,0.6s,baz=138,slow=8.2,SNR=3.7	**41.39**	**351**	P	**P**	**04 42 08.2**	**+0.1**
KSRS				pP	pP	04 42 18.4	-1.1
	comp=Z,6.4nm,0.9s,baz=170,slow=9.5,SNR=10						
KSRS				pPcP		04 44 16.3	
	comp=Z,3.4nm,1.0s,baz=170,slow=4.6,SNR=4.7						
KSRS				LR	LR	04 59 51.7	
	comp=Z,105nm,18.8s,MS3.7,baz=331,slow=37						
CM31	**Chiang Mai Arr**	**42.20**	**302**	*e*P	**P**	**04 42 14.4**	**-0.5**
CMAR	**Chiang Mai Arr** comp=Z,0.8nm,0.3s,mb3.8,baz=126,slow=6.8,SNR=4.3	**42.20**	**302**	P	**P**	**04 42 14.1**	**-0.8**
CMAR				pP	pP	04 42 24.3	-2.2
	comp=Z,4.4nm,0.8s,baz=122,slow=6.7,SNR=4.3						
CMAR				pPcP		04 44 20.4	
	comp=Z,2.0nm,0.5s,baz=150,slow=2.4,SNR=5.9						
CHTO	**Chiang Mai** comp=Z,16nm,1.1s,mb4.6	**42.36**	**303**	*e*P	**P**	**04 42 15.7**	**-0.6**
CHTO	**Chiang Mai** comp=Z,16nm,1.1s,mb4.6	**42.36**	**303**	*e*P	**P**	**04 42 15.7**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.6						
KMI	**Kunming**	**42.76**	**314**	P	**P**	**04 42 19.9**	**+0.5**
KMI				pP	pP	04 42 30.3	-0.7
KMI				sP	sP	04 42 35.3	-0.6
KMI				PP	PP	04 44 04.0	+4.8
KMI				S	**S**	**04 48 38.8**	**-1.8**
KMI				sS	sS	04 48 57.3	-2.6
KMI				SS	SS	04 51 47.3	-5.4
KMI				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.8						
KMI				pmax	pmax		
	comp=Z,110nm,4.0s						
KMI				LR	LR		
	comp=N,89nm,22.4s						
KMI				LR	LR		
	comp=E,120nm,17.1s						
KMI				LR	LR		
	comp=Z,240nm,24.1s,MS4.0						
XAN	**Xi'an**	**45.05**	**328**	P	**P**	**04 42 36.9**	**-0.7**
XAN				pP	pP	04 42 52.8	+3.6
XAN				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2						
CD2	**Chengdu**	**45.77**	**321**	P	**P**	**04 42 42.5**	**-0.9**
CD2				pP	pP	04 42 54.9	-0.2
CD2				sP	sP	04 43 00.3	+0.4
CD2				PP	PP	04 44 30.4	-0.9
CD2				ScP	ScP	04 48 07.8	-2.7
CD2				S	**S**	**04 49 22.3**	**-2.0**
CD2				sS	sS	04 49 43.3	-0.4
CD2				SS	SS	04 52 38.8	-11
CD2				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
CD2				pmax	pmax		
	comp=Z,50nm,4.9s						
CD2				LR	LR		
	comp=N,190nm,22.5s,MS4.2						
CD2				LR	LR		
	comp=E,230nm,20.6s,MS4.2						
CD2				LR	LR		
	comp=Z,200nm,14.9s						
BJT	**Baijiatuan** comp=Z,4.9nm,0.4s,mb4.8	**46.87**	**340**	*e*P	**P**	**04 42 51.9**	**0.0**
BJT	**Baijiatuan**	**46.87**	**340**	*e*P	**P**	**04 42 51.9**	**+0.1**
BJT				pmax	pmax		
	comp=Z,5.0nm,0.4s						
BJI	**Beijing**	**46.88**	**340**	P	**P**	**04 42 52.1**	**+0.1**
BJI				PP	PP	04 44 44.0	+1.2
BJI				S	**S**	**04 49 40.6**	**+0.7**
BJI				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
BJI				pmax	pmax		
	comp=Z,88nm,5.2s						
BJI				LR	LR		
	comp=N,130nm,25.0s,MS3.9						
BJI				LR	LR		
	comp=E,120nm,24.2s,MS3.9						
BJI				LR	LR		
	comp=Z,180nm,26.5s,MS3.9						
CN2	**Changchun**	**47.99**	**350**	*e*P	**P**	**04 43 07.3**	**+6.8**
CN2				*e*S	**S**	**04 50 02.3**	**+6.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,800nm,20.0s,MS4.8						
CN2				LR	LR		
	comp=E,600nm,20.0s,MS4.8						
CN2				LR	LR		
	comp=Z,200nm,17.0s,MS4.2						
MDJ	**Mudanjiang**	**48.23**	**354**	P	**P**	**04 43 04.3**	**+2.0**
MDJ				pP	pP	04 43 17.8	+3.7
MDJ				sP	sP	04 43 23.8	+4.9
MDJ				PcP	PcP	04 44 29.6	+0.6
MDJ				PP	PP	04 44 57.3	+2.2
MDJ				S	**S**	**04 49 57.5**	**-1.4**
MDJ				sS	sS	04 50 24.5	+6.1
MDJ				pmax	pmax		
	comp=Z,19nm,2.4s,mb4.7						
MDJ				pmax	pmax		
	comp=Z,140nm,3.2s						
MDJ				LR	LR		
	comp=N,76nm,27.8s						
MDJ				LR	LR		
	comp=E,43nm,22.0s						
MDJ				LR	LR		
	comp=Z,97nm,24.7s,MS3.7						
HHC	**Hu-ho-hao-te**	**49.33**	**336**	*e*P	**P**	**04 43 11.0**	**+0.1**
HHC				pP	pP	04 43 23.3	+0.7
HHC				sP	sP	04 43 28.5	+1.0
HHC				PP	PP	04 45 06.3	+1.1
HHC				PcS	PcS	04 48 27.4	-2.1
HHC				S	**S**	**04 50 14.4**	**-0.1**
HHC				sS	sS	04 50 35.0	+0.9
HHC				SS	SS	04 53 41.0	-5.8
HHC				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.1						
HHC				pmax	pmax		
	comp=Z,120nm,4.2s						
HHC				LR	LR		
	comp=N,220nm,13.2s,MS4.5						
HHC				LR	LR		
	comp=E,170nm,11.4s,MS4.5						
HHC				LR	LR		
	comp=Z,220nm,18.0s						
LZH	**Lanzhou**	**49.34**	**326**	⇑P	**P**	**04 43 12.3**	**+1.3**
LZH				pP	pP	04 43 23.0	+0.2
LZH				sP	sP	04 43 27.8	+0.2
LZH				PP	PP	04 45 08.0	+2.6
LZH				S	**S**	**04 50 17.0**	**+2.2**
LZH				sS	sS	04 50 38.0	+3.6
LZH				SS	SS	04 53 44.6	-2.4
LZH				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
LZH				pmax	pmax		
	comp=Z,200nm,4.0s						
RPZ	**Rata Peaks** comp=Z,18nm,1.1s,mb4.9,baz=326,slow=3.6,SNR=2.7	**50.83**	**147**	P	**P**	**04 43 24.7**	**+2.5**
KLR	**Kul'dur**	**52.65**	**357**	*e*P	**P**	**04 43 34.3**	**-1.3**
LSA	**Lhasa**	**53.86**	**311**	P	**P**	**04 43 44.9**	**0.0**
TAPN	**Taplejung** comp=Z,118nm,1.1s,mb5.8	**55.43**	**307**	*e*P	**P**	**04 43 56.5**	**+0.1**
ODAN	**Odare** comp=Z,92nm,0.9s,mb5.8	**55.48**	**306**	*e*P	**P**	**04 43 56.6**	**-0.1**
RAMN	**Ramite** comp=Z,222nm,1.2s	**56.15**	**306**	*e*P	**P**	**04 44 01.6**	**0.0**
JIRN	**Jiri** comp=Z,98nm,1.1s,mb5.8	**56.78**	**306**	*e*P	**P**	**04 44 06.3**	**+0.3**
ULN	**Ulaanbaatar**	**56.96**	**337**	P	pP	04 44 18.2	-0.7
GUN	**Gumba**	**57.14**	**307**	*e*P	**P**	**04 44 08.7**	**+0.1**
SONM	**Songino Array** comp=Z,0.9nm,0.4s,mb4.1,baz=156,slow=9.3,SNR=6.4	**57.19**	**337**	P	**P**	**04 44 08.8**	**+0.2**
SONM				pP	pP	04 44 19.1	-1.4
	comp=Z,2.9nm,0.6s,baz=156,slow=7.2,SNR=11						
SONM				pPcP		04 45 13.6	
	comp=Z,2.2nm,0.8s,baz=145,slow=5.3,SNR=2.3						
SONM				LR	LR	05 08 38.8	
	comp=Z,190nm,20.3s,MS4.2,baz=3.1,slow=36						
SONM	**Songino Array**	**57.19**	**337**	P	**P**	**04 44 08.8**	**+0.3**
SONM				*PP	pP	04 44 19.1	-1.4
PKI	**Pulchoki** comp=Z,61nm,1.1s,mb5.5	**57.38**	**306**	*e*P	**P**	**04 44 10.0**	**-0.2**
PKIN	**Phulchoki**	**57.39**	**306**	*e*P	**P**	**04 44 10.0**	**-0.3**
KKN	**Kakani** comp=Z,68nm,0.9s,mb5.7	**57.57**	**306**	*e*P	**P**	**04 44 11.5**	**-0.1**
DMN	**Daman** comp=Z,113nm,1.0s,mb5.8	**57.64**	**306**	*e*P	**P**	**04 44 12.2**	**+0.1**
GKN	**Gorkha** comp=Z,161nm,1.1s	**58.18**	**306**	*e*P	**P**	**04 44 15.8**	**-0.1**
KOLN	**Koldanda** comp=Z,74nm,0.9s,mb5.7	**58.92**	**305**	*e*P	**P**	**04 44 21.5**	**+0.4**
ZAK	**Zakamensk**	**60.46**	**337**	*e*P	**P**	**04 44 31.3**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
TLY	**Talaya**	**61.35**	**338**	*e*P	**P**	**04 44 38.0**	**+0.8**
TLY				*e*S	**S**	**04 52 57.5**	**+2.7**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
WMQ	**Urumqi**	**63.76**	**323**	*e*P	**P**	**04 44 55.1**	**+1.7**
WMQ				pP	pP	04 45 08.0	+2.4
WMQ				sP	sP	04 45 13.3	+3.0
WMQ				PcP	PcP	04 45 30.8	+1.6
WMQ				PP	PP	04 47 17.1	+3.0
WMQ				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.3						
WMQ				pmax	pmax		
	comp=Z,270nm,4.2s						
WMQ				LR	LR		
	comp=N,75nm,20.4s,MS4.0						
WMQ				LR	LR		
	comp=E,82nm,23.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,78nm,26.6s,MS3.8						
SEY	**Seymchan**	**67.49**	**8**	⇓*i*P	**P**	**04 45 17.4**	**+0.3**
MK31	**Makanchi Array**	**68.57**	**324**	*e*P	**P**	**04 45 24.4**	**+0.2**
MK31	**Makanchi Array**	**68.57**	**324**	*i*P	**P**	**04 45 24.1**	**-0.2**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
MKAR	**Makanchi Array** comp=Z,3.4nm,0.6s,mb4.5,baz=109,slow=8.4,SNR=44	**68.57**	**324**	P	**P**	**04 45 24.1**	**-0.2**
KSH	**Kashi**	**69.41**	**315**	*e*P	**P**	**04 45 30.9**	**+1.3**
KSH				*e*pP	pP	04 45 47.4	+5.5
KSH				*e*sP	sP	04 45 54.0	+7.4
KSH				*e*PP	PP	04 48 06.9	+3.4
KSH				*e*S	S	04 54 31.3	-2.7
KSH				*e*sS	sS	04 54 59.3	+4.9
KSH				*e*ScS	ScS	04 55 23.1	-4.7
KSH				*e*SS	SS	04 59 00.3	-1.7
KSH				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
KSH				LR	LR		
	comp=N,45nm,3.9s						
KSH				LR	LR		
	comp=E,45nm,3.9s						
KSH				LR	LR		
	comp=Z,69nm,3.8s						
ZAA0	**Zalesovo Array**	**71.11**	**331**	*e*P	**P**	**04 45 39.1**	**-0.6**
ZALV	**Zalesovo Beam** comp=Z,3.0nm,0.7s,mb4.3,baz=113,slow=5.4,SNR=12	**71.11**	**331**	P	**P**	**04 45 38.4**	**-1.3**
ZALV				LR	LR	05 15 28.3	
	comp=Z,42nm,21.4s,MS3.7,baz=95,slow=35						
AAK	**Ala-Archa**	**71.66**	**317**	*c*eP	**P**	**04 45 44.0**	**+0.7**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
AAK	**Ala-Archa**	**71.66**	**317**	P	PcP	04 46 03.7	+1.4
KURK	**Kurchatov** comp=Z,10nm,0.9s,mb4.8	**72.63**	**326**	*e*P	**P**	**04 45 47.9**	**-1.0**
KURK	**Kurchatov** comp=Z,12nm,1.6s,mb4.6	**72.63**	**326**	⇑*e*P	**P**	**04 45 48.2**	**-0.7**
KURK				pmax	pmax		
KBL	**Kabul** comp=Z,10nm,0.9s,mb4.8	**72.94**	**308**	*e*P	**P**	**04 45 50.5**	**-0.7**
KBL				*e*	pP	04 46 00.8	-2.7
KBL	**Kabul**	**72.94**	**308**	*e*P	**P**	**04 45 50.5**	**-0.6**
KBL				*e*	pP	04 46 00.8	-2.7
KBL				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
PPT	**Papeete** comp=Z,212nm,23.5s	**74.48**	**107**	*e*LR	LR	05 09 01.3	
PPT	**Papeete** comp=Z,210nm,18.4s,MS4.5,baz=162,slow=33	**74.48**	**107**	LR	LR	05 14 58.1	
KK31	**Karatay Array**	**74.56**	**316**	*i*P	**P**	**04 46 00.5**	**+0.1**
KK31				pmax	pmax		

comp=Z,140nm,19.6s,MS4.3,baz=235,slow=33
MAW Mawson 80.21 202 *e*P **P** 04 46 32.0 +0.4
MAW *e* pP 04 46 42.9 -1.1
MAW pmax pmax
comp=Z,4.0nm,1.7s
AB31 Akbulak array 83.35 320 *i* P **P** 04 46 47.9 -0.5
AB31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
ABKAR Akbulak array 83.35 320 *e*P **P** 04 46 48.2 -0.3
comp=Z,2.8nm,0.6s,mb4.5
ABKAR *e* pP 04 46 59.1 -1.8
TAOE Nuku Hiva Isla 83.79 98 *e*LR LR 05 13 14.1
comp=Z,303nm,27.9s
SVE Sverdlovsk 84.76 328 *e*P pP 04 47 07.1 -0.9
SVE pmax pmax
comp=Z,25nm,1.4s,mb5.2
ARU Arti 85.78 327 *d i*P **P** 04 47 10.1 +10
ARU S S 04 57 35.1 +4.8
ARU pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
MCK McKinley 86.75 26 *e*P **P** 04 47 04.7 -0.5
comp=Z,17nm,1.3s,mb5.1
MCK McKinley 86.75 26 *e*P **P** 04 47 04.7 -0.5
MCK pmax pmax
comp=Z,17nm,1.3s,mb5.1
COLD Coldfoot 87.16 22 *e*P **P** 04 47 07.5 +0.4
comp=Z,6.8nm,1.0s,mb4.8
DIV Divide 87.59 28 *e*P **P** 04 47 09.5 +0.3
comp=Z,27nm,1.0s,mb5.4
ILAR Eielson Array 87.86 25 P **P** 04 47 09.0 -1.5
comp=Z,2.4nm,0.6s,mb4.6,baz=261,slow=4.4,SNR=26
ILAR LR LR 05 19 58.2
comp=Z,80nm,21.6s,MS4.1,baz=276,slow=31
BMRM Bremner River 88.11 29 *e*P **P** 04 47 11.7 -0.1
comp=Z,12nm,1.0s,mb5.1
INK Inuvik 93.58 22 LR LR 05 26 25.6
comp=Z,40nm,19.4s,MS3.9,baz=260,slow=33
ARCES ARCESS Array B 100.24 340 P Pdif 04 48 06.2 -1.4
comp=Z,1.0nm,0.6s,baz=90,slow=6.1,SNR=8.9
ARCES pP 04 48 16.5
comp=Z,2.2nm,0.6s,baz=86,slow=7.3,SNR=4.5
BRTR Keskin Array B 101.45 310 P Pdif 04 48 11.1 -1.8
comp=Z,0.2nm,0.5s,baz=134,slow=4.2,SNR=2.1
BRTR pP 04 48 21.6
comp=Z,0.8nm,0.8s,baz=2.6,slow=2.7,SNR=3.4
AKASG Malin Array Be 103.07 321 PP PP 04 52 34.5 -0.6
comp=Z,0.8nm,0.4s,baz=67,slow=8.4,SNR=4.1
NVAR Mina Array Bea 104.78 51 Pdiff Pdif 04 48 29.0 +1.3
comp=Z,0.3nm,0.7s,baz=309,slow=4.3,SNR=3.1
NVAR PP PP 04 52 50.4 +2.1
comp=Z,0.5nm,0.5s,baz=282,slow=9.0,SNR=3.4
TXAR Lajitas Array 118.37 59 PKP PKPdf 04 53 10.7 +1.2
comp=Z,0.2nm,0.7s,baz=223,slow=4.8,SNR=2.7
TXAR pPKP pPKPdf 04 53 20.8 -1.7
comp=Z,0.3nm,0.6s,baz=254,slow=3.3,SNR=3.7
TORD Torodi Ar. Bea 133.48 285 PKP PKPdf 04 53 36.6 -2.0
comp=Z,0.3nm,0.5s,baz=52,slow=1.7,SNR=7.3
TORD pPKP pPKPdf 04 53 47.7 -4.0
comp=Z,3.3nm,0.9s,baz=48,slow=2.7,SNR=13
DBIC Dimbokro 140.50 276 PKhKP PKPpre 04 53 45.9
comp=Z,3.4nm,0.9s,baz=142,slow=5.2,SNR=3.1
LPAZ La Paz 149.37 131 PKP PKPdf 04 54 09.8 +2.9
LPAZ PKPbc PKPbc 04 54 13.5 +2.3
LPAZ pPKPbc pPKPbc 04 54 23.5 -0.7
LPAZ La Paz 149.37 131 PKP PKPdf 04 54 09.8 +2.9
comp=Z,13nm,1.1s,baz=255,slow=2.5,SNR=9.5
LPAZ PKPbc PKPbc 04 54 13.5 +2.3
comp=Z,14nm,1.1s,baz=271,slow=0.9,SNR=22
LPAZ pPKPbc pPKPbc 04 54 23.5 -0.8
comp=Z,14nm,0.9s,baz=327,slow=0.9,SNR=13
LPAZ La Paz 149.37 131 PKHKP PKPpre 04 54 09.8
LPAZ 04 54 13.5
ROSC El Rosal 150.12 86 PKPbc PKPbc 04 54 13.9 +0.6
comp=Z,5.1nm,0.5s,baz=330,slow=6.3,SNR=8.4
ROSC pPKPbc pPKPbc 04 54 26.1 -0.1
comp=Z,19nm,0.8s,baz=269,slow=14,SNR=6.8

NIED **19** *05:08:00, 39.70N×144.50E, h5km, Mw3.9 Best double couple: M₀8.19000×10¹⁴ NP1:φ₀231.00000°, δ76.00000°, λ-88.00000°. NP2:φ₀42.00000°, δ14.00000°, λ-99.00000°.*
ISCJB **19** *05:08:12.3±0.7, 39.68N±0.03×144.56E±0.05, h27km, mb3.6/7, Error ellipse: s-maj=6.5km s-min=4.0km az=36.0*
IDC **19** *05:08:13.7±1.4, 39.44N×144.86E, h27km±6km, mb3.5/7, mb1 3.6/8, mb1mx3.5/23, mbtmp3.5/8, ML3.4/1, MS3.0/3, Ms1 3.0/3, ms1mx2.6/26, Error ellipse: s-maj=31.1km s-min=23.2km az=84.0*
JMA **19** *05:08:14.0±0.2, 39.68N×144.50E, h46km, M3.7*
ISC 19 05:08:13.9±0.7,**39.66N**±0.03×**144.56E**±0.05, **h29**km, **h29**km±2.1km**:pP-P, n30,** σ1.9**13**/46, **mb3.6**/7, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**2.10**	**279**	P		P	**Pn**	**05 08 46.9**	**-0.1**
JTH				*e*S		S	**Sn**	**05 09 11.4**	**-0.7**
MIYJ	**Miyakonagasawa**	**2.12**	**269**	P		P	**Pn**	**05 08 47.5**	**+0.2**
MIYJ				*e*S		S	**Sn**	**05 09 12.2**	**-0.5**
OFUJ	**Ofunato**	**2.31**	**257**	P		P	**Pn**	**05 08 49.8**	**-0.2**
OFUJ				S		S	**Sn**	**05 09 16.0**	**-1.5**
JANG	**Nango**	**2.44**	**288**	P		P	**Pn**	**05 08 51.7**	**-0.1**
JANG				*e*S		S	**Sn**	**05 09 19.6**	**-1.1**
JOM	**Ohasama**	**2.53**	**267**	P		P	**Pn**	**05 08 53.6**	**+0.6**
JOM				*e*S		S	**Sn**	**05 09 22.9**	**0.0**
JMK	**Ichinoseki**	**2.68**	**256**	P		P	**Pn**	**05 08 55.2**	**+0.1**
JMK				*e*S		S	**Sn**	**05 09 25.4**	**-1.2**
JNBK	**Urakawa-nobuka**	**2.96**	**333**	P		P	**Pn**	**05 08 59.1**	**+0.2**
JNBK				*e*S		S	**Sn**	**05 09 32.8**	**-0.6**
JRG	**Rokugo**	**3.05**	**266**	P		P	**Pn**	**05 09 00.9**	**+0.8**
JRG				*e*S		S	**Sn**	**05 09 36.1**	**+0.5**
JAH	**Hinai**	**3.06**	**281**	P		P	**Pn**	**05 09 01.5**	**+1.2**
JAH				*e*S		S	**Sn**	**05 09 36.4**	**+0.4**
JCH	**Churui**	**3.09**	**343**	P		P	**Pn**	**05 09 00.1**	**-0.6**
JCH				*e*S		S	**Sn**	**05 09 35.9**	**-0.8**
JOT	**Ohata**	**3.18**	**304**	P		P	**Pn**	**05 09 02.8**	**+0.8**
JOU	**Okura**	**3.30**	**248**	P		P	**Pn**	**05 09 03.4**	**-0.2**
JOU				*e*S		S	**Sn**	**05 09 39.9**	**-1.8**
JYK	**Kaneyama**	**3.34**	**259**	P		P	**Pn**	**05 09 04.9**	**+0.7**
JYK				*e*S		S	**Sn**	**05 09 44.0**	**+1.1**
JYW	**Yuwa**	**3.36**	**269**	P		P	**Pn**	**05 09 05.7**	**+1.2**
JYW				*e*S		S	**Sn**	**05 09 44.9**	**+1.5**
JKB	**Kayabe**	**3.48**	**311**	P		P	**Pn**	**05 09 06.4**	**+0.3**
JKB				*e*S		S	**Sn**	**05 09 46.4**	**0.0**
NEM2	**Nemuro 2**	**3.81**	**13**	P		P	**Pn**	**05 09 08.2**	**-2.4**
NEM2				*e*S		S	**Sn**	**05 09 50.0**	**-4.4**
JFT	**Otama**	**3.94**	**239**	P		P	**Pn**	**05 09 11.9**	**-0.5**
JFT				*e*S		S	**Sn**	**05 09 54.9**	**-2.7**
JTKR	**Abashiri--Toko**	**4.34**	**354**	P		P	**Pn**	**05 09 18.0**	**+0.1**
JTKR				*e*S		S	**Sn**	**05 10 05.9**	**-1.5**
JHR	**Hokuryu**	**4.60**	**333**	P		P	**Pn**	**05 09 24.2**	**+2.7**
JHR				*e*S		S	**Sn**	**05 10 16.1**	**+2.2**
ASAJ	**Asahikawa**	**4.69**	**342**	Sn		Sn	**Sn**	**05 10 14.7**	**-1.4**
	1.1nm,0.3s,baz=235,slow=31,SNR=5.4								
MJAR	**Matsushiro Arr**	**5.89**	**240**	Pn		Pn	**Pn**	**05 09 40.3**	**+1.0**
	0.9nm,0.3s,baz=67,slow=12,SNR=5.4								
MJAR				LR		LR	LR	05 11 32.0	
	comp=Z,105nm,18.2s,baz=150,slow=33								
KSRS	**Korea Array**	**13.21**	**266**	LR		LR	LR	05 16 45.1	
	comp=Z,16nm,19.7s,baz=260,slow=38								
SONM	**Songino Array**	**28.52**	**299**	P		P	**P**	**05 14 10.5**	**+3.9**
	0.2nm,0.6s,mb3.0,baz=104,slow=9.1,SNR=2.3								
SONM				pP		pP	pP	05 14 16.7	+1.5
	0.3nm,0.5s,baz=102,slow=9.0,SNR=2.5								
ZALV	**Zalesovo Beam**	**42.04**	**310**	P		P	**P**	**05 16 04.8**	**+2.2**
	0.8nm,0.3s,mb3.8,baz=25,slow=8.6,SNR=3.2								
ZALV				pP		pP	pP	05 16 13.9	+2.6
	0.8nm,0.3s,baz=76,slow=6.3,SNR=2.0								
MKAR	**Makanchi Array**	**44.88**	**300**	P		P	**P**	**05 16 26.9**	**+1.4**
	comp=Z,1.0nm,0.9s,mb3.4,baz=75,slow=14,SNR=2.7								
MKAR				pP		pP	pP	05 16 35.9	+1.6
	0.9nm,0.8s,baz=82,slow=8.7,SNR=4.9								
ILAR	**Eielson Array**	**45.95**	**34**	P		P	**P**	**05 16 34.0**	**+0.3**
	0.4nm,0.7s,mb3.5,baz=255,slow=6.2,SNR=5.3								
KURK	**Kurchatov**	**46.31**	**307**	P		P	**P**	**05 16 40.3**	**+3.5**
	0.6nm,0.3s,mb4.0,baz=78,slow=7.9,SNR=2.7								
KURK				pP		pP	pP	05 16 48.8	+3.2
	2.3nm,0.4s,baz=81,slow=8.7,SNR=6.9								
HNR	**Honiara**	**50.88**	**160**	LR		LR	LR	05 35 47.6	
	comp=Z,54nm,19.3s,baz=57,slow=33								
WRA	**Warramunga Arr**	**60.05**	**191**	P		P	**P**	**05 18 16.6**	**-1.5**
	0.5nm,0.3s,mb4.0,baz=10,slow=7.0,SNR=6.1								
ASAR	**Alice Springs**	**63.77**	**191**	P		P	**P**	**05 18 42.5**	**-0.6**
	0.8nm,1.1s,mb3.7,baz=9.7,slow=6.6,SNR=4.3								

ISK **19** *05:23:02.8, 37.96N×37.93E, h7km, MD2.9*
ISCJB **19** *05:23:03.8±0.4, 37.93N±0.02×37.99E±0.04, h10km, Error ellipse: s-maj=4.6km s-min=3.2km az=26.6*
DDA **19** *05:23:03.5, 37.91N×37.98E, h7km±2km, Md2.7*
CSEM **19** *05:23:03.7±0.2, 37.93N×37.98E, h8km, MD2.7, Error ellipse: s-maj=4.3km s-min=3.3km az=125.0*
ISC 19 05:23:04.1±0.5,**37.92N**±0.02×**37.96E**±0.04, **h6**km±6km, **n28,** σ0.978/45, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.37**	**355**	*i*	P		**Pg**	**05 23 11.1**	**-0.3**
AKCD				*i*	S		**Sg**	**05 23 16.9**	**+0.7**
AKCD	**Akcadag**	**0.37**	**355**	*i*	P		**Pg**	**05 23 11.1**	**-0.3**
AKCD				*i*	S		**Sg**	**05 23 16.9**	**+0.6**
ATAB	**Bozova**	**0.53**	**150**	*e*	P		**Pg**	**05 23 13.8**	**-0.4**
ATAB				*i*	S		**Sg**	**05 23 21.2**	**+0.1**
ATAB	**Bozova**	**0.53**	**150**	*e*	P		**Pg**	**05 23 13.8**	**-0.4**
ATAB				*i*	S		**Sg**	**05 23 21.2**	**+0.1**
MALT	**Malatya**	**0.53**	**43**	*e*	PG		**Pg**	**05 23 14.1**	**-0.3**
MALT				*e*	SG		**Sg**	**05 23 21.6**	**+0.2**
MALT	**Malatya**	**0.53**	**43**	*e*	Pg		**Pg**	**05 23 14.1**	**-0.3**
MALT				*e*	Sg		**Sg**	**05 23 21.6**	**+0.2**
GZT	**Gaziantep**	**0.65**	**209**	*e*	P		**Pg**	**05 23 17.5**	**+0.9**
GZT				*i*	S		**Sg**	**05 23 25.3**	**+0.2**
URFA	**Urfa**	**0.83**	**125**	*e*	PG		**Pg**	**05 23 19.2**	**-0.9**
URFA				*e*	SG		**Sg**	**05 23 32.5**	**+1.6**
URFA	**Urfa**	**0.83**	**125**	*e*	Pg		**Pg**	**05 23 19.2**	**-0.9**
URFA				*e*	Sg		**Sg**	**05 23 32.5**	**+1.5**
KMRS	**Kahramanmaras**	**0.94**	**244**	*e*	PG		**Pg**	**05 23 21.7**	**-0.5**
KMRS	**Kahramanmaras**	**0.94**	**244**	*e*	Pg		**Pg**	**05 23 21.7**	**-0.5**
GAZ	**Gaziantep**	**0.96**	**219**	*e*	PG		**Pg**	**05 23 21.8**	**-0.7**
GAZ	**Gaziantep**	**0.96**	**219**	*e*	Pg		**Pg**	**05 23 21.8**	**-0.7**
ELZG	**Elazig**	**0.99**	**54**	*i*	P		**Pg**	**05 23 22.5**	**-0.6**
ELZG				*i*	S		**Sg**	**05 23 35.9**	**0.0**
ELZG	**Elazig**	**0.99**	**54**	*i*	P		**Pg**	**05 23 22.5**	**-0.6**
ELZG				*i*	S		**Sg**	**05 23 35.9**	**0.0**
DARE	**Darende-Malaty**	**1.03**	**353**	*e*	PG		**Pg**	**05 23 16.4**	**-7.5**
DARE				*e*	SG		**Sg**	**05 23 27.0**	**-10**
DARE	**Darende-Malaty**	**1.03**	**353**	*e*	Pg		**Pg**	**05 23 16.5**	**-7.5**
DARE				*e*	Sg		**Sg**	**05 23 27.0**	**-10**
SVRC	**Sivrice-ELAZID**	**1.15**	**66**	*e*	PN		**Pn**	**05 23 25.6**	**-1.1**
SVRC	**Sivrice-ELAZID**	**1.15**	**66**	*e*	Pn		**Pn**	**05 23 25.6**	**-1.1**
SARI	**SarD1z-Kayseri**	**1.25**	**307**	*e*	PN		**Pn**	**05 23 28.0**	**0.0**
SARI	**SarD1z-Kayseri**	**1.25**	**307**	*e*	Pn		**Pn**	**05 23 28.0**	**-0.1**
KUZU	**Kuzuini**	**1.35**	**212**	*i*	P		**Pn**	**05 23 30.6**	**+1.2**
KUZU				*i*	S		**Sb**	**05 23 47.5**	**+0.2**
KUZU	**Kuzuini**	**1.35**	**212**	*i*	P		**Pn**	**05 23 30.6**	**+1.2**
KUZU				*i*	S		**Sb**	**05 23 47.5**	**+0.2**
KEMA	**Kemaliye**	**1.41**	**17**	*e*	P		**Pn**	**05 23 30.0**	**-0.2**
KEMA				*i*	S		**Sb**	**05 23 50.8**	**+1.9**
KEMA	**Kemaliye**	**1.41**	**17**	*e*	P		**Pn**	**05 23 30.0**	**-0.2**
KEMA				*i*	S		**Sb**	**05 23 50.8**	**+1.9**
PTK	**Pertek**	**1.48**	**49**	*e*	PN		**Pn**	**05 23 30.1**	**-1.1**
PTK	**Pertek**	**1.48**	**49**	*e*	Pn		**Pn**	**05 23 30.1**	**-1.2**
KOZT	**Kozan**	**1.75**	**256**	*e*	PN		**Pn**	**05 23 34.6**	**-0.4**

IDC 19 05:29:15.2±2.0,**16.64S**×**178.00W**, **h0**km, **mb3.7**/5, **mb1 4.1**/5, **mb1mx3.9**/14, **mbtmp3.7**/5, **MS3.5**/1, **Ms1 3.5**/1, **ms1mx2.7**/16, **Error ellipse: s-maj=124.6km s-min=25.1km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.06**	**259**	LR		LR	LR	05 45 32.4	
	comp=Z,74nm,20.3s,baz=232,slow=29								
WRA	**Warramunga Arr**	**45.26**	**258**	P		P	P	05 37 35.0	+0.2
	0.3nm,0.5s,baz=94,slow=7.2,SNR=2.7								
ASAR	**Alice Springs**	**45.52**	**253**	P		P	P	05 37 36.7	-0.1
	1.0nm,0.7s,baz=90,slow=8.5,SNR=7.5								
NVAR	**Mina Array Bea**	**78.24**	**44**	P		P	P	05 41 18.8	+1.9
	0.4nm,0.7s,baz=224,slow=11,SNR=4.0								
ILAR	**Eielson Array**	**84.57**	**13**	P		P	P	05 41 49.2	-0.7
	0.2nm,0.4s,baz=222,slow=5.0,SNR=7.6								
TXAR	**Lajitas Array**	**84.99**	**58**	P		P	P	05 41 52.1	-0.7
	0.6nm,0.7s,baz=232,slow=4.1,SNR=5.2								

IDC **19** *05:35:57.0±1.8, 11.81N×45.50E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.7/22, mbtmp3.8/8, MS3.4/8, Ms1 3.4/8, ms1mx3.1/33, Error ellipse: s-maj=44.7km s-min=21.6km az=171.0*
NEIC **19** *05:35:58.0±1.2, 11.77N×45.50E, h10km, mb4.0/2, Error ellipse: s-maj=29.2km s-min=12.5km az=164.0*
CSEM **19** *05:35:58.1±0.4, 12.01N×45.39E, h2km, ML3.9, Error ellipse: s-maj=13.5km s-min=9.9km az=17.0*
DHMR **19** *05:35:58.2±1.1, 11.97N×45.19E, h13km±6km, ML3.9*
ISC 19 05:35:59.8±0.7,**12.07N**±0.06×**45.37E**±0.05, **h10**km, **n41,** σ1.913/40, **mb3.8**/9, **MS3.4**/8, **3D, Western Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ADEN	**Aden**	**0.80**	**332**	↓*i*	P		**Pg**	**05 36 13.5**	**-1.7**
ADEN				*i*	S		**Sg**	**05 36 25.0**	**-0.6**
ADEN	**Aden**	**0.80**	**332**	↓*i*	P		**Pg**	**05 36 13.5**	**-1.7**
ADEN				*i*	S		**Sg**	**05 36 25.0**	**-0.6**
TRBA	**At Turbah**	**1.68**	**313**	↓*i*	P		**Pn**	**05 36 27.9**	**-1.4**
TRBA				*i*	S		**Sn**	**05 36 49.9**	**-1.0**
TRBA					AML	AML		05 37 02.3	
	comp=E,1μm,0.5s								
LBOS		**1.79**	**356**	*i*	P		**Pn**	**05 36 31.7**	**+0.9**
LBOS				*i*	S		**Sn**	**05 36 58.2**	**+4.6**
BDHA	**Al Bayda'**	**1.90**	**6**	*i*	P		**Pn**	**05 36 33.2**	**+0.8**
BDHA				*i*	S		**Sn**	**05 37 01.1**	**+4.8**
BDHA					AML	AML		05 37 08.2	
	comp=E,2μm,0.8s								
ATD	**Arta Tunnel**	**2.53**	**258**	Pn		Pn	**Pn**	**05 36 40.1**	**-0.8**
	comp=E,5.9nm,0.3s,baz=52,slow=11,SNR=15								
ATD					Sn	Sn	**Sn**	**05 37 13.0**	**+1.2**
	comp=E,14nm,0.3s,baz=262,slow=23,SNR=4.4								
ATD	**Arta Tunnel**	**2.53**	**258**	Pn		Pn	**Pn**	**05 36 40.1**	**-0.8**
ATD					Sn	Sn	**Sn**	**05 37 13.0**	**+1.2**
DHBB	**Dhamar BB**	**2.66**	**339**	*i*	P		**Pn**	**05 36 44.0**	**+1.3**
DHBB	**Dhamar BB**	**2.66**	**339**	*i*	P		**Pn**	**05 36 44.0**	**+1.2**
HAJJ	**Hajjah**	**4.00**	**335**	*i*	P		**Pn**	**05 37 02.1**	**+1.0**
HAJJ	**Hajjah**	**4.00**	**335**	*i*	P		**Pn**	**05 37 02.1**	**+1.0**
EIL	**Elat**	**20.01**	**333**	LR		LR	LR	05 47 38.8	
	comp=E,56nm,18.0s,MS3.0,baz=101,slow=35								
BHD	**Baghdad**	**21.12**	**358**	*ex*			x	05 40 46.0	
BHD	**Baghdad**	**21.12**	**358**	*e*	P		**P**	**05 40 46.0**	**+1.3**
ASF	**Jabal al Asfar**	**21.47**	**340**	LR		LR	LR	05 48 52.2	
	comp=E,124nm,19.4s,MS3.3,baz=206,slow=36								
GNI	**Garni**	**27.97**	**359**	LR		LR	LR	05 54 27.5	
	comp=E,97nm,18.1s,MS3.4,baz=354,slow=39								
BRTR	**Keskin Array B**	**29.44**	**341**	P		P	**P**	**05 42 06.2**	**+2.6**
	comp=E,1.1nm,0.8s,mb3.6,baz=159,slow=11,SNR=6.2								
BRTR					PcP	PcP		05 45 10.0	+0.6
	comp=E,0.7nm,0.7s,baz=116,slow=3.4,SNR=3.6								
BRTR					LR	LR		05 54 14.5	
	comp=E,90nm,20.3s,MS3.4,baz=126,slow=37								
BRTR	**Keskin Array B**	**29.44**	**341**	P		P	**P**	**05 42 06.2**	**+2.6**
BRTR	**Keskin Array B**	**29.44**	**341**	PcP		PcP		05 45 10.0	+0.6
AML	**Almayashu**	**38.80**	**34**	*e*P		P	**P**	**05 43 25.8**	**+1.1**
	comp=E,12nm,1.6s,mb4.4								
AML	**Almayashu**	**38.80**	**34**	*e*P		P	**P**	**05 43 25.8**	**+1.1**
	comp=E,12nm,1.6s,mb4.4								
ABKAR	**Akbulak array**	**38.99**	**15**	*e*P		P	**P**	**05 43 26.2**	**0.0**
	comp=E,1.7nm,0.8s,mb3.8								
ABKAR	**Akbulak array**	**38.99**	**15**	*e*P		P	**P**	**05 43 26.2**	**0.0**
	comp=E,1.7nm,0.8s,mb3.8								
AKASG	**Malin Array Be**	**40.72**	**344**	P		P	**P**	**05 43 41.4**	**+0.7**
	comp=E,0.1nm,0.2s,mb3.0,baz=159,slow=6.9,SNR=4.5								
AKASG	**Malin Array Be**	**40.72**	**344**	P		P	**P**	**05 43 41.3**	**+0.7**
BOSA	**Boshof**	**44.88**	**205**	LR		LR	LR	06 02 00.5	
	comp=E,63nm,20.1s,MS3.5,baz=232,slow=35								
BVAR	**Borovoye Array**	**45.49**	**21**	P		P	**P**	**05 44 19.2**	**0.0**
	comp=E,0.5nm,0.5s,mb3.6,baz=224,slow=8.3,SNR=4.8								
BVAR	**Borovoye Array**	**45.49**	**21**	P		P	**P**	**05 44 19.2**	**0.0**
MK31	**Makanchi Array**	**46.51**	**35**	*e*P		P	**P**	**05 44 26.1**	**-1.1**
MK31	**Makanchi Array**	**46.51**	**35**	*e*P		P	**P**	**05 44 26.1**	**-1.2**
MKAR	**Makanchi Array**	**46.51**	**35**	P		P	**P**	**05 44 26.6**	**-0.7**
MKAR					LR	LR		06 06 15.3	
MKAR	**Makanchi Array**	**46.51**	**35**	P		P	**P**	**05 44 26.6**	**-0.7**
	comp=E,1.0nm,0.9s,mb3.8,baz=233,slow=7.4,SNR=6.4								
MKAR					LR	LR		06 06 15.3	
	comp=E,43nm,19.8s,MS3.4,baz=174,slow=39								
MKAR	**Makanchi Array**	**46.51**	**35**	P		P	**P**	**05 44 26.6**	**-0.7**
KURK	**Kurchatov**	**47.12**	**28**	P		P	**P**	**05 44 30.5**	**-1.5**
	comp=E,0.9nm,0.3s,mb4.2,baz=226,slow=7.5,SNR=2.7								
KURK	**Kurchatov**	**47.12**	**28**	P		P	**P**	**05 44 30.5**	**-1.5**
CMAR	**Chiang Mai Arr**	**51.92**	**76**	P		P	**P**	**05 45 07.7**	**-1.6**
	comp=E,1.5nm,0.7s,mb4.0,baz=269,slow=8.9,SNR=7.8								
CMAR	**Chiang Mai Arr**	**51.92**	**76**	P		P	**P**	**05 45 07.7**	**-1.5**
ZALV	**Zalesovo Beam**	**52.12**	**28**	LR		LR	LR	06 11 02.4	
	comp=E,25nm,18.7s,MS3.3,baz=9.1,slow=40								
NOA	**NORSAR Array B**	**54.87**	**340**	LR		LR	LR	06 10 56.7	
	comp=E,36nm,18.9s,MS3.5,baz=280,slow=38								
SONM	**Songino Array**	**61.78**	**42**	P		P	**P**	**05 46 18.6**	**-0.2**
	comp=E,1.3nm,0.9s,mb4.1,baz=244,slow=6.4,SNR=6.0								
SONM	**Songino Array**	**61.78**	**42**	P		P	**P**	**05 46 18.5**	**-0.2**

NIED **19** *05:42:00, 43.10N×146.00E, h74km, Mw3.5 Best double couple: M₀1.92000×10¹⁴ NP1:φ₀78.00000°, δ67.00000°, λ99.00000°. NP2:φ₀236.00000°, δ25.00000°, λ70.00000°.*
IDC **19** *05:42:14.5±4.8, 43.49N×146.06E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/21, mbtmp3.8/4, Error ellipse: s-maj=164.5km s-min=30.3km az=2.0*
ISCJB **19** *05:42:19.4±1.2, 43.06N±0.09×146.0E±0.1, h63km±7km, mb3.7/4, Error ellipse: s-maj=15.8km s-min=10.7km az=150.1*
JMA **19** *05:42:20.1±0.1, 43.06N×146.01E, h59km±1km, M3.7*
JMA Felt I J1.
ISC 19 05:42:20.3±1.2,**43.05N**±0.09×**146.0E**±0.1, **h56**km±8km, **n11,** σ0.946/18, **mb3.7**/4, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.38**	**326**	P		P	**Pn**	**05 42 30.7**	**0.0**
NEM2				*e*	S	S	**Sn**	**05 42 38.1**	**-0.1**
JAK	**Akkeshi**	**0.98**	**267**	P		P	**Pn**	**05 42 37.9**	**0.0**
JAK				*e*	S	S	**Sn**	**05 42 51.1**	**+0.2**
JNK	**Nakash**	**1.10**	**300**	P		P	**Pn**	**05 42 39.0**	**-0.5**
JNK				*e*	S	S	**Sn**	**05 42 52.6**	**-1.1**
JRA	**Rausu**	**1.11**	**324**	P		P	**Pn**	**05 42 39.5**	**-0.1**
JRA				*e*	S	S	**Sn**	**05 42 53.9**	**0.0**
JAR	**Ashorobuto**	**1.67**	**279**	P		P	**Pn**	**05 42 47.4**	**+0.2**
JAR				*e*	S	S	**Sn**	**05 43 08.0**	**+0.4**
JTKR	**Abashiri--Toko**	**1.80**	**301**	P		P	**Pn**	**05 42 49.5**	**+0.6**
JTKR				*e*	S	S	**Sn**	**05 43 11.6**	**+1.0**
JCH	**Churui**	**2.01**	**258**	P		P	**Pn**	**05 42 51.9**	**+0.1**
JCH				*e*	S	S	**Sn**	**05 43 15.5**	**-0.3**
SONM	**Songino Array**	**28.00**	**294**	P		P	**P**	**05 48 05.7**	**+0.1**
	0.9nm,0.5s,mb3.6,baz=87,slow=9.5,SNR=4.6								
MKAR	**Makanchi Array**	**44.19**	**298**	P		P	**P**	**05 50 23.2**	**-0.3**
	0.5nm,0.6s,mb3.5,baz=80,slow=8.8,SNR=6.1								
FINES	**FINESS Array B**	**65.12**	**333**	P		P	**P**	**05 52 54.1**	**-0.7**
	1.5nm,0.5s,mb4.2,baz=34,slow=10,SNR=5.4								
NVAR	**Mina Array Bea**	**68.64**	**57**	P		P	**P**	**05 53 18.1**	**+0.6**
	0.3nm,0.5s,mb3.5,baz=315,slow=8.3,SNR=3.0								

WEL 19 05:52:46.3±0.3,**39.58S**×**174.31E**, **h205**km±2km, **ML3.6**/11, **Error ellipse: s-maj=1.8km s-min=1.2km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DFE	**Dawson Falls**	**0.30**	**328**	PN		Pn	Pn	05 53 13.5	0.0
NRZ	**Ngariki Road**	**0.38**	**310**	PN		Pn	Pn	05 53 13.5	-0.1
NWEZ	**Newall Road**	**0.46**	**312**	PN		Pn	Pn	05 53 13.7	-0.1
PKE	**Pukeiti**	**0.46**	**327**	PN		Pn	Pn	05 53 14.1	+0.2
WAZ	**Wanganui**	**0.55**	**109**	PN		Pn	Pn	05 53 15.1	+0.9
WAZ						SN	Sn	05 53 36.9	+1.1
VRZ	**Vera Road**	**0.57**	**38**	PN		Pn	P

132C-97D, Bonin Islands region

Code	Station Name	Δ°	ΔZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.66**	**186**	Pn		**Pn**		**06 11 02.9**	**-3.1**
	36nm,0.3s,baz=43,slow=7.1,SNR=21								
CBIJ				Sn		**Sn**		**06 11 19.7**	**-6.4**
	279nm,0.3s,baz=272,slow=23,SNR=16								
CBIJ	**Chichi jima**	**1.66**	**186**	P		**Pn**		**06 11 01.9**	**-4.1**
CBIJ				*e*S		**Sn**		**06 11 19.8**	**-6.3**
JHHJ	**Haha-jima-NKT**	**2.12**	**185**	P		**Pn**		**06 11 09.0**	**-3.3**
JHHJ				*e*S		**Sn**		**06 11 32.2**	**-5.3**
JHJ2	**Mitsune**	**4.88**	**334**	*e*S		**Sn**		**06 12 45.0**	**-0.5**
JHJ	**Hachijo jima 2**	**4.90**	**333**	Pn		**Pn**		**06 11 50.9**	**+0.4**
	9.5nm,0.3s,baz=65,slow=18,SNR=1.8								
JHJ				Sn		**Sn**		**06 12 45.4**	**-0.6**
	21nm,0.3s,baz=243,slow=23,SNR=5.4								
JHJ				LR		LR		06 13 48.1	
	comp=Z,2μm,19.4s,baz=5.1,slow=39								
BSO1	**Boso 1**	**6.01**	**349**	P		**Pn**		**06 12 05.3**	**-0.4**
BSO1				*e*S		**Sn**		**06 13 12.5**	**-0.9**
BSO3	**Boso 3**	**6.24**	**346**	P		**Pn**		**06 12 08.8**	**-0.2**
BSO3				*e*S		**Sn**		**06 13 22.8**	**+3.7**
BSO4	**Boso 4**	**6.46**	**345**	P		**Pn**		**06 12 13.7**	**+1.7**
BSO4				*e*S		**Sn**		**06 13 25.0**	**+0.5**
JOD2	**Odawara 2**	**7.07**	**338**	P		**Pn**		**06 12 21.5**	**+1.1**
JOD2				*e*S		**Sn**		**06 13 42.5**	**+2.9**
JHU	**Hanno**	**7.55**	**340**	P		**Pn**		**06 12 27.4**	**+0.4**
JHU				*e*S		**Sn**		**06 13 50.5**	**-0.9**
JRY	**Ryogami san**	**7.82**	**339**	P		**Pn**		**06 12 31.4**	**+0.8**
JRY				*e*S		**Sn**		**06 13 56.0**	**-2.0**
JAG	**Ashikaga**	**8.04**	**343**	P		**Pn**		**06 12 32.6**	**-1.1**
JAG				*e*S		**Sn**		**06 14 00.1**	**-3.4**
MJAR	**Matsushiro Arr**	**8.53**	**337**	Pn		**Pn**		**06 12 40.3**	**0.0**
	6.6nm,0.3s,baz=154,slow=11,SNR=39								
MJAR				Sn		**Sn**		**06 14 14.7**	**-0.7**
	0.6nm,0.3s,baz=311,slow=38,SNR=3.0								
MJAR				LR		LR		06 15 37.4	
	comp=Z,677nm,21.7s,baz=165,slow=36								
MJAR	**Matsushiro Arr**	**8.53**	**337**	P		**Pn**		**06 12 40.3**	**-0.1**
MJAR								06 14 14.7	
MJAR				pmax		pmax			
	comp=Z,7.0nm,0.3s								
MJAR				smax					
	comp=N,1.0nm,0.3s								
MJAR				MLR		MLR			
	comp=Z,677nm,21.7s								
MAJO	**Matsushiro**	**8.53**	**337**	*e*Pn		**Pn**		**06 12 42.0**	**+1.6**
MAT	**Matsushiro**	**8.53**	**337**	P		**Pn**		**06 12 40.5**	**+0.1**
MAT				S		**Sn**		**06 14 14.6**	**-0.9**
MAT	**Matsushiro**	**8.53**	**337**	P		**Pn**		**06 12 40.3**	**-0.1**
MAT				*e*S		**Sn**		**06 14 14.0**	**-1.5**
JHS	**Saijyo**	**10.04**	**311**	P		**Pn**		**06 13 02.2**	**+1.1**
JMK	**Ichinoseki**	**10.22**	**355**	P		**Pn**		**06 13 02.5**	**-1.0**
JMK				*e*S		**Sn**		**06 14 48.8**	**-8.2**
KSRS	**Korea Array**	**14.89**	**309**	Pn		**Pn**		**06 14 08.0**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=114,slow=12,SNR=16								
KSRS				LR		LR		06 19 54.7	
	comp=Z,1μm,18.2s,baz=126,slow=37								
KSRS	**Korea Array**	**14.89**	**309**	P		**Pn**		**06 14 08.0**	**+0.6**
KSRS				pmax		pmax			
	comp=Z,1.0nm,0.3s								
KSRS				MLR		MLR			
	comp=Z,1μm,18.3s								
GUMO	**Guam**	**15.26**	**171**	*e*P		**Pn**		**06 14 12.6**	**+0.3**
	comp=Z,126nm,1.3s								
GUMO	**Guam**	**15.26**	**171**	Pn		**Pn**		**06 14 12.0**	**-0.3**
	comp=Z,3.5nm,0.3s,baz=93,slow=17,SNR=3.3								
GUMO				LR		LR		06 19 46.7	
	comp=Z,420nm,18.0s,baz=222,slow=36								
GUMO	**Guam**	**15.26**	**171**	*e*P		**Pn**		**06 14 12.6**	**+0.3**
GUMO				pmax		pmax			
	comp=Z,126nm,1.3s								
ASAJ	**Asahikawa**	**15.34**	**1**	Pn		**Pn**		**06 14 10.9**	**-2.1**
	comp=Z,1.1nm,0.3s,baz=248,slow=19,SNR=3.5								
ASAJ				Sn		**Sn**		**06 16 51.2**	**-11**
	comp=Z,0.9nm,0.3s,baz=42,slow=29,SNR=2.9								
ASAJ	**Asahikawa**	**15.34**	**1**	P		**Pn**		**06 14 11.0**	**-2.1**
ASAJ								06 16 51.2	
ASAJ				pmax		pmax			
	comp=Z,1.0nm,0.3s								
ASAJ				smax					
	comp=N,1.0nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**15.51**	**9**	*i*P		**Pn**		**06 14 10.2**	**-5.1**
YUK				MLR		MLR			
	comp=N,110nm,10.2s								
YUK				MLR		MLR			
	comp=Z,230nm,10.2s								
INCN	**Inchon**	**15.80**	**307**	*e*P		**Pn**		**06 14 23.6**	**+4.5**
	comp=Z,43nm,0.5s								
YSS	**Yuzh-Sakhalins**	**18.18**	**1**	*e*P		**Pn**		**06 14 47.7**	**-1.1**
	comp=Z,40nm,1.0s								
YSS	**Yuzh-Sakhalins**	**18.18**	**1**	*e*P		**Pn**		**06 14 48.0**	**-0.8**
YSS				pmax		pmax			
	comp=Z,60nm,1.3s								
YSS				MLR		MLR			
	comp=Z,500nm,17.0s								
YSS				MLR		MLR			
	comp=N,500nm,16.0s								
YSS				MLR		MLR			
	comp=E,500nm,14.0s								
SSE	**Sheshan**	**18.52**	**282**	P		**Pn**		**06 14 55.9**	**+2.7**
SSE				pP		pP		06 15 03.0	+1.4
SSE				S		**Sn**		**06 18 17.1**	**-2.2**
SSE				sS		sS		06 18 32.5	-3.8
SSE				pmax		pmax			
	comp=Z,35nm,0.8s								
SSE				pmax		pmax			
	comp=Z,250nm,11.7s								
SSE				LR		LR			
	comp=N,210nm,17.7s								
SSE				LR		LR			
	comp=E,430nm,17.7s								
SSE				LR		LR			
	comp=Z,290nm,17.3s								
MDJ	**Mudanjiang**	**18.83**	**331**	P		**Pn**		**06 14 55.9**	**-0.9**
MDJ				pP		pP		06 15 05.8	+1.0
MDJ				sP		sP		06 15 11.3	+2.3
MDJ				S		**Sn**		**06 18 25.5**	**-1.0**
MDJ				sS		sS		06 18 43.6	+1.3
MDJ				PcP		PcP		06 19 21.8	-0.2
MDJ				PcS		PcS		06 22 57.8	-1.0
MDJ				ScS		ScS		06 26 34.5	-2.0
MDJ				pmax		pmax			
	comp=Z,56nm,1.0s								
MDJ				pmax		pmax			
	comp=Z,170nm,3.9s								
MDJ				LR		LR			
	comp=N,600nm,9.6s								
MDJ				LR		LR			
	comp=E,470nm,13.2s								
MDJ				LR		LR			
	comp=Z,640nm,17.1s								
MDJ	**Mudanjiang**	**18.83**	**331**	*e*P		**Pn**		**06 14 55.1**	**-1.7**
	comp=Z,37nm,0.8s								
TATO	**Taipei**	**19.02**	**263**	*e*P		**Pn**		**06 14 58.2**	**-1.0**
	comp=Z,111nm,1.0s								
NACB	**Ninganchiao**	**19.16**	**261**	*e*P		**Pn**		**06 15 01.7**	**+0.8**
	comp=Z,34nm,0.8s								
YHNB	**Yeheng**	**19.20**	**263**	*e*P		**Pn**		**06 15 00.6**	**-0.9**
	comp=Z,53nm,0.7s								
YULB	**Yu-li**	**19.67**	**259**	*e*P		**Pn**		**06 15 06.4**	**-0.7**
	comp=Z,76nm,1.1s								
SSLB	**Suanglung**	**19.84**	**261**	*e*P		**Pn**		**06 15 08.5**	**-0.6**
	comp=Z,168nm,1.0s								
TWG	**Pinlang**	**20.07**	**258**	*e*P		**P**		**06 15 10.2**	**+0.4**
	comp=Z,39nm,0.8s								
SNY	**Shenyang**	**20.09**	**315**	P		**P**		**06 15 14.3**	**+4.4**
SNY				pmax		pmax			
	comp=Z,14nm,0.7s								
SNY				pmax		pmax			
	comp=Z,280nm,3.8s								
SNY				LR		LR			
	comp=N,480nm,12.1s,MS4.2								
SNY				LR		LR			
	comp=E,500nm,15.8s,MS4.2								
SNY				LR		LR			
	comp=Z,540nm,17.1s,MS4.0								
CN2	**Changchun**	**20.24**	**322**	*e*P		**P**		**06 15 12.3**	**+0.8**
CN2				*epP*				06 15 23.0	
CN2				*e*S		**S**		**06 18 52.3**	**-4.5**
CN2				pmax		pmax			
	comp=Z,20nm,1.0s								
CN2				pmax		pmax			
	comp=Z,200nm,3.0s								
CN2				LR		LR			
	comp=N,1μm,15.0s,MS4.4								
CN2				LR		LR			
	comp=E,800nm,15.0s,MS4.4								
CN2				LR		LR			
	comp=Z,1μm,17.0s,MS4.2								
TPUB	**Ta-pu**	**20.28**	**259**	*e*P		**P**		**06 15 13.7**	**+1.6**
	comp=Z,55nm,0.8s								
HABR	**Khabarovsk**	**20.49**	**346**	*e*P		**P**		**06 15 14.2**	**0.0**
HABR								06 15 30.3	
HABR				S		**S**		**06 19 02.1**	**+0.5**
HABR				*e*'SS		sS		06 19 15.2	-0.4
HABR				*e*SSS				06 19 34.8	
HABR				*e*				06 26 40.2	
HABR				pmax		pmax			
	comp=Z,79nm,1.4s								
HABR				pmax		pmax			
	comp=E,66nm,2.2s								
HABR				pmax		pmax			
	comp=N,61nm,1.6s								
HABR				MLR		MLR			
	comp=Z,311nm,18.0s,MS3.7								
NJ2	**Nanjing**	**20.55**	**285**	*e*P		**P**		**06 15 20.0**	**+5.0**
NJ2				pP				06 15 31.0	
NJ2				sP		sP		06 15 36.9	+8.9
NJ2				PP				06 15 43.3	
NJ2				S		**S**		**06 19 06.0**	**+2.8**
NJ2				sS		sS		06 19 25.0	+7.8
NJ2				pmax		pmax			
	comp=Z,30nm,0.7s								
NJ2				pmax		pmax			
	comp=Z,250nm,3.6s								
NJ2				LR		LR			
	comp=N,360nm,17.6s,MS4.0								
NJ2				LR		LR			
	comp=E,540nm,17.4s,MS4.0								
NJ2				LR		LR			
	comp=Z,620nm,15.4s,MS4.1								
QZH	**Quanzhou**	**21.56**	**265**	*i*P		**P**		**06 15 27.3**	**+1.4**
QZH				S		**S**		**06 19 20.8**	**-2.3**
QZH				pmax		pmax			
	comp=Z,60nm,0.9s,mb5.0								
QZH				LR		LR			
	comp=N,1μm,17.8s,MS4.4								
QZH				LR		LR			
	comp=E,560nm,14.6s,MS4.4								
QZH				LR		LR			
	comp=Z,870nm,21.2s								
KLR	**Kul'dur**	**22.02**	**341**	*e*P		**P**		**06 15 27.0**	**-3.6**
KLR				*e*S		**S**		**06 19 36.0**	**+4.4**
KLR				pmax		pmax			
	comp=E,34nm,1.6s								
KLR				pmax		pmax			
	comp=Z,74nm,1.6s,mb4.9								
KLR				MLR		MLR			
	comp=N,600nm,13.5s,MS4.4								
KLR				MLR		MLR			
	comp=E,900nm,13.5s,MS4.4								
BJI	**Beijing**	**24.30**	**305**	P		**P**		**06 15 51.9**	**-1.6**
BJI				S		**S**		**06 20 09.6**	**-0.8**
BJI				pmax		pmax			
	comp=Z,15nm,1.2s,mb4.3								
BJI				pmax		pmax			
	comp=Z,77nm,3.5s								
BJI				LR		LR			
	comp=N,650nm,18.7s,MS4.5								
BJI				LR		LR			
	comp=E,1μm,17.1s,MS4.5								
BJI				LR		LR			
	comp=Z,690nm,18.0s,MS4.2								
WHN	**Wuhan**	**24.41**	**281**	P		**P**		**06 15 55.0**	**+0.3**
WHN				S		**S**		**06 20 11.3**	**-1.1**
WHN				LR		LR			
	comp=N,840nm,15.4s,MS4.6								
WHN				LR		LR			
	comp=E,1μm,17.8s,MS4.6								
WHN				LR		LR			
	comp=Z,680nm,17.3s,MS4.2								
TGY	**Tagaytay City**	**24.66**	**238**	P		**P**		**06 15 58.7**	**+1.7**
	comp=Z,99nm,0.3s,mb5.8,baz=301,slow=12,SNR=2.8								
TGY	**Tagaytay City**	**24.66**	**238**	P		**P**		**06 15 58.7**	**+1.7**
TGY				pmax		pmax			
	comp=Z,99nm,0.3s								
DAV	**Davao City (W)**	**26.78**	**220**	LR		LR		06 24 42.5	
	comp=Z,300nm,20.1s,MS3.8,baz=179,slow=32								
HHC	**Hu-ho-hao-te**	**27.90**	**304**	*e*P		**P**		**06 16 27.8**	**+1.8**
HHC				pP		pP		06 16 37.1	+1.6
HHC				sP		sP		06 16 41.5	+1.9
HHC				PP				06 17 18.1	
HHC				*e*S		**S**		**06 21 08.4**	**+1.0**
HHC				sS		sS		06 21 23.9	+0.8
HHC				SS				06 22 34.0	
HHC				pmax		pmax			
	comp=Z,21nm,0.7s,mb4.9								
HHC				pmax		pmax			
	comp=Z,88nm,3.8s								
HHC				LR		LR			
	comp=N,370nm,13.2s,MS4.6								
HHC				LR		LR			
	comp=E,1μm,15.0s,MS4.6								
HHC				LR		LR			
	comp=Z,1μm,15.8s,MS4.6								
XAN	**Xi'an**	**28.97**	**289**	P		**P**		**06 16 33.9**	**-1.8**
XAN				pP		pP		06 16 46.3	+1.1
XAN				sP		sP		06 16 51.3	+2.1
XAN				PP		PP		06 17 36.3	-5.0
XAN				S		**S**		**06 21 33.5**	**+9.0**
XAN				pmax		pmax			
	comp=Z,3.0nm,1.0s,mb4.0								
XAN				pmax		pmax			
	comp=Z,27nm,9.9s								
XAN				LR		LR			
	comp=N,250nm,18.1s,MS4.0								
XAN				LR		LR			
	comp=E,160nm,17.5s,MS4.0								
XAN				LR		LR			
	comp=Z,210nm,18.1s,MS3.8								
QIZ	**Qiongzhong**	**31.20**	**259**	P		**P**		**06 16 54.0**	**-1.6**
QIZ				pP		pP		06 17 06.3	+1.2
QIZ				S		**S**		**06 21 59.3**	**-0.5**
QIZ				LR		LR			
	comp=E,180nm,19.4s								
QIZ				LR		LR			
	comp=Z,390nm,17.1s,MS4.1								
GYA	**Guiyang**	**31.67**	**274**	P		**P**		**06 17 01.8**	**+2.2**
GYA				pP		pP		06 17 11.8	+2.6
GYA				sP		sP		06 17 16.8	+3.6
GYA				PP		PP		06 18 06.5	-4.9
GYA				PcP		PcP		06 19 51.3	+0.2
GYA				S		**S**		**06 22 05.6**	**-1.3**
GYA				sS		sS		06 22 25.8	+3.1
GYA				ScP		ScP		06 23 31.0	-1.0
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s,mb4.6								
GYA				pmax		pmax			
	comp=Z,110nm,4.6s								
GYA				LR		LR			
	comp=N,490nm,16.8s,MS4.4								
GYA				LR		LR			
	comp=E,460nm,17.0s,MS4.4								
GYA				LR		LR			
	comp=Z,470nm,15.1s,MS4.3								
LZH	**Lanzhou**	**33.19**	**293**	*e*P		**P**		**06 17 16.8**	**+4.0**
LZH				pP		pP		06 17 25.8	+3.4
LZH				sP		sP		06 17 30.5	+4.1
LZH				pmax		pmax			
	comp=Z,19nm,1.0s,mb5.0								
ULN	**Ulaanbaatar**	**33.27**	**315**	*e*P		**P**		**06 17 13.3**	**-0.1**
	comp=Z,18nm,1.1s,mb4.9								
ULN	**Ulaanbaatar**	**33.27**	**315**	*e*P		**P**		**06 17 13.3**	**-0.1**
ULN				pmax		pmax			
	comp=Z,19nm,1.1s,mb4.9								
CD2	**Chengdu**	**33.47**	**283**	P		**P**		**06 17 14.4**	**-1.0**
CD2				pP		pP		06 17 24.0	-0.9
CD2				sP		sP		06 17 27.9	-1.0
CD2				PP		PP		06 18 26.8	-4.6
CD2				S		**S**		**06 22 32.3**	**-2.6**
CD2				PcS		PcS		06 23 40.3	-1.5
CD2				ScS		ScS		06 27 35.8	-3.4
CD2				pmax		pmax			
	comp=Z,50nm,0.8s,mb5.5								
CD2				pmax		pmax			
	comp=Z,60nm,4.3s								
CD2				LR		LR			
	comp=N,540nm,16.5s,MS4.6								
CD2				LR		LR			
	comp=E,780nm,15.3s,MS4.6								
CD2				LR		LR			
	comp=Z,790nm,16.0s,MS4.5								
SONM	**Songino Array**	**33.67**	**314**	P		**P**		**06 17 16.9**	**0.0**
	comp=Z,8.4nm,1.0s,mb4.6,baz=120,slow=8.4,SNR=27								
SONM				PcP		PcP		06 19 56.8	+0.5
	comp=Z,1.1nm,0.6s,baz=127,slow=3.8,SNR=4.0								
SONM				LR		LR		06 31 28.9	
	comp=Z,353nm,19.0s,MS4.1,baz=271,slow=37								
SONM	**Songino Array**	**33.67**	**314**	P		**P**		**06 17 16.9**	**0.0**
SONM								06 19 56.8	
SONM				pmax		pmax			
	comp=Z,8.0nm,1.0s								
SONM				MLR		MLR			
	comp=Z,353nm,19.0s								
SEY	**Seymchan**	**34.81**	**8**	*e*P		**P**		**06 17 27.2**	**+0.7**
KMI	**Kunming**	**35.42**	**274**	P		**P**		**06 17 32.3**	**0.0**
KMI				pP		pP		06 17 43.0	+1.1
KMI				sP		sP		06 17 49.0	+3.1
KMI				PP		PP		06 18 53.8	+0.8
KMI				S		**S**		**06 23 05.8**	**+0.7**
KMI				sS		sS		06 23 24.3	+3.4
KMI				SS		SS		06 25 23.4	-16
KMI				pmax		pmax			
	comp=Z,15nm,1.5s,mb4.7								
KMI				pmax		pmax			
	comp=Z,100nm,4.1s								
KMI				LR		LR			
	comp=N,190nm,16.7s,MS4.3								
KMI				LR		LR			
	comp=E,430nm,19.4s,MS4.3								
KMI				LR		LR			
	comp=Z,570nm,17.2s,MS4.4								
ZAK	**Zakamensk**	**36.51**	**317**	*e*P		**P**		**06 17 41.9**	**+0.6**
ZAK				pmax		pmax			
	comp=Z,5.0nm,1.1s,mb4.3								
GTA	**Gaotai**	**36.53**	**298**	*e*P		**P**		**06 17 40.3**	**-1.4**
GTA				S		**S**		**06 23 18.3**	**-3.5**
GTA				pmax		pmax			
	comp=Z,6.0nm,1.2s,mb4.3								
GTA				pmax		pmax			
	comp=Z,92nm,4.5s								
GTA				LR		LR			
	comp=N,330nm,13.4s,MS4.5								
GTA				LR		LR			
	comp=E,460nm,15.2s,MS4.5								
GTA				LR		LR			
	comp=Z,470nm,14.9s,MS4.4								
TLY	**Talaya**	**36.79**	**319**	*e*P		**P**		**06 17 45.3**	**+1.7**
	comp=Z,27nm,0.8s,mb5.1								
TLY	**Talaya**	**36.79**	**319**	*e*P		**P**		**06 17 45.3**	**+1.6**
TLY				pmax		pmax			
	comp=Z,35nm,0.9s,mb5.2								
TLY				MLR		MLR			
	comp=Z,682nm,17.0s,MS4.5								
MOY	**Mondy**	**38.31**	**318**	*e*P		**P**		**06 17 57.4**	**+0.8**
MOY				pmax		pmax			
	comp=Z,32nm,2.7s,mb4.6								
CHTO	**Chiang Mai**	**40.77**	**266**	*e*P		**P**		**06 18 16.4**	**-1.1**
	comp=Z,17nm,0.8s,mb4.7								
CHTO	**Chiang Mai**	**40.77**	**266**	*e*P		**P**		**06 18 16.4**	**-1.1**
CHTO				pmax		pmax			
	comp=Z,17nm,0.8s,mb4.7								
CM31	**Chiang Mai Arr**	**40.91**	**265**	*e*P		**P**		**06 18 18.3**	**-0.3**
	comp=Z,5.8nm,0.4s,mb4.6								
CMAR	**Chiang Mai Arr**	**40.91**	**265**	P		**P**		**06 18 17.9**	**-0.8**
	comp=Z,4.1nm,0.4s,mb4.4,baz=44,slow=9.2,SNR=22								
CMAR				PcP		PcP		06 20 20.5	+1.7
	comp=Z,1.2nm,0.3s,baz=347,slow=0.9,SNR=5.0								
CMAR				LR		LR		06 35 31.8	
	comp=Z,294nm,19.2s,MS4.2,baz=87,slow=37								
CMAR	**Chiang Mai Arr**	**40.91**	**265**	P		**P**		**06 18 17.9**	**-0.7**
CMAR								06 20 20.5	
CMAR				pmax		pmax			
	comp=Z,4.0nm,0.4s								
CMAR				MLR		MLR			
	comp=Z,294nm,19.2s								
BILL	**Bilibino**	**41.81**	**13**	*i*P		**P**		**06 18 25.8**	**+0.5**
BILL				*e*				06 18 32.1	
BILL				*e*S		**S**		**06 24 42.8**	**+2.4**
BILL				*e*SS		SS		06 27 39.6	-7.3
BILL				pmax		pmax			
	comp=Z,10.0nm,1.3s,mb4.3								
BILL				MLR		MLR			
	comp=Z,100nm,19.0s,MS3.7								
WMQ	**Urumqi**	**45.77**	**304**	P		**P**		**06 18 59.0**	**+1.5**
WMQ				pP		pP		06 19 09.8	+2.5
WMQ				sP		sP		06 19 14.8	+3.5
WMQ				PcP		PcP		06 20 36.4	+1.6
WMQ				PP		PP		06 20 46.9	+1.9
WMQ				*e*S		**S**		**06 25 39.3**	**+0.4**
WMQ				ScS		ScS		06 28 48.3	-2.7
WMQ				SS		SS		06 28 55.3	-8.1
WMQ				pmax		pmax			
	comp=Z,24nm,1.2s,mb5.0								
WMQ				pmax		pmax			
	comp=Z,140nm,4.4s								
WMQ				LR		LR			
	comp=N,160nm,22.8s,MS4.2								
WMQ				LR		LR			
	comp=E,210nm,18.0s,MS4.2								
WMQ				LR		LR			
	comp=Z,210nm,18.0s,MS4.1								
ODAN	**Odare**	**48.32**	**282**	*e*P		**P**		**06 19 17.1**	**-0.5**
ZAA0	**Zalesovo Array**	**48.37**	**318**	*e*P		**P**		**06 19 17.6**	**0.0**
ZALV	**Zalesovo Beam**	**48.37**	**318**	P		**P**		**06 19 17.5**	**-0.2**
	comp=Z,22nm,0.8s,mb5.2,baz=99,slow=7.1,SNR=83								
ZALV				PcP		PcP		06 20 43.2	-0.6
	comp=Z,7.9nm,0.8s,baz=84,slow=3.1,SNR=6.6								
ZALV				LR		LR		06 40 21.2	
	comp=Z,264nm,18.9s,MS4.2,baz=95,slow=37								
ZALV	**Zalesovo Beam**	**48.37**	**318**	P		**P**		**06 19 17.5**	**-0.1**
ZALV								06 20 43.2	
ZALV				pmax		pmax			
	comp=Z,22nm,0.8s,mb5.2								
ZALV				MLR		MLR			
	comp=Z,264nm,18.9s,MS4.2								
RAMN	**Ramite**	**48.97**	**282**	*e*P		**P**		**06 19 22.1**	**-0.6**
	comp=Z,56nm,1.0s,mb5.6								
WRA	**Warramunga Arr**	**49.03**	**190**	P		**P**		**06 19 20.6**	**-2.4**
WRA	**Warramunga Arr**	**49.03**	**190**	P		**P**		**06 19 20.6**	**-2.4**
	comp=Z,23nm,0.8s,mb5.3,baz=11,slow=8.3,SNR=45								
WRA	**Warramunga Arr**	**49.03**	**190**	P		**P**		**06 19 20.6**	**-2.4**
WRA				pmax		pmax			
	comp=Z,23nm,0.8s								
JIRN	**Jiri**	**49.14**	**283**	*e*P		**P**		**06 19 24.1**	**+0.2**
	comp=Z,82nm,1.0s,mb5.7								
FITZ	**Fitzroy Crossi**	**49.31**	**201**	*e*P		**P**		**06 19 23.8**	**-1.4**
	comp=Z,12nm,0.6s,mb5.1								
FITZ	**Fitzroy Crossi**	**49.31**	**201**	*e*P		**P**		**06 19 23.8**	**-1.3**
	comp=Z,7.0nm,0.8s,mb4.7								
GUN	**Gumba**	**49.34**	**283**	*e*P		**P**		**06 19 25.4**	**0.0**
	comp=Z,83nm,0.9s,mb5.8								
NVS	**Novosibirsk**	**49.40**	**319**	*e*P		**P**		**06 19 25.0**	**-0.5**
NVS				pmax		pmax			
	comp=Z,42nm,1.4s,mb5.3								
NVS				pmax		pmax			
	comp=N,14nm,1.3s								
NVS				pmax		pmax			
	comp=E,49nm,1.5s								
MK31	**Makanchi Array**	**49.58

KURK Kurchatov 51.97 314*c i*P P 06 19 44.8 -0.1
KURK pmax pmax
comp=Z,71nm,1.1s,mb5.5
KURK MLR MLR
comp=Z,227nm,15.0s,MS4.3
ASAR Alice Springs 52.75 190 P P 06 19 51.1 +0.1
comp=Z,2.1nm,0.9s,mb4.1,baz=7.2,slow=5.5,SNR=15
ASAR PcP PcP 06 20 58.0 -2.3
comp=Z,0.8nm,0.7s,baz=17,slow=6.8,SNR=2.3
ASAR Alice Springs 52.75 190 P P 06 19 51.1 +0.2
ASAR 06 20 58.0
ASAR pmax pmax
comp=Z,2.0nm,0.9s
PPLA Purkeypile 53.66 31 *e*P P 06 19 57.8 +0.6
comp=Z,11nm,0.9s,mb4.8
ULHL Ulahol 54.25 303 P P 06 20 02.3 +0.4
SNR=13
BPAW Bear Paw Mtn. 54.35 30 *e*P P 06 20 02.6 +0.4
comp=Z,6.3nm,1.1s,mb4.5
TRF Thorofare Moun 54.58 31 *e*P P 06 20 03.9 0.0
comp=Z,10nm,0.9s,mb4.9
TKM2 Tokmak 2 54.63 304 P P 06 20 05.4 +0.8
SNR=11
TKM2 Tokmak 2 54.63 304 *e*P P 06 20 05.1 +0.5
comp=Z,7.8nm,0.7s,mb4.8
TKM2 Tokmak 2 54.63 304 *e*P P 06 20 05.1 +0.5
TKM2 pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
KSH Kashi 54.90 300⇓ *i*P P 06 20 10.3 +3.7
KSH *e*pP pP 06 20 22.6 +6.0
KSH *e*sP sP 06 20 28.1 +7.6
KSH *e*PcP PcP 06 21 11.0 +2.6
KSH *e*PP PP 06 22 14.8 +5.2
KSH *e*ScP ScP 06 25 04.5 -0.1
KSH *e*PcS PcS 06 25 09.8 +1.6
KSH *e*S **S 06 27 47.3 +1.3**
KSH *e*sS sS 06 28 08.4 +6.0
KSH *e*ScS ScS 06 29 51.8 -1.7
KSH *e*SS SS 06 31 31.9 +2.5
KSH pmax pmax
comp=Z,9.0nm,0.4s,mb5.2
KSH pmax pmax
comp=Z,87nm,4.6s
KSH LR LR
comp=N,340nm,13.2s,MS4.7
KSH LR LR
comp=E,260nm,15.3s,MS4.7
KSH LR LR
comp=Z,110nm,8.7s
PMR Palmer 54.95 33 *e*P P 06 20 06.1 -0.6
comp=Z,12nm,0.9s,mb4.9
PMR Palmer 54.95 33 *e*P P 06 20 06.1 -0.6
PMR pmax pmax
comp=Z,12nm,0.9s,mb4.9
KZA Kyzart 55.01 303 P P 06 20 08.9 +1.5
SNR=14
COLD Coldfoot 55.11 26 *e*P P 06 20 08.7 +1.0
comp=Z,2.9nm,0.7s,mb4.4
KBK Karagaybulak 55.14 304 P P 06 20 09.3 +0.9
SNR=10
MCK McKinley 55.21 30 *e*P P 06 20 08.5 0.0
comp=Z,7.5nm,0.8s,mb4.8
MCK McKinley 55.21 30 *e*P P 06 20 08.5 0.0
MCK pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
FRU Bishkek 55.35 304 *i*P P 06 20 10.0 +0.1
FRU pmax pmax
comp=N,30nm,2.0s
USP Ospenovka 55.37 305 P P 06 20 10.4 +0.4
SNR=10.0
AAK Ala-Archa 55.47 304 P P 06 20 11.3 +0.6
SNR=5.4
AAK Ala-Archa 55.47 304 *e*P P 06 20 11.1 +0.4
comp=N,10nm,0.8s,mb4.9
AAK Ala-Archa 55.47 304 P P 06 20 11.0 +0.3
comp=N,6.4nm,0.6s,mb4.8,baz=135,slow=7.1,SNR=15
AAK Ala-Archa 55.47 304*c i*P P 06 20 10.8 +0.1
AAK pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
AAK MLR MLR
comp=Z,98nm,15.0s,MS4.0
UCH Uchtor 55.52 303 P P 06 20 12.1 +1.0
SNR=25
DZM Mont Dzumac 55.60 153 *e*LR LR 06 36 26.3
comp=Z,260nm,23.4s
EKS2 Erkin-Say 55.99 304 P P 06 20 14.7 +0.2
SNR=9.0
AML Almayashu 56.14 303 P P 06 20 16.7 +1.2
SNR=36
ILAR Eielson Array 56.18 29 P P 06 20 14.4 -1.1
comp=Z,1.9nm,0.7s,mb4.2,baz=261,slow=6.0,SNR=22
ILAR Eielson Array 56.18 29 P P 06 20 14.4 -1.1
ILAR pmax pmax
comp=Z,2.0nm,0.7s
NDI New Delhi 56.46 287 *e*PKP P 06 20 16.5 -1.6
BVAR Borovoye Array 56.96 317 P P 06 20 21.6 +0.4
comp=Z,23nm,0.6s,mb5.4,baz=94,slow=8.1,SNR=81
BVAR Borovoye Array 56.96 317 P P 06 20 21.6 +0.4
BVAR pmax pmax
comp=Z,23nm,0.6s
BRVK Borovoye 57.02 317 *e*P P 06 20 22.4 +0.8
comp=Z,28nm,1.0s,mb5.2
BRVK Borovoye 57.02 317*c i*P P 06 20 22.1 +0.5
BRVK pmax pmax
comp=Z,28nm,0.9s,mb5.3
BRVK MLR MLR
comp=Z,316nm,17.0s,MS4.5
KK31 Karatay Array 58.27 305*ce*P P 06 20 30.5 -0.1
KK31 pmax pmax
comp=Z,16nm,0.6s,mb5.2
DAWY Dawson 59.43 30 *e*P P 06 20 39.2 +1.0
DAWY *e* 06 20 55.4
STKA Stephens Creek 60.30 181 *e*P P 06 20 44.4 -0.1
comp=Z,5.4nm,0.8s,mb4.6
STKA Stephens Creek 60.30 181 *e*P P 06 20 45.9 +1.4
comp=Z,23nm,2.6s,mb4.7
STKA Stephens Creek 60.30 181 P P 06 20 44.5 0.0
comp=Z,6.6nm,0.7s,mb4.8,baz=337,slow=11,SNR=7.2
STKA LR LR 06 47 25.1
comp=Z,177nm,20.4s,MS4.2,baz=210,slow=37
HYT Haines Junctio 60.59 34 *e*P P 06 20 48.2 +1.9
FORT Forrest 60.75 194 *e*P P 06 20 48.6 +1.0
comp=Z,14nm,0.6s,mb5.3
FORT Forrest 60.75 194 *e*P P 06 20 48.5 +0.9
comp=Z,17nm,0.7s,mb5.3
KBL Kabul 61.46 296 *e*P P 06 20 52.6 0.0
comp=Z,8.2nm,0.8s,mb4.9
KBL Kabul 61.46 296 *e*P P 06 20 52.6 0.0
KBL pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
INK Inuvik 61.46 25 *e*P P 06 20 52.3 +0.2
comp=Z,12nm,0.9s,mb5.0
INK Inuvik 61.46 25 P P 06 20 51.9 -0.2
comp=Z,4.5nm,0.6s,mb4.8,baz=291,slow=4.9,SNR=19
INK Inuvik 61.46 25 *e*P P 06 20 52.3 +0.3
INK pmax pmax
comp=Z,11nm,0.9s
SVE Sverdlovsk 62.03 322⇑ *e*P P 06 20 57.1 +1.0
SVE pmax pmax
comp=Z,36nm,0.9s,mb5.5
ARU Arti 63.23 322 *e*P P 06 21 04.4 +0.3
comp=Z,39nm,0.9s,mb5.5
ARU Arti 63.23 322*c i*P P 06 21 04.4 +0.3
ARU 06 21 39.6
ARU S S 06 29 36.4 +3.0
ARU pmax pmax
comp=Z,46nm,1.0s,mb5.6
SOKR Solikamsk 63.50 325*d i*P P 06 21 06.3 +0.5
SOKR pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
SOKR MLR MLR
comp=Z,370nm,16.0s,MS4.7
AB31 Akbulak array 64.08 314*ce*P P 06 21 10.1 +0.3
AB31 pmax pmax
comp=Z,31nm,0.6s,mb5.5
ABKAR Akbulak array 64.08 314 *e*P P 06 21 10.5 +0.7
comp=Z,29nm,0.6s,mb5.5
AKTK Aktyubinsk 64.98 315 P P 06 21 16.0 +0.3
AKTO Aktyubinsk 64.98 315 P P 06 21 16.0 +0.3
comp=Z,24nm,0.7s,mb5.3,baz=87,slow=7.5,SNR=25
AKTO Aktyubinsk 64.98 315 P P 06 21 16.0 +0.3
AKTO pmax pmax
comp=Z,24nm,0.7s,mb5.3
TOO Toolangi 66.04 177 *e*P P 06 21 22.3 -0.2
YKA Yellowknife Ar 70.61 29 P P 06 21 50.1 -0.8
comp=Z,1.8nm,0.6s,mb4.2,baz=295,slow=6.5,SNR=5.7
YKA Yellowknife Ar 70.61 29 P P 06 21 50.1 -0.8
YKA pmax pmax
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 72.04 341 P P 06 21 59.8 +0.3
comp=Z,8.0nm,0.8s,mb4.7,baz=39,slow=7.9,SNR=17
ARCES ARCESS Array B 72.04 341 P P 06 21 59.8 +0.3
ARCES pmax pmax
comp=Z,8.0nm,0.8s
IGLO Ghaloghah 72.47 302 *e*P P 06 22 02.0 -0.6
JCW Jim Creek 72.70 44 *e*P P 06 22 04.2 +0.5
IANJ Anjilo 72.81 301 *e*P P 06 22 05.3 +0.6
ISHM Shahmirzad 73.14 302 *e*P P 06 22 06.8 +0.2
ILAS Lasjerd 73.56 302 *e*P P 06 22 09.0 -0.1
IFIR Firoozkooh 73.61 302 *e*P P 06 22 10.1 +0.7
H04A Detroit Lake 73.97 48⇑ P P 06 22 11.0 -0.3
baz=74
IDMV Damavand 74.17 302 *e*P P 06 22 13.4 +0.7
B08A Colville Reser 74.21 43⇓ P P 06 22 12.1 -0.6
baz=74
VRHR Novokhopersk 74.46 320 *e*P P 06 22 13.3 -0.7
VRHR pmax pmax
comp=N,9.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VRHR pmax pmax
comp=E,10.0nm,1.0s
E07A Sunnyside 74.66 45⇓ P P 06 22 14.7 -0.6
baz=74
G06A Carlson Farm, 74.74 47⇓ P P 06 22 15.3 -0.4
baz=74
YBH Yreka Blue Hor 74.86 51 *e*P P 06 22 16.8 +0.2
comp=E,3.7nm,0.8s,mb4.4
YBH Yreka Blue Hor 74.86 51 *e*P P 06 22 16.8 +0.2
YBH pmax pmax
comp=Z,4.0nm,0.8s
D08A Wollman Farm, 75.02 44⇑ P P 06 22 17.1 -0.3
baz=75
IZEF Zefreh 75.06 299 *e*P P 06 22 18.6 +0.8
KCPM Cahto Peak 75.12 53 *e*P P 06 22 18.8 +0.6
OBN Obninsk 75.28 325⇑ *e*P P 06 22 19.5 +0.8
OBN *e* pP 06 22 30.6 +1.6
OBN *e*SS SS 06 36 49.2 +4.4
OBN pmax pmax
comp=Z,14nm,0.7s,mb5.0
OBN MLR MLR
comp=Z,400nm,18.0s,MS4.8
EDM Edmonton 75.39 37 *e*P P 06 22 19.6 +0.2
NEW Newport 75.57 43⇑ P P 06 22 20.4 -0.1
baz=75
NEW Newport 75.57 43 *e*P P 06 22 20.2 -0.3
comp=Z,3.5nm,0.7s,mb4.4
NEW Newport 75.57 43 *e*P P 06 22 20.2 -0.3
NEW pmax pmax
comp=Z,4.0nm,0.7s
K05A Summer Lake 75.66 49⇑ P P 06 22 21.2 +0.1
baz=76
VSR Storozhevoye 75.78 321 *e*P P 06 22 21.5 -0.1
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR MLR MLR
comp=E,220nm,18.0s,MS4.7
VSR MLR MLR
comp=Z,460nm,18.0s,MS4.8
VSR MLR MLR
comp=N,220nm,19.0s,MS4.7
IRAZ Razeghan 75.81 303 *e*P P 06 22 22.3 +0.2
I07A Izee 75.97 47⇑ P P 06 22 22.5 -0.3
baz=76
C11A Tepee Creek (N 76.28 43⇓ P P 06 22 24.6 0.0
baz=76
FINES FINESS Array B 76.55 334 P P 06 22 24.7 -1.1
comp=N,3.9nm,0.8s,mb4.4,baz=66,slow=6.5,SNR=6.4
FINES LR LR 06 55 02.2
comp=N,77nm,19.7s,MS4.0,baz=352,slow=35
A13A Flathead Natio 76.85 41⇓ P P 06 22 27.7 0.0
baz=77
J08A Circle Bar Ran 76.96 48⇑ P P 06 22 28.7 +0.2
baz=77
KIV Kislovodsk 77.05 313⇑ *e*P P 06 22 31.3 +2.3
KIV *e* pP 06 22 39.3 0.0
KIV *e*S S 06 32 20.5 +5.1
KIV pmax pmax
comp=Z,14nm,0.6s,mb5.1
KIV MLR MLR
comp=Z,200nm,24.0s,MS4.3
WALA Waterton Lakes 77.08 41 *e*P P 06 22 29.5 +0.4
comp=Z,0.1nm,0.7s
B13A Whitefish 77.09 42⇑ P P 06 22 28.9 -0.2
baz=77
C13A Hot Springs 77.36 42⇑ P P 06 22 30.8 +0.1
baz=77
A14A Double T Ranch 77.40 41⇑ P P 06 22 30.8 0.0
baz=77
GNI Garni 77.42 309 *e*P P 06 22 33.5 +2.4
comp=Z,16nm,0.9s,mb4.9
GNI Garni 77.42 309 *e*P P 06 22 33.5 +2.3
GNI pmax pmax
comp=Z,16nm,0.9s
JTMT Jette 77.50 42 *e*P P 06 22 31.7 +0.3
D13A Huson 77.71 43⇑ P P 06 22 32.4 -0.2
baz=78
SWMT Swartz Lake 77.78 42 *e*P P 06 22 33.3 +0.3
B14A Marquette Ranc 77.79 41⇓ P P 06 22 33.1 +0.1
baz=78
A15A Johnson Ranch, 77.80 41⇓ P P 06 22 32.9 -0.2
baz=78
C14A Swan Lake 77.81 42⇑ P P 06 22 32.8 -0.3
baz=78
F12A Elk City 77.87 44⇑ P P 06 22 33.1 -0.5
baz=78
WCN Washoe City 77.95 52⇓ P P 06 22 33.8 -0.4
baz=78
CMB Columbia Colle 78.09 53 *e*P P 06 22 34.9 -0.1
comp=Z,5.0nm,0.6s,mb4.6
CMB Columbia Colle 78.09 53 *e*P P 06 22 34.9 0.0
CMB pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
G12A Big Creek, Yel 78.13 45⇑ P P 06 22 35.2 +0.2
baz=78
MSO Missoula 78.15 43⇓ P P 06 22 34.9 -0.2
baz=78
SLMT Seeley Lake 78.21 42 *e*P P 06 22 35.5 +0.1
B15A Bradely Ranch, 78.23 41⇑ P P 06 22 35.1 -0.3
baz=78
D14A Greenough 78.28 43⇑ P P 06 22 35.5 -0.3
baz=78
F13A Darby 78.42 44⇑ P P 06 22 36.0 -0.6
baz=78
C15A Salmond Ranch, 78.47 42⇑ P P 06 22 36.8 0.0
baz=78
MFID Camas Ranch 78.64 47⇓ P P 06 22 38.1 +0.3
baz=78
H12A Diamond D Ranc 78.70 45⇑ P P 06 22 38.0 -0.2
baz=78
G13A Cobalt 78.82 45⇓ P P 06 22 38.5 -0.4
baz=79
I12A Atlanta 78.90 46⇓ P P 06 22 39.2 0.0
baz=79
SUMG Summit 78.95 0 *e*P P 06 22 40.4 +1.5
comp=Z,7.1nm,0.6s,mb4.8
SUMG Summit 78.95 0 *i*P P 06 22 38.7 -0.3
comp=Z,6.5nm,0.7s,mb4.7
C16A Fuhringer Ranc 78.96 41⇑ P P 06 22 39.5 0.0
baz=79
A17A Triple J Farms 78.97 40⇓ P P 06 22 39.5 0.0
baz=79
H13A Challis 79.07 45⇑ P P 06 22 40.3 +0.1
baz=79
SOC Sochi 79.12 314 *e*P P 06 22 40.6 +0.1
SOC *e* 06 25 46.0
SOC *e*S S 06 32 35.4 -2.3
SOC *e*SS SS 06 37 42.5 -0.8
SOC pmax pmax
comp=Z,16nm,0.5s,mb5.2
SOC MLR MLR
comp=Z,287nm,21.0s,MS4.6
E15A Deer Lodge 79.13 43⇓ P P 06 22 40.4 -0.1
baz=79
B17A L&G Farms, Che 79.25 41⇓ P P 06 22 41.2 +0.1
baz=79
NVAR Mina Array Bea 79.36 52 P P 06 22 41.7 -0.2
comp=Z,2.5nm,0.7s,mb4.3,baz=296,slow=5.6,SNR=24
A18A Metzger Ranch, 79.46 40⇓ P P 06 22 42.3 +0.1
baz=79
HRY Holter Researc 79.46 42 *e*P P 06 22 42.3 0.0
comp=Z,2.8nm,0.7s,mb4.3
D16A Dana Ranch, Ca 79.47 42⇑ P P 06 22 41.7 -0.6
baz=79
HLID Hailey 79.47 46⇓ P P 06 22 42.6 +0.2
baz=79
HLID Hailey 79.47 46 *e*P P 06 22 42.7 +0.3
comp=Z,2.0nm,0.8s,mb4.1
I13A Wildhorse Cree 79.48 46⇑ P P 06 22 42.6 +0.2
baz=79
F15A Butte 79.51 43⇑ P P 06 22 42.8 +0.2
baz=79
LRM Limekiln Ridge 79.55 43 *e*P P 06 22 42.7 0.0
H14A Leadore 79.59 45⇓ P P 06 22 42.8 -0.2
baz=79
C17A Wharram Farm, 79.61 41⇓ P P 06 22 42.9 -0.2
baz=79
DLMT Dillon 79.69 44 *e*P P 06 22 43.5 0.0
comp=Z,3.7nm,0.8s,mb4.4
J13A Cove Ranch, Pi 79.70 46⇓ P P 06 22 43.4 -0.2
baz=80
G15A Dillon 79.86 44⇑ P P 06 22 43.7 -0.8
baz=80
I14A Mackay 79.89 45⇓ P P 06 22 44.1 -0.5
baz=80
D17A Six Diamond Ra 79.91 42⇓ P P 06 22 44.1 -0.6
baz=80
ANN Anapa 79.94 316 *e*P P 06 22 38.4 -6.5
ANN *e* pP 06 22 47.0 -8.3
ANN pmax pmax
comp=Z,19nm,0.8s,mb5.1
ANN MLR MLR
comp=N,264nm,22.0s,MS4.8
ANN MLR MLR
comp=E,402nm,22.0s,MS4.8
ANN MLR MLR
comp=Z,235nm,22.0s,MS4.5
EGMT Eagleton 79.99 40⇓ P P 06 22 44.6 -0.5
baz=80
VES Vestal, Richgr 80.03 55⇓ P P 06 22 44.9 -0.7
baz=80
BOZ Bozeman (W) 80.13 43⇓ P P 06 22 46.1 +0.2
baz=80
BOZ Bozeman (W) 80.13 43 *e*P P 06 22 46.3 +0.3
comp=Z,2.2nm,0.7s,mb4.2
BOZ Bozeman (W) 80.13 43 *e*P P 06 22 46.3 +0.4
BOZ pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
J14A Carey 80.15 46⇑ P P 06 22 46.8 +0.8
baz=80
PMOR Pomariorio Ree 80.15 113 *e*T 07 50 28.9
comp=Z,6.5nm,0.2s
PPT Papeete 80.23 116 *e*LR LR 06 47 46.4
comp=Z,154nm,23.0s
PPT Papeete 80.23 116 LR LR 06 49 55.9
comp=Z,160nm,21.0s,MS4.3,baz=169,slow=30
G16A Moss Hill, Enn 80.24 44⇑ P P 06 22 46.7 +0.2
baz=80
MIB Mutribah 80.24 299 *e*P P 06 22 46.3 -0.6
MIB AMb AMB 06 22 47.7
comp=Z,105nm,0.9s,mb5.8
FFC Flin Flon 80.25 32 *i*P P 06 22 51.8 +5.4
D18A Linhart Farms, 80.40 41⇓ P P 06 22 47.6 +0.2
baz=80
SCO Scoresbysund 80.42 355 *i*P P 06 22 38.7 -8.3
SCO pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
RDF Al-Radifah 80.48 298 *e*P P 06 22 47.7 -0.4
RDF AMb AMB 06 22 48.6
comp=Z,79nm,0.7s,mb5.7
ISA Isabella 80.55 55⇑ P P 06 22 48.6 +0.2
baz=80
NAY Al-Naaiem 80.57 298 *e*P P 06 22 48.1 -0.5
NAY AMb AMB 06 22 49.5
comp=Z,66nm,1.0s,mb5.5
F17A Fitzpatrick Pl 80.58 43⇑ P P 06 22 48.5 +0.2
baz=80
E18A Harlowton 80.67 42⇑ P P 06 22 48.8 +0.1
baz=80
M13A Montello 80.72 48⇑ P P 06 22 49.1 -0.1
baz=80
M13A Montello 80.72 48 *e*P P 06 22 49.5 +0.4
comp=Z,1.8nm,0.9s,mb4.0
K14A Jones Ranch, D 80.76 46⇑ P P 06 22 49.1 -0.2
baz=80
S10A Tonopah Range, 80.79 52⇑ P P 06 22 49.5 -0.1
baz=81,SNR=6.8
R10A Warm Springs 80.81 51⇑ P P 06 22 49.6 -0.1
baz=81
G17A Pierce Place, 80.83 43⇑ P P 06 22 49.8 0.0
baz=81
H16A Russell Place, 80.85 44⇓ P P 06 22 50.0 +0.2
baz=81
O12A Currie 80.88 49⇓ P P 06 22 50.2 +0.1
baz=81
N13A Wendover, West 80.95 48⇓ P P 06 22 50.0 -0.4
baz=81
Q11A Duckwater 80.98 51⇓ P P 06 22 49.8 -0.8
baz=81
L14A Malta 80.98 47⇓ P P 06 22 50.3 -0.3
baz=81
MPMC Manual Prospec 81.06 54⇑ P P 06 22 50.7 -0.4
baz=81
K15A Arbon 81.10 46⇓ P P 06 22 51.1 -0.1
baz=81
F18A Big Timber 81.14 42⇑ P P 06 22 51.2 -0.1
baz=81
I16A Newdale 81.14 45⇑ P P 06 22 51.4 0.0
baz=81
P12A McGill 81.17 50⇑ P P 06 22 51.4 -0.3
baz=81
M14A Sheep Mountain 81.18 47⇓ P P 06 22 51.4 -0.3
baz=81
R11A Troy Canyon, C 81.27 51⇓ P P 06 22 52.1 -0.1
baz=81,SNR=9.1
EDW2 Edwards Air Fo 81.27 55⇓ P P 06 22 51.8 -0.4
baz=81
J16A Bone 81.37 45⇑ P P 06 22 53.3 +0.7
baz=81
E19A Rath Farm, Rou 81.38 41⇓ P P 06 22 52.8 +0.2
baz=81
AKASG Malin Array Be 81.39 324 P P 06 22 51.6 -0.9
comp=Z,5.2nm,0.8s,mb4.5,baz=48,slow=5.6,SNR=14
AKASG LR LR 07 01 31.5
comp=Z,348nm,18.6s,MS4.7,baz=60,slow=38
AKASG Malin Array Be 81.39 324 P P 06 22 51.6 -1.0
AKASG pmax pmax
comp=Z,5.0nm,0.8s
AKASG MLR MLR
comp=Z,348nm,18.6s
AKBB Malin Array Si 81.39 324 *e*P P 06 22 51.6 -1.0
KIEV Kiev 81.41 324 *e*P P 06 22 51.8 -0.9
comp=Z,5.9nm,0.8s,mb4.6
KIEV Kiev 81.41 324 *e*P P 06 22 51.8 -0.8
KIEV pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
D20A Manuel Ranch, 81.41 41⇑ P P 06 22 53.1 +0.3
baz=81
H17A Grant Village 81.42 44⇓ P P 06 22 54.1 +1.3
baz=81
IMW Indian Meadow 81.46 44 *e*P P 06 22 54.5 +1.4
comp=Z,3.8nm,0.9s,mb4.3
S11A Rachel 81.51 52⇑ P P 06 22 53.5 0.0
baz=81
FLWY Flagg Ranch 81.51 44 *e*P P 06 22 54.7 +1.4
comp=Z,3.4nm,0.7s,mb4.4
L15A Malad City 81.54 47⇑ P P 06 22 53.8 +0.3
baz=81
F19A Roth Farm, Mol 81.62 42⇑ P P 06 22 53.9 0.0
baz=81
U10A Ash Meadows, A 81.71 53⇑ P P 06 22 54.5 0.0
baz=82
P13A Bates Ranch, G 81.78 49⇓ P P 06 22 54.8 0.0
baz=82,SNR=5.4
M15A Larsen Ranch, 81.78 47⇑ P P 06 22 54.5 -0.3
baz=82
RLMT Red Lodge 81.82 43⇑ P P 06 22 55.1 +0.2
baz=82
RLMT Red Lodge 81.82 43 *e*P P 06 22 55.7 +0.7
comp=Z,4.2nm,0.9s,mb4.4
SIM Simferopol' 81.87 317 *e*P P 06 22 55.9 +0.7
SIM 06 26 03.0
SIM S S 06 32 59.0 -7.4
SIM *e*PS 06 34 15.0
SIM pmax pmax
comp=Z,13nm,0.5s,mb5.1
SIM MLR MLR

comp=Z,194nm,19.0s,MS4.5
GSC Goldstone 81.92 54 ⇑P P 06 22 55.2 -0.4
baz=82
R12A Pony Springs, 81.95 51 ⇑P P 06 22 55.6 -0.2
baz=82
L16A Fish Haven 82.14 46 ⇓P P 06 22 56.9 +0.2
baz=82
S12A Delamar Landin 82.14 51 ⇓P P 06 22 56.5 -0.3
baz=82
NOA NORSAR Array B 82.15 338 P P 06 22 55.7 -0.7
comp=Z,4.6nm,0.8s,mb4.5,baz=42,slow=5.2,SNR=18
NOA LR LR 07 01 14.2
comp=Z,87nm,18.5s,MS4.2,baz=280,slow=37
NOA NORSAR Array B 82.15 338 P P 06 22 55.7 -0.6
NOA pmax pmax
comp=Z,5.0nm,0.8s
NOA MLR MLR
comp=Z,87nm,18.5s
DUG Dugway 82.20 48 ⇑P P 06 22 56.9 -0.1
baz=82,SNR=5.1
DUG Dugway 82.20 48 eP P 06 22 56.9 -0.1
comp=Z,7.6nm,1.1s,mb4.5
DUG Dugway 82.20 48 eP P 06 22 56.9 -0.1
DUG pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
HWUT Hardware Ranch 82.27 47 eP P 06 22 57.7 +0.3
comp=Z,4.9nm,0.9s,mb4.4
P14A Drum Mountains 82.34 49 ⇓P P 06 22 57.7 0.0
baz=82,SNR=9.6
BBRC Big Bear Solar 82.34 55 ⇓P P 06 22 58.1 +0.1
baz=82
J18A Kendall Valley 82.39 45 ⇑P P 06 22 58.1 +0.2
baz=82
L17A Cokeville 82.45 46 ⇓P P 06 22 58.4 +0.1
baz=82
R13A O'Grain Ranch, 82.45 51 ⇑P P 06 22 58.4 0.0
baz=82
TUQ Turquoise Moun 82.48 54 ⇑P P 06 22 58.2 -0.4
baz=82,SNR=9.6
Q14A Sevier Lake (B 82.51 50 ⇑P P 06 22 58.7 0.0
baz=82,SNR=9.6
MALT Malatya 82.60 310 eP P 06 23 00.9 +1.8
comp=Z,13nm,1.1s,mb4.9
MALT Malatya 82.60 310 eP P 06 23 01.0 +1.8
MALT pmax pmax
comp=Z,13nm,1.1s,mb4.9
V11A Goodsprings 82.63 53 ⇓P P 06 22 59.1 -0.3
baz=82
K18A Toltan Ranch, 82.69 45 ⇑P P 06 22 59.7 +0.1
baz=82
LAO LASA Array 82.73 40 ⇓P P 06 22 60.0 +0.3
baz=82
LAO LASA Array 82.73 40 eP P 06 22 59.9 +0.3
comp=Z,10nm,1.1s,mb4.8
S13A Holt Ranch, En 82.83 51 ⇓P P 06 23 00.4 0.0
baz=83,SNR=5.2
P15A Leamington 82.87 49 ⇑P P 06 23 00.1 -0.4
baz=83
JLU Jordanelle 82.87 47 eP P 06 23 01.2 +0.7
M17A Scullys Gap (B 82.92 46 ⇓P P 06 23 00.2 -0.6
baz=83
BW06 Boulder Array 82.92 45 ⇑P P 06 23 00.3 -0.4
baz=83
BW06 Boulder Array 82.92 45 eP P 06 22 59.3 -1.4
comp=Z,1.2nm,0.6s,mb4.1
GMRC Granite Mounta 82.99 54 ⇑P P 06 23 00.1 -1.1
baz=83
O16A Springville 83.05 48 ⇓P P 06 23 01.9 +0.4
baz=83
T13A Saint George 83.09 52 ⇓P P 06 23 01.6 -0.1
baz=83
V12A Nelson 83.09 53 ⇓P P 06 23 01.9 +0.1
baz=83
N17A Moffit Pass 83.09 47 ⇓P P 06 23 01.6 0.0
baz=83
Q15A Fillmore 83.10 49 ⇓P P 06 23 01.5 -0.3
baz=83
I20A Worland 83.14 43 ⇓P P 06 23 02.4 +0.6
baz=83
CCUT Cedar City 83.19 51 eP P 06 23 02.2 -0.1
comp=Z,2.9nm,0.8s,mb4.4
M18A Lyman 83.32 46 ⇑P P 06 23 02.8 0.0
baz=83
K19A Absolon Red Bu 83.33 45 ⇓P P 06 23 02.7 -0.1
baz=83
U13A Pakoon Wash 83.36 52 ⇑P P 06 23 03.3 +0.1
baz=83
MONP Monument Peak 83.39 56 ⇑P P 06 23 03.5 +0.1
baz=83
L19A Farson 83.40 45 ⇑P P 06 23 03.5 +0.3
baz=83
H21A Big Horn, Sher 83.42 42 ⇑P P 06 23 03.5 +0.3
baz=83
O17A Robinson Place 83.55 48 ⇑P P 06 23 04.6 +0.5
baz=83
R15A Junction 83.58 50 ⇓P P 06 23 04.2 0.0
baz=83
V13A Grand Canyon W 83.63 53 ⇓P P 06 23 04.5 0.0
baz=83
I21A Big Trails, Te 83.72 43 ⇓P P 06 23 05.3 +0.4
baz=84
K20A Yellowstone Ra 83.73 44 ⇓P P 06 23 04.6 -0.3
baz=84
U14A Mt Trumbull 83.90 52 ⇑P P 06 23 05.6 -0.3
baz=84
R16A Teasdale 84.07 49 ⇑P P 06 23 07.1 +0.4
baz=84,SNR=7.0
W13A Hualapai Mount 84.09 53 ⇑P P 06 23 06.6 -0.3
baz=84
T15A Red Dirt Ranch 84.13 51 ⇑P P 06 23 06.9 -0.2
baz=84
N19A John Jarvie Ra 84.17 46 ⇓P P 06 23 06.9 -0.3
baz=84
P18A Preston Nutter 84.17 48 ⇓P P 06 23 06.8 -0.4
baz=84
SRU San Rafael 84.27 48 ⇓P P 06 23 07.5 -0.3
baz=84,SNR=6.1
SRU San Rafael 84.27 48 eP P 06 23 07.6 -0.2
comp=Z,4.8nm,0.9s,mb4.6
SRU San Rafael 84.27 48 eP P 06 23 07.6 -0.1
SRU pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
S16A Weppner Ranch, 84.30 50 ⇓P P 06 23 07.7 -0.2
baz=84
V14A Boquillas Ranc 84.36 52 ⇑P P 06 23 07.8 -0.4
baz=84
M20A Sweetwater, Wa 84.47 45 ⇑P P 06 23 08.4 -0.3
baz=84
R17A Hanksville Air 84.52 49 ⇓P P 06 23 08.7 -0.3
baz=84,SNR=5.4
Q18A Rafter H Ranch 84.53 48 ⇑P P 06 23 08.6 -0.5
baz=84
W14A Seligman 84.59 53 ⇓P P 06 23 09.4 0.0
baz=84
L21A Rawlins 84.71 45 ⇑P P 06 23 09.9 0.0
baz=84,SNR=6.4
T16A Glen Canyon Da 84.75 51 ⇑P P 06 23 09.6 -0.6
baz=84
N20A Spence Gulch, 84.78 46 ⇓P P 06 23 10.6 +0.3
baz=85,SNR=7.5
K22A Casper 84.84 44 ⇑P P 06 23 10.7 +0.1
baz=85
S17A Black Ridge (B 84.88 50 ⇑P P 06 23 10.0 -0.9
baz=85
V15A Kaibab Nationa 84.91 52 ⇓P P 06 23 11.1 +0.1
baz=85
M21A Separation Pea 84.92 45 ⇑P P 06 23 11.0 0.0
baz=85,SNR=5.9
RWWY Rawlins 84.97 45 eP P 06 23 11.6 +0.4
comp=Z,5.8nm,0.8s,mb4.8
P19A Cripple Cowboy 84.99 47 ⇓P P 06 23 11.4 0.0
baz=85,SNR=6.8
BR131 Keskin Array S 85.01 313 eP P 06 23 12.0 +0.5
comp=Z,17nm,0.8s,mb5.2
BRTR Keskin Array B 85.01 313 P P 06 23 11.7 +0.2
comp=Z,13nm,0.8s,mb5.1,baz=99,slow=4.4,SNR=67
BRTR LR LR 07 03 50.3
comp=Z,72nm,21.6s,MS4.0,baz=215,slow=38
BRTR Keskin Array B 85.01 313 P P 06 23 11.7 +0.2
BRTR pmax pmax
comp=Z,13nm,0.8s
BRTR MLR MLR
comp=Z,72nm,21.6s
R18A Canyonlands Na 85.07 49 ⇓P P 06 23 11.3 -0.5
baz=85
W15A Williams 85.18 52 ⇑P P 06 23 12.4 0.0
baz=85
O20A White River Ci 85.19 47 ⇓P P 06 23 12.4 +0.1
baz=85
T17A Navajo Res., N 85.22 50 ⇑P P 06 23 12.6 +0.1
baz=85
Z13A Yuma Proving G 85.23 55 ⇑P P 06 23 12.4 -0.3
baz=85
N21A Black Mountain 85.29 46 ⇑P P 06 23 12.9 0.0
baz=85,SNR=5.4
Y14A Wickenburg 85.31 54 ⇑P P 06 23 12.6 -0.5
baz=85
BUR08 Bucovina Ar. S 85.34 323 eP P 06 23 14.0 +1.0
KWP Kalwaria Pacla 85.36 325 eP P 06 23 12.9 -0.1
113A Mohawk Valley, 85.37 55 ⇑P P 06 23 13.1 -0.3
baz=85
S18A Hurst Farm, Bl 85.39 49 ⇓P P 06 23 12.9 -0.5
baz=85
P20A De Beque 85.44 47 ⇓P P 06 23 13.4 -0.2
baz=85
U16A Tuba City 85.45 51 ⇑P P 06 23 13.6 -0.2
baz=85
R19A Curley Farm, L 85.54 49 ⇓P P 06 23 13.8 -0.3
baz=85
X15A Humboldt 85.56 53 ⇑P P 06 23 14.4 +0.1
baz=85
WUAZ Wupatki 85.62 52 ⇓P P 06 23 14.5 0.0
baz=85
WUAZ Wupatki 85.62 52 eP P 06 23 14.7 +0.1
comp=Z,3.9nm,1.0s,mb4.6
O21A Panaca 85.63 46 ⇓P P 06 23 14.4 -0.2
baz=85
PV10 Paradox Valley 85.64 48 eP P 06 23 14.7 +0.1
comp=Z,198nm,0.8s
L23A Garrett 85.65 44 ⇑P P 06 23 14.3 -0.3
baz=85,SNR=5.4
PV04 Paradox Valley 85.72 48 eP P 06 23 15.4 +0.4
T18A Mexican Hat 85.77 50 ⇑P P 06 23 14.5 -0.7
baz=86
Y15A Casa Rosa Ranc 85.78 54 ⇓P P 06 23 14.9 -0.5
baz=86
Q20A Ridgley Place, 85.81 48 ⇑P P 06 23 15.4 -0.1
baz=86,SNR=7.2
S19A Harvey Farm, M 85.92 49 ⇑P P 06 23 16.1 +0.1
baz=86
N22A Wattenberg Ran 85.94 45 ⇑P P 06 23 15.9 -0.2
baz=86
ULM Lac du Bonnet 85.97 33 LR LR 06 57 41.7
comp=Z,48nm,21.6s,MS3.9,baz=21,slow=33
114A Black Gap (USA 86.02 55 ⇑P P 06 23 16.7 +0.1
baz=86
PV01 Paradox Valley 86.08 48 eP P 06 23 16.4 -0.4
comp=Z,255nm,0.7s
X16A Lo Mia Camp, P 86.16 53 ⇑P P 06 23 17.2 0.0
baz=86
U18A Rough Rock, Ch 86.16 50 ⇑P P 06 23 17.1 -0.2
baz=86
R20A Redvale 86.18 48 ⇑P P 06 23 17.2 -0.1
baz=86
N23A Red Feather La 86.20 45 ⇓P P 06 23 17.8 +0.4
baz=86,SNR=6.1
O22A Kremmling 86.24 46 ⇑P P 06 23 17.5 -0.1
baz=86
Y16A Circle Bar Ran 86.42 53 ⇑P P 06 23 18.7 +0.1
baz=86
P22A Eagle 86.43 46 ⇑P P 06 23 19.0 +0.5
baz=86,SNR=7.8
214A Organ Pipe Nat 86.48 55 ⇑P P 06 23 18.6 -0.3
baz=86
T19A Beclabito 86.50 50 ⇓P P 06 23 18.7 -0.2
baz=86
SMCO Snowmass 86.53 47 eP P 06 23 19.4 +0.4
comp=Z,8.2nm,1.3s,mb4.8
M24A Cheyenne 86.56 44 ⇑P P 06 23 19.3 +0.2
baz=86
O23A Lake Granby, G 86.61 45 ⇑P P 06 23 19.3 -0.1
baz=86
R21A Cimarron 86.62 48 ⇑P P 06 23 19.5 +0.1
baz=86
MVCO Mesa Verde 86.64 49 ⇑P P 06 23 19.3 -0.3
baz=86
X17A Forest Lakes 86.64 53 ⇑P P 06 23 19.9 +0.2
baz=86
U19A Dine' College, 86.68 50 ⇑P P 06 23 19.7 -0.1
baz=86
Q22A Crested Butte, 86.75 47 ⇓P P 06 23 20.7 +0.6
baz=86,SNR=8.9
116A Eloy 86.96 54 ⇓P P 06 23 20.9 -0.3
baz=87
ISCO Idaho Springs 87.04 46 ⇑P P 06 23 21.8 +0.4
baz=87
ISCO Idaho Springs 87.04 46 eP P 06 23 21.6 +0.1
comp=Z,1.9nm,0.7s,mb4.4
ISCO Idaho Springs 87.04 46 eP P 06 23 21.6 +0.1
ISCO pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
R22A Saguache, Gunn 87.21 47 ⇓P P 06 23 22.9 +0.5
baz=87
S22A 4UR Ranch, Cre 87.44 48 ⇓P P 06 23 24.2 +0.8
baz=87
Y18A Canyon Day Jun 87.48 53 ⇓P P 06 23 23.8 +0.1
baz=87
U21A Nageezi 87.64 49 ⇑P P 06 23 24.7 +0.2
baz=87
117A Oracle 87.64 54 ⇑P P 06 23 24.6 +0.1
baz=87
X19A St. Johns 87.64 52 ⇑P P 06 23 24.9 +0.3
baz=87
DPC Dobruska-Polom 87.92 329 eP P 06 23 27.6 +2.1
217A Green Valley 88.02 55 ⇑P P 06 23 25.9 -0.5
baz=88
R24A Sanders Place, 88.27 47 ⇓P P 06 23 27.6 +0.2
baz=88
CLL Collm 88.70 331 eP P 06 23 29.0 -0.1
comp=Z,3.0nm,0.8s,mb4.7
CLL Collm 88.70 331 eP P 06 23 29.0 -0.1
CLL pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
Z20A Nine Sixteen R 88.86 53 ⇑P P 06 23 30.3 0.0
baz=89
KHC Kasperske Hory 90.04 329 eP P 06 23 39.8 +4.3
KHC Kasperske Hory 90.04 329 eP P 06 23 39.8 +4.3
SOKA Soboth 91.14 327 i/PcP P 06 23 39.8 -0.8
comp=Z,3.9nm,1.2s,mb4.6
124A Stringfield Ra 91.26 51 ⇓P P 06 23 42.1 +0.6
baz=91
W27A Bowe Ranch, En 91.47 48 ⇑P P 06 23 42.6 +0.1
baz=91
224A Cornudas Mount 91.57 52 ⇓P P 06 23 43.1 +0.1
baz=91
Y26A Elida 91.65 50 ⇑P P 06 23 43.0 -0.3
baz=91
125A Gardner Draw, 91.83 51 ⇓P P 06 23 44.0 -0.1
baz=92
MNTX Cornudas Mount 91.89 52 ⇑P P 06 23 44.3 -0.1
baz=92
325A Bean Ranch, Si 92.37 52 ⇑P P 06 23 46.6 0.0
baz=92
AMTX Amarillo 92.48 48 ⇑P P 06 23 47.2 +0.1
baz=92
425A Indio Mountain 92.70 53 ⇑P P 06 23 48.2 0.0
baz=92
326A Caldwell Ranch 93.08 52 ⇑P P 06 23 49.9 0.0
baz=93
426A McDonald Obser 93.43 52 ⇓P P 06 23 51.8 +0.2
baz=93
526A Mary Lane Ranc 93.75 53 ⇓P P 06 23 52.9 -0.2
baz=94
427A Hayter Ranch, 93.76 52 ⇓P P 06 23 52.8 -0.3
baz=94
328A Wristen Ranch, 93.85 51 ⇓P P 06 23 53.4 -0.1
baz=94
626A Big Bend Ranch 94.02 53 ⇑P P 06 23 54.1 -0.2
baz=94
527A Woodward Ranch 94.03 52 ⇓P P 06 23 54.4 +0.1
baz=94
428A Kincaid Ranch, 94.33 52 ⇓P P 06 23 55.9 +0.2
baz=94
WMOK Wichita Mounta 94.44 46 eP P 06 23 55.4 -0.7
comp=Z,3.5nm,1.0s,mb4.7
WMOK Wichita Mounta 94.44 46 eP P 06 23 55.4 -0.7
WMOK pmax pmax
comp=Z,3.0nm,1.0s,mb4.7
TXAR Lajitas Array 94.47 53 P P 06 23 56.5 +0.1
comp=Z,1.3nm,0.7s,mb4.5,baz=300,slow=2.7,SNR=11
TXAR LR LR 07 04 08.6
comp=Z,48nm,21.1s,MS3.9,baz=215,slow=34
528A Cox Ranch, San 94.59 52 ⇑P P 06 23 57.1 +0.2
baz=94
627A Terlingua Ranc 94.60 53 ⇑P P 06 23 57.0 +0.1
baz=94
628A Black Gap, Mar 94.93 53 ⇓P P 06 23 58.4 -0.1
baz=95
CASY Casey 97.81 192 eP P 06 24 10.4 0.0
comp=Z,17nm,1.0s,mb5.5
TORD Torodi Ar. Bea 123.62 312 PKP PKPdf 06 29 33.2 -0.9
TORD PP PP 06 31 02.4 -13
TORD Torodi Ar. Bea 123.62 312 PKP PKPdf 06 29 33.2 -0.9
comp=Z,1.5nm,0.8s,baz=31,slow=1.2,SNR=9.0
TORD PP PP 06 31 02.4 -13
comp=Z,0.8nm,0.9s,baz=36,slow=5.9,SNR=3.5
LPAZ La Paz 149.30 73 ePKPbc PKPbc 06 30 25.7 +0.5
LPAZ La Paz 149.30 73 PKPbc PKPbc 06 30 25.9 +0.7
comp=Z,4.8nm,0.8s,baz=2.0,slow=3.3,SNR=17

NEIC ***19*** *06:31:52.9, 19.13N×68.23W, h133km, MD3.5(RSPR), After RSPR.*
RSPR 19 06:31:52.9, 19.13N×68.23W, h133km±3km, MD3.5/4, 3C-1D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMN1	**Samana, DR**	**0.99**	**273**	⇑*eP*	**Pn**	06 32 15.4	-0.6
SMN1				*eS*	**Sn**	06 32 33.7	+0.2
CRPR	**Cabo Rojo, PR**	**1.54**	**136**	⇑*eP*	**Pn**	06 32 21.6	-0.2
CRPR				*eS*	**Sn**	06 32 43.7	-0.1
SJG	**San Juan**	**2.22**	**117**	⇓*eP*	**Pn**	06 32 29.9	+0.2
SJG				*eS*	**Sn**	06 32 58.8	+0.7
CBYP	**Canovanas**	**2.41**	**111**	⇑*eP*	**Pn**	06 32 32.5	+0.4
CBYP				*eS*	**Sn**	06 33 02.2	0.0

ISCJB ***19*** *07:05:26.6±1.2, 28.4N±0.1×51.22E±0.07, h10km, Error ellipse: s-maj=17.2km s-min=4.9km az=155.5*
TEH ***19*** *07:05:27.0, 28.09N×51.30E, h25km*
CSEM ***19*** *07:05:27.0, 28.09N×51.30E, h25km, ML3.6, After TEH*
ISC 19 07:05:27.6±3.0, 28.2N±0.2×51.28E±0.08, h18km±16km, n20, σ0s33/24, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISRV	**Sarvestan**	**1.98**	**54**	*ePn*	**Pn**	**07 06 00.1**	**0.0**
ISRV				*eSg*	**Sg**	**07 06 31.9**	**+0.7**
ISRV	**Sarvestan**	**1.98**	**54**	*ePn*	**Pn**	**07 06 00.1**	**0.0**
ISRV				*eSg*	**Sg**	**07 06 31.9**	**+0.7**
IPAR	**Pars**	**2.23**	**44**	*ePn*	**Pn**	**07 06 03.7**	**+0.1**
IPAR				*eSg*	**Sg**	**07 06 38.8**	**-0.5**
IPAR				*e*		07 06 48.6	
	comp=Z,2μm,0.4s						
IPAR	**Pars**	**2.23**	**44**	*ePn*	**Pn**	**07 06 03.7**	**+0.1**
IPAR				*eSg*	**Sg**	**07 06 38.8**	**-0.5**
QRN	**Al-Qurain**	**3.00**	**281**	*eP*	**Pn**	**07 06 14.0**	**-0.2**
QRN				AML	AML	07 06 59.5	
	comp=Z,46nm,0.4s						
RDF	**Al-Radifah**	**3.35**	**283**	*eP*	**Pn**	**07 06 18.8**	**-0.2**
NAY	**Al-Naaiem**	**3.68**	**287**	*eP*	**Pn**	**07 06 23.4**	**-0.1**
NAY				AML	AML	07 07 16.4	
	comp=Z,33nm,0.5s						
MIB	**Mutribah**	**3.79**	**295**	*eP*	**Pn**	**07 06 25.3**	**+0.4**
MIB				AML	AML	07 07 26.2	
	comp=Z,56nm,0.6s						
ISAD	**Sadrabad**	**4.22**	**29**	*eSg*	**Sg**	**07 07 42.9**	**-0.1**
ISAD	**Sadrabad**	**4.22**	**29**	*eSg*	**Sg**	**07 07 42.9**	**-0.1**
IMEH	**Mehriz**	**4.28**	**42**	*ePn*	**Pn**	**07 06 31.6**	**-0.1**
IMEH				*e*		07 06 33.1	
	comp=Z,871nm,0.2s						
IMEH	**Mehriz**	**4.28**	**42**	*ePn*	**Pn**	**07 06 31.6**	**-0.1**
IZEF	**Zefreh**	**4.73**	**11**	*ePn*	**Pn**	**07 06 38.1**	**+0.1**
IZEF				*e*		07 07 14.9	
	comp=Z,155nm,0.3s						
IZEF	**Zefreh**	**4.73**	**11**	*ePn*	**Pn**	**07 06 38.1**	**+0.1**
ICHK	**Chekchek**	**4.83**	**33**	*ePn*	**Pn**	**07 06 39.1**	**-0.2**
ICHK				*e*		07 07 38.1	
	comp=Z,204nm,0.2s						
ICHK	**Chekchek**	**4.83**	**33**	*ePn*	**Pn**	**07 06 39.1**	**-0.2**
IBAF	**Bafgh**	**5.00**	**47**	*ePn*	**Pn**	**07 06 41.3**	**-0.4**
IBAF				*e*		07 06 41.8	
	comp=Z,522nm,0.1s						
IBAF	**Bafgh**	**5.00**	**47**	*ePn*	**Pn**	**07 06 41.3**	**-0.4**
IKLH	**Kolahrood**	**5.07**	**3**	*ePn*	**Pn**	**07 06 43.2**	**+0.5**
IKLH				*e*		07 07 41.8	
	comp=N,425nm,0.3s						
IKLH	**Kolahrood**	**5.07**	**3**	*ePn*	**Pn**	**07 06 43.2**	**+0.5**

IDC 19 07:17:49.6±1.6, 2.56S×141.29E, h0km, mb3.3/3, mb1 3.7/4, mb1mx3.5/14, mbtmp3.4/4, ML3.8/1, Error ellipse: s-maj=75.8km s-min=26.7km az=103.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.57**	**201**	P	Pn	07 22 07.1	-1.1
	0.3nm,0.3s,baz=17,slow=12,SNR=3.7						
ASAR	**Alice Springs**	**22.17**	**198**	P	P	07 22 48.2	+0.9
	0.6nm,0.7s,baz=28,slow=10,SNR=5.6						
MKAR	**Makanchi Array**	**71.26**	**322**	P	P	07 29 11.6	+0.9
	0.3nm,0.7s,baz=111,slow=5.7,SNR=3.5						
ILAR	**Eielson Array**	**84.63**	**24**	P	P	07 30 24.1	-0.7
	0.3nm,0.8s,baz=246,slow=6.8,SNR=3.2						

CSEM ***19*** *07:46:30.2±0.7, 38.38N×26.78E, h2km, MD2.6, Error ellipse: s-maj=13.2km s-min=5.4km az=103.0*
DDA ***19*** *07:46:31.3, 38.35N×26.89E, h7km±4km, Md2.6*
ISC 19 07:46:30.6±2.5, 38.36N±0.05×26.8E±0.2, h3km±16km, n11, σ0s55/19, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.19**	**83**	PG	**Pg**	**07 46 34.5**	**+0.2**
BLCB				SG	**Sg**	**07 46 36.8**	**-0.1**
BLCB	**Balcova**	**0.19**	**83**	*i* Pg	**Pg**	**07 46 34.5**	**+0.1**
BLCB				*i* Sg	**Sg**	**07 46 36.8**	**-0.1**
IZM	**Izmir**	**0.37**	**84**	*e*PG	**Pg**	**07 46 37.8**	**+0.1**
GCAM	**G?zelcaml?**	**0.75**	**152**	*i* P	**Pg**	**07 46 45.4**	**+0.5**
GCAM				*i* S	**Sg**	**07 46 55.1**	**+0.5**
GCAM	**G?zelcaml?**	**0.75**	**152**	*i* P	**Pg**	**07 46 45.4**	**+0.5**
GCAM				*i* S	**Sg**	**07 46 55.1**	**+0.5**
AKHS	**Akhisar**	**0.95**	**57**	*i* P	**Pg**	**07 46 47.7**	**-1.1**
AKHS				*i* S	**Sg**	**07 47 02.0**	**+0.9**
AKHS	**Akhisar**	**0.95**	**57**	*i* P	**Pg**	**07 46 47.7**	**-1.1**
AKHS				*i* S	**Sg**	**07 47 02.0**	**+0.9**
AYDN	**Tasoluk**	**1.10**	**129**	*i* P	**Pg**	**07 46 51.4**	**-0.4**
AYDN				*i* S	**Sg**	**07 47 05.5**	**-0.6**
AYDN	**Tasoluk**	**1.10**	**129**	*i* P	**Pg**	**07 46 51.4**	**-0.4**
AYDN				*i* S	**Sg**	**07 47 05.5**	**-0.6**
KULA	**Kula-Manisa**	**1.47**	**84**	*e*PN	**Pn**	**07 46 58.0**	**0.0**
KULA	**Kula-Manisa**	**1.47**	**84**	*e*Pn	**Pn**	**07 46 58.0**	**0.0**

ATH ***19*** *07:52:50.2, 38.84N×20.88E, h9km±5km, MD3.3/8*
NEIC ***19*** *07:52:50.2, 38.84N×20.88E, h9km, MD3.3(ATH), After ATH.*
ISCJB ***19*** *07:52:51.1±0.5, 38.82N±0.03×20.97E±0.03, h10km±8km, Error ellipse: s-maj=4.6km s-min=3.8km az=18.9*
CSEM ***19*** *07:52:51.0±0.2, 38.79N×20.95E, h12km, ML2.2/4, Error ellipse: s-maj=4.1km s-min=3.8km az=177.0*
THE ***19*** *07:52:51.7, 38.81N×20.99E, h11km±3km, ML2.2/4, Error ellipse: s-maj=4.1km s-min=0.9km az=226.0*
ISC 19 07:52:51.7±0.5, 38.82N±0.03×20.96E±0.03, h15km±6km, n36, σ1s07/65, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKD2	**Lefkada island**	**0.24**	**264**	P	**Pg**	**07 52 57.0**	**+0.1**
LKD2				S	**Sg**	**07 53 01.8**	**+1.3**
LKD2	**Lefkada island**	**0.24**	**264**	P	**Pg**	**07 52 57.0**	**+0.1**
LKD2				S	**Sg**	**07 53 01.8**	**+1.3**
EVR	**Evrytania**	**0.67**	**81**	*e*Pb	**Pg**	**07 53 05.2**	**+0.4**
EVR				*e*Sb	**Sg**	**07 53 14.2**	**+0.5**
EVR	**Evrytania**	**0.67**	**81**	*e*PB	**Pg**	**07 53 05.2**	**+0.4**
EVR				*e*SB	**Sg**	**07 53 14.2**	**+0.5**
EVR	**Evrytania**	**0.67**	**81**	*e*Pb	**Pg**	**07 53 05.2**	**+0.4**
EVR				*e*Sb	**Sg**	**07 53 14.2**	**+0.5**
VLS	**Valsamata**	**0.70**	**205**	*e*Pb	**Pg**	**07 53 03.7**	**-1.6**
VLS				*e*Sb	**Sg**	**07 53 14.3**	**-0.3**
VLS	**Valsamata**	**0.70**	**205**	*e*PB	**Pg**	**07 53 03.7**	**-1.6**
VLS				*e*SB	**Sg**	**07 53 14.3**	**-0.3**
VLS	**Valsamata**	**0.70**	**205**	P	**Pg**	**07 53 04.0**	**-1.3**
VLS				S	**Sg**	**07 53 15.3**	**+0.7**
VLS	**Valsamata**	**0.70**	**205**	*e*Pb	**Pg**	**07 53 03.7**	**-1.6**

VLS	**Valsamata**	**0.70**	**205**	P	**Pg**	**07 53 04.0**	**-1.3**
VLS				*e*Sb	**Sg**	**07 53 14.3**	**-0.3**
VLS				S	**Sg**	**07 53 15.3**	**+0.7**
EFP	**Efpalio**	**0.84**	**117**	*e*PG	**Pg**	**07 53 06.8**	**-1.1**
EFP				*e*SB	**Sg**	**07 53 20.2**	**+1.2**
EFP	**Efpalio**	**0.84**	**117**	*e*Pg	**Pg**	**07 53 06.8**	**-1.1**
EFP				*e*Sb	**Sg**	**07 53 20.3**	**+1.3**
RLS	**Riolos of Patr**	**0.85**	**152**	*e*Pg	**Pg**	**07 53 06.9**	**-1.4**
RLS				*e*Sb	**Sg**	**07 53 19.3**	**-0.2**
RLS	**Riolos of Patr**	**0.85**	**152**	*e*PG	**Pg**	**07 53 06.9**	**-1.4**
RLS				*e*SB	**Sg**	**07 53 19.3**	**-0.2**
RLS	**Riolos of Patr**	**0.85**	**152**	*e*Pg	**Pg**	**07 53 06.9**	**-1.4**
RLS				*e*Sb	**Sg**	**07 53 19.3**	**-0.2**
IGT	**Igoumenitsa**	**0.87**	**326**	P	**Pg**	**07 53 08.5**	**0.0**
IGT				S	**Sg**	**07 53 21.2**	**+1.3**
IGT	**Igoumenitsa**	**0.87**	**326**	P	**Pg**	**07 53 08.5**	**0.0**
IGT				S	**Sg**	**07 53 21.2**	**+1.3**
TRIZ	**Trizonia**	**0.98**	**117**	P	**Pg**	**07 53 09.4**	**-1.3**
TRIZ				S	**Sg**	**07 53 24.7**	**+1.2**
TRIZ	**Trizonia**	**0.98**	**117**	P	**Pg**	**07 53 09.4**	**-1.3**
TRIZ				S	**Sg**	**07 53 24.7**	**+1.2**
LAKA	**Lakka**	**0.98**	**125**	P	**Pg**	**07 53 09.3**	**-1.4**
LAKA				S	**Sg**	**07 53 24.8**	**+1.2**
LAKA	**Lakka**	**0.98**	**125**	P	**Pg**	**07 53 09.3**	**-1.4**
LAKA				S	**Sg**	**07 53 24.8**	**+1.2**
KALE	**Kalithea**	**1.02**	**114**	P	**Pg**	**07 53 10.1**	**-1.3**
KALE				S	**Sg**	**07 53 25.9**	**+1.2**
KALE	**Kalithea**	**1.02**	**114**	P	**Pg**	**07 53 10.1**	**-1.3**
KALE				S	**Sg**	**07 53 25.9**	**+1.2**
AGG	**Agios Georgios**	**1.09**	**79**	P	**Pg**	**07 53 12.0**	**-0.7**
AGG				S	**Sg**	**07 53 26.3**	**-0.7**
AGG	**Agios Georgios**	**1.09**	**79**	P	**Pg**	**07 53 12.0**	**-0.7**
AGG				S	**Sg**	**07 53 26.3**	**-0.7**
THL	**Klokotos Trika**	**1.11**	**47**	*e*PG	**Pg**	**07 53 11.5**	**-1.6**
THL				*e*SB	**Sg**	**07 53 27.7**	**0.0**
THL	**Klokotos Trika**	**1.11**	**47**	*e*Pg	**Pg**	**07 53 11.5**	**-1.6**
THL				*e*Sb	**Sg**	**07 53 27.7**	**0.0**
DSF	**Desfina**	**1.29**	**108**	P	**Pn**	**07 53 14.9**	**-0.2**
DSF	**Desfina**	**1.29**	**108**	P	**Pn**	**07 53 14.9**	**-0.2**
GUR	**Goura**	**1.40**	**128**	*e*PG	**Pn**	**07 53 17.4**	**+0.8**
GUR				*e*SB	**Sg**	**07 53 38.3**	**+1.5**
GUR	**Goura**	**1.40**	**128**	*e*Pg	**Pn**	**07 53 17.4**	**+0.8**
GUR				*e*Sb	**Sg**	**07 53 38.3**	**+1.5**
ITM	**Ithomi**	**1.80**	**155**	*e*Pg	**Pg**	**07 53 25.2**	**-1.1**
ITM	**Ithomi**	**1.80**	**155**	*e*PG	**Pg**	**07 53 25.2**	**-1.1**
ITM	**Ithomi**	**1.80**	**155**	*e*Pg	**Pg**	**07 53 25.2**	**-1.1**
DID	**Didima**	**2.22**	**125**	*e*PB	**Pn**	**07 53 29.5**	**+1.6**
DID	**Didima**	**2.22**	**125**	*e*Pb	**Pn**	**07 53 29.5**	**+1.6**

MDD **19** *07:59:30.2±1.5,35°12N×12°73W,h0km,mb4.3/9,Error ellipse: s-maj=15.7km s-min=10.0km az=97.0,PRIMO*
CNRM **19** *07:59:31.9,35°11N×12°72W,h30km,MD3.6*
ISCJB **19** *07:59:31.3±0.8,35°14N±0°03×12°33W±0°06,h10km,Error ellipse: s-maj=6.7km s-min=4.8km az=9.6*
NEIC **19** *07:59:32.0,35°45N×12°84W,h0km,MN3.4(MDD),After MDD.*
INMG **19** *07:59:32.5±1.8,34°94N×13°02W,h10km,ML3.0,Error ellipse: s-maj=10.6km s-min=5.0km az=131.0*
CSEM **19** *07:59:34.5±0.5,35°10N×12°26W,h10km,ML3.0,Error ellipse: s-maj=9.9km s-min=5.8km az=90.0*

ISC 19 07:59:33.7±0.7,35°12N±0°03×12°32W±0°05,h10km,n154,σ1s24/253,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**3.47**	**54**	*e*P	**Pn**	**08 00 28.6**	**+0.9**
PFVI				*e*S	**Sn**	**08 01 09.4**	**+0.6**
PFVI				A		08 01 11.8	
	36nm,0.2s						
PFVI	**Vila Bisbo**	**3.47**	**54**	P	**Pn**	**08 00 28.5**	**+0.8**
PFVI				S	**Sn**	**08 01 08.7**	**-0.1**
PFVI	**Vila Bisbo**	**3.47**	**54**	P	**Pn**	**08 00 28.5**	**+0.8**
	4.6nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**08 01 09.2**	**+0.4**
	26nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.47**	**54**	P	**Pn**	**08 00 28.5**	**+0.8**
	4.6nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**08 01 09.2**	**+0.4**
	26nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.47**	**54**	*e*P	**Pn**	**08 00 28.6**	**+0.9**
PFVI				*e*S	**Sn**	**08 01 09.4**	**+0.6**
	36nm,0.2s						
MORF	**Marmelete**	**3.68**	**53**	*e*S	**Sn**	**08 01 15.5**	**+1.4**
MORF				A		08 01 16.8	
	37nm,0.1s						
MORF	**Marmelete**	**3.68**	**53**	S	**Sn**	**08 01 15.5**	**+1.4**
	37nm,0.1s						
MORF	**Marmelete**	**3.68**	**53**	S	**Sn**	**08 01 15.5**	**+1.4**
	37nm,0.1s						
MORF	**Marmelete**	**3.68**	**53**	*e*S	**Sn**	**08 01 15.5**	**+1.4**
	37nm,0.1s						
PTEO	**Sao Teotonio**	**3.78**	**49**	*e*S	**Sn**	**08 01 18.2**	**+1.7**
PTEO				A		08 01 20.5	
	23nm,0.2s						
PTEO	**Sao Teotonio**	**3.78**	**49**	S	**Sn**	**08 01 18.2**	**+1.7**
	12nm,0.2s						
PTEO	**Sao Teotonio**	**3.78**	**49**	S	**Sn**	**08 01 18.2**	**+1.7**
	12nm,0.2s						
PTEO	**Sao Teotonio**	**3.78**	**49**	*e*S	**Sn**	**08 01 18.2**	**+1.7**
	23nm,0.2s						
PBDV	**Barranco-do-Ve**	**4.13**	**58**	*e*P	**Pn**	**08 00 38.0**	**+1.1**
PBDV				*e*S	**Sn**	**08 01 25.6**	**+0.4**
PBDV				A		08 01 32.7	
	14nm,0.1s						
PBDV	**Barranco-do-Ve**	**4.13**	**58**	P	**Pn**	**08 00 38.0**	**+1.1**
PBDV				S	**Sn**	**08 01 25.6**	**+0.4**
	14nm,0.1s						
PBDV	**Barranco-do-Ve**	**4.13**	**58**	P	**Pn**	**08 00 38.0**	**+1.1**
PBDV				S	**Sn**	**08 01 25.6**	**+0.4**
	14nm,0.1s						
PBDV	**Barranco-do-Ve**	**4.13**	**58**	*e*P	**Pn**	**08 00 38.0**	**+1.1**
PBDV				*e*S	**Sn**	**08 01 25.6**	**+0.4**
	14nm,0.1s						
PCVE	**Castro Verde**	**4.27**	**53**	*e*P	**Pn**	**08 00 39.5**	**+0.8**
PCVE				*e*S	**Sn**	**08 01 29.2**	**+0.7**
PCVE				A		08 01 30.8	
	21nm,0.3s						
PCVE	**Castro Verde**	**4.27**	**53**	P	**Pn**	**08 00 39.5**	**+0.8**
PCVE				S	**Sn**	**08 01 29.2**	**+0.7**
	21nm,0.3s						
PCVE	**Castro Verde**	**4.27**	**53**	P	**Pn**	**08 00 39.5**	**+0.8**
PCVE				S	**Sn**	**08 01 29.2**	**+0.7**
	21nm,0.3s						
PCVE	**Castro Verde**	**4.27**	**53**	*e*P	**Pn**	**08 00 39.5**	**+0.8**
PCVE				*e*S	**Sn**	**08 01 29.2**	**+0.7**
	21nm,0.3s						
PVAQ	**Vaqueiros**	**4.36**	**57**	*e*P	**Pn**	**08 00 41.1**	**+1.1**
PVAQ				*e*S	**Sn**	**08 01 31.5**	**+0.6**
PVAQ				A		08 01 33.5	
	28nm,0.1s						
PVAQ	**Vaqueiros**	**4.36**	**57**	P	**Pn**	**08 00 41.1**	**+1.1**
PVAQ				S	**Sn**	**08 01 31.5**	**+0.6**
	28nm,0.1s						
PVAQ	**Vaqueiros**	**4.36**	**57**	P	**Pn**	**08 00 41.1**	**+1.1**
PVAQ				S	**Sn**	**08 01 31.5**	**+0.6**
	28nm,0.1s						
PVAQ	**Vaqueiros**	**4.36**	**57**	*e*P	**Pn**	**08 00 41.1**	**+1.1**
PVAQ				*e*S	**Sn**	**08 01 31.5**	**+0.6**
	28nm,0.1s						
PMAFR	**Mafra**	**4.53**	**32**	*e*S	**Sn**	**08 01 33.3**	**-1.7**
PMAFR				A		08 01 36.5	
	30nm,0.1s						
PMAFR	**Mafra**	**4.53**	**32**	P	**Pn**	**08 00 41.2**	**-1.1**
	9.9nm,0.3s,SNR=7.9						
PMAFR				P		08 00 41.4	
	1.8nm,0.2s,SNR=7.9						
PMAFR				S	**Sn**	**08 01 30.8**	**-4.3**
	20nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**4.53**	**32**	P	**Pn**	**08 00 41.2**	**-1.1**
	9.9nm,0.3s,SNR=7.9						
PMAFR				P		08 00 41.4	
	1.8nm,0.2s,SNR=7.9						
PMAFR				S	**Sn**	**08 01 30.8**	**-4.3**
	20nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**4.53**	**32**	P	**Pn**	**08 00 41.4**	**-0.9**
	1.8nm,0.2s,SNR=7.9						
PMAFR				*e*S	**Sn**	**08 01 33.3**	**-1.7**
	30nm,0.1s						
EGRO	**El Granado**	**4.59**	**57**	P	**Pn**	**08 00 44.1**	**+1.0**
EGRO				S	**Sn**	**08 01 37.3**	**+0.9**
EGRO	**El Granado**	**4.59**	**57**	P	**Pn**	**08 00 44.1**	**+1.0**
	0.1nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**08 01 37.3**	**+0.9**
	9.8nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.59**	**57**	P	**Pn**	**08 00 44.1**	**+1.0**
	0.1nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**08 01 37.3**	**+0.9**
	9.8nm,0.1s,SNR=7.9						
PBEJ	**Beja**	**4.61**	**50**	*e*S	**Sn**	**08 01 37.1**	**+0.1**
PBEJ				A		08 01 39.4	
	15nm,0.1s						
PBEJ	**Beja**	**4.61**	**50**	S	**Sn**	**08 01 37.1**	**+0.1**
	7.7nm,0.1s						
PBEJ	**Beja**	**4.61**	**50**	S	**Sn**	**08 01 37.1**	**+0.1**
	7.7nm,0.1s						
PBEJ	**Beja**	**4.61**	**50**	*e*S	**Sn**	**08 01 37.1**	**+0.1**
	15nm,0.1s						
CIA	**Chichaoua**	**4.64**	**139**	P	**Pn**	**08 00 43.0**	**-0.8**
CIA	**Chichaoua**	**4.64**	**139**	P	**Pn**	**08 00 43.0**	**-0.8**
CIA	**Chichaoua**	**4.64**	**139**	*e*P	**Pn**	**08 00 43.0**	**-0.8**
CIA				*i* S	**Sn**	**08 01 33.0**	**-4.7**
MOE	**Montemor**	**4.65**	**42**	*e*S	**Sn**	**08 01 37.6**	**-0.5**
MOE	**Montemor**	**4.65**	**42**	S	**Sn**	**08 01 37.6**	**-0.5**
MOE	**Montemor**	**4.65**	**42**	S	**Sn**	**08 01 37.6**	**-0.5**
MOE	**Montemor**	**4.65**	**42**	*e*S	**Sn**	**08 01 37.6**	**-0.5**
PBAR	**Barrancos**	**5.22**	**53**	*e*P	**Pn**	**08 00 52.9**	**+1.0**
PBAR				*e*S	**Sn**	**08 01 52.3**	**+0.1**
PBAR				A		08 01 56.1	
	11nm,0.3s						
PBAR	**Barrancos**	**5.22**	**53**	P	**Pn**	**08 00 52.9**	**+1.0**
PBAR				S	**Sn**	**08 01 52.3**	**+0.1**
	11nm,0.3s						
PBAR	**Barrancos**	**5.22**	**53**	P	**Pn**	**08 00 52.9**	**+1.0**
PBAR				S	**Sn**	**08 01 52.3**	**+0.1**
	11nm,0.3s						
PBAR	**Barrancos**	**5.22**	**53**	*e*P	**Pn**	**08 00 52.9**	**+1.0**
PBAR				*e*S	**Sn**	**08 01 52.3**	**+0.1**
	11nm,0.3s						
EMIN	**Mina Concepcio**	**5.26**	**58**	P	**Pn**	**08 00 53.5**	**+1.1**
EMIN				S	**Sn**	**08 01 53.3**	**+0.2**
EMIN	**Mina Concepcio**	**5.26**	**58**	P	**Pn**	**08 00 53.1**	**+0.7**
	0.7nm,0.1s,SNR=9.2						
EMIN				S	**Sn**	**08 01 53.3**	**+0.2**
	2.5nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.26**	**58**	P	**Pn**	**08 00 53.1**	**+0.7**
	0.7nm,0.1s,SNR=9.2						
EMIN				S	**Sn**	**08 01 53.3**	**+0.2**
	2.5nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.26**	**58**	P	**Pn**	**08 00 53.5**	**+1.1**
	0.7nm,0.1s,SNR=9.2						
EMIN				S	**Sn**	**08 01 53.3**	**+0.2**
	2.5nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**5.32**	**44**	*e*S	**Sn**	**08 01 53.9**	**-0.6**
PESTR				A		08 01 59.0	
	5.6nm,0.3s						
PESTR	**Estremoz**	**5.32**	**44**	S	**Sn**	**08 01 53.9**	**-0.6**
	5.6nm,0.3s						
PESTR	**Estremoz**	**5.32**	**44**	S	**Sn**	**08 01 53.9**	**-0.6**
	5.6nm,0.3s						
PESTR	**Estremoz**	**5.32**	**44**	*e*S	**Sn**	**08 01 53.9**	**-0.6**
	5.6nm,0.3s						
ESPR	**Espera**	**5.52**	**70**	P	**Pn**	**08 00 57.7**	**+1.7**
ESPR				S	**Sn**	**08 02 01.0**	**+1.4**
ESPR	**Espera**	**5.52**	**70**	P	**Pn**	**08 00 57.7**	**+1.7**
	2.6nm,0.2s,SNR=9.9						
ESPR				S	**Sn**	**08 02 01.0**	**+1.5**
	4.2nm,0.1s,SNR=7.9					

IDC 19 08:20:56.1±4.0, **26°10S×176°96W, h78**km±37km, **mb3.9**/3, **mb1 4.2/5, mb1mx3.8**/15, **mbtmp4.1**/5, **Error ellipse: s-maj=48.4km s-min=25.9km az=126.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**13.07**	**23**	P	Pn	08 23 59.2	+0.6
	3.9nm,0.3s,baz=268,slow=19,SNR=7.4						
AFI				S	Sn	08 26 12.2	-10
	1.4nm,0.3s,baz=150,slow=20,SNR=2.9						
URZ	**Urewera**	**13.12**	**201**	P	Pn	08 23 59.2	+0.1
	0.1nm,0.3s,baz=260,slow=6.8,SNR=2.2						
URZ				S	Sn	08 26 22.1	-1.2
	0.7nm,0.3s,baz=72,slow=20,SNR=4.7						
CTA	**Charters Tower**	**34.28**	**272**	P	P	08 27 35.5	+0.4
	4.8nm,0.7s,baz=88,slow=9.9,SNR=4.9						
ASAR	**Alice Springs**	**44.43**	**262**	P	P	08 28 59.6	+0.1
	1.2nm,0.5s,baz=85,slow=6.7,SNR=20						
WRA	**Warramunga Arr**	**45.04**	**267**	P	P	08 29 04.0	-0.4
	2.4nm,0.6s,baz=104,slow=8.1,SNR=35						
NOA	**NORSAR Array B**	**144.63**	**353**	PKP	PKPdf	08 40 21.9	-1.2
	1.3nm,0.7s,baz=18,slow=4.2,SNR=4.8						
BRTR	**Keskin Array B**	**151.10**	**306**	PKPbc	PKPbc	08 40 40.4	+0.1
	0.6nm,0.6s,baz=116,slow=6.7,SNR=2.7						
BRTR				PKPab	PKPab	08 40 48.2	0.0
	0.7nm,0.5s,baz=72,slow=2.3,SNR=3.9						

ISCJB ***19*** *08:33:53.7±0.2, 8°14S±0°04×13°38W±0°03, h10km, mb5.2/241, MS4.9/59, Error ellipse: s-maj=5.8km s-min=3.5km az=146.5*

IDC ***19*** *08:33:53.2±0.5, 8°19S×13°47W, h0km, mb4.7/25, mb1 4.7/26, mb1mx4.7/28, mbtmp4.7/26, ML3.7/1, MS4.9/21, Ms1 4.9/21, ms1mx4.8/24, Error ellipse: s-maj=13.6km s-min=12.3km az=2.0*

MOS ***19*** *08:33:54.0±1.0, 8°01S×13°46W, h10km, mb5.5/104, MS4.8/29, Error ellipse: s-maj=9.4km s-min=3.8km az=73.6*

INMG ***19*** *08:33:55.3, 8°24S×13°47W, h10km, MS5.3*

NEIC ***19*** *08:33:55.2±0.2, 8°20S×13°45W, h10km, mb5.3/171, Error ellipse: s-maj=5.9km s-min=4.1km az=143.0*

GCMT ***19*** *08:33:57.7±0.1, 8°09S×13°53W, h12km, MW5.5, Moment Tensor Solution. s70,c122; s99,c195; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.90±.03; $M_{\theta\theta}$-1.08±.03; $M_{\phi\phi}$1.98±.03; $M_{r\theta}$0.28±.07; $M_{\theta\phi}$0.74±.03; $M_{\phi r}$-0.45±.06; Best double couple: $M_0$1.90000×10^{17} NP1:ϕ_s234.00000°, δ62.00000°, λ-20.00000°. NP2:ϕ_s334.00000°, δ72.00000°, λ-150.00000°. Principal axes: T 2.2000, Plg7.0000°, Azm102.0000°; N -0.7000, Plg56.0000°, Azm2.0000°; P -1.5000, Plg34.0000°, Azm197.0000°; Data Used: II IU IC CN G. Surface waves from 104 sta.*

SZGRF ***19*** *08:33:59.5, 7°97S×13°01W, h33km, mb5.4, MS5.1, Ascension Island region*

ISC 19 08:33:54.2±1.6, **8°20S**±0°04×**13°46W**±0°03, **h3**km±9km, **n659**, **$_n$0°97/632**, **mb5.2**/240, **MS4.9**/59, **56C-65D, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEL	**Horse Pasture**	**10.79**	**136**	Pn	**Pn**	**08 36 30.7**	**+1.1**
	936nm,0.7s,SNR=5.5						
SHEL	**Horse Pasture**	**10.79**	**136**	*e*Pn	**Pn**	**08 36 29.5**	**-0.1**
	97nm,0.6s						
SHEL	**Horse Pasture**	**10.79**	**136**	*e*P	**Pn**	**08 36 29.5**	**-0.1**
SHEL				pmax	pmax		
	comp=Z,97nm,0.6s						
LIC	**Lamto**	**16.61**	**31**	*e*P	**Pn**	**08 37 46.8**	**-1.4**
	comp=Z,351nm,1.5s						
LIC	**Lamto**	**16.61**	**31**	*e*P	**Pn**	**08 37 46.8**	**-1.4**
	comp=Z,134nm,0.9s,baz=217						
LIC				*e*MLR	MLR		
	comp=Z,2μm,21.0s						
KIC	**Kosan Boka**	**16.87**	**31**	*e*P	**Pn**	**08 37 49.2**	**-2.4**
	comp=Z,85nm,0.9s						
TIC	**Toumodi**	**16.97**	**30**	*e*P	**Pn**	**08 37 48.2**	**-4.7**
	comp=Z,235nm,1.2s						
TIC	**Toumodi**	**16.97**	**30**	*e*P	**Pn**	**08 37 48.2**	**-4.7**
TIC				pmax	pmax		
	comp=Z,235nm,1.2s						
DBIC	**Dimbokro**	**17.08**	**30**	*e*P	**Pn**	**08 37 52.9**	**-1.3**
	comp=Z,797nm,2.9s						
DBIC	**Dimbokro**	**17.08**	**30**	P	**Pn**	**08 37 52.6**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=199,slow=11,SNR=7.7						
DBIC				LR	LR	08 42 58.2	
	comp=Z,2μm,19.8s,baz=189,slow=32						
DBIC	**Dimbokro**	**17.08**	**30**	*e*P	**Pn**	**08 37 52.9**	**-1.3**
DBIC				pmax	pmax		
	comp=Z,797nm,2.9s						
RCBR	**Riachuelo**	**22.40**	**275**	*e*P	**P**	**08 38 54.1**	**0.0**
	comp=Z,92nm,1.0s,mb5.2						
TOA0	**Torodi Ar. Sit**	**26.00**	**36**	*e*P	**P**	**08 39 26.6**	**-1.9**
TORD	**Torodi Ar. Bea**	**26.00**	**36**	P	**P**	**08 39 27.3**	**-1.3**
	comp=Z,24nm,0.7s,mb4.8,baz=218,slow=6.1,SNR=72						
TORD				LR	LR	08 47 54.2	
	comp=Z,2μm,18.1s,MS4.8,baz=210,slow=32						
TSUM	**Tsumeb**	**32.02**	**113**	*e*P	**P**	**08 40 22.1**	**-0.1**
	comp=Z,32nm,1.2s,mb5.0						
TSUM	**Tsumeb**	**32.02**	**113**	P	**P**	**08 40 21.7**	**-0.5**
	comp=Z,10nm,0.9s,mb4.7,baz=243,slow=8.7,SNR=19						
TAM	**Tamanrasset**	**35.97**	**31**	*e*P	**P**	**08 40 59.5**	**+3.1**
	comp=Z,32nm,1.4s,mb5.0						
TAM	**Tamanrasset**	**35.97**	**31**	*e*P	**P**	**08 40 59.5**	**+3.1**
TAM				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.0						
SUR	**Sutherland**	**39.85**	**132**	*e*P	**P**	**08 41 30.7**	**+1.5**
	comp=Z,40nm,1.0s,mb5.1						
SUR	**Sutherland**	**39.85**	**132**	P	**P**	**08 41 29.7**	**+0.5**
	comp=Z,12nm,0.8s,mb4.7,baz=272,slow=8.1,SNR=7.5						
SUR				LR	LR	08 54 35.6	
	comp=Z,4μm,20.3s,MS5.2,baz=293,slow=31						
LBTB	**Lobatse**	**40.80**	**119**	*e*P	**P**	**08 41 37.7**	**+0.5**
	comp=Z,408nm,2.3s,mb5.7						
LBTB	**Lobatse**	**40.80**	**119**	P	**P**	**08 41 36.0**	**-1.2**
	comp=Z,12nm,0.9s,mb4.5,baz=297,slow=7.1,SNR=8.2						
LBTB	**Lobatse**	**40.80**	**119**	*e*P	**P**	**08 41 37.7**	**+0.5**
LBTB				pmax	pmax		
	comp=Z,409nm,2.3s,mb5.7						
LSZ	**Lusaka**	**41.32**	**104**	*e*P	**P**	**08 41 42.3**	**+0.7**
	comp=Z,74nm,1.5s,mb5.1						
LSZ	**Lusaka**	**41.32**	**104**	P	**P**	**08 41 41.3**	**-0.3**
	comp=Z,15nm,0.9s,mb4.6,baz=280,slow=5.3,SNR=18						
LSZ	**Lusaka**	**41.32**	**104**	*e*P	**P**	**08 41 42.3**	**+0.7**
LSZ				pmax	pmax		
	comp=Z,74nm,1.5s,mb5.1						
MDT	**Midelt**	**41.64**	**11**	P	**P**	**08 41 44.9**	**+1.0**
	comp=Z,14nm,1.1s,mb4.5,baz=188,slow=9.4,SNR=9.3						
MDT				PP	PP	08 43 24.8	+4.6
	comp=Z,4.9nm,0.9s,baz=198,slow=8.8,SNR=4.7						
BOSA	**Boshof**	**41.70**	**124**	*e*P	**P**	**08 41 44.8**	**+0.3**
	comp=Z,40nm,1.1s,mb5.0						
BOSA	**Boshof**	**41.70**	**124**	P	**P**	**08 41 44.5**	**-0.1**
	comp=Z,26nm,0.9s,mb4.8,baz=287,slow=6.4,SNR=16						
BOSA				LR	LR	08 55 58.8	
	comp=Z,4μm,20.7s,MS5.2,baz=291,slow=32						
BOSA	**Boshof**	**41.70**	**124**	*e*P	**P**	**08 41 44.8**	**+0.2**
BOSA				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.0						
EJIF	**Jimena Fronter**	**45.04**	**9**	P	**P**	**08 42 13.5**	**+2.2**
	comp=Z,30nm,1.0s,mb5.1						
EJIF	**Jimena Fronter**	**45.04**	**9**	P	**P**	**08 42 13.5**	**+2.2**
EJIF				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.1						
EMIJ	**Mijas**	**45.26**	**10**	P	**P**	**08 42 15.2**	**+2.2**
	comp=Z,25nm,0.8s,mb5.1						
PFVI	**Vila Bisbo**	**45.30**	**5**	P	**P**	**08 42 15.5**	**+2.2**
ESPR	**Espera**	**45.39**	**9**	P	**P**	**08 42 16.0**	**+1.9**
	comp=Z,26nm,0.8s,mb5.1						
PTEO	**Sao Teotonio**	**45.72**	**5**	*e*P	**P**	**08 42 17.3**	**+0.7**
	comp=Z,196nm,1.5s,mb5.8						
PCVE	**Castro Verde**	**45.87**	**6**	*e*P	**P**	**08 42 19.4**	**+1.6**
	comp=Z,64nm,1.8s,mb5.2						
ERON	**Agron**	**45.88**	**11**	P	**P**	**08 42 17.2**	**-0.7**
	comp=Z,16nm,1.8s,mb4.7						
EBER	**Berja**	**45.94**	**12**	P	**P**	**08 42 17.7**	**-0.7**
	comp=Z,42nm,1.0s,mb5.3						
ELOJ	**Sierra Loja**	**45.94**	**10**	P	**P**	**08 42 18.6**	**+0.2**
	comp=Z,9.6nm,0.8s,mb4.8						
ELOJ	**Sierra Loja**	**45.94**	**10**	P	**P**	**08 42 18.6**	**+0.2**
ELOJ				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
ENIJ	**Nijar**	**46.15**	**13**	P	**P**	**08 42 20.1**	**0.0**
	comp=Z,43nm,0.9s,mb5.4						
ENIJ	**Nijar**	**46.15**	**13**	P	**P**	**08 42 20.1**	**0.0**
ENIJ				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.4						
EMIN	**Mina Concepcio**	**46.16**	**7**	P	**P**	**08 42 20.5**	**+0.4**
	comp=Z,50nm,1.0s,mb5.4						
ECOG	**Cogollos-Vega**	**46.17**	**11**	P	**P**	**08 42 20.5**	**+0.2**
	comp=Z,85nm,0.9s,mb5.7						
ECOG	**Cogollos-Vega**	**46.17**	**11**	P	**P**	**08 42 20.5**	**+0.3**
ECOG				pmax	pmax		
	comp=Z,85nm,0.9s,mb5.7						
PBEJ	**Beja**	**46.28**	**6**	*e*P	**P**	**08 42 22.3**	**+1.3**
	comp=Z,52nm,1.8s,mb5.2						
PBAR	**Barrancos**	**46.52**	**7**	*e*P	**P**	**08 42 23.1**	**+0.2**
	comp=Z,35nm,1.4s,mb5.1						
EVO	**Evora**	**46.76**	**6**	*e*P	**P**	**08 42 23.2**	**-1.6**
	comp=Z,86nm,1.1s,mb5.3						
EVO				*e*MLR	MLR		
	comp=Z,867nm,17.5s,MS4.5						
EVO	**Evora**	**46.76**	**6**	*e*P	**P**	**08 42 25.3**	**+0.5**
	comp=Z,59nm,1.7s,mb5.2						
EQES	**Quesada**	**46.78**	**11**	P	**P**	**08 42 25.2**	**+0.3**
	comp=Z,28nm,1.3s,mb5.0						
EADA	**Adamuz**	**46.86**	**10**	P	**P**	**08 42 25.6**	**0.0**
	comp=Z,72nm,1.2s,mb5.5						
EHUE	**Huescar**	**46.88**	**12**	P	**P**	**08 42 25.7**	**-0.1**
	comp=Z,16nm,0.9s,mb4.9						
EHUE	**Huescar**	**46.88**	**12**	P	**P**	**08 42 25.7**	**-0.1**
EHUE				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
EBAN	**Banos Encina**	**46.99**	**10**	P	**P**	**08 42 26.6**	**0.0**
	comp=Z,24nm,0.9s,mb5.1						
EBAN	**Banos Encina**	**46.99**	**10**	P	**P**	**08 42 26.7**	**0.0**
EBAN				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
CART	**Cartagena**	**47.01**	**14**	*e*P	**P**	**08 42 27.9**	**+1.1**
	comp=Z,52nm,1.0s,mb5.4						
PMAFR	**Mafra**	**47.07**	**4**	*e*P	**P**	**08 42 27.7**	**+0.5**
	comp=Z,192nm,1.4s,mb5.8						
SIV	**San Ignacio**	**47.11**	**256**	P	**P**	**08 42 27.7**	**-0.3**
	comp=Z,7.8nm,0.9s,mb4.6,baz=101,slow=8.9,SNR=24						
PESTR	**Estremoz**	**47.14**	**6**	*e*P	**P**	**08 42 30.3**	**+2.5**
	comp=Z,30nm,1.7s,mb4.9						
PMRV	**Marv??o**	**47.71**	**6**	*e*P	**P**	**08 42 32.9**	**+0.6**
	comp=Z,100nm,1.7s,mb5.6						
ETOB	**Tobarra**	**47.90**	**13**	P	**P**	**08 42 33.6**	**-0.1**
	comp=Z,13nm,0.7s,mb5.1						
PCBR	**Castelo Branco**	**48.11**	**6**	*e*P	**P**	**08 42 35.9**	**+0.6**
	comp=Z,48nm,1.9s,mb5.2						
EBEN	**Beniarda**	**48.26**	**14**	P	**P**	**08 42 36.4**	**-0.1**
	comp=Z,40nm,1.7s,mb5.2						
ESDC	**Sonseca Array**	**48.43**	**10**	P	**P**	**08 42 38.0**	**+0.2**
	comp=Z,10nm,0.8s,mb4.9						
ESDC	**Sonseca Array**	**48.43**	**10**	P	**P**	**08 42 36.8**	**-1.0**
	comp=Z,4.0nm,0.7s,mb4.6,baz=185,slow=8.0,SNR=7.9						
ESDC				PP	PP	08 44 34.2	+3.6
	comp=Z,4.8nm,1.0s,baz=198,slow=9.8,SNR=5.8						
ESDC				LR	LR	09 03 44.0	
	comp=Z,832nm,18.1s,MS4.8,baz=180,slow=37						
MTE	**Manteigas**	**48.66**	**6**	*e*P	**P**	**08 42 39.7**	**+0.2**
	comp=Z,102nm,1.6s,mb5.6						
MTE	**Manteigas**	**48.66**	**6**	*e*P	**P**	**08 42 39.2**	**-0.4**
	comp=Z,55nm,0.9s,mb5.6						
KEST	**Kesra**	**48.69**	**25**	*e*P	**P**	**08 42 41.1**	**+1.2**
KEST	**Kesra**	**48.69**	**25**	P	**P**	**08 42 40.5**	**+0.6**
	comp=Z,5.1nm,1.1s,mb4.5,baz=200,slow=5.5,SNR=8.0						
KEST				LR	LR	09 03 16.1	
	comp=Z,892nm,18.1s,MS4.8,baz=345,slow=36						
ECHE	**Chera**	**48.93**	**13**	P	**P**	**08 42 41.7**	**0.0**
	comp=Z,21nm,0.8s,mb5.2						
ECHE	**Chera**	**48.93**	**13**	P	**P**	**08 42 41.7**	**0.0**
ECHE				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
GUD	**Guadarrama**	**49.35**	**9**	P	**P**	**08 42 45.2**	**+0.4**
	comp=Z,14nm,0.8s,mb5.0						
GUD	**Guadarrama**	**49.35**	**9**	P	**P**	**08 42 45.2**	**+0.4**
GUD				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
MVO	**Moncorvo**	**49.47**	**6**	*e*P	**P**	**08 42 45.9**	**+0.1**
	comp=Z,94nm,1.6s,mb5.6						
MVO	**Moncorvo**	**49.47**	**6**	P	**P**	**08 42 46.3**	**+0.5**
PVRL	**Vila Real**	**49.51**	**6**	*e*P	**P**	**08 42 46.0**	**0.0**
	comp=Z,72nm,1.3s,mb5.5						
ETOR	**Torete**	**49.89**	**11**	P	**P**	**08 42 49.2**	**+0.3**
	comp=Z,14nm,1.0s,mb5.0						
ETOR	**Torete**	**49.89**	**11**	P	**P**	**08 42 49.2**	**+0.2**
ETOR				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
PCAB	**Cabril**	**49.91**	**5**	*e*P	**P**	**08 42 49.6**	**+0.5**
	comp=Z,139nm,1.8s,mb5.7						
ELOB	**Lobios**	**50.06**	**5**	P	**P**	**08 42 51.0**	**+0.8**
	comp=Z,89nm,0.8s,mb5.8						
PBRG	**Braganca**	**50.13**	**7**	*e*P	**P**	**08 42 51.3**	**+0.5**
	comp=Z,33nm,1.6s,mb5.1						
EZAM	**Zamans**	**50.29**	**5**	P	**P**	**08 42 52.7**	**+0.7**
	comp=Z,45nm,0.7s,mb5.6						
EZAM	**Zamans**	**50.29**	**5**	P	**P**	**08 42 52.7**	**+0.7**
EZAM				pmax	pmax		
	comp=Z,45nm,0.7s,mb5.6						
ERTA	**Horta de San J**	**50.53**	**14**	P	**P**	**08 42 53.9**	**+0.1**
	comp=Z,84nm,1.1s,mb5.6						
KMBO	**Kilima Mbogo**	**50.98**	**85**	*e*P	**P**	**08 42 59.5**	**+1.6**
	comp=Z,77nm,2.0s,mb5.3						
KMBO	**Kilima Mbogo**	**50.98**	**85**	LR	LR	09 02 53.0	
	comp=Z,4μm,18.6s,MS5.5,baz=270,slow=34						
KMBO	**Kilima Mbogo**	**50.98**	**85**	*e*P	**P**	**08 42 59.5**	**+1.7**
KMBO				pmax	pmax		
	comp=Z,77nm,2.0s						
STS	**Santiago**	**51.03**	**5**	P	**P**	**08 42 58.4**	**+0.8**
	comp=Z,28nm,0.6s,mb5.4						
STS	**Santiago**	**51.03**	**5**	P	**P**	**08 42 58.4**	**+0.8**
STS				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.4						
EPOB	**Poblet**	**51.08**	**14**	P	**P**	**08 42 58.1**	**+0.2**
	comp=Z,23nm,0.8s,mb5.2						
EMIR	**Miracle**	**51.72**	**14**	P	**P**	**08 43 03.0**	**+0.2**
	comp=Z,26nm,0.9s,mb5.2						
EARI	**Arriondas**	**51.80**	**8**	P	**P**	**08 43 04.0**	**+0.7**
	comp=Z,55nm,1.0s,mb5.4						
CFON	**Fontmartina**	**51.81**	**15**	P	**P**	**08 43 03.6**	**+0.2**
	comp=Z,85nm,1.1s,mb5.6						
VSL	**Villasalto**	**51.96**	**22**	*e*P	**P**	**08 43 06.5**	**+1.9**
	comp=Z,29nm,1.2s,mb5.1						
ELAN	**Lanestosa**	**51.99**	**9**	P	**P**	**08 43 05.3**	**+0.6**
	comp=Z,42nm,0.8s,mb5.4						
CSOR	**Sort**	**52.06**	**14**	P	**P**	**08 43 05.7**	**+0.4**
	comp=Z,34nm,0.9s,mb5.3						
EBIE	**Bielsa**	**52.14**	**13**	P	**P**	**08 43 06.4**	**+0.6**
	comp=Z,11nm,0.9s,mb4.8						
ETSF	**Etsaut**	**52.19**	**12**	*e*P	**P**	**08 43 06.0**	**-0.2**
	comp=Z,82nm,1.2s,mb5.2						
ETSF	**Etsaut**	**52.19**	**12**	*e*P	**P**	**08 43 06.0**	**-0.2**
	comp=Z,41nm,1.2s,mb5.2						
ETSF	**Etsaut**	**52.19**	**12**	*e*P	**P**	**08 43 06.0**	**-0.2**
ETSF				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.2						
SJPF	**Ste Jean**	**52.26**	**11**	*e*P	**P**	**08 43 06.4**	**-0.4**
	comp=Z,85nm,0.9s,mb5.4						
SJPF	**Ste Jean**	**52.26**	**11**	*e*P	**P**	**08 43 06.4**	**-0.4**
	comp=Z,42nm,0.9s,mb5.4						
SJPF	**Ste Jean**	**52.26**	**11**	*e*P	**P**	**08 43 06.4**	**-0.4**
SJPF				pmax	pmax		
	comp=Z,42nm,0.9s,mb5.4						
CLLI	**Llivia**	**52.36**	**14**	P	**P**	**08 43 07.9**	**+0.4**
MELF	**Melles**	**52.45**	**13**	*e*P	**P**	**08 43 10.2**	**+2.0**
FDF	**Fort de France**	**52.49**	**296**	*e*P	**P**	**08 43 09.0**	**0.0**
	comp=Z,110nm,1.4s,mb5.6						
FDF	**Fort de France**	**52.49**	**296**	*e*P	**P**	**08 43 09.0**	**0.0**
FDF				pmax	pmax		
	comp=Z,110nm,1.4s,mb5.6						
EPF	**Esparros**	**52.51**	**13**	*e*P	**P**	**08 43 08.2**	**-0.4**
	comp=Z,27nm,0.9s,mb4.9						
EPF	**Esparros**	**52.51**	**13**	*e*P	**P**	**08 43 08.2**	**-0.4**
	comp=Z,14nm,0.9s,mb4.9						
EPF	**Esparros**	**52.51**	**13**	*e*P	**P**	**08 43 08.2**	**-0.4**
EPF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
MLS	**Moulis**	**52.61**	**13**	*e*P	**P**	**08 43 11.7**	**+2.4**
TRQA	**Tornquist**	**52.81**	**228**	*e*P	**P**	**08 43 10.3**	**-0.7**
	comp=Z,70nm,1.3s,mb5.4						
LRDF	**Laroque-de-Fa**	**52.94**	**15**	*e*P	**P**	**08 43 11.8**	**0.0**
MTLF	**Montolieu**	**53.24**	**14**	*e*P	**P**	**08 43 12.7**	**-1.3**
	comp=Z,58nm,1.3s,mb5.1						
MTLF	**Montolieu**	**53.24**	**14**	*e*P	**P**	**08 43 12.7**	**-1.3**
	comp=Z,29nm,1.3s,mb5.0						
MTLF	**Montolieu**	**53.24**	**14**	*e*P	**P**	**08 43 12.7**	**-1.3**
MTLF				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
LPAZ	**La Paz**	**53.90**	**256**	*e*P	**P**	**08 43 19.2**	**-0.2**
	comp=Z,29nm,1.1s,mb5.1						
LPAZ	**La Paz**	**53.90**	**256**	P	**P**	**08 43 18.6**	**-0.8**
	comp=Z,9.6nm,0.9s,mb4.7,baz=77,slow=7.4,SNR=31						
LPAZ				LR	LR	09 03 53.7	
	comp=Z,2μm,20.0s,MS5.1,baz=91,slow=33						
LPAZ	**La Paz**	**53.90**	**256**	*e*P	**P**	**08 43 19.2**	**-0.2**
LPAZ				pmax	pmax		
	comp=Z,29nm,1.1s						
PCRV	**Puerto La Cruz**	**54.12**	**289**	P	**P**	**08 43 21.9**	**+0.9**
	comp=Z,6.9nm,0.7s,mb4.7,baz=55,slow=12,SNR=5.0						
LASF	**Ste Croix**	**54.34**	**15**	*e*P	**P**	**08 43 21.2**	**-0.8**
	comp=Z,24nm,0.9s,mb4.8						
LMR	**La Mourre**	**54.40**	**18**	*e*P	**P**	**08 43 21.8**	**-0.7**
	comp=Z,78nm,1.2s,mb5.2						
LMR	**La Mourre**	**54.40**	**18**	*e*P	**P**	**08 43 21.8**	**-0.7**
	comp=Z,39nm,1.2s,mb5.2						
LMR	**La Mourre**	**54.40**	**18**	*e*P	**P**	**08 43 21.8**	**-0.7**
LMR				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.2						
LFF	**La Frestale**	**54.41**	**12**	*e*P	**P**	**08 43 21.9**	**-0.7**
	comp=Z,99nm,1.0s,mb5.4						
LFF	**La Frestale**	**54.41**	**12**	*e*P	**P**	**08 43 21.9**	**-0.7**
	comp=Z,49nm,1.0s,mb5.4						
LFF	**La Frestale**	**54.41**	**12**	*e*P	**P**	**08 43 21.9**	**-0.7**
LFF				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.4						
FRF	**La Foret Royal**	**54.65**	**18**	*e*P	**P**	**08 43 23.4**	**-0.9**
	comp=Z,66nm,1.2s,mb5.2						
FRF	**La Foret Royal**	**54.65**	**18**	*e*P	**P**	**08 43 23.4**	**-0.9**
	comp=Z,33nm,1.2s,mb5.2						
FRF	**La Foret Royal**	**54.65**	**18**	*e*P	**P**	**08 43 23.4**	**-0.9**
FRF				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.2						
CAF	**Calviac**	**54.70**	**13**	*e*P	**P**	**08 43 23.6**	**-1.0**
	comp=Z,50nm,1.2s,mb5.1						
CAF	**Calviac**	**54.70**	**13**	*e*P	**P**	**08 43 23.6**	**-1.0**
	comp=Z,25nm,1.2s,mb5.1						
CAF	**Calviac**	**54.70**	**13**	*e*P	**P**	**08 43 23.6**	**-1.0**
CAF				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.1						
SMRF	**Simiane la Rot**	**54.72**	**17**	*e*P	**P**	**08 43 24.5**	**-0.3**
	comp=Z,91nm,1.5s,mb5.3						
SMRF	**Simiane la Rot**	**54.72**	**17**	*e*P	**P**	**08 43 24.5**	**-0.3**
	comp=Z,91nm,1.5s,mb5.6						
CALN	**Calern**	**54.90**	**18**	*e*P	**P**	**08 43 28.2**	**+2.1**
RJF	**Les Rejaudoux**	**54.93**	**13**	*e*P	**P**	**08 43 25.3**	**-1.0**
	comp=Z,100nm,1.1s,mb5.5						
RJF				*e*MLR	MLR		
	comp=Z,2μm,22.5s,MS4.8						
RJF	**Les Rejaudoux**	**54.93**	**13**	*e*P	**P**	**08 43 25.3**	**-1.0**
	comp=Z,50nm,1.1s,mb5.5						
RJF				LR	LR		
	comp=Z,2μm,22.5s,MS5.1						
RJF	**Les Rejaudoux**	**54.93**	**13**	*e*P	**P**	**08 43 25.3**	**-1.0**
RJF				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.5						
RJF				MLR	MLR		
	comp=Z,2μm,22.5s,MS5.1						
LUCF	**Luceram**	**55.17**	**18**	*e*P	**P**	**08 43 30.4**	**+2.3**
SBF	**Sospel**	**55.17**	**18**	*e*P	**P**	**08 43 27.4**	**-0.7**
	comp=Z,95nm,1.1s,mb5.4						
SBF	**Sospel**	**55.17**	**18**	*e*P	**P**	**08 43 27.4**	**-0.7**
	comp=Z,47nm,1.1s,mb5.4						
SBF	**Sospel**	**55.17**	**18**	*e*P	**P**	**08 43 27.4**	**-0.7**
SBF				pmax	pmax		
	comp=Z,47nm,1.1s,mb5.4						
TOUF	**Mont Tournerai**	**55.25**	**18**	*e*P	**P**	**08 43 29.9**	**+1.3**
LBL	**Lubilhac**	**55.27**	**14**	*e*P	**P**	**08 43 28.7**	**0.0**
VIVF	**Saint-Julien-l**	**55.28**	**16**	*e*P	**P**	**08 43 28.3**	**-0.5**
	comp=Z,79nm,1.3s,mb5.3						
VIVF	**Saint-Julien-l**	**55.28**	**16**	*e*P	**P**	**08 43 28.3**	**-0.5**
	comp=Z,39nm,1.3s,mb5.3						
VIVF	**Saint-Julien-l**	**55.28**	**16**	*e*P	**P**	**08 43 28.3**	**-0.5**
VIVF				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.3						
SAOF	**Saorge**	**55.32**	**18**	*e*P	**P**	**08 43 28.4**	**-0.7**
SSB	**Saint Sauveur**	**55.64**	**15**	*e*P	**P**	**08 43 32.4**	**+1.0**
	comp=Z,43nm,1.3s,mb5.3						
SSB	**Saint

SSF pmax pmax
comp=Z,54nm,1.2s,mb5.5
STVI Saint Thomas 57.25 298 *e*P **P 08 43 42.8 -0.6**
comp=Z,58nm,1.1s,mb5.5
CABF La Chapelle 57.28 16 *e*P **P 08 43 42.2 -0.9**
comp=Z,94nm,1.0s,mb5.5
CABF La Chapelle 57.28 16 *e*P **P 08 43 42.2 -0.9**
comp=Z,47nm,1.0s,mb5.5
CABF La Chapelle 57.28 16 *e*P **P 08 43 42.2 -0.9**
CABF pmax pmax
comp=Z,47nm,1.0s,mb5.5
LOR Lormes 57.32 14 *e*P **P 08 43 42.3 -1.1**
comp=Z,76nm,1.2s,mb5.3
LOR *e*MLR MLR
comp=Z,1µm,19.5s,MS4.7
LOR Lormes 57.32 14 *e*P **P 08 43 42.3 -1.1**
comp=Z,38nm,1.2s,mb5.3
LOR LR LR
comp=Z,1µm,19.5s,MS5.0
LOR Lormes 57.32 14 *e*P **P 08 43 42.3 -1.1**
LOR pmax pmax
comp=Z,38nm,1.2s,mb5.3
LOR MLR MLR
comp=Z,1µm,19.5s,MS5.0
GRR Gorron 57.42 10 *e*P **P 08 43 43.0 -1.1**
comp=Z,298nm,1.4s,mb5.8
GRR Gorron 57.42 10 *e*P **P 08 43 43.0 -1.1**
comp=Z,149nm,1.4s,mb5.8
GRR Gorron 57.42 10 *e*P **P 08 43 43.0 -1.1**
GRR pmax pmax
comp=Z,149nm,1.4s,mb5.8
MTP Monte Pirata 57.67 297 *e*P **P 08 43 46.2 -0.2**
comp=Z,51nm,1.0s,mb5.5
LDF La Druitiere 57.75 10 *e*P **P 08 43 45.1 -1.3**
comp=Z,49nm,1.3s,mb5.1
LDF La Druitiere 57.75 10 *e*P **P 08 43 45.1 -1.3**
comp=Z,24nm,1.3s,mb5.1
LDF La Druitiere 57.75 10 *e*P **P 08 43 45.1 -1.3**
LDF pmax pmax
comp=Z,24nm,1.3s,mb5.1
FLN La Foliniere 57.85 10 *e*P **P 08 43 45.7 -1.4**
comp=Z,78nm,0.9s,mb5.4
FLN *e*MLR MLR
comp=Z,2µm,21.0s,MS4.9
FLN La Foliniere 57.85 10 *e*P **P 08 43 45.7 -1.4**
comp=Z,39nm,0.9s,mb5.4
FLN LR LR
comp=Z,2µm,21.0s,MS5.2
FLN La Foliniere 57.85 10 *e*P **P 08 43 45.7 -1.4**
FLN pmax pmax
comp=Z,39nm,0.9s,mb5.4
FLN MLR MLR
comp=Z,2µm,21.0s,MS5.2
HUMP Col San Antoni 57.95 297 *e*P **P 08 43 47.6 -0.8**
comp=Z,31nm,0.8s,mb5.4
CBYP Canovanas 58.01 297 *e*P **P 08 43 49.2 +0.4**
comp=Z,16nm,0.7s,mb5.2
SJG San Juan 58.21 297 *e*P **P 08 43 50.7 +0.5**
comp=Z,27nm,0.9s,mb5.3
SJG San Juan 58.21 297 P **P 08 43 48.7 -1.4**
comp=Z,14nm,0.3s,mb5.5,baz=335,slow=18,SNR=8.7
SJG San Juan 58.21 297 *e*P **P 08 43 50.7 +0.5**
SJG pmax pmax
comp=Z,27nm,0.9s
BBS Basel-Blauen 58.45 17 *e*P **P 08 43 52.7 +1.4**
CELP Cerrillos 58.57 297 *e*P **P 08 43 52.9 +0.1**
OBIP Obispado Ponce 58.58 297 *e*P **P 08 43 53.5 +0.7**
comp=Z,49nm,1.1s,mb5.5
HINF Hinteralfeld 58.59 16 *e*P **P 08 43 50.6 -1.7**
comp=Z,25nm,0.9s,mb4.9
HINF Hinteralfeld 58.59 16 *e*P **P 08 43 50.6 -1.7**
comp=Z,13nm,0.9s,mb5.0
HINF Hinteralfeld 58.59 16 *e*P **P 08 43 50.6 -1.7**
HINF pmax pmax
comp=Z,13nm,0.9s,mb5.0
HAU Haudompre 58.63 15 *e*P **P 08 43 51.3 -1.3**
comp=Z,83nm,1.1s,mb5.4
HAU *e*MLR MLR
comp=Z,655nm,18.0s,MS4.5
HAU Haudompre 58.63 15 *e*P **P 08 43 51.3 -1.3**
comp=Z,42nm,1.1s,mb5.4
HAU LR LR
comp=Z,660nm,18.0s,MS4.8
HAU Haudompre 58.63 15 *e*P **P 08 43 51.3 -1.3**
HAU pmax pmax
comp=Z,42nm,1.1s,mb5.4
HAU MLR MLR
comp=Z,660nm,18.0s,MS4.8
MOF Molkenrain 58.70 16 *e*P **P 08 43 54.7 +1.6**
THEF They Montfort 58.74 15 *e*P **P 08 43 52.9 -0.4**
MEZF Maizieres J'vi 58.76 14 *e*P **P 08 43 52.6 -0.9**
comp=Z,199nm,1.2s,mb5.7
MEZF Maizieres J'vi 58.76 14 *e*P **P 08 43 52.6 -0.9**
comp=Z,199nm,1.2s,mb6.0
AOPR Arecibo Observ 58.83 297 *e*P **P 08 43 53.5 -1.0**
comp=Z,49nm,0.9s,mb5.5
TRI Trieste 58.95 22 *e*P **P 08 43 55.8 +1.0**
comp=Z,145nm,1.8s,mb5.7
TRI Trieste 58.95 22 *e*P **P 08 43 55.8 +1.0**
TRI pmax pmax
comp=Z,145nm,1.8s,mb5.7
FELD Feldberg im Sc 58.97 17 *e*P **P 08 43 56.0 +1.1**
DAVA Damuels 59.00 18⇑ *i*P **P 08 43 54.8 -0.3**
comp=Z,56nm,1.1s,mb5.5
CRPR Cabo Rojo, PR 59.02 297 *e*P **P 08 43 55.9 +0.1**
comp=Z,18nm,1.0s,mb5.1
FETA Feichten 59.03 19⇑ *i*P **P 08 43 55.0 -0.4**
comp=Z,33nm,1.1s,mb5.3
ECH Echery 59.04 16 *e*P **P 08 43 54.0 -1.4**
ECH Echery 59.04 16 *e*P **P 08 43 56.4 +0.9**
comp=Z,28nm,1.1s,mb5.2
ECH Echery 59.04 16 *e*P **P 08 43 56.4 +1.0**
ECH pmax pmax
comp=Z,28nm,1.1s,mb5.2
JAVS Javornik 59.22 22 *i*P **P 08 43 56.7 0.0**
JAVS *i*S **S 08 52 07.5 +2.3**
CDF Champ du Feu 59.25 16 *e*P **P 08 43 55.4 -1.5**
comp=Z,36nm,1.0s,mb5.1
CDF Champ du Feu 59.25 16 *e*P **P 08 43 55.4 -1.5**
comp=Z,18nm,1.0s,mb5.1
CDF Champ du Feu 59.25 16 *e*P **P 08 43 55.4 -1.5**
CDF pmax pmax
comp=Z,18nm,1.0s,mb5.1
VOY Vojsko 59.27 22 *e*P **P 08 43 58.3 +1.2**
VOY *e* 08 44 04.2
VOY *e* 08 44 07.0
VOY *e* 08 44 18.1
BOJS Bojanci 59.34 23 *i*P **P 08 43 58.0 +0.4**
BOJS *e*S **S 08 52 08.0 +1.2**
ABTA Abfaltersbach 59.39 20⇑ *i*P **P 08 43 58.3 +0.4**
comp=Z,42nm,1.7s,mb5.2
GCAM G?zelcaml? 59.39 37 *i*P **P 08 43 58.2 +0.1**
SPAK Spaichingen-Ko 59.40 17 *e*P **P 08 43 59.0 +1.1**
VISS Visnje 59.43 23 *i*P **P 08 44 03.6 +5.4**
VISS *e*S **S 08 52 04.9 -3.1**
SDV Santo Domingo 59.44 285 *e*P **P 08 44 00.0 +1.2**
comp=Z,15nm,0.8s,mb5.1
MOTA Moosalm 59.44 19⇑ *i*P **P 08 43 58.3 +0.1**
comp=Z,26nm,1.1s,mb5.2
BFO Black Forest 59.47 17 P **P 08 43 59.5 +1.1**
comp=Z,167nm,1.1s,mb6.0,SNR=7.2
BFO Black Forest 59.47 17 *e*P **P 08 43 56.9 -1.5**
comp=Z,46nm,1.2s,mb5.4
BFO Black Forest 59.47 17 *e*P **P 08 43 56.9 -1.5**
BFO pmax pmax
comp=Z,46nm,1.2s,mb5.4
WTTA Wattenberg 59.54 20⇓ *i*P **P 08 44 00.0 +1.1**
comp=Z,60nm,1.3s,mb5.5
TURN Turunc 59.68 38 *i*P **P 08 43 57.2 -2.9**
AYDN Tasoluk 59.75 37 *i*P **P 08 44 00.6 0.0**
AKAS Kas 59.91 40 *i*P **P 08 43 58.9 -2.7**
LANF Langenberg 59.92 16 *e*P **P 08 44 00.5 -0.9**
PLCA Paso Flores 59.95 227 *e*P **P 08 44 00.3 -1.7**
comp=Z,58nm,1.8s,mb5.3
PLCA Paso Flores 59.95 227 *e*P **P 08 44 00.3 -1.7**
PLCA pmax pmax
comp=Z,58nm,1.8s
KBA Koelnbreinsper 59.97 21⇑ *i*P **P 08 44 03.7 +1.9**
comp=Z,20nm,1.4s,mb5.0
BAIF Baives 60.02 13 *e*P **P 08 44 00.7 -1.4**
comp=Z,128nm,1.0s,mb5.6
BAIF Baives 60.02 13 *e*P **P 08 44 00.7 -1.4**
comp=Z,64nm,1.0s,mb5.6
BAIF Baives 60.02 13 *e*P **P 08 44 00.7 -1.4**
BAIF pmax pmax
comp=Z,64nm,1.0s,mb5.6

WLF Walferdange 60.11 15 *e*P **P 08 44 01.8 -1.0**
comp=Z,51nm,1.2s,mb5.4
WLF Walferdange 60.11 15 *e*P **P 08 44 04.5 +1.7**
comp=Z,8.3nm,0.8s,mb4.8
WLF Walferdange 60.11 15 *e*P **P 08 44 04.5 +1.7**
WLF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
STU Stuttgart 60.12 17 *e*P **P 08 44 01.2 -1.6**
comp=Z,39nm,1.3s,mb5.3
DOU Dourbes 60.14 13 P **P 08 44 05.7 +2.7**
GIVF Givet 60.20 13 *e*P **P 08 44 01.9 -1.5**
comp=Z,131nm,1.1s,mb5.6
GIVF Givet 60.20 13 *e*P **P 08 44 01.9 -1.5**
comp=Z,66nm,1.1s,mb5.6
GIVF Givet 60.20 13 *e*P **P 08 44 01.9 -1.5**
GIVF pmax pmax
comp=Z,66nm,1.1s,mb5.6
FUR Furstenfeldbru 60.22 19 *e*P **P 08 44 02.2 -1.3**
comp=Z,94nm,1.2s,mb5.7
FUR Furstenfeldbru 60.22 19 *e*P **P 08 44 02.2 -1.3**
FUR pmax pmax
comp=Z,94nm,1.2s,mb5.7
PERS Pernice 60.24 22 *i*P **P 08 44 04.3 +0.6**
PERS *e*S **S 08 52 14.8 -3.6**
SOKA Soboth 60.24 22⇓ *i*P **P 08 44 04.0 +0.3**
comp=Z,22nm,1.3s,mb5.0
RUP Ruppelstein 60.38 15 *e*P **P 08 44 05.7 +1.1**
DNZL Cakiroluk 60.48 38 *i*P **P 08 44 05.5 0.0**
GOLH Golhisar 60.51 39 *i*P **P 08 44 04.8 -0.9**
VTS Vitosha 60.60 30⇓ *i*P **P 08 44 11.1 +4.8**
VTS Vitosha 60.60 30⇓ *i*P **P 08 44 11.1 +4.8**
BCLA Clavier 60.61 14 P **P 08 44 10.8 +4.6**
comp=Z,17nm,1.3s,mb5.0
TOD Tromm 60.76 16 *e*P **P 08 44 08.5 +1.3**
KORT Korkueli 60.85 39 *i*P **P 08 44 09.7 +1.6**
ARSA Arzberg 60.90 22⇓ *i*P **P 08 44 09.8 +1.5**
comp=Z,15nm,1.1s,mb5.0
MEM Membach 60.95 14 P **P 08 44 13.8 +5.3**
BALY Balya 60.97 35 *i*P **P 08 44 08.7 -0.2**
KHAL Karahalli 61.18 38 *i*P **P 08 44 10.0 -0.4**
TNS Taunus Mts 61.22 16 *e*P **P 08 44 09.1 -1.2**
comp=Z,49nm,0.9s,mb5.6
TNS Taunus Mts 61.22 16 *e*P **P 08 44 09.1 -1.2**
TNS pmax pmax
comp=Z,49nm,0.9s,mb5.6
PKSM Moragy 61.29 25 P **P 08 44 12.1 +1.3**
DURS Dursunbey 61.38 36 *i*P **P 08 44 11.0 -0.6**
GRA1 Grafenberg Arr 61.54 18 *e*P **P 08 44 11.1 -1.4**
comp=Z,46nm,1.2s,mb5.5
GRA1 LR LR
comp=Z,1µm,18.4s,MS5.2
GRF Grafenberg Arr 61.54 18 *e*P **P 08 44 11.1 -1.4**
comp=Z,46nm,1.2s,mb5.5
GRF *e*L 09 10 48.7
comp=Z,1µm,18.4s
GRF Grafenberg Arr 61.54 18 *e*P **P 08 44 11.1 -1.4**
GRF pmax pmax
comp=Z,46nm,1.2s,mb5.5
GRF MLR MLR
comp=Z,1µm,18.4s,MS5.2
WET Wettzell 61.59 19 *e*P **P 08 44 11.5 -1.3**
comp=Z,31nm,1.1s,mb5.3
WET Wettzell 61.59 19 *e*P **P 08 44 11.5 -1.3**
WET pmax pmax
comp=Z,31nm,1.1s,mb5.3
CONA Conrad Observa 61.60 22⇓ *i*P **P 08 44 14.6 +1.7**
comp=Z,32nm,1.5s,mb5.2
GEC2 GERESS Array S 61.61 20 *e*P **P 08 44 11.8 -1.2**
comp=Z,38nm,1.4s,mb5.3
GEC2 GERESS Array S 61.61 20 *e*P **P 08 44 11.8 -1.2**
GEC2 pmax pmax
comp=Z,38nm,1.4s,mb5.3
GDZ Gediz 61.64 37 *i*P **P 08 44 12.1 -1.3**
GAZI Gazipasa 61.65 41 *i*P **P 08 44 12.4 -1.1**
SOP Sopron 61.65 23⇓ *e*P **P 08 44 13.8 +0.5**
KHC Kasperske Hory 61.81 20 *e*P **P 08 44 15.0 +0.7**
comp=Z,32nm,1.5s,mb5.2
KHC Kasperske Hory 61.81 20 *e*P **P 08 44 15.0 +0.7**
KHC pmax pmax
comp=Z,32nm,1.5s,mb5.2
KHC Kasperske Hory 61.81 20 *e*P **P 08 44 14.2 -0.1**
KHC *ex* x 08 44 22.4
KHC *e*PP PP 08 46 32.2 +1.7
KHC AMS AMS 09 10 50.0
comp=Z,1µm,19.4s
BUG Bochum--Univer 62.03 15 *e*P **P 08 44 14.6 -1.1**
ROSC El Rosal 62.08 280 *e*P **P 08 44 18.5 +1.6**
ROSC El Rosal 62.08 280 P **P 08 44 17.8 +0.9**
comp=Z,28nm,0.9s,mb5.4,baz=120,slow=4.2,SNR=26
ROSC LR LR 09 08 54.5
comp=Z,5µm,20.5s,MS5.6,baz=168,slow=34
BZS Buzias 62.11 27⇑ P **P 08 44 17.8 +1.3**
BZS Buzias 62.11 27⇑ *i*P **P 08 44 17.8 +1.4**
ERMK Ermenek 62.27 41 *i*P **P 08 44 17.1 -0.6**
ZST Bratislava 62.28 23 *e*P **P 08 44 17.4 -0.1**
comp=Z,35nm,1.7s,mb5.2
ZST Bratislava 62.28 23 *e*P **P 08 44 17.4 -0.1**
ZST pmax pmax
comp=Z,35nm,1.7s,mb5.2
ZST Bratislava 62.28 23 *e*P **P 08 44 17.4 -0.1**
NKC Novy Kostel 62.40 18 *e*P **P 08 44 18.4 +0.1**
NKC MLR MLR
comp=Z,1µm,18.9s,MS5.1
NKC Novy Kostel 62.40 18 *e*P **P 08 44 18.4 +0.1**
NKC AMS AMS 09 11 40.0
comp=Z,1µm,18.9s
WERN Wernitzgruen 62.42 18 *e*P **P 08 44 17.2 -1.2**
comp=Z,37nm,1.3s,mb5.3
BUD Budapest 62.46 24⇑ *e*P **P 08 44 20.3 +1.6**
VNA1 Neumayer--Stat 62.48 178 *e*P **P 08 44 20.3 +1.8**
VNA1 *e* pP 08 44 23.0 +3.4
VNA1 *e* 08 44 24.4
GUNZ Gunzen 62.48 18 *e*P **P 08 44 17.5 -1.3**
comp=Z,37nm,1.1s,mb5.4
MOX Moxa 62.51 18 *e*P **P 08 44 18.6 -0.4**
comp=Z,57nm,1.5s,mb5.5
MOX
comp=Z,1µm,19.0s
MOX Moxa 62.51 18 *e*P **P 08 44 17.7 -1.3**
comp=Z,29nm,1.0s,mb5.4
MOX Moxa 62.51 18 *e*P **P 08 44 18.6 -0.4**
MOX pmax pmax
comp=Z,57nm,1.5s,mb5.5
MOX MLR MLR
comp=Z,1µm,19.0s,MS5.0
WERD Werda 62.54 18 *e*P **P 08 44 17.8 -1.4**
comp=Z,46nm,1.4s,mb5.4
TANN Tannenbergstha 62.56 18 *e*P **P 08 44 18.1 -1.3**
comp=Z,31nm,1.1s,mb5.3
TREC Trest 62.61 21 AMS AMS 09 10 50.0
comp=Z,1µm,23.3s
PRU Pruhonice 62.87 20 *e*P **P 08 44 22.1 +0.7**
PRU *e*S **S 08 52 49.5 -2.1**
PRU MLR MLR
comp=Z,1µm,18.1s,MS5.0
PRU Pruhonice 62.87 20 *e*P **P 08 44 22.1 +0.7**
PRU *ex* x 08 44 31.8
PRU *e*S **S 08 52 49.5 -2.1**
PRU AMS AMS 09 12 40.0
comp=Z,1µm,18.1s
IBBN Ibbenburen 62.94 14 *e*P **P 08 44 21.0 -0.9**
comp=Z,35nm,1.1s,mb5.4
VRAC Vranov 63.02 22⇓ P **P 08 44 22.5 +0.1**
VRAC Vranov 63.02 22 P **P 08 44 22.7 +0.3**
VRAC Vranov 63.02 22⇓ *i*P **P 08 44 22.5 +0.1**
SDDR Presa de Saban 63.07 296 *e*P **P 08 44 23.7 +0.3**
comp=Z,44nm,1.0s,mb5.5
KOLL Kolacno 63.10 23 *e*P **P 08 44 24.9 +1.9**
KOLL Kolacno 63.10 23 *e*P **P 08 44 24.9 +1.9**
PSZ Piszkesteto 63.16 24 *e*P **P 08 44 25.2 +1.8**
comp=Z,53nm,1.5s,mb5.5
PSZ Piszkesteto 63.16 24 P **P 08 44 25.2 +1.8**
PSZ pmax pmax
comp=Z,53nm,1.5s,mb5.5
PSZ Piszkesteto 63.16 24⇓ *i*P **P 08 44 23.5 +0.1**
PSZ Piszkesteto 63.16 24⇓ *e*P **P 08 44 23.9 +0.5**
VYHS Vyhne 63.20 23 *e*P **P 08 44 24.1 +0.5**
comp=Z,49nm,2.2s,mb5.2
VYHS Vyhne 63.20 23 *e*P **P 08 44 24.1 +0.5**
VYHS pmax pmax
comp=Z,49nm,2.2s,mb5.2
VYHS Vyhne 63.20 23 *e*P **P 08 44 24.1 +0.5**
CLZ Clausthal 63.21 16 *e*P **P 08 44 22.6 -1.0**
comp=Z,17nm,0.9s,mb5.2
CLZ Clausthal 63.21 16 *e*P **P 08 44 22.6 -1.0**
CLZ pmax pmax
comp=Z,17nm,0.9s,mb5.2
PVCC Panska Ves 63.34 20 *e*P **P 08 44 25.5 +1.0**
PVCC *e* 08 44 34.1
PVCC MLR MLR
comp=Z,800nm,17.5s,MS5.0
PVCC Panska Ves 63.34 20 *e*P **P 08 44 25.5 +1.0**
PVCC *ex* x 08 44 34.1
PVCC AMS AMS 09 11 10.0
comp=Z,800nm,17.5s
BRG Berggiesshubel 63.43 19 *e*P **P 08 44 23.7 -1.4**
comp=Z,10.0nm,1.2s,mb4.8
BRG Berggiesshubel 63.43 19 *e*P **P 08 44 25.4 +0.3**
comp=Z,14nm,1.6s,mb4.8
BRG PP PP 08 46 42.6 -2.1
comp=Z,64nm,2.2s
BRG S **S 08 53 02.0 +3.4**
BRG SS SS 08 56 56.0 -10
BRG PKPPKP 09 13 23.6
comp=Z,15nm,1.8s
BRG
comp=N,888nm,16.7s
BRG
comp=E,807nm,18.8s
BRG
comp=Z,1µm,18.1s
BRG Berggiesshubel 63.43 19 *e*P **P 08 44 25.4 +0.3**
BRG 08 46 42.6
BRG S **S 08 53 02.0 +3.4**
BRG SS SS 08 56 56.0 -10
BRG pmax pmax
comp=Z,9.0nm,1.6s,mb4.7
BRG pmax pmax
comp=Z,38nm,2.3s,mb5.1
BRG MLR MLR
comp=N,532nm,16.7s,MS4.9
BRG MLR MLR
comp=E,483nm,18.8s,MS4.9
BRG MLR MLR
comp=Z,833nm,18.1s,MS5.0
DRGR 63.50 27⇓ P **P 08 44 25.5 -0.2**
DRGR 63.50 27 P **P 08 44 25.9 +0.2**
DRGR 63.50 27⇓ *i*P **P 08 44 25.5 -0.2**
CLL Collm 63.51 18 *e*P **P 08 44 24.3 -1.3**
comp=Z,20nm,1.4s,mb5.0
CLL Collm 63.51 18⇑ *i*P **P 08 44 25.9 +0.3**
comp=Z,28nm,1.5s,mb5.1
CLL Collm 63.51 18⇑ *i*P **P 08 44 25.9 +0.3**
CLL pmax pmax
comp=Z,28nm,1.5s,mb5.1
CLL Collm 63.51 18⇑ *i*P **P 08 44 25.9 +0.3**
comp=Z,28nm,1.5s,mb5.1
CLL *i* 08 44 35.1
CLL *e*PP PP 08 46 49.0 +3.6
CLL *e*PPS 08 53 25.0
CLL *e*SS SS 08 57 00.0 -7.0
CLL LmV 09 12 00.0
comp=Z,1µm,18.7s
VOIR 63.59 29⇓ P **P 08 44 26.4 +0.2**
VOIR 63.59 29 P **P 08 44 26.9 +0.6**
VOIR 63.59 29⇓ *i*P **P 08 44 26.5 +0.2**
NRDL Niedersach Rie 63.72 16 *e*P **P 08 44 25.6 -1.4**
comp=Z,57nm,1.4s,mb5.4
MORC Moravsky Berou 63.75 22 *e*P **P 08 44 28.7 +1.4**
comp=Z,27nm,1.2s,mb5.2
MORC Moravsky Berou 63.75 22 *e*P **P 08 44 28.7 +1.4**
MORC pmax pmax
comp=Z,27nm,1.2s,mb5.2
MORC Moravsky Berou 63.75 22⇓ *i*P **P 08 44 26.8 -0.5**
DPC Dobruska-Polom 63.79 21 *e*P **P 08 44 25.7 -1.8**
DPC *e*S **S 08 53 04.7 +1.6**
DPC MLR MLR
comp=Z,1µm,18.1s,MS5.0
DPC Dobruska-Polom 63.79 21 *e*P **P 08 44 25.7 -1.8**
DPC *ex* x 08 44 36.9
DPC *e*S **S 08 53 04.7 +1.6**
DPC AMS AMS 09 12 00.0
comp=Z,1µm,18.1s
UPC Upice 63.81 20 *e*P **P 08 44 27.6 0.0**
UPC Upice 63.81 20 *e*P **P 08 44 27.6 0.0**
GULE Gulek 63.86 42 *i*P **P 08 44 28.4 +0.1**
OKC Ostrava-Krasne 64.03 22 *e*P **P 08 44 28.7 -0.4**
OKC MLR MLR
comp=Z,1µm,19.2s,MS5.1
OKC Ostrava-Krasne 64.03 22 *e*P **P 08 44 28.7 -0.4**
OKC *ex* x 08 44 39.2
OKC AMS AMS 09 12 20.0
comp=Z,1µm,19.2s
MLR Muntele Rosu 64.06 30⇑ *i*P **P 08 44 29.9 +0.5**
MLR Muntele Rosu 64.06 30⇑ *i*P **P 08 44 29.9 +0.5**
BBAL Bala 64.13 39 *i*P **P 08 44 30.9 +0.9**
KSP Ksiaz 64.19 20 *e*P **P 08 44 29.4 -0.7**
KSP *e*S **S 08 53 09.0 +0.9**
KSP *e*SS SS 08 57 09.0 -8.6
MAIT Maitri 64.51 171 *e*P **P 08 44 32.3 +0.3**
NVL N'lazarevskaya 64.52 171 *e*P **P 08 44 27.9 -4.1**
NVL pmax pmax
comp=Z,53nm,1.6s,mb5.3
BR131 Keskin Array S 64.56 39 *e*P **P 08 44 33.2 +0.4**
comp=Z,22nm,1.2s,mb5.1
BRTR Keskin Array B 64.56 39 P **P 08 44 33.2 +0.4**
comp=Z,10nm,1.0s,mb4.8,baz=214,slow=6.0,SNR=12
BRTR LR LR 09 12 13.6
comp=Z,199nm,21.0s,MS4.3,baz=51,slow=36
CRVS Cervenica-Dubn 64.58 25 *e*P **P 08 44 33.1 +0.4**
comp=Z,58nm,2.0s,mb5.3
CRVS Cervenica-Dubn 64.58 25 *e*P **P 08 44 33.1 +0.4**
CRVS pmax pmax
comp=Z,58nm,2.0s,mb5.3
CRVS Cervenica-Dubn 64.58 25 *e*P **P 08 44 33.1 +0.4**
VRI Vrincioaia 64.71 30⇑ P **P 08 44 33.2 -0.4**
VRI Vrincioaia 64.71 30⇑ *i*P **P 08 44 33.2 -0.5**
UZH Uzhgorod 64.72 25 *d i*P **P 08 44 34.0 +0.3**
UZH *i* 08 44 38.3
UZH *i* 08 45 06.0
UZH *e*S **S 08 53 10.0 -4.7**
UZH MLR MLR
comp=N,400nm,20.0s,MS4.9
UZH MLR MLR
comp=E,750nm,20.0s,MS4.9
UZH MLR MLR
comp=Z,430nm,20.0s,MS4.6
RUE Ruedersdorf 64.77 18 *e*P **P 08 44 32.8 -1.1**
comp=Z,28nm,0.6s,mb5.5
AVNT Avonos 64.77 40 *i*P **P 08 44 35.4 +1.2**
ELDT Eldivan 64.89 38 *i*P **P 08 44 35.5 +0.6**
STHS Stebnicka Huta 64.90 24 *e*P **P 08 44 36.5 +1.7**
comp=Z,3.0nm,1.0s,mb4.3
STHS Stebnicka Huta 64.90 24 *e*P **P 08 44 36.5 +1.7**
CDAG Cicekdag 64.95 39 *i*P **P 08 44 35.0 -0.4**
OJC Ojcow 64.96 23 *e*P **P 08 44 35.3 +0.1**
OJC *e*PcP PcP 08 45 05.3 -2.9
OJC *e*S **S 08 53 09.7 -7.9**
OJC L 09 13 29.9
comp=Z,1.1nm,19.9s
ANDN Andirin 65.06 42 *i*P **P 08 44 37.1 +1.0**
BSEG Bad Segeberg 65.07 15 *e*P **P 08 44 34.7 -1.1**
comp=Z,52nm,1.0s,mb5.5
KUZU Kuzuini 65.11 43 *i*P **P 08 44 36.4 -0.1**
TESR 65.13 29⇑ P **P 08 44 35.9 -0.5**
TESR 65.13 29⇑ *i*P **P 08 44 35.8 -0.6**
BUR08 Bucovina Ar. S 65.27 28 *e*P **P 08 44 38.0 +0.7**
ILGA Ilgaz 65.40 38 *i*P **P 08 44 37.6 -0.6**
KWP Kalwaria Pacla 65.67 25 *e*P **P 08 44 40.2 +0.4**
comp=Z,15nm,0.8s,mb5.1
KWP Kalwaria Pacla 65.67 25 *e*P **P 08 44 40.2 +0.4**
KWP pmax pmax
comp=Z,15nm,0.8s,mb5.1
PINB Pinarbasi 65.71 41 *i*P **P 08 44 36.0 -4.3**
ATAB Bozova 66.31 43 *i*P **P 08 44 43.7 -0.5**
LVV L'vov 66.37 25 *e*P **P 08 44 43.5 -0.8**
LVV *e* 08 45 15.3
LVV MLR MLR
comp=E,600nm,20.0s,MS5.0
LVV MLR MLR
comp=Z,800nm,20.0s,MS4.9
LVV MLR MLR
comp=N,700nm,18.0s,MS5.0
KIS Kishinev 66.54 30 *e*P **P 08 44 43.0 -2.5**
comp=N,300nm,2.4s,mb5.9
KIS *e*S S 08 53 32.0 -5.0
KIS *e*L 09 13 08.0
KIS LRM 09 17 00.0
comp=N,500nm,18.0s

KIS Kishinev 66.54 30 *e*P P 08 44 43.0 -2.5
KIS *e* 08 45 14.0
KIS *e*S S 08 53 32.0 -5.0
KIS pmax pmax
comp=Z,280nm,2.4s,mb5.9
KIS MLR MLR
comp=N,500nm,17.0s,MS5.0
KIS MLR MLR
comp=E,500nm,17.0s,MS5.0
KIS MLR MLR
comp=Z,500nm,17.0s,MS4.8
KIS MLR MLR
comp=Z,500nm,18.0s
PMSA Palmer Station 66.59 201 *e*P P 08 44 45.3 -0.3
comp=Z,107nm,1.6s,mb5.6
MALT Malatya 66.84 42 *e*P P 08 44 48.0 +0.4
comp=Z,20nm,1.1s,mb5.1
MALT Malatya 66.84 42 P P 08 44 48.9 +1.3
MALT Malatya 66.84 42 ⇓*i*P P 08 44 48.5 +0.9
MALT Malatya 66.84 42 P P 08 44 48.1 +0.5
comp=Z,888nmcomp=Z,22nm,2.4s,mb4.8
MUD Monsted U'grnd 67.08 13 *i*P P 08 44 52.2 +3.5
MUD pmax pmax
comp=Z,22nm,0.9s,mb5.2
MUD MLR MLR
comp=Z,460nm,17.0s,MS4.8
MUD Monsted U'grnd 67.08 13 *i*P P 08 44 52.2 +3.5
comp=Z,22nm,0.9s,mb5.2
MUD
comp=Z,460nm,17.0s
COP Copenhagen 67.19 16 *i*P P 08 44 52.3 +2.9
COP pmax pmax
comp=Z,21nm,1.0s,mb5.1
COP MLR MLR
comp=Z,230nm,20.0s,MS4.4
COP Copenhagen 67.19 16 *i*P P 08 44 52.3 +2.9
comp=Z,21nm,1.0s,mb5.1
COP
comp=Z,230nm,20.0s
BSD Bornholm Skovb 67.39 17 *i*P P 08 44 51.4 +0.7
BSD pmax pmax
comp=Z,12nm,0.9s,mb4.9
BSD MLR MLR
comp=Z,450nm,17.0s,MS4.8
BSD Bornholm Skovb 67.39 17 *i*P P 08 44 51.4 +0.7
comp=Z,12nm,0.9s,mb4.9
BSD
comp=Z,450nm,17.0s
SIM Simferopol' 68.00 34 *e*P P 08 44 55.7 +0.9
SIM *e*S S 08 53 54.0 -0.8
SIM pmax pmax
comp=Z,33nm,7.9s
BCIP Isla Barro Col 68.33 283 *e*P P 08 44 58.2 +0.7
comp=Z,218nm,1.9s,mb5.9
BHD Baghdad 68.64 50 *ex* x 08 44 55.0
BHD *ex* x 08 53 58.7
AKASG Malin Array Be 69.30 27 P P 08 45 01.0 -1.8
comp=Z,2.8nm,0.5s,mb4.4,baz=225,slow=7.2,SNR=23
AKASG LR LR 09 16 56.6
comp=Z,535nm,19.4s,MS4.8,baz=240,slow=37
AKBB Malin Array Si 69.30 27 *e*P P 08 45 01.3 -1.4
SYO Syowa Base 69.72 162⇑*e*P P 08 45 03.0 -2.1
ANN Anapa 69.81 36*d i*P P 08 44 58.6 -7.4
ANN *e* 08 45 22.8
ANN *e*S S 08 54 04.9 -11
ANN *e*SS SS 08 58 39.5 -5.6
ANN pmax pmax
comp=Z,13nm,0.8s,mb4.9
KONO Kongsberg 70.09 12 *e*P P 08 45 08.9 +1.5
comp=Z,46nm,1.7s,mb5.1
KONO Kongsberg 70.09 12 *e*P P 08 45 08.9 +1.5
KONO pmax pmax
comp=Z,46nm,1.7s,mb5.1
SOC Sochi 70.50 38*d i*P P 08 45 10.1 -0.2
SOC *e* 08 47 46.8
SOC *e*PPP 08 49 27.9
SOC *e*S S 08 54 26.7 +2.4
SOC pmax pmax
comp=Z,35nm,1.0s,mb5.2
IIGN Ignalina 71.40 23 *e*P P 08 45 14.5 -1.0
IIGN AMB AMB 08 45 21.8
comp=Z,9.5nm,1.2s,mb4.6
MNK Minsk 71.41 24 *e*P P 08 45 08.0 -7.6
MICGM Minsk 71.43 24 *e* P 08 45 08.0 -7.7
IDID Didziasalis 71.58 23 *e*P P 08 45 15.6 -1.0
IDID AMB AMB 08 45 22.7
comp=Z,11nm,1.4s,mb4.6
NOA NORSAR Array B 71.69 12 P P 08 45 16.5 -0.6
comp=Z,6.7nm,0.9s,mb4.6,baz=207,slow=6.1,SNR=13
NOA LR LR 09 17 52.6
comp=Z,552nm,18.6s,MS4.8,baz=200,slow=37
IZAR Zarasai 71.71 22 *e*P P 08 45 16.4 -1.0
IZAR AMB AMB 08 45 23.6
comp=Z,7.5nm,1.7s,mb4.3
GNI Garni 72.01 43 *e*P P 08 45 20.8 +1.2
comp=Z,64nm,1.3s,mb5.4
GNI Garni 72.01 43*d i*P P 08 45 20.6 +1.1
GNI pmax pmax
comp=Z,104nm,2.5s
GNI MLR MLR
comp=Z,385nm,20.0s
GOR Gori 72.45 41 P P 08 45 23.2 +1.0
KIV Kislovodsk 72.52 39 *e*P P 08 45 23.6 +1.1
comp=Z,16nm,0.7s,mb5.1
KIV Kislovodsk 72.52 39*d i*P P 08 45 22.8 +0.3
KIV *e* 08 45 38.8
KIV *e* 08 48 04.5
KIV pmax pmax
comp=Z,80nm,2.5s,mb5.2
KIV MLR MLR
comp=Z,200nm,19.0s,MS4.4
TBLG Delisi 72.75 42 *e*P P 08 45 24.4 +0.5
TBLG Delisi 72.75 42 P P 08 45 24.5 +0.6
MTA Mtatsminda 72.77 42 P P 08 45 24.4 +0.4
DGRG David-gareji 73.04 42 P P 08 45 23.8 -1.8
GOF Gofitskoye 73.30 38 *e*P PcP 08 45 38.0 -5.5
GOF pmax pmax
comp=Z,50nm,1.3s,mb5.3
JTS JuntasAbangare 73.50 283 *i*P P 08 45 28.6 -0.3
VSR Storozhevoye 74.46 31 *e*P P 08 45 32.3 -1.5
VSR *e**SP sP 08 45 43.0 +7.8
VSR *e*S S 08 55 00.9 -8.5
VSR pmax pmax
comp=N,60nm,2.3s
VSR pmax pmax
comp=Z,150nm,2.3s,mb5.5
VSR pmax pmax
comp=E,50nm,2.1s
VSR smax
comp=E,250nm,6.0s
VSR smax
comp=Z,140nm,6.4s
VSR smax
comp=N,90nm,6.2s
VSR MLR MLR
comp=Z,680nm,17.0s,MS5.0
VSR MLR MLR
comp=N,210nm,15.0s,MS4.8
VSR MLR MLR
comp=E,360nm,18.0s,MS4.8
TRY Troy 74.54 318 *e*P P 08 45 35.1 +0.7
ACCN Adirondack Com 74.83 319 *e*P P 08 45 36.8 +0.7
comp=E,32nm,1.1s,mb5.2
MAK Makhachkala 75.13 42 *e*P P 08 45 34.3 -3.6
MAK *e* 08 45 45.5
MAK *e* 08 48 21.6
MAK *e*S S 08 55 13.0 -4.2
MAK *e* 08 55 43.7
MAK pmax pmax
comp=Z,37nm,0.3s,mb5.8
MVL Millersville 75.18 315 *e*P P 08 45 39.5 +1.4
comp=Z,22nm,1.1s,mb5.0
SDMD Soldier's Deli 75.28 314 *e*P P 08 45 40.3 +1.5
comp=Z,28nm,1.1s,mb5.1
FRNY Flat Rock 75.45 320 *e*P P 08 45 40.9 +1.3
comp=Z,31nm,1.1s,mb5.2
NCB Newcomb 75.46 319 *e*P P 08 45 39.8 +0.1
comp=Z,14nm,0.9s,mb4.9
OBN Obninsk 75.55 27 *i*P P 08 45 42.8 +2.8
OBN *e* 08 45 50.2
OBN *e* 08 48 28.4
OBN pmax pmax
comp=Z,22nm,1.3s,mb4.9
OBN MLR MLR
comp=Z,700nm,22.0s,MS4.9

VRHR Novokhopersk 75.68 32 *e*P P 08 45 46.6 +5.8
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VRHR pmax pmax
comp=N,50nm,1.5s
VRHR pmax pmax
comp=E,10.0nm,0.8s
BINY Binghamton 75.84 317 *e*P P 08 45 42.9 +1.0
comp=E,24nm,1.0s,mb5.1
FINES FINESS Array B 75.96 18 P P 08 45 42.2 0.0
comp=E,14nm,0.9s,mb4.9,baz=182,slow=8.8,SNR=14
FINES LR LR 09 18 56.0
comp=E,483nm,20.4s,MS4.8,baz=223,slow=36
MOS Moscow 76.41 27 *e*P P 08 45 42.9 -2.0
MOS *e* 08 45 53.7
MOS *e* 08 48 30.7
MOS pmax pmax
comp=Z,96nm,1.2s,mb5.6
MOS MLR MLR
comp=Z,800nm,20.0s,MS5.0
TGUH Tegucigalpa,Un 76.49 287 *e*P P 08 45 46.7 +0.5
comp=Z,14nm,0.8s,mb5.0
KAF Kangasniemi 76.54 18 *e*P P 08 45 44.6 -0.8
comp=Z,13nm,0.8s,mb4.9
KAF Kangasniemi 76.54 18 *e*P P 08 45 44.6 -0.8
KAF pmax pmax
comp=Z,13nm,0.8s,mb4.9
KAF Kangasniemi 76.54 18 *ep* P 08 45 44.6 -0.8
comp=Z,13nm,0.8s,mb4.9
JSC Jenkinsville 76.69 308 *e*P P 08 45 47.9 +0.9
SCHQ Schefferville 76.93 332 *e*P P 08 45 48.5 +0.7
comp=Z,27nm,1.1s,mb5.1
SCHQ Schefferville 76.93 332 P P 08 45 46.9 -0.9
comp=Z,9.7nm,0.8s,mb4.8,baz=108,slow=7.6,SNR=5.8
SCHQ LR LR 09 15 23.9
comp=Z,520nm,21.4s,MS4.8,baz=148,slow=32
BLA Blacksburg 77.06 311 *e*P P 08 45 50.6 +1.6
comp=Z,45nm,1.3s,mb5.2
BLA Blacksburg 77.06 311 *e*P P 08 45 50.6 +1.6
BLA pmax pmax
comp=Z,45nm,1.3s,mb5.2
MAW Mawson 77.26 158 *e*P P 08 45 49.9 +0.4
comp=Z,3.1nm,0.8s,mb4.3
MAW Mawson 77.26 158 P P 08 45 49.9 +0.4
comp=Z,11nm,0.6s,mb4.9,baz=280,slow=6.0,SNR=54
MAW LR LR 09 13 48.3
comp=Z,944nm,18.1s,MS5.2,baz=294,slow=31
JOF Joensuu 78.71 19 *e*P P 08 45 55.4 -2.2
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
JOF Joensuu 78.71 19 *ep* P 08 45 55.4 -2.2
comp=Z,5.3nm,0.7s,mb4.6
SCO Scoresbysund 78.72 357 *i*P P 08 46 03.1 +5.6
SCO pmax pmax
comp=Z,14nm,0.9s,mb4.9
SCO Scoresbysund 78.72 357 *i*P P 08 46 03.1 +5.6
comp=Z,14nm,0.9s,mb4.9
TEIG Tepich 78.77 292 *e*P P 08 45 59.0 +0.1
comp=Z,45nm,1.4s,mb5.2
TKL Tuckaleechee C 79.09 309 *e*P P 08 46 01.0 +0.8
CPCT Cooper Cave 79.60 308 *e*P P 08 46 04.2 +1.1
KLMR Klimovskoe 80.31 23 *e*P P 08 46 09.5 +3.2
KLMR pmax pmax
comp=Z,49nm,1.6s,mb5.2
SWET Sewanee 80.63 308 *e*P P 08 46 08.0 -0.6
ABKT Ailbek 80.75 49 P P 08 46 09.8 +0.6
comp=Z,126nm,1.0s,mb5.8,SNR=5.8
LRAL Lakeview Retre 80.86 305 *e*P P 08 46 09.9 -0.1
comp=Z,13nm,1.1s,mb4.8
WCI Wyandotte Cave 81.79 311 *e*P P 08 46 13.8 -1.0
comp=Z,19nm,0.9s,mb5.0
WCI Wyandotte Cave 81.79 311 *e*P P 08 46 13.8 -1.0
WCI pmax pmax
comp=Z,19nm,0.9s,mb5.0
ARCES ARCESS Array B 82.06 13 P P 08 46 15.1 -0.4
comp=Z,17nm,1.0s,mb5.0,baz=242,slow=5.2,SNR=14
ARCES LR LR 09 24 18.9
comp=Z,514nm,20.0s,MS4.9,baz=28,slow=37
ARE0 ARCESS Array S 82.06 13 *e*P P 08 46 16.8 +1.4
SUMG Summit 82.23 353 *e*P P 08 46 17.0 +0.7
comp=Z,80nm,1.2s,mb5.5
SUMG Summit 82.23 353⇓*i*P P 08 46 17.9 +1.6
comp=Z,34nm,1.0s,mb5.2
SUMG
comp=Z,340nm,16.0s
BLO Bloomington 82.24 311 *e*P P 08 46 16.0 -1.1
comp=Z,10nm,0.7s,mb4.9
BLO Bloomington 82.24 311 *e*P P 08 46 16.0 -1.1
BLO pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
WVT Waverly 82.37 308 *e*P P 08 46 15.8 -2.1
comp=Z,20nm,1.0s,mb5.0
WVT Waverly 82.37 308 *e*P P 08 46 15.8 -2.1
WVT pmax pmax
comp=Z,20nm,1.0s,mb5.0
KEV Kevo 82.56 13 *e*P P 08 46 17.0 -1.1
comp=Z,9.8nm,0.8s,mb4.9
KEV Kevo 82.56 13 *e*P P 08 46 17.0 -1.1
KEV pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
KEV Kevo 82.56 13 *ep* P 08 46 17.0 -1.1
comp=Z,9.8nm,0.8s,mb4.9
APA Apatity 82.59 16⇑*i*P P 08 46 12.3 -6.0
APA pmax pmax
comp=Z,30nm,1.3s,mb5.2
APA MLR MLR
comp=Z,600nm,18.0s,MS5.0
USIN University of 82.75 310 *e*P P 08 46 19.3 -0.5
comp=Z,14nm,0.7s,mb5.1
LVZ Lovozero 83.16 16⇑*e*P P 08 46 23.8 +2.5
LVZ pmax pmax
comp=Z,49nm,1.7s,mb5.3
LVZ MLR MLR
comp=Z,384nm,17.0s,MS4.8
OLIL Olney 83.29 311 *e*P P 08 46 21.6 -1.0
comp=Z,64nm,1.2s,mb5.5
VBMS Vicksburg 83.53 304 *e*P P 08 46 25.4 +1.5
comp=Z,11nm,0.3s,mb5.5
SIUC Southern Illin 83.87 309 *e*P P 08 46 25.1 -0.4
comp=Z,33nm,1.2s,mb5.3
PARMO Parma 84.01 308 *e*P P 08 46 25.6 -0.7
GNAR Gosnell 84.04 308 *e*P P 08 46 25.9 -0.6
comp=Z,2μm,1.2s
HBAR Harrisburg 84.44 307 *e*P P 08 46 28.1 -0.4
HDIL Hopedale 84.67 312 *e*P P 08 46 28.4 -1.2
comp=Z,19nm,0.7s,mb5.3
AKTO Aktyubinsk 84.70 38 LR LR 09 29 00.3
comp=Z,324nm,18.4s,MS4.7,baz=63,slow=39
FVM French Village 84.86 309 *e*P P 08 46 29.6 -1.0
comp=Z,47nm,1.2s,mb5.5
FVM French Village 84.86 309 *e*P P 08 46 29.6 -1.0
FVM pmax pmax
comp=Z,47nm,1.2s,mb5.5
CCM Cathedral Cave 85.50 309 *e*P P 08 46 33.1 -0.7
comp=Z,67nm,1.3s,mb5.7
CCM Cathedral Cave 85.50 309 *e*P P 08 46 33.2 -0.6
CCM pmax pmax
comp=Z,67nm,1.3s,mb5.7
ABKAR Akbulak array 85.51 39 *e*P P 08 46 33.9 +0.3
comp=Z,8.9nm,0.9s,mb5.0
UALR University of 85.60 306 *e*P P 08 46 34.4 0.0
comp=Z,13nm,0.8s,mb5.2
JFWS Jewell Farm 85.98 314 *e*P P 08 46 36.1 0.0
comp=Z,18nm,0.7s,mb5.4
JFWS Jewell Farm 85.98 314 *e*P P 08 46 36.1 0.0
JFWS pmax pmax
comp=Z,18nm,0.7s,mb5.4
MIAR Mount Ida 86.54 305 *e*P P 08 46 37.8 -1.3
comp=Z,7.3nm,0.9s,mb4.9
MIAR Mount Ida 86.54 305 *e*P P 08 46 37.8 -1.2
MIAR pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
NATX Nacogdoches 86.86 303 *e*P P 08 46 40.5 -0.2
comp=Z,13nm,0.6s,mb5.3
ARU Arti 87.02 32 *e*P P 08 46 41.3 +0.5
ARU Arti 87.02 32*d i*P P 08 46 40.9 +0.1
ARU 08 50 01.2
ARU S S 08 57 07.9 -12
ARU pmax pmax
comp=Z,20nm,2.5s,mb4.9
ARU MLR MLR
comp=Z,530nm,19.0s,MS5.0
HKT Hockley 87.50 301 *e*P P 08 46 44.3 +0.4
comp=Z,24nm,1.6s,mb5.2
HKT Hockley 87.50 301 *e*P P 08 46 44.3 +0.5
HKT pmax pmax
comp=Z,24nm,1.6s,mb5.2

SCIA State Center 87.87 313 *e*P P 08 46 46.1 +0.7
comp=Z,11nm,0.4s,mb5.5
MIR Mirnyy 89.00 157⇑*i*P P 08 46 51.0 +0.8
MIR pmax pmax
comp=Z,86nm,1.6s,mb5.8
MIR pmax pmax
comp=Z,400nm,4.0s
KSU1 Kansas State U 89.83 309 *e*P P 08 46 54.1 -0.6
comp=Z,11nm,0.7s,mb5.3
ECSD EROS Data Cent 90.69 314 *e*P P 08 46 58.2 -0.3
comp=Z,31nm,1.3s,mb5.5
WMOK Wichita Mounta 90.80 305 *e*P P 08 46 58.2 -1.0
comp=Z,16nm,1.2s,mb5.2
WMOK Wichita Mounta 90.80 305 *e*P P 08 46 58.2 -1.0
WMOK pmax pmax
comp=Z,16nm,1.2s,mb5.2
JCT Junction City 90.97 300⇑P P 08 46 59.6 -0.5
baz=91
JCT Junction City 90.97 300 *e*P P 08 46 59.5 -0.6
comp=Z,24nm,1.0s,mb5.5
JCT Junction City 90.97 300 *e*P P 08 46 59.5 -0.7
JCT pmax pmax
comp=Z,24nm,1.0s,mb5.5
AGMN Agassiz Nation 91.03 319 *e*P P 08 47 00.3 +0.3
comp=Z,14nm,1.1s,mb5.2
ULM Lac du Bonnet 91.42 320 LR LR 09 21 21.7
comp=Z,1μm,21.4s,MS5.3,baz=83,slow=31
CBKS Cedar Bluff 92.19 309⇓P P 08 47 06.0 +0.4
baz=92
CBKS Cedar Bluff 92.19 309 *e*P P 08 47 06.5 +0.9
comp=Z,12nm,0.9s,mb5.2
CBKS Cedar Bluff 92.19 309 *e*P P 08 47 06.5 +0.9
CBKS pmax pmax
comp=Z,12nm,0.9s,mb5.2
BRVK Borovoye 92.74 37 *i*P P 08 47 06.5 -1.3
BRVK pmax pmax
comp=Z,3.0nm,1.1s,mb4.6
BRVK MLR MLR
comp=Z,214nm,21.0s,MS4.6
BVAR Borovoye Array 92.79 37 P P 08 47 07.0 -1.0
comp=Z,1.5nm,0.7s,mb4.5,baz=265,slow=5.8,SNR=5.6
AMTX Amarillo 93.18 305⇑P P 08 47 10.1 -0.2
baz=93
428A Kincaid Ranch, 93.47 300⇓P P 08 47 12.2 +0.5
baz=94,SNR=7.7
528A Cox Ranch, San 93.48 300⇑P P 08 47 11.4 -0.4
baz=94
628A Black Gap, Mar 93.48 299⇓P P 08 47 12.2 +0.4
baz=94,SNR=10
328A Wristen Ranch, 93.66 301⇑P P 08 47 11.9 -0.7
baz=94
627A Terlingua Ranc 93.91 299⇓P P 08 47 13.5 -0.3
baz=94
MSTX Muleshoe 93.95 304⇑P P 08 47 13.7 -0.1
baz=94
AAK Ala-Archa 93.98 48 *e*P P 08 47 14.6 +0.9
comp=Z,17nm,1.2s,mb5.4
AAK Ala-Archa 93.98 48 LR LR 09 31 32.5
comp=Z,330nm,21.3s,MS4.8,baz=266,slow=37
AAK Ala-Archa 93.98 48 *i*P P 08 47 15.0 +1.2
AAK pmax pmax
comp=Z,2.0nm,1.1s,mb4.5
AAK MLR MLR
comp=Z,182nm,19.0s,MS4.6
AAK Ala-Archa 93.98 48 P P 08 47 19.2 +5.4
SBA Scott Base 94.09 180 *e*P P 08 47 14.0 +0.4
comp=Z,38nm,1.5s,mb5.6
SBA Scott Base 94.09 180 *e*P P 08 47 14.0 +0.4
SBA pmax pmax
comp=Z,38nm,1.5s,mb5.6
427A Hayter Ranch, 94.10 300⇓P P 08 47 14.4 -0.2
baz=94
FRU Bishkek 94.10 47 *e*P P 08 47 19.0 +4.7
FRU *e* 08 51 00.0
TXAR Lajitas Array 94.14 299 P P 08 47 14.1 -0.7
comp=Z,2.0nm,0.8s,mb4.6,baz=120,slow=6.8,SNR=22
TXAR LR LR 09 28 54.7
comp=Z,179nm,18.8s,MS4.6,baz=5,0,slow=35
527A Woodward Ranch 94.19 300⇑P P 08 47 15.3 +0.2
baz=94,SNR=13
OGNE Ogallala 94.23 311⇓P P 08 47 15.5 +0.5
baz=94
OGNE Ogallala 94.23 311 *e*P P 08 47 16.6 +1.6
comp=Z,24nm,0.9s,mb5.6
127A Arkansas Junct 94.28 302⇓P P 08 47 15.6 +0.2
baz=94
W27A Bowe Ranch, En 94.32 305⇑P P 08 47 15.4 -0.1
baz=94
626A Big Bend Ranch 94.57 299⇓P P 08 47 16.6 -0.2
baz=95,SNR=11
526A Mary Lane Ranc 94.59 300⇓P P 08 47 16.4 -0.5
baz=95
426A McDonald Obser 94.61 300⇑P P 08 47 17.1 +0.1
baz=95,SNR=7.7
326A Caldwell Ranch 94.64 301⇑P P 08 47 16.6 -0.5
baz=95
KSH Kashi 94.71 51⇑*i*P P 08 47 20.6 +3.4
KSH *ep*P pP 08 47 25.6 +7.3
KSH *es*P sP 08 47 27.8 +9.1
KSH *e*SKS 08 57 54.0
KSH *e*S S 08 58 32.3 +0.7
KSH *es*S sS 08 58 40.3 +6.9
KSH pmax pmax
comp=Z,3.0nm,0.6s,mb4.9
KSH pmax pmax
comp=Z,46nm,3.2s
KSH LR LR
comp=N,350nm,13.4s,MS5.1
KSH LR LR
comp=E,220nm,10.0s,MS5.1
KSH LR LR
comp=Z,350nm,15.1s
Y26A Elida 94.82 303⇑P P 08 47 17.8 0.0
baz=95
126A Clayton Basin, 94.83 302⇓P P 08 47 18.0 +0.1
baz=95
226A Malaga, Loving 94.83 302⇓P P 08 47 17.6 -0.3
baz=95,SNR=5.7
Z26A Caprock 94.87 303⇓P P 08 47 17.7 -0.4
baz=95
X26A CR and CF Fran 94.88 304⇓P P 08 47 17.7 -0.4
baz=95,SNR=14
V26A Tequesquite Ra 95.00 305⇓P P 08 47 18.3 -0.3
baz=95,SNR=9.4
GDL2 Guadalupe Moun 95.07 302 *e*P P 08 47 18.6 -0.4
125A Gardner Draw, 95.37 302⇓P P 08 47 19.4 -1.0
baz=95
425A Indio Mountain 95.44 300⇓P P 08 47 20.6 -0.2
baz=96,SNR=12
W25A X Bar L Ranch, 95.48 305⇓P P 08 47 20.2 -0.6
baz=96
325A Bean Ranch, Si 95.49 301⇓P P 08 47 20.7 -0.3
baz=96
U25A Circle Dot Ran 95.56 306⇑P P 08 47 21.0 -0.2
baz=96
X25A Clemmons Ranch 95.57 304⇑P P 08 47 21.2 0.0
baz=96
T25A Trinidad 95.64 307⇑P P 08 47 21.3 -0.2
baz=96
V25A Rancho No Teng 95.67 305⇑P P 08 47 21.4 -0.2
baz=96
Q25A Bedland, Calha 95.70 308⇓P P 08 47 21.6 -0.1
baz=96,SNR=6.1
S25A Robets Cordova 95.71 307⇑P P 08 47 22.2 +0.3
baz=96,SNR=7.8
FFC Flin Flon 95.77 324 *e*P P 08 47 21.6 -0.1
comp=Z,30nm,1.5s,mb5.5
FFC Flin Flon 95.77 324 *i*P P 08 47 22.5 +0.8
MNTX Cornudas Mount 95.88 301⇓P P 08 47 22.1 -0.6
baz=96
224A Cornudas Mount 96.03 301⇑P P 08 47 22.8 -0.6
baz=96,SNR=6.1
124A Stringfield Ra 96.04 302⇓P P 08 47 22.9 -0.5
baz=96
Y24A Capitan 96.15 303⇑P P 08 47 23.3 -0.6
baz=96,SNR=6.4
V24A Rampart Ranch, 96.19 305⇓P P 08 47 23.4 -0.6
baz=96
W24A Lazy 6 Ranch, 96.25 305⇑P P 08 47 23.9 -0.4
baz=96
R24A Sanders Place, 96.30 308⇓P P 08 47 24.5 +0.1
baz=96
S24A Houchin Ranch, 96.33 307⇑P P 08 47 24.7 0.0
baz=96
M24A Cheyenne 96.38 311⇑P P 08 47 24.0 -0.8
baz=96
Q24A Divide 96.40 308⇑P P 08 47 24.5 -0.4

baz=96
SDCO Great Sand Dun 96.56 307 *e*P P 08 47 26.1 +0.4
comp=Z,15nm,1.5s,mb5.2
Y23A Lovelace Mesa, 96.66 303 ⇑P P 08 47 25.3 -1.0
baz=97
Z23A Rita Site, Whi 96.75 303 ⇑P P 08 47 26.6 0.0
baz=97
ISCO Idaho Springs 96.83 309 ⇓P P 08 47 26.8 0.0
baz=97
ISCO Idaho Springs 96.83 309 *e*P P 08 47 28.7 +1.8
comp=Z,12nm,1.4s,mb5.1
ISCO Idaho Springs 96.83 309 *e*P P 08 47 28.7 +1.8
ISCO pmax pmax
comp=Z,12nm,1.4s,mb5.1
W23A Werner Place, 96.85 304 ⇑P P 08 47 26.5 -0.6
baz=97
T23A Casias Ranch, 96.93 306 ⇓P P 08 47 27.1 -0.3
baz=97
P23A Jefferson 96.97 309 ⇓P P 08 47 28.3 +0.8
baz=97
ANMO Albuquerque 97.09 304 *e*P P 08 47 29.0 +0.8
comp=Z,1.9nm,0.9s,mb4.5
ANMO Albuquerque 97.09 304 *e*P P 08 47 29.0 +0.9
ANMO pmax pmax
comp=Z,2.0nm,0.9s
O23A Lake Granby, G 97.10 310 ⇓P P 08 47 28.5 +0.5
baz=97
BNM Barren Site 97.16 303 *e*P P 08 47 28.6 +0.2
comp=Z,13nm,1.5s,mb5.1
N23A Red Feather La 97.18 310 ⇓P P 08 47 29.0 +0.6
baz=97
Z22A Elephant Butte 97.36 303 ⇓P P 08 47 29.5 +0.1
baz=97
Y22A Socorro 97.42 303 ⇑P P 08 47 29.7 +0.1
baz=97
U22A Llaves 97.53 306 ⇓P P 08 47 30.5 +0.4
baz=98
V22A San Miguel Ran 97.53 305 ⇓P P 08 47 30.3 +0.2
baz=98
O22A Kremmling 97.58 309 ⇓P P 08 47 30.3 +0.1
baz=98
KURK Kurchatov 97.59 40 *e*P P 08 47 31.1 +1.1
comp=Z,2.0nm,0.6s,mb4.8
KURK Kurchatov 97.59 40 *e*P P 08 47 31.1 +1.1
KURK pmax pmax
comp=Z,2.0nm,0.6s,mb4.8
R22A Saguache, Gunn 97.59 308 ⇑P P 08 47 30.7 +0.4
baz=98
LAZ Ladron 97.60 304 *e*P P 08 47 32.0 +1.5
comp=Z,4.9nm,1.4s,mb4.8
S22A 4UR Ranch, Cre 97.61 307 ⇑P P 08 47 30.7 +0.2
baz=98
T22A Edith 97.61 306 ⇓P P 08 47 30.8 +0.3
baz=98
P22A Eagle 97.70 309 ⇓P P 08 47 31.2 +0.4
baz=98
Q22A Crested Butte, 97.76 308 ⇓P P 08 47 31.6 +0.5
baz=98
SMCO Snowmass 97.83 308 *e*P P 08 47 32.8 +1.4
comp=Z,23nm,1.9s,mb5.4
Y21A Point of Rocks 98.01 303 ⇑P P 08 47 32.3 -0.1
baz=98
X21A Alamocita Cree 98.13 304 ⇑P P 08 47 32.8 0.0
baz=98
U21A Nageezi 98.18 306 ⇑P P 08 47 32.9 -0.1
baz=98
L21A Rawlins 98.32 311 ⇓P P 08 47 34.1 +0.6
baz=98
N21A Black Mountain 98.36 310 ⇓P P 08 47 34.4 +0.7
baz=98
S21A Coal Bank Pass 98.37 307 ⇓P P 08 47 34.3 +0.4
baz=98
I21A Big Trails, Te 98.37 313 ⇑P P 08 47 33.9 +0.1
baz=98
320A Kipp Ranch, An 98.52 300 ⇓P P 08 47 34.8 +0.1
baz=98
Z20A Nine Sixteen R 98.71 302 ⇑P P 08 47 35.3 -0.1
baz=99
X20A Quemado 98.73 304 ⇓P P 08 47 35.8 +0.3
baz=99
E19A Rath Farm, Rou 99.55 316 ⇑P P 08 47 38.0 -0.9
baz=100
R19A Curley Farm, L 99.56 307 ⇑P P 08 47 38.8 -0.3
baz=100
MKAR Makanchi Array 99.85 44 P Pdif 08 47 40.8 +0.7
comp=Z,0.3nm,0.2s,baz=273,slow=2.2,SNR=4.2
MKAR LR LR 09 39 24.8
comp=Z,471nm,19.1s,MS5.0,baz=272,slow=39
D16A Dana Ranch, Ca 101.46 316 ⇓P Pdif 08 47 46.6 -0.6
baz=102
EDM Edmonton 102.44 323 *e*Pdif Pdif 08 47 51.1 -0.5
GTA Gaotai 113.11 51 *e*PKP PKiKP 08 52 38.5 +5.0
ILAR Eielson Array 114.81 340 PKP PKiKP 08 52 33.4 -2.5
comp=Z,1.1nm,1.2s,baz=90,slow=1.8,SNR=4.3
ILAR PKKPbc PKKPbc 09 03 14.9 -0.5
comp=Z,0.9nm,1.0s,baz=244,slow=4.3,SNR=4.7
RKT Rikitea 114.91 240 *e*SS SS 09 09 30.9 -1.4
comp=Z,306nm,28.8s
RKT *e*LR LR 09 27 22.9
comp=Z,430nm,25.2s
SONM Songino Array 115.89 41 PKP PKPdf 08 52 35.8 -2.7
comp=Z,0.3nm,0.4s,baz=90,slow=4.3,SNR=2.5
SONM PKKPbc PKKPbc 09 03 12.6 +1.3
comp=Z,0.7nm,0.8s,baz=130,slow=5.1,SNR=3.7
LZH Lanzhou 116.80 54 *e*PKP PKPdf 08 52 36.5 -4.1
LZH sPKP 08 52 41.6
LZH LR LR
comp=N,490nm,15.1s
LZH LR LR
comp=Z,540nm,20.0s,MS5.2
KMI Kunming 117.12 66 PKP PKPdf 08 52 43.3 +1.7
CD2 Chengdu 117.48 59 PKP PKPdf 08 52 42.0 -0.1
CD2 PP PP 08 53 59.3 +5.4
CD2 PKS 08 56 17.5
CD2 SKS SKSdf 08 59 53.1 -2.3
CD2 SKKS SKKSac 09 00 51.6 -4.3
CD2 SS SS 09 10 07.8 +1.6
CD2 AMB AMB
comp=Z,150nm,5.5s
CD2 LR LR
comp=N,460nm,20.1s,MS5.1
CD2 LR LR
comp=E,250nm,21.6s,MS5.1
CD2 LR LR
comp=Z,400nm,25.3s,MS4.9
GYA Guiyang 120.54 64 *e*Pdif Pdif 08 49 12.8 +0.8
GYA PKP PKPdf 08 52 48.0 -0.1
GYA PP PP 08 54 21.3 +6.2
GYA PKS 08 56 22.3
GYA SKKS SKKSac 09 01 10.5 -5.7
GYA SS SS 09 10 45.3 -0.6
GYA AMB AMB
comp=Z,130nm,7.9s
GYA LR LR
comp=N,190nm,21.8s,MS4.8
GYA LR LR
comp=E,160nm,22.0s,MS4.8
GYA LR LR
comp=Z,170nm,24.1s,MS4.6
HHC Hu-ho-hao-te 121.55 47 *e*PKP PKPdf 08 52 46.5 -3.1
HHC PP PP 08 54 24.9 +3.5
HHC PKS 08 56 21.3
HHC SKS SKSdf 08 59 53.6 -9.1
HHC SKKS SKKSac 09 01 13.8 -8.4
HHC SS SS 09 10 57.8 +0.1
HHC LR LR
comp=N,200nm,14.1s,MS5.1
HHC LR LR
comp=E,280nm,14.7s,MS5.1
HHC LR LR
comp=Z,450nm,16.8s,MS5.2
QIZ Qiongzhong 124.06 73 PKP PKPdf 08 52 54.5 -0.6
QIZ PP PP 08 54 39.3 0.0
QIZ SS SS 09 11 31.6 +0.4
QIZ LR LR
comp=N,310nm,20.2s,MS5.0
QIZ LR LR
comp=E,170nm,20.6s,MS5.0
QIZ LR LR
comp=Z,370nm,18.8s,MS5.1
TAOE Nuku Hiva Isla 124.25 253 *e*LR LR 09 31 35.2
comp=Z,844nm,22.5s
SEY Seymchan 124.40 8 *i* PKIKP PKPdf 08 52 59.5 +5.1
BJI Beijing 125.14 46 PKP PKPdf 08 52 56.5 0.0
BJI PP PP 08 54 45.9 +0.3
BJI SS SS 09 11 44.8 +1.6
BJI LR LR
comp=N,300nm,19.9s,MS5.1
BJI LR LR
comp=E,260nm,18.8s,MS5.1
BJI LR LR
comp=Z,330nm,27.6s
WHN Wuhan 126.52 58 PKP PKPdf 08 53 04.5 +5.0
WHN LR LR
comp=N,2μm,24.4s,MS5.8
WHN LR LR
comp=E,2μm,23.0s,MS5.8
WHN LR LR
comp=Z,1μm,18.6s,MS5.6
PPT Papeete 129.66 239 *e*SS SS 09 12 42.3 +2.0
comp=Z,650nm,26.0s
PPT *e*LR LR 09 34 06.8
comp=Z,435nm,22.8s
KLR Kul'dur 129.78 29 *e*PKIKP PKPdf 08 53 03.7 -1.4
NJ2 Nanjing 129.84 55 *e*PKP PKPdf 08 53 02.6 -3.2
NJ2 PP PP 08 55 18.5 +1.5
NJ2 SKS SKSdf 09 00 09.5 -9.1
NJ2 SKKS SKKSac 09 02 08.0 -7.3
NJ2 AMB AMB
comp=Z,110nm,7.9s
NJ2 LR LR
comp=N,420nm,25.0s,MS5.3
NJ2 LR LR
comp=E,610nm,27.8s,MS5.3
NJ2 LR LR
comp=Z,800nm,26.8s,MS5.3
MDJ Mudanjiang 131.62 35 PKP PKPdf 08 53 08.8 +0.1
MDJ PP PP 08 55 27.6 0.0
MDJ AMB AMB
comp=Z,260nm,4.4s
MDJ LR LR
comp=N,210nm,23.6s,MS4.9
MDJ LR LR
comp=E,220nm,27.1s,MS4.9
MDJ LR LR
comp=Z,230nm,25.9s,MS4.8
FITZ Fitzroy Crossi 131.90 123 *e*P PKPdf 08 53 07.1 -3.0
comp=Z,16nm,1.0s
FITZ Fitzroy Crossi 131.90 123 *e*PKPdf PKPdf 08 53 13.2 +3.1
SSE Sheshan 132.03 55 PKP PKPdf 08 53 07.8 -2.1
SSE PP PP 08 55 36.8 +5.7
SSE SS SS 09 13 11.6 +2.4
SSE AMB AMB
comp=Z,78nm,4.5s
SSE LR LR
comp=N,190nm,24.2s,MS5.0
SSE LR LR
comp=E,290nm,24.2s,MS5.0
SSE LR LR
comp=Z,350nm,14.8s
ASAR Alice Springs 135.06 136 PKP PKPdf 08 53 15.8 0.0
ASAR Alice Springs 135.06 136 PKhKP PKPpre 08 53 02.0
comp=Z,1.5nm,1.0s,baz=218,slow=3.0,SNR=5.3
ASAR PKP PKPdf 08 53 15.8 0.0
comp=Z,1.4nm,0.7s,baz=205,slow=2.6,SNR=9.4
WRA Warramunga Arr 137.73 132 PKP PKPdf 08 53 19.9 -1.0
WRA Warramunga Arr 137.73 132 PKhKP PKPpre 08 53 09.5
comp=Z,1.2nm,0.7s,baz=240,slow=2.7,SNR=6.5
WRA PKP PKPdf 08 53 19.9 -1.0
comp=Z,1.7nm,0.8s,baz=242,slow=2.5,SNR=5.2
MJAR Matsushiro Arr 141.78 38 PKP PKPdf 08 53 27.3 -0.5
comp=Z,1.0nm,0.4s,baz=334,slow=3.0,SNR=3.1
CTA Charters Tower 145.52 145 *e*P PKPdf 08 53 34.4 -0.5
comp=Z,31nm,1.0s
CTAO Charters Tower 145.52 145 *e*PKPdf PKPdf 08 53 34.0 -0.9
COEN Coen 148.03 133 *e*PKPbc PKPbc 08 53 42.2 0.0
DZM Mont Dzumac 149.92 180 eLR LR 09 43 24.7
comp=Z,322nm,22.2s

*ISCJB **19** 08:40:36.3±1.1,28°.9N±0°.1×51°.32E±0°.04,h10km, Error ellipse: s-maj=18.7km s-min=4.0km az=168.2*
*KISR **19** 08:40:36.4±0.6,28°.88N×50°.96E,h34km±186km, ML2.7*
*TEH **19** 08:40:39.2,28°.85N×51°.38E,h19km*
ISC 19 08:40:37.2±1.2,28°.8N±0°.1×51°.34E±0°.05,h10km,n10, σ0s49/16,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISRV	**Sarvestan**	**1.65**	**70**	*e*	**Pg**	**08 41 14.8**	**+6.0**
	comp=Z,5μm,0.2s						
ISRV				*e*Pn	**Pn**	**08 41 07.0**	**+0.8**
ISRV				*e*Sg	**Sg**	**08 41 29.6**	**-0.7**
IPAR	**Pars**	**1.81**	**56**	*e*Sg	**Sg**	**08 41 34.4**	**-0.9**
IPAR				*e*Pn	**Pn**	**08 41 09.1**	**+0.7**
IPAR				*e*		08 41 41.8	
	comp=Z,4μm,0.4s						
RDF	**Al-Radifah**	**3.32**	**273**	*e*P	**Pn**	**08 41 29.0**	**-0.2**
RDF				*e*S	**Sn**	**08 42 08.6**	**-0.2**
RDF				AML	AML	08 42 12.6	
	comp=Z,22nm,0.4s						
NAY	**Al-Naaiem**	**3.61**	**278**	*e*P	**Pn**	**08 41 33.3**	**+0.1**
NAY				*e*S	**Sn**	**08 42 15.3**	**-0.5**
NAY				AML	AML	08 42 17.0	
	comp=Z,12nm,0.5s						
IGAR	**Gharneh**	**3.62**	**10**	*e*Pn	**Pn**	**08 41 34.0**	**+0.7**
IGAR				*e*		08 41 47.5	
	comp=Z,227nm,0.2s						
MIB	**Mutribah**	**3.62**	**287**	*e*P	**Pn**	**08 41 33.1**	**-0.2**
MIB				*e*S	**Sn**	**08 42 16.1**	**-0.1**
MIB				AML	AML	08 42 20.1	
	comp=Z,28nm,0.6s						
IMEH	**Mehriz**	**3.82**	**47**	*e*Pn	**Pn**	**08 41 36.2**	**+0.1**
IMEH				*e*		08 41 55.0	
	comp=Z,320nm,0.1s						
IZEF	**Zefreh**	**4.14**	**12**	*e*Pn	**Pn**	**08 41 40.9**	**+0.4**
IZEF				*e*		08 42 01.6	
	comp=Z,136nm,0.1s						
IKLH	**Kolahrood**	**4.48**	**3**	*e*Pn	**Pn**	**08 41 45.4**	**+0.2**
IKLH				*e*		08 42 48.1	
	comp=N,254nm,0.2s						
IBAF	**Bafgh**	**4.58**	**52**	*e*Pn	**Pn**	**08 41 46.3**	**-0.2**
IBAF				*e*		08 42 01.8	
	comp=Z,249nm,0.3s						

*ISCJB **19** 08:48:35.9±0.4,38°.12N±0°.03×21°.53E±0°.03,h19km±3km, Error ellipse: s-maj=5.0km s-min=3.4km az=164.7*
*ATH **19** 08:48:35.4,38°.12N×21°.52E,h19km±1km, MDJ3.2/15*
*THE **19** 08:48:35.7,38°.06N×21°.56E,h10km±1km, ML2.3/6, Error ellipse: s-maj=1.9km s-min=0.6km az=164.0*
*NEIC **19** 08:48:35.4,38°.12N×21°.52E,h19km, MD3.2(ATH), After ATH.*
*CSEM **19** 08:48:35.5±0.2,38°.14N×21°.52E,h18km±1km, MD3.2, Error ellipse: s-maj=5.1km s-min=3.2km az=160.0*
ISC 19 08:48:35.9±0.4,38°.13N±0°.03×21°.52E±0°.03,h18km±2km, n52,σ1s01/90,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.08**	**213**	*e*Pb	**Pg**	**08 48 39.1**	**-0.3**
RLS				*e*Sb	**Sg**	**08 48 42.0**	**+0.2**
RLS	**Riolos of Patr**	**0.08**	**213**	*e*PB	**Pg**	**08 48 39.1**	**-0.3**
RLS				*e*SB	**Sg**	**08 48 42.0**	**+0.2**
RLS	**Riolos of Patr**	**0.08**	**213**	*e*Pb	**Pg**	**08 48 39.1**	**-0.3**
RLS				*e*Sb	**Sg**	**08 48 42.0**	**+0.2**
UPR	**University Cam**	**0.26**	**53**	*e*PB	**Pg**	**08 48 40.9**	**-0.9**
UPR				*e*SB	**Sg**	**08 48 46.2**	**+0.4**
UPR	**University Cam**	**0.26**	**53**	P	**Pg**	**08 48 41.8**	**0.0**
UPR				S	**Sg**	**08 48 46.1**	**+0.3**
UPR	**University Cam**	**0.26**	**53**	*e*Pb	**Pg**	**08 48 40.9**	**-0.9**
UPR	**University Cam**	**0.26**	**53**	P	**Pg**	**08 48 41.8**	**0.0**
UPR				S	**Sg**	**08 48 46.1**	**+0.3**
LAKA	**Lakka**	**0.38**	**72**	P	**Pg**	**08 48 43.1**	**-0.7**
LAKA				S	**Sg**	**08 48 49.0**	**-0.1**
LAKA	**Lakka**	**0.38**	**72**	P	**Pg**	**08 48 43.1**	**-0.7**
LAKA				S	**Sg**	**08 48 49.0**	**-0.1**
EFP	**Efpalio**	**0.42**	**45**	*e*PB	**Pb**	**08 48 43.9**	**-1.0**
EFP				*e*SB	**Sb**	**08 48 50.8**	**-0.1**
EFP	**Efpalio**	**0.42**	**45**	P	**Pg**	**08 48 44.2**	**-0.4**
EFP				S	**Sg**	**08 48 51.7**	**+1.2**
EFP	**Efpalio**	**0.42**	**45**	*e*Pb	**Pb**	**08 48 43.9**	**-1.0**
EFP	**Efpalio**	**0.42**	**45**	P	**Pg**	**08 48 44.2**	**-0.4**
EFP				*e*Sb	**Sb**	**08 48 50.8**	**-0.1**
EFP				S	**Sg**	**08 48 51.7**	**+1.2**
TRIZ	**Trizonia**	**0.49**	**61**	P	**Pg**	**08 48 45.1**	**-0.8**
TRIZ				S	**Sg**	**08 48 53.1**	**+0.5**
TRIZ	**Trizonia**	**0.49**	**61**	P	**Pg**	**08 48 45.1**	**-0.8**
TRIZ				S	**Sg**	**08 48 53.1**	**+0.5**
KALE	**Kalithea**	**0.55**	**61**	P	**Pg**	**08 48 46.1**	**-0.8**
KALE				S	**Sg**	**08 48 54.9**	**+0.5**
KALE	**Kalithea**	**0.55**	**61**	P	**Pg**	**08 48 46.1**	**-0.8**
KALE				S	**Sg**	**08 48 54.9**	**+0.5**
KFL	**Anninata**	**0.58**	**269**	P	**Pg**	**08 48 47.3**	**-0.1**
KFL				S	**Sg**	**08 48 57.2**	**+2.0**
KFL	**Anninata**	**0.58**	**269**	P	**Pg**	**08 48 47.3**	**-0.1**
KFL				S	**Sg**	**08 48 57.2**	**+2.0**
GUR	**Goura**	**0.67**	**106**	*e*PB	**Pb**	**08 48 48.0**	**-1.1**
GUR				*e*SN	**Sb**	**08 48 57.7**	**-0.4**
GUR	**Goura**	**0.67**	**106**	P	**Pb**	**08 48 48.1**	**-1.0**
GUR				S	**Sb**	**08 48 57.6**	**-0.5**
GUR	**Goura**	**0.67**	**106**	P	**Pb**	**08 48 48.1**	**-1.0**
GUR				S	**Sb**	**08 48 57.6**	**-0.5**
VLS	**Valsamata**	**0.74**	**274**	*e*Pn	**Pn**	**08 48 49.3**	**-2.1**
VLS				*e*Sn	**Sn**	**08 49 01.1**	**-1.0**
VLS	**Valsamata**	**0.74**	**274**	*e*PN	**Pn**	**08 48 49.3**	**-2.1**
VLS				*e*SN	**Sn**	**08 49 01.1**	**-1.0**
VLS	**Valsamata**	**0.74**	**274**	P	**Pb**	**08 48 49.6**	**-0.6**
VLS				S	**Sb**	**08 49 01.4**	**+1.5**
VLS	**Valsamata**	**0.74**	**274**	*e*Pn	**Pn**	**08 48 49.3**	**-2.1**
VLS	**Valsamata**	**0.74**	**274**	P	**Pb**	**08 48 49.6**	**-0.6**
VLS				*e*Sn	**Sn**	**08 49 01.1**	**-1.0**
VLS				S	**Sb**	**08 49 01.4**	**+1.5**
EVR	**Evrytania**	**0.82**	**16**	*e*Pn	**Pn**	**08 48 51.3**	**-1.2**
EVR				*e*Sn	**Sn**	**08 49 03.1**	**-1.1**
EVR	**Evrytania**	**0.82**	**16**	*e*PN	**Pn**	**08 48 51.3**	**-1.2**
EVR				*e*SN	**Sn**	**08 49 03.1**	**-1.1**
EVR	**Evrytania**	**0.82**	**16**	*e*Pn	**Pn**	**08 48 51.3**	**-1.2**
EVR				*e*Sn	**Sn**	**08 49 03.1**	**-1.1**
DSF	**Desfina**	**0.84**	**70**	P	**Pb**	**08 48 50.7**	**-1.2**
DSF				S	**Sb**	**08 49 03.4**	**+0.6**
DSF	**Desfina**	**0.84**	**70**	P	**Pb**	**08 48 50.7**	**-1.2**
DSF				S	**Sb**	**08 49 03.4**	**+0.6**
ITM	**Ithomi**	**1.00**	**161**	*e*Pn	**Pn**	**08 48 55.0**	**+0.1**
ITM	**Ithomi**	**1.00**	**161**	*e*PN	**Pn**	**08 48 55.0**	**+0.1**
ITM	**Ithomi**	**1.00**	**161**	*e*Pn	**Pn**	**08 48 55.0**	**+0.1**
VLX	**Vlachokerasia**	**1.01**	**138**	*e*PN	**Pn**	**08 48 54.7**	**-0.5**
VLX				*e*SN	**Sn**	**08 49 08.9**	**0.0**
VLX	**Vlachokerasia**	**1.01**	**138**	*e*Pn	**Pn**	**08 48 54.7**	**-0.5**
VLX				*e*Sn	**Sn**	**08 49 08.9**	**0.0**
AGG	**Agios Georgios**	**1.10**	**35**	*e*Pn	**Pn**	**08 48 56.1**	**-0.2**
AGG				*e*Sn	**Sn**	**08 49 12.0**	**+1.0**
AGG	**Agios Georgios**	**1.10**	**35**	*e*PN	**Pn**	**08 48 56.1**	**-0.2**
AGG				*e*SN	**Sn**	**08 49 12.0**	**+1.0**
AGG	**Agios Georgios**	**1.10**	**35**	P	**Pb**	**08 48 56.2**	**-0.1**
AGG				S	**Sb**	**08 49 13.9**	**+3.7**
AGG	**Agios Georgios**	**1.10**	**35**	*e*Pn	**Pn**	**08 48 56.1**	**-0.2**
AGG				*e*Sn	**Sn**	**08 49 12.0**	**+1.0**
LTK	**Loutraki**	**1.14**	**95**	*e*PN	**Pn**	**08 48 58.0**	**+1.1**
LTK	**Loutraki**	**1.14**	**95**	*e*Pn	**Pn**	**08 48 58.0**	**+1.1**
PYL	**PYLOS**	**1.24**	**172**	*e*PN	**Pn**	**08 48 59.1**	**+0.8**
PYL	**PYLOS**	**1.24**	**172**	*e*Pn	**Pn**	**08 48 59.1**	**+0.8**
LKR	**Lokris**	**1.27**	**65**	*e*Pn	**Pn**	**08 48 58.9**	**+0.2**
LKR	**Lokris**	**1.27**	**65**	*e*PN	**Pn**	**08 48 58.9**	**+0.2**
LKR	**Lokris**	**1.27**	**65**	*e*Pn	**Pn**	**08 48 58.9**	**+0.2**
THL	**Klokotos Trika**	**1.49**	**15**	*e*PN	**Pn**	**08 49 03.6**	**+1.9**
DID	**Didima**	**1.49**	**114**	*e*PN	**Pn**	**08 49 03.9**	**+2.2**
DID				*e*SN	**Sn**	**08 49 23.5**	**+2.8**
VLI	**Veliai**	**1.80**	**141**	*e*Pb	**Pb**	**08 49 07.0**	**-1.3**
VLI	**Veliai**	**1.80**	**141**	*e*PB	**Pb**	**08 49 07.0**	**-1.3**

*NEIC **19** 09:17:44.6, 18°.57N×65°.42W, h107km, MD3.1(RSPR), After RSPR.*
RSPR 19 09:17:44.6,18°.57N×65°.42W,h107km±1km,MD3.1/8, 12C-6D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTP	**Monte Pirata**	**0.49**	**195**	*e*P	Pn	09 18 00.4	-0.7
MTP				*e*S	Sn	09 18 12.4	-1.0
MTP	**Monte Pirata**	**0.49**	**195**	*e*P	Pn	09 18 00.4	-0.7
MTP				*e*S	Sn	09 18 12.4	-1.0
STVI	**Saint Thomas**	**0.49**	**116**	*e*P	Pn	09 18 00.9	-0.2
STVI				*e*S	Sn	09 18 13.5	0.0
STVI	**Saint Thomas**	**0.49**	**116**	*e*P	Pn	09 18 00.9	-0.2
STVI				*e*S	Sn	09 18 13.5	0.0
CBYP	**Canovanas**	**0.51**	**234**	*e*P	Pn	09 18 00.7	-0.5
CBYP				*e*S	Sn	09 18 13.6	-0.1
CBYP	**Canovanas**	**0.51**	**234**	*e*P	Pn	09 18 00.7	-0.5
CBYP				*e*S	Sn	09 18 13.6	-0.1
HUMP	**Col San Antoni**	**0.59**	**224**	*e*P	Pn	09 18 01.1	-0.7
HUMP				*e*S	Sn	09 18 14.5	-0.2
HUMP	**Col San Antoni**	**0.59**	**224**	*e*P	Pn	09 18 01.1	-0.7
HUMP				*e*S	Sn	09 18 14.5	-0.2
TBVI	**Tortola**	**0.78**	**101**	*e*P	Pn	09 18 02.8	-0.6
TBVI	**Tortola**	**0.78**	**101**	*e*P	Pn	09 18 02.8	-0.6
OBIP	**Obispado Ponce**	**1.24**	**245**	*e*S	Sn	09 18 26.2	+0.1
OBIP	**Obispado Ponce**	**1.24**	**245**	*e*S	Sn	09 18 26.2	+0.1
ICM	**Isla Caja Muer**	**1.24**	**237**	*e*P	Pn	09 18 08.2	-0.1
ICM	**Isla Caja Muer**	**1.24**	**237**	*e*P	Pn	09 18 08.2	-0.1
AOPR	**Arecibo Observ**	**1.28**	**260**	*e*P	Pn	09 18 08.3	-0.4
AOPR				*e*S	Sn	09 18 26.7	-0.3
AOPR	**Arecibo Observ**	**1.28**	**260**	*e*P	Pn	09 18 08.3	-0.4
AOPR				*e*S	Sn	09 18 26.7	-0.3
AGPR	**Aguadilla, PR**	**1.61**	**267**	*e*P	Pn	09 18 12.4	-0.2
AGPR				*e*S	Sn	09 18 33.6	-0.2
AGPR	**Aguadilla, PR**	**1.61**	**267**	*e*P	Pn	09 18 12.4	-0.2
AGPR				*e*S	Sn	09 18 33.6	-0.2
CRPR	**Cabo Rojo, PR**	**1.70**	**251**	*e*P	Pn	09 18 13.4	-0.2
CRPR				*e*S	Sn	09 18 35.6	-0.2
CRPR	**Cabo Rojo, PR**	**1.70**	**251**	*e*P	Pn	09 18 13.4	-0.2
CRPR				*e*S	Sn	09 18 35.6	-0.2

DJA 19 09:25:40,8°.31S×107°.62E,h13km,MLv3.5/7,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**0.77**	**14**	P	Pg	09 25 54.7	-0.3
CISI				S	Sg	09 26 04.8	-0.4
LEM	**Lembang**	**1.47**	**360**	P	Pn	09 26 07.4	+1.1
LEM				S	Sn	09 26 25.0	-0.4
SKJI	**Sukabumi**	**1.67**	**321**	P	Pn	09 26 07.5	-1.5
SKJI				S	Sn	09 26 30.2	-0.1
BJII	**Banjamegara**	**2.29**	**65**	P	Pn	09 26 18.8	+1.3
CGJI	**Cibinong**	**2.55**	**311**	P	Pn	09 26 21.3	+0.2
UGM	**Wanagama**	**2.90**	**82**	P	Pn	09 26 24.5	-1.4
PWJI	**Pagerwojo**	**4.15**	**86**	P	Pn	09 26 42.8	-0.3

CASC 19 09:31:36.9±1.8,13°.46N×90°.99W,h7km±15km,MD3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**1.00**	**8**	*e*P	Pg	09 31 56.3	+0.2
FG6		**1.10**	**5**	*e*P	Pg	09 31 57.5	-0.6
FG6				*e*S	Sg	09 32 13.0	+0.5
NBG	**Las Nubes**	**1.28**	**29**	*e*P	Pn	09 32 01.3	+0.1
NBG				*e*S	Sb	09 32 18.8	+0.6
TP2	**Tecpan 2**	**1.32**	**359**	*e*P	Pn	09 32 01.0	-0.8
TP2				*e*S	Sb	09 32 19.4	+0.2
RBDL	**Robledal**	**1.42**	**62**	*e*P	Pn	09 32 01.8	-1.3
BOQS	**Boqueron**	**1.68**	**80**	*e*P	Pn	09 32 05.3	-1.4
BOQS				*e*S	Sn	09 32 30.0	+1.5
LFRS	**El Faro**	**1.88**	**85**	*e*P	Pn	09 32 08.9	-0.5
LFRS				*e*S	Sn	09 32 34.8	+1.4
MRL	**Marmol**	**2.04**	**38**	*e*P	Pn	09 32 12.9	+1.3

*IDC **19** 09:37:58.9±1.1,36°.79N×142°.18E,h0km,mb3.8/7, mb1 3.9/10,mb1mx3.8/24,mbtmp3.9/10,ML3.5/3,MS3.1/2, Ms1 3.1/2,ms1mx2.6/26, Error ellipse: s-maj=28.3km s-min=20.1km az=90.0*
*NIED **19** 09:38:00,36°.80N×141°.70E,h20km,Mw3.9 Best double couple: M0 8.82000×10^14 NP1:φ21.00000°,δ72.00000°, λ83.00000°. NP2:φ223.00000°,δ19.00000°,λ111.00000°.*
*NEIC **19** 09:38:04.9,36°.77N×141°.73E,h50km,MG3.9(JMA), After JMA.*
*JMA **19** 09:38:04.8±0.2,36°.77N×141°.73E,h50km±3km,M3.9*
ISC 19 09:38:01.6±1.2,36°.78N±0°.04×141°.89E±0°.06,h9km±6km, n25,σ1s17/36,mb3.8/6,5D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.93**	**291**	⇓P	**Pg**	**09 38 20.0**	**+0.6**
ONAJ				*e*S	**Sg**	**09 38 31.2**	**+0.3**
JFK	**Kawauchi**	**1.00**	**306**	⇓P	**Pg**	**09 38 21.2**	**+0.5**

JFK				*e*S	**Sg**	**09 38 33.9**	**+0.2**
JHO	**Hitachi**	**1.07**	**261**	⇓P	**Pg**	**09 38 21.6**	**-0.5**
JHO				*e*S	**Sg**	**09 38 34.1**	**-2.0**
JMM	**Marumori**	**1.39**	**322**	⇓P	**Pn**	**09 38 27.4**	**+0.3**
JMM				*e*S	**Sb**	**09 38 43.9**	**-1.6**
JFT	**Otama**	**1.44**	**301**	⇓P	**Pn**	**09 38 28.6**	**+0.8**
JYT	**Yasato**	**1.47**	**248**	P	**Pn**	**09 38 27.5**	**-0.7**
JYT				*e*S	**Sn**	**09 38 44.8**	**-2.7**
JFY	**Yanaizu**	**1.85**	**290**	P	**Pn**	**09 38 34.1**	**+0.6**
JAG	**Ashikaga**	**1.99**	**260**	P	**Pn**	**09 38 35.2**	**-0.1**
JAG				*e*S	**Sn**	**09 38 58.4**	**-2.0**
JKT	**Katashina**	**2.12**	**270**	P	**Pn**	**09 38 38.0**	**+0.9**
JKT				S	**Sn**	**09 39 01.8**	**-1.7**
MJAR	**Matsushiro Arr**	**2.97**	**266**	Pn	**Pn**	**09 38 50.0**	**+1.2**
MJAR				Sn	**Sn**	**09 39 26.1**	**+1.7**
MJAR				LR	LR	09 40 12.0	
MAJO	**Matsushiro**	**2.97**	**267**	*e*Pn	**Pn**	**09 38 50.7**	**+1.9**
MAT	**Matsushiro**	**2.97**	**267**	P	**Pn**	**09 38 50.3**	**+1.5**
MAT				S	**Sn**	**09 39 26.6**	**+2.1**
JHJ	**Hachijo jima 2**	**4.04**	**206**	Pn	**Pn**	**09 39 04.5**	**+0.9**
JHJ				Sn	**Sn**	**09 39 50.8**	**-0.2**
ASAJ	**Asahikawa**	**7.35**	**4**	Pn	**Pn**	**09 39 48.0**	**-0.9**
KSRS	**Korea Array**	**11.17**	**278**	Pn	**Pn**	**09 40 46.2**	**+4.8**
KSRS				LR	LR	09 45 08.8	
SONM	**Songino Array**	**28.24**	**304**	P	**P**	**09 43 54.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**41.80**	**256**	P	**P**	**09 45 51.2**	**-0.4**
ZALV	**Zalesovo Beam**	**42.37**	**313**	P	**P**	**09 45 56.5**	**+0.8**
ZALV				PcP	PcP	09 47 48.7	-0.3
MKAR	**Makanchi Array**	**44.57**	**302**	P	**P**	**09 46 14.4**	**+0.7**
KURK	**Kurchatov**	**46.39**	**308**	*e*P	**P**	**09 46 28.1**	**+0.1**
ILAR	**Eielson Array**	**49.51**	**32**	P	**P**	**09 46 49.0**	**-3.0**
ILAR	**Eielson Array**	**49.51**	**32**	P	**P**	**09 46 49.0**	**-3.0**
WRA	**Warramunga Arr**	**56.86**	**188**	P	**P**	**09 47 45.3**	**-1.2**
ASAR	**Alice Springs**	**60.59**	**188**	P	**P**	**09 48 11.9**	**-0.5**

0.4nm,0.6s,mb3.6,baz=5.5,slow=7.2,SNR=6.0
0.6nm,1.0s,mb3.7,baz=3.1,slow=6.4,SNR=3.2

*ISK **19** 09:50:04.3, 37˚.68N×43˚.90E, h5km, ML4.0*
*DDA **19** 09:50:06.0, 37˚.68N×43˚.68E, h7km±3km, Md3.9*
*CSEM **19** 09:50:06.4±0.3, 37˚.69N×43˚.87E, h2km, ML3.6, Error ellipse: s-maj=7.2km s-min=6.9km az=140.0*
*ISCJB **19** 09:50:07.4±0.5, 37˚.62N±0˚.03×43˚.81E±0˚.03, h11km±4km, Error ellipse: s-maj=5.1km s-min=4.1km az=155.2*
*TEH **19** 09:50:07.7, 37˚.66N×43˚.59E, h34km*
ISC 19 09:50:08.3±0.5**, 37°.63N**±0˚.03×**43°.76E**±0˚.03**, h7**km±4km**, n50**, σ1§**44/63**, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HAKT	**HAKKARI**	**0.08**	**212**	*i* P		**Pg**	**09 50 08.5**	**-1.8**
HAKT				*i* S		**Sg**	**09 50 11.9**	**+0.2**
HAKT	**HAKKARI**	**0.08**	**212**	*i* P		**Pg**	**09 50 08.5**	**-1.8**
HAKT				*i* S		**Sg**	**09 50 11.9**	**+0.2**
CUKT	**Cukurca**	**0.40**	**198**	*e*PG		**Pg**	**09 50 14.5**	**-1.5**
CUKT				*e*SG		**Sg**	**09 50 22.7**	**+1.4**
CUKT	**Cukurca**	**0.40**	**198**	*e*Pg		**Pg**	**09 50 14.5**	**-1.5**
CUKT				*e*Sg		**Sg**	**09 50 22.7**	**+1.5**
VANT	**Van**	**0.89**	**334**	*e*PG		**Pg**	**09 50 22.3**	**-3.0**
TATV	**Tatvan**	**1.47**	**307**	*i* P		**Pn**	**09 50 32.9**	**-2.4**
TATV				*i* S		**Sn**	**09 50 56.4**	**+1.7**
TATV	**Tatvan**	**1.47**	**307**	*i* P		**Pn**	**09 50 32.9**	**-2.3**
CLDR	**Caldiran**	**1.52**	**5**	*e*PN		**Pn**	**09 50 32.0**	**-3.9**
CLDR				*e*SN		**Sn**	**09 50 53.7**	**-2.2**
CLDR	**Caldiran**	**1.52**	**5**	*e*Pn		**Pn**	**09 50 32.0**	**-3.9**
CLDR				*e*Sn		**Sn**	**09 50 53.7**	**-2.2**
ISHB	**Shabestar**	**1.61**	**65**	*e*Pn		**Pn**	**09 50 33.5**	**-3.6**
ISHB				*e*			09 50 40.2	
	comp=Z,5μm,0.2s							
IAZR	**Azarshahr**	**1.76**	**88**	*e*Pn		**Pn**	**09 50 37.8**	**-1.4**
IAZR				*e*			09 51 14.8	
	comp=Z,9μm,0.3s							
IAZR	**Azarshahr**	**1.76**	**88**	*e*Pn		**Pn**	**09 50 37.8**	**-1.4**
IMRD	**Marand**	**1.88**	**54**	*e*Pn		**Pn**	**09 50 38.8**	**-2.0**
IMRD				*e*Sg		**Sg**	**09 51 10.0**	**+1.4**
IMRD				*e*			09 51 11.3	
	comp=Z,9μm,0.3s							
ITBZ	**Tabriz**	**1.98**	**71**	*e*Pn		**Pn**	**09 50 40.6**	**-1.7**
ITBZ				*e*Sg		**Sg**	**09 51 14.1**	**+2.1**
ITBZ				*e*			09 51 20.8	
	comp=Z,1μm,0.3s							
BEST	**Besiri**	**1.99**	**278**	*i* P		**Pn**	**09 50 42.7**	**+0.3**
BEST				*i* S		**Sn**	**09 51 12.9**	**+5.3**
AGRB	**Hanur-Agry**	**2.04**	**343**	*e*PN		**Pn**	**09 50 41.3**	**-1.7**
AGRB	**Hanur-Agry**	**2.04**	**343**	*e*Pn		**Pn**	**09 50 41.3**	**-1.7**
MARD	**Mardin**	**2.39**	**263**	*i* P		**Pn**	**09 50 47.0**	**-0.9**
MARD				*i* S		**Sn**	**09 51 22.8**	**+5.3**
BNGL	**BINGOL**	**2.44**	**304**	*i* P		**Pn**	**09 50 49.4**	**+0.8**
BNGL				*i* S		**Sg**	**09 51 30.1**	**+3.3**
GNI	**Garni**	**2.63**	**17**	*e*PN		**Pn**	**09 50 49.2**	**-2.0**
GNI	**Garni**	**2.63**	**17**	*e*Pn		**Pn**	**09 50 49.2**	**-2.0**
IHRS	**Heris**	**2.68**	**74**	*e*Pn		**Pn**	**09 50 53.8**	**+1.9**
IHRS				*e*			09 51 02.2	
	comp=Z,1μm,0.2s							
BINT	**Bingol**	**2.86**	**297**	*e*PN		**Pn**	**09 50 54.4**	**0.0**
BINT	**Bingol**	**2.86**	**297**	*e*Pn		**Pn**	**09 50 54.4**	**0.0**
EZM	**Erzurum**	**2.95**	**321**	*e*PN		**Pn**	**09 50 54.7**	**-0.9**
ISRB	**Sarab**	**3.10**	**85**	*e*Pn		**Pn**	**09 51 00.9**	**+3.2**
ISRB				*e*			09 51 17.2	
	comp=Z,1μm,0.3s							
ISRB	**Sarab**	**3.10**	**85**	*e*Pn		**Pn**	**09 51 00.9**	**+3.2**
SVRC	**Sivrice-ELAZID**	**3.60**	**283**	*e*PN		**Pn**	**09 51 04.6**	**+0.1**
SVRC	**Sivrice-ELAZID**	**3.60**	**283**	*e*Pn		**Pn**	**09 51 04.6**	**+0.1**
PTK	**Pertek**	**3.66**	**292**	*e*PN		**Pn**	**09 51 05.6**	**+0.2**
PTK	**Pertek**	**3.66**	**292**	*e*Pn		**Pn**	**09 51 05.6**	**+0.2**
DGRG	**David-gareji**	**4.02**	**18**	P		**Pn**	**09 51 16.2**	**+5.9**
EZC	**Erzincan**	**4.05**	**303**	*e*PN		**Pn**	**09 51 11.4**	**+0.7**
MTA	**Mtatsminda**	**4.14**	**11**	P		**Pn**	**09 51 14.0**	**+2.1**
TBLG	**Delisi**	**4.17**	**10**	P		**Pn**	**09 51 13.4**	**+1.1**
MALT	**Malatya**	**4.27**	**281**	*e*PN		**Pn**	**09 51 13.4**	**-0.3**
MALT	**Malatya**	**4.27**	**281**	*e*Pn		**Pn**	**09 51 13.4**	**-0.3**
MYA	**Malatya**	**4.27**	**281**	*e*PN		**Pn**	**09 51 13.8**	**0.0**
MYA	**Malatya**	**4.27**	**281**	*e*Pn		**Pn**	**09 51 13.8**	**0.0**
ATAB	**Bozova**	**4.35**	**270**	*i* P		**Pb**	**09 51 26.6**	**+1.6**
ATAB				*i* S		**Sg**	**09 52 26.6**	**-1.3**
GOR	**Gori**	**4.36**	**3**	P		**Pb**	**09 51 25.2**	**-0.1**
GUMT	**Gumushane**	**4.37**	**312**	*e*PN		**Pn**	**09 51 15.9**	**+0.7**
GUMT	**Gumushane**	**4.37**	**312**	*e*Pn		**Pn**	**09 51 15.9**	**+0.8**
BHD	**Baghdad**	**4.38**	**173**	*ex*		x	09 51 14.7	
BHD				*ex*		x	09 52 06.3	
BHD				*ex*		x	09 52 16.0	
BHD	**Baghdad**	**4.38**	**173**	*e*Pn		**Pn**	**09 51 14.7**	**-0.5**
BHD				*e*Sn		**Sn**	**09 52 06.3**	**-0.1**
GAZ	**Gaziantep**	**5.23**	**267**	*e*PN		**Pn**	**09 51 28.4**	**+1.4**
GAZ	**Gaziantep**	**5.23**	**267**	*e*Pn		**Pn**	**09 51 28.4**	**+1.4**
KMRS	**Kahramanmaras**	**5.45**	**271**	*e*PN		**Pn**	**09 51 31.9**	**+2.0**
KMRS	**Kahramanmaras**	**5.45**	**271**	*e*Pn		**Pn**	**09 51 32.0**	**+2.0**
SARI	**SarD1z-Kayseri**	**5.67**	**283**	*e*Pn		**Pn**	**09 51 37.3**	**+4.4**

*ISCJB **19** 09:55:53.4±0.4, 46˚.35N±0˚.02×13˚.16E±0˚.02, h15km±3km, Error ellipse: s-maj=3.2km s-min=2.1km az=25.2*
*CSEM **19** 09:55:53.8±0.1, 46˚.34N×13˚.16E, h10km, ML2.6/13, Error ellipse: s-maj=2.1km s-min=1.4km az=26.0*
*VIE **19** 09:55:53.4±0.2, 46˚.33N×13˚.14E, h10km±5km, mb1.4/6, ML2.2/10, Error ellipse: s-maj=1.3km s-min=0.8km az=21.0 1 km SSW of Venzone*
*ROM **19** 09:55:54.1±0.2, 46˚.49N×13˚.23E, h10km, Md2.5/3, MI1.8/2, Error ellipse: s-maj=3.6km s-min=0.7km az=14.0*
ISC 19 09:55:54.3±0.3**, 46°.35N**±0˚.02×**13°.16E**±0˚.02**, h10**km±4km**, n58, σ0§70**/114**, 14C-17D, Austria**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VINO	**Villanova**	**0.12**	**138**	⇑*e*Pg		**Pg**	**09 55 56.8**	**-0.4**
VINO				*e*Sg		**Sg**	**09 55 59.1**	**-0.1**
VINO	**Villanova**	**0.12**	**138**	*e*Pg		**Pg**	**09 55 56.8**	**-0.4**
VINO				*e*Sg		**Sg**	**09 55 59.1**	**-0.1**
BAD	**Bernadia**	**0.12**	**153**	⇑*e*Pg		**Pg**	**09 55 56.8**	**-0.4**
BAD				*e*Sg		**Sg**	**09 55 59.2**	**0.0**
BAD	**Bernadia**	**0.12**	**153**	*e*Pg		**Pg**	**09 55 56.8**	**-0.4**
BAD				*e*Sg		**Sg**	**09 55 59.2**	**-0.1**
FUSE	**Fusea**	**0.13**	**301**	⇓*e*Pg		**Pg**	**09 55 57.1**	**-0.3**
FUSE				*e*Sg		**Sg**	**09 55 59.7**	**+0.1**
FUSE	**Fusea**	**0.13**	**301**	*e*Pg		**Pg**	**09 55 57.1**	**-0.3**
FUSE				*e*Sg		**Sg**	**09 55 59.7**	**+0.1**
PTCC	**Patocco-Chiusa**	**0.14**	**65**	⇓*i*Pg		**Pg**	**09 55 57.3**	**-0.3**
PTCC				*i*Sg		**Sg**	**09 56 00.0**	**+0.1**
PTCC	**Patocco-Chiusa**	**0.14**	**65**	⇓*i*Pg		**Pg**	**09 55 57.3**	**-0.3**
PTCC				*i*Sg		**Sg**	**09 56 00.0**	**+0.1**
MPRI	**Monte Prat**	**0.16**	**230**	⇑*e*Pg		**Pg**	**09 55 57.5**	**-0.3**
MPRI				*e*Sg		**Sg**	**09 56 00.5**	**+0.2**
MPRI	**Monte Prat**	**0.16**	**230**	*e*Pg		**Pg**	**09 55 57.5**	**-0.3**
MPRI				*e*Sg		**Sg**	**09 56 00.5**	**+0.2**
PLRO	**Paularo**	**0.20**	**357**	⇓*e*Pg		**Pg**	**09 55 58.5**	**-0.1**
PLRO				*e*Sg		**Sg**	**09 56 02.2**	**+0.6**
PLRO	**Paularo**	**0.20**	**357**	*e*Pg		**Pg**	**09 55 58.5**	**-0.1**
PLRO				*e*Sg		**Sg**	**09 56 02.2**	**+0.7**
ZOU	**Zoufplan**	**0.25**	**328**	⇓*e*Pg		**Pg**	**09 55 59.4**	**0.0**
ZOU				*e*Sg		**Sg**	**09 56 03.7**	**+0.9**
ZOU	**Zoufplan**	**0.25**	**328**	*e*Pg		**Pg**	**09 55 59.4**	**0.0**
ZOU				*e*Sg		**Sg**	**09 56 03.7**	**+0.9**
COLI	**Coloredo**	**0.26**	**145**	⇓*e*Pg		**Pg**	**09 55 59.2**	**-0.3**
COLI				*e*Sg		**Sg**	**09 56 03.6**	**+0.5**
COLI	**Coloredo**	**0.26**	**145**	*e*Pg		**Pg**	**09 55 59.2**	**-0.4**
COLI				*e*Sg		**Sg**	**09 56 03.6**	**+0.5**
ROBS	**Robic**	**0.26**	**113**	*i* Pg		**Pg**	**09 55 59.0**	**-0.6**
ROBS				*i* Sg		**Sg**	**09 56 03.2**	**+0.1**
	comp=Z,81nm,0.1s							
ROBS	**Robic**	**0.26**	**113**	*i* Pg		**Pg**	**09 55 59.0**	**-0.6**
ROBS				*i* Sg		**Sg**	**09 56 03.2**	**+0.1**
	comp=Z,81nm,0.1s							
FVI	**Forni Avoltri**	**0.36**	**314**	Pg		**Pg**	**09 56 01.2**	**-0.3**
FVI				Sg		**Sg**	**09 56 06.7**	**+0.3**
	comp=Z,188nm,0.3s							
FVI	**Forni Avoltri**	**0.36**	**314**	Pg		**Pg**	**09 56 01.2**	**-0.3**
FVI				Sg		**Sg**	**09 56 06.7**	**+0.3**
	comp=Z,188nm,0.3s							
DRE	**Drenchia**	**0.38**	**117**	⇓*e*Pg		**Pg**	**09 56 01.0**	**-0.7**
DRE				*e*Sg		**Sg**	**09 56 07.2**	**+0.5**
DRE	**Drenchia**	**0.38**	**117**	*e*Pg		**Pg**	**09 56 01.0**	**-0.7**
DRE				*e*Sg		**Sg**	**09 56 07.2**	**+0.5**
CADS	**Cadrg**	**0.41**	**106**	*i* Pg		**Pg**	**09 56 01.8**	**-0.6**
CADS				*i* Sg		**Sg**	**09 56 08.4**	**+0.4**
CADS	**Cadrg**	**0.41**	**106**	*i* Pg		**Pg**	**09 56 01.8**	**-0.6**
CADS				*i* Sg		**Sg**	**09 56 08.4**	**+0.5**
MLNI	**Malnisio**	**0.43**	**243**	⇓*e*Pg		**Pg**	**09 56 02.4**	**-0.4**
MLNI				*e*Sg		**Sg**	**09 56 09.5**	**+1.0**
MLNI	**Malnisio**	**0.43**	**243**	*e*Pg		**Pg**	**09 56 02.4**	**-0.4**
MLNI				*e*Sg		**Sg**	**09 56 09.5**	**+1.0**
MYKA	**Terra Mystica**	**0.43**	**49**	⇑*i*Pg		**Pg**	**09 56 02.7**	**-0.2**
MYKA				⇑*i*Sg		**Sg**	**09 56 09.0**	**+0.4**
	comp=Z,41nm,0.2s							
MYKA	**Terra Mystica**	**0.43**	**49**	Pg		**Pg**	**09 56 02.7**	**-0.2**
MYKA				Sg		**Sg**	**09 56 09.0**	**+0.4**
	comp=Z,41nm,0.2s							
SABO	**M.te Sabotino**	**0.47**	**140**	⇑*e*Pg		**Pg**	**09 56 03.0**	**-0.6**
SABO				*e*Sg		**Sg**	**09 56 10.8**	**+0.9**
SABO	**M.te Sabotino**	**0.47**	**140**	*e*Pg		**Pg**	**09 56 03.0**	**-0.6**
SABO				*e*Sg		**Sg**	**09 56 10.8**	**+1.0**
CIMO	**Cimolais**	**0.50**	**266**	⇓*e*Pg		**Pg**	**09 56 02.8**	**-1.3**
CIMO				*e*Sg		**Sg**	**09 56 10.5**	**-0.3**
CIMO	**Cimolais**	**0.50**	**266**	*e*Pg		**Pg**	**09 56 02.8**	**-1.3**
CIMO				*e*Sg		**Sg**	**09 56 10.5**	**-0.2**
VOJS	**Vojsko**	**0.59**	**122**	*i* Pg		**Pg**	**09 56 04.8**	**-0.9**
VOJS				*i* Sg		**Sg**	**09 56 14.3**	**+0.8**
VOJS								
	comp=Z,36nm,0.2s							
VOJS	**Vojsko**	**0.59**	**122**	*i* Pg		**Pg**	**09 56 04.8**	**-1.0**
VOJS				*i* Sg		**Sg**	**09 56 14.3**	**+0.8**
	comp=Z,36nm,0.2s							
ABTA	**Abfaltersbach**	**0.60**	**312**	⇑*i*Pg		**Pg**	**09 56 05.5**	**-0.5**
ABTA				⇓*i*Sg		**Sg**	**09 56 14.0**	**+0.1**
	comp=Z,9.2nm,0.1s							
ABTA	**Abfaltersbach**	**0.60**	**312**	Pg		**Pg**	**09 56 05.5**	**-0.5**
ABTA				Sg		**Sg**	**09 56 14.0**	**+0.1**
	comp=Z,9.2nm,0.1s							
CAE	**Caneva**	**0.61**	**236**	⇑*e*Pg		**Pg**	**09 56 05.4**	**-0.7**
CAE				*e*Sg		**Sg**	**09 56 14.8**	**+0.7**
CAE	**Caneva**	**0.61**	**236**	*e*Pg		**Pg**	**09 56 05.4**	**-0.7**
CAE				*e*Sg		**Sg**	**09 56 14.8**	**+0.7**
KBA	**Koelnbreinsper**	**0.74**	**10**	⇓*i*Pg		**Pg**	**09 56 08.6**	**0.0**
KBA				⇓*i*Sg		**Sg**	**09 56 18.8**	**+0.4**
	comp=Z,29nm,0.1s							
KBA	**Koelnbreinsper**	**0.74**	**10**	Pg		**Pg**	**09 56 08.6**	**-0.1**
KBA				Sg		**Sg**	**09 56 18.8**	**+0.4**
	comp=Z,29nm,0.1s							
TRI	**Trieste**	**0.76**	**147**	⇑*e*Pg		**Pg**	**09 56 07.6**	**-1.5**
TRI	**Trieste**	**0.76**	**147**	*e*Pg		**Pg**	**09 56 07.6**	**-1.4**
JAVS	**Javornik**	**0.77**	**126**	*i* Pg		**Pg**	**09 56 07.9**	**-1.3**
JAVS				*i* Sg		**Sg**	**09 56 20.8**	**+1.5**
JAVS								
	comp=Z,20nm,0.2s							
JAVS	**Javornik**	**0.77**	**126**	*i* Pg		**Pg**	**09 56 07.9**	**-1.3**
JAVS				*i* Sg		**Sg**	**09 56 20.8**	**+1.5**
	comp=Z,20nm,0.2s							
OBKA	**Obir**	**0.97**	**80**	⇑*i*Pg		**Pg**	**09 56 12.3**	**-0.7**
OBKA				⇓*i*Sg		**Sg**	**09 56 26.6**	**+0.9**
	comp=Z,13nm,0.3s							
OBKA	**Obir**	**0.97**	**80**	Pg		**Pg**	**09 56 12.3**	**-0.7**
OBKA				Sg		**Sg**	**09 56 26.6**	**+1.0**
	comp=Z,13nm,0.3s							
CTI	**Castel Tesino**	**1.09**	**255**	Pg		**Pg**	**09 56 15.6**	**+0.3**
CTI				Sg		**Sg**	**09 56 31.8**	**+2.3**
	comp=Z,967nm,9.3s							
CTI	**Castel Tesino**	**1.09**	**255**	Pg		**Pg**	**09 56 15.6**	**+0.3**
CTI				Sg		**Sg**	**09 56 31.8**	**+2.3**
	comp=Z,967nm,9.3s							
SOKA	**Soboth**	**1.33**	**75**	⇓*i*Pg		**Pg**	**09 56 19.4**	**-0.5**
SOKA				⇑*i*Sg		**Sg**	**09 56 38.0**	**+0.8**
	comp=Z,1.8nm,0.2s							
SOKA	**Soboth**	**1.33**	**75**	Pg		**Pg**	**09 56 19.4**	**-0.5**
SOKA				Sg		**Sg**	**09 56 38.0**	**+0.8**
	comp=Z,1.8nm,0.2s							
WTTA	**Wattenberg**	**1.40**	**312**	⇑*i*Pg		**Pg**	**09 56 20.3**	**-0.8**
WTTA				⇑*i*Sg		**Sg**	**09 56 39.0**	**-0.2**
	comp=Z,8.8nm,0.4s							
WTTA	**Wattenberg**	**1.40**	**312**	Pg		**Pg**	**09 56 20.3**	**-0.8**
WTTA				Sg		**Sg**	**09 56 39.0**	**-0.2**
	comp=Z,8.8nm,0.4s							
MOTA	**Moosalm**	**1.73**	**306**	⇑*i*Pg		**Pg**	**09 56 26.9**	**-0.6**
MOTA				⇓*i*Sg		**Sg**	**09 56 50.7**	**+0.7**
	comp=Z,9.3nm,0.3s							
MOTA	**Moosalm**	**1.73**	**306**	Pg		**Pg**	**09 56 26.9**	**-0.6**
MOTA				Sg		**Sg**	**09 56 50.7**	**+0.7**
	comp=Z,9.3nm,0.3s							
FETA	**Feichten**	**1.81**	**293**	⇓*i*Pg		**Pg**	**09 56 27.9**	**-1.0**
FETA				⇓*i*Sg		**Sg**	**09 56 53.3**	**+0.9**
	comp=Z,1.8nm,0.2s							
FETA	**Feichten**	**1.81**	**293**	Pg		**Pg**	**09 56 27.9**	**-1.1**
FETA				Sg		**Sg**	**09 56 53.3**	**+0.9**
	comp=Z,1.8nm,0.2s							
NVLJ	**Novalja**	**2.15**	**145**	*e*Pn		**Pn**	**09 56 30.2**	**0.0**
NVLJ				Sn		**Sn**	**09 56 57.9**	**+1.0**
NVLJ	**Novalja**	**2.15**	**145**	*e*Pn		**Pn**	**09 56 30.2**	**0.0**
NVLJ				Sn		**Sn**	**09 56 57.8**	**+1.0**

*IDC **19** 10:10:51.7±3.9, 14˚.64N×93˚.14W, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.6/18, mbtmp3.4/4, ML3.2/2, Error ellipse: s-maj=266.8km s-min=55.5km az=49.0*
*ISCJB **19** 10:10:54.4±1.1, 14˚.36N±0˚.07×94˚.17W±0˚.03, h33km, mb3.6/2, Error ellipse: s-maj=10.2km s-min=4.5km az=179.8*
*NEIC **19** 10:10:55.3, 14˚.26N×94˚.17W, h20km, MD3.9(MEX), After MEX.*
*MEX **19** 10:10:55.4±1.2, 14˚.28N×94˚.19W, h16km±18km, MD3.9*
ISC 19 10:10:55.7±1.1**, 14°.32N**±0˚.07×**94°.13W**±0˚.03**, h35**km**, n21, σ1§11/36, mb3.6/2, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PCIG		**1.63**	**33**	*i* P		**Pn**	**10 11 21.4**	**-0.6**
PCIG				*i* S		**Sn**	**10 11 40.9**	**-0.9**
THIG		**1.90**	**72**	*i* P		**Pn**	**10 11 24.2**	**-1.4**
THIG				*i* S		**Sn**	**10 11 46.8**	**-1.6**
HUIG	**Huatulco**	**2.39**	**307**	*i* P		**Pn**	**10 11 31.0**	**-1.3**
HUIG				*i* S		**Sn**	**10 11 56.6**	**-3.8**
HUIG	**Huatulco**	**2.39**	**307**	*i* P		**Pn**	**10 11 31.0**	**-1.3**
HUIG				*i* S		**Sn**	**10 11 56.6**	**-3.8**
TGIG		**2.63**	**22**	*i* P		**Pn**	**10 11 35.8**	**+0.1**
TGIG				*i* S		**Sn**	**10 12 06.0**	**-0.3**
SCX	**San Cristobal**	**2.80**	**31**	*e*P		**Pn**	**10 11 38.1**	**0.0**
SCX				*i* S		**Sn**	**10 12 11.0**	**+0.4**
SCX	**San Cristobal**	**2.80**	**31**	*e*P		**Pn**	**10 11 38.1**	**0.0**
SCX				*i* S		**Sn**	**10 12 11.0**	**+0.4**
CMIG	**Matias Romero**	**2.84**	**345**	Pn		**Pn**	**10 11 39.4**	**+0.7**
	5.2nm,0.3s,baz=165,slow=12,SNR=134							
CMIG				Sn		**Sn**	**10 12 11.7**	**0.0**
	12nm,0.3s,baz=63,slow=12,SNR=3.7							
VHO	**Vista Hermosa**	**3.71**	**318**	*i* P		**Pn**	**10 11 52.1**	**+1.6**
VHO				*i* S		**Sn**	**10 12 33.0**	**+0.1**
VHO	**Vista Hermosa**	**3.71**	**318**	*i* P		**Pn**	**10 11 52.1**	**+1.6**
VHO				*i* S		**Sn**	**10 12 33.0**	**+0.1**
PNIG	**Pinotepa**	**4.37**	**299**	*i* P		**Pn**	**10 11 59.6**	**0.0**
PNIG				*i* S		**Sn**	**10 12 47.8**	**-1.4**
PNIG	**Pinotepa**	**4.37**	**299**	*i* P		**Pn**	**10 11 59.6**	**0.0**
PNIG				*i* S		**Sn**	**10 12 47.8**	**-1.4**
UTMO	**Huajuapan**	**4.96**	**315**	*i* P		**Pn**	**10 12 09.1**	**+1.4**
UTMO				*i* S		**Sn**	**10 13 04.0**	**+0.1**
PPM	**Popocatepetl**	**6.39**	**318**	*e*P		**Pn**	**10 12 32.3**	**+5.0**
PPM				*i* S		**Sn**	**10 13 37.8**	**-1.2**
PPM	**Popocatepetl**	**6.39**	**318**	*e*P		**Pn**	**10 12 32.3**	**+5.0**
PPM				*i* S		**Sn**	**10 13 37.8**	**-1.2**
TEIG	**Tepich**	**8.11**	**43**	*e*Pn		**Pn**	**10 12 51.7**	**+0.7**
TEIG				*e*Sn		**Sn**	**10 14 24.0**	**+2.5**
TXAR	**Lajitas Array**	**17.35**	**331**	P		**Pn**	**10 14 59.6**	**+4.5**
	0.0nm,0.3s,baz=152,slow=15,SNR=2.6							
NVAR	**Mina Array Bea**	**32.14**	**323**	P		**P**	**10 17 24.3**	**+4.3**
NVAR	**Mina Array Bea**	**32.14**	**323**	P		**P**	**10 17 24.3**	**+4.3**
	1.0nm,0.9s,mb3.6,baz=142,slow=10,SNR=6.0							
ILAR	**Eielson Array**	**61.73**	**337**	P		**P**	**10 21 12.3**	**+2.0**
	0.4nm,0.8s,mb3.6,baz=134,slow=6.4,SNR=3.9							
CMAR	**Chiang Mai Arr**	**144.97**	**338**	PKPbc	PKPdf		**10 30 30.5**	**+0.3**
	0.6nm,0.5s,baz=339,slow=4.8,SNR=5.3							

*NEIC **19** 10:23:20.1, 16˚.58N×94˚.72W, h94km, MD4.0(MEX), After MEX.*
MEX 19 10:23:20.5±2.4**, 16°.63N**×**94°.74W, h82**km±54km**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TGIG		**1.56**	**84**	*i* P		Pn	10 23 45.3	-1.4
TGIG				*i* S		Sn	10 24 04.6	-1.9
HUIG	**Huatulco**	**1.57**	**237**	*i* P		Pn	10 23 44.4	-2.3
HUIG				*i* S		Sn	10 24 05.7	-0.9
HUIG	**Huatulco**	**1.57**	**237**	*i* P		Pn	10 23 44.4	-2.3
HUIG				*i* S		Sn	10 24 05.7	-0.9
PCIG		**1.73**	**122**	*i* P		Pn	10 23 47.9	-1.0
PCIG				*i* S		Sn	10 24 08.8	-1.6
OXX	**Oaxaca**	**1.95**	**284**	*i* P		Pn	10 23 51.1	-0.7
OXX				*i* S		Sn	10 24 15.2	-0.4
OXX	**Oaxaca**	**1.95**	**284**	*i* P		Pn	10 23 51.1	-0.7
OXX				*i* S		Sn	10 24 15.2	-0.4
VHO	**Vista Herm

WRA Warramunga Arr 24.30 243 P P 10 54 04.8 -0.8
1.6nm,0.7s,baz=70,slow=9.5,SNR=8.0
ASAR Alice Springs 26.22 235 P P 10 54 22.8 -0.2
1.6nm,0.7s,baz=69,slow=9.9,SNR=28
STKA Stephens Creek 26.34 211 P P 10 54 25.5 +1.4
3.8nm,0.8s,baz=32,slow=14,SNR=4.2

BJI ***19*** *10:54:24.1,30.′00N×79.′82E,h20km,mB4.1/1,mb3.8/5*
IDC ***19*** *10:54:24.2±0.9,30.′04N×79.′99E,h0km,mb3.8/14, mb1 4.0/15,mb1mx3.9/28,mbtmp3.9/15,ML4.2/1,MS3.6/1, Ms1 3.6/1,ms1mx2.7/32, Error ellipse: s-maj=26.9km s-min=16.1km az=48.0*
NDI ***19*** *10:54:26.7±2.8,30.′02N×80.′06E,h8km±11km,ML4.3, mb4.2(NEIC)*
NEIC ***19*** *10:54:26.7±4.5,30.′08N×80.′01E,h16km±27km,mb4.2/2, Error ellipse: s-maj=14.8km s-min=10.3km az=200.0*
ISCJB ***19*** *10:54:26.5±0.5,30.′04N±0.′02×80.′09E±0.′02,h32km±4km, mb3.9/15, Error ellipse: s-maj=4.1km s-min=2.7km az=24.4*
DMN ***19*** *10:54:29.3±0.3,30.′11N×80.′07E,h10km,Ml4.8/11, Error ellipse: s-maj=22.0km s-min=5.9km az=26.0*

ISC 19 10:54:27.2±0.7,30.′04N±0.′02×80.′07E±0.′02,h19km±4km, n69,σ1§31/102,mb3.9/15,1D,Western Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PTH	**Pithoragarh**	**0.50**	**165**	*e*PKP		**Pg**	**10 54 35.2**	**-2.1**
PTH				*ex*		**Sg**	**10 54 37.2**	**-6.9**
JOSI	**Joshimath**	**0.68**	**320**	*e*PKP		**Pg**	**10 54 39.0**	**-1.7**
JOSI				*e*S		**Sg**	**10 54 49.3**	**-0.5**
JOSI				AML		AML	10 54 50.9	
	comp=N,20μm,0.5s							
JOSI				AML		AML	10 54 51.0	
	comp=E,20μm,0.3s							
KLP	**Kalpa**	**2.17**	**314**	*e*PKP		**Pb**	**10 55 06.2**	**+0.4**
KLP				*e*S		**Sb**	**10 55 33.5**	**+1.3**
KLP				AML		AML	10 55 37.9	
	comp=E,2μm,0.6s							
KLP				AML		AML	10 55 39.3	
	comp=N,2μm,0.2s							
SMLA	**Simla**	**2.73**	**294**	*i* x		**Pb**	**10 55 13.9**	**-1.5**
SMLA				*i* S		**Sn**	**10 55 44.2**	**+1.7**
SMLA				*i* S		**Sn**	**10 55 45.5**	**+3.1**
SMLA				⇓			10 55 52.3	
	comp=E,15μm,0.2s							
SMLA							10 55 52.6	
	comp=N,7μm,0.2s							
NDI	**New Delhi**	**2.83**	**242**	*e*PN		**Pn**	**10 55 13.0**	**+1.6**
NDI				*e*PG		**Pg**	**10 55 22.0**	**+0.5**
NDI				*e*SN		**Sn**	**10 55 45.5**	**+0.5**
NDI				*ex*		**Sb**	**10 55 50.0**	**-1.4**
AYAN	**Aya Nagar**	**3.00**	**240**	*e*PKP		**Pn**	**10 55 15.2**	**+1.5**
AYAN				*e*S		**Sn**	**10 55 48.6**	**-0.6**
SDNR	**Sundarnagar**	**3.04**	**299**	*e*PKP		**Pn**	**10 55 15.5**	**+1.2**
SDNR				*ex*		**Sg**	**10 56 03.1**	**-1.9**
SONA	**Sohna**	**3.16**	**236**	*e*PKP		**Pn**	**10 55 17.1**	**+1.1**
SONA				*e*S		**Sn**	**10 55 53.5**	**+0.4**
BHK	**Bhakra**	**3.43**	**295**	*ex*		**Pb**	**10 55 23.7**	**-3.7**
BHK				*ex*		**Sb**	**10 56 12.5**	**+3.7**
KUDL	**Kundal**	**3.66**	**240**	*e*PKP		**Pn**	**10 55 22.5**	**-0.2**
KUDL				*e*S		**Sn**	**10 56 02.9**	**-2.5**
KOLN	**Koldanda**	**3.83**	**125**	*e*Pn		**Pn**	**10 55 27.4**	**+2.3**
KOLN				*e*Sn		**Sn**	**10 56 10.7**	**+1.1**
	comp=N,431nm,0.5s							
KHET	**Khetri**	**4.21**	**243**	*e*PKP		**Pn**	**10 55 32.5**	**+2.1**
KHET				*e*S		**Sn**	**10 56 18.0**	**-1.1**
GKN	**Gorkha**	**4.48**	**116**	*e*Pn		**Pn**	**10 55 36.1**	**+2.0**
GKN				*e*Sn		**Sn**	**10 56 26.0**	**+0.3**
	comp=N,508nm,0.4s							
JHNI	**Jhansi**	**4.75**	**197**	*e*PKP		**Pn**	**10 55 39.0**	**+1.2**
JHNI				*ex*		**Sn**	**10 56 34.0**	**+1.7**
ALBI	**Allahabad**	**4.95**	**161**	*ex*		**Pn**	**10 55 38.0**	**-2.6**
DMN	**Daman**	**5.04**	**117**	*e*Pn		**Pn**	**10 55 43.4**	**+1.7**
DMN				*e*Sn		**Sn**	**10 56 38.3**	**-1.1**
	comp=N,246nm,0.6s							
KKN	**Kakani**	**5.08**	**115**	*e*Pn		**Pn**	**10 55 44.3**	**+1.9**
KKN				*e*Sn		**Sn**	**10 56 39.1**	**-1.5**
	comp=N,106nm,0.2s							
PKIN	**Phulchoki**	**5.28**	**116**	*e*Pn		**Pn**	**10 55 46.8**	**+1.8**
PKIN				*e*Sn		**Sn**	**10 56 45.1**	**-0.2**
	comp=N,127nm,0.3s							
PKI	**Pulchoki**	**5.29**	**116**	*e*Pn		**Pn**	**10 55 46.5**	**+1.3**
PKI				*e*Sn		**Sn**	**10 56 44.3**	**-1.3**
	comp=N,156nm,0.3s							
GUN	**Gumba**	**5.51**	**111**	*e*Pn		**Pn**	**10 55 50.5**	**+2.2**
GUN				*e*Sn		**Sn**	**10 56 49.8**	**-1.3**
	comp=N,242nm,0.4s							
JIRN	**Jiri**	**5.87**	**112**	*e*Pn		**Pn**	**10 55 54.9**	**+1.8**
JIRN				*e*Sn		**Sn**	**10 56 58.2**	**-1.6**
	comp=N,360nm,0.3s							
AJM	**Ajmer**	**5.95**	**235**	*e*PKP		**Pn**	**10 55 55.0**	**+0.7**
AJM				*e*S		**Sn**	**10 56 58.9**	**-3.1**
RAMN	**Ramite**	**6.52**	**117**	*e*Pn		**Pn**	**10 56 02.9**	**+0.8**
RAMN				*e*Sn		**Sn**	**10 57 14.1**	**-1.8**
	comp=N,268nm,0.3s							
CHCP	**Chirah Chowk**	**6.82**	**304**	P		**Pn**	**10 56 09.2**	**+2.9**
BHPL	**Bhopal**	**7.17**	**200**	*e*PKP		**Pn**	**10 56 10.4**	**-0.6**
BHPL				*e*S		**Sn**	**10 57 27.9**	**-4.1**
ODAN	**Odare**	**7.18**	**114**	*e*Pn		**Pn**	**10 56 12.8**	**+1.7**
ODAN				*e*Sn		**Sn**	**10 57 29.8**	**-2.4**
	comp=N,116nm,0.3s							
TAPN	**Taplejung**	**7.22**	**110**	*e*Pn		**Pn**	**10 56 13.5**	**+1.7**
TAPN				*e*Sn		**Sn**	**10 57 30.8**	**-2.5**
	comp=N,90nm,0.3s							
CEP	**Cherat**	**7.90**	**301**	P		**Pn**	**10 56 22.5**	**+1.5**
CEP				S		**Sn**	**10 57 50.0**	**+0.2**
LSA	**Lhasa**	**9.63**	**89**	P		**Pn**	**10 56 45.9**	**+1.2**
AKL	**Akola**	**9.69**	**197**	*e*PKP		**Pn**	**10 56 44.7**	**-1.0**
AKL				*ex*		x	10 58 30.2	
KSH	**Kashi**	**10.04**	**342**	P		**Pn**	**10 56 49.8**	**-0.5**
KSH				S		**Sn**	**10 58 28.8**	**-14**
KBL	**Kabul**	**10.36**	**299**	*e*Pn		**Pn**	**10 56 54.9**	**+0.2**
	comp=N,10nm,0.7s							
LATR	**Latur**	**12.00**	**196**	*ex*		**Pn**	**10 57 13.6**	**-3.6**
LATR				*ex*		x	11 00 37.5	
HYB	**Hyderabad**	**12.64**	**187**	*e*P		**Pn**	**10 57 22.5**	**-3.5**
HYB				*e*S		**Sn**	**10 59 39.0**	**-7.2**
HYB	**Hyderabad**	**12.64**	**187**	*i* P		**Sn**	**10 57 22.5**	**-3.5**
HYB				*e*S		**Sn**	**10 59 39.0**	**-7.2**
UCH	**Uchtor**	**12.96**	**341**	*e*Pn		**Pn**	**10 57 29.5**	**-0.8**
	comp=N,3,3nm,0.6s							
AML	**Almayashu**	**13.12**	**339**	*e*Pn		**Pn**	**10 57 32.0**	**-0.5**
	comp=N,127nm,0.6s							
MK31	**Makanchi Array**	**16.82**	**5**	*e*P		**Pn**	**10 58 21.9**	**+0.3**
MKAR	**Makanchi Array**	**16.82**	**5**	Pn		**Pn**	**10 58 20.1**	**-1.4**
MKAR				Sn		**Sn**	**11 01 24.1**	**-3.8**
MKAR	**Makanchi Array**	**16.82**	**5**	Pn		**Pn**	**10 58 20.1**	**-1.4**
	comp=N,0.8nm,0.3s,baz=185,slow=12,SNR=20							
MKAR				Sn		**Sn**	**11 01 24.1**	**-3.8**
	comp=N,0.2nm,0.3s,baz=190,slow=23,SNR=3.2							
GTA	**Gaotai**	**18.70**	**55**	*e*P		**Pn**	**10 58 51.4**	**+6.6**
GTA				pmax		pmax		
	comp=Z,4.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**20.68**	**120**	P		**P**	**10 59 06.5**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=318,slow=12,SNR=3.2							
KURK	**Kurchatov**	**20.69**	**357**	P		**P**	**10 59 04.2**	**-1.7**
	comp=Z,2.0nm,0.2s,baz=189,slow=8.6,SNR=6.9							
BVAR	**Borovoye Array**	**24.04**	**346**	P		**P**	**10 59 40.3**	**-0.6**
	comp=Z,0.7nm,0.4s,mb3.4,baz=171,slow=13,SNR=4.2							
ZALV	**Zalesovo Beam**	**24.14**	**7**	P		**P**	**10 59 41.7**	**-0.1**
ZALV	**Zalesovo Beam**	**24.14**	**7**	P		**P**	**10 59 41.7**	**-0.1**
	comp=Z,1.9nm,0.5s,mb3.8,baz=188,slow=11,SNR=9.1							
ABKAR	**Akbulak array**	**24.54**	**327**	*e*P		**P**	**10 59 46.2**	**+0.8**
	comp=Z,1.7nm,0.6s,mb3.8							
AKTK	**Aktyubinsk**	**26.25**	**327**	P		**P**	**11 00 01.0**	**0.0**
AKTO	**Aktyubinsk**	**26.25**	**327**	P		**P**	**11 00 01.0**	**0.0**
	comp=Z,1.8nm,0.4s,mb3.9,baz=108,slow=11,SNR=6.7							
SONM	**Songino Array**	**26.92**	**41**	P		**P**	**11 00 08.9**	**+1.9**
	comp=Z,2.2nm,0.6s,mb3.9,baz=232,slow=11,SNR=13							
KSRS	**Korea Array**	**40.12**	**66**	P		**P**	**11 02 00.4**	**-1.3**
	comp=Z,2.0nm,1.0s,mb3.8,baz=277,slow=9.7,SNR=4.0							
AKASG	**Malin Array Be**	**42.90**	**314**	P		**P**	**11 02 23.6**	**-0.7**
	comp=Z,1.7nm,0.6s,mb3.9,baz=78,slow=7.8,SNR=4.6							
FINES	**FINESS Array B**	**47.02**	**328**	P		**P**	**11 02 56.1**	**-0.9**
	comp=Z,1.5nm,0.5s,mb4.2,baz=114,slow=9.2,SNR=8.5							
ARCES	**ARCESS Array B**	**49.98**	**338**	P		**P**	**11 03 20.1**	**+0.5**
	comp=Z,1.3nm,0.5s,mb4.2,baz=108,slow=7.8,SNR=9.6							
CBIJ	**Chichi jima**	**54.04**	**77**	LR		LR	11 26 52.8	
	comp=Z,54nm,20.9s,baz=307,slow=36							
HAU	**Haudompre**	**57.84**	**310**	*e*P		**P**	**11 04 16.4**	**-1.1**
	comp=Z,4.9nm,0.5s,mb4.5							
HAU	**Haudompre**	**57.84**	**310**	*e*P		**P**	**11 04 16.4**	**-1.1**
	comp=Z,2.5nm,0.5s,mb4.5							
LPG	**La Plagne**	**58.06**	**307**	*e*P		**P**	**11 04 19.5**	**+0.5**
LPL	**La Plagne**	**58.07**	**307**	*e*P		**P**	**11 04 19.6**	**+0.5**
	comp=Z,9.1nm,0.6s,mb4.7							
MBDF	**Montbardon**	**58.20**	**307**	*e*P		**P**	**11 04 19.8**	**-0.2**
CABF	**La Chapelle**	**58.28**	**309**	*e*P		**P**	**11 04 20.6**	**0.0**
MEZF	**Maizieres J'vi**	**58.60**	**311**	*e*P		**P**	**11 04 21.9**	**-0.8**
SMF	**Signal de Mont**	**59.79**	**309**	*e*P		**P**	**11 04 30.1**	**-0.9**
SSF	**Saint Saulge**	**59.92**	**310**	*e*P		**P**	**11 04 31.4**	**-0.5**
AVF	**Avril sur Loir**	**60.09**	**310**	*e*P		**P**	**11 04 33.0**	**0.0**
WRA	**Warramunga Arr**	**72.09**	**127**	P		**P**	**11 05 50.6**	**+0.2**
	comp=Z,0.3nm,0.4s,mb3.6,baz=321,slow=6.0,SNR=7.7							
TORD	**Torodi Ar. Bea**	**73.58**	**276**	P		**P**	**11 05 59.1**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.6,baz=58,slow=6.1,SNR=3.6							
ASAR	**Alice Springs**	**74.31**	**130**	P		**P**	**11 06 05.2**	**+1.7**
	comp=Z,0.3nm,0.5s,mb3.5,baz=314,slow=6.3,SNR=5.9							
ILAR	**Eielson Array**	**78.68**	**19**	P		**P**	**11 06 27.1**	**-0.5**
	comp=Z,0.5nm,0.7s,mb3.6,baz=321,slow=5.3,SNR=8.1							

IDC ***19*** *10:57:59.0±0.4,28.′38S×113.′05W,h0km,mb4.9/18, mb1 5.0/18,mb1mx5.0/18,mbtmp4.9/18,MS5.3/11, Ms1 5.3/11,ms1mx5.3/11,Error ellipse: s-maj=17.2km s-min=15.8km az=91.0*
ISCJB ***19*** *10:57:59.4±0.2,28.′36S±0.′04×112.′89W±0.′04,h10km, mb5.4/162,MS5.3/233,Error ellipse: s-maj=5.3km s-min=4.6km az=144.4*
MOS ***19*** *10:57:59.9±1.1,28.′28S×112.′97W,h10km,mb5.7/47, MS5.3/60,Error ellipse: s-maj=12.7km s-min=6.3km az=80.9*
BJI ***19*** *10:57:59.5,28.′20S×113.′47W,h9km,mB5.8/29,Ms5.7/27, Ms7 5.5/30*
NEIC ***19*** *10:58:00.2±0.2,28.′55S×112.′84W,h9km,mb5.5/150, MS5.3/194,MW5.7,MW5.7,Error ellipse: s-maj=5.7km s-min=4.7km az=113.0,Moment Tensor Solution. s85 Moment tensor: Scale 10^17Nm; Mrr=1.78±.05; Mθθ=-2.94±.05; Mφφ=1.16±.05; Mrθ=-0.08±.11; Mrφ=3.52±.04; Mθφ=0.12±.12; Best double couple: M=3.90000×10^17 NP1:φ=71.00000°,δ82.00000°, λ=-15.00000°. NP2:φ=163.00000°,δ75.00000°, λ=-172.00000°. Principal axes: T 3.9400, Plg4.0000°, Azm117.0000°; N -0.0400, Plg72.0000°, Azm223.0000°; P -3.8900, Plg16.0000°, Azm26.0000°;*
GCMT ***19*** *10:58:06.5±0.1,28.′65S×112.′79W,h13km,MW5.7, Moment Tensor Solution. s99,c179; s64,c82; Moment tensor: Scale 10^17Nm; Mrr=1.78±.05; Mθθ=-2.94±.05; Mφφ=1.16±.05; Mrθ=-0.08±.11; Mrφ=3.52±.04; Mθφ=0.12±.12; Best double couple: M=4.10000×10^17 NP1:φ=75.00000°, δ87.00000°,λ=1.00000°. NP2:φ=345.00000°,δ89.00000°, λ=177.00000°. Principal axes: T 3.1900, Plg3.0000°, Azm300.0000°; N 1.7800, Plg87.0000°, Azm143.0000°; P -4.9700, Plg1.0000°, Azm30.0000°; Data Used: II IU IC G CN. Surface waves: sta=111, comp=223, per= 50.*

ISC 19 10:58:01.1±0.2,28.′45S±0.′04×112.′90W±0.′04,h10km, n1109,σ0§63/702,mb5.4/162,MS5.3/233,236C-221D, Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RPN	**Rapa Nui**	**3.42**	**68**	Pn		**Pn**	**10 58 50.0**	**-4.5**
	4μm,0.7s,SNR=11							
RPN	**Rapa Nui**	**3.42**	**68**	*e*Pn		**Pn**	**10 58 50.4**	**-4.1**
RPN				*e*Sn		**Sn**	**10 59 33.3**	**-1.8**
RPN	**Rapa Nui**	**3.42**	**68**	Pn		**Pn**	**10 58 50.1**	**-4.4**
	47nm,0.3s,baz=252,slow=8.8,SNR=18							
RPN				Sn		**Sn**	**10 59 43.4**	**+8.3**
	3.0nm,0.3s,baz=41,slow=12,SNR=4.9							
RPN				LR		LR	11 00 03.5	
	comp=Z,40μm,20.1s,baz=296,slow=35							
RPN				T			11 02 19.8	
	109nm,0.3s,baz=34,slow=9.9,SNR=8.6							
PTCN	**Pitcairn Islan**	**15.73**	**278**	*e*Pn		**Pn**	**11 01 42.9**	**+0.1**
	866nm,1.2s							
PTCN				*e*Sn		**Sn**	**11 04 38.6**	**+1.4**
RKT	**Rikitea**	**20.57**	**280**	*e*P		**P**	**11 02 40.3**	**+0.2**
	157nm,1.3s							
RKT				*e*LQ			11 06 33.5	
	28μm,28.2s							
RKT				*e*LR		LR	11 07 23.8	
	7μm,26.8s							
RKT	**Rikitea**	**20.57**	**280**	*e*P		**P**	**11 02 40.3**	**+0.2**
	157nm,1.3s							
RKT				*e*LQ			11 06 33.5	
TAOE	**Nuku Hiva Isla**	**32.21**	**302**	*e*S		**S**	**11 09 38.9**	**-3.9**
	845nm,28.8s							
TAOE				*e*LR		LR	11 12 52.1	
	14μm,26.8s,baz=142							
TBI	**Tubuai**	**33.20**	**270**	*e*P		**P**	**11 04 38.5**	**+0.3**
	323nm,1.3s,mb6.1							
MEH	**Mehetia**	**33.89**	**280**	*e*P		**P**	**11 04 44.4**	**+0.1**
	175nm,1.2s,mb5.9							
PMOR	**Pomariorio Ree**	**35.02**	**285**	*e*P		**P**	**11 04 54.5**	**+0.4**
	295nm,1.3s,mb6.1							
PAYG	**Puerto Ayora**	**35.08**	**42**	PFAKE			11 05 10.0	+15
PAYG				LR		LR		
	comp=Z,10μm,19.0s,MS5.6							
TIAR	**Tiarei**	**35.13**	**280**	*e*P		**P**	**11 04 55.0**	**-0.1**
	comp=Z,384nm,1.1s,mb6.2							
PAE	**Paea**	**35.29**	**280**	*e*P		**P**	**11 04 56.6**	**+0.2**
	comp=Z,57nm,1.2s,mb5.4							
PAE	**Paea**	**35.29**	**280**	*e*P		**P**	**11 04 56.6**	**+0.2**
PAE				pmax		pmax		
	comp=Z,57nm,1.2s,mb5.4							
PPT	**Papeete**	**35.33**	**280**	*e*P		**P**	**11 04 56.8**	**+0.1**
	comp=Z,316nm,1.2s,mb6.1							
PPT				*e*S		**S**	**11 10 29.0**	**-2.1**
	comp=Z,1μm,26.0s							
PPT				*e*LQ			11 12 50.5	
	comp=Z,9μm,27.2s							
PPT				*e*LR		LR	11 14 11.2	
	comp=Z,6μm,26.5s,baz=109							
PPT	**Papeete**	**35.33**	**280**	P		**P**	**11 04 54.6**	**-2.1**
	comp=Z,238nm,1.1s,mb6.0,baz=105,slow=10,SNR=25							
PPT				LR		LR	11 15 45.5	
	comp=Z,1μm,19.5s,MS4.7,baz=116,slow=30							
COYC	**Coyhaique**	**36.35**	**129**	*i* P		**P**	**11 05 07.1**	**+1.9**
COYC	**Coyhaique**	**36.35**	**129**	*i* P		**P**	**11 05 07.1**	**+1.9**
LMEL	**Las Melosas**	**36.74**	**109**	*i* P		**P**	**11 05 10.8**	**+2.1**
LMEL	**Las Melosas**	**36.74**	**109**	*i* P		**P**	**11 05 10.8**	**+2.1**
LCO	**Las Campanas**	**36.86**	**101**	*e*P		**P**	**11 05 11.2**	**+1.4**
	comp=Z,111nm,1.4s,mb5.5							
LCO				LR		LR		
	comp=Z,6μm,21.0s,MS5.3							
NNA	**Nana**	**37.40**	**71**	*e*P		**P**	**11 05 14.8**	**+0.3**
	comp=Z,142nm,1.7s,mb5.5							
NNA				LR		LR		
	comp=Z,6μm,22.0s,MS5.3							
USHA	**Ushuaia**	**41.40**	**142**	P		**P**	**11 05 47.7**	**+0.3**
	comp=Z,20nm,0.9s,mb4.8,baz=292,slow=5.4,SNR=6.1							
LPAZ	**La Paz**	**42.90**	**83**	*e*P		**P**	**11 06 01.4**	**+1.2**
	comp=Z,150nm,1.4s,mb5.5							
LPAZ				LR		LR		
	comp=Z,2μm,20.0s,MS5.0							
LPAZ	**La Paz**	**42.90**	**83**	P		**P**	**11 06 01.8**	**+1.7**
	comp=Z,79nm,1.3s,mb5.3,baz=247,slow=6.3,SNR=64							
LPAZ				LR		LR	11 20 05.7	
	comp=Z,2μm,19.7s,MS4.9,baz=244,slow=31							
LPAZ	**La Paz**	**42.90**	**83**	*e*P		**P**	**11 06 01.4**	**+1.2**
LPAZ				pmax		pmax		
	comp=Z,150nm,1.4s							
LPAZ				MLR		MLR		
	comp=Z,2μm,20.0s							
TRQA	**Tornquist**	**43.18**	**116**	*e*P		**P**	**11 06 02.3**	**+0.1**
	comp=Z,104nm,1.6s,mb5.3							
TRQA				LR		LR		
	comp=Z,7μm,19.0s,MS5.6							
OTAV	**Otavalo**	**43.60**	**55**	PFAKE			11 06 20.0	+14
OTAV				LR		LR		
	comp=Z,2μm,19.0s,MS5.0							
ACX	**Acapulco**	**46.79**	**17**	*e*P		**P**	**11 06 32.2**	**+1.2**
PNIG	**Pinotepa**	**46.81**	**20**	*i* P		**P**	**11 06 31.5**	**+0.3**
CAIG	**El Cayaco**	**46.85**	**17**	*i* P		**P**	**11 06 31.6**	**+0.1**
HUIG	**Huatulco**	**46.87**	**22**	*e*P		**P**	**11 06 31.7**	**+0.1**
JTS	**JuntasAbangare**	**47.05**	**39**	P		**P**	**11 06 34.3**	**+1.2**
	comp=Z,175nm,1.5s,mb5.8,SNR=5.3							
JTS	**JuntasAbangare**	**47.05**	**39**	*e*P		**P**	**11 06 33.7**	**+0.6**
	comp=Z,710nm,2.8s,mb6.1							
JTS				LR		LR		
	comp=Z,8μm,20.0s,MS5.7							
JTS	**JuntasAbangare**	**47.05**	**39**	*c* i P		**P**	**11 06 34.1**	**+1.0**

ZIIG Zihuatanejo 47.10 15 *i* P **P** **11 06 32.4 -1.0**
PMSA Palmer Station 47.43 154 P **P** **11 06 37.5 +2.0**
PMSA LR LR
comp=Z,2μm,20.0s,MS5.0
PMSA Palmer Station 47.43 154 P **P** **11 06 37.5 +2.0**
comp=Z,39nm,1.1s,mb5.2,baz=288,slow=4.5,SNR=4.0
VHO Vista Hermosa 47.88 21 *i* P **P** **11 06 39.9 +0.4**
CMIG Matias Romero 48.51 23 P **P** **11 06 43.8 -0.6**
comp=Z,18nm,1.1s,mb5.0,baz=197,slow=7.2,SNR=15
TGUH Tegucigalpa,Un 49.00 34 *e*P **P** **11 06 48.9 +0.7**
comp=Z,889nm,2.8s,mb6.3
TGUH LR LR
comp=Z,4μm,20.0s,MS5.4
CPUP Villa Florida 49.01 101 P **P** **11 06 47.2 -1.1**
comp=Z,4.2nm,0.8s,mb4.5,baz=242,slow=12,SNR=6.5
MOIG Morelia 49.17 15 *i* P **P** **11 06 50.4 +1.1**
BCIP Isla Barro Col 49.18 45 *e*P **P** **11 06 49.3 -0.3**
comp=Z,111nm,1.8s,mb5.6
BCIP LR LR
comp=Z,6μm,20.0s,MS5.5
PPM Popocatepetl 49.21 18 *i* P **P** **11 06 53.5 +3.8**
SZVM Salazar 49.26 17 *e*P **P** **11 06 51.2 +1.1**
PBVM Pinon 49.45 17 *e*P **P** **11 06 54.0 +2.5**
PTVM Pico Tres Padr 49.59 17 *e*P **P** **11 06 54.4 +1.9**
IIO Organos 49.69 18 *e*P **P** **11 06 54.4 +1.1**
ROSC El Rosal 49.74 54 P **P** **11 06 55.7 +1.7**
comp=Z,3.1nm,0.3s,mb4.8,baz=84,slow=23,SNR=9.0
ROSC LR LR 11 24 04.3
comp=Z,3μm,18.8s,MS5.4,baz=200,slow=31
LVIG Laguna Verde 50.47 20 *i* P **P** **11 06 59.4 +0.1**
XMAS Kiritimati 52.38 298 PFAKE 11 07 30.0 +16
XMAS LR LR
comp=Z,3μm,19.0s,MS5.4
TEIG Tepich 53.92 29 *e*P **P** **11 07 24.5 -0.4**
comp=Z,81nm,1.4s,mb5.5
TEIG LR LR
comp=Z,3μm,22.0s,MS5.3
SDV Santo Domingo 55.16 54 *e*P **P** **11 07 33.7 -0.5**
comp=Z,18nm,1.2s,mb5.0
SDV LR LR
comp=Z,1μm,22.0s,MS5.0
AFI Afiamalu 56.28 272 PFAKE 11 07 50.0 +7.8
AFI LR LR
comp=Z,2μm,21.0s,MS5.2
KVTX Kingsville 57.51 16 *e*P **P** **11 07 52.4 +1.9**
comp=Z,138nm,1.2s,mb5.9
KVTX LR LR
comp=Z,4μm,20.0s,MS5.5
MTDJ Mount Denham 57.64 41 *e*P **P** **11 07 51.9 +0.2**
comp=Z,352nm,2.1s,mb6.0
MTDJ LR LR
comp=Z,6μm,20.0s,MS5.7
TXAR Lajitas Array 58.13 9 P **P** **11 07 54.5 -0.4**
comp=Z,9.0nm,1.0s,mb4.7,baz=188,slow=7.6,SNR=47
TXAR LR LR 11 29 06.2
comp=Z,3μm,18.0s,MS5.5,baz=240,slow=32
TXAR PKPPKP 11 37 43.8
comp=Z,0.1nm,0.6s,baz=160,slow=5.2,SNR=3.5
626A Big Bend Ranch 58.28 9 ⇑P **P** **11 07 56.3 +0.3**
baz=59,SNR=54
626A ⇑S **S** **11 16 03.4 +5.2**
baz=59
627A Terlingua Ranc 58.29 10 ⇓P **P** **11 07 56.4 +0.3**
baz=59,SNR=68
627A ⇑S **S** **11 16 04.7 +6.5**
baz=59
SPB Sao Paulo 58.40 102 PFAKE 11 08 10.0 +13
SPB LR LR
comp=Z,2μm,20.0s,MS5.2
628A Black Gap, Mar 58.40 10 ⇓P **P** **11 07 56.9 +0.1**
baz=59,SNR=22
628A ⇓S **S** **11 16 05.5 +5.8**
baz=59
526A Mary Lane Ranc 58.79 9 ⇑P **P** **11 07 59.5 0.0**
baz=59,SNR=19
527A Woodward Ranch 58.94 9 ⇑P **P** **11 08 00.5 0.0**
baz=59
528A Cox Ranch, San 59.08 10 ⇓P **P** **11 08 01.6 +0.1**
baz=59,SNR=30
SNZO South Karori 59.19 237 PFAKE 11 08 10.0 +7.7
SNZO LR LR
comp=Z,3μm,20.0s,MS5.4
425A Indio Mountain 59.39 8 ⇑P **P** **11 08 03.7 0.0**
baz=60,SNR=22
426A McDonald Obser 59.40 9 ⇑P **P** **11 08 03.6 -0.1**
baz=60,SNR=27
319A Douglas 59.59 4 ⇓P **P** **11 08 05.5 +0.4**
baz=60,SNR=39
320A Kipp Ranch, An 59.60 4 ⇑P **P** **11 08 05.6 +0.5**
baz=60,SNR=35
318A Bisbee 59.62 3 ⇓P **P** **11 08 05.3 0.0**
baz=60,SNR=69
428A Kincaid Ranch, 59.65 10 ⇑P **P** **11 08 05.9 +0.4**
baz=60,SNR=62
427A Hayter Ranch, 59.66 9 ⇓P **P** **11 08 05.5 0.0**
baz=60,SNR=67
JCT Junction City 59.92 13 ⇓P **P** **11 08 07.1 -0.2**
baz=60,SNR=46
JCT Junction City 59.92 13 *e*P **P** **11 08 07.0 -0.3**
comp=Z,122nm,1.0s,mb5.9
JCT LR LR
comp=Z,8μm,20.0s,MS5.8
JCT Junction City 59.92 13 *e*P **P** **11 08 07.0 -0.3**
JCT pmax pmax
comp=Z,122nm,1.0s,mb5.9
JCT MLR MLR
comp=Z,8μm,20.0s,MS5.8
217A Green Valley 59.92 2 ⇑P **P** **11 08 07.8 +0.5**
baz=60,SNR=24
325A Bean Ranch, Si 59.97 8 ⇑P **P** **11 08 07.3 -0.3**
baz=60,SNR=23
326A Caldwell Ranch 60.04 9 ⇑P **P** **11 08 07.5 -0.6**
baz=60,SNR=11
214A Organ Pipe Nat 60.07 0 ⇑P **P** **11 08 08.7 +0.4**
baz=60,SNR=21
216A Three Points, 60.13 1 ⇑P **P** **11 08 09.1 +0.3**
baz=60,SNR=23
218A Dragoon 60.15 3 ⇓P **P** **11 08 09.3 +0.4**
baz=60,SNR=17
**327A Balmorhea

222A Williams Famil 60.47 6 ⇓P P 11 08 11.3 +0.2
baz=61,SNR=8.4
224A Cornudas Mount 60.60 7 ⇓P P 11 08 11.8 -0.2
baz=61,SNR=86
112A Yuma 60.67 358 ⇓P P 11 08 12.6 +0.2
baz=61,SNR=6.9
116A Eloy 60.69 1 ⇑P P 11 08 12.8 +0.2
baz=61,SNR=14
225A Deer Hill, Car 60.71 8 ⇑P P 11 08 12.1 -0.6
baz=61,SNR=27
117A Oracle 60.72 2 ⇓P P 11 08 13.3 +0.5
baz=61,SNR=37
226A Malaga, Loving 60.76 9 ⇑P P 11 08 12.7 -0.4
baz=61,SNR=23
120A U Bar Ranch, L 60.80 4 ⇑P P 11 08 13.8 +0.5
baz=61,SNR=17
227A Bennet, Jal 60.82 9 ⇓P P 11 08 12.6 -0.8
baz=61,SNR=7.6
121A Cookes Peak, D 60.84 5 ⇑P P 11 08 13.9 +0.3
baz=61,SNR=23
DVTC Desert V Tower 60.85 357 ⇓P P 11 08 13.6 0.0
baz=61
GDL2 Guadalupe Moun 60.86 8 eP P 11 08 13.7 -0.1
114A Black Gap (USA 60.87 0 ⇑P P 11 08 14.0 +0.3
baz=61,SNR=11
113A Mohawk Valley, 60.89 359 ⇓P P 11 08 14.2 +0.4
baz=61,SNR=10
BAR Barrett 60.90 356 eP P 11 08 14.1 +0.1
comp=Z,54nm,1.4s,mb5.5
119A Ashpeak Ranch, 60.98 3 ⇑P P 11 08 14.9 +0.4
baz=61,SNR=18
CLNB Carlsbad 60.99 9 eP P 11 08 14.4 -0.1
comp=Z,2.8nm,0.6s,mb4.6
122A Conniff Cattle 61.07 6 ⇓P P 11 08 15.3 +0.2
baz=61
123A Bell Site, Whi 61.08 6 ⇓P P 11 08 15.3 +0.2
baz=61,SNR=10
MONP Monument Peak 61.09 357 ⇑P P 11 08 15.7 +0.4
baz=61,SNR=10
SWSC Sam W. Stewart 61.12 357 ⇑P P 11 08 15.5 +0.1
baz=61
109C Camp Elliot, M 61.13 356 ⇑P P 11 08 15.6 +0.1
baz=62
GLA Glamis 61.19 358 ⇓P P 11 08 16.2 +0.2
baz=62
GLA Glamis 61.19 358 eP P 11 08 15.5 -0.5
comp=Z,48nm,1.3s,mb5.5
GLA Glamis 61.19 358 eP P 11 08 15.5 -0.5
GLA pmax pmax
comp=Z,48nm,1.3s,mb5.5
124A Stringfield Ra 61.22 7 ⇑P P 11 08 16.6 +0.4
baz=62,SNR=37
Z18A Geronimo 61.26 3 ⇓P P 11 08 16.6 +0.2
baz=62
125A Gardner Draw, 61.27 8 ⇓P P 11 08 16.1 -0.4
baz=62,SNR=108
Z13A Yuma Proving G 61.32 359 ⇑P P 11 08 16.9 +0.1
baz=62
SCI San Clemente I 61.33 355 ⇓P P 11 08 16.9 0.0
baz=62
126A Clayton Basin, 61.34 9 ⇑P P 11 08 15.9 -1.1
baz=62,SNR=11
Z20A Nine Sixteen R 61.36 4 ⇑P P 11 08 17.6 +0.5
baz=62,SNR=16
Z15A Gila River Ind 61.41 1 ⇓P P 11 08 17.2 -0.2
baz=62
Z17A San Carlos Hig 61.45 2 ⇑P P 11 08 18.0 +0.3
baz=62,SNR=11
127A Arkansas Junct 61.46 9 ⇑P P 11 08 17.1 -0.7
baz=62,SNR=10
Z16A Peralta Trail, 61.47 1 ⇓P P 11 08 18.0 +0.2
baz=62,SNR=17
Z19A T-Link Ranch, 61.50 3 ⇓P P 11 08 18.4 +0.3
baz=62
Z21A St. Cloud Mine 61.62 5 ⇓P P 11 08 19.3 +0.4
baz=62,SNR=14
Z22A Elephant Butte 61.63 6 ⇑P P 11 08 19.2 +0.3
baz=62,SNR=18
Z23A Rita Site, Whi 61.70 6 ⇑P P 11 08 20.0 +0.6
baz=62,SNR=20
QSPA South Pole Qui 61.73 180 eP P 11 08 20.1 +1.1
comp=Z,195nm,1.9s,mb5.9
QSPA LR LR
comp=Z,4μm,21.0s,MS5.5
QSPA South Pole Qui 61.73 180 PKPPKP 11 37 31.4
comp=Z,4.2nm,1.1s,baz=233,slow=4.7,SNR=5.4
CIS Catalina Islan 61.74 355 ⇓P P 11 08 19.3 -0.4
baz=62
CPRX Cap Rock 61.74 9 eP P 11 08 19.3 -0.3
comp=Z,18nm,1.0s,mb5.2
PFO Pinyon Flat Ob 61.81 357 P P 11 08 20.8 +0.7
comp=Z,70nm,1.4s,mb5.6,SNR=7.8
PFO Pinyon Flat Ob 61.81 357 ⇑P P 11 08 20.6 +0.5
baz=62,SNR=6.8
PFO Pinyon Flat Ob 61.81 357 eP P 11 08 21.0 +0.9
comp=Z,295nm,2.8s,mb5.9
PFO LR LR
comp=Z,1μm,21.0s,MS5.1
PFO Pinyon Flat Ob 61.81 357 eP P 11 08 21.0 +0.9
PFO pmax pmax
comp=Z,295nm,2.8s,mb5.9
PFO MLR MLR
comp=Z,1μm,21.0s,MS5.1
Y17A Roosevelt 61.84 2 ⇑P P 11 08 20.8 +0.5
baz=62,SNR=14
MURC Murrieta 61.85 356 ⇓P P 11 08 20.4 0.0
baz=62
Y12C Blythe 61.88 358 ⇑P P 11 08 21.0 +0.4
baz=62,SNR=7.5
Y13A Salome 61.93 359 ⇓P P 11 08 21.5 +0.5
baz=62,SNR=21
Y18A Canyon Day Jun 61.95 3 ⇓P P 11 08 21.3 +0.3
baz=62,SNR=10
Z26A Caprock 61.97 8 ⇑P P 11 08 20.0 -1.2
baz=62,SNR=58
SDDR Presa de Saban 61.98 45 eP P 11 08 21.7 +0.1
comp=Z,33nm,1.3s,mb5.3
SDDR LR LR
comp=Z,2μm,20.0s,MS5.2
Y16A Circle Bar Ran 62.01 1 ⇓P P 11 08 21.9 +0.4
baz=62,SNR=29
FMP Fort Macarthur 62.03 355 ⇑P P 11 08 21.7 +0.1
baz=62
Y14A Wickenburg 62.05 360 ⇑P P 11 08 22.3 +0.5
baz=62,SNR=21
Y15A Casa Rosa Ranc 62.07 1 ⇓P P 11 08 22.2 +0.4
baz=62,SNR=27
Y19A Nutrioso 62.16 3 ⇓P P 11 08 23.1 +0.6
baz=62,SNR=48
Y20A Horse Springs, 62.17 4 ⇓P P 11 08 23.2 +0.7
baz=62,SNR=31
Y22A Socorro 62.30 6 ⇓P P 11 08 23.9 +0.5
baz=63,SNR=30
IRM Iron Mountain 62.31 358 ⇑P P 11 08 23.7 +0.2
baz=63,SNR=25
Y21A Point of Rocks 62.32 5 ⇑P P 11 08 24.3 +0.8
baz=63,SNR=62
NATX Nacogdoches 62.34 18 eP P 11 08 24.3 +0.6
comp=Z,183nm,1.4s,mb6.0
NATX LR LR
comp=Z,3μm,19.0s,MS5.4
Y23A Lovelace Mesa, 62.38 6 ⇓P P 11 08 24.5 +0.5
baz=63,SNR=58
PDMCI Parker Dam,Lak 62.42 359 ⇑P P 11 08 24.7 +0.5
baz=63,SNR=14
BSC Santa Cruz Isl 62.43 354 ⇓P P 11 08 24.0 -0.3
baz=63
Y24A Capitan 62.44 7 ⇑P P 11 08 24.4 +0.1
baz=63,SNR=60
Y22D IRIS PASSCAL I 62.44 6 ⇓P P 11 08 24.7 +0.3
baz=63
X17A Forest Lakes 62.48 2 ⇓P P 11 08 25.4 +0.8
baz=63,SNR=7.6
PASC Pasadena Art C 62.48 355 eP P 11 08 24.4 -0.2
comp=Z,167nm,1.4s,mb6.0
BBRC Big Bear Solar 62.49 356 ⇓P P 11 08 25.3 +0.7
baz=63
BLG Laguna Peak 62.49 354 ⇑P P 11 08 24.6 -0.1
baz=63
BFSC Mount Baldy Ra 62.51 356 ⇓P P 11 08 25.2 +0.4
baz=63,SNR=7.1
MWC Mount Wilson 62.52 355 eP P 11 08 25.8 +0.9
comp=Z,52nm,1.5s,mb5.4
MWC Mount Wilson 62.52 355 eP P 11 08 25.8 +0.9
MWC pmax pmax
comp=Z,52nm,1.5s,mb5.4
LENM Lemitar 62.53 6 eP P 11 08 25.9 +0.9
BNM Barren Site 62.54 6 eP P 11 08 25.7 +0.7
comp=Z,28nm,1.4s,mb5.2
X16A Lo Mia Camp, P 62.54 1 ⇑P P 11 08 25.5 +0.5
baz=63,SNR=18
DECC Green Verdugo 62.57 355 ⇑P P 11 08 25.2 0.0
baz=63
X14A Yava 62.58 0 ⇑P P 11 08 25.7 +0.5
baz=63,SNR=18
X15A Humboldt 62.60 1 ⇑P P 11 08 26.0 +0.6
baz=63,SNR=37
Y26A Elida 62.63 8 ⇑P P 11 08 24.4 -1.2
baz=63,SNR=41
X19A St. Johns 62.63 3 ⇓P P 11 08 25.7 +0.1
baz=63,SNR=10
X18A Snowflake 62.70 3 ⇓P P 11 08 26.4 +0.4
baz=63,SNR=24
LPM Los Pinos Moun 62.70 6 eP P 11 08 23.1 -3.0
X21A Alamocita Cree 62.74 5 ⇓P P 11 08 27.0 +0.6
baz=63,SNR=31
LAZ Ladron 62.75 5 eP P 11 08 27.4 +1.0
comp=Z,16nm,1.3s,mb5.0
X20A Quemado 62.79 4 ⇑P P 11 08 27.2 +0.6
baz=63,SNR=20
MSTX Muleshoe 62.82 9 ⇓P P 11 08 26.0 -0.9
baz=63,SNR=48
SBC Santa Barbara 62.88 354 ⇓P P 11 08 27.0 -0.3
baz=63
NEE2 Needles Airpor 62.90 358 ⇓P P 11 08 27.6 +0.2
baz=63
GMRC Granite Mounta 62.94 357 ⇓P P 11 08 28.4 +0.7
baz=63,SNR=23
OSI Osito Adit 62.97 355 ⇑P P 11 08 27.8 0.0
baz=63
X23A Hourglass Bar 63.01 6 ⇓P P 11 08 28.1 -0.1
baz=63,SNR=9.3
HEC Hector,Ludlow 63.02 357 ⇓P P 11 08 28.4 +0.2
baz=63
RRX Edison Barstow 63.11 356 ⇑P P 11 08 28.3 -0.4
baz=63
X25A Clemmons Ranch 63.12 8 ⇓P P 11 08 28.0 -0.8
baz=63,SNR=17
EDW2 Edwards Air Fo 63.17 355 ⇓P P 11 08 28.9 -0.3
baz=64,SNR=9.8
POHA Pohakuloa 63.20 314 PFAKE 11 08 40.0 +10
POHA LR LR
comp=Z,4μm,20.0s,MS5.6
W13A Hualapai Mount 63.21 359 ⇓P P 11 08 30.1 +0.6
baz=64,SNR=9.4
W16A Flagstaff 63.22 1 ⇓P P 11 08 30.0 +0.5
baz=64,SNR=10
LDFC Landfair 63.22 358 eP P 11 08 31.5 +2.0
comp=Z,120nm,1.2s,mb5.9
W17A Winslow 63.22 2 ⇑P P 11 08 29.6 +0.1
baz=64
X26A CR and CF Fran 63.25 8 ⇓P P 11 08 28.8 -0.9
baz=64,SNR=21
W15A Williams 63.29 1 ⇑P P 11 08 30.6 +0.6
baz=64,SNR=7.4
W18A Petrified Fore 63.30 3 ⇓P P 11 08 30.2 +0.1
baz=64
W19A Sanders 63.31 3 ⇑P P 11 08 30.5 +0.4
baz=64,SNR=17
W14A Seligman 63.32 360 ⇓P P 11 08 31.2 +1.0
baz=64,SNR=43
PKM Peck Mountain 63.34 354 ⇑P P 11 08 30.4 +0.1
baz=64
ANMO Albuquerque 63.35 6 eP P 11 08 29.8 -0.6
comp=Z,34nm,1.4s,mb5.3
ANMO LR LR
comp=Z,5μm,20.0s,MS5.7
ANMO Albuquerque 63.35 6 eP P 11 08 29.8 -0.6
ANMO pmax pmax
comp=Z,34nm,1.4s
ANMO MLR MLR
comp=Z,5μm,20.0s
W21A San Fidel 63.42 5 ⇑P P 11 08 31.3 +0.5
baz=64
W12A Cal Nev Ari 63.44 358 ⇓P P 11 08 31.5 +0.5
baz=64
W22A Albuquerque 63.44 6 ⇓P P 11 08 31.4 +0.4
baz=64,SNR=5.4
ARVC Arvin 63.48 355 ⇓P P 11 08 31.3 +0.1
baz=64
GSC Goldstone 63.52 356 ⇓P P 11 08 31.9 +0.5
baz=64,SNR=29
GSC Goldstone 63.52 356 eP P 11 08 32.1 +0.7
comp=Z,52nm,1.2s,mb5.4
GSC Goldstone 63.52 356 eP P 11 08 32.2 +0.7
GSC pmax pmax
comp=Z,52nm,1.2s,mb5.4
W23A Werner Place, 63.59 6 ⇑P P 11 08 31.8 -0.1
baz=64,SNR=46
TUQ Turquoise Moun 63.61 357 ⇑P P 11 08 32.8 +0.8
baz=64,SNR=12
WUAZ Wupatki 63.64 1 ⇓P P 11 08 32.8 +0.6
baz=64,SNR=15
WUAZ Wupatki 63.64 1 eP P 11 08 33.5 +1.2
comp=Z,73nm,1.5s,mb5.5
WUAZ LR LR
comp=Z,1μm,20.0s,MS5.0
W24A Lazy 6 Ranch, 63.71 7 ⇓P P 11 08 33.0 +0.2
baz=64,SNR=88
V14A Boquillas Ranc 63.74 360 ⇓P P 11 08 33.7 +0.7
baz=64,SNR=30
LRMC Laurel Mountai 63.74 356 ⇓P P 11 08 33.1 +0.1
baz=64,SNR=6.2
SMMC Simmler 63.77 354 ⇑P P 11 08 33.0 -0.2
baz=64
W26A Owens Ranch, T 63.78 8 ⇑P P 11 08 32.9 -0.3
baz=64,SNR=19
DWPF Disney 63.81 31 PFAKE 11 08 50.0 +16
DWPF LR LR
comp=Z,1μm,19.0s,MS5.1
W25A X Bar L Ranch, 63.83 8 ⇓P P 11 08 33.3 -0.3
baz=64,SNR=25
W27A Bowe Ranch, En 63.85 9 ⇓P P 11 08 33.2 -0.5
baz=64,SNR=29
V12A Nelson 63.86 358 ⇑P P 11 08 34.3 +0.5
baz=64,SNR=17
AMTX Amarillo 63.88 10 ⇑P P 11 08 33.3 -0.5
baz=64,SNR=9.0
AMTX Amarillo 63.88 10 eP P 11 08 33.8 -0.1
comp=Z,717nm,2.9s,mb6.2
AMTX LR LR
comp=Z,2μm,19.0s,MS5.2
GRGR Grenville 63.89 58 PFAKE 11 08 50.0 +16
GRGR LR LR
comp=Z,2μm,20.0s,MS5.2
V15A Kaibab Nationa 63.93 1 ⇓P P 11 08 34.8 +0.6
baz=64,SNR=29
V13A Grand Canyon W 63.97 359 ⇑P P 11 08 34.8 +0.4
baz=64,SNR=41
GRTK Grand Turk 63.97 44 PFAKE 11 08 50.0 +15
GRTK LR LR
comp=Z,2μm,20.0s,MS5.4
CRPR Cabo Rojo, PR 63.98 49 eP P 11 08 34.6 -0.3
comp=Z,30nm,1.6s,mb5.1
VBMS Vicksburg 63.98 21 eP P 11 08 35.2 +0.6
comp=Z,109nm,1.3s,mb5.7
VBMS LR LR
comp=Z,1μm,21.0s,MS5.0
ISA Isabella 63.99 355 ⇓P P 11 08 35.0 +0.5
baz=64,SNR=10
ISA Isabella 63.99 355 eP P 11 08 34.6 +0.1
comp=Z,80nm,1.8s,mb5.5
ISA Isabella 63.99 355 eP P 11 08 34.6 0.0
ISA pmax pmax
comp=Z,80nm,1.8s,mb5.5
V11A Goodsprings 63.99 358 ⇓P P 11 08 35.3 +0.7
baz=64,SNR=18
V20A Brimhall 64.04 4 ⇑P P 11 08 35.2 +0.3
baz=64,SNR=30
BRAL Brewton 64.06 25 PFAKE 11 08 50.0 +15
BRAL LR LR
comp=Z,2μm,19.0s,MS5.3
SHOC Shoshone 64.09 357 ⇑P P 11 08 35.6 +0.4
baz=64,SNR=16
V21A Milan 64.10 5 ⇑P P 11 08 35.5 +0.2
baz=64,SNR=7.3
V23A Ortiz Mt. (NFS 64.17 6 ⇓P P 11 08 35.5 -0.3
baz=64,SNR=7.9
VES Vestal, Richgr 64.21 354 ⇓P P 11 08 35.9 -0.1
baz=64,SNR=9.9
V24A Rampart Ranch, 64.24 7 ⇓P P 11 08 35.8 -0.4
baz=65,SNR=8.7
WMOK Wichita Mounta 64.25 13 eP P 11 08 34.0 -2.3
comp=Z,189nm,3.0s
WMOK LR LR
comp=Z,5μm,21.0s,MS5.7
WMOK Wichita Mounta 64.25 13 eP P 11 08 34.0 -2.3
WMOK pmax pmax
comp=Z,189nm,3.0s
WMOK MLR MLR
comp=Z,5μm,21.0s,MS5.7
V22A San Miguel Ran 64.27 5 ⇑P P 11 08 36.6 +0.2
baz=65
U16A Tuba City 64.27 2 ⇑P P 11 08 36.8 +0.4
baz=65,SNR=31
MPMC Manual Prospec 64.31 356 ⇑P P 11 08 36.8 +0.1
baz=65,SNR=35
V25A Rancho No Teng 64.42 7 ⇓P P 11 08 37.0 -0.4
baz=65,SNR=24
V26A Tequesquite Ra 64.48 8 ⇓P P 11 08 37.0 -0.8
baz=65,SNR=35
U14A Mt Trumbull 64.52 360 ⇓P P 11 08 38.2 +0.1
baz=65,SNR=25
U13A Pakoon Wash 64.53 359 ⇑P P 11 08 38.7 +0.6
baz=65,SNR=18
DAC Darwin (Calif) 64.53 356 PFAKE 11 08 50.0 +12
DAC LR LR
comp=Z,2μm,22.0s,MS5.2
U12A Valley of Fire 64.56 359 ⇑P P 11 08 38.7 +0.5
baz=65,SNR=11
U11A Corn Creek 64.57 358 ⇑P P 11 08 39.0 +0.6
baz=65,SNR=7.4
U18A Rough Rock, Ch 64.59 3 ⇓P P 11 08 38.7 +0.2
baz=65,SNR=22
U10A Ash Meadows, A 64.61 357 ⇑P P 11 08 39.4 +0.8
baz=65,SNR=29
U20A Newcomb 64.61 4 ⇓P P 11 08 38.5 -0.2
baz=65
FURC Furnace Creek, 64.68 356 ⇑P P 11 08 39.3 +0.1
baz=65,SNR=7.9
RCTC Rector, Farmer 64.69 354 ⇓P P 11 08 38.7 -0.5
baz=65
SJG San Juan 64.70 50 PFAKE 11 08 50.0 +10
SJG LR LR
comp=Z,1μm,21.0s,MS5.2
U21A Nageezi 64.72 5 ⇓P P 11 08 39.6 +0.2
baz=65,SNR=34
CWC Cottonwood Cre 64.73 355 ⇓P P 11 08 39.7 +0.3
baz=65,SNR=6.0
U22A Llaves 64.73 5 ⇑P P 11 08 39.6 +0.2
baz=65,SNR=24
U23A El Rio 64.74 6 ⇑P P 11 08 40.1 +0.6
baz=65,SNR=92
T12A Moapa 64.85 358 ⇑P P 11 08 40.4 +0.2
baz=65,SNR=5.5
U25A Circle Dot Ran 65.00 8 ⇓P P 11 08 40.9 -0.3
baz=65,SNR=17
T19A Beclabito 65.04 3 ⇑P P 11 08 40.9 -0.5
baz=65,SNR=32
U26A Atchley Ranch, 65.07 8 ⇓P P 11 08 41.1 -0.5
baz=65,SNR=21
T16A Glen Canyon Da 65.10 1 ⇓P P 11 08 42.0 +0.1
baz=65,SNR=9.2
T15A Red Dirt Ranch 65.12 0 ⇑P P 11 08 42.6 +0.6
baz=66,SNR=9.4
T13A Saint George 65.13 359 ⇓P P 11 08 42.6 +0.6
baz=66,SNR=42
T17A Navajo Res., N 65.13 2 ⇓P P 11 08 42.4 +0.3
baz=66,SNR=36
T14A Hurricane 65.17 360 ⇓P P 11 08 42.4 +0.1
baz=66,SNR=11
GRAC Grapevine Rang 65.24 356 ⇓P P 11 08 43.4 +0.7
baz=66,SNR=16
MIAR Mount Ida 65.27 18 eP P 11 08 42.5 -0.5
comp=Z,46nm,1.3s,mb5.3
MIAR LR LR
comp=Z,2μm,22.0s,MS5.3
MIAR Mount Ida 65.27 18 eP P 11 08 42.5 -0.5
MIAR pmax pmax
comp=Z,46nm,1.3s,mb5.3
MIAR MLR MLR
comp=Z,2μm,22.0s,MS5.3
T21A Navajo Lake 65.29 5 ⇑P P 11 08 42.7 -0.4
baz=66,SNR=14
T18A Mexican Hat 65.30 3 ⇑P P 11 08 43.3 +0.2
baz=66,SNR=38
TIN Tinemaha 65.35 355 ⇓P P 11 08 43.9 +0.4
baz=66
T22A Edith 65.36 5 ⇑P P 11 08 44.0 +0.5
baz=66,SNR=31
SAO San Andreas Ge 65.36 352 eP P 11 08 44.1 +0.5
comp=Z,271nm,2.8s,mb5.8
SAO LR LR
comp=Z,1μm,19.0s,MS5.2
SAO San Andreas Ge 65.36 352 eP P 11 08 44.1 +0.6
SAO pmax pmax
comp=Z,271nm,2.8s,mb5.8
SAO MLR MLR
comp=Z,1μm,19.0s,MS5.2
MVCO Mesa Verde 65.44 4 ⇓P P 11 08 43.9 -0.1
baz=66,SNR=32
MVCO Mesa Verde 65.44 4 eP P 11 08 44.1 0.0
comp=Z,104nm,1.4s,mb5.7
MVCO LR LR
comp=Z,2μm,20.0s,MS5.3
T23A Casias Ranch, 65.46 6 ⇓P P 11 08 44.2 +0.1
baz=66,SNR=5.9
CCUT Cedar City 65.66 360 eP P 11 08 45.8 +0.4
comp=Z,52nm,1.3s,mb5.4
MTUM Tungsten Hills 65.67 355 eP P 11 08 46.0 +0.5
S13A Holt Ranch, En 65.69 359 ⇓P P 11 08 46.2 +0.6
baz=66,SNR=47
T25A Trinidad 65.73 7 ⇑P P 11 08 46.1 +0.2
baz=66,SNR=10
S12A Delamar Landin 65.74 358 ⇑P P 11 08 46.6 +0.7
baz=66,SNR=8.4
S17A Black Ridge (B 65.77 2 ⇑P P 11 08 46.1 0.0
baz=66,SNR=20
S15A Panguitch 65.78 0 ⇓P P 11 08 46.9 +0.7
baz=66,SNR=14
S11A Rachel 65.80 358 ⇓P P 11 08 47.4 +1.0
baz=66,SNR=23
UALR University of 65.82 18 eP P 11 08 46.5 0.0
comp=Z,85nm,1.4s,mb5.6
S16A Weppner Ranch, 65.84 1 ⇓P P 11 08 46.6 0.0
baz=66,SNR=22
S18A Hurst Farm, BI 65.85 3 ⇑P P 11 08 47.0 +0.4
baz=66,SNR=24
S14A Cedar City 65.86 360 ⇑P P 11 08 47.5 +0.8
baz=66,SNR=11
ARUT Antelope Range 65.89 360 eP P 11 08 47.6 +0.7
comp=Z,188nm,2.3s,mb5.7
ARUT Antelope Range 65.89 360 eP P 11 08 47.6 +0.7
ARUT pmax pmax
comp=Z,188nm,2.3s,mb5.7
LRAL Lakeview Retre 65.91 24 eP P 11 08 47.2 +0.1
comp=Z,84nm,1.5s,mb5.5
LRAL LR LR
comp=Z,1μm,19.0s,MS5.2
FDF Fort de France 65.94 56 PFAKE 11 09 00.0 +12
FDF LR LR
comp=Z,2μm,21.0s,MS5.2
S21A Coal Bank Pass 65.94 4 ⇑P P 11 08 47.4 +0.2
baz=66,SNR=26
S19A Harvey Farm, M 65.94 3 ⇑P P 11 08 47.1 -0.2
baz=66,SNR=15
MLAC Mammoth Lakes 65.97 355 ⇑P P 11 08 47.7 +0.3
baz=66
KIP Kipapa 65.99 314 PFAKE 11 09 00.0 +12
KIP LR LR
comp=Z,3μm,20.0s,MS5.5
S22A 4UR Ranch, Cre 66.09 5 ⇑P P 11 08 48.3 +0.1
baz=66,SNR=24
BBGH Gun Hill 66.10 59 PFAKE 11 09 00.0 +11
BBGH LR LR
comp=Z,4μm,21.0s,MS5.5
S10A Tonopah Range, 66.12 357 ⇓P P 11 08 49.2 +0.8
baz=66,SNR=30
S24A Houchin Ranch, 66.14 7 ⇓P P 11 08 48.9 +0.4
baz=66,SNR=10
SDCO Great Sand Dun 66.21 6 eP P 11 08 48.6 -0.4
comp=Z,28nm,1.3s,mb5.1
SDCO LR LR
comp=Z,5μm,19.0s,MS5.8
S25A Robets Cordova 66.24 7 ⇑P P 11 08 49.0 -0.2
baz=67,SNR=33
R13A O'Grain Ranch, 66.29 359 ⇓P P 11 08 50.4 +1.0
baz=67,SNR=16
TPH Tonopah 66.30 356 PFAKE 11 09 00.0 +10
TPH LR LR
comp=Z,1μm,21.0s,MS5.1
R15A Junction 66.31 1 ⇑P P 11 08 50.2 +0.5
baz=67,SNR=15
PV01 Paradox Valley 66.36 4 eP P 11 08 50.1 +0.2

comp=Z,2µm,1.3s
R16A Teasdale 66.40 1 ⇓P **P 11 08 50.2 0.0**
baz=67,SNR=38
R14A James Farms, M 66.40 360 ⇑P **P 11 08 50.6 +0.4**
baz=67
R20A Redvale 66.43 4 ⇑P **P 11 08 50.3 0.0**
baz=67,SNR=16
R12A Pony Springs, 66.45 359 ⇓P **P 11 08 51.6 +1.1**
baz=67,SNR=33
R10A Warm Springs 66.47 357 ⇓P **P 11 08 51.0 +0.4**
baz=67
R19A Curley Farm, L 66.48 3 ⇓P **P 11 08 50.5 -0.2**
baz=67,SNR=60
R11A Troy Canyon, C 66.50 358 ⇑P **P 11 08 51.5 +0.7**
baz=67,SNR=24
CMB Columbia Colle 66.51 354 *e*P **P 11 08 51.0 +0.2**
comp=Z,90nm,1.8s,mb5.5
CMB LR LR
comp=Z,2µm,21.0s,MS5.2
CMB Columbia Colle 66.51 354 *e*P **P 11 08 51.0 +0.1**
CMB pmax pmax
comp=Z,90nm,1.8s,mb5.5
CMB MLR MLR
comp=Z,2µm,21.0s,MS5.2
R18A Canyonlands Na 66.55 3 ⇓P **P 11 08 51.1 0.0**
baz=67,SNR=36
R17A Hanksville Air 66.55 2 ⇓P **P 11 08 50.5 -0.6**
baz=67,SNR=22
PV10 Paradox Valley 66.58 3 *e*P **P 11 08 50.9 -0.4**
comp=Z,329nm,1.2s,mb6.2
R22A Saguache, Gunn 66.58 5 ⇑P **P 11 08 51.6 +0.2**
baz=67,SNR=21
PV04 Paradox Valley 66.60 3 *e*P **P 11 08 51.8 +0.3**
MVU Marysvale 66.61 1 PFAKE 11 09 00.0 +8.5
MVU LR LR
comp=Z,2µm,19.0s,MS5.4
MSU Marysvale 66.62 1 *e*P **P 11 08 52.5 +0.9**
R21A Cimarron 66.66 5 ⇑P **P 11 08 52.1 +0.3**
baz=67,SNR=37
NVAR Mina Array Bea 66.72 355 P **P 11 08 53.0 +0.7**
NVAR ⇑*e* 11 37 27.1
NVAR Mina Array Bea 66.72 355 P **P 11 08 53.0 +0.7**
comp=Z,25nm,1.0s,mb5.2,baz=185,slow=6.6,SNR=101
NVAR PKP2bc 11 37 27.1
comp=Z,0.8nm,0.9s,baz=9.2,slow=0.9,SNR=5.4
R24A Sanders Place, 66.73 7 ⇑P **P 11 08 52.6 +0.3**
baz=67,SNR=12
WAKR Walker 66.89 354 *e*P **P 11 08 54.2 +0.9**
MCCM Marconi Confer 66.90 351 *e*P **P 11 08 53.9 +0.5**
comp=Z,322nm,2.4s,mb5.9
MCCM LR LR
comp=Z,1µm,21.0s,MS5.1
Q11A Duckwater 67.00 358 ⇑P **P 11 08 54.8 +0.8**
baz=67,SNR=52
Q10A Clear Creek Ra 67.01 357 ⇑P **P 11 08 54.9 +0.8**
baz=67,SNR=9.5
HBAR Harrisburg 67.03 20 *e*P **P 11 08 53.9 -0.4**
Q16A Castle Valley 67.04 1 ⇑P **P 11 08 54.5 +0.2**
baz=67,SNR=23
Q13A Wheeler Ranch, 67.06 359 ⇑P **P 11 08 54.7 +0.3**
baz=67
Q14A Sevier Lake (B 67.09 360 ⇓P **P 11 08 55.1 +0.5**
baz=67,SNR=25
Q15A Fillmore 67.10 0 ⇓P **P 11 08 55.0 +0.3**
baz=67,SNR=16
Q21A Lamborn Mesa, 67.12 5 ⇑P **P 11 08 55.0 +0.2**
baz=68
Q12A Willow Creek R 67.17 358 ⇓P **P 11 08 55.5 +0.4**
baz=68,SNR=9.4
Q20A Ridgley Place, 67.19 4 ⇓P **P 11 08 54.9 -0.3**
baz=68,SNR=18
Q22A Crested Butte, 67.20 5 ⇑P **P 11 08 55.2 -0.1**
baz=68,SNR=22
SRU San Rafael 67.25 2 ⇓P **P 11 08 54.9 -0.6**
baz=68,SNR=54
SRU San Rafael 67.25 2 *e*P **P 11 08 55.1 -0.4**
comp=Z,66nm,1.2s,mb5.5
SRU San Rafael 67.25 2 *e*P **P 11 08 55.2 -0.4**
SRU pmax pmax
comp=Z,66nm,1.2s,mb5.5
Q18A Rafter H Ranch 67.25 2 ⇓P **P 11 08 55.3 -0.3**
baz=68,SNR=43
Q23A Hartsel 67.33 6 ⇑P **P 11 08 56.3 +0.2**
baz=68,SNR=9.5
ANWB Willy Bob 67.41 53 PFAKE 11 09 10.0 +13
ANWB LR LR
comp=Z,934nm,19.0s,MS5.0
TMUT Trail Mountain 67.42 1 *e*P **P 11 08 56.1 -0.5**
comp=Z,542nm,2.8s,mb6.1
Q24A Divide 67.45 7 ⇓P **P 11 08 56.9 0.0**
baz=68
Q25A Bedland, Calha 67.50 7 ⇑P **P 11 08 56.8 -0.4**
baz=68,SNR=20
SMCO Snowmass 67.50 5 *e*P **P 11 08 57.2 0.0**
comp=Z,25nm,1.0s,mb5.2
GOGA Godfrey 67.56 26 *e*P **P 11 08 57.2 -0.5**
comp=Z,35nm,1.1s,mb5.3
GOGA LR LR
comp=Z,2µm,22.0s,MS5.4
GOGA Godfrey 67.56 26 *e*P **P 11 08 57.2 -0.5**
GOGA pmax pmax
comp=Z,35nm,1.1s,mb5.3
GOGA MLR MLR
comp=Z,2µm,22.0s,MS5.4
P13A Bates Ranch, G 67.56 359 ⇓P **P 11 08 58.1 +0.5**
baz=68,SNR=50
P12A McGill 67.60 358 ⇓P **P 11 08 58.1 +0.3**
baz=68,SNR=16
GNAR Gosnell 67.60 20 *e*P **P 11 08 57.7 -0.2**
comp=Z,1µm,1.1s
P17A Butcher Ranch, 67.60 2 ⇑P **P 11 08 57.6 -0.2**
baz=68,SNR=29
P15A Leamington 67.67 1 ⇑P **P 11 08 58.4 +0.2**
baz=68
P14A Drum Mountains 67.69 360 ⇑P **P 11 08 58.8 +0.4**
baz=68,SNR=22
P11A Circle Ranch, 67.70 358 ⇓P **P 11 08 59.4 +1.0**
baz=68,SNR=6.0
WCN Washoe City 67.70 354 ⇓P **P 11 08 59.2 +0.7**
baz=68
P16A Fountain Green 67.72 1 ⇑P **P 11 08 58.9 +0.4**
baz=68
P20A De Beque 67.73 4 ⇓P **P 11 08 58.4 -0.2**
baz=68,SNR=16
HOPS Hopland 67.76 351 *e*P **P 11 08 59.7 +0.9**
comp=Z,141nm,1.6s,mb5.8
HOPS LR LR
comp=Z,2µm,19.0s,MS5.2
P18A Preston Nutter 67.77 2 ⇓P **P 11 08 58.7 -0.2**
baz=68,SNR=11
P23A Jefferson 67.80 6 ⇓P **P 11 08 59.5 +0.5**
baz=68,SNR=17
P19A Cripple Cowboy 67.83 3 ⇓P **P 11 08 59.0 -0.2**
baz=68,SNR=18
OHCM Honcut 67.91 353 *e*P **P 11 09 00.5 +0.7**
P22A Eagle 67.94 5 ⇓P **P 11 09 00.1 +0.2**
baz=68,SNR=28
P24A Kohler Place, 68.02 7 ⇓P **P 11 09 00.1 -0.4**
baz=68
CBKS Cedar Bluff 68.04 11 ⇓P **P 11 08 59.8 -0.7**
baz=68,SNR=11
CBKS Cedar Bluff 68.04 11 *e*P **P 11 09 00.4 -0.2**
comp=Z,57nm,1.3s,mb5.4
CBKS LR LR
comp=Z,2µm,19.0s,MS5.3
CBKS Cedar Bluff 68.04 11 *e*P **P 11 09 00.4 -0.2**
CBKS pmax pmax
comp=Z,57nm,1.3s,mb5.4
CBKS MLR MLR
comp=Z,2µm,19.0s,MS5.3
NLU North Lily Min 68.06 1 *e*P **P 11 09 01.6 +1.0**
comp=Z,37nm,1.2s,mb5.3
PAHR Pah Rah Range 68.08 355 *e*P **P 11 09 01.3 +0.5**
comp=Z,400nm,3.0s
P25A Willow Gulch B 68.10 7 ⇓P **P 11 09 01.0 +0.1**
baz=68,SNR=7.3
VNA1 Neumayer--Stat 68.12 160 *e*P **P 11 08 57.9 -2.9**
VNA1 *e* 11 09 05.2
MPU Maple Canyon 68.12 1 *e*P **P 11 09 01.8 +0.7**
comp=Z,38nm,1.2s,mb5.3
ISCO Idaho Springs 68.24 6 ⇑P **P 11 09 01.8 0.0**
baz=69,SNR=17
ISCO Idaho Springs 68.24 6 *e*P **P 11 09 01.5 -0.3**
comp=Z,14nm,1.2s,mb4.9
ISCO LR LR
comp=Z,6µm,20.0s,MS5.8
ISCO Idaho Springs 68.24 6 *e*P **P 11 09 01.5 -0.3**
ISCO pmax pmax
comp=Z,14nm,1.2s,mb4.9
ISCO MLR MLR
comp=Z,6µm,20.0s,MS5.8
O13A Hicks Ranch, I 68.24 359 ⇓P **P 11 09 02.2 +0.4**
baz=69,SNR=11
SWET Sewanee 68.25 24 *e*P **P 11 09 01.3 -0.7**
DUG Dugway 68.29 0 ⇑P **P 11 09 02.3 +0.2**
baz=69,SNR=20
DUG Dugway 68.29 0 *e*P **P 11 09 02.3 +0.2**
comp=Z,415nm,3.0s
DUG LR LR
comp=Z,2µm,21.0s,MS5.3
DUG Dugway 68.29 0 *e*P **P 11 09 02.3 +0.2**
DUG pmax pmax
comp=Z,415nm,3.0s
DUG MLR MLR
comp=Z,2µm,21.0s,MS5.3
O16A Springville 68.32 1 ⇑P **P 11 09 02.2 -0.1**
baz=69,SNR=9.0
O17A Robinson Place 68.32 2 ⇑P **P 11 09 02.0 -0.3**
baz=69,SNR=9.3
PARMO Parma 68.33 20 *e*P **P 11 09 02.8 +0.4**
O20A White River Ci 68.37 4 ⇑P **P 11 09 02.5 -0.2**
baz=69,SNR=8.9
O15A The Old Anders 68.38 0 ⇑P **P 11 09 03.1 +0.4**
baz=69,SNR=5.8
O12A Currie 68.39 358 ⇑P **P 11 09 03.3 +0.6**
baz=69,SNR=25
O18A Roosevelt 68.42 2 ⇓P **P 11 09 02.7 -0.2**
baz=69
WVT Waverly 68.44 22 *e*P **P 11 09 02.1 -1.0**
comp=Z,24nm,1.1s,mb5.1
WVT LR LR
comp=Z,1µm,19.0s,MS5.2
WVT Waverly 68.44 22 *e*P **P 11 09 02.2 -0.9**
WVT pmax pmax
comp=Z,23nm,1.1s,mb5.1
WVT MLR MLR
comp=Z,1µm,19.0s,MS5.2
O19A Miners Draw (B 68.49 3 ⇓P **P 11 09 03.0 -0.4**
baz=69,SNR=15
O21A Pagoda 68.50 4 ⇑P **P 11 09 03.4 0.0**
baz=69,SNR=7.7
KCPM Cahto Peak 68.51 351 *e*P **P 11 09 04.7 +1.1**
comp=Z,112nm,2.1s,mb5.4
O22A Kremmling 68.52 5 ⇓P **P 11 09 03.9 +0.4**
baz=68,SNR=14
DAU Daniels Canyon 68.53 1 *e*P **P 11 09 03.6 0.0**
O24A Longmont 68.61 6 ⇑P **P 11 09 04.0 -0.1**
baz=69
O23A Lake Granby, G 68.62 6 ⇓P **P 11 09 03.9 -0.3**
baz=69
NHSC New Hope 68.64 29 *e*P **P 11 09 04.8 +0.3**
comp=Z,27nm,0.7s,mb5.3
NHSC LR LR
comp=Z,1µm,22.0s,MS5.1
BMN Battle Mountai 68.65 356 *e*P **P 11 09 04.8 +0.4**
comp=Z,86nm,1.3s,mb5.5
BMN LR LR
comp=Z,1µm,21.0s,MS5.2
BMN Battle Mountai 68.65 356 *e*P **P 11 09 04.8 +0.4**
BMN pmax pmax
comp=Z,86nm,1.3s,mb5.5
BMN MLR MLR
comp=Z,1µm,21.0s,MS5.2
O25A Wiggins 68.70 7 ⇓P **P 11 09 04.6 -0.1**
baz=69,SNR=12
JLU Jordanelle 68.71 1 *e*P **P 11 09 04.8 +0.1**
comp=Z,42nm,1.2s,mb5.2
NOQ North Oquirrh 68.75 1 *e*P **P 11 09 05.5 +0.4**
comp=Z,79nm,1.3s,mb5.5
CTU Camp Tracy 68.80 1 *e*P **P 11 09 05.8 +0.5**
comp=Z,37nm,1.1s,mb5.2
KSU1 Kansas State U 68.90 14 *e*P **P 11 09 06.1 +0.1**
comp=Z,73nm,1.3s,mb5.5
KSU1 LR LR
comp=Z,6µm,20.0s,MS5.8
N14A Grayback Hills 68.95 360 ⇑P **P 11 09 06.0 -0.2**
baz=69,SNR=30
N13A Wendover, West 68.97 359 ⇑P **P 11 09 06.4 +0.1**
baz=69,SNR=9.4
N13A Wendover, West 68.97 359 *e*P **P 11 09 06.7 +0.4**
comp=Z,84nm,1.3s,mb5.5
CPCT Copper Cave 68.97 25 *e*P **P 11 09 05.5 -1.0**
N15A Stansbury Isla 68.99 0 ⇑P **P 11 09 06.4 -0.1**
baz=69
N16A Rees Ranch, Co 69.00 1 ⇓P **P 11 09 06.5 0.0**
baz=69,SNR=5.2
BGU Big Grassy Mou 69.02 360 *e*P **P 11 09 06.3 -0.4**
comp=Z,227nm,2.2s,mb5.7
N21A Black Mountain 69.04 4 ⇑P **P 11 09 06.5 -0.3**
baz=69,SNR=7.2
N20A Spence Gulch, 69.07 4 ⇓P **P 11 09 06.7 -0.2**
baz=69,SNR=22
N17A Moffit Pass 69.07 2 ⇓P **P 11 09 07.1 +0.2**
baz=69,SNR=53
N19A John Jarvie Ra 69.08 3 ⇑P **P 11 09 06.2 -0.8**
baz=69,SNR=11
N22A Wattenberg Ran 69.16 5 ⇑P **P 11 09 07.8 +0.3**
baz=70,SNR=29
CCM Cathedral Cave 69.20 18 *e*P **P 11 09 06.8 -1.1**
CCM LR LR
comp=Z,1µm,20.0s,MS5.2
JSC Jenkinsville 69.20 28 *e*P **P 11 09 08.2 +0.2**
WDC Whiskeytown Da 69.26 352 *e*P **P 11 09 07.5 -0.6**
comp=Z,67nm,1.4s,mb5.4
WDC LR LR
comp=Z,1µm,20.0s,MS5.1
WDC Whiskeytown Da 69.26 352 *e*P **P 11 09 07.5 -0.7**
WDC pmax pmax
comp=Z,67nm,1.4s,mb5.4
WDC MLR MLR
comp=Z,1µm,20.0s,MS5.1
N23A Red Feather La 69.29 6 ⇑P **P 11 09 08.3 0.0**
baz=70,SNR=21
N24A Carr 69.33 6 ⇓P **P 11 09 08.4 -0.1**
baz=70
FVM French Village 69.36 19 *e*P **P 11 09 08.6 -0.2**
comp=Z,42nm,1.2s,mb5.2
FVM French Village 69.36 19 *e*P **P 11 09 08.6 -0.2**
FVM pmax pmax
comp=Z,42nm,1.2s,mb5.2
N25A Grover 69.39 7 ⇓P **P 11 09 09.2 +0.2**
baz=70
TKL Tuckaleechee C 69.43 25 *e*P **P 11 09 08.4 -0.9**
SIUC Southern Illin 69.46 20 *e*P **P 11 09 09.2 -0.2**
comp=Z,86nm,1.1s,mb5.6
M13A Montello 69.47 359 ⇓P **P 11 09 09.3 -0.2**
baz=70,SNR=28
M13A Montello 69.47 359 *e*P **P 11 09 08.9 -0.5**
comp=Z,20nm,1.0s,mb5.0
M15A Larsen Ranch, 69.56 0 ⇓P **P 11 09 09.5 -0.5**
baz=70
M18A Lyman 69.58 2 ⇑P **P 11 09 09.0 -1.1**
baz=70,SNR=16
M14A Sheep Mountain 69.60 360 ⇑P **P 11 09 09.7 -0.6**
baz=70,SNR=12
M17A Scullys Gap (B 69.60 2 ⇓P **P 11 09 09.4 -0.8**
baz=70,SNR=6.3
M19A Rock Springs 69.69 3 ⇓P **P 11 09 09.2 -1.6**
baz=70
KHMM Horse Mountain 69.70 351 *e*P **P 11 09 12.1 +1.2**
comp=Z,108nm,1.5s,mb5.6
HWUT Hardware Ranch 69.72 1 *e*P **P 11 09 10.7 -0.3**
comp=Z,9.8nm,1.0s,mb4.7
HWUT LR LR
comp=Z,2µm,19.0s,MS5.4
M20A Sweetwater, Wa 69.72 4 ⇓P **P 11 09 10.3 -0.7**
baz=70,SNR=24
PHWY Pilot Hill 69.74 6 *e*P **P 11 09 10.7 -0.5**
comp=Z,171nm,1.8s,mb5.3
M22A Cedar Creek Ra 69.75 5 ⇑P **P 11 09 10.7 -0.4**
baz=70,SNR=10
OGNE Ogallala 69.78 9 ⇓P **P 11 09 11.0 -0.3**
baz=70
OGNE Ogallala 69.78 9 PFAKE 11 09 20.0 +8.7
OGNE LR LR
comp=Z,2µm,20.0s,MS5.3
HVU Hansel Valley 69.88 0 *e*P **P 11 09 11.5 -0.4**
comp=Z,99nm,2.2s,mb5.3
HVU Hansel Valley 69.88 0 *e*P **P 11 09 11.5 -0.4**
HVU pmax pmax
comp=Z,99nm,2.2s,mb5.3
M21A Separation Pea 69.89 4 ⇑P **P 11 09 11.1 -0.9**
baz=70,SNR=7.9
M24A Cheyenne 69.97 6 ⇓P **P 11 09 12.3 -0.2**
baz=70,SNR=21
RWWY Rawlins 69.98 5 *e*P **P 11 09 12.4 -0.2**
comp=Z,22nm,1.1s,mb5.0
L18A Fontenelle, Gr 70.07 2 ⇑P **P 11 09 11.9 -1.2**
baz=70,SNR=12
L15A Malad City 70.10 0 ⇓P **P 11 09 12.3 -1.0**
baz=70,SNR=8.6
L16A Fish Haven 70.13 1 ⇓P **P 11 09 12.4 -1.0**
baz=70,SNR=14
L14A Malta 70.13 360 ⇑P **P 11 09 13.0 -0.5**
baz=70,SNR=21
USIN University of 70.17 21 *e*P **P 11 09 13.7 -0.1**
comp=Z,194nm,1.5s,mb5.8
L17A Cokeville 70.22 2 ⇓P **P 11 09 12.8 -1.3**
baz=71,SNR=18
L20A Wamsutter 70.23 4 ⇑P **P 11 09 13.6 -0.5**
baz=71,SNR=19
L21A Rawlins 70.25 4 ⇓P **P 11 09 13.0 -1.2**
baz=71,SNR=10
L19A Farson 70.28 3 ⇑P **P 11 09 13.3 -1.1**
baz=71,SNR=24
MOD Modoc 70.33 354 *e*P **P 11 09 14.7 0.0**
comp=Z,54nm,1.2s,mb5.3
MOD LR LR
comp=Z,2µm,19.0s,MS5.3
L22A Ellis Ranch, M 70.38 5 ⇓P **P 11 09 14.8 -0.2**
baz=71,SNR=11
YBH Yreka Blue Hor 70.42 352 *e*P **P 11 09 15.3 +0.1**
comp=Z,32nm,1.5s,mb5.0
YBH LR LR
comp=Z,1µm,19.0s,MS5.2
YBH Yreka Blue Hor 70.42 352 P **P 11 09 13.8 -1.5**
comp=Z,10nm,1.2s,mb4.7,baz=188,slow=4.3,SNR=10
YBH Yreka Blue Hor 70.42 352 *e*P **P 11 09 15.3 0.0**
YBH pmax pmax
comp=Z,32nm,1.5s
YBH MLR MLR
comp=Z,1µm,19.0s
L23A Garrett 70.53 6 ⇓P **P 11 09 15.1 -0.8**
baz=71,SNR=8.0
L24A Wheatland 70.53 6 ⇑P **P 11 09 15.4 -0.5**
baz=71
DRV Dumont d'Urvil 70.63 204 S S 11 18 38.0 +7.9
DRV R 11 31 00.0
K14A Jones Ranch, D 70.64 360 ⇓P **P 11 09 16.1 -0.5**
baz=71,SNR=21
WVOR Wild Horse Val 70.73 356 *e*P **P 11 09 17.3 +0.2**
comp=Z,38nm,1.1s,mb5.2
WVOR LR LR
comp=Z,2µm,20.0s,MS5.3
WVOR Wild Horse Val 70.73 356 *e*P **P 11 09 17.3 +0.2**
WVOR pmax pmax
comp=Z,38nm,1.1s,mb5.2
WVOR MLR MLR
comp=Z,2µm,20.0s,MS5.3
OLIL Olney 70.74 20 *e*P **P 11 09 16.7 -0.6**
comp=Z,74nm,1.4s,mb5.4
K15A Arbon 70.78 0 ⇓P **P 11 09 16.0 -1.4**
baz=71,SNR=5.6
K18A Toltan Ranch, 70.78 2 ⇑P **P 11 09 16.6 -0.8**
baz=71,SNR=20
JOHN Johnston Islan 70.82 302 PFAKE 11 09 30.0 +12
JOHN LR LR
comp=Z,2µm,20.0s,MS5.3
WCI Wyandotte Cave 70.85 22 *e*P **P 11 09 17.2 -0.7**
comp=Z,123nm,2.0s,mb5.5
WCI LR LR
comp=Z,1µm,20.0s,MS5.2
WCI Wyandotte Cave 70.85 22 *e*P **P 11 09 17.3 -0.7**
WCI pmax pmax
comp=Z,123nm,2.0s,mb5.5
WCI MLR MLR
comp=Z,1µm,20.0s,MS5.2
K17A Gardner Place, 70.87 2 ⇓P **P 11 09 16.6 -1.4**
baz=71,SNR=7.0
K20A Yellowstone Ra 70.88 4 ⇓P **P 11 09 16.8 -1.2**
baz=71,SNR=18
AHID Auburn Hatcher 70.88 1 *e*P **P 11 09 16.9 -1.2**
comp=Z,39nm,1.3s,mb5.2
AHID LR LR
comp=Z,2µm,19.0s,MS5.4
BW06 Boulder Array 70.93 3 ⇑P **P 11 09 17.3 -1.1**
baz=71,SNR=24
BW06 Boulder Array 70.93 3 PFAKE 11 09 30.0 +12
BW06 LR LR
comp=Z,1µm,22.0s,MS5.1
K16A Soda Springs 70.94 1 ⇓P **P 11 09 18.1 -0.3**
baz=71,SNR=12
K22A Casper 70.99 5 ⇑P **P 11 09 18.0 -0.7**
baz=71,SNR=25
K19A Absolon Red Bu 71.02 3 ⇓P **P 11 09 17.5 -1.4**
baz=71,SNR=14
K05A Summer Lake 71.20 354 ⇓P **P 11 09 20.5 +0.4**
baz=72,SNR=16
HUMO Hull Mountain 71.31 352 *e*P **P 11 09 21.0 +0.4**
comp=Z,33nm,1.2s,mb5.1
HUMO LR LR
comp=Z,1µm,20.0s,MS5.2
J18A Kendall Valley 71.36 2 ⇑P **P 11 09 19.9 -1.0**
baz=72,SNR=33
J16A Bone 71.38 1 ⇓P **P 11 09 20.5 -0.6**
baz=72,SNR=39
J14A Carey 71.42 360 ⇑P **P 11 09 21.6 +0.3**
baz=72,SNR=35
CNNC Cliffs of the 71.45 30 PFAKE 11 09 30.0 +8.3
CNNC LR LR
comp=Z,1µm,19.0s,MS5.2
RRI2 Red Ridge 71.46 1 *e*P **P 11 09 21.4 -0.1**
comp=Z,61nm,1.4s,mb5.3
REDW Red Top Meadow 71.48 2 *e*P **P 11 09 20.8 -0.9**
comp=Z,52nm,1.4s,mb5.3
J17A Brown Place, J 71.49 2 ⇓P **P 11 09 20.8 -0.9**
baz=72,SNR=7.3
J15A Blackfoot 71.50 0 ⇑P **P 11 09 21.5 -0.2**
baz=72,SNR=27
J13A Cove Ranch, Pi 71.50 359 ⇓P **P 11 09 22.0 +0.2**
baz=72,SNR=25
MFID Camas Ranch 71.56 358 ⇑P **P 11 09 22.0 -0.1**
baz=72,SNR=15
SNOW Snow King Moun 71.59 2 *e*P **P 11 09 22.2 -0.1**
comp=Z,33nm,1.4s,mb5.1
TPAW Teton Pass 71.61 1 *e*P **P 11 09 21.5 -0.9**
comp=Z,23nm,0.9s,mb5.1
J08A Circle Ran 71.64 356 ⇑P **P 11 09 23.2 +0.6**
baz=72,SNR=29
HLID Hailey 71.67 359 ⇓P **P 11 09 23.1 +0.2**
baz=72,SNR=84
HLID Hailey 71.67 359 *e*P **P 11 09 23.0 +0.2**
comp=Z,54nm,1.2s,mb5.3
HLID LR LR
comp=Z,1µm,20.0s,MS5.2
DCID1 Drake Creek 71.71 1 *e*P **P 11 09 23.2 +0.1**
comp=Z,79nm,1.3s,mb5.5
LOHW Long Hollow 71.74 2 *e*P **P 11 09 22.6 -0.6**
comp=Z,331nm,2.9s,mb5.8
KEBM Edson Butte 71.75 351 *e*P **P 11 09 24.1 +0.8**
comp=Z,147nm,1.4s,mb5.7
I18A Diamond G Ranc 71.85 2 ⇑P **P 11 09 23.3 -0.7**
baz=72,SNR=31
MOOW Moose Ponds 71.87 2 *e*P **P 11 09 23.1 -0.9**
comp=Z,210nm,2.5s,mb5.6
I12A Atlanta 71.92 358 ⇓P **P 11 09 24.6 +0.3**
baz=72,SNR=23
DZM Mont Dzumac 71.96 254 *e*P **P 11 09 26.2 +1.0**
comp=Z,78nm,1.3s,mb5.5
DZM *e*S S 11 18 45.3 -1.6
DZM comp=Z,1µm,26.1s *e*SS SS 11 23 21.1 -2.3
DZM comp=Z,910nm,27.9s *e*LQ 11 28 19.0
DZM comp=Z,2µm,28.4s *e*LR LR 11 31 16.3
comp=Z,2µm,27.4s
I16A Newdale 71.98 1 ⇑P **P 11 09 24.3 -0.4**
baz=72,SNR=8.7
IMW Indian Meadow 72.02 1 *e*P **P 11 09 23.9 -1.0**
comp=Z,34nm,1.3s,mb5.1
I13A Wildhorse Cree 72.02 359 ⇓P **P 11 09 24.8 -0.1**
baz=72,SNR=30
I14A Mackay 72.03 360 ⇑P **P 11 09 25.3 +0.4**
baz=72,SNR=29
I17A Pilgrim Ck. 72.05 2 ⇓P **P 11 09 24.7 -0.4**
baz=72
HDIL Hopedale 72.07 19 *e*P **P 11 09 25.5 +0.2**
comp=Z,15nm,0.6s,mb5.1
HDIL LR LR
comp=Z,1µm,21.0s,MS5.1
BLA Blacksburg 72.08 27 *e*P **P 11 09 25.1 -0.3**
comp=Z,52nm,1.2s,mb5.3
BLA LR LR

comp=Z,2µm,20.0s,MS5.3
BLA Blacksburg 72.08 27 *eP* **P 11 09 25.1 -0.3**
BLA pmax pmax
comp=Z,52nm,1.2s,mb5.3
BLA MLR MLR
comp=Z,2µm,20.0s,MS5.3
I21A Big Trails, Te 72.09 4 ⇑P **P 11 09 24.6 -0.8**
baz=72,SNR=55
I15A Monteview 72.10 0 ⇑P **P 11 09 25.4 +0.1**
baz=72,SNR=11
I20A Worland 72.18 4 ⇑P **P 11 09 25.0 -0.8**
baz=72,SNR=14
FLWY Flagg Ranch 72.21 2 *eP* **P 11 09 26.3 +0.3**
comp=Z,28nm,0.9s,mb5.2
SCIA State Center 72.33 15 *eP* **P 11 09 26.7 -0.1**
comp=Z,53nm,1.1s,mb5.4
SCIA LR LR
comp=Z,4µm,19.0s,MS5.7
I07A Izee 72.43 355 ⇑P **P 11 09 28.0 +0.7**
baz=73,SNR=38
H17A Grant Village 72.52 2 ⇓P **P 11 09 28.2 +0.3**
baz=73
YFT Old Faithful 72.57 2 *eP* **P 11 09 29.2 +1.0**
comp=Z,21nm,1.2s,mb5.0
H12A Diamond D Ranc 72.67 359 ⇓P **P 11 09 28.4 -0.4**
baz=73,SNR=11
H13A Challis 72.67 359 ⇑P **P 11 09 28.6 -0.2**
baz=73,SNR=14
RSSD Black Hills 72.67 7 *eP* **P 11 09 28.6 -0.2**
comp=Z,23nm,1.3s,mb5.0
RSSD LR LR
comp=Z,5µm,20.0s,MS5.8
RSSD Black Hills 72.67 7 *eP* **P 11 09 28.6 -0.2**
RSSD pmax pmax
comp=Z,23nm,1.3s,mb5.0
RSSD MLR MLR
comp=Z,5µm,20.0s,MS5.8
LKWY Lake 72.70 2 *eP* **P 11 09 29.9 +0.9**
comp=Z,9.2nm,0.8s,mb4.8
LKWY LR LR
comp=Z,2µm,19.0s,MS5.5
LKWY Lake 72.70 2 *eP* **P 11 09 29.9 +1.0**
LKWY pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LKWY MLR MLR
comp=Z,2µm,19.0s,MS5.5
H14A Leadore 72.71 360 ⇑P **P 11 09 28.8 -0.2**
baz=73,SNR=13
H15A Lima 72.71 0 ⇓P **P 11 09 29.2 +0.2**
baz=73,SNR=27
H20A Greybull 72.72 4 ⇑P **P 11 09 28.0 -1.1**
baz=73
YMR Madison River 72.79 1 *eP* **P 11 09 29.6 +0.2**
comp=Z,17nm,0.9s,mb5.0
H16A Russell Place, 72.82 1 ⇑P **P 11 09 29.9 +0.2**
baz=73,SNR=33
H21A Big Horn, Sher 72.92 4 ⇑P **P 11 09 29.3 -1.0**
baz=73
MCMT McKenzie Canyo 72.92 0 *eP* **P 11 09 29.5 -0.7**
comp=Z,12nm,1.2s,mb4.7
G13A Cobalt 73.20 359 ⇓P **P 11 09 31.8 -0.1**
baz=74,SNR=31
G15A Dillon 73.26 0 ⇓P **P 11 09 32.0 -0.3**
baz=74,SNR=13
H04A Detroit Lake 73.27 353 ⇑P **P 11 09 31.7 -0.6**
baz=74,SNR=11
RLMT Red Lodge 73.29 3 ⇑P **P 11 09 31.8 -0.6**
baz=74,SNR=12
RLMT Red Lodge 73.29 3 *eP* **P 11 09 31.6 -0.8**
comp=Z,51nm,1.5s,mb5.2
RLMT LR LR
comp=Z,1µm,22.0s,MS5.2
COR Corvallis 73.30 352 *eP* **P 11 09 33.8 +1.3**
comp=Z,73nm,1.2s,mb5.5
COR LR LR
comp=Z,681nm,19.0s,MS5.0
COR Corvallis 73.30 352 *eP* **P 11 09 33.8 +1.3**
COR pmax pmax
comp=Z,73nm,1.2s,mb5.5
COR MLR MLR
comp=Z,681nm,19.0s,MS5.0
G16A Moss Hill, Enn 73.33 1 ⇓P **P 11 09 32.3 -0.4**
baz=74,SNR=8.3
G14A Jackson 73.34 360 ⇓P **P 11 09 32.4 -0.4**
baz=74
ECSD EROS Data Cent 73.37 12 *eP* **P 11 09 31.9 -1.0**
comp=Z,65nm,1.7s,mb5.3
ECSD LR LR
comp=Z,2µm,19.0s,MS5.4
G17A Pierce Place, 73.44 2 ⇓P **P 11 09 33.4 +0.1**
baz=74,SNR=9.2
DLMT Dillon 73.46 0 *eP* **P 11 09 33.5 +0.1**
comp=Z,138nm,2.1s,mb5.5
G18A Lazy EL Ranch, 73.48 2 ⇑P **P 11 09 33.1 -0.4**
baz=74,SNR=36
G21A Lodge Grass 73.50 4 ⇓P **P 11 09 32.8 -0.9**
baz=74
MAIT Maitri 73.66 163 *eP* **P 11 09 34.9 +0.5**
G06A Carlson Farm, 73.67 354 ⇓P **P 11 09 34.7 +0.1**
baz=74,SNR=17
NVL N'lazarevskaya 73.69 164 *eP* **P 11 09 34.2 -0.4**
NVL *eS* S 11 19 02.9 -2.1
NVL pmax pmax
comp=Z,50nm,1.0s,mb5.4
BOZ Bozeman (W) 73.75 1 ⇓P **P 11 09 34.6 -0.5**
baz=74,SNR=16
BOZ Bozeman (W) 73.75 1 *eP* **P 11 09 34.9 -0.3**
comp=Z,14nm,1.2s,mb4.8
BOZ LR LR
comp=Z,972nm,20.0s,MS5.1
BOZ Bozeman (W) 73.75 1 *eP* **P 11 09 34.9 -0.2**
BOZ pmax pmax
comp=Z,14nm,1.2s,mb4.8
BOZ MLR MLR
comp=Z,972nm,20.0s,MS5.1
G04A Mulino 73.82 353 ⇑P **P 11 09 35.5 -0.1**
baz=74,SNR=7.7
HOOD Mount Hood Mea 73.85 354 *eP* **P 11 09 36.0 +0.3**
comp=Z,419nm,2.7s,mb5.9
F12A Elk City 73.88 358 ⇓P **P 11 09 35.8 -0.1**
baz=74,SNR=25
F16A Kennard Place, 73.89 1 ⇑P **P 11 09 35.7 -0.2**
baz=74,SNR=20
F13A Darby 73.90 359 ⇑P **P 11 09 35.7 -0.3**
baz=74,SNR=33
F14A Wisdom 73.91 360 ⇓P **P 11 09 36.1 0.0**
baz=74,SNR=7.7
LRM Limekiln Ridge 73.92 0 *eP* **P 11 09 36.5 +0.3**
F15A Butte 73.94 0 ⇑P **P 11 09 36.0 -0.2**
baz=74,SNR=5.4
GCMT Greycliff 73.95 2 *eP* **P 11 09 36.0 -0.2**
comp=Z,5.8nm,1.1s,mb4.4
JFWS Jewell Farm 74.01 17 *eP* **P 11 09 36.2 -0.5**
comp=Z,8.9nm,0.9s,mb4.7
JFWS LR LR
comp=Z,3µm,19.0s,MS5.7
JFWS Jewell Farm 74.01 17 *eP* **P 11 09 36.2 -0.5**
JFWS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
JFWS MLR MLR
comp=Z,3µm,19.0s,MS5.7
F20A Billings 74.02 3 ⇑P **P 11 09 36.0 -0.7**
baz=74
F17A Fitzpatrick Pl 74.03 2 ⇑P **P 11 09 36.8 +0.1**
baz=74,SNR=14
F19A Roth Farm, Mol 74.04 3 ⇓P **P 11 09 35.8 -1.0**
baz=74,SNR=13
F18A Big Timber 74.06 2 ⇓P **P 11 09 36.2 -0.7**
baz=74,SNR=12
F21A Absaloka Mine, 74.11 4 ⇑P **P 11 09 36.2 -1.0**
baz=74
LNOR Lincton Mounta 74.13 356 *eP* **P 11 09 37.5 +0.2**
CBN Corbin 74.17 28 PFAKE 11 09 50.0 +12
CBN LR LR
comp=Z,2µm,19.0s,MS5.3
F10A Beach Ranch, E 74.17 357 ⇓P **P 11 09 37.0 -0.6**
baz=74,SNR=19
MCWV Mont Chateau 74.42 26 *eP* **P 11 09 40.0 +0.8**
comp=Z,113nm,1.5s,mb5.6
MCWV LR LR
comp=Z,2µm,19.0s,MS5.5
E14A Clinton 74.52 360 ⇓P **P 11 09 39.4 -0.2**
baz=75,SNR=11
E15A Deer Lodge 74.52 0 ⇑P **P 11 09 39.2 -0.4**
baz=75,SNR=17
F04A Amboy 74.53 353 ⇓P **P 11 09 39.3 -0.4**
baz=75,SNR=11
E13A Victor 74.55 359 ⇓P **P 11 09 39.1 -0.7**
baz=75,SNR=20
E16A East Helena 74.64 1 ⇑P **P 11 09 40.2 -0.1**
baz=75,SNR=11
E19A Rath Farm, Rou 74.65 3 ⇓P **P 11 09 39.6 -0.7**
baz=75,SNR=12
F03A Seaside 74.66 352 ⇓P **P 11 09 40.3 -0.2**
baz=75
E18A Harlowton 74.71 2 ⇓P **P 11 09 40.6 -0.2**
baz=75,SNR=18
E20A Meyer Farm, Mu 74.73 3 ⇑P **P 11 09 40.3 -0.5**
baz=75,SNR=12
HAWA Hanford 74.73 355 *eP* **P 11 09 41.5 +0.7**
comp=Z,47nm,1.5s,mb5.2
HAWA LR LR
comp=Z,673nm,20.0s,MS4.9
RSW Rattlesnake Hi 74.74 355 *eP* **P 11 09 41.8 +0.9**
E09A Wood Farm, Sta 74.76 356 ⇑P **P 11 09 40.5 -0.5**
baz=75
E08A Dider Farm, El 74.80 356 ⇓P **P 11 09 41.2 0.0**
baz=75
HRY Holter Researc 74.81 1 *eP* **P 11 09 41.6 +0.3**
E21A Keefer Ranch, 74.82 4 ⇑P **P 11 09 40.3 -1.1**
baz=75
E07A Sunnyside 74.92 355 ⇑P **P 11 09 42.4 +0.4**
baz=75,SNR=7.5
MSO Missoula 74.93 359 ⇓P **P 11 09 41.7 -0.3**
baz=75,SNR=12
MSO Missoula 74.93 359 *eP* **P 11 09 41.8 -0.2**
comp=Z,180nm,2.6s,mb5.5
MSO LR LR
comp=Z,665nm,20.0s,MS4.9
CHMT Chamberlain Mo 75.01 360 *eP* **P 11 09 42.4 0.0**
LAO LASA Array 75.03 5 ⇑P **P 11 09 42.0 -0.5**
baz=75,SNR=11
LAO LASA Array 75.03 5 *eP* **P 11 09 42.0 -0.6**
comp=Z,16nm,0.9s,mb5.0
LAO LR LR
comp=Z,2µm,20.0s,MS5.4
D16A Dana Ranch, Ca 75.14 1 ⇑P **P 11 09 42.9 -0.3**
baz=76,SNR=15
D15A Lincoln 75.14 0 ⇓P **P 11 09 43.1 -0.1**
baz=76,SNR=9.0
D14A Greenough 75.18 360 ⇑P **P 11 09 43.2 -0.2**
baz=76,SNR=15
D12A Red Ives Fores 75.18 358 ⇑P **P 11 09 42.7 -0.7**
baz=76
D13A Huson 75.20 359 ⇓P **P 11 09 43.2 -0.4**
baz=76,SNR=15
E03A Lebam 75.27 352 ⇑P **P 11 09 43.7 -0.2**
baz=76,SNR=6.1
D17A Six Diamond Ra 75.28 2 ⇑P **P 11 09 44.3 +0.3**
baz=76,SNR=18
LON Longmire 75.28 354 *eP* **P 11 09 44.0 0.0**
comp=Z,202nm,2.5s,mb5.6
LON Longmire 75.28 354 *eP* **P 11 09 44.0 0.0**
LON pmax pmax
comp=Z,202nm,2.5s,mb5.6
D20A Manuel Ranch, 75.31 3 ⇓P **P 11 09 43.6 -0.6**
baz=76,SNR=11
SLMT Seeley Lake 75.34 360 *eP* **P 11 09 43.9 -0.4**
D18A Linhart Farms, 75.34 2 ⇑P **P 11 09 44.2 -0.2**
baz=76,SNR=18
D08A Wollman Farm, 75.35 356 ⇓P **P 11 09 44.3 -0.1**
baz=76,SNR=7.1
AAM Ann Arbor 75.39 22 *eP* **P 11 09 45.3 +0.6**
comp=Z,19nm,0.4s,mb5.4
AAM LR LR
comp=Z,3µm,19.0s,MS5.6
AAM Ann Arbor 75.39 22 *eP* **P 11 09 45.3 +0.6**
AAM pmax pmax
comp=Z,19nm,0.4s,mb5.4
AAM MLR MLR
comp=Z,3µm,19.0s,MS5.6
SWMT Swartz Lake 75.61 359 *eP* **P 11 09 46.0 +0.1**
OD2 Odessa Site #2 75.67 356 *eP* **P 11 09 46.3 +0.1**
D05A Enumclaw 75.73 354 ⇓P **P 11 09 46.5 -0.1**
baz=76,SNR=9.2
C17A Wharram Farm, 75.75 1 ⇑P **P 11 09 46.7 0.0**
baz=76,SNR=15
C13A Hot Springs 75.79 359 ⇑P **P 11 09 46.6 -0.3**
baz=76
RCBR Riachuelo 75.82 89 PFAKE 11 10 00.0 +12
RCBR LR LR
comp=Z,1µm,20.0s,MS5.2
C12B Naegeli Ranch, 75.84 358 ⇓P **P 11 09 46.5 -0.7**
baz=76,SNR=9.4
JTMT Jette 75.85 359 *eP* **P 11 09 47.1 -0.2**
BBSR BB Station 75.87 41 PFAKE 11 10 00.0 +12
BBSR LR LR
comp=Z,2µm,20.0s,MS5.4
C15A Salmond Ranch, 75.87 0 ⇑P **P 11 09 47.5 +0.1**
baz=76,SNR=12
C16A Fuhringer Ranc 75.91 1 ⇑P **P 11 09 47.8 +0.2**
baz=76,SNR=13
YBMT Yellow Bay 75.97 359 *eP* **P 11 09 48.4 +0.5**
BSMT Bassoo Peak 75.97 359 *eP* **P 11 09 47.7 -0.2**
ETW Entiat 76.00 355 *eP* **P 11 09 48.6 +0.5**
ALLY Alegheny Colle 76.04 25 *eP* **P 11 09 49.1 +0.6**
comp=Z,56nm,1.0s,mb5.5
C09A Chrisman Ranch 76.05 356 ⇓P **P 11 09 48.2 -0.2**
baz=76,SNR=15
BLMT Blacktail Moun 76.12 359 *eP* **P 11 09 49.1 +0.4**
NLWA Neilton Lookou 76.14 352 *eP* **P 11 09 49.5 +0.7**
comp=Z,42nm,1.1s,mb5.3
NLWA LR LR
comp=Z,893nm,21.0s,MS5.0
EGMT Eagleton 76.17 2 ⇓P **P 11 09 49.3 +0.2**
baz=76,SNR=19
EGMT Eagleton 76.17 2 *eP* **P 11 09 49.7 +0.6**
comp=Z,37nm,1.1s,mb5.2
EGMT LR LR
comp=Z,1µm,21.0s,MS5.1
GNW Green Mountain 76.19 353 *eP* **P 11 09 49.3 +0.1**
comp=Z,14nm,1.2s,mb4.8
B15A Bradely Ranch, 76.41 0 ⇑P **P 11 09 50.0 -0.4**
baz=77,SNR=13
B17A L&G Farms, Che 76.41 1 ⇓P **P 11 09 50.5 +0.1**
baz=77,SNR=10
NEW Newport 76.46 357 ⇑P **P 11 09 50.7 0.0**
baz=77,SNR=23
NEW Newport 76.46 357 *eP* **P 11 09 50.5 -0.2**
comp=Z,50nm,1.2s,mb5.3
NEW LR LR
comp=Z,2µm,19.0s,MS5.4
NEW Newport 76.46 357 *eP* **P 11 09 50.5 -0.2**
NEW pmax pmax
comp=Z,50nm,1.2s
NEW MLR MLR
comp=Z,2µm,19.0s
B14A Marquette Ranc 76.46 360 ⇑P **P 11 09 50.8 +0.1**
baz=77,SNR=12
B13A Whitefish 76.48 359 ⇓P **P 11 09 50.6 -0.3**
baz=77,SNR=15
ERPA Erie 76.50 25 PFAKE 11 10 00.0 +8.9
ERPA LR LR
comp=Z,2µm,22.0s,MS5.4
B16A M & M Farms, S 76.52 1 ⇓P **P 11 09 51.0 0.0**
baz=77,SNR=18
B18A Beardsley Farm 76.54 2 ⇓P **P 11 09 51.6 +0.4**
baz=77,SNR=10
B12A Libby 76.61 358 ⇑P **P 11 09 51.0 -0.5**
baz=77
B08A Colville Reser 76.67 356 ⇓P **P 11 09 51.2 -0.7**
baz=77,SNR=13
JCW Jim Creek 76.72 354 *eP* **P 11 09 52.3 +0.1**
DGMT Dagmar 76.97 6 ⇑P **P 11 09 53.3 -0.3**
baz=77,SNR=14
DGMT Dagmar 76.97 6 *eP* **P 11 09 53.9 +0.3**
DGMT LR LR
comp=Z,3µm,20.0s,MS5.5
B06A Marblemount 77.00 354 ⇑P **P 11 09 52.9 -0.9**
baz=77
A13A Flathead Natio 77.04 359 ⇑P **P 11 09 54.0 0.0**
baz=77,SNR=16
A16A West Butte Ran 77.06 1 ⇑P **P 11 09 54.1 +0.1**
baz=77,SNR=7.5
A18A Metzger Ranch, 77.07 2 ⇓P **P 11 09 54.2 +0.1**
baz=77,SNR=25
A17A Triple J Farms 77.07 1 ⇓P **P 11 09 54.6 +0.5**
baz=77,SNR=36
A12A Yaak River Ran 77.07 358 ⇑P **P 11 09 53.7 -0.4**
baz=77
A14A Double T Ranch 77.07 360 ⇑P **P 11 09 54.2 0.0**
baz=77,SNR=17
A15A Johnson Ranch, 77.08 0 ⇑P **P 11 09 54.1 -0.1**
baz=77,SNR=13
A05A Maple Falls 77.53 354 ⇑P **P 11 09 56.3 -0.4**
baz=78,SNR=11
AGMN Agassiz Nation 77.91 12 *eP* **P 11 09 58.7 -0.2**
comp=Z,25nm,1.1s,mb5.0
AGMN LR LR
comp=Z,3µm,20.0s,MS5.5
BINY Binghamton 78.11 27 *eP* **P 11 10 00.1 0.0**
comp=Z,33nm,1.3s,mb5.1
BINY LR LR
comp=Z,1µm,19.0s,MS5.2
EYMN Ely 78.44 15 *eP* **P 11 10 01.3 -0.5**
comp=Z,37nm,1.1s,mb5.2
EYMN LR LR
comp=Z,6µm,20.0s,MS5.9
MGCD Mangrove Creek 79.56 238 *eP* **P 11 10 07.9 -0.6**
comp=Z,142nm,1.4s,mb5.7
ULM Lac du Bonnet 79.80 11 *eP* **P 11 10 08.6 -0.5**
comp=Z,25nm,1.1s,mb5.1
ULM LR LR
comp=Z,3µm,20.0s,MS5.7
ULM Lac du Bonnet 79.80 11 P **P 11 10 07.1 -2.1**
comp=Z,14nm,0.9s,mb4.9,baz=210,slow=6.2,SNR=11
ULM LR LR 11 41 53.8
comp=Z,3µm,19.6s,MS5.6,baz=1.2,slow=33
CNB Canberra Magne 79.88 235 *eP* **P 11 10 09.1 -1.1**
CASY Casey 79.94 196 *eP* **P 11 10 10.6 +0.7**
comp=Z,30nm,1.3s,mb5.1
CASY LR LR
comp=Z,3µm,19.0s,MS5.6
CAN Canberra 80.14 235 *eP* **P 11 10 11.2 -0.5**
comp=Z,96nm,1.5s,mb5.5
CAN LR LR
comp=Z,1µm,20.0s,MS5.2
CAN Canberra 80.14 235 *eP* **P 11 10 11.2 -0.5**
CAN pmax pmax
comp=Z,96nm,1.5s,mb5.5
CAN MLR MLR
comp=Z,1µm,20.0s,MS5.2
NCB Newcomb 80.30 27 *eP* **P 11 10 11.8 -0.2**
comp=Z,61nm,1.5s,mb5.3
NCB LR LR
comp=Z,1µm,22.0s,MS5.3
ARMA Armidale 80.43 241 *eP* **P 11 10 12.3 -1.0**
ARMA Armidale 80.43 241 *eP* **P 11 10 14.2 +0.9**
comp=Z,61nm,1.5s,mb5.3
LONY Lake Ozonia 80.70 27 *eP* **P 11 10 13.9 -0.3**
comp=Z,41nm,1.3s,mb5.2
LONY LR LR
comp=Z,799nm,20.0s,MS5.1
SYO Syowa Base 80.75 170 ⇑ *eP* **P 11 10 09.6 -4.7**
SYO Syowa Base 80.75 170 ⇑ *iX* **P 11 10 12.8 -1.5**
TRIS Tristan da Cun 81.08 127 PFAKE 11 10 30.0 +13
TRIS LR LR
comp=Z,2µm,19.0s,MS5.4
LBNH Lisbon 81.47 28 PFAKE 11 10 30.0 +12
LBNH LR LR
comp=Z,1µm,19.0s,MS5.2
TOO Toolangi 81.55 232 *eP* **P 11 10 15.5 -3.7**
HNR Honiara 83.09 263 PFAKE 11 10 40.0 +12
HNR LR LR
comp=Z,814nm,21.0s,MS5.1
EIDS Eidsvold 83.20 245 *eP* **P 11 10 28.7 +0.7**
comp=Z,41nm,1.4s,mb5.3
FFC Flin Flon 83.37 6 *eP* **P 11 10 27.0 -0.9**
comp=Z,26nm,1.1s,mb5.2
FFC LR LR
comp=Z,4µm,20.0s,MS5.8
FFC Flin Flon 83.37 6 *i* P **P 11 10 27.6 -0.3**
PKME Peaks-Kenny Pk 83.41 29 PFAKE 11 10 40.0 +12
PKME LR LR
comp=Z,870nm,19.0s,MS5.2
MIDW Midway 83.57 307 *eP* **P 11 10 29.6 0.0**
comp=Z,23nm,0.8s,mb5.3
MIDW LR LR
comp=Z,2µm,20.0s,MS5.5
MAW Mawson 84.19 178 *eP* **P 11 10 32.4 +0.1**
comp=Z,22nm,1.1s,mb5.2
MAW Mawson 84.19 178 *eP* **P 11 10 32.6 +0.3**
comp=Z,12nm,1.3s,mb4.9
MAW LR LR
comp=Z,5µm,20.0s,MS5.8
MAW Mawson 84.19 178 P **P 11 10 31.7 -0.6**
comp=Z,18nm,1.0s,mb5.1,baz=186,slow=6.6,SNR=17
MAW LR LR 11 45 12.3
comp=Z,3µm,19.1s,MS5.7,baz=180,slow=34
MAW Mawson 84.19 178 *eP* **P 11 10 32.6 +0.3**
MAW pmax pmax
comp=Z,12nm,1.3s
MAW MLR MLR
comp=Z,5µm,20.0s
STKA Stephens Creek 87.20 235 *eP* **P 11 10 47.7 -0.3**
comp=Z,8.6nm,1.2s,mb4.9
STKA Stephens Creek 87.20 235 *eP* **P 11 10 48.5 +0.5**
STKA Stephens Creek 87.20 235 P **P 11 10 47.1 -0.8**
comp=Z,8.1nm,1.2s,mb4.8,baz=123,slow=9.4,SNR=4.4
STKA LR LR 11 42 13.8
comp=Z,2µm,21.9s,MS5.4,baz=132,slow=30
SIT Sitka 87.26 348 *eP* **P 11 10 47.8 +0.4**
comp=Z,16nm,0.9s,mb5.2
SIT Sitka 87.26 348 *eP* **P 11 10 47.8 +0.4**
SIT pmax pmax
comp=Z,16nm,0.9s,mb5.2
SKAG Skagway 89.53 349 *eP* **P 11 10 57.8 -0.3**
comp=Z,20nm,1.5s,mb5.2
CTA Charters Tower 89.65 247 *eP* **P 11 10 55.7 -4.1**
comp=Z,16nm,1.3s,mb5.2
CTA Charters Tower 89.65 247 P **P 11 10 59.2 -0.6**
comp=Z,18nm,1.1s,mb5.3,baz=164,slow=6.4,SNR=5.7
CTAO Charters Tower 89.65 247 *eP* **P 11 11 00.9 +1.2**
comp=Z,56nm,1.5s,mb5.7
CTAO LR LR
comp=Z,1µm,19.0s,MS5.4
CTAO Charters Tower 89.65 247 *eP* **P 11 11 00.9 +1.1**
CTAO pmax pmax
comp=Z,56nm,1.5s,mb5.7
CTAO MLR MLR
comp=Z,1µm,19.0s,MS5.4
YKA Yellowknife Ar 90.64 359 P **P 11 11 01.3 -1.9**
comp=Z,6.2nm,1.1s,mb4.9,baz=171,slow=4.3,SNR=6.0
WAKE Wake Island 91.01 291 PFAKE 11 11 20.0 +14
WAKE LR LR
comp=Z,1µm,19.0s,MS5.3
SCHQ Schefferville 91.89 25 P **P 11 11 07.7 -1.5**
SCHQ LR LR 11 51 11.3
SCHQ Schefferville 91.89 25 P **P 11 11 07.7 -1.5**
comp=Z,9.9nm,0.9s,mb5.1,baz=190,slow=4.1,SNR=6.2
SCHQ LR LR 11 51 11.3
comp=Z,1µm,18.2s,MS5.3,baz=217,slow=35
PMG Port Moresby 94.19 257 PFAKE 11 11 30.0 +9.1
PMG LR LR
comp=Z,957nm,19.0s,MS5.3
PMR Palmer 94.39 344 *eP* **P 11 11 20.1 -0.4**
RSO Redoubt South 94.40 341 *eP* **P 11 11 19.6 -1.0**
EGAK Eagle 95.50 348 *eP* **P 11 11 23.3 -2.2**
EGAK LR LR
comp=Z,524nm,19.0s,MS5.0
MCK McKinley 96.18 345 *eP* **P 11 11 28.3 -0.3**
TRF Thorofare Moun 96.26 344 *eP* **P 11 11 28.3 -0.7**
comp=Z,73nm,1.4s,mb5.9
ILAR Eielson Array 96.62 346 P **P 11 11 28.9 -1.7**
comp=Z,2.5nm,1.0s,mb4.6,baz=186,slow=4.8,SNR=14
ILAR PP PP 11 15 25.4 -0.1
comp=Z,0.3nm,0.9s,baz=163,slow=7.8,SNR=4.0
ILAR LR LR 11 46 38.3
comp=Z,632nm,19.2s,MS5.1,baz=357,slow=30
ILAR Eielson Array 96.62 346 P **P 11 11 28.9 -1.7**
ILAR 11 15 25.5
SHEL Horse Pasture 96.91 112 PFAKE 11 11 40.0 +6.8
SHEL LR LR
comp=Z,1µm,20.0s,MS5.4
COLA College 96.92 346 *eP* **P 11 11 31.1 -0.9**
comp=Z,21nm,1.3s,mb5.4
COLA LR LR
comp=Z,789nm,21.0s,MS5.2
COLA College 96.92 346 *eP* **P 11 11 31.1 -0.9**
COLA pmax pmax
comp=Z,21nm,1.3s,mb5.4
COLA MLR MLR
comp=Z,789nm,21.0s,MS5.2
BPAW Bear Paw Mtn. 96.97 344 *eP* **P 11 11 31.0 -1.3**
comp=Z,45nm,1.3s,mb5.7
ASAR Alice Springs 97.41 238 P **P 11 11 34.2 -1.1**
comp=Z,0.7nm,0.9s,mb4.1,baz=116,slow=4.2,SNR=5.3
WRA Warramunga Arr 99.20 241 P **P 11 11 42.3 -1.1**
comp=Z,3.2nm,1.2s,mb4.7,baz=126,slow=4.6,SNR=3.9
WRA PP PP 11 15 52.8 +7.0
comp=Z,2.4nm,1.2s,baz=125,slow=6.4,SNR=6.2
WRA LR LR 11 52 54.9

comp=Z,2µm,18.5s,MS5.7,baz=125,slow=33
WRA Warramunga Arr 99.20 241 P **P** 11 11 42.3 **-1.2**
WRA 11 15 52.8
NWAO Narrogin (SRO) 102.61 221 PFAKE 11 12 10.0 +12
NWAO LR LR
comp=Z,2µm,21.0s,MS5.6
SUR Sutherland 105.20 141 PFAKE 11 16 30.0 +5.7
SUR LR LR
comp=Z,653nm,22.0s,MS5.1
GUMO Guam 106.98 276 PFAKE 11 16 40.0 +12
GUMO LR LR
comp=Z,435nm,19.0s,MS5.0
DBIC Dimbokro 109.00 93 PFAKE 11 16 40.0 +8.3
DBIC LR LR
comp=Z,4µm,21.0s,MS6.0
MBWA Marble Bar 109.20 232 PFAKE 11 16 40.0 +8.0
MBWA LR LR
comp=Z,3µm,19.0s,MS5.9
BOSA Boshof 110.55 141 PFAKE 11 16 50.0 +16
BOSA LR LR
comp=Z,689nm,20.0s,MS5.2
PET Petropavlovsk 111.30 320 PFAKE 11 16 50.0 +15
PET LR LR
comp=Z,2µm,22.0s,MS5.6
TSUM Tsumeb 112.66 129 PFAKE 11 16 50.0 +11
TSUM LR LR
comp=Z,913nm,21.0s,MS5.3
BILL Bilibino 112.73 336 PFAKE 11 16 50.0 +13
BILL LR LR
comp=Z,697nm,19.0s,MS5.3
BILL Bilibino 112.73 336 *e*P Pdif 11 12 42.4 -0.7
BILL *e* 11 17 23.5
BILL *e* 11 23 20.0
BILL *e*PS PS 11 26 58.3 -1.1
BILL pmax pmax
comp=Z,3.0nm,1.2s
LBTB Lobatse 113.52 139 PFAKE 11 16 50.0 +10
LBTB LR LR
comp=Z,774nm,21.0s,MS5.3
BORG Borgarnes 116.01 28 PFAKE 11 16 50.0 +6.5
BORG LR LR
comp=Z,1µm,19.0s,MS5.6
YUK Yuzh-Kuril'sk 116.88 308 PKIKP PKPdf 11 16 40.4 -5.4
YUK *e* 11 24 01.7
YUK *i* PS PS 11 27 40.4 +2.2
TORD Torodi Ar. Bea 117.65 90 PKP PKPdf 11 16 45.5 -2.7
comp=Z,2.5nm,1.0s,baz=245,slow=0.6,SNR=6.6
TORD PP PP 11 18 00.6 -0.4
comp=Z,15nm,1.2s,baz=255,slow=4.9,SNR=15
TORD PKKPbc PKKPbc 11 27 14.3 +5.4
comp=Z,1.6nm,1.1s,baz=52,slow=4.6,SNR=5.2
ERM Erimo 118.31 305 PFAKE 11 17 00.0 +11
ERM LR LR
comp=Z,943nm,20.0s,MS5.4
SFS San Fernando 118.97 62 PFAKE 11 17 00.0 +10
SFS LR LR
comp=Z,918nm,20.0s,MS5.4
YSS Yuzh-Sakhalins 119.65 310 PFAKE 11 17 00.0 +9.0
YSS LR LR
comp=Z,367nm,20.0s,MS5.0
MJAR Matsushiro Arr 120.70 298 PKP PKPdf 11 16 51.1 -2.3
comp=Z,0.4nm,0.4s,baz=56,slow=18,SNR=4.1
MAJO Matsushiro 120.70 298 PFAKE 11 17 00.0 +6.6
MAJO LR LR
comp=Z,660nm,20.0s,MS5.3
DAV Davao City (W) 120.99 261 PFAKE 11 17 10.0 +15
DAV LR LR
comp=Z,540nm,19.0s,MS5.2
PAB San Pablo 121.14 59 PFAKE 11 17 10.0 +16
PAB LR LR
comp=Z,732nm,20.0s,MS5.3
JMIC Jan Mayen 121.29 22 *e*PP PP 11 18 24.4 -0.3
JMIC AMS AMS 12 06 43.0
comp=Z,1µm,17.2s,MS5.6
ESDC Sonseca Array 121.46 59 PKP PKPdf 11 16 54.1 -0.6
comp=Z,0.3nm,0.3s,baz=289,slow=1.6,SNR=7.6
ESLA Sonseca Array 121.46 59 PFAKE 11 17 10.0 +15
ESLA LR LR
comp=Z,4µm,19.0s,MS6.1
LSZ Lusaka 122.49 134 PFAKE 11 17 10.0 +12
LSZ LR LR
comp=Z,961nm,21.0s,MS5.4
ESK Eskdalemuir 123.95 40 PFAKE 11 17 10.0 +11
ESK LR LR
comp=Z,520nm,19.0s,MS5.2
KBS Kingsbay 124.21 11 *e*PP PP 11 18 44.9 +0.7
KBS AMS AMS 12 09 08.4
comp=Z,1µm,19.8s,MS5.6
KBS Kingsbay 124.21 11 PFAKE 11 17 10.0 +11
KBS LR LR
comp=Z,1µm,19.0s,MS5.6
TAM Tamanrasset 124.70 81 PFAKE 11 17 10.0 +8.5
TAM LR LR
comp=Z,1µm,20.0s,MS5.5
GRR Gorron 125.00 49 *e*PKIKP PKPdf 11 16 59.4 -1.9
EPF Esparros 125.24 56 *e*PKIKP PKPdf 11 16 59.2 -2.7
comp=Z,51nm,1.4s
MFF Saint Martin d 125.31 51 *e*PKIKP PKPdf 11 16 59.2 -2.7
TIXI Tiksi 125.56 340 PFAKE 11 17 10.0 +8.3
TIXI LR LR
comp=Z,488nm,22.0s,MS5.1
LFF La Frestale 125.76 53 *e*PKIKP PKPdf 11 17 00.0 -2.8
RJF Les Rejaudoux 126.34 53 *e*PKIKP PKPdf 11 17 01.7 -2.2
RJF *e*MLR MLR
comp=Z,656nm,22.2s,MS5.0
RJF Les Rejaudoux 126.34 53 *e*PKIKP PKPdf 11 17 01.7 -2.2
RJF MLR MLR
comp=Z,660nm,22.3s,MS5.3
MTLF Montolieu 126.64 55 *e*PKIKP PKPdf 11 17 02.6 -2.0
comp=Z,41nm,1.4s
CAF Calviac 126.69 53 *e*PKIKP PKPdf 11 17 03.1 -1.5
KLR Kul'dur 127.23 312 *e*PKIKP PKPdf 11 17 01.5 -4.0
KLR pmax pmax
comp=Z,28nm,1.4s
BGF Bois d'Agland 127.37 51 *e*PKIKP PKPdf 11 17 02.8 -3.1
comp=Z,108nm,1.4s
AVF Avril sur Loir 127.73 51 *e*PKIKP PKPdf 11 17 04.4 -2.1
comp=Z,23nm,1.2s
LASF Ste Croix 127.90 55 *e*PKIKP PKPdf 11 17 04.5 -2.5
comp=Z,50nm,1.6s
BJO Bjornoya 127.96 15 AMS AMS 12 10 15.7
comp=Z,2µm,22.1s,MS5.7
BER Bergen 128.19 34 AMS AMS 12 01 12.0
comp=Z,686nm,18.4s,MS5.4
SSB Saint Sauveur 128.47 53 PFAKE 11 17 20.0 +12
SSB LR LR
comp=Z,573nm,21.0s,MS5.2
MDJ Mudanjiang 128.48 306 PKP PKPdf 11 17 07.9 -0.1
MDJ PP PP 11 19 13.5 -0.1
MDJ AMB AMB
comp=Z,170nm,4.2s
MDJ LR LR
comp=N,330nm,14.0s
MDJ LR LR
comp=E,540nm,28.0s
MDJ LR LR
comp=Z,930nm,27.1s
MDJ Mudanjiang 128.48 306 *e*PKPdf PKPdf 11 17 08.5 +0.5
MDJ LR LR
comp=Z,908nm,20.0s,MS5.5
KKM Kota Kinabalu 128.52 254 PFAKE 11 17 20.0 +11
KKM LR LR
comp=Z,557nm,20.0s,MS5.2
VIVF Saint-Julien-l 128.54 54 *e*PKIKP PKPdf 11 17 05.7 -2.4
comp=Z,50nm,1.5s
DOU Dourbes 128.63 47 PKP PKPdf 11 17 08.4 +0.3
MEZF Maizieres J'vi 128.93 49 *e*PKIKP PKPdf 11 17 06.2 -2.6
KSRS Korea Array 128.95 297 PKP PKPdf 11 17 08.2 -1.0
comp=Z,4.1nm,1.0s,baz=108,slow=2.5,SNR=9.8
ABPO Ambohimpanom 129.05 156 PFAKE 11 17 20.0 +10
ABPO LR LR
comp=Z,875nm,19.0s,MS5.5
BCLA Clavier 129.08 47 PKP PKPdf 11 17 10.1 +1.1
SMRF Simiane la Rot 129.12 55 *e*PKIKP PKPdf 11 17 07.2 -2.1
comp=Z,66nm,1.4s
ORIF Oris-en-Rattie 129.40 54 *e*PKIKP PKPdf 11 17 07.6 -2.2
comp=Z,47nm,1.4s
ORIF *e*MLR MLR
comp=Z,917nm,19.8s,MS5.2
MEM Membach 129.53 46 PKP PKPdf 11 17 11.4 +1.5
CABF La Chapelle 129.60 52 *e*PKIKP PKPdf 11 17 08.1 -2.0
WLF Walferdange 129.65 48 *e*PKPdf PKPdf 11 17 09.6 -0.5
WLF Walferdange 129.65 48 PFAKE 11 17 20.0 +10
WLF LR LR
comp=Z,923nm,21.0s,MS5.5
HAU Haudompre 129.80 50 *e*PKIKP PKPdf 11 17 07.8 -2.6
HAU *e*MLR MLR
comp=Z,1µm,18.2s,MS5.3
HAU Haudompre 129.80 50 *e*PKIKP PKPdf 11 17 07.8 -2.6
HAU MLR MLR
comp=Z,1µm,18.3s,MS5.6
FRF La Foret Royal 129.87 55 *e*PKIKP PKPdf 11 17 08.0 -2.7
comp=Z,61nm,1.2s
INCN Inchon 129.97 297 PFAKE 11 17 20.0 +8.9
INCN LR LR
comp=Z,671nm,19.0s,MS5.4
MBDF Montbardon 130.02 54 *e*PKIKP PKPdf 11 17 09.4 -1.6
comp=Z,36nm,1.3s
LPL La Plagne 130.02 53 *e*PKIKP PKPdf 11 17 09.5 -1.5
comp=Z,70nm,1.5s
LPG La Plagne 130.04 53 *e*PKIKP PKPdf 11 17 09.6 -1.4
comp=Z,76nm,1.4s
HINF Hinteralfeld 130.14 50 *e*PKIKP PKPdf 11 17 08.3 -2.8
BUG Bochum--Univer 130.28 45 *e*PKPdf PKPdf 11 17 10.6 -0.7
ECH Echery 130.34 49 PFAKE 11 17 20.0 +8.5
ECH LR LR
comp=Z,952nm,19.0s,MS5.5
COCO West Island 130.41 220 PFAKE 11 17 20.0 +7.3
COCO LR LR
comp=Z,1µm,20.0s,MS5.6
CDF Champ du Feu 130.41 49 *e*PKIKP PKPdf 11 17 08.8 -2.8
KONO Kongsberg 130.43 34 AMS AMS 12 02 12.4
comp=Z,804nm,23.6s,MS5.3
KONO Kongsberg 130.43 34 PFAKE 11 17 20.0 +8.7
KONO LR LR
comp=Z,819nm,21.0s,MS5.4
TRO Tromso 130.51 20 *e*PP PP 11 19 24.7 -1.1
TRO AMS AMS 12 08 48.1
comp=Z,868nm,23.3s,MS5.4
NAO01 NORSAR Array S 130.77 33 PFAKE 11 17 20.0 +8.1
NAO01 LR LR
comp=Z,756nm,22.0s,MS5.3
NB2 NORSAR Subarra 130.87 32 PKPdf PKPdf 11 17 11.8 -0.3
baz=289,slow=1.9
NOA NORSAR Array B 130.87 32 PKP PKPdf 11 17 11.2 -0.8
comp=Z,6.5nm,1.1s,baz=296,slow=2.0,SNR=4.8
TNS Taunus Mts 131.11 47 *e*PKPdf PKPdf 11 17 12.6 -0.3
BFO Black Forest 131.12 49 *e*PKPdf PKPdf 11 17 12.5 -0.4
BFO LR LR
comp=Z,743nm,20.0s,MS5.4
CN2 Changchun 131.41 305 *e*PKP PKPdf 11 17 15.8 +2.1
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,400nm,20.0s,MS5.4
CN2 LR LR
comp=E,700nm,20.0s,MS5.4
CN2 LR LR
comp=Z,700nm,20.0s,MS5.4
VSL Villasalto 131.61 61 PFAKE 11 17 30.0 +16
VSL LR LR
comp=Z,443nm,19.0s,MS5.2
TATO Taipei 131.63 279 PFAKE 11 17 30.0 +15
TATO LR LR
comp=Z,471nm,20.0s,MS5.2
YHNB Yeheng 131.65 279 PFAKE 11 17 30.0 +15
YHNB LR LR
comp=Z,578nm,21.0s,MS5.3
STU Stuttgart 131.67 49 *e*PKPdf PKPdf 11 17 13.5 -0.5
BSEG Bad Segeberg 131.87 42 *e*PKPdf PKPdf 11 17 13.6 -0.6
NRDL Niedersach Rie 131.94 44 *e*PKPdf PKPdf 11 17 12.9 -1.4
KTK1 Kautokeino 132.13 20 *e*PP PP 11 19 36.5 +0.2
KTK1 AMS AMS 12 05 38.0
comp=Z,3µm,35.7s,MS5.7
CLZ Clausthal 132.17 44 *e*PKPdf PKPdf 11 17 14.7 -0.1
DAVA Damuels 132.20 51 ⇑*i*PKiKP PKiKP 11 17 15.1 -0.9
comp=Z,29nm,1.5s
ARCES ARCESS Array B 132.47 18 PKP PKPdf 11 17 15.5 +0.6
comp=Z,12nm,1.1s,baz=328,slow=4.3,SNR=12
VLC Villacollemand 132.60 55 PFAKE 11 17 30.0 +14
VLC LR LR
comp=Z,494nm,22.0s,MS5.2
KEV Kevo 132.75 18 PFAKE 11 17 30.0 +15
KEV LR LR
comp=Z,1µm,20.0s,MS5.5
FETA Feichten 132.79 51 ⇑*i*PKiKP PKiKP 11 17 16.4 -0.9
comp=Z,35nm,1.6s,SNR=12
RETA Reutte 132.79 50 ⇑*i*PKiKP PKiKP 11 17 16.3 -0.9
comp=Z,16nm,1.3s
GRA1 Grafenberg Arr 132.93 47 *e*PKPdf PKPdf 11 17 16.3 0.0
GRA1 LR LR
comp=Z,800nm,19.3s,MS5.4
GRF Grafenberg Arr 132.93 47 *e*PKPdf PKPdf 11 17 16.3 0.0
GRF *e*L 12 11 57.3
comp=Z,779nm,19.3s
MOTA Moosalm 133.03 50 ⇑*i*PKPdf PKPdf 11 17 16.3 -0.3
comp=Z,36nm,1.3s
MOX Moxa 133.09 46 *e*PKPdf PKPdf 11 17 16.1 -0.5
WTTA Wattenberg 133.39 51 ⇑*i*PKiKP PKiKP 11 17 17.6 -0.9
comp=Z,49nm,1.8s,SNR=9.1
WERD Werda 133.55 46 *e*PKPdf PKPdf 11 17 17.1 -0.4
GUNZ Gunzen 133.57 46 *e*PKPdf PKPdf 11 17 17.4 -0.1
WERN Wernitzgruen 133.61 46 *e*PKPdf PKPdf 11 17 17.4 -0.2
TANN Tannenbergstha 133.65 46 *e*PKPdf PKPdf 11 17 17.5 -0.1
NKC Novy Kostel 133.66 46 *e*PKIKP PKPdf 11 17 17.9 +0.2
NKC MLR MLR
comp=Z,700nm,18.0s,MS5.4
NKC Novy Kostel 133.66 46 *e*PKPdf PKPdf 11 17 17.9 +0.2
NKC *es*PKP 11 17 27.0
NKC AMS AMS 12 15 50.0
comp=Z,700nm,18.0s
CLL Collm 133.87 45 *e*PKPdf PKPdf 11 17 17.5 -0.5
CLL Collm 133.87 45 *i* PKIKP PKPdf 11 17 18.1 +0.1
CLL pmax pmax
comp=Z,58nm,1.9s
CLL MLR MLR
comp=Z,500nm,21.5s,MS5.2
CLL Collm 133.87 45 *i* PKPdf PKPdf 11 17 18.1 +0.1
comp=Z,58nm,1.9s
CLL *i* 11 17 27.0
CLL *e* 11 18 56.0
CLL *e*PP PP 11 19 46.0 -2.2
CLL *e*PKSbc 11 20 50.0
CLL *e*SS SS 11 37 37.0 +1.4
CLL *e*SSS 11 42 36.0
CLL LV 12 08 00.0
comp=Z,500nm,21.5s
ABTA Abfaltersbach 134.02 51 ⇑*i*PKPdf PKPdf 11 17 18.2 -0.2
comp=Z,8.6nm,1.1s
WET Wettzell 134.06 48 *e*PKPdf PKPdf 11 17 18.0 -0.5
QZH Quanzhou 134.15 278 *e*PKP PKPdf 11 17 18.8 -0.6
QZH PP PP 11 19 52.0 +1.2
QZH PKS 11 20 53.0
QZH LR LR
comp=Z,890nm,22.0s,MS5.4
RUE Ruedersdorf 134.16 43 *e*PKPdf PKPdf 11 17 17.9 -0.6
BRG Berggiesshubel 134.52 45 *e*PKPdf PKPdf 11 17 18.9 -0.4
BRG Berggiesshubel 134.52 45 *e*PKP PKPdf 11 17 19.5 +0.2
comp=Z,29nm,1.4s
BRG *e* 11 17 28.6
comp=Z,30nm,1.6s
BRG *e* 11 26 31.0
BRG SS SS 11 37 40.0 -3.5
BRG
comp=N,249nm,19.3s
BRG
comp=E,406nm,16.9s
BRG
comp=Z,509nm,20.4s
BRG Berggiesshubel 134.52 45 *e*PKIKP PKPdf 11 17 19.5 +0.2
BRG SS SS 11 37 40.0 -3.5
BRG pmax pmax
comp=Z,17nm,1.4s
BRG MLR MLR
comp=N,149nm,19.3s,MS5.0
BRG MLR MLR
comp=E,243nm,16.9s,MS5.0
BRG MLR MLR
comp=Z,305nm,20.4s,MS5.0
KHC Kasperske Hory 134.52 48 *e*PKPdf PKPdf 11 17 19.6 +0.3
KHC Kasperske Hory 134.52 48 *e*PKIKP PKPdf 11 17 18.9 -0.4
KHC *e* 11 17 24.5
KHC *e* 11 37 49.1
KHC MLR MLR
comp=Z,700nm,17.9s,MS5.4
KHC Kasperske Hory 134.52 48 *e*PKPdf PKPdf 11 17 18.9 -0.4
KHC *ep*PKP pPKPdf 11 17 24.5 +1.7
KHC *e*SS SS 11 37 49.1 +5.5
KHC AMS AMS 12 15 30.0
comp=Z,700nm,17.9s
KBA Koelnbreinsper 134.57 51 ⇓*i*PKPdf PKPdf 11 17 18.9 -0.5
comp=Z,12nm,1.1s
GEC2 GERESS Array S 134.64 48 *e*PKPdf PKPdf 11 17 19.0 -0.6
MBAR Mbarara 134.76 123 PFAKE 11 17 30.0 +9.1
MBAR LR LR
comp=Z,583nm,20.0s,MS5.3
AQU L'Aquila 134.79 57 PFAKE 11 17 30.0 +10
AQU LR LR
comp=Z,486nm,20.0s,MS5.2
PRA Prague 134.95 46 PKPdf PKPdf 11 17 22.0 +1.9
PRA AMS AMS 12 10 30.0
TRI Trieste 134.95 53 PFAKE 11 17 30.0 +10
TRI LR LR
comp=Z,502nm,19.0s,MS5.3
PVCC Panska Ves 134.97 46 *e*PKIKP PKPdf 11 17 20.8 +0.7
PVCC MLR MLR
comp=Z,600nm,19.2s,MS5.3
PVCC Panska Ves 134.97 46 *e*PKPdf PKPdf 11 17 20.8 +0.7
PVCC AMS AMS 12 17 40.0
comp=Z,600nm,19.2s
PRU Pruhonice 135.03 46 *e*PKIKP PKPdf 11 17 21.2 +0.9
PRU *e* 11 17 27.5
PRU *e* 11 37 56.1
PRU MLR MLR
comp=Z,600nm,20.1s,MS5.3
PRU Pruhonice 135.03 46 *e*PKPdf PKPdf 11 17 21.2 +0.9
PRU *ep*PKP pPKPdf 11 17 27.5 +3.8
PRU *e*SS SS 11 37 56.1 +6.4
PRU AMS AMS 12 09 20.0
comp=Z,600nm,20.1s
HIA Hailar 135.08 312 PFAKE 11 17 30.0 +10
HIA LR LR
comp=Z,988nm,22.0s,MS5.5
JAVS Javornik 135.15 52 *i* PKPdf PKPdf 11 17 20.6 0.0
WDD Wield Dalam 135.32 67 PFAKE 11 17 30.0 +8.7
WDD LR LR
comp=Z,661nm,20.0s,MS5.4
NJ2 Nanjing 135.50 288 *e*PKP PKPdf 11 17 17.1 -4.6
NJ2 PP PP 11 19 56.0 -3.2
NJ2 SKS SKSdf 11 24 23.0 -10
NJ2 SKKS SKKSac 11 26 44.0 -10
NJ2 SS SS 11 37 47.0 -9.5
NJ2 AMB AMB
comp=Z,650nm,6.2s
NJ2 LR LR
comp=N,390nm,26.7s,MS5.1
NJ2 LR LR
comp=E,230nm,24.6s,MS5.1
NJ2 LR LR
comp=Z,110nm,27.4s,MS4.4
VISS Visnje 135.70 52 *i* PKPdf PKPdf 11 17 21.8 +0.1
TREC Trest 135.74 47 *e*PKIKP PKPdf 11 17 21.9 +0.3
TREC MLR MLR
comp=Z,700nm,20.9s,MS5.4
TREC Trest 135.74 47 *e*PKPdf PKPdf 11 17 21.9 +0.3
TREC AMS AMS 12 17 40.0
comp=Z,700nm,20.9s
PERS Pernice 135.82 51 *i* PKPdf PKPdf 11 17 21.8 0.0
APA Apatity 135.96 18 ⇑*i*PKIKP PKPdf 11 17 16.0 -5.5
APA pmax pmax
comp=Z,27nm,1.4s
KSP Ksiaz 136.00 45 *e*PKP PKPdf 11 17 23.1 +1.0
KSP Ksiaz 136.00 45 *e*PKIKP PKPdf 11 17 22.6 +0.6
BOJS Bojanci 136.01 53 *i* PKPdf PKPdf 11 17 22.6 +0.4
ARSA Arzberg 136.03 50 ⇓*i*PKPdf PKPdf 11 17 21.4 -0.8
comp=Z,13nm,1.2s
LVZ Lovozero 136.04 17 PFAKE 11 17 30.0 +8.4
LVZ LR LR
comp=Z,1µm,20.0s,MS5.5
DPC Dobruska-Polom 136.10 46 *e*PKIKP PKPdf 11 17 22.6 +0.4
DPC *e* 11 17 27.8
DPC MLR MLR
comp=Z,600nm,20.1s,MS5.3
DPC Dobruska-Polom 136.10 46 *e*PKPdf PKPdf 11 17 22.6 +0.4
DPC *ep*PKP pPKPdf 11 17 27.8 +2.1
DPC AMS AMS 12 17 10.0
comp=Z,600nm,20.1s
CONA Conrad Observa 136.18 49 ⇑*i*PKPdf PKPdf 11 17 21.6 -0.9
comp=Z,17nm,1.3s,SNR=9.1
VRAC Vranov 136.46 47 ⇓*i*P PKPdf 11 17 23.5 +0.5
VRAC Vranov 136.46 47 ⇓*i*P PKPdf 11 17 23.5 +0.6
CUC Castrocucco 136.59 61 PFAKE 11 17 30.0 +6.5
CUC LR LR
comp=Z,457nm,20.0s,MS5.2
CEL Celeste 136.60 63 PFAKE 11 17 30.0 +6.4
CEL LR LR
comp=Z,637nm,21.0s,MS5.3
SOP Sopron 136.68 49 ⇓*e*PKP PKPdf 11 17 22.8 -0.6
MORC Moravsky Berou 136.98 46 *e*PKPdf PKPdf 11 17 23.0 -0.9
MORC Moravsky Berou 136.98 46 ⇓*i*P PKPdf 11 17 24.7 +0.8
KAF Kangasniemi 137.03 27 *e*PKIKP PKPdf 11 17 22.0 -1.6
KAF pmax pmax
comp=Z,5.0nm,0.8s
KAF Kangasniemi 137.03 27 *ep* PKPdf 11 17 22.0 -1.6
comp=Z,4.8nm,0.8s
FINES FINESS Array B 137.29 28 PKP PKPdf 11 17 23.8 -0.3
comp=Z,8.8nm,1.0s,baz=198,slow=5.6,SNR=7.1
TIP Timpagrande 137.31 62 PFAKE 11 17 40.0 +15
TIP LR LR
comp=Z,618nm,20.0s,MS5.3
OKC Ostrava-Krasne 137.35 46 *e*PKIKP PKPdf 11 17 24.3 -0.3
OKC MLR MLR
comp=Z,400nm,13.6s,MS5.3
OKC Ostrava-Krasne 137.35 46 *e*PKPdf PKPdf 11 17 24.3 -0.3
OKC AMS AMS 12 20 20.0
comp=Z,400nm,13.6s
VYHS Vyhne 138.06 48 *e*PKP PKPdf 11 17 26.0 +0.1
VYHS Vyhne 138.06 48 *e*PKP PKPdf 11 17 26.0 +0.1
PKSM Moragy 138.29 51 ⇓*e*P PKPdf 11 17 27.1 +0.6
PKSM Moragy 138.29 51 PKIKP PKPdf 11 17 26.8 +0.4
PKSM Moragy 138.29 51 ⇓*i*P PKPdf 11 17 27.1 +0.7
BJI Beijing 138.29 299 PKP PKPdf 11 17 26.1 -0.5
BJI PP PP 11 20 13.5 -2.9
BJI LR LR
comp=N,280nm,19.2s,MS5.5
BJI LR LR
comp=E,690nm,18.6s,MS5.5
BJI LR LR
comp=Z,750nm,23.9s
BJT Baijiatuan 138.30 299 PFAKE 11 17 40.0 +13
BJT LR LR
comp=Z,568nm,19.0s,MS5.3
OJC Ojcow 138.31 45 *e*PKP PKPdf 11 17 25.6 -0.7
JOF Joensuu 138.44 24 *e*PKIKP PKPdf 11 17 25.5 -0.7
JOF pmax pmax
comp=Z,4.0nm,0.8s
JOF Joensuu 138.44 24 *ep* PKPdf 11 17 25.5 -0.7
comp=Z,3.6nm,0.8s
NIE Niedzica 138.82 46 *e*PKP PKPdf 11 17 27.6 +0.3
PSZ Piszkesteto 138.86 49 *e*PKPdf PKPdf 11 17 28.0 +0.6
PSZ LR LR
comp=Z,528nm,20.0s,MS5.3
PSZ Piszkesteto 138.86 49 PKIKP PKPdf 11 17 25.5 -1.9
PSZ Piszkesteto 138.86 49 ⇑PKIKP PKPdf 11 17 28.2 +0.8
PSZ Piszkesteto 138.86 49 ⇑*i*P PKPdf 11 17 28.2 +0.8
PSZ Piszkesteto 138.86 49 ⇓*e*PKP PKPdf 11 17 25.5 -1.9
KMBO Kilima Mbogo 138.97 131 PFAKE 11 17 40.0 +11
KMBO LR LR
comp=Z,625nm,20.0s,MS5.3
WHN Wuhan 139.06 285 PKP PKPdf 11 17 26.0 -2.3
WHN PP PP 11 20 22.0 +0.5
WHN LR LR
comp=N,2µm,24.8s
WHN LR LR
comp=E,870nm,18.9s
WHN LR LR
comp=Z,1µm,21.6s,MS5.6
SUW Suwalki 139.19 39 *e*PKP PKPdf 11 17 27.7 -0.1
SUW Suwalki 139.19 39 *e*PKPdf PKPdf 11 17 28.4 +0.5
STHS Stebnicka Huta 139.41 46 *e*PKP PKPdf 11 17 29.3 +0.9
STHS Stebnicka Huta 139.41 46 *e*PKP PKPdf 11 17 29.3 +0.9
TIR Tirane 139.65 59 PFAKE 11 17 40.0 +11
TIR LR LR
comp=Z,717nm,22.0s,MS5.4
CRVS Cervenica-Dubn 139.67 47 *e*PKP PKPdf 11 17 28.1 -0.8
CRVS Cervenica-Dubn 139.67 47 *e*PKP PKPdf 11 17 28.1 -0.8
QIZ Qiongzhong 139.94 266 PKP PKPdf 11 17 28.6 -1.7
QIZ PP PP 11 20 26.3 -0.7
QIZ LR LR
comp=N,360nm,20.8s
QIZ LR LR
comp=Z,420nm,23.9s,MS5.1
QIZ Qiongzhong 139.94 266 PFAKE 11 17 40.0 +10
QIZ LR LR

	comp=Z,413nm,20.0s,MS5.2									
UZH	**Uzhgorod**	**140.27**	**47**	*e*	PKIKP	PKPdf	11 17 30.0	0.0		
UZH				*i*			11 17 37.7			
KWP	**Kalwaria Pacla**	**140.28**	**45**	*e*	PKP	PKPdf	11 17 29.9	0.0		
KWP	**Kalwaria Pacla**	**140.28**	**45**	*e*	PKIKP	PKPdf	11 17 30.6	+0.7		
KWP					MLR	MLR				
	comp=Z,619nm,21.0s,MS5.3									
KWP	**Kalwaria Pacla**	**140.28**	**45**	⇑*i*	P	PKPdf	11 17 29.8	-0.1		
PSI	**Prapat**	**140.38**	**236**		PKhKP	PKPpre	11 17 22.2			
	comp=Z,1.4nm,0.5s,baz=293,slow=5.5,SNR=3.0									
BZS	**Buzias**	**140.43**	**52**		P	PKPdf	11 17 30.6	+0.2		
TRPA	**Tarpa**	**140.55**	**48**	⇓*i*	P	PKPdf	11 17 35.9	+5.4		
KULM	**Kulim**	**140.73**	**240**		PFAKE		11 17 40.0	+8.1		
KULM					LR	LR				
	comp=Z,1μm,22.0s,MS5.6									
DRGR		**140.96**	**50**		P	PKPdf	11 17 31.4	+0.1		
DRGR		**140.96**	**50**	⇓*i*	P	PKPdf	11 17 24.5	-6.8		
LVV	**L'vov**	**141.05**	**45**	*e*	PKIKP	PKPdf	11 17 27.8	-3.5		
LVV					MLR	MLR				
	comp=E,300nm,18.0s,MS5.2									
LVV					MLR	MLR				
	comp=Z,400nm,18.0s,MS5.2									
LVV					MLR	MLR				
	comp=N,300nm,19.0s,MS5.2									
MNK	**Minsk**	**141.50**	**36**	*e*	PKIKP	PKPdf	11 17 32.0	0.0		
MICGM	**Minsk**	**141.52**	**36**	*e*		PKPdf	11 17 32.0	0.0		
HHC	**Hu-ho-hao-te**	**141.77**	**301**	*e*	PKP	PKPdf	11 17 30.3	-2.6		
HHC					PP	PP	11 20 39.3	+1.5		
HHC					PKS		11 21 05.1			
HHC					AMB	AMB				
	comp=Z,120nm,6.3s									
HHC					LR	LR				
	comp=N,210nm,15.7s,MS5.4									
HHC					LR	LR				
	comp=E,430nm,13.7s,MS5.4									
HHC					LR	LR				
	comp=Z,680nm,21.0s									
BUR08	**Bucovina Ar. S**	**142.40**	**48**	*e*	PKPdf	PKPdf	11 17 31.3	-2.5		
BUR01	**Bucovina Ar. S**	**142.42**	**48**		P	PKPdf	11 17 31.8	-2.1		
BURAR	**Bucovina Array**	**142.42**	**48**	⇑	P	PKPdf	11 17 32.9	-1.0		
BURAR	**Bucovina Array**	**142.42**	**48**	⇑*i*	P	PKPdf	11 17 32.9	-1.0		
KLMR	**Klimovskoe**	**142.69**	**22**	*e*	PKIKP	PKPdf	11 17 29.6	-4.3		
KLMR				*e*			11 20 37.7			
KLMR					pmax	pmax				
	comp=Z,125nm,1.5s									
VOIR		**142.84**	**51**	⇑	P	PKPdf	11 17 32.6	-2.1		
VOIR		**142.84**	**51**		PKIKP	PKPdf	11 17 33.5	-1.2		
VOIR		**142.84**	**51**	⇑*i*	P	PKPdf	11 17 32.6	-2.1		
ENH	**Enshi**	**143.17**	**283**		PFAKE		11 17 50.0	+14		
ENH					LR	LR				
	comp=Z,565nm,20.0s,MS5.3									
MLR	**Muntele Rosu**	**143.44**	**51**	⇓	P	PKPdf	11 17 32.8	-2.9		
MLR	**Muntele Rosu**	**143.44**	**51**		PKIKP	PKPdf	11 17 33.2	-2.5		
MLR	**Muntele Rosu**	**143.44**	**51**	⇓*i*	P	PKPdf	11 17 32.8	-2.9		
ULN	**Ulaanbaatar**	**143.60**	**313**	*e*	PKPdf	PKPdf	11 17 32.8	-3.2		
ULN					LR	LR				
	comp=Z,740nm,22.0s,MS5.4									
IRK	**Irkutsk**	**143.63**	**321**	*e*	PKHKP	PKPpre	11 17 26.3			
IRK					pmax	pmax				
	comp=Z,99nm,2.3s									
KIEV	**Kiev**	**143.87**	**41**	*e*	PKPdf	PKPdf	11 17 33.6	-2.7		
KIEV					LR	LR				
	comp=Z,629nm,20.0s,MS5.4									
AKASG	**Malin Array Be**	**143.88**	**41**		PKhKP	PKPpre	11 17 32.9			
	comp=Z,6.0nm,0.9s,baz=282,slow=3.1,SNR=19									
AKBB	**Malin Array Si**	**143.88**	**41**	*e*	PKPdf	PKPdf	11 17 33.5	-2.8		
XAN	**Xi'an**	**144.00**	**290**		PKP	PKPdf	11 17 33.3	-3.8		
XAN					SKS	SKSdf	11 24 37.1	-10		
XAN					AMB	AMB				
	comp=Z,55nm,8.0s									
XAN					LR	LR				
	comp=N,74nm,23.5s,MS4.9									
XAN					LR	LR				
	comp=E,230nm,22.3s,MS4.9									
XAN					LR	LR				
	comp=Z,190nm,20.7s,MS4.8									
SONM	**Songino Array**	**144.03**	**313**		PKP	PKPdf	11 17 33.6	-3.1		
	comp=Z,49nm,1.1s,baz=106,slow=1.7,SNR=149									
GRER		**144.17**	**51**	⇓	P	PKPdf	11 17 36.1	-0.9		
GRER		**144.17**	**51**	⇓*i*	P	PKPdf	11 17 36.1	-0.9		
TLY	**Talaya**	**144.23**	**321**	*e*	PKPdf	PKPdf	11 17 35.1	-1.8		
TLY					LR	LR				
	comp=Z,1μm,20.0s,MS5.7									
TLY	**Talaya**	**144.23**	**321**	*e*	PKIKP	PKPdf	11 17 34.5	-2.4		
TLY				*e*	SS	SS	11 39 42.1	+4.9		
TLY					pmax	pmax				
	comp=Z,71nm,1.5s									
APE	**Apeiranthos**	**144.23**	**65**	⇑	PKIKP	PKPdf	11 17 43.1	+5.7		
APE	**Apeiranthos**	**144.23**	**65**	⇑*i*	P	PKPdf	11 17 43.1	+5.7		
ENEZ	**Enez**	**144.44**	**59**	*e*	P	PKPdf	11 17 35.3	-2.4		
AMRR	**Amara**	**144.60**	**52**		P	PKPdf	11 17 37.2	-0.6		
EZN	**Ezine**	**144.67**	**60**	*e*	P	PKPdf	11 17 35.3	-2.8		
ERIK	**Erikli-Kesan**	**144.72**	**59**	*e*	P	PKPdf	11 17 36.3	-1.8		
EDRB	**Edirne**	**144.72**	**57**	*e*	P	PKPdf	11 17 35.3	-2.8		
GELI	**Tayfur-Gelibol**	**144.72**	**59**	*e*	P	PKPdf	11 17 35.9	-2.3		
GYA	**Guiyang**	**144.94**	**276**	⇑*i*	PKP	PKPdf	11 17 37.9	-1.1		
GYA					PP	PP	11 21 01.3	+4.0		
GYA					PKS		11 21 11.6			
GYA					SKKS	SKKSac	11 27 49.0	-0.8		
GYA					AMB	AMB				
	comp=Z,430nm,7.5s									
GYA					LR	LR				
	comp=N,490nm,23.8s,MS5.3									
GYA					LR	LR				
	comp=E,360nm,24.0s,MS5.3									
GYA					LR	LR				
	comp=Z,470nm,22.1s,MS5.2									
KIS	**Kishinev**	**144.95**	**48**	*e*	PKP	PKPdf	11 17 36.0	-2.3		
	comp=Z,900nm,2.4s									
KIS	**Kishinev**	**144.95**	**48**	*e*	PP	PP	11 20 48.0	-8.5		
KIS	**Kishinev**	**144.95**	**48**	*e*	PKIKP	PKPdf	11 17 36.0	-2.3		
KIS					pmax	pmax				
	comp=Z,900nm,2.4s									
KIS					pmax	pmax				
	comp=Z,1μm,3.6s									
CFR	**Carcaliu**	**145.01**	**51**	⇓	P	PKPbc	11 17 38.1	+0.2		
CFR	**Carcaliu**	**145.01**	**51**		PKIKP	PKPdf	11 17 37.6	-0.9		
CFR	**Carcaliu**	**145.01**	**51**	⇓*i*	P	PKPbc	11 17 38.1	+0.3		
MSEY	**Mahe Island**	**145.22**	**159**		PFAKE		11 17 50.0	+11		
MSEY					LR	LR				
	comp=Z,1μm,21.0s,MS5.6									
MFT	**Murefte**	**145.28**	**59**	*e*	P	PKPdf	11 17 38.3	-0.8		
BLCB	**Balcova**	**145.36**	**63**	*e*	P	PKPdf	11 17 38.6	-0.7		
TIRR	**Tirgusor**	**145.38**	**52**	*e*	PKPbc	PKPbc	11 17 38.7	-0.4		
OBN	**Obninsk**	**145.45**	**31**	*e*	PKPbc	PKPbc	11 17 38.8	-0.2		
OBN					LR	LR				
	comp=Z,493nm,20.0s,MS5.3									
OBN	**Obninsk**	**145.45**	**31**	*c i*	PKIKP	PKPdf	11 17 38.3	-0.6		
OBN				*e*			11 20 59.8			
OBN					pmax	pmax				
	comp=Z,464nm,1.7s									
OBN					MLR	MLR				
	comp=Z,500nm,16.0s,MS5.4									
MOS	**Moscow**	**145.53**	**29**	*i*	PKIKP	PKPdf	11 17 38.4	-0.6		
MOS				*e*			11 21 06.5			
MOS					pmax	pmax				
	comp=Z,1μm,2.2s									
MOS					pmax	pmax				
	comp=Z,369nm,1.6s									
MOS					MLR	MLR				
	comp=Z,1μm,20.0s,MS5.7									
BODT	**Bodrum**	**145.65**	**65**	*e*	P	PKPdf	11 17 37.8	-2.1		
GONE	**Gonen-Balikesi**	**145.68**	**60**	*e*	P	PKPdf	11 17 39.5	-0.3		
MOY	**Mondy**	**145.69**	**322**	*e*	PKIKP	PKPdf	11 17 39.5	+0.1		
MOY					pmax	pmax				
	comp=Z,337nm,3.0s									
EDC	**Edincik**	**145.78**	**59**	*e*	P	PKPdf	11 17 40.1	+0.2		
DAT	**Datca**	**145.88**	**66**	*e*	P	PKPdf	11 17 38.6	-1.6		
BALB	**Balikesir**	**145.88**	**61**	*e*	P	PKPdf	11 17 40.2	+0.1		
MLSB	**Milas**	**146.01**	**65**	*e*	P	PKPdf	11 17 40.5	0.0		
CTKS	**Kestanelik-??a**	**146.12**	**58**	*e*	P	PKPdf	11 17 40.1	-0.4		
KCTX	**Karacabey (Bur**	**146.16**	**59**	*e*	P	PKPdf	11 17 40.1	-0.5		
ARMT	**Armutlu**	**146.50**	**59**	*e*	P	PKPdf	11 17 41.5	+0.3		
KULA	**Kula-Manisa**	**146.61**	**62**	*e*	P	PKPdf	11 17 42.5	+1.1		
GEMT	**Gemlik**	**146.77**	**59**	*e*	P	PKPdf	11 17 42.5	+0.9		
YLV	**Yalova**	**146.88**	**59**	*e*	P	PKPdf	11 17 40.7	-1.1		
NST	**Nakhon Sawan**	**146.97**	**254**		P	PKPab	11 17 45.0	-1.1		
HRT	**Hereke**	**147.06**	**58**	*e*	P	PKPdf	11 17 42.0	-0.1		
CAVI	**Cavuskoy**	**147.30**	**59**	*e*	P	PKPdf	11 17 44.3	+1.7		
GLHS	**Glhisar (BURDU**	**147.39**	**65**	*e*	P	PKPbc	11 17 44.9	-0.4		
ALT	**Altintas**	**147.67**	**61**	*e*	P	PKPdf	11 17 44.4	+1.2		
ELL	**Elmali**	**147.75**	**65**	*e*	P	PKPbc	11 17 46.3	0.0		
GULT	**Gulveren**	**147.76**	**59**	*e*	P	PKPbc	11 17 45.4	-0.8		
KMI	**Kunming**	**148.09**	**272**		PKPbc	PKPdf	11 17 44.1	-0.2		
SOKR	**Solikamsk**	**148.10**	**10**	*c i*	PKIKP	PKPdf	11 17 42.0	-1.2		
SOKR					pmax	pmax				
	comp=Z,130nm,1.4s									
SOKR					MLR	MLR				
	comp=Z,810nm,22.0s,MS5.5									
ISP	**Isparta**	**148.14**	**63**	*e*	P	PKPbc	11 17 46.7	-0.6		
ISP	**Isparta**	**148.14**	**63**	*e*	PKPbc	PKPbc	11 17 47.5	+0.3		
ISP					LR	LR				
	comp=Z,386nm,19.0s,MS5.2									
CD2	**Chengdu**	**148.15**	**284**		PKPbc	PKPdf	11 17 44.3	+0.1		
CD2					PKPab	PKPab	11 17 52.6	+2.2		
CD2					PKS		11 21 18.0			
CD2					PP	PP	11 21 19.8	+3.6		
CD2					SKS	SKSdf	11 24 51.3	-1.6		
CD2					AMB	AMB				
	comp=Z,340nm,6.3s									
CD2					LR	LR				
	comp=N,540nm,19.2s,MS5.5									
CD2					LR	LR				
	comp=E,530nm,17.8s,MS5.5									
CD2					LR	LR				
	comp=Z,590nm,18.1s,MS5.4									
LZH	**Lanzhou**	**148.16**	**293**	⇑	PKPbc	PKPbc	11 17 47.8	+0.4		
LZH					pPKP	pPKPdf	11 17 50.5	+3.0		
LZH					sPKP		11 17 52.3			
LZH					PP	PP	11 21 24.1	+8.1		
LZH					SKKS	SKKSac	11 28 09.0	+1.5		
LZH					SS	SS	11 40 21.0	-2.4		
LZH					AMB	AMB				
	comp=Z,180nm,6.8s									
LZH					LR	LR				
	comp=E,660nm,16.5s									
LZH					LR	LR				
	comp=Z,1μm,20.8s,MS5.6									
BCK	**Bucak**	**148.23**	**64**	*e*	P	PKPdf	11 17 44.9	+0.7		
MDU	**Mudurnu**	**148.28**	**58**	*e*	P	PKPdf	11 17 45.6	+1.5		
SVRH	**Sivrihisar-ESK**	**148.70**	**60**	*e*	P	PKPbc	11 17 47.3	-1.4		
VOR	**Voronezh**	**148.77**	**34**		PKIKP	PKPdf	11 17 44.0	-0.6		
VOR					pmax	pmax				
	comp=Z,500nm,1.6s									
KIZT	**Kizilcal**	**149.06**	**61**	*e*	P	PKPbc	11 17 47.8	-1.8		
VSR	**Storozhevoye**	**149.06**	**35**	*e*	PKIKP	PKPdf	11 17 44.0	-1.1		
VSR					pmax	pmax				
	comp=Z,400nm,1.8s									
VSR					pmax	pmax				
	comp=N,90nm,2.9s									
VSR					pmax	pmax				
	comp=E,170nm,3.8s									
VSR					MLR	MLR				
	comp=N,430nm,18.0s,MS5.3									
VSR					MLR	MLR				
	comp=Z,760nm,18.0s,MS5.5									
VSR					MLR	MLR				
	comp=E,280nm,19.0s,MS5.3									
SIM	**Simferopol'**	**149.11**	**49**	*c i*	PKP2	PKPbc	11 17 49.4	-0.1		
SIM					pmax	pmax				
	comp=Z,43nm,1.6s									
SIM					MLR	MLR				
	comp=Z,485nm,17.9s,MS5.3									
SAFT	**Safranbolu**	**149.21**	**56**	*e*	P	PKPbc	11 17 48.9	-1.0		
CM31	**Chiang Mai Arr**	**149.23**	**258**		PFAKE		11 18 00.0	+14		
CM31					LR	LR				
	comp=Z,581nm,20.0s,MS5.4									
CMAR	**Chiang Mai Arr**	**149.23**	**258**		PKP	PKPdf	11 17 45.1	-1.2		
	comp=Z,23nm,1.1s,baz=295,slow=0.3,SNR=16									
CMAR					PKPbc	PKPbc	11 17 51.6	+1.0		
	comp=Z,28nm,1.2s,baz=122,slow=1.2,SNR=53									
CHG	**Chiang Mai**	**149.37**	**259**	⇓	P	PKPbc	11 17 50.1	-0.8		
	comp=Z,72nm,1.2s									
CHTO	**Chiang Mai**	**149.37**	**259**	*e*	PKPdf	PKPdf	11 17 46.6	+0.1		
CHTO				*e*	PKPbc	PKPbc	11 17 50.5	-0.5		
CHTO				*e*	PKPab	PKPab	11 17 56.2	+0.5		
CHTO					LR	LR				
	comp=Z,683nm,21.0s,MS5.4									
CHTO	**Chiang Mai**	**149.37**	**259**	*e*	PKIKP	PKPdf	11 17 46.6	0.0		
CHTO				*e*			11 17 50.5			
CHTO					MLR	MLR				
	comp=Z,683nm,21.0s,MS5.4									
LOD	**Lodumlu**	**149.56**	**59**	*e*	P	PKPbc	11 17 48.9	-1.9		
KONT	**Konya--Tatoy**	**149.57**	**63**	*e*	P	PKPbc	11 17 50.1	-0.8		
HDMB	**Hadim**	**149.79**	**65**	*e*	P	PKPdf	11 17 48.3	+1.6		
BZK	**Bozkurt**	**149.98**	**55**	*e*	P	PKPdf	11 17 48.9	+2.0		
CANT	**Cankiri**	**150.05**	**57**	*e*	P	PKPbc	11 17 51.3	-0.7		
TOS	**Tosya**	**150.24**	**56**	*e*	P	PKPdf	11 17 49.5	+2.2		
BR131	**Keskin Array S**	**150.25**	**59**	*e*	PKPbc	PKPbc	11 17 52.6	+0.1		
BR131					LR	LR				
	comp=Z,367nm,20.0s,MS5.2									
BRTR	**Keskin Array B**	**150.25**	**59**		PKP	PKPdf	11 17 46.1	-1.2		
	comp=Z,40nm,1.2s,baz=200,slow=1.4,SNR=19									
BRTR					PKPbc	PKPbc	11 17 52.4	-0.1		
	comp=Z,29nm,1.1s,baz=232,slow=1.6,SNR=46									
LEF	**Lefka**	**150.27**	**68**	*e*	P	PKPdf	11 17 45.9	-1.7		
VRHR	**Novokhopersk**	**150.35**	**33**	*e*	PKIKP	PKPbc	11 17 52.1	-0.2		
VRHR					pmax	pmax				
	comp=Z,150nm,0.9s									
VRHR					pmax	pmax				
	comp=N,30nm,0.6s									
VRHR					pmax	pmax				
	comp=E,30nm,0.6s									
SULT	**Sultanhani-AKS**	**150.44**	**62**	*e*	P	PKPbc	11 17 52.7	-0.3		
BYBT	**Boyabat**	**150.67**	**55**	*e*	P	PKPbc	11 17 53.6	+0.2		
IKL	**Isikli**	**150.83**	**66**	*e*	P	PKPbc	11 17 52.1	-1.9		
GTA	**Gaotai**	**150.89**	**301**		PKPbc	PKPdf	11 17 48.0	-0.3		
GTA					PKPab	PKPbc	11 17 54.3	+0.3		
GTA					PP	PP	11 21 34.8	+3.2		
GTA					SKS	SKSdf	11 24 51.4	-4.7		
GTA					SKKS	SKKSac	11 28 20.8	-1.6		
GTA					AMB	AMB				
	comp=Z,230nm,7.1s									
GTA					LR	LR				
	comp=N,500nm,16.4s,MS5.5									
GTA					LR	LR				
	comp=E,420nm,19.3s,MS5.5									
GTA					LR	LR				
	comp=Z,540nm,18.1s,MS5.4									
NVS	**Novosibirsk**	**151.15**	**341**	*e*	PKIKP	PKPdf	11 17 38.5	-10		
NVS					pmax	pmax				
	comp=Z,160nm,1.9s									
NVS					pmax	pmax				
	comp=E,91nm,1.7s									
SVE	**Sverdlovsk**	**151.27**	**7**	*i*	PKIKP	PKPdf	11 17 49.1	+0.8		
SVE					pmax	pmax				
	comp=Z,104nm,1.5s									
EREN	**Erenkoy**	**151.28**	**67**	*e*	P	PKPdf	11 17 47.3	-1.8		
ANN	**Anapa**	**151.35**	**47**	*i*	PKIKP	PKPdf	11 17 46.6	-2.3		
ANN					pmax	pmax				
	comp=Z,164nm,1.6s									
ARU	**Arti**	**151.38**	**10**	*e*	PKPdf	PKPdf	11 17 48.9	+0.4		
ARU				*e*	PKPbc	PKPbc	11 17 54.9	+0.3		
ARU				*e*	PKPab	PKPab	11 18 03.2	+0.5		
ARU					LR	LR				
	comp=Z,968nm,19.0s,MS5.6									
ARU	**Arti**	**151.38**	**10**	*i*	PKIKP	PKPdf	11 17 48.1	-0.4		
ZAA0	**Zalesovo Array**	**151.41**	**338**	*e*	PKPdf	PKPdf	11 17 48.5	-0.1		
ZAA0				*e*	PKPbc	PKPbc	11 17 54.1	-0.6		
ZAA0				*e*	PKPab	PKPab	11 18 02.9	-0.1		
ZALV	**Zalesovo Beam**	**151.41**	**338**		PKP	PKPdf	11 17 46.9	-1.8		
	comp=Z,2.8nm,0.3s,baz=358,slow=0.6,SNR=5.0									
ZALV					PKPbc	PKPbc	11 17 53.9	-0.9		
	comp=Z,18nm,0.7s,baz=20,slow=3.8,SNR=24									
KVT	**Kavak**	**151.70**	**55**	*e*	P	PKPdf	11 17 49.2	-0.3		
KARA	**Karaisali**	**151.79**	**64**	*e*	P	PKPdf	11 17 48.3	-1.5		
KOZT	**Kozan**	**152.36**	**63**	*e*	P	PKPdf	11 17 48.7	-1.9		
CEYT	**Ceyhan**	**152.37**	**64**	*e*	P	PKPdf	11 17 50.1	-0.5		
SARI	**SarD1z-Kayseri**	**152.80**	**60**	*e*	P	PKPdf	11 17 49.2	-2.0		
KMRS	**Kahramanmaras**	**153.19**	**63**	*e*	P	PKPdf	11 17 51.9	0.0		
SOC	**Sochi**	**153.35**	**48**	*c i*	PKIKP	PKPdf	11 17 51.0	-0.9		
SOC				*i*			11 17 59.4			
SOC				*e*			11 21 45.0			
SOC				*e*			11 25 19.4			
SOC					pmax	pmax				
	comp=Z,22nm,0.9s									
DARE	**Darende-Malaty**	**153.57**	**59**	*e*	P	PKPdf	11 17 51.5	-0.9		
ESPY	**Espiye-Giresun**	**153.68**	**54**	*e*	P	PKPdf	11 17 49.7	-2.7		
MYA	**Malatya**	**154.20**	**60**	*e*	P	PKPdf	11 17 53.9	+0.6		
MALT	**Malatya**	**154.20**	**60**	*e*	PKPdf	PKPdf	11 17 53.7	+0.4		
MALT					LR	LR				
	comp=Z,521nm,20.0s,MS5.3									
MALT	**Malatya**	**154.20**	**60**	⇑*i*	P	PKPdf	11 17 53.7	+0.4		
GUMT	**Gumushane**	**154.38**	**55**	*e*	P	PKPdf	11 17 54.3	+0.8		
KTUT	**Trabzon**	**154.40**	**54**	*e*	P	PKPdf	11 17 54.2	+0.7		
EZC	**Erzincan**	**154.51**	**57**	*e*	P	PKPdf	11 17 49.7	-3.9		
URFA	**Urfa**	**154.71**	**62**	*e*	P	PKPdf	11 17 52.1	-1.9		
PTK	**Pertek**	**154.78**	**58**	*e*	P	PKPdf	11 17 54.0	0.0		
SVRC	**Sivrice-ELAZID**	**154.86**	**60**	*e*	P	PKPdf	11 17 54.5	+0.3		
KIV	**Kislovodsk**	**155.08**	**45**		PFAKE		11 18 00.0	+5.7		
KIV					LR	LR				
	comp=Z,553nm,22.0s,MS5.3									
KIV	**Kislovodsk**	**155.08**	**45**	*c i*	PKIKP	PKPdf	11 17 54.2	-0.1		
KIV					pmax	pmax				
	comp=Z,18nm,1.5s									
BRVK	**Borovoye**	**155.31**	**355**	*e*	PKPdf	PKPdf	11 17 54.5	+0.2		
BRVK				*e*	PKPbc	PKPdf	11 18 03.5	+9.2		
BRVK				*e*	PKPab	PKPab	11 18 19.2	-0.2		
BRVK					LR	LR				
	comp=Z,945nm,20.0s,MS5.6									
BRVK	**Borovoye**	**155.31**	**355**	*c i*	PKIKP	PKPdf	11 17 53.7	-0.6		
BVAR	**Borovoye Array**	**155.33**	**355**		PKP	PKPdf	11 17 53.6	-0.7		
	comp=Z,5.6nm,1.0s,baz=318,slow=1.9,SNR=10									
BVAR					PKPab	PKPab	11 18 19.5	0.0		
	comp=Z,18nm,1.0s,baz=8.5,slow=3.0,SNR=11									
KURK	**Kurchatov**	**156.12**	**342**	*e*	PKPdf	PKPdf	11 17 54.9	-0.6		
KURK				*e*	PKPab	PKPab	11 18 22.4	-0.5		
KURK					LR	LR				
	comp=Z,1μm,22.0s,MS5.7									
KURK	**Kurchatov**	**156.12**	**342**		PKP	PKPdf	11 17 53.5	-1.9		
	comp=Z,14nm,1.1s,baz=350,slow=1.3,SNR=18									
KURK	**Kurchatov**	**156.12**	**342**	*c i*	PKIKP	PKPdf	11 17 53.9	-1.5		
GOR	**Gori**	**156.95**	**48**		P	PKPdf	11 17 58.0	+1.2		
AKTK	**Aktyubinsk**	**156.99**	**15**		PKP	PKPdf	11 17 57.3	+0.7		
AKTK					PKPab	PKPab	11 18 25.0	-1.7		
AKTO	**Aktyubinsk**	**156.99**	**15**		PKP	PKPdf	11 17 57.3	+0.7		
	comp=Z,0.9nm,0.3s,baz=320,slow=3.0,SNR=15									
AKTO					PKPab	PKPab	11 18 25.0	-1.7		
	comp=Z,8.5nm,1.0s,baz=2.7,slow=10.0,SNR=4.1									
AGRB	**Hanur-Agry**	**157.21**	**55**	*e*	P	PKPdf	11 17 57.4	+0.2		
WMQ	**Urumqi**	**157.47**	**318**		PKP	PKPdf	11 17 57.1	-0.3		
WMQ					PKS		11 21 29.5			
WMQ					PP	PP	11 22 10.8	+2.8		
WMQ					SKS	SKSdf	11 25 01.5	-1.9		
WMQ					SKKS	SKKSac	11 28 58.4	+0.9		
WMQ					AMB	AMB				
	comp=Z,380nm,6.0s									
WMQ					LR	LR				
	comp=N,930nm,23.4s,MS5.6									
WMQ					LR	LR				
	comp=E,510nm,23.5s,MS5.6									
WMQ					LR	LR				
	comp=Z,770nm,21.2s,MS5.5									
TBLG	**Delisi**	**157.49**	**48**	*e*	PKIKP	PKPdf	11 17 57.5	0.0		
TBLG	**Delisi**	**157.49**	**48**		P	PKPdf	11 17 57.5	0.0		
MTA	**Mtatsminda**	**157.54**	**48**		P	PKPdf	11 17 57.9	+0.4		
CLDR	**Calditan**	**158.04**	**55**	*e*	P	PKPdf	11 17 55.0	-3.3		
DGRG	**David-gareji**	**158.04**	**48**		P	PKPdf	11 17 57.0	-1.2		
MKAR	**Makanchi Array**	**158.16**	**331**		PKP	PKPdf	11 17 55.7	-2.5		
	comp=Z,3.1nm,0.7s,baz=30,slow=2.9,SNR=9.4									
MKAR					PKPab	PKPab	11 18 31.0	-0.9		
	comp=Z,4.1nm,0.9s,baz=56,slow=5.1,SNR=5.1									
MKAR					PP	PP	11 22 07.4	-4.0		
	comp=Z,0.3nm,0.3s,baz=48,slow=7.4,SNR=5.1		

GRAC	**Grapevine Rang** baz=1.1,SNR=54	**1.12**	**109**	⇓P	**Pg**	**11 00 09.3**	**-0.2**
GRAC	baz=1.1			⇑S	**Sg**	**11 00 24.2**	**+0.2**
RCTC	**Rector, Farmer** baz=1.2,SNR=8.2	**1.14**	**203**	⇑P	**Pg**	**11 00 09.5**	**-0.3**
RCTC	baz=1.2			⇑S	**Sg**	**11 00 25.2**	**+0.5**
CMB	**Columbia Colle**	**1.50**	**297**	*e*Pn	**Pn**	**11 00 14.4**	**-1.2**
CMB				*e*Sn	**Sn**	**11 00 34.8**	**-0.8**
VES	**Vestal, Richgr** baz=1.6,SNR=25	**1.56**	**192**	⇓Pb	**Pb**	**11 00 16.6**	**-0.7**
VES	baz=1.6			⇑Sb	**Sb**	**11 00 37.8**	**+0.5**
MPMC	**Manual Prospec** baz=1.6,SNR=31	**1.63**	**143**	⇑P	**Pn**	**11 00 16.8**	**-0.5**
MPMC	baz=1.6			⇓Sb	**Sb**	**11 00 39.6**	**+0.2**
ISA	**Isabella** baz=1.7,SNR=104	**1.71**	**174**	⇓Pb	**Pb**	**11 00 19.4**	**-0.6**
ISA	baz=1.7			⇓Sb	**Sb**	**11 00 41.8**	**0.0**
ISA	**Isabella**	**1.71**	**174**	*e*Pn	**Pn**	**11 00 17.5**	**-1.0**
ISA				*e*Sg	**Sg**	**11 00 41.9**	**-1.0**
S10A	**Tonopah Range,** baz=1.7	**1.76**	**71**	⇓P	**Pn**	**11 00 18.7**	**-0.5**
S10A	baz=1.7			⇓Sb	**Sb**	**11 00 43.4**	**+0.2**
LRMC	**Laurel Mountai** baz=2.1	**2.05**	**156**	⇓Sb	**Sb**	**11 00 52.5**	**+0.8**
WCN	**Washoe City** baz=2.1	**2.10**	**337**	⇑Pb	**Pb**	**11 00 26.8**	**+0.1**
WCN	baz=2.1			⇑Sb	**Sb**	**11 00 54.5**	**+1.4**
R10A	**Warm Springs** baz=2.1,SNR=101	**2.11**	**63**	⇓Pb	**Pb**	**11 00 26.5**	**-0.2**
R10A	baz=2.1			⇓Sb	**Sb**	**11 00 54.6**	**+1.4**
U10A	**Ash Meadows, A** baz=2.1	**2.12**	**116**	⇓Pb	**Pb**	**11 00 27.1**	**+0.2**
ARVC	**Arvin** baz=2.3	**2.24**	**183**	⇑Sb	**Sb**	**11 00 57.5**	**+0.5**
SAO	**San Andreas Ge**	**2.28**	**256**	*e*Pn	**Pn**	**11 00 25.8**	**-0.6**
SAO				*e*Sg	**Sg**	**11 01 02.8**	**+1.5**
SMMC	**Simmler** baz=2.3,SNR=9.7	**2.31**	**208**	⇓P	**Pn**	**11 00 27.4**	**+0.6**
SMMC	baz=2.3			⇑Sb	**Sb**	**11 00 58.3**	**-0.7**
Q10A	**Clear Creek Ra** baz=2.3,SNR=101	**2.32**	**51**	⇓Pb	**Pb**	**11 00 30.0**	**-0.4**
SHOC	**Shoshone** baz=2.4	**2.43**	**126**	⇓Sb	**Sb**	**11 01 04.3**	**+1.7**
EDW2	**Edwards Air Fo** baz=2.6	**2.55**	**167**	⇓Sb	**Sb**	**11 01 07.4**	**+1.5**
GSC	**Goldstone**	**2.56**	**143**	*e*Pn	**Pn**	**11 00 30.1**	**-0.2**
R11A	**Troy Canyon, C** baz=2.6,SNR=21	**2.65**	**67**	⇑Pb	**Pb**	**11 00 35.5**	**-0.5**
R11A	baz=2.6			⇓Sb	**Sb**	**11 01 10.4**	**+1.5**
Q11A	**Duckwater** baz=2.8,SNR=34	**2.82**	**57**	⇓Pb	**Pb**	**11 00 38.6**	**-0.2**
ARUT	**Antelope Range**	**4.20**	**83**	*e*Pn	**Pn**	**11 00 51.4**	**-1.3**
CCUT	**Cedar City**	**4.25**	**86**	*e*Pn	**Pn**	**11 00 50.5**	**-2.9**
CCUT				*e*Sg	**Sg**	**11 02 02.5**	**-1.9**

*CSEM **19** 11:17:43.3,37.19N×37.17E,h7km,MD2.7,After DDA*
DDA 19 11:17:43.3,37.19N×37.17E,h7km±4km,Md2.7,Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KUZU	**Kuzuini**	**0.42**	**190**	*e*P		Pg	11 17 52.0	+0.6
KUZU				*i* S		Sg	11 17 57.5	+0.7
KUZU	**Kuzuini**	**0.42**	**190**	*e*P		Pg	11 17 52.0	+0.6
KUZU				*i* S		Sg	11 17 57.5	+0.6
ANDN	**Andirin**	**0.76**	**301**	*i* P		Pg	11 17 59.5	+1.6
ANDN				*i* S		Sg	11 18 13.9	+6.1
ANDN	**Andirin**	**0.76**	**301**	*i* P		Pg	11 17 59.5	+1.6
ANDN				*i* S		Sg	11 18 13.9	+6.1
ATAB	**Bozova**	**0.94**	**72**	*e*P		Pg	11 17 59.8	-1.6
ATAB				*i* S		Sg	11 18 11.8	-1.9
ATAB	**Bozova**	**0.94**	**72**	*e*P		Pg	11 17 59.8	-1.6
ATAB				*i* S		Sg	11 18 11.8	-1.8
AKCD	**Akcadag**	**1.26**	**28**	*i* P		Pn	11 18 06.9	-0.4
AKCD				*i* S		Sb	11 18 24.7	+1.0
AKCD	**Akcadag**	**1.26**	**28**	*i* P		Pn	11 18 06.9	-0.4
AKCD				*i* S		Sb	11 18 24.7	+1.0

*NEIC **19** 11:31:51.0,32.56S×71.63W,h15km,ML3.5(GUC),After GUC.*
NEIC Felt [III] at Puchuncavi and [II] at Papudo and Quintero.
GUC 19 11:31:51.0±0.6,32.56S×71.63W,h15km±2km,MD3.6, ML3.5,17C-6D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.66**	**129**	⇑*i* P		Pg	11 32 02.5	-1.5
ROCH				*i* S		Sg	11 32 11.0	-1.8
ROCH	**El Roble**	**0.66**	**129**	⇑*i* P		Pg	11 32 02.5	-1.5
ROCH				*i* S		Sg	11 32 11.0	-1.8
CHNG	**Los Chungos**	**0.68**	**9**	⇑*i* P		Pg	11 32 02.0	-2.3
CHNG				*i* S		Sg	11 32 10.5	-2.9
JACH	**Jahuel**	**0.88**	**98**	⇑*i* P		Pb	11 32 05.9	-2.1
JACH				*i* S		Sb	11 32 17.0	-2.6
JACH	**Jahuel**	**0.88**	**98**	⇑*i* P		Pb	11 32 05.9	-2.1
JACH				*i* S		Sb	11 32 17.0	-2.6
LCCH	**Las Cruces**	**0.92**	**177**	⇓*i* P		Pb	11 32 06.1	-2.4
LCCH				*i* S		Sb	11 32 17.2	-3.4
LCCH	**Las Cruces**	**0.92**	**177**	⇓*i* P		Pb	11 32 06.1	-2.4
LCCH				*i* S		Sb	11 32 17.2	-3.4
SAN	**Santiago**	**1.21**	**138**	⇑*i* P		Pn	11 32 10.6	-2.7
SAN				*e*S		Sb	11 32 25.7	-3.2
SAN	**Santiago**	**1.21**	**138**	⇑*i* P		Pn	11 32 10.6	-2.7
SAN				*e*S		Sb	11 32 25.7	-3.2
SAN	comp=N,3μm,0.2s			AML	AML		11 32 26.1	
TACH	**Talagante**	**1.24**	**152**	⇑*i* P		Pn	11 32 11.2	-2.5
TACH				*i* S		Sb	11 32 26.3	-3.4
TACH	**Talagante**	**1.24**	**152**	⇑*i* P		Pn	11 32 11.2	-2.5
TACH				*i* S		Sb	11 32 26.3	-3.4
CLCH	**Cerro Calan**	**1.24**	**133**	⇓*i* P		Pn	11 32 11.2	-2.6
CLCH				*i* S		Sb	11 32 26.7	-3.2
CLCH	comp=N,1μm,0.4s			AML	AML		11 32 34.2	
CLCH	comp=E,1μm,0.3s			AML	AML		11 32 34.7	
ANTU	**Antumapu**	**1.31**	**141**	⇑*i* P		Pn	11 32 12.3	-2.4
ANTU				*i* S		Sb	11 32 28.5	-3.4
ANTU	**Antumapu**	**1.31**	**141**	⇑*i* P		Pn	11 32 12.3	-2.4
ANTU				*i* S		Sb	11 32 28.5	-3.4
ANTU	comp=E,1μm,0.4s			AML	AML		11 32 33.4	
FCH	**Farellones**	**1.36**	**125**	⇓*i* P		Pn	11 32 17.8	+2.3
FCH				*i* S		Sn	11 32 34.9	+1.7
FCH	comp=N,1μm,0.2s			AML	AML		11 32 38.9	
LNV	**Longovilo**	**1.41**	**173**	⇑*i* P		Pn	11 32 14.0	-2.1
LNV				*i* S		Sn	11 32 30.6	-3.7
LNV	**Longovilo**	**1.41**	**173**	⇑*i* P		Pn	11 32 14.0	-2.1
LNV				*i* S		Sn	11 32 30.6	-3.7
PCH	**Pirque**	**1.41**	**139**	⇓*i* P		Pn	11 32 13.9	-2.2
PCH				*i* S		Sn	11 32 31.6	-2.9
PCH	**Pirque**	**1.41**	**139**	⇓*i* P		Pn	11 32 13.9	-2.2
PCH				*i* S		Sn	11 32 31.6	-2.9
CHCH	**Chadas Angostu**	**1.60**	**149**	⇑*i* P		Pn	11 32 17.0	-1.7
CHCH				*i* S		Sn	11 32 36.4	-2.6
CHCH	**Chadas Angostu**	**1.60**	**149**	⇑*i* P		Pn	11 32 17.0	-1.7
CHCH				*i* S		Sn	11 32 36.4	-2.6
LMEL	**Las Melosas**	**1.75**	**137**	*e*P		Pn	11 32 19.3	-1.6
LMEL				*i* S		Sn	11 32 41.0	-1.9
LMEL	**Las Melosas**	**1.75**	**137**	*e*P		Pn	11 32 19.3	-1.6
LMEL				*i* S		Sn	11 32 41.0	-1.9
LMEL	comp=N,2μm,0.2s			AML	AML		11 32 45.3	
CACH	**El Canelo**	**1.78**	**151**	⇑*i* P		Pn	11 32 20.5	-0.7
CACH				*i* S		Sn	11 32 43.3	-0.1
CACH	**El Canelo**	**1.78**	**151**	⇑*i* P		Pn	11 32 20.5	-0.7
CACH				*i* S		Sn	11 32 43.3	-0.1

*ISCJB **19** 11:37:47.4±0.5,28.4S±0.1×112.96W±0.10,h10km, mb4.1/13,MS4.1/6,Error ellipse: s-maj=15.2km s-min=12.2km az=1.5*
*IDC **19** 11:37:47.5±0.7,28.47S×113.08W,h0km,mb3.9/8, mb1 4.1/8,mb1mx4.1/15,mbtmp3.9/8,MS4.1/6,Ms1 4.1/6, ms1mx3.9/18,Error ellipse: s-maj=26.9km s-min=22.7km az=63.0*
*NEIC **19** 11:37:49.1±0.4,28.44S×112.93W,h10km,mb4.6/6,Error ellipse: s-maj=14.6km s-min=11.6km az=179.0*
ISC 19 11:37:49.3±0.5,28.5S±0.1×113.0W±0.1,h10km,n27, σ1912/16,mb4.1/13,MS4.1/6,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**3.48**	**68**	*e*Pn		**Pn**	**11 38 40.8**	**-2.8**
TAOE	**Nuku Hiva Isla** 64nm,0.4s	**32.18**	**302**	P		**P**	**11 44 18.1**	**+0.6**
PPT	**Papeete** 4.7nm,0.5s,mb4.7,baz=90,slow=19,SNR=1.8	**35.28**	**280**	P		**P**	**11 44 42.8**	**-1.6**
PPT	comp=Z,75nm,19.7s,MS3.5,baz=301,slow=29			LR	LR		11 54 53.6	
CFAA	**Coronel Fontan** 0.6nm,0.8s,mb3.4,baz=238,slow=6.7,SNR=4.0	**38.64**	**106**	P		**P**	**11 45 13.0**	**0.0**
RAR	**Rarotonga** 6.7nm,0.4s,mb4.7	**42.88**	**269**	*e*P		**P**	**11 45 48.5**	**+0.5**
LPAZ	**La Paz** 1.7nm,0.8s,mb3.8,baz=248,slow=13,SNR=4.6	**42.96**	**83**	P		**P**	**11 45 50.0**	**+1.2**
LPAZ	comp=Z,247nm,19.5s,MS4.1,baz=74,slow=30			LR	LR		11 59 23.6	
OTAV	**Otavalo** 0.6nm,0.4s,mb3.7	**43.66**	**55**	*e*P		**P**	**11 45 56.2**	**+1.8**
PMSA	**Palmer Station** 22nm,1.0s,mb5.0	**47.43**	**154**	*e*P		**P**	**11 46 22.0**	**-1.6**
CMIG	**Matias Romero** comp=Z,161nm,20.7s,MS4.0,baz=136,slow=30	**48.56**	**23**	LR	LR		12 01 44.3	
TXAR	**Lajitas Array** 0.4nm,1.0s,mb3.4,baz=169,slow=7.6,SNR=4.0	**58.17**	**10**	P		**P**	**11 47 43.5**	**+0.2**
TXAR	comp=Z,194nm,19.3s,MS4.2,baz=65,slow=31			LR	LR		12 08 01.9	
JCT	**Junction City** 8.2nm,1.0s,mb4.7	**59.96**	**13**	*e*P		**P**	**11 47 55.4**	**-0.4**
QSPA	**South Pole Qui** 2.6nm,0.9s,mb4.4	**61.70**	**180**	*e*P		**P**	**11 48 08.6**	**+1.6**
QSPA	**South Pole Qui** 2.3nm,0.9s,mb4.3,baz=118,slow=8.6,SNR=6.3	**61.70**	**180**	P		**P**	**11 48 06.7**	**-0.3**
ANMO	**Albuquerque** comp=Z,289nm,19.8s,MS4.5,baz=175,slow=31	**63.39**	**6**	LR	LR		12 10 53.5	
NVAR	**Mina Array Bea** 1.0nm,0.8s,mb3.9,baz=191,slow=10,SNR=6.4	**66.75**	**355**	P		**P**	**11 48 41.2**	**+0.7**
FLWY	**Flagg Ranch** 3.8nm,1.1s,mb4.2	**72.24**	**2**	*e*P		**P**	**11 49 14.2**	**-0.2**
MAW	**Mawson** 2.4nm,0.8s,mb4.4,baz=212,slow=6.3,SNR=5.9	**84.16**	**178**	P		**P**	**11 50 21.1**	**+0.8**
MAW	comp=Z,237nm,18.9s,MS4.6,baz=16,slow=33			LR	LR		12 24 30.3	
ILAR	**Eielson Array** 0.2nm,0.8s,mb3.6,baz=180,slow=2.7,SNR=3.9	**96.63**	**346**	P		**P**	**11 51 17.7**	**-1.1**
SONM	**Songino Array** 2.3nm,0.7s,baz=107,slow=2.1,SNR=16	**144.01**	**313**	PKP	PKPdf		11 57 22.4	-2.4
CMAR	**Chiang Mai Arr** 1.1nm,0.7s,baz=150,slow=1.3,SNR=8.9	**149.16**	**258**	PKPbc	PKPbc		11 57 38.1	-0.4
BRTR	**Keskin Array B** 2.7nm,0.9s,baz=224,slow=4.0,SNR=6.8	**150.32**	**59**	PKPbc	PKPbc		11 57 40.6	-0.2
ZAA0	**Zalesovo Array**	**151.42**	**338**	*e*PKPdf	PKPdf		11 57 36.5	-0.3
ZAA0				*e*PKPbc	PKPbc		11 57 42.1	-0.8
ZAA0				*e*PKPab	PKPab		11 57 50.7	-0.4
ZALV	**Zalesovo Beam** 3.9nm,0.6s,baz=20,slow=2.8,SNR=20	**151.42**	**338**	PKPbc	PKPbc		11 57 42.1	-0.8
ARU	**Arti**	**151.42**	**10**	*e*PKPdf	PKPdf		11 57 37.1	+0.4
ARU				*e*PKPbc	PKPbc		11 57 42.2	-0.6
ARU				*e*PKPab	PKPab		11 57 50.4	-0.6
BVAR	**Borovoye Array** 0.3nm,0.3s,baz=207,slow=1.0,SNR=2.4	**155.35**	**355**	PKP	PKPdf		11 57 42.9	+0.4
BVAR				PKPab	PKPab		11 58 06.9	-0.9
KURK	**Kurchatov** 0.6nm,0.5s,baz=316,slow=4.0,SNR=4.0	**156.12**	**342**	PKP	PKPdf		11 57 44.4	+0.8
KURK				PKPab	PKPab		11 58 09.9	-1.2
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=19,slow=3.5,SNR=3.7	**158.16**	**331**	PKP	PKPdf		11 57 47.2	+0.9
	0.3nm,0.2s,baz=114,slow=1.7,SNR=2.6							

GUC 19 11:44:33.1±0.5,22.18S×68.76W,h120km±7km,MD3.7, ML3.7,3C-1D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.68**	**263**	⇑*i* P		Pn	11 44 59.1	+6.9
PB04				*i* S		Sn	11 45 18.7	+12
PB04	comp=E,934nm,0.2s			AML	AML		11 45 22.1	
MACH	**Maria Elena**	**0.92**	**269**	⇑*i* P		Pn	11 44 55.2	+0.9
MACH				*i* S		Sn	11 45 12.0	+1.6
PB01	**Plate Boundary**	**1.32**	**329**	*e*P		Pn	11 44 59.6	+1.1
PB01				*e*S		Sn	11 45 18.8	+1.1
PB01	comp=E,944nm,0.4s			AML	AML		11 45 20.8	
CEN1	**Los Morros**	**1.79**	**228**	*e*P		Pn	11 45 07.4	+3.5
CEN1				*i* S		Sn	11 45 33.6	+6.1
MECH	**Mejillones**	**1.81**	**239**	*e*P		Pn	11 45 05.0	+0.9
MECH				*i* S		Sn	11 45 28.9	+1.1
MECH	comp=E,617nm,0.3s			AML	AML		11 45 41.0	
ANCH	**Antofagasta**	**2.13**	**225**	⇓*i* P		Pn	11 45 05.7	-2.5
ANCH				*i* S		Sn	11 45 32.9	-2.1
HMBC	**Humberston**	**2.17**	**331**	⇑*i* P		Pn	11 45 09.5	+0.8
HMBC				*i* S		Sn	11 45 37.6	+1.7
HMBC	comp=N,611nm,0.7s			AML	AML		11 45 42.8	
PSGC	**Pisagua**	**2.87**	**333**	*e*P		Pn	11 45 17.9	+0.1
PSGC				*i* S		Sn	11 45 52.9	+0.8
PSGC	comp=N,283nm,0.6s			AML	AML		11 46 03.4	

MAN 19 11:47:22,15.40N×122.29E,h28km,mb4.7,ML3.6,MS3.6, 1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.75**	**207**	*e*P		Pb	11 47 36.3	-0.1
POLP				*e*S		Sb	11 47 48.5	+2.2
BALP	**Baler**	**0.77**	**297**	*e*P		Pb	11 47 37.4	+0.6
BALP				*e*S		Sb	11 47 47.8	+1.0
GQP	**Guinayangan**	**1.49**	**174**	⇓*e*P		Pn	11 47 46.6	-0.4
GQP				*i* S		Sn	11 48 06.5	+1.0
CAUP	**Cauayan**	**1.60**	**344**	*e*P		Pn	11 47 48.6	+0.1
BOAC	**Boac**	**1.98**	**193**	*e*P		Sb	11 48 25.2	+3.8
PVCP	**Virac**	**2.54**	**135**	*e*P		Pn	11 48 02.0	+0.6

IDC 19 11:49:20.0±2.9,26.56S×112.38W,h0km,mb3.6/2, mb1 4.1/2,mb1mx3.8/12,mbtmp3.6/2,MS3.3/1,Ms1 3.3/1, ms1mx3.2/8,Error ellipse: s-maj=207.1km s-min=50.6km az=108.0,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**2.78**	**102**	LR		LR	11 50 50.0	
TXAR	comp=Z,591nm,21.9s,baz=59,slow=32 **Lajitas Array** 0.4nm,0.9s,baz=187,slow=7.2,SNR=3.7	**56.20**	**9**	P		P	11 59 01.1	-0.7
NVAR	**Mina Array Bea** 0.7nm,0.6s,baz=186,slow=8.2,SNR=6.3	**64.89**	**355**	P		P	12 00 01.9	+1.0
ZALV	**Zalesovo Beam** 1.3nm,0.5s,baz=38,slow=3.3,SNR=5.8	**149.82**	**340**	PKPbc	PKPbc		12 09 11.2	-0.4
CMAR	**Chiang Mai Arr** 0.7nm,0.8s,baz=127,slow=0.9,SNR=5.7	**150.02**	**261**	PKPbc	PKPbc		12 09 12.7	-0.4
BVAR	**Borovoye Array** 0.5nm,0.5s,baz=4.8,slow=1.7,SNR=3.1	**153.49**	**356**	PKPbc	PKPbc		12 09 21.4	+1.4
BVAR	1.0nm,0.5s,baz=29,slow=3.4,SNR=4.7			PKPab	PKPab		12 09 32.4	+0.1
KURK	**Kurchatov** 0.7nm,0.8s,baz=20,slow=2.9,SNR=5.5	**154.45**	**344**	PKPbc	PKPbc		12 09 21.7	-0.5
KURK	0.9nm,0.8s,baz=21,slow=4.1,SNR=3.7			PKPab	PKPab		12 09 35.6	-0.8

WEL 19 11:58:47.5±0.7,37.09S×176.56E,h312km±7km,ML3.6/8, Error ellipse: s-maj=14.3km s-min=13.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.25**	**160**	PN		Pn	11 59 30.0	-0.2
URZ				SN		S	12 00 04.3	0.0
MWZ	**Matawai**	**1.46**	**149**	PN		Pn	11 59 31.4	0.0
MWZ				SN		S	12 00 06.4	-0.1
CNGZ	**Carnagh Statio**	**1.91**	**137**	PN		Pn	11 59 34.8	+0.3
CNGZ				SN		S	12 00 09.6	-2.4
NMHZ	**Naumai**	**2.02**	**175**	PN		Pn	11 59 36.1	+0.9
NMHZ				SN		S	12 00 12.4	-1.0
BKZ	**Black Stump Fm**	**2.08**	**181**	PN		Pn	11 59 35.7	0.0
BKZ				SN		S	12 00 13.4	-0.9
KNZ	**Kokohu**	**2.12**	**156**	PN		Pn	11 59 36.0	-0.1
MCHZ	**McNeill Hill**	**2.35**	**177**	PN		Pn	11 59 38.4	+0.4
BHHZ	**Black Hill Sta**	**2.43**	**189**	PN		Pn	11 59 38.7	+0.1
MRZ	**Mangatainoka R**	**3.65**	**192**	PN		Pn	11 59 49.3	-1.2
OGWZ	**Otaki Gorge**	**3.88**	**196**	PN		Pn	11 59 51.6	-1.2
KIW	**Kapiti Island**	**3.98**	**198**	PN		Pn	11 59 53.0	-0.9
SNZO	**South Karori**	**4.46**	**198**	PN		Pn	11 59 58.0	-1.1
TCW	**Tory Channel**	**4.49**	**203**	SN		S	12 00 53.8	-3.5
TUWZ	**Tuamarina**	**4.79**	**204**	PN		Pn	12 00 01.8	-1.1
NNZ	**Nelson**	**4.81**	**210**	PN		Pn	12 00 01.3	-1.7
KHZ	**Kahutara**	**5.81**	**203**	PN		Pn	12 00 13.8	-0.8

IDC 19 12:05:03.5±3.4,7.04S×150.79E,h0km,mb3.6/3, mb1 3.9/3,mb1mx3.6/15,mbtmp3.7/3,Error ellipse: s-maj=114.1km s-min=45.4km az=123.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.7nm,0.5s,baz=55,slow=11,SNR=9.3	**20.47**	**230**	P		P	12 09 42.8	-0.1
ASAR	**Alice Springs** 0.5nm,0.4s,baz=56,slow=9.1,SNR=18	**23.15**	**223**	P		P	12 10 11.6	-0.1
FITZ	**Fitzroy Crossi** 3.7nm,1.1s,baz=55,slow=8.9,SNR=6.7	**26.85**	**243**	P		P	12 10 45.7	-0.3
TORD	**Torodi Ar. Bea** 0.2nm,0.4s,baz=42,slow=2.3,SNR=3.1	**148.99**	**284**	PKPbc	PKPbc		12 24 54.5	-0.1

*CSEM **19** 12:19:43.2,14.03N×43.20E,h20km,ML4.1,After DHMR*
DHMR 19 12:19:43.2±2.0,14.03N×43.20E,h21km±9km,ML4.1,1C, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
UDYN	**Al 'Udayn**	**0.75**	**95**	⇑*i* P		Pb	12 19 58.6	+1.0
UDYN				*i* S		Sb	12 20 08.3	+0.8
TRBA	**At Turbah**	**1.20**	**131**	*i* P		Pn	12 20 04.9	+0.2
TRBA				*i* S		Sb	12 20 20.2	+0.1
TRBA	comp=E,9μm,0.3s			AML	AML		12 20 21.5	
DHBB	**Dhamar BB**	**1.28**	**65**	*i* P		Pn	12 20 06.3	+0.5
DHBB				*i* S		Sn	12 20 24.4	+2.0
DHBB	**Dhamar BB**	**1.28**	**65**	*i* P		Pn	12 20 06.3	+0.4
DHBB				*i* S		Sn	12 20 24.4	+2.0
SANA	**San'a**	**1.67**	**36**	*i* P		Pn	12 20 12.1	+0.9
SANA				*i* S		Sn	12 20 35.7	+3.7
SANA	comp=E,4μm,0.6s			AML	AML		12 20 40.8	
HAJJ	**Hajjah**	**1.71**	**13**	*i* P		Pn	12 20 12.2	+0.4
HAJJ				*i* S		Sn	12 20 36.2	+3.2
HAJJ	comp=Z,2μm,0.5s			AML	AML		12 20 46.7	
HAJJ	**Hajjah**	**1.71**	**13**	*i* P		Pn	12 20 12.2	+0.4
HAJJ				*i* S		Sn	12 20 36.2	+3.2
	comp=Z,1μm,0.5s							
LBOS		**2.00**	**94**	*i* P		Pn	12 20 17.8	+2.0
LBOS				*i* S		Sn	12 20 44.9	+4.7
ADEN	**Aden**	**2.14**	**125**	*i* P		Pn	12 20 20.3	+2.6
ADEN				*i* S		Sn	12 20 48.9	+5.3
ADEN	comp=E,908nm,0.9s			AML	AML		12 20 54.1	
ADEN	**Aden**	**2.14**	**125**	*i* P		Pn	12 20 20.3	+2.6
ADEN				*i* S		Sn	12 20 48.9	+5.2
	comp=E,454nm,0.9s							
BDHA	**Al Bayda'**	**2.30**	**91**	*i* P		Pn	12 20 23.6	+3.6
BDHA				*i* S		Sn	12 20 53.4	+5.7
BDHA	comp=N,1μm,0.5s			AML	AML		12 20 59.7	
BDHA	**Al Bayda'**	**2.30**	**91**	*i* P		Pn	12 20 23.6	+3.6
BDHA				*i* S		Sn	12 20 53.4	+5.7
	comp=N,744nm,0.5s							

IDC 19 12:27:57.3±2.0,5.11S×147.95E,h0km,mb3.6/3, mb1 4.0/4,mb1mx3.6/15,mbtmp3.7/4,Error ellipse: s-maj=131.2km s-min=26.6km az=126.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=48,slow=12,SNR=46	**19.82**	**221**	P		Pn	12 32 30.0	-1.2
ASAR	**Alice Springs** 0.9nm,0.7s,baz=50,slow=8.5,SNR=25	**22.89**	**215**	P		P	12 33 03.0	+0.3
FITZ	**Fitzroy Crossi** 2.2nm,0.5s,baz=48,slow=8.3,SNR=7.9	**25.34**	**238**	P		P	12 33 25.7	-0.5
ILAR	**Eielson Array** 0.4nm,1.0s,baz=243,slow=6.0,SNR=3.9	**84.29**	**23**	P		P	12 40 30.9	+0.2

*ISCJB **19** 12:49:00.8±0.8,24.74N±0.05×122.41E±0.03, h115km±6km,Error ellipse: s-maj=8.1km s-min=3.8km az=168.4*
*TAP **19** 12:49:00.8,24.74N×122.44E,h115km±1km,ML3.1,D*
*JMA **19** 12:49:00.0±0.2,24.90N×122.44E,h123km,M2.0*
ISC 19 12:49:01.1±0.8,24.76N±0.05×122.41E±0.03,h115km±6km, n29,σ0947/57,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=303	**0.46**	**303**	*i* P		**Pn**	**12 49 18.2**	**0.0**
TWB1	baz=303			*i* S		**Sn**	**12 49 31.0**	**-0.1**
TWC	**Suao** baz=255	**0.53**	**254**	*i* P		**Pn**	**12 49 18.4**	**-0.3**
TWC	baz=255			*i* S		**Sn**	**12 49 31.8**	**-0.2**
ILA	**Ilan** baz=271	**0.60**	**271**	P		**Pn**	**12 49 19.2**	**+0.1**
ILA	baz=271			S		**Sn**	**12 49 32.8**	**0.0**
YOJ	**Yonaguni jima**	**0.62**	**118**	P		**Pn**	**12 49 19.5**	**+0.1**
YOJ				*e*S		**Sn**	**12 49 34.5**	**+1.4**
NWF	**Wu-fen Shan** baz=298	**0.65**	**299**	P		**Pn**	**12 49 19.3**	**-0.2**
NWF	baz=298			S		**Sn**	**12 49 33.5**	**0.0**
TWE	**Neicheng** baz=267	**0.68**	**267**	P

TWQ1	**Liyutan**	**1.54**	**255**	*e*P	**Pn**	**12 49 28.6**	**-0.2**
	baz=255						
TWQ1				*e*S	**Sn**	**12 49 50.0**	**+0.2**
	baz=255						
JKRS	**Kuro-shima**	**1.55**	**109**	P	**Pn**	**12 49 29.0**	**+0.2**
JKRS				*e*S	**Sn**	**12 49 50.6**	**+0.8**
EHY	**Hungye**	**1.59**	**219**	*e*P	**Pn**	**12 49 29.8**	**+0.5**
	baz=219						
EHY				*e*S	**Sn**	**12 49 50.9**	**+0.1**
	baz=219						
JIJ	**Ishigaki jima**	**1.63**	**104**	P	**Pn**	**12 49 29.4**	**-0.3**
JIJ				*e*S	**Sn**	**12 49 51.0**	**-0.5**
SMLT	**Sun Moon Lake**	**1.63**	**238**	*e*P	**Pn**	**12 49 30.7**	**+0.9**
	baz=238						
TYC	**Yuchr**	**1.65**	**239**	*e*P	**Pn**	**12 49 30.4**	**+0.3**
	baz=239						
TYC				*e*S	**Sn**	**12 49 51.6**	**-0.4**
	baz=239						
TWF1	**Yuli**	**1.73**	**216**	*e*P	**Pn**	**12 49 31.3**	**+0.3**
	baz=216						
TWF1				*e*S	**Sn**	**12 49 53.3**	**-0.5**
	baz=216						
CHKT	**Chengkung**	**1.91**	**210**	*e*P	**Pn**	**12 49 33.1**	**-0.1**
	baz=210						
CHKT				*e*S	**Sn**	**12 49 56.9**	**-0.7**
	baz=210						
ALS	**Alishan**	**1.92**	**230**	*e*P	**Pn**	**12 49 34.1**	**+0.7**
	baz=230						
ALS				*e*S	**Sn**	**12 49 58.1**	**+0.1**
	baz=230						
CHN5	**Tsauling**	**1.96**	**234**	*e*P	**Pn**	**12 49 33.9**	**+0.1**
	baz=234						
CHN5				*e*S	**Sn**	**12 49 58.7**	**-0.1**
	baz=234						
JTJ	**Tarama**	**2.09**	**93**	P	**Pn**	**12 49 35.0**	**-0.5**
JTJ				*e*S	**Sn**	**12 50 00.6**	**-1.1**
CHN4	**Tsaushan**	**2.17**	**230**	*e*P	**Pn**	**12 49 36.6**	**+0.1**
	baz=230						
CHN4				*e*S	**Sn**	**12 50 03.8**	**+0.2**
	baz=230						
WTP	**Ta-pu**	**2.23**	**228**	*e*P	**Pn**	**12 49 37.2**	**0.0**
	baz=227						
WTP				*e*S	**Sn**	**12 50 04.3**	**-0.5**
	baz=227						
CHN1	**Nanshi**	**2.33**	**228**	*e*P	**Pn**	**12 49 38.5**	**0.0**
	baz=228						
CHN1				*e*S	**Sn**	**12 50 07.8**	**+0.6**
	baz=228						

DDA ***19*** *12:57:13.2, 36˚.98N×29˚.18E, h7km±5km, Md3.1*
ISCJB ***19*** *12:57:13.9±0.5, 37˚.00N±0˚.02×29˚.17E±0˚.03, h6km±4km, Error ellipse: s-maj=4.0km s-min=3.8km az=169.6*
ISK ***19*** *12:57:14.0, 37˚.05N×29˚.19E, h7km, MD3.0*
CSEM ***19*** *12:57:14.1±0.2, 37˚.02N×29˚.18E, h5km, MD3.0, Error ellipse: s-maj=4.4km s-min=3.7km az=166.0*
NEIC ***19*** *12:57:14.0, 37˚.06N×29˚.20E, h7km, MD3.5(ATH), MD3.1(ISK), After ISK.*
ATH ***19*** *12:57:15.9, 36˚.91N×29˚.16E, h27km±2km, MD3.5/6*
ISC 19 12:57:14.6±0.5, 37˚.01N±0˚.02×29˚.17E±0˚.03, h9km±4km, n62, σ1s05/84, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**61**	*e*PG	**Pg**	**12 57 19.7**	**-0.8**
GLHS				*e*SG	**Sg**	**12 57 24.4**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.30**	**61**	*e*Pg	**Pg**	**12 57 19.7**	**-0.8**
GLHS				*e*Sg	**Sg**	**12 57 24.4**	**-0.1**
GOLH	**Golhisar**	**0.38**	**54**	*i* P	**Pg**	**12 57 20.4**	**-1.7**
GOLH				*i* S	**Sg**	**12 57 27.4**	**+0.3**
GOLH	**Golhisar**	**0.38**	**54**	*i* P	**Pg**	**12 57 20.4**	**-1.7**
GOLH				*i* S	**Sg**	**12 57 27.5**	**+0.3**
TURN	**Turunc**	**0.48**	**253**	*i* P	**Pg**	**12 57 27.5**	**+3.7**
TURN				*i* S	**Sg**	**12 57 39.4**	**+9.2**
TURN	**Turunc**	**0.48**	**253**	*i* P	**Pg**	**12 57 27.5**	**+3.6**
ELL	**Elmali**	**0.65**	**114**	*e*PG	**Pg**	**12 57 26.2**	**-0.9**
ELL				*e*SG	**Sg**	**12 57 36.8**	**+1.3**
ELL	**Elmali**	**0.65**	**114**	*e*Pg	**Pg**	**12 57 26.2**	**-0.9**
ELL				*e*Sg	**Sg**	**12 57 36.8**	**+1.3**
DNZL	**Cakiroluk**	**0.68**	**352**	*i* P	**Pg**	**12 57 26.6**	**-1.2**
DNZL				*i* S	**Sg**	**12 57 37.6**	**+0.9**
DNZL	**Cakiroluk**	**0.68**	**352**	*i* P	**Pg**	**12 57 26.6**	**-1.2**
YER	**Yerkesik**	**0.72**	**280**	*e*PG	**Pg**	**12 57 28.6**	**+0.1**
YER				*e*SG	**Sg**	**12 57 39.5**	**+1.6**
YER	**Yerkesik**	**0.72**	**280**	*e*Pg	**Pg**	**12 57 28.6**	**+0.1**
YER				*e*Sg	**Sg**	**12 57 39.5**	**+1.6**
DENT	**Denizli**	**0.75**	**351**	*e*PG	**Pg**	**12 57 27.9**	**-1.2**
DENT				*e*SG	**Sg**	**12 57 38.8**	**0.0**
DENT	**Denizli**	**0.75**	**351**	*e*Pg	**Pg**	**12 57 27.9**	**-1.1**
DENT				*e*Sg	**Sg**	**12 57 38.8**	**0.0**
AKAS	**Kas**	**0.85**	**156**	*i* P	**Pg**	**12 57 29.1**	**-1.9**
AKAS				*i* S	**Sg**	**12 57 44.6**	**+2.5**
AKAS	**Kas**	**0.85**	**156**	*i* P	**Pg**	**12 57 29.1**	**-1.9**
AKAS				*i* S	**Sg**	**12 57 44.6**	**+2.6**
KSL	**Kastellorizon**	**0.92**	**159**	*e*Pn	**Pn**	**12 57 32.2**	**-1.5**
KSL	**Kastellorizon**	**0.92**	**159**	*e*PN	**Pn**	**12 57 32.2**	**-1.5**
KORT	**Korkueli**	**0.94**	**90**	*i* P	**Pg**	**12 57 32.8**	**+0.1**
KORT				*i* S	**Sg**	**12 57 50.6**	**+5.7**
KORT	**Korkueli**	**0.94**	**90**	*i* P	**Pg**	**12 57 32.8**	**+0.1**
MLSB	**Milas**	**1.15**	**285**	*e*PN	**Pn**	**12 57 36.3**	**-0.6**
MLSB	**Milas**	**1.15**	**285**	*e*Pn	**Pn**	**12 57 36.3**	**-0.6**
ARG	**Arkhangelos**	**1.16**	**227**	*e*Pn	**Pn**	**12 57 36.7**	**-0.3**
ARG				*e*Sn	**Sn**	**12 57 52.0**	**-0.9**
ARG	**Arkhangelos**	**1.16**	**227**	*e*PN	**Pn**	**12 57 36.7**	**-0.3**
ARG				*e*SN	**Sn**	**12 57 52.0**	**-0.9**
ARG	**Arkhangelos**	**1.16**	**227**	*e*Pn	**Pn**	**12 57 36.7**	**-0.3**
ANTB	**Antalya**	**1.19**	**95**	*e*PN	**Pn**	**12 57 37.1**	**-0.3**
ANTB	**Antalya**	**1.19**	**95**	*e*Pn	**Pn**	**12 57 37.1**	**-0.3**
BCK	**Bucak**	**1.22**	**68**	*e*PN	**Pn**	**12 57 36.8**	**-1.0**
BCK	**Bucak**	**1.22**	**68**	*e*Pn	**Pn**	**12 57 36.8**	**-1.0**
DAT	**Datca**	**1.31**	**258**	*e*PN	**Pn**	**12 57 39.0**	**-0.1**
DAT	**Datca**	**1.31**	**258**	*e*Pn	**Pn**	**12 57 39.0**	**-0.1**
KHL	**Karahalli**	**1.34**	**12**	*e*PN	**Pn**	**12 57 38.5**	**-1.0**
KHL	**Karahalli**	**1.34**	**12**	*e*Pn	**Pn**	**12 57 38.5**	**-1.0**
ISP	**Isparta**	**1.34**	**53**	*e*PN	**Pn**	**12 57 39.8**	**+0.2**
ISP	**Isparta**	**1.34**	**53**	*e*Pn	**Pn**	**12 57 40.7**	**+1.2**
ISP	**Isparta**	**1.34**	**53**	*e*Pn	**Pn**	**12 57 39.8**	**+0.2**
KHAL	**Karahalli**	**1.38**	**10**	*i* P	**Pn**	**12 57 40.0**	**0.0**
KHAL				*i* S	**Sb**	**12 57 59.5**	**+1.2**
KHAL	**Karahalli**	**1.38**	**10**	*i* P	**Pn**	**12 57 40.0**	**0.0**
KHAL				*i* S	**Sb**	**12 57 59.5**	**+1.2**
BODT	**Bodrum**	**1.49**	**272**	*e*PN	**Pn**	**12 57 42.2**	**+0.7**
BODT	**Bodrum**	**1.49**	**272**	*e*Pn	**Pn**	**12 57 42.2**	**+0.6**
KULA	**Kula-Manisa**	**1.55**	**345**	*e*PN	**Pn**	**12 57 42.2**	**-0.2**
KULA	**Kula-Manisa**	**1.55**	**345**	*e*Pn	**Pn**	**12 57 42.2**	**-0.2**
KARP	**Karpathos**	**2.19**	**229**	*e*Pb	**Pb**	**12 57 51.9**	**-2.4**
KARP				*e*Sn	**Sn**	**12 58 17.8**	**-0.5**
KARP	**Karpathos**	**2.19**	**229**	*e*PB	**Pb**	**12 57 51.9**	**-2.4**
KARP				*e*SN	**Sn**	**12 58 17.8**	**-0.5**
KARP	**Karpathos**	**2.19**	**229**	*e*Pb	**Pb**	**12 57 51.9**	**-2.4**
KARP				*e*Sn	**Sn**	**12 58 17.8**	**-0.5**
HDMB	**Hadim**	**2.65**	**90**	*e*PN	**Pn**	**12 57 58.2**	**+0.6**
HDMB	**Hadim**	**2.65**	**90**	*e*Pn	**Pn**	**12 57 58.2**	**+0.7**
KONT	**Konya--Tatoy**	**2.70**	**69**	*e*PN	**Pn**	**12 57 59.2**	**+1.0**
KONT	**Konya--Tatoy**	**2.70**	**69**	*e*Pn	**Pn**	**12 57 59.3**	**+1.1**
KIZT	**Kizilcal**	**2.84**	**48**	*e*PN	**Pn**	**12 58 00.5**	**+0.4**
KIZT	**Kizilcal**	**2.84**	**48**	*e*Pn	**Pn**	**12 58 00.5**	**+0.4**
ZKR	**Zakros**	**3.05**	**233**	*e*Pn	**Pn**	**12 58 03.7**	**+0.6**
ZKR	**Zakros**	**3.05**	**233**	*e*PN	**Pn**	**12 58 03.7**	**+0.6**
ZKR	**Zakros**	**3.05**	**233**	*e*Pn	**Pn**	**12 58 03.7**	**+0.6**
NPS	**Neapolis**	**3.37**	**240**	*e*Pn	**Pn**	**12 58 08.1**	**+0.7**
NPS	**Neapolis**	**3.37**	**240**	*e*PN	**Pn**	**12 58 08.1**	**+0.7**
NPS	**Neapolis**	**3.37**	**240**	*e*Pn	**Pn**	**12 58 08.1**	**+0.7**
XRY	**Khrisi**	**3.54**	**234**	*e*Pn	**Pn**	**12 58 11.1**	**+1.4**
XRY	**Khrisi**	**3.54**	**234**	*e*PN	**Pn**	**12 58 11.1**	**+1.4**
XRY	**Khrisi**	**3.54**	**234**	*e*Pn	**Pn**	**12 58 11.1**	**+1.4**
IKL	**Isikli**	**3.71**	**101**	*e*PN	**Pn**	**12 58 13.6**	**+1.5**
IKL	**Isikli**	**3.71**	**101**	*e*Pn	**Pn**	**12 58 13.6**	**+1.5**

IDC ***19*** *13:05:47.7±1.4, 35˚.39N×23˚.20E, h0km, mb3.8/7, mb1 3.8/8, mb1mx3.6/25, mbtmp3.8/8, ML4.2/1, Error ellipse: s-maj=37.8km s-min=26.4km az=132.0*
ATH ***19*** *13:05:55.0, 35˚.31N×23˚.24E, h65km±2km, ML3.3*
NEIC ***19*** *13:05:55.0, 35˚.31N×23˚.24E, h65km, MG3.3(ATH), After ATH.*
ISCJB ***19*** *13:05:55.2±0.6, 35˚.31N±0˚.04×23˚.26E±0˚.05, h77km±4km, mb3.6/7, Error ellipse: s-maj=8.9km s-min=4.6km az=43.1*
THE ***19*** *13:05:56.5, 35˚.32N×23˚.32E, h71km±6km, ML2.7/1, Error ellipse: s-maj=6.9km s-min=2.2km az=123.0*

CSEM ***19*** *13:05:56.1±0.2, 35˚.30N×23˚.26E, h71km±1km, ML2.7/1, Error ellipse: s-maj=6.2km s-min=3.0km az=38.0*
ISC 19 13:05:56.3±0.6, 35˚.31N±0˚.04×23˚.27E±0˚.05, h70km±5km, n110, σ0s60/139, mb3.6/7, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARN	**Karanos**	**0.54**	**80**	*e*P	**Pn**	**13 06 08.6**	**-0.8**
KARN				*e*S	**Sn**	**13 06 18.4**	**-0.7**
KARN	**Karanos**	**0.54**	**80**	P	**Pn**	**13 06 08.4**	**-1.1**
KARN				S	**Sn**	**13 06 19.6**	**+0.5**
KARN	**Karanos**	**0.54**	**80**	*e*P	**Pn**	**13 06 08.6**	**-0.8**
KARN				S	**Sn**	**13 06 19.6**	**+0.5**
VAM	**Vamos**	**0.77**	**82**	*e*P	**Pn**	**13 06 12.0**	**+0.1**
VAM				*e*S	**Sn**	**13 06 23.3**	**-0.2**
VAM	**Vamos**	**0.77**	**82**	*e*P	**Pn**	**13 06 12.0**	**+0.1**
VAM				*e*S	**Sn**	**13 06 23.3**	**-0.2**
VAM	**Vamos**	**0.77**	**82**	*e*P	**Pn**	**13 06 12.0**	**+0.1**
VAM				*e*S	**Sn**	**13 06 23.3**	**-0.2**
GVD	**Gavdhos**	**0.82**	**125**	*e*P	**Pn**	**13 06 11.3**	**-1.3**
GVD				*e*S	**Sn**	**13 06 24.5**	**-0.1**
GVD	**Gavdhos**	**0.82**	**125**	*e*P	**Pn**	**13 06 11.3**	**-1.3**
GVD				*e*S	**Sn**	**13 06 24.5**	**-0.1**
GVD	**Gavdhos**	**0.82**	**125**	P	**Pn**	**13 06 11.4**	**-1.2**
GVD	**Gavdhos**	**0.82**	**125**	P	**Pn**	**13 06 11.4**	**-1.2**
GVD				*e*S	**Sn**	**13 06 24.5**	**-0.1**
KYTH	**Kithira**	**0.99**	**349**	*e*P	**Pn**	**13 06 13.7**	**-0.9**
KYTH	**Kithira**	**0.99**	**349**	*e*P	**Pn**	**13 06 13.7**	**-0.9**
KYTH	**Kithira**	**0.99**	**349**	*e*P	**Pn**	**13 06 13.7**	**-0.9**
SIVA	**Sivas**	**1.30**	**102**	*e*P	**Pn**	**13 06 18.8**	**+0.2**
SIVA				*e*S	**Sn**	**13 06 34.8**	**-0.5**
SIVA	**Sivas**	**1.30**	**102**	*e*P	**Pn**	**13 06 18.8**	**+0.2**
SIVA				*e*S	**Sn**	**13 06 34.8**	**-0.5**
SIVA	**Sivas**	**1.30**	**102**	P	**Pn**	**13 06 18.8**	**+0.2**
SIVA				S	**Sn**	**13 06 33.9**	**-1.4**
SIVA	**Sivas**	**1.30**	**102**	P	**Pn**	**13 06 18.8**	**+0.2**
SIVA				*e*S	**Sn**	**13 06 34.8**	**-0.5**
VLI	**Veliai**	**1.43**	**349**	*e*P	**Pn**	**13 06 19.9**	**-0.4**
VLI				*e*S	**Sn**	**13 06 38.9**	**+0.5**
VLI	**Veliai**	**1.43**	**349**	*e*P	**Pn**	**13 06 19.9**	**-0.4**
VLI				*e*S	**Sn**	**13 06 38.9**	**+0.5**
VLI	**Veliai**	**1.43**	**349**	*e*P	**Pn**	**13 06 19.9**	**-0.4**
VLI				*e*S	**Sn**	**13 06 38.9**	**+0.5**
NPS	**Neapolis**	**1.92**	**91**	*e*P	**Pn**	**13 06 27.3**	**+0.5**
NPS				*e*S	**Sn**	**13 06 50.4**	**+0.3**
NPS	**Neapolis**	**1.92**	**91**	*e*P	**Pn**	**13 06 27.3**	**+0.5**
NPS				*e*S	**Sn**	**13 06 50.4**	**+0.3**
NPS	**Neapolis**	**1.92**	**91**	*e*P	**Pn**	**13 06 27.3**	**+0.5**
NPS				*e*S	**Sn**	**13 06 50.4**	**+0.3**
PYL	**PYLOS**	**2.01**	**323**	*e*P	**Pn**	**13 06 27.4**	**-0.6**
PYL	**PYLOS**	**2.01**	**323**	*e*P	**Pn**	**13 06 27.4**	**-0.6**
THR5	**Thira Island,**	**2.02**	**56**	P	**Pn**	**13 06 28.1**	**-0.1**
THR5	**Thira Island,**	**2.02**	**56**	P	**Pn**	**13 06 28.1**	**-0.1**
THR6	**Thira Island,**	**2.02**	**58**	P	**Pn**	**13 06 28.1**	**-0.1**
THR6	**Thira Island,**	**2.02**	**58**	P	**Pn**	**13 06 28.1**	**-0.1**
THR1	**Thera Island**	**2.07**	**59**	P	**Pn**	**13 06 29.0**	**+0.1**
THR1	**Thera Island**	**2.07**	**59**	P	**Pn**	**13 06 29.0**	**+0.1**
ITM	**Ithomi**	**2.16**	**330**	*e*P	**Pn**	**13 06 30.0**	**0.0**
ITM	**Ithomi**	**2.16**	**330**	*e*P	**Pn**	**13 06 30.0**	**0.0**
ITM	**Ithomi**	**2.16**	**330**	*e*P	**Pn**	**13 06 30.0**	**0.0**
VLX	**Vlachokerasia**	**2.18**	**341**	*e*P	**Pn**	**13 06 30.5**	**+0.2**
VLX	**Vlachokerasia**	**2.18**	**341**	P	**Pn**	**13 06 35.0**	**+4.7**
VLX	**Vlachokerasia**	**2.18**	**341**	*e*P	**Pn**	**13 06 30.5**	**+0.2**
DID	**Didima**	**2.19**	**359**	*e*P	**Pn**	**13 06 31.3**	**+0.8**
DID	**Didima**	**2.19**	**359**	P	**Pn**	**13 06 32.1**	**+1.6**
DID				S	**Sn**	**13 06 55.9**	**-0.7**
DID	**Didima**	**2.19**	**359**	*e*P	**Pn**	**13 06 31.3**	**+0.8**
DID				S	**Sn**	**13 06 55.9**	**-0.7**
ZKR	**Zakros**	**2.42**	**94**	*e*P	**Pn**	**13 06 35.0**	**+1.4**
ZKR	**Zakros**	**2.42**	**94**	*e*P	**Pn**	**13 06 35.0**	**+1.4**
ZKR	**Zakros**	**2.42**	**94**	*e*P	**Pn**	**13 06 35.0**	**+1.4**
NAIG	**Nisos Aigina**	**2.45**	**4**	*e*P	**Pn**	**13 06 34.4**	**+0.4**
NAIG	**Nisos Aigina**	**2.45**	**4**	*e*P	**Pn**	**13 06 34.4**	**+0.4**
NAIG	**Nisos Aigina**	**2.45**	**4**	*e*P	**Pn**	**13 06 34.4**	**+0.4**
APE	**Apeiranthos**	**2.54**	**46**	*e*P	**Pn**	**13 06 35.2**	**0.0**
APE				*e*S	**Sn**	**13 07 05.7**	**+0.7**
APE	**Apeiranthos**	**2.54**	**46**	*e*P	**Pn**	**13 06 35.2**	**0.0**
APE				*e*S	**Sn**	**13 07 05.7**	**+0.7**
APE	**Apeiranthos**	**2.54**	**46**	P	**Pn**	**13 06 34.9**	**-0.3**
APE				S	**Sn**	**13 07 04.5**	**-0.5**
APE	**Apeiranthos**	**2.54**	**46**	*e*P	**Pn**	**13 06 35.2**	**0.0**
APE				S	**Sn**	**13 07 04.5**	**-0.5**
VLY	**Voula,Athens**	**2.57**	**9**	*e*P	**Pn**	**13 06 35.6**	**-0.1**
VLY	**Voula,Athens**	**2.57**	**9**	*e*P	**Pn**	**13 06 35.6**	**-0.1**
VLY	**Voula,Athens**	**2.57**	**9**	*e*P	**Pn**	**13 06 35.6**	**-0.1**
ATH	**Athens Observa**	**2.68**	**8**	*e*P	**Pn**	**13 06 37.4**	**+0.3**
ATH	**Athens Observa**	**2.68**	**8**	*e*P	**Pn**	**13 06 37.4**	**+0.3**
ATH	**Athens Observa**	**2.68**	**8**	*e*P	**Pn**	**13 06 37.4**	**+0.3**
LTK	**Loutraki**	**2.72**	**355**	*e*P	**Pn**	**13 06 37.6**	**0.0**
LTK	**Loutraki**	**2.72**	**355**	*e*P	**Pn**	**13 06 37.6**	**0.0**
GUR	**Goura**	**2.73**	**344**	*e*P	**Pn**	**13 06 38.3**	**+0.6**
GUR	**Goura**	**2.73**	**344**	P	**Pn**	**13 06 38.2**	**+0.5**
GUR	**Goura**	**2.73**	**344**	P	**Pn**	**13 06 38.2**	**+0.5**
PTL	**Penteli**	**2.78**	**10**	*e*P	**Pn**	**13 06 37.8**	**-0.6**
PTL				*e*S	**Sn**	**13 07 09.8**	**-1.0**
PTL	**Penteli**	**2.78**	**10**	*e*P	**Pn**	**13 06 37.8**	**-0.6**
PTL				*e*S	**Sn**	**13 07 09.8**	**-1.0**
PTL	**Penteli**	**2.78**	**10**	*e*P	**Pn**	**13 06 37.8**	**-0.6**
PTL				*e*S	**Sn**	**13 07 09.8**	**-1.0**
RLS	**Riolos of Patr**	**3.10**	**333**	*e*P	**Pn**	**13 06 43.5**	**+0.7**
RLS	**Riolos of Patr**	**3.10**	**333**	*e*P	**Pn**	**13 06 43.5**	**+0.7**
RLS	**Riolos of Patr**	**3.10**	**333**	*e*P	**Pn**	**13 06 43.5**	**+0.7**
DSF	**Desfina**	**3.15**	**349**	P	**Pn**	**13 06 43.0**	**-0.5**
DSF	**Desfina**	**3.15**	**349**	P	**Pn**	**13 06 43.0**	**-0.5**
KARP	**Karpathos**	**3.19**	**85**	*e*P	**Pn**	**13 06 44.3**	**+0.3**
KARP	**Karpathos**	**3.19**	**85**	*e*P	**Pn**	**13 06 44.2**	**+0.2**
KARP	**Karpathos**	**3.19**	**85**	*e*P	**Pn**	**13 06 44.3**	**+0.3**
EFP	**Efpalio**	**3.30**	**341**	*e*P	**Pn**	**13 06 46.3**	**+0.8**
EFP	**Efpalio**	**3.30**	**341**	*e*P	**Pn**	**13 06 46.3**	**+0.8**
LKR	**Lokris**	**3.34**	**356**	*e*P	**Pn**	**13 06 46.4**	**+0.3**
LKR	**Lokris**	**3.34**	**356**	*e*P	**Pn**	**13 06 46.4**	**+0.3**
LKR	**Lokris**	**3.34**	**356**	P	**Pn**	**13 06 46.4**	**+0.3**
LKR	**Lokris**	**3.34**	**356**	P	**Pn**	**13 06 46.4**	**+0.3**
VLS	**Valsamata**	**3.58**	**324**	*e*P	**Pn**	**13 06 50.4**	**+1.1**
VLS	**Valsamata**	**3.58**	**324**	*e*P	**Pn**	**13 06 50.4**	**+1.1**
VLS	**Valsamata**	**3.58**	**324**	*e*P	**Pn**	**13 06 50.4**	**+1.1**
AGG	**Agios Georgios**	**3.78**	**349**	*e*P	**Pn**	**13 06 52.0**	**-0.1**
AGG	**Agios Georgios**	**3.78**	**349**	*e*P	**Pn**	**13 06 52.0**	**-0.1**
AGG	**Agios Georgios**	**3.78**	**349**	*e*P	**Pn**	**13 06 52.0**	**-0.1**
NEO	**Neokhori**	**3.99**	**360**	*e*P	**Pn**	**13 06 55.0**	**0.0**
NEO	**Neokhori**	**3.99**	**360**	*e*P	**Pn**	**13 06 55.0**	**0.0**
NEO	**Neokhori**	**3.99**	**360**	*e*P	**Pn**	**13 06 55.0**	**0.0**
ARG	**Arkhangelos**	**4.05**	**76**	*e*P	**Pn**	**13 06 56.0**	**+0.2**
ARG	**Arkhangelos**	**4.05**	**76**	*e*P	**Pn**	**13 06 56.0**	**+0.2**
ARG	**Arkhangelos**	**4.05**	**76**	*e*P	**Pn**	**13 06 56.0**	**+0.2**
THL	**Klokotos Trika**	**4.36**	**347**	*e*P	**Pn**	**13 07 00.4**	**+0.4**
THL	**Klokotos Trika**	**4.36**	**347**	*e*P	**Pn**	**13 07 00.4**	**+0.4**
PRK	**Paraskevi**	**4.60**	**30**	*e*P	**Pn**	**13 07 03.5**	**+0.2**
PRK	**Paraskevi**	**4.60**	**30**	*e*P	**Pn**	**13 07 03.5**	**+0.2**
PRK	**Paraskevi**	**4.60**	**30**	*e*P	**Pn**	**13 07 03.5**	**+0.2**
STON	**Ston**	**8.70**	**332**	*e*Pn	**Pn**	**13 07 50.3**	**-9.0**
STON				Sn	**Sn**	**13 09 21.5**	**-14**
BRTR	**Keskin Array B**	**9.34**	**59**	Pn	**Pn**	**13 08 09.2**	**+1.1**
	baz=230,slow=13,SNR=4.3						
BRTR	**Keskin Array B**	**9.34**	**59**	Pn	**Pn**	**13 08 09.2**	**+1.1**
AKASG	**Malin Array Be**	**15.98**	**14**	Pn	**Pn**	**13 09 31.6**	**-5.0**
	0.9nm,0.3s,baz=190,slow=9.4,SNR=4.1						
HFS	**Hagfors**	**25.61**	**349**	P	**P**	**13 11 17.8**	**-0.9**
	1.1nm,0.4s,mb3.7,baz=156,slow=11,SNR=8.2						
HFS	**Hagfors**	**25.61**	**349**	P	**P**	**13 11 17.8**	**-0.9**
FINES	**FINESS Array B**	**26.22**	**3**	P	**P**	**13 11 23.1**	**-1.2**
	1.1nm,0.4s,mb3.6,baz=169,slow=13,SNR=5.3						
FINES	**FINESS Array B**	**26.22**	**3**	P	**P**	**13 11 23.0**	**-1.2**
TORD	**Torodi Ar. Bea**	**29.43**	**227**	P	**P**	**13 11 53.3**	**0.0**
	0.2nm,0.5s,mb3.0,baz=29,slow=9.3,SNR=2.3						
KURK	**Kurchatov**	**42.29**	**51**	P	**P**	**13 13 42.6**	**-0.2**
	1.0nm,0.4s,mb3.9,baz=275,slow=8.7,SNR=5.8						
KURK	**Kurchatov**	**42.29**	**51**	P	**P**	**13 13 42.6**	**-0.2**
MKAR	**Makanchi Array**	**44.98**	**56**	P	**P**	**13 14 05.1**	**+0.6**
	0.5nm,0.3s,mb3.7,baz=268,slow=8.6,SNR=8.8						
ZALV	**Zalesovo Beam**	**46.02**	**46**	P	**P**	**13 14 12.0**	**-0.5**
	1.2nm,0.3s,mb4.0,baz=267,slow=9.8,SNR=6.2						
SONM	**Songino Array**	**60.59**	**50**	P	**P**	**13 15 59.4**	**-0.1**
	0.4nm,0.8s,mb3.5,baz=263,slow=6.7,SNR=2.9						
SONM	**Songino Array**	**60.59**	**50**	P	**P**	**13 15 59.4**	**0.0**

ISK ***19*** *13:05:59.8, 39˚.88N×32˚.38E, h6km, MD3.1*
ISCJB ***19*** *13:06:00.1±0.6, 39˚.87N±0˚.03×32˚.35E±0˚.03, h3km±6km, Error ellipse: s-maj=5.6km s-min=4.5km az=179.3*

CSEM ***19*** *13:06:00.1±0.2, 39˚.89N×32˚.36E, h2km, MD3.1, Error ellipse: s-maj=4.6km s-min=3.8km az=163.0*
DDA ***19*** *13:06:00.2, 39˚.83N×32˚.38E, h7km±6km, Md3.0*
ISC 19 13:06:00.6±0.6, 39˚.88N±0˚.04×32˚.37E±0˚.04, h4km±6km, n31, σ1s05/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOD	**Lodumlu**	**0.30**	**89**	PG	**Pg**	**13 06 05.5**	**-0.9**
LOD				*e*SG	**Sg**	**13 06 11.5**	**+1.1**
LOD	**Lodumlu**	**0.30**	**89**	*i* Pg	**Pg**	**13 06 05.5**	**-0.9**
LOD				*e*Sg	**Sg**	**13 06 11.5**	**+1.1**
SGKT	**Sivrigoynuk**	**0.73**	**341**	*i* P	**Pg**	**13 06 14.7**	**0.0**
SGKT				*i* S	**Sg**	**13 06 27.2**	**+3.1**
SGKT	**Sivrigoynuk**	**0.73**	**341**	*i* P	**Pg**	**13 06 14.6**	**0.0**
SGKT				*i* S	**Sg**	**13 06 27.2**	**+3.1**
SVRH	**Sivrihisar-ESK**	**0.79**	**237**	*e*PG	**Pg**	**13 06 14.9**	**-0.8**
SVRH	**Sivrihisar-ESK**	**0.79**	**237**	*e*Pg	**Pg**	**13 06 14.9**	**-0.7**
MDU	**Mudurnu**	**1.06**	**304**	*e*PG	**Pg**	**13 06 21.2**	**+0.3**
MDU	**Mudurnu**	**1.06**	**304**	*e*Pg	**Pg**	**13 06 21.2**	**+0.3**
KIZT	**Kizilcal**	**1.07**	**201**	*e*PG	**Pg**	**13 06 20.6**	**-0.5**
KIZT				*e*SG	**Sg**	**13 06 36.1**	**+1.2**
KIZT	**Kizilcal**	**1.07**	**201**	*e*Pg	**Pg**	**13 06 20.6**	**-0.5**
KIZT				*e*Sg	**Sg**	**13 06 36.2**	**+1.2**
ESKT	**Eskisehir**	**1.23**	**253**	*e*P	**Pg**	**13 06 22.4**	**-1.8**
ESKT				*i* S	**Sg**	**13 06 41.5**	**+1.5**
SEYT	**Eskypehyr**	**1.23**	**253**	*e*P	**Pg**	**13 06 22.4**	**-1.7**
SEYT				*i* S	**Sg**	**13 06 41.5**	**+1.5**
SAFT	**Safranbolu**	**1.38**	**10**	*e*PN	**Pn**	**13 06 26.2**	**-0.3**
SAFT	**Safranbolu**	**1.38**	**10**	*e*Pn	**Pn**	**13 06 26.3**	**-0.2**
GULT	**Gulveren**	**1.52**	**292**	*e*PN	**Pn**	**13 06 28.1**	**-0.5**
GULT	**Gulveren**	**1.52**	**292**	*e*Pn

Moment Tensor Solution. s87,c157; s36,c36; Moment tensor: Scale 10^{17}Nm; M_{rr}0.46±.03; $M_{\theta\theta}$1.21±.03; $M_{\phi\phi}$-1.66±.03; $M_{r\theta}$0.57±.07; $M_{r\phi}$1.70±.03; $M_{\theta\phi}$1.94±.15; Best double couple: $M_0$3.00000×10^{17} NP1:ϕ_s111.00000°, δ47.00000°, λ7.00000°. NP2:ϕ_s16.00000°, δ85.00000°, λ137.00000°. Principal axes: T 2.8900, Plg33.0000°, Azm324.0000°; N 0.2800, Plg46.0000°, Azm191.0000°; P -3.1600, Plg25.0000°, Azm72.0000°; Data Used: ll IU IC G CN. Surface waves: sta=113, comp=220, per= 50.

ISC 19 13:37:31.2±0.2, 15°06S±0.06×173°39W±0.04, h35km, (h8km≥2.4km; pP-P), n989, σ0.70/616, mb5.0/127, MS5.3/229, 228C-218D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.94**	**54**	Pn		**Pn**	**13 37 52.9**	**-8.7**
	195nm,0.3s,baz=74,slow=1.9,SNR=159							
AFI				Sn		**Sn**	**13 38 13.2**	**-12**
	980nm,0.3s,baz=3.5,slow=24,SNR=20							
AFI	**Afiamalu**	**1.94**	**54**	*e*P		**Pn**	**13 37 53.0**	**-8.6**
MSVF	**Nonsavu**	**8.64**	**251**	Pn		**Pn**	**13 39 41.0**	**+7.3**
	1μm,1.2s,SNR=26							
MSVF	**Nonsavu**	**8.64**	**251**	*e*P		**Pn**	**13 39 40.6**	**+6.9**
	303nm,1.1s							
FUNA	**Funafuti**	**9.74**	**311**	P		**Pn**	**13 39 46.6**	**-2.3**
FUNA				*e*S		**Sn**	**13 41 18.9**	**-18**
RAR	**Rarotonga**	**14.31**	**117**	*e*P		**Pn**	**13 40 44.7**	**-6.6**
	47nm,0.7s							
RAR	**Rarotonga**	**14.31**	**117**	Pn		**Pn**	**13 40 45.5**	**-5.8**
	3.9nm,0.3s,baz=266,slow=7.9,SNR=16							
RAR				LR	LR		13 44 44.8	
	comp=Z,8μm,21.5s,baz=308,slow=30							
RAR				T			13 55 35.7	
	30nm,0.3s,baz=38,slow=14,SNR=3.9							
RAR	**Rarotonga**	**14.31**	**117**	*e*P		**Pn**	**13 40 44.7**	**-6.6**
RAR				pmax	pmax			
	comp=Z,47nm,0.7s							
DZM	**Mont Dzumac**	**20.34**	**247**	*e*P		**P**	**13 42 06.6**	**+2.0**
	comp=Z,437nm,1.4s							
DZM				*e*LR	LR		13 46 56.9	
	comp=Z,22μm,25.8s							
DZM	**Mont Dzumac**	**20.34**	**247**	*e*P		**P**	**13 42 04.4**	**-0.1**
DZM	**Mont Dzumac**	**20.34**	**247**	*e*P		**P**	**13 42 05.9**	**+1.4**
	comp=Z,228nm,1.4s							
NOUC	**Port Laguerre**	**20.47**	**247**	*e*P		**P**	**13 42 09.1**	**+3.1**
PPT	**Papeete**	**22.98**	**99**	*e*LQ			13 46 58.5	
	comp=Z,25μm,28.0s							
PPT				*e*LR	LR		13 47 59.0	
	comp=Z,14μm,25.2s,baz=263							
PPT	**Papeete**	**22.98**	**99**	P		**P**	**13 42 31.5**	**-1.4**
PPT				LR	LR		13 49 01.6	
PPT	**Papeete**	**22.98**	**99**	P		**P**	**13 42 31.5**	**-1.4**
	comp=Z,62nm,1.1s,mb4.9,baz=213,slow=4.8,SNR=4.8							
PPT				LR	LR		13 49 01.6	
	comp=Z,4μm,18.6s,MS4.9,baz=270,slow=30							
PPT				T			14 06 31.2	
	comp=Z,17nm,0.4s,baz=22,slow=22,SNR=4.1							
PAE	**Paea**	**22.98**	**100**	*e*P		**P**	**13 42 31.4**	**-1.6**
XMAS	**Kiritimati**	**23.19**	**44**	PFAKE			13 42 40.0	+4.8
XMAS				LR	LR			
	comp=Z,8μm,20.0s,MS5.2							
URZ	**Urewera**	**24.59**	**198**	*e*P		**P**	**13 42 47.5**	**-0.4**
URZ	**Urewera**	**24.59**	**198**	P		**P**	**13 42 48.3**	**+0.4**
	comp=Z,14nm,0.8s,mb4.5,baz=24,slow=6.9,SNR=4.9							
URZ				LR	LR		13 51 21.7	
	comp=Z,8μm,21.0s,MS5.2,baz=282,slow=34							
HNR	**Honiara**	**26.64**	**279**	PFAKE			13 43 20.0	+13
HNR				LR	LR			
	comp=Z,7μm,21.0s,MS5.2							
HNR	**Honiara**	**26.64**	**279**	LR		LR	13 51 58.2	
	comp=Z,7μm,18.8s,MS5.2,baz=125,slow=33							
SNZO	**South Karori**	**28.12**	**199**	PFAKE			13 43 30.0	+10
SNZO				LR	LR			
	comp=Z,4μm,19.0s,MS5.0							
JOHN	**Johnston Islan**	**31.82**	**7**	PFAKE			13 44 00.0	+7.3
JOHN				LR	LR			
	comp=Z,3μm,21.0s,MS4.9							
TAOE	**Nuku Hiva Isla**	**33.07**	**83**	*e*LR		LR	13 52 33.3	
	comp=Z,11μm,26.5s,baz=264							
ARMA	**Armidale**	**35.53**	**238**	*e*P		**P**	**13 44 24.8**	**-0.1**
RKT	**Rikitea**	**37.09**	**108**	*e*S		**S**	**13 50 24.1**	**+1.7**
	comp=Z,756nm,29.2s							
RKT				*e*LQ			13 53 07.1	
	comp=Z,3μm,27.0s							
RKT				*e*LR	LR		13 54 35.9	
	comp=Z,7μm,24.2s,baz=282							
CTA	**Charters Tower**	**38.73**	**257**	LR		LR	13 58 19.5	
	comp=Z,2μm,19.4s,MS5.0,baz=79,slow=32							
CTAO	**Charters Tower**	**38.73**	**257**	PFAKE			13 45 10.0	+18
CTAO				LR	LR			
	comp=Z,3μm,22.0s,MS5.0							
POHA	**Pohakuloa**	**38.80**	**27**	PFAKE			13 45 00.0	+7.2
POHA				LR	LR			
	comp=Z,3μm,21.0s,MS5.1							
PMG	**Port Moresby**	**38.92**	**274**	PFAKE			13 45 10.0	+16
PMG				LR	LR			
	comp=Z,3μm,22.0s,MS5.1							
CNB	**Canberra Magne**	**38.97**	**232**	*e*P		**P**	**13 44 54.7**	**+0.6**
CAN	**Canberra**	**39.24**	**232**	PFAKE			13 45 10.0	+14
CAN				LR	LR			
	comp=Z,2μm,20.0s,MS4.9							
KIP	**Kipapa**	**39.27**	**23**	PFAKE			13 45 10.0	+13
KIP				LR	LR			
	comp=Z,2μm,20.0s,MS5.0							
WAKE	**Wake Island**	**39.38**	**329**	PFAKE			13 45 10.0	+12
WAKE				LR	LR			
	comp=Z,3μm,20.0s,MS5.1							
MTSU	**Mount Surprise**	**40.59**	**260**	*e*P		**P**	**13 45 06.3**	**-1.5**
	comp=Z,82nm,1.1s,mb5.3							
CMSA	**Cobar Meteorol**	**40.74**	**239**	*e*P		**P**	**13 45 07.6**	**-1.2**
QLP	**Quilpie**	**41.06**	**247**	*e*P		**P**	**13 45 09.1**	**-2.5**
PTCN	**Pitcairn Islan**	**41.71**	**111**	PFAKE			13 45 30.0	+13
PTCN				LR	LR			
	comp=Z,3μm,19.0s,MS5.1							
TOO	**Toolangi**	**42.69**	**230**	*e*P		**P**	**13 45 25.9**	**+1.2**
MIDW	**Midway**	**43.19**	**355**	PFAKE			13 45 40.0	+11
MIDW				LR	LR			
	comp=Z,3μm,19.0s,MS5.1							
STKA	**Stephens Creek**	**44.22**	**240**	*e*P		**P**	**13 45 35.6**	**-1.5**
	comp=Z,12nm,1.0s,mb4.6							
STKA	**Stephens Creek**	**44.22**	**240**	*e*P		**P**	**13 45 36.4**	**-0.8**
	comp=Z,4.8nm,1.1s,mb4.1							
STKA	**Stephens Creek**	**44.22**	**240**	P		**P**	**13 45 35.4**	**-1.7**
	comp=Z,11nm,1.0s,mb4.5,baz=83,slow=7.2,SNR=8.0							
STKA				LR	LR		14 01 50.3	
	comp=Z,3μm,20.2s,MS5.2,baz=70,slow=33							
BBOO	**Buckleboo**	**48.99**	**240**	*e*P		**P**	**13 46 12.9**	**-1.7**
	comp=Z,8.8nm,1.2s,mb4.7							
WRA	**Warramunga Arr**	**49.93**	**256**	P		**P**	**13 46 19.4**	**-2.5**
	comp=Z,19nm,0.8s,mb5.2,baz=90,slow=7.4,SNR=67							
WRA				LR	LR		14 04 59.8	
	comp=Z,3μm,22.0s,MS5.3,baz=90,slow=33							
GUMO	**Guam**	**50.16**	**303**	PFAKE			13 46 40.0	+16
GUMO				LR	LR			
	comp=Z,2μm,20.0s,MS5.0							
GUMO	**Guam**	**50.16**	**303**	LR		LR	14 05 31.7	
	comp=Z,2μm,18.1s,MS5.1,baz=109,slow=34							
ASAR	**Alice Springs**	**50.23**	**252**	P		**P**	**13 46 22.1**	**-2.0**
	comp=Z,119nm,0.9s,mb5.9,baz=86,slow=8.7,SNR=319							
FORT	**Forrest**	**55.58**	**243**	*e*P		**P**	**13 47 00.9**	**-2.6**
	comp=Z,24nm,0.7s,mb5.3							
FORT	**Forrest**	**55.58**	**243**	*e*P		**P**	**13 47 01.0**	**-2.5**
	comp=Z,45nm,0.9s,mb5.5							
FITZ	**Fitzroy Crossi**	**58.29**	**258**	LR		LR	14 09 41.1	
	comp=Z,4μm,21.8s,MS5.5,baz=98,slow=33							
DRV	**Dumont d'Urvil**	**59.91**	**200**	S		**S**	**13 55 54.0**	**+11**
DRV				L			14 02 00.0	
MBWA	**Marble Bar**	**63.47**	**254**	PFAKE			13 48 10.0	+12
MBWA				LR	LR			
	comp=Z,3μm,19.0s,MS5.5							
SBA	**Scott Base**	**63.59**	**185**	*e*P		**P**	**13 48 00.1**	**+2.2**
	comp=Z,10nm,0.9s,mb4.8							
SBA				LR	LR			
	comp=Z,2μm,19.0s,MS5.2							
SBA	**Scott Base**	**63.59**	**185**	*e*P		**P**	**13 48 00.1**	**+2.2**
SBA				pmax	pmax			
	comp=Z,10.0nm,0.9s,mb4.8							
SBA				MLR	MLR			
	comp=Z,2μm,19.0s,MS5.2							
DAV	**Davao City (W)**	**64.36**	**286**	PFAKE			13 48 20.0	+16
DAV				LR	LR			
	comp=Z,2μm,19.0s,MS5.3							
NWAO	**Narrogin (SRO)**	**64.79**	**240**	PFAKE			13 48 20.0	+13
NWAO				LR	LR			
	comp=Z,3μm,22.0s,MS5.4							
MJAR	**Matsushiro Arr**	**68.69**	**320**	P		**P**	**13 48 31.4**	**+0.2**
	comp=Z,8.7nm,0.9s,mb4.7,baz=152,slow=5.7,SNR=11							
MJAR				LR	LR		14 13 03.0	
	comp=Z,2μm,21.9s,MS5.3,baz=135,slow=31							
MAJO	**Matsushiro**	**68.69**	**320**	*e*P		**P**	**13 48 31.8**	**+0.5**
	comp=Z,27nm,1.3s,mb5.0							
MAJO				LR	LR			
	comp=Z,3μm,22.0s,MS5.4							
MAJO	**Matsushiro**	**68.69**	**320**	*e*P		**P**	**13 48 31.8**	**+0.5**
MAJO				pmax	pmax			
	comp=Z,27nm,1.3s,mb5.0							
MAJO				MLR	MLR			
	comp=Z,3μm,22.0s,MS5.4							
MAT	**Matsushiro**	**68.69**	**320**	P		**P**	**13 48 30.6**	**-0.7**
MAT				S		S	13 57 34.0	+2.0
ERM	**Erimo**	**69.49**	**327**	PFAKE			13 48 50.0	+14
ERM				LR	LR			
	comp=Z,2μm,20.0s,MS5.4							
YUK	**Yuzh-Kuril'sk**	**69.58**	**330**	⇓*i*P		**P**	**13 48 35.1**	**-1.5**
YUK				*i*			13 51 11.2	
YUK				*i* PPP			13 52 51.1	
YUK				*i* S		S	13 57 47.5	+5.3
BSC	**Santa Cruz Isl**	**70.68**	**45**	⇓P		**P**	**13 48 43.2**	**-0.3**
	baz=71							
CASY	**Casey**	**70.72**	**205**	PFAKE			13 49 00.0	+17
CASY				LR	LR			
	comp=Z,947nm,20.0s,MS5.0							
SCI	**San Clemente I**	**70.87**	**47**	⇓P		**P**	**13 48 44.6**	**-0.1**
	baz=71							
SBC	**Santa Barbara**	**70.88**	**45**	⇑P		**P**	**13 48 45.1**	**+0.3**
	baz=71							
MCCM	**Marconi Confer**	**71.00**	**40**	PFAKE			13 49 00.0	+15
MCCM				LR	LR			
	comp=Z,2μm,20.0s,MS5.4							
PKM	**Peak Mountain**	**71.06**	**44**	⇓P		**P**	**13 48 46.1**	**+0.2**
	baz=71							
PKM				⇓S		S	13 58 03.5	+3.6
	baz=71							
SAO	**San Andreas Ge**	**71.07**	**42**	PFAKE			13 49 00.0	+14
SAO				LR	LR			
	comp=Z,2μm,20.0s,MS5.3							
BLG	**Laguna Peak**	**71.14**	**45**	⇑P		**P**	**13 48 45.6**	**-0.7**
	baz=71							
SMMC	**Simmler**	**71.18**	**44**	⇑P		**P**	**13 48 46.6**	**0.0**
	baz=71							
ASAJ	**Asahikawa**	**71.26**	**328**	LR		LR	14 13 25.5	
	comp=Z,1μm,21.7s,MS5.0,baz=171,slow=30							
HOPS	**Hopland**	**71.40**	**39**	P		**P**	**13 48 47.8**	**0.0**
	comp=Z,36nm,1.4s,mb5.1							
HOPS				LR	LR			
	comp=Z,2μm,19.0s,MS5.5							
FMP	**Fort Macarthur**	**71.45**	**46**	⇑P		**P**	**13 48 48.4**	**+0.1**
	baz=71							
OSI	**Osito Adit**	**71.65**	**45**	⇑P		**P**	**13 48 49.8**	**+0.3**
	baz=72							
DECC	**Green Verdugo**	**71.72**	**46**	⇑P		**P**	**13 48 48.8**	**-1.1**
	baz=72							
109C	**Camp Elliot, M**	**71.84**	**47**	⇓P		**P**	**13 48 50.1**	**-0.5**
	baz=72							
ARVC	**Arvin**	**71.86**	**45**	⇑P		**P**	**13 48 50.2**	**-0.5**
	baz=72							
PET	**Petropavlovsk**	**71.96**	**343**	PFAKE			13 49 00.0	+9.1
PET				LR	LR			
	comp=Z,1μm,19.0s,MS5.1							
PET	**Petropavlovsk**	**71.96**	**343**	*e*P		**P**	**13 48 50.7**	**-0.2**
PET				*i* S		S	13 58 11.0	+1.5
PET				*e*PS			13 58 41.9	
PET				*e*PPS			13 58 54.6	
PET				pmax	pmax			
	comp=Z,300nm,12.4s							
PET				MLR	MLR			
	comp=Z,1μm,17.0s,MS5.2							
VES	**Vestal, Richgr**	**72.09**	**44**	⇓P		**P**	**13 48 51.2**	**-0.8**
	baz=72							
MURC	**Murrieta**	**72.15**	**47**	⇑P		**P**	**13 48 51.8**	**-0.7**
	baz=72							
BFSC	**Mount Baldy Ra**	**72.18**	**46**	⇑P		**P**	**13 48 52.3**	**-0.3**
	baz=72							
RCTC	**Rector, Farmer**	**72.25**	**43**	⇑P		**P**	**13 48 52.7**	**-0.3**
	baz=72							
EDW2	**Edwards Air Fo**	**72.30**	**45**	⇓P		**P**	**13 48 52.8**	**-0.5**
	baz=72							
MONP	**Monument Peak**	**72.33**	**48**	⇓P		**P**	**13 48 53.1**	**-0.4**
	baz=72							
ISA	**Isabella**	**72.40**	**44**	⇑P		**P**	**13 48 54.1**	**+0.1**
	baz=72							
ISA	**Isabella**	**72.40**	**44**	*e*P		**P**	**13 48 51.4**	**-2.6**
	comp=Z,15nm,1.3s,mb4.8							
ISA	**Isabella**	**72.40**	**44**	*e*P		**P**	**13 48 51.4**	**-2.5**
ISA				pmax	pmax			
	comp=Z,15nm,1.3s,mb4.8							
DVTC	**Desert V Tower**	**72.44**	**48**	⇓P		**P**	**13 48 53.8**	**-0.4**
	baz=72							
CMB	**Columbia Colle**	**72.50**	**41**	*e*P		**P**	**13 48 54.4**	**0.0**
	comp=Z,9.8nm,1.0s,mb4.7							
CMB				LR	LR			
	comp=Z,2μm,20.0s,MS5.3							
CMB	**Columbia Colle**	**72.50**	**41**	*e*P		**P**	**13 48 54.4**	**-0.1**
CMB				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.7							
CMB				MLR	MLR			
	comp=Z,2μm,20.0s,MS5.3							
PFO	**Pinyon Flat Ob**	**72.69**	**47**	⇑P		**P**	**13 48 55.0**	**-0.6**
	baz=73							
PFO	**Pinyon Flat Ob**	**72.69**	**47**	PFAKE			13 49 10.0	+14
PFO				LR	LR			
	comp=Z,3μm,21.0s,MS5.6							
BBRC	**Big Bear Solar**	**72.70**	**46**	⇓P		**P**	**13 48 56.2**	**+0.4**
	baz=73							
WDC	**Whiskeytown Da**	**72.71**	**38**	*e*P		**P**	**13 48 55.5**	**-0.1**
	comp=Z,21nm,1.3s,mb4.9							
WDC				LR	LR			
	comp=Z,2μm,20.0s,MS5.4							
WDC	**Whiskeytown Da**	**72.71**	**38**	*e*P		**P**	**13 48 55.5**	**-0.1**
WDC				pmax	pmax			
	comp=Z,21nm,1.3s,mb4.9							
WDC				MLR	MLR			
	comp=Z,2μm,20.0s,MS5.4							
SWSC	**Sam W. Stewart**	**72.81**	**48**	⇓P		**P**	**13 48 55.6**	**-0.8**
	baz=73							
KKM	**Kota Kinabalu**	**72.82**	**281**	PFAKE			13 49 10.0	+13
KKM				LR	LR			
	comp=Z,696nm,22.0s,MS4.9							
LRMC	**Laurel Mountai**	**72.83**	**45**	⇓P		**P**	**13 48 56.4**	**-0.1**
	baz=73							
RRX	**Edison Barstow**	**72.98**	**46**	⇑P		**P**	**13 48 57.5**	**+0.1**
	baz=73							
CWC	**Cottonwood Cre**	**73.10**	**44**	⇑P		**P**	**13 48 57.9**	**-0.2**
	baz=73							
YSS	**Yuzh-Sakhalins**	**73.20**	**330**	*e*P		**P**	**13 48 59.3**	**+1.0**
	comp=Z,41nm,0.9s,mb5.3							
YSS				LR	LR			
	comp=Z,447nm,20.0s,MS4.7							
YSS	**Yuzh-Sakhalins**	**73.20**	**330**	*e*P		**P**	**13 49 00.0**	**+1.6**
YSS				*e*			13 49 15.8	
YSS				*e*S		S	13 58 28.0	+4.1
YSS				*e*PPS			13 59 06.0	
YSS				MLR	MLR			
	comp=Z,500nm,16.0s,MS4.9							
YSS				MLR	MLR			
	comp=N,500nm,17.0s							
MLAC	**Mammoth Lakes**	**73.27**	**42**	⇑P		**P**	**13 48 59.4**	**+0.4**
	baz=73							
MPMC	**Manual Prospec**	**73.29**	**44**	⇓P		**P**	**13 48 59.1**	**-0.1**
	baz=73							
YBH	**Yreka Blue Hor**	**73.32**	**37**	*e*P		**P**	**13 48 59.9**	**+0.6**
	comp=N,29nm,1.3s,mb5.0							
YBH				LR	LR			
	comp=Z,2μm,21.0s,MS5.3							
YBH	**Yreka Blue Hor**	**73.32**	**37**	P		**P**	**13 48 59.4**	**+0.2**
	comp=Z,6.6nm,0.8s,mb4.6,baz=170,slow=5.9,SNR=13							
YBH	**Yreka Blue Hor**	**73.32**	**37**	*e*P		**P**	**13 48 59.9**	**+0.7**
YBH				pmax	pmax			
	comp=Z,29nm,1.3s							
YBH				MLR	MLR			
	comp=Z,2μm,21.0s							
DAC	**Darwin (Calif)**	**73.34**	**44**	PFAKE			13 49 10.0	+11
DAC				LR	LR			
	comp=Z,3μm,20.0s,MS5.6							
GSC	**Goldstone**	**73.34**	**45**	⇑P		**P**	**13 48 58.7**	**-0.8**
	baz=73							
GSC	**Goldstone**	**73.34**	**45**	*e*P		**P**	**13 48 58.8**	**-0.7**
	comp=Z,11nm,1.2s,mb4.7							
GSC	**Goldstone**	**73.34**	**45**	*e*P		**P**	**13 48 58.8**	**-0.7**
GSC				pmax	pmax			
	comp=Z,11nm,1.2s,mb4.7							
TIN	**Tinemaha**	**73.35**	**43**	⇓P		**P**	**13 48 59.5**	**0.0**
	baz=73							
HEC	**Hector,Ludlow**	**73.42**	**46**	⇑P		**P**	**13 48 59.3**	**-0.7**
	baz=73							
112A	**Yuma**	**73.48**	**49**	⇑P		**P**	**13 49 00.5**	**+0.2**
	baz=73							
GLA	**Glamis**	**73.56**	**48**	⇑P		**P**	**13 49 00.5**	**-0.3**
	baz=74							
WCN	**Washoe City**	**73.65**	**41**	⇑P		**P**	**13 49 00.2**	**-1.0**
	baz=74							
HUMO	**Hull Mountain**	**73.73**	**36**	*e*P		**P**	**13 49 02.3**	**+0.7**
	comp=Z,25nm,1.3s,mb5.0							
HUMO				LR	LR			
	comp=Z,2μm,20.0s,MS5.3							
GMRC	**Granite Mounta**	**73.86**	**46**	⇓P		**P**	**13 49 01.3**	**-1.3**
	baz=74							
GRAC	**Grapevine Rang**	**73.89**	**44**	⇑P		**P**	**13 49 02.8**	**+0.1**
	baz=74							
IRM	**Iron Mountain**	**73.90**	**47**	⇓P		**P**	**13 49 02.6**	**-0.2**
	baz=74							
FURC	**Furnace Creek,**	**73.94**	**44**	⇓P		**P**	**13 49 02.6**	**-0.3**
	baz=74							
TUQ	**Turquoise Moun**	**74.02**	**46**	⇑P		**P**	**13 49 03.4**	**-0.1**
	baz=74							
SHOC	**Shoshone**	**74.03**	**45**	⇑P		**P**	**13 49 03.2**	**-0.3**
	baz=74							
NVAR	**Mina Array Bea**	**74.07**	**42**	P		**P**	**13 49 04.1**	**+0.4**
	comp=Z,4.4nm,0.8s,mb4.5,baz=230,slow=8.8,SNR=17							
Y12C	**Blythe**	**74.13**	**48**	⇑P		**P**	**13 49 04.2**	**0.0**
	baz=74							
113A	**Mohawk Valley,**	**74.19**	**49**	⇑P		**P**	**13 49 04.1**	**-0.4**
	baz=74							
U10A	**Ash Meadows, A**	**74.27**	**45**	⇓P		**P**	**13 49 05.2**	**+0.3**
	baz=74							
LDFC	**Landfair**	**74.40**	**46**	*e*P		**P**	**13 49 05.9**	**+0.1**
	comp=Z,42nm,1.2s,mb5.2							
Z13A	**Yuma Proving G**	**74.48**	**49**	⇑P		**P**	**13 49 05.6**	**-0.7**
	baz=74							
NACB	**Ninganchiao**	**74.49**	**301**	*e*P		**P**	**13 49 06.5**	**0.0**
214A	**Organ Pipe Nat**	**74.49**	**50**	⇓P		**P**	**13 49 05.8**	**-0.5**
	baz=74							
TPH	**Tonopah**	**74.58**	**43**	PFAKE			13 49 20.0	+13
TPH				LR	LR			
	comp=Z,2μm,20.0s,MS5.4							
V11A	**Goodsprings**	**74.58**	**46**	⇑P		**P**	**13 49 07.1**	**+0.4**
	baz=74							
NEE2	**Needles Airpor**	**74.59**	**47**	⇓P		**P**	**13 49 07.1**	**+0.3**
	baz=74							
KDAK	**Kodiak Island**	**74.59**	**11**	PFAKE			13 49 20.0	+14
KDAK				LR	LR			
	comp=Z,1μm,19.0s,MS5.2							
Y13A	**Salome**	**74.67**	**48**	⇓P		**P**	**13 49 07.3**	**0.0**
	baz=75							
W12A	**Cal Nev Ari**	**74.69**	**46**	⇑P		**P**	**13 49 06.8**	**-0.5**
	baz=75							
PDMCI	**Parker Dam,Lak**	**74.69**	**48**	⇑P		**P**	**13 49 07.1**	**-0.3**
	baz=75							
COR	**Corvallis**	**74.79**	**35**	PFAKE			13 49 20.0	+12
COR				LR	LR			
	comp=Z,1μm,21.0s,MS5.1							
114A	**Black Gap (USA**	**74.82**	**49**	⇑P		**P**	**13 49 08.3**	**+0.1**
	baz=75							
MOD	**Modoc**	**74.85**	**38**	*e*P		**P**	**13 49 07.2**	**-0.9**
	comp=Z,36nm,1.1s,mb5.2							
MOD				LR	LR			
	comp=Z,2μm,20.0s,MS5.4							
YHNB	**Yeheng**	**74.87**	**301**	PFAKE			13 49 20.0	+11
YHNB				LR	LR			
	comp=Z,2μm,20.0s,MS5.3							
S10A	**Tonopah Range,**	**74.91**	**43**	⇓P		**P**	**13 49 08.2**	**-0.4**
	baz=75							
TATO	**Taipei**	**74.91**	**301**	PFAKE			13 49 20.0	+11
TATO				LR	LR			
	comp=Z,770nm,20.0s,MS5.0							
U11A	**Corn Creek**	**74.92**	**45**	⇑P		**P**	**13 49 08.7**	**0.0**
	baz=75							
V12A	**Nelson**	**74.92**	**46**	⇑P		**P**	**13 49 08.7**	**0.0**
	baz=75							
TPUB	**Ta-pu**	**74.93**	**300**	*e*P		**P**	**13 49 06.6**	**-2.4**
	comp=Z,29nm,0.9s,mb5.2							
QSPA	**South Pole Qui**	**74.98**	**180**	PFAKE			13 49 20.0	+12
QSPA				LR	LR			
	comp=Z,987nm,19.0s,MS5.1							
K05A	**Summer Lake**	**75.00**	**37**	⇓P		**P**	**13 49 09.2**	**+0.2**
	baz=75							
Z14A	**Wintersburg**	**75.08**	**49**	⇓P		**P**	**13 49 09.4**	**-0.3**
	baz=75							
W13A	**Hualapai Mount**	**75.27**	**47**	⇓P		**P**	**13 49 10.8**	**+0.1**
	baz=75							
R10A	**Warm Springs**	**75.30**	**43**	⇓P		**P**	**13 49 10.7**	**-0.1**
	baz=75							
Y14A	**Wickenburg**	**75.32**	**48**	⇑P		**P**	**13 49 10.9**	**-0.1**
	baz=75							
S11A	**Rachel**	**75.32**	**44**	⇓P		**P**	**13 49 10.3**	**-0.6**
	baz=75							
H04A	**Detroit Lake**	**75.47**	**35**	⇑P		**P**	**13 49 11.2**	**-0.5**
	baz=76							
U12A	**Valley of Fire**	**75.50**	**45**	⇓P		**P**	**13 49 11.8**	**-0.2**
	baz=75							
216A	**Three Points,**	**75.52**	**51**	⇓P		**P**	**13 49 12.4**	**+0.1**
	baz=75							
F03A	**Seaside**	**75.52**	**33**	⇑P		**P**	**13 49 12.9**	**+0.9**
	baz=76							
Q10A	**Clear Creek Ra**	**75.53**	**43**	⇓P		**P**	**13 49 12.2**	**+0.1**
	baz=76							
T12A	**Moapa**	**75.53**	**45**	⇓P		**P**	**13 49 12.2**	**-0.1**
	baz=76			

comp=Z,16nm,1.1s,mb4.9
TUC MLR MLR

comp=Z,3µm,20.0s,MS5.5
Z16A Peralta Trail, 76.18 50 ⇓P P 13 49 16.1 +0.1
baz=76
T13A Saint George 76.24 45 ⇑P P 13 49 16.6 +0.3
baz=76
NLWA Neilton Lookou 76.31 32 PFAKE 13 49 30.0 +14
NLWA LR LR

comp=Z,992nm,20.0s,MS5.1
117A Oracle 76.33 51 ⇓P P 13 49 16.8 -0.1
baz=76
P11A Circle Ranch, 76.35 42 ⇓P P 13 49 16.9 +0.1
baz=76
318A Bisbee 76.36 52 ⇓P P 13 49 17.2 +0.1
baz=76,SNR=8.6
Y16A Circle Bar Ran 76.40 49 ⇓P P 13 49 17.2 0.0
baz=76
U14A Mt Trumbull 76.44 46 ⇓P P 13 49 18.0 +0.7
baz=76,SNR=16
R12A Pony Springs, 76.45 44 ⇑P P 13 49 17.8 +0.4
baz=76
W15A Williams 76.46 48 ⇓P P 13 49 18.0 +0.5
baz=76
S13A Holt Ranch, En 76.56 45 ⇑P P 13 49 18.0 0.0
baz=76
218A Dragoon 76.57 51 ⇓P P 13 49 18.6 +0.4
baz=76,SNR=8.8
I07A Izee 76.62 37 ⇓P P 13 49 18.4 +0.2
baz=77
Q12A Willow Creek R 76.68 43 ⇓P P 13 49 18.6 -0.1
baz=77
G06A Carlson Farm, 76.68 35 ⇓P P 13 49 18.4 -0.1
baz=77
X16A Lo Mia Camp, P 76.69 49 ⇓P P 13 49 19.3 +0.5
baz=77,SNR=11
Y17A Roosevelt 76.78 49 ⇑P P 13 49 19.5 +0.1
baz=77
R13A O'Grain Ranch, 76.80 44 ⇑P P 13 49 19.3 -0.1
baz=77
J08A Circle Bar Ran 76.80 38 ⇓P P 13 49 19.2 0.0
baz=77
INCN Inchon 76.82 315 PFAKE 13 49 30.0 +10
INCN LR LR

comp=Z,1µm,19.0s,MS5.2
T14A Hurricane 76.83 46 ⇓P P 13 49 20.0 +0.4
baz=77
V15A Kaibab Nationa 76.84 47 ⇓P P 13 49 20.2 +0.5
baz=77,SNR=9.5
P12A McGill 76.86 43 ⇓P P 13 49 19.4 -0.3
baz=77
Z17A San Carlos Hig 76.86 50 ⇑P P 13 49 19.7 -0.2
baz=77
319A Douglas 76.88 52 ⇑P P 13 49 20.1 +0.1
baz=77
CCUT Cedar City 76.89 45 eP P 13 49 20.3 +0.4
comp=Z,19nm,1.3s,mb4.9
W16A Flagstaff 76.95 48 ⇓P P 13 49 20.6 +0.3
baz=77
ARUT Antelope Range 76.95 45 eP P 13 49 19.6 -0.7
comp=Z,46nm,1.2s,mb5.3
ARUT Antelope Range 76.95 45 eP P 13 49 19.6 -0.7
ARUT pmax pmax

comp=Z,46nm,1.2s,mb5.3
LON Longmire 76.98 34 eP P 13 49 22.6 +2.4
comp=Z,18nm,1.6s,mb4.8
LON Longmire 76.98 34 eP P 13 49 22.6 +2.4
LON pmax pmax

comp=Z,18nm,1.6s,mb4.8
U15A North Rim 77.06 46 ⇑P P 13 49 21.3 +0.4
baz=77
Z18A Geronimo 77.09 50 ⇑P P 13 49 21.4 +0.3
baz=77
X17A Forest Lakes 77.11 49 ⇑P P 13 49 22.3 +1.1
baz=77
S14A Cedar City 77.12 45 ⇑P P 13 49 21.2 0.0
baz=77
D05A Enumclaw 77.16 33 ⇓P P 13 49 21.8 +0.6
baz=77
Q13A Wheeler Ranch, 77.17 43 ⇑P P 13 49 21.4 -0.1
baz=77
219A White Tail Can 77.17 52 ⇑P P 13 49 21.9 +0.3
baz=77
WUAZ Wupatki 77.26 48 ⇓P P 13 49 22.5 +0.5
baz=77
WUAZ Wupatki 77.26 48 eP P 13 49 22.1 +0.1
comp=Z,14nm,1.3s,mb4.7
WUAZ LR LR

comp=Z,2µm,21.0s,MS5.5
T15A Red Dirt Ranch 77.29 46 ⇑P P 13 49 22.4 +0.2
baz=77
QZH Quanzhou 77.30 300 ⇑iP P 13 49 20.0 -2.5
QZH PP PP 13 52 12.9 -4.2
QZH pmax pmax

comp=Z,1µm,6.4s
QZH LR LR

comp=N,510nm,9.7s
QZH LR LR

comp=E,500nm,11.1s
QZH LR LR

comp=Z,2µm,24.0s
O12A Currie 77.39 42 ⇓P P 13 49 23.0 +0.4
baz=77
Y18A Canyon Day Jun 77.41 50 ⇑P P 13 49 23.8 +0.9
baz=77
P13A Bates Ranch, G 77.43 43 ⇑P P 13 49 23.1 +0.2
baz=77
320A Kipp Ranch, An 77.44 53 ⇑P P 13 49 23.5 +0.4
baz=77
119A Ashpeak Ranch, 77.49 51 ⇓P P 13 49 23.9 +0.6
baz=77
R14A James Farms, M 77.50 44 ⇓P P 13 49 23.6 +0.3
baz=77
W17A Winslow 77.53 48 ⇑P P 13 49 24.0 +0.4
baz=78
S15A Panguitch 77.63 45 ⇑P P 13 49 25.3 +1.2
baz=78
Q14A Sevier Lake (B 77.68 44 ⇑P P 13 49 24.5 +0.2
baz=78,SNR=15
220A Playas Peak, P 77.69 52 ⇓P P 13 49 24.9 +0.4
baz=78,SNR=13
U16A Tuba City 77.74 47 ⇓P P 13 49 25.1 +0.4
baz=78
Z19A T-Link Ranch, 77.76 50 ⇑P P 13 49 24.8 0.0
baz=78
SSE Sheshan 77.77 307 P P 13 49 24.8 -0.2
SSE pP pP 13 49 28.0 -7.9
SSE S S 13 59 17.6 +2.4
SSE sS sS 13 59 23.8 -10
SSE pmax pmax

comp=Z,13nm,0.7s,mb5.0
SSE pmax pmax

comp=Z,74nm,2.8s,mb5.1
SSE LR LR

comp=N,490nm,26.0s,MS4.9
SSE LR LR

comp=E,490nm,26.0s,MS4.9
SSE LR LR

comp=Z,840nm,25.8s,MS5.0
O13A Hicks Ranch, I 77.81 42 ⇓P P 13 49 25.0 0.0
baz=78
X18A Snowflake 77.82 49 ⇓P P 13 49 24.9 -0.3
baz=78
T16A Glen Canyon Da 77.88 46 ⇓P P 13 49 25.7 +0.2
baz=78
120A U Bar Ranch, L 77.89 51 ⇑P P 13 49 26.2 +0.5
baz=78
E07A Sunnyside 77.92 35 ⇑P P 13 49 25.4 -0.1
baz=78
R15A Junction 77.96 45 ⇓P P 13 49 26.7 +0.9
baz=78
RSW Rattlesnake Hi 77.96 35 eP P 13 49 26.0 +0.3
comp=Z,20nm,1.1s,mb5.0
HAWA Hanford 77.99 35 eP P 13 49 25.7 -0.1
comp=Z,21nm,1.3s,mb4.9
HAWA LR LR

comp=Z,1µm,21.0s,MS5.2
N13A Wendover, West 78.05 42 ⇑P P 13 49 26.2 -0.1
baz=78
Y19A Nutrioso 78.07 50 ⇓P P 13 49 27.1 +0.5
baz=78,SNR=14
P14A Drum Mountains 78.13 43 ⇓P P 13 49 26.7 0.0
baz=78,SNR=19
MVU Marysvale 78.15 45 PFAKE 13 49 40.0 +13
MVU LR LR

comp=Z,3µm,20.0s,MS5.5
Z20A Nine Sixteen R 78.18 51 ⇑P P 13 49 27.3 +0.1
baz=78,SNR=8.9
MSU Marysvale 78.18 45 eP P 13 49 28.3 +1.2
comp=Z,24nm,1.2s,mb5.0
MSU Marysvale 78.18 45 eP P 13 49 28.3 +1.2
MSU pmax pmax

comp=Z,25nm,1.2s,mb5.0
S16A Weppner Ranch, 78.18 46 ⇑P P 13 49 27.6 +0.5
baz=78
W18A Petrified Fore 78.25 49 ⇑P P 13 49 28.0 +0.4
baz=78
X19A St. Johns 78.26 49 ⇓P P 13 49 27.8 +0.2
baz=78
A05A Maple Falls 78.26 32 ⇓P P 13 49 27.0 -0.3
baz=78
B06A Marblemount 78.26 32 ⇓P P 13 49 27.5 +0.2
baz=78
Q15A Fillmore 78.29 44 ⇑P P 13 49 27.8 +0.2
baz=78
ETW Emtiat 78.30 34 eP P 13 49 27.7 +0.2
comp=Z,12nm,0.9s,mb4.8
221A Mesquite Ranch 78.31 52 ⇓P P 13 49 28.9 +1.0
baz=78
E08A Dider Farm, El 78.31 35 ⇑P P 13 49 27.8 +0.2
baz=78
M13A Montello 78.34 41 ⇑P P 13 49 27.6 -0.3
baz=78,SNR=7.6
M13A Montello 78.34 41 eP P 13 49 28.1 +0.2
comp=Z,19nm,1.3s,mb4.9
T17A Navajo Res., N 78.38 47 ⇑P P 13 49 28.7 +0.4
baz=78,SNR=8.1
MFID Camas Ranch 78.42 39 ⇓P P 13 49 28.0 -0.3
baz=78
W19A Sanders 78.50 49 ⇓P P 13 49 29.1 +0.2
baz=78
121A Cookes Peak, D 78.53 52 ⇑P P 13 49 29.1 -0.1
baz=78
R16A Teasdale 78.54 45 ⇓P P 13 49 30.1 +1.0
baz=78
DUG Dugway 78.61 43 ⇑P P 13 49 29.0 -0.4
baz=79
DUG Dugway 78.61 43 eP P 13 49 28.4 -1.1
comp=Z,20nm,1.2s,mb4.9
DUG LR LR

comp=Z,2µm,22.0s,MS5.3
DUG Dugway 78.61 43 eP P 13 49 28.4 -1.0
DUG pmax pmax

comp=Z,20nm,1.2s,mb4.9
DUG MLR MLR

comp=Z,2µm,22.0s,MS5.3
P15A Leamington 78.64 44 ⇑P P 13 49 29.4 -0.2
baz=79
S17A Black Ridge (B 78.69 46 ⇑P P 13 49 29.5 -0.4
baz=79,SNR=6.9
Y20A Horse Springs, 78.70 50 ⇓P P 13 49 30.8 +0.7
baz=79,SNR=14
N14A Grayback Hills 78.70 42 ⇓P P 13 49 28.7 -1.2
baz=79
D08A Wollman Farm, 78.73 35 ⇑P P 13 49 29.1 -0.8
baz=79
U18A Rough Rock, Ch 78.77 47 ⇓P P 13 49 30.3 -0.1
baz=79
MDJ Mudanjiang 78.77 322 P P 13 49 30.8 +0.6
MDJ pP pP 13 49 33.8 -7.4
MDJ sP sP 13 49 35.1 -10
MDJ PP PP 13 52 31.5 +2.5
MDJ S S 13 59 30.4 +5.0
MDJ sS sS 13 59 37.0 -6.5
MDJ pmax pmax

comp=Z,15nm,1.9s,mb4.6
MDJ pmax pmax

comp=Z,580nm,5.5s
MDJ LR LR

comp=N,930nm,20.8s,MS5.3
MDJ LR LR

comp=E,1µm,22.6s,MS5.3
MDJ LR LR

comp=Z,2µm,22.6s,MS5.4
MDJ Mudanjiang 78.77 322 PFAKE 13 49 40.0 +10
MDJ LR LR

comp=Z,2µm,21.0s,MS5.5
E09A Wood Farm, Sta 78.84 35 ⇑P P 13 49 30.2 -0.4
baz=79
BGU Big Grassy Mou 78.84 42 P P 13 49 30.7 0.0
comp=Z,13nm,1.5s,mb4.6
222A Williams Famil 78.86 52 ⇑P P 13 49 31.4 +0.4
baz=79
O15A The Old Anders 78.88 43 ⇑P P 13 49 31.1 +0.2
baz=79
X20A Quemado 78.89 50 ⇓P P 13 49 31.4 +0.3
baz=79
TTA Tatalina 78.92 8 eP P 13 49 33.3 +2.7
comp=Z,37nm,1.2s,mb5.2
TTA Tatalina 78.92 8 eP P 13 49 33.3 +2.7
TTA pmax pmax

comp=Z,37nm,1.2s,mb5.2
M14A Sheep Mountain 78.94 42 ⇑P P 13 49 30.9 -0.3
baz=79,SNR=27
Z21A St. Cloud Mine 78.96 51 ⇓P P 13 49 31.1 -0.4
baz=79
NLU North Lily Min 78.97 43 P P 13 49 32.0 +0.6
F10A Beach Ranch, E 79.04 36 ⇑P P 13 49 31.5 -0.1
baz=79
OD2 Odessa Site #2 79.04 34 eP P 13 49 31.1 -0.5
comp=Z,22nm,1.3s,mb4.9
I12A Atlanta 79.05 39 ⇓P P 13 49 31.7 0.0
baz=79,SNR=20
Q16A Castle Valley 79.06 45 ⇑P P 13 49 32.3 +0.4
baz=79
DIV Divide 79.07 13 P P 13 49 32.8 +1.4
comp=Z,28nm,1.2s,mb5.1
P16A Fountain Green 79.08 44 ⇓P P 13 49 31.9 -0.1
baz=79
T18A Mexican Hat 79.10 47 ⇑P P 13 49 31.9 -0.3
baz=79,SNR=41
R17A Hanksville Air 79.13 45 ⇑P P 13 49 32.3 0.0
baz=79
N15A Stansbury Isla 79.15 42 ⇑P P 13 49 32.4 0.0
baz=79
U19A Dine' College, 79.18 48 ⇓P P 13 49 32.8 +0.1
baz=79
BMRM Bremner River 79.19 14 eP P 13 49 31.7 -0.4
comp=Z,90nm,1.4s,mb5.5
122A Conniff Cattle 79.20 52 ⇑P P 13 49 33.2 +0.4
baz=79
TMUT Trail Mountain 79.22 44 eP P 13 49 34.0 +1.2
comp=Z,41nm,1.1s,mb5.3
Y21A Point of Rocks 79.26 50 ⇓P P 13 49 34.1 +1.0
baz=79
S18A Hurst Farm, Bl 79.28 46 ⇓P P 13 49 33.4 +0.2
baz=79
L14A Malta 79.28 41 ⇓P P 13 49 33.2 +0.1
baz=79
MPU Maple Canyon 79.30 44 P P 13 49 33.1 -0.1
comp=Z,21nm,1.2s,mb5.0
HLID Hailey 79.36 39 ⇓P P 13 49 33.4 -0.1
baz=79,SNR=36
HLID Hailey 79.36 39 eP P 13 49 33.7 +0.2
comp=Z,23nm,1.1s,mb5.0
HLID LR LR

comp=Z,1µm,20.0s,MS5.2
X21A Alamocita Cree 79.37 50 ⇓P P 13 49 33.8 0.0
baz=79
J13A Cove Ranch, Pi 79.42 40 ⇑P P 13 49 34.0 +0.2
baz=79,SNR=16
HVU Hansel Valley 79.45 42 eP P 13 49 34.2 +0.3
comp=Z,20nm,1.1s,mb5.0
HVU Hansel Valley 79.45 42 eP P 13 49 34.2 +0.2
HVU pmax pmax

comp=Z,20nm,1.1s,mb5.0
Z22A Elephant Butte 79.47 51 ⇑P P 13 49 34.6 +0.3
baz=79,SNR=9.7
O16A Springville 79.48 43 ⇓P P 13 49 33.8 -0.4
baz=79
V20A Brimhall 79.48 48 ⇑P P 13 49 34.2 -0.2
baz=79
M15A Larsen Ranch, 79.49 42 ⇑P P 13 49 34.0 -0.2
baz=79
C09A Chrisman Ranch 79.53 34 ⇓P P 13 49 34.3 +0.1
baz=80
T19A Beclabito 79.56 47 ⇓P P 13 49 35.0 +0.3
baz=80,SNR=8.0
K14A Jones Ranch, D 79.59 41 ⇑P P 13 49 34.7 0.0
baz=80,SNR=9.0
SRU San Rafael 79.60 45 ⇑P P 13 49 34.9 0.0
baz=80
SRU San Rafael 79.60 45 eP P 13 49 34.6 -0.2
comp=Z,23nm,1.3s,mb4.9
SRU San Rafael 79.60 45 eP P 13 49 34.6 -0.3
SRU pmax pmax

comp=Z,23nm,1.3s,mb5.0
P17A Butcher Ranch, 79.63 44 ⇑P P 13 49 35.3 +0.3
baz=80
H12A Diamond D Ranc 79.63 38 ⇓P P 13 49 34.4 -0.5
baz=80
R18A Canyonlands Na 79.68 46 ⇓P P 13 49 35.2 -0.1
baz=80,SNR=23
U20A Newcomb 79.71 48 ⇓P P 13 49 35.4 -0.1
baz=80
JLU Jordanelle 79.71 43 eP P 13 49 35.3 -0.2
comp=Z,23nm,1.2s,mb5.0
I13A Wildhorse Cree 79.73 39 ⇓P P 13 49 35.8 +0.3
baz=80
123A Bell Site, Whi 79.73 52 ⇓P P 13 49 36.3 +0.5
baz=80
DAU Daniels Canyon 79.74 43 eP P 13 49 33.1 -2.5
comp=Z,25nm,1.3s,mb5.0
DAU Daniels Canyon 79.74 43 eP P 13 49 33.1 -2.5
DAU pmax pmax

comp=Z,25nm,1.3s,mb5.0
Y22A Socorro 79.76 51 ⇑P P 13 49 36.0 +0.1
baz=80
W21A San Fidel 79.77 49 ⇑P P 13 49 36.6 +0.7
baz=80
J14A Carey 79.78 40 ⇑P P 13 49 36.4 +0.7
baz=80,SNR=15
L15A Malad City 79.81 41 ⇓P P 13 49 35.4 -0.5
baz=80
LAZ Ladron 79.83 50 eP P 13 49 37.2 +1.0
comp=Z,17nm,1.6s,mb4.7
Y22D IRIS PASSCAL I 79.85 51 ⇑P P 13 49 36.9 +0.5
baz=80
LENM Lemitar 79.85 51 eP P 13 49 33.7 -2.7
comp=Z,8.2nm,1.1s,mb4.6
Q18A Rafter H Ranch 79.86 45 ⇑P P 13 49 36.3 0.0
baz=80,SNR=7.7
N16A Rees Ranch, Co 79.86 43 ⇑P P 13 49 36.3 0.0
baz=80
S19A Harvey Farm, M 79.91 46 ⇑P P 13 49 36.9 +0.3
baz=80,SNR=6.3
NJ2 Nanjing 79.97 307 eP P 13 49 38.1 +1.0
NJ2 pP pP 13 49 42.8 -5.3
NJ2 sP sP 13 49 45.1 -7.0
NJ2 S S 13 59 43.5 +4.8
NJ2 sS sS 13 59 50.5 -6.4
NJ2 pmax pmax

comp=Z,10.0nm,0.5s,mb5.0
NJ2 pmax pmax

comp=Z,580nm,8.5s
NJ2 LR LR

comp=N,540nm,22.6s
NJ2 LR LR

comp=E,1µm,30.8s
NJ2 LR LR

comp=Z,1µm,28.6s
O17A Robinson Place 79.98 44 ⇑P P 13 49 37.6 +0.7
baz=80
H13A Challis 80.00 39 ⇓P P 13 49 36.7 -0.1
baz=80,SNR=8.5
MNTX Cornudas Mount 80.02 53 ⇑P P 13 49 36.8 -0.5
baz=80,SNR=15
MNTX Cornudas Mount 80.02 53 eP P 13 49 36.3 -1.0
comp=Z,12nm,1.1s,mb4.7
MNTX LR LR

comp=Z,1µm,21.0s,MS5.3
Z23A Rita Site, Whi 80.02 52 ⇓P P 13 49 37.7 +0.5
baz=80
P18A Preston Nutter 80.04 44 ⇓P P 13 49 37.8 +0.6
baz=80
F12A Elk City 80.06 37 ⇓P P 13 49 36.5 -0.7
baz=80,SNR=25
224A Cornudas Mount 80.06 53 ⇓P P 13 49 36.8 -0.7
baz=80,SNR=12
K15A Arbon 80.07 41 ⇓P P 13 49 37.8 +0.5
baz=80
R19A Curley Farm, L 80.07 46 ⇑P P 13 49 37.6 +0.1
baz=80
V21A Milan 80.09 49 ⇓P P 13 49 38.2 +0.6
baz=80
BNM Barren Site 80.11 51 eP P 13 49 38.2 +0.5
comp=Z,13nm,1.3s,mb4.7
MVCO Mesa Verde 80.11 47 ⇓P P 13 49 37.5 -0.2
baz=80
MVCO Mesa Verde 80.11 47 PFAKE 13 49 50.0 +12
MVCO LR LR

comp=Z,3µm,22.0s,MS5.6
626A Big Bend Ranch 80.13 56 ⇓P P 13 49 38.3 +0.4
baz=80
HWUT Hardware Ranch 80.14 42 eP P 13 49 37.1 -0.6
comp=Z,12nm,1.2s,mb4.7
HWUT LR LR

comp=Z,2µm,20.0s,MS5.4
I14A Mackay 80.14 39 ⇑P P 13 49 38.1 +0.4
baz=80
325A Bean Ranch, Si 80.20 54 ⇑P P 13 49 38.0 -0.3
baz=80,SNR=15
E12A Beaver Dam Sad 80.24 36 ⇓P P 13 49 37.5 -0.6
baz=80
KLR Kul'dur 80.24 327 eP P 13 49 34.8 -3.3
KLR eS S 13 59 41.0 +0.2
KLR pmax pmax

comp=Z,1µm,5.0s
N17A Moffit Pass 80.29 43 ⇑P P 13 49 38.7 +0.1
baz=80
TRF Thorofare Moun 80.29 10 eP P 13 49 37.9 -0.1
comp=Z,54nm,1.5s,mb5.3
G13A Cobalt 80.30 38 ⇑P P 13 49 38.5 0.0
baz=80,SNR=11
W22A Albuquerque 80.33 50 ⇓P P 13 49 39.8 +0.9
baz=80
U21A Nageezi 80.35 48 ⇑P P 13 49 39.5 +0.5
baz=80,SNR=18
526A Mary Lane Ranc 80.36 55 ⇑P P 13 49 39.5 +0.3
baz=80
PV04 Paradox Valley 80.37 46 eP P 13 49 36.1 -2.9
124A Stringfield Ra 80.38 52 ⇓P P 13 49 39.6 +0.4
baz=80
TXAR Lajitas Array 80.42 56 P P 13 49 39.7 +0.2
comp=Z,13nm,1.2s,mb4.7,baz=221,slow=4.3,SNR=16
TXAR LR LR 14 19 12.9

comp=Z,2µm,19.0s,MS5.4,baz=350,slow=31
SKAG Skagway 80.42 19 P P 13 49 39.0 +0.2
comp=Z,52nm,1.5s,mb5.2
NEW Newport 80.42 34 ⇓P P 13 49 39.3 +0.2
baz=80
NEW Newport 80.42 34 P P 13 49 38.8 -0.3
comp=Z,6.4nm,1.2s,mb4.4
NEW LR LR

comp=Z,579nm,21.0s,MS4.9
L16A Fish Haven 80.43 42 ⇓P P 13 49 39.5 +0.2
baz=80
Y23A Lovelace Mesa, 80.44 51 ⇑P P 13 49 39.5 0.0
baz=80
PV01 Paradox Valley 80.48 46 eP P 13 49 39.3 -0.3
J15A Blackfoot 80.50 40 ⇓P P 13 49 40.3 +0.7
baz=80,SNR=9.5
O18A Roosevelt 80.50 44 ⇓P P 13 49 39.9 +0.2
baz=80
H14A Leadore 80.56 39 ⇓P P 13 49 39.8 -0.1
baz=80
ANMO Albuquerque 80.58 50 eP P 13 49 40.7 +0.4
comp=Z,50nm,1.8s,mb5.1
ANMO LR LR

comp=Z,2µm,21.0s,MS5.5
ANMO Albuquerque 80.58 50 P P 13 49 41.1 +0.9
comp=Z,1.4nm,0.4s,mb4.2,baz=208,slow=4.5,SNR=12
ANMO Albuquerque 80.58 50 eP P 13 49 40.7 +0.5
ANMO pmax pmax

comp=Z,49nm,1.8s
ANMO MLR MLR

comp=Z,2µm,21.0s
F13A Darby 80.61 37 ⇓P P 13 49 39.6 -0.6
baz=81
225A Deer Hill, Car 80.62 53 ⇑P P 13 49 41.2 +0.6
baz=80
X23A Hourglass Bar 80.62 50 ⇓P P 13 49 40.6 +0.1
baz=80
R20A Redvale 80.64 46 ⇓P P 13 49 40.6 +0.1
baz=81
426A McDonald Obser 80.66 55 ⇑P P 13 49 40.7 -0.1
baz=81,SNR=18
C11A Tepee Creek (N 80.66 35 ⇑P P 13 49 39.9 -0.4
baz=81
M17A Scullys Gap (B 80.66 43 ⇓P P 13 49 40.7 +0.2
baz=81
V22A San Miguel Ran 80.67 49 ⇑P P 13 49 40.9 +0.2
baz=81
627A Terlingua Ranc 80.69 56 ⇑P P 13 49 41.2 +0.3

T21A **Navajo Lake** 80.69 48 ⇓P P 13 49 41.0 +0.1
baz=81,SNR=22
D12A **Red Ives Fores** 80.72 36 ⇑P P 13 49 40.0 -0.7
baz=81
K16A **Soda Springs** 80.74 41 ⇑P P 13 49 40.8 -0.1
baz=81
I15A **Monteview** 80.78 40 ⇑P P 13 49 41.6 +0.6
baz=81
PAX **Paxson** 80.78 13 *eP* P 13 49 42.0 +1.4
comp=Z,33nm,1.5s,mb5.0
PAX **Paxson** 80.78 13 *eP* P 13 49 42.0 +1.4
PAX pmax pmax
comp=Z,33nm,1.5s,mb5.0
527A **Woodward Ranch** 80.78 55 ⇓P P 13 49 41.4 -0.1
baz=81
MCK **McKinley** 80.79 11 *eP* P 13 49 38.6 -2.1
comp=Z,43nm,1.1s,mb5.3
MCK **McKinley** 80.79 11 *eP* P 13 49 38.6 -2.1
MCK pmax pmax
comp=Z,43nm,1.1s,mb5.3
S21A **Coal Bank Pass** 80.81 47 ⇑P P 13 49 42.3 +0.8
baz=81,SNR=19
L17A **Cokeville** 80.83 42 ⇓P P 13 49 40.9 -0.6
baz=81
CN2 **Changchun** 80.84 320 *eP* P 13 49 41.9 +0.5
CN2 *epP* pP 13 49 46.6 -5.8
CN2 *eS* S 13 59 49.3 +2.0
CN2 pmax pmax
comp=Z,30nm,0.9s,mb5.2
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,600nm,18.0s,MS5.2
CN2 LR LR
comp=E,900nm,18.0s,MS5.2
CN2 LR LR
comp=Z,1µm,20.0s,MS5.2
G14A **Jackson** 80.84 38 ⇓P P 13 49 41.5 +0.1
baz=81
W23A **Werner Place,** 80.90 50 ⇑P P 13 49 42.2 +0.3
baz=81
P19A **Cripple Cowboy** 80.90 45 ⇓P P 13 49 41.6 -0.2
baz=81
Y24A **Capitan** 80.90 51 ⇓P P 13 49 41.9 -0.1
baz=81,SNR=8.0
U22A **Llaves** 80.91 49 ⇑P P 13 49 42.4 +0.4
baz=81
J16A **Bone** 80.95 41 ⇓P P 13 49 42.2 +0.1
baz=81,SNR=6.8
326A **Caldwell Ranch** 80.95 54 ⇑P P 13 49 42.1 -0.3
baz=81
125A **Gardner Draw,** 80.97 53 ⇓P P 13 49 42.2 -0.2
baz=81
MCMT **McKenzie Canyo** 80.99 39 *eP* P 13 49 42.8 +0.6
comp=Z,11nm,1.1s,mb4.7
H15A **Lima** 81.00 39 ⇑P P 13 49 42.1 -0.2
baz=81,SNR=9.2
GDL2 **Guadalupe Moun** 81.01 53 *eP* P 13 49 43.0 +0.4
comp=Z,17nm,1.2s,mb4.8
C12B **Naegeli Ranch,** 81.02 35 ⇓P P 13 49 41.9 -0.3
baz=81
AHID **Auburn Hatcher** 81.02 41 PFAKE 13 49 50.0 +7.6
AHID LR LR
comp=Z,889nm,19.0s,MS5.1
M18A **Lyman** 81.03 43 ⇓P P 13 49 42.3 -0.2
baz=81
Q20A **Ridgley Place,** 81.05 46 ⇓P P 13 49 42.4 -0.2
baz=81
E13A **Victor** 81.05 37 ⇑P P 13 49 42.0 -0.5
baz=81
N18A **Larsen Ranch,** 81.07 43 ⇓P P 13 49 42.2 -0.5
baz=81
628A **Black Gap, Mar** 81.10 56 ⇑P P 13 49 43.2 0.0
baz=81,SNR=18
O19A **Miners Draw (B** 81.11 44 ⇑P P 13 49 42.9 0.0
baz=81
MENT **Mentasta** 81.12 13 *eP* P 13 49 41.8 -0.7
V23A **Ortiz Mt. (NFS** 81.12 49 ⇓P P 13 49 44.1 +0.9
baz=81
K17A **Gardner Place,** 81.12 41 ⇓P P 13 49 43.0 0.0
baz=81
T22A **Edith** 81.16 48 ⇑P P 13 49 43.4 +0.1
baz=81,SNR=6.8
226A **Malaga, Loving** 81.16 53 ⇑P P 13 49 42.9 -0.5
baz=81,SNR=6.4
RRI2 **Red Ridge** 81.17 41 *eP* P 13 49 43.7 +0.5
comp=Z,25nm,1.1s,mb5.0
F14A **Wisdom** 81.19 38 ⇑P P 13 49 43.2 -0.1
baz=81
427A **Hayter Ranch,** 81.22 55 ⇑P P 13 49 44.0 +0.2
baz=81,SNR=12
P20A **De Beque** 81.24 45 ⇑P P 13 49 43.7 0.0
baz=81
D13A **Huson** 81.25 36 ⇓P P 13 49 42.5 -1.0
baz=81,SNR=11
L18A **Fontenelle, Gr** 81.29 42 ⇓P P 13 49 43.8 -0.1
baz=81
R21A **Cimarron** 81.30 47 ⇑P P 13 49 45.0 +1.0
baz=81
I16A **Newdale** 81.33 40 ⇑P P 13 49 44.2 +0.2
baz=81
327A **Balmorhea Ranc** 81.36 54 ⇑P P 13 49 44.3 -0.1
baz=81
N19A **John Jarvie Ra** 81.36 44 ⇑P P 13 49 43.5 -0.8
baz=81
U23A **El Rito** 81.37 49 ⇑P P 13 49 44.8 +0.4
baz=81
B12A **Libby** 81.38 35 ⇓P P 13 49 43.9 -0.3
baz=81
G15A **Dillon** 81.38 39 ⇑P P 13 49 44.5 +0.2
baz=81
DLBC **Dease Lake** 81.38 21 P P 13 49 45.2 +1.3
comp=Z,4,1nm,0.3s,mb4.8,baz=191,slow=24,SNR=9.2
MSO **Missoula** 81.41 37 ⇓P P 13 49 43.5 -0.9
baz=81
MSO **Missoula** 81.41 37 *eP* P 13 49 43.1 -1.3
MSO LR LR
comp=Z,985nm,20.0s,MS5.2
DLMT **Dillon** 81.42 38 *eP* P 13 49 44.2 -0.3
comp=Z,18nm,1.2s,mb4.9
528A **Cox Ranch, San** 81.44 56 ⇑P P 13 49 45.3 +0.3
baz=81,SNR=22
E14A **Clinton** 81.44 37 ⇑P P 13 49 44.1 -0.4
baz=81
126A **Clayton Basin,** 81.46 53 ⇑P P 13 49 44.4 -0.6
baz=81
W24A **Lazy 6 Ranch,** 81.47 50 ⇑P P 13 49 44.9 -0.1
baz=81
REDW **Red Top Meadow** 81.47 41 *eP* P 13 49 45.2 +0.4
comp=Z,34nm,1.3s,mb5.1
TPAW **Teton Pass** 81.47 41 *eP* P 13 49 45.2 +0.4
comp=Z,26nm,1.1s,mb5.1
BSMT **Bassoo Peak** 81.48 36 *eP* P 13 49 44.4 -0.3
comp=Z,22nm,1.2s,mb5.0
Q21A **Lamborn Mesa,** 81.50 46 ⇑P P 13 49 45.3 +0.2
baz=81
C13A **Hot Springs** 81.51 36 ⇓P P 13 49 44.4 -0.5
baz=82
S22A **4UR Ranch, Cre** 81.53 47 ⇓P P 13 49 46.2 +0.9
baz=82,SNR=24
J17A **Brown Place, J** 81.56 41 ⇑P P 13 49 45.2 -0.1
baz=82
A12A **Yaak River Ran** 81.61 34 ⇑P P 13 49 45.4 0.0
baz=82
K18A **Toltan Ranch,** 81.63 42 ⇓P P 13 49 45.8 +0.1
baz=82,SNR=9.2
O20A **White River Ci** 81.63 45 ⇑P P 13 49 45.3 -0.4
baz=82
M19A **Rock Springs** 81.66 43 ⇑P P 13 49 46.0 +0.1
baz=82
IMW **Indian Meadow** 81.69 40 *eP* P 13 49 46.5 +0.5
comp=Z,25nm,1.2s,mb5.0
JTMT **Jette** 81.71 36 P P 13 49 45.8 -0.1
comp=Z,12nm,1.6s,mb4.6
F15A **Butte** 81.73 38 ⇓P P 13 49 46.0 -0.1
baz=82
MOOW **Moose Ponds** 81.73 41 *eP* P 13 49 46.5 +0.4
comp=Z,12nm,1.3s,mb4.7
X25A **Clemmons Ranch** 81.74 51 ⇑P P 13 49 46.2 -0.2
baz=82
Z26A **Caprock** 81.74 52 ⇑P P 13 49 46.0 -0.4
baz=82,SNR=6.2
428A **Kincaid Ranch,** 81.74 55 ⇓P P 13 49 47.0 +0.4
baz=82,SNR=11
LRM **Limekiln Ridge** 81.75 38 *eP* P 13 49 46.3 +0.1
comp=Z,110nm,1.5s,mb5.6

LOHW **Long Hollow** 81.75 41 *eP* P 13 49 46.3 0.0
comp=Z,21nm,1.4s,mb4.9
227A **Bennet, Jal** 81.77 54 ⇑P P 13 49 46.2 -0.5
baz=82
V24A **Rampart Ranch,** 81.79 50 ⇓P P 13 49 47.2 +0.6
baz=82
T23A **Casias Ranch,** 81.79 48 ⇑P P 13 49 47.3 +0.6
baz=82
D14A **Greenough** 81.79 37 ⇓P P 13 49 45.1 -1.3
baz=82
R22A **Saguache, Gunn** 81.80 47 ⇑P P 13 49 47.2 +0.6
baz=82
L19A **Farson** 81.82 43 ⇓P P 13 49 46.7 +0.1
baz=82
G16A **Moss Hill, Enn** 81.83 39 ⇑P P 13 49 46.4 -0.3
baz=82
CHMT **Chamberlain Mo** 81.85 37 *eP* P 13 49 46.0 -0.7
comp=Z,7.0nm,1.0s,mb4.5
328A **Wristen Ranch,** 81.90 55 ⇓P P 13 49 46.8 -0.5
baz=82
H16A **Russell Place,** 81.90 40 ⇑P P 13 49 47.9 +0.8
baz=82,SNR=30
I17A **Pilgrim Ck.** 81.92 40 ⇑P P 13 49 47.0 -0.2
baz=82
J18A **Kendall Valley** 81.93 41 ⇑P P 13 49 47.0 -0.3
baz=82,SNR=14
FLWY **Flagg Ranch** 81.93 40 *eP* P 13 49 47.6 +0.4
comp=Z,33nm,1.3s,mb5.1
N20A **Spence Gulch,** 81.94 44 ⇑P P 13 49 47.3 0.0
baz=82,SNR=14
B13A **Whitefish** 81.95 35 ⇑P P 13 49 46.2 -0.9
baz=82
E15A **Deer Lodge** 81.95 38 ⇑P P 13 49 46.8 -0.4
baz=82
Q22A **Crested Butte,** 81.97 46 ⇓P P 13 49 48.1 +0.5
baz=82
127A **Arkansas Junct** 81.98 53 ⇓P P 13 49 47.3 -0.5
baz=82
BW06 **Boulder Array** 82.01 42 ⇑P P 13 49 47.1 -0.5
baz=82,SNR=18
BW06 **Boulder Array** 82.01 42 PFAKE 13 50 00.0 +12
BW06 LR LR
comp=Z,2µm,20.0s,MS5.5
C14A **Swan Lake** 82.02 36 ⇓P P 13 49 46.5 -1.1
baz=82
YFT **Old Faithful** 82.03 40 *eP* P 13 49 49.5 +1.8
comp=Z,26nm,1.2s,mb5.0
COLA **College** 82.03 11 *eP* P 13 49 47.1 -0.1
comp=Z,42nm,1.0s,mb5.3
COLA LR LR
comp=Z,932nm,19.0s,MS5.2
COLA **College** 82.03 11 *eP* P 13 49 47.1 -0.1
COLA pmax pmax
comp=Z,42nm,1.0s,mb5.3
COLA MLR MLR
comp=Z,932nm,19.0s,MS5.2
YMR **Madison River** 82.06 40 *eP* P 13 49 49.1 +1.3
comp=Z,63nm,1.4s,mb5.4
SMCO **Snowmass** 82.07 46 *eP* P 13 49 48.9 +0.8
comp=Z,40nm,1.4s,mb5.2
ILAR **Eielson Array** 82.11 11 P P 13 49 47.2 -0.4
comp=Z,7.7nm,1.0s,mb4.6,baz=216,slow=6.3,SNR=27
Y26A **Elida** 82.12 52 ⇑P P 13 49 48.0 -0.5
baz=82,SNR=11
BOZ **Bozeman (W)** 82.15 39 ⇓P P 13 49 47.8 -0.5
baz=82,SNR=16
BOZ **Bozeman (W)** 82.15 39 *eP* P 13 49 47.9 -0.4
comp=Z,19nm,1.3s,mb4.9
BOZ LR LR
comp=Z,1µm,20.0s,MS5.3
BOZ **Bozeman (W)** 82.15 39 *eP* P 13 49 47.9 -0.4
BOZ pmax pmax
comp=Z,19nm,1.3s,mb4.9
BOZ MLR MLR
comp=Z,1µm,20.0s,MS5.3
H17A **Grant Village** 82.16 40 ⇑P P 13 49 49.8 +1.4
baz=82
W25A **X Bar L Ranch,** 82.17 50 ⇑P P 13 49 48.0 -0.7
baz=82
O21A **Pagoda** 82.20 45 ⇓P P 13 49 48.3 -0.4
baz=82
SEY **Seymchan** 82.20 345 *i* P P 13 49 49.3 +1.1
F16A **Kennard Place,** 82.22 38 ⇑P P 13 49 48.9 +0.3
baz=82
YNR **Norris Junctio** 82.26 40 *eP* P 13 49 48.2 -0.7
comp=Z,28nm,1.4s,mb5.0
A13A **Flathead Natio** 82.29 35 ⇓P P 13 49 49.6 +0.7
baz=82
I18A **Diamond G Ranc** 82.30 41 ⇑P P 13 49 49.5 +0.4
baz=82
M20A **Sweetwater, Wa** 82.30 43 ⇓P P 13 49 48.8 -0.4
baz=82,SNR=6.8
V25A **Rancho No Teng** 82.32 50 ⇓P P 13 49 49.3 -0.2
baz=82,SNR=15
D15A **Lincoln** 82.34 37 ⇑P P 13 49 48.9 -0.4
baz=82,SNR=12
LKWY **Lake** 82.35 40 *eP* P 13 49 50.3 +0.9
comp=Z,33nm,1.2s,mb5.1
LKWY LR LR
comp=Z,1µm,22.0s,MS5.2
LKWY **Lake** 82.35 40 *eP* P 13 49 50.3 +0.9
LKWY pmax pmax
comp=Z,33nm,1.2s,mb5.1
LKWY MLR MLR
comp=Z,1µm,22.0s,MS5.2
X26A **CR and CF Fran** 82.39 51 ⇑P P 13 49 49.7 -0.1
baz=82
P22A **Eagle** 82.41 46 ⇑P P 13 49 50.6 +0.8
baz=82
N21A **Black Mountain** 82.41 44 ⇑P P 13 49 50.3 +0.5
baz=82
L20A **Wamsutter** 82.44 43 ⇑P P 13 49 50.0 0.0
baz=82,SNR=14
SDCO **Great Sand Dun** 82.48 48 *eP* P 13 49 50.5 +0.3
comp=Z,22nm,1.4s,mb4.9
SDCO LR LR
comp=Z,2µm,19.0s,MS5.5
K19A **Absolon Red Bu** 82.50 42 ⇓P P 13 49 49.7 -0.5
baz=82,SNR=8.5
G17A **Pierce Place,** 82.52 39 ⇑P P 13 49 50.6 +0.3
baz=82
E16A **East Helena** 82.57 38 ⇑P P 13 49 49.8 -0.7
baz=82,SNR=9.9
HRY **Holter Researc** 82.57 38 *eP* P 13 49 50.2 -0.3
comp=Z,30nm,1.1s,mb5.2
B14A **Marquette Ranc** 82.61 36 ⇑P P 13 49 50.1 -0.6
baz=83
W26A **Owens Ranch, T** 82.64 51 ⇓P P 13 49 50.8 -0.3
baz=83
S24A **Houchin Ranch,** 82.64 48 ⇑P P 13 49 51.9 +0.8
baz=83,SNR=18
C15A **Salmond Ranch,** 82.68 36 ⇓P P 13 49 50.3 -0.7
baz=83,SNR=17
U25A **Circle Dot Ran** 82.70 49 ⇑P P 13 49 51.9 +0.5
baz=83,SNR=11
K20A **Yellowstone Ra** 82.74 42 ⇓P P 13 49 50.6 -0.9
baz=83,SNR=8.0
Q23A **Hartsel** 82.75 47 ⇓P P 13 49 51.8 +0.2
baz=83
QIZ **Qiongzhong** 82.79 292 P P 13 49 54.4 +2.1
QIZ PP PP 13 53 01.9 -1.0
QIZ S S 14 00 12.5 +4.1
QIZ pmax pmax
comp=Z,340nm,7.6s
QIZ LR LR
comp=E,320nm,22.1s
QIZ LR LR
comp=Z,870nm,24.2s,MS5.0
QIZ **Qiongzhong** 82.79 292 PFAKE 13 50 00.0 +7.7
QIZ LR LR
comp=Z,576nm,20.0s,MS4.9
O22A **Kremmling** 82.80 45 ⇑P P 13 49 52.2 +0.3
baz=83,SNR=5.8
A14A **Double T Ranch** 82.86 35 ⇑P P 13 49 51.7 -0.2
baz=83
F17A **Fitzpatrick Pl** 82.86 39 ⇑P P 13 49 52.2 +0.1
baz=83,SNR=11
M21A **Separation Pea** 82.90 44 ⇓P P 13 49 52.1 -0.2
baz=83,SNR=16
D16A **Dana Ranch, Ca** 82.91 37 ⇑P P 13 49 52.2 -0.1
baz=83,SNR=11
V26A **Tequesquite Ra** 82.91 50 ⇑P P 13 49 52.2 -0.3
baz=83
WHN **Wuhan** 82.92 304 P P 13 49 50.6 -2.1
WHN LR LR
comp=N,730nm,8.3s
WHN LR LR
comp=E,620nm,5.1s

WHN LR LR
comp=Z,2µm,19.7s,MS5.4
MSTX **Muleshoe** 82.94 52 ⇓P P 13 49 52.5 -0.3
baz=83
P23A **Jefferson** 82.95 46 ⇓P P 13 49 53.5 +0.9
baz=83,SNR=11
R24A **Sanders Place,** 82.97 47 ⇓P P 13 49 52.8 +0.1
baz=83
B15A **Bradely Ranch,** 82.99 36 ⇓P P 13 49 51.1 -1.5
baz=83
T25A **Trinidad** 83.01 49 ⇑P P 13 49 52.8 -0.2
baz=83
RWWY **Rawlins** 83.04 44 *eP* P 13 49 52.7 -0.3
comp=Z,72nm,1.4s,mb5.5
L21A **Rawlins** 83.06 43 ⇑P P 13 49 52.6 -0.6
baz=83,SNR=12
DAWY **Dawson** 83.09 14 *eP* P 13 49 52.6 -0.2
N22A **Wattenberg Ran** 83.15 45 ⇓P P 13 49 54.1 +0.5
baz=83,SNR=5.8
W27A **Bowe Ranch, En** 83.16 51 ⇓P P 13 49 53.0 -0.8
baz=83,SNR=11
PAYG **Puerto Ayora** 83.16 89 PFAKE 13 50 10.0 +16
PAYG LR LR
comp=Z,893nm,19.0s,MS5.2
C16A **Fuhringer Ranc** 83.19 37 ⇓P P 13 49 53.0 -0.6
baz=83,SNR=8.3
U26A **Atchley Ranch,** 83.19 50 ⇑P P 13 49 53.8 -0.2
baz=83,SNR=15
S25A **Robets Cordova** 83.21 48 ⇑P P 13 49 53.9 -0.1
baz=83,SNR=26
G18A **Lazy EL Ranch,** 83.24 40 ⇓P P 13 49 53.8 -0.2
baz=83,SNR=10
A15A **Johnson Ranch,** 83.24 35 ⇓P P 13 49 52.7 -1.2
baz=83,SNR=14
Q24A **Divide** 83.25 47 ⇓P P 13 49 54.6 +0.4
baz=83
O23A **Lake Granby, G** 83.26 45 ⇓P P 13 49 54.4 +0.2
baz=83
ISCO **Idaho Springs** 83.29 46 ⇑P P 13 49 54.3 -0.1
baz=83
ISCO **Idaho Springs** 83.29 46 *eP* P 13 49 54.5 +0.1
comp=Z,28nm,1.6s,mb5.0
ISCO LR LR
comp=Z,2µm,19.0s,MS5.4
ISCO **Idaho Springs** 83.29 46 *eP* P 13 49 54.5 +0.1
ISCO pmax pmax
comp=Z,28nm,1.6s,mb5.0
ISCO MLR MLR
comp=Z,2µm,19.0s,MS5.4
EGAK **Eagle** 83.29 13 *eP* P 13 49 53.8 0.0
comp=Z,21nm,1.3s,mb5.0
EGAK LR LR
comp=Z,956nm,19.0s,MS5.2
M22A **Cedar Creek Ra** 83.32 44 ⇓P P 13 49 54.6 +0.1
baz=83
RLMT **Red Lodge** 83.33 40 ⇓P P 13 49 54.8 +0.3
baz=83,SNR=11
RLMT **Red Lodge** 83.33 40 *eP* P 13 49 55.0 +0.5
comp=Z,19nm,1.1s,mb5.0
RLMT LR LR
comp=Z,755nm,22.0s,MS5.0
GCMT **Greycliff** 83.41 39 *eP* P 13 49 55.4 +0.6
comp=Z,24nm,1.5s,mb5.0
F18A **Big Timber** 83.44 39 ⇑P P 13 49 55.1 +0.1
baz=83,SNR=12
D17A **Six Diamond Ra** 83.47 38 ⇑P P 13 49 55.5 +0.3
baz=83,SNR=18
I20A **Worland** 83.49 41 ⇓P P 13 49 55.1 -0.2
baz=83,SNR=15
B16A **M & M Farms, S** 83.53 36 ⇑P P 13 49 54.7 -0.7
baz=84
N23A **Red Feather La** 83.54 45 ⇑P P 13 49 56.1 +0.5
baz=84
E18A **Harlowton** 83.64 38 ⇓P P 13 49 56.4 +0.4
baz=84,SNR=16
P24A **Kohler Place,** 83.66 46 ⇓P P 13 49 55.7 -0.6
baz=84
C17A **Wharram Farm,** 83.67 37 ⇓P P 13 49 55.9 -0.3
baz=84,SNR=10
L22A **Ellis Ranch, M** 83.71 44 ⇑P P 13 49 56.7 +0.1
baz=84,SNR=16
CMIG **Matias Romero** 83.76 71 P P 13 49 56.7 -0.6
comp=Z,5nm,0.8s,mb4.4,baz=290,slow=5.7,SNR=4.3
O24A **Longmont** 83.80 46 ⇑P P 13 49 57.8 +0.8
baz=84
COLD **Coldfoot** 83.81 9 *eP* P 13 49 57.3 +0.9
comp=Z,23nm,1.1s,mb5.2
H20A **Greybull** 83.82 41 ⇓P P 13 49 55.9 -1.1
baz=84
A16A **West Butte Ran** 83.86 36 ⇓P P 13 49 56.4 -0.7
baz=84,SNR=12
Q25A **Bedland, Calha** 83.87 47 ⇓P P 13 49 57.1 -0.3
baz=84
F19A **Roth Farm, Mol** 83.88 39 ⇑P P 13 49 57.3 0.0
baz=84,SNR=16
K22A **Casper** 83.93 43 ⇓P P 13 49 57.3 -0.3
baz=84
JCT **Junction City** 83.95 56 ⇑P P 13 49 57.1 -0.9
baz=84
JCT **Junction City** 83.95 56 *eP* P 13 49 57.1 -0.9
comp=Z,17nm,1.2s,mb5.0
JCT LR LR
comp=Z,2µm,20.0s,MS5.4
JCT **Junction City** 83.95 56 *eP* P 13 49 57.1 -0.9
JCT pmax pmax
comp=Z,17nm,1.2s,mb5.0
JCT MLR MLR
comp=Z,2µm,20.0s,MS5.4
I21A **Big Trails, Te** 83.96 42 ⇓P P 13 49 57.0 -0.8
baz=84,SNR=23
B17A **L&G Farms, Che** 83.98 37 ⇓P P 13 49 57.0 -0.8
baz=84
D18A **Linhart Farms,** 84.02 38 ⇓P P 13 49 58.9 +0.9
baz=84
PHWY **Pilot Hill** 84.05 45 *eP* P 13 49 58.4 +0.2
comp=Z,27nm,1.4s,mb5.2
AMTX **Amarillo** 84.13 52 ⇑P P 13 49 58.2 -0.6
baz=84
AMTX **Amarillo** 84.13 52 *eP* P 13 49 58.6 -0.2
AMTX LR LR
comp=Z,22nm,1.0s,mb5.2
AMTX LR LR
comp=Z,2µm,20.0s,MS5.6
P25A **Willow Gulch B** 84.17 47 ⇑P P 13 49 59.2 +0.2
baz=84,SNR=11
BILL **Bilibino** 84.18 352 PFAKE 13 50 10.0 +12
BILL LR LR
comp=Z,2µm,22.0s,MS5.5
BILL **Bilibino** 84.18 352⇑ *eP* P 13 49 59.6 +1.3
BILL *e* 13 53 13.9
BILL *eS* S 14 00 21.9 +1.5
BILL pmax pmax
comp=Z,36nm,1.2s,mb5.4
N24A **Carr** 84.23 45 ⇑P P 13 49 59.5 +0.3
baz=84
L23A **Garrett** 84.24 44 ⇓P P 13 49 59.1 -0.1
baz=84,SNR=17
E19A **Rath Farm, Rou** 84.27 39 ⇑P P 13 49 59.0 -0.2
baz=84,SNR=13
F20A **Billings** 84.35 40 ⇓P P 13 49 59.5 -0.2
baz=84
A17A **Triple J Farms** 84.37 36 ⇓P P 13 49 58.8 -0.9
baz=84,SNR=23
EGMT **Eagleton** 84.46 37 ⇑P P 13 50 00.2 +0.1
baz=84
EGMT **Eagleton** 84.46 37 *eP* P 13 49 59.7 -0.5
comp=Z,20nm,1.3s,mb5.1
EGMT LR LR
comp=Z,1µm,20.0s,MS5.3
O25A **Wiggins** 84.46 46 ⇑P P 13 49 59.9 -0.5
baz=84
PMSA **Palmer Station** 84.48 156 PFAKE 13 50 10.0 +10
PMSA LR LR
comp=Z,2µm,21.0s,MS5.4
KVTX **Kingsville** 84.49 60 PFAKE 13 50 10.0 +9.2
KVTX LR LR
comp=Z,865nm,20.0s,MS5.1
H21A **Big Horn, Sher** 84.49 41 ⇑P P 13 49 59.9 -0.5
baz=84
M24A **Cheyenne** 84.55 45 ⇑P P 13 50 00.9 +0.1
baz=84
B18A **Beardsley Farm** 84.62 37 ⇓P P 13 50 00.7 -0.3
baz=85
G21A **Lodge Grass** 84.66 40 ⇓P P 13 50 01.3 +0.1
baz=85
E20A **Meyer Farm, Mu** 84.69 39 ⇑P P 13 50 01.0 -0.4
baz=85,SNR=6.2
L24A **Wheatland** 84.72 44 ⇓P P 13 50 02.0 +0.4
baz=85

A18A	**Metzger Ranch,** baz=85,SNR=6.0	**84.85**	**36**	⇓P		**P**		**13 50 01.2**	**-0.9**
D20A	**Manuel Ranch,** baz=85,SNR=13	**84.96**	**39**	⇓P		**P**		**13 50 02.8**	**0.0**
F21A	**Absaloka Mine,** baz=85	**84.99**	**40**	⇓P		**P**		**13 50 03.0**	**+0.1**
EDM	**Edmonton**	**85.19**	**32**	*e*P		**P**		**13 50 03.2**	**-0.5**
BJT	**Baijiatuau** comp=Z,20nm,1.0s,mb5.2	**85.24**	**313**	*e*P		**P**		**13 50 05.5**	**+1.1**
BJT	comp=Z,646nm,22.0s,MS5.0			LR		LR			
BJT	**Baijiatuau**	**85.24**	**313**	*e*P		**P**		**13 50 05.5**	**+1.2**
BJT	comp=Z,20nm,1.0s			pmax		pmax			
BJT	comp=Z,646nm,22.0s			MLR		MLR			
BJI	**Beijing**	**85.25**	**313**	P		**P**		**13 50 04.9**	**+0.6**
BJI				S		S		14 00 28.3	-3.9
BJI	comp=Z,20nm,1.6s,mb5.0			pmax		pmax			
BJI	comp=Z,650nm,5.5s			pmax		pmax			
BJI	comp=N,420nm,24.3s,MS5.0			LR		LR			
BJI	comp=E,560nm,22.2s,MS5.0			LR		LR			
BJI	comp=Z,790nm,28.0s			LR		LR			
E21A	**Keefer Ranch,** baz=85	**85.35**	**39**	⇑P		**P**		**13 50 04.9**	**+0.2**
LAO	**LASA Array** baz=86	**85.94**	**39**	⇓P		**P**		**13 50 07.8**	**+0.2**
LAO	**LASA Array** comp=Z,52nm,1.3s,mb5.6	**85.94**	**39**	P		**P**		**13 50 06.8**	**-0.8**
LAO	comp=Z,713nm,20.0s,MS5.1			LR		LR			
RSSD	**Black Hills** comp=Z,26nm,1.4s,mb5.3	**86.20**	**42**	*e*P		**P**		**13 50 07.2**	**-1.8**
RSSD	comp=Z,1μm,20.0s,MS5.4			LR		LR			
RSSD	**Black Hills**	**86.20**	**42**	*e*P		**P**		**13 50 07.2**	**-1.8**
RSSD	comp=Z,26nm,1.4s,mb5.3			pmax		pmax			
RSSD	comp=Z,1μm,20.0s,MS5.4			MLR		MLR			
OGNE	**Ogallala** baz=86	**86.25**	**46**	⇑P		**P**		**13 50 09.0**	**-0.3**
OGNE	**Ogallala**	**86.25**	**46**	PFAKE				13 50 20.0	+11
OGNE	comp=Z,2μm,21.0s,MS5.4			LR		LR			
WMOK	**Wichita Mounta** comp=Z,18nm,1.6s,mb5.0	**86.29**	**53**	*e*P		**P**		**13 50 08.1**	**-1.6**
WMOK	comp=Z,2μm,21.0s,MS5.4			LR		LR			
WMOK	**Wichita Mounta**	**86.29**	**53**	*e*P		**P**		**13 50 08.1**	**-1.5**
WMOK	comp=Z,18nm,1.6s,mb5.0			pmax		pmax			
WMOK	comp=Z,2μm,21.0s,MS5.4			MLR		MLR			
COCO	**West Island**	**86.68**	**258**	PFAKE				13 50 20.0	+8.0
COCO	comp=Z,1μm,20.0s,MS5.3			LR		LR			
ENH	**Enshi** comp=Z,20nm,1.1s,mb5.3	**86.75**	**302**	P		**P**		**13 50 14.9**	**+2.9**
ENH	comp=Z,852nm,20.0s,MS5.2			LR		LR			
HIA	**Hailar**	**86.94**	**323**	PFAKE				13 50 20.0	+7.6
HIA	comp=Z,2μm,21.0s,MS5.5			LR		LR			
HKT	**Hockley** comp=Z,44nm,1.5s,mb5.5	**87.00**	**58**	*e*P		**P**		**13 50 13.6**	**+0.4**
HKT	comp=Z,2μm,20.0s,MS5.4			LR		LR			
HKT	**Hockley**	**87.00**	**58**	*e*P		**P**		**13 50 13.6**	**+0.4**
HKT	comp=Z,44nm,1.5s,mb5.5			pmax		pmax			
HKT	comp=Z,2μm,20.0s,MS5.4			MLR		MLR			
TIY	**Taiyuan**	**87.04**	**310**	*e*P		**P**		**13 50 13.4**	**+0.1**
TIY				sP		sP		13 50 20.4	-8.0
TIY				PP		PP		13 53 33.5	-3.6
TIY				S		S		14 00 42.9	-7.0
TIY	comp=Z,380nm,5.8s			pmax		pmax			
TIY	comp=N,590nm,15.1s			LR		LR			
TIY	comp=E,240nm,6.0s			LR		LR			
TIY	comp=Z,770nm,16.0s,MS5.2			LR		LR			
CBKS	**Cedar Bluff** baz=87	**87.06**	**49**	⇑P		**P**		**13 50 12.9**	**-0.4**
CBKS	**Cedar Bluff**	**87.06**	**49**	PFAKE				13 50 20.0	+6.7
CBKS	comp=Z,1μm,20.0s,MS5.4			LR		LR			
GYA	**Guiyang**	**87.90**	**298**	P		**P**		**13 50 19.0**	**+1.4**
GYA				PP		PP		13 53 48.4	+4.1
GYA				SKS				14 00 45.3	
GYA				S		S		14 01 01.4	+2.8
GYA	comp=Z,20nm,1.0s,mb5.3			pmax		pmax			
GYA	comp=Z,130nm,6.2s			pmax		pmax			
GYA	comp=N,590nm,20.8s,MS5.1			LR		LR			
GYA	comp=E,560nm,21.0s,MS5.1			LR		LR			
GYA	comp=Z,670nm,20.1s,MS5.0			LR		LR			
INK	**Inuvik** comp=Z,21nm,1.3s,mb5.2	**87.94**	**14**	*e*P		**P**		**13 50 16.5**	**-0.4**
INK	**Inuvik** comp=Z,12nm,1.1s,mb5.0,baz=192,slow=6.6,SNR=9.3	**87.94**	**14**	P		**P**		**13 50 17.5**	**+0.6**
INK	**Inuvik**	**87.94**	**14**	*e*P		**P**		**13 50 16.5**	**-0.3**
INK	comp=Z,21nm,1.3s			pmax		pmax			
DGMT	**Dagmar** baz=88	**87.96**	**38**	⇑P		**P**		**13 50 17.4**	**0.0**
DGMT	**Dagmar** comp=Z,43nm,1.2s,mb5.6	**87.96**	**38**	*e*P		**P**		**13 50 17.6**	**+0.2**
DGMT	comp=Z,2μm,20.0s,MS5.6			LR		LR			
MAW	**Mawson** comp=Z,11nm,0.9s,mb5.1	**88.11**	**199**	*e*P		**P**		**13 50 19.2**	**+1.3**
MAW	**Mawson** comp=Z,3.6nm,0.9s,mb4.6	**88.11**	**199**	*e*P		**P**		**13 50 18.3**	**+0.4**
MAW	**Mawson** comp=Z,15nm,0.9s,mb5.2,baz=123,slow=5.4,SNR=19	**88.11**	**199**	P		**P**		**13 50 18.8**	**+0.9**
MAW	comp=Z,1μm,19.4s,MS5.3,baz=119,slow=34			LR		LR		14 26 42.2	
MAW	**Mawson**	**88.11**	**199**	*e*P		**P**		**13 50 18.3**	**+0.4**
MAW	comp=Z,4.0nm,0.9s			pmax		pmax			
NATX	**Nacogdoches**	**88.53**	**57**	*e*P		**P**		**13 50 20.6**	**+0.1**
NATX	comp=Z,2μm,20.0s,MS5.5			LR		LR			
HHC	**Hu-ho-hao-te**	**88.81**	**313**	*e*P		**P**		**13 50 23.1**	**+1.5**
HHC				pP		pP		13 50 27.5	-5.2
HHC				sP		sP		13 50 30.8	-5.9
HHC				PP		PP		13 53 55.3	+4.1
HHC				SKS				14 00 50.6	
HHC				sS		sS		14 01 17.0	-8.0
HHC	comp=Z,33nm,0.7s,mb5.8			pmax		pmax			
HHC	comp=Z,270nm,6.4s			LR		LR			
HHC	comp=N,190nm,14.5s,MS5.0			LR		LR			
HHC	comp=E,420nm,16.7s,MS5.0			LR		LR			
HHC	comp=Z,600nm,19.5s,MS5.0			LR		LR			
KSU1	**Kansas State U**	**89.44**	**49**	PFAKE				13 50 40.0	+15
KSU1	comp=Z,2μm,20.0s,MS5.6			LR		LR			
YKA	**Yellowknife Ar** comp=Z,6.1nm,0.8s,mb5.0,baz=236,slow=3.9,SNR=5.9	**89.78**	**23**	P		**P**		**13 50 25.7**	**+0.1**
BTO	**Baotou**	**89.82**	**312**	*e*P		**P**		**13 50 27.8**	**+1.5**
TGUH	**Tegucigalpa,Un**	**89.93**	**76**	PFAKE				13 50 40.0	+13
TGUH	comp=Z,2μm,21.0s,MS5.4			LR		LR			
MIAR	**Mount Ida**	**90.27**	**54**	PFAKE				13 50 40.0	+11
MIAR	comp=Z,2μm,21.0s,MS5.4			LR		LR			
TEIG	**Tepich**	**90.66**	**69**	PFAKE				13 50 40.0	+9.3
TEIG	comp=Z,662nm,21.0s,MS5.0			LR		LR			
KMI	**Kunming**	**90.89**	**296**	P		**P**		**13 50 33.9**	**+2.2**
KMI				pP		pP		13 50 37.0	-5.8
KMI				sP		sP		13 50 38.3	-8.6
KMI				PP		PP		13 54 12.5	+4.3
KMI				SKS				14 01 05.8	
KMI				S		S		14 01 28.4	+1.8
KMI				sS		sS		14 01 34.3	-11
KMI	comp=Z,6.0nm,0.5s,mb5.2			pmax		pmax			
KMI	comp=Z,270nm,5.5s			pmax		pmax			
KMI	comp=N,400nm,18.4s,MS5.2			LR		LR			
KMI	comp=E,530nm,15.3s,MS5.2			LR		LR			
KMI	comp=Z,710nm,18.4s,MS5.1			LR		LR			
ECSD	**EROS Data Cent**	**91.01**	**45**	PFAKE				13 50 40.0	+8.2
ECSD	comp=Z,3μm,22.0s,MS5.7			LR		LR			
JTS	**JuntasAbangare**	**91.14**	**80**	PFAKE				13 50 40.0	+6.9
JTS	comp=Z,2μm,20.0s,MS5.6			LR		LR			
JTS	**JuntasAbangare**	**91.14**	**80**	*d* iP		**P**		**13 50 34.2**	**+1.1**
CD2	**Chengdu**	**91.65**	**301**	P		**P**		**13 50 36.1**	**+1.0**
CD2				pP		pP		13 50 40.9	-5.3
CD2				sP		sP		13 50 43.1	-7.1
CD2				PP		PP		13 54 17.6	+3.6
CD2				SKS				14 01 06.6	
CD2				S		S		14 01 34.0	+0.8
CD2				sS		sS		14 01 42.0	-10
CD2	comp=Z,10.0nm,0.5s,mb5.4			pmax		pmax			
CD2	comp=Z,280nm,7.6s			pmax		pmax			
CD2	comp=N,750nm,23.0s,MS5.2			LR		LR			
CD2	comp=E,750nm,21.1s,MS5.2			LR		LR			
CD2	comp=Z,640nm,19.6s,MS5.1			LR		LR			
FFC	**Flin Flon**	**91.82**	**33**	PFAKE				13 50 50.0	+15
FFC	comp=Z,645nm,21.0s,MS5.0			LR		LR			
FFC	**Flin Flon**	**91.82**	**33**	*i* P		**P**		**13 50 38.8**	**+3.5**
VBMS	**Vicksburg**	**92.03**	**57**	PFAKE				13 50 50.0	+13
VBMS	comp=Z,1μm,21.0s,MS5.3			LR		LR			
CM31	**Chiang Mai Arr**	**92.52**	**288**	PFAKE				13 50 50.0	+11
CM31	comp=Z,247nm,22.0s,MS4.6			LR		LR			
CMAR	**Chiang Mai Arr** comp=Z,1.6nm,0.9s,mb4.5,baz=90,slow=2.4,SNR=7.5	**92.52**	**288**	P		**P**		**13 50 39.8**	**+0.4**
CMAR	comp=Z,662nm,21.4s,MS5.0,baz=275,slow=32			LR		LR		14 26 43.7	
CHTO	**Chiang Mai**	**92.61**	**289**	PFAKE				13 50 50.0	+10
CHTO	comp=Z,566nm,21.0s,MS5.0			LR		LR			
SCIA	**State Center**	**92.80**	**47**	PFAKE				13 50 50.0	+10
SCIA	comp=Z,2μm,20.0s,MS5.6			LR		LR			
SYO	**Syowa Base**	**92.93**	**191**	⇓*e*P		**P**		**13 50 40.4**	**+0.1**
AGMN	**Agassiz Nation**	**93.03**	**41**	PFAKE				13 50 50.0	+9.0
AGMN	comp=Z,2μm,20.0s,MS5.5			LR		LR			
LZH	**Lanzhou**	**93.03**	**306**	*e*P		**P**		**13 50 45.3**	**+3.9**
LZH				pP		pP		13 50 48.4	-4.1
LZH				sP		sP		13 50 50.4	-6.1
LZH	comp=Z,20nm,1.0s,mb5.5			pmax		pmax			
LZH	comp=Z,270nm,7.2s			pmax		pmax			
LZH	comp=N,500nm,16.1s			LR		LR			
LZH	comp=Z,800nm,19.8s,MS5.2			LR		LR			
CCM	**Cathedral Cave**	**93.11**	**52**	PFAKE				13 50 50.0	+8.3
CCM	comp=Z,2μm,22.0s,MS5.5			LR		LR			
NNA	**Nana**	**93.12**	**103**	PFAKE				13 50 50.0	+7.7
NNA	comp=Z,1μm,21.0s,MS5.2			LR		LR			
LCO	**Las Campanas**	**93.51**	**121**	PFAKE				13 51 00.0	+16
LCO	comp=Z,2μm,19.0s,MS5.6			LR		LR			
ULM	**Lac du Bonnet** comp=Z,2μm,19.4s,MS5.7,baz=253,slow=32	**93.66**	**39**	LR		LR		14 27 59.2	
FVM	**French Village** comp=Z,25nm,1.5s,mb5.4	**93.71**	**52**	*e*P		**P**		**13 50 41.9**	**-2.5**
FVM	**French Village**	**93.71**	**52**	*e*P		**P**		**13 50 41.9**	**-2.5**
FVM	comp=Z,25nm,1.5s,mb5.4			pmax		pmax			
ULN	**Ulaanbaatar** comp=Z,12nm,1.2s,mb5.2	**94.19**	**318**	*e*P		**P**		**13 50 45.2**	**-1.2**
ULN	comp=Z,1μm,22.0s,MS5.3			LR		LR			
ULN	**Ulaanbaatar**	**94.19**	**318**	*e*P		**P**		**13 50 45.2**	**-1.2**
ULN	comp=Z,12nm,1.2s,mb5.2			pmax		pmax			
ULN	comp=Z,1μm,22.0s,MS5.3			MLR		MLR			
BRAL	**Brewton**	**94.55**	**59**	PFAKE				13 51 00.0	+12
BRAL	comp=Z,972nm,21.0s,MS5.2			LR		LR			
SONM	**Songino Array** comp=Z,2.1nm,1.0s,mb4.5,baz=134,slow=6.4,SNR=11	**94.60**	**318**	P		**P**		**13 50 46.6**	**-1.7**
SONM	comp=Z,0.4nm,0.7s,baz=116,slow=10,SNR=3.7			PP		PP		13 54 35.8	-1.0
TIXI	**Tiksi**	**94.68**	**344**	PFAKE				13 51 00.0	+12
TIXI	comp=Z,872nm,21.0s,MS5.2			LR		LR			
OTAV	**Otavalo**	**94.83**	**91**	PFAKE				13 51 00.0	+10
OTAV	comp=Z,778nm,20.0s,MS5.2			LR		LR			
LRAL	**Lakeview Retre**	**95.11**	**57**	PFAKE				13 51 00.0	+9.0
LRAL	comp=Z,796nm,20.0s,MS5.2			LR		LR			
JFWS	**Jewell Farm**	**95.19**	**47**	PFAKE				13 51 00.0	+8.9
JFWS	comp=Z,3μm,21.0s,MS5.7			LR		LR			
WVT	**Waverly**	**95.22**	**54**	PFAKE				13 51 00.0	+8.6
WVT	comp=Z,2μm,20.0s,MS5.6			LR		LR			
HDIL	**Hopedale**	**95.25**	**50**	PFAKE				13 51 00.0	+8.6
HDIL	comp=Z,2μm,20.0s,MS5.6			LR		LR			
EYMN	**Ely**	**95.72**	**42**	PFAKE				13 51 00.0	+6.6
EYMN	comp=Z,2μm,20.0s,MS5.5			LR		LR			
BCIP	**Isla Barro Col**	**95.73**	**82**	PFAKE				13 51 10.0	+16
BCIP	comp=Z,632nm,21.0s,MS5.1			LR		LR			
COWI	**Conover**	**96.78**	**44**	PFAKE				13 51 10.0	+12
COWI	comp=Z,3μm,20.0s,MS5.7			LR		LR			
TRQA	**Tornquist**	**96.88**	**132**	PFAKE				13 51 10.0	+11
TRQA	comp=Z,1μm,20.0s,MS5.3			LR		LR			
WCI	**Wyandotte Cave**	**96.92**	**52**	PFAKE				13 51 10.0	+11
WCI	comp=Z,2μm,20.0s,MS5.5			LR		LR			
GTA	**Gaotai**	**96.98**	**309**	*e*P		**P**		**13 51 02.4**	**+3.1**
GTA				pP		pP		13 51 06.9	-3.6
GTA				sP		sP		13 51 09.8	-4.7
GTA	comp=Z,3.0nm,1.0s,mb4.7			pmax		pmax			
ZAK	**Zakamensk**	**97.27**	**320**	*e*P		**P**		**13 51 00.2**	**-0.2**
ZAK	comp=Z,2.0nm,1.3s,mb4.4			pmax		pmax			
TLY	**Talaya**	**97.38**	**321**	PFAKE				13 51 10.0	+9.2
TLY	comp=Z,963nm,20.0s,MS5.3			LR		LR			
TLY	**Talaya**	**97.38**	**321**	*e*P		**P**		**13 51 03.2**	**+2.4**
TLY	comp=Z,5.0nm,0.8s,mb5.0			pmax		pmax			
GOGA	**Godfrey**	**98.07**	**58**	PFAKE				13 51 20.0	+16
GOGA	comp=Z,1μm,22.0s,MS5.3			LR		LR			
DWPF	**Disney**	**98.64**	**63**	PFAKE				13 51 20.0	+13
DWPF	comp=Z,623nm,20.0s,MS5.1			LR		LR			
AAM	**Ann Arbor**	**99.78**	**49**	PFAKE				13 51 20.0	+8.4
AAM	comp=Z,1μm,20.0s,MS5.4			LR		LR			
LPAZ	**La Paz**	**99.91**	**110**	PFAKE				13 51 30.0	+18
LPAZ	comp=Z,828nm,19.0s,MS5.3			LR		LR			
LPAZ	**La Paz** comp=Z,741nm,19.2s,MS5.2,baz=258,slow=31	**99.91**	**110**	LR		LR		14 29 18.8	
MTDJ	**Mount Denham**	**100.02**	**74**	PFAKE				13 51 20.0	+7.3
MTDJ	comp=Z,675nm,20.0s,MS5.2			LR		LR			
NHSC	**New Hope**	**100.71**	**59**	PFAKE				13 51 30.0	+14
NHSC	comp=Z,1μm,20.0s,MS5.3			LR		LR			
BLA	**Blacksburg**	**101.27**	**54**	PFAKE				13 51 30.0	+12
BLA	comp=Z,2μm,20.0s,MS5.6			LR		LR			
MCWV	**Mont Chateau**	**102.14**	**52**	PFAKE				13 51 30.0	+7.9
MCWV	comp=Z,3μm,21.0s,MS5.7			LR		LR			
ERPA	**Erie**	**102.42**	**50**	PFAKE				13 51 40.0	+17
ERPA	comp=Z,2μm,19.0s,MS5.7			LR		LR			
GTBY	**Guantanamo Bay** comp=Z,821nm,20.0s,MS5.2	**102.61**	**73**	PFAKE				13 51 40.0	+16
GTBY				LR		LR			
CNNC	**Cliffs of the**	**102.95**	**57**	PFAKE				13 51 40.0	+14
CNNC	comp=Z,2μm,20.0s,MS5.6			LR		LR			
CBN	**Corbin**	**103.82**	**54**	PFAKE				13 51 40.0	+10
CBN	comp=Z,2μm,20.0s,MS5.6			LR		LR			
SDV	**Santo Domingo** comp=Z,358nm,19.0s,MS4.9	**104.50**	**85**	PFAKE				13 51 50.0	+17
SDV				LR		LR			
BINY	**Binghamton**	**105.39**	**50**	PFAKE				13 56 00.0	+10
BINY	comp=Z,2μm,19.0s,MS5.7			LR		LR			
SDDR	**Presa de Saban** comp=Z,2μm,20.0s,MS5.8	**105.97**	**74**	PFAKE				13 56 00.0	+7.8
SDDR				LR		LR			
GRTK	**Grand Turk**	**106.56**	**72**	PFAKE				13 56 10.0	+17
GRTK	comp=Z,633nm,19.0s,MS5.2			LR		LR			
LONY	**Lake Ozonia**	**106.64**	**47**	PFAKE				13 56 00.0	+7.3
LONY	comp=Z,2μm,20.0s,MS5.6			LR		LR			
WMQ	**Urumqi**	**106.65**	**312**	*e*Pdif		Pdif		13 51 44.4	+2.2
WMQ				PP		PP		13 56 12.9	+4.8
WMQ				S		Sdif		14 03 42.4	+2.2
WMQ	comp=Z,250nm,5.0s			AMB		AMB			
WMQ	comp=N,180nm,17.0s,MS4.9			LR		LR			
WMQ	comp=E,270nm,18.0s,MS4.9			LR		LR			
WMQ	comp=Z,330nm,19.2s,MS4.9			LR		LR			
NCB	**Newcomb**	**106.84**	**48**	PFAKE				13 56 10.0	+17
NCB	comp=Z,3μm,20.0s,MS5.8			LR		LR			
LBNH	**Lisbon**	**108.51**	**48**	PFAKE				13 56 10.0	+14
LBNH	comp=Z,3μm,20.0s,MS5.8			LR		LR			
ZALV	**Zalesovo Beam** comp=Z,0.3nm,0.3s,baz=35,slow=5.4,SNR=3.9	**108.97**	**322**	Pdiff		Pdif		13 51 52.5	+0.1
ZALV				PKiKP		PKiKP		13 55 56.9	+0.1
PKME	**Peaks-Kenny Pk** comp=Z,0.7nm,0.7s,baz=40,slow=2.5,SNR=4.6	**110.43**	**47**	PFAKE				13 56 10.0	+10
PKME	comp=Z,926nm,20.0s,MS5.4			LR		LR			
MKAR	**Makanchi Array** comp=Z,1.8nm,0.9s,baz=108,slow=4.0,SNR=10	**110.60**	**315**	PKiKP		PKiKP		13 56 00.0	-0.1
MKAR	comp=Z,0.3nm,0.2s,baz=87,slow=12,SNR=4.6			PP		PP		13 56 36.5	-0.3
SJG	**San Juan**	**110.61**	**76**	PFAKE				13 56 10.0	+9.1
SJG	comp=Z,720nm,20.0s,MS5.2			LR		LR			
SCHQ	**Schefferville**	**111.71**	**37**	PFAKE				13 56 10.0	+8.1
SCHQ	comp=Z,957nm,22.0s,MS5.3			LR		LR			
KURK	**Kurchatov**	**112.90**	**319**	PKPdf		PKiKP		13 56 04.7	+0.4
KURK				PP		PP		13 56 54.0	+1.0
KURK	comp=Z,978nm,19.0s,MS5.4			LR		LR			
KURK	**Kurchatov** comp=Z,4.3nm,0.9s,baz=94,slow=1.9,SNR=13	**112.90**	**319**	PKiKP		PKiKP		13 56 04.7	+0.4
KURK				PP		PP		13 56 54.0	+1.0
KURK	**Kurchatov**	**112.90**	**319**	⇓*i* PKIKP		PKiKP		13 56 05.0	+0.7
KURK	comp=Z,7.0nm,1.0s			pmax		pmax			
KURK	comp=Z,928nm,19.0s,MS5.4			MLR		MLR			
BBSR	**BB Station**	**113.55**	**61**	PFAKE				13 56 20.0	+14
BBSR	comp=Z,684nm,22.0s,MS5.2			LR		LR			
GRGR	**Grenville**	**113.81**	**83**	PFAKE				13 56 20.0	+13
GRGR	comp=Z,461nm,19.0s,MS5.1			LR		LR			
ANWB	**Willy Bob**	**114.64**	**77**	PFAKE				13 56 20.0	+11
ANWB	comp=Z,516nm,20.0s,MS5.1			LR		LR			
SPB	**Sao Paulo**	**114.68**	**125**	PFAKE				13 56 20.0	+11
SPB	comp=Z,2μm,20.0s,MS5.6			LR		LR			
FDF	**Fort de France**	**114.77**	**81**	PFAKE				13 56 20.0	+11
FDF	comp=Z,556nm,21.0s,MS5.1			LR		LR			
KSH	**Kashi**	**115.28**	**307**	*e*PKP		PKPdf		13 56 12.3	+3.0
KSH				*e*PKS				13 59 48.1	
KSH				*e*SKS		SKSdf		14 03 19.8	+1.0
KSH	comp=Z,93nm,6.0s			AMB		AMB			
KSH	comp=N,120nm,12.2s,MS4.9			LR		LR			
KSH	comp=E,170nm,15.9s,MS4.9			LR		LR			
KSH	comp=Z,120nm,7.7s			LR		LR			
BBGH	**Gun Hill**	**116.01**	**83**	PFAKE				13 56 20.0	+8.7
BBGH	comp=Z,2μm,22.0s,MS5.6			LR		LR			
KBS	**Kingsbay**	**116.06**	**359**	PFAKE				13 56 20.0	+10
KBS	comp=Z,369nm,20.0s,MS5.0			LR		LR			
AAK	**Ala-Archa**	**116.28**	**310**	PFAKE				13 56 20.0	+8.9
AAK	comp=Z,612nm,20.0s,MS5.2			LR		LR			
EKS2	**Erkin-Say**	**116.80**	**310**	PFAKE				13 56 20.0	+7.9
EKS2	comp=Z,569nm,20.0s,MS5.2			LR		LR			
NIL	**Nilore**	**117.52**	**300**	PFAKE				13 56 30.0	+16
NIL	comp=Z,65nm,19.0s,MS4.3			LR		LR			
BVAR	**Borovoye Array** comp=Z,5.4nm,0.9s,baz=158,slow=0.8,SNR=22	**117.62**	**322**	PKP		PKPdf		13 56 12.3	-1.0
BRVK	**Borovoye**	**117.68**	**322**	PFAKE				13 56 30.0	+17
BRVK	comp=Z,1μm,22.0s,MS5.4			LR		LR			
BRVK	**Borovoye**	**117.68**	**322**	⇑*i* PKIKP		PKPdf		13 56 13.5	+0.1
BRVK	comp=Z,9.0nm,1.0s			pmax		pmax			
SVE	**Sverdlovsk**	**121.85**	**328**	*i* PKIKP		PKPdf		13 56 23.6	+2.3
SVE				*e*SS		SS		14 14 39.8	+10
SVE				*e*SSS				14 18 55.1	
SVE	comp=Z,14nm,1.0s			pmax		pmax			
SVE	comp=Z,757nm,20.0s,MS5.3			MLR		MLR			
SOKR	**Solikamsk**	**122.49**	**332**	*d i* PKIKP		PKPdf		13 56 25.6	+3.1
SOKR	comp=Z,20nm,0.8s			pmax		pmax			
SOKR	comp=Z,810nm,20.0s,MS5.4			MLR		MLR			
ARU	**Arti**	**123.06**	**329**	*e*PKPdf		PKPdf		13 56 23.4	-0.3
ARU	comp=Z,959nm,21.0s,MS5.4			LR		LR			
ARU	**Arti**	**123.06**	**329**	*i* PKIKP		PKPdf		13 56 22.5	-1.2
ARU				SP		SP		14 07 51.0	-3.5
ARU				PS		PS		14 08 01.0	+1.1
KEV	**Kevo**	**123.87**	**352**	PFAKE				13 56 40.0	+15
KEV	comp=Z,603nm,21.0s,MS5.2			LR		LR			
LVZ	**Lovozero**	**124.18**	**348**	PFAKE				13 56 40.0	+14
LVZ	comp=Z,525nm,19.0s,MS5.2			LR		LR			
ARCES	**ARCESS Array B** comp=Z,3.9nm,0.8s,baz=349,slow=1.2,SNR=8.4	**124.28**	**352**	PKP		PKPdf		13 56 26.9	+1.2
APA	**Apatity**	**124.71**	**348**	⇑*i* PKIKP		PKPdf		13 56 36.0	+9.5

APA					pmax	pmax			
	comp=Z,34nm,1.3s								
APA					MLR	MLR			
	comp=Z,800nm,18.0s,MS5.4								
ABKAR	**Akbulak array**	**124.97**	**320**	*e*PKPdf	PKPdf	13 56 27.0	-0.6		
AKTK	**Aktyubinsk**	**125.73**	**322**	PKP	PKPdf	13 56 29.8	+0.8		
AKTO	**Aktyubinsk**	**125.73**	**322**	PKP	PKPdf	13 56 29.8	+0.8		
	comp=Z,5.8nm,0.9s,baz=354,slow=1.0,SNR=15								
BORG	**Borgarnes**	**126.83**	**15**	PFAKE		13 56 40.0	+9.3		
BORG				LR	LR				
	comp=Z,615nm,22.0s,MS5.2								
ABPO	**Ambohimpanom**	**127.60**	**231**	PFAKE		13 56 50.0	+16		
ABPO				LR	LR				
	comp=Z,1μm,20.0s,MS5.6								
MSEY	**Mahe Island**	**127.77**	**252**	PFAKE		13 56 50.0	+16		
MSEY				LR	LR				
	comp=Z,1μm,21.0s,MS5.5								
KLMR	**Klimovskoe**	**128.48**	**340**	PKIKP	PKPdf	13 56 35.2	+1.3		
KLMR				pmax	pmax				
	comp=Z,20nm,1.3s								
SUR	**Sutherland**	**130.91**	**196**	PFAKE		13 56 50.0	+10		
SUR				LR	LR				
	comp=Z,1μm,19.0s,MS5.5								
BOSA	**Boshof**	**132.98**	**203**	PFAKE		13 57 00.0	+16		
BOSA				LR	LR				
	comp=Z,415nm,20.0s,MS5.1								
RCBR	**Riachuelo**	**133.03**	**113**	PFAKE		13 57 00.0	+16		
RCBR				LR	LR				
	comp=Z,996nm,20.0s,MS5.5								
OBN	**Obninsk**	**133.81**	**337**	PFAKE		13 57 00.0	+16		
OBN				LR	LR				
	comp=Z,662nm,21.0s,MS5.3								
OBN	**Obninsk**	**133.81**	**337**	*i* PKIKP	PKPdf	13 56 47.4	+3.2		
OBN				*e*		14 03 56.0			
OBN				*e*PS	PS	14 09 33.2	-0.2		
OBN				pmax	pmax				
	comp=Z,7.0nm,1.2s								
OBN				MLR	MLR				
	comp=Z,700nm,22.0s,MS5.3								
NOA	**NORSAR Array B**	**133.97**	**357**	PKP	PKPdf	13 56 46.2	+1.9		
	comp=Z,1.3nm,0.8s,baz=13,slow=4.1,SNR=3.5								
KONO	**Kongsberg**	**135.43**	**358**	PFAKE		13 57 00.0	+13		
KONO				LR	LR				
	comp=Z,722nm,20.0s,MS5.4								
LBTB	**Lobatse**	**136.07**	**205**	PFAKE		13 57 00.0	+11		
LBTB				LR	LR				
	comp=Z,426nm,19.0s,MS5.2								
KIV	**Kislovodsk**	**137.95**	**321**	PFAKE		13 57 10.0	+18		
KIV				LR	LR				
	comp=Z,769nm,20.0s,MS5.4								
KIV	**Kislovodsk**	**137.95**	**321**	*i* PKIKP	PKPdf	13 56 55.2	+3.0		
KIV				pmax	pmax				
	comp=Z,4.0nm,0.9s								
KIV				MLR	MLR				
	comp=Z,600nm,20.0s,MS5.3								
GNI	**Garni**	**138.45**	**314**	PKP	PKPdf	13 56 55.3	+2.0		
GNI				LR	LR				
	comp=Z,431nm,20.0s,MS5.2								
GNI	**Garni**	**138.45**	**314**	PKP	PKPdf	13 56 55.3	+2.0		
	comp=Z,4.2nm,0.5s,baz=30,slow=15,SNR=4.5								
GNI	**Garni**	**138.45**	**314**	⇓*i* PKIKP	PKPdf	13 56 56.4	+3.1		
GNI				pmax	pmax				
	comp=Z,23nm,1.7s								
GNI				MLR	MLR				
	comp=Z,435nm,23.0s								
ESK	**Eskdalemuir**	**139.12**	**9**	PFAKE		13 57 10.0	+16		
ESK				LR	LR				
	comp=Z,1μm,20.0s,MS5.6								
AKASG	**Malin Array Be**	**140.03**	**338**	PKP	PKPdf	13 56 57.0	+1.1		
AKASG	**Malin Array Be**	**140.03**	**338**	PKP	PKPdf	13 56 57.0	+1.1		
	comp=Z,7.8nm,1.0s,baz=24,slow=1.8,SNR=5.2								
KIEV	**Kiev**	**140.05**	**338**	PFAKE		13 57 10.0	+14		
KIEV				LR	LR				
	comp=Z,777nm,20.0s,MS5.5								
PTK	**Pertek**	**142.69**	**316**	*e*P	PKPdf	13 57 01.7	+0.7		
SVRC	**Sivrice-ELAZID**	**143.00**	**315**	*e*P	PKPdf	13 56 59.3	-2.3		
LSZ	**Lusaka**	**143.07**	**216**	PFAKE		13 57 20.0	+18		
LSZ				LR	LR				
	comp=Z,896nm,19.0s,MS5.5								
KWP	**Kalwaria Pacla**	**143.11**	**343**	PFAKE		13 57 10.0	+8.6		
KWP				LR	LR				
	comp=Z,1μm,20.0s,MS5.6								
KIS	**Kishinev**	**143.18**	**334**	*e*PP	PP	14 00 30.0	+19		
KIS				*e*SKP		14 00 42.0			
KIS	**Kishinev**	**143.18**	**334**	*e*PPP		14 03 42.0			
KIS				*e*L		14 48 20.0			
KIS				LRM		14 59 00.0			
	comp=Z,900nm,21.0s								
OJC	**Ojcow**	**143.34**	**346**	*e*PKP	PKPdf	13 56 58.5	-3.3		
CLL	**Collm**	**143.48**	**353**	*i* PKIKP	PKPdf	13 57 01.8	-0.2		
CLL				pmax	pmax				
	comp=Z,5.0nm,1.1s								
CLL				MLR	MLR				
	comp=Z,600nm,19.6s,MS5.4								
CLL	**Collm**	**143.48**	**353**	*i* PKPdf	PKPdf	13 57 01.8	-0.2		
	comp=Z,5.0nm,1.1s								
CLL				*e*SS	SS	14 18 54.0	+3.0		
CLL				LmH		15 00 00.0			
	comp=N,500nm,20.4s								
CLL				LmH		15 00 00.0			
	comp=E,300nm,19.2s								
CLL				LmV		15 07 00.0			
	comp=Z,600nm,19.6s								
MALT	**Malatya**	**143.63**	**316**	*e*PKPpre	PKPpre	13 57 01.9			
MALT				LR	LR				
	comp=Z,326nm,20.0s,MS5.1								
MALT	**Malatya**	**143.63**	**316**	⇑PKIKP	PKPdf	13 57 02.7	0.0		
MALT	**Malatya**	**143.63**	**316**	⇑*i*P	PKPdf	13 57 02.7	0.0		
SVSK	**Karacayir**	**143.71**	**319**	*e*P	PKPdf	13 57 00.5	-2.2		
STHS	**Stebnicka Huta**	**143.71**	**344**	*e*PKP	PKPdf	13 57 00.3	-2.2		
STHS	**Stebnicka Huta**	**143.71**	**344**	*e*PKP	PKPdf	13 57 00.3	-2.2		
BRG	**Berggiesshubel**	**143.79**	**352**	*e*PKP	PKPdf	13 57 07.1	+4.6		
	comp=Z,5.2nm,1.0s								
BRG	**Berggiesshubel**	**143.79**	**352**	*e*PKIKP	PKPdf	13 57 07.1	+4.5		
BRG				pmax	pmax				
	comp=Z,3.0nm,1.0s								
URFA	**Urfa**	**143.80**	**314**	*e*P	PKPdf	13 56 59.3	-3.7		
UPC	**Upice**	**143.84**	**350**	*e*PKIKP	PKPdf	13 57 04.6	+2.0		
UPC				*e*		13 57 12.1			
UPC	**Upice**	**143.84**	**350**	*e*PKP	PKPdf	13 57 04.6	+2.0		
UPC				*e*x		13 57 12.1			
DPC	**Dobruska-Polom**	**143.94**	**349**	*e*PKIKP	PKPdf	13 57 03.0	+0.2		
DPC				MLR	MLR				
	comp=Z,800nm,20.7s,MS5.5								
DPC	**Dobruska-Polom**	**143.94**	**349**	*e*PKP	PKPdf	13 57 03.0	+0.2		
DPC				AMS	AMS	14 59 10.0			
	comp=Z,800nm,20.7s								
NIE	**Niedzica**	**143.95**	**345**	*e*PKP	PKPdf	13 57 02.9	0.0		
BUR08	**Bucovina Ar. S**	**144.04**	**338**	*e*PKPpre	PKPdf	13 57 02.7	-0.4		
PVCC	**Panska Ves**	**144.04**	**351**	AMS	AMS	14 59 10.0			
	comp=Z,800nm,20.5s								
BURAR	**Bucovina Array**	**144.06**	**338**	⇓P	PKPdf	13 57 03.1	0.0		
BURAR	**Bucovina Array**	**144.06**	**338**	⇓*i*P	PKPdf	13 57 03.1	0.0		
OKC	**Ostrava-Krasne**	**144.07**	**347**	*e*PKIKP	PKPdf	13 57 03.6	+0.5		
OKC				MLR	MLR				
	comp=Z,700nm,20.3s,MS5.4								
OKC	**Ostrava-Krasne**	**144.07**	**347**	*e*PKP	PKPdf	13 57 03.6	+0.5		
OKC				AMS	AMS	15 00 30.0			
	comp=Z,700nm,20.3s								
CRVS	**Cervenica-Dubn**	**144.12**	**343**	*e*PKP	PKPdf	13 57 02.7	-0.5		
CRVS	**Cervenica-Dubn**	**144.12**	**343**	*e*PKP	PKPdf	13 57 02.7	-0.5		
UZH	**Uzhgorod**	**144.12**	**342**	*de*PKIKP	PKPdf	13 57 03.0	-0.2		
UZH				*e*		13 57 18.7			
UZH				*e*		14 04 16.0			
UZH				MLR	MLR				
	comp=N,230nm,20.0s,MS5.2								
UZH				MLR	MLR				
	comp=E,330nm,20.0s,MS5.2								
UZH				MLR	MLR				
	comp=Z,270nm,20.0s,MS5.0								
MORC	**Moravsky Berou**	**144.25**	**348**	*e*PKPdf	PKPdf	13 57 03.3	-0.1		
MORC	**Moravsky Berou**	**144.25**	**348**	⇑PKIKP	PKPdf	13 57 03.9	+0.5		
MORC	**Moravsky Berou**	**144.25**	**348**	⇑*i*P	PKPdf	13 57 03.9	+0.5		
TSUM	**Tsumeb**	**144.28**	**198**	*e*PKPdf	PKPdf	13 57 06.5	+2.1		
TSUM				LR	LR				
	comp=Z,1μm,19.0s,MS5.7								
MOX	**Moxa**	**144.28**	**355**	*e*PKP	PKPdf	13 57 05.4	+2.0		
	comp=Z,12nm,1.3s								
MOX									
	comp=Z,400nm,21.0s								
MOX	**Moxa**	**144.28**	**355**	*e*PKPbc	PKPdf	13 57 05.0	+1.6		
WERD	**Werda**	**144.41**	**354**	*e*PKPbc	PKPdf	13 57 05.4	+1.8		
TANN	**Tannenbergstha**	**144.42**	**354**	*e*PKPbc	PKPdf	13 57 05.4	+1.7		
GUNZ	**Gunzen**	**144.49**	**354**	*e*PKPbc	PKPdf	13 57 05.9	+2.1		
TRPA	**Tarpa**	**144.50**	**342**	⇑*i*P	PKPdf	13 57 04.3	+0.4		
MEM	**Membach**	**144.54**	**1**	PKP	PKPdf	13 57 02.7	-1.1		
WERN	**Wernitzgruen**	**144.56**	**354**	*e*PKPbc	PKPdf	13 57 06.0	+2.1		
PRU	**Pruhonice**	**144.57**	**351**	*e*PKIKP	PKPdf	13 57 05.1	+1.2		
PRU				MLR	MLR				
	comp=Z,1μm,21.5s,MS5.5								
PRU	**Pruhonice**	**144.57**	**351**	*e*PKP	PKPdf	13 57 05.1	+1.2		
PRU				AMS	AMS	14 59 40.0			
	comp=Z,1μm,21.5s								
SARI	**SarD1z-Kayseri**	**144.59**	**317**	*e*P	PKPdf	13 57 03.7	-0.6		
NKC	**Novy Kostel**	**144.60**	**354**	*e*PKIKP	PKPdf	13 57 06.5	+2.5		
NKC				*e*		13 57 10.9			
NKC				MLR	MLR				
	comp=Z,700nm,26.6s,MS5.3								
NKC	**Novy Kostel**	**144.60**	**354**	*e*PKP	PKPdf	13 57 06.5	+2.5		
NKC				*ep*PKP	pPKPdf	13 57 10.9	-4.6		
NKC				AMS	AMS	15 02 00.0			
	comp=Z,700nm,26.6s								
BCLA	**Clavier**	**144.72**	**1**	PKP	PKPdf	13 57 04.7	+0.6		
TOS	**Tosya**	**144.85**	**323**	*e*P	PKPdf	13 57 04.8	+0.1		
VRAC	**Vranov**	**144.88**	**349**	⇓P	PKPdf	13 57 07.6	+3.1		
VRAC	**Vranov**	**144.88**	**349**	PKIKP	PKPdf	13 57 06.1	+1.6		
VRAC	**Vranov**	**144.88**	**349**	⇓*i*P	PKPdf	13 57 07.6	+3.1		
TNS	**Taunus Mts**	**144.90**	**358**	*e*PKPbc	PKPdf	13 57 06.8	+2.3		
GIVF	**Givet**	**145.02**	**2**	*e*PKP1	PKPbc	13 57 03.7	-0.4		
COCRM	**Corum**	**145.03**	**321**	*e*P	PKPbc	13 57 04.9	+0.5		
BAIF	**Bafes**	**145.04**	**3**	*e*PKP1	PKPbc	13 57 04.9	+0.8		
	comp=Z,107nm,1.4s								
KMRS	**Kahramanmaras**	**145.09**	**316**	*e*P	PKPbc	13 57 04.5	-0.2		
TREC	**Trest**	**145.10**	**350**	*e*PKIKP	PKPdf	13 57 07.5	+2.6		
TREC				MLR	MLR				
	comp=Z,800nm,16.5s,MS5.6								
TREC	**Trest**	**145.10**	**350**	*e*PKP	PKPdf	13 57 07.5	+2.6		
TREC				AMS	AMS	15 05 40.0			
	comp=Z,800nm,16.5s								
VYHS	**Vyhne**	**145.18**	**346**	*e*PKP	PKPdf	13 57 05.9	+0.9		
VYHS	**Vyhne**	**145.18**	**346**	*e*PKP	PKPdf	13 57 05.9	+0.9		
KOLL	**Kolacno**	**145.20**	**346**	*e*PKP	PKPdf	13 57 07.2	+2.1		
KOLL	**Kolacno**	**145.20**	**346**	*e*PKP	PKPdf	13 57 07.2	+2.1		
GRER		**145.24**	**335**	P	PKPbc	13 57 07.7	+2.7		
GRA1	**Grafenberg Arr**	**145.26**	**355**	*e*PKPbc	PKPbc	13 57 07.9	+3.0		
GRA1				LR	LR				
	comp=Z,700nm,21.9s,MS5.4								
GRF	**Grafenberg Arr**	**145.26**	**355**	*e*PKPbc	PKPbc	13 57 07.9	+3.0		
GRF				*e*L		15 02 33.2			
	comp=Z,727nm,21.9s								
TIRR	**Tirgusor**	**145.35**	**332**	*e*PKP	PKPdf	13 57 05.1	-0.4		
CANT	**Cankiri**	**145.36**	**323**	*e*P	PKPbc	13 57 05.7	+0.2		
PSZ	**Piszkesteto**	**145.44**	**344**	*e*PKP	PKPdf	13 57 07.3	+1.8		
PSZ				LR	LR				
	comp=Z,659nm,19.0s,MS5.4								
PSZ	**Piszkesteto**	**145.44**	**344**	⇓*i*P	PKPbc	13 57 08.5	+3.0		
PSZ	**Piszkesteto**	**145.44**	**344**	⇓*e*PKP	PKPdf	13 57 07.4	+1.9		
RUP	**Ruppelstein**	**145.45**	**359**	PKIKP	PKPdf	13 57 07.0	+1.5		
SAFT	**Safranbolu**	**145.49**	**324**	*e*P	PKPdf	13 57 06.8	+1.0		
WLF	**Walferdange**	**145.49**	**1**	*e*PKPbc	PKPbc	13 57 08.8	+3.2		
WLF	**Walferdange**	**145.49**	**1**	*e*PKIKP	PKPdf	13 57 07.1	+1.6		
WLF				MLR	MLR				
	comp=Z,1μm,21.0s,MS5.7								
TOD	**Tromm**	**145.50**	**357**	PKIKP	PKPdf	13 57 07.5	+1.9		
KHC	**Kasperske Hory**	**145.55**	**352**	*e*PKP	PKPdf	13 57 06.8	+1.2		
KHC	**Kasperske Hory**	**145.55**	**352**	*e*PKIKP	PKPdf	13 57 07.0	+1.4		
KHC				*e*		13 57 14.0			
KHC				MLR	MLR				
	comp=Z,1μm,25.2s,MS5.5								
KHC	**Kasperske Hory**	**145.55**	**352**	*e*PKP	PKPdf	13 57 07.0	+1.4		
KHC				*ep*PKP	pPKPdf	13 57 14.0	-3.1		
KHC				AMS	AMS	15 00 10.0			
	comp=Z,1μm,25.2s								
MLR	**Muntele Rosu**	**145.57**	**336**	⇑P	PKPdf	13 57 08.6	+2.8		
MLR	**Muntele Rosu**	**145.57**	**336**	⇑*i*P	PKPdf	13 57 08.6	+2.8		
WET	**Wettzell**	**145.63**	**353**	*e*PKPbc	PKPbc	13 57 08.7	+2.7		
DRGR		**145.63**	**340**	⇑P	PKPdf	13 57 07.6	+1.7		
DRGR		**145.63**	**340**	⇑*i*P	PKPdf	13 57 07.6	+1.7		
MODS	**Modra-Piesok**	**145.64**	**347**	*e*PKP	PKPdf	13 57 09.2	+3.4		
MODS	**Modra-Piesok**	**145.64**	**347**	*e*PKP	PKPdf	13 57 09.2	+3.4		
KMBO	**Kilima Mbogo**	**145.69**	**245**	PKPbc	PKPbc	13 57 08.5	+1.1		
	comp=Z,7.8nm,0.9s,baz=359,slow=24,SNR=9.2								
KMBO	**Kilima Mbogo**	**145.69**	**245**	PKIKP	PKPdf	13 57 10.0	+3.0		
KMBO				MLR	MLR				
	comp=Z,764nm,21.0s								
GEC2	**GERESS Array S**	**145.81**	**352**	*e*PKPbc	PKPbc	13 57 09.1	+2.5		
KOZT	**Kozan**	**145.82**	**316**	*e*P	PKPdf	13 57 07.3	+0.8		
ROSF	**Rostrenen**	**145.83**	**12**	*e*PKP1	PKPbc	13 57 09.0	+2.3		
	comp=Z,154nm,1.5s								
ZST	**Bratislava**	**145.84**	**347**	*e*PKP	PKPdf	13 57 08.5	+2.3		
ZST	**Bratislava**	**145.84**	**347**	*e*PKP	PKPdf	13 57 08.5	+2.3		
FLN	**La Foliniere**	**145.89**	**8**	*e*PKP1	PKPbc	13 57 07.2	+0.3		
	comp=Z,254nm,1.4s								
FLN				*e*MLR	MLR				
	comp=Z,855nm,19.5s,MS5.2								
FLN	**La Foliniere**	**145.89**	**8**	*e*PKIKP	PKPdf	13 57 07.2	+1.0		
FLN				MLR	MLR				
	comp=Z,850nm,19.5s,MS5.5								
BR131	**Keskin Array S**	**145.90**	**321**	*e*PKP	PKPdf	13 57 08.0	+1.4		
BRTR	**Keskin Array B**	**145.90**	**321**	PKPbc	PKPbc	13 57 08.2	+1.0		
	comp=Z,38nm,0.9s,baz=111,slow=2.3,SNR=82								
VOIR		**145.96**	**337**	⇑P	PKPdf	13 57 07.6	+1.1		
VOIR		**145.96**	**337**	⇑*i*P	PKPdf	13 57 07.6	+1.1		
SGMF	**Saint Gilles**	**146.05**	**11**	*e*PKP1	PKPbc	13 57 09.7	+2.3		
BUD	**Budapest**	**146.07**	**345**	⇓*ep*PKP/B	pPKPbc	13 57 15.4	-3.4		
LDF	**La Druitiere**	**146.11**	**8**	*e*PKP1	PKPbc	13 57 07.7	+0.2		
	comp=Z,29nm,1.0s								
SULR		**146.11**	**335**	P	PKPab	13 57 09.4	+1.1		
CEYT	**Ceyhan**	**146.13**	**316**	*e*P	PKPdf	13 57 06.5	-0.5		
LANF	**Langenberg**	**146.16**	**359**	PKP	PKPab	13 57 11.1	+2.8		
GRR	**Gorron**	**146.20**	**9**	*e*PKP1	PKPab	13 57 09.9	+1.4		
QUIF	**Quistinic**	**146.26**	**12**	*e*PKP1	PKPab	13 57 11.0	+2.3		
	comp=Z,175nm,1.4s								
LOD	**Lodumlu**	**146.32**	**322**	*e*P	PKPdf	13 57 08.0	+0.8		
CONA	**Conrad Observa**	**146.35**	**349**	⇓*i*pPKPdf	PKPab	13 57 10.5	+1.4		
	comp=Z,52nm,1.5s,SNR=19								
SOP	**Sopron**	**146.44**	**348**	⇓*e*PKP	PKPab	13 57 10.8	+1.3		
KARA	**Karaisali**	**146.45**	**317**	*e*P	PKPdf	13 57 08.5	+0.9		
MEZF	**Maizieres J'vi**	**146.63**	**2**	*e*PKP1	PKPbc	13 57 10.8	+1.7		
MOA	**Molln**	**146.70**	**351**	*i* pPKPdf	PKPab	13 57 11.1	+0.6		
	comp=Z,34nm,1.2s,SNR=10								
CDF	**Champ du Feu**	**146.74**	**359**	*e*PKP1	PKPbc	13 57 10.4	+1.0		
	comp=Z,50nm,0.9s								
BFO	**Black Forest**	**146.80**	**358**	*e*PKPbc	PKPbc	13 57 10.3	+0.7		
BFO				LR	LR				
	comp=Z,613nm,20.0s,MS5.4								
GZR	**Gura Zlata**	**146.83**	**339**	⇓P	PKPbc	13 57 11.7	+1.9		
GZR	**Gura Zlata**	**146.83**	**339**	⇓*i*P	PKPbc	13 57 11.7	+1.9		
MDU	**Mudurnu**	**146.84**	**325**	*e*P	PKPdf	13 57 08.5	+0.4		
SULT	**Sultanhani-AKS**	**146.91**	**319**	*e*P	PKPdf	13 57 08.9	+0.6		
THEF	**They Montfort**	**146.93**	**1**	PKP	PKPbc	13 57 10.0	+0.1		
ECH	**Echery**	**146.94**	**359**	PKP	PKPbc	13 57 10.0	0.0		
ECH	**Echery**	**146.94**	**359**	*e*PKIKP	PKPdf	13 57 08.2	+0.2		
ECH				MLR	MLR				
	comp=Z,718nm,20.0s,MS5.5								
SPAK	**Spaichingen-Ko**	**147.01**	**357**	PKP	PKPab	13 57 12.2	+0.6		
BZS	**Buzias**	**147.02**	**340**	⇓P	PKPbc	13 57 12.1	+1.8		
BZS	**Buzias**	**147.02**	**340**	PKP2	PKPab	13 57 11.3	-0.5		
BZS	**Buzias**	**147.02**	**340**	⇓*i*P	PKPbc	13 57 12.1	+1.8		
ARSA	**Arzberg**	**147.06**	**349**	⇑*i*sPKPdf	PKPab	13 57 12.5	+0.6		
	comp=Z,11nm,1.0s								
HAU	**Haudompre**	**147.15**	**0**	*e*PKP1	PKPbc	13 57 11.5	+0.9		
	comp=Z,90nm,1.2s								
HAU				*e*MLR	MLR				
	comp=Z,791nm,20.0s,MS5.2								
HAU	**Haudompre**	**147.15**	**0**	*e*PKP2	PKPab	13 57 11.5	-0.7		
HAU				MLR	MLR				
	comp=Z,790nm,20.0s,MS5.5								
GULT	**Gulveren**	**147.25**	**325**	*e*P	PKPdf	13 57 08.9	+0.1		
FELD	**Feldberg im Sc**	**147.26**	**358**	PKP	PKPbc	13 57 12.4	+1.5		
SVRH	**Sivrihisar-ESK**	**147.34**	**323**	*e*P	PKPbc	13 57 11.2	-0.2		
HINF	**Hinteralfeld**	**147.34**	**360**	*e*PKP1	PKPbc	13 57 11.8	+0.7		
PKSM	**Moragy**	**147.35**	**344**	P	PKPbc	13 57 12.1	+0.9		
RETA	**Reutte**	**147.49**	**355**	⇑*i*PKPab	PKPab	13 57 12.7	-0.8		
	comp=Z,33nm,1.2s,SNR=8.6								
KIZT	**Kizilcal**	**147.50**	**322**	*e*P	PKPbc	13 57 13.0	+1.2		
KBA	**Koelnbreinsper**	**147.59**	**351**	⇑*i*PKPab	PKPab	13 57 13.5	-0.4		
	comp=Z,19nm,1.1s,SNR=5.5								
MOTA	**Moosalm**	**147.60**	**354**	⇑*i*pPKPdf	PKPab	13 57 12.8	-1.2		
	comp=Z,19nm,0.8s								
WTTA	**Wattenberg**	**147.62**	**354**	⇑*i*pPKPdf	PKPab	13 57 12.5	-1.6		
	comp=Z,35nm,1.1s								
SOKA	**Soboth**	**147.70**	**349**	⇑*i*sPKPdf	PKPab	13 57 13.7	-0.8		
	comp=Z,45nm,1.4s								
PERS	**Pernice**	**147.73**	**349**	*i* PKPdf	PKPbc	13 57 13.8	+1.6		
DAVA	**Damuels**	**147.76**	**356**	⇓*i*sPKPdf	PKPab	13 57 13.9	-0.7		
	comp=Z,45nm,1.2s,SNR=7.0								
CAVI	**Cavuskoy**	**147.78**	**325**	*e*P	PKPab	13 57 15.7	+0.7		
LOR	**Lormes**	**147.81**	**4**	*e*PKP1	PKPbc	13 57 13.1	+0.7		
	comp=Z,80nm,1.3s								
LOR				*e*MLR	MLR				
	comp=Z,1μm,20.5s,MS5.3								
LOR	**Lormes**	**147.81**	**4**	*e*PKP2	PKPab	13 57 13.1	-1.7		
LOR				MLR	MLR				
	comp=Z,1μm,20.5s,MS5.6								
IKL	**Isikli**	**147.94**	**316**	*e*P	PKPdf	13 57 11.3	+1.2		
FETA	**Feichten**	**147.95**	**355**	*i* sPKPdf	PKPab	13 57 14.0	-1.4		
	comp=Z,24nm,1.1s,SNR=13								
MYKA	**Terra Mystica**	**147.99**	**351**	⇑*ip*PKPdf	PKPbc	13 57 13.1	+0.2		
	comp=Z,20nm,1.0s								
SSF	**Saint Saulge**	**147.99**	**4**	*e*PKP1	PKPbc	13 57 13.8	+0.9		
	comp=Z,100nm,1.2s								
EREN	**Erenkoy**	**148.00**	**315**	*e*P	PKPdf	13 57 12.1	+1.9		
ABTA	**Abfaltersbach**	**148.03**	**352**	⇓*ip*PKPdf	PKPbc	13 57 13.4	+0.4		
	comp=Z,31nm,1.1s								
MFF	**Saint Martin d**	**148.05**	**9**	*e*PKP1	PKPab	13 57 15.2	-0.6		
	comp=Z,68nm,1.2s								
AVF	**Avril sur Loir**	**148.25**	**4**	*e*PKP1	PKPbc	13 57 14.3	+0.7		
	comp=Z,24nm,0.8s								
HDMB	**Hadim**	**148.30**	**318**	*e*P	PKPab	13 57 18.1	+0.9		
ALT	**Altintas**	**148.42**	**324**	*e*P	PKPbc	13 57 14.4	+0.1		
SMF	**Signal de Mont**	**148.43**	**4**	*e*PKP1	PKPbc	13 57 15.0	+0.9		
	comp=Z,105nm,1.4s								
BGF	**Bois d'Agland**	**148.44**	**5**	*e*PKP1	PKPbc	13 57 16.0	+1.9		
CABF	**La Chapelle**	**148.54**	**1**	*e*PKP1	PKPbc	13 57 15.9	+1.5		
	comp=Z,175nm,1.3s								
LFK	**Lefkose**	**148.57**	**315**	*e*P	PKPbc	13 57 14.9	+0.1		
VISS	**Visnje**	**148.58**	**349**	*i* PKPdf	PKPbc	13 57 15.3	+0.8		
JAVS	**Javornik**	**148.63**	**350**	*i* PKPdf	PKPbc	13 57 15.6	+1.0		
TCF	**Toulx Ste Croi**	**148.65**	**6**	*e*PKP1	PKPbc	13 57 16.0	+1.3		
	comp=Z,53nm,1.3s								
BOJS	**Bojanci**	**148.79**	**348**	*i* PKPdf	PKPbc	13 57 15.7	+0.6		
TRI	**Trieste**	**148.86**	**350**	PFAKE		13 57 20.0	+8.7		
TRI				LR	LR				
	comp=Z,597nm,20.0s,MS5.4								
ISP	**Isparta**	**148.99**	**321**	PFAKE		13 57 20.0	+8.2		
ISP				LR	LR				
	comp=Z,705nm,20.0s,MS5.5								
PLDF	**La Plantade**	**149.09**	**4**	PKP	PKPab	13 57 19.1	-0.9		
LEF	**Lefka**	**149.09**	**315**	*e*P	PKPbc	13 57 17.7	+1.5		
RJF	**Les Rejaudoux**	**149.55**	**7**	*e*PKP1	PKPbc	13 57 18.7	+1.7		
	comp=Z,104nm,1.3s								
RJF				*e*MLR	MLR				
	comp=Z,954nm,19.8s,MS5.3								
RJF	**Les Rejaudoux**	**149.55**	**7**	*e*PKP2	PKPbc	13 57 18.7	+1.7		
RJF				MLR	MLR				
	comp=Z,950nm,19.8s,MS5.6			

az=16.6
*NEIC **19** 13:48:37.3±2.4,6.°18S×149.°56E,h75km±19km, Error ellipse: s-maj=36.3km s-min=16.5km az=111.0*

ISC 19 13:48:37.3±3.3,6.°2S±0.°2×149.°6E±0.°3,h75km±27km,n11, σ0s40/10,mb3.6/8,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.99**	**216**	*eP*		**Pn**		**13 49 36.1**	**0.0**
WRA	**Warramunga Arr**	**20.14**	**226**	P		**P**		**13 53 05.8**	**+0.2**
	1.9nm,0.3s,baz=51,slow=11,SNR=42								
WRA				PcP		PcP		13 57 17.9	0.0
	0.7nm,0.7s,baz=31,slow=1.9,SNR=6.2								
ASAR	**Alice Springs**	**23.00**	**219**	P		**P**		**13 53 36.0**	**-0.1**
	1.2nm,0.5s,mb3.5,baz=52,slow=9.6,SNR=25								
ASAR				PcP		PcP		13 57 23.4	0.0
	0.8nm,0.9s,baz=64,slow=4.2,SNR=4.9								
FITZ	**Fitzroy Crossi**	**26.17**	**241**	P		**P**		**13 54 04.3**	**-0.7**
	2.4nm,0.4s,mb4.0,baz=51,slow=7.1,SNR=33								
KSRS	**Korea Array**	**47.88**	**337**	P		**P**		**13 57 07.9**	**0.0**
	0.7nm,0.6s,mb3.6,baz=156,slow=8.2,SNR=3.2								
SONM	**Songino Array**	**65.83**	**330**	P		**P**		**13 59 15.3**	**+0.6**
	0.4nm,0.4s,mb3.6,baz=137,slow=5.9,SNR=2.6								
MKAR	**Makanchi Array**	**79.27**	**320**	P		**P**		**14 00 34.9**	**+0.3**
	0.3nm,0.2s,mb3.7,baz=91,slow=8.6,SNR=2.0								
MKAR				LR		LR		14 37 29.5	
	comp=Z,406nm,21.1s,baz=93,slow=37								
ZALV	**Zalesovo Beam**	**80.53**	**327**	P		**P**		**14 00 40.8**	**-0.4**
	0.4nm,0.5s,mb3.5,baz=108,slow=4.7,SNR=2.8								
MAW	**Mawson**	**83.06**	**203**	P		**P**		**14 00 54.8**	**+0.5**
	0.6nm,0.5s,mb3.7,baz=44,slow=22,SNR=3.6								
ILAR	**Eielson Array**	**84.66**	**23**	P		**P**		**14 01 01.9**	**-0.5**
	0.6nm,0.9s,mb3.5,baz=230,slow=4.2,SNR=3.9								
TORD	**Torodi Ar. Bea**	**147.60**	**285**	PKPbc		PKPbc		14 08 14.2	0.0
	0.2nm,0.3s,baz=57,slow=2.4,SNR=10								

GUC 19 14:04:37.4±0.5,21.°73S×70.°25W,h7km±4km,ML3.8, 2C-1D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**0.89**	**127**	*eP*			Pg	14 04 48.5	-6.0
PB04				*i* S			Sg	14 04 57.2	-8.8
PB01	**Plate Boundary**	**0.98**	**46**	*i* P			Pg	14 04 54.8	-1.5
PB01				*i* S			Sg	14 05 07.7	-1.4
PB01				AML		AML		14 05 10.6	
	comp=E,3μm,0.3s								
HMBC	**Humberston**	**1.48**	**13**	⇑*i* P			Pn	14 05 02.8	-1.7
HMBC				*i* S			Sn	14 05 22.5	-1.7
HMBC				AML		AML		14 05 29.5	
	comp=E,1μm,0.3s								
ANCH	**Antofagasta**	**1.95**	**184**	⇓*i* P			Pn	14 05 03.7	-7.3
ANCH				*i* S			Sn	14 05 28.9	-6.9
ANCH				AML		AML		14 05 41.0	
	comp=E,1μm,0.5s								
PSGC	**Pisagua**	**2.12**	**3**	⇑*i* P			Pn	14 05 11.2	-2.1
PSGC				*i* S			Sn	14 05 38.8	-1.2
MNMC	**Miæe Miæ**	**2.66**	**13**	AML		AML		14 06 13.5	
	comp=E,850nm,0.4s								

JMA 19 14:12:03.8±0.5,44.°58N×150.°26E,h30km,M3.9,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**3.48**	**251**	P			Pn	14 12 55.0	-0.8
NEM2				*e*S			Sn	14 13 33.5	-2.5
JRA	**Rausu**	**3.75**	**262**	P			Pn	14 13 01.6	+2.1
JNK	**Nakash**	**4.11**	**258**	P			Pn	14 13 05.5	+0.9
JNK				*e*S			Sn	14 13 50.6	-1.0
JAK	**Akkeshi**	**4.33**	**250**	P			Pn	14 13 07.0	-0.5
JTKR	**Abashiri--Toko**	**4.60**	**265**	P			Pn	14 13 13.4	+2.1
JAR	**Ashorobuto**	**4.86**	**257**	P			Pn	14 13 15.9	+1.1
JAR				*e*S			Sn	14 14 09.5	-0.5
JMP	**Maruseppu**	**4.99**	**266**	P			Pn	14 13 19.0	+2.5
JCH	**Churui**	**5.38**	**251**	P			Pn	14 13 21.7	-0.3
JNBK	**Urakawa-nobuka**	**5.93**	**250**	P			Pn	14 13 29.3	-0.2
JNBK				*e*S			Sn	14 14 32.3	-4.1
JNB	**Noboribetsu**	**7.03**	**256**	P			Pn	14 13 45.3	+0.7
JNB				*e*S			Sn	14 15 02.0	-1.4
JKB	**Kayabe**	**7.26**	**251**	P			Pn	14 13 47.4	-0.3
JKB				*e*S			Sn	14 15 03.8	-5.2
JANG	**Nango**	**7.71**	**240**	*e*S			Sn	14 15 10.0	-10
JTH	**Tanohata**	**7.76**	**236**	*e*S			Sn	14 15 10.0	-11
OFUJ	**Ofunato**	**8.44**	**232**	*e*S			Sn	14 15 27.4	-11
JRG	**Rokugo**	**8.84**	**237**	*e*S			Sn	14 15 39.7	-8.3

MAN 19 14:13:55,11.°05N×125.°03E,h157km,mb4.2,ML3.0, MS2.7,1C,Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.42**	**270**	*e*P			Pn	14 14 18.2	+1.4
OCLP				*e*S			Sn	14 14 25.8	-7.5
BESP	**Borongan**	**0.68**	**36**	*e*P			Pn	14 14 19.3	+1.2
SCPH	**Surigao**	**1.34**	**160**	⇑*e*P			Pn	14 14 24.2	+0.7
CNP	**Catarman**	**1.50**	**346**	*e*P			Pn	14 14 25.7	+0.7
PVCP	**Virac**	**2.67**	**341**	*e*P			Pn	14 14 39.5	+0.9

DJA 19 14:14:26,0.°42N×121.°09E,h20km,MLv3.8/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TOLI	**Toli-Toli**	**0.76**	**337**	P			Pb	14 14 38.7	-1.8
TOLI				S			Sb	14 14 51.1	+0.7
MRSI	**Marisa**	**0.85**	**86**	P			Pb	14 14 40.7	-1.4
MRSI				S			Sb	14 14 54.7	+1.6
APSI	**Ampana**	**1.44**	**157**	P			Pn	14 14 50.6	-0.3
APSI				S			Sn	14 15 09.8	+0.6

*IDC **19** 14:26:20.1±1.1,15.°19S×173.°64W,h0km,mb4.2/7, mb1 4.5/7,mb1mx4.3/13,mbtmp4.2/7,MS4.0/5,Ms1 4.0/5, ms1mx3.7/15,Error ellipse: s-maj=58.5km s-min=22.6km az=147.0*
*NEIC **19** 14:26:21.7±0.7,15.°13S×173.°67W,h10km,mb4.5/5,Error ellipse: s-maj=34.6km s-min=14.0km az=143.0*
*ISCJB **19** 14:26:24.2±0.9,15.°1S±0.°2×173.°6W±0.°3,h33km,mb4.3/12, MS4.1/4,Error ellipse: s-maj=43.1km s-min=24.0km az=135.3*

ISC 19 14:26:25.7±0.8,15.°1S±0.°2×173.°7W±0.°2,h35km,n29, σ0s74/17,mb4.3/12,MS4.1/4,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.23**	**57**	*e*P			**Pn**	**14 26 48.0**	**-12**
AFI				Sn			**Sn**	**14 27 06.8**	**-20**
AFI				LR		LR		14 27 18.5	
AFI	**Afiamalu**	**2.23**	**57**	Pn			**Pn**	**14 26 48.0**	**-12**
	74nm,0.3s,baz=99,slow=1.1,SNR=11								
AFI				Sn			**Sn**	**14 27 06.8**	**-20**
	259nm,0.3s,baz=198,slow=21,SNR=12								
AFI				LR		LR		14 27 18.5	
	comp=Z,1μm,19.9s,baz=127,slow=26								
MSVF	**Nonsavu**	**8.32**	**251**	*e*P			**Pn**	**14 28 33.9**	**+10**
RAR	**Rarotonga**	**14.56**	**117**	T				14 44 26.5	
	11nm,0.3s,baz=100,slow=22,SNR=6.4								
DZM	**Mont Dzumac**	**20.02**	**247**	*e*LR		LR		14 35 38.0	
	970nm,26.1s								
PPT	**Papeete**	**23.29**	**99**	*e*LQ				14 35 52.5	
	1μm,28.5s								
PPT				*e*LR		LR		14 36 56.5	
	672nm,23.8s,baz=284								
PPT	**Papeete**	**23.29**	**99**	LR		LR		14 37 48.1	
	comp=Z,508nm,21.6s,MS3.9,baz=13,slow=30								
HNR	**Honiara**	**26.34**	**279**	LR		LR		14 40 28.7	
	comp=Z,400nm,19.3s,MS4.0,baz=123,slow=32								
TAOE	**Nuku Hiva Isla**	**33.39**	**83**	*e*LR		LR		14 41 27.5	
	547nm,26.4s								
RKT	**Rikitea**	**37.37**	**108**	*e*LR		LR		14 43 01.7	
	443nm,29.8s,baz=279								
STKA	**Stephens Creek**	**43.91**	**240**	LR		LR		14 51 53.2	
	comp=Z,180nm,19.6s,MS4.0,baz=27,slow=35								
WRA	**Warramunga Arr**	**49.61**	**257**	P			**P**	**14 35 13.8**	**-0.2**
	1.9nm,0.6s,mb4.3,baz=92,slow=7.5,SNR=30								
ASAR	**Alice Springs**	**49.91**	**252**	P			**P**	**14 35 16.0**	**-0.2**
	12nm,0.7s,mb5.0,baz=87,slow=8.0,SNR=97								
NVAR	**Mina Array Bea**	**74.33**	**42**	P			**P**	**14 37 59.8**	**+0.1**
	1.4nm,0.8s,mb3.9,baz=229,slow=10,SNR=7.6								
HLID	**Hailey**	**79.61**	**39**	*e*P			**P**	**14 38 29.6**	**+0.3**
	4.8nm,1.0s,mb4.4								
TXAR	**Lajitas Array**	**80.71**	**56**	P			**P**	**14 38 35.9**	**+0.3**
	0.7nm,0.9s,mb3.6,baz=224,slow=8.8,SNR=5.5								
MCK	**McKinley**	**80.91**	**11**	*e*P			**P**	**14 38 35.4**	**-0.4**
	9.9nm,1.1s,mb4.7								
MCMT	**McKenzie Canyo**	**81.23**	**39**	*e*P			**P**	**14 38 38.3**	**+0.3**
	1.1nm,0.9s,mb3.6								
COLA	**College**	**82.15**	**11**	*e*P			**P**	**14 38 40.9**	**-1.5**
	7.1nm,0.9s,mb4.6								
ILAR	**Eielson Array**	**82.23**	**11**	P			**P**	**14 38 42.4**	**-0.4**
	1.6nm,1.0s,mb3.9,baz=202,slow=5.4,SNR=6.1								
HRY	**Holter Researc**	**82.81**	**38**	*e*P			**P**	**14 38 46.4**	**+0.1**
	2.1nm,0.6s,mb4.3								
MAW	**Mawson**	**87.96**	**199**	P			**P**	**14 39 11.5**	**-0.1**
	3.7nm,0.9s,mb4.6,baz=108,slow=3.2,SNR=4.9								
PLCA	**Paso Flores**	**89.92**	**132**	LR		LR		15 11 33.3	
	comp=Z,143nm,18.1s,MS4.4,baz=97,slow=30								
SONM	**Songino Array**	**94.44**	**318**	P			**P**	**14 39 44.1**	**+2.1**
	0.8nm,0.8s,mb4.2,baz=111,slow=8.2,SNR=4.2								
CDF	**Champ du Feu**	**146.79**	**359**	*e*PKP1		PKPbc		14 46 04.7	+0.6
	33nm,1.4s								
LOR	**Lormes**	**147.89**	**3**	*e*PKP1		PKPbc		14 46 07.6	+0.5
SSF	**Saint Saulge**	**148.07**	**4**	*e*PKP1		PKPbc		14 46 08.7	+1.1
AVF	**Avril sur Loir**	**148.33**	**4**	*e*PKP1		PKPbc		14 46 07.7	-0.6
	14nm,0.9s								
SMF	**Signal de Mont**	**148.51**	**3**	*e*PKP1		PKPbc		14 46 08.8	0.0

*IDC **19** 14:33:23.9±0.9,22.°99N×121.°80E,h0km,mb3.8/8, mb1 3.9/8,mb1mx3.8/21,mbtmp3.9/8,Error ellipse: s-maj=45.0km s-min=18.1km az=64.0*
*ISCJB **19** 14:33:25.6±0.5,22.°90N±0.°02×121.°57E±0.°02,h8km±3km, mb3.8/8,Error ellipse: s-maj=2.8km s-min=2.4km az=41.8*
*NEIC **19** 14:33:25.7±0.8,22.°91N×121.°56E,h10km,Error ellipse: s-maj=11.8km s-min=9.3km az=85.0*
*BJI **19** 14:33:26.6,23.°10N×121.°41E,h10km,mB4.5/2,mb4.5/4, ML3.9/2,Ms3.9/2,Ms7 3.7/3*
*TAP **19** 14:33:27.5,22.°97N×121.°42E,h12km,ML4.2,B*
*JMA **19** 14:33:29.1±0.3,22.°72N×121.°81E,h104km,M2.9*

ISC 19 14:33:26.1±0.4,22.°91N±0.°01×121.°55E±0.°02,h7km±2km, n80,σ0s99/124,mb3.8/8,16C-7D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.25**	**319**	⇑*i* P			**Pg**	**14 33 31.6**	**+0.4**
	baz=344								
CHKT				S			**Sg**	**14 33 34.4**	**-0.1**
	baz=344								
TTN	**Taitung**	**0.40**	**248**	⇓*i* P			**Pg**	**14 33 35.0**	**+1.1**
	baz=229								
TTN				S			**Sg**	**14 33 40.4**	**+1.4**
	baz=229								
TWG	**Pinlang**	**0.45**	**259**	*e*P			**Pg**	**14 33 34.5**	**-0.2**
TWG	**Pinlang**	**0.45**	**259**	⇑P			**Pg**	**14 33 34.9**	**+0.1**
	baz=243								
TWG				*e*S			**Sg**	**14 33 41.2**	**+0.7**
	baz=243								
TWF1	**Yuli**	**0.50**	**333**	⇑*i* P			**Pg**	**14 33 36.1**	**+0.4**
	baz=347								
TWF1				S			**Sg**	**14 33 42.4**	**0.0**
	baz=347								
YULB	**Yu-li**	**0.54**	**335**	*e*P			**Pg**	**14 33 36.3**	**-0.1**
ELDTW	**Lidau**	**0.56**	**300**	⇑*i* P			**Pg**	**14 33 36.4**	**-0.5**
	baz=302								
ELDTW				*e*S			**Sg**	**14 33 42.8**	**-1.5**
	baz=302								
ECL	**Taimali**	**0.63**	**241**	⇓*i* P			**Pg**	**14 33 38.3**	**+0.2**
	baz=242								
EHY	**Hungye**	**0.63**	**341**	⇑*i* P			**Pg**	**14 33 38.6**	**+0.3**
	baz=335								
EHY				S			**Sg**	**14 33 47.5**	**+1.0**
	baz=335								
STYT	**Tauyuan**	**0.77**	**290**	*e*S			**Sg**	**14 33 49.5**	**-1.5**
	baz=288								
YUS	**Yu-Shan**	**0.80**	**317**	⇑*i* P			**Pg**	**14 33 41.2**	**-0.2**
	baz=322								
YUS				S			**Sg**	**14 33 50.4**	**-1.4**
	baz=322								
EAST	**Anshuo**	**0.83**	**231**	⇓*i* P			**Pg**	**14 33 42.0**	**0.0**
	baz=218								
SSD	**Sandimen**	**0.86**	**259**	⇓*i* P			**Pg**	**14 33 41.8**	**-0.8**
	baz=251								
SSD				*e*S			**Sg**	**14 33 51.3**	**-2.4**
	baz=251								
LAY	**Lan-yu**	**0.86**	**180**	⇑*i* P			**Pg**	**14 33 43.1**	**+0.4**
	baz=169								
LAY				*e*S			**Sg**	**14 33 54.7**	**+0.8**
	baz=169								
ALS	**Alishan**	**0.91**	**312**	⇑*e*P			**Pg**	**14 33 43.1**	**-0.5**
	baz=316								
ESL	**Shilin**	**0.91**	**353**	⇑P			**Pg**	**14 33 43.3**	**-0.3**
	baz=15								
ESL				*e*S			**Sg**	**14 33 55.5**	**+0.1**
	baz=15								
WTP	**Ta-pu**	**0.92**	**292**	⇑*i* P			**Pg**	**14 33 43.4**	**-0.4**
	baz=291								
WTP				*e*S			**Sg**	**14 33 55.1**	**-0.7**
	baz=291								
TPUB	**Ta-pu**	**0.93**	**295**	*e*P			**Pg**	**14 33 43.1**	**-0.8**
CHN1	**Nanshi**	**0.98**	**287**	⇑P			**Pg**	**14 33 44.8**	**-0.1**
	baz=293								
CHN1				*e*S			**Sg**	**14 33 57.5**	**-0.1**
	baz=293								
CHN4	**Tsaushan**	**0.98**	**297**	⇑*i* P			**Pg**	**14 33 44.7**	**-0.3**
	baz=307								
CHN4				*e*S			**Sg**	**14 33 57.2**	**-0.6**
	baz=307								
SCZT	**Fagliau**	**1.01**	**238**	⇓*i* P			**Pg**	**14 33 45.0**	**-0.4**
	baz=236								
SSLB	**Suanglung**	**1.03**	**328**	*e*P			**Pg**	**14 33 44.8**	**-1.1**
TWM1	**Shoushan**	**1.04**	**266**	⇓*i* P			**Pg**	**14 33 46.8**	**+0.7**
	baz=254								
TWM1				*e*S			**Sg**	**14 34 02.0**	**+2.4**
	baz=254								
CHN5	**Tsauling**	**1.05**	**311**	⇑*i* P			**Pg**	**14 33 46.0**	**-0.3**
	baz=314								
CHN5				*e*S			**Sg**	**14 34 00.4**	**+0.4**
	baz=314								
HWA	**Hwalien**	**1.07**	**3**	*e*P			**Pg**	**14 33 46.6**	**0.0**
	baz=26								
HWA				*e*S			**Sg**	**14 34 01.5**	**+1.1**
	baz=26								
CHN3	**Shinhua**	**1.10**	**279**	*e*P			**Pg**	**14 33 48.0**	**+0.8**
	baz=276								
CHN3				*e*S			**Sg**	**14 34 04.0**	**+2.5**
	baz=276								
TSEB	**Hengchuen, Pin**	**1.17**	**211**	*e*P			**Pg**	**14 33 47.7**	**-0.7**
	baz=202								
TSEB				*e*S			**Sg**	**14 34 03.9**	**+0.2**
	baz=202								
HEN	**Hengchun**	**1.17**	**220**	P			**Pg**	**14 33 47.9**	**-0.6**
	baz=195								
HEN				*e*S			**Sg**	**14 34 03.1**	**-0.5**
	baz=195								
TWD	**Chiawan**	**1.17**	**2**	*e*P			**Pg**	**14 33 47.0**	**-1.6**
	baz=356								
TWK1	**Hengchun**	**1.18**	**216**	*e*P			**Pg**	**14 33 47.8**	**-0.9**
	baz=191								
TWK1				*e*S			**Sg**	**14 34 02.8**	**-1.2**
	baz=191								
TYC	**Yuchr**	**1.18**	**328**	⇑*i* P			**Pg**	**14 33 47.9**	**-0.8**
	baz=347								
TYC				*e*S			**Sg**	**14 34 04.9**	**+0.9**
	baz=347								
CHY	**Chiayi**	**1.19**	**300**	P			**Pg**	**14 33 48.6**	**-0.3**
	baz=301								
CHY				*e*S			**Sg**	**14 34 04.8**	**+0.4**
	baz=301								
KAU	**Kaohsiung**	**1.19**	**254**	*e*P			**Pg**	**14 33 50.5**	**+1.6**
	baz=240								
KAU				*e*S			**Sg**	**14 34 07.2**	**+2.8**
	baz=240								
WGK	**Gukeng**	**1.19**	**311**	*e*P			**Pg**	**14 33 48.9**	**-0.1**
	baz=314								
WGK				*e*S			**Sg**	**14 34 04.1**	**-0.3**
	baz=314								
TAI1	**Yung-k'ang**	**1.22**	**277**	*e*P			**Pb**	**14 33 49.1**	**-0.4**
	baz=273								
TAI1				*e*S			**Sg**	**14 34 05.8**	**+0.4**
	baz=273								
TWP	**Hsiaoliuchiu**	**1.23**	**243**	⇓*e*P			**Pb**	**14 33 51.6**	**+2.0**
	baz=227								
TWP				*e*S			**Sg**	**14 34 09.1**	**+3.5**
	baz=227								
WNT	**Mingjian**	**1.25**	**321**	⇑P			**Pn**	**14 33 50.0**	**+0.1**
	baz=326								
WNT				*e*S			**Sb**	**14 34 06.8**	**+0.5**
	baz=326								
WHF	**Hehuan Shan**	**1.26**	**348**	*e*P			**Pn**	**14 33 48.9**	**-1.2**
	baz=9.0								
WHF				*e*S			**Sb**	**14 34 05.1**	**-1.5**
	baz=9.0								
NACB	**Ninganchiao**	**1.26**	**2**	*e*P			**Pn**	**14 33 47.9**	**-2.3**
CHN8	**Yiju**	**1.30**	**290**	*e*P			**Pn**	**14 33 50.1**	**-0.6**
	baz=289								
CHN8				S			**Sb**	**14 34 08.2**	**+0.3**
	baz=289								
TWT	**Tachien**	**1.38**	**346**	*e*P			**Pn**	**14 33 50.9**	**-0.9**
	baz=353								
WSF	**Szhu**	**1.42**	**301**	*e*P			**Pn**	**14 33 52.4**	**+0.1**
	baz=303								
WSF				*e*S			**Sb**	**14 34 10.9**	**-0.3**
	baz=303								
TCU	**Taichung**	**1.47**	**327**	*e*P			**Pn**	**14 33 53.6**	**+0.6**
	baz=333								
TCU				*e*S			**Sn**	**14 34 12.6**	**+0.1**
	baz=333								
WTCT	**Ta-ch'eng**	**1.50**	**310**	*e*P			**Pn**	**14 33 53.0**	**-0.4**
	baz=313								
WTCT				*e*S			**Sn**	**14 34 13.1**	**-0.2**
	baz=313								
ENA	**Nanau**	**1.52**	**7**	*e*P			**Pn**	**14 33 52.5**	**-1.2**
	baz=360								
NNS	**Nan Shan**	**1.54**	**354**	*e*P			**Pn**	**14 33 53.2**	**-0.7**
	baz=18								
TWQ1	**Liyutan**	**1.60**	**334**	⇑*i* P			**Pn**	**14 33 56.0**	**+1.3**
	baz=341								
TWQ1				*e*S			**Sn**	**14 34 16.2**	**+0.5**
	baz=341								
NSY	**Sanyi**	**1.67**	**335**	*e*P			**Pn**	**14 33 57.1**	**+1.4**
	baz=341								
NSY				*e*S			**Sn**	**14 34 19.5**	**+2.2**
	baz=341								
TWC	**Suao**	**1.72**	**9**	*e*P			**Pn**	**14 33 55.4**	**-1.0**
	baz=30								
ENTT	**Nioudou**	**1.73**	**1**	*e*P			**Pn**	**14 33 56.2**	**-0.3**
	baz=8.0								
YHNB	**Yeheng**	**1.76**	**355**	*e*P			**Pn**	**14 33 56.8**	**-0.2**
NSK	**Sanguang**	**1.77**	**354**	*e*P			**Pn**	**14 33 56.9**	**-0.2**
	baz=16								
NSTT	**Nanjuang**	**1.79**	**344**	*e*P			**Pn**	**14 33 58.2**	**+0.8**
	baz=351								
NSTT				*e*S			**Sn**	**14 34 21.5**	**+1.2**
	baz=351								
TWE	**Neicheng**	**1.81**	**3**	*e*P			**Pn**	**14 33 59.1**	**+1.4**
	baz=12								
PNG	**Penghu**	**1.95**	**290**	*e*P			**Pn**	**14 33 58.9**	**-0.6**
	baz=290								
PNG				*e*S			**Sn**	**14 34 21.7**	**-2.5**
	baz=290								
YOJ	**Yonaguni jima**	**2.05**	**41**	P			**Pn**	**14 34 03.2**	**+2.3**
YOJ				*e*S			**Sn**	**14 34 28.2**	**+1.5**
YOJ	**Yonaguni jima**	**2.05**	**41**	*e*P			**Pn**	**14 34 02.7**	**+1.8**
	baz=47								
TATO	**Taipei**	**2.06**	**359**	*e*P			**Pn**	**14 34 02.6**	**+1.5**
TWA	**Mucha**	**2.06**	**1**	*e*P			**Pn**	**14 33 59.8**	**-1.4**
	baz=21								
TWB1	**Santiao Chiao**	**2.13**	**11**	*e*P			**Pn**	**14 34 03.8**	**+1.7**
	baz=4.0								
NWF	**Wu-fen Shan**	**2.17**	**6**	*e*P			**Pn**	**14 34 03.1**	**+0.6**
	baz=13								
TWS1	**Kuangyinshan**	**2.19**	**357**	*e*P			**Pn**	**14 34 04.7**	**+1.9**
	baz=22								
HATJ	**Hateruma jima**	**2.37**	**61**	P			**Pn**	**14 34 05.7**	**+0.4**
HATJ				*e*S			**Sn**	**14 34 33.8**	**-0.8**
IRIF	**Iriomote-Funau**	**2.46**	**54**	P			**Pn**	**14 34 07.2**	**+0.7**
IRIF				*e*S			**Sn**	**14 34 37.0**	**+0.2**
JKRS	**Kuro-shima**	**2.62**	**59**	P			**Pn**	**14 34 09.4**	**+0.6**
JKRS				*e*S			**Sn**	**14 34 40.7**	**-0.1**
JIJ	**Ishigaki jima**	**2.79**	**58**	P			**Pn**	**14 34 11.7**	**+0.6**
JIJ				*e*S			**Sn**	**14 34 43.9**	**-1.1**
KNM	**Kinmen**	**3.23**	**298**	*e*P			**Pn**	**14 34 17.1**	**0.0**
	baz=300								
JTJ	**Tarama**	**3.37**	**59**	P			**Pn**	**14 34 19.1**	**0.0**
JTJ				*e*S			**Sn**	**14 34 58.9**	**-0.4**
QZH	**Quanzhou**	**3.38**	**307**	Pn			**Pn**	**14 34 17.4**	**-1.8**
QZH				Sn			**Sn**	**14 34 51.8**	**-7.8**
QZH				smax					
	comp=N,280nm,0.6s								
QZH				smax					
	comp=E,380nm,0.8s								
QZH				LR		LR			
	comp=Z,1μm,8.0s								
KSRS	**Korea Array**	**15.50**	**19**	Pn			**Pn**	**14 37 09.6**	**+4.5**
	comp=Z,0.1nm,0.3s,baz=194,slow=11,SNR=5.9								
KMI	**Kunming**	**17.32**	**281**	P			**Pn**	**14 37 28.5**	**0.0**
KMI				pmax		pmax			
	comp=Z,11nm,0.5s								
HHC	**Hu-ho-hao-te**	**19.77**	**337**	*e*P			**Pn**	**14 37 59.1**	**+1.0**
HHC				pP		pP		14 38 02.3	+3.6
HHC				sP		sP		14 38 05.6	+5.9
HHC				PP				14 38 17.3	
HHC				*e*S			**Sn**	**14 41 33.3**	**-7.1**
HHC				sS		sS		14 41 39.3	-3.6
HHC				SS				14 42 03.3	
HHC				pmax		pmax			
	comp=Z,17nm,0.8s								
HHC				pmax		pmax			
	comp=Z,190nm,3.7s								
HHC				LR		LR			
	comp=N,210nm,10.8s								
HHC				LR		LR			
	comp=

Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.48**	**12**	P	**Pn**	**14 43 27.7**	**-1.5**
ARG				S	**Sn**	**14 43 33.3**	**-4.8**
ARG	**Arkhangelos**	**0.48**	**12**	*e*P	**Pn**	**14 43 27.8**	**-1.4**
ARG				*e*S	**Sn**	**14 43 35.3**	**-2.8**
ARG	**Arkhangelos**	**0.48**	**12**	P	**Pn**	**14 43 27.7**	**-1.5**
ARG				S	**Sn**	**14 43 33.3**	**-4.8**
ARG	**Arkhangelos**	**0.48**	**12**	*e*P	**Pn**	**14 43 27.8**	**-1.4**
ARG				S	**Sn**	**14 43 33.3**	**-4.8**
KARP	**Karpathos**	**0.71**	**254**	*e*P	**Pn**	**14 43 31.4**	**-0.3**
KARP				*e*S	**Sn**	**14 43 42.7**	**+0.3**
KARP	**Karpathos**	**0.71**	**254**	*e*P	**Pn**	**14 43 31.4**	**-0.3**
KARP				*e*S	**Sn**	**14 43 42.7**	**+0.3**
KARP	**Karpathos**	**0.71**	**254**	*e*P	**Pn**	**14 43 31.4**	**-0.3**
KARP				*e*S	**Sn**	**14 43 42.7**	**+0.3**
DAT	**Datca**	**1.04**	**341**	*e*PN	**Pn**	**14 43 34.5**	**-1.4**
DAT				*e*SN	**Sn**	**14 43 48.3**	**-1.5**
DAT	**Datca**	**1.04**	**341**	*e*Pn	**Pn**	**14 43 34.5**	**-1.3**
DAT				*e*Sn	**Sn**	**14 43 48.3**	**-1.5**
NIS1	**Nisyros lsl.**	**1.09**	**323**	P	**Pn**	**14 43 35.0**	**-1.4**
NIS1				S	**Sn**	**14 43 47.8**	**-3.0**
NIS1	**Nisyros lsl.**	**1.09**	**323**	P	**Pn**	**14 43 35.0**	**-1.4**
NIS1				S	**Sn**	**14 43 47.8**	**-3.0**
TURN	**Turunc**	**1.23**	**23**	*i* P	**Pn**	**14 43 35.6**	**-2.7**
TURN				*i* S	**Sn**	**14 43 49.9**	**-4.2**
TURN	**Turunc**	**1.23**	**23**	*i* P	**Pn**	**14 43 35.6**	**-2.7**
TURN				*i* S	**Sn**	**14 43 49.9**	**-4.2**
KSL	**Kastellorizon**	**1.35**	**72**	*e*P	**Pn**	**14 43 40.5**	**+0.7**
KSL	**Kastellorizon**	**1.35**	**72**	*e*P	**Pn**	**14 43 40.5**	**+0.7**
AKAS	**Kas**	**1.39**	**69**	⇓*i*P	**Pn**	**14 43 40.1**	**-0.3**
AKAS				*i* S	**Sn**	**14 43 57.9**	**0.0**
AKAS	**Kas**	**1.39**	**69**	*i* P	**Pn**	**14 43 40.1**	**-0.3**
AKAS				*i* S	**Sn**	**14 43 57.9**	**0.0**
BDRM	**Kayabasi**	**1.40**	**341**	*i* P	**Pn**	**14 43 39.1**	**-1.3**
BDRM				*i* S	**Sn**	**14 43 55.8**	**-2.2**
BDRM	**Kayabasi**	**1.40**	**341**	*i* P	**Pn**	**14 43 39.2**	**-1.3**
BDRM				*i* S	**Sn**	**14 43 55.8**	**-2.2**
YER	**Yerkesik**	**1.41**	**9**	*e*PN	**Pn**	**14 43 40.5**	**-0.2**
YER	**Yerkesik**	**1.41**	**9**	*e*Pn	**Pn**	**14 43 40.5**	**-0.2**
BODT	**Bodrum**	**1.43**	**337**	*e*PN	**Pn**	**14 43 38.5**	**-2.4**
BODT	**Bodrum**	**1.43**	**337**	*e*Pn	**Pn**	**14 43 38.5**	**-2.4**
MLSB	**Milas**	**1.56**	**353**	*e*PN	**Pn**	**14 43 41.8**	**-0.9**
MLSB	**Milas**	**1.56**	**353**	*e*Pn	**Pn**	**14 43 41.8**	**-0.9**
ZKR	**Zakros**	**1.58**	**247**	P	**Pn**	**14 43 44.5**	**+1.5**
ZKR				S	**Sn**	**14 44 03.9**	**+1.4**
ZKR	**Zakros**	**1.58**	**247**	*e*P	**Pn**	**14 43 44.6**	**+1.6**
ZKR				*e*S	**Sn**	**14 44 04.1**	**+1.6**
ZKR	**Zakros**	**1.58**	**247**	P	**Pn**	**14 43 44.5**	**+1.5**
ZKR				S	**Sn**	**14 44 03.9**	**+1.4**
ZKR	**Zakros**	**1.58**	**247**	P	**Pn**	**14 43 44.5**	**+1.5**
ZKR				S	**Sn**	**14 44 03.9**	**+1.4**
ELL	**Elmali**	**1.84**	**56**	*e*PN	**Pn**	**14 43 47.7**	**+1.3**
ELL	**Elmali**	**1.84**	**56**	*e*Pn	**Pn**	**14 43 47.7**	**+1.3**
GLHS	**Glhisar (BURDU**	**1.86**	**40**	*e*PN	**Pn**	**14 43 47.5**	**+0.8**
GLHS	**Glhisar (BURDU**	**1.86**	**40**	*e*Pn	**Pn**	**14 43 47.5**	**+0.8**
AYDN	**Tasoluk**	**1.92**	**357**	*i* P	**Pn**	**14 43 47.3**	**-0.2**
AYDN				*i* S	**Sn**	**14 44 04.1**	**-6.5**
AYDN	**Tasoluk**	**1.92**	**357**	*i* P	**Pn**	**14 43 47.3**	**-0.2**
NPS	**Neapolis**	**2.00**	**257**	*e*P	**Pn**	**14 43 49.4**	**+0.7**
NPS				*e*S	**Sn**	**14 44 12.9**	**+0.2**
NPS	**Neapolis**	**2.00**	**257**	*e*P	**Pn**	**14 43 49.4**	**+0.7**
NPS				*e*S	**Sn**	**14 44 12.9**	**+0.2**
NPS	**Neapolis**	**2.00**	**257**	*e*P	**Pn**	**14 43 49.4**	**+0.7**
NPS				*e*S	**Sn**	**14 44 12.9**	**+0.2**
XRY	**Khrisi**	**2.07**	**246**	*e*P	**Pn**	**14 43 50.9**	**+1.3**
XRY	**Khrisi**	**2.07**	**246**	*e*P	**Pn**	**14 43 50.9**	**+1.3**
XRY	**Khrisi**	**2.07**	**246**	*e*P	**Pn**	**14 43 50.9**	**+1.3**
THR1	**Thera Island**	**2.15**	**288**	P	**Pn**	**14 43 50.2**	**-0.4**
THR1	**Thera Island**	**2.15**	**288**	P	**Pn**	**14 43 50.2**	**-0.4**
DENT	**Denizli**	**2.17**	**22**	*e*PN	**Pn**	**14 43 50.7**	**-0.2**
DENT	**Denizli**	**2.17**	**22**	*e*Pn	**Pn**	**14 43 50.7**	**-0.2**
THR3	**Thira Island,**	**2.21**	**288**	P	**Pn**	**14 43 51.1**	**-0.3**
THR3	**Thira Island,**	**2.21**	**288**	P	**Pn**	**14 43 51.1**	**-0.3**
THR3	**Thira Island,**	**2.21**	**288**	P	**Pn**	**14 43 51.1**	**-0.3**
THR5	**Thira Island,**	**2.25**	**288**	P	**Pn**	**14 43 51.8**	**-0.2**
THR5	**Thira Island,**	**2.25**	**288**	P	**Pn**	**14 43 51.8**	**-0.2**
THR5	**Thira Island,**	**2.25**	**288**	P	**Pn**	**14 43 51.8**	**-0.2**
APE	**Apeiranthos**	**2.39**	**304**	*e*PN	**Pn**	**14 43 53.1**	**-0.8**
APE	**Apeiranthos**	**2.39**	**304**	P	**Pn**	**14 43 53.3**	**-0.6**
APE				S	**Sn**	**14 44 20.1**	**-2.0**
APE	**Apeiranthos**	**2.39**	**304**	*e*P	**Pn**	**14 43 53.3**	**-0.6**
APE				*e*S	**Sn**	**14 44 20.3**	**-1.8**
APE	**Apeiranthos**	**2.39**	**304**	P	**Pn**	**14 43 53.3**	**-0.6**
APE				S	**Sn**	**14 44 20.1**	**-2.0**
APE	**Apeiranthos**	**2.39**	**304**	⇑*i*P	**Pn**	**14 43 53.0**	**-0.9**
APE	**Apeiranthos**	**2.39**	**304**	*e*P	**Pn**	**14 43 53.3**	**-0.6**
APE				*e*S	**Sn**	**14 44 20.3**	**-1.8**
ANTB	**Antalya**	**2.44**	**61**	*e*PN	**Pn**	**14 43 54.6**	**+0.1**
ANTB	**Antalya**	**2.44**	**61**	*e*Pn	**Pn**	**14 43 54.6**	**+0.1**
BCK	**Bucak**	**2.70**	**50**	*e*PN	**Pn**	**14 43 59.1**	**+1.0**
BCK	**Bucak**	**2.70**	**50**	*e*Pn	**Pn**	**14 43 59.1**	**+1.0**
SIVA	**Sivas**	**2.70**	**255**	P	**Pn**	**14 44 00.3**	**+2.1**
SIVA				S	**Sn**	**14 44 31.1**	**+1.4**
SIVA	**Sivas**	**2.70**	**255**	P	**Pn**	**14 44 00.3**	**+2.1**
SIVA				S	**Sn**	**14 44 31.1**	**+1.4**
SIVA	**Sivas**	**2.70**	**255**	P	**Pn**	**14 44 00.3**	**+2.1**
SIVA				S	**Sn**	**14 44 31.1**	**+1.4**
IZM	**Izmir**	**2.72**	**348**	*e*PN	**Pn**	**14 43 57.1**	**-1.2**
IZM	**Izmir**	**2.72**	**348**	*e*Pn	**Pn**	**14 43 57.1**	**-1.2**
BLCB	**Balcova**	**2.75**	**344**	*e*PN	**Pn**	**14 43 57.7**	**-1.1**
BLCB	**Balcova**	**2.75**	**344**	P	**Pn**	**14 43 57.9**	**-0.9**
BLCB				S	**Sn**	**14 44 28.7**	**-2.1**
BLCB	**Balcova**	**2.75**	**344**	P	**Pn**	**14 43 57.9**	**-0.9**
BLCB				S	**Sn**	**14 44 28.7**	**-2.1**
BLCB	**Balcova**	**2.75**	**344**	P	**Pn**	**14 43 57.9**	**-0.9**
BLCB				S	**Sn**	**14 44 28.7**	**-2.1**
KULA	**Kula-Manisa**	**2.82**	**11**	*e*PN	**Pn**	**14 43 59.8**	**+0.1**
KULA	**Kula-Manisa**	**2.82**	**11**	*e*Pn	**Pn**	**14 43 59.8**	**+0.1**
KHL	**Karahalli**	**2.85**	**25**	*e*PN	**Pn**	**14 43 59.8**	**-0.4**
KHL	**Karahalli**	**2.85**	**25**	*e*Pn	**Pn**	**14 43 59.8**	**-0.4**
ISP	**Isparta**	**2.90**	**44**	*e*PN	**Pn**	**14 44 01.7**	**+0.8**
ISP	**Isparta**	**2.90**	**44**	P	**Pn**	**14 44 01.3**	**+0.5**
ISP				S	**Sn**	**14 44 34.3**	**-0.2**
ISP	**Isparta**	**2.90**	**44**	P	**Pn**	**14 44 01.3**	**+0.5**
ISP				S	**Sn**	**14 44 34.3**	**-0.2**
ISP	**Isparta**	**2.90**	**44**	⇓*i*P	Px	14 44 13.7	
ISP	**Isparta**	**2.90**	**44**	P	**Pn**	**14 44 01.3**	**+0.5**
ISP	**Isparta**	**2.90**	**44**	*e*Pn	**Pn**	**14 44 01.7**	**+0.9**
ISP				S	**Sn**	**14 44 34.3**	**-0.2**
CHOS	**Chios island**	**3.06**	**330**	*e*P	**Pn**	**14 44 02.3**	**-0.8**
CHOS				*e*S	**Sn**	**14 44 36.3**	**-2.2**
CHOS	**Chios island**	**3.06**	**330**	P	**Pn**	**14 44 02.3**	**-0.8**
CHOS				S	**Sn**	**14 44 36.1**	**-2.4**
CHOS	**Chios island**	**3.06**	**330**	*e*P	**Pn**	**14 44 02.3**	**-0.8**
CHOS				*e*S	**Sn**	**14 44 36.3**	**-2.2**
VAM	**Vamos**	**3.12**	**265**	*e*P	**Pn**	**14 44 04.6**	**+0.8**
VAM				*e*S	**Sn**	**14 44 41.0**	**+1.2**
VAM	**Vamos**	**3.12**	**265**	*e*P	**Pn**	**14 44 04.6**	**+0.8**
VAM				*e*S	**Sn**	**14 44 41.0**	**+1.2**
VAM	**Vamos**	**3.12**	**265**	*e*P	**Pn**	**14 44 04.6**	**+0.8**
VAM				*e*S	**Sn**	**14 44 41.0**	**+1.2**
AKHS	**Akhisar**	**3.13**	**357**	*i* P	**Pn**	**14 44 03.0**	**-1.1**
AKHS				*i* S	**Sn**	**14 44 37.7**	**-2.5**
AKHS	**Akhisar**	**3.13**	**357**	*i* P	**Pn**	**14 44 03.0**	**-1.0**
AKHS				*i* S	**Sn**	**14 44 37.7**	**-2.6**
AKS	**Akhisar**	**3.14**	**357**	*e*PN	**Pn**	**14 44 03.1**	**-1.0**
AKS	**Akhisar**	**3.14**	**357**	*e*Pn	**Pn**	**14 44 03.1**	**-0.9**
GVD	**Gavdhos**	**3.32**	**255**	P	**Pn**	**14 44 08.2**	**+1.6**
GVD	**Gavdhos**	**3.32**	**255**	*e*P	**Pn**	**14 44 08.3**	**+1.7**
GVD	**Gavdhos**	**3.32**	**255**	P	**Pn**	**14 44 08.2**	**+1.6**
GVD	**Gavdhos**	**3.32**	**255**	P	**Pn**	**14 44 08.2**	**+1.6**
DEMI	**Demirci**	**3.34**	**10**	*i* P	**Pn**	**14 44 06.4**	**-0.5**
DEMI				*i* S	**Sn**	**14 44 39.9**	**-5.5**
DEMI	**Demirci**	**3.34**	**10**	*i* P	**Pn**	**14 44 06.4**	**-0.5**
PPCY	**Paphos**	**3.66**	**102**	P	**Pn**	**14 44 11.6**	**+0.5**
PPCY	**Paphos**	**3.66**	**102**	P	**Pn**	**14 44 11.6**	**+0.5**
ALT	**Altintas**	**3.71**	**26**	*e*PN	**Pn**	**14 44 13.0**	**+1.1**
ALT	**Altintas**	**3.71**	**26**	*e*Pn	**Pn**	**14 44 13.0**	**+1.1**
AYVA	**Ayvalik**	**3.71**	**344**	*i* P	**Pn**	**14 44 11.1**	**-0.8**
AYVA	**Ayvalik**	**3.71**	**344**	*i* P	**Pn**	**14 44 11.1**	**-0.8**
PRK	**Paraskevi**	**3.76**	**339**	P	**Pn**	**14 44 12.2**	**-0.3**
PRK	**Paraskevi**	**3.76**	**339**	*e*P	**Pn**	**14 44 12.1**	**-0.5**
PRK				*e*S	**Sn**	**14 44 53.8**	**-1.7**
PRK	**Paraskevi**	**3.76**	**339**	P	**Pn**	**14 44 12.2**	**-0.3**
PRK	**Paraskevi**	**3.76**	**339**	P	**Pn**	**14 44 12.2**	**-0.3**
PRK				*e*S	**Sn**	**14 44 53.8**	**-1.7**
ALFC	**Alevga**	**3.80**	**97**	P	**Pn**	**14 44 13.4**	**+0.3**
	57nm,0.2s						
ALFC				S	**Sn**	**14 44 56.7**	**+0.1**
ALFC	**Alevga**	**3.80**	**97**	P	**Pn**	**14 44 13.4**	**+0.3**
	57nm,0.2s						
ALFC				S	**Sn**	**14 44 56.7**	**+0.1**
HDMB	**Hadim**	**3.82**	**70**	*e*PN	**Pn**	**14 44 14.5**	**+1.0**
HDMB	**Hadim**	**3.82**	**70**	*e*Pn	**Pn**	**14 44 14.5**	**+1.1**
SIGR	**SIGRI**	**3.86**	**334**	P	**Pn**	**14 44 13.4**	**-0.5**
SIGR	**SIGRI**	**3.86**	**334**	P	**Pn**	**14 44 13.4**	**-0.5**
BALB	**Balikesir**	**3.89**	**359**	*e*PN	**Pn**	**14 44 14.4**	**0.0**
BALB	**Balikesir**	**3.89**	**359**	*e*Pn	**Pn**	**14 44 14.4**	**0.0**
VLY	**Voula,Athens**	**3.98**	**303**	*e*P	**Pn**	**14 44 16.2**	**+0.6**
VLY				*e*S	**Sn**	**14 44 58.8**	**-2.1**
VLY	**Voula,Athens**	**3.98**	**303**	*e*P	**Pn**	**14 44 16.2**	**+0.6**
VLY				*e*S	**Sn**	**14 44 58.8**	**-2.1**
VLY	**Voula,Athens**	**3.98**	**303**	*e*P	**Pn**	**14 44 16.2**	**+0.6**
VLY				*e*S	**Sn**	**14 44 58.8**	**-2.1**
PTL	**Penteli**	**4.04**	**306**	*e*P	**Pn**	**14 44 17.1**	**+0.8**
PTL				*e*S	**Sn**	**14 44 59.7**	**-2.6**
PTL	**Penteli**	**4.04**	**306**	*e*P	**Pn**	**14 44 17.1**	**+0.8**
PTL				*e*S	**Sn**	**14 44 59.7**	**-2.6**
PTL	**Penteli**	**4.04**	**306**	*e*P	**Pn**	**14 44 17.1**	**+0.8**
PTL				*e*S	**Sn**	**14 44 59.7**	**-2.6**
LEF	**Lefka**	**4.04**	**97**	*e*PN	**Pn**	**14 44 15.9**	**-0.5**
LEF	**Lefka**	**4.04**	**97**	*e*Pn	**Pn**	**14 44 15.9**	**-0.5**
KYTH	**Kithira**	**4.06**	**279**	*e*P	**Pn**	**14 44 17.3**	**+0.6**
KYTH	**Kithira**	**4.06**	**279**	*e*P	**Pn**	**14 44 17.3**	**+0.6**
KYTH	**Kithira**	**4.06**	**279**	*e*P	**Pn**	**14 44 17.3**	**+0.6**
ATH	**Athens Observa**	**4.09**	**304**	*e*P	**Pn**	**14 44 18.1**	**+1.0**
ATH				*e*S	**Sn**	**14 45 01.8**	**-1.9**
ATH	**Athens Observa**	**4.09**	**304**	*e*P	**Pn**	**14 44 18.1**	**+1.0**
ATH				*e*S	**Sn**	**14 45 01.8**	**-1.9**
ATH	**Athens Observa**	**4.09**	**304**	*e*P	**Pn**	**14 44 18.1**	**+1.0**
ATH				*e*S	**Sn**	**14 45 01.8**	**-1.9**
SZAC	**Souni-Zanaja**	**4.12**	**102**	P	**Pn**	**14 44 18.1**	**+0.7**
	26nm,0.1s						
SZAC	**Souni-Zanaja**	**4.12**	**102**	P	**Pn**	**14 44 18.1**	**+0.7**
	26nm,0.1s						
KONT	**Konya--Tatoy**	**4.13**	**57**	*e*PN	**Pn**	**14 44 18.9**	**+1.3**
KONT	**Konya--Tatoy**	**4.13**	**57**	*e*Pn	**Pn**	**14 44 18.9**	**+1.2**
NAIG	**Nisos Aigina**	**4.14**	**300**	*e*P	**Pn**	**14 44 18.5**	**+0.7**
NAIG	**Nisos Aigina**	**4.14**	**300**	*e*P	**Pn**	**14 44 18.5**	**+0.7**
NAIG	**Nisos Aigina**	**4.14**	**300**	*e*P	**Pn**	**14 44 18.5**	**+0.7**
VLI	**Veliai**	**4.21**	**285**	*e*P	**Pn**	**14 44 19.5**	**+0.8**
VLI				*e*S	**Sn**	**14 45 05.3**	**-1.2**
VLI	**Veliai**	**4.21**	**285**	*e*P	**Pn**	**14 44 19.5**	**+0.8**
VLI				*e*S	**Sn**	**14 45 05.3**	**-1.2**
VLI	**Veliai**	**4.21**	**285**	*e*P	**Pn**	**14 44 19.5**	**+0.8**
VLI				*e*S	**Sn**	**14 45 05.3**	**-1.2**
DID	**Didima**	**4.22**	**296**	*e*P	**Pn**	**14 44 19.5**	**+0.7**
DID				*e*S	**Sn**	**14 45 05.8**	**-1.0**
DID	**Didima**	**4.22**	**296**	P	**Pn**	**14 44 19.3**	**+0.5**
DID	**Didima**	**4.22**	**296**	P	**Pn**	**14 44 19.3**	**+0.5**
DID				*e*S	**Sn**	**14 45 05.8**	**-1.0**
MAMC	**Mammari**	**4.30**	**96**	P	**Pn**	**14 44 20.4**	**+0.5**
MAMC	**Mammari**	**4.30**	**96**	P	**Pn**	**14 44 20.4**	**+0.5**
GONE	**Gonen-Balikesi**	**4.30**	**357**	*e*PN	**Pn**	**14 44 20.2**	**+0.2**
GONE	**Gonen-Balikesi**	**4.30**	**357**	*e*Pn	**Pn**	**14 44 20.3**	**+0.3**
KIZT	**Kizilcal**	**4.40**	**43**	*e*PN	**Pn**	**14 44 21.9**	**+0.6**
KIZT	**Kizilcal**	**4.40**	**43**	*e*Pn	**Pn**	**14 44 22.0**	**+0.6**
CSS	**Prodhromos**	**4.43**	**99**	P	**Pn**	**14 44 22.1**	**+0.4**
	12nm,0.2s						
CSS				S	**Sn**	**14 45 12.1**	**+0.2**
CSS	**Prodhromos**	**4.43**	**99**	P	**Pn**	**14 44 22.1**	**+0.4**
	12nm,0.2s						
CSS				S	**Sn**	**14 45 12.1**	**+0.2**
KCTX	**Karacabey (Bur**	**4.53**	**3**	*e*PN	**Pn**	**14 44 22.9**	**-0.2**
KCTX	**Karacabey (Bur**	**4.53**	**3**	*e*Pn	**Pn**	**14 44 22.9**	**-0.1**
LFK	**Lefkose**	**4.54**	**94**	*e*PN	**Pn**	**14 44 23.3**	**+0.1**
LFK	**Lefkose**	**4.54**	**94**	*e*Pn	**Pn**	**14 44 23.3**	**+0.1**
LTK	**Loutraki**	**4.63**	**301**	*e*P	**Pn**	**14 44 25.7**	**+1.2**
LTK	**Loutraki**	**4.63**	**301**	P	**Pn**	**14 44 25.3**	**+0.8**
LTK	**Loutraki**	**4.63**	**301**	P	**Pn**	**14 44 25.3**	**+0.8**
IKL	**Isikli**	**4.64**	**82**	*e*PN	**Pn**	**14 44 25.4**	**+0.8**
IKL	**Isikli**	**4.64**	**82**	*e*Pn	**Pn**	**14 44 25.4**	**+0.8**
SVRH	**Sivrihisar-ESK**	**4.64**	**36**	*e*PN	**Pn**	**14 44 25.9**	**+1.4**
SVRH	**Sivrihisar-ESK**	**4.64**	**36**	*e*Pn	**Pn**	**14 44 25.9**	**+1.3**
HMAT	**Matruh**	**4.70**	**190**	P	**Pn**	**14 44 26.7**	**+1.3**
	baz=192						
HMAT				S	**Sn**	**14 45 17.2**	**-1.4**
HMAT	**Matruh**	**4.70**	**190**	P	**Pn**	**14 44 26.7**	**+1.3**
	baz=192						
HMAT				S	**Sn**	**14 45 17.2**	**-1.4**
AOS	**Alonnisos**	**4.74**	**317**	P	**Pn**	**14 44 26.6**	**+0.7**
AOS	**Alonnisos**	**4.74**	**317**	P	**Pn**	**14 44 26.6**	**+0.7**
GADA	**Gvkgeada**	**4.74**	**340**	*e*PN	**Pn**	**14 44 25.4**	**-0.6**
GADA	**Gvkgeada**	**4.74**	**340**	*e*Pn	**Pn**	**14 44 25.4**	**-0.6**
GELI	**Tayfur-Gelibol**	**4.80**	**346**	*e*PN	**Pn**	**14 44 26.4**	**-0.3**
GELI	**Tayfur-Gelibol**	**4.80**	**346**	*e*Pn	**Pn**	**14 44 26.5**	**-0.3**
VLX	**Vlachokerasia**	**4.81**	**291**	*e*P	**Pn**	**14 44 28.8**	**+1.9**
VLX				*e*S	**Sn**	**14 45 19.9**	**-1.4**
VLX	**Vlachokerasia**	**4.81**	**291**	P	**Pn**	**14 44 28.2**	**+1.3**
VLX	**Vlachokerasia**	**4.81**	**291**	P	**Pn**	**14 44 28.2**	**+1.3**
VLX				*e*S	**Sn**	**14 45 19.9**	**-1.4**
SLUM		**4.83**	**210**	P	**Pn**	**14 44 27.6**	**+0.3**
	baz=212						
SLUM				AMP		14 45 00.0	
	comp=N,460μm,0.4s,logA/T=6.1,baz=212						
SLUM		**4.83**	**210**	P	**Pn**	**14 44 27.7**	**+0.4**
LKR	**Lokris**	**4.94**	**308**	*e*P	**Pn**	**14 44 29.4**	**+0.8**
LKR	**Lokris**	**4.94**	**308**	*e*P	**Pn**	**14 44 29.4**	**+0.8**
LKR	**Lokris**	**4.94**	**308**	*e*P	**Pn**	**14 44 29.4**	**+0.8**
PHNC	**Paralimni**	**4.98**	**97**	P	**Pn**	**14 44 29.5**	**+0.2**
	comp=N,9.6nm,0.5s						
PHNC				S	**Sn**	**14 45 26.3**	**+0.7**
PHNC	**Paralimni**	**4.98**	**97**	P	**Pn**	**14 44 29.5**	**+0.2**
	comp=N,9.6nm,0.5s						
PHNC				S	**Sn**	**14 45 26.3**	**+0.7**
LTBQ	**Tobruq**	**5.00**	**224**	*i* P	**Pn**	**14 44 30.4**	**+0.8**
	comp=N,195nm,1.6s,SNR=43						
LTBQ				*e*S	**Sn**	**14 45 24.2**	**-1.9**
	comp=N,81nm,0.6s,SNR=43						
GUR	**Goura**	**5.04**	**297**	*e*P	**Pn**	**14 44 31.7**	**+1.6**
GUR				*e*S	**Sn**	**14 45 24.9**	**-2.0**
GUR	**Goura**	**5.04**	**297**	P	**Pn**	**14 44 31.7**	**+1.6**
GUR	**Goura**	**5.04**	**297**	*e*P	**Pn**	**14 44 31.7**	**+1.6**
GUR				*e*S	**Sn**	**14 45 24.9**	**-2.0**
SULT	**Sultanhani-AKS**	**5.05**	**59**	*e*PN	**Pn**	**14 44 31.9**	**+1.6**
SULT	**Sultanhani-AKS**	**5.05**	**59**	*e*Pn	**Pn**	**14 44 31.9**	**+1.7**
ERIK	**Erikli-Kesan**	**5.06**	**347**	*e*PN	**Pn**	**14 44 30.6**	**+0.2**
ERIK	**Erikli-Kesan**	**5.06**	**347**	*e*Pn	**Pn**	**14 44 30.6**	**+0.3**
GULT	**Gulveren**	**5.09**	**22**	*e*PN	**Pn**	**14 44 31.7**	**+1.0**
GULT	**Gulveren**	**5.09**	**22**	*e*Pn	**Pn**	**14 44 31.7**	**+1.0**
ITM	**Ithomi**	**5.10**	**288**	P	**Pn**	**14 44 33.9**	**+3.0**
ITM	**Ithomi**	**5.10**	**288**	*e*P	**Pn**	**14 44 33.1**	**+2.2**
ITM				*e*S	**Sn**	**14 45 27.8**	**-0.7**
ITM	**Ithomi**	**5.10**	**288**	P	**Pn**	**14 44 33.9**	**+3.0**
ITM	**Ithomi**	**5.10**	**288**	P	**Pn**	**14 44 33.9**	**+3.0**
ITM				*e*S	**Sn**	**14 45 27.8**	**-0.7**
DSF	**Desfina**	**5.12**	**303**	P	**Pn**	**14 44 32.5**	**+1.3**
DSF	**Desfina**	**5.12**	**303**	P	**Pn**	**14 44 32.5**	**+1.3**
PYL	**PYLOS**	**5.18**	**285**	*e*P	**Pn**	**14 44 33.7**	**+1.7**
PYL				*e*S	**Sn**	**14 45 29.5**	**-1.0**
PYL	**PYLOS**	**5.18**	**285**	*e*P	**Pn**	**14 44 33.7**	**+1.7**
PYL				*e*S	**Sn**	**14 45 29.5**	**-1.0**
ENEZ	**Enez**	**5.19**	**344**	*e*PN	**Pn**	**14 44 32.5**	**+0.3**
ENEZ	**Enez**	**5.19**	**344**	*e*Pn	**Pn**	**14 44 32.5**	**+0.3**
NEO	**Neokhori**	**5.20**	**315**	*e*P	**Pn**	**14 44 33.2**	**+0.9**
NEO	**Neokhori**	**5.20**	**315**	*e*P	**Pn**	**14 44 33.2**	**+0.9**
NEO	**Neokhori**	**5.20**	**315**	*e*P	**Pn**	**14 44 33.2**	**+0.9**
XOR	**Xorichti**	**5.26**	**315**	P	**Pn**	**14 44 33.9**	**+0.8**
XOR	**Xorichti**	**5.26**	**315**	P	**Pn**	**14 44 33.9**	**+0.8**
MDU	**Mudurnu**	**5.35**	**27**	*e*PN	**Pn**	**14 44 36.0**	**+1.7**
MDU	**Mudurnu**	**5.35**	**27**	*e*Pn	**Pn**	**14 44 36.0**	**+1.6**
ALN	**Alexandroupoli**	**5.37**	**344**	P	**Pn**	**14 44 34.7**	**+0.1**
ALN	**Alexandroupoli**	**5.37**	**344**	*e*P	**Pn**	**14 44 34.8**	**+0.2**
ALN				*e*S	**Sn**	**14 45 31.7**	**-3.4**
ALN	**Alexandroupoli**	**5.37**	**344**	P	**Pn**	**14 44 34.7**	**+0.1**
ALN	**Alexandroupoli**	**5.37**	**344**	P	**Pn**	**14 44 34.7**	**+0.1**
HBRG	**Burj al 'Arab**	**5.38**	**163**	P	**Pn**	**14 44 35.7**	**+0.9**
	baz=164						
HBRG	**Burj al 'Arab**	**5.38**	**163**	P	**Pn**	**14 44 35.7**	**+0.9**
KALE	**Kalithea**	**5.38**	**301**	P	**Pn**	**14 44 36.4**	**+1.7**
KALE	**Kalithea**	**5.38**	**301**	P	**Pn**	**14 44 36.4**	**+1.7**
PAIG	**Paliouri**	**5.40**	**322**	P	**Pn**	**14 44 35.6**	**+0.6**
PAIG	**Paliouri**	**5.40**	**322**	P	**Pn**	**14 44 35.6**	**+0.6**
LAKA	**Lakka**	**5.43**	**299**	P	**Pn**	**14 44 37.0**	**+1.6**
LAKA	**Lakka**	**5.43**	**299**	P	**Pn**	**14 44 37.0**	**+1.6**
EFP	**Efpalio**	**5.56**	**301**	*e*P	**Pn**	**14 44 38.9**	**+1.7**
EFP	**Efpalio**	**5.56**	**301**	P	**Pn**	**14 44 38.8**	**+1.6**
EFP	**Efpalio**	**5.56**	**301**	P	**Pn**	**14 44 38.8**	**+1.6**
OUR	**Ouranopolis**	**5.57**	**327**	P	**Pn**	**14 44 38.1**	**+0.7**
OUR	**Ouranopolis**	**5.57**	**327**	P	**Pn**	**14 44 38.1**	**+0.7**
AGG	**Agios Georgios**	**5.58**	**308**	P	**Pn**	**14 44 38.8**	**+1.4**
AGG	**Agios Georgios**	**5.58**	**308**	*e*P	**Pn**	**14 44 39.2**	**+1.8**
AGG	**Agios Georgios**	**5.58**	**308**	P	**Pn**	**14 44 38.8**	**+1.4**
AGG	**Agios Georgios**	**5.58**	**308**	P	**Pn**	**14 44 38.8**	**+1.4**
UPR	**University Cam**	**5.58**	**299**	*e*P	**Pn**	**14 44 39.4**	**+1.9**
UPR	**University Cam**	**5.58**	**299**	*e*P	**Pn**	**14 44 39.4**	**+1.9**
RLS	**Riolos of Patr**	**5.72**	**296**	*e*P	**Pn**	**14 44 40.9**	**+1.5**
RLS				*e*S	**Sn**	**14 45 42.1**	**-1.6**
RLS	**Riolos of Patr**	**5.72**	**296**	*e*P	**Pn**	**14 44 40.9**	**+1.5**
RLS				*e*S	**Sn**	**14 45 42.1**	**-1.6**
RLS	**Riolos of Patr**	**5.72**	**296**	*e*P	**Pn**	**14 44 40.9**	**+1.5**
RLS				*e*S	**Sn**	**14

KEK	Kerkira	7.61	304	*e*P		Pn	14 45 06.7	+1.5		
KEK	Kerkira	7.61	304	*e*P		Pn	14 45 06.7	+1.5		
HNKL	Nakhl	7.67	137	P		Pn	14 45 06.2	0.0		
	baz=138									
HNKL	Nakhl	7.67	137	P		Pn	14 45 06.2	0.0		
KRUS	Krusevo	7.71	319	*i* Pn		Pn	14 45 09.1	+2.5		
VTS	Vitosha	7.79	333	⇓P		Pn	14 45 09.5	+1.9		
VTS	Vitosha	7.79	333	⇓*i*P		Pn	14 45 09.5	+1.9		
VTS	Vitosha	7.79	333	P		Pn	14 45 09.5	+1.9		
ROOS	tl_alroos	7.79	99	⇑P		Pn	14 45 08.0	+0.3		
ROOS				⇑S		Sn	14 46 11.0	-23		
SALA	Sala	7.84	110	⇑P		Pn	14 45 09.0	+0.6		
SALA	Sala	7.84	110	⇑P		Pn	14 45 09.0	+0.6		
SALA				⇑S		Sn	14 46 17.0	-19		
SALA	Sala	7.84	110	⇑*i*P		Pn	14 45 09.1	+0.7		
ZFRI	Zfri	7.94	129	Pn		Pn	14 45 08.8	-0.9		
ZFRI				Sn		Sn	14 46 33.0	-5.0		
KRMI	Paran Flat	7.96	133	Pn		Pn	14 45 09.1	-1.0		
KRMI				Sn		Sn	14 46 33.4	-5.3		
PRNI	Paran	7.96	130	Pn		Pn	14 45 09.5	-0.6		
LJBD	Adjabya	8.11	236	*i* P		Pn	14 45 12.1	0.0		
	comp=N,399nm,0.9s,SNR=41									
ASF	Jabal al Asfar	8.20	113	Pn		Pn	14 45 13.6	+0.2		
	comp=N,1.0nm,0.3s,baz=189,slow=6.6,SNR=6.2									
ASF				Sn		Sn	14 46 42.8	-1.8		
	comp=N,1.3nm,0.3s,baz=310,slow=23,SNR=3.5									
ASF	Jabal al Asfar	8.20	113	P		Pn	14 45 13.6	+0.2		
ASF							14 46 42.8			
ASF				pmax	pmax					
	comp=Z,1.0nm,0.3s									
ASF				smax						
	comp=N,1.0nm,0.3s									
HRFI	Mount Harif	8.21	132	Pn		Pn	14 45 12.5	-1.0		
HRFI				Sn		Sn	14 46 39.6	-5.1		
MBRI	Mt Berech	8.31	134	Pn		Pn	14 45 14.3	-0.5		
MBRI				Sn		Sn	14 46 43.0	-4.2		
HRDS	Abu Rudays	8.32	146	P		Pn	14 45 13.8	-1.2		
	baz=146									
AKCD	Akcadag	8.34	69	*e*S		Sn	14 46 47.7	-0.1		
AKCD	Akcadag	8.34	69	*e*S		Sn	14 46 47.6	-0.1		
EIL	Elat	8.42	134	Pn		Pn	14 45 16.2	-0.2		
	comp=N,2.1nm,0.3s,baz=359,slow=16,SNR=32									
EIL				Sn		Sn	14 46 47.9	-2.1		
	comp=N,16nm,0.3s,baz=65,slow=18,SNR=12									
EIL				LR		LR	14 48 46.4			
	comp=N,137nm,21.8s,baz=291,slow=38									
EIL	Elat	8.42	134	Pn		Pn	14 45 16.2	-0.2		
EIL				Sn		Sn	14 46 47.9	-2.0		
EIL	Elat	8.42	134	Pn		Pn	14 45 15.4	-1.0		
EIL				Sn		Sn	14 46 45.0	-4.9		
AQBJ	Aqaba	8.44	133	Pn		Pn	14 45 16.1	-0.5		
TIR	Tirane	8.48	314	P		Pn	14 45 18.5	+1.4		
	comp=N,47nm,0.8s									
TIR	Tirane	8.48	314	P		Pn	14 45 18.5	+1.4		
TIR				pmax	pmax					
	comp=Z,47nm,0.8s									
TIR	Tirane	8.48	314	P		Pn	14 45 18.5	+1.4		
	comp=Z,47nm,0.8s									
GRB	Gharib	8.48	150	P		Pn	14 45 17.6	+0.4		
	baz=150									
GRB	Gharib	8.48	150	P		Pn	14 45 17.6	+0.4		
HFRF	Wahat Farafira	8.57	178	P		Pn	14 45 18.4	-0.1		
	baz=179									
HFRF	Wahat Farafira	8.57	178	P		Pn	14 45 18.4	0.0		
HBST	Basata	8.64	137	P		Pn	14 45 18.7	-0.6		
	baz=137									
HBST	Basata	8.64	137	P		Pn	14 45 18.7	-0.7		
SCTE	Santa Cesarea	8.68	303	*e*P		Pn	14 45 21.4	+1.5		
SCTE	Santa Cesarea	8.68	303	*e*P		Pn	14 45 21.4	+1.5		
TIRR	Tirgusor	8.71	2	*e*P		Pn	14 45 20.9	+0.6		
	comp=Z,28nm,1.0s									
TIRR	Tirgusor	8.71	2	*e*P		Pn	14 45 20.9	+0.6		
TIRR				pmax	pmax					
	comp=Z,28nm,1.0s									
TIRR	Tirgusor	8.71	2	⇑*i*P		Pn	14 45 20.7	+0.4		
TIRR	Tirgusor	8.71	2	*e*P		Pn	14 45 20.9	+0.6		
	comp=Z,28nm,1.0s									
HKAT	Jabal Katrina	8.81	143	P		Pn	14 45 21.5	-0.2		
	baz=143									
HKAT	Jabal Katrina	8.81	143	P		Pn	14 45 21.5	-0.2		
HDHB	Dhahab	8.96	139	P		Pn	14 45 23.2	-0.6		
	baz=140									
HDHB	Dhahab	8.96	139	P		Pn	14 45 23.2	-0.6		
TR1		9.22	145	P		Pn	14 45 26.8	-0.5		
	baz=145									
TR1		9.22	145	P		Pn	14 45 26.8	-0.5		
TIP	Timpagrande	9.57	294	P		Pn	14 45 31.3	-0.8		
TIP	Timpagrande	9.57	294	P		Pn	14 45 31.3	-0.8		
TAR1	Taranto	9.70	303	*e*Pn		Pn	14 45 33.4	-0.3		
PE1	Pezze di Greco	9.73	304	*e*Pn		Pn	14 45 34.1	-0.1		
PE1				*e*Sn		Sn	14 47 19.5	-2.3		
MLR	Muntele Rosu	9.86	352	⇑P		Pn	14 45 37.4	+1.4		
MLR				LR		LR	14 50 00.0			
MLR	Muntele Rosu	9.86	352	Pn		Pn	14 45 34.1	-1.9		
	comp=Z,0.3nm,0.3s,baz=160,slow=7.3,SNR=13									
MLR				LR		LR	14 50 00.0			
	comp=Z,243nm,18.7s,baz=274,slow=42									
MLR	Muntele Rosu	9.86	352	⇑*i*P		Pn	14 45 37.4	+1.4		
MLR	Muntele Rosu	9.86	352	P		Pn	14 45 37.4	+1.4		
VOIR		9.94	348	⇑P		Pn	14 45 37.6	+0.5		
VOIR		9.94	348	⇑*i*P		Pn	14 45 37.6	+0.6		
VOIR		9.94	348	P		Pn	14 45 37.6	+0.6		
CEL	Celeste	10.00	288	P		Pn	14 45 38.9	+0.9		
CEL	Celeste	10.00	288	P		Pn	14 45 38.9	+0.9		
PLOR	Plostina	10.15	355	⇑P		Pn	14 45 47.5	+7.6		
PLOR	Plostina	10.15	355	⇑*i*P		Pn	14 45 47.5	+7.6		
VRI	Vrincioaia	10.16	355	⇓P		Px	14 45 53.0			
VRI	Vrincioaia	10.16	355	⇓*i*P		Px	14 45 53.0			
HDK1	Dakhla	10.24	173	P		Pn	14 45 41.5	+0.3		
	baz=173									
HDK1	Dakhla	10.24	173	P		Pn	14 45 41.5	+0.3		
SG1	Sgolgore (BA)	10.25	303	*e*Pn		Pn	14 45 40.7	-0.6		
SIM	Simferopol'	10.31	25	P		Pn	14 45 50.7	+8.6		
SIM				S		Sn	14 47 37.0	+1.0		
SIM				pmax	pmax					
	comp=Z,25nm,1.2s									
GZR	Gura Zlata	10.43	339	⇓P		Pn	14 45 44.0	+0.3		
GZR	Gura Zlata	10.43	339	⇓*i*P		Pn	14 45 44.0	+0.3		
GZR	Gura Zlata	10.43	339	P		Pn	14 45 44.0	+0.3		
AKRG	Al Kharijah	10.43	167	P		Pn	14 45 43.2	-0.6		
	baz=168									
HSFG		10.46	149	P		Pn	14 45 43.7	-0.5		
	baz=150									
HSFG		10.46	149	P		Pn	14 45 43.7	-0.5		
CUC	Castrocucco	10.52	297	P		Pn	14 45 45.1	+0.1		
CUC	Castrocucco	10.52	297	P		Pn	14 45 45.1	+0.1		
CDT	Castel del Mon	10.63	304	*e*Pn		Pn	14 45 46.6	+0.1		
STON	Ston	10.69	315	*e*Pn		Pn	14 45 45.6	-1.7		
STON				Sn		Sn	14 47 40.1	-5.1		
STON	Ston	10.69	315	*e*Pn		Pn	14 45 45.5	-1.8		
TESR		10.81	355	⇑P		Pn	14 45 52.3	+3.4		
TESR		10.81	355	⇑*i*P		Pn	14 45 52.3	+3.4		
BZS	Buzias	10.99	336	⇑P		Pn	14 45 52.8	+1.5		
BZS	Buzias	10.99	336	⇑*i*P		Pn	14 45 52.8	+1.5		
BZS	Buzias	10.99	336	P		Pn	14 45 52.8	+1.5		
VAE	Valguarnera	11.06	283	Pn		Pn	14 45 52.1	-0.2		
VAE				Sn		Sn	14 47 53.2	-1.1		
VAE	Valguarnera	11.06	283	Pn		Pn	14 45 52.1	-0.2		
	comp=Z,7.8nm,0.3s,baz=30,slow=4.7,SNR=4.1									
VAE				Sn		Sn	14 47 53.2	-1.1		
	comp=Z,4.3nm,0.3s,baz=270,slow=6.3,SNR=5.3									
VAE	Valguarnera	11.06	283	Pn		Pn	14 45 52.1	-0.3		
VAE				Sn		Sn	14 47 53.2	-1.2		
MS1	Monte Sant'Ang	11.14	306	*e*Pn		Pn	14 45 53.0	-0.4		
KIS	Kishinev	11.26	3	*e*		Pn	14 46 03.0	+7.9		
HQSR		11.37	149	P		Pn	14 45 56.4	-0.2		
	baz=150									
HQSR		11.37	149	P		Pn	14 45 56.4	-0.2		
HDK2	Wahat Dakhilah	11.41	176	P		Pn	14 45 57.8	+0.5		
	baz=176									
HDK2	Wahat Dakhilah	11.41	176	P		Pn	14 45 57.8	+0.5		
DRGR		11.73	342	⇓P		Pn	14 46 02.0	+0.5		
DRGR		11.73	342	⇓*i*P		Pn	14 46 02.0	+0.5		
DRGR		11.73	342	P		Pn	14 46 02.0	+0.5		
BURAR	Bucovina Array	12.04	351	⇑P		Pn	14 46 09.5	+3.7		
BURAR	Bucovina Array	12.04	351	⇑*i*P		Pn	14 46 09.5	+3.8		
LJFR	Jufra	12.23	241	*i* P		Pn	14 46 07.3	-1.2		
	SNR=41									
PKSM	Moragy	12.61	329	⇓*e*P		Pn	14 46 15.1	+1.6		
BUD	Budapest	13.51	333	⇓*es*P		Pn	14 46 33.5	+7.9		
PSZ	Piszkesteto	13.57	336	⇑P		Pn	14 46 35.1	+8.6		
PSZ	Piszkesteto	13.57	336	⇑*i*P		Pn	14 46 35.1	+8.6		
PSZ	Piszkesteto	13.57	336	⇓*es*P		Pn	14 46 34.3	+7.8		
PSZ	Piszkesteto	13.57	336	⇓*e*P		Pn	14 46 34.3	+7.8		
GNI	Garni	13.92	67	Pn		Pn	14 46 31.1	-0.1		
	comp=Z,0.8nm,0.3s,baz=234,slow=3.6,SNR=2.6									
GNI	Garni	13.92	67	⇓*e*P		Pn	14 46 33.1	+1.9		
GNI				pmax	pmax					
	comp=Z,16nm,2.3s									
GNI	Garni	13.92	67	Pn		Pn	14 46 31.1	-0.1		
KIV	Kislovodsk	13.94	49	*i* P		Pn	14 46 35.3	+4.0		
KIV				pmax	pmax					
	comp=Z,3.0nm,0.5s									
KIV				MLR	MLR					
	comp=Z,700nm,25.0s									
CRVS	Cervenica-Dubn	14.00	342	*e*Pn		Pn	14 46 25.6	-6.6		
CRVS	Cervenica-Dubn	14.00	342	*e*		Pn	14 46 25.6	-6.6		
ISHB	Shabestar	14.31	75	*e*P		Pn	14 46 44.2	+8.0		
ISHB	Shabestar	14.31	75	*e*P		Pn	14 46 44.2	+8.0		
VYHS	Vyhne	14.43	335	*e*Pn		Pn	14 46 43.6	+5.9		
VYHS	Vyhne	14.43	335	*e*P		Pn	14 46 43.6	+5.9		
VYHS	Vyhne	14.43	335	*e*P		Pn	14 46 43.6	+5.9		
STHS	Stebnicka Huta	14.54	342	*e*Pn		Pn	14 46 46.1	+7.0		
STHS	Stebnicka Huta	14.54	342	*e*P		Pn	14 46 46.1	+7.0		
STHS	Stebnicka Huta	14.54	342	*e*P		Pn	14 46 46.1	+7.0		
SOKA	Soboth	14.63	322	⇑*i*P		Pn	14 46 42.1	+1.7		
SOKA	Soboth	14.63	322	Pn		Pn	14 46 42.1	+1.7		
GOF	Gofitskoye	14.74	46	*e*P		Pn	14 46 47.8	+6.0		
GOF	Gofitskoye	14.74	46	*e*P		Pn	14 46 47.8	+6.0		
VOY	Vojsko	14.79	318	*e*(Pn)		Pn	14 46 43.5	+1.0		
VOY				*e*			14 46 47.4			
VOY				*e*			14 46 51.1			
VOY				*e*			14 46 56.0			
VOY	Vojsko	14.79	318	*e*Pn		Pn	14 46 43.5	+1.0		
KIEV	Kiev	14.97	3	*e*P		Pn	14 46 47.5	+2.7		
	comp=Z,9.8nm,0.9s									
KIEV	Kiev	14.97	3	*e*P		Pn	14 46 47.5	+2.7		
KIEV				pmax	pmax					
	comp=Z,10.0nm,0.9s									
KIEV	Kiev	14.97	3	*e*P		Pn	14 46 47.5	+2.7		
	comp=Z,9.8nm,0.9s									
AKASG	Malin Array Be	14.98	3	Pn		Pn	14 46 44.0	-0.9		
	comp=Z,0.3nm,0.3s,baz=191,slow=11,SNR=6.9									
AKASG	Malin Array Be	14.98	3	Pn		Pn	14 46 44.0	-0.9		
AKBB	Malin Array Si	14.98	3	*e*P		Pn	14 46 47.9	+3.0		
AKBB	Malin Array Si	14.98	3	*e*P		Pn	14 46 47.9	+3.0		
KEST	Kesra	15.15	275	P		Pn	14 46 48.1	+0.9		
KEST	Kesra	15.15	275	Pn		Pn	14 46 49.1	+1.9		
	comp=Z,0.4nm,0.3s,baz=52,slow=2.7,SNR=17									
IGHG	Ghaleghazi	15.28	90	*e*P		Pn	14 46 55.6	+6.7		
IGHG	Ghaleghazi	15.28	90	*e*P		Pn	14 46 55.6	+6.7		
OJC	Ojcow	15.65	340	*e*P		Pn	14 46 58.6	+5.1		
OJC	Ojcow	15.65	340	*e*P		Pn	14 46 58.6	+5.1		
KBA	Koelnbreinsper	15.76	320	⇑*i*P		Pn	14 46 56.4	+1.6		
	SNR=21									
KBA	Koelnbreinsper	15.76	320	P		Pn	14 46 56.4	+1.6		
	SNR=21									
OKC	Ostrava-Krasne	15.81	336	*e*P		Pn	14 46 58.6	+3.0		
OKC	Ostrava-Krasne	15.81	336	*e*P		Pn	14 46 58.6	+3.0		
OKC	Ostrava-Krasne	15.81	336	*e*P		Pn	14 46 58.6	+3.0		
MOA	Molln	15.82	324	⇑*i*P		Pn	14 46 57.7	+2.1		
MOA	Molln	15.82	324	P		Pn	14 46 57.7	+2.0		
VRAC	Vranov	15.93	332	⇓P		Pn	14 47 00.6	+3.6		
VRAC	Vranov	15.93	332	Pn		Pn	14 46 58.4	+1.4		
	comp=Z,1.2nm,0.3s,baz=141,slow=9.5,SNR=29									
VRAC	Vranov	15.93	332	P		Pn	14 46 58.4	+1.4		
VRAC				pmax	pmax					
	comp=Z,1.0nm,0.3s									
VRAC	Vranov	15.93	332	⇓*i*P		Pn	14 47 00.6	+3.6		
VRAC	Vranov	15.93	332	⇓P		Pn	14 47 00.6	+3.6		
MORC	Moravsky Berou	15.97	335	*e*P		Pn	14 46 59.8	+2.3		
	comp=Z,25nm,1.2s									
MORC	Moravsky Berou	15.97	335	*e*P		Pn	14 46 59.8	+2.3		
MORC				pmax	pmax					
	comp=Z,25nm,1.2s									
MORC	Moravsky Berou	15.97	335	⇑*i*P		Pn	14 47 00.2	+2.7		
MORC	Moravsky Berou	15.97	335	*e*P		Pn	14 46 59.8	+2.3		
	comp=Z,25nm,1.2s									
TREC	Trest	16.36	330	*e*P		Pn	14 47 04.7	+2.3		
TREC	Trest	16.36	330	*e*P		Pn	14 47 04.7	+2.3		
TREC	Trest	16.36	330	*e*P		Pn	14 47 04.7	+2.3		
GEC2	GERESS Array S	16.79	326	*e*P		Pn	14 47 08.3	+0.4		
	comp=Z,19nm,0.9s									
GEC2	GERESS Array S	16.79	326	*e*P		Pn	14 47 08.3	+0.4		
GEC2				pmax	pmax					
	comp=Z,19nm,0.9s									
GEC2	GERESS Array S	16.79	326	*e*P		Pn	14 47 08.3	+0.4		
	comp=Z,19nm,0.9s									
DPC	Doka-Polom	16.88	333	*e*P		Pn	14 47 10.3	+1.4		
DPC	Dobruska-Polom	16.88	333	*e*P		Pn	14 47 10.3	+1.4		
DPC				*ep*P		pP	14 47 20.4	-3.0		
DPC	Dobruska-Polom	16.88	333	*e*P		Pn	14 47 10.3	+1.4		
KHC	Kasperske Hory	17.06	326	*e*P		Pn	14 47 12.4	+1.3		
	comp=Z,12nm,0.8s									
KHC	Kasperske Hory	17.06	326	*e*P		Pn	14 47 12.4	+1.3		
KHC				pmax	pmax					
	comp=Z,12nm,0.8s									
KHC	Kasperske Hory	17.06	326	*e*P		Pn	14 47 12.2	+1.1		
KHC				*ep*P		pP	14 47 26.0	+0.6		
KHC	Kasperske Hory	17.06	326	*e*P		Pn	14 47 12.4	+1.3		
	comp=Z,12nm,0.8s									
UPC	Upice	17.12	333	*e*P		Pn	14 47 12.5	+0.6		
UPC	Upice	17.12	333	*e*P		Pn	14 47 12.5	+0.6		
UPC	Upice	17.12	333	*e*P		Pn	14 47 12.5	+0.6		
FETA	Feichten	17.13	316	⇑*i*P		Pn	14 47 13.5	+1.4		
	SNR=29									
FETA	Feichten	17.13	316	P		Pn	14 47 13.5	+1.4		
	SNR=29									
KSP	Ksiaz	17.30	334	*e*P		Pn	14 47 14.9	+0.8		
KSP	Ksiaz	17.30	334	*e*P		Pn	14 47 14.9	+0.8		
WET	Wettzell	17.39	325	*e*P		Pn	14 47 15.7	+0.5		
	comp=Z,34nm,1.2s									
WET	Wettzell	17.39	325	*e*P		Pn	14 47 15.7	+0.5		
WET				pmax	pmax					
	comp=Z,34nm,1.2s									
WET	Wettzell	17.39	325	*e*P		Pn	14 47 15.7	+0.5		
	comp=Z,34nm,1.2s									
VSR	Storozhevoye	17.43	24	*e*P		Px	14 47 26.1			
VSR				pmax	pmax					
	comp=Z,10.0nm,0.8s									
VSR				pmax	pmax					
	comp=N,20nm,1.0s									
VSR				pmax	pmax					
	comp=E,10.0nm,1.1s									
DAVOX	Davos/Dischmat	17.48	315	P		Pn	14 47 17.3	+1.0		
	comp=E,1.0nm,0.3s,baz=140,slow=11,SNR=6.7									
DAVOX	Davos/Dischmat	17.48	315	P		Pn	14 47 17.3	+0.9		
PVCC	Panska Ves	17.69	331	*e*P		Pn	14 47 20.0	+1.1		
PVCC	Panska Ves	17.69	331	*e*P		Pn	14 47 20.0	+1.1		
PVCC	Panska Ves	17.69	331	*e*P		Pn	14 47 20.0	+1.1		
SAOF	Saorge	17.69	304	*e*P		Pn	14 47 22.1	+3.1		
SBF	Sospel	17.73	303	*e*P		Pn	14 47 18.0	-1.4		
	comp=E,42nm,0.8s									
SBF	Sospel	17.73	303	*e*P		Pn	14 47 18.0	-1.4		
	comp=E,21nm,0.8s									
SBF	Sospel	17.73	303	*e*P		Pn	14 47 18.0	-1.4		
SBF				pmax	pmax					
	comp=Z,21nm,0.8s									
SBF	Sospel	17.73	303	*e*P		Pn	14 47 18.0	-1.4		
	comp=Z,21nm,0.8s									
DAVA	Damuels	17.76	316	⇓*i*P		Pn	14 47 20.6	+0.8		
	SNR=9.5									
DAVA	Damuels	17.76	316	P		Pn	14 47 20.6	+0.8		
	SNR=9.5									
AUTN	L'Aution	17.78	304	*e*P		Pn	14 47 20.4	+0.3		
AUTN	L'Aution	17.78	304	*e*P		Pn	14 47 20.4	+0.3		
IRAZ	Razeghan	17.84	85	*e*P		Pn	14 47 24.6	+3.7		
TOUF	Mont Tournerai	17.91	304	*e*P		Pn	14 47 22.9	+1.3		
TOUF	Mont Tournerai	17.91	304	*e*P		Pn	14 47 22.9	+1.3		
MVIF	Mont Vial	17.93	303	*e*P		Pn	14 47 20.7	-1.2		
MVIF	Mont Vial	17.93	303	*e*P		Pn	14 47 20.7	-1.2		
CALN	Calern	18.07	303	*e*P		Pn	14 47 24.7	+1.2		
CALN	Calern	18.07	303	*e*P		Pn	14 47 24.7	+1.2		
FRF	La Foret Royal	18.17	302	*e*P		Pn	14 47 22.8	-2.0		
	comp=Z,24nm,0.9s									
FRF	La Foret Royal	18.17	302	*e*P		Pn	14 47 22.8	-2.0		
	comp=Z,12nm,0.9s									
FRF	La Foret Royal	18.17	302	*e*P		Pn	14 47 22.8	-2.0		
FRF				pmax	pmax					
	comp=Z,12nm,0.9s									
FRF	La Foret Royal	18.17	302	*e*P		Pn	14 47 22.8	-2.0		
	comp=Z,12nm,0.9s									
LMR	La Mourre	18.20	301	*e*P		Pn	14 47 23.3	-1.8		
	comp=Z,38nm,1.0s									
LMR	La Mourre	18.20	301	*e*P		Pn	14 47 23.3	-1.8		
	comp=Z,19nm,1.0s									
LMR	La Mourre	18.20	301	*e*P		Pn	14 47 23.3	-1.8		
LMR				pmax	pmax					
	comp=Z,19nm,1.0s									
LMR	La Mourre	18.20	301	*e*P		Pn	14 47 23.3	-1.8		
	comp=Z,19nm,1.0s									
BRG	Berggiesshubel	18.21	330	*e*P		Pn	14 47 24.7	-0.5		
	comp=Z,15nm,1.2s									
BRG	Berggiesshubel	18.21	330	*e*P		Pn	14 47 24.9	-0.3		
	comp=Z,5.8nm,0.7s									
BRG										
	comp=N,483nm,21.2s									
BRG										
	comp=E,351nm,21.3s									
BRG										
	comp=Z,648nm,19.3s									
BRG	Berggiesshubel	18.21	330	*e*P		Pn	14 47 24.9	-0.3		
BRG				pmax	pmax					
	comp=Z,4.0nm,0.7s									
BRG				MLR	MLR					
	comp=N,289nm,21.2s									
BRG				MLR	MLR					
	comp=E,210nm,21.3s									
BRG				MLR	MLR					
	comp=Z,388nm,19.3s									
BRG	Berggiesshubel	18.21	330	*e*P		Pn	14 47 24.9	-0.3		
	comp=Z,388nm,19.3s									
VRHR	Novokhopersk	18.21	28	*e*P		Px	14 47 37.0			
VRHR				pmax	pmax					
	comp=Z,9.0nm,0.5s									
VRHR				pmax	pmax					
	comp=N,10.0nm,0.8s									
VRHR				pmax	pmax					
	comp=E,30nm,1.6s									
WERN	Wernitzgruen	18.43	327	*e*P		Pn	14 47 26.6	-1.3		
	comp=Z,14nm,0.7s									
MBDF	Montbardon	18.48	306	*e*P		Pn	14 47 26.4	-2.2		
	comp=Z,26nm,0.8s									
MBDF	Montbardon	18.48	306	*e*P		Pn	14 47 26.4	-2.2		
	comp=Z,13nm,0.8s									
MBDF	Montbardon	18.48	306	*e*P		Pn	14 47 26.4	-2.2		
MBDF				pmax	pmax					
	comp=Z,13nm,0.8s									
MBDF	Montbardon	18.48	306	*e*P		Pn	14 47 26.4	-2.2		
	comp=Z,13nm,0.8s									
TANN	Tannenbergstha	18.49	327	*e*P		Pn	14 47 27.9	-0.6		
	comp=Z,17nm,1.1s									
GUNZ	Gunzen	18.51	327	*e*P		Pn	14 47 27.9	-0.9		
	comp=Z,24nm,1.1s									
GRA1	Grafenberg Arr	18.55	324	*e*P		Pn	14 47 28.5	-0.8		
	comp=Z,65nm,1.4s									
GRA1	Grafenberg Arr	18.55	324	*e*P		Pn	14 47 28.5	-0.8		
	comp=Z,65nm,1.4s									
GRF	Grafenberg Arr	18.55	324	*e*P		Pn	14 47 28.5	-0.8		
	comp=Z,65nm,1.4s									
GRF	Grafenberg Arr	18.55	324	*e*P		Pn	14 47 28.5	-0.8		
GRF				pmax	pmax					
	comp=Z,65nm,1.4s									
WERD	Werda	18.58	327	*e*P		Pn	14 47 28.5	-1.1		
	comp=Z,16nm,0.8s									
IR3	Iran Long-Peri	18.72	84	*e*P	

comp=Z,12nm,0.9s
VIVF Saint-Julien-I 19.93 304 *e*P **Pn** **14 47 43.0 -2.7**
VIVF pmax pmax
comp=Z,12nm,0.9s
VIVF Saint-Julien-I 19.93 304 *e*P **Pn** **14 47 43.0 -2.7**
comp=Z,12nm,0.9s
IFIR Firoozkooh 20.10 83 *e*P **P** **14 47 52.1 +6.7**
HAU Haudompre 20.17 314 *e*P **P** **14 47 46.5 +0.4**
comp=Z,21nm,0.6s
HAU Haudompre 20.17 314 *e*P **P** **14 47 46.5 +0.4**
comp=Z,10nm,0.6s
HAU Haudompre 20.17 314 *e*P **P** **14 47 46.5 +0.4**
HAU pmax pmax
comp=Z,10.0nm,0.6s
HAU Haudompre 20.17 314 *e*P **P** **14 47 46.5 +0.4**
comp=Z,10nm,0.6s
IGAR Gharneh 20.18 93 *e*P **P** **14 47 50.3 +3.9**
LASF Ste Croix 20.25 302 *e*P **P** **14 47 46.1 -0.9**
LASF Ste Croix 20.25 302 *e*P **P** **14 47 46.1 -0.9**
OBN Obninsk 20.26 14 *i* P **P** **14 47 49.2 +2.2**
OBN pmax pmax
comp=Z,13nm,0.6s
OBN MLR MLR
comp=Z,600nm,19.0s
OBN Obninsk 20.26 14 *i* P **P** **14 47 49.2 +2.2**
comp=Z,600nm,19.0s
IZEF Zefreh 20.28 91 *e*P **P** **14 47 50.4 +2.9**
IZEF Zefreh 20.28 91 *e*P **P** **14 47 50.4 +2.9**
ISHM Shahmirzad 20.51 82 *e*P **P** **14 47 55.0 +5.1**
RUP Ruppelstein 20.67 319 *e*P **P** **14 47 51.9 +0.4**
RUP Ruppelstein 20.67 319 *e*P **P** **14 47 51.9 +0.4**
IGLO Ghaloghah 20.87 80 *e*P **P** **14 47 58.5 +4.8**
PLDF La Plantade 21.00 307 *e*P **P** **14 47 54.3 -0.8**
PLDF La Plantade 21.00 307 *e*P **P** **14 47 54.3 -0.8**
LBL Lubilhac 21.01 304 *e*P **P** **14 47 55.9 +0.7**
LBL Lubilhac 21.01 304 *e*P **P** **14 47 55.9 +0.7**
MOS Moscow 21.06 15 *e*P pP 14 48 06.4 -2.9
MOS pmax pmax
comp=Z,60nm,1.4s,mb4.7
SMF Signal de Mont 21.11 308 *e*P **P** **14 47 55.1 -1.2**
comp=Z,15nm,0.6s,mb4.2
SMF Signal de Mont 21.11 308 *e*P **P** **14 47 55.1 -1.2**
comp=Z,7.7nm,0.6s,mb4.2
SMF Signal de Mont 21.11 308 *e*P **P** **14 47 55.1 -1.2**
SMF pmax pmax
comp=Z,8.0nm,0.6s,mb4.2
SMF Signal de Mont 21.11 308 *e*P **P** **14 47 55.1 -1.2**
comp=Z,7.7nm,0.6s,mb4.2
MEZF Maizieres J'vi 21.17 314 *e*P **P** **14 47 56.3 -0.6**
comp=Z,39nm,0.8s,mb4.5
MEZF Maizieres J'vi 21.17 314 *e*P **P** **14 47 56.3 -0.6**
comp=Z,39nm,0.8s,mb4.8
MEZF Maizieres J'vi 21.17 314 *e*P **P** **14 47 56.3 -0.6**
comp=Z,20nm,0.8s,mb4.5
MTLF Montolieu 21.23 299 *e*P **P** **14 47 56.5 -1.0**
comp=Z,8.9nm,0.6s,mb4.0
MTLF Montolieu 21.23 299 *e*P **P** **14 47 56.5 -1.0**
comp=Z,4.4nm,0.6s,mb4.0
MTLF Montolieu 21.23 299 *e*P **P** **14 47 56.5 -1.0**
MTLF pmax pmax
comp=Z,4.0nm,0.6s,mb3.9
MTLF Montolieu 21.23 299 *e*P **P** **14 47 56.5 -1.0**
comp=Z,4.4nm,0.6s,mb4.0
LOR Lormes 21.34 310 *e*P **P** **14 47 57.2 -1.6**
LOR Lormes 21.34 310 *e*P **P** **14 47 57.2 -1.6**
AVF Avril sur Loir 21.48 308 *e*P **P** **14 47 58.9 -1.3**
comp=Z,14nm,0.8s,mb4.0
AVF Avril sur Loir 21.48 308 *e*P **P** **14 47 58.9 -1.3**
comp=Z,6.8nm,0.8s,mb4.0
AVF Avril sur Loir 21.48 308 *e*P **P** **14 47 58.9 -1.3**
AVF pmax pmax
comp=Z,7.0nm,0.8s,mb4.0
AVF Avril sur Loir 21.48 308 *e*P **P** **14 47 58.9 -1.3**
comp=Z,6.8nm,0.8s,mb4.0
SSF Saint Saulge 21.48 309 *e*P **P** **14 48 00.2 0.0**
comp=Z,25nm,0.6s,mb4.4
SSF Saint Saulge 21.48 309 *e*P **P** **14 48 00.2 0.0**
comp=Z,13nm,0.6s,mb4.4
SSF Saint Saulge 21.48 309 *e*P **P** **14 48 00.2 0.0**
SSF pmax pmax
comp=Z,13nm,0.6s,mb4.4
SSF Saint Saulge 21.48 309 *e*P **P** **14 48 00.2 0.0**
comp=Z,13nm,0.6s,mb4.4
BGF Bois d'Agland 21.71 308 *e*P **P** **14 48 02.0 -0.7**
comp=Z,16nm,0.7s,mb4.3
BGF Bois d'Agland 21.71 308 *e*P **P** **14 48 02.0 -0.7**
comp=Z,7.9nm,0.7s,mb4.2
BGF Bois d'Agland 21.71 308 *e*P **P** **14 48 02.0 -0.7**
BGF pmax pmax
comp=Z,8.0nm,0.7s,mb4.3
BGF Bois d'Agland 21.71 308 *e*P **P** **14 48 02.0 -0.7**
comp=Z,7.9nm,0.7s,mb4.3
CAF Calviac 21.72 303 *e*P **P** **14 48 01.6 -1.2**
CAF Calviac 21.72 303 *e*P **P** **14 48 01.6 -1.2**
IPAR Pars 21.84 98 *e*P **P** **14 48 08.0 +3.8**
TCF Toulx Ste Croi 22.04 306 *e*P **P** **14 48 04.1 -2.0**
TCF Toulx Ste Croi 22.04 306 *e*P **P** **14 48 04.1 -2.0**
ISRV Sarvestan 22.07 100 *e*P pP 14 48 17.5 -3.0
GIVF Givet 22.10 318 *e*P **P** **14 48 05.3 -1.5**
GIVF Givet 22.10 318 *e*P **P** **14 48 05.3 -1.5**
RJF Les Rejaudoux 22.20 304 *e*P **P** **14 48 06.0 -1.9**
comp=Z,12nm,0.7s,mb4.1
RJF Les Rejaudoux 22.20 304 *e*P **P** **14 48 06.0 -1.9**
comp=Z,5.8nm,0.7s,mb4.1
RJF Les Rejaudoux 22.20 304 *e*P **P** **14 48 06.0 -1.9**
RJF pmax pmax
comp=Z,6.0nm,0.7s,mb4.1
RJF Les Rejaudoux 22.20 304 *e*P **P** **14 48 06.0 -1.9**
comp=Z,5.8nm,0.7s,mb4.1
BAIF Baives 22.42 317 *e*P **P** **14 48 09.3 -0.9**
comp=Z,8.3nm,0.4s,mb4.2
BAIF Baives 22.42 317 *e*P **P** **14 48 09.3 -0.9**
comp=Z,4.2nm,0.4s,mb4.2
BAIF Baives 22.42 317 *e*P **P** **14 48 09.3 -0.9**
BAIF pmax pmax
comp=Z,4.0nm,0.4s,mb4.2
BAIF Baives 22.42 317 *e*P **P** **14 48 09.3 -0.9**
comp=Z,4.2nm,0.4s,mb4.2
EPF Esparros 22.52 297 *e*P **P** **14 48 08.7 -2.6**
comp=Z,24nm,1.1s,mb4.2
EPF Esparros 22.52 297 *e*P **P** **14 48 08.7 -2.6**
comp=Z,12nm,1.1s,mb4.2
EPF Esparros 22.52 297 *e*P **P** **14 48 08.7 -2.6**
EPF pmax pmax
comp=Z,12nm,1.1s,mb4.2
IMEH Mehriz 22.57 93 *e*P **P** **14 48 12.9 +1.0**
IMEH Mehriz 22.57 93 *e*P **P** **14 48 12.9 +1.0**
LFF La Frestale 22.63 302 *e*P **P** **14 48 09.8 -2.7**
comp=Z,10.0nm,0.5s,mb4.2
LFF La Frestale 22.63 302 *e*P **P** **14 48 09.8 -2.7**
comp=Z,5.0nm,0.5s,mb4.2
LFF La Frestale 22.63 302 *e*P **P** **14 48 09.8 -2.7**
LFF pmax pmax
comp=Z,5.0nm,0.5s,mb4.2
ETSF Etsaut 23.15 297 *e*P **P** **14 48 15.4 -2.5**
TAM Tamanrasset 23.41 243 *e*P **P** **14 48 22.6 +2.2**
comp=Z,27nm,1.6s,mb4.4
TAM Tamanrasset 23.41 243 *e*P **P** **14 48 22.6 +2.2**
TAM pmax pmax
comp=Z,27nm,1.6s,mb4.4
TAM Tamanrasset 23.41 243 *e*P **P** **14 48 22.6 +2.2**
comp=Z,27nm,1.6s,mb4.4
SJPF Ste Jean 23.66 297 *e*P **P** **14 48 19.5 -3.1**
MFF Saint Martin d 23.68 306 *e*P **P** **14 48 22.1 -0.6**
comp=Z,9.8nm,0.4s,mb4.2
MFF Saint Martin d 23.68 306 *e*P **P** **14 48 22.1 -0.6**
comp=Z,4.9nm,0.4s,mb4.3
MFF Saint Martin d 23.68 306 *e*P **P** **14 48 22.1 -0.6**
MFF pmax pmax
comp=Z,5.0nm,0.4s,mb4.3
MFF Saint Martin d 23.68 306 *e*P **P** **14 48 22.1 -0.6**
comp=Z,4.9nm,0.4s,mb4.2
LDF La Druitiere 24.32 311 *e*P **P** **14 48 27.8 -0.8**
comp=Z,14nm,0.4s,mb4.4
LDF La Druitiere 24.32 311 *e*P **P** **14 48 27.8 -0.8**
comp=Z,6.9nm,0.4s,mb4.4
LDF La Druitiere 24.32 311 *e*P **P** **14 48 27.8 -0.8**
LDF pmax pmax
comp=Z,7.0nm,0.4s,mb4.4
LDF La Druitiere 24.32 311 *e*P **P** **14 48 27.8 -0.8**
comp=Z,6.9nm,0.4s,mb4.4
FLN La Foliniere 24.61 311 *e*P **P** **14 48 30.2 -0.9**
comp=Z,27nm,0.5s,mb4.8
FLN La Foliniere 24.61 311 *e*P **P** **14 48 30.2 -0.9**
comp=Z,13nm,0.5s,mb4.7
FLN La Foliniere 24.61 311 *e*P **P** **14 48 30.2 -0.9**
FLN pmax pmax
comp=Z,13nm,0.5s,mb4.7
FLN La Foliniere 24.61 311 *e*P **P** **14 48 30.2 -0.9**
comp=Z,13nm,0.5s,mb4.8
GRR Gorron 24.71 310 *e*P **P** **14 48 30.2 -1.9**
comp=Z,38nm,0.5s,mb4.9
GRR Gorron 24.71 310 *e*P **P** **14 48 30.2 -1.9**
comp=Z,19nm,0.5s,mb4.9
GRR Gorron 24.71 310 *e*P **P** **14 48 30.2 -1.9**
GRR pmax pmax
comp=Z,19nm,0.5s,mb4.9
GRR Gorron 24.71 310 *e*P **P** **14 48 30.2 -1.9**
comp=Z,19nm,0.5s,mb4.9
ESDC Sonseca Array 25.52 288 P P **14 48 40.4 +0.9**
ESDC Sonseca Array 25.52 288 P P **14 48 40.4 +0.9**
comp=Z,3.4nm,0.5s,mb4.2,baz=80,slow=9.7,SNR=24
ESDC Sonseca Array 25.52 288 P P **14 48 40.4 +0.9**
SGMF Saint Gilles 25.74 309 *e*P P **14 48 40.4 -1.0**
SGMF Saint Gilles 25.74 309 *e*P P **14 48 40.4 -1.0**
FINES FINESS Array B 25.75 358 P P **14 48 41.0 -0.4**
comp=Z,2.1nm,0.6s,mb3.8,baz=164,slow=10,SNR=9.5
FINES FINESS Array B 25.75 358 P P **14 48 41.0 -0.4**
FINES pmax pmax
comp=Z,2.0nm,0.6s
FINES FINESS Array B 25.75 358 P P **14 48 41.0 -0.4**
comp=Z,2.0nm,0.6s,mb3.8
IMYA Miami 25.91 79 *e*P P **14 48 47.9 +4.9**
QUIF Quistinic 26.03 308 *e*P P **14 48 43.0 -1.0**
QUIF Quistinic 26.03 308 *e*P P **14 48 43.0 -1.0**
HFS Hagfors 26.10 344 P P **14 48 43.5 -1.0**
comp=Z,14nm,0.9s,mb4.5,baz=148,slow=8.7,SNR=14
HFS Hagfors 26.10 344 P P **14 48 43.5 -1.1**
HFS pmax pmax
comp=Z,14nm,1.0s
HFS Hagfors 26.10 344 P P **14 48 43.5 -1.1**
comp=Z,14nm,1.0s,mb4.5
AKTK Aktyubinsk 26.16 47 P P **14 48 47.4 +2.2**
AKTK Aktyubinsk 26.16 47 P P **14 48 47.4 +2.2**
AKTO Aktyubinsk 26.16 47 P P **14 48 47.4 +2.2**
comp=Z,0.9nm,0.7s,mb3.4,baz=243,slow=11,SNR=3.3
KLMR Klimovskoe 26.19 13 P P **14 48 44.7 -0.6**
KLMR pmax pmax
comp=Z,44nm,1.4s,mb4.8
KLMR Klimovskoe 26.19 13 P P **14 48 44.7 -0.6**
comp=Z,44nm,1.4s,mb4.8
ROSF Rostrenen 26.22 308 *e*P P **14 48 44.3 -1.5**
ROSF Rostrenen 26.22 308 *e*P P **14 48 44.3 -1.5**
MDT Midelt 27.04 273 P P **14 48 55.6 +2.3**
comp=Z,4.2nm,0.9s,mb4.0,baz=73,slow=12,SNR=6.0
MDT Midelt 27.04 273 P P **14 48 55.6 +2.3**
NB2 NORSAR Subarra 27.49 342 P P **14 48 55.4 -1.6**
comp=Z,5.2nm,0.9s,mb4.1,baz=147,slow=9.0,SNR=7.2
NOA NORSAR Array B 27.49 342 P P **14 48 55.8 -1.2**
comp=Z,3.7nm,0.9s,mb3.9,baz=144,slow=8.7,SNR=7.9
NOA NORSAR Array B 27.49 342 P P **14 48 55.8 -1.2**
NOA pmax pmax
comp=Z,4.0nm,0.9s
NOA NORSAR Array B 27.49 342 P P **14 48 55.8 -1.2**
comp=Z,4.0nm,0.9s,mb4.0
EKA Eskdalemuir Ar 28.95 322 P P **14 49 09.9 -0.1**
comp=Z,0.7nm,0.5s,mb3.6,baz=123,slow=10,SNR=4.4
EKA Eskdalemuir Ar 28.95 322 P P **14 49 10.0 -0.1**
EKA pmax pmax
comp=Z,1.0nm,0.5s
EKA Eskdalemuir Ar 28.95 322 P P **14 49 10.0 -0.1**
comp=Z,1.0nm,0.5s,mb3.8
ARU Arti 29.23 35 P P **14 49 12.9 +0.4**
ARU Arti 29.23 35 P P **14 49 12.9 +0.4**
TORD Torodi Ar. Bea 32.66 233 P P **14 49 44.9 +1.7**
comp=Z,3.5nm,0.5s,mb4.5,baz=34,slow=8.8,SNR=31
ARCES ARCESS Array B 33.88 358 P P **14 49 52.7 -0.5**
ARCES PcP PcP 14 52 32.1 +1.7
ARCES ARCESS Array B 33.88 358 P P **14 49 52.7 -0.5**
comp=Z,1.0nm,0.4s,mb4.1,baz=178,slow=8.5,SNR=13
ARCES PcP PcP 14 52 32.1 +1.7
comp=Z,1.2nm,0.9s,baz=180,slow=3.2,SNR=3.6
ARCES ARCESS Array B 33.88 358 P P **14 49 52.7 -0.5**
ARCES 14 52 32.1
ARCES pmax pmax
comp=Z,1.0nm,0.4s
ARCES ARCESS Array B 33.88 358 P P **14 49 52.7 -0.5**
comp=Z,1.0nm,0.4s,mb4.1
ARCES ARCESS Array B 33.88 358 PcP PcP 14 52 32.1 +1.7
KURK Kurchatov 39.01 51 *e*P P **14 50 44.5 +7.4**
KURK pmax pmax
comp=Z,4.0nm,1.4s,mb4.0
MKAR Makanchi Array 41.52 57 P P **14 50 59.8 +1.9**
comp=Z,0.3nm,0.3s,mb3.5,baz=275,slow=7.2,SNR=4.5
ZALV Zalesovo Beam 42.93 47 P P **14 51 10.7 +1.5**
comp=Z,0.9nm,0.6s,mb3.7,baz=256,slow=6.0,SNR=4.8
ZALV LR LR 15 11 26.2
comp=Z,110nm,20.1s,baz=77,slow=39
ZALV Zalesovo Beam 42.93 47 P P **14 51 10.7 +1.5**
ZALV pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
ZALV MLR MLR
comp=Z,110nm,20.1s
ZAK Zakamensk 54.62 49 *e*P P **14 52 40.2 +1.3**
ZAK pmax pmax
comp=Z,1.0nm,1.0s,mb3.8
ZAK Zakamensk 54.62 49 *e*P P **14 52 40.2 +1.3**
comp=Z,1.0nm,1.0s,mb3.8
GTA Gaotai 55.64 63 *e*P P **14 52 49.1 +2.7**
GTA pP pP 14 52 59.3 -3.9
GTA pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
SONM Songino Array 57.32 52 P P **14 53 00.9 +2.7**
comp=Z,1.6nm,1.0s,mb4.0,baz=282,slow=7.2,SNR=6.0
SONM Songino Array 57.32 52 P P **14 53 00.9 +2.7**
SONM pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 57.32 52 P P **14 53 00.9 +2.7**
comp=Z,2.0nm,1.0s,mb4.1
CMAR Chiang Mai Ar 64.21 85 P P **14 53 47.4 +1.9**
comp=Z,0.8nm,0.7s,mb3.9,baz=302,slow=8.0,SNR=6.7
CMAR Chiang Mai Arr 64.21 85 P P **14 53 47.4 +2.0**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR Chiang Mai Ar 64.21 85 P P **14 53 47.3 +1.9**
SCHQ Schefferville 64.24 320 P P **14 53 44.6 -0.5**
comp=Z,2.1nm,0.5s,mb4.4,baz=91,slow=6.3,SNR=6.6
SCHQ Schefferville 64.24 320 P P **14 53 44.6 -0.5**
NJ2 Nanjing 72.73 63 *e*P P **14 54 45.3 +6.8**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
KSRS Korea Array 76.08 54 LR LR 15 31 56.8
comp=Z,45nm,21.4s,baz=285,slow=38
ILAR Eielson Array 79.74 358 P P **14 55 18.2 +0.7**
comp=Z,0.7nm,0.6s,mb3.8,baz=342,slow=3.8,SNR=9.5
ILAR Eielson Array 79.74 358 P P **14 55 18.3 +0.7**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
ILAR Eielson Array 79.74 358 P P **14 55 18.3 +0.7**
comp=Z,1.0nm,0.6s,mb3.9
ULM Lac du Bonnet 81.10 327 P P **14 55 25.3 +0.2**
comp=Z,4.3nm,0.5s,mb4.6,baz=62,slow=4.3,SNR=3.3
ULM Lac du Bonnet 81.10 327 P P **14 55 25.3 +0.2**
TGY Tagaytay City 84.24 77 LR LR 15 36 45.3
comp=Z,12nm,21.6s,baz=126,slow=38

*NEIC **19** 14:52:59.1, 16°.13N×98°.37W, h2km, MD3.7(MEX), After MEX.*

MEX 19 14:52:58.7±0.8, 16°.08N×98°.33W, h5km±6km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.37**	**32**	*i* P		Pg 14 53 04.9	-0.9
PNIG				*i* S		Sg 14 53 11.3	+0.6
PNIG	**Pinotepa**	**0.37**	**32**	*i* P		Pg 14 53 04.9	-0.9
PNIG				*i* S		Sg 14 53 11.3	+0.6
ACX	**Acapulco**	**1.66**	**298**	*e*P		Pn 14 53 25.8	-2.7
ACX				*i* S		Sn 14 53 46.5	-3.8
ACX	**Acapulco**	**1.66**	**298**	*e*P		Pn 14 53 25.8	-2.7
ACX				*i* S		Sn 14 53 46.5	-3.8
UTMO	**Huajuapan**	**1.81**	**16**	*i* P		Pn 14 53 27.9	-2.7
UTMO				*i* S		Sn 14 53 49.4	-4.6
VHO	**Vista Hermosa**	**1.82**	**57**	*i* P		Pn 14 53 28.7	-2.0
VHO				*i* S		Sn 14 53 50.7	-3.6
VHO	**Vista Hermosa**	**1.82**	**57**	*i* P		Pn 14 53 28.0	-2.7
VHO				*i* S		Sn 14 53 50.7	-3.6
CAIG	**El Cayaco**	**2.09**	**298**	*e*P		Pn 14 53 31.9	-2.5
CAIG				*i* S		Sn 14 53 55.9	-5.0
CAIG	**El Cayaco**	**2.09**	**298**	*e*P		Pn 14 53 31.9	-2.5
CAIG				*i* S		Sn 14 53 55.9	-5.0
HUIG	**Huatulco**	**2.16**	**98**	*i* P		Pn 14 53 33.8	-1.6
HUIG				*i* S		Sn 14 53 54.4	-8.3
HUIG	**Huatulco**	**2.16**	**98**	*i* P		Pn 14 53 32.6	-2.8
HUIG				*i* S		Sn 14 53 54.9	-7.8
MEIG	**Mezcala**	**2.21**	**326**	*e*P		Pn 14 53 33.1	-3.0
MEIG				*i* S		Sn 14 53 59.3	-4.5
PPM	**Popocatepetl**	**2.98**	**355**	*e*P		Pn 14 53 44.4	-2.3
PPM				*i* S		Sn 14 54 18.6	-4.3
PPM	**Popocatepetl**	**2.98**	**355**	*e*P		Pn 14 53 44.4	-2.3
PPM				*i* S		Sn 14 54 18.6	-4.3
MZVM		**3.21**	**345**	*e*P		Pn 14 53 48.2	-1.7
MZVM				*i* S		Sn 14 54 25.1	-3.4
IIO	**Organos**	**3.51**	**354**	*e*P		Pn 14 53 52.1	-1.9
IIO				*i* S		Sn 14 54 31.5	-4.5
IIO	**Organos**	**3.51**	**354**	*e*P		Pn 14 53 52.1	-1.9
IIO				*i* S		Sn 14 54 31.5	-4.5
PTVM	**Pico Tres Padr**	**3.57**	**348**	*e*P		Pn 14 53 53.0	-1.9
PTVM				*i* S		Sn 14 54 34.1	-3.3
PTVM	**Pico Tres Padr**	**3.57**	**348**	*e*P		Pn 14 53 53.0	-1.9
PTVM				*i* S		Sn 14 54 34.1	-3.3

IDC 19 14:54:33.2±4.1, 6°.63S×149°.75E, h0km, mb3.0/1, mb1 3.4/2, mb1mx3.3/14, mbtmp3.2/2, Error ellipse: s-maj=163.5km s-min=49.3km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.97**	**227**	P		Pn 14 59 07.8	-1.1
	0.1nm,0.3s,baz=50,slow=10.0,SNR=5.9						
ASAR	**Alice Springs**	**22.78**	**220**	P		P 14 59 36.9	-0.5
	0.5nm,0.7s,baz=65,slow=8.8,SNR=4.2						
TORD	**Torodi Ar. Bea**	**147.89**	**284**	PKPbc		PKPbc 15 14 20.8	-0.5
	0.3nm,0.5s,baz=96,slow=1.4,SNR=2.5						

MAN 19 15:04:03, 9°.34N×122°.30E, h33km, mb4.1, ML2.9, MS2.6, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIM	**Jordan**	**1.31**	**12**	*e*P		Pn 15 04 26.3	+1.3
GUIM				*e*S		Sn 15 04 38.8	-2.7
IPIL	**Ipil**	**1.56**	**170**	*e*P		Pn 15 04 29.6	+1.1
PAGZ	**Pagadian**	**1.82**	**144**	*e*P		Pn 15 04 36.5	+4.4
CUYO	**Cuyo Island**	**1.97**	**320**	*e*P		Pn 15 04 35.5	+1.5
BUSP	**Coron**	**3.36**	**322**	*e*P		Pn 15 04 54.5	+1.3
ENPP	**El Nido**	**3.39**	**304**	*e*P		Pn 15 04 55.0	+1.4

*ISCJB **19** 15:07:38.0±1.7, 11°.13S×0°.04×115°.53E±0°.08, h26km±14km, mb4.1/12, Error ellipse: s-maj=13.2km s-min=5.7km az=159.9*

*IDC **19** 15:07:39.4±1.0, 10°.64S×115°.58E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.9/18, mbtmp3.9/9, Error ellipse: s-maj=46.6km s-min=15.9km az=60.0*

*NEIC **19** 15:07:40.8±0.5, 10°.64S×115°.63E, h10km, mb4.4/4, Error ellipse: s-maj=28.7km s-min=8.7km az=58.0*

*DJA **19** 15:07:42, 10°.86S×115°.37E, h20km, MLv4.3/7*

ISC 19 15:07:39.1±2.7, 11°.09S±0°.05×115°.50E±0°.08, h16km±19km, n35, σ0°84/45, mb4.1/12, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**2.28**	**351**	P		**Pn 15 08 16.0**	**-0.1**
DNP	**Denpasar**	**2.41**	**353**	P		**Pn 15 08 17.5**	**-0.4**
KHKI	**Kahang-Kahang**	**2.71**	**2**	P		**Pn 15 08 22.6**	**+0.6**
KHKI				S		**Sn 15 08 53.0**	**-1.5**
SRBI	**Singaraja**	**3.00**	**355**	P		**Pn 15 08 27.1**	**+1.1**
SRBI				S		**Sn 15 09 01.1**	**-0.6**
GMJI	**Gumukmas**	**3.45**	**324**	P		**Pn 15 08 31.0**	**-1.3**
KRKI	**Karangkates**	**4.18**	**314**	P		**Pn 15 08 41.9**	**-0.4**
PWJI	**Pagerwojo**	**4.75**	**310**	P		**Pn 15 08 50.0**	**-0.1**
SJI	**Sawahan**	**4.96**	**312**	P		**Pn 15 08 54.1**	**+1.0**
MBWA	**Marble Bar**	**10.81**	**158**	*e*P		**Pn 15 10 11.8**	**-1.5**
MBWA				*e*S		**Sn 15 12 01.9**	**-12**
MBWA	**Marble Bar**	**10.81**	**158**	*e*P		**Pn 15 10 11.7**	**-1.6**
	21nm,0.3s						
GIRL	**Giralia**	**11.56**	**186**	*e*P		**Pn 15 10 23.1**	**-0.4**
	100nm,0.3s						
FITZ	**Fitzroy Crossi**	**12.04**	**127**	*e*P		**Pn 15 10 31.1**	**+0.9**
	3.3nm,0.3s						
FITZ				*e*S		**Sn 15 12 37.1**	**-7.1**
FITZ	**Fitzroy Crossi**	**12.04**	**127**	*e*P		**Pn 15 10 31.1**	**+1.0**
FITZ				Sn		**Sn 15 12 38.3**	**-5.9**
FITZ	**Fitzroy Crossi**	**12.04**	**127**	Pn		**Pn 15 10 31.0**	**+0.8**
	0.6nm,0.3s,baz=323,slow=6.2,SNR=15						
FITZ				Sn		**Sn 15 12 38.3**	**-5.9**
	1.1nm,0.3s,baz=201,slow=22,SNR=8.1						
KNA	**Kununurra**	**13.71**	**111**	*e*P		**Pn 15 10 53.2**	**+0.1**
	49nm,1.8s						
MEEK	**Meekatharra**	**15.75**	**170**	*e*P		**Pn 15 11 19.7**	**-0.7**
MEEK				*e*S		**Sn 15 13 59.8**	**-15**
MORW	**Morawa**	**17.90**	**178**	*e*P		**Pn 15 11 47.2**	**-0.3**
MORW				*e*S		**Sn 15 14 48.1**	**-19**
WRA	**Warramunga Arr**	**20.16**	**118**	P		**P 15 12 17.2**	**+4.2**
	2.2nm,0.6s,baz=300,slow=11,SNR=29						
WRA				S		**S 15 15 50.8**	**-8.2**
	1.0nm,0.7s,baz=282,slow=22,SNR=5.4						
ASAR	**Alice Springs**	**21.53**	**128**	P		**P 15 12 33.1**	**+5.3**
	0.9nm,0.5s,mb3.4,baz=298,slow=8.8,SNR=20						
ASAR				S		**S 15 16 18.7**	**-7.4**
	0.4nm,0.8s,baz=175,slow=16,SNR=3.4						
NWAO	**Narrogin (SRO)**	**21.80**	**176**	P		**P 15 12 38.7**	**+8.2**
NWAO	**Narrogin (SRO)**	**21.80**	**176**	P		**P 15 12 38.7**	**+8.2**
	6.6nm,0.7s,mb4.2,baz=0.9,slow=12,SNR=8.0						
FORT	**Forrest**	**22.80**	**151**	*e*P		**P 15 12 44.9**	**+3.6**
	16nm,0.6s,mb4.6						
FORT	**Forrest**	**22.80**	**151**	*e*P		**P 15 12 45.4**	**+4.1**
	18nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**31.75**	**135**	*e*P		**P 15 14 07.0**	**+4.4**
	2.8nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**31.75**	**135**	P		**P 15 14 06.9**	**+4.2**
	3.1nm,0.6s,mb4.3,baz=323,slow=8.9,SNR=12						
CMAR	**Chiang Mai Arr**	**33.59**	**331**	P		**P 15 14 19.3**	**+0.4**
CMAR	**Chiang Mai Arr**	**33.59**	**331**	P		**P 15 14 19.3**	**+0.4**
	1.0nm,0.8s,mb3.8,baz=164,slow=8.1,SNR=8.3						
KSRS	**Korea Array**	**49.67**	**13**	P		**P 15 16 30.5**	**+0.3**
	2.4nm,1.0s,mb4.2,baz=192,slow=5.9,SNR=5.6						
SONM	**Songino Array**	**59.21**	**353**	P		**P 15 17 39.2**	**-0.2**
	0.8nm,0.6s,mb3.9,baz=168,slow=8.0,SNR=5.0						
MKAR	**Makanchi Array**	**64.82**	**335**	P		**P 15 18 17.7**	**+0.5**
MKAR	**Makanchi Array**	**64.82**	**335**	P		**P 15 18 17.7**	**+0.5**
	0.6nm,0.4s,mb4.0,baz=154,slow=7.4,SNR=4.4						
AML	**Almayashu**	**65.38**	**327**	*e*P		**P 15 18 22.2**	**+1.3**
	3.3nm,0.8s,mb4.4						
KURK	**Kurchatov**	**69.41**	**336**	*e*P		**P 15 18 46.6**	**+0.4**
	1.6nm,0.8s,mb4.0						
ZALV	**Zalesovo Beam**	**69.82**	**341**	P		**P 15 18 47.9**	**-0.8**
	0.9nm,0.5s,mb3.9,baz=147,slow=3.9,SNR=5.1						
ABKAR	**Akbulak array**	**77.32**	**326**	*e*P		**P 15 19 34.0**	**+1.0**
	1.0nm,0.6s,mb3.9						

IDC 19 15:22:56.8±2.6, 11°.26S×114°.98E, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.6/17, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=151.1km s-min=26.2km az=47.0, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.35**	**125**	Pn		Pn 15 25 52.2	-1.9
	0.2nm,0.3s,baz=277,slow=10,SNR=5.8						
FITZ				Sn		Sn 15 27 56.5	-16
	0.1nm,0.3s,baz=84,slow=16,SNR=3.9						
WRA	**Warramunga Arr**	**20.53**	**117**	P		P 15 27 37.2	+0.3
	0.9nm,0.6s,baz=301,slow=11,SNR=17						
WRA				S		S 15 31 11.8	-16
	0.3nm,0.5s,baz=292,slow=23,SNR=3.7						
ASAR	**Alice Springs**	**21.83**	**127**	P		P 15 27 52.0	+1.0
	0.6nm,0.6s,baz=302,slow=9.6,SNR=12						
STKA	**Stephens Creek**	**31.99**	**134**	P		P 15 29 24.6	-0.3
	1.6nm,0.6s,baz=305,slow=11,SNR=5.2

EMHD	**Djebel Mahouad**	**1.43 272**	P	Pn	15 25 42.8	+0.9
CASM	**Ain Smara**	**1.43 85**	P	Pn	15 25 42.8	+0.9

*TIF **19** 15:34:09.2, 40°.93N × 44°.72E, h10km*
*ISK **19** 15:34:09.4, 40°.45N × 44°.14E, h5km, ML3.6*
*ISCJB **19** 15:34:10.9±0.3, 40°.34N±0°.02 × 44°.15E±0°.02, h10km, Error ellipse: s-maj=2.5km s-min=2.2km az=168.4*
*NSSP **19** 15:34:11.0, 40°.35N × 44°.15E, h5km, Ms3.2*
*CSEM **19** 15:34:11.2±0.2, 40°.27N × 44°.15E, h2km, ML4.3, Error ellipse: s-maj=5.2km s-min=4.0km az=173.0*
*DDA **19** 15:34:16.3, 40°.14N × 43°.69E, h7km±14km, Md2.9*

ISC 19 15:34:11.5±0.3, **40°.31N**±0°.02 × **44°.14E**±0°.02, **h10km, n59,** σ1$**38**/104, **11C-21D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARUZ	**Aruch**	**0.05**	**232**	⇓*i*P	**Pg**	**15 34 11.4**	**-2.0**
ARUZ				⇓*i*S	**Sg**	**15 34 12.0**	**-2.9**
ARUZ	**Aruch**	**0.05**	**232**	⇓P	**Pg**	**15 34 11.4**	**-2.1**
ARUZ				S	**Sg**	**15 34 12.0**	**-2.8**
AMBZ	**Amberd**	**0.12**	**50**	⇓*i*P	**Pg**	**15 34 13.1**	**-1.3**
AMBZ	**Amberd**	**0.12**	**50**	⇓P	**Pg**	**15 34 13.1**	**-1.3**
AKSZ	**Araks**	**0.23**	**238**	⇑*i*P	**Pg**	**15 34 14.7**	**-1.5**
AKSZ				⇑*i*S	**Sg**	**15 34 18.2**	**-1.1**
PAAR	**P'arak'ar**	**0.25**	**131**	⇓*i*P	**Pg**	**15 34 15.2**	**-1.3**
PAAR				⇓*i*S	**Sg**	**15 34 17.9**	**-1.9**
PAAR	**P'arak'ar**	**0.25**	**131**	⇓P	**Pg**	**15 34 15.2**	**-1.3**
PAAR				S	**Sg**	**15 34 17.9**	**-2.0**
VRNZ	**Vardanashen**	**0.27**	**171**	⇑*i*P	**Pg**	**15 34 15.3**	**-1.6**
VRNZ				⇑*i*S	**Sg**	**15 34 19.9**	**-0.6**
VRNZ	**Vardanashen**	**0.27**	**171**	⇑P	**Pg**	**15 34 15.3**	**-1.6**
VRNZ				S	**Sg**	**15 34 19.9**	**-0.6**
ERE	**Yerevan**	**0.29**	**119**	⇓*i*P	**Pg**	**15 34 12.5**	**-4.8**
ERE				⇓*i*S	**Sg**	**15 34 17.0**	**-4.3**
ERE	**Yerevan**	**0.29**	**119**	⇓P	**Pg**	**15 34 12.5**	**-4.8**
VNNZ	**Vanand**	**0.32**	**229**	⇑*i*P	**Pg**	**15 34 16.4**	**-1.4**
VNNZ				⇑*i*S	**Sg**	**15 34 20.5**	**-1.6**
VNNZ	**Vanand**	**0.32**	**229**	⇑P	**Pg**	**15 34 16.4**	**-1.4**
VNNZ				S	**Sg**	**15 34 20.5**	**-1.6**
KAPZ	**Kaputan**	**0.43**	**88**	⇓*i*P	**Pg**	**15 34 18.5**	**-1.4**
KAPZ				⇓*i*S	**Sg**	**15 34 25.2**	**-0.4**
KAPZ	**Kaputan**	**0.43**	**88**	⇓P	**Pg**	**15 34 18.5**	**-1.4**
KAPZ				S	**Sg**	**15 34 25.2**	**-0.4**
GNI	**Garni**	**0.49**	**109**	*e*PG	**Pg**	**15 34 21.4**	**+0.4**
GNI				*e*SG	**Sg**	**15 34 30.0**	**+2.5**
GNI	**Garni**	**0.49**	**109**	⇑*i*P	**Pg**	**15 34 22.3**	**+1.3**
GNI				⇑*i*S	**Sg**	**15 34 29.8**	**+2.3**
GNI	**Garni**	**0.49**	**109**	*e*Pg	**Pg**	**15 34 21.4**	**+0.4**
GNI	**Garni**	**0.49**	**109**	⇓P	**Pg**	**15 34 22.3**	**+1.3**
GNI				S	**Sg**	**15 34 29.8**	**+2.3**
GMRZ	**Gyumri**	**0.55**	**335**	*e*P	**Pg**	**15 34 19.0**	**-3.2**
GMRZ				*e*S	**Sg**	**15 34 26.0**	**-3.5**
DIGO	**Kars**	**0.59**	**280**	⇑*i*P	**Pg**	**15 34 22.3**	**-0.7**
DIGO				*i* S	**Sg**	**15 34 30.0**	**-0.8**
DIGO	**Kars**	**0.59**	**280**	*i* P	**Pg**	**15 34 22.3**	**-0.7**
DIGO				*i* S	**Sg**	**15 34 30.0**	**-0.8**
STE	**Stepanavan**	**0.71**	**14**	⇓P	**Pg**	**15 34 24.6**	**-0.6**
STEZ	**Stepenevan**	**0.72**	**16**	⇓*i*P	**Pg**	**15 34 24.6**	**-0.7**
STEZ				⇓S	**Sg**	**15 34 32.0**	**-2.7**
DYDN	**Diyadin**	**0.84**	**204**	*e*P	**Pg**	**15 34 29.9**	**+2.2**
DYDN				*e*S	**Sg**	**15 34 34.9**	**-3.7**
DYDN	**Diyadin**	**0.84**	**204**	*e*P	**Pg**	**15 34 29.9**	**+2.2**
DYDN				*e*S	**Sg**	**15 34 34.9**	**-3.8**
AGRB	**Hanur-Agry**	**1.15**	**231**	*e*PN	**Pg**	**15 34 34.6**	**+1.0**
AGRB				*e*SN	**Sg**	**15 34 52.9**	**+4.5**
AGRB	**Hanur-Agry**	**1.15**	**231**	*e*Pn	**Pg**	**15 34 34.6**	**+1.0**
AGRB				*e*Sn	**Sg**	**15 34 52.9**	**+4.4**
CLDR	**Caldiran**	**1.18**	**188**	*e*PN	**Pn**	**15 34 34.8**	**+0.8**
CLDR	**Caldiran**	**1.18**	**188**	*e*Pn	**Pn**	**15 34 34.8**	**+0.8**
VADZ	**Vardenis**	**1.24**	**96**	*e*P	**Pg**	**15 34 37.0**	**+1.7**
VADZ				*e*S	**Sg**	**15 34 54.0**	**+2.7**
MTA	**Mtatsminda**	**1.47**	**20**	P	**Pg**	**15 34 39.0**	**-0.7**
MTA				S	**Sg**	**15 34 58.4**	**-0.3**
MTA	**Mtatsminda**	**1.47**	**20**	P	**Pg**	**15 34 39.0**	**-0.7**
MTA				S	**Sg**	**15 34 58.4**	**-0.3**
DGRG	**David-gareji**	**1.47**	**39**	P	**Pg**	**15 34 39.2**	**-0.6**
DGRG				S	**Sg**	**15 34 58.8**	**-0.1**
DGRG	**David-gareji**	**1.47**	**39**	P	**Pg**	**15 34 39.2**	**-0.6**
DGRG				S	**Sg**	**15 34 58.8**	**-0.1**
TBLG	**Delisi**	**1.49**	**18**	P	**Pg**	**15 34 39.4**	**-0.7**
TBLG				S	**Sg**	**15 34 59.5**	**0.0**
TBLG	**Delisi**	**1.49**	**18**	P	**Pg**	**15 34 39.4**	**-0.7**
TBLG				S	**Sg**	**15 34 59.5**	**+0.1**
GOR	**Gori**	**1.67**	**359**	P	**Pg**	**15 34 43.0**	**-0.6**
GOR				S	**Sg**	**15 35 06.4**	**+1.1**
GOR	**Gori**	**1.67**	**359**	P	**Pg**	**15 34 43.0**	**-0.6**
GOR				S	**Sg**	**15 35 06.4**	**+1.1**
HOMI	**Horasan**	**1.73**	**262**	*i* P	**Pg**	**15 34 45.2**	**+0.5**
HOMI				*e*S	**Sg**	**15 35 09.9**	**+2.8**
GRS	**Goris**	**1.87**	**115**	*e*P	**Pg**	**15 34 51.0**	**+3.6**
GRS				*e*S	**Sg**	**15 35 17.0**	**+5.3**
GRS	**Goris**	**1.87**	**115**	P	**Pg**	**15 34 51.0**	**+3.6**
GRS				S	**Sg**	**15 35 17.0**	**+5.3**
ARTV	**Artvin**	**1.89**	**298**	*i* P	**Pb**	**15 34 46.2**	**+0.1**
ARTV				*e*S	**Sb**	**15 35 11.3**	**+1.5**
ARTV	**Artvin**	**1.89**	**298**	*i* P	**Pb**	**15 34 46.2**	**+0.1**
ARTV				*e*S	**Sb**	**15 35 11.3**	**+1.5**
DDEM	**Demirkent**	**1.91**	**288**	*i* P	**Pb**	**15 34 46.4**	**0.0**
DDEM				*e*S	**Sn**	**15 35 09.4**	**+1.2**
DDEM	**Demirkent**	**1.91**	**288**	*i* P	**Pb**	**15 34 46.4**	**0.0**
DDEM				*e*S	**Sn**	**15 35 09.4**	**+1.3**
DBAD	**Bademkaya**	**1.99**	**292**	*e*P	**Pb**	**15 34 48.2**	**+0.4**
DBAD				*e*S	**Sn**	**15 35 11.1**	**+1.0**
DBAD	**Bademkaya**	**1.99**	**292**	*e*P	**Pb**	**15 34 48.2**	**+0.4**
DBAD				*e*S	**Sn**	**15 35 11.1**	**+1.0**
STKZ		**2.07**	**103**	⇑*i*P	**Pg**	**15 34 53.5**	**+2.4**
STKZ				⇑*i*S	**Sg**	**15 35 20.2**	**+2.3**
STKZ		**2.07**	**103**	⇑P	**Pg**	**15 34 53.5**	**+2.4**
STKZ				S	**Sg**	**15 35 20.2**	**+2.3**
DBOC	**Borcka**	**2.14**	**300**	*e*P	**Pn**	**15 34 48.9**	**+1.7**
DBOC				*e*S	**Sb**	**15 35 18.2**	**+1.2**
DBOC	**Borcka**	**2.14**	**300**	*e*P	**Pn**	**15 34 48.9**	**+1.6**
DBOC				*e*S	**Sb**	**15 35 18.2**	**+1.2**
EZM	**Erzurum**	**2.17**	**260**	*e*PN	**Pn**	**15 34 48.2**	**+0.6**
BCA	**Borcka**	**2.22**	**302**	*e*PN	**Pn**	**15 34 48.1**	**-0.3**
BCA	**Borcka**	**2.22**	**302**	*e*Pn	**Pn**	**15 34 48.1**	**-0.2**
GUMT	**Gumushane**	**3.56**	**274**	*e*PN	**Pn**	**15 35 07.8**	**+1.0**
GUMT	**Gumushane**	**3.56**	**274**	*e*Pn	**Pn**	**15 35 07.8**	**+1.0**
PTK	**Pertek**	**3.93**	**250**	*e*PN	**Pn**	**15 35 13.4**	**+1.5**
PTK	**Pertek**	**3.93**	**250**	*e*Pn	**Pn**	**15 35 13.4**	**+1.5**

*ISCJB **19** 15:48:04.2±1.8, 16°.6S±0°.8 × 174°.9W±0°.9, h209km±39km, mb3.7/4, Error ellipse: s-maj=189.7km s-min=25.5km az=135.6*
*IDC **19** 15:48:05.1±1.9, 16°.37S × 175°.06W, h191km±35km, mb3.6/4, mb1 3.9/5, mb1mx3.5/16, mbtmp3.7/5, Error ellipse: s-maj=143.4km s-min=19.9km az=139.0*

ISC 19 15:48:05.2±1.7, **16°.6S**±0°.8 × **174°.9W**±0°.9, **h205km**±38km, **n9,** σ0$**61**/9, **mb3.7/4, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.99**	**48**	P	**Pn**	**15 49 08.3**	**+1.3**
	16nm,0.3s,baz=168,slow=22,SNR=55						
AFI				S	**Sn**	**15 49 54.7**	**-0.9**
	62nm,0.3s,baz=78,slow=22,SNR=23						
ARMA	**Armidale**	**33.54**	**240**	*e*P	**P**	**15 54 25.9**	**+0.1**
CMSA	**Cobar Meteorol**	**38.75**	**240**	*e*P	**P**	**15 55 09.3**	**-0.6**
STKA	**Stephens Creek**	**42.24**	**241**	*e*P	**P**	**15 55 38.2**	**-0.3**
	4.6nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**42.24**	**241**	P	**P**	**15 55 38.6**	**+0.2**
	5.5nm,0.7s,mb4.1,baz=95,slow=7.3,SNR=9.8						
WRA	**Warramunga Arr**	**48.23**	**258**	P	**P**	**15 56 25.9**	**+0.3**
	0.4nm,0.3s,mb3.2,baz=90,slow=8.1,SNR=30						
ASAR	**Alice Springs**	**48.42**	**253**	P	**P**	**15 56 26.9**	**-0.2**
	11nm,0.6s,mb4.3,baz=92,slow=7.8,SNR=242						
ILAR	**Eielson Array**	**83.88**	**12**	P	**P**	**16 00 11.7**	**+0.2**
	0.2nm,0.5s,mb3.1,baz=230,slow=6.1,SNR=5.9						
BRTR	**Keskin Array B**	**146.16**	**319**	PKPbc	PKPbc	16 07 22.4	+0.8
	0.4nm,0.4s,baz=346,slow=0.5,SNR=3.8						

WEL 19 15:48:21.5±0.5, **37°.76S** × **175°.87E, h176km**±7km, **ML3.5**/14, **1C, Error ellipse: s-maj=11.0km s-min=6.2km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**1.10**	**117**	PN	Pn	15 48 49.8	+0.3
URZ				SN	Sn	15 49 11.5	+0.4
MWZ	**Matawai**	**1.43**	**114**	PN	Pn	15 48 52.4	0.0
MWZ				SN	Sn	15 49 15.4	-0.8
BKZ	**Black Stump Fm**	**1.48**	**161**	PN	Pn	15 48 52.9	0.0
BKZ				SN	Sn	15 49 16.6	-0.8
RAHZ	**Arahi**	**1.50**	**141**	PN	Pn	15 48 53.4	+0.3
RAHZ				SN	Sn	15 49 17.5	0.0
NMHZ	**Naumai**	**1.52**	**151**	PN	Pn	15 48 54.1	+0.8
NMHZ				SN	Sn	15 49 18.8	+0.8
BHHZ	**Black Hill Sta**	**1.73**	**175**	PN	Pn	15 48 55.1	-0.3
MCHZ	**McNeill Hill**	**1.80**	**159**	PN	Pn	15 48 56.2	+0.1
KNZ	**Kokohu**	**1.89**	**132**	PN	Pn	15 48 56.4	-0.7
PUZ	**Puketiti**	**1.91**	**100**	PN	Pn	15 48 56.2	-1.1
CNGZ	**Carnagh Statio**	**1.98**	**112**	PN	Pn	15 48 57.8	-0.2
MHGZ	**Mahia Peninsul**	**2.12**	**132**	*e*PN	Pn	15 48 58.5	-1.0
PNHZ	**Pukenui**	**2.16**	**173**	PN	Pn	15 48 58.9	-1.2
KAHZ	**Kahuranaki**	**2.18**	**159**	PN	Pn	15 48 59.3	-0.9
TSZ	**Takapari Road**	**2.29**	**178**	PN	Pn	15 49 00.3	-1.3
WPHZ	**Waipukurau**	**2.34**	**169**	PN	Pn	15 49 00.6	-1.4
DVHZ	**Dannevirke**	**2.54**	**175**	PN	Pn	15 49 02.4	-2.0
POWZ	**Post Office Ro**	**2.63**	**182**	PN	Pn	15 49 03.4	-2.0
MRZ	**Mangatainoka R**	**2.91**	**184**	⇑PN	Pn	15 49 06.1	-2.6
MRZ				SN	Sn	15 49 40.6	-5.0
BFZ	**Birch Farm**	**2.93**	**174**	PN	Pn	15 49 06.3	-2.8
BFZ				SN	Sn	15 49 40.7	-5.4
TIWZ	**Tintock**	**3.01**	**180**	PN	Pn	15 49 07.3	-2.7
OGWZ	**Otaki Gorge**	**3.10**	**190**	PN	Pn	15 49 08.5	-2.6
OGWZ				SN	Sn	15 49 44.9	-4.9
HOWZ	**Holdsworth Sta**	**3.14**	**185**	PN	Pn	15 49 08.7	-3.1
KIW	**Kapiti Island**	**3.18**	**193**	PN	Pn	15 49 09.2	-2.9
CAW	**Cannon Point**	**3.40**	**190**	PN	Pn	15 49 11.6	-3.2
MTW	**Mount Morrison**	**3.40**	**185**	PN	Pn	15 49 11.1	-3.8
TCW	**Tory Channel**	**3.66**	**199**	PN	Pn	15 49 14.9	-3.2
NNZ	**Nelson**	**3.95**	**208**	SN	Sn	15 50 04.7	-4.3
TUWZ	**Tuamarina**	**3.96**	**202**	PN	Pn	15 49 18.3	-3.5
KHZ	**Kahutara**	**4.98**	**200**	PN	Pn	15 49 31.0	-4.0
KHZ				SN	Sn	15 50 26.7	-6.0
LTZ	**Lake Taylor**	**5.72**	**208**	PN	Pn	15 49 40.2	-4.5
LTZ				SN	Sn	15 50 41.3	-8.8
MQZ	**McQueen's Vall**	**6.42**	**201**	SN	Sn	15 50 55.6	-11

*ISCJB **19** 15:49:21.1±0.5, 36°.96N±0°.03 × 29°.13E±0°.03, h5km±4km, Error ellipse: s-maj=4.4km s-min=3.4km az=178.0*
*DDA **19** 15:49:21.1, 36°.98N × 29°.10E, h11km±6km, Md2.9*
*ISK **19** 15:49:21.4, 37°.04N × 29°.15E, h13km, MD3.1*
*CSEM **19** 15:49:21.3±0.2, 37°.00N × 29°.13E, h5km, MD3.1, Error ellipse: s-maj=5.0km s-min=3.4km az=9.0*

ISC 19 15:49:21.7±0.4, **36°.97N**±0°.03 × **29°.13E**±0°.03, **h7km**±4km, **n51,** σ1$**01**/74, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.35**	**58**	*e*PG	**Pg**	**15 49 27.6**	**-1.0**
GLHS				*e*SG	**Sg**	**15 49 33.2**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.35**	**58**	*e*Pg	**Pg**	**15 49 27.6**	**-0.9**
GLHS				*e*Sg	**Sg**	**15 49 33.2**	**+0.1**
TURN	**Turunc**	**0.43**	**257**	*i* P	**Pg**	**15 49 35.0**	**+4.8**
TURN				*e*S	**Sg**	**15 49 45.5**	**+10**
TURN	**Turunc**	**0.43**	**257**	*i* P	**Pg**	**15 49 35.0**	**+4.9**
GOLH	**Golhisar**	**0.43**	**53**	*i* P	**Pg**	**15 49 28.4**	**-1.8**
GOLH				*i* S	**Sg**	**15 49 36.0**	**+0.1**
GOLH	**Golhisar**	**0.43**	**53**	*i* P	**Pg**	**15 49 28.4**	**-1.8**
GOLH				*i* S	**Sg**	**15 49 36.0**	**+0.1**
ELL	**Elmali**	**0.67**	**109**	*e*PG	**Pg**	**15 49 34.6**	**0.0**
ELL				*e*SG	**Sg**	**15 49 42.2**	**+2.0**
ELL	**Elmali**	**0.67**	**109**	*e*Pg	**Pg**	**15 49 34.6**	**+0.1**
ELL				*e*Sg	**Sg**	**15 49 45.2**	**+2.0**
YER	**Yerkesik**	**0.70**	**284**	*e*PG	**Pg**	**15 49 35.8**	**+0.6**
YER				*e*SG	**Sg**	**15 49 46.0**	**+1.8**
YER	**Yerkesik**	**0.70**	**284**	*e*Pg	**Pg**	**15 49 35.8**	**+0.7**
YER				*e*Sg	**Sg**	**15 49 46.0**	**+1.8**
DNZL	**Cakiroluk**	**0.72**	**355**	*i* P	**Pg**	**15 49 34.3**	**-1.3**
DNZL				*i* S	**Sg**	**15 49 45.8**	**+0.8**
DNZL	**Cakiroluk**	**0.72**	**355**	*i* P	**Pg**	**15 49 34.3**	**-1.3**
DNZL				*i* S	**Sg**	**15 49 45.8**	**+0.9**
DENT	**Denizli**	**0.78**	**354**	*e*PG	**Pg**	**15 49 35.5**	**-1.3**
DENT	**Denizli**	**0.78**	**354**	*e*Pg	**Pg**	**15 49 35.5**	**-1.3**
AKAS	**Kas**	**0.83**	**152**	*i* P	**Pg**	**15 49 36.5**	**-1.2**
AKAS				*i* S	**Sg**	**15 49 57.8**	**+9.3**
AKAS	**Kas**	**0.83**	**152**	*i* P	**Pg**	**15 49 36.5**	**-1.2**
KSL	**Kastellorizon**	**0.90**	**156**	*e*P	**Pg**	**15 49 39.0**	**0.0**
KORT	**Korkueli**	**0.98**	**88**	*i* P	**Pg**	**15 49 40.7**	**+0.2**
KORT				*e*S	**Sg**	**15 49 55.1**	**+3.3**
KORT	**Korkueli**	**0.98**	**88**	*i* P	**Pg**	**15 49 40.7**	**+0.2**
ARG	**Arkhangelos**	**1.10**	**227**	*e*P	**Pg**	**15 49 42.7**	**-0.2**
MLSB	**Milas**	**1.13**	**287**	*e*PN	**Pg**	**15 49 43.3**	**0.0**
MLSB	**Milas**	**1.13**	**287**	*e*Pn	**Pg**	**15 49 43.3**	**-0.1**
AYDN	**Tasoluk**	**1.21**	**305**	*i* P	**Pg**	**15 49 44.3**	**-0.6**
AYDN				*i* S	**Sg**	**15 50 02.8**	**+2.1**
AYDN	**Tasoluk**	**1.21**	**305**	*i* P	**Pg**	**15 49 44.3**	**-0.7**
AYDN				*i* S	**Sg**	**15 50 02.8**	**+2.1**
BCK	**Bucak**	**1.26**	**67**	*e*PN	**Pn**	**15 49 45.4**	**-0.4**
BCK	**Bucak**	**1.26**	**67**	*e*Pn	**Pn**	**15 49 45.4**	**-0.4**
DAT	**Datca**	**1.27**	**259**	*e*PN	**Pn**	**15 49 45.6**	**-0.2**
DAT	**Datca**	**1.27**	**259**	*e*Pn	**Pn**	**15 49 45.6**	**-0.2**
BDRM	**Kayabasi**	**1.35**	**274**	*i* P	**Pn**	**15 49 47.3**	**+0.4**
BDRM				*i* S	**Sb**	**15 50 06.2**	**+1.4**
BDRM	**Kayabasi**	**1.35**	**274**	*i* P	**Pn**	**15 49 47.3**	**+0.3**
BDRM				*i* S	**Sb**	**15 50 06.2**	**+1.4**
KHL	**Karahalli**	**1.38**	**13**	*e*PN	**Pn**	**15 49 46.5**	**-0.9**
KHL	**Karahalli**	**1.38**	**13**	*e*Pn	**Pn**	**15 49 46.5**	**-0.9**
KHAL	**Karahalli**	**1.42**	**12**	*i* P	**Pn**	**15 49 47.6**	**-0.4**
KHAL				*i* S	**Sb**	**15 50 07.5**	**+0.6**
KHAL	**Karahalli**	**1.42**	**12**	*i* P	**Pn**	**15 49 47.6**	**-0.4**
KHAL				*i* S	**Sb**	**15 50 07.5**	**+0.6**
BODT	**Bodrum**	**1.46**	**274**	*e*PN	**Pn**	**15 49 47.6**	**-0.8**
BODT	**Bodrum**	**1.46**	**274**	*e*Pn	**Pn**	**15 49 47.6**	**-0.8**
KULA	**Kula-Manisa**	**1.58**	**347**	*e*PN	**Pn**	**15 49 49.2**	**-1.0**
KULA	**Kula-Manisa**	**1.58**	**347**	*e*Pn	**Pn**	**15 49 49.2**	**-1.0**
GDZ	**Gediz**	**2.13**	**7**	*e*P	**Pn**	**15 49 53.2**	**-4.4**
GDZ				*e*S	**Sn**	**15 50 25.5**	**+1.1**
GDZ	**Gediz**	**2.13**	**7**	*e*P	**Pn**	**15 49 53.2**	**-4.5**
GDZ				*e*S	**Sn**	**15 50 25.5**	**+1.1**
KARP	**Karpathos**	**2.13**	**229**	*e*P	**Pn**	**15 49 57.4**	**-0.3**
BLCB	**Balcova**	**2.17**	**311**	*e*PN	**Pn**	**15 49 57.6**	**-0.7**
BLCB	**Balcova**	**2.17**	**311**	*e*Pn	**Pn**	**15 49 57.6**	**-0.7**
ALT	**Altintas**	**2.22**	**20**	*e*PN	**Pn**	**15 49 58.2**	**-0.7**
ALT	**Altintas**	**2.22**	**20**	*e*Pn	**Pn**	**15 49 58.2**	**-0.7**
GAZI	**Gazipasa**	**2.67**	**105**	*e*P	**Pn**	**15 50 07.0**	**+1.9**
GAZI				*e*S	**Sn**	**15 50 38.4**	**+0.7**
GAZI	**Gazipasa**	**2.67**	**105**	*e*P	**Pn**	**15 50 06.9**	**+1.8**
GAZI				*e*S	**Sn**	**15 50 38.4**	**+0.8**
HDMB	**Hadim**	**2.69**	**89**	*e*PN	**Pn**	**15 50 05.9**	**+0.5**
HDMB	**Hadim**	**2.69**	**89**	*e*Pn	**Pn**	**15 50 05.9**	**+0.5**
ZKR	**Zakros**	**3.00**	**233**	*e*P	**Pn**	**15 50 09.2**	**-0.4**
NPS	**Neapolis**	**3.32**	**240**	*e*P	**Pn**	**15 50 12.7**	**-1.3**

*DDA **19** 16:10:04.2, 39°.08N × 40°.09E, h7km±3km, Md2.8*
*ISCJB **19** 16:10:06.5±1.2, 39°.18N±0°.08 × 39°.87E±0°.04, h10km, Error ellipse: s-maj=11.3km s-min=4.6km az=8.9*
*CSEM **19** 16:10:06.8±0.7, 39°.09N × 39°.90E, h8km, MD2.8, Error ellipse: s-maj=20.0km s-min=7.6km az=5.0*

ISC 19 16:10:07.1±1.3, **39°.19N**±0°.08 × **39°.87E**±0°.05, **h10km, n10,** σ1$**42**/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTK	**Pertek**	**0.47**	**232**	*e*PG	**Pg**	**16 10 14.9**	**-1.4**
PTK				*e*SG	**Sg**	**16 10 22.1**	**-0.5**
PTK	**Pertek**	**0.47**	**232**	*e*Pg	**Pg**	**16 10 14.9**	**-1.5**
PTK				*e*Sg	**Sg**	**16 10 22.1**	**-0.5**
BINT	**Bingol**	**0.57**	**123**	*e*PG	**Pg**	**16 10 16.6**	**-1.6**
BINT				*e*SG	**Sg**	**16 10 25.6**	**-0.1**
BINT	**Bingol**	**0.57**	**123**	*e*Pg	**Pg**	**16 10 16.6**	**-1.6**
BINT				*e*Sg	**Sg**	**16 10 25.6**	**-0.1**
ELZG	**Elazig**	**0.98**	**226**	*i* P	**Pg**	**16 10 24.4**	**-1.4**
ELZG				*i* S	**Sg**	**16 10 38.8**	**+0.3**
ELZG	**Elazig**	**0.98**	**226**	*i* P	**Pg**	**16 10 24.5**	**-1.4**
ELZG				*i* S	**Sg**	**16 10 38.8**	**+0.2**
KEMA	**Kemaliye**	**1.07**	**275**	*i* P	**Pg**	**16 10 28.2**	**+0.5**
KEMA				*i* S	**Sg**	**16 10 44.7**	**+2.9**
KEMA	**Kemaliye**	**1.07**	**275**	*i* P	**Pg**	**16 10 28.2**	**+0.4**
KEMA				*i* S	**Sg**	**16 10 44.7**	**+3.0**
BEST	**Besiri**	**1.69**	**139**	*i* P	**Pn**	**16 10 32.4**	**-4.3**
BEST				*i* S	**Sn**	**16 11 01.1**	**+2.7**
MARD	**Mardin**	**2.00**	**159**	*i* P	**Pn**	**16 10 40.6**	**-0.4**
MARD				*i* S	**Sn**	**16 11 08.3**	**+2.3**

*CSEM **19** 16:22:12.6, 66°.53N × 17°.68W, h10km, ML3.3, After REY*

REY 19 16:22:12.6, 66°.53N × 17°.68W, h10km, ML3.3, ML3.6, Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGRI	**Grimsey**	**0.14**	**276**	P	Pg	16 22 15.6	-0.1
IGRI				S	Sg	16 22 18.0	+0.1
IBRE	**Brettingsstaoi**	**0.42**	**193**	P	Pg	16 22 20.4	-0.4
IBRE				S	Sg	16 22 26.3	0.0
IHED	**Heoinshofoi**	**0.47**	**162**	P	Pg	16 22 21.0	-0.8
IHED				S	Sg	16 22 27.7	-0.3
ILEI	**Leirhofn**	**0.49**	**104**	P	Pg	16 22 21.5	-0.6
ILEI				S	Sg	16 22 28.4	-0.2
IGRA	**Granastaoir**	**0.61**	**176**	P	Pg	16 22 23.4	-1.1
IGRA				S	Sg	16 22 31.7	-0.8
ISIG	**Siglufjorour**	**0.64**	**232**	P	Pg	16 22 23.4	-1.5
ISIG				S	Sg	16 22 31.4	-1.9
IHLA	**Hella**	**0.65**	**207**	P	Pg	16 22 24.0	-1.2
IHLA				S	Sg	16 22 32.6	-1.1
IGIL	**Gilhagi**	**0.70**	**130**	P	Pg	16 22 24.6	-1.5
IGIL				S	Sg	16 22 34.4	-0.8
IKVO	**Krokottuvotn**	**0.88**	**158**	P	Pg	16 22 27.7	-1.8
IKVO				S	Sg	16 22 39.2	-1.7
IREN	**Reynihlio**	**0.94**	**160**	P	Pg	16 22 28.7	-1.9
IREN				S	Sg	16 22 41.0	-1.8
IHRN	**Hraun**	**1.07**	**248**	P	Pb	16 22 29.7	-3.5
IHRN				S	Sg	16 22 43.2	-3.9

*BJI **19** 16:30:11.9, 15°.02S × 173°.41W, h9km, mB6.0/29, mb5.5/46, Ms5.9/58, Ms7 5.7/56*
*IDC **19** 16:30:11.9±0.4, 15°.14S × 173°.53W, h0km, mb5.2/21, mb1 5.3/21, mb1mx5.3/22, mbtmp5.1/21, MS5.7/16, Ms1 5.7/16, ms1mx5.7/17, Error ellipse: s-maj=16.2km s-min=12.4km az=135.0*
*NEIC **19** 16:30:13.2±0.1, 15°.09S × 173°.48W, h8km, mb5.6/172, ME5.8, MS5.9/183, MW6.1, MW6.0, Error ellipse: s-maj=6.1km s-min=3.6km az=157.0 Broadband fault plane solution: P waves. NP1:φs220.00000°, δ85.00000°, λ-90.00000°. NP2:φs40.00000°, δ5.00000°, λ-90.00000°. Principal axes: T Plg40.0000°, Azm310.0000°; N Plg0.0000°, Azm0.0000°; P Plg50.0000°, Azm130.0000°; Moment Tensor Solution. s95 Moment tensor: Scale 10^18 Nm; Mrr-0.20; Mθθ0.83; Mφφ-0.63; Mrθ0.44; Mrφ0.00; Mθφ1.24; Best double couple: M0 1.50000×10^18 NP1: φs121.00000°, δ30.00000°, λ-6.00000°. NP2:φs216.00000°, δ87.00000°, λ-119.00000°. Principal axes: T 1.1900, Plg35.0000°, Azm331.0000°; N 0.5200, Plg29.0000°

HNR pmax pmax
comp=Z,67nm,0.8s,mb5.2
HNR MLR MLR
comp=Z,24µm,18.6s,MS5.8
SNZO South Karori 28.01 199 PFAKE 16 36 20.0 +15
SNZO LR LR
comp=Z,17µm,19.0s,MS5.7
RPZ Rata Peaks 31.39 202 *eP* **P 16 36 36.2 +1.5**
RPZ Rata Peaks 31.39 202 P P **16 36 34.6 -0.1**
comp=Z,9.6nm,0.7s,mb4.8,baz=27,slow=15,SNR=5.1
JOHN Johnston Islan 31.91 7 PFAKE 16 36 50.0 +11
JOHN LR LR
comp=Z,13µm,20.0s,MS5.6
TAOE Nuku Hiva Isla 33.17 83 *eS* **S 16 42 02.7 -5.5**
comp=Z,1µm,27.5s
TAOE *e*LR LR 16 45 21.8
comp=Z,40µm,26.5s,baz=260
ARMA Armidale 35.41 239 *eP* **P 16 37 08.4 -1.5**
ARMA *eS* **S 16 42 46.9 +4.4**
ARMA Armidale 35.41 239 *eP* **P 16 37 08.8 -1.1**
comp=Z,24nm,1.0s,mb5.1
RKT Rikitea 37.15 108 *eP* **P 16 37 24.9 0.0**
comp=Z,241nm,1.5s,mb5.8
RKT *eS* **S 16 43 05.0 -4.3**
comp=Z,3µm,29.8s
RKT *e*LQ 16 45 47.0
comp=Z,13µm,27.0s
RKT *e*LR LR 16 47 24.5
comp=Z,25µm,24.0s,baz=282
RKT Rikitea 37.15 108 *eP* **P 16 37 24.9 0.0**
comp=Z,241nm,1.5s,mb5.8
RKT *eS* **S 16 43 05.0 -4.3**
RKT *e*LQ 16 45 47.0
CTA Charters Tower 38.62 257 *eP* **P 16 37 34.4 -2.9**
comp=Z,15nm,1.0s,mb4.7
CTA Charters Tower 38.62 257 P **P 16 37 35.9 -1.5**
comp=Z,14nm,0.8s,mb4.7,baz=76,slow=10,SNR=5.9
CTA LR LR 16 51 03.6
comp=Z,7µm,19.2s,MS5.5,baz=79,slow=32
CTA Charters Tower 38.62 257 P **P 16 37 35.9 -1.4**
CTA pmax pmax
comp=Z,14nm,0.8s
CTA MLR MLR
comp=Z,7µm,19.2s
CTAO Charters Tower 38.62 257 *eP* **P 16 37 35.4 -1.9**
comp=Z,23nm,0.9s,mb4.9
CTAO LR LR
comp=Z,8µm,21.0s,MS5.5
CTAO Charters Tower 38.62 257 *eP* **P 16 37 35.4 -1.9**
CTAO pmax pmax
comp=Z,23nm,0.9s,mb4.9
CTAO MLR MLR
comp=Z,8µm,21.0s,MS5.5
PMG Port Moresby 38.84 274 PFAKE 16 37 50.0 +11
PMG LR LR
comp=Z,10µm,21.0s,MS5.6
PMG Port Moresby 38.84 274*c i* **P 16 37 39.8 +0.6**
CNB Canberra Magne 38.84 232 *eP* **P 16 37 38.6 -0.4**
CNB *eS* **S 16 43 39.9 +5.2**
POHA Pohakuloa 38.92 28 PFAKE 16 37 50.0 +10
POHA LR LR
comp=Z,7µm,22.0s,MS5.4
CAN Canberra 39.12 232 *eP* **P 16 37 40.0 -1.3**
comp=Z,144nm,1.5s,mb5.5
CAN LR LR
comp=Z,6µm,20.0s,MS5.4
CAN Canberra 39.12 232 *eP* **P 16 37 40.1 -1.2**
CAN pmax pmax
comp=Z,144nm,1.5s,mb5.5
CAN MLR MLR
comp=Z,6µm,20.0s,MS5.4
KIP Kipapa 39.38 23 *eP* **P 16 37 42.9 -0.7**
comp=Z,132nm,1.0s,mb5.6
KIP LR LR
comp=Z,6µm,21.0s,MS5.4
KIP Kipapa 39.38 23 *eP* **P 16 37 42.9 -0.7**
KIP pmax pmax
comp=Z,132nm,1.0s,mb5.6
KIP MLR MLR
comp=Z,6µm,21.0s,MS5.4
WAKE Wake Island 39.40 330 *eP* **P 16 37 42.6 -1.1**
comp=Z,269nm,1.1s,mb5.9
WAKE LR LR
comp=Z,10µm,19.0s,MS5.7
QLP Quilpie 40.95 247 *eP* **P 16 37 54.7 -1.9**
PTCN Pitcairn Islan 41.77 111 PFAKE 16 38 10.0 +6.6
PTCN LR LR
comp=Z,8µm,21.0s,MS5.6
COEN Coen 41.92 266 *eP* **P 16 38 04.6 -0.1**
COEN *eS* PcS 16 43 54.3 +2.4
COEN Coen 41.92 266 *eP* **P 16 38 04.5 -0.2**
comp=Z,553nm,1.4s,mb6.0
TOO Toolangi 42.57 230 *eP* **P 16 38 08.7 -1.0**
MIDW Midway 43.27 355 PFAKE 16 38 30.0 +15
MIDW LR LR
comp=Z,9µm,20.0s,MS5.7
STKA Stephens Creek 44.10 240 *eP* **P 16 38 21.0 -1.1**
comp=Z,24nm,0.9s,mb4.9
STKA *eS* **S 16 44 59.0 +6.4**
STKA Stephens Creek 44.10 240 P **P 16 38 21.1 -1.0**
comp=Z,15nm,1.0s,mb4.7,baz=54,slow=6.5,SNR=13
STKA LR LR 16 54 35.0
comp=Z,10µm,20.0s,MS5.7,baz=70,slow=33
QIS Mount Isa 44.86 256 *eP* **P 16 38 26.3 -2.1**
BBOO Buckleboo 48.87 240 *eP* **P 16 38 57.7 -1.9**
comp=Z,22nm,1.0s,mb5.1
BBOO *eS* **S 16 45 54.4 -6.6**
WRA Warramunga Arr 49.83 257 P **P 16 39 05.5 -1.6**
WRA LR LR 16 57 44.5
WRA Warramunga Arr 49.83 257 P **P 16 39 05.5 -1.5**
comp=Z,60nm,1.0s,mb5.6,baz=90,slow=7.6,SNR=169
WRA LR LR 16 57 44.5
comp=Z,9µm,21.6s,MS5.7,baz=95,slow=33
WRA Warramunga Arr 49.83 257 P **P 16 39 05.5 -1.6**
WRA pmax pmax
comp=Z,60nm,1.0s
WRA MLR MLR
comp=Z,9µm,21.6s
ASAR Alice Springs 50.12 252 P **P 16 39 07.7 -1.5**
comp=Z,170nm,0.8s,mb6.1,baz=87,slow=9.0,SNR=661
ASAR Alice Springs 50.12 252 P **P 16 39 07.7 -1.5**
ASAR pmax pmax
comp=Z,170nm,0.8s
GUMO Guam 50.13 303 P **P 16 39 09.8 +0.4**
comp=Z,413nm,1.7s,mb6.2
GUMO LR LR
comp=Z,5µm,20.0s,MS5.5
GUMO Guam 50.13 303 P **P 16 39 09.4 0.0**
comp=Z,167nm,1.2s,mb6.0,baz=180,slow=13,SNR=8.8
GUMO Guam 50.13 303 P **P 16 39 09.4 0.0**
GUMO pmax pmax
comp=Z,167nm,1.2s,mb5.9
KAKA Kakadu 52.44 265 *eP* **P 16 39 24.2 -2.6**
comp=Z,14nm,0.6s,mb5.1
KAKA Kakadu 52.44 265 *eP* **P 16 39 24.0 -2.7**
comp=Z,58nm,0.8s,mb5.6
KAKA Kakadu 52.44 265 P **P 16 39 25.8 -1.0**
comp=Z,355nmcomp=Z,38nm,0.8s,mb5.4
FORT Forrest 55.46 243 *eP* **P 16 39 46.0 -2.6**
comp=Z,43nm,0.6s,mb5.7
FORT Forrest 55.46 243 *eP* **P 16 39 45.8 -2.8**
comp=Z,153nm,1.2s,mb5.9
KNA Kununurra 55.51 261 P **P 16 39 47.9 -1.3**
comp=Z,869nmcomp=Z,76nm,1.1s,mb5.7
FITZ Fitzroy Crossi 58.19 258 *eP* **P 16 40 06.8 -1.3**
comp=Z,24nm,1.5s,mb5.0
FITZ Fitzroy Crossi 58.19 258 *eP* **P 16 40 06.8 -1.4**
comp=Z,66nm,1.7s,mb5.4
FITZ Fitzroy Crossi 58.19 258 P **P 16 40 06.9 -1.3**
comp=Z,16nm,1.2s,mb4.9,baz=77,slow=8.4,SNR=4.9
FITZ Fitzroy Crossi 58.19 258 P **P 16 40 07.3 -0.8**
comp=Z,3µmcomp=Z,58nm,1.7s,mb5.3
NLAI Namlea 59.66 275 P **P 16 40 20.9 +2.4**
comp=Z,2µmcomp=Z,61nm,1.6s,mb5.4
DRV Dumont d'Urvil 59.81 200 S **S 16 48 34.0 +6.7**
DRV L 16 55 00.0
RPN Rapa Nui 60.46 113 *i* P **P 16 40 29.5 +5.8**
RPN LR LR
comp=Z,7µm,21.0s,MS5.8
TNTI Ternate 60.55 280 P **P 16 40 25.1 +0.5**
comp=Z,3µmcomp=Z,114nm,2.3s,mb5.6
SGSI Sangihe 63.20 282 P **P 16 40 43.9 +1.5**
MBWA Marble Bar 63.36 254 *eP* **P 16 40 41.7 -1.6**
comp=Z,30nm,1.1s,mb5.3
MBWA LR LR
comp=Z,10µm,19.0s,MS6.0

SBA Scott Base 63.50 185 *eP* **P 16 40 45.1 +1.8**
comp=Z,255nm,1.9s,mb6.0
SBA LR LR
comp=Z,5µm,19.0s,MS5.8
SBA Scott Base 63.50 185 *eP* **P 16 40 45.1 +1.8**
SBA pmax pmax
comp=Z,255nm,1.9s,mb6.0
SBA MLR MLR
comp=Z,5µm,19.0s,MS5.8
KDI Kendari 63.79 273 P **P 16 40 45.9 -0.4**
comp=Z,41nm,1.5s,mb5.2
DAV Davao City (W) 64.29 286 PFAKE 16 41 00.0 +10
DAV LR LR
comp=Z,5µm,22.0s,MS5.7
NWAO Narrogin (SRO) 64.68 240 PFAKE 16 41 00.0 +8.2
NWAO LR LR
comp=Z,6µm,21.0s,MS5.7
TTSI Tana Toraja 66.72 273 P **P 16 41 05.4 +0.1**
comp=Z,1µmcomp=Z,36nm,1.6s,mb5.1
MJAR Matsushiro Arr 68.69 320 P **P 16 41 16.9 -0.3**
comp=Z,30nm,1.1s,mb5.1,baz=145,slow=5.8,SNR=45
MJAR LR LR 17 05 48.3
comp=Z,9µm,21.9s,MS5.9,baz=130,slow=31
MJAR Matsushiro Arr 68.69 320 P **P 16 41 16.9 -0.3**
MJAR pmax pmax
comp=Z,30nm,1.1s
MJAR MLR MLR
comp=Z,9µm,21.9s
MAJO Matsushiro 68.69 320 *eP* **P 16 41 16.8 -0.4**
comp=Z,281nm,1.8s,mb5.9
MAJO LR LR
comp=Z,10µm,22.0s,MS6.0
MAJO Matsushiro 68.69 320 *eP* **P 16 41 16.8 -0.4**
MAJO pmax pmax
comp=Z,281nm,1.8s,mb5.9
MAJO MLR MLR
comp=Z,10µm,22.0s,MS6.0
MAT Matsushiro 68.69 320 P **P 16 41 17.2 0.0**
MAT S S 16 50 20.0 +2.0
UNV Unalaska Valle 68.97 4 P **P 16 41 19.8 +1.3**
comp=Z,39nm,1.2s,mb5.2
YUK Yuzh-Kuril'sk 69.60 330⇑ *i* P **P 16 41 15.5 -7.2**
YUK *i* 16 43 52.9
YUK *i* PPP 16 45 33.0
YUK *i* S S 16 50 26.6 -1.8
YUK MLR MLR
comp=Z,4µm,16.4s,MS5.8
YUK MLR MLR
comp=N,160nm,8.2s
YUK MLR MLR
comp=E,3µm,16.4s
MYLDM Lahad Datu 70.32 281 P **P 16 41 30.2 +2.4**
comp=E,3µmcomp=E,53nm,1.8s,mb5.2
CASY Casey 70.61 205 *eP* **P 16 41 29.0 +0.4**
comp=E,38nm,1.3s,mb5.2
CASY LR LR
comp=Z,3µm,20.0s,MS5.6
SKR Severo-Kuril's 70.76 340 *eP* **P 16 41 24.0 -5.6**
SKR *e* 16 41 46.0
SKR *e*PPP 16 45 42.0
SKR *e*S S 16 50 38.0 -3.7
SKR *e* 16 51 12.0
SKR pmax pmax
comp=N,2µm,6.0s
SKR pmax pmax
comp=Z,2µm,6.0s
SKR smax
comp=N,5µm,14.0s
SKR smax
comp=E,3µm,14.0s
SKR MLR MLR
comp=N,6µm,18.0s,MS6.0
SKR MLR MLR
comp=E,3µm,18.0s,MS6.0
SKR MLR MLR
comp=Z,4µm,18.0s,MS5.7
BSC Santa Cruz Isl 70.80 45⇑ P **P 16 41 29.4 -0.9**
baz=71
BSC ⇑S S 16 50 47.2 +4.3
baz=71
SCI San Clemente I 70.99 47⇑ P **P 16 41 30.8 -0.7**
baz=71
SCI ⇑S S 16 50 48.8 +3.7
baz=71
SBC Santa Barbara 71.00 45⇓ P **P 16 41 31.1 -0.3**
baz=71
SBC ⇓S S 16 50 47.7 +2.6
baz=71
MCCM Marconi Confer 71.12 40 *eP* **P 16 41 33.2 +1.1**
comp=Z,58nm,1.7s,mb5.2
MCCM LR LR
comp=Z,5µm,21.0s,MS5.8
PKM Peak Mountain 71.18 44⇑ P **P 16 41 32.7 +0.2**
baz=71
SAO San Andreas Ge 71.19 42 *eP* **P 16 41 32.8 +0.2**
comp=Z,30nm,1.1s,mb5.1
SAO LR LR
comp=Z,5µm,20.0s,MS5.8
SAO San Andreas Ge 71.19 42 *eP* **P 16 41 32.8 +0.2**
SAO pmax pmax
comp=Z,30nm,1.1s,mb5.1
SAO MLR MLR
comp=Z,5µm,20.0s,MS5.8
BLG Laguna Peak 71.26 45⇑ P **P 16 41 32.4 -0.6**
baz=71
SMMC Simmler 71.30 44⇓ P **P 16 41 33.1 -0.2**
baz=71
CIS Catalina Islan 71.33 46⇑ P **P 16 41 33.4 -0.1**
baz=71
HOPS Hopland 71.52 39 *eP* **P 16 41 34.8 +0.3**
comp=Z,76nm,1.3s,mb5.5
HOPS LR LR
comp=Z,7µm,19.0s,MS5.9
FMP Fort Macarthur 71.57 46⇑ P **P 16 41 34.3 -0.6**
baz=72
OSI Osito Adit 71.77 45⇑ P **P 16 41 36.0 -0.1**
baz=72
OSI Osito Adit 71.77 45 *eP* **P 16 41 36.4 +0.3**
DECC Green Verdugo 71.84 46⇑ P **P 16 41 35.8 -0.8**
baz=72
PASC Pasadena Art C 71.90 46 *eP* **P 16 41 36.4 -0.5**
109C Camp Elliot, M 71.96 47⇑ P **P 16 41 36.6 -0.7**
baz=72
ARVC Arvin 71.98 45⇑ P **P 16 41 36.7 -0.7**
baz=72
PET Petropavlovsk 72.01 343 *eP* **P 16 41 35.8 -1.4**
comp=Z,182nm,1.7s,mb5.7
PET LR LR
comp=Z,3µm,19.0s,MS5.6
PET Petropavlovsk 72.01 343*c i* P **P 16 41 34.5 -2.6**
PET *i* S S 16 50 54.3 -1.8
PET *e*PS 16 51 33.8
PET pmax pmax
comp=Z,55nm,1.6s,mb5.2
PET pmax pmax
comp=Z,1µm,15.4s
PET pmax pmax
comp=Z,400nm,13.4s
PET MLR MLR
comp=Z,3µm,20.0s,MS5.6
PET MLR MLR
comp=Z,3µm,16.0s
MWC Mount Wilson 72.01 46 P **P 16 41 36.5 -1.1**
comp=Z,44nm,1.3s,mb5.2
MWC Mount Wilson 72.01 46 P **P 16 41 36.5 -1.1**
MWC pmax pmax
comp=Z,44nm,1.3s,mb5.2
BAR Barrett 72.16 48 *eP* **P 16 41 37.9 -0.6**
comp=Z,87nm,1.8s,mb5.4
VES Vestal, Richgr 72.21 44⇑ P **P 16 41 38.4 -0.3**
baz=72
MURC Murrieta 72.28 47⇑ P **P 16 41 38.5 -0.6**
baz=72
CHGN Chignik 72.29 9 *eP* **P 16 41 38.9 +0.2**
BFSC Mount Baldy Ra 72.30 46⇓ P **P 16 41 38.7 -0.6**
baz=72
EDW2 Edwards Air Fo 72.42 45⇑ P **P 16 41 39.1 -0.9**
baz=72,SNR=14
MONP Monument Peak 72.45 48⇑ P **P 16 41 39.5 -0.7**
baz=73,SNR=12
ISA Isabella 72.52 44⇑ P **P 16 41 40.4 -0.2**
baz=73,SNR=11
ISA Isabella 72.52 44 *eP* **P 16 41 40.8 +0.2**
comp=Z,48nm,1.3s,mb5.3
ISA Isabella 72.52 44 *eP* **P 16 41 40.8 +0.2**
ISA pmax pmax
comp=Z,48nm,1.3s,mb5.3

DVTC Desert V Tower 72.56 48⇑ P **P 16 41 41.0 +0.2**
baz=73
CMB Columbia Colle 72.62 41 *eP* **P 16 41 40.6 -0.6**
comp=Z,24nm,1.2s,mb5.0
CMB LR LR
comp=Z,4µm,19.0s,MS5.8
CMB Columbia Colle 72.62 41 *eP* **P 16 41 40.6 -0.5**
CMB pmax pmax
comp=Z,24nm,1.2s,mb5.0
CMB MLR MLR
comp=Z,4µm,19.0s,MS5.8
KKM Kota Kinabalu 72.75 281 *eP* **P 16 41 43.4 +0.9**
comp=Z,41nm,1.3s,mb5.2
KKM LR LR
comp=Z,2µm,20.0s,MS5.4
KKM Kota Kinabalu 72.75 281 P **P 16 41 44.5 +2.1**
comp=Z,1µmcomp=Z,36nm,1.5s,mb5.1
PFO Pinyon Flat Ob 72.81 47 P **P 16 41 42.5 +0.2**
comp=Z,82nm,1.7s,mb5.4,SNR=7.1
PFO Pinyon Flat Ob 72.81 47⇓ P **P 16 41 41.9 -0.4**
baz=73
PFO Pinyon Flat Ob 72.81 47 *eP* **P 16 41 42.4 +0.1**
comp=Z,22nm,1.2s,mb5.0
PFO LR LR
comp=Z,10µm,21.0s,MS6.1
PFO Pinyon Flat Ob 72.81 47 *eP* **P 16 41 42.4 +0.1**
PFO pmax pmax
comp=Z,22nm,1.2s,mb5.0
PFO MLR MLR
comp=Z,10µm,21.0s,MS6.1
BBRC Big Bear Solar 72.83 46⇓ P **P 16 41 42.2 -0.3**
baz=73
WDC Whiskeytown Da 72.83 38 *eP* **P 16 41 42.1 -0.2**
comp=Z,104nm,1.6s,mb5.5
WDC LR LR
comp=Z,6µm,20.0s,MS5.9
WDC Whiskeytown Da 72.83 38 *eP* **P 16 41 42.1 -0.2**
WDC pmax pmax
comp=Z,104nm,1.6s,mb5.5
WDC MLR MLR
comp=Z,6µm,20.0s,MS5.9
SWSC Sam W. Stewart 72.93 48⇑ P **P 16 41 42.9 -0.2**
baz=73
LRMC Laurel Mountai 72.95 45⇓ P **P 16 41 43.0 -0.2**
baz=73
RRX Edison Barstow 73.10 46⇓ P **P 16 41 43.2 -0.9**
baz=73
CWC Cottonwood Cre 73.22 44⇑ P **P 16 41 44.3 -0.5**
baz=73
YSS Yuzh-Sakhalins 73.22 330 *eP* **P 16 41 44.7 +0.2**
comp=Z,90nm,1.2s,mb5.6
YSS LR LR
comp=Z,2µm,20.0s,MS5.3
YSS Yuzh-Sakhalins 73.22 330*ae* **P 16 41 44.7 +0.2**
YSS *e* pP 16 41 53.0 -2.4
YSS *e* pP 16 41 58.0 +2.6
YSS *e* 16 44 30.0
YSS *e*PPP 16 46 10.0
YSS *e*S S 16 51 14.0 +3.8
YSS *e*PPS 16 51 54.0
YSS pmax pmax
comp=Z,70nm,1.1s,mb5.5
YSS smax
comp=N,3µm,12.0s
YSS MLR MLR
comp=Z,2µm,18.0s,MS5.4
YSS MLR MLR
comp=N,2µm,17.0s
MLAC Mammoth Lakes 73.39 43⇑ P **P 16 41 45.7 0.0**
baz=74
MPMC Manual Prospec 73.41 44⇑ P **P 16 41 45.4 -0.4**
baz=74,SNR=10
YBH Yreka Blue Hor 73.44 37 *eP* **P 16 41 46.1 +0.2**
comp=N,52nm,1.3s,mb5.3
YBH LR LR
comp=Z,5µm,20.0s,MS5.8
YBH Yreka Blue Hor 73.44 37 *eP* **P 16 41 46.1 +0.2**
YBH pmax pmax
comp=Z,52nm,1.3s
YBH MLR MLR
comp=Z,5µm,20.0s
DAC Darwin (Calif) 73.46 44 PFAKE 16 42 00.0 +14
DAC LR LR
comp=Z,8µm,20.0s,MS6.0
GSC Goldstone 73.46 45⇓ P **P 16 41 46.1 -0.1**
baz=74
GSC Goldstone 73.46 45 *eP* **P 16 41 46.2 +0.1**
comp=Z,36nm,1.3s,mb5.1
GSC Goldstone 73.46 45 *eP* **P 16 41 46.3 +0.1**
GSC pmax pmax
comp=Z,36nm,1.3s,mb5.1
TIN Tinemaha 73.47 43⇓ P **P 16 41 46.1 -0.1**
baz=74
HEC Hector,Ludlow 73.54 46⇑ P **P 16 41 46.1 -0.5**
baz=74
112A Yuma 73.60 49⇓ P **P 16 41 46.9 -0.1**
baz=74
GLA Glamis 73.68 48⇑ P **P 16 41 47.3 -0.2**
baz=74
GLA Glamis 73.68 48 *eP* **P 16 41 47.2 -0.3**
comp=Z,44nm,1.2s,mb5.3
GLA Glamis 73.68 48 *eP* **P 16 41 47.3 -0.2**
GLA pmax pmax
comp=Z,44nm,1.2s,mb5.3
WCN Washoe City 73.77 41⇑ P **P 16 41 47.9 0.0**
baz=74
PCJI Pacitan 73.82 266 P **P 16 41 49.0 +0.2**
comp=Z,131nm,1.2s,mb5.7
HUMO Hull Mountain 73.85 36 *eP* **P 16 41 48.8 +0.5**
comp=Z,112nm,1.7s,mb5.5
HUMO LR LR
comp=Z,5µm,20.0s,MS5.8
GMRC Granite Mounta 73.98 46⇓ P **P 16 41 48.3 -1.0**
baz=74,SNR=13
GRAC Grapevine Rang 74.01 44⇑ P **P 16 41 49.4 +0.1**
baz=74
IRM Iron Mountain 74.02 47⇑ P **P 16 41 48.8 -0.7**
baz=74,SNR=19
FURC Furnace Creek, 74.06 44⇓ P **P 16 41 49.1 -0.6**
baz=74,SNR=7.5
TUQ Turquoise Moun 74.14 46⇑ P **P 16 41 49.9 -0.3**
baz=74
SHOC Shoshone 74.15 45⇑ P **P 16 41 49.4 -0.7**
baz=74
NVAR Mina Array Bea 74.19 42 P **P 16 41 50.9 +0.5**
comp=Z,9.5nm,0.9s,mb4.7,baz=229,slow=8.2
Y12C Blythe 74.25 48⇑ P **P 16 41 50.5 -0.3**
baz=74
113A Mohawk Valley, 74.31 49⇓ P **P 16 41 50.1 -1.0**
baz=74,SNR=7.1
YULB Yu-li 74.37 300 P **P 16 41 51.5 -0.3**
comp=Z,73nm,1.6s,mb5.4
U10A Ash Meadows, A 74.39 45⇑ P **P 16 41 51.6 0.0**
baz=74
NACB Ninganchiao 74.45 301 *eP* **P 16 41 51.9 -0.2**
comp=Z,166nm,1.6s,mb5.7
LDFC Landfair 74.52 46 *eP* **P 16 41 53.0 +0.6**
comp=Z,79nm,1.2s,mb5.5
Z13A Yuma Proving G 74.60 49⇓ P **P 16 41 52.2 -0.7**
baz=75,SNR=11
214A Organ Pipe Nat 74.61 50⇓ P **P 16 41 52.3 -0.6**
baz=75,SNR=12
KDAK Kodiak Island 74.69 11 PFAKE 16 42 00.0 +7.2
KDAK LR LR
comp=Z,6µm,22.0s,MS5.8
V11A Goodsprings 74.70 46⇓ P **P 16 41 53.0 -0.4**
baz=75
NEE2 Needles Airpor 74.71 47⇓ P **P 16 41 53.2 -0.3**
baz=75
Y13A Salome 74.79 48⇑ P **P 16 41 53.6 -0.3**
baz=75
W12A Cal Nev Ari 74.81 46⇓ P **P 16 41 53.9 -0.2**
baz=75
PDMCI Parker Dam,Lak 74.81 48⇓ P **P 16 41 53.2 -0.8**
baz=75,SNR=8.2
SSLB Suanglung 74.82 300 *eP* **P 16 41 53.2 -1.1**
comp=Z,38nm,1.3s,mb5.2
YHNB Yeheng 74.84 301 *eP* **P 16 41 54.0 -0.4**
comp=Z,102nm,1.4s,mb5.6
YHNB LR LR
comp=Z,6µm,20.0s,MS5.9
TATO Taipei 74.87 302 PFAKE 16 42 10.0 +15
TATO LR LR
comp=Z,3µm,20.0s,MS5.6
TPUB Ta-pu 74.89 300 *eP* **P 16 41 53.5 -1.3**
comp=Z,68nm,1.1s,mb5.5
COR Corvallis 74.91 35 PFAKE 16 42 10.0 +16

COR LR LR
comp=Z,3μm,21.0s,MS5.5
114A Black Gap (USA 74.95 49 ⇑P **P 16 41 54.5 -0.4**
baz=75,SNR=8.3
MOD Modoc 74.97 38 *eP* **P 16 41 54.4 -0.4**
comp=Z,89nm,1.3s,mb5.5
MOD LR LR
comp=Z,6μm,20.0s,MS5.9
S10A Tonopah Range, 75.03 43 ⇑P **P 16 41 55.0 -0.2**
baz=75,SNR=15
U11A Corn Creek 75.04 45 ⇑P **P 16 41 54.8 -0.5**
baz=75
V12A Nelson 75.04 46 ⇓P **P 16 41 55.2 -0.1**
baz=75,SNR=10
K05A Summer Lake 75.12 37 ⇑P **P 16 41 55.8 +0.2**
baz=75,SNR=19
X13A Yucca 75.18 47 ⇓P **P 16 41 56.3 +0.1**
baz=75
Z14A Wintersburg 75.20 49 ⇑P **P 16 41 56.0 -0.3**
baz=75,SNR=10
W13A Hualapai Mount 75.39 47 ⇑P **P 16 41 57.7 +0.3**
baz=76,SNR=12
115A Sonoran Desert 75.40 50 ⇓P **P 16 41 57.3 -0.2**
baz=76
R10A Warm Springs 75.42 43 ⇓P **P 16 41 57.4 -0.1**
baz=76,SNR=17
Y14A Wickenburg 75.44 48 ⇑P **P 16 41 57.3 -0.4**
baz=76
S11A Rachel 75.44 44 ⇓P **P 16 41 57.8 +0.2**
baz=76,SNR=8.6
SBUM Sibu 75.52 277 P **P 16 41 59.2 +0.6**
comp=Z,1μmcomp=Z,14nm,1.1s,mb4.8
H04A Detroit Lake 75.59 35 ⇑P **P 16 41 57.8 -0.5**
baz=76,SNR=7.9
U12A Valley of Fire 75.62 45 ⇑P **P 16 41 58.8 +0.1**
baz=76
F03A Seaside 75.64 33 ⇑P **P 16 41 58.5 0.0**
baz=76
216A Three Points, 75.64 51 ⇓P **P 16 41 58.8 -0.1**
baz=76,SNR=12
Q10A Clear Creek Ra 75.65 43 ⇓P **P 16 41 58.8 0.0**
baz=76,SNR=11
T12A Moapa 75.66 45 ⇑P **P 16 41 59.4 +0.5**
baz=76
V13A Grand Canyon W 75.71 46 ⇑P **P 16 41 59.1 -0.1**
baz=76,SNR=11
116A Eloy 75.72 50 ⇓P **P 16 41 58.9 -0.4**
baz=76
Z15A Gila River Ind 75.74 49 ⇓P **P 16 41 58.9 -0.5**
baz=76
G04A Mulino 75.76 35 ⇑P **P 16 41 58.4 -0.9**
baz=76
X14A Yava 75.79 48 ⇑P **P 16 41 60.0 +0.3**
baz=76,SNR=17
KSRS Korea Array 75.92 316 P **P 16 42 01.9 +1.6**
comp=Z,40nm,1.2s,mb5.2,baz=124,slow=5.7,SNR=32
KSRS LR LR 17 09 23.0
comp=Z,3μm,21.6s,MS5.5,baz=110,slow=31
KSRS Korea Array 75.92 316 P **P 16 42 01.9 +1.5**
KSRS pmax pmax
comp=Z,40nm,1.2s,mb5.2
KSRS MLR MLR
comp=Z,3μm,21.6s,MS5.5
R11A Troy Canyon, C 75.93 43 ⇓P **P 16 42 00.2 -0.2**
baz=76,SNR=23
Y15A Casa Rosa Ranc 75.94 49 ⇑P **P 16 42 00.5 0.0**
baz=76,SNR=32
BMN Battle Mountai 76.01 41 *eP* **P 16 42 00.0 -0.8**
comp=Z,65nm,1.3s,mb5.4
BMN LR LR
comp=Z,4μm,20.0s,MS5.8
BMN Battle Mountai 76.01 41 *eP* **P 16 42 00.0 -0.8**
BMN pmax pmax
comp=Z,65nm,1.3s,mb5.4
BMN MLR MLR
comp=Z,4μm,20.0s,MS5.8
U13A Pakoon Wash 76.01 46 ⇓P **P 16 42 01.1 +0.2**
baz=76,SNR=26
217A Green Valley 76.02 51 ⇓P **P 16 42 01.0 -0.1**
baz=76,SNR=16
W14A Seligman 76.02 47 ⇓P **P 16 42 01.4 +0.4**
baz=76,SNR=28
S12A Delamar Landin 76.03 44 ⇓P **P 16 42 01.4 +0.4**
baz=76
E03A Lebam 76.03 33 ⇓P **P 16 42 00.4 -0.4**
baz=76
Q11A Duckwater 76.15 43 ⇓P **P 16 42 01.4 -0.2**
baz=76,SNR=25
V14A Boquillas Ranc 76.22 47 ⇑P **P 16 42 02.4 +0.3**
baz=76,SNR=24
F04A Amboy 76.25 34 ⇑P **P 16 42 01.8 -0.3**
baz=76
X15A Humboldt 76.27 48 ⇑P **P 16 42 02.5 +0.1**
baz=76,SNR=17
WVOR Wild Horse Val 76.28 39 *eP* **P 16 42 02.5 +0.2**
comp=Z,78nm,1.4s,mb5.4
WVOR LR LR
comp=Z,7μm,19.0s,MS6.0
WVOR Wild Horse Val 76.28 39 *eP* **P 16 42 02.6 +0.3**
WVOR pmax pmax
comp=Z,78nm,1.4s,mb5.5
WVOR MLR MLR
comp=Z,7μm,19.0s,MS6.0
TUC Tucson 76.29 51 *eP* **P 16 42 02.9 +0.3**
comp=Z,47nm,1.2s,mb5.3
TUC LR LR
comp=Z,8μm,21.0s,MS6.0
TUC Tucson 76.29 51 *eP* **P 16 42 02.9 +0.3**
TUC pmax pmax
comp=Z,47nm,1.2s,mb5.3
TUC MLR MLR
comp=Z,8μm,21.0s,MS6.0
Z16A Peralta Trail, 76.30 50 ⇑P **P 16 42 03.2 +0.6**
baz=76
T13A Saint George 76.36 45 ⇓P **P 16 42 03.0 +0.1**
baz=76,SNR=8.5
NLWA Neilton Lookou 76.43 32 *eP* **P 16 42 03.4 +0.4**
comp=Z,50nm,1.4s,mb5.2
NLWA LR LR
comp=Z,2μm,20.0s,MS5.5
117A Oracle 76.45 51 ⇓P **P 16 42 03.9 +0.4**
baz=76,SNR=23
P11A Circle Ranch, 76.47 42 ⇑P **P 16 42 03.4 0.0**
baz=77
318A Bisbee 76.49 52 ⇑P **P 16 42 03.8 +0.1**
baz=77,SNR=19
Y16A Circle Bar Ran 76.52 49 ⇑P **P 16 42 04.0 +0.1**
baz=77,SNR=11
U14A Mt Trumbull 76.56 46 ⇑P **P 16 42 04.3 +0.3**
baz=77,SNR=24
R12A Pony Springs, 76.57 44 ⇓P **P 16 42 04.2 +0.2**
baz=77
W15A Williams 76.58 48 ⇓P **P 16 42 04.5 +0.3**
baz=77
S13A Holt Ranch, En 76.68 45 ⇑P **P 16 42 04.9 +0.2**
baz=77,SNR=18
218A Dragoon 76.69 51 ⇓P **P 16 42 05.0 +0.2**
baz=77,SNR=24
I07A Izee 76.74 37 ⇓P **P 16 42 04.6 -0.3**
baz=77,SNR=28
Q12A Willow Creek R 76.80 43 ⇑P **P 16 42 04.8 -0.5**
baz=77,SNR=12
G06A Carlson Farm, 76.80 35 ⇓P **P 16 42 04.7 -0.5**
baz=77,SNR=13
X16A Lo Mia Camp, P 76.81 49 ⇑P **P 16 42 05.7 +0.2**
baz=77,SNR=21
INCN Inchon 76.81 315 *eP* **P 16 42 06.6 +1.2**
comp=Z,381nm,1.8s,mb6.0
INCN LR LR
comp=Z,4μm,19.0s,MS5.7
Y17A Roosevelt 76.90 49 ⇓P **P 16 42 06.0 0.0**
baz=77,SNR=14
J08A Circle Bar Ran 76.92 38 ⇑P **P 16 42 05.9 0.0**
baz=77,SNR=28
R13A O'Grain Ranch, 76.92 44 ⇑P **P 16 42 06.3 +0.3**
baz=77,SNR=8.4
T14A Hurricane 76.95 46 ⇑P **P 16 42 06.6 +0.4**
baz=77
V15A Kaibab Nationa 76.96 47 ⇓P **P 16 42 06.7 +0.4**
baz=77,SNR=17
P12A McGill 76.98 43 ⇓P **P 16 42 06.6 +0.3**
baz=77
Z17A San Carlos Hig 76.98 50 ⇑P **P 16 42 06.7 +0.2**
baz=77,SNR=10.0
319A Douglas 77.00 52 ⇓P **P 16 42 06.7 +0.1**
baz=77,SNR=16
CCUT Cedar City 77.01 45 *eP* **P 16 42 07.3 +0.8**
comp=Z,60nm,1.5s,mb5.3
W16A Flagstaff 77.07 48 ⇑P **P 16 42 07.6 +0.6**
baz=77
ARUT Antelope Range 77.08 45 *eP* **P 16 42 07.5 +0.6**
comp=Z,238nm,1.7s,mb5.8
ARUT Antelope Range 77.08 45 *eP* **P 16 42 07.5 +0.6**
ARUT pmax pmax
comp=Z,238nm,1.7s,mb5.8
GNW Green Mountain 77.08 33 *eP* **P 16 42 06.5 -0.2**
comp=Z,41nm,1.4s,mb5.2
LON Longmire 77.09 34 *eP* **P 16 42 06.6 -0.2**
comp=Z,51nm,1.5s,mb5.2
LON Longmire 77.09 34 *eP* **P 16 42 06.6 -0.2**
LON pmax pmax
comp=Z,51nm,1.5s,mb5.2
RSO Redoubt South 77.17 10 *eP* **P 16 42 06.5 -0.4**
U15A North Rim 77.18 46 ⇓P **P 16 42 08.3 +0.8**
baz=77,SNR=27
Z18A Geronimo 77.21 50 ⇓P **P 16 42 08.3 +0.6**
baz=77
X17A Forest Lakes 77.23 49 ⇑P **P 16 42 08.6 +0.7**
baz=77
S14A Cedar City 77.25 45 ⇑P **P 16 42 08.2 +0.4**
baz=77
QZH Quanzhou 77.26 300 ⇑*i*P **P 16 42 07.3 -0.9**
QZH S S 16 51 59.4 +3.5
QZH ScS ScS 16 52 25.5 +1.9
QZH LR LR
comp=N,3μm,19.4s,MS5.7
QZH LR LR
comp=E,3μm,18.0s,MS5.7
QZH LR LR
comp=Z,8μm,26.9s
D05A Enumclaw 77.28 33 ⇑P **P 16 42 08.3 +0.5**
baz=77
Q13A Wheeler Ranch, 77.29 44 ⇓P **P 16 42 07.9 -0.2**
baz=77,SNR=13
219A White Tail Can 77.30 52 ⇓P **P 16 42 08.6 +0.3**
baz=77,SNR=23
WUAZ Wupatki 77.38 48 P **P 16 42 09.4 +0.7**
baz=78
WUAZ Wupatki 77.38 48 *eP* **P 16 42 09.6 +0.9**
comp=Z,41nm,1.2s,mb5.2
WUAZ LR LR
comp=Z,7μm,21.0s,MS5.9
T15A Red Dirt Ranch 77.41 46 ⇓P **P 16 42 09.1 +0.2**
baz=78,SNR=13
PGC Sidney 77.46 31 *eP* **P 16 42 08.9 +0.2**
comp=Z,3.1nm,1.1s,mb4.2
O12A Currie 77.50 42 ⇑P **P 16 42 09.0 -0.2**
baz=78,SNR=9.9
Y18A Canyon Day Jun 77.53 50 ⇓P **P 16 42 09.8 +0.2**
baz=78,SNR=15
P13A Bates Ranch, G 77.55 43 ⇓P **P 16 42 09.8 +0.3**
baz=78,SNR=24
320A Kipp Ranch, An 77.56 53 ⇑P **P 16 42 10.4 +0.7**
baz=78,SNR=11
119A Ashpeak Ranch, 77.61 51 ⇓P **P 16 42 10.4 +0.4**
baz=78,SNR=19
MIR Mirnyy 77.62 204 ⇓*i*P **P 16 42 10.4 +0.9**
MIR *e*S S 16 52 00.0 +1.5
MIR *e*PS 16 53 08.0
MIR pmax pmax
comp=Z,114nm,1.6s,mb5.5
MIR pmax pmax
comp=Z,1μm,6.0s
MIR smax
comp=N,2μm,9.0s
MIR MLR MLR
comp=N,2μm,18.0s,MS5.7
MIR MLR MLR
comp=E,3μm,18.0s,MS5.7
MIR MLR MLR
comp=Z,4μm,18.0s,MS5.8
W17A Winslow 77.65 48 ⇑P **P 16 42 10.7 +0.5**
baz=78
SSE Sheshan 77.74 307 P **P 16 42 11.0 +0.2**
SSE pP pP 16 42 13.8 -8.0
SSE S S 16 52 04.9 +4.0
SSE sS sS 16 52 11.0 -8.0
SSE pmax pmax
comp=Z,31nm,0.7s,mb5.3
SSE pmax pmax
comp=Z,1μm,3.1s
SSE LR LR
comp=N,2μm,27.0s,MS5.4
SSE LR LR
comp=E,2μm,27.0s,MS5.4
SSE LR LR
comp=Z,3μm,25.7s,MS5.5
S15A Panguitch 77.75 45 ⇑P **P 16 42 11.9 +1.2**
baz=78
Q14A Sevier Lake (B 77.80 44 ⇑P **P 16 42 11.1 +0.2**
baz=78,SNR=43
220A Playas Peak, P 77.81 52 ⇑P **P 16 42 11.4 +0.3**
baz=78,SNR=34
V17A Tonalea, Kykot 77.85 48 ⇑P **P 16 42 11.5 +0.2**
baz=78
U16A Tuba City 77.86 47 ⇑P **P 16 42 11.9 +0.5**
baz=78
Z19A T-Link Ranch, 77.88 50 ⇑P **P 16 42 12.0 +0.5**
baz=78,SNR=8.9
O13A Hicks Ranch, I 77.93 42 ⇓P **P 16 42 11.7 +0.1**
baz=78
X18A Snowflake 77.94 49 ⇑P **P 16 42 12.2 +0.3**
baz=78,SNR=6.8
JCW Jim Creek 77.94 32 *eP* **P 16 42 11.7 +0.2**
comp=Z,145nm,1.6s,mb5.7
T16A Glen Canyon Da 78.00 46 ⇓P **P 16 42 12.1 0.0**
baz=78,SNR=13
120A U Bar Ranch, L 78.02 51 ⇓P **P 16 42 12.8 +0.5**
baz=78,SNR=18
E07A Sunnyside 78.03 35 ⇑P **P 16 42 11.7 -0.4**
baz=78,SNR=7.4
HABR Khabarovsk 78.08 328*ce*P **P 16 42 10.2 -2.0**
HABR pP 16 42 20.5 -2.7
HABR 16 45 04.0
HABR pmax pmax
comp=Z,2μm,3.8s
R15A Junction 78.08 45 ⇓P **P 16 42 13.0 +0.5**
baz=78
RSW Rattlesnake Hi 78.08 35 *eP* **P 16 42 12.1 -0.2**
comp=Z,160nm,1.5s,mb5.7
HAWA Hanford 78.11 35 *eP* **P 16 42 12.8 +0.4**
comp=Z,98nm,1.5s,mb5.5
HAWA LR LR
comp=Z,3μm,21.0s,MS5.5
N13A Wendover, West 78.17 42 ⇓P **P 16 42 12.6 -0.3**
baz=78
N13A Wendover, West 78.17 42 *eP* **P 16 42 13.2 +0.3**
comp=Z,94nm,1.1s,mb5.6
Y19A Nutrioso 78.19 50 ⇓P **P 16 42 13.9 +0.7**
baz=78,SNR=27
P14A Drum Mountains 78.25 43 ⇓P **P 16 42 13.7 +0.3**
baz=78,SNR=30
Z20A Nine Sixteen R 78.30 51 ⇓P **P 16 42 14.4 +0.5**
baz=78,SNR=25
MSU Marysvale 78.30 45 *eP* **P 16 42 14.1 +0.4**
comp=Z,68nm,1.3s,mb5.4
MSU Marysvale 78.30 45 *eP* **P 16 42 14.1 +0.4**
MSU pmax pmax
comp=Z,68nm,1.3s,mb5.4
S16A Weppner Ranch, 78.31 46 ⇑P **P 16 42 13.9 +0.1**
baz=78,SNR=15
W18A Petrified Fore 78.37 49 ⇑P **P 16 42 14.6 +0.4**
baz=78
A05A Maple Falls 78.38 32 ⇑P **P 16 42 13.8 -0.1**
baz=78
X19A St. Johns 78.38 49 ⇓P **P 16 42 14.6 +0.3**
baz=78,SNR=9.1
B06A Marblemount 78.38 32 ⇑P **P 16 42 13.5 -0.4**
baz=78
Q15A Fillmore 78.41 44 ⇓P **P 16 42 14.7 +0.4**
baz=78
ETW Entiat 78.42 34 *eP* **P 16 42 14.4 +0.3**
comp=Z,154nm,1.6s,mb5.7
221A Mesquite Ranch 78.43 52 ⇑P **P 16 42 15.0 +0.4**
baz=78,SNR=14
E08A Dider Farm, El 78.43 35 ⇑P **P 16 42 14.0 -0.2**
baz=79,SNR=6.7
M13A Montello 78.46 41 ⇓P **P 16 42 14.0 -0.5**
baz=79,SNR=17
M13A Montello 78.46 41 *eP* **P 16 42 14.6 +0.1**
comp=Z,65nm,1.3s,mb5.4
LNOR Lincton Mounta 78.50 36 *eP* **P 16 42 14.3 -0.3**
comp=Z,35nm,1.5s,mb5.1
LNOR Lincton Mounta 78.50 36 *eP* **P 16 42 14.3 -0.3**
LNOR pmax pmax
comp=Z,35nm,1.5s,mb5.1
T17A Navajo Res., N 78.50 47 ⇓P **P 16 42 15.4 +0.5**
baz=79,SNR=24
MFID Camas Ranch 78.54 39 ⇑P **P 16 42 14.3 -0.6**
baz=79,SNR=16
W19A Sanders 78.62 49 ⇑P **P 16 42 15.9 +0.3**
baz=79
121A Cookes Peak, D 78.65 52 ⇓P **P 16 42 15.7 -0.1**
baz=79
R16A Teasdale 78.66 45 ⇑P **P 16 42 16.2 +0.5**
baz=79,SNR=13
DUG Dugway 78.73 43 P **P 16 42 16.0 0.0**
baz=79
DUG Dugway 78.73 43 *eP* **P 16 42 16.1 0.0**
comp=Z,56nm,1.3s,mb5.3
DUG LR LR
comp=Z,4μm,20.0s,MS5.8
DUG Dugway 78.73 43 *eP* **P 16 42 16.1 +0.1**
DUG pmax pmax
comp=Z,57nm,1.3s,mb5.3
DUG MLR MLR
comp=Z,4μm,20.0s,MS5.8
P15A Leamington 78.76 44 ⇑P **P 16 42 16.2 -0.1**
baz=79,SNR=9.5
MDJ Mudanjiang 78.77 322 P **P 16 42 17.3 +1.1**
MDJ PP PP 16 45 15.8 +0.7
MDJ S S 16 52 15.4 +4.0
MDJ SS SS 16 57 19.5 +2.6
MDJ pmax pmax
comp=Z,53nm,1.8s,mb5.2
MDJ pmax pmax
comp=Z,2μm,6.6s
MDJ LR LR
comp=N,4μm,21.0s,MS5.9
MDJ LR LR
comp=E,5μm,23.0s,MS5.9
MDJ LR LR
comp=Z,8μm,23.0s,MS6.0
MDJ Mudanjiang 78.77 322 *eP* **P 16 42 16.4 +0.2**
comp=Z,154nm,1.7s,mb5.7
MDJ LR LR
comp=Z,9μm,22.0s,MS6.1
S17A Black Ridge (B 78.81 46 ⇓P **P 16 42 16.3 -0.3**
baz=79,SNR=10
Y20A Horse Springs, 78.82 50 ⇑P **P 16 42 17.4 +0.7**
baz=79,SNR=40
N14A Grayback Hills 78.82 42 ⇓P **P 16 42 16.3 -0.2**
baz=79,SNR=11
D08A Wollman Farm, 78.85 35 ⇓P **P 16 42 16.0 -0.5**
baz=79,SNR=11
PMR Palmer 78.89 12 *eP* **P 16 42 16.9 +0.6**
comp=Z,124nm,1.6s,mb5.6
PMR Palmer 78.89 12 *eP* **P 16 42 17.0 +0.6**
PMR pmax pmax
comp=Z,125nm,1.6s,mb5.6
U18A Rough Rock, Ch 78.89 47 ⇑P **P 16 42 17.0 0.0**
baz=79,SNR=27
E09A Wood Farm, Sta 78.95 35 ⇑P **P 16 42 16.9 -0.2**
baz=79,SNR=7.9
BGU Big Grassy Mou 78.96 42 *eP* **P 16 42 16.2 -1.1**
comp=Z,96nm,1.7s,mb5.5
222A Williams Famil 78.98 52 ⇓P **P 16 42 18.1 +0.5**
baz=79
O15A The Old Anders 79.00 43 ⇑P **P 16 42 17.5 0.0**
baz=79
TTA Tatalina 79.01 8 *eP* **P 16 42 18.0 +0.9**
comp=Z,81nm,1.2s,mb5.5
TTA Tatalina 79.01 8 *eP* **P 16 42 18.0 +1.0**
TTA pmax pmax
comp=Z,81nm,1.2s,mb5.5
X20A Quemado 79.01 50 ⇑P **P 16 42 18.3 +0.6**
baz=79,SNR=35
M14A Sheep Mountain 79.06 42 ⇑P **P 16 42 17.8 0.0**
baz=79,SNR=47
Z21A St. Cloud Mine 79.08 51 ⇓P **P 16 42 18.8 +0.6**
baz=79,SNR=12
NLU North Lily Min 79.09 43 *eP* **P 16 42 18.5 +0.5**
comp=Z,33nm,1.3s,mb5.1
F10A Beach Ranch, E 79.16 36 ⇑P **P 16 42 17.3 -0.9**
baz=79,SNR=17
OD2 Odessa Site #2 79.16 34 *eP* **P 16 42 18.2 0.0**
comp=Z,158nm,1.6s,mb5.7
DIV Divide 79.17 13 *eP* **P 16 42 17.8 -0.2**
comp=Z,66nm,1.0s,mb5.5
I12A Atlanta 79.17 39 ⇑P **P 16 42 18.4 0.0**
baz=79,SNR=38
Q16A Castle Valley 79.18 45 ⇓P **P 16 42 19.1 +0.6**
baz=79,SNR=9.3
P16A Fountain Green 79.20 44 ⇑P **P 16 42 19.2 +0.6**
baz=79
T18A Mexican Hat 79.22 47 ⇑P **P 16 42 19.4 +0.6**
baz=79,SNR=65
R17A Hanksville Air 79.25 45 ⇓P **P 16 42 19.1 +0.1**
baz=79,SNR=13
N15A Stansbury Isla 79.28 42 ⇓P **P 16 42 18.9 -0.1**
baz=79
W20A Ramah 79.28 49 ⇑P **P 16 42 20.0 +0.9**
baz=79
BMRM Bremner River 79.29 14 *eP* **P 16 42 18.6 0.0**
comp=Z,159nm,1.3s,mb5.8
U19A Dine' College, 79.30 48 ⇑P **P 16 42 19.7 +0.4**
baz=79,SNR=20
122A Conniff Cattle 79.32 52 ⇑P **P 16 42 20.3 +0.9**
baz=79
TMUT Trail Mountain 79.34 44 *eP* **P 16 42 20.5 +1.1**
comp=Z,122nm,1.3s,mb5.7
Y21A Point of Rocks 79.38 50 ⇓P **P 16 42 20.5 +0.7**
baz=80,SNR=15
S18A Hurst Farm, Bl 79.40 46 ⇓P **P 16 42 19.9 +0.1**
baz=80,SNR=17
L14A Malta 79.40 41 ⇑P **P 16 42 19.8 +0.1**
baz=80
B08A Colville Reser 79.41 33 ⇑P **P 16 42 18.8 -0.8**
baz=80,SNR=10
NOQ North Oquirrh 79.42 43 *eP* **P 16 42 19.0 -0.7**
comp=Z,67nm,1.1s,mb5.5
MPU Maple Canyon 79.42 44 *eP* **P 16 42 20.5 +0.7**
comp=Z,63nm,1.4s,mb5.3
223A Chaparral, Ant 79.46 53 ⇑P **P 16 42 20.8 +0.6**
baz=80
HLID Hailey 79.48 39 P **P 16 42 19.9 -0.2**
baz=80
HLID Hailey 79.48 39 *eP* **P 16 42 20.2 +0.2**
comp=Z,81nm,1.3s,mb5.5
HLID LR LR
comp=Z,3μm,21.0s,MS5.6
X21A Alamocita Cree 79.50 50 ⇓P **P 16 42 20.8 +0.5**
baz=80,SNR=31
PNL Peninsula 79.50 17 *eP* **P 16 42 20.2 +0.4**
comp=Z,69nm,1.0s,mb5.5
SPUT South Promonto 79.53 42 P **P 16 42 20.6 +0.2**
comp=Z,86nm,1.4s,mb5.5
J13A Cove Ranch, Pi 79.54 40 ⇑P **P 16 42 20.6 +0.2**
baz=80,SNR=19
PPLA Purkeypile 79.55 10 *eP* **P 16 42 19.0 -1.0**
comp=Z,23nm,1.3s,mb4.9
HVU Hansel Valley 79.57 42 *eP* **P 16 42 20.5 0.0**
comp=Z,67nm,1.2s,mb5.4
HVU Hansel Valley 79.57 42 *eP* **P 16 42 20.5 -0.1**
HVU pmax pmax
comp=Z,67nm,1.2s,mb5.5
Z22A Elephant Butte 79.59 51 ⇓P **P 16 42 21.4 +0.5**
baz=80,SNR=50
O16A Springville 79.60 43 ⇓P **P 16 42 20.3 -0.5**
baz=80
V20A Brimhall 79.61 49 ⇑P **P 16 42 21.5 +0.6**
baz=80
M15A Larsen Ranch, 79.61 42 ⇑P **P 16 42 20.4 -0.4**
baz=80
C09A Chrisman Ranch 79.64 34 ⇓P **P 16 42 20.3 -0.5**
baz=80
CTU Camp Tracy 79.68 43 *eP* **P 16 42 20.6 -0.6**
comp=Z,77nm,1.5s,mb5.4
T19A Beclabito 79.68 47 ⇑P **P 16 42 21.7 +0.4**
baz=80,SNR=34
K14A Jones Ranch, D 79.71 41 ⇓P **P 16 42 21.5 +0.2**
baz=80,SNR=10.0
SRU San Rafael 79.72 45 ⇑P **P 16 42 21.7 +0.2**
baz=80
SRU San Rafael 79.72 45 *eP* **P 16 42 21.5 +0.1**
comp=Z,86nm,1.3s,mb5.5
SRU San Rafael 79.72 45 *eP* **P 16 42 21.5 0.0**
SRU pmax pmax
comp=Z,85nm,1.3s,mb5.5
H12A Diamond D Ranc 79.75 38 ⇓P **P 16 42 21.1 -0.4**
baz=80,SNR=18
P17A Butcher Ranch, 79.75 44 ⇑P **P 16 42 21.6 -0.1**
baz=80,SNR=8.9

G12A	Big Creek, Yel	79.79	38	⇓P		P	16 42 21.4	-0.3
	baz=80							
R18A	Canyonlands Na	79.80	46	⇓P		P	16 42 22.2	+0.2
	baz=80,SNR=38							
U20A	Newcomb	79.83	48	⇓P		P	16 42 22.1	-0.1
	baz=80,SNR=12							
JLU	Jordanelle	79.83	43	eP		P	16 42 21.6	-0.5
	comp=Z,72nm,1.3s,mb5.4							
I13A	Wildhorse Cree	79.85	39	⇑P		P	16 42 22.0	-0.1
	baz=80,SNR=15							
123A	Bell Site, Whi	79.85	52	⇑P		P	16 42 22.8	+0.5
	baz=80							
DAU	Daniels Canyon	79.86	43	eP		P	16 42 22.9	+0.7
	comp=Z,67nm,1.4s,mb5.4							
DAU	Daniels Canyon	79.86	43	eP		P	16 42 22.9	+0.7
DAU					pmax	pmax		
	comp=Z,67nm,1.4s,mb5.4							
Y22A	Socorro	79.88	51	⇑P		P	16 42 22.9	+0.4
	baz=80,SNR=13							
W21A	San Fidel	79.90	49	⇓P		P	16 42 23.1	+0.6
	baz=80							
J14A	Carey	79.90	40	⇓P		P	16 42 22.6	+0.2
	baz=80,SNR=46							
L15A	Malad City	79.93	42	⇑P		P	16 42 22.2	-0.4
	baz=80,SNR=14							
NJ2	Nanjing	79.95	307	eP		P	16 42 22.8	-0.1
NJ2				pP		pP	16 42 27.6	-6.3
NJ2				sP		sP	16 42 30.1	-7.8
NJ2				PP		PP	16 45 25.8	+0.7
NJ2				S		S	16 52 22.0	-2.4
NJ2				sS		sS	16 52 33.0	-10
NJ2				pmax		pmax		
	comp=Z,50nm,1.1s,mb5.4							
NJ2				pmax		pmax		
	comp=Z,2µm,7.3s							
NJ2				LR		LR		
	comp=N,1µm,27.0s							
NJ2				LR		LR		
	comp=E,2µm,16.7s							
NJ2				LR		LR		
	comp=Z,1µm,16.3s							
LAZ	Ladron	79.95	50	eP		P	16 42 23.9	+1.0
	comp=Z,58nm,1.7s,mb5.2							
Y22D	IRIS PASSCAL I	79.97	51	⇑P		P	16 42 23.6	+0.6
	baz=80							
LENM	Lemitar	79.97	51	eP		P	16 42 24.0	+1.0
	comp=Z,87nm,1.7s,mb5.4							
Q18A	Rafter H Ranch	79.98	45	⇑P		P	16 42 22.7	-0.2
	baz=80,SNR=20							
N16A	Rees Ranch, Co	79.98	43	⇑P		P	16 42 22.5	-0.4
	baz=80,SNR=8.7							
HKC	Hong Kong Obse	80.02	296	eP		P	16 42 22.0	-1.5
S19A	Harvey Farm, M	80.03	47	⇑P		P	16 42 23.4	+0.2
	baz=80,SNR=20							
O17A	Robinson Place	80.10	44	⇑P		P	16 42 23.7	+0.2
	baz=80,SNR=21							
H13A	Challis	80.12	39	⇑P		P	16 42 23.1	-0.4
	baz=80,SNR=21							
MNTX	Cornudas Mount	80.14	53	P		P	16 42 24.0	+0.1
	baz=80							
MNTX	Cornudas Mount	80.14	53	eP		P	16 42 23.7	-0.2
	comp=Z,53nm,1.4s,mb5.3							
MNTX				LR		LR		
	comp=Z,5µm,21.0s,MS5.8							
Z23A	Rita Site, Whi	80.14	52	⇓P		P	16 42 24.3	+0.4
	baz=80,SNR=7.6							
P18A	Preston Nutter	80.16	44	⇓P		P	16 42 23.9	+0.1
	baz=80,SNR=15							
F12A	Elk City	80.17	37	⇓P		P	16 42 23.4	-0.4
	baz=80,SNR=50							
224A	Cornudas Mount	80.19	53	⇓P		P	16 42 24.6	+0.4
	baz=80,SNR=32							
K15A	Arbon	80.19	41	⇑P		P	16 42 23.8	-0.2
	baz=80,SNR=12							
R19A	Curley Farm, L	80.19	46	⇓P		P	16 42 23.9	-0.1
	baz=80,SNR=17							
V21A	Milan	80.21	49	⇓P		P	16 42 25.0	+0.8
	baz=80							
BNM	Barren Site	80.23	51	eP		P	16 42 24.9	+0.6
	comp=Z,106nm,1.7s,mb5.5							
MVCO	Mesa Verde	80.23	47	P		P	16 42 24.3	+0.1
	baz=80							
MVCO	Mesa Verde	80.23	47	eP		P	16 42 24.6	+0.3
	comp=Z,157nm,1.9s,mb5.6							
MVCO				LR		LR		
	comp=Z,9µm,21.0s,MS6.1							
626A	Big Bend Ranch	80.25	56	⇑P		P	16 42 24.8	+0.3
	baz=80,SNR=44							
HWUT	Hardware Ranch	80.26	42	eP		P	16 42 24.2	-0.2
	comp=Z,55nm,1.4s,mb5.3							
HWUT				LR		LR		
	comp=Z,6µm,21.0s,MS5.9							
KLR	Kul'dur	80.26	327	eP		P	16 42 21.0	-3.1
KLR				e			16 45 23.0	
KLR				eS		S	16 52 23.5	-3.4
KLR				pmax		pmax		
	comp=E,490nm,3.2s							
KLR				pmax		pmax		
	comp=Z,1µm,3.2s							
KLR				pmax		pmax		
	comp=Z,2µm,6.0s							
KLR				smax				
	comp=N,4µm,8.5s							
KLR				smax				
	comp=E,1µm,8.5s							
I14A	Mackay	80.27	39	⇓P		P	16 42 24.9	+0.6
	baz=80							
325A	Bean Ranch, Si	80.32	54	⇑P		P	16 42 24.7	-0.2
	baz=80,SNR=30							
E12A	Beaver Dam Sad	80.36	36	⇑P		P	16 42 23.7	-1.0
	baz=80,SNR=9.7							
TRF	Thorofare Moun	80.39	10	eP		P	16 42 23.7	-0.8
	comp=E,69nm,1.1s,mb5.5							
N17A	Moffit Pass	80.41	43	⇓P		P	16 42 25.0	-0.1
	baz=80							
G13A	Cobalt	80.41	38	⇓P		P	16 42 24.1	-1.0
	baz=80							
W22A	Albuquerque	80.45	50	⇑P		P	16 42 26.4	+0.8
	baz=80							
U21A	Nageezi	80.47	48	⇑P		P	16 42 25.9	+0.3
	baz=81,SNR=61							
526A	Mary Lane Ranc	80.48	55	⇑P		P	16 42 25.7	-0.1
	baz=81,SNR=44							
PV04	Paradox Valley	80.49	46	eP		P	16 42 26.4	+0.8
124A	Stringfield Ra	80.50	52	⇑P		P	16 42 26.0	+0.2
	baz=81,SNR=21							
SKAG	Skagway	80.53	19	eP		P	16 42 25.5	+0.2
	comp=E,94nm,1.4s,mb5.5							
TXAR	Lajitas Array	80.53	56	P		P	16 42 26.7	+0.6
	comp=E,42nm,1.2s,mb5.2,baz=238,slow=5.0,SNR=70							
TXAR				LR		LR	17 10 01.9	
	comp=E,6µm,21.5s,MS5.9,baz=30,slow=30							
TXAR	Lajitas Array	80.53	56	P		P	16 42 26.7	+0.6
TXAR				pmax		pmax		
	comp=Z,42nm,1.2s							
TXAR				MLR		MLR		
	comp=Z,6µm,21.5s							
NEW	Newport	80.54	34	P		P	16 42 25.3	-0.4
	baz=81							
NEW	Newport	80.54	34	eP		P	16 42 24.9	-0.8
	comp=Z,32nm,1.5s,mb5.0							
NEW				LR		LR		
	comp=Z,2µm,20.0s,MS5.4							
NEW	Newport	80.54	34	eP		P	16 42 24.9	-0.8
NEW				pmax		pmax		
	comp=Z,32nm,1.5s							
NEW				MLR		MLR		
	comp=Z,2µm,20.0s							
L16A	Fish Haven	80.55	42	⇑P		P	16 42 25.6	-0.3
	baz=81,SNR=20							
Y23A	Lovelace Mesa,	80.56	51	⇓P		P	16 42 26.5	+0.4
	baz=81,SNR=16							
TNA	Tin City	80.57	2	eP		P	16 42 28.2	+2.7
	comp=Z,352nm,1.9s,mb6.0							
PV01	Paradox Valley	80.60	46	eP		P	16 42 26.8	+0.6
	comp=Z,9µm,1.4s							
J15A	Blackfoot	80.62	40	⇑P		P	16 42 26.2	-0.1
	baz=81,SNR=19							
O18A	Roosevelt	80.62	44	⇑P		P	16 42 26.7	+0.4
	baz=81							
ANMO	Albuquerque	80.70	50	eP		P	16 42 27.6	+0.7
	comp=Z,220nm,1.9s,mb5.8							
ANMO				LR		LR		
	comp=Z,6µm,21.0s,MS6.0							
ANMO	Albuquerque	80.70	50	eP		P	16 42 27.6	+0.7
ANMO				pmax		pmax		
	comp=Z,220nm,1.9s							
ANMO				MLR		MLR		
	comp=Z,6µm,21.0s							
F13A	Darby	80.73	37	⇑P		P	16 42 26.2	-0.5
	baz=81,SNR=17							
225A	Deer Hill, Car	80.74	53	⇑P		P	16 42 27.6	+0.4
	baz=81,SNR=25							
X23A	Hourglass Bar	80.74	50	⇓P		P	16 42 27.2	+0.1
	baz=81,SNR=7.2							
R20A	Redvale	80.76	46	⇑P		P	16 42 27.1	0.0
	baz=81							
C11A	Tepee Creek (N	80.77	35	⇓P		P	16 42 26.5	-0.5
	baz=81,SNR=17							
426A	McDonald Obser	80.78	55	⇓P		P	16 42 27.7	+0.4
	baz=81,SNR=61							
M17A	Scullys Gap (B	80.78	43	⇓P		P	16 42 26.9	-0.2
	baz=81							
627A	Terlingua Ranc	80.81	56	⇑P		P	16 42 27.9	+0.4
	baz=81,SNR=70							
T21A	Navajo Lake	80.81	48	⇑P		P	16 42 27.5	0.0
	baz=81,SNR=6.3							
D12A	Red Ives Fores	80.84	36	⇑P		P	16 42 26.7	-0.6
	baz=81							
CN2	Changchun	80.84	320	⇑P		P	16 42 28.1	+0.7
CN2				epP		pP	16 42 32.8	-5.6
CN2				esP		sP	16 42 35.1	-7.3
CN2				PP		PP	16 45 30.5	-1.7
CN2				eS		S	16 52 35.3	+2.0
CN2				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb4.7							
CN2				pmax		pmax		
	comp=Z,200nm,6.0s							
CN2				LR		LR		
	comp=N,2µm,20.0s,MS5.8							
CN2				LR		LR		
	comp=E,3µm,20.0s,MS5.8							
CN2				LR		LR		
	comp=Z,4µm,25.0s,MS5.7							
K16A	Soda Springs	80.86	41	⇑P		P	16 42 28.0	+0.4
	baz=81							
BPAW	Bear Paw Mtn.	80.87	10	eP		P	16 42 26.3	-0.8
	comp=Z,46nm,1.5s,mb5.2							
PAX	Paxson	80.87	13	eP		P	16 42 26.5	-0.7
	comp=Z,67nm,1.6s,mb5.3							
PAX	Paxson	80.87	13	eP		P	16 42 26.5	-0.6
PAX				pmax		pmax		
	comp=Z,67nm,1.6s,mb5.3							
MCK	McKinley	80.89	11	eP		P	16 42 26.8	-0.4
	comp=Z,88nm,1.0s,mb5.7							
MCK	McKinley	80.89	11	eP		P	16 42 26.8	-0.4
MCK				pmax		pmax		
	comp=Z,88nm,1.0s,mb5.6							
I15A	Monteview	80.90	40	⇑P		P	16 42 28.2	+0.5
	baz=81							
527A	Woodward Ranch	80.90	55	⇑P		P	16 42 28.0	0.0
	baz=81,SNR=22							
S21A	Coal Bank Pass	80.93	47	⇑P		P	16 42 28.2	+0.1
	baz=81,SNR=48							
DL2	Dalian	80.95	314	P		P	16 42 29.3	+1.2
DL2				S		S	16 52 40.3	+5.7
DL2				pmax		pmax		
	comp=Z,60nm,1.2s,mb5.4							
DL2				pmax		pmax		
	comp=Z,1µm,6.7s							
DL2				LR		LR		
	comp=N,850nm,24.7s,MS5.3							
DL2				LR		LR		
	comp=E,1µm,22.5s,MS5.3							
DL2				LR		LR		
	comp=Z,2µm,24.1s,MS5.3							
L17A	Cokeville	80.95	42	⇑P		P	16 42 27.5	-0.6
	baz=81							
G14A	Jackson	80.96	38	⇓P		P	16 42 27.7	-0.3
	baz=81,SNR=7.6							
GZH	Guangzhou	81.01	297	P		P	16 42 29.1	+0.3
GZH				S		S	16 52 37.8	+1.9
GZH				LR		LR		
	comp=N,970nm,18.4s,MS5.6							
GZH				LR		LR		
	comp=E,3µm,21.2s,MS5.6							
GZH				LR		LR		
	comp=Z,4µm,25.1s,MS5.7							
W23A	Werner Place,	81.02	50	⇓P		P	16 42 28.9	+0.3
	baz=81,SNR=12							
P19A	Cripple Cowboy	81.02	45	⇑P		P	16 42 28.4	-0.1
	baz=81,SNR=15							
Y24A	Capitan	81.03	51	⇓P		P	16 42 28.8	+0.1
	baz=81,SNR=46							
U22A	Naves	81.03	49	⇑P		P	16 42 28.6	0.0
	baz=81,SNR=14							
SNY	Shenyang	81.03	318	⇑P		P	16 42 29.1	+0.6
SNY				S		S	16 52 44.3	+8.9
SNY				pmax		pmax		
	comp=Z,140nm,1.9s,mb5.6							
SNY				LR		LR		
	comp=N,2µm,18.6s,MS5.5							
SNY				LR		LR		
	comp=E,1µm,22.4s,MS5.5							
SNY				LR		LR		
	comp=Z,2µm,20.1s,MS5.5							
J16A	Bone	81.07	41	⇑P		P	16 42 28.7	+0.1
	baz=81,SNR=17							
326A	Caldwell Ranch	81.08	54	⇑P		P	16 42 28.9	0.0
	baz=81,SNR=8.1							
125A	Gardner Draw,	81.09	53	⇑P		P	16 42 29.3	+0.3
	baz=81,SNR=21							
MCMT	McKenzie Canyo	81.11	39	eP		P	16 42 28.4	-0.4
	comp=Z,38nm,1.4s,mb5.1							
H15A	Lima	81.12	39	⇓P		P	16 42 28.6	-0.2
	baz=81,SNR=24							
GDL2	Guadalupe Moun	81.13	53	eP		P	16 42 30.2	+1.0
	comp=Z,58nm,1.2s,mb5.4							
C12B	Naegeli Ranch,	81.14	35	⇓P		P	16 42 28.6	-0.3
	baz=81							
AHID	Auburn Hatcher	81.14	41	PFAKE				
AHID				LR		LR	16 42 40.0	+11
	comp=Z,2µm,19.0s,MS5.6							
M18A	Lyman	81.15	43	⇑P		P	16 42 29.0	-0.1
	baz=81,SNR=15							
E13A	Victor	81.17	37	⇑P		P	16 42 28.3	-0.8
	baz=81,SNR=12							
Q20A	Ridgley Place,	81.17	46	⇓P		P	16 42 29.5	+0.2
	baz=81,SNR=14							
N18A	Larsen Ranch,	81.19	43	⇓P		P	16 42 29.2	-0.1
	baz=81							
628A	Black Gap, Mar	81.22	56	⇓P		P	16 42 29.8	0.0
	baz=81,SNR=68							
MENT	Mentasta	81.22	13	eP		P	16 42 28.6	-0.4
O19A	Miners Draw (B	81.23	44	⇓P		P	16 42 29.7	+0.1
	baz=81							
K17A	Gardner Place,	81.25	41	⇓P		P	16 42 29.8	+0.2
	baz=81							
V23A	Ortiz Mt. (NFS	81.25	49	⇑P		P	16 42 30.3	+0.6
	baz=81,SNR=13							
T22A	Edith	81.28	48	⇓P		P	16 42 29.7	-0.2
	baz=81,SNR=25							
226A	Malaga, Loving	81.28	54	⇑P		P	16 42 30.3	+0.3
	baz=81,SNR=40							
RRI2	Red Ridge	81.29	41	eP		P	16 42 29.9	+0.1
	comp=Z,103nm,1.4s,mb5.6							
F14A	Wisdom	81.31	38	⇓P		P	16 42 29.6	-0.3
	baz=81,SNR=11							
427A	Hayter Ranch,	81.34	55	⇑P		P	16 42 30.6	+0.2
	baz=81,SNR=39							
P20A	De Beque	81.36	45	⇑P		P	16 42 30.2	-0.1
	baz=82,SNR=14							
D13A	Huson	81.37	36	⇓P		P	16 42 29.3	-0.8
	baz=82,SNR=21							
L18A	Fontenelle, Gr	81.41	42	⇓P		P	16 42 30.5	0.0
	baz=82							
R21A	Cimarron	81.42	47	⇑P		P	16 42 31.1	+0.5
	baz=82,SNR=26							
I16A	Newdale	81.45	40	⇑P		P	16 42 31.2	+0.5
	baz=82,SNR=13							
MDSI	Maura Dua	81.46	268	P		P	16 42 33.0	+1.6
	comp=Z,25nm,1.8s,mb4.8							
327A	Balmorhea Ranc	81.48	54	⇑P		P	16 42 31.6	+0.5
	baz=82							
N19A	John Jarvie Ra	81.48	44	⇓P		P	16 42 30.4	-0.5
	baz=82							
DLBC	Dease Lake	81.49	21	eP		P	16 42 30.4	-0.1
U23A	El Rito	81.49	49	⇑P		P	16 42 31.3	+0.3
	baz=82,SNR=28							
B12A	Libby	81.50	35	⇑P		P	16 42 31.0	+0.3
	baz=82							
DCID1	Drake Creek	81.50	41	eP		P	16 42 31.5	+0.6
G15A	Dillon	81.50	39	⇓P		P	16 42 30.9	0.0
	baz=82,SNR=11							
MSO	Missoula	81.52	37	P		P	16 42 30.3	-0.6
	baz=82							
MSO	Missoula	81.52	37	eP		P	16 42 30.2	-0.7
	comp=Z,84nm,1.5s,mb5.5							
MSO				LR		LR		
	comp=Z,3µm,20.0s,MS5.6							
CLNB	Carlsbad	81.53	53	eP		P	16 42 31.6	+0.3
	comp=Z,7.7nm,0.9s,mb4.6							
DLMT	Dillon	81.54	39	eP		P	16 42 30.9	-0.2
	comp=Z,172nm,1.7s,mb5.7							
528A	Cox Ranch, San	81.56	56	⇑P		P	16 42 31.9	+0.4
	baz=82,SNR=54							
E14A	Clinton	81.56	37	⇓P		P	16 42 30.5	-0.7
	baz=82,SNR=22							
126A	Clayton Basin,	81.58	53	⇓P		P	16 42 31.0	-0.6
	baz=82,SNR=13							
W24A	Lazy 6 Ranch,	81.59	50	⇑P		P	16 42 31.5	0.0
	baz=82,SNR=22							
REDW	Red Top Meadow	81.59	41	eP		P	16 42 32.1	+0.7
	comp=Z,134nm,1.5s,mb5.7							
TPAW	Teton Pass	81.59	41	eP		P	16 42 31.7	+0.3
	comp=Z,37nm,1.0s,mb5.3							
BSMT	Bassoo Peak	81.60	36	eP		P	16 42 31.1	-0.2
	comp=Z,96nm,1.5s,mb5.5							
Q21A	Lamborn Mesa,	81.62	46	⇓P		P	16 42 32.0	+0.3
	baz=82,SNR=9.4							
C13A	Hot Springs	81.62	36	⇑P		P	16 42 30.1	-1.3
	baz=82							
S22A	4UR Ranch, Cre	81.65	47	⇓P		P	16 42 32.5	+0.6
	baz=82,SNR=56							
J17A	Brown Place, J	81.68	41	⇓P		P	16 42 32.3	+0.4
	baz=82							
SNOW	Snow King Moun	81.70	41	eP		P	16 42 33.0	+1.0
	comp=Z,58nm,1.0s,mb5.5							
A12A	Yaak River Ran	81.72	34	⇑P		P	16 42 32.2	+0.3
	baz=82							
K18A	Toltan Ranch,	81.75	42	⇓P		P	16 42 32.4	+0.1
	baz=82,SNR=14							
O20A	White River Ci	81.75	45	⇑P		P	16 42 32.8	+0.4
	baz=82							
M19A	Rock Springs	81.78	43	⇑P		P	16 42 32.2	-0.3
	baz=82							
IMW	Indian Meadow	81.81	40	eP		P	16 42 33.3	+0.8
	comp=Z,72nm,1.3s,mb5.5							
JTMT	Jette	81.83	36	eP		P	16 42 31.9	-0.6
	comp=Z,30nm,1.5s,mb5.0							
F15A	Butte	81.85	38	⇑P		P	16 42 32.1	-0.6
	baz=82,SNR=14							
CPRX	Cap Rock	81.85	53	eP		P	16 42 33.7	+0.6
	comp=Z,24nm,1.0s,mb5.1							
MOOW	Moose Ponds	81.85	41	eP		P	16 42 32.5	-0.3
	comp=Z,77nm,1.6s,mb5.4							
SWMT	Swartz Lake	81.86	36	eP		P	16 42 31.4	-1.3
	comp=Z,32nm,1.6s,mb5.0							
X25A	Clemmons Ranch	81.86	51	⇓P		P	16 42 32.8	-0.3
	baz=82							
Z26A	Caprock	81.86	52	⇓P		P	16 42 33.3	+0.2
	baz=82							
428A	Kincaid Ranch,	81.86	55	⇓P		P	16 42 33.7	+0.6
	baz=82,SNR=30							
LRM	Limekiln Ridge	81.86	38	eP		P	16 42 31.5	-1.3
	comp=Z,434nm,1.6s,mb6.1							
LOHW	Long Hollow	81.87	41	eP		P	16 42 33.4	+0.5
	comp=Z,75nm,1.4s,mb5.4							
227A	Bennet, Jal	81.89	54	⇑P		P	16 42 33.1	-0.1
	baz=82							
V24A	Rampart Ranch,	81.91	50	⇓P		P	16 42 33.8	+0.6
	baz=82,SNR=24							
D14A	Greenough	81.91	37	⇓P		P	16 42 32.2	-0.8
	baz=82,SNR=11							
T23A	Casias Ranch,	81.91	48	⇓P		P	16 42 33.5	+0.3
	baz=82,SNR=10							
R22A	Saguache, Gunn	81.92	47	⇑P		P	16 42 34.0	+0.7
	baz=82,SNR=54							
BLMT	Blacktail Moun	81.92	36	eP		P	16 42 32.5	-0.5
L19A	Farson	81.94	43	⇑P		P	16 42 33.1	-0.1
	baz=82,SNR=14							
G16A	Moss Hill, Enn	81.95	39	⇑P		P	16 42 33.2	0.0
	baz=82,SNR=9.8							
CHMT	Chamberlain Mo	81.97	37	eP		P	16 42 33.2	-0.1
	comp=Z,55nm,1.5s,mb5.3							
SLMT	Seeley Lake	82.00	37	eP		P	16 42 32.8	-0.7
	comp=Z,68nm,1.7s,mb5.3							
328A	Wristen Ranch,	82.02	55	⇓P		P	16 42 33.6	-0.3
	baz=82							
H16A	Russell Place,	82.02	40	⇑P		P	16 42 34.4	+0.8
	baz=82,SNR=56							
I17A	Pilgrim Ck.	82.04	41	⇑P		P	16 42 34.2	+0.4
	baz=82,SNR=8.8							
J18A	Kendall Valley	82.05	41	⇑P		P	16 42 33.5	-0.3
	baz=82,SNR=12							
FLWY	Flagg Ranch	82.05	40	eP		P	16 42 34.4	+0.6
	comp=Z,126nm,1.4s,mb5.7							
N20A	Spence Gulch,	82.06	44	⇑P		P	16 42 34.2	+0.3
	baz=82,SNR=28							
B13A	Whitefish	82.07	35	⇑P		P	16 42 33.1	-0.7
	baz=82,SNR=6.9							
E15A	Deer Lodge	82.07	38	⇑P		P	16 42 33.2	-0.7
	baz=82,SNR=9.8							
Q22A	Crested Butte,	82.09	46	⇑P		P	16 42 35.0	+0.8
	baz=82,SNR=37							
127A	Arkansas Junct	82.10	53	⇑P		P	16 42 33.9	-0.5
	baz=82							
COLA	College	82.12	11	eP		P	16 42 32.8	-0.9
	comp=Z,100nm,1.0s,mb5.7							
COLA				LR		LR		
	comp=Z,4µm,20.0s,MS5.8							
COLA	College	82.12	11	eP		P	16 42 32.8	-0.9
COLA				pmax		pmax		
	comp=Z,101nm,1.0s,mb5.7							
COLA				MLR		MLR		
	comp=Z,4µm,20.0s,MS5.8							
BW06	Boulder Array	82.13	42	P		P	16 42 33.8	-0.4
	baz=82							
BW06	Boulder Array	82.13	42	eP		P	16 42 33.7	-0.5
	comp=Z,101nm,1.5s,mb5.5							
BW06				LR		LR		
	comp=Z,5µm,20.0s,MS5.9							
C14A	Swan Lake	82.14	36	⇓P		P	16 42 32.7	-1.4
	baz=82,SNR=6.5							
YFT	Old Faithful	82.15	40	eP		P	16 42 36.3	+2.0
	comp=Z,182nm,1.7s,mb5.7							
YMR	Madison River	82.18	40	eP		P	16 42 35.7	+1.2
	comp=Z,271nm,1.6s,mb5.9							
SMCO	Snowmass	82.19	46	eP		P	16 42 35.6	+0.9
	comp=Z,128nm,1.3s,mb5.7							
ILAR	Eielson Array	82.21	11	P		P	16 42 33.1	-1.0
	comp=Z,11nm,1.0s,mb4.8,baz=204,slow=5.6,SNR=53							
ILAR				LR		LR	17 18 00.0	
	comp=Z,3µm,18.4s,MS5.6,baz=209,slow=35							
ILAR	Eielson Array	82.21	11	P		P	16 42 33.2	-0.9
ILAR				pmax		pmax		
	comp=Z,11nm,1.0s							
ILAR				MLR		MLR		
	comp=Z,3µm,18.4s							
Y26A	Elida	82.24	52	⇑P		P	16 42 34.7	-0.4
	baz=82,SNR=12							
SEY	Seymchan	82.25	345	⇑iP		P	16 42 34.1	-0.3
B

comp=Z,3µm,19.0s,MS5.7
LKWY Lake 82.47 40 *e*P P 16 42 38.1 +2.1
LKWY pmax pmax
comp=Z,133nm,1.4s,mb5.7
LKWY MLR MLR
comp=Z,3µm,19.0s,MS5.7
X26A CR and CF Fran 82.51 51 ⇑P P 16 42 36.0 -0.4
baz=83,SNR=19
P22A Eagle 82.53 46 ⇓P P 16 42 36.7 +0.3
baz=83,SNR=12
N21A Black Mountain 82.53 44 ⇑P P 16 42 36.4 0.0
baz=83,SNR=27
L20A Wamsutter 82.56 43 ⇑P P 16 42 36.6 +0.1
baz=83,SNR=27
SDCO Great Sand Dun 82.60 48 *e*P P 16 42 37.5 +0.7
comp=Z,102nm,1.5s,mb5.6
SDCO LR LR
comp=Z,5µm,20.0s,MS5.9
K19A Absolon Red Bu 82.61 42 ⇓P P 16 42 36.4 -0.4
baz=83,SNR=16
G17A Pierce Place, 82.64 39 ⇓P P 16 42 36.9 0.0
baz=83,SNR=9.9
E16A East Helena 82.69 38 ⇑P P 16 42 36.6 -0.5
baz=83,SNR=26
HRY Holter Researc 82.69 38 *e*P P 16 42 37.3 +0.2
comp=Z,62nm,1.0s,mb5.6
B14A Marquette Ranc 82.73 36 ⇓P P 16 42 36.5 -0.7
baz=83,SNR=17
QIZ Qiongzhong 82.74 292 P P 16 42 38.5 +0.6
QIZ PP PP 16 45 46.9 -1.5
QIZ S S 16 52 58.0 +4.2
QIZ SS SS 16 58 21.4 +4.4
QIZ pmax pmax
comp=Z,1µm,10.0s
QIZ LR LR
comp=N,680nm,16.9s
QIZ LR LR
comp=E,1µm,22.0s
QIZ LR LR
comp=Z,3µm,25.6s
QIZ Qiongzhong 82.74 292 PFAKE 16 42 50.0 +12
QIZ LR LR
comp=Z,2µm,20.0s,MS5.5
WALA Waterton Lakes 82.75 35 *e*P P 16 42 37.3 0.0
comp=Z,2.8nm,1.5s,mb4.1
W26A Owens Ranch, T 82.76 51 ⇑P P 16 42 37.0 -0.8
baz=83,SNR=12
S24A Houchin Ranch, 82.76 48 ⇓P P 16 42 38.2 +0.5
baz=83,SNR=55
C15A Salmond Ranch, 82.80 36 ⇑P P 16 42 37.2 -0.4
baz=83,SNR=24
U25A Circle Dot Ran 82.83 49 ⇓P P 16 42 38.2 +0.2
baz=83,SNR=36
K20A Yellowstone Ra 82.86 42 ⇓P P 16 42 37.2 -0.9
baz=83,SNR=22
Q23A Hartsel 82.87 47 ⇓P P 16 42 38.2 0.0
baz=83,SNR=16
WHN Wuhan 82.89 304 P P 16 42 40.0 +1.5
WHN S S 16 53 03.8 +8.9
WHN LR LR
comp=N,2µm,7.8s
WHN LR LR
comp=E,2µm,7.5s
WHN LR LR
comp=Z,2µm,19.1s,MS5.4
O22A Kremmling 82.92 45 ⇓P P 16 42 38.4 -0.1
baz=83,SNR=75
A14A Double T Ranch 82.97 35 ⇓P P 16 42 38.0 -0.5
baz=83,SNR=13
TIA Tai'an 82.98 310 P P 16 42 40.0 +1.1
TIA S S 16 53 04.5 +8.8
TIA pmax pmax
comp=Z,70nm,1.7s,mb5.4
TIA LR LR
comp=N,4µm,21.7s,MS5.9
TIA LR LR
comp=E,5µm,24.5s,MS5.9
TIA LR LR
comp=Z,2µm,21.7s,MS5.5
F17A Fitzpatrick Pl 82.98 39 ⇓P P 16 42 39.0 +0.4
baz=83,SNR=20
D16A Dana Ranch, Ca 83.02 37 ⇓P P 16 42 38.4 -0.4
baz=83,SNR=34
M21A Separation Pea 83.02 44 ⇑P P 16 42 38.8 -0.1
baz=83,SNR=49
V26A Tequesquite Ra 83.03 50 ⇓P P 16 42 38.1 -1.1
baz=83,SNR=9.2
MSTX Muleshoe 83.06 52 ⇓P P 16 42 39.1 -0.3
baz=83,SNR=9.1
P23A Jefferson 83.07 46 ⇑P P 16 42 39.8 +0.6
baz=83,SNR=36
R24A Sanders Place, 83.09 48 ⇑P P 16 42 39.5 +0.1
baz=83,SNR=42
B15A Bradely Ranch, 83.11 36 ⇑P P 16 42 38.2 -1.0
baz=83,SNR=16
T25A Trinidad 83.13 49 ⇓P P 16 42 39.5 -0.1
baz=83,SNR=16
RWWY Rawlins 83.16 44 *e*P P 16 42 40.2 +0.5
comp=Z,271nm,1.5s,mb6.1
L21A Rawlins 83.18 43 ⇑P P 16 42 39.6 -0.1
baz=83,SNR=25
DAWY Dawson 83.19 14 *e*P P 16 42 38.9 -0.4
PAYG Puerto Ayora 83.26 89 PFAKE 16 42 50.0 +9.2
PAYG LR LR
comp=Z,3µm,20.0s,MS5.6
N22A Wattenberg Ran 83.27 45 ⇓P P 16 42 40.9 +0.7
baz=83,SNR=70
W27A Bowe Ranch, En 83.28 51 ⇑P P 16 42 39.4 -1.0
baz=83,SNR=47
C16A Fuhringer Ranc 83.31 37 ⇓P P 16 42 39.5 -0.7
baz=83,SNR=11
U26A Atchley Ranch, 83.31 50 ⇓P P 16 42 40.6 0.0
baz=83,SNR=59
S25A Robets Cordova 83.33 48 ⇓P P 16 42 40.9 +0.3
baz=83,SNR=80
A15A Johnson Ranch, 83.36 35 ⇓P P 16 42 39.5 -1.0
baz=84,SNR=20
G18A Lazy EL Ranch, 83.36 40 ⇑P P 16 42 40.2 -0.4
baz=84,SNR=24
Q24A Divide 83.37 47 ⇑P P 16 42 41.3 +0.5
baz=84,SNR=29
O23A Lake Granby, G 83.38 45 ⇓P P 16 42 41.0 +0.2
baz=84,SNR=18
EGAK Eagle 83.39 13 *e*P P 16 42 39.6 -0.7
comp=Z,35nm,1.1s,mb5.3
EGAK LR LR
comp=Z,3µm,21.0s,MS5.7
ISCO Idaho Springs 83.41 46 P P 16 42 41.0 0.0
baz=84
ISCO Idaho Springs 83.41 46 *e*P P 16 42 41.8 +0.9
comp=Z,96nm,1.5s,mb5.6
ISCO LR LR
comp=Z,5µm,19.0s,MS5.9
ISCO Idaho Springs 83.41 46 *e*P P 16 42 41.8 +0.8
ISCO pmax pmax
comp=Z,96nm,1.5s,mb5.6
ISCO MLR MLR
comp=Z,5µm,19.0s,MS5.9
M22A Cedar Creek Ra 83.44 44 ⇑P P 16 42 41.1 0.0
baz=84,SNR=16
RLMT Red Lodge 83.45 40 P P 16 42 40.9 -0.1
baz=84
RLMT Red Lodge 83.45 40 *e*P P 16 42 41.4 +0.4
comp=Z,56nm,1.1s,mb5.5
RLMT LR LR
comp=Z,2µm,20.0s,MS5.5
GCMT Greycliff 83.53 39 *e*P P 16 42 42.4 +1.0
comp=Z,94nm,1.6s,mb5.7
F18A Big Timber 83.56 39 ⇓P P 16 42 41.9 +0.4
baz=84,SNR=40
D17A Six Diamond Ra 83.59 38 ⇑P P 16 42 41.7 0.0
baz=84,SNR=36
I20A Worland 83.61 41 ⇑P P 16 42 42.1 +0.2
baz=84,SNR=29
B16A M & M Farms, S 83.64 36 ⇑P P 16 42 41.4 -0.6
baz=84
N23A Red Feather La 83.66 45 ⇓P P 16 42 42.8 +0.5
baz=84,SNR=18
E18A Harlowton 83.76 38 ⇓P P 16 42 42.5 -0.1
baz=84,SNR=29
P24A Kohler Place, 83.78 46 ⇑P P 16 42 43.7 +0.8
baz=84
C17A Wharram Farm, 83.79 37 ⇑P P 16 42 42.4 -0.3
baz=84,SNR=28
COLD Coldfoot 83.90 9 *e*P P 16 42 43.7 +0.8
comp=Z,56nm,1.2s,mb5.6
O24A Longmont 83.92 46 ⇑P P 16 42 44.5 +0.9
baz=84
H20A Greybull 83.94 41 ⇑P P 16 42 43.0 -0.6
baz=84,SNR=10
Q25A Bedland, Calha 83.99 47 ⇓P P 16 42 43.4 -0.5
baz=84
F19A Roth Farm, Mol 84.00 39 ⇓P P 16 42 43.2 -0.6
baz=84,SNR=26
K22A Casper 84.05 43 ⇑P P 16 42 43.9 -0.3
baz=84,SNR=10
JCT Junction City 84.07 56 P P 16 42 43.8 -0.8
baz=84
JCT Junction City 84.07 56 *e*P P 16 42 43.9 -0.7
comp=Z,56nm,1.3s,mb5.5
JCT LR LR
comp=Z,5µm,20.0s,MS5.9
JCT Junction City 84.07 56 *e*P P 16 42 43.9 -0.7
JCT pmax pmax
comp=Z,56nm,1.3s,mb5.5
JCT MLR MLR
comp=Z,5µm,20.0s,MS5.9
I21A Big Trails, Te 84.08 42 ⇑P P 16 42 43.6 -0.7
baz=84,SNR=77
B17A L&G Farms, Che 84.10 37 ⇓P P 16 42 43.7 -0.6
baz=84,SNR=16
D18A Linhart Farms, 84.14 38 ⇓P P 16 42 44.3 -0.2
baz=84,SNR=9.3
PHWY Pilot Hill 84.17 45 *e*P P 16 42 45.2 +0.4
comp=Z,102nm,1.5s,mb5.7
BILL Bilibino 84.25 352 *c i*P P 16 42 44.2 -0.4
BILL *e* 16 45 53.7
BILL pmax pmax
comp=Z,54nm,1.0s,mb5.6
AMTX Amarillo 84.25 52 P P 16 42 45.0 -0.4
baz=84
AMTX Amarillo 84.25 52 *e*P P 16 42 44.8 -0.6
comp=Z,277nm,1.6s,mb6.1
AMTX LR LR
comp=Z,8µm,21.0s,MS6.1
P25A Willow Gulch B 84.30 47 ⇑P P 16 42 46.0 +0.4
baz=84,SNR=23
N24A Carr 84.36 45 ⇓P P 16 42 45.9 +0.2
baz=84,SNR=9.2
L23A Garrett 84.36 44 ⇓P P 16 42 45.9 +0.1
baz=84,SNR=49
E19A Rath Farm, Rou 84.39 39 ⇓P P 16 42 45.9 +0.1
baz=84,SNR=35
PMSA Palmer Station 84.44 156 PFAKE 16 43 00.0 +14
PMSA LR LR
comp=Z,6µm,21.0s,MS6.0
F20A Billings 84.47 40 ⇑P P 16 42 45.8 -0.4
baz=85,SNR=10
A17A Triple J Farms 84.49 36 ⇑P P 16 42 46.0 -0.2
baz=85,SNR=19
EGMT Eagleton 84.57 37 P P 16 42 46.5 -0.2
baz=85
EGMT Eagleton 84.57 37 *e*P P 16 42 46.3 -0.4
comp=Z,156nm,1.6s,mb5.9
EGMT LR LR
comp=Z,4µm,20.0s,MS5.8
O25A Wiggins 84.58 46 ⇓P P 16 42 47.3 +0.3
baz=85
KVTX Kingsville 84.61 60 PFAKE 16 43 00.0 +13
KVTX LR LR
comp=Z,3µm,19.0s,MS5.7
H21A Big Horn, Sher 84.61 41 ⇓P P 16 42 46.8 -0.2
baz=85,SNR=16
M24A Cheyenne 84.67 45 ⇓P P 16 42 47.4 0.0
baz=85,SNR=22
B18A Beardsley Farm 84.74 37 ⇑P P 16 42 47.7 +0.2
baz=85,SNR=16
G21A Lodge Grass 84.78 41 ⇓P P 16 42 48.2 +0.4
baz=85
E20A Meyer Farm, Mu 84.81 39 ⇑P P 16 42 47.8 -0.1
baz=85,SNR=10
L24A Wheatland 84.84 44 ⇑P P 16 42 48.7 +0.5
baz=85,SNR=10
N25A Grover 84.90 46 ⇑P P 16 42 48.5 0.0
baz=85
A18A Metzger Ranch, 84.97 36 ⇓P P 16 42 48.3 -0.3
baz=85,SNR=24
SDSI Sungai Dareh 85.02 270 P P 16 42 51.1 +1.3
comp=Z,951nmcomp=Z,15nm,1.3s,mb5.0
D20A Manuel Ranch, 85.08 39 ⇓P P 16 42 49.3 0.0
baz=85,SNR=28
F21A Absaloka Mine, 85.11 40 ⇑P P 16 42 49.8 +0.4
baz=85,SNR=7.5
BJT Baijiatuau 85.23 313 *e*P P 16 42 50.6 +0.4
comp=Z,620nm,2.1s,mb6.4
BJT LR LR
comp=Z,3µm,22.0s,MS5.6
BJT Baijiatuau 85.23 313 *e*P P 16 42 50.6 +0.4
BJT pmax pmax
comp=Z,620nm,2.1s
BJT MLR MLR
comp=Z,3µm,22.0s
BJI Beijing 85.24 313 P P 16 42 51.5 +1.3
BJI S S 16 53 15.4 -2.7
BJI SS SS 16 58 58.6 +5.3
BJI pmax pmax
comp=Z,85nm,2.2s,mb5.5
BJI LR LR
comp=N,1µm,22.9s,MS5.5
BJI LR LR
comp=E,2µm,22.9s,MS5.5
BJI LR LR
comp=Z,3µm,25.3s,MS5.6
EDM Edmonton 85.31 32 *e*P P 16 42 50.2 0.0
E21A Keefer Ranch, 85.47 39 ⇓P P 16 42 51.5 +0.3
baz=86
LAO LASA Array 86.06 40 P P 16 42 54.7 +0.6
baz=86
LAO LASA Array 86.06 40 *e*P P 16 42 55.2 +1.0
comp=Z,209nm,1.4s,mb6.2
LAO LR LR
comp=Z,2µm,21.0s,MS5.5
RSSD Black Hills 86.33 43 *e*P P 16 42 55.6 +0.1
comp=Z,72nm,1.3s,mb5.8
RSSD LR LR
comp=Z,4µm,20.0s,MS5.8
RSSD Black Hills 86.33 43 *e*P P 16 42 55.6 +0.1
RSSD pmax pmax
comp=Z,72nm,1.3s,mb5.7
RSSD MLR MLR
comp=Z,4µm,20.0s,MS5.8
OGNE Ogallala 86.37 46 P P 16 42 55.2 -0.6
baz=86
OGNE Ogallala 86.37 46 *e*P P 16 42 53.3 -2.5
comp=Z,19nm,0.9s,mb5.3
OGNE LR LR
comp=Z,6µm,21.0s,MS5.9
WMOK Wichita Mounta 86.41 53 *e*P P 16 42 55.6 -0.6
comp=Z,66nm,1.5s,mb5.6
WMOK LR LR
comp=Z,6µm,21.0s,MS6.0
WMOK Wichita Mounta 86.41 53 *e*P P 16 42 55.6 -0.6
WMOK pmax pmax
comp=Z,66nm,1.5s,mb5.6
WMOK MLR MLR
comp=Z,6µm,21.0s,MS6.0
COCO West Island 86.58 258 PFAKE 16 43 10.0 +13
COCO LR LR
comp=Z,4µm,20.0s,MS5.8
ENH Enshi 86.72 302 *e*P P 16 42 58.8 +1.0
comp=Z,83nm,1.4s,mb5.8
ENH LR LR
comp=Z,3µm,20.0s,MS5.7
IPM Ipoh 86.82 275 P P 16 42 59.2 +0.5
comp=Z,1µmcomp=Z,22nm,0.9s,mb5.4
HIA Hailar 86.94 323 *e*P P 16 42 59.0 +0.5
comp=Z,177nm,1.7s,mb6.0
HIA LR LR
comp=Z,7µm,21.0s,MS6.1
HIA Hailar 86.94 323 *e*P P 16 42 59.0 +0.6
HIA pmax pmax
comp=Z,177nm,1.7s
HIA MLR MLR
comp=Z,7µm,21.0s
TIY Taiyuan 87.03 310 *i*P P 16 42 58.5 -0.6
TIY SKS 16 53 21.4
TIY S S 16 53 27.3 -8.4
TIY pmax pmax
comp=Z,54nm,0.7s,mb5.9
TIY LR LR
comp=N,2µm,15.7s
TIY LR LR
comp=E,2µm,21.0s
TIY LR LR
comp=Z,3µm,24.6s
HKT Hockley 87.11 58 *e*P P 16 43 00.4 +0.6
comp=Z,154nm,1.5s,mb6.0
HKT LR LR
comp=Z,5µm,20.0s,MS5.9
HKT Hockley 87.11 58 *e*P P 16 43 00.4 +0.7
HKT pmax pmax
comp=Z,154nm,1.5s,mb6.0
HKT MLR MLR
comp=Z,5µm,20.0s,MS5.9
CBKS Cedar Bluff 87.18 49 P P 16 42 59.2 -0.6
baz=87
CBKS Cedar Bluff 87.18 49 PFAKE 16 43 10.0 +10
CBKS LR LR
comp=Z,4µm,20.0s,MS5.9
KULM Kulim 87.39 276 PFAKE 16 43 10.0 +8.5
KULM LR LR
comp=Z,2µm,22.0s,MS5.4
GYA Guiyang 87.85 298 ⇑*i*P P 16 43 05.4 +2.0
GYA PP PP 16 46 32.0 +2.1
GYA SKS 16 53 30.9
GYA S S 16 53 46.3 +2.2
GYA SS SS 16 59 35.3 +3.1
GYA pmax pmax
comp=Z,60nm,1.0s,mb5.8
GYA LR LR
comp=N,15µm,20.4s,MS6.5
GYA LR LR
comp=E,12µm,21.3s,MS6.5
GYA LR LR
comp=Z,19µm,20.5s,MS6.5
CLNS Chul'man 87.97 331 *e*P P 16 43 02.5 -0.7
CLNS *e**PP pP 16 43 12.6 -1.7
CLNS *e* 16 46 23.5
CLNS *e*S SKSac 16 53 25.9 -2.8
CLNS *e*SS SS 16 59 34.2 +1.6
CLNS pmax pmax
comp=E,8.0nm,1.0s
CLNS pmax pmax
comp=Z,24nm,1.4s,mb5.2
CLNS pmax pmax
comp=N,15nm,1.4s
CLNS pmax pmax
comp=N,4.0nm,1.1s
CLNS pmax pmax
comp=E,8.0nm,1.0s
CLNS pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
CLNS smax
comp=E,870nm,14.7s
CLNS smax
comp=N,819nm,13.5s
CLNS MLR MLR
comp=N,3µm,19.0s,MS5.9
CLNS MLR MLR
comp=Z,4µm,17.0s,MS5.9
CLNS MLR MLR
comp=E,3µm,20.0s,MS5.9
MAW Mawson 88.01 199 *e*P P 16 43 04.0 +0.6
comp=E,29nm,0.9s,mb5.5
MAW Mawson 88.01 199 P P 16 43 03.9 +0.5
comp=E,39nm,1.0s,mb5.6,baz=126,slow=6.6,SNR=50
MAW LR LR 17 19 49.2
comp=E,6µm,20.5s,MS6.0,baz=120,slow=34
MAW Mawson 88.01 199 P P 16 43 03.9 +0.5
MAW pmax pmax
comp=Z,39nm,1.0s
MAW MLR MLR
comp=Z,6µm,20.5s
INK Inuvik 88.04 14 *e*P P 16 43 02.3 -1.0
comp=Z,50nm,1.3s,mb5.6
INK Inuvik 88.04 14 *e*P P 16 43 02.3 -1.0
INK pmax pmax
comp=Z,50nm,1.3s
DGMT Dagmar 88.08 39 P P 16 43 03.8 -0.1
baz=88
DGMT Dagmar 88.08 39 *e*P P 16 43 04.4 +0.5
comp=Z,84nm,1.0s,mb5.9
DGMT LR LR
comp=Z,7µm,20.0s,MS6.1
PSI Prapat 88.40 273 P P 16 43 05.5 -0.8
comp=Z,2.0nm,0.4s,mb4.7,baz=107,slow=11,SNR=5.1
PSI Prapat 88.40 273 P P 16 43 05.5 -0.8
PSI pmax pmax
comp=Z,2.0nm,0.4s,mb4.7
XAN Xi'an 88.42 306 P P 16 43 05.4 -0.5
XAN SS SS 16 59 46.8 +6.7
XAN pmax pmax
comp=Z,360nm,7.7s
XAN LR LR
comp=N,2µm,20.2s,MS5.4
XAN LR LR
comp=E,580nm,21.4s,MS5.4
XAN LR LR
comp=Z,810nm,20.8s,MS5.1
NATX Nacogdoches 88.65 57 *e*P P 16 43 07.9 +0.9
comp=Z,492nm,1.6s,mb6.6
NATX LR LR
comp=Z,5µm,20.0s,MS5.9
HHC Hu-ho-hao-te 88.80 313 ⇑P P 16 43 09.1 +1.6
HHC pP pP 16 43 13.4 -5.2
HHC sP sP 16 43 16.1 -6.5
HHC PP PP 16 46 39.8 +2.7
HHC SKS 16 53 36.6
HHC S S 16 53 54.8 +2.4
HHC sS sS 16 54 02.5 -8.4
HHC pmax pmax
comp=Z,80nm,1.4s,mb5.9
HHC LR LR
comp=N,630nm,14.7s,MS5.6
HHC LR LR
comp=E,2µm,18.4s,MS5.6
HHC LR LR
comp=Z,2µm,20.4s,MS5.6
GSI Gunungsitoli 89.32 272 P P 16 43 12.2 +1.6
KSU1 Kansas State U 89.56 49 PFAKE 16 43 20.0 +8.9
KSU1 LR LR
comp=Z,6µm,20.0s,MS6.0
PLCA Paso Flores 89.74 132 LR LR 17 15 35.2
comp=Z,5µm,20.0s,MS5.9,baz=209,slow=30
BTO Baotou 89.81 312 *e*P P 16 43 12.6 +0.4
YKA Yellowknife Ar 89.89 23 P P 16 43 12.2 +0.1
YKA Yellowknife Ar 89.89 23 P P 16 43 12.2 +0.1
comp=Z,15nm,1.0s,mb5.3,baz=235,slow=4.3,SNR=11
YKA Yellowknife Ar 89.89 23 P P 16 43 12.2 +0.1
YKA pmax pmax
comp=Z,15nm,1.0s
TGUH Tegucigalpa,Un 90.04 76 P P 16 43 14.8 +0.9
comp=Z,147nm,1.4s,mb6.1
TGUH LR LR
comp=Z,5µm,21.0s,MS5.9
MIAR Mount Ida 90.39 54 *e*P P 16 43 15.0 -0.1
comp=Z,73nm,1.8s,mb5.7
MIAR LR LR
comp=Z,5µm,20.0s,MS6.0
MIAR Mount Ida 90.39 54 *e*P P 16 43 15.0 -0.1
MIAR pmax pmax
comp=Z,73nm,1.8s,mb5.7
MIAR MLR MLR
comp=Z,5µm,20.0s,MS6.0
TEIG Tepich 90.77 69 *e*P P 16 43 18.4 +1.2
comp=Z,87nm,1.3s,mb5.9
TEIG LR LR
comp=Z,2µm,20.0s,MS5.5
KMI Kunming 90.84 296 P P 16 43 18.9 +1.5
KMI pP pP 16 43 29.6 +1.0
KMI PP PP 16 46 58.1 +4.3
KMI SKS 16 53 46.5
KMI S S 16 54 12.3 +0.2
KMI sS sS 16 54 28.8 -1.8
KMI SS SS 17 00 19.8 +4.1
KMI LR LR
comp=N,1µm,19.0s,MS5.7
KMI LR LR
comp=E,2µm,17.3s,MS5.7
KMI LR LR
comp=Z,2µm,17.3s,MS5.7
ECSD EROS Data Cent 91.13 45 *e*P P 16 43 17.4 -0.9
comp=Z,44nm,1.3s,mb5.6
ECSD LR LR
comp=Z,9µm,22.0s,MS6.1
JTS JuntasAbangare 91.24 80 P P 16 43 21.4 +1.9
comp=Z,441nm,1.2s,mb6.7,SNR=11
JTS JuntasAbangare 91.24 80 *e*P P 16 43 21.1 +1.6
comp=Z,152nm,1.3s,mb6.2
JTS LR LR
comp=Z,7µm,20.0s,MS6.1

JTS	**JuntasAbangare**	**91.24**	**80**	*d*	*i*P		**P**	**16 43 20.5**	**+1.0**
UALR	**University of**	**91.43**	**54**		*e*P		**P**	**16 43 20.2**	**+0.3**
	comp=Z,136nm,1.5s,mb6.1								
CD2	**Chengdu**	**91.61**	**301**		P		**P**	**16 43 21.6**	**+0.7**
CD2					pP		pP	16 43 26.4	-5.6
CD2					sP		sP	16 43 28.6	-7.4
CD2					PP		PP	16 47 02.4	+2.7
CD2					SKS			16 53 51.9	
CD2					S		S	16 54 18.6	-0.2
CD2					sS		sS	16 54 26.6	-11
CD2					SS		SS	17 00 28.8	+2.3
CD2					pmax		pmax		
	comp=Z,10.0nm,0.4s,mb5.5								
CD2					pmax		pmax		
	comp=Z,1μm,7.6s								
CD2					LR		LR		
	comp=N,3μm,23.0s,MS5.8								
CD2					LR		LR		
	comp=E,2μm,22.0s,MS5.8								
CD2					LR		LR		
	comp=Z,3μm,20.1s,MS5.7								
CIT	**Chita**	**91.68**	**324**		*e*P		**P**	**16 43 22.1**	**+1.4**
CIT					*e*		pP	16 43 34.3	+2.5
CIT					*e*			16 46 58.0	
CIT					pmax		pmax		
	comp=Z,290nm,1.8s,mb6.3								
FFC	**Flin Flon**	**91.93**	**33**		P		**P**	**16 43 20.2**	**-1.6**
	comp=Z,26nm,1.3s,mb5.4								
FFC					LR		LR		
	comp=Z,1μm,20.0s,MS5.4								
FFC	**Flin Flon**	**91.93**	**33**		P		**P**	**16 43 20.2**	**-1.6**
FFC					pmax		pmax		
	comp=Z,26nm,1.3s,mb5.4								
FFC					MLR		MLR		
	comp=Z,1μm,20.0s,MS5.4								
VBMS	**Vicksburg**	**92.15**	**57**	*e*	P		**P**	**16 43 24.7**	**+1.4**
	comp=Z,40nm,0.5s,mb6.0								
VBMS					LR		LR		
	comp=Z,4μm,21.0s,MS5.8								
CMAR	**Chiang Mai Arr**	**92.46**	**288**		P		**P**	**16 43 26.1**	**+1.0**
	comp=Z,2.3nm,1.0s,mb4.5,baz=120,slow=3.2,SNR=11								
CMAR					PP		PP	16 47 07.4	+0.8
	comp=Z,0.4nm,0.7s,baz=126,slow=6.8,SNR=3.6								
CMAR					LR		LR	17 19 39.6	
	comp=Z,3μm,21.8s,MS5.7,baz=275,slow=32								
CMAR	**Chiang Mai Arr**	**92.46**	**288**		P		**P**	**16 43 26.1**	**+1.0**
CMAR								16 47 07.4	
CMAR					pmax		pmax		
	comp=Z,2.0nm,1.0s								
CMAR					MLR		MLR		
	comp=Z,3μm,21.8s								
CHTO	**Chiang Mai**	**92.55**	**289**	*e*	P		**P**	**16 43 26.2**	**+0.8**
	comp=Z,3.7nm,1.3s,mb4.7								
CHTO					LR		LR		
	comp=Z,2μm,21.0s,MS5.6								
CHTO	**Chiang Mai**	**92.55**	**289**	*e*	P		**P**	**16 43 26.2**	**+0.7**
CHTO					pmax		pmax		
	comp=Z,4.0nm,1.3s,mb4.7								
CHTO					MLR		MLR		
	comp=Z,2μm,21.0s,MS5.6								
SYO	**Syowa Base**	**92.83**	**191**⇓	*e*	P		**P**	**16 43 25.0**	**-0.8**
SYO	**Syowa Base**	**92.83**	**191**⇓	*e*	PcP		PcP	16 43 27.4	+0.9
SCIA	**State Center**	**92.92**	**47**	*e*	P		**P**	**16 43 27.1**	**+0.5**
	comp=Z,30nm,0.4s,mb6.1								
SCIA					LR		LR		
	comp=Z,7μm,21.0s,MS6.1								
HBAR	**Harrisburg**	**92.98**	**54**	*e*	P		**P**	**16 43 27.7**	**+0.6**
LZH	**Lanzhou**	**93.01**	**306**	*e*	P		**P**	**16 43 28.9**	**+1.7**
LZH					pP		pP	16 43 32.4	-6.0
LZH					sP		sP	16 43 35.8	-6.6
LZH					PP		PP	16 47 14.0	+3.4
LZH					SKS			16 54 01.4	
LZH					S		S	16 54 33.4	+2.3
LZH					sS		sS	16 54 38.3	-11
LZH					SS		SS	17 00 52.0	+5.6
LZH					pmax		pmax		
	comp=Z,27nm,1.1s,mb5.6								
LZH					pmax		pmax		
	comp=Z,250nm,5.5s								
LZH					LR		LR		
	comp=E,3μm,19.1s								
LZH					LR		LR		
	comp=Z,3μm,20.0s,MS5.8								
AGMN	**Agassiz Nation**	**93.15**	**41**	*e*	P		**P**	**16 43 26.3**	**-1.3**
	comp=Z,53nm,1.4s,mb5.8								
AGMN					LR		LR		
	comp=Z,5μm,20.0s,MS5.9								
NNA	**Nana**	**93.19**	**103**		PFAKE			16 43 40.0	+11
NNA					LR		LR		
	comp=Z,3μm,19.0s,MS5.8								
CCM	**Cathedral Cave**	**93.23**	**52**	*e*	P		**P**	**16 43 27.0**	**-1.2**
	comp=Z,53nm,1.4s,mb5.8								
CCM					LR		LR		
	comp=Z,6μm,22.0s,MS6.0								
CCM	**Cathedral Cave**	**93.23**	**52**	*e*	P		**P**	**16 43 27.0**	**-1.2**
CCM					pmax		pmax		
	comp=Z,53nm,1.4s,mb5.8								
CCM					MLR		MLR		
	comp=Z,6μm,22.0s,MS6.0								
LCO	**Las Campanas**	**93.55**	**121**	*e*	P		**P**	**16 43 32.3**	**+2.3**
	comp=Z,93nm,1.4s,mb6.0								
LCO					LR		LR		
	comp=Z,5μm,21.0s,MS6.0								
ULM	**Lac du Bonnet**	**93.78**	**39**		P		**P**	**16 43 29.6**	**-0.8**
	comp=Z,23nm,1.2s,mb5.5,baz=248,slow=5.4,SNR=8.1								
ULM					LR		LR	17 20 45.9	
	comp=Z,6μm,19.4s,MS6.1,baz=256,slow=32								
FVM	**French Village**	**93.83**	**52**	*e*	P		**P**	**16 43 30.6**	**-0.3**
	comp=Z,94nm,1.4s,mb6.0								
FVM	**French Village**	**93.83**	**52**	*e*	P		**P**	**16 43 30.6**	**-0.4**
FVM					pmax		pmax		
	comp=Z,95nm,1.4s,mb6.0								
HALT	**Halls**	**94.10**	**54**	*e*	P		**P**	**16 43 31.7**	**-0.6**
ULN	**Ulaanbaatar**	**94.19**	**318**	*e*	P		**P**	**16 43 33.0**	**+0.6**
	comp=Z,71nm,1.6s,mb5.8								
ULN					LR		LR		
	comp=Z,4μm,22.0s,MS5.8								
ULN	**Ulaanbaatar**	**94.19**	**318**⇑	*i*	P		**P**	**16 43 33.2**	**+0.9**
MAIT	**Maitri**	**94.22**	**182**	*e*	P		**P**	**16 43 35.6**	**+3.4**
NVL	**N'lazarevskaya**	**94.23**	**182**	*e*	P		**P**	**16 43 36.9**	**+4.7**
NVL					*e**PP		pP	16 43 48.4	+5.0
NVL					*e**SP		sP	16 43 53.2	+5.8
NVL					*e*			16 54 45.5	
NVL					*e*SS		SS	17 01 22.6	+22
NVL					pmax		pmax		
	comp=Z,9.0nm,0.8s,mb5.2								
SONM	**Songino Array**	**94.60**	**318**		P		**P**	**16 43 34.9**	**+0.7**
	comp=Z,8.6nm,1.2s,mb5.1,baz=106,slow=3.8,SNR=19								
SONM					PP		PP	16 47 26.3	+3.6
	comp=Z,5.3nm,1.2s,baz=137,slow=6.9,SNR=6.9								
SONM					LR		LR	17 21 16.1	
	comp=Z,2μm,20.6s,MS5.6,baz=123,slow=32								
SONM	**Songino Array**	**94.60**	**318**		P		**P**	**16 43 35.0**	**+0.8**
SONM								16 47 26.3	
BRAL	**Brewton**	**94.67**	**59**		PFAKE			16 43 50.0	+15
BRAL					LR		LR		
	comp=Z,3μm,21.0s,MS5.7								
SIUC	**Southern Illin**	**94.68**	**52**	*e*	P		**P**	**16 43 35.0**	**+0.1**
	comp=Z,171nm,1.7s,mb6.2								
TIXI	**Tiksi**	**94.74**	**344**⇑	*i*	P		**P**	**16 43 33.3**	**-1.0**
TIXI					LR		LR		
	comp=Z,4μm,21.0s,MS5.8								
TIXI	**Tiksi**	**94.74**	**344**	*c* *i*	P		**P**	**16 43 33.1**	**-1.2**
TIXI					*e*S		SKSac	16 54 07.2	+0.6
TIXI					*e*			16 54 46.3	
TIXI					pmax		pmax		
	comp=Z,41nm,2.8s,mb5.4								
TIXI					smax				
	comp=E,614nm,10.3s								
TIXI					smax				
	comp=N,822nm,9.2s								
TIXI					MLR		MLR		
	comp=Z,2μm,20.0s,MS5.5								
LRAL	**Lakeview Retre**	**95.23**	**57**		PFAKE			16 43 50.0	+13
LRAL					LR		LR		
	comp=Z,2μm,20.0s,MS5.7								
JFWS	**Jewell Farm**	**95.31**	**47**	*e*	P		**P**	**16 43 36.8**	**-0.8**
	comp=Z,103nm,1.4s,mb6.1								
JFWS					LR		LR		
	comp=Z,7μm,21.0s,MS6.1								
JFWS	**Jewell Farm**	**95.31**	**47**	*e*	P		**P**	**16 43 36.8**	**-0.8**
JFWS					pmax		pmax		
	comp=Z,103nm,1.4s,mb6.1								
JFWS					MLR		MLR		
	comp=Z,7μm,21.0s,MS6.1								
WVT	**Waverly**	**95.34**	**54**	*e*	P		**P**	**16 43 37.7**	**-0.3**
	comp=Z,59nm,1.5s,mb5.8								
WVT					LR		LR		
	comp=Z,7μm,21.0s,MS6.1								
WVT	**Waverly**	**95.34**	**54**	*e*	P		**P**	**16 43 37.7**	**-0.2**
WVT					pmax		pmax		
	comp=Z,59nm,1.5s,mb5.8								
WVT					MLR		MLR		
	comp=Z,7μm,21.0s,MS6.1								
HDIL	**Hopedale**	**95.37**	**50**	*e*	P		**P**	**16 43 37.4**	**-0.6**
	comp=Z,53nm,1.1s,mb5.9								
HDIL					LR		LR		
	comp=Z,6μm,20.0s,MS6.1								
EYMN	**Ely**	**95.83**	**42**		PFAKE			16 43 50.0	+10
EYMN					LR		LR		
	comp=Z,5μm,21.0s,MS6.0								
BCIP	**Isla Barro Col**	**95.84**	**82**		PFAKE			16 43 50.0	+9.3
BCIP					LR		LR		
	comp=Z,2μm,22.0s,MS5.6								
SWET	**Sewanee**	**96.62**	**55**	*e*	P		**P**	**16 43 41.3**	**-2.5**
TRQA	**Tornquist**	**96.90**	**132**		PFAKE			16 44 00.0	+15
TRQA					LR		LR		
	comp=Z,4μm,20.0s,MS5.9								
COWI	**Conover**	**96.91**	**44**	*e*	P		**P**	**16 43 43.8**	**-1.0**
	comp=Z,56nm,1.2s,mb5.9								
COWI					LR		LR		
	comp=Z,7μm,20.0s,MS6.2								
GTA	**Gaotai**	**96.96**	**309**	*e*	P		**P**	**16 43 46.9**	**+1.7**
GTA					pP		pP	16 43 51.3	-5.1
GTA					PP		PP	16 47 38.5	-2.7
GTA					SKS			16 54 21.9	
GTA					S		S	16 55 07.4	+2.0
GTA					sS		sS	16 55 15.1	-8.9
GTA					SS		SS	17 01 46.3	+3.9
GTA					pmax		pmax		
	comp=Z,9.0nm,1.9s,mb4.9								
GTA					pmax		pmax		
	comp=Z,540nm,6.2s								
GTA					LR		LR		
	comp=N,1μm,20.8s,MS5.6								
GTA					LR		LR		
	comp=E,2μm,24.7s,MS5.6								
GTA					LR		LR		
	comp=Z,4μm,23.8s,MS5.8								
WCI	**Wyandotte Cave**	**97.05**	**52**		PFAKE			16 44 00.0	+14
WCI					LR		LR		
	comp=Z,5μm,20.0s,MS6.0								
IRK	**Irkutsk**	**97.16**	**322**	*e*	P		**P**	**16 43 44.8**	**-1.0**
IRK				*e*				16 54 26.0	
IRK					pmax		pmax		
	comp=Z,67nm,3.0s								
ZAK	**Zakamensk**	**97.28**	**320**	*e*	P		**P**	**16 43 44.0**	**-2.3**
ZAK					pmax		pmax		
	comp=Z,6.0nm,1.6s,mb4.8								
TLY	**Talaya**	**97.39**	**321**	*e*	P		**P**	**16 43 46.6**	**-0.2**
	comp=Z,29nm,1.4s,mb5.5								
TLY					LR		LR		
	comp=Z,4μm,20.0s,MS5.9								
TLY	**Talaya**	**97.39**	**321**	*c* *i*	P		**P**	**16 43 45.6**	**-1.2**
TLY				*e*				16 47 40.6	
TLY				*e*				16 54 24.8	
TLY				*e*S		S		16 55 05.4	-3.1
TLY				*e*PS		PS		16 56 36.9	+1.6
TLY				*e*SS		SS		17 01 44.3	-3.5
TLY				pmax		pmax			
	comp=Z,31nm,1.5s,mb5.5								
GOGA	**Godfrey**	**98.19**	**58**		PFAKE			16 44 00.0	+9.1
GOGA					LR		LR		
	comp=Z,4μm,22.0s,MS5.8								
TKL	**Tuckaleechee C**	**98.43**	**55**		P		**P**	**16 43 50.9**	**-1.1**
DWPF	**Disney**	**98.75**	**63**		PFAKE			16 44 00.0	+6.4
DWPF					LR		LR		
	comp=Z,1μm,20.0s,MS5.5								
AAM	**Ann Arbor**	**99.90**	**49**		PFAKE			16 44 10.0	+12
AAM					LR		LR		
	comp=Z,3μm,20.0s,MS5.8								
MTDJ	**Mount Denham**	**100.12**	**74**		PFAKE			16 44 10.0	+11
MTDJ					LR		LR		
	comp=Z,2μm,21.0s,MS5.7								
SHL	**Shillong**	**100.48**	**294**	*ex*		Pdif		16 44 04.0	+3.3
SHL				*e*S		SKSac		16 54 40.0	+2.0
NHSC	**New Hope**	**100.83**	**59**		PFAKE			16 44 10.0	+7.7
NHSC					LR		LR		
	comp=Z,3μm,20.0s,MS5.8								
BLA	**Blacksburg**	**101.39**	**54**		PFAKE			16 44 20.0	+15
BLA					LR		LR		
	comp=Z,5μm,20.0s,MS6.0								
MCWV	**Mont Chateau**	**102.26**	**52**		PFAKE			16 44 20.0	+11
MCWV					LR		LR		
	comp=Z,9μm,22.0s,MS6.2								
ERPA	**Erie**	**102.55**	**50**		PFAKE			16 44 20.0	+10
ERPA					LR		LR		
	comp=Z,6μm,20.0s,MS6.1								
GTBY	**Guantanamo Bay**	**102.72**	**73**		PFAKE			16 44 20.0	+9.3
GTBY					LR		LR		
	comp=Z,2μm,19.0s,MS5.7								
CNNC	**Cliffs of the**	**103.07**	**57**		PFAKE			16 44 20.0	+7.8
CNNC					LR		LR		
	comp=Z,6μm,21.0s,MS6.1								
CBN	**Corbin**	**103.94**	**54**		PFAKE			16 44 30.0	+14
CBN					LR		LR		
	comp=Z,6μm,21.0s,MS6.1								
SDV	**Santo Domingo**	**104.60**	**85**		PFAKE			16 44 30.0	+11
SDV					LR		LR		
	comp=Z,1μm,20.0s,MS5.4								
BINY	**Binghamton**	**105.51**	**50**		PFAKE			16 48 50.0	+13
BINY					LR		LR		
	comp=Z,6μm,20.0s,MS6.1								
SDDR	**Presa de Saban**	**106.08**	**74**		PFAKE			16 48 50.0	+12
SDDR					LR		LR		
	comp=Z,7μm,20.0s,MS6.2								
WMQ	**Urumqi**	**106.64**	**312**		Pdif		Pdif	16 44 29.4	+1.3
WMQ					PP		PP	16 48 57.9	+3.9
WMQ					S		Sdif	16 56 27.4	+1.3
WMQ					SS		SS	17 03 59.5	+3.2
WMQ					LR		LR		
	comp=N,1μm,23.4s,MS5.5								
WMQ					LR		LR		
	comp=E,1μm,25.0s,MS5.5								
WMQ					LR		LR		
	comp=Z,1μm,24.0s,MS5.4								
GRTK	**Grand Turk**	**106.68**	**72**		PFAKE			16 48 50.0	+11
GRTK					LR		LR		
	comp=Z,2μm,20.0s,MS5.6								
LONY	**Lake Ozonia**	**106.76**	**47**		PFAKE			16 48 50.0	+11
LONY					LR		LR		
	comp=Z,5μm,21.0s,MS6.0								
VIS	**Vishakhapatnam**	**106.77**	**284**	*e*	PKP		Pdif	16 44 28.9	+0.2
NCB	**Newcomb**	**106.97**	**48**		PFAKE			16 48 50.0	+11
NCB					LR		LR		
	comp=Z,6μm,20.0s,MS6.1								
LBNH	**Lisbon**	**108.64**	**48**		PFAKE			16 48 50.0	+7.6
LBNH					LR		LR		
	comp=Z,8μm,20.0s,MS6.3								
ZALV	**Zalesovo Beam**	**108.97**	**322**		Pdiff		Pdif	16 44 38.3	-0.2
	comp=Z,0.4nm,0.4s,baz=76,slow=6.1,SNR=6.9								
ZALV					PKiKP		PKiKP	16 48 42.6	-0.2
	comp=Z,1.3nm,0.6s,baz=114,slow=0.6,SNR=6.1								
PKME	**Peaks-Kenny Pk**	**110.55**	**47**		PFAKE			16 49 00.0	+14
PKME					LR		LR		
	comp=Z,3μm,19.0s,MS5.9								
MKAR	**Makanchi Array**	**110.59**	**315**		Pdiff		Pdif	16 44 52.4	+6.7
	comp=Z,1.8nm,1.0s,baz=84,slow=5.0,SNR=6.9								
MKAR					PKiKP		PKiKP	16 48 45.9	-0.1
	comp=Z,1.4nm,0.8s,baz=73,slow=0.7,SNR=13								
MKAR					PKKPbc		PKKPbc	16 59 49.6	+3.0
	comp=Z,0.5nm,0.7s,baz=225,slow=5.7,SNR=4.1								
MKAR	**Makanchi Array**	**110.59**	**315**		P		Pdif	16 44 52.4	+6.7
MKAR				*i*				16 48 45.9	
MKAR								16 59 49.7	
MKAR					pmax		pmax		
	comp=Z,2.0nm,1.0s								
MKAR					pmax		pmax		
	comp=Z,1.0nm,0.8s								
SJG	**San Juan**	**110.72**	**76**		PFAKE			16 49 00.0	+13
SJG					LR		LR		
	comp=Z,2μm,20.0s,MS5.7								
DGAR	**Diego Garcia**	**110.93**	**256**		PFAKE			16 49 00.0	+12
DGAR					LR		LR		
	comp=Z,3μm,20.0s,MS5.9								
KURK	**Kurchatov**	**112.90**	**319**	*e*	PKiKP		PKiKP	16 48 50.3	0.0
KURK					LR		LR		
	comp=Z,3μm,19.0s,MS6.0								
KURK	**Kurchatov**	**112.90**	**319**	*c* *i*	PKIKP		PKiKP	16 48 50.1	-0.2
KURK					pmax		pmax		
	comp=Z,20nm,1.7s								
KURK					MLR		MLR		
	comp=Z,3μm,19.0s,MS5.9								
BHPL	**Bhopal**	**113.11**	**289**	*e*	PKP		PKiKP	16 48 51.2	-0.3
BHPL					AMS		AMS	17 32 04.5	
	comp=Z,1μm,16.9s,MS5.5								
BBSR	**BB Station**	**113.67**	**61**		PFAKE			16 49 00.0	+7.7
BBSR					LR		LR		
	comp=Z,2μm,22.0s,MS5.6								
GRGR	**Grenville**	**113.91**	**83**		PFAKE			16 49 10.0	+17
GRGR					LR		LR		
	comp=Z,1μm,20.0s,MS5.5								
SPB	**Sao Paulo**	**114.71**	**125**		PFAKE			16 49 10.0	+15
SPB					LR		LR		
	comp=Z,5μm,20.0s,MS6.1								
ANWB	**Willy Bob**	**114.75**	**77**		PFAKE			16 49 10.0	+15
ANWB					LR		LR		
	comp=Z,1μm,20.0s,MS5.6								
FDF	**Fort de France**	**114.87**	**81**		PFAKE			16 49 10.0	+15
FDF					LR		LR		
	comp=Z,2μm,21.0s,MS5.6								
KAD	**Karad**	**115.30**	**282**	*ex*		PKPdf		16 48 48.7	-7.2
POO	**Poona**	**115.79**	**283**	*e*PKP		PKPdf		16 48 54.1	-2.7
AJM	**Ajmer**	**115.95**	**292**	*e*PKP		PKPdf		16 48 55.9	-1.0
AJM						AMb	AMB	16 50 06.9	
	comp=Z,17nm,1.1s								
BBGH	**Gun Hill**	**116.11**	**83**		PFAKE			16 49 10.0	+13
BBGH					LR		LR		
	comp=Z,4μm,21.0s,MS6.0								
KBS	**Kingsbay**	**116.14**	**359**	*e*	PP		PP	16 49 58.5	-2.5
KBS				*e*	SKS		SKSac	16 55 49.9	+6.8
KBS				*e*	SS		SS	17 06 05.2	+4.4
KBS					AMS		AMS	17 29 36.7	
	comp=Z,1μm,21.6s,MS5.5								
KBS	**Kingsbay**	**116.14**	**359**		PFAKE			16 49 10.0	+14
KBS					LR		LR		
	comp=Z,1μm,20.0s,MS5.5								
FRU	**Bishkek**	**116.16**	**311**	*e*	PKIKP		PKPdf	16 48 57.0	+0.2
FRU				*e*				16 49 03.0	
FRU				*i*				16 50 00.0	
FRU				*e*				16 55 50.0	
FRU					MLR		MLR		
	comp=Z,2μm,22.0s,MS5.6								
AAK	**Ala-Archa**	**116.26**	**310**⇓	*e*	PKP		PKPdf	16 48 57.7	+0.7
AAK					LR		LR		
	comp=Z,3μm,21.0s,MS5.8								
NIL	**Nilore**	**117.48**	**300**		PFAKE			16 49 10.0	+10
NIL					LR		LR		
	comp=Z,90nm,22.0s,MS4.3								
BRVK	**Borovoye**	**117.69**	**322**	*e*	PKPdf		PKPdf	16 48 59.4	0.0
BRVK					LR		LR		
	comp=Z,4μm,21.0s,MS6.0								
BRVK	**Borovoye**	**117.69**	**322**	*c* *i*	PKIKP		PKPdf	16 48 59.3	-0.1
BRVK					pmax		pmax		
	comp=Z,31nm,1.7s								
BRVK					MLR		MLR		
	comp=Z,4μm,23.0s,MS6.0								
KBL	**Kabul**	**120.95**	**301**	*e*	PKPdf		PKPdf	16 49 07.2	+0.9
SVE	**Sverdlovsk**	**121.87**	**328**⇑	*i*	PKIKP		PKPdf	16 49 08.2	+0.9
SVE				*e*				16 50 38.9	
SVE				*e*	PPP			16 53 25.5	
SVE					pmax		pmax		
	comp=Z,40nm,1.5s								
SVE					MLR		MLR		
	comp=Z,3μm,19.0s,MS5.9								
SOKR	**Solikamsk**	**122.52**	**332**	*c* *i*	PKIKP		PKPdf	16 49 08.7	+0.2
SOKR					SS		SS	17 07 19.2	-4.7
SOKR					pmax		pmax		
	comp=Z,50nm,1.3s								
ARU	**Arti**	**123.08**	**328**	*i*	PKIKP		PKPdf	16 49 09.8	+0.1
ARU					PS		PS	17 00 35.6	-10
ARU					MLR		MLR		
	comp=Z,3μm,21.0s,MS6.0								
JMIC	**Jan Mayen**	**123.43**	**6**	*e*	SS		SS	17 07 40.3	+5.7
JMIC					AMS		AMS	17 34 07.6	
	comp=Z,1μm,24.3s,MS5.5								
KEV	**Kevo**	**123.94**	**352**	*e*	PKP		PKPdf	16 49 12.5	+1.5
KEV					LR		LR		
	comp=Z,2μm,20.0s,MS5.8								
KEV	**Kevo**	**123.94**	**352**	*e*	pkp		PKPdf	16 49 12.5	+1.5
	comp=Z,4.7nm,0.7s								
LVZ	**Lovozero**	**124.23**	**348**		PFAKE			16 49 20.0	+8.4
LVZ					LR		LR		
	comp=Z,2μm,20.0s,MS5.8								
ARCES	**ARCESS Array B**	**124.35**	**352**		PKP		PKPdf	16 49 13.2	+1.5
	comp=Z,4.6nm,0.6s,baz=6.9,slow=1.4,SNR=21								
ARCES	**ARCESS Array B**	**124.35**	**352**		PKIKP		PKPdf	16 49 13.2	+1.4
ARCES					pmax		pmax		
	comp=Z,5.0nm,0.6s								
APA	**Apatity**	**124.77**	**348**⇑	*i*	PKIKP		PKPdf	16 49 12.8	+0.2
APA				*i*				16 49 17.5	
APA				*i*				16 50 57.0	
APA				*e*				16 56 16.0	
APA				*i*	PS		PS	17 00 58.0	-2.4
APA				*e*SS		SS		17 07 49.0	-2.6
APA					MLR		MLR		
	comp=Z,3μm,21.0s,MS6.0								
ABKAR	**Akbulak array**	**124.97**	**320**	*e*	PKPdf		PKPdf	16 49 13.8	+0.2
TRO	**Tromso**	**124.99**	**355**	*e*	PP		PP	16 50 58.8	-2.7
TRO				*e*	SS		SS	17 07 57.5	+3.3
TRO					AMS		AMS	17 34 32.0	
	comp=Z,2μm,20.1s,MS5.8								
TRIS	**Tristan da Cun**	**125.12**	**162**		PFAKE			16 49 30.0	+16
TRIS					LR		LR		
	comp=Z,2μm,19.0s,MS5.8								
KTK1	**Kautokeino**	**125.13**	**353**	*e*	PP		PP	16 51 00.3	-2.1
KTK1				*e*	SS		SS	17 08 01.1	+5.2
KTK1					AMS		AMS	17 35 58.6	
	comp=Z,6μm,25.0s,MS6.2								
BORG	**Borgarnes**	**126.93**	**15**		PFAKE			16 49 30.0	+13
BORG					LR		LR		
	comp=Z,2μm,20.0s,MS5.8								
ABPO	**Ambohimpanom**	**127.48**	**231**		PFAKE			16 49 30.0	+11
ABPO					LR		LR		
	comp=Z,4μm,22.0s,MS6.1								
MSEY	**Mahe Island**	**127.66**	**252**		PFAKE			16 49 30.0	+10
MSEY					LR		LR		
	comp=Z,3μm,21.0s,MS6.0								
KLMR	**Klimovskoe**	**128.53**	**340**	*e*	PKIKP		PKPdf	16 49 20.1	+0.1
KLMR				*e*				16 51 21.6	
KLMR				*e*				16 56 29.6	
KLMR				*e*SP		SP		17 01 25.3	-2.5
KLMR				*e*PS		PS		17 01 25.9	-7.6
KLMR				*e*SS		SS		17 08 36.1	-2.6
KLMR					pmax		pmax		
	comp=

baz=6.6,slow=1.8
NOA NORSAR Array B 134.04 357 PKP PKPdf 16 49 32.2 +1.8
NOA NORSAR Array B 134.04 357 PKP PKPdf 16 49 32.2 +1.8
comp=Z,5.4nm,1.0s,baz=16,slow=4.0,SNR=5.1
NOA NORSAR Array B 134.04 357 PKIKP PKPdf 16 49 32.2 +1.8
NOA pmax pmax
comp=Z,5.0nm,1.0s
VRHR Novokhopersk 134.40 329 *e*PKIKP PKPdf 16 49 32.4 +1.0
VRHR pmax pmax
comp=Z,10.0nm,0.7s
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.5s
BER Bergen 134.82 1 *e*SS SS 17 09 59.0 +4.1
VOR Voronezh 135.14 332 PKIKP PKPdf 16 49 32.0 -0.7
VOR pmax pmax
comp=Z,160nm,2.0s
MAK Makhachkala 135.35 317 *e*PKP PKPdf 16 49 35.9 +2.5
MAK Makhachkala 135.35 317 *e*P Pdif 16 46 30.0 -5.8
MAK *i* 16 49 31.6
MAK *e* 16 52 06.2
MAK *e*PPP 16 55 03.5
MAK *e*SP SP 17 02 28.8 +0.9
MAK pmax pmax
comp=Z,64nm,1.0s
MAK pmax pmax
comp=Z,139nm,1.7s
VSR Storozhevoye 135.50 331 *i* PKIKP PKPdf 16 49 34.2 +0.8
VSR *e* 16 52 05.1
VSR *e*SS SS 17 09 58.1 -6.0
VSR *e*SSS 17 14 55.2
VSR pmax pmax
comp=Z,390nm,3.9s
VSR pmax pmax
comp=N,50nm,2.3s
VSR pmax pmax
comp=E,150nm,4.4s
VSR pmax pmax
comp=Z,300nm,7.1s
VSR pmax pmax
comp=N,70nm,6.5s
VSR pmax pmax
comp=E,70nm,6.5s
KONO Kongsberg 135.51 358 *e*SS SS 17 10 07.0 +3.8
KONO Kongsberg 135.51 358 PFAKE 16 49 50.0 +17
KONO LR LR
comp=Z,2μm,19.0s,MS5.9
IZAR Zarasai 136.73 344 *e*P PKPdf 16 49 36.1 +0.5
IZAR AMB AMB 16 49 42.8
comp=Z,10nm,1.7s
IDID Didziasalis 136.97 343 *e*P PKPdf 16 49 36.0 0.0
IDID AMB AMB 16 49 43.0
comp=Z,9.5nm,1.6s
IIGN Ignalina 137.09 344 *e*P PKPdf 16 49 37.0 +0.8
IIGN AMB AMB 16 49 43.4
comp=Z,16nm,1.6s
GOF Gofitskoye 137.16 322 *e*PKHKP PKPpre 16 49 17.8
GOF pmax pmax
comp=Z,50nm,1.4s
NACGM Naroch 137.32 343 *e*PKP PKPdf 16 49 35.0 -1.7
MICGM Minsk 137.35 342 *e*PKP PKPdf 16 49 38.0 +1.2
MNK Minsk 137.36 342 *e*PKIKP PKPdf 16 49 38.0 +1.2
MNK *e* 16 52 17.0
MNK *e*SS SS 17 10 24.0 -1.7
MNK MLR MLR
comp=Z,6μm,20.0s,MS6.3
DGRG David-gareji 137.44 316 P PKPdf 16 49 41.9 +4.6
MTA Mtatsminda 137.72 316 P PKPdf 16 49 39.2 +1.3
TBLG Delisi 137.74 316 *e*PKIKP PKPdf 16 49 37.6 -0.3
TBLG Delisi 137.74 316 P PKPdf 16 49 37.7 -0.2
KIV Kislovodsk 137.95 320↑ *i*PKP PKPdf 16 49 38.8 +0.6
KIV LR LR
comp=Z,3μm,20.0s,MS6.0
KIV Kislovodsk 137.95 320 *c i*PKIKP PKPdf 16 49 38.7 +0.5
KIV *e* 16 52 26.9
KIV pmax pmax
comp=Z,27nm,1.7s
KIV MLR MLR
comp=Z,2μm,25.0s,MS5.8
GOR Gori 138.03 317 P PKPdf 16 49 41.2 +2.8
GNI Garni 138.44 314 PKPdf PKPdf 16 49 40.5 +1.2
GNI LR LR
comp=Z,2μm,21.0s,MS5.7
GNI Garni 138.44 314 *d i*PKIKP PKPdf 16 49 42.7 +3.5
GNI pmax pmax
comp=Z,56nm,1.7s
GNI MLR MLR
comp=Z,2μm,22.0s
SUW Suwalki 139.08 345 *e*PKP PKPdf 16 49 36.6 -3.3
SUW *e*PKiKP PKiKP 16 49 42.0 -0.2
SUW *e*PP 16 53 18.0
SUW LMZ 17 40 53.2
comp=Z,4μm,29.3s
ESK Eskdalemuir 139.21 8 PFAKE 16 49 50.0 +10
ESK LR LR
comp=Z,2μm,20.0s,MS5.9
ARTV Artvin 139.85 317 *i* P PKPdf 16 49 41.0 -0.8
DBOC Borcka 139.94 318 *i* P PKPdf 16 49 35.5 -6.4
SOC Sochi 139.96 322 *e*PKIKP PKPdf 16 49 41.1 -0.8
SOC *e* 16 52 35.9
SOC *e*PPP 16 55 40.9
SOC *e*SS SS 17 10 56.2 -1.3
SOC *e*SSS 17 16 04.4
SOC pmax pmax
comp=Z,12nm,0.7s
SOC MLR MLR
comp=Z,3μm,18.0s,MS6.1
AKASG Malin Array Be 140.07 338 PKhKP PKPpre 16 49 35.8
comp=Z,1.7nm,0.7s,baz=34,slow=3.7,SNR=7.1
AKASG PKP PKPdf 16 49 41.8 -0.1
comp=Z,18nm,1.0s,baz=28,slow=1.7,SNR=30
KIEV Kiev 140.09 338 *e*PKPdf PKPdf 16 49 42.3 +0.4
KIEV LR LR
comp=Z,4μm,22.0s,MS6.1
DDEM Demirkent 140.11 317 *i* P PKPdf 16 49 43.3 +1.0
HAKT HAKKARI 140.26 311 *i* P PKPdf 16 49 34.5 -8.2
GKP Gorka Klasztor 141.03 350 *e*PKP PKPdf 16 49 46.0 +2.5
GKP LMZ 17 46 39.1
comp=Z,4μm,24.6s
WAR Warsaw 141.23 346 *e*PKP PKPdf 16 49 43.8 -0.1
WAR LMZ 17 49 13.3
comp=Z,4μm,22.7s
BHD Baghdad 141.31 305 *ex* x 16 47 01.8
BHD *ex* x 16 49 47.0
BHD *ex* x 16 52 45.7
BHD *ex* x 16 56 56.8
KOPT Kop Dagi 141.38 317 *i* P PKPdf 16 49 39.2 -5.4
SIM Simferopol' **142.24 328** *ce*PKHKP PKPpre 16 49 36.5
SIM *e* 16 52 51.0
SIM pmax pmax
comp=Z,79nm,7.5s
SIM MLR MLR
comp=Z,2μm,20.9s,MS5.9
MARD Mardin 142.47 313 *i* P PKPdf 16 49 40.4 -6.2
LVV L'vov 142.59 341 *e*PKHKP PKPpre 16 49 43.0
DIYA Diyarbakir 142.65 314 *i* P PKPdf 16 49 43.8 -3.2
LSZ Lusaka 142.96 216 PKPpre PKPpre 16 49 43.0
LSZ LR LR
comp=Z,3μm,20.0s,MS6.0
KEMA Kemaliye 143.09 317 *i* P PKPdf 16 49 42.3 -5.3
ELZG Elazig 143.16 315 *i* P PKPdf 16 49 45.6 -2.2
KWP Kalwaria Pacla 143.16 342 *e*PKP PKPpre 16 49 43.4
KWP *e*PKiKP PKiKP 16 49 48.2 -2.5
KWP LMZ 17 44 57.5
comp=Z,4μm,28.5s
KWP Kalwaria Pacla 143.16 342 *e*PKPpre PKPpre 16 49 44.6
KWP LR LR
comp=Z,3μm,20.0s,MS6.1
KWP Kalwaria Pacla 143.16 342↑ *i*P PKPdf 16 49 46.5 -0.9
KIS Kishinev 143.21 334 *e*PP PP 16 53 02.0 +4.4
KIS *e*SKP 16 53 28.0
KIS Kishinev 143.21 334 *e*PKKP PKKPdf 16 58 48.0 -14
KIS *e*SKKS SKKSac 16 59 48.0 -0.4
KIS *e*SKSP 17 03 04.0
KIS Kishinev 143.21 334 *e*PKHKP PKPpre 16 49 41.0
KIS *e* 16 53 02.0
KIS *e*SS SS 17 11 34.0 -0.5
KIS MLR MLR
comp=Z,3μm,22.0s,MS6.0
KIS MLR MLR
comp=N,2μm,20.0s,MS6.0
KIS MLR MLR
comp=E,2μm,20.0s,MS6.0
KIS MLR MLR
comp=Z,3μm,22.0s
CLZ Clausthal 143.26 356 *e*PKP PKPdf 16 49 48.6 +1.1
OJC Ojcow 143.39 346 *e*PKP PKPdf 16 49 45.4 -2.4
OJC *e*PP PP 16 53 01.8 +3.4
OJC *e*SS SS 17 11 37.0 +0.9
OJC L 17 50 07.4
comp=Z,3.9nm,22.5s
ERBA Erbaa 143.43 320 *i* P PKPdf 16 49 45.8 -2.4
KSP Ksiaz 143.53 350 *e*PKP PKPdf 16 49 46.4 -1.7
KSP *e*PKiKP PKiKP 16 49 50.3 -1.1
KSP LMZ 17 51 57.0
comp=Z,7μm,21.4s
KSP Ksiaz 143.53 350 *e*PKIKP PKPdf 16 49 46.0 -2.0
KSP *e* 16 49 51.3
KSP *e*SS SS 17 11 38.0 +0.5
KSP *e*SSS 17 16 52.0
KSP MLR MLR
comp=Z,8μm,21.1s,MS6.5
CLL Collm 143.55 353 *e*PKP PKPdf 16 49 48.8 +0.7
CLL Collm 143.55 353 *e*PKP PKPdf 16 49 47.0 -1.1
CLL LR LR
comp=Z,3μm,19.9s,MS6.0
CLL Collm 143.55 353 *e*PKIKP PKPdf 16 49 47.0 -1.1
CLL pmax pmax
comp=Z,18nm,1.1s
CLL MLR MLR
comp=Z,3μm,19.9s,MS6.0
CLL Collm 143.55 353 *e*PKPdf PKPdf 16 49 47.0 -1.1
comp=Z,18nm,1.1s
CLL *e*PKiKP PKiKP 16 49 52.0 +0.6
CLL *e* 16 51 33.0
CLL *e*PP PP 16 52 57.0 -2.3
comp=Z,35nm,1.6s
CLL *e*SKKSac SKKSac 16 59 55.0 +4.9
CLL *e*SS SS 17 11 46.0 +8.3
CLL *e*SSS 17 17 13.0
CLL LmV 18 00 00.0
comp=Z,3μm,19.9s
MALT Malatya 143.63 315 *e*PKPpre PKPdf 16 49 48.0 -0.7
MALT LR LR
comp=Z,2μm,22.0s,MS5.9
MALT Malatya 143.63 315↓ *i*P PKPdf 16 49 48.6 0.0
SCER sogukcermik 143.66 319 *i* P PKPdf 16 49 46.4 -2.2
STHS Stebnicka Huta 143.76 344 *e*PKP PKPdf 16 49 48.3 -0.2
STHS Stebnicka Huta 143.76 344 *e*PKP PKPdf 16 49 48.3 -0.2
BUH Bochum--Univer 143.79 359 *e*PKP PKPdf 16 49 48.7 +0.2
TOKA Tokat 143.81 320 *i* P PKPdf 16 49 46.7 -2.2
BRG Berggiesshubel 143.86 352 *e*PKP PKPdf 16 49 47.2 -1.4
BRG Berggiesshubel 143.86 352 *e*PKP PKPdf 16 49 48.2 -0.5
comp=Z,17nm,1.2s
BRG *i* 16 49 50.9
comp=Z,70nm,1.6s
BRG *e* 16 53 12.9
comp=Z,5.0nm,1.2s
BRG SS SS 17 11 36.0 -5.3
BRG
comp=N,2μm,23.2s
BRG
comp=E,2μm,26.5s
BRG
comp=Z,3μm,22.0s
BRG Berggiesshubel 143.86 352 *e*PKIKP PKPdf 16 49 48.2 -0.4
BRG SS SS 17 11 36.0 -5.3
BRG pmax pmax
comp=Z,10.0nm,1.2s
BRG MLR MLR
comp=N,904nm,23.2s,MS5.6
BRG MLR MLR
comp=E,930nm,26.5s,MS5.6
BRG MLR MLR
comp=Z,2μm,22.0s,MS5.8
RAC Raciborz 143.88 347 *e*PKIKP PKPdf 16 49 46.6 -2.1
RAC MLR MLR
comp=Z,4μm,21.0s,MS6.2
UPC Upice 143.90 350 *e*PKIKP PKPdf 16 49 47.1 -1.6
UPC Upice 143.90 350 *e*PKP PKPdf 16 49 47.1 -1.6
AKCD Akcadag 143.98 316 *i* P PKPdf 16 49 46.8 -2.5
DPC Dobruska-Polom 144.00 349 *e*PKIKP PKPdf 16 49 48.0 -0.9
DPC *e* 16 52 56.7
DPC *e*SS SS 17 11 38.2 -4.7
DPC MLR MLR
comp=Z,3μm,20.7s,MS6.0
DPC Dobruska-Polom 144.00 349 *e*PKP PKPdf 16 49 48.0 -0.9
DPC *e*PP PP 16 52 56.7 -5.3
DPC *e*SKKS SKKSac 16 59 55.8 +3.1
DPC *ex* x 17 11 38.2
DPC AMS AMS 17 52 10.0
comp=Z,3μm,20.7s
NIE Niedzica 144.00 345 *e*PKP PKPdf 16 49 47.6 -1.3
BURAR Bucovina Array 144.10 338↑ P PKPdf 16 49 48.1 -1.1
BURAR Bucovina Array 144.10 338 *i*P PKPdf 16 49 48.1 -1.1
BUR01 Bucovina Ar. S 144.10 338 P PKPdf 16 49 49.1 0.0
PVCC Panska Ves 144.11 351 *e*PKIKP PKPdf 16 49 49.5 +0.4
PVCC *e*SS SS 17 11 39.2 -5.0
PVCC MLR MLR
comp=Z,4μm,22.7s,MS6.1
PVCC Panska Ves 144.11 351 *e*PKP PKPdf 16 49 49.5 +0.4
PVCC *e*SKKS SKKSac 16 59 55.9 +2.6
PVCC *ex* x 17 11 39.2
PVCC AMS AMS 17 52 00.0
comp=Z,4μm,22.7s
OKC Ostrava-Krasne 144.12 347 *e*PKIKP PKPdf 16 49 48.6 -0.5
OKC *e*SS SS 17 11 43.4 -1.1
OKC MLR MLR
comp=Z,3μm,20.3s,MS6.0
OKC Ostrava-Krasne 144.12 347 *e*PKP PKPdf 16 49 48.6 -0.5
OKC *e*PP PP 16 52 54.7 -8.1
OKC *e*SKKS SKKSac 16 59 58.9 +5.4
OKC *e*SS SS 17 11 43.4 -1.1
OKC AMS AMS 17 53 20.0
comp=Z,3μm,20.3s
CRVS Cervenica-Dubn 144.17 343 *e*PKP PKPdf 16 49 47.3 -1.9
CRVS Cervenica-Dubn 144.17 343 *e*PKP PKPdf 16 49 47.3 -1.9
UZH Uzhgorod 144.17 342 *c i*PKIKP PKPdf 16 49 48.3 -0.9
UZH *e* 16 49 54.7
UZH *e* 16 50 01.5
UZH MLR MLR
comp=N,800nm,21.0s,MS5.8
UZH MLR MLR
comp=E,2μm,21.0s,MS5.8
UZH MLR MLR
comp=Z,1μm,21.0s,MS5.6
TSUM Tsumeb 144.18 198 *e*PKPdf PKPdf 16 49 49.2 -1.0
TSUM LR LR
comp=Z,4μm,19.0s,MS6.2
MORC Moravsky Berou 144.31 348 *e*PKPdf PKPdf 16 49 48.7 -0.8
MORC Moravsky Berou 144.31 348 PKIKP PKPdf 16 49 49.1 -0.3
MORC Moravsky Berou 144.31 348↑ *i*P PKPdf 16 49 48.8 -0.6
MOX Moxa 144.35 354 *e*PKP PKPdf 16 49 49.4 -0.1
comp=Z,77nm,1.8s
MOX
comp=Z,2μm,22.0s
MOX Moxa 144.35 354 *e*PKP PKPdf 16 49 48.8 -0.7
TESR 144.49 336↑ P PKPdf 16 49 47.8 -2.0
TESR 144.49 336↑ *i*P PKPdf 16 49 47.8 -2.1
TRPA Tarpa 144.54 341↑ *i*P PKPdf 16 49 50.3 +0.4
PRA Prague 144.58 351 PKP PKPdf 16 49 51.0 +1.1
PRA AMS AMS 17 53 30.0
MEM Membach 144.62 1 APKP 16 49 50.3
WERN Wernitzgruen 144.63 354 *e*PKP PKPdf 16 49 49.3 -0.7
TLCR 144.63 332↓ P PKPdf 16 49 50.9 +0.7
TLCR 144.63 332↓ *i*P PKPdf 16 49 50.9 +0.7
PRU Pruhonice 144.64 351 *e*PKIKP PKPdf 16 49 50.3 +0.3
PRU *e*SS SS 17 11 40.3 -10
PRU MLR MLR
comp=Z,4μm,21.4s,MS6.2
PRU Pruhonice 144.64 351 *e*PKP PKPdf 16 49 50.3 +0.3
PRU *ex* x 16 52 52.1
PRU *e*SKKS SKKSac 17 00 00.2 +3.8
PRU *ex* x 17 11 40.3
PRU AMS AMS 17 52 20.0
comp=Z,4μm,21.4s
BMR Baia Mare 144.64 340↑ P PKPdf 16 49 51.2 +1.1
BMR Baia Mare 144.64 340 PKIKP PKPdf 16 49 50.2 +0.1
BMR Baia Mare 144.64 340↑ *i*P PKPdf 16 49 51.2 +1.1
NKC Novy Kostel 144.67 353 *e*PKIKP PKPdf 16 49 50.0 -0.1
NKC MLR MLR
comp=Z,2μm,20.9s,MS5.9
NKC Novy Kostel 144.67 353 *e*PKP PKPdf 16 49 50.0 -0.1
NKC AMS AMS 17 54 50.0
comp=Z,2μm,20.9s
SNF Seneffe 144.68 2 PKP PKPdf 16 49 50.0 0.0
SNF APKP 16 49 52.8
PINB Pinarbasi 144.78 317 *i* P PKPdf 16 49 49.5 -1.1
BCLA Clavier 144.80 1 PKP PKPdf 16 49 49.8 -0.4
CFR Carcaliu 144.94 333 P PKPdf 16 49 51.8 +1.1
CFR ↓P 16 49 55.1
CFR Carcaliu 144.94 333↓ *i*P PKPdf 16 49 55.1 +4.4
VRAC Vranov 144.94 349 ↓P PKPdf 16 49 52.9 +2.4
VRAC Vranov 144.94 349 PKIKP PKPdf 16 49 51.3 +0.7
VRAC Vranov 144.94 349↓ *i*P PKPdf 16 49 52.9 +2.3
TNS Taunus Mts 144.98 358 *e*PKP PKPdf 16 49 50.2 -0.4
VRI Vrincioaia 144.98 335 ↓P PKPdf 16 49 51.0 +0.3
VRI Vrincioaia 144.98 335↓ *i*P PKPdf 16 49 51.0 +0.3
PLOR Plostina 145.03 335 ↓PKIKP PKPdf 16 49 50.0 -0.8
PLOR Plostina 145.03 335↓ *i*P PKPbc 16 49 50.0 -0.2
ILGA Ilgaz 145.03 323 *i* P PKPbc 16 49 51.1 +0.7
DOU Dourbes 145.11 2 PKP PKPdf 16 49 51.0 +0.2
GIVF Givet 145.11 2 *e*PKP1 PKPbc 16 49 48.7 -1.6
comp=Z,138nm,1.2s
BAIF Baives 145.13 3 *e*PKP1 PKPbc 16 49 49.9 -0.5
comp=Z,202nm,1.2s
TREC Trest 145.16 350 *e*PKIKP PKPdf 16 49 51.2 +0.3
TREC MLR MLR
comp=Z,3μm,23.4s,MS6.0
TREC Trest 145.16 350 *e*PKP PKPdf 16 49 51.2 +0.3
TREC *e*SS SS 17 12 00.1 +3.9
TREC AMS AMS 17 49 30.0
comp=Z,3μm,23.4s
VYHS Vyhne 145.23 346 *e*PKP PKPdf 16 49 51.6 +0.5
VYHS Vyhne 145.23 346 *e*PKP PKPdf 16 49 51.6 +0.5
KOLL Kolacno 145.25 346 *e*PKP PKPdf 16 49 52.5 +1.4
KOLL Kolacno 145.25 346 *e*PKP PKPdf 16 49 52.5 +1.4
GRER 145.27 334 ↓P PKPbc 16 49 53.4 +2.3
GRER 145.27 334↓ *i*P PKPbc 16 49 53.4 +2.4
GRA1 Grafenberg Arr 145.33 355 *e*PKP PKPdf 16 49 51.7 +0.5
GRA1 LR LR
comp=Z,3μm,21.1s,MS6.1
GRF Grafenberg Arr 145.33 355 *e*PKP PKPdf 16 49 51.7 +0.5
GRF *e*L 17 55 19.3
comp=Z,3μm,21.1s
KUZU Kuzuini 145.33 314 *i* P PKPbc 16 49 52.0 +0.5
ABH Alteburg 145.34 359 PKP PKPdf 16 49 51.6 +0.4
ANDN Andirin 145.41 316 *i* P PKPbc 16 49 52.0 +0.2
DOPR Dopca 145.43 337↑ *i*P PKPbc 16 49 53.4 +1.9
PSZ Piszkesteto 145.50 344 *e*PKP PKPdf 16 49 52.0 +0.4
PSZ LR LR
comp=Z,2μm,22.0s,MS5.9
PSZ Piszkesteto 145.50 344↓ *i*P PKPdf 16 49 53.0 +1.4
PSZ Piszkesteto 145.50 344↑ *i*ePKP PKPdf 16 49 52.2 +0.6
CDAG Cicekdag 145.52 320 *i* P PKPdf 16 49 51.5 -0.3
RUP Ruppelstein 145.53 359 PKIKP PKPdf 16 49 52.1 +0.5
ELDT Eldivan 145.56 322 *i* P PKPdf 16 49 52.9 +1.0
WLF Walferdange 145.57 0 *e*PKP PKPdf 16 49 52.6 +1.0
WLF Walferdange 145.57 0 *e*PKIKP PKPdf 16 49 52.5 +0.9
WLF MLR MLR
comp=Z,3μm,21.0s,MS6.1
KMBO Kilima Mbogo 145.57 245 PKPbc PKPbc 16 49 53.4 +0.4
comp=Z,18nm,1.1s,baz=118,slow=4.4,SNR=27
KMBO Kilima Mbogo 145.57 245 *e*PKHKP PKPdf 16 49 52.5 -0.3
KMBO MLR MLR
comp=Z,2μm,20.0s
TOD Tromm 145.58 357 PKP PKPdf 16 49 51.9 +0.3
MLR Muntele Rosu 145.60 336↑ P PKPdf 16 49 51.7 -0.1
MLR Muntele Rosu 145.60 336↑ *i*P PKPdf 16 49 51.7 -0.1
KHC Kasperske Hory 145.62 352 *e*PKIKP PKPdf 16 49 52.1 +0.4
KHC Kasperske Hory 145.62 352 *e*PKP PKPdf 16 49 52.7 +1.0
KHC *e*SKKS SKKSac 17 00 05.6 +3.7
KHC *e*SS SS 17 11 59.1 -2.3
KHC AMS AMS 17 52 50.0
comp=Z,4μm,23.5s
DRGR 145.67 340 ↓P PKPdf 16 49 52.0 +0.1
DRGR 145.67 340↓ *i*P PKPdf 16 49 52.0 +0.1
WET Wettzell 145.69 353 *e*PKP PKPdf 16 49 52.9 +1.0
AVNT Avonos 145.72 319 *i* P PKPdf 16 49 52.7 +0.5
AMRR Amara 145.73 333 ↓P PKPdf 16 49 54.3 +2.2
AMRR Amara 145.73 333↓ *i*P PKPdf 16 49 54.3 +2.2
GEC2 GERESS Array S 145.88 352 *e*PKP PKPdf 16 49 53.2 +1.0
KTD Kalmit 145.89 358 PKP PKPdf 16 49 53.4 +1.2
ZST Bratislava 145.90 347 *e*PKP PKPdf 16 49 54.4 +2.2
ZST Bratislava 145.90 347 *e*PKP PKPdf 16 49 54.4 +2.2
BRTR Keskin Array B 145.91 321 PKPbc PKPbc 16 49 53.6 +0.4
comp=Z,68nm,1.1s,baz=94,slow=1.7,SNR=135
BRTR Keskin Array B 145.91 321 PKIKP PKPdf 16 49 53.7 +1.2
BRTR pmax pmax
comp=Z,68nm,1.1s
ROSF Rostrenen 145.93 12 *e*PKP1 PKPbc 16 49 52.2 -0.8
comp=Z,332nm,1.5s
FLN La Foliniere 145.99 8 *e*PKP1 PKPbc 16 49 52.2 -0.9
comp=Z,660nm,1.5s
FLN *e*MLR MLR
comp=Z,3μm,20.5s,MS5.8
FLN La Foliniere 145.99 8 *e*PKP2 PKPab 16 49 52.2 -1.4
FLN MLR MLR
comp=Z,3μm,20.5s,MS6.1
VOIR 146.00 336↑ P PKPdf 16 49 54.3 +1.8
VOIR 146.00 336 PKIKP PKPdf 16 49 53.4 +0.9
VOIR 146.00 336↑ *i*P PKPdf 16 49 54.3 +1.8
BUD Budapest 146.12 345↑ *e*PKP PKPbc 16 49 53.3 -0.3
SULR 146.14 334↑ P PKPdf 16 49 53.8 +1.0
SULR 146.14 334↑ *i*P PKPdf 16 49 53.8 +1.0
SGMF Saint Gilles 146.14 11 *e*PKP1 PKPbc 16 49 52.8 -0.8
comp=Z,454nm,1.5s
LDF La Druitiere 146.20 8 *e*PKP1 PKPbc 16 49 52.9 -0.9
comp=Z,165nm,1.4s
LANF Langenberg 146.24 358 PKP PKPdf 16 49 54.7 +1.9
GRR Gorron 146.30 9 *e*PKP1 PKPbc 16 49 53.5 -0.6
comp=Z,620nm,1.8s
BBAL Bala 146.34 321 *i* P PKPdf 16 49 53.9 +0.7
QUIF Quistinic 146.35 12 *e*PKP1 PKPbc 16 49 53.2 -1.0
comp=Z,374nm,1.5s
YAYL Yayladag 146.38 314 *i* P PKPdf 16 49 54.1 +0.6
STU Stuttgart 146.39 357 *e*PKP PKPdf 16 49 54.9 +1.8
STU Stuttgart 146.39 357 *e*PKP2 PKPab 16 49 55.8 +0.6
CONA Conrad Observa 146.41 349↑ *i*PKPab PKPab 16 49 54.0 -1.3
comp=Z,261nm,1.8s,SNR=38
SOP Sopron 146.50 348↑ *e*PKP PKPab 16 49 55.4 -0.3
GULE Gulek 146.62 317 *i* P PKPdf 16 49 54.2 +0.4
MEZF Maizieres J'vi 146.71 2 *e*PKP1 PKPbc 16 49 55.0 -0.3
MOA Molln 146.76 350↑ *i*PKPbc PKPbc 16 49 54.2 -1.3
comp=Z,109nm,1.2s,SNR=47
SHEL Horse Pasture 146.81 158 PFAKE 16 50 10.0 +15
SHEL LR LR
comp=Z,2μm,21.0s,MS5.9
CDF Champ du Feu 146.82 359 *e*PKP1 PKPbc 16 49 55.3 -0.3
comp=Z,377nm,1.5s
FUR Furstenfeldbru 146.84 354 *e*PKP PKPab 16 49 56.4 -0.5
GZR Gura Zlata 146.87 339 ↓P PKPbc 16 49 56.9 +1.1
GZR Gura Zlata 146.87 339↓ *i*P PKPbc 16 49 56.9 +1.1
BFO Black Forest 146.88 358 *e*PKP PKPbc 16 49 56.3 +0.6
THEF They Montfort 147.01 1 PKP PKPbc 16 49 57.9 +1.8
ECH Echery 147.02 359 PKP PKPbc 16 49 57.7 +1.5
ECH Echery 147.02 359 *e*PKP2 PKPab 16 49 57.1 -0.5
ECH MLR MLR
comp=Z,3μm,19.0s,MS6.0
BZS Buzias 147.07 340↑ P PKPdf 16 49 55.7 +1.4
BZS Buzias 147.07 340 PKIKP PKPdf 16 49 55.3 +1.0
BZS Buzias 147.07 340↑ *i*P PKPbc 16 49 55.7 -0.7
LIBD Limburg 147.08 359 PKP2 PKPab 16 49 57.7 -0.2
SPAK Spaichingen-Ko 147.08 357 PKP PKPbc 16 49 57.0 +0.7
ARSA Arzberg 147.12 349↑ *i*PKPbc PKPbc 16 49 55.0 -1.5
comp=Z,71nm,1.4s,SNR=7.3
HAU Haudompre 147.23 0 *e*PKP1 PKPbc 16 49 56.5 -0.3
comp=Z,348nm,1.4s
HAU *e*MLR MLR
comp=Z,3μm,20.5s,MS5.7
HAU Haudompre 147.23 0 *e*PKP2 PKPbc 16 49 56.5 -0.3
HAU MLR MLR
comp=Z,3μm,20.5s,MS6.0
FELD Feldberg im Sc 147.34 358 PKP PKPbc 16 49 57.5 +0.4
HWQ Hawqa 147.36 311 *e*P PKPdf 16 49 55.6 +0.5
MOF Molkenrain 147.38 359 PKP PKPbc 16 49 57.7 +0.5
PKSM Moragy 147.40 344 ↓P PKPbc 16 49 57.7 +0.4
PKSM Moragy 147.40 344 PKIKP PKPbc 16 49 56.1 -1.2
PKSM Moragy 147.40 344↓ *i*P PKPbc 16 49 57.7 +0.4
HINF Hinteralfeld 147.42 360 *e*PKP1 PKPbc 16 49 56.9 -0.4
comp=Z,200nm,1.5s
DESE Dese 147.52 267 *e*P PKPdf 16 49 56.8 +0.8
RETA Reutte 147.56 355↓ *i*PKPbc PKPdf 16 49 55.7 +0.6
comp=Z,134nm,1.4s,SNR=32
WATA Walderalm 147.63 354↑ *i*PKPbc PKPbc 16 49 56.6 -1.3
comp=Z,62nm,1.2s,SNR=9.8
KBA Koelnbreinsper 147.66 351↑ *i*PKPbc PKPbc 16 49 56.6 -1.3
comp=Z,72nm,1.4s,SNR=23
MOTA Moosalm 147.67 354↓ *i*PKPbc PKPbc 16 49 56.6 -1.4

comp=Z,149nm,1.1s,SNR=14
WTTA Wattenberg 147.69 353 *i*PKPbc PKPbc 16 49 56.1 -1.9
comp=Z,177nm,1.4s,SNR=49
BHL Bhannes 147.75 311 *e*P PKPdf 16 49 56.5 +0.7
JMB Yambol 147.76 332 P PKPdf 16 49 57.5 +1.9
BBS Basel-Blauen 147.76 359 PKP2 PKPab 16 49 59.0 -1.6
SOKA Soboth 147.76 349 ⇑*i*PKPdf PKPdf 16 49 55.9 +0.5
comp=Z,155nm,1.3s
PERS Pernice 147.79 349 *i* PKPdf PKPdf 16 49 56.3 +0.8
DAVA Damuels 147.83 356 ⇓*i*PKPbc PKPbc 16 49 57.6 -0.9
comp=Z,166nm,1.2s,SNR=17
ELBA Catalca 147.87 328 *i* P PKPbc 16 49 57.9 -0.9
LOMF Lomont 147.89 360 PKP PKPbc 16 49 59.4 +0.8
LOR Lormes 147.89 3 *e*PKP1 PKPbc 16 49 58.3 -0.3
comp=Z,172nm,1.2s
LOR *e*MLR MLR
comp=Z,3μm,21.8s,MS5.7
LOR Lormes 147.89 3 *e*PKP2 PKPbc 16 49 58.3 -0.3
LOR MLR MLR
comp=Z,3μm,21.8s,MS6.0
AAE Adis Abeba 147.91 263 *e*P PKPdf 16 49 57.2 +0.5
FURI Furi 147.97 263 *e*P PKPbc 16 49 59.5 -0.3
OBKA Obir 148.02 350 ⇑*i*PKPdf PKPdf 16 49 55.5 -0.3
comp=Z,85nm,1.8s,SNR=28
FETA Feichten 148.03 355 ⇑*i*PKPdf PKPdf 16 49 53.1 -2.7
comp=Z,106nm,1.4s,SNR=27
MYKA Terra Mystica 148.05 351 ⇑*i*PKPdf PKPdf 16 49 56.3 +0.4
comp=Z,115nm,1.7s
SSF Saint Saulge 148.08 4 *e*PKP1 PKPbc 16 49 58.9 -0.2
comp=Z,289nm,1.4s
ABTA Abfaltersbach 148.10 352 ⇑*i*PKPdf PKPdf 16 49 56.4 +0.4
comp=Z,104nm,1.2s,SNR=8.4
MFF Saint Martin d 148.15 9 *e*PKP1 PKPbc 16 49 58.7 -0.6
comp=Z,248nm,1.3s
ERMK Ermenek 148.21 317 *i* P PKPdf 16 49 56.1 -0.4
AVF Avril sur Loir 148.34 4 *e*PKP1 PKPbc 16 49 59.2 -0.6
comp=Z,149nm,1.2s
PHNC Paralimni 148.36 314 P PKPbc 16 50 00.0 -0.3
comp=Z,1.2nm,1.1s
LJU Ljubljana 148.47 349 *e*PKPdf PKPdf 16 49 57.5 +0.9
SMF Signal de Mont 148.51 4 *e*PKP1 PKPbc 16 49 59.8 -0.5
comp=Z,272nm,1.2s
BGF Bois d'Agland 148.53 5 *e*PKP1 PKPbc 16 49 59.9 -0.4
comp=Z,239nm,1.2s
VOY Vojsko 148.59 350 *e*PKPdf PKPdf 16 49 57.8 +1.0
VOY *e* 16 50 00.5
VOY *e* 16 50 05.5
VOY *e* 16 50 23.0
VOY *e* 16 50 34.8
VOY *e* 16 50 46.5
CABF La Chapelle 148.63 1 *e*PKP1 PKPbc 16 50 00.9 +0.4
comp=Z,283nm,1.1s
VISS Visnje 148.64 349 *i* PKPdf PKPdf 16 49 57.7 +0.8
JAVS Javornik 148.70 350 *i* PKPdf PKPdf 16 49 58.1 +1.2
TCF Toulx Ste Croi 148.74 6 *e*PKP1 PKPbc 16 50 00.3 -0.6
comp=Z,168nm,1.2s
GDZ Gediz 148.76 324 *i* P PKPdf 16 49 56.0 -1.3
MAMC Mammari 148.83 315 P PKPbc 16 49 59.9 -1.6
GAZI Gazipasa 148.84 317 *i* P PKPdf 16 49 53.7 -3.9
BOJS Bojanci 148.85 348 *i* PKPdf PKPdf 16 49 58.5 +1.3
CSS Prodhromos 148.87 314 P PKPbc 16 50 00.7 -0.9
comp=Z,1.6nm,1.4s
PLD Plovdiv 148.89 333 P PKPbc 16 50 00.7 -0.7
TRI Trieste 148.93 350 *e*PKPdf PKPdf 16 49 58.4 +1.1
TRI LR LR
comp=Z,3μm,22.0s,MS6.0
DIVS Divibare 148.94 341 P PKPdf 16 49 58.1 +0.7
DURS Dursunbey 148.96 326 *i* P PKPdf 16 49 57.7 +0.1
ISP Isparta 149.00 321 P PKPdf 16 49 57.6 -0.1
AGO Saint Agoulin 149.06 5 PKP PKPbc 16 50 03.3 +1.6
VTS Vitosha 149.11 336 ⇑P PKPbc 16 50 03.0 +1.1
VTS Vitosha 149.11 336 P PKPdf 16 49 58.7 +0.9
VTS Vitosha 149.11 336 ⇑*i*P PKPbc 16 50 03.0 +1.1
PLDF La Plantade 149.17 4 PKP PKPbc 16 50 03.8 +1.8
DEMI Demirci 149.22 325 *i* P PKPdf 16 49 58.8 +0.7
ALN Alexandroupoli 149.24 330 *e*P PKPbc 16 50 02.0 -0.3
ALN Alexandroupoli 149.24 330 P PKPdf 16 49 59.5 +1.5
KHAL Karahalli 149.25 323 *i* P PKPdf 16 49 58.3 +0.2
ALFC Alevga 149.26 315 P PKPbc 16 50 00.4 -2.2
comp=Z,1.0nm,0.6s
EMAZ Mazaricos 149.26 23 PKP PKPab 16 50 04.5 -2.3
BALY Balya 149.32 327 *i* P PKPdf 16 49 57.3 -0.9
PYM Petit Puy Mans 149.35 5 PKP PKPbc 16 50 04.1 +1.7
STS Santiago 149.48 22 PKP PKPbc 16 50 04.8 +2.0
EPON Pontenova 149.57 20 PKP PKPbc 16 50 04.8 +1.8
PPCY Paphos 149.59 315 P PKPbc 16 50 01.0 -2.4
KORT Korkueli 149.63 320 *i* P PKPdf 16 49 59.0 +0.2
RJF Les Rejaudoux 149.64 7 *e*PKP1 PKPbc 16 50 02.8 -0.3
comp=Z,116nm,1.1s
RJF *e*MLR MLR
comp=Z,4μm,21.2s,MS5.9
RJF Les Rejaudoux 149.64 7 *e*PKP2 PKPbc 16 50 02.8 -0.3
RJF MLR MLR
comp=Z,4μm,21.3s,MS6.2
FRNF Fournols 149.67 6 PKP PKPab 16 50 05.8 -2.5
LPL La Plagne 149.72 360 *e*PKP1 PKPbc 16 50 04.0 +0.7
comp=Z,229nm,1.3s
LPG La Plagne 149.74 360 *e*PKP1 PKPbc 16 50 04.2 +0.8
comp=Z,218nm,1.2s
PLE Pljevlja 149.82 341 ⇓*i*PKP PKPdf 16 50 01.3 +2.4
AKHS Akhisar 149.84 326 *i* P PKPdf 16 49 58.5 -0.5
KAVA Kavala 149.87 332 P PKPdf 16 50 00.1 +1.1
NVR Nevrokopi 149.87 333 *e*P PKPbc 16 50 04.5 +0.7
LBL Lubilhac 149.88 5 PKP PKPbc 16 50 06.1 +2.4
LFF La Frestale 149.90 8 *e*PKP1 PKPbc 16 50 03.4 -0.4
comp=Z,207nm,1.3s
SSB Saint Sauveur 149.91 3 PKP PKPbc 16 50 04.8 +1.0
SSB Saint Sauveur 149.91 3 *e*PKPdf PKPdf 16 50 00.6 +1.7
SSB *e*PKPbc PKPbc 16 50 04.6 +0.8
SSB PKP PKPbc 16 50 04.8 +1.0
SSB LR LR
comp=Z,2μm,19.0s,MS5.9
SSB Saint Sauveur 149.91 3 *e*PKHKP PKPdf 16 50 00.6 +1.7
SSB 16 50 04.8
SSB MLR MLR
comp=Z,2μm,19.0s,MS5.9
GOLH Golhisar 149.96 321 *i* P PKPdf 16 50 00.8 +1.5
DNZL Cakirozluk 149.96 323 *i* P PKPdf 16 49 59.0 -0.3
GDM Grand'Maison 150.03 1 PKP PKPab 16 50 07.6 -2.2
EZAM Zamans 150.06 23 PKP PKPbc 16 50 05.9 +1.6
IVA Berane 150.07 340 ⇓*i*PKP PKPdf 16 50 00.4 +1.1
IVA Berane 150.07 340 ⇓*i*PKP PKPdf 16 50 00.5 +1.2
CAF Calviac 150.07 6 *e*PKP1 PKPbc 16 50 04.0 -0.2
comp=Z,234nm,1.8s
UPM Unac-Piva 150.09 342 ⇓*i*PKP PKPdf 16 50 00.3 +1.0
UPM Unac-Piva 150.09 342 ⇓*i*PKP PKPdf 16 50 00.4 +1.1
AYVA Ayvalik 150.12 328 *i* P PKPbc 16 50 04.8 +0.3
SRS Serrai 150.18 334 P PKPdf 16 49 59.1 -0.4
EARI Arriondas 150.19 17 PKP PKPbc 16 50 06.1 +1.6
PVY Plav 150.30 340 ⇓*i*PKP PKPdf 16 50 01.2 +1.6
ORIF Oris-en-Rattie 150.32 1 *e*PKP1 PKPbc 16 50 04.9 +0.1
comp=Z,296nm,1.6s
ORIF *e*MLR MLR
comp=Z,2μm,21.5s,MS5.6
SKO Skopje 150.32 337 P PKPbc 16 50 06.3 +1.4
SKO Skopje 150.32 337 *e*PKP PKPbc 16 50 05.2 +0.3
VIVF Saint-Julien-l 150.34 3 *e*PKP1 PKPbc 16 50 05.0 +0.1
comp=Z,218nm,1.3s
PRK Paraskevi 150.38 328 *e*P PKPbc 16 50 04.8 -0.3
PRK Paraskevi 150.38 328 P PKPbc 16 50 04.8 -0.3
ERUA La Rua 150.41 21 PKP PKPbc 16 50 07.2 +2.1
NKY Niksic 150.41 341 ⇓*i*PKP PKPbc 16 50 02.4 -2.7
NKY Niksic 150.41 341 ⇓*i*PKHKP PKPbc 16 50 02.5 -2.6
KNT Kendrikon 150.43 334 P PKPdf 16 50 01.6 +1.7
VAY Valandovo 150.44 335 P PKPbc 16 50 03.7 -1.5
VAY Valandovo 150.44 335 *e*PKP PKPbc 16 50 04.5 -0.7
BRY Bratogost 150.47 342 ⇓*i*PKP PKPdf 16 50 00.0 +0.1
BRY Bratogost 150.47 342 ⇓*i*PKIKP PKPdf 16 50 00.1 +0.2
MBDF Montbardon 150.51 360 *e*PKP1 PKPbc 16 50 05.3 0.0
comp=Z,292nm,1.3s
SOH Sokhos 150.52 333 *e*P PKPbc 16 50 04.8 -0.6
ELOB Lobios 150.54 22 PKP PKPbc 16 50 07.1 +1.6
OUR Ouranopolis 150.64 332 P PKPbc 16 50 04.4 -1.3
OCF Saint Nazaire 150.64 2 PKP PKPbc 16 50 08.9 +3.3
OG26 St.-Nazaire-De 150.64 2 PKP PKPbc 16 50 08.9 +3.3
KSL Kastellorizon 150.65 320 *e*P PKPbc 16 50 06.2 +0.3
AYDN Tasoluk 150.66 324 *i* P PKPbc 16 50 06.8 +1.0
TTG Podgorica 150.68 341 ⇓*i*PKP PKPbc 16 50 03.4 -2.3
PCAB Cabril 150.69 23 *e*PKPbc PKPbc 16 50 08.0 +2.2
ELAN Lanestosa 150.74 15 PKP PKPbc 16 50 07.5 +1.7
SURF Saint Ours 150.76 360 PKP PKPab 16 50 09.6 -3.2
TURN Turunc 150.77 322 *i* P PKPbc 16 50 06.4 +0.3
GRG Griva 150.81 335 P PKPdf 16 50 01.3 +0.8

HORT Hortiatis 150.81 334 P PKPbc 16 50 06.0 -0.1
URLA Izmir 150.87 326 *i* P PKPdf 16 50 02.8 +2.1
VLC Villacollemand 150.89 354 *e*PKPbc PKPbc 16 50 06.4 +0.2
VLC LR LR
comp=Z,3μm,21.0s,MS6.1
HCY Herceg Novi 150.90 342 ⇓*i*PKP PKPdf 16 50 01.0 +0.4
HCY Herceg Novi 150.90 342 ⇓*i*PKIKP PKPdf 16 50 01.1 +0.5
BUM Brajici-Budva 150.91 341 ⇓*i*PKP PKPbc 16 50 04.1 -2.2
BUM Brajici-Budva 150.91 341 ⇓*i*PKP PKPbc 16 50 04.2 -2.1
KRUS Krusevo 150.91 337 *e*PKP PKPbc 16 50 06.2 -0.1
ECAL Calabor 150.94 21 PKP PKPbc 16 50 08.0 +1.6
GCAM G?zelcaml? 151.00 325 *i* P PKPdf 16 50 00.9 0.0
LASF Ste Croix 151.07 4 *e*PKP1 PKPbc 16 50 06.7 +0.1
comp=Z,141nm,1.2s
ULC Ulcinj 151.10 340 ⇓*i*PKP PKPdf 16 50 03.8 +2.9
ULC Ulcinj 151.10 340 ⇓*i*PKIKP PKPdf 16 50 03.9 +3.0
PAIG Paliouri 151.11 332 P PKPbc 16 50 05.1 -1.7
CHOS Chios island 151.14 327 *e*P PKPbc 16 50 07.1 +0.2
CHOS Chios island 151.14 327 P PKPdf 16 50 03.6 +2.5
PVRL Vila Real 151.18 23 *e*PKPbc PKPbc 16 50 09.9 +2.9
EALK Alkurruntz 151.19 12 PKP PKPbc 16 50 08.0 +1.1
TOUF Mont Tournerai 151.22 359 PKP PKPbc 16 50 04.7 -2.2
AUTN L'Aution 151.23 359 PKP PKPbc 16 50 05.3 -1.7
AUTN PKP PKPbc 16 50 09.0 +2.0
ELIZ Elizondo 151.24 12 PKP PKPbc 16 50 08.5 +1.5
SAOF Saorge 151.24 358 PKP PKPdf 16 50 02.4 +1.4
SMRF Simiane la Rot 151.25 1 *e*PKP1 PKPbc 16 50 06.7 -0.3
comp=Z,200nm,1.2s
BDRM Kayabasi 151.32 323 *i* P PKPbc 16 50 08.1 +0.6
MVIF Mont Vial 151.34 359 PKP PKPbc 16 50 05.2 -2.0
SJPF Ste Jean 151.35 12 *e*PKP1 PKPbc 16 50 07.2 -0.1
comp=Z,116nm,1.4s
SBF Sospel 151.37 359 *e*PKP1 PKPbc 16 50 05.8 -1.5
comp=Z,216nm,1.2s
FNA Florina 151.37 336 P PKPdf 16 50 02.2 +0.8
MBAR Mbarara 151.40 239 PFAKE 16 50 10.0 +7.8
MBAR LR LR
comp=Z,660nm,19.0s,MS5.5
TIR Tirane 151.44 339 *e*PKPbc PKPbc 16 50 08.4 +0.8
TIR LR LR
comp=Z,4μm,21.0s,MS6.2
TIR Tirane 151.44 339 P PKPbc 16 50 05.0 -2.6
LARF Larrau 151.47 12 PKP PKPbc 16 50 04.3 -3.2
CALN Calern 151.49 359 PKP PKPbc 16 50 05.3 -2.3
LIT Litokhoron 151.49 334 *e*P PKPbc 16 50 06.0 -1.7
LIT Litokhoron 151.49 334 P PKPdf 16 49 59.4 -2.2
REVF Revere 151.49 359 PKP PKPdf 16 50 02.6 +1.2
ARG Arkhangelos 151.50 321 *e*P PKPbc 16 50 08.2 +0.3
ARG Arkhangelos 151.50 321 P PKPbc 16 50 07.5 -0.4
MVO Moncorvo 151.53 22 *e*PKPbc PKPbc 16 50 09.5 +1.7
MVO Moncorvo 151.53 22 PKP PKPbc 16 50 08.0 +0.2
PVIS Viseu 151.60 23 *e*PKPbc PKPbc 16 50 09.7 +1.8
KZN Kozani 151.62 335 *e*P PKPbc 16 50 07.7 -0.3
MTLF Montolieu 151.66 7 *e*PKP1 PKPbc 16 50 07.8 -0.2
comp=Z,100nm,1.4s
FRF La Foret Royal 151.68 360 *e*PKP1 PKPbc 16 50 06.8 -1.2
comp=Z,273nm,1.6s
ETSF Etsaut 151.68 11 *e*PKP1 PKPbc 16 50 08.3 +0.2
comp=Z,146nm,1.1s
EPF Esparros 151.71 10 *e*PKP1 PKPbc 16 50 09.0 +0.9
XOR Xorichti 151.78 332 P PKPdf 16 50 04.2 +2.2
NIS1 Nisyros Isl. 151.79 323 P PKPbc 16 50 10.8 +2.3
VIEF Viey 151.80 10 PKP PKPbc 16 50 06.9 -1.4
NEST Nestorio 151.81 336 P PKPdf 16 50 04.2 +2.2
NEO Neokhori 151.81 332 *e*P PKPbc 16 50 07.9 -0.6
MLS Moulis 151.89 8 PKP PKPbc 16 50 05.9 -2.6
LMR La Murre 151.91 0 *e*PKP1 PKPbc 16 50 07.3 -1.2
comp=Z,141nm,1.2s
MTE Manteigas 152.01 23 *e*PKPbc PKPbc 16 50 11.2 +2.3
MTE *e*LR LR 17 47 03.3
comp=Z,2μm,20.0s
MTE Manteigas 152.01 23 *e*PKPbc PKPbc 16 50 11.2 +2.4
MTE LR LR
comp=Z,3μm,21.0s,MS6.0
EBIE Bielsa 152.01 10 PKP PKPbc 16 50 09.3 +0.5
THL Klokotos Trika 152.14 334 *e*P PKPbc 16 50 06.5 -2.7
THL Klokotos Trika 152.14 334 P PKPdf 16 50 01.4 -1.2
AQU L'Aquila 152.24 349 ⇑P PKPbc 16 50 09.7 +0.3
AQU LR LR
comp=Z,4μm,22.0s,MS6.2
AQU L'Aquila 152.24 349 ⇑*i*P PKPbc 16 50 09.7 +0.4
ATAL Atalanti 152.40 331 P PKPdf 16 50 02.9 -0.1
LKR Lokris 152.45 331 *e*P PKPbc 16 50 09.2 -0.7
AGG Agios Georgios 152.45 333 *e*P PKPbc 16 50 09.6 -0.3
AGG Agios Georgios 152.45 333 P PKPbc 16 50 09.5 -0.4
CSOR Sort 152.47 9 PKP PKPbc 16 50 10.5 +0.6
CLLI Llivia 152.48 7 PKP PKPbc 16 50 10.5 +0.6
PTL Penteli 152.51 329 *e*P PKPbc 16 50 11.6 +1.5
KARP Karpathos 152.53 321 *e*P PKPbc 16 50 09.6 -0.6
JAN Janina 152.54 336 *e*P PKPbc 16 50 11.5 +1.4
EJON La Jonquera 152.61 6 PKP PKPbc 16 50 10.6 +0.5
ATH Athens Observa 152.64 329 *e*P PKPdf 16 50 06.3 +2.9
VLY Voula,Athens 152.70 329 *e*P PKPbc 16 50 08.6 -1.9
EVR Evrytania 152.76 333 *e*P PKPbc 16 50 15.2 +4.6
ESAC San Caprasio 152.84 12 PKP PKPbc 16 50 11.1 +0.4
EPLA Plasencia 152.84 22 PKP PKPbc 16 50 10.5 -0.3
NOCI Noci 152.85 342 *e*P PKPbc 16 50 11.6 +0.8
KEK Kerkira 152.90 337 *e*P PKPbc 16 50 08.5 -2.4
PMRV Marv??o 152.90 24 *e*PKPbc PKPbc 16 50 12.3 +1.4
GUD Guadarrama 152.95 18 PKP PKPbc 16 50 11.4 +0.5
LTK Loutraki 152.96 331 *e*P PKPbc 16 50 10.3 -0.8
LTK Loutraki 152.96 331 P PKPdf 16 50 04.9 +1.1
EMIR Miracle 152.98 8 PKP PKPbc 16 50 11.1 +0.1
KALE Kalithea 153.05 332 P PKPdf 16 50 03.7 -0.2
EFP Efpalio 153.12 333 *e*P PKPbc 16 50 13.2 +1.8
EFP Efpalio 153.12 333 P PKPdf 16 50 05.4 +1.4
CFON Fontmartina 153.24 7 PKP PKPbc 16 50 11.6 0.0
DID Didima 153.24 329 *e*P PKPbc 16 50 09.9 -1.8
LAKA Lakka 153.25 332 P PKPdf 16 50 06.1 +1.9
GUR Goura 153.33 331 *e*P PKPbc 16 50 12.3 +0.4
GUR Goura 153.33 331 P PKPdf 16 50 05.7 +1.3
ETOR Torete 153.35 15 PKP PKPbc 16 50 11.0 -0.9
EVO Evora 153.41 26 *e*PKP2 PKPab 16 50 24.5 +0.3
comp=Z,100nm,1.5s
EVO *e*MLR MLR
comp=Z,3μm,22.8s,MS5.8
EPOB Poblet 153.46 9 PKP PKPbc 16 50 11.2 -0.8
EBAD Badajoz 153.63 24 PKP PKPbc 16 50 11.9 -0.7
NPS Neapolis 153.64 323 *e*P PKPbc 16 50 14.0 +1.3
ERTA Horta de San J 153.72 11 PKP PKPbc 16 50 12.2 -0.5
VLX Vlachokerasia 153.76 330 *e*P PKPbc 16 50 13.0 +0.1
VLX Vlachokerasia 153.76 330 P PKPbc 16 50 11.3 -1.6
PAB San Pablo 153.89 19 PFAKE 16 50 20.0 +15
PAB LR LR
comp=Z,2μm,19.0s,MS6.0
ESDC Sonseca Array 153.89 19 PKP PKPdf 16 50 06.0 +0.9
ESDC PKP PKPdf 16 50 12.3 +7.2
ESDC PKPbc PKPbc 16 50 14.6 +1.5
ESDC Sonseca Array 153.89 19 PKP PKPdf 16 50 06.0 +0.9
comp=Z,0.2nm,0.4s,baz=355,slow=2.4,SNR=4.3
ESDC PKPbc PKPbc 16 50 14.6 +1.5
comp=Z,0.3nm,0.3s,baz=330,slow=3.8,SNR=7.7
ESLA Sonseca Array 153.89 19 PFAKE 16 50 20.0 +15
ESLA LR LR
comp=Z,15μm,20.0s,MS6.8
VLS Valsamata 153.90 334 *e*P PKPbc 16 50 09.6 -3.5
CUC Castrocucco 153.94 344 PFAKE 16 50 20.0 +15
CUC LR LR
comp=Z,2μm,20.0s,MS6.0
CUC Castrocucco 153.94 344 *e*P PKPbc 16 50 14.1 +0.9
ITM Ithomi 154.13 331 *e*P PKPbc 16 50 15.4 +1.7
EMOS Mosqueruela 154.14 12 PKP PKPbc 16 50 12.5 -1.1
PCVE Castro Verde 154.15 27 *e*PKPab PKPab 16 50 28.7 +1.4
PCVE *e*LR LR 17 46 41.2
comp=Z,4μm,22.0s
SIVA Sivas 154.28 324 *e*P PKPbc 16 50 16.5 +2.5
VAM Vamos 154.34 325 *e*P PKPdf 16 50 09.6 +3.7
TIP Timpagrande 154.42 341 PKPdf PKPdf 16 50 07.1 +1.2
TIP LR LR
comp=Z,4μm,21.0s,MS6.2
EGRO El Granado 154.47 27 PKP PKPbc 16 50 13.2 -1.2
EMIN Mina Concepcio 154.62 25 PKP PKPbc 16 50 13.5 -1.2
GVD Gavdhos 154.81 324 *e*P PKPab 16 50 30.7 +0.4
EADA Adamuz 155.06 21 PKP PKPdf 16 50 14.0 +7.2
EVIA Vianos 155.28 17 PKP PKPdf 16 50 14.5 +7.4
CEL Celeste 155.53 342 PFAKE 16 50 20.0 +13
CEL LR LR
comp=Z,3μm,21.0s,MS6.2
CEL Celeste 155.53 342 *e*P PKPdf 16 50 07.4 0.0
ETOB Tobarra 155.53 15 PKP PKPdf 16 50 14.4 +7.0
VSL Villasalto 155.61 355 PFAKE 16 50 20.0 +13
VSL LR LR
comp=Z,2μm,19.0s,MS5.9
ESPR Espera 155.72 25 PKP PKPdf 16 50 15.0 +7.3
EQES Quesada 155.88 19 PKP PKPdf 16 50 15.3 +7.4
SFS San Fernando 155.92 26 PFAKE 16 50 20.0 +12
SFS LR LR
comp=Z,4μm,20.0s,MS6.2
EHUE Huescar 156.02 18 PKP PKPdf 16 50 15.4 +7.3
ELOJ Sierra Loja 156.12 21 PKP PKPdf 16 50 15.6 +7.3
ECOG Cogollos-Vega 156.20 20 PKP PKPdf 16 50 16.0 +7.6
EJIF Jimena Fronter 156.24 25 PKP PKPdf 16 50 15.7 +7.3
ERON Agron 156.36 21 PKP PKPdf 16 50 16.0 +7.4
EMUR La Murta 156.37 15 PKP PKPdf 16 50 15.5 +7.0
EMIJ Mijas 156.41 23 PKP PKPdf 16 50 15.9 +7.2
EGUA Guajares 156.61 21 PKP PKPdf 16 50 16.3 +7.4
WDD Wield Dalam 158.15 342 PFAKE 16 50 20.0 +9.1
WDD LR LR
comp=Z,2μm,19.0s,MS5.9
KEST Kesra 159.34 353 *e*PKPdf PKPdf 16 50 13.9 +1.6
KEST Kesra 159.34 353 PKP PKPdf 16 50 13.9 +1.6
comp=Z,2.5nm,1.2s,baz=232,slow=1.0,SNR=5.0
KEST PKPab PKPab 16 50 49.2 -0.4
comp=Z,5.1nm,1.0s,baz=334,slow=3.9,SNR=6.3
LIC Lamto 165.61 127 *e*PKP1 PKPdf 16 50 20.5 +1.4
comp=Z,156nm,1.7s
LIC Lamto 165.61 127 *e*PKIKP PKPdf 16 50 21.7 +2.6
comp=Z,23nm,0.9s
LIC *e*MLR MLR
comp=Z,5μm,21.5s
LIC Lamto 165.61 127 *e*PKPdf PKPdf 16 50 21.7 +2.6
LIC LR LR
comp=Z,3μm,21.5s
TIC Toumodi 165.88 125 *e*PKP1 PKPdf 16 50 19.8 +0.4
comp=Z,153nm,1.7s
KIC Kosan Boka 165.92 127 *e*PKP1 PKPdf 16 50 19.8 +0.4
comp=Z,148nm,1.7s
DBIC Dimbokro 166.02 126 PKP PKPdf 16 50 19.4 -0.1
comp=Z,6.4nm,0.9s,baz=210,slow=3.4,SNR=4.7
DBIC PKPab PKPab 16 51 19.9 +0.2
comp=Z,9.7nm,1.0s,baz=243,slow=4.5,SNR=2.9
DBIC PP PP 16 55 05.9 -0.7
comp=Z,6.3nm,1.0s,baz=143,slow=3.0,SNR=4.6
DBIC Dimbokro 166.02 126 PKIKP PKPdf 16 50 19.4 -0.1
DBIC 16 51 19.9
DBIC 16 55 05.9
DBIC pmax pmax
comp=Z,6.0nm,0.9s
DBIC pmax pmax
comp=Z,10.0nm,1.0s
DBIC pmax pmax
comp=Z,6.0nm,1.0s
TAM Tamanrasset 172.33 7 *e*PKPdf PKPdf 16 50 24.5 +1.4
TAM LR LR
comp=Z,3μm,20.0s
TORD Torodi Ar. Bea 174.92 112 PKP PKPdf 16 50 23.6 -0.6
comp=Z,7.9nm,1.2s,baz=235,slow=1.4,SNR=10
TORD PKPab PKPab 16 51 58.5 -0.6
comp=Z,4.6nm,1.1s,baz=274,slow=2.2,SNR=2.8
TORD PP PP 16 55 48.8 -2.8
comp=Z,9.6nm,1.4s,baz=257,slow=1.7,SNR=6.3

IDC 19 16:43:23.2±4.2, 10°.95S×115°.28E, h0km, mb2.9/3, mb1 3.2/3, mb1mx3.1/16, mbtmp3.0/3, Error ellipse: s-maj=243.8km s-min=28.0km az=45.0, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.41**	**118**	P	P	16 48 01.6	-0.4
	0.6nm,0.9s,baz=301,slow=11,SNR=4.6						
ASAR	**Alice Springs**	**21.79**	**128**	P	P	16 48 17.4	+0.6
	0.6nm,1.0s,baz=301,slow=9.1,SNR=5.3						
MKAR	**Makanchi Array**	**64.60**	**336**	P	P	16 54 02.5	+0.1
	0.1nm,0.3s,baz=145,slow=7.6,SNR=4.9						

DJA 19 16:52:47,8°.71S×111°.10E, h9km, MLv3.5/7, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCJI	**Pacitan**	**0.52**	**8**	P	Pg	16 52 57.3	+0.2
PCJI				S	Sg	16 53 05.0	+1.1
PWJI	**Pagerwojo**	**0.98**	**46**	P	Pg	16 53 04.7	-1.1
PWJI				S	Sg	16 53 18.4	-0.1
UGM	**Wanagama**	**0.98**	**324**	P	Pg	16 53 04.8	-1.0
UGM				S	Sg	16 53 18.5	0.0
SJI	**Sawahan**	**1.17**	**34**	P	Pb	16 53 08.0	-1.4
SJI				S	Sb	16 53 24.4	-0.4
YOGI	**Yogyakarta**	**1.19**	**318**	P	Pb	16 53 08.1	-1.7
YOGI				S	Sb	16 53 24.9	-0.4
KRKI	**Karangkates**	**1.45**	**68**	P	Pn	16 53 12.7	-0.7
BJII	**Banjamegara**	**1.94**	**315**	P	Pn	16 53 20.2	0.0
GMJI	**Gumukmas**	**2.36**	**80**	P	Pn	16 53 25.0	-0.9

*NEIC **19** 16:55:24.6±0.9, 44°.87N×11°.25E, h10km, ML3.0(STR), Error ellipse: s-maj=27.0km s-min=8.8km az=152.0*
*ROM **19** 16:55:24.8±0.1, 44°.87N×11°.19E, h1km, Ml2.9/27, Error ellipse: s-maj=1.8km s-min=1.2km az=69.0*
*ISCJB **19** 16:55:25.3±0.2, 44°.87N±0°.01×11°.23E±0°.02, h11km±2km, Error ellipse: s-maj=2.5km s-min=1.8km az=33.6*
*CSEM **19** 16:55:25.4±0.1, 44°.85N×11°.23E, h10km, ML3.8/15, Error ellipse: s-maj=2.7km s-min=1.8km az=124.0*
*SZGRF **19** 16:55:25.0, 44°.67N×11°.15E, h10km, mb3.2, Northern Italy*
*VIE **19** 16:55:26.0±0.3, 44°.87N×11°.35E, h8km±2km, mb2.9/12, ML3.2/16, Error ellipse: s-maj=2.5km s-min=1.5km az=154.0 41 km N of Bologna*
*STR **19** 16:55:28.5±0.4, 44°.47N×10°.99E, h10km, Ml3.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 19 16:55:25.9±0.2, 44°.85N±0°.01×11°.23E±0°.02, h12km±1km, n179, σ1°.08/276, 22C-28D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAVA	**Ravarino**	**0.12**	**219**	⇓*i*Pg	**Pg**	**16 55 27.6**	**-1.4**
RAVA				Sg	**Sg**	**16 55 30.4**	**-0.9**
	64μm,0.2s						
RAVA	**Ravarino**	**0.12**	**219**	⇓*i*Pg	**Pg**	**16 55 27.6**	**-1.4**
RAVA				Sg	**Sg**	**16 55 30.4**	**-0.9**
	64μm,0.2s						
FIU	**Minerbio Fiu**	**0.28**	**138**	Pg	**Pg**	**16 55 32.5**	**+0.8**
FIU				Sg	**Sg**	**16 55 37.2**	**+1.6**
FIU	**Minerbio Fiu**	**0.28**	**138**	Pg	**Pg**	**16 55 32.5**	**+0.8**
FIU				Sg	**Sg**	**16 55 37.2**	**+1.6**
SBPO	**S.Benedetto Po**	**0.30**	**313**	Pg	**Pg**	**16 55 31.4**	**-0.6**
SBPO				Sg	**Sg**	**16 55 34.6**	**-1.5**
	4μm,0.6s						
SBPO	**S.Benedetto Po**	**0.30**	**313**	Pg	**Pg**	**16 55 31.4**	**-0.6**
SBPO				Sg	**Sg**	**16 55 34.6**	**-1.5**
	4μm,0.6s						
NOVE	**Novellara**	**0.37**	**262**	⇓*i*Pg	**Pg**	**16 55 31.7**	**-1.6**
NOVE				Sg	**Sg**	**16 55 38.6**	**+0.4**
	1μm,0.4s						
NOVE	**Novellara**	**0.37**	**262**	⇓*i*Pg	**Pg**	**16 55 31.7**	**-1.6**
NOVE				Sg	**Sg**	**16 55 38.6**	**+0.4**
	1μm,0.4s						
MTRZ	**Monterenzio**	**0.50**	**160**	Pg	**Pg**	**16 55 38.6**	**+2.8**
	1μm,0.7s						
ZCCA	**Zocca**	**0.53**	**200**	Pg	**Pg**	**16 55 36.8**	**+0.5**
ZCCA				Sg	**Sg**	**16 55 45.5**	**+2.2**
	834nm,0.9s						
ZCCA	**Zocca**	**0.53**	**200**	Pg	**Pg**	**16 55 36.8**	**+0.5**
ADRI	**Adria, Italy**	**0.59**	**71**	⇑*i*Pg	**Pg**	**16 55 38.5**	**+1.0**
ADRI				*i* Sg	**Sg**	**16 55 48.8**	**+3.6**
ADRI	**Adria, Italy**	**0.59**	**71**	*i* Pg	**Pg**	**16 55 38.5**	**+1.1**
ADRI				*i* Sg	**Sg**	**16 55 48.8**	**+3.6**
TEOL	**Teolo**	**0.60**	**31**	⇓*e*Pg	**Pg**	**16 55 37.5**	**-0.1**
TEOL				eSg	**Sg**	**16 55 47.9**	**+2.5**
TEOL	**Teolo**	**0.60**	**31**	*e*Pg	**Pg**	**16 55 37.5**	**-0.1**
TEOL				eSg	**Sg**	**16 55 47.9**	**+2.4**
PRMA	**PARMA**	**0.66**	**263**	Pg

		508nm,1.1s							
PZZT	**Monte Pizzetto**		**0.77**	**200**	Pg		**Pg**	**16 55 39.6**	**-1.1**
		382nm,0.5s							
PZZT	**Monte Pizzetto**		**0.77**	**200**	Pg		**Pg**	**16 55 39.6**	**-1.1**
		382nm,0.5s							
SEI	**Scarperia**		**0.80**	**173**	Pg		**Pg**	**16 55 42.2**	**+0.8**
		614nm,0.4s							
SEI	**Scarperia**		**0.80**	**173**	Pg		**Pg**	**16 55 42.2**	**+0.8**
		614nm,0.4s							
BALD	**Monte Baldo**		**0.88**	**341**	*e*Pg		**Pg**	**16 55 42.2**	**-0.7**
BALD					*e*Sg		**Sg**	**16 55 55.8**	**+1.3**
BALD	**Monte Baldo**		**0.88**	**341**	*e*Pg		**Pg**	**16 55 42.2**	**-0.7**
BALD					*e*Sg		**Sg**	**16 55 55.8**	**+1.3**
BDI	**Bagni Di Lucca**		**0.91**	**210**	Pn		**Pn**	**16 55 43.1**	**-1.4**
		293nm,0.4s							
BDI	**Bagni Di Lucca**		**0.91**	**210**	Pn		**Pn**	**16 55 43.1**	**-1.4**
		293nm,0.4s							
SALO	**Salr**		**0.92**	**327**	Pg		**Pg**	**16 55 42.3**	**-1.3**
SALO					Sg		**Sg**	**16 55 56.8**	**+1.3**
		1µm,0.3s							
SALO	**Salr**		**0.92**	**327**	Pg		**Pg**	**16 55 42.3**	**-1.3**
SALO					Sg		**Sg**	**16 55 56.8**	**+1.3**
		1µm,0.3s							
VLC	**Villacollemand**		**0.92**	**221**	*e*P		**Pg**	**16 55 42.7**	**-0.9**
VLC	**Villacollemand**		**0.92**	**221**	Pg		**Pg**	**16 55 42.8**	**-0.8**
		423nm,1.1s							
VLC	**Villacollemand**		**0.92**	**221**	*e*P		**Pg**	**16 55 42.7**	**-0.9**
VMG	**Vicchio**		**0.92**	**166**	Pn		**Pn**	**16 55 44.1**	**-0.5**
		207nm,0.3s							
VMG	**Vicchio**		**0.92**	**166**	Pn		**Pn**	**16 55 44.1**	**-0.5**
		207nm,0.3s							
SFI	**Santa Sofia**		**1.04**	**155**	Pn		**Pn**	**16 55 46.3**	**-0.1**
SFI					Sg		**Sg**	**16 56 03.2**	**+3.6**
		158nm,0.5s							
MAIM	**Mastiano**		**1.07**	**210**	Pn		**Pn**	**16 55 44.9**	**-1.9**
MAIM					Sn		**Sn**	**16 56 02.2**	**+0.6**
		271nm,0.5s							
MAIM	**Mastiano**		**1.07**	**210**	Pn		**Pn**	**16 55 44.9**	**-1.9**
MAIM					Sn		**Sn**	**16 56 02.2**	**+0.6**
		271nm,0.5s							
CRMI	**Carmignano**		**1.08**	**190**	Pn		**Pn**	**16 55 46.2**	**-0.6**
CRMI					Sn		**Sn**	**16 56 02.2**	**+0.6**
		176nm,0.5s							
CRMI	**Carmignano**		**1.08**	**190**	Pn		**Pn**	**16 55 46.2**	**-0.6**
CRMI					Sn		**Sn**	**16 56 02.2**	**+0.6**
		176nm,0.5s							
MTLO	**Montello**		**1.14**	**32**⇑	*e*Pg		**Pg**	**16 55 47.3**	**-0.6**
MTLO					*e*Sg		**Sg**	**16 56 04.6**	**+1.9**
MTLO	**Montello**		**1.14**	**32**	*e*Pg		**Pg**	**16 55 47.3**	**-0.6**
MTLO					*e*Sg		**Sg**	**16 56 04.6**	**+1.9**
CTI	**Castel Tesino**		**1.23**	**14**	Pn		**Pn**	**16 55 48.0**	**-1.0**
		238nm,4.6s							
CTI	**Castel Tesino**		**1.23**	**14**	Pn		**Pn**	**16 55 48.0**	**-1.0**
		238nm,4.6s							
PII	**Pisa**		**1.24**	**204**	Pn		**Pn**	**16 55 48.6**	**-0.4**
		103nm,0.2s							
PII	**Pisa**		**1.24**	**204**	Pn		**Pn**	**16 55 48.6**	**-0.4**
		103nm,0.2s							
BOB	**Bobbio (Coli)**		**1.27**	**267**	Pn		**Pn**	**16 55 49.1**	**-0.4**
BOB					Sg		**Sg**	**16 56 07.4**	**+0.6**
		200nm,0.8s							
BOB	**Bobbio (Coli)**		**1.27**	**267**	Pn		**Pn**	**16 55 49.1**	**-0.4**
BOB					Sg		**Sg**	**16 56 07.4**	**+0.6**
		200nm,0.8s							
RSM	**Repubblica di**		**1.27**	**136**	Pn		**Pn**	**16 55 51.2**	**+1.7**
		65nm,0.8s							
RSM	**Repubblica di**		**1.27**	**136**	Pn		**Pn**	**16 55 51.2**	**+1.7**
		65nm,0.8s							
SC2M	**Scurtabo**		**1.29**	**250**	Pn		**Pn**	**16 55 49.1**	**-0.6**
SC2M					Sn		**Sn**	**16 56 07.4**	**+0.5**
		498nm,0.5s							
SC2M	**Scurtabo**		**1.29**	**250**	Pn		**Pn**	**16 55 49.1**	**-0.6**
SC2M					Sn		**Sn**	**16 56 07.4**	**+0.5**
		498nm,0.5s							
VARN	**Col Varnada, M**		**1.30**	**28**⇓	*e*Pg		**Pn**	**16 55 48.9**	**-1.0**
VARN	**Col Varnada, M**		**1.30**	**28**	*e*Pg		**Pn**	**16 55 48.9**	**-1.0**
MABI	**Malga Bissina**		**1.30**	**338**	Pn		**Pn**	**16 55 49.0**	**-0.9**
MABI					Sn		**Sn**	**16 56 07.2**	**-0.1**
		143nm,0.2s							
MABI	**Malga Bissina**		**1.30**	**338**	Pn		**Pn**	**16 55 49.0**	**-0.9**
MABI					Sn		**Sn**	**16 56 07.2**	**-0.1**
		143nm,0.2s							
CSNT	**Castellina Chi**		**1.38**	**178**	Pn		**Pn**	**16 55 50.6**	**-0.3**
CSNT					Sn		**Sn**	**16 56 10.2**	**+1.1**
		111nm,0.5s							
CSNT	**Castellina Chi**		**1.38**	**178**	Pn		**Pn**	**16 55 50.6**	**-0.3**
CSNT					Sn		**Sn**	**16 56 10.2**	**+1.1**
		111nm,0.5s							
PARC	**Parchiule**		**1.40**	**149**	Pn		**Pn**	**16 55 52.1**	**+0.8**
		84nm,0.7s							
PARC	**Parchiule**		**1.40**	**149**	Pn		**Pn**	**16 55 52.1**	**+0.8**
		84nm,0.7s							
MDI	**Monti di Nese**		**1.42**	**311**⇑	*i*Pn		**Pn**	**16 55 50.7**	**-0.8**
MDI					Sn		**Sn**	**16 56 09.9**	**-0.1**
		210nm,0.3s							
MDI	**Monti di Nese**		**1.42**	**311**⇑	*i*Pn		**Pn**	**16 55 50.7**	**-0.8**
MDI					Sn		**Sn**	**16 56 09.9**	**-0.1**
		210nm,0.3s							
CAE	**Caneva**		**1.44**	**36**⇑	*e*Pg		**Pn**	**16 55 51.4**	**-0.3**
CAE					*e*Sg		**Sg**	**16 56 11.6**	**-0.5**
CAE	**Caneva**		**1.44**	**36**	*e*Pg		**Pn**	**16 55 51.4**	**-0.3**
CAE					*e*Sg		**Sg**	**16 56 11.6**	**-0.5**
FAU	**Forcella Aurin**		**1.48**	**21**⇓	*e*Pg		**Pn**	**16 55 51.6**	**-0.7**
FAU					*e*Sg		**Sg**	**16 56 11.8**	**-1.7**
FAU	**Forcella Aurin**		**1.48**	**21**	*e*Pg		**Pn**	**16 55 51.6**	**-0.7**
FAU					*e*Sg		**Sg**	**16 56 11.8**	**-1.7**
BADI	**Badiali**		**1.53**	**151**	Pn		**Pn**	**16 55 55.8**	**+2.8**
		108nm,0.7s							
FSSB	**Fossombrone**		**1.61**	**136**	Pn		**Pn**	**16 55 56.4**	**+2.3**
		46nm,0.1s							
CAFI	**Castiglion Fio**		**1.61**	**160**	Pn		**Pn**	**16 55 54.4**	**+0.3**
		59nm,0.8s							
CAFI	**Castiglion Fio**		**1.61**	**160**	Pn		**Pn**	**16 55 54.4**	**+0.3**
		59nm,0.8s							
CSO	**Casso**		**1.62**	**28**⇑	*e*Pg		**Pn**	**16 55 53.3**	**-1.0**
CSO	**Casso**		**1.62**	**28**	*e*Pg		**Pn**	**16 55 53.3**	**-0.9**
MLNI	**Malnisio**		**1.62**	**36**⇓	*e*Pg		**Pn**	**16 55 54.5**	**+0.2**
MLNI					*e*Sg		**Sg**	**16 56 16.1**	**-2.0**
MLNI	**Malnisio**		**1.62**	**36**	*e*Pg		**Pn**	**16 55 54.5**	**+0.2**
MLNI					*e*Sg		**Sg**	**16 56 16.1**	**-2.0**
APPI	**Appiano**		**1.63**	**360**	Pn		**Pn**	**16 55 54.4**	**0.0**
		204nm,0.3s							
APPI	**Appiano**		**1.63**	**360**	Pn		**Pn**	**16 55 54.4**	**0.0**
		204nm,0.3s							
CIMO	**Cimolais**		**1.69**	**30**⇑	*e*Pn		**Pn**	**16 55 54.2**	**-1.0**
CIMO	**Cimolais**		**1.69**	**30**	*e*Pn		**Pn**	**16 55 54.2**	**-1.0**
GROG	**Isola di Gorgo**		**1.72**	**215**	Pn		**Pn**	**16 55 54.6**	**-1.0**
		111nm,0.5s							
GROG	**Isola di Gorgo**		**1.72**	**215**	Pn		**Pn**	**16 55 54.6**	**-1.0**
		111nm,0.5s							
BRMO	**Bormio**		**1.73**	**340**	Pn		**Pn**	**16 55 56.9**	**+1.1**
		80nm,0.3s							
BRMO	**Bormio**		**1.73**	**340**	Pn		**Pn**	**16 55 56.9**	**+1.1**
		80nm,0.3s							
BERNI	**Berninapass**		**1.78**	**332**	Pn		**Pn**	**16 55 57.9**	**+1.5**
BERNI	**Berninapass**		**1.78**	**332**	Pn		**Pn**	**16 55 57.9**	**+1.5**
AFL	**Alpe Faloria**		**1.81**	**21**⇑	*e*Pn		**Pn**	**16 55 57.5**	**+0.6**
AFL	**Alpe Faloria**		**1.81**	**21**	*e*Pn		**Pn**	**16 55 57.5**	**+0.7**
MPRI	**Monte Prat**		**1.86**	**41**	*e*Pn		**Pn**	**16 55 57.7**	**+0.1**
MPRI	**Monte Prat**		**1.86**	**41**	*e*Pn		**Pn**	**16 55 57.7**	**+0.1**
FUORN	**Ofenpass-Fuorn**		**1.89**	**339**	Pn		**Pn**	**16 55 58.8**	**+0.8**
FUORN	**Ofenpass-Fuorn**		**1.89**	**339**	Pn		**Pn**	**16 55 58.8**	**+0.8**
CSMI	**Casera Mimoias**		**1.94**	**30**⇑	*e*Pn		**Pn**	**16 55 58.4**	**-0.2**
CSMI	**Casera Mimoias**		**1.94**	**30**	*e*Pn		**Pn**	**16 55 58.4**	**-0.2**
BAD	**Bernadia**		**1.98**	**45**⇓	*e*Pn		**Pn**	**16 55 58.4**	**-0.8**
BAD	**Bernadia**		**1.98**	**45**	*e*Pn		**Pn**	**16 55 58.4**	**-0.8**
COLI	**Coloredo**		**1.98**	**49**⇓	*e*Pn		**Pn**	**16 55 58.6**	**-0.6**
COLI					*e*Sn		**Sn**	**16 56 24.4**	**+0.4**
COLI	**Coloredo**		**1.98**	**49**	*e*Pn		**Pn**	**16 55 58.6**	**-0.7**
COLI					*e*Sn		**Sn**	**16 56 24.4**	**+0.4**
TRI	**Trieste**		**1.98**	**63**	*e*Pn		**Pn**	**16 55 58.0**	**-1.3**
TRI	**Trieste**		**1.98**	**63**	Pn		**Pn**	**16 55 58.6**	**-0.7**
TRI	**Trieste**		**1.98**	**63**	Pn		**Pn**	**16 55 58.6**	**-0.7**
GMNA	**Gemona**		**2.00**	**44**	Pn		**Pn**	**16 55 58.8**	**-0.8**
		190nm,0.8s							
GMNA	**Gemona**		**2.00**	**44**	Pn		**Pn**	**16 55 58.8**	**-0.8**
		190nm,0.8s							
VINO	**Villanova**		**2.01**	**45**⇓	*e*Pn		**Pn**	**16 55 58.8**	**-0.9**
VINO	**Villanova**		**2.01**	**45**	*e*Pn		**Pn**	**16 55 58.8**	**-0.9**
SABO	**M.te Sabotino**		**2.02**	**55**⇑	*e*Pn		**Pn**	**16 55 59.8**	**+0.1**
SABO	**M.te Sabotino**		**2.02**	**55**	*e*Pn		**Pn**	**16 55 59.8**	**+0.1**
FVI	**Forni Avoltri**		**2.06**	**31**	Pn		**Pn**	**16 56 00.2**	**-0.1**
		67nm,0.5s							
FVI	**Forni Avoltri**		**2.06**	**31**	Pn		**Pn**	**16 56 00.2**	**-0.1**
		67nm,0.5s							
SKDS	**Skadanscina**		**2.09**	**70**	*i*Pn		**Pn**	**16 56 00.1**	**-0.6**
SKDS					*i*Sn		**Sn**	**16 56 25.2**	**-1.4**
SKDS									
		comp=Z,15nm,0.1s							
ABTA	**Abfaltersbach**		**2.10**	**25**⇑	*e*Pn		**Pn**	**16 56 01.3**	**+0.5**
		SNR=12							
ABTA					⇑*i*Sn		**Sn**	**16 56 27.5**	**+0.7**
ABTA	**Abfaltersbach**		**2.10**	**25**	Pn		**Pn**	**16 56 01.3**	**+0.4**
		SNR=12							
ABTA					Sn		**Sn**	**16 56 27.5**	**+0.6**
ZOU	**Zoufplan**		**2.10**	**35**	*e*Pn		**Pn**	**16 56 01.3**	**+0.4**
ZOU	**Zoufplan**		**2.10**	**35**	*e*Pn		**Pn**	**16 56 01.3**	**+0.4**
DAVOX	**Davos/Dischmat**		**2.15**	**334**	Pn		**Pn**	**16 56 02.6**	**+1.1**
DAVOX	**Davos/Dischmat**		**2.15**	**334**	Pn		**Pn**	**16 56 02.6**	**+1.1**
DRE	**Drenchia**		**2.15**	**51**⇑	*e*Pn		**Pn**	**16 56 01.1**	**-0.5**
DRE	**Drenchia**		**2.15**	**51**	*e*Pn		**Pn**	**16 56 01.1**	**-0.5**
PTCC	**Patocco-Chiusa**		**2.15**	**43**	Pn		**Pn**	**16 56 04.8**	**+3.2**
		comp=Z,35nm,0.6s							
PLRO	**Paularo**		**2.17**	**38**	*e*Pn		**Pn**	**16 56 02.4**	**+0.6**
PLRO	**Paularo**		**2.17**	**38**	*e*Pn		**Pn**	**16 56 02.4**	**+0.6**
FETA	**Feichten**		**2.20**	**351**⇑	*e*Pn		**Pn**	**16 56 03.4**	**+1.1**
		SNR=42							
FETA					⇑*i*Sn		**Sn**	**16 56 31.3**	**+2.0**
FETA	**Feichten**		**2.20**	**351**	Pn		**Pn**	**16 56 03.4**	**+1.2**
		SNR=42							
FETA					Sn		**Sn**	**16 56 31.3**	**+2.0**
VOY	**Vojsko**		**2.22**	**57**	*e*Pn		**Pn**	**16 56 01.8**	**-0.7**
VOY					*e*			16 56 04.8	
VOY					*e*Sn		**Sn**	**16 56 29.3**	**-0.5**
VOY	**Vojsko**		**2.22**	**57**	*e*Pn		**Pn**	**16 56 01.8**	**-0.7**
VOY					*e*Sn		**Sn**	**16 56 29.3**	**-0.5**
CADS	**Cadrg**		**2.24**	**51**	*i*Pn		**Pn**	**16 56 03.7**	**+1.0**
CADS					*i*Sn		**Sn**	**16 56 30.4**	**+0.1**
CADS									
		comp=Z,28nm,0.2s							
CADS	**Cadrg**		**2.24**	**51**	*i*Pn		**Pn**	**16 56 03.7**	**+0.9**
CADS					*i*Sn		**Sn**	**16 56 30.4**	**+0.1**
		comp=Z,28nm,0.2s							
JAVS	**Javornik**		**2.25**	**61**	*e*Pn		**Pn**	**16 56 02.6**	**-0.4**
JAVS					*i*Sn		**Sn**	**16 56 30.7**	**0.0**
JAVS									
		comp=Z,26nm,0.2s							
JAVS	**Javornik**		**2.25**	**61**	*e*Pn		**Pn**	**16 56 02.6**	**-0.4**
JAVS					*i*Sn		**Sn**	**16 56 30.7**	**0.0**
		comp=Z,26nm,0.2s							
LSR	**Lussari**		**2.29**	**44**	*e*Pn		**Pn**	**16 56 04.3**	**+0.8**
LSR	**Lussari**		**2.29**	**44**	*e*Pn		**Pn**	**16 56 04.3**	**+0.8**
ORO	**Oropa**		**2.42**	**290**	Pn		**Pn**	**16 56 07.0**	**+1.7**
		comp=Z,40nm,0.2s							
ORO	**Oropa**		**2.42**	**290**	Pn		**Pn**	**16 56 07.0**	**+1.7**
		comp=Z,40nm,0.2s							
WTTA	**Wattenberg**		**2.43**	**7**	*e*Pn		**Pn**	**16 56 06.3**	**+0.9**
WTTA	**Wattenberg**		**2.43**	**7**	*e*Pn		**Pn**	**16 56 06.4**	**+1.0**
		SNR=21							
WTTA					⇓*i*Sn		**Sn**	**16 56 36.0**	**+1.0**
WTTA	**Wattenberg**		**2.43**	**7**	Pn		**Pn**	**16 56 06.4**	**+1.0**
		SNR=21							
WTTA					Sn		**Sn**	**16 56 36.0**	**+1.0**
MYKA	**Terra Mystica**		**2.45**	**43**⇓	*i*Pg		**Pg**	**16 56 11.8**	**-1.2**
MYKA					⇓*i*Sg		**Sg**	**16 56 45.1**	**+0.4**
		comp=Z,20nm,0.3s							
MYKA	**Terra Mystica**		**2.45**	**43**	Pg		**Pg**	**16 56 11.8**	**-1.2**
MYKA					Sg		**Sg**	**16 56 45.1**	**+0.3**
		comp=Z,20nm,0.3s							
MOTA	**Moosalm**		**2.50**	**358**⇓	*e*Pn		**Pn**	**16 56 07.1**	**+0.8**
		SNR=23							
MOTA					⇓*i*Sn		**Sn**	**16 56 39.6**	**+3.0**
MOTA	**Moosalm**		**2.50**	**358**	Pn		**Pn**	**16 56 07.1**	**+0.8**
		SNR=23							
MOTA					Sn		**Sn**	**16 56 39.6**	**+2.9**
WATA	**Walderalm**		**2.50**	**5**⇑	*e*Pn		**Pn**	**16 56 07.3**	**+1.0**
		SNR=16							
WATA					⇓*i*Sn		**Sn**	**16 56 39.2**	**+2.5**
WATA	**Walderalm**		**2.50**	**5**	Pn		**Pn**	**16 56 07.3**	**+1.0**
		SNR=16							
WATA					Sn		**Sn**	**16 56 39.2**	**+2.5**
DAVA	**Damuels**		**2.61**	**339**	*e*Pn		**Pn**	**16 56 09.1**	**+1.2**
DAVA					*e*Sn		**Sn**	**16 56 40.8**	**+1.3**
DAVA	**Damuels**		**2.61**	**339**⇓	*e*Pn		**Pn**	**16 56 09.2**	**+1.3**
		SNR=15							
DAVA					⇑*i*Sn		**Sn**	**16 56 42.0**	**+2.5**
DAVA	**Damuels**		**2.61**	**339**	Pn		**Pn**	**16 56 09.2**	**+1.3**
		SNR=15							
DAVA					Sn		**Sn**	**16 56 42.0**	**+2.5**
NVLJ	**Novalja**		**2.61**	**95**	*e*Pn		**Pn**	**16 56 06.9**	**-1.0**
NVLJ					Sn		**Sn**	**16 56 38.3**	**-1.2**
NVLJ	**Novalja**		**2.61**	**95**	*e*Pn		**Pn**	**16 56 06.9**	**-1.0**
NVLJ					Sn		**Sn**	**16 56 38.3**	**-1.2**
RETA	**Reutte**		**2.66**	**353**⇓	*i*Pn		**Pn**	**16 56 09.9**	**+1.3**
RETA					⇑*i*Sn		**Sn**	**16 56 42.7**	**+2.0**
RETA	**Reutte**		**2.66**	**353**	Pn		**Pn**	**16 56 09.9**	**+1.4**
RETA					Sn		**Sn**	**16 56 42.7**	**+2.1**
KBA	**Koelnbreinsper**		**2.67**	**33**⇑	*e*Pn		**Pn**	**16 56 08.7**	**-0.1**
		SNR=9.9							
KBA					⇑*i*Sn		**Sn**	**16 56 40.9**	**-0.1**
KBA					⇓*i*Sg		**Sg**	**16 56 52.1**	**+0.4**
		comp=Z,16nm,0.4s							
KBA	**Koelnbreinsper**		**2.67**	**33**	Pn		**Pn**	**16 56 08.7**	**0.0**
		SNR=9.9							
KBA					Sn		**Sn**	**16 56 40.9**	**-0.1**
KBA					Sg		**Sg**	**16 56 52.1**	**+0.3**
		comp=Z,16nm,0.4s							
SAOF	**Saorge**		**2.77**	**253**	P		**Pn**	**16 56 09.7**	**-0.4**
SAOF					S		**Sn**	**16 56 42.2**	**-1.2**
SAOF	**Saorge**		**2.77**	**253**	P		**Pn**	**16 56 09.7**	**-0.4**
SAOF					S		**Sn**	**16 56 42.2**	**-1.2**
AUTN	**L'Aution**		**2.85**	**254**	P		**Pn**	**16 56 10.6**	**-0.6**
AUTN					S		**Sn**	**16 56 44.8**	**-0.7**
AUTN	**L'Aution**		**2.85**	**254**	P		**Pn**	**16 56 10.6**	**-0.6**
AUTN					S		**Sn**	**16 56 44.8**	**-0.7**
OBKA	**Obir**		**2.86**	**53**	*e*Pn		**Pn**	**16 56 12.0**	**+0.7**
OBKA	**Obir**		**2.86**	**53**⇑	*i*Pn		**Pn**	**16 56 11.1**	**-0.2**
OBKA					⇓*i*Sn		**Sn**	**16 56 45.5**	**-0.1**
OBKA	**Obir**		**2.86**	**53**	Pn		**Pn**	**16 56 11.1**	**-0.2**
OBKA					Sn		**Sn**	**16 56 45.5**	**-0.1**
LUCF	**Luceram**		**2.94**	**252**	P		**Pn**	**16 56 11.6**	**-0.9**
LUCF					S		**Sn**	**16 56 47.3**	**-0.4**
LUCF	**Luceram**		**2.94**	**252**	P		**Pn**	**16 56 11.6**	**-0.9**
LUCF					S		**Sn**	**16 56 47.3**	**-0.4**
TOUF	**Mont Tournerai**		**2.97**	**255**	P		**Pn**	**16 56 12.2**	**-0.6**
TOUF					S		**Sn**	**16 56 48.5**	**+0.1**
TOUF	**Mont Tournerai**		**2.97**	**255**	P		**Pn**	**16 56 12.2**	**-0.6**
TOUF					S		**Sn**	**16 56 48.5**	**+0.1**
SOKA	**Soboth**		**3.23**	**54**⇓	*i*Pn		**Pn**	**16 56 16.4**	**0.0**
SOKA					⇑*i*Sn		**Sn**	**16 56 54.8**	**0.0**
SOKA	**Soboth**		**3.23**	**54**	Pn		**Pn**	**16 56 16.4**	**0.0**
SOKA					Sn		**Sn**	**16 56 54.8**	**+0.1**
MOA	**Molln**		**3.66**	**34**	*e*Pn		**Pn**	**16 56 23.4**	**+1.1**
MOA	**Molln**		**3.66**	**34**⇓	*i*Pn		**Pn**	**16 56 22.5**	**+0.1**
MOA					⇓*i*Sn		**Sn**	**16 57 06.3**	**+0.8**
MOA	**Molln**		**3.66**	**34**	Pn		**Pn**	**16 56 22.5**	**+0.1**
MOA					Sn		**Sn**	**16 57 06.3**	**+0.9**
BFO	**Black Forest**		**4.01**	**331**	*e*Pn		**Pn**	**16 56 26.4**	**-0.8**
BFO					*e*Sn		**Sn**	**16 57 10.1**	**-4.0**
BFO	**Black Forest**		**4.01**	**331**	*e*Pn		**Pn**	**16 56 26.4**	**-0.8**
BFO					*e*Sn		**Sn**	**16 57 10.1**	**-4.0**
GEC2	**GERESS Array S**		**4.34**	**22**	*e*Pn		**Pn**	**16 56 31.0**	**-0.7**
GEC2					*e*Sn		**Sn**	**16 57 20.2**	**-1.9**
GEC2	**GERESS Array S**		**4.34**	**22**	*e*Pn		**Pn**	**16 56 31.0**	**-0.7**
GEC2					*e*Sn		**Sn**	**16 57 20.2**	**-1.9**
WET	**Wettzell**		**4.44**	**14**	*e*Pn		**Pn**	**16 56 32.4**	**-0.6**
WET					*e*Sn		**Sn**	**16 57 22.7**	**-1.9**
WET	**Wettzell**		**4.44**	**14**	*e*Pn		**Pn**	**16 56 32.4**	**-0.6**
WET					*e*Sn		**Sn**	**16 57 22.7**	**-1.9**
CSNA	**Conrad Observa**		**4.44**	**45**⇓	*i*Pn		**Pn**	**16 56 32.6**	**-0.4**
CSNA					⇓*i*Sn		**Sn**	**16 57 24.4**	**-0.3**
CSNA	**Conrad Observa**		**4.44**	**45**	Pn		**Pn**	**16 56 32.6**	**-0.5**
CSNA					Sn		**Sn**	**16 57 24.4**	**-0.2**
STON	**Ston**		**5.08**	**111**	*e*Pn		**Pn**	**16 56 40.1**	**-1.7**
STON					Sn		**Sn**	**16 57 37.9**	**-2.5**
STON	**Ston**		**5.08**	**111**	*e*Pn		**Pn**	**16 56 40.1**	**-1.7**
STON					Sn		**Sn**	**16 57 37.9**	**-2.5**
CLL	**Collm**		**6.57**	**10**	*e*Sg		**Sg**	**16 58 55.0**	**-1.6**
		comp=Z,6.0nm,0.9s							

IDC 19 16:55:31.1±20.0, 23°.81S×66°.94W, h358km±183km, mb3.7/2, mb1 3.4/3, mb1mx3.1/14, mbtmp3.4/3, Error ellipse: s-maj=202.2km s-min=33.0km az=142.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**17.14**	**189**	P	P	16 59 08.3	0.0
	0.1nm,0.3s,baz=0.0,slow=11,SNR=3.0						
DBIC	**Dimbokro**	**67.69**	**72**	P	P	17 05 51.5	+0.3
	2.4nm,0.9s,baz=220,slow=7.9,SNR=4.1						
TORD	**Torodi Ar. Bea**	**76.45**	**69**	P	P	17 06 42.5	-0.1
	1.5nm,0.4s,baz=253,slow=5.7,SNR=32						
ASAR	**Alice Springs**	**128.65**	**205**	PKP	PKPdf	17 13 56.3	-0.4
	0.4nm,0.9s,baz=119,slow=2.1,SNR=3.0						
WRA	**Warramunga Arr**	**131.81**	**207**	PKP	PKPdf	17 14 03.0	+0.2
	0.2nm,0.6s,baz=150,slow=1.6,SNR=4.7						
MKAR	**Makanchi Array**	**146.35**	**39**	PKPbc	PKPbc	17 14 29.4	-0.7
	0.3nm,0.8s,baz=304,slow=3.1,SNR=2.8						

*IDC **19** 17:15:20.0±1.2, 37°.64N×21°.02E, h0km, mb3.6/10, mb1 3.7/10, mb1mx3.6/23, mbtmp3.6/10, Error ellipse: s-maj=25.3km s-min=24.4km az=110.0*

*ISCJB **19** 17:15:21.9±0.6, 37°.53N±0°.02×20°.78E±0°.03, h9km±3km, mb3.5/10, Error ellipse: s-maj=4.5km s-min=3.2km az=32.0*

*THE **19** 17:15:23.1, 37°.55N×20°.88E, h0km±2km, ML3.3/5, Error ellipse: s-maj=2.6km s-min=0.8km az=226.0*

*ATH **19** 17:15:23.5, 37°.61N×20°.90E, h17km±1km, MD3.5/21, ML3.3*

*NEIC **19** 17:15:23.5, 37°.61N×20°.90E, h17km, ML3.3(ATH), After ATH.*

*CSEM **19** 17:15:23.3±0.2, 37°.54N×20°.85E, h10km, ML3.3/5, Error ellipse: s-maj=5.6km s-min=4.1km az=34.0*

ISC 19 17:15:22.8±0.6, 37°.53N±0°.02×20°.82E±0°.03, h9km±3km, n155, σ1°.24/205, mb3.5/10, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KFL	**Anninata**	**0.58**	**357**	P	**Pg**	**17 15 33.9**	**-0.2**
KFL				S	**Sg**	**17 15 41.7**	**0.0**
KFL	**Anninata**	**0.58**	**357**	P	**Pg**	**17 15 33.9**	**-0.2**
KFL				S	**Sg**	**17 15 41.7**	**0.0**
VLS	**Valsamata**	**0.67**	**344**	*e*Pn	**Pg**	**17 15 35.7**	**-0.1**
VLS				*e*Sn	**Sg**	**17 15 44.6**	**0.0**
VLS	**Valsamata**	**0.67**	**344**	*e*PN	**Pg**	**17 15 35.7**	**-0.1**
VLS				*e*SN	**Sg**	**17 15 44.6**	**0.0**
VLS	**Valsamata**	**0.67**	**344**	P	**Pg**	**17 15 35.8**	**0.0**
VLS				S	**Sg**	**17 15 46.0**	**

VLY	**Voula,Athens**	**2.38**	**81**	*e*Pb	**Pn**	**17 16 02.4**	**+0.5**
VLY	**Voula,Athens**	**2.38**	**81**	*e*PB	**Pn**	**17 16 02.4**	**+0.5**
VLY	**Voula,Athens**	**2.38**	**81**	*e*Pb	**Pn**	**17 16 02.4**	**+0.5**
PTL	**Penteli**	**2.47**	**77**	*e*Pn	**Pn**	**17 16 03.1**	**0.0**
PTL				*e*Sn	**Sn**	**17 16 33.7**	**+0.4**
PTL	**Penteli**	**2.47**	**77**	*e*PN	**Pn**	**17 16 03.1**	**0.0**
PTL				*e*SN	**Sn**	**17 16 33.7**	**+0.4**
PTL	**Penteli**	**2.47**	**77**	*e*Pn	**Pn**	**17 16 03.1**	**0.0**
PTL				*e*Sn	**Sn**	**17 16 33.7**	**+0.4**
NEO	**Neokhori**	**2.59**	**46**	*e*Pn	**Pn**	**17 16 05.3**	**+0.5**
NEO	**Neokhori**	**2.59**	**46**	*e*PN	**Pn**	**17 16 05.3**	**+0.5**
NEO	**Neokhori**	**2.59**	**46**	*e*Pn	**Pn**	**17 16 05.3**	**+0.5**
XOR	**Xorichti**	**2.61**	**45**	P	**Pn**	**17 16 05.6**	**+0.5**
XOR	**Xorichti**	**2.61**	**45**	P	**Pn**	**17 16 05.5**	**+0.4**
XOR	**Xorichti**	**2.61**	**45**	P	**Pn**	**17 16 05.6**	**+0.5**
KZN	**Kozani**	**2.87**	**15**	P	**Pn**	**17 16 11.2**	**+2.5**
KZN	**Kozani**	**2.87**	**15**	P	**Pn**	**17 16 11.2**	**+2.5**
LIT	**Litokhoron**	**2.88**	**26**	P	**Pn**	**17 16 08.2**	**-0.6**
LIT	**Litokhoron**	**2.88**	**26**	P	**Pn**	**17 16 08.2**	**-0.6**
LIT	**Litokhoron**	**2.88**	**26**	P	**Pn**	**17 16 08.2**	**-0.6**
AOS	**Alonnisos**	**2.91**	**55**	P	**Pn**	**17 16 09.6**	**+0.4**
AOS	**Alonnisos**	**2.91**	**55**	P	**Pn**	**17 16 09.3**	**+0.1**
AOS	**Alonnisos**	**2.91**	**55**	P	**Pn**	**17 16 09.6**	**+0.4**
PAIG	**Paliouri**	**3.28**	**42**	P	**Pn**	**17 16 14.2**	**0.0**
PAIG	**Paliouri**	**3.28**	**42**	P	**Pn**	**17 16 14.2**	**0.0**
FNA	**Florina**	**3.28**	**7**	P	**Pn**	**17 16 15.0**	**+0.7**
FNA	**Florina**	**3.28**	**7**	P	**Pn**	**17 16 15.2**	**+0.9**
FNA	**Florina**	**3.28**	**7**	P	**Pn**	**17 16 15.0**	**+0.7**
THE	**Thessaloniki**	**3.52**	**28**	P	**Pn**	**17 16 17.9**	**+0.3**
THE	**Thessaloniki**	**3.52**	**28**	P	**Pn**	**17 16 17.9**	**+0.3**
HORT	**Hortiatis**	**3.54**	**29**	P	**Pn**	**17 16 18.1**	**+0.2**
HORT	**Hortiatis**	**3.54**	**29**	P	**Pn**	**17 16 18.1**	**+0.2**
TIP	**Timpagrande**	**3.59**	**299**	P	**Pn**	**17 16 20.9**	**+2.3**
TIP	**Timpagrande**	**3.59**	**299**	P	**Pn**	**17 16 20.9**	**+2.3**
GRG	**Griva**	**3.64**	**19**	P	**Pn**	**17 16 19.6**	**+0.4**
GRG	**Griva**	**3.64**	**19**	P	**Pn**	**17 16 19.6**	**+0.4**
OUR	**Ouranopolis**	**3.73**	**40**	P	**Pn**	**17 16 20.3**	**-0.2**
OUR	**Ouranopolis**	**3.73**	**40**	P	**Pn**	**17 16 20.3**	**-0.2**
SOH	**Sokhos**	**3.83**	**30**	P	**Pn**	**17 16 22.7**	**+0.8**
SOH	**Sokhos**	**3.83**	**30**	P	**Pn**	**17 16 22.6**	**+0.7**
SOH	**Sokhos**	**3.83**	**30**	P	**Pn**	**17 16 22.6**	**+0.7**
KRUS	**Krusevo**	**3.85**	**5**	*i* Pn	**Pn**	**17 16 21.6**	**-0.5**
CEL	**Celeste**	**3.97**	**282**	P	**Pn**	**17 16 25.0**	**+1.3**
CEL	**Celeste**	**3.97**	**282**	P	**Pn**	**17 16 25.0**	**+1.3**
SRS	**Serrai**	**4.18**	**30**	P	**Pn**	**17 16 26.9**	**+0.3**
SRS	**Serrai**	**4.18**	**30**	P	**Pn**	**17 16 26.9**	**+0.3**
CUC	**Castrocucco**	**4.62**	**304**	P	**Pn**	**17 16 37.4**	**+4.6**
CUC	**Castrocucco**	**4.62**	**304**	P	**Pn**	**17 16 37.4**	**+4.6**
VAE	**Valgurnera**	**5.10**	**271**	Pn	**Pn**	**17 16 45.5**	**+6.2**
VAE				Sn	**Sn**	**17 16 37.3**	**+0.1**
VAE	**Valgurnera**	**5.10**	**271**	Pn	**Pn**	**17 16 45.5**	**+6.3**
	2.2nm,0.3s,baz=86,slow=11,SNR=2.8						
VAE				Sn	**Sn**	**17 17 38.3**	**+0.1**
	2.4nm,0.3s,baz=202,slow=19,SNR=2.9						
VAE	**Valgurnera**	**5.10**	**271**	Sn	**Sn**	**17 17 38.3**	**+0.1**
WDD	**Wield Dalam**	**5.33**	**254**	P	**Pn**	**17 16 44.7**	**+2.3**
WDD	**Wield Dalam**	**5.33**	**254**	P	**Pn**	**17 16 44.7**	**+2.3**
BARS	**Barje**	**5.34**	**8**	*e*Pn	**Pn**	**17 16 41.9**	**-0.7**
VTS	**Vitosha**	**5.38**	**19**	P	**Pn**	**17 16 46.0**	**+2.9**
VTS	**Vitosha**	**5.38**	**19**	P	**Pn**	**17 16 46.0**	**+2.9**
STON	**Ston**	**5.85**	**337**	*e*Pn	**Pn**	**17 16 46.8**	**-2.8**
STON				Sn	**Sn**	**17 17 50.0**	**-6.6**
BBLS	**Lazići**	**6.42**	**351**	*e*Pn	**Pn**	**17 16 57.5**	**0.0**
DIVS	**Divibare**	**6.59**	**355**	*e*Pn	**Pn**	**17 16 58.8**	**-1.0**
NVLJ	**Novalja**	**8.34**	**329**	*e*Pn	**Pn**	**17 17 23.2**	**-0.6**
NVLJ				Sn	**Sn**	**17 18 50.6**	**-7.4**
NVLJ	**Novalja**	**8.34**	**329**	*e*Pn	**Pn**	**17 17 23.1**	**-0.7**
MLR	**Muntele Rosu**	**8.83**	**24**	Pn	**Pn**	**17 17 33.6**	**+3.0**
	0.2nm,0.3s,baz=307,slow=23,SNR=4.0						
MLR	**Muntele Rosu**	**8.83**	**24**	Pn	**Pn**	**17 17 33.6**	**+3.1**
HFS	**Hagfors**	**23.08**	**351**	P	**P**	**17 20 25.6**	**-2.8**
	0.6nm,0.3s,mb3.5,baz=162,slow=11,SNR=9.5						
EKA	**Eskdalemuir Ar**	**24.10**	**325**	P	**P**	**17 20 37.2**	**-1.2**
	1.3nm,0.8s,mb3.4,baz=126,slow=8.0,SNR=3.6						
EKA	**Eskdalemuir Ar**	**24.10**	**325**	P	**P**	**17 20 37.2**	**-1.2**
FINES	**FINESS Array B**	**24.16**	**6**	P	**P**	**17 20 35.9**	**-3.1**
	1.0nm,0.7s,mb3.4,baz=185,slow=13,SNR=4.9						
NOA	**NORSAR Array B**	**24.30**	**349**	P	**P**	**17 20 38.7**	**-1.5**
	0.4nm,0.7s,mb3.0,baz=159,slow=9.4,SNR=3.3						
NOA	**NORSAR Array B**	**24.30**	**349**	P	**P**	**17 20 38.7**	**-1.5**
AKTK	**Aktyubinsk**	**29.39**	**52**	P	**P**	**17 21 23.4**	**-2.7**
AKTO	**Aktyubinsk**	**29.39**	**52**	P	**P**	**17 21 23.4**	**-2.7**
	0.7nm,0.5s,mb3.7,baz=244,slow=8.2,SNR=4.0						
TORD	**Torodi Ar. Bea**	**29.68**	**220**	P	**P**	**17 21 29.1**	**+0.2**
	0.2nm,0.4s,mb3.2,baz=27,slow=8.6,SNR=5.2						
ARCES	**ARCESS Array B**	**32.17**	**3**	P	**P**	**17 21 48.4**	**-2.0**
	1.0nm,0.7s,mb3.7,baz=189,slow=11,SNR=6.5						
MKAR	**Makanchi Array**	**45.44**	**58**	P	**P**	**17 23 38.8**	**-3.0**
	0.3nm,0.3s,mb3.6,baz=276,slow=7.7,SNR=12						
ZALV	**Zalesovo Beam**	**45.95**	**48**	P	**P**	**17 23 42.8**	**-2.9**
	1.1nm,0.4s,mb4.2,baz=283,slow=7.2,SNR=5.3						
CMAR	**Chiang Mai Arr**	**69.74**	**82**	P	**P**	**17 26 31.2**	**-2.1**
	0.3nm,0.3s,mb3.7,baz=307,slow=7.4,SNR=5.4						
CMAR	**Chiang Mai Arr**	**69.74**	**82**	P	**P**	**17 26 31.2**	**-2.2**

*IDC **19** 17:23:38.8±1.3,20.°75N×124.°58E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.6/19, mbtmp3.6/7, Error ellipse: s-maj=59.5km s-min=17.8km az=63.0*
*NEIC **19** 17:23:39.5±1.0,20.°85N×124.°54E, h10km, Error ellipse: s-maj=34.5km s-min=8.6km az=55.0*
*JMA **19** 17:23:45.9±0.3,21.°06N×124.°44E, h50km, M4.1*
ISC 19 17:23:45.4±1.1, 20.°96N±0.°06×124.°28E±0.°05, h61km±15km, n27, σ1°s24/41, mb3.5/7, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**3.12**	**352**	P	**Pn**	**17 24 33.0**	**+0.9**
HATJ				*e*S	**Sn**	**17 25 07.9**	**-0.2**
JKRS	**Kuro-shima**	**3.27**	**356**	P	**Pn**	**17 24 35.4**	**+1.1**
JKRS				*e*S	**Sn**	**17 25 12.7**	**+0.7**
JIJ	**Ishigaki jima**	**3.39**	**358**	P	**Pn**	**17 24 36.2**	**+0.3**
JIJ				*e*S	**Sn**	**17 25 14.8**	**-0.1**
IRIF	**Iriomote-Funau**	**3.40**	**351**	P	**Pn**	**17 24 37.2**	**+1.2**
IRIF				*e*S	**Sn**	**17 25 15.4**	**+0.3**
TWG	**Pinlang**	**3.51**	**302**	*e*Pn	**Pn**	**17 24 36.6**	**-0.9**
TWG				*e*Sn	**Sn**	**17 25 15.6**	**-2.2**
YULB	**Yu-li**	**3.68**	**312**	*e*Pn	**Pn**	**17 24 38.8**	**-1.0**
YULB				*e*Sn	**Sn**	**17 25 18.4**	**-3.6**
YOJ	**Yonaguni jima**	**3.68**	**342**	P	**Pn**	**17 24 41.3**	**+1.5**
YOJ				*e*S	**Sn**	**17 25 23.0**	**+1.0**
JTJ	**Tarama**	**3.69**	**6**	P	**Pn**	**17 24 40.2**	**+0.3**
JTJ				*e*S	**Sn**	**17 25 21.4**	**-0.7**
JOGS	**Gusukube**	**3.92**	**15**	P	**Pn**	**17 24 43.7**	**+0.5**
JMJ	**Miyako jima 2**	**3.95**	**13**	P	**Pn**	**17 24 44.2**	**+0.7**
NACB	**Ninganchiao**	**4.05**	**323**	*e*Pn	**Pn**	**17 24 44.5**	**-0.4**
NACB				*e*Sn	**Sn**	**17 25 28.9**	**-2.3**
TPUB	**Ta-pu**	**4.11**	**305**	*e*Pn	**Pn**	**17 24 46.6**	**+0.9**
TPUB				*e*Sn	**Sn**	**17 25 33.6**	**+1.0**
SSLB	**Suanglung**	**4.17**	**313**	*e*Pn	**Pn**	**17 24 46.8**	**+0.2**
SSLB				*e*Sn	**Sn**	**17 25 30.2**	**-3.9**
YHNB	**Yeheng**	**4.56**	**325**	*e*Pn	**Pn**	**17 24 53.0**	**+1.0**
YHNB				*e*Sn	**Sn**	**17 25 42.7**	**-1.2**
TATO	**Taipei**	**4.76**	**328**	Pn	**Pn**	**17 24 57.1**	**+2.5**
TATO				*e*Sn	**Sn**	**17 25 47.5**	**-0.9**
JKE	**Kume jima 2**	**5.81**	**23**	P	**Pn**	**17 25 09.9**	**+0.8**
JKE				*e*S	**Sn**	**17 26 12.6**	**-1.8**
JOW	**Kunigami**	**6.89**	**31**	P	**Pn**	**17 25 22.4**	**-1.5**
JTK	**Tokunoshima**	**8.02**	**31**	P	**Pn**	**17 25 37.3**	**-1.9**
CMAR	**Chiang Mai Arr**	**23.98**	**268**	P	**P**	**17 28 57.5**	**+3.1**
	0.5nm,0.9s,mb3.0,baz=67,slow=9.1,SNR=4.1						
MDJ	**Mudanjiang**	**24.00**	**9**	P	**P**	**17 28 49.3**	**-5.0**
SONM	**Songino Array**	**30.45**	**336**	P	**P**	**17 29 56.5**	**+4.3**
	0.5nm,0.8s,mb3.3,baz=148,slow=8.5,SNR=3.1						
WRA	**Warramunga Arr**	**41.82**	**166**	P	**P**	**17 31 27.5**	**-1.9**
	0.7nm,0.6s,mb3.5,baz=346,slow=9.2,SNR=5.8						
MKAR	**Makanchi Array**	**42.64**	**317**	P	**P**	**17 31 41.1**	**+5.3**
	0.7nm,0.7s,mb3.5,baz=109,slow=8.9,SNR=7.0						
ZALV	**Zalesovo Beam**	**44.49**	**328**	P	**P**	**17 31 52.5**	**+1.9**
	0.4nm,0.4s,mb3.5,baz=123,slow=10,SNR=2.7						
ASAR	**Alice Springs**	**45.33**	**168**	P	**P**	**17 31 56.3**	**-1.3**
	0.2nm,0.5s,mb3.2,baz=345,slow=6.1,SNR=11						
STKA	**Stephens Creek**	**55.09**	**162**	P	**P**	**17 33 11.5**	**+0.3**
STKA	**Stephens Creek**	**55.09**	**162**	P	**P**	**17 33 11.5**	**+0.3**
	3.0nm,0.8s,mb4.3,baz=326,slow=8.8,SNR=5.9						

IDC 19 17:59:12.1±10.0, 7°.25S×123°.58E, h75km±116km, mb3.0/1, mb1 3.3/4, mb1mx3.1/19, mbtmp3.1/4, ML3.0/2, Error ellipse: s-maj=152.0km s-min=46.0km az=48.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.97**	**170**	P	Pn	18 01 45.8	-0.5
	0.1nm,0.3s,baz=7.6,slow=12,SNR=4.7						
FITZ				S	Sn	18 03 37.7	-10
	0.2nm,0.3s,baz=288,slow=20,SNR=5.3						
WRA	**Warramunga Arr**	**16.38**	**141**	P	Pn	18 02 58.8	+1.4
	0.1nm,0.3s,baz=316,slow=12,SNR=5.4						
WRA				S	S	18 05 52.5	-14
	baz=314,slow=26,SNR=3.1						
ASAR	**Alice Springs**	**19.10**	**150**	P	Pn	18 03 28.6	-1.9
	0.2nm,0.3s,baz=323,slow=12,SNR=17						
MKAR	**Makanchi Array**	**65.09**	**330**	P	P	18 09 44.9	+0.2
	0.2nm,0.7s,baz=117,slow=7.0,SNR=3.0						

*IDC **19** 18:00:30.6±0.8,5.°13S×102.°25E, h0km, mb4.0/9, mb1 4.1/9, mb1mx4.0/18, mbtmp4.0/9, Error ellipse: s-maj=36.6km s-min=15.6km az=62.0*
*ISCJB **19** 18:00:34.7±1.2,5.°24S±0.°09×102.°21E±0.°09, h50km±10km, mb4.0/13, Error ellipse: s-maj=20.8km s-min=5.9km az=43.9*
*DJA **19** 18:00:35,5.°27S×102.°23E, h25km, MLv4.5/15*
*NEIC **19** 18:00:39.8±2.4,5.°07S×102.°29E, h75km±21km, mb4.1/4, Error ellipse: s-maj=30.4km s-min=11.4km az=58.0*
ISC 19 18:00:36.9±1.0,5.°17S±0.°09×102.°29E±0.°09, h49km±9km, n38, σ0°s93/36, mb4.0/13, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**1.05**	**40**	P	**Pn**	**18 00 54.1**	**-1.2**
KSI	**Kapahiang**	**1.54**	**11**	P	**Pn**	**18 01 01.3**	**-0.7**
LWLI	**Liwa**	**1.77**	**85**	P	**Pn**	**18 01 04.9**	**-0.2**
MDSI	**Maura Dua**	**2.00**	**70**	P	**Pn**	**18 01 08.4**	**+0.1**
KASI	**Kota Agung**	**2.23**	**99**	P	**Pn**	**18 01 10.8**	**-0.6**
KLSI		**2.48**	**79**	P	**Pn**	**18 01 15.2**	**+0.3**
BLSI	**Bandar Lampung**	**2.95**	**94**	P	**Pn**	**18 01 21.1**	**-0.2**
KRJI	**Kerinci**	**3.17**	**345**	P	**Pn**	**18 01 24.7**	**+0.3**
RBSI	**Rajabasa**	**3.50**	**101**	P	**Pn**	**18 01 29.0**	**+0.1**
CGJI	**Cibinong**	**3.68**	**113**	P	**Pn**	**18 01 30.5**	**-0.8**
SDSI	**Sungai Dareh**	**4.30**	**348**	P	**Pn**	**18 01 41.2**	**+1.3**
PDSI	**Padang**	**4.61**	**337**	P	**Pn**	**18 01 43.7**	**-0.4**
DBJI	**Dramaga**	**4.64**	**107**	P	**Pn**	**18 01 44.2**	**-0.4**
CBJI	**Citeko**	**4.71**	**105**	P	**Pn**	**18 01 46.9**	**+1.5**
SISI	**Saibi**	**4.98**	**320**	P	**Pn**	**18 01 48.5**	**-0.7**
	0.5nm77nm,0.9s						
PPI	**Padang Panjang**	**5.05**	**338**	P	**Pn**	**18 01 50.8**	**+0.6**
	0.4nm6µm54nm,1.0s						
CISI	**Cisompet, Garu**	**5.98**	**114**	P	**Pn**	**18 02 01.9**	**-1.1**
	0.3nm62nm,0.7s						
MNSI	**Mandailing Nat**	**6.52**	**335**	P	**Pn**	**18 02 10.2**	**-0.1**
	0.2nm33nm,0.4s						
MYKOM	**Kota Tinggi**	**7.09**	**13**	P	**Pn**	**18 02 20.5**	**+2.3**
GSI	**Gunungsitoli**	**7.97**	**324**	P	**Pn**	**18 02 29.7**	**-0.6**
	27nm,0.6s						
UGM	**Wanagama**	**8.62**	**109**	P	**Pn**	**18 02 39.4**	**+0.2**
KULM	**Kulim**	**10.52**	**351**	*e*Pn	**Pn**	**18 03 06.7**	**+1.5**
CMAR	**Chiang Mai Arr**	**23.71**	**352**	P	**P**	**18 05 44.8**	**+0.2**
	1.1nm,0.5s,mb3.6,baz=183,slow=9.7,SNR=13						
CHTO	**Chiang Mai**	**24.06**	**352**	P	**P**	**18 05 38.5**	**-9.3**
	2.1nm,0.9s,mb3.6						
WRA	**Warramunga Arr**	**34.46**	**118**	P	**P**	**18 07 19.8**	**-0.5**
	1.2nm,0.8s,mb3.9,baz=291,slow=9.8,SNR=6.4						
WRA				PcP	PcP	18 09 55.3	+0.4
	0.5nm,0.5s,baz=300,slow=2.0,SNR=5.7						
ASAR	**Alice Springs**	**35.57**	**124**	P	**P**	**18 07 30.6**	**+0.8**
	1.7nm,0.5s,mb4.2,baz=294,slow=7.5,SNR=35						
ASAR				PcP	PcP	18 09 59.0	+0.9
	0.5nm,0.7s,baz=320,slow=2.2,SNR=4.5						
STKA	**Stephens Creek**	**45.35**	**131**	P	**P**	**18 08 51.8**	**+1.2**
	9.3nm,0.6s,mb4.8,baz=300,slow=8.7,SNR=28						
SONM	**Songino Array**	**52.91**	**3**	P	**P**	**18 09 49.1**	**+1.1**
	1.8nm,0.7s,mb4.1,baz=183,slow=8.9,SNR=11						
ULN	**Ulaanbaatar**	**52.98**	**4**	P	**P**	**18 09 47.7**	**-0.8**
	1.7nm,0.8s,mb4.0						
EKS2	**Erkin-Say**	**54.19**	**334**	*e*P	**P**	**18 09 55.3**	**-2.1**
	2.4nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**54.69**	**343**	P	**P**	**18 10 01.0**	**0.0**
MKAR	**Makanchi Array**	**54.69**	**343**	P	**P**	**18 10 01.0**	**0.0**
	0.9nm,0.6s,mb4.0,baz=147,slow=8.8,SNR=15						
ZALV	**Zalesovo Beam**	**60.70**	**348**	P	**P**	**18 10 42.5**	**-0.6**
	1.0nm,0.4s,mb4.3,baz=158,slow=6.2,SNR=7.1						
ABKAR	**Akbulak array**	**65.50**	**331**	*e*P	**P**	**18 11 13.6**	**-1.4**
	1.5nm,0.6s,mb4.2						
MAW	**Mawson**	**67.81**	**195**	P	**P**	**18 11 31.0**	**+1.6**
	0.8nm,0.7s,mb3.9,baz=45,slow=8.6,SNR=3.3						
BRTR	**Keskin Array B**	**77.14**	**313**	P	**P**	**18 12 25.2**	**-0.3**
	0.6nm,0.9s,mb3.5,baz=108,slow=4.7,SNR=3.3						
TXAR	**Lajitas Array**	**145.65**	**43**	PKPbc	PKPbc	18 20 11.6	+0.7
TXAR	**Lajitas Array**	**145.65**	**43**	PKPbc	PKPbc	18 20 11.6	+0.7
	2.6nm,0.7s,baz=256,slow=1.5,SNR=36						

*ISCJB **19** 18:15:55.7±0.6,38.°95N±0.°03×42.°40E±0.°04, h7km±6km, Error ellipse: s-maj=5.0km s-min=4.6km az=11.3*
*DDA **19** 18:15:56.1,38.°98N×42.°38E, h8km±4km, Md2.8*
*ISK **19** 18:15:56.0,38.°99N×42.°36E, h6km, MD3.0*
*CSEM **19** 18:15:56.2±0.3,39.°00N×42.°30E, h2km, MD2.8, Error ellipse: s-maj=8.7km s-min=7.0km az=110.0*
ISC 19 18:15:56.6±0.5, 38.°95N±0.°03×42.°42E±0.°04, h12km±6km, n19, σ0°s86/29, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TATV	**Tatvan**	**0.46**	**195**	*i* P	**Pg**	**18 16 04.8**	**-0.7**
TATV				*i* S	**Sg**	**18 16 11.3**	**-0.3**
TATV	**Tatvan**	**0.46**	**195**	*i* P	**Pg**	**18 16 04.8**	**-0.7**
TATV				*i* S	**Sg**	**18 16 11.3**	**-0.3**
AGRB	**Hanur-Agry**	**0.77**	**35**	*e*PG	**Pg**	**18 16 11.2**	**-0.3**
AGRB				*e*SG	**Sg**	**18 16 22.0**	**+0.5**
AGRB	**Hanur-Agry**	**0.77**	**35**	*e*Pg	**Pg**	**18 16 11.2**	**-0.3**
AGRB				*e*Sg	**Sg**	**18 16 22.0**	**+0.4**
BNGL	**BINGOL**	**0.99**	**271**	*i* P	**Pg**	**18 16 14.0**	**-1.7**
BNGL				*i* S	**Sg**	**18 16 27.9**	**-0.7**
EZM	**Erzurum**	**1.26**	**320**	*e*PN	**Pn**	**18 16 19.4**	**-0.6**
BEST	**Besiri**	**1.39**	**221**	*i* P	**Pn**	**18 16 22.4**	**+0.7**
BEST				*i* S	**Sg**	**18 16 42.1**	**+0.8**
HAKT	**HAKKARI**	**1.72**	**143**	*i* P	**Pg**	**18 16 29.7**	**+0.2**
HAKT				*i* S	**Sg**	**18 16 53.3**	**+1.5**
HAKT	**HAKKARI**	**1.72**	**143**	*i* P	**Pg**	**18 16 29.7**	**+0.1**
HAKT				*i* S	**Sg**	**18 16 53.3**	**+1.5**
KOPT	**Kop Dagi**	**1.83**	**306**	*e*P	**Pg**	**18 16 32.5**	**+0.7**
KOPT				*i* S	**Sg**	**18 16 56.8**	**+1.3**
CUKT	**Cukurca**	**1.94**	**151**	*e*PN	**Pb**	**18 16 31.3**	**-0.5**
CUKT	**Cukurca**	**1.94**	**151**	*e*Pn	**Pb**	**18 16 31.3**	**-0.5**
MARD	**Mardin**	**2.08**	**219**	*e*P	**Pb**	**18 16 33.0**	**-1.3**
MARD				*i* S	**Sn**	**18 16 57.1**	**0.0**
GNI	**Garni**	**2.16**	**55**	*e*PN	**Pb**	**18 16 34.5**	**-1.1**
GNI	**Garni**	**2.16**	**55**	*e*Pn	**Pb**	**18 16 34.5**	**-1.1**
PTK	**Pertek**	**2.36**	**270**	*e*PN	**Pn**	**18 16 36.1**	**+0.9**
PTK	**Pertek**	**2.36**	**270**	*e*Pn	**Pn**	**18 16 36.1**	**+1.0**
SVRC	**Sivrice-ELAZID**	**2.50**	**258**	*e*PN	**Pn**	**18 16 37.6**	**+0.6**
SVRC	**Sivrice-ELAZID**	**2.50**	**258**	*e*Pn	**Pn**	**18 16 37.7**	**+0.6**

*IDC **19** 18:21:48.2±1.1,20.°05N×121.°33E, h0km, mb3.4/6, mb1 3.6/7, mb1mx3.5/21, mbtmp3.4/7, ML3.7/1, Error ellipse: s-maj=40.2km s-min=18.2km az=68.0*
*NEIC **19** 18:21:48.6±6.7,20.°03N×121.°30E, h3km±44km, Error ellipse: s-maj=17.7km s-min=14.0km az=69.0*
*ISCJB **19** 18:21:51.6±1.8,20.°13N±0.°09×121.°4E±0.°1, h39km±19km, mb3.2/6, Error ellipse: s-maj=23.5km s-min=14.5km az=173.9*
ISC 19 18:21:53.1±3.4, 20.°12N±0.°06×121.°4E±0.°1, h35km±27km, n13, σ0°s85/16, mb3.2/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**2.70**	**355**	*e*Pn	**Pn**	**18 22 33.8**	**-0.3**
TPUB	**Ta-pu**	**3.24**	**348**	*e*Pn	**Pn**	**18 22 39.9**	**-1.5**
YULB	**Yu-li**	**3.26**	**359**	*e*Pn	**Pn**	**18 22 42.8**	**+1.1**
YULB				*e*Sn	**Sn**	**18 23 19.3**	**+0.1**
NACB	**Ninganchiao**	**4.04**	**3**	*e*Pn	**Pn**	**18 22 52.4**	**-0.1**
NACB				*e*Sn	**Sn**	**18 23 32.2**	**-6.4**
YHNB	**Yeheng**	**4.53**	**0**	*e*Pn	**Pn**	**18 23 00.7**	**+1.5**
YHNB				*e*Sn	**Sn**	**18 23 49.6**	**-1.0**
ENH	**Enshi**	**14.74**	**316**	Pn	**Pn**	**18 25 19.1**	**+0.1**
KSRS	**Korea Array**	**18.20**	**17**	P	**Pn**	**18 26 02.2**	**-0.7**
	0.2nm,0.3s,baz=199,slow=11,SNR=2.9						
CMAR	**Chiang Mai Arr**	**21.22**	**269**	P	**P**	**18 26 34.9**	**-1.1**
	0.3nm,0.6s,mb2.8,baz=68,slow=11,SNR=4.5						

SONM	**Songino Array**	**30.19**	**340**	P	**P**	**18 28 00.5**	**+0.5**
	0.2nm,0.4s,mb3.2,baz=148,slow=8.4,SNR=3.2						
MKAR	**Makanchi Array**	**41.43**	**319**	P	**P**	**18 29 37.3**	**+1.1**
	0.5nm,0.5s,mb3.4,baz=118,slow=8.7,SNR=8.4						
WRA	**Warramunga Arr**	**41.80**	**162**	P	**P**	**18 29 38.8**	**-0.6**
	0.5nm,0.6s,mb3.3,baz=344,slow=9.1,SNR=7.8						
ZALV	**Zalesovo Beam**	**43.77**	**329**	P	**P**	**18 29 55.9**	**+0.8**
	0.3nm,0.4s,mb3.3,baz=123,slow=5.3,SNR=2.8						
ASAR	**Alice Springs**	**45.21**	**164**	P	**P**	**18 30 07.0**	**+0.1**
	0.2nm,0.3s,mb3.4,baz=348,slow=6.7,SNR=13						

*IDC **19** 18:25:49.2±21.0, 16.°93S×176.°58W, h279km±173km, mb3.1/4, mb1 3.4/4, mb1mx3.2/16, mbtmp3.1/4, Error ellipse: s-maj=182.0km s-min=38.3km az=132.0*
*ISCJB **19** 18:26:05.1±1.0, 16.°3S±0.°2×177.°3W±0.°1, h429km±12km, mb3.4/5, Error ellipse: s-maj=36.7km s-min=18.9km az=158.3*
*NEIC **19** 18:26:06.0±1.1, 16.°26S×177.°23W, h421km±12km, mb4.0/1, Error ellipse: s-maj=32.1km s-min=17.2km az=155.0*
ISC 19 18:26:06.0±1.0, 16.°2S±0.°2×177.°2W±0.°1, h423km±13km, n10, σ1°s64/8, mb3.4/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.75**	**251**	*e*Pn	**P**	**18 27 27.5**	**+0.8**
AFI	**Afiamalu**	**5.75**	**67**	*e*P	**P**	**18 27 36.3**	**-0.6**
WRA	**Warramunga Arr**	**46.06**	**258**	P	**P**	**18 33 48.3**	**-2.0**
	0.2nm,0.3s,mb2.9,baz=92,slow=8.4,SNR=10						
WRA				PcP	PcP	18 35 18.6	0.0
	0.2nm,0.3s,baz=90,slow=3.7,SNR=5.7						
ASAR	**Alice Springs**	**46.34**	**253**	P	**P**	**18 33 51.0**	**-1.5**
	0.8nm,0.6s,mb3.3,baz=87,slow=8.2,SNR=22						
ASAR				PcP	PcP	18 35 19.2	-0.4
	0.2nm,0.7s,baz=93,slow=5.6,SNR=3.5						
FITZ	**Fitzroy Crossi**	**54.43**	**259**	P	**P**	**18 34 53.8**	**+1.6**
	1.4nm,0.8s,mb3.3,baz=90,slow=3.0,SNR=5.5						
SBA	**Scott Base**	**62.18**	**184**	*e*P	**P**	**18 35 44.6**	**+0.6**
QSPA	**South Pole Qui

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.30**	**211**	P	Pn	18 51 03.0	+0.1
	0.6nm,0.3s,baz=343,slow=3.9,SNR=3.5						
URZ				S	Sn	18 52 24.5	+0.2
	1.9nm,0.3s,baz=183,slow=13,SNR=8.4						
ASAR	**Alice Springs**	**42.98**	**269**	P	P	18 57 11.0	0.0
	0.5nm,0.6s,baz=109,slow=7.7,SNR=6.9						
WRA	**Warramunga Arr**	**44.12**	**274**	P	P	18 57 19.9	-0.2
	1.8nm,0.6s,baz=111,slow=6.6,SNR=10						
FINES	**FINESS Array B**	**146.71**	**339**	PKPbc	PKPbc	19 08 50.9	-0.6
	0.7nm,0.4s,baz=40,slow=3.2,SNR=6.6						

*IDC **19** 18:50:48.8±1.2, 14.°80S×167.°97E, h0km, mb4.1/6, mb1 4.2/6, mb1mx3.9/16, mbtmp4.1/6, Error ellipse: s-maj=40.7km s-min=30.5km az=93.0*
*LDG **19** 18:50:53.6±0.4, 13.°99S×167.°44E, h10km, Error ellipse: s-maj=68.4km s-min=10.9km az=90.0*
*NEIC **19** 18:51:07.0±3.7, 14.°87S×167.°54E, h137km±28km, mb4.2/5, Error ellipse: s-maj=36.3km s-min=24.0km az=224.0*
*ISCJB **19** 18:51:08.0±3.9, 15.°05S±0.°2×167.°4E±0.°3, h154km±32km, mb3.9/9, Error ellipse: s-maj=44.4km s-min=26.1km az=160.3*

ISC 19 18:51:07.8±3.7, 14.°9S±0.°2×167.°5E±0.°3, h138km±30km, n37, σ0°58/14, mb3.9/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.21**	**188**	*e*P	**Pn**	**18 52 50.5**	**0.0**
DZM				*e*S	**Sn**	**18 54 11.3**	**+0.2**
DZM	**Mont Dzumac**	**7.21**	**188**	*e*Pn	**Pn**	**18 52 50.3**	**-0.2**
	14nm,0.8s						
DZM				*e*Sn	**Sn**	**18 54 03.4**	**-7.7**
STKA	**Stephens Creek**	**29.04**	**230**	*e*P	**P**	**18 56 55.4**	**+0.5**
	0.7nm,0.5s,mb3.6						
STKA	**Stephens Creek**	**29.04**	**230**	P	**P**	**18 56 55.8**	**+0.9**
	3.2nm,0.5s,mb4.3,baz=55,slow=10,SNR=9.3						
ASAR	**Alice Springs**	**32.80**	**249**	P	**P**	**18 57 27.3**	**-0.8**
	0.5nm,0.5s,mb3.5,baz=76,slow=8.9,SNR=13						
SBA	**Scott Base**	**62.98**	**180**	*e*P	**P**	**19 01 19.9**	**+0.7**
	2.5nm,0.8s,mb4.1						
KULM	**Kulim**	**69.17**	**282**	*e*P	**P**	**19 01 54.5**	**-5.4**
	11nm,0.9s,mb4.6						
KULM				*e*		19 02 02.7	
QSPA	**South Pole Qui**	**75.14**	**180**	P	**P**	**19 02 33.2**	**-0.9**
	2.4nm,0.8s,mb3.9,baz=359,slow=3.6,SNR=26						
CMAR	**Chiang Mai Arr**	**75.20**	**294**	P	**P**	**19 02 36.2**	**+0.6**
	0.7nm,0.7s,mb3.4,baz=135,slow=4.7,SNR=6.2						
CHTO	**Chiang Mai**	**75.33**	**294**	P	**P**	**19 02 36.0**	**-0.3**
	2.9nm,1.2s,mb3.8						
SONM	**Songino Array**	**82.74**	**324**	P	**P**	**19 03 16.4**	**+0.4**
	0.7nm,0.5s,mb3.6,baz=125,slow=6.8,SNR=4.6						
MKAR	**Makanchi Array**	**97.46**	**316**	P	**P**	**19 04 25.5**	**-0.3**
	0.7nm,0.7s,mb4.1,baz=93,slow=5.8,SNR=8.2						
ARCES	**ARCESS Array B**	**120.46**	**345**	PKP	PKPdf	19 09 41.5	-0.6
	1.1nm,0.5s,baz=77,slow=2.0,SNR=11						
CABF	**La Chapelle**	**144.75**	**338**	*e*PKP1	PKPdf	19 10 28.0	-0.2
FLN	**La Foliniere**	**144.80**	**346**	*e*PKP1	PKPdf	19 10 27.3	-0.9
LDF	**La Druitiere**	**144.87**	**346**	*e*PKP1	PKPdf	19 10 27.8	-0.5
	2.7nm,0.5s						
LOR	**Lormes**	**144.96**	**340**	*e*PKP1	PKPdf	19 10 27.7	-0.8
GRR	**Gorron**	**145.24**	**346**	*e*PKP1	PKPbc	19 10 28.9	0.0
SSF	**Saint Saulge**	**145.25**	**341**	*e*PKP1	PKPbc	19 10 29.3	+0.3
	21nm,0.9s						
LPL	**La Plagne**	**145.42**	**336**	*e*PKP1	PKPbc	19 10 30.4	+0.8
	7.6nm,0.7s						
LPG	**La Plagne**	**145.43**	**336**	*e*PKP1	PKPbc	19 10 30.5	+0.9
	9.4nm,0.7s						
SMF	**Signal de Mont**	**145.51**	**340**	*e*PKP1	PKPbc	19 10 30.0	+0.2
AVF	**Avril sur Loir**	**145.54**	**341**	*e*PKP1	PKPbc	19 10 30.4	+0.5
BGF	**Bois d'Agland**	**145.91**	**341**	*e*PKP1	PKPbc	19 10 31.1	0.0
	14nm,0.8s						
MBDF	**Montbardon**	**146.06**	**335**	*e*PKP1	PKPbc	19 10 31.6	0.0
	4.8nm,0.7s						
ORIF	**Oris-en-Rattie**	**146.25**	**336**	*e*PKP1	PKPbc	19 10 32.5	+0.4
	12nm,0.8s						
TCF	**Toulx Ste Croi**	**146.35**	**341**	*e*PKP1	PKPbc	19 10 32.2	-0.2
SBF	**Sospel**	**146.48**	**333**	*e*PKP1	PKPbc	19 10 32.5	-0.3
	13nm,0.8s						
MFF	**Saint Martin d**	**146.73**	**344**	*e*PKP1	PKPbc	19 10 33.4	-0.1
	8.9nm,0.7s						
FRF	**La Foret Royal**	**147.06**	**334**	*e*PKP1	PKPbc	19 10 34.2	-0.3
SMRF	**Simiane la Rot**	**147.16**	**336**	*e*PKP1	PKPbc	19 10 35.1	+0.4
CAF	**Calviac**	**147.61**	**340**	*e*PKP1	PKPbc	19 10 35.5	-0.4
LASF	**Ste Croix**	**147.74**	**338**	*e*PKP1	PKPbc	19 10 36.5	+0.2
LFF	**La Frestale**	**148.01**	**342**	*e*PKP1	PKPbc	19 10 37.1	+0.1
	12nm,0.7s						
MTLF	**Montolieu**	**148.96**	**339**	*e*PKP1	PKPbc	19 10 39.6	+0.1
ETSF	**Etsaut**	**150.26**	**342**	*e*PKP1	PKPbc	19 10 43.2	+0.5
	6.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**166.09**	**265**	PKP	PKPdf	19 10 56.6	-0.6
	0.4nm,0.6s,baz=64,slow=0.9,SNR=5.8						

IDC 19 19:00:36.8±4.6, 3.°50N×96.°29E, h0km, mb3.6/4, mb1 3.5/6, mb1mx3.3/23, mbtmp3.4/6, ML2.7/2, Error ellipse: s-maj=115.4km s-min=33.5km az=39.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.72**	**105**	Pn	Pn	19 01 22.3	+0.5
	0.2nm,0.3s,baz=312,slow=5.5,SNR=3.7						
CMAR	**Chiang Mai Arr**	**15.09**	**10**	Pn	Pn	19 04 11.0	-0.5
	0.0nm,0.3s,baz=195,slow=10,SNR=3.2						
MKAR	**Makanchi Array**	**44.81**	**346**	P	P	19 08 52.4	0.0
	0.5nm,0.5s,baz=156,slow=8.5,SNR=9.1						
SONM	**Songino Array**	**45.02**	**10**	P	P	19 08 54.9	+0.8
	0.5nm,0.6s,baz=195,slow=8.8,SNR=2.9						
KURK	**Kurchatov**	**49.35**	**345**	P	P	19 09 27.3	-0.5
	0.5nm,0.6s,baz=159,slow=7.9,SNR=4.0						
ZALV	**Zalesovo Beam**	**51.16**	**351**	P	P	19 09 41.0	-0.6
	0.7nm,0.5s,baz=155,slow=4.9,SNR=4.6						

IDC 19 19:12:25.6±1.2, 2.°12N×126.°28E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/18, mbtmp3.5/6, Error ellipse: s-maj=100.2km s-min=18.3km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.11**	**182**	P	P	19 17 02.8	+1.7
	1.9nm,0.9s,baz=354,slow=8.9,SNR=6.2						
WRA	**Warramunga Arr**	**23.31**	**161**	P	P	19 17 34.6	-0.9
	0.6nm,0.3s,baz=336,slow=10,SNR=13						
ASAR	**Alice Springs**	**26.69**	**164**	P	P	19 18 06.8	+0.3
	0.3nm,0.3s,baz=346,slow=12,SNR=7.0						
STKA	**Stephens Creek**	**36.81**	**158**	P	P	19 19 34.9	-0.5
	1.9nm,0.8s,baz=336,slow=12,SNR=2.7						
SONM	**Songino Array**	**48.67**	**342**	P	P	19 21 11.7	+0.2
	0.4nm,0.3s,baz=152,slow=6.5,SNR=5.1						
MKAR	**Makanchi Array**	**58.62**	**326**	P	P	19 22 24.4	0.0
	0.2nm,0.5s,baz=111,slow=7.4,SNR=3.8						

IDC 19 19:21:07.7±7.7, 0.°34N×122.°49E, h176km±77km, mb3.3/5, mb1 3.4/6, mb1mx3.2/20, mbtmp3.3/6, Error ellipse: s-maj=101.7km s-min=17.8km az=65.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.59**	**171**	P	P	19 25 10.9	-0.7
	0.8nm,0.3s,baz=12,slow=12,SNR=28						
WRA	**Warramunga Arr**	**23.26**	**151**	P	P	19 25 59.6	0.0
	1.0nm,0.4s,baz=336,slow=8.7,SNR=33						
ASAR	**Alice Springs**	**26.31**	**156**	P	P	19 26 27.2	0.0
	0.4nm,0.5s,baz=344,slow=12,SNR=17						
ASAR				PcP	PcP	19 29 48.6	-0.2
	0.2nm,0.3s,baz=351,slow=2.1,SNR=6.5						
STKA	**Stephens Creek**	**36.79**	**152**	P	P	19 27 59.2	+0.6
	0.9nm,0.4s,baz=311,slow=11,SNR=5.7						
SONM	**Songino Array**	**49.33**	**346**	P	P	19 29 39.4	+0.6
	0.7nm,0.7s,baz=173,slow=9.0,SNR=5.3						
MKAR	**Makanchi Array**	**58.06**	**328**	P	P	19 30 41.8	-0.5
	0.4nm,0.5s,baz=116,slow=9.9,SNR=5.7						

*IDC **19** 19:38:25.5±1.1, 10.°82N×91.°62E, h0km, mb3.9/9, mb1 3.9/10, mb1mx3.7/25, mbtmp3.8/10, ML3.4/1, Error ellipse: s-maj=44.2km s-min=15.4km az=60.0*
*ISCJB **19** 19:38:28.1±0.8, 10.°9N±0.°1×91.°6E±0.°1, h33km, mb3.7/9, Error ellipse: s-maj=21.3km s-min=9.8km az=142.7*

ISC 19 19:38:30.4±0.8, 10.°9N±0.°1×91.°6E±0.°1, h35km, n17, σ0°77/19, mb3.7/9, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.31**	**43**	Pn	**Pn**	**19 40 55.5**	**-0.4**
	0.1nm,0.3s,baz=237,slow=15,SNR=3.1						
VIS	**Vishakhapatnam**	**10.50**	**311**	*i* P	**Pn**	**19 40 58.4**	**-0.2**
VIS				*i* S	**Sn**	**19 42 47.6**	**-7.4**
VIS				*i* S	**Sn**	**19 42 47.6**	**-7.4**
VIS				*ex*	x	19 42 50.3	
	comp=N,12nm,0.4s						
VIS				*ex*	x	19 42 52.3	
	comp=E,16nm,0.4s						
ODAN	**Odare**	**16.35**	**346**	*e*P	**Pn**	**19 42 17.4**	**0.0**
	comp=E,8.0nm,0.4s						
PKI	**Pulchoki**	**17.57**	**341**	*e*P	**Pn**	**19 42 32.6**	**0.0**
	comp=E,13nm,0.6s						
PKIN	**Phulchoki**	**17.58**	**341**	*e*P	**Pn**	**19 42 32.6**	**-0.1**
	comp=E,7.0nm,0.4s						
DMN	**Daman**	**17.70**	**341**	*e*P	**Pn**	**19 42 33.5**	**-0.7**
GKN	**Gorkha**	**18.22**	**340**	*e*P	**Pn**	**19 42 38.5**	**-2.1**
KOLN	**Koldanda**	**18.38**	**337**	*e*P	**Pn**	**19 42 41.9**	**-0.7**
	comp=E,21nm,0.6s						
MKAR	**Makanchi Array**	**36.62**	**349**	P	**P**	**19 45 34.6**	**+1.3**
	comp=E,1.5nm,0.8s,mb3.9,baz=167,slow=8.4,SNR=13						
SONM	**Songino Array**	**38.84**	**16**	P	**P**	**19 45 53.2**	**+1.1**
	comp=E,0.3nm,0.5s,mb3.2,baz=207,slow=6.9,SNR=2.6						
KURK	**Kurchatov**	**41.10**	**347**	P	**P**	**19 46 10.9**	**+0.2**
	comp=E,1.2nm,0.7s,mb3.6,baz=169,slow=7.2,SNR=4.7						
ZALV	**Zalesovo Beam**	**43.26**	**354**	P	**P**	**19 46 29.1**	**+0.8**
	comp=E,0.7nm,0.3s,mb3.8,baz=184,slow=12,SNR=5.3						
FITZ	**Fitzroy Crossi**	**44.26**	**130**	P	**P**	**19 46 36.4**	**-0.4**
	comp=E,1.1nm,0.7s,mb4.2,baz=260,slow=19,SNR=9.4						
BVAR	**Borovoye Array**	**45.34**	**342**	P	**P**	**19 46 45.9**	**+1.0**
	comp=E,0.5nm,0.7s,mb3.5,baz=178,slow=8.5,SNR=5.1						
WRA	**Warramunga Arr**	**52.04**	**126**	P	**P**	**19 47 36.4**	**-0.6**
	comp=E,0.4nm,0.3s,mb3.9,baz=279,slow=5.6,SNR=30						
WRA				PcP	PcP	19 48 49.4	+0.4
	comp=E,0.2nm,0.4s,baz=324,slow=2.9,SNR=2.9						
ASAR	**Alice Springs**	**53.76**	**130**	P	**P**	**19 47 49.5**	**-0.1**
	comp=E,1.4nm,0.8s,mb3.9,baz=306,slow=6.9,SNR=14						
ASAR				PcP	PcP	19 48 56.8	+1.5
	comp=E,0.4nm,0.7s,baz=318,slow=4.0,SNR=3.8						
BRTR	**Keskin Array B**	**58.58**	**310**	P	**P**	**19 48 24.3**	**+0.5**
	comp=E,0.4nm,0.8s,mb3.5,baz=94,slow=5.3,SNR=4.0						

*KNET **19** 19:52:40.9±0.8, 41.°40N×75.°65E, h4km±4km, ml2.8, Error ellipse: s-maj=5.5km s-min=2.5km az=153.0*
*NNC **19** 19:52:42.2±1.4, 41.°06N×76.°32E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=12.3km s-min=5.4km az=152.0*

ISC 19 19:52:40.8±1.4, 41.°28N±0.°08×75.°83E±0.°06, h10km, n15, σ1°29/20, 8C-13D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZA	**Kyzart**	**0.91**	**332**	P	**Pg**	**19 52 56.0**	**-2.2**
	80nm,0.2s,SNR=79						
ULHL	**Ulahol**	**1.01**	**18**	P	**Pg**	**19 52 59.3**	**-1.0**
	80nm,0.2s,SNR=96						
ULHL				⇓S	**Sg**	**19 53 13.2**	**-0.2**
	166nm,0.2s						
UCH	**Uchtor**	**1.37**	**314**	⇓P	**Pn**	**19 53 03.8**	**-2.1**
	19nm,0.2s,SNR=50						
UCH				⇓S	**Sb**	**19 53 21.5**	**-2.4**
	132nm,0.4s						
KBK	**Karagaybulak**	**1.52**	**335**	⇑P	**Pn**	**19 53 07.5**	**-0.6**
	63nm,0.1s,SNR=128						
KBK				⇓S	**Sn**	**19 53 27.6**	**-0.3**
	335nm,0.2s						
AAK	**Ala-Archa**	**1.68**	**324**	⇓P	**Pn**	**19 53 09.8**	**-0.4**
	25nm,0.2s,SNR=24						
AAK				⇓S	**Sn**	**19 53 32.4**	**+0.6**
	89nm,0.2s						
AML	**Almayashu**	**1.81**	**299**	⇑P	**Pn**	**19 53 11.4**	**-0.6**
	54nm,0.3s,SNR=74						
AML				⇑S	**Sn**	**19 53 35.4**	**+0.5**
	159nm,0.4s						
CHMS	**Chumysh**	**1.90**	**335**	⇑P	**Pn**	**19 53 13.9**	**+0.8**
	28nm,0.1s,SNR=39						
CHMS				⇓S	**Sn**	**19 53 39.0**	**+1.9**
	141nm,0.2s						
EKS2	**Erkin-Say**	**2.06**	**313**	⇑P	**Pn**	**19 53 16.4**	**+0.9**
	53nm,0.5s,SNR=40						
KNDC	**Almaty**	**2.11**	**23**	⇓Pn	**Pg**	**19 53 20.0**	**-1.3**
	40nm,0.3s						
KNDC				⇓Sn	**Sg**	**19 53 49.5**	**+0.9**
	146nm,0.4s						
USP	**Ospenovka**	**2.22**	**334**	⇓P	**Pn**	**19 53 19.5**	**+1.9**
	81nm,0.3s,SNR=76						
KK31	**Karatay Array**	**4.35**	**297**	⇓Pn	**Pb**	**19 53 57.0**	**-0.3**
	2.6nm,0.5s,baz=116,slow=14,SNR=45						
KK31				Sn	**Sb**	**19 54 52.2**	**+2.4**
	3.4nm,0.3s,baz=114,slow=29,SNR=6.5						
MK31	**Makanchi Array**	**7.21**	**38**	⇑Pn	**Pn**	**19 54 27.8**	**+1.6**
	1.0nm,0.5s,baz=220,slow=15,SNR=8.0						
MK31				⇓Lg		19 56 27.3	
	1.0nm,0.6s,baz=224,slow=29,SNR=4.8						
KURK	**Kurchatov**	**9.63**	**11**	⇑Lg		19 57 51.1	
	6.9nm,0.7s						
VOSK	**Vostochnaya**	**11.91**	**346**	⇑Lg		19 59 09.7	
	3.0nm,1.1s						
BVA0	**Borovoye Array**	**12.31**	**344**	⇓Lg		19 59 23.6	
	0.3nm,0.7s,baz=146,slow=29,SNR=3.6						

IDC 19 19:53:03.8±1.9, 2.°12N×126.°11E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/19, mbtmp3.5/4, Error ellipse: s-maj=118.6km s-min=24.3km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.10**	**181**	P	P	19 57 39.9	+0.7
	3.6nm,1.1s,baz=17,slow=9.7,SNR=3.7						
WRA	**Warramunga Arr**	**23.36**	**160**	P	P	19 58 13.2	-1.0
	0.7nm,0.4s,baz=337,slow=10,SNR=22						
ASAR	**Alice Springs**	**26.73**	**164**	P	P	19 58 45.6	+0.5
	0.3nm,0.4s,baz=348,slow=13,SNR=6.6						
MKAR	**Makanchi Array**	**58.53**	**326**	P	P	20 03 02.1	+0.1
	0.2nm,0.4s,baz=114,slow=7.9,SNR=5.9						

CASC 19 19:57:20.9±2.5, 10.°56N×86.°35W, h13km±29km, MD3.7, 1C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.81**	**84**	⇑*i*P	Pg	19 57 36.3	-0.3
SSN	**San Juan del S**	**0.88**	**34**	*e*P	Pg	19 57 37.5	-0.5
SSN				*e*S	Sg	19 57 48.8	-0.8
GBS2	**Las Lilas**	**0.93**	**73**	*i* P	Pg	19 57 37.7	-1.1
BUEV	**Buena Vista**	**0.96**	**76**	*i* P	Pb	19 57 38.1	-1.3
GB1A	**Borinquen Arri**	**0.97**	**75**	*i* P	Pb	19 57 38.4	-1.3
CUI	**Cuipilapa**	**1.17**	**85**	*i* P	Pn	19 57 41.1	-2.0
CUI				*i* S	Sb	19 57 58.0	-0.1
CONN	**Concepcion**	**1.22**	**36**	*e*P	Pn	19 57 43.2	-0.6
CONN				*e*S	Sb	19 57 58.3	-1.3
JCR	**Jicaral**	**1.41**	**120**	*e*P	Pn	19 57 43.4	-2.9
COPN	**Copaltepe**	**1.62**	**352**	*e*P	Pn	19 57 48.2	-1.0
CGA2	**Cerro Gallo 2**	**1.94**	**106**	*e*P	Pn	19 57 54.4	+0.8
PRS1	**Puriscal**	**2.09**	**106**	*e*P	Pn	19 57 55.5	-0.1
LAJ	**Bijagual**	**2.30**	**107**	*e*P	Pn	19 57 52.5	-6.1
URSC	**Urasca**	**2.64**	**106**	*e*P	Pn	19 58 03.0	-0.1
BUS	**Buena Vista**	**2.75**	**111**	*e*P	Pn	19 58 05.1	+0.4
BUS				*e*S	Sn	19 58 45.4	+7.7

IDC 19 20:00:36.0±1.4, 9.°38S×124.°98E, h0km, mb3.4/3, mb1 3.8/6, mb1mx3.6/16, mbtmp3.6/6, ML3.9/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/21, Error ellipse: s-maj=97.5km s-min=24.1km az=68.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**8.70**	**176**	Pn	Pn	20 02 44.3	+1.1
	0.9nm,0.3s,baz=6.1,slow=11,SNR=22						
FITZ				Sn	Sn	20 04 17.1	-4.9
	0.7nm,0.3s,baz=81,slow=20,SNR=5.3						
WRA	**Warramunga Arr**	**13.86**	**140**	Pn	Pn	20 03 52.7	-1.2
	0.6nm,0.3s,baz=314,slow=15,SNR=30						
WRA				Sn	Sn	20 06 19.9	-8.7
	0.6nm,0.3s,baz=322,slow=23,SNR=6.4						
WRA				LR	LR	20 09 12.4	
	comp=Z,107nm,21.0s,baz=155,slow=37						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**16.58**	**150**	Pn	Pn	20 04 29.8	-0.2
	0.3nm,0.3s,baz=318,slow=11,SNR=21						
ASAR				Sn	Sn	20 07 26.7	-8.0
	0.2nm,0.3s,baz=316,slow=22,SNR=7.2						
SONM	**Songino Array**	**59.30**	**346**	P	P	20 10 39.7	+0.3
	0.2nm,0.7s,baz=180,slow=5.0,SNR=2.5						
MKAR	**Makanchi Array**	**67.62**	**330**	P	P	20 11 35.0	+0.4
	0.2nm,0.5s,baz=131,slow=6.2,SNR=4.7						
ZALV	**Zalesovo Beam**	**71.62**	**336**	P	P	20 11 58.7	-0.4
	0.4nm,0.5s,baz=132,slow=2.1,SNR=3.1						

*IDC **19** 20:21:43.1±1.0, 9.°31N×126.°55E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.8/20, mbtmp3.9/10, MS3.1/1, Ms1 3.1/1, ms1mx2.2/25, Error ellipse: s-maj=58.7km s-min=16.4km az=69.0*
*NEIC **19** 20:21:44.5±0.5, 9.°32N×126.°58E, h10km, mb4.4/7, Error ellipse: s-maj=28.9km s-min=7.7km az=68.0*
*MAN **19** 20:21:48, 9.°63N×126.°78E, h18km, mb4.9, ML3.9, MS4.0*
*ISCJB **19** 20:21:50.0±1.2, 9.°47N±0.°05×126.°72E±0.°09, h70km±10km, mb4.0/19, Error ellipse: s-maj=15.5km s-min=8.1km az=163.8*

ISC 19 20:21:50.6±1.3, 9.°46N±0.°05×126.°75E±0.°09, h59km±11km, n35, σ1°26/39, mb4.0/19, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.22**	**247**	*e*P	**Pn**	**20 22 10.8**	**-0.7**
BUTP				*e*S	**Sn**	**20 22 29.4**	**+2.3**
SCPH	**Surigao**	**1.29**	**285**	⇑*e*P	**Pn**	**20 22 10.1**	**-2.3**
CGP	**Cagayan de Oro**	**2.27**	**244**	⇓*e*P	**Pn**	**20 22 22.0**	**-3.6**
CGP				*e*S	**Sn**	**20 22 52.3**	**-0.2**
BUKP	**Musuan**	**2.29**	**227**	*e*P	**Pn**	**20 22 28.7**	**+2.7**
BUKP				*e*S	**Sn**	**20 23 01.2**	**+8.0**
MATI	**Mati**	**2.54**	**191**	*e*P	**Pn**	**20 22 30.8**	**+1.3**
OCLP	**Ormoc**	**2.64**	**307**	*e*P	**Pn**	**20 22 30.6**	**-0.2**
DMPH	**Davao City--Mi**	**2.66**	**208**	⇑*e*P	**Pn**	**20 22 34.6**	**+3.5**
DMPH				*e*S	**Sn**	**20 23 00.7**	**-1.5**
TBP	**Tagbilaran**	**2.86**	**275**	*e*P	**Pn**	**20 22 34.1**	**+0.3**
TBP				*e*S	**Sn**	**20 23 05.0**	**-2.0**
CNP	**Catarman**	**3.66**	**326**	*e*P	**Pn**	**20 22 43.0**	**-1.7**
PAGZ	**Pagadian**	**3.70**	**245**	*e*P	**Pn**	**20 22 47.5**	**+2.3**
GUIM	**Jordan**	**4.26**	**286**	*e*P	**Pn**	**20 22 53.4**	**+0.4**
GUMO	**Guam**	**18.22**	**75**	LR	LR	20 32 04.2	
	comp=Z,55nm,18.4s,baz=308,slow=34						
FITZ	**Fitzroy Crossi**	**27.41**	**182**	P	**P**	**20 27 29.1**	**-1.6**
	3.2nm,1.0s,mb3.8,baz=9.7,slow=8.6,SNR=2.3						
CMAR	**Chiang Mai Arr**	**28.40**	**291**	P	**P**	**20 27 38.6**	**-1.0**
	1.0nm,0.9s,mb3.4,baz=100,slow=7.1,SNR=7.7						
WRA	**Warramunga Arr**	**30.16**	**166**	P	**P**	**20 27 53.8**	**-1.3**
WRA	**Warramunga Arr**	**30.16**	**166**	P	**P**	**20 27 53.8**	**-1.3**
	0.4nm,0.8s,mb3.2,baz=351,slow=9.4,SNR=2.6						
ASAR	**Alice Springs**	**33.66**	**168**	P	**P**	**20 28 24.1**	**-1.7**
	0.3nm,0.7s,mb3.4,baz=348,slow=7.0,SNR=3.3						
GTA	**Gaotai**	**38.31**	**326**	*e*P	**P**	**20 29 05.8**	**+0.3**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
ULN	**Ulaanbaatar**	**41.74**	**340**	*e*P	**P**	**20 29 34.8**	**+1.0**
	comp=Z,1.8nm,0.9s,mb3.7						
SONM	**Songino Array**	**41.94**	**339**	P	**P**	**20 29 36.4**	**+1.0**
	comp=Z,1.0nm,0.7s,mb3.6,baz=155,slow=8.9,SNR=8.9						
STKA	**Stephens Creek**	**43.48**	**162**	P	**P**	**20 29 48.8**	**+0.7**
	comp=Z,1.2nm,0.9s,mb3.6,baz=352,slow=14,SNR=2.9						
MKAR	**Makanchi Array**	**52.96**	**323**	P	**P**	**20 31 01.1**	**+0.1**
	comp=Z,1.1nm,0.7s,mb3.9,baz=118,slow=8.3,SNR=15						
MKAR				PcP	PcP	20 32 10.7	+1.5
	comp=Z,0.3nm,0.5s,baz=116,slow=4.8,SNR=4.0						
ZALV	**Zalesovo Beam**	**55.56**	**331**	P	**P**	**20 31 19.7**	**-0.1**
	comp=Z,1.1nm,0.5s,mb4.2,baz=111,slow=7.5,SNR=7.0						
UCH	**Uchtor**	**56.08**	**315**	*e*P	**P**	**20 31 24.9**	**+1.1**
	comp=Z,3.4nm,0.8s,mb4.4						
AML	**Almayashu**	**56.62**	**315**	*e*P	**P**	**20 31 28.7**	**+1.1**
	comp=Z,2.3nm,0.8s,mb4.3						
EKS2	**Erkin-Say**	**56.74**	**315**	*e*P	**P**	**20 31 29.4**	**+1.0**
	comp=Z,4.4nm,1.1s,mb4.4						
KURK	**Kurchatov**	**57.00**	**326**	*e*P	**P**	**20 31 29.7**	**-0.4**
	comp=Z,2.6nm,0.8s,mb4.3						
KBL	**Kabul**	**58.18**	**305**	*e*P	**P**	**20 31 38.5**	**-0.2

VLX S Sb 20 49 12.8 +0.7
DID Didima 1.58 39 ePN Pn 20 49 03.5 +0.7
DID eSN Sn 20 49 23.0 +0.7
DID Didima 1.58 39 P Pn 20 49 04.1 +1.3
DID S Sn 20 49 25.0 +2.7
DID Didima 1.58 39 ePn Pn 20 49 03.5 +0.7
DID Didima 1.58 39 P Pn 20 49 04.1 +1.3
DID eSn Sn 20 49 23.0 +0.7
DID S Sn 20 49 25.0 +2.7
GUR Goura 1.68 9 ePN Pn 20 49 05.6 +1.4
GUR eSN Sn 20 49 25.1 +0.4
GUR Goura 1.68 9 P Pn 20 49 05.7 +1.5
GUR Goura 1.68 9 P Pn 20 49 05.7 +1.5
GUR eSn Sn 20 49 25.1 +0.4
KARN Karanos 1.79 119 ePB Pb 20 49 08.4 -0.5
KARN eSN Sn 20 49 30.8 +3.3
KARN Karanos 1.79 119 P Pn 20 49 08.3 +2.6
KARN S Sn 20 49 31.4 +3.9
KARN Karanos 1.79 119 P Pn 20 49 08.3 +2.6
KARN eSn Sn 20 49 30.8 +3.3
KARN S Sn 20 49 31.4 +3.9
RLS Riolos of Patr 1.83 347 ePb Pb 20 49 08.2 -1.3
RLS eSn Sn 20 49 30.2 +1.8
RLS Riolos of Patr 1.83 347 ePB Pb 20 49 08.2 -1.3
RLS eSN Sn 20 49 30.2 +1.8
RLS Riolos of Patr 1.83 347 ePb Pb 20 49 08.2 -1.3
RLS eSn Sn 20 49 30.2 +1.8
NAIG Nisos Aigina 1.90 39 ePb Pb 20 49 08.0 -2.8
NAIG Nisos Aigina 1.90 39 ePB Pb 20 49 08.0 -2.8
NAIG Nisos Aigina 1.90 39 ePb Pb 20 49 08.0 -2.8
LTK Loutraki 1.91 24 ePB Pb 20 49 08.5 -2.4
LTK eSN Sn 20 49 30.9 +0.5
LTK Loutraki 1.91 24 P Pn 20 49 08.3 +1.0
LTK S Sn 20 49 34.5 +4.1
LTK Loutraki 1.91 24 P Pn 20 49 08.3 +1.0
LTK eSn Sn 20 49 30.9 +0.5
LTK S Sn 20 49 34.5 +4.1
LAKA Lakka 1.96 360 P Pn 20 49 10.5 +2.5
LAKA S Sn 20 49 34.2 +2.6
LAKA Lakka 1.96 360 P Pn 20 49 10.5 +2.5
LAKA S Sn 20 49 34.2 +2.6
VAM Vamos 1.99 115 ePb Pb 20 49 11.1 -1.2
VAM eSn Sn 20 49 34.9 +2.4
VAM Vamos 1.99 115 ePB Pb 20 49 11.1 -1.2
VAM eSN Sn 20 49 34.9 +2.4
VAM Vamos 1.99 115 ePb Pb 20 49 11.1 -1.2
VAM eSn Sn 20 49 34.9 +2.4
UPR University Cam 2.01 355 ePN Pn 20 49 09.3 +0.6
UPR eSN Sn 20 49 32.9 0.0
UPR University Cam 2.01 355 ePn Pn 20 49 09.3 +0.6
UPR eSn Sn 20 49 32.9 0.0
TRIZ Trizonia 2.08 2 P Pn 20 49 11.9 +2.1
TRIZ S Sn 20 49 38.2 +3.4
TRIZ Trizonia 2.08 2 P Pn 20 49 11.9 +2.1
TRIZ S Sn 20 49 38.2 +3.4
KALE Kalithea 2.11 3 P Pn 20 49 12.4 +2.2
KALE Kalithea 2.11 3 P Pn 20 49 12.4 +2.2
VLY Voula,Athens 2.13 42 ePn Pn 20 49 10.8 +0.4
VLY eSn Sn 20 49 35.6 -0.3
VLY Voula,Athens 2.13 42 ePN Pn 20 49 10.8 +0.4
VLY eSN Sn 20 49 35.6 -0.3
VLY Voula,Athens 2.13 42 ePn Pn 20 49 10.8 +0.4
VLY eSn Sn 20 49 35.6 -0.3
EFP Efpalio 2.15 358 P Pn 20 49 13.4 +2.8
EFP S Sn 20 49 39.8 +3.5
EFP Efpalio 2.15 358 P Pn 20 49 13.4 +2.8
EFP S Sn 20 49 39.8 +3.5
DSF Desfina 2.17 11 P Pn 20 49 12.0 +1.0
DSF Desfina 2.17 11 P Pn 20 49 12.0 +1.0
ATH Athens Observa 2.18 39 ePn Pn 20 49 11.8 +0.7
ATH eSn Sn 20 49 36.8 -0.3
ATH Athens Observa 2.18 39 ePN Pn 20 49 11.8 +0.7
ATH eSN Sn 20 49 36.8 -0.3
ATH Athens Observa 2.18 39 ePn Pn 20 49 11.8 +0.7
ATH eSn Sn 20 49 36.8 -0.3
VLS Valsamata 2.20 330 ePn Pn 20 49 13.0 +1.6
VLS eSn Sn 20 49 39.3 +1.7
VLS Valsamata 2.20 330 ePN Pn 20 49 13.0 +1.6
VLS eSN Sn 20 49 39.3 +1.7
VLS Valsamata 2.20 330 P Pn 20 49 13.1 +1.7
VLS Valsamata 2.20 330 ePn Pn 20 49 13.0 +1.6
VLS eSn Sn 20 49 39.3 +1.7
ATHU Athens Univers 2.21 40 P Pn 20 49 12.9 +1.4
ATHU S Sn 20 49 39.7 +1.8
ATHU Athens Univers 2.21 40 P Pn 20 49 12.9 +1.4
ATHU S Sn 20 49 39.7 +1.8
GVD Gavdhos 2.23 129 ePn Pn 20 49 13.8 +2.0
GVD Gavdhos 2.23 129 P Pn 20 49 13.9 +2.1
GVD Gavdhos 2.23 129 P Pn 20 49 13.9 +2.1
PTL Penteli 2.31 40 ePn Pn 20 49 13.6 +0.7
PTL eSn Sn 20 49 40.5 +0.1
PTL Penteli 2.31 40 ePN Pn 20 49 13.6 +0.7
PTL eSN Sn 20 49 40.5 +0.1
PTL Penteli 2.31 40 ePn Pn 20 49 13.6 +0.7
PTL eSn Sn 20 49 40.5 +0.1
LKR Lokris 2.50 18 ePn Pn 20 49 16.2 +0.7
LKR eSn Sn 20 49 44.5 -0.5
LKR Lokris 2.50 18 ePN Pn 20 49 16.2 +0.7
LKR eSN Sn 20 49 44.5 -0.5
LKR Lokris 2.50 18 P Pn 20 49 16.4 +0.9
LKR Lokris 2.50 18 P Pn 20 49 16.4 +0.9
LKR eSn Sn 20 49 44.5 -0.5
ATAL Atalanti 2.54 18 P Pn 20 49 16.9 +0.8
ATAL Atalanti 2.54 18 P Pn 20 49 16.9 +0.8
SIVA Sivas 2.62 118 ePn Pn 20 49 19.0 +1.9
SIVA eSn Sn 20 49 50.1 +2.2
SIVA Sivas 2.62 118 ePN Pn 20 49 19.0 +1.9
SIVA eSN Sn 20 49 50.1 +2.2
SIVA Sivas 2.62 118 ePn Pn 20 49 19.0 +1.9
SIVA eSn Sn 20 49 50.1 +2.2
LKD2 Lefkada island 2.72 337 P Pn 20 49 21.4 +2.9
LKD2 Lefkada island 2.72 337 P Pn 20 49 21.4 +2.9
AGG Agios Georgios 2.75 5 ePn Pn 20 49 20.7 +1.7
AGG eSn Sn 20 49 51.9 +0.7
AGG Agios Georgios 2.75 5 ePN Pn 20 49 20.7 +1.7
AGG eSN Sn 20 49 51.9 +0.7
AGG Agios Georgios 2.75 5 P Pn 20 49 21.2 +2.2
AGG Agios Georgios 2.75 5 ePn Pn 20 49 20.7 +1.7
AGG Agios Georgios 2.75 5 P Pn 20 49 21.2 +2.2
AGG eSn Sn 20 49 51.9 +0.7
APE Apeiranthos 2.95 73 ePn Pn 20 49 22.5 +0.8
APE eSn Sn 20 49 56.5 +0.4
APE Apeiranthos 2.95 73 ePN Pn 20 49 22.5 +0.8
APE eSN Sn 20 49 56.5 +0.4
APE Apeiranthos 2.95 73⇑iP Pn 20 49 23.0 +1.3
APE Apeiranthos 2.95 73 ePn Pn 20 49 22.5 +0.8
APE Apeiranthos 2.95 73⇑iP Pn 20 49 23.0 +1.3
APE eSn Sn 20 49 56.5 +0.4
NPS Neapolis 3.11 108 ePn Pn 20 49 24.8 +0.9
NPS eSn Sn 20 50 01.1 +1.0
NPS Neapolis 3.11 108 ePN Pn 20 49 24.8 +0.9
NPS eSN Sn 20 50 01.1 +1.0
NPS Neapolis 3.11 108 ePn Pn 20 49 24.8 +0.9
NPS eSn Sn 20 50 01.1 +1.0
NEO Neokhori 3.18 17 ePn Pn 20 49 25.4 +0.6
NEO eSn Sn 20 50 01.0 -0.7
NEO Neokhori 3.18 17 ePN Pn 20 49 25.4 +0.6
NEO eSN Sn 20 50 01.0 -0.7
NEO Neokhori 3.18 17 ePn Pn 20 49 25.4 +0.6
NEO eSn Sn 20 50 01.0 -0.7
XOR Xorichti 3.23 17 P Pn 20 49 25.8 +0.3
XOR Xorichti 3.23 17 P Pn 20 49 25.8 +0.3
AOS Alonnisos 3.25 27 P Pn 20 49 25.8 0.0
AOS Alonnisos 3.25 27 P Pn 20 49 25.8 0.0
THL Klokotos Trika 3.28 0 ePN Pn 20 49 28.0 +1.8
THL eSN Sn 20 50 04.9 +0.6
THL Klokotos Trika 3.28 0 P Pn 20 49 28.6 +2.4
THL Klokotos Trika 3.28 0 ePn Pn 20 49 28.0 +1.8
THL Klokotos Trika 3.28 0 P Pn 20 49 28.6 +2.4
THL eSn Sn 20 50 04.9 +0.6
JAN Janina 3.49 345 ePn Pn 20 49 31.6 +2.5
JAN eSn Sn 20 50 09.4 -0.1
JAN Janina 3.49 345 ePN Pn 20 49 31.6 +2.5
JAN eSN Sn 20 50 09.4 -0.1
JAN Janina 3.49 345 ePn Pn 20 49 31.6 +2.5
JAN eSn Sn 20 50 09.4 -0.1
ZKR Zakros 3.63 107 ePn Pn 20 49 33.5 +2.5
ZKR eSn Sn 20 50 14.0 +1.2
ZKR Zakros 3.63 107 ePN Pn 20 49 33.5 +2.5
ZKR eSN Sn 20 50 14.0 +1.2
ZKR Zakros 3.63 107 ePn Pn 20 49 33.5 +2.5
ZKR eSn Sn 20 50 14.0 +1.2
LIT Litokhoron 3.84 6 ePn Pn 20 49 34.9 +1.0
LIT eSn Sn 20 50 18.1 +0.1
LIT Litokhoron 3.84 6 ePN Pn 20 49 34.9 +1.0
LIT eSN Sn 20 50 18.1 +0.1
LIT Litokhoron 3.84 6 ePn Pn 20 49 34.9 +1.0
LIT eSn Sn 20 50 18.1 +0.1
KEK Kerkira 3.84 334 ePn Pn 20 49 35.1 +1.2
KEK eSn Sn 20 50 18.5 +0.4
KEK Kerkira 3.84 334 ePN Pn 20 49 35.1 +1.2
KEK eSN Sn 20 50 18.5 +0.4
KEK Kerkira 3.84 334 P Pn 20 49 35.1 +1.2
KEK Kerkira 3.84 334 ePn Pn 20 49 35.1 +1.2
KEK eSn Sn 20 50 18.5 +0.4
CHOS Chios island 3.86 56 ePN Pn 20 49 34.6 +0.4
CHOS eSN Sn 20 50 18.7 +0.1
CHOS Chios island 3.86 56 ePn Pn 20 49 34.6 +0.4
CHOS eSn Sn 20 50 18.7 +0.1
SRN Sarande 3.92 337 i PN Sn 20 50 19.7 -0.4
LSK Leskovik 4.02 345 i PN Sn 20 50 22.8 +0.4
KZN Kozani 4.03 358 ePn Pn 20 49 38.6 +2.1
KZN eSn Sn 20 50 23.7 +1.1
KZN Kozani 4.03 358 ePN Pn 20 49 38.6 +2.1
KZN eSN Sn 20 50 23.7 +1.1
KZN Kozani 4.03 358 P Pn 20 49 38.8 +2.3
KZN Kozani 4.03 358 ePn Pn 20 49 38.6 +2.1
KZN eSn Sn 20 50 23.7 +1.1
NEST Nestorio 4.20 350 P Pn 20 49 41.7 +2.9
NEST Nestorio 4.20 350 P Pn 20 49 41.7 +2.9
KARP Karpathos 4.26 98 ePn Pn 20 49 41.1 +1.5
KARP eSn Sn 20 50 28.7 +0.3
KARP Karpathos 4.26 98 ePN Pn 20 49 41.1 +1.5
KARP eSN Sn 20 50 28.7 +0.3
KARP Karpathos 4.26 98 ePn Pn 20 49 41.1 +1.5
KARP eSn Sn 20 50 28.7 +0.3
KBN Korca 4.44 348 i PN Sn 20 50 31.2 -1.6
BDRM Kayabasi 4.45 78⇑iP Pn 20 49 41.6 -0.8
BDRM Kayabasi 4.45 78 i P Pn 20 49 41.6 -0.7
PRK Paraskevi 4.50 48 ePn Pn 20 49 44.0 +1.0
PRK Paraskevi 4.50 48 ePN Pn 20 49 44.0 +1.0
PRK Paraskevi 4.50 48 ePn Pn 20 49 44.0 +1.0
SOH Sokhos 4.66 13 ePn Pn 20 49 47.0 +1.8
SOH eSn Sn 20 50 37.9 -0.4
SOH Sokhos 4.66 13 ePN Pn 20 49 47.0 +1.8
SOH eSN Sn 20 50 37.9 -0.4
SOH Sokhos 4.66 13 ePn Pn 20 49 47.0 +1.8
SOH eSn Sn 20 50 37.9 -0.4
AYDN Tasoluk 4.91 72⇑iP Pn 20 49 49.7 +1.1
AYDN Tasoluk 4.91 72 i P Pn 20 49 49.7 +1.1
ARG Arkhangelos 4.96 89 ePn Pn 20 49 51.2 +1.9
ARG eSn Sn 20 50 46.7 +1.1
ARG Arkhangelos 4.96 89 ePN Pn 20 49 51.2 +1.9
ARG eSN Sn 20 50 46.7 +1.1
ARG Arkhangelos 4.96 89 ePn Pn 20 49 51.2 +1.9
ARG eSn Sn 20 50 46.7 +1.1
VAY Valandovo 5.06 5 ePn Pn 20 49 51.2 +0.6
VAY eSg Sn 20 50 44.7 -3.3
TIP Timpagrande 5.06 306 ePn Pn 20 49 51.8 +1.1
17nm,0.5s
TIP eSn Sn 20 50 44.9 -3.2
TIP Timpagrande 5.06 306 ePn Pn 20 49 51.8 +1.1
17nm,0.5s
TIP eSn Sn 20 50 44.9 -3.2
KRUS Krusevo 5.12 354 ePn Pn 20 49 51.1 -0.3
CEL Celeste 5.25 294 ePn Pn 20 49 54.8 +1.5
35nm,0.5s
CEL eSn Sn 20 50 47.7 -5.1
CEL Celeste 5.25 294 ePn Pn 20 49 54.8 +1.5
35nm,0.5s
NVR Nevrokopi 5.27 16 ePn Pn 20 49 54.8 +1.3
NVR eSn Sn 20 50 52.8 -0.5
NVR Nevrokopi 5.27 16 ePN Pn 20 49 54.8 +1.3
NVR eSN Sn 20 50 52.8 -0.5
NVR Nevrokopi 5.27 16 ePn Pn 20 49 54.8 +1.3
NVR eSn Sn 20 50 52.8 -0.5
TIR Tirane 5.33 342 ePn Pn 20 49 56.0 +1.7
TIR eSn Sn 20 50 54.7 0.0
TIR Tirane 5.33 342 ePN Pn 20 49 56.0 +1.7
TIR eSN Sn 20 50 54.7 0.0
TIR Tirane 5.33 342 ePn Pn 20 49 56.0 +1.7
TIR eSn Sn 20 50 54.7 0.0
SLUM 5.47 150 P Pn 20 49 57.9 +1.5
baz=158
SLUM S Sn 20 50 53.8 -4.5
baz=158
SLUM 5.47 150 P Pn 20 49 57.9 +1.5
BALY Balya 5.63 50⇑iP Pn 20 49 55.0 -3.5
SKO Skopje 5.70 356 ePn Pn 20 50 00.5 +1.0
SKO eSg Sn 20 51 01.9 -2.0
DNZL Cakiroluk 5.82 74⇑iP Pn 20 50 03.5 +2.4
PUK Puka 5.98 345 i PN Sn 20 51 11.6 +0.8
ULC Ulcinj 6.07 340⇑iPn Pn 20 50 04.0 -0.5
ULC eSn Sn 20 51 07.4 -5.4
ULC Ulcinj 6.07 340⇑iPn Pn 20 50 04.0 -0.5
CUC Castrocucco 6.12 309 ePn Pn 20 50 06.7 +1.5
43nm,0.6s
CUC eSn Sn 20 51 12.7 -1.6
CUC Castrocucco 6.12 309 ePn Pn 20 50 06.7 +1.5
43nm,0.6s
AKAS Kas 6.15 88 i P Pn 20 50 05.9 +0.2
GOLH Golhisar 6.15 79⇑iP Pn 20 50 08.3 +2.6
VAE Valguarnera 6.19 283 Pn Pn 20 50 08.7 +2.5
VAE Sn Sn 20 51 18.3 +2.2
VAE Valguarnera 6.19 283 Pn Pn 20 50 08.7 +2.5
0.9nm,0.3s,baz=82,slow=18,SNR=3.4
VAE Sn Sn 20 51 18.3 +2.2
3.1nm,0.3s,baz=97,slow=17,SNR=3.5
VAE Valguarnera 6.19 283 Pn Pn 20 50 08.7 +2.4
VAE Sn Sn 20 51 18.3 +2.2
BCI Bajram Curri 6.26 347 i PN Sn 20 51 16.2 -1.5
VTS Vitosha 6.38 8 ⇑P Pn 20 50 11.7 +3.0
VTS Vitosha 6.38 8⇑iP Pn 20 50 11.7 +3.0
VTS Vitosha 6.38 8 P Pn 20 50 11.7 +3.0
BUM Brajici-Budva 6.47 339⇑iPn Pn 20 50 09.7 -0.4
BUM eSn Sn 20 51 17.1 -5.9
BUM Brajici-Budva 6.47 339⇑iPn Pn 20 50 09.7 -0.4
PDG Podgorica 6.50 342⇑iPn Pn 20 50 10.0 -0.4
TTG Podgorica 6.50 342⇑iPn Pn 20 50 10.0 -0.4
TTG eSn Sn 20 51 18.7 -4.8
TTG Podgorica 6.50 342 i P Pn 20 50 10.0 -0.4
PVY Plav 6.50 347 ePn Pn 20 50 11.3 +0.9
PVY eSn Sn 20 51 20.2 -3.3
PVY Plav 6.50 347 ePn Pn 20 50 11.3 +0.9
BARS Barje 6.53 359⇑iPn Pn 20 50 12.0 +1.1
HMAT Matruh 6.69 139 P Pn 20 50 11.2 -1.9
baz=145
HMAT AMP 20 51 00.0
comp=E,30μm,0.3s,logA/T=5.0,baz=145
HMAT S Sn 20 51 20.2 -8.2
baz=145
HCY Herceg Novi 6.73 337⇓iPn Pn 20 50 12.7 -0.9
HCY eSn Sn 20 51 22.7 -6.5
HCY Herceg Novi 6.73 337⇓iPn Pn 20 50 12.7 -0.9
KORT Korkueli 6.76 81⇑iP Pn 20 50 17.9 +3.9
BEY Berane 6.78 347⇑iPn Pn 20 50 15.1 +0.8
IVA Berane 6.78 347⇑iPn Pn 20 50 15.1 +0.8
IVA eSn Sn 20 51 27.0 -3.5
IVA Berane 6.78 347⇑iPn Pn 20 50 15.1 +0.8
NKY Niksic 6.92 341⇑iPn Pn 20 50 15.7 -0.5
NKY eSn Sn 20 51 28.8 -5.2
NKY Niksic 6.92 341⇑iPn Pn 20 50 15.7 -0.5
BRY Bratogost 7.13 339⇑iPn Pn 20 50 18.3 -0.8
BRY eSn Sn 20 51 32.8 -6.3
BRY Bratogost 7.13 339⇑iPn Pn 20 50 18.3 -0.8
UPM Unac-Piva 7.31 342⇑iPn Pn 20 50 21.7 +0.1
UPM eSn Sn 20 51 38.0 -5.5
UPM Unac-Piva 7.31 342⇑iPn Pn 20 50 21.7 +0.1
PLE Pljevlja 7.32 345⇓iPn Pn 20 50 22.1 +0.4
PLE eSn Sn 20 51 39.1 -4.7
PLE Pljevlja 7.32 345⇓iPn Pn 20 50 22.1 +0.4
STON Ston 7.37 335 i Pn Pn 20 50 20.3 -2.1
STON Sn Sn 20 51 38.1 -6.9
BOLS Boljevac 7.54 360⇑iPn Pn 20 50 23.9 -0.8
GRUS Gruza 7.67 353⇑iPn Pn 20 50 25.1 -1.3
BBLS Lazići 7.83 346⇓iPn Pn 20 50 28.0 -0.7
DIVS Divibare 7.96 350⇓iPn Pn 20 50 29.7 -0.8
TRUS Trudelj 8.03 352⇑iPn Pn 20 50 30.1 -1.3
GAZI Gazipasa 8.34 87⇑iP Pn 20 50 34.2 -1.5
HBRG Burj al 'Arab 8.68 129 P Pn 20 50 37.9 -2.5
baz=133
ERMK Ermenek 8.81 84⇑iP Pn 20 50 43.0 +0.9
AQU L'Aquila 9.01 315 ePn Pn 20 50 45.1 +0.3
AQU L'Aquila 9.01 315 eP Pn 20 50 45.1 +0.3
GZR Gura Zlata 9.13 3 ⇑P Pn 20 50 47.7 +1.3
GZR Gura Zlata 9.13 3⇑iP Pn 20 50 47.7 +1.3
GZR Gura Zlata 9.13 3 P Pn 20 50 47.7 +1.3
BZS Buzias 9.33 358 ⇑P Pn 20 50 48.7 -0.6
BZS Buzias 9.33 358⇑iP Pn 20 50 48.7 -0.6
BZS Buzias 9.33 358 P Pn 20 50 48.7 -0.6
VOIR 9.44 13 ⇑P Pn 20 50 53.3 +2.6
VOIR 9.44 13⇑iP Pn 20 50 53.3 +2.6
VOIR 9.44 13 P Pn 20 50 53.3 +2.6
MLR Muntele Rosu 9.68 17 ⇑P Pn 20 50 56.8 +2.8
MLR Muntele Rosu 9.68 17 Pn Pn 20 50 56.5 +2.5
comp=E,0.1nm,0.3s,baz=197,slow=19,SNR=4.2
MLR Muntele Rosu 9.68 17⇑iP Pn 20 50 56.8 +2.8
MLR Muntele Rosu 9.68 17 P Pn 20 50 56.5 +2.5
BRTR Keskin Array B 9.81 66 Pn Pn 20 50 54.6 -1.2
comp=E,0.1nm,0.3s,baz=258,slow=17,SNR=2.7
BRTR Keskin Array B 9.81 66 P Pn 20 50 54.7 -1.2
BR131 Keskin Array S 9.81 66 ePn Pn 20 50 53.2 -2.7
HMYD Mayadein 9.82 129 P Pn 20 50 53.5 -2.5
baz=132
AWBH 9.85 142 P Pn 20 50 55.9 -0.5
baz=146
NVLJ Novalja 9.89 329 ePn Pn 20 50 56.5 -0.5
NVLJ Sn Sn 20 52 39.7 -7.2
NVLJ Novalja 9.89 329 ePn Pn 20 50 56.4 -0.6
PKSM Moragy 10.24 347⇓iP Pn 20 50 59.9 -1.8
PKSM Moragy 10.24 347⇓iP Pn 20 50 59.9 -1.8
PKSM Moragy 10.24 347⇑eP Pn 20 51 00.5 -1.2
KEST Kesra 10.26 271 Pn Pn 20 51 04.6 +2.5
comp=E,0.1nm,0.3s,baz=45,slow=13,SNR=3.3
KEST Sn Sn 20 52 55.1 -1.0
comp=E,0.1nm,0.3s,baz=233,slow=20,SNR=3.3
KOT Kottamia 10.39 125 P Pn 20 51 00.7 -3.2
baz=128
HSAF As Saff 10.42 127 P Pn 20 51 02.5 -1.7
baz=130
VSL Villasalto 10.47 292 ePn Pn 20 51 05.6 +0.6
VSL Villasalto 10.47 292 ePn Pn 20 51 05.6 +0.7
BOJS Bojanci 10.53 333 ePn Pn 20 51 05.6 -0.1
BOJS eSn Sn 20 52 55.3 -7.2
BOJS Bojanci 10.53 333 ePn Pn 20 51 05.6 -0.1
GLL Jalalah 10.54 127 P Pn 20 51 04.4 -1.5
baz=130
HFRF Wahat Farafira 10.57 148 P Pn 20 51 06.5 +0.3
baz=152
HFRF Wahat Farafira 10.57 148 P Pn 20 51 06.6 +0.3
BEHE Becsehely 10.91 341 eS Sn 20 52 12.6 +0.8
AMAG Maghara 10.92 118 P Pn 20 51 07.2 -3.8
baz=120
SKDS Skadanscina 11.05 329 ePn Pn 20 51 11.5 -1.2
SKDS eSn Sn 20 53 07.0 -8.2
SKDS
comp=Z,8.0nm,0.2s
SUZ 11.13 122 P Pn 20 51 11.6 -2.3
baz=125
PKSG 11.42 348 eP Pn 20 51 17.2 -0.7
VOY Vojsko 11.49 330 ePn Pn 20 51 18.5 -0.3
VOY Vojsko 11.49 330 ePn Pn 20 51 18.5 -0.3
MMAI Mount Meron Ar 11.51 103 Pn Pn 20 51 16.2 -3.0
comp=Z,1.4nm,0.3s,baz=279,slow=12,SNR=6.8
MMAI Sn Sn 20 53 18.1 -8.7
comp=Z,1.5nm,0.3s,baz=295,slow=21,SNR=5.2
SOKA Soboth 11.62 336⇓iPn Pn 20 51 19.0 -1.6
OBKA Obir 11.64 334⇓iPn Pn 20 51 19.8 -1.1
OBKA Obir 11.64 334 Sn Sn 20 53 23.0 -6.9
OBKA Obir 11.64 334 Pn Pn 20 51 19.8 -1.1
PSZ Piszkesteto 11.74 353 ePn Pn 20 51 21.7 -0.4
PSZ eSn Sn 20 53 24.5 -7.5
PSZ Piszkesteto 11.74 353⇑iP Pn 20 51 20.1 -2.0
PSZ Piszkesteto 11.74 353⇓ePP 20 51 22.2
PSZ eSS 20 53 30.3
PSZ Piszkesteto 11.74 353 eP Pn 20 51 21.7 -0.4
PSZ eS Sn 20 53 30.3 -1.7
VYHS Vyhne 12.43 350 ePn Pn 20 51 28.5 -3.1
VYHS eSn Sn 20 53 40.8 -8.2
VYHS Vyhne 12.43 350 ePN Pn 20 51 28.5 -3.1
KBA Koelnbreinsper 12.57 332⇓iPn Pn 20 51 32.7 -0.9
KBA Koelnbreinsper 12.57 332 Pn Pn 20 51 32.7 -0.8
KOLL Kolacno 12.57 349 ePn Pn 20 51 27.2 -6.4
KOLL eSn Sn 20 53 40.6 -12
KOLL Kolacno 12.57 349 ePN Pn 20 51 27.2 -6.4
CRVS Cervenica-Dubn 12.62 358 ePn Pn 20 51 34.9 +0.6
CRVS Cervenica-Dubn 12.62 358 ePN Pn 20 51 34.9 +0.6
CRVS Cervenica-Dubn 12.62 358 eP Pn 20 51 34.9 +0.6
EIL Elat 12.71 118 Pn Pn 20 51 32.7 -2.9
comp=Z,0.6nm,0.3s,baz=275,slow=3.0,SNR=14
EIL Sn Sn 20 53 44.8 -11
comp=Z,1.2nm,0.3s,baz=11,slow=21,SNR=6.1
MOA Molln 12.90 336⇑iPn Pn 20 51 37.0 -1.1
MOA Molln 12.90 336 Pn Pn 20 51 37.0 -1.0
ASF Jabal al Asfar 12.99 104 Pn Pn 20 51 38.6 -0.8
comp=Z,0.4nm,0.3s,baz=240,slow=8.1,SNR=3.2
ASF Sn Sn 20 53 52.5 -11
comp=Z,0.2nm,0.3s,baz=280,slow=17,SNR=2.0
STHS Stebnicka Huta 13.14 358 ePn Pn 20 51 50.4 +9.0
STHS Stebnicka Huta 13.14 358 ePN Pn 20 51 50.4 +9.0
MALT Malatya 13.24 76 ePn Pn 20 51 44.8 +2.0
comp=Z,4.7nm,0.9s
MALT Malatya 13.24 76 ⇓P Pn 20 51 44.6 +1.8
MALT Malatya 13.24 76⇓iP Pn 20 51 44.6 +1.8
MALT Malatya 13.24 76 P Pn 20 51 44.6 +1.8
OKC Ostrava-Krasne 13.84 350 eP Pn 20 52 00.2 +9.4
OKC Ostrava-Krasne 13.84 350 eP Pn 20 52 00.2 +9.4
OKC Ostrava-Krasne 13.84 350 eP Pn 20 52 00.2 +9.4
DAVOX Davos/Dischmat 13.85 323 Pn Pn 20 51 55.6 +4.5
comp=Z,0.3nm,0.3s,baz=144,slow=19,SNR=4.0
DAVOX Sn Sn 20 54 20.1 -3.7
comp=Z,0.5nm,0.3s,baz=329,slow=19,SNR=4.3
MORC Moravsky Berou 13.88 348 ePn Pn 20 51 59.0 +7.7
MORC Moravsky Berou 13.88 348 eP Pn 20 51 59.0 +7.7
KHC Kasperske Hory 14.24 337 eP Pn 20 52 05.0 +8.6
KHC Kasperske Hory 14.24 337 eP Pn 20 52 05.0 +8.6
KHC Kasperske Hory 14.24 337 eP Pn 20 52 05.0 +8.6
DPC Dobruska-Polom 14.65 346 eP Pn 20 52 08.7 +6.8
DPC Dobruska-Polom 14.65 346 eP Pn 20 52 08.7 +6.8
DPC Dobruska-Polom 14.65 346 eP Pn 20 52 08.7 +6.8
PRU Pruhonice 14.73 341 eP Pn 20 52 06.3 +3.3
PRU Pruhonice 14.73 341 eP Pn 20 52 06.3 +3.3
PRU Pruhonice 14.73 341 eP Pn 20 52 06.3 +3.3
LPG La Plagne 14.73 313 eP Pn 20 52 03.4 +0.3
UPC Upice 14.87 345 eP Pn 20 52 10.9 +6.1
UPC Upice 14.87 345 eP Pn 20 52 10.9 +6.1
UPC Upice 14.87 345 eP Pn 20 52 10.9 +6.1
AKASG Malin Array Be 15.33 18 Pn Pn 20 52 08.1 -2.9
comp=Z,0.4nm,0.3s,baz=212,slow=10,SNR=2.9
HINF Hinteralfeld 16.07 321 eP Pn 20 52 22.3 +1.8
HINF Hinteralfeld 16.07 321 eP Pn 20 52 22.3 +1.8
HAU Haudompre 16.45 320 eP Pn 20 52 23.7 -1.7
KIV Kislovodsk 17.56 58 ePn Pn 20 52 37.3 -2.0
comp=Z,4.6nm,0.7s
KIV Kislovodsk 17.56 58 eP Pn 20 52 39.4 +0.1
KIV pmax pmax
comp=Z,4.0nm,0.9s
KIV Kislovodsk 17.56 58 ePn Pn 20 52 37.3 -2.0
comp=Z,4.6nm,0.7s
KIV Kislovodsk 17.56 58 eP Pn 20 52 39.4 +0.1
comp=Z,4.0nm,0.9s
SUW Suwalki 17.75 2 ePn Pn 20 52 39.5 -2.1
SUW Suwalki 17.75 2 eP Pn 20 52 39.5 -2.1
GNI Garni 18.28 71 ePn Pn 20 52 46.6 -1.5
comp=Z,7.6nm,0.9s
GNI P 20 52 49.1
GNI LR LR 21 00 41.4
GNI Garni 18.28 71 P Pn 20 52 49.1 +1.0
comp=Z,0.6nm,0.3s,baz=225,slow=3.8,SNR=5.7
GNI LR LR 21 00 41.4
comp=Z,34nm,18.0s,baz=3.1,slow=40
GNI Garni 18.28 71 ePn Pn 20 52 46.6 -1.5
comp=Z,7.6nm,0.9s
GNI Garni 18.28 71 P Pn 20 52 49.1 +1.0
comp=Z,1.0nm,0.3s
BSD Bornholm Skovb 19.46 348 i P Pn 20 52 59.5 -2.7
BSD pmax pmax
comp=Z,10.0nm,0.9s
BSD Bornholm Skovb 19.46 348 i P Pn 20 52 59.5 -2.7
comp=Z,10nm,0.9s
BSD Bornholm Skovb 19.46 348 i P Pn 20 52 59.5 -2.7
comp=Z,10.0nm,0.9s
TAM Tamanrasset 19.61 231 eP Pn 20 53 08.8 +4.5

comp=Z,2.7nm,0.9s
TAM Tamanrasset 19.61 231 *e*P **Pn 20 53 08.8 +4.5**
TAM pmax pmax
comp=Z,3.0nm,0.9s
LDF La Druitiere 20.36 314 *e*P **P 20 53 12.1 +1.3**
comp=Z,5.6nm,0.5s
LDF La Druitiere 20.36 314 *e*P **P 20 53 12.1 +1.3**
comp=Z,2.8nm,0.5s
LDF La Druitiere 20.36 314 *e*P **P 20 53 12.1 +1.3**
LDF pmax pmax
comp=Z,3.0nm,0.5s
LDF La Druitiere 20.36 314 *e*P **P 20 53 12.1 +1.3**
comp=Z,2.8nm,0.5s
FLN La Foliniere 20.65 314 *e*P **P 20 53 15.1 +1.2**
FLN La Foliniere 20.65 314 *e*P **P 20 53 15.1 +1.2**
GRR Gorron 20.69 313 *e*P **P 20 53 14.7 +0.3**
GRR Gorron 20.69 313 *e*P **P 20 53 14.7 +0.3**
ESDC Sonseca Array 20.72 287 P **P 20 53 15.9 +1.2**
comp=Z,0.8nm,0.6s,baz=80,slow=9.7,SNR=3.2
ESDC Sonseca Array 20.72 287 P **P 20 53 15.9 +1.1**
OBN Obninsk 21.33 23 *e*P **P 20 53 18.5 -2.7**
OBN *e* 20 57 22.2
OBN pmax pmax
comp=Z,7.0nm,0.9s,mb4.0
OBN Obninsk 21.33 23 *e*P **P 20 53 18.5 -2.7**
comp=Z,7.0nm,0.9s,mb4.0
OBN Obninsk 21.33 23 *e*PcP PcP 20 57 22.2 -2.3
HFS Hagfors 24.46 350 P **P 20 53 51.8 -1.1**
comp=Z,1.5nm,0.4s,mb3.8,baz=144,slow=11,SNR=16
HFS Hagfors 24.46 350 P **P 20 53 51.8 -1.1**
FINES FINESS Array B 25.32 5 P **P 20 53 59.4 -1.3**
comp=Z,3.2nm,0.5s,mb4.1,baz=155,slow=12,SNR=31
FINES FINESS Array B 25.32 5 P **P 20 53 59.4 -1.3**
NAO01 NORSAR Array S 25.59 347 *e*P **P 20 54 00.8 -2.3**
comp=Z,4.2nm,0.8s,mb4.0
EKA Eskdalemuir Ar 25.66 326 P **P 20 54 03.4 -0.4**
comp=Z,2.9nm,0.9s,mb3.8,baz=117,slow=7.4,SNR=8.6
EKA Eskdalemuir Ar 25.66 326 P **P 20 54 03.3 -0.5**
NB2 NORSAR Subarra 25.71 348 P **P 20 54 04.3 +0.1**
comp=Z,1.4nm,0.4s,mb3.8,SNR=7.7
NOA NORSAR Array B 25.71 348 P **P 20 54 04.0 -0.2**
comp=Z,1.0nm,0.4s,mb3.7,baz=153,slow=10,SNR=8.4
NOA NORSAR Array B 25.71 348 P **P 20 54 04.0 -0.2**
KAF Kangasniemi 26.00 5 *e*P **P 20 54 03.6 -3.2**
comp=Z,0.8nm,0.3s,mb3.7
KAF Kangasniemi 26.00 5 *e*P **P 20 54 03.6 -3.2**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb3.8
KAF Kangasniemi 26.00 5 *e*p **P 20 54 03.6 -3.2**
comp=Z,0.8nm,0.3s,mb3.7
JOF Joensuu 27.28 9 *e*P **P 20 54 16.2 -2.2**
JOF Joensuu 27.28 9 *e*p **P 20 54 16.2 -2.2**
comp=Z,0.9nm,0.4s,mb3.6
TORD Torodi Ar. Bea 29.38 224 P **P 20 54 39.7 +2.2**
comp=Z,0.7nm,0.7s,mb3.5,baz=33,slow=9.1,SNR=8.8
AKTK Aktyubinsk 29.44 50 P **P 20 54 35.7 -2.1**
AKTK Aktyubinsk 29.44 50 P **P 20 54 35.7 -2.1**
AKTO Aktyubinsk 29.44 50 P **P 20 54 35.7 -2.1**
comp=Z,0.6nm,0.3s,mb3.7,baz=264,slow=10,SNR=3.7
ABKAR Akbulak array 30.40 53 *e*P **P 20 54 43.9 -2.3**
comp=Z,0.8nm,0.5s,mb3.7
ARU Arti 31.75 39 *e*P **P 20 54 55.4 -2.6**
comp=Z,1.8nm,0.4s,mb4.3
ARU Arti 31.75 39 *e*P **P 20 54 55.4 -2.6**
ARU pmax pmax
comp=Z,2.0nm,0.4s,mb4.3
ARCES ARCESS Array B 33.37 2 P **P 20 55 10.9 -1.2**
comp=Z,2.5nm,0.7s,mb4.2,baz=190,slow=9.9,SNR=23
ARCES ARCESS Array B 33.37 2 P **P 20 55 10.9 -1.2**
ARE0 ARCESS Array S 33.37 2 *e*P **P 20 55 09.2 -2.9**
KEV Kevo 33.65 3 *e*P **P 20 55 12.7 -1.8**
KEV Kevo 33.65 3 *e*p **P 20 55 12.7 -1.8**
BRVK Borovoye 37.42 48 *e*P **P 20 55 45.7 -1.3**
comp=Z,4.8nm,0.9s,mb4.3
BRVK Borovoye 37.42 48 *e*P **P 20 55 45.7 -1.4**
BRVK pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
BRVK Borovoye 37.42 48 *e*P **P 20 55 45.7 -1.4**
comp=Z,4.8nm,0.9s,mb4.3
KBL Kabul 38.09 78 *e*P **P 20 55 52.3 -0.7**
comp=Z,3.5nm,0.8s,mb4.1
KBL Kabul 38.09 78 *e*P **P 20 55 52.3 -0.7**
KBL pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
KBL Kabul 38.09 78 *e*P **P 20 55 52.3 -0.7**
comp=Z,3.5nm,0.8s,mb4.1
DBIC Dimbokro 38.36 226 P **P 20 55 56.4 +1.0**
DBIC Dimbokro 38.36 226 P **P 20 55 56.4 +1.0**
EKS2 Erkin-Say 39.96 64 *e*P **P 20 56 07.6 -0.9**
comp=Z,5.7nm,0.9s,mb4.3
EKS2 Erkin-Say 39.96 64 *e*P **P 20 56 07.6 -0.9**
comp=Z,5.7nm,0.9s,mb4.3
AML Almayashu 39.98 65 P **P 20 56 07.9 -0.8**
comp=Z,1.2nm,0.6s,mb3.8
AML Almayashu 39.98 65 P **P 20 56 07.9 -0.8**
comp=Z,1.2nm,0.6s,mb3.8
AAK Ala-Archa 40.49 64 *e*P **P 20 56 12.2 -0.6**
comp=Z,5.8nm,0.9s,mb4.3
AAK Ala-Archa 40.49 64 *e*P **P 20 56 12.2 -0.7**
AAK pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
AAK Ala-Archa 40.49 64 *e*P **P 20 56 12.2 -0.7**
comp=Z,5.8nm,0.9s,mb4.3
NVS Novosibirsk 45.14 46 *e*P **P 20 56 49.6 -0.8**
NVS Novosibirsk 45.14 46 *e*P **P 20 56 49.6 -0.8**
MK31 Makanchi Array 45.32 57 *e*P **P 20 56 50.3 -1.6**
MK31 Makanchi Array 45.32 57 *e*P **P 20 56 50.3 -1.7**
MKAR Makanchi Array 45.32 57 P **P 20 56 50.5 -1.4**
comp=Z,1.5nm,0.4s,mb4.2,baz=270,slow=7.9,SNR=56
MKAR PcP PcP 20 58 31.5 +0.2
comp=Z,0.6nm,0.6s,baz=279,slow=3.9,SNR=3.0
MKAR Makanchi Array 45.32 57 P **P 20 56 50.6 -1.4**
MKAR Makanchi Array 45.32 57 PcP PcP 20 58 31.5 +0.3
ZAA0 Zalesovo Array 46.11 47 *e*P **P 20 56 56.0 -2.0**
ZALV Zalesovo Beam 46.11 47 P **P 20 56 56.3 -1.8**
comp=Z,3.6nm,0.4s,mb4.7,baz=265,slow=9.4,SNR=22
LSZ Lusaka 51.61 172 *e*P **P 20 57 42.2 +1.6**
LSZ Lusaka 51.61 172 *e*P **P 20 57 42.2 +1.6**
KOLN Koldanda 52.16 81 *e*P **P 20 57 40.6 -4.1**
GKN Gorkha 52.88 80 *e*P **P 20 57 49.7 -0.4**
comp=Z,10nm,0.4s,mb5.1
DMN Daman 53.43 80 *e*P **P 20 57 53.6 -0.5**
comp=Z,22nm,0.7s,mb5.2
KKN Kakani 53.48 80 *e*P **P 20 57 54.3 -0.3**
PKIN Phulchoki 53.67 80 *e*P **P 20 57 55.3 -0.6**
comp=Z,3.3nm,0.4s,mb4.6
PKI Pulchoki 53.68 80 *e*P **P 20 57 55.5 -0.5**
LSA Lhasa 57.28 75 P **P 20 58 21.4 -0.5**
SCHQ Schefferville 60.66 318 P **P 20 58 45.8 +0.9**
comp=Z,2.5nm,0.6s,mb4.5,baz=58,slow=15,SNR=3.2
SCHQ Schefferville 60.66 318 P **P 20 58 45.8 +0.9**
SONM Songino Array 60.76 50 P **P 20 58 45.0 -0.7**
comp=Z,0.5nm,0.5s,mb3.9,baz=281,slow=8.0,SNR=5.7
SONM Songino Array 60.76 50 P **P 20 58 45.0 -0.7**
CHTO Chiang Mai 68.80 82 P **P 20 59 37.0 -1.6**
CHTO Chiang Mai 68.80 82 P **P 20 59 37.0 -1.5**
CMAR Chiang Mai Arr 68.99 82 P **P 20 59 39.1 -0.6**
comp=Z,2.0nm,0.8s,mb4.1,baz=303,slow=7.9,SNR=16
CMAR Chiang Mai Arr 68.99 82 P **P 20 59 39.1 -0.6**
ILAR Eielson Array 78.91 355 P **P 21 00 37.2 +0.3**
comp=Z,0.4nm,0.4s,mb3.7,baz=340,slow=2.7,SNR=8.1
ILAR Eielson Array 78.91 355 P **P 21 00 37.2 +0.3**
KSRS Korea Array 79.62 51 P **P 21 00 40.4 -1.0**
comp=Z,0.9nm,0.7s,mb3.8,baz=312,slow=5.0,SNR=5.2
KSRS Korea Array 79.62 51 P **P 21 00 40.4 -1.0**
KSRS pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
KSRS Korea Array 79.62 51 P **P 21 00 40.4 -1.0**
comp=Z,1.0nm,0.7s,mb3.9
WRA Warramunga Arr 119.26 94 PKP PKPdf 21 07 22.8 -0.6
comp=Z,0.6nm,1.1s,baz=251,slow=1.6,SNR=9.3
ASAR Alice Springs 120.77 98 PKP PKPdf 21 07 26.2 -0.1
comp=Z,0.3nm,0.3s,baz=306,slow=1.3,SNR=9.0

IDC 19 20:53:14.8±1.4, 0.05N×126.55E, h0km, mb3.1/4, mb1 3.3/4, mb1mx3.2/18, mbtmp3.1/4, Error ellipse: s-maj=146.1km s-min=23.1km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.28**	**159**	P	P	20 58 03.2	+0.1
	0.3nm,0.5s,baz=339,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**24.63**	**164**	P	P	20 58 37.2	+0.1
	0.5nm,0.9s,baz=342,slow=9.9,SNR=4.3						
SONM	**Songino Array**	**50.72**	**343**	P	P	21 02 16.9	+0.6
	0.2nm,0.7s,baz=148,slow=8.5,SNR=2.3						
MKAR	**Makanchi Array**	**60.48**	**327**	P	P	21 03 26.0	-0.6
	0.1nm,0.5s,baz=122,slow=7.5,SNR=3.9						

*ISCJB **19** 21:20:47.0±0.3, 42.65N×0.02×27.82W±0.04, h10km, mb4.4/66, MS3.7/22, Error ellipse: s-maj=4.9km s-min=3.2km az=21.9*
*IDC **19** 21:20:47.9±1.1, 42.78N×27.82W, h0km, mb3.9/15, mb1 4.0/16, mb1mx4.0/26, mbtmp3.9/16, ML5.2/1, MS3.7/20, Ms1 3.7/20, ms1mx3.6/36, Error ellipse: s-maj=27.0km s-min=18.0km az=12.0*
*NEIC **19** 21:20:49.1±0.2, 42.75N×27.79W, h10km, mb4.7/52, MS3.9/3, ML4.4(SVSA), Error ellipse: s-maj=5.5km s-min=4.2km az=150.0*
*CSEM **19** 21:20:50.4±0.1, 42.69N×27.78W, h20km, mb4.7/42, Ms3.8, Error ellipse: s-maj=5.9km s-min=4.3km az=119.0*
*PDA **19** 21:20:53.9±1.2, 42.61N×27.54W, h0km, MD4.2, ML4.4, Error ellipse: s-maj=11.7km s-min=6.1km az=108.0*

ISC 19 21:20:49.0±0.3, 42.64N±0.02×27.79W±0.04, h10km, (h19km±1.5km:pP-P), n284, σ1s10/288, mb4.4/66, MS3.7/22, 7C-8D, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROSA	**Rosas**	**3.93**	**185**	*e*P	**Pn**	**21 21 50.6**	**+1.2**
ROSA				*e*S	**Sn**	**21 22 33.4**	**-2.2**
ROSA	**Rosas**	**3.93**	**185**	*e*P	**Pn**	**21 21 51.2**	**+1.8**
ROSA				*e*S	**Sn**	**21 22 33.4**	**-2.2**
ROSA	**Rosas**	**3.93**	**185**	*e*P	**Pn**	**21 21 50.6**	**+1.2**
ROSA				*e*S	**Sn**	**21 22 33.4**	**-2.2**
ADH	**Angra Heroismo**	**4.01**	**174**	*e*P	**Pn**	**21 21 50.5**	**+0.1**
ADH				*e*S	**Sn**	**21 22 34.0**	**-3.3**
ADH				A		21 22 39.3	
	77nm,0.3s						
ADH	**Angra Heroismo**	**4.01**	**174**	*e*P	**Pn**	**21 21 51.0**	**+0.6**
ADH				*e*S	**Sn**	**21 22 33.3**	**-4.0**
ADH	**Angra Heroismo**	**4.01**	**174**	*e*P	**Pn**	**21 21 51.0**	**+0.6**
ADH				*e*S	**Sn**	**21 22 33.3**	**-4.0**
PMAN	**Manadas**	**4.01**	**183**	*e*P	**Pn**	**21 21 51.3**	**+0.8**
PMAN				*e*S	**Sn**	**21 22 35.3**	**-2.2**
PMAN				A		21 22 40.2	
	81nm,0.3s						
PMAN	**Manadas**	**4.01**	**183**	*e*P	**Pn**	**21 21 52.4**	**+2.0**
PMAN				*e*S	**Sn**	**21 22 35.4**	**-2.1**
PMAN	**Manadas**	**4.01**	**183**	*e*P	**Pn**	**21 21 51.3**	**+0.8**
PMAN				*e*S	**Sn**	**21 22 35.4**	**-2.1**
PCED	**Cedros**	**4.07**	**190**	*e*P	**Pn**	**21 21 52.6**	**+1.3**
PCED				*e*S	**Sn**	**21 22 37.4**	**-1.5**
PCED				A		21 22 40.9	
	39nm,0.4s						
PCED	**Cedros**	**4.07**	**190**	*e*P	**Pn**	**21 21 53.4**	**+2.1**
PCED				*e*S	**Sn**	**21 22 37.1**	**-1.8**
PCED	**Cedros**	**4.07**	**190**	*e*P	**Pn**	**21 21 52.6**	**+1.3**
PCED				*e*S	**Sn**	**21 22 37.4**	**-1.5**
CALA	**Caldeira**	**4.12**	**190**	*e*P	**Pn**	**21 21 53.8**	**+1.9**
CALA				*e*S	**Sn**	**21 22 38.6**	**-1.5**
CALA	**Caldeira**	**4.12**	**190**	*e*P	**Pn**	**21 21 54.1**	**+2.2**
CALA				*e*S	**Sn**	**21 22 38.4**	**-1.7**
CALA	**Caldeira**	**4.12**	**190**	*e*P	**Pn**	**21 21 53.8**	**+1.9**
CALA				*e*S	**Sn**	**21 22 38.6**	**-1.5**
PID	**Ribeirinha**	**4.20**	**184**	*e*P	**Pn**	**21 21 54.7**	**+1.6**
PID				*e*S	**Sn**	**21 22 40.4**	**-1.8**
PID	**Ribeirinha**	**4.20**	**184**	*e*P	**Pn**	**21 21 54.7**	**+1.6**
PID				*e*S	**Sn**	**21 22 40.4**	**-1.8**
PSET	**Sete Cidades**	**5.07**	**161**	*e*P	**Pn**	**21 22 05.8**	**+0.8**
PSET	**Sete Cidades**	**5.07**	**161**	*e*P	**Pn**	**21 22 05.8**	**+0.8**
PDA	**Ponta Delgada**	**5.15**	**161**	*e*P	**Pn**	**21 22 07.0**	**+0.9**
PDA	**Ponta Delgada**	**5.15**	**161**	*e*P	**Pn**	**21 22 07.2**	**+1.1**
PDA	**Ponta Delgada**	**5.15**	**161**	*e*P	**Pn**	**21 22 07.0**	**+0.9**
GRON	**Grota Negra**	**5.17**	**160**	*e*P	**Pn**	**21 22 07.9**	**+1.6**
BART	**Pico Bartolome**	**5.26**	**157**	*e*P	**Pn**	**21 22 07.9**	**+0.3**
BART				*e*S	**Sn**	**21 23 03.1**	**-5.1**
BART				A		21 23 04.5	
	42nm,0.5s						
BART	**Pico Bartolome**	**5.26**	**157**	*e*P	**Pn**	**21 22 07.9**	**+0.3**
PSMA	**Santa Maria**	**6.00**	**159**	*e*P	**Pn**	**21 22 18.7**	**+0.9**
PSMN	**Pico do Norte,**	**6.01**	**159**	*e*P	**Pn**	**21 22 18.5**	**+0.6**
PSMN	**Pico do Norte,**	**6.01**	**159**	*e*P	**Pn**	**21 22 18.5**	**+0.6**
PTOM	**Tomar**	**14.91**	**95**	*e*P	**Pn**	**21 24 19.5**	**-0.2**
MTE	**Manteigas**	**15.33**	**92**	*e*Pn	**Pn**	**21 24 20.8**	**-4.5**
	15nm,0.9s						
PTEO	**Sao Teotonio**	**15.45**	**103**	*e*P	**Pn**	**21 24 25.9**	**-0.9**
PFVI	**Vila Bisbo**	**15.55**	**104**	*e*P	**Pn**	**21 24 27.9**	**-0.3**
PMRV	**Marv??o**	**15.72**	**95**	*e*P	**Pn**	**21 24 29.2**	**-1.2**
PESTR	**Estremoz**	**15.76**	**97**	*e*P	**Pn**	**21 24 29.7**	**-1.2**
PBEJ	**Beja**	**15.87**	**100**	*e*P	**Pn**	**21 24 31.8**	**-0.5**
PCVE	**Castro Verde**	**15.90**	**102**	*e*P	**Pn**	**21 24 32.8**	**0.0**
PBDV	**Barranco-do-Ve**	**16.14**	**103**	*e*P	**Pn**	**21 24 36.5**	**+0.6**
PVAQ	**Vaqueiros**	**16.23**	**102**	*e*P	**Pn**	**21 24 37.9**	**+0.9**
PVAQ	**Vaqueiros**	**16.23**	**102**	*e*P	**Pn**	**21 24 37.9**	**+0.9**
PBAR	**Barrancos**	**16.41**	**99**	*e*P	**Pn**	**21 24 40.4**	**+1.1**
PBAR	**Barrancos**	**16.41**	**99**	*e*P	**Pn**	**21 24 40.4**	**+1.1**
ROSF	**Rostrenen**	**18.07**	**63**	*e*P	**Pn**	**21 24 57.9**	**-2.1**
	108nm,1.4s						
ROSF	**Rostrenen**	**18.07**	**63**	*e*P	**Pn**	**21 24 57.9**	**-2.1**
	54nm,1.4s						
ROSF	**Rostrenen**	**18.07**	**63**	*e*P	**Pn**	**21 24 57.9**	**-2.1**
	54nm,1.4s						
ESDC	**Sonseca Array**	**18.17**	**91**	P	**Pn**	**21 25 00.4**	**-0.8**
ESDC				LR	LR	21 30 30.2	
ESDC	**Sonseca Array**	**18.17**	**91**	P	**Pn**	**21 25 00.4**	**-0.8**
	1.8nm,0.3s,baz=288,slow=13,SNR=29						
ESDC				LR	LR	21 30 30.2	
	comp=Z,176nm,18.5s,baz=220,slow=32						
ESDC	**Sonseca Array**	**18.17**	**91**	P	**Pn**	**21 25 00.4**	**-0.9**
SJPF	**Ste Jean**	**19.45**	**80**	*e*P	**Pn**	**21 25 15.9**	**-0.9**
SJPF	**Ste Jean**	**19.45**	**80**	*e*P	**Pn**	**21 25 15.9**	**-0.9**
GRR	**Gorron**	**19.67**	**64**	*e*P	**Pn**	**21 25 18.9**	**-0.4**
	149nm,1.5s						
GRR	**Gorron**	**19.67**	**64**	*e*P	**Pn**	**21 25 18.9**	**-0.4**
	74nm,1.5s						
GRR	**Gorron**	**19.67**	**64**	*e*P	**Pn**	**21 25 18.9**	**-0.4**
	74nm,1.5s						
ETSF	**Etsaut**	**19.96**	**80**	*e*P	**Pn**	**21 25 21.8**	**-1.1**
ETSF	**Etsaut**	**19.96**	**80**	*e*P	**Pn**	**21 25 21.8**	**-1.1**
MFF	**Saint Martin d**	**20.02**	**69**	*e*P	**P**	**21 25 20.9**	**-0.9**
	109nm,1.6s						
MFF	**Saint Martin d**	**20.02**	**69**	*e*P	**P**	**21 25 20.9**	**-0.9**
	55nm,1.6s						
MFF	**Saint Martin d**	**20.02**	**69**	*e*P	**P**	**21 25 20.9**	**-0.9**
	55nm,1.6s						
LDF	**La Druitiere**	**20.18**	**63**	*e*P	**P**	**21 25 24.2**	**+0.7**
	35nm,1.1s						
LDF	**La Druitiere**	**20.18**	**63**	*e*P	**P**	**21 25 24.2**	**+0.7**
	17nm,1.1s						
LDF	**La Druitiere**	**20.18**	**63**	*e*P	**P**	**21 25 24.2**	**+0.7**
	17nm,1.1s						
EKA	**Eskdalemuir Ar**	**20.42**	**43**	P	**P**	**21 25 26.6**	**+0.5**
	2.7nm,0.6s,baz=248,slow=7.5,SNR=6.4						
EKA	**Eskdalemuir Ar**	**20.42**	**43**	P	**P**	**21 25 26.5**	**+0.5**
EPF	**Esparros**	**20.60**	**79**	*e*P	**P**	**21 25 26.7**	**-1.4**
	101nm,1.4s						
EPF	**Esparros**	**20.60**	**79**	*e*P	**P**	**21 25 26.7**	**-1.4**
	51nm,1.4s						
EPF	**Esparros**	**20.60**	**79**	*e*P	**P**	**21 25 26.7**	**-1.4**
	51nm,1.4s						
LFF	**La Frestale**	**20.68**	**74**	*e*P	**P**	**21 25 28.7**	**-0.2**
	162nm,1.4s						
LFF	**La Frestale**	**20.68**	**74**	*e*P	**P**	**21 25 28.7**	**-0.2**
	81nm,1.4s						
LFF	**La Frestale**	**20.68**	**74**	*e*P	**P**	**21 25 28.7**	**-0.2**
	81nm,1.4s						
MDT	**Midelt**	**20.73**	**111**	P	pP	21 25 39.8	+7.3
	7.0nm,0.6s,baz=316,slow=13,SNR=14						
MDT				LR	LR	21 31 51.4	
	comp=Z,177nm,20.4s,MS3.4,baz=122,slow=32						
CAF	**Calviac**	**21.62**	**74**	*e*P	**P**	**21 25 37.8**	**-1.3**
	45nm,1.1s,mb4.5						
CAF	**Calviac**	**21.62**	**74**	*e*P	**P**	**21 25 37.8**	**-1.3**
	22nm,1.1s,mb4.5						
CAF	**Calviac**	**21.62**	**74**	*e*P	**P**	**21 25 37.8**	**-1.3**
	22nm,1.1s,mb4.5						
TCF	**Toulx Ste Croi**	**21.65**	**70**	*e*P	**P**	**21 25 39.1**	**-0.3**
	70nm,1.3s,mb4.6						
TCF	**Toulx Ste Croi**	**21.65**	**70**	*e*P	**P**	**21 25 39.1**	**-0.3**
	35nm,1.3s,mb4.6						
TCF	**Toulx Ste Croi**	**21.65**	**70**	*e*P	**P**	**21 25 39.1**	**-0.3**
	35nm,1.3s,mb4.6						
MTLF	**Montolieu**	**21.91**	**78**	*e*P	**P**	**21 25 39.1**	**-3.1**
	106nm,1.4s,mb4.8						
MTLF	**Montolieu**	**21.91**	**78**	*e*P	**P**	**21 25 39.1**	**-3.1**
	53nm,1.4s,mb4.8						
BGF	**Bois d'Agland**	**22.09**	**69**	*e*P	**P**	**21 25 44.0**	**-0.1**
	116nm,1.3s,mb4.9						
BGF	**Bois d'Agland**	**22.09**	**69**	*e*P	**P**	**21 25 44.0**	**-0.1**
	58nm,1.3s,mb4.8						
BGF	**Bois d'Agland**	**22.09**	**69**	*e*P	**P**	**21 25 44.0**	**-0.1**
	58nm,1.3s,mb4.9						
AGO	**Saint Agoulin**	**22.30**	**71**	*e*P	**P**	**21 25 50.1**	**+3.8**
AGO	**Saint Agoulin**	**22.30**	**71**	*e*P	**P**	**21 25 50.1**	**+3.8**
AVF	**Avril sur Loir**	**22.43**	**69**	*e*P	**P**	**21 25 46.0**	**-1.7**
	100nm,1.5s,mb4.7						
AVF	**Avril sur Loir**	**22.43**	**69**	*e*P	**P**	**21 25 46.0**	**-1.7**
	50nm,1.5s,mb4.7						
AVF	**Avril sur Loir**	**22.43**	**69**	*e*P	**P**	**21 25 46.0**	**-1.7**
	50nm,1.5s,mb4.7						
BORG	**Borgarnes**	**22.45**	**7**	LR	LR	21 32 05.0	
	comp=Z,176nm,18.9s,MS3.5,baz=170,slow=30						
SSF	**Saint Saulge**	**22.54**	**68**	*e*P	**P**	**21 25 47.7**	**-1.1**
	143nm,1.5s,mb4.9						
SSF	**Saint Saulge**	**22.54**	**68**	*e*P	**P**	**21 25 47.7**	**-1.1**
	71nm,1.5s,mb4.9						
SSF	**Saint Saulge**	**22.54**	**68**	*e*P	**P**	**21 25 47.7**	**-1.1**
	71nm,1.5s,mb4.9						
PLDF	**La Plantade**	**22.65**	**71**	*e*P	**P**	**21 25 53.4**	**+3.4**
SMF	**Signal de Mont**	**22.77**	**69**	*e*P	**P**	**21 25 48.2**	**-3.1**
	102nm,1.4s,mb4.8						
SMF	**Signal de Mont**	**22.77**	**69**	*e*P	**P**	**21 25 48.2**	**-3.1**
	51nm,1.4s,mb4.8						
LOR	**Lormes**	**22.78**	**67**	*e*P	**P**	**21 25 50.1**	**-1.3**
	86nm,1.1s,mb4.8						
LOR				*e*MLR	MLR		
	comp=Z,530nm,20.5s,MS3.7						
LOR	**Lormes**	**22.78**	**67**	*e*P	**P**	**21 25 50.1**	**-1.3**
	comp=Z,43nm,1.1s,mb4.8						
LOR				LR	LR		
	comp=Z,530nm,20.5s,MS4.0						
LOR	**Lormes**	**22.78**	**67**	*e*P	**P**	**21 25 50.1**	**-1.3**
	comp=Z,43nm,1.1s,mb4.8						
LASF	**Ste Croix**	**22.98**	**76**	*e*P	**P**	**21 25 52.5**	**-1.1**
	comp=Z,74nm,1.2s,mb4.7						
LASF	**Ste Croix**	**22.98**	**76**	*e*P	**P**	**21 25 52.5**	**-1.1**
	comp=Z,37nm,1.2s,mb4.7						
BAIF	**Baives**	**23.16**	**60**	*e*P	**P**	**21 25 55.2**	**-0.2**
	comp=Z,108nm,1.3s,mb4.8						
BAIF	**Baives**	**23.16**	**60**	*e*P	**P**	**21 25 55.2**	**-0.2**
	comp=Z,54nm,1.3s,mb4.8						
BAIF	**Baives**	**23.16**	**60**	*e*P	**P**	**21 25 55.2**	**-0.2**
	comp=Z,54nm,1.3s,mb4.8						
SSB	**Saint Sauveur**	**23.34**	**72**	*e*P	**P**	**21 25 59.4**	**+2.1**
	comp=Z,21nm,1.3s,mb4.4						
SSB	**Saint Sauveur**	**23.34**	**72**	*e*P	**P**	**21 25 59.4**	**+2.1**
	comp=Z,21nm,1.3s,mb4.4						
VIVF	**Saint-Julien-l**	**23.47**	**73**	*e*P	**P**	**21 25 57.6**	**-1.1**
	comp=Z,55nm,1.5s,mb4.5						
VIVF	**Saint-Julien-l**	**23.47**	**73**	*e*P	**P**	**21 25 57.6**	**-1.1**
	comp=Z,27nm,1.5s,mb4.5						
VIVF	**Saint-Julien-l**	**23.47**	**73**	*e*P	**P**	**21 25 57.6**	**-1.1**
	comp=Z,27nm,1.5s,mb4.5						
GIVF	**Givet**	**23.56**	**60**	*e*P	**P**	**21 25 58.2**	**-1.4**
	comp=Z,144nm,1.4s,mb4.9						
GIVF	**Givet**	**23.56**	**60**	*e*P	**P**	**21 25 58.2**	**-1.4**
	comp=Z,72nm,1.4s,mb4.9						
GIVF	**Givet**	**23.56**	**60**	*e*P	**P**	**21 25 58.2**	**-1.4**
	comp=Z,72nm,1.4s,mb4.9						
MEZF	**Maizieres J'vi**	**23.60**	**64**	*e*P	**P**	**21 25 59.4**	**-0.6**
	comp=Z,91nm,1.2s,mb4.8						
MEZF	**Maizieres J'vi**	**23.60**	**64**	*e*P	**P**	**21 25 59.4**	**-0.6**
	comp=Z,91nm,1.2s,mb5.1						
MEZF	**Maizieres J'vi**	**23.60**	**64**	*e*P	**P**	**21 25 59.4**	**-0.6**
	comp=Z,45nm,1.2s,mb4.8						
THEF	**They Montfort**	**24.22**	**65**	*e*P	**P**	**21 26 10.5**	**+4.9**
THEF	**They Montfort**	**24.22**	**65**	*e*P	**P**	**21 26 10.5**	**+4.9**
ORIF	**Oris-en-Rattie**	**24.32**	**73**	*e*P	**P**	**21 26 06.5**	**-0.1**
ORIF				*e*MLR	MLR		
	comp=Z,338nm,20.2s,MS3.5						
ORIF	**Oris-en-Rattie**	**24.32**	**73**	*e*P	**P**	**21 26 06.5**	**-0.1**
CABF	**La Chapelle**	**24.32**	**69**	*e*P	**P**	**21 26 04.6**	**-2.0**
	comp=Z,124nm,1.5s,mb4.8						
CABF	**La Chapelle**	**24.32**	**69**	*e*P	**P**	**21 26 04.6**	**-2.0**
	comp=Z,62nm,1.5s,mb4.8						
CABF	**La Chapelle**	**24.32**	**69**	*e*P	**P**	**21 26 04.6**	**-2.0**
	comp=Z,62nm,1.5s,mb4.8						
HAU	**Haudompre**	**24.46**	**66**	*e*P	**P**	**21 26 06.5**	**-1.3**
	comp=Z,56nm,1.3s,mb4.5						
HAU				*e*MLR	MLR		
	comp=Z,505nm,18.2s,MS3.8						
HAU	**Haudompre**	**24.46**	**66**	*e*P	**P**	**21 26 06.5**	**-1.3**
	comp=Z,28nm,1.3s,mb4.5						
HAU				LR	LR		
	comp=Z,500nm,18.3s,MS4.0						
HAU	**Haudompre**	**24.46**	**66**	*e*P	**P**	**21 26 06.5**	**-1.3**
	comp=Z,28nm,1.3s,mb4.5						
HINF	**Hinteralfeld**	**24.80**	**66**	*e*P	**P**	**21 26 10.8**	**-0.1**
	comp=Z,40nm,1.3s,mb4.5						
HINF	**Hinteralfeld**	**24.80**	**66**	*e*P	**P**	**21 26 10.8**	**-0.1**
	comp=Z,20nm,1.3s,mb4.5		

comp=Z,200nm,18.0s
SCHQ Schefferville 28.11 309 P **P** **21 26 40.6 -0.1**
comp=Z,3.4nm,0.9s,mb4.0,baz=104,slow=8.3,SNR=1.7
SCHQ LR LR 21 37 02.5
comp=Z,113nm,18.2s,MS3.5,baz=88,slow=35
SCHQ Schefferville 28.11 309 P **P** **21 26 40.6 -0.1**
WERN Wernitzgruen 28.42 60 *eP* **P** **21 26 49.5 +6.0**
comp=Z,19nm,1.5s,mb4.5
NKC Novy Kostel 28.46 60 *eP* **P** **21 26 44.4 +0.5**
NKC *epP* pP 21 26 49.2 +2.2
NKC Novy Kostel 28.46 60 P **P** **21 26 44.4 +0.5**
WET Wettzell 28.77 63 *eP* **P** **21 26 52.1 +5.5**
comp=Z,16nm,1.5s,mb4.5
WET Wettzell 28.77 63 *eP* **P** **21 26 52.1 +5.5**
comp=Z,16nm,1.5s,mb4.5
CLL Collm 28.83 58 P **P** **21 26 48.0 +0.9**
CLL Collm 28.83 58 *eP* **P** **21 26 48.0 +0.9**
comp=Z,3.0nm,0.8s,mb4.1
CLL Lm 21 37 00.0
comp=Z,200nm,19.5s
CLL Collm 28.83 58 P **P** **21 26 48.0 +0.9**
KHC Kasperske Hory 29.23 63 *eP* **P** **21 26 51.0 +0.2**
comp=Z,9.5nm,1.2s,mb4.4
KHC Kasperske Hory 29.23 63 *eP* **P** **21 26 50.4 -0.3**
KHC *epP* pP 21 26 56.8 +3.0
KHC AMS AMS 21 37 40.0
comp=Z,300nm,16.1s
KHC Kasperske Hory 29.23 63 *eP* **P** **21 26 51.0 +0.3**
comp=Z,9.5nm,1.2s,mb4.4
KBA Koelnbreinsper 29.25 67⇑*i*P **P** **21 26 52.2 +1.3**
comp=Z,30nm,1.1s,mb4.9
KBA Koelnbreinsper 29.25 67 P **P** **21 26 52.2 +1.3**
comp=Z,30nm,1.1s,mb4.9
BRG Berggiesshubel 29.42 59 *eP* **P** **21 26 57.5 +5.1**
comp=Z,14nm,1.5s,mb4.5
BRG Berggiesshubel 29.42 59 *eP* **P** **21 26 58.1 +5.7**
comp=Z,14nm,1.5s,mb4.5
BRG
comp=N,172nm,16.2s
BRG
comp=E,239nm,23.8s
BRG
comp=Z,321nm,19.0s
KEST Kesra 29.42 91 P **P** **21 26 53.3 +0.7**
comp=Z,0.8nm,0.8s,mb3.5,baz=256,slow=8.6,SNR=3.6
KEST LR LR 21 35 27.3
comp=Z,48nm,21.4s,MS3.1,baz=292,slow=30
NOA NORSAR Array B 29.69 38 LR LR 21 36 43.4
comp=Z,157nm,21.3s,MS3.6,baz=255,slow=32
PRU Pruhonice 29.82 61 *eP* **P** **21 26 56.2 +0.3**
PRU *epP* pP 21 27 02.3 +3.3
PRU AMS AMS 21 37 30.0
comp=Z,400nm,19.6s
PRU Pruhonice 29.82 61 P **P** **21 26 56.2 +0.3**
PVCC Panska Ves 29.82 60 AMS AMS 21 37 20.0
comp=Z,400nm,20.3s
JMIC Jan Mayen 30.01 12 LR LR 21 36 00.9
comp=Z,103nm,18.4s,MS3.5,baz=37,slow=31
OBKA Obir 30.14 68⇓*i*P **P** **21 26 59.0 +0.2**
comp=Z,21nm,0.8s,mb4.9
OBKA Obir 30.14 68 P **P** **21 26 59.0 +0.2**
comp=Z,21nm,0.8s,mb4.9
AQU L'Aquila 30.16 76 *eP* **P** **21 27 00.5 +1.5**
comp=Z,18nm,0.8s,mb4.8
AQU L'Aquila 30.16 76⇑*i*P **P** **21 27 00.3 +1.3**
AQU L'Aquila 30.16 76 *eP* **P** **21 27 00.5 +1.5**
comp=Z,18nm,0.8s,mb4.8
TREC Trest 30.47 62 *epP* pP 21 27 07.5 +2.8
TREC AMS AMS 21 38 30.0
comp=Z,300nm,19.9s
HFS Hagfors 30.57 41 P **P** **21 27 02.4 0.0**
comp=Z,0.7nm,0.7s,mb3.6,baz=207,slow=9.2,SNR=2.8
HFS LR LR 21 38 23.6
comp=Z,329nm,18.4s,MS4.0,baz=234,slow=35
HFS Hagfors 30.57 41 P **P** **21 27 02.4 -0.1**
UPC Upice 30.74 60 *eP* **P** **21 27 05.7 +1.6**
UPC *epP* pP 21 27 10.1 +3.0
UPC Upice 30.74 60 P **P** **21 27 05.7 +1.6**
DPC Dobruska-Polom 30.95 60 AMS AMS 21 38 00.0
comp=Z,400nm,20.4s
FRB Frobisher Bay 31.45 326 LR LR 21 36 34.8
comp=Z,94nm,20.2s,MS3.5,baz=170,slow=30
MORC Moravsky Berou 31.77 61 *eP* **P** **21 27 14.9 +1.7**
comp=Z,13nm,1.4s,mb4.6
MORC Moravsky Berou 31.77 61⇑*i*P **P** **21 27 14.7 +1.6**
MORC Moravsky Berou 31.77 61 *eP* **P** **21 27 14.9 +1.8**
comp=Z,13nm,1.4s,mb4.6
OKC Ostrava-Krasne 32.15 61 AMS AMS 21 39 40.0
comp=Z,300nm,15.5s
VYHS Vyhne 32.75 63 *eP* **P** **21 27 25.1 +3.4**
comp=Z,1.5nm,1.0s,mb3.9
VYHS Vyhne 32.75 63 *eP* **P** **21 27 25.1 +3.4**
PKSM Moragy 32.98 68⇓*i*P **P** **21 27 23.3 -0.5**
PKSM Moragy 32.98 68⇓*i*P **P** **21 27 23.3 -0.5**
BUD Budapest 33.02 65⇓*e*P **P** **21 27 24.3 +0.2**
BUD Budapest 33.02 65⇓*e*P **P** **21 27 24.3 +0.2**
OJC Ojcow 33.18 60 *eP* **P** **21 27 26.1 +0.6**
OJC e pP 21 27 30.4 +1.8
OJC Ojcow 33.18 60 *eP* **P** **21 27 26.1 +0.6**
PSZ Piszkesteto 33.53 64 *eP* **P** **21 27 29.1 +0.5**
comp=Z,7.6nm,1.1s,mb4.5
PSZ Piszkesteto 33.53 64⇓*e*P **P** **21 27 29.4 +0.8**
PSZ Piszkesteto 33.53 64 *eP* **P** **21 27 29.0 +0.4**
comp=Z,7.6nm,1.1s,mb4.5
NIE Niedzica 33.60 61 *eP* **P** **21 27 30.6 +1.5**
NIE Niedzica 33.60 61 *e*PKIKP **P** **21 27 30.6 +1.5**
TAM Tamanrasset 34.00 115 *eP* **P** **21 27 33.8 +0.9**
comp=Z,13nm,1.6s,mb4.6
TAM Tamanrasset 34.00 115 *eP* **P** **21 27 33.8 +0.9**
comp=Z,13nm,1.6s,mb4.6
STHS Stebnicka Huta 34.20 61 *eP* **P** **21 27 35.9 +1.5**
comp=Z,4.0nm,1.1s,mb4.3
STHS Stebnicka Huta 34.20 61 *eP* **P** **21 27 35.9 +1.5**
STHS Stebnicka Huta 34.20 61 *eP* **P** **21 27 35.9 +1.5**
comp=Z,4.0nm,1.1s,mb4.3
CRVS Cervenica-Dubn 34.41 62 *eP* **P** **21 27 37.7 +1.5**
comp=Z,18nm,1.4s,mb4.8
CRVS Cervenica-Dubn 34.41 62 *eP* **P** **21 27 37.7 +1.5**
CRVS Cervenica-Dubn 34.41 62 *eP* **P** **21 27 37.7 +1.5**
comp=Z,18nm,1.4s,mb4.8
KWP Kalwaria Pacla 35.12 61 *eP* **P** **21 27 43.8 +1.5**
comp=Z,19nm,1.2s,mb4.9
KWP Kalwaria Pacla 35.12 61⇑*i*P **P** **21 27 43.8 +1.5**
KWP Kalwaria Pacla 35.12 61 *eP* **P** **21 27 43.8 +1.5**
comp=Z,19nm,1.2s,mb4.9
BZS Buzias 35.14 68⇑*i*P **P** **21 27 43.1 +0.6**
BZS Buzias 35.14 68⇑*i*P **P** **21 27 43.1 +0.6**
BINY Binghamton 35.20 286 *eP* **P** **21 27 42.6 -0.4**
BINY Binghamton 35.20 286 *eP* **P** **21 27 42.7 -0.4**
FINES FINESS Array B 36.77 40 P **P** **21 27 55.5 -0.8**
comp=Z,2.0nm,0.8s,mb4.0,baz=272,slow=7.9,SNR=3.5
FINES LR LR 21 41 04.9
comp=Z,282nm,21.1s,MS4.0,baz=328,slow=33
FINES FINESS Array B 36.77 40 P **P** **21 27 55.5 -0.8**
KAF Kangasniemi 36.95 39 *eP* **P** **21 27 56.7 -1.1**
comp=Z,2.8nm,0.6s,mb4.3
KAF Kangasniemi 36.95 39 *ep* **P** **21 27 56.7 -1.1**
comp=Z,2.8nm,0.6s,mb4.3
KAF Kangasniemi 36.95 39 *eP* **P** **21 27 56.7 -1.1**
comp=Z,2.8nm,0.6s,mb4.3
BURAR Bucovina Array 37.12 64⇓*i*P **P** **21 28 00.9 +1.5**
BURAR Bucovina Array 37.12 64⇓*i*P **P** **21 28 00.9 +1.5**
ARCES ARCESS Array B 38.10 27 P **P** **21 28 06.2 -1.3**
comp=Z,2.3nm,0.7s,mb4.0,baz=249,slow=9.0,SNR=6.7
ARCES LR LR 21 41 34.3
comp=Z,122nm,21.9s,MS3.7,baz=25,slow=33
ARCES ARCESS Array B 38.10 27 P **P** **21 28 06.2 -1.3**
MLR Muntele Rosu 38.12 67⇑*i*P **P** **21 28 12.1 +4.2**
TOA0 Torodi Ar. Sit 38.90 130 *eP* **P** **21 28 16.3 +1.5**
TOA0 Torodi Ar. Sit 38.90 130 *eP* **P** **21 28 16.3 +1.5**
TORD Torodi Ar. Bea 38.90 130 P **P** **21 28 16.2 +1.4**
TORD LR LR 21 43 07.3
TORD Torodi Ar. Bea 38.90 130 P **P** **21 28 16.2 +1.4**
comp=Z,5.8nm,0.9s,mb4.3,baz=324,slow=8.3,SNR=23
TORD LR LR 21 43 07.3
comp=Z,153nm,18.5s,MS3.9,baz=320,slow=34
AKASG Malin Array Be 39.07 59 P **P** **21 28 16.1 +0.2**
comp=Z,0.6nm,0.4s,mb3.7,baz=273,slow=9.4,SNR=6.7
AKASG Malin Array Be 39.07 58 P **P** **21 28 16.0 +0.1**
JOF Joensuu 39.33 38 *eP* **P** **21 28 16.4 -1.5**
JOF Joensuu 39.33 38 *ep* **P** **21 28 16.4 -1.5**
comp=Z,2.5nm,0.6s,mb4.1
JOF Joensuu 39.33 38 *eP* **P** **21 28 16.4 -1.5**
SPITS Spitsbergen Ar 39.68 13 LR LR 21 40 17.3
comp=Z,74nm,20.2s,MS3.5,baz=110,slow=30
DBIC Dimbokro 41.16 144 LR LR 21 44 22.4
comp=Z,92nm,19.1s,MS3.7,baz=14,slow=34
BR131 Keskin Array S 45.43 72 P **P** **21 29 03.5 -4.3**
BRTR Keskin Array B 45.43 72 P **P** **21 29 08.8 +1.0**
comp=Z,0.6nm,0.8s,mb3.5,baz=286,slow=7.0,SNR=3.0
BRTR LR LR 21 49 25.1
comp=Z,45nm,18.4s,MS3.4,baz=150,slow=38
BRTR Keskin Array B 45.43 72 P **P** **21 29 08.8 +1.0**
ULM Lac du Bonnet 46.03 304 LR LR 21 46 41.0
comp=Z,126nm,19.7s,MS3.9,baz=63,slow=34
ECSD EROS Data Cent 48.84 296 *eP* **P** **21 29 33.3 -1.1**
comp=Z,20nm,1.6s,mb4.9
ECSD EROS Data Cent 48.84 296 *eP* **P** **21 29 33.3 -1.1**
comp=Z,20nm,1.6s,mb4.9
MIAR Mount Ida 50.89 284 *eP* **P** **21 29 50.1 0.0**
comp=Z,23nm,1.3s,mb5.0
MIAR Mount Ida 50.89 284 *eP* **P** **21 29 50.1 0.0**
comp=Z,23nm,1.3s,mb5.0
NATX Nacogdoches 53.10 282 *eP* **P** **21 30 07.8 +1.2**
ARU Arti 54.03 43 *eP* **P** **21 30 12.4 -0.7**
comp=Z,7.3nm,0.9s,mb4.6
ARU Arti 54.03 43 *eP* **P** **21 30 12.4 -0.7**
comp=Z,7.3nm,0.9s,mb4.6
WMOK Wichita Mounta 54.50 287 *eP* **P** **21 30 16.3 -0.5**
comp=Z,7.6nm,1.1s,mb4.5
WMOK Wichita Mounta 54.50 287 *eP* **P** **21 30 16.3 -0.5**
comp=Z,7.6nm,1.1s,mb4.5
AMTX Amarillo 56.46 289 *eP* **P** **21 30 30.3 -0.6**
comp=Z,16nm,1.1s,mb5.0
AMTX Amarillo 56.46 289 *eP* **P** **21 30 30.3 -0.6**
comp=Z,16nm,1.1s,mb5.0
INK Inuvik 56.48 335 LR LR 21 51 09.0
comp=Z,43nm,20.0s,MS3.5,baz=308,slow=32
HWUT Hardware Ranch 59.57 300 *eP* **P** **21 30 51.7 -1.0**
comp=Z,6.6nm,1.2s,mb4.5
HWUT Hardware Ranch 59.57 300 *eP* **P** **21 30 51.7 -0.9**
comp=Z,6.6nm,1.2s,mb4.5
GDL2 Guadalupe Moun 59.79 287 *eP* **P** **21 30 54.7 +0.4**
comp=Z,2.3nm,0.4s,mb4.6
GDL2 Guadalupe Moun 59.79 287 *eP* **P** **21 30 54.7 +0.4**
comp=Z,2.3nm,0.4s,mb4.6
TXAR Lajitas Array 60.91 284 P **P** **21 31 02.1 +0.2**
TXAR LR LR 21 57 45.6
TXAR Lajitas Array 60.91 284 P **P** **21 31 02.2 +0.2**
comp=Z,2.8nm,1.0s,mb4.3,baz=79,slow=6.5,SNR=9.0
TXAR LR LR 21 57 45.6
comp=Z,129nm,18.5s,MS4.1,baz=235,slow=36
TXAR Lajitas Array 60.91 284 P **P** **21 31 02.2 +0.2**
ILAR Eielson Array 62.87 335 P **P** **21 31 13.8 -0.8**
comp=Z,0.2nm,0.6s,mb3.5,baz=39,slow=5.8,SNR=3.1
ILAR Eielson Array 62.87 335 P **P** **21 31 13.8 -0.8**
WVOR Wild Horse Val 63.53 304 *eP* **P** **21 31 19.6 +0.2**
comp=Z,9.8nm,1.4s,mb4.7
WVOR Wild Horse Val 63.53 304 *eP* **P** **21 31 19.6 +0.2**
comp=Z,9.8nm,1.4s,mb4.7
KURK Kurchatov 67.14 41 *eP* **P** **21 31 41.8 -0.8**
comp=Z,4.9nm,1.3s,mb4.4
KURK Kurchatov 67.14 41 *eP* **P** **21 31 41.8 -0.8**
comp=Z,4.9nm,1.3s,mb4.4
ZALV Zalesovo Beam 67.87 36 P **P** **21 31 48.8 +1.6**
comp=Z,0.5nm,0.6s,mb3.8,baz=326,slow=7.7,SNR=3.5
MK31 Makanchi Array 71.56 43 *eP* **P** **21 32 09.5 -0.5**
MK31 Makanchi Array 71.56 43 *eP* **P** **21 32 09.5 -0.5**
MKAR Makanchi Array 71.56 43 P **P** **21 32 09.7 -0.3**
comp=Z,0.7nm,0.5s,mb3.8,baz=308,slow=4.6,SNR=12
SONM Songino Array 81.24 29 P **P** **21 33 04.9 0.0**
comp=Z,2.0nm,1.0s,mb4.0,baz=343,slow=4.6,SNR=9.4
SONM Songino Array 81.24 29 P **P** **21 33 04.9 0.0**
ULN Ulaanbaatar 81.45 29 *eP* **P** **21 33 05.6 -0.4**
comp=Z,6.6nm,1.3s,mb4.4
ULN Ulaanbaatar 81.45 29 *eP* **P** **21 33 05.6 -0.4**
comp=Z,6.6nm,1.3s,mb4.4
PLCA Paso Flores 91.55 211 LR LR 22 11 52.4
comp=Z,92nm,18.4s,MS4.2,baz=282,slow=33

BJI ***19*** *21:33:32.5, 51.°90N×178.°90W, h108km, mB5.2/15, mb4.7/22*
ISCJB ***19*** *21:33:33.3±0.5, 51.°95N±0.°05×178.°90W±0.°03, h109km±4km, mb4.7/81, Error ellipse: s-maj=8.4km s-min=3.0km az=177.5*
NEIC ***19*** *21:33:34.6±0.5, 51.°94N×178.°94W, h108km±4km, mb4.7/56, Error ellipse: s-maj=7.4km s-min=3.5km az=173.0*
IDC ***19*** *21:33:36.0±1.9, 52.°06N×178.°95W, h120km±16km, mb4.1/22, mb1 4.2/22, mb1mx4.1/32, mbtmp4.1/22, Error ellipse: s-maj=17.7km s-min=9.6km az=166.0*

ISC 19 21:33:34.6±0.4, **51.°95N**±0.°05×**178.°90W**±0.°03,
h105km±4km, **h105**km±1.3km**:pP-P, n452,** σ**o**=**64**/456,
mb4.7/81,**138C-145D,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**1.26**	**244**	P	**Pn**	**21 33 57.8**	**-0.4**
AMKA				S	**Sn**	**21 34 15.3**	**-0.7**
ATKA	**Atka Island**	**2.92**	**83**	*e*Pn	**Pn**	**21 34 17.2**	**-2.1**
ATKA				*e*Sn	**Sn**	**21 34 47.6**	**-6.1**
SMY	**Shemya**	**4.36**	**283**	P	**Pn**	**21 34 39.4**	**+0.8**
SMY				S	**Sn**	**21 35 29.0**	**+0.7**
FX1	**Attu Island--F**	**4.94**	**284**	P	**Pn**	**21 34 46.7**	**+0.2**
FX1				S	**Sn**	**21 35 42.0**	**-0.4**
NIKO	**Nikolski**	**6.23**	**77**	P	**Pn**	**21 35 02.5**	**-1.4**
SPIA	**Saint Paul Isl**	**7.26**	**40**	*e*Pn	**Pn**	**21 35 20.5**	**+2.6**
UNV	**Unalaska Valle**	**7.74**	**71**	*e*Pn	**Pn**	**21 35 24.3**	**0.0**
AKUT	**Akutan**	**8.21**	**69**	*e*Pn	**Pn**	**21 35 31.0**	**+0.2**
SDPT	**Sand Point**	**11.45**	**65**	*e*Pn	**Pn**	**21 36 12.6**	**-2.0**
PET	**Petropavlovsk**	**13.71**	**283**	Pn	**Pn**	**21 36 44.3**	**0.0**
OHAK	**Old Harbor**	**15.71**	**60**	*e*P	**Pn**	**21 37 08.6**	**-1.0**
	58nm,0.4s						
SVW2	**Sparrevohn**	**15.71**	**45**	*e*P	**Pn**	**21 37 11.0**	**+1.4**
	15nm,1.1s						
KDAK	**Kodiak Island**	**16.17**	**59**	*e*Pn	**Pn**	**21 37 13.8**	**-1.6**
	248nm,2.0s						
KDAK	**Kodiak Island**	**16.17**	**59**	P	**Pn**	**21 37 12.4**	**-3.0**
	6.2nm,0.3s,baz=271,slow=5.6,SNR=32						
TTA	**Tatalina**	**16.41**	**39**	*e*P	**Pn**	**21 37 20.6**	**+2.4**
RSO	**Redoubt South**	**16.76**	**49**	*e*Pn	**Pn**	**21 37 25.1**	**+2.6**
PPLA	**Purkeypile**	**17.93**	**42**	*e*P	**Pn**	**21 37 37.8**	**+1.0**
	33nm,0.7s						
SEW	**Sewad**	**18.24**	**52**	*e*Pn	**Pn**	**21 37 39.6**	**-0.8**
RC01	**Rabbit Creek A**	**18.36**	**49**	*e*P	**P**	**21 37 41.0**	**+0.4**
	13nm,0.8s						
PMR	**Palmer**	**18.79**	**48**	*e*P	**P**	**21 37 48.1**	**+2.8**
	11nm,0.6s						
BPAW	**Bear Paw Mtn.**	**18.95**	**39**	*e*P	**P**	**21 37 48.1**	**+1.1**
	44nm,1.2s						
TRF	**Thorofare Moun**	**18.95**	**42**	*e*P	**P**	**21 37 48.1**	**+1.1**
	21nm,0.8s						
MCK	**McKinley**	**19.61**	**41**	*e*P	**P**	**21 37 53.1**	**-1.1**
DIV	**Divide**	**20.23**	**50**	*e*P	**P**	**21 38 00.8**	**-0.2**
	20nm,0.6s						
COLA	**College**	**20.50**	**39**	*e*P	**P**	**21 38 04.5**	**+0.6**
	16nm,0.9s						
BMRM	**Bremner River**	**20.76**	**51**	*e*P	**P**	**21 38 06.9**	**+0.2**
	14nm,0.6s						
COLD	**Coldfoot**	**20.80**	**32**	*e*P	**P**	**21 38 07.8**	**+0.8**
	8.1nm,0.7s						
ILAR	**Eielson Array**	**20.84**	**40**	P	**P**	**21 38 05.7**	**-1.8**
	3.9nm,0.8s,baz=242,slow=9.7,SNR=27						
ILAR				ScP	ScP	21 45 34.8	-3.4
	1.1nm,0.6s,baz=275,slow=3.4,SNR=16						
MENT	**Mentasta**	**21.59**	**46**	*e*P	**P**	**21 38 15.4**	**0.0**
EGAK	**Eagle**	**23.16**	**42**	*e*P	**P**	**21 38 30.9**	**-0.5**
	43nm,1.1s,mb4.7						
EGAK				*e*		21 38 53.8	
DAWY	**Dawson**	**23.74**	**44**	*e*P	**P**	**21 38 36.0**	**-0.7**
HYT	**Haines Junctio**	**24.19**	**52**	*e*P	**P**	**21 38 40.5**	**-0.4**
SKAG	**Skagway**	**25.27**	**56**	*e*P	**P**	**21 38 50.6**	**-0.1**
ASAJ	**Asahikawa**	**26.65**	**268**	P	**P**	**21 39 03.4**	**+0.1**
	14nm,1.0s,mb4.5,baz=14,slow=8.3,SNR=3.7						
INK	**Inuvik**	**27.03**	**36**	*e*P	**P**	**21 39 06.2**	**-0.2**
INK	**Inuvik**	**27.03**	**36**	P	**P**	**21 39 05.8**	**-0.6**
	1.4nm,0.3s,mb3.9,baz=134,slow=3.4,SNR=3.3						
MAJO	**Matsushiro**	**33.82**	**260**	*e*P	**P**	**21 40 06.6**	**+0.1**
	18nm,0.9s,mb4.9						
MAT	**Matsushiro**	**33.82**	**260**	P	**P**	**21 40 06.8**	**+0.3**
MJAR	**Matsushiro Arr**	**33.82**	**260**	P	**P**	**21 40 06.3**	**-0.2**
	5.1nm,0.7s,mb4.5,baz=50,slow=7.0,SNR=15						
MDJ	**Mudanjiang**	**34.42**	**279**	P	**P**	**21 40 10.9**	**-0.7**
MDJ				pP	pP	21 40 33.6	-1.6
MDJ				sP	sP	21 40 45.3	-1.9
MDJ				PP	PP	21 41 30.8	-0.6
MDJ				PcP	PcP	21 42 42.8	-1.8
MDJ				S	**S**	**21 45 30.4**	**-1.3**
MDJ				sS	sS	21 46 11.8	-0.8
MDJ				ScS	ScS	21 50 22.3	-0.4

MDJ pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
MDJ pmax pmax
comp=Z,240nm,4.5s
MDJ LR LR
comp=N,370nm,12.7s
MDJ LR LR
comp=E,540nm,11.1s
MDJ LR LR
comp=Z,700nm,11.8s
YKA Yellowknife Ar 34.89 47 P **P** **21 40 14.6 -0.8**
comp=Z,3.6nm,0.4s,mb4.6,baz=280,slow=9.5,SNR=22
YKA ScP ScP 21 46 18.7 -2.5
comp=Z,1.4nm,0.8s,baz=284,slow=3.4,SNR=4.3
E03A Lebam 35.78 76⇓P **P** **21 40 24.1 +0.9**
baz=36
F03A Seaside 36.09 77⇓P **P** **21 40 26.4 +0.6**
baz=36
D05A Enumclaw 36.41 74⇓P **P** **21 40 29.1 +0.5**
baz=36
FMW Mount Fremont 36.72 75 P **P** **21 40 32.0 +0.8**
LON Longmire 36.73 75 *eP* **P** **21 40 32.0 +0.7**
comp=Z,11nm,0.7s,mb4.9
F04A Amboy 36.77 76⇓P **P** **21 40 32.1 +0.5**
baz=37,SNR=12
WPW White Pass 36.91 75 P **P** **21 40 33.4 +0.6**
COR Corvallis 36.93 79 P **P** **21 40 32.6 -0.4**
G04A Mulino 37.11 77⇓P **P** **21 40 35.2 +0.7**
baz=37
ETW Entiat 37.19 73 P **P** **21 40 35.7 +0.5**
CN2 Changchun 37.38 280 *eP* **P** **21 40 36.5 -0.4**
CN2 *eS* **S** **21 46 15.6 -1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CN2 LR LR
comp=N,700nm,12.0s
CN2 LR LR
comp=E,1μm,12.0s
CN2 LR LR
comp=Z,700nm,15.0s
B08A Colville Reser 37.41 71⇑P **P** **21 40 37.6 +0.5**
baz=37
HOOD Mount Hood Mea 37.55 77 *eP* **P** **21 40 39.2 +0.9**
comp=Z,148nm,2.1s,mb5.5
H04A Detroit Lake 37.56 78⇓P **P** **21 40 39.0 +0.7**
baz=37,SNR=18
BROR Big Rock Looko 37.62 79 P **P** **21 40 39.8 +1.0**
VFP Flag Point 37.66 77 P **P** **21 40 40.1 +0.9**
E07A Sunnyside 37.99 74⇓P **P** **21 40 42.2 +0.2**
baz=38
G06A Carlson Farm, 38.20 76⇓P **P** **21 40 44.1 +0.3**
baz=38
HUMO Hull Mountain 38.22 81 *eP* **P** **21 40 45.3 +1.4**
comp=Z,16nm,1.1s,mb4.8
RSW Rattlesnake Hi 38.23 74 *eP* **P** **21 40 44.6 +0.6**
HAWA Hanford 38.27 74 *eP* **P** **21 40 44.4 +0.2**
comp=Z,16nm,0.6s,mb5.0
D08A Wollman Farm, 38.29 73⇑P **P** **21 40 44.3 -0.2**
baz=38
E08A Dider Farm, El 38.50 74⇓P **P** **21 40 46.5 +0.3**
baz=38
EDM Edmonton 38.59 61 *eP* **P** **21 40 45.5 -1.4**
VIPM Ingram Point 38.60 77 P **P** **21 40 47.7 +0.6**
KHMM Horse Mountain 38.73 84 *eP* **P** **21 40 50.2 +1.9**
comp=Z,11nm,0.7s,mb4.8
NEW Newport 38.75 70⇓P **P** **21 40 48.3 0.0**
baz=39
NEW Newport 38.75 70 *eP* **P** **21 40 48.7 +0.4**
comp=Z,3.5nm,0.6s,mb4.4
YBH Yreka Blue Hor 38.87 82 *eP* **P** **21 40 50.9 +1.6**
comp=Z,24nm,1.4s,mb4.8
YBH Yreka Blue Hor 38.87 82 P **P** **21 40 50.3 +1.0**
comp=Z,9.1nm,0.7s,mb4.7,baz=333,slow=4.6,SNR=19
YBH pP pP 21 41 14.8 +1.5
comp=Z,7.9nm,1.0s,baz=305,slow=2.5,SNR=5.2
E09A Wood Farm, Sta 39.03 73⇓P **P** **21 40 50.7 +0.1**
baz=39
G08A Pilot Rock 39.18 75⇓P **P** **21 40 51.7 -0.2**
baz=39
K05A Summer Lake 39.41 80⇓P **P** **21 40 54.9 +1.0**
baz=39,SNR=11
I07A Izee 39.50 77⇑P **P** **21 40 54.9 +0.3**
baz=39,SNR=23
KCPM Cahto Peak 39.53 86 *eP* **P** **21 40 51.2 -3.7**
comp=Z,9.2nm,0.9s,mb4.6
KSRS Korea Array 39.57 270 P **P** **21 40 56.1 +0.8**
comp=Z,2.1nm,0.6s,mb4.1,baz=58,slow=9.0,SNR=4.7
WDC Whiskeytown Da 39.64 84 *eP* **P** **21 40 52.1 -3.7**
comp=Z,7.5nm,0.8s,mb4.6
F10A Beach Ranch, E 39.85 73⇓P **P** **21 40 57.4 -0.1**
baz=40
WALA Waterton Lakes 40.21 67 *eP* **P** **21 41 00.0 -0.4**
MOD Modoc 40.24 81 *eP* **P** **21 41 01.7 +0.9**
comp=Z,15nm,0.8s,mb4.9
HOPS Hopland 40.26 86 *eP* **P** **21 41 00.7 -0.3**
BSMT Bassoo Peak 40.31 70 *eP* **P** **21 41 01.1 -0.2**
J08A Circle Bar Ran 40.53 77⇓P **P** **21 41 03.2 +0.1**
baz=40,SNR=6.6
B14A Marquette Ranc 40.92 68⇑P **P** **21 41 05.9 -0.4**
baz=41
WVOR Wild Horse Val 40.95 79 *eP* **P** **21 41 06.1 -0.5**
comp=Z,17nm,0.7s,mb5.0
OHCM Honcut 41.03 85 *eP* **P** **21 41 04.7 -2.6**
F12A Elk City 41.13 72⇑P **P** **21 41 07.8 -0.2**
baz=41,SNR=18
MSO Missoula 41.33 70⇑P **P** **21 41 09.1 -0.6**
baz=41
MSO Missoula 41.33 70 *eP* **P** **21 41 09.2 -0.4**
E13A Victor 41.39 71⇑P **P** **21 41 09.8 -0.3**
baz=41
D14A Greenough 41.45 70⇓P **P** **21 41 10.2 -0.4**
baz=41
C15A Salmond Ranch, 41.61 68⇑P **P** **21 41 11.2 -0.7**
baz=42,SNR=6.4
F13A Darby 41.66 72⇑P **P** **21 41 11.6 -0.7**
baz=42,SNR=5.5
CHMT Chamberlain Mo 41.69 70 *eP* **P** **21 41 12.2 -0.4**
E14A Clinton 41.81 71⇑P **P** **21 41 13.1 -0.4**
baz=42
H12A Diamond D Ranc 42.03 74⇑P **P** **21 41 14.6 -0.7**
baz=42,SNR=5.5
MFID Camas Ranch 42.09 76⇓P **P** **21 41 15.8 0.0**
baz=42
C16A Fuhringer Ranc 42.09 68⇓P **P** **21 41 14.8 -1.0**
baz=42
A17A Triple J Farms 42.09 66⇓P **P** **21 41 14.8 -1.0**
baz=42
G13A Cobalt 42.10 73⇑P **P** **21 41 15.8 -0.1**
baz=42
PAHR Pah Rah Range 42.10 83 *eP* **P** **21 41 16.8 +0.9**
comp=Z,22nm,1.2s,mb4.8
I12A Atlanta 42.29 75⇑P **P** **21 41 17.3 -0.1**
baz=42,SNR=25
E15A Deer Lodge 42.31 70⇓P **P** **21 41 17.0 -0.6**
baz=42
H13A Challis 42.38 73⇑P **P** **21 41 18.0 -0.2**
baz=42
G14A Jackson 42.47 72⇓P **P** **21 41 18.6 -0.3**
baz=42
CMB Columbia Colle 42.51 85 *eP* **P** **21 41 19.1 -0.3**
comp=Z,4.3nm,0.6s,mb4.4
HRY Holter Researc 42.62 69 *eP* **P** **21 41 20.2 +0.1**
F15A Butte 42.71 71⇓P **P** **21 41 20.0 -0.8**
baz=43
WAKR Walker 42.80 84 *eP* **P** **21 41 22.6 +0.9**
I13A Wildhorse Cree 42.83 74⇓P **P** **21 41 21.7 -0.1**
baz=43,SNR=20
HLID Hailey 42.85 75⇑P **P** **21 41 22.1 +0.1**
baz=43,SNR=16
HLID Hailey 42.85 75 *eP* **P** **21 41 22.1 +0.1**
comp=Z,7.7nm,0.8s,mb4.5
H14A Leadore 42.88 73⇓P **P** **21 41 22.2 0.0**
baz=43,SNR=11
B18A Beardsley Farm 42.90 66⇓P **P** **21 41 22.3 0.0**
baz=43
BMN Battle Mountai 42.99 80 *eP* **P** **21 41 23.7 +0.5**
comp=Z,13nm,0.7s,mb4.8
D17A Six Diamond Ra 43.04 68⇑P **P** **21 41 23.3 -0.2**
baz=43
MCMT McKenzie Canyo 43.06 72 *eP* **P** **21 41 22.8 -0.9**
comp=Z,3.4nm,0.6s,mb4.2
G15A Dillon 43.09 72⇓P **P** **21 41 23.4 -0.5**
baz=43
J13A Cove Ranch, Pi 43.09 75⇑P **P** **21 41 23.8 -0.1**
baz=43,SNR=15
EGMT Eagleton 43.11 67 *eP* **P** **21 41 25.5 +1.5**
comp=Z,6.3nm,0.8s,mb4.4

F16A **Kennard Place,** 43.25 70 ⇑P P 21 41 25.0 -0.2
baz=43
H15A **Lima** 43.30 72 ⇑P P 21 41 25.4 -0.2
baz=43
BOZ **Bozeman (W)** 43.32 71 *e*P P 21 41 25.2 -0.6
comp=Z,7.9nm,0.8s,mb4.5
G16A **Moss Hill, Enn** 43.45 71 ⇑P P 21 41 26.1 -0.7
baz=43
J14A **Carey** 43.52 74 ⇑P P 21 41 27.9 +0.5
baz=43
NVAR **Mina Array Bea** 43.55 83 P P 21 41 28.2 +0.6
comp=Z,5.4nm,0.5s,mb4.5,baz=298,slow=7.2,SNR=48
NVAR pP pP 21 41 52.1 +0.1
comp=Z,6.0nm,0.8s,baz=293,slow=8.6,SNR=7.1
NVAR ScP ScP 21 46 53.6 -1.5
comp=Z,1.4nm,0.7s,baz=295,slow=4.3,SNR=8.4
F17A **Fitzpatrick Pl** 43.74 70 ⇑P P 21 41 28.8 -0.3
baz=44
E18A **Harlowton** 43.81 68 ⇑P P 21 41 29.0 -0.7
baz=44
FFC **Flin Flon** 43.86 55 P P 21 41 27.8 -2.2
MTUM **Tungsten Hills** 44.06 85 *e*P P 21 41 32.7 +0.9
H16A **Russell Place,** 44.08 71 ⇓P P 21 41 32.0 +0.1
baz=44
J15A **Blackfoot** 44.12 74 ⇓P P 21 41 32.5 +0.2
baz=44
M13A **Montello** 44.28 77 ⇓P P 21 41 33.9 +0.4
baz=44
M13A **Montello** 44.28 77 *e*P P 21 41 33.3 -0.2
comp=Z,36nm,1.0s,mb5.1
L14A **Malta** 44.44 76 ⇓P P 21 41 34.6 -0.1
baz=44,SNR=5.5
Q10A **Clear Creek Ra** 44.47 82 ⇓P P 21 41 35.4 +0.3
baz=44,SNR=14
K15A **Arbon** 44.48 75 ⇑P P 21 41 35.7 +0.6
baz=44
N13A **Wendover, West** 44.56 78 ⇓P P 21 41 36.0 +0.2
baz=44,SNR=5.9
N13A **Wendover, West** 44.56 78 *e*P P 21 41 36.4 +0.7
comp=Z,22nm,0.8s,mb4.9
O12A **Currie** 44.59 79 ⇓P P 21 41 36.1 +0.1
baz=44,SNR=22
H17A **Grant Village** 44.65 71 ⇓P P 21 41 37.1 +0.8
baz=44
M14A **Sheep Mountain** 44.69 76 ⇑P P 21 41 36.6 -0.1
baz=44,SNR=9.6
VES **Vestal, Richgr** 44.71 87 ⇑P P 21 41 36.7 -0.3
baz=45
FLWY **Flagg Ranch** 44.75 72 *e*P P 21 41 37.7 +0.5
comp=Z,7.6nm,0.7s,mb4.5
RRI2 **Red Ridge** 44.81 73 *e*P P 21 41 37.9 +0.2
comp=Z,4.4nm,0.6s,mb4.4
R10A **Warm Springs** 44.86 82 ⇓P P 21 41 38.1 0.0
baz=45,SNR=11
HVU **Hansel Valley** 44.87 76 *e*P P 21 41 34.1 -4.0
comp=Z,23nm,0.5s,mb5.2
Q11A **Duckwater** 44.91 81 ⇓P P 21 41 38.5 0.0
baz=45,SNR=12
S10A **Tonopah Range,** 44.91 83 ⇓P P 21 41 38.5 0.0
baz=45,SNR=17
CWC **Cottonwood Cre** 44.94 85 ⇑P P 21 41 38.9 +0.1
baz=45
K16A **Soda Springs** 44.96 74 ⇓P P 21 41 39.2 +0.4
baz=45
L15A **Malad City** 44.97 75 ⇓P P 21 41 39.5 +0.5
baz=45,SNR=6.6
P12A **McGill** 44.98 80 ⇑P P 21 41 39.4 +0.3
baz=45
RLMT **Red Lodge** 44.99 70 ⇓P P 21 41 39.3 +0.1
baz=45,SNR=6.6
RLMT **Red Lodge** 44.99 70 *e*P P 21 41 38.7 -0.4
comp=Z,6.0nm,0.6s,mb4.5
O13A **Hicks Ranch, I** 45.14 78 ⇑P P 21 41 40.0 -0.3
baz=45
N14A **Grayback Hills** 45.18 77 ⇑P P 21 41 40.8 +0.1
baz=45,SNR=12
BJI **Beijing** 45.19 281 P P 21 41 39.9 -0.9
BJI pmax pmax
comp=Z,19nm,0.8s,mb4.9
ISA **Isabella** 45.20 86 ⇑P P 21 41 40.5 -0.4
baz=45
ISA **Isabella** 45.20 86 *e*P P 21 41 40.1 -0.8
BJT **Baijiatuau** 45.21 281 *e*P P 21 41 40.9 0.0
BGU **Big Grassy Mou** 45.23 77 *e*P P 21 41 41.1 +0.1
comp=Z,5.4nm,0.8s,mb4.3
M15A **Larsen Ranch,** 45.26 76 ⇓P P 21 41 41.4 +0.1
baz=45,SNR=10
R11A **Troy Canyon, C** 45.27 81 ⇓P P 21 41 41.3 0.0
baz=45,SNR=30
Q12A **Willow Creek R** 45.30 80 ⇑P P 21 41 42.0 +0.5
baz=45,SNR=7.2
SPUT **South Promonto** 45.35 76 *e*P P 21 41 42.5 +0.5
comp=Z,8.7nm,0.9s,mb4.5
P13A **Bates Ranch, G** 45.53 79 ⇑P P 21 41 43.8 +0.3
baz=45,SNR=14
L16A **Fish Haven** 45.53 75 ⇑P P 21 41 43.7 +0.2
baz=45
MPMC **Manual Prospec** 45.55 85 ⇑P P 21 41 43.9 +0.2
baz=45,SNR=8.6
N15A **Stansbury Isla** 45.56 77 ⇓P P 21 41 44.0 +0.3
baz=45,SNR=5.1
J18A **Kendall Valley** 45.66 72 ⇓P P 21 41 44.7 +0.2
baz=46
FURC **Furnace Creek,** 45.68 84 ⇓P P 21 41 44.9 +0.3
baz=46,SNR=7.2
HWUT **Hardware Ranch** 45.70 75 *e*P P 21 41 45.0 +0.3
comp=Z,7.3nm,0.8s,mb4.5
DUG **Dugway** 45.81 78 ⇓P P 21 41 45.9 +0.3
baz=46,SNR=20
DUG **Dugway** 45.81 78 *e*P P 21 41 45.9 +0.3
comp=Z,25nm,0.6s,mb5.1
L17A **Cokeville** 45.82 74 ⇓P P 21 41 45.3 -0.4
baz=46
Q13A **Wheeler Ranch,** 45.84 80 ⇑P P 21 41 46.2 +0.3
baz=46,SNR=21
LAO **LASA Array** 45.85 66 *e*P P 21 41 44.9 -1.0
comp=Z,3.7nm,0.4s,mb4.5
BLG **Laguna Peak** 45.86 89 ⇑P P 21 41 45.9 -0.2
baz=46
R12A **Pony Springs,** 45.88 81 ⇑P P 21 41 46.6 +0.5
baz=46
K18A **Toltan Ranch,** 45.99 73 ⇑P P 21 41 47.2 +0.2
baz=46,SNR=12
EDW2 **Edwards Air Fo** 46.01 87 ⇓P P 21 41 47.3 +0.1
baz=46
P14A **Drum Mountains** 46.02 78 ⇑P P 21 41 47.5 +0.2
baz=46,SNR=12
U10A **Ash Meadows, A** 46.03 84 ⇑P P 21 41 47.8 +0.3
baz=46
S12A **Delamar Landin** 46.18 82 ⇑P P 21 41 49.3 +0.7
baz=46,SNR=12
T11A **Corn Creek, Al** 46.19 82 ⇑P P 21 41 48.8 +0.2
baz=46,SNR=36
BW06 **Boulder Array** 46.20 73 ⇑P P 21 41 48.1 -0.5
baz=46,SNR=29
BW06 **Boulder Array** 46.20 73 *e*P P 21 41 48.0 -0.7
N16A **Rees Ranch, Co** 46.21 76 ⇓P P 21 41 48.9 +0.1
baz=46
Q14A **Sevier Lake (B** 46.27 79 ⇓P P 21 41 49.6 +0.3
baz=46,SNR=33
M17A **Scullys Gap (B** 46.32 75 ⇑P P 21 41 48.8 -0.8
baz=46
SONM **Songino Array** 46.34 296 P P 21 41 49.8 +0.1
comp=Z,1.8nm,0.8s,mb3.9,baz=69,slow=4.8,SNR=3.5
SONM ScP ScP 21 47 04.3 -2.1
comp=Z,0.8nm,0.8s,baz=47,slow=5.8,SNR=4.0
I20A **Worland** 46.34 71 ⇓P P 21 41 49.0 -0.7
baz=46
R13A **O'Grain Ranch,** 46.36 81 ⇑P P 21 41 50.0 +0.1
baz=46
JLU **Jordanelle** 46.38 76 *e*P P 21 41 50.5 +0.4
comp=Z,14nm,0.9s,mb4.7
NLU **North Lily Min** 46.40 77 *e*P P 21 41 50.8 +0.5
comp=Z,14nm,0.7s,mb4.8
SHOC **Shoshone** 46.40 85 ⇑P P 21 41 50.4 +0.1
baz=46
L18A **Fontenelle, Gr** 46.42 74 ⇑P P 21 41 50.5 +0.1
baz=46
GSC **Goldstone** 46.47 86 ⇑P P 21 41 50.8 0.0
baz=46,SNR=14
GSC **Goldstone** 46.47 86 *e*P P 21 41 50.9 +0.1
comp=Z,20nm,1.0s,mb4.8
P15A **Leamington** 46.52 78 ⇓P P 21 41 51.4 +0.2
baz=46,SNR=11
K19A **Absolon Red Bu** 46.58 72 ⇓P P 21 41 50.1 -1.5
baz=46,SNR=15
O16A **Springville** 46.59 77 ⇑P P 21 41 51.8 +0.1
baz=46,SNR=5.8

FMP **Fort Macarthur** 46.60 88 ⇓P P 21 41 50.9 -1.0
baz=46
DAU **Daniels Canyon** 46.61 76 *e*P P 21 41 52.8 +0.9
MPU **Maple Canyon** 46.63 77 *e*P P 21 41 52.5 +0.5
comp=Z,13nm,0.6s,mb4.8
M18A **Lyman** 46.70 74 ⇓P P 21 41 52.3 -0.3
baz=46,SNR=5.7
L19A **Farson** 46.72 73 ⇑P P 21 41 51.7 -1.0
baz=47,SNR=5.5
S13A **Holt Ranch, En** 46.81 81 ⇓P P 21 41 53.7 +0.2
baz=47,SNR=5.7
Q15A **Fillmore** 46.81 79 ⇓P P 21 41 53.4 0.0
baz=47
I21A **Big Trails, Te** 46.91 70 ⇓P P 21 41 52.8 -1.4
baz=47,SNR=5.7
TUQ **Turquoise Moun** 46.92 85 ⇑P P 21 41 54.5 +0.1
baz=47
V11A **Woodsprings** 46.97 84 ⇓P P 21 41 54.4 -0.3
baz=47
K20A **Yellowstone Ra** 46.98 72 ⇑P P 21 41 53.2 -1.5
baz=47,SNR=5.7
O17A **Robinson Place** 47.06 76 ⇑P P 21 41 55.0 -0.4
baz=47
HEC **Hector,Ludlow** 47.07 86 ⇓P P 21 41 55.5 -0.1
baz=47
CCUT **Cedar City** 47.13 81 *e*P P 21 41 56.6 +0.7
comp=Z,4.7nm,0.7s,mb4.3
T13A **Saint George** 47.14 82 ⇓P P 21 41 55.7 -0.3
baz=47,SNR=7.2
M19A **Rock Springs** 47.20 74 ⇓P P 21 41 55.9 -0.5
baz=47
N18A **Larsen Ranch,** 47.22 75 ⇑P P 21 41 55.9 -0.6
baz=47,SNR=8.3
MSU **Marysvale** 47.24 79 *e*P P 21 41 57.4 +0.6
TMUT **Trail Mountain** 47.34 78 *e*P P 21 41 57.1 -0.5
comp=Z,33nm,0.7s,mb5.2
R15A **Junction** 47.37 79 ⇓P P 21 41 57.9 +0.1
baz=47
V12A **Nelson** 47.39 84 ⇑P P 21 41 58.4 +0.3
baz=47
O18A **Roosevelt** 47.45 76 ⇓P P 21 41 59.0 +0.6
baz=47
HHC **Hu-ho-hao-te** 47.47 285 *e*P P 21 42 00.0 +1.4
HHC pP pP 21 42 24.8 +1.6
HHC sP sP 21 42 37.3 +2.2
HHC PP PP 21 43 52.3 +1.8
HHC *e*S S 21 48 44.5 -0.5
HHC sS sS 21 49 29.3 +1.8
HHC ScS ScS 21 51 39.5 -1.9
HHC SS SS 21 52 08.1 -5.5
HHC pmax pmax
comp=Z,31nm,0.9s,mb5.0
HHC pmax pmax
comp=Z,110nm,4.0s
HHC LR LR
comp=N,170nm,13.1s
HHC LR LR
comp=E,180nm,10.9s
HHC LR LR
comp=Z,140nm,10.3s
U13A **Pakoon Wash** 47.49 82 ⇑P P 21 41 58.7 0.0
baz=47,SNR=8.9
P17A **Butcher Ranch,** 47.51 77 ⇓P P 21 41 58.7 -0.2
baz=47,SNR=8.0
GMRC **Granite Mounta** 47.52 85 ⇑P P 21 41 58.8 -0.2
baz=47,SNR=6.9
N19A **John Jarvie Ra** 47.56 74 ⇑P P 21 41 59.1 -0.1
baz=47
Q16A **Castle Valley** 47.59 78 ⇓P P 21 41 59.5 0.0
baz=47,SNR=8.0
T14A **Hurricane** 47.61 81 ⇑P P 21 41 59.9 +0.2
baz=48
P18A **Preston Nutter** 47.71 77 ⇓P P 21 42 00.6 +0.2
baz=48,SNR=12
M20A **Sweetwater, Wa** 47.78 73 ⇓P P 21 42 00.4 -0.5
baz=48,SNR=8.0
PFO **Pinyon Flat Ob** 47.81 87 ⇑P P 21 42 00.6 -0.7
baz=48
PFO **Pinyon Flat Ob** 47.81 87 *e*P P 21 42 00.9 -0.3
R16A **Teasdale** 47.81 79 ⇑P P 21 42 02.2 +1.0
baz=48,SNR=21
BELC **Belle Mtn. Jos** 47.83 86 ⇓P P 21 42 01.0 -0.4
baz=48
V13A **Grand Canyon W** 47.84 83 ⇓P P 21 42 02.1 +0.6
baz=48,SNR=7.4
SRU **San Rafael** 47.87 77 ⇓P P 21 42 01.8 +0.2
baz=48,SNR=32
SRU **San Rafael** 47.87 77 *e*P P 21 42 02.0 +0.4
comp=Z,28nm,0.6s,mb5.3
O19A **Miners Draw (B** 47.96 75 ⇑P P 21 42 02.5 +0.1
baz=48,SNR=54
U14A **Mt Trumbull** 47.97 82 ⇓P P 21 42 02.3 -0.2
baz=48,SNR=5.2
L21A **Rawlins** 47.98 72 ⇓P P 21 42 01.7 -0.8
baz=48,SNR=6.0
K22A **Casper** 48.05 71 ⇑P P 21 42 02.4 -0.6
baz=48
T15A **Red Dirt Ranch** 48.07 81 ⇓P P 21 42 03.6 +0.3
baz=48,SNR=7.1
S16A **Weppner Ranch,** 48.10 79 ⇑P P 21 42 03.8 +0.3
baz=48,SNR=7.3
Q18A **Rafter H Ranch** 48.11 77 ⇓P P 21 42 03.1 -0.4
baz=48,SNR=22
N20A **Spence Gulch,** 48.14 74 ⇑P P 21 42 03.5 -0.3
baz=48,SNR=9.7
R17A **Hanksville Air** 48.19 78 ⇓P P 21 42 03.7 -0.4
baz=48
M21A **Separation Pea** 48.20 73 ⇓P P 21 42 03.5 -0.6
baz=48
IRM **Iron Mountain** 48.24 86 ⇑P P 21 42 04.1 -0.5
baz=48,SNR=5.7
MONP **Monument Peak** 48.31 88 ⇑P P 21 42 05.0 -0.2
baz=48
W13A **Hualapai Mount** 48.40 84 ⇑P P 21 42 05.5 -0.3
baz=48,SNR=5.6
P19A **Cripple Cowboy** 48.46 76 ⇑P P 21 42 06.1 -0.1
baz=48,SNR=43
U15A **North Rim** 48.51 81 ⇑P P 21 42 06.9 +0.3
baz=48,SNR=22
V14A **Boquillas Ranc** 48.53 83 ⇓P P 21 42 06.7 0.0
baz=48,SNR=18
O20A **White River Ci** 48.59 75 ⇓P P 21 42 07.0 -0.1
baz=48,SNR=8.8
T16A **Glen Canyon Da** 48.63 80 ⇓P P 21 42 07.1 -0.4
baz=48
N21A **Black Mountain** 48.63 74 ⇓P P 21 42 06.7 -0.8
baz=48,SNR=8.3
S17A **Black Ridge (B** 48.63 79 ⇓P P 21 42 07.4 -0.2
baz=48,SNR=14
R18A **Canyonlands Na** 48.70 78 ⇓P P 21 42 07.6 -0.5
baz=48,SNR=18
PDMCI **Parker Dam,Lak** 48.77 85 ⇓P P 21 42 08.4 -0.3
baz=49
W14A **Seligman** 48.82 83 ⇓P P 21 42 08.8 -0.1
baz=49,SNR=6.2
L23A **Garrett** 48.86 71 ⇓P P 21 42 08.0 -1.2
baz=49,SNR=11
P20A **De Beque** 48.90 75 ⇑P P 21 42 08.6 -1.0
baz=49,SNR=8.6
Y12C **Blythe** 48.90 85 ⇓P P 21 42 09.4 -0.3
baz=49
V15A **Kaibab Nationa** 48.98 82 ⇑P P 21 42 10.5 +0.3
baz=49,SNR=16
O21A **Pagoda** 49.00 74 ⇓P P 21 42 09.9 -0.4
baz=49,SNR=6.1
T17A **Navajo Res., N** 49.05 80 ⇑P P 21 42 10.6 -0.2
baz=49,SNR=5.4
S18A **Hurst Farm, Bl** 49.09 78 ⇑P P 21 42 10.9 -0.1
baz=49,SNR=32
R19A **Curley Farm, L** 49.15 77 ⇓P P 21 42 11.3 -0.1
baz=49,SNR=5.5
GLA **Glamis** 49.19 86 ⇓P P 21 42 11.6 -0.3
baz=49
GLA **Glamis** 49.19 86 *e*P P 21 42 12.0 +0.1
N22A **Wattenberg Ran** 49.23 73 ⇑P P 21 42 12.0 -0.1
baz=49
Y13A **Salome** 49.29 85 ⇑P P 21 42 12.3 -0.3
baz=49
PV04 **Paradox Valley** 49.30 77 *e*P P 21 42 12.3 -0.3
Q20A **Ridgley Place,** 49.30 76 ⇑P P 21 42 12.1 -0.5
baz=49,SNR=5.7
X14A **Yava** 49.43 84 ⇑P P 21 42 13.4 -0.3
baz=49,SNR=7.6
N23A **Red Feather La** 49.48 72 ⇓P P 21 42 13.8 -0.1
baz=49
T18A **Mexican Hat** 49.52 79 ⇓P P 21 42 13.4 -0.9
baz=49,SNR=16
S19A **Harvey Farm, M** 49.57 78 ⇓P P 21 42 14.4 -0.3
baz=49,SNR=29
O22A **Kremmling** 49.58 74 ⇓P P 21 42 14.6 -0.1
baz=49,SNR=6.0
PV01 **Paradox Valley** 49.66 77 *e*P P 21 42 15.8 +0.4
comp=Z,2µm,0.7s
WUAZ **Wupatki** 49.67 81 ⇑P P 21 42 15.2 -0.3
baz=50,SNR=6.4
WUAZ **Wupatki** 49.67 81 *e*P P 21 42 15.8 +0.3
Y14A **Wickenburg** 49.71 84 ⇑P P 21 42 15.8 0.0
baz=50
R20A **Redvale** 49.74 77 ⇑P P 21 42 15.4 -0.6
baz=50,SNR=6.3
Q21A **Lamborn Mesa,** 49.81 76 ⇓P P 21 42 16.1 -0.4
baz=50,SNR=7.7
X15A **Humboldt** 49.82 83 ⇓P P 21 42 16.7 +0.1
baz=50,SNR=6.5
W16A **Flagstaff** 49.85 82 ⇑P P 21 42 16.9 +0.1
baz=50
O23A **Lake Granby, G** 49.93 73 ⇓P P 21 42 17.7 +0.4
baz=50,SNR=6.8
V17A **Tonalea, Kykot** 49.95 81 ⇑P P 21 42 18.2 +0.6
baz=50,SNR=11
SMCO **Snowmass** 49.95 75 *e*P P 21 42 17.6 0.0
comp=Z,7.5nm,0.5s,mb4.9
U18A **Rough Rock, Ch** 49.99 80 ⇑P P 21 42 18.0 +0.1
baz=50
Y15A **Casa Rosa Ranc** 50.12 84 ⇑P P 21 42 18.6 -0.3
baz=50,SNR=6.3
R21A **Cimarron** 50.13 76 ⇑P P 21 42 18.6 -0.3
baz=50,SNR=11
Q22A **Crested Butte,** 50.19 75 ⇑P P 21 42 19.4 0.0
baz=50,SNR=6.4
T19A **Beclabito** 50.24 79 ⇑P P 21 42 19.6 -0.1
baz=50,SNR=45
X16A **Lo Mia Camp, P** 50.35 83 ⇓P P 21 42 20.9 +0.2
baz=50,SNR=8.3
ISCO **Idaho Springs** 50.37 73 ⇑P P 21 42 21.3 +0.6
baz=50
ISCO **Idaho Springs** 50.37 73 *e*P P 21 42 21.0 +0.3
comp=Z,5.6nm,1.0s,mb4.5
S21A **Coal Bank Pass** 50.44 77 ⇓P P 21 42 21.2 0.0
baz=50,SNR=18
U19A **Dine' College,** 50.48 79 ⇓P P 21 42 21.5 0.0
baz=50
P23A **Jefferson** 50.51 74 ⇓P P 21 42 22.2 +0.5
baz=50
114A **Black Gap (USA** 50.59 85 ⇓P P 21 42 22.3 -0.1
baz=50
Y16A **Circle Bar Ran** 50.69 83 ⇑P P 21 42 23.2 0.0
baz=50
R22A **Saguache, Gunn** 50.70 76 ⇓P P 21 42 23.5 +0.4
baz=50,SNR=11
Q23A **Hartsel** 50.81 74 ⇓P P 21 42 24.1 +0.1
baz=51,SNR=8.0
U20A **Newcomb** 50.84 79 ⇑P P 21 42 24.5 +0.2
baz=51
V19A **Window Rock** 50.96 80 ⇓P P 21 42 25.6 +0.5
baz=51
S22A **4UR Ranch, Cre** 50.96 76 ⇓P P 21 42 25.7 +0.5
baz=51,SNR=13
115A **Sonoran Desert** 51.03 85 ⇓P P 21 42 25.9 +0.1
baz=51,SNR=5.3
T21A **Navajo Lake** 51.03 77 ⇑P P 21 42 26.1 +0.4
baz=51
Z16A **Peralta Trail,** 51.09 84 ⇑P P 21 42 26.4 +0.2
baz=51
214A **Organ Pipe Nat** 51.18 86 ⇑P P 21 42 26.6 -0.2
baz=51
Q24A **Divide** 51.18 74 ⇑P P 21 42 26.9 +0.1
baz=51
X18A **Snowflake** 51.19 81 ⇓P P 21 42 27.3 +0.4
baz=51,SNR=5.8
Y17A **Roosevelt** 51.21 83 ⇑P P 21 42 27.3 +0.2
baz=51,SNR=16
V20A **Brimhall** 51.25 79 ⇑P P 21 42 27.7 +0.4
baz=51,SNR=6.3
U21A **Nageezi** 51.33 78 ⇑P P 21 42 28.2 +0.2
baz=51,SNR=17
T22A **Edith** 51.40 77 ⇑P P 21 42 29.2 +0.7
baz=51,SNR=16
P25A **Willow Gulch B** 51.41 73 ⇑P P 21 42 29.0 +0.5
baz=51,SNR=6.7
Y18A **Canyon Day Jun** 51.65 82 ⇑P P 21 42 30.8 +0.5
baz=52
X19A **St. Johns** 51.67 81 ⇓P P 21 42 30.6 +0.1
baz=52
R24A **Sanders Place,** 51.68 75 ⇑P P 21 42 30.6 +0.1
baz=52,SNR=5.4
W20A **Ramah** 51.68 80 ⇑P P 21 42 31.3 +0.7
baz=52
Q25A **Bedland, Calha** 51.75 73 ⇓P P 21 42 31.0 0.0
baz=52,SNR=5.1
V21A **Milan** 51.75 79 ⇓P P 21 42 31.0 -0.1
baz=52,SNR=5.5
SDCO **Great Sand Dun** 51.76 75 *e*P P 21 42 31.2 +0.1
U22A **Llaves** 51.85 78 ⇑P P 21 42 32.0 +0.2
baz=52,SNR=13
S24A **Houchin Ranch,** 52.00 75 ⇓P P 21 42 33.3 +0.4
baz=52,SNR=7.9
Y19A **Nutrioso** 52.01 81 ⇓P P 21 42 33.9 +0.9
baz=52
117A **Oracle** 52.03 84 ⇑P P 21 42 33.5 +0.3
baz=52,SNR=5.9
X20A **Quemado** 52.07 80 ⇑P P 21 42 34.2 +0.7
baz=52,SNR=8.9
V22A **San Miguel Ran** 52.12 78 ⇓P P 21 42 33.6 -0.3
baz=52,SNR=6.4
TUC **Tucson** 52.19 84 *e*P P 21 42 34.5 +0.2
U23A **El Rito** 52.28 77 ⇑P P 21 42 35.4 +0.4
baz=52,SNR=12
118A **Homack Ranch,** 52.46 83 ⇓P P 21 42 36.5 +0.1
baz=52,SNR=14
217A **Green Valley** 52.53 85 ⇓P P 21 42 36.8 -0.1
baz=52
X21A **Alamocita Cree** 52.57 80 ⇓P P 21 42 38.3 +1.1
baz=52,SNR=20
FRB **Frobisher Bay** 52.57 32 P P 21 42 35.9 -0.9
comp=Z,1.0nm,0.3s,mb4.3,baz=356,slow=5.9,SNR=5.4
Y20A **Horse Springs,** 52.57 81 ⇓P P 21 42 37.8 +0.6
baz=52,SNR=14
V23A **Ortiz Mt. (NFS** 52.67 78 ⇑P P 21 42 38.5 +0.6
baz=52,SNR=8.5
SUMG **Summit** 52.76 14 P P 21 42 38.3 +0.3
119A **Ashpeak Ranch,** 52.78 83 ⇓P P 21 42 38.8 0.0
baz=53
T25A **Trinidad** 52.81 75 ⇑P P 21 42 39.3 +0.4
baz=53,SNR=17
218A **Dragoon** 52.87 84 ⇑P P 21 42 39.3 -0.1
baz=53,SNR=10.0
Z20A **Nine Sixteen R** 52.98 82 ⇑P P 21 42 40.2 0.0
baz=53,SNR=9.0
ANMO **Albuquerque** 53.04 79 *e*P P 21 42 40.9 +0.3
W23A **Werner Place,** 53.09 78 ⇑P P 21 42 40.8 -0.1
baz=53
V24A **Rampart Ranch,** 53.24 77 ⇑P P 21 42 42.2 +0.1
baz=53,SNR=11
LENM **Lemitar** 53.26 80 *e*P P 21 42 43.5 +1.3
318A **Bisbee** 53.27 84 ⇓P P 21 42 42.0 -0.4
baz=53
U25A **Circle Dot Ran** 53.31 76 ⇓P P 21 42 42.2 -0.4
baz=53,SNR=20
219A **White Tail Can** 53.34 83 ⇑P P 21 42 42.7 -0.1
baz=53
120A **U Bar Ranch, L** 53.34 82 ⇓P P 21 42 43.0 +0.1
baz=53,SNR=6.2
Z21A **St. Cloud Mine** 53.41 81 ⇑P P 21 42 44.5 +1.1
baz=53
Y22A **Socorro** 53.42 80 ⇓P P 21 42 44.1 +0.8
baz=53,SNR=7.4
BNM **Barren Site** 53.48 79 *e*P P 21 42 44.2 +0.4
comp=Z,2.3nm,0.7s,mb4.3
W24A **Lazy 6 Ranch,** 53.50 78 ⇓P P 21 42 44.2 +0.3
baz=53,SNR=10
V25A **Rancho No Teng** 53.56 76 ⇑P P 21 42 44.5 +0.1
baz=53,SNR=19
U26A **Atchley Ranch,** 53.71 75 ⇑P P 21 42 45.8 +0.4
baz=54
319A **Douglas** 53.75 84 ⇓P P 21 42 46.0 +0.1
baz=54
220A **Playas Peak, P** 53.85 83 ⇑P P 21 42 46.6 0.0
baz=54,SNR=11
121A **Cookes Peak, D** 53.87 82 ⇓P P 21 42 46.9 +0.1
baz=54,SNR=5.4
Z22A **Elephant Butte** 53.88 80 ⇑P P 21 42 47.0 +0.3
baz=54,SNR=5.8
Y23A **Lovelace Mesa,** 53.97 79 ⇑P P 21 42 47.8 +0.4
baz=54,SNR=20
W25A **X Bar L Ranch,** 54.07 77 ⇑P P 21 42 47.9 -0.2

baz=54,SNR=26
V26A Tequesquite Ra 54.08 76 ⇓P P 21 42 48.0 -0.2
baz=54,SNR=7.1
122A Conniff Cattle 54.24 81 ⇓P P 21 42 50.1 +0.8
baz=54
Z23A Rita Site, Whi 54.32 80 ⇓P P 21 42 50.5 +0.5
baz=54
Y24A Capitan 54.35 79 ⇓P P 21 42 51.0 +0.8
baz=54,SNR=34
X25A Clemmons Ranch 54.41 78 ⇑P P 21 42 50.5 -0.1
baz=54
CBKS Cedar Bluff 54.47 71 ⇓P P 21 42 50.7 -0.2
baz=54
W26A Owens Ranch, T 54.57 77 ⇓P P 21 42 51.9 +0.1
baz=54
222A Williams Famil 54.59 82 ⇓P P 21 42 52.2 +0.3
baz=54,SNR=5.3
X26A CR and CF Fran 54.91 77 ⇓P P 21 42 54.0 -0.2
baz=55,SNR=15
W27A Bowe Ranch, En 55.01 76 ⇑P P 21 42 54.5 -0.5
baz=55
LZH Lanzhou 55.16 286 *e*P P **21 42 57.3 +1.3**
LZH pP pP 21 43 22.1 +0.8
LZH sP sP 21 43 35.0 +2.0
LZH pmax pmax
comp=Z,21nm,1.0s,mb5.1
124A Stringfield Ra 55.18 80 ⇑P P 21 42 56.3 +0.1
baz=55
Z25A Roswell 55.23 79 ⇑P P 21 42 56.8 +0.3
baz=55
X27A F and S Farms, 55.28 77 ⇓P P 21 42 56.6 -0.2
baz=55
GTA Gaotai 55.30 291 P P **21 42 57.0 +0.1**
GTA pP pP 21 43 23.3 +1.1
GTA sP sP 21 43 35.8 +1.9
GTA PcP PcP 21 43 56.6 +0.3
GTA pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
Y26A Elida 55.33 78 ⇓P P 21 42 56.9 -0.4
baz=55,SNR=18
224A Cornudas Mount 55.57 80 ⇓P P 21 42 59.2 +0.2
baz=55,SNR=7.7
Z26A Caprock 55.69 78 ⇓P P 21 42 59.6 -0.2
baz=56,SNR=11
125A Gardner Draw, 55.70 79 ⇑P P 21 42 59.9 0.0
baz=56,SNR=12
MNTX Cornudas Mount 55.92 81 ⇑P P 21 43 01.2 -0.3
baz=56,SNR=19
MSTX Muleshoe 55.94 77 ⇑P P 21 43 01.0 -0.6
baz=56,SNR=6.9
AMTX Amarillo 55.97 75 ⇑P P 21 43 01.5 -0.2
baz=56,SNR=9.7
AMTX Amarillo 55.97 75 *e*P P **21 43 01.5 -0.3**
225A Deer Hill, Car 55.98 80 ⇓P P 21 43 01.7 -0.2
baz=56,SNR=6.1
GDL2 Guadalupe Moun 56.19 80 *e*P P **21 43 04.1 +0.7**
325A Bean Ranch, Si 56.40 81 ⇓P P 21 43 04.8 -0.1
baz=56,SNR=18
226A Malaga, Loving 56.45 79 ⇓P P 21 43 04.7 -0.6
baz=56,SNR=7.4
326A Caldwell Ranch 57.04 80 ⇑P P 21 43 09.1 -0.3
baz=57
426A McDonald Obser 57.47 81 ⇑P P 21 43 12.1 -0.3
baz=57,SNR=15
ARCES ARCESS Array B 57.52 350 P P **21 43 11.8 -0.5**
comp=Z,1.9nm,0.8s,mb4.2,baz=16,slow=7.8,SNR=8.1
328A Wristen Ranch, 57.71 79 ⇑P P 21 43 13.8 -0.3
baz=58,SNR=12
427A Hayter Ranch, 57.72 80 ⇓P P 21 43 13.8 -0.4
baz=58,SNR=6.9
WMOK Wichita Mounta 57.79 74 *e*P P **21 43 14.2 -0.4**
comp=Z,8.0nm,0.8s,mb4.8
526A Mary Lane Ranc 57.86 81 ⇑P P 21 43 14.8 -0.4
baz=58,SNR=18
527A Woodward Ranch 58.09 81 ⇓P P 21 43 16.4 -0.4
baz=58,SNR=7.5
626A Big Bend Ranch 58.19 82 ⇑P P 21 43 17.1 -0.4
baz=58,SNR=18
428A Kincaid Ranch, 58.25 80 ⇑P P 21 43 17.5 -0.4
baz=58,SNR=22
KURK Kurchatov 58.58 313 P P **21 43 19.3 -0.6**
KURK Kurchatov 58.58 313 P P **21 43 19.3 -0.6**
comp=Z,1.4nm,0.4s,mb4.3,baz=44,slow=6.5,SNR=4.0
528A Cox Ranch, San 58.58 80 ⇓P P 21 43 20.3 +0.1
baz=58,SNR=10
TXAR Lajitas Array 58.63 81 P P **21 43 20.0 -0.6**
TXAR Lajitas Array 58.63 81 P P **21 43 20.0 -0.6**
comp=Z,7.6nm,0.6s,mb4.9,baz=295,slow=4.5,SNR=47
627A Terlingua Ranc 58.72 81 ⇓P P 21 43 20.8 -0.4
baz=59,SNR=11
CD2 Chengdu 58.80 281 P P **21 43 22.4 +0.7**
CD2 pmax pmax
comp=Z,30nm,0.5s,mb5.6
CD2 pmax pmax
comp=Z,120nm,6.5s
WMQ Urumqi 58.98 303 P P **21 43 26.5 +3.7**
WMQ pP pP 21 43 50.5 +2.1
WMQ sP sP 21 44 01.6 +1.7
WMQ PcP PcP 21 44 14.3 +3.6
WMQ pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
WMQ pmax pmax
comp=Z,100nm,4.2s
WMQ LR LR
comp=N,97nm,18.7s
WMQ LR LR
comp=E,95nm,20.2s
WMQ LR LR
comp=Z,62nm,18.7s
628A Black Gap, Mar 59.00 81 ⇑P P 21 43 22.5 -0.7
baz=59,SNR=15
SCHQ Schefferville 59.60 38 P P **21 43 25.7 -1.2**
SCHQ Schefferville 59.60 38 P P **21 43 25.7 -1.2**
comp=Z,1.4nm,0.5s,mb4.3,baz=304,slow=7.3,SNR=4.6
MK31 Makanchi Array 59.63 308 *e*P P **21 43 27.5 +0.3**
MKAR Makanchi Array 59.63 308 P P **21 43 25.4 -1.8**
MKAR Makanchi Array 59.63 308 P P **21 43 25.4 -1.8**
comp=Z,1.0nm,0.3s,mb4.3,baz=49,slow=7.1,SNR=17
JCT Junction City 60.17 78 ⇑P P 21 43 29.9 -1.3
baz=60,SNR=7.9
JCT Junction City 60.17 78 *e*P P **21 43 30.5 -0.6**
GYA Guiyang 60.20 276 *e*P P **21 43 32.0 +0.6**
GYA pP pP 21 43 58.4 +1.3
GYA sP sP 21 44 11.6 +3.0
GYA PcP PcP 21 44 18.9 +3.0
GYA PP PP 21 45 48.9 +3.9
GYA ScP ScP 21 48 06.5 -0.5
GYA PcS PcS 21 48 17.3 -1.2
GYA S S **21 51 35.0 -1.9**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
BVAR Borovoye Array 60.41 319 P P **21 43 31.0 -1.4**
comp=Z,1.9nm,0.4s,mb4.5,baz=72,slow=6.9,SNR=5.1
BRVK Borovoye 60.43 320 *e*P P **21 43 30.8 -1.8**
MIAR Mount Ida 60.99 70 *e*P P **21 43 36.5 -0.2**
KMI Kunming 63.59 278 P P **21 43 55.8 +1.7**
KMI pP pP 21 44 21.5 +1.5
KMI sP sP 21 44 35.1 +3.6
KMI pmax pmax
comp=Z,7.0nm,2.0s,mb4.1
KMI pmax pmax
comp=Z,430nm,5.0s
KMI LR LR
comp=Z,56nm,24.7s
FINES FINESS Array B 65.21 347 P P **21 44 04.1 0.0**
comp=Z,0.5nm,0.4s,mb3.7,baz=0.9,slow=7.6,SNR=6.2
LRAL Lakeview Retre 65.87 67 *e*P P **21 44 07.2 -1.6**
comp=Z,4.5nm,0.7s,mb4.4
AAK Ala-Archa 66.45 310 *e*P P **21 44 11.8 -0.6**
CMAR Chiang Mai Arr 70.89 276 P P **21 44 40.2 -0.1**
comp=Z,1.9nm,0.6s,mb4.1,baz=24,slow=6.7,SNR=5.0
TAPN Taplejung 70.95 290 *e*P P **21 44 41.0 +0.5**
ODAN Odare 71.50 290 *e*P P **21 44 44.5 +0.6**
GUN Gumba 71.58 292 *e*P P **21 44 45.0 +0.7**
comp=Z,55nm,0.4s,mb5.8
JIRN Jiri 71.59 291 *e*P P **21 44 45.2 +0.8**
comp=Z,29nm,0.5s,mb5.3
RAMN Ramite 71.89 291 *e*P P **21 44 46.6 +0.4**
comp=Z,26nm,0.5s,mb5.3
KKN Kakani 72.02 292 *e*P P **21 44 47.6 +0.7**
comp=Z,6.5nm,0.4s,mb4.9
PKI Pulchoki 72.11 292 *e*P P **21 44 47.4 -0.1**
comp=Z,11nm,0.4s,mb5.1
PKIN Phulchoki 72.11 292 *e*P P **21 44 47.3 -0.2**
comp=Z,11nm,0.4s,mb5.0
GKN Gorkha 72.22 293 *e*P P **21 44 48.6 +0.4**
comp=Z,14nm,0.5s,mb5.1
DMN Daman 72.26 292 *e*P P **21 44 49.3 +0.9**
comp=Z,7.1nm,0.4s,mb4.8
KBL Kabul 75.44 308 P P **21 45 07.2 +0.4**
WRA Warramunga Arr 82.38 224 P P **21 45 43.5 -1.2**
comp=Z,5.3nm,0.8s,mb4.4,baz=32,slow=5.9,SNR=5.4
PSI Prapat 82.97 266 P P **21 45 47.7 -0.3**
PSI Prapat 82.97 266 P P **21 45 47.7 -0.3**
comp=Z,6.4nm,0.4s,mb4.8,baz=349,slow=8.4,SNR=7.1
FITZ Fitzroy Crossi 84.77 232 P P **21 45 56.5 -0.4**
comp=Z,5.8nm,0.7s,mb4.6,baz=16,slow=5.8,SNR=6.0
ASAR Alice Springs 85.86 222 P P **21 46 02.2 -0.1**
comp=Z,3.7nm,0.8s,mb4.4,baz=22,slow=5.0,SNR=6.5
TORD Torodi Ar. Bea 115.17 359 PKP PKPdf 21 52 02.3 -1.4
TORD Torodi Ar. Bea 115.17 359 PKP PKPdf 21 52 02.3 -1.4
comp=Z,1.2nm,1.0s,baz=342,slow=2.3,SNR=4.0
MAW Mawson 146.89 218 PKPbc PKPbc 21 53 02.6 -0.6
comp=Z,4.2nm,0.7s,baz=72,slow=5.3,SNR=9.4
BOSA Boshof 150.54 313 PKPbc PKPbc 21 53 12.9 -0.8
comp=Z,1.5nm,0.5s,baz=97,slow=5.0,SNR=8.6

*IDC **19** 21:34:54.6±2.0, 3.38S×135.32E, h0km, mb3.9/3, mb1 4.1/5, mb1mx3.9/14, mbtmp4.0/5, ML4.3/1, MS3.9/1, Ms1 3.9/1, ms1mx2.8/22, Error ellipse: s-maj=66.2km s-min=28.6km az=72.0*
*ISCJB **19** 21:34:57.0±0.6, 3.46S±0.06×135.32E±0.09, h33km, mb3.9/5, Error ellipse: s-maj=13.2km s-min=7.5km az=14.6*
*NEIC **19** 21:34:59.1±0.4, 3.40S×135.29E, h35km, mb4.0/4, Error ellipse: s-maj=11.3km s-min=8.2km az=84.0*
ISC 19 21:34:59.0±0.6, 3.39S±0.06×135.34E±0.10, h35km, n19, σ0.92/24, mb3.9/5, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**9.69**	**197**	*e*Pn	**Pn**	**21 37 16.4**	**+0.3**
	116nm,0.4s						
KAKA				*e*Sn	**Sn**	**21 39 05.1**	**+1.3**
PMG	**Port Moresby**	**13.18**	**118**	*e*P	**Pn**	**21 38 03.9**	**+0.1**
WRA	**Warramunga Arr**	**16.48**	**183**	Pn	**Pn**	**21 38 41.8**	**-5.8**
WRA				Sn	**Sn**	**21 41 39.4**	**-10**
WRA	**Warramunga Arr**	**16.48**	**183**	Pn	**Pn**	**21 38 41.8**	**-5.8**
	0.4nm,0.3s,baz=2.9,slow=13,SNR=28						
WRA				Sn	**Sn**	**21 41 39.4**	**-10**
	0.6nm,0.3s,baz=8.5,slow=22,SNR=4.7						
FITZ	**Fitzroy Crossi**	**17.43**	**212**	*e*Pn	**Pn**	**21 38 58.9**	**-0.8**
	3.1nm,0.6s						
FITZ				S	**S**	**21 42 07.8**	**-12**
FITZ	**Fitzroy Crossi**	**17.43**	**212**	P	**Pn**	**21 38 58.8**	**-0.8**
	0.7nm,0.3s,baz=40,slow=11,SNR=20						
FITZ				S	**S**	**21 42 07.8**	**-12**
	0.5nm,0.3s,baz=285,slow=16,SNR=5.1						
CTA	**Charters Tower**	**19.72**	**148**	P	**Pn**	**21 39 25.6**	**-1.7**
	0.3nm,0.3s,baz=343,slow=13,SNR=3.4						
ASAR	**Alice Springs**	**20.20**	**184**	P	**P**	**21 39 31.1**	**+0.2**
	4.7nm,0.4s,baz=9.4,slow=11,SNR=61						
ASAR				S	**S**	**21 43 05.6**	**-10**
	0.4nm,0.5s,baz=2.4,slow=27,SNR=2.6						
KKM	**Kota Kinabalu**	**21.27**	**296**	P	**P**	**21 39 38.3**	**-4.3**
MBWA	**Marble Bar**	**23.29**	**219**	*e*P	**P**	**21 40 03.3**	**-0.7**
	6.4nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**28.94**	**169**	P	**P**	**21 40 56.4**	**+1.3**
	1.2nm,0.8s,mb3.7,baz=328,slow=13,SNR=3.1						
COCO	**West Island**	**39.09**	**255**	*e*P	**P**	**21 42 21.7**	**-1.6**
YSS	**Yuzh-Sakhalins**	**50.56**	**7**	P	**P**	**21 43 53.2**	**-0.8**
SONM	**Songino Array**	**56.96**	**337**	LR	LR	22 06 30.0	
	comp=Z,96nm,20.5s,baz=183,slow=33						
MKAR	**Makanchi Array**	**68.31**	**324**	P	**P**	**21 45 57.5**	**+0.9**
	0.3nm,0.4s,mb3.7,baz=106,slow=6.0,SNR=2.3						
EKS2	**Erkin-Say**	**71.88**	**317**	*e*P	**P**	**21 46 19.4**	**+0.8**
	0.9nm,0.8s,mb3.8						
BRVK	**Borovoye**	**78.04**	**326**	P	**P**	**21 46 54.4**	**+0.4**
ARU	**Arti**	**85.53**	**327**	*e*P	**P**	**21 47 33.5**	**+0.2**
	2.2nm,0.8s,mb4.4						
MCK	**McKinley**	**86.74**	**26**	P	**P**	**21 47 39.7**	**+0.5**

*ISCJB **19** 21:35:10.9±0.1, 25.05N±0.02×97.87E±0.02, h10km, mb5.0/191, MS4.3/43, Error ellipse: s-maj=3.1km s-min=2.2km az=12.4*
*IDC **19** 21:35:10.8±0.4, 25.04N×97.90E, h0km, mb4.8/33, mb1 4.9/34, mb1mx4.8/37, mbtmp4.8/34, ML4.7/1, MS4.1/13, Ms1 4.1/13, ms1mx3.8/33, Error ellipse: s-maj=14.5km s-min=9.5km az=61.0*
*BJI **19** 21:35:12.4, 25.09N×97.89E, h15km, mB5.0/32, mb4.6/44, ML4.9/8, Ms4.9/59, Ms7 4.7/48*
*TEH **19** 21:35:13.0, 25.04N×97.92E, h8km*
*MOS **19** 21:35:14.1±0.8, 25.06N×97.90E, h33km, mb5.2/76, MS4.3/25, Error ellipse: s-maj=7.3km s-min=3.7km az=121.7*
*GCMT **19** 21:35:16.5±0.2, 25.09N×98.03E, h19km, MW5.0, Moment Tensor Solution. s32,c37; s61,c111; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.36±.18; $M_{\theta\theta}$1.16±.11; $M_{\phi\phi}$2.20±.11; $M_{r\theta}$1.24±.28; $M_{\theta\phi}$2.34±.08; $M_{\phi r}$-0.01±.23; Best double couple: M_o4.00000×10^{16} NP1:ϕ_s21.00000°, δ42.00000°, λ-117.00000°. NP2:ϕ_s235.00000°, δ53.00000°, λ-68.00000°. Principal axes: T 4.1600, Plg6.0000°, Azm310.0000°; N -0.4100, Plg18.0000°, Azm42.0000°; P -3.7500, Plg71.0000°, Azm202.0000°; Data Used: II IU CN G IC.*
*NEIC **19** 21:35:17.2±0.5, 25.05N×97.92E, h46km±5km, mb5.0/94 Error ellipse: s-maj=3.5km s-min=2.9km az=208.0*
NEIC Five rooms collapsed and 2,420 rooms, 23 large buildings and 10 roads damaged in Yingjiang, China. Also felt in the Kachin State border region, Myanmar.
*SZGRF **19** 21:35:19.8, 25.36N×97.54E, h33km, mb5.4, MS4.2, Myanmar-China border region*
*DJA **19** 21:35:21, 25.02N×97.91E, h73km, mb5.2/15*
*PLV **19** 21:35:25.9±4.1, 24.88N×98.98E, h10km±255km, ML4.2*
ISC 19 21:35:12.8±0.1, 25.04N±0.02×97.87E±0.02, h10km, (h14km±5km:pP-P), n616, σ0.99/627, mb5.0/191, MS4.3/43, 28C-47D, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**3.59**	**267**	*e*PKP	**Pn**	**21 36 11.0**	**+2.5**
IMP				*ex*	**Sb**	**21 36 59.0**	**-0.9**
KMI	**Kunming**	**4.41**	**88**	Pn	**Pn**	**21 36 20.9**	**+1.0**
KMI				Pg	**Pg**	**21 36 33.9**	**-3.5**
KMI				Sg	**Sg**	**21 37 30.1**	**-4.5**
KMI				smax			
	comp=N,2μm,1.3s						
KMI				smax			
	comp=E,1μm,1.1s						
SHL	**Shillong**	**5.45**	**277**	*e*PKP	**Pn**	**21 36 37.0**	**+2.9**
LCVN	**Lai Chau**	**5.69**	**121**	*e*Pn	**Pn**	**21 36 40.2**	**+2.7**
LCVN				AML	AML	21 38 29.8	
	comp=E,173nm,0.7s						
SPV	**Sa-pa**	**6.09**	**115**	*e*Pn	**Pn**	**21 36 43.3**	**+0.4**
AGT	**Agartala**	**6.14**	**261**	*i* P	**Pn**	**21 36 43.0**	**-0.6**
AGT				*i* x	x	21 37 20.0	
TGV	**Tuan Giao**	**6.15**	**123**	*e*Pn	**Pn**	**21 36 44.6**	**+0.9**
CHG	**Chiang Mai**	**6.28**	**171**	PG	**Pn**	**21 36 50.9**	**+5.4**
CHG				SG	**Pg**	**21 37 10.1**	**-3.0**
CHTO	**Chiang Mai**	**6.28**	**171**	*e*Pn	**Pn**	**21 36 46.9**	**+1.4**
CHTO				*e*Pg	**Pg**	**21 37 11.4**	**-1.6**
CHTO				*e*Sg	**Sg**	**21 38 33.6**	**-0.7**
CHTO	**Chiang Mai**	**6.28**	**171**	*e*P	**Pn**	**21 36 46.9**	**+1.4**
CM31	**Chiang Mai Arr**	**6.63**	**171**	*e*Pn	**Pn**	**21 36 52.2**	**+1.9**
CM31				*e*Pg	**Pg**	**21 37 18.0**	**-1.8**
CM31				*e*Sg	**Sg**	**21 38 45.1**	**-0.5**
CMAR	**Chiang Mai Arr**	**6.63**	**171**	Pn	**Pn**	**21 36 51.6**	**+1.3**
	comp=E,4.1nm,0.3s,baz=348,slow=14,SNR=62						
CMAR				Pg	**Pg**	**21 37 15.2**	**-4.5**
	comp=E,9.8nm,0.3s,baz=344,slow=17,SNR=27						
CMAR				Lg		21 38 43.2	
	comp=E,22nm,0.3s,baz=349,slow=28,SNR=12						
CMAR				LR	LR	21 39 42.4	
	comp=E,2μm,19.9s,baz=344,slow=41						
CMAR	**Chiang Mai Arr**	**6.63**	**171**	P	**Pn**	**21 36 51.6**	**+1.3**
SLVN	**Son La**	**6.66**	**122**	*e*Pn	**Pn**	**21 36 54.1**	**+3.3**
HGVB	**Ha Giang**	**6.87**	**107**	*e*Pn	**Pn**	**21 36 53.0**	**-0.7**
TTVN	**Tram Tau**	**6.94**	**119**	*e*Pn	**Pn**	**21 36 54.5**	**-0.1**
VTVB	**Vinh Tuy**	**7.01**	**112**	*e*Pn	**Pn**	**21 36 54.5**	**-1.1**
DHV	**Doan Hung**	**7.53**	**115**	*e*Pg	**Pg**	**21 37 31.8**	**-5.2**
MCV	**Moc Chau**	**7.54**	**123**	*e*Pn	**Pn**	**21 37 02.1**	**-0.7**
CD2	**Chengdu**	**7.83**	**40**	Pn	**Pn**	**21 37 08.8**	**+2.1**
CD2				Sn	**Sn**	**21 38 37.5**	**+2.1**
CD2				smax			
	comp=N,240nm,1.8s						
CD2				smax			
	comp=E,350nm,2.0s						
BCVB	**Bac Can 7.90 112**			*e*Pn	**Pn**	**21 37 07.5**	**-0.3**
BCVB				*e*Pg	Pn	21 37 42.2	+34
GYA	**Guiyang 8.05 78**			*i* P	**Pn**	**21 37 09.9**	**+0.1**
GYA				S	**Sn**	**21 38 46.9**	**+5.9**
GYA				pmax	pmax		
	comp=Z,70nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,4.8s						
GYA				LR	LR		
	comp=N,13μm,9.9s						
GYA				LR	LR		
	comp=E,4μm,10.5s						
GYA				LR	LR		
	comp=Z,4μm,8.3s						
HBVN	**Hoa-Binh 8.07 120**			*e*Pg	Px	21 37 44.7	
CCVB	**Con Cuong 8.82 131**			*e*Pg	Px	21 37 59.4	
CAL	**Calcutta 9.09 256**			*e*S	**Sn**	**21 39 00.1**	**-6.4**
TAPN	**Taplejung 9.41 286**			*e*P	**Pn**	**21 37 30.3**	**+1.8**
	comp=Z,261nm,0.7s						
ODAN	**Odare 9.61 283**			*e*P	**Pn**	**21 37 32.7**	**+1.5**
	comp=Z,427nm,0.8s						
RAMN	**Ramite 10.32 283**			*e*P	**Pn**	**21 37 42.0**	**+1.1**
	comp=Z,311nm,0.7s						
JIRN	**Jiri 10.80 287**			*e*P	**Pn**	**21 37 48.5**	**+1.0**
	comp=Z,321nm,0.7s						
GUN	**Gumba 11.12 288**			*e*P	**Pn**	**21 37 52.6**	**+0.7**
	comp=Z,670nm,1.0s						
PKI	**Pulchoki 11.46 285**			*e*P	**Pn**	**21 37 56.5**	**-0.1**
	comp=Z,190nm,1.0s						
PKIN	**Phulchoki 11.47 285**			*e*P	**Pn**	**21 37 57.0**	**+0.2**
	comp=Z,205nm,0.8s						
ENH	**Enshi 11.54 61**			*e*Pn	**Pn**	**21 37 56.4**	**-1.2**
	comp=Z,48nm,0.8s						
KKN	**Kakani 11.61 286**			*e*P	**Pn**	**21 37 58.5**	**-0.2**
	comp=Z,258nm,0.7s						
DMN	**Daman 11.73 285**			*e*P	**Pn**	**21 37 59.9**	**-0.4**
	comp=Z,180nm,0.8s						
LZH	**Lanzhou 12.15 24**			⇓P	**Pn**	**21 38 09.0**	**+3.1**
LZH				pP		21 38 11.8	
LZH				sP		21 38 13.4	
LZH				PP		21 38 19.0	
LZH				S	**Sn**	**21 40 26.1**	**+4.7**
LZH				sS		21 40 30.0	
LZH				SS		21 40 39.0	
LZH				pmax	pmax		
	comp=Z,39nm,1.2s						
LZH				pmax	pmax		
	comp=Z,160nm,4.2s						
LZH				LR	LR		
	comp=E,5μm,10.3s						
LZH				LR	LR		
	comp=Z,7μm,11.0s						
GKN	**Gorkha 12.21 287**			*e*P	**Pn**	**21 38 06.4**	**-0.5**
	comp=Z,374nm,1.0s						
QIZ	**Qiongzhong 12.61 116**			P	**Pn**	**21 38 14.8**	**+2.5**
QIZ				S	**Sn**	**21 40 35.0**	**+2.2**
QIZ				pmax	pmax		
	comp=Z,210nm,6.3s						
QIZ				LR	LR		
	comp=N,1μm,7.7s						
QIZ				LR	LR		
	comp=Z,2μm,11.3s						
QIZ	**Qiongzhong 12.61 116**			*e*Pn	**Pn**	**21 38 13.3**	**+1.0**
XAN	**Xi'an 13.14 44**			P	**Pn**	**21 38 21.9**	**+2.4**
XAN				pP		21 38 26.8	
XAN				LR	LR		
	comp=N,2μm,15.8s						
XAN				LR	LR		
	comp=E,510nm,18.3s						
XAN				LR	LR		
	comp=Z,1μm,14.1s						
GZH	**Guangzhou 14.27 95**			P	**Pn**	**21 38 39.0**	**+4.0**
GZH				S	**Sn**	**21 41 22.0**	**+8.6**
GZH				LR	LR		
	comp=N,2μm,7.3s						
GZH				LR	LR		
	comp=E,5μm,8.3s						
GTA	**Gaotai 14.42 6**			*e*P	**Pn**	**21 38 39.3**	**+2.3**
GTA				pP	pP	21 38 42.3	-4.4
GTA				sP	sP	21 38 44.9	-3.1
GTA				S	**Sn**	**21 41 21.9**	**+5.0**
GTA				sS	sS	21 41 28.8	-13
GTA				SS		21 41 38.3	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.8s						
GTA				pmax	pmax		
	comp=Z,160nm,5.1s						
GTA				LR	LR		
	comp=N,3μm,10.7s						
GTA				LR	LR		
	comp=E,6μm,12.8s						
GTA				LR	LR		
	comp=Z,4μm,9.2s						
VIS	**Vishakhapatnam 15.37 245**			*i* P	**Pn**	**21 38 50.8**	**+0.9**
VIS				*e*PKP		21 38 53.7	
VIS				*i* x	x	21 41 54.9	
WHN	**Wuhan 15.57 66**			P	**Pn**	**21 38 53.8**	**+1.3**
WHN				LR	LR		
	comp=N,7μm,9.2s						
WHN				LR	LR		
	comp=E,4μm,10.2s						
WHN				LR	LR		
	comp=Z,3μm,11.7s						
PTH	**Pithoragarh 16.32 290**			*e*PKP	**Pn**	**21 39 03.3**	**+1.2**
PTH				*ex*	x	21 42 26.0	
JOSI	**Joshimath 17.10 293**			*e*PKP	**Pn**	**21 39 13.2**	**+1.1**
TIY	**Taiyuan 17.70 41**			*e*P	**Pn**	**21 39 11.4**	**-8.0**
TIY				pP	pP	21 39 15.8	-7.3
TIY				sP	sP	21 39 18.5	-5.9
TIY				PP		21 39 26.3	
TIY				S	**Sn**	**21 42 24.9**	**-12**
TIY				SS		21 42 47.6	
TIY				pmax	pmax		
	comp=Z,250nm,4.0s						
TIY				LR	LR		
	comp=N,1μm,12.6s						
TIY				LR	LR		
	comp=E,2μm,11.8s						
TIY				LR	LR		
	comp=Z,2μm,13.9s						
AGRA	**Agra 18.03 281**			*e*PKP	**Pn**	**21 39 22.9**	**-0.6**
KLP	**Kalpa 18.44 295**			*e*PKP	**Pn**	**21 39 28.6**	**0.0**
KLP				AMb	AMB	21 39 34.9	
	comp=Z,119nm,1.0s						
BTO	**Baotou 18.55 30**			*e*P	**Pn**	**21 39 26.4**	**-3.4**
BHPL	**Bhopal 18.75 269**			*e*PKP	**Pn**	**21 39 32.5**	**+0.2**
BHPL				AMb	AMB	21 39 41.1	
	comp=Z,266nm,1.6s						
NDI	**New Delhi 18.78 286**			*ex*	**Pn**	**21 39 28.0**	**-4.7**
QZH	**Quanzhou 18.78 86**			⇓*i*P	**Pn**	**21 39 31.8**	**-1.0**
QZH				S	**Sn**	**21 42 58.3**	**-4.8**
QZH				pmax	pmax		
	comp=Z,1μm,7.2s						
QZH				LR	LR		
	comp=N,14μm,9.6s						
QZH				LR	LR		
	comp=E,2μm,6.0s						
QZH				LR	LR		
	comp=Z,7μm,12.3s						
AYAN	**Aya Nagar 18.84 285**			*e*PKP	**Pn**	**21 39 34.2**	**+0.8**
AYAN				AMb	AMB	21 39 40.8	
	comp=Z,115nm,1.2s						
SONA	**Sohna 18.85 284**			*e*PKP	**Pn**	**21 39 33.2**	**-0.4**
SONA				AMb	AMB	21 39 41.2	
	comp=Z,74nm,0.8s						
KUDL	**Kundal 19.37 284**			*ex*	**Pn**	**21 39 35.1**	**-4.7**
HHC	**Hu-ho-hao-te 19.47 33**			*e*P	**Pn**	**21 39 41.8**	**+0.9**
HHC				pP	pP	21 39 45.9	+3.4
HHC				sP	sP	21 39 49.1	+5.3
HHC				PP		21 40 00.3	
HHC				*e*S	**Sn**	**21 43 15.6**	**-3.7**
HHC				sS	sS	21 43 20.3	-3.9
HHC				SS		21 43 41.6	
HHC				PcP	PcP	21 44 03.3	+2.7
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,310nm,5.8s						
HHC				LR	LR		
	comp=N,3μm,9.8s						
HHC				LR	LR		

comp=E,1μm,9.0s
HHC LR LR
comp=Z,2μm,8.9s
SDNR Sundarnagar 19.49 294 *e*PKP **Pn** **21 39 40.5 -0.7**
HYB Hyderabad 19.53 251 *e*P **Pn** **21 39 42.5 +0.7**
comp=Z,130nm,1.0s
HYB *e*S **Sn** **21 43 22.0 +0.9**
HYB Hyderabad 19.53 251 *e*P **Pn** **21 39 42.5 +0.7**
HYB *e*S **Sn** **21 43 22.0 +0.9**
HYB pmax pmax
comp=Z,130nm,1.0s
HYB Hyderabad 19.53 251 *i* P **Pn** **21 39 42.5 +0.7**
comp=Z,130nm,1.0s
HYB *e*S **Sn** **21 43 22.0 +0.9**
BSI Banda Aceh 19.59 188 P **Pn** **21 39 42.5 0.0**
comp=Z,1μmcomp=Z,50nm,1.2s
AKL Akola 19.69 262 *i* P **Pn** **21 39 44.2 +0.4**
AKL *ex* x 21 39 50.9
comp=Z,276nm,1.6s
AKL *i* S **Sn** **21 43 26.5 +1.4**
KULM Kulim 19.82 172 *e*P **Pn** **21 39 44.8 -0.5**
comp=Z,174nm,1.4s
TIA Tai'an 19.92 51 P **Pn** **21 39 46.8 +0.4**
TIA pmax pmax
comp=Z,50nm,0.9s
TIA pmax pmax
comp=Z,370nm,7.4s
TIA LR LR
comp=N,2μm,12.3s
TIA LR LR
comp=E,3μm,13.3s
TIA LR LR
comp=Z,4μm,14.0s
BHK Bhakra 19.93 293 *ex* **Pn** **21 39 42.2 -4.3**
KHET Khetri 19.97 284 *ex* **Pn** **21 39 44.8 -2.1**
KHET AMb AMB 21 39 52.1
comp=Z,256nm,1.1s
MDRS Chennai 20.45 238 *ex* **P** **21 39 49.2 -1.4**
MDRS *ex* x 21 44 01.2
WMQ Urumqi 20.50 339 P **P** **21 39 52.3 +1.4**
WMQ pP 21 40 01.3
WMQ sP sP 21 40 05.4 +10
WMQ PP 21 40 13.5
WMQ S **S** **21 43 34.8 -5.4**
WMQ sS sS 21 43 48.3 +3.5
WMQ PcP PcP 21 44 03.3 +0.9
WMQ SS 21 44 05.8
WMQ pmax pmax
comp=Z,100nm,1.1s
WMQ pmax pmax
comp=Z,920nm,4.4s
WMQ LR LR
comp=N,1μm,9.8s
WMQ LR LR
comp=E,2μm,16.0s
WMQ LR LR
comp=Z,1μm,11.0s,MS4.5
TPUB Ta-pu 20.83 90 *e*P **P** **21 39 55.4 +0.7**
comp=Z,58nm,0.9s
LATR Latur 20.85 256 *e*PKP **P** **21 39 57.0 +2.0**
AJM Ajmer 20.97 279 *i* P **P** **21 39 57.0 +0.8**
SSLB Suanglung 21.05 89 *e*P **P** **21 39 58.7 +1.6**
comp=Z,52nm,1.1s,mb4.8
TWG Pinlang 21.32 91 *e*P **P** **21 40 00.7 +0.8**
comp=Z,102nm,1.1s,mb5.1
YHNB Yeheng 21.33 86 *e*P **P** **21 39 59.5 -0.6**
BJT Baijiatuan 21.41 41 *e*P **P** **21 40 01.4 +0.7**
comp=Z,41nm,0.9s,mb4.8
BJT Baijiatuan 21.41 41 *e*P **P** **21 40 01.4 +0.6**
BJT pmax pmax
comp=Z,41nm,0.9s
SSE Sheshan 21.42 68 P **P** **21 39 57.9 -3.1**
SSE S **S** **21 43 54.8 -3.9**
SSE sS sS 21 44 00.3 -3.0
SSE pmax pmax
comp=Z,16nm,0.7s,mb4.5
SSE pmax pmax
comp=Z,87nm,4.1s
SSE LR LR
comp=N,3μm,18.0s,MS4.7
SSE LR LR
comp=E,550nm,18.1s,MS4.7
SSE LR LR
comp=Z,1μm,10.8s
YULB Yu-li 21.42 89 *e*P **P** **21 40 01.4 +0.3**
comp=Z,36nm,1.0s,mb4.7
BJI Beijing 21.43 41 P **P** **21 40 01.3 +0.3**
BJI S **S** **21 44 01.8 +3.2**
BJI pmax pmax
comp=Z,45nm,1.3s,mb4.6
BJI pmax pmax
comp=Z,290nm,4.3s
BJI LR LR
comp=N,870nm,14.2s,MS4.6
BJI LR LR
comp=E,1μm,12.1s,MS4.6
BJI LR LR
comp=Z,470nm,14.8s,MS4.0
TSI Tuntungan 21.43 178 P Px 21 40 15.1
comp=Z,206nm,1.3s
TSI Tuntungan 21.43 178 P **P** **21 40 03.3 +2.2**
comp=Z,206nm,1.3s,mb5.3
NACB Ninganchiao 21.58 87 *e*P **P** **21 40 01.7 -1.1**
comp=Z,37nm,0.9s,mb4.8
TPTI 21.66 182 P **P** **21 40 11.7 +8.0**
comp=Z,28nm,1.1s,mb4.6
TPTI 21.66 182 P **P** **21 40 02.1 -1.6**
PSI Prapat 22.13 177 P **P** **21 40 10.6 +1.9**
comp=Z,17nm,0.8s,mb4.5,baz=340,slow=8.7,SNR=13
PSI LR LR 21 49 29.9
comp=Z,244nm,19.9s,MS3.6,baz=332,slow=39
PSI Prapat 22.13 177 P **P** **21 40 10.6 +1.9**
POO Poona 23.21 259⇑ *i*P **P** **21 40 20.0 -0.2**
comp=Z,40nm,1.0s,mb4.8
POO *e*PKP 21 40 20.2
POO AMb AMB 21 40 28.0
comp=Z,74nm,1.2s,mb5.0
KAD Karad 23.37 255 *e*PKP **P** **21 40 21.8 0.0**
KAD AMb AMB 21 40 34.0
comp=Z,78nm,1.9s,mb4.8
KSH Kashi 23.39 313⇓ *i*P **P** **21 40 23.0 +1.1**
KSH *e*pP 21 40 28.8
KSH *e*sP sP 21 40 31.8 +5.7
KSH *e*PP 21 40 55.6
KSH *e*PcP PcP 21 44 09.1 +0.8
KSH S **S** **21 44 32.8 -1.9**
KSH sS sS 21 44 42.6 +2.9
KSH *e*SS 21 45 21.0
KSH *e*ScP ScP 21 47 45.0 -1.5
KSH *e*PcS PcS 21 47 48.0 +0.5
KSH *e*ScS ScS 21 51 30.3 -2.5
KSH pmax pmax
comp=Z,11nm,0.9s,mb4.3
KSH LR LR
comp=N,640nm,9.9s
KSH LR LR
comp=E,750nm,8.2s
KSH LR LR
comp=Z,980nm,9.9s
GSI Gunungsitoli 23.60 181 P **P** **21 40 22.6 -1.6**
comp=Z,1μmcomp=Z,62nm,1.5s,mb4.8
SONM Songino Array 23.73 14 P **P** **21 40 24.8 -0.2**
comp=Z,12nm,0.8s,mb4.3,baz=196,slow=9.6,SNR=45
SONM Songino Array 23.73 14 P **P** **21 40 24.8 -0.3**
ULN Ulaanbaatar 23.91 15 *e*P **P** **21 40 26.6 -0.2**
comp=Z,31nm,1.0s,mb4.7
ULN Ulaanbaatar 23.91 15 *e*P **P** **21 40 26.6 -0.1**
ULN pmax pmax
comp=Z,31nm,1.0s,mb4.7
PALK Pallekele 24.12 226 *e*P **P** **21 40 29.2 +0.3**
PALK Pallekele 24.12 226 P **P** **21 40 36.2 +7.3**
comp=Z,16nm,1.1s,mb4.4
MNSI Mandailing Nat 24.16 176 P **P** **21 40 32.5 +3.2**
comp=Z,27nm,1.1s,mb4.6
MNSI Mandailing Nat 24.16 176 P **P** **21 40 30.1 +0.8**
comp=Z,27nm,1.1s,mb4.6
DL2 Dalian 24.35 50 P **P** **21 40 33.4 +2.6**
DL2 pmax pmax
comp=Z,20nm,0.9s,mb4.5
DL2 LR LR
comp=N,670nm,12.7s,MS4.4
DL2 LR LR
comp=E,540nm,14.2s,MS4.4
DL2 LR LR
comp=Z,760nm,13.5s,MS4.3
BKNI Bangkinang 24.76 172 P **P** **21 40 36.1 +1.4**
comp=Z,77nm,1.4s,mb5.0
ULHL Ulahol 24.76 319 P **P** **21 40 36.8 +2.2**
SNR=8.4
AAA Alma-Ata 24.99 322 *e*P **P** **21 40 41.4 +4.7**
AAA pmax pmax
comp=Z,1μm,3.9s
AAA MLR MLR
comp=Z,1μm,16.0s,MS4.5
MK31 Makanchi Array 25.02 334 *e*P **P** **21 40 37.8 +1.0**
MK31 Makanchi Array 25.02 334 *e*P **P** **21 40 37.8 +1.0**
MKAR Makanchi Array 25.02 334 P **P** **21 40 37.7 +0.8**
comp=Z,17nm,0.7s,mb4.7,baz=144,slow=9.4,SNR=201
MKAR PcP PcP 21 44 11.5 -0.2
comp=Z,2.7nm,0.8s,baz=134,slow=4.2,SNR=5.1
MKAR Makanchi Array 25.02 334 P **P** **21 40 37.7 +0.9**
MKAR 21 44 11.5
KZA Kyzart 25.26 318 P **P** **21 40 41.3 +2.2**
SNR=8.7
ZAK Zakamensk 25.64 8⇓ *i*P **P** **21 40 42.6 +0.1**
ZAK *e* 21 44 12.5
ZAK pmax pmax
comp=Z,20nm,1.6s,mb4.4
KBK Karagaybulak 25.78 319 P **P** **21 40 45.6 +1.8**
SNR=15
UCH Uchtor 25.80 317 P **P** **21 40 45.6 +1.7**
SNR=17
UCH Uchtor 25.80 317⇓ *e*P **P** **21 40 45.6 +1.7**
comp=Z,47nm,1.1s,mb4.9
KKM Kota Kinabalu 25.80 134 *e*P **P** **21 40 44.8 +0.5**
comp=Z,45nm,1.1s,mb4.9
AAK Ala-Archa 26.04 318 P **P** **21 40 48.2 +2.1**
SNR=9.2
AAK Ala-Archa 26.04 318 *e*P **P** **21 40 48.0 +1.9**
comp=Z,97nm,1.1s,mb5.2
AAK Ala-Archa 26.04 318 P **P** **21 40 48.0 +1.9**
comp=Z,43nm,1.0s,mb4.9,baz=122,slow=5.5,SNR=30
AAK LR LR 21 51 37.1
comp=Z,339nm,21.2s,MS3.9,baz=206,slow=38
AAK Ala-Archa 26.04 318 *d* iP **P** **21 40 47.9 +1.8**
AAK pmax pmax
comp=Z,38nm,1.7s,mb4.7
AAK MLR MLR
comp=Z,145nm,14.0s,MS3.7
AAK Ala-Archa 26.04 318 P **P** **21 40 48.9 +2.8**
comp=Z,417nm,1.1s,mb5.9,SNR=10.0
AAK Ala-Archa 26.04 318 P **P** **21 40 47.9 +1.8**
comp=Z,178nmcomp=Z,19nm,1.2s,mb4.5
AAK Ala-Archa 26.04 318 P **P** **21 40 48.2 +2.1**
comp=Z,178nmcomp=Z,19nm,1.2s,mb4.5
SDSI Sungai Dareh 26.05 172 P **P** **21 40 48.1 +1.6**
comp=Z,739nmcomp=Z,22nm,1.4s,mb4.5
SDSI Sungai Dareh 26.05 172 P **P** **21 40 47.6 +1.1**
comp=Z,739nmcomp=Z,22nm,1.4s,mb4.5
FRU Bishkek 26.08 319⇑ *i*P **P** **21 40 48.0 +1.5**
FRU *e* 21 41 44.0
FRU pmax pmax
comp=Z,110nm,1.8s,mb5.1
FRU MLR MLR
comp=E,1μm,11.0s
CHMS Chumysh 26.09 319 P **P** **21 40 47.9 +1.3**
SNR=11
SISI Saibi 26.24 177 P **P** **21 40 56.2 +8.0**
comp=E,57nm,1.4s,mb4.9
SISI Saibi 26.24 177 P **P** **21 40 54.4 +6.2**
AML Almayashu 26.25 316 P **P** **21 40 49.9 +1.8**
SNR=68
AML Almayashu 26.25 316 *e*P **P** **21 40 49.2 +1.1**
comp=E,90nm,1.0s,mb5.3
AML *e*PcP PcP 21 44 15.0 +0.4
USP Ospenovka 26.40 319 P **P** **21 40 50.5 +1.1**
SNR=11
EKS2 Erkin-Say 26.49 318 P **P** **21 40 51.8 +1.6**
SNR=39
EKS2 Erkin-Say 26.49 318 *e*P **P** **21 40 51.6 +1.4**
comp=E,111nm,1.1s,mb5.3
EKS2 *e*PcP PcP 21 44 15.6 +0.5
KBL Kabul 26.67 298 *e*P **P** **21 40 52.6 +0.6**
comp=E,162nm,0.9s,mb5.6
KBL Kabul 26.67 298 *e*P **P** **21 40 52.6 +0.6**
KBL pmax pmax
comp=Z,162nm,0.9s,mb5.6
MOY Mondy 26.69 4 *e*P **P** **21 40 55.6 +3.7**
TLY Talaya 26.96 8 *e*P Px 21 41 09.4
TLY pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
TLY MLR MLR
comp=Z,772nm,13.0s,MS4.5
SNY Shenyang 27.06 45⇑ P **P** **21 40 56.5 +1.1**
SNY S **S** **21 45 35.3 +2.0**
SNY pmax pmax
comp=Z,110nm,0.8s,mb5.4
SNY pmax pmax
comp=Z,190nm,5.1s
SNY LR LR
comp=E,1μm,14.5s
SNY LR LR
comp=Z,910nm,17.4s,MS4.4
INCN Inchon 27.42 56 P **P** **21 41 00.0 +1.3**
QUE Quetta 27.83 288 *e*P **P** **21 41 04.0 +1.6**
QUE *e*S **S** **21 45 41.0 -4.6**
QUE Quetta 27.83 288 *e*P **P** **21 41 04.0 +1.6**
QUE *e*S **S** **21 45 41.0 -4.6**
KSRS Korea Array 28.39 57 P **P** **21 41 05.5 -1.8**
comp=Z,3.7nm,0.8s,mb4.1,baz=251,slow=9.2,SNR=4.6
KSRS LR LR 21 51 57.1
comp=Z,311nm,18.1s,MS4.0,baz=79,slow=36
KSRS Korea Array 28.39 57 P **P** **21 41 05.6 -1.8**
KSRS pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
KSRS MLR MLR
comp=Z,311nm,18.1s,MS4.0
CN2 Changchun 29.25 43 *e*P **P** **21 41 16.0 +1.1**
CN2 *e*pP pP 21 41 20.3 +2.3
CN2 *e*S **S** **21 46 06.8 -0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
CN2 LR LR
comp=N,700nm,12.0s,MS4.7
CN2 LR LR
comp=E,1μm,12.0s,MS4.7
CN2 LR LR
comp=Z,700nm,15.0s,MS4.4
HIA Hailar 29.60 30 *e*P **P** **21 41 17.1 -0.8**
comp=Z,28nm,1.4s,mb4.8
HIA Hailar 29.60 30 *e*P **P** **21 41 17.1 -0.9**
HIA pmax pmax
comp=Z,28nm,1.4s
KURK Kurchatov 29.62 335 *e*P **P** **21 41 18.2 +0.1**
comp=Z,15nm,0.8s,mb4.8
KURK Kurchatov 29.62 335 P **P** **21 41 18.0 -0.1**
comp=Z,4.9nm,0.7s,mb4.3,baz=138,slow=9.7,SNR=17
KURK PcP PcP 21 44 21.9 -0.6
comp=Z,6.3nm,0.9s,baz=154,slow=2.2,SNR=7.0
KURK Kurchatov 29.62 335 *d* iP **P** **21 41 18.3 +0.2**
KURK pmax pmax
comp=Z,11nm,1.2s,mb4.5
KURK MLR MLR
comp=Z,430nm,19.0s,MS4.1
KLSI 30.30 166 P **P** **21 41 28.3 +3.9**
comp=Z,52nm,1.2s,mb5.1
KLSI 30.30 166 P **P** **21 41 24.3 -0.1**
comp=Z,52nm,1.2s,mb5.1
ZAA0 Zalesovo Array 30.47 345 *e*P **P** **21 41 25.7 +0.1**
ZALV Zalesovo Beam 30.47 345 P **P** **21 41 25.9 +0.3**
comp=Z,23nm,0.6s,mb5.1,baz=164,slow=9.5,SNR=109
ZALV Zalesovo Beam 30.47 345 P **P** **21 41 26.0 +0.4**
NVS Novosibirsk 31.68 344⇓ *i*P **P** **21 41 36.1 -0.1**
NVS *i* S **S** **21 46 45.9 +0.5**
NVS pmax pmax
comp=Z,73nm,1.2s,mb5.4
NVS pmax pmax
comp=N,58nm,1.3s
NVS pmax pmax
comp=E,33nm,1.4s
NVS smax
comp=E,50nm,1.9s
NVS smax
comp=N,43nm,2.2s
CGJI Cibinong 32.37 165 P Px 21 41 57.2
IMYA Miami 34.18 298 *e*P **P** **21 41 59.5 +1.1**
BJII Banjamegara 34.18 159 P **P** **21 42 00.0 +1.5**
comp=N,68nm,1.6s,mb5.3
ISRO Mashad 34.68 298 *e*P **P** **21 42 03.3 +0.6**
IKOO Kooshah 34.72 291 *e*P **P** **21 42 04.3 +1.2**
IMOG Moghan 34.76 298 *e*P **P** **21 42 04.6 +1.2**
BVAR Borovoye Array 34.76 331 P **P** **21 42 03.6 +0.5**
comp=N,5.9nm,0.7s,mb4.6,baz=132,slow=10,SNR=32
BVAR PcP PcP 21 44 36.0 -0.6
comp=N,4.4nm,0.7s,baz=134,slow=4.3,SNR=5.3
BVAR LR LR 21 59 38.6
comp=N,60nm,21.4s,MS3.3,baz=298,slow=42
BVAR Borovoye Array 34.76 331 P **P** **21 42 03.6 +0.5**
BVAR 21 44 36.0
BRVK Borovoye 34.83 331 *e*P **P** **21 42 04.3 +0.6**
comp=N,28nm,1.1s,mb5.1
BRVK Borovoye 34.83 331 *e*P **P** **21 42 04.3 +0.6**
BRVK pmax pmax
comp=Z,28nm,1.1s,mb5.1
ITEG Tejag 34.96 292 *e*P **P** **21 42 05.6 +0.5**
IPAY Payeh 35.08 298 *e*P **P** **21 42 07.1 +1.0**
SJI Sawahan 35.28 156 P **P** **21 42 09.9 +1.9**
comp=Z,154nm,0.2s
IAKL Akhelmad 35.29 299 *e*P **P** **21 42 09.1 +1.1**
IKRD Kardeh 35.51 299 *e*P **P** **21 42 04.5 -5.3**
KLR Kul'dur 35.75 39 *e*P **P** **21 42 02.2 -10**
ISFR Sfrayin 35.95 299 *e*P **P** **21 42 14.6 +1.0**
ABKT Ailbek 35.99 301 P **P** **21 42 15.7 +1.8**
comp=Z,244nm,1.0s,mb6.1,SNR=12
MAJO Matsushiro 36.26 62 *e*P **P** **21 42 14.5 -1.7**
MAJO Matsushiro 36.26 62 *e*P **P** **21 42 14.5 -1.7**
MAT Matsushiro 36.26 62 P **P** **21 42 17.6 +1.4**
MJAR Matsushiro Arr 36.26 62 P **P** **21 42 17.6 +1.3**
MJAR PcP PcP 21 44 40.5 -0.9
MJAR LR LR 21 59 00.7
MJAR Matsushiro Arr 36.26 62 P **P** **21 42 17.6 +1.3**
comp=Z,6.6nm,0.8s,mb4.6,baz=270,slow=9.8,SNR=12
MJAR PcP PcP 21 44 40.5 -0.9
comp=Z,0.7nm,0.4s,baz=239,slow=3.2,SNR=4.2
MJAR LR LR 21 59 00.7
comp=Z,268nm,18.7s,MS4.0,baz=260,slow=39
MJAR Matsushiro Arr 36.26 62 P **P** **21 42 17.6 +1.4**
MJAR 21 44 40.5
CLNS Chul'man 37.27 24 *e*P **P** **21 42 25.2 +0.6**
CLNS *e* 21 44 42.9
CLNS *e*S **S** **21 48 01.8 -10**
CLNS pmax pmax
comp=Z,36nm,1.1s,mb5.1
CLNS pmax pmax
comp=E,21nm,1.1s
CLNS pmax pmax
comp=N,20nm,1.1s
CLNS smax
comp=E,217nm,14.1s
CLNS smax
comp=N,136nm,18.3s
CLNS MLR MLR
comp=N,485nm,12.0s,MS4.6
CLNS MLR MLR
comp=E,477nm,14.0s,MS4.6
CLNS MLR MLR
comp=Z,604nm,13.0s,MS4.6
IBAF Bafgh 37.63 290 *e*P **P** **21 42 29.2 +1.2**
ABKAR Akbulak array 38.11 319 *e*P **P** **21 42 31.7 -0.1**
comp=Z,32nm,0.9s,mb5.0
ABKAR *e*PP PP 21 43 59.2 +0.3
IMEH Mehriz 38.45 290 *e*P **P** **21 42 35.2 +0.2**
AKTK Aktyubinsk 39.74 320 P **P** **21 42 45.7 +0.2**
AKTO Aktyubinsk 39.74 320 P **P** **21 42 45.7 +0.2**
comp=Z,6.3nm,0.9s,mb4.3,baz=109,slow=8.8,SNR=22
AKTO Aktyubinsk 39.74 320 P **P** **21 42 45.7 +0.2**
ISRV Sarvestan 39.86 286 *e*P **P** **21 42 46.1 -0.6**
IPAR Pars 39.88 287 *e*P **P** **21 42 47.4 +0.5**
IZEF Zefreh 40.36 292 *e*P **P** **21 42 51.1 +0.3**
ISFB Sefidab 40.43 294 *e*P **P** **21 42 51.5 +0.1**
IGAR Gharneh 40.61 291 *e*P **P** **21 42 54.2 +1.3**
IDMV Damavand 40.63 296 *e*P **P** **21 42 53.4 +0.4**
DGAR Diego Garcia 40.66 221 P **P** **21 42 52.9 -0.6**
DGAR Diego Garcia 40.66 221 P **P** **21 42 52.9 -0.6**
ASAJ Asahikawa 40.87 51 P **P** **21 42 54.6 -0.3**
comp=Z,47nm,0.8s,mb5.2,baz=281,slow=9.3,SNR=19
ASAJ Asahikawa 40.87 51 P **P** **21 42 54.6 -0.3**
ASAJ pmax pmax
comp=Z,47nm,0.8s
IKLH Kolahrood 40.98 293 *e*P **P** **21 42 57.6 +1.6**
SVE Sverdlovsk 41.53 330⇑ *e*P **P** **21 43 00.9 +0.8**
SVE pmax pmax
comp=Z,52nm,1.0s,mb5.1
SVE MLR MLR
comp=Z,320nm,14.0s,MS4.3
YSS Yuzh-Sakhalins 41.67 47 P **P** **21 43 01.3 -0.2**
YSS Yuzh-Sakhalins 41.67 47 *e*P **P** **21 43 02.1 +0.6**
YSS pmax pmax
comp=Z,50nm,1.2s,mb5.0
YSS MLR MLR
comp=E,600nm,16.0s
YSS MLR MLR
comp=Z,600nm,16.0s,MS4.6
ARU Arti 42.28 328 *e*P **P** **21 43 07.0 +0.7**
comp=Z,24nm,1.0s,mb4.8
ARU *e*PP PP 21 44 44.0 -0.1
ARU Arti 42.28 328 *d* iP **P** **21 43 06.5 +0.3**
ARU *e* 21 44 41.5
ARU *e* 21 44 59.2
ARU PPP 21 45 15.6
ARU S **S** **21 49 30.0 +3.3**
ARU SS SS 21 52 34.2 -0.7
ARU 21 53 00.2
ARU pmax pmax
comp=Z,25nm,1.2s,mb4.7
ARU MLR MLR
comp=Z,399nm,16.0s,MS4.4
ARU Arti 42.28 328 P **P** **21 43 06.8 +0.6**
comp=Z,136nm,1.2s,mb5.5,SNR=9.0
IRAZ Razeghan 42.34 296 *e*P **P** **21 43 07.3 +0.2**
UMR Umm Al-Rimmam 44.53 287 *e*P **P** **21 43 24.5 -0.3**
UMR AMb AMB 21 43 30.8
comp=Z,74nm,1.2s,mb5.4
SOKR Solikamsk 44.73 332 *d* iP **P** **21 43 26.9 +0.9**
SOKR S **S** **21 50 09.6 +7.0**
SOKR pmax pmax
comp=Z,30nm,0.8s,mb5.2
SOKR MLR MLR
comp=Z,210nm,16.0s,MS4.2
MIB Mutribah 44.82 288 *e*P **P** **21 43 27.0 -0.2**
MIB AMb AMB 21 43 33.2
comp=Z,88nm,1.3s,mb5.4
NAY Al-Naaiem 44.97 287 *e*P **P** **21 43 28.0 -0.4**
NAY AMb AMB 21 43 34.4
comp=Z,80nm,1.3s,mb5.4
GNI Garni 46.57 302 *e*P **P** **21 43 42.2 +1.4**
comp=Z,117nm,1.1s,mb5.7
GNI *e*PcP PcP 21 45 14.6 -0.4
GNI Garni 46.57 302 *d* iP **P** **21 43 42.1 +1.3**
GNI pmax pmax
comp=Z,65nm,1.2s
GNI MLR MLR
comp=Z,119nm,22.0s
GOF Gofitskoye 48.15 309 *e*P Px 21 44 06.3
GOF pmax pmax
comp=Z,100nm,1.3s,mb5.7
KIV Kislovodsk 48.31 307 *e*P **P** **21 43 53.8 -0.5**
comp=Z,76nm,1.2s,mb5.6
KIV Kislovodsk 48.31 307 *d* iP **P** **21 43 54.4 +0.1**
KIV *e* 21 45 18.5
KIV pmax pmax
comp=Z,35nm,1.2s,mb5.3
KIV MLR MLR
comp=Z,300nm,20.0s,MS4.3
KIV Kislovodsk 48.31 307 P **P** **21 43 55.9 +1.6**
comp=Z,276nm,1.1s,mb6.2,SNR=9.5
TIXI Tiksi 49.79 12 *e*P **P** **21 44 03.8 -1.5**
TIXI pmax pmax
comp=Z,41nm,2.0s,mb5.1
TIXI MLR MLR
comp=Z,315nm,15.0s,MS4.4
VRHR Novokhopersk 49.87 317 *e*P **P** **21 44 05.2 -1.0**
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR pmax pmax
comp=Z,30nm,0.7s,mb5.4
VRHR pmax pmax
comp=E,10.0nm,0.6s
SOC Sochi 50.44 307 *d* iP **P** **21 44 09.4 -1.2**
SOC *e* 21 45 25.7
SOC *e* 21 46 03.6
SOC *e*PPP 21 47 06.2
SOC *e*S **S** **21 51 23.8 -0.3**
SOC *e*SS SS 21 54 57.2 -0.6
SOC pmax pmax
comp=Z,25nm,1.1s,mb5.2
SOC MLR MLR

comp=Z,188nm,14.0s,MS4.2
MBWA Marble Bar 50.60 153 *e*P P **21 44 11.9 -0.1**
comp=Z,42nm,1.3s,mb5.2
FITZ Fitzroy Crossi 50.70 145 *e*P P **21 44 11.4 -1.4**
comp=Z,21nm,0.8s,mb5.1
FITZ Fitzroy Crossi 50.70 145 P P **21 44 11.6 -1.1**
comp=Z,11nm,0.7s,mb4.9,baz=316,slow=3.8,SNR=6.6
FITZ Fitzroy Crossi 50.70 145 P P **21 44 11.3 -1.5**
comp=Z,40nm,1.0s,mb5.3
VSR Storozhevoye 51.42 317 *e*P P **21 44 16.6 -1.3**
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
VSR pmax pmax
comp=N,7.0nm,1.1s
VSR pmax pmax
comp=E,10.0nm,1.0s
VOR Voronezh 51.47 317 P P **21 44 18.0 -0.2**
VOR pmax pmax
comp=Z,140nm,1.2s,mb5.8
MALT Malatya 51.49 300 *e*P P **21 44 19.8 +1.2**
comp=Z,9.0nm,0.9s,mb4.7
MALT Malatya 51.49 300 *e*P P **21 44 19.8 +1.2**
MALT pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
MALT Malatya 51.49 300⇑ *i*P P **21 44 19.8 +1.2**
MALT Malatya 51.49 300 P P **21 44 19.4 +0.8**
comp=Z,11nm,1.1s,mb4.7
SEY Seymchan 52.03 28⇑ *e*P P **21 44 21.7 -0.5**
MOS Moscow 53.01 322 *e*P P **21 44 28.7 -0.9**
MOS *i* S S **21 52 03.0 +3.9**
MOS pmax pmax
comp=Z,66nm,1.0s,mb5.5
KLMR Klimovskoe 53.13 329 *e*P P **21 44 30.3 -0.1**
KLMR *e*SS SS 21 55 42.2 +2.5
KLMR pmax pmax
comp=Z,135nm,1.3s,mb5.7
KLMR pmax pmax
comp=Z,122nm,15.1s
OBN Obninsk 53.50 321 *e*P P **21 44 33.2 -0.1**
comp=Z,73nm,1.3s,mb5.5
OBN Obninsk 53.50 321 *d i*P P **21 44 32.8 -0.5**
OBN *e* 21 45 40.4
OBN pmax pmax
comp=Z,74nm,1.7s,mb5.3
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.4
BR131 Keskin Array S 55.11 302 *e*P P **21 44 45.1 -0.1**
BRTR Keskin Array B 55.11 302 P P **21 44 44.8 -0.4**
comp=Z,3.7nm,0.8s,mb4.5,baz=114,slow=7.7,SNR=19
BRTR PcP PcP 21 45 46.6 +0.1
comp=Z,3.0nm,1.0s,baz=115,slow=6.8,SNR=2.6
BRTR PP PP 21 46 50.4 +2.0
comp=Z,2.2nm,0.9s,baz=90,slow=4.3,SNR=3.7
BRTR Keskin Array B 55.11 302 P P **21 44 44.8 -0.4**
BRTR 21 45 46.6
BRTR 21 46 50.4
WRA Warramunga Arr 57.07 138 P P **21 44 58.8 -0.6**
WRA ⇑ *e* 22 15 01.0
WRA Warramunga Arr 57.07 138 P P **21 44 58.8 -0.6**
comp=Z,26nm,0.7s,mb5.4,baz=328,slow=7.7,SNR=23
WRA PKP2bc 22 15 01.0
comp=Z,1.6nm,1.0s,baz=145,slow=2.0,SNR=6.7
WRA Warramunga Arr 57.07 138 P P **21 44 58.8 -0.6**
JOF Joensuu 57.36 330 *e*P P **21 44 59.2 -1.7**
JOF Joensuu 57.36 330 *e*P P **21 44 59.2 -1.7**
JOF Joensuu 57.36 330 *e*p P **21 44 59.2 -1.7**
comp=Z,12nm,0.7s,mb5.0
AKASG Malin Array Be 57.66 315 P P **21 45 02.2 -1.1**
AKASG LR LR 22 15 02.1
AKASG Malin Array Be 57.66 315 P P **21 45 02.2 -1.1**
comp=Z,11nm,0.7s,mb5.0,baz=80,slow=6.7,SNR=28
AKASG LR LR 22 15 02.1
comp=Z,182nm,18.2s,MS4.2,baz=75,slow=42
AKASG Malin Array Be 57.66 315 P P **21 45 02.2 -1.1**
KIEV Kiev 57.67 315 *e*P P **21 45 01.8 -1.5**
comp=Z,29nm,1.0s,mb5.3
KIEV Kiev 57.67 315 *e*P P **21 45 01.8 -1.5**
KIEV pmax pmax
comp=Z,29nm,1.0s,mb5.3
KIS Kishinev 58.07 311 *e*UNK 21 45 04.0
KIS Kishinev 58.07 311 *e*P P **21 45 04.0 -2.2**
MICGM Minsk 58.47 320 *e* P **21 45 08.0 -0.8**
MNK Minsk 58.50 320 *e*P P **21 45 08.0 -1.0**
BILL Bilibino 58.96 24 *e*P P **21 45 11.7 -0.4**
comp=Z,24nm,1.1s,mb5.1
BILL Bilibino 58.96 24 *d i*P P **21 45 11.1 -0.9**
BILL *e* 21 47 22.2
BILL pmax pmax
comp=Z,30nm,1.2s,mb5.2
BILL MLR MLR
comp=Z,600nm,18.0s,MS4.8
PMG Port Moresby 58.97 119 *e*P P **21 45 12.3 -0.6**
PMG Port Moresby 58.97 119 *e*P P **21 45 12.3 -0.6**
NACGM Naroch 59.11 320 *e* P **21 45 11.0 -2.3**
IDID Didziasalis 59.13 321 *e*P P **21 45 13.3 -0.1**
IDID *e*PP PP 21 47 24.0 +0.2
IZAR Zarasai 59.41 321 *e*P P **21 45 15.2 -0.1**
IZAR AMB AMB 21 45 22.0
comp=Z,15nm,1.2s,mb4.9
IIGN Ignalina 59.43 321 *e*P P **21 45 15.3 -0.1**
IIGN AMB AMB 21 45 22.2
comp=Z,20nm,1.3s,mb5.0
KAF Kangasniemi 59.58 329 *e*P P **21 45 15.4 -1.0**
comp=Z,2.3nm,0.6s,mb4.4
KAF Kangasniemi 59.58 329 *e*P P **21 45 15.4 -1.0**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
KAF Kangasniemi 59.58 329 *e*p P **21 45 15.4 -1.0**
comp=Z,2.3nm,0.6s,mb4.4
TESR 59.60 311 ⇓P P **21 45 16.2 -0.6**
TESR 59.60 311 ⇓*i*P P **21 45 16.2 -0.6**
VRI Vrincioaia 59.60 310 ⇓P P **21 45 17.3 +0.4**
VRI Vrincioaia 59.60 310 P P **21 45 17.6 +0.7**
VRI Vrincioaia 59.60 310 ⇓*i*P P **21 45 17.3 +0.4**
FINES FINESS Array B 59.65 328 P P **21 45 16.8 -0.1**
comp=Z,9.0nm,0.7s,mb4.9,baz=99,slow=8.3,SNR=13
FINES LR LR 22 13 18.7
comp=Z,244nm,18.2s,MS4.4,baz=91,slow=38
FINES FINESS Array B 59.65 328 P P **21 45 16.8 -0.1**
PLOR Plostina 59.66 310 ⇓P P **21 45 17.8 +0.6**
PLOR Plostina 59.66 310 ⇓*i*P P **21 45 17.8 +0.6**
ASAR Alice Springs 59.70 141 P P **21 45 17.6 -0.1**
ASAR ⇑ *e* 22 14 52.8
ASAR Alice Springs 59.70 141 P P **21 45 17.6 -0.1**
comp=Z,11nm,0.8s,mb5.0,baz=326,slow=6.1,SNR=21
ASAR PKP2bc 22 14 52.8
comp=Z,1.0nm,1.0s,baz=123,slow=3.4,SNR=4.2
ASAR Alice Springs 59.70 141 P P **21 45 17.6 -0.1**
KEV Kevo 60.13 338 *e*P P **21 45 18.6 -1.4**
comp=Z,5.0nm,0.6s,mb4.7
KEV Kevo 60.13 338 *e*P P **21 45 18.6 -1.4**
KEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
KEV Kevo 60.13 338 *e*p P **21 45 18.6 -1.4**
comp=Z,5.0nm,0.6s,mb4.7
MLR Muntele Rosu 60.19 310 ⇓P P **21 45 21.2 +0.4**
MLR Muntele Rosu 60.19 310 ⇓P P **21 45 21.3 +0.4**
MLR Muntele Rosu 60.19 310 ⇓*i*P P **21 45 21.3 +0.4**
BURAR Bucovina Array 60.47 312 ⇓P P **21 45 22.7 -0.1**
BURAR Bucovina Array 60.47 312 ⇓P P **21 45 22.7 -0.1**
BURAR Bucovina Array 60.47 312 ⇓*i*P P **21 45 22.7 -0.1**
NWAO Narrogin (SRO) 60.53 161 P P **21 45 23.0 -0.2**
comp=Z,11nm,0.8s,mb5.0,baz=337,slow=7.6,SNR=3.8
NWAO Narrogin (SRO) 60.53 161 P P **21 45 23.0 -0.2**
NWAO pmax pmax
comp=Z,11nm,0.8s
ARCES ARCESS Array B 60.62 337 P P **21 45 23.0 -0.4**
comp=Z,4.3nm,0.7s,mb4.7,baz=86,slow=8.6,SNR=13
ARCES ARCESS Array B 60.62 337 P P **21 45 23.0 -0.4**
ARE0 ARCESS Array S 60.62 337 *e*P P **21 45 23.2 -0.2**
VOIR 60.82 310 ⇓P P **21 45 24.5 -0.7**
VOIR 60.82 310 ⇓P P **21 45 24.5 -0.7**
VOIR 60.82 310 ⇓*i*P P **21 45 24.5 -0.7**
LVV L'vov 61.04 315 *e*P P **21 45 25.5 -1.1**
LVV *e* 21 47 45.5
LVV MLR MLR
comp=E,200nm,15.0s
LVV MLR MLR
comp=Z,200nm,15.0s,MS4.4
SUW Suwalki 61.24 320 *e*P P **21 45 27.0 -0.9**
SUW *e*pP pP 21 45 31.0 -0.2
SUW LMZ 22 14 05.0
comp=Z,300nm,18.9s
SUW Suwalki 61.24 320 *e*P P **21 45 27.4 -0.5**
comp=Z,88nm,1.1s,mb5.8
SUW Suwalki 61.24 320 *e*P P **21 45 27.4 -0.5**
SUW pmax pmax
comp=Z,88nm,1.1s,mb5.8
BMR Baia Mare 61.62 312 P P **21 45 31.4 +0.8**
KWP Kalwaria Pacla 61.91 315 *e*P P **21 45 32.5 0.0**
KWP *e*pP pP 21 45 36.3 +0.6
KWP LMZ 22 17 08.5
comp=Z,300nm,17.4s
KWP Kalwaria Pacla 61.91 315 *e*P P **21 45 32.8 +0.3**
comp=Z,90nm,1.1s,mb5.8
KWP Kalwaria Pacla 61.91 315 *e*P P **21 45 32.8 +0.3**
KWP pmax pmax
comp=Z,90nm,1.1s,mb5.8
KWP Kalwaria Pacla 61.91 315 ⇓*i*P P **21 45 32.7 +0.2**
DRGR 62.26 311 ⇑P P **21 45 35.9 +1.0**
DRGR 62.26 311 ⇑P P **21 45 35.9 +1.0**
DRGR 62.26 311 ⇑*i*P P **21 45 35.9 +1.0**
UZH Uzhgorod 62.30 313 *d i*P P **21 45 35.0 -0.1**
UZH *e* 21 45 43.8
UZH *e*S S **21 53 58.0 -3.3**
UZH *e*SS SS 21 57 59.5 -4.8
UZH MLR MLR
comp=N,170nm,16.0s,MS4.6
UZH MLR MLR
comp=E,280nm,16.0s,MS4.6
UZH MLR MLR
comp=Z,160nm,16.0s,MS4.3
GZR Gura Zlata 62.41 310 ⇑P P **21 45 36.0 +0.1**
GZR Gura Zlata 62.41 310 ⇑P P **21 45 36.1 +0.1**
GZR Gura Zlata 62.41 310 ⇑*i*P P **21 45 36.0 0.0**
VTS Vitosha 62.55 307 ⇓P P **21 45 36.9 0.0**
VTS Vitosha 62.55 307 ⇓P P **21 45 36.9 0.0**
VTS Vitosha 62.55 307 ⇓*i*P P **21 45 36.9 0.0**
FORT Forrest 62.58 151 *e*P P **21 45 40.9 +3.8**
comp=Z,18nm,1.4s,mb5.0
CRVS Cervenica-Dubn 62.81 314 *e*P P **21 45 39.0 +0.5**
comp=Z,7.5nm,1.1s,mb4.7
CRVS Cervenica-Dubn 62.81 314 *e*P P **21 45 39.0 +0.5**
CRVS pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
CRVS Cervenica-Dubn 62.81 314 *e*P P **21 45 39.0 +0.5**
STHS Stebnicka Huta 62.89 314 *e*P P **21 45 38.7 -0.3**
comp=Z,6.4nm,1.4s,mb4.6
STHS Stebnicka Huta 62.89 314 *e*P P **21 45 38.7 -0.3**
STHS pmax pmax
comp=Z,6.0nm,1.4s,mb4.5
STHS Stebnicka Huta 62.89 314 *e*P P **21 45 38.7 -0.3**
BZS Buzias 63.19 310 ⇓P P **21 45 40.5 -0.6**
BZS Buzias 63.19 310 ⇓P P **21 45 40.5 -0.6**
BZS Buzias 63.19 310 ⇓*i*P P **21 45 40.5 -0.6**
NIE Niedzica 63.49 315 *e*P P **21 45 43.7 +0.7**
NIE Niedzica 63.49 315 *e*P P **21 45 43.7 +0.7**
OJC Ojcow 63.70 315 *e*P P **21 45 44.3 -0.1**
OJC Ojcow 63.70 315 *e*P P **21 45 44.3 -0.1**
PSZ Piszkesteto 63.99 313 *e*P P **21 45 46.1 -0.3**
comp=Z,34nm,1.6s,mb5.1
PSZ Piszkesteto 63.99 313 *e*P P **21 45 46.1 -0.3**
PSZ pmax pmax
comp=Z,34nm,1.6s,mb5.1
PSZ Piszkesteto 63.99 313 ⇓*e*P P **21 45 46.0 -0.4**
KMBO Kilima Mbogo 64.11 256 *e*P P **21 45 48.2 +0.5**
comp=Z,16nm,1.1s,mb5.0
KMBO Kilima Mbogo 64.11 256 P P **21 45 46.7 -1.0**
comp=Z,13nm,1.1s,mb4.9,baz=0.2,slow=24,SNR=7.8
KMBO Kilima Mbogo 64.11 256 *e*P P **21 45 48.2 +0.5**
KMBO pmax pmax
comp=Z,16nm,1.1s
VYHS Vyhne 64.59 314 *e*P P **21 45 49.9 -0.4**
comp=Z,5.7nm,1.3s,mb4.4
VYHS Vyhne 64.59 314 *e*P P **21 45 49.9 -0.4**
VYHS pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
VYHS Vyhne 64.59 314 *e*P P **21 45 49.9 -0.4**
BUD Budapest 64.64 313 ⇓*e*P P **21 45 50.0 -0.6**
OKC Ostrava-Krasne 64.81 315 *e*P P **21 45 51.8 +0.1**
OKC MLR MLR
comp=Z,200nm,11.1s,MS4.6
OKC Ostrava-Krasne 64.81 315 *e*P P **21 45 51.8 +0.1**
OKC *ex* x 21 45 54.9
OKC AMS AMS 22 17 40.0
comp=Z,200nm,11.1s
CTA Charters Tower 65.00 129 *e*P P **21 45 52.8 -0.5**
comp=Z,20nm,1.0s,mb5.1
CTA Charters Tower 65.00 129 P P **21 45 52.9 -0.4**
comp=Z,24nm,1.0s,mb5.2,baz=292,slow=5.4,SNR=3.6
CTA Charters Tower 65.00 129 P P **21 45 52.9 -0.4**
CTAO Charters Tower 65.00 129 *e*P P **21 45 53.0 -0.3**
comp=Z,93nm,1.8s,mb5.5
CTAO Charters Tower 65.00 129 *e*P P **21 45 53.0 -0.3**
CTAO pmax pmax
comp=Z,93nm,1.8s,mb5.5
PKSM Moragy 65.13 311 ⇑P P **21 45 53.2 -0.6**
PKSM Moragy 65.13 311 ⇑P P **21 45 53.2 -0.6**
PKSM Moragy 65.13 311 ⇑*i*P P **21 45 53.2 -0.6**
MORC Moravsky Berou 65.21 315 *e*P P **21 45 54.4 +0.1**
comp=Z,29nm,1.2s,mb5.2
MORC Moravsky Berou 65.21 315 *e*P P **21 45 54.4 +0.1**
MORC pmax pmax
comp=Z,29nm,1.2s,mb5.2
MORC Moravsky Berou 65.21 315⇑ *i*P P **21 45 54.4 +0.1**
HFS Hagfors 65.77 327 P P **21 45 57.6 -0.1**
comp=Z,5.7nm,0.6s,mb4.8,baz=104,slow=6.3,SNR=17
HFS Hagfors 65.77 327 P P **21 45 57.6 -0.1**
ZST Bratislava 65.78 314 *e*P P **21 45 58.1 +0.1**
comp=Z,11nm,1.0s,mb4.8
ZST Bratislava 65.78 314 *e*P P **21 45 58.1 +0.1**
ZST pmax pmax
comp=Z,11nm,1.0s,mb4.8
ZST Bratislava 65.78 314 *e*P P **21 45 58.1 +0.1**
KSP Ksiaz 65.81 317 *e*P P **21 45 58.4 +0.2**
KSP *e*pP pP 21 46 02.3 +0.8
KSP LMZ 22 17 44.6
comp=Z,500nm,16.5s
KSP Ksiaz 65.81 317 *e*P P **21 45 57.9 -0.3**
DPC Dobruska-Polom 65.88 316 *e*P P **21 45 58.9 +0.3**
DPC Dobruska-Polom 65.88 316 *e*P P **21 45 58.9 +0.3**
DPC *ex* x 21 46 02.6
BSD Bornholm Skovb 65.89 321 *e*P P **21 45 56.8 -1.8**
BSD pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
BSD Bornholm Skovb 65.89 321 *i*P P **21 45 56.8 -1.8**
comp=Z,7.3nm,0.9s,mb4.7
VRAC Vranov 65.90 315 ⇑P P **21 45 59.2 +0.4**
VRAC Vranov 65.90 315 ⇑P P **21 45 59.2 +0.4**
VRAC Vranov 65.90 315 ⇑*i*P P **21 45 59.2 +0.4**
UPC Upice 66.05 316 *e*P P **21 46 00.2 +0.5**
UPC Upice 66.05 316 *e*P P **21 46 00.2 +0.5**
UPC *ex* x 21 46 03.9
SOP Sopron 66.24 313 ⇓*e*P P **21 46 00.9 -0.1**
TREC Trest 66.62 315 *e*P P **21 46 03.7 +0.3**
TREC Trest 66.62 315 *e*P P **21 46 03.7 +0.3**
TREC *ex* x 21 46 07.3
CONA Conrad Observa 66.65 313 *i*P P **21 46 03.6 -0.1**
comp=Z,43nm,1.2s,mb5.4,SNR=15
NOA NORSAR Array B 66.83 328 P P **21 46 03.8 -0.7**
comp=Z,6.5nm,0.6s,mb4.8,baz=81,slow=6.4,SNR=40
NOA PP PP 21 48 30.7 -0.6
comp=Z,1.4nm,0.8s,baz=72,slow=10.0,SNR=3.8
NOA LR LR 22 18 28.8
comp=Z,103nm,18.1s,MS4.1,baz=90,slow=39
NOA NORSAR Array B 66.83 328 P P **21 46 03.8 -0.7**
NOA 21 48 30.7
PVCC Panska Ves 66.95 316 *e*P P **21 46 05.5 0.0**
PVCC Panska Ves 66.95 316 *e*P P **21 46 05.5 0.0**
PVCC *ex* x 21 46 08.9
ARSA Arzberg 67.02 313 ⇓*i*P P **21 46 05.6 -0.4**
comp=Z,10nm,0.9s,mb4.8
NAO01 NORSAR Array S 67.02 328 *e*P P **21 46 05.6 -0.1**
comp=Z,4.9nm,0.6s,mb4.7
RUE Ruedersdorf 67.04 319 *e*P P **21 46 06.1 +0.1**
comp=Z,70nm,1.3s,mb5.5
RUE Ruedersdorf 67.04 319 *e*P P **21 46 05.8 -0.2**
comp=Z,65nm,1.2s,mb5.5
PRU Pruhonice 67.08 316 *e*P P **21 46 07.1 +0.8**
PRU pmax pmax
comp=Z,200nm,15.1s,MS4.5
PRU Pruhonice 67.08 316 *e*P P **21 46 07.1 +0.8**
PRU *ex* x 21 46 10.6
PRU AMS AMS 22 18 10.0
comp=Z,200nm,15.1s
COP Copenhagen 67.19 322 *e*P P **21 46 06.8 -0.1**
COP pmax pmax
comp=Z,14nm,1.0s,mb5.0
COP Copenhagen 67.19 322 *i*P P **21 46 06.8 -0.1**
comp=Z,14nm,1.0s,mb5.0
BRG Berggiesshubel 67.27 317 *e*P P **21 46 07.5 0.0**
comp=Z,21nm,1.1s,mb5.1
BRG Berggiesshubel 67.27 317 *e*P P **21 46 07.6 +0.1**
comp=Z,11nm,0.9s,mb4.9
BRG *e* pP 21 46 11.9 +1.2
comp=Z,14nm,1.0s
BRG *e* 21 46 35.1
comp=Z,6.2nm,0.9s
BRG
comp=N,115nm,13.7s
BRG
comp=E,175nm,14.6s
BRG
comp=Z,311nm,20.9s
BRG Berggiesshubel 67.27 317 *e*P P **21 46 07.6 +0.1**
BRG *e* 21 46 35.1
BRG pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
BRG MLR MLR
comp=N,69nm,13.7s,MS4.3
BRG MLR MLR
comp=E,105nm,14.6s,MS4.3
BRG MLR MLR
comp=Z,186nm,20.9s
PERS Pernice 67.43 312 *i*P P **21 46 08.2 -0.4**
SOKA Soboth 67.47 312 ⇑*i*P P **21 46 08.5 -0.4**
comp=Z,17nm,1.1s,mb5.0
BOJS Bojanci 67.59 311 *i*P P **21 46 09.1 -0.5**
MOA Molln 67.72 314 ⇓*i*P P **21 46 10.2 -0.2**
comp=Z,31nm,1.0s,mb5.3,SNR=13
CLL Collm 67.75 318 *e*P P **21 46 10.2 -0.3**
comp=Z,17nm,1.2s,mb5.0
CLL Collm 67.75 318 *i*P P **21 46 09.9 -0.7**
comp=Z,12nm,1.1s,mb4.8
CLL Collm 67.75 318 *i*P P **21 46 09.9 -0.7**
CLL pmax pmax
comp=Z,12nm,1.1s,mb4.8
CLL Collm 67.75 318 *i*P P **21 46 09.9 -0.7**
comp=Z,12nm,1.1s,mb4.8
CLL *e*SS SS 21 59 42.0 +13
CLL LmV 22 19 00.0
comp=Z,200nm,20.0s
VISS Visnje 67.81 311 *i*P P **21 46 10.6 -0.4**
OBKA Obir 67.84 312 ⇑*i*P P **21 46 10.6 -0.6**
comp=Z,13nm,1.1s,mb4.9
GEC2 GERESS Array S 67.86 315 *e*P P **21 46 11.5 +0.2**
comp=Z,38nm,1.4s,mb5.2
GEC2 GERESS Array S 67.86 315 *e*P P **21 46 11.5 +0.2**
GEC2 pmax pmax
comp=Z,38nm,1.4s,mb5.2
KHC Kasperske Hory 67.88 315 *e*P P **21 46 11.5 +0.2**
comp=Z,16nm,1.3s,mb4.9
KHC Kasperske Hory 67.88 315 *e*P P **21 46 11.5 +0.1**
KHC pmax pmax
comp=Z,16nm,1.3s,mb4.9
KHC Kasperske Hory 67.88 315 *e*P P **21 46 11.3 -0.1**
KHC *ex* x 21 46 14.9
KONO Kongsberg 67.88 327 *e*P P **21 46 11.1 -0.1**
TIP Timpagrande 68.05 304 *e*P P **21 46 11.4 -1.3**
comp=Z,16nm,1.3s,mb4.9
JAVS Javornik 68.31 312 *i*P P **21 46 13.5 -0.6**
WET Wettzell 68.32 315 *e*P P **21 46 14.3 +0.1**
comp=Z,15nm,0.8s,mb5.1
WET Wettzell 68.32 315 *e*P P **21 46 14.3 +0.1**
WET pmax pmax
comp=Z,15nm,0.8s,mb5.1
NKC Novy Kostel 68.34 316 *e*P P **21 46 14.6 +0.4**
NKC MLR MLR
comp=Z,200nm,11.9s,MS4.6
NKC Novy Kostel 68.34 316 *e*P P **21 46 14.6 +0.4**
NKC *ex* x 21 46 17.6
NKC AMS AMS 22 19 00.0
comp=Z,200nm,11.9s
WERN Wernitzgruen 68.37 317 *e*P P **21 46 14.7 +0.3**
comp=Z,22nm,1.5s,mb5.0
WERD Werda 68.38 317 *e*P P **21 46 14.5 0.0**
comp=Z,15nm,1.3s,mb4.9
VOY Vojsko 68.39 312 *e*P P **21 46 14.2 -0.5**
VOY *e* 21 46 19.2
KBA Koelnbreinsper 68.51 313 ⇓*i*P P **21 46 14.7 -0.7**
comp=Z,20nm,1.1s,mb5.0,SNR=7.1
CUC Castrocucco 68.55 305 *e*P P **21 46 14.7 -1.0**
comp=Z,9.0nm,0.9s,mb4.7
TRI Trieste 68.56 312 *e*P P **21 46 15.1 -0.6**
comp=Z,36nm,1.1s,mb5.2
TRI Trieste 68.56 312 *e*P P **21 46 15.1 -0.6**
TRI pmax pmax
comp=Z,36nm,1.1s,mb5.2
BSEG Bad Segeberg 68.76 321 *e*P P **21 46 17.5 +0.7**
comp=Z,38nm,1.1s,mb5.2
BSEG Bad Segeberg 68.76 321 *e*P P **21 46 17.5 +0.7**
MOX Moxa 68.76 317 *e*P P **21 46 16.6 -0.3**
comp=Z,23nm,1.4s,mb4.9
MOX Moxa 68.76 317 *e*P P **21 46 16.9 0.0**
comp=Z,22nm,1.5s,mb4.9
MOX Moxa 68.76 317 *e*P P **21 46 16.6 -0.3**
MOX pmax pmax
comp=Z,23nm,1.4s,mb4.9
MUD Monsted U'grnd 68.81 323 *e*P P **21 46 18.3 +1.3**
MUD pmax pmax
comp=Z,11nm,1.1s,mb4.7
MUD Monsted U'grnd 68.81 323 *i*P P **21 46 18.3 +1.3**
comp=Z,11nm,1.1s,mb4.7
CEL Celeste 68.95 303 *e*P P **21 46 17.6 -0.7**
comp=Z,29nm,1.0s,mb5.2
ABTA Abfaltersbach 69.14 313 ⇓*i*P P **21 46 18.1 -1.2**
comp=Z,12nm,1.3s,mb4.7,SNR=10
NRDL Niedersach Rie 69.22 319 *e*P P **21 46 19.3 -0.4**
comp=Z,66nm,1.6s,mb5.3
CLZ Clausthal 69.23 318 *e*P P **21 46 20.1 +0.4**
comp=Z,30nm,0.9s,mb5.2
CLZ Clausthal 69.23 318 *e*P P **21 46 20.1 +0.4**
CLZ pmax pmax
comp=Z,30nm,0.9s,mb5.2
GRA1 Grafenberg Arr 69.24 316 *e*P P **21 46 20.5 +0.6**
comp=Z,41nm,1.4s,mb5.2
GRA1 LR LR
comp=Z,200nm,21.1s,MS4.3
GRF Grafenberg Arr 69.24 316 *e*P P **21 46 20.5 +0.6**
comp=Z,41nm,1.4s,mb5.2
GRF *e*L 22 13 22.1
comp=Z,154nm,21.1s
GRF Grafenberg Arr 69.24 316 *e*P P **21 46 20.5 +0.6**
GRF pmax pmax
comp=Z,41nm,1.4s,mb5.2
GRF MLR MLR
comp=Z,200nm,21.1s,MS4.3
WTTA Wattenberg 69.59 314⇑ *i*P P **21 46 21.2 -0.9**
comp=Z,25nm,1.1s,mb5.0,SNR=11
FUR Furstenfeldbru 69.59 315 *e*P P **21 46 22.3 +0.2**
comp=Z,64nm,1.6s,mb5.3
FUR Furstenfeldbru 69.59 315 *e*P P **21 46 22.3 +0.2**
FUR pmax pmax
comp=Z,64nm,1.6s,mb5.3
AQU L'Aquila 69.68 308 *e*P P **21 46 22.7 0.0**
comp=Z,24nm,1.2s,mb5.0
AQU L'Aquila 69.68 308 *e*P P **21 46 22.7 0.0**
AQU pmax pmax
comp=Z,24nm,1.2s,mb5.0
MOTA Moosalm 69.92 314 ⇓*i*P P **21 46 23.2 -0.9**
comp=Z,20nm,0.9s,mb5.0,SNR=16
RETA Reutte 70.10 314 *i*P P **21 46 24.7 -0.5**
comp=Z,34nm,1.3s,mb5.1,SNR=27
FETA Feichten 70.25 313⇑ *i*P P **21 46 25.1 -1.1**
comp=Z,29nm,1.1s,mb5.1,SNR=12
STKA Stephens Creek 70.33 141 *e*P P **21 46 23.9 -2.9**
comp=Z,12nm,0.9s,mb4.8
STKA Stephens Creek 70.33 141 P P **21 46 23.6 -3.1**
STKA LR LR 22 17 00.4
STKA Stephens Creek 70.33 141 P P **21 46 23.6 -3.1**
comp=Z,8.7nm,1.0s,mb4.7,baz=328,slow=6.9,SNR=10
STKA LR LR 22 17 00.4
comp=Z,152nm,19.6s,MS4.3,baz=20,slow=36
IBBN Ibbenburen 70.66 319 *e*P P **21 46 28.9 +0.3**
comp=Z,39nm,1.4s,mb5.1
DAVA Damuels 70.73 314 ⇓*i*P P **21 46 27.7 -1.4**
comp=Z,36nm,1.6s,mb5.1
STU Stuttgart 70.76 316 *e*P P **21 46 29.3 +0.1**
comp=Z,59nm,1.4s,mb5.3
STU Stuttgart 70.76 316 *e*P P **21 46 29.3 +0.1**
STU pmax pmax
comp=Z,53nm,1.3s,mb5.3
TNS Taunus Mts 70.83 317 *e*P P **21 46 29.7 +0.1**
comp=Z,55nm,1.5s,mb5.3
TNS Taunus Mts 70.83 317 *e*P P **21 46 29.7 +0.1**
TNS pmax pmax

comp=Z,55nm,1.5s,mb5.3
DAVOX **Davos/Dischmat 70.88 313** P **P** **21 46 29.9 -0.1**
comp=Z,14nm,0.7s,mb5.0,baz=110,slow=6.6,SNR=24
DAVOX **Davos/Dischmat 70.88 313** P **P** **21 46 29.9 -0.1**
BUG Bochum–Univer 71.20 319 *eP* **P** **21 46 32.0 +0.2**
comp=Z,28nm,1.2s,mb5.1
VLC Villacollemand 71.28 311 *eP* **P** **21 46 33.3 +0.7**
BFO Black Forest 71.44 315 *eP* **P** **21 46 33.0 -0.4**
comp=Z,14nm,1.2s,mb4.8
BFO Black Forest 71.44 315 *eP* **P** **21 46 33.0 -0.4**
BFO pmax pmax
comp=Z,14nm,1.2s,mb4.8
DAG Danmarks Havn 71.56 347⇑ *iP* **P** **21 46 32.3 -1.3**
DAG pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
DAG Danmarks Havn 71.56 347⇑ *iP* **P** **21 46 32.3 -1.3**
comp=Z,4.8nm,0.7s,mb4.5
CDF Champ du Feu 72.08 316 *eP* **P** **21 46 36.4 -0.8**
comp=Z,51nm,1.5s,mb4.9
CDF Champ du Feu 72.08 316 *eP* **P** **21 46 36.4 -0.8**
comp=Z,26nm,1.5s,mb4.9
CDF Champ du Feu 72.08 316 *eP* **P** **21 46 36.4 -0.8**
CDF pmax pmax
comp=Z,25nm,1.5s,mb4.9
WLF Walferdange 72.41 317 *eP* **P** **21 46 39.9 +0.8**
comp=Z,94nm,1.5s,mb5.5
WLF Walferdange 72.41 317 *eP* **P** **21 46 40.2 +1.1**
comp=Z,103nm,1.5s,mb5.5
WLF Walferdange 72.41 317 *eP* **P** **21 46 40.2 +1.1**
WLF pmax pmax
comp=Z,103nm,1.5s,mb5.5
HINF Hinteralfeld 72.54 315 *eP* **P** **21 46 38.7 -1.3**
comp=Z,88nm,1.8s,mb5.1
HINF Hinteralfeld 72.54 315 *eP* **P** **21 46 38.7 -1.3**
comp=Z,44nm,1.8s,mb5.1
HINF Hinteralfeld 72.54 315 *eP* **P** **21 46 38.7 -1.3**
HINF pmax pmax
comp=Z,44nm,1.8s,mb5.1
HAU Haudompre 72.80 315 *eP* **P** **21 46 40.5 -1.0**
comp=Z,34nm,1.3s,mb4.8
HAU *e*MLR MLR
comp=Z,138nm,18.8s,MS4.0
HAU Haudompre 72.80 315 *eP* **P** **21 46 40.5 -1.0**
comp=Z,17nm,1.3s,mb4.8
HAU LR LR
comp=Z,140nm,18.8s,MS4.3
HAU Haudompre 72.80 315 *eP* **P** **21 46 40.5 -1.0**
HAU pmax pmax
comp=Z,17nm,1.3s,mb4.8
HAU MLR MLR
comp=Z,140nm,18.8s,MS4.3
GIVF Givet 73.08 318 *eP* **P** **21 46 42.5 -0.7**
GIVF Givet 73.08 318 *eP* **P** **21 46 42.5 -0.7**
LPG La Plagne 73.34 313 *eP* **P** **21 46 44.5 -0.3**
LPG La Plagne 73.34 313 *eP* **P** **21 46 44.5 -0.3**
LPL La Plagne 73.34 313 *eP* **P** **21 46 44.5 -0.3**
comp=Z,22nm,0.7s,mb4.9
LPL La Plagne 73.34 313 *eP* **P** **21 46 44.5 -0.3**
comp=Z,11nm,0.7s,mb4.9
LPL La Plagne 73.34 313 *eP* **P** **21 46 44.5 -0.3**
LPL pmax pmax
comp=Z,11nm,0.7s,mb4.9
SBF Sospel 73.40 311 *eP* **P** **21 46 43.8 -1.4**
comp=Z,27nm,0.8s,mb4.9
SBF Sospel 73.40 311 *eP* **P** **21 46 43.8 -1.4**
comp=Z,14nm,0.8s,mb4.9
SBF Sospel 73.40 311 *eP* **P** **21 46 43.8 -1.4**
SBF pmax pmax
comp=Z,14nm,0.8s,mb4.9
CABF La Chapelle 73.42 314 *eP* **P** **21 46 44.4 -0.8**
comp=Z,40nm,1.3s,mb4.9
CABF La Chapelle 73.42 314 *eP* **P** **21 46 44.4 -0.8**
comp=Z,20nm,1.3s,mb4.9
CABF La Chapelle 73.42 314 *eP* **P** **21 46 44.4 -0.8**
CABF pmax pmax
comp=Z,20nm,1.3s,mb4.9
VSL Villasalto 73.44 306 *eP* **P** **21 46 44.8 -0.7**
MEZF Maizieres J'vi 73.46 316 *eP* **P** **21 46 44.7 -0.7**
comp=Z,59nm,1.1s,mb5.1
MEZF Maizieres J'vi 73.46 316 *eP* **P** **21 46 44.7 -0.7**
comp=Z,59nm,1.1s,mb5.4
BAIF Baives 73.47 318 *eP* **P** **21 46 44.8 -0.7**
BAIF Baives 73.47 318 *eP* **P** **21 46 44.8 -0.7**
MBDF Montbardon 73.57 312 *eP* **P** **21 46 45.5 -0.7**
comp=Z,21nm,0.7s,mb4.8
MBDF Montbardon 73.57 312 *eP* **P** **21 46 45.5 -0.7**
comp=Z,10nm,0.7s,mb4.9
MBDF Montbardon 73.57 312 *eP* **P** **21 46 45.5 -0.7**
MBDF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
FRF La Foret Royal 74.04 311 *eP* **P** **21 46 47.6 -1.3**
comp=Z,23nm,1.0s,mb4.8
FRF La Foret Royal 74.04 311 *eP* **P** **21 46 47.6 -1.3**
comp=Z,12nm,1.0s,mb4.8
FRF La Foret Royal 74.04 311 *eP* **P** **21 46 47.6 -1.3**
FRF pmax pmax
comp=Z,12nm,1.0s,mb4.8
ORIF Oris-en-Rattie 74.11 312 *eP* **P** **21 46 48.1 -1.2**
comp=Z,13nm,0.8s,mb4.6
ORIF *e*MLR MLR
comp=Z,212nm,18.0s,MS4.2
ORIF Oris-en-Rattie 74.11 312 *eP* **P** **21 46 48.1 -1.2**
comp=Z,6.6nm,0.8s,mb4.6
ORIF Oris-en-Rattie 74.11 312 *eP* **P** **21 46 48.1 -1.2**
ORIF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
LMR La Mourre 74.21 311 *eP* **P** **21 46 48.7 -1.2**
comp=Z,75nm,1.5s,mb5.1
LMR La Mourre 74.21 311 *eP* **P** **21 46 48.7 -1.2**
comp=Z,38nm,1.5s,mb4.9
LMR La Mourre 74.21 311 *eP* **P** **21 46 48.7 -1.2**
LMR pmax pmax
comp=Z,38nm,1.5s,mb5.1
SMRF Simiane la Rot 74.63 312 *eP* **P** **21 46 51.7 -0.7**
comp=Z,38nm,1.2s,mb4.9
SMRF Simiane la Rot 74.63 312 *eP* **P** **21 46 51.7 -0.7**
comp=Z,38nm,1.2s,mb5.2
LOR Lormes 74.63 315 *eP* **P** **21 46 51.0 -1.3**
comp=Z,48nm,1.5s,mb4.9
LOR *e*MLR MLR
comp=Z,147nm,22.2s,MS3.9
LOR Lormes 74.63 315 *eP* **P** **21 46 51.0 -1.3**
comp=Z,24nm,1.5s,mb4.9
LOR LR LR
comp=Z,150nm,22.3s,MS4.2
LOR Lormes 74.63 315 *eP* **P** **21 46 51.0 -1.3**
LOR pmax pmax
comp=Z,24nm,1.5s,mb4.9
LOR MLR MLR
comp=Z,150nm,22.3s,MS4.2
KEST Kesra 74.71 303 *eP* **P** **21 46 53.1 +0.1**
KEST Kesra 74.71 303 P **P** **21 46 51.7 -1.3**
comp=Z,7.3nm,1.2s,mb4.5,baz=114,slow=3.0,SNR=6.1
SMF Signal de Mont 74.86 315 *eP* **P** **21 46 52.5 -1.1**
comp=Z,59nm,1.2s,mb5.1
SMF Signal de Mont 74.86 315 *eP* **P** **21 46 52.5 -1.1**
comp=Z,30nm,1.2s,mb5.1
SMF Signal de Mont 74.86 315 *eP* **P** **21 46 52.5 -1.1**
SMF pmax pmax
comp=Z,30nm,1.2s,mb5.1
SSF Saint Saulge 74.93 315 *eP* **P** **21 46 52.9 -1.1**
comp=Z,36nm,1.0s,mb5.0
SSF Saint Saulge 74.93 315 *eP* **P** **21 46 52.9 -1.1**
comp=Z,18nm,1.0s,mb5.0
SSF Saint Saulge 74.93 315 *eP* **P** **21 46 52.9 -1.1**
SSF pmax pmax
comp=Z,18nm,1.0s,mb5.0
VIVF Saint-Julien-l 74.94 313 *eP* **P** **21 46 52.9 -1.2**
comp=Z,30nm,1.0s,mb4.9
VIVF Saint-Julien-l 74.94 313 *eP* **P** **21 46 52.9 -1.2**
comp=Z,15nm,1.0s,mb4.9
VIVF Saint-Julien-l 74.94 313 *eP* **P** **21 46 52.9 -1.2**
VIVF pmax pmax
comp=Z,15nm,1.0s,mb4.9
TTA Tatalina 74.98 27 *eP* **P** **21 46 54.0 0.0**
TTA Tatalina 74.98 27 *eP* **P** **21 46 54.0 0.0**
AVF Avril sur Loir 75.12 315 *eP* **P** **21 46 54.1 -1.1**
comp=Z,84nm,1.5s,mb5.1
AVF Avril sur Loir 75.12 315 *eP* **P** **21 46 54.1 -1.1**
comp=Z,42nm,1.5s,mb5.2
AVF Avril sur Loir 75.12 315 *eP* **P** **21 46 54.1 -1.1**
AVF pmax pmax
comp=Z,42nm,1.5s,mb5.2
COLD Coldfoot 75.18 22 *eP* **P** **21 46 54.1 -0.9**
comp=Z,32nm,1.8s,mb5.0
ARMA Armidale 75.45 134 *eP* **P** **21 46 58.6 +1.5**
BGF Bois d'Agland 75.53 315 *eP* **P** **21 46 56.5 -1.0**
BGF Bois d'Agland 75.53 315 *eP* **P** **21 46 56.5 -1.0**
LASF Ste Croix 75.76 312 *eP* **P** **21 46 57.4 -1.5**
comp=Z,38nm,1.2s,mb4.9
ESK Eskdalemuir 75.77 325 *eP* **P** **21 46 58.6 -0.1**
ESK Eskdalemuir 75.77 325 *i P* **P** **21 46 59.6 +0.9**
SCO Scoresbysund 75.83 342 *i P* PcP 21 47 11.5 +0.2
SCO pmax pmax
comp=Z,22nm,0.9s,mb5.1
TCF Toulx Ste Croi 76.04 315 *eP* **P** **21 46 59.8 -0.6**
comp=Z,39nm,1.1s,mb4.9
TCF Toulx Ste Croi 76.04 315 *eP* **P** **21 46 59.8 -0.6**
comp=Z,20nm,1.1s,mb5.0
TCF Toulx Ste Croi 76.04 315 *eP* **P** **21 46 59.8 -0.6**
TCF pmax pmax
comp=Z,19nm,1.1s,mb4.9
BPAW Bear Paw Mtn. 76.44 25 *eP* **P** **21 47 01.2 -1.1**
comp=Z,8.6nm,0.8s,mb4.7
PPLA Purkeypile 76.56 26 *eP* **P** **21 47 03.1 0.0**
comp=Z,63nm,1.5s,mb5.3
CAF Calviac 76.64 313 *eP* **P** **21 47 03.4 -0.5**
comp=Z,26nm,1.0s,mb4.8
CAF Calviac 76.64 313 *eP* **P** **21 47 03.4 -0.5**
comp=Z,13nm,1.0s,mb4.8
CAF Calviac 76.64 313 *eP* **P** **21 47 03.4 -0.5**
CAF pmax pmax
comp=Z,13nm,1.0s,mb4.8
LDF La Druitiere 76.64 317 *eP* **P** **21 47 02.6 -1.2**
LDF La Druitiere 76.64 317 *eP* **P** **21 47 02.6 -1.2**
FLN La Foliniere 76.80 318 *eP* **P** **21 47 03.7 -1.0**
FLN *e*MLR MLR
comp=Z,161nm,19.8s,MS4.0
FLN La Foliniere 76.80 318 *eP* **P** **21 47 03.7 -1.0**
FLN MLR MLR
comp=Z,160nm,19.8s,MS4.3
RJF Les Rejaudoux 76.86 314 *eP* **P** **21 47 04.9 -0.2**
comp=Z,39nm,1.0s,mb5.0
RJF *e*MLR MLR
comp=Z,138nm,18.0s,MS4.0
RJF Les Rejaudoux 76.86 314 *eP* **P** **21 47 04.9 -0.2**
comp=Z,20nm,1.0s,mb5.0
RJF LR LR
comp=Z,140nm,18.0s,MS4.3
RJF Les Rejaudoux 76.86 314 *eP* **P** **21 47 04.9 -0.2**
RJF pmax pmax
comp=Z,20nm,1.0s,mb5.0
RJF MLR MLR
comp=Z,140nm,18.0s,MS4.3
MTLF Montolieu 77.14 312 *eP* **P** **21 47 05.9 -0.8**
comp=Z,34nm,1.3s,mb4.8
MTLF Montolieu 77.14 312 *eP* **P** **21 47 05.9 -0.8**
comp=Z,17nm,1.3s,mb4.8
MTLF Montolieu 77.14 312 *eP* **P** **21 47 05.9 -0.8**
MTLF pmax pmax
comp=Z,17nm,1.3s,mb4.8
GRR Gorron 77.17 317 *eP* **P** **21 47 05.8 -1.0**
comp=Z,46nm,1.1s,mb5.0
GRR Gorron 77.17 317 *eP* **P** **21 47 05.8 -1.0**
comp=Z,23nm,1.1s,mb5.0
GRR Gorron 77.17 317 *eP* **P** **21 47 05.8 -1.0**
GRR pmax pmax
comp=Z,23nm,1.1s,mb5.0
COLA College 77.21 24 *eP* **P** **21 47 05.8 -0.9**
MCK McKinley 77.41 25 *eP* **P** **21 47 07.8 0.0**
MCK McKinley 77.41 25 *eP* **P** **21 47 07.8 0.0**
MFF Saint Martin d 77.43 316 *eP* **P** **21 47 07.3 -1.0**
comp=Z,114nm,1.6s,mb5.2
MFF Saint Martin d 77.43 316 *eP* **P** **21 47 07.3 -1.0**
comp=Z,57nm,1.6s,mb5.2
MFF Saint Martin d 77.43 316 *eP* **P** **21 47 07.3 -1.0**
MFF pmax pmax
comp=Z,57nm,1.6s,mb5.2
LFF La Frestale 77.51 314 *eP* **P** **21 47 07.5 -1.2**
comp=Z,114nm,1.6s,mb5.3
LFF La Frestale 77.51 314 *eP* **P** **21 47 07.5 -1.2**
comp=Z,57nm,1.6s,mb5.2
LFF La Frestale 77.51 314 *eP* **P** **21 47 07.5 -1.2**
LFF pmax pmax
comp=Z,57nm,1.6s,mb5.2
ILAR Eielson Array 77.61 23 P **P** **21 47 06.9 -2.0**
comp=Z,3.2nm,1.0s,mb4.2,baz=294,slow=5.4,SNR=18
ILAR PP PP 21 50 03.4 0.0
comp=Z,1.1nm,0.8s,baz=297,slow=6.7,SNR=5.2
ILAR LR LR 22 24 59.0
comp=Z,146nm,19.8s,MS4.3,baz=303,slow=38
ILAR Eielson Array 77.61 23 P **P** **21 47 06.9 -2.0**
ILAR 21 50 03.4
SUMG Summit 78.25 348 *eP* **P** **21 47 11.9 -0.4**
comp=Z,54nm,1.2s,mb5.4
SUMG Summit 78.25 348 *i P* **P** **21 47 11.5 -0.8**
comp=Z,22nm,0.9s,mb5.1
SGMF Saint Gilles 78.27 318 *eP* **P** **21 47 12.4 -0.5**
comp=Z,76nm,1.3s,mb5.2
SGMF Saint Gilles 78.27 318 *eP* **P** **21 47 12.4 -0.5**
comp=Z,38nm,1.3s,mb5.2
SGMF Saint Gilles 78.27 318 *eP* **P** **21 47 12.4 -0.5**
SGMF pmax pmax
comp=Z,38nm,1.3s,mb5.2
PMR Palmer 78.45 27 *eP* **P** **21 47 12.6 -1.1**
comp=Z,20nm,1.0s,mb5.0
PMR Palmer 78.45 27 *eP* **P** **21 47 12.6 -1.0**
PMR pmax pmax
comp=Z,20nm,1.0s,mb5.0
ROSF Rostrenen 78.67 318 *eP* **P** **21 47 14.6 -0.5**
ROSF Rostrenen 78.67 318 *eP* **P** **21 47 14.6 -0.5**
LSZ Lusaka 78.83 247 *eP* **P** **21 47 16.2 -0.3**
LSZ Lusaka 78.83 247 *eP* **P** **21 47 16.2 -0.2**
KDAK Kodiak Island 78.88 31 P **P** **21 47 14.6 -1.5**
comp=Z,8.7nm,0.7s,mb4.8,baz=289,slow=7.6,SNR=5.7
KDAK Kodiak Island 78.88 31 *i P* **P** **21 47 16.0 -0.1**
ETSF Etsaut 79.18 312 *eP* **P** **21 47 17.6 -0.4**
comp=Z,43nm,1.4s,mb4.9
ETSF Etsaut 79.18 312 *eP* **P** **21 47 17.6 -0.4**
comp=Z,22nm,1.4s,mb4.9
ETSF Etsaut 79.18 312 *eP* **P** **21 47 17.6 -0.4**
ETSF pmax pmax
comp=Z,21nm,1.4s,mb4.9
SJPF Ste Jean 79.54 313 *eP* **P** **21 47 18.4 -1.6**
SJPF Ste Jean 79.54 313 *eP* **P** **21 47 18.4 -1.6**
EGAK Eagle 79.61 22 *eP* **P** **21 47 19.6 -0.3**
comp=Z,18nm,1.4s,mb4.8
EGAK PP PP 21 50 19.4 -0.6
INK Inuvik 79.61 17 *eP* **P** **21 47 19.0 -0.9**
INK Inuvik 79.61 17 P **P** **21 47 19.2 -0.7**
comp=Z,7.9nm,0.8s,mb4.7,baz=315,slow=8.5,SNR=6.3
INK Inuvik 79.61 17 P **P** **21 47 19.2 -0.7**
INK pmax pmax
comp=Z,8.0nm,0.9s
RES Resolute Bay 80.17 3 *eP* **P** **21 47 22.3 -0.5**
RES Resolute Bay 80.17 3 *eP* **P** **21 47 22.3 -0.5**
BMRM Bremner River 80.62 26 *eP* **P** **21 47 24.6 -0.8**
comp=Z,22nm,1.0s,mb5.0
TAM Tamanrasset 82.66 292 *eP* **P** **21 47 37.0 0.0**
comp=Z,15nm,1.4s,mb4.8
TAM Tamanrasset 82.66 292 *eP* **P** **21 47 37.0 0.0**
TAM pmax pmax
comp=Z,15nm,1.4s,mb4.8
ESDC Sonseca Array 82.87 310 P **P** **21 47 37.7 -0.1**
comp=Z,1.6nm,0.7s,mb4.1,baz=50,slow=5.3,SNR=9.5
ESLA Sonseca Array 82.87 310 *eP* **P** **21 47 37.4 -0.4**
MVO Moncorvo 84.27 313 *eP* **P** **21 47 45.7 +0.8**
comp=Z,32nm,1.7s,mb5.2
MTE Manteigas 84.97 312 *eP* **P** **21 47 49.6 +1.1**
comp=Z,60nm,1.8s,mb5.4
PMRV Marv??o 85.34 311 *eP* **P** **21 47 50.6 +0.3**
comp=Z,31nm,2.1s,mb5.1
PBAR Barrancos 85.69 310 *eP* **P** **21 47 52.4 +0.3**
LBTB Lobatse 85.78 240 *eP* **P** **21 47 52.9 +0.2**
comp=Z,47nm,0.8s,mb5.8
LBTB Lobatse 85.78 240 *eP* **P** **21 47 52.9 +0.2**
LBTB pmax pmax
comp=Z,47nm,0.8s,mb5.8
DLBC Dease Lake 87.82 23 *eP* **P** **21 48 02.5 +0.4**
BOSA Boshof 87.84 237 P **P** **21 48 02.0 -0.6**
comp=Z,20nm,1.1s,mb5.3,baz=80,slow=5.4,SNR=13
BOSA LR LR 22 24 38.4
comp=Z,111nm,18.1s,MS4.3,baz=268,slow=34
BOSA Boshof 87.84 237 P **P** **21 48 02.1 -0.5**
TSUM Tsumeb 89.60 249 *eP* **P** **21 48 10.7 -0.5**
TORD Torodi Ar. Bea 90.00 284 P **P** **21 48 13.0 -0.2**
comp=Z,7.9nm,1.1s,mb5.0,baz=63,slow=4.2,SNR=23
TORD PP PP 21 51 48.1 +2.1
comp=Z,3.1nm,1.1s,baz=56,slow=5.4,SNR=4.8
TORD Torodi Ar. Bea 90.00 284 P **P** **21 48 13.0 -0.2**
TORD PP PP 21 51 48.1 +2.1
FRB Frobisher Bay 90.87 354 P **P** **21 48 15.2 -1.1**
comp=Z,10nm,1.1s,mb5.1,baz=68,slow=3.5,SNR=3.4
FRB Frobisher Bay 90.87 354 P **P** **21 48 15.2 -1.1**
CASY Casey 91.54 175 *eP* **P** **21 48 18.3 -0.8**
comp=Z,19nm,1.4s,mb5.2
MAW Mawson 95.97 193 *eP* **P** **21 48 39.9 +0.5**
comp=Z,2.3nm,1.4s,mb4.4
MAW Mawson 95.97 193 P **P** **21 48 39.1 -0.3**
comp=Z,4.2nm,1.1s,mb4.8,baz=88,slow=16,SNR=4.2
MAW Mawson 95.97 193 *eP* **P** **21 48 39.9 +0.5**
MAW pmax pmax
comp=Z,2.0nm,1.4s
SCHQ Schefferville 99.38 351 LR LR 22 35 05.1
comp=Z,105nm,21.7s,MS4.3,baz=22,slow=36
BW06 Boulder Array 107.94 21 PKiKP PKiKP 21 53 40.5 -0.3
NVAR Mina Array Bea 108.33 29 PKiKP PKiKP 21 53 41.5 -0.2
comp=Z,0.3nm,0.6s,baz=297,slow=4.0,SNR=2.8
WMOK Wichita Mounta 118.49 16 *e*PKPdf PKPdf 21 54 00.4 -0.7
WMOK Wichita Mounta 118.49 16 *e*PKIKP PKPdf 21 54 00.4 -0.8
WVT Waverly 118.92 5 *e*PKPdf PKPdf 21 54 01.6 -0.3
WVT Waverly 118.92 5 *e*PKIKP PKPdf 21 54 01.6 -0.4
MIAR Mount Ida 119.75 11 *e*PKPdf PKPdf 21 54 02.2 -1.4
MIAR Mount Ida 119.75 11 *e*PKIKP PKPdf 21 54 02.2 -1.4
TXAR Lajitas Array 122.11 22 PKP PKPdf 21 54 07.2 -1.1
comp=Z,1.0nm,0.6s,baz=162,slow=0.4,SNR=6.8
TXAR Lajitas Array 122.11 22 PKIKP PKPdf 21 54 07.2 -1.1
JCT Junction City 122.25 18 *e*PKPdf PKPdf 21 54 06.9 -1.6
JCT Junction City 122.25 18 *e*PKIKP PKPdf 21 54 06.9 -1.6
RCBR Riachuelo 131.82 285 *e*PKPdf PKPdf 21 54 26.8 -0.4
SDV Santo Domingo 144.47 340 *e*PKPdf PKPdf 21 54 47.7 -2.6
BCIP Isla Barro Col 145.93 356 *e*PKPdf PKPdf 21 54 51.6 -1.2
ROSC El Rosal 149.33 345 PKPbc PKPbc 21 55 03.5 +0.7
comp=Z,18nm,0.6s,baz=284,slow=8.3,SNR=7.5
OTAV Otavalo 154.62 351 *e*PKPdf PKPdf 21 55 06.1 -0.3

*ISCJB **19** 21:40:42.8±0.8, 31°.95S±0'.09×179°.5E±0'.2, h482km±11km, mb3.5/3, Error ellipse: s-maj=22.3km s-min=12.2km az=24.9*
*NEIC **19** 21:40:42.7±1.0, 31°.81S×179°.49E, h462km±11km, mb4.3/2, Error ellipse: s-maj=14.4km s-min=11.6km az=123.0*
*IDC **19** 21:40:42.5±1.9, 31°.85S×179°.59E, h456km±23km, mb3.1/2, mb1 3.5/4, mb1mx3.2/14, mbtmp3.4/4, Error ellipse: s-maj=32.2km s-min=20.5km az=125.0*
ISC 19 21:40:44.9±0.9**, 32°.04S**±0'.10×**179°.4E**±0'.2**, h481**km±12km**, n65,σ1§01/65, mb3.5/3, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**5.59**	**189**	*e*PN	**P**	**21 42 14.8**	**-1.4**
MXZ				SN	**S**	**21 43 31.2**	**+0.2**
PUZ	**Puketiti**	**6.10**	**189**	*e*PN	**P**	**21 42 20.8**	**-0.4**
PUZ				SN	**S**	**21 43 38.5**	**-1.6**
OPRZ	**Ohinepanea**	**6.25**	**201**	*e*PN	**P**	**21 42 24.6**	**+1.8**
MARZ	**Manawahe**	**6.35**	**200**	*e*PN	**P**	**21 42 25.4**	**+1.6**
MWZ	**Matawai**	**6.47**	**193**	*e*PN	**P**	**21 42 24.8**	**-0.1**
MWZ				SN	**S**	**21 43 46.8**	**-0.1**
URZ	**Urewera**	**6.49**	**196**	*e*P	**P**	**21 42 25.1**	**-0.1**
URZ				*e*S	**S**	**21 43 46.5**	**-0.8**
URZ	**Urewera**	**6.49**	**196**	P	**P**	**21 42 25.5**	**+0.3**
	60nm,0.3s,baz=313,slow=1.5,SNR=171						
URZ				S	**S**	**21 43 46.6**	**-0.7**
	8.2nm,0.3s,baz=217,slow=20,SNR=8.3						
URZ	**Urewera**	**6.49**	**196**	*e*PN	**P**	**21 42 24.0**	**-1.2**
URZ				SN	**S**	**21 43 46.0**	**-1.3**
CNGZ	**Carnagh Statio**	**6.51**	**188**	*e*PN	**P**	**21 42 25.5**	**+0.2**
TARZ	**Mount Tarawera**	**6.63**	**200**	*e*PN	**P**	**21 42 29.5**	**+2.9**
RRRZ	**Republican Roa**	**6.72**	**200**	PN	**P**	**21 42 30.3**	**+2.8**
PRGZ	**Paritu Road**	**6.99**	**190**	*e*PN	**P**	**21 42 31.8**	**+1.6**
KNZ	**Kokohu**	**7.11**	**191**	PN	**P**	**21 42 32.5**	**+1.0**
RAHZ	**Arahi**	**7.12**	**195**	*e*PN	**P**	**21 42 31.5**	**-0.1**
MHGZ	**Mahia Peninsul**	**7.21**	**189**	*e*PN	**P**	**21 42 34.6**	**+2.2**
NMHZ	**Naumai**	**7.36**	**196**	*e*PN	**P**	**21 42 34.0**	**0.0**
BKZ	**Black Stump Fm**	**7.50**	**198**	*e*PN	**P**	**21 42 34.4**	**-1.1**
BKZ				SN	**S**	**21 44 05.3**	**-1.0**
MCHZ	**McNeill Hill**	**7.71**	**196**	*e*PN	**P**	**21 42 38.9**	**+1.2**
CKHZ	**Cape Kidnapper**	**7.84**	**193**	PN	**P**	**21 42 40.4**	**+1.4**
TUVZ	**Tukino**	**7.84**	**202**	PN	**P**	**21 42 38.7**	**-0.4**
BHHZ	**Black Hill Sta**	**7.92**	**199**	*e*PN	**P**	**21 42 38.8**	**-1.1**
BHHZ				SN	**S**	**21 44 14.6**	**+0.4**
MOVZ	**Moawhango**	**7.94**	**201**	*e*PN	**P**	**21 42 39.4**	**-0.7**
PKVZ	**Pokaka**	**7.96**	**203**	*e*PN	**P**	**21 42 41.3**	**+1.0**
MTVZ	**Mangateitei**	**8.01**	**203**	*e*PN	**P**	**21 42 42.0**	**+1.2**
KAHZ	**Kahuranaki**	**8.01**	**194**	*e*PN	**P**	**21 42 40.7**	**-0.1**
PXZ	**Pawanui**	**8.24**	**194**	*e*PN	**P**	**21 42 39.8**	**-3.4**
PNHZ	**Pukenui**	**8.28**	**197**	*e*PN	**P**	**21 42 42.3**	**-1.3**
WPHZ	**Waipukurau**	**8.37**	**196**	*e*PN	**P**	**21 42 44.3**	**-0.2**
TSZ	**Takapari Road**	**8.48**	**198**	*e*PN	**P**	**21 42 44.4**	**-1.4**
TSZ				SN	**S**	**21 44 23.7**	**-1.4**
PRHZ	**Porangahau**	**8.52**	**195**	*e*PN	**P**	**21 42 45.5**	**-0.7**
DVHZ	**Dannevirke**	**8.65**	**197**	*e*PN	**P**	**21 42 46.1**	**-1.2**
BFZ	**Birch Farm**	**9.00**	**196**	*e*PN	**P**	**21 42 52.0**	**+0.8**
MRZ	**Mangatainoka R**	**9.15**	**199**	*e*PN	**P**	**21 42 51.7**	**-1.1**
MRZ				SN	**S**	**21 44 37.9**	**-0.1**
TIWZ	**Tintock**	**9.18**	**197**	*e*PN	**P**	**21 42 53.9**	**+0.8**
HOWZ	**Holdsworth Sta**	**9.38**	**198**	*e*PN	**P**	**21 42 55.5**	**+0.2**
OGWZ	**Otaki Gorge**	**9.41**	**200**	*e*PN	**P**	**21 42 55.3**	**-0.3**
KIW	**Kapiti Island**	**9.53**	**201**	*e*PN	**P**	**21 42 57.3**	**+0.4**
MTW	**Mount Morrison**	**9.63**	**198**	*e*PN	**P**	**21 42 58.2**	**+0.2**
CAW	**Cannon Point**	**9.71**	**200**	*e*PN	**P**	**21 42 58.7**	**-0.1**
MSWZ	**Moikau Station**	**9.94**	**199**	*e*PN	**P**	**21 43 01.8**	**+0.5**
TCW	**Tory Channel**	**10.04**	**203**	PN	**P**	**21 43 02.4**	**0.0**
TUWZ	**Tuamarina**	**10.35**	**204**	PN	**P**	**21 43 04.9**	**-0.8**
NNZ	**Nelson**	**10.37**	**206**	PN	**P**	**21 43 05.7**	**-0.2**
KHZ	**Kahutara**	**11.37**	**203**	*e*PN	**P**	**21 43 17.5**	**+0.9**
RPZ	**Rata Peaks**	**13.39**	**207**	P	**P**	**21 43 38.7**	**+0.6**
	0.5nm,0.3s,baz=100,slow=18,SNR=3.5						
RPZ				S	**S**	**21 46 05.3**	**+4.1**
	0.4nm,0.3s,baz=348,slow=12,SNR=3.6						
AFI	**Afiamalu**	**19.76**	**26**	*e*P	**P**	**21 44 38.9**	**-3.6**
	31nm,0.8s						
AFI	**Afiamalu**	**19.76**	**26**	P	**P**	**21 44 39.2**	**-3.3**
	5.2nm,0.3s,baz=231,slow=13,SNR=4.8						
MCQ	**Macquarie Isla**	**26.76**	**207**	*e*P	**P**	**21 45 45.5**	**+0.9**
CTAO	**Charters Tower**	**31.96**	**284**	*e*P	**P**	**21 46 29.2**	**-1.2**
WRA	**Warramunga Arr**	**42.00**	**275**	P	**P**	**21 47 53.2**	**-0.1**
WRA	**Warramunga Arr**	**42.00**	**275**	P	**P**	**21 47 53.2**	**0.0**
	0.4nm,0.3s,mb3.4,baz=111,slow=8.1,SNR=16						
CASY	**Casey**	**52.66**	**208**	*e*P	**P**	**21 49 13.3**	**+0.4**
	2.7nm,0.8s,mb3.6						
RPN	**Rapa Nui**	**61.13**	**105**	P	**P**	**21 50 11.7**	**-0.2**
KSRS	**Korea Array**	**84.20**	**321**	P	**P**	**21 52 24.8**	**+0.1**
	0.7nm,0.5s,mb3.5,baz=148,slow=7.2,SNR=3.9						
KURK	**Kurchatov**	**120.58**	**314**	PKP	PKPdf	21 58 40.5	-0.3
	0.4nm,0.5s,baz=113,slow=1.8,SNR=4.2						
BVAR	**Borovoye Array**	**126.02**	**315**	PKP	PKPdf	21 58 51.1	-0.1
	0.6nm,0.5s,baz=74,slow=6.2,SNR=4.6						
ARCES	**ARCESS Array B**	**139.68**	**346**	PKP	PKPpre	21 59 09.6	
ARCES	**ARCESS Array B**	**139.68**	**346**	PKhKP	PKPpre	21 59 09.6	
	1.4nm,0.8s,baz=47,slow=1.9,SNR=6.7						
FINES	**FINESS Array B**	**145.87**	**337**	PKPbc	PKPbc	21 59 28.3	-0.7
	4.1nm,0.5s,baz=48,slow=4.6,SNR=52						
NOA	**NORSAR Array B**	**149.97**	**349**	PKPbc	PKPbc	21 59 39.2	-0.4
	1.0nm,0.6s,baz=16,slow=4.2,SNR=4.5						
NOA				PKPab	PKPab	21 59 46.1	-1.3
	1.3nm,0.9s,baz=19,slow=3.0,SNR=3.5						
AKASG	**Malin Array Be**	**151.18**	**319**	PKPbc	PKPbc	21 59 42.6	-0.1
	0.9nm,0.4s,baz=53,slow=3.6,SNR=4.3						
BRTR	**Keskin Array B**	**151.37**	**295**	PKPbc	PKPbc	21 59 43.9	+0.3
BRTR	**Keskin Array B**	**151.37**	**295**	PKPbc	PKPbc	21 59 43.9	+0.3
	0.4nm,0.4s,baz=151,slow=3.2,SNR=5.4						
DBIC	**Dimbokro**	**154.45**	**170**	PKPbc	PKPbc	21 59 50.9	0.0
DBIC	**Dimbokro**	**154.45**	**170**	PKPbc	PKPbc	21 59 50.9	0.0
	5.9nm,1.1s,baz=184,slow=5.9,SNR=3.1						

*ISCJB **19** 21:44:02.8±0.9, 24°.80N±0'.08×98°.18E±0'.07, h10km, mb3.6/4, Error ellipse: s-maj=11.9km s-min=8.9km az=2.4*
*IDC **19** 21:44:03.8

CMAR	**Chiang Mai Arr**	**6.49**	**173**	Pg		**Pg**		**21 46 09.3**	**+0.2**
	comp=E,0.7nm,0.3s,baz=347,slow=17,SNR=4.2								
CMAR				Lg				21 47 33.9	
	comp=E,1.0nm,0.3s,baz=356,slow=31,SNR=4.2								
LSA	**Lhasa**	**7.78**	**309**	Pn		**Pn**		**21 45 55.8**	**-2.2**
SONM	**Songino Array**	**23.79**	**14**	P		**P**		**21 49 18.3**	**+0.7**
	comp=E,0.6nm,0.9s,mb3.0,baz=196,slow=14,SNR=3.0								
MKAR	**Makanchi Array**	**25.20**	**334**	P		**P**		**21 49 30.6**	**+0.2**
	comp=E,0.3nm,0.3s,mb3.4,baz=143,slow=9.9,SNR=3.5								
ZALV	**Zalesovo Beam**	**30.63**	**345**	P		**P**		**21 50 20.8**	**+1.8**
	comp=E,0.7nm,0.4s,mb3.8,baz=166,slow=9.5,SNR=4.8								
FITZ	**Fitzroy Crossi**	**50.50**	**145**	LR		LR		22 18 23.4	
	comp=E,64nm,18.4s,baz=249,slow=41								
WRA	**Warramunga Arr**	**56.87**	**138**	P		**P**		**21 53 50.1**	**+0.1**
	comp=E,1.6nm,0.9s,mb4.1,baz=328,slow=7.5,SNR=6.9								

IDC 19 21:48:41.3±3.6, 22°.35N×45°.20W, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/21, mbtmp3.8/4, MS3.8/2, Ms1 3.8/2, ms1mx3.2/20, Error ellipse: s-maj=105.6km s-min=36.2km az=26.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**41.88**	**106**	LR	LR	22 10 52.7	
	comp=Z,88nm,19.6s,baz=231,slow=32						
TORD	**Torodi Ar. Bea**	**45.44**	**93**	P		21 57 01.9	-0.4
	1.2nm,0.9s,baz=299,slow=9.4,SNR=6.1						
TORD				LR	LR	22 14 13.2	
	comp=Z,124nm,18.0s,baz=260,slow=34						
NOA	**NORSAR Array B**	**54.58**	**30**	P		P	21 58 10.6	-0.5
	0.8nm,0.9s,baz=252,slow=7.5,SNR=2.9						
BRTR	**Keskin Array B**	**67.74**	**55**	P		P	21 59 41.6	+0.8
	0.6nm,0.6s,baz=269,slow=5.8,SNR=5.3						
ILAR	**Eielson Array**	**74.86**	**334**	P		P	22 00 23.5	+0.1
	1.0nm,0.8s,baz=72,slow=5.1,SNR=9.9						

IDC 19 21:49:46.1±1.3, 25°.22N×98°.30E, h0km, mb3.3/3, mb1 3.4/4, mb1mx3.2/24, mbtmp3.2/4, ML3.3/1, Error ellipse: s-maj=52.2km s-min=17.4km az=73.0
ISC 19 21:49:46.4±1.0, 24°.93N±0°.09×98°.01E±0°.07, h10km, n5, σ0s72/7, mb3.3/3, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**4.29**	**86**	Pg	**Pg**	**21 51 07.8**	**-0.8**
KMI				Sg	**Sg**	**21 52 04.6**	**+0.3**
KMI				smax			
	comp=N,16nm,0.9s						
KMI				smax			
	comp=E,13nm,0.8s						
CMAR	**Chiang Mai Arr**	**6.50**	**172**	Pn	**Pn**	**21 51 27.9**	**+5.8**
	comp=E,0.2nm,0.3s,baz=346,slow=13,SNR=3.4						
CMAR				Pg	**Pg**	**21 51 50.4**	**-0.5**
	comp=E,0.2nm,0.3s,baz=346,slow=18,SNR=7.3						
CMAR				Lg		21 53 18.7	
	comp=E,0.3nm,0.3s,baz=354,slow=31,SNR=4.3						
MKAR	**Makanchi Array**	**25.17**	**334**	P	**P**	**21 55 12.0**	**+0.2**
	comp=E,0.2nm,0.2s,mb3.2,baz=130,slow=11,SNR=2.7						
ZALV	**Zalesovo Beam**	**30.61**	**345**	P	**P**	**21 55 60.0**	**-0.5**
	comp=E,0.3nm,0.5s,mb3.4,baz=170,slow=8.8,SNR=2.6						
WRA	**Warramunga Arr**	**56.91**	**138**	P	**P**	**21 59 33.2**	**+1.4**
	comp=E,0.3nm,0.8s,mb3.4,baz=329,slow=7.7,SNR=2.8						

BJI 19 21:52:43.4, 24°.66N×97°.77E, h6km, ML3.4/4
ISCJB 19 21:52:44.4±0.8, 25°.05N±0°.09×98°.16E±0°.06, h10km, mb3.4/4, Error ellipse: s-maj=13.9km s-min=7.7km az=12.8
IDC 19 21:52:44.7±1.4, 25°.04N×97°.93E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.3/24, mbtmp3.4/5, ML3.5/1, Error ellipse: s-maj=51.1km s-min=18.4km az=75.0
ISC 19 21:52:46.0±0.8, 24°.95N±0°.07×98°.07E±0°.06, h10km, n7, σ1s07/9, mb3.4/4, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**4.24**	**87**	Pg	**Pg**	**21 54 06.0**	**-1.3**
KMI				Sg	**Sg**	**21 55 03.1**	**+0.9**
KMI				smax			
	comp=N,41nm,0.8s						
KMI				smax			
	comp=E,41nm,1.0s						
CMAR	**Chiang Mai Arr**	**6.51**	**173**	Pn	**Pn**	**21 54 24.7**	**+2.8**
	comp=E,0.3nm,0.3s,baz=348,slow=17,SNR=3.1						
CMAR				Pg	**Pg**	**21 54 49.4**	**-1.4**
	comp=E,0.3nm,0.3s,baz=346,slow=17,SNR=7.2						
CMAR				Lg		21 56 16.1	
	comp=E,1.4nm,0.3s,baz=346,slow=30,SNR=11						
LSA	**Lhasa**	**7.76**	**309**	Pn	**Pn**	**21 54 39.8**	**+0.8**
SONM	**Songino Array**	**23.77**	**14**	P	**P**	**21 57 58.6**	**-0.1**
	comp=E,0.4nm,0.9s,mb2.9,baz=191,slow=7.0,SNR=2.9						
MKAR	**Makanchi Array**	**25.18**	**334**	P	**P**	**21 58 11.1**	**-0.4**
	comp=E,0.2nm,0.2s,mb3.2,baz=149,slow=9.4,SNR=4.1						
ZALV	**Zalesovo Beam**	**30.61**	**345**	P	**P**	**21 58 59.4**	**-0.6**
	comp=E,0.5nm,0.4s,mb3.7,baz=158,slow=12,SNR=3.3						
WRA	**Warramunga Arr**	**56.89**	**138**	P	**P**	**22 02 31.8**	**+0.5**
	comp=E,0.6nm,0.5s,mb3.9,baz=328,slow=7.5,SNR=6.2						

ISCJB 19 21:54:20.6±2.1, 14°.95S±0°.2×174°.0W±0°.2, h94km±27km, mb4.2/7, Error ellipse: s-maj=37.3km s-min=22.6km az=146.1
NEIC 19 21:54:21.6±1.6, 15°.00S×174°.06W, h83km±19km, mb4.3/1, Error ellipse: s-maj=26.5km s-min=15.0km az=144.0
IDC 19 21:54:21.6±2.9, 15°.05S×173°.98W, h83km±30km, mb3.8/5, mb1 4.1/6, mb1mx3.7/16, mbtmp3.9/6, Error ellipse: s-maj=47.9km s-min=19.6km az=139.0
ISC 19 21:54:21.4±2.0, 15°.0S±0°.2×174°.0W±0°.2, h86km±26km, n10, σ0s62/11, mb4.2/7, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.39**	**65**	*e*Pn	**Pn**	**21 54 60.0**	**+1.2**
AFI				*e*Sn	**Sn**	**21 55 27.2**	**-0.1**
AFI	**Afiamalu**	**2.39**	**65**	P	**Pn**	**21 54 59.7**	**+1.0**
	141nm,0.3s,baz=49,slow=2.2,SNR=70						
AFI				S	**Sn**	**21 55 25.4**	**-1.9**
	133nm,0.3s,baz=16,slow=20,SNR=7.2						
URZ	**Urewera**	**24.51**	**197**	P	**P**	**21 59 32.7**	**-0.1**
	2.2nm,0.3s,mb4.0,baz=8.8,slow=11,SNR=3.0						
HNR	**Honiara**	**26.03**	**279**	*e*P	**P**	**21 59 46.3**	**-0.5**
	25nm,0.4s,mb5.0						
CTAO	**Charters Tower**	**38.18**	**256**	*e*P	**P**	**22 01 33.0**	**+0.1**
	2.2nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**43.76**	**239**	P	**P**	**22 02 18.2**	**-0.4**
	1.5nm,0.5s,mb4.0,baz=89,slow=9.4,SNR=4.9						
WRA	**Warramunga Arr**	**49.38**	**256**	P	**P**	**22 03 02.9**	**+0.2**
	1.5nm,0.4s,mb4.3,baz=91,slow=6.6,SNR=40						
WRA				PcP	PcP	22 04 24.8	+0.8
	0.4nm,0.6s,baz=92,slow=3.9,SNR=3.8						
ASAR	**Alice Springs**	**49.70**	**252**	P	**P**	**22 03 05.2**	**+0.1**
	2.7nm,0.4s,mb4.5,baz=86,slow=8.1,SNR=42						
NVAR	**Mina Array Bea**	**74.39**	**42**	P	**P**	**22 05 50.4**	**+0.4**
	0.5nm,0.6s,mb3.4,baz=226,slow=9.9,SNR=3.6						
BRTR	**Keskin Array B**	**145.44**	**321**	PKPbc	PKPbc	22 13 51.8	+1.9
	0.9nm,0.7s,baz=69,slow=2.6,SNR=6.0						

KRSC 19 22:05:12.0±0.8, 49°.55N×158°.46E, h51km±51km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALID	**Alaid**	**2.29**	**306**	*e*P	Pn	22 05 48.3	+1.1
ALID				*i* S	Sn	22 06 14.8	+0.6
MIPR	**Malaya Ipel'ka**	**2.94**	**339**	*e*P	Pn	22 05 59.0	+2.9
MIPR				*i* S	Sn	22 06 33.1	+3.1
GRL	**Gorelyy**	**3.02**	**356**	*e*P	Pn	22 05 59.8	+2.6
GRL				*i* S	Sn	22 06 35.5	+3.5
PET	**Petropavlovsk**	**3.48**	**2**	*e*P	Pn	22 06 04.4	+2.8
PET				*i* S	Sn	22 06 45.8	+2.3
SPN	**Mys Shipunski**	**3.69**	**15**	*e*P	Pn	22 06 10.0	+3.6
SPN				*i* S	Sn	22 06 51.2	+2.7
AVH	**Avacha**	**3.73**	**3**	*e*P	Pn	22 06 10.6	+3.7
AVH				*i* S	Sn	22 06 53.6	+4.2
GNL	**Ganaly**	**4.16**	**356**	*e*P	Pn	22 06 16.6	+3.7
MKZ	**Mys Kozlova**	**5.40**	**21**	*e*P	Pn	22 06 32.2	+2.3
MKZ				*i* S	Sn	22 07 30.6	-0.1
KBTR	**Krutoberegovo**	**7.17**	**20**	*e*P	Pn	22 06 58.2	+4.1

ISCJB 19 22:13:22.7±0.8, 38°.29N±0°.04×21°.89E±0°.03, h10km±7km,

Error ellipse: s-maj=6.3km s-min=4.3km az=173.4
CSEM 19 22:13:22.9±0.1, 38°.29N×21°.90E, h5km, ML1.1/5, Error ellipse: s-maj=3.7km s-min=2.7km az=161.0
THE 19 22:13:22.5, 38°.29N×21°.86E, h10km±1km, ML1.1/5, Error ellipse: s-maj=1.4km s-min=0.5km az=243.0
ATH 19 22:13:22.6, 38°.29N×21°.93E, h5km±3km, MD2.7/6
ISC 19 22:13:23.3±0.8, 38°.29N±0°.04×21°.89E±0°.03, h7km±8km, n23, σ0s73/42, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPR	**University Cam**	**0.08**	**267**	*e*PG	**Pg**	**22 13 24.5**	**-0.7**
UPR				*e*SG	**Sg**	**22 13 26.0**	**-0.5**
UPR	**University Cam**	**0.08**	**267**	P	**Pg**	**22 13 24.4**	**-0.8**
UPR				S	**Sg**	**22 13 26.2**	**-0.3**
UPR	**University Cam**	**0.08**	**267**	*e*Pg	**Pg**	**22 13 24.5**	**-0.7**
UPR				*e*Sg	**Sg**	**22 13 26.0**	**-0.5**
LAKA	**Lakka**	**0.09**	**123**	P	**Pg**	**22 13 25.3**	**0.0**
LAKA				S	**Sg**	**22 13 27.4**	**+0.7**
LAKA	**Lakka**	**0.09**	**123**	P	**Pg**	**22 13 25.3**	**0.0**
LAKA				S	**Sg**	**22 13 27.4**	**+0.7**
EFP	**Efpalio**	**0.14**	**6**	*e*PG	**Pg**	**22 13 25.5**	**-0.7**
EFP				*e*SG	**Sg**	**22 13 28.0**	**-0.2**
EFP	**Efpalio**	**0.14**	**6**	P	**Pg**	**22 13 25.8**	**-0.4**
EFP				S	**Sg**	**22 13 28.3**	**+0.1**
EFP	**Efpalio**	**0.14**	**6**	*e*Pg	**Pg**	**22 13 25.5**	**-0.7**
EFP	**Efpalio**	**0.14**	**6**	P	**Pg**	**22 13 25.8**	**-0.4**
EFP				*e*Sg	**Sg**	**22 13 28.0**	**-0.2**
EFP				S	**Sg**	**22 13 28.3**	**+0.1**
TRIZ	**Trizonia**	**0.17**	**62**	P	**Pg**	**22 13 26.6**	**-0.1**
TRIZ				S	**Sg**	**22 13 29.3**	**+0.3**
TRIZ	**Trizonia**	**0.17**	**62**	P	**Pg**	**22 13 26.6**	**-0.1**
TRIZ				S	**Sg**	**22 13 29.3**	**+0.3**
KALE	**Kalithea**	**0.22**	**63**	P	**Pg**	**22 13 27.8**	**+0.1**
KALE				S	**Sg**	**22 13 31.4**	**+0.6**
KALE	**Kalithea**	**0.22**	**63**	P	**Pg**	**22 13 27.8**	**+0.1**
KALE				S	**Sg**	**22 13 31.4**	**+0.6**
RLS	**Riolos of Patr**	**0.40**	**235**	*e*PB	**Pg**	**22 13 31.7**	**+0.6**
RLS	**Riolos of Patr**	**0.40**	**235**	*e*Pb	**Pg**	**22 13 31.7**	**+0.6**
GUR	**Goura**	**0.50**	**134**	*e*PB	**Pg**	**22 13 32.0**	**-1.0**
GUR				*e*SB	**Sg**	**22 13 39.2**	**-0.3**
GUR	**Goura**	**0.50**	**134**	*e*Pb	**Pg**	**22 13 32.0**	**-1.0**
GUR				*e*Sb	**Sg**	**22 13 39.2**	**-0.3**
DSF	**Desfina**	**0.52**	**76**	P	**Pg**	**22 13 32.5**	**-0.8**
DSF				S	**Sg**	**22 13 40.9**	**+0.8**
DSF	**Desfina**	**0.52**	**76**	P	**Pg**	**22 13 32.5**	**-0.8**
DSF				S	**Sg**	**22 13 40.9**	**+0.8**
EVR	**Evrytania**	**0.63**	**354**	*e*PB	**Pg**	**22 13 35.1**	**-0.3**
EVR	**Evrytania**	**0.63**	**354**	*e*Pb	**Pg**	**22 13 35.1**	**-0.3**
VLS	**Valsamata**	**1.03**	**264**	*e*PG	**Pg**	**22 13 42.6**	**-0.4**
VLS				*e*SB	**Sg**	**22 13 58.9**	**+2.6**
VLS	**Valsamata**	**1.03**	**264**	*e*Pg	**Pg**	**22 13 42.6**	**-0.4**
VLS				*e*Sb	**Sg**	**22 13 58.9**	**+2.6**

FUNV 19 22:15:30.7, 8°.06N×73°.78W, h73km, MW3.5, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.46**	**98**	↑*i*P	Pn	22 15 55.0	-0.3
CAPV				*e*S	Sn	22 16 13.0	-0.8
VIGV	**El Vigia**	**2.51**	**72**	*e*P	Pn	22 16 09.3	0.0
VIGV				*e*S	Sn	22 16 36.5	-2.4
VIRV	**Villa del Rosa**	**2.78**	**29**	↑*i*P	Pn	22 16 11.2	-1.8
VIRV				*e*S	Sn	22 16 42.3	-3.1
SOCV	**Socops**	**2.90**	**85**	*e*P	Pn	22 16 13.9	-0.7
SOCV				*e*S	Sn	22 16 46.2	-2.3
QARV	**Quebrada Arrib**	**3.86**	**56**	*e*P	Pn	22 16 26.8	-0.9
DABV	**Dabajuro**	**4.21**	**47**	*e*P	Pn	22 16 31.9	-0.5
CURV	**Curarigua**	**4.24**	**63**	*e*P	Pn	22 16 31.9	-0.9
CURV				*e*S	Sn	22 17 16.3	-4.9
ELOV	**Elorza**	**4.39**	**104**	*e*P	Pn	22 16 32.9	-2.0
SANV	**Sanarito**	**4.43**	**71**	*e*P	Pn	22 16 34.3	-1.2
SANV				*e*S	Sn	22 17 20.7	-5.1
SIQV	**Siquisique**	**4.69**	**56**	*e*P	Pn	22 16 37.8	-1.2
SIQV				*e*S	Sn	22 17 27.4	-4.6
TEPV	**Terepaima**	**4.91**	**67**	*e*P	Pn	22 16 41.0	-1.0
MONV	**Montecano**	**5.39**	**44**	*e*P	Pn	22 16 47.0	-1.5
MAPV	**Macapo**	**5.54**	**71**	*e*P	Pn	22 16 49.0	-1.7
BAUV	**El Baul**	**5.74**	**81**	*e*P	Pn	22 16 51.1	-2.3
TURV	**Turiamo**	**6.32**	**68**	*e*P	Pn	22 16 59.7	-1.6
CAOV	**Caicara del Or**	**7.43**	**95**	*e*P	Pn	22 17 13.5	-2.9

MOS 19 22:26:13.9±1.9, 53°.47N×109°.83E, h15km, mb4.1/1, Error ellipse: s-maj=41.8km s-min=15.2km az=72.6
BYKL 19 22:26:13.1±0.3, 53°.48N×109°.76E, h19km±3km, 1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SYVR	**Suvo**	**0.23**	**39**	*e*PG	Pg	22 26 17.8	-0.7
SYVR				*e*		22 26 21.2	
SYVR				pmax	pmax		
	comp=Z,651nm,0.1s						
SYVR				smax			
	comp=N,9μm,0.1s						
SYVR	**Suvo**	**0.23**	**39**	↓*i*Pg	Pg	22 26 17.9	-0.6
SYVR				*i* Sg	Sg	22 26 21.8	-0.5
SYVR				Pmax			
	comp=N,399nm,0.1s						
SYVR				Smax			
	comp=N,9μm,0.1s						
MXMB	**Maximikha**	**0.65**	**251**	*e*Pg	Pg	22 26 25.4	-0.5
MXMB				*e*Sg	Sg	22 26 35.3	+0.8
MXMB				Pmax			
	comp=N,133nm,0.1s						
MXMB				Smax			
	comp=N,1μm,0.2s						
OGRR	**Ongureny**	**1.30**	**278**	*e*PG	Pg	22 26 36.5	-1.7
OGRR				*e*		22 26 54.4	
OGRR				pmax	pmax		
	comp=Z,45nm,0.3s						
OGRR				smax			
	comp=N,425nm,0.3s						
OGRR	**Ongureny**	**1.30**	**278**	*e*Pg	Pg	22 26 36.5	-1.7
OGRR				*e*Sg	Sg	22 26 54.3	-0.9
OGRR				Pmax			
	comp=N,40nm,0.3s						
OGRR				Smax			
	comp=N,423nm,0.2s						
YLYR	**Ulyunkhan**	**1.62**	**30**	*e*PN	Pn	22 26 40.6	0.0
YLYR				*e*		22 27 03.9	
YLYR				pmax	pmax		
	comp=Z,38nm,0.2s						
YLYR				smax			
	comp=N,257nm,0.3s						
YLYR	**Ulyunkhan**	**1.62**	**30**	*e*Pn	Pn	22 26 40.6	0.0
YLYR				*e*Pg	Pg	22 26 41.4	-2.9
YLYR				*i* Sg	Sg	22 27 04.1	-1.4
YLYR				Pmax			
	comp=N,38nm,0.3s						
YLYR				Smax			
	comp=N,342nm,0.8s						
ZRHB	**Zarechye**	**1.83**	**241**	*e*Pn	Pn	22 26 45.4	+2.0
ZRHB				*e*Pg	Pg	22 26 46.5	-1.7
ZRHB				*e*Sg	Sg	22 27 10.9	-1.1
ZRHB				Pmax			
	comp=N,107nm,0.7s						
ZRHB				Smax			
	comp=N,649nm,0.9s						
UUDB	**Ulan-Yde**	**2.06**	**219**	*e*Pn	Pn	22 26 47.2	+0.6
UUDB				*e*Pg	Pg	22 26 49.6	-3.0
UUDB				*e*Sn	Sn	22 27 14.7	+3.0
UUDB				*e*Sg	Sg	22 27 17.7	-1.6
UUDB				Pmax			
	comp=N,54nm,0.7s						
UUDB				Smax			
	comp=N,238nm,0.5s						
TRG	**Tyrgan**	**2.18**	**252**	*e*Pn	Pn	22 26 48.4	+0.1
TRG				*e*Sn	Sn	22 27 15.4	+0.7
TRG				*e*Sg	Sg	22 27 21.5	-1.7
TRG				max			
	comp=N,26nm,0.2s						
TRG				Smax			
	comp=N,134nm,0.2s						
NIZ	**Nizh Angarsk**	**2.30**	**357**	*e*PN	Pn	22 26 56.2	+6.2
NIZ				*e*		22 27 24.9	
NIZ				pmax	pmax		
	comp=Z,35nm,0.3s						
NIZ				smax			
	comp=N,258nm,0.6s						
NIZ	**Nizh Angarsk**	**2.30**	**357**	*e*Pg	Pg	22 26 53.8	-3.5
NIZ				*e*Sg	Sg	22 27 24.4	-2.8
NIZ				Pmax			
	comp=N,53nm,0.3s						
NIZ				Smax			
	comp=N,280nm,0.4s						
KAB	**Kabansk**	**2.37**	**234**	*e*Sg	Sg	22 27 27.9	-1.3
KAB				Smax			
	comp=N,762nm,0.8s						
HRMR	**Khuramsha**	**2.52**	**224**	*e*Pn	Pn	22 26 53.7	+0.7
HRMR				*e*Pg	Pg	22 26 57.3	-4.2
HRMR				*e*Sn	Sn	22 27 23.1	-0.1
HRMR				*e*Sg	Sg	22 27 31.7	-2.5
HRMR				Pmax			
	comp=N,93nm,0.5s						
HRMR				Smax			
	comp=N,604nm,0.3s						
KMO	**Kumora**	**2.55**	**19**	*e*Pn	Pn	22 26 54.3	+0.9
KMO				*e*Pg	Pg	22 26 57.4	-4.6
KMO				*e*Sn	Sn	22 27 25.9	+2.0
KMO				*e*Sg	Sg	22 27 31.9	-3.2
KMO				Pmax			
	comp=N,45nm,0.5s						
KMO				Smax			
	comp=N,193nm,1.1s						
YOA	**Uoyan**	**2.89**	**22**	*e*PN	Pn	22 27 05.1	+7.1
YOA	**Uoyan**	**2.89**	**22**	*e*	Sn	22 27 28.4	-3.8
YOA				*e*Sg	Sg	22 27 43.9	-2.0
YOA				Smax			
	comp=N,283nm,1.1s						
LSTR	**Listvyanka**	**3.41**	**244**	*e*	Pg	22 27 17.8	-0.5
LSTR				*e*Sn	Sn	22 27 43.3	-1.7
LSTR				*e*Sg	Sg	22 27 58.2	-4.2
LSTR				Smax			
	comp=N,50nm,0.9s						
IRK	**Irkutsk**	**3.55**	**252**	*e*Sg	Sg	22 28 04.1	-2.9
IRK				Smax			
	comp=N,218nm,0.3s						
TLY	**Talaya**	**4.14**	**247**	*e*Sg	Sg	22 28 20.5	-5.5
TLY				Smax			
	comp=N,31nm,0.7s						
NLYR	**Nelyaty**	**4.56**	**46**	*e*PN	Pn	22 27 21.0	0.0
NLYR				*e*		22 27 36.1	
NLYR				*e*		22 28 32.9	
NLYR				pmax	pmax		
	comp=Z,18nm,0.9s						
NLYR				smax			
	comp=E,81nm,1.2s						
NLYR	**Nelyaty**	**4.56**	**46**	*e*Pn	Pn	22 27 23.2	+2.2
NLYR				*e*Pg	Pg	22 27 35.3	-5.1
NLYR				*e*Sg	Sg	22 28 35.1	-4.3
NLYR				*e*		22 28 45.4	
NLYR				Pmax			
	comp=E,14nm,0.7s						
NLYR				max			
	comp=E,83nm,1.6s						
ARS	**Arshan**	**4.73**	**254**	*e*Pn	Pn	22 27 23.1	-0.2
ARS				*e*		22 27 33.7	
ARS				*e*Sg	Sg	22 28 38.3	-6.4
ARS				max			
	comp=E,12nm,0.5s						
ARS				Smax			
	comp=E,93nm,0.4s						
ZAK	**Zakamensk**	**5.07**	**235**	*e*Pg	Pg	22 27 44.0	-6.1
ZAK				*e*Sg	Sg	22 28 50.1	-5.6
ZAK				Pmax			
	comp=E,1.0nm,0.4s						
ZAK				Smax			
	comp=E,16nm,1.0s						
MOY	**Mondy**	**5.65**	**255**	*e*Sg	Sn	22 29 06.3	+26
MOY				Smax			
	comp=E,196nm,0.7s						
ULN	**Ulaanbaatar**	**5.88**	**198**	*e*Pg	Pn	22 27 58.3	+19
ULN				*e*Sg	Sn	22 29 15.7	+30
CRS	**Chara**	**5.96**	**51**	*e*PN	Pn	22 28 02.1	+22
CRS				*e*		22 29 17.7	
CRS				pmax	pmax		
	comp=Z,17nm,0.6s						
CRS				smax			
	comp=E,31nm,2.0s						
CRS	**Chara**	**5.96**	**51**	*e*Sg	Sn	22 29 17.8	+30
CRS				Smax			
	comp=E,15nm,0.7s						
ORL	**Orlik**	**6.08**	**265**	*e*Pn	Pn	22 27 43.1	+1.3
ORL				*e*Sn	Sn	22 28 47.6	-3.2
ORL				*e*Sg	Sn	22 29 21.5	+31
ORL				max			
	comp=E,5.0nm,0.6s						
ORL				Smax			
	comp=E,37nm,1.4s						
TUP	**Tupik**	**6.09**	**77**	*e*Sg	Sn	22 29 21.3	+30
TUP				Smax			
	comp=E,38nm,1.1s						
TDJR	**Todzha**	**8.32**	**268**	*e*Sg	Sn	22 30 30.9	+45

ISCJB 19 22:53:25.8±0.3, 33°.31N±0°.03×92°.30E±0°.05, h10km, mb4.1/18, MS3.8/20, Error ellipse: s-maj=6.0km s-min=4.2km az=11.3
IDC 19 22:53:25.8±0.7, 33°.14N×92°.04E, h0km, mb4.1/15, mb1 4.2/18, mb1mx4.1/28, mbtmp4.1/18, ML3.8/3, MS3.7/24, Ms1 3.8/24, ms1mx3.6/36, Error ellipse: s-maj=25.3km s-min=14.5km az=51.0
BJI 19 22:53:26.0, 33°.10N×91°.98E, h19km, mB4.6/6, mb4.6/13, Ms4.3/10, Ms7 4.1/9
NEIC 19 22:53:27.2±0.4, 33°.16N×92°.21E, h10km, mb4.0/7, Error ellipse: s-maj=10.5km s-min=6.9km az=218.0
ISC 19 22:53:28.1±0.3, 33°.33N±0°.03×92°.28E±0°.05, h10km, n59, σ1s10/51, mb4.1/18, MS3.8/20, 1D, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.74**	**195**	Pg	**Pn**	**22 54 27.6**	**+1.7**
LSA				Sg	**Sb**	**22 55 19.5**	**-0.2**
TAPN	**Taplejung**	**7.15**	**215**	*e*P	**Pn**	**22 55 14.2**	**+1.5**
ODAN	**Odare**	**7.71**	**215**	*e*P	**Pn**	**22 55 20.3**	**-0.2**
	20nm,0.5s						
JIRN	**Jiri**	**7.71**	**225**	*e*P	**Pn**	**22 55 22.8**	**+2.3**
	24nm,0.6s						
SHL	**Shillong**	**7.74**	**183**	*e*PKP	**Pn**	**22 55 22.5**	**+1.6**
SHL				*e*S	**Sn**	**22 56 47.0**	**-1.6**
RAMN	**Ramite**	**8.03**	**219**	*e*P	**Pn**	**22 55 24.1**	**-0.8**
KKN	**Kakani**	**8.18**	**229**	*e*P	**Pn**	**22 55 27.6**	**+0.7**
PKI	**Pulchoki**	**8.25**	**228**	*e*P	**Pn**	**22 55 28.2**	**+0.3**
	26nm,0.5s						
PKIN	**Phulchoki**	**8.25**	**228**	*e*P	**Pn**	**22 55 28.0**	**+0.1**
DMN	**Daman**	**8.41**	**229**	*e*P	**Pn**	**22 55

KMI					LR	LR				
	comp=E,530nm,8.4s									
KMI					LR	LR				
	comp=Z,790nm,10.1s									
GYA	**Guiyang**	**14.22**	**115**		P	**Pn**	**22 56 50.3**	**+0.7**		
GYA					pmax	pmax				
	comp=Z,10.0nm,0.8s									
ENH	**Enshi**	**14.95**	**97**	*e*Pn		**Pn**	**22 56 58.8**	**-0.7**		
	comp=Z,8.3nm,0.5s									
MK31	**Makanchi Array**	**15.45**	**333**	*e*Pn		**Pn**	**22 57 05.7**	**-0.3**		
MKAR	**Makanchi Array**	**15.45**	**333**	Pn		**Pn**	**22 57 04.0**	**-2.0**		
	comp=Z,0.1nm,0.3s,baz=145,slow=14,SNR=10									
MKAR					LR	LR	23 02 58.2			
	comp=Z,140nm,19.3s,baz=149,slow=37									
CMAR	**Chiang Mai Arr**	**15.97**	**156**	Pn		**Pn**	**22 57 09.1**	**-3.8**		
	comp=Z,0.2nm,0.3s,baz=332,slow=12,SNR=21									
CMAR					LR	LR	23 04 07.3			
	comp=Z,218nm,19.0s,baz=333,slow=40									
UCH	**Uchtor**	**16.60**	**307**	*e*Pn		**Pn**	**22 57 23.0**	**+2.2**		
	comp=Z,14nm,1.4s									
AAK	**Ala-Archa**	**16.79**	**309**	Pn		**Pn**	**22 57 27.6**	**+4.3**		
	comp=Z,0.3nm,0.3s,baz=170,slow=7.0,SNR=6.4									
AAK					LR	LR	23 05 08.8			
	comp=Z,416nm,21.8s,baz=99,slow=42									
AML	**Almayashu**	**17.10**	**306**	*e*Pn		**Pn**	**22 57 27.8**	**+0.5**		
	comp=Z,5.2nm,1.1s									
EKS2	**Erkin-Say**	**17.28**	**308**	*e*Pn		**Pn**	**22 57 31.3**	**+1.9**		
	comp=Z,10nm,1.4s									
SONM	**Songino Array**	**17.98**	**32**	P		**Pn**	**22 57 41.1**	**+3.0**		
SONM					LR	LR	23 05 57.6			
SONM	**Songino Array**	**17.98**	**32**	P		**Pn**	**22 57 41.1**	**+3.0**		
	comp=Z,0.7nm,0.3s,baz=214,slow=12,SNR=87									
SONM					LR	LR	23 05 57.6			
	comp=Z,92nm,20.6s,baz=242,slow=41									
ULN	**Ulaanbaatar**	**18.30**	**33**	*e*P		**Pn**	**22 57 42.8**	**+0.8**		
	comp=Z,18nm,1.1s									
KBL	**Kabul**	**19.32**	**280**	*e*P		**Pn**	**22 57 53.9**	**-0.5**		
KURK	**Kurchatov**	**20.06**	**334**	P		**P**	**22 58 00.8**	**-0.6**		
	comp=Z,2.7nm,0.5s,baz=142,slow=12,SNR=20									
KURK					LR	LR	23 05 47.1			
	comp=Z,166nm,20.6s,MS3.4,baz=160,slow=37									
ZAA0	**Zalesovo Array**	**21.29**	**348**	*e*P		**P**	**22 58 14.6**	**0.0**		
ZALV	**Zalesovo Beam**	**21.29**	**348**	P		**P**	**22 58 14.9**	**+0.3**		
	comp=Z,8.8nm,0.9s,mb4.1,baz=155,slow=11,SNR=29									
ZALV					LR	LR	23 07 46.4			
	comp=Z,48nm,18.9s,MS2.9,baz=209,slow=40									
BVAR	**Borovoye Array**	**25.17**	**328**	P		**P**	**22 58 53.4**	**0.0**		
	comp=Z,2.1nm,0.7s,mb3.8,baz=131,slow=10,SNR=13									
BRVK	**Borovoye**	**25.24**	**328**	*e*P		**P**	**22 58 54.2**	**+0.1**		
	comp=Z,9.7nm,1.0s,mb4.3									
ABKAR	**Akbulak array**	**28.77**	**313**	*e*P		**P**	**22 59 25.2**	**-0.6**		
	comp=Z,0.5nm,0.6s,mb3.4									
KSRS	**Korea Array**	**29.24**	**72**	LR		LR	23 13 42.8			
	comp=Z,33nm,18.3s,MS3.0,baz=94,slow=41									
AKTO	**Aktyubinsk**	**30.36**	**315**	LR		LR	23 13 20.8			
	comp=Z,231nm,18.1s,MS3.9,baz=274,slow=39									
ASF	**Jabal al Asfar**	**46.12**	**284**	P		**P**	**23 01 50.9**	**-1.8**		
	comp=Z,2.1nm,1.0s,mb4.0,baz=92,slow=1.5,SNR=4.4									
BRTR	**Keskin Array B**	**46.83**	**295**	P		**P**	**23 01 57.0**	**-1.2**		
	comp=Z,1.6nm,0.8s,mb4.0,baz=104,slow=7.3,SNR=9.9									
AKASG	**Malin Array Be**	**48.45**	**311**	P		**P**	**23 02 08.4**	**-2.1**		
	comp=Z,0.2nm,0.2s,mb3.7,baz=76,slow=7.8,SNR=5.2									
AKASG					LR	LR	23 26 40.3			
	comp=Z,124nm,18.7s,MS3.9,baz=75,slow=41									
EIL	**Elat**	**48.50**	**282**	P		**P**	**23 02 09.9**	**-1.3**		
	comp=Z,5.3nm,0.7s,mb4.7,baz=61,slow=3.1,SNR=5.1									
FINES	**FINESS Array B**	**50.07**	**325**	P		**P**	**23 02 21.9**	**-0.9**		
	comp=Z,1.3nm,0.7s,mb4.1,baz=80,slow=12,SNR=4.3									
FINES					LR	LR	23 25 30.9			
	comp=Z,116nm,21.5s,MS3.9,baz=263,slow=38									
ARCES	**ARCESS Array B**	**51.10**	**335**	P		**P**	**23 02 30.4**	**0.0**		
	comp=Z,2.7nm,1.0s,mb4.1,baz=65,slow=7.7,SNR=3.0									
MLR	**Muntele Rosu**	**51.31**	**304**	LR		LR	23 26 21.9			
	comp=Z,102nm,20.9s,MS3.8,baz=60,slow=39									
SPITS	**Spitsbergen Ar**	**54.75**	**346**	LR		LR	23 29 48.9			
	comp=Z,64nm,21.3s,MS3.7,baz=250,slow=40									
HFS	**Hagfors**	**56.20**	**324**	LR		LR	23 27 38.7			
	comp=Z,92nm,19.4s,MS3.9,baz=77,slow=36									
VRAC	**Vranov**	**56.71**	**311**	LR		LR	23 31 44.5			
	comp=Z,128nm,18.9s,MS4.0,baz=250,slow=41									
NOA	**NORSAR Array B**	**57.25**	**325**	P		**P**	**23 03 15.3**	**-0.1**		
	comp=Z,0.9nm,0.8s,mb3.9,baz=79,slow=7.1,SNR=3.8									
NOA					LR	LR	23 29 50.3			
	comp=Z,161nm,18.9s,MS4.2,baz=85,slow=38									
DAVOX	**Davos/Dischmat**	**61.75**	**309**	LR		LR	23 32 44.7			
	comp=Z,113nm,20.1s,MS4.0,baz=84,slow=38									
JMIC	**Jan Mayen**	**62.27**	**339**	LR		LR	23 31 03.3			
	comp=Z,40nm,21.6s,MS3.5,baz=229,slow=36									
WRA	**Warramunga Arr**	**66.46**	**137**	P		**P**	**23 04 17.5**	**-0.4**		
	comp=Z,0.8nm,0.7s,mb3.9,baz=326,slow=6.2,SNR=4.5									
ASAR	**Alice Springs**	**69.17**	**139**	P		**P**	**23 04 34.5**	**-0.4**		
	comp=Z,2.2nm,0.6s,mb4.3,baz=327,slow=6.3,SNR=27									
COLD	**Coldfoot**	**69.32**	**22**	P		**P**	**23 04 34.9**	**-0.5**		
	comp=Z,6.5nm,1.0s,mb4.5									
NWAO	**Narrogin (SRO)**	**69.97**	**158**	LR		LR	23 36 02.6			
	comp=Z,73nm,20.1s,MS3.9,baz=147,slow=37									
PPLA	**Purkeypile**	**71.29**	**26**	*e*P		**P**	**23 04 48.8**	**+1.4**		
	comp=Z,32nm,1.5s,mb5.0									
ILAR	**Eielson Array**	**71.93**	**23**	P		**P**	**23 04 52.0**	**+0.7**		
	comp=Z,2.9nm,0.9s,mb4.2,baz=297,slow=5.1,SNR=22									
ILAR					LR	LR	23 40 32.3			
	comp=Z,52nm,19.6s,MS3.8,baz=226,slow=39									
STKA	**Stephens Creek**	**79.81**	**139**	P		**P**	**23 05 35.9**	**-0.7**		
	comp=Z,3.0nm,0.9s,mb4.2,baz=358,slow=10.0,SNR=3.0									
STKA					LR	LR	23 47 10.3			
	comp=Z,81nm,18.6s,MS4.1,baz=20,slow=40									
TORD	**Torodi Ar. Bea**	**83.38**	**281**	P		**P**	**23 05 54.1**	**-1.9**		
	comp=Z,1.5nm,1.1s,mb4.0,baz=39,slow=4.4,SNR=9.0									
TORD					LR	LR	23 47 33.4			
	comp=Z,56nm,20.5s,MS3.9,baz=255,slow=39									
BOSA	**Boshof**	**88.46**	**234**	LR		LR	23 43 38.7			
	comp=Z,76nm,18.3s,MS4.2,baz=160,slow=34									
SCHQ	**Schefferville**	**90.38**	**348**	LR		LR	23 52 19.0			
	comp=Z,46nm,19.1s,MS3.9,baz=55,slow=39									
YBH	**Yreka Blue Hor**	**98.67**	**26**	LR		LR	23 54 01.0			
	comp=Z,48nm,19.3s,MS4.0,baz=176,slow=37									

*NEIC **19** 22:54:32.6,36.40N×27.13E,h45km, MD3.0(ISK), MD2.8(ATH), After ATH.*
*CSEM **19** 22:54:32.3±0.2,36.39N×27.05E,h8km, ML2.2, Error ellipse: s-maj=4.4km s-min=3.4km az=120.0*
*ISK **19** 22:54:32.7,36.45N×27.11E,h8km, ML2.2*
*ATH **19** 22:54:32.6,36.40N×27.13E,h45km, MD2.8/4*
*ISCJB **19** 22:54:33.0±0.6,36.39N±0.03×27.07E±0.05,h18km±9km, Error ellipse: s-maj=6.4km s-min=4.9km az=13.8*
*DDA **19** 22:54:38.0,36.54N×27.23E,h5km, Md2.9*

ISC 19 22:54:32.1±0.7, 36.39N±0.03×27.03E±0.05, h6km±7km, n33,σ0 84/56, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.56**	**52**	*e*PG		**Pg**		**22 54 42.5**	**-0.5**
DAT				*e*SG		**Sg**		**22 54 49.4**	**-0.8**
DAT	**Datca**	**0.56**	**52**	*e*Pg		**Pg**		**22 54 42.5**	**-0.4**
DAT				*e*Sg		**Sg**		**22 54 49.4**	**-0.8**
BODT	**Bodrum**	**0.71**	**18**	*e*PG		**Pg**		**22 54 45.2**	**-0.6**
BODT				*e*SG		**Sg**		**22 54 54.9**	**-0.3**
BODT	**Bodrum**	**0.71**	**18**	Pg		**Pg**		**22 54 44.7**	**-1.1**
BODT	**Bodrum**	**0.71**	**18**	*e*Pg		**Pg**		**22 54 45.2**	**-0.6**
BODT				*e*Sg		**Sg**		**22 54 54.9**	**-0.2**
BDRM	**Kayabasi**	**0.76**	**26**	*i* P		**Pg**		**22 54 46.7**	**0.0**
BDRM				*i* S		**Sg**		**22 54 57.2**	**+0.7**
BDRM	**Kayabasi**	**0.76**	**26**	*i* P		**Pg**		**22 54 46.7**	**0.0**
BDRM				*i* S		**Sg**		**22 54 57.2**	**+0.7**
KARP	**Karpathos**	**0.84**	**173**	*e*P		**Pg**		**22 54 49.3**	**+1.0**
KARP				*e*S		**Sg**		**22 55 01.1**	**+1.8**
KARP	**Karpathos**	**0.84**	**173**	*e*P		**Pg**		**22 54 49.3**	**+1.0**
KARP				*e*S		**Sg**		**22 55 01.1**	**+1.8**
KARP	**Karpathos**	**0.84**	**173**	*e*P		**Pg**		**22 54 49.3**	**+1.0**
KARP				*e*S		**Sg**		**22 55 01.1**	**+1.8**
ARG	**Arkhangelos**	**0.90**	**100**	*e*P		**Pg**		**22 54 49.0**	**-0.4**
ARG				*e*S		**Sg**		**22 55 00.6**	**-0.5**
ARG	**Arkhangelos**	**0.90**	**100**	*e*P		**Pg**		**22 54 49.0**	**-0.4**
ARG				*e*S		**Sg**		**22 55 00.6**	**-0.5**
ARG	**Arkhangelos**	**0.90**	**100**	*e*P		**Pg**		**22 54 49.0**	**-0.4**
ARG				*e*S		**Sg**		**22 55 00.6**	**-0.5**
MLSB	**Milas**	**1.09**	**33**	*e*PG		**Pg**		**22 54 52.6**	**-0.4**
MLSB	**Milas**	**1.09**	**33**	Pg		**Pg**		**22 54 51.9**	**-1.1**
MLSB	**Milas**	**1.09**	**33**	*e*Pg		**Pg**		**22 54 52.7**	**-0.3**
YER	**Yerkesik**	**1.25**	**53**	*e*PN		**Pn**		**22 54 55.5**	**-0.7**
YER	**Yerkesik**	**1.25**	**53**	*e*Pn		**Pn**		**22 54 55.5**	**-0.7**
GCAM	**G?zelcaml?**	**1.32**	**7**	*i* P		**Pn**		**22 54 57.5**	**+0.3**
GCAM				*i* S		**Sb**		**22 55 16.4**	**+1.8**
GCAM	**G?zelcaml?**	**1.32**	**7**	*i* P		**Pn**		**22 54 57.5**	**+0.4**
GCAM				*i* S		**Sb**		**22 55 16.4**	**+1.8**
TURN	**Turunc**	**1.35**	**68**	*i* P		**Pn**		**22 54 50.6**	**-7.0**
TURN				*i* S		**Sb**		**22 55 06.4**	**-9.1**
APE	**Apeiranthos**	**1.39**	**300**	*e*PN		**Pn**		**22 54 59.4**	**+1.4**
APE	**Apeiranthos**	**1.39**	**300**	*e*P		**Pn**		**22 54 57.4**	**-0.6**
APE				*e*S		**Sb**		**22 55 16.1**	**-0.2**
APE	**Apeiranthos**	**1.39**	**300**	*e*P		**Pn**		**22 54 57.4**	**-0.6**
APE				*e*S		**Sb**		**22 55 16.1**	**-0.2**
APE	**Apeiranthos**	**1.39**	**300**	*e*P		**Pn**		**22 54 57.4**	**-0.6**
APE	**Apeiranthos**	**1.39**	**300**	*e*Pn		**Pn**		**22 54 59.4**	**+1.4**
APE				*e*S		**Sb**		**22 55 16.1**	**-0.2**
AYDN	**Tasoluk**	**1.44**	**28**	*i* P		**Pn**		**22 54 58.7**	**-0.1**
AYDN				*i* S		**Sb**		**22 55 19.0**	**+1.0**
AYDN	**Tasoluk**	**1.44**	**28**	*i* P		**Pn**		**22 54 58.7**	**-0.1**
AYDN				*i* S		**Sb**		**22 55 19.0**	**+1.0**
NPS	**Neapolis**	**1.61**	**226**	*e*P		**Pn**		**22 55 00.6**	**-0.4**
NPS				*e*S		**Sn**		**22 55 20.6**	**-1.5**
NPS	**Neapolis**	**1.61**	**226**	*e*P		**Pn**		**22 55 00.6**	**-0.4**
NPS				*e*S		**Sn**		**22 55 20.6**	**-1.5**
NPS	**Neapolis**	**1.61**	**226**	*e*P		**Pn**		**22 55 00.6**	**-0.4**
NPS				*e*S		**Sn**		**22 55 20.6**	**-1.5**
GLHS	**Glhisar (BURDU**	**2.13**	**68**	*e*PN		**Pn**		**22 55 08.3**	**+0.1**
GLHS	**Glhisar (BURDU**	**2.13**	**68**	*e*Pn		**Pn**		**22 55 08.3**	**+0.1**

IDC 19 23:01:19.2±5.1, 30.48S×178.73W, h33km±7km, mb3.6/2, mb1 3.8/2, mb1mx3.6/11, mbtmp3.6/2, Error ellipse: s-maj=210.7km s-min=40.9km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.48**	**267**	P		P	P	23 09 11.2	-0.1
	0.6nm,0.7s,baz=100,slow=7.5,SNR=5.8								
ASAR				pP		pP	P	23 09 21.4	+0.3
	0.9nm,0.8s,baz=109,slow=8.0,SNR=5.8								
WRA	**Warramunga Arr**	**43.47**	**273**	P		P	P	23 09 19.9	+0.5
	0.7nm,0.4s,baz=113,slow=8.5,SNR=15								
WRA				pP		pP	P	23 09 30.4	+1.2
	1.1nm,0.4s,baz=112,slow=8.0,SNR=7.6								
FINES	**FINESS Array B**	**145.00**	**339**	PKPbc		PKPdf		23 20 49.5	-2.7
	1.7nm,0.8s,baz=324,slow=9.4,SNR=3.8								
FINES				pPKPbc				23 21 00.3	
	1.7nm,0.7s,baz=46,slow=5.5,SNR=2.2								

IDC 19 23:04:23.6±4.7, 30.38S×178.41W, h35km±7km, mb3.7/2, mb1 4.0/2, mb1mx3.6/11, mbtmp3.7/2, Error ellipse: s-maj=189.7km s-min=38.9km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.76**	**267**	P		P	P	23 12 17.2	-0.6
	0.7nm,0.5s,baz=105,slow=7.4,SNR=8.9								
ASAR				pP		pP	P	23 12 27.8	-0.3
	0.6nm,0.4s,baz=102,slow=7.7,SNR=5.0								
WRA	**Warramunga Arr**	**43.74**	**272**	P		P	P	23 12 26.1	+0.3
	1.3nm,0.5s,baz=112,slow=8.0,SNR=14								
WRA				pP		pP	P	23 12 36.4	+0.3
	2.4nm,0.7s,baz=112,slow=7.9,SNR=8.4								
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc		PKPdf		23 23 55.1	-0.6
	1.1nm,0.6s,baz=29,slow=3.2,SNR=6.9								
FINES				pPKPbc				23 24 06.1	
	1.1nm,0.5s,baz=53,slow=3.2,SNR=2.5								

IDC 19 23:39:43.2±3.8, 14.81S×174.64W, h136km±63km, mb3.6/3, mb1 3.9/4, mb1mx3.5/16, mbtmp3.6/4, Error ellipse: s-maj=165.8km s-min=25.0km az=146.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.92**	**73**	P		Pn		23 40 30.9	+1.9
	35nm,0.3s,baz=88,slow=2.8,SNR=21								
AFI				S		Sn		23 41 04.0	-0.3
	24nm,0.3s,baz=56,slow=18,SNR=2.5								
WRA	**Warramunga Arr**	**48.81**	**256**	P		P	P	23 48 15.0	+0.1
	0.4nm,0.3s,baz=92,slow=7.8,SNR=22								
ASAR	**Alice Springs**	**49.16**	**251**	P		P	P	23 48 17.1	-0.4
	5.8nm,0.6s,baz=86,slow=8.3,SNR=71								
ILAR	**Eielson Array**	**82.10**	**12**	P		P	P	23 51 48.1	0.0
	0.3nm,0.6s,baz=215,slow=7.7,SNR=4.3								
BRTR	**Keskin Array B**	**144.94**	**320**	PKP		PKPdf		23 59 04.8	+0.3
	0.4nm,0.5s,baz=54,slow=1.8,SNR=3.4								

BJI 19 23:54:49.5, 32.46N×105.06E, h13km, ML3.6/8, Ms3.5/1, Ms7 3.0/1, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.90**	**216**	Pn		Pn	Pn	23 55 22.6	+1.0
CD2				Pg		Pg	Pg	23 55 26.5	+0.5
CD2				Sg		Sg	Sg	23 55 47.8	-2.9
CD2				smax					
	comp=N,420nm,0.7s								
CD2				smax					
	comp=E,1μm,0.8s								
XAN	**Xi'an**	**3.60**	**63**	Pg		Pg	Pg	23 55 53.5	-4.9
XAN				Sg		Sg	Sg	23 56 39.6	-5.5
XAN				smax					
	comp=N,72nm,1.0s								
XAN				smax					
	comp=E,42nm,0.7s								
LZH	**Lanzhou**	**3.75**	**345**	Pn		Pn	Pn	23 55 49.8	+2.7
LZH				Pg		Pg	Pg	23 55 59.8	-1.6
LZH				Sg		Sg	Sg	23 56 41.9	-8.2
LZH				smax					
	comp=N,190nm,0.7s								
LZH				smax					
	comp=E,180nm,0.6s								

*IDC **20** 00:06:33.3±0.9, 0.98S×126.90E, h0km, mb4.2/7, mb1 4.3/8, mb1mx4.1/20, mbtmp4.2/8, ML3.8/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/28, Error ellipse: s-maj=77.2km s-min=16.6km az=73.0*
*ISCJB **20** 00:06:37.9±0.7, 1.02S±0.05×126.78E±0.05, h48km±10km, mb4.2/7, Error ellipse: s-maj=9.0km s-min=8.0km az=174.1*
*NEIC **20** 00:06:38.6±0.7, 1.21S×126.60E, h35km, mb3.6/1, Error ellipse: s-maj=30.7km s-min=10.7km az=66.0*
*DJA **20** 00:06:38, 0.93S×126.81E, h21km, MLv4.7/7*

ISC 20 00:06:39.6±0.6, 0.99S×126.81E±0.05, h45km±9km, n29,σ1 9/30, mb4.2/7, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.84**	**18**	P		P	Pn	**00 07 07.3**	**-1.4**
TNTI				S		S	Sn	**00 07 37.1**	**+0.3**
MSAI	**Masohi**	**3.15**	**138**	P		P	Pn	**00 07 28.4**	**+1.6**
LUWI	**Luwuk**	**4.04**	**269**	P		P	Pn	**00 07 37.8**	**-1.2**
BNDI	**Bandanaira**	**4.67**	**139**	P		P	Pn	**00 07 48.7**	**+1.0**
BNDI				S		S	Pn	**00 07 48.7**	**+1.0**
APSI	**Ampana**	**5.17**	**271**	P		P	Pn	**00 07 53.7**	**-0.8**
TTSI	**Tana Toraja**	**7.28**	**254**	P		P	Pn	**00 08 24.1**	**+0.6**
	0.2nm46nm,0.8s								
TLE	**Tual**	**7.50**	**128**	P		P	Pn	**00 08 26.7**	**+0.2**
	0.6nm111nm,0.8s								
SPSI	**Sidrap Palu**	**7.63**	**247**	P		P	Pn	**00 08 29.0**	**+0.7**
	0.5nm2μm111nm,0.5s								
BKSI	**Bulukumba**	**7.95**	**237**	P		P	Pn	**00 08 33.8**	**+1.2**
KAKA	**Kakadu**	**12.91**	**155**	*e*Pn		P	Pn	**00 09 36.8**	**-3.8**
KAKA	**Kakadu**	**12.91**	**155**	P		P	Pn	**00 09 37.6**	**-3.0**
KNA	**Kununurra**	**14.79**	**173**	P		P	Pn	**00 10 01.3**	**-4.7**
FITZ	**Fitzroy Crossi**	**17.04**	**184**	*e*Pn		P	Pn	**00 10 31.1**	**-3.7**
	2.9nm,0.6s								
FITZ				LR		LR		00 17 36.4	
FITZ	**Fitzroy Crossi**	**17.04**	**184**	P		P	Pn	**00 10 33.6**	**-1.3**
	0.3nm,0.3s,baz=32,slow=8.1,SNR=11								
FITZ				LR		LR		00 17 36.4	
	comp=Z,55nm,21.4s,baz=104,slow=39								
FITZ	**Fitzroy Crossi**	**17.04**	**184**	P		P	Pn	**00 10 31.2**	**-3.6**
WRA	**Warramunga Arr**	**20.22**	**159**	P		P	Pn	**00 11 09.0**	**-2.0**
WRA	**Warramunga Arr**	**20.22**	**159**	P		P	Pn	**00 11 09.0**	**-2.0**
	8.5nm,0.6s,baz=338,slow=12,SNR=12								
COEN	**Coen**	**20.69**	**129**	*e*P		P	Pn	**00 11 16.5**	**+0.4**
	173nm,0.7s								
COEN				*e*				00 11 25.0	
ASAR	**Alice Springs**	**23.57**	**164**	P		P	Pn	**00 11 45.0**	**-1.3**
	8.7nm,0.8s,mb4.2,baz=347,slow=9.6,SNR=62								
STKA	**Stephens Creek**	**33.74**	**157**	P		P	Pn	**00 13 17.4**	**+0.4**
	15nm,0.9s,mb4.9,baz=334,slow=8.1,SNR=17								
KSRS	**Korea Array**	**38.27**	**1**	P		P	Pn	**00 13 54.8**	**-0.9**
	2.2nm,0.9s,mb3.9,baz=179,slow=8.8,SNR=4.4								
GTA	**Gaotai**	**47.21**	**331**	*e*P		P	Pn	**00 15 09.8**	**+1.7**
GTA				pP		pP	Pn	00 15 13.3	-7.2
GTA				sP		sP	Pn	00 15 16.5	-9.3
GTA				pmax		pmax			
	comp=Z,4.0nm,0.9s,mb4.3								
SONM	**Songino Array**	**51.78**	**343**	P		P	Pn	**00 15 43.2**	**+0.4**
	comp=Z,0.1nm,0.4s,mb3.1,baz=328,slow=43,SNR=2.8								
MKAR	**Makanchi Array**	**61.49**	**327**	P		P	Pn	**00 16 52.2**	**+0.4**
MKAR	**Makanchi Array**	**61.49**	**327**	P		P	Pn	**00 16 52.2**	**+0.4**
	comp=Z,2.0nm,0.8s,mb4.3,baz=124,slow=8.2,SNR=12								
QSPA	**South Pole Qui**	**88.95**	**180**	P		P	Pn	**00 19 29.3**	**+0.4**
QSPA	**South Pole Qui**	**88.95**	**180**	P		P	Pn	**00 19 29.3**	**+0.4**
	comp=Z,1.0nm,0.7s,mb4.3,baz=322,slow=3.2,SNR=7.8								
TORD	**Torodi Ar. Bea**	**124.35**	**285**	PKP		PKPdf		00 25 35.6	+0.8
	comp=Z,0.6nm,0.9s,baz=30,slow=2.4,SNR=3.1								

IDC 20 00:13:35.8±12.0, 48.52S×105.72E, h0km, mb3.9/2, mb1 4.2/2, mb1mx3.8/13, mbtmp3.9/2, MS3.5/5, Ms1 3.5/5, ms1mx3.3/20, Error ellipse: s-maj=676.6km s-min=56.0km az=123.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**17.82**	**33**	LR		LR	LR	00 21 53.0	
	comp=Z,83nm,21.6s,baz=80,slow=28								
MAW	**Mawson**	**28.75**	**213**	LR		LR	LR	00 28 18.5	
	comp=Z,100nm,19.3s,baz=224,slow=31								
STKA	**Stephens Creek**	**31.69**	**72**	LR		LR	LR	00 29 04.4	
	comp=Z,103nm,18.8s,baz=25,slow=29								
ASAR	**Alice Springs**	**33.33**	**52**	P		P	P	00 20 14.9	-0.4
	0.9nm,0.7s,baz=213,slow=7.1,SNR=9.0								
WRA	**Warramunga Arr**	**36.65**	**49**	P		P	P	00 20 44.4	+0.4
	1.4nm,0.6s,baz=214,slow=7.9,SNR=6.7								
CTA	**Charters Tower**	**43.11**	**63**	LR		LR	LR	00 38 34.3	
	comp=Z,68nm,18.2s,baz=46,slow=35								
CMAR	**Chiang Mai Arr**	**66.94**	**353**	LR		LR	LR	00 54 13.6	
	comp=Z,39nm,18.4s,baz=185,slow=36								
TXAR	**Lajitas Array**	**150.45**	**120**	PKPbc		PKPbc	PKPbc	00 33 28.9	-0.2
	0.3nm,0.8s,baz=174,slow=2.7,SNR=3.5								

*IDC **20** 00:18:59.1±1.7, 25.20N×98.46E, h0km, mb3.4/2, mb1 3.6/2, mb1mx3.2/23, mbtmp3.4/2, Error ellipse: s-maj=65.8km s-min=22.3km az=73.0*

ISC 20 00:18:58.7±3.1, 24.9N±0.1×98.0E±0.1, h1km±22km, n4, σ0 38/5, mb3.4/2, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**4.31**	**87**	Pg		**Pg**		**00 20 21.1**	**-0.3**
KMI				Sg		**Sg**		**00 21 17.5**	**+0.2**
KMI				smax					
	comp=N,29nm,1.0s								
KMI				smax					
	comp=E,26nm,1.0s								
CMAR	**Chiang Mai Arr**	**6.51**	**172**	Pg		**Pg**		**00 21 03.6**	**+0.1**
	comp=E,0.5nm,0.3s,baz=351,slow=18,SNR=7.5								
CMAR				Lg				00 22 31.1	
	comp=E,1.4nm,0.3s,baz=352,slow=31,SNR=9.8								
MKAR	**Makanchi Array**	**25.15

*IDC **20** 01:15:42.3±2.3,3.°30S×128.°47E, h0km, mb3.9/2, mb1 4.3/3, mb1mx3.8/18, mbtmp4.1/3, ML4.2/1, Error ellipse: s-maj=177.0km s-min=27.3km az=68.0*
*DJA **20** 01:15:47, 2.°80S×129.°25E, h10km, MLv3.9/5*
*ISCJB **20** 01:15:51.1±1.2, 3.°3S×0.°1×129.°1E±0.°1, h115km±7km, Error ellipse: s-maj=26.5km s-min=10.7km az=41.8*
ISC 20 01:15:52.4±1.2,**3.°3S**±0.°2×**129.°0E**±0.°1,**h108**km±7km,**n7**, σ1§**39**/11,**Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.11**	**259**	P	**Pn**	**01 15 58.0**	**-9.3**
MSAI				S	**Sn**	**01 16 19.4**	**+1.0**
BNDI	**Bandanaira**	**1.47**	**144**	P	**Pn**	**01 16 17.7**	**-1.0**
BNDI				S	**Sn**	**01 16 43.1**	**+4.4**
NLAI	**Namlea**	**1.94**	**272**	P	**Pn**	**01 16 23.1**	**-1.4**
NLAI				S	**Sn**	**01 16 50.3**	**+1.3**
LUWI	**Luwuk**	**6.66**	**290**	P	**Pn**	**01 17 25.9**	**-1.9**
WRA	**Warramunga Arr**	**17.31**	**163**	P	**Pn**	**01 19 46.9**	**-0.5**
	0.9nm,0.3s,baz=343,slow=13,SNR=36						
WRA				S	**Sn**	**01 22 53.5**	**-6.7**
	0.1nm,0.3s,baz=334,slow=22,SNR=3.0						
ASAR	**Alice Springs**	**20.76**	**167**	P	**P**	**01 20 27.4**	**+2.6**
	9.2nm,0.6s,baz=352,slow=9.3,SNR=73						
MKAR	**Makanchi Array**	**64.65**	**326**	P	**P**	**01 26 19.7**	**+1.1**
	0.4nm,0.4s,baz=123,slow=8.5,SNR=5.9						

*NEIC **20** 01:19:23.9, 16.°87N×94.°83W, h137km, MD3.7(MEX), After MEX.*
MEX 20 01:19:23.9±0.9,**16.°87N**×**94.°83W**,**h137**km±22km,**MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.64**	**228**	*i* P	Pn	01 19 52.3	-1.7
HUIG				*i* S	Sn	01 20 15.3	-1.8
HUIG	**Huatulco**	**1.64**	**228**	*i* P	Pn	01 19 52.3	-1.7
HUIG				*i* S	Sn	01 20 15.3	-1.8
TGIG		**1.64**	**93**	*e*P	Pn	01 19 52.7	-1.4
TGIG				*i* S	Sn	01 20 14.6	-2.5
VHO	**Vista Hermosa**	**1.83**	**277**	*i* P	Pn	01 19 56.2	0.0
VHO				*i* S	Sn	01 20 19.9	-1.0
VHO	**Vista Hermosa**	**1.83**	**277**	*i* P	Pn	01 19 56.2	0.0
VHO				*i* S	Sn	01 20 19.9	-1.0
PCIG		**1.93**	**126**	*e*P	Pn	01 19 56.8	-0.6
PCIG				*i* S	Sn	01 20 20.5	-2.7
UTMO	**Huajuapan**	**3.00**	**289**	*i* P	Pn	01 20 11.0	+0.3
UTMO				*i* S	Sn	01 20 43.4	-3.4
PNIG	**Pinotepa**	**3.19**	**262**	*i* P	Pn	01 20 11.9	-1.3
PNIG				*i* S	Sn	01 20 48.5	-2.9
PNIG	**Pinotepa**	**3.19**	**262**	*i* P	Pn	01 20 11.9	-1.3
PNIG				*i* S	Sn	01 20 48.5	-2.9
PPM	**Popocatepetl**	**4.22**	**302**	*e*P	Pn	01 20 27.1	+0.4
PPM				*i* S	Sn	01 21 17.1	+1.5
PPM	**Popocatepetl**	**4.22**	**302**	*e*P	Pn	01 20 27.1	+0.4
PPM				*i* S	Sn	01 21 17.1	+1.5

MAN 20 01:33:55, 11.°62N×125.°43E, h27km,**mb4.1, ML2.9, MS2.6, 1D, Samar**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.02**	**145**	*e*P	Pb	01 34 00.3	+0.8
BESP				*e*S	Sb	01 34 04.3	+1.6
CNP	**Catarman**	**1.16**	**320**	*e*P	Pn	01 34 13.5	-2.0
SCPH	**Surigao**	**1.83**	**178**‖	*e*P	Pn	01 34 25.8	+1.1
PVCP	**Virac**	**2.33**	**328**	*e*P	Pn	01 34 32.7	+1.2

*ISCJB **20** 01:38:04.6±1.2, 13.°44S±0.°09×76.°3W±0.°1, h57km±11km, mb3.9/10, Error ellipse: s-maj=24.1km s-min=8.9km az=146.1*
*IDC **20** 01:38:06.4±0.8, 13.°38S×76.°25W, h54km±6km, mb3.7/6, mb1 3.9/9, mb1mx3.7/17, mbtmp3.6/9, MS2.8/2, Ms1 2.8/2, ms1mx2.6/19, Error ellipse: s-maj=29.8km s-min=7.2km az=62.0*
*NEIC **20** 01:38:06.2±0.4, 13.°42S×76.°26W, mb4.0/5, Error ellipse: s-maj=17.0km s-min=7.9km az=53.0*
NEIC Felt [III] at Chincha Alta, Pisco and San Vicente de Canete; [II] at Ica.
ISC 20 01:38:05.1±1.2,**13.°42S**±0.°09×**76.°2W**±0.°1,**h42**km±12km, **h57**km±3.5km:**pP-P**,**n25**,σ0§**62**/20,**mb3.9**/10,**Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**1.56**	**336**	P	**Pn**	**01 38 30.0**	**-0.4**
NNA				S	**Sn**	**01 38 49.4**	**-0.1**
NNA	**Nana**	**1.56**	**336**	P	**Pn**	**01 38 30.0**	**-0.4**
	42nm,0.3s,baz=163,slow=13,SNR=98						
NNA				S	**Sn**	**01 38 49.4**	**-0.1**
	201nm,0.3s,baz=190,slow=14,SNR=17						
LPAZ	**La Paz**	**8.30**	**111**	P	**Pn**	**01 40 07.5**	**+4.6**
	1.4nm,0.3s,baz=289,slow=7.3,SNR=28						
SIV	**San Ignacio**	**14.85**	**102**	P	**Pn**	**01 41 32.8**	**+0.5**
	0.1nm,0.3s,baz=225,slow=19,SNR=6.9						
LCO	**Las Campanas**	**16.33**	**163**	*e*P	**Pn**	**01 41 52.5**	**+1.1**
	5.1nm,0.7s						
CFAA	**Coronel Fontan**	**19.52**	**159**	P	**Pn**	**01 42 29.7**	**-0.7**
	0.0nm,0.3s,baz=335,slow=12,SNR=7.8						
CFAA				LR	LR	01 48 50.5	
	comp=Z,11nm,18.3s,baz=357,slow=33						
PCRV	**Puerto La Cruz**	**26.10**	**27**	LR	LR	01 54 46.1	
	comp=Z,49nm,21.4s,baz=209,slow=38						
PLCA	**Paso Flores**	**27.65**	**171**	P	**P**	**01 43 48.0**	**-0.9**
	1.4nm,0.6s,mb3.7,baz=325,slow=9.0,SNR=4.8						
TXAR	**Lajitas Array**	**50.11**	**328**	P	**P**	**01 46 57.3**	**+1.1**
	0.1nm,0.7s,mb2.9,baz=137,slow=36,SNR=3.0						
TXAR				pP	pP	01 47 10.7	+2.5
	0.8nm,0.8s,baz=149,slow=10.0,SNR=7.1						
SDCO	**Great Sand Dun**	**57.86**	**333**	*e*P	**P**	**01 47 52.7**	**0.0**
	1.1nm,0.8s,mb3.9						
DUG	**Dugway**	**63.26**	**329**	*e*P	**P**	**01 48 29.7**	**+0.3**
	1.6nm,0.7s,mb4.3						
NVAR	**Mina Array Bea**	**64.90**	**324**	P	**P**	**01 48 41.0**	**+0.8**
NVAR				pP	pP	01 48 56.0	+3.3
NVAR	**Mina Array Bea**	**64.90**	**324**	P	**P**	**01 48 41.0**	**+0.8**
	0.2nm,0.4s,mb3.5,baz=120,slow=5.5,SNR=3.3						
NVAR				pP	pP	01 48 56.0	+3.3
	0.6nm,0.7s,baz=113,slow=7.7,SNR=3.4						
HLID	**Hailey**	**66.59**	**331**	*e*P	**P**	**01 48 50.8**	**-0.2**
	0.5nm,0.6s,mb3.7						
DBIC	**Dimbokro**	**73.58**	**79**	P	**P**	**01 49 34.0**	**-0.5**
	3.4nm,0.8s,mb4.3,baz=219,slow=8.5,SNR=4.4						
YKA	**Yellowknife Ar**	**81.39**	**343**	P	**P**	**01 50 16.3**	**-0.8**
	0.5nm,0.5s,mb3.7,baz=133,slow=4.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**81.56**	**74**	P	**P**	**01 50 18.9**	**-0.1**
TORD				pP	pP	01 50 35.9	+4.2
TORD	**Torodi Ar. Bea**	**81.56**	**74**	P	**P**	**01 50 18.9**	**-0.1**
	3.2nm,0.7s,mb4.3,baz=260,slow=5.2,SNR=44						
TORD				pP	pP	01 50 35.9	+4.2
	1.6nm,0.9s,baz=242,slow=5.7,SNR=3.2						
TSUM	**Tsumeb**	**89.15**	**109**	*e*P	**P**	**01 50 56.8**	**-0.1**
	1.2nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**135.26**	**223**	PKP	PKPdf	01 57 20.6	-0.5
	0.5nm,0.8s,baz=137,slow=1.7,SNR=2.9						
ZALV	**Zalesovo Beam**	**136.88**	**16**	PKP	PKPdf	01 57 21.0	-2.0
ZALV	**Zalesovo Beam**	**136.88**	**16**	PKP	PKPdf	01 57 21.0	-2.0
	1.1nm,0.7s,baz=329,slow=1.7,SNR=5.4						
KURK	**Kurchatov**	**137.55**	**24**	*e*PKPdf	PKPdf	01 57 24.1	-0.3
ULN	**Ulaanbaatar**	**145.56**	**356**	*e*PKPdf	PKPdf	01 57 39.6	+0.8
ULN				*e*pPKPdf	pPKPdf	01 57 54.9	+2.8
SONM	**Songino Array**	**145.63**	**357**	PKPbc	PKPbc	01 57 39.6	+0.4
	3.4nm,0.9s,baz=331,slow=2.9,SNR=15						
SONM				pPKPbc	pPKPbc	01 57 53.5	+1.1
	4.3nm,1.0s,baz=325,slow=2.1,SNR=9.3						

*ISCJB **20** 02:08:28.8±1.1, 24.°84N±0.°09×98.°05E±0.°07, h10km, mb3.6/3, Error ellipse: s-maj=13.6km s-min=9.3km az=0.4*
*BJI **20** 02:08:32.6, 25.°21N×97.°82E, h15km, ML3.2/5*
*IDC **20** 02:08:32.9±1.6, 25.°32N×98.°16E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.3/23, mbtmp3.6/3, Error ellipse: s-maj=84.1km s-min=24.6km az=66.0*
ISC 20 02:08:31.7±1.1,**24.°95N**±0.°09×**97.°98E**±0.°07,**h10**km,**n5**, σ0§**89**/6,**mb3.6**/3,**Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**4.32**	**87**	Pg	**Pg**	**02 09 54.0**	**-0.5**
KMI				Sg	**Sg**	**02 10 50.8**	**+0.3**
KMI				smax			
	comp=N,43nm,0.7s						
KMI				smax			
	comp=E,39nm,0.9s						
CMAR	**Chiang Mai Arr**	**6.52**	**172**	Pg	**Pg**	**02 10 36.6**	**0.0**
	comp=E,0.6nm,0.3s,baz=350,slow=18,SNR=17						
CMAR				Lg		02 12 05.4	
	comp=E,0.4nm,0.3s,baz=353,slow=26,SNR=6.5						
MKAR	**Makanchi Array**	**25.15**	**334**	P	**P**	**02 13 57.8**	**+0.8**
	comp=E,0.3nm,0.2s,mb3.4,baz=140,slow=10,SNR=2.9						
ZALV	**Zalesovo Beam**	**30.59**	**345**	P	**P**	**02 14 44.8**	**-0.8**
	comp=E,0.5nm,0.4s,mb3.7,baz=154,slow=7.9,SNR=2.3						
WRA	**Warramunga Arr**	**56.94**	**138**	P	**P**	**02 18 21.6**	**+4.2**
	comp=E,0.5nm,0.6s,mb3.8,baz=327,slow=7.4,SNR=6.1						

*ISCJB **20** 02:13:16.0±0.8, 38.°41N±0.°03×22.°00E±0.°04, h14km±6km, Error ellipse: s-maj=5.2km s-min=4.7km az=12.8*
*CSEM **20** 02:13:15.5±0.1, 38.°42N×21.°99E, h15km, ML1.6/4, Error ellipse: s-maj=3.9km s-min=3.0km az=105.0*
*THE **20** 02:13:16.7, 38.°40N×22.°00E, h10km±1km, ML1.6/4, Error ellipse: s-maj=1.4km s-min=0.7km az=246.0*
*ATH **20** 02:13:16.4, 38.°41N×22.°01E, h11km±3km, MD2.7/5*
ISC 20 02:13:16.6±0.8,**38.°41N**±0.°03×**22.°00E**±0.°04,**h11**km±6km, **n24**,σ0§**52**/45,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRIZ	**Trizonia**	**0.07**	**127**	P	**Pg**	**02 13 18.7**	**-0.2**
TRIZ				S	**Sg**	**02 13 20.5**	**-0.1**
TRIZ	**Trizonia**	**0.07**	**127**	P	**Pg**	**02 13 18.7**	**-0.2**
TRIZ				S	**Sg**	**02 13 20.5**	**-0.1**
EFP	**Efpalio**	**0.08**	**284**	*e*PG	**Pg**	**02 13 18.6**	**-0.4**
EFP				*e*SG	**Sg**	**02 13 20.7**	**0.0**
EFP	**Efpalio**	**0.08**	**284**	P	**Pg**	**02 13 18.8**	**-0.2**
EFP				S	**Sg**	**02 13 20.5**	**-0.2**
EFP	**Efpalio**	**0.08**	**284**	P	**Pg**	**02 13 18.8**	**-0.2**
EFP				S	**Sg**	**02 13 20.5**	**-0.2**
KALE	**Kalithea**	**0.11**	**99**	P	**Pg**	**02 13 19.3**	**-0.1**
KALE				S	**Sg**	**02 13 21.5**	**0.0**
KALE	**Kalithea**	**0.11**	**99**	P	**Pg**	**02 13 19.3**	**-0.1**
KALE				S	**Sg**	**02 13 21.5**	**0.0**
LAKA	**Lakka**	**0.17**	**186**	P	**Pg**	**02 13 20.3**	**0.0**
LAKA				S	**Sg**	**02 13 23.3**	**+0.4**
LAKA	**Lakka**	**0.17**	**186**	P	**Pg**	**02 13 20.3**	**0.0**
LAKA				S	**Sg**	**02 13 23.3**	**+0.4**
UPR	**University Cam**	**0.21**	**233**	P	**Pg**	**02 13 21.2**	**+0.2**
UPR	**University Cam**	**0.21**	**233**	P	**Pg**	**02 13 21.2**	**+0.2**
DSF	**Desfina**	**0.41**	**90**	P	**Pg**	**02 13 24.4**	**-0.4**
DSF				S	**Sg**	**02 13 30.9**	**+0.6**
DSF	**Desfina**	**0.41**	**90**	P	**Pg**	**02 13 24.4**	**-0.4**
DSF				S	**Sg**	**02 13 30.9**	**+0.6**
EVR	**Evrytania**	**0.53**	**344**	*e*PB	**Pg**	**02 13 26.2**	**-0.7**
EVR				*e*SB	**Sg**	**02 13 34.1**	**+0.2**
EVR	**Evrytania**	**0.53**	**344**	*e*Pb	**Pg**	**02 13 26.3**	**-0.6**
EVR				*e*Sb	**Sg**	**02 13 34.1**	**+0.2**
GUR	**Goura**	**0.54**	**150**	*e*PG	**Pg**	**02 13 26.6**	**-0.6**
GUR				*e*SB	**Sg**	**02 13 34.4**	**+0.1**
GUR	**Goura**	**0.54**	**150**	P	**Pg**	**02 13 26.7**	**-0.5**
GUR				S	**Sg**	**02 13 34.4**	**+0.1**
GUR	**Goura**	**0.54**	**150**	P	**Pg**	**02 13 26.7**	**-0.5**
GUR				S	**Sg**	**02 13 34.4**	**+0.1**
RLS	**Riolos of Patr**	**0.55**	**230**	*e*PG	**Pg**	**02 13 26.8**	**-0.4**
RLS				*e*SB	**Sg**	**02 13 35.4**	**+1.0**
RLS	**Riolos of Patr**	**0.55**	**230**	*e*Pg	**Pg**	**02 13 26.8**	**-0.4**
RLS				*e*Sb	**Sg**	**02 13 35.4**	**+1.0**
AGG	**Agios Georgios**	**0.67**	**23**	*e*PB	**Pg**	**02 13 28.5**	**-1.0**
AGG				*e*SB	**Sg**	**02 13 39.3**	**+1.1**
AGG	**Agios Georgios**	**0.67**	**23**	P	**Pg**	**02 13 28.9**	**-0.6**
AGG				S	**Sg**	**02 13 40.0**	**+1.8**
AGG	**Agios Georgios**	**0.67**	**23**	*e*Pb	**Pg**	**02 13 28.5**	**-1.0**
AGG	**Agios Georgios**	**0.67**	**23**	P	**Pg**	**02 13 28.9**	**-0.6**
AGG				*e*Sb	**Sg**	**02 13 39.3**	**+1.1**

*BJI **20** 02:38:22.2, 1.°00N×97.°30E, h10km, mB4.7/3, mb4.7/7*
*IDC **20** 02:38:22.0±1.2, 1.°01N×97.°23E, h0km, mb4.2/10, mb1 4.2/12, mb1mx4.0/24, mbtmp4.1/12, ML3.9/2, Error ellipse: s-maj=38.2km s-min=16.4km az=59.0*
*ISCJB **20** 02:38:24.7±0.6, 0.°99N±0.°05×97.°17E±0.°06, h33km, mb4.3/15, Error ellipse: s-maj=9.2km s-min=6.6km az=154.3*
*NEIC **20** 02:38:27.2±0.5, 1.°03N×97.°27E, h35km, mb4.4/3, Error ellipse: s-maj=12.0km s-min=7.3km az=66.0*
*DJA **20** 02:38:29, 1.°26N×97.°45E, h39km, MLv4.2/7*
ISC 20 02:38:27.3±0.6,**1.°04N**±0.°05×**97.°27E**±0.°07,**h35**km,**n35**, σ0§**74**/36,**mb4.3**/15,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.40**	**50**	P	**Pn**	**02 38 36.5**	**-0.1**
GSI				S	**Sn**	**02 38 43.6**	**+0.7**
TPTI		**2.20**	**358**	P	**Pn**	**02 38 59.8**	**-1.6**
TPTI				S	**Sn**	**02 39 26.3**	**-1.2**
MNSI	**Mandailing Nat**	**2.32**	**96**	P	**Pn**	**02 39 03.3**	**+0.3**
PSI	**Prapat**	**2.40**	**43**	Pn	**Pn**	**02 39 03.0**	**-1.1**
	5.5nm,0.3s,baz=232,slow=4.6,SNR=21						
TSI	**Tuntungan**	**2.76**	**28**	P	**Pn**	**02 39 10.2**	**+1.1**
SISI	**Saibi**	**2.97**	**142**	P	**Pn**	**02 39 18.6**	**+6.6**
PPI	**Padang Panjang**	**3.46**	**115**	P	**Pn**	**02 39 17.7**	**-1.0**
PDSI	**Padang**	**3.73**	**121**	P	Px	02 39 38.3	
BKNI	**Bangkinang**	**3.83**	**101**	P	**Pn**	**02 39 17.8**	**-6.1**
SDSI	**Sungai Dareh**	**4.60**	**115**	P	**Pn**	**02 39 34.0**	**-0.4**
BSI	**Banda Aceh**	**4.84**	**336**	P	**Pn**	**02 39 33.5**	**-4.2**
KULM	**Kulim**	**5.40**	**39**	*e*Pn	**Pn**	**02 39 45.4**	**0.0**
	52nm,0.9s						
CMAR	**Chiang Mai Arr**	**17.38**	**5**	P	**Pn**	**02 42 27.2**	**0.0**
	0.4nm,0.3s,baz=195,slow=12,SNR=11						
KMI	**Kunming**	**24.51**	**12**	P	**P**	**02 43 45.1**	**+1.6**
KMI				pP		02 43 51.1	
KMI				sP	sP	02 43 53.5	-4.3
KMI				PP		02 44 23.1	
KMI				S	**S**	**02 48 06.8**	**+4.9**
KMI				sS	sS	02 48 16.3	-2.1
KMI				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.5						
KMI				pmax	pmax		
	comp=Z,54nm,3.5s						
GTA	**Gaotai**	**38.26**	**3**	*e*P	**P**	**02 45 44.8**	**+0.7**
GTA				pP	pP	02 45 49.3	-5.0
GTA				sP	sP	02 45 52.3	-6.3
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	**41.89**	**122**	P	**P**	**02 46 14.2**	**-0.4**
	comp=Z,0.5nm,0.3s,mb3.6,baz=90,slow=6.0,SNR=36						
BJI	**Beijing**	**42.46**	**22**	P	**P**	**02 46 19.6**	**+0.7**
BJI				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.8						
FORT	**Forrest**	**43.11**	**140**	*e*P	**P**	**02 46 23.8**	**-0.5**
	comp=Z,27nm,0.9s,mb5.0						
ASAR	**Alice Springs**	**43.24**	**127**	P	**P**	**02 46 25.5**	**-0.1**
	comp=Z,1.0nm,0.7s,mb3.6,baz=297,slow=7.4,SNR=6.8						
KSRS	**Korea Array**	**45.94**	**34**	P	**P**	**02 46 46.1**	**-0.7**
	comp=Z,3.4nm,0.8s,mb4.3,baz=221,slow=8.1,SNR=7.2						
SONM	**Songino Array**	**47.27**	**8**	P	**P**	**02 46 57.5**	**+0.4**
	comp=Z,2.5nm,0.5s,mb4.4,baz=187,slow=9.6,SNR=16						
SONM				PcP	PcP	02 48 28.5	+0.6
	comp=Z,1.2nm,0.7s,baz=188,slow=3.5,SNR=3.7						
MK31	**Makanchi Array**	**47.41**	**346**	*e*P	**P**	**02 46 58.7**	**+0.5**
MKAR	**Makanchi Array**	**47.41**	**346**	P	**P**	**02 46 59.0**	**+0.8**
MKAR	**Makanchi Array**	**47.41**	**346**	P	**P**	**02 46 59.0**	**+0.8**
	comp=Z,2.9nm,0.7s,mb4.3,baz=160,slow=8.4,SNR=18						
KURK	**Kurchatov**	**51.96**	**345**	*e*P	**P**	**02 47 33.0**	**+0.2**
	comp=Z,3.8nm,0.9s,mb4.3						
KURK	**Kurchatov**	**51.96**	**345**	P	**P**	**02 47 32.6**	**-0.1**
	comp=Z,1.9nm,0.7s,mb4.1,baz=160,slow=7.6,SNR=10.0						
STKA	**Stephens Creek**	**53.20**	**132**	P	**P**	**02 47 43.3**	**+1.0**
	comp=Z,3.1nm,1.0s,mb4.2,baz=315,slow=12,SNR=4.3						
ZAA0	**Zalesovo Array**	**53.72**	**351**	*e*P	**P**	**02 47 45.9**	**+0.2**
ZALV	**Zalesovo Beam**	**53.72**	**351**	P	**P**	**02 47 45.9**	**+0.2**
ZALV	**Zalesovo Beam**	**53.72**	**351**	P	**P**	**02 47 45.9**	**+0.2**
	comp=Z,4.4nm,0.6s,mb4.6,baz=177,slow=7.0,SNR=22						
BVAR	**Borovoye Array**	**56.42**	**341**	P	**P**	**02 48 04.9**	**-0.3**
	comp=Z,1.4nm,0.7s,mb4.1,baz=139,slow=9.5,SNR=7.8						
ABKAR	**Akbulak array**	**57.68**	**332**	*e*P	**P**	**02 48 13.7**	**-0.6**
	comp=Z,1.1nm,0.6s,mb4.1						
ARCES	**ARCESS Array B**	**82.71**	**340**	P	**P**	**02 50 46.9**	**-0.1**
ARCES	**ARCESS Array B**	**82.71**	**340**	P	**P**	**02 50 46.9**	**-0.1**
	comp=Z,3.4nm,1.0s,mb4.3,baz=92,slow=8.1,SNR=3.9						
TXAR	**Lajitas Array**	**143.76**	**32**	PKP	PKPdf	02 57 58.8	-0.7
	comp=Z,0.2nm,0.6s,baz=78,slow=1.8,SNR=3.6						

IDC 20 02:38:56.2±2.3,**0.°88N**×**97.°10E**,**h0**km,**mb4.0**/8,**mb1 4.1**/8, **mb1mx3.9**/20,**mbtmp4.0**/8,**Error ellipse: s-maj=108.6km s-min=18.7km az=57.0**,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**41.95**	**122**	P	P	02 46 49.0	-0.1
	0.8nm,0.8s,baz=303,slow=8.9,SNR=2.5						
ASAR	**Alice Springs**	**43.28**	**127**	P	P	02 46 59.9	0.0
	0.3nm,0.7s,baz=305,slow=6.7,SNR=4.4						
SONM	**Songino Array**	**47.47**	**8**	P	P	02 47 32.6	-0.1
	1.8nm,0.5s,baz=190,slow=10,SNR=7.4						
MKAR	**Makanchi Array**	**47.53**	**346**	P	P	02 47 34.2	+0.9
	1.1nm,0.5s,baz=169,slow=9.0,SNR=3.3						
KURK	**Kurchatov**	**52.08**	**345**	P	P	02 48 07.2	-0.6
	0.8nm,0.5s,baz=164,slow=6.7,SNR=2.7						
STKA	**Stephens Creek**	**53.22**	**132**	P	P	02 48 17.0	+0.4
	1.6nm,0.7s,baz=302,slow=13,SNR=2.9						
ZALV	**Zalesovo Beam**	**53.86**	**351**	P	P	02 48 20.8	-0.1
	3.0nm,0.4s,baz=176,slow=7.1,SNR=6.5						
ARCES	**ARCESS Array B**	**82.81**	**340**	P	P	02 51 21.6	-0.4
	2.4nm,0.9s,baz=92,slow=6.1,SNR=4.1						
TXAR	**Lajitas Array**	**144.00**	**32**	PKP	PKPdf	02 58 32.9	-1.6
	0.1nm,0.5s,baz=20,slow=3.0,SNR=3.1						

*NEIC **20** 03:17:39.6, 16.°61N×99.°50W, h16km, MD3.6(MEX), After MEX.*
MEX 20 03:17:39.6±1.2,**16.°61N**×**99.°50W**,**h16**km±15km,**MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.43**	**307**	*i* P	Pg	03 17 48.0	-0.3
ACX				*i* S	Sg	03 17 53.4	-0.8
ACX	**Acapulco**	**0.43**	**307**	*i* P	Pg	03 17 48.0	-0.3
ACX				*i* S	Sg	03 17 53.4	-0.8
CAIG	**El Cayaco**	**0.85**	**301**	*i* P	Pb	03 17 53.7	-2.4
CAIG				*i* S	Sb	03 18 01.9	-5.4
CAIG	**El Cayaco**	**0.85**	**301**	*i* P	Pb	03 17 53.7	-2.4
CAIG				*i* S	Sb	03 18 01.9	-5.4
PNIG	**Pinotepa**	**1.33**	**99**	*i* P	Pn	03 17 60.0	-3.6
PNIG				*i* S	Sn	03 18 14.3	-6.7
PNIG	**Pinotepa**	**1.33**	**99**	*i* P	Pn	03 17 60.0	-3.6
PNIG				*i* S	Sn	03 18 14.3	-6.7
UTMO	**Huajuapan**	**2.03**	**53**	*i* P	Pn	03 18 09.6	-3.5
UTMO				*i* S	Sn	03 18 34.1	-4.0
ZIIG	**Zihuatanejo**	**2.12**	**298**	*i* P	Pn	03 18 10.4	-4.0
ZIIG				*i* S	Sn	03 18 35.1	-5.4
ZIIG	**Zihuatanejo**	**2.12**	**298**	*i* P	Pn	03 18 10.4	-4.0
ZIIG				*i* S	Sn	03 18 35.1	-5.4
MZVM		**2.58**	**6**	*e*P	Pn	03 18 18.3	-2.4
MZVM				*i* S	Sn	03 18 48.6	-3.2
PPM	**Popocatepetl**	**2.58**	**19**	*e*P	Pn	03 18 18.6	-2.2
PPM				*i* S	Sn	03 18 49.4	-2.5
PPM	**Popocatepetl**	**2.58**	**19**	*e*P	Pn	03 18 18.6	-2.2
PPM				*i* S	Sn	03 18 49.4	-2.5
IIO	**Organos**	**3.06**	**14**	*e*P	Pn	03 18 25.7	-1.6
IIO				*i* S	Sn	03 19 00.0	-3.6
IIO	**Organos**	**3.06**	**14**	*e*P	Pn	03 18 25.7	-1.6
IIO				*i* S	Sn	03 19 00.0	-3.6

*ISCJB **20** 03:20:48.0±0.4, 38.°43N±0.°02×22.°45E±0.°02, h7km±7km, Error ellipse: s-maj=4.1km s-min=3.3km az=179.3*
*CSEM **20** 03:20:47.6±0.2, 38.°44N×22.°42E, h14km, ML2.1/3, Error ellipse: s-maj=4.2km s-min=3.7km az=43.0*
*THE **20** 03:20:48.3, 38.°43N×22.°44E, h5km±3km, ML2.1/3, Error ellipse: s-maj=3.5km s-min=0.5km az=134.0*
*ATH **20** 03:20:48.1, 38.°45N×22.°44E, h11km, MD2.8/8*
ISC 20 03:20:48.4±0.5,**38.°44N**±0.°02×**22.°44E**±0.°03,**h8**km±7km, **n39**,σ0§**66**/78,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DSF	**Desfina**	**0.07**	**113**	P	**Pg**	**03 20 49.7**	**-0.6**
DSF				S	**Sg**	**03 20 51.1**	**-0.5**
DSF	**Desfina**	**0.07**	**113**	P	**Pg**	**03 20 49.7**	**-0.6**
DSF				S	**Sg**	**03 20 51.1**	**-0.5**
KALE	**Kalithea**	**0.24**	**258**	P	**Pg**	**03 20 52.9**	**-0.3**
KALE				S	**S

*ISCJB **20** 03:34:51.4±0.4,37.95N±0.02×21.51E±0.03,h10km, Error ellipse: s-maj=3.3km s-min=2.9km az=159.1*
*CSEM **20** 03:34:51.5±0.2,37.95N×21.51E,h8km, ML2.6, Error ellipse: s-maj=3.3km s-min=2.9km az=38.0*
*THE **20** 03:34:51.5,37.96N×21.51E,h0km±2km, ML2.4/4, Error ellipse: s-maj=2.6km s-min=0.8km az=253.0*
*ATH **20** 03:34:51.7,37.96N×21.55E,h12km±1km, MD3.2/17, ML2.6*
*NEIC **20** 03:34:51.7,37.96N×21.55E,h12km, ML2.6(ATH), After ATH.*

ISC 20 03:34:51.8±0.4,37.95N±0.02×21.51E±0.03,h5km±4km, n70,σ0.92/117, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.11**	**341**	*e*Pg	**Pg**	**03 34 54.8**	**+0.7**
RLS				*e*Sg	**Sg**	**03 34 57.2**	**+1.5**
RLS	**Riolos of Patr**	**0.11**	**341**	*e*PG	**Pg**	**03 34 54.8**	**+0.7**
RLS				*e*SG	**Sg**	**03 34 57.2**	**+1.5**
RLS	**Riolos of Patr**	**0.11**	**341**	*e*Pg	**Pg**	**03 34 54.8**	**+0.7**
RLS				*e*Sg	**Sg**	**03 34 57.2**	**+1.5**
UPR	**University Cam**	**0.40**	**33**	*e*PB	**Pg**	**03 34 59.7**	**+0.3**
UPR				*e*SB	**Sg**	**03 35 04.8**	**+0.2**
UPR	**University Cam**	**0.40**	**33**	P	**Pg**	**03 34 59.4**	**0.0**
UPR				S	**Sg**	**03 35 05.0**	**+0.4**
UPR	**University Cam**	**0.40**	**33**	P	**Pg**	**03 34 59.4**	**0.0**
UPR	**University Cam**	**0.40**	**33**	*e*Pb	**Pg**	**03 34 59.7**	**+0.3**
UPR				*e*Sb	**Sg**	**03 35 04.8**	**+0.2**
LAKA	**Lakka**	**0.47**	**52**	P	**Pg**	**03 35 00.1**	**-0.7**
LAKA				S	**Sg**	**03 35 07.7**	**+0.8**
LAKA	**Lakka**	**0.47**	**52**	P	**Pg**	**03 35 00.1**	**-0.7**
LAKA				S	**Sg**	**03 35 07.7**	**+0.8**
EFP	**Efpalio**	**0.57**	**33**	*e*PB	**Pg**	**03 35 01.9**	**-0.8**
EFP				*e*SB	**Sg**	**03 35 10.7**	**+0.6**
EFP	**Efpalio**	**0.57**	**33**	P	**Pg**	**03 35 01.9**	**-0.8**
EFP				S	**Sg**	**03 35 11.3**	**+1.2**
EFP	**Efpalio**	**0.57**	**33**	P	**Pg**	**03 35 01.9**	**-0.8**
EFP				*e*Sb	**Sg**	**03 35 10.7**	**+0.6**
EFP				S	**Sg**	**03 35 11.3**	**+1.2**
KFL	**Anninata**	**0.59**	**286**	P	**Pg**	**03 35 03.2**	**0.0**
KFL	**Anninata**	**0.59**	**286**	P	**Pg**	**03 35 03.2**	**0.0**
TRIZ	**Trizonia**	**0.60**	**47**	P	**Pg**	**03 35 02.4**	**-1.0**
TRIZ				S	**Sg**	**03 35 13.0**	**+1.7**
TRIZ	**Trizonia**	**0.60**	**47**	P	**Pg**	**03 35 02.4**	**-1.0**
TRIZ				S	**Sg**	**03 35 13.0**	**+1.7**
GUR	**Goura**	**0.66**	**91**	*e*PG	**Pg**	**03 35 03.5**	**-0.9**
GUR				*e*SB	**Sg**	**03 35 12.5**	**-0.4**
GUR	**Goura**	**0.66**	**91**	P	**Pg**	**03 35 03.5**	**-0.9**
GUR				S	**Sg**	**03 35 13.6**	**+0.7**
GUR	**Goura**	**0.66**	**91**	P	**Pg**	**03 35 03.5**	**-0.9**
GUR				*e*Sb	**Sg**	**03 35 12.5**	**-0.4**
GUR				S	**Sg**	**03 35 13.6**	**+0.7**
KALE	**Kalithea**	**0.66**	**48**	P	**Pg**	**03 35 03.5**	**-1.0**
KALE				S	**Sg**	**03 35 14.1**	**+1.0**
KALE	**Kalithea**	**0.66**	**48**	P	**Pg**	**03 35 03.5**	**-1.0**
KALE				S	**Sg**	**03 35 14.1**	**+1.0**
VLS	**Valsamata**	**0.76**	**288**	*e*Pg	**Pg**	**03 35 06.7**	**+0.2**
VLS				*e*Sb	**Sb**	**03 35 18.4**	**+0.2**
VLS	**Valsamata**	**0.76**	**288**	*e*PG	**Pg**	**03 35 06.7**	**+0.2**
VLS				*e*SB	**Sb**	**03 35 18.4**	**+0.2**
VLS	**Valsamata**	**0.76**	**288**	P	**Pg**	**03 35 05.3**	**-1.2**
VLS				S	**Sg**	**03 35 17.8**	**+1.4**
VLS	**Valsamata**	**0.76**	**288**	P	**Pg**	**03 35 05.3**	**-1.2**
VLS	**Valsamata**	**0.76**	**288**	*e*Pg	**Pg**	**03 35 06.7**	**+0.2**
VLS				S	**Sg**	**03 35 17.8**	**+1.4**
VLS				*e*Sb	**Sb**	**03 35 18.4**	**+0.2**
ITM	**Ithomi**	**0.84**	**157**	*e*Pg	**Pg**	**03 35 07.3**	**-0.5**
ITM	**Ithomi**	**0.84**	**157**	*e*PG	**Pg**	**03 35 07.3**	**-0.5**
ITM	**Ithomi**	**0.84**	**157**	P	**Pg**	**03 35 07.3**	**-0.5**
ITM	**Ithomi**	**0.84**	**157**	P	**Pg**	**03 35 07.3**	**-0.5**
VLX	**Vlachokerasia**	**0.90**	**130**	*e*PB	**Pg**	**03 35 09.1**	**+0.1**
VLX				*e*SB	**Sg**	**03 35 21.0**	**+0.3**
VLX	**Vlachokerasia**	**0.90**	**130**	P	**Pg**	**03 35 08.9**	**-0.1**
VLX				S	**Sg**	**03 35 22.8**	**+2.1**
VLX	**Vlachokerasia**	**0.90**	**130**	P	**Pg**	**03 35 08.9**	**-0.1**
VLX				*e*Sb	**Sg**	**03 35 21.0**	**+0.3**
VLX				S	**Sg**	**03 35 22.8**	**+2.1**
DSF	**Desfina**	**0.92**	**60**	P	**Pg**	**03 35 07.9**	**-1.6**
DSF	**Desfina**	**0.92**	**60**	P	**Pg**	**03 35 07.9**	**-1.6**
EVR	**Evrytania**	**0.99**	**13**	*e*Pg	**Pg**	**03 35 09.5**	**-1.3**
EVR	**Evrytania**	**0.99**	**13**	*e*PG	**Pg**	**03 35 09.5**	**-1.3**
EVR	**Evrytania**	**0.99**	**13**	*e*Pg	**Pg**	**03 35 09.5**	**-1.3**
PYL	**PYLOS**	**1.07**	**170**	*e*PG	**Pg**	**03 35 11.8**	**-0.5**
PYL				*e*SB	**Sg**	**03 35 27.4**	**+1.3**
PYL	**PYLOS**	**1.07**	**170**	*e*Pg	**Pg**	**03 35 11.8**	**-0.5**
PYL				*e*Sb	**Sg**	**03 35 27.4**	**+1.3**
LKD2	**Lefkada island**	**1.07**	**321**	P	**Pg**	**03 35 10.7**	**-1.7**
LKD2	**Lefkada island**	**1.07**	**321**	P	**Pg**	**03 35 10.7**	**-1.7**
LTK	**Loutraki**	**1.15**	**86**	*e*PG	**Pg**	**03 35 12.8**	**-1.0**
LTK				*e*SB	**Sg**	**03 35 28.3**	**-0.5**
LTK	**Loutraki**	**1.15**	**86**	*e*Pg	**Pg**	**03 35 12.8**	**-1.0**
LTK				*e*Sb	**Sg**	**03 35 28.3**	**-0.5**
AGG	**Agios Georgios**	**1.25**	**31**	*e*Pb	**Pb**	**03 35 15.0**	**-0.8**
AGG				*e*Sb	**Sb**	**03 35 32.2**	**0.0**
AGG	**Agios Georgios**	**1.25**	**31**	*e*PB	**Pb**	**03 35 15.0**	**-0.8**
AGG				*e*SB	**Sb**	**03 35 32.2**	**0.0**
AGG	**Agios Georgios**	**1.25**	**31**	P	**Pg**	**03 35 14.6**	**-1.1**
AGG				S	**Sg**	**03 35 32.6**	**+0.7**
AGG	**Agios Georgios**	**1.25**	**31**	P	**Pg**	**03 35 14.6**	**-1.1**
AGG	**Agios Georgios**	**1.25**	**31**	*e*Pb	**Pb**	**03 35 15.0**	**-0.8**
AGG				*e*Sb	**Sb**	**03 35 32.2**	**0.0**
AGG				S	**Sg**	**03 35 32.6**	**+0.7**
LKR	**Lokris**	**1.36**	**59**	*e*Pn	**Pn**	**03 35 16.1**	**-1.3**
LKR	**Lokris**	**1.36**	**59**	*e*PN	**Pn**	**03 35 16.1**	**-1.3**
LKR	**Lokris**	**1.36**	**59**	*e*Pn	**Pn**	**03 35 16.1**	**-1.3**
DID	**Didima**	**1.44**	**107**	*e*PB	**Pb**	**03 35 18.8**	**-0.2**
DID				*e*SB	**Sb**	**03 35 37.5**	**-0.1**
DID	**Didima**	**1.44**	**107**	P	**Pb**	**03 35 18.2**	**-0.2**
DID				S	**Sb**	**03 35 39.0**	**+1.4**
DID	**Didima**	**1.44**	**107**	P	**Pn**	**03 35 18.2**	**-0.2**
DID	**Didima**	**1.44**	**107**	*e*Pb	**Pb**	**03 35 18.8**	**-0.2**
DID				*e*Sb	**Sb**	**03 35 37.5**	**-0.1**
DID				S	**Sb**	**03 35 39.0**	**+1.4**
NAIG	**Nisos Aigina**	**1.57**	**96**	*e*Pb	**Pb**	**03 35 21.1**	**-0.3**
NAIG	**Nisos Aigina**	**1.57**	**96**	*e*PB	**Pb**	**03 35 21.1**	**-0.3**
NAIG	**Nisos Aigina**	**1.57**	**96**	*e*Pb	**Pb**	**03 35 21.1**	**-0.3**
THL	**Klokotos Trika**	**1.66**	**13**	*e*PB	**Pb**	**03 35 22.4**	**-0.4**
THL				*e*SB	**Sb**	**03 35 45.3**	**+1.3**
THL	**Klokotos Trika**	**1.66**	**13**	*e*Pb	**Pb**	**03 35 22.4**	**-0.4**
THL				*e*Sb	**Sb**	**03 35 45.3**	**+1.3**
VLI	**Veliai**	**1.67**	**137**	*e*Pb	**Pb**	**03 35 23.2**	**+0.2**
VLI				*e*Sb	**Sb**	**03 35 45.5**	**+1.1**
VLI	**Veliai**	**1.67**	**137**	*e*PB	**Pb**	**03 35 23.2**	**+0.2**
VLI				*e*SB	**Sb**	**03 35 45.5**	**+1.1**
VLI	**Veliai**	**1.67**	**137**	*e*Pb	**Pb**	**03 35 23.2**	**+0.2**
VLI				*e*Sb	**Sb**	**03 35 45.5**	**+1.1**
ATH	**Athens Observa**	**1.74**	**89**	*e*Pn	**Pn**	**03 35 23.4**	**+0.8**
ATH	**Athens Observa**	**1.74**	**89**	*e*PN	**Pn**	**03 35 23.4**	**+0.8**
ATH	**Athens Observa**	**1.74**	**89**	*e*Pn	**Pn**	**03 35 23.4**	**+0.8**
VLY	**Voula,Athens**	**1.81**	**92**	*e*Pn	**Pn**	**03 35 24.0**	**+0.5**
VLY	**Voula,Athens**	**1.81**	**92**	*e*PN	**Pn**	**03 35 24.0**	**+0.5**
VLY	**Voula,Athens**	**1.81**	**92**	*e*Pn	**Pn**	**03 35 24.0**	**+0.5**

*ISCJB **20** 03:51:58.5±1.1,24.85N±0.10×98.07E±0.07,h10km, mb3.4/2, Error ellipse: s-maj=13.8km s-min=9.4km az=0.4*
*IDC **20** 03:52:01.1±2.1,25.26N×98.49E,h0km, mb3.6/2, mb1 3.6/2,mb1mx3.2/23,mbtmp3.6/2, Error ellipse: s-maj=65.3km s-min=22.7km az=81.0*
*BJI **20** 03:52:05.7,24.94N×98.10E,h8km, ML3.3/6*

ISC 20 03:52:01.4±1.1,24.95N±0.09×98.00E±0.07,h10km,n4, σ0.79/5,mb3.4/2,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**4.30**	**87**	Pg	**Pg**	**03 53 23.6**	**-0.3**
KMI				Sg	**Sg**	**03 54 20.0**	**+0.3**
KMI				smax			
	comp=N,47nm,0.9s						
KMI				smax			
	comp=E,38nm,0.8s						
CMAR	**Chiang Mai Arr**	**6.52**	**172**	Pg	**Pg**	**03 54 06.4**	**0.0**
	comp=E,0.6nm,0.3s,baz=350,slow=17,SNR=11						
CMAR				Lg		03 55 35.2	
	comp=E,0.5nm,0.3s,baz=354,slow=30,SNR=6.1						
MKAR	**Makanchi Array**	**25.15**	**334**	P	**P**	**03 57 27.5**	**+0.9**
	comp=E,0.2nm,0.3s,mb3.2,baz=143,slow=9.4,SNR=3.4						
ZALV	**Zalesovo Beam**	**30.59**	**345**	P	**P**	**03 58 14.5**	**-0.8**
	comp=E,0.5nm,0.4s,mb3.7,baz=152,slow=9.6,SNR=3.3						

MAN 20 04:05:13,9.46N×122.30E,h66km,mb3.9,ML2.7,MS2.3, 1C,Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.93**	**97**	*i*P	Pn	04 05 29.3	-1.1
SNPH				*i* S	Sn	04 05 41.9	-1.4
GUIM	**Jordan**	**1.19**	**14**	*e*P	Pn	04 05 35.0	+1.2
GUIM				*e*S	Sn	04 05 46.6	-2.8
TBP	**Tagbilaran**	**1.56**	**81**	*e*P	Pn	04 05 40.1	+1.5
TBP				*e*S	Sn	04 05 59.4	+1.5
CUYO	**Cuyo Island**	**1.87**	**318**	*e*P	Pn	04 05 44.5	+1.7
PAGZ	**Pagadian**	**1.93**	**146**	*e*P	Pn	04 05 45.0	+1.4
ENPP	**El Nido**	**3.32**	**302**	*e*P	Pn	04 06 04.1	+1.5

TAP 20 04:22:19.2,24.80N×121.87E,h85km,ML3.5,5D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILA	**Ilan**	**0.12**	**252**	P	Pn	04 22 31.8	+0.5
ILA	baz=243			*e*S	Sn	04 22 41.7	+1.4
TWC	**Suao**	**0.19**	**187**	*i* P	Pn	04 22 32.3	+0.7
TWC	baz=183			*i* S	Sn	04 22 41.2	+0.5
TWE	**Neicheng**	**0.20**	**247**	*i* P	Pn	04 22 32.4	+0.8
TWE	baz=242			S	Sn	04 22 41.3	+0.6
TWB1	**Santiao Chiao**	**0.23**	**27**	⇓*i*P	Pn	04 22 32.0	+0.3
TWB1	baz=35			S	Sn	04 22 40.8	-0.2
NWF	**Wu-fen Shan**	**0.28**	**343**	*i* P	Pn	04 22 32.4	+0.4
NWF	baz=343			S	Sn	04 22 41.3	-0.1
TWA	**Mucha**	**0.32**	**304**	⇓*i*P	Pn	04 22 32.7	+0.5
TWA	baz=309			*i* S	Sn	04 22 42.5	+0.8
ENTT	**Nioudou**	**0.32**	**240**	⇓*i*P	Pn	04 22 33.2	+1.0
ENTT	baz=250			S	Sn	04 22 42.6	+0.9
ENA	**Nanau**	**0.39**	**198**	*i* P	Pn	04 22 33.8	+1.2
ENA	baz=196			S	Sn	04 22 44.2	+1.7
TAP1	**Taipei**	**0.40**	**307**	P	Pn	04 22 33.1	+0.4
TAP1	baz=309			*e*S	Sn	04 22 43.1	+0.5
NSK	**Sanguang**	**0.49**	**255**	⇓*i*P	Pn	04 22 33.9	+0.5
NSK	baz=254			S	Sn	04 22 43.9	+0.2
TWS1	**Kuangyinshan**	**0.51**	**306**	⇓*i*P	Pn	04 22 34.3	+0.8
TWS1	baz=311			S	Sn	04 22 45.4	+1.2
TWY	**Chenhua**	**0.53**	**332**	*i* P	Pn	04 22 34.1	+0.3
TWY	baz=333			S	Sn	04 22 44.8	+0.3
NNS	**Nan Shan**	**0.58**	**232**	P	Pn	04 22 35.2	+1.1
NNS	baz=234			S	Sn	04 22 46.3	+1.1
NCU	**National Centr**	**0.65**	**285**	*e*P	Pn	04 22 35.6	+0.9
NCU	baz=275			*e*S	Sn	04 22 47.3	+1.0
TWD	**Chiawan**	**0.76**	**199**	*e*P	Pn	04 22 38.0	+2.0
TWD	baz=206			*e*S	Sn	04 22 49.6	+1.3
NSTT	**Nanjuang**	**0.81**	**258**	*i* P	Pn	04 22 37.0	+0.5
NSTT	baz=257			S	Sn	04 22 49.6	+0.3
TWT	**Tachien**	**0.84**	**229**	P	Pn	04 22 38.7	+1.9
TWT	baz=228			S	Sn	04 22 51.8	+2.0
WHF	**Hehuan Shan**	**0.86**	**220**	*e*P	Pn	04 22 38.3	+1.4
WHF	baz=212			S	Sn	04 22 51.5	+1.3
ESL	**Shilin**	**1.06**	**202**	*e*P	Pn	04 22 40.1	+0.8
ESL	baz=199			*e*S	Sn	04 22 55.3	+0.9
NSY	**Sanyi**	**1.08**	**249**	*e*P	Pn	04 22 42.7	+3.2
NSY	baz=248			*e*S	Sn	04 22 56.0	+1.2
TWQ1	**Liyutan**	**1.10**	**246**	*e*P	Pn	04 22 41.1	+1.4
TWQ1	baz=253			*e*S	Sn	04 22 55.9	+0.8
TCU	**Taichung**	**1.27**	**239**	*e*P	Pn	04 22 42.6	+0.8
TCU	baz=237			*e*S	Sn	04 23 00.8	+1.9
TYC	**Yuchr**	**1.29**	**226**	P	Pn	04 22 43.5	+1.5
TYC	baz=233			*e*S	Sn	04 23 01.2	+1.9
EHY	**Hungye**	**1.39**	**201**	*e*P	Pn	04 22 44.0	+0.7
EHY	baz=199			*e*S	Sn	04 23 00.9	-0.5
TWF1	**Yuli**	**1.54**	**200**	*e*P	Pn	04 22 46.1	+0.8
YUS	**Yu-Shan**	**1.56**	**213**	*e*P	Pn	04 22 48.5	+3.1
YUS	baz=204			*e*S	Sn	04 23 07.9	+2.6
ALS	**Alishan**	**1.61**	**217**	*e*P	Pn	04 22 47.9	+1.6
CHN5	**Tsauling**	**1.62**	**223**	*e*P	Pn	04 22 47.8	+1.5
CHN5	baz=227			*e*S	Sn	04 23 08.6	+1.7
ELDTW	**Lidau**	**1.79**	**206**	*e*P	Pn	04 22 50.2	+1.7
CHN4	**Tsaushan**	**1.86**	**219**	*e*P	Pn	04 22 51.4	+2.0
CHN4	baz=216			*e*S	Sn	04 23 15.1	+2.7
STYT	**Tauyuan**	**1.93**	**212**	*e*P	Pn	04 22 51.5	+1.2
WTP	**Ta-pu**	**1.93**	**217**	*e*P	Pn	04 22 51.8	+1.4
CHN1	**Nanshi**	**2.03**	**218**	*e*P	Pn	04 22 53.1	+1.5
CHN1	baz=214			*e*S	Sn	04 23 18.0	+1.7
EAST	**Anshuo**	**2.58**	**202**	*e*P	Pn	04 23 02.1	+3.0

CASC 20 04:22:25.1±1.4,13.92N×90.90W,h99km±8km,MD3.6, 1C-1D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**0.53**	**6**	*e*P	Pn	04 22 41.0	0.0
PCG	**Pacaya**	**0.55**	**31**	*e*P	Pn	04 22 41.6	+0.4
PCG				*e*S	Sn	04 22 54.9	+1.7
FG6		**0.64**	**2**	*e*P	Pn	04 22 42.1	+0.2
JAT	**Jato**	**0.82**	**299**	⇑*e*P	Pn	04 22 44.6	+1.1
NBG	**Las Nubes**	**0.86**	**39**	*e*P	Pn	04 22 44.8	+0.8
NBG				*e*S	Sn	04 23 00.8	+2.7
TP2	**Tecpan 2**	**0.87**	**352**	*e*P	Pn	04 22 44.9	+0.8
TP2				*e*S	Sn	04 22 59.8	+1.5
RBDL	**Robledal**	**1.20**	**80**	⇓*i*P	Pn	04 22 47.6	0.0
RTR	**El Retiro**	**1.22**	**91**	*e*P	Pn	04 22 48.2	+0.3
RTR				*e*S	Sn	04 23 07.2	+2.0
SBLS	**San Blas**	**1.25**	**93**	*e*P	Pn	04 22 48.5	+0.2
SBLS				*e*S	Sn	04 23 07.1	+1.4
SNJE	**San Jose**	**1.26**	**92**	*e*P	Pn	04 22 48.5	+0.2
MTO2	**Montecristo 2**	**1.57**	**72**	*e*P	Pn	04 22 51.7	-0.5
BOQS	**Boqueron**	**1.59**	**96**	*e*P	Pn	04 22 52.7	+0.3
MRL	**Marmol**	**1.64**	**46**	*e*P	Pn	04 22 54.2	+1.2
MRL				*e*S	Sn	04 23 15.4	+1.2
LFRS	**El Faro**	**1.81**	**99**	*e*P	Pn	04 22 55.7	+0.5
LFRS				*e*S	Sn	04 23 20.5	+2.4
LBRS	**Las Brisas**	**1.81**	**95**	*e*P	Pn	04 22 55.5	+0.3
SNVI	**San Vicente**	**2.03**	**98**	*e*P	Pn	04 22 58.7	+0.7
CAHU	**Cacaquatique**	**2.62**	**93**	*e*P	Pn	04 23 06.1	+0.3
CNCH	**Conchagua**	**3.05**	**102**	*e*P	Pn	04 23 12.2	+0.6

*ISCJB **20** 04:39:05.6±0.3,62.20N±0.02×150.43W±0.06,h63km±2km, mb4.0/26, Error ellipse: s-maj=4.5km s-min=3.3km az=160.0*
*IDC **20** 04:39:06.3±0.7,62.32N×150.61W,h69km±5km, mb3.7/14, mb1 3.9/19,mb1mx3.8/27,mbtmp3.7/19,MS3.1/3, Ms1 3.1/3,ms1mx2.7/24, Error ellipse: s-maj=16.1km s-min=11.8km az=40.0*
*NEIC **20** 04:39:07.3,62.13N×150.39W,h57km, mb3.9/11, ML4.2(PMR),ML4.0(AEIC),After AEIC.*
NEIC Felt at Caswell and Talkeetna.

ISC 20 04:39:06.7±0.3,62.19N±0.02×150.43W±0.06,h56km±2km, h68km±2.0km:pP-P,n227,σ0.70/241,mb4.0/26,60C-91D, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GHO	**Glory Hole Cre**	**0.82**	**120**	P	**Pn**	**04 39 21.9**	**-0.3**
PMR	**Palmer**	**0.86**	**134**	P	**Pn**	**04 39 21.8**	**-0.9**
PMR				S	**Sn**	**04 39 33.8**	**-0.7**
FIB	**Fire Island**	**1.03**	**173**	P	**Pn**	**04 39 25.2**	**+0.2**
FIB				S	**Sn**	**04 39 39.2**	**+0.6**
SML	**Sawmill**	**1.06**	**110**	P	**Pn**	**04 39 24.8**	**-0.5**
SML				S	**Sn**	**04 39 38.4**	**-0.8**
PPLA	**Purkeypile**	**1.08**	**312**	P	**Pn**	**04 39 26.2**	**+0.5**
PPLA				S	**Sn**	**04 39 41.0**	**+1.3**
RC01	**Rabbit Creek A**	**1.15**	**163**	*e*Pn	**Pn**	**04 39 25.6**	**-1.0**
RC01				*e*Sn	**Sn**	**04 39 38.1**	**-3.3**
TRF	**Thorofare Moun**	**1.27**	**3**	P	**Pn**	**04 39 28.9**	**+0.8**
TRF				S	**Sn**	**04 39 45.8**	**+1.7**
RND	**Reindeer**	**1.42**	**30**	P	**Pn**	**04 39 30.7**	**+0.5**
SCM	**Sheep Creek Mo**	**1.51**	**102**	P	**Pn**	**04 39 31.3**	**-0.1**
DHY	**Denali Highway**	**1.67**	**56**	P	**Pn**	**04 39 33.8**	**+0.3**
DHY				S	**Sn**	**04 39 55.9**	**+2.0**
SLKM	**Skilak Lake**	**1.69**	**176**	P	**Pn**	**04 39 32.8**	**-1.0**
MCK	**McKinley**	**1.69**	**23**	*e*Pn	**Pn**	**04 39 34.7**	**+0.8**
MCK				*e*Sn	**Sn**	**04 39 51.5**	**-3.0**
CHUM	**Lake Minchumin**	**1.91**	**334**	P	**Pn**	**04 39 37.6**	**+0.8**
CHUM				S	**Sn**	**04 39 59.4**	**-0.2**
BPAW	**Bear Paw Mtn.**	**1.94**	**353**	P	**Pn**	**04 39 37.7**	**+0.5**
SEW	**Seward**	**2.15**	**167**	P	**Pn**	**04 39 39.8**	**-0.3**
PAX	**Paxson**	**2.43**	**69**	P	**Pn**	**04 39 44.5**	**+0.7**
BRLK	**Bradley Lake**	**2.44**	**185**	P	**Pn**	**04 39 45.0**	**+0.9**
DIV	**Divide**	**2.46**	**114**	P	**Pn**	**04 39 43.1**	**-1.2**
TT01	**Tatalina**	**2.69**	**288**	P	**Pn**	**04 39 47.0**	**-0.4**
TTA	**Tatalina**	**2.69**	**289**	*e*P	**Pn**	**04 39 46.9**	**-0.6**
SVW2	**Sparrevohn**	**2.69**	**248**	*e*P	**Pn**	**04 39 46.9**	**-0.6**
EYAK	**Cordova Ski Ar**	**2.79**	**124**	P	**Pn**	**04 39 49.1**	**+0.3**
COLA	**College**	**2.93**	**22**	P	**Pn**	**04 39 51.3**	**+0.5**
COLA				*e*Sn	**Sn**	**04 40 23.7**	**-1.0**
ILAR	**Eielson Array**	**3.04**	**30**	P	**Pn**	**04 39 52.5**	**+0.3**
	21nm,0.3s,baz=212,slow=14,SNR=560						
ILAR				S	**Sn**	**04 40 26.4**	**-1.0**
	81nm,0.3s,baz=222,slow=24,SNR=16						
BMRM	**Bremner River**	**3.04**	**111**	P	**Pn**	**04 39 50.8**	**-1.5**
MENT	**Mentasta**	**3.20**	**73**	*e*Pn	**Pn**	**04 39 54.1**	**-0.3**
DOT	**Dot Lake**	**3.26**	**61**	P	**Pn**	**04 39 55.6**	**+0.4**
MID	**Middleton Isla**	**3.42**	**142**	*e*Pn	**Pn**	**04 39 57.1**	**-0.4**
GCSA	**Galena City Sc**	**3.87**	**314**	P	**Pn**	**04 40 04.7**	**+1.2**
IM3	**Indian Mountai**	**4.08**	**341**	P	**Pn**	**04 40 07.0**	**+0.6**
BCA3	**Beaver Creek A**	**4.09**	**74**	P	**Pn**	**04 40 06.3**	**-0.3**
KDAK	**Kodiak Island**	**4.55**	**195**	P	**Pn**	**04 40 11.2**	**-1.7**
KDAK				*e*Sn	**Sn**	**04 41 06.8**	**+2.3**
KDAK	**Kodiak Island**	**4.55**	**195**	P	**Pn**	**04 40 14.2**	**+1.3**
	3.0nm,0.3s,baz=28,slow=8.0,SNR=13						
KDAK				S	**Sn**	**04 41 09.9**	**+5.5**
	11nm,0.3s,baz=165,slow=20,SNR=2.7						
EGAK	**Eagle**	**4.90**	**54**	P	**Pn**	**04 40 17.6**	**-0.1**
COLD	**Coldfoot**	**5.06**	**1**	P	**Pn**	**04 40 21.4**	**+1.5**
OHAK	**Old Harbor**	**5.19**	**197**	P	**Pn**	**04 40 20.9**	**-0.8**
DAWY	**Dawson**	**5.35**	**65**	P	**Pn**	**04 40 24.0**	**+0.2**
BM3	**Burnt Mountain**	**5.81**	**23**	P	**Pn**	**04 40 30.9**	**+0.9**
PNL	**Peninsula**	**5.94**	**110**	*e*Pn	**Pn**	**04 40 32.0**	**0.0**
	52nm,0.8s						
SKAG	**Skagway**	**7.87**	**104**	*e*Pn	**Pn**	**04 40 57.0**	**-1.3**
	21nm,0.4s						
TNA	**Tin City**	**8.42**	**301**	P	**Pn**	**04 41 06.0**	**+0.3**
INK	**Inuvik**	**9.35**	**42**	*e*Pn	**Pn**	**04 41 18.5**	**0.0**
INK				S	**Sn**	**04 42 60.0**	**-2.0**
INK				*e*Sn	**Sn**	**04 43 01.9**	**0.0**
INK				LR	LR	04 45 25.3	
INK	**Inuvik**	**9.35**	**42**	P	**Pn**	**04 41 18.1**	**-0.4**
	0.8nm,0.3s,baz=228,slow=16,SNR=23						
INK				S	**Sn**	**04 42 60.0**	**-2.0**
	1.0nm,0.3s,baz=295,slow=17,SNR=3.1						
INK				LR	LR	04 45 25.3	
	comp=Z,64nm,19.7s,baz=262,slow=41						
DLBC	**Dease Lake**	**10.78**	**101**	P	**Pn**	**04 41 37.8**	**-0.3**
	0.2nm,0.3s,baz=292,slow=11,SNR=3.3						
DLBC				LR	LR	04 45 54.1	
	comp=Z,151nm,18.4s,baz=273,slow=38						
YKA	**Yellowknife Ar**	**16.51**	**73**	P	**Pn**	**04 42 52.7**	**-1.4**
YKA				sP	sP	04 43 16.0	+0.7
YKA	**Yellowknife Ar**	**16.51**	**73**	P	**Pn**	**04 42 52.7**	**-1.4**
	0.3nm,0.3s,baz=283,slow=9.5,SNR=12						
YKA				sP	sP	04 43 16.0	+0.7
	0.3nm,0.3s,baz=285,slow=10,SNR=7.0						
EDM	**Edmonton**	**21.46**	**98**	*e*P	**P**	**04 43 51.9**	**+1.9**
D05A	**Enumclaw**	**22.00**	**120**	⇑P	**P**	**04 43 56.0**	**+0.2**
	baz=22						
B08A	**Colville Reser**	**22.19**	**114**	⇑P	**P**	**04 43 58.5**	**+0.7**
	baz=22		

B17A	L&G Farms, Che	26.02	104	⇓P		P	04 44 33.8	-0.3
	baz=26							
E14A	Clinton	26.23	110	⇓P		P	04 44 35.9	-0.1
	baz=26							
YBH	Yreka Blue Hor	26.30	128	P		P	04 44 37.6	+0.9
	4.4nm,1.0s,mb4.0,baz=314,slow=1.6,SNR=6.8							
F13A	Darby	26.34	112	⇓P		P	04 44 37.0	-0.1
	baz=26							
C17A	Wharram Farm,	26.53	105	⇑P		P	04 44 38.3	-0.4
	baz=26							
F14A	Wisdom	26.75	111	⇑P		P	04 44 40.3	-0.3
	baz=27							
D17A	Six Diamond Ra	26.92	105	⇓P		P	04 44 41.7	-0.5
	baz=27							
G13A	Cobalt	26.93	113	⇓P		P	04 44 41.8	-0.6
	baz=27							
H12A	Diamond D Ranc	27.10	114	⇓P		P	04 44 43.8	-0.1
	baz=27							
H13A	Challis	27.35	113	⇑P		P	04 44 45.7	-0.3
	baz=27							
I12A	Atlanta	27.59	115	⇓P		P	04 44 47.8	-0.4
	baz=28							
MFID	Camas Ranch	27.61	117	⇓P		P	04 44 48.2	-0.2
	baz=28							
G16A	Moss Hill, Enn	27.89	109	⇑P		P	04 44 50.3	-0.6
	baz=28							
I13A	Wildhorse Cree	27.93	114	⇑P		P	04 44 51.0	-0.2
	baz=28,SNR=6.5							
H15A	Lima	28.00	111	⇓P		P	04 44 51.4	-0.5
	baz=28							
HLID	Hailey	28.08	115	⇓P		P	04 44 52.6	-0.1
	baz=28							
HLID	Hailey	28.08	115	*e*P		P	04 44 52.1	-0.5
	1.2nm,0.7s,mb3.6							
D20A	Manuel Ranch,	28.13	103	⇑P		P	04 44 53.1	+0.1
	baz=28							
I14A	Mackay	28.20	113	⇓P		P	04 44 53.6	-0.1
	baz=28							
F18A	Big Timber	28.30	106	⇓P		P	04 44 54.6	0.0
	baz=28							
J14A	Carey	28.66	114	⇓P		P	04 44 57.6	-0.2
	baz=28							
F19A	Roth Farm, Mol	28.69	105	⇓P		P	04 44 57.9	-0.1
	baz=29							
LAO	LASA Array	29.30	101	⇑P		P	04 45 03.4	0.0
	baz=29							
IMW	Indian Meadow	29.32	110	*e*P		P	04 45 04.3	+0.7
	2.2nm,0.7s,mb4.0							
K14A	Jones Ranch, D	29.44	114	⇓P		P	04 45 04.7	+0.1
	baz=29							
TPAW	Teton Pass	29.64	111	*e*P		P	04 45 06.5	+0.1
	2.4nm,0.8s,mb4.0							
LOHW	Long Hollow	29.70	110	*e*P		P	04 45 07.3	+0.4
	0.8nm,0.6s,mb3.6							
L14A	Malta	29.83	115	⇑P		P	04 45 08.4	+0.3
	baz=30							
H20A	Greybull	30.17	106	⇑P		P	04 45 11.1	0.0
	baz=30							
L15A	Malad City	30.22	114	⇓P		P	04 45 11.7	+0.2
	baz=30							
J18A	Kendall Valley	30.27	110	⇓P		P	04 45 12.3	+0.3
	baz=30							
K18A	Toltan Ranch,	30.72	111	⇑P		P	04 45 16.4	+0.4
	baz=31							
BW06	Boulder Array	30.83	110	⇓P		P	04 45 16.8	-0.1
	baz=31							
BW06	Boulder Array	30.83	110	*e*P		P	04 45 16.9	0.0
	1.1nm,0.5s,mb3.9							
NVAR	Mina Array Bea	30.84	125	P		P	04 45 16.9	-0.2
	2.5nm,0.8s,mb4.1,baz=312,slow=9.7,SNR=15							
NVAR				pP		pP	04 45 33.2	+2.1
	0.4nm,0.4s,baz=311,slow=9.3,SNR=3.9							
K19A	Absolon Red Bu	31.10	109	⇑P		P	04 45 19.1	-0.2
	baz=31							
Q11A	Duckwater	31.51	122	⇑P		P	04 45 23.2	+0.2
	baz=31							
DUG	Dugway	31.53	117	*e*P		P	04 45 23.3	+0.1
	1.3nm,0.7s,mb3.9							
S10A	Tonopah Range,	31.94	124	⇓P		P	04 45 26.8	+0.1
	baz=32							
R11A	Troy Canyon, C	31.97	122	⇓P		P	04 45 26.7	-0.3
	baz=32							
N18A	Larsen Ranch,	32.23	112	⇓P		P	04 45 29.0	-0.2
	baz=32							
RSSD	Black Hills	32.25	102	*e*P		P	04 45 29.6	+0.1
	3.5nm,0.5s,mb4.5							
Q14A	Sevier Lake (B	32.36	118	⇓P		P	04 45 30.7	+0.3
	baz=32							
O17A	Robinson Place	32.41	114	⇑P		P	04 45 31.3	+0.4
	baz=32							
N19A	John Jarvie Ra	32.51	112	⇓P		P	04 45 31.5	-0.3
	baz=32							
M21A	Separation Pea	32.73	109	⇓P		P	04 45 33.2	-0.4
	baz=33							
L22A	Ellis Ranch, M	32.81	107	⇓P		P	04 45 34.6	+0.3
	baz=33							
N20A	Spence Gulch,	32.96	111	⇓P		P	04 45 36.4	+0.7
	baz=33,SNR=11							
O19A	Miners Draw (B	33.02	112	⇓P		P	04 45 36.9	+0.7
	baz=33							
L23A	Garrett	33.07	106	⇓P		P	04 45 37.3	+0.7
	baz=33							
P18A	Preston Nutter	33.09	114	⇑P		P	04 45 38.1	+1.2
	baz=33							
ISA	Isabella	33.21	128	⇑P		P	04 45 38.0	+0.2
	baz=33							
MPMC	Manual Prospec	33.23	126	⇑P		P	04 45 38.3	+0.3
	baz=33							
Q16A	Castle Valley	33.29	116	⇓P		P	04 45 38.8	+0.3
	baz=33							
S13A	Holt Ranch, En	33.32	120	⇓P		P	04 45 38.9	+0.1
	baz=33							
N21A	Black Mountain	33.35	110	⇑P		P	04 45 38.6	-0.4
	baz=33							
SRU	San Rafael	33.41	115	⇑P		P	04 45 40.0	+0.4
	baz=33,SNR=5.0							
PKM	Peak Mountain	33.41	131	⇑P		P	04 45 40.2	+0.6
	baz=33							
P19A	Cripple Cowboy	33.63	113	⇓P		P	04 45 41.6	+0.1
	baz=34							
N22A	Wattenberg Ran	33.79	109	⇑P		P	04 45 43.0	+0.2
	baz=34							
S16A	Weppner Ranch,	34.13	118	⇓P		P	04 45 46.0	+0.2
	baz=34							
Q20A	Ridgley Place,	34.49	113	⇑P		P	04 45 49.1	+0.1
	baz=34							
O23A	Lake Granby, G	34.51	109	⇓P		P	04 45 49.7	+0.7
	baz=34							
S17A	Black Ridge (B	34.53	117	⇑P		P	04 45 49.8	+0.5
	baz=34							
V12A	Nelson	34.53	123	⇑P		P	04 45 49.4	+0.1
	baz=34							
R19A	Curley Farm, L	34.63	114	⇓P		P	04 45 50.0	-0.1
	baz=34							
BFSC	Mount Baldy Ra	34.78	128	⇑P		P	04 45 52.0	+0.5
	baz=35							
GMRC	Granite Mounta	35.05	125	⇑P		P	04 45 53.8	0.0
	baz=35							
R20A	Redvale	35.09	113	⇑P		P	04 45 54.1	0.0
	baz=35							
R21A	Cimarron	35.30	112	⇓P		P	04 45 56.2	+0.2
	baz=35							
T18A	Mexican Hat	35.34	116	⇓P		P	04 45 55.6	-0.7
	baz=35							
V15A	Kaibab Nationa	35.52	120	⇑P		P	04 45 58.4	+0.6
	baz=35							
W14A	Seligman	35.68	122	⇓P		P	04 45 59.7	+0.4
	baz=36							
R22A	Saguache, Gunn	35.77	111	⇑P		P	04 46 00.2	+0.3
	baz=36							
S21A	Coal Bank Pass	35.79	113	⇑P		P	04 46 00.5	+0.3
	baz=36							
T19A	Beclabito	35.96	115	⇓P		P	04 46 01.7	+0.1
	baz=36							
WUAZ	Wupatki	36.11	119	⇓P		P	04 46 03.2	+0.3
	baz=36							
S22A	4UR Ranch, Cre	36.14	112	⇑P		P	04 46 03.2	+0.1
	baz=36							
V17A	Tonalea, Kykot	36.26	118	⇑P		P	04 46 04.4	+0.3
	baz=36,SNR=6.5							
X14A	Yava	36.41	122	⇑P		P	04 46 06.1	+0.7
	baz=36							
T21A	Navajo Lake	36.46	114	⇓P		P	04 46 06.4	+0.5
	baz=36							
V18A	Ganado	36.54	117	⇓P		P	04 46 06.7	+0.1
	baz=36							
SDCO	Great Sand Dun	36.72	111	*e*P		P	04 46 08.4	+0.4
	1.0nm,0.8s,mb3.7							
T22A	Edith	36.72	113	⇓P		P	04 46 08.0	0.0
	baz=37							
U21A	Nageezi	36.89	114	⇑P		P	04 46 09.8	+0.4
	baz=37							
X16A	Lo Mia Camp, P	37.03	120	⇓P		P	04 46 10.6	-0.2
	baz=37							
Y15A	Casa Rosa Ranc	37.08	122	⇑P		P	04 46 11.7	+0.6
	baz=37							
Z13A	Yuma Proving G	37.22	124	⇓P		P	04 46 12.7	+0.4
	baz=37							
X18A	Snowflake	37.55	118	⇑P		P	04 46 15.9	+0.8
	baz=37							
U23A	El Rito	37.60	113	⇓P		P	04 46 16.4	+0.8
	baz=38							
W20A	Ramah	37.64	116	⇓P		P	04 46 15.9	0.0
	baz=38,SNR=7.0							
X19A	St. Johns	37.91	118	⇓P		P	04 46 19.0	+0.9
	baz=38							
U25A	Circle Dot Ran	38.32	111	⇑P		P	04 46 22.0	+0.4
	baz=38,SNR=8.9							
Y19A	Nutrioso	38.33	118	⇑P		P	04 46 22.4	+0.7
	baz=38							
Z17A	San Carlos Hig	38.40	120	⇓P		P	04 46 23.0	+0.7
	baz=38							
V24A	Rampart Ranch,	38.51	112	⇓P		P	04 46 23.5	+0.3
	baz=38							
X21A	Alamocita Cree	38.52	116	⇓P		P	04 46 24.1	+0.8
	baz=38							
W23A	Werner Place,	38.61	114	⇓P		P	04 46 24.5	+0.5
	baz=38							
U26A	Atchley Ranch,	38.62	110	⇓P		P	04 46 23.8	-0.3
	baz=38							
V25A	Rancho No Teng	38.70	111	⇓P		P	04 46 25.0	+0.2
	baz=39							
117A	Oracle	38.93	121	⇓P		P	04 46 27.3	+0.6
	baz=39							
V26A	Tequesquite Ra	39.10	110	⇓P		P	04 46 28.3	+0.2
	baz=39,SNR=9.1							
W25A	X Bar L Ranch,	39.29	112	⇑P		P	04 46 30.1	+0.3
	baz=39							
Y22A	Socorro	39.30	115	⇓P		P	04 46 30.2	+0.4
	baz=39							
Z20A	Nine Sixteen R	39.33	118	⇓P		P	04 46 30.0	-0.1
	baz=39							
119A	Ashpeak Ranch,	39.34	119	⇑P		P	04 46 30.9	+0.7
	baz=39							
Z22A	Elephant Butte	39.89	116	⇑P		P	04 46 34.6	-0.1
	baz=40							
Y24A	Capitan	39.97	114	⇓P		P	04 46 35.8	+0.5
	baz=40							
219A	White Tail Can	40.03	120	⇓P		P	04 46 35.7	-0.2
	baz=40							
X26A	CR and CF Fran	40.14	111	⇓P		P	04 46 36.0	-0.8
	baz=40							
318A	Bisbee	40.22	121	⇑P		P	04 46 37.9	+0.4
	baz=40							
Y25A	Mesa, Roswell	40.29	113	⇓P		P	04 46 38.1	+0.1
	baz=40							
X27A	F and S Farms,	40.37	111	⇑P		P	04 46 38.5	-0.2
	baz=40							
220A	Playas Peak, P	40.41	119	⇑P		P	04 46 39.1	+0.1
	baz=40							
Z24A	Sheeppen Canyo	40.51	114	⇓P		P	04 46 40.0	+0.1
	baz=40							
Z25A	Roswell	40.83	113	⇑P		P	04 46 43.1	+0.6
	baz=41							
Y27A	Causey	40.99	111	⇓P		P	04 46 43.7	-0.1
	baz=41,SNR=6.7							
124A	Stringfield Ra	41.01	115	⇓P		P	04 46 44.0	0.0
	baz=41							
MSTX	Muleshoe	41.08	111	⇓P		P	04 46 44.4	-0.2
	baz=41							
Z26A	Caprock	41.15	113	⇓P		P	04 46 45.3	+0.1
	baz=41							
125A	Gardner Draw,	41.38	114	⇓P		P	04 46 47.1	0.0
	baz=41							
225A	Deer Hill, Car	41.79	114	⇑P		P	04 46 50.2	-0.1
	baz=42							
MNTX	Cornudas Mount	41.90	115	⇑P		P	04 46 51.1	-0.2
	baz=42							
WMOK	Wichita Mounta	42.21	106	*e*P		P	04 46 53.1	-0.7
	2.9nm,1.0s,mb3.9							
325A	Bean Ranch, Si	42.36	115	⇓P		P	04 46 55.2	+0.2
	baz=42							
326A	Caldwell Ranch	42.83	114	⇑P		P	04 46 58.8	-0.1
	baz=43							
425A	Indio Mountain	42.86	116	⇓P		P	04 46 59.7	+0.6
	baz=43,SNR=6.2							
426A	McDonald Obser	43.37	115	⇑P		P	04 47 03.4	+0.2
	baz=43							
427A	Hayter Ranch,	43.48	114	⇓P		P	04 47 04.0	-0.1
	baz=43							
526A	Mary Lane Ranc	43.87	115	⇓P		P	04 47 07.7	+0.5
	baz=44							
428A	Kincaid Ranch,	43.90	113	⇑P		P	04 47 07.6	+0.2
	baz=44							
527A	Woodward Ranch	44.00	115	⇓P		P	04 47 08.3	+0.1
	baz=44							
626A	Big Bend Ranch	44.29	116	⇑P		P	04 47 10.7	+0.1
	baz=44							
528A	Cox Ranch, San	44.34	114	⇓P		P	04 47 11.2	+0.2
	baz=44,SNR=7.7							
TXAR	Lajitas Array	44.68	115	P		P	04 47 12.9	-0.8
	0.9nm,0.7s,mb3.7,baz=330,slow=5.9,SNR=13							
TXAR				LR		LR	05 07 01.9	
	comp=Z,25nm,21.0s,baz=180,slow=37							
627A	Terlingua Ranc	44.70	115	⇓P		P	04 47 13.6	-0.3
	baz=45							
628A	Black Gap, Mar	44.88	114	⇑P		P	04 47 15.1	-0.2
	baz=45							
JCT	Junction City	45.37	110	⇓P		P	04 47 18.9	-0.2
	baz=45							
JCT	Junction City	45.37	110	*e*P		P	04 47 18.6	-0.5
	4.3nm,0.6s,mb4.5							
MDJ	Mudanjiang	47.43	287	P		P	04 47 33.3	-1.8
MDJ				pmax		pmax		
	comp=Z,9.0nm,2.3s,mb4.3							
MDJ				pmax		pmax		
	comp=Z,190nm,3.5s							
ARCES	ARCESS Array B	48.53	2	P		P	04 47 39.4	-3.9
	comp=Z,2.7nm,1.0s,mb4.2,baz=7.0,slow=8.2,SNR=3.5							
ARCES				PcP		PcP	04 49 05.3	-2.9
	comp=Z,2.5nm,0.9s,baz=35,slow=4.4,SNR=5.9							
SONM	Songino Array	54.51	306	P		P	04 48 26.8	-1.3
	comp=Z,2.6nm,0.8s,mb4.3,baz=26,slow=7.8,SNR=14							
SONM				pP		pP	04 48 44.6	+1.4
	comp=Z,0.8nm,0.5s,baz=34,slow=5.3,SNR=4.5							
NOA	NORSAR Array B	56.30	11	P		P	04 48 38.1	-2.8
	comp=Z,0.9nm,0.8s,mb3.9,baz=350,slow=7.2,SNR=3.9							
ZALV	Zalesovo Beam	56.34	324	P		P	04 48 38.8	-2.4
	comp=Z,0.4nm,0.4s,mb3.8,baz=23,slow=8.0,SNR=5.1							
ZALV				pP		pP	04 48 55.6	-0.7
	comp=Z,0.7nm,0.5s,baz=46,slow=8.4,SNR=2.7							
FINES	FINESS Array B	56.66	2	P		P	04 48 40.9	-2.5
	comp=Z,0.8nm,0.6s,mb3.9,baz=0.0,slow=6.5,SNR=2.4							
BVAR	Borovoye Array	60.70	333	P		P	04 49 08.9	-2.6
	comp=Z,0.5nm,0.5s,mb3.9,baz=12,slow=7.5,SNR=3.7							
BVAR				pP		pP	04 49 26.4	-0.4
	comp=Z,1.5nm,0.8s,baz=54,slow=7.3,SNR=3.5							
MKAR	Makanchi Array	63.48	322	P		P	04 49 26.4	-4.0
MKAR				pP		pP	04 49 45.4	-0.2
MKAR	Makanchi Array	63.48	322	P		P	04 49 26.4	-4.0
	comp=Z,0.4nm,0.4s,mb3.9,baz=44,slow=4.4,SNR=4.0							
MKAR				pP		pP	04 49 45.4	-0.2
	comp=Z,0.7nm,0.4s,baz=52,slow=7.5,SNR=2.3							
AKASG	Malin Array Be	67.46	0	P		P	04 49 53.8	-2.1
	comp=Z,1.0nm,0.5s,mb4.1,baz=1.3,slow=6.3,SNR=7.2							
AKASG				pP		pP	04 50 10.4	-1.0
	comp=Z,0.7nm,0.5s,baz=353,slow=5.5,SNR=2.6							
ESDC	Sonseca Array	74.94	26	P		P	04 50 39.1	-2.2
	comp=Z,0.4nm,0.4s,mb3.7,baz=344,slow=5.8,SNR=4.7							
CMAR	Chiang Mai Arr	83.05	297	P		P	04 51 21.4	-4.5
	comp=Z,0.7nm,0.3s,mb4.1,baz=225,slow=1.0,SNR=6.6							
BOSA	Boshof	146.30	7	PKPbc		PKPbc	04 58 38.2	-2.2
BOSA	Boshof	146.30	7	PKPbc		PKPbc	04 58 38.2	-2.2
	comp=Z,2.2nm,0.6s,baz=70,slow=2.2,SNR=5.7							

*BJI **20** 04:54:39.0, 1.°79N×96.°76E, h29km, mB5.1/7, mb5.0/16*
*ISCJB **20** 04:54:41.7±0.3, 2.°04N±0.°04×96.°71E±0.°04, h26km, mb4.7/52, MS3.6/3, Error ellipse: s-maj=6.7km s-min=4.2km az=142.3*
*NEIC **20** 04:54:43.6±0.3, 2.°07N×96.°76E, mb4.6/23, Error ellipse: s-maj=7.9km s-min=5.8km az=57.0*
*IDC **20** 04:54:43.5±0.7, 2.°07N×96.°73E, h28km±4km, mb4.3/20, mb1 4.4/22, mb1mx4.3/27, mbtmp4.3/22, ML4.4/2, MS3.6/3, Ms1 3.6/3, ms1mx2.9/30, Error ellipse: s-maj=16.0km s-min=11.7km az=56.0*
*DJA **20** 04:54:45, 2.°26N×96.°77E, h83km, MLv4.9/5*

ISC 20 04:54:44.0±0.3, 2.°08N±0.°04×96.°75E±0.°04, h28km, h28km±2.5km: pP-P, n102, σ0.96/99, mb4.7/52, MS3.6/3, 1C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPTI		1.25	20	P	Pn	04 55 05.1	-0.5
TPTI				S	Sn	04 55 21.6	+0.1
PSI	Prapat	2.29	72	Pn	Pn	04 55 20.6	+0.6
	17nm,0.3s,baz=263,slow=11,SNR=43						
TSI	Tuntungan	2.30	52	P	Pn	04 55 21.4	+1.3
MNSI	Mandailing Nat	3.11	114	P	Pn	04 55 32.3	+1.1
MNSI				S	Sn	04 56 08.6	+1.2
BSI	Banda Aceh	3.69	337	P	Pn	04 55 37.4	-1.8
BSI				S	Sn	04 56 18.9	-2.8
PPI	Padang Panjang	4.44	125	P	Pn	04 55 50.9	+1.4
PDSI	Padang	4.76	129	P	Pn	04 55 58.3	+4.4
SDSI	Sungai Dareh	5.56	123	P	Pn	04 56 06.3	+1.4
	1um56nm,0.5s						
KSI	Kapahiang	8.16	134	P	Pn	04 56 34.5	-6.1
MDSI	Maura Dua	9.88	131	P	Pn	04 57 03.8	-0.5
CM31	Chiang Mai Arr	16.42	7	*e*P	Pn	04 58 34.1	+1.6
	32nm,0.8s						
CMAR	Chiang Mai Arr	16.42	7	Pn	Pn	04 58 31.3	-1.2
	1.6nm,0.3s,baz=201,slow=12,SNR=75						
CHTO	Chiang Mai	16.77	7	*e*P	Pn	04 58 35.4	-1.6
	16nm,0.8s						
KKM	Kota Kinabalu	19.81	78	*e*P	Pn	04 59 13.1	-1.2
	14nm,0.8s						
KMI	Kunming	23.63	14	P	P	04 59 53.0	0.0
KMI				pP		05 00 02.1	
KMI				sP	sP	05 00 05.8	+1.3
KMI				PP		05 00 29.0	
KMI				S	S	05 04 08.1	+2.3
KMI				sS	sS	05 04 23.5	+4.4
KMI				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.4						
KMI				pmax	pmax		
	comp=Z,140nm,5.5s						
SHL	Shillong	23.82	349	*e*PKP	P	04 59 52.5	-2.2
ODAN	Odare	26.22	341	*e*P	P	05 00 16.9	+0.3
	comp=Z,54nm,0.6s,mb5.2						
RAMN	Ramite	26.57	339	*e*P	P	05 00 21.0	+1.2
	comp=Z,35nm,0.5s,mb5.1						
TAPN	Taplejung	26.57	342	*e*P	P	05 00 20.5	+0.7
	comp=Z,56nm,0.9s,mb5.1						
JIRN	Jiri	27.37	339	*e*P	P	05 00 27.5	+0.6
	comp=Z,66nm,0.9s,mb5.2						
PKI	Pulchoki	27.57	338	*e*P	P	05 00 29.4	+0.6
	comp=Z,9.8nm,0.5s,mb4.7						
PKIN	Phulchoki	27.58	338	*e*P	P	05 00 30.3	+1.4
	comp=Z,17nm,0.5s,mb4.9						
GUN	Gumba	27.71	339	*e*P	P	05 00 30.6	+0.6
	comp=Z,37nm,0.6s,mb5.2						
DMN	Daman	27.72	337	*e*P	P	05 00 31.7	+1.6
	comp=Z,11nm,0.5s,mb4.8						
KKN	Kakani	27.82	338	*e*P	P	05 00 31.9	+0.9
	comp=Z,19nm,0.6s,mb4.9						
LSA	Lhasa	27.98	350	P	P	05 00 32.3	-0.1
GKN	Gorkha	28.26	337	*e*P	P	05 00 35.1	+0.2
	comp=Z,20nm,0.6s,mb5.0						
KOLN	Koldanda	28.47	335	*e*P	P	05 00 37.6	+0.8
	comp=Z,26nm,0.6s,mb5.0						
ENH	Enshi	30.53	22	*e*P	P	05 00 52.2	-2.9
	comp=Z,7.1nm,0.6s,mb4.7						
MBWA	Marble Bar	32.24	137	*e*P	P	05 01 10.0	-0.3
	comp=Z,6.2nm,0.7s,mb4.5						
LZH	Lanzhou	34.47	10	*e*P	P	05 01 28.8	-0.7
LZH				pP	pP	05 01 33.5	-4.2
LZH				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8						
FITZ	Fitzroy Crossi	34.81	126	⇑*i*P	P	05 01 31.6	-1.1
	comp=Z,15nm,0.6s,mb5.1						
FITZ	Fitzroy Crossi	34.81	126	P	P	05 01 31.6	-1.0
	comp=Z,10nm,0.7s,mb4.9,baz=315,slow=4.1,SNR=28						
GTA	Gaotai	37.26	4	P	P	05 01 53.3	0.0
GTA				pP	pP	05 02 00.9	-0.7
GTA				sP	sP	05 02 04.5	-0.5
GTA				pmax	pmax		
	comp=Z,32nm,0.7s,mb5.3						
KAKA	Kakadu	38.36	113	*e*P	P	05 02 01.4	-1.6
	comp=Z,12nm,0.5s,mb4.9						
KAKA	Kakadu	38.36	113	*e*P	P	05 02 01.0	-2.0
	comp=Z,24nm,0.5s,mb5.2						
BJT	Baijiatuau	41.68	23	*e*P	P	05 02 29.6	-0.6
	comp=Z,8.6nm,0.5s,mb4.6						
BJI	Beijing	41.70	23	P	P	05 02 30.4	0.0
BJI				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.6						
WRA	Warramunga Arr	42.89	123	P	P	05 02 39.5	-0.9
WRA				PcP	PcP	05 04 29.9	-1.1
WRA	Warramunga Arr	42.89	123	P	P	05 02 39.5	-0.9
	comp=Z,18nm,0.6s,mb5.0,baz=299,slow=9.5,SNR=188						
WRA				PcP	PcP	05 04 29.9	-1.1
	comp=Z,2.2nm,0.7s,baz=313,slow=2.5,SNR=8.6						
ULHL	Ulahol	44.01	338	P	P	05 02 49.9	+0.8
	SNR=10						
FORT	Forrest	44.24	140	*e*P	P	05 02 51.3	+0.2
	comp=Z,31nm,0.7s,mb5.2						
KZA	Kyzart	44.25	337	P	P	05 02 52.3	+1.3
	SNR=7.7						
ASAR	Alice Springs	44.29	128	P	P	05 02 51.1	-0.5
	comp=Z,8.3nm,0.7s,mb4.6,baz=301,slow=8.0,SNR=81						
ASAR				PcP	PcP	05 04 35.4	-0.3
	comp=Z,1.8nm,0.7s,baz=308,slow=3.3,SNR=7.3						
UCH	Uchtor	44.67	336	P	P	05 02 55.5	+1.2
	SNR=17						
UCH	Uchtor	44.67	336	*e*P	P	05 02 55.4	+1.1
	comp=Z,93μm,0.6s						
TKM2	Tokmak 2	44.84	338	P	P	05 02 56.7	+1.1
	SNR=11						
TKM2	Tokmak 2	44.84	338	*e*P	P	05 02 56.5	+0.9
	comp=Z,18nm,1.2s,mb4.8						
KBK	Karagaybulak	44.86	337	P	P	05 02 57.5	+1.7

STKA	Stephens Creek	54.28	132	P		P	05 04 08.1	+0.2	
	comp=Z,9.2nm,0.9s,mb4.7,baz=303,slow=5.9,SNR=12								
BRVK	Borovoye	55.34	341	*eP*		P	05 04 15.1	0.0	
	comp=Z,5.0nm,0.6s,mb4.7								
ABKAR	Akbulak array	56.53	332	*eP*		P	05 04 23.9	+0.1	
	comp=Z,6.9nm,0.8s,mb4.7								
CMSA	Cobar Meteorol	57.20	130	*eP*		P	05 04 28.9	0.0	
AKTO	Aktyubinsk	58.24	332	LR		LR	05 32 20.8		
	comp=Z,26nm,18.1s,MS3.4,baz=282,slow=39								
BR131	Keskin Array S	68.19	312	*eP*		P	05 05 41.2	-0.8	
	comp=Z,2.7nm,0.8s,mb4.3								
BRTR	Keskin Array B	68.19	312	P		P	05 05 41.1	-0.9	
	comp=Z,1.4nm,0.7s,mb4.1,baz=132,slow=7.9,SNR=9.5								
BRTR				pP		pP	05 05 49.9	-0.9	
	comp=Z,2.7nm,0.8s,baz=128,slow=7.1,SNR=10								
LSZ	Lusaka	69.93	253	*eP*		P	05 05 53.7	+0.5	
	comp=Z,2.5nm,0.8s,mb4.2								
LSZ	Lusaka	69.93	253	P		P	05 05 52.9	-0.4	
	comp=Z,2.0nm,0.6s,mb4.3,baz=89,slow=7.3,SNR=6.0								
MAW	Mawson	73.46	193	P		P	05 06 12.7	-0.8	
	comp=Z,3.0nm,0.7s,mb4.3,baz=341,slow=5.7,SNR=9.6								
LBTB	Lobatse	73.87	243	*eP*		P	05 06 16.8	+0.1	
	comp=Z,6.6nm,0.8s,mb4.6								
AKASG	Malin Array Be	74.29	322	P		P	05 06 16.9	-1.8	
AKASG	Malin Array Be	74.29	322	P		P	05 06 16.9	-1.8	
	comp=Z,1.0nm,0.6s,mb3.9,baz=83,slow=5.9,SNR=4.1								
BOSA	Boshof	74.82	240	*eP*		P	05 06 21.9	-0.3	
	comp=Z,3.0nm,0.6s,mb4.4								
BOSA	Boshof	74.82	240	P		P	05 06 22.1	-0.2	
	comp=Z,2.6nm,0.5s,mb4.4,baz=42,slow=5.0,SNR=6.4								
JOF	Joensuu	77.16	335	*eP*		P	05 06 35.3	+0.5	
JOF	Joensuu	77.16	335	*ep*		P	05 06 35.3	+0.5	
	comp=Z,2.4nm,0.5s,mb4.4								
FINES	FINESS Array B	79.01	332	P		P	05 06 44.7	-0.5	
FINES				pP		pP	05 06 53.6	-0.4	
FINES	FINESS Array B	79.01	332	P		P	05 06 44.7	-0.5	
	comp=Z,2.4nm,0.8s,mb4.2,baz=100,slow=6.6,SNR=4.6								
FINES				pP		pP	05 06 53.6	-0.4	
	comp=Z,3.5nm,0.6s,baz=103,slow=6.1,SNR=5.9								
KAF	Kangasniemi	79.10	333	*eP*		P	05 06 46.0	+0.4	
	comp=Z,4.0nm,0.6s,mb4.5								
KAF	Kangasniemi	79.10	333	*ep*		P	05 06 46.0	+0.4	
	comp=Z,4.0nm,0.6s,mb4.5								
TSUM	Tsumeb	80.45	250	*eP*		P	05 06 53.6	-0.3	
	comp=Z,2.6nm,0.9s,mb4.2								
ARCES	ARCESS Array B	81.56	340	P		P	05 06 58.5	-0.2	
	comp=Z,1.0nm,0.7s,mb3.9,baz=101,slow=6.0,SNR=9.1								
CLL	Collm	84.47	321	*eP*		P	05 07 14.0	-0.1	
NOA	NORSAR Array B	86.02	331	P		P	05 07 20.2	-1.5	
	comp=Z,0.3nm,0.5s,mb3.8,baz=180,slow=12,SNR=2.4								
TORD	Torodi Ar. Bea	94.45	283	P		P	05 08 01.8	-0.5	
	comp=Z,0.9nm,0.7s,mb4.3,baz=84,slow=5.4,SNR=6.1								
TORD				pP		pP	05 08 11.7	+0.3	
	comp=Z,1.1nm,1.0s,baz=59,slow=3.6,SNR=4.3								
HLID	Hailey	126.65	28	*e*PKPdf		PKPdf	05 13 44.9	-0.2	
NVAR	Mina Array Bea	128.33	35	PKP		PKPdf	05 13 47.0	-1.4	
	comp=Z,0.2nm,0.4s,baz=233,slow=5.5,SNR=4.2								
DUG	Dugway	129.99	30	*e*PKPdf		PKPdf	05 13 52.5	+1.0	
MNTX	Cornudas Mount	140.38	30	*e*PKPdf		PKPdf	05 14 10.7	-0.4	
TXAR	Lajitas Array	143.15	31	PKP		PKPdf	05 14 13.3	-2.9	
	comp=Z,0.4nm,0.6s,baz=192,slow=0.7,SNR=5.7								
JCT	Junction City	143.98	25	*e*PKPdf		PKPdf	05 14 15.7	-1.9	

*ISCJB **20** 04:57:10.9±0.4,0.˚40N±0.˚08×100.˚3E±0.˚1,h176km±5km, mb3.9/13, Error ellipse: s-maj=20.7km s-min=10.2km az=150.0*

*NEIC **20** 04:57:11.1±1.5,0.˚33N×100.˚45E,h167km±12km,mb4.3/4, Error ellipse: s-maj=26.8km s-min=12.9km az=57.0*

*IDC **20** 04:57:11.0±2.3,0.˚37N×100.˚43E,h162km±21km,mb3.6/10, mb1 3.7/12,mb1mx3.5/23,mbtmp3.6/12, Error ellipse: s-maj=28.1km s-min=13.7km az=54.0*

*DJA **20** 04:57:20,0.˚16N×100.˚14E,h55km, MLv4.0/7*

ISC 20 04:57:11.9±0.4, 0.˚36N±0.˚08×100.˚3E±0.˚1, h169km±5km, n29, σ0.˚995/29, mb3.9/13, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKNI	Bangkinang	0.78	93	P	Pn	04 57 37.1	+0.2
MNSI	Mandailing Nat	0.81	302	P	Pn	04 57 36.7	-0.4
PPI	Padang Panjang	0.83	171	P	Pn	04 57 37.3	0.0
PDSI	Padang	1.28	171	P	Pn	04 57 40.9	0.0
SDSI	Sungai Dareh	1.74	138	P	Pn	04 57 45.9	+0.5
SISI	Saibi	2.05	215	P	Pn	04 57 47.7	-1.1
SISI				S	Sn	04 58 11.9	-5.4
KRJI	Kerinci	2.72	154	P	Pn	04 57 58.4	+1.8
PSI	Prapat	2.77	331	P	Pn	04 57 56.4	-0.8
PSI	Prapat	2.77	331	P	Pn	04 57 56.4	-0.8
	15nm,0.3s,baz=155,slow=8.4,SNR=4.9						
MDSI	Maura Dua	6.21	141	P	Pn	04 58 41.8	+0.2
LWLI	Liwa	6.55	145	P	Pn	04 58 52.9	+6.7
CMAR	Chiang Mai Arr	18.03	356	P	P	05 01 10.3	0.0
	baz=186,slow=11,SNR=4.4						
WRA	Warramunga Arr	39.01	123	P	P	05 04 20.3	-2.0
	1.2nm,0.6s,mb3.7,baz=306,slow=8.6,SNR=6.6						
WRA				PcP	PcP	05 06 29.4	+0.1
	0.9nm,0.4s,baz=316,slow=2.4,SNR=8.4						
ASAR	Alice Springs	40.47	128	P	P	05 04 32.5	-1.8
	1.5nm,0.8s,mb3.7,baz=300,slow=7.5,SNR=8.1						
ASAR				PcP	PcP	05 06 34.1	+0.3
	1.3nm,0.5s,baz=311,slow=2.7,SNR=10.0						
SONM	Songino Array	47.58	6	P	P	05 05 32.2	+1.7
	0.4nm,0.4s,mb3.4,baz=186,slow=7.1,SNR=3.6						
SONM				PcP	PcP	05 06 57.1	-0.5
	0.5nm,0.6s,baz=178,slow=3.0,SNR=3.2						
TKM2	Tokmak 2	47.79	336	*eP*	P	05 05 32.7	+0.5
	6.8nm,0.5s,mb4.5						
AAK	Ala-Archa	48.02	334	*eP*	P	05 05 35.1	+1.1
	2.7nm,0.3s,mb4.3						
AAK	Ala-Archa	48.02	334	P	P	05 05 35.1	+1.1
	2.0nm,0.3s,mb4.2,baz=198,slow=3.2,SNR=3.0						
EKS2	Erkin-Say	48.36	334	*eP*	P	05 05 37.5	+1.0
	7.2nm,0.8s,mb4.3						
MK31	Makanchi Array	48.84	344	*eP*	P	05 05 40.1	-0.1
MKAR	Makanchi Array	48.84	344	P	P	05 05 40.1	0.0
	2.3nm,0.4s,mb4.1,baz=149,slow=8.0,SNR=7.5						
KURK	Kurchatov	53.43	343	P	P	05 06 13.2	-1.1
	1.8nm,0.5s,mb4.0,baz=250,slow=11,SNR=4.0						
ZALV	Zalesovo Beam	54.91	349	P	P	05 06 23.8	-1.2
ZALV				pP	pP	05 07 03.0	-0.6
ZALV	Zalesovo Beam	54.91	349	P	P	05 06 23.7	-1.2
	1.0nm,0.4s,mb3.9,baz=166,slow=8.1,SNR=4.4						
ZALV				pP	pP	05 07 03.0	-0.6
	2.3nm,0.8s,baz=165,slow=6.1,SNR=3.7						
ABKAR	Akbulak array	59.71	331	*eP*	P	05 06 58.0	-0.7
	0.7nm,0.3s,mb4.0						
BRTR	Keskin Array B	71.94	312	P	P	05 08 17.5	+0.4
	0.5nm,0.6s,mb3.5,baz=131,slow=8.9,SNR=2.8						
BOSA	Boshof	77.03	241	P	P	05 08 48.0	+1.3
	1.0nm,0.3s,mb3.9,baz=72,slow=3.2,SNR=3.9						
FINES	FINESS Array B	82.16	332	P	P	05 09 13.8	+0.1
	0.6nm,0.4s,mb3.5,baz=114,slow=9.3,SNR=2.4						
TXAR	Lajitas Array	142.66	36	PKP	PKPdf	05 16 22.7	-3.0
	0.4nm,0.4s,baz=240,slow=0.9,SNR=11						

*ISCJB **20** 05:10:36.8±0.6,22.˚02N±0.˚04×121.˚52E±0.˚03,h15km±5km, Error ellipse: s-maj=6.6km s-min=4.6km az=169.0*

*JMA **20** 05:10:38.4±0.4,22.˚20N×121.˚72E,h0km,M3.5*

*TAP **20** 05:10:38.0,22.˚06N×121.˚37E,h16km,ML3.5,C*

*NEIC **20** 05:10:39.9±4.3,22.˚27N×121.˚63E,h10km,MG3.5(JMA), Error ellipse: s-maj=43.0km s-min=22.7km az=170.0*

ISC 20 05:10:36.5±0.7, 22.˚08N±0.˚03×121.˚52E±0.˚03, h1km±4km, n43, σ1.˚901/65, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.05	148	↑*i*P	Pg	05 10 42.9	+5.5
	baz=97						
LAY				*e*S	Sg	05 10 46.2	+8.2
	baz=97						
TSEB	Hengchuen, Pin	0.60	253	*e*P	Pg	05 10 48.7	+0.6
	baz=268						
TSEB				*e*S	Sg	05 10 56.7	+0.8
	baz=268						
TWK1	Hengchun	0.68	259	P	Pg	05 10 49.1	-0.3
	baz=271						
TWK1				*e*S	Sg	05 10 56.8	-1.5
	baz=271						
EAST	Anshuo	0.69	296	↑*i*P	Pg	05 10 49.6	-0.2
	baz=305						
EAST				*i* S	Sg	05 10 57.6	-1.2
	baz=305						
HEN	Hengchun	0.73	264	P	Pg	05 10 50.3	-0.2
	baz=275						
HEN				S	Sg	05 10 58.3	-1.7
	baz=275						
ECL	Taimali	0.74	314	*e*P	Pg	05 10 50.2	-0.4
	baz=325						
ECL				*e*S	Sg	05 10 59.3	-0.8
	baz=325						
TWG	Pinlang	0.85	331	*e*Pg	Pg	05 10 54.8	+2.1
TWG				*e*Sg	Sg	05 11 03.5	-0.2
TWG	Pinlang	0.85	331	*e*P	Pg	05 10 52.3	-0.4
	baz=325						
SCZT	Fangliau	0.89	289	P	Pg	05 10 52.6	-0.8
	baz=305						
CHKT	Chengkung	1.02	352	*e*P	Pg	05 10 57.9	+1.7
	baz=10.0						
SSD	Sandimen	1.06	309	*e*P	Pg	05 10 56.2	-0.5
	baz=325						
ELDTW	Lidau	1.20	337	*e*P	Pg	05 10 57.9	-1.5
	baz=344						
TWM1	Shoushan	1.26	306	*e*P	Pg	05 11 01.1	+0.5
	baz=323						
TWF1	Yuli	1.28	351	*e*P	Pg	05 11 00.6	-0.4
	baz=6.0						
YULB	Yu-li	1.32	351	*e*Pg	Pg	05 11 01.9	0.0
YULB				*e*Sg	Sg	05 11 19.8	+0.8
EHY	Hungye	1.43	353	*e*P	Pn	05 11 02.5	-1.1
	baz=346						
WTP	Ta-pu	1.43	324	*e*P	Pn	05 11 03.6	-0.1
	baz=340						
CHN1	Nanshi	1.43	320	*e*P	Pn	05 11 03.7	+0.1
	baz=326						
CHN1				*e*S	Sb	05 11 22.9	+0.1
	baz=326						
TPUB	Ta-pu	1.47	326	*e*Pn	Pn	05 11 04.8	+0.7
TPUB				*e*Sn	Sn	05 11 25.0	+1.0
YUS	Yu-Shan	1.50	340	*e*P	Pn	05 11 04.5	0.0
	baz=345						
CHN4	Tsaushan	1.53	326	*e*P	Pn	05 11 04.8	-0.1
	baz=343						
CHN4				*e*S	Sn	05 11 25.5	0.0
	baz=343						
ALS	Alishan	1.57	335	*e*P	Pn	05 11 05.3	-0.2
	baz=341						
CHN5	Tsauling	1.70	333	*e*P	Pn	05 11 08.0	+0.7
	baz=338						
CHN5				*e*S	Sn	05 11 30.0	+0.3
	baz=338						
ESL	Shilin	1.73	357	*e*P	Pn	05 11 06.8	-0.9
	baz=10.0						
ESL				*e*S	Sn	05 11 29.6	-0.9
	baz=10.0						
SSLB	Suanglung	1.78	343	*e*Pn	Pn	05 11 08.9	+0.5
SSLB				*e*Sn	Sn	05 11 32.7	+1.1
SMLT	Sun Moon Lake	1.88	342	*e*P	Pn	05 11 10.8	+1.0
	baz=357						
TYC	Yuchr	1.92	341	P	Pn	05 11 10.8	+0.5
	baz=356						
WHF	Hehuan Shan	2.07	353	*e*P	Pn	05 11 12.7	+0.3
	baz=8.0						
NACB	Ninganchiao	2.08	2	*e*Pn	Pn	05 11 11.8	-0.8
NACB				*e*Sn	Sn	05 11 35.9	-3.4
PNG	Penghu	2.34	310	*e*P	Pn	05 11 15.2	-0.9
	baz=313						
ENA	Nanau	2.34	5	*e*P	Pn	05 11 17.5	+1.3
	baz=356						
NNS	Nan Shan	2.35	357	*e*P	Pn	05 11 17.9	+1.6
	baz=11						
TWQ1	Liyutan	2.36	343	*e*P	Pn	05 11 17.6	+1.2
	baz=346						
TWC	Suao	2.54	7	*e*P	Pn	05 11 20.2	+1.4
	baz=357						
ENTT	Nioudou	2.55	1	*e*P	Pn	05 11 20.1	+1.1
	baz=3.0						
YHNB	Yeheng	2.58	357	*e*Pn	Pn	05 11 20.2	+0.7
YHNB				*e*Sn	Sn	05 11 54.5	+3.0
NSK	Sanguang	2.59	357	*e*P	Pn	05 11 20.3	+0.7
	baz=10.0						
YOJ	Yonaguni jima	2.74	30	P	Pn	05 11 22.0	+0.4
YOJ				*e*S	Sn	05 11 54.3	-1.0
HATJ	Hateruma jima	2.88	46	P	Pn	05 11 23.8	+0.3
HATJ				*e*S	Sn	05 11 57.5	-1.3
IRIF	Iriomote-Funau	3.03	42	P	Pn	05 11 26.1	+0.5
IRIF				*e*S	Sn	05 12 00.9	-1.6
JKRS	Kuro-shima	3.14	46	P	Pn	05 11 27.4	+0.3
JKRS				*e*S	Sn	05 12 03.0	-2.2
JIJ	Ishigaki jima	3.31	46	P	Pn	05 11 29.4	-0.1
JIJ				*e*S	Sn	05 12 06.8	-2.7
JTJ	Tarama	3.88	48	P	Pn	05 11 38.4	+1.1
JTJ				*e*S	Sn	05 12 21.6	-1.9

*NIED **20** 05:28:00,38.˚90N×142.˚50E,h35km,Mw4.2 Best double couple: M0 2.01000×10^15 NP1:ϕs272.00000°,δ87.00000°, λ144.00000°. NP2:ϕs4.00000°,δ54.00000°,λ4.00000°.*

*IDC **20** 05:28:00.7±0.9,38.˚79N×142.˚59E,h0km,mb3.8/6, mb1 4.0/10,mb1mx3.8/26,mbtmp3.9/10,ML3.7/2,MS3.3/3, Ms1 3.4/3,ms1mx2.7/31, Error ellipse: s-maj=26.3km s-min=18.4km az=106.0*

*ISCJB **20** 05:28:01.9±1.1,38.˚91N±0.˚03×142.˚59E±0.˚07,h20km±7km, mb4.0/9, Error ellipse: s-maj=8.9km s-min=5.3km az=19.2*

*NEIC **20** 05:28:03.4,38.˚95N×142.˚53E,h30km,mb4.2/3, After JMA.*

NEIC Recorded [1 JMA] in Iwate and Miyagi.

*JMA **20** 05:28:03.4±0.1,38.˚95N×142.˚53E,h30km±2km, M4.3 Broadband fault plane solution: P waves. NP1: ϕs188.00000°,δ28.00000°,λ-1.00000°. NP2:ϕs279.00000°, δ89.00000°,λ-118.00000°. Principal axes: T Plg38.0000°, Azm34.0000°; N Plg28.0000°, Azm279.0000°; P Plg39.0000°, Azm163.0000°;*

JMA Felt I J1.

ISC 20 05:28:02.8±1.1, 38.˚95N±0.˚03×142.˚52E±0.˚05, h13km±6km, n29, σ0.˚991/37, mb4.0/9, 3C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.68	282	↓iP	Pg	05 28 16.6	+0.7
OFUJ				S	Sg	05 28 25.6	+0.8
MIYJ	Miyakonagasawa	0.83	319	↓iP	Pg	05 28 18.6	-0.2
MIYJ				S	Sg	05 28 29.3	-0.4
JMK	Ichinoseki	1.01	271	↑iP	Pb	05 28 21.9	-0.2
JMK				S	Sb	05 28 35.2	-0.1
JIO	Ouri	1.04	242	↑iP	Pb	05 28 21.6	-1.0
JIO				S	Sb	05 28 34.4	-1.7
JOM	Ohasama	1.09	299	↓iP	Pb	05 28 23.1	-0.3
JOM				S	Sb	05 28 37.5	0.0
JTH	Tanohata	1.11	333	P	Pb	05 28 22.8	-1.0
JTH				*e*S	Sb	05 28 37.4	-0.8
JKZ	Kuzumaki	1.39	319	↓iP	Pn	05 28 27.7	-0.1
JKZ				S	Sn	05 28 45.5	-0.4
JOU	Okura	1.56	249	↑iP	Pn	05 28 30.0	-0.2
JOU				S	Sn	05 28 49.8	-0.5
JANG	Nango	1.62	332	P	Pn	05 28 31.0	0.0
JANG				*e*S	Sn	05 28 52.0	+0.3
ERM	Erimo	3.10	9	*e*Pn	Pn	05 28 51.6	+0.2
MAJO	Matsushiro	4.18	236	*e*Pn	Pn	05 29 07.2	+1.1
MAT	Matsushiro	4.18	236	P	Pn	05 29 07.7	+1.6
MAT				S	Sn	05 29 56.7	+2.0
MJAR	Matsushiro Arr	4.18	236	Pn	Pn	05 29 06.5	+0.4
MJAR				LR	LR	05 30 55.6	
MJAR	Matsushiro Arr	4.18	236	Pn	Pn	05 29 06.5	+0.4
	3.3nm,0.3s,baz=37,slow=12,SNR=36						
MJAR				LR	LR	05 30 55.6	
	comp=Z,421nm,19.6s,baz=65,slow=42						
ASAJ	Asahikawa	5.17	1	Pn	Pn	05 29 22.9	+3.3
	2.9nm,0.3s,baz=164,slow=26,SNR=4.4						
ASAJ				LR	LR	05 31 52.0	
	comp=Z,290nm,21.1s,baz=242,slow=43						
JHJ	Hachijo jima 2	6.22	202	Pn	Pn	05 29 32.0	-2.2
	18nm,0.3s,baz=74,slow=11,SNR=5.2						
KSRS	Korea Array	11.58	267	Pn	Pn	05 30 49.5	+1.7
	0.2nm,0.3s,baz=85,slow=14,SNR=5.1						
ZALV	Zalesovo Beam	41.30	311	P	P	05 35 48.0	+0.4
ZALV	Zalesovo Beam	41.30	311	P	P	05 35 48.0	+0.4
	0.8nm,0.3s,mb3.9,baz=93,slow=10,SNR=4.6						
MKAR	Makanchi Array	43.87	301	P	P	05 36 09.1	+0.4
	0.4nm,0.3s,mb3.7,baz=83,slow=9.9,SNR=6.9						
KURK	Kurchatov	45.47	307	*e*P	P	05 36 21.1	-0.1
	4.2nm,0.8s,mb4.3						
ILAR	Eielson Array	47.42	33	P	P	05 36 37.4	+1.0
	0.8nm,0.7s,mb3.8,baz=270,slow=6.5,SNR=14						
TKM2	Tokmak 2	49.51	297	P	P	05 36 53.1	+0.3
	3.0nm,1.0s,mb4.3						
ABKAR	Akbulak array	57.39	310	P	P	05 37 50.0	-0.6
	0.6nm,0.4s,mb4.0						
WRA	Warramunga Arr	59.08	189	P	P	05 38 01.3	-1.3
	2.8nm,0.7s,mb4.4,baz=6.9,slow=6.9,SNR=34						
ASAR	Alice Springs	62.80	189	P	P	05 38 27.1	-0.8
	0.7nm,0.6s,mb3.9,baz=4.2,slow=4.5,SNR=7.6						
NOA	NORSAR Array B	72.76	337	LR	LR	06 14 39.8	
	comp=Z,23nm,18.3s,baz=5.0,slow=38						
TXAR	Lajitas Array	88.27	53	P	P	05 40 54.1	+0.1
	0.1nm,0.4s,mb3.4,baz=20,slow=3.2,SNR=2.5						
LPAZ	La Paz	144.96	59	PKP	PKPdf	05 47 41.0	+1.0
	0.6nm,0.6s,baz=225,slow=2.9,SNR=4.9						

*IDC **20** 05:36:43.9±0.9, 18.˚92N×146.˚61E,h0km,mb3.9/10, mb1 4.1/10,mb1mx4.0/20,mbtmp3.9/10,MS3.1/2, Ms1 3.1/2,ms1mx2.6/24, Error ellipse: s-maj=34.7km s-min=19.6km az=88.0*

*ISCJB **20** 05:36:49.9±2.9, 18.˚84N±0.˚09×146.˚6E±0.˚2,h58km±26km, mb4.0/11,MS3.0/1, Error ellipse: s-maj=30.1km s-min=14.4km az=175.5*

*NEIC **20** 05:36:52.8±2.1, 18.˚81N×146.˚59E,h70km±20km, Error ellipse: s-maj=22.9km s-min=13.0km az=83.0*

ISC 20 05:36:52.1±2.3, 18.˚86N±0.˚08×146.˚6E±0.˚2, h62km±22km, n15, σ0.˚970/16, mb4.0/11, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.49	198	Pn	Pn	05 38 11.0	-0.3
	baz=0.0,slow=20,SNR=2.1						
GUMO				Sn	Sn	05 39 13.1	0.0
	8.6nm,0.3s,baz=162,slow=20,SNR=2.5						
GUMO				LR	LR	05 40 08.6	
	comp=Z,150nm,20.0s,baz=81,slow=37						
MAJO	Matsushiro	19.09	339	P	Pn	05 41 11.7	+0.6
YULB	Yu-li	23.99	285	P	P	05 42 02.0	+0.9
KSRS	Korea Array	24.69	322	P	P	05 42 06.4	-0.9
	0.9nm,0.6s,mb3.5,baz=143,slow=8.7,SNR=4.3						
KSRS				LR	LR	05 51 32.9	
	comp=Z,50nm,18.5s,baz=130,slow=36						
WRA	Warramunga Arr	40.38	198	P	P	05 44 24.1	-0.1
	0.9nm,0.5s,mb3.8,baz=18,slow=8.8,SNR=16						
SONM	Songino Array	43.54	321	P	P	05 44 49.1	-0.5
	0.5nm,0.5s,mb3.5,baz=138,slow=9.9,SNR=4.7						
ASAR	Alice Springs	44.04	197	P	P	05 44 53.9	+0.1
	0.4nm,0.3s,mb3.6,baz=24,slow=6.5,SNR=7.0						
ZALV	Zalesovo Beam	58.39	322	P	P	05 46 41.3	+0.3
	2.0nm,0.5s,mb4.4,baz=108,slow=8.0,SNR=11						
MKAR	Makanchi Array	58.95	314	P	P	05 46 46.0	+0.9
	0.6nm,0.4s,mb4.0,baz=90,slow=7.7,SNR=8.8						
ILAR	Eielson Array	63.14	26	P	P	05 47 12.3	-0.8
	0.2nm,0.4s,mb3.6,baz=259,slow=5.4,SNR=4.6						
NVAR	Mina Array Bea	82.39	52	P	P	05 49 09.3	+1.7
	0.6nm,0.8s,mb3.6,baz=255,slow=6.1,SNR=4.3						
ARCES	ARCESS Array B	82.59	342	P	P	05 49 07.7	-0.5
	1.2nm,0.5s,mb4.2,baz=70,slow=7.3,SNR=10						
JOF	Joensuu	84.22	335	*eP*	P	05 49 16.1	-0.5
JOF	Joensuu	84.22	335	*ep*	P	05 49 16.1	-0.5
	4.1nm,0.4s,mb4.9						
FINES	FINESS Array B	87.08	336	P	P	05 49 30.0	-0.8
	2.0nm,0.3s,mb4.8,baz=75,slow=4.4,SNR=20						

IDC 20 05:46:34.6±6.1, 20.˚01S×176.˚25W, h0km, mb4.1/4, mb1 4.4/4, mb1mx3.9/17, mbtmp4.1/4, Error ellipse: s-maj=257.3km s-min=36.1km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	35.18	263	P	P	05 53 32.3	+1.8
	2.4nm,0.3s,baz=89,slow=9.4,SNR=6.3						
ASAR	Alice Springs	46.23	256	P	P	05 55 01.6	-0.3
	1.9nm,0.6s,baz=88,slow=8.4,SNR=25						
WRA	Warramunga Arr	46.30	261	P	P	05 55 01.1	-1.3
	1.0nm,0.3s,baz=97,slow=7.6,SNR=26						
ILAR	Eielson Array	87.48	12	P	P	05 59 23.7	+0.1
	0.4nm,0.7s,baz=214,slow=5.1,SNR=5.9						

GUC 20 05:54:20.0±0.6, 22.˚97S×70.˚13W, h46km±3km, MD3.5, ML2.5, 1C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MECH	Mejillones	0.32	246	*e*P	Pn	05 54 28.7	-0.2
MECH				*i* S	Sn	05 54 35.4	+0.2
MECH				AML	AML	05 54 45.9	
	comp=N,416nm,0.5s						
CEN1	Los Morros	0.42	189	↓*i*P	Pn	05 54 32.8	+2.8
CEN1				*i* S	Sn	05 54 42.7	+5.5
CEN1				AML	AML	05 54 43.6	
	comp=N,223nm,0.6s						
ANCH	Antofagasta	0.75	200	↑*i*P	Pn	05 54 30.2	-4.0
ANCH				*i* S	Sn	05 54 40.7	-3.9
ANCH				AML	AML	05 54 42.2	
	comp=N,375nm,0.1s						
MACH	Maria Elena	0.85	24	*i* P	Pn	05 54 36.6	+1.1
MACH				*i* S	Sn	05 54 48.6	+1.8
PB04	Plate Boundary	0.92	40	↓*i*P	Pn	05 54 33.3	-3.3
PB04				*i* S	Sn

JMA Felt IV J1.
IDC ***20*** *06:13:29.2±1.4,35°.97N×139°.77E,h55km±13km,mb4.1/20, mb1 4.3/23,mb1mx4.3/28,mbtmp4.2/23,MS3.4/4, Ms1 3.4/4,ms1mx3.0/21 Error ellipse: s-maj=14.4km s-min=8.6km az=75.0*
NEIC ***20*** *06:13:29.2±1.0,36°.07N×139°.74E,h52km±8km,mb4.6/25, MW4.4(NIED),Error ellipse: s-maj=9.8km s-min=6.7km az=162.0*
NEIC Recorded [4 JMA] in Ibaraki; [3 JMA] in Chiba, Saitama, Tochigi and Tokyo; [2 JMA] in Fukushima, Gumma and Kanagawa; [1 JMA] in Miyagi, Nagano, Shizuoka and Yamanashi. Also recorded [1 JMA] on Kozu-shima, Nii-jima, O-shima, Shikine-jima and To-shima.
ISC 20 06:13:29.4±0.3,36°.07N±0°.03×139°.77E±0°.03,h46km±3km, h7km±5.2km:pP-P,n379,σ0s75/384,mb4.6/78,MS4.0/9, 118C-114D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.38**	**65**	⇑P		**Pn**	**06 13 37.7**	**-1.2**
JYT				S		**Sn**	**06 13 43.7**	**-2.0**
TOK	**Tokyo**	**0.38**	**182**	⇑P		**Pn**	**06 13 39.6**	**+0.6**
JAG	**Ashikaga**	**0.44**	**324**	⇓P		**Pn**	**06 13 40.4**	**+0.8**
JRY	**Ryogami san**	**0.71**	**266**	⇓P		**Pn**	**06 13 43.9**	**+0.9**
JRY				*e*S		**Sn**	**06 13 54.5**	**+1.6**
JKT	**Katashina**	**0.81**	**329**	⇓P		**Pn**	**06 13 45.0**	**+0.6**
JOD2	**Odawara 2**	**0.98**	**215**	⇓P		**Pn**	**06 13 46.9**	**+0.2**
JOD2				*e*S		**Sn**	**06 14 00.2**	**+0.8**
JYN	**Shimob**	**1.15**	**241**	⇑P		**Pn**	**06 13 50.6**	**+1.6**
JHK	**Hiroka**	**1.32**	**333**	⇓P		**Pn**	**06 13 52.4**	**+1.0**
JFY	**Yanaizu**	**1.33**	**358**	*e*S		**Sn**	**06 14 08.9**	**+0.8**
MJAR	**Matsushiro Arr**	**1.35**	**291**	P		**Pn**	**06 13 52.5**	**+0.8**
	179nm,0.3s,baz=96,slow=8.8,SNR=988							
MJAR				LR		LR	06 14 30.0	
	comp=Z,2μm,18.6s,baz=115,slow=45							
MAJO	**Matsushiro**	**1.35**	**291**	*e*P		**Pn**	**06 13 53.7**	**+2.0**
MAT	**Matsushiro**	**1.35**	**291**	P		**Pn**	**06 13 53.4**	**+1.7**
MAT				S		**Sn**	**06 14 08.2**	**-0.2**
JIM2	**Oshima 3**	**1.38**	**192**	⇓P		**Pn**	**06 13 51.2**	**-0.9**
BSO3	**Boso 3**	**1.40**	**154**	⇓P		**Pn**	**06 13 50.7**	**-1.8**
JHJ	**Hachijo jima 2**	**2.94**	**180**	P		**Pn**	**06 14 12.4**	**-1.2**
	850nm,0.3s,baz=69,slow=22,SNR=282							
JHJ				S		**Sn**	**06 14 45.2**	**-2.5**
	464nm,0.3s,baz=235,slow=24,SNR=12							
JHJ				LR		LR	06 15 05.5	
	comp=Z,422nm,19.9s,baz=148,slow=34							
ERM	**Erimo**	**6.49**	**23**	*e*Pn		**Pn**	**06 15 00.6**	**-1.7**
ERM	**Erimo**	**6.49**	**23**	*e*P		**Pn**	**06 15 02.2**	**-0.1**
ASAJ	**Asahikawa**	**8.32**	**14**	P		**Pn**	**06 15 27.1**	**-0.2**
	2.5nm,0.3s,baz=235,slow=19,SNR=4.2							
ASAJ	**Asahikawa**	**8.32**	**14**	P		**Pn**	**06 15 27.2**	**-0.1**
ASAJ				pmax	pmax			
	comp=Z,3.0nm,0.3s							
CBIJ	**Chichi jima**	**9.18**	**166**	P		**Pn**	**06 15 34.6**	**-4.6**
	comp=Z,76nm,0.3s,baz=78,slow=17,SNR=24							
CBIJ				S		**Sn**	**06 17 10.7**	**-10**
	comp=Z,29nm,0.3s,baz=307,slow=20,SNR=4.9							
YUK	**Yuzh-Kuril'sk**	**9.22**	**29**	⇓*i*P		**Pn**	**06 15 39.6**	**0.0**
YUK				*i* S		**Sn**	**06 17 18.1**	**-3.8**
YUK				pmax	pmax			
	comp=Z,680nm,2.0s							
YUK				pmax	pmax			
	comp=E,49nm,0.8s							
YUK				pmax	pmax			
	comp=Z,142nm,0.8s							
YUK				pmax	pmax			
	comp=N,71nm,0.4s							
YUK				smax				
	comp=N,84nm,0.6s							
YUK				smax				
	comp=E,247nm,0.6s							
YUK				smax				
	comp=N,70nm,0.4s							
YUK				smax				
	comp=E,910nm,2.0s							
KSRS	**Korea Array**	**9.61**	**282**	P		**Pn**	**06 15 46.5**	**+1.6**
	comp=E,0.4nm,0.3s,baz=98,slow=13,SNR=3.8							
KSRS				LR		LR	06 19 25.4	
	comp=E,279nm,19.4s,baz=134,slow=37							
YSS	**Yuzh-Sakhalins**	**11.10**	**11**	Pn		**Pn**	**06 16 02.6**	**-2.8**
YSS	**Yuzh-Sakhalins**	**11.10**	**11**	*e*P		**Pn**	**06 16 04.2**	**-1.1**
YSS				pmax	pmax			
	comp=Z,20nm,0.8s							
MDJ	**Mudanjiang**	**11.53**	**321**	P		**Pn**	**06 16 01.3**	**-10**
MDJ				pP			06 16 04.3	
MDJ				sP			06 16 07.8	
MDJ				PP			06 16 09.8	
MDJ				S		**Sn**	**06 18 02.3**	**-16**
MDJ				ScP		ScP	06 25 35.4	+6.4
MDJ				PcS		PcS	06 25 36.9	+3.0
MDJ				pmax	pmax			
	comp=Z,5.0nm,1.3s							
MDJ				pmax	pmax			
	comp=Z,250nm,5.8s							
MDJ				LR		LR		
	comp=N,180nm,5.2s							
MDJ				LR		LR		
	comp=E,180nm,5.6s							
MDJ				LR		LR		
	comp=Z,320nm,5.6s							
CN2	**Changchun**	**13.42**	**309**	*e*P		**Pn**	**06 16 29.8**	**-7.2**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
KLR	**Kul'dur**	**14.40**	**338**	*e*P		**Pn**	**06 16 50.8**	**+0.5**
NJ2	**Nanjing**	**17.78**	**263**	*e*P		**Pn**	**06 17 38.5**	**+5.0**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
BJI	**Beijing**	**18.98**	**289**	P		**Pn**	**06 17 47.3**	**-0.7**
BJI				S		**S**	**06 21 14.9**	**-5.1**
BJI				sS		sS	06 21 24.1	-13
BJI				pmax	pmax			
	comp=Z,8.0nm,0.5s							
PET	**Petropavlovsk**	**21.53**	**32**	⇑*e*P		**P**	**06 18 12.2**	**-2.2**
HHC	**Hu-ho-hao-te**	**22.55**	**291**	*e*P		**P**	**06 18 25.0**	**-0.4**
HHC				pP			06 18 28.9	
HHC				sP		sP	06 18 32.3	-10
HHC				PP			06 18 51.1	
HHC				*e*S		**S**	**06 22 24.6**	**-5.2**
HHC				pmax	pmax			
	comp=Z,13nm,1.0s,mb4.3							
HHC				pmax	pmax			
	comp=Z,67nm,4.0s							
HHC				LR	LR			
	comp=N,85nm,6.4s							
HHC				LR	LR			
	comp=E,170nm,7.2s							
HHC				LR	LR			
	comp=Z,93nm,9.5s							
CLNS	**Chul'man**	**23.06**	**339**	*e*P		**P**	**06 18 28.5**	**-2.1**
CLNS				pmax	pmax			
	comp=Z,12nm,0.8s,mb4.4							
CLNS				pmax	pmax			
	comp=N,3.0nm,0.4s							
ENH	**Enshi**	**25.94**	**266**	*e*P		**P**	**06 18 56.1**	**-1.2**
	comp=N,10nm,0.7s,mb4.5							
SONM	**Songino Array**	**27.25**	**306**	P		**P**	**06 19 08.0**	**-1.0**
SONM				LR		LR	06 29 44.9	
SONM	**Songino Array**	**27.25**	**306**	P		**P**	**06 19 08.0**	**-1.0**
	comp=N,2.0nm,0.6s,mb3.8,baz=108,slow=9.0,SNR=16							
SONM				LR		LR	06 29 44.9	
	comp=N,61nm,19.1s,MS3.2,baz=36,slow=36							
SEY	**Seymchan**	**28.00**	**12**	*i* P		**P**	**06 19 14.6**	**-0.9**
LZH	**Lanzhou**	**28.94**	**281**	*e*P		**P**	**06 19 26.1**	**+1.9**
LZH				pP		pP	06 19 30.8	-5.5
LZH				sP		sP	06 19 33.8	-8.0
LZH				pmax	pmax			
	comp=Z,18nm,1.4s,mb4.6							
LZH				LR		LR		
	comp=N,260nm,18.5s,MS4.0							
LZH				LR		LR		
	comp=E,170nm,15.2s,MS4.0							
LZH				LR		LR		
	comp=Z,190nm,19.8s,MS3.7							
GYA	**Guiyang**	**29.76**	**261**	P		**P**	**06 19 37.6**	**+6.1**
GYA				PP		PP	06 20 34.3	-4.9
GYA				PcP		PcP	06 22 41.8	+7.3
GYA				S		**S**	**06 24 41.6**	**+17**
GYA				ScP		ScP	06 26 20.4	+7.8
GYA				ScS		ScS	06 30 14.5	+6.7
GYA				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.6							
GYA				pmax	pmax			
	comp=Z,90nm,4.5s							
GYA				LR		LR		
	comp=N,420nm,14.9s,MS4.3							
GYA				LR		LR		
	comp=E,300nm,15.5s,MS4.3							
GYA				LR		LR		
	comp=Z,430nm,16.3s,MS4.2							
CD2	**Chengdu**	**30.36**	**271**	P		**P**	**06 19 41.0**	**+4.2**
CD2				pmax	pmax			
	comp=Z,10.0nm,0.6s,mb4.7							
CD2				pmax	pmax			
	comp=Z,120nm,6.7s							
GTA	**Gaotai**	**31.59**	**288**	P		**P**	**06 19 50.6**	**+3.0**
GTA				pP		pP	06 19 53.9	-5.9
GTA				sP		sP	06 19 56.8	-8.4
GTA				pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.5							
KMI	**Kunming**	**33.51**	**261**	P		**P**	**06 20 10.9**	**+6.4**
KMI				pP		pP	06 20 13.6	-3.1
KMI				sP		sP	06 20 14.8	-7.4
KMI				PP		PP	06 21 23.4	+2.5
KMI				S		**S**	**06 25 32.5**	**+9.2**
KMI				SS		SS	06 27 36.4	-13
KMI				pmax	pmax			
	comp=Z,8.0nm,0.6s,mb4.8							
KMI				pmax	pmax			
	comp=Z,110nm,5.2s							
KMI				LR		LR		
	comp=N,120nm,17.9s,MS3.7							
KMI				LR		LR		
	comp=E,88nm,21.9s,MS3.7							
KMI				LR		LR		
	comp=Z,120nm,15.6s							
BILL	**Bilibino**	**35.33**	**17**	⇑*e*P		**P**	**06 20 18.1**	**-1.6**
BILL				*e*			06 21 35.9	
BILL				pmax	pmax			
	comp=Z,12nm,2.5s,mb4.4							
BILL				MLR		MLR		
	comp=Z,100nm,18.0s,MS3.6							
CMAR	**Chiang Mai Arr**	**39.97**	**255**	P		**P**	**06 20 58.2**	**-1.4**
	comp=Z,0.8nm,0.3s,mb3.9,baz=46,slow=6.4,SNR=3.3							
WMQ	**Urumqi**	**40.10**	**298**	*e*P		**P**	**06 21 01.4**	**+1.0**
WMQ				pP		pP	06 21 05.9	-6.9
WMQ				sP		sP	06 21 08.4	-10
WMQ				pmax	pmax			
	comp=Z,11nm,0.8s,mb4.6							
WMQ				pmax	pmax			
	comp=Z,99nm,4.2s							
ZAA0	**Zalesovo Array**	**41.60**	**313**	*e*P		**P**	**06 21 11.8**	**-0.7**
ZAA0				*e*PcP		PcP	06 23 07.3	-1.5
ZALV	**Zalesovo Beam**	**41.60**	**313**	P		**P**	**06 21 12.3**	**-0.2**
	comp=Z,22nm,0.7s,mb4.9,baz=92,slow=6.5,SNR=80							
ZALV				PcP		PcP	06 23 07.5	-1.3
	comp=Z,3.2nm,0.5s,baz=100,slow=3.8,SNR=6.1							
NVS	**Novosibirsk**	**42.56**	**314**	*e*P		**P**	**06 21 19.5**	**-0.8**
NVS				pmax	pmax			
	comp=E,33nm,1.0s							
NVS				pmax	pmax			
	comp=Z,35nm,1.0s,mb5.0							
NVS				pmax	pmax			
	comp=N,11nm,0.8s							
MK31	**Makanchi Array**	**43.52**	**303**	*e*P		**P**	**06 21 27.9**	**-0.3**
MK31	**Makanchi Array**	**43.52**	**303**	*i* P		**P**	**06 21 27.8**	**-0.4**
MK31				pmax	pmax			
	comp=Z,4.0nm,0.6s,mb4.3							
MKAR	**Makanchi Array**	**43.52**	**303**	P		**P**	**06 21 27.9**	**-0.4**
	comp=Z,3.9nm,0.6s,mb4.3,baz=86,slow=9.5,SNR=50							
MKAR				PcP		PcP	06 23 14.0	-1.4
	comp=Z,0.8nm,0.7s,baz=73,slow=4.8,SNR=2.6							
MKAR				LR		LR	06 40 34.0	
	comp=Z,48nm,18.2s,MS3.4,baz=279,slow=37							
MKAR	**Makanchi Array**	**43.52**	**303**	P		**P**	**06 21 27.9**	**-0.3**
MKAR							06 23 14.0	
TAPN	**Taplejung**	**44.69**	**274**	*e*P		**P**	**06 21 37.5**	**-0.3**
ODAN	**Odare**	**45.15**	**274**	*e*P		**P**	**06 21 41.1**	**-0.4**
KURK	**Kurchatov**	**45.49**	**309**	*e*P		**P**	**06 21 43.2**	**-0.7**
	comp=Z,30nm,0.7s,mb5.2							
RAMN	**Ramite**	**45.75**	**274**	*e*P		**P**	**06 21 46.2**	**-0.1**
	comp=Z,39nm,0.7s,mb5.4							
JIRN	**Jiri**	**45.79**	**275**	*e*P		**P**	**06 21 46.3**	**-0.3**
	comp=Z,23nm,0.7s,mb5.2							
GUN	**Gumba**	**45.94**	**276**	*e*P		**P**	**06 21 47.5**	**-0.2**
PKI	**Pulchoki**	**46.45**	**276**	*e*P		**P**	**06 21 51.3**	**-0.5**
	comp=Z,13nm,0.7s,mb5.0							
PKIN	**Phulchoki**	**46.46**	**276**	*e*P		**P**	**06 21 51.9**	**0.0**
	comp=Z,18nm,0.6s,mb5.2							
KKN	**Kakani**	**46.47**	**276**	*e*P		**P**	**06 21 51.9**	**0.0**
	comp=Z,15nm,0.7s,mb5.1							
DMN	**Daman**	**46.68**	**276**	*e*P		**P**	**06 21 53.2**	**-0.4**
GKN	**Gorkha**	**46.90**	**276**	*e*P		**P**	**06 21 54.8**	**-0.5**
	comp=Z,66nm,0.9s,mb5.6							
DANN	**Dangsing**	**47.46**	**277**	*e*P		**P**	**06 22 00.1**	**+0.4**
	comp=Z,87nm,0.7s,mb5.8							
KOLN	**Koldanda**	**47.83**	**277**	*e*P		**P**	**06 22 02.6**	**+0.1**
	comp=Z,20nm,0.7s,mb5.3							
KDAK	**Kodiak Island**	**48.70**	**41**	P		**P**	**06 22 08.4**	**-0.3**
	comp=Z,7.7nm,0.7s,mb4.8,baz=268,slow=9.2,SNR=5.6							
KDAK	**Kodiak Island**	**48.70**	**41**	*ce*P		**P**	**06 22 08.1**	**-0.7**
TKM2	**Tokmak 2**	**48.93**	**299**	P		**P**	**06 22 11.6**	**+0.8**
	SNR=22							
KZA	**Kyzart**	**49.40**	**298**	P		**P**	**06 22 16.0**	**+1.6**
	SNR=6.4							
KBK	**Karagaybulak**	**49.46**	**299**	P		**P**	**06 22 15.4**	**+0.6**
	SNR=12							
KSH	**Kashi**	**49.59**	**294**	P		**P**	**06 22 19.1**	**+3.2**
KSH				*ep*P		pP	06 22 23.8	-4.8
KSH				*es*P		sP	06 22 26.1	-7.9
KSH				*ePcP*		PcP	06 23 41.6	+4.6
KSH				*ePP*		PP	06 24 13.5	+3.1
KSH				*es*ScP		ScP	06 27 35.0	+6.4
KSH				*ePcS*		PcS	06 27 36.8	+3.2
KSH				*eS*		**S**	**06 29 24.0**	**+3.2**
KSH				*es*ScS		ScS	06 32 07.3	+3.7
KSH				pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.7							
KSH				pmax	pmax			
	comp=Z,55nm,4.3s							
KSH				LR		LR		
	comp=N,240nm,16.3s,MS4.4							
KSH				LR		LR		
	comp=E,140nm,14.6s,MS4.4							
KSH				LR		LR		
	comp=Z,120nm,5.1s							
AAK	**Ala-Archa**	**49.79**	**299**	*e*P		**P**	**06 22 17.4**	**+0.1**
	comp=Z,8.6nm,0.8s,mb4.8							
AAK	**Ala-Archa**	**49.79**	**299**	*ce*P		**P**	**06 22 17.2**	**-0.1**
AAK				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.6							
UCH	**Uchtor**	**49.88**	**298**	P		**P**	**06 22 19.1**	**+1.0**
	SNR=11							
VOSK	**Vostochnaya**	**49.94**	**312**	P		**P**	**06 22 17.5**	**-0.8**
VOSK				pmax	pmax			
	comp=Z,12nm,0.9s,mb4.9							
BVA0	**Borovoye Array**	**50.25**	**313**	P		**P**	**06 22 19.8**	**-0.8**
BVA0				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.1							
EKS2	**Erkin-Say**	**50.29**	**299**	P		**P**	**06 22 21.1**	**0.0**
	SNR=8.5							
BRVK	**Borovoye**	**50.30**	**313**	*e*P		**P**	**06 22 20.0**	**-1.0**
	comp=Z,6.4nm,0.9s,mb4.7							
BRVK	**Borovoye**	**50.30**	**313**	*ce*P		**P**	**06 22 20.4**	**-0.7**
BRVK				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.7							
AML	**Almayashu**	**50.49**	**298**	P		**P**	**06 22 23.8**	**+1.1**
	SNR=53							
COLA	**College**	**50.59**	**32**	*e*P		**P**	**06 22 22.2**	**-0.8**
	comp=Z,2.4nm,0.6s,mb4.3							
COLA	**College**	**50.59**	**32**	*e*P		**P**	**06 22 22.3**	**-0.8**
COLA				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.2							
ILAR	**Eielson Array**	**51.01**	**32**	P		**P**	**06 22 25.4**	**-0.8**
	comp=Z,3.0nm,0.7s,mb4.3,baz=272,slow=6.3,SNR=45							
ZRNK	**Zerenda**	**51.08**	**313**	P		**P**	**06 22 26.4**	**-0.6**
ZRNK				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.6							
KK31	**Karatay Array**	**52.47**	**300**	*i* P		**P**	**06 22 37.2**	**-0.2**
KK31				pmax	pmax			
	comp=Z,21nm,1.0s,mb5.0							
SVE	**Sverdlovsk**	**55.00**	**319**	*e*P		**P**	**06 22 55.9**	**+0.2**
SVE				pmax	pmax			
	comp=Z,12nm,0.8s,mb5.0							
FITZ	**Fitzroy Crossi**	**55.51**	**196**	P		**P**	**06 22 59.1**	**-0.7**
	comp=Z,5.9nm,0.5s,mb4.9,baz=14,slow=6.8,SNR=19							
INK	**Inuvik**	**55.84**	**27**	*e*P		**P**	**06 23 00.3**	**-1.3**
	comp=Z,5.5nm,0.8s,mb4.6							
INK	**Inuvik**	**55.84**	**27**	*e*P		**P**	**06 23 00.3**	**-1.3**
INK				pmax	pmax			
	comp=Z,6.0nm,0.8s							
WRA	**Warramunga Arr**	**55.94**	**186**	P		**P**	**06 23 00.8**	**-2.0**
	comp=Z,3.6nm,0.5s,mb4.7,baz=360,slow=7.6,SNR=79							
ARU	**Arti**	**56.21**	**319**	*e*P		**P**	**06 23 03.0**	**-1.3**
	comp=Z,12nm,0.5s,mb5.2							
ARU	**Arti**	**56.21**	**319**	*d i*P		**P**	**06 23 03.3**	**-1.1**
ARU				*e*			06 25 05.4	
ARU				S		**S**	**06 30 46.7**	**-3.7**
ARU				pmax	pmax			
	comp=Z,10.0nm,0.6s,mb5.0							
KBL	**Kabul**	**56.52**	**291**	*e*P		**P**	**06 23 06.6**	**-0.4**
	comp=Z,7.8nm,0.8s,mb4.8							
KBL	**Kabul**	**56.52**	**291**	*e*P		**P**	**06 23 06.6**	**-0.4**
KBL				pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.8							
AB31	**Akbulak array**	**57.55**	**310**	*e*P		**P**	**06 23 13.2**	**-0.8**
AB31				pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.7							
ABKAR	**Akbulak array**	**57.55**	**310**	*e*P		**P**	**06 23 13.1**	**-0.9**
	comp=Z,3.1nm,0.4s,mb4.7							
ASAR	**Alice Springs**	**59.67**	**186**	P		**P**	**06 23 27.9**	**-1.0**
	comp=Z,1.7nm,0.6s,mb4.2,baz=12,slow=6.4,SNR=20							
KLMR	**Klimovskoe**	**63.86**	**328**	P		**P**	**06 23 54.9**	**-1.9**
KLMR				pmax	pmax			
	comp=Z,33nm,2.0s,mb5.0							
KEV	**Kevo**	**63.87**	**339**	*e*P		**P**	**06 23 54.3**	**-2.4**
KEV	**Kevo**	**63.87**	**339**	*e*p		**P**	**06 23 54.3**	**-2.4**
ARCES	**ARCESS Array B**	**64.43**	**339**	P		**P**	**06 23 59.7**	**-0.6**
	comp=Z,3.3nm,0.8s,mb4.4,baz=50,slow=8.0,SNR=12							
YKA	**Yellowknife Ar**	**65.30**	**29**	P		**P**	**06 24 05.4**	**-0.7**
	comp=Z,1.7nm,0.7s,mb4.2,baz=308,slow=6.4,SNR=5.1							
JOF	**Joensuu**	**66.19**	**332**	*e*P		**P**	**06 24 09.6**	**-2.2**
JOF	**Joensuu**	**66.19**	**332**	*e*p		**P**	**06 24 09.6**	**-2.2**
	comp=Z,2.9nm,0.4s,mb4.7							
VRHR	**Novokhopersk**	**67.51**	**317**	*e*P		**P**	**06 24 18.2**	**-2.2**
VRHR				pmax	pmax			
	comp=E,9.0nm,0.5s							
VRHR				pmax	pmax			
	comp=Z,10.0nm,0.5s,mb5.1							
VRHR				pmax	pmax			
	comp=N,30nm,0.8s							
STKA	**Stephens Creek**	**67.61**	**178**	P		**P**	**06 24 18.0**	**-3.1**
	comp=N,3.7nm,0.8s,mb4.5,baz=325,slow=3.4,SNR=4.2							
OBN	**Obninsk**	**68.07**	**323**	⇑*i*P		**P**	**06 24 22.8**	**-1.1**
OBN				*e*			06 26 55.6	
OBN				pmax	pmax			
	comp=Z,9.0nm,0.6s,mb5.0							
KAF	**Kangasniemi**	**68.55**	**332**	*e*P		**P**	**06 24 24.1**	**-2.7**
	comp=Z,2.7nm,0.6s,mb4.3							
KAF	**Kangasniemi**	**68.55**	**332**	*e*P		**P**	**06 24 24.1**	**-2.7**
KAF				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.4							
KAF	**Kangasniemi**	**68.55**	**332**	*e*p		**P**	**06 24 24.1**	**-2.7**
	comp=Z,2.7nm,0.6s,mb4.3							
VSR	**Storozhevoye**	**68.78**	**318**	*e*P		**P**	**06 24 27.1**	**-1.3**
VSR				pmax	pmax			
	comp=Z,10.0nm,0.6s,mb4.9							
VSR				pmax	pmax			
	comp=N,9.0nm,0.4s							
VSR				pmax	pmax			
	comp=E,6.0nm,0.5s							
FINES	**FINESS Array B**	**69.04**	**332**	P		**P**	**06 24 29.0**	**-0.8**
	comp=E,6.5nm,0.8s,mb4.6,baz=64,slow=8.7,SNR=13							
B08A	**Colville Reser**	**70.45**	**44**	⇑P		**P**	**06 24 38.4**	**-0.3**
	baz=70							
KIV	**Kislovodsk**	**70.53**	**311**	⇑*e*P		**P**	**06 24 39.1**	**-0.2**
KIV				*e*			06 27 15.1	
KIV				*eS*		S	06 33 45.8	-3.4
KIV				pmax	pmax			
	comp=Z,15nm,1.0s,mb4.9							
D08A	**Wollman Farm,**	**71.39**	**45**	⇓P		**P**	**06 24 43.4**	**-1.1**
	baz=70							
SUMG	**Summit**	**71.64**	**359**	*e*P		**P**	**06 24 45.0**	**-0.6**
	comp=Z,13nm,0.7s,mb5.0							
SUMG	**Summit**	**71.64**	**359**	*i* P		**P**	**06 24 45.7**	**+0.2**
	comp=Z,15nm,0.8s,mb5.0							
NEW	**Newport**	**71.74**	**43**	⇓P		**P**	**06 24 45.9**	**-0.7**
	baz=71							
E09A	**Wood Farm, Sta**	**72.13**	**45**	⇑P		**P**	**06 24 48.4**	**-0.5**
	baz=71							
F10A	**Beach Ranch, E**	**72.96**	**45**	⇓P		**P**	**06 24 53.8**	**-0.1**
	baz=72							
B13A	**Whitefish**	**73.13**	**42**	⇓P		**P**	**06 24 54.3**	**-0.6**
	baz=72							
D12A	**Red Ives Fores**	**73.41**	**44**	⇓P		**P**	**06 24 56.2**	**-0.3**
	baz=72							
C13A	**Hot Springs**	**73.48**	**43**	⇑P		**P**	**06 24 56.4**	**-0.5**
	baz=72							
YBMT	**Yellow Bay**	**73.68**	**42**	*e*P		**P**	**06 24 57.5**	**-0.6**
J08A	**Circle Bar Ran**	**73.70**	**48**	⇑P		**P**	**06 24 58.1**	**-0.2**
	baz=73							
A15A	**Johnson Ranch,**	**73.71**	**41**	⇑P		**P**	**06 24 57.4**	**-0.9**
	baz=73							
B14A	**Marquette Ranc**	**73.79**	**42**	⇑P		**P**	**06 24 58.0**	**-0.7**
	baz=73							
C14A	**Swan Lake**	**73.88**	**42**	⇓P		**P**	**06 24 58.5**	**-0.8**
	baz=73							
D13A	**Huson**	**73.88**	**43**	⇓P		**P**	**06 24 59.1**	**-0.1**
	baz=73							
SWMT	**Swartz Lake**	**73.89**	**43**	*e*P		**P**	**06 24 58.3**	**-1.0**
B15A	**Bradely Ranch,**	**74.20**	**41**	⇓P		**P**	**06 25 00.7**	**-0.4**
	baz=73							
F12A	**Elk City**	**74.22**	**45**	⇑P		**P**	**06 25 01.1**	**-0.2**
	baz=73							
AKASG	**Malin Array Be**	**74.24**	**322**	P		**P**	**06 24 59.2**	**-2.1**
	comp=Z,3.4nm,0.6s,mb4.5,baz=49,slow=5.8,SNR=12							
KIEV	**Kiev**	**74.25**	**322**	*e*P		**P**	**06 24 59.7**	**-1.7**
	comp=Z,9.1nm,1.0s,mb4.7							
KIEV	**Kiev**	**74.25**	**322**	*e*P		**P**	**06 24 59.7**	**-1.7**
KIEV				pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.7							
**MS

DLMT	Dillon	75.95	44	*e*P		P	06 25 11.7	+0.4
	comp=Z,5.5nm,0.9s,mb4.5							
I13A	Wildhorse Cree	75.96	46	⇓P		P	06 25 11.3	0.0
	baz=75							
HLID	Hailey	75.99	46	⇑P		P	06 25 11.5	0.0
	baz=75							
G15A	Dillon	76.13	44	⇓P		P	06 25 12.3	0.0
	baz=75,SNR=7.0							
J13A	Cove Ranch, Pi	76.23	46	⇓P		P	06 25 12.5	-0.3
	baz=75							
F16A	Kennard Place,	76.24	43	⇑P		P	06 25 12.3	-0.6
	baz=75							
E17A	Martinsdale	76.24	42	⇑P		P	06 25 12.6	-0.2
	baz=75							
BOZ	Bozeman (W)	76.32	43	⇑P		P	06 25 13.0	-0.3
	baz=75							
BOZ	Bozeman (W)	76.32	43	*e*P		P	06 25 13.9	+0.6
	comp=Z,2.4nm,0.9s,mb4.1							
BOZ	Bozeman (W)	76.32	43	*e*P		P	06 25 13.9	+0.6
BOZ				pmax		pmax		
	comp=Z,2.0nm,0.9s,mb4.0							
I14A	Mackay	76.33	45	⇑P		P	06 25 14.0	+0.5
	baz=75,SNR=7.9							
D18A	Linhart Farms,	76.36	41	⇓P		P	06 25 13.3	-0.2
	baz=75							
H15A	Lima	76.38	44	⇓P		P	06 25 13.9	+0.2
	baz=75							
NVAR	Mina Array Bea	76.62	52	P		P	06 25 15.7	+0.5
	comp=Z,2.6nm,0.8s,mb4.2,baz=278,slow=5.9,SNR=19							
J14A	Carey	76.66	46	⇑P		P	06 25 15.8	+0.5
	baz=76,SNR=5.2							
E18A	Harlowton	76.69	42	⇓P		P	06 25 15.2	-0.3
	baz=76							
F17A	Fitzpatrick Pl	76.69	43	⇑P		P	06 25 15.4	-0.1
	baz=76							
G17A	Pierce Place,	77.01	43	⇓P		P	06 25 17.4	+0.1
	baz=76							
H16A	Russell Place,	77.11	44	⇓P		P	06 25 18.2	+0.4
	baz=76							
F18A	Big Timber	77.21	42	⇓P		P	06 25 18.5	+0.1
	baz=76							
J15A	Blackfoot	77.24	45	⇑P		P	06 25 19.0	+0.4
	baz=76							
D20A	Manuel Ranch,	77.30	40	⇓P		P	06 25 18.7	-0.2
	baz=76							
K14A	Jones Ranch, D	77.33	46	⇑P		P	06 25 18.8	-0.3
	baz=76							
E19A	Rath Farm, Rou	77.36	41	⇑P		P	06 25 19.1	-0.1
	baz=76							
I16A	Newdale	77.49	45	⇑P		P	06 25 20.6	+0.7
	baz=76,SNR=8.1							
Q10A	Clear Creek Ra	77.60	51	⇑P		P	06 25 20.6	0.0
	baz=77							
VES	Vestal, Richgr	77.61	55	⇓P		P	06 25 21.1	+0.3
	baz=77							
F19A	Roth Farm, Mol	77.66	42	⇓P		P	06 25 20.7	-0.2
	baz=77							
H17A	Grant Village	77.68	44	⇑P		P	06 25 22.6	+1.6
	baz=77,SNR=6.2							
E20A	Meyer Farm, Mu	77.68	41	⇑P		P	06 25 20.9	-0.1
	baz=77							
O12A	Currie	77.77	49	⇓P		P	06 25 22.6	+1.0
	baz=77							
IMW	Indian Meadow	77.79	44	*e*P		P	06 25 22.4	+0.8
	comp=Z,4.8nm,1.0s,mb4.4							
M14A	Sheep Mountain	77.86	47	⇑P		P	06 25 22.5	+0.5
	baz=77							
R10A	Warm Springs	77.98	51	⇑P		P	06 25 23.2	+0.4
	baz=77							
S10A	Tonopah Range,	78.01	52	⇑P		P	06 25 23.5	+0.5
	baz=77							
Q11A	Duckwater	78.06	51	⇑P		P	06 25 23.3	+0.1
	baz=77							
K16A	Soda Springs	78.08	45	⇑P		P	06 25 23.6	+0.3
	baz=77							
L15A	Malad City	78.12	46	⇑P		P	06 25 23.2	-0.3
	baz=77							
KWP	Kalwaria Pacla	78.13	324	*e*P		P	06 25 23.3	-0.1
P12A	McGill	78.14	50	⇑P		P	06 25 24.3	+0.7
	baz=77							
N14A	Grayback Hills	78.36	48	⇓P		P	06 25 25.0	+0.2
	baz=77							
R11A	Troy Canyon, C	78.40	51	⇓P		P	06 25 25.5	+0.4
	baz=78							
Q12A	Willow Creek R	78.45	50	⇓P		P	06 25 26.0	+0.6
	baz=78							
BRTR	Keskin Array B	78.49	311	P		P	06 25 25.3	-0.3
	comp=Z,1.5nm,0.7s,mb4.0,baz=123,slow=4.6,SNR=6.7							
LAO	LASA Array	78.56	40	⇑P		P	06 25 25.3	-0.5
	baz=78							
F21A	Absaloka Mine,	78.66	41	⇑P		P	06 25 26.2	-0.2
	baz=78							
P13A	Bates Ranch, G	78.70	49	⇑P		P	06 25 27.2	+0.4
	baz=78							
S11A	Rachel	78.72	52	⇓P		P	06 25 27.2	+0.3
	baz=78							
J18A	Kendall Valley	78.74	44	⇓P		P	06 25 27.2	+0.3
	baz=78							
HWUT	Hardware Ranch	78.85	46	*e*P		P	06 25 28.2	+0.7
	comp=Z,16nm,1.8s,mb4.7							
L17A	Cokeville	78.95	46	⇓P		P	06 25 28.1	0.0
	baz=78							
DUG	Dugway	78.98	48	⇓P		P	06 25 28.9	+0.6
	baz=78							
DUG	Dugway	78.98	48	*e*P		P	06 25 29.4	+1.1
	comp=Z,5.6nm,0.6s,mb4.7							
DUG	Dugway	78.98	48	*e*P		P	06 25 29.4	+1.1
DUG				pmax		pmax		
	comp=Z,6.0nm,0.6s,mb4.7							
Q13A	Wheeler Ranch,	79.01	50	⇓P		P	06 25 29.1	+0.6
	baz=78							
R12A	Pony Springs,	79.02	50	⇑P		P	06 25 29.0	+0.4
	baz=78							
P14A	Drum Mountains	79.20	49	⇓P		P	06 25 30.0	+0.6
	baz=78							
CRVS	Cervenica-Dubn	79.23	324	*e*P		P	06 25 30.7	+1.3
CRVS	Cervenica-Dubn	79.23	324	*e*P		P	06 25 30.7	+1.3
BW06	Boulder Array	79.28	45	⇓P		P	06 25 29.5	-0.4
	baz=78							
PDAR	Pinedale Array	79.28	45	P		P	06 25 28.4	-1.5
	comp=Z,1.0nm,0.6s,mb3.9,baz=338,slow=4.2,SNR=11							
Q14A	Sevier Lake (B	79.44	49	⇓P		P	06 25 30.9	+0.1
	baz=79,SNR=7.9							
H21A	Big Horn, Sher	79.48	42	⇓P		P	06 25 31.2	+0.3
	baz=78							
K19A	Absolon Red Bu	79.65	44	⇓P		P	06 25 31.8	-0.1
	baz=79							
N17A	Moffit Pass	79.70	47	⇓P		P	06 25 32.7	+0.5
	baz=79							
L19A	Farson	79.82	45	⇑P		P	06 25 32.8	-0.1
	baz=79							
I21A	Big Trails, Te	79.87	43	⇓P		P	06 25 33.3	+0.2
	baz=79							
Q15A	Fillmore	79.99	49	⇓P		P	06 25 34.1	+0.4
	baz=79							
V11A	Goodsprings	80.01	53	⇑P		P	06 25 34.7	+0.7
	baz=79							
OKC	Ostrava-Krasne	80.12	326		AMS	AMS	07 14 30.0	
	comp=Z,400nm,18.5s							
MURC	Murrieta	80.19	56	⇓P		P	06 25 35.3	+0.4
	baz=79							
O17A	Robinson Place	80.23	47	⇓P		P	06 25 35.3	+0.2
	baz=79							
T13A	Saint George	80.26	51	⇑P		P	06 25 35.8	+0.5
	baz=79							
MSU	Marysvale	80.41	49	*e*P		P	06 25 37.2	+1.1
V12A	Nelson	80.45	53	⇑P		P	06 25 37.1	+0.8
	baz=80							
GMRC	Granite Mounta	80.50	54	⇑P		P	06 25 37.2	+0.6
	baz=80							
R15A	Junction	80.54	49	⇑P		P	06 25 37.3	+0.5
	baz=80							
DPC	Dobruska-Polom	80.56	327	*e*P		P	06 25 36.6	0.0
DPC	Dobruska-Polom	80.56	327	*e*P		P	06 25 36.6	0.0
U13A	Pakoon Wash	80.59	52	⇑P		P	06 25 37.6	+0.6
	baz=80							
PFO	Pinyon Flat Ob	80.68	55	⇓P		P	06 25 37.7	+0.1
	baz=80							
N19A	John Jarvie Ra	80.70	46	⇑P		P	06 25 37.7	+0.1
	baz=80							
BELC	Belle Mtn. Jos	80.75	55	⇑P		P	06 25 37.9	-0.1
	baz=80							
T14A	Hurricane	80.75	51	⇑P		P	06 25 38.2	+0.3
	baz=80							
VYHS	Vyhne	80.76	325	*e*P		P	06 25 36.2	-1.5
VYHS	Vyhne	80.76	325	*e*P		P	06 25 36.2	-1.5
S15A	Panguitch	80.82	50	⇓P		P	06 25 38.8	+0.5
	baz=80							
M20A	Sweetwater, Wa	80.88	45	⇑P		P	06 25 39.0	+0.4
	baz=80							
V13A	Grand Canyon W	80.93	52	⇓P		P	06 25 39.1	+0.2
	baz=80							
R16A	Teasdale	80.98	49	⇓P		P	06 25 39.8	+0.7
	baz=80,SNR=5.1							
L21A	Rawlins	81.04	44	⇓P		P	06 25 39.4	0.0
	baz=80							
SRU	San Rafael	81.04	48	⇑P		P	06 25 39.6	+0.2
	baz=80							
U14A	Mt Trumbull	81.09	51	⇓P		P	06 25 40.3	+0.6
	baz=80							
O19A	Miners Draw (B	81.11	46	⇓P		P	06 25 40.1	+0.3
	baz=80							
PVCC	Panska Ves	81.19	328		AMS	AMS	07 06 40.0	
	comp=Z,300nm,21.4s							
IRM	Iron Mountain	81.21	54	⇓P		P	06 25 40.6	+0.2
	baz=80							
T15A	Red Dirt Ranch	81.22	50	⇑P		P	06 25 41.4	+1.0
	baz=80							
CLL	Collm	81.26	329	⇑*i*P		P	06 25 39.4	-1.0
	comp=Z,5.0nm,0.8s,mb4.5							
CLL	Collm	81.26	329	⇑*i*P		P	06 25 39.4	-1.0
CLL				pmax		pmax		
	comp=Z,5.0nm,0.8s,mb4.5							
CLL	Collm	81.26	329	⇑*i*P		P	06 25 39.4	-1.0
	comp=Z,5.0nm,0.8s,mb4.5							
CLL				*e*(PcP)		PcP	06 25 43.0	-3.5
CLL				*e*sP		sP	06 26 00.0	+1.0
N20A	Spence Gulch,	81.27	45	⇓P		P	06 25 40.6	0.0
	baz=80							
S16A	Weppner Ranch,	81.27	49	⇓P		P	06 25 41.4	+0.7
	baz=80							
M21A	Separation Pea	81.28	44	⇓P		P	06 25 40.9	+0.3
	baz=80							
Q18A	Rafter H Ranch	81.28	48	⇑P		P	06 25 40.8	+0.1
	baz=80							
BC3	Big Chuckawall	81.31	55	⇓P		P	06 25 41.6	+0.6
	baz=80							
R17A	Hanksville Air	81.37	48	⇓P		P	06 25 41.6	+0.4
	baz=80							
W13A	Hualapai Mount	81.45	53	⇓P		P	06 25 42.1	+0.4
	baz=81							
DVTC	Desert V Tower	81.49	56	⇓P		P	06 25 42.7	+0.7
	baz=81							
L22A	Ellis Ranch, M	81.52	44	⇑P		P	06 25 42.0	+0.1
	baz=80							
PRU	Pruhonice	81.60	328	*e*P		P	06 25 42.5	+0.3
PRU				MLR		MLR		
	comp=Z,500nm,20.2s,MS4.9							
PRU	Pruhonice	81.60	328	*e*P		P	06 25 42.5	+0.3
PRU				AMS		AMS	07 09 30.0	
	comp=Z,500nm,20.2s							
P19A	Cripple Cowboy	81.62	47	⇑P		P	06 25 42.5	0.0
	baz=81,SNR=5.7							
V14A	Boquillas Ranc	81.62	52	⇑P		P	06 25 43.1	+0.5
	baz=81							
U15A	North Rim	81.64	51	⇑P		P	06 25 43.6	+1.0
	baz=81							
TREC	Trest	81.70	327		AMS	AMS	07 09 50.0	
	comp=Z,500nm,21.0s							
O20A	White River Ci	81.73	46	⇓P		P	06 25 43.1	+0.1
	baz=81							
N21A	Black Mountain	81.74	45	⇓P		P	06 25 43.5	+0.4
	baz=81							
PDMCI	Parker Dam,Lak	81.78	53	⇓P		P	06 25 43.7	+0.2
	baz=81							
X13A	Yucca	81.80	53	⇑P		P	06 25 43.6	0.0
	baz=81							
S17A	Black Ridge (B	81.81	49	⇓P		P	06 25 43.6	+0.1
	baz=81							
M22A	Cedar Creek Ra	81.84	44	⇑P		P	06 25 44.2	+0.6
	baz=81							
L23A	Garrett	81.87	43	⇑P		P	06 25 43.0	-0.7
	baz=81							
R18A	Canyonlands Na	81.88	48	⇓P		P	06 25 44.0	+0.1
	baz=81							
W14A	Seligman	81.90	52	⇓P		P	06 25 44.5	+0.4
	baz=81							
V15A	Kaibab Nationa	82.10	51	⇑P		P	06 25 45.6	+0.5
	baz=81							
S18A	Hurst Farm, Bl	82.27	49	⇑P		P	06 25 45.7	-0.2
	baz=81							
R19A	Curry Farm, L	82.32	48	⇑P		P	06 25 46.2	0.0
	baz=81							
Q20A	Ridgley Place,	82.47	47	⇑P		P	06 25 47.2	+0.3
	baz=82							
X14A	Yava	82.49	53	⇑P		P	06 25 47.9	+0.7
	baz=82							
N23A	Red Feather La	82.55	44	⇑P		P	06 25 47.6	+0.2
	baz=82							
U16A	Tuba City	82.55	50	⇓P		P	06 25 47.9	+0.5
	baz=82,SNR=6.0							
U17A	Shonto	82.55	50	⇑P		P	06 25 48.0	+0.6
	baz=82							
KHC	Kasperske Hory	82.66	328	*e*P		P	06 25 47.3	-0.4
KHC				MLR		MLR		
	comp=Z,600nm,20.0s,MS5.0							
KHC	Kasperske Hory	82.66	328	*e*P		P	06 25 47.3	-0.4
KHC				AMS		AMS	07 07 20.0	
	comp=Z,600nm,20.0s							
O22A	Kremmling	82.69	45	⇑P		P	06 25 47.9	-0.2
	baz=82							
T18A	Mexican Hat	82.69	49	⇓P		P	06 25 47.9	-0.2
	baz=82							
Y14A	Wickenburg	82.74	53	⇑P		P	06 25 48.6	+0.1
	baz=82							
S19A	Harvey Farm, M	82.75	48	⇓P		P	06 25 48.5	+0.1
	baz=82							
Z13A	Yuma Proving G	82.78	54	⇑P		P	06 25 48.5	-0.1
	baz=82							
M24A	Cheyenne	82.79	43	⇓P		P	06 25 48.5	-0.1
	baz=82							
WUAZ	Wupatki	82.80	51	⇑P		P	06 25 48.5	-0.3
	baz=82							
WUAZ	Wupatki	82.80	51	*e*P		P	06 25 49.1	+0.4
	comp=Z,8.9nm,0.9s,mb4.8							
PV01	Paradox Valley	82.84	48	*e*P		P	06 25 48.8	-0.1
X15A	Humboldt	82.90	52	⇓P		P	06 25 49.9	+0.6
	baz=82,SNR=6.4							
R20A	Redvale	82.92	47	⇑P		P	06 25 50.0	+0.7
	baz=82							
P22A	Eagle	82.95	46	⇓P		P	06 25 49.6	+0.1
	baz=82							
W16A	Flagstaff	82.96	52	⇑P		P	06 25 49.9	+0.3
	baz=82							
Q21A	Lamborn Mesa,	82.97	47	⇑P		P	06 25 50.4	+0.8
	baz=82							
V17A	Tonalea, Kykot	83.09	51	⇓P		P	06 25 50.9	+0.7
	baz=82							
SMCO	Snowmass	83.10	46	*e*P		P	06 25 50.7	+0.5
	comp=Z,2.3nm,0.8s,mb4.3							
U18A	Rough Rock, Ch	83.16	50	⇑P		P	06 25 51.2	+0.6
	baz=82							
Y15A	Casa Rosa Ranc	83.17	53	⇑P		P	06 25 51.1	+0.4
	baz=82							
R21A	Cimarron	83.29	47	⇓P		P	06 25 51.9	+0.7
	baz=82							
Q22A	Crested Butte,	83.34	46	⇑P		P	06 25 52.0	+0.5
	baz=82							
T19A	Beclabito	83.41	49	⇓P		P	06 25 52.1	+0.2
	baz=82							
X16A	Lo Mia Camp, P	83.45	52	⇑P		P	06 25 52.5	+0.4
	baz=83,SNR=7.2							
ISCO	Idaho Springs	83.47	45	⇓P		P	06 25 52.8	+0.7
	baz=82							
O24A	Longmont	83.56	44	⇓P		P	06 25 52.9	+0.3
	baz=83							
114A	Black Gap (USA	83.56	54	⇑P		P	06 25 53.5	+0.8
	baz=83							
V18A	Ganado	83.57	50	⇑P		P	06 25 53.2	+0.5
	baz=83,SNR=5.4							
S21A	Coal Bank Pass	83.61	48	⇓P		P	06 25 53.3	+0.4
	baz=83							
U19A	Dine' College,	83.65	49	⇑P		P	06 25 53.8	+0.7
	baz=83,SNR=6.4							
Y16A	Circle Bar Ran	83.77	52	⇓P		P	06 25 54.1	+0.3
	baz=83							
SOKA	Soboth	83.84	325	⇑*i*P		P	06 25 53.4	-0.5
	comp=Z,5.3nm,0.9s,mb4.7							
R22A	Saguache, Gunn	83.85	47	⇓P		P	06 25 54.3	+0.2
	baz=83							
X17A	Forest Lakes	83.91	52	⇑P		P	06 25 55.2	+0.8
	baz=83,SNR=5.9							
214A	Organ Pipe Nat	84.11	55	⇑P		P	06 25 55.4	-0.2
	baz=83							
V19A	Window Rock	84.12	50	⇑P		P	06 25 55.2	-0.3
	baz=83							
S22A	4UR Ranch, Cre	84.13	47	⇑P		P	06 25 55.7	+0.1
	baz=83							
Z16A	Peralta Trail,	84.14	53	⇓P		P	06 25 56.0	+0.3
	baz=83							
T21A	Navajo Lake	84.21	48	⇓P		P	06 25 56.5	+0.6
	baz=83							
W19A	Sanders	84.30	50	⇑P		P	06 25 57.0	+0.5
	baz=83							
X18A	Snowflake	84.32	51	⇓P		P	06 25 57.0	+0.4
	baz=84							
V20A	Brimhall	84.42	49	⇑P		P	06 25 57.1	+0.1
	baz=84							
116A	Eloy	84.46	54	⇑P		P	06 25 57.5	+0.3
	baz=84							
U21A	Nageezi	84.50	48	⇓P		P	06 25 57.8	+0.4
	baz=84							
T22A	Edith	84.57	48	⇓P		P	06 25 58.4	+0.6
	baz=84							
Z17A	San Carlos Hig	84.78	52	⇓P		P	06 25 59.5	+0.6
	baz=84							
R24A	Sanders Place,	84.81	46	⇑P		P	06 25 59.4	+0.5
	baz=84							
W20A	Ramah	84.84	50	⇓P		P	06 25 59.4	+0.3
	baz=84							
SDCO	Great Sand Dun	84.91	46	*e*P		P	06 26 00.1	+0.6
	comp=Z,4.7nm,1.0s,mb4.6							
U22A	Llaves	85.02	48	⇓P		P	06 26 00.6	+0.5
	baz=84							
T23A	Casias Ranch,	85.07	47	⇑P		P	06 26 00.6	+0.3
	baz=84							
117A	Oracle	85.08	53	⇓P		P	06 26 00.9	+0.5
	baz=84							
Y19A	Nutrioso	85.13	51	⇑P		P	06 26 01.4	+0.7
	baz=84							
S24A	Houchin Ranch,	85.15	46	⇑P		P	06 26 01.4	+0.8
	baz=84							
TUC	Tucson	85.21	53	*e*P		P	06 26 01.2	+0.1
	comp=Z,1.7nm,0.7s,mb4.3							
TUC	Tucson	85.21	53	*e*P		P	06 26 01.2	+0.1
TUC				pmax		pmax		
	comp=Z,4.0nm,1.3s,mb4.4							
V22A	San Miguel Ran	85.30	48	⇑P		P	06 26 01.9	+0.4
	baz=84							
U23A	El Rito	85.45	48	⇓P		P	06 26 02.6	+0.4
	baz=84							
ECSD	EROS Data Cent	85.49	37	*e*P		P	06 26 01.4	-0.8
	comp=Z,3.0nm,0.7s,mb4.5							
118A	Homack Ranch,	85.53	53	⇓P		P	06 26 02.7	0.0
	baz=85							
X21A	Alamocita Cree	85.73	50	⇓P		P	06 26 04.1	+0.4
	baz=85							
119A	Ashpeak Ranch,	85.87	52	⇑P		P	06 26 04.5	+0.1
	baz=85							
U24A	Moreno Valley	85.94	47	⇓P		P	06 26 05.1	+0.5
	baz=85							
T25A	Trinidad	85.96	46	⇑P		P	06 26 04.9	+0.2
	baz=85							
ANMO	Albuquerque	86.21	49	P		P	06 26 05.3	-0.7
	comp=Z,1.0nm,0.7s,mb4.2,baz=331,slow=8.6,SNR=5.3							
318A	Bisbee	86.29	53	⇑P		P	06 26 06.4	0.0
	baz=86							
219A	White Tail Can	86.40	53	⇓P		P	06 26 06.9	-0.1
	baz=86							
V24A	Ramah Ranch,	86.41	48	⇑P		P	06 26 07.8	+0.8
	baz=86							
U25A	Circle Dot Ran	86.47	47	⇓P		P	06 26 07.2	0.0
	baz=86							
W24A	Lazy 6 Ranch,	86.68	48	⇑P		P	06 26 08.9	+0.6
	baz=86							
V25A	Rancho No Teng	86.72	47	⇓P		P	06 26 09.2	+0.7
	baz=86							
Y23A	Lovelace Mesa,	87.14	49	⇑P		P	06 26 11.0	+0.5
	baz=86							
W25A	X Bar L Ranch,	87.24	48	⇓P		P	06 26 11.5	+0.5
	baz=86							
V26A	Tequesquite Ra	87.25	47	⇓P		P	06 26 11.1	0.0
	baz=86							
W27A	Bowe Ranch, En	88.18	47	⇑P		P	06 26 15.8	+0.2
	baz=87							
Z25A	Roswell	88.41	49	⇑P		P	06 26 16.4	-0.2
	baz=88							
TXAR	Lajitas Array	91.76	51	P		P	06 26 32.1	-0.2
	comp=Z,1.1nm,0.6s,mb4.4,baz=298,slow=2.9,SNR=25							
MIAR	Mount Ida	93.92	42	*e*P		P	06 26 37.7	-4.5
TORD	Torodi Ar. Bea	117.05	313	PKP		PKPdf	06 32 07.4	-2.4
	comp=Z,0.3nm,0.6s,baz=50,slow=0.8,SNR=4.4							
DBIC	Dimbokro	126.06	315	PKP		PKPdf	06 32 24.6	-2.5
	comp=Z,2.6nm,0.9s,baz=242,slow=10.0,SNR=3.7							
LPAZ	La Paz	148.32	59	PKPbc		PKPbc	06 33 11.0	0.0
	comp=Z,2.5nm,0.6s,baz=232,slow=2.4,SNR=14							
SIV	San Ignacio	152.71	48	PKPbc		PKPbc	06 33 20.8	-0.7
	comp=Z,2.9nm,0.6s,baz=278,slow=1.4,SNR=14							
CFAA	Coronel Fontan	156.35	87	PKPab		PKPab	06 33 46.4	-1.1
CFAA	Coronel Fontan	156.35	87	PKPab		PKPab	06 33 46.4	-1.1
	comp=Z,0.2nm,0.7s,baz=262,slow=4.1,SNR=5.9							

IDC ***20*** *06:20:53.6±0.5,9.16N×84.08W,h0km,mb4.3/24, mb1 4.4/28,mb1mx4.4/30,mbtmp4.3/28,ML4.1/2,MS4.6/18, Ms1 4.6/18,ms1mx4.5/23,Error ellipse: s-maj=20.4km s-min=10.9km az=57.0*

CASC ***20*** *06:20:55.9±1.5,8.97N×84.06W,h8km,MD4.9, mb4.8(NEIC)*

ISCJB ***20*** *06:20:56.7±0.8,8.99N±0.03×84.09W±0.02,h30km±5km, mb4.7/83,MS4.8/20,Error ellipse: s-maj=5.3km s-min=3.7km az=25.1*

BJI ***20*** *06:20:56.2,9.00N×84.10W,h20km,mB5.3/5,Ms5.2/4, Ms7 5.1/5*

NEIC ***20*** *06:20:57.2±0.9,9.03N×84.08W,h20km±5km,mb4.9/62, MS4.7/1,Error ellipse: s-maj=7.4km s-min=3.9km az=211.0*

NEIC Felt at Peninsula de Osa.

SZGRF ***20*** *06:21:00.1,8.96N×83.58W,h33km,mb5.0,Costa Rica*

GCMT ***20*** *06:21:03.1±0.2,8.94N×83.99W,h17km,MW5.3,Moment Tensor Solution. s75,c128; s90,c157; Moment tensor: Scale 10¹⁷Nm; Mrr0.00; Mθθ0.00; Mϕϕ0.00; Mrθ0.00; Mrϕ0.00; Best double couple: M₀1.10000×10¹⁷ NP1:ϕs297.00000°,δ22.00000°,λ92.00000°. NP2: ϕs115.00000°,δ68.00000°,λ89.00000°. Principal axes: T 1.0500, Plg67.0000°, Azm24.0000°; N 0.0500, Plg1.0000°, Azm115.0000°; P -1.1000, Plg23.0000°, Azm206.0000°; Data Used: ll IU IC G CN.*

ISC 20 06:20:57.1±1.0,9.01N×0.03×84.10W±0.02,h20km±6km, n216,σ1§22/200,mb4.7/83,MS4.8/20,9C-23D,Costa Rica

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

TGUH **Tegucigalpa,Un** 5.91 328 *e*Pn Pn **06 22 27.4 +3.8**
OTAV **Otavalo** 10.37 147 *e*Pn Pn **06 23 27.4 +2.5**
52nm,1.2s
ROSC **El Rosal** 10.54 112 Pn Pn **06 23 27.9 +0.8**
0.3nm,0.3s,baz=287,slow=19,SNR=1.9
ROSC LR LR 06 26 45.2
comp=Z,2μm,18.6s,baz=340,slow=33
MCJ **Malvern** 10.83 34 *e*P Pn **06 23 31.3 +0.1**
MTDJ **Mount Denham** 11.16 34 *e*Pn Pn **06 23 39.1 +3.3**
BBJ **Bamboo Saint A** 11.44 35‖ *e*P Pn **06 23 42.4 +2.9**
HOJ **Hope** 11.44 38 *e*P Pn **06 23 42.3 +2.8**
STH **Stony Hill** 11.46 37‖ *e*P Pn **06 23 42.3 +2.5**
GWJ **Greenwich** 11.51 38‖ *e*P Pn **06 23 41.8 +1.4**
YHJ **Yallahs** 11.52 39 *e*P Pn **06 23 43.4 +2.9**
CMJ **Castle Mountai** 11.77 39‖ *e*P Pn **06 23 46.5 +2.4**
TEIG **Tepich** 11.86 341 *e*Pn Pn **06 23 49.7 +4.4**
CMIG **Matias Romero** 13.22 309 Pn Pn **06 24 03.3 -0.6**
1.1nm,0.3s,baz=125,slow=8.7,SNR=19
SDV **Santo Domingo** 13.30 89 *e*Pn Pn **06 24 09.3 +4.2**
HUIG **Huatulco** 13.52 301 *i* P Pn **06 24 13.0 +5.1**
GTBY **Guantanamo Bay** 13.90 38 *e*Pn Pn **06 24 16.0 +2.7**
VHO **Vista Hermosa** 14.68 304 *e*P Pn **06 24 22.1 -1.7**
PNIG **Pinotepa** 15.52 300 *i* P Pn **06 24 39.9 +4.9**
SDDR **Presa de Saban** 15.89 50 *e*Pn Pn **06 24 40.3 +0.5**
125nm,0.9s
PPM **Popocatepetl** 17.27 307 *i* P Pn **06 24 59.2 +1.9**
GRTK **Grand Turk** 17.62 44 Pn Pn **06 25 03.8 +2.2**
PLIG **Platanillo** 17.62 304 *e*P Pn **06 25 09.0 +7.3**
CRPR **Cabo Rojo, PR** 18.77 60 *e*Pn Pn **06 25 16.6 +0.9**
24nm,1.1s
MPR **Mayaguez** 18.84 59 *e*Pn Pn **06 25 17.4 +0.9**
LSP **Las Mesas** 18.86 59 *e*Pn Pn **06 25 20.2 +3.3**
AGP **Aguadilla** 18.92 59 *e*Pn Pn **06 25 20.2 +2.6**
AGPR **Aguadilla, PR** 18.98 59 *e*Pn Pn **06 25 18.4 +0.2**
306nm,1.1s
OBIP **Obispado Ponce** 19.22 60 *e*Pn Pn **06 25 21.6 +0.5**
378nm,2.5s
AOPR **Arecibo Observ** 19.22 59 *e*Pn Pn **06 25 21.3 +0.1**
59nm,1.0s
PCRV **Puerto La Cruz** 19.23 85 P Pn **06 25 21.4 +0.1**
0.5nm,0.3s,baz=243,slow=4.5,SNR=3.8
ICM **Isla Caja Muer** 19.23 61 *e*P Pn **06 25 20.9 -0.4**
CELP **Cerrillos** 19.25 60 *e*Pn Pn **06 25 21.9 +0.4**
SJG **San Juan** 19.64 61 *e*P Pn **06 25 25.4 -0.8**
189nm,1.5s
SJG **San Juan** 19.64 61 P Pn **06 25 24.7 -1.5**
2.4nm,0.3s,baz=337,slow=23,SNR=19
SJG LR LR 06 32 26.5
comp=Z,3μm,18.4s,baz=237,slow=35
HUMP **Col San Antoni** 19.91 61 *e*Pn Pn **06 25 28.9 -0.5**
170nm,1.6s
CBYP **Canovanas** 19.96 61 *e*P Pn **06 25 28.7 -1.3**
126nm,1.3s
MTP **Monte Pirata** 20.15 61 *e*P P **06 25 30.4 0.0**
156nm,1.4s
CDVI **St. Croix** 20.70 63 *e*P P **06 25 36.6 +0.3**
103nm,0.8s
STVI **Saint Thomas** 20.77 61 *e*P P **06 25 37.2 +0.1**
34nm,1.1s
BRAL **Brewton** 22.07 353 *e*P P **06 25 52.4 +1.5**
122nm,1.3s,mb5.2
NNA **Nana** 22.07 161 P P **06 25 52.1 +1.1**
15nm,1.0s,mb4.3,baz=267,slow=3.3,SNR=2.1
NNA LR LR 06 33 37.9
comp=Z,1μm,20.0s,MS4.3,baz=325,slow=34
GRGR **Grenville** 22.28 80 *e*P P **06 25 54.0 +0.7**
HKT **Hockley** 23.55 334 *e*P P **06 26 07.2 +0.6**
24nm,1.3s,mb4.5
VBMS **Vicksburg** 23.85 346 *e*P P **06 26 09.3 0.0**
75nm,0.8s,mb5.2
LRAL **Lakeview Retre** 24.06 354 *e*P P **06 26 11.2 0.0**
37nm,1.1s,mb4.7
GOGA **Godfrey** 24.29 1 *e*P P **06 26 12.7 -0.6**
50nm,1.4s,mb4.8
NATX **Nacogdoches** 24.68 338 *e*P P **06 26 17.2 +0.4**
135nm,1.8s,mb5.2
JSC **Jenkinsville** 25.29 6 *e*P P **06 26 22.5 +0.1**
JCT **Junction City** 25.91 328 *e*P P **06 26 28.3 +0.2**
11nm,0.8s,mb4.5
SWET **Sewanee** 26.14 357 *e*P P **06 26 30.5 +0.4**
CPCT **Cooper Cave** 26.32 359 *e*P P **06 26 32.2 +0.5**
TKL **Tuckaleechee C** 26.53 1 *e*P P **06 26 33.0 -0.5**
TKL LR LR 06 37 37.6
TKL **Tuckaleechee C** 26.53 1 P P **06 26 33.0 -0.6**
4.3nm,0.9s,mb4.0,baz=151,slow=8.9,SNR=4.3
TKL LR LR 06 37 37.6
comp=Z,2μm,18.2s,MS4.7,baz=253,slow=38
UALR **University of** 26.74 345 *e*P P **06 26 35.3 -0.1**
45nm,1.4s,mb4.8
TXAR **Lajitas Array** 27.31 320 P P **06 26 40.0 -0.7**
TXAR PcP PcP 06 29 60.0 -0.1
TXAR **Lajitas Array** 27.31 320 P P **06 26 40.0 -0.7**
0.9nm,0.7s,baz=141,slow=5.8,SNR=7.2
TXAR PcP PcP 06 29 60.0 -0.1
0.7nm,0.8s,baz=146,slow=5.0,SNR=4.6
WMOK **Wichita Mounta** 28.93 334 *e*P P **06 26 55.0 -0.1**
19nm,1.8s,mb4.5
WCI **Wyandotte Cave** 29.16 356 *e*P P **06 26 56.4 -0.7**
16nm,0.9s,mb4.7
CCM **Cathedral Cave** 29.63 349 *e*P P **06 26 59.2 -2.0**
14nm,0.8s,mb4.8
LPAZ **La Paz** 29.69 148 P P **06 27 02.4 +0.5**
LPAZ LR LR 06 39 46.5
LPAZ **La Paz** 29.69 148 P P **06 27 02.4 +0.5**
0.9nm,0.8s,mb3.6,baz=304,slow=3.6,SNR=2.1
LPAZ LR LR 06 39 46.5
comp=Z,2μm,21.4s,MS4.7,baz=312,slow=38
OLIL **Olney** 29.82 354 *e*P P **06 27 02.0 -0.9**
26nm,1.1s,mb4.9
MNTX **Cornudas Mount** 30.01 322 *e*P P **06 27 06.4 +1.7**
7.0nm,1.4s,mb4.2
BLO **Bloomington** 30.11 356 *e*P P **06 27 04.5 -1.0**
63nm,1.7s,mb5.1
MVL **Millersville** 31.63 11 *e*P P **06 27 18.8 0.0**
32nm,1.3s,mb5.0
HDIL **Hopedale** 31.76 352 *e*P P **06 27 17.0 -2.9**
18nm,0.7s,mb5.0
ANMO **Albuquerque** 32.95 325 P P **06 27 28.7 -1.9**
0.6nm,0.6s,mb3.7,baz=141,slow=13,SNR=2.0
LAZ **Ladron** 32.95 323 *e*P P **06 27 37.2 +6.6**
5.8nm,1.6s,mb4.3
SIV **San Ignacio** 33.71 137 P P **06 27 37.4 +0.1**
5.4nm,1.0s,mb4.5,baz=317,slow=10,SNR=14
SIV PcP PcP 06 30 18.8 +1.8
3.1nm,0.9s,baz=336,slow=7.2,SNR=3.1
SCIA **State Center** 33.74 348 *e*P P **06 27 36.1 -1.3**
21nm,0.7s,mb5.2
TUC **Tucson** 33.89 317 *e*P P **06 27 40.5 +1.7**
3.9nm,0.9s,mb4.3
JFWS **Jewell Farm** 34.20 352 *e*P P **06 27 39.4 -1.9**
20nm,0.6s,mb5.2
SDCO **Great Sand Dun** 34.52 329 *e*P P **06 27 46.9 +2.7**
4.7nm,1.0s,mb4.4
MVCO **Mesa Verde** 35.72 326 *e*P P **06 27 55.7 +1.2**
9.6nm,1.0s,mb4.7
SADO **Sadowa** 35.89 6 P P **06 27 53.9 -1.9**
6.6nm,0.8s,mb4.6,baz=200,slow=7.9,SNR=5.0
WUAZ **Wupatki** 36.27 321 *e*P P **06 28 00.6 +1.3**
8.9nm,0.9s,mb4.7
ECSD **EROS Data Cent** 36.27 345 *e*P P **06 27 56.5 -2.7**
12nm,1.2s,mb4.7
SMCO **Snowmass** 36.36 329 *e*P P **06 28 02.0 +2.0**
3.6nm,0.9s,mb4.3
PV04 **Paradox Valley** 36.79 327 *e*P P **06 28 04.3 +0.7**
GLA **Glamis** 37.10 315 *e*P P **06 28 07.6 +1.2**
30nm,1.4s,mb4.9
PKME **Peaks-Kenny Pk** 38.32 17 *e*P P **06 28 17.9 +1.4**
94nm,1.7s,mb5.2
PFO **Pinyon Flat Ob** 38.55 314 *e*P P **06 28 20.0 +1.4**
7.7nm,1.0s,mb4.4
GSC **Goldstone** 39.70 316 *e*P P **06 28 29.4 +1.1**
PDAR **Pinedale Array** 40.36 331 P P **06 28 31.1 -2.5**
0.4nm,0.8s,baz=142,slow=8.9,SNR=4.2
PDAR PcP PcP 06 30 37.6 +0.9
0.7nm,0.8s,baz=125,slow=5.6,SNR=3.8
PDAR LR LR 06 49 53.3
comp=Z,732nm,18.6s,baz=143,slow=43
AGMN **Agassiz Nation** 40.40 348 *e*P P **06 28 31.3 -2.5**
29nm,1.4s,mb4.8
HWUT **Hardware Ranch** 40.52 328 *e*P P **06 28 36.3 +1.4**
5.1nm,0.9s,mb4.2
REDW **Red Top Meadow** 41.43 330 *e*P P **06 28 42.2 -0.2**
20nm,1.5s,mb4.5
N13A **Wendover, West** 41.45 325 *e*P P **06 28 43.4 +0.8**
13nm,0.9s,mb4.6
SNOW **Snow King Moun** 41.46 330 *e*P P **06 28 44.9 +2.3**
12nm,1.4s,mb4.3
IMW **Indian Meadow** 41.87 331 *e*P P **06 28 46.5 +0.5**
IMW *e*PcP PcP 06 30 44.0 +2.4
ULM **Lac du Bonnet** 42.26 349 *e*P P **06 28 47.1 -1.9**
ULM **Lac du Bonnet** 42.26 349 P P **06 28 45.9 -3.2**
11nm,0.9s,mb4.5,baz=154,slow=7.4,SNR=6.5
ULM LR LR 06 50 09.9
comp=Z,459nm,18.2s,MS4.4,baz=47,slow=42
NVAR **Mina Array Bea** 42.45 319 P P **06 28 50.8 0.0**
1.8nm,0.6s,mb3.9,baz=128,slow=7.3,SNR=15
NVAR PcP PcP 06 30 44.1 +0.4
0.9nm,0.7s,baz=129,slow=4.0,SNR=2.2
BMN **Battle Mountai** 42.95 322 *e*P P **06 28 56.7 +1.8**
CFAA **Coronel Fontan** 43.14 160 P P **06 28 56.5 +0.1**
1.1nm,1.0s,baz=325,slow=7.1,SNR=4.2
WAKR **Walker** 43.23 318 *e*P P **06 28 59.7 +2.6**
WVOR **Wild Horse Val** 45.01 324 *e*P P **06 29 10.9 -0.5**
9.2nm,0.8s,mb4.7
YBH **Yreka Blue Hor** 47.09 320 P P **06 29 26.5 -1.3**
1.3nm,0.7s,mb4.0,baz=171,slow=9.2,SNR=3.6
SCHQ **Schefferville** 47.73 13 *e*P P **06 29 30.9 -1.6**
SCHQ **Schefferville** 47.73 13 P P **06 29 30.3 -2.2**
12nm,1.0s,mb4.9,baz=222,slow=6.6,SNR=10
SCHQ LR LR 06 50 48.8
comp=Z,2μm,18.2s,MS5.1,baz=206,slow=38
SPB **Sao Paulo** 48.31 133 *e*P P **06 29 40.4 +2.9**
19nm,1.1s,mb5.0
EDM **Edmonton** 50.02 337 *e*P P **06 29 48.2 -1.9**
PLCA **Paso Flores** 51.05 167 P P **06 29 58.8 +0.8**
22nm,0.8s,mb5.2,baz=338,slow=8.5,SNR=19
YKA **Yellowknife Ar** 57.80 344 P P **06 30 44.3 -2.5**
1.7nm,0.8s,mb4.2,baz=142,slow=7.0,SNR=4.3
YKA PcP PcP 06 31 39.6 +0.3
1.1nm,0.6s,baz=143,slow=4.1,SNR=4.2
TAOE **Nuku Hiva Isla** 58.58 254 *e*S S **06 39 03.8 +7.3**
334nm,25.0s
TAOE *e*LR LR 06 48 06.9
388nm,24.3s
RKT **Rikitea** 59.13 236 *e*S S **06 39 07.9 +4.5**
596nm,26.5s
RKT *e*LR LR 06 48 29.7
744nm,28.5s,baz=58
RES **Resolute Bay** 65.93 357 P P **06 31 40.4 -1.0**
4.6nm,0.7s,mb4.6,baz=140,slow=7.6,SNR=2.8
INK **Inuvik** 67.46 342 *e*P P **06 31 50.7 -0.6**
11nm,1.2s,mb4.8
INK *e*pP pP 06 32 09.0 +11
SUMG **Summit** 69.12 13 *e*P P **06 32 00.5 -1.1**
46nm,1.1s,mb5.3
SUMG **Summit** 69.12 13⇑ *i*P P **06 32 00.5 -1.1**
23nm,0.9s,mb5.1
PPT **Papeete** 69.85 248 *e*S S 06 41 22.8 +6.7
469nm,26.0s
PPT *e*LR LR 06 53 30.5
338nm,24.2s,baz=60
PPT **Papeete** 69.85 248 LR LR 06 55 00.6
comp=Z,410nm,18.4s,MS4.7,baz=47,slow=29
ILAR **Eielson Array** 70.48 336 P P **06 32 09.2 -0.9**
2.0nm,0.9s,mb4.0,baz=124,slow=4.7,SNR=13
ILAR LR LR 07 06 56.6
comp=Z,379nm,19.6s,MS4.7,baz=291,slow=39
KDAK **Kodiak Island** 71.01 328 P P **06 32 12.2 -1.2**
9.6nm,0.8s,mb4.8,baz=288,slow=11,SNR=4.0
PPLA **Purkeypile** 72.12 333 *e*P P **06 32 20.1 +0.1**
15nm,1.2s,mb4.8
COLD **Coldfoot** 72.60 338 *e*P P **06 32 23.3 +0.5**
ESDC **Sonseca Array** 76.73 51 P P **06 32 46.5 -0.9**
3.2nm,0.7s,mb4.4,baz=280,slow=5.5,SNR=12
ESDC LR LR 06 59 20.0
comp=Z,210nm,21.3s,MS4.4,baz=270,slow=30
JMIC **Jan Mayen** 76.85 19 *e*P P **06 32 50.4 +3.1**
TIC **Toumodi** 78.24 85 *e*P P **06 33 01.7 +5.4**
90nm,1.3s,mb5.5
LIC **Lamto** 78.29 85 *e*P P **06 32 57.5 +1.0**
63nm,1.2s,mb5.4
UNV **Unalaska Valle** 78.31 323 *e*P P **06 32 56.7 +0.9**
65nm,1.4s,mb5.4
DBIC **Dimbokro** 78.40 85 P P **06 32 56.4 -0.7**
3.6nm,0.9s,mb4.3,baz=273,slow=17,SNR=2.7
DBIC LR LR 07 05 31.9
comp=Z,188nm,19.0s,MS4.4,baz=252,slow=34
KIC **Kosan Boka** 78.55 85 *e*P P **06 32 57.7 -0.3**
74nm,1.5s,mb5.4
GRR **Gorron** 78.84 42 *e*P P **06 32 57.8 -1.1**
LDF **La Druitiere** 79.33 42 *e*P P **06 33 01.1 -0.5**
6.7nm,0.6s,mb4.5
LDF **La Druitiere** 79.33 42 *e*P P **06 33 01.1 -0.5**
3.3nm,0.6s,mb4.4
MFF **Saint Martin d** 79.37 44 *e*P P **06 33 00.9 -0.9**
TCF **Toulx Ste Croi** 81.02 44 *e*P P **06 33 09.9 -0.8**
5.3nm,0.6s,mb4.3
TCF **Toulx Ste Croi** 81.02 44 *e*P P **06 33 09.9 -0.8**
2.7nm,0.6s,mb4.3
BGF **Bois d'Agland** 81.44 44 *e*P P **06 33 12.1 -0.8**
AVF **Avril sur Loir** 81.77 44 *e*P P **06 33 14.7 0.0**
SSF **Saint Saulge** 81.85 44 *e*P P **06 33 13.6 -1.5**
14nm,1.0s,mb4.5
SSF **Saint Saulge** 81.85 44 *e*P P **06 33 13.6 -1.5**
6.8nm,1.0s,mb4.5
BER **Bergen** 81.96 30 *e*P P **06 33 15.8 +0.4**
LOR **Lormes** 82.08 43 *e*P P **06 33 16.2 -0.1**
16nm,1.0s,mb4.6
LOR **Lormes** 82.08 43 *e*P P **06 33 16.2 -0.1**
8.1nm,1.0s,mb4.6
LASF **Ste Croix** 82.34 47 *e*P P **06 33 15.4 -2.4**
54nm,1.5s,mb5.0
KBS **Kingsbay** 82.39 11 *e*P P **06 33 20.2 +2.9**
KBS *e*S S 06 43 33.1 +1.0
KBS AMS AMS 07 11 49.7
comp=Z,592nm,19.7s,MS5.0
VIVF **Saint-Julien-l** 82.85 46 *e*P P **06 33 20.1 -0.3**
TORD **Torodi Ar. Bea** 83.93 78 P P **06 33 25.2 -1.4**
comp=Z,2.2nm,0.8s,mb4.3,baz=281,slow=5.4,SNR=9.2
TORD LR LR 07 06 51.9
comp=Z,318nm,20.3s,MS4.7,baz=270,slow=33
KONO **Kongsberg** 84.17 31 *e*P P **06 33 27.0 +0.1**
NOA **NORSAR Array B** 84.76 29 P P **06 33 29.5 -0.3**
comp=Z,1.6nm,0.8s,mb4.2,baz=276,slow=5.0,SNR=6.0
NOA LR LR 07 07 10.7
comp=Z,188nm,21.5s,MS4.4,baz=270,slow=33
TRO **Tromso** 86.12 20 *e*P P **06 33 40.3 +3.9**
TRO AMS AMS 07 12 46.1
comp=Z,340nm,14.4s,MS4.9
DAVA **Damuels** 86.14 43⇑ *i*P P **06 33 36.4 -0.6**
comp=Z,11nm,1.0s,mb5.0
TAM **Tamanrasset** 86.22 68 *e*P P **06 33 38.2 +0.3**
comp=Z,11nm,1.4s,mb4.9
GRA1 **Granberg Arr** 86.63 40 *e*P P **06 33 38.8 -0.6**
comp=Z,16nm,1.6s,mb5.0
GRF **Grafenberg Arr** 86.63 40 *e*P P **06 33 38.8 -0.6**
comp=Z,16nm,1.6s,mb5.0
MOX **Moxa** 86.71 39 *e*P P **06 33 41.0 +1.3**
comp=Z,25nm,1.7s,mb5.2
MOX
comp=Z,300nm,20.0s
FETA **Feichten** 86.76 43⇑ *i*P P **06 33 39.5 -0.5**
comp=Z,8.6nm,1.4s,mb4.8
WERD **Werda** 87.18 40 *e*P P **06 33 41.3 -0.7**
comp=Z,24nm,1.7s,mb5.2
WERN **Wernitzgruen** 87.26 40 *e*P P **06 33 41.9 -0.5**
comp=Z,18nm,1.5s,mb5.1
CLL **Collm** 87.45 39 P P **06 33 43.0 -0.3**
CLL **Collm** 87.45 39 *e*P P **06 33 43.0 -0.3**
comp=Z,14nm,1.3s,mb5.0
CLL *e*sP sP 06 33 53.0 +0.7
CLL *e*PP PP 06 37 09.0 +1.2
CLL *e*S S 06 44 19.0 -4.3
CLL *e*sPS 06 45 36.0
CLL *e*SS SS 06 50 12.0 +3.9
CLL Lm 07 10 00.0
comp=Z,300nm,19.8s
KEST **Kesra** 87.58 54 P P **06 33 43.9 -0.4**
comp=Z,0.7nm,0.7s,mb4.0,baz=43,slow=18,SNR=2.0
KTK1 **Kautokeino** 87.76 20 *e*P P **06 33 44.8 +0.4**
WET **Wettzell** 87.79 41 *e*P P **06 33 44.5 -0.5**
comp=Z,29nm,1.7s,mb5.2
ABTA **Abfaltersbach** 88.01 43⇓ *i*P P **06 33 45.8 -0.3**
comp=Z,8.2nm,1.2s,mb4.8
BRG **Berggiesshubel** 88.12 39 *e*P P **06 33 46.1 -0.4**
comp=Z,8.0nm,1.2s,mb4.8
BRG **Berggiesshubel** 88.12 39 *e*P P **06 33 46.0 -0.6**
comp=Z,15nm,1.7s,mb5.0
BRG *e* pP 06 33 53.8 +0.7
comp=Z,6.0nm,1.0s
BRG PP PP 06 37 15.0 +1.8
BRG SKS 06 44 17.0
BRG S S 06 44 39.0 +9.3
BRG PS 06 45 38.0
BRG SS SS 06 50 41.0 +23
BRG
comp=N,240nm,15.7s
BRG
comp=E,304nm,18.7s
BRG
comp=Z,339nm,19.1s
ARCES **ARCESS Array B** 88.34 19 P P **06 33 46.6 -0.5**
comp=Z,4.3nm,1.1s,mb4.6,baz=243,slow=2.4,SNR=4.0
ARCES LR LR 07 14 48.5
comp=Z,399nm,18.8s,MS4.9,baz=21,slow=37
GEC2 **GERESS Array S** 88.38 41 *e*P P **06 33 47.3 -0.5**
comp=Z,15nm,1.7s,mb5.0
KBA **Koelnbreinsper** 88.50 43⇑ *i*P P **06 33 47.7 -0.7**
comp=Z,14nm,1.4s,mb5.1
SOKA **Soboth** 89.72 43⇑ *i*PcP P **06 33 54.3 +0.1**
comp=Z,2.8nm,0.9s,mb4.6
AFI **Afiamalu** 89.90 256 LR LR 07 07 59.8
comp=Z,156nm,18.9s,MS4.5,baz=119,slow=31
FINES **FINESS Array B** 91.56 27 P P **06 34 00.5 -1.9**
FINES LR LR 07 14 12.2
FINES **FINESS Array B** 91.56 27 P P **06 34 00.5 -1.9**
comp=Z,1.9nm,0.6s,mb4.6,baz=226,slow=5.0,SNR=4.4
FINES LR LR 07 14 12.2
comp=Z,252nm,20.0s,MS4.7,baz=297,slow=35
CRVS **Cervenica-Dubn** 93.32 40 *e*P P **06 34 10.8 0.0**
CRVS **Cervenica-Dubn** 93.32 40 *e*P P **06 34 10.8 0.0**
CRVS *e* 06 34 29.1
AKASG **Malin Array Be** 97.39 36 LR LR 07 15 38.9
comp=Z,520nm,21.1s,MS5.0,baz=285,slow=34
DZM **Mont Dzumac** 111.31 250 *e*LR LR 07 12 44.0
comp=Z,131nm,24.5s
CN2 **Changchun** 121.00 335 *e*PKP PKPdf 06 39 51.3 +2.7
SONM **Songino Array** 122.65 352 PKP PKPdf 06 39 50.4 -1.2
comp=Z,0.6nm,0.7s,baz=336,slow=3.2,SNR=4.4
MKAR **Makanchi Array** 123.14 11 PKP PKPdf 06 39 51.1 -1.6
comp=Z,0.2nm,0.6s,baz=16,slow=4.5,SNR=3.3
KSRS **Korea Array** 124.31 329 PKP PKPdf 06 39 55.0 -1.3
comp=Z,1.4nm,0.7s,baz=17,slow=1.8,SNR=3.9
WMQ **Urumqi** 126.90 7 *e*PKP PKPdf 06 39 59.6 -0.3
WMQ PP PP 06 42 00.5 +4.3
WMQ PKS 06 43 34.9
WMQ SKS SKSdf 06 47 06.3 -4.5
WMQ SKKS SKKSac 06 48 48.5 -5.9
WMQ SS SS 06 59 01.4 +0.1
WMQ AMB AMB
comp=Z,140nm,4.8s
WMQ LR LR
comp=N,410nm,21.5s
WMQ LR LR
comp=Z,390nm,21.4s,MS5.0
KSH **Kashi** 128.30 20 *e*PKP PKPdf 06 39 59.3 -3.4
KSH *e*PKS 06 43 34.4
KSH AMB AMB
comp=Z,82nm,6.4s
KSH LR LR
comp=N,30nm,4.4s
KSH LR LR
comp=E,37nm,3.9s
KSH LR LR
comp=Z,38nm,4.0s
HHC **Hu-ho-hao-te** 128.33 345 *e*PKP PKPdf 06 39 58.0 -4.8
HHC PP PP 06 42 06.4 +0.6
HHC PKS 06 43 33.3
HHC AMB AMB
comp=Z,170nm,5.4s
HHC LR LR
comp=N,260nm,14.3s,MS5.3
HHC LR LR
comp=E,400nm,17.6s,MS5.3
HHC LR LR
comp=Z,370nm,17.2s,MS5.1
NJ2 **Nanjing** 133.65 333 *e*PKP PKPdf 06 40 17.1 +4.0
WHN **Wuhan** 136.87 336 PKP PKPdf 06 40 13.3 -5.8
WHN SS SS 07 01 00.8 -2.8
WHN LR LR
comp=Z,630nm,14.8s,MS5.5
CD2 **Chengdu** 139.60 350 PKP PKPdf 06 40 19.5 -4.7
ASAR **Alice Springs** 140.88 243 PKhKP PKPpre 06 40 20.6
comp=Z,0.8nm,0.9s,baz=137,slow=3.7,SNR=3.2
ASAR PKP PKPdf 06 40 26.0 -0.6
comp=Z,2.1nm,0.8s,baz=111,slow=2.8,SNR=8.4
WRA **Warramunga Arr** 141.32 249 PKP PKPpre 06 40 23.2
WRA PKP PKPdf 06 40 27.8 +0.3
WRA **Warramunga Arr** 141.32 249 PKhKP PKPpre 06 40 23.2
comp=Z,2.6nm,0.9s,baz=279,slow=0.7,SNR=14
WRA PKP PKPdf 06 40 27.8 +0.3
comp=Z,2.8nm,0.8s,baz=102,slow=2.8,SNR=16
GYA **Guiyang** 143.23 344 *e*PKP PKPdf 06 40 28.9 -1.9
GYA PP PP 06 43 41.9 +2.2
GYA AMB AMB
comp=Z,110nm,8.0s
KMI **Kunming** 145.43 349 PKPbc PKPbc 06 40 33.8 -0.7
CMAR **Chiang Mai Arr** 152.55 354 PKP PKPdf 06 40 46.1 -0.2
comp=Z,0.4nm,0.3s,baz=349,slow=1.5,SNR=4.1
CMAR PKPbc PKPbc 06 40 52.5 -0.7
comp=Z,1.0nm,0.4s,baz=319,slow=2.2,SNR=10
CMAR PKPab PKPab 06 41 01.8 -1.6
comp=Z,3.2nm,0.8s,baz=332,slow=3.1,SNR=9.7

DJA 20 06:42:14.0±23S×122°61E, h198km, MLv3.6/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.82**	**169**	P	Pn		06 42 42.9	+0.4
LUWI				S	Sn		06 43 05.7	+1.1
MRSI	**Marisa**	**0.97**	**316**	P	Pn		06 42 43.8	+0.4
KMSI	**Cibinong**	**1.59**	**60**	P	Pn		06 42 48.8	+0.5
KMSI				S	Sn		06 43 16.2	+1.3

IDC 20 06:58:40.2±1.3, 4°46S×151°06E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.6/15, mbtmp3.6/4, Error ellipse: s-maj=97.7km s-min=25.1km az=129.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.41**	**225**	P	P		07 03 40.2	-0.3
	0.6nm,0.4s,baz=50,slow=10,SNR=12							
ASAR	**Alice Springs**	**25.27**	**219**	P	P		07 04 08.2	-0.1
	0.6nm,0.7s,baz=52,slow=8.3,SNR=5.5							
ILAR	**Eielson Array**	**82.51**	**22**	P	P		07 11 04.1	-0.3
	0.3nm,0.7s,baz=244,slow=5.0,SNR=6.6							
NVAR	**Mina Array Bea**	**93.24**	**52**	P	P		07 11 57.0	0.0
	0.3nm,0.5s,baz=246,slow=5.4,SNR=2.9							
TORD	**Torodi Ar. Bea**	**148.55**	**288**	PKPbc	PKPbc		07 18 30.6	+0.4
	0.5nm,0.4s,baz=90,slow=2.2,SNR=14							

IDC ***20*** *07:04:40.7±0.8, 18°86N×146°67E, h0km, mb4.0/13, mb1 4.2/15, mb1mx4.1/23, mbtmp4.0/15, ML4.3/2, MS3.3/2, Ms1 3.4/2, ms1mx2.8/27, Error ellipse: s-maj=31.3km s-min=13.8km az=93.0*

ISCJB ***20*** *07:04:45.1±2.8, 18°86N±0°07×146°6E±0°2, h43km±24km, mb4.1/16, Error ellipse: s-maj=32.3km s-min=12.2km az=178.2*

NEIC ***20*** *07:04:47.0±1.7, 18°83N×146°56E, h46km±15km, mb4.3/2, Error ellipse: s-maj=21.2km s-min=8.7km az=87.0*

ISC 20 07:04:47.3±2.3, 18°88N±0°07×146°6E±0°2, h48km±20km, n25, σ0°86/25, mb4.1/16, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.53**	**198**	Pn	**Pn**		**07 06 05.4**	**-1.8**
	9.8nm,0.3s,baz=8.5,slow=5.3,SNR=4.8							
GUMO				Sn	**Sn**		**07 07 11.2**	**+1.8**
	7.3nm,0.3s,baz=218,slow=19,SNR=2.3							
GUMO				LR	LR		07 08 04.1	
	comp=Z,160nm,20.2s,baz=106,slow=37							
MJAR	**Matsushiro Arr**	**19.09**	**339**	P	**Pn**		**07 09 07.0**	**-0.2**
	0.7nm,0.3s,baz=157,slow=11,SNR=3.0							
KSRS	**Korea Array**	**24.71**	**322**	P	**P**		**07 10 05.3**	**+1.3**
	0.8nm,0.4s,mb3.6,baz=148,slow=7.8,SNR=3.5							
WRA	**Warramunga Arr**	**40.42**	**198**	P	**P**		**07 12 20.8**	**-0.3**
	1.2nm,0.6s,mb3.8,baz=18,slow=8.7,SNR=14							
FITZ	**Fitzroy Crossi**	**42.15**	**211**	P	**P**		**07 12 34.3**	**-1.0**
	1.7nm,0.5s,mb3.9,baz=33,slow=14,SNR=8.7							
SONM	**Songino Array**	**43.56**	**321**	P	**P**		**07 12 46.9**	**+0.5**
	0.6nm,0.5s,mb3.6,baz=132,slow=8.3,SNR=4.9							
ASAR	**Alice Springs**	**44.08**	**197**	P	**P**		**07 12 50.7**	**0.0**
	0.7nm,0.6s,mb3.6,baz=25,slow=6.5,SNR=9.9							

STKA	**Stephens Creek**	**50.70**	**186**	P	**P**	**07 13 42.3**	**+0.2**
	2.4nm,0.9s,mb4.2,baz=354,slow=15,SNR=3.6						
ZALV	**Zalesovo Beam**	**58.41**	**322**	P	**P**	**07 14 37.8**	**-0.1**
	2.8nm,0.6s,mb4.5,baz=111,slow=8.6,SNR=12						
MKAR	**Makanchi Array**	**58.98**	**314**	P	**P**	**07 14 42.2**	**+0.3**
MKAR	**Makanchi Array**	**58.98**	**314**	P	**P**	**07 14 42.2**	**+0.3**
	0.8nm,0.5s,mb4.0,baz=88,slow=7.6,SNR=14						
ILAR	**Eielson Array**	**63.09**	**26**	P	**P**	**07 15 10.0**	**+0.5**
	0.3nm,0.4s,mb3.8,baz=255,slow=6.3,SNR=12						
ILAR				LR	LR	07 41 49.3	
	comp=Z,36nm,18.8s,baz=2.3,slow=35						
ABKAR	**Akbulak array**	**73.81**	**317**	*eP*	**P**	**07 16 16.7**	**-0.1**
	1.5nm,0.6s,mb4.1						
KEV	**Kevo**	**82.03**	**342**	*eP*	**P**	**07 17 02.0**	**0.0**
KEV	**Kevo**	**82.03**	**342**	*ep*	**P**	**07 17 02.0**	**0.0**
NVAR	**Mina Array Bea**	**82.33**	**52**	P	**P**	**07 17 05.1**	**+0.9**
NVAR	**Mina Array Bea**	**82.33**	**52**	P	**P**	**07 17 05.1**	**+0.9**
	0.2nm,0.3s,mb3.5,baz=279,slow=5.9,SNR=4.1						
ARCES	**ARCESS Array B**	**82.59**	**342**	P	**P**	**07 17 05.7**	**+0.7**
	2.1nm,0.6s,mb4.3,baz=68,slow=7.1,SNR=13						
JOF	**Joensuu**	**84.23**	**335**	*eP*	**P**	**07 17 12.6**	**-0.8**
JOF	**Joensuu**	**84.23**	**335**	*ep*	**P**	**07 17 12.6**	**-0.8**
	5.7nm,0.5s,mb5.0						
KAF	**Kangasniemi**	**86.61**	**336**	*eP*	**P**	**07 17 23.8**	**-1.6**
	1.3nm,0.4s,mb4.5						
KAF	**Kangasniemi**	**86.61**	**336**	*ep*	**P**	**07 17 23.8**	**-1.6**
	1.3nm,0.4s,mb4.5						
FINES	**FINESS Array B**	**87.09**	**336**	P	**P**	**07 17 26.8**	**-0.9**
	2.3nm,0.3s,mb4.8,baz=80,slow=4.2,SNR=18						
NOA	**NORSAR Array B**	**92.71**	**340**	P	**P**	**07 17 54.5**	**+0.5**
	0.6nm,0.7s,mb4.2,baz=53,slow=8.2,SNR=3.0						
TORD	**Torodi Ar. Bea**	**133.03**	**310**	PKP	PKPdf	07 23 59.0	+0.5
	0.4nm,1.0s,baz=12,slow=1.4,SNR=5.4						

IDC 20 07:18:14.3±1.8, 29.11S×67.31W, h114km±17km, mb3.9/8, mb1 3.9/11, mb1mx3.8/20, mbtmp3.8/11, Error ellipse: s-maj=22.9km s-min=15.7km az=92.0, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**2.62**	**198**	P	Pn	07 18 56.8	+1.5
	baz=12,slow=11						
CFAA				S	Sn	07 19 27.2	+0.3
	24nm,0.3s,baz=167,slow=18,SNR=4.3						
PLCA	**Paso Flores**	**11.90**	**192**	P	Pn	07 20 57.5	-2.7
	0.1nm,0.3s,baz=355,slow=14,SNR=4.1						
LPAZ	**La Paz**	**12.78**	**356**	P	Pn	07 21 11.7	-0.1
	0.4nm,0.3s,baz=127,slow=6.2,SNR=14						
SIV	**San Ignacio**	**14.26**	**25**	P	Pn	07 21 30.2	-0.9
	0.6nm,0.3s,baz=215,slow=11,SNR=12						
QSPA	**South Pole Qui**	**61.12**	**180**	P	P	07 28 16.7	+0.8
	1.1nm,0.7s,baz=191,slow=2.0,SNR=7.5						
TXAR	**Lajitas Array**	**67.69**	**326**	P	P	07 28 59.2	0.0
	0.3nm,0.6s,baz=141,slow=6.4,SNR=5.1						
DBIC	**Dimbokro**	**69.75**	**70**	P	P	07 29 12.1	-0.3
	3.3nm,0.4s,baz=189,slow=3.3,SNR=9.1						
SUR	**Sutherland**	**73.61**	**118**	P	P	07 29 35.2	-0.2
	8.4nm,1.0s,baz=172,slow=7.1,SNR=4.0						
TSUM	**Tsumeb**	**76.60**	**105**	P	P	07 29 52.3	-0.4
	0.7nm,0.6s,baz=215,slow=7.3,SNR=6.2						
BOSA	**Boshof**	**78.69**	**116**	P	P	07 30 04.6	+0.4
	1.8nm,0.5s,baz=324,slow=20,SNR=4.5						
TORD	**Torodi Ar. Bea**	**78.69**	**68**	P	P	07 30 04.8	+0.5
	7.4nm,0.5s,baz=276,slow=6.2,SNR=124						
PDAR	**Pinedale Array**	**81.39**	**330**	P	P	07 30 18.6	+0.4
	0.7nm,0.5s,baz=125,slow=7.2,SNR=9.7						
ASAR	**Alice Springs**	**123.70**	**204**	PKP	PKPdf	07 36 57.3	-1.8
	0.3nm,0.4s,baz=134,slow=2.2,SNR=3.4						
WRA	**Warramunga Arr**	**126.95**	**206**	PKP	PKPdf	07 37 04.7	-0.8
	0.9nm,0.5s,baz=160,slow=1.8,SNR=21						
ZALV	**Zalesovo Beam**	**147.95**	**31**	PKPbc	PKPbc	07 37 46.3	+0.6
	3.5nm,0.4s,baz=310,slow=3.5,SNR=18						
MKAR	**Makanchi Array**	**150.48**	**45**	PKPbc	PKPbc	07 37 52.6	+0.3
	3.2nm,0.7s,baz=301,slow=2.3,SNR=32						
MKAR				PKPab	PKPab	07 37 59.1	-0.1
	1.3nm,0.6s,baz=299,slow=3.3,SNR=8.4						

*IDC **20** 07:22:41.5±0.8, 32.68S×179.01W, h0km, mb4.3/7, mb1 4.6/8, mb1mx4.3/15, mbtmp4.4/8, ML5.1/1, MS3.4/2, Ms1 3.4/2, ms1mx3.0/14, Error ellipse: s-maj=26.0km s-min=22.8km az=14.0*

*NEIC **20** 07:23:06.2±2.6, 34.43S×179.81W, h196km±16km, Error ellipse: s-maj=32.8km s-min=14.6km az=52.0*

ISC 20 07:22:44.4±1.9, 33.34S±0.09×178.2W±0.1, h12km±14km, n91, σ1ş04/53, mb4.3/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.08**	**213**	P	**Pn**	**07 24 00.2**	**-0.2**
MXZ	**Matakaoa Point**	**5.08**	**213**	PN	**Pn**	**07 24 01.1**	**+0.7**
MXZ				SN	**Sn**	**07 25 00.6**	**+1.5**
PUZ	**Puketiti**	**5.53**	**210**	P	**Pn**	**07 24 07.0**	**+0.5**
PUZ				S	**Sn**	**07 25 08.9**	**-1.1**
PUZ	**Puketiti**	**5.53**	**210**	PN	**Pn**	**07 24 07.0**	**+0.5**
PUZ				SN	**Sn**	**07 25 08.9**	**-1.1**
CNGZ	**Carnagh Statio**	**5.90**	**209**	PN	**Pn**	**07 24 12.6**	**+1.0**
CNGZ				SN	**Sn**	**07 25 20.9**	**+1.8**
KUZ	**Kuaotunu**	**6.03**	**234**	P	**Pn**	**07 24 14.4**	**+1.0**
KUZ	**Kuaotunu**	**6.03**	**234**	PN	**Pn**	**07 24 14.4**	**+1.0**
KUZ				SN	**Sn**	**07 25 25.0**	**+2.6**
MWZ	**Matawai**	**6.07**	**214**	P	**Pn**	**07 24 13.6**	**-0.3**
MWZ				S	**Sn**	**07 25 21.8**	**-1.5**
MWZ	**Matawai**	**6.07**	**214**	PN	**Pn**	**07 24 13.8**	**-0.1**
OPRZ	**Ohinepanea**	**6.20**	**222**	PN	**Pn**	**07 24 16.2**	**+0.5**
URZ	**Urewera**	**6.21**	**216**	P	**Pn**	**07 24 14.7**	**-1.2**
URZ	**Urewera**	**6.21**	**216**	Pn	**Pn**	**07 24 15.4**	**-0.5**
	40nm,0.3s,baz=288,slow=1.5,SNR=165						
URZ				Sn	**Sn**	**07 25 25.1**	**-1.7**
	30nm,0.3s,baz=164,slow=21,SNR=9.3						
URZ				LR	LR	07 26 30.0	
	comp=Z,184nm,21.5s,baz=252,slow=36						
URZ	**Urewera**	**6.21**	**216**	PN	**Pn**	**07 24 15.1**	**-0.8**
TGRZ	**Tauranga**	**6.29**	**224**	PN	**Pn**	**07 24 18.2**	**+1.3**
PRGZ	**Paritu Road**	**6.41**	**208**	PN	**Pn**	**07 24 18.4**	**-0.2**
KNZ	**Kokohu**	**6.57**	**209**	P	**Pn**	**07 24 20.9**	**0.0**
KNZ	**Kokohu**	**6.57**	**209**	PN	**Pn**	**07 24 20.9**	**0.0**
MHGZ	**Mahia Peninsul**	**6.59**	**207**	PN	**Pn**	**07 24 20.5**	**-0.6**
MKAZ	**Moumakai**	**6.60**	**233**	P	**Pn**	**07 24 22.3**	**+1.1**
MKAZ	**Moumakai**	**6.60**	**233**	PN	**Pn**	**07 24 22.3**	**+1.1**
WCZ	**Waipu Caves**	**6.66**	**245**	P	**Pn**	**07 24 21.8**	**-0.3**
WCZ	**Waipu Caves**	**6.66**	**245**	PN	**Pn**	**07 24 21.8**	**-0.4**
RAHZ	**Arahi**	**6.74**	**213**	PN	**Pn**	**07 24 24.2**	**+1.0**
NMHZ	**Naumai**	**7.02**	**214**	*e*PN	**Pn**	**07 24 27.1**	**+0.1**
OUZ	**Omahuta**	**7.04**	**252**	P	**Pn**	**07 24 25.5**	**-1.8**
OUZ	**Omahuta**	**7.04**	**252**	PN	**Pn**	**07 24 25.5**	**-1.8**
BKZ	**Black Stump Fm**	**7.22**	**215**	P	**Pn**	**07 24 28.1**	**-1.6**
BKZ	**Black Stump Fm**	**7.22**	**215**	PN	**Pn**	**07 24 28.1**	**-1.6**
MCHZ	**McNeill Hill**	**7.35**	**213**	PN	**Pn**	**07 24 32.5**	**+1.0**
KAHZ	**Kahuranaki**	**7.56**	**210**	PN	**Pn**	**07 24 33.0**	**-1.3**
OTVZ	**Oturere**	**7.63**	**219**	PN	**Pn**	**07 24 35.6**	**+0.2**
NGZ	**Ngauruhoe**	**7.67**	**219**	P	**Pn**	**07 24 36.1**	**+0.1**
NGZ	**Ngauruhoe**	**7.67**	**219**	PN	**Pn**	**07 24 36.1**	**+0.1**
FWVZ	**Far West T-bar**	**7.76**	**219**	P	**Pn**	**07 24 36.9**	**-0.2**
FWVZ	**Far West T-bar**	**7.76**	**219**	PN	**Pn**	**07 24 36.9**	**-0.2**
MOVZ	**Moawhango**	**7.77**	**217**	P	**Pn**	**07 24 36.3**	**-1.0**
MOVZ	**Moawhango**	**7.77**	**217**	PN	**Pn**	**07 24 36.3**	**-1.0**
PNHZ	**Pukenui**	**7.95**	**213**	PN	Px	07 24 38.0	
WPHZ	**Waipukurau**	**7.97**	**211**	PN	Px	07 24 37.9	
PRHZ	**Porangahau**	**8.05**	**209**	PN	Px	07 24 39.2	
VRZ	**Vera Road**	**8.10**	**223**	P	Px	07 24 42.0	
VRZ	**Vera Road**	**8.10**	**223**	PN	Px	07 24 42.0	
DVHZ	**Dannevirke**	**8.28**	**211**	PN	Px	07 24 42.4	
BFZ	**Birch Farm**	**8.56**	**210**	P	Px	07 24 45.6	
BFZ	**Birch Farm**	**8.56**	**210**	PN	Px	07 24 45.6	
MRZ	**Mangatainoka R**	**8.83**	**212**	*e*P	Px	07 24 48.3	
MRZ	**Mangatainoka R**	**8.83**	**212**	*e*PN	Px	07 24 48.3	
HOWZ	**Holdsworth Sta**	**9.05**	**212**	*e*PN	Px	07 24 51.9	
TMWZ	**Te Maipa**	**9.07**	**210**	PN	Px	07 24 52.8	
OGWZ	**Otaki Gorge**	**9.14**	**213**	PN	Px	07 24 52.3	
MTW	**Mount Morrison**	**9.27**	**211**	P	Px	07 24 53.9	
MTW	**Mount Morrison**	**9.27**	**211**	PN	Px	07 24 53.9	
TRWZ	**Traveller**	**9.39**	**209**	PN	Px	07 24 57.4	
PAWZ	**Paruwai Farm**	**9.49**	**210**	P	Px	07 24 58.1	
PAWZ	**Paruwai Farm**	**9.49**	**210**	PN	Px	07 24 58.1	
MSWZ	**Moikau Station**	**9.59**	**211**	P	Px	07 24 58.6	
MSWZ	**Moikau Station**	**9.59**	**211**	PN	Px	07 24 58.6	
PLWZ	**Palliser**	**9.72**	**210**	PN	Px	07 24 59.7	
SNZO	**South Karori**	**9.75**	**213**	P	Px	07 25 00.4	
SNZO	**South Karori**	**9.75**	**213**	PN	Px	07 25 00.4	
TCW	**Tory Channel**	**9.88**	**215**	*e*P	Px	07 25 01.4	
TCW	**Tory Channel**	**9.88**	**215**	*e*PN	Px	07 25 01.4	
TUWZ	**Tuamarina**	**10.20**	**215**	PN	Px	07 25 05.4	
NNZ	**Nelson**	**10.33**	**218**	P	Px	07 25 08.0	
NNZ	**Nelson**	**10.33**	**218**	PN	Px	07 25 08.0	
CTZ	**Chatham Island**	**10.45**	**174**	P	Px	07 25 21.1	
KHZ	**Kahutara**	**11.16**	**213**	P	Px	07 25 18.4	
KHZ	**Kahutara**	**11.16**	**213**	PN	Px	07 25 18.4	
DSZ	**Denniston Nort**	**11.54**	**220**	P	Px	07 25 22.5	
DSZ	**Denniston Nort**	**11.54**	**220**	PN	Px	07 25 22.5	
LTZ	**Lake Taylor**	**12.04**	**216**	P	Px	07 25 29.1	
LTZ	**Lake Taylor**	**12.04**	**216**	PN	Px	07 25 29.1	
MQZ	**McQueen's Vall**	**12.57**	**212**	P	Px	07 25 36.8	
MQZ	**McQueen's Vall**	**12.57**	**212**	PN	Px	07 25 36.8	
RPZ	**Rata Peaks**	**13.33**	**216**	Pn	Px	07 25 47.4	
	4.4nm,0.3s,baz=42,slow=1.7,SNR=28						
RPZ				Sn	Sx	07 28 06.5	
	3.0nm,0.3s,baz=106,slow=19,SNR=10						
ODZ	**Otahua Downs**	**14.52**	**213**	P	Px	07 26 02.7	
ODZ	**Otahua Downs**	**14.52**	**213**	PN	Px	07 26 02.7	
STKA	**Stephens Creek**	**33.75**	**261**	LR	LR	07 41 12.1	
	comp=Z,142nm,20.6s,baz=25,slow=34						
CTA	**Charters Tower**	**34.21**	**284**	P	**P**	**07 29 22.7**	**-7.3**
CTA	**Charters Tower**	**34.21**	**284**	P	**P**	**07 29 22.7**	**-7.3**
	2.9nm,0.5s,mb4.5,baz=107,slow=10,SNR=4.6						
ASAR	**Alice Springs**	**42.86**	**270**	P	**P**	**07 30 36.5**	**-6.2**
ASAR	**Alice Springs**	**42.86**	**270**	P	**P**	**07 30 36.5**	**-6.2**
	1.3nm,0.4s,mb4.0,baz=108,slow=7.7,SNR=20						
WRA	**Warramunga Arr**	**44.11**	**275**	P	**P**	**07 30 46.1**	**-6.7**
	1.8nm,0.3s,mb4.2,baz=116,slow=8.0,SNR=70						
QSPA	**South Pole Qui**	**56.78**	**180**	P	**P**	**07 32 32.9**	**+5.1**
	6.2nm,0.8s,mb4.7,baz=32,slow=1.9,SNR=24						
PLCA	**Paso Flores**	**80.64**	**133**	P	**P**	**07 35 02.1**	**+5.0**
	3.3nm,1.0s,mb4.2,baz=217,slow=3.2,SNR=5.3						
NVAR	**Mina Array Bea**	**90.51**	**43**	P	**P**	**07 35 46.0**	**-0.1**
	1.8nm,0.8s,mb4.4,baz=223,slow=8.2,SNR=12						
PDAR	**Pinedale Array**	**98.38**	**44**	P	**P**	**07 36 22.1**	**+0.2**
	0.3nm,0.6s,mb4.0,baz=286,slow=4.4,SNR=2.8						
MKAR	**Makanchi Array**	**119.50**	**309**	PKP	PKPdf	07 41 28.5	-5.1
	0.2nm,0.4s,baz=89,slow=1.0,SNR=3.8						
FINES	**FINESS Array B**	**147.82**	**338**	PKPbc	PKPbc	07 42 24.1	-4.3
	1.6nm,0.5s,baz=66,slow=4.6,SNR=6.5						
NOA	**NORSAR Array B**	**151.62**	**350**	PKPbc	PKPbc	07 42 33.9	-3.9
	1.8nm,0.7s,baz=16,slow=4.2,SNR=6.2						
TORD	**Torodi Ar. Bea**	**159.90**	**180**	PKPab	PKPab	07 43 22.3	-0.7
	2.1nm,0.8s,baz=177,slow=4.2,SNR=8.5						

*ISCJB **20** 07:38:43.9±0.8, 10.68N±0.07×62.40W±0.03, h91km±7km, Error ellipse: s-maj=11.9km s-min=5.0km az=173.2*

*FUNV **20** 07:38:44.6, 10.72N×62.33W, h90km, MW2.6*

*TRN **20** 07:38:48.9, 10.89N×62.18W, h73km, MD3.0*

*NEIC **20** 07:38:48.9, 10.89N×62.18W, h73km, MD3.0(TRN), After TRN.*

ISC 20 07:38:44.6±0.8, 10.72N±0.07×62.40W±0.03, h88km±8km, n16, σ1ş14/32, 2C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.18**	**112**	*e*P	**Pn**	**07 38 57.3**	**+0.1**
GUIV				*e*S	**Sn**	**07 39 05.9**	**-0.6**
TCE	**Chacachacare**	**0.63**	**92**	*e*P	**Pn**	**07 39 01.7**	**+1.5**
TCE				*e*S	**Sn**	**07 39 11.6**	**-0.3**
TCE	**Chacachacare**	**0.63**	**92**	*e*P	**Pn**	**07 39 01.7**	**+1.5**
TCE				*e*S	**Sn**	**07 39 11.6**	**-0.3**
GUNV	**Guanoco**	**0.77**	**224**	*e*P	**Pn**	**07 39 02.4**	**+0.7**
GUNV				*e*S	**Sn**	**07 39 15.4**	**+1.1**
CRUV	**Carupano**	**0.83**	**267**	*e*P	**Pn**	**07 39 02.5**	**+0.4**
CRUV				*e*S	**Sn**	**07 39 15.6**	**+0.2**
ITEV	**Isla Los Testi**	**0.96**	**311**	*e*P	**Pn**	**07 39 04.0**	**+0.3**
ITEV				*e*S	**Sn**	**07 39 18.2**	**+0.2**
TRN	**Trinidad (W)**	**0.98**	**94**	*i*P	**Pn**	**07 39 05.0**	**+1.2**
TRN				*e*S	**Sn**	**07 39 17.6**	**-0.8**
TRN	**Trinidad (W)**	**0.98**	**94**	*i*P	**Pn**	**07 39 05.0**	**+1.2**
TRN				*e*S	**Sn**	**07 39 17.6**	**-0.8**
TBH	**Brigand Hill**	**1.33**	**100**	*e*P	**Pn**	**07 39 09.5**	**+1.5**
TBH				*e*S	**Sn**	**07 39 24.2**	**-1.5**
TBH	**Brigand Hill**	**1.33**	**100**	*e*P	**Pn**	**07 39 09.5**	**+1.5**
TBH				*e*S	**Sn**	**07 39 24.2**	**-1.5**
GRW	**Mount Saint Ca**	**1.61**	**27**	*e*P	**Pn**	**07 39 13.2**	**+1.6**
GRW				*e*S	**Sn**	**07 39 28.7**	**-3.4**
GRW	**Mount Saint Ca**	**1.61**	**27**	*e*P	**Pn**	**07 39 13.2**	**+1.6**
GRW				*e*S	**Sn**	**07 39 28.7**	**-3.4**
TOSP	**Speyside**	**1.92**	**72**	*e*P	**Pn**	**07 39 16.8**	**+1.2**
TOSP				*e*S	**Sn**	**07 39 37.2**	**-2.0**
PCRV	**Puerto La Cruz**	**2.27**	**257**	*e*P	**Pn**	**07 39 20.8**	**+0.6**
PCRV				*e*S	**Sn**	**07 39 46.4**	**-1.1**
CUPV	**Cœpira**	**3.40**	**259**	*e*P	**Pn**	**07 39 35.5**	**0.0**
CUPV				*e*S	**Sn**	**07 40 12.6**	**-2.3**
CAOV	**Caicara del Or**	**5.14**	**229**	*e*P	**Pn**	**07 39 57.8**	**-1.3**
CAOV				*e*S	**Sn**	**07 40 52.6**	**-4.5**

IDC 20 07:44:10.7±2.1, 6.98S×128.55E, h0km, mb4.2/1, mb1 4.1/4, mb1mx3.7/16, mbtmp4.0/4, ML4.0/3, Error ellipse: s-maj=103.8km s-min=26.6km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.41**	**194**	Pn	Pn	07 46 55.8	+0.7
	3.3nm,0.3s,baz=20,slow=12,SNR=70						
FITZ				Sn	Sn	07 48 54.8	-8.5
	2.2nm,0.3s,baz=94,slow=19,SNR=8.4						
WRA	**Warramunga Arr**	**14.05**	**157**	Pn	Pn	07 47 30.0	-1.3
	0.4nm,0.3s,baz=330,slow=15,SNR=30						
WRA				Sn	Sn	07 49 51.9	-16
	2.0nm,0.3s,baz=339,slow=22,SNR=6.9						
ASAR	**Alice Springs**	**17.37**	**163**	P	Pn	07 48 15.1	+0.4
	0.2nm,0.3s,baz=340,slow=10,SNR=9.8						
ASAR				S	Sn	07 51 15.1	-14
	baz=344,slow=24,SNR=4.1						
MKAR	**Makanchi Array**	**67.43**	**327**	P	P	07 55 08.2	+0.1
	0.9nm,0.4s,baz=128,slow=7.2,SNR=12						

*NIED **20** 08:14:00, 25.70N×128.70E, h11km, Mw3.7 Best double couple: M₀3.98000×10¹⁴ NP1:φ₉228.00000°, δ78.00000°, λ-134.00000°. NP2:φ₉126.00000°, δ45.00000°, λ-16.00000°.*

JMA 20 08:14:19.4±0.3, 25.67N×128.75E, h53km, M3.9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**1.01**	**298**	P	Pn	08 14 37.9	+0.5
JJT2				S	Sn	08 14 51.2	+0.5
NAH1	**Naha**	**1.09**	**299**	P	Pn	08 14 38.7	+0.3
NAH1				S	Sn	08 14 52.1	-0.4
JOW	**Kunigami**	**1.23**	**340**	P	Pn	08 14 41.1	+0.8
JOW				*e*S	Sn	08 14 55.6	-0.3
JIH	**Iheya**	**1.53**	**333**	P	Pn	08 14 45.4	+1.0
JIH				*e*S	Sn	08 15 03.8	+0.7
JAGN	**Aguni-jima**	**1.64**	**304**	P	Pn	08 14 46.6	+0.8
JAGN				S	Sn	08 15 06.1	+0.4
JKE	**Kume jima 2**	**1.88**	**291**	P	Pn	08 14 49.5	+0.3
JKE				*e*S	Sn	08 15 10.9	-0.9
JTK	**Tokunoshima**	**2.12**	**5**	P	Pn	08 14 53.3	+1.0
JTK				S	Sn	08 15 17.3	-0.1
JMZ	**Minamidaito 2**	**2.23**	**86**	P	Pn	08 14 53.8	-0.1
JMZ				*e*S	Sn	08 15 18.5	-1.8
JAM	**Amami Oshima**	**2.83**	**15**	P	Pn	08 15 03.0	+0.8
JAM				S	Sn	08 15 34.5	-0.6
JZK	**Kikaishima**	**2.85**	**22**	P	Pn	08 15 04.6	+2.2
JZK				*e*S	Sn	08 15 37.4	+1.9
JNN	**Nakanoshima**	**4.27**	**13**	P	Pn	08 15 23.0	+1.1

*NEIC **20** 08:33:01.1±1.0, 8.99N×84.13W, h10km, MD4.3(CASC), Error ellipse: s-maj=12.6km s-min=6.7km az=215.0*

CASC 20 08:33:01.3±4.0, 9.00N×84.03W, h0km±6km, MD4.2, 4C-9D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QCR	**Quepos**	**0.44**	**343**	*i*P	Pg	08 33 10.6	+0.9
BUS	**Buena Vista**	**0.61**	**26**	*e*P	Pg	08 33 14.3	+1.2
BUS	**Buena Vista**	**0.61**	**26**	*e*P	Pg	08 33 14.3	+1.2
LAJ	**Bijagual**	**0.86**	**354**	*e*P	Pg	08 33 18.1	+0.2
LAJ	**Bijagual**	**0.86**	**354**	*e*P	Pg	08 33 18.1	+0.2
URSC	**Urasca**	**0.86**	**17**	*i*P	Pg	08 33 18.4	+0.5
URSC	**Urasca**	**0.86**	**17**	*i*P	Pg	08 33 18.4	+0.5
ACR	**Cerro Adams**	**0.92**	**112**	*e*P	Pg	08 33 19.3	+0.3
ACR				*e*S	Sg	08 33 33.5	+2.5
ACR	**Cerro Adams**	**0.92**	**112**	*e*P	Pg	08 33 19.3	+0.3
ACR				*e*S	Sg	08 33 33.5	+2.5
PRS1	**Puriscal**	**1.01**	**344**	*i*P	Pg	08 33 19.0	-1.8
PRS1	**Puriscal**	**1.01**	**344**	*i*P	Pg	08 33 19.0	-1.8
CGA2	**Cerro Gallo 2**	**1.09**	**337**	*i*P	Pg	08 33 21.9	-0.4
CGA2	**Cerro Gallo 2**	**1.09**	**337**	*i*P	Pg	08 33 21.9	-0.4
BRU2	**Volcan**	**1.34**	**99**	*i*P	Pg	08 33 26.6	-0.5
BRU2				*e*S	Sg	08 33 46.3	+1.8
JCR	**Jicaral**	**1.36**	**308**	*e*P	Pg	08 33 24.1	-3.2
JCR	**Jicaral**	**1.36**	**308**	*e*P	Pg	08 33 24.1	-3.2
TBS2		**1.38**	**99**	*e*P	Pg	08 33 32.7	+5.0
TBS2				*e*S	Sg	08 33 52.3	+6.7
CNI	**Changuinola**	**1.55**	**75**	*e*P	Pn	08 33 28.4	-1.8
JTS	**JuntasAbangare**	**1.57**	**325**	*e*Pn	Pn	08 33 28.0	-2.3
JTS				*e*Sn	Sn	08 33 47.0	-4.4
TRTC	**Tortuguero**	**1.59**	**11**	*i*P	Pn	08 33 30.8	+0.1
VCR	**Vista de Mar**	**1.93**	**305**	*e*P	Pn	08 33 34.8	-0.5
VCR				*e*S	Sn	08 33 59.8	-0.5
VCR	**Vista de Mar**	**1.93**	**305**	*e*P	Pn	08 33 34.8	-0.5
VCR				*e*S	Sn	08 33 59.8	-0.5
CUI	**Cuipilapa**	**1.99**	**326**	*i*P	Pn	08 33 35.0	-1.1
COLC	**Colonia**	**2.01**	**325**	*i*P	Pn	08 33 35.3	-1.2
COLC				*i*S	Sn	08 34 01.6	-0.8
GUAB	**Guayabo de Bag**	**2.06**	**325**	*i*P	Pn	08 33 35.3	-1.9
LIM1	**Limonal**	**2.07**	**325**	*i*P	Pn	08 33 35.3	-2.0
MESS	**Mesas**	**2.07**	**327**	*i*P	Pn	08 33 36.4	-0.9
BUEV	**Buena Vista**	**2.24**	**323**	*i*P	Pn	08 33 39.0	-0.5
BUEV				*i*S	Sn	08 34 07.3	-0.6
GB1A	**Borinquen Arri**	**2.25**	**323**	*i*P	Pn	08 33 40.0	+0.2
SSN	**San Juan del S**	**2.90**	**322**	*e*P	Pn	08 33 50.8	+2.1
CONN	**Concepcion**	**2.99**	**329**	*e*P	Pn	08 33 52.8	+2.9
BOAB	**BOACO BROADBAN**	**3.78**	**335**	*e*P	Pn	08 34 02.1	+1.2
BOAB				*e*S	Sn	08 34 54.9	+8.8
PINA	**Piqa, Costa Ab**	**3.93**	**86**	*i*P	Pn	08 34 03.4	+0.6
PINA	**Piqa, Costa Ab**	**3.93**	**86**	*i*P	Pn	08 34 03.4	+0.6
CSAN		**3.94**	**324**	*e*P	Pn	08 34 06.3	+3.3
COPN	**Copaltepe**	**4.04**	**322**	*e*P	Pn	08 34 07.8	+3.5
BCIP	**Isla Barro Col**	**4.15**	**87**	*e*P	Pn	08 34 06.4	+0.5
BCIP	**Isla Barro Col**	**4.15**	**87**	*i*P	Pn	08 34 06.5	+0.7
BCIP				*e*S	Sn	08 34 55.0	-0.1
TGUH	**Tegucigalpa,Un**	**5.94**	**328**	Pn	Pn	08 34 41.1	+11
ROSC	**El Rosal**	**10.48**	**113**	Pn	Pn	08 35 26.4	-6.4

*IDC **20** 08:35:51.3±3.2, 16.48N×85.77W, h0km, mb3.4/7, mb1 3.8/8, mb1mx3.7/20, mbtmp3.5/8, ML2.8/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/22, Error ellipse: s-maj=80.3km s-min=32.5km az=7.0*

*NEIC **20** 08:35:55.9±0.9, 16.38N×85.89W, h35km, mb3.2/1, Error ellipse: s-maj=17.7km s-min=12.4km az=100.0*

*ISCJB **20** 08:35:56.3±0.7, 16.70N±0.04×86.0W±0.1, h33km, mb3.5/7, MS3.3/2, Error ellipse: s-maj=17.4km s-min=4.6km az=

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.27**	**300**	P	**Pn**	**08 59 13.8**	**-2.1**
BNDI	**Bandanaira**	**1.27**	**144**	P	**Pn**	**08 59 30.3**	**+0.6**
NLAI	**Namlea**	**2.07**	**277**	P	**Pn**	**08 59 34.8**	**-5.9**
LBMI	**Labuha**	**3.27**	**330**	P	**Pn**	**08 59 56.5**	**-0.8**
TLE	**Tual**	**4.16**	**121**	P	**Pn**	**09 00 07.5**	**-1.9**
FITZ	**Fitzroy Crossi**	**14.94**	**193**	Pn	**Pn**	**09 02 43.9**	**+6.8**
	0.1nm,0.3s,baz=18,slow=9.6,SNR=5.1						
WRA	**Warramunga Arr**	**17.12**	**163**	P	**Pn**	**09 03 04.8**	**-0.3**
	0.1nm,0.3s,baz=349,slow=12,SNR=6.4						
ASAR	**Alice Springs**	**20.59**	**168**	P	**P**	**09 03 45.2**	**+0.8**
	4.5nm,0.8s,baz=350,slow=11,SNR=38						
SONM	**Songino Array**	**54.86**	**341**	P	**P**	**09 08 37.2**	**+2.0**
	0.3nm,0.4s,mb3.7,baz=151,slow=6.6,SNR=3.5						
MKAR	**Makanchi Array**	**64.85**	**326**	P	**P**	**09 09 45.2**	**+1.3**
	0.2nm,0.4s,mb3.5,baz=126,slow=7.3,SNR=2.2						
BVAR	**Borovoye Array**	**74.66**	**328**	P	**P**	**09 10 48.6**	**+4.4**
	0.4nm,0.4s,mb3.7,baz=119,slow=5.1,SNR=2.9						

*ISCJB **20** 09:00:42.8±0.5, 31.48N±0.08×86.43E±0.10, h10km, mb3.7/10, MS3.5/3, Error ellipse: s-maj=15.8km s-min=6.4km az=44.7*
*IDC **20** 09:00:42.8±0.9, 31.52N×86.57E, h0km, mb3.7/9, mb1 4.0/10, mb1mx3.8/25, mbtmp3.8/10, ML4.2/1, MS3.3/5, Ms1 3.3/5, ms1mx2.9/42, Error ellipse: s-maj=30.2km s-min=19.2km az=53.0*
*NEIC **20** 09:00:44.5±0.6, 31.53N×86.47E, h10km, mb3.8/3, Error ellipse: s-maj=16.3km s-min=8.4km az=218.0*
ISC 20 09:00:44.7±0.5, 31.56N±0.08×86.51E±0.08, h10km, n25, σ1§17/24, mb3.7/10, MS3.5/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.41**	**114**	P	**Pn**	**09 01 53.8**	**+2.2**
LSA				S	**Sn**	**09 02 49.4**	**+6.4**
LSA				LR	LR		
	comp=N,830nm,9.6s						
LSA				LR	LR		
	comp=E,910nm,8.3s						
LSA				LR	LR		
	comp=Z,1μm,10.9s						
LSA	**Lhasa**	**4.41**	**114**	Pn	**Pn**	**09 01 53.5**	**+1.9**
LSA				*e*Sg	**Sg**	**09 03 05.1**	**-1.2**
SHL	**Shillong**	**7.61**	**140**	*e*PKP	**Pn**	**09 02 40.0**	**+4.3**
SHL				*i* S	**Sn**	**09 04 03.0**	**+1.0**
TKM2	**Tokmak 2**	**14.27**	**326**	*e*P	**Pn**	**09 04 14.1**	**+7.3**
	comp=Z,4.9nm,1.1s						
UCH	**Uchtor**	**14.32**	**321**	*e*Pn	**Pn**	**09 04 09.7**	**+2.3**
	comp=Z,3.1nm,0.9s						
AAK	**Ala-Archa**	**14.62**	**322**	LR	LR	09 09 56.2	
	comp=Z,63nm,19.6s,baz=171,slow=38						
AML	**Almayashu**	**14.70**	**319**	Pn	**Pn**	**09 04 12.2**	**-0.4**
	comp=Z,5.6nm,1.0s						
KBL	**Kabul**	**14.95**	**286**	*e*Pn	**Pn**	**09 04 14.4**	**-1.6**
	comp=Z,9.8nm,1.0s						
EKS2	**Erkin-Say**	**15.01**	**321**	Pn	**Pn**	**09 04 15.9**	**-1.0**
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**15.56**	**349**	LR	LR	09 10 41.2	
	comp=Z,28nm,21.3s,baz=160,slow=38						
CMAR	**Chiang Mai Arr**	**17.22**	**136**	P	**Pn**	**09 04 44.8**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=321,slow=11,SNR=10.0						
KURK	**Kurchatov**	**20.02**	**345**	P	**P**	**09 05 15.3**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=164,slow=10,SNR=5.5						
SONM	**Songino Array**	**22.22**	**37**	P	**P**	**09 05 41.5**	**+0.2**
	comp=Z,1.8nm,0.8s,mb3.5,baz=226,slow=10.0,SNR=11						
ZALV	**Zalesovo Beam**	**22.41**	**357**	P	**P**	**09 05 44.0**	**+0.8**
	comp=Z,0.3nm,0.3s,mb3.1,baz=188,slow=9.9,SNR=2.1						
ZALV				LR	LR	09 15 47.3	
	comp=Z,83nm,18.1s,MS3.2,baz=73,slow=40						
ULN	**Ulaanbaatar**	**22.59**	**38**	*e*P	**P**	**09 05 45.3**	**+0.1**
	comp=Z,1.4nm,0.4s,mb3.7						
ABKAR	**Akbulak array**	**26.66**	**319**	*e*P	**P**	**09 06 24.7**	**+1.2**
	comp=Z,2.3nm,0.7s,mb3.8						
AKASG	**Malin Array Be**	**45.95**	**312**	P	**P**	**09 09 07.9**	**+0.3**
	comp=Z,1.9nm,0.7s,mb4.2,baz=81,slow=7.4,SNR=7.4						
MLR	**Muntele Rosu**	**48.30**	**305**	P	**P**	**09 09 27.9**	**+1.8**
	comp=Z,1.5nm,0.5s,mb4.2,baz=121,slow=13,SNR=3.1						
VRAC	**Vranov**	**54.15**	**311**	LR	LR	09 34 38.8	
	comp=Z,32nm,18.2s,MS3.4,baz=43,slow=38						
WRA	**Warramunga Arr**	**68.74**	**132**	P	**P**	**09 11 48.2**	**-0.7**
WRA	**Warramunga Arr**	**68.74**	**132**	P	**P**	**09 11 48.2**	**-0.7**
	comp=Z,0.2nm,0.4s,mb3.4,baz=326,slow=6.6,SNR=7.2						
ASAR	**Alice Springs**	**71.22**	**135**	P	**P**	**09 12 03.5**	**-0.5**
	comp=Z,0.5nm,0.8s,mb3.5,baz=319,slow=6.6,SNR=4.6						
ILAR	**Eielson Array**	**75.38**	**21**	P	**P**	**09 12 27.2**	**-0.8**
	comp=Z,0.4nm,0.9s,mb3.4,baz=295,slow=4.5,SNR=4.4						
TORD	**Torodi Ar. Bea**	**78.88**	**279**	P	**P**	**09 12 47.9**	**-0.7**
	comp=Z,0.7nm,0.7s,mb3.7,baz=68,slow=2.7,SNR=4.5						
BOSA	**Boshof**	**81.22**	**231**	LR	LR	09 49 43.4	
	comp=Z,60nm,18.6s,MS4.0,baz=320,slow=35						

*SKO **20** 09:08:41.8, 39.64N×20.34E, h0km*
*NEIC **20** 09:08:41.4, 39.86N×20.47E, h23km, MD3.8(ATH), After ATH.*
*ATH **20** 09:08:41.4, 39.86N×20.47E, h23km±1km, MD3.3/8*
*CSEM **20** 09:08:43.1±0.2, 39.74N×20.43E, h10km, ML2.2/3, Error ellipse: s-maj=4.5km s-min=4.0km az=68.0*
*THE **20** 09:08:43.5, 39.73N×20.46E, h5km±1km, ML2.2/3, Error ellipse: s-maj=1.9km s-min=0.9km az=277.0*
*ISCJB **20** 09:08:43.1±0.4, 39.72N±0.02×20.46E±0.04, h8km±4km, Error ellipse: s-maj=4.6km s-min=3.4km az=14.7*
*TIR **20** 09:08:45.1±2.2, 40.10N×20.22E, h2km±207km, ML3.1*
ISC 20 09:08:43.5±0.4, 39.73N±0.02×20.43E±0.03, h13km±3km, n51, σ1§14/85, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.21**	**201**	P	**Pg**	**09 08 47.2**	**-1.0**
IGT				S	**Sg**	**09 08 51.5**	**+0.2**
IGT	**Igoumenitsa**	**0.21**	**201**	P	**Pg**	**09 08 47.2**	**-1.0**
IGT				S	**Sg**	**09 08 51.5**	**+0.2**
JAN	**Janina**	**0.33**	**103**	*e*Pb	**Pg**	**09 08 49.2**	**-1.1**
JAN				*e*Sb	**Sg**	**09 08 54.5**	**-0.3**
JAN	**Janina**	**0.33**	**103**	*e*PB	**Pg**	**09 08 49.2**	**-1.1**
JAN				*e*SB	**Sg**	**09 08 54.5**	**-0.3**
JAN	**Janina**	**0.33**	**103**	*e*Pb	**Pg**	**09 08 49.2**	**-1.1**
JAN				*e*Sb	**Sg**	**09 08 54.5**	**-0.3**
SRN	**Sarande**	**0.36**	**294**	*i* PG	**Pg**	**09 08 50.7**	**-0.1**
SRN				*i* SG	**Sg**	**09 08 57.6**	**+1.9**
SRN	**Sarande**	**0.36**	**294**	*i* Pg	**Pg**	**09 08 50.7**	**-0.1**
	SNR=94						
SRN				*i* Sg	**Sg**	**09 08 57.6**	**+1.9**
	SNR=94						
LSK	**Leskovik**	**0.44**	**17**	*i* PG	**Pg**	**09 08 51.4**	**-0.8**
LSK				*i* SG	**Sg**	**09 08 58.2**	**+0.2**
LSK	**Leskovik**	**0.44**	**17**	*i* Pg	**Pg**	**09 08 51.4**	**-0.8**
	SNR=95						
LSK				*i* Sg	**Sg**	**09 08 58.2**	**+0.2**
	SNR=95						
KEK	**Kerkira**	**0.49**	**268**	*e*Pn	**Pg**	**09 08 52.4**	**-0.7**
KEK				*e*Sn	**Sg**	**09 09 00.0**	**+0.4**
KEK	**Kerkira**	**0.49**	**268**	*e*PN	**Pg**	**09 08 52.4**	**-0.7**
KEK				*e*SN	**Sg**	**09 09 00.0**	**+0.4**
KEK	**Kerkira**	**0.49**	**268**	P	**Pg**	**09 08 52.4**	**-0.7**
KEK				S	**Sg**	**09 09 01.6**	**+2.0**
KEK	**Kerkira**	**0.49**	**268**	P	**Pg**	**09 08 52.4**	**-0.7**
KEK				S	**Sg**	**09 09 01.6**	**+2.0**
NEST	**Nestorio**	**0.83**	**35**	P	**Pg**	**09 08 58.5**	**-1.1**
NEST				S	**Sg**	**09 09 11.2**	**+0.7**
NEST	**Nestorio**	**0.83**	**35**	P	**Pg**	**09 08 58.5**	**-1.1**
NEST				S	**Sg**	**09 09 11.2**	**+0.7**
KBN	**Korca**	**0.93**	**17**	*i* PG	**Pg**	**09 09 02.9**	**+1.4**
KBN				*i* SG	**Sg**	**09 09 13.7**	**0.0**
KBN	**Korca**	**0.93**	**17**	*i* Pg	**Pg**	**09 09 02.9**	**+1.4**
	SNR=92						
KBN				*i* Sg	**Sg**	**09 09 13.7**	**0.0**
	SNR=92						
LKD2	**Lefkada island**	**0.96**	**169**	P	**Pg**	**09 09 00.8**	**-1.2**
LKD2				S	**Sg**	**09 09 15.5**	**+0.9**
LKD2	**Lefkada island**	**0.96**	**169**	P	**Pg**	**09 09 00.8**	**-1.2**
LKD2				S	**Sg**	**09 09 15.5**	**+0.9**
KZN	**Kozani**	**1.18**	**60**	*e*Pn	**Pn**	**09 09 02.4**	**-3.3**
KZN	**Kozani**	**1.18**	**60**	*e*PN	**Pn**	**09 09 02.4**	**-3.3**
KZN	**Kozani**	**1.18**	**60**	*e*Pn	**Pn**	**09 09 02.4**	**-3.3**
THL	**Klokotos Trika**	**1.23**	**97**	*e*PN	**Pn**	**09 09 05.3**	**-1.2**
THL				*e*SN	**Sn**	**09 09 21.9**	**-1.1**
THL	**Klokotos Trika**	**1.23**	**97**	P	**Pn**	**09 09 05.4**	**-1.1**
THL				S	**Sb**	**09 09 24.3**	**+1.8**
THL	**Klokotos Trika**	**1.23**	**97**	P	**Pn**	**09 09 05.4**	**-1.1**
THL				*e*Sn	**Sn**	**09 09 21.9**	**-1.1**
THL				S	**Sb**	**09 09 24.3**	**+1.8**
FNA	**Florina**	**1.27**	**34**	P	**Pn**	**09 09 06.6**	**-0.4**
FNA				S	**Sb**	**09 09 25.3**	**+1.6**
FNA	**Florina**	**1.27**	**34**	P	**Pn**	**09 09 06.6**	**-0.4**
FNA				S	**Sb**	**09 09 25.3**	**+1.6**
EVR	**Evrytania**	**1.34**	**127**	*e*Pn	**Pn**	**09 09 08.1**	**+0.1**
EVR				*e*Sn	**Sn**	**09 09 25.9**	**+0.2**
EVR	**Evrytania**	**1.34**	**127**	*e*PN	**Pn**	**09 09 08.1**	**+0.1**
EVR				*e*SN	**Sn**	**09 09 25.9**	**+0.2**
EVR	**Evrytania**	**1.34**	**127**	*e*Pn	**Pn**	**09 09 08.1**	**+0.1**
EVR				*e*Sn	**Sn**	**09 09 25.9**	**+0.2**
VLS	**Valsamata**	**1.56**	**175**	*e*Pn	**Pn**	**09 09 11.7**	**+0.8**
VLS	**Valsamata**	**1.56**	**175**	*e*PN	**Pn**	**09 09 11.7**	**+0.8**
VLS	**Valsamata**	**1.56**	**175**	P	**Pn**	**09 09 11.7**	**+0.8**
VLS				S	**Sn**	**09 09 31.5**	**+0.5**
VLS	**Valsamata**	**1.56**	**175**	P	**Pn**	**09 09 11.7**	**+0.8**
VLS				S	**Sn**	**09 09 31.5**	**+0.5**
LIT	**Litokhoron**	**1.63**	**76**	*e*Pn	**Pn**	**09 09 11.0**	**-0.9**
LIT	**Litokhoron**	**1.63**	**76**	*e*PN	**Pn**	**09 09 11.0**	**-0.9**
LIT	**Litokhoron**	**1.63**	**76**	*e*Pn	**Pn**	**09 09 11.0**	**-0.9**
AGG	**Agios Georgios**	**1.64**	**115**	*e*Pn	**Pn**	**09 09 12.4**	**+0.4**
AGG	**Agios Georgios**	**1.64**	**115**	*e*PN	**Pn**	**09 09 12.4**	**+0.4**
AGG	**Agios Georgios**	**1.64**	**115**	P	**Pn**	**09 09 12.8**	**+0.8**
AGG				S	**Sn**	**09 09 34.0**	**+1.1**
AGG	**Agios Georgios**	**1.64**	**115**	*e*Pn	**Pn**	**09 09 12.4**	**+0.4**
AGG	**Agios Georgios**	**1.64**	**115**	P	**Pn**	**09 09 12.8**	**+0.8**
AGG				S	**Sn**	**09 09 34.0**	**+1.1**
EFP	**Efpalio**	**1.74**	**138**	*e*PN	**Pn**	**09 09 14.1**	**+0.7**
EFP	**Efpalio**	**1.74**	**138**	*e*Pn	**Pn**	**09 09 14.1**	**+0.7**
KRUS	**Krusevo**	**1.75**	**21**	*e*Pn	**Pn**	**09 09 15.3**	**+1.8**
GUR	**Goura**	**2.33**	**140**	*e*PB	**Pb**	**09 09 22.9**	**-2.6**
GUR	**Goura**	**2.33**	**140**	*e*Pb	**Pb**	**09 09 22.9**	**-2.6**
DID	**Didima**	**3.13**	**134**	*e*PN	**Pn**	**09 09 33.4**	**+0.9**
DID	**Didima**	**3.13**	**134**	*e*Pn	**Pn**	**09 09 33.4**	**+0.9**
STON	**Ston**	**3.75**	**328**	*e*Pn	**Pn**	**09 09 39.2**	**-1.8**
STON				Sn	**Sn**	**09 10 23.0**	**-2.1**
STON	**Ston**	**3.75**	**328**	*e*Pn	**Pn**	**09 09 39.2**	**-1.8**
STON				Sn	**Sn**	**09 10 22.9**	**-2.1**

*ISCJB **20** 09:31:48.2±0.6, 32.25N±0.1×57.1E±0.1, h10km, mb4.0/15, MS3.3/2, Error ellipse: s-maj=22.5km s-min=12.3km az=41.4*
*IDC **20** 09:31:48.7±0.7, 32.24N×57.17E, h0km, mb4.1/13, mb1 4.1/13, mb1mx4.0/26, mbtmp4.1/13, MS3.4/2, Ms1 3.3/2, ms1mx3.0/25, Error ellipse: s-maj=28.9km s-min=18.7km az=45.0*
*NEIC **20** 09:31:50.0±0.6, 32.15N×57.11E, h10km, mb4.3/3, Error ellipse: s-maj=23.3km s-min=12.4km az=222.0*
ISC 20 09:31:50.2±0.6, 32.1N±0.1×57.1E±0.1, h10km, n22, σ1§11/20, mb4.0/15, MS3.3/2, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABPO	**Ambohimpanom**	**15.81**	**323**	*e*Pn	**Pn**	**09 35 31.5**	**-1.4**
	9.6nm,0.5s						
OPO	**Ambohidratompo**	**16.20**	**324**	Pn	**Pn**	**09 35 36.7**	**-1.3**
	4.0nm,0.3s,baz=161,slow=8.7,SNR=33						
LBTB	**Lobatse**	**28.51**	**276**	LR	LR	09 47 05.2	
	comp=Z,61nm,18.9s,MS3.2,baz=125,slow=32						
LSZ	**Lusaka**	**31.21**	**296**	P	**P**	**09 38 09.5**	**-0.4**
	0.5nm,0.3s,mb3.8,baz=108,slow=12,SNR=3.6						
MAW	**Mawson**	**35.67**	**176**	LR	LR	09 50 50.2	
	comp=Z,68nm,20.9s,MS3.4,baz=237,slow=32						
TSUM	**Tsumeb**	**37.68**	**280**	P	**P**	**09 39 05.7**	**-0.2**
	1.2nm,0.3s,mb4.0,baz=108,slow=3.2,SNR=3.2						
QSPA	**South Pole Qui**	**58.03**	**180**	P	**P**	**09 41 43.6**	**+0.8**
QSPA	**South Pole Qui**	**58.03**	**180**	P	**P**	**09 41 43.6**	**+0.8**
	3.5nm,0.8s,mb4.4,baz=245,slow=3.8,SNR=15						
EIL	**Elat**	**64.97**	**339**	P	**P**	**09 42 31.1**	**+1.0**
	3.5nm,0.6s,mb4.5,baz=190,slow=14,SNR=4.0						
ASF	**Jabal al Asfar**	**66.76**	**341**	P	**P**	**09 42 43.6**	**+2.0**
	1.9nm,0.7s,mb4.2,baz=210,slow=8.1,SNR=3.9						
ASAR	**Alice Springs**	**67.10**	**104**	P	**P**	**09 42 42.6**	**-1.6**
	0.5nm,0.9s,mb3.5,baz=246,slow=6.0,SNR=2.8						
WRA	**Warramunga Arr**	**69.14**	**101**	P	**P**	**09 42 56.8**	**-0.4**
	0.9nm,0.8s,mb3.8,baz=248,slow=4.5,SNR=4.4						
TORD	**Torodi Ar. Bea**	**69.55**	**301**	P	**P**	**09 42 59.4**	**-0.2**
	0.9nm,0.9s,mb3.7,baz=149,slow=9.3,SNR=3.8						
STKA	**Stephens Creek**	**69.66**	**115**	P	**P**	**09 42 59.3**	**-0.8**
	1.8nm,0.8s,mb4.0,baz=328,slow=9.5,SNR=3.0						
BRTR	**Keskin Array B**	**74.74**	**341**	P	**P**	**09 43 32.5**	**+2.4**
	2.0nm,0.9s,mb4.0,baz=175,slow=6.2,SNR=9.9						
ABKAR	**Akbulak array**	**81.07**	**2**	P	**P**	**09 44 03.8**	**-1.2**
	2.4nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**81.78**	**17**	P	**P**	**09 44 09.0**	**+0.1**
MKAR	**Makanchi Array**	**81.78**	**17**	P	**P**	**09 44 09.0**	**+0.1**
	0.2nm,0.2s,mb3.6,baz=207,slow=6.2,SNR=2.7						
AKTK	**Aktyubinsk**	**82.21**	**1**	P	**P**	**09 44 12.3**	**+1.3**
AKTO	**Aktyubinsk**	**82.21**	**1**	P	**P**	**09 44 12.3**	**+1.3**
	1.4nm,0.5s,mb4.1,baz=245,slow=8.4,SNR=4.2						
KURK	**Kurchatov**	**84.65**	**14**	P	**P**	**09 44 22.9**	**-0.7**
	5.8nm,1.1s,mb4.6						
BVAR	**Borovoye Array**	**85.59**	**8**	P	**P**	**09 44 28.3**	**+0.1**
	0.9nm,0.7s,mb4.1,baz=175,slow=4.9,SNR=4.5						

*IDC **20** 09:37:24.6±0.4, 14.97N×119.98E, h0km, mb4.5/31, mb1 4.6/31, mb1mx4.5/33, mbtmp4.5/31, MS4.2/21, Ms1 4.2/21, ms1mx4.1/34, Error ellipse: s-maj=17.7km s-min=10.4km az=75.0*
*MOS **20** 09:37:28.1±1.2, 14.98N×120.05E, h33km, mb5.1/33, MS4.5/13, Error ellipse: s-maj=11.1km s-min=5.5km az=117.9*
*MAN **20** 09:37:29, 14.98N×119.62E, h20km, mb5.3, ML4.3, MS4.5*
*NEIC **20** 09:37:30.0±0.2, 14.91N×120.00E, h35km, mb4.9/29, Error ellipse: s-maj=7.0km s-min=5.2km az=86.0*
*BJI **20** 09:37:30.2, 14.62N×119.84E, h60km, mB4.8/33, mb4.6/43, Ms4.6/40, MS7 4.5/40*
*ISCJB **20** 09:37:31.5±0.5, 14.92N±0.03×119.89E±0.03, h61km±4km, mb4.7/89, Error ellipse: s-maj=5.7km s-min=4.4km az=162.6*
*GCMT **20** 09:37:32.3±0.2, 15.06N×119.60E, h29km, MW5.1, Moment Tensor Solution. s51,c65; s71,c102; Moment tensor: Scale 10^{16}Nm; M_{rr}3.29±.16; $M_{\theta\theta}$0.98±.11; $M_{\phi\phi}$-4.28±.12; $M_{r\theta}$-0.49±.19; $M_{\theta\phi}$-0.34±.08; $M_{\phi r}$-2.93±.19; Best double couple: $M_0$4.80000×10^{16} NP1:ϕ_s357.00000°, δ26.00000°, λ80.00000°. NP2:ϕ_s188.00000°, δ64.00000°, λ95.00000°. Principal axes: T 4.3300, Plg70.0000°, Azm109.0000°; N 0.9800, Plg4.0000°, Azm6.0000°; P -5.3200, Plg19.0000°, Azm275.0000°; Data Used: IU II G IC CN.*
*DJA **20** 09:38:06, 14.86N×118.48E, h199km, mb4.5/15*
ISC 20 09:37:32.8±0.4, 14.94N±0.03×119.91E±0.03, h58km±4km, h43km±3.4km: pP-P, n250, σ1§17/232, mb4.7/89, MS4.4/45, 19C-13D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.83**	**0**	*e*P	**Pn**	**09 37 44.7**	**-3.9**
TGY	**Tagaytay City**	**1.30**	**130**	Pg	**Pn**	**09 37 54.6**	**-0.2**
	1μm,0.3s,baz=255,slow=1.8,SNR=44						
TGY	**Tagaytay City**	**1.30**	**130**	↓*i*P	**Pn**	**09 37 55.1**	**+0.3**
PCPH	**Palayan**	**1.30**	**62**	↓*e*P	**Pn**	**09 37 53.1**	**-1.7**
PCPH				*e*S	**Sn**	**09 38 11.3**	**+0.1**
BOLP	**Bolinao**	**1.43**	**0**	*e*P	**Pn**	**09 37 54.1**	**-2.5**
BCPH	**Baguio City Da**	**1.57**	**24**	↑*i*P	**Pn**	**09 37 56.8**	**-1.7**
BCPH				*i* S	**Sn**	**09 38 19.9**	**+2.2**
PGP	**Puerto Galera**	**1.76**	**145**	↑*i*P	**Pn**	**09 38 02.2**	**+1.2**
LQP	**Lukban**	**1.79**	**117**	*e*P	**Pn**	**09 38 01.6**	**+0.2**
BALP	**Baler**	**1.80**	**64**	*e*P	**Pn**	**09 38 01.4**	**-0.1**
POLP	**Polilio Island**	**1.98**	**96**	*e*P	**Pn**	**09 38 05.9**	**+1.9**
GQP	**Guinayangan**	**2.67**	**112**	↓*e*P	**Pn**	**09 38 15.2**	**+1.8**
CAUP	**Cauayan**	**2.71**	**43**	*e*P	**Pn**	**09 38 15.3**	**+1.3**
BUSP	**Coron**	**2.94**	**174**	*e*P	**Pn**	**09 38 16.9**	**-0.2**
AUQP	**San Andres**	**3.13**	**121**	*e*P	**Pn**	**09 38 26.0**	**+6.3**
APYP	**Conner**	**3.17**	**24**	*e*P	**Pn**	**09 38 22.2**	**+1.9**
PALP	**Palanan**	**3.21**	**49**	*e*P	**Pn**	**09 38 24.3**	**+3.5**
OTRP	**Odiongan**	**3.29**	**141**	*e*P	**Pn**	**09 38 24.9**	**+3.0**
ENPP	**El Nido**	**3.74**	**187**	*e*P	**Pn**	**09 38 26.4**	**-1.7**
PVCP	**Virac**	**4.33**	**107**	*e*P	**Pn**	**09 38 39.9**	**+3.7**
PAGZ	**Pagadian**	**7.83**	**154**	*e*P	**Pn**	**09 39 29.5**	**+5.4**
TPUB	**Ta-pu**	**8.34**	**5**	*e*Pn	**Pn**	**09 39 29.4**	**-1.7**
	60nm,0.9s						
YULB	**Yu-li**	**8.51**	**9**	Pn	**Pn**	**09 39 33.2**	**-0.1**
	29nm,0.8s						
SSLB	**Suanglung**	**8.85**	**6**	*e*Pn	**Pn**	**09 39 37.0**	**-1.1**
	50nm,1.0s						
DAV	**Davao City (W)**	**9.60**	**144**	LR	LR	09 44 15.2	
	comp=Z,3μm,18.5s,baz=117,slow=43						
YHNB	**Yeheng**	**9.78**	**8**	*e*Pn	**Pn**	**09 39 48.3**	**-2.4**
	90nm,1.2s						
QIZ	**Qiongzhong**	**10.45**	**294**	P	**Pn**	**09 39 53.5**	**-6.4**
QIZ				S	**Sn**	**09 41 56.3**	**+0.8**
QIZ				pmax	pmax		
	comp=Z,15nm,1.0s						
QIZ				LR	LR		
	comp=N,1μm,14.4s						
QIZ				LR	LR		
	comp=E,1μm,16.2s						
QIZ				LR	LR		
	comp=Z,3μm,15.6s						
QIZ	**Qiongzhong**	**10.45**	**294**	*e*Pn	**Pn**	**09 39 52.6**	**-7.4**
	comp=Z,20nm,0.8s						
SSE	**Sheshan**	**16.12**	**4**	P	**Pn**	**09 41 20.9**	**+5.2**
SSE				pmax	pmax		
	comp=Z,26nm,0.7s						
SSE				pmax	pmax		
	comp=Z,180nm,6.0s						
SSE				LR	LR		
	comp=N,760nm,19.2s						
SSE				LR	LR		
	comp=E,310nm,19.3s						
SSE				LR	LR		
	comp=Z,990nm,19.0s						
WHN	**Wuhan**	**16.34**	**343**	P	**Pn**	**09 41 24.0**	**+5.5**
WHN				S	**S**	**09 44 13.3**	**-15**
WHN				LR	LR		
	comp=N,1μm,11.6s						
WHN				LR	LR		
	comp=E,1μm,10.3s						
WHN				LR	LR		
	comp=Z,2μm,15.2s						
GYA	**Guiyang**	**16.86**	**315**	↑*i*P	**Pn**	**09 41 23.3**	**-1.6**
GYA				pP	pP	09 41 33.6	-5.1
GYA				PP		09 41 41.4	
GYA				S	**S**	**09 44 31.0**	**-8.1**
GYA				SS		09 44 52.3	
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,4.6s						
GYA				LR	LR		
	comp=N,620nm,12.9s						
GYA				LR	LR		
	comp=E,500nm,13.5s						
GYA				LR	LR		
	comp=Z,730nm,12.3s						
STKI	**Sintang**	**16.97**	**210**	P	pP	09 41 42.4	+2.3
	comp=Z,38nm,1.1s						
NJ2	**Nanjing**	**17.06**	**357**	*e*P	**Pn**	**09 41 32.3**	**+4.9**
NJ2				pP	pP	09 41 39.5	-1.4
NJ2				sP	sP	09 41 45.1	-3.2
NJ2				PP		09 41 47.1	
NJ2				S	**S**	**09 44 36.3**	**-6.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,270nm,5.6s						
NJ2				LR	LR		
	comp=N,1μm,14.2s						
NJ2				LR	LR		
	comp=E,570nm,12.6s						
NJ2				LR	LR		
	comp=Z,5μm,13.4s						
KMI	**Kunming**	**19.02**	**305**	P	**Pn**	**09 41 51.5**	**+0.2**
KMI				pP	pP	09 41 59.5	-3.2
KMI				PP		09 42 08.4	
KMI				S	**S**	**09 45 20.9**	**-2.1**
KMI				SS		09 45 47.4	
KMI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,250nm,4.1s						
KMI				LR	LR		
	comp=N,800nm,14.8s						
KMI				LR	LR		
	comp=E,1μm,14.8s						
KMI				LR	LR		
	comp=Z,2μm,14.5s						
NST	**Nakhon Sawan**	**19.09**	**275**	P	**Pn**	**09 41 49.5**	**-2.7**
BDT	**Bhumibol Dam**	**20.21**	**279**	P	**P**	**09 42 04.0**	**+0.9**
CM31	**Chiang Mai Arr**	**20.38**	**283**	*e*P	**P**	**09 42 06.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**20.38**	**283**	P	**P**	**09 42 04.8**	**0.0**
	comp=Z,21nm,1.0s,baz=95,slow=9.2,SNR=65						
CMAR				PcP	PcP	09 46 17.1	+1.1
	comp=Z,0.7nm,0.6s,baz=68,slow=0.4,SNR=4.9						
CMAR				LR	LR	09 50 08.1	
	comp=Z,837nm,18.8s,MS4.1,baz=130,slow=37						
CMAR	**Chiang Mai Arr**	**20.38**	**283**	P	**P**	**09 42 04.9

BJI pmax pmax
comp=Z,120nm,6.6s
BJI LR LR
comp=N,780nm,17.4s,MS4.4
BJI LR LR
comp=E,370nm,14.0s,MS4.4
BJI LR LR
comp=Z,540nm,18.3s,MS4.1
LZH Lanzhou 25.49 329 *e*P **P 09 42 59.8 +4.1**
LZH pP pP 09 43 09.0 -0.9
LZH sP sP 09 43 13.1 -3.7
LZH *e*S **S 09 47 21.0 +2.2**
LZH SS 09 48 28.0
LZH pmax pmax
comp=Z,29nm,1.0s,mb4.8
LZH pmax pmax
comp=Z,110nm,4.1s
LZH LR LR
comp=N,1μm,13.6s,MS4.8
LZH LR LR
comp=E,970nm,12.1s,MS4.8
LZH LR LR
comp=Z,2μm,15.4s,MS4.7
GSI Gunungsitoli 25.88 240 P pP 09 43 10.1 -3.6
comp=Z,49nm,1.0s
HHC Hu-ho-hao-te 26.81 346 *e*P **P 09 43 09.8 +2.2**
HHC pP pP 09 43 18.9 -3.0
HHC PP 09 43 54.8
HHC *e*S **S 09 47 42.8 +3.1**
HHC SS 09 48 58.3
HHC PcS PcS 09 50 10.3 -0.1
HHC pmax pmax
comp=Z,14nm,1.1s,mb4.4
HHC pmax pmax
comp=Z,110nm,3.8s
HHC LR LR
comp=N,730nm,14.4s,MS4.4
HHC LR LR
comp=E,390nm,13.9s,MS4.4
HHC LR LR
comp=Z,620nm,16.0s,MS4.3
SNY Shenyang 26.98 6 ⇑P **P 09 43 08.6 -0.4**
SNY pmax pmax
comp=Z,14nm,1.2s,mb4.4
SNY LR LR
comp=N,590nm,11.4s,MS4.5
SNY LR LR
comp=E,540nm,15.6s,MS4.5
SNY LR LR
comp=Z,510nm,16.8s,MS4.2
MJAR Matsushiro Arr 27.01 34 P **P 09 43 08.4 -0.9**
comp=Z,1.4nm,0.6s,mb3.7,baz=265,slow=6.7,SNR=4.5
MJAR LR LR 09 52 58.9
comp=Z,238nm,21.4s,MS3.7,baz=235,slow=35
SHL Shillong 28.27 296 *e*PKP **P 09 43 20.0 -0.8**
GTA Gaotai 30.08 328 *e*P **P 09 43 40.3 +3.6**
GTA pP pP 09 43 50.9 -0.2
GTA sP sP 09 43 55.3 -2.7
GTA PP PP 09 44 42.0 -3.5
GTA S **S 09 48 38.6 +7.5**
GTA sS sS 09 48 55.6 -0.1
GTA pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
GTA pmax pmax
comp=Z,99nm,5.1s
GTA LR LR
comp=N,1μm,16.9s,MS4.7
GTA LR LR
comp=E,1μm,16.9s,MS4.7
GTA LR LR
comp=Z,2μm,16.6s,MS4.8
LSA Lhasa 30.27 304 P **P 09 43 47.3 +8.8**
MDJ Mudanjiang 30.70 14 P **P 09 43 42.3 +0.2**
MDJ S **S 09 48 44.1 +3.4**
MDJ ScP ScP 09 50 19.4 +2.8
MDJ PcS PcS 09 50 23.1 +0.6
MDJ pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
MDJ pmax pmax
comp=Z,100nm,4.7s
MDJ LR LR
comp=N,350nm,27.0s
MDJ LR LR
comp=E,470nm,20.9s
MDJ LR LR
comp=Z,470nm,23.7s,MS4.1
FITZ Fitzroy Crossi 33.32 170 P **P 09 44 03.8 -1.4**
comp=Z,1.1nm,0.4s,mb4.1,baz=24,slow=7.2,SNR=6.1
FITZ PcP PcP 09 46 47.4 +1.1
comp=Z,2.6nm,0.6s,baz=314,slow=4.0,SNR=6.3
ULN Ulaanbaatar 34.51 345 *e*P **P 09 44 14.1 -1.2**
comp=Z,6.4nm,1.1s,mb4.5
ULN Ulaanbaatar 34.51 345 *e*P **P 09 44 14.1 -1.2**
ULN pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
SONM Songino Array 34.66 344 P **P 09 44 15.7 -0.8**
comp=Z,3.5nm,0.8s,mb4.3,baz=164,slow=10,SNR=12
SONM LR LR 09 59 13.7
comp=Z,528nm,19.4s,MS4.3,baz=154,slow=38
ASAJ Asahikawa 34.91 29 P **P 09 44 17.9 -1.0**
comp=Z,10nm,0.6s,mb4.9,baz=192,slow=10.0,SNR=12
KLR Kul'dur 35.55 13 *e*P **P 09 44 20.1 -4.1**
MBWA Marble Bar 35.88 180 *e*P **P 09 44 26.9 -0.4**
MBWA Marble Bar 35.88 180 *e*P **P 09 44 26.7 -0.6**
comp=Z,53nm,1.1s,mb5.4
COEN Coen 36.80 140 *e*P **P 09 44 34.5 -0.8**
YSS Yuzh-Sakhalins 37.17 26 *e*P **P 09 44 42.7 +4.6**
comp=Z,8.9nm,0.6s,mb4.8
YSS Yuzh-Sakhalins 37.17 26 *e*P **P 09 44 38.0 -0.1**
YSS pmax pmax
comp=Z,40nm,1.2s,mb5.1
YSS MLR MLR
comp=N,300nm,16.0s
YSS MLR MLR
comp=Z,300nm,16.0s,MS4.2
WRA Warramunga Arr 37.46 157 P **P 09 44 38.9 -1.9**
comp=Z,9.7nm,0.6s,mb4.8,baz=338,slow=9.4,SNR=67
WRA PcP PcP 09 46 59.0 +0.5
comp=Z,0.9nm,0.5s,baz=343,slow=3.2,SNR=5.0
ZAK Zakamensk 37.83 343 *e*P **P 09 44 41.7 -1.9**
TLY Talaya 38.90 344 *e*P **P 09 44 58.7 +6.1**
TLY *e*SSS 09 54 55.4
TLY pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
TLY MLR MLR
comp=Z,441nm,16.0s,MS4.4
WMQ Urumqi 39.76 323 *e*P **P 09 45 01.5 +1.6**
WMQ pP pP 09 45 11.3 -3.4
WMQ PP PP 09 46 37.8 +5.7
WMQ PcP PcP 09 47 07.9 +2.6
WMQ *e*S **S 09 51 03.4 +3.7**
WMQ SS SS 09 53 53.6 -3.7
WMQ ScS ScS 09 55 04.3 +2.2
WMQ pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
WMQ pmax pmax
comp=Z,79nm,3.8s
WMQ LR LR
comp=N,950nm,18.0s,MS4.8
WMQ LR LR
comp=E,660nm,17.0s,MS4.8
WMQ LR LR
comp=Z,960nm,18.1s,MS4.7
MTSU Mount Surprise 40.73 143 *e*P **P 09 45 08.6 +0.4**
ASAR Alice Springs 40.74 160 P **P 09 45 06.9 -1.3**
comp=Z,6.7nm,0.5s,mb4.5,baz=336,slow=6.6,SNR=84
MEEK Meekatharra 41.35 182 *e*P **P 09 45 12.7 -0.4**
CTA Charters Tower 43.39 143 P **P 09 45 29.6 -0.3**
comp=Z,2.0nm,0.3s,mb4.3,baz=301,slow=6.8,SNR=2.4
MK31 Makanchi Array 44.58 323 *e*P **P 09 45 39.3 +0.2**
MK31 Makanchi Array 44.58 323 *ce*P **P 09 45 41.2 +2.1**
MK31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.1
MKAR Makanchi Array 44.58 323 P **P 09 45 38.9 -0.2**
MKAR PcP PcP 09 47 21.7 +0.4
MKAR LR LR 10 05 23.5
MKAR Makanchi Array 44.58 323 P **P 09 45 38.9 -0.2**
comp=Z,1.8nm,0.6s,mb4.1,baz=127,slow=9.3,SNR=15
MKAR PcP PcP 09 47 21.7 +0.4
comp=Z,0.6nm,0.3s,baz=116,slow=4.1,SNR=3.6
MKAR LR LR 10 05 23.5
comp=Z,317nm,18.1s,MS4.3,baz=111,slow=38
MKAR Makanchi Array 44.58 323 P **P 09 45 38.9 -0.2**
MKAR 09 47 21.7
KSH Kashi 45.50 311 *e*P **P 09 45 51.5 +4.9**

KSH *ep*P pP 09 46 01.3 -0.3
KSH *es*P sP 09 46 05.4 -2.9
KSH *e*PcP PcP 09 47 29.3 +4.7
KSH *e*PP PP 09 47 39.5 +5.6
KSH *e*PcS PcS 09 51 22.3 +3.7
KSH *e*S **S 09 52 32.5 +8.2**
KSH *es*S sS 09 52 48.8 -0.9
KSH *e*SS SS 09 55 48.8 0.0
KSH pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KSH pmax pmax
comp=Z,97nm,3.0s
KSH LR LR
comp=N,300nm,12.8s,MS4.8
KSH LR LR
comp=E,630nm,14.0s,MS4.8
KSH LR LR
comp=Z,640nm,15.3s,MS4.7
KMBL Kambalda 46.08 178 *e*P **P 09 45 50.0 -1.1**
comp=Z,112nm,0.6s
TKM2 Tokmak 2 47.00 315 *e*P **P 09 45 59.2 +0.9**
comp=Z,6.3nm,1.1s,mb4.5
TKM2 Tokmak 2 47.00 315 *e*P **P 09 45 59.2 +0.9**
TKM2 pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
UCH Uchtor 47.49 314 *e*P **P 09 46 03.5 +1.5**
comp=Z,91μm,0.6s
YAK Yakutsk 47.54 6 *e*P **P 09 45 59.3 -2.8**
YAK pmax pmax
comp=Z,26nm,1.0s,mb5.2
YAK pmax pmax
comp=N,14nm,1.1s
YAK pmax pmax
comp=E,8.0nm,1.3s
ZAA0 Zalesovo Array 47.61 333 *e*P **P 09 46 02.4 -0.3**
ZALV Zalesovo Beam 47.61 333 P **P 09 46 01.3 -1.5**
comp=E,2.9nm,0.4s,mb4.6,baz=124,slow=7.3,SNR=14
ZALV LR LR 10 06 59.1
comp=E,371nm,18.9s,MS4.4,baz=256,slow=37
AAK Ala-Archa 47.65 315 *e*P **P 09 46 04.3 +1.1**
comp=E,8.1nm,1.0s,mb4.7
AAK Ala-Archa 47.65 315 *ce*P **P 09 46 06.4 +3.1**
AAK pmax pmax
comp=Z,2.0nm,1.3s,mb4.0
AAK Ala-Archa 47.65 315 P pP 09 46 17.3 -1.1
comp=Z,1.9nm,1.0s
NWAO Narrogin (SRO) 47.67 183 P **P 09 46 03.1 -0.3**
comp=Z,16nm,0.9s,mb5.0,baz=34,slow=4.6,SNR=7.2
AML Almayashu 48.02 314 *e*P **P 09 46 08.8 +2.6**
comp=Z,14nm,0.9s,mb5.0
AML Almayashu 48.02 314 *e*P **P 09 46 08.8 +2.6**
AML pmax pmax
comp=Z,14nm,0.9s,mb5.0
PET Petropavlovsk 48.73 30 *e*P **P 09 46 11.9 +0.4**
PET *e*S **S 09 53 14.2 +4.4**
PET pmax pmax
comp=Z,100nm,16.1s
PET pmax pmax
comp=Z,21nm,1.1s,mb5.1
PET MLR MLR
comp=Z,200nm,16.0s,MS4.2
KURK Kurchatov 48.73 326 *e*P **P 09 46 11.0 -0.5**
comp=Z,20nm,0.8s,mb5.2
KURK Kurchatov 48.73 326 *ce*P **P 09 46 10.8 -0.7**
KURK pmax pmax
comp=Z,21nm,1.1s,mb5.1
KBL Kabul 49.59 303 *e*P **P 09 46 21.2 +2.8**
comp=Z,24nm,1.4s,mb5.0
KBL Kabul 49.59 303 *e*P **P 09 46 21.2 +2.9**
KBL pmax pmax
comp=Z,24nm,1.4s,mb5.0
BBOO Buckleboo 49.93 162 *e*P **P 09 46 20.3 -0.5**
comp=Z,4.8nm,0.5s,mb4.8
KK31 Karatay Array 50.56 314 *i* P **P 09 46 26.0 +0.4**
KK31 pmax pmax
comp=Z,1.0nm,0.2s,mb4.4
STKA Stephens Creek 50.99 156 P **P 09 46 26.3 -2.5**
comp=Z,4.4nm,1.0s,mb4.3,baz=341,slow=5.5,SNR=7.3
CMSA Cobar Meteorol 52.42 152 *e*P **P 09 46 40.0 +0.5**
SEY Seymchan 53.07 18 *ce*P **P 09 46 44.5 +0.6**
VOSK Vostochnaya 53.87 325 P **P 09 46 49.8 -0.1**
VOSK pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
BVA0 Borovoye Array 54.32 326 P **P 09 46 53.5 +0.3**
BVA0 pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
BVAR Borovoye Array 54.32 326 P **P 09 46 52.9 -0.3**
comp=Z,2.6nm,0.6s,mb4.3,baz=81,slow=9.2,SNR=10
BRVK Borovoye 54.39 326 *e*P **P 09 46 53.8 +0.1**
comp=Z,15nm,0.8s,mb5.0
BRVK Borovoye 54.39 326 *ce*P **P 09 46 53.6 -0.1**
BRVK pmax pmax
comp=Z,20nm,1.2s,mb4.9
TIXI Tiksi 56.94 3 *e*P **P 09 47 10.4 -1.3**
comp=Z,30nm,1.2s,mb5.2
TIXI Tiksi 56.94 3 *e*P **P 09 47 09.9 -1.8**
TIXI pmax pmax
comp=Z,22nm,0.9s,mb5.2
TIXI MLR MLR
comp=Z,258nm,17.0s,MS4.4
DZM Mont Dzumac 58.60 128 *e*LR LR 10 04 39.4
comp=Z,177nm,25.3s
AB31 Akbulak array 59.30 319 *i* P **P 09 47 28.4 -0.1**
AB31 pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
ABKAR Akbulak array 59.30 319 *e*P **P 09 47 28.4 -0.1**
comp=Z,4.7nm,0.7s,mb4.6
BILL Bilibino 60.77 18 ⇑*e*P **P 09 47 37.4 -0.9**
BILL *e* 09 49 51.5
BILL pmax pmax
comp=Z,9.0nm,1.3s,mb4.7
BILL MLR MLR
comp=Z,200nm,19.0s,MS4.3
AKTK Aktyubinsk 60.77 320 P **P 09 47 38.0 -0.7**
AKTO Aktyubinsk 60.77 320 P **P 09 47 38.0 -0.7**
comp=Z,3.6nm,0.7s,mb4.6,baz=91,slow=11,SNR=11
SVE Sverdlovsk 60.95 327 *e*P **P 09 47 40.4 +0.7**
SVE pmax pmax
comp=Z,21nm,0.8s,mb5.3
ARU Arti 61.93 326 *e*P **P 09 47 45.9 -0.4**
comp=Z,10nm,0.9s,mb5.0
ARU Arti 61.93 326 *d i*P **P 09 47 45.8 -0.5**
ARU 09 50 01.4
ARU pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
SOKR Solikamsk 63.70 330 *d i*P **P 09 47 56.5 -1.5**
SOKR pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
SOKR MLR MLR
comp=Z,430nm,16.0s,MS4.7
MAK Makhachkala 67.14 311 *e*P **P 09 48 26.9 +6.3**
MAK *e*S S 09 57 13.8 +3.2
MAK pmax pmax
comp=Z,130nm,1.4s,mb5.8
KIV Kislovodsk 70.63 312 ⇑*e*P **P 09 48 44.5 +2.2**
KIV pmax pmax
comp=Z,13nm,1.1s,mb4.8
KIV MLR MLR
comp=Z,200nm,17.0s,MS4.4
KLMR Klimovskoe 72.39 330 *e*P **P 09 48 50.1 -2.4**
KLMR pmax pmax
comp=Z,30nm,1.5s,mb5.0
VSR Storozhevoye 72.72 319 *e*P **P 09 48 53.2 -1.5**
VSR pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,2.0nm,0.4s
OBN Obninsk 74.09 324 ⇑*e*P **P 09 49 03.0 +0.4**
OBN *e* 09 51 46.2
OBN pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
OBN MLR MLR
comp=Z,500nm,19.0s,MS4.8
MALT Malatya 74.28 306 *e*P **P 09 49 04.5 +0.4**
comp=Z,6.4nm,1.1s,mb4.5
MALT Malatya 74.28 306 *e*P **P 09 49 04.5 +0.4**
MALT pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
MALT Malatya 74.28 306 P **P 09 49 13.1 +9.0**
ANN Anapa 74.33 313 *e*P **P 09 49 06.7 +2.4**
ANN pmax pmax
comp=Z,93nm,1.2s,mb5.6
ANN MLR MLR
comp=Z,214nm,17.0s,MS4.5

APA Apatity 74.97 337 ⇑*i*P **P 09 49 11.0 +3.5**
APA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
APA MLR MLR
comp=Z,1μm,18.0s,MS5.2
KDAK Kodiak Island 76.18 33 P **P 09 49 14.8 +0.1**
comp=Z,6.0nm,0.6s,mb4.7,baz=322,slow=19,SNR=5.9
KDAK Kodiak Island 76.18 33 *ce*P **P 09 49 15.7 +1.1**
JOF Joensuu 76.19 332 *e*P **P 09 49 13.3 -1.3**
JOF Joensuu 76.19 332 *ep* **P 09 49 13.3 -1.3**
comp=Z,4.6nm,0.7s,mb4.5
BPAW Bear Paw Mtn. 76.30 27 *e*P **P 09 49 15.5 +0.3**
comp=Z,26nm,1.3s,mb5.0
ASF Jabal al Asfar 76.38 300 P **P 09 49 17.1 +0.8**
comp=Z,1.0nm,0.4s,mb4.1,baz=135,slow=1.4,SNR=2.2
ASF LR LR 10 27 09.4
comp=Z,64nm,18.4s,MS4.0,baz=178,slow=39
KEV Kevo 77.10 339 *e*P **P 09 49 19.0 -0.6**
comp=Z,3.6nm,0.6s,mb4.5
KEV Kevo 77.10 339 *e*P **P 09 49 19.0 -0.6**
KEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
KEV Kevo 77.10 339 *ep* **P 09 49 19.0 -0.6**
comp=Z,3.6nm,0.6s,mb4.5
MCK McKinley 77.25 27 *e*P **P 09 49 20.2 -0.3**
comp=Z,33nm,1.3s,mb5.1
MCK McKinley 77.25 27 *e*P **P 09 49 20.3 -0.2**
MCK pmax pmax
comp=Z,33nm,1.3s,mb5.1
PMR Palmer 77.45 29 *e*P **P 09 49 20.8 -1.0**
comp=Z,10nm,1.0s,mb4.7
PMR Palmer 77.45 29 *e*P **P 09 49 20.8 -0.9**
PMR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MMAI Mount Meron Ar 77.48 301 LR LR 10 30 28.0
comp=Z,71nm,19.1s,MS4.0,baz=90,slow=41
COLA College 77.55 26 *e*P **P 09 49 22.2 0.0**
comp=Z,7.5nm,1.1s,mb4.5
COLA College 77.55 26 *e*P **P 09 49 22.2 0.0**
COLA pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
ARCES ARCESS Array B 77.66 339 P **P 09 49 22.6 -0.1**
comp=Z,3.3nm,0.5s,mb4.5,baz=83,slow=7.4,SNR=42
ARCES LR LR 10 25 36.6
comp=Z,252nm,20.3s,MS4.5,baz=237,slow=37
BRTR Keskin Array B 77.78 308 P **P 09 49 25.8 +1.7**
comp=Z,0.5nm,0.8s,baz=87,slow=5.9,SNR=1.4
BRTR LR LR 10 30 31.1
comp=Z,72nm,18.2s,MS4.0,baz=240,slow=41
ILAR Eielson Array 77.98 26 P **P 09 49 23.4 -1.2**
comp=Z,0.8nm,0.7s,mb3.8,baz=276,slow=5.3,SNR=11
SPITS Spitsbergen Ar 78.22 348 P **P 09 49 26.1 +0.4**
comp=Z,5.2nm,0.5s,mb4.7,baz=142,slow=9.8,SNR=35
EIL Elat 78.45 298 LR LR 10 29 53.5
comp=Z,136nm,19.4s,MS4.3,baz=279,slow=40
KAF Kangasniemi 78.60 331 *e*P **P 09 49 26.9 -1.2**
KAF pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
KAF Kangasniemi 78.60 331 *ep* **P 09 49 26.9 -1.2**
comp=Z,5.0nm,0.4s,mb4.8
FINES FINESS Array B 78.83 331 P **P 09 49 29.1 -0.3**
comp=Z,4.5nm,0.4s,mb4.7,baz=60,slow=5.5,SNR=26
AKASG Malin Array Be 79.02 320 P **P 09 49 29.9 -0.8**
comp=Z,2.6nm,0.9s,mb4.1,baz=66,slow=6.1,SNR=6.5
AKASG LR LR 10 26 23.4
comp=Z,156nm,18.1s,MS4.4,baz=80,slow=37
MENT Mentasta 79.70 28 *e*P **P 09 49 35.0 +0.9**
EGAK Eagle 80.38 25 *e*P **P 09 49 37.5 -0.1**
comp=Z,5.1nm,0.7s,mb4.6
TIRR Tirgusor 80.75 314 ⇑*i*P **P 09 49 50.0 +10**
DAWY Dawson 81.31 26 *e*P **P 09 49 43.1 +0.5**
VRI Vrincioaia 81.61 315 *ji*P **P 09 49 46.4 +1.8**
INK Inuvik 82.22 21 *e*P **P 09 49 47.5 +0.2**
comp=Z,15nm,1.4s,mb4.7
INK Inuvik 82.22 21 P **P 09 49 47.2 -0.2**
comp=Z,2.1nm,0.6s,mb4.2,baz=282,slow=11,SNR=8.0
INK Inuvik 82.22 21 *e*P **P 09 49 47.5 +0.1**
INK pmax pmax
comp=Z,15nm,1.4s
BURAR Bucovina Array 82.23 317 ⇑*i*P **P 09 49 47.8 0.0**
MLR Muntele Rosu 82.23 315 LR LR 10 29 42.3
comp=Z,222nm,21.3s,MS4.5,baz=64,slow=38
MLR Muntele Rosu 82.23 315 *ji*P **P 09 49 48.5 +0.6**
KWP Kalwaria Pacla 83.34 319 *e*P **P 09 49 54.3 +0.7**
KWP Kalwaria Pacla 83.34 319 *ji*P **P 09 49 51.8 -1.8**
UZH Uzhgorod 83.87 319 *e*P **P 09 49 57.5 +1.2**
DRGR 84.09 317 ⇑*i*P **P 09 49 58.4 +1.0**
STHS Stebnicka Huta 84.32 320 *e*P **P 09 49 58.5 -0.1**
STHS Stebnicka Huta 84.32 320 *e*P **P 09 49 58.5 -0.1**
CRVS Cervenica-Dubn 84.33 319 *e*P **P 09 49 59.1 +0.5**
comp=Z,24nm,1.9s,mb5.0
CRVS Cervenica-Dubn 84.33 319 *e*P **P 09 49 59.1 +0.5**
CRVS pmax pmax
comp=Z,24nm,1.9s,mb5.0
CRVS Cervenica-Dubn 84.33 319 *e*P **P 09 49 59.1 +0.5**
CRVS *ep*P pP 09 50 13.5 -1.5
SKAG Skagway 84.58 30 *e*P **P 09 50 01.4 +1.7**
comp=Z,60nm,1.8s,mb5.4
OJC Ojcow 84.99 321 *e*P **P 09 50 02.8 +0.9**
HFS Hagfors 85.02 331 P **P 09 50 00.9 -0.9**
comp=Z,3.7nm,0.5s,mb4.8,baz=106,slow=3.2,SNR=25
PSZ Piszkesteto 85.61 318 *e*P **P 09 50 05.2 +0.2**
PSZ Piszkesteto 85.61 318 *ji*P **P 09 50 05.8 +0.7**
NOA NORSAR Array B 85.81 332 P **P 09 50 04.5 -1.2**
comp=Z,6.0nm,0.8s,mb4.9,baz=66,slow=4.5,SNR=14
NOA LR LR 10 33 50.4
comp=Z,264nm,18.1s,MS4.7,baz=50,slow=40
VYHS Vyhne 86.11 319 *e*P **P 09 50 07.9 +0.4**
VYHS Vyhne 86.11 319 *e*P **P 09 50 07.9 +0.4**
VYHS *ep*P pP 09 50 22.0 -2.0
OKC Ostrava-Krasne 86.12 321 *e*P **P 09 50 08.3 +0.8**
OKC MLR MLR
comp=Z,300nm,21.9s,MS4.7
OKC Ostrava-Krasne 86.12 321 *e*P **P 09 50 08.3 +0.8**
OKC AMS AMS 10 30 50.0
comp=Z,300nm,21.9s
MORC Moravsky Berou 86.51 321 *e*P **P 09 50 10.2 +0.7**
KSP Ksiaz 86.91 322 *e*P **P 09 50 12.5 +1.1**
KSP Ksiaz 86.91 322 *e*P **P 09 50 11.2 -0.2**
DPC Dobruska-Polom 87.06 321 *e*P **P 09 50 12.3 +0.2**
DPC MLR MLR
comp=Z,300nm,17.7s,MS4.8
DPC Dobruska-Polom 87.06 321 *e*P **P 09 50 12.3 +0.2**
DPC *e*PCP PcP 09 50 16.2 +2.0
DPC AMS AMS 10 31 00.0
comp=Z,300nm,17.7s
UPC Upice 87.19 322 *e*P **P 09 50 12.1 -0.7**
UPC Upice 87.19 322 *e*P **P 09 50 12.1 -0.7**
VRAC Vranov 87.25 320 LR LR 10 35 01.8
comp=Z,200nm,18.5s,MS4.6,baz=78,slow=40
TREC Trest 87.93 321 AMS AMS 10 31 30.0
comp=Z,300nm,14.8s
PVCC Panska Ves 88.05 322 *e*P **P 09 50 18.1 +1.2**
PVCC MLR MLR
comp=Z,400nm,19.9s,MS4.8
PVCC Panska Ves 88.05 322 *e*P **P 09 50 18.1 +1.2**
PVCC AMS AMS 10 31 30.0
comp=Z,400nm,19.9s
PRU Pruhonice 88.26 321 *e*P **P 09 50 19.0 +1.1**
PRU MLR MLR
comp=Z,300nm,17.9s,MS4.8
PRU Pruhonice 88.26 321 *e*P **P 09 50 19.0 +1.1**
PRU *e*PCP PcP 09 50 22.9 +3.3
PRU AMS AMS 10 31 50.0
comp=Z,300nm,17.9s
CLL Collm 88.68 323 *e*P pP 09 50 30.0 -6.3
CLL Collm 88.68 323 *ep*P pP 09 50 30.0 -6.3
comp=Z,8.0nm,1.0s
CLL LmV 10 32 00.0
comp=Z,300nm,18.8s
KHC Kasperske Hory 89.16 321 *e*P **P 09 50 21.1 -1.0**
KHC *e* 09 50 26.5
KHC *e* pP 09 50 36.0 -2.6
KHC MLR MLR
comp=Z,300nm,19.9s,MS4.7
KHC Kasperske Hory 89.16 321 *e*P **P 09 50 21.1 -1.0**
KHC *e*PCP PcP 09 50 26.5 +3.0
KHC *ep*P pP 09 50 36.0 -2.6
KHC AMS AMS 10 32 10.0
comp=Z,300nm,19.9s
NKC Novy Kostel 89.42 322 AMS AMS 10 32 20.0
comp=Z,400nm,18.9s
ABTA Abfaltersbach 90.72 319 *ji*P **P 09 50 28.7 -0.8**
comp=Z,4.3nm,1.2s,mb4.7
WTTA Wattenberg 91.08 320 ⇑*i*P **P 09 50 30.7 -0.4**

comp=Z,13nm,1.3s,mb5.1
MOTA Moosalm 91.38 320 ⇓ *i* PcP PcP 09 50 32.4 -1.0
comp=Z,9.7nm,0.8s
FETA Feichten 91.74 320 ⇑ *i* PcP PcP 09 50 34.2 -0.8
comp=Z,13nm,1.2s
YKA Yellowknife Ar 91.93 22 P P **09 50 34.8 +0.1**
comp=Z,2.4nm,0.7s,mb4.6,baz=309,slow=4.4,SNR=7.2
MAW Mawson 92.01 199 P P **09 50 36.1 +1.3**
comp=Z,1.8nm,0.6s,mb4.5,baz=22,slow=5.7,SNR=7.4
DAVOX Davos/Dischmat 92.37 320 P P **09 50 38.1 +1.0**
comp=Z,7.8nm,1.1s,mb5.0,baz=6.9,slow=9.4,SNR=6.5
CDF Champ du Feu 93.25 322 *e*P P **09 50 41.1 0.0**
comp=Z,28nm,1.2s,mb5.3
CDF Champ du Feu 93.25 322 *e*P P **09 50 41.1 0.0**
comp=Z,14nm,1.2s,mb5.3
CDF Champ du Feu 93.25 322 *e*P P **09 50 41.1 0.0**
CDF pmax pmax
comp=Z,14nm,1.2s,mb5.3
GIVF Givet 93.89 324 *e*P P **09 50 44.0 0.0**
LPG La Plagne 94.89 320 *e*P P **09 50 49.1 +0.4**
comp=Z,12nm,0.8s,mb5.0
LPG La Plagne 94.89 320 *e*P P **09 50 49.1 +0.4**
comp=Z,5.8nm,0.8s,mb5.1
LPG La Plagne 94.89 320 *e*P P **09 50 49.1 +0.4**
LPG pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
LPL La Plagne 94.89 320 *e*P P **09 50 49.1 +0.4**
comp=Z,10nm,0.8s,mb5.0
LPL La Plagne 94.89 320 *e*P P **09 50 49.1 +0.4**
comp=Z,5.2nm,0.8s,mb5.0
LPL La Plagne 94.89 320 *e*P P **09 50 49.1 +0.4**
LPL pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
PPT Papeete 94.89 107 *e*LR LR 10 21 24.7
comp=Z,180nm,24.0s,baz=280
PPT Papeete 94.89 107 LR LR 10 26 36.2
comp=Z,107nm,20.2s,MS4.3,baz=302,slow=31
LSZ Lusaka 95.45 256 LR LR 10 32 36.0
comp=Z,218nm,19.0s,MS4.7,baz=139,slow=35
ORIF Oris-en-Rattie 95.70 319 *e*P P **09 50 52.3 -0.1**
comp=Z,15nm,1.0s,mb5.1
ORIF Oris-en-Rattie 95.70 319 *e*P P **09 50 52.3 -0.1**
comp=Z,7.6nm,1.0s,mb5.1
ORIF Oris-en-Rattie 95.70 319 *e*P P **09 50 52.3 -0.1**
ORIF pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
KEST Kesra 97.31 310 P P **09 50 58.4 -1.6**
comp=Z,1.0nm,0.7s,mb4.4,baz=34,slow=9.5,SNR=3.4
KEST LR LR 10 43 48.8
comp=Z,30nm,18.4s,MS3.8,baz=335,slow=41
TORD Torodi Ar. Bea 112.78 291 PKiKP PKiKP 09 56 03.5 -0.5
comp=Z,0.4nm,0.5s,baz=69,slow=1.9,SNR=6.0
TXAR Lajitas Array 119.12 44 PKP PKPdf 09 56 16.8 +0.9
comp=Z,0.8nm,0.6s,baz=236,slow=0.7,SNR=12
DBIC Dimbokro 121.19 287 PKP PKPdf 09 56 19.8 -0.4
comp=Z,3.0nm,0.7s,baz=194,slow=4.2,SNR=3.2
BCIP Isla Barro Col 149.07 40 *e*PKPbc PKPbc 09 57 15.1 -0.4
BCIP *e*PKPab PKPab 09 57 19.4 -0.4
PLCA Paso Flores 152.74 162 PKPbc PKPbc 09 57 24.8 +1.4
comp=Z,4.1nm,0.8s,baz=240,slow=1.2,SNR=9.8
LPAZ La Paz 172.14 101 PKP PKPdf 09 57 38.7 +2.7
comp=Z,1.8nm,1.0s,baz=359,slow=4.3,SNR=5.2

*ISCJB **20** 09:43:22.2±1.1, 9.00N±0.06×84.10W±0.04, h9km±7km, Error ellipse: s-maj=12.3km s-min=4.2km az=30.3*
*CASC **20** 09:43:22.9±2.1, 9.02N×84.03W, h8km, MD4.1*
*NEIC **20** 09:43:23.0, 9.01N×84.06W, h8km, MD4.2(CASC), After CASC.*
ISC 20 09:43:21.8±1.0, 8.99N±0.06×84.11W±0.04, h4km±5km, n38, σ1=03/51, 7C-11D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
QCR	**Quepos**	**0.43**	**352**	⇓ *e*P		**Pg**	**09 43 31.3**	**+1.1**
QCR	**Quepos**	**0.43**	**352**	⇓ *e*P		**Pg**	**09 43 31.3**	**+1.1**
BUS	**Buena Vista**	**0.66**	**31**	⇓ *e*P		**Pg**	**09 43 35.0**	**+0.5**
BUS	**Buena Vista**	**0.66**	**31**	⇓ *e*P		**Pg**	**09 43 35.0**	**+0.5**
LAJ	**Bijagual**	**0.86**	**359**	⇑ *e*P		**Pg**	**09 43 38.7**	**+0.2**
LAJ	**Bijagual**	**0.86**	**359**	⇑ *e*P		**Pg**	**09 43 38.7**	**+0.2**
URSC	**Urasca**	**0.90**	**21**	⇓ *e*P		**Pg**	**09 43 39.2**	**+0.1**
URSC	**Urasca**	**0.90**	**21**	⇓ *e*P		**Pg**	**09 43 39.2**	**+0.1**
ACR	**Cerro Adams**	**0.99**	**110**	*e*P		**Pg**	**09 43 40.3**	**-0.4**
ACR				*e*S		**Sg**	**09 43 54.1**	**+0.6**
ACR	**Cerro Adams**	**0.99**	**110**	*e*P		**Pg**	**09 43 40.3**	**-0.4**
ACR				*e*S		**Sg**	**09 43 54.1**	**+0.6**
PRS1	**Puriscal**	**1.00**	**348**	⇓ *e*P		**Pg**	**09 43 39.6**	**-1.5**
PRS1	**Puriscal**	**1.00**	**348**	⇓ *e*P		**Pg**	**09 43 39.6**	**-1.5**
CGA2	**Cerro Gallo 2**	**1.08**	**341**	⇑ *e*P		**Pg**	**09 43 42.5**	**-0.1**
CGA2	**Cerro Gallo 2**	**1.08**	**341**	⇑ *e*P		**Pg**	**09 43 42.5**	**-0.1**
JCR	**Jicaral**	**1.31**	**311**	*e*P		**Pn**	**09 43 47.5**	**+0.7**
JCR	**Jicaral**	**1.31**	**311**	*e*P		**Pn**	**09 43 47.5**	**+0.7**
BRU2	**Volcan**	**1.41**	**98**	⇑ *i*P		**Pn**	**09 43 47.5**	**-0.7**
BRU2				*e*S		**Sb**	**09 44 06.4**	**-0.6**
BRU2				*e*S		**Sb**	**09 44 06.9**	**-0.2**
TBS2		**1.44**	**98**	*e*P		**Pg**	**09 43 53.9**	**+4.3**
TBS2				*e*S		**Sb**	**09 44 11.0**	**+3.0**
JTS	**JuntasAbangare**	**1.54**	**327**	*e*Pn		**Pn**	**09 43 48.7**	**-1.3**
JTS				*e*Sn		**Sn**	**09 44 08.4**	**-2.0**
CASO	**Castillo**	**1.56**	**337**	*i* P		**Pn**	**09 43 50.1**	**-0.2**
TRTC	**Tortuguero**	**1.62**	**14**	⇓ *e*P		**Pn**	**09 43 51.6**	**+0.4**
TRTC				*e*S		**Sn**	**09 44 13.6**	**+1.1**
VCR	**Vista de Mar**	**1.88**	**307**	*e*P		**Pn**	**09 43 56.4**	**+1.7**
VCR				*e*S		**Sn**	**09 44 20.5**	**+1.6**
VCR	**Vista de Mar**	**1.88**	**307**	*e*P		**Sn**	**09 43 56.4**	**+1.7**
VCR				*e*S		**Sn**	**09 44 20.5**	**+1.6**
CUI	**Cuipilapa**	**1.96**	**328**	*i* P		**Pn**	**09 43 55.5**	**-0.3**
COLC	**Colonia**	**1.98**	**327**	*i* P		**Pn**	**09 43 55.8**	**-0.4**
COLC				*i* S		**Sn**	**09 44 21.9**	**+0.4**
GUAB	**Guayabo de Bag**	**2.03**	**327**	*i* P		**Pn**	**09 43 56.5**	**-0.3**
LIM1	**Limonal**	**2.04**	**326**	*i* P		**Pn**	**09 43 56.8**	**-0.2**
MESS	**Mesas**	**2.04**	**328**	*i* P		**Pn**	**09 43 56.6**	**-0.4**
BUEV	**Buena Vista**	**2.21**	**325**	*i* P		**Pn**	**09 43 59.8**	**+0.5**
GB1A	**Borinquen Arri**	**2.22**	**325**	*i* P		**Pn**	**09 43 59.7**	**+0.3**
SSN	**San Juan del S**	**2.87**	**323**	*e*P		**Pb**	**09 44 12.6**	**-1.0**
CONN	**Concepcion**	**2.96**	**330**	*e*P		**Pb**	**09 44 14.6**	**-0.6**
BOAB	**BOACO BROADBAN**	**3.76**	**336**	*e*P		**Pn**	**09 44 22.9**	**+2.2**
PINA	**Piqa, Costa Ab**	**4.00**	**86**	⇓ *e*P		**Pn**	**09 44 24.3**	**+0.4**
PINA	**Piqa, Costa Ab**	**4.00**	**86**	⇓ *e*P		**Pn**	**09 44 24.3**	**+0.4**
BCIP	**Isla Barro Col**	**4.22**	**87**	⇑ *e*P		**Pn**	**09 44 27.2**	**+0.3**
BCIP				*e*S		**Sn**	**09 45 14.0**	**-2.7**
BCIP	**Isla Barro Col**	**4.22**	**87**	⇑ *e*P		**Pn**	**09 44 27.2**	**+0.3**
BCIP				*e*S		**Sn**	**09 45 14.0**	**-2.7**
TGUH	**Tegucigalpa,Un**	**5.91**	**329**	*e*Pn		**Pb**	**09 45 04.0**	**-1.5**
TGUH				*e*Sg		**Sg**	**09 46 44.5**	**+13**

IDC 20 09:59:42.3±3.2, 3.02N×95.93E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.4/21, mbtmp3.4/4, ML2.6/1, Error ellipse: s-maj=90.4km s-min=29.8km az=50.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PSI	**Prapat**	**3.00**	**94**	Pn		Pn	10 00 31.9	+0.8
	0.8nm,0.3s,baz=288,slow=13,SNR=2.6							
WRA	**Warramunga Arr**	**44.08**	**123**	P		P	10 07 52.2	-0.2
	0.4nm,0.9s,baz=300,slow=9.1,SNR=3.8							
MKAR	**Makanchi Array**	**45.19**	**347**	P		P	10 08 01.5	+0.6
	0.2nm,0.3s,baz=165,slow=8.8,SNR=3.0							
SONM	**Songino Array**	**45.55**	**10**	P		P	10 08 03.2	-0.6
	0.2nm,0.3s,baz=189,slow=8.2,SNR=2.8							

*IDC **20** 10:14:03.5±1.5, 32.21S×56.97E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.9/23, mbtmp4.0/11, ML4.8/1, Error ellipse: s-maj=50.9km s-min=22.5km az=32.0*
*ISCJB **20** 10:14:04.3±0.8, 32.0S±0.1×57.1E±0.2, h10km, mb3.9/12, Error ellipse: s-maj=28.0km s-min=13.8km az=137.2*
*NEIC **20** 10:14:06.2±0.5, 32.00S×57.08E, h10km, mb4.3/3, Error ellipse: s-maj=19.5km s-min=9.6km az=47.0*
ISC 20 10:14:06.4±0.8, 32.0S±0.1×57.1E±0.2, h10km, n18, σ0=46/17, mb3.9/12, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ABPO	**Ambohimpanom**	**15.67**	**323**	*e*Pn		**Pn**	**10 17 47.0**	**-0.3**
	12nm,0.6s							
OPO	**Ambohidratompo**	**16.07**	**324**	Pn		**Pn**	**10 17 52.6**	**+0.2**
	3.8nm,0.3s,baz=164,slow=9.5,SNR=32							
QSPA	**South Pole Qui**	**58.19**	**180**	*e*P		**P**	**10 24 00.9**	**+1.0**
	4.4nm,1.0s,mb4.4							
QSPA	**South Pole Qui**	**58.19**	**180**	P		**P**	**10 24 00.4**	**+0.4**
	2.0nm,0.6s,mb4.3,baz=277,slow=3.7,SNR=26							
CMAR	**Chiang Mai Arr**	**64.21**	**45**	P		**P**	**10 24 41.7**	**+0.1**
	3.3nm,0.7s,mb4.5,baz=226,slow=7.2,SNR=17							
ASF	**Jabal al Asfar**	**66.61**	**341**	P		**P**	**10 24 57.4**	**+0.6**
	1.8nm,0.6s,mb4.3,baz=107,slow=19,SNR=3.5							
ASAR	**Alice Springs**	**67.16**	**104**	P		**P**	**10 25 00.0**	**-0.7**
	0.3nm,0.7s,mb3.4,baz=239,slow=5.2,SNR=5.3							
WRA	**Warramunga Arr**	**69.19**	**101**	P		**P**	**10 25 13.3**	**-0.2**
	0.3nm,0.6s,mb3.4,baz=239,slow=5.5,SNR=4.0							
TORD	**Torodi Ar. Bea**	**69.46**	**301**	P		**P**	**10 25 14.0**	**-1.1**
	0.6nm,1.0s,mb3.5,baz=126,slow=3.9,SNR=3.0							
BRTR	**Keskin Array B**	**74.59**	**341**	P		**P**	**10 25 45.7**	**+0.3**
	0.9nm,0.9s,mb3.7,baz=152,slow=6.5,SNR=3.3							
ABKAR	**Akbulak array**	**80.92**	**2**	*e*P		**P**	**10 26 20.8**	**+0.4**
	0.9nm,0.6s,mb3.9							
MKAR	**Makanchi Array**	**81.64**	**17**	P		**P**	**10 26 24.6**	**+0.3**
MKAR	**Makanchi Array**	**81.64**	**17**	P		**P**	**10 26 24.6**	**+0.3**
	0.2nm,0.2s,mb3.6,baz=224,slow=4.0,SNR=3.0							
AKTK	**Aktyubinsk**	**82.06**	**1**	P		**P**	**10 26 26.4**	**0.0**
AKTO	**Aktyubinsk**	**82.06**	**1**	P		**P**	**10 26 26.4**	**0.0**
	0.5nm,0.3s,mb4.0,baz=171,slow=3.9,SNR=2.8							
KURK	**Kurchatov**	**84.51**	**14**	P		**P**	**10 26 38.7**	**-0.3**
	0.8nm,0.7s,mb4.0,baz=210,slow=6.0,SNR=2.0							
BVAR	**Borovoye Array**	**85.44**	**8**	P		**P**	**10 26 43.8**	**+0.2**
	0.5nm,0.5s,mb4.0,baz=145,slow=5.3,SNR=3.7							
ILAR	**Eielson Array**	**144.00**	**17**	PKP		PKPdf	10 33 37.8	-3.4
	0.3nm,0.9s,baz=304,slow=2.1,SNR=4.0							

*IDC **20** 10:31:34.6±1.5, 31.46N×103.53E, h0km, mb3.3/3, mb1 3.6/5, mb1mx3.4/23, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=61.2km s-min=26.9km az=66.0*
*BJI **20** 10:31:37.2, 32.28N×104.18E, h19km, ML3.4/13, Ms3.3/3, Ms7 3.3/2*
ISC 20 10:31:32.7±0.9, 32.24N±0.04×104.18E±0.08, h6km±9km, n8, σ0=94/13, mb3.4/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CD2	**Chengdu**	**1.38**	**195**	Pg		**Pg**	**10 31 59.5**	**+0.5**
CD2				Sn		**Sn**	**10 32 13.6**	**-3.2**
CD2				Sg		**Sg**	**10 32 17.1**	**+0.2**
CD2				smax				
	comp=N,2μm,0.7s							
CD2				smax				
	comp=E,2μm,0.7s							
LZH	**Lanzhou**	**3.85**	**356**	*e*Pg		**Pg**	**10 32 45.6**	**-0.8**
LZH				Sg		**Sg**	**10 33 36.8**	**+0.6**
LZH				smax				
	comp=N,34nm,0.9s							
LZH				smax				
	comp=E,77nm,0.7s							
LZH				LR	LR			
	comp=N,200nm,6.0s							
LZH				LR	LR			
	comp=E,170nm,4.1s							
LZH				LR	LR			
	comp=Z,100nm,6.4s							
XAN	**Xi'an**	**4.36**	**64**	Pn		**Pn**	**10 32 44.1**	**+4.7**
XAN				Pg		**Pg**	**10 32 54.8**	**-1.4**
XAN				Sn		**Sn**	**10 33 36.1**	**+5.6**
XAN				Sg		**Sg**	**10 33 53.4**	**+0.7**
XAN				smax				
	comp=N,40nm,0.7s							
XAN				smax				
	comp=E,87nm,0.9s							
CMAR	**Chiang Mai Arr**	**14.51**	**200**	Pn		**Pn**	**10 34 49.8**	**-8.8**
	comp=E,0.1nm,0.3s,baz=6.9,slow=11,SNR=2.6							
SONM	**Songino Array**	**15.67**	**6**	Pn		Px	10 35 29.1	
	comp=E,0.1nm,0.3s,baz=186,slow=8.7,SNR=4.9							
MKAR	**Makanchi Array**	**22.18**	**317**	P		**P**	**10 36 34.0**	**+4.7**
	comp=E,0.2nm,0.2s,mb3.1,baz=122,slow=11,SNR=2.5							
WRA	**Warramunga Arr**	**59.38**	**147**	P		**P**	**10 41 36.1**	**+0.3**
	comp=E,0.3nm,0.6s,mb3.5,baz=339,slow=7.5,SNR=4.6							
ASAR	**Alice Springs**	**62.43**	**149**	P		**P**	**10 41 57.1**	**+0.6**
	comp=E,0.3nm,0.8s,mb3.5,baz=328,slow=6.8,SNR=3.0							

*ISK **20** 10:34:15.6, 38.41N×39.01E, h19km, MD2.7*
*ISCJB **20** 10:34:16.4±0.5, 38.40N±0.03×38.99E±0.03, h10km, Error ellipse: s-maj=4.1km s-min=3.4km az=163.4*
*DDA **20** 10:34:16.7, 38.42N×38.98E, h14km±1km, Md2.7*
*CSEM **20** 10:34:16.6±0.2, 38.43N×39.00E, h10km, MD2.7, Error ellipse: s-maj=4.1km s-min=3.3km az=166.0*
ISC 20 10:34:16.7±0.7, 38.42N±0.03×39.00E±0.03, h16km±8km, n20, σ0=61/36, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ELZG	**Elazig**	**0.08**	**353**	*i* P		**Pg**	**10 34 19.9**	**-0.1**
ELZG				*i* S		**Sg**	**10 34 22.1**	**0.0**
ELZG	**Elazig**	**0.08**	**353**	*i* P		**Pg**	**10 34 19.9**	**0.0**
ELZG				*i* S		**Sg**	**10 34 22.1**	**0.0**
SVRC	**Sivrice-ELAZID**	**0.25**	**99**	*e*PG		**Pg**	**10 34 21.5**	**-0.7**
SVRC				*e*SG		**Sg**	**10 34 25.8**	**-0.1**
SVRC	**Sivrice-ELAZID**	**0.25**	**99**	*e*Pg		**Pg**	**10 34 21.5**	**-0.7**
SVRC				*e*Sg		**Sg**	**10 34 25.8**	**-0.1**
MYA	**Malataya**	**0.46**	**259**	*e*PG		**Pg**	**10 34 25.7**	**-0.2**
MYA				*e*SG		**Sg**	**10 34 32.7**	**+0.6**
MYA	**Malataya**	**0.46**	**259**	*e*Pg		**Pg**	**10 34 25.7**	**-0.2**
MYA				*e*Sg		**Sg**	**10 34 32.7**	**+0.6**
MALT	**Malatya**	**0.46**	**257**	*e*PG		**Pg**	**10 34 25.5**	**-0.4**
MALT	**Malatya**	**0.46**	**257**	*e*Pg		**Pg**	**10 34 25.5**	**-0.4**
PTK	**Pertek**	**0.57**	**33**	*e*PG		**Pg**	**10 34 26.5**	**-1.4**
PTK				*e*SG		**Sg**	**10 34 36.2**	**+0.6**
PTK	**Pertek**	**0.57**	**33**	*e*Pg		**Pg**	**10 34 26.5**	**-1.4**
PTK				*e*Sg		**Sg**	**10 34 36.2**	**+0.6**
AKCD	**Akcadag**	**0.85**	**262**	*i* P		**Pg**	**10 34 32.9**	**-0.4**
AKCD				*i* S		**Sg**	**10 34 45.1**	**+0.6**
AKCD	**Akcadag**	**0.85**	**262**	*i* P		**Pg**	**10 34 32.8**	**-0.5**
AKCD				*i* S		**Sg**	**10 34 45.1**	**+0.6**
KEMA	**Kemaliye**	**0.94**	**335**	*i* P		**Pg**	**10 34 34.7**	**-0.3**
KEMA				*i* S		**Sg**	**10 34 47.9**	**+0.6**
KEMA	**Kemaliye**	**0.94**	**335**	*i* P		**Pg**	**10 34 34.7**	**-0.2**
KEMA				*i* S		**Sg**	**10 34 47.9**	**+0.6**
URFA	**Urfa**	**0.98**	**188**	*e*PG		**Pg**	**10 34 34.9**	**-0.8**
URFA	**Urfa**	**0.98**	**188**	*e*Pg		**Pg**	**10 34 34.9**	**-0.8**
DIYA	**Diyarbakir**	**1.01**	**119**	*i* P		**Pg**	**10 34 36.9**	**+0.5**
DIYA				*i* S		**Sg**	**10 34 50.7**	**+1.1**
DIYA	**Diyarbakir**	**1.01**	**119**	*i* P		**Pg**	**10 34 36.9**	**+0.6**
DIYA				*i* S		**Sg**	**10 34 50.7**	**+1.1**
ATAB	**Bozova**	**1.09**	**211**	*i* P		**Pg**	**10 34 38.2**	**+0.3**
ATAB				*i* S		**Sg**	**10 34 52.1**	**-0.1**
ATAB	**Bozova**	**1.09**	**211**	*i* P		**Pg**	**10 34 38.2**	**+0.3**
ATAB				*i* S		**Sg**	**10 34 52.1**	**-0.1**

*NEIC **20** 10:39:19.7, 18.31N×102.40W, h23km, MD4.0(MEX), After MEX.*
MEX 20 10:39:18.1±0.8, 18.31N×102.40W, h5km±9km, MD4.0, Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MMIG	**Aquila**	**0.90**	**269**	*e*P		Pg	10 39 33.1	-2.2
MMIG				*i* S		Sg	10 39 45.7	-1.2
ZIIG	**Zihuatanejo**	**1.13**	**128**	*i* P		Pg	10 39 36.7	-3.1
ZIIG				*i* S		Sg	10 39 51.5	-3.1
ZIIG	**Zihuatanejo**	**1.13**	**128**	*i* P		Pg	10 39 36.7	-3.1
ZIIG				*i* S		Sg	10 39 51.5	-3.1
MOIG	**Morelia**	**1.78**	**40**	*i* P		Pn	10 39 46.4	-3.2
MOIG				*i* S		Sn	10 40 08.3	-4.4
MOIG	**Morelia**	**1.78**	**40**	*i* P		Pn	10 39 46.4	-3.2
MOIG				*i* S		Sn	10 40 08.3	-4.4
CAIG	**El Cayaco**	**2.39**	**121**	*e*P		Pn	10 39 55.8	-2.2
CAIG				*i* S		Sn	10 40 22.7	-5.0
MEIG	**Mezcala**	**2.67**	**98**	*i* P		Pn	10 39 58.7	-3.2
MEIG				*i* S		Sn	10 40 31.1	-3.6
PLIG	**Platanillo**	**2.76**	**88**	*i* P		Pn	10 40 00.3	-2.7
PLIG				*i* S		Sn	10 40 31.9	-4.8
PLIG	**Platanillo**	**2.76**	**88**	*i* P		Pn	10 40 00.3	-2.7
PLIG				*i* S		Sn	10 40 33.2	-3.5
ACX	**Acapulco**	**2.82**	**120**	*i* P		Pn	10 40 01.1	-2.7
ACX				*i* S		Sn	10 40 33.2	-5.0
ACX	**Acapulco**	**2.82**	**120**	*i* P		Pn	10 40 01.1	-2.7
ACX				*i* S		Sn	10 40 33.2	-5.0
SZVM	**Salazar**	**3.04**	**70**	*e*P		Pn	10 40 05.3	-1.5
SZVM				*i* S		Sn	10 40 43.1	-0.5
SZVM	**Salazar**	**3.04**	**70**	*e*P		Pn	10 40 05.3	-1.5
SZVM				*i* S		Sn	10 40 43.1	-0.5
MZVM		**3.13**	**73**	*e*P		Pn	10 40 05.6	-2.6
MZVM				*i* S		Sn	10 40 41.7	-4.3
PBVM	**Pinon**	**3.34**	**70**	*e*P		Pn	10 40 08.4	-2.6
PBVM				*i* S		Sn	10 40 47.2	-3.8
PBVM	**Pinon**	**3.34**	**70**	*e*P		Pn	10 40 08.4	-2.6
PBVM				*i* S		Sn	10 40 47.2	-3.8
PTVM	**Pico Tres Padr**	**3.37**	**67**	*e*P		Pn	10 40 09.2	-2.1
PTVM				*i* S		Sn	10 40 47.8	-3.9
PTVM	**Pico Tres Padr**	**3.37**	**67**	*e*P		Pn	10 40 09.2	-2.1
PTVM				*i* S		Sn	10 40 47.8	-3.9
ANIG	**Ahuacatlan**	**3.38**	**324**	*i* P		Pn	10 40 09.5	-2.1
ANIG				*i* S		Sn	10 40 47.7	-4.4
PPM	**Popocatepetl**	**3.66**	**78**	*e*P		Pn	10 40 16.0	+0.6
PPM				*i* S		Sn	10 40 58.5	-0.5
PPM	**Popocatepetl**	**3.66**	**78**	*e*P		Pn	10 40 16.0	+0.6
PPM				*i* S		Sn	10 40 58.5	-0.5
IIO	**Organos**	**3.71**	**69**	*i* P		Pn	10 40 13.8	-2.3
IIO				*i* S		Sn	10 40 55.8	-4.5
IIO	**Organos**	**3.71**	**69**	*i* P		Pn	10 40 13.8	-2.3
IIO				*i* S		Sn	10 40 55.8	-4.5
UTMO	**Huajuapan**	**4.40**	**96**	*e*P		Pn	10 40 23.3	-2.3
UTMO				*i* S		Sn	10 41 12.7	-4.6
PNIG	**Pinotepa**	**4.51**	**114**	*e*P		Pn	10 40 24.8	-2.3
PNIG				*i* S		Sn	10 41 15.2	-4.8
PNIG	**Pinotepa**	**4.51**	**114**	*e*P		Pn	10 40 24.8	-2.3
PNIG				*i* S		Sn	10 41 15.2	-4.8
VHO	**Vista Hermosa**	**5.54**	**102**	*e*P		Pn	10 40 39.5	-1.9
VHO				*i* S		Sn	10 41 42.2	-3.4
VHO	**Vista Hermosa**	**5.54**	**102**	*e*P		Pn	10 40 39.5	-1.9
VHO				*i* S		Sn	10 41 42.2	-3.4
HUIG	**Huatulco**	**6.53**	**112**	*e*P		Pn	10 40 54.3	-0.6
HUIG				*i* S		Sn	10 42 07.2	-2.7
HUIG	**Huatulco**	**6.53**	**112**	*e*P		Pn	10 40 54.3	-0.6
HUIG				*i* S		Sn	10 42 07.2	-2.7
CMIG	**Matias Romero**	**7.27**	**98**	*e*P		Pn	10 41 03.2	-1.8
CMIG				*i* S		Sn	10 42 24.8	-3.3
CMIG	**Matias Romero**	**7.27**	**98**	*e*P		Pn	10 41 03.2	-1.8
CMIG				*i* S		Sn	10 42 24.8	-3.3

*CSEM **20** 10:52:06.3, 38.25N×21.07E, h30km, MD3.5, After ATH*
ATH 20 10:52:06.3, 38.25N×21.07E, h30km±1km, MD3.5/4, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VLS	**Valsamata**	**0.39**	**259**	*e*PB		Pb	10 52 15.0	+0.1
VLS				*e*SB		Sb	10 52 22.4	+1.6
VLS	**Valsamata**	**0.39**	**259**	*e*Pb		Pb	10 52 15.0	+0.1
VLS				*e*Sb		Sb	10 52 22.4	+1.6
EFP	**Efpalio**	**0.68**	**75**	*e*PN		Pn	10 52 20.0	+0.1
EFP	**Efpalio**	**0.68**	**75**	*e*Pn		Pn	10 52 20.0	+0.1
GUR	**Goura**	**1.05**	**107**	*e*PN		Pn	10 52 26.6	+1.6
GUR	**Goura**	**1.05**	**107**	*e*Pn		Pn	10 52 26.6	+1.6
DID	**Didima**	**1.87**	**113**	*e*PN		Pn	10 52 38.0	+1.8
DID	**Didima**	**1.87**	**113**	*e*Pn		Pn	10 52 38.0	+1.8

*NSSC **20** 11:01:37, 37.98N×37.51E, h29km±17km*
*MOS **20** 11:01:37.6±0.7, 37.67N×37.49E, h10km, mb4.5/9, Error ellipse: s-maj=12.4km s-min=8.7km az=134.3*
*ISCJB **20** 11:01:38.4±0.3, 37.67N±0.01×37.50E±0.02, h6km±2km, mb4.1/19, MS3.1/5, Error ellipse: s-maj=2.4km s-min=1.9km az=24.6*
*DDA **20** 11:01:38.4, 37.71N×37.46E, h15km±1km, Ml4.2*
*NEIC **20** 11:01:38.0, 37.71N×37.46E, h5km, mb4.4/10, ML4.3(ISK), After ISK.*
*ISK **20** 11:01:38.1, 37.69N×37.49E, h3km, ML4.4*
*CSEM **20** 11:01:39.1±0.1, 37.69N×37.51E, h2km, mb4.4/13, Error ellipse: s-maj=2.9km s-min=2.4km az=106.0*
*IDC **20** 11:01:39.1±1.0, 37.65N×37.35E, h0km, mb3.7/6, mb1 3.7/12, mb1mx3.6/27, mbtmp3.7/12, ML3.5/6, MS3.2/9, Ms1 3.2/9, ms1mx2.9/31, Error ellipse: s-maj=16.1km s-min=13.0km az=92.0*
*GII **20** 11:01:39.1±1.6, 37.72N×37.47E, h1km±23km, Mb4.3/6, Md4.2/6*
ISC 20 11:01:39.2±0.3, 37.67N±0.01×37.50E±0.02, h2km±2km, n310, σ1=912/372, mb4.1/19, MS3.1/5, 12C-23D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GZT	**Gaziantep**	**0.32**	**171**	*i* P		**Pg**	**11 01 45.4**	**+0.1**
KMRS	**Kahramanmaras**	**0.51**	**251**	*e*PG		**Pg**

KEMA	Kemaliye	1.77	26	⇓	*i*P	Pn	11 02 09.9	-1.0	
KEMA					*i*S	Sn	11 02 36.9	+2.8	
KEMA	Kemaliye	1.77	26		*i*P	Pn	11 02 09.9	-1.0	
KEMA					*i*S	Sn	11 02 36.9	+2.9	
BTCH	Batrach	1.83	207	⇑	P	Pn	11 02 10.0	-1.7	
BTCH				⇑	S	Sn	11 02 36.0	+0.5	
BTCH	Batrach	1.83	207	⇑	*i*P	Pn	11 02 11.0	-0.7	
BTCH				⇑	*i*S	Sn	11 02 36.5	+1.0	
HTY	Hatay	1.90	216		*e*PN	Pn	11 02 13.0	+0.4	
HTY	Hatay	1.90	216		*e*Pn	Pn	11 02 13.0	+0.4	
PTK	Pertek	1.92	50		*e*PN	Pn	11 02 11.8	-1.1	
PTK	Pertek	1.92	50		*e*Pn	Pn	11 02 11.8	-1.1	
YAYL	Yayladag	1.98	215	⇓	*i*P	Pn	11 02 12.3	-1.4	
YAYL				⇓	*i*S	Sn	11 02 45.0	+5.8	
YAYL	Yayladag	1.98	215		*i*P	Pn	11 02 12.3	-1.5	
KARA	Karaisali	1.99	259		*e*PN	Pn	11 02 12.8	-1.0	
KARA	Karaisali	1.99	259		*e*Pn	Pn	11 02 12.9	-1.0	
DRBT	Darb Altahta	2.02	113	⇑	P	Pn	11 02 05.0	-9.2	
DRBT				⇑	S	Sn	11 02 24.0	-16	
DIYA	Diyarbakir	2.09	82		*i*P	Pn	11 02 14.6	-0.6	
DIYA					*i*S	Sn	11 02 42.3	+0.5	
DIYA	Diyarbakir	2.09	82		*i*P	Pn	11 02 14.6	-0.6	
DIYA					*i*S	Sn	11 02 42.3	+0.5	
JHLN	Al Jahlan	2.13	159	⇓	P	Pn	11 02 15.0	-0.9	
JHLN				⇓	S	Sn	11 02 43.0	+0.1	
JHLN	Al Jahlan	2.13	159	⇓	*i*P	Pn	11 02 15.2	-0.7	
JHLN				⇓	*i*S	Sn	11 02 43.4	+0.5	
GULE	Gulek	2.20	261		*i*P	Pn	11 02 17.1	+0.3	
GULE					*i*S	Sn	11 02 44.4	-0.2	
GULE	Gulek	2.20	261		*i*P	Pn	11 02 17.1	+0.3	
GULE					*i*S	Sn	11 02 44.4	-0.2	
SVSK	Karacayir	2.27	350		*e*PN	Pn	11 02 18.1	+0.3	
SVSK	Karacayir	2.27	350		*e*Pn	Pn	11 02 18.1	+0.3	
WRDH	Warideh	2.33	202	⇓	P	Pn	11 02 17.0	-1.6	
WRDH				⇓	S	Sn	11 02 48.0	+0.2	
WRDH	Warideh	2.33	202	⇓	*i*P	Pn	11 02 17.9	-0.7	
WRDH				⇓	*i*S	Sn	11 02 48.3	+0.5	
AVNT	Avonos	2.36	299		*i*P	Pn	11 02 17.9	-1.1	
AVNT	Avonos	2.36	299		*i*P	Pn	11 02 17.9	-1.1	
SFNV	Sufian	2.44	120	⇑	P	Pn	11 02 18.0	-2.0	
SFNV				⇑	S	Sn	11 02 47.0	-3.3	
SFNV	Sufian	2.44	120	⇑	*i*P	Pn	11 02 19.0	-1.0	
SFNV				⇑	*i*S	Sn	11 02 47.1	-3.2	
EZC	Erzincan	2.53	34		*e*PN	Pn	11 02 21.2	-0.1	
YOZ	Yozgat	2.60	320		*e*PN	Pn	11 02 22.1	-0.3	
YOZ	Yozgat	2.60	320		*e*Pn	Pn	11 02 22.1	-0.2	
MARD	Mardin	2.63	97		*i*P	Pn	11 02 20.4	-2.3	
MARD					*i*S	Sn	11 03 03.1	+7.9	
BINT	Bingol	2.64	62		*e*PN	Pn	11 02 23.6	+0.8	
BINT	Bingol	2.64	62		*e*Pn	Pn	11 02 23.6	+0.8	
RSDY	Resadiye-TOKAT	2.72	357		*e*PN	Pn	11 02 24.6	+0.6	
RSDY	Resadiye-TOKAT	2.72	357		*e*Pn	Pn	11 02 24.6	+0.6	
TOKT	Tokat	2.75	345		*e*PN	Pn	11 02 24.1	-0.1	
TOKT	Tokat	2.75	345		*e*Pn	Pn	11 02 24.2	-0.1	
TOKA	Tokat	2.76	344		*i*P	Pn	11 02 24.8	+0.2	
TOKA					*i*S	Sn	11 02 59.1	+0.6	
TOKA	Tokat	2.76	344		*i*P	Pn	11 02 24.8	+0.3	
TOKA					*i*S	Sn	11 02 59.1	+0.6	
BIDA	Albida	2.82	200	⇑	P	Pn	11 02 24.0	-1.3	
BIDA				⇑	S	Sn	11 02 59.0	-0.9	
BIDA	Albida	2.82	200	⇑	*i*P	Pn	11 02 24.9	-0.4	
BIDA				⇑	*i*S	Sn	11 02 59.1	-0.8	
KELT	Kelkit	2.83	28		*i*P	Pn	11 02 24.5	-0.9	
KELT					*i*S	Sg	11 03 14.4	+4.5	
KELT	Kelkit	2.83	28		*i*P	Pn	11 02 24.5	-0.9	
BEST	Besiri	2.99	85	⇑	*i*P	Pn	11 02 26.9	-0.7	
ERBA	Erbaa	3.06	349		P	Pn	11 02 29.1	+0.5	
ERBA	Erbaa	3.06	349		*i*P	Pn	11 02 29.1	+0.5	
CDAG	Cicekdag	3.13	309	⇑	*i*P	Pn	11 02 29.3	-0.3	
CDAG	Cicekdag	3.13	309		*i*P	Pn	11 02 29.3	-0.3	
BNGL	BINGOL	3.14	65		*e*P	Pn	11 02 30.1	+0.4	
GUMT	Gumushane	3.18	28		*e*PN	Pn	11 02 29.9	-0.4	
GUMT	Gumushane	3.18	28		*e*Pn	Pn	11 02 29.9	-0.4	
SULT	Sultanhani-AKS	3.19	281		*e*PN	Pn	11 02 31.2	+0.7	
SULT	Sultanhani-AKS	3.19	281		*e*Pn	Pn	11 02 31.2	+0.7	
RABH	Abou Rabah	3.24	184	⇓	P	Pn	11 02 31.0	-0.1	
RABH				⇓	S	Sn	11 03 10.0	-0.2	
RABH	Abou Rabah	3.24	184	⇓	*i*P	Pn	11 02 31.7	+0.6	
RABH				⇓	*i*S	Sn	11 03 10.3	+0.1	
GRSN	GIRESUNGRSN	3.30	10		*i*P	Pn	11 02 30.8	-1.1	
GRSN	GIRESUNGRSN	3.30	10		*i*P	Pn	11 02 30.8	-1.1	
KOPT	Kop Dagi	3.31	44		*i*P	Pn	11 02 33.2	+1.2	
KOPT	Kop Dagi	3.31	44		*i*P	Pn	11 02 33.2	+1.2	
CORM	Corum	3.36	319		*e*PN	Pn	11 02 33.3	+0.6	
CORM	Corum	3.36	319		*e*Pn	Pn	11 02 33.3	+0.6	
ESPY	Espiye-Giresun	3.38	16		*e*PN	Pn	11 02 33.6	+0.6	
ESPY	Espiye-Giresun	3.38	16		*e*Pn	Pn	11 02 33.6	+0.7	
IKL	Isikli	3.38	246		*e*PN	Pn	11 02 33.9	+1.0	
IKL	Isikli	3.38	246		*e*Pn	Pn	11 02 33.9	+1.0	
EREN	Erenkoy	3.43	232		*e*PN	Pn	11 02 34.5	+0.8	
EREN	Erenkoy	3.43	232		*e*Pn	Pn	11 02 34.5	+0.8	
ROOS	tl_alroos	3.50	183	⇑	P	Pn	11 02 35.0	+0.3	
ROOS				⇑	S	Sn	11 03 16.0	-0.7	
ROOS	tl_alroos	3.50	183	⇑	*i*P	Pn	11 02 35.0	+0.3	
ROOS				⇑	*i*S	Sn	11 03 16.6	-0.1	
FKH	Fakeheh	3.54	195		*e*P	Pn	11 02 35.0	-0.3	
FKH	Fakeheh	3.54	195		*e*P	Pn	11 02 35.0	-0.3	
KVT	Kavak	3.58	342		*e*PN	Pn	11 02 35.9	+0.1	
KVT	Kavak	3.58	342		*e*Pn	Pn	11 02 35.9	+0.1	
HWQ	Hawqa	3.62	201		*e*P	Pn	11 02 36.0	-0.3	
HWQ	Hawqa	3.62	201		*e*P	Pn	11 02 36.0	-0.2	
CTKT	Corum	3.62	325	⇑	*i*P	Pn	11 02 36.4	+0.1	
CTKT	Corum	3.62	325		*i*P	Pn	11 02 36.4	+0.1	
BRTR	Keskin Array B	3.65	305		Pn	Pn	11 02 36.4	-0.3	
	4.8nm,0.3s,baz=140,slow=17,SNR=88								
BRTR					Pg	Pg	11 02 44.8	-4.4	
	9.8nm,0.3s,baz=137,slow=16,SNR=66								
BRTR					Lg		11 03 32.5		
	3.7nm,0.3s,baz=133,slow=30,SNR=2.3								
BRTR					LR	LR	11 04 21.1		
	comp=Z,393nm,19.5s,baz=136,slow=45								
BRTR	Keskin Array B	3.65	305		P	Pn	11 02 36.4	-0.3	
BRTR	Keskin Array B	3.65	305		Pg	Pg	11 02 44.8	-4.4	
BR131	Keskin Array S	3.65	305		*e*Pn	Pn	11 02 36.6	-0.1	
BR131	Keskin Array S	3.65	305		*e*Pn	Pn	11 02 36.6	-0.1	
MARH	Ras Al Marh	3.73	193	⇑	P	Pn	11 02 38.0	+0.2	
MARH				⇑	S	Sn	11 03 22.0	-0.4	
MARH	Ras Al Marh	3.73	193	⇑	*i*P	Pn	11 02 38.6	+0.8	
MARH				⇑	*i*S	Sn	11 03 22.6	+0.2	
KTUT	Trabzon	3.75	27		*e*PN	Pn	11 02 39.2	+1.2	
KTUT	Trabzon	3.75	27		*e*Pn	Pn	11 02 39.2	+1.2	
EZM	Erzurum	3.75	52		*e*PN	Pn	11 02 39.6	+1.5	
ERMK	Ermenek	3.81	256		*i*P	Pn	11 02 39.5	+0.6	
ERMK					*i*S	Sn	11 03 27.2	+3.0	
ERMK	Ermenek	3.81	256		*i*P	Pn	11 02 39.5	+0.6	
ERMK					*i*S	Sn	11 03 27.2	+3.0	
PHNC	Paralimni	3.87	227		P	Pn	11 02 45.9	+6.2	
	7.8nm,0.9s								
BBAL	Bala	3.91	300		*i*P	Pn	11 02 40.5	+0.3	
BBAL	Bala	3.91	300		*i*P	Pn	11 02 40.5	+0.3	
LFK	Lefkose	3.99	234		*e*PN	Pn	11 02 43.2	+1.8	
LFK	Lefkose	3.99	234		*e*Pn	Pn	11 02 43.2	+1.8	
BHL	Bhannes	4.05	202		*e*P	Pn	11 02 43.1	+0.8	
BHL	Bhannes	4.05	202		*e*P	Pn	11 02 43.1	+0.9	
HDMB	Hadim	4.06	261		*e*PN	Pn	11 02 42.8	+0.5	
HDMB	Hadim	4.06	261		*e*Pn	Pn	11 02 42.8	+0.4	
KONT	Konya--Tatoy	4.08	275		*e*PN	Pn	11 02 43.6	+1.0	
KONT	Konya--Tatoy	4.08	275		*e*Pn	Pn	11 02 43.7	+1.1	
HOMI	Horasan	4.17	54		*i*P	Pn	11 02 45.3	+1.4	
CANT	Cankiri	4.21	315		*e*PN	Pn	11 02 45.3	+0.9	
ELDT	Eldivan	4.24	313		*i*P	Pn	11 02 45.5	+0.7	
ELDT	Eldivan	4.24	313		*i*P	Pn	11 02 45.5	+0.7	
QASN	Qassioun	4.25	194	⇑	P	Pn	11 02 45.0	0.0	
QASN				⇑	S	Sn	11 03 35.0	-0.1	
QASN	Qassioun	4.25	194	⇑	*i*P	Pn	11 02 45.3	+0.3	
QASN				⇑	*i*S	Sn	11 03 35.3	+0.2	
MAMC	Mammari	4.26	235		P	Pn	11 02 46.7	+1.6	
MAMC	Mammari	4.26	235		P	Pn	11 02 46.7	+1.6	
TOS	Tosya	4.31	322		*e*PN	Pn	11 02 46.7	+1.0	
TOS	Tosya	4.31	322		*e*Pn	Pn	11 02 46.7	+1.0	
LOD	Lodumlu	4.31	302		*e*PN	Pn	11 02 46.5	+0.7	
LOD	Lodumlu	4.31	302		*e*Pn	Pn	11 02 46.5	+0.7	
CSS	Prodhromos	4.32	232		P	Pn	11 02 47.3	+1.4	
	2.4nm,0.8s								
CSS	Prodhromos	4.32	232		P	Pn	11 02 47.3	+1.4	
BYBT	Boyabat	4.34	332		*e*PN	Pn	11 02 46.9	+0.7	
BYBT	Boyabat	4.34	332		*e*Pn	Pn	11 02 46.9	+0.7	
TOTH	TOTAH	4.39	192	⇑	P	Pn	11 02 47.0	+0.1	
TOTH				⇑	S	Sn	11 03 38.0	-0.6	
TOTH	TOTAH	4.39	192	⇑	*i*P	Pn	11 02 47.4	+0.5	
TOTH				⇑	*i*S	Sn	11 03 38.8	+0.2	
GAZI	Gazipasa	4.39	253		*i*P	Pn	11 02 47.1	+0.2	
GAZI	Gazipasa	4.39	253		*i*P	Pn	11 02 47.1	+0.1	
RCY	Rachaya	4.40	199		*e*P	Pn	11 02 46.5	-0.5	
RCY	Rachaya	4.40	199		*e*P	Pn	11 02 46.5	-0.5	
BRBR	Barbar	4.44	197	⇑	P	Pn	11 02 48.0	+0.5	
BRBR				⇑	S	Sn	11 03 38.0	-1.7	
BRBR	Barbar	4.44	197	⇑	*i*P	Pn	11 02 48.6	+1.1	
BRBR				⇑	*i*S	Sn	11 03 38.6	-1.1	
ILGA	Ilgaz	4.47	320		*i*P	Pn	11 02 48.6	+0.6	
ILGA	Ilgaz	4.47	320		*i*P	Pn	11 02 48.6	+0.6	
LEF	Lefka	4.51	237		*e*PN	Pn	11 02 50.3	+1.8	
LEF	Lefka	4.51	237		*e*Pn	Pn	11 02 50.3	+1.8	
KIZT	Kizilcal	4.58	287		*e*PN	Pn	11 02 50.5	+1.0	
KIZT	Kizilcal	4.58	287		*e*Pn	Pn	11 02 50.6	+1.0	
HRI	Mount Hermon	4.63	199		Pn	Pn	11 02 51.9	+1.7	
ALFC	Alevga	4.68	239		P	Pn	11 02 51.9	+1.0	
	2.8nm,0.5s								
ALFC	Alevga	4.68	239		P	Pn	11 02 51.9	+1.0	
AGRB	Hanur-Agry	4.70	64		*e*PN	Pn	11 02 52.8	+1.7	
AGRB	Hanur-Agry	4.70	64		*e*Pn	Pn	11 02 52.8	+1.7	
KSDI	Kefar Szold	4.72	199		Pn	Pn	11 02 51.9	+0.5	
VANB	Van	4.73	77		*e*PN	Pn	11 02 53.8	+2.2	
ZALF	Zalf	4.74	182	⇑	P	Pn	11 02 51.0	-0.7	
ZALF				⇑	S	Sn	11 03 45.0	-2.3	
ZALF	Zalf	4.74	182	⇑	*i*P	Pn	11 02 51.5	-0.2	
ZALF				⇑	*i*S	Sn	11 03 45.9	-1.4	
CUKT	Cukurca	4.88	93		*e*PN	Pn	11 02 55.2	+1.6	
CUKT	Cukurca	4.88	93		*e*Pn	Pn	11 02 55.2	+1.6	
KSHT	Keshet	4.88	197		Pn	Pn	11 02 55.3	+1.7	
HAKT	HAKKARI	4.93	89		*i*P	Pn	11 02 53.2	-1.1	
HAKT					*i*S	Sg	11 04 15.0	-2.5	
HAKT	HAKKARI	4.93	89		*i*P	Pn	11 02 53.2	-1.1	
BCA	Borcka	4.93	39		*e*PN	Pn	11 02 55.7	+1.4	
BCA	Borcka	4.93	39		*e*Pn	Pn	11 02 55.7	+1.4	
HKR	Hakkari	4.95	89		*e*PN	Pn	11 02 56.4	+1.8	
HKR	Hakkari	4.95	89		*e*Pn	Pn	11 02 56.4	+1.8	
MMA0B	Mount Meron ar	4.95	201		Pn	Pn	11 02 55.5	+0.9	
MMAI	Mount Meron Ar	4.95	201		Pn	Pn	11 02 55.0	+0.4	
	4.0nm,0.3s,baz=34,slow=12,SNR=9.5								
MMAI					Pg	Pg	11 03 06.7	-7.5	
	10nm,0.3s,baz=22,slow=19,SNR=15								
MMAI					Lg		11 04 16.9		
	24nm,0.3s,baz=23,slow=24,SNR=4.0								
HNTI	Hanita	4.96	203		Pn	Pn	11 02 56.3	+1.6	
SALA	Sala	4.99	187	⇑	P	Pn	11 02 55.0	-0.1	
SALA				⇑	S	Sn	11 03 52.0	-1.4	
SALA	Sala	4.99	187	⇑	*i*P	Pn	11 02 55.4	+0.3	
SALA				⇑	*i*S	Sn	11 03 52.7	-0.7	
BALT	Daday	5.00	322		*i*P	Pn	11 02 54.5	-0.8	
BALT	Daday	5.00	322		*i*P	Pn	11 02 54.5	-0.7	
PPCY	Paphos	5.01	238		P	Pn	11 02 57.1	+1.7	
PPCY	Paphos	5.01	238		P	Pn	11 02 57.1	+1.7	
SVRH	Sivrihisar-ESK	5.01	293		*e*PN	Pn	11 02 57.0	+1.7	
SVRH	Sivrihisar-ESK	5.01	293		*e*Pn	Pn	11 02 57.1	+1.7	
BZK	Bozkurt	5.06	329		*e*PN	Pn	11 02 56.6	+0.6	
BZK	Bozkurt	5.06	329		*e*Pn	Pn	11 02 56.6	+0.6	
SGKT	Sivrigoynuk	5.13	306		*i*P	Pn	11 02 55.2	-1.8	
SGKT	Sivrigoynuk	5.13	306		*i*P	Pn	11 02 55.2	-1.8	
SAFT	Safranbolu	5.16	315		*e*PN	Pn	11 02 58.5	+1.1	
SAFT	Safranbolu	5.16	315		*e*Pn	Pn	11 02 58.5	+1.1	
BLGI	Bet Lehem HaGe	5.28	202		Pn	Pn	11 02 59.6	+0.5	
MMLI	Mount Malkishu	5.49	199		Pn	Pn	11 03 03.2	+1.1	
ASF	Jabal al Asfar	5.51	185		Pn	Pn	11 03 01.9	-0.3	
ASF					Pg	Pg	11 03 24.5	-0.3	
ASF					Lg		11 04 32.6		
ASF					LR	LR	11 05 23.7		
ASF	Jabal al Asfar	5.51	185		Pn	Pn	11 03 01.9	-0.3	
	1.2nm,0.3s,baz=240,slow=9.7,SNR=7.8								
ASF					Pg	Pg	11 03 24.5	-0.3	
	3.5nm,0.3s,baz=302,slow=2.6,SNR=5.8								
ASF					Lg		11 04 32.6		
	8.1nm,0.3s,baz=8.2,slow=20,SNR=8.8								
ASF					LR	LR	11 05 23.7		
	comp=Z,96nm,20.0s,baz=240,slow=41								
MDU	Mudurnu	5.63	302		*e*PN	Pn	11 03 05.7	+1.7	
MDU	Mudurnu	5.63	302		*e*Pn	Pn	11 03 05.7	+1.8	
HMDT	Nahal Hemdat	5.64	197		Pn	Pn	11 03 06.2	+2.1	
SLTI	Sal'it	5.78	201		Pn	Pn	11 03 06.4	+0.4	
ALT	Altintas	5.97	286		*e*PN	Pn	11 03 09.6	+1.0	
ALT	Altintas	5.97	286		*e*Pn	Pn	11 03 09.6	+1.0	
GULT	Gulveren	6.10	299		*e*PN	Pn	11 03 12.3	+2.0	
GULT	Gulveren	6.10	299		*e*Pn	Pn	11 03 12.3	+2.0	
GNI	Garni	6.16	64		Pg	Pg	11 03 39.1	+1.8	
	1.1nm,0.3s,baz=2.6,slow=18,SNR=7.8								
GNI					Lg		11 05 07.7		
	0.6nm,0.3s,baz=198,slow=20,SNR=1.8								
GNI	Garni	6.16	64		*e*P	Pn	11 03 08.6	-2.6	
GNI	Garni	6.16	64		*e*P	Pn	11 03 08.6	-2.6	
GNI	Garni	6.16	64		Pg	Pg	11 03 39.1	+1.8	
GOR	Gori	6.66	48		P	Pg	11 03 46.8	0.0	
TBLG	Delisi	6.89	52		P	Pg	11 03 52.0	+0.7	
MTA	Mtatsminda	6.91	52		P	Pg	11 03 51.4	-0.1	
BHD	Baghdad	7.12	126		*ex*	x	11 03 23.5		
BHD					*ex*	x	11 03 56.5		
BHD					*ex*	x	11 04 40.5		
BHD	Baghdad	7.12	126		*e*Pn	Pn	11 03 23.5	-1.0	
DGRG	David-gareji	7.16	56		P	Pg	11 03 59.8	+3.5	
KIV	Kislovodsk	7.40	30	⇓	*e*P	Pn	11 03 19.1	-9.2	
KIV					pmax	pmax			
	comp=Z,6.0nm,0.8s								
EIL	Elat	8.26	196		Pn	Pn	11 03 38.6	-1.4	
	comp=Z,0.5nm,0.3s,baz=53,slow=15,SNR=2.3								
EIL					Lg		11 05 58.6		
	comp=Z,0.6nm,0.3s,baz=77,slow=19,SNR=3.0								
EIL	Elat	8.26	196		Pn	Pn	11 03 38.6	-1.4	
MLR	Muntele Rosu	11.65	316		LR	LR	11 09 58.4		
	comp=Z,142nm,18.7s,baz=138,slow=43								
AKASG	Malin Array Be	14.30	338		Pn	Pn	11 05 01.7	-0.9	
	comp=Z,0.6nm,0.3s,baz=152,slow=12,SNR=3.2								
AKASG	Malin Array Be	14.30	338		Pn	Pn	11 05 01.7	-0.9	
CRVS	Cervenica-Dubn	16.16	319		*e*P	Pn	11 05 30.0	+2.7	
CRVS	Cervenica-Dubn	16.16	319		*e*P	Pn	11 05 30.0	+2.7	
CRVS	Cervenica-Dubn	16.16	319		*e*P	Pn	11 05 30.0	+2.7	
VYHS	Vyhne	17.36	314		*e*P	Pn	11 05 45.9	+3.4	
VYHS	Vyhne	17.36	314		*e*P	Pn	11 05 45.9	+3.4	
VYHS	Vyhne	17.36	314		*e*P	Pn	11 05 45.9	+3.4	
VRAC	Vranov	19.04	314		LR	LR	11 14 34.1		
	comp=Z,50nm,18.9s,baz=126,slow=41								
AKTK	Aktyubinsk	19.42	42		P	Pn	11 06 07.2	-0.4	
AKTK	Aktyubinsk	19.42	42		P	Pn	11 06 07.2	-0.4	
AKTO	Aktyubinsk	19.42	42		P	Pn	11 06 07.2	-0.4	
	comp=Z,0.1nm,0.3s,baz=240,slow=11,SNR=6.0								
MOA	Molln	19.79	308	⇑	*i*P	Pn	11 06 12.4	+0.3	
	comp=Z,7.9nm,1.1s								
MOA	Molln	19.79	308		P	Pn	11 06 12.4	+0.3	
	comp=Z,7.9nm,1.1s								
KHC	Kasperske Hory	20.72	311		*e*P	P	11 06 20.9	+0.1	
	comp=Z,6.1nm,1.0s								
KHC	Kasperske Hory	20.72	311		*e*P	P	11 06 20.9	+0.1	
KHC					pmax	pmax			
	comp=Z,6.0nm,1.0s								
KHC	Kasperske Hory	20.72	311		*e*P	P	11 06 20.9	+0.1	
	comp=Z,6.1nm,1.0s								
MOTA	Moosalm	21.64	305	⇑	*i*P	P	11 06 30.7	0.0	
	comp=Z,11nm,0.7s,mb4.4								
MOTA	Moosalm	21.64	305		P	P	11 06 30.7	0.0	
	comp=Z,11nm,0.7s,mb4.4								
FETA	Feichten	21.79	304	⇑	*i*pP	pP	11 06 30.4	-2.4	
	comp=Z,8.9nm,1.1s								
FETA	Feichten	21.79	304		P	P	11 06 30.4	-1.9	
	comp=Z,8.9nm,1.1s,mb4.1								
RETA	Reutte	21.90	305	⇑	*i*P	P	11 06 33.7	+0.2	
	comp=Z,7.1nm,0.6s,mb4.2								
RETA	Reutte	21.90	305		P	P	11 06 33.7	+0.2	
	comp=Z,7.1nm,0.6s,mb4.2								
CLL	Collm	22.03	316		*e*(sP)	sP	11 06 39.0	+3.4	
DAVOX	Davos/Dischmat	22.29	303		P	P	11 06 36.7	-1.0	
	comp=Z,1.8nm,0.5s,mb3.7,baz=133,slow=19,SNR=2.4								
DAVOX					LR	LR	11 16 51.4		
	comp=Z,36nm,18.5s,MS2.8,baz=289,slow=41								
DAVOX	Davos/Dischmat	22.29	303		P	P	11 06 36.7	-1.0	
DAVA	Damuels	22.42	304	⇑	*i*P	P	11 06 36.9	-2.2	
	comp=Z,7.5nm,0.7s,mb4.2								
DAVA	Damuels	22.42	304		P	P	11 06 36.9	-2.2	
	comp=Z,7.5nm,0.7s,mb4.2								
KEST	Kesra	22.63	274		P	P	11 06 40.6	-0.7	
	comp=Z,2.6nm,0.9s,mb3.6,baz=78,slow=9.9,SNR=5.8								
FRF	La Foret Royal	24.06	294		*e*P	P	11 06 53.1	-2.7	
FRF	La Foret Royal	24.06	294		*e*P	P	11 06 53.1	-2.7	
MBDF	Montbardon	24.07	297		*e*P	P	11 06 54.6	-1.2	
	comp=Z,17nm,0.9s,mb4.2								
MBDF	Montbardon	24.07	297		*e*P	P	11 06 54.6	-1.2	
	comp=Z,8.7nm,0.9s,mb4.2								
MBDF	Montbardon	24.07	297		*e*P	P	11 06 54.6	-1.2	
MBDF					pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.2								
MBDF	Montbardon	24.07	297		*e*P	P	11 06 54.6	-1.2	
	comp=Z,8.7nm,0.9s,mb4.2								
LPG	La Plagne	24.18	299		*e*P	P	11 06 54.8	-2.0	
	comp=Z,11nm,0.6s,mb4.2								
LPG	La Plagne	24.18	299		*e*P	P	11 06 54.8	-2.0	
	comp=Z,5.7nm,0.6s,mb4.2								
LPG	La Plagne	24.18	299		*e*P	P	11 06 54.8	-2.0	
LPG					pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.2								
LPG	La Plagne	24.18	299		*e*P	P	11 06 54.8	-2.0	
	comp=Z,5.7nm,0.6s,mb4.2								
LPL	La Plagne	24.20	299		*e*P	P	11 06 55.7	-1.3	
LPL	La Plagne	24.20	299		*e*P	P	11 06 55.7	-1.3	
ECH	Echery	24.43	305		*e*P	P	11 06 57.1	-2.0	
	comp=Z,12nm,1.0s,mb4.3								
ECH	Echery	24.43	305		*e*P	P	11 06 57.1	-2.0	
ECH					pmax	pmax			
	comp=Z,12nm,1.0s,mb4.3								
ECH	Echery	24.43	305		*e*P	P	11 06 57.1	-2.0	
	comp=Z,12nm,1.0s,mb4.3								
ORIF	Oris-en-Rattie	24.73	297		*e*P	P	11 07 00.1	-1.7	
	com

MYA	**Malataya**	**0.99**	**50**	*e*PG	**Pg**	**11 17 05.8**	**+0.6**
MYA	**Malataya**	**0.99**	**50**	*e*Pg	**Pg**	**11 17 05.8**	**+0.6**
URFA	**Urfa**	**1.11**	**103**	*e*PN	**Pg**	**11 17 06.2**	**-1.3**
URFA				*e*SN	**Sg**	**11 17 22.6**	**+0.6**
URFA	**Urfa**	**1.11**	**103**	*e*Pn	**Pg**	**11 17 06.2**	**-1.3**
URFA				*e*Sn	**Sg**	**11 17 22.6**	**+0.7**
SARI	**SarD1z-Kayseri**	**1.15**	**329**	*e*PN	**Pn**	**11 17 07.4**	**-1.2**
SARI				*e*SN	**Sn**	**11 17 24.4**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.15**	**329**	*e*Pn	**Pn**	**11 17 07.4**	**-1.2**
SARI				*e*Sn	**Sn**	**11 17 24.4**	**-0.2**
PINB	**Pinarbasi**	**1.28**	**320**	*i* P	**Pn**	**11 17 11.5**	**+1.0**
PINB				*i* S	**Sb**	**11 17 21.9**	**-5.4**
PINB	**Pinarbasi**	**1.28**	**320**	*i* P	**Pn**	**11 17 11.5**	**+1.0**
KOZT	**Kozan**	**1.31**	**261**	*e*PN	**Pn**	**11 17 10.7**	**-0.1**
SVRC	**Sivrice-ELAZID**	**1.61**	**64**	*e*PN	**Pn**	**11 17 15.6**	**+0.6**
SVRC	**Sivrice-ELAZID**	**1.61**	**64**	*e*Pn	**Pn**	**11 17 15.6**	**+0.6**

IDC ***20*** *11:21:54.8±2.9, 6°.81S×109°.64E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/18, mbtmp3.6/4, Error ellipse: s-maj=177.0km s-min=26.1km az=51.0*

ISCJB ***20*** *11:22:00.1±1.1, 8°.1S±0°.2×108°.22E±0°.06, h78km±12km, mb3.6/4, Error ellipse: s-maj=27.8km s-min=8.3km az=14.9*

DJA ***20*** *11:22:01, 8°.14S×108°.26E, h27km, MLv4.3/12*

ISC 20 11:22:01.2±1.0, 8°.1S±0°.2×108°.23E±0°.06, h73km±11km, n16, σ1§14/18, mb3.6/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.67**	**323**	P	**Pn**	**11 22 15.0**	**-1.0**
CISI				S	**Sn**	**11 22 25.8**	**-1.2**
CLJI	**Cilicap**	**0.87**	**64**	P	**Pn**	**11 22 17.6**	**-0.6**
LEM	**Lembang**	**1.40**	**334**	P	**Pn**	**11 22 26.4**	**+1.4**
BJII	**Banjamegara**	**1.65**	**63**	P	**Pn**	**11 22 28.0**	**-0.3**
BJII				S	**Sn**	**11 22 49.3**	**+0.5**
YOGI	**Yogyakarta**	**2.07**	**82**	P	**Pn**	**11 22 34.3**	**+0.5**
DBJI	**Dramaga**	**2.12**	**316**	P	**Pn**	**11 22 36.3**	**+1.7**
UGM	**Wanagama**	**2.28**	**86**	P	**Pn**	**11 22 37.7**	**+1.0**
PCJI	**Pacitan**	**2.92**	**92**	P	**Pn**	**11 22 45.8**	**+0.4**
PCJI				S	**Sn**	**11 23 17.1**	**-2.4**
SJI	**Sawahan**	**3.53**	**84**	P	**Pn**	**11 22 54.2**	**+0.6**
PWJI	**Pagerwojo**	**3.54**	**89**	P	**Pn**	**11 22 53.9**	**0.0**
GRJI	**Gresik**	**4.38**	**75**	P	**Pn**	**11 23 06.0**	**+0.7**
WRA	**Warramunga Arr** 1.0nm,1.1s,mb3.3,baz=294,slow=11,SNR=12	**27.89**	**118**	P	**P**	**11 27 40.9**	**-3.5**
ASAR	**Alice Springs** 0.4nm,0.6s,mb3.2,baz=301,slow=8.7,SNR=7.1	**29.07**	**125**	P	**P**	**11 27 54.0**	**-0.9**
STKA	**Stephens Creek** 1.2nm,0.4s,mb4.1,baz=312,slow=9.9,SNR=7.4	**39.01**	**132**	P	**P**	**11 29 22.4**	**+1.5**
MKAR	**Makanchi Array** 0.4nm,0.4s,mb3.8,baz=148,slow=8.6,SNR=4.7	**59.33**	**340**	P	**P**	**11 31 53.9**	**-1.7**
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=245,slow=3.3,SNR=4.8	**143.35**	**51**	PKP	PKPdf	11 41 26.2	-1.8

THE ***20*** *11:47:06.8, 36°.49N×22°.38E, h6km±1km, ML2.9/4, Error ellipse: s-maj=2.5km s-min=1.1km az=222.0*

ISCJB ***20*** *11:47:07.5±0.9, 36°.48N±0°.05×22°.26E±0°.05, h23km±5km, Error ellipse: s-maj=9.4km s-min=5.7km az=30.6*

NEIC ***20*** *11:47:07.5, 36°.54N×22°.27E, h35km, MD3.6(ATH), After ATH.*

ATH ***20*** *11:47:07.5, 36°.54N×22°.27E, h35km±2km, MD3.6/11*

CSEM ***20*** *11:47:08.1±0.4, 36°.49N×22°.24E, h30km, MD3.6, Error ellipse: s-maj=11.1km s-min=6.3km az=37.0*

ISC 20 11:47:07.7±0.9, 36°.50N±0°.05×22°.26E±0°.05, h19km±4km, n46, σ1§04/70, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.57**	**313**	*e*PN	**Pg**	**11 47 19.3**	**+0.2**
PYL				*e*SN	**Sg**	**11 47 27.8**	**+0.9**
PYL	**PYLOS**	**0.57**	**313**	P	**Pg**	**11 47 19.3**	**+0.2**
PYL				S	**Sg**	**11 47 28.1**	**+1.2**
PYL	**PYLOS**	**0.57**	**313**	P	**Pg**	**11 47 19.3**	**+0.2**
PYL				*e*Sn	**Sg**	**11 47 27.8**	**+0.9**
PYL				S	**Sg**	**11 47 28.1**	**+1.2**
VLI	**Veliai**	**0.58**	**68**	*e*Pn	**Pg**	**11 47 19.5**	**+0.2**
VLI				*e*Sn	**Sg**	**11 47 28.4**	**+1.2**
VLI	**Veliai**	**0.58**	**68**	*e*PN	**Pg**	**11 47 19.5**	**+0.2**
VLI				*e*SN	**Sg**	**11 47 28.4**	**+1.2**
VLI	**Veliai**	**0.58**	**68**	*e*Pn	**Pg**	**11 47 19.5**	**+0.2**
VLI				*e*Sn	**Sg**	**11 47 28.4**	**+1.2**
KYTH	**Kithira**	**0.66**	**109**	*e*Pn	**Pg**	**11 47 22.0**	**+1.3**
KYTH	**Kithira**	**0.66**	**109**	*e*PN	**Pg**	**11 47 22.0**	**+1.3**
KYTH	**Kithira**	**0.66**	**109**	*e*Pn	**Pg**	**11 47 22.0**	**+1.3**
ITM	**Ithomi**	**0.73**	**338**	*e*Pn	**Pg**	**11 47 21.1**	**-0.9**
ITM				*e*Sn	**Sg**	**11 47 31.9**	**+0.2**
ITM	**Ithomi**	**0.73**	**338**	*e*PN	**Pg**	**11 47 21.1**	**-0.9**
ITM				*e*SN	**Sg**	**11 47 31.9**	**+0.2**
ITM	**Ithomi**	**0.73**	**338**	P	**Pg**	**11 47 21.1**	**-0.9**
ITM	**Ithomi**	**0.73**	**338**	*e*Pn	**Pg**	**11 47 21.1**	**-0.9**
ITM				*e*SN	**Sg**	**11 47 31.9**	**+0.2**
VLX	**Vlachokerasia**	**0.87**	**6**	*e*PB	**Pg**	**11 47 23.2**	**-1.5**
VLX				*e*SN	**Sg**	**11 47 36.7**	**+0.5**
VLX	**Vlachokerasia**	**0.87**	**6**	P	**Pg**	**11 47 23.1**	**-1.6**
VLX				S	**Sg**	**11 47 36.9**	**+0.7**
VLX	**Vlachokerasia**	**0.87**	**6**	P	**Pg**	**11 47 23.1**	**-1.6**
VLX				*e*Sn	**Sg**	**11 47 36.7**	**+0.5**
DID	**Didima**	**1.27**	**38**	*e*PB	**Pb**	**11 47 29.4**	**-1.6**
DID				*e*SN	**Sn**	**11 47 47.0**	**+0.1**
DID	**Didima**	**1.27**	**38**	P	**Pn**	**11 47 29.6**	**-0.8**
DID				S	**Sn**	**11 47 47.0**	**+0.1**
DID	**Didima**	**1.27**	**38**	P	**Pn**	**11 47 29.6**	**-0.8**
DID				S	**Sn**	**11 47 47.0**	**+0.1**
GUR	**Goura**	**1.43**	**3**	*e*PN	**Pn**	**11 47 33.0**	**+0.4**
GUR				*e*SN	**Sn**	**11 47 50.0**	**-1.0**
GUR	**Goura**	**1.43**	**3**	P	**Pn**	**11 47 32.9**	**+0.3**
GUR				S	**Sn**	**11 47 53.0**	**+2.0**
GUR	**Goura**	**1.43**	**3**	*e*Pn	**Pn**	**11 47 33.0**	**+0.4**
GUR				*e*Sn	**Sn**	**11 47 50.0**	**-1.0**
GUR				S	**Sn**	**11 47 53.0**	**+2.0**
LTK	**Loutraki**	**1.62**	**20**	*e*PB	**Pb**	**11 47 34.5**	**-2.4**
LTK	**Loutraki**	**1.62**	**20**	P	**Pn**	**11 47 34.6**	**-0.6**
LTK	**Loutraki**	**1.62**	**20**	P	**Pn**	**11 47 34.6**	**-0.6**
RLS	**Riolos of Patr**	**1.68**	**338**	*e*Pb	**Pb**	**11 47 37.0**	**-0.9**
RLS	**Riolos of Patr**	**1.68**	**338**	*e*PB	**Pb**	**11 47 37.0**	**-0.9**
LAKA	**Lakka**	**1.75**	**353**	P	**Pn**	**11 47 37.2**	**+0.2**
LAKA				S	**Sn**	**11 48 01.5**	**+2.7**
LAKA	**Lakka**	**1.75**	**353**	P	**Pn**	**11 47 37.2**	**+0.2**
TRIZ	**Trizonia**	**1.87**	**355**	P	**Pn**	**11 47 39.7**	**+1.1**
TRIZ	**Trizonia**	**1.87**	**355**	P	**Pn**	**11 47 39.7**	**+1.1**
KALE	**Kalithea**	**1.89**	**357**	P	**Pn**	**11 47 38.6**	**-0.3**
KALE				S	**Sn**	**11 48 03.9**	**+1.7**
KALE	**Kalithea**	**1.89**	**357**	P	**Pn**	**11 47 38.6**	**-0.3**
KALE				S	**Sn**	**11 48 03.9**	**+1.7**
ATHU	**Athens Univers**	**1.90**	**39**	P	**Pn**	**11 47 38.7**	**-0.4**
ATHU				S	**Sn**	**11 48 01.9**	**-0.6**
ATHU	**Athens Univers**	**1.90**	**39**	P	**Pn**	**11 47 38.7**	**-0.4**
VAM	**Vamos**	**1.92**	**124**	*e*Pn	**Pn**	**11 47 39.9**	**+0.7**
VAM	**Vamos**	**1.92**	**124**	*e*PN	**Pn**	**11 47 39.9**	**+0.7**
VAM	**Vamos**	**1.92**	**124**	*e*Pn	**Pn**	**11 47 39.9**	**+0.7**
DSF	**Desfina**	**1.92**	**6**	P	**Pn**	**11 47 39.3**	**0.0**
DSF	**Desfina**	**1.92**	**6**	P	**Pn**	**11 47 39.3**	**0.0**
EFP	**Efpalio**	**1.94**	**352**	*e*PB	**Pb**	**11 47 40.9**	**-1.5**
VLS	**Valsamata**	**2.14**	**322**	*e*Pn	**Pn**	**11 47 42.0**	**-0.3**
VLS	**Valsamata**	**2.14**	**322**	*e*PN	**Pn**	**11 47 42.0**	**-0.3**
VLS	**Valsamata**	**2.14**	**322**	*e*Pn	**Pn**	**11 47 42.0**	**-0.3**
AGG	**Agios Georgios**	**2.52**	**1**	P	**Pn**	**11 47 47.9**	**+0.4**
AGG	**Agios Georgios**	**2.52**	**1**	P	**Pn**	**11 47 47.9**	**+0.4**

ISCJB ***20*** *11:50:53.3±0.5, 37°.72N±0°.03×37°.44E±0°.04, h10km, Error ellipse: s-maj=4.5km s-min=3.8km az=40.3*

DDA ***20*** *11:50:53.4, 37°.75N×37°.51E, h7km±5km, Md2.8*

ISK ***20*** *11:50:53.2, 37°.69N×37°.44E, h5km, MD2.9*

CSEM ***20*** *11:50:53.8±0.3, 37°.74N×37°.43E, h8km, MD2.9, Error ellipse: s-maj=8.5km s-min=5.3km az=147.0*

ISC 20 11:50:53.8±0.6, 37°.72N±0°.03×37°.44E±0°.04, h0km±10km, n18, σ0§79/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZT	**Gaziantep**	**0.38**	**165**	*i* P	**Pg**	**11 51 00.6**	**-0.5**
GZT				*i* S	**Sg**	**11 51 05.0**	**-1.0**
KMRS	**Kahramanmaras**	**0.48**	**243**	*e*PG	**Pg**	**11 51 02.6**	**-0.5**
KMRS				*e*SG	**Sg**	**11 51 09.4**	**0.0**
KMRS	**Kahramanmaras**	**0.48**	**243**	*e*Pg	**Pg**	**11 51 02.6**	**-0.5**
KMRS				*e*Sg	**Sg**	**11 51 09.4**	**+0.1**
ATAB	**Bozova**	**0.72**	**110**	*i* P	**Pg**	**11 51 06.5**	**-1.2**
ATAB				*i* S	**Sg**	**11 51 16.8**	**-0.2**
ATAB	**Bozova**	**0.72**	**110**	*i* P	**Pg**	**11 51 06.4**	**-1.3**
ATAB				*i* S	**Sg**	**11 51 16.8**	**-0.3**
MALT	**Malatya**	**0.98**	**53**	*e*PG	**Pg**	**11 51 13.1**	**+0.5**
MALT				*e*SG	**Sg**	**11 51 26.5**	**+1.3**
MALT	**Malatya**	**0.98**	**53**	*e*Pg	**Pg**	**11 51 13.1**	**+0.5**
MALT				*e*Sg	**Sg**	**11 51 26.5**	**+1.3**
MYA	**Malataya**	**0.98**	**52**	*e*PG	**Pg**	**11 51 12.9**	**+0.2**
MYA	**Malataya**	**0.98**	**52**	*e*Pg	**Pg**	**11 51 12.9**	**+0.2**
KUZU	**Kuzuini**	**0.99**	**197**	*i* P	**Pg**	**11 51 13.8**	**+1.0**
KUZU				*i* S	**Sg**	**11 51 27.4**	**+1.8**
KUZU	**Kuzuini**	**0.99**	**197**	*i* P	**Pg**	**11 51 13.9**	**+1.1**
KUZU				*i* S	**Sg**	**11 51 27.5**	**+1.8**
SARI	**SarD1z-Kayseri**	**1.12**	**329**	*e*PN	**Pg**	**11 51 14.7**	**-0.6**
SARI				*e*SN	**Sg**	**11 51 29.5**	**-0.3**
SARI	**SarD1z-Kayseri**	**1.12**	**329**	*e*Pn	**Pg**	**11 51 14.7**	**-0.6**
SARI				*e*Sn	**Sg**	**11 51 29.5**	**-0.4**
KOZT	**Kozan**	**1.31**	**260**	*e*PN	**Pn**	**11 51 19.2**	**-0.1**
SVRC	**Sivrice-ELAZID**	**1.61**	**65**	*e*PN	**Pn**	**11 51 23.0**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.61**	**65**	*e*Pn	**Pn**	**11 51 23.0**	**-0.5**
PTK	**Pertek**	**1.93**	**52**	*e*PN	**Pn**	**11 51 28.2**	**+0.3**
PTK	**Pertek**	**1.93**	**52**	*e*Pn	**Pn**	**11 51 28.2**	**+0.4**

IDC 20 12:10:25.0±1.0, 11°.81N×143°.99E, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.7/23, mbtmp3.6/8, Error ellipse: s-maj=35.6km s-min=17.6km az=104.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam** 30nm,0.3s,baz=235,slow=3.3,SNR=19	**1.96**	**26**	Pn	**Pn**	**12 11 00.4**	**+0.8**
GUMO				Sn	**Sn**	**12 11 25.5**	**+0.6**
KSRS	**Korea Array** 0.6nm,0.7s,baz=167,slow=6.9,SNR=4.0	**29.32**	**333**	P	**P**	**12 16 30.3**	**+1.0**
WRA	**Warramunga Arr** 1.1nm,0.7s,baz=18,slow=9.2,SNR=14	**32.95**	**197**	P	**P**	**12 17 01.5**	**0.0**
ASAR	**Alice Springs** 0.4nm,0.9s,baz=17,slow=12,SNR=4.4	**36.61**	**196**	P	**P**	**12 17 33.2**	**+0.1**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=101,slow=7.6,SNR=3.4	**62.18**	**317**	P	**P**	**12 20 48.4**	**+0.2**
KURK	**Kurchatov** 0.4nm,0.3s,baz=104,slow=6.6,SNR=1.8	**65.39**	**321**	P	**P**	**12 21 10.0**	**+0.6**
ILAR	**Eielson Array** 0.3nm,0.8s,baz=251,slow=5.6,SNR=4.7	**70.53**	**25**	P	**P**	**12 21 39.6**	**-1.9**
BVAR	**Borovoye Array** 0.6nm,0.4s,baz=99,slow=4.1,SNR=2.6	**70.79**	**322**	P	**P**	**12 21 42.3**	**-0.9**
NVAR	**Mina Array Bea** 0.3nm,0.7s,baz=260,slow=5.5,SNR=3.6	**88.70**	**51**	P	**P**	**12 23 22.8**	**+2.1**

IDC 20 12:16:15.0±0.9, 15°.69S×173°.24W, h0km, mb4.1/9, mb1 4.4/9, mb1mx4.2/17, mbtmp4.1/9, MS3.3/1, Ms1 3.3/1, ms1mx2.8/17, Error ellipse: s-maj=57.3km s-min=17.8km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu** 35nm,0.3s,baz=144,slow=0.8,SNR=79	**2.27**	**39**	Pn	**Pn**	**12 16 45.8**	**-8.1**
AFI				Sn	**Sn**	**12 17 04.7**	**-18**
URZ	**Urewera** comp=Z,81nm,20.4s,baz=34,slow=34	**24.04**	**199**	LR	LR	**12 29 53.7**	
STKA	**Stephens Creek** 1.4nm,0.6s,baz=56,slow=3.6,SNR=2.9	**44.02**	**140**	P	**P**	**12 24 25.3**	**+0.7**
WRA	**Warramunga Arr** 2.0nm,0.8s,baz=97,slow=7.8,SNR=44	**49.92**	**257**	P	**P**	**12 25 10.9**	**0.0**
ASAR	**Alice Springs** 13nm,0.8s,baz=87,slow=8.1,SNR=126	**50.16**	**252**	P	**P**	**12 25 12.8**	**0.0**
YBH	**Yreka Blue Hor** 1.0nm,0.7s,baz=195,slow=18,SNR=3.1	**73.74**	**37**	P	**P**	**12 27 51.7**	**+0.7**
NVAR	**Mina Array Bea** 0.7nm,0.7s,baz=228,slow=9.7,SNR=7.1	**74.44**	**42**	P	**P**	**12 27 55.5**	**+0.3**
TXAR	**Lajitas Array** 0.6nm,0.9s,baz=216,slow=6.2,SNR=5.8	**80.65**	**56**	P	**P**	**12 28 31.7**	**+1.6**
PDAR	**Pinedale Array** 0.6nm,0.6s,baz=220,slow=2.5,SNR=5.2	**82.38**	**42**	P	**P**	**12 28 39.2**	**+0.2**
ILAR	**Eielson Array** 0.7nm,0.9s,baz=212,slow=5.0,SNR=7.8	**82.70**	**11**	P	**P**	**12 28 38.2**	**-1.9**
MAW	**Mawson** 2.9nm,0.7s,baz=96,slow=10,SNR=9.1	**87.57**	**199**	P	**P**	**12 29 03.4**	**-1.3**
AKASG	**Malin Array Be** 0.4nm,0.4s,baz=28,slow=2.2,SNR=3.4	**140.66**	**337**	PKP	PKPdf	**12 35 45.0**	**-1.6**
BRTR	**Keskin Array B** 3.0nm,0.9s,baz=209,slow=1.9,SNR=7.6	**146.48**	**321**	PKP	PKPdf	**12 35 56.8**	**-0.4**
BRTR	2.9nm,0.9s,baz=104,slow=2.2,SNR=13			PKPbc	PKPbc	**12 35 58.9**	**+0.4**

FUNV 20 12:35:16.2, 6°.76N×71°.98W, h15km, MW3.7, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.15**	**343**	*e*P	Pn	**12 35 37.1**	**-0.6**
CAPV				*e*S	Sb	**12 35 52.8**	**+0.4**
SOCV	**Socops**	**1.88**	**36**↑	*e*P	Pn	**12 35 46.8**	**-0.9**
SOCV				*e*S	Sn	**12 36 09.7**	**-1.4**
VIGV	**El Vigia**	**2.15**	**16**	*e*P	Pn	**12 35 51.8**	**+0.3**
VIGV				*e*S	Sn	**12 36 17.4**	**-0.5**
SANV	**Sanarito**	**3.64**	**41**	*e*P	Pn	**12 36 11.1**	**-0.8**
QARV	**Quebrada Arrib**	**3.71**	**23**	*e*P	Pn	**12 36 11.5**	**-1.5**
VIRV	**Villa del Rosa**	**3.74**	**353**	*e*P	Pn	**12 36 11.8**	**-1.6**
VIRV				*e*S	Sn	**12 36 53.2**	**-4.0**
CURV	**Curarigua**	**3.79**	**32**	*e*P	Pn	**12 36 13.7**	**-0.5**
TEPV	**Terepaima**	**4.21**	**41**	*e*P	Pn	**12 36 18.4**	**-1.4**
DABV	**Dabajuro**	**4.34**	**18**	*e*P	Pn	**12 36 20.3**	**-1.3**
SIQV	**Siquisique**	**4.42**	**29**	*e*P	Pn	**12 36 21.3**	**-1.3**
BAUV	**El Baul**	**4.46**	**61**	*e*P	Pn	**12 36 21.1**	**-2.2**
MAPV	**Macapo**	**4.63**	**49**	*e*P	Pn	**12 36 24.4**	**-1.2**
TURV	**Turiamo**	**5.49**	**48**	*e*P	Pn	**12 36 35.2**	**-2.3**
MONV	**Montecano**	**5.53**	**21**	*e*P	Pn	**12 36 36.2**	**-1.7**
CAOV	**Caicara del Or**	**5.64**	**84**	*e*P	Pn	**12 36 37.8**	**-1.7**
IMOV	**Isla Los Monje**	**5.66**	**11**	*e*P	Pn	**12 36 38.2**	**-1.5**
CUPV	**Cepira**	**6.94**	**61**	*e*P	Pn	**12 36 55.6**	**-1.8**

MAN 20 12:49:04, 12°.89N×120°.88E, h53km, mb4.0, ML2.8, MS2.5, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.61**	**7**‖	*i* P	Pn	**12 49 15.1**	**-1.6**
LUBP	**Lubang**	**1.04**	**324**	*e*P	Pn	**12 49 23.5**	**+1.2**
BOAC	**Boac**	**1.10**	**59**	*e*P	Pn	**12 49 24.3**	**+1.2**
BUSP	**Coron**	**1.10**	**217**	*e*P	Pn	**12 49 24.4**	**+1.2**
OTRP	**Odiongan**	**1.23**	**115**	*e*P	Pn	**12 49 26.2**	**+1.3**

IDC 20 12:51:58.8±3.1, 7°.64S×151°.26E, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.5/14, mbtmp3.5/3, Error ellipse: s-maj=228.1km s-min=27.9km az=129.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.7nm,0.7s,baz=56,slow=12,SNR=15	**20.46**	**232**	P	P	**12 56 37.6**	**-0.5**
ASAR	**Alice Springs** 0.5nm,0.7s,baz=58,slow=9.6,SNR=9.5	**23.05**	**224**	P	P	**12 57 06.2**	**+0.3**
ILAR	**Eielson Array** 0.8nm,0.8s,baz=245,slow=5.0,SNR=11	**85.35**	**22**	P	P	**13 04 37.5**	**+0.1**
TORD	**Torodi Ar. Bea** 0.8nm,0.6s,baz=78,slow=2.7,SNR=8.3	**149.59**	**283**	PKPbc	PKPbc	**13 11 51.0**	**-0.3**

NEIC ***20*** *13:03:31.2, 8°.85N×84°.13W, h14km, MD4.2(CASC), After CASC.*

CASC 20 13:03:31.8±2.0, 8°.90N×84°.08W, h16km±9km, MD4.3, 8C-11D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QCR	**Quepos**	**0.53**	**350**	*i* P	Pg	**13 03 41.5**	**-0.7**
QCR	**Quepos**	**0.53**	**350**	*i* P	Pg	**13 03 41.5**	**-0.7**
BUS	**Buena Vista**	**0.72**	**26**	*e* P	Pg	**13 03 44.8**	**-1.2**
BUS	**Buena Vista**	**0.72**	**26**	*e* P	Pg	**13 03 44.8**	**-1.2**
ACR	**Cerro Adams**	**0.93**	**105**	*e*P	Pb	**13 03 48.4**	**-1.1**
ACR				*e*S	Sb	**13 04 02.3**	**+0.6**
ACR	**Cerro Adams**	**0.93**	**105**	*e*P	Pb	**13 03 48.4**	**-1.1**
ACR				*e*S	Sb	**13 04 02.3**	**+0.6**
LAJ	**Bijagual**	**0.96**	**357**	*e*P	Pb	**13 03 48.8**	**-1.2**
LAJ				*e*S	Sb	**13 04 02.7**	**+0.3**
LAJ	**Bijagual**	**0.96**	**357**	*e*P	Pb	**13 03 48.8**	**-1.2**
LAJ				*e*S	Sb	**13 04 02.7**	**+0.3**
URSC	**Urasca**	**0.97**	**18**	*e*P	Pb	**13 03 49.2**	**-1.0**
URSC	**Urasca**	**0.97**	**18**	*e*P	Pb	**13 03 49.2**	**-1.0**
PRS1	**Puriscal**	**1.10**	**348**↑	*i* P	Pb	**13 03 50.1**	**-2.4**
PRS1	**Puriscal**	**1.10**	**348**↑	*i* P	Pb	**13 03 50.1**	**-2.4**
CGA2	**Cerro Gallo 2**	**1.17**	**341**↑	*e*P	Pn	**13 03 52.7**	**-0.8**
CGA2				*e*S	Sb	**13 04 08.9**	**+0.3**
CGA2	**Cerro Gallo 2**	**1.17**	**341**↑	*e*P	Pn	**13 03 52.7**	**-0.8**
CGA2				*e*S	Sb	**13 04 08.9**	**+0.3**
BRU2	**Volcan**	**1.37**	**94**‖	*e*P	Pn	**13 03 56.3**	**0.0**
BRU2				*e*S	Sn	**13 04 15.8**	**+1.7**
BRU2	**Volcan**	**1.37**	**94**‖	*e*P	Pn	**13 03 56.3**	**0.0**
BRU2				*e*S	Sn	**13 04 15.8**	**+1.7**
JCR	**Jicaral**	**1.39**	**313**	*e*P	Pn	**13 03 54.8**	**-1.7**
JCR	**Jicaral**	**1.39**	**313**	*e*P	Pn	**13 03 54.8**	**-1.7**
TBS2		**1.41**	**94**	*e*P	Pn	**13 04 02.5**	**+5.8**
TBS2				*e*S	Sn	**13 04 21.6**	**+6.6**
JTS	**JuntasAbangare**	**1.63**	**328**	*e*Pn	Pn	**13 03 58.9**	**-0.9**
TRTC	**Tortuguero**	**1.70**	**12**‖	*e*P	Pn	**13 04 01.9**	**+1.2**
PINA	**Piqa, Costa Ab**	**3.98**	**85**‖	*e*P	Pn	**13 04 33.3**	**+1.2**
PINA	**Piqa, Costa Ab**	**3.98**	**85**‖	*e*P	Pn	**13 04 33.3**	**+1.2**
BCIP	**Isla Barro Col**	**4.19**	**86**‖	*e*P	Pn	**13 04 36.2**	**+1.1**
BCIP				*e*S	Sn	**13 05 23.0**	**-0.8**
BCIP	**Isla Barro Col**	**4.19**	**86**‖	*e*P	Pn	**13 04 36.2**	**+1.1**
BCIP				*e*S	Sn	**13 05 23.0**	**-0.8**

IDC ***20*** *13:17:59.6±0.4, 12°.94N×124°.38E, h0km, mb4.9/23, mb1 5.0/25, mb1mx5.0/26, mbtmp4.9/25, ML4.6/1, MS4.7/19, Ms1 4.7/19, ms1mx4.7/22, Error ellipse: s-maj=17.1km s-min=10.2km az=69.0*

MAN ***20*** *13:18:02, 13°.04N×124°.35E, h13km, mb5.7, ML4.8, MS5.2*

MAN INTENSITY V - CABID-AN SORSOGON CITY; INTENSITY IV - LEGASPI CITY; INTENSITY III - LIGNON HILL.

BJI ***20*** *13:18:03.2, 12°.89N×124°.49E, h44km, mB5.3/46, mb5.0/64, Ms5.0/67, Ms7 4.8/62*

MOS ***20*** *13:18:03.4±1.0, 12°.99N×124°.36E, h33km, mb5.4/52, MS4.8/25, Error ellipse: s-maj=8.7km s-min=4.8km az=116.7*

ISCJB ***20*** *13:18:04.0±0.4, 13°.06N±0°.02×124°.45E±0°.02, h35km±3km, mb5.2/187, MS4.8/56, Error ellipse: s-maj=4.1km s-min=2.7km az=171.5*

GCMT ***20*** *13:18:04.8±0.1, 13°.11N×124°.36E, h22km±1km, MW5.3, Moment Tensor Solution. s63,c102; s87,c162; Moment tensor: Scale 10^16 Nm; Mrr-0.44±.17; Mθθ3.74±.15; Mϕϕ-3.31±.15; Mrθ6.76±.44; Mrϕ6.24±.13; Mθϕ0.43±.25; Best double couple: M0 9.70000×10^16 NP1:ϕs 11.00000°, δ48.00000°, λ178.00000°. NP2:ϕs 102.00000°, δ89.00000°, λ42.00000°. Principal axes: T 10.8000, Plg29.0000°, Azm335.0000°; N -2.3000, Plg48.0000°, Azm104.0000°; P -8.5000, Plg27.0000°, Azm228.0000°; Data Used: II IU IC G CN.*

NEIC ***20*** *13:18:05.2±0.7, 12°.95N×124°.32E, h36km±5km, mb5.2/61, MS5.0/1 Error ellipse: s-maj=5.4km s-min=4.3km az=71.0*

NEIC Felt [V PIVS] at Sorsogon and [IV PIVS] at Legaspi, Luzon.

TEH ***20*** *13:18:06.0, 12°.91N×124°.30E, h35km*

DJA ***20*** *13:18:16, 13°.10N×124°.38E, h125km, Mw5.4/39*

ISC 20 13:18:06.5±0.3, 13°.05N±0°.02×124°.41E±0°.03, h43km±3km, h35km±2.1km: pP-P, n480, σ1§15/474, mb5.2/187, MS4.8/56, 46C-16D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.59**	**155**	*e*P	**Pn**	**13 18 15.0**	**-3.5**
PVCP	**Virac**	**0.60**	**335**	*e*P	**Pn**	**13 18 13.8**	**-4.9**
MMPH	**Masbate**	**1.03**	**228**↑	*e*P	**Pn**	**13 18 21.5**	**-3.0**
MMPH				*i* S	**Sn**	**13 18 35.7**	**-2.0**
AUQP	**San Andres**	**1.71**	**279**	*e*P	**Pn**	**13 18 35.9**	**+2.0**
OCLP	**Ormoc**	**1.99**	**174**	*e*P	**Pn**	**13 18 37.3**	**-0.4**
GQP	**Guinayangan**	**2.10**	**294**‖	*e*P	**Pn**	**13 18 37.5**	**-1.6**
GQP	

GZH LR LR
comp=N,3μm,19.9s
GZH LR LR
comp=E,4μm,17.8s
GZH LR LR
comp=Z,5μm,21.8s
BTM Bintulu 14.87 230 P **Pn** **13 21 35.5 +1.4**
QIZ Qiongzhong 15.21 295 P **Pn** **13 21 32.6 -5.9**
QIZ S **S** **13 24 25.3 -16**
QIZ pmax pmax
comp=Z,12nm,1.9s
QIZ pmax pmax
comp=Z,280nm,5.3s
QIZ LR LR
comp=N,2μm,15.7s
QIZ LR LR
comp=E,800nm,18.1s
QIZ LR LR
comp=Z,2μm,14.5s
QIZ Qiongzhong 15.21 295 P **Pn** **13 21 38.9 +0.5**
comp=Z,2.0nm,0.5s
SBUM Sibu 16.01 230 P **Pn** **13 21 50.4 +1.6**
SBUM Sibu 16.01 230 P **Pn** **13 21 49.8 +1.0**
comp=Z,4μmcomp=Z,243nm,1.6s
NLAI Namlea 16.40 170 P **Pn** **13 21 54.5 +0.8**
comp=Z,1μmcomp=Z,113nm,1.1s
TTSI Tana Toraja 16.62 196 P **Pn** **13 21 58.8 +2.2**
comp=Z,5μmcomp=Z,665nm,0.8s
KDI Kendari 16.99 186 P **Pn** **13 22 04.6 +3.5**
comp=Z,2μmcomp=Z,55nm,1.1s
SPSI Sidrap Palu 17.52 196 P **Pn** **13 22 11.8 +4.1**
comp=Z,2μmcomp=Z,179nm,0.9s
KBKI Kotabaru 18.19 207 P **Pn** **13 22 23.1 +7.2**
comp=Z,2μmcomp=Z,86nm,1.1s
STKI Sintang 18.19 226 P **Pn** **13 22 18.0 +2.1**
comp=Z,113nm,1.9s
SSE Sheshan 18.21 351 P **Pn** **13 22 14.9 -1.2**
SSE sP sP 13 22 26.6 -5.0
SSE S **S** **13 25 40.3 -1.9**
SSE sS sS 13 25 52.5 -6.1
SSE pmax pmax
comp=Z,46nm,0.7s
SSE pmax pmax
comp=Z,920nm,7.5s
SSE LR LR
comp=N,1μm,19.5s
SSE LR LR
comp=E,3μm,19.5s
SSE LR LR
comp=Z,2μm,18.4s
BNDI Bandanaira 18.29 162 P **Pn** **13 22 24.4 +7.3**
comp=Z,310nm,1.4s
BAKI Biak 18.29 140 P **Pn** **13 22 22.5 +5.3**
comp=Z,4μmcomp=Z,291nm,1.1s
BBSI Bau Bau 18.50 186 P **Pn** **13 22 22.4 +2.6**
comp=Z,4μmcomp=Z,142nm,1.0s
BKSI Bulukumba 18.74 193 P **Pn** **13 22 22.9 +0.3**
comp=Z,2μmcomp=Z,129nm,0.8s
NJ2 Nanjing 19.59 346 *e*P **Pn** **13 22 32.8 +0.1**
NJ2 pP pP 13 22 40.8 -0.6
NJ2 sP sP 13 22 45.0 -1.9
NJ2 PP 13 22 50.4
NJ2 S **S** **13 26 08.8 -1.2**
NJ2 sS sS 13 26 20.3 -6.3
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 pmax pmax
comp=Z,820nm,9.6s
NJ2 LR LR
comp=N,2μm,17.9s
NJ2 LR LR
comp=E,3μm,14.8s
NJ2 LR LR
comp=Z,8μm,13.0s
WHN Wuhan 19.74 333 P **Pn** **13 22 34.0 -0.5**
WHN S **S** **13 26 16.4 +3.4**
WHN LR LR
comp=N,9μm,15.2s
WHN LR LR
comp=E,4μm,14.1s
WHN LR LR
comp=Z,11μm,16.7s
GUMO Guam 19.91 86 *e*P **Pn** **13 22 36.9 +0.3**
comp=Z,387nm,1.3s
GUMO Guam 19.91 86 P **Pn** **13 22 36.8 +0.1**
comp=Z,2.8nm,0.3s,baz=255,slow=6.5,SNR=6.8
GUMO LR LR 13 28 43.1
comp=Z,1μm,18.5s,baz=269,slow=32
GUMO Guam 19.91 86 *e*P **Pn** **13 22 36.9 +0.2**
GUMO pmax pmax
comp=Z,387nm,1.3s
GUMO Guam 19.91 86 P **Pn** **13 22 37.0 +0.3**
comp=Z,5μmcomp=Z,316nm,1.4s
PBKI Pangkalan Bun 20.12 220 P **P** **13 22 38.3 +1.3**
TLE Tual 20.32 155 P **P** **13 22 44.2 +5.1**
comp=Z,353nm,1.1s
GYA Guiyang 21.34 311 ⇑*i*P **P** **13 22 50.3 +0.2**
GYA pP 13 23 01.6
GYA sP sP 13 23 07.8 +1.9
GYA PP 13 23 16.8
GYA S **S** **13 26 41.4 -3.4**
GYA PcP PcP 13 26 55.0 +1.8
GYA sS sS 13 26 58.9 -2.8
GYA SS 13 27 17.8
GYA ScP ScP 13 30 27.0 0.0
GYA pmax pmax
comp=Z,40nm,1.0s,mb4.7
GYA pmax pmax
comp=Z,140nm,4.9s
GYA LR LR
comp=N,2μm,14.9s,MS4.6
GYA LR LR
comp=E,900nm,15.5s,MS4.6
GYA LR LR
comp=Z,2μm,14.3s,MS4.6
MMRI Maumere 21.65 186 P **P** **13 22 57.3 +3.9**
comp=Z,2μmcomp=Z,189nm,1.0s,mb5.5
CBIJ Chichi jima 21.73 47 LR LR 13 29 24.1
comp=Z,2μm,21.4s,MS4.5,baz=234,slow=31
ENH Enshi 22.01 324 *e*P **P** **13 22 57.0 -0.2**
comp=Z,87nm,1.0s,mb5.1
KTGM Kuala Trengganu 22.35 252 P **P** **13 23 00.3 -0.7**
KMMI Kalianget 22.50 208 P **P** **13 23 03.8 +1.3**
comp=Z,4μmcomp=Z,282nm,0.8s,mb5.7
TPI Tanjungpandan 22.88 228 P **P** **13 23 05.6 -0.9**
comp=Z,1μmcomp=Z,100nm,1.1s,mb5.2
SRBI Singaraja 22.90 204 P **P** **13 23 06.9 +0.2**
comp=Z,3μmcomp=Z,415nm,0.9s,mb5.9
KHKI Kahang-Kahang 23.00 203 P **P** **13 23 10.6 +2.8**
comp=Z,92nm,1.2s,mb5.1
MYKOM Kota Tinggi 23.23 243 P **P** **13 23 10.0 -0.3**
MYKOM Kota Tinggi 23.23 243 P **P** **13 23 09.4 -0.9**
comp=Z,1μmcomp=Z,79nm,0.8s,mb5.2
KGM Kluang 23.58 244 P **P** **13 23 12.8 -0.9**
IGBI Denpasar 23.59 203 P **P** **13 23 14.8 +1.1**
comp=Z,6μmcomp=Z,438nm,1.2s,mb5.8
KMI Kunming 23.70 304 P **P** **13 23 15.1 +0.5**
KMI pP 13 23 25.3
KMI sP sP 13 23 29.8 -1.3
KMI PP 13 23 48.8
KMI S **S** **13 27 26.1 -0.7**
KMI sS sS 13 27 41.9 -3.8
KMI SS 13 28 15.1
KMI pmax pmax
comp=Z,36nm,0.8s,mb4.8
KMI pmax pmax
comp=Z,370nm,4.4s
KMI LR LR
comp=N,1μm,23.9s,MS4.4
KMI LR LR
comp=E,1μm,23.1s,MS4.4
KMI LR LR
comp=Z,910nm,24.7s,MS4.2
GMJI Gumukmas 23.82 208 P **P** **13 23 19.5 +3.8**
comp=Z,2μmcomp=Z,92nm,1.3s,mb5.0
TIA Tai'an 23.98 345 ⇑P **S** **13 23 18.1 +1.1**
TIA S **S** **13 27 23.9 -7.1**
TIA pmax pmax
comp=Z,70nm,0.9s,mb5.1
TIA pmax pmax
comp=Z,880nm,5.1s
TIA LR LR
comp=N,2μm,20.2s,MS4.8
TIA LR LR
comp=E,2μm,17.8s,MS4.8
TIA LR LR
comp=Z,2μm,22.0s,MS4.6
NGJI Ngawi 24.02 213 P **P** **13 23 19.9 +2.3**
comp=Z,221nm,1.0s,mb5.6
SNG Songkhla 24.13 258 P **P** **13 23 16.0 -2.7**
comp=Z,140nm,0.8s,mb5.4
SJI Sawahan 24.17 212 P **P** **13 23 20.2 +1.3**
comp=Z,3μmcomp=Z,235nm,0.9s,mb5.6
KRKI Karangkates 24.18 210 P **P** **13 23 20.8 +1.7**
comp=Z,307nm,1.1s,mb5.7
PWJI Pagerwojo 24.39 212 P **P** **13 23 21.4 +0.4**
comp=Z,3μmcomp=Z,210nm,0.9s,mb5.6
INCN Inchon 24.42 4 *e*P **P** **13 23 21.6 +0.6**
JHJ Hachijo jima 2 24.42 33 LR LR 13 31 38.3
comp=Z,2μm,19.6s,MS4.6,baz=36,slow=33
KSRS Korea Array 24.51 7 P **P** **13 23 21.9 +0.1**
comp=Z,19nm,0.9s,mb4.6,baz=184,slow=10,SNR=40
KSRS PcP PcP 13 27 00.8 +1.2
comp=Z,4.5nm,1.0s,baz=179,slow=2.4,SNR=6.3
KSRS LR LR 13 32 12.5
comp=Z,3μm,20.7s,MS4.7,baz=191,slow=35
FRIM Kepong 24.55 249 P **P** **13 23 21.7 -0.8**
CHRT Chiangrai 24.56 289 P sP 13 23 40.5 +1.5
IPM Ipoh 24.61 252 P **P** **13 23 22.1 -0.9**
IPM Ipoh 24.61 252 P **P** **13 23 22.1 -0.9**
comp=Z,702nmcomp=Z,50nm,1.0s,mb5.0
KULM Kulim 24.67 254 *e*P **P** **13 23 22.9 -0.8**
comp=Z,91nm,1.2s,mb5.2
KULM Kulim 24.67 254 P **P** **13 23 23.1 -0.5**
KULM Kulim 24.67 254 P **P** **13 23 23.2 -0.4**
comp=Z,982nmcomp=Z,75nm,1.4s,mb5.0
PCJI Pacitan 24.86 213 P **P** **13 23 26.2 +0.9**
BJII Banjamegara 24.96 217 P **P** **13 23 28.4 +2.2**
comp=Z,3μmcomp=Z,163nm,1.7s,mb5.3
UGM Wanagama 24.98 214 P **P** **13 23 30.4 +4.1**
comp=Z,205nm,1.3s,mb5.5
YOGI Yogyakarta 25.02 215 P **P** **13 23 30.3 +3.5**
comp=Z,351nm,0.8s,mb5.9
CMAR Chiang Mai Arr 25.08 286 P **P** **13 23 25.9 -1.4**
comp=Z,25nm,0.9s,mb4.7,baz=96,slow=7.2,SNR=87
CMAR PcP PcP 13 27 02.2 +1.0
comp=Z,4.8nm,0.8s,baz=46,slow=0.5,SNR=12
CMAR ScP ScP 13 30 40.2 +3.2
comp=Z,1.9nm,0.8s,baz=100,slow=1.4,SNR=8.3
CMAR LR LR 13 34 15.8
comp=Z,557nm,19.4s,MS4.1,baz=97,slow=39
CMAR Chiang Mai Arr 25.08 286 P **P** **13 23 25.9 -1.4**
CMAR 13 27 02.2
CHG Chiang Mai 25.14 286 ⇑P **P** **13 23 25.6 -2.2**
comp=Z,21nm,0.8s,mb4.7
XAN Xi'an 25.20 329 P **P** **13 23 27.9 -0.3**
XAN pP pP 13 23 34.3 -5.3
XAN pmax pmax
comp=Z,8.0nm,0.7s,mb4.4
XAN pmax pmax
comp=Z,110nm,9.9s
XAN LR LR
comp=N,1μm,13.9s,MS4.5
XAN LR LR
comp=E,660nm,15.8s,MS4.5
XAN LR LR
comp=Z,900nm,16.2s,MS4.4
LEM Lembang 25.85 221 P **P** **13 23 42.5 +8.2**
comp=Z,81nm,1.2s,mb5.1
DL2 Dalian 25.87 355 ⇑P **P** **13 23 34.4 +0.2**
DL2 *e*S **S** **13 28 02.3 +1.1**
DL2 sS sS 13 28 16.1 -4.3
DL2 pmax pmax
comp=Z,20nm,1.0s,mb4.6
DL2 pmax pmax
comp=Z,220nm,5.4s
DL2 LR LR
comp=N,910nm,16.1s,MS4.7
DL2 LR LR
comp=E,2μm,14.6s,MS4.7
DL2 LR LR
comp=Z,1μm,16.4s,MS4.6
CBJI Citeko 26.05 223 P **P** **13 23 45.6 +10**
comp=Z,192nm,0.9s,mb5.6
CD2 Chengdu 26.05 316 P **P** **13 23 36.4 +0.5**
CD2 pP pP 13 23 45.8 -1.6
CD2 sP sP 13 23 49.8 -2.7
CD2 PP 13 24 18.3
CD2 PcP PcP 13 27 04.0 +0.8
CD2 S **S** **13 28 03.3 -0.9**
CD2 sS sS 13 28 18.9 -4.5
CD2 SS 13 29 11.3
CD2 pmax pmax
comp=Z,150nm,0.8s,mb5.6
CD2 pmax pmax
comp=Z,240nm,6.5s
CD2 LR LR
comp=N,4μm,23.0s,MS5.0
CD2 LR LR
comp=E,3μm,19.6s,MS5.0
CD2 LR LR
comp=Z,3μm,20.6s,MS4.8
DBJI Dramaga 26.21 223 P **P** **13 23 40.1 +2.6**
comp=Z,7μmcomp=Z,69nm,1.0s,mb5.1
CISI Cisompet, Garu 26.28 220 P **P** **13 23 39.2 +1.0**
comp=Z,100nm,1.2s,mb5.2
KLSI 26.32 229 P **P** **13 23 38.7 +0.2**
comp=Z,61nm,1.2s,mb5.0
BKNI Bangkinang 26.39 243 P **P** **13 23 40.2 +1.0**
comp=Z,111nm,1.0s,mb5.4
MAJO Matsushiro 26.47 26 *e*P **P** **13 23 39.2 -0.5**
comp=Z,164nm,1.9s,mb5.2
MAJO Matsushiro 26.47 26 *e*P **P** **13 23 39.2 -0.5**
MAJO pmax pmax
comp=Z,164nm,1.9s,mb5.2
MAT Matsushiro 26.47 26 P **P** **13 23 38.5 -1.2**
MAT S **S** **13 28 21.0 +10**
MJAR Matsushiro Arr 26.47 26 P **P** **13 23 38.2 -1.5**
MJAR PcP PcP 13 27 05.2 +1.2
MJAR LR LR 13 33 14.7
MJAR Matsushiro Arr 26.47 26 P **P** **13 23 38.2 -1.5**
comp=Z,7.6nm,0.7s,mb4.3,baz=196,slow=9.2,SNR=16
MJAR PcP PcP 13 27 05.2 +1.2
comp=Z,7.8nm,0.9s,baz=178,slow=2.0,SNR=12
MJAR LR LR 13 33 14.7
comp=Z,2μm,19.1s,MS4.7,baz=210,slow=34
MJAR Matsushiro Arr 26.47 26 P **P** **13 23 38.2 -1.5**
MJAR 13 27 05.2
MDSI Maura Dua 26.59 230 P **P** **13 23 40.9 -0.1**
comp=Z,709nmcomp=Z,30nm,0.9s,mb4.8
MMPI Merauke 26.62 143 P **P** **13 23 48.7 +7.5**
comp=Z,394nm,1.0s,mb5.9
SDSI Sungai Dareh 26.70 240 P **P** **13 23 49.4 +7.5**
comp=Z,30nm,1.1s,mb4.7
TIY Taiyuan 26.79 339 *e*P **P** **13 23 42.8 +0.3**
TIY pP pP 13 23 51.8 -2.2
TIY sP sP 13 23 56.3 -2.8
TIY S **S** **13 28 20.3 +4.6**
TIY pmax pmax
comp=Z,290nm,4.5s
TIY LR LR
comp=N,2μm,12.7s
TIY LR LR
comp=E,450nm,8.0s
TIY LR LR
comp=Z,2μm,14.6s,MS4.8
KAKA Kakadu 26.80 162 *e*P **P** **13 23 40.8 -2.0**
comp=Z,25nm,0.6s,mb4.9
KAKA Kakadu 26.80 162 *e*P **P** **13 23 40.7 -2.0**
comp=Z,112nm,0.7s,mb5.5
KAKA Kakadu 26.80 162 P **P** **13 23 41.2 -1.6**
comp=Z,703nmcomp=Z,100nm,0.7s,mb5.5
CGJI Cibinong 26.97 225 P **P** **13 23 47.4 +3.0**
comp=Z,38nm,1.7s,mb4.7
PSI Prapat 27.19 250 P **P** **13 23 45.5 -0.8**
comp=Z,19nm,0.8s,mb4.7,baz=116,slow=3.7,SNR=16
PSI PcP PcP 13 27 05.9 -0.2
comp=Z,20nm,0.9s,baz=198,slow=5.5,SNR=8.8
PSI LR LR 13 35 29.3
comp=Z,1μm,19.2s,MS4.4,baz=249,slow=39
PSI Prapat 27.19 250 P **P** **13 23 45.6 -0.8**
PSI 13 27 05.9
TSI Tuntungan 27.25 252 P **P** **13 23 49.5 +2.6**
KSI Kapahiang 27.29 234 P **P** **13 23 49.0 +1.7**
comp=Z,191nm,1.1s,mb5.5
PPI Padang Panjang 27.33 242 P **P** **13 23 48.7 +1.0**
comp=Z,1μmcomp=Z,40nm,1.1s,mb4.8
MNSI Mandailing Nat 27.45 246 P **P** **13 23 49.7 +1.0**
comp=Z,2μmcomp=Z,47nm,1.0s,mb5.0
PDSI Padang 27.51 242 P **P** **13 23 52.7 +3.5**
comp=Z,74nm,0.9s,mb5.3
BJT Baijiatuau 27.83 346 *e*P **P** **13 23 51.9 +0.1**
comp=Z,63nm,1.0s,mb5.2
BJT Baijiatuau 27.83 346 *e*P **P** **13 23 51.9 +0.1**
BJT pmax pmax
comp=Z,63nm,1.0s
BJI Beijing 27.85 346 P **P** **13 23 52.0 0.0**
BJI pP pP 13 24 01.4 -2.1
BJI sP sP 13 24 05.5 -3.1
BJI S **S** **13 28 36.8 +4.4**
BJI sS sS 13 28 53.1 +1.5
BJI pmax pmax
comp=Z,38nm,0.8s,mb5.1
BJI pmax pmax
comp=Z,470nm,3.7s
BJI LR LR
comp=N,2μm,18.4s,MS4.8
BJI LR LR
comp=E,2μm,15.5s,MS4.8
BJI LR LR
comp=Z,1μm,20.7s
SNY Shenyang 28.68 359 ⇑P **P** **13 23 59.9 +0.5**
SNY S **S** **13 28 43.3 -2.1**
SNY pmax pmax
comp=Z,42nm,1.6s,mb4.9
SNY LR LR
comp=N,2μm,16.0s,MS5.0
SNY LR LR
comp=E,2μm,14.9s,MS5.0
SNY LR LR
comp=Z,3μm,15.0s,MS5.0
KNA Kununurra 28.93 171 P **P** **13 24 01.8 0.0**
comp=Z,1μmcomp=Z,187nm,0.9s,mb5.8
LZH Lanzhou 29.47 325 *e*P **P** **13 24 07.4 +0.9**
LZH pP pP 13 24 16.1 -1.9
LZH sP sP 13 24 19.6 -3.5
LZH PP PP 13 25 02.3 -11
LZH *e*S **S** **13 28 57.6 -0.4**
LZH SS SS 13 30 36.0 -28
LZH pmax pmax
comp=Z,30nm,1.2s,mb4.9
LZH pmax pmax
comp=Z,110nm,4.8s
LZH LR LR
comp=N,3μm,14.4s,MS5.2
LZH LR LR
comp=E,3μm,15.6s,MS5.2
LZH LR LR
comp=Z,5μm,17.4s,MS5.2
HHC Hu-ho-hao-te 29.90 340 *e*P **P** **13 24 11.1 +0.9**
HHC pP pP 13 24 20.8 -0.9
HHC sP sP 13 24 25.0 -1.8
HHC PP PP 13 25 09.3 -8.9
HHC *e*S **S** **13 29 05.3 +0.7**
HHC sS sS 13 29 21.6 -2.2
HHC SS SS 13 30 43.8 -29
HHC pmax pmax
comp=Z,41nm,1.2s,mb5.0
HHC pmax pmax
comp=Z,290nm,4.8s
HHC LR LR
comp=N,2μm,12.9s,MS5.0
HHC LR LR
comp=E,2μm,13.5s,MS5.0
HHC LR LR
comp=Z,1μm,13.6s,MS4.8
BTO Baotou 30.22 338 *e*P **P** **13 24 12.6 -0.4**
CN2 Changchun 30.66 1 *e*P **P** **13 24 17.5 +0.6**
CN2 *e*S **S** **13 29 18.1 +1.7**
CN2 pmax pmax
comp=Z,20nm,1.2s,mb4.8
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,900nm,15.0s,MS4.8
CN2 LR LR
comp=E,1μm,15.0s,MS4.8
CN2 LR LR
comp=Z,900nm,18.0s,MS4.5
FITZ Fitzroy Crossi 30.97 178 *e*P **P** **13 24 16.9 -3.0**
comp=Z,18nm,0.9s,mb4.9
FITZ Fitzroy Crossi 30.97 178 LR LR 13 39 18.3
comp=Z,710nm,18.1s,MS4.4,baz=304,slow=41
PMG Port Moresby 31.75 134 *e*P **P** **13 24 25.4 -1.4**
PMG pmax pmax
comp=Z,37nm,1.2s
PMG Port Moresby 31.75 134 P **P** **13 24 30.8 +4.0**
comp=Z,46nm,1.2s,mb5.2
MDJ Mudanjiang 31.77 7 P **P** **13 24 27.4 +0.7**
MDJ pP pP 13 24 36.3 -1.9
MDJ sP sP 13 24 40.1 -3.2
MDJ S **S** **13 29 36.3 +2.5**
MDJ sS sS 13 29 51.4 -1.7
MDJ pmax pmax
comp=Z,25nm,1.2s,mb4.9
MDJ pmax pmax
comp=Z,280nm,4.7s
MDJ LR LR
comp=N,2μm,20.9s,MS4.7
MDJ LR LR
comp=E,840nm,20.4s,MS4.7
MDJ LR LR
comp=Z,2μm,22.6s,MS4.7
MDJ Mudanjiang 31.77 7 *e*P **P** **13 24 27.3 +0.6**
comp=Z,47nm,1.1s,mb5.2
COEN Coen 32.64 145 *e*P **P** **13 24 32.6 -2.0**
comp=Z,311nm,0.9s,mb6.2
COEN Coen 32.64 145 P **P** **13 24 32.8 -1.8**
comp=Z,173nm,1.0s,mb5.9
SHL Shillong 33.03 297 ⇑*i*P **P** **13 24 37.0 -1.0**
GTA Gaotai 34.08 325 ⇑P **P** **13 24 47.4 +0.5**
GTA pP pP 13 24 59.0 +0.5
GTA sP sP 13 25 02.4 -1.2
GTA PcP PcP 13 27 25.4 +1.6
GTA S **S** **13 30 11.3 +1.5**
GTA sS sS 13 30 27.4 -1.7
GTA pmax pmax
comp=Z,18nm,1.9s,mb4.7
GTA pmax pmax
comp=Z,270nm,4.5s
GTA LR LR
comp=N,970nm,16.3s,MS4.9
GTA LR LR
comp=E,2μm,17.2s,MS4.9
GTA LR LR
comp=Z,2μm,16.6s,MS4.9
WRA Warramunga Arr 34.20 163 P **P** **13 24 46.0 -2.1**
comp=Z,12nm,0.8s,mb4.9,baz=342,slow=9.3,SNR=79
WRA PcP PcP 13 27 23.1 -1.3
comp=Z,5.3nm,0.6s,baz=339,slow=3.0,SNR=9.5
WRA S **S** **13 30 08.3 -3.7**
comp=Z,3.6nm,0.8s,baz=344,slow=15,SNR=6.2
WRA ScP ScP 13 31 08.6 +2.5
comp=Z,2.5nm,0.9s,baz=358,slow=4.0,SNR=4.8
WRA Warramunga Arr 34.20 163 P **P** **13 24 46.0 -2.1**
WRA 13 27 23.1
WRA S **S** **13 30 08.3 -3.7**
MBWA Marble Bar 34.30 188 *e*P **P** **13 24 45.8 -3.1**
MBWA Marble Bar 34.30 188 *e*P **P** **13 24 46.0 -2.9**
comp=Z,7.4nm,0.6s,mb4.8
LSA Lhasa 34.96 304 P **P** **13 24 55.1 +0.4**
LSA S **S** **13 30 15.6 -8.1**
LSA LR LR
comp=Z,720nm,21.2s,MS4.4
LSA Lhasa 34.96 304 *e*P **P** **13 24 55.1 +0.4**
comp=Z,22nm,0.6s,mb5.3
LSA Lhasa 34.96 304 *e*P **P** **13 24 55.1 +0.4**
LSA pmax pmax
comp=Z,22nm,0.6s,mb5.3
YUK Yuzh-Kuril'sk 35.95 27 ⇓*i*P **P** **13 25 01.7 -1.2**
YUK *i* 13 26 23.2
YUK *i* SS SS 13 32 57.5 -19
YUK MLR MLR
comp=Z,770nm,19.0s,MS4.5
YUK MLR MLR
comp=N,510nm,20.0s,MS4.5
YUK MLR MLR
comp=E,780nm,20.0s,MS4.5
HIA Hailar 36.32 355 *e*P **P** **13 25 06.0 0.0**
comp=E,6.3nm,0.6s,mb4.7
HIA Hailar 36.32 355 *e*P **P** **13 25 06.0 0.0**
HIA pmax pmax
comp=Z,6.0nm,0.6s
HABR Khabarovsk 36.41 12 *e*P **P** **13 25 05.7 -1.1**
HABR *e**PP pP 13 25 15.0 -3.5
HABR *SP sP 13 25 19.4 -4.1
HABR 13 27 29.2

HABR eS **S** **13 30 46.7 +1.4**
HABR e*SS sS 13 31 03.1 -1.7
HABR eSSS 13 33 36.9
HABR e 13 35 18.7
HABR pmax pmax
comp=E,119nm,2.9s
HABR pmax pmax
comp=Z,122nm,2.9s,mb5.3
HABR pmax pmax
comp=N,46nm,2.1s
HABR MLR MLR
comp=Z,1µm,18.0s,MS4.6
KLR Kul'dur 36.58 8 eP **P** **13 25 04.0 -4.3**
KLR pmax pmax
comp=Z,50nm,1.8s,mb5.0
KLR MLR MLR
comp=N,1µm,13.5s,MS4.9
KLR MLR MLR
comp=E,1µm,13.5s,MS4.9
KLR MLR MLR
comp=Z,1µm,13.5s,MS4.9
TAPN Taplejung 37.11 298 eP **P** **13 25 12.8 -0.3**
comp=Z,60nm,0.8s,mb5.5
YSS Yuzh-Sakhalins 37.15 21 eP **P** **13 25 12.9 -0.2**
comp=Z,18nm,0.9s,mb4.9
YSS Yuzh-Sakhalins 37.15 21 eP **P** **13 25 13.0 -0.1**
YSS pmax pmax
comp=Z,17nm,0.9s,mb4.9
ODAN Odare 37.26 297 eP **P** **13 25 13.8 -0.6**
comp=Z,114nm,0.6s,mb5.8
ULN Ulaanbaatar 37.61 341 eP **P** **13 25 17.9 +0.8**
comp=Z,44nm,0.9s,mb5.2
ULN Ulaanbaatar 37.61 341 eP **P** **13 25 17.9 +0.8**
ULN pmax pmax
comp=Z,44nm,0.9s,mb5.2
ULN Ulaanbaatar 37.61 341 P **P** **13 25 18.0 +0.9**
comp=Z,708nmcomp=Z,51nm,0.9s,mb5.2
ULN Ulaanbaatar 37.61 341 P **P** **13 25 18.3 +1.3**
SNR=27
ASAR Alice Springs 37.65 166 P **P** **13 25 16.2 -1.4**
comp=Z,15nm,0.5s,mb5.0,baz=343,slow=6.7,SNR=200
ASAR PcP PcP 13 27 33.1 -1.4
comp=Z,4.3nm,0.6s,baz=348,slow=2.6,SNR=6.0
ASAR S **S** **13 31 02.7 -2.0**
comp=Z,3.0nm,0.8s,baz=0.6,slow=18,SNR=8.8
ASAR ScP ScP 13 31 20.4 +1.7
comp=Z,6.1nm,0.9s,baz=15,slow=3.8,SNR=13
SONM Songino Array 37.80 340 P **P** **13 25 19.1 +0.5**
comp=Z,8.3nm,0.7s,mb4.6,baz=161,slow=9.7,SNR=47
SONM LR LR 13 41 31.6
comp=Z,1µm,19.9s,MS4.8,baz=152,slow=37
RAMN Ramite 37.97 297 eP **P** **13 25 20.1 -0.3**
comp=Z,113nm,0.7s,mb5.7
JIRN Jiri 38.50 298 eP **P** **13 25 24.7 -0.1**
comp=Z,114nm,0.7s,mb5.7
GUN Gumba 38.82 298 eP **P** **13 25 27.3 -0.3**
comp=Z,191nm,0.9s,mb5.8
PKI Pulchoki 39.15 298 eP **P** **13 25 29.4 -0.9**
comp=Z,90nm,0.9s,mb5.5
PKIN Phulchoki 39.16 298 eP **P** **13 25 29.5 -0.9**
comp=Z,56nm,0.7s,mb5.4
KKN Kakani 39.31 298 eP **P** **13 25 30.6 -1.0**
comp=Z,82nm,1.0s,mb5.4
CTA Charters Tower 39.32 147 eP **P** **13 25 31.1 -0.6**
comp=Z,16nm,1.1s,mb4.7
CTAO Charters Tower 39.32 147 eP **P** **13 25 31.1 -0.6**
comp=Z,29nm,1.2s,mb4.9
CTAO Charters Tower 39.32 147 eP **P** **13 25 31.1 -0.6**
CTAO pmax pmax
comp=Z,29nm,1.2s,mb4.9
CTAO Charters Tower 39.32 147 P **P** **13 25 31.1 -0.6**
DMN Daman 39.42 298 eP **P** **13 25 31.6 -0.9**
comp=Z,86nm,1.0s,mb5.4
VIS Vishakhapatnam 39.83 282 ePKP **P** **13 25 33.2 -2.9**
MEEK Meekatharra 39.84 188 eP **P** **13 25 33.2 -2.8**
GKN Gorkha 39.91 298 eP **P** **13 25 35.5 -1.1**
comp=Z,92nm,0.9s,mb5.5
DANN Dangsing 40.75 298 eP **P** **13 25 42.0 -1.5**
comp=Z,114nm,0.9s,mb5.5
KOLN Koldanda 40.75 297 eP **P** **13 25 42.8 -0.8**
comp=Z,64nm,0.8s,mb5.3
ZAK Zakamensk 41.04 339⇓ *i* P **P** **13 25 45.1 -0.5**
ZAK *e* 13 27 22.9
ZAK pmax pmax
comp=Z,4.0nm,1.0s,mb4.0
TLY Talaya 42.03 341 eP **P** **13 25 54.4 +0.7**
comp=Z,21nm,0.9s,mb4.8
TLY Talaya 42.03 341 eP **P** **13 25 54.0 +0.4**
TLY *e* 13 27 48.0
TLY pmax pmax
comp=Z,16nm,0.8s,mb4.7
TLY MLR MLR
comp=Z,776nm,17.0s,MS4.7
TLY Talaya 42.03 341 P **P** **13 25 54.2 +0.6**
comp=Z,121nm,0.6s,mb5.7,SNR=6.1
TLY Talaya 42.03 341 P **P** **13 25 54.7 +1.0**
SNR=8.7
IRK Irkutsk 42.31 342 eP **P** **13 25 56.3 +0.3**
IRK *e* 13 27 45.4
IRK pmax pmax
comp=Z,47nm,2.1s,mb4.8
MORW Morawa 42.64 191 eP **P** **13 25 56.6 -2.3**
MOY Mondy 42.91 339 eP **P** **13 26 02.0 +1.2**
MOY pmax pmax
comp=Z,77nm,1.9s,mb5.1
MDRS Chennai 42.98 275 ePKP **P** **13 26 00.8 -1.1**
MDRS *ex* SS 13 35 37.2 -0.6
CLNS Chul'man 43.70 0*c i*P **P** **13 26 08.0 +0.9**
CLNS *e**PP pP 13 26 13.7 -5.3
CLNS *e*SSS 13 35 50.8
CLNS pmax pmax
comp=Z,36nm,1.5s,mb4.9
CLNS pmax pmax
comp=N,27nm,1.2s
CLNS pmax pmax
comp=E,6.0nm,0.7s
CLNS MLR MLR
comp=N,526nm,14.0s,MS4.7
CLNS MLR MLR
comp=Z,775nm,16.0s,MS4.7
CLNS MLR MLR
comp=E,398nm,17.0s,MS4.7
FORT Forrest 43.71 175 eP **P** **13 26 04.9 -2.6**
comp=E,45nm,0.6s,mb5.4
WMQ Urumqi 43.93 321 P **P** **13 26 11.0 +1.8**
WMQ pP pP 13 26 20.9 -0.2
WMQ sP sP 13 26 24.8 -1.3
WMQ PP PP 13 27 55.3 +3.3
WMQ ScP ScP 13 31 44.6 +1.5
WMQ S **S** **13 32 40.3 +2.5**
WMQ sS sS 13 32 56.8 -0.8
WMQ SS SS 13 35 49.4 -6.1
WMQ ScS ScS 13 36 04.8 +0.2
WMQ pmax pmax
comp=Z,39nm,1.4s,mb4.9
WMQ pmax pmax
comp=Z,260nm,3.8s
WMQ LR LR
comp=N,1µm,18.0s,MS5.0
WMQ LR LR
comp=E,1µm,18.0s,MS5.0
WMQ LR LR
comp=Z,1µm,18.0s,MS4.9
KMBL Kambalda 44.22 183 eP **P** **13 26 08.8 -2.8**
comp=Z,241nm,0.9s,mb5.9
HYB Hyderabad 44.38 282 eP **P** **13 26 13.0 -0.2**
HYB Hyderabad 44.38 282 *i* P **P** **13 26 13.0 -0.2**
SKR Severo-Kuril's 45.53 28 eP **P** **13 26 22.5 +0.7**
SKR *e*S **S** **13 33 05.0 +4.1**
SKR *e*SSS 13 37 24.0
SKR pmax pmax
comp=N,60nm,0.5s
SKR pmax pmax
comp=E,60nm,0.5s
SKR pmax pmax
comp=Z,80nm,0.5s,mb5.9
SKR smax
comp=E,1µm,14.0s
SKR MLR MLR
comp=Z,1µm,20.0s,MS4.8
BHPL Bhopal 45.62 290 ePKP **P** **13 26 20.9 -2.0**
EIDS Eidsvold 46.19 146 eP **P** **13 26 26.3 -1.0**
comp=Z,33nm,0.9s,mb5.3
NWAO Narrogin (SRO) 46.22 188 eP **P** **13 26 24.9 -2.6**
comp=Z,18nm,0.6s,mb5.2
NWAO Narrogin (SRO) 46.22 188 eP **P** **13 26 24.9 -2.6**
NWAO pmax pmax
comp=Z,18nm,0.6s
STKA Stephens Creek 47.61 160 eP **P** **13 26 37.3 -1.0**
comp=Z,10nm,1.0s,mb4.8
STKA Stephens Creek 47.61 160 P **P** **13 26 37.4 -0.9**
comp=Z,30nm,0.7s,mb5.4,baz=333,slow=7.6,SNR=35
STKA S **S** **13 33 32.3 +1.4**
comp=Z,7.0nm,1.0s,baz=324,slow=8.7,SNR=4.1
PET Petropavlovsk 48.29 27 eP **P** **13 26 44.2 +0.9**
comp=Z,14nm,0.6s,mb5.2
PET Petropavlovsk 48.29 27*c i*P **P** **13 26 44.4 +1.1**
PET *e* 13 28 36.0
PET *e*S **S** **13 33 42.3 +2.2**
PET pmax pmax
comp=Z,31nm,0.6s,mb5.5
PET pmax pmax
comp=Z,200nm,13.5s
PET pmax pmax
comp=Z,200nm,11.5s
PET MLR MLR
comp=Z,500nm,20.0s,MS4.5
PET MLR MLR
comp=Z,500nm,14.0s
AJM Ajmer 48.42 294 ePKP **P** **13 26 43.3 -1.5**
KAD Karad 48.56 282 ePKP **P** **13 26 43.8 -2.1**
KAD AMb AMB 13 26 46.9
comp=Z,49nm,1.6s,mb5.3
MK31 Makanchi Array 48.73 322 eP **P** **13 26 47.4 +0.5**
MK31 Makanchi Array 48.73 322 *i* P **P** **13 26 47.2 +0.4**
MK31 pmax pmax
comp=Z,89nm,0.8s,mb5.8
MKAR Makanchi Array 48.73 322 P **P** **13 26 47.3 +0.5**
comp=Z,68nm,0.8s,mb5.7,baz=120,slow=8.4,SNR=348
MKAR PcP PcP 13 28 12.5 +1.1
comp=Z,8.9nm,0.8s,baz=161,slow=3.9,SNR=2.9
MKAR LR LR 13 48 49.0
comp=Z,899nm,20.6s,MS4.7,baz=118,slow=38
MKAR Makanchi Array 48.73 322 P **P** **13 26 47.3 +0.5**
MKAR 13 28 12.5
POO Poona 48.84 283 ePKP **P** **13 26 46.0 -2.1**
POO AMb AMB 13 26 50.5
comp=Z,86nm,1.2s,mb5.6
YAK Yakutsk 49.06 3*c i*P **P** **13 26 48.8 -0.3**
YAK *e* 13 28 11.8
YAK *e* 13 28 42.8
YAK *e*S **S** **13 33 46.8 -3.8**
YAK pmax pmax
comp=Z,28nm,0.9s,mb5.3
YAK pmax pmax
comp=N,14nm,1.3s
YAK pmax pmax
comp=E,5.0nm,1.3s
YAK pmax pmax
comp=Z,94nm,3.5s
YAK pmax pmax
comp=E,31nm,3.0s
YAK pmax pmax
comp=N,93nm,3.8s
YAK smax
comp=N,77nm,3.3s
YAK smax
comp=E,32nm,3.0s
YAK MLR MLR
comp=Z,1µm,21.0s,MS4.8
YAK MLR MLR
comp=N,1µm,24.0s,MS4.9
YAK MLR MLR
comp=E,604nm,20.0s,MS4.9
KSH Kashi 50.04 311⇓ P **P** **13 26 59.3 +2.3**
KSH *e*pP pP 13 27 09.3 +0.3
KSH *e*sP sP 13 27 12.9 -1.1
KSH *e*S **S** **13 34 06.8 +1.7**
KSH *e*ScS ScS 13 36 42.0 -2.9
KSH pmax pmax
comp=Z,19nm,1.3s,mb5.0
KSH pmax pmax
comp=Z,55nm,2.9s,mb5.1
KSH LR LR
comp=N,1µm,20.9s
KSH LR LR
comp=E,520nm,13.7s
KSH LR LR
comp=Z,740nm,14.6s
ARMA Armidale 50.53 149 eP **P** **13 27 00.9 +0.2**
ARMA Armidale 50.53 149 eP **P** **13 27 00.7 0.0**
comp=Z,47nm,0.9s,mb5.4
ULHL Ulahol 50.74 314 P **P** **13 27 03.3 +1.1**
SNR=16
ZAA0 Zalesovo Array 51.33 331 eP **P** **13 27 06.2 -0.2**
ZALV Zalesovo Beam 51.33 331 P **P** **13 27 06.2 -0.3**
comp=Z,19nm,0.6s,mb5.2,baz=118,slow=7.8,SNR=98
ZALV PcP PcP 13 28 20.2 -0.6
comp=Z,5.6nm,0.8s,baz=108,slow=4.7,SNR=2.0
ZALV LR LR 13 50 27.7
comp=Z,673nm,18.1s,MS4.7,baz=120,slow=38
ZALV Zalesovo Beam 51.33 331 P **P** **13 27 06.2 -0.2**
ZALV 13 28 20.2
KZA Kyzart 51.38 314 P **P** **13 27 08.7 +1.7**
SNR=31
TKM2 Tokmak 2 51.42 315 P **P** **13 27 08.2 +0.8**
SNR=20
KBK Karagaybulak 51.78 314 P **P** **13 27 11.3 +1.3**
SNR=15
UCH Uchtor 51.95 314 P **P** **13 27 13.0 +1.7**
SNR=62
CHMS Chumysh 52.03 315 P **P** **13 27 12.4 +0.5**
SNR=8.4
FRU Bishkek 52.07 315 eP **P** **13 27 12.0 -0.2**
FRU pmax pmax
comp=Z,50nm,1.8s,mb5.1
AAK Ala-Archa 52.09 314*ce*P **P** **13 27 13.0 +0.7**
AAK pmax pmax
comp=Z,16nm,1.7s,mb4.7
AAK Ala-Archa 52.09 314 P **P** **13 27 14.9 +2.6**
comp=Z,60nm,1.2s,mb5.4,SNR=5.4
AAK Ala-Archa 52.09 314 P **P** **13 27 13.6 +1.2**
SNR=14
USP Ospenovka 52.30 315 P **P** **13 27 14.4 +0.6**
SNR=13
YNG Young 52.31 155 eP **P** **13 27 14.0 0.0**
comp=Z,14nm,0.8s,mb5.0
AML Almayashu 52.49 313 P **P** **13 27 16.8 +1.4**
SNR=29
EKS2 Erkin-Say 52.60 314 P **P** **13 27 17.1 +1.0**
SNR=22
NVS Novosibirsk 52.61 331 *i* P **P** **13 27 15.7 -0.2**
NVS *e* 13 29 17.8
NVS pmax pmax
comp=N,126nm,2.0s
NVS pmax pmax
comp=E,133nm,2.0s
NVS pmax pmax
comp=Z,165nm,2.0s,mb5.6
KURK Kurchatov 52.76 325 P **P** **13 27 17.0 -0.2**
comp=Z,708nm,0.8s,SNR=16
KURK Kurchatov 52.76 325 eP **P** **13 27 16.2 -1.0**
comp=Z,115nm,0.9s,mb5.8
KURK Kurchatov 52.76 325*c i*P **P** **13 27 17.5 +0.3**
KURK pmax pmax
comp=Z,248nm,1.7s,mb5.9
KURK Kurchatov 52.76 325 P **P** **13 27 18.0 +0.8**
SNR=57
CAN Canberra 53.45 155 eP **P** **13 27 22.5 +0.1**
comp=Z,20nm,0.8s,mb5.1
CAN Canberra 53.45 155 eP **P** **13 27 22.5 +0.2**
CAN pmax pmax
comp=Z,20nm,0.8s,mb5.1
CNB Canberra Magne 53.59 155 eP **P** **13 27 23.5 +0.1**
SEY Seymchan 53.62 15*ce*P **P** **13 27 24.8 +1.6**
DZM Mont Dzumac 54.01 130 eS **S** **13 35 06.2 +6.2**
comp=Z,138nm,31.6s
DZM *e*LQ 13 40 59.9
comp=Z,1µm,32.5s
DZM *e*LR LR 13 43 15.9
comp=Z,576nm,24.6s
DZM Mont Dzumac 54.01 130 eP **P** **13 27 27.1 +0.4**
comp=Z,23nm,0.8s,mb5.2
TOO Toolangi 54.10 159 eP **P** **13 27 26.9 -0.2**
KBL Kabul 54.28 303 eP **P** **13 27 28.0 -0.6**
comp=Z,56nm,1.1s,mb5.4
KBL Kabul 54.28 303 eP **P** **13 27 28.0 -0.6**
KBL pmax pmax
comp=Z,56nm,1.1s,mb5.4
KK31 Karatay Array 55.02 314 *i* P **P** **13 27 33.6 -0.2**
KK31 pmax pmax
comp=Z,14nm,0.7s,mb5.1
BVA0 Borovoye Array 58.36 325 *i* P **P** **13 27 57.1 -0.2**
BVA0 pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
BVAR Borovoye Array 58.36 325 P **P** **13 27 57.2 -0.1**
comp=Z,24nm,0.6s,mb5.4,baz=129,slow=8.4,SNR=84
BVAR PcP PcP 13 28 48.1 +0.2
comp=Z,12nm,0.9s,baz=120,slow=4.2,SNR=3.7
BRVK Borovoye 58.43 325 P **P** **13 27 58.0 +0.2**
comp=Z,466nm,0.7s,SNR=45
BRVK Borovoye 58.43 325 eP **P** **13 27 58.1 +0.3**
comp=Z,51nm,0.7s,mb5.7
BRVK Borovoye 58.43 325*ce*P **P** **13 27 58.0 +0.2**
BRVK pmax pmax
comp=Z,72nm,0.8s,mb5.8
BRVK Borovoye 58.43 325 P **P** **13 27 58.5 +0.7**
SNR=37
TIXI Tiksi 58.63 2 eP **P** **13 27 58.5 -0.5**
comp=Z,18nm,0.9s,mb5.1
TIXI Tiksi 58.63 2*c i*P **P** **13 27 58.4 -0.5**
TIXI *e*S **S** **13 36 02.3 +2.4**
TIXI pmax pmax
comp=Z,54nm,1.6s,mb5.3
TIXI MLR MLR
comp=Z,884nm,17.0s,MS5.0
ZRNK Zerenda 59.11 325 *i* P **P** **13 28 02.6 +0.1**
ZRNK pmax pmax
comp=Z,37nm,0.5s,mb5.7
MSVF Nonsavu 61.13 119 eP **P** **13 28 19.5 +2.6**
comp=Z,40nm,1.0s,mb5.5
BILL Bilibino 61.26 17⇑ eP **P** **13 28 17.5 +0.5**
BILL *e* 13 30 30.9
BILL *e*S **S** **13 36 32.4 -1.3**
BILL pmax pmax
comp=Z,101nm,2.5s,mb5.5
BILL MLR MLR
comp=Z,400nm,17.0s,MS4.6
IMYA Miami 61.74 304 eP **P** **13 28 21.4 +0.6**
ISRO Mashad 62.25 304 eP **P** **13 28 24.9 +0.7**
IMOG Moghan 62.34 304 eP **P** **13 28 25.9 +1.0**
IAKL Akhelmad 62.84 305 eP **P** **13 28 28.7 +0.5**
IEMG Emamgholi 62.98 305 eP **P** **13 28 30.7 +1.6**
ABKT Ailbek 63.44 306 P **P** **13 28 32.6 +0.5**
comp=Z,227nm,1.0s,mb6.3,SNR=9.5
ISFR Sfrayin 63.48 305 eP **P** **13 28 33.6 +1.2**
AB31 Akbulak array 63.60 319 *i* P **P** **13 28 32.6 -0.4**
AB31 pmax pmax
comp=Z,31nm,0.6s,mb5.5
ABKAR Akbulak array 63.60 319 eP **P** **13 28 32.7 -0.3**
comp=Z,26nm,0.6s,mb5.5
SVE Sverdlovsk 64.91 327⇓ eP **P** **13 28 41.5 +0.1**
SVE *e*S **S** **13 37 24.5 +4.8**
SVE *e*SS SS 13 41 32.1 +0.5
SVE *e*SSS 13 44 30.0
SVE pmax pmax
comp=Z,125nm,0.9s,mb5.9
SVE MLR MLR
comp=Z,791nm,20.0s,MS4.9
AKTK Aktyubinsk 65.04 320 P **P** **13 28 42.0 -0.4**
AKTO Aktyubinsk 65.04 320 P **P** **13 28 42.0 -0.4**
comp=Z,16nm,0.6s,mb5.2,baz=95,slow=9.0,SNR=63
NIKO Nikolski 65.70 38 eP **P** **13 28 46.8 +0.2**
comp=Z,58nm,0.7s,mb5.7
ARU Arti 65.92 326 eP **P** **13 28 47.2 -0.7**
comp=Z,90nm,0.6s,mb6.0
ARU Arti 65.92 326*d i*P **P** **13 28 47.2 -0.7**
ARU *e* 13 29 16.4
ARU *e* 13 31 12.9
ARU S S 13 37 34.5 +2.4
ARU SS SS 13 41 44.1 -3.3
ARU pmax pmax
comp=Z,74nm,0.6s,mb5.9
ARU MLR MLR
comp=Z,1µm,17.0s,MS5.1
ARU Arti 65.92 326 P **P** **13 28 47.0 -0.9**
comp=Z,938nm,0.6s,SNR=31
IGLO Ghaloghah 66.80 304 eP **P** **13 28 55.2 +1.2**
UNV Unalaska Valle 67.24 37 eP **P** **13 28 56.6 +0.2**
comp=Z,23nm,0.7s,mb5.3
ISRV Sarvestan 67.53 297 eP **P** **13 28 58.8 +0.1**
SOKR Solikamsk 67.55 329*c i*P **P** **13 28 57.8 -0.4**
SOKR S S 13 37 48.5 -3.1
SOKR pmax pmax
comp=Z,20nm,0.9s,mb5.2
SOKR MLR MLR
comp=Z,820nm,15.0s,MS5.1
IPAR Pars 67.57 297 eP **P** **13 28 59.8 +0.8**
ISFB Sefidab 68.11 302 eP **P** **13 29 02.0 -0.3**
IDMV Damavand 68.26 303 eP **P** **13 29 03.2 0.0**
RPZ Rata Peaks 70.69 146 eP **P** **13 29 17.2 -0.7**
comp=Z,34nm,1.0s,mb5.2
MAK Makhachkala 71.68 311 eP **P** **13 29 24.0 0.0**
MAK *e*S S 13 38 42.2 +1.4
MAK *e*SS SS 13 43 11.5 -5.3
MAK pmax pmax
comp=Z,159nm,1.3s,mb5.8
MAK MLR MLR
comp=Z,773nm,24.0s,MS4.9
UMR Umm Al-Rimmam 72.22 297 eP **P** **13 29 26.6 -0.9**
UMR AMb AMB 13 29 28.6
comp=Z,128nm,1.1s,mb5.8
KBD Kabd 72.27 297 eP **P** **13 29 26.9 -0.9**
KBD AMb AMB 13 29 28.6
comp=Z,90nm,1.0s,mb5.6
MIB Mutribah 72.52 297 eP **P** **13 29 28.4 -1.0**
MIB AMb AMB 13 29 30.3
comp=Z,149nm,0.9s,mb5.9
ISHB Shabestar 73.30 306 eP **P** **13 29 34.8 +1.0**
MRIV Mauritius Mete 73.66 244 eP **P** **13 29 32.5 -3.7**
TTA Tatalina 73.73 28 eP **P** **13 29 37.0 +1.1**
comp=Z,35nm,1.3s,mb5.1
TTA Tatalina 73.73 28 eP **P** **13 29 37.0 +1.2**
TTA pmax pmax
comp=Z,35nm,1.3s,mb5.1
SVW2 Sparrevohn 73.85 30 eP **P** **13 29 37.2 +0.7**
comp=Z,13nm,0.8s,mb4.9
BHD Baghdad 74.71 301 *ex* x 13 29 43.0
BHD *ex* x 13 39 13.6
OHAK Old Harbor 74.97 34 eP **P** **13 29 43.5 +0.3**
comp=Z,17nm,0.6s,mb5.1
KIV Kislovodsk 75.14 312 eP **P** **13 29 44.1 -0.3**
comp=Z,34nm,1.0s,mb5.2
KIV Kislovodsk 75.14 312⇓ eP **P** **13 29 44.7 +0.3**
KIV *i* S S 13 39 24.7 +4.7
KIV pmax pmax
comp=Z,23nm,1.0s,mb5.1
KIV MLR MLR
comp=Z,700nm,18.0s,MS5.0
KIV Kislovodsk 75.14 312 P **P** **13 29 45.4 +1.0**
SNR=9.6
RSO Redoubt South 75.22 31 eP **P** **13 29 44.5 0.0**
KDAK Kodiak Island 75.35 33 P **P** **13 29 46.0 +0.7**
comp=Z,130nm,0.8s,mb5.9,SNR=6.1
KDAK Kodiak Island 75.35 33 eP **P** **13 29 45.8 +0.5**
comp=Z,14nm,0.7s,mb5.0
KDAK Kodiak Island 75.35 33 eP **P** **13 29 45.8 +0.5**
KDAK pmax pmax
comp=Z,14nm,0.7s,mb5.0
VRHR Novokhopersk 75.45 320 eP **P** **13 29 44.7 -1.3**
VRHR pmax pmax
comp=Z,20nm,0.6s,mb5.2
VRHR pmax pmax
comp=N,5.0nm,0.8s
VRHR pmax pmax
comp=E,6.0nm,0.4s
PPLA Purkeypile 75.48 28 eP **P** **13 29 46.9 +0.9**
comp=E,30nm,1.3s,mb5.1
BPAW Bear Paw Mtn. 76.01 27 eP **P** **13 29 50.1 +1.2**
comp=E,60nm,0.8s,mb5.6
KLMR Klimovskoe 76.23 330 eP **P** **13 29 48.6 -1.7**
KLMR *e*S S 13 39 22.7 -8.6
KLMR pmax pmax
comp=Z,87nm,1.7s,mb5.4
KLMR pmax pmax
comp=Z,48nm,5.2s
KLMR MLR MLR
comp=Z,1µm,17.0s,MS5.2
COLD Coldfoot 76.28 24 eP **P** **13 29 51.9 +1.5**
comp=Z,18nm,0.8s,mb5.1
TRF Thorofare Moun 76.33 27 eP **P** **13 29 51.6 +0.7**
comp=Z,16nm,0.8s,mb5.0
RC01 Rabbit Creek A 76.69 30 eP **P** **13 29 52.5 -0.4**
comp=Z,8.6nm,0.6s,mb4.9
SEW Seward 76.88 31 eP **P** **13 29 53.9 0.0**
comp=Z,24nm,0.8s,mb5.2
MCK McKinley 76.93 27 eP **P** **13 29 54.5 +0.3**
comp=Z,48nm,0.7s,mb5.5

MCK	**McKinley**	**76.93**	**27**	*e*P		**P**	**13 29 54.5**	**+0.3**	
MCK					pmax	pmax			
	comp=Z,48nm,0.7s,mb5.5								
PMR	**Palmer**	**76.95**	**29**	*e*P		**P**	**13 29 54.6**	**+0.3**	
	comp=Z,27nm,1.2s,mb5.0								
PMR	**Palmer**	**76.95**	**29**	*e*P		**P**	**13 29 54.6**	**+0.3**	
PMR					pmax	pmax			
	comp=Z,27nm,1.2s,mb5.0								
VSR	**Storozhevoye**	**76.99**	**320**	*e*P		**P**	**13 29 53.5**	**-1.3**	
VSR					pmax	pmax			
	comp=Z,30nm,1.0s,mb5.2								
VSR					pmax	pmax			
	comp=N,10.0nm,1.5s								
VSR					pmax	pmax			
	comp=E,10.0nm,0.6s								
COLA	**College**	**77.33**	**26**	*e*P		**P**	**13 29 56.4**	**0.0**	
	comp=E,8.1nm,0.8s,mb4.7								
COLA	**College**	**77.33**	**26**	*e*P		**P**	**13 29 56.4**	**0.0**	
COLA					pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.7								
MOS	**Moscow**	**77.53**	**325**	*e*P		**P**	**13 29 56.3**	**-1.4**	
MOS					pmax	pmax			
	comp=Z,43nm,0.8s,mb5.4								
ILAR	**Eielson Array**	**77.75**	**26**	P		**P**	**13 29 57.9**	**-0.9**	
	comp=Z,5.1nm,0.8s,mb4.5,baz=263,slow=3.6,SNR=52								
ILAR					PKKPbc	PKKPbc	13 49 00.0	-3.0	
	comp=Z,0.4nm,0.7s,baz=117,slow=2.1,SNR=5.0								
ILAR					LR	LR	14 03 27.5		
	comp=Z,284nm,21.3s,MS4.6,baz=166,slow=35								
OBN	**Obninsk**	**78.19**	**324**⇓	*e*P		**P**	**13 30 00.6**	**-0.8**	
OBN				*e*			13 32 57.4		
OBN				*i* S		S	13 39 53.7	+0.8	
OBN					pmax	pmax			
	comp=Z,36nm,1.7s,mb5.0								
OBN					MLR	MLR			
	comp=Z,600nm,19.0s,MS4.9								
APA	**Apatity**	**78.43**	**337**⇓	*i*P		**P**	**13 29 54.0**	**-8.5**	
APA				*i*		pP	13 30 05.6	-10	
APA					pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.6								
APA					MLR	MLR			
	comp=Z,800nm,17.0s,MS5.1								
DIV	**Divide**	**78.60**	**30**	*e*P		**P**	**13 30 04.3**	**+0.7**	
	comp=Z,28nm,0.7s,mb5.3								
ANN	**Anapa**	**78.81**	**314**	*e*P		**P**	**13 30 02.7**	**-2.3**	
ANN				*e**PP		pP	13 30 14.6	-3.2	
ANN				*e*S		S	13 39 57.8	-2.1	
ANN					pmax	pmax			
	comp=Z,23nm,0.8s,mb5.2								
MALT	**Malatya**	**78.92**	**307**	*e*P		**P**	**13 30 07.0**	**+1.2**	
	comp=Z,12nm,1.0s,mb4.8								
MALT	**Malatya**	**78.92**	**307**	*e*P		**P**	**13 30 07.0**	**+1.2**	
MALT					pmax	pmax			
	comp=Z,12nm,1.0s,mb4.8								
MALT	**Malatya**	**78.92**	**307**⇑	*i*P		**P**	**13 30 06.7**	**+0.9**	
BMRM	**Bremner River**	**79.19**	**30**	*e*P		**P**	**13 30 05.9**	**-0.9**	
	comp=Z,30nm,1.2s,mb5.1								
ATD	**Arta Tunnel**	**79.36**	**279**	P		**P**	**13 30 08.3**	**-0.3**	
ATD	**Arta Tunnel**	**79.36**	**279**	P		**P**	**13 30 08.3**	**-0.3**	
	comp=Z,5.1nm,0.4s,mb4.8,baz=207,slow=23,SNR=4.2								
JOF	**Joensuu**	**79.90**	**332**	*e*P		**P**	**13 30 08.8**	**-1.8**	
JOF	**Joensuu**	**79.90**	**332**	*e*p		**P**	**13 30 08.8**	**-1.8**	
	comp=Z,1.5nm,0.4s,mb4.3								
EGAK	**Eagle**	**80.19**	**26**	*e*P		**P**	**13 30 12.8**	**+0.7**	
	comp=Z,8.9nm,0.6s,mb4.9								
KEV	**Kevo**	**80.41**	**340**	*e*P		**P**	**13 30 11.7**	**-1.5**	
	comp=Z,4.7nm,0.7s,mb4.5								
KEV	**Kevo**	**80.41**	**340**	*e*P		**P**	**13 30 11.7**	**-1.5**	
KEV					pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.5								
KEV	**Kevo**	**80.41**	**340**	*e*p		**P**	**13 30 11.7**	**-1.5**	
	comp=Z,4.7nm,0.7s,mb4.5								
ARCES	**ARCESS Array B**	**80.97**	**339**	P		**P**	**13 30 16.4**	**+0.2**	
	comp=Z,6.7nm,0.9s,mb4.6,baz=77,slow=5.5,SNR=15								
DAWY	**Dawson**	**81.07**	**26**	*e*P		**P**	**13 30 17.9**	**+1.0**	
SIM	**Simferopol'**	**81.12**	**314**	*e*P		**P**	**13 30 17.4**	**-0.1**	
SIM				*e*S		S	13 40 25.0	+0.7	
SIM				*e*SSS			13 49 05.0		
SIM					pmax	pmax			
	comp=Z,21nm,0.9s,mb5.1								
SIM					MLR	MLR			
	comp=Z,650nm,24.0s,MS4.9								
KAF	**Kangasniemi**	**82.34**	**332**	*e*P		**P**	**13 30 22.1**	**-1.5**	
	comp=Z,13nm,0.8s,mb4.9								
KAF	**Kangasniemi**	**82.34**	**332**	*e*P		**P**	**13 30 22.1**	**-1.5**	
KAF					pmax	pmax			
	comp=Z,13nm,0.8s,mb4.9								
KAF	**Kangasniemi**	**82.34**	**332**	*e*p		**P**	**13 30 22.1**	**-1.5**	
	comp=Z,13nm,0.8s,mb4.9								
BRTR	**Keskin Array B**	**82.38**	**309**	P		**P**	**13 30 23.2**	**-1.0**	
	comp=Z,4.0nm,0.8s,mb4.4,baz=95,slow=4.7,SNR=14								
BRTR					PP	PP	13 33 33.7	+0.4	
	comp=Z,1.2nm,0.9s,baz=92,slow=6.2,SNR=3.6								
BRTR					LR	LR	14 12 34.7		
	comp=Z,328nm,21.2s,MS4.7,baz=232,slow=40								
BRTR	**Keskin Array B**	**82.38**	**309**	P		**P**	**13 30 23.2**	**-1.1**	
BRTR							13 33 33.7		
INK	**Inuvik**	**82.39**	**22**	*e*P		**P**	**13 30 24.2**	**+0.5**	
	comp=Z,19nm,0.8s,mb5.1								
INK	**Inuvik**	**82.39**	**22**	*e*P		**P**	**13 30 24.2**	**+0.5**	
INK					pmax	pmax			
	comp=Z,19nm,0.8s								
FINES	**FINESS Array B**	**82.60**	**331**	P		**P**	**13 30 24.1**	**-0.9**	
	comp=Z,8.0nm,0.6s,mb4.9,baz=90,slow=5.7,SNR=19								
FINES					LR	LR	14 11 31.9		
	comp=Z,518nm,18.2s,MS4.9,baz=77,slow=39								
AKASG	**Malin Array Be**	**83.28**	**320**	P		**P**	**13 30 27.4**	**-1.3**	
	comp=Z,6.9nm,0.7s,mb4.8,baz=65,slow=5.0,SNR=22								
AKASG					LR	LR	14 11 47.0		
	comp=Z,486nm,19.3s,MS4.9,baz=85,slow=39								
AKBB	**Malin Array Si**	**83.28**	**320**	*e*P		**P**	**13 30 27.7**	**-1.0**	
KIEV	**Kiev**	**83.29**	**320**	*e*P		**P**	**13 30 27.3**	**-1.4**	
	comp=Z,11nm,0.8s,mb4.9								
KIEV	**Kiev**	**83.29**	**320**	*e*P		**P**	**13 30 27.3**	**-1.4**	
KIEV					pmax	pmax			
	comp=Z,11nm,0.8s,mb4.9								
TLCR		**84.76**	**315**	⇑P		**P**	**13 30 36.4**	**0.0**	
TLCR		**84.76**	**315**⇑	*i*P		**P**	**13 30 36.4**	**0.0**	
TIRR	**Tirgusor**	**85.20**	**314**	*e*P		**P**	**13 30 38.2**	**-0.5**	
	comp=Z,8.6nm,0.9s,mb4.9								
TIRR	**Tirgusor**	**85.20**	**314**	*e*P		**P**	**13 30 38.2**	**-0.4**	
TIRR					pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.9								
TIRR	**Tirgusor**	**85.20**	**314**⇑	*i*P		**P**	**13 30 38.2**	**-0.4**	
TESR		**85.91**	**317**⇑	*i*P		**P**	**13 30 41.8**	**-0.3**	
PLOR	**Plostina**	**86.08**	**316**	⇓P		**P**	**13 30 43.2**	**+0.3**	
PLOR	**Plostina**	**86.08**	**316**⇓	*i*P		**P**	**13 30 43.2**	**+0.3**	
BURAR	**Bucovina Array**	**86.57**	**318**	⇑P		**P**	**13 30 45.4**	**+0.1**	
BURAR	**Bucovina Array**	**86.57**	**318**⇑	*i*P		**P**	**13 30 45.4**	**+0.1**	
BUR08	**Bucovina Ar. S**	**86.58**	**318**	*e*P		**P**	**13 30 45.3**	**0.0**	
MLR	**Muntele Rosu**	**86.65**	**316**	⇑P		**P**	**13 30 45.6**	**-0.1**	
MLR	**Muntele Rosu**	**86.65**	**316**⇑	*i*P		**P**	**13 30 45.6**	**-0.1**	
LVV	**L'vov**	**86.72**	**320**	*e*P		**P**	**13 30 45.6**	**-0.4**	
KMBO	**Kilima Mbogo**	**87.48**	**268**	*e*P		**P**	**13 30 50.9**	**+0.5**	
	comp=Z,5.4nm,0.8s,mb4.8								
KMBO	**Kilima Mbogo**	**87.48**	**268**	P		**P**	**13 30 49.3**	**-1.1**	
	comp=Z,6.3nm,0.9s,mb4.8,baz=1.4,slow=24,SNR=6.3								
KMBO	**Kilima Mbogo**	**87.48**	**268**	*e*P		**P**	**13 30 50.9**	**+0.5**	
KMBO					pmax	pmax			
	comp=Z,5.0nm,0.8s								
KWP	**Kalwaria Pacla**	**87.60**	**320**	*e*P		**P**	**13 30 50.2**	**0.0**	
KWP	**Kalwaria Pacla**	**87.60**	**320**	*e*P		**P**	**13 30 50.0**	**-0.3**	
	comp=Z,32nm,0.9s,mb5.5								
KWP	**Kalwaria Pacla**	**87.60**	**320**	⇑P		**P**	**13 30 50.3**	**0.0**	
KWP	**Kalwaria Pacla**	**87.60**	**320**⇑	*i*P		**P**	**13 30 50.3**	**0.0**	
UZH	**Uzhgorod**	**88.16**	**320***d*	*i*P		**P**	**13 30 52.5**	**-0.4**	
UZH				*e*		pP	13 31 06.1	+0.3	
UZH				*e*S		S	13 41 30.3	-3.9	
UZH					MLR	MLR			
	comp=N,350nm,16.4s,MS5.2								
UZH					MLR	MLR			
	comp=E,650nm,16.4s,MS5.2								
UZH					MLR	MLR			
	comp=Z,180nm,16.4s,MS4.6								
DRGR		**88.44**	**318**	⇑P		**P**	**13 30 54.5**	**+0.2**	
DRGR		**88.44**	**318**⇑	*i*P		**P**	**13 30 54.5**	**+0.2**	
STHS	**Stebnicka Huta**	**88.58**	**320**	*e*P		**P**	**13 30 56.1**	**+1.2**	
	comp=Z,12nm,1.6s,mb5.0								
STHS	**Stebnicka Huta**	**88.58**	**320**	*e*P		**P**	**13 30 56.1**	**+1.2**	
STHS					pmax	pmax			
	comp=Z,12nm,1.6s,mb5.0								
STHS	**Stebnicka Huta**	**88.58**	**320**	*e*P		**P**	**13 30 56.1**	**+1.2**	
CRVS	**Cervenica-Dubn**	**88.60**	**320**	*e*P		**P**	**13 30 55.4**	**+0.4**	
	comp=Z,24nm,1.1s,mb5.4								
CRVS	**Cervenica-Dubn**	**88.60**	**320**	*e*P		**P**	**13 30 55.4**	**+0.4**	
CRVS					pmax	pmax			
	comp=Z,24nm,1.1s,mb5.4								
CRVS	**Cervenica-Dubn**	**88.60**	**320**	*e*P		**P**	**13 30 55.4**	**+0.4**	
HFS	**Hagfors**	**88.76**	**332**	P		**P**	**13 30 54.5**	**-1.0**	
	comp=Z,5.4nm,0.6s,mb5.1,baz=112,slow=4.0,SNR=21								
HFS	**Hagfors**	**88.76**	**332**	P		**P**	**13 30 54.5**	**-1.0**	
OJC	**Ojcow**	**89.20**	**322**	*e*P		**P**	**13 30 57.4**	**-0.4**	
VTS	**Vitosha**	**89.35**	**314**	⇓P		**P**	**13 30 59.1**	**+0.4**	
VTS	**Vitosha**	**89.35**	**314**⇓	*i*P		**P**	**13 30 59.0**	**+0.3**	
NOA	**NORSAR Array B**	**89.48**	**333**	P		**P**	**13 30 57.1**	**-1.8**	
	comp=Z,3.4nm,0.7s,mb4.8,baz=68,slow=4.7,SNR=10								
NOA					LR	LR	14 14 48.3		
	comp=Z,945nm,19.0s,MS5.2,baz=55,slow=38								
PPT	**Papeete**	**90.15**	**108**	*e*S		S	13 41 57.5	+3.7	
	comp=Z,556nm,26.2s								
PPT				*e*LQ			13 55 40.9		
	comp=Z,790nm,34.5s								
PPT				*e*LR		LR	13 59 57.9		
	comp=Z,183nm,28.5s								
OKC	**Ostrava-Krasne**	**90.33**	**322**	AMS		AMS	14 14 20.0		
	comp=Z,500nm,15.9s								
VYHS	**Vyhne**	**90.38**	**320**	*e*P		**P**	**13 31 03.6**	**+0.2**	
	comp=Z,9.5nm,1.8s,mb4.8								
VYHS				*e*PP		PP	13 34 39.0	+1.4	
VYHS	**Vyhne**	**90.38**	**320**	*e*P		**P**	**13 31 03.6**	**+0.2**	
VYHS					pmax	pmax			
	comp=Z,10.0nm,1.8s,mb4.8								
VYHS	**Vyhne**	**90.38**	**320**	*e*P		**P**	**13 31 03.5**	**+0.1**	
VYHS				*e*PP		PP	13 34 39.0	+1.4	
DPC	**Dobruska-Polom**	**91.24**	**322**	*e*P		**P**	**13 31 08.0**	**+0.7**	
DPC					MLR	MLR			
	comp=Z,400nm,16.8s,MS4.9								
DPC	**Dobruska-Polom**	**91.24**	**322**	*e*P		**P**	**13 31 08.0**	**+0.7**	
DPC					AMS	AMS	14 15 10.0		
	comp=Z,400nm,16.8s								
PKSM	**Moragy**	**91.29**	**318**	⇑P		**P**	**13 31 06.9**	**-0.8**	
PKSM	**Moragy**	**91.29**	**318**⇑	*i*P		**P**	**13 31 06.9**	**-0.8**	
UPC	**Upice**	**91.36**	**323**	*e*P		**P**	**13 31 07.0**	**-0.9**	
UPC	**Upice**	**91.36**	**323**	*e*P		**P**	**13 31 07.0**	**-0.9**	
MAW	**Mawson**	**91.67**	**200**	P		**P**	**13 31 07.2**	**-1.6**	
	comp=Z,0.9nm,0.5s,mb4.3,baz=333,slow=4.5,SNR=3.3								
MAW					LR	LR	14 08 42.9		
	comp=Z,184nm,18.1s,MS4.6,baz=72,slow=33								
YKA	**Yellowknife Ar**	**91.96**	**23**	P		**P**	**13 31 10.8**	**+0.4**	
	comp=Z,4.2nm,0.6s,mb5.0,baz=302,slow=4.4,SNR=16								
TREC	**Trest**	**92.14**	**322**	AMS		AMS	14 15 30.0		
	comp=Z,400nm,18.3s								
PVCC	**Panska Ves**	**92.20**	**323**	AMS		AMS	14 15 40.0		
	comp=Z,500nm,15.1s								
BRG	**Berggiesshubel**	**92.43**	**324**	*e*P		**P**	**13 31 12.9**	**+0.1**	
	comp=Z,3.8nm,1.0s,mb4.7								
BRG				*e*			13 31 15.7		
	comp=Z,9.4nm,1.3s								
BRG									
	comp=N,479nm,22.0s								
BRG									
	comp=E,743nm,22.3s								
BRG									
	comp=Z,683nm,19.2s								
PRU	**Pruhonice**	**92.44**	**323**	*e*P		**P**	**13 31 12.9**	**0.0**	
PRU					MLR	MLR			
	comp=Z,500nm,18.7s,MS5.0								
PRU	**Pruhonice**	**92.44**	**323**	*e*P		**P**	**13 31 12.9**	**0.0**	
PRU					AMS	AMS	14 16 00.0		
	comp=Z,500nm,18.7s								
CONA	**Conrad Observa**	**92.44**	**320**⇑	*i*PcP		**P**	**13 31 12.6**	**-0.3**	
	comp=Z,10nm,1.2s,mb5.0								
CLL	**Collm**	**92.79**	**324**	*e*P		**P**	**13 31 14.0**	**-0.5**	
CLL				*e*S		S	13 42 13.0	-3.6	
CLL					MLR	MLR			
	comp=Z,500nm,18.6s,MS5.0								
CLL	**Collm**	**92.79**	**324**	*e*(P)		**P**	**13 31 14.0**	**-0.5**	
CLL				*e*PP		PP	13 34 57.0	+0.5	
CLL				*e*SKSac		SKSac	13 41 45.0	+0.1	
CLL				*e*S		S	13 42 13.0	-3.6	
CLL				*e*PS		PS	13 43 32.0	-1.3	
CLL				*e*SS		SS	13 48 30.0	+0.5	
CLL				LmV			14 17 00.0		
	comp=Z,500nm,18.6s								
KHC	**Kasperske Hory**	**93.36**	**322**	*e*P		**P**	**13 31 18.0**	**+0.9**	
KHC					MLR	MLR			
	comp=Z,500nm,19.2s,MS5.0								
KHC	**Kasperske Hory**	**93.36**	**322**	*e*P		**P**	**13 31 18.0**	**+0.9**	
KHC					AMS	AMS	14 20 30.0		
	comp=Z,500nm,19.2s								
SOKA	**Soboth**	**93.44**	**319**⇑	*i*PcP		**P**	**13 31 17.0**	**-0.6**	
	comp=Z,7.5nm,0.9s,mb5.1								
MOA	**Molln**	**93.46**	**321**⇑	*i*PcP		**P**	**13 31 17.5**	**-0.1**	
	comp=Z,14nm,1.0s,mb5.4								
NKC	**Novy Kostel**	**93.56**	**323**	AMS		AMS	14 17 00.0		
	comp=Z,700nm,17.2s								
ABTA	**Abfaltersbach**	**95.00**	**320**⇑	*i*PcP		**P**	**13 31 23.5**	**-1.3**	
	comp=Z,8.9nm,0.9s,mb5.2								
WTTA	**Wattenberg**	**95.32**	**321**⇑	*i*PcP		**P**	**13 31 25.7**	**-0.5**	
	comp=Z,20nm,1.4s,mb5.3								
FETA	**Feichten**	**95.98**	**321**⇑	*i*PcP		**P**	**13 31 30.2**	**+1.0**	
	comp=Z,7.6nm,0.9s,mb5.1								
ESK	**Eskdalemuir**	**98.97**	**333**	*i* P		**P**	**13 31 44.1**	**+1.6**	
LPG	**La Plagne**	**99.14**	**321**	*e*P		**P**	**13 31 43.4**	**0.0**	
	comp=Z,13nm,0.8s,mb5.2								
LPG	**La Plagne**	**99.14**	**321**	*e*P		**P**	**13 31 43.4**	**0.0**	
	comp=Z,6.4nm,0.8s,mb5.2								
LPG	**La Plagne**	**99.14**	**321**	*e*P		**P**	**13 31 43.4**	**0.0**	
LPG					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb5.2								
LPL	**La Plagne**	**99.14**	**321**	*e*P		**P**	**13 31 43.3**	**-0.1**	
NVAR	**Mina Array Bea**	**102.24**	**46**	P		Pdif	13 31 59.0	+2.0	
	comp=Z,0.9nm,0.7s,baz=273,slow=4.9,SNR=6.4								
NVAR					PKKPbc	PKKPbc	13 48 00.2	-0.4	
	comp=Z,0.5nm,0.7s,baz=131,slow=4.1,SNR=3.5								
RKT	**Rikitea**	**104.64**	**111**	*e*LQ			14 02 10.5		
	comp=Z,369nm,33.2s								
RKT				*e*LR		LR	14 06 40.5		
	comp=Z,240nm,32.8s								
PV01	**Paradox Valley**	**108.95**	**42**	PKiKP		PKiKP	13 36 29.7	-2.1	
MNTX	**Cornudas Mount**	**114.77**	**46**	*e*PKiKP		PKiKP	13 36 43.9	+0.9	
TXAR	**Lajitas Array**	**117.33**	**47**	PKP		PKPdf	13 36 48.5	+0.4	
	comp=Z,1.8nm,0.8s,baz=234,slow=1.5,SNR=17								
TXAR					PKKPab	PKKPab	13 47 14.4	-2.0	
	comp=Z,0.4nm,0.7s,baz=109,slow=4.9,SNR=4.9								
TORD	**Torodi Ar. Bea**	**117.54**	**292**	PKP		PKPdf	13 36 48.0	-0.7	
TORD				PP		PP	13 37 49.4	-12	
TORD				PKKPab		PKKPab	13 47 18.6	+3.5	
TORD	**Torodi Ar. Bea**	**117.54**	**292**	PKP		PKPdf	13 36 48.0	-0.7	
	comp=Z,1.2nm,0.7s,baz=89,slow=2.4,SNR=6.3								
TORD				PP		PP	13 37 49.4	-12	
	comp=Z,2.1nm,1.0s,baz=56,slow=5.3,SNR=5.1								
TORD				PKKPab		PKKPab	13 47 18.6	+3.5	
	comp=Z,1.6nm,0.9s,baz=249,slow=5.4,SNR=6.1								
JCT	**Junction City**	**119.33**	**44**	*e*PKPdf		PKPdf	13 36 52.1	+0.2	
MIAR	**Mount Ida**	**120.49**	**36**	*e*PKPdf		PKPdf	13 36 54.5	+0.6	
BINY	**Binghamton**	**121.91**	**18**	PKPdf		PKPdf	13 36 56.6	+0.1	
WVT	**Waverly**	**122.39**	**31**	*e*Pdif		Pdif	13 33 25.1	-1.4	
TKL	**Tuckaleechee C**	**124.70**	**28**	*e*PKPdf		PKPdf	13 37 02.7	+0.7	
DBIC	**Dimbokro**	**125.93**	**288**	PKP		PKPdf	13 37 05.1	+0.2	
	comp=Z,4.7nm,0.9s,baz=111,slow=6.8,SNR=3.8								
KIC	**Kosan Boka**	**125.94**	**288**	*e*PKIKP		PKPdf	13 37 04.4	-0.5	
	comp=Z,37nm,1.1s								
TIC	**Toumodi**	**126.09**	**288**	*e*PKIKP		PKPdf	13 37 04.8	-0.4	
	comp=Z,68nm,1.5s								
LIC	**Lamto**	**126.25**	**288**	*e*PKIKP		PKPdf	13 37 05.0	-0.5	
	comp=Z,68nm,1.6s								
SDDR	**Presa de Saban**	**144.61**	**26**	*e*PKPdf		PKPdf	13 37 38.7	-0.7	
AGPR	**Aguadilla, PR**	**146.69**	**20**	*e*PKPdf		PKPdf	13 37 43.5	+0.5	
CRPR	**Cabo Rojo, PR**	**147.12**	**20**	*e*PKPbc		PKPbc	13 37 46.3	+0.5	
CBYP	**Canovanas**	**147.28**	**18**	*e*PKPbc		PKPbc	13 37 45.7	-0.6	
BCIP	**Isla Barro Col**	**147.34**	**49**	*e*PKPbc		PKPbc	13 37 46.9	+0.4	
ICM	**Isla Caja Muer**	**147.42**	**20**	*e*PKPbc		PKPbc	13 37 47.0	+0.3	
MTP	**Monte Pirata**	**147.53**	**18**	*e*PKPbc		PKPbc	13 37 47.6	+0.7	
PLCA	**Paso Flores**	**149.46**	**157**	PKPbc		PKPbc	13 37 50.6	-0.7	
	comp=Z,9.0nm,0.6s,baz=196,slow=3.2,SNR=22								
FDF	**Fort de France**	**151.86**	**11**	*e*PKPbc		PKPbc	13 37 58.1	+0.4	
SDV	**Santo Domingo**	**153.58**	**35**	*e*PKPdf		PKPdf	13 37 54.6	+0.8	
ROSC	**El Rosal**	**154.25**	**47**	PKP		PKPdf	13 37 56.6	+1.8	
	comp=Z,4.2nm,0.5s,baz=90,slow=23,SNR=3.1								
ROSC					PKPbc	PKPbc	13 38 04.4	+1.3	
	comp=Z,4.2nm,0.4s,baz=256,slow=4.2,SNR=4.2								
CPUP	**Villa Florida**	**166.68**	**173**	PKP		PKPdf	13 38 08.7	+0.6	
	comp=Z,0.7nm,0.4s,baz=56,slow=3.6,SNR=3.5								
CPUP					PKPab	PKPab	13 39 09.0	-1.5	
	comp=Z,1.3nm,0.6s,baz=344,slow=0.3,SNR=3.4								
LPAZ	**La Paz**	**167.44**	**106**	PKP		PKPdf	13 38 10.4	+1.5	
	comp=Z,3.2nm,0.9s,baz=355,slow=3.6,SNR=7.4								
LPAZ					PKPab	PKPab	13 39 14.8	+0.4	
	comp=Z,1.6nm,0.9s,baz=270,slow=8.1,SNR=1.9								
LPAZ	**La Paz**	**167.44**	**106**	*e*PKIKP		PKPdf	13 38 10.2	+1.3	

IGIL ***20*** *13:21:12.1, 37.26N×13.11W, h0km*
MDD ***20*** *13:21:12.1±2.3, 37.22N×13.10W, h0km, mb4.1/4, Error ellipse: s-maj=17.9km s-min=15.9km az=48.0, PRIMO*
CSEM ***20*** *13:21:14.8±0.5, 37.36N×12.88W, h10km, ML3.1/12, Error ellipse: s-maj=8.0km s-min=7.3km az=45.0*
INMG ***20*** *13:21:16.1±1.1, 36.99N×13.33W, h10km, ML2.4, Error ellipse: s-maj=10.9km s-min=7.3km az=110.0*

ISC 20 13:21:14.7±1.3, 37.34N±0.06×12.87W±0.07, h10km, n96, σ0s95/133, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**3.24**	**92**	*e*Pn	**Pn**	**13 22 06.0**	**+0.4**
PFVI				*e*Sn	**Sn**	**13 22 43.5**	**-0.6**
PFVI				A		13 22 54.7	
	6.9nm,0.8s						
PFVI	**Vila Bisbo**	**3.24**	**92**	Pn	**Pn**	**13 22 04.5**	**-1.0**
	2.0nm,0.1s,SNR=7.9						
PFVI				Sn	**Sn**	**13 22 43.5**	**-0.6**
	4.7nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.24**	**92**	Pn	**Pn**	**13 22 04.5**	**-1.0**
	2.0nm,0.1s,SNR=7.9						
PFVI				Sn	**Sn**	**13 22 43.5**	**-0.6**
	4.7nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.24**	**92**	P	**Pn**	**13 22 04.5**	**-1.1**
	2.0nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.24**	**92**	*e*Pn	**Pn**	**13 22 06.0**	**+0.4**
PFVI				S	**Sn**	**13 22 43.5**	**-0.6**
	4.7nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**3.26**	**59**	*e*Sn	**Sn**	**13 22 47.0**	**+2.3**
PMAFR				A		13 22 50.7	
	22nm,0.2s						
PMAFR	**Mafra**	**3.26**	**59**	Sn	**Sn**	**13 22 45.9**	**+1.2**
	8.9nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**3.26**	**59**	Sn	**Sn**	**13 22 45.9**	**+1.2**
	8.9nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**3.26**	**59**	S	**Sn**	**13 22 45.9**	**+1.2**
	8.9nm,0.1s,SNR=7.9						
PMAFR				*e*Sn	**Sn**	**13 22 47.0**	**+2.3**
	22nm,0.2s						
PTEO	**Sao Teotonio**	**3.31**	**85**	*e*Sn	**Sn**	**13 22 46.1**	**+0.2**
PTEO				A		13 22 52.9	
	10nm,0.5s						
PTEO	**Sao Teotonio**	**3.31**	**85**	Sn	**Sn**	**13 22 46.1**	**+0.2**
	5.1nm,0.5s						
PTEO	**Sao Teotonio**	**3.31**	**85**	Sn	**Sn**	**13 22 46.1**	**+0.2**
	5.1nm,0.5s						
PTEO	**Sao Teotonio**	**3.31**	**85**	*e*Sn	**Sn**	**13 22 46.1**	**+0.2

	2.3nm,0.6s							
PMRV	**Marv??o**	**4.79**	**62**	*e*Sn		**Sn**	**13 23 23.4**	**+1.1**
PMRV				A			13 23 28.8	
	2.8nm,0.2s							
PMRV	**Marv??o**	**4.79**	**62**	Sn		**Sn**	**13 23 23.4**	**+1.1**
	2.8nm,0.2s							
PMRV	**Marv??o**	**4.79**	**62**	Sn		**Sn**	**13 23 23.4**	**+1.1**
	2.8nm,0.2s							
PMRV	**Marv??o**	**4.79**	**62**	*e*Sn		**Sn**	**13 23 23.4**	**+1.1**
	2.8nm,0.2s							
EBAD	**Badajoz**	**4.84**	**71**	Sn		**Sn**	**13 23 23.4**	**-0.2**
	2.9nm,0.1s,SNR=7.9							
EBAD	**Badajoz**	**4.84**	**71**	Sn		**Sn**	**13 23 23.4**	**-0.2**
	2.9nm,0.1s,SNR=7.9							
EBAD	**Badajoz**	**4.84**	**71**	S		**Sn**	**13 23 23.4**	**-0.2**
	2.9nm,0.1s,SNR=7.9							
PCBR	**Castelo Branco**	**4.91**	**58**	*e*Sn		**Sn**	**13 23 26.6**	**+1.2**
PCBR				A			13 23 31.2	
	2.0nm,0.7s							
PCBR	**Castelo Branco**	**4.91**	**58**	Sn		**Sn**	**13 23 26.6**	**+1.2**
	1.0nm,0.7s							
PCBR	**Castelo Branco**	**4.91**	**58**	Sn		**Sn**	**13 23 26.6**	**+1.2**
	1.0nm,0.7s							
PCBR	**Castelo Branco**	**4.91**	**58**	*e*Sn		**Sn**	**13 23 26.6**	**+1.2**
	2.0nm,0.7s							
EMIN	**Mina Concepcio**	**4.95**	**83**	Pn		**Pn**	**13 22 30.5**	**+1.4**
	0.3nm,0.2s,SNR=7.9							
EMIN				Sn		**Sn**	**13 23 25.5**	**-0.8**
	1.0nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**4.95**	**83**	Pn		**Pn**	**13 22 30.5**	**+1.4**
	0.3nm,0.2s,SNR=7.9							
EMIN				Sn		**Sn**	**13 23 25.5**	**-0.8**
	1.0nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**4.95**	**83**	P		**Pn**	**13 22 30.5**	**+1.4**
	0.3nm,0.2s,SNR=7.9							
EMIN				S		**Sn**	**13 23 25.5**	**-0.8**
	1.0nm,0.2s,SNR=7.9							
ESPR	**Espera**	**5.63**	**93**	Pn		**Pn**	**13 22 38.6**	**+0.1**
	1.6nm,0.2s,SNR=7.9							
ESPR				Sn		**Sn**	**13 23 41.2**	**-1.9**
	1.0nm,0.2s,SNR=4.0							
ESPR	**Espera**	**5.63**	**93**	Pn		**Pn**	**13 22 38.6**	**+0.1**
	1.6nm,0.2s,SNR=7.9							
ESPR				Sn		**Sn**	**13 23 41.2**	**-1.9**
	1.0nm,0.2s,SNR=4.0							
ESPR	**Espera**	**5.63**	**93**	P		**Pn**	**13 22 38.6**	**+0.2**
	1.6nm,0.2s,SNR=7.9							
ESPR				S		**Sn**	**13 23 41.2**	**-1.9**
	1.0nm,0.2s,SNR=4.0							
ELOB	**Lobios**	**5.85**	**38**	Pn		**Pn**	**13 22 41.3**	**-0.2**
	0.4nm,0.1s,SNR=4.0							
ELOB				Sn		**Sn**	**13 23 47.2**	**-1.4**
	0.7nm,0.1s,SNR=7.9							
ELOB	**Lobios**	**5.85**	**38**	Pn		**Pn**	**13 22 41.3**	**-0.2**
	0.4nm,0.1s,SNR=4.0							
ELOB				Sn		**Sn**	**13 23 47.2**	**-1.4**
	0.7nm,0.1s,SNR=7.9							
ELOB	**Lobios**	**5.85**	**38**	P		**Pn**	**13 22 41.3**	**-0.2**
	0.4nm,0.1s,SNR=4.0							
ELOB				S		**Sn**	**13 23 47.2**	**-1.4**
	0.7nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**5.93**	**48**	Pn		**Pn**	**13 22 42.3**	**-0.3**
	0.5nm,0.1s,SNR=4.0							
MVO				Sn		**Sn**	**13 23 48.5**	**-2.0**
	0.9nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**5.93**	**48**	Pn		**Pn**	**13 22 42.3**	**-0.3**
	0.5nm,0.1s,SNR=4.0							
MVO				Sn		**Sn**	**13 23 48.5**	**-2.0**
	0.9nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**5.93**	**48**	P		**Pn**	**13 22 42.3**	**-0.3**
	0.5nm,0.1s,SNR=4.0							
MVO				S		**Sn**	**13 23 48.5**	**-2.0**
	0.9nm,0.1s,SNR=7.9							
MVO				*e*Sn		**Sn**	**13 23 51.3**	**+0.8**
EPLA	**Plasencia**	**5.97**	**61**	Sn		**Sn**	**13 23 50.7**	**-0.8**
	1.0nm,0.2s,SNR=7.9							
EPLA	**Plasencia**	**5.97**	**61**	Sn		**Sn**	**13 23 50.7**	**-0.8**
	1.0nm,0.2s,SNR=7.9							
EPLA	**Plasencia**	**5.97**	**61**	S		**Sn**	**13 23 50.7**	**-0.8**
	1.0nm,0.2s,SNR=7.9							
EMAZ	**Mazaricos**	**6.35**	**27**	Pn		**Pn**	**13 22 48.0**	**-0.3**
	1.1nm,0.1s,SNR=7.9							
EMAZ				Sn		**Sn**	**13 23 56.6**	**-4.2**
	0.3nm,0.3s,SNR=7.9							
EMAZ	**Mazaricos**	**6.35**	**27**	Pn		**Pn**	**13 22 48.0**	**-0.3**
	1.1nm,0.1s,SNR=7.9							
EMAZ				Sn		**Sn**	**13 23 56.6**	**-4.2**
	0.3nm,0.3s,SNR=7.9							
EMAZ	**Mazaricos**	**6.35**	**27**	P		**Pn**	**13 22 48.0**	**-0.3**
	1.1nm,0.1s,SNR=7.9							
ECAL	**Calabor**	**6.60**	**44**	Sn		**Sn**	**13 24 05.9**	**-1.1**
	0.8nm,0.3s,SNR=7.9							
ECAL	**Calabor**	**6.60**	**44**	Sn		**Sn**	**13 24 05.9**	**-1.1**
	0.8nm,0.3s,SNR=7.9							
ECAL	**Calabor**	**6.60**	**44**	S		**Sn**	**13 24 05.9**	**-1.1**
	0.8nm,0.3s,SNR=7.9							
EADA	**Adamuz**	**6.63**	**80**	Sn		**Sn**	**13 24 07.4**	**-0.3**
	2.4nm,0.1s,SNR=7.9							
EADA	**Adamuz**	**6.63**	**80**	Sn		**Sn**	**13 24 07.4**	**-0.3**
	2.4nm,0.1s,SNR=7.9							
EADA	**Adamuz**	**6.63**	**80**	S		**Sn**	**13 24 07.4**	**-0.3**
	2.4nm,0.1s,SNR=7.9							

*IDC **20** 13:34:56.9±1.0, 12.°82N×124.°11E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.7/20, mbtmp3.6/8, Error ellipse: s-maj=41.0km s-min=18.7km az=62.0*
*ISCJB **20** 13:34:58.6±1.0, 13.°07N±0.°03×124.°41E±0.°07, h21km±7km, mb3.7/8, Error ellipse: s-maj=12.2km s-min=5.8km az=175.0*
*MAN **20** 13:34:58, 13.°09N×124.°35E, h13km, mb5.0, ML3.9, MS4.0*
*NEIC **20** 13:35:02.1±0.6, 12.°77N×124.°01E, h35km, mb4.6/1, Error ellipse: s-maj=20.0km s-min=10.2km az=55.0*

ISC 20 13:34:58.6±1.0, 13.°05N±0.°03×124.°38E±0.°07, h7km±6km, n24, σ1s09/28, mb3.7/8, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.58**	**338**	*e*P	**Pg**	**13 35 09.2**	**-0.7**
PVCP				*e*S	**Sg**	**13 35 18.0**	**+0.5**
CNP	**Catarman**	**0.61**	**153**	*e*P	**Pg**	**13 35 11.3**	**+1.0**
MMPH	**Masbate**	**1.01**	**227**	↓*i*P	**Pg**	**13 35 17.2**	**-0.9**
MMPH				*i* S	**Sg**	**13 35 31.5**	**+0.3**
AUQP	**San Andres**	**1.68**	**279**	*e*P	**Pn**	**13 35 30.4**	**+2.0**
GQP	**Guinayangan**	**2.06**	**294**	↓*e*P	**Pn**	**13 35 33.4**	**-0.2**
GQP				*i* S	**Sn**	**13 36 03.5**	**+3.9**
BOAC	**Boac**	**2.50**	**280**	*e*P	**Pn**	**13 35 46.3**	**+6.6**
POLP	**Polilio Island**	**2.90**	**305**	*e*P	**Pn**	**13 35 46.6**	**+1.5**
GUIM	**Jordan**	**2.98**	**216**	*e*P	**Pn**	**13 35 45.9**	**-0.4**
TBP	**Tagbilaran**	**3.38**	**189**	*e*P	**Pn**	**13 35 52.0**	**+0.2**
TBP				*e*S	**Sn**	**13 36 33.6**	**+1.4**
SCPH	**Surigao**	**3.43**	**161**	↑*e*P	**Pn**	**13 35 56.6**	**+4.2**
TGY	**Tagaytay City**	**3.51**	**288**	Pn	**Pn**	**13 35 50.6**	**-2.9**
	23nm,0.3s,baz=122,slow=19,SNR=2.5						
BALP	**Baler**	**3.81**	**315**	*e*P	**Pn**	**13 35 56.7**	**-1.0**
CUYO	**Cuyo Island**	**3.95**	**237**	*e*P	**Pn**	**13 35 59.2**	**-0.5**
CMAR	**Chiang Mai Arp**	**25.05**	**286**	P	**P**	**13 40 20.5**	**-3.2**
	0.4nm,0.3s,mb3.4,baz=106,slow=9.6,SNR=3.5						
XAN	**Xi'an**	**25.18**	**329**	P	**P**	**13 40 25.0**	**+0.3**
XAN				pP	pP	13 40 29.8	+2.8
XAN				pmax	pmax		
	comp=Z,660nm,15.8s						
WRA	**Warramunga Arr**	**34.22**	**163**	P	**P**	**13 41 43.7**	**-1.4**
	comp=Z,0.2nm,0.5s,mb3.3,baz=345,slow=8.1,SNR=7.8						
ASAR	**Alice Springs**	**37.66**	**166**	P	**P**	**13 42 12.4**	**-2.2**
	comp=Z,0.4nm,0.4s,mb3.5,baz=343,slow=6.9,SNR=7.4						
SONM	**Songino Array**	**37.78**	**340**	P	**P**	**13 42 15.7**	**+0.4**
	comp=Z,0.8nm,0.8s,mb3.5,baz=152,slow=6.5,SNR=3.2						
MK31	**Makanchi Array**	**48.71**	**322**	*e*P	**P**	**13 43 43.8**	**+0.2**
MKAR	**Makanchi Array**	**48.71**	**322**	P	**P**	**13 43 44.0**	**+0.4**
	comp=Z,2.5nm,0.8s,mb4.3,baz=119,slow=8.5,SNR=24						
ZALV	**Zalesovo Beam**	**51.31**	**331**	P	**P**	**13 44 03.1**	**-0.1**
	comp=Z,0.3nm,0.4s,mb3.6,baz=101,slow=7.5,SNR=2.4						
KURK	**Kurchatov**	**52.74**	**325**	*e*P	**P**	**13 44 14.4**	**+0.4**
	comp=Z,6.4nm,0.9s,mb4.5						
ABKAR	**Akbulak array**	**63.57**	**319**	*e*P	**P**	**13 45 29.3**	**-0.6**
ILAR	**Eielson Array**	**77.76**	**26**	P	**P**	**13 46 57.0**	**+1.0**
	comp=Z,0.5nm,1.1s,mb3.4,baz=242,slow=5.8,SNR=3.1						

*MAN **20** 13:38:49, 13.°34N×124.°63E, h59km, mb4.8, ML3.7, MS3.7*
*IDC **20** 13:38:52.3±1.6, 12.°93N×124.°55E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/19, mbtmp3.6/5, MS3.5/1, Ms1 3.5/1, ms1mx2.5/24, Error ellipse: s-maj=169.4km s-min=19.8km az=68.0*

*ISCJB **20** 13:38:55.0±1.7, 12.°91N±0.°05×124.°48E±0.°08, h31km±12km, mb3.6/5, Error ellipse: s-maj=13.3km s-min=8.0km az=157.2*

ISC 20 13:38:56.8±1.3, 12.°88N±0.°06×124.°42E±0.°07, h28km±9km, n17, σ0s82/20, mb3.6/5, 1C-2D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.43**	**147**	*e*P	**Pg**	**13 39 06.7**	**+0.5**
PVCP	**Virac**	**0.76**	**340**	*e*P	**Pg**	**13 39 04.5**	**-7.0**
PVCP				*e*S	**Sg**	**13 39 13.7**	**-7.8**
MMPH	**Masbate**	**0.93**	**236**	↑*i*P	**Pg**	**13 39 12.6**	**-1.4**
MMPH				*i* S	**Sg**	**13 39 26.3**	**-0.2**
AUQP	**San Andres**	**1.76**	**285**	*e*P	**Pn**	**13 39 25.4**	**+0.1**
GQP	**Guinayangan**	**2.18**	**298**	↓*e*P	**Pn**	**13 39 28.9**	**-2.2**
GQP				*i* S	**Sn**	**13 39 58.6**	**+1.4**
BOAC	**Boac**	**2.58**	**283**	*e*P	**Pn**	**13 39 32.4**	**-4.2**
GUIM	**Jordan**	**2.87**	**219**	*e*P	**Pn**	**13 39 41.5**	**+0.8**
POLP	**Polilio Island**	**3.03**	**308**	*e*P	**Pn**	**13 39 43.7**	**+0.8**
TBP	**Tagbilaran**	**3.21**	**190**	*e*P	**Pn**	**13 39 45.5**	**+0.1**
TBP				*e*S	**Sn**	**13 40 23.3**	**+0.5**
SCPH	**Surigao**	**3.25**	**161**	↓*e*P	**Pn**	**13 39 51.2**	**+5.2**
CUYO	**Cuyo Island**	**3.89**	**239**	*e*P	**Pn**	**13 39 54.6**	**-0.1**
CBIJ	**Chichi jima**	**21.84**	**47**	*i* LR	LR	13 50 48.8	
	comp=Z,116nm,18.1s,baz=54,slow=33						
WRA	**Warramunga Arr**	**34.04**	**163**	P	**P**	**13 45 38.1**	**-0.5**
	0.1nm,0.3s,mb3.2,baz=345,slow=8.0,SNR=6.4						
ASAR	**Alice Springs**	**37.48**	**166**	P	**P**	**13 46 08.1**	**0.0**
	0.4nm,0.3s,mb3.7,baz=345,slow=6.9,SNR=10						
SONM	**Songino Array**	**37.96**	**340**	P	**P**	**13 46 12.1**	**+0.2**
	0.5nm,0.7s,mb3.4,baz=157,slow=4.1,SNR=3.3						
MKAR	**Makanchi Array**	**48.87**	**322**	P	**P**	**13 47 39.5**	**-0.4**
	1.2nm,0.7s,mb4.0,baz=118,slow=8.7,SNR=12						
ZALV	**Zalesovo Beam**	**51.48**	**331**	P	**P**	**13 47 59.8**	**+0.2**
	0.4nm,0.5s,mb3.6,baz=111,slow=7.9,SNR=2.4						

*IDC **20** 13:48:11.3±1.0, 12.°99N×124.°52E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.6/19, mbtmp3.6/6, Error ellipse: s-maj=71.6km s-min=19.2km az=70.0*
*ISCJB **20** 13:48:13.6±1.1, 13.°11N±0.°06×124.°63E±0.°08, h26km±7km, mb3.5/6, Error ellipse: s-maj=15.1km s-min=6.8km az=150.0*
*MAN **20** 13:48:14, 12.°97N×124.°29E, h1km, mb4.6, ML3.5, MS3.4*
*NEIC **20** 13:48:16.4±0.7, 12.°95N×124.°44E, h35km, Error ellipse: s-maj=45.0km s-min=12.6km az=69.0*

ISC 20 13:48:13.8±1.1, 13.°13N±0.°05×124.°60E±0.°08, h14km±6km, n18, σ0s96/21, mb3.5/6, 3D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.62**	**175**	*e*P	**Pg**	**13 48 26.1**	**+0.2**
CNP				*e*S	**Sg**	**13 48 35.5**	**+1.4**
PVCP	**Virac**	**0.64**	**317**	*e*P	**Pg**	**13 48 25.2**	**-1.2**
PVCP				*e*S	**Sg**	**13 48 34.6**	**-0.2**
MMPH	**Masbate**	**1.22**	**231**	↓*i*P	**Pn**	**13 48 32.5**	**-4.0**
MMPH				*i*		13 48 46.7	
AUQP	**San Andres**	**1.89**	**276**	*e*P	**Pn**	**13 48 46.0**	**+0.4**
GQP	**Guinayangan**	**2.24**	**290**	↓*e*P	**Pn**	**13 48 50.4**	**-0.1**
GQP				*e*S	**Sn**	**13 49 18.6**	**+0.8**
BOAC	**Boac**	**2.71**	**277**	*e*P	**Pn**	**13 48 56.7**	**-0.2**
POLP	**Polilio Island**	**3.04**	**302**	*e*P	**Pn**	**13 49 02.8**	**+1.3**
GUIM	**Jordan**	**3.17**	**219**	*e*P	**Pn**	**13 49 01.6**	**-1.8**
SCPH	**Surigao**	**3.44**	**165**	↓*e*P	**Sn**	**13 49 40.1**	**-7.4**
WRA	**Warramunga Arr**	**34.23**	**164**	P	**P**	**13 54 57.1**	**-2.2**
	0.3nm,0.5s,mb3.5,baz=342,slow=8.8,SNR=8.0						
ASAR	**Alice Springs**	**37.68**	**166**	P	**P**	**13 55 28.4**	**-0.5**
	0.5nm,0.4s,mb3.6,baz=336,slow=6.9,SNR=14						
SONM	**Songino Array**	**37.79**	**340**	P	**P**	**13 55 30.4**	**+0.9**
SONM	**Songino Array**	**37.79**	**340**	P	**P**	**13 55 30.4**	**+0.9**
	0.4nm,0.8s,mb3.2,baz=162,slow=9.8,SNR=2.3						
MK31	**Makanchi Array**	**48.78**	**322**	*e*P	**P**	**13 56 58.3**	**0.0**
MKAR	**Makanchi Array**	**48.78**	**322**	P	**P**	**13 56 58.4**	**+0.1**
MKAR	**Makanchi Array**	**48.78**	**322**	P	**P**	**13 56 58.4**	**+0.1**
	1.2nm,0.8s,mb4.0,baz=124,slow=8.5,SNR=12						
ZALV	**Zalesovo Beam**	**51.35**	**331**	P	**P**	**13 57 17.7**	**0.0**
	0.4nm,0.4s,mb3.7,baz=112,slow=11,SNR=3.5						
ILAR	**Eielson Array**	**77.60**	**26**	P	**P**	**14 00 10.1**	**+0.8**
	0.2nm,0.8s,mb3.1,baz=278,slow=6.1,SNR=3.3						

IDC 20 14:22:08.3±1.8, 9.°58S×125.°23E, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.6/15, mbtmp3.6/4, ML3.8/2, Error ellipse: s-maj=157.8km s-min=31.1km az=58.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.55**	**141**	Pn	Pn	14 25 22.0	+0.1
	0.5nm,0.3s,baz=315,slow=14,SNR=36						
WRA				Sn	Sn	14 27 43.9	-9.4
	0.5nm,0.3s,baz=313,slow=23,SNR=9.4						
ASAR	**Alice Springs**	**16.28**	**150**	Pn	Pn	14 25 58.5	0.0
	0.3nm,0.3s,baz=321,slow=11,SNR=26						
ASAR				Sn	Sn	14 28 50.3	-9.5
	0.2nm,0.3s,baz=314,slow=20,SNR=6.0						
MKAR	**Makanchi Array**	**67.92**	**330**	P	P	14 33 08.9	+0.2
	0.2nm,0.4s,baz=123,slow=7.3,SNR=4.1						
ZALV	**Zalesovo Beam**	**71.91**	**336**	P	P	14 33 33.2	0.0
	0.3nm,0.4s,baz=142,slow=7.3,SNR=2.2						

GUC 20 14:45:32.0±0.8, 23.°00S×70.°16W, h51km±14km, MD3.9, ML3.0, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.28**	**249**	*e*P	Pn	14 45 40.8	-0.3
MECH				*i* S	Sn	14 45 48.1	+0.5
MECH				AML	AML	14 45 49.5	
	comp=N,1μm,0.5s						
CEN1	**Los Morros**	**0.39**	**185**	*e*P	Pn	14 45 39.4	-2.7
CEN1				*i* S	Sn	14 45 49.2	-0.1
ANCH	**Antofagasta**	**0.71**	**199**	*e*P	Pn	14 45 41.4	-4.5
ANCH				*e*S	Sn	14 45 51.6	-4.5
ANCH				AML	AML	14 45 52.1	
	comp=E,911nm,0.1s						
MACH	**Maria Elena**	**0.89**	**25**	*e*P	Pn	14 45 49.3	+1.0
MACH				*i* S	Sn	14 46 02.0	+1.9
PB04	**Plate Boundary**	**0.96**	**40**	↓*i*P	Pn	14 45 46.1	-3.2
PB04				*i* S	Sn	14 45 56.4	-5.6
PB04				AML	AML	14 45 57.0	
	comp=N,2μm,0.4s						

*OMAN **20** 15:20:21.3±99.0, 29.°00N×58.°22E, h20km, Error ellipse: s-maj=1173.0km s-min=51.6km az=23.0*
*IDC **20** 15:20:29.9±2.9, 27.°83N×57.°79E, h0km, mb3.9/5, mb1 3.9/5, mb1mx3.5/26, mbtmp3.9/5, Error ellipse: s-maj=75.0km s-min=25.0km az=154.0*
*ISCJB **20** 15:20:31.8±0.6, 27.°99N±0.°04×57.°94E±0.°06, h10km, mb3.6/6, Error ellipse: s-maj=8.8km s-min=4.4km az=33.2*
*NEIC **20** 15:20:33.5±0.9, 28.°08N×57.°65E, h10km, mb3.4/1, ML3.6(THR), Error ellipse: s-maj=17.3km s-min=9.9km az=149.0*
*CSEM **20** 15:20:34.0±0.5, 27.°91N×57.°92E, h5km, ML3.6, Error ellipse: s-maj=16.5km s-min=8.9km az=124.0*
*THR **20** 15:20:35.2±0.3, 28.°04N×57.°71E, h15km, ML3.6*
*TEH **20** 15:20:37.3, 27.°92N×57.°84E, h21km*
*SGS **20** 15:20:38.9, 27.°89N×57.°79E, h52km*

ISC 20 15:20:34.4±0.5, 27.°98N±0.°04×57.°78E±0.°06, h10km, n56, σ1s61/61, mb3.6/6, 1C-1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBND	**Bandar-abas**	**1.22**	**245**	*e*Pg	**Pg**	**15 20 59.8**	**+1.9**
IBND				*e*Pg	**Pg**	**15 20 59.9**	**+2.0**
IBND				*e*Sg	**Sg**	**15 21 17.7**	**+4.0**
IBND				*e*		15 21 25.9	
	comp=Z,29μm,0.1s						
IBND				*e*		15 21 26.1	
	comp=Z,29μm,0.2s						
IBND	**Bandar-abas**	**1.22**	**245**	*e*Pg	**Pg**	**15 20 59.8**	**+1.9**
BNDS	**Bandar-Abbas**	**1.54**	**249**	*e*Pg	**Pg**	**15 21 03.0**	**-1.0**
BNDS	**Bandar-Abbas**	**1.54**	**249**	*e*Pg	**Pg**	**15 21 03.0**	**-0.9**
BNDS				AML	AML	15 21 28.8	
	comp=N,909nm,0.8s						
BNDS	**Bandar-Abbas**	**1.54**	**249**	*e*Pg	**Pg**	**15 21 03.0**	**-1.0**
KRBR	**Kerman**	**2.19**	**336**	*e*Pg	**Pb**	**15 21 13.0**	**-1.2**
KRBR	**Kerman**	**2.19**	**336**	*e*Pg	**Pb**	**15 21 13.7**	**-0.5**
KRBR				AML	AML	15 21 49.8	
	comp=E,429nm,0.7s						
KRBR				AML	AML	15 21 50.5	
	comp=N,357nm,0.5s						
KRBR	**Kerman**	**2.19**	**336**	*e*Pg	**Pb**	**15 21 13.0**	**-1.2**
BANOM	**Banah**	**2.44**	**213**	P	**Pb**	**15 21 14.7**	**-3.6**
	SNR=45						
BANOM	**Banah**	**2.44**	**213**	↓P	**Pn**	**15 21 14.7**	**+0.4**
	SNR=45						
ZHSF	**Zahedan**	**3.09**	**57**	*e*Pn	**Pn**	**15 21 25.0**	**+1.8**
ZHSF	**Zahedan**	**3.09**	**57**	*e*Pn	**Pn**	**15 21 25.9**	**+2.7**
ZHSF	**Zahedan**	**3.09**	**57**	*e*Pn	**Pn**	**15 21 25.0**	**+1.8**
ASHO	**Ashiyiah**	**3.62**	**206**	P	**Pn**	**15 21 31.6**	**+1.0**
	SNR=17						
ASHO	**Ashiyiah**	**3.62**	**206**	P	**Pn**	**15 21 31.6**	**+1.0**
	SNR=17						
ASUD	**Al Ashush, Dub**	**4.00**	**214**	P	**Pn**	**15 21 36.5**	**+0.8**
	SNR=14						
ASUD	**Al Ashush, Dub**	**4.00**	**214**	P	**Pn**	**15 21 36.5**	**+0.8**
	SNR=14						
IBAF	**Bafgh**	**4.09**	**332**	*e*Pn	**Pn**	**15 21 38.6**	**+1.7**
IBAF				*e*		15 21 57.5	
	comp=Z,531nm,0.2s						
IBAF	**Bafgh**	**4.09**	**332**	*e*Pn	**Pn**	**15 21 38.6**	**+1.7**
ISRV	**Sarvestan**	**4.34**	**290**	*e*Pn	**Pn**	**15 21 42.4**	**+2.0**
ISRV				*e*		15 22 39.0	
	comp=Z,512nm,0.1s						
ISRV	**Sarvestan**	**4.34**	**290**	*e*Pn	**Pn**	**15 21 42.4**	**+2.0**
IMEH	**Mehriz**	**4.38**	**322**	*e*Pn	**Pn**	**15 21 44.0**	**+3.0**
IMEH				*e*		15 23 00.8	
	comp=Z,422nm,0.3s						
IMEH	**Mehriz**	**4.38**	**322**	*e*Pn	**Pn**	**15 21 44.0**	**+3.0**
IPAR	**Pars**	**4.55**	**295**	*e*Pn	**Pn**	**15 21 46.3**	**+3.0**
IPAR				*e*		15 23 21.0	
	comp=Z,466nm,0.4s						
IPAR	**Pars**	**4.55**	**295**	*e*Pn	**Pn**	**15 21 46.3**	**+3.0**
IKOO	**Kooshah**	**4.56**	**13**	*e*Pn	**Pn**	**15 21 45.8**	**+2.4**
IKOO				*e*		15 21 54.5	
	comp=Z,461nm,0.1s						
IKOO	**Kooshah**	**4.56**	**13**	*e*Pn	**Pn**	**15 21 45.8**	**+2.4**
ARQ	**Araqi**	**4.76**	**194**	P	**Pn**	**15 21 46.8**	**+0.6**
	SNR=5.1						
ARQ	**Araqi**	**4.76**	**194**	↑P	**Pn**	**15 21 46.8**	**+0.6**
	SNR=5.1						
ITEG	**Tejag**	**4.98**	**9**	*e*Pn	**Pn**	**15 21 51.5**	**+2.3**
ITEG				*e*		15 22 07.0	
	comp=Z,538nm,0.2s						
ITEG				*e*Sg	**Sg**	**15 23 13.4**	**-0.8**
ITEG	**Tejag**	**4.98**	**9**	*e*Pn	**Pn**	**15 21 51.5**	**+2.3**
ITEG				*e*Sg	**Sg**	**15 23 13.4**	**-0.8**
IDAH	**Dahanechah**	**5.08**	**20**	*e*Pn	**Pn**	**15 21 53.1**	**+2.5**
IDAH				*e*		15 22 23.5	
	comp=Z,178nm,0.2s						
IDAH				*e*Sg	**Sg**	**15 23 17.4**	**-0.1**
IDAH	**Dahanechah**	**5.08**	**20**	*e*Pn	**Pn**	**15 21 53.1**	**+2.5**
IDAH				*e*Sg	**Sg**	**15 23 17.4**	**-0.1**
IGAR	**Gharneh**	**6.65**	**313**	*e*Pn	**Pn**	**15 22 12.9**	**+0.8**
QRN	**Al-Qurain**	**8.73**	**277**	*e*P	**Pn**	**15 22 39.9**	**-0.8**
KBD	**Kabd**	**8.95**	**280**	*e*P	**Pn**	**15 22 42.8**	**-1.0**
UMR	**Umm Al-Rimmam**	**8.97**	**282**	*e*P	**Pn**	**15 22 43.8**	**-0.3**
UMR				AML	AML	15 24 20.8	
	comp=Z,13nm,0.3s						
HRDDS		**9.04**	**238**	S	**Sn**	**15 24 18.6**	**-8.4**
HRDDS		**9.04**	**238**	P	**Pn**	**15 22 43.4**	**-1.7**
LYLS		**11.23**	**241**	P	**Pn**	**15 23 11.1**	**-4.0**
ASYS		**11.92**	**271**	P	**Pn**	**15 23 20.5**	**-3.9**
ASYS		**11.92**	**271**	P	**Pn**	**15 23 20.5**	**-3.9**
BHD	**Baghdad**	**12.69**	**298**	*ex*	x	15 23 41.3	
BHD				*ex*	x	15 26 03.7	
ABKAR	**Akbulak array**	**21.32**	**4**	*e*P	**P**	**15 25 20.2**	**-1.0**
	comp=Z,1.0nm,0.6s,mb3.3						
ABKAR	**Akbulak array**	**21.32**	**4**	*e*P	**P**	**15 25 20.2**	**-1.0**
	comp=Z,0.9nm,0.6s,mb3.3						
BRTR	**Keskin Array B**	**23.15**	**307**	P	**P**	**15 25 38.9**	**-2.0**
	comp=Z,0.3nm,0.5s,mb3.0,baz=123,slow=10,SNR=3.0						
BRTR	**Keskin Array B**	**23.15**	**307**	P	**P**	**15 25 38.9**	**-2.0**
BVAR	**Borovoye

*NEIC **20** 16:19:53.4±0.2,8.32S×110.88E,mb4.6/7, Error ellipse: s-maj=10.6km s-min=5.6km az=46.0*
NEIC Felt [IV] at Yogyakarta and [II] at Karangkates.
*ISCJB **20** 16:19:54.7±0.4,8.56S±0.05×110.90E±0.02,h98km±3km, mb4.4/27, Error ellipse: s-maj=9.0km s-min=2.8km az=12.8*
*IDC **20** 16:19:54.2±0.8,8.34S×110.85E,h72km±6km, mb4.0/18, mb1 4.1/19,mb1mx4.1/22,mbtmp4.0/19,MS3.3/7, Ms1 3.3/7,ms1mx3.1/28, Error ellipse: s-maj=17.6km s-min=11.3km az=54.0*
*DJA **20** 16:19:55,8.79S×110.90E,h39km, MLv5.3/29*

ISC 20 16:19:56.1±0.4,8.56S±0.05×110.91E±0.02,h95km±3km, h70km±2.9km:pP-P,n101,σ1§36/114,mb4.4/27,1C,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCJI	**Pacitan**	**0.45**	**36**	P	**Pn**	**16 20 07.8**	**-3.2**
PCJI				S	**Sn**	**16 20 17.8**	**-4.2**
UGM	**Wanagama**	**0.75**	**329**	P	**Pn**	**16 20 11.2**	**-2.3**
UGM				S	**Sn**	**16 20 23.2**	**-3.3**
PWJI	**Pagerwojo**	**1.03**	**59**	P	**Pn**	**16 20 15.0**	**-1.5**
PWJI				S	**Sn**	**16 20 28.9**	**-3.0**
SJI	**Sawahan**	**1.18**	**46**	P	**Pn**	**16 20 17.5**	**-0.7**
NGJI	**Ngawi**	**1.30**	**25**	P	**Pn**	**16 20 21.4**	**+1.7**
KRKI	**Karangkates**	**1.58**	**76**	P	**Pn**	**16 20 22.7**	**-0.4**
KRKI				S	**Sn**	**16 20 43.8**	**+0.2**
BJII	**Banjamegara**	**1.70**	**316**	P	**Pn**	**16 20 24.6**	**0.0**
BJII				S	**Sn**	**16 20 47.8**	**+1.5**
GRJI	**Gresik**	**2.26**	**44**	P	**Pn**	**16 20 31.5**	**-0.4**
GMJI	**Gumukmas**	**2.53**	**84**	P	**Pn**	**16 20 34.5**	**-0.9**
CISI	**Cisompet, Garu**	**3.22**	**288**	P	**Pn**	**16 20 43.4**	**-1.3**
CISI				S	**Sn**	**16 21 19.6**	**-2.6**
JCJI	**Jatiwangi**	**3.33**	**308**	P	**Pn**	**16 20 42.6**	**-3.5**
JCJI				S	**Sn**	**16 21 22.5**	**-2.3**
KMMI	**Kalianget**	**3.38**	**64**	P	**Pn**	**16 20 46.2**	**-0.7**
KMMI				S	**Sn**	**16 21 27.6**	**+1.5**
BYJI	**Banyuwangi**	**3.43**	**85**	P	**Pn**	**16 20 48.1**	**+0.6**
BYJI				S	**Sn**	**16 21 28.2**	**+0.9**
NBBI	**Negara**	**3.68**	**87**	P	**Pn**	**16 20 51.4**	**+0.5**
NBBI				S	**Sn**	**16 21 33.3**	**0.0**
LEM	**Lembang**	**3.69**	**298**	P	**Pn**	**16 20 51.2**	**+0.2**
LEM				S	**Sn**	**16 21 34.8**	**+1.3**
IGBI	**Denpasar**	**4.20**	**94**	P	**Pn**	**16 20 57.3**	**-0.6**
IGBI				S	**Sn**	**16 21 44.5**	**-1.4**
DNP	**Denpasar**	**4.26**	**92**	P	**Pn**	**16 21 00.1**	**+1.4**
DNP				S	**Sn**	**16 21 48.1**	**+0.8**
SRBI	**Singaraja**	**4.29**	**84**	P	**Pn**	**16 20 58.7**	**-0.4**
SRBI				S	**Sn**	**16 21 48.2**	**+0.2**
DBJI	**Dramaga**	**4.58**	**296**	P	**Pn**	**16 21 03.3**	**+0.2**
DBJI				S	**Sn**	**16 21 56.8**	**+1.7**
SKJI	**Sukabumi**	**4.58**	**289**	P	**Pn**	**16 21 03.2**	**+0.1**
SKJI				S	**Sn**	**16 21 54.4**	**-0.8**
KHKI	**Kahang-Kahang**	**4.65**	**88**	P	**Pn**	**16 21 03.8**	**-0.3**
KHKI				S	**Sn**	**16 21 54.2**	**-2.8**
SBJI	**Serang**	**5.32**	**297**	P	**Pn**	**16 21 13.6**	**+0.4**
	2.0nm9µm313nm,1.0s						
CGJI	**Cibinong**	**5.52**	**290**	P	**Pn**	**16 21 14.2**	**-1.6**
RBSI	**Rajabasa**	**5.79**	**297**	P	**Pn**	**16 21 19.2**	**-0.4**
	1.4nm4µm472nm,0.9s						
BLSI	**Bandar Lampung**	**6.45**	**299**	P	**Pn**	**16 21 33.4**	**+4.8**
TPI	**Tanjungpandan**	**6.61**	**330**	P	**Pn**	**16 21 32.7**	**+2.0**
	0.5nm969nm39nm,1.1s						
KASI	**Kota Agung**	**7.04**	**295**	P	**Pn**	**16 21 37.2**	**+0.6**
	0.7nm3µm176nm,1.1s						
KASI				S	**Sn**	**16 22 52.3**	**-2.8**
	0.7nm3µm176nm,1.1s						
KLI	**Kotabumi**	**7.04**	**301**	P	**Pn**	**16 21 38.2**	**+1.6**
	0.9nm5µm307nm,1.0s						
KLSI		**7.24**	**302**	P	**Pn**	**16 21 39.9**	**+0.6**
	0.5nm1µm142nm,1.2s						
KBKI	**Kotabaru**	**7.39**	**45**	P	**Pn**	**16 21 43.4**	**+2.0**
	0.2nm51nm,0.7s						
LWLI	**Liwa**	**7.66**	**297**	P	**Pn**	**16 21 47.1**	**+2.1**
	1.0nm3µm237nm,0.8s						
MDSI	**Maura Dua**	**7.81**	**301**	P	**Pn**	**16 21 49.3**	**+2.2**
	0.3nm84nm,1.1s						
STKI	**Sintang**	**8.59**	**4**	P	**Pn**	**16 22 00.0**	**+2.4**
	8µm42nm,1.0s						
MNAI	**Manna**	**8.93**	**297**	P	**Pn**	**16 22 01.4**	**-1.0**
	306nm,1.4s						
WSI	**Waingapu**	**9.34**	**98**	P	**Pn**	**16 22 06.1**	**-1.8**
	8µm424nm,0.6s						
WSI				S	**Sn**	**16 23 46.9**	**-4.3**
	8µm424nm,0.6s						
KSI	**Kapahiang**	**9.60**	**300**	P	**Pn**	**16 22 12.2**	**+0.8**
	3µm245nm,0.7s						
BKSI	**Bulukumba**	**9.70**	**71**	P	**Pn**	**16 22 13.2**	**+0.4**
	470nm48nm,0.7s						
SPSI	**Sidrap Palu**	**9.92**	**63**	P	**Pn**	**16 22 16.8**	**+1.0**
	31nm,1.0s						
TTSI	**Tana Toraja**	**10.42**	**59**	P	**Pn**	**16 22 24.6**	**+2.0**
	33nm,1.4s						
SBUM	**Sibu**	**11.01**	**7**	P	**Pn**	**16 22 33.3**	**+2.6**
	6.9nm,0.9s						
MMRI	**Maumere**	**11.20**	**91**	P	**Pn**	**16 22 30.0**	**-3.3**
	2µm133nm,0.8s						
SDSI	**Sungai Dareh**	**12.10**	**308**	P	**Pn**	**16 22 47.4**	**+2.0**
	762nm12nm,0.8s						
MYKOM	**Kota Tinggi**	**12.46**	**325**	P	**Pn**	**16 22 52.7**	**+2.6**
	17nm,1.0s						
PDSI	**Padang**	**12.88**	**306**	P	**Pn**	**16 22 56.4**	**+0.7**
	45nm,0.4s						
PPI	**Padang Panjang**	**13.21**	**307**	P	**Pn**	**16 23 00.2**	**+0.2**
	232nm,1.1s						
MRSI	**Marisa**	**14.19**	**51**	P	**Pn**	**16 23 19.0**	**+6.2**
MBWA	**Marble Bar**	**15.14**	**147**	*e*Pn	**Pn**	**16 23 21.5**	**-3.5**
	10.0nm,0.4s						
MBWA	**Marble Bar**	**15.14**	**147**	P	**Pn**	**16 23 21.3**	**-3.7**
	23nm,1.2s						
KKM	**Kota Kinabalu**	**15.44**	**20**	P	**Pn**	**16 23 36.5**	**+7.8**
MYLDM	**Lahad Datu**	**15.61**	**29**	P	**Pn**	**16 23 36.2**	**+5.4**
	30nm,1.4s						
IPM	**Ipoh**	**16.27**	**322**	P	**Pn**	**16 23 44.2**	**+5.0**
	13nm,1.4s						
PSI	**Prapat**	**16.43**	**313**	LR	LR	16 30 30.1	
	comp=Z,160nm,19.7s,baz=11,slow=39						
GSI	**Gunungsitoli**	**16.51**	**306**	P	**Pn**	**16 23 37.2**	**-4.9**
KULM	**Kulim**	**17.14**	**323**	P	**Pn**	**16 23 52.8**	**+2.9**
	12nm,1.1s						
FITZ	**Fitzroy Crossi**	**17.18**	**125**	*e*P	**Pn**	**16 23 49.8**	**-0.4**
	26nm,0.8s						
FITZ				*e*S	S	16 26 43.8	-18
FITZ	**Fitzroy Crossi**	**17.18**	**125**	P	**Pn**	**16 23 50.0**	**-0.2**
	1.6nm,0.3s,baz=306,slow=11,SNR=48						
FITZ				S	**S**	**16 26 46.9**	**-15**
	1.0nm,0.3s,baz=196,slow=19,SNR=9.7						
FITZ				LR	LR	16 30 31.8	
	comp=Z,50nm,19.4s,baz=289,slow=37						
KNA	**Kununurra**	**18.86**	**114**	P	**Pn**	**16 24 10.2**	**-0.3**
	1µm122nm,0.9s						
KAKA	**Kakadu**	**21.56**	**103**	*e*P	**P**	**16 24 37.8**	**-0.3**
	49nm,0.7s,mb4.9						
KAKA	**Kakadu**	**21.56**	**103**	*e*P	**P**	**16 24 37.6**	**-0.4**
	112nm,0.7s,mb5.3						
KAKA	**Kakadu**	**21.56**	**103**	P	**P**	**16 24 37.8**	**-0.3**
NWAO	**Narrogin (SRO)**	**24.95**	**167**	LR	LR	16 33 25.4	
	comp=Z,112nm,21.8s,baz=174,slow=32						
WRA	**Warramunga Arr**	**25.33**	**119**	P	**P**	**16 25 15.1**	**+0.8**
	6.8nm,0.7s,mb4.2,baz=293,slow=11,SNR=50						
WRA				PcP	PcP	16 28 46.1	+1.1
	1.3nm,0.8s,baz=301,slow=2.0,SNR=4.9						
WRA				S		16 30 00.5	+27
	2.1nm,0.8s,baz=293,slow=23,SNR=5.1						
ASAR	**Alice Springs**	**26.65**	**127**	P	**P**	**16 25 27.2**	**+1.1**
	3.9nm,0.9s,mb4.0,baz=302,slow=8.9,SNR=41						
ASAR				PcP	PcP	16 28 49.1	+1.2
	1.5nm,0.5s,baz=306,slow=2.2,SNR=6.2						
ASAR				S	S	16 30 29.1	+35
	3.2nm,1.1s,baz=300,slow=19,SNR=6.9						
CMAR	**Chiang Mai Arr**	**29.33**	**336**	P	**P**	**16 25 48.5**	**-1.5**
	0.8nm,0.6s,mb3.5,baz=174,slow=7.9,SNR=6.8						
CMAR				pP	pP	16 26 02.8	-8.6
	2.4nm,0.6s,baz=170,slow=8.1,SNR=11						
CMAR				PcP	PcP	16 28 56.0	+1.5
	1.9nm,0.7s,baz=189,slow=2.9,SNR=10						
CMAR				pPcP		16 29 17.2	
	1.6nm,0.7s,baz=193,slow=3.3,SNR=6.2						
CMAR				ScP	ScP	16 32 29.6	+1.8
	0.8nm,0.8s,baz=202,slow=1.2,SNR=5.1						
CMAR				LR	LR	16 39 10.0	
	comp=Z,42nm,18.7s,baz=185,slow=40						
CTA	**Charters Tower**	**36.03**	**112**	P	**P**	**16 26 50.4**	**+1.9**
	4.6nm,0.9s,mb4.4,baz=288,slow=13,SNR=3.4						
CTA				LR	LR	16 40 39.9	
	comp=Z,60nm,19.0s,baz=41,slow=34						
CTAO	**Charters Tower**	**36.03**	**112**	*e*P	**P**	**16 26 50.1**	**+1.6**
	8.1nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**36.75**	**133**	*e*P	**P**	**16 26 56.5**	**+2.1**
STKA				PcP	PcP	16 29 16.6	+1.6
STKA				LR	LR	16 42 16.0	
STKA	**Stephens Creek**	**36.75**	**133**	P	**P**	**16 26 56.6**	**+2.2**
	3.4nm,0.3s,mb4.8,baz=309,slow=11,SNR=26						
STKA				PcP	PcP	16 29 16.6	+1.6
	5.1nm,0.9s,baz=315,slow=2.9,SNR=3.2						
STKA				LR	LR	16 42 16.0	
	comp=Z,54nm,18.9s,baz=25,slow=36						
LSA	**Lhasa**	**42.53**	**334**	P	**P**	**16 27 41.8**	**-0.6**
LSA	**Lhasa**	**42.53**	**334**	*e*P	**P**	**16 27 42.0**	**-0.4**
	3.8nm,0.5s,mb4.4						
KSRS	**Korea Array**	**48.46**	**18**	P	**P**	**16 28 29.2**	**+0.1**
	0.8nm,0.6s,mb3.8,baz=201,slow=8.6,SNR=3.1						
KSRS				pP	pP	16 28 47.2	-4.6
	2.0nm,0.8s,baz=195,slow=7.4,SNR=3.5						
MJAR	**Matsushiro Arr**	**51.67**	**28**	P	**P**	**16 28 53.1**	**-0.3**
	0.6nm,0.4s,mb4.0,baz=225,slow=12,SNR=3.1						
MJAR				LR	LR	16 53 16.9	
	comp=Z,31nm,19.2s,baz=235,slow=39						
SONM	**Songino Array**	**56.29**	**356**	P	**P**	**16 29 26.0**	**-0.8**
	0.6nm,0.5s,mb3.9,baz=178,slow=8.1,SNR=4.9						
SONM				PcP	PcP	16 30 23.3	+0.2
	1.5nm,0.6s,baz=176,slow=4.2,SNR=4.7						
SONM				ScP	ScP	16 34 15.5	+1.6
	0.3nm,0.5s,baz=178,slow=6.1,SNR=4.1						
TKM2	**Tokmak 2**	**60.49**	**331**	*e*P	**P**	**16 29 54.5**	**-1.6**
	2.5nm,0.4s,mb4.6						
MK31	**Makanchi Array**	**60.72**	**338**	*e*P	**P**	**16 29 56.1**	**-1.4**
MKAR	**Makanchi Array**	**60.72**	**338**	P	**P**	**16 29 56.2**	**-1.4**
	1.8nm,0.4s,mb4.5,baz=150,slow=7.8,SNR=27						
MKAR				pP	pP	16 30 15.1	-6.1
	1.9nm,0.5s,baz=150,slow=7.5,SNR=4.9						
MKAR				PcP	PcP	16 30 40.9	+0.2
	1.3nm,0.5s,baz=152,slow=6.4,SNR=4.2						
AML	**Almayashu**	**60.85**	**329**	P	**P**	**16 29 57.9**	**-0.6**
OPO	**Ambohidratompo**	**62.47**	**254**	P	**P**	**16 30 10.7**	**+0.7**
	3.9nm,0.8s,mb4.5,baz=80,slow=6.5,SNR=6.5						
KURK	**Kurchatov**	**65.33**	**338**	P	**P**	**16 30 26.3**	**-1.7**
	0.4nm,0.4s,mb3.6,baz=151,slow=6.3,SNR=4.1						
KURK				PcP	PcP	16 30 59.0	-0.5
	1.1nm,0.5s,baz=151,slow=3.6,SNR=8.3						
ZALV	**Zalesovo Beam**	**66.06**	**343**	P	**P**	**16 30 30.5**	**-2.1**
ZALV	**Zalesovo Beam**	**66.06**	**343**	P	**P**	**16 30 30.5**	**-2.1**
	0.8nm,0.5s,mb4.0,baz=156,slow=5.1,SNR=6.0						
MAW	**Mawson**	**67.05**	**198**	P	**P**	**16 30 40.7**	**+1.9**
	3.4nm,0.8s,mb4.2,baz=54,slow=5.8,SNR=5.9						
QRN	**Al-Qurain**	**71.11**	**304**	*e*P	**P**	**16 31 03.7**	**-1.0**
RDF	**Al-Radifah**	**71.48**	**304**	*e*P	**P**	**16 31 06.5**	**-0.3**
RDF				AMb	AMB	16 31 07.3	
	comp=Z,36nm,0.7s,mb5.3						
UMR	**Umm Al-Rimmam**	**71.57**	**305**	*e*P	**P**	**16 31 06.4**	**-1.0**
UMR				AMb	AMB	16 31 07.4	
	comp=Z,65nm,0.9s,mb5.5						
NAY	**Al-Naaiem**	**71.85**	**304**	*e*P	**P**	**16 31 07.8**	**-1.3**
NAY				AMb	AMB	16 31 08.8	
	comp=Z,19nm,0.7s,mb5.0						
MIB	**Mutribah**	**71.97**	**305**	*e*P	**P**	**16 31 08.6**	**-1.1**
MIB				AMb	AMB	16 31 09.4	
	comp=Z,30nm,0.6s,mb5.3						
ABKAR	**Akbulak array**	**72.76**	**328**	*e*P	**P**	**16 31 13.2**	**-0.8**
	comp=Z,5.0nm,0.8s,mb4.4						
SYO	**Syowa Base**	**75.40**	**201⇑**	*e*P	**P**	**16 31 29.5**	**+0.4**
LSZ	**Lusaka**	**80.81**	**256**	P	**P**	**16 32 01.2**	**+1.2**
	comp=Z,7.7nm,0.5s,mb4.3,baz=63,slow=15						
QSPA	**South Pole Qui**	**81.44**	**180**	*e*P	**P**	**16 32 04.2**	**+2.0**
	comp=Z,6.7nm,0.9s,mb4.5						
BOSA	**Boshof**	**82.16**	**242**	P	**P**	**16 32 08.8**	**+1.8**
	comp=Z,2.7nm,0.4s,mb4.4,baz=112,slow=4.5,SNR=13						
BRTR	**Keskin Array B**	**85.76**	**311**	P	**P**	**16 32 24.8**	**-0.1**
	comp=Z,6.2nm,0.8s,mb4.6,baz=126,slow=6.4,SNR=41						
BRTR				pP	pP	16 32 44.1	-5.8
	comp=Z,1.8nm,0.7s,baz=134,slow=7.0,SNR=3.3						
AKASG	**Malin Array Be**	**91.33**	**321**	P	**P**	**16 32 49.6**	**-1.5**
	comp=Z,0.4nm,0.3s,mb4.0,baz=85,slow=4.8,SNR=4.2						
FINES	**FINESS Array B**	**94.98**	**331**	P	**P**	**16 33 06.3**	**-1.4**
FINES	**FINESS Array B**	**94.98**	**331**	P	**P**	**16 33 06.3**	**-1.4**
	comp=Z,0.8nm,0.7s,mb4.2,baz=104,slow=10,SNR=4.3						
NVAR	**Mina Array Bea**	**126.80**	**48**	PKP	PKPdf	16 38 50.0	+0.9
	comp=Z,0.3nm,0.7s,baz=252,slow=2.7,SNR=2.7						
SCHQ	**Schefferville**	**133.82**	**358**	PKP	PKPdf	16 39 03.6	+1.7
	comp=Z,3.2nm,0.8s,baz=95,slow=0.7,SNR=2.6						
TXAR	**Lajitas Array**	**141.55**	**53**	PKhKP	PKPpre	16 39 12.2	
	comp=Z,0.3nm,0.7s,baz=241,slow=1.9,SNR=3.5						
TXAR				PKP	PKPdf	16 39 18.9	+2.0
	comp=Z,0.2nm,0.4s,baz=220,slow=2.2,SNR=3.6						
TXAR				SKPbc	SKPbc	16 42 48.0	+2.2
	comp=Z,0.6nm,0.8s,baz=277,slow=0.7,SNR=4.5						
LPAZ	**La Paz**	**155.30**	**182**	PKPab	PKPab	16 40 06.8	+2.2
LPAZ	**La Paz**	**155.30**	**182**	PKPab	PKPab	16 40 06.8	+2.2
	comp=Z,1.8nm,0.8s,baz=213,slow=5.2,SNR=5.9						

*IDC **20** 16:22:15.1±1.0, 18.53N×147.08E, h0km, mb3.9/7, mb1 4.2/8, mb1mx3.9/22, mbtmp3.9/8, ML4.4/1, Error ellipse: s-maj=33.6km s-min=22.6km az=115.0*
*ISCJB **20** 16:22:22.2±4.2, 18.3N±0.2×146.8E±0.2, h60km±39km, mb3.9/7, Error ellipse: s-maj=38.6km s-min=27.7km az=12.0*
*NEIC **20** 16:22:22.1±3.9, 18.47N×147.06E, h50km±39km, Error ellipse: s-maj=32.9km s-min=30.7km az=132.0*

ISC 20 16:22:21.9±3.7,18.4N±0.2×147.0E±0.2,h48km±37km,n10, σ1§24/12,mb3.9/7,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.18**	**204**	*e*P	**Pn**	**16 23 38.6**	**+1.8**
GUMO				Sn	**Sn**	**16 24 34.4**	**-0.9**
GUMO	**Guam**	**5.18**	**204**	Pn	**Pn**	**16 23 37.1**	**+0.2**
	12nm,0.3s,baz=74,slow=2.8,SNR=10.0						
GUMO				Sn	**Sn**	**16 24 34.4**	**-0.9**
	11nm,0.3s,baz=343,slow=19,SNR=3.6						
WRA	**Warramunga Arr**	**40.05**	**199**	P	**P**	**16 29 52.7**	**+0.2**
	1.1nm,0.9s,mb3.6,baz=24,slow=10.0,SNR=2.5						
CMAR	**Chiang Mai Arr**	**45.49**	**278**	P	**P**	**16 30 37.7**	**+0.9**
	1.0nm,0.8s,mb3.7,baz=75,slow=6.7,SNR=7.8						
MKAR	**Makanchi Array**	**59.58**	**314**	P	**P**	**16 32 21.6**	**+0.9**
	0.6nm,0.4s,mb4.0,baz=107,slow=7.9,SNR=2.9						
KURK	**Kurchatov**	**62.34**	**318**	P	**P**	**16 32 37.3**	**-2.0**
	0.6nm,0.5s,mb4.0,baz=96,slow=6.9,SNR=3.7						
ILAR	**Eielson Array**	**63.39**	**26**	P	**P**	**16 32 43.9**	**-2.2**
	0.7nm,0.9s,mb3.8,baz=262,slow=5.8,SNR=7.6						
NVAR	**Mina Array Bea**	**82.35**	**52**	P	**P**	**16 34 40.3**	**+1.4**
	0.7nm,0.7s,mb3.7,baz=285,slow=3.5,SNR=6.9						
ARCES	**ARCESS Array B**	**83.18**	**342**	P	**P**	**16 34 42.7**	**+0.1**
ARCES	**ARCESS Array B**	**83.18**	**342**	P	**P**	**16 34 42.7**	**+0.1**
	2.6nm,0.8s,mb4.3,baz=42,slow=8.5,SNR=3.7						

DJA 20 16:22:46,0.47N×127.31E,h10km,MLv4.0/4,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.30**	**11**	P	Pg	16 22 53.4	+1.3
NLAI	**Namlea**	**3.69**	**183**	P	Pn	16 23 40.3	-2.8
NLAI				S	Sn	16 24 29.9	+3.2
LUWI	**Luwuk**	**4.78**	**252**	P	Pn	16 23 58.9	+0.8

*ISCJB **20** 16:42:13.0±0.3, 44.82N±0.01×7.22E±0.03, h7km±2km, Error ellipse: s-maj=3.1km s-min=2.1km az=173.3*
*CSEM **20** 16:42:13.7±0.1, 44.82N×7.25E, h5km, ML3.2/24, Error ellipse: s-maj=2.0km s-min=1.4km az=82.0*
*ROM **20** 16:42:13.6±0.1, 44.82N×7.20E, h11km±1km, Md2.7/10, Ml2.6/9, Error ellipse: s-maj=1.2km s-min=0.7km az=60.0*
*LDG **20** 16:42:14.6±0.1, 44.78N×7.30E, h2km, Md3.0/2, Ml3.0/16, Error ellipse: s-maj=2.5km s-min=1.5km az=78.0*
*ZUR **20** 16:42:14.3, 44.82N×7.19E, h3km±1km, ML1.8/4*
*NEIC **20** 16:42:14.6, 44.78N×7.30E, h2km, ML3.0(LDG), ML2.8(STR), After LDG*
*STR **20** 16:42:14.8±0.2, 44.76N×7.31E, h5km, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 20 16:42:13.8±0.3,44.82N±0.01×7.24E±0.03,h7km±2km, n114,σ0§74/189,8C-2D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DOI	**San Damiano**	**0.32**	**179⇑**	*i*Pg	**Pg**	**16 42 20.4**	**+0.4**
DOI				Sg	**Sg**	**16 42 24.4**	**+0.2**
	475nm,0.3s						
PZZ	**Stroppo**	**0.33**	**196⇑**	*i*Pg	**Pg**	**16 42 20.7**	**+0.5**
PZZ				Sg	**Sg**	**16 42 25.1**	**+0.6**
	1µm,0.2s						
PZZ	**Stroppo**	**0.33**	**196⇑**	*i*Pg	**Pg**	**16 42 20.7**	**+0.5**
PZZ				Sg	**Sg**	**16 42 25.1**	**+0.6**
	1µm,0.2s						
RSP	**Reno Superiore**	**0.33**	**3**	Pg	**Pg**	**16 42 20.7**	**+0.4**
RSP				Sg	**Sg**	**16 42 25.4**	**+0.7**
	436nm,0.2s						
RSP	**Reno Superiore**	**0.33**	**3**	Pg	**Pg**	**16 42 20.7**	**+0.4**
RSP				Sg	**Sg**	**16 42 25.4**	**+0.7**
	436nm,0.2s						
MBDF	**Montbardon**	**0.35**	**255**	*e*Pg	**Pg**	**16 42 21.1**	**+0.5**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**16 42 25.6**	**+0.5**
	1µm,0.3s						
MBDF	**Montbardon**	**0.35**	**255**	*e*Pg	**Pg**	**16 42 21.1**	**+0.5**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**16 42 25.6**	**+0.5**
	510nm,0.3s						
SURF	**Saint Ours**	**0.46**	**222**	Pg	**Pg**	**16 42 23.4**	**+0.8**
SURF				Sg	**Sg**	**16 42 29.7**	**+1.1**
SURF	**Saint Ours**	**0.46**	**222**	Pg	**Pg**	**16 42 23.4**	**+0.8**
SURF				Sg	**Sg**	**16 42 29.7**	**+1.1**
MONC	**Moncucco Torin**	**0.55**	**62**	Pg	**Pg**	**16 42 25.6**	**+1.1**
	339nm,0.3s						
MONC	**Moncucco Torin**	**0.55**	**62**	Pg	**Pg**	**16 42 25.6**	**+1.1**
	339nm,0.3s						
LSD	**Lago del Serru**	**0.64**	**353**	Pg	**Pg**	**16 42 26.3**	**0.0**
LSD				Sg	**Sg**	**16 42 34.7**	**0.0**
	207nm,0.3s						
LSD	**Lago del Serru**	**0.64**	**353**	Pg	**Pg**	**16 42 26.3**	**0.0**
LSD				Sg	**Sg**	**16 42 34.7**	**0.0**
	207nm,0.3s						
LPG	**La Plagne**	**0.76**	**333**	*e*Pg	**Pg**	**16 42 28.3**	**-0.2**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**16 42 37.6**	**-0.8**
	350nm,0.4s						
LPG	**La Plagne**	**0.76**	**333**	*e*Pg	**Pg**	**16 42 28.3**	**-0.2**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**16 42 37.6**	**-0.8**
	175nm,0.4s						
LPL	**La Plagne**	**0.78**	**333**	*e*Pg	**Pg**	**16 42 28.7**	**-0.2**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**16 42 37.3**	**-1.8**
	362nm,0.4s						
LPL	**La Plagne**	**0.78**	**333**	*e*Pg	**Pg**	**16 42 28.7**	**-0.2**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**16 42 37.3**	**-1.8**
	181nm,0.4s						
TOUF	**Mont Tournerai**	**0.81**	**180**	Pg	**Pg**	**16 42 29.3**	**0.0**
TOUF	**Mont Tournerai**	**0.81**	**180**	Pg	**Pg**	**16 42 29.3**	**0.0**
AUTN	**L'Aution**	**0.83**	**171**	Pg	**Pg**	**16 42 29.3**	**-0.6**
AUTN				Sg	**Sg**	**16 42 40.1**	**-0.6**
AUTN	**L'Aution**	**0.83**	**171**	Pg	**Pg**	**16 42 29.3**	**-0.6**
AUTN				Sg	**Sg**	**16 42 40.1**	**-0.6**
SAOF	**Saorge**	**0.86**	**165**	Pg	**Pg**	**16 42 29.5**	**-0.9**
SAOF				Sg	**Sg**	**16 42 40.0**	**-1.6**
SAOF	**Saorge**	**0.86**	**165**	Pg	**Pg**	**16 42 29.5**	**-0.9**
SAOF				Sg	**Sg**	**16 42 40.0**	**-1.6**
GDM	**Grand'Maison**	**0.88**	**296**	Pg	**Pg**	**16 42 32.1**	**+1.3**
GDM	**Grand'Maison**	**0.88**	**296**	Pg	**Pg**	**16 42 32.1**	**+1.3**
MVIF	**Mont Vial**	**0.93**	**184**	Pg	**Pg**	**16 42 31.1**	**-0.5**
MVIF				Sg	**Sg**	**16 42 43.4**	**-0.2**
MVIF	**Mont Vial**	**0.93**	**184**	Pg	**Pg**	**16 42 31.1**	**-0.5**
MVIF				Sg	**Sg**	**16 42 43.4**	**-0.2**
QLNO	**Quiliano**	**0.93**	**122⇑**	*i*Pg	**Pg**	**16 42 31.6**	**-0.1**
QLNO				Sg	**Sg**	**16 42 44.0**	**+0.1**
	173nm,0.3s						
QLNO	**Quiliano**	**0.93**	**122⇑**	*i*Pg	**Pg**	**16 42 31.6**	**-0.1**
QLNO				Sg	**Sg**	**16 42 44.0**	**+0.1**
	173nm,0.3s						
MRGE	**Morge**	**0.96**	**353⇑**	*i*Pg	**Pg**	**16 42 32.0**	**-0.3**
	65nm,0.4s						
MRGE	**Morge**	**0.96**	**353⇑**	*i*Pg	**Pg**

SNR=1.0
VIVF *e*Sg **Sg** 16 43 13.2 +0.7
23nm,0.3s,SNR=1.0
VIVF Saint-Julien-I 1.83 272 *e*Pn **Pn** 16 42 45.5 -0.1
VIVF *e*Pg **Pg** 16 42 49.2 +0.4
VIVF *e*Sn **Sn** 16 43 08.1 -0.8
VIVF *e*Sg **Sg** 16 43 13.2 +0.7
VIVF Saint-Julien-I 1.83 272 *e*Pn **Pn** 16 42 45.5 -0.1
SNR=1.0
VIVF Saint-Julien-I 1.83 272 *e*Pg **Pg** 16 42 49.2 +0.4
SNR=1.0
VIVF *e*Sn **Sn** 16 43 08.1 -0.8
SNR=1.0
VIVF *e*Sg **Sg** 16 43 13.2 +0.7
11nm,0.3s,SNR=1.0
CABF La Chapelle 1.96 336 *e*Pg **Pg** 16 42 51.8 +0.3
SNR=1.0
CABF *e*Sn **Sn** 16 43 12.4 +0.1
8.1nm,0.2s,SNR=1.0
CABF La Chapelle 1.96 336 *e*Pn **Pn** 16 42 48.3 +0.8
CABF *e*Pg **Pg** 16 42 51.8 +0.3
CABF *e*Sn **Sn** 16 43 12.4 +0.1
CABF La Chapelle 1.96 336 *e*Pn **Pn** 16 42 48.3 +0.8
CABF La Chapelle 1.96 336 *e*Pg **Pg** 16 42 51.8 +0.3
SNR=1.0
CABF *e*Sn **Sn** 16 43 12.4 +0.1
4.1nm,0.2s,SNR=1.0
SSB Saint Sauveur 1.97 284 Pn **Pn** 16 42 48.1 +0.6
SSB Saint Sauveur 1.97 284 Pn **Pn** 16 42 48.1 +0.6
LASF Ste Croix 2.53 254 *e*Pn **Pn** 16 42 55.6 +0.3
SNR=1.0
LASF *e*Sn **Sn** 16 43 25.3 -1.0
3.3nm,0.2s
LASF Ste Croix 2.53 254 *e*Pn **Pn** 16 42 55.6 +0.3
SNR=1.0
LASF *e*Sn **Sn** 16 43 25.3 -1.0
1.6nm,0.2s
PLDF La Plantade 2.80 296 Pn **Pn** 16 43 00.2 +1.3
PLDF La Plantade 2.80 296 Pn **Pn** 16 43 00.2 +1.3
LBL Lubilhac 2.86 280 Pn **Pn** 16 43 00.3 +0.5
LBL Lubilhac 2.86 280 Pn **Pn** 16 43 00.3 +0.5
SMF Signal de Mont 3.00 309 *e*Pn **Pn** 16 43 02.7 +1.0
SNR=1.0
SMF *e*Sn **Sn** 16 43 36.9 -0.9
SNR=1.0
SMF *e*Sg **Sg** 16 43 49.5 -0.6
12nm,0.3s,SNR=1.0
SMF Signal de Mont 3.00 309 *e*Pn **Pn** 16 43 02.7 +1.0
SNR=1.0
SMF *e*Sn **Sn** 16 43 36.9 -0.9
SNR=1.0
SMF *e*Sg **Sg** 16 43 49.5 -0.6
5.8nm,0.3s,SNR=1.0
HINF Hinteralfeld 3.01 355 *e*Pn **Pn** 16 43 01.0 -0.8
SNR=1.0
HINF *e*Sn **Sn** 16 43 37.1 -1.0
SNR=1.0
HINF *e*Sg **Sg** 16 43 49.7 -0.8
6.2nm,0.4s,SNR=1.0
HINF Hinteralfeld 3.01 355 *e*Pn **Pn** 16 43 01.0 -0.8
SNR=1.0
HINF *e*Sn **Sn** 16 43 37.1 -1.0
SNR=1.0
HINF *e*Sg **Sg** 16 43 49.7 -0.8
3.1nm,0.4s,SNR=1.0
PYM Petit Puy Mans 3.13 289 Pn **Pn** 16 43 03.9 +0.4
PYM Petit Puy Mans 3.13 289 Pn **Pn** 16 43 03.9 +0.4
AGO Saint Agoulin 3.14 295 Pn **Pn** 16 43 04.3 +0.6
AGO Saint Agoulin 3.14 295 Pn **Pn** 16 43 04.3 +0.6
HAU Haudompre 3.25 349 *e*Pn **Pn** 16 43 05.6 +0.5
SNR=1.0
HAU *e*Sg **Sg** 16 43 57.6 -0.5
6.1nm,0.3s,SNR=1.0
HAU Haudompre 3.25 349 *e*Pn **Pn** 16 43 05.6 +0.5
SNR=1.0
HAU *e*Sg **Sg** 16 43 57.6 -0.5
3.0nm,0.3s,SNR=1.0
AVF Avril sur Loir 3.36 307 *e*Pn **Pn** 16 43 07.5 +0.9
SNR=1.0
AVF *e*Sn **Sn** 16 43 45.6 -1.1
8.1nm,0.4s,SNR=1.0
AVF *e*Sg **Sg** 16 44 01.3 -0.3
6.8nm,0.4s
AVF Avril sur Loir 3.36 307 *e*Pn **Pn** 16 43 07.5 +0.9
SNR=1.0
AVF *e*Sn **Sn** 16 43 45.6 -1.1
4.1nm,0.4s,SNR=1.0
AVF *e*Sg **Sg** 16 44 01.3 -0.3
3.4nm,0.4s
LOR Lormes 3.40 317 *e*Pn **Pn** 16 43 07.9 +0.7
baz=139,SNR=1.0
LOR *e*Sn **Sn** 16 43 46.1 -1.5
baz=148,SNR=1.0
LOR *e*Sg **Sg** 16 44 02.7 -0.2
5.2nm,0.3s,SNR=1.0
LOR Lormes 3.40 317 *e*Pn **Pn** 16 43 07.9 +0.7
baz=139,SNR=1.0
LOR *e*Sn **Sn** 16 43 46.1 -1.5
baz=148,SNR=1.0
LOR *e*Sg **Sg** 16 44 02.7 -0.2
2.6nm,0.3s,SNR=1.0
SSF Saint Saulge 3.44 312 *e*Pn **Pn** 16 43 08.5 +0.8
SNR=1.0
SSF *e*Sn **Sn** 16 43 46.6 -2.0
7.0nm,0.5s,SNR=1.0
SSF Saint Saulge 3.44 312 *e*Pn **Pn** 16 43 08.5 +0.8
SNR=1.0
SSF *e*Sn **Sn** 16 43 46.6 -2.0
3.5nm,0.5s,SNR=1.0
BGF Bois d'Agland 3.54 301 *e*Pn **Pn** 16 43 09.5 +0.4
SNR=1.0
BGF Bois d'Agland 3.54 301 *e*Pn **Pn** 16 43 09.5 +0.4
SNR=1.0
CDF Champ du Feu 3.59 0 *e*Pn **Pn** 16 43 09.8 -0.1
SNR=1.0
CDF Champ du Feu 3.59 0 *e*Pn **Pn** 16 43 09.8 -0.1
SNR=1.0
CAF Calviac 3.68 273 *e*Pn **Pn** 16 43 11.8 +0.7
SNR=1.0
CAF Calviac 3.68 273 *e*Pn **Pn** 16 43 11.8 +0.7
SNR=1.0
TCF Toulx Ste Croi 3.83 294 *e*Pn **Pn** 16 43 13.0 -0.1
SNR=1.0
TCF Toulx Ste Croi 3.83 294 *e*Pn **Pn** 16 43 13.0 -0.1
SNR=1.0
MTLF Montolieu 3.91 250 *e*Pn **Pn** 16 43 14.7 +0.5
MTLF Montolieu 3.91 250 *e*Pn **Pn** 16 43 14.7 +0.5
RJF Les Rejaudoux 4.08 279 *e*Pn **Pn** 16 43 16.9 +0.3
SNR=1.0
RJF Les Rejaudoux 4.08 279 *e*Pn **Pn** 16 43 16.9 +0.3
SNR=1.0
GRR Gorron 6.62 305 *e*Pn **Pn** 16 43 52.2 +0.8
SNR=1.0
GRR Gorron 6.62 305 *e*Pn **Pn** 16 43 52.2 +0.8
SNR=1.0

*ISCJB **20** 16:43:20.1±1.9, 7°.79S±0°.08×127°.8E±0°.1, h128km±20km, mb3.6/8, Error ellipse: s-maj=20.3km s-min=11.5km az=157.9*

*IDC **20** 16:43:20.4±3.6, 7°.80S×127°.67E, h111km±34km, mb3.5/8, mb1 3.7/10, mb1mx3.6/16, mbtmp3.6/10, Error ellipse: s-maj=33.1km s-min=16.1km az=65.0*

*NEIC **20** 16:43:21.2±1.8, 7°.76S×127°.80E, h119km±17km, mb4.5/2, Error ellipse: s-maj=15.9km s-min=12.6km az=223.0*

ISC 20 16:43:20.3±2.0, 7°.87S±0°.10×127°.70E±0°.10, h112km±21km, n24, σ1§08/27, mb3.7/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.70**	**136**	*e*P		**Pn**	**16 44 57.2**	**+0.9**
	108nm,0.3s							
KAKA				*e*S		**Sn**	**16 46 08.1**	**-3.1**
KAKA	**Kakadu**	**6.70**	**136**	*e*P		**Pn**	**16 44 57.4**	**+1.2**
	229nm,0.4s							
FITZ	**Fitzroy Crossi**	**10.37**	**191**	*e*P		**Pn**	**16 45 47.3**	**+1.3**
	7.7nm,0.3s							
FITZ				*e*S		**Sn**	**16 47 38.8**	**-1.4**
FITZ	**Fitzroy Crossi**	**10.37**	**191**	P		**Pn**	**16 45 47.2**	**+1.2**
	1.2nm,0.3s,baz=12,slow=13,SNR=27							
FITZ				S		**Sn**	**16 47 38.2**	**-2.0**
	4.0nm,0.3s,baz=93,slow=18,SNR=11							
WRA	**Warramunga Arr**	**13.62**	**152**	P		**Pn**	**16 46 28.4**	**-0.6**
WRA				S		**Sn**	**16 48 52.2**	**-6.8**
WRA	**Warramunga Arr**	**13.62**	**152**	P		**Pn**	**16 46 28.4**	**-0.6**
	4.3nm,0.3s,baz=328,slow=13,SNR=151							
WRA				S		**Sn**	**16 48 52.2**	**-6.8**
	4.9nm,0.3s,baz=333,slow=23,SNR=11							
MBWA	**Marble Bar**	**15.29**	**209**	P		**Pn**	**16 46 54.5**	**+4.3**
	2.8nm,0.4s							
COEN	**Coen**	**16.35**	**113**	*e*P		**Pn**	**16 47 03.1**	**-0.3**
	56nm,0.5s							
ASAR	**Alice Springs**	**16.80**	**160**	P		**Pn**	**16 47 10.2**	**+1.3**
	1.8nm,0.3s,baz=336,slow=11,SNR=64							
ASAR				S		**S**	**16 50 10.9**	**-5.4**
	0.7nm,0.3s,baz=322,slow=19,SNR=6.7							
CTA	**Charters Tower**	**21.69**	**126**	P		**P**	**16 48 03.2**	**+0.9**
CTA	**Charters Tower**	**21.69**	**126**	P		**P**	**16 48 03.2**	**+0.9**
	2.5nm,0.5s,mb3.8,baz=305,slow=15,SNR=2.9							
STKA	**Stephens Creek**	**27.17**	**153**	P		**P**	**16 48 54.7**	**+1.4**
STKA	**Stephens Creek**	**27.17**	**153**	P		**P**	**16 48 54.7**	**+1.4**
	1.6nm,0.5s,mb3.8,baz=329,slow=12,SNR=3.8							
CMAR	**Chiang Mai Arr**	**38.59**	**313**	P		**P**	**16 50 33.2**	**+0.6**
	0.5nm,0.5s,mb3.6,baz=144,slow=7.6,SNR=5.1							
KSRS	**Korea Array**	**45.08**	**0**	P		**P**	**16 51 24.0**	**-1.2**
	0.9nm,0.5s,mb3.7,baz=180,slow=10,SNR=5.9							
SONM	**Songino Array**	**58.57**	**343**	P		**P**	**16 53 06.3**	**+1.1**
	0.3nm,0.5s,mb3.6,baz=156,slow=8.5,SNR=3.0							
MK31	**Makanchi Array**	**67.72**	**328**	*e*P		**P**	**16 54 05.3**	**-0.3**
MKAR	**Makanchi Array**	**67.72**	**328**	P		**P**	**16 54 05.2**	**-0.4**
	0.3nm,0.3s,mb3.6,baz=119,slow=8.3,SNR=7.2							
MKAR				pP		pP	16 54 31.1	-2.4
	0.2nm,0.5s,baz=124,slow=7.4,SNR=3.0							
ZALV	**Zalesovo Beam**	**71.37**	**335**	P		**P**	**16 54 26.7**	**-1.2**
	0.5nm,0.3s,mb3.8,baz=139,slow=6.0,SNR=3.3							
KURK	**Kurchatov**	**72.08**	**330**	P		**P**	**16 54 31.8**	**-0.4**
MAW	**Mawson**	**73.32**	**201**	P		**P**	**16 54 39.1**	**-0.2**
	1.4nm,0.6s,mb4.0,baz=100,slow=6.5,SNR=6.1							
TORD	**Torodi Ar. Bea**	**126.73**	**280**	PKP		PKPdf	17 02 11.2	-0.4
	0.3nm,0.6s,baz=95,slow=2.5,SNR=3.4							
TXAR	**Lajitas Array**	**127.33**	**59**	PKP		PKPdf	17 02 12.4	0.0
	0.1nm,0.6s,baz=277,slow=7.1,SNR=2.9							
LPAZ	**La Paz**	**151.34**	**147**	PKPab		PKPab	17 03 12.3	+2.2
	1.0nm,0.6s,baz=194,slow=2.0,SNR=4.4							

IDC 20 16:47:38.6±1.4, 55°.69S×142°.36W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.8/11, mbtmp3.7/2, MS3.7/5, Ms1 3.7/5, ms1mx3.5/13, Error ellipse: s-maj=168.4km s-min=43.8km az=171.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TBI	**Tubuai**	**32.73**	**348**	*e*T			17 29 39.2	
	18nm,0.3s							
RAR	**Rarotonga**	**36.81**	**332**	LR	LR	LR	17 05 46.7	
	comp=Z,85nm,19.6s,baz=109,slow=30							
PPT	**Papeete**	**38.45**	**349**	*e*LR	LR	LR	17 05 42.6	
	167nm,27.0s							
PPT	**Papeete**	**38.45**	**349**	*e*LR	LR	LR	16 54 29.1	
	60nm,24.0s							
PPT	**Papeete**	**38.45**	**349**	LR	LR	LR	17 06 54.2	
	comp=Z,85nm,18.8s,baz=190,slow=30							
PLCA	**Paso Flores**	**47.93**	**103**	LR	LR	LR	17 13 08.8	
	comp=Z,52nm,18.8s,baz=294,slow=32							
ASAR	**Alice Springs**	**67.32**	**261**	P		P	16 58 35.4	+0.3
	0.9nm,1.0s,baz=144,slow=6.4,SNR=5.9							
WRA	**Warramunga Arr**	**70.03**	**264**	P		P	16 58 52.3	+0.2
	0.8nm,0.9s,baz=147,slow=5.8,SNR=5.9							
BOSA	**Boshof**	**95.37**	**169**	LR	LR	LR	17 44 23.9	
	comp=Z,61nm,18.1s,baz=340,slow=36							
YBH	**Yreka Blue Hor**	**98.48**	**15**	LR	LR	LR	17 36 01.7	
	comp=Z,48nm,18.5s,baz=275,slow=30							
ILAR	**Eielson Array**	**120.18**	**358**	PKP	PKPdf	PKPdf	17 06 29.8	0.0
	0.9nm,0.9s,baz=222,slow=2.4,SNR=8.1							
ESDC	**Sonseca Array**	**148.31**	**103**	PKPbc	PKPbc	PKPbc	17 07 25.6	-0.3
	0.1nm,0.3s,baz=233,slow=3.3,SNR=4.0							
MKAR	**Makanchi Array**	**151.12**	**271**	PKPbc	PKPbc	PKPbc	17 07 31.7	-0.8
	1.1nm,0.7s,baz=123,slow=4.5,SNR=6.2							

*IDC **20** 16:58:16.6±1.6, 12°.97N×124°.43E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/19, mbtmp3.7/6, Error ellipse: s-maj=192.5km s-min=17.5km az=67.0*

*ISCJB **20** 16:58:18.8±1.2, 13°.03N±0°.06×124°.50E±0°.07, h22km±9km, mb3.7/6, Error ellipse: s-maj=12.0km s-min=8.2km az=142.8*

*MAN **20** 16:58:18, 13°.15N×124°.56E, h10km, mb4.9, ML3.8, MS3.9*

ISC 20 16:58:18.0±1.4, 13°.02N±0°.05×124°.49E±0°.06, h4km±8km, n16, σ1§14/18, mb3.7/6, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.53**	**161**	*e*P		**Pg**	**16 58 31.4**	**+3.1**
PVCP	**Virac**	**0.66**	**331**	*e*P		**Pg**	**16 58 30.6**	**-0.1**
MMPH	**Masbate**	**1.07**	**232**	*i*P		**Pg**	**16 58 37.2**	**-1.3**
MMPH				*i* S		**Sg**	**16 58 51.6**	**-0.7**
BESP	**Borongan**	**1.69**	**146**	*e*P		**Pn**	**16 58 49.0**	**+0.7**
AUQP	**San Andres**	**1.79**	**280**	*e*P		**Pn**	**16 58 51.1**	**+1.4**
OCLP	**Ormoc**	**1.96**	**176**	*e*P		**Pn**	**16 58 54.3**	**+2.3**
GQP	**Guinayangan**	**2.17**	**294**	*e*P		**Pn**	**16 58 54.9**	**-0.1**
GQP				*i* S		**Sn**	**16 59 23.7**	**+1.3**
BOAC	**Boac**	**2.61**	**280**	*e*P		**Pn**	**16 59 01.9**	**+1.0**
GUIM	**Jordan**	**3.02**	**218**	*e*P		**Pn**	**16 59 06.8**	**+0.2**
CUYO	**Cuyo Island**	**4.02**	**238**	*e*P		**Pn**	**16 59 19.8**	**-0.6**
WRA	**Warramunga Arr**	**34.16**	**163**	P		**P**	**17 05 02.0**	**-2.4**
	0.3nm,0.5s,mb3.5,baz=344,slow=8.9,SNR=7.7							
ASAR	**Alice Springs**	**37.60**	**166**	P		**P**	**17 05 33.4**	**-0.6**
	0.6nm,0.4s,mb3.7,baz=335,slow=7.0,SNR=45							
SONM	**Songino Array**	**37.85**	**340**	P		**P**	**17 05 35.6**	**-0.2**
	0.3nm,0.5s,mb3.2,baz=153,slow=11,SNR=3.4							
STKA	**Stephens Creek**	**47.56**	**160**	P		**P**	**17 06 54.3**	**-0.5**
	2.2nm,0.8s,mb4.2,baz=343,slow=11,SNR=2.6							
MKAR	**Makanchi Array**	**48.80**	**322**	P		**P**	**17 07 03.7**	**-0.5**
	1.1nm,0.7s,mb4.0,baz=122,slow=8.0,SNR=13							
ZALV	**Zalesovo Beam**	**51.39**	**331**	P		**P**	**17 07 22.4**	**-1.4**
	0.4nm,0.5s,mb3.6,baz=116,slow=8.2,SNR=4.5							

*NEIC **20** 17:03:13.7, 32°.31S×72°.24W, h25km, ML3.4(GUC), After GUC.*

GUC 20 17:03:13.7±0.8, 32°.31S×72°.24W, h25km±8km, MD3.9, ML3.4, 1C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.76**	**56**	*e*P		Pb	17 03 25.0	-3.2
CHNG				*i* S		Sb	17 03 36.0	-2.2
ROCH	**El Roble**	**1.23**	**123**	*e*P		Pn	17 03 35.5	+0.3
ROCH				*i* S		Sn	17 03 52.0	+1.0
ROCH				AML	AML		17 03 53.8	
	comp=N,1μm,0.5s							
JACH	**Jahuel**	**1.44**	**105**	*i* P		Pn	17 03 38.6	+0.4
JACH				*i* S		Sn	17 03 57.2	+1.0
JACH	**Jahuel**	**1.44**	**105**	*i* P		Pn	17 03 38.6	+0.4
JACH				*i* S		Sn	17 03 57.2	+1.0
PEL	**Peldehue**	**1.55**	**123**	*i* P		Pn	17 03 40.5	+0.9
PEL				*i* S		Sn	17 04 00.6	+1.7
PEL				AML	AML		17 04 07.0	
	comp=E,1μm,0.4s							
TACH	**Talagante**	**1.73**	**141**	*e*P		Pn	17 03 42.7	+0.6
TACH	**Talagante**	**1.73**	**141**	*e*P		Pn	17 03 42.7	+0.6
FCH	**Farellones**	**1.93**	**122**	*e*P		Pn	17 03 46.7	+1.8
FCH				AML	AML		17 04 11.4	
	comp=E,279nm,0.2s							
PCH	**Pirque**	**1.95**	**132**	*e*P		Pn	17 03 46.7	+1.5
PCH				S		Sn	17 04 11.4	+2.6
PCH	**Pirque**	**1.95**	**132**	*e*P		Pn	17 03 46.7	+1.5
PCH				*i* S		Sn	17 04 11.4	+2.6
CHCH	**Chadas Angostu**	**2.09**	**141**	*e*P		Pn	17 03 48.4	+1.2
CHCH	**Chadas Angostu**	**2.09**	**141**	*e*P		Pn	17 03 48.4	+1.2

IDC 20 17:26:00.6±2.0, 15°.05S×173°.71W, h0km, mb3.8/5, mb1 4.2/5, mb1mx4.0/16, mbtmp3.8/5, MS3.8/17, Ms1 3.8/17, ms1mx3.7/25, Error ellipse: s-maj=118.5km s-min=24.2km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.18**	**59**	Pn		Pn	17 26 28.9	-9.3
	72nm,0.3s,baz=221,slow=11,SNR=24							
AFI				Sn		Sn	17 26 48.5	-17
	304nm,0.3s,baz=225,slow=20,SNR=18							
RAR	**Rarotonga**	**14.59**	**117**	LR	LR	LR	17 33 21.2	
	comp=Z,330nm,18.3s,baz=100,slow=30							
PPT	**Papeete**	**23.29**	**100**	*e*LQ			17 35 34.9	
	878nm,28.5s							
PPT				*e*LR	LR	LR	17 36 26.4	
	304nm,25.0s							
PPT	**Papeete**	**23.29**	**100**	LR	LR	LR	17 37 27.2	
	comp=Z,197nm,21.3s,baz=277,slow=30							
PAE	**Paea**	**23.29**	**100**	*e*T			17 54 51.1	
	2.4nm,0.2s							
TBI	**Tubuai**	**24.31**	**114**	*e*T			17 56 10.7	
	4.9nm,0.2s							
HNR	**Honiara**	**26.33**	**279**	LR	LR	LR	17 40 19.0	
	comp=Z,207nm,20.4s,baz=252,slow=33							
RKT	**Rikitea**	**37.38**	**108**	*e*LR	LR	LR	17 42 59.5	
	247nm,28.2s							
RKT				*e*T			18 12 26.9	
	2.1nm,0.3s							
CTA	**Charters Tower**	**38.44**	**257**	LR	LR	LR	17 46 57.9	
	comp=Z,60nm,19.6s,baz=305,slow=33							
STKA	**Stephens Creek**	**43.96**	**240**	LR	LR	LR	17 51 13.0	
	comp=Z,100nm,18.5s,baz=203,slow=34							
WRA	**Warramunga Arr**	**49.64**	**256**	P		P	17 34 54.3	-0.1
	1.0nm,0.5s,baz=90,slow=7.0,SNR=35							
GUMO	**Guam**	**49.90**	**303**	LR	LR	LR	17 53 52.3	
	comp=Z,48nm,19.8s,baz=87,slow=34							
ASAR	**Alice Springs**	**49.94**	**252**	P		P	17 34 56.0	-0.6
	6.3nm,0.7s,baz=89,slow=7.8,SNR=59							
FITZ	**Fitzroy Crossi**	**57.99**	**258**	LR	LR	LR	17 57 11.6	
	comp=Z,84nm,21.5s,baz=92,slow=32							
CBIJ	**Chichi jima**	**59.90**	**314**	LR	LR	LR	17 56 49.7	
	comp=Z,79nm,20.5s,baz=267,slow=31							
MJAR	**Matsushiro Arr**	**68.48**	**320**	LR	LR	LR	18 00 37.1	
	comp=Z,81nm,19.9s,baz=120,slow=30							
NVAR	**Mina Array Bea**	**74.27**	**42**	P		P	17 37 40.0	+0.2
	0.2nm,0.5s,baz=234,slow=7.7,SNR=2.8							
KSRS	**Korea Array**	**75.70**	**316**	LR	LR	LR	18 09 08.5	
	comp=Z,56nm,18.9s,baz=70,slow=34							
TXAR	**Lajitas Array**	**80.66**	**56**	P		P	17 38 16.1	+0.3
	0.2nm,0.5s,baz=239,slow=6.0,SNR=5.0							
TXAR				LR		LR	18 06 10.7	
	comp=Z,58nm,19.7s,baz=5.0,slow=30							
ILAR	**Eielson Array**	**82.16**	**11**	P		P	17 38 21.9	-1.0
	0.7nm,0.9s,baz=205,slow=4.0,SNR=5.4							
USHA	**Ushuaia**	**86.38**	**146**	LR	LR	LR	18 07 58.2	
	comp=Z,174nm,19.4s,baz=10,slow=29							
PLCA	**Paso Flores**	**89.97**	**132**	LR	LR	LR	18 10 14.5	
	comp=Z,63nm,19.0s,baz=186,slow=30							
CMAR	**Chiang Mai Arr**	**92.22**	**288**	LR	LR	LR	18 21 21.8	
	comp=Z,37nm,18.2s,baz=304,slow=36							
SONM	**Songino Array**	**94.39**	**318**	LR	LR	LR	18 15 19.1	
	comp=Z,66nm,20.2s,baz=322,slow=31							
CFAA	**Coronel Fontan**	**94.90**	**124**	LR	LR	LR	18 12 49.3	
	comp=Z,8.8nm,19.8s,baz=241,slow=30							
TKL	**Tuckaleechee C**	**98.56**	**55**	LR	LR	LR	18 17 35.0	
	comp=Z,48nm,20.6s,baz=177,slow=31							
BRTR	**Keskin Array B**	**145.70**	**321**	PKPbc	PKPbc	PKPbc	17 45 42.9	+1.1
	2.1nm,0.8s,baz=53,slow=2.1,SNR=12							

*HLW **20** 17:26:32.8, 37°.86N×21°.30E, h34km±39km, Ml3.6*

*IDC **20** 17:26:33.4±0.8, 37°.93N×21°.41E, h0km, mb4.0/14, mb1 4.0/22, mb1mx3.9/35, mbtmp3.9/22, ML3.0/6, MS3.1/5, Ms1 3.1/5, ms1mx2.7/40, Error ellipse: s-maj=17.4km s-min=12.5km az=153.0*

*BJI **20** 17:26:33.0, 37°.68N×20°.55E, h53km, mB4.9/6, mb4.4/11, Ms4.7/2, Ms7 4.2/2*

*NEIC **20** 17:26:35.4, 37°.85N×21°.31E, h12km, mb4.3/5, ML4.0(ATH), ML4.0(PDG), After ATH.*

*ATH **20** 17:26:35.4, 37°.85N×21°.31E, h12km±1km, ML4.0*

*PDG **20** 17:26:35.3±1.1, 37°.84N×21°.34E, h8km±2km, mL4.0/9, Error ellipse: s-maj=1.9km s-min=1.7km az=90.0*

*THE **20** 17:26:35.4, 37°.85N×21°.34E, h0km±2km, ML4.3/7, Error ellipse: s-maj=2.7km s-min=0.7km az=202.0*

*CSEM **20** 17:26:35.2±0.1, 37°.83N×21°.36E, h10km, mb4.1/7, Error ellipse: s-maj=3.7km s-min=2.9km az=26.0*

*MOS **20** 17:26:38.0±1.4, 38°.00N×21°.49E, h33km, mb4.4/5, Error ellipse: s-maj=8.0km s-min=4.0km az=102.6*

ISC 20 17:26:35.1±0.4, 37.79N±0°.02×21°.37E±0°.02, h11km±2km, h53km±2.6km: pP-P, n328, σ1§24/398, mb4.2/32, MS3.4/6, 22C-28D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.28**	**17**	*e*Pg		**Pg**	**17 26 40.2**	**-0.5**
RLS				*e*Sg		**Sg**	**17 26 43.9**	**-0.6**
RLS	**Riolos of Patr**	**0.28**	**17**	*e*PG		**Pg**	**17 26 40.2**	**-0.5**
RLS				*e*SG		**Sg**	**17 26 43.9**	**-0.6**
RLS	**Riolos of Patr**	**0.28**	**17**	*e*Pg		**Pg**	**17 26 40.2**	**-0.5**
RLS				*e*Sg		**Sg**	**17 26 43.9**	**-0.6**
KFL	**Anninata**	**0.56**	**305**	P		**Pg**	**17 26 45.3**	**-0.6**
KFL	**Anninata**	**0.56**	**305**	P		**Pg**	**17 26 45.3**	**-0.6**
UPR	**University Cam**	**0.59**	**34**	*e*PB		**Pg**	**17 26 46.7**	**+0.1**
UPR				*e*SB		**Sg**	**17 26 55.2**	**+0.8**
UPR	**University Cam**	**0.59**	**34**	P		**Pg**	**17 26 46.0**	**-0.6**
UPR				S		**Sg**	**17 26 55.0**	**+0.6**
UPR	**University Cam**	**0.59**	**34**	P		**Pg**	**17 26 46.0**	**-0.6**
UPR	**University Cam**	**0.59**	**34**	*e*Pb		**Pg**	**17 26 46.7**	**+0.1**
UPR				S		**Sg**	**17 26 55.0**	**+0.6**
LAKA	**Lakka**	**0.66**	**47**	P		**Pg**	**17 26 47.1**	**-0.7**
LAKA				S		**Sg**	**17 26 55.9**	**-0.6**
LAKA	**Lakka**	**0.66**	**47**	P		**Pg**	**17 26 47.1**	**-0.7**
LAKA				S		**Sg**	**17 26 55.9**	**-0.6**
VLS	**Valsamata**	**0.72**	**302**	*e*Pg		**Pg**	**17 26 47.8**	**-1.3**
VLS				*e*Sb		**Sg**	**17 26 58.2**	**-0.4**
VLS	**Valsamata**	**0.72**	**302**	*e*PG		**Pg**	**17 26 47.8**	**-1.3**
VLS				*e*SB		**Sg**	**17 26 58.2**	**-0.4**
VLS	**Valsamata**	**0.72**	**302**	P		**Pg**	**17 26 47.6**	**-1.5**
VLS				S		**Sg**	**17 26 58.7**	**+0.1**
VLS	**Valsamata**	**0.72**	**302**	*e*Pg		**Pg**	**17 26 47.8**	**-1.3**
VLS				*e*Sb		**Sg**	**17 26 58.2**	**-0.4**
VLS				S		**Sg**	**17 26 58.7**	**+0.1**
ITM	**Ithomi**	**0.76**	**144**	*e*Pb		**Pg**	**17 26 51.7**	**+2.0**
ITM	**Ithomi**	**0.76**	**144**	*e*PB		**Pg**	**17 26 51.7**	**+2.0**
ITM	**Ithomi**	**0.76**	**144**	P		**Pg**	**17 26 50.9**	**+1.2**
ITM	**Ithomi**	**0.76**	**144**	P		**Pg**	**17 26 50.9**	**+1.2**
ITM	**Ithomi**	**0.76**	**144**	*e*Pb		**Pg**	**17 26 51.7**	**+2.0**
EFP	**Efpalio**	**0.76**	**34**	*e*PG		**Pg**	**17 26 49.1**	**-0.7**
EFP				*e*SB		**Sb**	**17 27 00.8**	**0.0**
EFP	**Efpalio**	**0.76**	**34**	P		**Pg**	**17 26 48.8**	**-1.0**
EFP				S		**Sg**	**17 27 00.3**	**+0.5**
EFP	**Efpalio**	**0.76**	**34**	P		**Pg**	**17 26 48.8**	**-1.0**
EFP	**Efpalio**	**0.76**	**34**	*e*Pg		**Pg**	**17 26 49.1**	**-0.7**
EFP				S		**Sg

DID **Didima** 1.51 100 P Pn 17 27 03.4 +1.3
LKR **Lokris** 1.54 56 *e*Pg Pg 17 27 03.4 -1.3
LKR **Lokris** 1.54 56 *e*PG Pg 17 27 03.4 -1.3
LKR **Lokris** 1.54 56 *e*Pg Pg 17 27 03.4 -1.3
ATAL **Atalanti** 1.58 55 P Pn 17 27 03.3 +0.2
ATAL **Atalanti** 1.58 55 P Pn 17 27 03.3 +0.2
VLI **Veliai** 1.65 130 *e*Pg Pg 17 27 08.2 +1.5
VLI **Veliai** 1.65 130 *e*PG Pg 17 27 08.2 +1.5
VLI **Veliai** 1.65 130 *e*Pg Pg 17 27 08.2 +1.5
NAIG **Nisos Aigina** 1.68 91 *e*Pn Pg 17 27 07.3 -0.1
NAIG **Nisos Aigina** 1.68 91 *e*PN Pg 17 27 07.3 -0.1
NAIG **Nisos Aigina** 1.68 91 *e*Pn Pg 17 27 07.3 -0.1
THL **Klokotos Trika** 1.84 16 P Pn 17 27 07.2 +0.6
THL S Sn 17 27 32.0 +2.1
THL **Klokotos Trika** 1.84 16 P Pn 17 27 07.2 +0.6
THL S Sn 17 27 32.0 +2.1
ATH **Athens Observa** 1.87 84 *e*Pn Pg 17 27 09.5 -1.4
ATH *e*Sn Sg 17 27 35.2 +0.1
ATH **Athens Observa** 1.87 84 *e*PN Pg 17 27 09.5 -1.4
ATH *e*SN Sg 17 27 35.2 +0.1
ATH **Athens Observa** 1.87 84 *e*Pn Pg 17 27 09.5 -1.4
JAN **Janina** 1.90 348 *e*Pn Pn 17 27 08.9 +1.4
JAN **Janina** 1.90 348 *e*PN Pn 17 27 08.9 +1.4
JAN **Janina** 1.90 348 *e*Pn Pn 17 27 08.9 +1.4
IGT **Igoumenitsa** 1.92 335 P Pn 17 27 07.9 +0.2
IGT **Igoumenitsa** 1.92 335 P Pn 17 27 07.9 +0.2
ATHU **Athens Univers** 1.92 84 P Pn 17 27 09.8 +2.0
ATHU **Athens Univers** 1.92 84 P Pn 17 27 09.8 +2.0
PTL **Penteli** 1.99 82 *e*Pn Pn 17 27 11.1 +2.4
PTL **Penteli** 1.99 82 *e*PN Pn 17 27 11.1 +2.4
PTL **Penteli** 1.99 82 *e*Pn Pn 17 27 11.1 +2.4
XOR **Xorichti** 2.12 42 P Pn 17 27 11.4 +0.8
XOR **Xorichti** 2.12 42 P Pn 17 27 11.4 +0.8
KEK **Kerkira** 2.27 328 *e*Pb Pn 17 27 13.1 +0.5
KEK **Kerkira** 2.27 328 *e*PB Pn 17 27 13.1 +0.5
KEK **Kerkira** 2.27 328 P Pn 17 27 13.0 +0.4
KEK **Kerkira** 2.27 328 P Pn 17 27 13.0 +0.4
AOS **Alonnisos** 2.40 54 P Pn 17 27 15.2 +0.8
AOS **Alonnisos** 2.40 54 P Pn 17 27 15.2 +0.8
LIT **Litokhoron** 2.46 20 P Pn 17 27 15.4 +0.2
LIT **Litokhoron** 2.46 20 P Pn 17 27 15.4 +0.2
NEST **Nestorio** 2.63 355 P Pn 17 27 19.2 +1.7
NEST **Nestorio** 2.63 355 P Pn 17 27 19.2 +1.7
GRG **Griva** 3.26 14 P Pn 17 27 28.1 +1.9
GRG **Griva** 3.26 14 P Pn 17 27 28.1 +1.9
VAM **Vamos** 3.30 135 *e*Pn Pn 17 27 30.2 +3.5
VAM **Vamos** 3.30 135 *e*PN Pn 17 27 30.2 +3.5
APE **Apeiranthos** 3.39 101 ⇓P Pg 17 27 38.2 -1.9
APE **Apeiranthos** 3.39 101 ⇓*i*P Pg 17 27 38.2 -1.9
KRUS **Krusevo** 3.57 359 *e*Pn Pn 17 27 58.8 +0.3
VAV **Valandovo** 3.64 14 *e*Pn Pn 17 27 32.0 +0.5
GVD **Gavdhos** 3.68 142 *e*P Pn 17 27 32.8 +0.9
GVD **Gavdhos** 3.68 142 *e*P Pn 17 27 32.8 +0.9
TIR **Tirane** 3.73 342 *e*P Pn 17 27 33.1 +0.5
TIR **Tirane** 3.73 342 *e*P Pn 17 27 33.2 +0.5
TIP **Timpagrande** 3.87 292 *e*P Pn 17 27 34.2 -0.4
TIP **Timpagrande** 3.87 292 *e*P Pn 17 27 34.2 -0.4
SKO **Skopje** 4.17 1 *e*Pn Pn 17 27 39.7 +0.9
TAR1 **Taranto** 4.18 312 *e*Pn Pn 17 27 38.1 -0.8
TAR1 *e*Sn Sn 17 28 25.4 -2.4
PE1 **Pezze di Greco** 4.29 316 *e*Pn Pn 17 27 40.7 +0.4
PE1 *e*Sn Sn 17 28 33.0 +2.6
CEL **Celeste** 4.35 278 *e*P Pn 17 27 40.7 -0.4
CEL **Celeste** 4.35 278 *e*P Pn 17 27 40.7 -0.4
ULC **Ulcinj** 4.47 339 ⇓*i*Pn Pn 17 27 42.1 -0.7
ULC *e*Sn Sn 17 28 35.8 +1.0
ULC **Ulcinj** 4.47 339 ⇓*i*Pn Pn 17 27 42.1 -0.7
ULC *e*Sn Sn 17 28 35.8 +1.0
SG1 **Sgolgore (BA)** 4.74 311 *e*Pn Pn 17 27 47.2 +0.7
BAI **Bari** 4.80 315 *e*Pn Pn 17 27 48.4 +1.1
CUC **Castrocucco** 4.86 299 *e*P Pn 17 27 49.1 +1.0
CUC **Castrocucco** 4.86 299 *e*P Pn 17 27 49.1 +1.0
BUM **Brajici-Budva** 4.88 338 ⇑*i*Pn Pn 17 27 47.5 -1.0
BUM *e*Sn Sn 17 28 45.0 0.0
BUM **Brajici-Budva** 4.88 338 ⇑*i*Pn Pn 17 27 47.5 -1.0
BUM *e*Sn Sn 17 28 45.0 0.0
PDG **Podgorica** 4.90 341 ⇓*i*Pn Pn 17 27 48.9 +0.1
PDG *e*Sn Sn 17 28 46.3 +0.8
TTG **Podgorica** 4.90 341 ⇓*i*Pn Pn 17 27 48.9 +0.1
TTG *e*Sn Sn 17 28 46.3 +0.8
TTG **Podgorica** 4.90 341 *i* P Pn 17 27 48.9 +0.1
TTG *e*S Sn 17 28 46.3 +0.8
PVY **Plav** 4.91 348 ⇓*i*Pn Pn 17 27 49.6 +0.7
PVY *e*Sn Sn 17 28 46.3 +0.6
PVY **Plav** 4.91 348 ⇓*i*Pn Pn 17 27 49.6 +0.7
PVY *e*Sn Sn 17 28 46.3 +0.6
VTS **Vitosha** 5.00 16 ⇓P Pn 17 27 52.1 +2.1
VTS **Vitosha** 5.00 16 ⇓*i*P Pn 17 27 52.1 +2.1
VTS **Vitosha** 5.00 16 P Pn 17 27 52.1 +2.1
BARS **Barje** 5.03 4 *e*Pn Pn 17 27 50.5 0.0
CDT **Castel del Mon** 5.13 311 *e*Pn Pn 17 27 51.9 0.0
HCY **Herceg Novi** 5.14 336 ⇓*i*Pn Pn 17 27 50.5 -1.5
HCY *e*Sn Sn 17 28 48.1 -3.2
HCY **Herceg Novi** 5.14 336 ⇓*i*Pn Pn 17 27 50.5 -1.5
HCY *e*Sn Sn 17 28 48.1 -3.2
BEY **Berane** 5.20 348 ⇓*i*Pn Pn 17 27 53.3 +0.6
BEY *e*Sn Sn 17 28 53.5 +0.8
IVA **Berane** 5.20 348 ⇓*i*Pn Pn 17 27 53.3 +0.6
IVA *e*Sn Sn 17 28 53.5 +0.8
IVA **Berane** 5.20 348 ⇓*i*Pn Pn 17 27 53.3 +0.6
IVA *e*Sn Sn 17 28 53.5 +0.8
NKY **Niksic** 5.33 341 ⇑*i*Pn Pn 17 27 56.2 +1.6
NKY *e*Sn Sn 17 28 56.8 +0.3
NKY **Niksic** 5.33 341 ⇑*i*Pn Pn 17 27 56.3 +1.7
NKY *e*Sn Sn 17 28 56.3 +0.3
NKY **Niksic** 5.33 341 ⇑*i*Pn Pn 17 27 56.3 +1.7
NKY *e*Sn Sn 17 28 56.3 +0.3
VAE **Valguarnera** 5.53 269 Pn Pn 17 27 59.3 +2.0
VAE Sn Sn 17 29 03.1 +2.2
VAE **Valguarnera** 5.53 269 Pn Pn 17 27 59.3 +2.0
0.3nm,0.3s,baz=81,slow=13,SNR=2.3
VAE Sn Sn 17 29 03.1 +2.2
4.4nm,0.3s,baz=114,slow=20,SNR=3.1
VAE **Valguarnera** 5.53 269 Pn Pn 17 27 59.3 +1.9
VAE Sn Sn 17 29 03.1 +2.2
BRY **Bratogost** 5.54 338 ⇑*i*Pn Pn 17 27 56.7 -0.8
BRY *e*Sn Sn 17 29 01.7 +0.6
BRY **Bratogost** 5.54 338 ⇑*i*Pn Pn 17 27 56.8 -0.7
BRY *e*Sn Sn 17 29 01.7 +0.6
BRY **Bratogost** 5.54 338 ⇑*i*Pn Pn 17 27 56.8 -0.7
BRY *e*Sn Sn 17 29 01.7 +0.6
UPM **Unac-Piva** 5.72 342 ⇑*i*Pn Pn 17 28 00.6 +0.7
UPM *e*Sn Sn 17 29 06.1 +0.5
UPM **Unac-Piva** 5.72 342 ⇑*i*Pn Pn 17 28 00.6 +0.7
UPM *e*Sn Sn 17 29 06.1 +0.5
PLE **Pljevlja** 5.73 345 ⇓*i*Pn Pn 17 28 02.1 +2.0
PLE *e*Sn Sn 17 29 06.0 +0.2
PLE **Pljevlja** 5.73 345 ⇓*i*Pn Pn 17 28 02.1 +2.0
PLE *e*Sn Sn 17 29 06.0 +0.2
STON **Ston** 5.79 332 *e*Pn Pn 17 27 56.6 -4.4
STON Sn Sn 17 29 01.2 -6.2
WDD **Wield Dalam** 5.82 253 *e*P Pn 17 28 01.4 +0.1
204nm,0.6s
WDD **Wield Dalam** 5.82 253 *e*P Pn 17 28 01.4 +0.1
204nm,0.6s
GRUS **Gruza** 6.11 356 *e*Pn Pn 17 28 04.1 -1.2
BBLS **Lazići** 6.25 347 *e*Pn Pn 17 28 07.0 -0.2
DIVS **Divibare** 6.38 351 *e*Pn Pn 17 28 08.1 -1.0
SLUM 7.04 152 P Pn 17 28 14.5 -3.6
baz=152
AQU **L'Aquila** 7.62 309 *e*P Pn 17 28 27.6 +1.6
55nm,1.0s
AQU **L'Aquila** 7.62 309 *e*P Pn 17 28 27.6 +1.6
AQU pmax pmax
comp=Z,55nm,1.0s
AQU **L'Aquila** 7.62 309 ⇑*i*P Pn 17 28 28.0 +2.0
AQU **L'Aquila** 7.62 309 *e*P Pn 17 28 27.6 +1.6
comp=Z,55nm,1.0s
GZR **Gura Zlata** 7.67 7 ⇑P Pn 17 28 28.1 +1.4
GZR **Gura Zlata** 7.67 7 ⇑*i*P Pn 17 28 28.1 +1.4
GZR **Gura Zlata** 7.67 7 P Pn 17 28 28.1 +1.4
SULR 7.80 27 ⇓*i*P Pn 17 28 30.1 +1.6
BZS **Buzias** 7.82 1 ⇓P Pn 17 28 29.7 +0.9
BZS **Buzias** 7.82 1 ⇓*i*P Pn 17 28 29.7 +0.9
BZS **Buzias** 7.82 1 P Pn 17 28 29.7 +0.9
VOIR 8.12 19 ⇓*i*P Pn 17 28 35.2 +2.3
NVLJ **Novalja** 8.35 326 *e*Pn Pn 17 28 34.7 -1.3
NVLJ Sn Sn 17 30 05.0 -5.3
NVLJ **Novalja** 8.35 326 *e*Pn Pn 17 28 34.7 -1.3
MLR **Muntele Rosu** 8.42 23 Pn Pn 17 28 36.7 -0.3
comp=Z,0.1nm,0.3s,baz=209,slow=12,SNR=2.4
MLR **Muntele Rosu** 8.42 23 ⇓*i*P Pn 17 28 38.6 +1.6
MLR **Muntele Rosu** 8.42 23 P Pn 17 28 36.7 -0.3
PKSM **Moragy** 8.65 347 ⇑P Pn 17 28 39.8 -0.4
PKSM **Moragy** 8.65 347 ⇑*i*P Pn 17 28 39.8 -0.4
PKSM **Moragy** 8.65 347 P Pn 17 28 39.8 -0.4
PLOR **Plostina** 8.96 24 ⇓P Pn 17 28 45.6 +1.2
PLOR **Plostina** 8.96 24 ⇓*i*P Pn 17 28 45.5 +1.1
PLOR **Plostina** 8.96 24 P Pn 17 28 45.6 +1.2
VRI **Vrincioaia** 9.00 25 ⇑P Pn 17 28 47.0 +2.0
VRI **Vrincioaia** 9.00 25 ⇑*i*P Pn 17 28 47.0 +2.0
VRI **Vrincioaia** 9.00 25 P Pn 17 28 47.0 +2.0
DRGR 9.05 6 ⇑P Pn 17 28 45.6 0.0
DRGR 9.05 6 ⇑*i*P Pn 17 28 45.6 0.0
DRGR 9.05 6 P Pn 17 28 45.6 0.0
SWA2 9.18 157 P Pn 17 28 44.8 -2.7
baz=156
SWA2 S Sn 17 30 24.9 -5.9
baz=156
VISS **Visnje** 9.37 331 *i* Pn Pn 17 28 49.6 -0.4
VISS **Visnje** 9.37 331 *i* Pn Pn 17 28 49.6 -0.4
SKDS **Skadanscina** 9.50 327 *e*Pn Pn 17 28 51.3 -0.5
BR131 **Keskin Array S** 9.78 75 *e*P Pn 17 28 60.0 +4.3
comp=Z,1.4nm,0.5s
BRTR **Keskin Array B** 9.78 75 Pn Pn 17 28 56.1 +0.5
comp=Z,0.0nm,0.3s,baz=261,slow=12,SNR=2.3
BRTR **Keskin Array B** 9.78 75 P Pn 17 28 56.2 +0.6
KEST **Kesra** 9.86 262 Pn Pn 17 28 57.2 +0.4
comp=Z,0.0nm,0.3s,baz=69,slow=14,SNR=4.2
VOY **Vojsko** 9.93 328 *e*Pn Pn 17 28 57.0 -0.7
VOY *e* 17 28 58.9
VOY *e* 17 29 04.7
VOY *e*Sn Sn 17 30 43.3 -5.9
VOY **Vojsko** 9.93 328 *e*Pn Pn 17 28 57.0 -0.7
SOKA **Soboth** 10.04 334 ⇑*i*Pn Pn 17 28 57.5 -1.7
SOKA **Soboth** 10.04 334 Pn Pn 17 28 57.5 -1.7
OBKA **Obir** 10.07 332 ⇑*i*Pn Pn 17 28 57.4 -2.2
OBKA **Obir** 10.07 332 Pn Pn 17 28 57.4 -2.2
OBKA **Obir** 10.07 332 Sn Sn 17 30 40.7 -12
PSZ **Piszkesteto** 10.18 354 *e*P Pn 17 29 05.0 +4.0
comp=Z,10nm,0.9s
PSZ **Piszkesteto** 10.18 354 ⇓P Pn 17 29 00.7 -0.4
PSZ **Piszkesteto** 10.18 354 ⇓*i*P Pn 17 29 00.7 -0.4
PSZ **Piszkesteto** 10.18 354 ⇓*i*eP Pn 17 29 04.6 +3.5
PSZ **Piszkesteto** 10.18 354 P Pn 17 29 00.7 -0.4
VYHS **Vyhne** 10.85 351 *e*Pn Pn 17 29 12.3 +2.0
VYHS 17 29 25.3
VYHS *e*Sn Sn 17 31 01.5 -10
VYHS **Vyhne** 10.85 351 *e*PN Pn 17 29 12.3 +2.0
VYHS *e* 17 29 25.3
VYHS **Vyhne** 10.85 351 *e*P Pn 17 29 12.3 +2.0
CRVS **Cervenica-Dubn** 11.10 0 *e*Pn Pn 17 29 18.7 +4.9
CRVS **Cervenica-Dubn** 11.10 0 *e*PN Pn 17 29 18.7 +4.9
MOA **Molln** 11.32 335 ⇓*i*Pn Pn 17 29 14.7 -1.9
MOA **Molln** 11.32 335 Pn Pn 17 29 14.7 -1.9
AWBH 11.36 144 P Pn 17 29 16.3 -1.1
baz=144
AWBH 11.36 144 P Pn 17 29 16.3 -1.1
STHS **Stebnicka Huta** 11.62 360 *e*Pn Pn 17 29 25.2 +4.4
STHS **Stebnicka Huta** 11.62 360 *e*PN Pn 17 29 25.2 +4.4
AMAG **Maghara** 12.11 123 P Pn 17 29 25.9 -1.7
baz=122
AMAG **Maghara** 12.11 123 P Pn 17 29 25.9 -1.8
HFRF **Wahat Farafira** 12.12 149 P Pn 17 29 25.9 -1.9
baz=149
HFRF AMP 17 32 00.9
comp=E,10µm,1.0s,logA/T=4.0,baz=149
SBF **Sospel** 12.16 304 *e*P Pn 17 29 31.5 +3.2
comp=E,44nm,1.0s
SBF **Sospel** 12.16 304 *e*P Pn 17 29 31.5 +3.2
comp=E,22nm,1.0s
SBF **Sospel** 12.16 304 *e*P Pn 17 29 31.5 +3.2
SBF pmax pmax
comp=Z,22nm,1.0s
DAVOX **Davos/Dischmat** 12.36 320 Pn Pn 17 29 30.7 -0.1
comp=Z,0.2nm,0.3s,baz=139,slow=20,SNR=2.1
DAVOX Sn Sn 17 31 43.6 -4.9
comp=Z,0.3nm,0.3s,baz=143,slow=20,SNR=2.6
DAVOX LR LR 17 34 57.2
comp=Z,78nm,19.2s,baz=269,slow=41
DAVOX **Davos/Dischmat** 12.36 320 P Pn 17 29 30.8 -0.1
DAVOX 17 31 43.6
DAVOX **Davos/Dischmat** 12.36 320 P Pn 17 29 30.8 -0.1
MMAI **Mount Meron Ar** 12.40 108 Pn Pn 17 29 31.1 -0.5
comp=Z,0.8nm,0.3s,baz=292,slow=12,SNR=3.5
FRF **La Foret Royal** 12.57 302 *e*P Pn 17 29 34.9 +1.1
comp=Z,35nm,1.1s
FRF **La Foret Royal** 12.57 302 *e*P Pn 17 29 34.9 +1.1
comp=Z,18nm,1.1s
FRF **La Foret Royal** 12.57 302 *e*P Pn 17 29 34.9 +1.1
FRF pmax pmax
comp=Z,18nm,1.1s
FRF **La Foret Royal** 12.57 302 *e*P Pn 17 29 34.9 +1.1
comp=Z,18nm,1.1s
LMR **La Mourre** 12.57 301 *e*P Pn 17 29 38.2 +4.3
comp=Z,25nm,0.9s
LMR **La Mourre** 12.57 301 *e*P Pn 17 29 38.2 +4.3
comp=Z,12nm,0.9s
LMR **La Mourre** 12.57 301 *e*P Pn 17 29 38.2 +4.3
LMR pmax pmax
comp=Z,12nm,0.9s
MBDF **Montbardon** 12.97 307 *e*P Pn 17 29 43.1 +3.8
comp=Z,11nm,0.8s
MBDF **Montbardon** 12.97 307 *e*P Pn 17 29 43.1 +3.8
comp=Z,5.3nm,0.8s
MBDF **Montbardon** 12.97 307 *e*P Pn 17 29 43.1 +3.8
MBDF pmax pmax
comp=Z,5.0nm,0.8s
LPL **La Plagne** 13.38 310 *e*P Pn 17 29 49.0 +4.2
HDK1 **Dakhla** 13.99 149 P Pn 17 29 52.3 -1.0
baz=148
AKASG **Malin Array Be** 14.07 21 Pn Pn 17 29 52.7 -1.5
comp=Z,0.3nm,0.3s,baz=208,slow=12,SNR=3.2
AKASG **Malin Array Be** 14.07 21 Pn Pn 17 29 52.7 -1.5
CABF **La Chapelle** 14.33 313 *e*P Pn 17 30 01.8 +4.0
CABF **La Chapelle** 14.33 313 *e*P Pn 17 30 01.8 +4.0
CLL **Collm** 14.75 339 *e*PP 17 30 12.0
CDF **Champ du Feu** 14.76 320 *e*P Pn 17 30 05.7 +2.1
comp=Z,8.1nm,0.8s
CDF **Champ du Feu** 14.76 320 *e*P Pn 17 30 05.7 +2.1
comp=Z,4.1nm,0.8s
CDF **Champ du Feu** 14.76 320 *e*P Pn 17 30 05.7 +2.1
CDF pmax pmax
comp=Z,4.0nm,0.8s
HDK2 **Wahat Dakhilah** 14.91 152 P Pn 17 30 04.0 -1.8
baz=152
HAU **Haudompre** 14.98 318 *e*P Pn 17 30 10.8 +4.1
comp=Z,22nm,0.8s
HAU **Haudompre** 14.98 318 *e*P Pn 17 30 10.8 +4.1
comp=Z,11nm,0.8s
HAU **Haudompre** 14.98 318 *e*P Pn 17 30 10.8 +4.1
HAU pmax pmax
comp=Z,11nm,0.8s
HAU **Haudompre** 14.98 318 *e*P Pn 17 30 10.8 +4.1
comp=Z,11nm,0.8s
LOR **Lormes** 15.97 312 *e*P Pn 17 30 23.2 +3.5
LOR **Lormes** 15.97 312 *e*P Pn 17 30 23.2 +3.5
SUW **Suwalki** 16.27 4 *e*P Pn 17 30 25.1 +1.7
comp=Z,60nm,0.5s
SUW **Suwalki** 16.27 4 *e*P Pn 17 30 25.1 +1.7
SUW pmax pmax
comp=Z,60nm,0.5s
SUW **Suwalki** 16.27 4 *e*P Pn 17 30 25.1 +1.7
comp=Z,60nm,0.5s
ESDC **Sonseca Array** 19.83 283 P Pn 17 31 06.3 -1.2
ESDC **Sonseca Array** 19.83 283 P Pn 17 31 06.3 -1.1
comp=Z,0.2nm,0.3s,baz=79,slow=11,SNR=17
ESDC **Sonseca Array** 19.83 283 P Pn 17 31 06.3 -1.1
ESLA **Sonseca Array** 19.83 283 *e*P Pn 17 31 06.9 -0.6
ESLA **Sonseca Array** 19.83 283 *e*P Pn 17 31 06.9 -0.5
QUIF **Quistinic** 20.55 307 *e*P P 17 31 21.3 +7.7
ROSF **Rostrenen** 20.77 308 *e*P P 17 31 24.4 +8.4
comp=Z,25nm,0.8s
ROSF **Rostrenen** 20.77 308 *e*P P 17 31 24.4 +8.4
comp=Z,13nm,0.8s
ROSF **Rostrenen** 20.77 308 *e*P P 17 31 24.4 +8.4
ROSF pmax pmax
comp=Z,13nm,0.8s
MDT **Midelt** 21.75 265 P P 17 31 26.8 +0.2
comp=Z,2.2nm,0.9s,mb3.6,baz=53,slow=11,SNR=3.8
MDT **Midelt** 21.75 265 P P 17 31 26.8 +0.2
HFS **Hagfors** 22.89 350 P P 17 31 36.3 -2.2
comp=Z,5.2nm,0.5s,mb4.3,baz=157,slow=15,SNR=21
HFS LR LR 17 41 10.4
comp=Z,47nm,18.5s,MS3.0,baz=166,slow=38
HFS **Hagfors** 22.89 350 P P 17 31 36.3 -2.2
FINES **FINESS Array B** 23.86 6 P P 17 31 46.5 -1.7
comp=Z,3.4nm,0.7s,mb3.9,baz=178,slow=9.7,SNR=10
FINES **FINESS Array B** 23.86 6 P P 17 31 46.5 -1.7
FINES **FINESS Array B** 23.86 6 P P 17 31 46.5 -1.7
EKA **Eskdalemuir Ar** 24.13 325 P P 17 31 50.1 -0.6
comp=Z,4.4nm,0.7s,mb4.0,baz=127,slow=9.5,SNR=21
EKA **Eskdalemuir Ar** 24.13 325 P P 17 31 50.1 -0.7
NB2 **NORSAR Subarra** 24.13 348 P P 17 31 49.3 -1.4
comp=Z,2.6nm,0.6s,mb3.8,SNR=2.8
NOA **NORSAR Array B** 24.13 348 P P 17 31 49.5 -1.3
comp=Z,4.1nm,0.7s,mb3.9,baz=154,slow=9.3,SNR=13
NOA LR LR 17 42 49.6
comp=Z,45nm,19.9s,MS3.0,baz=170,slow=41
NOA **NORSAR Array B** 24.13 348 P P 17 31 49.5 -1.2
KAF **Kangasniemi** 24.54 6 *e*P P 17 31 52.4 -2.0
KAF **Kangasniemi** 24.54 6 *e*p P 17 31 52.4 -2.0
comp=Z,2.8nm,0.6s,mb4.0
KAF **Kangasniemi** 24.54 6 *e*P P 17 31 52.4 -2.0
comp=Z,2.8nm,0.6s,mb4.0
JOF **Joensuu** 25.88 10 *e*P P 17 32 02.5 -4.1
JOF **Joensuu** 25.88 10 *e*p P 17 32 02.5 -4.1
comp=Z,2.5nm,0.5s,mb4.0
AKTK **Aktyubinsk** 28.88 52 P P 17 32 32.8 -0.9
AKTK LR LR 17 45 39.9
AKTK **Aktyubinsk** 28.88 52 P P 17 32 32.8 -0.9
AKTO **Aktyubinsk** 28.88 52 P P 17 32 32.8 -0.9
comp=Z,0.5nm,0.3s,mb3.7,baz=254,slow=7.4,SNR=4.4
AKTO LR LR 17 45 39.9
comp=Z,40nm,18.0s,MS3.1,baz=1.3,slow=40
ABKAR **Akbulak array** 29.91 55 *e*P P 17 32 41.7 -1.1
comp=Z,0.6nm,0.3s,mb3.8
ABKAR **Akbulak array** 29.91 55 *e*P P 17 32 41.7 -1.1
comp=Z,0.6nm,0.3s,mb3.8
TORD **Torodi Ar. Bea** 30.16 221 P P 17 32 45.6 +0.3
comp=Z,1.0nm,0.5s,mb3.8,baz=31,slow=9.3,SNR=8.5
APA **Apatity** 30.59 9 ⇑*e*P P 17 32 56.5 +7.9
APA MLR MLR
comp=Z,200nm,12.0s,MS4.0
ARCES **ARCESS Array B** 31.88 3 P P 17 32 58.6 -1.3
comp=Z,3.5nm,0.7s,mb4.3,baz=188,slow=10.0,SNR=16
ARCES **ARCESS Array B** 31.88 3 P P 17 32 58.7 -1.2
KEV **Kevo** 32.17 4 *e*P P 17 33 00.0 -2.5
KEV **Kevo** 32.17 4 *e*p P 17 33 00.0 -2.5
comp=Z,3.2nm,0.7s,mb4.3
DBIC **Dimbokro** 39.07 224 P P 17 34 04.5 +2.2
comp=Z,2.7nm,0.7s,mb4.1,baz=26,slow=10,SNR=3.0
DBIC **Dimbokro** 39.07 224 P P 17 34 04.5 +2.2
TIC **Toumodi** 39.18 224 *e*PKP1 P 17 34 10.4 +7.2
comp=Z,4.0nm,0.2s,mb4.7
KIC **Kosan Boka** 39.27 224 *e*PKP1 P 17 34 09.8 +5.9
comp=Z,40nm,1.5s,mb4.9
LIC **Lamto** 39.54 224 *e*PKP1 P 17 34 10.6 +4.4
comp=Z,72nm,1.7s,mb5.1
LIC **Lamto** 39.54 224 *e*P P 17 34 11.0 +4.8
comp=Z,17nm,0.8s,mb4.5
LIC **Lamto** 39.54 224 *e*P P 17 34 11.0 +4.8
comp=Z,8.6nm,0.8s,mb4.5
KURK **Kurchatov** 41.97 53 *e*P P 17 34 24.9 -1.0
comp=Z,4.9nm,1.0s,mb4.1
KURK **Kurchatov** 41.97 53 *e*P P 17 34 24.9 -1.0
KURK pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
KURK **Kurchatov** 41.97 53 *e*P P 17 34 24.9 -1.0
comp=Z,4.9nm,1.0s,mb4.1
KSH **Kashi** 42.13 70 *e*P P 17 34 34.3 +7.0
KSH *e*pP pP 17 34 49.3 +19
KSH *e*sP sP 17 34 56.8 +25
KSH *e*PP PP 17 36 17.1 +12
KSH *e*PcP PcP 17 36 24.1 +2.3
KSH *e*ScP ScP 17 40 08.5 -3.7
KSH *e*PcS PcS 17 40 15.3 +1.9
KSH *e*S S 17 40 55.1 +8.2
KSH *e*sS sS 17 41 21.4 +29
KSH *e*SS SS 17 44 01.5 +7.3
KSH *e*ScS ScS 17 44 26.5 -3.3
KSH pmax pmax
comp=Z,2.0nm,1.1s,mb3.7
KSH pmax pmax
comp=Z,68nm,4.7s
KSH LR LR
comp=N,61nm,8.2s
KSH LR LR
comp=E,67nm,6.1s
KSH LR LR
comp=Z,60nm,6.1s
NVS **Novosibirsk** 44.45 47 *i* P P 17 34 45.0 -0.9
NVS pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
NVS pmax pmax
comp=N,3.0nm,1.2s
NVS pmax pmax
comp=E,4.0nm,1.2s
NVS **Novosibirsk** 44.45 47 *i* P P 17 34 45.0 -0.9
comp=E,8.0nm,1.1s,mb4.4
MKAR **Makanchi Array** 44.94 58 P P 17 34 49.2 -0.6
MKAR LR LR 17 56 11.7
MKAR **Makanchi Array** 44.94 58 P P 17 34 49.2 -0.6
comp=E,2.9nm,0.5s,mb4.4,baz=285,slow=6.6,SNR=35
MKAR LR LR 17 56 11.6
comp=E,18nm,20.1s,MS3.0,baz=194,slow=40
MKAR **Makanchi Array** 44.94 58 P P 17 34 49.2 -0.7
ZAA0 **Zalesovo Array** 45.45 48 *e*P P 17 34 52.7 -1.1
ZAA0 **Zalesovo Array** 45.45 48 *e*P P 17 34 52.7 -1.2
ZALV **Zalesovo Beam** 45.45 48 P P 17 34 52.6 -1.3
comp=E,3.5nm,0.5s,mb4.5,baz=274,slow=8.6,SNR=13
ZALV **Zalesovo Beam** 45.45 48 P P 17 34 52.6 -1.3
WMQ **Urumqi** 49.36 61 *e*P P 17 35 26.0 +1.5
WMQ pP pP 17 35 40.0 +12
WMQ sP sP 17 35 46.3 +17
WMQ pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
WMQ pmax pmax
comp=Z,38nm,4.0s
ZAK **Zakamensk** 57.31 49 *e*P P 17 36 22.1 -0.7
ZAK pmax pmax
comp=Z,1.0nm,1.1s,mb3.8
ZAK **Zakamensk** 57.31 49 *e*P P 17 36 22.1 -0.7
comp=Z,1.0nm,1.1s,mb3.8
GTA **Gaotai** 59.42 62 *e*P P 17 36 41.5 +3.8
GTA pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
SONM **Songino Array** 60.19 51 P P 17 36 42.2 -0.7
comp=Z,0.4nm,0.6s,mb3.7,baz=285,slow=5.5,SNR=3.0
SONM **Songino Array** 60.19 51 P P 17 36 42.2 -0.6
CD2 **Chengdu** 66.29 69 P P 17 37 21.5 -2.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CD2 pmax pmax
comp=Z,130nm,6.1s
HHC **Hu-ho-hao-te** 66.70 56 *e*P P 17 37 24.8 -1.3
HHC pP pP 17 37 41.3 +12
HHC sP sP 17 37 48.1 +17
HHC PP PP 17 39 54.0 +1.4
HHC S S 17 46 10.0 -7.7
HHC sS sS 17 46 37.3 +14
HHC ScS ScS 17 47 11.6 -12
HHC SS SS 17 50 30.3 -4.4
HHC pmax pmax
comp=Z,11nm,0.9s,mb4.9
HHC pmax pmax
comp=Z,70nm,5.7s
HHC LR LR
comp=N,120nm,14.7s,MS4.4
HHC LR LR
comp=E,110nm,12.4s,MS4.4
HHC LR LR
comp=Z,73nm,12.7s,MS4.1
KMI **Kunming** 68.57 74 P P 17 37 37.8 -0.3
KMI pP pP 17 37 53.0 +11
KMI sP sP 17 37 59.3 +16
KMI pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
KMI pmax pmax
comp=Z,51nm,4.0s
CMAR **Chiang Mai Arr** 69.28 82 P P 17 37 42.9 +0.2
comp=Z,0.4nm,0.5s,mb3.6,baz=308,slow=7.5,SNR=4.7
CMAR **Chiang Mai Arr** 69.28 82 P P 17 37 42.8 +0.2
GYA **Guiyang** 70.81 71 *e*P P 17 37 51.3 -0.6
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
CN2 **Changchun** 73.66 47 *e*P P 17 38 07.0 -1.7
WHN **Wuhan** 74.16 64 P P 17 38 11.5 -0.3
MDJ **Mudanjiang** 75.51 44 P P 17 38 16.8 -2.6

MDJ					pmax	pmax			
	comp=Z,10.0nm,2.1s,mb4.4								
MDJ					pmax	pmax			
	comp=Z,160nm,4.2s								
KSRS	**Korea Array**	**79.06**	**51**	P		**P**	**17 38 38.0**	**-1.4**	
	comp=Z,0.7nm,0.4s,mb3.9,baz=304,slow=4.5,SNR=3.7								
KSRS	**Korea Array**	**79.06**	**51**	P		**P**	**17 38 38.0**	**-1.4**	
KSRS					pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.1								
KSRS	**Korea Array**	**79.06**	**51**	P		**P**	**17 38 38.0**	**-1.4**	
	comp=Z,1.0nm,0.4s,mb4.1								
ASAR	**Alice Springs**	**121.47**	**97**	PKP		PKPdf	17 45 28.7	-0.2	
	comp=Z,0.3nm,0.8s,baz=303,slow=1.7,SNR=3.9								
ASAR	**Alice Springs**	**121.47**	**97**	PKIKP		PKPdf	17 45 28.6	-0.2	

*IDC **20** 17:29:28.7±0.7, 17°.93N×119°.60E, h0km, mb3.7/8, mb1 3.9/10, mb1mx3.7/21, mbtmp3.7/10, ML3.7/1, MS3.0/1, Ms1 3.0/1, ms1mx2.2/36, Error ellipse: s-maj=35.7km s-min=17.0km az=70.0*
*NEIC **20** 17:29:29.8±8.9, 17°.98N×119°.67E, h9km±56km, mb4.5/1, Error ellipse: s-maj=30.2km s-min=11.0km az=49.0*
*ISCJB **20** 17:29:31.9±0.5, 17°.88N±0°.06×119°.40E±0°.05, h33km, mb3.8/8, Error ellipse: s-maj=9.9km s-min=6.0km az=32.8*
*MAN **20** 17:29:36, 17°.88N×119°.75E, h15km, mb5.3, ML4.3, MS4.5*

ISC 20 17:29:33.6±0.5, 17°.87N±0°.06×119°.45E±0°.05, h35km, n21, σ1§00/22, mb3.8/8, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**1.22**	**100**	*eP*		**Pn**	**17 29 53.3**	**-1.0**
ABRA				*eS*		**Sn**	**17 30 05.5**	**-4.1**
APYP	**Conner**	**1.71**	**90**	*eP*		**Pn**	**17 30 00.4**	**-0.5**
APYP				*eS*		**Sn**	**17 30 20.4**	**-1.2**
BCPH	**Baguio City Da**	**1.83**	**144**	⇑*iP*		**Pn**	**17 30 02.5**	**-0.2**
BCPH				*i S*		**Sn**	**17 30 23.5**	**-1.1**
CAUP	**Cauayan**	**2.45**	**112**	*eP*		**Pn**	**17 30 13.4**	**+2.3**
SGCP	**Mt. Cagua**	**2.50**	**81**	*eP*		**Pn**	**17 30 12.7**	**+0.9**
BALP	**Baler**	**2.94**	**136**	*eP*		**Pn**	**17 30 19.9**	**+2.0**
PALP	**Palanan**	**2.95**	**105**	*eP*		**Pn**	**17 30 19.4**	**+1.4**
TGY	**Tagaytay City**	**4.01**	**159**	Pn		**Pn**	**17 30 32.2**	**-0.4**
	baz=216,slow=17,SNR=2.5							
QIZ	**Qiongzhong**	**9.19**	**279**	*eP*		**Pn**	**17 31 42.0**	**-1.8**
	11nm,0.6s							
CMAR	**Chiang Mai Arr**	**19.50**	**275**	P		**Pn**	**17 34 00.3**	**+1.0**
	0.1nm,0.3s,baz=90,slow=11,SNR=4.8							
KSRS	**Korea Array**	**20.88**	**19**	P		**P**	**17 34 12.4**	**-0.4**
	2.5nm,0.9s,baz=204,slow=9.7,SNR=5.1							
WRA	**Warramunga Arr**	**40.32**	**158**	P		**P**	**17 37 07.4**	**-0.4**
	0.3nm,0.3s,mb3.5,baz=342,slow=8.9,SNR=6.5							
WRA					PcP	PcP	17 39 12.1	+1.1
	1.0nm,0.8s,baz=343,slow=3.2,SNR=8.9							
MKAR	**Makanchi Array**	**42.01**	**322**	P		**P**	**17 37 21.5**	**0.0**
	0.2nm,0.2s,mb3.3,baz=104,slow=9.1,SNR=2.0							
MKAR					PcP	PcP	17 39 17.1	+0.9
	0.4nm,0.2s,baz=104,slow=4.6,SNR=5.7							
ASAR	**Alice Springs**	**43.63**	**161**	P		**P**	**17 37 35.0**	**+0.1**
	1.7nm,0.7s,mb3.9,baz=342,slow=7.3,SNR=20							
ASAR					PcP	PcP	17 39 22.8	+0.9
	0.5nm,0.6s,baz=341,slow=3.5,SNR=7.9							
ZALV	**Zalesovo Beam**	**44.83**	**332**	LR		LR	17 56 08.0	
	comp=Z,17nm,20.5s,baz=61,slow=36							
KURK	**Kurchatov**	**46.09**	**325**	*eP*		**P**	**17 37 53.3**	**-0.8**
	3.4nm,0.7s,mb4.4							
ARCES	**ARCESS Array B**	**74.78**	**339**	P		**P**	**17 41 10.2**	**+0.4**
	2.5nm,0.9s,mb4.2,baz=81,slow=6.5,SNR=3.8							
ILAR	**Eielson Array**	**75.55**	**26**	P		**P**	**17 41 14.1**	**-0.2**
	0.3nm,0.7s,mb3.4,baz=293,slow=5.8,SNR=4.3							
FINES	**FINESS Array B**	**76.08**	**330**	P		**P**	**17 41 17.7**	**+0.3**
	0.4nm,0.4s,mb3.7,baz=76,slow=12,SNR=3.2							
NOA	**NORSAR Array B**	**83.03**	**332**	P		**P**	**17 41 55.8**	**+0.6**
	1.3nm,0.9s,mb4.0,baz=64,slow=5.0,SNR=3.4							
TXAR	**Lajitas Array**	**117.28**	**42**	PKP		PKPdf	17 48 16.7	+0.8
	0.3nm,0.7s,baz=236,slow=4.9,SNR=3.3							

*IDC **20** 17:41:36.9±0.8, 8°.33N×126°.92E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.8/19, mbtmp3.8/9, Error ellipse: s-maj=31.6km s-min=16.0km az=90.0*
*NEIC **20** 17:41:38.6±0.5, 8°.36N×126°.81E, h10km, mb4.1/1, Error ellipse: s-maj=21.1km s-min=10.4km az=83.0*
*MAN **20** 17:41:40, 8°.19N×127°.20E, h30km, mb5.0, ML3.9, MS4.1*
*ISCJB **20** 17:41:43.8±1.5, 8°.31N±0°.05×127°.0E±0°.1, h68km±14km, mb3.6/10, Error ellipse: s-maj=17.2km s-min=7.8km az=170.1*

ISC 20 17:41:45.2±1.5, 8°.29N±0°.05×126°.9E±0°.1, h63km±14km, n27, σ0§87/31, mb3.7/10, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.46**	**298**	*eP*		**Pn**	**17 42 09.3**	**-0.1**
MATI	**Mati**	**1.49**	**207**	*eP*		**Pn**	**17 42 03.9**	**-6.0**
MATI				*eS*		**Sn**	**17 42 22.1**	**-6.3**
DAV	**Davao City (W)**	**1.80**	**228**	Pn		**Pn**	**17 42 09.6**	**-4.5**
	103nm,0.3s,baz=40,slow=7.9,SNR=3.8							
DAV					Sn	**Sn**	**17 42 36.0**	**+0.1**
	154nm,0.3s,baz=81,slow=19,SNR=27							
DMPH	**Davao City--Mi**	**1.85**	**230**	⇑*eP*		**Pn**	**17 42 13.1**	**-1.6**
DMPH				*eS*		**Sn**	**17 42 37.3**	**+0.3**
BUKP	**Musuan**	**1.89**	**258**	*eP*		**Pn**	**17 42 14.6**	**-0.7**
CGP	**Cagayan de Oro**	**2.22**	**274**	*eP*		**Pn**	**17 42 18.8**	**-0.9**
CGP				*i S*		**Sn**	**17 42 48.4**	**+2.3**
KCP	**Kidapawan**	**2.22**	**235**	⇓*eP*		**Pn**	**17 42 13.4**	**-6.4**
TBP	**Tagbilaran**	**3.34**	**295**	*eP*		**Pn**	**17 42 35.5**	**+0.5**
TBP				*eS*		**Sn**	**17 43 12.2**	**-1.2**
PAGZ	**Pagadian**	**3.54**	**263**	*eP*		**Pn**	**17 42 37.6**	**-0.2**
LLP	**Lapu-Lapu**	**3.55**	**305**	*eP*		**Pn**	**17 42 38.5**	**+0.6**
LLP				*eS*		**Sn**	**17 43 19.1**	**+0.4**
CNP	**Catarman**	**4.75**	**332**	*eP*		**Pn**	**17 42 54.4**	**0.0**
GUIM	**Jordan**	**4.87**	**299**	*eP*		**Pn**	**17 42 56.9**	**+0.9**
FITZ	**Fitzroy Crossi**	**26.25**	**183**	P		**P**	**17 47 14.2**	**-0.4**
	2.0nm,0.8s,mb3.7,baz=360,slow=7.5,SNR=5.6							
WRA	**Warramunga Arr**	**28.98**	**166**	P		**P**	**17 47 40.0**	**+0.9**
WRA	**Warramunga Arr**	**28.98**	**166**	P		**P**	**17 47 40.0**	**+0.9**
	0.4nm,0.8s,mb3.2,baz=348,slow=9.9,SNR=2.3							
KSRS	**Korea Array**	**29.05**	**2**	P		**P**	**17 47 39.6**	**+0.1**
	0.9nm,0.7s,mb3.6,baz=184,slow=9.8,SNR=3.0							
ASAR	**Alice Springs**	**32.48**	**168**	P		**P**	**17 48 09.3**	**-0.5**
	0.3nm,0.4s,mb3.4,baz=345,slow=7.1,SNR=19							
STKA	**Stephens Creek**	**42.33**	**161**	P		**P**	**17 49 35.0**	**+1.9**
SONM	**Songino Array**	**43.09**	**340**	PcP		PcP	17 51 28.9	+0.9
	0.3nm,0.6s,baz=132,slow=2.1,SNR=2.9							
MKAR	**Makanchi Array**	**53.99**	**323**	P		**P**	**17 51 03.2**	**+0.3**
MKAR					PcP	PcP	17 52 07.4	+0.1
MKAR	**Makanchi Array**	**53.99**	**323**	P		**P**	**17 51 03.2**	**+0.3**
	0.4nm,0.4s,mb3.7,baz=124,slow=7.7,SNR=14							
MKAR					PcP	PcP	17 52 07.4	+0.1
	0.5nm,0.7s,baz=120,slow=2.8,SNR=5.3							
ZALV	**Zalesovo Beam**	**56.67**	**332**	P		**P**	**17 51 21.1**	**-0.9**
	0.4nm,0.3s,mb3.9,baz=144,slow=8.2,SNR=2.9							
KURK	**Kurchatov**	**58.06**	**326**	*eP*		**P**	**17 51 31.2**	**-0.7**
	1.8nm,0.9s,mb4.1							
ILAR	**Eielson Array**	**80.93**	**26**	P		**P**	**17 53 53.4**	**+0.9**
	0.2nm,0.7s,mb3.2,baz=254,slow=6.5,SNR=3.9							
ARCES	**ARCESS Array B**	**86.27**	**340**	P		**P**	**17 54 19.6**	**-0.2**
	1.3nm,0.7s,mb4.2,baz=90,slow=9.0,SNR=3.7							
FINES	**FINESS Array B**	**87.94**	**332**	P		**P**	**17 54 27.1**	**-0.9**
	0.4nm,0.4s,mb4.0,baz=94,slow=5.9,SNR=4.4							
TORD	**Torodi Ar. Bea**	**121.59**	**291**	PKP		PKPdf	18 00 32.4	-0.5
	0.2nm,0.4s,baz=59,slow=1.7,SNR=2.7							

*ISCJB **20** 17:59:36.7±0.9, 14°.83S±0°.09×72°.75W±0°.08, h100km±12km, mb4.2/6, Error ellipse: s-maj=18.0km s-min=7.7km az=34.6*
*NEIC **20** 17:59:38.5±1.1, 14°.81S×72°.65W, h96km±11km, mb4.7/2, Error ellipse: s-maj=16.4km s-min=10.0km az=49.0*
*IDC **20** 17:59:41.5±3.7, 14°.83S×72°.47W, h119km±29km, mb3.9/4, mb1 4.0/8, mb1mx3.8/20, mbtmp4.0/8, Error ellipse: s-maj=30.9km s-min=21.7km az=94.0*

ISC 20 17:59:38.1±0.8, 14°.79S±0°.09×72°.73W±0°.08, h98km±10km, n17, σ1§22/15, mb4.2/6, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.68**	**109**	P		**Pn**	**18 00 48.4**	**+2.0**
	13nm,0.3s,baz=285,slow=9.7,SNR=188							
LPAZ					S	**Sn**	**18 01 40.0**	**+0.4**
	baz=160,slow=18,SNR=1.8							
NNA	**Nana**	**4.87**	**304**	P		**Pn**	**18 00 50.1**	**+1.1**
	33nm,0.3s,baz=134,slow=15,SNR=48							
NNA					S	**Sn**	**18 01 43.5**	**-0.9**
	22nm,0.3s,baz=246,slow=20,SNR=6.2							
SIV	**San Ignacio**	**11.31**	**98**	P		**Pn**	**18 02 14.8**	**-1.8**
	3.3nm,0.3s,baz=283,slow=14,SNR=70							
CFAA	**Coronel Fontan**	**17.24**	**167**	P		**Pn**	**18 03 31.8**	**-0.8**
CFAA	**Coronel Fontan**	**17.24**	**167**	P		**Pn**	**18 03 31.8**	**-0.8**
	0.1nm,0.3s,baz=330,slow=12,SNR=4.2							
CPUP	**Villa Florida**	**18.41**	**131**	P		**Pn**	**18 03 44.9**	**-2.0**
	2.0nm,0.3s,baz=301,slow=13,SNR=24							
ROSC	**El Rosal**	**19.58**	**355**	P		**Pn**	**18 04 00.1**	**-0.6**
	1.4nm,0.3s,baz=141,slow=6.5,SNR=3.3							
SDV	**Santo Domingo**	**23.61**	**5**	*eP*		**P**	**18 04 41.2**	**+1.0**
	24nm,0.8s,mb4.6							
SPB	**Sao Paulo**	**25.41**	**114**	*eP*		**P**	**18 04 57.5**	**+0.9**
	20nm,0.7s,mb4.7							
PLCA	**Paso Flores**	**25.92**	**176**	P		**P**	**18 05 02.3**	**+1.4**
	3.3nm,0.7s,mb3.9,baz=351,slow=12,SNR=6.8							
TXAR	**Lajitas Array**	**53.07**	**326**	pP		pP	18 09 14.0	+4.8
	0.8nm,0.9s,baz=143,slow=10,SNR=6.3							
DBIC	**Dimbokro**	**70.57**	**77**	P		**P**	**18 10 41.9**	**-1.2**
	5.0nm,1.0s,mb4.3,baz=233,slow=7.6,SNR=2.5							
TORD	**Torodi Ar. Bea**	**78.72**	**73**	P		**P**	**18 11 29.4**	**-0.8**
	2.8nm,0.7s,mb4.2,baz=253,slow=5.7,SNR=12							
ESDC	**Sonseca Array**	**83.74**	**46**	P		**P**	**18 11 57.5**	**+1.3**
	0.5nm,0.3s,mb3.8,baz=258,slow=6.0,SNR=10							
WRA	**Warramunga Arr**	**136.41**	**218**	PKP		PKPdf	18 18 50.0	+0.8
	0.4nm,0.7s,baz=144,slow=1.7,SNR=5.5							
ZALV	**Zalesovo Beam**	**137.14**	**19**	PKP		PKPdf	18 18 51.4	+1.9
	0.9nm,0.6s,baz=309,slow=4.8,SNR=6.6							
SONM	**Songino Array**	**147.04**	**1**	PKPbc		PKPbc	18 19 11.3	+1.9
	1.0nm,0.7s,baz=352,slow=2.9,SNR=8.8							
SONM					pPKPbc	pPKPbc	18 19 39.2	+3.0
	1.8nm,1.0s,baz=332,slow=3.2,SNR=3.2							

*ISCJB **20** 18:27:42.8±0.4, 39°.39N±0°.03×140°.94E±0°.07, h109km±3km, mb3.5/8, Error ellipse: s-maj=9.2km s-min=4.3km az=23.0*
*JMA **20** 18:27:43.8±0.1, 39°.39N×140°.91E, h103km±1km, M3.4*
*NEIC **20** 18:27:43.9, 39°.39N×140°.91E, h102km, MG3.4(JMA), After JMA.*
*IDC **20** 18:27:43.9±1.6, 39°.39N×140°.85E, h104km±15km, mb3.3/8, mb1 3.5/11, mb1mx3.4/25, mbtmp3.3/11, Error ellipse: s-maj=21.2km s-min=11.8km az=105.0*

ISC 20 18:27:44.0±0.4, 39°.39N±0°.03×140°.94E±0°.07, h103km±3km, n27, σ0§59/42, mb3.5/8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.23**	**272**	P		**Pn**	**18 27 58.4**	**-0.3**
JRG				S		**Sn**	**18 28 09.1**	**-0.6**
JOM	**Ohasama**	**0.29**	**73**	P		**Pn**	**18 27 58.7**	**-0.2**
JOM				S		**Sn**	**18 28 10.1**	**0.0**
JMK	**Ichinoseki**	**0.49**	**153**	P		**Pn**	**18 27 59.7**	**-0.4**
JMK				S		**Sn**	**18 28 11.7**	**-0.4**
JYK	**Kaneyama**	**0.65**	**224**	P		**Pn**	**18 28 01.0**	**-0.3**
JYK				S		**Sn**	**18 28 14.1**	**-0.1**
JAH	**Hinai**	**0.83**	**344**	P		**Pn**	**18 28 03.0**	**+0.1**
JAH				S		**Sn**	**18 28 17.6**	**+0.4**
JIO	**Ouri**	**0.99**	**161**	P		**Pn**	**18 28 04.2**	**-0.4**
JIO				S		**Sn**	**18 28 19.4**	**-0.6**
JOU	**Okura**	**1.04**	**192**	P		**Pn**	**18 28 05.3**	**+0.1**
JOU				S		**Sn**	**18 28 21.8**	**+0.7**
JANG	**Nango**	**1.08**	**24**	P		**Pn**	**18 28 05.6**	**+0.1**
JANG				S		**Sn**	**18 28 21.8**	**+0.1**
JYA	**Atsumi**	**1.24**	**230**	P		**Pn**	**18 28 07.1**	**-0.2**
JYA				S		**Sn**	**18 28 24.6**	**-0.4**
JMM	**Marumori**	**1.53**	**184**	P		**Pn**	**18 28 10.7**	**-0.1**
JMM				S		**Sn**	**18 28 31.6**	**+0.6**
JAW	**Awa shima**	**1.61**	**235**	P		**Pn**	**18 28 11.8**	**0.0**
JAW				S		**Sn**	**18 28 32.6**	**-0.3**
ERM	**Erimo**	**3.12**	**32**	*e*Pn		**Pn**	**18 28 30.8**	**-0.5**
ERM				*e*Sn		**Sn**	**18 29 08.8**	**+0.9**
MAJO	**Matsushiro**	**3.57**	**218**	*eP*		**Pn**	**18 28 38.6**	**+1.1**
MAT	**Matsushiro**	**3.57**	**218**	P		**Pn**	**18 28 38.4**	**+1.0**
MAT				*eS*		**Sn**	**18 29 19.4**	**+0.7**
MJAR	**Matsushiro Arr**	**3.57**	**218**	P		**Pn**	**18 28 38.5**	**+1.1**
	2.0nm,0.3s,baz=23,slow=15,SNR=18							
ASAJ	**Asahikawa**	**4.88**	**14**	*e*Pn		**Pn**	**18 28 54.7**	**-0.4**
ASAJ	**Asahikawa**	**4.88**	**14**	P		**Pn**	**18 28 54.5**	**-0.5**
	1.4nm,0.3s,baz=333,slow=30,SNR=13							
ASAJ				S		**Sn**	**18 29 50.8**	**+0.4**
	1.2nm,0.3s,baz=225,slow=20,SNR=2.4							
JHJ	**Hachijo jima 2**	**6.33**	**189**	P		**Pn**	**18 29 14.3**	**-0.4**
	4.1nm,0.3s,baz=90,slow=19,SNR=2.8							
JHJ				S		**Sn**	**18 30 21.1**	**-4.5**
	7.4nm,0.3s,baz=72,slow=19,SNR=4.2							
SONM	**Songino Array**	**26.22**	**300**	P		**P**	**18 33 09.1**	**+0.1**
	0.2nm,0.4s,mb2.9,baz=107,slow=7.7,SNR=2.8							
ZALV	**Zalesovo Beam**	**40.08**	**310**	P		**P**	**18 35 08.0**	**-0.9**
ZALV	**Zalesovo Beam**	**40.08**	**310**	P		**P**	**18 35 08.0**	**-0.9**
	0.7nm,0.5s,mb3.8,baz=82,slow=8.5,SNR=4.4							
MKAR	**Makanchi Array**	**42.59**	**300**	P		**P**	**18 35 28.6**	**-0.9**
	0.5nm,0.5s,mb3.5,baz=86,slow=10,SNR=11							
ILAR	**Eielson Array**	**47.72**	**33**	P		**P**	**18 36 10.0**	**+0.1**
	0.7nm,0.7s,mb3.6,baz=276,slow=6.4,SNR=11							
WRA	**Warramunga Arr**	**59.34**	**187**	P		**P**	**18 37 34.1**	**-1.0**
	1.0nm,0.5s,mb4.1,baz=4.4,slow=7.2,SNR=7.6							
ASAR	**Alice Springs**	**63.07**	**187**	P		**P**	**18 37 59.8**	**-0.5**
	0.4nm,0.4s,mb3.7,baz=5.5,slow=7.2,SNR=5.2							
FINES	**FINESS Array B**	**66.56**	**332**	P		**P**	**18 38 22.5**	**-0.1**
	0.4nm,0.5s,mb3.5,baz=28,slow=9.5,SNR=2.6							
NVAR	**Mina Array Bea**	**73.88**	**53**	P		**P**	**18 39 09.0**	**+1.5**
	0.5nm,0.8s,mb3.3,baz=320,slow=4.1,SNR=3.4							

*IDC **20** 18:47:40.6±1.0, 31°.14N×103°.70E, h0km, mb3.8/6, mb1 3.8/8, mb1mx3.6/24, mbtmp3.7/8, ML3.2/2, Error ellipse: s-maj=34.5km s-min=17.8km az=60.0*
*BJI **20** 18:47:41.9, 31°.20N×103°.80E, h13km, ML3.8/18, Ms3.7/3, Ms7 3.6/2*
*NEIC **20** 18:47:42.9±0.6, 31°.12N×103°.77E, h10km, mb3.9/1, Error ellipse: s-maj=16.8km s-min=10.4km az=62.0*

ISC 20 18:47:43.4±0.9, 31°.20N±0°.03×103°.83E±0°.06, h11km±7km, n17, σ1§14/26, mb3.7/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.30**	**192**	Pg		**Pg**	**18 47 49.3**	**-0.1**
CD2				Sg		**Sg**	**18 47 55.1**	**+1.6**
CD2				smax				
	comp=N,11μm,0.5s							
CD2				smax				
	comp=E,21μm,0.4s							
LZH	**Lanzhou**	**4.87**	**0**	*e*Pn		**Pn**	**18 48 56.8**	**+0.2**
LZH				Pg		**Pb**	**18 49 08.3**	**-0.4**
LZH				Sn		**Sn**	**18 49 52.9**	**0.0**
LZH				Sg		**Sb**	**18 50 10.8**	**+3.5**
LZH				smax				
	comp=N,62nm,0.8s							
LZH				smax				
	comp=E,50nm,0.7s							
LZH				LR	LR			
	comp=N,360nm,4.7s							
LZH				LR	LR			
	comp=E,230nm,5.1s							
LZH				LR	LR			
	comp=Z,430nm,6.8s							
ENH	**Enshi**	**4.96**	**99**	*eP*		**Pn**	**18 48 58.9**	**+1.1**
XAN	**Xi'an**	**5.14**	**55**	Pn		**Pn**	**18 49 01.0**	**+0.7**
XAN				Pg		**Pg**	**18 49 16.5**	**-5.4**
XAN				Sn		**Sn**	**18 50 00.8**	**+1.1**
XAN				Sg		**Sg**	**18 50 25.3**	**-3.2**
XAN				smax				
	comp=N,98nm,0.9s							
XAN				smax				
	comp=E,51nm,0.6s							
GYA	**Guiyang**	**5.34**	**152**	Pn		**Pn**	**18 49 04.5**	**+1.4**
GYA				Sn		**Sn**	**18 50 05.5**	**+0.9**
GYA				Sg		**Sg**	**18 50 33.9**	**-1.0**
GYA				smax				
	comp=N,120nm,0.8s							
GYA				smax				
	comp=E,110nm,0.8s							
KMI	**Kunming**	**6.13**	**189**	Pn		**Pn**	**18 49 13.5**	**-0.5**
KMI				smax				
	comp=N,23nm,1.1s							
KMI				smax				
	comp=E,21nm,1.4s							
KMI				LR	LR			
	comp=N,280nm,7.1s							
KMI				LR	LR			
	comp=E,320nm,9.4s							
CMAR	**Chiang Mai Arr**	**13.44**	**200**	Pn		**Pn**	**18 50 53.1**	**-1.0**
	comp=E,0.0nm,0.3s,baz=9.7,slow=11,SNR=3.5							
SONM	**Songino Array**	**16.73**	**6**	Pn		**Pn**	**18 51 37.9**	**+0.3**
	comp=E,0.1nm,0.3s,baz=181,slow=9.5,SNR=3.6							
KSRS	**Korea Array**	**20.82**	**66**	P		**P**	**18 52 24.6**	**-0.3**
	comp=E,2.3nm,0.6s,baz=261,slow=10,SNR=11							
MK31	**Makanchi Array**	**22.75**	**319**	*eP*		**P**	**18 52 47.1**	**+1.6**
MKAR	**Makanchi Array**	**22.75**	**319**	P		**P**	**18 52 43.4**	**-2.1**
	comp=E,1.4nm,0.9s,mb3.4,baz=122,slow=12,SNR=10							
ZALV	**Zalesovo Beam**	**26.53**	**334**	P		**P**	**18 53 21.6**	**+0.8**
	comp=E,0.9nm,0.7s,mb3.4,baz=140,slow=12,SNR=4.1							
KURK	**Kurchatov**	**27.03**	**323**	P		**P**	**18 53 25.9**	**+0.5**
	comp=E,3.3nm,1.3s,mb3.7							
KURK	**Kurchatov**	**27.03**	**323**	P		**P**	**18 53 23.1**	**-2.3**
	comp=E,0.5nm,0.2s,mb3.6,baz=133,slow=7.7,SNR=3.7							
WRA	**Warramunga Arr**	**58.69**	**146**	P		**P**	**18 57 39.8**	**-1.2**
	comp=E,2.1nm,0.6s,mb4.4,baz=338,slow=7.9,SNR=54							
WB2	**Warramunga Arr**	**58.69**	**146**	*eP*		**P**	**18 57 40.0**	**-1.1**
ASAR	**Alice Springs**	**61.70**	**149**	P		**P**	**18 58 00.7**	**-1.0**
	comp=E,0.8nm,1.0s,mb3.8,baz=333,slow=6.7,SNR=6.7							

JMA 20 19:09:35.5±0.2, 25°.22N×124°.95E, h6km, M3.7, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JMJ	**Miyako jima 2**	**0.51**	**142**	P		**Pg**	**19 09 45.7**	**+0.4**
JMJ				S		**Sg**	**19 09 52.5**	**+0.5**
JOGS	**Gusukube**	**0.62**	**138**	P		**Pg**	**19 09 47.6**	**+0.2**
JOGS				S		**Sg**	**19 09 56.0**	**+0.6**
JTJ	**Tarama**	**0.62**	**201**	P		**Pg**	**19 09 47.5**	**+0.1**
JIJ	**Ishigaki jima**	**1.12**	**221**	P		**Pg**	**19 09 56.0**	**-1.1**
JIJ				S		**Sg**	**19 10 11.0**	**-0.7**
JKRS	**Kuro-shima**	**1.30**	**221**	P		**Pn**	**19 09 59.4**	**-0.8**
JKRS				S		**Sb**	**19 10 17.1**	**-0.2**
IRIF	**Iriomote-Funau**	**1.42**	**232**	P		**Pn**	**19 10 00.6**	**-1.2**
IRIF				S		**Sb**	**19 10 21.0**	**+0.4**
HATJ	**Hateruma jima**	**1.56**	**222**	P		**Pn**	**19 10 03.6**	**-0.1**
HATJ				*e*S		**Sn**	**19 10 24.3**	**0.0**
YOJ	**Yonaguni jima**	**1.92**	**247**	P		**Pn**	**19 10 07.6**	**-1.1**
YOJ				*e*S		**Sn**	**19 10 33.2**	**+0.1**
JKE	**Kume jima 2**	**1.99**	**56**	P		**Pn**	**19 10 08.0**	**-1.7**
JAGN	**Aguni-jima**	**2.47**	**56**	P		**Pn**	**19 10 15.4**	**-0.9**
JIH	**Iheya**	**3.26**	**56**	P		**Pn**	**19 10 26.8**	**-0.3**
JOW	**Kunigami**	**3.40**	**61**	P		**Pn**	**19 10 28.7**	**-0.3**
JAM	**Amami Oshima**	**5.24**	**52**	P		**Pn**	**19 10 54.0**	**-0.3**

*NNC **20** 19:12:36.5±1.0, 41°.80N×77°.42E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=6.9km s-min=4.7km az=176.0*
*ISCJB **20** 19:12:38.0±0.8, 41°.86N±0°.07×77°.51E±0°.06, h10km, mb3.4/3, Error ellipse: s-maj=9.4km s-min=6.2km az=178.7*
*IDC **20** 19:12:37.6±1.2, 41°.81N×77°.39E, h0km, mb3.4/3, mb1 3.6/8, mb1mx3.4/29, mbtmp3.5/8, ML3.2/5, Error ellipse: s-maj=17.8km s-min=12.1km az=174.0*
*KNET **20** 19:12:39.1±0.8, 42°.04N×77°.34E, h0km±5km, ml3.6, Error ellipse: s-maj=8.8km s-min=4.3km az=26.0*

ISC 20 19:12:40.2±0.8, 41°.90N±0°.06×77°.40E±0°.06, h10km, n26, σ1§27/33, mb3.4/3, 16C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.93**	**292**	P		**Pg**	**19 12 55.9**	**-2.2**
	126nm,0.1s,SNR=929							
ULHL				⇓S		**Sg**	**19 13 08.6**	**-1.6**
	659nm,0.2s							
KNDC	**Almaty**	**1.36**	**347**	⇑P		**Pn**	**19 13 04.1**	**-1.1**
KNDC	606nm,0.2s							
				⇓S		**Sb**	**19 13 23.4**	**+0.3**
	881nm,0.4s							
KZA	**Kyzart**	**1.61**	**277**	⇑P		**Pn**	**19 13 08.0**	**-0.6**

2.0nm,0.9s,baz=41,slow=9.3,SNR=3.3
TORD Torodi Ar. Bea 149.40 287 PKPbc PKPbc 19 41 53.8 -0.3
0.6nm,0.6s,baz=85,slow=1.9,SNR=9.4

KRSC 20 19:27:52.2±0.8, 51°.55N×159°.67E, h23km±22km, ML4.0, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**1.41**	**316**	*eP*	Pn	19 28 17.4	+1.0
GRL				*eS*	Sn	19 28 35.7	+1.5
SPN	**Mys Shipunski**	**1.57**	**8**	P	Pn	19 28 20.6	+2.0
SPN				*i* S	Sn	19 28 41.6	+3.5
PET	**Petropavlovsk**	**1.60**	**337**	*eP*	Pn	19 28 19.7	+0.6
PET				*i* S	Sn	19 28 39.9	+0.9
NLC	**Nalytchevo**	**1.64**	**353**	P	Pn	19 28 20.8	+1.3
NLC				*i* S	Sn	19 28 41.9	+2.1
AVH	**Avacha**	**1.81**	**342**	*eP*	Pn	19 28 24.2	+2.3
AVH				*eS*	Sn	19 28 47.1	+3.0
MIPR	**Malaya Ipel'ka**	**1.94**	**293**	*eP*	Pn	19 28 24.9	+1.1
MIPR				*eS*	Sn	19 28 48.4	+1.0
GNL	**Ganaly**	**2.39**	**335**	*eP*	Pn	19 28 32.2	+2.3
GNL				*eS*	Sn	19 29 01.1	+2.6
ALID	**Alaid**	**2.68**	**257**	*eP*	Pn	19 28 34.9	+1.0
ALID				*eS*	Sn	19 29 06.2	+0.7
MKZ	**Mys Kozlova**	**3.26**	**22**	P	Pn	19 28 42.7	+0.9
MKZ				*i* S	Sn	19 29 19.1	-0.7
KBTR	**Krutoberegovo**	**5.03**	**21**	P	Pn	19 29 08.3	+2.2

*NEIC **20** 19:32:59.8±0.2, 10°.17S×161°.45E, mb5.3/41, Error ellipse: s-maj=8.4km s-min=6.2km az=124.0*
*ISCJB **20** 19:33:00.7±0.3, 10°.15S±0°.04×161°.28E±0°.05, h92km, mb5.2/95, Error ellipse: s-maj=7.5km s-min=5.3km az=22.8*
*IDC **20** 19:33:00.3±0.6, 10°.28S×161°.58E, h84km±4km, mb4.8/17, mb1 4.9/17, mb1mx4.8/21, mbtmp4.8/17, MS3.8/15, Ms1 3.8/15, ms1mx3.7/23, Error ellipse: s-maj=12.8km s-min=8.6km az=24.0*
*GCMT **20** 19:33:01.2±0.3, 10°.20S×161°.45E, h71km±3km, MW5.0, Moment Tensor Solution. s35,c39; s65,c92; Moment tensor: Scale 10^16Nm; Mrr2.16±.19; Mθθ-1.43±.15; Mφφ-0.73±.16; Mrθ0.17±.11; Mθφ2.52±.14; Mφr2.13±.09; Best double couple: M0 3.80000×10^16 NP1:θ99.00000°, δ44.00000°, λ35.00000°. NP2:θ342.00000°, δ67.00000°, λ129.00000°. Principal axes: T 3.7000, Plg52.0000°, Azm298.0000°; N 0.2200, Plg35.0000°, Azm145.0000°; P -3.9200, Plg13.0000°, Azm45.0000°; Data Used: II IU IC G CN.*
*MOS **20** 19:33:03.5±0.9, 10°.03S×161°.28E, h112km, mb5.3/20 Error ellipse: s-maj=10.9km s-min=8.7km az=96.3*
*BJI **20** 19:33:03.5, 9°.74S×161°.30E, h103km, mB5.2/25, mb5.1/47*
*DJA **20** 19:34:01, 9°.99S×157°.93E, h482km, mb5.3/21*
ISC 20 19:33:02.5±0.3, 10°.17S±0°.04×161°.33E±0°.05, h94km, h94km±3.7km: pP-P, n238, σθ90/175, mb5.2/95, 22C-7D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.55**	**298**	P	**Pn**	**19 33 30.1**	**+1.0**
	746nm,0.3s,baz=191,slow=3.6,SNR=187						
HNR				S	**Sn**	**19 33 52.8**	**+3.6**
	3μm,0.3s,baz=13,slow=21,SNR=42						
HNR	**Honiara**	**1.55**	**298**	⇑*iP*	**Pn**	**19 33 29.8**	**+0.8**
HNR				S	**Sn**	**19 33 51.6**	**+2.4**
DZM	**Mont Dzumac**	**12.81**	**158**	*e*Pn	**Pn**	**19 35 59.9**	**-1.2**
	5.5nm,0.2s						
DZM				*e*Sn	**Sn**	**19 38 15.0**	**-7.0**
	6.8nm,0.3s						
DZM				*e*LR	LR	19 38 54.8	
	746nm,27.8s						
DZM	**Mont Dzumac**	**12.81**	**158**	*e*P	**Pn**	**19 36 01.2**	**+0.1**
PMG	**Port Moresby**	**13.99**	**272**	Pn	**Pn**	**19 36 15.4**	**-1.1**
PMG				*e*		19 36 25.6	
PMG	**Port Moresby**	**13.99**	**272**	*ce*P	**Pn**	**19 36 24.8**	**+8.2**
PMG				pmax	pmax		
	comp=Z,146nm,1.2s						
PMG	**Port Moresby**	**13.99**	**272**	P	**Pn**	**19 36 25.9**	**+9.3**
	comp=Z,138nm,1.2s						
CTA	**Charters Tower**	**17.57**	**234**	⇑*iP*	**Pn**	**19 37 04.9**	**+3.5**
	comp=Z,60nm,0.9s						
CTA	**Charters Tower**	**17.57**	**234**	P	**Pn**	**19 37 04.8**	**+3.4**
	comp=Z,5.9nm,0.3s,baz=61,slow=12,SNR=77						
CTAO	**Charters Tower**	**17.57**	**234**	*e*Pn	**Pn**	**19 37 05.1**	**+3.7**
	comp=Z,102nm,1.0s						
CTAO	**Charters Tower**	**17.57**	**234**	*e*P	**Pn**	**19 37 05.1**	**+3.7**
CTAO				pmax	pmax		
	comp=Z,102nm,1.0s						
EIDS	**Eidsvold**	**17.98**	**211**	*e*P	**Pn**	**19 37 07.8**	**+1.5**
	comp=Z,29nm,0.8s						
COEN	**Coen**	**18.15**	**256**	*e*P	**Pn**	**19 37 11.5**	**+3.1**
	comp=Z,1μm,1.0s						
COEN	**Coen**	**18.15**	**256**	P	**Pn**	**19 37 11.7**	**+3.3**
	comp=Z,8μmcomp=Z,657nm,1.1s						
KWAJ	**Kwajalein Atol**	**19.85**	**19**	*e*P	**Pn**	**19 37 32.4**	**+3.8**
	comp=Z,234nm,0.8s						
ARMA	**Armidale**	**22.08**	**203**	*e*P	**P**	**19 37 50.1**	**+0.2**
ARMA	**Armidale**	**22.08**	**203**	*e*P	**P**	**19 37 50.2**	**+0.3**
	comp=Z,39nm,0.7s,mb4.8						
AFI	**Afiamalu**	**26.55**	**101**	LR	LR	19 46 13.2	
	comp=Z,286nm,22.0s,baz=203,slow=30						
CNB	**Canberra Magne**	**27.31**	**202**	*e*P	**P**	**19 38 39.1**	**+0.8**
CAN	**Canberra**	**27.45**	**202**	*e*P	**P**	**19 38 40.4**	**+0.9**
	comp=Z,12nm,0.8s,mb4.5						
CAN	**Canberra**	**27.45**	**202**	*e*P	**P**	**19 38 40.4**	**+0.9**
CAN				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**27.78**	**246**	P	**P**	**19 38 43.1**	**+0.4**
	comp=Z,33nm,0.6s,mb5.0,baz=76,slow=9.4,SNR=265						
WRA				LR	LR	19 48 45.4	
	comp=Z,236nm,21.1s,baz=45,slow=34						
STKA	**Stephens Creek**	**28.29**	**217**	*e*P	**P**	**19 38 47.4**	**+0.3**
	comp=Z,3.2nm,1.0s						
STKA	**Stephens Creek**	**28.29**	**217**	P	**P**	**19 38 48.1**	**+1.0**
	comp=Z,8.9nm,0.6s,mb4.5,baz=52,slow=14,SNR=24						
STKA				LR	LR	19 50 09.3	
	comp=Z,377nm,20.4s,baz=30,slow=36						
KAKA	**Kakadu**	**28.42**	**262**	*e*P	**P**	**19 38 48.3**	**-0.2**
	comp=Z,29nm,0.5s,mb5.1						
KAKA	**Kakadu**	**28.42**	**262**	*e*P	**P**	**19 38 48.7**	**+0.2**
	comp=Z,77nm,0.5s,mb5.5						
KAKA	**Kakadu**	**28.42**	**262**	P	**P**	**19 38 48.3**	**-0.2**
	comp=Z,784nmcomp=Z,80nm,0.6s,mb5.5						
GUMO	**Guam**	**28.70**	**325**	P	**P**	**19 38 50.8**	**-0.1**
	comp=Z,17nm,0.4s,mb5.0,baz=191,slow=12,SNR=4.1						
ASAR	**Alice Springs**	**29.40**	**239**	P	**P**	**19 38 56.8**	**-0.3**
	comp=Z,10nm,0.9s,mb4.5,baz=63,slow=9.5,SNR=69						
ASAR				PP	PP	19 39 59.8	-5.3
	comp=Z,3.6nm,0.9s,baz=65,slow=12,SNR=3.3						
TOO	**Toolangi**	**30.79**	**205**	*e*P	**P**	**19 39 10.4**	**+1.2**
URZ	**Urewera**	**31.35**	**156**	LR	LR	19 50 38.3	
	comp=Z,112nm,18.2s,baz=156,slow=34						
KNA	**Kununurra**	**32.19**	**257**	P	**P**	**19 39 22.1**	**+0.3**
	comp=Z,2μmcomp=Z,245nm,0.9s,mb5.9						
MOO	**Moorlands**	**34.45**	**199**	*e*P	**P**	**19 39 42.7**	**+1.6**
RPZ	**Rata Peaks**	**34.47**	**168**	LR	LR	19 51 43.1	
	comp=Z,158nm,20.1s,baz=176,slow=33						
FITZ	**Fitzroy Crossi**	**35.45**	**253**	⇑*iP*	**P**	**19 39 49.7**	**-0.3**
	comp=Z,18nm,0.3s,mb5.4						
FITZ	**Fitzroy Crossi**	**35.45**	**253**	P	**P**	**19 39 50.0**	**0.0**
	comp=Z,16nm,0.4s,mb5.2,baz=82,slow=7.2,SNR=108						
MMRI	**Maumere**	**38.58**	**269**	P	**P**	**19 40 15.9**	**-0.7**
	comp=Z,1μmcomp=Z,113nm,1.1s,mb5.6						
RAR	**Rarotonga**	**38.92**	**111**	LR	LR	19 52 56.4	
	comp=Z,262nm,20.2s,baz=301,slow=31						
LUWI	**Luwuk**	**39.39**	**281**	P	**P**	**19 40 23.2**	**-0.1**
	comp=Z,1μmcomp=Z,103nm,1.2s,mb5.5						
MRSI	**Marisa**	**40.59**	**283**	P	**P**	**19 40 31.3**	**-2.0**
	comp=Z,25nm,0.9s,mb5.0						
MBWA	**Marble Bar**	**41.40**	**250**	*e*P	**P**	**19 40 40.2**	**+0.3**
	comp=Z,36nm,0.4s,mb5.5						
MYLDM	**Lahad Datu**	**45.30**	**288**	P	**P**	**19 41 11.4**	**+0.1**
	comp=Z,35nm,1.1s,mb5.0						
IGBI	**Denpasar**	**45.55**	**268**	P	**P**	**19 41 12.7**	**-0.5**
	comp=Z,425nm,0.7s,mb6.3						
KLBR	**Kellerberrin**	**45.57**	**235**	*e*P	**P**	**19 41 12.8**	**-0.4**
	comp=Z,34nm,1.1s,mb5.0						
NWAO	**Narrogin (SRO)**	**46.41**	**234**	*e*P	**P**	**19 41 20.2**	**+0.5**
KKM	**Kota Kinabalu**	**47.73**	**288**	*e*P	**P**	**19 41 29.7**	**-0.6**
	comp=Z,36nm,1.0s,mb5.2						
KKM	**Kota Kinabalu**	**47.73**	**288**	P	**P**	**19 41 30.1**	**-0.2**
	comp=Z,529nmcomp=Z,37nm,1.1s,mb5.2						
PPT	**Papeete**	**48.12**	**104**	*e*LR	LR	19 55 25.7	
	comp=Z,179nm,25.0s						
PPT	**Papeete**	**48.12**	**104**	LR	LR	19 57 25.3	
	comp=Z,228nm,18.9s,baz=180,slow=31						
KRKI	**Karangkates**	**48.26**	**268**	P	**P**	**19 41 32.5**	**-1.9**
	comp=Z,359nm,0.6s						
PWJI	**Pagerwojo**	**48.92**	**268**	P	**P**	**19 41 38.9**	**-0.5**
	comp=Z,195nm,0.6s,mb6.0						
SJI	**Sawahan**	**48.99**	**269**	P	**P**	**19 41 39.9**	**-0.1**
	comp=Z,2μmcomp=Z,140nm,0.8s,mb6.0						
PCJI	**Pacitan**	**49.51**	**268**	P	**P**	**19 41 43.0**	**-1.0**
	comp=Z,448nm,0.8s						
UGM	**Wanagama**	**50.19**	**268**	P	**P**	**19 41 49.0**	**-0.1**
	comp=Z,196nm,1.1s,mb6.0						
BJII	**Banjamegara**	**51.06**	**269**	P	**P**	**19 41 56.6**	**+0.9**
MJAR	**Matsushiro Arr**	**51.30**	**336**	P	**P**	**19 41 56.5**	**-0.5**
	comp=Z,24nm,0.6s,mb5.4,baz=166,slow=8.5,SNR=53						
MAJO	**Matsushiro**	**51.30**	**336**	*e*P	**P**	**19 41 56.5**	**-0.5**
	comp=Z,43nm,0.7s,mb5.6						
MAJO				pmax	pmax		
	comp=Z,43nm,0.7s,mb5.6						
MAT	**Matsushiro**	**51.30**	**336**	P	**P**	**19 41 56.6**	**-0.4**
YULB	**Yu-li**	**51.44**	**311**	*e*P	**P**	**19 41 57.8**	**-0.5**
	comp=Z,24nm,0.6s,mb5.4						
TPUB	**Ta-pu**	**51.89**	**310**	*e*P	**P**	**19 42 00.6**	**-1.0**
	comp=Z,55nm,1.0s,mb5.5						
SSLB	**Suanglung**	**51.93**	**311**	*e*P	**P**	**19 42 01.8**	**-0.2**
	comp=Z,50nm,0.6s,mb5.7						
YHNB	**Yeheng**	**52.14**	**312**	*e*P	**P**	**19 42 03.7**	**+0.2**
	comp=Z,26nm,0.6s,mb5.4						
CISI	**Cisompet, Garu**	**52.90**	**268**	P	**P**	**19 42 06.9**	**-2.4**
	comp=Z,133nm,0.8s,mb6.0						
LEM	**Lembang**	**53.18**	**269**	P	**P**	**19 42 08.4**	**-3.0**
CBJI	**Citeko**	**53.99**	**269**	P	**P**	**19 42 15.4**	**-1.9**
	comp=Z,175nm,1.0s,mb6.0						
DBJI	**Dramaga**	**54.07**	**269**	P	**P**	**19 42 17.1**	**-0.8**
	comp=Z,110nm,1.0s,mb5.8						
CGJI	**Cibinong**	**55.10**	**269**	P	**P**	**19 42 23.3**	**-2.1**
	comp=Z,3μmcomp=Z,412nm,0.7s						
ASAJ	**Asahikawa**	**56.64**	**344**	P	**P**	**19 42 37.0**	**+1.3**
	comp=Z,58nm,0.6s,mb5.8,baz=213,slow=10,SNR=50						
KSRS	**Korea Array**	**56.78**	**328**	P	**P**	**19 42 37.6**	**+0.8**
	comp=Z,24nm,0.8s,mb5.2,baz=142,slow=7.4,SNR=55						
KSRS				LR	LR	20 03 40.2	
	comp=Z,89nm,20.5s,baz=335,slow=32						
MDSI	**Maura Dua**	**56.91**	**271**	P	**P**	**19 42 37.1**	**-1.2**
	comp=Z,39nm,0.8s,mb5.5						
INCN	**Inchon**	**57.48**	**328**	*e*P	**P**	**19 42 42.1**	**+0.4**
	comp=Z,67nm,0.9s,mb5.7						
TAOE	**Nuku Hiva Isla**	**57.66**	**94**	*e*LR	LR	19 59 36.6	
	comp=Z,295nm,25.8s						
NJ2	**Nanjing**	**58.40**	**318**	*e*P	**P**	**19 42 48.9**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
QIZ	**Qiongzhong**	**59.46**	**300**	*e*P	**P**	**19 42 49.6**	**+0.6**
YSS	**Yuzh-Sakhalins**	**59.23**	**345**	*e*P	**P**	**19 42 54.0**	**+0.2**
	comp=Z,55nm,1.1s,mb5.5						
YSS	**Yuzh-Sakhalins**	**59.23**	**345**	⇑*iP*	**P**	**19 42 54.1**	**+0.3**
YSS				*e*	pP	19 43 17.0	-0.2
YSS				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
SDSI	**Sungai Dareh**	**60.23**	**275**	P	**P**	**19 43 01.1**	**-0.3**
WHN	**Wuhan**	**60.61**	**314**	P	**P**	**19 43 03.9**	**+0.3**
DL2	**Dalian**	**61.23**	**325**	P	**P**	**19 43 08.1**	**+0.5**
DL2				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.3						
MDJ	**Mudanjiang**	**61.63**	**335**	P	**P**	**19 43 10.8**	**+0.7**
MDJ				pP	pP	19 43 35.4	+1.7
MDJ				sP	sP	19 43 46.8	+2.7
MDJ				ScP	ScP	19 47 43.3	-0.8
MDJ				PcS	PcS	19 47 53.9	+0.2
MDJ				S	**S**	**19 51 26.4**	**+1.3**
MDJ				sS	sS	19 52 09.4	+4.0
MDJ				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.3						
MDJ				pmax	pmax		
	comp=Z,140nm,4.4s						
MDJ				LR	LR		
	comp=N,35nm,22.4s						
MDJ				LR	LR		
	comp=E,35nm,27.0s						
MDJ				LR	LR		
	comp=Z,66nm,23.9s						
MDJ	**Mudanjiang**	**61.63**	**335**	*e*P	**P**	**19 43 10.4**	**+0.2**
	comp=Z,37nm,0.9s,mb5.4						
RKT	**Rikitea**	**61.96**	**111**	*e*LR	LR	20 01 49.9	
	comp=Z,224nm,30.0s						
CN2	**Changchun**	**62.83**	**332**	*e*P	**P**	**19 43 18.8**	**+0.6**
CN2				*e*pP	pP	19 43 46.1	+4.2
CN2				*e*sP	sP	19 43 58.9	+6.7
CN2				*e*S	**S**	**19 51 39.0**	**-1.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
HABR	**Khabarovsk**	**62.84**	**341**	*ce*P	**P**	**19 43 18.5**	**+0.4**
HABR				*e**SP	sP	19 43 53.0	+0.9
HABR				*e*		19 45 35.9	
HABR				S	**S**	**19 51 40.9**	**+0.8**
HABR				*e*		19 52 08.2	
HABR						19 52 59.8	
HABR				pmax	pmax		
	comp=Z,53nm,1.3s,mb5.3						
HABR				MLR	MLR		
	comp=Z,29nm,15.0s						
PET	**Petropavlovsk**	**62.98**	**358**	*e*P	**P**	**19 43 19.4**	**+0.4**
ENH	**Enshi**	**64.01**	**311**	*e*P	**P**	**19 43 25.5**	**-0.8**
	comp=Z,10nm,0.8s,mb4.7						
GYA	**Guiyang**	**64.36**	**306**	P	**P**	**19 43 30.0**	**+1.3**
GYA				pP	pP	19 43 55.4	+3.0
GYA				PcP	PcP	19 44 03.3	+0.8
GYA				PP	PP	19 45 55.8	+4.3
GYA				ScP		19 47 55.0	
GYA				S	**S**	**19 51 58.9**	**-1.0**
GYA				sS	sS	19 52 44.8	+4.3
GYA				SKS		19 53 10.0	
GYA				SS	SS	19 56 11.6	-0.1
GYA				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
GYA				pmax	pmax		
	comp=Z,130nm,5.3s						
GYA				LR	LR		
	comp=N,720nm,18.9s						
GYA				LR	LR		
	comp=E,500nm,17.5s						
GYA				LR	LR		
	comp=Z,660nm,18.3s						
KLR	**Kul'dur**	**64.61**	**339**	*e*P	**P**	**19 43 26.2**	**-3.5**
KLR				pmax	pmax		
	comp=E,28nm,1.4s						
KLR				pmax	pmax		
	comp=Z,72nm,1.4s,mb5.3						
BJT	**Baijiatuan**	**65.12**	**323**	*e*P	**P**	**19 43 33.2**	**0.0**
	comp=Z,12nm,0.4s,mb5.1						
BJT	**Baijiatuan**	**65.12**	**323**	*e*P	**P**	**19 43 33.2**	**-0.1**
BJT				pmax	pmax		
	comp=Z,12nm,0.4s						
BJI	**Beijing**	**65.13**	**323**	P	**P**	**19 43 33.5**	**+0.2**
BJI				S	S	19 52 10.3	+1.5
BJI				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.9						
BJI				LR	LR		
	comp=Z,94nm,39.2s						
CASY	**Casey**	**65.66**	**200**	⇑*iP*	**P**	**19 43 35.8**	**-0.6**
CASY	**Casey**	**65.66**	**200**	*e*P	**P**	**19 43 35.5**	**-0.8**
	comp=Z,5.6nm,0.7s,mb4.5						
XAN	**Xi'an**	**66.36**	**314**	P	**P**	**19 43 41.5**	**+0.1**
XAN				pP	pP	19 44 02.8	-2.5
XAN				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
KMI	**Kunming**	**66.98**	**303**	P	**P**	**19 43 46.1**	**+0.6**
KMI				pP	pP	19 44 14.0	+4.6
KMI				sP	sP	19 44 24.1	+4.4
KMI				PP	PP	19 46 17.9	+3.5
KMI				S	S	19 52 31.8	-0.1
KMI				sS	sS	19 53 16.8	+4.1
KMI				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.6						
KMI				pmax	pmax		
	comp=Z,130nm,4.7s						
KMI				LR	LR		
	comp=N,120nm,15.1s						
KMI				LR	LR		
	comp=E,93nm,17.0s						
KMI				LR	LR		
	comp=Z,100nm,23.2s						
SBA	**Scott Base**	**67.73**	**179**	*e*P	**P**	**19 43 49.9**	**+0.5**
	comp=Z,11nm,1.3s,mb4.5						
SBA	**Scott Base**	**67.73**	**179**	*e*P	**P**	**19 43 49.9**	**+0.5**
SBA				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.5						
CMAR	**Chiang Mai Arr**	**67.80**	**295**	P	**P**	**19 43 51.2**	**+0.4**
	comp=Z,2.8nm,0.6s,mb4.3,baz=129,slow=5.3,SNR=29						
CMAR				pP	pP	19 44 13.8	-0.9
	comp=Z,3.3nm,0.8s,baz=120,slow=4.6,SNR=5.9						
CMAR				LR	LR	20 12 03.2	
	comp=Z,39nm,18.4s,baz=290,slow=34						
CMAR	**Chiang Mai Arr**	**67.80**	**295**	P	**P**	**19 43 51.2**	**+0.4**
CMAR				*PP	pP	19 44 13.8	-0.9
HHC	**Hu-ho-hao-te**	**68.40**	**321**	*e*P	**P**	**19 43 55.0**	**+0.9**
HHC				PP	PP	19 46 29.8	+3.4
HHC				*e*S	S	19 52 51.4	+3.2
HHC				sS	sS	19 53 24.8	-4.5
HHC				ScS	ScS	19 53 43.8	-1.4
HHC				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.9						
HHC				pmax	pmax		
	comp=Z,120nm,4.5s						
HHC				LR	LR		
	comp=N,130nm,12.5s						
HHC				LR	LR		
	comp=E,150nm,10.8s						
HHC				LR	LR		
	comp=Z,130nm,14.9s						
CD2	**Chengdu**	**68.65**	**309**	P	**P**	**19 43 56.1**	**+0.2**
CD2				pP	pP	19 44 23.8	+3.9
CD2				sP	sP	19 44 36.1	+5.9
CD2				PP	PP	19 46 31.3	+2.5
CD2				ScP		19 48 12.3	
CD2				S	S	19 52 48.3	-3.3
CD2				sS	sS	19 53 36.3	+3.7
CD2				SS	SS	19 57 16.3	-1.8
CD2				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.2						
CD2				pmax	pmax		
	comp=Z,160nm,4.3s						
HIA	**Hailar**	**69.52**	**332**	*e*P	**P**	**19 44 01.5**	**+0.6**
	comp=Z,51nm,0.7s,mb5.5						
HIA	**Hailar**	**69.52**	**332**	*e*P	**P**	**19 44 01.5**	**+0.6**
HIA				pmax	pmax		
	comp=Z,51nm,0.7s						
AKUT	**Akutan**	**69.84**	**20**	*e*P	**P**	**19 44 02.4**	**-0.3**
	comp=Z,147nm,2.0s,mb5.5						
LZH	**Lanzhou**	**70.99**	**314**	*e*P	**P**	**19 44 11.6**	**+1.5**
LZH				PcP	PcP	19 44 31.3	+1.3
LZH				pP	pP	19 44 39.3	+5.1
LZH				sP	sP	19 44 50.6	+6.1
LZH				*e*S	S	19 53 13.3	-5.5
LZH				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.2						
LZH				pmax	pmax		
	comp=Z,190nm,5.4s						
SEY	**Seymchan**	**73.20**	**356**	*ce*P	**P**	**19 44 23.2**	**+0.4**
CLNS	**Chul'man**	**73.21**	**340**	*e*P	**P**	**19 44 22.7**	**-0.2**
CLNS				pmax	pmax		
	comp=Z,26nm,0.6s,mb5.2						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.6s						
CHGN	**Chignik**	**74.14**	**22**	*e*P	**P**	**19 44 29.6**	**+1.3**
ULN	**Ulaanbaatar**	**75.08**	**326**	*e*P	**P**	**19 44 34.8**	**+0.7**
	comp=E,63nm,0.9s,mb5.3						
ULN	**Ulaanbaatar**	**75.08**	**326**	*e*P	**P**	**19 44 34.8**	**+0.8**
ULN				pmax	pmax		
	comp=Z,63nm,0.9s,mb5.3						
GTA	**Gaotai**	**75.36**	**315**	⇑P	**P**	**19 44 37.3**	**+1.5**
GTA				PcP	PcP	19 44 49.3	+0.7
GTA				pP	pP	19 45 04.0	+3.9
GTA				S	S	19 54 04.9	-3.1
GTA				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.9						
GTA				pmax	pmax		
	comp=Z,69nm,4.2s						
SONM	**Songino Array**	**75.44**	**325**	P	**P**	**19 44 37.3**	**+1.2**
	comp=Z,52nm,0.7s,mb5.4,baz=142,slow=5.7,SNR=394						
SONM				pP	pP	19 44 58.2	-2.2
	comp=Z,7.8nm,0.7s,baz=144,slow=6.1,SNR=3.3						
SONM				LR	LR	20 13 22.4	
	comp=Z,71nm,21.6s,baz=109,slow=32						
YAK	**Yakutsk**	**76.09**	**345**	*e*P	**P**	**19 44 39.4**	**0.0**
YAK				pmax	pmax		
	comp=Z,53nm,0.8s,mb5.3						
YAK				pmax	pmax		
	comp=N,16nm,1.1s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.2s						
KDAK	**Kodiak Island**	**77.42**	**23**	P	**P**	**19 44 47.2**	**+0.2**
KDAK				pP	pP	19 45 08.5	-3.0
KDAK	**Kodiak Island**	**77.42**	**23**	P	**P**	**19 44 47.2**	**+0.2**
	comp=E,9.9nm,0.6s,mb4.7,baz=215,slow=4.2,SNR=12						
KDAK				pP	pP	19 45 08.5	-3.0
	comp=E,12nm,0.8s,baz=332,slow=8.4,SNR=4.7						
KDAK	**Kodiak Island**	**77.42**	**23**	*ce*P	**P**	**19 44 47.2**	**+0.2**
BILL	**Bilibino**	**78.09**	**2**	⇑*eP*	**P**	**19 44 50.7**	**+0.2**
BILL				*i*		19 47 50.7	
BILL				*e*SS	SS	19 59 45.9	+5.4
BILL				pmax	pmax		
	comp=Z,64nm,1.2s,mb5.2						
LSA	**Lhasa**	**78.23**	**303**	P	**P**	**19 44 53.3**	**+1.1**
LSA	**Lhasa**	**78.23**	**303**	*e*P	**P**	**19 44 52.9**	**+0.7**
	comp=Z,3.6nm,0.8s,mb4.2						
LSA	**Lhasa**	**78.23**	**303**	*e*P	**P**	**19 44 52.9**	**+0.7**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
ZAK	**Zakamensk**	**78.53**	**326**	⇑*iP*	**P**	**19 44 53.9**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.9						
SVW2	**Sparrevohn**	**78.70**	**20**	*e*P	**P**	**19 44 54.1**	**+0.1**
	comp=Z,82nm,2.5s,mb5.1						
IRK	**Irkutsk**	**79.00**	**328**	*e*P	**P**	**19 44 55.3**	**-0.6**
IRK				pmax	pmax		
	comp=Z,33nm,1.9

comp=Z,27nm,1.0s,mb5.0
MAW Mawson 83.89 202 *e*P **P 19 45 21.0 -0.5**
comp=Z,2.8nm,1.0s
MAW *e* 19 45 40.1
MAW Mawson 83.89 202 P **P 19 45 21.0 -0.5**
comp=Z,7.9nm,1.0s,mb4.5,baz=89,slow=8.3,SNR=7.9
MAW pP pP 19 45 42.3 -3.9
comp=Z,5.3nm,0.8s,baz=95,slow=9.9,SNR=4.7
MAW Mawson 83.89 202 *e*P **P 19 45 21.0 -0.5**
MAW pmax pmax
comp=Z,3.0nm,1.0s
KOLN Koldanda 84.03 299 *e*P **P 19 45 22.4 -0.6**
comp=Z,23nm,0.7s,mb5.2
DANN Dangsing 84.04 300 *e*P **P 19 45 22.3 -0.7**
comp=Z,45nm,0.7s,mb5.4
ILAR Eielson Array 84.11 20 P **P 19 45 21.7 -0.8**
comp=Z,7.9nm,0.8s,mb4.6,baz=244,slow=5.1,SNR=59
ILAR LR LR 20 16 44.8
comp=Z,42nm,21.8s,baz=342,slow=31
DIB Dawson Inlet, 84.32 34 T 21 18 12.6
SNR=6.2
TIXI Tiksi 84.45 350 *e*P **P 19 45 23.2 -0.9**
comp=Z,67nm,1.8s,mb5.2
TIXI *e*pP pP 19 45 44.0 -4.9
TIXI Tiksi 84.45 350 *e*P **P 19 45 23.4 -0.7**
TIXI pmax pmax
comp=Z,20nm,1.1s,mb4.9
COLD Coldfoot 84.69 17 *e*P **P 19 45 27.8 +2.4**
comp=Z,376nm,1.3s,mb6.2
HYT Haines Junctio 85.42 26 *e*P **P 19 45 30.4 +1.2**
WMQ Urumqi 85.43 316 *e*P **P 19 45 29.3 -0.3**
WMQ pP pP 19 45 57.9 +3.4
WMQ sP sP 19 46 09.9 +5.3
WMQ pmax pmax
comp=Z,11nm,1.2s,mb4.7
WMQ pmax pmax
comp=Z,130nm,4.4s
EGAK Eagle 86.09 21 *e*P **P 19 45 33.0 +0.5**
comp=Z,28nm,1.0s,mb5.2
DAWY Dawson 86.35 22 *e*P **P 19 45 34.8 +1.1**
YBH Yreka Blue Hor 86.42 47 LR LR 20 15 49.5
comp=Z,20nm,20.6s,baz=348,slow=30
MK31 Makanchi Array 89.93 318 *e*P **P 19 45 51.1 0.0**
MKAR Makanchi Array 89.93 318 P **P 19 45 51.0 -0.2**
MKAR pP pP 19 46 12.8 -3.4
MKAR sP sP 19 46 22.9 -3.3
MKAR Makanchi Array 89.93 318 P **P 19 45 51.0 -0.2**
comp=Z,9.7nm,0.6s,mb5.1,baz=96,slow=6.1,SNR=98
MKAR pP pP 19 46 12.8 -3.4
comp=Z,2.7nm,0.7s,baz=100,slow=5.3,SNR=2.5
MKAR sP sP 19 46 22.9 -3.3
comp=Z,5.5nm,0.8s,baz=97,slow=6.3,SNR=4.1
ZAA0 Zalesovo Array 90.33 325 *e*P **P 19 45 51.4 -1.4**
ZALV Zalesovo Beam 90.33 325 P **P 19 45 51.6 -1.2**
comp=Z,2.9nm,0.5s,mb4.7,baz=113,slow=5.3,SNR=17
ZALV LR LR 20 24 48.3
comp=Z,24nm,19.2s,baz=78,slow=34
INK Inuvik 90.51 20 P **P 19 45 52.2 -1.1**
comp=Z,3.4nm,0.7s,mb4.6,baz=220,slow=2.9,SNR=3.8
OD2 Odessa Site #2 90.69 42 *e*P **P 19 45 54.3 -0.3**
KSH Kashi 92.84 309 ⇓P **P 19 46 06.3 +1.5**
KSH *e*pP pP 19 46 32.4 +2.5
KSH *e*sP sP 19 46 42.4 +2.5
KSH *e*PP PP 19 49 51.3 +2.8
KSH *e*SKS 19 56 29.3
KSH *e*S S 19 56 58.0 -4.6
KSH *e*SS SS 20 03 17.5 -0.8
KSH pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
KSH pmax pmax
comp=Z,90nm,4.0s
KSH LR LR
comp=N,83nm,5.1s
KSH LR LR
comp=E,130nm,5.0s
KSH LR LR
comp=Z,160nm,5.1s
KURK Kurchatov 93.21 321 P **P 19 46 05.7 -0.5**
comp=Z,71nm,1.0s,mb6.0,SNR=8.6
KURK Kurchatov 93.21 321 *e*P **P 19 46 05.0 -1.2**
comp=Z,18nm,1.2s,mb5.3
KURK Kurchatov 93.21 321 *e*P **P 19 46 05.0 -1.2**
KURK pmax pmax
comp=Z,18nm,1.2s,mb5.3
AAK Ala-Archa 94.49 312 *ce*P **P 19 46 11.4 -0.9**
AAK pmax pmax
comp=Z,4.0nm,2.5s,mb4.3
PDAR Pinedale Array 96.17 48 LR LR 20 21 26.2
comp=Z,41nm,20.1s,baz=70,slow=30
YKA Yellowknife Ar 96.20 28 P **P 19 46 18.9 -0.7**
comp=Z,3.8nm,0.8s,mb4.8,baz=253,slow=5.4,SNR=6.3
BRVK Borovoye 96.67 322 *e*P **P 19 46 29.8 -1.2**
comp=Z,6.4nm,1.1s,mb5.1
BRVK Borovoye 98.67 322 *ce*P **P 19 46 30.0 -1.0**
BRVK pmax pmax
comp=Z,6.0nm,1.0s,mb5.1
PHWY Pilot Hill 99.02 50 *e*Pdif **P 19 46 31.7 -1.2**
comp=Z,24nm,0.9s,mb5.7
TXAR Lajitas Array 99.23 62 LR LR 20 22 16.2
comp=Z,60nm,20.1s,baz=5.0,slow=30
ABKAR Akbulak array 105.06 318 *e*Pdif Pdif 19 46 57.8 -1.7
comp=Z,0.4nm,0.4s
ARCES ARCESS Array B 114.36 344 PKP PKiKP 19 51 29.7 -1.0
comp=Z,0.9nm,0.3s,baz=76,slow=1.3,SNR=40
TKL Tuckaleechee C 116.06 55 PKP PKPdf 19 51 34.1 -0.9
comp=Z,3.1nm,0.5s,baz=143,slow=7.3,SNR=4.2
ALLY Alegheny Colle 117.93 48 *e*PKPdf PKPdf 19 51 36.1 -2.3
SADO Sadowa 117.95 45 PKP PKPdf 19 51 36.9 -1.4
comp=Z,1.2nm,0.3s,baz=299,slow=2.6,SNR=3.6
FINES FINESS Array B 119.33 337 PKP PKPdf 19 51 39.5 -0.9
comp=Z,0.6nm,0.5s,baz=132,slow=5.4,SNR=4.8
FINES PP PP 19 52 58.9 -3.4
comp=Z,2.6nm,0.8s,baz=60,slow=11,SNR=5.4
SCHQ Schefferville 121.53 30 PKP PKPdf 19 51 43.7 -1.2
comp=Z,2.7nm,0.6s,baz=242,slow=13,SNR=3.8
MALT Malatya 121.94 309 ⇑PKIKP PKPdf 19 51 45.7 -0.5
MALT Malatya 121.94 309 ⇑*i*P PKPdf 19 51 45.7 -0.5
BOSA Boshof 122.68 226 PKP PKPdf 19 51 47.0 -0.9
comp=Z,2.8nm,0.5s,baz=200,slow=1.5,SNR=6.5
AKASG Malin Array Be 123.72 325 PKP PKPdf 19 51 48.1 -1.1
comp=Z,1.4nm,0.5s,baz=63,slow=2.5,SNR=5.9
AKASG PP PP 19 53 32.7 +0.1
comp=Z,0.2nm,0.3s,baz=50,slow=7.3,SNR=4.8
LPAZ La Paz 124.45 118 PKP PKPdf 19 51 51.1 -0.5
comp=Z,2.3nm,0.9s,baz=30,slow=3.7,SNR=8.2
NOA NORSAR Array B 124.66 343 PKP PKPdf 19 51 49.8 -0.9
comp=Z,1.4nm,0.8s,baz=39,slow=2.1,SNR=4.7
BRTR Keskin Array B 125.16 312 PKP PKPdf 19 51 51.4 -0.9
comp=Z,1.2nm,0.8s,baz=87,slow=2.4,SNR=7.1
BRTR PP PP 19 53 43.5 +0.8
comp=Z,0.4nm,0.4s,baz=75,slow=5.2,SNR=5.2
BUR08 Bucovina Ar. S 127.53 324 *e*PKPdf PKPdf 19 51 56.7 +0.2
BURAR Bucovina Array 127.53 324 ⇑PKIKP PKPdf 19 51 57.3 +0.7
BURAR Bucovina Array 127.53 324 ⇑*i*P PKPdf 19 51 57.3 +0.7
KWP Kalwaria Pacla 127.85 327 ⇓PKIKP PKPdf 19 51 58.2 +1.1
KWP Kalwaria Pacla 127.85 327 ⇓*i*P PKPdf 19 51 58.2 +1.1
MLR Muntele Rosu 128.14 321 ⇓PKIKP PKPdf 19 51 58.6 +0.8
MLR Muntele Rosu 128.14 321 ⇓*i*P PKPdf 19 51 58.6 +0.8
CRVS Cervenica-Dubn 128.94 327 *e*Pdif Pdif 19 48 47.9 +2.3
CRVS Cervenica-Dubn 128.94 327 PDIF Pdif 19 48 47.9 +2.3
VYHS Vyhne 130.58 328 *e*P Pdif 19 49 00.4 +7.5
VYHS Vyhne 130.58 328 PDIF Pdif 19 49 00.4 +7.5
VTS Vitosha 131.27 319 ⇑PKIKP PKPdf 19 52 04.7 +0.8
VTS Vitosha 131.27 319 ⇑*i*P PKPdf 19 52 04.7 +0.8
PKSM Moragy 132.06 325 ⇓PKIKP PKPdf 19 52 05.5 +0.3
PKSM Moragy 132.06 325 ⇓*i*P PKPdf 19 52 05.5 +0.3
MOTA Moosalm 135.21 331 ⇑*i*PKiKP PKPdf 19 52 12.3 +1.2
comp=Z,2.9nm,0.8s
FETA Feichten 135.62 331 ⇑*i*PKiKP PKPdf 19 52 12.2 +0.3
comp=Z,6.6nm,0.9s
RJF Les Rejaudoux 140.93 337 *e*PKP1 PKPdf 19 52 14.6 -7.1
LASF Ste Croix 140.99 334 *e*PKP1 PKPdf 19 52 15.5 -6.3
comp=Z,27nm,1.2s
CAF Calviac 141.03 336 *e*PKP1 PKPdf 19 52 16.9 -5.0
comp=Z,6.4nm,0.9s
MTLF Montolieu 142.28 335 *e*PKP1 PKPdf 19 52 20.1 -4.1
comp=Z,11nm,0.8s
ETSF Etsaut 143.76 337 *e*PKP1 PKPdf 19 52 25.1 -1.7
comp=Z,31nm,0.7s
SJPF Ste Jean 143.83 338 *e*PKP1 PKPdf 19 52 24.7 -2.2
comp=Z,58nm,1.2s
KEST Kesra 144.01 319 *e*PKPdf PKPdf 19 52 25.3 -2.2
KEST Kesra 144.01 319 PKP PKPdf 19 52 25.8 -1.7
comp=Z,3.8nm,0.6s,baz=324,slow=2.6,SNR=20
PBRG Braganca 146.79 344 *e*PKP PKPbc 19 52 34.1 +0.2
MVO Moncorvo 147.46 344 *e*PKP PKPbc 19 52 36.1 +0.3
PVRL Vila Real 147.54 345 *e*PKP PKPbc 19 52 36.2 +0.2
ESDC Sonseca Array 147.83 338 PKPbc PKPbc 19 52 36.6 -0.2
comp=Z,2.6nm,0.6s,baz=16,slow=2.9,SNR=16
PVIS Viseu 148.12 344 *e*PKP PKPbc 19 52 37.8 +0.2
MTE Manteigas 148.31 344 *e*PKP PKPbc 19 52 38.2 +0.1
PCBR Castelo Branco 148.82 343 *e*PKP PKPbc 19 52 39.3 -0.1
PMRV Marv??o 149.17 343 *e*PKP PKPbc 19 52 40.5 +0.2
PTOM Tomar 149.28 344 *e*PKP PKPbc 19 52 40.6 0.0
PESTR Estremoz 149.75 343 *e*PKP PKPbc 19 52 41.6 -0.2
EVO Evora 150.19 343 *e*PKP PKPbc 19 52 43.0 +0.2
PBAR Barrancos 150.22 341 *e*PKP PKPbc 19 52 43.0 +0.1
PBEJ Beja 150.61 342 *e*PKP PKPbc 19 52 44.0 +0.1
PCVE Castro Verde 151.03 342 *e*PKP PKPbc 19 52 45.0 +0.2
PVAQ Vaqueiros 151.14 342 *e*PKP PKPbc 19 52 45.7 +0.6
PBDV Barranco-do-Ve 151.35 342 *e*PKP PKPbc 19 52 45.4 -0.2
MORF Marmelete 151.51 343 *e*PKP PKPbc 19 52 46.7 +0.7
TORD Torodi Ar. Bea 159.84 280 PKP PKPdf 19 52 50.2 -1.2
comp=Z,0.7nm,0.8s,baz=90,slow=0.6,SNR=4.5
TORD PKPab PKPab 19 53 30.2 -0.8
comp=Z,2.4nm,0.9s,baz=70,slow=2.9,SNR=6.7
DBIC Dimbokro 165.90 257 PKP PKPdf 19 52 56.1 -1.3
comp=Z,4.5nm,1.0s,baz=209,slow=0.6,SNR=3.1
DBIC PKPab PKPab 19 53 57.4 -0.3
comp=Z,3.3nm,0.6s,baz=109,slow=4.5,SNR=5.3

*NEIC **20** 19:39:21.1, 8.87N×84.11W, h8km, MD4.1(CASC), After CASC.*
CASC 20 19:39:21.4±2.5, 8.95N×84.01W, h2km±10km, MD4.1, 4C-14D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
QCR	**Quepos**	**0.49**	**342**	⇓*i*	P		Pg	19 39 31.6	+0.7
QCR	**Quepos**	**0.49**	**342**	⇓*i*	P		Pg	19 39 31.6	+0.7
BUS	**Buena Vista**	**0.65**	**23**	⇓*e*	P		Pg	19 39 35.1	+1.2
BUS	**Buena Vista**	**0.65**	**23**	⇓*e*	P		Pg	19 39 35.1	+1.2
ACR	**Cerro Adams**	**0.89**	**110**	⇓*e*	P		Pg	19 39 39.0	+0.6
ACR				*e*	S		Sg	19 39 52.3	+2.3
ACR	**Cerro Adams**	**0.89**	**110**	⇓*e*	P		Pg	19 39 39.0	+0.6
ACR				*e*	S		Sg	19 39 52.3	+2.3
URSC	**Urasca**	**0.91**	**15**	⇓*e*	P		Pg	19 39 39.6	+0.8
URSC	**Urasca**	**0.91**	**15**	⇓*e*	P		Pg	19 39 39.6	+0.8
LAJ	**Bijagual**	**0.91**	**353**	⇓*e*	P		Pg	19 39 38.4	-0.5
LAJ				*e*	S		Sg	19 39 51.6	+0.9
LAJ	**Bijagual**	**0.91**	**353**	⇓*e*	P		Pg	19 39 38.4	-0.5
LAJ				*e*	S		Sg	19 39 51.6	+0.9
SJS	**Escuela Geolog**	**0.98**	**358**	⇓*i*	P		Pg	19 39 40.7	+0.4
SJS				*e*	S		Sg	19 39 55.5	+2.5
PRS1	**Puriscal**	**1.06**	**344**	⇓*e*	P		Pg	19 39 40.0	-1.9
PRS1	**Puriscal**	**1.06**	**344**	⇓*e*	P		Pg	19 39 40.0	-1.9
CGA2	**Cerro Gallo 2**	**1.15**	**337**	⇓*e*	P		Pg	19 39 42.7	-0.7
CGA2				*e*	S		Sg	19 39 58.5	+0.2
CGA2	**Cerro Gallo 2**	**1.15**	**337**	⇓*e*	P		Pg	19 39 42.7	-0.7
CGA2				*e*	S		Sg	19 39 58.5	+0.2
BRU2	**Volcan**	**1.32**	**97**	⇑*i*	P		Pg	19 39 46.3	-0.4
BRU2				*e*	S		Sg	19 40 06.1	+2.4
BRU2	**Volcan**	**1.32**	**97**	⇑*i*	P		Pg	19 39 46.3	-0.4
BRU2				*e*	S		Sg	19 40 06.1	+2.4
TBS2		**1.35**	**97**	*e*	P		Pn	19 39 53.3	+6.1
TBS2				*e*	S		Sg	19 40 13.5	+8.7
JCR	**Jicaral**	**1.40**	**310**	*e*	P		Pn	19 39 47.9	-0.1
JCR	**Jicaral**	**1.40**	**310**	*e*	P		Pn	19 39 47.9	-0.1
JTS	**JuntasAbangare**	**1.62**	**325**	*e*	P		Pn	19 39 48.0	-3.0
JTS	**JuntasAbangare**	**1.62**	**325**	*e*	P		Pn	19 39 48.4	-2.6
TRTC	**Tortuguero**	**1.64**	**10**	⇓*e*	P		Pn	19 39 51.8	+0.6
TRTC				*e*	S		Sn	19 40 15.1	+2.2
AMAS	**Alto Masis**	**1.91**	**330**	*i*	P		Pn	19 39 56.3	+1.4
PTEN	**Parque Tenorio**	**2.00**	**331**	*i*	P		Pn	19 39 57.4	+1.3
CUI	**Cuipilapa**	**2.04**	**326**	*i*	P		Pn	19 39 56.8	+0.1
LIM1	**Limonal**	**2.12**	**325**	*i*	P		Pn	19 39 57.2	-0.6
MESS	**Mesas**	**2.12**	**327**	*i*	P		Pn	19 39 58.2	+0.3
NY14	**Universidad de**	**2.25**	**318**	*i*	P		Pn	19 39 59.5	-0.1
LAPC	**Finca la Perla**	**2.28**	**322**	*i*	P		Pn	19 40 00.9	+0.9
BCIP	**Isla Barro Col**	**4.13**	**87**	*e*	P		Pn	19 40 26.1	+0.6

*NEIC **20** 19:43:12.0, 46.20N×111.34W, h10km, ML3.6(BUT), After BUT.*
NEIC Felt in the Toston area.
*IDC **20** 19:43:12.9±1.3, 46.21N×111.09W, h0km, mb3.3/1, mb1 3.6/4, mb1mx3.4/23, mbtmp3.3/4, ML3.5/3, Error ellipse: s-maj=25.4km s-min=9.7km az=65.0*
*ISCJB **20** 19:43:13.1±0.1, 46.207N±0.010×111.36W±0.01, h10km, Error ellipse: s-maj=1.4km s-min=1.4km az=6.0*
ISC 20 19:43:13.3±0.1, 46.207N±0.010×111.33W±0.01, h10km, n126, σ0 89/191, 66C-67D, Montana

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
E16A	**East Helena**	**0.40**	**324**	⇑P			**Pg**	**19 43 20.5**	**-0.8**
baz=0.4									
E16A				⇑S			**Sg**	**19 43 26.4**	**-0.2**
baz=0.4									
E17A	**Martinsdale**	**0.42**	**52**	⇑P			**Pg**	**19 43 20.5**	**-1.0**
baz=0.4,SNR=1000									
E17A				⇓S			**Sg**	**19 43 27.0**	**-0.1**
baz=0.4									
F16A	**Kennard Place,**	**0.47**	**206**	⇑P			**Pg**	**19 43 21.4**	**-1.0**
baz=0.5,SNR=1000									
F16A				⇓S			**Sg**	**19 43 28.2**	**-0.4**
baz=0.5									
F17A	**Fitzpatrick Pl**	**0.56**	**122**	P			**Pg**	**19 43 23.8**	**-0.4**
baz=0.6,SNR=554									
F17A				⇓S			**Sg**	**19 43 31.6**	**+0.2**
baz=0.6									
BOZ	**Bozeman (W)**	**0.60**	**200**	⇑P			**Pg**	**19 43 24.5**	**-0.4**
baz=0.6									
BOZ				⇑S			**Sg**	**19 43 33.1**	**+0.4**
baz=0.6									
BOZ	**Bozeman (W)**	**0.60**	**200**	*e*Pg			**Pg**	**19 43 24.3**	**-0.6**
BOZ				*e*Sg			**Sg**	**19 43 30.3**	**-2.4**
D16A	**Dana Ranch, Ca**	**0.84**	**350**	⇓P			**Pg**	**19 43 28.3**	**-1.2**
baz=0.8									
D16A				⇓S			**Sg**	**19 43 39.9**	**-0.5**
baz=0.8									
F15A	**Butte**	**0.89**	**246**	⇓P			**Pg**	**19 43 29.2**	**-1.1**
baz=0.9,SNR=1000									
E15A	**Deer Lodge**	**0.93**	**284**	⇓P			**Pg**	**19 43 30.2**	**-1.0**
baz=0.9									
E15A				⇓S			**Sg**	**19 43 42.5**	**-0.8**
baz=0.9									
G17A	**Pierce Place,**	**0.98**	**155**	⇓P			**Pg**	**19 43 31.0**	**-1.1**
baz=1.0,SNR=137									
G16A	**Moss Hill, Enn**	**1.03**	**199**	⇓P			**Pg**	**19 43 31.5**	**-1.6**
baz=1.0,SNR=267									
G16A				⇑S			**Sg**	**19 43 45.0**	**-1.5**
baz=1.0									
D17A	**Six Diamond Ra**	**1.04**	**25**	⇓P			**Pg**	**19 43 32.0**	**-1.4**
baz=1.1									
E18A	**Harlowton**	**1.05**	**69**	⇑P			**Pg**	**19 43 32.5**	**-0.9**
baz=1.1,SNR=805									
E18A				⇑S			**Sg**	**19 43 46.7**	**-0.4**
baz=1.1									
F18A	**Big Timber**	**1.17**	**104**	⇑P			**Pb**	**19 43 34.4**	**-1.2**
baz=1.2,SNR=158									
F18A				⇓S			**Sb**	**19 43 50.4**	**-0.3**
baz=1.2									
D15A	**Lincoln**	**1.17**	**316**	⇓P			**Pb**	**19 43 34.3**	**-1.3**
baz=1.2									
D15A				⇓S			**Sb**	**19 43 49.9**	**-0.8**
baz=1.2									
DLMT	**Dillon**	**1.22**	**227**	*e*Pg			**Pg**	**19 43 35.0**	**-1.8**
G15A	**Dillon**	**1.32**	**218**	⇓P			**Pn**	**19 43 36.7**	**-1.1**
baz=1.3,SNR=449									
G15A				⇑S			**Sb**	**19 43 54.3**	**-0.7**
baz=1.3									
D18A	**Linhart Farms,**	**1.45**	**46**	⇓P			**Pn**	**19 43 39.3**	**-0.2**
baz=1.5,SNR=81									
D18A				⇑Sb			**Sb**	**19 43 58.6**	**-0.2**
baz=1.5									
F14A	**Wisdom**	**1.47**	**255**	⇓P			**Pn**	**19 43 39.4**	**-0.4**
baz=1.5,SNR=411									
F14A				⇓Sg			**Sg**	**19 44 00.6**	**0.0**
baz=1.5									
C17A	**Wharram Farm,**	**1.48**	**15**	⇓P			**Pn**	**19 43 39.8**	**-0.1**
baz=1.5,SNR=74									
C17A				⇑Sb			**Sb**	**19 43 59.2**	**-0.5**
baz=1.5									
H16A	**Russell Place,**	**1.50**	**178**	⇑P			**Pn**	**19 43 39.9**	**-0.4**
baz=1.5,SNR=633									
H16A				⇑Sb			**Sb**	**19 44 00.4**	**0.0**
baz=1.5									
E14A	**Clinton**	**1.51**	**279**	⇓P			**Pn**	**19 43 40.1**	**-0.2**
baz=1.5,SNR=85									
E14A				⇑Sg			**Sg**	**19 44 01.8**	**0.0**
baz=1.5									
G18A	**Lazy EL Ranch,**	**1.53**	**125**	P			**Pn**	**19 43 40.2**	**-0.4**
baz=1.5,SNR=108									
G18A				⇓S			**Sn**	**19 43 59.6**	**-0.9**
baz=1.5									
YMR	**Madison River**	**1.56**	**170**	*e*P			**Pn**	**19 43 40.9**	**-0.1**
YNR	**Norris Junctio**	**1.56**	**163**	*e*P			**Pn**	**19 43 40.7**	**-0.3**
C16A	**Fuhringer Ranc**	**1.62**	**350**	⇓P			**Pn**	**19 43 41.8**	**-0.1**
baz=1.6,SNR=98									
C16A				⇓Sb			**Sb**	**19 44 03.9**	**+0.1**
baz=1.6									
F19A	**Roth Farm, Mol**	**1.70**	**101**	⇑Pb			**Pb**	**19 43 44.2**	**-0.4**
baz=1.7									
F19A				⇑Sb			**Sb**	**19 44 06.4**	**+0.3**
baz=1.7									
D14A	**Greenough**	**1.73**	**301**	⇑P			**Pn**	**19 43 43.2**	**-0.2**
baz=1.7,SNR=419									
D14A				⇓Sg			**Sg**	**19 44 08.6**	**-0.4**
baz=1.7									
G14A	**Jackson**	**1.77**	**238**	⇓P			**Pn**	**19 43 43.8**	**-0.2**
baz=1.8									
G14A				⇑Sg			**Sg**	**19 44 10.6**	**+0.3**
baz=1.8									
E19A	**Rath Farm, Rou**	**1.78**	**81**	⇓Pb			**Pb**	**19 43 45.6**	**-0.5**
baz=1.8									
E19A				⇓Sb			**Sb**	**19 44 09.0**	**+0.6**
baz=1.8									
YFT	**Old Faithful**	**1.79**	**168**	*e*Pg			**Pg**	**19 43 45.7**	**-1.9**
C15A	**Salmond Ranch,**	**1.79**	**331**	⇓P			**Pn**	**19 43 44.3**	**0.0**
baz=1.8,SNR=664									
C15A				⇓Sb			**Sb**	**19 44 09.0**	**+0.3**
baz=1.8									
RLMT	**Red Lodge**	**1.81**	**126**	⇓Pb			**Pb**	**19 43 45.7**	**-0.8**
baz=1.8									
RLMT				⇓Sb			**Sb**	**19 44 09.5**	**+0.3**
baz=1.8									
RLMT	**Red Lodge**	**1.81**	**126**	*e*Pn			**Pn**	**19 43 44.6**	**+0.1**
H15A	**Lima**	**1.84**	**211**	⇓P			**Pn**	**19 43 44.4**	**-0.5**
baz=1.8,SNR=67									
H15A				⇑Sb			**Sb**	**19 44 10.4**	**+0.4**
baz=1.8									
H17A	**Grant Village**	**1.89**	**163**	⇓Pg			**Pg**	**19 43 48.7**	**-0.8**
baz=1.9									
MSO	**Missoula**	**1.91**	**290**	⇓P			**Pn**	**19 43 45.1**	**-0.6**
baz=1.9									
MSO				⇑Sb			**Sb**	**19 44 12.4**	**+0.5**
baz=1.9									
MSO	**Missoula**	**1.91**	**290**	*e*Pn			**Pn**	**19 43 45.2**	**-0.6**
E13A	**Victor**	**1.99**	**278**	⇑P			**Pn**	**19 43 46.2**	**-0.8**
baz=2.0,SNR=135									
E13A				⇓Sb			**Sb**	**19 44 15.2**	**+0.7**
baz=2.0									
EGMT	**Eagleton**	**2.11**	**30**	⇓P			**Pn**	**19 43 49.0**	**+0.3**
baz=2.1									
EGMT				⇑Sb			**Sb**	**19 44 19.0**	**+1.0**
baz=2.1									
EGMT	**Eagleton**	**2.11**	**30**	*e*Pn			**Pn**	**19 43 49.3**	**+0.7**
EGMT				*e*Sn			**Sn**	**19 44 18.1**	**+3.1**
B17A	**L&G Farms, Che**	**2.12**	**10**	⇑P			**Pn**	**19 43 48.8**	**0.0**
baz=2.1,SNR=108									
B17A				⇑Sb			**Sb**	**19 44 18.9**	**+0.8**
baz=2.1									
F13A	**Darby**	**2.13**	**260**	P			**Pn**	**19 43 48.5**	**-0.4**
baz=2.1,SNR=28									
F13A				⇑Sb			**Sb**	**19 44 19.0**	**+0.6**
baz=2.1									
H14A	**Leadore**	**2.14**	**223**	⇓P			**Pn**	**19 43 48.9**	**-0.1**
baz=2.1,SNR=48									
H14A				⇑Sb			**Sb**	**19 44 19.9**	**+1.2**
baz=2.1									
FLWY	**Flagg Ranch**	**2.17**	**168**	*e*Pn			**Pn**	**19 43 50.5**	**+1.0**
B16A	**M & M Farms, S**	**2.22**	**354**	⇓P			**Pn**	**19 43 50.6**	**+0.4**
baz=2.2									
B16A				⇓Sb			**Sb**	**19 44 21.8**	**+0.8**
baz=2.2									
E20A	**Meyer Farm, Mu**	**2.24**	**81**	⇑Pb			**Pb**	**19 43 53.0**	**-0.8**
baz=2.2									
E20A				⇑Sb			**Sb**	**19 44 21.8**	**+0.2**
baz=2.2									
F20A	**Billings**	**2.26**	**99**	⇑Pb			**Pb**	**19 43 53.2**	**-1.0**
baz=2.3									
F20A				⇑Sb			**Sb**	**19 44 22.7**	**+0.6**
baz=2.3									
B15A	**Bradely Ranch,**	**2.27**	**339**	⇓P			**Pn**	**19 43 50.9**	**+0.1**
baz=2.3,SNR=50									
B15A				⇓Sb			**Sb**	**19 44 23.1**	**+0.7**
baz=2.3									
G13A	**Cobalt**	**2.32**	**242**	P			**Pn**	**19 43 51.1**	**-0.4**
baz=2.3,SNR=44									
G13A				⇑Sb			**Sb**	**19 44 24.2**	**+0.4**
baz=2.3									
IMW	**Indian Meadow**	**2.33**	**173**	*e*Pn			**Pn**	**19 43 52.6**	**+1.0**
IMW				*e*Sn			**Sn**	**19 44 25.2**	**+5.0**
D13A	**Huson**	**2.33**	**294**	⇑P			**Pn**	**19 43 51.5**	**-0.1**
baz=2.3,SNR=19									
D13A				⇑Sb			**Sb**	**19 44 24.4**	**+0.3**
baz=2.3									
I16A	**Newdale**	**2.33**	**183**	⇓Pb			**Pb**	**19 43 54.9**	**-0.5**
baz=2.3									
I16A				⇓Sb			**Sb**	**19 44 25.0**	**+0.8**
baz=2.3									
I17A	**Pilgrim Ck.**	**2.35**	**167**	⇓P			**Pn**	**19 43 52.7**	**+0.8**
baz=2.3									
I15A	**Monteview**	**2.35**	**201**	⇓Sb			**Sb**	**19 44 25.4**	**+0.6**
baz=2.3									
D20A	**Manuel Ranch,**	**2.37**	**67**	⇑Pb			**Pb**	**19 43 55.5**	**-0.6**
baz=2.4									
D20A				⇑Sb			**Sb**	**19 44 25.8**	**+0.4**
baz=2.4									
B18A	**Beardsley Farm**	**2.43**	**25**	⇓P			**Pn**	**19 43 53.7**	**+0.6**
baz=2.4,SNR=60									
B18A				⇓Sb			**Sb**	**19 44 27.9**	**+0.8**
baz=2.4									
MOOW	**Moose Ponds**	**2.49**	**170**	*e*Pn			**Pn**	**19 43 55.9**	**+2.0**
MOOW				*e*S			**Sn**	**19 44 29.8**	**+5.4**
B14A	**Marquette Ranc**	**2.53**	**

F21A				⇑Sb	Sb	19 44 42.3	0.0		
	baz=3.0								
E21A	Keefer Ranch,	2.97	82	⇑Pb	Pb	19 44 04.6	-1.6		
	baz=3.0								
H12A	Diamond D Ranc	2.98	238	P	Pn	19 44 00.8	+0.1		
	baz=3.0,SNR=60								
G12A	Big Creek, Yel	3.00	250	⇑P	Pn	19 44 00.9	+0.1		
	baz=3.0,SNR=16								
I13A	Wildhorse Cree	3.02	222	⇑P	Pn	19 44 01.5	+0.3		
	baz=3.0,SNR=10								
I13A				⇑Sb	Sb	19 44 45.2	+1.1		
	baz=3.0								
B13A	Whitefish	3.04	317	⇓Pb	Pb	19 44 07.3	-0.1		
	baz=3.0								
G21A	Lodge Grass	3.05	107	⇓Pb	Pb	19 44 07.1	-0.6		
	baz=3.0								
A14A	Double T Ranch	3.11	334	⇓P	Pn	19 44 02.7	+0.4		
	baz=3.1,SNR=11								
J18A	Kendall Valley	3.14	162	⇓Pb	Pb	19 44 08.7	-0.4		
	baz=3.1								
I20A	Worland	3.20	134	⇓Pb	Pb	19 44 09.6	-0.6		
	baz=3.2								
I20A				⇑Sb	Sb	19 44 50.9	+1.7		
	baz=3.2								
WALA	Waterton Lakes	3.34	330	ePn	Pn	19 44 06.2	+0.7		
K16A	Soda Springs	3.38	183	⇑Pb	Pb	19 44 12.8	-0.4		
	baz=3.4								
K16A				⇑Sb	Sb	19 44 56.0	+1.6		
	baz=3.4								
H21A	Big Horn, Sher	3.41	116	⇑Pb	Pb	19 44 13.2	-0.5		
	baz=3.4								
H21A				⇓Sb	Sb	19 44 56.3	+1.0		
	baz=3.4								
HLID	Hailey	3.43	221	⇑P	Pn	19 44 07.0	+0.2		
	baz=3.4								
HLID	Hailey	3.43	221	ePn	Pn	19 44 07.5	+0.7		
HLID				ePg	Pg	19 44 14.7	-4.4		
HLID				eSg	Sg	19 44 58.5	-5.0		
A13A	Flathead Natio	3.43	324	⇑P	Pn	19 44 07.9	+1.1		
	baz=3.4,SNR=20								
AHID	Auburn Hatcher	3.44	177	eP	Pn	19 44 12.2	+5.2		
J13A	Cove Ranch, Pi	3.46	217	⇓P	Pn	19 44 07.5	+0.3		
	baz=3.4,SNR=13								
LAO	LASA Array	3.57	80	⇓Pb	Pb	19 44 15.5	-1.0		
	baz=3.6								
LAO	LASA Array	3.57	80	ePn	Pn	19 44 10.7	+2.1		
I12A	Atlanta	3.62	230	⇓P	Pn	19 44 09.6	+0.2		
	baz=3.6								
BW06	Boulder Array	3.67	159	⇓P	Pn	19 44 10.0	-0.1		
	baz=3.7								
PDAR	Pinedale Array	3.67	159	Pn	Pn	19 44 12.3	+2.3		
PDAR				Pg	Pg	19 44 17.8	-5.7		
PDAR				Lg		19 45 07.0			
PDAR	Pinedale Array	3.67	159	Pn	Pn	19 44 12.3	+2.3		
	0.4nm,0.3s,baz=353,slow=14,SNR=16								
PDAR				Pg	Pg	19 44 17.8	-5.7		
	2.1nm,0.3s,baz=350,slow=14,SNR=39								
PDAR				Lg		19 45 07.0			
	1.8nm,0.3s,baz=355,slow=31,SNR=9.7								
K18A	Toltan Ranch,	3.69	165	⇓Pb	Pb	19 44 18.6	+0.1		
	baz=3.7								
K19A	Absolon Red Bu	3.82	151	⇑Pb	Pb	19 44 20.7	-0.1		
	baz=3.8								
F10A	Beach Ranch, E	4.11	269	⇑P	Pn	19 44 16.4	+0.3		
	baz=4.1,SNR=9.6								
MFID	Camas Ranch	4.24	230	⇓P	Pn	19 44 18.7	+0.8		
	baz=4.2								
L15A	Malad City	4.27	191	⇑Pb	Pb	19 44 27.7	-0.8		
	baz=4.3								
NEW	Newport	4.45	300	⇓P	Pn	19 44 20.4	-0.3		
	baz=4.4								
NEW	Newport	4.45	300	ePn	Pn	19 44 20.5	-0.2		
HVU	Hansel Valley	4.55	194	eP	Pn	19 44 23.7	+1.6		
HWUT	Hardware Ranch	4.60	182	Pn	Pn	19 44 24.4	+1.5		
M15A	Larsen Ranch,	4.81	190	⇑Pb	Pb	19 44 36.4	-1.3		
	baz=4.8								
LNOR	Lincton Mounta	4.85	269	ePn	Pn	19 44 27.3	+1.0		
C09A	Chrisman Ranch	5.01	291	⇑P	Pn	19 44 28.1	-0.3		
	baz=5.0								
OD2	Odessa Site #2	5.20	286	ePn	Pn	19 44 33.7	+2.6		
	16nm,0.5s								
DGMT	Dagmar	5.35	62	ePn	Pn	19 44 35.2	+2.0		
	76nm,0.7s								
BGU	Big Grassy Mou	5.42	194	Pn	Pn	19 44 33.3	-0.8		
	16nm,1.1s								
RSSD	Black Hills	5.57	109	eP	Pn	19 44 41.2	+5.1		
	18nm,0.6s								
JLU	Jordanelle	5.60	181	Pn	Pn	19 44 35.5	-1.2		
	22nm,0.9s								
HAWA	Hanford	5.69	275	ePn	Pn	19 44 37.0	-0.7		
	14nm,0.6s								
DAU	Daniels Canyon	5.79	179	P	Pn	19 44 43.8	+4.6		
	16nm,0.9s								
DAU				ePg	Pg	19 44 58.1	-6.1		
DUG	Dugway	6.11	191	ePn	Pn	19 44 43.2	-0.4		
	5.3nm,0.7s								
WVOR	Wild Horse Val	6.45	237	ePn	Pn	19 44 44.7	-3.6		
	1.7nm,0.6s								
WVOR				ePg	Pg	19 45 12.1	-4.8		
SRU	San Rafael	7.12	175	ePn	Pn	19 44 57.6	+0.2		
	3.6nm,0.9s								
YBH	Yreka Blue Hor	9.34	245	Pn	Pn	19 45 34.4	+6.5		
	0.2nm,0.3s,baz=27,slow=5.3,SNR=4.3								
ULM	Lac du Bonnet	11.07	63	Pg	Px	19 46 38.0			
	0.6nm,0.3s,baz=254,slow=13,SNR=3.6								
ULM				Lg		19 48 52.5			
	0.9nm,0.3s,baz=350,slow=19,SNR=2.7								
YKA	Yellowknife Ar	16.43	355	Pn	Pn	19 46 59.3	-4.3		
	0.2nm,0.3s,baz=167,slow=12,SNR=3.5								
ILAR	Eielson Array	26.84	327	P	P	19 48 57.2	+3.7		
	0.3nm,0.7s,baz=125,slow=9.1,SNR=4.5								

*ISCJB **20** 19:46:52.6±0.5, 36.98N±0.03×29.21E±0.03, h4km±5km, Error ellipse: s-maj=5.2km s-min=3.8km az=27.1*
*DDA **20** 19:46:52.8, 37.00N×29.22E, h7km±2km, Md2.9*
*ISK **20** 19:46:52.6, 37.00N×29.20E, h9km, MD3.0*
*CSEM **20** 19:46:52.8±0.2, 36.99N×29.21E, h8km, MD3.0, Error ellipse: s-maj=4.4km s-min=3.0km az=16.0*

ISC 20 19:46:53.3±0.5, 36.98N±0.03×29.20E±0.03, h9km±4km, n40, σ0s81/56, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLHS	Glhisar (BURDU	0.29	54	PG	Pg	19 46 58.2	-0.8
GLHS				eSG	Sg	19 47 04.0	+0.9
GLHS	Glhisar (BURDU	0.29	54	*i* Pg	Pg	19 46 58.2	-0.9
GLHS				eSg	Sg	19 47 04.0	+1.0
ELL	Elmali	0.61	112	ePG	Pg	19 47 04.3	-0.8
ELL				eSG	Sg	19 47 14.3	+1.2
ELL	Elmali	0.61	112	ePg	Pg	19 47 04.3	-0.8
ELL				eSg	Sg	19 47 14.3	+1.2
DNZL	Cakiroluk	0.71	350	*i* P	Pg	19 47 05.7	-1.4
DNZL				*i* S	Sg	19 47 17.2	+0.8
DNZL	Cakiroluk	0.71	350	*i* P	Pg	19 47 05.7	-1.4
DNZL				*i* S	Sg	19 47 17.2	+0.8
YER	Yerkesik	0.75	282	ePG	Pg	19 47 07.7	0.0
YER				eSG	Sg	19 47 18.2	+0.7
YER	Yerkesik	0.75	282	ePg	Pg	19 47 07.7	0.0
YER				eSg	Sg	19 47 18.2	+0.7
DENT	Denizli	0.78	350	ePG	Pg	19 47 07.4	-0.9
DENT				eSG	Sg	19 47 19.0	+0.6
DENT	Denizli	0.78	350	ePg	Pg	19 47 07.4	-0.9
DENT				eSg	Sg	19 47 19.0	+0.5
AKAS	Kas	0.82	156	*i* P	Pg	19 47 07.3	-1.6
AKAS				*i* S	Sg	19 47 20.8	+1.3
AKAS	Kas	0.82	156	*i* P	Pg	19 47 07.3	-1.7
AKAS				*i* S	Sg	19 47 20.8	+1.2
KORT	Korkueli	0.92	89	*i* P	Pg	19 47 10.4	-0.6
KORT	Korkueli	0.92	89	*i* P	Pg	19 47 10.4	-0.5
ANTB	Antalya	1.17	94	ePN	Pn	19 47 15.9	+0.1
ANTB	Antalya	1.17	94	ePn	Pn	19 47 15.9	+0.1
MLSB	Milas	1.18	286	ePN	Pn	19 47 14.9	-1.1
MLSB	Milas	1.18	286	ePn	Pn	19 47 14.9	-1.1
BCK	Bucak	1.21	66	ePN	Pn	19 47 16.4	+0.1
BCK	Bucak	1.21	66	ePn	Pn	19 47 16.4	+0.1
AYDN	Tasoluk	1.25	303	*i* P	Pn	19 47 15.8	-1.1
AYDN				*i* S	Sb	19 47 34.7	+1.5
AYDN	Tasoluk	1.25	303	*i* P	Pn	19 47 15.8	-1.1
AYDN				*i* S	Sb	19 47 34.7	+1.4
DAT	Datca	1.33	259	ePN	Pn	19 47 18.7	+0.7
DAT	Datca	1.33	259	ePn	Pn	19 47 18.7	+0.7
ISP	Isparta	1.34	51	ePN	Pn	19 47 18.7	+0.5
ISP	Isparta	1.34	51	ePn	Pn	19 47 18.7	+0.5
KHL	Karahalli	1.36	11	ePN	Pn	19 47 17.6	-0.8
KHL	Karahalli	1.36	11	ePn	Pn	19 47 17.7	-0.8
BDRM	Kayabasi	1.41	274	*i* P	Pn	19 47 19.4	+0.3
BDRM				*i* S	Sn	19 47 37.7	-0.1
BDRM	Kayabasi	1.41	274	*i* P	Pn	19 47 19.4	+0.3
BDRM				*i* S	Sn	19 47 37.7	-0.1
BODT	Bodrum	1.52	274	ePN	Pn	19 47 20.3	-0.2
BODT	Bodrum	1.52	274	ePn	Pn	19 47 20.3	-0.3
KULA	Kula-Manisa	1.59	344	ePN	Pn	19 47 21.7	+0.1
KULA	Kula-Manisa	1.59	344	ePn	Pn	19 47 21.7	+0.1
HDMB	Hadim	2.63	89	ePN	Pn	19 47 36.5	+0.6
HDMB	Hadim	2.63	89	ePn	Pn	19 47 36.5	+0.6
KONT	Konya--Tatoy	2.69	68	ePN	Pn	19 47 36.7	0.0
KONT	Konya--Tatoy	2.69	68	ePn	Pn	19 47 36.7	0.0
KIZT	Kizilcal	2.84	47	ePN	Pn	19 47 38.8	+0.1
KIZT	Kizilcal	2.84	47	ePn	Pn	19 47 38.8	0.0

*IDC **20** 19:47:06.0±4.0, 24.85S×176.15W, h0km, mb4.0/6, mb1 4.3/6, mb1mx4.1/15, mbtmp4.0/6, Error ellipse: s-maj=244.4km s-min=24.6km az=160.0*
*NEIC **20** 19:47:07.2±0.8, 24.98S×176.11W, h10km, mb4.6/1, Error ellipse: s-maj=23.9km s-min=16.0km az=169.0*
*ISCJB **20** 19:47:10.0±1.2, 24.8S±0.2×176.3W±0.2, h33km, mb4.0/6, Error ellipse: s-maj=28.7km s-min=21.4km az=168.1*

ISC 20 19:47:11.6±1.2, 24.9S±0.2×176.2W±0.2, h35km, n12, σ0s83/8, mb4.0/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	8.90	322	eP	Pn	19 49 17.8	0.0
	75nm,0.8s						
CTA	Charters Tower	34.94	270	P	P	19 54 00.2	-0.2
	2.6nm,0.4s,mb4.6,baz=141,slow=9.0,SNR=14						
CTAO	Charters Tower	34.94	270	eP	P	19 54 00.3	-0.1
	3.7nm,0.4s,mb4.7						
ASAR	Alice Springs	45.29	261	P	P	19 55 26.8	+0.6
	1.8nm,0.8s,mb4.0,baz=91,slow=7.3,SNR=12						
WRA	Warramunga Arr	45.79	266	P	P	19 55 28.7	-1.5
	0.7nm,0.5s,mb3.9,baz=101,slow=8.3,SNR=9.9						
NVAR	Mina Array Bea	83.11	42	P	P	19 59 33.6	-0.1
	0.2nm,0.4s,mb3.5,baz=210,slow=7.0,SNR=3.8						
PDAR	Pinedale Array	91.04	43	P	P	20 00 11.9	-0.3
	0.5nm,0.9s,mb3.8,baz=259,slow=1.8,SNR=3.7						
CMAR	Chiang Mai Arr	93.11	289	P	P	20 00 23.9	+1.6
	0.9nm,0.8s,mb4.2,baz=137,slow=3.2,SNR=5.6						
ARCES	ARCESS Array B	133.52	350	PKP	PKPdf	20 06 23.7	+0.3
	2.6nm,0.9s,baz=139,slow=2.0,SNR=4.3						
AKASG	Malin Array Be	147.63	329	PKPbc	PKPbc	20 06 50.8	-1.2
	0.7nm,0.4s,baz=40,slow=4.5,SNR=4.5						
BRTR	Keskin Array B	150.92	308	PKPbc	PKPbc	20 07 00.6	-0.1
	0.5nm,0.6s,baz=140,slow=1.0,SNR=3.8						
CLL	Collm	152.69	347	ePKPbc	PKPbc	20 07 04.0	-0.3

*ISCJB **20** 20:17:54.7±0.4, 37.77N±0.03×27.59E±0.04, h8km±8km, Error ellipse: s-maj=5.6km s-min=4.0km az=148.1*
*ISK **20** 20:17:54.4, 37.75N×27.55E, h10km, MD3.1*
*DDA **20** 20:17:55.1, 37.76N×27.61E, h7km±2km, Md2.8*
*CSEM **20** 20:17:55.0±0.1, 37.76N×27.57E, h10km, MD2.8, Error ellipse: s-maj=2.9km s-min=1.9km az=78.0*

ISC 20 20:17:55.3±0.4, 37.77N±0.03×27.59E±0.04, h10km±7km, n33, σ0s48/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AYDN	Tasoluk	0.25	115	*i* P	Pg	20 18 00.6	+0.1
AYDN				*i* S	Sg	20 18 04.1	+0.2
AYDN	Tasoluk	0.25	115	*i* P	Pg	20 18 00.6	+0.2
AYDN				*i* S	Sg	20 18 04.1	+0.2
GCAM	G?zelcaml?	0.29	257	*i* P	Pg	20 18 01.2	+0.1
GCAM				*i* S	Sg	20 18 06.0	+1.0
GCAM	G?zelcaml?	0.29	257	*i* P	Pg	20 18 01.2	+0.1
GCAM				*i* S	Sg	20 18 06.0	+1.0
MLSB	Milas	0.49	162	ePG	Pg	20 18 04.5	-0.4
MLSB				eSG	Sg	20 18 11.7	+0.3
MLSB	Milas	0.49	162	ePg	Pg	20 18 04.5	-0.4
MLSB				eSg	Sg	20 18 11.7	+0.3
IZM	Izmir	0.68	338	ePG	Pg	20 18 08.1	-0.3
IZM	Izmir	0.68	338	ePg	Pg	20 18 08.1	-0.4
BDRM	Kayabasi	0.71	189	*i* P	Pg	20 18 08.4	-0.5
BDRM	Kayabasi	0.71	189	*i* P	Pg	20 18 08.4	-0.6
BODT	Bodrum	0.74	198	ePG	Pg	20 18 08.0	-1.5
BODT				eSG	Sg	20 18 19.3	+0.1
BODT	Bodrum	0.74	198	ePg	Pg	20 18 08.0	-1.5
BODT				eSg	Sg	20 18 19.3	+0.2
BLCB	Balcova	0.75	325	ePG	Pg	20 18 10.0	+0.2
BLCB				eSG	Sg	20 18 19.7	+0.1
BLCB	Balcova	0.75	325	ePg	Pg	20 18 10.0	+0.2
BLCB				eSg	Sg	20 18 19.7	0.0
YER	Yerkesik	0.84	139	ePG	Pg	20 18 11.9	+0.4
YER				eSG	Sg	20 18 22.7	+0.3
YER	Yerkesik	0.84	139	ePg	Pg	20 18 11.9	+0.5
YER				eSg	Sg	20 18 22.7	+0.3
DAT	Datca	1.04	180	ePG	Pg	20 18 14.9	-0.3
DAT	Datca	1.04	180	ePg	Pg	20 18 14.9	-0.3
AKHS	Akhisar	1.12	9	*i* P	Pg	20 18 16.4	-0.5
AKHS				*i* S	Sg	20 18 26.5	-5.0
AKHS	Akhisar	1.12	9	*i* P	Pg	20 18 16.4	-0.5
AKS	Akhisar	1.12	9	ePN	Pg	20 18 16.9	0.0
AKS	Akhisar	1.12	9	ePn	Pg	20 18 16.9	0.0
KULA	Kula-Manisa	1.13	48	ePN	Pg	20 18 17.0	0.0
KULA	Kula-Manisa	1.13	48	ePn	Pg	20 18 17.0	0.0
DENT	Denizli	1.15	90	ePN	Pg	20 18 17.3	0.0
DENT	Denizli	1.15	90	ePn	Pg	20 18 17.3	0.0
DNZL	Cakiroluk	1.16	93	*i* P	Pb	20 18 16.9	-0.5
KHL	Karahalli	1.62	69	ePN	Pn	20 18 24.4	+0.4
KHL	Karahalli	1.62	69	ePn	Pn	20 18 24.4	+0.5
ELL	Elmali	2.11	118	ePN	Pn	20 18 31.0	+0.4
ELL	Elmali	2.11	118	ePn	Pn	20 18 31.0	+0.4
GONE	Gonen-Balikesi	2.28	2	ePN	Pn	20 18 33.1	+0.2
GONE	Gonen-Balikesi	2.28	2	ePn	Pn	20 18 33.1	+0.2

*ISCJB **20** 20:23:20.3±0.6, 37.73N±0.03×37.43E±0.04, h3km±12km, Error ellipse: s-maj=6.2km s-min=4.9km az=36.6*
*DDA **20** 20:23:20.4, 37.69N×37.47E, h7km±2km, Md3.0*
*CSEM **20** 20:23:21.2±0.3, 37.79N×37.37E, h10km, MD2.8, Error ellipse: s-maj=8.6km s-min=4.6km az=139.0*
*ISK **20** 20:23:21.0, 37.73N×37.39E, h13km, MD2.8*

ISC 20 20:23:20.9±0.6, 37.72N±0.03×37.44E±0.04, h7km±10km, n16, σ1s01/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GZT	Gaziantep	0.38	164	*i* P	Pg	20 23 27.0	-1.3
GZT				*i* S	Sg	20 23 32.7	-0.6
KMRS	Kahramanmaras	0.48	243	ePG	Pg	20 23 30.2	0.0
KMRS				eSG	Sg	20 23 37.1	+0.8
KMRS	Kahramanmaras	0.48	243	ePg	Pg	20 23 30.2	0.0
KMRS				eSg	Sg	20 23 37.2	+0.8
AKCD	Akcadag	0.69	34	*i* P	Pg	20 23 33.2	-1.0
AKCD				*i* S	Sg	20 23 44.6	+1.4
AKCD	Akcadag	0.69	34	*i* P	Pg	20 23 33.2	-1.0
AKCD				*i* S	Sg	20 23 44.6	+1.4
ANDN	Andirin	0.88	261	*i* P	Pg	20 23 37.7	-0.1
ANDN				*i* S	Sg	20 23 50.5	+1.3
ANDN	Andirin	0.88	261	*i* P	Pg	20 23 37.7	-0.1
ANDN				*i* S	Sg	20 23 50.5	+1.3
MALT	Malatya	0.98	53	ePG	Pg	20 23 41.0	+1.2
MALT	Malatya	0.98	53	ePg	Pg	20 23 41.0	+1.3
KUZU	Kuzuini	0.99	197	*i* P	Pg	20 23 40.8	+0.8
KUZU	Kuzuini	0.99	197	*i* P	Pg	20 23 40.8	+0.9
SARI	SarD1z-Kayseri	1.12	329	ePG	Pg	20 23 40.5	-1.9
SARI				eSG	Sg	20 23 56.0	-0.9
SARI	SarD1z-Kayseri	1.12	329	ePg	Pg	20 23 40.5	-1.9
SARI				eSg	Sg	20 23 56.0	-0.9
KOZT	Kozan	1.30	260	ePN	Pn	20 23 45.0	-0.6
PTK	Pertek	1.93	52	ePN	Pn	20 23 54.8	+0.6
PTK	Pertek	1.93	52	ePn	Pn	20 23 54.8	+0.6

*NEIC **20** 20:24:50.3, 15.67N×96.91W, h16km, MD3.5(MEX), After MEX.*

MEX 20 20:24:50.3±0.4, 15.67N×96.91W, h16km±6km, MD3.5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.78	83	*i* P	Pb	20 25 02.6	-2.9
HUIG				*i* S	Sg	20 25 12.2	-3.6
HUIG	Huatulco	0.78	83	*i* P	Pb	20 25 02.6	-2.9
HUIG				*i* S	Sg	20 25 12.2	-3.6
PNIG	Pinotepa	1.37	302	*i* P	Pn	20 25 11.4	-3.4
PNIG				*i* S	Sn	20 25 27.1	-5.5
PNIG	Pinotepa	1.37	302	*i* P	Pn	20 25 11.4	-3.4
PNIG				*i* S	Sn	20 25 27.1	-5.5
VHO	Vista Hermosa	1.40	7	*i* P	Pn	20 25 11.8	-3.3
VHO				*i* S	Sn	20 25 28.2	-5.1
VHO	Vista Hermosa	1.40	7	*i* P	Pn	20 25 11.8	-3.3
VHO				*i* S	Sn	20 25 28.2	-5.1
UTMO	Huajuapan	2.31	338	*i* P	Pn	20 25 25.0	-2.6
UTMO				*i* S	Sn	20 25 51.6	-4.2
CAIG	El Cayaco	3.50	293	*i* P	Pn	20 25 41.5	-2.6
CAIG				*i* S	Sn	20 26 17.2	-8.0
CAIG	El Cayaco	3.50	293	*i* P	Pn	20 25 41.5	-2.6
CAIG				*i* S	Sn	20 26 17.2	-8.0
PPM	Popocatepetl	3.75	334	eP	Pn	20 25 44.9	-2.7
PPM				*i* S	Sn	20 26 29.6	-1.8
PPM	Popocatepetl	3.75	334	eP	Pn	20 25 44.9	-2.7
PPM				*i* S	Sn	20 26 29.6	-1.8

*NIED **20** 20:25:00, 44.80N×149.30E, h53km, Mw3.8 Best double couple: M0=6.22000×10^14 NP1:φs=55.00000°, δ=68.00000°, λ=145.00000° NP2:φs=160.00000°, δ=58.00000°, λ=26.00000°.*
*MOS **20** 20:25:19.4±1.8, 44.63N×149.39E, h52km, mb4.1/5, Error ellipse: s-maj=14.2km s-min=12.8km az=151.1*
*ISCJB **20** 20:25:22.9±1.2, 44.72N±0.08×149.1E±0.1, h75km±9km, mb3.7/9, Error ellipse: s-maj=18.4km s-min=8.3km az=39.6*
*JMA **20** 20:25:22.7±0.5, 44.76N×149.28E, h30km, M4.0*
*IDC **20** 20:25:25.0±4.5, 44.94N×149.30E, h70km±45km, mb3.4/7, mb1 3.6/8, mb1mx3.3/23, mbtmp3.4/8, ML2.8/1, Error ellipse: s-maj=81.8km s-min=25.2km az=173.0*

ISC 20 20:25:24.1±1.1, 44.75N±0.08×149.2E±0.1, h68km±9km, n39, σ1s33/49, mb3.7/9, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	1.03	298	⇓*i* PN	Pn	20 25 41.4	-1.5
KUR				eS	Sn	20 25 56.0	-0.8
KUR				pmax	pmax		
	comp=N,320nm,0.5s						
KUR				pmax	pmax		
	comp=E,150nm,0.5s						
KUR				pmax	pmax		
	comp=Z,680nm,0.5s						
KUR				smax			
	comp=N,1μm,0.5s						
KUR				smax			
	comp=E,420nm,0.5s						
KUR				smax			
	comp=N,3μm,1.8s						
KUR				smax			
	comp=E,2μm,1.8s						
YUK	Yuzh-Kuril'sk	2.46	254	ePN	Pn	20 25 58.2	-3.8
NEM2	Nemuro 2	2.82	242	P	Pn	20 26 05.8	-1.0
NEM2				eS	Sn	20 26 37.5	-2.2
JRA	Rausu	3.00	256	P	Pn	20 26 10.9	+1.6
JNK	Nakash	3.39	251	P	Pn	20 26 15.6	+1.0
JNK				eS	Sn	20 26 55.3	+1.6
JAK	Akkeshi	3.67	243	P	Pn	20 26 17.8	-0.6
JAK				eS	Sn	20 26 58.2	-2.1
JTKR	Abashiri--Toko	3.84	260	P	Pn	20 26 23.5	+2.8
JAR	Ashorobuto	4.14	251	P	Pn	20 26 26.5	+1.6
JAR				eS	Sn	20 27 14.2	+2.2
JMP	Maruseppu	4.22	262	P	Pn	20 26 27.9	+2.1
JOB	Onbets	4.27	246	P	Pn	20 26 27.2	+0.7
JOB				eS	Sn	20 27 13.8	-1.2
JCH	Churui	4.71	245	P	Pn	20 26 32.7	+0.1
JCH				eS	Sn	20 27 25.1	-0.8
ASAJ	Asahikawa	4.74	265	P	Pn	20 26 35.8	+2.8
	comp=E,0.3nm,0.3s,baz=118,slow=13,SNR=3.3						
ASAJ				S	Sn	20 27 39.5	+13
	comp=E,0.6nm,0.3s,baz=103,slow=27,SNR=1.7						
YSS	Yuzh-Sakhalins	4.98	298	ePN	Pn	20 26 36.1	-0.1
ERM	Erimo	5.15	240	ePN	Pn	20 26 40.1	+1.4
JNBK	Urakawa-nobuka	5.27	244	P	Pn	20 26 39.7	-0.5
JNBK				eS	Sn	20 27 37.1	-2.4
JNB	Noboribetsu	6.31	252	P	Pn	20 26 55.4	+0.9
JKB	Kayabe	6.58	247	P	Pn	20 26 58.1	0.0
JKB				eS	Sn	20 28 08.7	-2.9
JYM2	Yakumo 2	6.91	251	P	Pn	20 27 03.3	+0.6
JANG	Nango	7.13	235	eS	Sn	20 28 18.4	-6.9
JTH	Tanohata	7.23	231	eS	Sn	20 28 19.6	-8.0
SKR	Severo-Kuril's	7.56	36	ePN	Pn	20 27 08.0	-3.6
MAJO	Matsushiro	11.67	229	ePN	Pn	20 28 03.1	-4.5
ULN	Ulaanbaatar	28.98	291	eP	P	20 31 15.8	-1.2
ILAR	Eielson Array	39.83	37	P	P	20 32 49.1	-1.1
	comp=E,0.4nm,0.5s,mb3.5,baz=262,slow=7.9,SNR=11						
MKAR	Makanchi Array	45.39	297	P	P	20 33 36.0	+0.4
	comp=E,0.3nm,0.6s,mb3.2,baz=68,slow=8.0,SNR=4.9						
MKAR	Makanchi Array	45.39	297	eP	P	20 33 36.3	+0.7
KURK	Kurchatov	46.16	304	eP	P	20 33 41.7	+0.

EFP	**Efpalio**	**1.53**	**70**	*e*PB	**Pb**	**21 07 11.7**	**-0.4**
EFP				*e*SB	**Sb**	**21 07 32.0**	**+0.3**
EFP	**Efpalio**	**1.53**	**70**	*e*Pb	**Pb**	**21 07 11.7**	**-0.4**
EFP				*e*Sb	**Sb**	**21 07 32.0**	**+0.3**
ITM	**Ithomi**	**1.65**	**116**	*e*Pg	**Pb**	**21 07 14.0**	**-0.2**
ITM				*e*Sb	**Sg**	**21 07 37.6**	**+1.1**
ITM	**Ithomi**	**1.65**	**116**	*e*PG	**Pb**	**21 07 14.0**	**-0.2**
ITM				*e*SB	**Sg**	**21 07 37.6**	**+1.1**
ITM	**Ithomi**	**1.65**	**116**	*e*Pg	**Pb**	**21 07 14.0**	**-0.2**
ITM				*e*Sb	**Sg**	**21 07 37.6**	**+1.1**
PYL	**PYLOS**	**1.68**	**127**	*e*PB	**Pb**	**21 07 15.4**	**+0.7**
PYL	**PYLOS**	**1.68**	**127**	*e*Pb	**Pb**	**21 07 15.4**	**+0.7**
EVR	**Evrytania**	**1.69**	**54**	*e*Pb	**Pb**	**21 07 15.3**	**+0.5**
EVR	**Evrytania**	**1.69**	**54**	*e*PB	**Pb**	**21 07 15.3**	**+0.5**
EVR	**Evrytania**	**1.69**	**54**	*e*Pb	**Pb**	**21 07 15.3**	**+0.5**
GUR	**Goura**	**1.80**	**89**	*e*PG	**Pb**	**21 07 16.6**	**-0.1**
GUR	**Goura**	**1.80**	**89**	*e*Pg	**Pb**	**21 07 16.6**	**-0.1**
AGG	**Agios Georgios**	**2.08**	**58**	*e*Pg	**Pb**	**21 07 21.8**	**+0.2**
AGG	**Agios Georgios**	**2.08**	**58**	*e*PG	**Pb**	**21 07 21.8**	**+0.2**
AGG	**Agios Georgios**	**2.08**	**58**	*e*Pg	**Pb**	**21 07 21.8**	**+0.2**
THL	**Klokotos Trika**	**2.23**	**42**	*e*PN	**Pb**	**21 07 23.9**	**-0.2**
LTK	**Loutraki**	**2.29**	**87**	*e*PN	**Pb**	**21 07 25.0**	**-0.1**
DID	**Didima**	**2.54**	**98**	*e*PN	**Pb**	**21 07 28.5**	**-0.9**

*ISCJB **20** 21:11:30.4±0.5, 37.85N±0.02×21.33E±0.03, h10km, Error ellipse: s-maj=3.8km s-min=3.2km az=41.1*
*CSEM **20** 21:11:30.6±0.2, 37.84N×21.35E, h5km, MD3.4, Error ellipse: s-maj=4.0km s-min=3.4km az=42.0*
*ATH **20** 21:11:30.7, 37.87N×21.33E, h14km±2km, MD3.4/15*
*NEIC **20** 21:11:30.7, 37.87N×21.33E, h14km, MD3.4(ATH), After ATH.*
*THE **20** 21:11:31.2, 37.85N×21.35E, h10km±2km, ML2.3/4, Error ellipse: s-maj=2.1km s-min=0.7km az=155.0*

ISC 20 21:11:31.1±0.5, 37.85N±0.03×21.33E±0.03, h7km±7km, n54, σ0.94/85, 3D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.24**	**27**	*i* P	**Pg**	**21 11 35.6**	**-0.2**
RLS				*e*Sg	**Sg**	**21 11 39.4**	**+0.4**
RLS	**Riolos of Patr**	**0.24**	**27**	*i* P	**Pg**	**21 11 35.6**	**-0.2**
RLS				*e*SG	**Sg**	**21 11 39.4**	**+0.4**
RLS	**Riolos of Patr**	**0.24**	**27**	*i* P	**Pg**	**21 11 35.6**	**-0.2**
RLS				*e*Sg	**Sg**	**21 11 39.4**	**+0.4**
KFL	**Anninata**	**0.51**	**302**	P	**Pg**	**21 11 41.4**	**+0.6**
KFL	**Anninata**	**0.51**	**302**	P	**Pg**	**21 11 41.4**	**+0.6**
UPR	**University Cam**	**0.57**	**39**	*e*PB	**Pg**	**21 11 41.5**	**-0.5**
UPR	**University Cam**	**0.57**	**39**	*e*Pb	**Pg**	**21 11 41.5**	**-0.5**
LAKA	**Lakka**	**0.65**	**52**	P	**Pg**	**21 11 42.7**	**-0.8**
LAKA				S	**Sg**	**21 11 52.7**	**+0.8**
LAKA	**Lakka**	**0.65**	**52**	P	**Pg**	**21 11 42.7**	**-0.8**
LAKA				S	**Sg**	**21 11 52.7**	**+0.8**
VLS	**Valsamata**	**0.67**	**300**	*e*Pb	**Pg**	**21 11 44.0**	**0.0**
VLS				*e*Sb	**Sg**	**21 11 52.8**	**0.0**
VLS	**Valsamata**	**0.67**	**300**	*e*PB	**Pg**	**21 11 44.0**	**0.0**
VLS				*e*SB	**Sg**	**21 11 52.8**	**0.0**
VLS	**Valsamata**	**0.67**	**300**	P	**Pg**	**21 11 43.9**	**-0.1**
VLS				S	**Sg**	**21 11 54.5**	**+1.7**
VLS	**Valsamata**	**0.67**	**300**	*e*Pb	**Pg**	**21 11 44.0**	**0.0**
VLS				*e*Sb	**Sg**	**21 11 52.8**	**0.0**
VLS				S	**Sg**	**21 11 54.5**	**+1.7**
EFP	**Efpalio**	**0.74**	**38**	*e*PB	**Pg**	**21 11 44.6**	**-0.6**
EFP				*e*SB	**Sg**	**21 11 55.4**	**+0.6**
EFP	**Efpalio**	**0.74**	**38**	P	**Pg**	**21 11 44.7**	**-0.5**
EFP				S	**Sg**	**21 11 56.3**	**+1.5**
EFP	**Efpalio**	**0.74**	**38**	P	**Pg**	**21 11 44.7**	**-0.5**
EFP				*e*Sb	**Sg**	**21 11 55.4**	**+0.6**
EFP				S	**Sg**	**21 11 56.3**	**+1.5**
TRIZ	**Trizonia**	**0.78**	**48**	P	**Pg**	**21 11 45.4**	**-0.7**
TRIZ				S	**Sg**	**21 11 56.7**	**+0.4**
TRIZ	**Trizonia**	**0.78**	**48**	P	**Pg**	**21 11 45.4**	**-0.7**
TRIZ				S	**Sg**	**21 11 56.7**	**+0.4**
GUR	**Goura**	**0.80**	**83**	*e*PG	**Pg**	**21 11 45.6**	**-0.9**
GUR				*e*SB	**Sg**	**21 11 56.9**	**-0.1**
GUR	**Goura**	**0.80**	**83**	P	**Pg**	**21 11 45.6**	**-0.9**
GUR				S	**Sg**	**21 11 57.8**	**+0.8**
GUR	**Goura**	**0.80**	**83**	P	**Pg**	**21 11 45.6**	**-0.9**
GUR				*e*Sb	**Sg**	**21 11 56.9**	**-0.1**
GUR				S	**Sg**	**21 11 57.8**	**+0.8**
ITM	**Ithomi**	**0.81**	**144**	*e*Pb	**Pg**	**21 11 47.0**	**+0.3**
ITM				*e*Sb	**Sg**	**21 11 58.5**	**+1.2**
ITM	**Ithomi**	**0.81**	**144**	*e*PB	**Pg**	**21 11 47.0**	**+0.3**
ITM				*e*SB	**Sg**	**21 11 58.5**	**+1.2**
ITM	**Ithomi**	**0.81**	**144**	P	**Pg**	**21 11 47.1**	**+0.4**
ITM	**Ithomi**	**0.81**	**144**	*e*Pb	**Pg**	**21 11 47.0**	**+0.3**
ITM				*e*Sb	**Sg**	**21 11 58.5**	**+1.2**
KALE	**Kalithea**	**0.84**	**49**	P	**Pg**	**21 11 46.3**	**-0.9**
KALE				S	**Sg**	**21 11 59.4**	**+1.3**
KALE	**Kalithea**	**0.84**	**49**	P	**Pg**	**21 11 46.3**	**-0.9**
KALE				S	**Sg**	**21 11 59.4**	**+1.3**
VLX	**Vlachokerasia**	**0.96**	**119**	*e*PG	**Pg**	**21 11 48.6**	**-0.8**
VLX				*e*SB	**Sg**	**21 12 02.5**	**+0.7**
VLX	**Vlachokerasia**	**0.96**	**119**	*e*Pg	**Pg**	**21 11 48.6**	**-0.8**
VLX				*e*Sb	**Sg**	**21 12 02.5**	**+0.7**
PYL	**PYLOS**	**1.00**	**161**	*e*PG	**Pg**	**21 11 50.0**	**-0.3**
PYL	**PYLOS**	**1.00**	**161**	P	**Pg**	**21 11 50.0**	**-0.3**
PYL	**PYLOS**	**1.00**	**161**	P	**Pg**	**21 11 50.0**	**-0.3**
LKD2	**Lefkada island**	**1.08**	**331**	P	**Pg**	**21 11 50.9**	**-0.9**
LKD2				S	**Sg**	**21 12 07.4**	**+1.5**
LKD2	**Lefkada island**	**1.08**	**331**	P	**Pg**	**21 11 50.9**	**-0.9**
LKD2				S	**Sg**	**21 12 07.4**	**+1.5**
DSF	**Desfina**	**1.10**	**59**	P	**Pg**	**21 11 51.0**	**-1.1**
DSF				S	**Sg**	**21 12 07.9**	**+1.5**
DSF	**Desfina**	**1.10**	**59**	P	**Pg**	**21 11 51.0**	**-1.1**
DSF				S	**Sg**	**21 12 07.9**	**+1.5**
EVR	**Evrytania**	**1.13**	**19**	*e*Pb	**Pg**	**21 11 52.0**	**-0.8**
EVR	**Evrytania**	**1.13**	**19**	*e*PB	**Pg**	**21 11 52.0**	**-0.8**
EVR	**Evrytania**	**1.13**	**19**	*e*Pb	**Pg**	**21 11 52.0**	**-0.8**
LTK	**Loutraki**	**1.30**	**82**	*e*PN	**Pn**	**21 11 54.6**	**-1.1**
LTK	**Loutraki**	**1.30**	**82**	*e*Pn	**Pn**	**21 11 54.6**	**-1.1**
AGG	**Agios Georgios**	**1.41**	**33**	*e*Pg	**Pg**	**21 11 56.6**	**-1.6**
AGG	**Agios Georgios**	**1.41**	**33**	*e*PG	**Pg**	**21 11 56.6**	**-1.6**
AGG	**Agios Georgios**	**1.41**	**33**	*e*Pg	**Pg**	**21 11 56.6**	**-1.6**
LKR	**Lokris**	**1.54**	**58**	*e*Pg	**Pg**	**21 11 58.7**	**-1.9**
LKR	**Lokris**	**1.54**	**58**	*e*PG	**Pg**	**21 11 58.7**	**-1.9**
LKR	**Lokris**	**1.54**	**58**	*e*Pg	**Pg**	**21 11 58.7**	**-1.9**
DID	**Didima**	**1.55**	**102**	*e*PB	**Pb**	**21 12 00.1**	**+0.1**
DID	**Didima**	**1.55**	**102**	*e*Pb	**Pb**	**21 12 00.1**	**+0.1**
VLI	**Veliai**	**1.70**	**131**	*e*Pn	**Pn**	**21 12 02.6**	**+1.5**
VLI	**Veliai**	**1.70**	**131**	*e*PN	**Pn**	**21 12 02.6**	**+1.5**
VLI	**Veliai**	**1.70**	**131**	*e*Pn	**Pn**	**21 12 02.6**	**+1.5**
THL	**Klokotos Trika**	**1.80**	**17**	*e*PN	**Pn**	**21 12 03.1**	**+0.6**
THL	**Klokotos Trika**	**1.80**	**17**	*e*Pn	**Pn**	**21 12 03.1**	**+0.6**

*ISCJB **20** 21:16:58.1±1.4, 13.02N±0.06×124.53E±0.07, h21km±10km, mb3.6/4, Error ellipse: s-maj=13.2km s-min=7.4km az=147.3*
*MAN **20** 21:16:59, 13.01N×124.26E, h1km, mb4.5, ML3.4, MS3.3*
*IDC **20** 21:17:00.1±1.3, 11.32N×121.12E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/20, mbtmp3.6/4, Error ellipse: s-maj=155.8km s-min=21.0km az=66.0*

ISC 20 21:16:58.1±1.3, 13.00N±0.05×124.49E±0.06, h9km±7km, n14, σ1.926/17, mb3.6/4, 3D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.51**	**160**	*e*P	**Pg**	**21 17 11.0**	**+2.9**
PVCP	**Virac**	**0.68**	**332**	*e*P	**Pg**	**21 17 10.1**	**-1.1**
MMPH	**Masbate**	**1.05**	**233**	*i* P	**Pg**	**21 17 17.4**	**-0.9**
MMPH				*i* S	**Sg**	**21 17 31.6**	**-0.5**
AUQP	**San Andres**	**1.79**	**281**	*e*P	**Pn**	**21 17 28.0**	**-1.2**
PLP	**Palo**	**1.88**	**165**	*e*P	**Pn**	**21 17 31.1**	**+0.7**
PLP				*e*S	**Sn**	**21 17 53.9**	**-0.4**
OCLP	**Ormoc**	**1.94**	**176**	*e*P	**Pn**	**21 17 35.0**	**+3.8**
GQP	**Guinayangan**	**2.18**	**295**	*e*P	**Pn**	**21 17 35.6**	**+1.0**
GQP				*e*S	**Sn**	**21 18 03.4**	**+1.7**
BOAC	**Boac**	**2.61**	**280**	*e*P	**Pn**	**21 17 42.9**	**+2.2**
GUIM	**Jordan**	**3.00**	**218**	*e*P	**Pn**	**21 17 46.4**	**+0.6**
CUYO	**Cuyo Island**	**4.01**	**238**	*e*P	**Pn**	**21 17 58.7**	**-1.0**
WRA	**Warramunga Arr**	**34.14**	**163**	P	**P**	**21 23 42.2**	**-1.3**
	0.5nm,0.8s,mb3.5,baz=328,slow=11,SNR=4.8						
ASAR	**Alice Springs**	**37.58**	**166**	P	**P**	**21 24 11.6**	**-1.5**
	0.5nm,0.4s,mb3.6,baz=338,slow=7.2,SNR=26						
SONM	**Songino Array**	**37.87**	**340**	P	**P**	**21 24 22.2**	**+6.9**
	0.4nm,0.7s,mb3.3,baz=152,slow=9.5,SNR=4.0						
MKAR	**Makanchi Array**	**48.81**	**322**	P	**P**	**21 25 43.3**	**-0.4**
	0.9nm,0.7s,mb3.9,baz=112,slow=8.8,SNR=10						

MAN 20 21:26:09, 5.70N×124.89E, h9km, mb4.6, ML3.5, MS3.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**0.39**	**9**	*i* P	Pg	21 26 20.2	+3.6
GSPH				*i* S	Sg	21 26 27.4	+5.7
KCP	**Kidapawan**	**1.31**	**9**	*e*P	Pn	21 26 33.7	+0.2
KCP				*i* S	Sb	21 26 51.0	+0.1
DMPH	**Davao City--Mi**	**1.50**	**24**	*i* P	Pn	21 26 37.1	+1.0
DMPH				*i* S	Sn	21 26 57.2	+1.4
MATI	**Mati**	**1.84**	**48**	*e*P	Pn	21 26 39.6	-1.1
BUKP	**Musuan**	**2.17**	**4**	*e*P	Pn	21 26 46.3	+1.0
PAGZ	**Pagadian**	**2.61**	**325**	*e*P	Pn	21 26 52.5	+1.2
IPIL	**Ipil**	**3.10**	**312**	*e*P	Pn	21 26 59.1	+1.0

*THE **20** 22:00:42.6, 40.33N×25.23E, h7km±1km, ML2.3/3, Error ellipse: s-maj=1.5km s-min=0.6km az=349.0*
*ISCJB **20** 22:00:42.5±0.5, 40.38N±0.04×25.23E±0.04, h14km±6km, Error ellipse: s-maj=7.5km s-min=4.4km az=20.3*
*ATH **20** 22:00:42.9, 40.39N×25.27E, h55km±5km, MD3.4/4*
*NEIC **20** 22:00:42.9, 40.39N×25.27E, h55km, MD3.4(ATH), After ATH.*
*CSEM **20** 22:00:43.7±0.4, 40.46N×25.12E, h2km, MD3.4, Error ellipse: s-maj=12.6km s-min=6.1km az=1.0*
*DDA **20** 22:00:45.9, 40.46N×25.44E, h7km±2km, Md2.6*

ISC 20 22:00:43.4±0.5, 40.39N±0.04×25.21E±0.04, h18km±5km, n23, σ0.80/46, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAVA	**Kavala**	**0.81**	**319**	P	**Pg**	**22 00 58.9**	**-0.3**
KAVA				S	**Sg**	**22 01 11.1**	**+1.2**
KAVA	**Kavala**	**0.81**	**319**	P	**Pg**	**22 00 58.9**	**-0.3**
KAVA				S	**Sg**	**22 01 11.1**	**+1.2**
ALN	**Alexandroupoli**	**0.81**	**51**	*e*P	**Pg**	**22 00 58.5**	**-0.8**
ALN				*e*S	**Sg**	**22 01 10.0**	**0.0**
ALN	**Alexandroupoli**	**0.81**	**51**	*e*P	**Pg**	**22 00 58.5**	**-0.8**
ALN				*e*S	**Sg**	**22 01 10.0**	**0.0**
ALN	**Alexandroupoli**	**0.81**	**51**	P	**Pg**	**22 00 58.5**	**-0.8**
ALN				S	**Sg**	**22 01 10.1**	**+0.1**
ALN	**Alexandroupoli**	**0.81**	**51**	*e*P	**Pg**	**22 00 58.5**	**-0.8**
ALN				*e*S	**Sg**	**22 01 10.0**	**0.0**
BOZC	**Bozcaada**	**0.84**	**130**	*i* P	**Pg**	**22 01 01.0**	**+1.1**
BOZC				*i* S	**Sg**	**22 01 12.2**	**+1.1**
OUR	**Ouranopolis**	**0.94**	**267**	P	**Pg**	**22 01 00.6**	**-1.1**
OUR				S	**Sg**	**22 01 14.1**	**-0.1**
OUR	**Ouranopolis**	**0.94**	**267**	P	**Pg**	**22 01 00.6**	**-1.1**
OUR				S	**Sg**	**22 01 14.1**	**-0.1**
PLG	**Polygyros**	**1.35**	**270**	*e*P	**Pn**	**22 01 06.8**	**-0.5**
PLG				*e*S	**Sn**	**22 01 23.9**	**-0.9**
PLG	**Polygyros**	**1.35**	**270**	*e*P	**Pn**	**22 01 06.8**	**-0.5**
PLG				*e*S	**Sn**	**22 01 23.9**	**-0.9**
PLG	**Polygyros**	**1.35**	**270**	P	**Pn**	**22 01 06.8**	**-0.5**
PLG				S	**Sn**	**22 01 26.6**	**+1.8**
PLG	**Polygyros**	**1.35**	**270**	*e*P	**Pn**	**22 01 06.8**	**-0.5**
PLG				*e*S	**Sn**	**22 01 23.9**	**-0.9**
NVR	**Nevrokopi**	**1.41**	**314**	*e*P	**Pn**	**22 01 08.1**	**0.0**
NVR				*e*S	**Sn**	**22 01 25.8**	**-0.3**
NVR	**Nevrokopi**	**1.41**	**314**	*e*P	**Pn**	**22 01 08.1**	**0.0**
NVR				*e*S	**Sn**	**22 01 25.8**	**-0.3**
NVR	**Nevrokopi**	**1.41**	**314**	*e*P	**Pn**	**22 01 08.1**	**0.0**
NVR				*e*S	**Sn**	**22 01 25.8**	**-0.3**
SRS	**Serrai**	**1.43**	**301**	P	**Pn**	**22 01 08.1**	**-0.3**
SRS				S	**Sn**	**22 01 28.6**	**+1.8**
SRS	**Serrai**	**1.43**	**301**	P	**Pn**	**22 01 08.1**	**-0.3**
SRS				S	**Sn**	**22 01 28.6**	**+1.8**
SOH	**Sokhos**	**1.48**	**288**	*e*P	**Pn**	**22 01 08.7**	**-0.4**
SOH				*e*S	**Sn**	**22 01 28.0**	**0.0**
SOH	**Sokhos**	**1.48**	**288**	*e*P	**Pn**	**22 01 08.7**	**-0.4**
SOH				*e*S	**Sn**	**22 01 28.0**	**0.0**
SOH	**Sokhos**	**1.48**	**288**	*e*P	**Pn**	**22 01 08.7**	**-0.4**
SOH				*e*S	**Sn**	**22 01 28.0**	**0.0**
BALY	**Balya**	**1.96**	**109**	*i* P	**Pg**	**22 01 20.6**	**-0.4**
BALY				*i* S	**Sg**	**22 01 45.8**	**-0.6**
BALY	**Balya**	**1.96**	**109**	*i* P	**Pg**	**22 01 20.6**	**-0.4**
BALY				*i* S	**Sg**	**22 01 45.8**	**-0.6**

*ISCJB **20** 22:14:42.0±1.3, 1.82N±0.09×124.4E±0.1, h251km±13km, mb3.8/18, Error ellipse: s-maj=21.2km s-min=10.4km az=143.2*
*NEIC **20** 22:14:42.8±0.9, 1.82N×124.42E, h244km±8km, mb3.8/10, Error ellipse: s-maj=12.4km s-min=6.2km az=53.0*
*IDC **20** 22:14:42.7±5.0, 1.79N×124.39E, h240km±49km, mb3.6/7, mb1 3.7/7, mb1mx3.4/20, mbtmp3.6/7, Error ellipse: s-maj=63.1km s-min=13.2km az=62.0*

ISC 20 22:14:42.7±1.4, 1.81N±0.09×124.4E±0.1, h241km±13km, n28, σ0.78/26, mb3.8/18, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**5.36**	**12**	Pn	**Pn**	**22 16 02.5**	**-0.1**
KKM	**Kota Kinabalu**	**9.21**	**297**	*e*Pn	**Pn**	**22 16 51.5**	**+0.1**
QIZ	**Qiongzhong**	**22.30**	**321**	P	**P**	**22 19 19.3**	**-0.9**
WRA	**Warramunga Arr**	**23.70**	**156**	P	**P**	**22 19 32.8**	**-0.2**
	3.5nm,0.4s,mb4.3,baz=331,slow=11,SNR=52						
PMG	**Port Moresby**	**25.24**	**117**	P	**P**	**22 19 47.6**	**+0.6**
ASAR	**Alice Springs**	**26.95**	**161**	P	**P**	**22 20 02.4**	**+0.2**
	0.9nm,0.5s,mb3.6,baz=340,slow=7.4,SNR=14						
ASAR				PcP	PcP	22 23 18.4	+0.8
	0.3nm,0.4s,baz=351,slow=1.8,SNR=5.9						
CMAR	**Chiang Mai Arr**	**29.97**	**305**	P	**P**	**22 20 29.1**	**0.0**
	0.3nm,0.3s,mb3.4,baz=148,slow=7.0,SNR=3.6						
CHTO	**Chiang Mai**	**30.15**	**306**	*e*P	**P**	**22 20 30.1**	**-0.5**
	1.1nm,0.6s,mb3.7						
ENH	**Enshi**	**31.66**	**335**	*e*P	**P**	**22 20 43.3**	**-0.4**
	4.3nm,0.7s,mb4.1						
HNR	**Honiara**	**37.10**	**108**	*e*P	**P**	**22 21 29.8**	**-0.7**
	159nm,0.8s						
BJT	**Baijiatuau**	**38.77**	**350**	*e*P	**P**	**22 21 44.2**	**+0.1**
	3.3nm,0.4s,mb4.2						
GTA	**Gaotai**	**43.63**	**332**	*e*P	**P**	**22 22 26.0**	**+2.4**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.8						
ULN	**Ulaanbaatar**	**48.28**	**344**	*e*P	**P**	**22 23 00.5**	**+0.9**
	comp=Z,1.5nm,0.8s,mb3.4						
SONM	**Songino Array**	**48.44**	**344**	P	**P**	**22 23 01.7**	**+0.9**
	comp=Z,0.7nm,0.6s,mb3.2,baz=150,slow=7.8,SNR=4.8						
MK31	**Makanchi Array**	**57.86**	**327**	*e*P	**P**	**22 24 09.7**	**+0.3**
MKAR	**Makanchi Array**	**57.86**	**327**	P	**P**	**22 24 09.6**	**+0.3**
	comp=Z,2.8nm,0.4s,mb4.3,baz=123,slow=7.9,SNR=80						
MKAR				PcP	PcP	22 24 58.9	-0.1
	comp=Z,0.8nm,0.6s,baz=130,slow=3.2,SNR=7.1						
TKM2	**Tokmak 2**	**59.70**	**320**	*e*P	**P**	**22 24 21.7**	**-0.4**
	comp=Z,1.3nm,0.6s,mb3.7						
UCH	**Uchtor**	**60.07**	**319**	*e*P	**P**	**22 24 25.8**	**+1.2**
	comp=Z,1.5nm,0.7s,mb3.7						
EKS2	**Erkin-Say**	**60.75**	**319**	*e*P	**P**	**22 24 29.7**	**+0.5**
	comp=Z,1.5nm,0.8s,mb3.7						
KBL	**Kabul**	**60.90**	**309**	*e*P	**P**	**22 24 30.3**	**-0.1**
	comp=Z,2.5nm,0.8s,mb3.9						
ZALV	**Zalesovo Beam**	**61.29**	**335**	P	**P**	**22 24 31.9**	**-0.7**
	comp=Z,0.3nm,0.4s,mb3.3,baz=113,slow=5.5,SNR=4.0						
KURK	**Kurchatov**	**62.16**	**329**	*e*P	**P**	**22 24 36.6**	**-1.8**
	comp=Z,2.3nm,0.4s,mb4.2						
BRVK	**Borovoye**	**67.77**	**328**	P	**P**	**22 25 13.7**	**-0.8**
MAW	**Mawson**	**81.17**	**200**	*e*P	**P**	**22 26 31.8**	**+0.7**
	comp=Z,0.5nm,0.7s,mb3.2						
SBA	**Scott Base**	**82.76**	**172**	*e*P	**P**	**22 26 38.9**	**-0.3**
ARCES	**ARCESS Array B**	**91.45**	**340**	P	**P**	**22 27 20.3**	**-0.9**
	comp=Z,3.5nm,1.1s,mb4.2,baz=70,slow=7.1,SNR=5.3						
TORD	**Torodi Ar. Bea**	**121.29**	**286**	PKP	PKPdf	22 33 07.9	-0.2
	comp=Z,0.3nm,0.7s,baz=82,slow=1.9,SNR=3.1						
DBIC	**Dimbokro**	**128.68**	**280**	PKP	PKPdf	22 33 21.6	-0.7
	comp=Z,15nm,1.3s,baz=132,slow=4.4,SNR=3.4						

*NEIC **20** 22:23:30.5, 16.64N×99.39W, h12km, MD3.8(MEX), After MEX.*

MEX 20 22:23:30.5±1.0, 16.64N×99.39W, h12km±9km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.51**	**296**	*i* P	Pg	22 23 39.3	-1.1
ACX				*i* S	Sg	22 23 48.1	+0.9
ACX	**Acapulco**	**0.51**	**296**	*i* P	Pg	22 23 39.3	-1.1
ACX				*i* S	Sg	22 23 48.1	+0.9
CAIG	**El Cayaco**	**0.94**	**296**	*i* P	Pg	22 23 45.6	-2.9
CAIG				*i* S	Sg	22 23 57.9	-2.9
CAIG	**El Cayaco**	**0.94**	**296**	*i* P	Pg	22 23 45.6	-2.9
CAIG				*i* S	Sg	22 23 57.9	-2.9
PNIG	**Pinotepa**	**1.23**	**102**	*i* P	Pn	22 23 50.0	-3.5
PNIG				*i* S	Sb	22 24 05.0	-4.6
PNIG	**Pinotepa**	**1.23**	**102**	*i* P	Pn	22 23 50.0	-3.5
PNIG				*i* S	Sb	22 24 05.0	-4.6
UTMO	**Huajuapan**	**1.92**	**52**	*e*P	Pn	22 23 59.6	-3.4
UTMO				*i* S	Sn	22 24 22.0	-5.0
ZIIG	**Zihuatanejo**	**2.21**	**296**	*i* P	Pn	22 24 03.5	-3.4
ZIIG				*i* S	Sn	22 24 29.4	-4.8
ZIIG	**Zihuatanejo**	**2.21**	**296**	*i* P	Pn	22 24 03.5	-3.4
ZIIG				*i* S	Sn	22 24 29.4	-4.8
PPM	**Popocatepetl**	**2.52**	**17**	*i* P	Pn	22 24 09.8	-1.4
PPM				*i* S	Sn	22 24 36.2	-5.6
PPM	**Popocatepetl**	**2.52**	**17**	*i* P	Pn	22 24 09.8	-1.4
PPM				*i* S	Sn	22 24 36.2	-5.6
MZVM		**2.54**	**3**	*i* P	Pn	22 24 09.9	-1.6
MZVM				*i* S	Sn	22 24 37.8	-4.5
VHO	**Vista Hermosa**	**2.58**	**80**	*e*P	Pn	22 24 09.6	-2.4
VHO				*i* S	Sn	22 24 39.8	-3.4
VHO	**Vista Hermosa**	**2.58**	**80**	*e*P	Pn	22 24 09.6	-2.4
VHO				*i* S	Sn	22 24 39.8	-3.4
SZVM	**Salazar**	**2.66**	**0**	*e*P	Pn	22 24 10.9	-2.4
SZVM				*i* S	Sn	22 24 43.0	-2.5
SZVM	**Salazar**	**2.66**	**0**	*e*P	Pn	22 24 10.9	-2.4
SZVM				*i* S	Sn	22 24 43.0	-2.5
PBVM	**Pinon**	**2.80**	**6**	*e*P	Pn	22 24 12.7	-2.4
PBVM				*i* S	Sn	22 24 44.4	-4.4
PBVM	**Pinon**	**2.80**	**6**	*e*P	Pn	22 24 12.7	-2.4
PBVM				*i* S	Sn	22 24 44.4	-4.4
PTVM	**Pico Tres Padr**	**2.94**	**5**	*e*P	Pn	22 24 15.7	-1.4
PTVM				*i* S	Sn	22 24 50.0	-2.4
PTVM	**Pico Tres Padr**	**2.94**	**5**	*e*P	Pn	22 24 15.7	-1.4
PTVM				*i* S	Sn	22 24 50.0	-2.4
IIO	**Organos**	**3.00**	**12**	*i* P	Pn	22 24 15.7	-2.2
IIO				*i* S	Sn	22 24 51.4	-2.3
IIO	**Organos**	**3.00**	**12**	*i* P	Pn	22 24 15.7	-2.2
IIO				*i* S	Sn	22 24 51.4	-2.3
HUIG	**Huatulco**	**3.27**	**105**	*e*P	Pn	22 24 19.1	-2.4
HUIG				*i* S	Sn	22 24 57.3	-3.1
HUIG	**Huatulco**	**3.27**	**105**	*e*P	Pn	22 24 19.1	-2.4
HUIG				*i* S	Sn	22 24 57.3	-3.1

IDC 20 22:25:50.8±10.0, 10.53N×91.21E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/22, mbtmp3.3/3, Error ellipse: s-maj=547.3km s-min=32.8km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**36.93**	**350**	P	P	22 33 01.3	-0.1
	0.2nm,0.5s,baz=150,slow=6.7,SNR=2.8						
WRA	**Warramunga Arr**	**52.14**	**125**	P	P	22 35 03.2	-0.2
	0.1nm,0.3s,baz=304,slow=9.3,SNR=3.0						
ASAR	**Alice Springs**	**53.82**	**130**	P	P	22 35 15.9	+0.2
	0.3nm,0.7s,baz=300,slow=6.8,SNR=3.3						

**IDC 20 22:29:52.9±3.7, 19.41N×121.94E, h0km, mb3.4/

*DDA **20** 23:45:14.9, 36.96N×29.15E, h6km±3km, Md3.1*
*ISCJB **20** 23:45:16.8±0.6, 37.01N±0.03×29.18E±0.05, h10km, Error ellipse: s-maj=5.8km s-min=4.5km az=143.1*
*CSEM **20** 23:45:16.3±0.2, 36.95N×29.22E, h8km, MD2.8, Error ellipse: s-maj=4.6km s-min=4.2km az=24.0*
*ISK **20** 23:45:16.6, 37.01N×29.20E, h11km, MD2.8*

ISC 20 23:45:16.6±0.8, 36°98N±0.04×29°17E±0.06, h5km±9km, n18, σ0°88/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**57**	*e*PG	**Pg**	**23 45 22.1**	**-0.7**
GLHS				*e*SG	**Sg**	**23 45 27.1**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.32**	**57**	*e*Pg	**Pg**	**23 45 22.1**	**-0.6**
GLHS				*e*Sg	**Sg**	**23 45 27.1**	**+0.2**
ELL	**Elmali**	**0.64**	**111**	*e*PG	**Pg**	**23 45 28.5**	**-0.4**
ELL				*e*SG	**Sg**	**23 45 38.8**	**+1.6**
ELL	**Elmali**	**0.64**	**111**	*e*Pg	**Pg**	**23 45 28.5**	**-0.4**
DNZL	**Cakiroluk**	**0.71**	**352**	*i* P	**Pg**	**23 45 29.1**	**-1.1**
DNZL				*i* S	**Sg**	**23 45 39.8**	**+0.2**
DNZL	**Cakiroluk**	**0.71**	**352**	*i* P	**Pg**	**23 45 29.1**	**-1.2**
DNZL				*i* S	**Sg**	**23 45 39.8**	**+0.2**
YER	**Yerkesik**	**0.72**	**283**	*e*PG	**Pg**	**23 45 31.8**	**+1.4**
YER	**Yerkesik**	**0.72**	**283**	*e*Pg	**Pg**	**23 45 31.8**	**+1.4**
AKAS	**Kas**	**0.83**	**154**	*i* P	**Pg**	**23 45 31.0**	**-1.4**
AKAS				*i* S	**Sg**	**23 45 47.4**	**+4.2**
AKAS	**Kas**	**0.83**	**154**	*i* P	**Pg**	**23 45 31.0**	**-1.4**
MLSB	**Milas**	**1.15**	**286**	*e*PN	**Pn**	**23 45 39.9**	**+0.6**
MLSB	**Milas**	**1.15**	**286**	*e*Pn	**Pn**	**23 45 39.9**	**+0.5**
DAT	**Datca**	**1.30**	**259**	*e*PN	**Pn**	**23 45 41.1**	**-0.2**
DAT	**Datca**	**1.30**	**259**	*e*Pn	**Pn**	**23 45 41.1**	**-0.3**
KHAL	**Karahalli**	**1.41**	**10**	*i* P	**Pn**	**23 45 42.2**	**-0.8**
KHAL				*i* S	**Sb**	**23 46 02.3**	**+0.6**
KHAL	**Karahalli**	**1.41**	**10**	*i* P	**Pn**	**23 45 42.2**	**-0.7**
KHAL				*i* S	**Sb**	**23 46 02.3**	**+0.6**
KULA	**Kula-Manisa**	**1.58**	**346**	*e*PN	**Pn**	**23 45 45.2**	**-0.1**
KULA	**Kula-Manisa**	**1.58**	**346**	*e*Pn	**Pn**	**23 45 45.2**	**-0.1**

IDC 20 23:45:30.0±10.0, 15°37S×172°95W, h0km, mb4.2/2, mb1 4.4/2, mb1mx3.8/19, mbtmp4.2/2, MS3.6/3, Ms1 3.6/3, ms1mx3.1/27, Error ellipse: s-maj=504.2km s-min=25.5km az=141.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.84**	**38**	Pn	Pn	23 46 01.3	-1.5
	70nm,0.3s,baz=209,slow=19,SNR=46						
AFI				Sn	Sn	23 46 19.0	-7.8
	288nm,0.3s,baz=8.4,slow=23,SNR=26						
DZM	**Mont Dzumac**	**20.61**	**248**	*e*LR	LR	23 55 24.3	
	238nm,25.6s						
PPT	**Papeete**	**22.52**	**99**	*e*LR	LR	23 55 55.5	
	180nm,25.2s						
HNR	**Honiara**	**27.10**	**279**	LR	LR	00 00 15.0	
	comp=Z,39nm,21.7s,baz=125,slow=33						
TAOE	**Nuku Hiva Isla**	**32.69**	**82**	*e*LR	LR	00 00 37.6	
	140nm,26.5s						
WRA	**Warramunga Arr**	**50.27**	**257**	P	P	23 54 27.1	-1.4
	1.2nm,0.8s,baz=90,slow=6.8,SNR=6.4						
ASAR	**Alice Springs**	**50.53**	**252**	P	P	23 54 30.2	-0.2
	5.4nm,0.8s,baz=86,slow=8.5,SNR=47						
TXAR	**Lajitas Array**	**80.23**	**56**	LR	LR	00 25 21.4	
	comp=Z,40nm,19.7s,baz=5.0,slow=30						
MAW	**Mawson**	**87.96**	**198**	LR	LR	00 35 14.7	
	comp=Z,120nm,20.7s,baz=229,slow=34						
BRTR	**Keskin Array B**	**146.40**	**321**	PKPbc	PKPbc	00 05 15.0	+1.8
	1.9nm,0.8s,baz=61,slow=1.9,SNR=9.6						

*NEIC **20** 23:53:45.3±0.6, 21.14N×120.18E, h10km, mb4.3/2, Error ellipse: s-maj=14.0km s-min=8.1km az=109.0*
*IDC **20** 23:53:45.1±1.7, 21.38N×121.53E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/22, mbtmp3.5/6, MS3.5/1, Ms1 3.5/1, ms1mx2.4/26, Error ellipse: s-maj=160.6km s-min=20.4km az=65.0*
*ISCJB **20** 23:53:47.0±0.8, 21.13N±0.07×120.23E±0.1, h33km, mb3.6/8, Error ellipse: s-maj=18.1km s-min=8.1km az=22.6*

ISC 20 23:53:46.6±3.2, 21°14N±0.09×120°2E±0.1, h18km±19km, n17, σ0°60/19, mb3.6/8, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.85**	**25**	*e*Pn	**Pn**	**23 54 18.1**	**+0.7**
TPUB	**Ta-pu**	**2.18**	**10**	*e*Pn	**Pn**	**23 54 22.4**	**+0.4**
TPUB				*e*Sn	**Sg**	**23 54 57.0**	**+0.1**
YULB	**Yu-li**	**2.45**	**24**	*e*Pn	**Pn**	**23 54 25.3**	**-0.4**
YULB				*e*Sn	**Sb**	**23 55 00.2**	**+0.1**
SSLB	**Suanglung**	**2.72**	**14**	*e*Pn	**Pn**	**23 54 29.3**	**-0.2**
NACB	**Ninganchiao**	**3.27**	**22**	*e*Pn	**Pn**	**23 54 36.0**	**-1.0**
YHNB	**Yeheng**	**3.67**	**16**	*e*Pn	**Pn**	**23 54 42.6**	**+0.1**
SONM	**Songino Array**	**28.88**	**341**	P	**P**	**23 59 48.2**	**+4.0**
	0.8nm,0.8s,mb3.5,baz=126,slow=7.3,SNR=4.5						
SONM				LR	LR	00 13 15.4	
	comp=Z,81nm,18.3s,baz=26,slow=40						
MKAR	**Makanchi Array**	**39.37**	**319**	P	**P**	**00 01 26.3**	**+6.2**
	0.2nm,0.4s,mb3.2,baz=116,slow=13,SNR=2.7						
ZALV	**Zalesovo Beam**	**42.36**	**329**	P	**P**	**00 01 44.2**	**+4.6**
ZALV	**Zalesovo Beam**	**42.36**	**329**	P	**P**	**00 01 44.2**	**+4.6**
	0.8nm,0.6s,mb3.5,baz=120,slow=8.8,SNR=4.9						
WRA	**Warramunga Arr**	**43.10**	**160**	P	**P**	**00 01 45.1**	**-0.8**
	1.3nm,0.9s,mb3.6,baz=346,slow=8.9,SNR=4.0						
AAK	**Ala-Archa**	**43.72**	**310**	*e*P	**P**	**00 01 51.2**	**+0.4**
	1.7nm,0.4s,mb4.1						
KURK	**Kurchatov**	**43.91**	**322**	P	**P**	**00 01 57.3**	**+5.2**
	0.4nm,0.7s,mb3.2,baz=119,slow=7.3,SNR=4.1						
AML	**Almayashu**	**44.17**	**309**	P	**P**	**00 01 54.2**	**-0.2**
ASAR	**Alice Springs**	**46.48**	**163**	P	**P**	**00 02 13.9**	**+1.1**
	0.2nm,0.4s,mb3.4,baz=358,slow=8.5,SNR=4.3						
KBL	**Kabul**	**46.74**	**298**	P	**P**	**00 02 14.6**	**-0.3**
	1.2nm,0.4s,mb4.2						
KIV	**Kislovodsk**	**66.83**	**310**	P	**P**	**00 04 37.1**	**-0.3**

*NIED **20** 23:56:00, 37.80N×141.80E, h41km, Mw3.7 Best double couple: M0 3.84000×10^14 NP1:φ=20.00000°, δ=70.00000°, λ=81.00000°. NP2:φ=224.00000°, δ=22.00000°, λ=112.00000°.*
*IDC **20** 23:56:37.4±1.9, 37.86N×142.24E, h0km, mb3.9/6, mb1 3.9/8, mb1mx3.6/26, mbtmp3.9/8, ML3.5/2, Error ellipse: s-maj=42.7km s-min=22.7km az=79.0*
*ISCJB **20** 23:56:43.4±0.9, 37.74N±0.03×141.88E±0.09, h52km±6km, mb3.9/14, Error ellipse: s-maj=11.5km s-min=5.5km az=9.7*
*JMA **20** 23:56:44.2±0.1, 37.76N×141.83E, h40km±2km, MS3.7*
JMA Felt I J1.
*NEIC **20** 23:56:44.8±4.0, 37.78N×141.93E, h50km±28km, mb4.1/9, Error ellipse: s-maj=43.0km s-min=8.8km az=64.0*
NEIC Recorded [1 JMA] in Fukushima.

ISC 20 23:56:44.5±0.9, 37°76N±0.03×141°87E±0.09, h42km±7km, n36, σ0°73/47, mb3.9/14, 1C-10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.81**	**330**	∥P	**Pn**	**23 56 58.9**	**-0.5**
JIO				*e*S	**Sn**	**23 57 09.0**	**-1.2**
JMM	**Marumori**	**0.86**	**278**	∥P	**Pn**	**23 56 59.6**	**-0.4**
JMM				S	**Sn**	**23 57 10.5**	**-0.9**
JFK	**Kawauchi**	**0.88**	**244**	∥P	**Pn**	**23 56 59.8**	**-0.5**
JFK				S	**Sn**	**23 57 10.9**	**-1.0**
ONAJ	**Iwakimizuishiy**	**1.07**	**233**	∥P	**Pn**	**23 57 02.5**	**-0.5**
ONAJ				S	**Sn**	**23 57 15.4**	**-1.3**
JOU	**Okura**	**1.13**	**303**	∥P	**Pn**	**23 57 03.8**	**+0.1**
JOU				*e*S	**Sn**	**23 57 18.0**	**0.0**
JFT	**Otama**	**1.24**	**259**	∥P	**Pn**	**23 57 05.8**	**+0.6**
JFT				*e*S	**Sn**	**23 57 21.1**	**+0.4**
JMK	**Ichinoseki**	**1.30**	**337**	∥P	**Pn**	**23 57 06.1**	**0.0**
JMK				*e*S	**Sn**	**23 57 22.0**	**-0.2**
JYS	**Shirataka**	**1.50**	**289**	∥P	**Pn**	**23 57 09.3**	**+0.5**
JYK	**Kaneyama**	**1.66**	**315**	∥P	**Pn**	**23 57 11.3**	**+0.3**
JFY	**Yanaizu**	**1.75**	**259**	∥P	**Pn**	**23 57 13.0**	**+0.7**
JOM	**Ohasama**	**1.77**	**345**	∥P	**Pn**	**23 57 12.8**	**+0.2**
JYA	**Atsumi**	**1.89**	**297**	P	**Pn**	**23 57 14.6**	**+0.4**
MJAR	**Matsushiro Arr**	**3.16**	**249**	Pn	**Pn**	**23 57 33.5**	**+1.8**
	3.1nm,0.3s,baz=50,slow=12,SNR=6.6						
MJAR				Sn	**Sn**	**23 58 13.4**	**+5.2**
	3.0nm,0.3s,baz=88,slow=6.7,SNR=4.2						
MAJO	**Matsushiro**	**3.16**	**249**	*e*Pn	**Pn**	**23 57 33.6**	**+1.9**
MAJO				Sn	**Sn**	**23 58 08.2**	**0.0**
MAT	**Matsushiro**	**3.16**	**249**	P	**Pn**	**23 57 34.1**	**+2.4**
MAT				*e*S	**Sn**	**23 58 12.4**	**+4.2**
JHJ	**Hachijo jima 2**	**4.93**	**201**	Pn	**Pn**	**23 57 56.0**	**+0.1**
	7.8nm,0.3s,baz=90,slow=20,SNR=2.1						
JHJ				Sn	**Sn**	**23 58 51.1**	**-0.6**
	20nm,0.3s,baz=67,slow=20,SNR=4.2						
INCN	**Inchon**	**12.09**	**273**	Pn	**Pn**	**23 59 33.4**	**-0.6**
GUMO	**Guam**	**24.22**	**173**	P	**P**	**00 01 56.5**	**-0.7**
ULN	**Ulaanbaatar**	**27.25**	**303**	*e*P	**P**	**00 02 24.8**	**+0.2**
	2.1nm,1.2s,mb3.5						
SONM	**Songino Array**	**27.69**	**303**	P	**P**	**00 02 28.9**	**+0.5**
	1.5nm,0.9s,mb3.6,baz=104,slow=9.4,SNR=7.6						
ZALV	**Zalesovo Beam**	**41.70**	**312**	P	**P**	**00 04 28.8**	**0.0**
	1.5nm,0.6s,mb3.8,baz=93,slow=6.1,SNR=6.3						
LSA	**Lhasa**	**42.51**	**275**	*e*P	**P**	**00 04 35.6**	**-0.2**
	1.9nm,0.4s,mb4.2						
MKAR	**Makanchi Array**	**44.04**	**302**	P	**P**	**00 04 47.9**	**0.0**
MKAR	**Makanchi Array**	**44.04**	**302**	P	**P**	**00 04 47.9**	**0.0**
	0.3nm,0.3s,mb3.5,baz=90,slow=9.7,SNR=4.0						
KURK	**Kurchatov**	**45.77**	**308**	*e*P	**P**	**00 05 01.5**	**-0.1**
	1.8nm,0.6s,mb4.2						
KURK	**Kurchatov**	**45.77**	**308**	P	**P**	**00 05 02.2**	**+0.6**
	1.9nm,0.6s,mb4.2,baz=82,slow=8.0,SNR=13						
TKM2	**Tokmak 2**	**49.61**	**298**	*e*P	**P**	**00 05 31.4**	**-0.1**
BVAR	**Borovoye Array**	**50.35**	**312**	P	**P**	**00 05 37.4**	**+0.4**
	0.4nm,0.5s,mb3.7,baz=56,slow=7.8,SNR=4.5						
BRVK	**Borovoye**	**50.41**	**312**	*e*P	**P**	**00 05 36.2**	**-1.2**
	1.6nm,0.9s,mb4.0						
AAK	**Ala-Archa**	**50.47**	**298**	*e*P	**P**	**00 05 38.0**	**+0.1**
	1.8nm,0.5s,mb4.4						
EKS2	**Erkin-Say**	**50.96**	**298**	*e*P	**P**	**00 05 42.2**	**+0.6**
	0.6nm,0.6s,mb3.7						
AML	**Almayashu**	**51.19**	**298**	*e*P	**P**	**00 05 43.8**	**+0.4**
	1.2nm,0.6s,mb4.0						
ARU	**Arti**	**56.06**	**318**	*e*P	**P**	**00 06 18.6**	**-0.2**
	1.8nm,0.5s,mb4.4						
ABKAR	**Akbulak array**	**57.75**	**310**	*e*P	**P**	**00 06 30.1**	**-0.8**
	0.6nm,0.6s,mb3.8						
WB2	**Warramunga Arr**	**57.82**	**188**	*e*P	**P**	**00 06 31.6**	**-0.1**
WRA	**Warramunga Arr**	**57.83**	**188**	P	**P**	**00 06 31.5**	**-0.2**
	0.4nm,0.4s,mb3.8,baz=6.0,slow=7.3,SNR=3.1						

IDC 21 00:15:06.2±1.8, 3°67S×151°04E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.7/16, mbtmp3.9/4, MS3.4/6, Ms1 3.4/6, ms1mx3.1/20, Error ellipse: s-maj=112.6km s-min=24.6km az=127.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**10.54**	**123**	LR	LR	00 21 12.9	
	comp=Z,170nm,20.6s,baz=323,slow=35						
CTA	**Charters Tower**	**16.98**	**196**	LR	LR	00 24 31.1	
	comp=Z,101nm,21.9s,baz=228,slow=33						
GUMO	**Guam**	**18.21**	**340**	LR	LR	00 24 55.2	
	comp=Z,38nm,21.1s,baz=232,slow=32						
WRA	**Warramunga Arr**	**22.96**	**224**	P	P	00 20 11.7	-0.7
	1.4nm,0.9s,baz=46,slow=9.8,SNR=6.3						
ASAR	**Alice Springs**	**25.87**	**218**	P	P	00 20 39.4	-0.5
	1.4nm,0.8s,baz=50,slow=9.3,SNR=9.2						
DAV	**Davao City (W)**	**27.56**	**293**	LR	LR	00 29 59.8	
	comp=Z,345nm,20.7s,baz=100,slow=32						
FITZ	**Fitzroy Crossi**	**28.71**	**238**	P	P	00 21 06.4	+0.9
	1.8nm,0.8s,baz=37,slow=10,SNR=2.2						
STKA	**Stephens Creek**	**29.43**	**197**	LR	LR	00 32 24.9	
	comp=Z,79nm,19.9s,baz=27,slow=35						
MKAR	**Makanchi Array**	**78.33**	**319**	LR	LR	01 00 04.1	
	comp=Z,35nm,18.8s,baz=347,slow=34						
ILAR	**Eison Array**	**81.78**	**22**	P	P	00 27 26.4	-0.3
	1.1nm,0.7s,baz=244,slow=5.9,SNR=11						
TORD	**Torodi Ar. Bea**	**148.29**	**289**	PKPbc	PKPbc	00 34 55.8	+0.3
	0.8nm,0.8s,baz=82,slow=4.3,SNR=4.8						

*IDC **21** 00:25:00.0±0.7, 1.22N×128.01E, h0km, mb4.3/13, mb1 4.4/14, mb1mx4.3/21, mbtmp4.3/14, ML4.1/1, MS3.5/8, Ms1 3.5/8, ms1mx3.1/25, Error ellipse: s-maj=38.8km s-min=13.6km az=78.0*
*ISCJB **21** 00:25:02.7±1.5, 1.16N±0.03×128.11E±0.05, h33km±11km, mb4.5/34, MS3.5/8, Error ellipse: s-maj=8.0km s-min=5.6km az=167.7*
*NEIC **21** 00:25:04.8±0.3, 1.22N×128.05E, h35km, mb4.4/12, Error ellipse: s-maj=9.6km s-min=5.4km az=65.0*
*BJI **21** 00:25:05.2, 1.58N×128.25E, h19km, mB5.0/8, mb4.7/15, Ms4.8/1, Ms7 4.5/1*
*DJA **21** 00:25:06, 0.82N×127.85E, h2km, MLv4.6/8*

ISC 21 00:25:03.1±1.5, 1°16N±0.03×128°15E±0.05, h22km±11km, n71, σ1°15/71, mb4.5/34, MS3.5/8, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.87**	**243**	P	**Pb**	**00 25 15.0**	**-4.6**
TNTI				S	**Sb**	**00 25 24.3**	**-6.5**
SGSI	**Sangihe**	**3.62**	**314**	P	**Pb**	**00 26 07.3**	**+0.8**
KMSI	**Cibinong**	**4.21**	**262**	P	**Pn**	**00 26 05.1**	**-0.9**
KMSI				S	**Sn**	**00 26 54.6**	**+0.1**
NLAI	**Namlea**	**4.50**	**193**	P	**Pn**	**00 26 10.5**	**+0.5**
NLAI				S	**Sn**	**00 27 01.6**	**-0.1**
MSAI	**Masohi**	**4.55**	**170**	P	**Pn**	**00 26 14.0**	**+3.3**
MSAI				S	**Sn**	**00 27 07.4**	**+4.4**
LUWI	**Luwuk**	**5.80**	**248**	P	**Pn**	**00 26 29.5**	**+1.5**
	0.6nm1μm110nm,1.2s						
MRSI	**Marisa**	**6.24**	**264**	P	**Pn**	**00 26 35.5**	**+1.5**
	0.2nm1μm57nm,0.7s						
DAV	**Davao City (W)**	**6.40**	**337**	Pn	**Pn**	**00 26 33.6**	**-2.6**
DAV				S	Sb	00 28 16.2	+6.1
KDI	**Kendari**	**7.51**	**227**	P	**Pn**	**00 26 50.5**	**-0.9**
	0.3nm971nm90nm,0.7s						
BAKI	**Biak**	**8.30**	**106**	P	**Pn**	**00 27 09.9**	**+7.6**
	2μm139nm,1.0s						
TTSI	**Tana Toraja**	**9.31**	**243**	P	**Pn**	**00 27 14.2**	**-2.0**
	1μm95nm,0.8s						
SPSI	**Sidrap Palu**	**9.80**	**239**	P	**Pn**	**00 27 22.8**	**-0.1**
	2μm114nm,0.6s						
KKM	**Kota Kinabalu**	**12.85**	**292**	*e*Pn	**Pn**	**00 28 02.7**	**-2.0**
KAKA	**Kakadu**	**14.43**	**163**	*e*Pn	**Pn**	**00 28 24.1**	**-2.1**
	39nm,0.6s						
KAKA				*e*Sn	**Sn**	**00 31 03.6**	**-2.1**
KAKA	**Kakadu**	**14.43**	**163**	P	**Pn**	**00 28 24.7**	**-1.5**
	339nm43nm,0.9s						
KNA	**Kununurra**	**16.82**	**178**	P	**Pn**	**00 28 57.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**19.30**	**187**	P	**Pn**	**00 29 27.0**	**-0.9**
	0.5nm,0.3s,baz=29,slow=11,SNR=8.3						
GUMO	**Guam**	**20.65**	**53**	*e*Pn	**P**	**00 29 41.7**	**+0.2**
GUMO	**Guam**	**20.65**	**53**	LR	LR	00 36 14.4	
	comp=Z,79nm,18.3s,MS3.1,baz=248,slow=32						
PMG	**Port Moresby**	**21.65**	**119**	*e*P	**P**	**00 29 53.7**	**+1.3**
WRA	**Warramunga Arr**	**21.84**	**164**	P	**P**	**00 29 55.4**	**+1.1**
	15nm,0.7s,mb4.5,baz=344,slow=11,SNR=48						
MBWA	**Marble Bar**	**23.66**	**200**	*e*P	**P**	**00 30 13.1**	**-0.3**
YHNB	**Yeheng**	**24.27**	**345**	P	**P**	**00 30 18.0**	**-0.8**
ASAR	**Alice Springs**	**25.31**	**168**	P	**P**	**00 30 29.4**	**+1.1**
	4.5nm,0.7s,mb4.1,baz=359,slow=16,SNR=43						
CBIJ	**Chichi jima**	**29.09**	**26**	LR	LR	00 42 05.8	
	comp=Z,67nm,18.5s,MS3.3,baz=159,slow=35						
HNR	**Honiara**	**33.38**	**109**	P	**P**	**00 31 40.6**	**+0.3**
CHTO	**Chiang Mai**	**33.58**	**303**	P	**P**	**00 31 40.9**	**-1.0**
STKA	**Stephens Creek**	**35.25**	**160**	*e*P	**P**	**00 31 56.9**	**+0.7**
STKA				LR	LR	00 45 56.2	
STKA	**Stephens Creek**	**35.25**	**160**	P	**P**	**00 31 57.8**	**+1.5**
	8.5nm,0.9s,mb4.7,baz=326,slow=10,SNR=8.8						
STKA				LR	LR	00 45 56.3	
	comp=Z,107nm,20.4s,MS3.6,baz=267,slow=36						
KSRS	**Korea Array**	**36.11**	**360**	P	**P**	**00 32 04.5**	**+0.9**
	2.1nm,0.5s,mb4.4,baz=176,slow=9.6,SNR=5.9						
KSRS				LR	LR	00 47 44.9	
	comp=Z,32nm,18.1s,MS3.1,baz=336,slow=38						
MAJO	**Matsushiro**	**36.41**	**14**	*e*P	**P**	**00 32 05.5**	**-0.7**
	7.4nm,0.6s,mb4.8						
MJAR	**Matsushiro Arr**	**36.41**	**14**	P	**P**	**00 32 04.2**	**-2.0**
	4.7nm,0.7s,mb4.5,baz=187,slow=9.3,SNR=8.4						
XAN	**Xi'an**	**37.33**	**333**	P	**P**	**00 32 14.8**	**+0.8**
XAN				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.1						
BJT	**Baijiatuan**	**40.18**	**346**	*e*P	**P**	**00 32 37.8**	**0.0**
	comp=Z,16nm,0.8s,mb4.8						
LZH	**Lanzhou**	**41.42**	**330**	*e*P	**P**	**00 32 51.0**	**+2.9**
LZH				pmax	pmax		
	comp=Z,23nm,1.0s,mb4.8						
LZH				pmax	pmax		
	comp=Z,85nm,4.3s						
LSA	**Lhasa**	**45.19**	**312**	*e*P	**P**	**00 33 18.8**	**0.0**
	comp=Z,7.9nm,1.2s,mb4.4						
GTA	**Gaotai**	**46.01**	**329**	*e*P	**P**	**00 33 26.3**	**+1.3**
GTA				pP	pP	00 33 32.3	+0.5
GTA				sP	sP	00 33 35.5	+1.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
ODAN	**Odare**	**46.72**	**307**	*e*P	**P**	**00 33 32.9**	**+2.1**
	comp=Z,12nm,0.7s,mb4.9						
YSS	**Yuzh-Sakhalins**	**47.35**	**14**	P	**P**	**00 33 34.1**	**-1.3**
RAMN	**Ramite**	**47.39**	**306**	*e*P	**P**	**00 33 38.5**	**+2.4**
	comp=Z,15nm,0.7s,mb5.0						
JIRN	**Jiri**	**48.02**	**307**	*e*P	**P**	**00 33 42.7**	**+1.7**
	comp=Z,10nm,0.4s,mb5.2						
GUN	**Gumba**	**48.38**	**307**	*e*P	**P**	**00 33 45.2**	**+1.5**
	comp=Z,25nm,0.6s,mb5.4						
ULN	**Ulaanbaatar**	**49.98**	**342**	*e*P	**P**	**00 33 54.2**	**-1.4**
	comp=Z,5.4nm,0.9s,mb4.6						
ULN				PcP	PcP	00 35 16.1	+0.6
KOLN	**Koldanda**	**50.15**	**306**	*e*P	**P**	**00 33 58.8**	**+1.5**
	comp=Z,26nm,0.7s,mb5.3						
SONM	**Songino Array**	**50.16**	**341**	P	**P**	**00 33 57.7**	**+0.7**
	comp=Z,1.2nm,0.5s,mb4.2,baz=159,slow=8.8,SNR=8.0						
SONM				LR	LR	00 55 23.3	
	comp=Z,46nm,19.0s,MS3.5,baz=288,slow=36						
DANN	**Dangsing**	**50.26**	**307**	*e*P	**P**	**00 33 59.1**	**+1.0**
	comp=Z,28nm,0.6s,mb5.5						
PETK	**Petropavlovsk-**	**57.28**	**21**	P	**P**	**00 34 50.2**	**+1.1**
	comp=Z,1.2nm,0.5s,mb4.2,baz=205,slow=0.5,SNR=4.7						
MK31	**Makanchi Array**	**60.46**	**325**	*e*P	**P**	**00 35 10.9**	**-0.4**
MKAR	**Makanchi Array**	**60.46**	**325**	P	**P**	**00 35 11.6**	**+0.3**
	comp=Z,1.6nm,0.3s,mb4.5,baz=112,slow=7.8,SNR=45						
TKM2	**Tokmak 2**	**62.59**	**319**	*e*P	**P**	**00 35 25.7**	**0.0**
	comp=Z,1.2nm,0.5s,mb4.3						
UCH	**Uchtor**	**63.01**	**318**	*e*P	**P**	**00 35 29.7**	**+1.1**
	comp=Z,2.3nm,0.8s,mb4.4						
AAK	**Ala-Archa**	**63.20**	**318**	*e*P	**P**	**00 35 29.4**	**-0.4**
ZAA0	**Zalesovo Array**	**63.50**	**333**	*e*P	**P**	**00 35 30.6**	**-1.0**
ZALV	**Zalesovo Beam**	**63.50**	**333**	P	**P**	**00 35 30.6**	**-0.9**
	comp=Z,0.5nm,0.3s,mb4.0,baz=110,slow=6.5,SNR=8.0						
ZALV				LR	LR	01 03 35.7	
	comp=Z,30nm,18.9s,MS3.5,baz=76,slow=36						
AML	**Almayashu**	**63.52**	**317**	*e*P	**P**	**00 35 31.8**	**-0.1**
	comp=Z,2.7nm,0.8s,mb4.3						
AML				*e*PcP	PcP	00 36 08.6	+0.1
EKS2	**Erkin-Say**	**63.69**	**318**	*e*P	**P**	**00 35 32.5**	**-0.6**
	comp=Z,2.2nm,0.7s,mb4.3						
KBL	**Kabul**	**64.20**	**308**	*e*P	**P**	**00 35 36.4**	**-0.1**
KURK	**Kurchatov**	**64.65**	**328**	*e*P	**P**	**00 35 38.3**	**-0.9**
KURK	**Kurchatov**	**64.65**	**328**	P	**P**	**00 35 38.9**	**-0.3**
	comp=Z,5.3nm,0.7s,mb4.7,baz=124,slow=6.2,SNR=4.7						
BVAR	**Borovoye Array**	**70.23**	**327**	P	**P**	**00 36 14.0**	**-0.4**
	comp=Z,2.6nm,0.7s,mb4.2,baz=126,slow=7.3,SNR=4.2						
BRVK	**Borovoye**	**70.30**	**327**	*e*P	**P**	**00 36 14.6**	**-0.3**
	comp=Z,6.6nm,1.1s,mb4.5						
ABKAR	**Akbulak array**	**75.02**	**321**	*e*P	**P**	**00 36 41.2**	**-1.8**
	comp=Z,1.2nm,0.6s,mb4.0						
ARU	**Arti**	**77.85**	**328**	*e*P	**P**	**00 36 57.3**	**-1.6**
	comp=Z,4.8nm,1.0s,mb4.4						
SBA	**Scott Base**	**81.62**	**172**	*e*P	**P**	**00 37 19.1**	**+0.1**
PPT	**Papeete**	**82.99**	**108**	LR	LR	01 08 54.1	
	comp=Z,90nm,18.5s,MS4.2,baz=36,slow=32						
PPLA	**Purkeypile**	**84.26**	**27**	*e*P	**P**	**00 37 33.1**	**+0.2**
	comp=Z,1.1nm,0.5s,mb4.2						
PMR	**Palmer**	**85.51**	**28**	*e*P	**P**	**00 37 38.7**	**-0.6**
ILAR	**Eielson Array**	**86.80**	**25**	P	**P**	**00 37 46.3**	**+0.8**
	comp=Z,0.3nm,0.5s,mb3.8,baz=247,slow=5.6,SNR=4.3						
ARCES	**ARCESS Array B**	**93.33**	**340**	P	**P**	**00 38 15.0**	**-1.1**
	comp=Z,2.6nm,1.0s,mb4.6,baz=89,slow=6.2,SNR=4.5						
FINES	**FINESS Array B**	**94.75**	**332**

ARG				*e*Sn	Sn	00 45 11.2 +2.3
APE	**Apeiranthos**	**1.38**	**298**	*e*Pn	Pn	00 45 06.6 +2.8
APE				*e*Sn	Sn	00 45 23.5 +2.5
APE	**Apeiranthos**	**1.38**	**298**	*e*PN	Pn	00 45 06.6 +2.8
APE				*e*SN	Sn	00 45 23.5 +2.5
APE	**Apeiranthos**	**1.38**	**298**	*e*Pn	Pn	00 45 06.6 +2.8
APE				*e*Sn	Sn	00 45 23.5 +2.5
ZKR	**Zakros**	**1.47**	**208**	*e*Pn	Pn	00 45 07.7 +2.7
ZKR				*e*Sn	Sn	00 45 26.2 +3.1
ZKR	**Zakros**	**1.47**	**208**	*e*PN	Pn	00 45 07.7 +2.7
ZKR				*e*SN	Sn	00 45 26.2 +3.1
ZKR	**Zakros**	**1.47**	**208**	*e*Pn	Pn	00 45 07.7 +2.7
ZKR				*e*Sn	Sn	00 45 26.2 +3.1
NPS	**Neapolis**	**1.64**	**226**	*e*Pb	Pb	00 45 09.3 -1.3
NPS				*e*Sn	Sn	00 45 29.7 +2.3
NPS	**Neapolis**	**1.64**	**226**	*e*PB	Pb	00 45 09.3 -1.3
NPS				*e*SN	Sn	00 45 29.7 +2.3
NPS	**Neapolis**	**1.64**	**226**	*e*Pb	Pb	00 45 09.3 -1.3
NPS				*e*Sn	Sn	00 45 29.7 +2.3
LAST	**Lasithi**	**1.79**	**226**	*e*Pb	Pb	00 45 12.1 -1.0
LAST	**Lasithi**	**1.79**	**226**	*e*PB	Pb	00 45 12.1 -1.0
LAST	**Lasithi**	**1.79**	**226**	*e*Pb	Pb	00 45 12.1 -1.0
KARN	**Karanos**	**2.74**	**249**	*e*PN	Pn	00 45 25.4 +2.9
KARN	**Karanos**	**2.74**	**249**	*e*Pn	Pn	00 45 25.4 +2.9
VLI	**Veliai**	**3.32**	**276**	*e*Pn	Pn	00 45 33.2 +2.6
VLI	**Veliai**	**3.32**	**276**	*e*PN	Pn	00 45 33.2 +2.6
VLI	**Veliai**	**3.32**	**276**	*e*Pn	Pn	00 45 33.2 +2.6

SKO ***21*** *00:45:30.8, 40°.51N×25°.36E, h0km*
SOF ***21*** *00:45:31.8, 40°.42N×25°.11E, h2km, MD2.7*
THE ***21*** *00:45:32.1, 40°.31N×25°.21E, h6km±1km, ML2.5/4, Error ellipse: s-maj=1.3km s-min=0.6km az=344.0*
ISCJB ***21*** *00:45:32.8±0.5, 40°.40N±0°.04×25°.19E±0°.03, h10km, Error ellipse: s-maj=5.6km s-min=3.2km az=12.1*
CSEM ***21*** *00:45:32.9±0.4, 40°.45N×25°.15E, h2km, ML2.5/4, Error ellipse: s-maj=10.4km s-min=5.8km az=171.0*
DDA ***21*** *00:45:34.7, 40°.48N×25°.51E, h9km±6km, Md2.7*

ISC 21 00:45:33.1±0.6, 40°.41N±0°.04×25°.16E±0°.03, h3km±5km, n32, σ1ᵗ21/51, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAVA	**Kavala**	**0.77**	**320**	P	**Pg**	**00 45 48.1**	**+0.2**
KAVA				S	**Sg**	**00 46 00.9**	**+3.1**
KAVA	**Kavala**	**0.77**	**320**	P	**Pg**	**00 45 48.1**	**+0.2**
ALN	**Alexandroupoli**	**0.83**	**54**	P	**Pg**	**00 45 48.2**	**-0.9**
ALN				S	**Sg**	**00 46 01.0**	**+1.1**
ALN	**Alexandroupoli**	**0.83**	**54**	P	**Pg**	**00 45 48.2**	**-0.9**
ALN				S	**Sg**	**00 46 01.0**	**+1.1**
BOZC	**Bozcaada**	**0.89**	**129**	*i* P	**Pg**	**00 45 49.9**	**-0.2**
BOZC				*i* S	**Sg**	**00 46 01.8**	**+0.2**
OUR	**Ouranopolis**	**0.90**	**266**	P	**Pg**	**00 45 50.0**	**-0.4**
OUR				S	**Sg**	**00 46 03.8**	**+1.7**
OUR	**Ouranopolis**	**0.90**	**266**	P	**Pg**	**00 45 50.0**	**-0.4**
OUR				S	**Sg**	**00 46 03.8**	**+1.7**
KDZ	**Kurdzhali**	**1.26**	**9**	*i* Pg	**Pg**	**00 45 55.7**	**-1.5**
KDZ	**Kurdzhali**	**1.26**	**9**	*i* Pg	**Pg**	**00 45 55.7**	**-1.5**
PLG	**Polygyros**	**1.31**	**269**	P	**Pg**	**00 45 56.4**	**-1.8**
PLG				S	**Sg**	**00 46 15.5**	**+0.3**
PLG	**Polygyros**	**1.31**	**269**	P	**Pg**	**00 45 56.4**	**-1.8**
PLG				S	**Sg**	**00 46 15.5**	**+0.3**
RZN	**Rozhen**	**1.32**	**345**	*i* Pg	**Pg**	**00 45 57.7**	**-0.8**
RZN	**Rozhen**	**1.32**	**345**	*i* Pg	**Pg**	**00 45 57.7**	**-0.8**
SRS	**Serrai**	**1.39**	**301**	P	**Pn**	**00 45 57.7**	**-1.7**
SRS				S	**Sg**	**00 46 18.9**	**+1.2**
SRS	**Serrai**	**1.39**	**301**	P	**Pn**	**00 45 57.7**	**-1.7**
SOH	**Sokhos**	**1.44**	**287**	P	**Pn**	**00 45 58.5**	**-1.6**
SOH				S	**Sg**	**00 46 19.6**	**+0.3**
SOH	**Sokhos**	**1.44**	**287**	P	**Pn**	**00 45 58.5**	**-1.6**
SOH				S	**Sg**	**00 46 19.6**	**+0.3**
MMB	**Musomiste**	**1.60**	**318**	P	**Pn**	**00 46 01.3**	**-1.1**
MMB	**Musomiste**	**1.60**	**318**	P	**Pn**	**00 46 01.3**	**-1.1**
DIM	**Dimitrovgrad**	**1.67**	**10**	P	**Pn**	**00 46 04.3**	**+1.1**
PLD	**Plovdiv**	**1.73**	**349**	P	**Pn**	**00 46 02.0**	**-2.1**
PLD				S	**Sn**	**00 46 30.8**	**+4.1**
PLD	**Plovdiv**	**1.73**	**349**	P	**Pn**	**00 46 02.0**	**-2.1**
KNT	**Kendrikon**	**1.88**	**294**	P	**Pn**	**00 46 05.1**	**-1.0**
KNT				S	**Sn**	**00 46 30.9**	**+0.6**
KNT	**Kendrikon**	**1.88**	**294**	P	**Pn**	**00 46 05.1**	**-1.0**
KNT				S	**Sn**	**00 46 30.9**	**+0.6**
BALY	**Balya**	**2.00**	**109**	*i* P	**Pn**	**00 46 08.4**	**+0.6**
BALY				*i* S	**Sn**	**00 46 35.4**	**+2.0**
BALY	**Balya**	**2.00**	**109**	*i* P	**Pn**	**00 46 08.4**	**+0.6**
BALY				*i* S	**Sn**	**00 46 35.4**	**+2.1**
VAY	**Valandovo**	**2.17**	**296**	*e*Pn	**Pn**	**00 46 10.6**	**+0.5**
VAY				*e*Sg	**Sg**	**00 46 43.5**	**+0.8**
VTS	**Vitosha**	**2.63**	**327**	*e*P	**Pn**	**00 46 18.2**	**+1.7**
VTS	**Vitosha**	**2.63**	**327**	*e*P	**Pn**	**00 46 18.2**	**+1.7**
DURS	**Dursunbey**	**2.67**	**106**	*i* P	**Pn**	**00 46 22.2**	**+5.2**
DURS				*i* S	**Sn**	**00 46 54.3**	**+4.5**
DURS	**Dursunbey**	**2.67**	**106**	*i* P	**Pn**	**00 46 22.2**	**+5.2**
DURS				*i* S	**Sn**	**00 46 54.3**	**+4.5**
KRUS	**Krusevo**	**3.12**	**289**	*e*Pn	**Pn**	**00 46 22.1**	**-1.0**

NEIC ***21*** *00:45:54.1, 17°.04N×95°.35W, h121km, MD3.8(MEX), After MEX.*

MEX 21 00:45:54.1±1.0, 17°.04N×95°.35W, h121km±9km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.45**	**83**	*i* P	Pn	00 46 11.0	-0.8
CMIG				*i* S	Sn	00 46 23.1	-2.1
CMIG	**Matias Romero**	**0.45**	**83**	*i* P	Pn	00 46 11.0	-0.8
CMIG				*i* S	Sn	00 46 23.1	-2.1
OXX	**Oaxaca**	**1.32**	**272**	*e*P	Pn	00 46 18.6	-0.9
OXX				*i* S	Sn	00 46 35.9	-2.9
OXX	**Oaxaca**	**1.32**	**272**	*e*P	Pn	00 46 18.6	-0.9
OXX				*i* S	Sn	00 46 35.9	-2.9
VHO	**Vista Hermosa**	**1.33**	**272**	*i* P	Pn	00 46 19.6	0.0
VHO				*i* S	Sn	00 46 37.5	-1.5
VHO	**Vista Hermosa**	**1.33**	**272**	*i* P	Pn	00 46 19.6	0.0
VHO				*i* S	Sn	00 46 37.5	-1.5
HUIG	**Huatulco**	**1.46**	**210**	*i* P	Pn	00 46 19.6	-1.5
HUIG				*i* S	Sn	00 46 40.3	-1.4
HUIG	**Huatulco**	**1.46**	**210**	*i* P	Pn	00 46 19.6	-1.5
HUIG				*i* S	Sn	00 46 40.3	-1.4
TGIG		**2.15**	**97**	*i* P	Pn	00 46 28.0	-1.4
TGIG				*i* S	Sn	00 46 53.3	-3.2
TPIG	**Tehuac#an**	**2.36**	**306**	*e*P	Pn	00 46 30.9	-1.2
TPIG				*i* S	Sn	00 46 59.1	-2.3
PCIG		**2.43**	**123**	*i* P	Pn	00 46 32.6	-0.5
PCIG				*i* S	Sn	00 47 01.2	-1.8
UTMO	**Huajuapan**	**2.47**	**289**	*i* P	Pn	00 46 33.0	-0.6
UTMO				*i* S	Sn	00 47 01.9	-2.0
PNIG	**Pinotepa**	**2.74**	**257**	*i* P	Pn	00 46 35.0	-2.1
PNIG				*i* S	Sn	00 47 04.8	-5.3
PNIG	**Pinotepa**	**2.74**	**257**	*i* P	Pn	00 46 35.0	-2.1
PNIG				*i* S	Sn	00 47 04.8	-5.3
PPM	**Popocatepetl**	**3.72**	**303**	*i* P	Pn	00 46 49.5	-0.4
PPM				*i* S	Sn	00 47 29.4	-3.7
PPM	**Popocatepetl**	**3.72**	**303**	*i* P	Pn	00 46 49.5	-0.4
PPM				*i* S	Sn	00 47 29.4	-3.7
MEIG	**Mezcala**	**4.17**	**283**	*e*P	Pn	00 46 55.2	-0.8
MEIG				*i* S	Sn	00 47 41.6	-2.4

ISCJB ***21*** *00:53:54.6±0.7, 13°.51N±0°.05×91°.12W±0°.03, h33km, Error ellipse: s-maj=8.2km s-min=3.1km az=22.4*
CASC ***21*** *00:53:56.9±1.6, 13°.67N×90°.98W, h30km±6km, MD3.7, ML3.7*
MEX ***21*** *00:53:57.6±0.3, 13°.35N×91°.42W, h14km±59km, MD4.2*

ISC 21 00:53:56.0±0.7, 13°.56N±0°.05×91°.09W±0°.03, h35km, n24, σ0ˢ87/40, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.87**	**45**	*e*P	**Pn**	**00 54 11.2**	**-0.6**
FUG	**Fuego 3**	**0.92**	**15**	*e*P	**Pn**	**00 54 12.2**	**-0.3**
JAT	**Jato**	**0.93**	**325**	*e*P	**Pn**	**00 54 13.6**	**+1.0**
PCG	**Pacaya**	**0.96**	**29**	*e*P	**Pn**	**00 54 12.7**	**-0.3**
FG6		**1.02**	**11**	*e*P	**Pn**	**00 54 13.7**	**-0.1**
FG6				*e*S	**Sn**	**00 54 25.8**	**-1.1**
TP2	**Tecpan 2**	**1.22**	**3**	*e*P	**Pn**	**00 54 17.0**	**+0.3**
TP2				*e*S	**Sn**	**00 54 32.8**	**+0.9**
NBG	**Las Nubes**	**1.25**	**35**	*e*P	**Pn**	**00 54 17.5**	**+0.4**
NBG				*e*S	**Sn**	**00 54 33.0**	**+0.3**
RBDL	**Robledal**	**1.47**	**68**	*e*P	**Pn**	**00 54 19.6**	**-0.4**
RBDL				*e*S	**Sn**	**00 54 36.0**	**-2.1**
SNJE	**San Jose**	**1.48**	**78**	*e*P	**Pn**	**00 54 19.1**	**-1.0**
SNJE				*e*S	**Sn**	**00 54 38.4**	**+0.2**
THIG		**1.76**	**320**	*i* P	**Pn**	**00 54 24.1**	**+0.1**
THIG				*i* S	**Sn**	**00 54 45.0**	**-0.3**
BOQS	**Boqueron**	**1.77**	**84**	*e*P	**Pn**	**00 54 24.3**	**+0.2**
BOQS				*e*S	**Sn**	**00 54 45.6**	**+0.2**
SNET	**Serv Nac Est T**	**1.81**	**86**	*e*P	**Pn**	**00 54 23.8**	**-0.9**
SNET				*e*S	**Sn**	**00 54 45.8**	**-0.7**
SNET				AML	AML	00 54 48.9	
	comp=Z,949nm,0.2s						
MTO2	**Montecristo 2**	**1.88**	**63**	*e*P	**Pn**	**00 54 24.7**	**-0.9**
LFRS	**El Faro**	**1.97**	**88**	*e*P	**Pn**	**00 54 27.4**	**+0.4**
LFRS				*e*S	**Sn**	**00 54 50.3**	**-0.1**
MRL	**Marmol**	**2.02**	**42**	*e*P	**Pn**	**00 54 28.3**	**+0.7**
SNVI	**San Vicente**	**2.19**	**88**	*e*P	**Pn**	**00 54 30.5**	**+0.5**
SNVI				*e*S	**Sn**	**00 54 56.9**	**+1.0**
BLLM	**Bellamira**	**2.78**	**92**	*e*P	**Pn**	**00 54 38.6**	**+0.6**
CAHU	**Cacacuatique**	**2.81**	**85**	*e*P	**Pn**	**00 54 38.7**	**+0.3**
PCIG		**2.97**	**316**	*i* P	**Pn**	**00 54 41.0**	**+0.4**
PCIG				*i* S	**Sn**	**00 55 14.8**	**-0.2**
CNCH	**Conchagua**	**3.18**	**95**	*e*P	**Pn**	**00 54 44.5**	**+0.9**
CNCH				*e*S	**Sn**	**00 55 20.2**	**-0.1**
TGIG		**3.76**	**329**	*i* P	**Pn**	**00 54 53.5**	**+2.0**
TGIG				*i* S	**Sn**	**00 55 36.5**	**+1.9**
CMIG	**Matias Romero**	**5.08**	**314**	*i* P	**Pn**	**00 55 10.0**	**+0.4**
CMIG				*i* S	**Sn**	**00 56 06.6**	**-0.5**
PNIG	**Pinotepa**	**7.36**	**293**	*e*P	**Pn**	**00 55 41.1**	**0.0**
PNIG				*i* S	**Sn**	**00 57 00.5**	**-3.0**
UTMO	**Huajuapan**	**7.74**	**304**	*e*P	**Pn**	**00 55 45.5**	**-0.6**
UTMO				*i* S	**Sn**	**00 57 09.4**	**-3.2**

IDC 21 00:56:16.4±8.3, 11°.35N×92°.37E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.3/22, mbtmp3.6/3, Error ellipse: s-maj=435.0km s-min=28.9km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.35**	**348**	P	P	01 03 22.1	0.0
	0.4nm,0.5s,baz=163,slow=8.9,SNR=5.1						
WRA	**Warramunga Arr**	**51.70**	**127**	P	P	01 05 25.6	-0.1
	0.4nm,0.3s,baz=307,slow=8.2,SNR=14						
ASAR	**Alice Springs**	**53.48**	**131**	P	P	01 05 39.0	+0.1
	0.3nm,0.4s,baz=308,slow=7.1,SNR=4.6						

NEIC ***21*** *01:03:36.2, 37°.09S×176°.99E, h204km, MG4.6(WEL), After WEL.*

WEL 21 01:03:36.6±0.2, 37°.08S×176°.97E, h199km±1km, ML4.6/22, 1C-1D, Error ellipse: s-maj=2.1km s-min=1.6km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.83**	**203**	*e*PN	Pn	01 04 05.4	+0.3
OPRZ				*e*SN	Sn	01 04 27.3	-0.1
MXZ	**Matakaoa Point**	**1.17**	**115**	PN	Pn	01 04 07.4	-0.1
MXZ				SN	Sn	01 04 31.6	+0.1
MXZ	**Matakaoa Point**	**1.17**	**115**	P	Pn	01 04 07.4	-0.1
MXZ				S	Sn	01 04 31.6	+0.2
URZ	**Urewera**	**1.18**	**174**	PN	Pn	01 04 07.4	-0.1
URZ				SN	Sn	01 04 31.5	-0.2
URZ	**Urewera**	**1.18**	**174**	*e*Pn	Pn	01 04 07.0	-0.5
URZ				*e*S	Sn	01 04 32.5	+0.8
MWZ	**Matawai**	**1.33**	**161**	PN	Pn	01 04 08.7	0.0
MWZ				SN	Sn	01 04 33.5	-0.3
MWZ	**Matawai**	**1.33**	**161**	P	Pn	01 04 08.7	0.0
MWZ				S	Sn	01 04 33.5	-0.3
PUZ	**Puketiti**	**1.43**	**134**	PN	Pn	01 04 09.6	+0.1
PUZ	**Puketiti**	**1.43**	**134**	P	Pn	01 04 09.6	+0.1
MKAZ	**Moumakai**	**1.44**	**268**	⇓PN	Pn	01 04 09.7	0.0
PRRZ	**Plateau Road**	**1.49**	**198**	PN	Pn	01 04 10.5	+0.5
PRRZ				SN	Sn	01 04 36.1	-0.1
CNGZ	**Carnagh Statio**	**1.71**	**145**	PN	Pn	01 04 12.8	+0.7
RAHZ	**Arahi**	**1.84**	**177**	PN	Pn	01 04 13.6	+0.2
PRGZ	**Paritu Road**	**1.98**	**159**	PN	Pn	01 04 15.2	+0.4
KNZ	**Kokohu**	**2.02**	**164**	PN	Pn	01 04 15.0	-0.2
KNZ	**Kokohu**	**2.02**	**164**	P	Pn	01 04 15.0	-0.1
NMHZ	**Naumai**	**2.02**	**184**	PN	Pn	01 04 15.6	+0.4
BKZ	**Black Stump Fm**	**2.12**	**190**	PN	Pn	01 04 15.4	-0.8
BKZ				SN	Sn	01 04 45.5	-1.7
BKZ	**Black Stump Fm**	**2.12**	**190**	P	Pn	01 04 15.4	-0.8
MHGZ	**Mahia Peninsul**	**2.20**	**161**	PN	Pn	01 04 17.3	+0.2
KRVZ	**Karewarewa**	**2.27**	**207**	PN	Pn	01 04 18.0	+0.2
OTVZ	**Oturere**	**2.32**	**206**	PN	Pn	01 04 18.5	+0.2
TWVZ	**Taurewa**	**2.33**	**211**	PN	Pn	01 04 18.5	0.0
TWVZ	**Taurewa**	**2.33**	**211**	P	Pn	01 04 18.5	+0.1
NGZ	**Ngauruhoe**	**2.35**	**207**	PN	Pn	01 04 18.9	+0.1
NGZ	**Ngauruhoe**	**2.35**	**207**	P	Pn	01 04 18.9	+0.2
MCHZ	**McNeill Hill**	**2.37**	**185**	PN	Pn	01 04 18.8	-0.1
TUVZ	**Tukino**	**2.42**	**205**	PN	Pn	01 04 19.2	-0.2
TUVZ	**Tukino**	**2.42**	**205**	P	Pn	01 04 19.2	-0.2
FWVZ	**Far West T-bar**	**2.44**	**207**	PN	Pn	01 04 19.4	-0.3
FWVZ	**Far West T-bar**	**2.44**	**207**	P	Pn	01 04 19.4	-0.3
WNVZ	**Wahianoa**	**2.49**	**205**	PN	Pn	01 04 19.9	-0.4
WNVZ	**Wahianoa**	**2.49**	**205**	P	Pn	01 04 19.9	-0.3
BHHZ	**Black Hill Sta**	**2.51**	**196**	⇑PN	Pn	01 04 19.4	-1.0
MOVZ	**Moawhango**	**2.51**	**202**	PN	Pn	01 04 19.5	-1.0
PKVZ	**Pokaka**	**2.55**	**210**	PN	Pn	01 04 20.6	-0.4
CKHZ	**Cape Kidnapper**	**2.58**	**178**	PN	Pn	01 04 20.9	-0.4
MTVZ	**Mangateitei**	**2.58**	**207**	PN	Pn	01 04 21.0	-0.4
VRZ	**Vera Road**	**2.68**	**220**	PN	Pn	01 04 22.8	+0.4
VRZ	**Vera Road**	**2.68**	**220**	P	Pn	01 04 22.8	+0.4
KAHZ	**Kahuranaki**	**2.71**	**181**	PN	Pn	01 04 22.1	-0.6
PNHZ	**Pukenui**	**2.89**	**192**	PN	Pn	01 04 23.5	-1.3
PXZ	**Pawanui**	**2.95**	**182**	PN	Pn	01 04 24.0	-1.5
WPHZ	**Waipukurau**	**3.01**	**188**	PN	Pn	01 04 24.9	-1.3
TSZ	**Takapari Road**	**3.08**	**195**	PN	Pn	01 04 25.3	-1.7
WAZ	**Wanganui**	**3.09**	**210**	PN	Pn	01 04 26.2	-1.0
WAZ	**Wanganui**	**3.09**	**210**	P	Pn	01 04 26.2	-1.0
NEZ	**North Egmont**	**3.15**	**225**	PN	Pn	01 04 28.8	+1.0
NEZ	**North Egmont**	**3.15**	**225**	P	Pn	01 04 28.8	+0.9
PKE	**Pukeiti**	**3.16**	**227**	PN	Pn	01 04 28.8	+0.8
PKE	**Pukeiti**	**3.16**	**227**	P	Pn	01 04 28.8	+0.8
PRHZ	**Porangahau**	**3.19**	**185**	PN	Pn	01 04 26.7	-1.7
DVHZ	**Dannevirke**	**3.27**	**191**	PN	Pn	01 04 27.3	-2.1
OUZ	**Omahuta**	**3.30**	**303**	*e*Pn	Pn	01 04 28.4	-1.4
POWZ	**Post Office Ro**	**3.44**	**195**	PN	Pn	01 04 29.4	-2.0
BFZ	**Birch Farm**	**3.64**	**189**	PN	Pn	01 04 31.4	-2.4
BFZ	**Birch Farm**	**3.64**	**189**	P	Pn	01 04 31.4	-2.4
MRZ	**Mangatainoka R**	**3.74**	**196**	PN	Pn	01 04 32.4	-2.6
MRZ	**Mangatainoka R**	**3.74**	**196**	P	Pn	01 04 32.4	-2.6
TIWZ	**Tintock**	**3.79**	**193**	PN	Pn	01 04 33.2	-2.4
HOWZ	**Holdsworth Sta**	**3.98**	**196**	PN	Pn	01 04 34.9	-3.1
OGWZ	**Otaki Gorge**	**3.99**	**200**	PN	Pn	01 04 35.3	-2.8
OGWZ	**Otaki Gorge**	**3.99**	**200**	P	Pn	01 04 35.3	-2.8
KIW	**Kapiti Island**	**4.10**	**202**	PN	Pn	01 04 36.5	-3.1
KIW	**Kapiti Island**	**4.10**	**202**	P	Pn	01 04 36.5	-3.0
TMWZ	**Te Maipa**	**4.11**	**191**	PN	Pn	01 04 37.0	-2.6
MTW	**Mount Morrison**	**4.23**	**195**	PN	Pn	01 04 37.8	-3.4
MTW	**Mount Morrison**	**4.23**	**195**	P	Pn	01 04 37.8	-3.3
CAW	**Cannon Point**	**4.28**	**200**	PN	Pn	01 04 38.4	-3.4
CAW	**Cannon Point**	**4.28**	**200**	P	Pn	01 04 38.4	-3.4
DUWZ	**D'Urville Isla**	**4.41**	**212**	PN	Pn	01 04 40.1	-3.3
TRWZ	**Traveller**	**4.42**	**193**	PN	Pn	01 04 40.2	-3.3
PAWZ	**Paruwai Farm**	**4.46**	**195**	PN	Pn	01 04 39.5	-4.5
PAWZ	**Paruwai Farm**	**4.46**	**195**	P	Pn	01 04 39.5	-4.5
MSWZ	**Moikau Station**	**4.53**	**197**	PN	Pn	01 04 41.2	-3.7
MSWZ	**Moikau Station**	**4.53**	**197**	P	Pn	01 04 41.2	-3.7
WEL	**Wellington**	**4.53**	**201**	PN	Pn	01 04 41.6	-3.3
WEL	**Wellington**	**4.53**	**201**	P	Pn	01 04 41.6	-3.3
SNZO	**South Karori**	**4.57**	**202**	PN	Pn	01 04 41.6	-3.9
SNZO	**South Karori**	**4.57**	**202**	*e*Pn	Pn	01 04 41.9	-3.6
SNZO				*e*S	Sn	01 05 33.4	-6.4
BHW	**Baring Head**	**4.62**	**200**	PN	Pn	01 04 42.1	-3.9
BHW	**Baring Head**	**4.62**	**200**	P	Pn	01 04 42.1	-3.9
TCW	**Tory Channel**	**4.63**	**206**	PN	Pn	01 04 42.6	-3.6
TCW	**Tory Channel**	**4.63**	**206**	P	Pn	01 04 42.6	-3.5
NNZ	**Nelson**	**4.98**	**213**	PN	Pn	01 04 46.6	-4.1
NNZ	**Nelson**	**4.98**	**213**	P	Pn	01 04 46.6	-4.1
BSWZ	**Blackbirch Sta**	**5.21**	**206**	PN	Pn	01 04 50.1	-3.5
BSWZ	**Blackbirch Sta**	**5.21**	**206**	P	Pn	01 04 50.1	-3.5
KHZ	**Kahutara**	**5.95**	**205**	PN	Pn	01 04 58.8	-4.2
KHZ	**Kahutara**	**5.95**	**205**	P	Pn	01 04 58.8	-4.3
LTZ	**Lake Taylor**	**6.74**	**211**	*e*PN	Pn	01 05 08.8	-4.6
LTZ	**Lake Taylor**	**6.74**	**211**	*e*P	Pn	01 05 08.8	-4.5
MQZ	**McQueen's Vall**	**7.39**	**205**	*e*PN	Pn	01 05 15.7	-6.1
MQZ	**McQueen's Vall**	**7.39**	**205**	*e*P	Pn	01 05 15.7	-6.1
RPZ	**Rata Peaks**	**8.02**	**212**	PN	Pn	01 05 24.9	-5.0
RPZ	**Rata Peaks**	**8.02**	**212**	P	Pn	01 05 24.9	-5.0
LBZ	**Lake Benmore**	**8.93**	**213**	PN	Pn	01 05 36.8	-5.0
LBZ	**Lake Benmore**	**8.93**	**213**	P	Pn	01 05 36.8	-5.0
QSPA	**South Pole Qui** 2.1nm,0.7s	**53.04**	**180**	*e*P	P	01 12 32.6	+0.1
MAW	**Mawson** 0.4nm,0.3s	**64.57**	**203**	*e*P	P	01 13 49.9	-2.1

CSEM ***21*** *01:08:32.3±0.3, 41°.35N×16°.18E, h58km±5km, ML2.7/7, Error ellipse: s-maj=4.5km s-min=2.7km az=45.0*

ROM 21 01:08:33.6±0.1, 41°.37N×16°.20E, h35km±1km, Md2.4/19, Ml2.0/10, 12C-2D, Error ellipse: s-maj=2.2km s-min=1.3km az=71.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDT	**Castel del Mon**	**0.29**	**169**	*i* Pg	Pn	01 08 42.0	+0.5
CDT				*e*Sg	Sn	01 08 47.5	+0.7
MRVN	**Minervino Murg**	**0.31**	**181**	⇑*i* Pg	Pn	01 08 42.2	+0.6
MRVN				Sg	Sn	01 08 47.7	+0.6
	87nm,0.2s						
MRVN	**Minervino Murg**	**0.31**	**181**	⇑*i* Pg	Pn	01 08 42.2	+0.6
MRVN				Sg	Sn	01 08 47.7	+0.6
	87nm,0.2s						
MS1	**Monte Sant'Ang**	**0.39**	**330**	*e*Pg	Pn	01 08 45.0	+2.3
MS1				*e*Sg	Sn	01 08 50.1	+1.3
MSAG	**Monte S. Angel**	**0.40**	**327**	Pg	Pn	01 08 43.5	+0.6
MSAG				Sg	Sn	01 08 50.0	+0.7
	199nm,0.2s						
MSAG	**Monte S. Angel**	**0.40**	**327**	Pg	Pn	01 08 43.5	+0.6
MSAG				Sg	Sn	01 08 50.0	+0.7
	199nm,0.2s						
PALZ	**Palazzo San Ge**	**0.46**	**203**	⇑*i* Pg	Pn	01 08 44.4	+0.7
PALZ				Sg	Sn	01 08 51.8	+1.1
	127nm,0.4s						
PALZ	**Palazzo San Ge**	**0.46**	**203**	⇑*i* Pg	Pn	01 08 44.4	+0.7
PALZ				Sg	Sn	01 08 51.8	+1.1
	127nm,0.4s						
SGRT	**San Giovanni R**	**0.51**	**318**	⇑*i* Pg	Pn	01 08 44.8	+0.4
SGRT				Sg	Sn	01 08 52.4	+0.4
	116nm,0.2s						
SGRT	**San Giovanni R**	**0.51**	**318**	⇑*i* Pg	Pn	01 08 44.8	+0.4
SGRT				Sg	Sn	01 08 52.4	+0.4
	116nm,0.2s						
RGNG	**Rignano Grg**	**0.55**	**304**	⇓*i* Pg	Pn	01 08 45.3	+0.4
RGNG				Sg	Sn	01 08 53.1	+0.2
RGNG	**Rignano Grg**	**0.55**	**304**	⇓*i* Pg	Pn	01 08 45.3	+0.4
RGNG				Sg	Sn	01 08 53.1	+0.2
AMUR	**Altamura**	**0.56**	**146**	⇑*i* Pg	Pn	01 08 45.7	+0.7
AMUR				Sg	Sn	01 08 53.8	+0.8
	122nm,0.3s						
AMUR	**Altamura**	**0.56**	**146**	⇑*i* Pg	Pn	01 08 45.7	+0.7
AMUR				Sg	Sn	01 08 53.8	+0.8
	122nm,0.3s						
BAI	**Bari**	**0.58**	**117**	*e*Pg	Pn

*LDG **21** 01:21:23.0±0.2, 46.65N×8.47E, h10km, Ml2.5/12, Error ellipse: s-maj=3.1km s-min=1.4km az=93.0*
*NEIC **21** 01:21:23.0, 46.65N×8.47E, h10km, ML2.5(LDG), After LDG.*
*VIE **21** 01:21:23.1±0.5, 46.43N×7.88E, h12km±1km, ML2.3/5, Error ellipse: s-maj=3.2km s-min=2.5km az=150.0 14 km NNW of Solothurn*
*CSEM **21** 01:21:26.8±0.2, 46.62N×8.09E, h2km, ML2.5/9, Error ellipse: s-maj=6.6km s-min=3.7km az=142.0*
*ISCJB **21** 01:21:27.0±0.4, 46.64N±0.02×7.98E±0.03, h4km±5km, Error ellipse: s-maj=3.9km s-min=2.6km az=148.7*
*ROM **21** 01:21:30.0±0.4, 46.49N×8.10E, h10km, Md2.6/10, MI1.9/3, Error ellipse: s-maj=7.3km s-min=2.8km az=147.0*

ISC 21 01:21:28.9±0.4, 46.61N±0.02×8.01E±0.03, h12km±4km, n53, σ1s33/90, 6C-4D, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMK	**Mattmark**	**0.56**	**183**	Pg	**Pg**	**01 21 38.3**	**-1.5**
MMK				Sg	**Sg**	**01 21 45.8**	**-1.4**
MMK	**Mattmark**	**0.56**	**183**	Pg	**Pg**	**01 21 38.3**	**-1.5**
MMK				Sg	**Sg**	**01 21 45.8**	**-1.4**
DIX	**Grande Dixence**	**0.67**	**218**	Pg	**Pg**	**01 21 41.6**	**-0.4**
DIX				Sg	**Sg**	**01 21 52.4**	**+1.6**
DIX	**Grande Dixence**	**0.67**	**218**	Pg	**Pg**	**01 21 41.6**	**-0.4**
DIX				Sg	**Sg**	**01 21 52.4**	**+1.6**
EMV	**Vieux Emosson**	**0.94**	**235**	Pg	**Pg**	**01 21 48.2**	**+1.1**
EMV	**Vieux Emosson**	**0.94**	**235**	Pg	**Pg**	**01 21 48.2**	**+1.1**
ORO	**Oropa**	**0.98**	**181**	Pg	**Pg**	**01 21 46.0**	**-1.8**
	9.0nm,0.2s						
ORO	**Oropa**	**0.98**	**181**	Pg	**Pg**	**01 21 46.0**	**-1.8**
	9.0nm,0.2s						
TRAV	**Traversella**	**1.11**	**190**	Pg	**Pg**	**01 21 48.1**	**-2.2**
TRAV				Sg	**Sg**	**01 22 04.4**	**-0.4**
	21nm,0.4s						
TRAV	**Traversella**	**1.11**	**190**	Pg	**Pg**	**01 21 48.1**	**-2.2**
TRAV				Sg	**Sg**	**01 22 04.4**	**-0.4**
	21nm,0.4s						
DAVOX	**Davos/Dischmat**	**1.30**	**82**	Pn	**Pn**	**01 21 52.4**	**-0.4**
DAVOX				Sg	**Sg**	**01 22 10.6**	**-0.1**
DAVOX	**Davos/Dischmat**	**1.30**	**82**	Pn	**Pn**	**01 21 52.4**	**-0.4**
LSD	**Lago del Serru**	**1.30**	**208**	Pn	**Pn**	**01 21 52.5**	**-0.4**
	13nm,0.4s						
LSD	**Lago del Serru**	**1.30**	**208**	Pn	**Pn**	**01 21 52.5**	**-0.4**
	13nm,0.4s						
CABF	**La Chapelle**	**1.32**	**271**	*e*Pg	**Pg**	**01 21 53.8**	**-0.5**
CABF				*e*Sg	**Sg**	**01 22 14.8**	**+3.3**
	15nm,0.4s						
CABF	**La Chapelle**	**1.32**	**271**	*e*Pg	**Pg**	**01 21 53.8**	**-0.5**
CABF				*e*Sg	**Sg**	**01 22 14.8**	**+3.3**
	7.6nm,0.4s						
LPL	**La Plagne**	**1.41**	**220**	*e*Pg	**Pn**	**01 21 53.9**	**-0.4**
LPL				*e*Sg	**Sg**	**01 22 15.8**	**+1.6**
	20nm,0.5s						
LPL	**La Plagne**	**1.41**	**220**	*e*Pg	**Pn**	**01 21 53.9**	**-0.4**
LPL				*e*Sg	**Sg**	**01 22 15.8**	**+1.6**
	9.9nm,0.5s						
LPG	**La Plagne**	**1.42**	**219**	*e*Sg	**Sg**	**01 22 15.9**	**+1.4**
	15nm,0.6s						
LPG	**La Plagne**	**1.42**	**219**	*e*Sg	**Sg**	**01 22 15.9**	**+1.4**
	7.6nm,0.6s						
HINF	**Hinteralfeld**	**1.44**	**327**	*e*Pn	**Pn**	**01 21 51.1**	**-3.7**
HINF				*e*Sg	**Sg**	**01 22 13.9**	**-1.4**
	4.6nm,0.3s						
HINF	**Hinteralfeld**	**1.44**	**327**	*e*Pn	**Pn**	**01 21 51.1**	**-3.7**
HINF				*e*Sg	**Sg**	**01 22 13.9**	**-1.4**
	2.3nm,0.3s						
MDI	**Monti di Nese**	**1.45**	**125**	Pn	**Pn**	**01 21 55.1**	**+0.3**
MDI	**Monti di Nese**	**1.45**	**125**	Pn	**Pn**	**01 21 55.1**	**+0.3**
DAVA	**Damuels**	**1.45**	**61**	⇑*i*Pg	**Pn**	**01 21 54.4**	**-0.5**
DAVA				⇑*i*Sn	**Sn**	**01 22 12.7**	**-1.1**
DAVA				⇑*i*Sg	**Sg**	**01 22 16.3**	**+0.7**
	13nm,0.3s						
DAVA	**Damuels**	**1.45**	**61**	Pg	**Pn**	**01 21 54.4**	**-0.5**
DAVA				Sn	**Sn**	**01 22 12.7**	**-1.1**
DAVA				Sg	**Sg**	**01 22 16.3**	**+0.8**
	13nm,0.3s						
RSP	**Reno Superiore**	**1.55**	**200**	Pn	**Pn**	**01 21 56.2**	**-0.1**
	62nm,1.2s						
RSP	**Reno Superiore**	**1.55**	**200**	Pn	**Pn**	**01 21 56.2**	**-0.1**
	62nm,1.2s						
FUORN	**Ofenpass-Fuorn**	**1.55**	**89**	Pn	**Pn**	**01 21 57.5**	**+1.2**
ECH	**Echery**	**1.71**	**341**	Pn	**Pn**	**01 21 54.4**	**-4.1**
ECH				*e*S	**Sn**	**01 22 22.4**	**+2.2**
ECH	**Echery**	**1.71**	**341**	Pn	**Pn**	**01 21 54.4**	**-4.0**
ECH				*e*S	**Sn**	**01 22 22.4**	**+2.2**
BFO	**Black Forest**	**1.73**	**7**	Pn	**Pn**	**01 21 52.4**	**-6.4**
BFO				*e*S	**Sn**	**01 22 13.2**	**-7.7**
HAU	**Haudompre**	**1.80**	**322**	*e*Sg	**Sg**	**01 22 25.5**	**-1.1**
	6.6nm,0.3s						
HAU	**Haudompre**	**1.80**	**322**	*e*Sg	**Sg**	**01 22 25.5**	**-1.1**
	3.3nm,0.3s						
CDF	**Champ du Feu**	**1.87**	**345**	*e*Pn	**Pn**	**01 21 54.7**	**-6.0**
CDF				*e*Sn	**Sn**	**01 22 16.7**	**-7.5**
CDF				*e*Sg	**Sg**	**01 22 23.7**	**-5.3**
	4.0nm,0.5s						
FETA	**Feichten**	**1.91**	**77**	⇑*i*Pg	**Pn**	**01 22 02.3**	**+1.0**
FETA				⇓*i*Sg	**Sg**	**01 22 31.4**	**+1.0**
	3.1nm,0.4s						
FETA	**Feichten**	**1.91**	**77**	Pg	**Pn**	**01 22 02.3**	**+1.0**
FETA				Sg	**Sg**	**01 22 31.4**	**+1.0**
	3.1nm,0.4s						
MBDF	**Montbardon**	**2.07**	**205**	*e*Pg	**Pn**	**01 22 05.5**	**+2.0**
MBDF				*e*Sg	**Sg**	**01 22 34.5**	**-1.0**
	21nm,0.6s						
MBDF	**Montbardon**	**2.07**	**205**	*e*Pg	**Pn**	**01 22 05.5**	**+2.0**
MBDF				*e*Sg	**Sg**	**01 22 34.5**	**-1.0**
	10nm,0.6s						
RETA	**Reutte**	**2.08**	**64**	⇓*i*Pg	**Pn**	**01 22 06.0**	**+2.4**
RETA				⇓*i*Sn	**Sn**	**01 22 29.1**	**-0.2**
RETA				⇑*i*Sg	**Sg**	**01 22 36.6**	**+0.9**
	4.8nm,0.4s						
RETA	**Reutte**	**2.08**	**64**	Pg	**Pn**	**01 22 06.0**	**+2.5**
RETA				Sn	**Sn**	**01 22 29.1**	**-0.2**
RETA				Sg	**Sg**	**01 22 36.6**	**+1.0**
	4.8nm,0.4s						
MOTA	**Moosalm**	**2.24**	**70**	⇑*i*Pn	**Pn**	**01 22 02.4**	**-3.4**
MOTA				⇓*i*Sg	**Sg**	**01 22 42.1**	**+1.2**
	4.2nm,0.4s						
MOTA	**Moosalm**	**2.24**	**70**	Pn	**Pn**	**01 22 02.4**	**-3.4**
MOTA				Sg	**Sg**	**01 22 42.1**	**+1.2**
	4.2nm,0.4s						
ORIF	**Oris-en-Rattie**	**2.25**	**222**	*e*Pg	**Pg**	**01 22 09.6**	**-2.5**
ORIF				*e*Sg	**Sg**	**01 22 42.1**	**+0.8**
	8.0nm,0.6s						
ORIF	**Oris-en-Rattie**	**2.25**	**222**	*e*Pg	**Pg**	**01 22 09.6**	**-2.5**
ORIF				*e*Sg	**Sg**	**01 22 42.1**	**+0.8**
	4.0nm,0.6s						
SSB	**Saint Sauveur**	**2.76**	**242**	Pn	**Pn**	**01 22 12.4**	**-0.5**
SSB				*e*S	**Sg**	**01 23 00.1**	**+2.6**
SSB	**Saint Sauveur**	**2.76**	**242**	Pn	**Pn**	**01 22 12.4**	**-0.5**
SMF	**Signal de Mont**	**2.87**	**272**	*e*Sg	**Sg**	**01 23 01.0**	**-0.1**
	4.6nm,0.4s						
SMF	**Signal de Mont**	**2.87**	**272**	*e*Sg	**Sg**	**01 23 01.0**	**-0.1**
	2.3nm,0.4s						
VIVF	**Saint-Julien-l**	**2.92**	**234**	*e*Pg	**Pg**	**01 22 22.3**	**-2.6**
VIVF				*e*Sg	**Sg**	**01 23 03.6**	**+0.9**
	4.6nm,0.5s						
VIVF	**Saint-Julien-l**	**2.92**	**234**	*e*Pg	**Pg**	**01 22 22.3**	**-2.6**
VIVF				*e*Sg	**Sg**	**01 23 03.6**	**+0.9**
	2.3nm,0.5s						
AVF	**Avril sur Loir**	**3.21**	**275**	*e*Sg	**Sg**	**01 23 13.5**	**+1.6**
	2.9nm,0.5s						
AVF	**Avril sur Loir**	**3.21**	**275**	*e*Sg	**Sg**	**01 23 13.5**	**+1.6**
	1.5nm,0.5s						

IDC 21 02:01:19.3±5.3, 14.59S×174.32W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.7/16, mbtmp3.6/2, Error ellipse: s-maj=337.4km s-min=74.8km az=150.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**49.17**	**256**	P	P	02 10 09.7	+0.2
	0.4nm,0.7s,baz=90,slow=7.4,SNR=2.9						
ASAR	**Alice Springs**	**49.52**	**251**	P	P	02 10 11.9	-0.3
	0.8nm,0.5s,baz=88,slow=8.1,SNR=16						
BRTR	**Keskin Array B**	**144.98**	**321**	PKP	PKPdf	02 20 58.5	-0.4
	0.5nm,0.7s,baz=31,slow=3.4,SNR=3.8						

CASC 21 02:24:11.2±2.0, 13.54N×91.78W, h20km±21km, MD3.9, ML3.4, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.78**	**10**	*e*P	Pb	02 24 26.9	+0.8
FUG	**Fuego 3**	**1.28**	**45**	*e*P	Pn	02 24 34.2	+0.2
FG6		**1.34**	**41**	*e*P	Pn	02 24 35.0	+0.2
TP2	**Tecpan 2**	**1.44**	**31**	*e*P	Pn	02 24 36.5	+0.4
NBG	**Las Nubes**	**1.74**	**53**	*e*P	Pn	02 24 41.6	+1.3
RTR	**El Retiro**	**2.11**	**80**	*e*P	Pn	02 24 45.7	+0.3
RTR				*e*S	Sn	02 25 12.8	+1.8
RBDL	**Robledal**	**2.11**	**74**	*e*P	Pn	02 24 45.5	0.0
RBDL				*e*S	Sn	02 25 11.6	+0.4
SNJE	**San Jose**	**2.14**	**81**	*e*P	Pn	02 24 45.7	-0.2
SNET	**Serv Nac Est T**	**2.48**	**86**	AML	AML	02 24 49.6	
	comp=Z,286nm,0.3s						
MRL	**Marmol**	**2.53**	**53**	*e*P	Pn	02 24 52.8	+1.6
LFRS	**El Faro**	**2.65**	**88**	*e*P	Pn	02 24 53.2	+0.4
LFRS				*e*S	Sn	02 25 26.0	+1.7
SNVI	**San Vicente**	**2.86**	**88**	*e*P	Pn	02 24 55.8	0.0

*NIED **21** 02:28:00, 32.60N×140.90E, h65km, Mw4.2 Best double couple: M0 2.45000×10^15 NP1:ϕs 169.00000°, δ 81.00000°, λ 57.00000° NP2:ϕs 65.00000°, δ 34.00000°, λ 164.00000°.*
*MOS **21** 02:28:42.6±1.1, 32.36N×140.89E, h33km, mb4.7/22, Error ellipse: s-maj=16.0km s-min=7.5km az=114.8*
*BJI **21** 02:28:44.7, 32.59N×141.19E, h74km, mB4.6/7, mb4.5/15, Ms4.6/3, Ms7 4.4/3*
*ISCJB **21** 02:28:48.0±0.9, 32.56N±0.05×140.78E±0.05, h76km±5km, mb4.6/44, Error ellipse: s-maj=9.2km s-min=6.5km az=144.1*
*IDC **21** 02:28:48.3±1.6, 32.48N×140.74E, h61km±12km, mb4.1/15, mb1 4.2/17, mb1mx4.1/25, mbtmp4.0/17, MS3.0/4, Ms1 3.0/4, ms1mx2.6/36, Error ellipse: s-maj=18.6km s-min=14.3km az=83.0*
*NEIC **21** 02:28:48.2±1.5, 32.47N×140.75E, h61km±11km, mb4.6/9, MW4.2(NIED), Error ellipse: s-maj=13.2km s-min=10.3km az=174.0*
NEIC Recorded [1 JMA] on Aoga-shima and Hachijo-jima.
*JMA **21** 02:28:49.0±0.2, 32.64N×140.87E, h58km, M4.6*
JMA Felt I J1.

ISC 21 02:28:48.7±0.9, 32.53N±0.05×140.81E±0.05, h65km±5km, n101, σ1s02/113, mb4.6/44, 2C-6D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.02**	**305**	⇓P	**Pn**	**02 29 07.4**	**+0.2**
JHJ2				S	**Sn**	**02 29 20.3**	**-0.6**
JHJ	**Hachijo jima 2**	**1.04**	**305**	P	**Pn**	**02 29 07.5**	**0.0**
	1μm,0.3s,baz=136,slow=5.6,SNR=214						
JHJ				S	**Sn**	**02 29 19.9**	**-1.6**
	4μm,0.3s,baz=56,slow=21,SNR=38						
JMY	**Miyakejima3**	**1.88**	**325**	P	**Pn**	**02 29 18.7**	**0.0**
JMY				S	**Sn**	**02 29 41.2**	**-0.2**
BSO1	**Boso 1**	**2.12**	**4**	P	**Pn**	**02 29 20.6**	**-1.3**
BSO1				S	**Sn**	**02 29 45.0**	**-2.2**
JKO	**Kozu shima**	**2.17**	**320**	P	**Pn**	**02 29 23.0**	**+0.5**
JKO				S	**Sn**	**02 29 48.3**	**0.0**
BSO3	**Boso 3**	**2.28**	**354**	P	**Pn**	**02 29 23.5**	**-0.5**
BSO3				*e*S	**Sn**	**02 29 50.4**	**-0.7**
TK01	**Tokai 1**	**2.97**	**295**	P	**Pn**	**02 29 36.5**	**+3.1**
TK01				S	**Sn**	**02 30 10.0**	**+2.2**
JOD2	**Odawara 2**	**3.08**	**333**	⇓P	**Pn**	**02 29 35.0**	**+0.1**
JOD2				S	**Sn**	**02 30 07.6**	**-3.0**
JYN	**Shimob**	**3.51**	**328**	⇓P	**Pn**	**02 29 42.3**	**+1.5**
JRY	**Ryogami san**	**3.82**	**336**	P	**Pn**	**02 29 45.9**	**+0.9**
JRY				S	**Sn**	**02 30 27.8**	**-0.9**
JIE	**Ise**	**3.90**	**300**	⇓P	**Pn**	**02 29 47.6**	**+1.5**
JIE				S	**Sn**	**02 30 30.9**	**+0.3**
JWZ	**Kozaga**	**4.39**	**285**	P	**Pn**	**02 29 54.7**	**+1.8**
JWZ				*e*S	**Sn**	**02 30 43.0**	**+0.2**
MJAR	**Matsushiro Arr**	**4.54**	**333**	P	**Pn**	**02 29 55.3**	**+0.4**
	5.8nm,0.3s,baz=162,slow=13,SNR=17						
MJAR				S	**Sn**	**02 30 47.0**	**+0.6**
	6.9nm,0.3s,baz=153,slow=24,SNR=4.7						
MJAR	**Matsushiro Arr**	**4.54**	**333**	P	**Pn**	**02 29 55.3**	**+0.4**
MJAR				S	**Sn**	**02 30 47.0**	**+0.6**
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.3s						
MJAR				smax			
	comp=N,7.0nm,0.3s						
MAJO	**Matsushiro**	**4.54**	**333**	*e*Pn	**Pn**	**02 29 55.9**	**+1.0**
MAJO				*e*S	**Sn**	**02 30 36.3**	**-10**
MAT	**Matsushiro**	**4.54**	**333**	P	**Pn**	**02 29 55.3**	**+0.4**
MAT				S	**Sn**	**02 30 46.8**	**+0.4**
ERM	**Erimo**	**9.65**	**10**	*e*Pn	**Pn**	**02 31 03.0**	**-1.8**
ERM				*e*Sg	**Sn**	**02 32 44.7**	**-6.8**
KSRS	**Korea Array**	**11.65**	**299**	P	**Pn**	**02 31 33.4**	**+1.4**
	comp=N,0.2nm,0.3s,baz=109,slow=12,SNR=2.9						
KSRS				LR	LR	02 35 36.1	
	comp=N,84nm,20.2s,baz=115,slow=35						
YSS	**Yuzh-Sakhalins**	**14.48**	**5**	*e*P	**Pn**	**02 32 17.0**	**+6.9**
NJ2	**Nanjing**	**18.57**	**274**	*e*P	**Pn**	**02 33 01.8**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
PETK	**Petropavlovsk-**	**23.90**	**26**	LR	LR	02 41 48.7	
	comp=Z,23nm,19.8s,baz=74,slow=33						
ULN	**Ulaanbaatar**	**29.71**	**311**	*e*P	**P**	**02 34 49.5**	**+1.1**
	comp=Z,9.8nm,0.6s,mb4.6						
ULN	**Ulaanbaatar**	**29.71**	**311**	*e*P	**P**	**02 34 49.5**	**+1.1**
ULN				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
SONM	**Songino Array**	**30.12**	**311**	P	**P**	**02 34 53.0**	**+1.0**
	comp=Z,8.9nm,0.7s,mb4.5,baz=113,slow=8.5,SNR=41						
SONM				LR	LR	02 45 58.5	
	comp=Z,44nm,18.4s,baz=42,slow=34						
SONM	**Songino Array**	**30.12**	**311**	P	**P**	**02 34 53.0**	**+1.0**
SONM				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,44nm,18.4s						
SEY	**Seymchan**	**31.30**	**10**	*e*P	**P**	**02 35 02.9**	**+0.7**
ZAK	**Zakamensk**	**32.86**	**314**	*e*P	**P**	**02 35 16.4**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.0						
TLY	**Talaya**	**33.08**	**316**	*e*P	**P**	**02 35 18.1**	**+0.1**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
GTA	**Gaotai**	**33.66**	**294**	*e*P	**P**	**02 35 22.1**	**-1.1**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
CMAR	**Chiang Mai Arr**	**40.05**	**260**	LR	LR	02 51 51.6	
	comp=Z,15nm,21.9s,baz=215,slow=35						
ZALV	**Zalesovo Beam**	**44.69**	**316**	P	**P**	**02 36 54.3**	**-0.6**
	comp=Z,2.0nm,0.5s,mb4.1,baz=109,slow=8.2,SNR=13						
ZALV				PcP	PcP	02 38 36.2	-0.1
	comp=Z,1.5nm,0.5s,baz=122,slow=5.2,SNR=2.5						
ZALV	**Zalesovo Beam**	**44.69**	**316**	P	**P**	**02 36 54.3**	**-0.6**
ZALV						02 38 36.3	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
TAPN	**Taplejung**	**45.92**	**278**	*e*P	**P**	**02 37 03.8**	**-1.2**
	comp=Z,17nm,0.4s,mb5.1						
MK31	**Makanchi Array**	**46.22**	**306**	*e*P	**P**	**02 37 07.1**	**0.0**
MKAR	**Makanchi Array**	**46.22**	**306**	P	**P**	**02 37 07.2**	**+0.2**
	comp=Z,12nm,0.6s,mb4.8,baz=89,slow=9.9,SNR=122						
MKAR	**Makanchi Array**	**46.22**	**306**	P	**P**	**02 37 07.3**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,12nm,0.6s						
ODAN	**Odare**	**46.35**	**278**	*e*P	**P**	**02 37 07.2**	**-1.2**
	comp=Z,29nm,0.4s,mb5.3						
RAMN	**Ramite**	**46.98**	**278**	*e*P	**P**	**02 37 12.3**	**-1.1**
	comp=Z,42nm,0.7s,mb5.3						
JIRN	**Jiri**	**47.08**	**279**	*e*P	**P**	**02 37 13.0**	**-1.1**
	comp=Z,66nm,0.6s,mb5.5						
GUN	**Gumba**	**47.26**	**280**	*e*P	**P**	**02 37 14.4**	**-1.1**
	comp=Z,41nm,0.8s,mb5.2						
PKI	**Pulchoki**	**47.76**	**279**	*e*P	**P**	**02 37 18.4**	**-1.0**
	comp=Z,20nm,0.8s,mb5.0						
PKIN	**Phulchoki**	**47.77**	**279**	*e*P	**P**	**02 37 18.4**	**-1.1**
	comp=Z,13nm,0.6s,mb5.0						
KKN	**Kakani**	**47.80**	**280**	*e*P	**P**	**02 37 18.7**	**-1.0**
	comp=Z,31nm,0.8s,mb5.2						
DMN	**Daman**	**48.00**	**279**	*e*P	**P**	**02 37 20.3**	**-1.0**
	comp=Z,18nm,0.9s,mb4.9						
GKN	**Gorkha**	**48.26**	**280**	*e*P	**P**	**02 37 22.3**	**-0.9**
	comp=Z,34nm,0.8s,mb5.2						
KURK	**Kurchatov**	**48.42**	**311**	*e*P	**P**	**02 37 22.8**	**-1.3**
	comp=Z,19nm,0.8s,mb5.0						
KURK	**Kurchatov**	**48.42**	**311**	*e*P	**P**	**02 37 24.0**	**-0.2**
KURK				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.0						
DANN	**Dangsing**	**48.87**	**281**	*e*P	**P**	**02 37 27.2**	**-0.7**
	comp=Z,49nm,0.8s,mb5.5						
KOLN	**Koldanda**	**49.20**	**280**	*e*P	**P**	**02 37 29.6**	**-0.9**
	comp=Z,16nm,0.7s,mb5.1						
KDAK	**Kodiak Island**	**50.84**	**39**	P	**P**	**02 37 42.6**	**+0.3**
	comp=Z,9.0nm,0.5s,mb5.0,baz=275,slow=5.8,SNR=16						
KDAK	**Kodiak Island**	**50.84**	**39**	*ce*P	**P**	**02 37 42.5**	**+0.1**
TKM2	**Tokmak 2**	**51.44**	**301**	*e*P	**P**	**02 37 47.4**	**+0.2**
	comp=Z,8.3nm,1.3s,mb4.6						
TKM2	**Tokmak 2**	**51.44**	**301**	*e*P	**P**	**02 37 47.4**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6						
KSH	**Kashi**	**51.90**	**297**	⇓*i*P	**P**	**02 37 54.3**	**+3.6**
KSH				*e*pP	pP	02 38 12.0	+4.5
KSH				*e*sP	sP	02 38 21.1	+6.2
KSH				*e*PcP	PcP	02 39 04.3	+1.7
KSH				*e*PP	PP	02 39 54.1	+5.2
KSH				*e*ScP	ScP	02 42 53.3	-0.5
KSH				*e*PcS	PcS	02 43 01.6	+0.9
KSH				*e*S	**S**	**02 45 11.1**	**+2.5**
KSH				*e*sS	sS	02 45 44.0	+6.9
KSH				*e*ScS	ScS	02 47 33.0	-1.8
KSH				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
KSH				pmax	pmax		
	comp=Z,27nm,3.3s						
KSH				LR	LR		
	comp=N,88nm,6.5s						
KSH				LR	LR		
	comp=E,83nm,4.9s						
KSH				LR	LR		
	comp=Z,120nm,4.4s						
AAK	**Ala-Archa**	**52.30**	**301**	*e*P	**P**	**02 37 52.8**	**-0.7**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
WRA	**Warramunga Arr**	**52.54**	**188**	P	**P**	**02 37 55.1**	**-0.3**
	comp=Z,1.8nm,0.4s,mb4.4,baz=5.6,slow=7.7,SNR=36						
WRA	**Warramunga Arr**	**52.54**	**188**	P	**P**	**02 37 55.2**	**-0.2**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
EKS2	**Erkin-Say**	**52.81**	**302**	*e*P	**P**	**02 37 57.4**	**0.0**
	comp=Z,1.7nm,0.6s,mb4.2						
COLA	**College**	**53.18**	**30**	P	**P**	**02 38 01.6**	**+1.9**
	comp=Z,3.3nm,0.5s,mb4.6						
COLA	**College**	**53.18**	**30**	P	**P**	**02 38 01.6**	**+1.9**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
BRVK	**Borovoye**	**53.37**	**315**	*e*P	**P**	**02 38 01.5**	**+0.2**
	comp=Z,7.0nm,0.6s,mb4.9						
BRVK	**Borovoye**	**53.37**	**315**	*e*P	**P**	**02 38 01.5**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
SDNR	**Sundarnagar**	**53.39**	**287**	*e*PKP	**P**	**02 38 00.0**	**-1.8**
SDNR				*e*S	PcP	02 39 01.0	-7.3
ILAR	**Eielson Array**	**53.59**	**30**	P	**P**	**02 38 02.6**	**-0.1**
	comp=Z,3.7nm,0.7s,mb4.5,baz=268,slow=6.2,SNR=54						
ILAR	**Eielson Array**	**53.59**	**30**	P	**P**	**02 38 02.7**	**0.0**
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ASAR	**Alice Springs**	**56.27**	**188**	P	**P**	**02 38 21.7**	**-0.7**
	comp=Z,0.5nm,0.5s,mb3.8,baz=3.6,slow=8.0,SNR=9.3						
ASAR	**Alice Springs**	**56.27**	**188**	P	**P**	**02 38 21.7**	**-0.7**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DAWY	**Dawson**	**56.88**	**31**	*e*P	**P**	**02 38 27.1**	**+0.7**
HYT	**Haines Junctio**	**58.24**	**35**	*e*P	**P**	**02 38 38.3**	**+2.3**
INK	**Inuvik**	**58.63**	**26**	P	**P**	**02 38 39.1**	**+0.5**
	comp=Z,2.9nm,0.5s,mb4.6,baz=48,slow=1.5,SNR=6.4						
INK	**Inuvik**	**58.63**	**26**	P	**P**	**02 38 39.1**	**+0.5**
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ARU	**Arti**	**59.45**	**320**	*d*P	**P**	**02 38 44.6**	**+0.2**
ARU				S	**S**	**02 46 49.9**	**+1.4**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
ABKAR	**Akbulak array**	**60.52**	**312**	*e*P	**P**	**02 38 51.5**	**-0.3**
	comp=Z,3.5nm,0.4s,mb4.7						
ARCES	**ARCESS Array B**	**68.04**	**340**	P	**P**	**02 39 42.0**	**+1.3**
	comp=Z,1.4nm,0.8s,mb3.8,baz=63,slow=11,SNR=4.4						
ARCES	**ARCESS Array B**	**68.04**	**340**	P	**P**	**02 39 42.0**	**+1.3**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
JOF	**Joensuu**	**69.71**	**333**	*e*P	**P**	**02 39 49.8**	**-1.4**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
JOF	**Joensuu**	**69.71**	**333**	*e*p	**P**	**02 39 49.8**	**-1.4**
	comp=Z,0.9nm,0.4s,mb4.0						
KAF	**Kangasniemi**	**72.09**	**333**	*e*P	**P**	**02 40 04.6**	**-1.0**
	com

LFRS				*e*S	Sg	02 35 07.5	+1.7
SNVI	**San Vicente**	**1.49**	**167**	*e*P	Pn	02 34 47.0	-0.3
SNVI				*e*S	Sg	02 35 09.6	+2.4
CAHU	**Cacacuatique**	**1.60**	**144**	*e*P	Pn	02 34 48.7	-0.1
CAHU				*e*S	Sn	02 35 13.1	+2.8
FG6		**1.72**	**253**	*e*P	Pn	02 34 51.4	+1.0
FUG	**Fuego 3**	**1.72**	**249**	*e*P	Pn	02 34 50.5	+0.2
FUG				*e*S	Sn	02 35 16.3	+3.3
TP2	**Tecpan 2**	**1.79**	**261**	*e*P	Pn	02 34 52.5	+1.1
TP2				*e*S	Sn	02 35 19.2	+4.3
BLLM	**Bellamira**	**1.86**	**150**	*e*P	Pn	02 34 52.7	+0.3
BLLM				*e*S	Sn	02 35 18.1	+1.4
TGUH	**Tegucigalpa,Un**	**2.11**	**118**	*e*P	Pn	02 34 55.6	-0.2
TGUH				*e*S	Sn	02 35 23.6	+0.8

IDC 21 02:37:59.9±3.4, 5.29S×149.64E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/16, mbtmp3.8/3, Error ellipse: s-maj=106.6km s-min=45.5km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.83**	**224**	P	P	02 42 43.8	+0.5
	1.2nm,0.4s,baz=49,slow=10,SNR=14						
ASAR	**Alice Springs**	**23.74**	**218**	P	P	02 43 13.8	-0.3
	0.3nm,0.4s,baz=57,slow=9.0,SNR=6.2						
FITZ	**Fitzroy Crossi**	**26.68**	**239**	P	P	02 43 40.6	-0.4
	5.3nm,0.7s,baz=59,slow=9.7,SNR=17						
TORD	**Torodi Ar. Bea**	**147.44**	**286**	PKPbc	PKPbc	02 57 46.5	-0.4
	0.2nm,0.7s,baz=76,slow=4.1,SNR=3.7						

*ISCJB **21** 02:43:54.9±0.5, 37.01N±0.03×29.17E±0.03, h6km±5km, Error ellipse: s-maj=4.4km s-min=3.8km az=15.1*
*DDA **21** 02:43:54.0, 36.96N×29.15E, h7km±2km, Md2.7*
*ISK **21** 02:43:54.6, 37.02N×29.17E, h10km, MD3.2*
*CSEM **21** 02:43:54.4±0.2, 36.97N×29.17E, h5km, MD3.2, Error ellipse: s-maj=4.1km s-min=2.6km az=5.0*

ISC 21 02:43:55.5±0.4, 37.02N±0.03×29.18E±0.03, h9km±4km, n53, σ0.95/71, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.29**	**62**	*e*PG	**Pg**	**02 44 00.5**	**-0.8**
GLHS				*e*SG	**Sg**	**02 44 06.4**	**+1.1**
GLHS	**Glhisar (BURDU**	**0.29**	**62**	*e*Pg	**Pg**	**02 44 00.5**	**-0.8**
GLHS				*e*Sg	**Sg**	**02 44 06.4**	**+1.2**
GOLH	**Golhisar**	**0.38**	**55**	*i* P	**Pg**	**02 44 01.6**	**-1.3**
GOLH				*i* S	**Sg**	**02 44 09.1**	**+1.2**
GOLH	**Golhisar**	**0.38**	**55**	*i* P	**Pg**	**02 44 01.6**	**-1.3**
GOLH				*i* S	**Sg**	**02 44 09.1**	**+1.2**
TURN	**Turunc**	**0.48**	**252**	*i* P	**Pg**	**02 44 08.6**	**+3.7**
TURN				*i* S	**Sg**	**02 44 19.2**	**+8.0**
TURN	**Turunc**	**0.48**	**252**	*i* P	**Pg**	**02 44 08.6**	**+3.7**
ELL	**Elmali**	**0.65**	**115**	*e*PG	**Pg**	**02 44 06.7**	**-1.3**
ELL				*e*SG	**Sg**	**02 44 17.6**	**+1.1**
ELL	**Elmali**	**0.65**	**115**	*e*Pg	**Pg**	**02 44 06.7**	**-1.3**
DNZL	**Cakiroluk**	**0.68**	**351**	*i* P	**Pg**	**02 44 07.8**	**-0.8**
DNZL				*i* S	**Sg**	**02 44 18.6**	**+1.1**
DNZL	**Cakiroluk**	**0.68**	**351**	*i* P	**Pg**	**02 44 07.8**	**-0.8**
DNZL				*i* S	**Sg**	**02 44 18.6**	**+1.1**
YER	**Yerkesik**	**0.72**	**279**	*e*PG	**Pg**	**02 44 09.3**	**-0.2**
YER				*e*SG	**Sg**	**02 44 19.2**	**+0.3**
YER	**Yerkesik**	**0.72**	**279**	*e*Pg	**Pg**	**02 44 09.3**	**-0.2**
YER				*e*Sg	**Sg**	**02 44 19.2**	**+0.2**
DENT	**Denizli**	**0.74**	**351**	*e*PG	**Pg**	**02 44 09.3**	**-0.5**
DENT	**Denizli**	**0.74**	**351**	*e*Pg	**Pg**	**02 44 09.4**	**-0.4**
AKAS	**Kas**	**0.86**	**156**	*i* P	**Pg**	**02 44 09.8**	**-2.2**
AKAS				*i* S	**Sg**	**02 44 24.2**	**+1.1**
AKAS	**Kas**	**0.86**	**156**	*i* P	**Pg**	**02 44 09.8**	**-2.2**
AKAS				*i* S	**Sg**	**02 44 24.2**	**+1.0**
KSL	**Kastellorizon**	**0.93**	**159**	*e*P	**Pg**	**02 44 14.0**	**+0.6**
KORT	**Korkueli**	**0.94**	**91**	*i* P	**Pg**	**02 44 12.3**	**-1.3**
KORT	**Korkueli**	**0.94**	**91**	*i* P	**Pg**	**02 44 12.3**	**-1.3**
MLSB	**Milas**	**1.15**	**284**	*e*PN	**Pn**	**02 44 17.0**	**-0.9**
MLSB				*e*SN	**Sn**	**02 44 33.4**	**-0.3**
MLSB	**Milas**	**1.15**	**284**	*e*Pn	**Pn**	**02 44 17.0**	**-0.8**
MLSB				*e*Sn	**Sn**	**02 44 33.4**	**-0.3**
ARG	**Arkhangelos**	**1.17**	**227**	*e*P	**Pb**	**02 44 17.5**	**-0.3**
ANTB	**Antalya**	**1.19**	**95**	*e*PN	**Pn**	**02 44 17.8**	**-0.5**
ANTB	**Antalya**	**1.19**	**95**	*e*Pn	**Pn**	**02 44 17.8**	**-0.5**
AYDN	**Tasoluk**	**1.22**	**302**	*i* P	**Pn**	**02 44 17.5**	**-1.2**
AYDN				*i* S	**Sb**	**02 44 36.3**	**+1.8**
AYDN	**Tasoluk**	**1.22**	**302**	*i* P	**Pn**	**02 44 17.5**	**-1.2**
AYDN				*i* S	**Sb**	**02 44 36.3**	**+1.8**
DAT	**Datca**	**1.31**	**258**	*e*PN	**Pn**	**02 44 19.4**	**-0.7**
DAT	**Datca**	**1.31**	**258**	*e*Pn	**Pn**	**02 44 19.4**	**-0.7**
KHL	**Karahalli**	**1.33**	**12**	*e*PN	**Pn**	**02 44 19.9**	**-0.3**
KHL	**Karahalli**	**1.33**	**12**	*e*Pn	**Pn**	**02 44 19.9**	**-0.4**
ISP	**Isparta**	**1.34**	**53**	*e*PN	**Pn**	**02 44 20.3**	**0.0**
ISP	**Isparta**	**1.34**	**53**	*e*Pn	**Pn**	**02 44 20.3**	**-0.1**
KHAL	**Karahalli**	**1.37**	**10**	*i* P	**Pn**	**02 44 21.6**	**+0.7**
KHAL	**Karahalli**	**1.37**	**10**	*i* P	**Pn**	**02 44 21.6**	**+0.8**
BDRM	**Kayabasi**	**1.39**	**272**	*i* P	**Pn**	**02 44 19.9**	**-1.2**
BDRM				*i* S	**Sb**	**02 44 40.3**	**+0.9**
BDRM	**Kayabasi**	**1.39**	**272**	*i* P	**Pn**	**02 44 19.9**	**-1.2**
BDRM				*i* S	**Sb**	**02 44 40.3**	**+0.9**
BODT	**Bodrum**	**1.49**	**272**	*e*PN	**Pn**	**02 44 22.1**	**-0.4**
BODT	**Bodrum**	**1.49**	**272**	*e*Pn	**Pn**	**02 44 22.1**	**-0.4**
KULA	**Kula-Manisa**	**1.55**	**345**	*e*PN	**Pn**	**02 44 23.0**	**-0.3**
KULA	**Kula-Manisa**	**1.55**	**345**	*e*Pn	**Pn**	**02 44 23.0**	**-0.3**
IZM	**Izmir**	**2.05**	**313**	*e*PN	**Pn**	**02 44 29.8**	**-0.4**
IZM	**Izmir**	**2.05**	**313**	*e*Pn	**Pn**	**02 44 29.8**	**-0.4**
AKS	**Akhisar**	**2.15**	**330**	*e*PN	**Pn**	**02 44 30.9**	**-0.6**
AKS	**Akhisar**	**2.15**	**330**	*e*Pn	**Pn**	**02 44 30.9**	**-0.6**
ALT	**Altintas**	**2.16**	**20**	*e*PN	**Pn**	**02 44 31.8**	**+0.1**
ALT	**Altintas**	**2.16**	**20**	*e*Pn	**Pn**	**02 44 31.8**	**+0.1**
KARP	**Karpathos**	**2.19**	**229**	*e*P	**Pn**	**02 44 32.7**	**+0.5**
HDMB	**Hadim**	**2.65**	**90**	*e*PN	**Pn**	**02 44 39.2**	**+0.8**
HDMB	**Hadim**	**2.65**	**90**	*e*Pn	**Pn**	**02 44 39.2**	**+0.8**
KONT	**Konya--Tatoy**	**2.69**	**69**	*e*PN	**Pn**	**02 44 39.9**	**+0.8**
KONT	**Konya--Tatoy**	**2.69**	**69**	*e*Pn	**Pn**	**02 44 39.9**	**+0.9**
ZKR	**Zakros**	**3.06**	**232**	*e*P	**Pn**	**02 44 45.7**	**+1.6**
LAST	**Lasithi**	**3.52**	**239**	*e*P	**Pn**	**02 44 51.3**	**+0.9**

*IDC **21** 03:01:50.9±2.8, 23.93S×179.94W, h497km±31km, mb3.4/7, mb1 3.7/8, mb1mx3.5/16, mbtmp3.4/8, Error ellipse: s-maj=37.2km s-min=18.8km az=162.0*
*NEIC **21** 03:01:53.6±3.7, 24.09S×179.96W, h535km±48km, mb4.5/1, Error ellipse: s-maj=44.5km s-min=16.4km az=184.0*

ISC 21 03:01:53.6±4.6, 24.1S±0.2×180.0W±0.2, h533km±60km, n12, σ0.60/11, mb3.9/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.32**	**189**	P	**P**	**03 04 56.0**	**-0.1**
	0.8nm,0.3s,baz=15,slow=12,SNR=3.1						
URZ				S	**S**	**03 07 26.1**	**-0.2**
	0.5nm,0.3s,baz=268,slow=5.7,SNR=3.4						
CTA	**Charters Tower**	**31.50**	**271**	P	**P**	**03 07 32.5**	**+0.4**
	8.4nm,0.5s,mb4.6,baz=93,slow=11,SNR=13						
CTAO	**Charters Tower**	**31.50**	**271**	*e*P	**P**	**03 07 32.3**	**+0.2**
	9.4nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**34.66**	**248**	P	**P**	**03 07 59.4**	**+0.7**
STKA	**Stephens Creek**	**34.66**	**248**	P	**P**	**03 07 59.4**	**+0.7**
	5.5nm,0.9s,mb4.1,baz=28,slow=9.1,SNR=4.8						
ASAR	**Alice Springs**	**42.02**	**261**	P	**P**	**03 08 58.6**	**+0.1**
	5.1nm,0.9s,mb4.0,baz=98,slow=7.5,SNR=33						
ASAR				ScP	ScP	03 13 45.2	+4.2
	0.9nm,0.8s,baz=103,slow=4.6,SNR=5.1						
WRA	**Warramunga Arr**	**42.42**	**266**	P	**P**	**03 09 00.9**	**-0.7**
	3.0nm,0.3s,mb4.3,baz=92,slow=8.5,SNR=71						
NVAR	**Mina Array Bea**	**84.89**	**44**	P	**P**	**03 13 32.7**	**+0.4**
	0.5nm,0.6s,mb3.2,baz=223,slow=7.3,SNR=3.6						
TXAR	**Lajitas Array**	**90.53**	**58**	P	**P**	**03 13 59.6**	**+0.6**
	0.6nm,0.7s,mb3.6,baz=216,slow=6.4,SNR=11						
ILAR	**Eielson Array**	**92.23**	**14**	P	**P**	**03 14 04.8**	**-1.2**
	0.4nm,0.9s,mb3.5,baz=231,slow=5.7,SNR=3.8						
ARCES	**ARCESS Array B**	**132.10**	**348**	PKP	PKPdf	03 20 05.0	-0.9
	2.3nm,0.9s,baz=35,slow=4.4,SNR=5.0						
BRTR	**Keskin Array B**	**147.73**	**307**	PKPbc	PKPbc	03 20 38.8	+0.3
	0.2nm,0.5s,baz=98,slow=3.6,SNR=2.5						

IDC 21 03:52:44.2±1.7, 11.15N×143.81E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/21, mbtmp3.4/3, Error ellipse: s-maj=250.1km s-min=27.1km az=110.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.27**	**197**	P	P	03 59 14.0	-0.8
	0.5nm,0.7s,baz=20,slow=9.5,SNR=6.5						
ASAR	**Alice Springs**	**35.93**	**196**	P	P	03 59 47.4	+0.8
	0.5nm,0.8s,baz=20,slow=11,SNR=3.6						
ILAR	**Eielson Array**	**71.20**	**25**	P	P	04 04 04.8	+0.1
	0.3nm,0.6s,baz=252,slow=5.2,SNR=6.3						

*FUNV **21** 03:59:50.1, 6.67N×73.24W, h176km, MW3.7*
*ISCJB **21** 03:59:51.1±0.5, 6.77N±0.06×72.97W±0.05, h176km±6km, mb3.4/3, Error ellipse: s-maj=10.5km s-min=7.1km az=137.3*
*NEIC **21** 03:59:52.5±0.6, 6.64N×72.96W, h176km±7km, Error ellipse: s-maj=13.6km s-min=8.8km az=127.0*
*IDC **21** 03:59:52.1±1.4, 6.61N×72.96W, h171km±15km, mb3.1/3, mb1 3.5/5, mb1mx3.2/21, mbtmp3.4/5, Error ellipse: s-maj=27.5km s-min=18.8km az=154.0*

ISC 21 03:59:52.0±0.5, 6.75N±0.05×72.97W±0.05, h169km±6km, n33, σ0.95/40, mb3.4/3, 12C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.28**	**30**	*i* P	**Pn**	**04 00 21.3**	**+0.3**
CAPV				*e*S	**Sn**	**04 00 43.5**	**+0.2**
ROSC	**El Rosal**	**2.32**	**216**	*e*Pn	**Pn**	**04 00 32.6**	**+0.6**
ROSC				*e*S	**Sn**	**04 00 59.4**	**-3.7**
ROSC	**El Rosal**	**2.32**	**216**	P	**Pn**	**04 00 33.1**	**+1.0**
	73nm,0.3s,baz=102,slow=6.5,SNR=572						
ROSC				S	**Sn**	**04 01 01.7**	**-1.4**
	49nm,0.3s,baz=79,slow=21,SNR=8.0						
SOCV	**Socops**	**2.59**	**54**	*i* P	**Pn**	**04 00 35.9**	**+0.8**
SOCV				*e*S	**Sn**	**04 01 10.3**	**+1.7**
VIGV	**El Vigia**	**2.61**	**37**	*e*P	**Pn**	**04 00 35.8**	**+0.3**
VIGV				*e*S	**Sn**	**04 01 09.0**	**-0.1**
SDV	**Santo Domingo**	**3.14**	**47**	*e*Pn	**Pn**	**04 00 42.6**	**+0.8**
SDV				*e*S	**Sn**	**04 01 20.6**	**0.0**
ELOV	**Elorza**	**3.47**	**86**	*i* P	**Pn**	**04 00 47.4**	**+1.4**
ELOV				*e*S	**Sn**	**04 01 28.4**	**+0.4**
VIRV	**Villa del Rosa**	**3.77**	**8**	*e*P	**Pn**	**04 00 48.1**	**-1.7**
VIRV				*e*S	**Sn**	**04 01 31.6**	**-3.3**
QARV	**Quebrada Arrib**	**4.20**	**35**	*i* P	**Pn**	**04 00 55.6**	**+0.3**
SANV	**Sanarito**	**4.36**	**51**	*e*P	**Pn**	**04 00 57.5**	**+0.1**
CURV	**Curarigua**	**4.40**	**42**	*i* P	**Pn**	**04 00 57.9**	**0.0**
DABV	**Dabajuro**	**4.74**	**29**	*e*P	**Pn**	**04 01 02.1**	**-0.2**
TEPV	**Terepaima**	**4.91**	**49**	*i* P	**Pn**	**04 01 04.9**	**+0.2**
SIQV	**Siquisique**	**4.97**	**39**	*i* P	**Pn**	**04 01 05.0**	**-0.5**
BAUV	**El Baul**	**5.34**	**66**	*i* P	**Pn**	**04 01 09.4**	**-0.9**
MAPV	**Macapo**	**5.41**	**55**	*i* P	**Pn**	**04 01 11.1**	**0.0**
IMOV	**Isla Los Monje**	**5.93**	**20**	*e*P	**Pn**	**04 01 17.0**	**-1.0**
JACV	**Jacura**	**5.94**	**43**	*e*P	**Pn**	**04 01 17.5**	**-0.6**
MONV	**Montecano**	**5.95**	**30**	*e*P	**Pn**	**04 01 17.0**	**-1.3**
TURV	**Turiamo**	**6.26**	**54**	*e*P	**Pn**	**04 01 21.7**	**-0.6**
CAOV	**Caicara del Or**	**6.62**	**85**	*i* P	**Pn**	**04 01 26.3**	**-0.8**
BIRV	**Birongo**	**7.58**	**60**	*i* eP	**Pn**	**04 01 38.8**	**-1.0**
CUPV	**Cœpira**	**7.82**	**65**	*e*P	**Pn**	**04 01 42.2**	**-0.8**
OTAV	**Otavalo**	**8.47**	**220**	*e*Pn	**Pn**	**04 01 51.2**	**-0.4**
PCRV	**Puerto La Cruz**	**8.91**	**67**	P	**Pn**	**04 01 59.7**	**+2.3**
	1.1nm,0.3s,baz=69,slow=3.4,SNR=12						
PCRV	**Puerto La Cruz**	**8.91**	**67**	*e*P	**Pn**	**04 01 57.6**	**+0.1**
MTDJ	**Mount Denham**	**12.24**	**339**	*e*Pn	**Pn**	**04 02 42.7**	**+1.8**
MTDJ				*e*S	**Sn**	**04 04 43.5**	**-1.3**
GTBY	**Guantanamo Bay**	**13.26**	**351**	*e*Pn	**Pn**	**04 02 56.1**	**+2.2**
TXAR	**Lajitas Array**	**36.62**	**312**	P	**P**	**04 06 42.9**	**+0.7**
	0.2nm,0.4s,mb3.1,baz=125,slow=8.6,SNR=6.0						
YKA	**Yellowknife Ar**	**63.38**	**340**	P	**P**	**04 10 03.4**	**+0.4**
	0.7nm,0.5s,mb3.7,baz=128,slow=7.0,SNR=5.2						
TORD	**Torodi Ar. Bea**	**73.60**	**78**	P	**P**	**04 11 06.7**	**-0.7**
	0.4nm,0.7s,mb3.2,baz=257,slow=5.7,SNR=3.6						
ASAR	**Alice Springs**	**149.20**	**234**	PKPbc	PKPbc	04 19 21.2	-0.1
	0.5nm,0.7s,baz=113,slow=3.8,SNR=4.9						
WRA	**Warramunga Arr**	**150.44**	**241**	PKPbc	PKPbc	04 19 24.3	-0.1
	0.3nm,0.5s,baz=106,slow=2.6,SNR=11						

*ISCJB **21** 04:01:18.2±1.7, 20.68S±0.08×177.78W±0.1, h332km±20km, mb3.9/13, Error ellipse: s-maj=21.1km s-min=11.7km az=15.5*
*IDC **21** 04:01:21.0±2.2, 20.66S×177.75W, h353km±23km, mb3.6/12, mb1 3.8/14, mb1mx3.7/21, mbtmp3.7/14, Error ellipse: s-maj=21.8km s-min=13.1km az=133.0*
*NEIC **21** 04:01:31.5±1.4, 20.98S×177.92W, h466km±13km, mb4.0/2, Error ellipse: s-maj=19.4km s-min=14.2km az=100.0*

ISC 21 04:01:19.2±1.7, 20.6S±0.1×177.8W±0.1, h327km±20km, n36, σ0.58/23, mb3.9/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.85**	**305**	*e*Pn	Px	04 02 57.2	
AFI	**Afiamalu**	**8.81**	**42**	*e*Pn	**Pn**	**04 03 22.1**	**-0.8**
AFI	**Afiamalu**	**8.81**	**42**	P	**Pn**	**04 03 23.1**	**+0.2**
	25nm,0.3s,baz=174,slow=3.4,SNR=17						
URZ	**Urewera**	**18.13**	**193**	P	**P**	**04 05 09.0**	**+0.3**
	1.7nm,0.3s,baz=341,slow=3.0,SNR=5.6						
URZ				S	**S**	**04 08 12.7**	**-6.3**
	0.6nm,0.3s,baz=246,slow=19,SNR=2.1						
RPZ	**Rata Peaks**	**24.85**	**199**	P	**P**	**04 06 13.0**	**+0.3**
RPZ	**Rata Peaks**	**24.85**	**199**	P	**P**	**04 06 13.0**	**+0.3**
	16nm,1.2s,mb4.1,baz=194,slow=21,SNR=3.0						
CTA	**Charters Tower**	**33.66**	**264**	P	**P**	**04 07 31.4**	**+1.0**
	3.4nm,0.4s,mb4.0,baz=80,slow=9.7,SNR=8.0						
CTAO	**Charters Tower**	**33.66**	**264**	*e*P	**P**	**04 07 31.9**	**+1.5**
	3.2nm,0.4s,mb3.9						
STKA	**Stephens Creek**	**37.90**	**244**	P	**P**	**04 08 06.3**	**+0.3**
STKA				PcP	PcP	04 10 13.5	-1.1
STKA	**Stephens Creek**	**37.90**	**244**	P	**P**	**04 08 06.3**	**+0.3**
	2.5nm,0.5s,mb3.7,baz=92,slow=11,SNR=8.4						
STKA				PcP	PcP	04 10 13.5	-1.1
	1.4nm,0.5s,baz=29,slow=13,SNR=3.0						
ASAR	**Alice Springs**	**44.67**	**257**	P	**P**	**04 09 00.3**	**-0.4**
	3.1nm,0.6s,mb3.6,baz=97,slow=8.2,SNR=40						
ASAR				PcP	PcP	04 10 35.4	-1.7
	1.6nm,0.6s,baz=105,slow=4.1,SNR=13						
WRA	**Warramunga Arr**	**44.76**	**262**	P	**P**	**04 09 00.7**	**-0.8**
	1.2nm,0.3s,mb3.5,baz=96,slow=7.8,SNR=98						
FITZ	**Fitzroy Crossi**	**53.19**	**262**	P	**P**	**04 10 04.4**	**-0.6**
	1.7nm,0.4s,mb3.7,baz=120,slow=8.3,SNR=21						
QSPA	**South Pole Qui**	**69.46**	**180**	*e*P	**P**	**04 11 51.5**	**-0.7**
	4.2nm,1.1s,mb4.1						
MJAR	**Matsushiro Arr**	**70.40**	**324**	P	**P**	**04 11 58.5**	**+0.1**
	1.5nm,0.4s,mb4.1,baz=158,slow=5.3,SNR=5.1						
PETK	**Petropavlovsk-**	**76.42**	**345**	P	**P**	**04 12 33.2**	**+0.3**
PETK	**Petropavlovsk-**	**76.42**	**345**	P	**P**	**04 12 33.2**	**+0.3**
	3.6nm,0.7s,mb4.2,baz=128,slow=9.7,SNR=7.4						
KSRS	**Korea Array**	**77.08**	**318**	P	**P**	**04 12 37.5**	**+0.5**
	0.6nm,0.4s,mb3.7,baz=128,slow=6.2,SNR=4.3						
TXAR	**Lajitas Array**	**86.97**	**57**	P	**P**	**04 13 28.8**	**+0.6**
TXAR	**Lajitas Array**	**86.97**	**57**	P	**P**	**04 13 28.8**	**+0.6**
	0.4nm,0.8s,mb3.3,baz=221,slow=7.4,SNR=4.7						
ILAR	**Eielson Array**	**88.38**	**13**	P	**P**	**04 13 33.9**	**0.0**
	0.8nm,0.5s,mb3.8,baz=220,slow=5.8,SNR=23						
CMAR	**Chiang Mai Arr**	**90.32**	**290**	P	**P**	**04 13 43.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**90.32**	**290**	P	**P**	**04 13 43.3**	**-0.8**
	3.0nm,0.7s,mb4.3,baz=126,slow=2.6,SNR=18						
ZALV	**Zalesovo Beam**	**110.69**	**321**	PKiKP	PKiKP	04 19 10.0	-3.0
	0.3nm,0.3s,baz=152,slow=9.9,SNR=3.7						
MKAR	**Makanchi Array**	**111.40**	**313**	PKiKP	PKiKP	04 19 12.1	-2.5
	0.3nm,0.3s,baz=51,slow=2.7,SNR=4.9						
KURK	**Kurchatov**	**114.19**	**317**	PKP	PKiKP	04 19 17.1	-2.7
	0.8nm,0.7s,baz=88,slow=1.9,SNR=4.3						
ARCES	**ARCESS Array B**	**129.06**	**350**	PKP	PKPdf	04 19 46.4	-1.4
	0.8nm,0.5s,baz=47,slow=1.0,SNR=13						
FINES	**FINESS Array B**	**135.93**	**344**	PKP	PKPdf	04 20 01.1	+0.2
	1.2nm,0.6s,baz=117,slow=0.3,SNR=2.6						
AKASG	**Malin Array Be**	**143.19**	**331**	PKhKP	PKPpre	04 20 09.9	
	7.5nm,0.5s,baz=43,slow=4.2,SNR=34						
AKBB	**Malin Array Si**	**143.19**	**331**	PKPdf	PKPpre	04 20 10.1	
MALT	**Malatya**	**144.14**	**307**	*e*PKPdf	PKPdf	04 20 14.9	-1.6
BR131	**Keskin Array S**	**147.04**	**312**	*e*PKPbc	PKPbc	04 20 22.2	-1.7
BRTR	**Keskin Array B**	**147.04**	**312**	PKPbc	PKPbc	04 20 22.2	-1.7
	2.5nm,0.5s,baz=139,slow=5.2,SNR=16						
CLL	**Collm**	**148.21**	**347**	*i* P	PKPbc	04 20 25.5	-1.1
CLL	**Collm**	**148.21**	**347**	*i* PKPbc	PKPbc	04 20 25.5	-1.1
	comp=Z,8.0nm,0.8s						
CLL				*e*PKPab	PKPab	04 20 31.0	+0.4
TORD	**Torodi Ar. Bea**	**172.56**	**176**	PKP	PKPdf	04 20 46.5	-3.5
	comp=Z,0.3nm,0.8s,baz=64,slow=3.4,SNR=2.5						

*ISCJB **21** 04:04:41.0±0.2, 24.75N±0.02×122.51E±0.02, h123km±2km, mb4.0/13, Error ellipse: s-maj=4.1km s-min=2.5km az=158.5*
*NEIC **21** 04:04:41.7±1.1, 24.80N×122.45E, h123km±9km, mb4.0/1, Error ellipse: s-maj=23.8km s-min=8.6km az=78.0*
*TAP **21** 04:04:42.5, 24.75N×122.48E, h115km, ML4.7, D*
*JMA **21** 04:04:42.5±0.2, 24.83N×122.53E, h113km±3km, M3.6*
*IDC **21** 04:04:43.3±4.7, 24.72N×122.29E, h138km±45km, mb3.7/12, mb1 3.8/13, mb1mx3.6/25, mbtmp3.7/13, Error ellipse: s-maj=30.4km s-min=11.8km az=69.0*

ISC 21 04:04:42.0±0.2, 24.75N±0.02×122.50E±0.02, h119km±2km, n83, σ1.03/143, mb4.0/13, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.53**	**299**	P	**Pn**	**04 05 00.5**	**+0.5**
	baz=291						
TWB1				S	**Sn**	**04 05 13.3**	**-0.2**
	baz=291						
YOJ	**Yonaguni jima**	**0.54**	**122**	P	**Pn**	**04 05 00.2**	**+0.2**
YOJ				S	**Sn**	**04 05 13.8**	**+0.2**
ILA	**Ilan**	**0.69**	**271**	P	**Pn**	**04 05 01.6**	**+0.5**
	baz=267						
ILA				S	**Sn**	**04 05 14.4**	**-1.1**
	baz=267						
NWF	**Wu-fen Shan**	**0.73**	**296**	*i* P	**Pn**	**04 05 02.0**	**+0.6**
	baz=290						
NWF				*e*S	**Sn**	**04 05 16.1**	**0.0**
	baz=290						
TWE	**Neicheng**	**0.76**	**268**	*i* P	**Pn**	**04 05 01.9**	**+0.3**
	baz=269						
TWE				*e*S	**Sn**	**04 05 15.7**	**-0.8**
	baz=269						
ENA	**Nanau**	**0.77**	**245**	*i* P	**Pn**	**04 05 02.2**	**+0.5**
	baz=242						
ENA				S	**Sn**	**04 05 16.6**	**0.0**
	baz=242						
ENTT	**Nioudou**	**0.86**	**263**	P	**Pn**	**04 05 03.2**	**+0.7**
	baz=264						
ENTT				S	**Sn**	**04 05 18.1**	**+0.1**
	baz=264						
TWA	**Mucha**	**0.87**	**286**	P	**Pn**	**04 05 02.8**	**+0.2**
	baz=278						
TWA				S	**Sn**	**04 05 17.6**	**-0.6**
	baz=278						
TAP1	**Taipei**	**0.94**	**288**	*e*P	**Pn**	**04 05 03.4**	**+0.2**
	baz=280						
TAP1				*e*S	**Sn**	**04 05 18.8**	**-0.5**
	baz=280						
TATO	**Taipei**	**0.95**	**284**	*e*Pn	**Pn**	**04 05 03.1**	**-0.3**
TATO				*e*S	**Sn**	**04 05 18.1**	**-1.5**
TWY	**Chenhua**	**0.97**	**303**	*e*P	**Pn**	**04 05 04.0**	**+0.5**
	baz=296						
TWY				*e*S	**Sn**	**04 05 19.9**	**-0.1**
	baz=296						
NACB	**Ninganchiao**	**1.01**	**235**	*e*Pn	**Pn**	**04 05 03.5**	**-0.5**
NACB				*e*S	**Sn**	**04 05 20.2**	**-0.4**
YHNB	**Yeheng**	**1.03**	**266**	*e*Pn	**Pn**	**04 05 04.4**	**+0.3**
YHNB				*e*S	**Sn**	**04 05 20.1**	**-0.8**
NSK	**Sanguang**	**1.04**	**266**	*e*P	**Pn**	**04 05 04.8**	**+0.5**
	baz=273						
NSK				S	**Sn**	**04 05 19.4**	**-1.8**
	baz=273						
TWS1

WGK				*e*S		**Sn**	04 05 43.9	+1.6
	baz=249							
WTCT	**Ta-ch'eng**	**2.21**	**247**	*e*S		**Sn**	04 05 45.0	-0.7
	baz=252							
CHN4	**Tsaushan**	**2.23**	**232**	P		**Pn**	04 05 19.6	+1.3
	baz=231							
CHN4				S		**Sn**	04 05 47.9	+1.8
	baz=231							
TPUB	**Ta-pu**	**2.24**	**230**	*e*Pn		**Pn**	04 05 19.3	+0.9
TPUB				*e*S		**Sn**	04 05 47.1	+0.8
STYT	**Tauyuan**	**2.25**	**226**	*e*S		**Sn**	04 05 47.7	+1.3
	baz=225							
CHY	**Chiayi**	**2.27**	**237**	*e*P		**Pn**	04 05 19.6	+0.8
	baz=237							
CHY				*e*S		**Sn**	04 05 48.1	+1.1
	baz=237							
WTP	**Ta-pu**	**2.29**	**229**	P		**Pn**	04 05 20.0	+1.0
	baz=240							
WTP				*e*S		**Sn**	04 05 49.5	+2.1
	baz=240							
TWG	**Pinlang**	**2.33**	**215**	*e*Pn		**Pn**	04 05 18.9	-0.6
TWG				*e*S		**Sn**	04 05 47.3	-1.0
TWG	**Pinlang**	**2.33**	**215**	P		**Pn**	04 05 19.0	-0.4
	baz=218							
TWG				S		**Sn**	04 05 46.6	-1.6
	baz=218							
CHN1	**Nanshi**	**2.39**	**230**	P		**Pn**	04 05 21.3	+1.1
	baz=238							
CHN1				*e*S		**Sn**	04 05 50.6	+1.0
	baz=238							
CHN8	**Yiju**	**2.52**	**237**	*e*P		**Pn**	04 05 22.6	+0.7
	baz=236							
CHN8				*e*S		**Sn**	04 05 52.4	-0.3
	baz=236							
JMJ	**Miyako jima 2**	**2.54**	**88**	S		**Sn**	04 05 53.1	0.0
ECL	**Taimali**	**2.57**	**214**	P		**Pn**	04 05 22.0	-0.6
	baz=207							
ECL				*e*S		**Sn**	04 05 51.8	-2.1
	baz=207							
SCLT	**Jiali**	**2.63**	**234**	*e*S		**Sn**	04 05 55.9	+0.6
	baz=241							
SSD	**Sandimen**	**2.63**	**221**	*e*P		**Pn**	04 05 24.9	+1.4
	baz=221							
SSD				*e*S		**Sn**	04 05 57.0	+1.8
	baz=221							
JOGS	**Gusukube**	**2.64**	**89**	*e*S		**Sn**	04 05 56.0	+0.6
EAST	**Anshuo**	**2.80**	**213**	P		**Pn**	04 05 25.4	-0.3
	baz=209							
EAST				S		**Sn**	04 05 58.0	-1.3
	baz=209							
LAY	**Lan-yu**	**2.84**	**198**	*e*P		**Pn**	04 05 26.0	-0.1
	baz=200							
LAY				*e*S		**Sn**	04 05 57.3	-2.8
	baz=200							
SCZT	**Fangliau**	**2.93**	**217**	*e*P		**Pn**	04 05 27.6	+0.3
	baz=216							
SCZT				*e*S		**Sn**	04 06 02.0	-0.2
	baz=216							
PNG	**Penghu**	**2.94**	**247**	P		**Pn**	04 05 26.9	-0.5
	baz=246							
PNG				*e*S		**Sn**	04 05 59.4	-3.0
	baz=246							
JKE	**Kume jima 2**	**4.17**	**67**	P		**Pn**	04 05 44.3	+0.5
JKE				*e*S		**Sn**	04 06 32.6	+0.8
JAGN	**Aguni-jima**	**4.65**	**66**	P		**Pn**	04 05 50.6	+0.4
JAGN				S		**Sn**	04 06 43.0	-0.2
JOW	**Kunigami**	**5.60**	**67**	P		**Pn**	04 06 01.9	-1.1
JOW				S		**Sn**	04 07 02.7	-2.9
JTK	**Tokunoshima**	**6.53**	**61**	P		**Pn**	04 06 13.9	-1.6
JTK				S		**Sn**	04 07 25.0	-3.6
KSRS	**Korea Array**	**13.48**	**19**	P		**Pn**	04 07 50.1	+1.7
	2.0nm,0.3s,baz=197,slow=11,SNR=20							
KKM	**Kota Kinabalu**	**19.55**	**199**	*e*P		**P**	04 09 02.3	+1.8
	5.0nm,0.6s							
GTA	**Gaotai**	**24.06**	**313**	*e*P		**P**	04 09 46.6	+0.5
GTA				pP			04 09 51.3	
GTA				pmax	pmax			
	comp=Z,4.0nm,0.4s,mb4.1							
SONM	**Songino Array**	**26.34**	**335**	P		**P**	04 10 05.8	-0.8
	comp=Z,3.0nm,0.7s,mb3.9,baz=151,slow=9.2,SNR=17							
MKAR	**Makanchi Array**	**38.78**	**315**	P		**P**	04 11 54.0	-0.8
	comp=Z,0.8nm,0.3s,mb4.0,baz=99,slow=10,SNR=17							
MKAR				PcP	PcP		04 14 02.8	-1.1
	comp=Z,0.9nm,0.7s,baz=83,slow=5.3,SNR=7.4							
ZALV	**Zalesovo Beam**	**40.44**	**326**	P		**P**	04 12 06.4	-2.0
	comp=Z,2.4nm,0.4s,mb4.3,baz=116,slow=8.9,SNR=9.8							
ZALV				PcP	PcP		04 14 08.1	-0.9
	comp=Z,0.5nm,0.5s,baz=116,slow=6.6,SNR=2.7							
KURK	**Kurchatov**	**42.44**	**319**	P		**P**	04 12 23.7	-1.1
	comp=Z,1.5nm,0.5s,mb4.0,baz=107,slow=10,SNR=14							
FITZ	**Fitzroy Crossi**	**42.70**	**176**	P		**P**	04 12 26.4	-0.8
	comp=Z,1.8nm,0.6s,mb4.0,baz=0.7,slow=5.1,SNR=6.2							
WRA	**Warramunga Arr**	**45.89**	**164**	P		**P**	04 12 52.5	-0.2
	comp=Z,3.1nm,0.6s,mb4.2,baz=347,slow=8.2,SNR=26							
ASAR	**Alice Springs**	**49.38**	**166**	P		**P**	04 13 18.6	-0.9
	comp=Z,0.7nm,0.5s,mb3.9,baz=348,slow=11,SNR=10							
ILAR	**Eielson Array**	**68.16**	**27**	P		**P**	04 15 29.2	+0.2
	comp=Z,0.4nm,0.7s,mb3.4,baz=293,slow=8.7,SNR=7.2							
ARCES	**ARCESS Array B**	**69.47**	**338**	P		**P**	04 15 35.6	-1.4
	comp=Z,3.0nm,1.0s,mb4.1,baz=56,slow=6.7,SNR=8.0							
FINES	**FINESS Array B**	**71.56**	**330**	P		**P**	04 15 48.5	-1.3
	comp=Z,1.0nm,0.5s,mb3.9,baz=23,slow=7.8,SNR=4.1							
NOA	**NORSAR Array B**	**78.28**	**332**	P		**P**	04 16 26.2	-2.3
	comp=Z,0.9nm,0.7s,mb3.6,baz=53,slow=5.5,SNR=4.2							
NVAR	**Mina Array Bea**	**95.20**	**44**	P		**P**	04 17 52.8	+0.5
	comp=Z,0.3nm,0.6s,mb3.9,baz=283,slow=5.5,SNR=3.2							

KRSC 21 04:34:27.1±1.1,**54°.00N**×**160°.40E**,**h92**km±82km,**ML3.7,**
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KII	**Karymskiy**	**0.56**	**274**	*e*P	Pn	04 34 42.9	+0.4
KII				*i* S	Sn	04 34 54.9	+0.9
SPN	**Mys Shipunski**	**0.93**	**194**	*e*P	Pn	04 34 47.3	+1.8
SPN				*i* S	Sn	04 35 02.7	+2.3
MKZ	**Mys Kozlova**	**0.96**	**54**	*e*P	Pn	04 34 47.9	+1.5
MKZ				*i* S	Sn	04 35 02.8	+1.9
NLC	**Nalytchevo**	**1.04**	**218**	*e*P	Pn	04 34 48.8	+1.5
NLC				*i* S	Sn	04 35 04.6	+2.0
AVH	**Avacha**	**1.23**	**234**	*e*P	Pn	04 34 51.2	+1.6
AVH				*i* S	Sn	04 35 08.9	+2.3
PET	**Petropavlovsk**	**1.43**	**228**	*e*P	Pn	04 34 53.3	+1.3
PET				*i* S	Sn	04 35 12.3	+1.5
GNL	**Ganaly**	**1.49**	**259**	*e*P	Pn	04 34 53.3	+0.6
GNL				*i* S	Sn	04 35 12.7	+0.6
KBTR	**Krutoberegovo**	**2.61**	**31**	*e*P	Pn	04 35 10.0	+2.6
KBTR				*i* S	Sn	04 35 40.9	+2.6
BKI	**Bering**	**3.46**	**67**	*e*P	Pn	04 35 20.5	+1.8
BKI				*i* S	Sn	04 35 59.8	+1.2

*TIR **21** 04:49:30.5,38°.95N×20°.55E,h2km, ML3.9*
*ATH **21** 04:49:35.4,39°.49N×20°.61E,h29km±2km, MD3.4/8*
*NEIC **21** 04:49:35.4,39°.49N×20°.61E,h29km, MD3.4(ATH), After ATH.*
*CSEM **21** 04:49:35.4,39°.49N×20°.61E,h29km, MD3.4, After ATH*
*ISCJB **21** 04:49:36.2±0.6,39°.43N±0°.04×20°.65E±0°.05,h10km, Error ellipse: s-maj=5.6km s-min=5.2km az=156.8*
ISC 21 04:49:36.1±0.9,**39°.38N**±0°.05×**20°.63E**±0°.05,**h2**km±9km,
n25,σ0**983**/38,**Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.32**	**32**	*e*Pb	**Pg**	04 49 41.8	-0.5
JAN				*e*Sb	**Sg**	04 49 47.2	+0.7
JAN	**Janina**	**0.32**	**32**	*e*PB	**Pg**	04 49 41.8	-0.5
JAN				*e*SB	**Sg**	04 49 47.2	+0.7
JAN	**Janina**	**0.32**	**32**	*e*Pb	**Pg**	04 49 41.8	-0.5
JAN				*e*Sb	**Sg**	04 49 47.2	+0.7
SRN	**Sarande**	**0.70**	**316**	*i* PG	**Pg**	04 49 49.7	+0.2
SRN				*i* SG	**Sg**	04 50 05.1	+6.6
KEK	**Kerkira**	**0.72**	**297**	*e*Pn	**Pg**	04 49 49.0	-1.0
KEK	**Kerkira**	**0.72**	**297**	*e*PN	**Pg**	04 49 49.0	-1.0
KEK	**Kerkira**	**0.72**	**297**	*e*Pn	**Pg**	04 49 49.0	-1.0
EVR	**Evrytania**	**1.03**	**117**	*e*Pn	**Pg**	04 49 55.8	0.0
EVR	**Evrytania**	**1.03**	**117**	*e*PN	**Pg**	04 49 55.8	0.0
EVR	**Evrytania**	**1.03**	**117**	*e*Pn	**Pg**	04 49 55.8	0.0
THL	**Klokotos Trika**	**1.08**	**80**	*e*PN	**Pg**	04 49 56.5	-0.4
THL				*e*SN	**Sg**	04 50 11.6	+0.6
THL	**Klokotos Trika**	**1.08**	**80**	*e*Pn	**Pg**	04 49 56.5	-0.4
THL				*e*Sn	**Sg**	04 50 11.6	+0.6
VLS	**Valsamata**	**1.21**	**182**	*e*Pb	**Pb**	04 49 59.2	-0.4
VLS				*e*Sn	**Sn**	04 50 18.3	+1.4
VLS	**Valsamata**	**1.21**	**182**	*e*PB	**Pb**	04 49 59.2	-0.4
VLS				*e*SN	**Sn**	04 50 18.3	+1.4
VLS	**Valsamata**	**1.21**	**182**	*e*Pb	**Pb**	04 49 59.2	-0.4
VLS				*e*Sn	**Sn**	04 50 18.3	+1.4
KBN	**Korca**	**1.25**	**5**	*i* PN	**Pg**	04 50 00.8	+0.8
KBN				*i* SN	**Sg**	04 50 21.1	+5.0
AGG	**Agios Georgios**	**1.37**	**105**	*e*Pn	**Pn**	04 50 02.0	-0.2
AGG				*e*Sn	**Sn**	04 50 20.3	-0.6
AGG	**Agios Georgios**	**1.37**	**105**	*e*PN	**Pn**	04 50 02.0	-0.2
AGG				*e*SN	**Sn**	04 50 20.3	-0.6
AGG	**Agios Georgios**	**1.37**	**105**	*e*Pn	**Pn**	04 50 02.0	-0.2
AGG				*e*Sn	**Sn**	04 50 20.3	-0.6
EFP	**Efpalio**	**1.38**	**133**	*e*PN	**Pn**	04 50 02.6	+0.2
EFP	**Efpalio**	**1.38**	**133**	*e*Pn	**Pn**	04 50 02.6	+0.2
LIT	**Litokhoron**	**1.60**	**63**	*e*Pb	**Pn**	04 50 02.6	-2.8
LIT	**Litokhoron**	**1.60**	**63**	*e*PB	**Pn**	04 50 02.6	-2.8
LIT	**Litokhoron**	**1.60**	**63**	*e*Pb	**Pn**	04 50 02.6	-2.8
BCI	**Bajram Curri**	**3.01**	**352**	*i* PN	**Pn**	04 50 25.4	+0.6

*ISCJB **21** 04:49:49.7±0.3,38°.96N±0°.02×26°.93E±0°.02,h6km±3km, Error ellipse: s-maj=3.3km s-min=2.6km az=165.7*
*CSEM **21** 04:49:49.9±0.1,38°.95N×26°.89E,h10km, MD3.2, Error ellipse: s-maj=3.4km s-min=2.4km az=83.0*
*DDA **21** 04:49:49.2,38°.97N×26°.95E,h26km±1km, Md3.0*
*ATH **21** 04:49:49.0,38°.99N×26°.97E,h31km±1km, MD3.6/5*
*NEIC **21** 04:49:49.0,38°.97N×26°.93E,h5km, MD3.6(ATH), MD3.2(ISK), After ISK.*
*ISK **21** 04:49:49.4,38°.96N×26°.93E,h9km, MD3.2*
ISC 21 04:49:50.4±0.3,**38°.96N**±0°.02×**26°.93E**±0°.03,**h10**km±3km,
n92,σ0**994**/134,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AYVA	**Ayvalik**	**0.40**	**332**	*i* P	**Pg**	04 49 57.3	-0.8
AYVA				*i* S	**Sg**	04 50 03.6	+0.2
AYVA	**Ayvalik**	**0.40**	**332**	*i* P	**Pg**	04 49 57.3	-0.9
AYVA				*i* S	**Sg**	04 50 03.6	+0.2
BLCB	**Balcova**	**0.58**	**171**	*e*PG	**Pg**	04 50 01.6	0.0
BLCB				SG	**Sg**	04 50 09.4	+0.3
BLCB	**Balcova**	**0.58**	**171**	*e*Pg	**Pg**	04 50 01.6	0.0
BLCB				*i* Sg	**Sg**	04 50 09.4	+0.3
PRK	**Paraskevi**	**0.59**	**300**	*e*Pn	**Pg**	04 50 01.7	0.0
PRK				*e*Sn	**Sg**	04 50 10.7	+1.3
PRK	**Paraskevi**	**0.59**	**300**	*e*PN	**Pg**	04 50 01.7	0.0
PRK				*e*SN	**Sg**	04 50 10.7	+1.3
PRK	**Paraskevi**	**0.59**	**300**	*e*Pn	**Pg**	04 50 01.7	0.0
PRK				*e*Sn	**Sg**	04 50 10.7	+1.3
KDAG	**Bornova**	**0.61**	**154**	*i* P	**Pg**	04 50 00.9	-1.4
KDAG				*i* S	**Sg**	04 50 09.4	-0.8
KDAG	**Bornova**	**0.61**	**154**	*i* P	**Pg**	04 50 00.9	-1.3
KDAG				*i* S	**Sg**	04 50 09.4	-0.9
IZM	**Izmir**	**0.62**	**155**	*e*PG	**Pg**	04 50 01.8	-0.5
IZM				*e*SG	**Sg**	04 50 11.4	+1.1
IZM	**Izmir**	**0.62**	**155**	*e*Pg	**Pg**	04 50 01.8	-0.5
IZM				*e*Sg	**Sg**	04 50 11.4	+1.1
URLA	**Izmir**	**0.65**	**204**	*i* P	**Pg**	04 50 02.0	-0.9
URLA				*i* S	**Sg**	04 50 12.6	+1.1
URLA	**Izmir**	**0.65**	**204**	*i* P	**Pg**	04 50 02.0	-0.9
URLA				*i* S	**Sg**	04 50 12.6	+1.2
AKS	**Akhisar**	**0.69**	**96**	*e*PG	**Pg**	04 50 03.3	-0.5
AKS				*e*SG	**Sg**	04 50 13.3	+0.5
AKS	**Akhisar**	**0.69**	**96**	*e*Pg	**Pg**	04 50 03.3	-0.5
AKS				*e*Sg	**Sg**	04 50 13.3	+0.4
AKHS	**Akhisar**	**0.70**	**96**	*i* P	**Pg**	04 50 03.4	-0.4
AKHS				*i* S	**Sg**	04 50 12.6	-0.3
AKHS	**Akhisar**	**0.70**	**96**	*i* P	**Pg**	04 50 03.4	-0.4
AKHS				*i* S	**Sg**	04 50 12.6	-0.3
CHOS	**Chios island**	**0.89**	**230**	*e*PN	**Pg**	04 50 06.9	-0.6
CHOS				*e*SN	**Sg**	04 50 20.4	+1.4
CHOS	**Chios island**	**0.89**	**230**	*e*Pn	**Pg**	04 50 06.9	-0.6
CHOS				*e*Sn	**Sg**	04 50 20.4	+1.4
BALY	**Balya**	**0.95**	**34**	*i* P	**Pg**	04 50 07.7	-0.9
BALY				*i* S	**Sg**	04 50 23.0	+2.0
BALY	**Balya**	**0.95**	**34**	*i* P	**Pg**	04 50 07.7	-0.9
BALY				*i* S	**Sg**	04 50 23.0	+2.0
EZN	**Ezine**	**0.98**	**332**	*e*PG	**Pg**	04 50 08.4	-0.9
EZN	**Ezine**	**0.98**	**332**	*e*Pg	**Pg**	04 50 08.5	-0.8
BALB	**Balikesir**	**1.01**	**47**	*e*PG	**Pg**	04 50 09.5	-0.2
BALB	**Balikesir**	**1.01**	**47**	*e*Pg	**Pg**	04 50 09.5	-0.2
BOZC	**Bozcaada**	**1.11**	**323**	*i* P	**Pb**	04 50 11.9	+0.2
BOZC				*i* P		04 50 11.9	
BOZC				*i* S	**Sg**	04 50 27.1	+0.8
BOZC				*i* S	**Sg**	04 50 27.1	+0.8
GONE	**Gonen-Balikesi**	**1.24**	**28**	*e*PN	**Pn**	04 50 12.7	-1.0
GONE	**Gonen-Balikesi**	**1.24**	**28**	*e*Pn	**Pn**	04 50 12.7	-1.0
SMG	**Samos**	**1.25**	**183**	*e*Pn	**Pn**	04 50 12.5	-1.4
SMG				*e*Sn	**Sn**	04 50 30.2	-0.5
SMG	**Samos**	**1.25**	**183**	*e*PN	**Pn**	04 50 12.5	-1.4
SMG				*e*SN	**Sn**	04 50 30.2	-0.5
SMG	**Samos**	**1.25**	**183**	*e*Pn	**Pn**	04 50 12.5	-1.4
SMG				*e*Sn	**Sn**	04 50 30.2	-0.5
GCAM	**G?zelcaml?**	**1.28**	**169**	*i* P	**Pn**	04 50 13.7	-0.5
GCAM				*i* S	**Sb**	04 50 31.7	+0.7
GCAM	**G?zelcaml?**	**1.28**	**169**	*i* P	**Pn**	04 50 13.7	-0.6
GCAM				*i* S	**Sb**	04 50 31.7	+0.7
DURS	**Dursunbey**	**1.36**	**61**	*i* P	**Pn**	04 50 14.9	-0.5
DURS				*i* S	**Sb**	04 50 31.1	-2.3
DURS	**Dursunbey**	**1.36**	**61**	*i* P	**Pn**	04 50 14.9	-0.5
DURS				*i* S	**Sb**	04 50 31.1	-2.3
DEMI	**Demirci**	**1.40**	**86**	*i* P	**Pn**	04 50 15.8	-0.1
DEMI				*i* S	**Sn**	04 50 34.2	-0.1
DEMI	**Demirci**	**1.40**	**86**	*i* P	**Pn**	04 50 15.8	-0.1
DEMI				*i* S	**Sn**	04 50 34.2	-0.2
KULA	**Kula-Manisa**	**1.43**	**108**	*e*PN	**Pn**	04 50 16.8	+0.5
KULA	**Kula-Manisa**	**1.43**	**108**	*e*Pn	**Pn**	04 50 16.1	-0.2
GADA	**Gvkgeada**	**1.47**	**327**	*e*PN	**Pn**	04 50 17.6	+0.7
GADA	**Gvkgeada**	**1.47**	**327**	*e*Pn	**Pn**	04 50 16.8	-0.1
GELI	**Tayfur-Gelibol**	**1.48**	**346**	*e*PN	**Pn**	04 50 16.8	-0.3
GELI	**Tayfur-Gelibol**	**1.48**	**346**	*e*Pn	**Pn**	04 50 16.6	-0.5
AYDN	**Tasoluk**	**1.50**	**150**	*i* P	**Pn**	04 50 16.4	-0.8
AYDN				*i* S	**Sn**	04 50 37.5	+0.7
AYDN	**Tasoluk**	**1.50**	**150**	*i* P	**Pn**	04 50 16.4	-0.8
AYDN				*i* S	**Sn**	04 50 37.5	+0.7
EDC	**Edincik**	**1.56**	**27**	*e*PN	**Pn**	04 50 17.1	-1.2
EDC	**Edincik**	**1.56**	**27**	*e*Pn	**Pn**	04 50 17.2	-1.0
BNT	**Bandirma**	**1.59**	**28**	*e*PN	**Pn**	04 50 17.1	-1.5
KCTX	**Karacabey (Bur**	**1.71**	**40**	*e*PN	**Pn**	04 50 19.5	-0.7
KCTX	**Karacabey (Bur**	**1.71**	**40**	*e*Pn	**Pn**	04 50 19.5	-0.7
RKY	**Sarkoy-Tekirda**	**1.74**	**6**	*e*PN	**Pn**	04 50 20.9	+0.2
RKY	**Sarkoy-Tekirda**	**1.74**	**6**	*e*Pn	**Pn**	04 50 20.9	+0.3
ERIK	**Erikli-Kesan**	**1.74**	**350**	*e*PN	**Pn**	04 50 21.0	+0.3
ERIK	**Erikli-Kesan**	**1.74**	**350**	*e*Pn	**Pn**	04 50 21.0	+0.4
SART	**Tekirdag**	**1.74**	**6**	*i* P	**Pn**	04 50 19.6	-1.0
SART				*i* S	**Sn**	04 50 42.2	-0.6
SART	**Tekirdag**	**1.74**	**6**	*i* P	**Pn**	04 50 19.6	-1.0
SART				*i* S	**Sn**	04 50 42.2	-0.7
MLSB	**Milas**	**1.79**	**158**	*e*PN	**Pn**	04 50 21.9	+0.6
MLSB	**Milas**	**1.79**	**158**	*e*Pn	**Pn**	04 50 21.9	+0.6
MFT	**Murefte**	**1.85**	**8**	*e*PN	**Pn**	04 50 21.8	-0.3
MFT	**Murefte**	**1.85**	**8**	*e*Pn	**Pn**	04 50 21.8	-0.3
ENEZ	**Enez**	**1.87**	**342**	*e*PN	**Pn**	04 50 23.5	+1.1
ENEZ	**Enez**	**1.87**	**342**	*e*Pn	**Pn**	04 50 23.1	+0.6
GDZ	**Gediz**	**1.99**	**85**	*i* P	**Pn**	04 50 25.6	+1.5
GDZ				*i* S	**Sn**	04 50 51.1	+1.9
GDZ	**Gediz**	**1.99**	**85**	*i* P	**Pn**	04 50 25.6	+1.5
GDZ				*i* S	**Sn**	04 50 51.1	+2.0
ALN	**Alexandroupoli**	**2.05**	**341**	*e*Pn	**Pn**	04 50 23.0	-1.9
ALN	**Alexandroupoli**	**2.05**	**341**	*e*PN	**Pn**	04 50 23.0	-1.9
ALN	**Alexandroupoli**	**2.05**	**341**	*e*Pn	**Pn**	04 50 23.0	-1.9
MDNY	**Mudanya-Bursa**	**2.07**	**46**	*e*PN	**Pn**	04 50 26.0	+0.9
MDNY	**Mudanya-Bursa**	**2.07**	**46**	*e*Pn	**Pn**	04 50 25.6	+0.5
ULDT	**Uludag**	**2.08**	**55**	*i* P	**Pn**	04 50 24.2	-1.1
ULDT				*i* S	**Sn**	04 50 51.8	+0.6
ULDT	**Uludag**	**2.08**	**55**	*i* P	**Pn**	04 50 24.2	-1.1
ULDT				*i* S	**Sn**	04 50 51.8	+0.6
KHAL	**Karahalli**	**2.09**	**105**	*i* P	**Pn**	04 50 25.2	-0.3
KHAL				*i* S	**Sn**	04 50 56.9	+5.4
KHAL	**Karahalli**	**2.09**	**105**	*i* P	**Pn**	04 50 25.2	-0.2
KHAL				*i* S	**Sn**	04 50 56.9	+5.4
YER	**Yerkesik**	**2.11**	**149**	*e*PN	**Pn**	04 50 26.5	+0.8
YER	**Yerkesik**	**2.11**	**149**	*e*Pn	**Pn**	04 50 26.5	+0.8
KHL	**Karahalli**	**2.13**	**106**	*e*PN	**Pn**	04 50 26.8	+0.8
KHL	**Karahalli**	**2.13**	**106**	*e*Pn	**Pn**	04 50 26.8	+0.8
APE	**Apeiranthos**	**2.18**	**211**	*e*Pn	**Pn**	04 50 25.1	-1.6
APE	**Apeiranthos**	**2.18**	**211**	*e*PN	**Pn**	04 50 25.1	-1.6
APE	**Apeiranthos**	**2.18**	**211**	*e*Pn	**Pn**	04 50 25.1	-1.6
ARMT	**Armutlu**	**2.19**	**42**	*e*PN	**Pn**	04 50 27.7	+0.9
ARMT	**Armutlu**	**2.19**	**42**	*e*Pn	**Pn**	04 50 27.7	+0.9
SLVT	**Silivri**	**2.47**	**23**	*e*PN	**Pn**	04 50 32.2	+1.5
SLVT	**Silivri**	**2.47**	**23**	*e*Pn	**Pn**	04 50 31.2	+0.5
YLV	**Yalova**	**2.48**	**49**	*e*PN	**Pn**	04 50 32.1	+1.4
YLV	**Yalova**	**2.48**	**49**	*e*Pn	**Pn**	04 50 31.6	+0.8
BUY	**Buyukada**	**2.53**	**41**	*e*S	**Sn**	04 51 09.6	+7.1
CTKS	**Kestanelik-??a**	**2.58**	**28**	*e*PN	**Pn**	04 50 33.6	+1.4
CTKS	**Kestanelik-??a**	**2.58**	**28**	*e*Pn	**Pn**	04 50 33.1	+0.9
ADVT	**Abdulvahap**	**2.62**	**55**	*e*PN	**Pn**	04 50 34.4	+1.6
ISK	**Istanbul-Kandi**	**2.67**	**37**	*e*PN	**Pn**	04 50 34.3	+0.9
ISK	**Istanbul-Kandi**	**2.67**	**37**	*e*Pn	**Pn**	04 50 34.3	+0.9

*ISCJB **21** 04:51:57.9±0.7,36°.42N±0°.03×27°.03E±0°.05,h8km±7km, Error ellipse: s-maj=7.5km s-min=4.6km az=18.7*
*ATH **21** 04:51:57.8,36°.45N×27°.04E,h23km±3km, MD3.5/9*
*ISK **21** 04:51:57.1,36°.39N×27°.06E,h3km, ML2.5*
*NEIC **21** 04:51:57.8,36°.45N×27°.04E,h23km, MD3.5(ATH), After ATH.*
*CSEM **21** 04:51:58.3±0.2,36°.39N×27°.08E,h10km, ML2.5, Error ellipse: s-maj=6.6km s-min=4.7km az=127.0*
ISC 21 04:51:58.7±0.7,**36°.42N**±0°.03×**27°.03E**±0°.06,**h11**km±7km,
n41,σ0**973**/57,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAT	**Datca**	**0.54**	**55**	*e*PG	**Pg**	04 52 08.5	-0.7
DAT				*e*SG	**Sg**	04 52 16.7	+0.5
DAT	**Datca**	**0.54**	**55**	*e*Pg	**Pg**	04 52 08.5	-0.7
DAT				*e*Sg	**Sg**	04 52 16.7	+0.5
BODT	**Bodrum**	**0.68**	**19**	*e*PG	**Pg**	04 52 11.4	-0.4
BODT				*e*SG	**Sg**	04 52 21.9	+1.2
BODT	**Bodrum**	**0.68**	**19**	*e*Pg	**Pg**	04 52 11.4	-0.4
BODT				*e*Sg	**Sg**	04 52 21.9	+1.2
KARP	**Karpathos**	**0.88**	**173**	*e*Pn	**Pg**	04 52 15.6	-0.1
KARP				*e*Sn	**Sg**	04 52 28.0	+0.8
KARP	**Karpathos**	**0.88**	**173**	*e*PN	**Pg**	04 52 15.6	-0.1
KARP				*e*SN	**Sg**	04 52 28.0	+0.8
KARP	**Karpathos**	**0.88**	**173**	*e*Pn	**Pg**	04 52 15.6	-0.1
KARP				*e*Sn	**Sg**	04 52 28.0	+0.8
ARG	**Arkhangelos**	**0.91**	**103**	*e*Pn	**Pg**	04 52 15.4	-0.8
ARG				*e*Sn	**Sg**	04 52 28.1	+0.1
ARG	**Arkhangelos**	**0.91**	**103**	*e*PN	**Pg**	04 52 15.4	-0.8
ARG				*e*SN	**Sg**	04 52 28.1	+0.1
ARG	**Arkhangelos**	**0.91**	**103**	*e*Pn	**Pg**	04 52 15.4	-0.8
ARG				*e*Sn	**Sg**	04 52 28.1	+0.1
MLSB	**Milas**	**1.06**	**34**	*e*PG	**Pg**	04 52 18.6	-0.4
MLSB	**Milas**	**1.06**	**34**	*e*Pg	**Pg**	04 52 18.6

1.4nm,0.5s,baz=176,slow=12,SNR=28
KK31 ⇑Sn Sn 05 11 30.7 +6.8
1.4nm,0.3s,baz=188,slow=23,SNR=13
TKM2 Tokmak 2 6.71 34 ⇑Pn Pn 05 10 32.2 -1.2
4.2nm,0.5s
TKM2 ⇑Sn Sn 05 11 50.6 0.0
2.8nm,0.7s
AB31 Akbulak array 14.03 330 ⇑Pn Pn 05 12 13.4 -0.3
0.4nm,0.5s,baz=178,slow=13,SNR=10
AB31 ⇑Sn Sn 05 14 52.1 +2.1
0.4nm,0.5s,baz=164,slow=23,SNR=6.2

IDC 21 05:14:50.1±2.9, 4.17S×152.36E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.7/16, mbtmp3.9/3, Error ellipse: s-maj=115.6km s-min=40.1km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.55**	**227**	P	P	05 20 03.0	+0.5
	4.1nm,0.7s,baz=53,slow=10,SNR=26						
ASAR	**Alice Springs**	**26.33**	**221**	P	P	05 20 27.9	0.0
	0.6nm,0.5s,baz=56,slow=8.6,SNR=6.9						
FITZ	**Fitzroy Crossi**	**29.59**	**240**	P	P	05 20 58.0	+0.9
	1.1nm,0.6s,baz=74,slow=7.4,SNR=4.6						
TORD	**Torodi Ar. Bea**	**149.69**	**289**	PKPbc	PKPbc	05 34 41.5	-1.5
	0.3nm,0.4s,baz=80,slow=2.0,SNR=10						

GUC 21 05:22:40.8±0.5, 23.94S×67.43W, h220km, ML4.0, 2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB04	**Plate Boundary**	**2.53**	**311**	*e*P	Pn	05 23 33.4	+7.1
PB04				*e*S	S	05 24 13.2	+11
PB04				AML	AML	05 24 15.6	
	comp=N,140nm,0.7s						
CEN1	**Los Morros**	**2.60**	**282**	⇓*i*P	Pn	05 23 28.6	+1.5
CEN1				*i* S	S	05 24 06.1	+2.8
CEN1				AML	AML	05 24 09.2	
	comp=E,109nm,0.6s						
PB01	**Plate Boundary**	**3.46**	**326**	⇓*i*P	Pn	05 23 39.4	+2.5
PB01				*i* S	S	05 24 23.6	+2.6
PB01				AML	AML	05 24 28.0	
	comp=E,55nm,0.1s						
PSGC	**Pisagua**	**5.00**	**329**	*e*P	Pn	05 23 58.0	+2.3
PSGC				*i* S	S	05 24 57.5	+2.4
PSGC				AML	AML	05 25 00.7	
	comp=N,17nm,0.4s						
MNMC	**Miæe Miæ**	**5.20**	**337**	*e*P	Pn	05 24 01.9	+3.6
MNMC				*e*S	S	05 25 03.8	+4.2
MNMC				AML	AML	05 25 06.0	
	comp=E,68nm,0.6s						

CASC 21 05:39:06.8±2.1, 8.93N×84.01W, h0km±4km, MD3.5, 4C-3D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QCR	**Quepos**	**0.51**	**343**	⇓*e*P	Pg	05 39 17.6	+1.0
QCR				*e*S	Sg	05 39 27.2	+3.9
BUS	**Buena Vista**	**0.67**	**22**	*e*P	Pg	05 39 21.1	+1.5
BUS				*e*S	Sg	05 39 32.9	+4.6
ACR	**Cerro Adams**	**0.88**	**108**	⇓*e*P	Pg	05 39 24.2	+0.5
ACR				*e*S	Sg	05 39 37.0	+1.9
URSC	**Urasca**	**0.93**	**14**	⇑*e*P	Pg	05 39 25.7	+1.2
URSC				*e*S	Sg	05 39 40.3	+3.7
LAJ	**Bijagual**	**0.93**	**353**	⇓*e*P	Pg	05 39 24.6	-0.1
LAJ				*e*S	Sg	05 39 39.3	+2.5
PRS1	**Puriscal**	**1.09**	**344**	⇑*e*P	Pg	05 39 26.0	-1.7
PRS1				*e*S	Sg	05 39 41.2	-0.5
CGA2	**Cerro Gallo 2**	**1.17**	**337**	⇑*e*P	Pg	05 39 28.9	-0.3
BRU2	**Volcan**	**1.31**	**96**	⇑*i*P	Pg	05 39 31.8	-0.1
BRU2				*e*S	Sg	05 39 51.3	+2.4
TBS2		**1.34**	**96**	*e*P	Pg	05 39 38.0	+5.4
TBS2				*e*S	Sg	05 39 57.1	+7.0
JCR	**Jicaral**	**1.42**	**310**	*e*P	Pn	05 39 32.9	-1.0

IDC 21 05:48:38.0±1.0, 17.34S×177.92W, h0km, mb3.8/5, mb1 4.2/5, mb1mx4.0/16, mbtmp3.8/5, Error ellipse: s-maj=56.5km s-min=23.4km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.19**	**259**	P	P	05 56 57.1	0.0
	0.2nm,0.3s,baz=87,slow=7.6,SNR=7.6						
ASAR	**Alice Springs**	**45.39**	**254**	P	P	05 56 59.1	+0.4
	1.9nm,0.6s,baz=89,slow=8.5,SNR=27						
NVAR	**Mina Array Bea**	**78.69**	**44**	P	P	06 00 43.6	+1.3
	1.1nm,0.7s,baz=225,slow=8.6,SNR=11						
ILAR	**Eielson Array**	**85.23**	**13**	P	P	06 01 14.6	-1.4
	0.3nm,0.4s,baz=226,slow=5.6,SNR=9.1						
TXAR	**Lajitas Array**	**85.30**	**57**	P	P	06 01 17.8	+0.6
	0.7nm,0.8s,baz=215,slow=11,SNR=5.6						
TORD	**Torodi Ar. Bea**	**175.81**	**175**	PKPab	PKPab	06 10 28.0	-1.1
	0.4nm,0.4s,baz=269,slow=2.4,SNR=9.4						

IDC 21 05:48:38.0±1.5, 12.47N×146.83E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.5/22, mbtmp3.5/6, Error ellipse: s-maj=38.7km s-min=29.7km az=84.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.21**	**300**	Pn	Pn	05 49 15.9	-0.1
	17nm,0.3s,baz=108,slow=7.6,SNR=9.2						
GUMO				Sn	Sn	05 49 39.1	-5.1
	74nm,0.3s,baz=269,slow=23,SNR=32						
WRA	**Warramunga Arr**	**34.48**	**201**	P	P	05 55 27.3	-0.5
	0.3nm,0.9s,baz=9.1,slow=8.6,SNR=4.6						
SONM	**Songino Array**	**48.75**	**324**	P	P	05 57 24.7	+0.2
	0.4nm,0.5s,baz=126,slow=14,SNR=2.2						
MKAR	**Makanchi Array**	**63.62**	**316**	P	P	05 59 12.1	+1.3
	0.2nm,0.5s,baz=100,slow=7.9,SNR=3.3						
ZALV	**Zalesovo Beam**	**63.64**	**324**	P	P	05 59 11.0	+0.1
	0.4nm,0.4s,baz=134,slow=4.2,SNR=2.6						
ILAR	**Eielson Array**	**68.76**	**25**	P	P	05 59 42.6	-1.0
	0.2nm,0.5s,baz=250,slow=6.2,SNR=6.0						

BJI 21 06:37:34.2, 32.84N×105.05E, h15km, ML3.4/8, Ms3.5/2, Ms7 3.5/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.22**	**210**	Pn	Pn	06 38 08.3	-2.1
CD2				Pg	Pg	06 38 11.0	-5.7
CD2				Sn	Sn	06 38 35.6	-1.9
CD2				Sg	Sg	06 38 39.3	-6.2
CD2				smax			
	comp=N,1μm,0.7s						
CD2				smax			
	comp=E,1μm,0.7s						
LZH	**Lanzhou**	**3.39**	**343**	*e*Pn	Pn	06 38 30.3	+3.8
LZH				Pg	Pg	06 38 38.0	-1.1
LZH				Sn	Sn	06 39 07.3	+0.8
LZH				Sg	Sg	06 39 19.9	-3.1
LZH				smax			
	comp=N,83nm,0.6s						
LZH				smax			
	comp=E,160nm,0.6s						
LZH				LR	LR		
	comp=N,350nm,4.7s						
LZH				LR	LR		
	comp=E,490nm,4.2s						
LZH				LR	LR		
	comp=Z,680nm,5.3s						
XAN	**Xi'an**	**3.45**	**69**	Pg	Pg	06 38 33.3	-7.0
XAN				Sg	Sg	06 39 15.1	-10
XAN				smax			
	comp=N,77nm,0.7s						
XAN				smax			
	comp=E,54nm,0.8s						

IDC 21 06:39:42.7±10.0, 15.49S×172.99W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.8/19, mbtmp3.9/3, MS4.1/1, Ms1 4.1/1, ms1mx3.0/28, Error ellipse: s-maj=479.4km s-min=23.3km az=140.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.96**	**37**	Pn	Pn	06 40 16.2	-1.1
	35nm,0.3s,baz=300,slow=2.0,SNR=30						
AFI				Sn	Sn	06 40 34.5	-8.1
	87nm,0.3s,baz=21,slow=23,SNR=14						
AFI				LR	LR	06 40 42.4	
	comp=Z,327nm,18.1s,baz=247,slow=30						
WRA	**Warramunga Arr**	**50.20**	**257**	P	P	06 48 40.6	-0.2
	0.7nm,0.5s,baz=90,slow=7.3,SNR=25						
ASAR	**Alice Springs**	**50.46**	**252**	P	P	06 48 42.3	-0.3
	3.0nm,0.5s,baz=86,slow=8.1,SNR=56						
GUMO	**Guam**	**50.71**	**303**	LR	LR	07 07 22.9	
	comp=Z,175nm,19.0s,baz=282,slow=33						
ILAR	**Eielson Array**	**82.46**	**11**	P	P	06 52 07.5	+0.9
	0.2nm,0.5s,baz=223,slow=6.0,SNR=8.3						

IDC 21 06:49:35.4±1.9, 6.35S×149.76E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.7/16, mbtmp3.6/4, MS3.8/1, Ms1 3.8/1, ms1mx2.8/19, Error ellipse: s-maj=104.3km s-min=25.9km az=129.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.18**	**226**	P	P	06 54 11.2	-0.5
	0.6nm,0.5s,baz=49,slow=10,SNR=14						
ASAR	**Alice Springs**	**23.00**	**220**	P	P	06 54 40.2	-1.9
	0.5nm,0.7s,baz=56,slow=10,SNR=5.1						
FITZ	**Fitzroy Crossi**	**26.27**	**241**	P	P	06 55 13.9	+1.2
	1.9nm,0.8s,baz=68,slow=5.4,SNR=2.8						
JHJ	**Hachijo jima 2**	**40.38**	**347**	LR	LR	07 12 00.4	
	comp=Z,127nm,18.9s,baz=114,slow=33						
ILAR	**Eielson Array**	**84.73**	**23**	P	P	07 02 10.4	-0.7
	0.8nm,0.8s,baz=258,slow=5.3,SNR=10						
TORD	**Torodi Ar. Bea**	**147.83**	**285**	PKPbc	PKPbc	07 09 24.1	+0.6
	0.9nm,0.5s,baz=57,slow=3.0,SNR=12						

NIED ***21*** *06:53:00, 23.90N×122.50E, h20km, Mw4.6 Best double couple: M0 7.70000×10^15 NP1:φ=60.00000°, δ=79.00000°, λ=70.00000°. NP2:φ=303.00000°, δ=23.00000°, λ=151.00000°.*
NEIC ***21*** *06:53:08.0±1.6, 23.85N×122.60E, h7km±9km, mb5.0/14, Error ellipse: s-maj=7.9km s-min=7.4km az=124.0*
BJI ***21*** *06:53:09.2, 23.83N×122.51E, h20km, mB4.8/17, mb4.6/24, ML4.0/7, Ms4.4/19, Ms7 4.3/21*
ISCJB ***21*** *06:53:10.9±0.2, 23.75N±0.02×122.56E±0.01, h36km, mb4.6/49, MS4.0/10, Error ellipse: s-maj=2.8km s-min=1.8km az=159.2*
MOS ***21*** *06:53:10.5±1.2, 23.91N×122.63E, h33km, mb5.0/23, Error ellipse: s-maj=17.9km s-min=7.5km az=121.9*
TAP ***21*** *06:53:11.2, 23.82N×122.50E, h30km, ML4.9, C*
JMA ***21*** *06:53:11.6±0.3, 23.86N×122.52E, h33km, M4.5*
IDC ***21*** *06:53:12.2±0.6, 23.96N×122.68E, h35km±3km, mb4.2/19, mb1 4.3/20, mb1mx4.2/26, mbtmp4.2/20, MS3.6/4, Ms1 3.7/4, ms1mx3.1/33, Error ellipse: s-maj=18.8km s-min=11.5km az=58.0*

ISC 21 06:53:12.2±0.2, 23.76N±0.02×122.54E±0.02, h38km, h38km±8km: pP-P, n187, σ1°27/230, mb4.6/49, MS4.0/10, 7C-23D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.82**	**32**	P	Pn	06 53 25.7	-1.6
YOJ				S	Sn	06 53 35.6	-2.7
YOJ	**Yonaguni jima**	**0.82**	**32**	P	Pn	06 53 26.0	-1.4
	baz=36						
YOJ				*e*S	Sn	06 53 36.5	-1.8
	baz=36						
HWA	**Hwalien**	**0.88**	**284**	P	Pn	06 53 26.3	-1.8
	baz=267						
HWA				S	Sn	06 53 37.7	-2.0
	baz=267						
EHP	**Heping Village**	**0.91**	**307**	*e*P	Pn	06 53 27.2	-1.4
	baz=289						
EHP				*e*S	Sn	06 53 39.4	-1.0
	baz=289						
TEGC	**Jichi Village**	**0.92**	**267**	*e*P	Pn	06 53 26.9	-1.7
	baz=261						
TEGC				S	Sn	06 53 38.9	-1.6
	baz=261						
TWD	**Chiawan**	**0.92**	**290**	⇓*i*P	Pn	06 53 26.6	-2.0
	baz=273						
TWD				*i* S	Sn	06 53 38.0	-2.6
	baz=273						
ESF	**Shoufeng Towns**	**0.95**	**277**	*e*P	Pn	06 53 27.1	-1.9
	baz=271						
ESF				*e*S	Sn	06 53 39.0	-2.4
	baz=271						
NACB	**Ninganchiao**	**0.96**	**296**	*e*Pg	Pn	06 53 26.9	-2.2
ENA	**Nanau**	**0.99**	**313**	⇓*i*P	Pn	06 53 28.3	-1.3
	baz=309						
ENA				S	Sn	06 53 41.2	-1.1
	baz=309						
ESL	**Shilin**	**1.01**	**273**	⇓*i*P	Pn	06 53 27.8	-2.1
	baz=267						
ESL				S	Sn	06 53 40.0	-3.0
	baz=267						
EHY	**Hungye**	**1.14**	**257**	⇓*i*P	Pn	06 53 30.3	-1.4
	baz=252						
EHY				S	Sn	06 53 43.8	-2.3
	baz=252						
YULB	**Yu-li**	**1.20**	**252**	*e*Pn	Pn	06 53 31.2	-1.2
YULB				*e*Sn	Sn	06 53 46.4	-1.0
HATJ	**Hateruma jima**	**1.20**	**75**	P	Pn	06 53 32.3	-0.2
HATJ				S	Sn	06 53 47.8	+0.3
TWF1	**Yuli**	**1.21**	**251**	⇓*i*P	Pn	06 53 31.3	-1.3
	baz=245						
TWF1				*e*S	Sn	06 53 45.9	-1.9
	baz=245						
WHF	**Hehuan Shan**	**1.23**	**288**	⇓*i*P	Pn	06 53 31.6	-1.3
	baz=272						
WHF				*e*S	Sn	06 53 44.2	-4.0
	baz=272						
IRIF	**Iriomote-Funau**	**1.23**	**62**	P	Pn	06 53 32.8	-0.1
IRIF				S	Sn	06 53 49.1	+0.8
ILA	**Ilan**	**1.23**	**324**	P	Pn	06 53 32.3	-0.7
	baz=321						
ILA				*e*S	Sn	06 53 48.8	+0.4
	baz=321						
TWE	**Neicheng**	**1.24**	**320**	⇓*i*P	Pn	06 53 32.6	-0.5
	baz=319						
ENTT	**Nioudou**	**1.25**	**315**	⇓*i*P	Pn	06 53 32.3	-0.9
	baz=298						
ENTT				*e*S	Sn	06 53 49.9	+1.2
	baz=298						
NNS	**Nan Shan**	**1.26**	**303**	⇓*i*P	Pn	06 53 32.3	-1.1
	baz=298						
NNS				*e*S	Sn	06 53 47.7	-1.4
	baz=298						
CHKT	**Chengkung**	**1.26**	**239**	*e*P	Pn	06 53 31.5	-1.8
	baz=223						
CHKT				S	Sn	06 53 46.4	-2.7
	baz=223						
TWT	**Tachien**	**1.34**	**292**	*e*P	Pn	06 53 33.6	-0.8
	baz=286						
TWT				S	Sn	06 53 49.2	-1.8
	baz=286						
TWB1	**Santiao Chiao**	**1.34**	**338**	P	Pn	06 53 33.4	-1.0
	baz=353						
TWB1				S	Sn	06 53 51.5	+0.4
	baz=353						
YHNB	**Yeheng**	**1.40**	**311**	*e*Pn	Pn	06 53 34.3	-0.9
NSK	**Sanguang**	**1.41**	**310**	P	Pn	06 53 34.7	-0.7
	baz=306						
NSK				*e*S	Sn	06 53 53.9	+1.1
	baz=306						
JKRS	**Kuro-shima**	**1.43**	**70**	P	Pn	06 53 36.0	+0.4
SSLB	**Suanglung**	**1.45**	**271**	*e*Pn	Pn	06 53 34.7	-1.3
NWF	**Wu-fen Shan**	**1.48**	**332**	⇓*i*P	Pn	06 53 35.8	-0.5
	baz=329						
NWF				*e*S	Sn	06 53 55.5	+1.1
	baz=329						
YUS	**Yu-Shan**	**1.48**	**260**	⇓*i*P	Pn	06 53 36.2	-0.2
	baz=254						
YUS				S	Sn	06 53 53.5	-0.9
	baz=254						
TWA	**Mucha**	**1.49**	**325**	⇓*i*P	Pn	06 53 36.5	-0.1
	baz=321						
TWA				*e*S	Sn	06 53 55.9	+1.1
	baz=321						
ELDTW	**Lidau**	**1.51**	**248**	P	Pn	06 53 35.6	-1.1
	baz=242						
ELDTW				*e*S	Sn	06 53 53.2	-1.9
	baz=242						
TATO	**Taipei**	**1.54**	**322**	*e*Pn	Pn	06 53 37.0	-0.2
TYC	**Yuchr**	**1.55**	**276**	⇓*i*P	Pn	06 53 36.7	-0.6
	baz=270						
TYC				*e*S	Sn	06 53 54.3	-1.8
	baz=270						
TAP1	**Taipei**	**1.57**	**324**	*e*P	Pn	06 53 37.3	-0.3
	baz=320						
TAP1				*e*S	Sn	06 53 59.2	+2.4
	baz=320						
JIJ	**Ishigaki jima**	**1.59**	**67**	P	Pn	06 53 37.3	-0.5
JIJ				S	Sn	06 53 56.1	-1.0
ALS	**Alishan**	**1.61**	**261**	⇓*i*P	Pn	06 53 38.3	+0.1
	baz=257						
TTN	**Taitung**	**1.62**	**232**	*e*P	Pn	06 53 37.4	-0.9
	baz=219						
TWG	**Pinlang**	**1.64**	**236**	*e*Pn	Pn	06 53 37.2	-1.4
TWG	**Pinlang**	**1.64**	**236**	P	Pn	06 53 37.4	-1.2
	baz=223						
NSTT	**Nanjuang**	**1.65**	**302**	⇓*i*P	Pn	06 53 39.1	+0.4
	baz=286						
NSTT				S	Sn	06 53 59.4	+0.7
	baz=286						
TWS1	**Kuangyinshan**	**1.68**	**323**	*e*P	Pn	06 53 38.8	-0.3
	baz=338						
WNT	**Mingjian**	**1.70**	**274**	*e*P	Pn	06 53 40.0	+0.6
	baz=268						
WNT				*e*S	Sn	06 54 01.2	+1.2
	baz=268						
CHN5	**Tsauling**	**1.71**	**265**	⇓*i*P	Pn	06 53 40.0	+0.5
	baz=259						
CHN5				*e*S	Sn	06 53 60.0	-0.3
	baz=259						
TWQ1	**Liyutan**	**1.72**	**290**	⇓*i*P	Pn	06 53 40.5	+0.8
	baz=285						
TWQ1				S	Sn	06 54 01.6	+1.3
	baz=285						
NCU	**National Centr**	**1.72**	**315**	*e*P	Pn	06 53 39.4	-0.3
	baz=312						
TWY	**Chenhua**	**1.73**	**331**	*e*P	Pn	06 53 39.9	0.0
	baz=327						
TWY				*e*S	Sn	06 54 01.9	+1.1
	baz=327						
TCU	**Taichung**	**1.75**	**283**	P	Pn	06 53 40.8	+0.8
	baz=277						
TCU				*e*S	Sn	06 54 03.1	+2.0
	baz=277						
NSY	**Sanyi**	**1.75**	**292**	*e*P	Pn	06 53 41.0	+0.9
	baz=287						
NSY				*e*S	Sn	06 54 02.1	+0.9
	baz=287						
HSN	**Hsinchu**	**1.77**	**306**	*e*P	Pn	06 53 39.8	-0.5
	baz=303						
HSN				*e*S	Sn	06 54 03.1	+1.5
	baz=303						
TPUB	**Ta-pu**	**1.81**	**256**	*e*Pn	Pn	06 53 41.5	+0.6
TPUB				*e*Sn	Sn	06 54 03.9	+1.3
WGK	**Gukeng**	**1.81**	**268**	*e*P	Pn	06 53 41.9	+1.0
	baz=264						
CHN4	**Tsaushan**	**1.83**	**258**	P	Pn	06 53 41.9	+0.7
	baz=243						
CHN4				*e*S	Sn	06 54 04.6	+1.5
	baz=243						
WTP	**Ta-pu**	**1.84**	**254**	⇓*i*P	Pn	06 53 41.9	+0.6
	baz=248						
WTP				*e*S	Sn	06 54 04.8	+1.5
	baz=248						
ECL	**Taimali**	**1.86**	**232**	⇑*i*P	Pn	06 53 40.1	-1.5
	baz=238						
ECL				*e*S	Sn	06 54 01.5	-2.4
	baz=238						
CHN1	**Nanshi**	**1.93**	**253**	⇓*i*P	Pn	06 53 43.6	+1.0
	baz=247						
CHN1				*e*S	Sn	06 54 07.2	+1.6
	baz=247						
LAY	**Lan-yu**	**1.94**	**208**	P	Pn	06 53 40.7	-1.9
	baz=205						
CHY	**Chiayi**	**1.96**	**263**	*e*P	Pn	06 53 44.1	+1.2
	baz=257						
CHY				*e*S	Sn	06 54 06.8	+0.6
	baz=257						
SSD	**Sandimen**	**2.02**	**240**	*e*P	Pn	06 53 44.0	+0.1
	baz=230						
SSD				*e*S	Sn	06 54 08.1	+0.2
	baz=230						
WTCT	**Ta-ch'eng**	**2.07**	**273**	P	Pn	06 53 45.6	+1.2
	baz=256						
WTCT				*e*S	Sn	06 54 11.1	+2.1
	baz=256						
EAST	**Anshuo**	**2.07**	**229**	*e*P	Pn	06 53 43.2	-1.3
	baz=234						
TWM1	**Shoushan**	**2.16**	**245**	*e*P	Pn	06 53 47.9	+2.2
	baz=240						
JTJ	**Tarama**	**2.16**	**66**	P	Pn	06 53 46.8	+1.1
JTJ				*e*S	Sn	06 54 11.9	+0.6
CHN8	**Yiju**	**2.17**	**260**	*e*P	Pn	06 53 45.0	-1.0
	baz=253						
CHN8				*e*S	Sn	06 54 13.8	+2.1
	baz=253						
SCLT	**Jiali**	**2.23**	**255**	*e*P	Pn	06 53 46.8	+0.1
	baz=249						
SCLT				*e*S	Sn	06 54 15.8	+2.8
	baz=249						
SCZT	**Fangliau**	**2.24**	**232**	*e*P	Pn	06 53 47.2	+0.4
	baz=222						
SCZT				*e*S	Sn	06 54 14.6	+1.3
	baz=222						
HEN	**Hengchun**	**2.41**	**224**	*e*P	Pn	06 53 50.2	+1.0
	baz=220						
TWK1	**Hengchun**	**2.41**	**222**	*e*P	Pn	06 53 49.4	+0.2
	baz=218						
PNG	**Penghu**	**2.74**	**267**	*i* P	Pn	06 53 53.9	+0.2
	baz=250						
PNG				*e*S	Sn	06 54 25.4	-0.3
	baz=250						
JOGS	**Gusukube**	**2.80**	**69**	*e*S	Sn	06 54 25.7	-1.4
QZH	**Quanzhou**	**3.79**	**289**	Pn	Pn	06 54 06.3	-1.8
QZH				Sn	Sn	06 54 47.3	-4.1
QZH				smax			
	comp=N,720nm,0.7s						
QZH				smax			
	comp=E,710nm,1.0s						
QZH				LR	LR		
	comp=Z,3μm,15.7s						
KNM	**Kinmen**	**3.81**	**281**	⇓*i*P	Pn	06 54 09.3	+0.9
	baz=273						
KNM				*e*S	Sn	06 54 51.8	-0.1
	baz=273						
JKE	**Kume jima 2**	**4.62**	**56**	P	Pn	06 54 19.2	-0.4
JOW	**Kunigami**	**6.03**	**58**	Pn	Pn	06 54 36.4	-2.4
JOW	**Kunigami**	**6.03**	**58**	Pn	Pn	06 54 36.4	-2.4
	baz=270,slow=20						
JOW	**Kunigami**	**6.03**	**58**	P	Pn	06 54 37.2	-1.6
JOW	**Kunigami**	**6.03**	**58**	*e*P	Pn	06 54 37.1	-1.7
	baz=62						
JTK	**Tokunoshima**	**7.03**	**54**	P	Pn	06 54 50.5	-2.2
SSE	**Sheshan**	**7.41**	**351**	P	Pn	06 54 56.8	-1.0
SSE				S	Sn	06 56 19.0	-1.5
SSE				smax			
	comp=N,51nm,0.9s						
SSE				smax			
	comp=E,65nm,1.4s						
SSE				LR	LR		
	comp=N,700nm,18.9s						
SSE				LR	LR		
	comp=E,780nm,18.7s						
SSE				LR	LR		
	comp=Z,2μm,13.7s						
JAM	**Amami Oshima**	**7.86**	**52**	P	Pn	06 55 02.0	-2.0
NJ2	**Nanjing**	**8.88**	**339**	*e*P	Pn	06 55 18.9	+0.9
NJ2				pP		06 55 26.0	
NJ2				sP		06 55 30.6	
NJ2				S	Sn	06 56 56.0	-0.7
NJ2				sS		06 57 13.0	
NJ2				pmax	pmax		
	comp=Z,310nm,4.6s						
NJ2				smax			
	comp=N,100nm,1.0s						
NJ2				smax			
	comp=E,70nm,0.8s						
NJ2				LR	LR		
	comp=N,80nm,11.0s						
NJ2				LR	LR		
	comp=E,760nm,18.2s						
NJ2				LR	LR		
	comp=Z,2μm,10.2s						
WHN	**Wuhan**	**9.94**	**315**	P	Pn	06 55 35.0	+2.5

WHN LR LR
comp=N,2μm,4.8s
WHN LR LR
comp=E,1μm,5.1s
WHN LR LR
comp=Z,2μm,16.8s
QIZ Qiongzhong 12.72 251 P **Pn** **06 56 11.4 +0.7**
QIZ S **Sn** **06 58 33.9 +2.8**
QIZ LR LR
comp=N,480nm,12.6s
QIZ LR LR
comp=Z,570nm,13.2s
KSRS Korea Array 14.41 17 Pn **Pn** **06 56 34.9 +1.3**
comp=Z,1.1nm,0.3s,baz=196,slow=12,SNR=31
KSRS LR LR 07 03 13.4
comp=Z,596nm,18.0s,baz=191,slow=42
XAN Xi'an 15.70 314 P **Pn** **06 56 55.3 +4.7**
XAN pmax pmax
comp=Z,5.0nm,1.0s
BJT Baijiatuau 17.08 343 *e*Pn **Pn** **06 57 09.0 +1.0**
SNY Shenyang 18.04 3 ⇓P **Pn** **06 57 18.9 -1.0**
SNY S **S** **07 00 34.6 -10**
SNY pmax pmax
comp=Z,8.0nm,0.5s
SNY pmax pmax
comp=Z,200nm,6.7s
SNY LR LR
comp=N,690nm,15.3s
SNY LR LR
comp=E,450nm,12.0s
SNY LR LR
comp=Z,990nm,13.2s
CBIJ Chichi jima 18.05 75 LR LR 07 03 01.3
comp=Z,146nm,21.9s,baz=105,slow=33
LZH Lanzhou 20.29 312 *e*P **P** **06 57 47.3 +2.6**
LZH pP 06 57 55.3
LZH sP sP 06 57 59.8 +0.6
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,160nm,5.7s
LZH LR LR
comp=N,1μm,19.3s,MS4.5
LZH LR LR
comp=E,1μm,17.8s,MS4.5
LZH LR LR
comp=Z,1μm,17.5s,MS4.2
CMAR Chiang Mai Arr 22.62 261 P **P** **06 58 11.8 +1.9**
comp=Z,0.9nm,0.3s,mb3.6,baz=68,slow=8.2,SNR=7.9
CMAR LR LR 07 07 39.5
comp=Z,112nm,18.9s,MS3.3,baz=40,slow=38
GTA Gaotai 24.76 314 ⇑P **P** **06 58 30.4 +0.1**
GTA pP 06 58 37.4
GTA sP sP 06 58 40.6 -4.8
GTA S **S** **07 02 52.9 +2.9**
GTA sS sS 07 02 59.5 -8.0
GTA pmax pmax
comp=Z,22nm,0.9s,mb4.7
GTA pmax pmax
comp=Z,190nm,6.0s
GTA LR LR
comp=N,220nm,16.2s,MS4.0
GTA LR LR
comp=E,380nm,18.0s,MS4.0
GTA LR LR
comp=Z,490nm,15.0s,MS4.1
ERM Erimo 25.01 38 *de*P **P** **06 58 34.5 +2.0**
ERM pmax pmax
comp=Z,72nm,1.7s,mb4.9
KLR Kul'dur 26.44 14 *e*P **P** **06 58 39.8 -5.5**
KLR MLR MLR
comp=N,800nm,13.0s
KLR MLR MLR
comp=Z,1μm,13.0s,MS4.7
ULN Ulaanbaatar 27.03 337 *e*P **P** **06 58 50.2 -0.5**
comp=Z,8.9nm,0.9s,mb4.3
ULN *e*pP pP 06 59 00.9 -0.4
ULN Ulaanbaatar 27.03 337 *e*P **P** **06 58 50.2 -0.5**
ULN *e**PP pP 06 59 00.9 -0.4
ULN pmax pmax
comp=Z,9.0nm,0.9s,mb4.3
SONM Songino Array 27.25 336 P **P** **06 58 51.7 -0.9**
SONM pP pP 06 59 03.1 -0.1
SONM Songino Array 27.25 336 P **P** **06 58 51.7 -0.9**
comp=Z,6.6nm,0.7s,mb4.3,baz=150,slow=9.3,SNR=41
SONM pP pP 06 59 03.1 -0.1
comp=Z,14nm,0.9s,baz=147,slow=8.5,SNR=16
YSS Yuzh-Sakhalins 28.25 30 *e*P **P** **06 59 02.7 +1.0**
YSS MLR MLR
comp=Z,300nm,15.0s,MS4.0
ZAK Zakamensk 30.51 335 *e*P **P** **06 59 19.8 -1.8**
ZAK pmax pmax
comp=Z,2.0nm,1.1s,mb3.9
WMQ Urumqi 34.84 314 *e*P **P** **07 00 00.3 +0.7**
WMQ pP pP 07 00 04.8 -5.5
WMQ sP sP 07 00 07.3 -7.6
WMQ pmax pmax
comp=Z,18nm,0.8s,mb5.0
WMQ pmax pmax
comp=Z,100nm,4.2s
WMQ LR LR
comp=N,82nm,17.0s
WMQ LR LR
comp=Z,110nm,15.0s,MS3.7
MK31 Makanchi Array 39.50 316 *e*P **P** **07 00 39.1 0.0**
MK31 *e*PP PP 07 01 58.2 -12
MKAR Makanchi Array 39.50 316 P **P** **07 00 38.9 -0.2**
MKAR pP pP 07 00 50.3 +0.4
MKAR Makanchi Array 39.50 316 P **P** **07 00 38.9 -0.2**
comp=Z,22nm,0.9s,mb4.9,baz=104,slow=9.7,SNR=124
MKAR pP pP 07 00 50.3 +0.4
comp=Z,9.2nm,0.8s,baz=101,slow=9.3,SNR=8.8
ZAA0 Zalesovo Array 41.27 327 *e*P **P** **07 00 52.3 -1.3**
ZAA0 *e* pP 07 01 02.8 -1.7
ZAA0 *e*PP PP 07 02 21.5 -7.7
ZALV Zalesovo Beam 41.27 327 P **P** **07 00 51.8 -1.8**
ZALV pP pP 07 01 02.9 -1.6
ZALV Zalesovo Beam 41.27 327 P **P** **07 00 51.8 -1.8**
comp=Z,8.5nm,0.8s,mb4.5,baz=112,slow=7.6,SNR=24
ZALV pP pP 07 01 02.9 -1.6
comp=Z,15nm,0.8s,baz=112,slow=8.3,SNR=11
KSH Kashi 42.17 303 P **P** **07 01 05.1 +3.9**
KSH *e*pP pP 07 01 14.8 +2.8
KSH *e*sP sP 07 01 18.8 +2.2
KSH *e*PP PP 07 02 46.3 +7.1
KSH *e*PcP PcP 07 02 59.5 +4.5
KSH *e*ScP ScP 07 06 46.3 +3.6
KSH *e*PcS PcS 07 06 50.0 +3.2
KSH *e*S **S** **07 07 22.0 +3.4**
KSH *e*sS sS 07 07 39.0 +2.4
KSH *e*SS SS 07 10 25.6 -1.6
KSH *e*ScS ScS 07 11 02.3 +1.9
KSH pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
KSH pmax pmax
comp=Z,95nm,5.2s
KSH LR LR
comp=N,400nm,17.1s
KSH LR LR
comp=E,230nm,11.1s
KSH LR LR
comp=Z,400nm,14.1s,MS4.5
ULHL Ulahol 42.40 307 P **P** **07 01 04.8 +1.8**
SNR=21
TKM2 Tokmak 2 43.00 308 P **P** **07 01 09.8 +1.9**
SNR=42
TKM2 Tokmak 2 43.00 308 *e*P **P** **07 01 09.5 +1.7**
comp=Z,27nm,0.6s,mb5.2
TKM2 *e* 07 01 16.5
TKM2 Tokmak 2 43.00 308 *e*P **P** **07 01 09.5 +1.6**
TKM2 *e* 07 01 16.5
TKM2 pmax pmax
comp=Z,27nm,0.6s,mb5.2
KZA Kyzart 43.10 307 P **P** **07 01 11.2 +2.5**
SNR=11
KURK Kurchatov 43.21 320 P **P** **07 01 08.8 -0.6**
comp=Z,2.8nm,0.8s,mb4.1,baz=113,slow=8.1,SNR=13
KURK pP pP 07 01 19.9 -0.4
comp=Z,7.0nm,1.0s,baz=112,slow=7.8,SNR=8.1
KURK Kurchatov 43.21 320 *c i*P **P** **07 01 08.7 -0.8**
KURK pmax pmax
comp=Z,11nm,1.2s,mb4.5
KBK Karagaybulak 43.42 308 P **P** **07 01 13.2 +2.0**
SNR=8.7
CHMS Chumysh 43.62 308 P **P** **07 01 14.2 +1.3**
SNR=8.1

UCH Uchtor 43.66 307 P **P** **07 01 15.9 +2.7**
SNR=36
AAK Ala-Archa 43.74 307 P **P** **07 01 15.2 +1.4**
comp=Z,5.4nm,0.5s,mb4.5,baz=110,slow=5.4,SNR=14
AAK LR LR 07 20 15.4
comp=Z,59nm,19.2s,MS3.5,baz=191,slow=37
AAK Ala-Archa 43.74 307 *c i*P **P** **07 01 15.3 +1.4**
AAK pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
AML Almayashu 44.25 307 *e*P **P** **07 01 20.2 +2.2**
comp=Z,20nm,0.8s,mb4.9
EKS2 Erkin-Say 44.27 307 P **P** **07 01 19.7 +1.6**
SNR=15
WRA Warramunga Arr 44.94 164 P **P** **07 01 24.4 +0.8**
comp=Z,4.9nm,0.8s,mb4.4,baz=347,slow=8.5,SNR=24
KBL Kabul 47.46 296 *e*P **P** **07 01 45.3 +1.9**
comp=Z,26nm,1.0s,mb5.1
KBL *e* pP 07 01 55.9 +1.5
KBL Kabul 47.46 296 *e*P **P** **07 01 45.3 +1.9**
KBL *e* pP 07 01 55.9 +1.5
KBL pmax pmax
comp=Z,26nm,1.0s,mb5.1
ASAR Alice Springs 48.42 166 P **P** **07 01 52.2 +1.4**
comp=Z,1.6nm,0.6s,mb4.2,baz=352,slow=14,SNR=22
BVAR Borovoye Array 48.78 321 P **P** **07 01 52.8 -0.5**
comp=Z,3.2nm,0.6s,mb4.6,baz=102,slow=8.1,SNR=12
BVAR pP pP 07 02 03.4 -1.0
comp=Z,2.9nm,0.6s,baz=95,slow=8.0,SNR=6.2
BRVK Borovoye 48.85 321 *c i*P **P** **07 01 53.4 -0.5**
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
ABKAR Akbulak array 54.62 314 *e*P **P** **07 02 37.5 +0.6**
comp=Z,10nm,0.7s,mb5.0
ABKAR *e* 07 02 42.5
ABKAR *e* pP 07 02 48.3 +0.2
AKTK Aktyubinsk 55.94 316 P **P** **07 02 46.6 +0.2**
AKTK pP pP 07 02 57.5 -0.2
AKTO Aktyubinsk 55.94 316 P **P** **07 02 46.6 +0.2**
comp=Z,0.9nm,0.4s,mb4.1,baz=77,slow=14,SNR=4.2
AKTO pP pP 07 02 57.5 -0.2
comp=Z,3.1nm,0.9s,baz=103,slow=5.2,SNR=3.7
STKA Stephens Creek 58.25 161 P **P** **07 03 04.5 +1.7**
comp=Z,9.2nm,0.8s,mb4.9,baz=334,slow=7.4,SNR=10
STKA pP pP 07 03 15.0 +0.8
comp=Z,2.5nm,0.7s,baz=4.3,slow=11,SNR=1.8
GNI Garni 66.06 305 ⇓*e*P **P** **07 03 58.4 +3.1**
GNI pmax pmax
comp=Z,18nm,1.7s
KLMR Klimovskoe 66.18 328 P **P** **07 04 05.9 +10**
KLMR pmax pmax
comp=Z,18nm,2.1s,mb4.7
VRHR Novokhopersk 66.28 317 *e*P **P** **07 04 06.6 +10**
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
MIB Mutribah 66.32 293 *e*P **P** **07 03 57.3 +0.1**
MIB AMb AMB 07 04 10.6
comp=Z,45nm,0.9s,mb5.5
RDF Al-Radifah 66.37 292 *e*P **P** **07 03 58.5 +1.0**
RDF AMb AMB 07 04 12.1
comp=Z,58nm,0.9s,mb5.6
NAY Al-Naaiem 66.55 293 *e*P **P** **07 03 58.6 -0.1**
NAY AMb AMB 07 04 12.0
comp=Z,22nm,0.7s,mb5.3
KIV Kislovodsk 66.81 309 *c i*P **P** **07 04 01.1 +1.0**
KIV *e* pP 07 04 12.5 +1.0
KIV pmax pmax
comp=Z,17nm,1.0s,mb5.0
KIV MLR MLR
comp=Z,100nm,15.0s,MS4.2
BPAW Bear Paw Mtn. 67.38 28 *e*P **P** **07 04 03.8 +0.5**
comp=Z,1.5nm,0.8s,mb4.1
KDAK Kodiak Island 67.54 35 *ce*P **P** **07 04 05.1 +0.7**
VSR Storozhevoye 67.79 318 *e*P **P** **07 04 05.4 -0.7**
VSR *e* pP 07 04 16.2 -1.4
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,2.0nm,0.4s
VSR pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
OBN Obninsk 68.60 322 P **P** **07 04 21.9 -0.7**
OBN pmax pmax
comp=Z,6.0nm,1.4s,mb4.3
ILAR Eielson Array 69.02 27 P **P** **07 04 12.4 -1.2**
comp=Z,0.5nm,0.5s,mb3.7,baz=276,slow=6.1,SNR=15
ILAR pP pP 07 04 21.9 -3.1
comp=Z,0.4nm,0.7s,baz=294,slow=7.7,SNR=4.4
ANN Anapa 70.31 311 *e*P **P** **07 04 21.5 -0.3**
ANN *e**PP pP 07 04 31.5 -1.8
ANN *e*S S 07 13 27.8 -3.5
ANN pmax pmax
comp=Z,29nm,0.9s,mb5.2
ARCES ARCESS Array B 70.39 338 P **P** **07 04 21.5 -0.5**
comp=Z,1.5nm,0.7s,mb4.0,baz=62,slow=7.7,SNR=9.6
MALT Malatya 71.26 304 *e*P **P** **07 04 29.7 +1.9**
comp=Z,8.0nm,0.6s,mb4.8
MALT *e* pP 07 04 40.9 +1.6
MALT Malatya 71.26 304 *e*P **P** **07 04 29.7 +1.9**
MALT *e* pP 07 04 40.9 +1.6
MALT pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
FINES FINESS Array B 72.43 330 P **P** **07 04 33.9 -0.5**
comp=Z,2.5nm,0.7s,mb4.3,baz=56,slow=7.1,SNR=7.9
AKASG Malin Array Be 74.01 319 P **P** **07 04 43.1 -0.8**
AKASG pP pP 07 04 54.1 -1.3
AKASG Malin Array Be 74.01 319 P **P** **07 04 43.1 -0.8**
comp=Z,2.6nm,0.7s,mb4.3,baz=62,slow=5.6,SNR=5.5
AKASG pP pP 07 04 54.1 -1.3
comp=Z,3.7nm,0.7s,baz=61,slow=5.9,SNR=8.6
BR131 Keskin Array S 74.42 307 *e*P **P** **07 04 47.6 +1.1**
comp=Z,9.1nm,0.8s,mb4.8
BR131 *e* 07 04 53.3
BR131 *e* pP 07 04 58.6 +0.5
BRTR Keskin Array B 74.42 307 P **P** **07 04 47.0 +0.5**
comp=Z,6.4nm,0.8s,mb4.6,baz=101,slow=6.5,SNR=32
BRTR pP pP 07 04 58.2 +0.1
comp=Z,7.4nm,0.9s,baz=101,slow=6.4,SNR=13
KWP Kalwaria Pacla 78.31 319 *e*P **P** **07 05 09.0 +0.6**
comp=Z,16nm,1.0s,mb4.9
KWP *e* pP 07 05 20.1 +0.1
KWP Kalwaria Pacla 78.31 319 *e*P **P** **07 05 09.0 +0.7**
KWP *e* pP 07 05 20.1 +0.1
KWP pmax pmax
comp=Z,16nm,1.0s,mb4.9
NOA NORSAR Array B 79.17 333 P **P** **07 05 12.1 -0.8**
comp=Z,2.3nm,0.7s,mb4.2,baz=56,slow=5.4,SNR=7.7
NOA pP pP 07 05 23.1 -1.4
comp=Z,2.4nm,0.7s,baz=57,slow=5.9,SNR=6.7
STHS Stebnicka Huta 79.27 319 *e*P pP 07 05 25.6 +0.3
STHS Stebnicka Huta 79.27 319 *e*PCP pP 07 05 25.6 +0.3
CRVS Cervenica-Dubn 79.35 319 *e*P **P** **07 05 15.8 +1.7**
CRVS Cervenica-Dubn 79.35 319 *e*P **P** **07 05 15.8 +1.7**
VYHS Vyhne 81.10 319 *e*P **P** **07 05 24.6 +1.1**
comp=Z,2.8nm,1.0s,mb4.2
VYHS *e* 07 05 30.9
VYHS *e* pP 07 05 35.7 +0.5
VYHS Vyhne 81.10 319 *e*P **P** **07 05 24.6 +1.1**
VYHS *e* pP 07 05 35.7 +0.5
VYHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
VYHS Vyhne 81.10 319 *e*P **P** **07 05 24.6 +1.1**
VYHS *e*PCP PcP 07 05 30.9 +1.1
VYHS *e* pP 07 05 35.7 +0.5
DPC Dobruska-Polom 81.74 322 *e*P pP 07 05 38.9 +0.4
DPC Dobruska-Polom 81.74 322 *e*P pP 07 05 38.9 +0.4
BRG Berggiesshubel 82.83 323 *e*P pP 07 05 48.5 +4.3
comp=Z,3.8nm,0.8s
BRG pmax pmax
comp=N,90nm,18.1s
BRG MLR MLR
comp=E,89nm,18.4s
BRG MLR MLR
comp=Z,199nm,14.7s
BRG Berggiesshubel 82.83 323 *e*P pP 07 05 48.5 +4.2
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
BRG MLR MLR
comp=N,54nm,18.1s,MS4.1
BRG MLR MLR
comp=E,53nm,18.4s,MS4.1
BRG MLR MLR
comp=Z,119nm,14.7s,MS4.4

YKA Yellowknife Ar 82.88 23 P **P** **07 05 32.4 -0.1**
comp=Z,3.6nm,0.8s,mb4.5,baz=313,slow=4.5,SNR=7.6
YKA pP pP 07 05 42.9 -1.4
comp=Z,2.4nm,0.7s,baz=314,slow=5.1,SNR=5.0
PRU Pruhonice 82.92 322 *e*P pP 07 05 45.6 +0.9
PRU Pruhonice 82.92 322 *e*P pP 07 05 45.6 +0.9
CLL Collm 83.13 323 *e*P pP 07 05 46.0 +0.2
KHC Kasperske Hory 83.88 321 *e*P pP 07 05 49.7 0.0
KHC Kasperske Hory 83.88 321 *e*P pP 07 05 49.7 0.0
GRF Grafenberg Arr 84.93 323 *e*P pP 07 05 55.3 +0.2
comp=Z,6.0nm,1.0s
GRF Grafenberg Arr 84.93 323 *e*P pP 07 05 55.3 +0.2
GRF pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
LPG La Plagne 89.75 321 *e*P **P** **07 06 07.2 +0.6**
comp=Z,9.1nm,0.7s,mb4.9
LPG La Plagne 89.75 321 *e*P **P** **07 06 07.2 +0.6**
comp=Z,4.6nm,0.7s,mb4.9
LPG La Plagne 89.75 321 *e*P **P** **07 06 07.2 +0.6**
LPG pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
LPL La Plagne 89.75 321 *e*P **P** **07 06 07.1 +0.5**
comp=Z,11nm,0.8s,mb5.0
LPL La Plagne 89.75 321 *e*P **P** **07 06 07.1 +0.5**
comp=Z,5.6nm,0.8s,mb5.0
LPL La Plagne 89.75 321 *e*P **P** **07 06 07.1 +0.5**
LPL pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
MBDF Montbardon 90.17 320 *e*P **P** **07 06 09.4 +0.8**
SMF Signal de Mont 90.73 323 *e*P **P** **07 06 11.1 -0.1**
comp=Z,29nm,1.1s,mb5.2
SMF Signal de Mont 90.73 323 *e*P **P** **07 06 11.1 -0.1**
comp=Z,15nm,1.1s,mb5.2
SMF Signal de Mont 90.73 323 *e*P **P** **07 06 11.1 -0.1**
SMF pmax pmax
comp=Z,15nm,1.1s,mb5.2
AVF Avril sur Loir 90.91 323 *e*P **P** **07 06 11.9 -0.2**
comp=Z,27nm,1.4s,mb5.1
AVF Avril sur Loir 90.91 323 *e*P **P** **07 06 11.9 -0.2**
comp=Z,13nm,1.4s,mb5.1
AVF Avril sur Loir 90.91 323 *e*P **P** **07 06 11.9 -0.2**
AVF pmax pmax
comp=Z,13nm,1.4s,mb5.1
NVAR Mina Array Bea 95.89 44 P **P** **07 06 36.2 +1.0**
comp=Z,0.1nm,0.3s,mb3.7,baz=316,slow=6.2,SNR=4.2

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*TAP **21** 06:54:28.9, 23°.82N×122°.51E, h27km±1km, ML4.4, D*
*IDC **21** 06:54:28.9±6.7, 24°.11N×123°.32E, h37km±7km, mb4.0/5, mb1 4.0/5, mb1mx3.7/22, mbtmp4.0/5, MS3.5/2, Ms1 3.5/2, ms1mx2.9/32, Error ellipse: s-maj=149.2km s-min=69.1km az=102.0*
*ISCJB **21** 06:54:29.1±0.6, 23°.75N±0°.03×122°.56E±0°.04, h38km, mb4.0/5, Error ellipse: s-maj=5.7km s-min=3.5km az=32.5*
ISC 21 06:54:29.8±0.6, **23°.75N**±0°.03×**122°.56E**±0°.04, **h40**km, **h40**km±.9km**:pP-P, n52**, σ1$**30**/69, **mb4.0**/5, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.82**	**30**	P	P	**Pn**	**06 54 44.3**	**-0.6**
	baz=35							
YOJ				*e*S		**Sn**	**06 54 54.7**	**-1.1**
	baz=35							
HWA	**Hwalien**	**0.90**	**285**	*e*P	P	**Pn**	**06 54 43.7**	**-2.3**
	baz=267							
HWA				*e*S		**Sn**	**06 54 56.2**	**-1.7**
	baz=267							
TWD	**Chiawan**	**0.94**	**291**	*e*P	P	**Pn**	**06 54 44.5**	**-2.0**
	baz=273							
TWD				S		**Sn**	**06 54 56.4**	**-2.5**
	baz=273							
ENA	**Nanau**	**1.01**	**312**	*e*P	P	**Pn**	**06 54 46.1**	**-1.4**
	baz=310							
ESL	**Shilin**	**1.04**	**274**	P	P	**Pn**	**06 54 45.4**	**-2.4**
	baz=267							
ESL				S		**Sn**	**06 54 57.6**	**-3.5**
	baz=267							
EHY	**Hungye**	**1.16**	**258**	P	P	**Pn**	**06 54 48.6**	**-1.0**
	baz=251							
EHY				*e*S		**Sn**	**06 55 01.9**	**-2.4**
	baz=251							
TWF1	**Yuli**	**1.23**	**251**	P	P	**Pn**	**06 54 49.6**	**-0.9**
	baz=245							
TWF1				S		**Sn**	**06 55 05.0**	**-0.8**
	baz=245							
WHF	**Hehuan Shan**	**1.25**	**289**	*e*P	P	**Pn**	**06 54 49.7**	**-1.1**
	baz=272							
ILA	**Ilan**	**1.25**	**324**	*e*P	P	**Pn**	**06 54 51.0**	**+0.2**
	baz=322							
TWE	**Neicheng**	**1.27**	**320**	*i* P	P	**Pn**	**06 54 50.8**	**-0.2**
	baz=316							
TWE				*e*S		**Sn**	**06 55 06.7**	**-0.1**
	baz=316							
ENTT	**Nioudou**	**1.27**	**314**	*e*P	P	**Pn**	**06 54 50.6**	**-0.4**
	baz=299							
CHKT	**Chengkung**	**1.28**	**240**	*e*P	P	**Pn**	**06 54 50.3**	**-0.8**
	baz=223							
CHKT				*i* S		**Sn**	**06 55 04.6**	**-2.4**
	baz=223							
NNS	**Nan Shan**	**1.28**	**303**	*e*P	P	**Pn**	**06 54 49.6**	**-1.7**
	baz=290							
TWB1	**Santiao Chiao**	**1.36**	**337**	P	P	**Pn**	**06 54 51.6**	**-0.7**
	baz=337							
TWT	**Tachien**	**1.36**	**292**	*e*P	P	**Pn**	**06 54 51.7**	**-0.6**
	baz=277							
NSK	**Sanguang**	**1.43**	**310**	*e*P	P	**Pn**	**06 54 53.6**	**+0.3**
	baz=307							
NWF	**Wu-fen Shan**	**1.50**	**332**	P	P	**Pn**	**06 54 53.7**	**-0.4**
	baz=327							
NWF				*e*S		**Sn**	**06 55 13.0**	**+0.6**
	baz=327							
YUS	**Yu-Shan**	**1.50**	**260**	*e*P	P	**Pn**	**06 54 53.4**	**-0.8**
	baz=255							
TWA	**Mucha**	**1.51**	**324**	*e*P	P	**Pn**	**06 54 54.7**	**+0.3**
	baz=340							
ELDTW	**Lidau**	**1.52**	**249**	*e*P	P	**Pn**	**06 54 54.0**	**-0.5**
	baz=244							
TYC	**Yuchr**	**1.57**	**276**	*e*P	P	**Pn**	**06 54 54.5**	**-0.6**
	baz=270							
TYC				*e*S		**Sn**	**06 55 13.1**	**-1.2**
	baz=270							
TAP1	**Taipei**	**1.59**	**324**	*e*P	P	**Pn**	**06 54 55.9**	**+0.4**
	baz=321							
ALS	**Alishan**	**1.63**	**262**	*e*P	P	**Pn**	**06 54 56.3**	**+0.3**
	baz=247							
TWG	**Pinlang**	**1.65**	**236**	*e*P	P	**Pn**	**06 54 55.5**	**-0.8**
	baz=221							
TWG				*e*S		**Sn**	**06 55 14.7**	**-1.6**
	baz=221							
NSTT	**Nanjuang**	**1.67**	**302**	*e*P	P	**Pn**	**06 54 57.4**	**+0.8**
	baz=285							
NSTT				*e*S		**Sn**	**06 55 16.5**	**-0.3**
	baz=285							
TWS1	**Kuangyinshan**	**1.70**	**322**	*e*P	P	**Pn**	**06 54 57.4**	**+0.4**
	baz=337							
CHN5	**Tsauling**	**1.73**	**265**	*e*P	P	**Pn**	**06 54 58.4**	**+1.0**
	baz=261							
TWQ1	**Liyutan**	**1.74**	**290**	*e*P	P	**Pn**	**06 54 58.0**	**+0.5**
	baz=283							
TWQ1				*e*S		**Sn**	**06 55 20.1**	**+1.6**
	baz=283							
TWY	**Chenhua**	**1.75**	**330**	*e*P	P	**Pn**	**06 54 59.2**	**+1.5**
	baz=328							
TCU	**Taichung**	**1.77**	**283**	*e*P	P	**Pn**	**06 54 59.1**	**+1.2**
	baz=279							
NSY	**Sanyi**	**1.77**	**292**	*e*P	P	**Pn**	**06 54 59.3**	**+1.3**
	baz=288							
WGK	**Gukeng**	**1.83**	**268**	*e*P	P	**Pn**	**06 55 00.6**	**+1.8**
	baz=261							
WGK				*e*S		**Sn**	**06 55 22.5**	**+1.7**
	baz=261							
WTP	**Ta-pu**	**1.86**	**255**	*e*P	P	**Pn**	**06 54 60.0**	**+0.8**
	baz=250							
ECL	**Taimali**	**1.87**	**232**	*e*P	P	**Pn**	**06 54 59.0**	**-0.4**
	baz=238							
ECL				*e*S		**Sn**	**06 55 19.6**	**-2.2**
	baz=238							
LAY	**Lan-yu**	**1.94**	**209**	*e*P	P	**Pn**	**06 54 59.5**	**-0.8**
	baz=207							
CHN1	**Nanshi**	**1.95**	**254**	*e*P	P	**Pn**	**06 55 02.2**	**+1.8**
	baz=247							
CHN1				*e*S		**Sn**	**06 55 25.9**	**+2.3**
	baz=247							
SSD	**Sandimen**	**2.04**	**241**	*e*P	P	**Pn**	**06 55 02.5**	**+0.9**
	baz=229							
EAST	**Anshuo**	**2.08**	**230**	*e*P	P	**Pn**	**06 55 02.9**	**+0.6**
	baz=235							

WTCT	**Ta-ch'eng**	**2.09**	**274**	*e*P		**Pn**	**06 55 03.8**	**+1.5**
	baz=255							
WTCT				*e*S		**Sn**	**06 55 29.4**	**+2.2**
	baz=255							
CHN3	**Shinhua**	**2.13**	**252**	*e*P		**Pn**	**06 55 06.2**	**+3.4**
	baz=247							
TWM1	**Shoushan**	**2.17**	**245**	*e*P		**Pn**	**06 55 06.5**	**+3.0**
	baz=242							
CHN8	**Yiju**	**2.19**	**260**	*e*P		**Pn**	**06 55 04.2**	**+0.4**
	baz=252							
CHN8				*e*S		**Sn**	**06 55 31.4**	**+1.7**
	baz=252							
SCLT	**Jiali**	**2.25**	**256**	*e*P		**Pn**	**06 55 04.5**	**0.0**
	baz=248							
SCLT				*e*S		**Sn**	**06 55 32.9**	**+1.9**
	baz=248							
SCZT	**Fangliau**	**2.25**	**233**	*e*P		**Pn**	**06 55 06.3**	**+1.7**
	baz=222							
HEN	**Hengchun**	**2.42**	**224**	*e*P		**Pn**	**06 55 07.5**	**+0.7**
	baz=220							
JOW	**Kunigami**	**6.01**	**58**	LR		LR	06 57 26.7	
	comp=Z,464nm,21.7s,baz=207,slow=34							
MJAR	**Matsushiro Arr**	**18.56**	**43**	LR		LR	07 06 18.6	
	comp=Z,154nm,18.7s,baz=230,slow=40							
SONM	**Songino Array**	**27.27**	**336**	P		**P**	**07 00 10.4**	**+0.2**
	2.2nm,0.6s,mb3.9,baz=155,slow=10,SNR=4.4							
SONM				pP		pP	07 00 20.5	-0.6
	4.4nm,0.9s,baz=152,slow=9.5,SNR=3.2							
MKAR	**Makanchi Array**	**39.52**	**316**	P		**P**	**07 01 57.4**	**+0.7**
	2.9nm,0.5s,mb4.2,baz=100,slow=9.7,SNR=6.6							
MKAR				pP		pP	07 02 08.8	+0.9
	3.3nm,0.7s,baz=99,slow=9.9,SNR=3.3							
ZALV	**Zalesovo Beam**	**41.29**	**327**	P		**P**	**07 02 10.3**	**-0.9**
	1.5nm,0.5s,mb3.9,baz=109,slow=7.8,SNR=2.4							
ZALV				pP		pP	07 02 21.2	-1.3
	3.8nm,0.8s,baz=108,slow=9.3,SNR=3.3							
AAK	**Ala-Archa**	**43.77**	**307**	P		**P**	**07 02 34.4**	**+2.9**
	2.2nm,0.4s,mb4.2,baz=150,slow=7.3,SNR=2.5							
BRTR	**Keskin Array B**	**74.44**	**307**	P		**P**	**07 06 05.8**	**+1.8**
	1.6nm,0.7s,mb4.0,baz=116,slow=6.6,SNR=2.5							
BRTR				pP		pP	07 06 16.9	+1.0
	2.3nm,0.8s,baz=130,slow=3.7,SNR=3.6							

*TAP **21** 06:56:52.3, 23°.82N × 122°.51E, h30km ± 1km, ML3.5, C*
*JMA **21** 06:56:53.4 ± 0.3, 23°.89N × 122°.54E, h9km, M2.8*

ISC 21 06:56:50.3 ± 0.5, **23°.74N** ± 0°.03 × **122°.50E** ± 0°.02, **h1** km ± 4km, **n35**, σ 0**99**/50, **2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HWA	**Hwalien**	**0.85**	**286**	*e*P		**Pg**	**06 57 07.1**	**+0.5**
	baz=267							
HWA				*e*S		**Sg**	**06 57 20.0**	**+2.3**
	baz=267							
YOJ	**Yonaguni jima**	**0.85**	**33**	P		**Pg**	**06 57 07.3**	**+0.6**
YOJ				*e*S		**Sg**	**06 57 16.9**	**-0.9**
YOJ	**Yonaguni jima**	**0.85**	**33**	*e*P		**Pg**	**06 57 07.5**	**+0.8**
	baz=35							
TWD	**Chiawan**	**0.89**	**292**	⇓ *i* P		**Pg**	**06 57 08.0**	**+0.6**
	baz=272							
TWD				*i* S		**Sg**	**06 57 19.5**	**+0.5**
	baz=272							
ENA	**Nanau**	**0.97**	**315**	*e*P		**Pg**	**06 57 09.8**	**+0.8**
	baz=310							
ESL	**Shilin**	**0.98**	**274**	P		**Pg**	**06 57 08.8**	**-0.4**
	baz=256							
ESL				*e*S		**Sg**	**06 57 21.1**	**-0.8**
	baz=256							
EHY	**Hungye**	**1.11**	**258**	P		**Pg**	**06 57 11.8**	**+0.3**
	baz=251							
EHY				*e*S		**Sg**	**06 57 26.1**	**+0.2**
	baz=251							
TWF1	**Yuli**	**1.17**	**251**	*e*P		**Pg**	**06 57 12.7**	**0.0**
	baz=244							
TWF1				*e*S		**Sg**	**06 57 27.8**	**-0.1**
	baz=244							
WHF	**Hehuan Shan**	**1.20**	**290**	⇓ *i* P		**Pg**	**06 57 12.9**	**-0.4**
	baz=272							
CHKT	**Chengkung**	**1.22**	**239**	*e*P		**Pg**	**06 57 12.6**	**-1.2**
	baz=222							
CHKT				*e*S		**Sg**	**06 57 27.7**	**-1.9**
	baz=222							
HATJ	**Hateruma jima**	**1.23**	**75**	*e*S		**Sg**	**06 57 30.6**	**+0.6**
ENTT	**Nioudou**	**1.24**	**317**	*e*P		**Pg**	**06 57 13.6**	**-0.4**
	baz=299							
TWE	**Neicheng**	**1.24**	**322**	P		**Pg**	**06 57 13.6**	**-0.5**
	baz=316							
TWE				*e*S		**Sg**	**06 57 30.6**	**+0.5**
	baz=316							
NNS	**Nan Shan**	**1.24**	**304**	*e*P		**Pg**	**06 57 13.7**	**-0.5**
	baz=289							
IRIF	**Iriomote-Funau**	**1.27**	**62**	P		**Pg**	**06 57 15.2**	**+0.5**
IRIF				S		**Sg**	**06 57 31.2**	**+0.1**
TWB1	**Santiao Chiao**	**1.34**	**340**	*e*P		**Pg**	**06 57 16.2**	**+0.1**
	baz=337							
NSK	**Sanguang**	**1.40**	**312**	*e*P		**Pn**	**06 57 15.1**	**-1.9**
	baz=307							
YUS	**Yu-Shan**	**1.44**	**260**	*e*P		**Pn**	**06 57 17.0**	**-0.6**
	baz=255							
JKRS	**Kuro-shima**	**1.47**	**70**	*e*S		**Sg**	**06 57 38.2**	**+0.8**
ELDTW	**Lidau**	**1.47**	**248**	*e*P		**Pn**	**06 57 16.4**	**-1.5**
	baz=242							
ELDTW				*e*S		**Sg**	**06 57 34.9**	**-2.6**
	baz=242							
NWF	**Wu-fen Shan**	**1.48**	**334**	P		**Pn**	**06 57 16.7**	**-1.4**
	baz=330							
TWA	**Mucha**	**1.49**	**326**	*e*P		**Pn**	**06 57 17.9**	**-0.4**
	baz=340							
TYC	**Yuchr**	**1.51**	**276**	*e*P		**Pn**	**06 57 17.9**	**-0.7**
	baz=271							
ALS	**Alishan**	**1.57**	**262**	*e*P		**Pn**	**06 57 19.1**	**-0.2**
	baz=248							
JIJ	**Ishigaki jima**	**1.62**	**67**	*e*S		**Sn**	**06 57 40.0**	**-1.7**
NSTT	**Nanjuang**	**1.63**	**303**	*e*P		**Pn**	**06 57 20.4**	**+0.2**
	baz=285							
NSTT				*e*S		**Sn**	**06 57 40.4**	**-1.4**
	baz=285							
CHN5	**Tsauling**	**1.68**	**265**	*e*P		**Pn**	**06 57 21.1**	**+0.3**
	baz=259							
CHN5				*e*S		**Sn**	**06 57 42.5**	**-0.5**
	baz=259							
TWQ1	**Liyutan**	**1.69**	**291**	*e*P		**Pn**	**06 57 21.1**	**0.0**
	baz=284							
TWQ1				*e*S		**Sn**	**06 57 43.0**	**-0.3**
	baz=284							
TCU	**Taichung**	**1.72**	**284**	*e*P		**Pn**	**06 57 22.4**	**+1.0**
	baz=279							
NSY	**Sanyi**	**1.73**	**293**	*e*P		**Pn**	**06 57 22.2**	**+0.7**
	baz=288							
CHN4	**Tsaushan**	**1.79**	**258**	*e*P		**Pn**	**06 57 24.9**	**+2.5**
	baz=243							
CHN4				*e*S		**Sn**	**06 57 47.8**	**+1.9**
	baz=243							
WTP	**Ta-pu**	**1.80**	**254**	*e*P		**Pn**	**06 57 23.4**	**+0.9**
	baz=249							
ECL	**Taimali**	**1.82**	**232**	*e*P		**Pn**	**06 57 23.4**	**+0.6**
	baz=239							
CHN1	**Nanshi**	**1.89**	**253**	*e*P		**Pn**	**06 57 25.3**	**+1.5**
	baz=247							
CHN1				*e*S		**Sn**	**06 57 49.9**	**+1.6**
	baz=247							
SSD	**Sandimen**	**1.98**	**240**	*e*P		**Pn**	**06 57 25.3**	**+0.3**
	baz=230							

*IDC **21** 07:01:31.8 ± 1.5, 2°.44N × 95°.66E, h0km, mb3.8/9, mb1 3.9/11, mb1mx3.7/26, mbtmp3.8/11, ML3.6/2, MS3.3/3, Ms1 3.3/3, ms1mx2.8/30, Error ellipse: s-maj=52.4km s-min=16.9km az=53.0*
*ISCJB **21** 07:01:35.9 ± 1.5, 2°.58N ± 0°.08 × 95°.73E ± 0°.09, h38km ± 14km, mb3.8/9, MS3.5/2, Error ellipse: s-maj=16.2km s-min=10.2km az=142.1*
*DJA **21** 07:01:36, 2°.72N × 95°.76E, h26km, MLv4.0/5*
*NEIC **21** 07:01:37.2 ± 0.7, 2°.47N × 95°.74E, h35km, Error ellipse: s-maj=19.2km s-min=8.3km az=51.0*

ISC 21 07:01:37.3 ± 2.9, **2°.60N** ± 0°.07 × **95°.76E** ± 0°.06, **h31** km ± 22km, **n19**, σ 0**88**/19, **mb3.8**/9, **MS3.5**/2, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TPTI		**1.56**	**65**	P		**Pn**	**07 02 02.0**	**-0.9**
TPTI				S		**Sn**	**07 02 21.6**	**-0.6**
BSI	**Banda Aceh**	**2.91**	**351**	P		**Pn**	**07 02 20.2**	**-1.3**
PSI	**Prapat**	**3.17**	**86**	Pn		**Pn**	**07 02 25.1**	**0.0**
	3.4nm,0.3s,baz=264,slow=6.4,SNR=10							
PSI				Sn		**Sn**	**07 03 03.1**	**+1.3**
	4.5nm,0.3s,baz=170,slow=13,SNR=4.9							
PSI				LR		LR	07 03 15.7	
	comp=Z,143nm,18.1s,baz=216,slow=32							
MNSI	**Mandailing Nat**	**4.22**	**115**	P		**Pn**	**07 02 40.0**	**+0.5**
SISI	**Saibi**	**5.13**	**139**	P		**Pn**	**07 02 53.5**	**+1.4**
	0.4nm94nm,2.0s							
IPM	**Ipoh**	**5.58**	**70**	P		**Pn**	**07 02 57.7**	**-0.5**
CMAR	**Chiang Mai Arr**	**16.06**	**11**	Pn		**Pn**	**07 05 22.4**	**+1.5**
	0.1nm,0.3s,baz=202,slow=11,SNR=10.0							
FITZ	**Fitzroy Crossi**	**35.91**	**126**	P		**P**	**07 08 33.8**	**-1.3**
	3.6nm,1.2s,mb4.2,baz=300,slow=8.1,SNR=3.1							
WRA	**Warramunga Arr**	**44.00**	**122**	P		**P**	**07 09 41.7**	**-0.5**
	0.5nm,0.5s,mb3.5,baz=298,slow=9.5,SNR=6.5							
ASAR	**Alice Springs**	**45.39**	**127**	P		**P**	**07 09 51.8**	**-1.5**
	0.3nm,0.5s,mb3.4,baz=301,slow=7.9,SNR=5.3							
MK31	**Makanchi Array**	**45.55**	**347**	*e*P		**P**	**07 09 54.8**	**+0.6**
MKAR	**Makanchi Array**	**45.55**	**347**	P		**P**	**07 09 54.6**	**+0.5**
	1.4nm,0.5s,mb4.1,baz=159,slow=8.1,SNR=21							
SONM	**Songino Array**	**45.98**	**10**	P		**P**	**07 09 57.7**	**+0.2**
	1.3nm,0.7s,mb4.0,baz=189,slow=8.6,SNR=8.5							
KURK	**Kurchatov**	**50.08**	**346**	P		**P**	**07 10 29.4**	**+0.2**
	0.5nm,0.6s,mb3.7,baz=166,slow=6.9,SNR=4.2							
ZALV	**Zalesovo Beam**	**51.96**	**352**	P		**P**	**07 10 42.8**	**-0.5**
	1.3nm,0.5s,mb4.1,baz=188,slow=4.2,SNR=7.0							
BVAR	**Borovoye Array**	**54.46**	**341**	P		**P**	**07 11 01.8**	**+0.1**
	1.0nm,0.6s,mb4.0,baz=144,slow=8.6,SNR=4.8							
BRTR	**Keskin Array B**	**67.11**	**312**	LR		LR	07 42 43.9	
	comp=Z,29nm,21.0s,MS3.5,baz=283,slow=37							
ARCES	**ARCESS Array B**	**80.74**	**340**	P		**P**	**07 13 48.1**	**+0.8**
	0.6nm,0.8s,mb3.6,baz=120,slow=5.4,SNR=5.2							
KEST	**Kesra**	**85.58**	**305**	LR		LR	07 58 42.5	
	comp=Z,23nm,18.1s,MS3.6,baz=289,slow=40							

IDC 21 07:03:12.7 ± 3.3, **30°.50S** × **138°.28E, h0km, mb1 3.1**/3, **mb1mx3.0**/14, **mbtmp2.9**/3, **ML2.6**/3, **Error ellipse: s-maj=69.1km s-min=14.5km az=42.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**3.16**	**117**	Pn		Pn	07 04 03.5	-0.1
	0.2nm,0.3s,baz=299,slow=15,SNR=3.9							
STKA				Pg		Pg	07 04 09.7	-3.5
	0.9nm,0.3s,baz=296,slow=15,SNR=8.0							
STKA				Sn		Sn	07 04 42.0	0.0
	0.9nm,0.3s,baz=300,slow=14,SNR=3.0							
STKA				Lg			07 04 54.2	
	2.9nm,0.3s,baz=24,slow=24,SNR=8.3							
ASAR	**Alice Springs**	**7.84**	**329**	Pn		Pn	07 05 09.2	+1.1
	0.1nm,0.3s,baz=146,slow=12,SNR=5.8							
ASAR				Sn		Sn	07 06 36.4	-1.1
	0.1nm,0.3s,baz=155,slow=20,SNR=4.0							
ASAR				Lg			07 07 23.7	
	0.1nm,0.3s,baz=148,slow=26,SNR=3.3							
WRA	**Warramunga Arr**	**11.10**	**340**	Pn		Pn	07 05 51.6	-1.1
	0.1nm,0.3s,baz=160,slow=13,SNR=4.6							
WRA				Sn		Sn	07 07 53.9	-3.6
	0.1nm,0.3s,baz=162,slow=24,SNR=3.2							

*NEIC **21** 07:10:59.5, 17°.28N × 101°.20W, h16km, MD3.6(MEX), After MEX.*

MEX 21 07:10:59.4 ± 0.3, **17°.27N** × **101°.21W, h16** km ± 19km, **MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.42**	**324**	*i* P		Pg	07 11 06.9	-1.0
ZIIG				*i* S		Sg	07 11 12.1	-1.5
ZIIG	**Zihuatanejo**	**0.42**	**324**	*i* P		Pg	07 11 06.9	-1.0
ZIIG				*i* S		Sg	07 11 12.1	-1.5
CAIG	**El Cayaco**	**0.92**	**104**	*i* P		Pb	07 11 13.8	-3.3
CAIG				*i* S		Sb	07 11 25.4	-3.7
CAIG	**El Cayaco**	**0.92**	**104**	*i* P		Pb	07 11 13.8	-3.3
CAIG				*i* S		Sb	07 11 25.4	-3.7
ACX	**Acapulco**	**1.35**	**107**	*e*P		Pn	07 11 19.3	-4.2
ACX				*i* S		Sn	07 11 34.4	-6.6
ACX	**Acapulco**	**1.35**	**107**	*e*P		Pn	07 11 19.3	-4.2
ACX				*i* S		Sn	07 11 34.4	-6.6
MZVM		**2.68**	**44**	*i* P		Pn	07 11 39.1	-2.7
MZVM				*i* S		Sn	07 12 10.3	-3.6
PPM	**Popocatepetl**	**3.04**	**53**	*e*P		Pn	07 11 45.2	-1.5
PPM				*i* S		Sn	07 12 19.8	-3.0
PPM	**Popocatepetl**	**3.04**	**53**	*e*P		Pn	07 11 45.2	-1.5
PPM				*i* S		Sn	07 12 19.8	-3.0
PNIG	**Pinotepa**	**3.07**	**106**	*e*P		Pn	07 11 44.4	-2.9
PNIG				*i* S		Sn	07 12 20.3	-3.4
PNIG	**Pinotepa**	**3.07**	**106**	*e*P		Pn	07 11 44.4	-2.9
PNIG				*i* S		Sn	07 12 20.3	-3.4
UTMO	**Huajuapan**	**3.29**	**80**	*i* P		Pn	07 11 48.0	-2.3
UTMO				*i* S		Sn	07 12 26.5	-2.6
IIO	**Organos**	**3.30**	**45**	*e*P		Pn	07 11 47.6	-2.7
IIO				*i* S		Sn	07 12 25.5	-3.8
IIO	**Organos**	**3.30**	**45**	*e*P		Pn	07 11 47.6	-2.7
IIO				*i* S		Sn	07 12 25.5	-3.8

*IDC **21** 07:14:24.3 ± 1.8, 15°.08S × 173°.71W, h0km, mb4.1/7, mb1 4.5/7, mb1mx4.2/17, mbtmp4.1/7, MS3.6/8, Ms1 3.7/8, ms1mx3.4/28, Error ellipse: s-maj=107.0km s-min=22.0km az=150.0*
*ISCJB **21** 07:14:28.5 ± 1.2, 14°.9S ± 0°.4 × 174°.0W ± 0°.3, h33km, mb4.2/12, MS3.7/7, Error ellipse: s-maj=60.7km s-min=17.4km az=148.5*
*NEIC **21** 07:14:28.0 ± 1.0, 14°.73S × 174°.01W, h15km, mb4.6/6, Error ellipse: s-maj=51.2km s-min=16.1km az=149.0*

ISC 21 07:14:30.8 ± 1.2, **14°.8S** ± 0°.4 × **174°.0W** ± 0°.2, **h35** km, **n51**, σ 0**71**/20, **mb4.2**/12, **MS3.7**/7, **Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**2.33**	**69**	Pn		**Pn**	**07 14 55.6**	**-11**
AFI				Sn		**Sn**	**07 15 15.5**	**-19**
AFI				LR		LR	07 15 32.5	
AFI	**Afiamalu**	**2.33**	**69**	Pn		**Pn**	**07 14 55.6**	**-11**
	59nm,0.3s,baz=300,slow=2.9,SNR=43							
AFI				Sn		**Sn**	**07 15 15.5**	**-19**
	193nm,0.3s,baz=42,slow=18,SNR=12							
AFI				LR		LR	07 15 32.5	
	comp=Z,800nm,18.6s,baz=159,slow=31							
DZM	**Mont Dzumac**	**19.90**	**246**	*e*LR		LR	07 23 49.5	
	200nm,26.3s							
PPT	**Papeete**	**23.62**	**100**	*e*LR		LR	07 24 59.2	
	306nm,27.5s							
PPT	**Papeete**	**23.62**	**100**	LR		LR	07 25 51.0	
	comp=Z,143nm,20.7s,MS3.4,baz=256,slow=30							
HNR	**Honiara**	**26.00**	**279**	LR		LR	07 29 04.6	
	comp=Z,110nm,18.2s,MS3.4,baz=204,slow=33							
TAOE	**Nuku Hiva Isla**	**33.63**	**84**	*e*LR		LR	07 28 41.9	
	221nm,26.8s							
RKT	**Rikitea**	**37.74**	**109**	*e*LR		LR	07 31 32.9	
	162nm,28.0s							
WRA	**Warramunga Arr**	**49.42**	**256**	P		**P**	**07 23 17.6**	**-0.1**
	1.2nm,0.8s,mb4.0,baz=90,slow=7.0,SNR=8.7							
ASAR	**Alice Springs**	**49.75**	**251**	P		**P**	**07 23 20.2**	**+0.1**
	9.3nm,0.9s,mb4.8,baz=87,slow=8.1,SNR=71							
MJAR	**Matsushiro Arr**	**68.09**	**320**	LR		LR	07 49 21.9	
	comp=Z,58nm,19.5s,MS3.8,baz=155,slow=31							
PETK	**Petropavlovsk-**	**71.86**	**342**	LR		LR	07 49 41.6	
	comp=Z,30nm,21.3s,MS3.5,baz=169,slow=29							
YBH	**Yreka Blue Hor**	**73.46**	**38**	LR		LR	07 55 07.7	
	comp=Z,65nm,18.4s,MS4.0,baz=60,slow=33							
NVAR	**Mina Array Bea**	**74.26**	**42**	P		**P**	**07 26 04.8**	**+0.3**
NVAR	**Mina Array Bea**	**74.26**	**42**	P		**P**	**07 26 04.8**	**+0.4**
	0.7nm,0.8s,mb3.7,baz=232,slow=11,SNR=5.3							
KSRS	**Korea Array**	**75.31**	**316**	LR		LR	07 54 00.0	
	comp=Z,36nm,19.1s,MS3.7,baz=201,slow=31							
TMUT	**Trail Mountain**	**79.44**	**45**	*e*P		**P**	**07 26 34.2**	**+0.6**
	6.0nm,1.0s,mb4.5							
HLID	**Hailey**	**79.52**	**40**	*e*P		**P**	**07 26 34.3**	**+0.4**
	2.5nm,1.0s,mb4.1							
TRF	**Thorofare Moun**	**80.12**	**11**	*e*P		**P**	**07 26 36.7**	**-0.1**
	6.8nm,1.2s,mb4.5							
MCK	**McKinley**	**80.62**	**11**	*e*P		**P**	**07 26 39.5**	**0.0**
	4.6nm,0.7s,mb4.5							
TXAR	**Lajitas Array**	**80.75**	**56**	P		**P**	**07 26 40.3**	**-0.7**
	0.6nm,0.8s,mb3.5,baz=199,slow=7.4,SNR=4.5							
COLA	**College**	**81.86**	**11**	*e*P		**P**	**07 26 46.1**	**+0.1**
	8.0nm,0.8s,mb4.7							
ILAR	**Eielson Array**	**81.95**	**11**	P		**P**	**07 26 46.3**	**-0.2**
	1.0nm,0.7s,mb3.9,baz=232,slow=5.9,SNR=17							
PDAR	**Pinedale Array**	**82.20**	**42**	P		**P**	**07 26 46.8**	**-1.5**
	1.1nm,0.9s,mb3.8,baz=224,slow=3.8,SNR=7.5							
DAWY	**Dawson**	**82.97**	**15**	*e*P		**P**	**07 26 52.2**	**+0.4**
EGAK	**Eagle**	**83.15**	**14**	*e*P		**P**	**07 26 52.7**	**-0.1**
YKA	**Yellowknife Ar**	**89.76**	**24**	P		**P**	**07 27 24.9**	**-0.3**
	0.9nm,0.7s,mb4.2,baz=242,slow=3.9,SNR=3.7							
CMAR	**Chiang Mai Arr**	**91.86**	**288**	LR		LR	08 06 24.9	
	comp=Z,33nm,18.6s,MS3.8,baz=245,slow=34							
BLO	**Bloomington**	**97.26**	**52**	*e*P		**P**	**07 28 03.2**	**+2.9**
	11nm,0.7s							
ARCES	**ARCESS Array B**	**123.91**	**352**	PKP		PKPdf	07 33 23.4	-1.2
	2.0nm,0.7s,baz=358,slow=5.6,SNR=6.1							
VYHS	**Vyhne**	**144.75**	**345**	*e*PKP		PKPdf	07 34 04.7	+0.8
VYHS	**Vyhne**	**144.75**	**345**	*e*PKP		PKPdf	07 34 04.7	+0.8
BAIF	**Baives**	**144.78**	**2**	*e*PKP1		PKPdf	07 34 03.7	-0.3
BRTR	**Keskin Array B**	**145.31**	**321**	PKPbc		PKPbc	07 34 06.8	+1.8
	1.8nm,0.8s,baz=144,slow=1.1,SNR=8.2							
CDF	**Champ du Feu**	**146.44**	**358**	*e*PKP1		PKPbc	07 34 09.0	+0.8
	22nm,1.0s							
BFO	**Black Forest**	**146.49**	**357**	*e*PKPbc		PKPbc	07 34 09.6	+1.2
SFTF	**Sexfontaines**	**146.66**	**1**	*e*PKP1		PKPbc	07 34 09.5	+0.7
HAU	**Haudompre**	**146.87**	**360**	*e*PKP1		PKPbc	07 34 10.3	+0.9
LOR	**Lormes**	**147.56**	**3**	*e*PKP1		PKPbc	07 34 12.0	+0.6
SSF	**Saint Saulge**	**147.75**	**3**	*e*PKP1		PKPbc	07 34 12.6	+0.7
	44nm,1.3s							
AVF	**Avril sur Loir**	**148.01**	**3**	*e*PKP1		PKPbc	07 34 13.1	+0.5
	9.6nm,0.9s							
BGF	**Bois d'Agland**	**148.21**	**4**	*e*PKP1		PKPbc	07 34 13.6	+0.4
CABF	**La Chapelle**	**148.26**	**360**	*e*PKP1		PKPbc	07 34 14.5	+1.2
	33nm,1.1s							
RJF	**Les Rejaudoux**	**149.34**	**6**	*e*PKP1		PKPbc	07 34 16.3	+0.2
LPL	**La Plagne**	**149.35**	**359**	*e*PKP1		PKPbc	07 34 17.9	+1.8
LPG	**La Plagne**	**149.37**	**359**	*e*PKP1		PKPbc	07 34 18.1	+1.9
	28nm,1.2s							
ORIF	**Oris-en-Rattie**	**149.96**	**0**	*e*PKP1		PKPbc	07 34 18.7	+1.1
VIVF	**Saint-Julien-l**	**150.00**	**2**	*e*PKP1		PKPbc	07 34 18.8	+1.1
	23nm,1.2s							
MBDF	**Montbardon**	**150.14**	**359**	*e*PKP1		PKPbc	07 34 19.2	+1.1
	45nm,1.5s							
LASF	**Ste Croix**	**150.74**	**3**	*e*PKP1		PKPbc	07 34 20.6	+1.1
	25nm,1.2s							
SMRF	**Simiane la Rot**	**150.90**	**1**	*e*PKP1		PKPbc	07 34 21.3	+1.4
	36nm,1.3s							

*IDC **21** 07:41:45.0 ± 0.7, 6°.09S × 131°.75E, h0km, mb4.1/9, mb1 4.4/11, mb1mx4.3/14, mbtmp4.2/11, ML5.0/3, Error ellipse: s-maj=35.6km s-min=16.0km az=81.0*
*NEIC **21** 07:41:50.9 ± 0.6, 6°.11S × 131°.53E, h35km, mb4.3/1, Error ellipse: s-maj=15.0km s-min=9.2km az=75.0*
*ISCJB **21** 07:41:52.9 ± 0.6, 6°.30S ± 0°.04 × 131°.58E ± 0°.05, h81km ± 7km, mb4.1/11, Error ellipse: s-maj=8.6km s-min=5.5km az=156.4*
*DJA **21** 07:41:55, 6°.19S × 131°.64E, h74km, mb4.9/9*

ISC 21 07:41:54.3 ± 0.5, **6°.31S** ± 0°.04 × **131°.61E** ± 0°.05, **h80** km ± 6km, **n45**, σ 1**36**/57, **mb4.1**/11, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TLE	**Tual**	**1.30**	**59**	P		**Pn**	**07 42 19.8**	**+2.7**
TLE				S		**Sn**	**07 42 34.0**	**-0.3**
BNDI	**Bandanaira**	**2.45**	**316**	P		**Pn**	**07 42 33.3**	**+1.0**
MSAI	**Masohi**	**3.97**	**318**	P		**Pn**	**07 42 53.0**	**+0.1**
MSAI				S		**Sn**	**07 43 33.8**	**-4.5**
NLAI	**Namlea**	**5.43**	**304**	P		**Pn**	**07 43 14.2**	**+1.4**
	7µm214nm,0.7s							
KAKA	**Kakadu**	**6.42**	**173**	*e*P		**Pn**	**07 43 28.8**	**+2.5**
	278nm,0.5s							
KAKA				*e*S		**Sn**	**07 44 37.1**	**-1.0**
KAKA	**Kakadu**	**6.42**	**173**	*e*Pn		**Pn**	**07 43 28.8**	**+2.5**
	475nm,0.5s							
KAKA				*e*Sn		**Sn**	**07 44 37.7**	**-0.4**
BAKI	**Biak**	**6.78**	**42**	P		**Pn**	**07 43 30.8**	**-0.4**
	0.8nm2µm195nm,0.6s							
LBMI	**Labuha**	**6.96**	**324**	P		**Pn**	**07 43 32.0**	**-1.8**
	2µm142nm,0.6s							
BKSI	**Bulukumba**	**11.47**	**274**	P		**Pn**	**07 44 42.0**	**+6.7**
MRSI	**Marisa**	**11.77**	**305**	P		**Pn**	**07 44 38.8**	**-0.6**
FITZ	**Fitzroy Crossi**	**13.09**	**206**	*e*P		**Pn**	**07 44 55.8**	**-1.3**
	107nm,0.3

TORD	**Torodi Ar. Bea**	**74.86**	**27**	P	P	08 17 03.5	+0.1		
	0.8nm,0.8s,baz=195,slow=6.3,SNR=7.9								
SONM	**Songino Array**	**149.78**	**89**	PKPbc	PKPbc	08 25 11.5	-0.4		
	0.4nm,0.6s,baz=204,slow=3.2,SNR=2.9								
ILAR	**Eielson Array**	**152.58**	**308**	PKPbc	PKPbc	08 25 18.4	+0.5		
	0.9nm,0.8s,baz=104,slow=1.9,SNR=9.1								
ILAR				PKPab	PKPab	08 25 27.6	-1.0		
	0.5nm,0.9s,baz=122,slow=3.3,SNR=4.6								

*IGIL **21** 08:06:14.9, 35˚.18N×11˚.80W, h0km*
*MDD **21** 08:06:14.4±2.6, 35˚.10N×11˚.66W, h0km, mb3.7/4, Error ellipse: s-maj=39.4km s-min=20.0km az=127.0, PRIMO*
*CSEM **21** 08:06:16.8±0.5, 35˚.29N×11˚.57W, h10km, ML2.7/6, Error ellipse: s-maj=15.7km s-min=8.1km az=126.0*

INMG 21 08:06:15.2±0.8, 35˚.11N×11˚.84W, h10km, ML2.0, Error ellipse: s-maj=13.0km s-min=5.1km az=128.0, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.17**	**50**	*e*Pn	Pn	08 07 02.8	-2.3
PFVI				*e*Sn	Sn	08 07 39.1	-3.8
PFVI	**Vila Bisbo**	**3.17**	**50**	Pn	Pn	08 07 02.8	-2.3
	2.6nm,0.1s,SNR=8.4						
PFVI				Sn	Sn	08 07 37.7	-5.2
	5.5nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.17**	**50**	Pn	Pn	08 07 02.8	-2.3
	2.6nm,0.1s,SNR=8.4						
PFVI				Sn	Sn	08 07 37.7	-5.2
	5.5nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.17**	**50**	P	Pn	08 07 02.8	-2.3
	2.6nm,0.1s,SNR=8.4						
PFVI				S	Sn	08 07 37.7	-5.2
	5.5nm,0.2s,SNR=7.9						
PFVI				*e*Sn	Sn	08 07 39.1	-3.8
MORF	**Marmelete**	**3.38**	**49**	*e*Sn	Sn	08 07 44.3	-4.0
MORF				A		08 07 46.6	
	5.8nm,0.2s						
MORF	**Marmelete**	**3.38**	**49**	Sn	Sn	08 07 44.3	-4.0
	5.8nm,0.2s						
MORF	**Marmelete**	**3.38**	**49**	Sn	Sn	08 07 44.3	-4.0
	5.8nm,0.2s						
MORF	**Marmelete**	**3.38**	**49**	*e*Sn	Sn	08 07 44.3	-4.0
	5.8nm,0.2s						
PBDV	**Barranco-do-Ve**	**3.81**	**55**	*e*Pn	Pn	08 07 11.7	-2.2
PBDV				*e*Sn	Sn	08 07 54.7	-4.1
PBDV				A		08 07 58.9	
	1.5nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.81**	**55**	Pn	Pn	08 07 11.7	-2.2
PBDV				Sn	Sn	08 07 54.7	-4.1
	1.5nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.81**	**55**	Pn	Pn	08 07 11.7	-2.2
PBDV				Sn	Sn	08 07 54.7	-4.1
	1.5nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.81**	**55**	*e*Pn	Pn	08 07 11.7	-2.2
PBDV				*e*Sn	Sn	08 07 54.7	-4.1
	1.5nm,0.5s						
PCVE	**Castro Verde**	**3.97**	**50**	*e*Pn	Pn	08 07 14.2	-1.9
PCVE				*e*Sn	Sn	08 07 58.2	-4.4
PCVE				A		08 08 00.3	
	1.9nm,0.5s						
PCVE	**Castro Verde**	**3.97**	**50**	Pn	Pn	08 07 14.2	-1.9
PCVE				Sn	Sn	08 07 58.2	-4.4
	1.9nm,0.5s						
PCVE	**Castro Verde**	**3.97**	**50**	Pn	Pn	08 07 14.2	-1.9
PCVE				Sn	Sn	08 07 58.2	-4.4
	1.9nm,0.5s						
PCVE	**Castro Verde**	**3.97**	**50**	*e*Pn	Pn	08 07 14.2	-1.9
PCVE				*e*Sn	Sn	08 07 58.2	-4.4
	1.9nm,0.5s						
MESJ	**Messejana**	**3.99**	**46**	*e*P	Pn	08 07 14.3	-2.1
MESJ				*e*S	Sn	08 07 57.9	-5.3
MESJ				*e*S	Sn	08 07 58.0	-5.3
MESJ	**Messejana**	**3.99**	**46**	*e*P	Pn	08 07 14.3	-2.1
MESJ				*e*S	Sn	08 07 57.9	-5.3
MESJ	**Messejana**	**3.99**	**46**	Pn	Pn	08 07 14.3	-2.1
MESJ				Sn	Sn	08 07 57.9	-5.3
MESJ	**Messejana**	**3.99**	**46**	Pn	Pn	08 07 14.3	-2.1
MESJ				Sn	Sn	08 07 57.9	-5.3
MESJ	**Messejana**	**3.99**	**46**	*e*P	Pn	08 07 14.3	-2.1
MESJ				*e*S	Sn	08 07 57.9	-5.3
PVAQ	**Vaqueiros**	**4.04**	**54**	*e*Pn	Pn	08 07 14.9	-2.2
PVAQ				*e*Sn	Sn	08 07 59.6	-4.9
PVAQ				A		08 08 01.6	
	2.9nm,0.3s						
PVAQ	**Vaqueiros**	**4.04**	**54**	Pn	Pn	08 07 14.9	-2.2
PVAQ				Sn	Sn	08 07 59.6	-4.9
	2.9nm,0.3s						
PVAQ	**Vaqueiros**	**4.04**	**54**	Pn	Pn	08 07 14.9	-2.2
PVAQ				Sn	Sn	08 07 59.6	-4.9
	2.9nm,0.3s						
PVAQ	**Vaqueiros**	**4.04**	**54**	*e*Pn	Pn	08 07 14.9	-2.2
PVAQ				*e*Sn	Sn	08 07 59.6	-4.9
	2.9nm,0.3s						
EGRO	**El Granado**	**4.27**	**54**	Pn	Pn	08 07 18.1	-2.2
	0.5nm,0.0s,SNR=11						
EGRO				Sn	Sn	08 08 04.1	-6.0
	2.2nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.27**	**54**	Pn	Pn	08 07 18.1	-2.2
	0.5nm,0.0s,SNR=11						
EGRO				Sn	Sn	08 08 04.1	-6.0
	2.2nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.27**	**54**	P	Pn	08 07 18.1	-2.1
	0.5nm,0.0s,SNR=11						
EGRO				S	Sn	08 08 04.1	-6.0
	2.2nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**4.35**	**27**	*e*Sn	Sn	08 08 07.9	-4.2
PMAFR	**Mafra**	**4.35**	**27**	Sn	Sn	08 08 08.0	-4.1
	8.8nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**4.35**	**27**	Sn	Sn	08 08 08.0	-4.1
	8.8nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**4.35**	**27**	*e*Sn	Sn	08 08 07.9	-4.2
MOE	**Montemor**	**4.41**	**38**	*e*Sn	Sn	08 08 08.8	-4.7
MOE	**Montemor**	**4.41**	**38**	Sn	Sn	08 08 08.8	-4.7
MOE	**Montemor**	**4.41**	**38**	Sn	Sn	08 08 08.8	-4.7
MOE	**Montemor**	**4.41**	**38**	*e*Sn	Sn	08 08 08.8	-4.7
PBAR	**Barrancos**	**4.92**	**50**	*e*Pn	Pn	08 07 26.8	-2.4
PBAR				*e*Sn	Sn	08 08 20.8	-5.5
PBAR				A		08 08 32.8	
	1.9nm,0.5s						
PBAR	**Barrancos**	**4.92**	**50**	Pn	Pn	08 07 26.8	-2.4
PBAR				Sn	Sn	08 08 20.8	-5.5
	1.9nm,0.5s						
PBAR	**Barrancos**	**4.92**	**50**	Pn	Pn	08 07 26.8	-2.4
PBAR				Sn	Sn	08 08 20.8	-5.5
	1.9nm,0.5s						
PBAR	**Barrancos**	**4.92**	**50**	*e*Pn	Pn	08 07 26.8	-2.4
PBAR				*e*Sn	Sn	08 08 20.8	-5.5
	1.9nm,0.5s						
EMIN	**Mina Concepcio**	**4.94**	**56**	Pn	Pn	08 07 27.1	-2.3
	0.5nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	08 08 20.5	-6.1
	0.7nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.94**	**56**	Pn	Pn	08 07 27.1	-2.3
	0.5nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	08 08 20.5	-6.1
	0.7nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.94**	**56**	P	Pn	08 07 27.1	-2.3
	0.5nm,0.1s,SNR=7.9						
EMIN				S	Sn	08 08 20.5	-6.1
	0.7nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**5.06**	**41**	*e*Sn	Sn	08 08 25.4	-4.2
PESTR	**Estremoz**	**5.06**	**41**	Sn	Sn	08 08 25.4	-4.2
PESTR	**Estremoz**	**5.06**	**41**	Sn	Sn	08 08 25.4	-4.2
PESTR	**Estremoz**	**5.06**	**41**	*e*Sn	Sn	08 08 25.4	-4.2
EBAD	**Badajoz**	**5.31**	**45**	Pn	Pn	08 07 32.7	-1.8
	0.2nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	08 08 29.8	-5.9
	1.2nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**5.31**	**45**	Pn	Pn	08 07 32.7	-1.8
	0.2nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	08 08 29.8	-5.9
	1.2nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**5.31**	**45**	P	Pn	08 07 32.7	-1.8
	0.2nm,0.1s,SNR=7.9						
EBAD				S	Sn	08 08 29.8	-5.9
	1.2nm,0.1s,SNR=7.9						
PMRV	**Marv??o**	**5.58**	**38**	*e*Sn	Sn	08 08 36.2	-6.2
PMRV				A		08 08 46.8	
	1.7nm,0.7s						
PMRV	**Marv??o**	**5.58**	**38**	Sn	Sn	08 08 36.2	-6.2
	1.7nm,0.7s						
PMRV	**Marv??o**	**5.58**	**38**	Sn	Sn	08 08 36.2	-6.2
	1.7nm,0.7s						
PMRV	**Marv??o**	**5.58**	**38**	*e*Sn	Sn	08 08 36.2	-6.2
	1.7nm,0.7s						
EADA	**Adamuz**	**6.59**	**60**	Pn	Pn	08 07 49.3	-2.8
	0.2nm,0.1s,SNR=7.9						
EADA				Sn	Sn	08 08 59.4	-7.8
	0.8nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.59**	**60**	Pn	Pn	08 07 49.3	-2.8
	0.2nm,0.1s,SNR=7.9						
EADA				Sn	Sn	08 08 59.4	-7.8
	0.4nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.59**	**60**	P	Pn	08 07 49.3	-2.8
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	08 08 59.4	-7.8
	0.8nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**7.37**	**23**	Sn	Sn	08 09 19.8	-6.6
	0.4nm,0.1s,SNR=4.5						
ELOB	**Lobios**	**7.37**	**23**	Sn	Sn	08 09 19.8	-6.6
	0.4nm,0.1s,SNR=4.5						
ELOB	**Lobios**	**7.37**	**23**	S	Sn	08 09 19.8	-6.6
	0.4nm,0.1s,SNR=4.5						

IDC 21 08:10:41.1±3.3, 11˚.16S×111˚.02E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.7/20, mbtmpg3.8/6, ML3.2/1, Error ellipse: s-maj=165.2km s-min=20.9km az=44.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.73**	**118**	Pn	Pn	08 14 26.2	+2.0
	0.1nm,0.3s,baz=296,slow=10.0,SNR=2.2						
FITZ				Sn	Sn	08 17 00.9	-18
	0.1nm,0.3s,baz=240,slow=16,SNR=3.1						
WRA	**Warramunga Arr**	**24.08**	**114**	P	P	08 15 58.2	-0.3
	1.2nm,0.8s,baz=286,slow=11,SNR=5.6						
ASAR	**Alice Springs**	**25.08**	**123**	P	P	08 16 07.2	-0.4
	0.9nm,0.8s,baz=298,slow=8.4,SNR=5.8						
MKAR	**Makanchi Array**	**63.16**	**338**	P	P	08 21 10.0	-0.7
	0.5nm,0.5s,baz=142,slow=7.6,SNR=4.9						
KURK	**Kurchatov**	**67.77**	**338**	P	P	08 21 41.0	+0.5
	0.4nm,0.4s,baz=159,slow=5.0,SNR=3.1						
ZALV	**Zalesovo Beam**	**68.57**	**344**	P	P	08 21 45.7	+0.2
	1.0nm,0.5s,baz=170,slow=5.0,SNR=4.6						

*NEIC **21** 08:12:20.8, 39˚.59S×173˚.88E, h292km, MG4.2(WEL), After WEL.*

WEL 21 08:12:24.8±0.4, 39˚.64S×173˚.94E, h254km±2km, ML4.1/22, Error ellipse: s-maj=2.6km s-min=1.4km az=90.0, Off west coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRZ	**Ngariki Road**	**0.31**	**360**	PN	Pn	08 12 57.6	-0.1
NRZ	**Ngariki Road**	**0.31**	**360**	P	Pn	08 12 57.6	-0.1
DFE	**Dawson Falls**	**0.34**	**23**	PN	Pn	08 12 58.0	+0.2
NEZ	**North Egmont**	**0.39**	**19**	PN	Pn	08 12 58.0	+0.1
NEZ				SN	S	08 13 22.2	-1.7
NEZ	**North Egmont**	**0.39**	**19**	P	Pn	08 12 58.0	+0.1
PKE	**Pukeiti**	**0.45**	**5**	PN	Pn	08 12 57.9	-0.2
PKE	**Pukeiti**	**0.45**	**5**	P	Pn	08 12 57.8	-0.2
DREZ	**Durham Road**	**0.50**	**25**	PN	Pn	08 12 58.0	-0.4
RAEZ	**Rainy Point**	**0.50**	**45**	PN	Pn	08 12 57.8	-0.4
RAEZ				SN	S	08 13 23.7	-0.6
RAEZ	**Rainy Point**	**0.50**	**45**	P	Pn	08 12 58.2	0.0
MHEZ	**Mangahewa**	**0.64**	**28**	PN	Pn	08 12 58.3	-0.3
MHEZ				SN	S	08 13 24.0	-1.2
WAZ	**Wanganui**	**0.82**	**98**	PN	Pn	08 12 59.8	+0.6
WAZ	**Wanganui**	**0.82**	**98**	P	Pn	08 12 59.8	+0.5
VRZ	**Vera Road**	**0.82**	**51**	PN	Pn	08 12 58.6	-0.8
VRZ	**Vera Road**	**0.82**	**51**	P	Pn	08 12 58.6	-0.7
PKVZ	**Pokaka**	**1.15**	**73**	PN	Pn	08 13 00.9	-0.2
DUWZ	**D'Urville Isla**	**1.16**	**181**	PN	Pn	08 13 01.3	+0.2
MTVZ	**Mangateitei**	**1.22**	**78**	PN	Pn	08 13 01.5	0.0
TRVZ	**Turoa**	**1.29**	**75**	PN	Pn	08 13 02.1	+0.1
TWVZ	**Taurewa**	**1.30**	**64**	PN	Pn	08 13 01.7	-0.3
FWVZ	**Far West T-bar**	**1.31**	**73**	PN	Pn	08 13 02.0	-0.1
FWVZ	**Far West T-bar**	**1.31**	**73**	P	Pn	08 13 02.0	-0.1
DRZ	**Dome Shelter**	**1.31**	**74**	PN	Pn	08 13 02.3	+0.2
WPVZ	**Whakapapa**	**1.32**	**71**	PN	Pn	08 13 02.2	0.0
WNVZ	**Wahianoa**	**1.32**	**77**	PN	Pn	08 13 02.4	+0.2
WNVZ	**Wahianoa**	**1.32**	**77**	P	Pn	08 13 02.4	+0.2
HIZ	**Hauiti**	**1.34**	**33**	PN	Pn	08 13 01.8	-0.6
HIZ	**Hauiti**	**1.34**	**33**	P	Pn	08 13 01.8	-0.5
NGZ	**Ngauruhoe**	**1.37**	**71**	PN	Pn	08 13 02.5	0.0
NGZ	**Ngauruhoe**	**1.37**	**71**	P	Pn	08 13 02.5	0.0
TUVZ	**Tukino**	**1.38**	**75**	PN	Pn	08 13 03.0	+0.4
TUVZ	**Tukino**	**1.38**	**75**	P	Pn	08 13 03.0	+0.4
WTVZ	**West Tongariro**	**1.39**	**68**	PN	Pn	08 13 02.5	-0.1
WTVZ	**West Tongariro**	**1.39**	**68**	P	Pn	08 13 02.5	-0.1
OTVZ	**Oturere**	**1.42**	**71**	PN	Pn	08 13 03.2	+0.3
MOVZ	**Moawhango**	**1.43**	**81**	PN	Pn	08 13 02.6	-0.3
MOVZ	**Moawhango**	**1.43**	**81**	P	Pn	08 13 02.6	-0.3
KIW	**Kapiti Island**	**1.43**	**149**	PN	Pn	08 13 02.7	-0.2
KRVZ	**Karewarewa**	**1.43**	**68**	PN	Pn	08 13 02.9	0.0
OGWZ	**Otaki Gorge**	**1.51**	**142**	PN	Pn	08 13 03.6	+0.1
TCW	**Tory Channel**	**1.59**	**171**	PN	Pn	08 13 04.2	+0.1
POWZ	**Post Office Flo**	**1.59**	**119**	PN	Pn	08 13 04.1	0.0
TSZ	**Takapari Road**	**1.61**	**106**	PN	Pn	08 13 04.4	+0.1
MRZ	**Mangatainoka R**	**1.62**	**129**	PN	Pn	08 13 04.2	-0.1
MRZ	**Mangatainoka R**	**1.62**	**129**	P	Pn	08 13 04.2	-0.1
NNZ	**Nelson**	**1.63**	**195**	PN	Pn	08 13 04.5	+0.1
NNZ	**Nelson**	**1.63**	**195**	P	Pn	08 13 04.5	+0.1
BHHZ	**Black Hill Sta**	**1.65**	**85**	PN	Pn	08 13 04.2	-0.4
CAW	**Cannon Point**	**1.70**	**150**	PN	Pn	08 13 04.9	0.0
CAW	**Cannon Point**	**1.70**	**150**	P	Pn	08 13 04.9	0.0
HOWZ	**Holdsworth Sta**	**1.74**	**137**	PN	Pn	08 13 05.2	0.0
WEL	**Wellington**	**1.76**	**159**	PN	Pn	08 13 05.4	-0.1
WEL	**Wellington**	**1.76**	**159**	P	Pn	08 13 05.4	0.0
PNHZ	**Pukenui**	**1.77**	**100**	PN	Pn	08 13 05.7	+0.2
SNZO	**South Karori**	**1.77**	**161**	PN	Pn	08 13 05.2	-0.3
SNZO	**South Karori**	**1.77**	**161**	P	Pn	08 13 05.2	-0.3
TUWZ	**Tuamarina**	**1.79**	**180**	PN	Pn	08 13 05.8	+0.2
DVHZ	**Dannevirke**	**1.84**	**112**	PN	Pn	08 13 06.2	+0.2
TIWZ	**Tintock**	**1.88**	**128**	PN	Pn	08 13 06.3	+0.1
BHW	**Baring Head**	**1.90**	**158**	PN	Pn	08 13 06.3	-0.3
BHW	**Baring Head**	**1.90**	**158**	P	Pn	08 13 06.3	-0.3
MTW	**Mount Morrison**	**1.93**	**142**	PN	Pn	08 13 06.8	-0.1
MTW	**Mount Morrison**	**1.93**	**142**	P	Pn	08 13 06.8	-0.1
WPHZ	**Waipukurau**	**1.97**	**103**	PN	Pn	08 13 07.8	+0.5
MSWZ	**Moikau Station**	**2.03**	**151**	PN	Pn	08 13 07.7	-0.1
MSWZ	**Moikau Station**	**2.03**	**151**	P	Pn	08 13 07.7	-0.1
BKZ	**Black Stump Fm**	**2.04**	**77**	PN	Pn	08 13 07.7	-0.2
BKZ	**Black Stump Fm**	**2.04**	**77**	P	Pn	08 13 07.7	-0.2
BFZ	**Birch Farm**	**2.05**	**121**	PN	Pn	08 13 08.1	+0.1
BFZ	**Birch Farm**	**2.05**	**121**	P	Pn	08 13 08.1	+0.1
BSWZ	**Blackbirch Sta**	**2.07**	**181**	PN	Pn	08 13 08.3	+0.1
BSWZ	**Blackbirch Sta**	**2.07**	**181**	P	Pn	08 13 08.3	+0.2
PAWZ	**Paruwai Farm**	**2.08**	**147**	PN	Pn	08 13 08.3	+0.1
PAWZ	**Paruwai Farm**	**2.08**	**147**	P	Pn	08 13 08.3	+0.1
TMWZ	**Te Maipa**	**2.09**	**135**	PN	Pn	08 13 08.5	+0.2
CMWZ	**Dept Campbell**	**2.11**	**174**	SN	S	08 13 41.9	-1.2
MCHZ	**McNeill Hill**	**2.15**	**86**	PN	Pn	08 13 09.8	+0.9
PRHZ	**Porangahau**	**2.17**	**108**	PN	Pn	08 13 09.6	+0.6
PLWZ	**Palliser**	**2.17**	**153**	PN	Pn	08 13 08.8	-0.2
TRWZ	**Traveller**	**2.21**	**143**	PN	Pn	08 13 09.5	+0.2
KAHZ	**Kahuranaki**	**2.27**	**95**	PN	Pn	08 13 10.8	+0.8
PXZ	**Pawanui**	**2.29**	**101**	PN	Pn	08 13 10.7	+0.5
NMHZ	**Naumai**	**2.29**	**77**	PN	Pn	08 13 11.2	+0.9
RAHZ	**Arahi**	**2.55**	**74**	PN	Pn	08 13 13.1	+0.3
DSZ	**Denniston Nort**	**2.65**	**217**	PN	Pn	08 13 13.6	-0.2
DSZ	**Denniston Nort**	**2.65**	**217**	P	Pn	08 13 13.6	-0.2
KHZ	**Kahutara**	**2.79**	**186**	PN	Pn	08 13 14.8	-0.3
KHZ	**Kahutara**	**2.79**	**186**	P	Pn	08 13 14.8	-0.4
URZ	**Urewera**	**2.83**	**62**	PN	Pn	08 13 14.8	-1.0
MWZ	**Matawai**	**3.09**	**66**	PN	Pn	08 13 17.9	-0.6
MWZ	**Matawai**	**3.09**	**66**	P	Pn	08 13 17.9	-0.6
MHGZ	**Mahia Peninsul**	**3.12**	**82**	PN	Pn	08 13 19.7	+1.0
PRGZ	**Paritu Road**	**3.15**	**78**	PN	Pn	08 13 19.5	+0.5
LTZ	**Lake Taylor**	**3.38**	**201**	PN	Pn	08 13 21.3	-0.2
LTZ	**Lake Taylor**	**3.38**	**201**	P	Pn	08 13 21.3	-0.3
CNGZ	**Carnagh Statio**	**3.52**	**72**	PN	Pn	08 13 23.7	+0.5
PUZ	**Puketiti**	**3.72**	**66**	PN	Pn	08 13 24.9	-0.6
MXZ	**Matakaoa Point**	**4.00**	**60**	PN	Pn	08 13 28.2	-0.6
MQZ	**McQueen's Vall**	**4.17**	**193**	PN	Pn	08 13 29.2	-1.5
MQZ	**McQueen's Vall**	**4.17**	**193**	P	Pn	08 13 29.2	-1.5
WVZ	**Waitaha Valley**	**4.19**	**214**	PN	Pn	08 13 30.0	-0.8
WVZ	**Waitaha Valley**	**4.19**	**214**	P	Pn	08 13 30.0	-0.9
RPZ	**Rata Peaks**	**4.61**	**207**	PN	Pn	08 13 35.3	-0.5
RPZ	**Rata Peaks**	**4.61**	**207**	P	Pn	08 13 35.3	-0.5
FOZ	**Fox Glacier**	**5.05**	**218**	PN	Pn	08 13 39.3	-1.9
FOZ	**Fox Glacier**	**5.05**	**218**	P	Pn	08 13 39.3	-1.9
LBZ	**Lake Benmore**	**5.50**	**209**	PN	Pn	08 13 45.7	-1.0
LBZ	**Lake Benmore**	**5.50**	**209**	P	Pn	08 13 45.7	-1.0
ODZ	**Otahua Downs**	**5.92**	**203**	PN	Pn	08 13 52.0	+0.1
ODZ	**Otahua Downs**	**5.92**	**203**	P	Pn	08 13 52.0	+0.1
WKZ	**Wanaka**	**6.34**	**214**	PN	Pn	08 13 55.5	-1.6
WKZ	**Wanaka**	**6.34**	**214**	P	Pn	08 13 55.5	-1.6

*BJI **21** 08:33:21.8, 15˚.30S×173˚.20W, h10km, mB5.4/19, mb5.0/25, Ms5.4/13, Ms7 5.1/14*
*IDC **21** 08:33:21.6±0.5, 15˚.34S×173˚.20W, h0km, mb4.6/15, mb1 4.7/16, mb1mx4.7/22, mbtmp4.6/16, ML4.4/1, MS4.0/20, Ms1 4.0/20, ms1mx3.9/24, Error ellipse: s-maj=22.0km s-min=13.7km az=136.0*
*NEIC **21** 08:33:23.8±0.2, 15˚.29S×173˚.20W, h10km, mb5.3/96, Error ellipse: s-maj=8.5km s-min=4.6km az=141.0*
*ISCJB **21** 08:33:26.1±0.2, 15˚.22S±0˚.06×173˚.26W±0˚.05, h33km, mb5.0/119, MS4.2/26, Error ellipse: s-maj=9.2km s-min=5.1km az=147.4*
*SZGRF **21** 08:33:26.5, 15˚.82S×172˚.44W, h31km, Samoa Islands region*
*MOS **21** 08:33:27.2±1.1, 15˚.05S×173˚.14W, h33km, mb5.4/34, Error ellipse: s-maj=15.3km s-min=7.8km az=58.3*
*GCMT **21** 08:33:34.0±0.2, 15˚.13S×172˚.81W, h43km±1km, MW5.1, Moment Tensor Solution. s40,c50; s76,c111; Moment tensor: Scale 10^{16}Nm; M_{rr}=3.78±.22; $M_{\theta\theta}$2.61±.18; $M_{\phi\phi}$1.17±.19; $M_{r\theta}$-2.65±.15; $M_{r\phi}$-2.77±.14; $M_{\theta\phi}$2.91±.15; Best double couple: $M_0$5.80000×10^{16} NP1:ϕ_s297.00000°, δ25.00000°, λ-107.00000°. NP2:ϕ_s136.00000°, δ67.00000°, λ-82.00000°. Principal axes: T 6.2600, Plg21.0000°, Azm220.0000°; N -0.8900, Plg7.0000°, Azm313.0000°; P -5.3700, Plg68.0000°, Azm60.0000°; Data Used: IU II IC CN G.*

ISC 21 08:33:27.8±0.2, 15˚.27S±0˚.06×173˚.27W±0˚.05, h35km, (h12km±5.5km: pP-P), n745, $c_0$56/607, mb5.0/119, MS4.2/26, 218C-208D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.98**	**47**	*e*Pn	**Pn**	**08 33 55.5**	**-3.4**
AFI				*e*Sn	**Sn**	**08 34 15.6**	**-6.9**
AFI	**Afiamalu**	**1.98**	**47**	Pn	**Pn**	**08 33 55.6**	**-3.2**
	baz=234,slow=19						
AFI				Sn	**Sn**	**08 34 15.0**	**-7.4**
	6μm,0.3s,baz=60,slow=20,SNR=21						
AFI				LR	LR	08 34 25.6	
	comp=Z,3μm,21.2s,baz=215,slow=32						
MSVF	**Nonsavu**	**8.68**	**252**	Pn	Px	08 35 41.5	
	651nm,1.1s,SNR=7.7						
MSVF	**Nonsavu**	**8.68**	**252**	*e*Pn	Px	08 35 40.9	
RAR	**Rarotonga**	**14.12**	**117**	Pn	**Pn**	**08 36 40.7**	**-4.7**
	1.9nm,0.3s,baz=256,slow=7.8,SNR=3.3						
RAR				Sn	**Sn**	**08 39 06.2**	**-15**
	1.0nm,0.3s,baz=77,slow=17,SNR=2.7						
RAR				LR	LR	08 40 18.3	
	comp=Z,502nm,21.6s,baz=38,slow=30						
DZM	**Mont Dzumac**	**20.36**	**248**	*e*P	**P**	**08 38 05.4**	**+4.0**
	177nm,1.3s						
DZM				*e*LR	LR	08 43 04.9	
	3μm,27.1s						
PPT	**Papeete**	**22.84**	**99**	*e*LQ		08 42 40.0	
	2μm,28.0s						
PPT				*e*LR	LR	08 43 37.5	
	1μm,28.2s,baz=270						
PPT	**Papeete**	**22.84**	**99**	LR	LR	08 45 00.6	
	comp=Z,247nm,21.1s,MS3.6,baz=271,slow=31						
URZ	**Urewera**	**24.43**	**199**	*e*P	**P**	**08 38 43.6**	**+0.5**
	33nm,0.7s,mb4.9						
URZ	**Urewera**	**24.43**	**199**	P	**

ARVC **Arvin** 71.93 45 ⇓P P 08 44 47.5 -0.3
baz=72
MWC **Mount Wilson** 71.96 46 eP P 08 44 47.5 -0.4
comp=Z,20nm,1.1s,mb5.0
MWC **Mount Wilson** 71.96 46 eP P 08 44 47.5 -0.4
MWC pmax pmax
comp=Z,19nm,1.1s,mb4.9
VES **Vestal, Richgr** 72.16 44 ⇓P P 08 44 48.4 -0.8
baz=72,SNR=7.9
MURC **Murrieta** 72.22 47 ⇑P P 08 44 49.0 -0.5
baz=72
BFSC **Mount Baldy Ra** 72.24 46 ⇑P P 08 44 49.0 -0.6
baz=72,SNR=5.7
KHMM **Horse Mountain** 72.28 37 eP P 08 44 50.8 +1.1
comp=Z,20nm,1.0s,mb5.0
EDW2 **Edwards Air Fo** 72.37 45 ⇑P P 08 44 50.1 -0.2
baz=72,SNR=12
CHGN **Chignik** 72.38 9 eP P 08 44 49.2 -0.7
MONP **Monument Peak** 72.39 48 ⇑P P 08 44 50.3 -0.2
baz=72,SNR=6.5
ISA **Isabella** 72.47 44 ⇓P P 08 44 50.9 -0.1
baz=73,SNR=11
ISA **Isabella** 72.47 44 eP P 08 44 51.3 +0.4
comp=Z,24nm,1.3s,mb5.0
ISA **Isabella** 72.47 44 eP P 08 44 51.3 +0.3
ISA pmax pmax
comp=Z,24nm,1.3s,mb5.0
DVTC **Desert V Tower** 72.49 48 ⇓P P 08 44 50.8 -0.4
baz=73
PETK **Petropavlovsk-** 72.54 342 P P 08 44 51.5 +0.6
comp=Z,8.3nm,0.8s,mb4.7,baz=117,slow=8.5,SNR=12
PETK LR LR 09 13 58.8
comp=Z,50nm,19.2s,MS3.8,baz=319,slow=34
CMB **Columbia Colle** 72.58 41 eP P 08 44 51.1 -0.5
comp=Z,9.7nm,1.0s,mb4.7
CMB **Columbia Colle** 72.58 41 eP P 08 44 51.1 -0.5
CMB pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
OHCM **Honcut** 72.68 40 eP P 08 44 50.0 -2.1
PFO **Pinyon Flat Ob** 72.74 47 ⇑P P 08 44 52.3 -0.3
baz=73,SNR=5.4
PFO **Pinyon Flat Ob** 72.74 47 eP P 08 44 51.5 -1.1
comp=Z,17nm,1.4s,mb4.8
PFO **Pinyon Flat Ob** 72.74 47 eP P 08 44 51.6 -1.0
PFO pmax pmax
comp=Z,17nm,1.4s,mb4.8
BBRC **Big Bear Solar** 72.77 46 ⇓P P 08 44 52.7 -0.1
baz=73
WDC **Whiskeytown Da** 72.80 38 eP P 08 44 53.5 +0.7
comp=Z,27nm,1.4s,mb5.0
WDC **Whiskeytown Da** 72.80 38 eP P 08 44 53.5 +0.7
WDC pmax pmax
comp=Z,27nm,1.4s,mb5.0
SWSC **Sam W. Stewart** 72.86 48 ⇑P P 08 44 53.0 -0.3
baz=73
LRMC **Laurel Mountai** 72.90 45 ⇓P P 08 44 53.3 -0.2
baz=73,SNR=6.0
RRX **Edison Barstow** 73.05 46 ⇑P P 08 44 54.0 -0.4
baz=73
CWC **Cottonwood Cre** 73.17 44 ⇑P P 08 44 55.0 -0.1
baz=73,SNR=6.5
BELC **Belle Mtn. Jos** 73.27 47 ⇓P P 08 44 55.5 -0.2
baz=73,SNR=9.6
MPMC **Manual Prospec** 73.36 44 ⇓P P 08 44 56.1 -0.1
baz=74,SNR=26
MTUM **Tungsten Hills** 73.37 43 eP P 08 44 56.2 0.0
GSC **Goldstone** 73.41 45 ⇓P P 08 44 56.2 -0.4
baz=74,SNR=11
GSC **Goldstone** 73.41 45 eP P 08 44 56.5 0.0
comp=Z,21nm,1.1s,mb5.0
GSC **Goldstone** 73.41 45 eP P 08 44 56.5 0.0
GSC pmax pmax
comp=Z,21nm,1.1s,mb5.0
YBH **Yreka Blue Hor** 73.42 37 eP P 08 44 57.1 +0.6
comp=Z,20nm,1.0s,mb5.0
YBH **Yreka Blue Hor** 73.42 37 eP P 08 44 57.1 +0.7
YBH pmax pmax
comp=Z,20nm,1.0s
YSS **Yuzh-Sakhalins** 73.43 330 eP P 08 44 58.0 +1.6
YSS **Yuzh-Sakhalins** 73.43 330⇑eP P 08 44 57.7 +1.3
YSS e 08 45 17.4
WAKR **Walker** 73.47 41 eP P 08 44 56.9 +0.2
BC3 **Big Chuckawall** 73.48 47 ⇑P P 08 44 56.9 -0.1
baz=74,SNR=7.1
HEC **Hector,Ludlow** 73.48 46 ⇑P P 08 44 56.3 -0.7
baz=74,SNR=13
112A **Yuma** 73.53 49 ⇑P P 08 44 57.1 -0.2
baz=74
GLA **Glamis** 73.61 48 ⇑P P 08 44 57.7 -0.1
baz=74
GLA **Glamis** 73.61 48 eP P 08 44 57.7 -0.1
comp=Z,19nm,1.0s,mb5.0
GLA **Glamis** 73.61 48 eP P 08 44 57.7 -0.1
GLA pmax pmax
comp=Z,19nm,1.0s,mb5.0
WCN **Washoe City** 73.73 41 ⇓P P 08 44 58.5 +0.2
baz=74,SNR=6.2
HUMO **Hull Mountain** 73.83 36 eP P 08 44 58.4 -0.5
comp=Z,24nm,1.3s,mb5.0
GMRC **Granite Mounta** 73.92 46 ⇑P P 08 44 59.2 -0.3
baz=74,SNR=12
IRM **Iron Mountain** 73.96 47 ⇑P P 08 44 59.6 -0.1
baz=74,SNR=18
GRAC **Grapevine Rang** 73.96 44 ⇑P P 08 44 59.8 +0.1
baz=74,SNR=9.1
FURC **Furnace Creek,** 74.01 44 ⇓P P 08 44 59.7 -0.3
baz=74,SNR=9.3
TUQ **Turquoise Moun** 74.09 46 ⇓P P 08 45 00.2 -0.3
baz=74,SNR=11
SHOC **Shoshone** 74.09 45 ⇓P P 08 44 60.0 -0.5
baz=74,SNR=11
NVAR **Mina Array Bea** 74.15 42 P P 08 45 00.7 -0.1
comp=Z,4.3nm,0.8s,mb4.4,baz=228,slow=9.1,SNR=30
Y12C **Blythe** 74.19 48 ⇑P P 08 45 00.7 -0.4
baz=74,SNR=5.2
PAHR **Pah Rah Range** 74.20 40 eP P 08 45 01.5 +0.5
comp=Z,23nm,1.2s,mb5.0
113A **Mohawk Valley,** 74.24 49 ⇑P P 08 45 00.9 -0.5
baz=74,SNR=10
U10A **Ash Meadows, A** 74.34 45 ⇑P P 08 45 01.8 -0.1
baz=74,SNR=12
LDFC **Landfair** 74.46 46 eP P 08 45 02.9 +0.2
Z13A **Yuma Proving G** 74.53 49 ⇑P P 08 45 02.8 -0.4
baz=75,SNR=18
214A **Organ Pipe Nat** 74.54 50 ⇓P P 08 45 02.9 -0.3
baz=75,SNR=9.7
V11A **Goodsprings** 74.64 46 ⇓P P 08 45 03.6 -0.1
baz=75,SNR=6.3
NEE2 **Needles Airpor** 74.65 47 ⇓P P 08 45 03.7 -0.1
baz=75
PDMCI **Parker Dam,Lak** 74.74 47 ⇑P P 08 45 04.0 -0.3
baz=75,SNR=8.2
W12A **Cal Nev Ari** 74.75 46 ⇑P P 08 45 04.5 +0.2
baz=75
KDAK **Kodiak Island** 74.77 11 eP P 08 45 03.3 -0.7
comp=Z,54nm,1.3s,mb5.3
KDAK **Kodiak Island** 74.77 11ceP P 08 45 04.1 +0.2
114A **Black Gap (USA** 74.87 49 ⇑P P 08 45 04.9 -0.3
baz=75
MOD **Modoc** 74.94 38 eP P 08 45 05.6 +0.2
comp=Z,31nm,1.0s,mb5.2
S10A **Tonopah Range,** 74.98 43 ⇑P P 08 45 05.6 0.0
baz=75,SNR=19
V12A **Nelson** 74.98 46 ⇓P P 08 45 05.7 0.0
baz=75,SNR=14
U11A **Corn Creek** 74.98 45 ⇑P P 08 45 05.9 +0.2
baz=75
K05A **Summer Lake** 75.09 37 ⇓P P 08 45 06.8 +0.6
baz=75,SNR=14
X13A **Yucca** 75.11 47 ⇓P P 08 45 06.3 -0.2
baz=75,SNR=18
Z14A **Wintersburg** 75.13 49 ⇑P P 08 45 06.5 -0.1
baz=75,SNR=6.0
W13A **Hualapai Mount** 75.33 47 ⇑P P 08 45 07.7 0.0
baz=75,SNR=15
Y14A **Wickenburg** 75.37 48 ⇓P P 08 45 07.7 -0.3
baz=76,SNR=18
R10A **Warm Springs** 75.38 43 ⇑P P 08 45 08.3 +0.4
baz=76,SNR=19
S11A **Rachel** 75.39 44 ⇓P P 08 45 07.9 -0.1
baz=76,SNR=8.4
T11A **Corn Creek, Al** 75.53 44 ⇑P P 08 45 08.9 +0.1
baz=76,SNR=29
216A **Three Points,** 75.56 51 ⇓P P 08 45 09.2 0.0
baz=76,SNR=17
U12A **Valley of Fire** 75.57 45 ⇑P P 08 45 09.1 +0.1
baz=76,SNR=14

H04A **Detroit Lake** 75.58 35 ⇓P P 08 45 08.7 -0.2
baz=76,SNR=9.6
T12A **Moapa** 75.60 45 ⇑P P 08 45 09.1 -0.1
baz=76
Q10A **Clear Creek Ra** 75.61 42 ⇓P P 08 45 09.4 +0.2
baz=76
F03A **Seaside** 75.63 33 ⇑P P 08 45 09.4 +0.2
baz=76
116A **Elov** 75.65 50 ⇓P P 08 45 09.3 -0.3
baz=76
V13A **Grand Canyon W** 75.65 46 ⇓P P 08 45 09.3 -0.2
baz=76,SNR=14
Z15A **Gila River Ind** 75.67 49 ⇓P P 08 45 09.3 -0.4
baz=76,SNR=6.2
X14A **Yava** 75.72 48 ⇑P P 08 45 10.1 +0.1
baz=76,SNR=14
G04A **Mulino** 75.75 34 ⇓P P 08 45 10.6 +0.8
baz=76,SNR=5.2
Y15A **Casa Rosa Ranc** 75.87 49 ⇓P P 08 45 10.9 +0.1
baz=76,SNR=48
R11A **Troy Canyon, C** 75.88 43 ⇓P P 08 45 10.6 -0.2
baz=76,SNR=16
217A **Green Valley** 75.94 51 ⇓P P 08 45 11.1 -0.2
baz=76,SNR=16
U13A **Pakoon Wash** 75.95 46 ⇓P P 08 45 11.6 +0.4
baz=76,SNR=50
W14A **Seligman** 75.96 47 ⇑P P 08 45 11.7 +0.4
baz=76,SNR=27
BMN **Battle Mountai** 75.97 41 eP P 08 45 11.3 +0.1
comp=Z,57nm,1.8s,mb5.2
BMN **Battle Mountai** 75.97 41 eP P 08 45 11.3 0.0
BMN pmax pmax
comp=Z,57nm,1.8s,mb5.2
S12A **Delamar Landin** 75.98 44 ⇑P P 08 45 11.7 +0.3
baz=76,SNR=17
E03A **Lebam** 76.03 33 ⇑P P 08 45 11.8 +0.3
baz=76
Q11A **Duckwater** 76.10 43 ⇑P P 08 45 12.1 0.0
baz=76,SNR=29
KSRS **Korea Array** 76.15 315 P P 08 45 12.1 -0.2
comp=Z,1.7nm,0.8s,mb4.0,baz=124,slow=5.9,SNR=5.3
KSRS LR LR 09 16 41.7
comp=Z,39nm,20.6s,MS3.7,baz=0.7,slow=34
V14A **Boquillas Ranc** 76.15 47 ⇑P P 08 45 12.7 +0.3
baz=76,SNR=26
X15A **Humboldt** 76.20 48 ⇓P P 08 45 12.9 +0.2
baz=76,SNR=23
TUC **Tucson** 76.21 51 eP P 08 45 12.8 0.0
comp=Z,26nm,1.1s,mb5.1
TUC **Tucson** 76.21 51 eP P 08 45 12.8 0.0
TUC pmax pmax
comp=Z,26nm,1.1s,mb5.1
Z16A **Peralta Trail,** 76.23 49 ⇓P P 08 45 12.8 0.0
baz=76,SNR=16
F04A **Amboy** 76.24 34 ⇓P P 08 45 12.6 -0.1
baz=76
WVOR **Wild Horse Val** 76.25 38 eP P 08 45 12.8 0.0
comp=Z,68nm,1.6s,mb5.3
WVOR **Wild Horse Val** 76.25 38 eP P 08 45 12.8 0.0
WVOR pmax pmax
comp=Z,68nm,1.6s,mb5.3
T13A **Saint George** 76.31 45 ⇑P P 08 45 13.4 +0.2
baz=76,SNR=28
117A **Oracle** 76.37 50 ⇑P P 08 45 13.7 0.0
baz=76,SNR=19
P11A **Circle Ranch,** 76.42 42 ⇑P P 08 45 13.8 0.0
baz=76
Y16A **Circle Bar Ran** 76.45 49 ⇓P P 08 45 14.2 +0.1
baz=76,SNR=18
U14A **Mt Trumbull** 76.50 46 ⇑P P 08 45 14.6 +0.3
baz=77,SNR=44
R12A **Pony Springs,** 76.52 44 ⇓P P 08 45 14.5 +0.1
baz=77,SNR=25
W15A **Wilams** 76.52 47 ⇑P P 08 45 15.0 +0.5
baz=77
218A **Dragoon** 76.61 51 ⇑P P 08 45 15.2 +0.2
baz=77,SNR=20
S13A **Holt Ranch, En** 76.63 45 ⇓P P 08 45 15.3 +0.3
baz=77,SNR=23
I07A **Izee** 76.72 37 ⇑P P 08 45 15.7 +0.2
baz=77,SNR=15
X16A **Lo Mia Camp, P** 76.74 48 ⇓P P 08 45 16.1 +0.3
baz=77,SNR=42
Q12A **Willow Creek R** 76.75 43 ⇓P P 08 45 15.7 0.0
baz=77,SNR=8.0
G06A **Carlson Farm,** 76.78 35 ⇑P P 08 45 15.6 -0.1
baz=77,SNR=8.9
Y17A **Roosevelt** 76.83 49 ⇑P P 08 45 16.3 0.0
baz=77,SNR=14
R13A **O'Grain Ranch,** 76.87 44 ⇓P P 08 45 17.1 +0.7
baz=77,SNR=9.1
J08A **Circle Bar Ran** 76.89 38 ⇑P P 08 45 16.5 +0.1
baz=77,SNR=24
T14A **Hurricane** 76.89 45 ⇓P P 08 45 16.8 +0.3
baz=77
Z17A **San Carlos Hig** 76.91 50 ⇑P P 08 45 16.9 +0.1
baz=77,SNR=8.7
319A **Douglas** 76.92 52 ⇓P P 08 45 17.0 +0.2
baz=77,SNR=14
P12A **McGill** 76.93 43 ⇑P P 08 45 16.7 0.0
baz=77,SNR=10
CCUT **Cedar City** 76.95 45 eP P 08 45 17.5 +0.6
comp=Z,34nm,1.4s,mb5.1
W16A **Flagstaff** 77.00 48 ⇓P P 08 45 17.6 +0.4
baz=77,SNR=8.5
ARUT **Antelope Range** 77.02 45 eP P 08 45 18.0 +0.7
comp=Z,15nm,1.1s,mb4.8
ARUT **Antelope Range** 77.02 45 eP P 08 45 18.0 +0.7
ARUT pmax pmax
comp=Z,15nm,1.1s,mb4.8
U15A **North Rim** 77.12 46 ⇓P P 08 45 18.4 +0.6
baz=77,SNR=28
Z18A **Geronimo** 77.13 50 ⇓P P 08 45 18.2 +0.2
baz=77,SNR=5.4
X17A **Forest Lakes** 77.16 49 ⇑P P 08 45 18.4 +0.3
baz=77,SNR=9.3
S14A **Cedar City** 77.19 45 ⇑P P 08 45 18.5 +0.3
baz=77,SNR=7.5
WPW **White Pass** 77.19 34 P P 08 45 18.3 +0.3
219A **White Tail Can** 77.22 52 ⇓P P 08 45 18.7 +0.2
baz=77,SNR=21
Q13A **Wheeler Ranch,** 77.24 43 ⇓P P 08 45 18.2 -0.3
baz=77,SNR=17
RSO **Redoubt South** 77.26 10 eP P 08 45 18.1 +0.1
D05A **Enumclaw** 77.27 33 ⇑P P 08 45 18.9 +0.5
baz=77
WUAZ **Wupatki** 77.32 48 ⇓P P 08 45 19.4 +0.4
baz=77,SNR=12
WUAZ **Wupatki** 77.32 48 eP P 08 45 19.3 +0.3
comp=Z,36nm,1.5s,mb5.1
T15A **Red Dirt Ranch** 77.36 46 ⇑P P 08 45 19.5 +0.3
baz=78,SNR=10
JBO **Jordan Butte** 77.37 35 P P 08 45 19.2 +0.2
SVW2 **Sparrevohn** 77.41 9 eP P 08 45 18.6 -0.3
comp=Z,36nm,1.9s,mb5.0
SVW2 LR LR
comp=Z,200nm,23.0s,MS4.4
Y18A **Canyon Day Jun** 77.46 50 ⇓P P 08 45 20.3 +0.5
baz=78,SNR=34
O12A **Currie** 77.46 42 ⇑P P 08 45 19.9 +0.2
baz=78,SNR=19
320A **Kipp Ranch, An** 77.47 52 ⇑P P 08 45 20.4 +0.4
baz=78,SNR=11
P13A **Bates Ranch, G** 77.51 43 ⇓P P 08 45 19.9 0.0
baz=78,SNR=16
119A **Ashpeak Ranch,** 77.53 51 ⇓P P 08 45 20.4 +0.1
baz=78,SNR=9.9
W17A **Winslow** 77.58 48 ⇑P P 08 45 20.8 +0.3
baz=78
S15A **Panguitch** 77.70 45 ⇓P P 08 45 22.5 +1.4
baz=78,SNR=18
220A **Playas Peak, P** 77.73 52 ⇑P P 08 45 21.7 +0.4
baz=78,SNR=28
Q14A **Sevier Lake (B** 77.75 44 ⇓P P 08 45 21.6 +0.3
baz=78,SNR=31
G08A **Pilot Rock** 77.76 36 ⇓P P 08 45 21.5 +0.3
baz=78,SNR=30
V17A **Tonalea, Kykot** 77.78 48 ⇓P P 08 45 21.9 +0.4
baz=78,SNR=25
U16A **Tuba City** 77.80 47 ⇓P P 08 45 22.1 +0.5
baz=78,SNR=34
Z19A **T-Link Ranch,** 77.80 50 ⇑P P 08 45 21.9 +0.2
baz=78
X18A **Snowflake** 77.87 49 ⇓P P 08 45 22.3 +0.2
baz=78,SNR=10
O13A **Hicks Ranch, I** 77.89 42 ⇑P P 08 45 22.2 +0.2
baz=78,SNR=5.7
120A **U Bar Ranch, L** 77.94 51 ⇓P P 08 45 22.8 +0.3
baz=78,SNR=9.8
JCW **Jim Creek** 77.94 32 eP P 08 45 22.6 +0.5
E07A **Sunnyside** 78.02 35 ⇑P P 08 45 22.8 +0.1
baz=78,SNR=9.8
R15A **Junction** 78.03 45 ⇑P P 08 45 23.7 +0.8
baz=78,SNR=9.7
RSW **Rattlesnake Hi** 78.07 35 eP P 08 45 23.5 +0.6
HAWA **Hanford** 78.10 35 eP P 08 45 23.0 0.0
comp=Z,51nm,1.3s,mb5.3
Y19A **Nutrioso** 78.12 50 ⇓P P 08 45 24.1 +0.6
baz=78,SNR=46
P14A **Drum Mountains** 78.20 43 ⇓P P 08 45 24.1 +0.3
baz=78,SNR=36
Z20A **Nine Sixteen R** 78.22 51 ⇑P P 08 45 24.6 +0.5
baz=78,SNR=24
MSU **Marysvale** 78.25 45 eP P 08 45 24.9 +0.8
S16A **Weppner Ranch,** 78.25 45 ⇑P P 08 45 24.3 +0.2
baz=78,SNR=28
W18A **Petrified Fore** 78.31 49 ⇓P P 08 45 24.6 +0.1
baz=78
X19A **St. Johns** 78.31 49 ⇑P P 08 45 25.0 +0.5
baz=78,SNR=38
221A **Mesquite Ranch** 78.34 52 ⇓P P 08 45 25.2 +0.4
baz=78,SNR=7.0
Q15A **Fillmore** 78.36 44 ⇑P P 08 45 24.8 +0.1
baz=78,SNR=11
RC01 **Rabbit Creek A** 78.39 11 eP P 08 45 23.7 -0.6
comp=Z,54nm,1.5s,mb5.3
ETW **Entiat** 78.41 33 P P 08 45 24.9 +0.2
E08A **Dider Farm, El** 78.42 35 ⇓P P 08 45 24.6 -0.2
baz=79,SNR=7.3
T17A **Navajo Res., N** 78.44 46 ⇓P P 08 45 25.9 +0.7
baz=78,SNR=23
V18A **Ganado** 78.44 48 ⇓P P 08 45 25.7 +0.4
baz=78,SNR=23
LNOR **Lincton Mounta** 78.48 36 eP P 08 45 25.1 -0.1
MFID **Camas Ranch** 78.51 39 ⇓P P 08 45 25.3 -0.1
baz=79,SNR=14
W19A **Sanders** 78.55 49 ⇓P P 08 45 26.2 +0.3
baz=79
121A **Cookes Peak, D** 78.57 52 ⇑P P 08 45 26.5 +0.4
baz=79,SNR=15
R16A **Teasdale** 78.61 45 ⇑P P 08 45 26.9 +0.8
baz=79,SNR=24
WTV **Waterville** 78.67 34 P P 08 45 26.1 -0.1
DUG **Dugway** 78.68 43 ⇓P P 08 45 26.3 -0.1
baz=79,SNR=25
DUG **Dugway** 78.68 43 eP P 08 45 26.3 -0.2
comp=Z,31nm,1.3s,mb5.1
DUG **Dugway** 78.68 43 eP P 08 45 26.3 -0.1
DUG pmax pmax
comp=Z,31nm,1.3s,mb5.1
P15A **Leamington** 78.72 44 ⇓P P 08 45 26.8 +0.2
baz=79,SNR=6.5
Y20A **Horse Springs,** 78.74 50 ⇑P P 08 45 27.8 +0.9
baz=79,SNR=36
S17A **Black Ridge (B** 78.75 46 ⇓P P 08 45 26.8 -0.1
baz=79,SNR=25
U18A **Rough Rock, Ch** 78.82 47 ⇑P P 08 45 27.7 +0.4
baz=79,SNR=23
D08A **Wollman Farm,** 78.84 34 ⇑P P 08 45 26.9 -0.2
baz=79,SNR=14
222A **Williams Famil** 78.90 52 ⇓P P 08 45 27.9 +0.1
baz=79,SNR=8.0
BGU **Big Grassy Mou** 78.92 42 eP P 08 45 27.3 -0.4
comp=Z,39nm,1.7s,mb5.0
E09A **Wood Farm, Sta** 78.94 35 ⇓P P 08 45 27.2 -0.6
baz=79,SNR=9.4
X20A **Quemado** 78.94 50 ⇓P P 08 45 28.6 +0.6
baz=79,SNR=22
O15A **The Old Anders** 78.95 43 ⇓P P 08 45 27.8 -0.1
baz=79
PMR **Palmer** 78.97 11 eP P 08 45 25.7 -1.8
comp=Z,164nm,3.0s
PMR LR LR
comp=Z,100nm,20.0s,MS4.2
PMR **Palmer** 78.97 11 eP P 08 45 25.7 -1.8
PMR pmax pmax
comp=Z,164nm,3.0s
PMR MLR MLR
comp=Z,100nm,20.0s,MS4.2
MDJ **Mudanjiang** 79.00 322 P P 08 45 28.3 +0.2
MDJ pP pP 08 45 31.5 -7.5
MDJ S S 08 55 30.1 +5.7
MDJ sS sS 08 55 33.5 -9.1
MDJ SS SS 09 00 33.3 +2.4
MDJ pmax pmax
comp=Z,150nm,6.5s
Z21A **St. Cloud Mine** 79.00 51 ⇑P P 08 45 29.0 +0.7
baz=79,SNR=13
M14A **Sheep Mountain** 79.02 41 ⇓P P 08 45 28.3 0.0
baz=79,SNR=62
NLU **North Lily Min** 79.05 43 eP P 08 45 29.2 +0.7
comp=Z,88nm,2.4s,mb5.3
V19A **Window Rock** 79.08 48 ⇑P P 08 45 29.2 +0.4
baz=79,SNR=6.0
TTA **Tatalina** 79.11 8 eP P 08 45 29.6 +1.4
Q16A **Castle Valley** 79.13 45 ⇓P P 08 45 29.4 +0.5
baz=79,SNR=14
I12A **Atlanta** 79.14 39 ⇑P P 08 45 29.1 +0.2
baz=79,SNR=33
F10A **Beach Ranch, E** 79.14 36 ⇑P P 08 45 28.2 -0.6
baz=79,SNR=21
P16A **Fountain Green** 79.15 44 ⇓P P 08 45 29.5 +0.5
baz=79
OD2 **Odessa Site #2** 79.15 34 eP P 08 45 28.7 -0.1
T18A **Mexican Hat** 79.16 47 ⇓P P 08 45 29.8 +0.6
baz=79,SNR=92
R17A **Hanksville Air** 79.20 45 ⇑P P 08 45 29.3 0.0
baz=79,SNR=42
W20A **Ramah** 79.21 49 ⇓P P 08 45 30.2 +0.8
baz=79,SNR=53
N15A **Stansbury Isla** 79.23 42 ⇑P P 08 45 29.3 -0.1
baz=79,SNR=12
U19A **Dine' College,** 79.23 48 ⇑P P 08 45 30.0 +0.4
baz=79,SNR=51
122A **Conniff Cattle** 79.24 52 ⇓P P 08 45 30.2 +0.6
baz=79,SNR=5.9
DIV **Divide** 79.24 13 eP P 08 45 29.0 0.0
comp=Z,43nm,1.2s,mb5.3
TMUT **Trail Mountain** 79.29 44 eP P 08 45 30.8 +1.0
comp=Z,61nm,1.2s,mb5.4
Y21A **Point of Rocks** 79.31 50 ⇓P P 08 45 30.8 +0.8
baz=79,SNR=19
S18A **Hurst Farm, Bl** 79.34 46 ⇓P P 08 45 30.1 -0.1
baz=79,SNR=10
BMRM **Bremner River** 79.36 14 eP P 08 45 29.2 -0.4
comp=Z,81nm,1.4s,mb5.5
L14A **Malta** 79.36 41 ⇓P P 08 45 30.1 0.0
baz=80,SNR=17
NOQ **North Oquirrh** 79.37 43 eP P 08 45 30.4 +0.1
comp=Z,28nm,1.1s,mb5.1
223A **Chaparral, Ant** 79.38 53 ⇑P P 08 45 30.5 0.0
baz=79
B08A **Colville Reser** 79.40 33 ⇓P P 08 45 29.3 -0.9
baz=80,SNR=12
X21A **Alamocita Cree** 79.42 50 ⇑P P 08 45 31.1 +0.5
baz=80,SNR=20
HLID **Hailey** 79.45 39 ⇓P P 08 45 30.8 +0.2
baz=80,SNR=55
HLID **Hailey** 79.45 39 eP P 08 45 30.8 +0.2
comp=Z,38nm,1.0s,mb5.3
SPUT **South Promonto** 79.49 42 eP P 08 45 31.2 +0.4
comp=Z,14nm,1.4s,mb5.2
Z22A **Elephant Butte** 79.51 51 ⇑P P 08 45 31.5 +0.4
baz=80,SNR=25
HVU **Hansel Valley** 79.53 41 eP P 08 45 30.6 -0.4
comp=Z,66nm,1.6s,mb5.3
HVU **Hansel Valley** 79.53 41 eP P 08 45 30.6 -0.4
HVU pmax pmax
comp=Z,66nm,1.6s,mb5.3
V20A **Brimhall** 79.54 48 ⇓P P 08 45 31.2 -0.1
baz=80,SNR=8.4
O16A **Springville** 79.55 43 ⇑P P 08 45 31.3 +0.1
baz=80,SNR=10.0
M15A **Larsen Ranch,** 79.57 42 ⇑P P 08 45 31.0 -0.3
baz=80,SNR=23
T19A **Beclabito** 79.62 47 ⇑P P 08 45 32.0 +0.4
baz=80,SNR=34
C09A **Chrisman Ranch** 79.63 34 ⇓P P 08 45 31.0 -0.5
baz=80,SNR=5.7
PPLA **Purkeypile** 79.64 10 eP P 08 45 30.5 -0.7
comp=Z,13nm,1.2s,mb4.7
SRU **San Rafael** 79.67 45 ⇓P P 08 45 31.9 0.0
baz=80,SNR=22
SRU **San Rafael** 79.67 45 eP P 08 45 32.0 +0.1
comp=Z,42nm,1.3s,mb5.2
SRU **San Rafael** 79.67 45 eP P 08 45 32.0 +0.2

SRU pmax pmax
comp=Z,42nm,1.3s,mb5.2
K14A Jones Ranch, D 79.67 41 ⇓P P 08 45 31.8 0.0
baz=80,SNR=29
P17A Butcher Ranch, 79.70 44 ⇑P P 08 45 32.1 +0.1
baz=80,SNR=11
H12A Diamond D Ranc 79.72 38 ⇓P P 08 45 31.8 -0.3
baz=80,SNR=19
R18A Canyonlands Na 79.75 46 ⇑P P 08 45 32.3 0.0
baz=80,SNR=37
U20A Newcomb 79.77 48 ⇓P P 08 45 32.7 +0.3
baz=80,SNR=9.5
123A Bell Site, Whi 79.77 52 ⇑P P 08 45 32.4 -0.2
baz=80
JLU Jordanelle 79.78 43 eP P 08 45 32.6 +0.1
comp=Z,29nm,1.2s,mb5.1
Y22A Socorro 79.81 51 ⇑P P 08 45 32.9 +0.2
baz=80,SNR=16
DAU Daniels Canyon 79.82 43 eP P 08 45 33.4 +0.7
I13A Wildhorse Cree 79.82 39 ⇓P P 08 45 32.7 +0.2
baz=80,SNR=18
W21A San Fidel 79.82 49 ⇓P P 08 45 33.4 +0.6
baz=80
J14A Carey 79.87 40 ⇑P P 08 45 33.6 +0.7
baz=80,SNR=41
LAZ Ladron 79.88 50 eP P 08 45 33.4 +0.3
comp=Z,20nm,1.6s,mb4.8
L15A Malad City 79.89 41 ⇑P P 08 45 32.7 -0.3
baz=80,SNR=18
Y22D IRIS PASSCAL I 79.90 51 ⇑P P 08 45 33.7 +0.4
baz=80
LENM Lemitar 79.90 50 eP P 08 45 34.1 +0.9
Q18A Rafter H Ranch 79.93 45 ⇑P P 08 45 33.1 -0.1
baz=80,SNR=32
N16A Rees Ranch, Co 79.94 43 ⇑P P 08 45 33.4 +0.1
baz=80,SNR=9.9
S19A Harvey Farm, M 79.97 46 ⇓P P 08 45 33.8 +0.3
baz=80,SNR=30
425A Indio Mountain 79.98 54 ⇓P P 08 45 33.9 +0.1
baz=80,SNR=26
X22A Bernardo 80.02 50 ⇓P P 08 45 34.9 +1.0
baz=80
MNTX Cornudas Mount 80.05 53 ⇓P P 08 45 33.9 -0.2
baz=80,SNR=24
MNTX Cornudas Mount 80.05 53 eP P 08 45 33.9 -0.2
comp=Z,35nm,1.4s,mb5.1
Z23A Rita Site, Whi 80.06 52 ⇑P P 08 45 34.3 +0.2
baz=80,SNR=7.7
H13A Challis 80.09 38 ⇓P P 08 45 34.0 0.0
baz=80,SNR=25
224A Cornudas Mount 80.10 53 ⇓P P 08 45 34.6 +0.3
baz=80,SNR=20
P18A Preston Nutter 80.11 44 ⇑P P 08 45 34.6 +0.4
baz=80,SNR=13
R19A Curley Farm, L 80.14 46 ⇑P P 08 45 34.5 +0.1
baz=80,SNR=33
V21A Milan 80.14 49 ⇑P P 08 45 35.0 +0.5
baz=80,SNR=8.0
BNM Barren Site 80.15 51 eP P 08 45 34.7 +0.1
comp=Z,45nm,1.6s,mb5.2
F12A Elk City 80.15 37 ⇓P P 08 45 34.1 -0.2
baz=80,SNR=52
K15A Arbon 80.15 41 ⇑P P 08 45 34.5 +0.1
baz=80,SNR=15
626A Big Bend Ranch 80.15 56 ⇑P P 08 45 34.7 0.0
baz=80,SNR=24
MVCO Mesa Verde 80.17 47 ⇑P P 08 45 34.6 0.0
baz=80,SNR=6.4
MVCO Mesa Verde 80.17 47 eP P 08 45 34.1 -0.5
comp=Z,9.6nm,0.9s,mb4.7
NJ2 Nanjing 80.18 307 eP P 08 45 30.3 -4.5
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
HWUT Hardware Ranch 80.22 42 eP P 08 45 34.3 -0.4
comp=Z,34nm,1.5s,mb5.1
LPM Los Pinos Moun 80.22 50 eP P 08 45 35.3 +0.4
325A Bean Ranch, Si 80.23 54 ⇑P P 08 45 34.9 -0.2
baz=80,SNR=29
I14A Mackay 80.23 39 ⇑P P 08 45 35.2 +0.4
baz=80,SNR=16
PV10 Paradox Valley 80.33 46 eP P 08 45 35.4 -0.1
N17A Moffit Pass 80.36 43 ⇑P P 08 45 35.5 -0.1
baz=80,SNR=11
W22A Albuquerque 80.38 50 ⇓P P 08 45 36.6 +0.8
baz=80,SNR=8.0
G13A Cobalt 80.39 38 ⇑P P 08 45 35.5 -0.1
baz=80,SNR=21
526A Mary Lane Ranc 80.39 55 ⇑P P 08 45 36.0 0.0
baz=80,SNR=20
U21A Nageezi 80.41 48 ⇓P P 08 45 36.5 +0.5
baz=80,SNR=73
124A Stringfield Ra 80.42 52 ⇓P P 08 45 36.5 +0.4
baz=80,SNR=16
PV04 Paradox Valley 80.43 46 eP P 08 45 36.3 +0.3
TXAR Lajitas Array 80.44 56 P P 08 45 36.2 -0.1
TXAR LR LR 09 13 46.6
TXAR Lajitas Array 80.44 56 P P 08 45 36.2 -0.1
comp=Z,15nm,1.1s,mb4.8,baz=224,slow=5.2,SNR=72
TXAR LR LR 09 13 46.6
comp=Z,158nm,19.5s,MS4.4,baz=315,slow=30
TRF Thorofare Moun 80.47 10 eP P 08 45 34.8 -0.8
comp=Z,12nm,0.7s,mb4.9
Y23A Lovelace Mesa, 80.48 51 ⇓P P 08 45 36.4 0.0
baz=81,SNR=11
L16A Fish Haven 80.51 42 ⇓P P 08 45 36.1 -0.3
baz=81,SNR=6.7
NEW Newport 80.53 34 ⇑P P 08 45 35.5 -0.8
baz=81,SNR=5.7
NEW Newport 80.53 34 eP P 08 45 35.8 -0.5
comp=Z,29nm,1.6s,mb5.0
NEW Newport 80.53 34 eP P 08 45 35.8 -0.5
NEW pmax pmax
comp=Z,29nm,1.6s
PV01 Paradox Valley 80.54 46 eP P 08 45 36.7 +0.1
O18A Roosevelt 80.58 44 ⇓P P 08 45 36.8 +0.1
baz=81,SNR=7.7
SKAG Skagway 80.58 19 eP P 08 45 36.5 +0.2
comp=Z,46nm,1.7s,mb5.1
SKAG LR LR
comp=Z,200nm,23.0s,MS4.4
J15A Blackfoot 80.58 40 ⇑P P 08 45 37.4 +0.7
baz=81,SNR=35
ANMO Albuquerque 80.62 50 eP P 08 45 37.4 +0.2
comp=Z,33nm,1.3s,mb5.1
ANMO Albuquerque 80.62 50 eP P 08 45 37.4 +0.3
ANMO pmax pmax
comp=Z,33nm,1.3s
H14A Leadore 80.65 39 ⇓P P 08 45 37.3 +0.3
baz=81,SNR=40
225A Deer Hill, Car 80.65 53 ⇓P P 08 45 37.4 +0.1
baz=81,SNR=20
X23A Hourglass Bar 80.67 50 ⇑P P 08 45 37.5 +0.1
baz=81
426A McDonald Obser 80.68 55 ⇓P P 08 45 37.7 +0.1
baz=81,SNR=34
R20A Redvale 80.70 46 ⇑P P 08 45 37.4 -0.1
baz=81,SNR=18
627A Terlingua Ranc 80.71 56 ⇑P P 08 45 37.8 +0.1
baz=81,SNR=34
F13A Darby 80.71 37 ⇑P P 08 45 36.8 -0.5
baz=81,SNR=20
V22A San Miguel Ran 80.72 49 ⇓P P 08 45 37.8 +0.2
baz=81
M17A Scullys Gap (B 80.73 43 ⇓P P 08 45 37.1 -0.4
baz=81
Z24A Sheeppen Canyo 80.75 52 ⇑P P 08 45 37.8 0.0
baz=81,SNR=15
T21A Navajo Lake 80.75 48 ⇑P P 08 45 38.1 +0.4
baz=81,SNR=11
527A Woodward Ranch 80.80 55 ⇓P P 08 45 37.9 -0.3
baz=81,SNR=16
D12A Red Ives Fores 80.82 36 ⇑P P 08 45 37.0 -0.9
baz=81,SNR=15
K16A Soda Springs 80.82 41 ⇑P P 08 45 38.0 0.0
baz=81,SNR=15
I15A Monteview 80.86 40 ⇑P P 08 45 38.6 +0.4
baz=81
S21A Coal Bank Pass 80.87 47 ⇑P P 08 45 38.7 +0.4
baz=81,SNR=48
L17A Cokeville 80.91 42 ⇑P P 08 45 37.8 -0.7
baz=81,SNR=6.0
G14A Jackson 80.93 38 ⇑P P 08 45 38.6 +0.1
baz=81,SNR=9.1
W23A Werner Place, 80.94 50 ⇑P P 08 45 38.8 0.0
baz=81,SNR=19
Y24A Capitan 80.95 51 ⇑P P 08 45 38.9 +0.1
baz=81,SNR=41
PAX Paxson 80.95 12 eP P 08 45 37.1 -1.1
comp=Z,28nm,1.5s,mb5.0
PAX Paxson 80.95 12 eP P 08 45 37.1 -1.1
PAX pmax pmax
comp=Z,28nm,1.5s,mb5.0
BPAW Bear Paw Mtn. 80.96 10 eP P 08 45 37.2 -1.1
comp=Z,15nm,1.4s,mb4.7
P19A Cripple Cowboy 80.96 45 ⇓P P 08 45 38.9 +0.1
baz=81
U22A Llaves 80.96 48 ⇑P P 08 45 39.2 +0.3
baz=81,SNR=10
MCK McKinley 80.97 11 eP P 08 45 38.1 -0.2
comp=Z,54nm,1.2s,mb5.4
MCK McKinley 80.97 11 eP P 08 45 38.1 -0.2
MCK pmax pmax
comp=Z,55nm,1.2s,mb5.4
326A Caldwell Ranch 80.98 54 ⇑P P 08 45 38.7 -0.5
baz=81
J16A Bone 81.03 41 ⇓P P 08 45 39.4 +0.3
baz=81,SNR=27
HYT Haines Junctio 81.05 17 eP P 08 45 39.5 +0.7
CN2 Changchun 81.06 320 eP P 08 45 40.6 +1.3
CN2 eS S 08 55 44.3 -2.0
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CN2 pmax pmax
comp=Z,200nm,7.0s
CN2 LR LR
comp=N,200nm,10.0s,MS5.0
CN2 LR LR
comp=E,300nm,10.0s,MS5.0
CN2 LR LR
comp=Z,200nm,12.0s,MS4.7
MCMT McKenzie Canyo 81.08 39 eP P 08 45 39.6 +0.3
comp=Z,14nm,1.0s,mb4.8
H15A Lima 81.09 39 ⇑P P 08 45 39.8 +0.4
baz=81,SNR=37
AHID Auburn Hatcher 81.10 41 eP P 08 45 39.4 -0.1
comp=Z,31nm,1.1s,mb5.2
M18A Lyman 81.10 43 ⇓P P 08 45 39.2 -0.4
baz=81,SNR=10
Q20A Ridgley Place, 81.12 46 ⇑P P 08 45 39.7 +0.1
baz=81,SNR=28
C12B Naegeli Ranch, 81.12 35 ⇓P P 08 45 39.0 -0.4
baz=81,SNR=10
628A Black Gap, Mar 81.12 56 ⇓P P 08 45 39.8 -0.2
baz=81,SNR=22
E13A Victor 81.15 37 ⇑P P 08 45 39.0 -0.6
baz=81,SNR=36
V23A Ortiz Mt. (NFS 81.17 49 ⇓P P 08 45 40.9 +0.9
baz=81,SNR=24
O19A Miners Draw (B 81.18 44 ⇓P P 08 45 39.7 -0.3
baz=81,SNR=11
K17A Gardner Place, 81.21 41 ⇓P P 08 45 40.1 0.0
baz=81,SNR=5.6
T22A Edith 81.21 48 ⇑P P 08 45 40.3 +0.1
baz=81,SNR=15
Z25A Roswell 81.22 52 ⇑P P 08 45 40.5 +0.1
baz=81,SNR=20
427A Hayter Ranch, 81.25 55 ⇑P P 08 45 40.8 +0.2
baz=81,SNR=19
RRI2 Red Ridge 81.25 41 eP P 08 45 40.6 +0.3
comp=Z,42nm,1.1s,mb5.3
F14A Wisdom 81.29 38 ⇑P P 08 45 40.3 -0.1
baz=81,SNR=10.0
MENT Mentasta 81.30 13 eP P 08 45 39.9 -0.2
P20A De Beque 81.30 45 ⇑P P 08 45 40.8 +0.2
baz=81,SNR=24
D13A Huson 81.35 36 ⇓P P 08 45 39.8 -0.9
baz=82,SNR=32
R21A Cimarron 81.36 46 ⇑P P 08 45 41.5 +0.5
baz=82,SNR=37
L18A Fontenelle, Gr 81.37 42 ⇓P P 08 45 40.6 -0.3
baz=82
327A Balmorhea Ranc 81.39 54 ⇓P P 08 45 40.8 -0.5
baz=82,SNR=27
I16A Newdale 81.42 40 ⇑P P 08 45 41.8 +0.7
baz=82,SNR=38
U23A El Rito 81.42 49 ⇑P P 08 45 41.8 +0.5
baz=82,SNR=6.2
N19A John Jarvie Ra 81.43 44 ⇑P P 08 45 40.7 -0.6
DCID1 Drake Creek 81.46 40 eP P 08 45 41.8 +0.4
comp=Z,51nm,1.1s,mb5.4
G15A Dillon 81.47 39 ⇓P P 08 45 41.4 0.0
baz=82,SNR=31
B12A Libby 81.49 35 ⇓P P 08 45 41.1 -0.3
baz=82
126A Clayton Basin, 81.49 53 ⇑P P 08 45 41.5 -0.3
baz=82,SNR=12
MSO Missoula 81.50 37 ⇑P P 08 45 40.6 -0.9
baz=82,SNR=26
MSO Missoula 81.50 37 eP P 08 45 40.6 -0.9
comp=Z,28nm,1.2s,mb5.1
Y25A Mesa, Roswell 81.51 52 ⇑P P 08 45 41.6 -0.3
baz=82,SNR=18
DLMT Dillon 81.51 38 eP P 08 45 41.8 +0.2
comp=Z,35nm,1.1s,mb5.2
W24A Lazy 6 Ranch, 81.51 50 ⇓P P 08 45 41.5 -0.4
baz=82,SNR=24
DLBC Dease Lake 81.53 21 eP P 08 45 41.8 +0.4
E14A Clinton 81.54 37 ⇓P P 08 45 41.3 -0.4
baz=82,SNR=27
REDW Red Top Meadow 81.56 41 eP P 08 45 41.8 -0.1
comp=Z,55nm,1.3s,mb5.3
TPAW Teton Pass 81.56 41 eP P 08 45 42.2 +0.3
comp=Z,48nm,1.2s,mb5.3
Q21A Lamborn Mesa, 81.56 46 ⇑P P 08 45 42.5 +0.5
baz=82
BSMT Bassoo Peak 81.58 35 eP P 08 45 41.5 -0.4
S22A 4UR Ranch, Cre 81.59 47 ⇑P P 08 45 42.8 +0.6
baz=82,SNR=38
C13A Hot Springs 81.61 36 ⇓P P 08 45 41.3 -0.8
baz=82
J17A Brown Place, J 81.64 41 ⇑P P 08 45 42.4 0.0
baz=82,SNR=19
SNOW Snow King Moun 81.67 41 eP P 08 45 42.7 +0.3
comp=Z,47nm,1.1s,mb5.3
O20A White River Ci 81.70 45 ⇓P P 08 45 42.8 0.0
baz=82,SNR=6.0
K18A Toltan Ranch, 81.71 42 ⇓P P 08 45 42.9 +0.2
baz=82,SNR=25
A12A Yazzi River Ran 81.72 34 ⇓P P 08 45 42.3 -0.2
baz=82
M19A Rock Springs 81.74 43 ⇑P P 08 45 42.6 -0.3
baz=82,SNR=6.8
428A Kincaid Ranch, 81.77 55 ⇓P P 08 45 43.5 +0.2
baz=82,SNR=15
Z26A Caprock 81.78 52 ⇓P P 08 45 43.0 -0.3
baz=82
X25A Clemmons Ranch 81.78 51 ⇑P P 08 45 42.9 -0.4
baz=82,SNR=6.1
227A Bennet, Jal 81.80 54 ⇓P P 08 45 43.0 -0.5
baz=82
JTMT Jette 81.81 36 eP P 08 45 42.6 -0.5
MOOW Moose Ponds 81.82 41 eP P 08 45 43.1 -0.2
comp=Z,27nm,1.3s,mb5.0
F15A Butte 81.82 38 ⇑P P 08 45 43.1 -0.2
baz=82,SNR=12
V24A Rampart Ranch, 81.83 50 ⇓P P 08 45 43.9 +0.3
baz=82,SNR=16
LRM Limekiln Ridge 81.84 38 eP P 08 45 43.2 -0.1
SWMT Swartz Lake 81.84 36 eP P 08 45 42.4 -0.9
T23A Casias Ranch, 81.84 48 ⇓P P 08 45 43.9 +0.3
baz=82,SNR=20
R22A Saguache, Gunn 81.86 47 ⇑P P 08 45 44.5 +0.9
baz=82,SNR=36
D14A Greenough 81.89 37 ⇓P P 08 45 42.5 -1.0
baz=82,SNR=24
L19A Farson 81.89 42 ⇓P P 08 45 43.6 -0.1
baz=82,SNR=12
G16A Cows Hill, Enn 81.92 39 ⇓P P 08 45 43.8 +0.1
baz=82,SNR=17
328A Wristen Ranch, 81.93 54 ⇓P P 08 45 43.5 -0.6
baz=82,SNR=14
CHMT Chamberlain Mo 81.95 37 eP P 08 45 43.2 -0.6
SLMT Seeley Lake 81.98 36 eP P 08 45 43.2 -0.8
H16A Russell Place, 81.99 39 ⇓P P 08 45 45.0 +0.9
baz=82,SNR=47
J18A Kendall Valley 82.01 41 ⇓P P 08 45 44.3 0.0
baz=82,SNR=40
I17A Pilgrim Ck. 82.01 40 ⇑P P 08 45 45.0 +0.7
baz=82,SNR=7.8
FLWY Flagg Ranch 82.01 40 eP P 08 45 44.9 +0.6
comp=Z,61nm,1.1s,mb5.4
N20A Spence Gulch, 82.02 44 ⇓P P 08 45 44.4 0.0
baz=82,SNR=18
127A Arkansas Junct 82.02 53 ⇑P P 08 45 43.9 -0.7
baz=82,SNR=14
Q22A Crested Butte, 82.03 46 ⇑P P 08 45 45.0 +0.5
baz=82,SNR=41
E15A Deer Lodge 82.04 37 ⇓P P 08 45 43.8 -0.6
baz=82,SNR=17
B13A Whitefish 82.05 35 ⇑P P 08 45 43.5 -0.9
baz=82,SNR=8.7
BW06 Boulder Array 82.09 42 ⇓P P 08 45 44.3 -0.4
baz=82,SNR=26
BW06 Boulder Array 82.09 42 eP P 08 45 44.3 -0.4
comp=Z,45nm,1.4s,mb5.2
YFT Old Faithful 82.11 40 eP P 08 45 46.9 +2.1
comp=Z,34nm,1.2s,mb5.2
C14A Swan Lake 82.12 36 ⇓P P 08 45 43.6 -1.2
baz=82
SMCO Snowmass 82.13 46 eP P 08 45 45.3 +0.3
comp=Z,76nm,1.5s,mb5.4
YMR Madison River 82.14 40 eP P 08 45 45.6 +0.7
comp=Z,108nm,1.5s,mb5.6
Y26A Elida 82.16 52 ⇓P P 08 45 45.1 -0.3
baz=82
COLA College 82.21 11 eP P 08 45 44.0 -0.8
comp=Z,26nm,1.0s,mb5.1
COLA College 82.21 11 eP P 08 45 44.0 -0.8
COLA pmax pmax
comp=Z,26nm,1.0s,mb5.1
W25A X Bar L Ranch, 82.22 50 ⇑P P 08 45 45.0 -0.6
baz=82,SNR=17
BOZ Bozeman (W) 82.24 39 ⇑P P 08 45 45.2 -0.2
baz=82,SNR=29
BOZ Bozeman (W) 82.24 39 eP P 08 45 45.4 0.0
comp=Z,48nm,1.4s,mb5.2
BOZ Bozeman (W) 82.24 39 eP P 08 45 45.4 0.0
BOZ pmax pmax
comp=Z,48nm,1.4s,mb5.2
H17A Grant Village 82.25 40 ⇓P P 08 45 46.7 +1.2
baz=82,SNR=13
O21A Pagoda 82.26 45 ⇑P P 08 45 45.5 -0.2
baz=82
ILAR Eielson Array 82.29 11 P P 08 45 44.4 -0.8
comp=Z,9.3nm,1.2s,mb4.6,baz=221,slow=5.4,SNR=31
ILAR LR LR 09 14 56.0
comp=Z,136nm,21.3s,MS4.3,baz=302,slow=30
F16A Kennard Place, 82.31 38 ⇑P P 08 45 45.9 +0.1
baz=82,SNR=19
YNR Norris Junctio 82.34 40 eP P 08 45 46.4 +0.5
comp=Z,41nm,1.2s,mb5.2
V25A Rancho No Teng 82.36 50 ⇓P P 08 45 46.3 0.0
baz=82,SNR=47
M20A Sweetwater, Wa 82.37 43 ⇓P P 08 45 46.3 +0.1
baz=82,SNR=13
I18A Diamond G Ranc 82.38 41 ⇓P P 08 45 46.1 -0.1
baz=82,SNR=14
A13A Flathead Natio 82.39 35 ⇓P P 08 45 45.6 -0.5
baz=82
SEY Seymchan 82.42 345 eP P 08 45 46.3 +0.3
X26A CR and CF Fran 82.43 51 ⇑P P 08 45 46.1 -0.6
baz=82
D15A Lincoln 82.44 37 ⇓P P 08 45 46.1 -0.3
baz=83,SNR=29
LKWY Lake 82.44 40 eP P 08 45 47.8 +1.3
comp=Z,47nm,1.1s,mb5.3
LKWY Lake 82.44 40 eP P 08 45 47.8 +1.3
LKWY pmax pmax
comp=Z,47nm,1.1s,mb5.3
P22A Eagle 82.47 46 ⇓P P 08 45 46.9 +0.1
baz=83,SNR=16
N21A Black Mountain 82.48 44 ⇑P P 08 45 46.9 +0.2
baz=83,SNR=31
L20A Wamsutter 82.52 43 ⇓P P 08 45 47.1 +0.1
baz=83,SNR=29
SDCO Great Sand Dun 82.54 48 eP P 08 45 47.1 -0.1
comp=Z,28nm,1.3s,mb5.1
K19A Absolon Red Bu 82.57 42 ⇓P P 08 45 46.5 -0.8
baz=83,SNR=18
G17A Pierce Place, 82.61 39 ⇓P P 08 45 48.1 +0.8
baz=83,SNR=14
Y27A Causey 82.65 52 ⇓P P 08 45 47.3 -0.6
baz=83,SNR=14
E16A East Helena 82.67 38 ⇑P P 08 45 47.4 -0.2
baz=83,SNR=16
HRY Holter Researc 82.67 38 eP P 08 45 47.5 -0.1
W26A Owens Ranch, T 82.69 51 ⇑P P 08 45 47.2 -0.8
baz=83,SNR=7.8
S24A Houchin Ranch, 82.70 48 ⇑P P 08 45 48.5 +0.5
baz=83,SNR=24
B14A Marquette Ranc 82.71 36 ⇑P P 08 45 46.9 -1.0
baz=83,SNR=7.9
WALA Waterton Lakes 82.74 35 eP P 08 45 47.6 -0.4
comp=Z,1.3nm,1.4s,mb3.8
U25A Circle Dot Ran 82.75 49 ⇑P P 08 45 48.0 -0.3
baz=83,SNR=42
C15A Salmond Ranch, 82.78 36 ⇓P P 08 45 47.5 -0.7
baz=83,SNR=22
Q23A Hartsel 82.81 47 ⇑P P 08 45 48.8 +0.3
baz=83,SNR=12
K20A Yellowstone Ra 82.82 42 ⇑P P 08 45 47.7 -0.8
baz=83,SNR=25
O22A Kremmling 82.87 45 ⇓P P 08 45 49.0 +0.2
baz=83,SNR=42
F17A Fitzpatrick Pl 82.95 39 ⇑P P 08 45 49.4 +0.3
baz=83,SNR=26
A14A Double T Ranch 82.96 35 ⇑P P 08 45 48.4 -0.7
baz=83,SNR=16
V26A Tequesquite Ra 82.96 50 ⇑P P 08 45 48.7 -0.7
baz=83,SNR=19
QIZ Qiongzhong 82.97 292 P P 08 45 50.1 +0.3
QIZ S S 08 56 04.4 -2.5
QIZ pmax pmax
comp=Z,13nm,1.9s,mb4.6
M21A Separation Pea 82.97 44 ⇑P P 08 45 49.1 -0.3
baz=83,SNR=14
MSTX Muleshoe 82.98 52 ⇓P P 08 45 49.1 -0.5
baz=83,SNR=18
D16A Dana Ranch, Ca 83.00 37 ⇓P P 08 45 49.2 -0.1
baz=83,SNR=22
X27A F and S Farms, 83.01 51 ⇑P P 08 45 49.4 -0.3
baz=83,SNR=15
P23A Jefferson 83.01 46 ⇑P P 08 45 50.4 +0.8
baz=83,SNR=13
R24A Sanders Place, 83.03 47 ⇓P P 08 45 49.9 +0.2
baz=83,SNR=28
T25A Trinidad 83.06 49 ⇑P P 08 45 49.7 -0.2
baz=83,SNR=18
B15A Bradely Ranch, 83.09 36 ⇓P P 08 45 48.8 -1.0
baz=83,SNR=11
E17A Martinsdale 83.12 38 ⇑P P 08 45 50.0 0.0
baz=83,SNR=10
L21A Rawlins 83.14 43 ⇑P P 08 45 49.8 -0.4
baz=83,SNR=15
W27A Bowe Ranch, En 83.20 51 ⇓P P 08 45 50.0 -0.7
baz=83,SNR=32
N22A Wattenberg Ran 83.22 45 ⇓P P 08 45 51.0 +0.4
baz=83,SNR=22
U26A Atchley Ranch, 83.24 50 ⇓P P 08 45 50.6 -0.2
baz=83,SNR=29
DAWY Dawson 83.26 14 eP P 08 45 50.4 +0.1
S25A Robets Cordova 83.26 48 ⇑P P 08 45 50.9 -0.1
baz=83,SNR=33
C16A Fuhringer Ranc 83.28 37 ⇓P P 08 45 50.0 -0.8
baz=83,SNR=24
Q24A Divide 83.31 47 ⇑P P 08 45 51.5 +0.3
baz=83,SNR=16
O23A Lake Granby, G 83.32 45 ⇑P P 08 45 51.5 +0.3
baz=83,SNR=16
G18A Lazy EL Ranch, 83.33 40 ⇑P P 08 45 51.2 +0.1
baz=83,SNR=16
ISCO Idaho Springs 83.35 46 ⇓P P 08 45 51.4 +0.1
baz=83,SNR=13
ISCO Idaho Springs 83.35 46 eP P 08 45 51.6 +0.2
comp=Z,14nm,1.0s,mb5.0
ISCO Idaho Springs 83.35 46 eP P 08 45 51.6 +0.3
ISCO pmax pmax
comp=Z,14nm,1.0s,mb5.0
M22A Cedar Creek Ra 83.39 44 ⇓P P 08 45 51.2 -0.4
baz=84,SNR=15
RLMT Red Lodge 83.42 40 ⇑P P 08 45 52.1 +0.6
baz=84,SNR=13
RLMT Red Lodge 83.42 40 eP P 08 45 52.3 +0.8
comp=Z,42nm,1.1s,mb5.4
EGAK Eagle 83.47 13 eP P 08 45 51.0 -0.4
comp=Z,32nm,1.4s,mb5.2
GCMT Greycliff 83.50 39 eP P 08 45 52.3 +0.3
comp=Z,48nm,1.5s,mb5.3
D17A Six Diamond Ra 83.57 38 ⇑P P 08 45 52.3 0.0
baz=84,SNR=30
I20A Worland 83.57 41 ⇑P P 08 45 52.1 -0.2
baz=84,SNR=36
N23A Red Feather La 83.61 45 ⇓P P 08 45 52.8 +0.2

baz=84,SNR=17
B16A M & M Farms, S 83.63 36 ⇑P **P 08 45 51.2 -1.3**
baz=84
P24A Kohler Place, 83.72 46 ⇓P **P 08 45 53.4 +0.1**
baz=84
E18A Harlowton 83.73 38 ⇑P **P 08 45 53.4 +0.3**
baz=84,SNR=29
C17A Wharram Farm, 83.77 37 ⇓P **P 08 45 52.9 -0.4**
baz=84,SNR=61
L22A Ellis Ranch, M 83.79 44 ⇓P **P 08 45 53.8 +0.3**
baz=84,SNR=14
O24A Longmont 83.87 46 ⇓P **P 08 45 54.2 +0.2**
baz=84,SNR=9.0
H20A Greybull 83.90 41 ⇑P **P 08 45 53.4 -0.7**
baz=84,SNR=16
Q25A Bedland, Calha 83.93 47 ⇓P **P 08 45 53.8 -0.5**
baz=84
A16A West Butte Ran 83.97 36 ⇓P **P 08 45 53.6 -0.6**
baz=84
F19A Roth Farm, Mol 83.97 39 ⇓P **P 08 45 54.3 -0.1**
baz=84,SNR=31
JCT Junction City 83.97 56 ⇑P **P 08 45 53.5 -1.2**
baz=84
JCT Junction City 83.97 56 *e*P **P 08 45 53.6 -1.2**
comp=Z,7.1nm,0.8s,mb4.8
JCT Junction City 83.97 56 *e*P **P 08 45 53.6 -1.2**
JCT pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
COLD Coldfoot 84.00 9 *e*P **P 08 45 54.3 +0.3**
comp=Z,41nm,1.7s,mb5.3
K22A Casper 84.01 43 ⇓P **P 08 45 54.2 -0.4**
baz=84,SNR=11
I21A Big Trails, Te 84.04 42 ⇑P **P 08 45 54.2 -0.5**
baz=84,SNR=41
B17A L&Q Farms, Che 84.08 37 ⇑P **P 08 45 54.3 -0.6**
baz=84,SNR=16
D18A Linhart Farms, 84.11 38 ⇑P **P 08 45 55.3 +0.3**
baz=84,SNR=21
PHWY Pilot Hill 84.12 45 *e*P **P 08 45 54.7 -0.5**
comp=Z,13nm,0.8s,mb5.1
AMTX Amarillo 84.17 52 ⇑P **P 08 45 55.0 -0.7**
baz=84,SNR=19
AMTX Amarillo 84.17 52 *e*P **P 08 45 55.1 -0.6**
comp=Z,51nm,1.0s,mb5.6
P25A Willow Gulch B 84.23 47 ⇑P **P 08 45 55.8 -0.1**
baz=84,SNR=19
N24A Carr 84.30 45 ⇓P **P 08 45 56.3 +0.1**
baz=84,SNR=13
L23A Garrett 84.31 44 ⇑P **P 08 45 55.8 -0.4**
baz=84,SNR=29
E19A Rath Farm, Rou 84.36 39 ⇓P **P 08 45 56.2 -0.1**
baz=84,SNR=25
BILL Bilibino 84.39 352 ⇑*e*P **P 08 45 56.4 +0.4**
BILL pmax pmax
comp=Z,15nm,1.5s,mb4.9
F20A Billings 84.43 40 ⇑P **P 08 45 56.4 -0.3**
baz=84,SNR=15
A17A Triple J Farms 84.47 36 ⇓P **P 08 45 56.5 -0.3**
baz=85,SNR=43
O25A Wiggins 84.52 46 ⇓P **P 08 45 56.5 -0.8**
baz=85
EGMT Eagleton 84.55 37 ⇑P **P 08 45 57.0 -0.3**
baz=85,SNR=9.4
EGMT Eagleton 84.55 37 *e*P **P 08 45 57.3 0.0**
comp=Z,35nm,1.1s,mb5.4
H21A Big Horn, Sher 84.58 41 ⇑P **P 08 45 57.1 -0.3**
baz=85,SNR=12
M24A Cheyenne 84.62 45 ⇑P **P 08 45 57.8 0.0**
baz=85,SNR=6.0
B18A Beardsley Farm 84.72 37 ⇓P **P 08 45 57.8 -0.3**
baz=85,SNR=16
G21A Lodge Grass 84.75 40 ⇑P **P 08 45 58.2 -0.2**
baz=85
E20A Meyer Farm, Mu 84.78 39 ⇓P **P 08 45 58.5 +0.1**
baz=85,SNR=24
L24A Wheatland 84.79 44 ⇑P **P 08 45 58.7 0.0**
baz=85,SNR=8.9
N25A Grover 84.84 45 ⇑P **P 08 45 58.6 -0.3**
baz=85
D20A Manuel Ranch, 85.06 38 ⇑P **P 08 45 59.8 0.0**
baz=85,SNR=28
F21A Absaloka Mine, 85.08 40 ⇓P **P 08 45 59.8 -0.2**
baz=85
EDM Edmonton 85.31 31 *e*P **P 08 46 00.4 -0.5**
E21A Keefer Ranch, 85.44 39 ⇑P **P 08 46 02.0 +0.2**
baz=86,SNR=15
BJI Beijing 85.47 313 P **P 08 46 03.3 +1.2**
BJI pmax pmax
comp=Z,7.0nm,1.5s,mb4.6
LAO LASA Array 86.03 39 ⇑P **P 08 46 05.2 +0.5**
baz=86
LAO LASA Array 86.03 39 *e*P **P 08 46 04.8 +0.1**
comp=Z,104nm,1.6s,mb5.8
RSSD Black Hills 86.28 42 *e*P **P 08 46 05.1 -0.9**
comp=Z,15nm,1.1s,mb5.1
RSSD Black Hills 86.28 42 *e*P **P 08 46 05.1 -0.9**
RSSD pmax pmax
comp=Z,15nm,1.1s,mb5.1
WMOK Wichita Mounta 86.33 53 *e*P **P 08 46 05.4 -1.0**
comp=Z,28nm,1.5s,mb5.3
WMOK Wichita Mounta 86.33 53 *e*P **P 08 46 05.4 -1.0**
WMOK pmax pmax
comp=Z,28nm,1.5s,mb5.3
HKT Hockley 87.01 58 *e*P **P 08 46 09.5 -0.4**
comp=Z,40nm,1.6s,mb5.4
HKT Hockley 87.01 58 *e*P **P 08 46 09.5 -0.4**
HKT pmax pmax
comp=Z,40nm,1.6s,mb5.4
MAW Mawson 87.96 199 *e*P **P 08 46 14.2 +0.5**
comp=Z,2.5nm,1.1s,mb4.4
MAW Mawson 87.96 199 P **P 08 46 13.9 +0.1**
comp=Z,2.1nm,0.7s,mb4.5,baz=122,slow=6.9,SNR=4.9
MAW LR LR 09 21 33.3
comp=Z,185nm,19.6s,MS4.5,baz=137,slow=33
MAW Mawson 87.96 199 *e*P **P 08 46 14.2 +0.4**
MAW pmax pmax
comp=Z,3.0nm,1.1s
DGMT Dagmar 88.05 38 ⇑P **P 08 46 14.1 -0.3**
baz=88,SNR=8.0
DGMT Dagmar 88.05 38 *e*P **P 08 46 13.8 -0.6**
comp=Z,29nm,1.1s,mb5.4
GYA Guiyang 88.09 298 P **P 08 46 16.0 +0.8**
GYA PP PP 08 49 44.8 +2.4
GYA SKS 08 56 41.5
GYA SS SS 09 02 51.8 +5.5
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.5
GYA pmax pmax
comp=Z,140nm,5.9s
GYA LR LR
comp=N,790nm,21.5s,MS5.2
GYA LR LR
comp=E,540nm,22.9s,MS5.2
GYA LR LR
comp=Z,870nm,20.8s,MS5.2
INK Inuvik 88.11 14 *e*P **P 08 46 14.0 -0.3**
comp=Z,96nm,2.4s,mb5.6
INK Inuvik 88.11 14 *e*P **P 08 46 14.0 -0.3**
INK pmax pmax
comp=Z,96nm,2.4s
HHC Hu-ho-hao-te 89.03 313 *e*P **P 08 46 20.9 +1.7**
HHC pP pP 08 46 25.3 -5.1
HHC sP sP 08 46 28.3 -6.1
HHC PP PP 08 49 53.8 +4.2
HHC SKS 08 56 48.3
HHC *e*S S 08 57 06.6 +1.3
HHC sS sS 08 57 14.1 -10
HHC SS SS 09 03 02.4 +3.1
HHC pmax pmax
comp=Z,17nm,1.1s,mb5.3
HHC pmax pmax
comp=Z,230nm,5.4s
HHC LR LR
comp=N,170nm,12.7s,MS4.9
HHC LR LR
comp=E,250nm,15.3s,MS4.9
HHC LR LR
comp=Z,190nm,14.3s,MS4.7
YKA Yellowknife Ar 89.93 23 P **P 08 46 22.2 -0.8**
comp=Z,2.6nm,0.9s,mb4.6,baz=241,slow=4.9,SNR=7.8
KMI Kunming 91.08 296 P **P 08 46 32.4 +3.2**
KMI pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
ECSD EROS Data Cent 91.08 45 *e*P **P 08 46 26.7 -2.1**
comp=Z,133nm,2.9s,mb5.8
CD2 Chengdu 91.85 301 P **P 08 46 33.3 +0.7**
CD2 pmax pmax
comp=Z,20nm,1.5s,mb5.2
CD2 pmax pmax
comp=Z,450nm,5.8s
CMAR Chiang Mai Arr 92.69 288 P **P 08 46 37.8 +1.0**
comp=Z,0.6nm,0.3s,mb4.5,baz=83,slow=2.8,SNR=3.4
CMAR LR LR 09 27 06.8
comp=Z,53nm,18.7s,MS4.0,baz=301,slow=35
SYO Syowa Base 92.75 191 ⇓*e*X pP 08 46 48.2 +0.9
AGMN Agassiz Nation 93.11 41 *e*P **P 08 46 36.5 -1.5**
comp=Z,123nm,2.6s,mb5.9
LZH Lanzhou 93.24 306 *e*P **P 08 46 43.5 +4.5**
LZH pP pP 08 46 48.8 -1.3
LZH sP sP 08 46 51.4 -2.7
LZH pmax pmax
comp=Z,14nm,1.1s,mb5.3
VNA1 Neumayer--Stat 93.67 175 *e*P **P 08 46 45.4 +5.1**
VNA1 *e* pP 08 46 55.6 +4.1
FVM French Village 93.75 52 *e*P **P 08 46 39.2 -2.0**
comp=Z,55nm,1.7s,mb5.7
FVM French Village 93.75 52 *e*P **P 08 46 39.2 -2.1**
FVM pmax pmax
comp=Z,55nm,1.7s,mb5.7
ULM Lac du Bonnet 93.75 39 LR LR 09 21 42.1
comp=Z,242nm,20.5s,MS4.6,baz=297,slow=31
MAIT Maitri 94.10 182 *e*P **P 08 46 44.7 +2.4**
SONM Songino Array 94.83 318 LR LR 09 23 24.6
comp=Z,59nm,21.6s,MS4.0,baz=255,slow=32
ZALV Zalesovo Beam 109.20 322 PKiKP PKiKP 08 51 52.7 -1.2
comp=Z,0.4nm,0.4s,baz=139,slow=3.1,SNR=2.8
MK31 Makanchi Array 110.82 315 *e*PKPdf PKiKP 08 51 56.5 -0.6
MKAR Makanchi Array 110.82 315 PKiKP PKiKP 08 51 56.4 -0.7
comp=Z,0.3nm,0.2s,baz=52,slow=2.4,SNR=3.3
KSH Kashi 115.49 307 *e*PKP PKPdf 08 52 03.3 -3.0
KSH *e*SKS SKSdf 08 59 10.3 -5.6
KSH AMB AMB
comp=Z,110nm,4.7s
KSH LR LR
comp=N,250nm,16.3s,MS5.0
KSH LR LR
comp=E,190nm,16.2s,MS5.0
KSH LR LR
comp=Z,100nm,4.7s
ARCES ARCESS Array B 124.50 352 PKP PKPdf 08 52 21.9 -0.8
comp=Z,2.3nm,0.8s,baz=19,slow=7.7,SNR=6.0
ABKAR Akbulak array 125.19 320 *e*PKPdf PKPdf 08 52 24.3 -0.3
KLMR Klimovskoe 128.71 340 PKIKP pPKPdf 08 52 42.2 -0.2
KLMR pmax pmax
comp=Z,12nm,1.2s
FINES FINESS Array B 131.84 348 PKP PKPdf 08 52 35.5 -1.4
comp=Z,1.7nm,0.8s,baz=335,slow=6.2,SNR=3.9
VSU Vasula 134.37 345 ⇑*i*PKIKP PKPdf 08 52 46.1 +4.3
GNI Garni 138.67 314 ⇓*i*PKIKP PKPdf 08 52 53.5 +3.2
GNI pmax pmax
comp=Z,7.0nm,1.0s
AKASG Malin Array Be 140.27 338 PKP PKPdf 08 52 50.9 -2.0
AKASG Malin Array Be 140.27 338 PKP PKPdf 08 52 50.9 -2.0
comp=Z,1.0nm,0.7s,baz=22,slow=1.6,SNR=6.8
ANN Anapa 140.77 325 *i* PKHKP PKPpre 08 52 44.3
ANN pmax pmax
comp=Z,20nm,1.0s
CLL Collm 143.70 353 *i* PKIKP PKPdf 08 52 56.7 -2.3
CLL pmax pmax
comp=Z,7.0nm,0.9s
MALT Malatya 143.86 316 *e*PKPdf PKPdf 08 52 59.2 -0.5
MALT Malatya 143.86 316 PKIKP PKPdf 08 52 59.6 -0.1
MALT Malatya 143.86 316 ⇑*i*P PKPdf 08 52 59.0 -0.7
STHS Stebnicka Huta 143.94 344 *e*PKP PKPdf 08 52 58.8 -0.7
STHS Stebnicka Huta 143.94 344 *e*PKP PKPdf 08 52 58.8 -0.7
BRG Berggiesshubel 144.01 352 *e*PKP PKPpre 08 52 43.4
BRG comp=Z,3.5nm,0.7s *e* 08 53 19.5
BRG comp=Z,4.7nm,1.0s *e* 08 53 48.0
BRG comp=Z,2.7nm,0.6s
BRG comp=N,65nm,13.2s
BRG comp=E,117nm,27.3s
BRG comp=Z,109nm,22.2s
BRG Berggiesshubel 144.01 352 *e*PKHKP PKPpre 08 52 43.4
BRG pmax pmax
comp=Z,2.0nm,0.7s
BRG pmax pmax
comp=Z,3.0nm,1.0s
BRG pmax pmax
comp=Z,2.0nm,0.6s
BRG MLR MLR
comp=N,39nm,13.2s
BRG MLR MLR
comp=E,70nm,27.3s
BRG MLR MLR
comp=Z,65nm,22.2s
UPC Upice 144.06 350 *e*PKIKP PKPdf 08 52 58.1 -1.5
UPC *e* 08 53 06.8
UPC Upice 144.06 350 *e*PKP PKPdf 08 52 58.1 -1.5
UPC *ep*PKP pPKPdf 08 53 06.8 -4.3
DPC Dobruska-Polom 144.16 349 *e*PKIKP PKPdf 08 52 58.3 -1.5
DPC *e* 08 53 07.1
DPC Dobruska-Polom 144.16 349 *e*PKP PKPdf 08 52 58.3 -1.5
DPC *ep*PKP pPKPdf 08 53 07.1 -4.2
BUR08 Bucovina Ar. S 144.27 338 *e*PKPdf PKPdf 08 52 58.9 -1.2
OKC Ostrava-Krasne 144.29 347 *e*PKIKP PKPdf 08 52 58.3 -1.8
OKC Ostrava-Krasne 144.29 347 *e*PKP PKPdf 08 52 58.3 -1.8
KRLC Kraliky 144.34 349 *e*PKP PKPdf 08 52 58.4 -1.7
CRVS Cervenica-Dubn 144.35 343 *e*PKP PKPdf 08 52 59.0 -1.2
CRVS Cervenica-Dubn 144.35 343 *e*PKP PKPdf 08 52 59.0 -1.2
UZH Uzhgorod 144.35 342 ⇑*i*PKIKP PKPdf 08 52 58.0 -2.2
UZH *i* 08 53 04.2
MORC Moravsky Berou 144.47 348 *e*PKPdf PKPdf 08 52 59.2 -1.2
MORC Moravsky Berou 144.47 348 ⇓PKIKP PKPdf 08 52 59.0 -1.4
MORC Moravsky Berou 144.47 348 ⇑*i*P PKPdf 08 52 59.0 -1.4
MOX Moxa 144.50 355 *e*PKP PKPdf 08 52 59.2 -1.2
comp=Z,25nm,1.8s
MOX Moxa 144.50 355 *e*PKPbc PKPdf 08 52 58.4 -2.0
MOX Moxa 144.50 355 *e*PKIKP PKPdf 08 52 59.2 -1.2
MOX pmax pmax
comp=Z,25nm,1.8s
WERD Werda 144.62 354 *e*PKPbc PKPdf 08 52 58.8 -1.8
WERN Wernitzgruen 144.77 354 *e*PKPbc PKPdf 08 52 59.6 -1.3
PRU Pruhonice 144.79 351 *e*PKIKP PKPdf 08 53 00.1 -0.8
PRU *e* 08 53 08.8
PRU Pruhonice 144.79 351 *e*PKP PKPdf 08 53 00.1 -0.8
PRU *ex* 08 53 08.8
SNF Seneffe 144.80 3 PKP PKPdf 08 53 01.4 +0.4
VRAC Vranov 145.11 349 PKIKP PKPdf 08 53 01.9 +0.4
VRI Vrincioaia 145.18 335 PKIKP PKPdf 08 53 02.1 +0.4
DOU Dourbes 145.22 2 PKP PKPdf 08 53 01.3 -0.4
PLOR Plostina 145.22 335 ⇑PKP2 PKPab 08 52 59.7 -1.9
PLOR Plostina 145.22 335 ⇑*i*P PKPbc 08 52 59.7 -1.8
GIVF Givet 145.22 2 *e*PKP1 PKPbc 08 53 00.3 -1.1
BAIF Baives 145.24 3 *e*PKP1 PKPbc 08 53 00.6 -0.8
comp=Z,73nm,1.3s
TREC Trest 145.32 350 *e*PKIKP PKPdf 08 53 01.7 -0.2
TREC Trest 145.32 350 *e*PKP PKPdf 08 53 01.7 -0.2
VYHS Vyhne 145.40 346 *e*PKP PKPdf 08 53 02.6 +0.6
VYHS Vyhne 145.40 346 *e*PKP PKPdf 08 53 02.6 +0.6
KOLL Kolacno 145.42 346 *e*PKP PKPdf 08 53 02.7 +0.6
KOLL Kolacno 145.42 346 *e*PKP PKPdf 08 53 02.7 +0.6
GRF Grafenberg Arr 145.47 355 *e*PKPbc PKPbc 08 53 02.4 +0.2
GRF *ep*PKPbc pPKPbc 08 53 11.5 -2.0
TIRR Tirgusor 145.58 332 *e*PKPbc PKPbc 08 53 02.6 0.0
TIRR Tirgusor 145.58 332 ⇓*i*P PKPdf 08 53 02.9 +0.4
PSZ Piszkesteto 145.67 344 *e*PKPbc PKPbc 08 53 03.4 +0.5
PSZ Piszkesteto 145.67 344 ⇑PKP2 PKPab 08 53 03.2 0.0
PSZ Piszkesteto 145.67 344 ⇑*i*P PKPdf 08 53 03.2 +0.7
PSZ Piszkesteto 145.67 344 ⇑*e*PKP PKPdf 08 53 03.9 +1.4
WLF Walferdange 145.69 1 PKP PKPdf 08 53 03.4 +0.9
WLF Walferdange 145.69 1 *e*PKPbc PKPbc 08 53 02.9 0.0
KMBO Kilima Mbogo 145.70 244 PKPbc PKPbc 08 53 03.5 -0.6
comp=Z,3.0nm,0.8s,baz=180,slow=24,SNR=4.2
KMBO Kilima Mbogo 145.70 244 *e*PKP2 PKPab 08 53 05.3 +0.9
KHC Kasperske Hory 145.77 352 *e*PKPbc PKPbc 08 53 03.1 0.0
KHC Kasperske Hory 145.77 352 *e*PKP PKPdf 08 53 02.7 +0.1
KHC *ex* x 08 53 11.6
MLR Muntele Rosu 145.80 336 ⇑P PKPdf 08 53 03.4 +0.6
MLR Muntele Rosu 145.80 336 ⇑*i*P PKPdf 08 53 03.4 +0.6
WET Wettzell 145.84 353 *e*PKPbc PKPbc 08 53 03.4 +0.1
DRGR 145.86 340 ⇓P PKPdf 08 53 03.4 +0.5
DRGR 145.86 340 ⇓*i*P PKPdf 08 53 03.4 +0.5
GEC2 GERESS Array S 146.03 352 *e*PKPbc PKPbc 08 53 03.8 -0.1
ZST Bratislava 146.07 348 *e*PKP PKPbc 08 53 05.6 +1.6
ZST Bratislava 146.07 348 *e*PKP PKPbc 08 53 05.6 +1.6
BR131 Keskin Array S 146.13 321 *e*PKPbc PKPbc 08 53 05.3 +0.8
BRTR Keskin Array B 146.13 321 PKPbc PKPbc 08 53 05.1 +0.6
comp=Z,18nm,1.0s,baz=113,slow=1.9,SNR=61
VOIR 146.19 337 ⇓P PKPdf 08 53 05.1 +1.6
VOIR 146.19 337 ⇓*i*P PKPdf 08 53 05.1 +1.6
CONA Conrad Observa 146.57 349 ⇓*i*PKPbc PKPbc 08 53 04.7 -0.9
comp=Z,18nm,1.7s
MOA Molln 146.92 351 ⇓*i*PKPab PKPab 08 53 06.7 -1.3
comp=Z,21nm,1.4s
CDF Champ du Feu 146.95 359 *e*PKP1 PKPbc 08 53 05.7 -0.9
comp=Z,41nm,1.2s
BFO Black Forest 147.01 358 *e*PKPbc PKPbc 08 53 06.4 -0.4
SFTF Sexfontaines 147.13 2 *e*PKP1 PKPbc 08 53 06.4 -0.7
ECH Echery 147.15 359 *e*PKPbc PKPbc 08 53 07.0 -0.2
BZS Buzias 147.25 341 ⇓P PKPdf 08 53 07.2 +1.9
BZS Buzias 147.25 341 ⇓*i*P PKPdf 08 53 07.2 +1.9
ARSA Arzberg 147.28 349 ⇓*i*PKPbc PKPbc 08 53 07.2 -0.4
comp=Z,10.0nm,1.1s
HAU Haudompre 147.36 0 *e*PKP1 PKPbc 08 53 06.9 -0.9
comp=Z,81nm,1.5s
HINF Hinteralfeld 147.55 360 *e*PKP1 PKPbc 08 53 07.2 -1.1
PKSM Moragy 147.57 344 PKIKP PKPdf 08 53 06.4 +0.6
RETA Reutte 147.70 355 ⇓*i*pPKPdf PKPbc 08 53 08.4 -0.3
comp=Z,14nm,1.2s
SOKA Soboth 147.93 349 ⇓*i*PKPbc PKPbc 08 53 08.5 -0.9
comp=Z,13nm,1.2s
PERS Pernice 147.95 349 *i* PKPdf PKPdf 08 53 08.7 +2.3
PERS *i* PKPbc PKPbc 08 53 17.7 +8.3
DAVA Damuels 147.97 356 ⇓*i*pPKPdf PKPbc 08 53 09.6 +0.1
comp=Z,16nm,1.1s
LOR Lormes 148.01 4 *e*PKP1 PKPbc 08 53 08.7 -0.9
comp=Z,38nm,1.2s
FETA Feichten 148.17 355 ⇓*i*pPKPdf PKPbc 08 53 09.9 -0.1
comp=Z,10nm,1.1s
SSF Saint Saulge 148.19 4 *e*PKP1 PKPbc 08 53 09.1 -1.0
comp=Z,22nm,1.0s
MFF Saint Martin d 148.24 9 *e*PKP1 PKPbc 08 53 08.7 -1.5
ABTA Abfaltersbach 148.25 352 ⇓*i*PKPbc PKPbc 08 53 09.0 -1.2
comp=Z,14nm,1.2s
AVF Avril sur Loir 148.45 4 *e*PKP1 PKPbc 08 53 09.6 -1.1
comp=Z,32nm,1.1s
SMF Signal de Mont 148.63 4 *e*PKP1 PKPbc 08 53 10.3 -0.9
BGF Bois d'Agland 148.64 5 *e*PKP1 PKPbc 08 53 10.3 -0.9
comp=Z,26nm,0.9s
CABF La Chapelle 148.75 1 *e*PKP1 PKPbc 08 53 11.3 -0.2
comp=Z,39nm,1.0s
VISS Visnje 148.81 349 *i* PKPdf PKPbc 08 53 11.2 -0.5
TCF Toulx Ste Croi 148.84 6 *e*PKP1 PKPbc 08 53 10.7 -1.1
JAVS Javornik 148.85 350 *i* PKPdf PKPbc 08 53 10.8 -1.0
BOJS Bojanci 149.01 348 *i* PKPdf PKPbc 08 53 12.1 -0.1
BOJS *e*PKPbc PKPab 08 53 20.1 +3.8
BOJS *e*PKPab 08 53 36.3
VTS Vitosha 149.31 336 ⇑P PKPbc 08 53 13.6 +0.6
VTS Vitosha 149.31 336 ⇑*i*P PKPbc 08 53 13.6 +0.5
RJF Les Rejaudoux 149.74 7 *e*PKP1 PKPbc 08 53 13.1 -0.9
LPL La Plagne 149.85 360 *e*PKP1 PKPbc 08 53 14.6 +0.3
comp=Z,37nm,1.2s
LPG La Plagne 149.87 360 *e*PKP1 PKPbc 08 53 14.7 +0.3
comp=Z,36nm,1.1s
SSB Saint Sauveur 150.03 3 *e*PKPbc PKPbc 08 53 15.3 +0.6
ORIF Oris-en-Rattie 150.44 1 *e*PKP1 PKPbc 08 53 15.4 -0.3
comp=Z,39nm,1.2s
VIVF Saint-Julien-l 150.46 3 *e*PKP1 PKPbc 08 53 15.4 -0.4
comp=Z,35nm,1.2s
MBDF Montbardon 150.64 360 *e*PKP1 PKPbc 08 53 16.0 -0.2
comp=Z,21nm,1.0s
PCAB Cabril 150.73 23 *e*PKPbc PKPbc 08 53 16.6 +0.1
LASF Ste Croix 151.18 4 *e*PKP1 PKPbc 08 53 17.1 -0.4
comp=Z,22nm,1.1s
SMRF Simiane la Rot 151.37 2 *e*PKP1 PKPbc 08 53 17.9 -0.1
MVO Moncorvo 151.57 22 *e*PKPbc PKPbc 08 53 18.1 -0.4
ETSF Etsaut 151.76 11 *e*PKP1 PKPbc 08 53 18.2 -0.7
MTE Manteigas 152.04 24 *e*PKPbc PKPbc 08 53 19.6 0.0
PMRV Marv??o 152.93 25 *e*PKPbc PKPbc 08 53 21.4 -0.3
ESDC Sonseca Array 153.95 19 PKPab PKPab 08 53 35.1 -1.9
comp=Z,0.3nm,0.3s,baz=303,slow=4.4,SNR=6.8
TORD Torodi Ar. Bea 174.69 113 PKP PKPdf 08 53 33.0 -1.8
TORD PKPab PKPab 08 55 06.6 -2.2
TORD Torodi Ar. Bea 174.69 113 PKP PKPdf 08 53 33.0 -1.8
comp=Z,0.4nm,0.7s,baz=225,slow=1.4,SNR=4.3
TORD PKPab PKPab 08 55 06.6 -2.2
comp=Z,1.5nm,1.1s,baz=279,slow=2.8,SNR=3.1

NIED ***21*** *08:47:00,35.°00N×135.°50E,h14km,Mw3.4 Best double couple: M₀1.36000×10¹⁴ NP1:φ₀221.00000°,δ82.00000°, λ151.00000°. NP2:φ₀315.00000°,δ61.00000°,λ9.00000°.*

JMA 21 08:47:57.7,35.°01N×135.°47E,h14km,M3.6,6C-2D Broadband fault plane solution: P waves. NP1: φ₀309.00000°,δ75.00000°,λ-8.00000°. **NP2:**φ₀42.00000°, δ82.00000°,λ-165.00000°. **Principal axes:** T Plg5.0000°, Azm175.0000°; N Plg73.0000°, Azm68.0000°; P Plg16.0000°, Azm266.0000°. **Western Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
JWT	**Wachi**	**0.28**	**348**	⇑P	Pg	08 48 03.5	-0.1
JWT				S	Sg	08 48 07.4	-0.1
JHE	**Heguri**	**0.40**	**153**	⇑P	Pg	08 48 05.6	-0.1
JHE				S	Sg	08 48 11.2	+0.2
JKS	**Kasai**	**0.51**	**267**	⇓P	Pg	08 48 07.7	-0.1
JKS				S	Sg	08 48 14.6	-0.1
JKY	**Yasaka**	**0.69**	**334**	⇑P	Pg	08 48 10.7	-0.4
JKY				S	Sg	08 48 19.8	-0.3
JAJ2	**Tsuna**	**0.76**	**219**	⇑P	Pg	08 48 12.0	-0.5
JAJ2				S	Sg	08 48 22.4	-0.1
JWY	**Kouya**	**0.80**	**173**	⇑P	Pg	08 48 12.6	-0.5
JWY				S	Sg	08 48 23.3	-0.3
TSUJ	**Tsu 2**	**0.84**	**111**	⇓P	Pg	08 48 13.3	-0.6
TSUJ				S	Sg	08 48 24.3	-0.6
JKSM	**Kasumi**	**0.88**	**311**	⇑P	Pg	08 48 14.1	-0.6
JKSM				S	Sg	08 48 25.5	-0.7
MAT	**Matsushiro**	**2.70**	**55**	P	Pn	08 48 47.8	+7.1
MAT				S	Sn	08 49 21.5	+8.4

ISCJB ***21*** *08:52:27.2±0.6,28.°94N±0.°07×139.°5E±0.°2,h426km±9km, mb3.4/8 Error ellipse: s-maj=26.7km s-min=8.6km az=162.6*

JMA ***21*** *08:52:27.1±0.1,29.°17N×140.°42E,h463km,M3.6*

IDC ***21*** *08:52:28.7±1.2,28.°82N×139.°44E,h431km±15km,mb3.0/7, mb1 3.1/10,mb1mx3.0/23,mbtmp3.1/10,Error ellipse: s-maj=27.5km s-min=15.6km az=66.0*

NEIC ***21*** *08:52:29.1±1.7,28.°84N×139.°40E,h435km±18km, MG3.6(JMA),Error ellipse: s-maj=24.8km s-min=17.2km az=67.0*

ISC 21 08:52:28.2±0.5,28.°97N±0.°08×139.°7E±0.°2,h423km±9km, n18,σ1$07/22,mb3.4/8,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.91**	**129**	P	**P**	**08 53 32.9**	**+0.4**
CBIJ	13nm,0.3s,baz=300,slow=20,SNR=3.9			S	**S**	**08 54 23.8**	**-0.8**
CBIJ	14nm,0.3s,baz=300,slow=20,SNR=3.6 **Chichi jima**	**2.91**	**129**	P	**P**	**08 53 33.0**	**+0.5**
CBIJ				S	**S**	**08 54 25.1**	**+0.6**
JHHJ	**Haha-jima-NKT**	**3.23**	**136**	P	**P**	**08 53 35.1**	**+0.1**
JHHJ				S	**S**	**08 54 28.8**	**-0.3**
JHJ	**Hachijo jima 2**	**4.13**	**1**	P	**P**	**08 53 46.7**	**+4.0**
JHJ	8.4nm,0.3s,baz=105,slow=20,SNR=3.8 3.0nm,0.3s,baz=253,slow=19,SNR=2.3			S	**S**	**08 54 42.7**	**-0.7**
BSO3	**Boso 3**	**5.86**	**7**	*e*S	**S**	**08 55 12.9**	**-1.9**
JWT	**Wachi**	**7.25**	**331**	P	**P**	**08 54 18.0**	**+3.1**
JAG	**Ashikaga**	**7.43**	**359**	S	**S**	**08 55 41.7**	**-4.3**
MAJO	**Matsushiro**	**7.65**	**351**	*e*P	**P**	**08 54 21.3**	**+2.1**
KSRS	**Korea Array**	**12.96**	**314**	P	**P**	**08 55 18.5**	**+0.8**
SONM	0.2nm,0.3s,baz=127,slow=9.4,SNR=3.3 **Songino Array**	**31.82**	**315**	P	**P**	**08 58 16.3**	**+0.4**
GTA	1.2nm,0.9s,mb3.2,baz=114,slow=7.7,SNR=4.6 **Gaotai**	**34.32**	**298**	P	**P**	**08 58 36.8**	**-0.6**
GTA	comp=Z,3.0nm,0.6s,mb3.8			pmax	pmax		
ZALV	**Zalesovo Beam**	**46.61**	**318**	P	**P**	**09 00 15.3**	**-0.8**
MK31	comp=Z,0.5nm,0.3s,mb3.3,baz=97,slow=4.6,SNR=2.4 **Makanchi Array**	**47.56**	**308**	*e*P	**P**	**09 00 22.9**	**-0.6**
MKAR	**Makanchi Array**	**47.56**	**308**	P	**P**	**09 00 22.9**	**-0.7**
WRA	comp=Z,0.6nm,0.3s,mb3.5,baz=94,slow=8.4,SNR=12 **Warramunga Arr**	**48.90**	**187**	P	**P**	**09 00 32.6**	**-1.1**
ARCES	comp=Z,0.4nm,0.5s,mb3.0,baz=2.7,slow=7.7,SNR=13 **ARCESS Array B**	**71.03**	**340**	P	**P**	**09 03 01.6**	**+0.1**

comp=Z,0.8nm,0.5s,mb3.5,baz=65,slow=8.7,SNR=10
FINES FINESS Array B 75.28 333 P **P 09 03 25.6 -0.5**
comp=Z,0.9nm,0.7s,mb3.5,baz=72,slow=6.2,SNR=4.6
NVAR Mina Array Bea 81.10 51 P **P 09 03 59.7 +1.7**
comp=Z,0.3nm,0.7s,mb3.1,baz=310,slow=7.0,SNR=3.3

*NEIC **21** 09:02:21.1, 17°.31N×100°.77W, h15km, MD4.0(MEX), After MEX.*
MEX 21 09:02:21.1±0.6, 17°.31N×100°.77W, h15km±6km, MD4.0, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.54**	**119**	*i* P	Pg	09 02 29.8	-2.0
CAIG				*i* S	Sg	09 02 37.9	-1.1
CAIG	**El Cayaco**	**0.54**	**119**	*i* P	Pg	09 02 29.8	-2.0
CAIG				*i* S	Sg	09 02 37.9	-1.1
ZIIG	**Zihuatanejo**	**0.73**	**294**	*i* P	Pg	09 02 33.2	-2.2
ZIIG				*i* S	Sg	09 02 41.9	-3.1
ZIIG	**Zihuatanejo**	**0.73**	**294**	*i* P	Pg	09 02 33.2	-2.2
ZIIG				*i* S	Sg	09 02 41.9	-3.1
ACX	**Acapulco**	**0.97**	**117**	*i* P	Pb	09 02 36.3	-3.4
ACX				*i* S	Sb	09 02 46.4	-6.0
ACX	**Acapulco**	**0.97**	**117**	*i* P	Pb	09 02 36.3	-3.4
ACX				*i* S	Sb	09 02 46.4	-6.0
MEIG	**Mezcala**	**1.25**	**61**	*i* P	Pn	09 02 40.0	-4.2
MEIG				*i* S	Sb	09 02 55.5	-4.9
PLIG	**Platanillo**	**1.61**	**48**	*i* P	Pn	09 02 46.2	-2.9
PLIG				*i* S	Sn	09 03 05.3	-4.4
PLIG	**Platanillo**	**1.61**	**48**	*i* P	Pn	09 02 46.2	-2.9
PLIG				*i* S	Sn	09 03 05.3	-4.4
MZVM		**2.37**	**38**	*i* P	Pn	09 02 55.7	-3.8
MZVM				*i* S	Sn	09 03 24.5	-3.9
MOIG	**Morelia**	**2.39**	**350**	*i* P	Pn	09 02 57.2	-2.6
MOIG				*i* S	Sn	09 03 25.1	-3.8
MOIG	**Morelia**	**2.39**	**350**	*i* P	Pn	09 02 57.2	-2.6
MOIG				*i* S	Sn	09 03 25.1	-3.8
MMIG	**Aquila**	**2.64**	**292**	*i* P	Pn	09 03 00.7	-2.6
MMIG				*i* S	Sn	09 03 31.3	-3.9
PBVM	**Pinon**	**2.65**	**37**	*e*P	Pn	09 03 00.1	-3.4
PBVM				*i* S	Sn	09 03 31.4	-4.0
PBVM	**Pinon**	**2.65**	**37**	*e*P	Pn	09 03 00.1	-3.4
PBVM				*i* S	Sn	09 03 31.4	-4.0
PPM	**Popocatepetl**	**2.68**	**49**	*i* P	Pn	09 03 00.1	-3.7
PPM				*i* S	Sn	09 03 32.8	-3.2
PPM	**Popocatepetl**	**2.68**	**49**	*i* P	Pn	09 03 00.1	-3.7
PPM				*i* S	Sn	09 03 32.8	-3.2
PNIG	**Pinotepa**	**2.69**	**109**	*i* P	Pn	09 03 01.6	-2.3
PNIG				*i* S	Sn	09 03 31.4	-4.7
PNIG	**Pinotepa**	**2.69**	**109**	*i* P	Pn	09 03 01.6	-2.3
PNIG				*i* S	Sn	09 03 31.4	-4.7
PTVM	**Pico Tres Padr**	**2.76**	**34**	*i* P	Pn	09 03 02.1	-2.8
PTVM				*i* S	Sn	09 03 35.0	-3.0
PTVM	**Pico Tres Padr**	**2.76**	**34**	*i* P	Pn	09 03 02.1	-2.8
PTVM				*i* S	Sn	09 03 35.0	-3.0
UTMO	**Huajuapan**	**2.87**	**79**	*e*P	Pn	09 03 03.4	-3.0
UTMO				*i* S	Sn	09 03 36.9	-3.9
IIO	**Organos**	**2.98**	**40**	*i* P	Pn	09 03 06.6	-1.4
IIO				*i* S	Sn	09 03 41.2	-2.3
IIO	**Organos**	**2.98**	**40**	*i* P	Pn	09 03 06.6	-1.4
IIO				*i* S	Sn	09 03 41.2	-2.3
TPIG	**Tehuac#an**	**3.42**	**71**	*e*P	Pn	09 03 12.7	-1.3
TPIG				*i* S	Sn	09 03 50.3	-4.1
VHO	**Vista Hermosa**	**3.86**	**93**	*e*P	Pn	09 03 18.5	-1.6
VHO				*i* S	Sn	09 04 02.6	-2.5
VHO	**Vista Hermosa**	**3.86**	**93**	*e*P	Pn	09 03 18.5	-1.6
VHO				*i* S	Sn	09 04 02.6	-2.5

*DDA **21** 09:05:04.8, 37°.80N×27°.20E, h14km±3km, Md2.7*
*ISCJB **21** 09:05:05.3±0.6, 37°.73N±0°.05×27°.19E±0°.04, h14km±6km, Error ellipse: s-maj=8.4km s-min=5.1km az=23.3*
*CSEM **21** 09:05:05.6±0.3, 37°.71N×27°.20E, h20km, MD2.7, Error ellipse: s-maj=9.0km s-min=6.4km az=39.0*
*ATH **21** 09:05:05.3, 37°.54N×26°.95E, h31km, MD3.0/3*
ISC 21 09:05:05.7±0.6, 37°.75N±0°.05×27°.20E±0°.05, h14km±6km, n14, σ0§63/26, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcami?**	**0.05**	**150**	*i* P	**Pg**	**09 05 08.5**	**+0.1**
GCAM				*i* S	**Sg**	**09 05 10.4**	**+0.2**
GCAM	**G?zelcami?**	**0.05**	**150**	*i* P	**Pg**	**09 05 08.5**	**+0.1**
GCAM				*i* S	**Sg**	**09 05 10.4**	**+0.1**
SMG	**Samos**	**0.29**	**263**	*e*PB	**Pg**	**09 05 11.7**	**-0.1**
SMG				*e*SB	**Sg**	**09 05 16.5**	**+0.7**
SMG	**Samos**	**0.29**	**263**	*e*Pb	**Pg**	**09 05 11.7**	**-0.1**
SMG				*e*Sb	**Sg**	**09 05 16.5**	**+0.7**
AYDN	**Tasoluk**	**0.55**	**99**	*i* P	**Pg**	**09 05 16.7**	**+0.3**
AYDN				*i* S	**Sg**	**09 05 23.7**	**0.0**
AYDN	**Tasoluk**	**0.55**	**99**	*i* P	**Pg**	**09 05 16.7**	**+0.3**
AYDN				*i* S	**Sg**	**09 05 23.7**	**0.0**
BDRM	**Kayabasi**	**0.71**	**164**	*i* P	**Pg**	**09 05 18.6**	**-0.9**
BDRM				*i* S	**Sg**	**09 05 29.0**	**+0.2**
BDRM	**Kayabasi**	**0.71**	**164**	*i* P	**Pg**	**09 05 18.6**	**-0.9**
BDRM				*i* S	**Sg**	**09 05 29.0**	**+0.2**
CHOS	**Chios island**	**1.11**	**306**	*e*PN	**Pg**	**09 05 26.1**	**-0.9**
CHOS				*e*SN	**Sg**	**09 05 41.1**	**-0.4**
CHOS	**Chios island**	**1.11**	**306**	*e*Pn	**Pg**	**09 05 26.1**	**-0.9**
CHOS				*e*Sn	**Sg**	**09 05 41.1**	**-0.4**
AKHS	**Akhisar**	**1.23**	**23**	*i* P	**Pn**	**09 05 27.6**	**-0.8**
AKHS				*i* S	**Sb**	**09 05 44.6**	**+0.2**
AKHS	**Akhisar**	**1.23**	**23**	*i* P	**Pn**	**09 05 27.6**	**-0.8**
AKHS				*i* S	**Sb**	**09 05 44.6**	**+0.2**
PRK	**Paraskevi**	**1.66**	**334**	*e*PN	**Pn**	**09 05 35.9**	**+1.5**
PRK	**Paraskevi**	**1.66**	**334**	*e*Pn	**Pn**	**09 05 35.9**	**+1.5**

WEL 21 09:06:07.8±0.6, 37°.01S×176°.73E, h250km±7km, ML3.5/9, Error ellipse: s-maj=10.4km s-min=10.1km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**1.28**	**166**	PN	Pn	09 06 44.4	0.0
URZ				SN	S	09 07 13.6	+0.2
MWZ	**Matawai**	**1.47**	**155**	PN	Pn	09 06 46.5	+0.7
MWZ				SN	S	09 07 15.7	0.0
PUZ	**Puketiti**	**1.61**	**132**	PN	Pn	09 06 46.6	-0.3
PUZ				SN	S	09 07 16.3	-1.4
CNGZ	**Carnagh Statio**	**1.88**	**142**	PN	Pn	09 06 49.6	+0.5
BKZ	**Black Stump Fm**	**2.16**	**185**	PN	Pn	09 06 51.9	+0.2
BKZ				SN	S	09 07 26.1	-0.3
BHHZ	**Black Hill Sta**	**2.53**	**192**	PN	Pn	09 06 55.6	+0.3
KAHZ	**Kahuranaki**	**2.78**	**178**	PN	Pn	09 06 58.0	+0.2
MRZ	**Mangatainoka R**	**3.76**	**193**	*e*PN	Pn	09 07 07.1	-1.6
OGWZ	**Otaki Gorge**	**3.99**	**197**	PN	Pn	09 07 10.5	-0.9
KIW	**Kapiti Island**	**4.10**	**200**	PN	Pn	09 07 11.3	-1.3
TCW	**Tory Channel**	**4.61**	**204**	PN	Pn	09 07 17.6	-1.2
TUWZ	**Tuamarina**	**4.92**	**205**	PN	Pn	09 07 20.6	-1.8
NNZ	**Nelson**	**4.94**	**211**	*e*PN	Pn	09 07 20.7	-2.0
KHZ	**Kahutara**	**5.93**	**203**	PN	Pn	09 07 32.9	-2.0

*IDC **21** 09:10:15.2±1.5, 14°.25S×167°.52E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.9/17, mbtmp3.9/8, Error ellipse: s-maj=71.6km s-min=21.3km az=143.0*
*NEIC **21** 09:10:16.6±0.4, 14°.34S×167°.57E, h10km, mb4.1/2, Error ellipse: s-maj=23.3km s-min=11.3km az=139.0*
*ISCJB **21** 09:10:19.0±0.9, 14°.4S±0°.2×167°.4E±0°.2, h33km, mb3.8/9, Error ellipse: s-maj=33.3km s-min=18.1km az=140.0*
ISC 21 09:10:20.8±0.9, 14°.3S±0°.2×167°.5E±0°.2, h35km, n25, σ0§45/11, mb3.8/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**29.43**	**229**	P	**P**	**09 16 21.9**	**+0.8**
	1.8nm,0.5s,mb4.1,baz=58,slow=9.5,SNR=8.6						
WRA	**Warramunga Arr**	**32.13**	**255**	P	**P**	**09 16 44.5**	**-0.7**
	0.1nm,0.4s,mb3.0,baz=86,slow=9.3,SNR=5.8						
ASAR	**Alice Springs**	**33.02**	**249**	P	**P**	**09 16 52.3**	**-0.6**
	0.6nm,0.4s,mb3.8,baz=79,slow=8.8,SNR=10						
FITZ	**Fitzroy Crossi**	**40.30**	**259**	*e*P	**P**	**09 17 55.7**	**+0.7**
	3.4nm,1.1s,mb4.0						
FITZ	**Fitzroy Crossi**	**40.30**	**259**	P	**P**	**09 17 55.4**	**+0.4**
	1.0nm,0.4s,mb3.9,baz=102,slow=9.3,SNR=2.8						
QSPA	**South Pole Qui**	**75.73**	**180**	*e*P	**P**	**09 22 02.0**	**-0.2**
	2.2nm,0.9s,mb4.1						
ILAR	**Eielson Array**	**86.06**	**18**	P	**P**	**09 22 57.6**	**+0.2**
	0.6nm,0.7s,mb3.9,baz=233,slow=5.4,SNR=12						
NVAR	**Mina Array Bea**	**86.84**	**49**	P	**P**	**09 23 01.6**	**-0.2**
	0.1nm,0.4s,mb3.4,baz=221,slow=3.6,SNR=3.0						
MKAR	**Makanchi Array**	**97.03**	**316**	P	**P**	**09 23 49.0**	**0.0**
MKAR	**Makanchi Array**	**97.03**	**316**	P	**P**	**09 23 49.0**	**0.0**
	0.2nm,0.2s,mb4.1,baz=104,slow=5.3,SNR=3.6						
ZALV	**Zalesovo Beam**	**97.17**	**324**	P	**P**	**09 23 49.5**	**+0.1**
	0.4nm,0.4s,mb4.2,baz=107,slow=9.2,SNR=2.5						
ARCES	**ARCESS Array B**	**119.89**	**346**	PKP	PKPdf	09 29 06.1	-0.7
	0.5nm,0.4s,baz=57,slow=6.6,SNR=12						
CABF	**La Chapelle**	**144.21**	**338**	*e*PKP1	PKPdf	09 29 54.3	+1.3
LDF	**La Druitiere**	**144.30**	**346**	*e*PKP1	PKPdf	09 29 51.6	-1.5
	4.5nm,0.6s						
GRR	**Gorron**	**144.67**	**347**	*e*PKP1	PKPdf	09 29 53.2	-0.6
	13nm,0.7s						
SSF	**Saint Saulge**	**144.70**	**341**	*e*PKP1	PKPdf	09 29 53.8	-0.1
	14nm,0.8s						
LPL	**La Plagne**	**144.88**	**336**	*e*PKP1	PKPdf	09 29 54.0	-0.2
LPG	**La Plagne**	**144.89**	**336**	*e*PKP1	PKPdf	09 29 54.8	+0.5
SMF	**Signal de Mont**	**144.96**	**340**	*e*PKP1	PKPdf	09 29 54.4	+0.1
	6.0nm,0.7s						
AVF	**Avril sur Loir**	**144.99**	**341**	*e*PKP1	PKPdf	09 29 54.3	-0.1
	13nm,0.9s						
SGMF	**Saint Gilles**	**145.15**	**348**	*e*PKP1	PKPbc	09 29 54.8	+0.6
	20nm,0.9s						
BGF	**Bois d'Agland**	**145.35**	**341**	*e*PKP1	PKPbc	09 29 55.7	+0.8
SBF	**Sospel**	**145.95**	**334**	*e*PKP1	PKPbc	09 29 57.3	+0.5
MFF	**Saint Martin d**	**146.16**	**345**	*e*PKP1	PKPbc	09 29 56.0	-1.4
	19nm,1.0s						
LMR	**La Mourre**	**146.77**	**334**	*e*PKP1	PKPbc	09 29 57.7	-1.6
	37nm,1.0s						

*GUC **21** 09:32:56.5±0.7, 25°.03S×68°.79W, h120km, ML5.5*
*ISCJB **21** 09:32:56.9±0.2, 25°.09S±0°.04×68°.67W±0°.04, h107km, mb5.3/126, Error ellipse: s-maj=5.8km s-min=4.0km az=38.3*
*MOS **21** 09:32:57.9±1.2, 24°.99S×68°.67W, h114km, mb5.3/31, Error ellipse: s-maj=12.8km s-min=6.7km az=107.7*
*IDC **21** 09:32:57.2±0.4, 25°.32S×68°.85W, h103km±3km, mb4.8/14, mb1 4.9/17, mb1mx4.8/19, mbtmp4.8/17, MS4.2/9, Ms1 4.2/9, ms1mx4.0/14, Error ellipse: s-maj=16.3km s-min=10.9km az=71.0*
*NEIC **21** 09:32:57.6±0.1, 25°.25S×68°.70W, mb5.3/102, MW5.4, Error ellipse: s-maj=6.3km s-min=3.9km az=53.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.33; $M_{\theta\theta}$0.20; $M_{\phi\phi}$ 1.13; $M_{r\theta}$0.21; $M_{\theta\phi}$-0.13; $M_{\phi r}$-0.59; Best double couple: $M_0$1.40000×10^{17} NP1:ϕ_s176.00000°, δ32.00000°, λ-83.00000°. NP2:ϕ_s347.00000°, δ58.00000°, λ-95.00000°. Principal axes: T 1.2900, Plg13.0000°, Azm80.0000°; N 0.1900, Plg3.0000°, Azm349.0000°; P -1.4800, Plg76.0000°, Azm243.0000°;*
NEIC Felt [IV] at Diego de Almagro and El Salvador; [III] at Chanaral and Taltal; [II] at Copiapo.
*GCMT **21** 09:33:00.9±0.2, 25°.29S×69°.13W, h118km±1km, MW5.3, Moment Tensor Solution. s64,c93; s85,c136; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.92±.02; $M_{\theta\theta}$-0.18±.02; $M_{\phi\phi}$1.10±.02; $M_{r\theta}$0.06±.02; $M_{\theta\phi}$-0.25±.02; $M_{\phi r}$-0.23±.02; Best double couple: $M_0$1.10000×10^{17} NP1:ϕ_s170.00000°, δ39.00000°, λ-89.00000°. NP2:ϕ_s348.00000°, δ51.00000°, λ-91.00000°. Principal axes: T 1.1700, Plg6.0000°, Azm79.0000°; N -0.2300, Plg1.0000°, Azm349.0000°; P -0.9500, Plg83.0000°, Azm252.0000°; Data Used: IU II IC G CN.*
*DJA **21** 09:33:02.2, 25°.10S×68°.62W, h126km, mb5.5/10*
ISC 21 09:32:58.5±0.2, 25°.17S±0°.04×68°.61W±0°.04, h109km, h109km±.4km: pP-P, n857, σ0§69/688, mb5.3/126, 228C-195D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANCH	**Antofagasta**	**2.21**	**312**	⇑*i* P	**Pn**	**09 33 26.6**	**-7.5**
ANCH				*i* S	**Sn**	**09 33 52.2**	**-9.1**
ANCH	**Antofagasta**	**2.21**	**312**	⇑*i* P	**Pn**	**09 33 26.6**	**-7.5**
ANCH				*i* S	**Sn**	**09 33 52.2**	**-9.1**
ANCH				AML	AML	09 33 59.9	
	comp=E,29μm,0.4s						
CEN1	**Los Morros**	**2.29**	**320**	⇓*i* P	**Pn**	**09 33 31.4**	**-3.7**
CEN1				*i* S	**Sn**	**09 33 57.0**	**-6.1**
MECH	**Mejillones**	**2.65**	**320**	⇑*i* P	**Pn**	**09 33 36.6**	**-3.2**
MECH				*i* S	**Sn**	**09 34 07.1**	**-4.6**
MECH				AML	AML	09 34 19.0	
	comp=N,29μm,0.5s						
PB04	**Plate Boundary**	**3.00**	**344**	⇑*i* P	**Pn**	**09 33 43.4**	**-1.0**
PB04				AML	AML	09 34 38.7	
	comp=E,11μm,0.6s						
MACH	**Maria Elena**	**3.14**	**340**	*e*P	**Pn**	**09 33 44.0**	**-2.3**
PB01	**Plate Boundary**	**4.18**	**349**	⇓*i* P	**Pn**	**09 33 58.1**	**-2.2**
PB01				*e*S	**Sn**	**09 34 45.4**	**-2.9**
LCO	**Las Campanas**	**4.26**	**205**	*e*Pn	**Pn**	**09 33 54.8**	**-6.4**
LCO				*e*Sn	**Sn**	**09 34 44.8**	**-5.1**
CFAA	**Coronel Fontan**	**6.42**	**177**	P	**Pn**	**09 34 26.3**	**-4.2**
	comp=E,10nm,0.3s,baz=353,slow=13,SNR=1012						
CFAA				S	**Sn**	**09 35 33.0**	**-9.3**
	comp=E,7.0nm,0.3s,baz=195,slow=11,SNR=5.9						
LPAZ	**La Paz**	**8.85**	**3**	P	**Pn**	**09 35 03.3**	**-0.2**
	comp=E,2.7nm,0.3s,baz=188,slow=6.6,SNR=109						
CPUP	**Villa Florida**	**10.24**	**99**	P	**Pn**	**09 35 21.4**	**-1.0**
	comp=E,5.9nm,0.3s,baz=263,slow=12,SNR=47						
CPUP				LR	LR	09 40 11.7	
	comp=E,840nm,20.8s,baz=273,slow=42						
CPUP	**Villa Florida**	**10.24**	**99**	*e*P	**Pn**	**09 35 21.3**	**-1.1**
SIV	**San Ignacio**	**11.54**	**39**	P	**Pn**	**09 35 36.9**	**-2.9**
	comp=E,82nm,0.3s,baz=231,slow=12,SNR=775						
SIV				S	**Sn**	**09 37 45.3**	**-1.5**
	baz=108,slow=19,SNR=3.0						
TRQA	**Tornquist**	**14.03**	**158**	*e*Pn	**Pn**	**09 36 08.1**	**-4.2**
NNA	**Nana**	**15.25**	**328**	*e*P	**Pn**	**09 36 29.7**	**+1.8**
	comp=E,72nm,1.0s						
NNA	**Nana**	**15.25**	**328**	P	**Pn**	**09 36 28.8**	**+0.8**
	comp=E,1.1nm,0.3s,baz=188,slow=12,SNR=4.9						
NNA				S	**Sn**	**09 39 11.7**	**-14**
	comp=E,1.4nm,0.3s,baz=238,slow=18,SNR=2.2						
SPB	**Sao Paulo**	**19.36**	**90**	*e*P	**P**	**09 37 16.2**	**+0.6**
	comp=E,455nm,1.4s						
ATAH	**Atahualpa**	**20.22**	**331**	P	**P**	**09 37 26.0**	**+1.0**
	comp=E,31nm,0.9s,baz=168,slow=10.0,SNR=11						
CAM4	**Nova Friburgo**	**23.99**	**89**	*e*P	**P**	**09 38 02.3**	**-0.8**
CAM4				*i*		09 38 10.1	
CAM4				*i*		09 38 14.8	
CAM4				*i*		09 38 23.7	
CAM4				*i*		09 38 27.7	
CAM4				*i*		09 38 30.6	
CAM4				*i*		09 38 36.0	
CAM4				*i*		09 38 44.6	
CAM4				*i*		09 38 48.0	
CAM4				*i*		09 38 53.1	
OTAV	**Otavalo**	**26.99**	**338**	*e*P	**P**	**09 38 30.2**	**0.0**
	comp=E,42nm,1.2s,mb4.8						
USHA	**Ushuaia**	**29.63**	**180**	P	**P**	**09 38 51.1**	**-2.1**
	comp=E,12nm,0.5s,mb4.7,baz=358,slow=6.3,SNR=8.6						
USHA				LR	LR	09 51 44.9	
	comp=E,615nm,19.9s,baz=217,slow=38						
ROSC	**El Rosal**	**30.36**	**349**	*e*P	**P**	**09 38 58.5**	**-1.5**
ROSC				*e*pP	pP	09 39 25.2	+1.0
ROSC	**El Rosal**	**30.36**	**349**	LR	LR	09 51 21.1	
	comp=E,244nm,19.5s,baz=95,slow=36						
BCIP	**Isla Barro Col**	**35.84**	**341**	*e*P	**P**	**09 39 48.1**	**+0.4**
	comp=E,108nm,1.9s,mb5.5						
RCBR	**Riachuelo**	**36.75**	**64**	*e*P	**P**	**09 39 56.5**	**+0.9**
	comp=E,185nm,1.4s,mb5.8						
RCBR				*e*P		09 39 57.1	
JTS	**JuntasAbangare**	**38.67**	**334**	P	**P**	**09 40 12.3**	**+0.6**
	comp=E,196nm,1.1s,mb5.8,SNR=5.2						
JTS	**JuntasAbangare**	**38.67**	**334**	*e*P	**P**	**09 40 12.3**	**+0.6**
	comp=E,45nm,1.1s,mb5.2						
JTS	**JuntasAbangare**	**38.67**	**334**	*d*P	**P**	**09 40 12.4**	**+0.7**
PMSA	**Palmer Station**	**39.72**	**177**	*e*P	**P**	**09 40 18.3**	**-1.5**
	comp=E,58nm,0.8s,mb5.5						
PMSA	**Palmer Station**	**39.72**	**177**	P	**P**	**09 40 18.2**	**-1.6**
	comp=E,46nm,0.8s,mb5.4,baz=13,slow=8.6,SNR=5.9						
OBIP	**Obispado Ponce**	**42.99**	**3**	*e*P	**P**	**09 40 46.3**	**-0.7**
TGUH	**Tegucigalpa,Un**	**43.02**	**333**	*e*P	**P**	**09 40 47.0**	**-0.3**
	comp=E,80nm,0.9s,mb5.5						
SJG	**San Juan**	**43.08**	**3**	*e*P	**P**	**09 40 45.7**	**-2.1**
	comp=E,72nm,1.1s,mb5.3						
SJG				*e*pP	pP	09 41 11.3	-1.6
SJG	**San Juan**	**43.08**	**3**	*e*P	**P**	**09 40 45.7**	**-2.1**
SJG				*e**PP	pP	09 41 11.3	-1.6
SJG				pmax	pmax		
	comp=Z,72nm,1.1s						
MPR	**Mayaguez**	**43.14**	**2**	*e*P	**P**	**09 40 46.8**	**-1.5**
SDDR	**Presa de Saban**	**43.96**	**356**	*e*P	**P**	**09 40 55.6**	**+0.8**
	comp=Z,15nm,0.5s,mb5.0						
MTDJ	**Mount Denham**	**44.00**	**348**	*e*P	**P**	**09 40 55.2**	**+0.1**
	comp=Z,186nm,0.9s,mb5.8						
TEIG	**Tepich**	**49.01**	**335**	*e*P	**P**	**09 41 33.1**	**-1.1**
	comp=Z,218nm,1.9s,mb5.8						
VNA1	**Neumayer--Stat**	**56.76**	**160**	*e*P	**P**	**09 42 27.4**	**-3.2**
VNA1				*e*	pP	09 42 54.0	-2.9
VNA1				*e*		09 43 05.9	
VNA1				*e*		09 44 39.1	
BBSR	**BB Station**	**57.34**	**4**	*e*P	**P**	**09 42 34.5**	**-0.6**
	comp=Z,94nm,1.0s,mb5.8						
NHSC	**New Hope**	**58.99**	**349**	*e*P	**P**	**09 42 46.7**	**+0.1**
	comp=Z,274nm,1.3s,mb6.1						
RKT	**Rikitea**	**60.02**	**257**	*e*LR	LR	10 00 39.9	
	comp=Z,612nm,37.0s						
LRAL	**Lakeview Retre**	**60.47**	**342**	*e*P	**P**	**09 42 55.3**	**-1.4**
	comp=Z,54nm,1.3s,mb5.4						
HKT	**Hockley**	**60.70**	**333**	*e*P	**P**	**09 42 57.5**	**-0.9**
	comp=Z,72nm,1.7s,mb5.4						
HKT	**Hockley**	**60.70**	**333**	*e*P	**P**	**09 42 57.6**	**-0.8**
HKT				pmax	pmax		
	comp=Z,72nm,1.7s,mb5.4						
VBMS	**Vicksburg**	**60.77**	**339**	*e*P	**P**	**09 42 58.2**	**-0.6**
	comp=Z,101nm,1.5s,mb5.6						
NATX	**Nacogdoches**	**61.84**	**335**	*e*P	**P**	**09 43 06.1**	**+0.1**
	comp=Z,76nm,0.9s,mb5.7						
CPCT	**Cooper Cave**	**62.14**	**345**	*e*P	**P**	**09 43 07.2**	**-0.7**
TKL	**Tuckaleechee C**	**62.17**	**346**	*e*P	**P**	**09 43 06.8**	**-1.3**
SWET	**Sewanee**	**62.25**	**344**	*e*P	**P**	**09 43 07.4**	**-1.3**
JCT	**Junction City**	**62.88**	**330**	⇑P	**P**	**09 43 12.0**	**-1.0**
	baz=63,SNR=21						
VWCC	**Virginia Weste**	**62.99**	**350**	*e*P	**P**	**09 43 13.8**	**+0.2**
VWCC				*e*pP	pP	09 43 40.2	-0.2
JSRW	**J. Sargeant Re**	**63.13**	**352**	*e*P	**P**	**09 43 14.8**	**+0.3**
JSRW				*e*pP	pP	09 43 41.1	-0.2
MAIT	**Maitri**	**63.30**	**159**	*e*P	**P**	**09 43 14.3**	**-0.9**
MAIT				*e*		09 43 30.2	
NVL	**N'lazarevskaya**	**63.33**	**159**	*e*P	**P**	**09 43 13.9**	**-1.5**
NVL				pmax	pmax		
	comp=Z,153nm,1.1s,mb5.8						
628A	**Black Gap, Mar**	**63.53**	**327**	⇓P	**P**	**09 43 16.9**	**-0.3**
	baz=64,SNR=40						
WVT	**Waverly**	**63.61**	**343**	*e*P	**P**	**09 43 15.7**	**-2.0**
	comp=Z,31nm,0.4s,mb5.5						
WVT	**Waverly**	**63.61**	**343**	*e*P	**P**	**09 43 15.7**	**-2.0**
WVT				pmax	pmax		
	comp=Z,31nm,0.4s,mb5.5						
UALR	**University of**	**63.72**	**338**	*e*P	**P**	**09 43 17.4**	**-1.0**
	comp=Z,50nm,1.0s,mb5.3						
627A	**Terlingua Ranc**	**63.75**	**326**	⇑P	**P**	**09 43 18.3**	**-0.5**
	baz=64,SNR=26						
TXAR	**Lajitas Array**	**63.79**	**326**	P	**P**	**09 43 18.2**	**-0.8**
TXAR				⇑*e*		10 12 15.4	
TXAR	**Lajitas Array**	**63.79**	**326**	P	**P**	**09 43 18.2**	**-0.8**
	comp=Z,5.3nm,0.8s,mb4.4,baz=149,slow=7.7,SNR=58						
TXAR				PKP2bc		10 12 15.4	
	comp=Z,1.1nm,0.9s,baz=323,slow=4.7,SNR=8.1						
MIAR	**Mount Ida**	**63.93**	**337**	*e*P	**P**	**09 43 18.6**	**-1.2**
	comp=Z,59nm,1.0s,mb5.4						
MIAR	**Mount Ida**	**63.93**	**337**	*e*P	**P**	**09 43 18.6**	**-1.2**
MIAR				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.4						
GNAR	**Gosnell**	**64.08**	**341**	*e*P	**P**	**09 43 20.0**	**-0.7**
	comp=Z,2μm,1.0s						
UTMT	**University of**	**64.09**	**342**	*e*P	**P**	**09 43 19.4**	**-1.4**
	comp=Z,222nm,1.0s,mb6.0						
626A	**Big Bend Ranch**	**64.21**	**326**	⇑P	**P**	**09 43 21.8**	**+0.1**
	baz=64,SNR=72						
527A	**Woodward Ranch**	**64.43**	**327**	⇓P	**P**	**09 43 22.5**	**-0.6**
	baz=65,SNR=27						
428A	**Kincaid Ranch,**	**64.45**	**328**	⇑P	**P**	**09 43 22.7**	**-0.5**
	baz=65,SNR=19						
526A	**Mary Lane Ranc**	**64.60**	**326**	⇓P	**P**	**09 43 24.1**	**-0.2**
	baz=65,SNR=94						
PARMO	**Parma**	**64.65**	**341**	*e*P	**P**	**09 43 23.

baz=68,SNR=6.3
BINY Binghamton 67.37 354 *e*P **P** **09 43 42.2 +0.4**
comp=Z,52nm,1.1s,mb5.3
BINY *e*pP pP 09 44 08.1 -0.8
124A Stringfield Ra 67.41 327 ⇑P **P** **09 43 41.7 -0.6**
baz=68,SNR=60
AMTX Amarillo 67.45 331 ⇑P **P** **09 43 41.3 -1.1**
baz=68,SNR=6.8
Z25A Roswell 67.52 328 ⇑P **P** **09 43 41.9 -1.0**
baz=68
Y26A Elida 67.62 329 ⇑P **P** **09 43 42.3 -1.2**
baz=68,SNR=6.2
TRY Troy 67.72 356 *e*P **P** **09 43 45.0 +1.1**
TRY *e*pP pP 09 44 11.7 +0.6
123A Bell Site, Whi 67.77 326 ⇑P **P** **09 43 44.2 -0.3**
baz=68
ERPA Erie 67.77 351 *e*P **P** **09 43 43.7 -0.5**
comp=Z,48nm,0.8s,mb5.4
ERPA *e*pP pP 09 44 10.7 -0.7
222A Williams Famil 67.77 325 ⇑P **P** **09 43 44.4 -0.1**
baz=68
Z24A Sheeppen Canyo 67.88 327 ⇑P **P** **09 43 44.8 -0.4**
baz=68,SNR=70
X27A F and S Farms, 67.88 330 ⇑P **P** **09 43 44.1 -1.1**
baz=68,SNR=9.7
320A Kipp Ranch, An 67.92 324 ⇑P **P** **09 43 45.5 +0.1**
baz=68,SNR=42
Y25A Mesa, Roswell 68.03 328 ⇓P **P** **09 43 45.1 -1.0**
baz=68,SNR=17
221A Mesquite Ranch 68.05 325 ⇓P **P** **09 43 46.6 +0.4**
baz=68,SNR=8.2
X26A CR and CF Fran 68.13 329 ⇓P **P** **09 43 46.2 -0.5**
baz=68,SNR=18
HDIL Hopedale 68.16 343 *e*P **P** **09 43 44.9 -1.9**
comp=Z,43nm,0.4s,mb5.6
122A Conniff Cattle 68.19 326 ⇓P **P** **09 43 47.8 +0.6**
baz=68,SNR=8.9
W27A Bowe Ranch, En 68.22 330 ⇓P **P** **09 43 46.5 -0.7**
baz=68,SNR=25
Z23A Rita Site, Whi 68.25 327 ⇓P **P** **09 43 47.6 +0.1**
baz=68,SNR=27
319A Douglas 68.36 323 ⇓P **P** **09 43 48.4 +0.2**
baz=69,SNR=35
220A Playas Peak, P 68.36 324 ⇑P **P** **09 43 48.1 -0.1**
baz=69,SNR=54
ACCN Adirondack Com 68.37 356 *e*P **P** **09 43 48.8 +0.8**
ACCN *e*pP pP 09 44 15.6 +0.4
Y24A Capitan 68.39 328 ⇓P **P** **09 43 47.7 -0.6**
baz=69,SNR=12
121A Cookes Peak, D 68.46 325 ⇓P **P** **09 43 49.2 +0.4**
baz=69,SNR=30
X25A Clemmons Ranch 68.51 329 ⇓P **P** **09 43 48.1 -0.9**
baz=69,SNR=9.2
AAM Ann Arbor 68.55 348 *e*P **P** **09 43 47.9 -1.3**
W26A Owens Ranch, T 68.56 330 ⇑P **P** **09 43 49.0 -0.3**
baz=69,SNR=41
HNH Hanover 68.61 357 *e*P **P** **09 43 49.7 +0.2**
Z22A Elephant Butte 68.61 326 ⇓P **P** **09 43 50.2 +0.5**
baz=69,SNR=100
Y23A Lovelace Mesa, 68.70 327 ⇓P **P** **09 43 50.2 0.0**
baz=69,SNR=16
219A White Tail Can 68.83 324 ⇓P **P** **09 43 51.3 +0.2**
baz=69,SNR=53
120A U Bar Ranch, L 68.92 324 ⇑P **P** **09 43 52.0 +0.3**
baz=69,SNR=25
W25A X Bar L Ranch, 68.98 329 ⇓P **P** **09 43 51.3 -0.7**
baz=69,SNR=42
NCB Newcomb 68.99 356 *e*P **P** **09 43 52.2 +0.4**
NCB *e*pP pP 09 44 10.7 -8.3
Z21A St. Cloud Mine 69.02 326 ⇑P **P** **09 43 52.7 +0.5**
baz=69,SNR=14
KSU1 Kansas State U 69.09 337 *e*P **P** **09 43 51.0 -1.5**
comp=Z,24nm,0.6s,mb5.2
V26A Tequesquite Ra 69.15 330 ⇓P **P** **09 43 52.5 -0.5**
baz=69,SNR=31
Y22A Socorro 69.16 326 ⇓P **P** **09 43 53.3 +0.2**
baz=69,SNR=19
BNM Barren Site 69.16 327 *e*P **P** **09 43 53.3 +0.2**
comp=Z,47nm,1.4s,mb5.1
BNM *e*pP pP 09 44 20.9 +0.6
LIC Lamto 69.19 72 *e*P **P** **09 43 54.2 +0.4**
comp=Z,42nm,0.3s,mb5.7
LIC Lamto 69.19 72 ⇑*i*P **P** **09 43 54.7 +0.9**
comp=Z,23nm,0.3s,mb5.1
LIC Lamto 69.19 72 ⇑*i*P **P** **09 43 54.7 +0.9**
comp=Z,12nm,0.3s,mb5.2
218A Dragoon 69.23 323 ⇓P **P** **09 43 53.9 +0.3**
baz=70,SNR=70
Y22D IRIS PASSCAL I 69.25 327 ⇑P **P** **09 43 54.1 +0.5**
baz=70
X23A Hourglass Bar 69.29 327 ⇓P **P** **09 43 54.2 +0.3**
baz=70,SNR=6.0
LPM Los Pinos Moun 69.29 327 *e*P **P** **09 43 54.1 +0.2**
LPM *e*pP pP 09 44 21.5 +0.3
Z20A Nine Sixteen R 69.34 325 ⇑P **P** **09 43 54.7 +0.5**
baz=70,SNR=40
LENM Lemitar 69.34 327 *e*P **P** **09 43 54.9 +0.6**
TIC Toumodi 69.41 72 *e*P **P** **09 43 55.6 +0.5**
comp=Z,30nm,0.6s,mb5.3
TIC Toumodi 69.41 72 *e*P **P** **09 43 55.6 +0.5**
TIC pmax pmax
comp=Z,31nm,0.6s,mb5.3
W24A Lazy 6 Ranch, 69.42 328 ⇓P **P** **09 43 54.3 -0.4**
baz=70,SNR=27
119A Ashpeak Ranch, 69.44 324 ⇑P **P** **09 43 55.4 +0.5**
baz=70,SNR=15
217A Green Valley 69.51 322 ⇓P **P** **09 43 55.4 +0.1**
baz=70,SNR=60
KIC Kosan Boka 69.51 72 *e*P **P** **09 43 56.6 +0.9**
comp=Z,64nm,0.5s,mb5.7
DBIC Dimbokro 69.56 72 P **P** **09 43 57.0 +0.9**
comp=Z,26nm,0.6s,mb5.2,baz=216,slow=6.6,SNR=31
DBIC LR LR 10 12 23.6
comp=Z,227nm,19.0s,baz=156,slow=34
V25A Rancho No Teng 69.57 329 ⇓P **P** **09 43 55.2 -0.4**
baz=70,SNR=47
Y21A Point of Rocks 69.57 326 ⇓P **P** **09 43 56.5 +0.8**
baz=70,SNR=50
LAZ Ladron 69.61 327 *e*P **P** **09 43 56.3 +0.4**
comp=Z,17nm,1.2s,mb4.8
LAZ *e*pP pP 09 44 24.4 +1.2
LAZ *e*sP sP 09 44 35.5 +0.5
TAOE Nuku Hiva Isla 69.62 270 *e*S S 09 53 04.5 +8.0
comp=Z,223nm,24.9s
TAOE *e*LR LR 10 05 06.3
comp=Z,306nm,32.9s
U26A Atchley Ranch, 69.63 330 ⇓P **P** **09 43 55.6 -0.4**
baz=70,SNR=26
X22A Bernardo 69.63 327 ⇓P **P** **09 43 56.9 +0.9**
baz=70
LONY Lake Ozonia 69.66 355 *e*P **P** **09 43 56.3 +0.4**
comp=Z,24nm,0.9s,mb5.0
LONY *e*pP pP 09 44 23.2 0.0
ANMO Albuquerque 69.72 327 *e*P **P** **09 43 56.6 +0.1**
comp=Z,34nm,1.0s,mb5.1
ANMO *e*pP pP 09 44 24.2 +0.4
ANMO *e*sP sP 09 44 35.9 +0.3
ANMO Albuquerque 69.72 327 *e*P **P** **09 43 56.7 +0.2**
ANMO *e**PP pP 09 44 24.2 +0.4
ANMO *e**SP sP 09 44 35.9 +0.3
ANMO pmax pmax
comp=Z,34nm,1.0s
W23A Werner Place, 69.74 328 ⇓P **P** **09 43 57.0 +0.3**
baz=70,SNR=50
V24A Rampart Ranch, 69.78 329 ⇓P **P** **09 43 56.7 -0.2**
baz=70,SNR=49
FRNY Flat Rock 69.81 356 *e*P **P** **09 43 57.4 +0.5**
FRNY *e*pP pP 09 44 24.2 +0.1
Z19A T-Link Ranch, 69.83 324 ⇓P **P** **09 43 57.9 +0.6**
baz=70,SNR=11
Y20A Horse Springs, 69.85 325 ⇑P **P** **09 43 57.8 +0.5**
baz=70,SNR=47
TUC Tucson 69.89 323 *e*P **P** **09 43 57.6 -0.1**
U25A Circle Dot Ran 69.93 330 ⇑P **P** **09 43 57.7 -0.1**
baz=70,SNR=46
X21A Alamocita Cree 69.97 326 ⇑P **P** **09 43 58.8 +0.7**
baz=70,SNR=48
CBKS Cedar Bluff 70.00 335 ⇓P **P** **09 43 57.8 -0.3**
baz=70,SNR=28
CBKS Cedar Bluff 70.00 335 *e*P **P** **09 43 57.7 -0.4**
comp=Z,162nm,1.0s,mb5.8
CBKS *e*pP pP 09 44 24.9 -0.6
CBKS Cedar Bluff 70.00 335 *e*P **P** **09 43 57.7 -0.5**
CBKS *e**PP pP 09 44 24.9 -0.6
CBKS pmax pmax
comp=Z,161nm,1.0s,mb5.8
W22A Albuquerque 70.02 327 ⇓P **P** **09 43 59.0 +0.7**
baz=70,SNR=14
216A Three Points, 70.03 322 ⇓P **P** **09 43 58.7 +0.1**
baz=70,SNR=12
117A Oracle 70.07 323 ⇑P **P** **09 43 58.8 +0.1**
baz=70,SNR=43
Z18A Geronimo 70.08 324 ⇓P **P** **09 43 59.1 +0.3**
baz=70,SNR=13
PKME Peaks-Kenny Pk 70.09 359 *e*P **P** **09 43 59.1 +0.6**
PKME *e*pP pP 09 44 26.2 +0.3
V23A Ortiz Mt. (NFS 70.23 328 ⇓P **P** **09 44 00.1 +0.5**
baz=70,SNR=36
Y19A Nutrioso 70.34 325 ⇓P **P** **09 44 01.3 +0.9**
baz=71,SNR=84
X20A Quemado 70.41 326 ⇑P **P** **09 44 01.4 +0.6**
baz=71,SNR=38
W21A San Fidel 70.44 327 ⇓P **P** **09 44 01.5 +0.6**
baz=71,SNR=42
Z17A San Carlos Hig 70.48 324 ⇓P **P** **09 44 01.2 0.0**
baz=71,SNR=11
SCIA State Center 70.51 341 *e*P **P** **09 43 60.0 -1.2**
comp=Z,27nm,0.4s,mb5.4
SCIA *e*pP pP 09 44 27.8 -0.7
T25A Trinidad 70.54 330 ⇓P **P** **09 44 01.8 +0.3**
baz=71,SNR=13
116A Eloy 70.59 322 ⇑P **P** **09 44 02.0 0.0**
baz=71,SNR=14
Y18A Canyon Day Jun 70.61 324 ⇓P **P** **09 44 02.2 +0.1**
baz=71,SNR=23
JFWS Jewell Farm 70.62 343 *e*P **P** **09 44 00.6 -1.2**
U23A El Rito 70.70 329 ⇓P **P** **09 44 02.8 +0.3**
baz=71,SNR=25
X19A St. Johns 70.73 325 ⇑P **P** **09 44 02.9 +0.2**
baz=71,SNR=14
214A Organ Pipe Nat 70.76 321 ⇑P **P** **09 44 03.3 +0.3**
baz=71,SNR=45
W20A Ramah 70.87 326 ⇑P **P** **09 44 03.9 +0.3**
baz=71,SNR=50
V21A Milan 70.98 327 ⇑P **P** **09 44 04.8 +0.6**
baz=71,SNR=8.3
Y17A Roosevelt 70.98 324 ⇓P **P** **09 44 04.6 +0.4**
baz=71,SNR=65
S25A Robets Cordova 70.98 331 ⇑P **P** **09 44 04.3 +0.2**
baz=71,SNR=42
Z16A Peralta Trail, 71.03 323 ⇓P **P** **09 44 04.5 0.0**
baz=71,SNR=13
U22A Llaves 71.06 328 ⇑P **P** **09 44 05.5 +0.8**
baz=71,SNR=31
X18A Snowflake 71.15 325 ⇓P **P** **09 44 05.7 +0.5**
baz=71,SNR=31
T23A Casias Ranch, 71.20 329 ⇓P **P** **09 44 05.8 +0.3**
baz=72,SNR=21
W19A Sanders 71.31 326 ⇑P **P** **09 44 06.5 +0.3**
baz=72,SNR=43
S24A Houchin Ranch, 71.32 330 ⇑P **P** **09 44 07.0 +0.8**
baz=72,SNR=54
V20A Brimhall 71.38 327 ⇑P **P** **09 44 06.9 +0.2**
baz=72,SNR=23
Z15A Gila River Ind 71.39 322 ⇑P **P** **09 44 06.7 -0.1**
baz=72,SNR=14
114A Black Gap (USA 71.39 322 ⇓P **P** **09 44 06.7 -0.1**
baz=72,SNR=23
X17A Forest Lakes 71.45 324 ⇑P **P** **09 44 07.7 +0.6**
baz=72,SNR=59
Y16A Circle Bar Ran 71.46 323 ⇑P **P** **09 44 07.4 +0.3**
baz=72,SNR=57
U21A Nageezi 71.48 328 ⇑P **P** **09 44 07.6 +0.3**
baz=72,SNR=55
W18A Petrified Fore 71.49 325 ⇓P **P** **09 44 07.5 +0.2**
baz=72,SNR=14
SDCO Great Sand Dun 71.53 330 *e*P **P** **09 44 07.7 +0.2**
comp=Z,61nm,1.3s,mb5.3
SDCO *e*pP pP 09 44 35.2 +0.3
T22A Edith 71.59 328 ⇑P **P** **09 44 08.5 +0.7**
baz=72,SNR=45
V19A Window Rock 71.61 326 ⇓P **P** **09 44 08.4 +0.4**
baz=72,SNR=26
R24A Sanders Place, 71.75 330 ⇓P **P** **09 44 09.3 +0.5**
baz=72,SNR=31
X16A Lo Mia Camp, P 71.85 324 ⇑P **P** **09 44 09.9 +0.4**
baz=72,SNR=92
U20A Newcomb 71.86 327 ⇓P **P** **09 44 09.6 +0.1**
baz=72,SNR=22
T21A Navajo Lake 71.87 328 ⇓P **P** **09 44 10.0 +0.4**
baz=72,SNR=21
Z14A Wintersburg 71.88 322 ⇑P **P** **09 44 09.5 -0.1**
baz=72,SNR=5.1
113A Mohawk Valley, 71.91 321 ⇑P **P** **09 44 09.8 -0.1**
baz=72,SNR=5.6
Q25A Bedland, Calha 71.94 331 ⇓P **P** **09 44 09.7 -0.2**
baz=72,SNR=12
W17A Winslow 71.97 325 ⇑P **P** **09 44 10.5 +0.3**
baz=72,SNR=12
Y15A Casa Rosa Ranc 71.98 323 ⇓P **P** **09 44 10.4 +0.1**
baz=72,SNR=40
V18A Ganado 72.06 326 ⇓P **P** **09 44 10.6 -0.1**
baz=72,SNR=14
U19A Dine' College, 72.14 326 ⇑P **P** **09 44 10.8 -0.4**
baz=72,SNR=18
S22A 4UR Ranch, Cre 72.15 329 ⇓P **P** **09 44 11.5 +0.3**
baz=72,SNR=25
Z13A Yuma Proving G 72.16 321 ⇑P **P** **09 44 11.4 +0.1**
baz=72,SNR=22
112A Yuma 72.20 320 ⇓P **P** **09 44 11.6 0.0**
baz=72,SNR=6.7
SBA Scott Base 72.29 191 *e*P **P** **09 44 11.0 -0.6**
comp=Z,37nm,1.2s,mb5.1
SBA Scott Base 72.29 191 *e*P **P** **09 44 11.0 -0.5**
SBA pmax pmax
comp=Z,37nm,1.2s,mb5.1
X15A Humboldt 72.33 323 ⇑P **P** **09 44 12.8 +0.4**
baz=73,SNR=66
Y14A Wickenburg 72.34 322 ⇑P **P** **09 44 12.5 +0.1**
baz=73,SNR=32
Q24A Divide 72.38 331 ⇓P **P** **09 44 12.9 +0.4**
baz=73,SNR=39
P25A Willow Gulch B 72.40 332 ⇓P **P** **09 44 13.0 +0.4**
baz=73,SNR=13
W16A Flagstaff 72.42 324 ⇓P **P** **09 44 13.6 +0.8**
baz=73,SNR=45
V17A Tonalea, Kykot 72.43 325 ⇓P **P** **09 44 13.4 +0.5**
baz=73,SNR=53
T19A Beclabito 72.47 327 ⇑P **P** **09 44 13.1 0.0**
baz=73,SNR=81
R22A Saguache, Gunn 72.50 329 ⇓P **P** **09 44 13.7 +0.4**
baz=73,SNR=14
MVCO Mesa Verde 72.51 328 ⇑P **P** **09 44 13.6 +0.3**
baz=73,SNR=50
S21A Coal Bank Pass 72.53 328 ⇑P **P** **09 44 13.9 +0.5**
baz=73,SNR=59
U18A Rough Rock, Ch 72.57 326 ⇑P **P** **09 44 14.1 +0.3**
baz=73,SNR=60
Q23A Hartsel 72.63 330 ⇑P **P** **09 44 14.0 0.0**
baz=73,SNR=11
WUAZ Wupatki 72.65 325 ⇑P **P** **09 44 14.8 +0.5**
baz=73,SNR=46
WUAZ Wupatki 72.65 325 *e*P **P** **09 44 14.8 +0.6**
comp=Z,50nm,0.9s,mb5.3
WUAZ *e*pP pP 09 44 42.4 +0.7
X14A Yava 72.68 323 ⇑P **P** **09 44 14.8 +0.4**
baz=73,SNR=30
GLA Glamis 72.72 321 ⇓P **P** **09 44 14.7 +0.1**
baz=73,SNR=15
GLA Glamis 72.72 321 *e*P **P** **09 44 14.8 +0.1**
comp=Z,18nm,0.8s,mb5.0
GLA *e*pP pP 09 44 42.7 +0.6
GLA Glamis 72.72 321 *e*P **P** **09 44 14.8 +0.1**
GLA *e**PP pP 09 44 42.7 +0.6
GLA pmax pmax
comp=Z,18nm,0.8s,mb5.0
P24A Kohler Place, 72.72 331 ⇑P **P** **09 44 14.8 +0.2**
baz=73,SNR=7.7
OGNE Ogallala 72.73 334 ⇑P **P** **09 44 14.3 -0.2**
baz=73
OGNE Ogallala 72.73 334 *e*P **P** **09 44 14.8 +0.3**
W15A Williams 72.87 324 ⇑P **P** **09 44 16.2 +0.7**
baz=73,SNR=20
O25A Wiggins 72.88 332 ⇓P **P** **09 44 16.0 +0.5**
baz=73,SNR=13
R21A Cimarron 72.98 329 ⇑P **P** **09 44 16.5 +0.4**
baz=73,SNR=40
SYO Syowa Base 72.99 159 ⇑*i*P **P** **09 44 13.4 -2.4**
U16A Tuba City 73.00 325 ⇑P **P** **09 44 16.8 +0.6**
baz=73,SNR=52
P23A Jefferson 73.02 331 ⇑P **P** **09 44 16.9 +0.6**
baz=73,SNR=13
Y12C Blythe 73.06 321 ⇓P **P** **09 44 16.9 +0.2**
baz=73,SNR=26
Q22A Crested Butte, 73.08 330 ⇑P **P** **09 44 17.3 +0.6**
baz=73,SNR=30
T18A Mexican Hat 73.13 327 ⇑P **P** **09 44 17.1 +0.1**
baz=73,SNR=73
DVTC Desert V Tower 73.18 319 ⇓P **P** **09 44 17.4 0.0**
baz=73
SWSC Sam W. Stewart 73.20 320 ⇓P **P** **09 44 17.4 -0.1**
baz=73,SNR=7.1
ECSD EROS Data Cent 73.22 339 *e*P **P** **09 44 16.4 -1.0**
comp=Z,21nm,0.4s,mb5.3
ECSD *e*pP pP 09 44 43.7 -1.2
R20A Redvale 73.23 328 ⇓P **P** **09 44 18.3 +0.7**
baz=74,SNR=65
PDMCI Parker Dam,Lak 73.24 322 ⇑P **P** **09 44 17.5 -0.2**
baz=74,SNR=6.4
S19A Harvey Farm, M 73.25 327 ⇑P **P** **09 44 18.0 +0.3**
baz=74,SNR=65
ISCO Idaho Springs 73.27 331 ⇓P **P** **09 44 18.1 +0.4**
baz=74,SNR=34
ISCO Idaho Springs 73.27 331 *e*P **P** **09 44 18.0 +0.2**
comp=Z,28nm,0.9s,mb5.1
ISCO *e*pP pP 09 44 45.3 +0.1
ISCO *e*sP sP 09 44 58.9 +2.0
ISCO Idaho Springs 73.27 331 *e*P **P** **09 44 18.0 +0.3**
ISCO *e**PP pP 09 44 45.3 +0.1
ISCO *e**SP sP 09 44 58.9 +1.9
ISCO pmax pmax
comp=Z,27nm,0.9s,mb5.1
PV01 Paradox Valley 73.28 328 *e*P **P** **09 44 18.3 +0.4**
comp=Z,4µm,1.2s
PV01 *e*pP pP 09 44 45.8 +0.4
X13A Yucca 73.29 322 ⇓P **P** **09 44 18.2 +0.2**
baz=74,SNR=51
O24A Longmont 73.30 332 ⇓P **P** **09 44 18.1 +0.2**
baz=74,SNR=7.3
COWI Conover 73.34 345 *e*P **P** **09 44 17.0 -1.0**
comp=Z,51nm,1.1s,mb5.3
COWI *e*pP pP 09 44 44.2 -1.3
W14A Seligman 73.34 323 ⇓P **P** **09 44 18.9 +0.7**
baz=74,SNR=36
Q21A Lamborn Mesa, 73.37 329 ⇑P **P** **09 44 18.6 +0.3**
baz=74
SMCO Snowmass 73.37 330 *e*P **P** **09 44 19.1 +0.7**
comp=Z,61nm,1.0s,mb5.4
SMCO *e*pP pP 09 44 46.5 +0.6
SMCO *e*sP sP 09 44 56.1 -1.5
N25A Grover 73.45 333 ⇑P **P** **09 44 19.2 +0.4**
baz=74
T17A Navajo Res., N 73.49 326 ⇓P **P** **09 44 20.1 +0.9**
baz=74,SNR=42
BC3 Big Chuckawall 73.52 321 ⇓P **P** **09 44 19.5 +0.1**
baz=74,SNR=35
BAR Barrett 73.53 319 *e*P **P** **09 44 19.4 0.0**
comp=Z,35nm,1.0s,mb5.0
BAR *e*pP pP 09 44 46.8 -0.2
BAR *e*sP sP 09 44 58.5 -0.3
MONP Monument Peak 73.53 319 ⇓P **P** **09 44 19.7 +0.3**
baz=74,SNR=20
P22A Eagle 73.61 330 ⇓P **P** **09 44 20.2 +0.5**
baz=74,SNR=30
S18A Hurst Farm, Bl 73.63 327 ⇑P **P** **09 44 20.6 +0.7**
baz=74,SNR=141
PV04 Paradox Valley 73.65 328 *e*P **P** **09 44 20.6 +0.7**
V14A Boquillas Ranc 73.66 323 ⇑P **P** **09 44 20.9 +0.8**
baz=74,SNR=87
W13A Hualapai Mount 73.69 323 ⇑P **P** **09 44 20.9 +0.6**
baz=74,SNR=25
IRM Iron Mountain 73.71 321 ⇑P **P** **09 44 20.7 +0.2**
baz=74,SNR=28
R19A Curley Farm, L 73.74 328 ⇓P **P** **09 44 20.5 0.0**
baz=74,SNR=47
O23A Lake Granby, G 73.74 331 ⇓P **P** **09 44 21.0 +0.5**
baz=74,SNR=45
N24A Carr 73.80 332 ⇓P **P** **09 44 21.4 +0.5**
baz=74
Q20A Ridgley Place, 73.80 329 ⇓P **P** **09 44 20.8 -0.1**
baz=74,SNR=17
U15A North Rim 73.83 325 ⇓P **P** **09 44 22.1 +1.0**
baz=74,SNR=80
NEE2 Needles Airpor 73.85 322 ⇓P **P** **09 44 21.2 -0.1**
baz=74,SNR=6.0
109C Camp Elliot, M 73.94 319 ⇑P **P** **09 44 21.7 -0.2**
baz=74
O22A Kremmling 73.98 331 ⇑P **P** **09 44 22.0 +0.2**
baz=74,SNR=36
S17A Black Ridge (B 73.99 326 ⇑P **P** **09 44 22.5 +0.5**
baz=74,SNR=21
PFO Pinyon Flat Ob 74.06 320 P **P** **09 44 22.6 +0.1**
comp=Z,145nm,1.0s,mb5.7,SNR=7.9
PFO Pinyon Flat Ob 74.06 320 ⇓P **P** **09 44 22.8 +0.3**
baz=74,SNR=18
BELC Belle Mtn. Jos 74.08 321 ⇑P **P** **09 44 22.8 +0.2**
baz=74,SNR=16
R18A Canyonlands Na 74.12 327 ⇓P **P** **09 44 22.7 0.0**
baz=74,SNR=23
P20A De Beque 74.28 329 ⇓P **P** **09 44 24.0 +0.3**
baz=74,SNR=25
U14A Mt Trumbull 74.29 324 ⇑P **P** **09 44 24.6 +0.8**
baz=74,SNR=98
V13A Grand Canyon W 74.30 323 ⇑P **P** **09 44 24.2 +0.4**
baz=74,SNR=58
M24A Cheyenne 74.31 333 ⇑P **P** **09 44 24.3 +0.5**
baz=75,SNR=32
N23A Red Feather La 74.31 331 ⇓P **P** **09 44 24.0 +0.2**
baz=75,SNR=24
T15A Red Dirt Ranch 74.32 325 ⇓P **P** **09 44 24.8 +0.8**
baz=75,SNR=74
W12A Cal Nev Ari 74.38 322 ⇑P **P** **09 44 24.5 +0.1**
baz=75
O21A Pagoda 74.43 330 ⇑P **P** **09 44 25.2 +0.6**
baz=75,SNR=10
PHWY Pilot Hill 74.44 332 *e*P **P** **09 44 24.6 +0.1**
GMRC Granite Mounta 74.45 321 ⇑P **P** **09 44 25.2 +0.5**
baz=75,SNR=36
S16A Weppner Ranch, 74.45 326 ⇓P **P** **09 44 24.9 +0.2**
baz=75,SNR=42
N22A Wattenberg Ran 74.46 331 ⇑P **P** **09 44 25.3 +0.6**
baz=75,SNR=27
MURC Murrieta 74.49 319 ⇑P **P** **09 44 25.1 +0.1**
baz=75,SNR=12
R17A Hanksville Air 74.55 327 ⇑P **P** **09 44 25.4 +0.1**
baz=75,SNR=92
P19A Cripple Cowboy 74.66 329 ⇑P **P** **09 44 26.4 +0.6**
baz=75,SNR=64
V12A Nelson 74.69 322 ⇓P **P** **09 44 26.2 +0.1**
baz=75,SNR=49
U13A Pakoon Wash 74.71 323 ⇓P **P** **09 44 26.7 +0.4**
baz=75,SNR=30
O20A White River Ci 74.72 330 ⇓P **P** **09 44 26.6 +0.4**
baz=75,SNR=54
T14A Hurricane 74.72 324 ⇑P **P** **09 44 26.9 +0.6**
baz=75,SNR=7.2
PPT Papeete 74.77 258 *e*S S 09 54 03.8 +8.5
comp=Z,1µm,24.5s
PPT *e*LR LR 10 07 27.4
comp=Z,842nm,35.5s
PPT Papeete 74.77 258 LR LR 10 08 12.0
comp=Z,335nm,18.5s,baz=133,slow=28
Q18A Rafter H Ranch 74.80 328 ⇑P **P** **09 44 26.8 +0.2**
baz=75,SNR=34
BBRC Big Bear Solar 74.80 320 ⇑P **P** **09 44 27.5 +0.7**
baz=75,SNR=7.9
S15A Panguitch 74.81 325 ⇑P **P** **09 44 27.3 +0.5**
baz=75,SNR=19
R16A Teasdale 74.83 326 ⇓P **P** **09 44 27.2 +0.3**
baz=75,SNR=21
L24A Wheatland 74.83 333 ⇓P **P** **09 44 27.0 +0.3**
baz=75
SCI San Clemente I 74.86 318 ⇑P **P** **09 44 27.2 0.0**
baz=75
HEC Hector,Ludlow 74.86 321 ⇓P **P** **09 44 27.6 +0.4**
baz=75,SNR=13
N21A Black Mountain 74.89 330 ⇑P **P** **09 44 27.8 +0.6**
baz=75,SNR=11
SRU San Rafael 74.99 327 ⇓P **P** **09 44 27.8 0.0**
baz=75,SNR=62
SRU San Rafael 74.99 327 *e*P **P** **09 44 27.8 0.0**
comp=Z,66nm,1.0s,mb5.3
SRU *e*pP pP 09 44 55.3 -0.1
SRU *e*sP sP 09 45 06.8 -0.3
SRU San Rafael 74.99 327 *e*P **P** **09 44 27.8 0.0**
SRU *e**PP pP 09 44 55.3 -0.1
SRU *e**SP sP 09 45 06.8 -0.3
SRU pmax pmax
comp=Z,66nm,1.0s,mb5.3
M22A Cedar Creek Ra 75.01 331 ⇑P **P** **09 44 28.1 +0.3**
baz=75,SNR=16
U12A Valley of Fire 75.03 323 ⇑P **P** **09 44 28.4 +0.3**

baz=75,SNR=41
TUQ Turquoise Moun 75.07 322 ⇓P P 09 44 28.7 +0.4
baz=75,SNR=18
CIS Catalina Islan 75.07 319 ⇓P P 09 44 28.2 -0.2
baz=75
V11A Goodsprings 75.09 322 ⇓P P 09 44 28.6 +0.2
baz=75,SNR=22
T13A Saint George 75.13 324 ⇑P P 09 44 29.2 +0.6
baz=75,SNR=43
Q16A Castle Valley 75.16 327 ⇑P P 09 44 29.2 +0.4
baz=75,SNR=27
R15A Junction 75.17 326 ⇓P P 09 44 29.3 +0.5
baz=75,SNR=25
L23A Garrett 75.21 332 ⇓P P 09 44 28.9 0.0
baz=76,SNR=11
BFSC Mount Baldy Ra 75.21 320 ⇓P P 09 44 29.2 0.0
baz=75,SNR=22
FMP Fort Macarthur 75.22 319 ⇑P P 09 44 29.4 +0.2
baz=75
CCUT Cedar City 75.24 325 eP P 09 44 30.4 +1.2
comp=Z,78nm,0.9s,mb5.4
CCUT epP pP 09 44 57.7 +0.8
O19A Miners Draw (B 75.26 329 ⇑P P 09 44 29.5 +0.2
baz=76,SNR=40
P18A Preston Nutter 75.26 328 ⇑P P 09 44 29.9 +0.6
baz=76,SNR=24
RRX Edison Barstow 75.28 321 ⇓P P 09 44 29.8 +0.3
baz=76
N20A Spence Gulch, 75.29 330 ⇓P P 09 44 29.7 +0.3
baz=76,SNR=25
S14A Cedar City 75.29 325 ⇑P P 09 44 30.2 +0.6
baz=76,SNR=16
T12A Moapa 75.34 323 ⇑P P 09 44 29.8 -0.1
baz=76
P17A Butcher Ranch, 75.38 328 ⇑P P 09 44 30.2 +0.2
baz=76,SNR=31
MWC Mount Wilson 75.44 319 eP P 09 44 30.7 +0.2
comp=Z,68nm,1.4s,mb5.2
MWC epP pP 09 44 58.1 0.0
MWC esP sP 09 45 10.7 +0.9
MWC Mount Wilson 75.44 319 eP P 09 44 30.7 +0.2
MWC e*PP pP 09 44 58.1 0.0
MWC e*SP sP 09 45 10.7 +0.9
MWC pmax pmax
comp=Z,68nm,1.4s,mb5.2
L22A Ellis Ranch, M 75.45 332 ⇑P P 09 44 30.9 +0.6
baz=76,SNR=11
ARUT Antelope Range 75.45 325 eP P 09 44 31.3 +0.9
comp=Z,69nm,1.0s,mb5.3
ARUT epP pP 09 44 59.0 +0.9
ARUT Antelope Range 75.45 325 eP P 09 44 31.3 +0.8
ARUT e*PP pP 09 44 59.0 +0.9
ARUT pmax pmax
comp=Z,69nm,1.0s,mb5.3
TMUT Trail Mountain 75.47 327 eP P 09 44 30.9 +0.4
comp=Z,18nm,0.9s,mb4.8
TMUT epP pP 09 44 58.2 0.0
TMUT esP sP 09 45 09.6 -0.3
GSC Goldstone 75.47 321 ⇑P P 09 44 30.9 +0.3
baz=76,SNR=29
U11A Corn Creek 75.49 323 ⇑P P 09 44 31.0 +0.3
baz=76,SNR=7.3
RWWY Rawlins 75.51 331 eP P 09 44 30.9 +0.2
comp=Z,67nm,0.9s,mb5.4
RWWY epP pP 09 44 58.6 +0.3
M21A Separation Pea 75.51 331 ⇑P P 09 44 31.0 +0.3
baz=76,SNR=31
S13A Holt Ranch, En 75.52 324 ⇑P P 09 44 31.7 +0.9
baz=76,SNR=92
SHOC Shoshone 75.61 322 ⇓P P 09 44 31.2 -0.2
baz=76,SNR=8.6
EYMN Ely 75.63 344 eP P 09 44 30.2 -1.0
comp=Z,31nm,0.8s,mb5.1
EYMN epP pP 09 44 57.8 -1.0
O18A Roosevelt 75.65 329 ⇑P P 09 44 31.9 +0.4
baz=76,SNR=25
N19A John Jarvie Ra 75.75 329 ⇑P P 09 44 32.2 +0.1
baz=76,SNR=48
M20A Sweetwater, Wa 75.78 330 ⇓P P 09 44 32.5 +0.2
baz=76,SNR=21
L21A Rawlins 75.80 331 ⇑P P 09 44 32.4 0.0
baz=76,SNR=71
Q15A Fillmore 75.83 326 ⇑P P 09 44 32.9 +0.4
baz=76,SNR=34
EDW2 Edwards Air Fo 75.86 320 ⇓P P 09 44 32.8 0.0
baz=76,SNR=19
P16A Fountain Green 75.93 327 ⇓P P 09 44 33.8 +0.7
baz=76,SNR=13
BLG Laguna Peak 75.96 319 ⇓P P 09 44 33.3 -0.1
baz=76
K22A Casper 76.00 332 ⇑P P 09 44 33.5 +0.1
baz=76,SNR=21
T11A Corn Creek, Al 76.00 323 ⇑P P 09 44 34.3 +0.8
baz=76,SNR=114
U10A Ash Meadows, A 76.01 322 ⇑P P 09 44 34.3 +0.6
baz=76,SNR=25
R13A O'Grain Ranch, 76.03 325 ⇑P P 09 44 34.7 +1.0
baz=76,SNR=63
S12A Delamar Landin 76.07 324 ⇑P P 09 44 34.6 +0.7
baz=76,SNR=24
OSI Osito Adit 76.10 319 ⇑P P 09 44 34.1 -0.2
baz=76
LRMC Laurel Mountai 76.11 321 ⇓P P 09 44 34.3 0.0
baz=76,SNR=24
RSSD Black Hills 76.21 335 eP P 09 44 34.5 -0.1
comp=Z,27nm,0.9s,mb5.0
RSSD epP pP 09 45 02.0 -0.2
RSSD Black Hills 76.21 335 eP P 09 44 34.5 -0.1
RSSD e*PP pP 09 45 02.0 -0.3
RSSD pmax pmax
comp=Z,27nm,0.9s,mb5.0
P15A Leamington 76.21 327 ⇑P P 09 44 35.0 +0.3
baz=76
BSC Santa Cruz Isl 76.22 318 ⇑P P 09 44 34.8 -0.1
baz=76,SNR=5.0
M19A Rock Springs 76.23 330 ⇓P P 09 44 34.7 -0.1
baz=76,SNR=11
MPU Maple Canyon 76.23 327 epP pP 09 45 07.9 +5.3
L20A Wamsutter 76.26 331 ⇓P P 09 44 35.1 +0.1
baz=76,SNR=33
Q14A Sevier Lake (B 76.27 326 ⇑P P 09 44 35.8 +0.8
baz=76,SNR=63
O16A Springville 76.32 328 ⇑P P 09 44 35.5 +0.2
baz=77,SNR=44
FURC Furnace Creek, 76.34 322 ⇑P P 09 44 35.7 +0.1
baz=77,SNR=33
DAU Daniels Canyon 76.36 328 eP P 09 44 36.1 +0.5
MPMC Manual Prospec 76.41 321 ⇑P P 09 44 35.9 0.0
baz=77,SNR=24
R12A Pony Springs, 76.47 324 ⇑P P 09 44 37.0 +0.7
baz=77,SNR=91
ARVC Arvin 76.52 320 ⇑P P 09 44 36.6 0.0
baz=77
N17A Moffit Pass 76.57 328 ⇑P P 09 44 37.2 +0.5
baz=77,SNR=82
SBC Santa Barbara 76.57 319 ⇓P P 09 44 36.8 -0.1
baz=77
S11A Rachel 76.58 323 ⇓P P 09 44 37.8 +1.0
baz=77,SNR=7.3
M18A Lyman 76.59 329 ⇓P P 09 44 36.5 -0.3
baz=77,SNR=20
JLU Jordanelle 76.60 328 eP P 09 44 37.3 +0.4
comp=Z,34nm,0.8s,mb5.1
JLU epP pP 09 45 04.7 +0.1
P14A Drum Mountains 76.62 326 ⇓P P 09 44 37.8 +0.7
baz=77,SNR=67
Q13A Wheeler Ranch, 76.63 325 ⇑P P 09 44 37.6 +0.5
baz=77,SNR=30
ISA Isabella 76.69 320 ⇑P P 09 44 37.8 +0.2
baz=77,SNR=44
ISA Isabella 76.69 320 eP P 09 44 37.8 +0.2
comp=Z,42nm,0.9s,mb5.2
ISA epP pP 09 45 05.4 +0.1
ISA esP sP 09 45 17.4 +0.5
ISA Isabella 76.69 320 eP P 09 44 37.8 +0.3
ISA e*PP pP 09 45 05.4 +0.2
ISA e*SP sP 09 45 17.4 +0.5
ISA pmax pmax
comp=Z,42nm,0.9s,mb5.2
K20A Yellowstone Ra 76.79 331 ⇑P P 09 44 37.4 -0.4
baz=77,SNR=35
L19A Farson 76.80 330 ⇓P P 09 44 38.2 +0.3
baz=77,SNR=43
N16A Rees Ranch, Co 76.81 328 ⇓P P 09 44 38.6 +0.6
baz=77,SNR=25
CTU Camp Tracy 76.81 328 eP P 09 44 38.5 +0.4
O15A The Old Anders 76.85 327 ⇑P P 09 44 38.9 +0.6
baz=77
M17A Scullys Gap (B 76.90 329 ⇑P P 09 44 38.2 -0.4
baz=77,SNR=9.0
PKM Peak Mountain 76.95 319 ⇑P P 09 44 39.4 +0.4
baz=77,SNR=21
DUG Dugway 76.95 327 ⇑P P 09 44 39.3 +0.4
baz=77,SNR=72
DUG Dugway 76.95 327 eP P 09 44 39.2 +0.3
NOQ North Oquirrh 76.96 327 eP P 09 44 39.4 +0.4
L18A Fontenelle, Gr 76.96 330 ⇑P P 09 44 39.0 +0.1
baz=77,SNR=51
P13A Bates Ranch, G 77.00 326 ⇑P P 09 44 39.9 +0.7
baz=77,SNR=58
R11A Troy Canyon, C 77.00 324 ⇑P P 09 44 39.9 +0.7
baz=77,SNR=63
GRAC Grapevine Rang 77.01 322 ⇓P P 09 44 39.6 +0.3
baz=77,SNR=9.0
CWC Cottonwood Cre 77.01 321 ⇑P P 09 44 39.7 +0.4
baz=77,SNR=7.9
AGMN Agassiz Nation 77.11 342 eP P 09 44 38.4 -1.1
comp=Z,28nm,0.7s,mb5.1
AGMN epP pP 09 45 05.9 -1.3
Q12A Willow Creek R 77.11 325 ⇑P P 09 44 40.2 +0.4
baz=77,SNR=25
K19A Absolon Red Bu 77.14 331 ⇓P P 09 44 39.5 -0.3
baz=77,SNR=41
VES Vestal, Richgr 77.17 320 ⇑P P 09 44 40.1 -0.1
baz=77,SNR=42
S10A Tonopah Range, 77.24 323 ⇑P P 09 44 41.0 +0.4
baz=78,SNR=69
I21A Big Trails, Te 77.27 332 ⇓P P 09 44 40.2 -0.4
baz=78,SNR=56
N15A Stansbury Isla 77.34 327 ⇓P P 09 44 41.0 -0.1
baz=78,SNR=35
SMMC Simmler 77.34 319 ⇑P P 09 44 41.6 +0.5
baz=78,SNR=23
R10A Warm Springs 77.35 323 ⇓P P 09 44 42.1 +1.0
baz=78,SNR=84
Q11A Duckwater 77.41 324 ⇓P P 09 44 41.9 +0.4
baz=78,SNR=57
BW06 Boulder Array 77.41 330 ⇓P P 09 44 41.0 -0.4
baz=78,SNR=29
BW06 Boulder Array 77.41 330 eP P 09 44 40.9 -0.5
HWUT Hardware Ranch 77.43 328 eP P 09 44 41.3 -0.2
comp=Z,49nm,0.9s,mb5.2
HWUT epP pP 09 45 09.4 +0.1
P12A McGill 77.48 325 ⇓P P 09 44 42.4 +0.6
baz=78,SNR=21
L17A Cokeville 77.49 329 ⇑P P 09 44 41.4 -0.5
baz=78,SNR=51
O13A Hicks Ranch, I 77.49 326 ⇑P P 09 44 42.3 +0.4
baz=78,SNR=11
TIN Tinemaha 77.53 321 ⇓P P 09 44 42.6 +0.4
baz=78,SNR=13
K18A Toltan Ranch, 77.53 330 ⇓P P 09 44 42.5 +0.4
baz=78,SNR=80
RCTC Rector, Farmer 77.59 320 ⇑P P 09 44 41.5 -1.0
baz=78,SNR=15
SPUT South Promonto 77.62 328 eP P 09 44 42.7 +0.1
L16A Fish Haven 77.68 329 ⇑P P 09 44 42.8 -0.1
baz=78,SNR=29
I20A Worland 77.73 332 ⇑P P 09 44 43.0 -0.2
baz=78,SNR=25
M15A Larsen Ranch, 77.74 328 ⇓P P 09 44 43.0 -0.2
baz=78,SNR=97
Q10A Clear Creek Ra 77.79 324 ⇓P P 09 44 44.2 +0.6
baz=78,SNR=34
H21A Big Horn, Sher 77.83 333 ⇓P P 09 44 42.9 -0.7
baz=78,SNR=17
MTUM Tungsten Hills 77.93 321 eP P 09 44 44.7 +0.3
MTUM epP pP 09 45 12.3 +0.2
J18A Kendall Valley 77.97 330 ⇑P P 09 44 44.4 -0.1
baz=78,SNR=79
P11A Circle Ranch, 77.98 325 ⇓P P 09 44 44.9 +0.3
baz=78,SNR=10
O12A Currie 77.98 326 ⇑P P 09 44 44.7 +0.1
baz=78,SNR=60
K17A Gardner Place, 78.02 330 ⇓P P 09 44 44.6 -0.2
baz=78,SNR=52
AHID Auburn Hatcher 78.11 329 eP P 09 44 45.1 -0.2
comp=Z,88nm,1.1s,mb5.4
AHID epP pP 09 45 12.8 -0.3
H20A Greybull 78.11 332 ⇑P P 09 44 44.6 -0.7
baz=78,SNR=33
L15A Malad City 78.13 328 ⇓P P 09 44 45.2 -0.2
baz=78,SNR=72
HVU Hansel Valley 78.14 328 eP P 09 44 45.4 0.0
M14A Sheep Mountain 78.21 327 ⇑P P 09 44 45.9 0.0
baz=78,SNR=88
I18A Diamond G Ranc 78.27 331 ⇓P P 09 44 46.4 +0.3
baz=78,SNR=43
MLAC Mammoth Lakes 78.28 321 ⇑P P 09 44 46.7 +0.4
baz=78,SNR=30
TORD Torodi Ar. Bea 78.35 69 P P 09 44 47.9 +0.6
TORD pP pP 09 45 14.8 -0.3
TORD S S 09 54 33.6 -0.6
TORD LR LR 10 18 27.7
TORD Torodi Ar. Bea 78.35 69 P P 09 44 47.9 +0.6
comp=Z,38nm,0.5s,mb5.4,baz=264,slow=5.6,SNR=579
TORD pP pP 09 45 14.8 -0.3
comp=Z,51nm,0.9s,baz=251,slow=4.5,SNR=7.8
TORD S S 09 54 33.6 -0.6
comp=Z,2.6nm,1.1s,baz=245,slow=10,SNR=5.8
TORD LR LR 10 18 27.7
comp=Z,185nm,18.5s,baz=130,slow=35
G21A Lodge Grass 78.39 333 ⇑P P 09 44 46.4 -0.4
baz=79,SNR=15
K16A Soda Springs 78.39 329 ⇑P P 09 44 47.2 +0.4
baz=79,SNR=53
J17A Brown Place, J 78.40 330 ⇓P P 09 44 47.1 +0.3
baz=79,SNR=31
REDW Red Top Meadow 78.47 330 eP P 09 44 47.3 +0.1
SNOW Snow King Moun 78.50 330 eP P 09 44 47.7 +0.3
NVAR Mina Array Bea 78.54 322 P P 09 44 47.8 0.0
NVAR pP pP 09 45 13.6 -2.0
NVAR P'P' 10 11 48.0
NVAR Mina Array Bea 78.54 322 P P 09 44 47.8 0.0
comp=Z,15nm,0.9s,mb4.8,baz=153,slow=6.2,SNR=98
NVAR pP pP 09 45 13.6 -2.0
comp=Z,3.0nm,0.8s,baz=142,slow=7.5,SNR=2.6
NVAR PKPPKP 10 11 48.0
comp=Z,0.3nm,0.7s,baz=304,slow=2.7,SNR=4.0
LOHW Long Hollow 78.55 330 eP P 09 44 47.8 +0.2
LOHW epP pP 09 45 15.4 -0.1
LOHW esP sP 09 45 27.1 0.0
L14A Malta 78.56 328 ⇑P P 09 44 47.6 -0.1
baz=79,SNR=80
TPAW Teton Pass 78.61 330 eP P 09 44 47.6 -0.4
comp=Z,52nm,1.0s,mb5.3
TPAW epP pP 09 45 15.8 0.0
RRI2 Red Ridge 78.67 330 eP P 09 44 48.5 +0.1
comp=Z,43nm,0.8s,mb5.3
RRI2 epP pP 09 45 17.0 +0.8
K15A Arbon 78.72 329 ⇑P P 09 44 48.4 -0.2
baz=79,SNR=42
MOOW Moose Ponds 78.72 330 eP P 09 44 48.5 -0.1
J16A Bone 78.74 329 ⇑P P 09 44 48.8 +0.1
baz=79,SNR=18
TSUM Tsumeb 78.75 106 eP P 09 44 50.6 +1.1
comp=Z,49nm,1.0s,mb5.3
TSUM epP pP 09 45 18.3 +1.0
I17A Pilgrim Ck. 78.78 330 ⇓P P 09 44 49.6 +0.7
baz=79,SNR=25
DCID1 Drake Creek 78.80 330 eP P 09 44 49.6 +0.6
comp=Z,44nm,1.0s,mb5.2
F21A Absaloka Mine, 78.84 334 ⇓P P 09 44 49.1 -0.1
baz=79,SNR=7.5
ULM Lac du Bonnet 78.88 343 P P 09 44 48.4 -0.9
ULM pP pP 09 45 15.6 -1.5
ULM LR LR 10 21 57.9
ULM Lac du Bonnet 78.88 343 P P 09 44 48.4 -0.9
comp=Z,37nm,0.7s,mb5.3,baz=151,slow=5.9,SNR=24
ULM pP pP 09 45 15.6 -1.5
comp=Z,19nm,0.9s,baz=154,slow=7.3,SNR=4.1
ULM LR LR 10 21 57.9
comp=Z,76nm,20.8s,baz=355,slow=37
K14A Jones Ranch, D 78.92 328 ⇓P P 09 44 49.3 -0.4
baz=79,SNR=30
H17A Grant Village 79.15 331 ⇓P P 09 44 52.1 +1.1
baz=79,SNR=14
I16A Newdale 79.16 330 ⇑P P 09 44 51.4 +0.4
baz=79,SNR=41
RLMT Red Lodge 79.16 332 ⇓P P 09 44 51.2 +0.2
baz=79,SNR=35
RLMT Red Lodge 79.16 332 eP P 09 44 51.2 +0.3
comp=Z,25nm,0.5s,mb5.3
RLMT epP pP 09 45 19.5 +0.7
SAO San Andreas Ge 79.19 319 eP P 09 44 51.6 +0.2
LAO LASA Array 79.20 335 ⇓P P 09 44 50.8 -0.3
baz=80,SNR=27
LAO LASA Array 79.20 335 eP P 09 44 50.8 -0.4
comp=Z,76nm,1.0s,mb5.5
LAO epP pP 09 45 19.1 +0.1
LKWY Lake 79.21 331 eP P 09 44 52.9 +1.7
comp=Z,49nm,1.3s,mb5.2
LKWY Lake 79.21 331 eP P 09 44 52.9 +1.7
LKWY pmax pmax
comp=Z,49nm,1.3s,mb5.2
J15A Blackfoot 79.22 329 ⇑P P 09 44 51.7 +0.4
baz=80,SNR=64
WAKR Walker 79.23 322 eP P 09 44 52.0 +0.5
F20A Billings 79.24 333 ⇓P P 09 44 51.0 -0.4
baz=80,SNR=14
YFT Old Faithful 79.31 331 eP P 09 44 53.4 +1.6
comp=Z,29nm,0.9s,mb5.1
E21A Keefer Ranch, 79.41 334 ⇑P P 09 44 52.1 -0.2
baz=80,SNR=21
CMB Columbia Colle 79.44 321 eP P 09 44 52.2 -0.5
comp=Z,19nm,1.0s,mb4.9
CMB Columbia Colle 79.44 321 eP P 09 44 52.2 -0.5
CMB pmax pmax
comp=Z,19nm,1.0s,mb4.9
G18A Lazy EL Ranch, 79.44 332 ⇑P P 09 44 52.4 -0.1
baz=80,SNR=34
YNR Norris Junctio 79.45 331 epP pP 09 45 20.9 +0.4
YMR Madison River 79.54 331 eP P 09 44 54.0 +0.9
comp=Z,226nm,1.4s,mb5.8
YMR epP pP 09 45 22.3 +1.4
F19A Roth Farm, Mol 79.61 333 ⇓P P 09 44 53.2 -0.2
baz=80,SNR=53
J14A Carey 79.67 328 ⇑P P 09 44 54.2 +0.4
baz=80,SNR=42
SCHQ Schefferville 79.68 1 P P 09 44 53.2 -0.3
comp=Z,11nm,0.6s,mb4.8,baz=184,slow=4.5,SNR=20
SCHQ pP pP 09 45 20.3 -1.2
comp=Z,17nm,0.9s,baz=188,slow=4.5,SNR=5.9
H16A Russell Place, 79.69 331 ⇑P P 09 44 54.5 +0.7
baz=80,SNR=34
I15A Monteview 79.71 329 ⇓P P 09 44 54.7 +0.8
baz=80
E20A Meyer Farm, Mu 79.80 333 ⇓P P 09 44 54.4 0.0
baz=80,SNR=56
GCMT Greycliff 79.86 332 eP P 09 44 54.8 0.0
comp=Z,49nm,1.0s,mb5.3
GCMT epP pP 09 45 22.6 -0.1
DGMT Dagmar 79.93 337 ⇓P P 09 44 55.2 +0.1
baz=80,SNR=33
G17A Pierce Place, 79.95 331 ⇓P P 09 44 55.9 +0.6
baz=80,SNR=12
WCN Washoe City 79.96 322 ⇓P P 09 44 55.8 +0.4
baz=80,SNR=11
E19A Rath Farm, Rou 80.03 333 ⇑P P 09 44 55.6 -0.1
baz=80,SNR=91
PAHR Pah Rah Range 80.04 323 eP P 09 44 56.3 +0.4
I14A Mackay 80.10 329 ⇓P P 09 44 56.8 +0.8
baz=80,SNR=74
H15A Lima 80.25 330 ⇑P P 09 44 57.7 +0.8
baz=80,SNR=22
D20A Manuel Ranch, 80.28 334 ⇓P P 09 44 56.7 -0.2
baz=81,SNR=48
HLID Hailey 80.28 328 ⇑P P 09 44 57.7 +0.6
baz=80,SNR=146
HLID Hailey 80.28 328 eP P 09 44 57.6 +0.6
comp=Z,85nm,1.0s,mb5.5
HLID epP pP 09 45 25.4 +0.5
G16A Moss Hill, Enn 80.35 331 ⇑P P 09 44 57.4 0.0
baz=81,SNR=19
F17A Fitzpatrick Pl 80.38 332 ⇑P P 09 44 57.7 +0.2
baz=81,SNR=36
I13A Wildhorse Cree 80.41 328 ⇑P P 09 44 58.4 +0.7
baz=81,SNR=114
MCMT McKenzie Canyo 80.51 330 eP P 09 44 59.0 +0.7
comp=Z,38nm,1.0s,mb5.2
MCMT epP pP 09 45 26.7 +0.5
MCMT esP sP 09 45 33.8 -4.0
E18A Harlowton 80.59 333 ⇑P P 09 44 58.4 -0.2
baz=81,SNR=21
H14A Leadore 80.59 329 ⇓P P 09 44 59.3 +0.6
baz=81,SNR=48
BOZ Bozeman (W) 80.60 331 ⇑P P 09 44 58.4 -0.3
baz=81,SNR=30
BOZ Bozeman (W) 80.60 331 eP P 09 44 58.3 -0.4
comp=Z,15nm,0.9s,mb4.8
BOZ epP pP 09 45 26.7 0.0
BOZ Bozeman (W) 80.60 331 eP P 09 44 58.3 -0.4
BOZ e*PP pP 09 45 26.7 0.0
BOZ pmax pmax
comp=Z,15nm,0.9s,mb4.8
G15A Dillon 80.61 330 ⇑P P 09 44 59.0 +0.3
baz=81,SNR=47
F16A Kennard Place, 80.70 331 ⇑P P 09 44 59.0 -0.2
baz=81,SNR=16
MAW Mawson 80.76 163 eP P 09 44 58.5 -0.9
comp=Z,48nm,0.6s,mb5.5
MAW Mawson 80.76 163 eP P 09 44 58.7 -0.7
comp=Z,16nm,0.7s,mb5.0
MAW Mawson 80.76 163 P P 09 44 58.7 -0.7
comp=Z,69nm,0.7s,mb5.6,baz=218,slow=6.7,SNR=170
MAW Mawson 80.76 163 eP P 09 44 58.7 -0.7
MAW pmax pmax
comp=Z,16nm,0.7s
I12A Atlanta 80.80 328 ⇑P P 09 45 00.2 +0.4
baz=81,SNR=49
MFID Camas Ranch 80.86 327 ⇓P P 09 45 00.2 +0.1
baz=81,SNR=33
E17A Martinsdale 80.90 332 ⇑P P 09 45 00.5 +0.1
baz=81,SNR=30
OHCM Honcut 80.95 321 eP P 09 45 00.5 -0.3
OHCM epP pP 09 45 28.4 -0.3
H13A Challis 80.96 329 ⇑P P 09 45 01.2 +0.5
baz=81,SNR=114
D18A Linhart Farms, 81.04 333 ⇓P P 09 45 01.0 0.0
baz=81,SNR=34
G14A Jackson 81.11 330 ⇑P P 09 45 01.7 +0.3
baz=81
F15A Butte 81.13 331 ⇑P P 09 45 01.9 +0.4
baz=81,SNR=51
H12A Diamond D Ranc 81.23 328 ⇓P P 09 45 02.3 +0.2
baz=82,SNR=38
E16A East Helena 81.31 332 ⇑P P 09 45 02.5 0.0
baz=82,SNR=11
G13A Cobalt 81.35 329 ⇓P P 09 45 03.2 +0.5
baz=82,SNR=150
D17A Six Diamond Ra 81.37 332 ⇓P P 09 45 02.9 +0.2
baz=82,SNR=58
F14A Wisdom 81.50 330 ⇓P P 09 45 04.2 +0.7
baz=82,SNR=54
BOSA Boshof 81.50 118 eP P 09 45 04.4 +0.3
comp=Z,85nm,1.4s,mb5.4
BOSA epP pP 09 45 32.1 0.0
BOSA Boshof 81.50 118 P P 09 45 04.0 -0.1
comp=Z,10nm,0.6s,mb4.9,baz=237,slow=3.6,SNR=26
BOSA LR LR 10 18 42.1
comp=Z,137nm,19.6s,baz=56,slow=34
BOSA Boshof 81.50 118 eP P 09 45 04.4 +0.3
BOSA e*PP pP 09 45 32.1 0.0
BOSA pmax pmax
comp=Z,85nm,1.4s,mb5.4
HRY Holter Researc 81.52 332 eP P 09 45 03.7 +0.2
WVOR Wild Horse Val 81.56 325 eP P 09 45 00.0 -3.9
comp=Z,17nm,1.2s,mb4.7
WVOR epP pP 09 45 30.2 -1.8
WVOR Wild Horse Val 81.56 325 eP P 09 45 00.0 -3.9
WVOR e*PP pP 09 45 30.2 -1.7
WVOR pmax pmax
comp=Z,17nm,1.2s,mb4.8
HOPS Hopland 81.64 320 eP P 09 45 04.7 +0.3
D16A Dana Ranch, Ca 81.64 332 ⇓P P 09 45 04.5 +0.3
baz=82,SNR=84
E15A Deer Lodge 81.65 331 ⇑P P 09 45 04.3 +0.1
baz=82,SNR=28
EGMT Eagleton 81.68 333 ⇓P P 09 45 03.8 -0.6
baz=82,SNR=18
EGMT Eagleton 81.68 333 eP P 09 45 03.8 -0.6
comp=Z,38nm,0.8s,mb5.3
EGMT epP pP 09 45 31.7 -0.7
EGMT esP sP 09 45 39.7 -4.3
C17A Wharram Farm, 81.78 333 ⇑P P 09 45 04.4 -0.5
baz=82,SNR=37
F13A Darby 81.92 330 ⇓P P 09 45 05.8 +0.1
baz=82,SNR=93
B18A Beardsley Farm 81.99 334 ⇑P P 09 45 05.6 -0.3
baz=82,SNR=36
E14A Clinton 82.02 330 ⇓P P 09 45 06.6 +0.4

baz=82,SNR=39
D15A Lincoln 82.07 331 ⇑P P **09 45 06.7 +0.3**
baz=82,SNR=30
MOD Modoc 82.07 324 *e*P P **09 45 06.0 -0.5**
comp=Z,48nm,1.2s,mb5.2
MOD *e*pP pP 09 45 33.8 -0.8
J08A Circle Bar Ran 82.14 326 ⇓P P **09 45 07.0 +0.1**
baz=82,SNR=63
LTIM Timbered Crate 82.21 323 P P **09 45 06.8 -0.5**
CHMT Chamberlain Mo 82.29 331 *e*P P **09 45 08.1 +0.5**
CHMT *e*pP pP 09 45 35.8 +0.1
B17A L&G Farms, Che 82.32 333 ⇓P P **09 45 07.1 -0.7**
baz=83,SNR=19
F12A Elk City 82.32 329 ⇑P P **09 45 07.7 -0.1**
baz=83,SNR=27
C16A Fuhringer Ranc 82.33 332 ⇓P P **09 45 07.5 -0.3**
baz=83,SNR=46
E13A Victor 82.35 330 ⇑P P **09 45 08.2 +0.3**
baz=83,SNR=70
KCPM Cahto Peak 82.39 320 *e*P P **09 45 09.1 +0.8**
WDC Whiskeytown Da 82.39 322 *e*P P **09 45 06.8 -1.5**
WDC *e*pP pP 09 45 34.4 -2.0
D14A Greenough 82.53 331 ⇓P P **09 45 08.8 -0.1**
baz=83,SNR=26
MSO Missoula 82.53 330 ⇑P P **09 45 09.0 +0.2**
baz=83,SNR=11
MSO Missoula 82.53 330 *e*P P **09 45 09.0 +0.1**
comp=Z,8.5nm,0.7s,mb4.7
MSO *e*pP pP 09 45 36.8 -0.1
SLMT Seeley Lake 82.65 331 *e*P P **09 45 09.3 -0.1**
SLMT *e*pP pP 09 45 37.8 +0.3
C15A Salmond Ranch, 82.67 332 ⇑P P **09 45 09.6 +0.1**
baz=83,SNR=80
B16A M & M Farms, S 82.79 333 ⇑P P **09 45 09.5 -0.7**
baz=83,SNR=24
A17A Triple J Farms 82.80 334 ⇑P P **09 45 09.8 -0.4**
baz=83,SNR=40
K05A Summer Lake 82.96 324 ⇓P P **09 45 11.4 +0.2**
baz=83,SNR=27
D13A Huson 82.97 330 ⇑P P **09 45 11.0 -0.1**
baz=83,SNR=48
B15A Bradely Ranch, 83.07 332 ⇓P P **09 45 10.9 -0.7**
baz=83,SNR=35
SWMT Swartz Lake 83.08 331 *e*P P **09 45 11.5 -0.1**
A16A West Butte Ran 83.16 333 ⇑P P **09 45 11.8 -0.3**
baz=83,SNR=76
I07A Izee 83.18 326 ⇓P P **09 45 12.3 0.0**
baz=83,SNR=13
LBTB Lobatse 83.25 114 *e*P P **09 45 13.9 +0.6**
comp=Z,108nm,1.3s,mb5.5
LBTB Lobatse 83.25 114 *e*P P **09 45 13.9 +0.6**
LBTB pmax pmax
comp=Z,108nm,1.3s,mb5.5
YBH Yreka Blue Hor 83.27 322 *e*P P **09 45 11.7 -1.1**
D12A Red Ives Fores 83.34 330 ⇑P P **09 45 12.7 -0.3**
baz=84
YBMT Yellow Bay 83.35 331 *e*P P **09 45 13.0 0.0**
YBMT *e*pP pP 09 45 40.9 -0.3
JTMT Jette 83.38 331 *e*P P **09 45 13.2 0.0**
JTMT *e*pP pP 09 45 41.3 -0.1
B14A Marquette Ranc 83.41 332 ⇑P P **09 45 12.6 -0.7**
baz=84,SNR=21
F10A Beach Ranch, E 83.41 328 ⇓P P **09 45 12.9 -0.5**
baz=84,SNR=22
C13A Hot Springs 83.46 331 ⇑P P **09 45 13.5 -0.1**
baz=84
BLMT Blacktail Moun 83.62 331 *e*P P **09 45 14.5 +0.1**
BLMT *e*pP pP 09 45 42.5 0.0
G08A Pilot Rock 83.76 327 ⇑P P **09 45 14.7 -0.5**
baz=84,SNR=12
LNOR Lincton Mounta 83.85 328 *e*P P **09 45 13.2 -2.4**
C12B Naegeli Ranch, 83.88 330 ⇓P P **09 45 15.4 -0.4**
baz=84,SNR=14
B13A Whitefish 83.94 331 ⇓P P **09 45 15.8 -0.2**
baz=84,SNR=16
A14A Double T Ranch 83.94 332 ⇑P P **09 45 15.3 -0.8**
baz=84,SNR=13
HUMO Hull Mountain 83.99 323 *e*P P **09 45 15.5 -0.9**
PTEO Sao Teotonio 83.99 44 *e*P P **09 45 19.1 +2.5**
comp=Z,85nm,1.4s,mb5.4
VIPM Ingram Point 84.05 325 P P **09 45 16.9 +0.2**
WALA Waterton Lakes 84.22 332 *e*P P **09 45 17.2 -0.3**
WALA *e*pP pP 09 45 43.7 -1.9
E09A Wood Farm, Sta 84.24 328 ⇑P P **09 45 16.4 -1.2**
baz=84
PBDV Barranco-do-Ve 84.31 44 *e*P P **09 45 18.4 +0.2**
comp=Z,41nm,1.5s,mb5.0
A13A Flathead Natio 84.34 332 ⇓P P **09 45 18.1 0.0**
baz=85
PCVE Castro Verde 84.47 44 *e*P P **09 45 20.0 +1.0**
comp=Z,30nm,1.4s,mb4.9
B12A Libby 84.50 331 ⇓P P **09 45 18.6 -0.2**
baz=85,SNR=9.6
PVAQ Vaqueiros 84.54 44 *e*P P **09 45 20.5 +1.1**
comp=Z,53nm,1.6s,mb5.2
G06A Carlson Farm, 84.56 326 ⇑P P **09 45 19.2 -0.1**
baz=85,SNR=8.3
FFC Flin Flon 84.58 341 *c*e P P **09 45 18.7 -0.4**
PBEJ Beja 84.82 44 *e*P P **09 45 22.6 +1.8**
comp=Z,44nm,1.1s,mb5.3
HAWA Hanford 84.83 327 *e*P P **09 45 20.1 -0.5**
comp=Z,27nm,0.8s,mb5.2
HAWA *e*pP pP 09 45 48.1 -0.6
RSW Rattlesnake Hi 84.86 327 *e*P P **09 45 21.1 +0.3**
comp=Z,75nm,1.2s,mb5.5
RSW *e*pP pP 09 45 48.7 -0.2
A12A Yaak River Ran 84.88 331 ⇑P P **09 45 20.2 -0.5**
baz=85,SNR=21
WRD Warden 84.93 328 P P **09 45 21.3 +0.3**
H04A Detroit Lake 84.98 325 ⇓P P **09 45 20.2 -1.2**
baz=85,SNR=7.5
D08A Wollman Farm, 85.00 328 ⇓P P **09 45 20.7 -0.7**
baz=85,SNR=12
EVO Evora 85.04 43 ⇓*i*P P **09 45 22.7 +0.9**
comp=Z,72nm,1.1s,mb5.2
NEW Newport 85.04 330 ⇓P P **09 45 20.3 -1.3**
baz=85,SNR=11
NEW Newport 85.04 330 *e*P P **09 45 20.3 -1.3**
comp=Z,14nm,1.0s,mb4.9
NEW *e*pP pP 09 45 48.5 -1.3
NEW Newport 85.04 330 *e*P P **09 45 20.3 -1.3**
NEW *e**PP pP 09 45 48.5 -1.3
NEW pmax pmax
comp=Z,14nm,1.0s
E07A Sunnyside 85.10 327 ⇓P P **09 45 21.6 -0.4**
baz=85
HOOD Mount Hood Mea 85.14 326 *e*P P **09 45 22.1 0.0**
comp=Z,49nm,1.1s,mb5.3
C09A Chrisman Ranch 85.23 329 ⇑P P **09 45 22.0 -0.5**
baz=86,SNR=37
PBAR Barrancos 85.43 44 *e*P P **09 45 24.8 +1.0**
comp=Z,36nm,1.1s,mb5.2
PTOM Tomar 85.46 42 *e*P P **09 45 25.2 +1.3**
comp=Z,73nm,1.1s,mb5.5
G04A Mulino 85.49 325 ⇑P P **09 45 23.0 -0.9**
baz=86,SNR=9.1
PESTR Estremoz 85.50 43 *e*P P **09 45 25.3 +1.2**
comp=Z,44nm,1.3s,mb5.2
ASR Mount Adams--S 85.68 326 P P **09 45 25.0 +0.1**
EBG Ellensburg 85.70 327 P P **09 45 24.8 -0.1**
F04A Amboy 85.95 326 ⇑P P **09 45 25.3 -0.9**
baz=86
WTV Waterville 85.95 328 P P **09 45 25.8 -0.4**
PMRV Marv??o 85.97 43 *e*P P **09 45 26.7 +0.3**
comp=Z,29nm,1.4s,mb5.0
ETW Entiat 86.07 328 *e*P P **09 45 26.1 -0.6**
ETW *e*pP pP 09 45 54.2 -0.8
CBSW Chelan Butte S 86.07 328 P P **09 45 26.3 -0.4**
B08A Colville Reser 86.13 329 ⇓P P **09 45 25.7 -1.3**
baz=86,SNR=20
PCBR Castelo Branco 86.16 43 *e*P P **09 45 28.3 +0.9**
comp=Z,21nm,1.1s,mb5.0
LON Longmire 86.20 327 *e*P P **09 45 26.5 -0.9**
NLW Nelson Butte 86.41 328 P P **09 45 27.4 -1.0**
MTE Manteigas 86.46 42 *e*P P **09 45 29.9 +1.1**
comp=Z,33nm,1.6s,mb5.0
D05A Enumclaw 86.59 327 ⇓P P **09 45 28.1 -1.2**
baz=87,SNR=12
E03A Lebam 86.95 326 ⇑P P **09 45 30.4 -0.7**
baz=87
MVO Moncorvo 87.23 42 *e*P P **09 45 33.7 +1.1**
comp=Z,34nm,1.5s,mb5.0
MVO Moncorvo 87.23 42 *e*PP PP 09 48 59.1 +0.7
JCW Jim Creek 87.25 328 *e*P P **09 45 30.8 -1.6**
comp=Z,72nm,1.0s,mb5.6
JCW *e*pP pP 09 45 59.1 -1.7

B06A Marblemount 87.26 328 ⇑P P **09 45 31.1 -1.4**
baz=88
MIR Mirnyy 87.51 173 *e*P P **09 45 31.0 -2.6**
MIR pmax pmax
comp=Z,46nm,1.6s,mb5.3
A05A Maple Falls 87.88 328 ⇓P P **09 45 34.3 -1.1**
baz=88
ESDC Sonseca Array 88.25 44 P P **09 45 38.5 +1.0**
comp=Z,3.0nm,0.8s,mb4.4,baz=248,slow=4.1,SNR=13
ESDC pP pP 09 46 03.9 -2.0
comp=Z,0.4nm,0.3s,baz=255,slow=4.2,SNR=2.7
PGC Sidney 88.31 327 *e*P P **09 45 37.0 -0.4**
comp=Z,1.8nm,0.9s,mb4.1
PGC *e*pP pP 09 46 05.3 -0.5
PGC *e*sP sP 09 46 16.5 -0.9
CASY Casey 88.84 180 ⇓*i*P P **09 45 39.0 -0.9**
CASY *i* pP pP 09 46 07.5 -0.8
CASY *e*sP sP 09 46 19.0 -0.9
LSZ Lusaka 89.59 107 P P **09 45 47.1 +2.8**
SNR=6.9
SJPF Ste Jean 91.88 43 *e*pP pP 09 46 22.5 -0.3
SJPF Ste Jean 91.88 43 *e*P P **09 45 54.9 +0.6**
comp=Z,22nm,1.1s,mb5.0
SJPF Ste Jean 91.88 43 *e*P P **09 45 54.9 +0.6**
comp=Z,11nm,1.1s,mb5.0
SJPF *e*pP pP 09 46 22.5 -0.3
SJPF Ste Jean 91.88 43 *e*P P **09 45 54.9 +0.6**
SJPF *e**PP pP 09 46 22.5 -0.3
SJPF pmax pmax
comp=Z,11nm,1.1s,mb5.0
ETSF Etsaut 92.18 43 *e*pP pP 09 46 24.2 +0.1
ETSF Etsaut 92.18 43 *e*P P **09 45 56.4 +0.7**
comp=Z,16nm,1.0s,mb4.9
ETSF Etsaut 92.18 43 *e*P P **09 45 56.4 +0.7**
comp=Z,8.1nm,1.0s,mb4.9
ETSF *e*pP pP 09 46 24.2 +0.1
ETSF Etsaut 92.18 43 *e*P P **09 45 56.4 +0.7**
ETSF *e**PP pP 09 46 24.2 +0.1
ETSF pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
EPF Esparros 92.80 43 *e*P P **09 45 59.0 +0.4**
comp=Z,10nm,0.9s,mb4.9
EPF Esparros 92.80 43 *e*P P **09 45 59.0 +0.4**
comp=Z,5.3nm,0.9s,mb4.9
EPF Esparros 92.80 43 *e*P P **09 45 59.0 +0.4**
EPF pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
LFF La Frestale 94.06 42 *e*P P **09 46 04.1 -0.2**
comp=Z,62nm,1.4s,mb5.5
LFF La Frestale 94.06 42 *e*P P **09 46 04.1 -0.2**
comp=Z,31nm,1.4s,mb5.5
LFF La Frestale 94.06 42 *e*P P **09 46 04.1 -0.2**
LFF pmax pmax
comp=Z,31nm,1.4s,mb5.5
MTLF Montolieu 94.14 44 *e*P P **09 46 04.5 -0.2**
comp=Z,15nm,1.2s,mb4.9
MTLF Montolieu 94.14 44 *e*P P **09 46 04.5 -0.2**
comp=Z,7.6nm,1.2s,mb4.9
MTLF Montolieu 94.14 44 *e*P P **09 46 04.5 -0.2**
MTLF pmax pmax
comp=Z,8.0nm,1.2s,mb4.9
MFF Saint Martin d 94.42 40 *e*P P **09 46 05.5 -0.4**
comp=Z,32nm,1.2s,mb5.2
MFF Saint Martin d 94.42 40 *e*P P **09 46 05.5 -0.4**
comp=Z,16nm,1.2s,mb5.2
MFF Saint Martin d 94.42 40 *e*P P **09 46 05.5 -0.4**
MFF pmax pmax
comp=Z,16nm,1.2s,mb5.2
YKA Yellowknife Ar 94.72 340 P P **09 46 05.8 -1.0**
comp=Z,14nm,0.8s,mb5.5,baz=138,slow=4.5,SNR=35
YKA pP pP 09 46 33.3 -2.1
comp=Z,7.4nm,0.8s,baz=139,slow=4.4,SNR=7.1
YKA Yellowknife Ar 94.72 340 P P **09 46 05.8 -1.1**
YKA *PP pP 09 46 33.3 -2.1
GRR Gorron 94.97 38 *e*P P **09 46 07.4 -0.9**
KEST Kesra 95.28 53 P P **09 46 11.0 +0.8**
comp=Z,1.5nm,0.9s,mb4.4,baz=178,slow=5.3,SNR=4.4
KEST LR LR 10 34 47.3
comp=Z,60nm,18.3s,baz=290,slow=39
LASF Ste Croix 95.53 44 *e*P P **09 46 11.2 +0.1**
BGF Bois d'Agland 96.16 41 *e*P P **09 46 13.3 -0.5**
VIVF Saint-Julien-l 96.43 43 *e*P P **09 46 15.5 +0.4**
AVF Avril sur Loir 96.58 41 *e*P P **09 46 15.1 -0.6**
SMF Signal de Mont 96.80 41 *e*P P **09 46 16.4 -0.3**
DLBC Dease Lake 97.56 332 *e*P P **09 46 19.6 -0.3**
DLBC *e*pP pP 09 46 48.2 -0.2
MBDF Montbardon 97.68 44 *e*P P **09 46 20.4 -0.3**
LPL La Plagne 98.02 43 *e*P P **09 46 23.2 +0.9**
LPG La Plagne 98.03 43 *e*P P **09 46 23.4 +1.1**
CDF Champ du Feu 99.68 41 *e*P Pdif 09 46 29.3 -0.5
INK Inuvik 104.46 340 *e*Pdif Pdif 09 46 50.5 -0.6
comp=Z,3.2nm,1.0s
INK Inuvik 104.46 340 *e*P Pdif 09 46 50.5 -0.6
INK pmax pmax
comp=Z,3.0nm,1.0s
ILAR Eielson Array 107.65 334 Pdiff Pdif 09 47 03.2 -2.0
comp=Z,0.6nm,1.0s,baz=131,slow=2.4,SNR=4.8
ILAR PKiKP PKiKP 09 51 11.0 -0.9
comp=Z,1.3nm,1.1s,baz=144,slow=0.9,SNR=5.6
ILAR PP PP 09 51 38.0 +3.6
comp=Z,1.5nm,1.0s,baz=103,slow=6.6,SNR=6.6
ILAR PKKPbc PKKPbc 10 02 22.7 -5.9
comp=Z,0.3nm,0.4s,baz=297,slow=2.8,SNR=8.3
ILAR Eielson Array 107.65 334 P Pdif 09 47 03.2 -2.0
ILAR 09 51 38.0
KWP Kalwaria Pacla 109.57 44 *e*PKP PKiKP 09 51 17.0 +1.1
AKASG Malin Array Be 113.89 44 PKPdif PKiKP 09 51 22.4 -1.7
AKASG PKKPab PKKPab 10 02 10.7 -1.2
AKASG Malin Array Be 113.89 44 PKiKP PKiKP 09 51 22.4 -1.7
comp=Z,1.7nm,0.3s,baz=262,slow=2.7,SNR=10.0
AKASG PKKPab PKKPab 10 02 10.7 -1.2
comp=Z,1.2nm,0.7s,baz=74,slow=5.1,SNR=6.3
FINES FINESS Array B 113.98 32 PKP PKiKP 09 51 21.5 -2.5
comp=Z,1.9nm,0.8s,baz=259,slow=1.9,SNR=4.2
BR131 Keskin Array S 114.68 56 *e*PKPdf PKiKP 09 51 25.9 -0.2
BRTR Keskin Array B 114.68 56 PKP PKiKP 09 51 25.7 -0.3
comp=Z,2.5nm,0.8s,baz=180,slow=3.7,SNR=15
BRTR *e*PKP 09 51 53.2
comp=Z,1.7nm,0.9s,baz=280,slow=0.8,SNR=4.2
ARCES ARCESS Array B 114.76 23 PKKPbc PKKPbc 10 02 01.4 -3.8
comp=Z,1.5nm,0.6s,baz=83,slow=3.7,SNR=11
STKA Stephens Creek 116.36 209 PKP PKPdf 09 51 27.9 -1.7
comp=Z,2.9nm,0.8s,baz=85,slow=2.2,SNR=4.8
STKA PKKPbc PKKPbc 10 01 58.8 0.0
comp=Z,2.3nm,0.9s,baz=301,slow=5.9,SNR=3.4
MALT Malatya 118.03 58 *e*PKPdf PKPdf 09 51 33.0 +0.5
ANN Anapa 118.38 51 *i* PKIKP PKPdf 09 51 28.3 -4.7
ANN pmax pmax
comp=Z,18nm,0.7s
OBN Obninsk 118.85 39 ⇑*i*PKIKP PKPdf 09 51 33.2 -0.3
OBN pmax pmax
comp=Z,24nm,0.8s
VSR Storozhevoye 120.19 44 *e*PKIKP PKPdf 09 51 35.3 -0.9
VSR pmax pmax
comp=N,4.0nm,0.9s
VSR pmax pmax
comp=E,8.0nm,0.9s
VSR pmax pmax
comp=Z,20nm,0.9s
VORD Divnogorie 120.25 44 *e*PKIKP PKPdf 09 51 35.1 -1.3
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,50nm,0.8s
VORD pmax pmax
comp=Z,10.0nm,0.8s
KLMR Klimovskoe 120.45 33 *e*PKIKP PKPdf 09 51 35.9 -0.5
KLMR pmax pmax
comp=Z,43nm,1.2s
VRHR Novokhopersk 121.73 44 *e*PKIKP PKPdf 09 51 38.8 -0.4
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR pmax pmax
comp=E,8.0nm,0.4s
KIV Kislovodsk 122.02 53 *e*PKP PKPdf 09 51 38.1 -1.9
KIV Kislovodsk 122.02 53 ⇑*i*PKIKP PKPdf 09 51 38.1 -1.9
KIV pmax pmax
comp=Z,40nm,1.6s
GNI Garni 123.16 57 *e*PKP PKPdf 09 51 40.9 -1.4
GNI Garni 123.16 57 *i* PKIKP PKPdf 09 51 40.9 -1.4
KLBR Kellerberrin 123.23 186 *e*PKP PKPdf 09 51 41.3 -1.6
comp=Z,9.5nm,0.3s
NAY Al-Naaiem 123.43 70 *e*P PKPdf 09 51 42.9 -0.2

NAY AMb AMB 09 51 43.5
comp=Z,10.0nm,0.7s
RDF Al-Radifah 123.62 71 *e*P PKPdf 09 51 44.2 +0.6
RDF AMb AMB 09 51 45.0
comp=Z,44nm,1.2s
MIB Mutribah 123.63 70 *e*P PKPdf 09 51 43.5 -0.1
MIB AMb AMB 09 51 44.4
comp=Z,24nm,1.1s
CTA Charters Tower 123.67 220 *e*PKP PKPdf 09 51 41.8 -2.2
comp=Z,7.4nm,1.0s
UMR Umm Al-Rimmam 123.90 70 *e*P PKPdf 09 51 44.0 0.0
UMR AMb AMB 09 51 45.0
comp=Z,47nm,0.9s
BILL Bilibino 126.01 338 ⇑*i*PKP PKPdf 09 51 46.2 -0.7
BILL Bilibino 126.01 338 ⇑*i*PKIKP PKPdf 09 51 46.1 -0.8
BILL pmax pmax
comp=Z,15nm,1.0s
ASAR Alice Springs 126.78 206 PKP PKPdf 09 51 48.0 -1.9
ASAR pPKP pPKPdf 09 52 16.4 -3.1
ASAR PKKP 10 02 03.2
ASAR Alice Springs 126.78 206 PKHKP PKPpre 09 51 21.2
comp=Z,0.2nm,0.7s,baz=116,slow=2.2,SNR=2.6
ASAR PKP PKPdf 09 51 48.0 -1.9
comp=Z,18nm,0.4s,baz=127,slow=1.8,SNR=243
ASAR pPKP pPKPdf 09 52 16.4 -3.1
comp=Z,2.1nm,1.0s,baz=4.0,slow=5.9,SNR=2.5
ASAR PKKP 10 02 03.2
comp=Z,0.2nm,0.4s,baz=349,slow=1.8,SNR=5.9
ASAR Alice Springs 126.78 206 PKIKP PKPdf 09 51 48.0 -1.9
ASAR 09 52 16.5
WB2 Warramunga Arr 129.91 209 *e*PKPdf PKPdf 09 51 54.5 -1.4
WRA Warramunga Ar 129.91 209 PKP PKPdf 09 51 54.2 -1.7
WRA pPKP pPKPdf 09 52 23.0 -2.6
WRA Warramunga Ar 129.91 209 PKHKP PKPpre 09 51 29.6
comp=Z,0.4nm,0.8s,baz=161,slow=2.6,SNR=5.6
WRA PKP PKPdf 09 51 54.2 -1.7
comp=Z,14nm,0.3s,baz=151,slow=1.7,SNR=255
WRA pPKP pPKPdf 09 52 23.0 -2.6
comp=Z,7.4nm,0.9s,baz=164,slow=1.2,SNR=4.1
PMG Port Moresby 131.06 230 ⇑*i*PKIKP PKPdf 09 51 57.5 -0.7
PMG pmax pmax
comp=Z,42nm,1.7s
SMDO Samad 131.53 81 PKPdf PKPdf 09 51 59.0 +0.2
SNR=6.8
MBWA Marble Bar 133.24 191 *e*PKP PKPdf 09 52 00.2 -2.0
SEY Seymchan 133.55 336 *d*i PKIKP PKPdf 09 52 01.3 -0.1
AB31 Akbulak array 133.59 45 *i* PKIKP PKPdf 09 52 02.2 +0.3
AB31 pmax pmax
comp=Z,5.0nm,0.5s
ABKAR Akbulak array 133.59 45 *e*PKPdf PKPdf 09 52 02.4 +0.6
FITZ Fitzroy Crossi 134.81 199 *e*PKP PKPdf 09 52 03.6 -1.6
comp=Z,27nm,0.6s
FITZ Fitzroy Crossi 134.81 199 *e*PKPdf PKPdf 09 52 04.1 -1.0
FITZ Fitzroy Crossi 134.81 199 PKHKP PKPpre 09 51 48.0
comp=Z,2.5nm,0.8s,baz=168,slow=6.2,SNR=4.6
FITZ PKP PKPdf 09 52 04.1 -1.1
comp=Z,19nm,0.8s,baz=209,slow=2.6,SNR=29
PETK Petropavlovsk- 135.62 321 PKHKP PKPpre 09 51 56.7
comp=Z,1.8nm,0.8s,baz=103,slow=11,SNR=5.4
PETK PKP PKPdf 09 52 05.2 -0.3
comp=Z,5.5nm,0.7s,baz=68,slow=4.3,SNR=27
PETK pPKP pPKPdf 09 52 33.6 -1.7
comp=Z,3.2nm,0.9s,baz=90,slow=4.4,SNR=3.1
PETK Petropavlovsk- 135.62 321 PKIKP PKPdf 09 52 05.2 -0.4
PETK 09 52 33.6
BRVK Borovoye 138.53 37 *e*PKPdf PKPdf 09 52 11.5 +0.6
BRVK Borovoye 138.53 37 ⇓*i*PKIKP PKPdf 09 52 10.7 -0.2
BRVK pmax pmax
comp=Z,21nm,1.2s
BRVK Borovoye 138.53 37 PKPdf PKPdf 09 52 11.9 +1.0
SNR=7.0
COCO West Island 140.25 157 P PKPdf 09 52 15.4 +0.1
KK31 Karatay Array 142.17 51 PKIKP PKPdf 09 52 24.0 +6.2
KK31 pmax pmax
comp=Z,7.0nm,0.3s
KBL Kabul 142.33 66 *e*PKPdf PKPdf 09 52 15.7 -2.7
TLE Tual 143.00 217 P PKPdf 09 52 20.0 -0.3
NVS Novosibirsk 143.82 28 *e*PKIKP PKPdf 09 52 17.0 -3.4
NVS *i* 09 52 47.1
NVS pmax pmax
comp=Z,128nm,1.9s
NVS pmax pmax
comp=N,37nm,2.0s
NVS pmax pmax
comp=E,72nm,2.0s
KURK Kurchatov 144.18 36 *e*PKPdf PKPdf 09 52 20.1 -1.0
KURK Kurchatov 144.18 36 PKP PKPdf 09 52 19.8 -1.3
comp=E,83nm,0.8s,baz=304,slow=3.5,SNR=157
KURK pPKP pPKPdf 09 52 48.2 -2.6
comp=E,19nm,0.8s,baz=302,slow=3.7,SNR=5.1
KURK Kurchatov 144.18 36*d*i PKIKP PKPdf 09 52 20.0 -1.1
KURK pmax pmax
comp=Z,119nm,1.2s
KURK Kurchatov 144.18 36 PKPdf PKPdf 09 52 20.2 -0.9
SNR=39
BAKI Biak 144.51 226 P PKPdf 09 52 21.3 -1.6
KAD Karad 144.54 95 *e*PKP PKPdf 09 52 20.8 -2.0
EKS2 Erkin-Say 144.59 51 P PKPdf 09 52 22.4 +0.2
SNR=55
EKS2 Erkin-Say 144.59 51 *e*PKPdf PKPdf 09 52 22.1 -0.1
EKS2 *ep*PKPdf pPKPdf 09 52 51.1 -0.7
POO Poona 144.62 93 *e*PKP PKPdf 09 52 21.8 -1.1
AML Almayashu 144.69 52 P PKPdf 09 52 22.9 +0.6
SNR=30
AML Almayashu 144.69 52 *e*PKPbc PKPdf 09 52 22.8 +0.4
AML *ep*PKPdf pPKPdf 09 52 51.5 -0.5
MMRI Maumere 144.78 199 P PKPdf 09 52 20.9 -2.5
USP Ospenovka 144.91 50 P PKPdf 09 52 22.8 +0.2
SNR=34
ZAA0 Zalesovo Array 145.11 28 *e*PKPbc PKPbc 09 52 22.6 +0.3
ZAA0 *ep*PKPdf pPKPdf 09 52 51.3 -1.1
ZAA0 *es*PKPdf 09 52 57.8
ZALV Zalesovo Beam 145.11 28 PKPbc PKPbc 09 52 22.7 +0.4
comp=Z,305nm,0.9s,baz=303,slow=3.8,SNR=613
ZALV pPKPbc 09 52 50.9
comp=Z,73nm,0.8s,baz=308,slow=4.1,SNR=7.0
AAK Ala-Archa 145.11 51 P PKPbc 09 52 24.5 +1.7
SNR=63
AAK Ala-Archa 145.11 51 PKPbc PKPbc 09 52 24.3 +1.6
comp=Z,90nm,0.8s,baz=225,slow=2.3,SNR=181
AAK Ala-Archa 145.11 51 *e*PKIKP PKPdf 09 52 24.3 +1.3
AAK *e* 09 52 52.9
AAK Ala-Archa 145.11 51 P PKPbc 09 52 24.7 +1.9
AAK Ala-Archa 145.11 51 PKPbc PKPbc 09 52 24.4 +1.7
SNR=102
FRU Bishkek 145.13 50 *e*PKIKP PKPdf 09 52 22.0 -1.0
FRU pmax pmax
comp=Z,200nm,2.0s
CHMS Chumysh 145.17 50 P PKPbc 09 52 23.9 +1.0
SNR=42
UCH Uchtor 145.25 51 P PKPbc 09 52 25.1 +1.9
SNR=180
KBK Karagaybulak 145.42 51 P PKPdf 09 52 25.3 +1.7
SNR=24
BNDI Bandanaira 145.44 214 P PKPdf 09 52 22.4 -2.1
PALK Pallekele 145.72 116 P PKPdf 09 52 25.3 +0.3
TKM2 Tokmak 2 145.78 50 P PKPdf 09 52 25.1 +0.9
SNR=58
TKM2 Tokmak 2 145.78 50 *e*PKPbc PKPbc 09 52 25.0 +0.1
TKM2 *ep*PKPdf pPKPdf 09 52 55.2 +1.3
KZA Kyzart 145.81 51 P PKPdf 09 52 26.1 +1.8
SNR=27
IGBI Denpasar 146.02 187 P PKPdf 09 52 25.7 +0.2
YUK Yuzh-Kuril'sk 146.28 313 ⇑*i*PKIKP PKPdf 09 52 23.0 -2.0
YUK *i* 09 59 26.0
YUK *i* SS SS 10 15 12.0 +34
KHKI Kahang-Kahang 146.42 188 P PKPdf 09 52 25.5 -0.7
ULHL Ulahol 146.46 51 P PKPdf 09 52 26.6 +1.3
SNR=33
JAGI Jajag, Banyuwa 146.46 185 P PKPdf 09 52 25.7 -0.5
GUMO Guam 146.47 256 PKPbc PKPbc 09 52 25.1 -2.6
comp=Z,290nm,1.0s,baz=173,slow=4.6,SNR=14
GUMO pPKPbc pPKPbc 09 52 53.8 -3.2
comp=Z,316nm,1.1s,baz=177,slow=3.6,SNR=6.8
GUMO Guam 146.47 256 *e*PKIKP PKPdf 09 52 25.5 -0.6
GUMO Guam 146.47 256 P PKPdf 09 52 26.1 0.0
GMJI Gumukmas 146.70 184 P PKPdf 09 52 27.6 +1.0
SRBI Singaraja 146.74 187 P PKPdf 09 52 27.5 +0.8
PCJI Pacitan 146.84 180 P PKPdf 09 52 28.2 +1.3
KRKI Karangkates 146.86 182 P PKPdf 09 52 28.5 +1.6
CLNS Chul'man 146.89 346 *e*PKP2 PKPab 09 52 25.8 -3.4
CLNS pmax pmax
comp=Z,30nm,1.2s
CLNS pmax pmax
comp=E,12nm,1.3s

CLNS					pmax	pmax			
	comp=N,30nm,1.4s								
YSS	**Yuzh-Sakhalins**	**146.94**	**319**	*e*P		PKPdf	09 52 24.7	-1.3	
YSS	**Yuzh-Sakhalins**	**146.94**	**319**	⇑*i*/PKIKP		PKPdf	09 52 25.5	-0.5	
YSS				*e*			09 52 55.3		
YSS					pmax	pmax			
	comp=Z,60nm,1.0s								
AJM	**Ajmer**	**146.97**	**80**	*e*PKP		PKPdf	09 52 23.9	-2.8	
PWJI	**Pagerwojo**	**147.01**	**181**	P		PKPdf	09 52 27.2	0.0	
KSH	**Kashi**	**147.07**	**56**	PKPbc		PKPbc	09 52 27.1	-1.6	
KSH				*es*PKP			09 53 04.3		
KSH				*e*PP		PP	09 55 29.8	-25	
KSH				*e*PKS			09 56 01.4		
KSH				*e*SKS		SKSdf	09 59 25.8	+0.6	
KSH				*e*SKKS		SKKSac	10 02 08.1	-28	
KSH				*e*SS		SS	10 13 40.1	-67	
KSH					AMB	AMB			
	comp=Z,160nm,5.9s								
KSH					LR	LR			
	comp=N,120nm,8.1s								
KSH					LR	LR			
	comp=E,87nm,5.6s								
KSH					LR	LR			
	comp=Z,160nm,4.9s								
KSH	**Kashi**	**147.07**	**56**	PKPbc		PKPbc	09 52 27.1	-1.6	
KSH				*es*PKP			09 53 04.3		
KSH				*e*PP		PP	09 55 29.8	-25	
KSH				*e*PKS			09 56 01.4		
KSH				*e*SKS		SKSdf	09 59 25.8	+0.6	
KSH				*e*SKKS		SKKSac	10 02 08.1	-28	
KSH				*e*SS		SS	10 13 40.1	-67	
KSH					AMB	AMB			
	comp=Z,160nm,5.9s								
KSH					LR	LR			
	comp=N,120nm,8.1s								
KSH					LR	LR			
	comp=E,87nm,5.6s								
KSH					LR	LR			
	comp=Z,160nm,4.9s								
UGM	**Wanagama**	**147.11**	**178**	P		PKPdf	09 52 27.3	0.0	
YOGI	**Yogyakarta**	**147.20**	**178**	P		PKPdf	09 52 28.7	+1.2	
CISI	**Cisompet, Garu**	**147.29**	**173**	P		PKPdf	09 52 28.8	+1.2	
SJI	**Sawahan**	**147.29**	**181**	P		PKPdf	09 52 29.3	+1.7	
BBSI	**Bau Bau**	**147.65**	**201**	P		PKPdf	09 52 28.8	+0.6	
BJII	**Banjamegara**	**147.66**	**177**	P		PKPdf	09 52 28.5	+0.3	
NGJI	**Ngawi**	**147.66**	**180**	P		PKPdf	09 52 31.5	+3.2	
KHET	**Khetri**	**148.13**	**77**	*e*PKP		PKPdf	09 52 27.9	-0.7	
MK31	**Makanchi Array**	**148.36**	**40**	*e*PKPdf		PKPdf	09 52 28.6	+0.2	
MK31				*e*PKPbc		PKPbc	09 52 32.1	+0.2	
MKAR	**Makanchi Array**	**148.36**	**40**	PKP		PKPdf	09 52 28.6	+0.2	
	comp=Z,76nm,0.6s,baz=304,slow=2.2,SNR=102								
MKAR					PKPbc	PKPbc	09 52 32.1	+0.2	
	comp=Z,77nm,0.6s,baz=314,slow=2.7,SNR=241								
MKAR					pPKPbc	pPKPbc	09 53 00.2	-1.2	
	comp=Z,27nm,0.8s,baz=336,slow=2.7,SNR=5.8								
ASAJ	**Asahikawa**	**148.39**	**315**	PKPbc		PKPbc	09 52 31.3	-0.8	
	comp=Z,48nm,1.0s,baz=217,slow=4.5,SNR=13								
HYB	**Hyderabad**	**148.51**	**98**	*i* PKP		PKPdf	09 52 29.5	0.0	
HYB				*ep*PKP		pPKPdf	09 53 02.0	+2.8	
HYB				*e*			09 53 40.0		
KUDL	**Kundal**	**148.73**	**77**	*e*PKP		PKPdf	09 52 26.4	-3.1	
ERM	**Erimo**	**148.88**	**311**	*e*PKPbc		PKPbc	09 52 33.5	+0.1	
BHPL	**Bhopal**	**149.01**	**86**	*e*PKP		PKPdf	09 52 29.8	-0.3	
SONA	**Sohna**	**149.26**	**77**	*e*PKP		PKPdf	09 52 30.4	0.0	
AYAN	**Aya Nagar**	**149.31**	**76**	*e*PKP		PKPdf	09 52 29.6	-0.9	
NDI	**New Delhi**	**149.39**	**76**	*e*PKP		PKPdf	09 52 30.0	-0.6	
AGRA	**Agra**	**149.97**	**79**	*e*PKP		PKPdf	09 52 30.8	-0.7	
DDI	**Dehra Dun**	**150.12**	**73**	*e*PKP		PKPdf	09 52 31.5	-0.2	
DDI				*ex*		x	09 53 09.0		
HABR	**Khabarovsk**	**150.23**	**327**	*de*PKIKP		PKPdf	09 52 29.7	-1.6	
HABR				*e*			09 52 41.7		
HABR							09 53 03.4		
HABR							09 53 08.9		
HABR				*e*			09 56 11.9		
HABR				*e*			09 59 28.1		
HABR				*e*SS		SS	10 15 23.3	+2.3	
HABR					pmax	pmax			
	comp=N,12nm,1.1s								
HABR					pmax	pmax			
	comp=Z,93nm,1.1s								
HABR					pmax	pmax			
	comp=E,18nm,1.4s								
KLP	**Kalpa**	**150.23**	**70**	*e*PKP		PKPdf	09 52 32.5	+0.7	
KLR	**Kul'dur**	**151.20**	**332**	*e*PKIKP		PKPdf	09 52 26.8	-5.9	
KLR				*e*			09 52 33.8		
KLR				*e*			09 53 03.0		
KLR				*e*			09 53 11.3		
KLR					pmax	pmax			
	comp=Z,60nm,1.2s								
JOSI	**Joshimath**	**151.41**	**72**	*e*PKP		PKPdf	09 52 35.2	+1.5	
PTH	**Pithoragarh**	**152.02**	**74**	*ex*		PKPbc	09 52 42.2	+0.9	
PTH				*ex*		x	09 53 11.1		
IRK	**Irkutsk**	**152.43**	**9**	*e*PKIKP		PKPdf	09 52 34.2	-0.3	
IRK				*e*			09 53 20.0		
IRK					pmax	pmax			
	comp=Z,56nm,1.6s								
TLY	**Talaya**	**152.87**	**11**	*e*PKIKP		PKPdf	09 52 36.2	+1.0	
TLY				*e*			09 53 22.0		
TLY					pmax	pmax			
	comp=Z,21nm,1.7s								
VIS	**Vishakhapatnam**	**152.89**	**100**	*e*PKP		PKPdf	09 52 36.7	+0.4	
ZAK	**Zakamensk**	**154.06**	**12**	⇓*i*/PKIKP		PKPdf	09 52 37.3	+0.4	
ZAK				*e*			09 53 14.1		
ZAK				*e*			09 56 34.5		
ZAK					pmax	pmax			
	comp=Z,5.0nm,1.3s								
MJAR	**Matsushiro Arr**	**154.42**	**303**	PKP		PKPdf	09 52 36.5	-1.4	
MJAR				PKPbc		PKPbc	09 52 45.3	-1.0	
MJAR				PKPab		PKPab	09 53 00.1	-1.0	
MJAR				pPKPbc		pPKPbc	09 53 13.3	-2.6	
MJAR	**Matsushiro Arr**	**154.42**	**303**	PKP		PKPdf	09 52 36.5	-1.4	
	comp=Z,3.4nm,1.0s,baz=29,slow=2.0,SNR=5.4								
MJAR					PKPbc	PKPbc	09 52 45.3	-1.0	
	comp=Z,5.2nm,0.7s,baz=85,slow=2.3,SNR=9.7								
MJAR					PKPab	PKPab	09 53 00.1	-1.0	
	comp=Z,21nm,1.0s,baz=89,slow=1.7,SNR=17								
MJAR					pPKPbc	pPKPbc	09 53 13.3	-2.6	
	comp=Z,11nm,1.0s,baz=11,slow=0.4,SNR=4.3								
MAT	**Matsushiro**	**154.42**	**303**	PKP		PKPbc	09 52 45.0	-1.3	
PSI	**Prapat**	**154.73**	**150**	PKP		PKPdf	09 52 37.7	-1.3	
	comp=Z,5.1nm,0.7s,baz=173,slow=6.8,SNR=6.6								
PSI					PKPbc	PKPbc	09 52 46.3	-1.4	
	comp=Z,10nm,0.8s,baz=180,slow=5.4,SNR=5.9								
PSI					PKPab	PKPab	09 53 02.0	-0.7	
	comp=Z,4.3nm,0.3s,baz=214,slow=6.7,SNR=5.8								
KOLN	**Koldanda**	**155.01**	**78**	*e*P		PKPdf	09 52 38.2	-0.8	
	comp=Z,14nm,0.8s								
DANN	**Dangsing**	**155.15**	**77**	*e*P		PKPdf	09 52 38.8	-0.3	
	comp=Z,87nm,1.0s								
MDJ	**Mudanjiang**	**155.62**	**327**	PKPbc		PKPdf	09 52 37.8	-1.4	
MDJ				PP		PP	09 56 42.8	+0.2	
MDJ					AMB	AMB			
	comp=Z,100nm,4.6s								
GKN	**Gorkha**	**155.93**	**77**	*e*P		PKPdf	09 52 39.5	-0.7	
	comp=Z,19nm,0.6s								
DMN	**Daman**	**156.34**	**78**	*e*P		PKPdf	09 52 40.1	-0.6	
	comp=Z,38nm,1.2s								
KKN	**Kakani**	**156.50**	**78**	*e*P		PKPdf	09 52 40.6	-0.3	
	comp=Z,15nm,0.6s								
PKI	**Pulchoki**	**156.61**	**78**	*e*P		PKPdf	09 52 40.7	-0.4	
	comp=Z,27nm,1.0s								
SONM	**Songino Array**	**157.03**	**9**	PKP		PKPdf	09 52 41.3	+0.3	
	comp=Z,12nm,1.1s,baz=220,slow=0.5,SNR=52								
SONM					PKPab	PKPab	09 53 11.2	-0.5	
	comp=Z,6.5nm,0.8s,baz=319,slow=3.8,SNR=11								
SONM					pPKPab	pPKPab	09 53 39.4	-0.9	
	comp=Z,6.2nm,0.9s,baz=344,slow=4.6,SNR=4.1								
SONM	**Songino Array**	**157.03**	**9**	PKIKP		PKPdf	09 52 41.3	+0.3	
SONM							09 53 11.2		
ULN	**Ulaanbaatar**	**157.09**	**8**	PKPdf		PKPdf	09 52 41.7	+0.7	
	SNR=9.8								
RAMN	**Ramite**	**157.67**	**80**	*e*P		PKPdf	09 52 42.0	-0.5	
	comp=Z,123nm,1.2s								
CN2	**Changchun**	**158.15**	**332**	*e*PKP		PKPdf	09 52 40.9	-1.6	
CN2				PP		PP	09 57 00.6	+4.2	
CN2				AMB		AMB			
	comp=Z,200nm,5.0s								
CN2				LR		LR			
	comp=N,300nm,10.0s								
CN2				LR		LR			
	comp=E,200nm,10.0s								
CN2				LR		LR			
	comp=Z,200nm,13.0s								
CN2	**Changchun**	**158.15**	**332**	*e*PKP		PKPdf	09 52 40.9	-1.6	
CN2				PP		PP	09 57 00.6	+4.2	
CN2				AMB		AMB			
	comp=Z,200nm,5.0s								
CN2				LR		LR			
	comp=N,300nm,10.0s								
CN2				LR		LR			
	comp=E,200nm,10.0s								
CN2				LR		LR			
	comp=Z,200nm,13.0s								
ODAN	**Odare**	**158.37**	**80**	*e*P		PKPdf	09 52 43.1	-0.2	
	comp=Z,68nm,1.2s								
TAPN	**Taplejung**	**158.66**	**79**	*e*P		PKPdf	09 52 43.6	0.0	
	comp=Z,81nm,1.3s								
KSRS	**Korea Array**	**161.34**	**315**	PKP		PKPdf	09 52 45.9	-0.5	
	comp=Z,5.9nm,0.9s,baz=79,slow=1.0,SNR=18								
KSRS					pPKP	pPKPdf	09 53 13.9	-2.2	
	comp=Z,6.9nm,1.1s,baz=99,slow=1.4,SNR=4.7								
KSRS					PKPab	PKPab	09 53 30.6	-0.3	
	comp=Z,14nm,0.9s,baz=61,slow=4.5,SNR=21								
KSRS					pPKPab	pPKPab	09 53 58.2	-1.2	
	comp=Z,7.5nm,1.0s,baz=58,slow=3.6,SNR=3.5								
LSA	**Lhasa**	**161.48**	**71**	*e*PKPdf		PKPdf	09 52 48.0	+1.3	
SHL	**Shillong**	**162.37**	**85**	*e*PKP		PKPdf	09 52 47.0	-0.7	
GTA	**Gaotai**	**162.78**	**32**	PKPbc		PKPdf	09 52 48.1	+0.4	
GTA				pPKP		pPKPdf	09 53 17.3	-0.3	
GTA				sPKP			09 53 26.1		
GTA				PKPab		PKPab	09 53 37.8	+0.8	
GTA				PP		PP	09 56 34.3	-47	
GTA				SKS		SKSdf	09 59 42.6	+0.1	
GTA				SS		SS	10 17 46.8	+11	
GTA				AMB		AMB			
	comp=Z,270nm,5.4s								
GTA	**Gaotai**	**162.78**	**32**	PKPbc		PKPdf	09 52 48.1	+0.4	
GTA				pPKP		pPKPdf	09 53 17.3	-0.3	
GTA				sPKP			09 53 26.1		
GTA				PKPab		PKPab	09 53 37.8	+0.8	
GTA				PP		PP	09 56 34.3	-47	
GTA				SKS		SKSdf	09 59 42.6	+0.1	
GTA				SS		SS	10 17 46.8	+11	
GTA				AMB		AMB			
	comp=Z,270nm,5.4s								
HHC	**Hu-ho-hao-te**	**164.36**	**360**	*e*PKP		PKPdf	09 52 48.8	-0.3	
HHC				pPKP		pPKPdf	09 53 15.3	-3.7	
HHC				sPKP			09 53 26.3		
HHC				PKPab		PKPab	09 53 44.3	+0.5	
HHC				PKS			09 56 19.8		
HHC				PP		PP	09 57 31.3	+2.1	
HHC				SKKS		SKKSac	10 04 12.8	+5.3	
HHC				SS		SS	10 17 49.8	-0.9	
HHC				AMB		AMB			
	comp=Z,190nm,5.6s								
HHC					LR	LR			
	comp=N,280nm,17.5s								
HHC					LR	LR			
	comp=E,160nm,18.0s								
HHC					LR	LR			
	comp=Z,230nm,15.5s								
HHC	**Hu-ho-hao-te**	**164.36**	**360**	*e*PKP		PKPdf	09 52 48.8	-0.3	
HHC				pPKP		pPKPdf	09 53 15.3	-3.7	
HHC				sPKP			09 53 26.3		
HHC				PKPab		PKPab	09 53 44.3	+0.5	
HHC				PKS			09 56 19.8		
HHC				PP		PP	09 57 31.3	+2.1	
HHC				SKKS		SKKSac	10 04 12.8	+5.3	
HHC				SS		SS	10 17 49.8	-0.9	
HHC				AMB		AMB			
	comp=Z,190nm,5.6s								
HHC					LR	LR			
	comp=N,280nm,17.5s								
HHC					LR	LR			
	comp=E,160nm,18.0s								
HHC					LR	LR			
	comp=Z,230nm,15.5s								
BJI	**Beijing**	**164.63**	**346**	PKP		PKPdf	09 52 48.9	-0.5	
BJI				LR		LR			
	comp=Z,59nm,41.3s								
BJI	**Beijing**	**164.63**	**346**	PKP		PKPdf	09 52 48.9	-0.5	
BJI				LR		LR			
	comp=Z,59nm,41.3s								
CMAR	**Chiang Mai Arr**	**166.66**	**118**	PKP		PKPdf	09 52 51.4	-0.3	
	comp=Z,6.6nm,1.0s,baz=261,slow=2.5,SNR=26								
CMAR					PKPab	PKPab	09 53 53.9	-0.9	
	comp=Z,4.0nm,1.0s,baz=249,slow=4.7,SNR=8.3								
CMAR					PP	PP	09 57 43.4	+0.6	
	comp=Z,0.4nm,0.3s,baz=250,slow=6.3,SNR=4.8								
LZH	**Lanzhou**	**167.33**	**29**	*e*PKP		PKPdf	09 52 53.0	+1.3	
LZH				pPKP		pPKPdf	09 53 22.0	+0.4	
LZH				sPKP			09 53 32.3		
LZH				PKP		PKPab	09 53 58.8	+1.6	
NJ2	**Nanjing**	**170.51**	**318**	*e*P		PKPdf	09 52 52.8	-1.1	
NJ2					pmax	pmax			
	comp=Z,30nm,0.6s								
CD2	**Chengdu**	**171.16**	**48**	PKP		PKPdf	09 52 52.4	-1.8	
GYA	**Guiyang**	**175.55**	**72**	PKPbc		PKPdf	09 52 53.9	-2.1	
GYA				pPKP		pPKPdf	09 53 21.9	-4.1	
GYA				sPKP			09 53 31.8		
GYA				PKPab		PKPab	09 54 36.5	+2.3	
GYA				PKS			09 56 25.0		
GYA				PP		PP	09 58 27.3	0.0	
GYA				SKKS		SKKSac	10 05 04.3	+1.0	
GYA				SS		SS	10 19 44.0	-1.2	
GYA				AMB		AMB			
	comp=Z,150nm,9.0s								
GYA					LR	LR			
	comp=N,190nm,24.5s								
GYA					LR	LR			
	comp=E,140nm,25.9s								
GYA					LR	LR			
	comp=Z,170nm,24.8s								

*BJI **21** 09:41:35.3, 31.88N×104.46E, h18km, ML3.3/8*
*IDC **21** 09:41:35.1±3.9, 32.06N×104.51E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.5/24, mbtmp3.5/5, ML3.3/2, Error ellipse: s-maj=95.3km s-min=40.2km az=96.0*
ISC 21 09:41:33.2±0.8, 31.87N±0.06×104.67E±0.07, h10km, n8, σ1s42/12, mb3.4/3, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.23**	**220**	Pg	**Pg**	**09 41 55.5**	**-1.4**
CD2				Sg	**Sg**	**09 42 11.8**	**-1.1**
CD2				smax			
	comp=N,1μm,0.7s						
CD2				smax			
	comp=E,2μm,0.7s						
XAN	**Xi'an**	**4.18**	**58**	Pn	**Pn**	**09 42 41.1**	**+4.2**
XAN				Pg	**Pg**	**09 42 53.4**	**+0.2**
XAN				Sg	**Sg**	**09 43 46.0**	**-1.3**
XAN				smax			
	comp=N,47nm,0.7s						
XAN				smax			
	comp=E,26nm,0.7s						
LZH	**Lanzhou**	**4.26**	**351**	*e*Pg	**Pg**	**09 42 50.1**	**-4.8**
LZH				Sg	**Sg**	**09 43 46.4**	**-3.7**
LZH				smax			
	comp=N,41nm,0.5s						
LZH				smax			
	comp=E,59nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.32**	**203**	Pn	**Pn**	**09 45 01.4**	**+5.4**
	comp=E,0.0nm,0.3s,baz=7.2,slow=8.8,SNR=2.4						
SONM	**Songino Array**	**16.00**	**4**	Pn	**Pn**	**09 45 20.5**	**+2.3**
	comp=E,0.2nm,0.3s,baz=180,slow=10,SNR=2.3						
MKAR	**Makanchi Array**	**22.74**	**317**	P	**P**	**09 46 36.6**	**+1.4**
	comp=E,0.2nm,0.2s,mb3.1,baz=126,slow=9.7,SNR=3.1						
ZALV	**Zalesovo Beam**	**26.26**	**333**	P	**P**	**09 47 09.5**	**+1.1**
	comp=E,0.8nm,0.4s,mb3.6,baz=120,slow=8.9,SNR=4.4						
ARCES	**ARCESS Array B**	**56.77**	**336**	P	**P**	**09 51 18.2**	**+1.3**
	comp=E,0.4nm,0.6s,mb3.6,baz=88,slow=10,SNR=3.9						

*DDA **21** 10:07:17.6, 36.33N×27.05E, h9km±3km, Md3.0*
*ATH **21** 10:07:18.8, 36.42N×26.97E, h16km±1km, MD3.6/10*
*NEIC **21** 10:07:18.8, 36.42N×26.97E, h16km, MD3.6(ATH), After ATH.*
*ISK **21** 10:07:18.8, 36.47N×27.05E, h5km, ML2.4*
*CSEM **21** 10:07:19.2±0.2, 36.42N×27.04E, h10km, ML2.4, Error ellipse: s-maj=7.2km s-min=4.1km az=123.0*
ISC 21 10:07:19.0±0.8, 36.43N±0.02×26.95E±0.06, h1km±8km, n43, σ0s62/66, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAT	**Datca**	**0.59**	**59**	*e*PG	**Pg**	**10 07 29.7**	**-0.6**
DAT				*e*SG	**Sg**	**10 07 37.8**	**0.0**
DAT	**Datca**	**0.59**	**59**	*e*Pg	**Pg**	**10 07 29.7**	**-0.5**
DAT				*e*Sg	**Sg**	**10 07 37.8**	**-0.1**
BODT	**Bodrum**	**0.69**	**25**	*e*PG	**Pg**	**10 07 31.9**	**-0.3**
BODT				*e*SG	**Sg**	**10 07 41.9**	**+0.6**
BODT	**Bodrum**	**0.69**	**25**	*e*Pg	**Pg**	**10 07 32.0**	**-0.3**
BODT				*e*Sg	**Sg**	**10 07 41.9**	**+0.6**
BDRM	**Kayabasi**	**0.75**	**32**	*i* P	**Pg**	**10 07 33.3**	**0.0**
BDRM				*i* S	**Sg**	**10 07 43.4**	**+0.3**
BDRM	**Kayabasi**	**0.75**	**32**	*i* P	**Pg**	**10 07 33.3**	**0.0**
BDRM				*i* S	**Sg**	**10 07 43.4**	**+0.4**
KARP	**Karpathos**	**0.90**	**169**	*e*Pn	**Pg**	**10 07 35.8**	**-0.4**
KARP				*e*Sn	**Sg**	**10 07 48.0**	**+0.2**
KARP	**Karpathos**	**0.90**	**169**	*e*PN	**Pg**	**10 07 35.8**	**-0.4**
KARP				*e*SN	**Sg**	**10 07 48.0**	**+0.2**
KARP	**Karpathos**	**0.90**	**169**	*e*Pn	**Pg**	**10 07 35.8**	**-0.4**
KARP				*e*Sn	**Sg**	**10 07 48.0**	**+0.2**
ARG	**Arkhangelos**	**0.98**	**102**	*e*Pn	**Pg**	**10 07 36.7**	**-1.0**
ARG				*e*Sn	**Sg**	**10 07 50.5**	**+0.2**
ARG	**Arkhangelos**	**0.98**	**102**	*e*PN	**Pg**	**10 07 36.7**	**-1.0**
ARG				*e*SN	**Sg**	**10 07 50.5**	**+0.2**
ARG	**Arkhangelos**	**0.98**	**102**	*e*Pn	**Pg**	**10 07 36.7**	**-1.0**
MLSB	**Milas**	**1.09**	**37**	*e*PG	**Pg**	**10 07 39.4**	**-0.5**
MLSB	**Milas**	**1.09**	**37**	*e*Pg	**Pg**	**10 07 39.4**	**-0.5**
SMG	**Samos**	**1.28**	**356**	*e*Pn	**Pn**	**10 07 43.1**	**-0.8**
SMG				*e*Sn	**Sn**	**10 08 01.5**	**-0.2**
SMG	**Samos**	**1.28**	**356**	*e*PN	**Pn**	**10 07 43.1**	**-0.8**
SMG				*e*SN	**Sn**	**10 08 01.5**	**-0.2**
SMG	**Samos**	**1.28**	**356**	*e*Pn	**Pn**	**10 07 43.1**	**-0.8**
SMG				*e*Sn	**Sn**	**10 08 01.5**	**-0.2**
APE	**Apeiranthos**	**1.30**	**300**	*e*PN	**Pn**	**10 07 46.0**	**+1.7**
APE	**Apeiranthos**	**1.30**	**300**	*e*Pn	**Pn**	**10 07 43.8**	**-0.5**
APE				*e*Sn	**Sn**	**10 08 01.6**	**-0.7**
APE	**Apeiranthos**	**1.30**	**300**	*e*PN	**Pn**	**10 07 43.8**	**-0.5**
APE				*e*SN	**Sn**	**10 08 01.6**	**-0.7**
APE	**Apeiranthos**	**1.30**	**300**	*e*Pn	**Pn**	**10 07 43.8**	**-0.5**
APE				*e*Sn	**Sn**	**10 08 01.6**	**-0.7**
AYDN	**Tasoluk**	**1.44**	**31**	*i* P	**Pn**	**10 07 45.5**	**-0.6**
AYDN				*i* S	**Sg**	**10 08 06.9**	**+1.7**
AYDN	**Tasoluk**	**1.44**	**31**	*i* P	**Pn**	**10 07 45.5**	**-0.6**
AYDN				*i* S	**Sg**	**10 08 06.9**	**+1.8**
ZKR	**Zakros**	**1.44**	**205**	*e*Pn	**Pn**	**10 07 46.7**	**+0.6**
ZKR				*e*Sn	**Sn**	**10 08 05.6**	**-0.1**
ZKR	**Zakros**	**1.44**	**205**	*e*PN	**Pn**	**10 07 46.7**	**+0.6**
ZKR				*e*SN	**Sn**	**10 08 05.6**	**-0.1**
ZKR	**Zakros**	**1.44**	**205**	*e*Pn	**Pn**	**10 07 46.7**	**+0.6**
ZKR				*e*Sn	**Sn**	**10 08 05.6**	**-0.1**
NPS	**Neapolis**	**1.59**	**223**	*e*Pn	**Pn**	**10 07 48.2**	**0.0**
NPS	**Neapolis**	**1.59**	**223**	*e*PN	**Pn**	**10 07 48.2**	**0.0**
NPS	**Neapolis**	**1.59**	**223**	*e*Pn	**Pn**	**10 07 48.2**	**0.0**
LAST	**Lasithi**	**1.74**	**224**	*e*Pn	**Pn**	**10 07 50.5**	**+0.2**
LAST	**Lasithi**	**1.74**	**224**	*e*PN	**Pn**	**10 07 50.5**	**+0.2**
LAST	**Lasithi**	**1.74**	**224**	*e*Pn	**Pn**	**10 07 50.5**	**+0.2**
URLA	**Izmir**	**1.95**	**352**	*i* P	**Pg**	**10 07 55.6**	**-0.7**
URLA				*i* S	**Sg**	**10 08 26.4**	**+4.9**
URLA	**Izmir**	**1.95**	**352**	*i* P	**Pg**	**10 07 55.6**	**-0.7**
CHOS	**Chios island**	**2.08**	**340**	*e*PN	**Pn**	**10 07 55.1**	**+0.2**
CHOS	**Chios island**	**2.08**	**340**	*e*Pn	**Pn**	**10 07 55.1**	**+0.2**
SIVA	**Sivas**	**2.24**	**232**	*e*Pn	**Pn**	**10 07 57.6**	**+0.5**
SIVA	**Sivas**	**2.24**	**232**	*e*PN	**Pn**	**10 07 57.6**	**+0.5**
SIVA	**Sivas**	**2.24**	**232**	*e*Pn	**Pn**	**10 07 57.6**	**+0.5**
ELL	**Elmali**	**2.40**	**82**	*e*PN	**Pn**	**10 07 59.5**	**+0.2**
ELL	**Elmali**	**2.40**	**82**	*e*Pn	**Pn**	**10 07 59.6**	**+0.2**
KARN	**Karanos**	**2.67**	**248**	*e*PB	**Pn**	**10 08 04.1**	**+1.1**
KARN	**Karanos**	**2.67**	**248**	*e*Pb	**Pn**	**10 08 04.1**	**+1.1**

*IDC **21** 10:07:41.8±1.7, 3.48S×129.28E, h0km, mb3.9/3, mb1 3.9/5, mb1mx3.7/19, mbtmp3.8/5, ML3.2/2, Error ellipse: s-maj=104.9km s-min=23.5km az=75.0*
*NEIC **21** 10:07:46.3±0.7, 3.53S×129.34E, h35km, mb4.5/3, Error ellipse: s-maj=29.9km s-min=11.0km az=85.0*
*DJA **21** 10:07:52, 3.11S×128.91E, h2km, MLv3.4/5*
ISC 21 10:07:45.6±3.0, 3.46S±0.10×129.4E±0.2, h29km±21km, n11, σ1s01/13, mb4.0/4, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.53**	**283**	P	**Pb**	**10 07 56.3**	**-0.1**
MSAI				S	**Sb**	**10 08 00.5**	**-3.2**
NLAI	**Namlea**	**2.35**	**275**	P	**Pn**	**10 08 23.7**	**+1.4**
LBMI	**Labuha**	**3.41**	**325**	P	**Pn**	**10 08 37.6**	**+0.7**
LBMI				S	**Sn**	**10 09 15.2**	**-1.2**
FITZ	**Fitzroy Crossi**	**15.02**	**194**	Pn	**Pn**	**10 11 15.9**	**-0.1**
	0.1nm,0.3s,baz=12,slow=14,SNR=2.1						
WRA	**Warramunga Arr**	**17.06**	**164**	P	**Pn**	**10 11 41.9**	**-0.4**
	0.1nm,0.3s,baz=345,slow=13,SNR=11						
MBWA	**Marble Bar**	**19.97**	**207**	*e*P	**P**	**10 12 13.0**	**-2.8**
	60nm,1.6s						

2.1nm,0.7s,mb4.1,baz=183,slow=4.5,SNR=6.3
ZALV Zalesovo Beam 70.39 336 P **P** **10 36 47.8 -0.8**
0.7nm,0.6s,mb3.7,baz=142,slow=7.5,SNR=4.2

IDC 21 10:36:57.2±2.4, 7.00S×120.08E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.4/19, mbtmp3.4/3, ML3.5/1, Error ellipse: s-maj=258.3km s-min=28.5km az=54.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.89**	**134**	P	Pn	10 41 19.9	0.0
	0.2nm,0.3s,baz=306,slow=13,SNR=10						
ASAR	**Alice Springs**	**21.23**	**143**	P	P	10 41 44.7	-0.1
	0.7nm,0.8s,baz=320,slow=10,SNR=16						
MKAR	**Makanchi Array**	**63.20**	**332**	P	P	10 47 27.1	0.0
	0.1nm,0.3s,baz=150,slow=6.1,SNR=2.7						

*CSEM **21** 10:49:04.7, 30.17N×57.60E, h8km, ML3.9, After TEH*
TEH 21 10:49:04.7, 30.17N×57.60E, h8km, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBAF	**Bafgh**	**2.25**	**309**	*e*Pn	Pn	10 49 42.4	+0.3
IBAF				*e*		10 49 44.1	
	comp=Z,6μm,0.2s						
IBAF				*e*Sg	Sg	10 50 15.0	-1.9
IBAF	**Bafgh**	**2.25**	**309**	*e*Pn	Pn	10 49 42.4	+0.3
IBAF				*e*Sg	Sg	10 50 15.0	-1.9
IKOO	**Kooshah**	**2.54**	**28**	*e*Pn	Pn	10 49 45.5	-0.7
IKOO				*e*		10 50 29.8	
	comp=Z,6μm,0.1s						
IKOO	**Kooshah**	**2.54**	**28**	*e*Pn	Pn	10 49 45.5	-0.7
IMEH	**Mehriz**	**2.84**	**296**	*e*Pn	Pn	10 49 50.2	-0.1
IMEH				*e*Sg	Sg	10 50 32.5	-3.5
IMEH				*e*		10 50 38.6	
	comp=Z,2μm,0.2s						
IMEH	**Mehriz**	**2.84**	**296**	*e*Pn	Pn	10 49 50.2	-0.1
IMEH				*e*Sg	Sg	10 50 32.5	-3.5
IBND	**Bandar-abas**	**2.87**	**199**	*e*Pn	Pn	10 49 50.4	-0.3
IBND				*e*Pn	Pn	10 49 50.5	-0.2
IBND				*e*		10 49 54.2	
	comp=Z,4μm,0.2s						
IBND				*e*		10 50 42.9	
	comp=Z,5μm,0.2s						
IBND	**Bandar-abas**	**2.87**	**199**	*e*Pn	Pn	10 49 50.4	-0.3
ITEG	**Tejag**	**2.89**	**20**	*e*Pn	Pn	10 49 50.4	-0.5
ITEG				*e*		10 49 58.4	
	comp=Z,5μm,0.1s						
ITEG	**Tejag**	**2.89**	**20**	*e*Pn	Pn	10 49 50.4	-0.5
IDAH	**Dahanechah**	**3.21**	**37**	*e*Pn	Pn	10 49 54.8	-0.5
IDAH				*e*		10 50 56.1	
	comp=Z,2μm,0.2s						
IDAH	**Dahanechah**	**3.21**	**37**	*e*Pn	Pn	10 49 54.8	-0.5
ICHK	**Chekchek**	**3.43**	**308**	*e*Pn	Pn	10 49 58.2	-0.1
ICHK				*e*		10 50 10.0	
	comp=Z,2μm,0.2s						
ICHK	**Chekchek**	**3.43**	**308**	*e*Pn	Pn	10 49 58.2	-0.1
IMON	**Monand**	**3.49**	**30**	*e*Sg	Sg	10 50 54.0	-2.7
IMON	**Monand**	**3.49**	**30**	*e*Sg	Sg	10 50 54.0	-2.7
ISAD	**Sadrabad**	**3.78**	**298**	*e*Pn	Pn	10 50 04.0	+0.8
ISAD				*e*		10 51 11.2	
	comp=Z,1μm,0.2s						
ISAD	**Sadrabad**	**3.78**	**298**	*e*Pn	Pn	10 50 04.0	+0.8
IPAR	**Pars**	**3.96**	**266**	*e*Pn	Pn	10 50 10.6	+4.9
IPAR				*e*		10 51 19.1	
	comp=Z,1μm,0.4s						
IPAR	**Pars**	**3.96**	**266**	*e*Pn	Pn	10 50 10.6	+4.9

*IDC **21** 11:21:26.5±0.8, 4.91N×127.57E, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.9/21, mbtmp3.9/9, MS3.0/2, Ms1 3.0/2, ms1mx2.4/25, Error ellipse: s-maj=49.3km s-min=15.5km az=79.0*
*ISCJB **21** 11:21:32.3±2.2, 4.78N±0.1×127.71E±0.1, h61km±21km, mb3.8/9, Error ellipse: s-maj=23.4km s-min=11.9km az=144.4*
*DJA **21** 11:21:35, 4.61N×126.96E, h24km, MLv4.4/4*
ISC 21 11:21:34.1±2.0, 4.78N±0.1×127.0E±0.1, h63km±21km, n16, σ0.81/16, mb3.8/9, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.87**	**233**	P	**Pn**	**11 22 03.1**	**-0.7**
SGSI				S	**Sn**	**11 22 26.3**	**-0.1**
TNTI	**Ternate**	**4.04**	**175**	P	**Pn**	**11 22 34.3**	**+0.9**
TNTI				S	**Sn**	**11 23 19.4**	**0.0**
KMSI	**Cibinong**	**5.20**	**216**	P	**Pn**	**11 22 49.4**	**+0.1**
LBMI	**Labuha**	**5.44**	**175**	P	**Pn**	**11 22 53.1**	**+0.4**
	0.3nm830nm53nm,1.0s						
MRSI	**Marisa**	**6.66**	**230**	P	**Pn**	**11 23 09.0**	**-0.4**
GUMO	**Guam**	**19.64**	**62**	LR	LR	11 32 34.3	
	comp=Z,37nm,19.4s,baz=271,slow=35						
FITZ	**Fitzroy Crossi**	**22.82**	**183**	P	**P**	**11 26 32.2**	**+0.3**
	3.5nm,0.6s,mb4.0,baz=21,slow=9.3,SNR=16						
WRA	**Warramunga Arr**	**25.64**	**164**	P	**P**	**11 26 57.2**	**-0.7**
	3.5nm,0.6s,mb4.0,baz=344,slow=9.9,SNR=16						
CBIJ	**Chichi jima**	**26.45**	**32**	LR	LR	11 37 07.5	
	comp=Z,39nm,19.8s,baz=153,slow=36						
ASAR	**Alice Springs**	**29.10**	**167**	P	**P**	**11 27 28.3**	**-0.6**
	1.1nm,0.8s,mb3.6,baz=358,slow=8.5,SNR=9.1						
STKA	**Stephens Creek**	**39.04**	**160**	P	**P**	**11 28 55.4**	**+0.6**
	4.8nm,0.8s,mb4.2,baz=322,slow=13,SNR=4.3						
SONM	**Songino Array**	**46.37**	**341**	P	**P**	**11 29 55.1**	**+1.1**
	0.3nm,0.6s,mb3.4,baz=138,slow=5.5,SNR=4.6						
PETK	**Petropavlovsk-**	**54.31**	**22**	P	**P**	**11 30 52.1**	**-1.8**
	1.4nm,0.8s,mb3.9,baz=168,slow=13,SNR=4.8						
MKAR	**Makanchi Array**	**56.84**	**325**	P	**P**	**11 31 13.1**	**+1.0**
	0.6nm,0.7s,mb3.8,baz=132,slow=8.1,SNR=6.3						
ZALV	**Zalesovo Beam**	**59.76**	**333**	P	**P**	**11 31 36.0**	**+3.7**
	0.3nm,0.3s,mb3.8,baz=118,slow=5.5,SNR=2.2						
ILAR	**Eielson Array**	**84.00**	**25**	P	**P**	**11 33 56.7**	**-0.6**
	0.5nm,0.8s,mb3.7,baz=240,slow=6.4,SNR=7.1						

BJI 21 11:30:54.0, 32.62N×105.24E, h15km, ML3.3/10, Ms3.8/1, Ms7 3.7/1, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.12**	**217**	Pn	Pn	11 31 28.0	-0.9
CD2				Pg	Pg	11 31 30.9	-3.8
CD2				Sg	Sg	11 31 58.5	-3.7
CD2				smax			
	comp=N,2μm,0.5s						
CD2				smax			
	comp=E,490nm,0.7s						
XAN	**Xi'an**	**3.39**	**64**	Pn	Pn	11 31 48.6	+2.2
XAN				Pg	Pg	11 31 54.3	-4.7
XAN				Sg	Sg	11 32 36.8	-6.1
XAN				smax			
	comp=N,110nm,0.8s						
XAN				smax			
	comp=E,34nm,0.6s						
LZH	**Lanzhou**	**3.65**	**342**	*e*Pn	Pn	11 31 49.3	-0.6
LZH				Pg	Pg	11 32 00.6	-3.3
LZH				Sn	Sn	11 32 32.0	-0.6
LZH				Sg	Sg	11 32 45.6	-5.5
LZH				smax			
	comp=N,230nm,0.6s						
LZH				smax			
	comp=E,520nm,0.6s						
LZH				LR	LR		
	comp=N,640nm,6.4s						
LZH				LR	LR		
	comp=E,620nm,5.2s						
LZH				LR	LR		
	comp=Z,790nm,7.4s						

*NEIC **21** 11:42:45.6, 36.38N×27.09E, h36km, MD3.5(ATH), After ATH.*
*CSEM **21** 11:42:45.6, 36.38N×27.09E, h36km, MD3.5, After ATH*
ATH 21 11:42:45.6, 36.38N×27.09E, h36km±4km, MD3.5/7, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.83**	**176**	*e*Pn	Pn	11 43 02.0	+1.2
KARP				*e*Sn	Sn	11 43 13.4	+1.6
KARP	**Karpathos**	**0.83**	**176**	*e*PN	Pn	11 43 02.0	+1.2
KARP				*e*SN	Sn	11 43 13.4	+1.6
KARP	**Karpathos**	**0.83**	**176**	*e*Pn	Pn	11 43 02.0	+1.2
KARP				*e*Sn	Sn	11 43 13.4	+1.6
ARG	**Arkhangelos**	**0.85**	**101**	*e*Pn	Pn	11 43 02.4	+1.3
ARG				*e*Sn	Sn	11 43 14.6	+2.3
ARG	**Arkhangelos**	**0.85**	**101**	*e*PN	Pn	11 43 02.4	+1.3
ARG				*e*SN	Sn	11 43 14.6	+2.3
ARG	**Arkhangelos**	**0.85**	**101**	*e*Pn	Pn	11 43 02.4	+1.3
ARG				*e*Sn	Sn	11 43 14.6	+2.3
SMG	**Samos**	**1.34**	**351**	*e*Pb	Pn	11 43 09.3	+1.5
SMG				*e*Sn	Sn	11 43 27.1	+2.7
SMG	**Samos**	**1.34**	**351**	*e*PB	Pn	11 43 09.3	+1.5
SMG				*e*SN	Sn	11 43 27.1	+2.7
SMG	**Samos**	**1.34**	**351**	*e*Pb	Pn	11 43 09.3	+1.5
SMG				*e*Sn	Sn	11 43 27.1	+2.7
APE	**Apeiranthos**	**1.43**	**299**	*e*Pn	Pn	11 43 11.4	+2.4
APE	**Apeiranthos**	**1.43**	**299**	*e*PN	Pn	11 43 11.4	+2.4
APE	**Apeiranthos**	**1.43**	**299**	*e*Pn	Pn	11 43 11.4	+2.4
ZKR	**Zakros**	**1.45**	**210**	*e*Pn	Pn	11 43 12.4	+3.1
ZKR				*e*Sn	Sn	11 43 29.6	+2.6
ZKR	**Zakros**	**1.45**	**210**	*e*PN	Pn	11 43 12.4	+3.1
ZKR				*e*SN	Sn	11 43 29.6	+2.6
ZKR	**Zakros**	**1.45**	**210**	*e*Pn	Pn	11 43 12.4	+3.1
ZKR				*e*Sn	Sn	11 43 29.6	+2.6
NPS	**Neapolis**	**1.64**	**228**	*e*Pb	Pn	11 43 14.5	+2.6
NPS				*e*Sn	Sn	11 43 33.5	+1.8
NPS	**Neapolis**	**1.64**	**228**	*e*PB	Pn	11 43 14.5	+2.6
NPS				*e*SN	Sn	11 43 33.5	+1.8
NPS	**Neapolis**	**1.64**	**228**	*e*Pb	Pn	11 43 14.5	+2.6
NPS				*e*Sn	Sn	11 43 33.5	+1.8
LAST	**Lasithi**	**1.79**	**228**	*e*Pb	Pn	11 43 16.5	+2.6
LAST				*e*Sn	Sn	11 43 38.4	+3.0
LAST	**Lasithi**	**1.79**	**228**	*e*PB	Pn	11 43 16.5	+2.6
LAST				*e*SN	Sn	11 43 38.4	+3.0
LAST	**Lasithi**	**1.79**	**228**	*e*Pb	Pn	11 43 16.5	+2.6
LAST				*e*Sn	Sn	11 43 38.4	+3.0
KARN	**Karanos**	**2.75**	**250**	*e*PN	Pn	11 43 29.8	+2.6
KARN	**Karanos**	**2.75**	**250**	*e*Pn	Pn	11 43 29.8	+2.6

IDC 21 11:44:44.3±20.0, 24.07S×179.92E, h492km±234km, mb3.2/6, mb1 3.4/6, mb1mx3.2/17, mbtmp3.2/6, Error ellipse: s-maj=74.6km s-min=24.1km az=70.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**34.59**	**248**	P	P	11 50 50.6	-0.7
	2.5nm,0.5s,baz=83,slow=8.4,SNR=9.3						
ASAR	**Alice Springs**	**41.93**	**261**	P	P	11 51 51.5	+0.2
	0.3nm,0.4s,baz=97,slow=7.6,SNR=4.2						
WRA	**Warramunga Arr**	**42.32**	**266**	P	P	11 51 54.9	+0.5
	2.2nm,0.4s,baz=98,slow=8.3,SNR=102						
FITZ	**Fitzroy Crossi**	**50.74**	**266**	P	P	11 52 59.1	+0.7
	1.4nm,0.6s,baz=105,slow=6.0,SNR=6.2						
QSPA	**South Pole Qui**	**66.01**	**180**	P	P	11 54 40.8	0.0
	1.2nm,0.6s,baz=0.0,slow=0.0,SNR=19						
JHJ	**Hachijo jima 2**	**68.54**	**324**	P	P	11 54 55.4	-1.7
	156nm,0.8s,baz=177,slow=7.2,SNR=4.0						
TXAR	**Lajitas Array**	**90.58**	**58**	P	P	11 56 55.4	+1.7
	0.4nm,0.8s,baz=221,slow=6.5,SNR=4.8						

*IDC **21** 11:51:36.3±0.9, 13.01N×124.37E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/21, mbtmp3.7/7, Error ellipse: s-maj=59.5km s-min=17.6km az=70.0*
*ISCJB **21** 11:51:38.8±1.3, 13.11N±0.08×124.6E±0.1, h30km±9km, mb3.6/7, Error ellipse: s-maj=21.3km s-min=9.7km az=154.0*
*MAN **21** 11:51:38, 13.13N×124.59E, h15km, mb4.7, ML3.6, MS3.6*
ISC 21 11:51:39.1±1.4, 13.10N±0.07×124.6E±0.1, h17km±8km, n15, σ1.05/16, mb3.6/7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.59**	**170**	*e*P	**Pg**	**11 51 51.6**	**+0.8**
PVCP	**Virac**	**0.63**	**322**	*e*P	**Pg**	**11 51 50.4**	**-1.1**
AUQP	**San Andres**	**1.85**	**277**	*e*P	**Pn**	**11 52 11.1**	**+1.1**
GQP	**Guinayangan**	**2.20**	**292**	*e*P	**Pn**	**11 52 13.3**	**-1.6**
GQP				*i* S	**Sn**	**11 52 49.5**	**+7.7**
POLP	**Polilio Island**	**3.01**	**303**	*e*P	**Pn**	**11 52 27.6**	**+1.5**
GUIM	**Jordan**	**3.12**	**218**	*e*P	**Pn**	**11 52 27.1**	**-0.5**
BALP	**Baler**	**3.90**	**313**	*e*P	**Pn**	**11 52 38.9**	**+0.6**
CAUP	**Cauayan**	**4.65**	**326**	*e*P	**Pn**	**11 52 49.5**	**+0.9**
WRA	**Warramunga Arr**	**34.22**	**163**	P	**P**	**11 58 22.5**	**-1.6**
	0.2nm,0.3s,mb3.5,baz=344,slow=8.0,SNR=13						
ASAR	**Alice Springs**	**37.66**	**166**	P	**P**	**11 58 53.8**	**+0.2**
	0.8nm,0.3s,mb3.9,baz=344,slow=7.2,SNR=33						
SONM	**Songino Array**	**37.80**	**340**	P	**P**	**11 58 54.1**	**-0.4**
	0.4nm,0.8s,mb3.2,baz=142,slow=4.9,SNR=2.8						
MKAR	**Makanchi Array**	**48.78**	**322**	P	**P**	**12 00 23.8**	**+0.6**
	1.2nm,0.8s,mb4.0,baz=119,slow=8.5,SNR=9.7						
ZALV	**Zalesovo Beam**	**51.35**	**331**	P	**P**	**12 00 41.0**	**-1.6**
	0.8nm,0.6s,mb3.8,baz=113,slow=10,SNR=3.7						
KURK	**Kurchatov**	**52.80**	**325**	P	**P**	**12 00 53.0**	**-0.4**
	0.4nm,0.3s,mb3.8,baz=123,slow=7.3,SNR=4.7						
ILAR	**Eielson Array**	**77.65**	**26**	P	**P**	**12 03 35.7**	**+1.3**
	0.3nm,0.8s,mb3.3,baz=248,slow=6.6,SNR=4.0						

CSEM 21 11:59:44.0±0.3, 46.07N×13.64E, h1km, ML0.9, 2C-1D, Error ellipse: s-maj=6.5km s-min=3.4km az=37.0, Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRE	**Drenchia**	**0.11**	**0**	*i* Pg	Pg	11 59 45.8	-0.3
DRE				*i* Sg	Sg	11 59 47.7	+0.2
DRE	**Drenchia**	**0.11**	**0**	*i* Pg	Pg	11 59 45.8	-0.3
DRE				*i* Sg	Sg	11 59 47.7	+0.2
VOJS	**Vojsko**	**0.17**	**101**	*i* Pg	Pg	11 59 47.2	-0.1
VOJS				*i* Sg	Sg	11 59 50.6	+1.2
VOJS							
	comp=Z,16nm,0.1s						
VOJS	**Vojsko**	**0.17**	**101**	*i* Pg	Pg	11 59 47.2	-0.1
VOJS				*i* Sg	Sg	11 59 50.7	+1.2
	comp=Z,16nm,0.1s						
CADS	**Cadrg**	**0.18**	**22**	*i* Pg	Pg	11 59 47.2	-0.2
CADS				*i* Sg	Sg	11 59 50.6	+0.9
CADS							
	comp=Z,9.0nm,0.1s						
CADS	**Cadrg**	**0.18**	**22**	*i* Pg	Pg	11 59 47.2	-0.2
CADS				*i* Sg	Sg	11 59 50.6	+0.9
	comp=Z,9.0nm,0.1s						
COLI	**Coloredo**	**0.20**	**291**	*e*Pg	Pg	11 59 47.8	0.0
COLI				*e*Sg	Sg	11 59 52.3	+2.0
VINO	**Villanova**	**0.32**	**307**	*i* *e*Pg	Pg	11 59 50.3	+0.2
VINO				*e*Sg	Sg	11 59 56.1	+1.9
VINO	**Villanova**	**0.32**	**307**	*e*Pg	Pg	11 59 50.3	+0.2
BAD	**Bernadia**	**0.33**	**302**	*i* *e*Pg	Pg	11 59 50.6	+0.3
BAD				*e*Sg	Sg	11 59 56.3	+1.8
BAD	**Bernadia**	**0.33**	**302**	*e*Pg	Pg	11 59 50.6	+0.3
JAVS	**Javornik**	**0.34**	**120**	*i* Pg	Pg	11 59 50.1	-0.4
JAVS				*i* Sg	Sg	11 59 56.5	+1.6
JAVS							
	comp=Z,5.0nm,0.1s						
JAVS	**Javornik**	**0.34**	**120**	*i* Pg	Pg	11 59 50.1	-0.4
JAVS				*i* Sg	Sg	11 59 56.5	+1.6
	comp=Z,5.0nm,0.1s						
GORS	**Gorjuse**	**0.35**	**44**	*i* Pg	Pg	11 59 50.5	-0.2
GORS				*i* Sg	Sg	11 59 56.5	+1.2
GORS							
	comp=Z,5.0nm,0.1s						

*ISCJB **21** 12:20:53.6±0.2, 24.90N±0.03×97.81E±0.02, h10km, mb4.7/103, MS5.5/4, Error ellipse: s-maj=4.8km s-min=3.0km az=179.8*
*BJI **21** 12:20:54.3, 24.93N×97.81E, h16km, mB5.0/26, mb4.7/39, ML5.1/10, Ms5.3/29, Ms7 5.1/29*
*MOS **21** 12:20:56.4±1.5, 24.87N×97.93E, h33km, mb5.1/46, Error ellipse: s-maj=9.6km s-min=4.6km az=118.6*
*IDC **21** 12:20:57.0±3.6, 24.89N×97.87E, h33km±28km, mb4.1/26, mb1 4.2/27, mb1mx4.2/32, mbtmp4.1/27, ML4.9/1, Error ellipse: s-maj=15.7km s-min=10.4km az=56.0*
*NEIC **21** 12:20:58.8±1.0, 24.86N×97.82E, h37km±10km, mb4.9/50, Error ellipse: s-maj=8.8km s-min=6.7km az=210.0*
*SZGRF **21** 12:21:08.6, 24.81N×96.44E, h33km, mb5.0, Myanmar*
ISC 21 12:20:54.9±0.9, 24.88N±0.03×97.81E±0.02, h7km±6km, n278, σ1.33/287, mb4.7/103, MS5.5/4, 17C-11D,

Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**3.52**	**269**	*e*PKP	**Pn**	**12 21 53.0**	**+2.9**
IMP				*i* x	**Pg**	**12 22 08.0**	**+5.6**
KMI	**Kunming**	**4.48**	**86**	Pn	**Pn**	**12 22 05.4**	**+2.1**
KMI				Pg	**Pg**	**12 22 21.8**	**+1.0**
KMI				Sn	**Sn**	**12 22 57.4**	**+1.7**
KMI				Sg	**Sg**	**12 23 19.5**	**+0.6**
KMI				smax			
	comp=N,1μm,1.3s						
KMI				smax			
	comp=E,1μm,0.8s						
KMI				LR	LR		
	comp=N,22μm,4.7s						
KMI				LR	LR		
	comp=E,14μm,5.1s						
KMI				LR	LR		
	comp=Z,15μm,8.2s						
AGT	**Agartala**	**6.06**	**262**	*i* x	**Pn**	**12 22 22.0**	**-3.0**
CHG	**Chiang Mai**	**6.13**	**170**	PN	**Pn**	**12 22 28.1**	**+2.1**
CHTO	**Chiang Mai**	**6.13**	**170**	*e*Pn	**Pn**	**12 22 27.7**	**+1.7**
	comp=Z,138nm,0.8s						
CHTO				*e*Sg	**Sg**	**12 24 11.4**	**-0.5**
CHTO	**Chiang Mai**	**6.13**	**170**	*e*P	**Pn**	**12 22 27.7**	**+1.7**
CHTO				pmax	pmax		
	comp=Z,138nm,0.8s						
CMAR	**Chiang Mai Arr**	**6.48**	**170**	Pn	**Pn**	**12 22 32.0**	**+1.2**
	comp=Z,7.3nm,0.3s,baz=346,slow=13,SNR=46						
CMAR				Pg	**Pg**	**12 22 56.8**	**-2.3**
	comp=Z,9.0nm,0.3s,baz=351,slow=16,SNR=28						
CMAR				Lg		12 24 24.6	
	comp=Z,10nm,0.3s,baz=356,slow=23,SNR=5.5						
LSA	**Lhasa**	**7.62**	**310**	*e*Pn	**Pn**	**12 22 47.6**	**+1.2**
	comp=Z,77nm,0.6s						
LSA	**Lhasa**	**7.62**	**310**	*e*P	**Pn**	**12 22 47.6**	**+1.2**
LSA				pmax	pmax		
	comp=Z,77nm,0.6s						
BDT	**Bhumibol Dam**	**7.68**	**171**	P	**Pn**	**12 22 50.0**	**+2.7**
	comp=Z,289nm,0.9s						
CD2	**Chengdu**	**7.98**	**40**	P	**Pn**	**12 22 50.8**	**-0.6**
GYA	**Guiyang**	**8.14**	**77**	*i* P	**Pn**	**12 22 51.4**	**-2.2**
GYA				S	**Sn**	**12 24 24.3**	**-1.6**
GYA				pmax	pmax		
	comp=Z,50nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,4.2s						
GYA				LR	LR		
	comp=N,15μm,10.5s						
GYA				LR	LR		
	comp=E,4μm,10.9s						
GYA				LR	LR		
	comp=Z,4μm,10.8s						
TAPN	**Taplejung**	**9.40**	**287**	*e*P	**Pn**	**12 23 10.6**	**-0.3**
	comp=Z,149nm,0.8s						
ODAN	**Odare**	**9.59**	**284**	*e*P	**Pn**	**12 23 13.9**	**+0.5**
	comp=Z,114nm,0.6s						
RAMN	**Ramite**	**10.30**	**284**	*e*P	**Pn**	**12 23 23.6**	**+0.4**
	comp=Z,96nm,0.6s						
JIRN	**Jiri**	**10.79**	**287**	*e*P	**Pn**	**12 23 29.9**	**0.0**
	comp=Z,89nm,0.6s						
GUN	**Gumba**	**11.11**	**288**	*e*P	**Pn**	**12 23 34.5**	**+0.2**
	comp=Z,216nm,0.8s						
PKI	**Pulchoki**	**11.45**	**286**	*e*P	**Pn**	**12 23 38.3**	**-0.6**
	comp=Z,64nm,0.5s						
PKIN	**Phulchoki**	**11.46**	**286**	*e*P	**Pn**	**12 23 38.2**	**-0.9**
PKIN	**Phulchoki**	**11.46**	**286**	*e*P	**Pn**	**12 23 38.9**	**-0.2**
	comp=Z,80nm,0.5s						
KKN	**Kakani**	**11.60**	**287**	*e*P	**Pn**	**12 23 40.7**	**-0.3**
	comp=Z,117nm,0.8s						
ENH	**Enshi**	**11.66**	**60**	*e*Pn	**Pn**	**12 23 41.5**	**-0.3**
DMN	**Daman**	**11.72**	**286**	*e*P	**Pn**	**12 23 42.9**	**+0.3**
	comp=Z,82nm,0.8s						
GKN	**Gorkha**	**12.20**	**288**	*e*P	**Pn**	**12 23 48.3**	**-1.0**
	comp=Z,139nm,0.8s						
LZH	**Lanzhou**	**12.31**	**24**	*e*P	**Pn**	**12 23 55.3**	**+4.6**
LZH				pP		12 23 58.3	
LZH				sP		12 24 01.4	
LZH				PP		12 24 05.3	
LZH				*e*S	**Sn**	**12 26 14.0**	**+5.7**
LZH				sS		12 26 19.0	
LZH				pmax	pmax		
	comp=Z,31nm,1.0s						
LZH				pmax	pmax		
	comp=Z,140nm,4.8s						
LZH				LR	LR		
	comp=N,5μm,8.6s						
LZH				LR	LR		
	comp=E,2μm,10.5s						
LZH				LR	LR		
	comp=Z,2μm,13.8s						
QIZ	**Qiongzhong**	**12.59**	**115**	*e*Pn	**Pn**	**12 23 54.3**	**-0.3**
DANN	**Dangsing**	**13.03**	**288**	*e*P	**Pn**	**12 23 59.3**	**-1.3**
	comp=Z,94nm,0.8s						
XAN	**Xi'an**	**13.29**	**44**	P	**Pn**	**12 24 11.8**	**+7.7**
XAN				pP		12 24 17.8	
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA	**Gaotai**	**14.58**	**6**	*i*P	**Pn**	**12 24 29.5**	**+7.8**
GTA				pP	pP	12 24 32.9	+2.8
GTA				sP	sP	12 24 35.8	+4.8
GTA				S	**Sn**	**12 27 03.3**	**-0.4**
GTA				sS	sS	12 27 06.6	-19
GTA				SS		12 27 17.4	
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,130nm,3.9s						
GTA				LR	LR		
	comp=N,3μm,9.9s						
GTA				LR	LR		
	comp=E,10μm,12.3s						
GTA				LR	LR		
	comp=Z,3μm,11.1s						
VIS	**Vishakhapatnam**	**15.25**	**245**	*e*PKP	**Pn**	**12 24 32.9**	**+2.0**
VIS				AMb	AMB	12 24 45.1	
	comp=Z,83nm,1.3s						
WHN	**Wuhan**	**15.69**	**65**	P	**Pn**	**12 24 31.8**	**-4.7**
PTH	**Pithoragarh**	**16.32**	**290**	*e*PKP	**Pn**	**12 24 47.4**	**+2.7**
JOSI	**Joshimath**	**17.11**	**293**	*ex*	x	12 25 00.5	
AGRA	**Agra**	**18.00**	**282**	*e*PKP	**Pn**	**12 25 05.7**	**0.0**
AGRA				*e*PKP		12 28 43.7	
DDI	**Dehra Dun**	**18.32**	**292**	*e*PKP	**Pn**	**12 25 09.8**	**+0.2**
KLP	**Kalpa**	**18.45**	**295**	*e*PKP	**Pn**	**12 25 11.0**	**-0.3**
BHPL	**Bhopal**	**18.69**	**269**	*e*PKP	**Pn**	**12 25 15.1**	**+0.9**
BHP

NJ2 LR LR
comp=Z,5μm,10.7s
KHET Khetri 19.95 284 *e*PKP **Pn** **12 25 27.8 -1.5**
KHET AMb AMB 12 25 34.9
comp=Z,118nm,1.3s
TIA Tai'an 20.07 51 *e*P **P** **12 25 25.8 -3.1**
WMQ Urumqi 20.62 339 P **P** **12 25 36.0 +1.2**
WMQ pP 12 25 40.0
WMQ sP sP 12 25 43.0 +5.5
WMQ PP 12 25 57.0
WMQ pmax pmax
comp=Z,67nm,1.1s
WMQ pmax pmax
comp=Z,710nm,4.1s
TPUB Ta-pu 20.89 90 *e*P **P** **12 25 38.4 +0.5**
comp=Z,45nm,0.8s
AJM Ajmer 20.94 279 *e*PKP **P** **12 25 39.2 +0.8**
AJM AMb AMB 12 25 45.7
comp=Z,242nm,1.3s
SSLB Suanglung 21.12 88 *e*P **P** **12 25 42.4 +2.0**
comp=Z,65nm,1.2s,mb4.8
TWG Pinlang 21.37 91 *e*P **P** **12 25 45.7 +2.6**
comp=Z,113nm,1.1s,mb5.1
YHNB Yeheng 21.40 86 *e*P **P** **12 25 44.2 +0.8**
comp=Z,88nm,1.5s,mb4.9
BJT Baijiatuau 21.56 41 *e*P **P** **12 25 45.5 +0.5**
comp=Z,24nm,0.8s,mb4.7
BJT Baijiatuau 21.56 41 *e*P **P** **12 25 45.5 +0.5**
BJT pmax pmax
comp=Z,24nm,0.8s
BJI Beijing 21.58 41 P **P** **12 25 45.6 +0.4**
BJI S **S** **12 29 45.8 +1.2**
BJI pmax pmax
comp=Z,35nm,1.2s,mb4.7
BJI pmax pmax
comp=Z,220nm,3.0s
BJI LR LR
comp=N,14μm,16.8s,MS5.5
BJI LR LR
comp=E,7μm,13.5s,MS5.5
BJI LR LR
comp=Z,8μm,21.3s
NACB Ninganchiao 21.65 87 *e*P **P** **12 25 47.8 +1.7**
comp=Z,50nm,1.1s,mb4.8
PSI Prapat 21.98 177 P **P** **12 25 48.3 -1.4**
comp=Z,5.8nm,0.8s,mb4.0,baz=353,slow=7.2,SNR=4.7
KSH Kashi 23.46 314 ⇓P **P** **12 26 06.3 +1.1**
KSH *e*pP 12 26 10.4
KSH *e*sP sP 12 26 13.3 +5.4
KSH *e*PP 12 26 37.3
KSH *e*PcP PcP 12 29 55.1 +4.0
KSH *e*S **S** **12 30 14.4 -4.3**
KSH *e*sS sS 12 30 20.1 -1.9
KSH *e*SS 12 30 59.1
KSH *e*PcS PcS 12 33 32.8 +2.5
KSH pmax pmax
comp=Z,21nm,1.5s,mb4.3
KSH LR LR
comp=N,3μm,9.9s
KSH LR LR
comp=E,2μm,8.1s
KSH LR LR
comp=Z,3μm,10.2s,MS5.1
SONM Songino Array 23.90 14 P **P** **12 26 06.5 -2.8**
comp=Z,11nm,0.9s,mb4.3,baz=189,slow=9.2,SNR=36
PALK Pallekele 23.96 226 *i* P **P** **12 26 18.5 +8.4**
ULN Ulaanbaatar 24.08 15 *e*P **P** **12 26 10.1 -0.8**
comp=Z,15nm,0.8s,mb4.5
ULN Ulaanbaatar 24.08 15 *e*P **P** **12 26 10.1 -0.8**
ULN pmax pmax
comp=Z,15nm,0.8s,mb4.5
ULN Ulaanbaatar 24.08 15 P **P** **12 26 11.5 +0.7**
SNR=11
ULHL Ulahol 24.84 319 P **P** **12 26 18.2 +0.2**
SNR=13
MK31 Makanchi Array 25.13 334 *e*P **P** **12 26 19.6 -0.9**
MKAR Makanchi Array 25.13 334 P **P** **12 26 19.5 -1.0**
comp=Z,4.9nm,0.5s,mb4.3,baz=140,slow=10,SNR=30
KZA Kyzart 25.34 318 P **P** **12 26 26.0 +3.6**
SNR=28
TKM2 Tokmak 2 25.63 320 P **P** **12 26 31.1 +6.0**
SNR=21
TKM2 Tokmak 2 25.63 320 *e*P **P** **12 26 26.7 +1.6**
comp=Z,34nm,1.0s,mb4.8
TKM2 Tokmak 2 25.63 320 *e*P **P** **12 26 26.7 +1.6**
TKM2 pmax pmax
comp=Z,34nm,1.0s,mb4.8
ZAK Zakamensk 25.81 8 *e*P **P** **12 26 24.8 -1.8**
ZAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.0
KBK Karagaybulak 25.86 319 P **P** **12 26 30.1 +3.0**
SNR=8.7
UCH Uchtor 25.87 318 P **P** **12 26 27.0 -0.3**
SNR=33
UCH Uchtor 25.87 318 *e*P **P** **12 26 27.4 +0.1**
comp=Z,7.6nm,0.9s,mb4.2
UCH Uchtor 25.87 318 *e*P **P** **12 26 27.4 +0.1**
UCH pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
AAK Ala-Archa 26.12 318 P **P** **12 26 34.1 +4.6**
SNR=14
AAK Ala-Archa 26.12 318 *e*P **P** **12 26 29.9 +0.5**
comp=Z,50nm,1.1s,mb5.0
AAK Ala-Archa 26.12 318 P **P** **12 26 29.4 -0.1**
comp=Z,16nm,0.9s,mb4.5,baz=139,slow=7.9,SNR=7.3
AAK Ala-Archa 26.12 318*c i*P **P** **12 26 29.6 +0.1**
AAK pmax pmax
comp=Z,19nm,0.8s,mb4.7
AAK Ala-Archa 26.12 318 P **P** **12 26 33.9 +4.4**
SNR=40
FRU Bishkek 26.16 319 *e*P **P** **12 26 31.0 +1.1**
FRU *e* 12 26 46.0
FRU pmax pmax
comp=Z,100nm,1.8s,mb5.0
CHMS Chumysh 26.18 319 P **P** **12 26 34.9 +4.9**
SNR=8.5
AML Almayashu 26.32 317 P **P** **12 26 31.7 +0.4**
SNR=27
AML Almayashu 26.32 317 *e*P **P** **12 26 31.5 +0.1**
USP Ospenovka 26.48 320 P **P** **12 26 37.8 +5.0**
SNR=14
EKS2 Erkin-Say 26.57 318 P **P** **12 26 34.9 +1.4**
SNR=34
EKS2 Erkin-Say 26.57 318 *e*P **P** **12 26 34.7 +1.1**
comp=Z,66nm,1.1s,mb5.1
EKS2 Erkin-Say 26.57 318 *e*P **P** **12 26 34.7 +1.1**
EKS2 pmax pmax
comp=Z,66nm,1.1s,mb5.1
KBL Kabul 26.70 298 *e*P **P** **12 26 36.7 +1.9**
comp=Z,134nm,1.1s,mb5.4
KBL Kabul 26.70 298 *e*P **P** **12 26 36.7 +1.9**
KBL pmax pmax
comp=Z,134nm,1.1s,mb5.4
KSRS Korea Array 28.52 57 P **P** **12 26 50.0 -1.2**
comp=Z,3.7nm,0.7s,mb4.2,baz=245,slow=9.0,SNR=11
CN2 Changchun 29.40 43 *e*P **P** **12 27 00.1 +1.2**
CN2 *e*S **S** **12 31 54.3 +1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,21μm,15.0s,MS6.0
CN2 LR LR
comp=E,13μm,15.0s,MS6.0
CN2 LR LR
comp=Z,14μm,17.0s,MS5.7
KURK Kurchatov 29.74 335 *e*P **P** **12 27 02.8 +1.0**
comp=Z,14nm,0.9s,mb4.7
KURK Kurchatov 29.74 335 P **P** **12 27 00.8 -0.9**
comp=Z,3.1nm,0.8s,mb4.1,baz=153,slow=7.6,SNR=12
KURK Kurchatov 29.74 335⇑*e*P **P** **12 26 59.9 -1.9**
KURK pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
KURK Kurchatov 29.74 335 P **P** **12 27 05.2 +3.5**
SNR=6.0
ZAA0 Zalesovo Array 30.61 345 *e*P **P** **12 27 07.6 -1.8**
ZALV Zalesovo Beam 30.61 345 P **P** **12 27 07.7 -1.8**
comp=Z,9.4nm,0.6s,mb4.8,baz=167,slow=8.7,SNR=21
NVS Novosibirsk 31.81 344 *e*P **P** **12 27 17.5 -2.5**
NVS pmax pmax
comp=N,27nm,1.3s
NVS pmax pmax
comp=Z,30nm,1.3s,mb5.0
NVS pmax pmax
comp=E,23nm,1.2s
MDJ Mudanjiang 32.41 45 P **P** **12 27 25.3 -0.1**
MDJ pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
MDJ pmax pmax
comp=Z,190nm,5.4s
BVAR Borovoye Array 34.87 331 P **P** **12 27 45.1 -1.6**
comp=Z,2.5nm,0.7s,mb4.3,baz=139,slow=9.2,SNR=7.7
BRVK Borovoye 34.94 331 *e*P **P** **12 27 47.2 -0.1**
comp=Z,41nm,1.6s,mb5.1
BRVK Borovoye 34.94 331⇑*e*P **P** **12 27 46.2 -1.1**
BRVK pmax pmax
comp=Z,13nm,1.0s,mb4.8
BRVK Borovoye 34.94 331 P **P** **12 27 50.1 +2.8**
SNR=7.2
KLR Kul'dur 35.91 39 *e*P **P** **12 27 48.7 -7.0**
MJAR Matsushiro Arr 36.38 62 P **P** **12 27 58.2 -1.8**
comp=Z,4.5nm,0.7s,mb4.5,baz=270,slow=9.8,SNR=9.6
ABKAR Akbulak array 38.20 319 *e*P **P** **12 28 14.0 -1.2**
comp=Z,22nm,1.0s,mb4.8
AKTK Aktyubinsk 39.83 320 P **P** **12 28 27.8 -1.0**
AKTO Aktyubinsk 39.83 320 P **P** **12 28 27.8 -1.0**
comp=Z,12nm,1.0s,mb4.6,baz=124,slow=7.1,SNR=18
ERM Erimo 41.00 54 *e*P **P** **12 28 38.6 -0.1**
comp=Z,32nm,0.9s,mb5.0
ERM Erimo 41.00 54*de*P **P** **12 28 39.6 +0.9**
ERM pmax pmax
comp=Z,40nm,1.0s,mb5.0
ASAJ Asahikawa 41.01 51 P **P** **12 28 36.9 -1.8**
comp=Z,39nm,0.7s,mb5.1,baz=241,slow=12,SNR=5.9
SVE Sverdlovsk 41.63 330 *e*P **P** **12 28 46.1 +2.5**
SVE pmax pmax
comp=Z,33nm,1.2s,mb4.8
YSS Yuzh-Sakhalins 41.82 47 *e*P **P** **12 28 46.2 +0.9**
comp=Z,36nm,1.2s,mb4.9
YSS Yuzh-Sakhalins 41.82 47⇑*e*P **P** **12 28 46.0 +0.7**
YSS pmax pmax
comp=Z,30nm,1.0s,mb4.9
ARU Arti 42.38 329 *e*P **P** **12 28 51.8 +2.1**
comp=Z,47nm,1.5s,mb4.9
ARU Arti 42.38 329*d i*P **P** **12 28 51.6 +1.9**
ARU *e* 12 30 29.3
ARU S **S** **12 35 13.7 +2.4**
ARU SS SS 12 38 19.8 -0.1
ARU pmax pmax
comp=Z,38nm,1.7s,mb4.8
RDF Al-Radifah 44.74 287 *e*P **P** **12 29 08.4 -0.8**
RDF AMb AMB 12 29 10.1
comp=Z,32nm,1.3s,mb5.0
MIB Mutribah 44.82 288 *e*P **P** **12 29 08.6 -1.2**
MIB AMb AMB 12 29 14.6
comp=Z,51nm,1.0s,mb5.3
SOKR Solikamsk 44.85 332*c i*P **P** **12 29 12.5 +3.0**
SOKR pmax pmax
comp=Z,50nm,1.3s,mb5.2
NAY Al-Naaiem 44.96 287 *e*P **P** **12 29 09.8 -1.2**
NAY AMb AMB 12 29 15.7
comp=Z,36nm,1.0s,mb5.2
GNI Garni 46.60 303 P **P** **12 29 24.2 +0.5**
comp=Z,4.1nm,0.3s,mb4.8,baz=292,slow=4.2,SNR=9.3
GNI Garni 46.60 303*ce*P **P** **12 29 24.7 +0.9**
GNI pmax pmax
comp=Z,47nm,1.2s
GNI Garni 46.60 303 P **P** **12 29 30.1 +6.4**
SNR=8.9
KIV Kislovodsk 48.36 308⇑*i*P **P** **12 29 37.3 0.0**
KIV pmax pmax
comp=Z,48nm,1.5s,mb5.3
KIV Kislovodsk 48.36 308 P **P** **12 29 42.4 +5.0**
SNR=8.1
VRHR Novokhopersk 49.95 317 *e*P **P** **12 29 50.4 +1.0**
VRHR pmax pmax
comp=N,6.0nm,0.4s
VRHR pmax pmax
comp=E,5.0nm,0.4s
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb5.2
TIXI Tiksi 49.96 12 *e*P **P** **12 29 46.8 -2.4**
TIXI *e* 12 29 53.2
TIXI pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
VSR Storozhevoye 51.50 317 *e*P **P** **12 30 01.3 +0.2**
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
MALT Malatya 51.52 300 *e*P **P** **12 30 03.0 +1.5**
comp=Z,42nm,2.1s,mb5.0
MALT Malatya 51.52 300 *e*P **P** **12 30 03.0 +1.5**
MALT pmax pmax
comp=Z,42nm,2.1s,mb5.0
SEY Seymchan 52.20 28⇓*e*P **P** **12 30 06.9 +0.8**
PETK Petropavlovsk- 52.52 41 P **P** **12 30 07.6 -1.0**
comp=Z,4.1nm,1.0s,mb4.3,baz=191,slow=6.8,SNR=6.0
MOS Moscow 53.09 322 *e*P **P** **12 30 14.2 +1.3**
MOS pmax pmax
comp=Z,86nm,1.3s,mb5.5
MOS pmax pmax
comp=Z,132nm,1.4s,mb5.7
KLMR Klimovskoe 53.23 329 P **P** **12 30 13.4 -0.4**
KLMR pmax pmax
comp=Z,81nm,1.4s,mb5.5
OBN Obninsk 53.59 321⇓*e*P **P** **12 30 17.9 +1.4**
OBN pmax pmax
comp=Z,42nm,1.2s,mb5.2
BR131 Keskin Array S 55.14 302 *e*P **P** **12 30 26.4 -1.7**
BRTR Keskin Array B 55.14 302 P **P** **12 30 25.9 -2.2**
comp=Z,1.1nm,0.9s,mb3.9,baz=108,slow=8.2,SNR=6.0
WRA Warramunga Arr 56.99 138 P **P** **12 30 38.9 -2.7**
comp=Z,4.2nm,0.6s,mb4.7,baz=319,slow=6.0,SNR=56
JOF Joensuu 57.47 330 *e*P **P** **12 30 42.3 -2.0**
JOF Joensuu 57.47 330 *e*p **P** **12 30 42.3 -2.0**
comp=Z,6.5nm,0.7s,mb4.8
APA Apatity 57.52 336⇑*e*P **P** **12 30 37.0 -7.6**
APA MLR MLR
comp=Z,3μm,16.0s,MS5.5
AKASG Malin Array Be 57.74 316 P **P** **12 30 43.6 -2.8**
comp=Z,3.9nm,0.7s,mb4.6,baz=78,slow=7.1,SNR=11
KIEV Kiev 57.75 316 *e*P **P** **12 30 46.6 +0.1**
comp=Z,8.6nm,0.9s,mb4.8
KIEV Kiev 57.75 316 *e*P **P** **12 30 46.6 +0.1**
KIEV pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
MICGM Minsk 58.55 320 *e* **P** **12 30 54.0 +1.9**
MNK Minsk 58.58 320 *e*P **P** **12 30 54.0 +1.7**
TIRR Tirgusor 58.60 308⇑P **P** **12 30 49.4 -3.2**
TIRR Tirgusor 58.60 308⇑*i*P **P** **12 30 49.4 -3.2**
BILL Bilibino 59.13 24⇓*e*P **P** **12 30 57.2 +1.4**
BILL pmax pmax
comp=Z,14nm,1.1s,mb4.9
ASAR Alice Springs 59.61 141 P **P** **12 30 56.6 -3.1**
comp=Z,2.0nm,0.7s,mb4.3,baz=325,slow=6.4,SNR=28
KAF Kangasniemi 59.68 329 *e*P **P** **12 31 00.3 +0.5**
comp=Z,2.1nm,0.6s,mb4.3
KAF Kangasniemi 59.68 329 *e*P **P** **12 31 00.3 +0.5**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
KAF Kangasniemi 59.68 329 *e*p **P** **12 31 00.3 +0.5**
comp=Z,2.1nm,0.6s,mb4.3
FINES FINESS Array B 59.75 328 P **P** **12 30 57.8 -2.4**
comp=Z,2.1nm,0.7s,mb4.3,baz=112,slow=8.6,SNR=4.1
MLR Muntele Rosu 60.25 310⇑P **P** **12 31 03.2 -0.7**
MLR Muntele Rosu 60.25 310⇑*i*P **P** **12 31 03.2 -0.7**
KEV Kevo 60.25 338 *e*P **P** **12 31 00.8 -2.7**
comp=Z,2.1nm,0.7s,mb4.3
KEV Kevo 60.25 338 *e*P **P** **12 31 00.8 -2.7**
KEV pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KEV Kevo 60.25 338 *e*p **P** **12 31 00.8 -2.7**
comp=Z,2.1nm,0.7s,mb4.3
BUR08 Bucovina Ar. S 60.54 312 *e*P **P** **12 31 06.3 +0.4**
ARCES ARCESS Array B 60.74 337 P **P** **12 31 04.9 -2.0**
comp=Z,1.2nm,0.5s,mb4.3,baz=92,slow=8.4,SNR=10
VOIR 60.88 310⇑P **P** **12 31 10.0 +1.8**
VOIR 60.88 310⇑*i*P **P** **12 31 10.0 +1.8**
KWP Kalwaria Pacla 61.08 315 P **P** **12 31 14.8 -0.8**
comp=Z,66nm,1.3s,mb5.6
KWP Kalwaria Pacla 61.98 315⇓P **P** **12 31 13.1 -2.5**
KWP Kalwaria Pacla 61.98 315⇓*i*P **P** **12 31 13.1 -2.5**
UZH Uzhgorod 62.37 314 *e*P **P** **12 31 16.6 -1.6**
UZH *e* 12 31 34.6
UZH *i* 12 32 01.2
CRVS Cervenica-Dubn 62.88 314 *e*P **P** **12 31 24.7 +3.0**
comp=Z,7.4nm,1.1s,mb4.7
CRVS Cervenica-Dubn 62.88 314 *e*P **P** **12 31 24.7 +3.0**
CRVS pmax pmax
comp=Z,7.0nm,1.1s,mb4.7
CRVS Cervenica-Dubn 62.88 314 *e*P **P** **12 31 24.7 +3.0**
KMBO Kilima Mbogo 64.01 256 *e*P **P** **12 31 29.3 -0.4**
comp=Z,15nm,1.6s,mb4.8
KMBO Kilima Mbogo 64.01 256 *e*P **P** **12 31 29.3 -0.4**
KMBO pmax pmax
comp=Z,15nm,1.6s
VYHS Vyhne 64.66 314 *e*P **P** **12 31 35.4 +2.0**
comp=Z,10nm,1.9s,mb4.5
VYHS Vyhne 64.66 314 *e*P **P** **12 31 35.4 +2.0**
VYHS pmax pmax
comp=Z,10.0nm,1.9s,mb4.5
VYHS Vyhne 64.66 314 *e*P **P** **12 31 35.4 +2.0**
CTA Charters Tower 64.95 129 P **P** **12 31 35.3 -0.3**
comp=Z,3.7nm,0.8s,mb4.5,baz=304,slow=3.6,SNR=3.2
MORC Moravsky Berou 65.28 315 *e*P **P** **12 31 38.4 +0.9**
comp=Z,9.6nm,1.1s,mb4.7
MORC Moravsky Berou 65.28 315 *e*P **P** **12 31 38.4 +1.0**
MORC pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
ZST Bratislava 65.85 314 *e*P **P** **12 31 43.0 +1.9**
ZST Bratislava 65.85 314 *e*P **P** **12 31 43.0 +1.9**
KSP Ksiaz 65.89 317 *e*P **P** **12 31 43.8 +2.5**
CONA Conrad Observa 66.72 314⇑*i*P **P** **12 31 45.7 -1.0**
comp=Z,16nm,1.1s,mb5.0
CSNA Conrad Observa 66.72 314⇓*i*P **P** **12 31 45.6 -1.1**
comp=Z,15nm,1.0s,mb5.0
NOA NORSAR Array B 66.93 328 P **P** **12 31 45.5 -2.3**
comp=Z,1.6nm,0.6s,mb4.2,baz=80,slow=6.3,SNR=9.7
BRG Berggiesshubel 67.34 317 *e*P **P** **12 31 54.3 +3.7**
comp=Z,11nm,1.3s,mb4.7
BRG Berggiesshubel 67.34 317 *e*P **P** **12 31 50.5 -0.1**
comp=Z,4.5nm,1.1s,mb4.4
BRG *e* 12 31 54.6
comp=Z,11nm,1.3s
BRG Berggiesshubel 67.34 317 *e*P **P** **12 31 50.5 -0.1**
BRG pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
BRG pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
SOKA Soboth 67.54 312 P **P** **12 31 56.0 +4.0**
comp=Z,8.7nm,1.2s,mb4.7
CLL Collm 67.83 318 P **P** **12 31 57.0 +3.3**
CLL Collm 67.83 318 *e*(P) **P** **12 31 57.0 +3.3**
GEC2 GERESS Array S 67.93 315 *e*P **P** **12 31 58.3 +3.9**
comp=Z,16nm,1.4s,mb4.9
GEC2 GERESS Array S 67.93 315 *e*P **P** **12 31 58.3 +3.9**
GEC2 pmax pmax
comp=Z,16nm,1.4s,mb4.9
WERD Werda 68.45 317 *e*P **P** **12 32 01.4 +3.8**
comp=Z,12nm,1.5s,mb4.7
GUNZ Gunzen 68.45 317 *e*P **P** **12 32 01.5 +3.9**
comp=Z,14nm,1.4s,mb4.8
MOX Moxa 68.83 317 *e*P **P** **12 31 58.7 -1.3**
comp=Z,8.0nm,1.1s,mb4.6
MOX Moxa 68.83 317 *e*P **P** **12 32 03.8 +3.8**
comp=Z,8.0nm,1.2s,mb4.5
MOX Moxa 68.83 317 *e*P **P** **12 31 58.7 -1.3**
MOX pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
NRDL Niedersach Rie 69.31 319 *e*P **P** **12 32 06.1 +3.2**
comp=Z,21nm,1.4s,mb4.9
GRA1 Grafenberg Arr 69.31 316 *e*P **P** **12 32 07.1 +4.1**
comp=Z,24nm,1.3s,mb5.0
GRF Grafenberg Arr 69.31 316 *e*P **P** **12 32 07.1 +4.1**
comp=Z,24nm,1.3s,mb5.0
GRF Grafenberg Arr 69.31 316 *e*P **P** **12 32 07.1 +4.1**
GRF pmax pmax
comp=Z,24nm,1.3s,mb5.0
GRF Grafenberg Arr 69.31 316 *e*P **P** **12 32 07.1 +4.1**
GRF pmax pmax
comp=Z,24nm,1.3s,mb5.0
MOTA Moosalm 69.98 314⇑*i*P **P** **12 32 05.5 -1.7**
comp=Z,7.6nm,0.8s,mb4.7
STKA Stephens Creek 70.25 141 P **P** **12 32 06.5 -2.4**
comp=Z,2.4nm,0.8s,mb4.2,baz=326,slow=11,SNR=2.8
FETA Feichten 70.32 313⇑*i*P **P** **12 32 03.9 -5.3**
comp=Z,15nm,1.2s,mb4.8
CDF Champ du Feu 72.16 316 *e*P **P** **12 32 20.3 0.0**
WLF Walferdange 72.48 317 P **P** **12 32 22.0 -0.2**
comp=Z,14nm,1.1s,mb4.8
LPG La Plagne 73.40 313 *e*P **P** **12 32 28.5 +0.7**
comp=Z,15nm,0.7s,mb4.7
LPG La Plagne 73.40 313 *e*P **P** **12 32 28.5 +0.7**
comp=Z,7.3nm,0.7s,mb4.7
LPG La Plagne 73.40 313 *e*P **P** **12 32 28.5 +0.7**
LPG pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
LPL La Plagne 73.41 313 *e*P **P** **12 32 28.3 +0.5**
comp=Z,16nm,0.8s,mb4.7
LPL La Plagne 73.41 313 *e*P **P** **12 32 28.3 +0.5**
comp=Z,7.9nm,0.8s,mb4.7
LPL La Plagne 73.41 313 *e*P **P** **12 32 28.3 +0.5**
LPL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SBF Sospel 73.46 311 *e*P **P** **12 32 28.2 0.0**
comp=Z,27nm,0.9s,mb4.9
SBF Sospel 73.46 311 *e*P **P** **12 32 28.2 0.0**
comp=Z,14nm,0.9s,mb4.9
SBF Sospel 73.46 311 *e*P **P** **12 32 28.2 0.0**
SBF pmax pmax
comp=Z,14nm,0.9s,mb4.9
CABF La Chapelle 73.48 314 *e*P **P** **12 32 28.3 0.0**
MBDF Montbardon 73.64 312 *e*P **P** **12 32 28.5 -0.7**
comp=Z,8.6nm,0.9s,mb4.4
MBDF Montbardon 73.64 312 *e*P **P** **12 32 28.5 -0.7**
comp=Z,4.3nm,0.9s,mb4.4
MBDF Montbardon 73.64 312 *e*P **P** **12 32 28.5 -0.7**
MBDF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
FRF La Foret Royal 74.10 311 *e*P **P** **12 32 31.8 -0.1**
ORIF Oris-en-Rattie 74.17 312 *e*P **P** **12 32 32.2 -0.1**
comp=Z,8.9nm,0.8s,mb4.5
ORIF Oris-en-Rattie 74.17 312 *e*P **P** **12 32 32.2 -0.1**
comp=Z,4.4nm,0.8s,mb4.4
ORIF Oris-en-Rattie 74.17 312 *e*P **P** **12 32 32.2 -0.1**
ORIF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
LMR La Mourre 74.27 311 *e*P **P** **12 32 33.6 +0.7**
comp=Z,43nm,1.1s,mb5.0
LMR La Mourre 74.27 311 *e*P **P** **12 32 33.6 +0.7**
comp=Z,22nm,1.1s,mb5.0
LMR La Mourre 74.27 311 *e*P **P** **12 32 33.6 +0.7**
LMR pmax pmax
comp=Z,22nm,1.1s,mb5.0
SMRF Simiane la Rot 74.69 312 *e*P **P** **12 32 35.0 -0.4**
SMF Signal de Mont 74.93 315 *e*P **P** **12 32 36.6 -0.1**
comp=Z,50nm,1.4s,mb4.9
SMF Signal de Mont 74.93 315 *e*P **P** **12 32 36.6 -0.1**
comp=Z,25nm,1.4s,mb5.0
SMF Signal de Mont 74.93 315 *e*P **P** **12 32 36.6 -0.1**
SMF pmax pmax
comp=Z,25nm,1.4s,mb5.0
SSF Saint Saulge 75.00 315 *e*P **P** **12 32 37.2 +0.1**
comp=Z,14nm,0.9s,mb4.6
SSF Saint Saulge 75.00 315 *e*P **P** **12 32 37.2 +0.1**
comp=Z,7.1nm,0.9s,mb4.6
SSF Saint Saulge 75.00 315 *e*P **P** **12 32 37.2 +0.1**
SSF pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
VIVF Saint-Julien-l 75.00 313 *e*P **P** **12 32 37.2 +0.1**
TTA Tatalina 75.15 27 *e*P **P** **12 32 37.6 -0.1**
AVF Avril sur Loir 75.19 315 *e*P **P** **12 32 38.1 -0.1**
comp=Z,18nm,1.1s,mb4.6
AVF Avril sur Loir 75.19 315 *e*P **P** **12 32 38.1 -0.1**
comp=Z,9.1nm,1.1s,mb4.6
AVF Avril sur Loir 75.19 315 *e*P **P** **12 32 38.1 -0.1**
AVF pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
LASF Ste Croix 75.82 312 *e*P **P** **12 32 42.1 +0.2**
TCF Toulx Ste Croi 76.11 315 *e*P **P** **12 32 43.9 +0.4**
comp=Z,27nm,1.1s,mb4.8
TCF Toulx Ste Croi 76.11 315 *e*P **P** **12 32 43.9 +0.4**
comp=Z,13nm,1.1s,mb4.8
TCF Toulx Ste Croi 76.11 315 *e*P **P** **12 32 43.9 +0.4**
TCF pmax pmax
comp=Z,13nm,1.1s,mb4.8
CAF Calviac 76.71 313 *e*P **P** **12 32 47.4 +0.5**
LDF La Druitiere 76.72 317 *e*P **P** **12 32 46.7 -0.2**
RJF Les Rejaudoux 76.93 314 *e*P **P** **12 32 48.9 +0.8**
comp=Z,27nm,1.2s,mb4.8
RJF Les Rejaudoux 76.93 314 *e*P **P** **12 32 48.9 +0.8**
comp=Z,14nm,1.2s,mb4.8
RJF Les Rejaudoux 76.93 314 *e*P **P** **12 32 48.9 +0.8**
RJF pmax pmax

comp=Z,14nm,1.2s,mb4.8
MTLF Montolieu 77.20 312 *e*P **P 12 32 49.9 +0.2**
GRR Gorron 77.25 317 *e*P **P 12 32 49.8 -0.1**
COLA College 77.38 23 *e*P **P 12 32 50.3 +0.1**
comp=Z,5,6nm,0.9s,mb4.5
COLA College 77.38 23 *e*P **P 12 32 50.3 0.0**
COLA pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
LFF La Freestale 77.57 314 *e*P **P 12 32 52.5 +0.7**
RSO Redoubt South 77.66 29 *e*P **P 12 32 54.9 +2.9**
ILAR Eielson Array 77.78 23 P **P 12 32 49.0 -3.5**
comp=Z,0.5nm,0.8s,mb3.5,baz=285,slow=6.2,SNR=6.0
SUMG Summit 78.39 348 *e*P **P 12 32 56.8 +1.0**
comp=Z,15nm,1.0s,mb4.9
SUMG Summit 78.39 348 *e*P **P 12 32 56.8 +1.0**
SUMG pmax pmax
comp=Z,15nm,1.0s
LSZ Lusaka 78.72 247 *e*P **P 12 32 57.1 -1.3**
comp=Z,7.3nm,0.8s,mb4.7
LSZ Lusaka 78.72 247 *e*P **P 12 32 57.2 -1.3**
LSZ pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
ETSF Etsaut 79.24 312 *e*P **P 12 33 01.6 +0.6**
EGAK Eagle 79.78 22 *e*P **P 12 33 03.1 -0.4**
comp=Z,26nm,2.0s,mb4.8
INK Inuvik 79.78 17 *e*P **P 12 33 05.0 +1.5**
comp=Z,147nm,3.0s
INK Inuvik 79.78 17 *e*P **P 12 33 05.0 +1.5**
INK pmax pmax
comp=Z,147nm,3.0s
BMRM Bremner River 80.79 26 *e*P **P 12 33 08.8 -0.2**
comp=Z,11nm,0.8s,mb4.8
TAM Tamanrasset 82.66 292 *e*P **P 12 33 21.3 +1.6**
comp=Z,2.9nm,0.9s,mb4.3
TAM Tamanrasset 82.66 292 *e*P **P 12 33 21.3 +1.6**
TAM pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
ESDC Sonseca Array 82.93 310 P **P 12 33 19.2 -1.6**
ESDC Sonseca Array 82.93 310 P **P 12 33 19.2 -1.6**
comp=Z,0.2nm,0.3s,mb3.6,baz=35,slow=5.6,SNR=6.2
LBTB Lobatse 85.65 240 *e*P **P 12 33 33.9 -0.8**
comp=Z,31nm,1.1s,mb5.5
LBTB Lobatse 85.65 240 *e*P **P 12 33 33.9 -0.8**
LBTB pmax pmax
comp=Z,31nm,1.1s,mb5.5
BOSA Boshof 87.70 237 P **P 12 33 43.3 -1.4**
comp=Z,6.9nm,0.7s,mb5.0,baz=100,slow=1.3,SNR=9.2
YKA Yellowknife Ar 89.16 14 P **P 12 33 47.9 -3.1**
comp=Z,0.3nm,0.5s,mb3.9,baz=162,slow=14,SNR=2.4
TORD Torodi Ar. Bea 89.98 284 P **P 12 33 54.2 -1.6**
comp=Z,2.0nm,1.0s,mb4.4,baz=64,slow=4.5,SNR=7.2
AHID Auburn Hatcher 107.60 22 *e*Pdif Pdif Pdif 12 35 19.4 +4.7
TXAR Lajitas Array 122.28 22 PKP PKPdf 12 39 48.5 -2.8
comp=Z,0.3nm,0.6s,baz=102,slow=0.3,SNR=5.3
ROSC El Rosal 149.47 344 *e*PKPbc PKPbc 12 40 45.4 -0.4

BJI ***21*** *12:24:27.8, 24.˚91N×97.˚79E, h14km, mB5.7/29, mb5.2/48, ML5.8/7, Ms6.1/64, Ms7 5.8/55*
NEIC ***21*** *12:24:30.9±0.1, 25.˚04N×97.˚70E, h10km, mb5.6/109, ME6.6, MS5.9/189, MW6.0, MW6.0, Error ellipse: s-maj=4.6km s-min=3.0km az=23.0 Broadband fault plane solution: P waves. NP1:ϕs235.00000°, δ85.00000°, λ-10.00000°. NP2:ϕs326.00000°, δ80.00000°, λ-175.00000°. Principal axes: T Plg3.0000°, Azm281.0000°; N Plg0.0000°, Azm0.0000°; P Plg11.0000°, Azm190.0000°; Moment Tensor Solution. s81 Moment tensor: Scale 10¹⁸ Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: Mo1.10000×10¹⁸ NP1:ϕs295.00000°, δ34.00000°, λ0.00000°. NP2:ϕs205.00000°, δ90.00000°, λ124.00000°. Principal axes: T 1.2400, Plg36.0000°, Azm143.0000°; N -0.5500, Plg33.0000°, Azm24.0000°; P -0.6900, Plg35.0000°, Azm265.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Five people killed, 127 injured and severe damage at Yingjiang, China. Felt [II] at Bangkok, Thailand.
ISCJB ***21*** *12:24:30.0±0.1, 25.˚20N±0.˚02×97.˚69E±0.˚02, h10km, mb5.4/271, MS5.8/285 Error ellipse: s-maj=2.8km s-min=2.0km az=13.7*
IDC ***21*** *12:24:31.0±1.7, 25.˚10N×98.˚06E, h16km±9km, mb4.9/33, mb1 4.9/34, mb1mx4.9/34, mbtmp4.8/34, ML5.7/1, MS5.6/34, Ms1 5.6/34, ms1mx5.6/40, Error ellipse: s-maj=11.8km s-min=8.0km az=53.0*
MOS ***21*** *12:24:31.7±1.1, 25.˚01N×97.˚83E, h33km, mb5.6/108, MS5.7/95, Error ellipse: s-maj=7.8km s-min=4.0km az=121.6*
GCMT ***21*** *12:24:35.7±0.1, 24.˚92N×97.˚99E, h18km, MW6.0, Moment Tensor Solution. s105,c200; s81,c128; Moment tensor: Scale 10¹⁸Nm; Mrr-0.07±.01; Mθθ0.36±.01; Mφφ-0.28±.01; Mrθ0.24±.02; Mθφ1.25±.01; Mφr0.05±.02; Best double couple: Mo1.30000×10¹⁸ NP1:ϕs7.00000°, δ80.00000°, λ178.00000°. NP2:ϕs97.00000°, δ88.00000°, λ10.00000°. Principal axes: T 1.3600, Plg9.0000°, Azm323.0000°; N -0.1000, Plg80.0000°, Azm111.0000°; P -1.2600, Plg5.0000°, Azm232.0000°; Data Used: II IU CN IC G. Surface waves: sta=111, comp=254, per= 50.*
SZGRF ***21*** *12:24:35.6, 24.˚70N×97.˚42E, h33km, mb5.9, MS5.9, Myanmar-China border region*
DJA ***21*** *12:24:35, 25.˚28N×97.˚95E, h13km, Mw5.9/38*
BGS ***21*** *12:24:36.3±2.3, 26.˚19N×97.˚65E, h10km, mb5.3, MS5.9*
CSEM ***21*** *12:24:48.0±99.0, 33.˚00N×8.˚00E, h1km, After MOLD*
ISC 21 12:24:31.9±0.1**, 25.˚21N**±0.˚02×**97.˚72E**±0.˚02**, h10**km**, (h17**km**±1.7**km**:pP-P), n1076,** σ1**°21**/978**, mb5.4**/271**, MS5.8**/285**, 65C-49D, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IMP	**Imphal**	**3.46**	**264**	*ex*		**Pn**	**12 25 29.0**	**+3.1**
IMP				*i* x		**Sg**	**12 26 21.0**	**-2.2**
KMI	**Kunming**	**4.55**	**90**	Pn		**Pn**	**12 25 39.8**	**-0.9**
KMI				Pg		**Pb**	**12 25 51.4**	**-0.4**
KMI				Sn		**Sn**	**12 26 33.3**	**-0.4**
KMI				Sg		**Sb**	**12 26 46.1**	**-0.5**
KMI				smax				
	comp=N,15μm,1.6s							
KMI				smax				
	comp=E,12μm,1.7s							
KMI				LR	LR			
	comp=N,837μm,14.2s							
KMI				LR	LR			
	comp=E,100μm,9.0s							
KMI				LR	LR			
	comp=Z,82nm,10.6s							
SHL	**Shillong**	**5.29**	**275**	*ex*		**Pb**	**12 26 00.0**	**-4.5**
AGT	**Agartala**	**6.04**	**259**	*i* x		x	12 26 10.0	
CHG	**Chiang Mai**	**6.46**	**170**	PG		**Pb**	**12 26 27.3**	**+2.9**
CHG				SG		**Sg**	**12 27 48.3**	**-11**
CMAR	**Chiang Mai Arr**	**6.81**	**170**	Pn		**Pn**	**12 26 09.3**	**-2.5**
	comp=Z,38nm,0.3s,baz=348,slow=14,SNR=19							
CMAR				Pg		**Pb**	**12 26 33.0**	**+2.7**
	comp=Z,108nm,0.3s,baz=354,slow=16,SNR=25							
CMAR				Lg			12 27 59.2	
	comp=Z,212nm,0.3s,baz=353,slow=18,SNR=4.7							
CMAR				LR	LR		12 28 29.3	
	comp=Z,55μm,21.3s,baz=203,slow=36							
LSA	**Lhasa**	**7.36**	**309**	*e*Pn		**Pn**	**12 26 22.9**	**+3.6**
	comp=Z,250nm,0.5s							
LSA	**Lhasa**	**7.36**	**309**	*e*P		**Pn**	**12 26 22.9**	**+3.6**
LSA				pmax	pmax			
	comp=Z,250nm,0.5s							
CD2	**Chengdu**	**7.79**	**42**	Pn		**Pn**	**12 26 29.8**	**+4.5**
CD2				Pg		Pn	12 27 06.5	+41
CD2				Sg		Sn	12 28 48.4	+55
CD2				smax				
	comp=N,2μm,2.3s							
CD2				smax				
	comp=E,2μm,2.4s							
GYA	**Guiyang**	**8.15**	**79**	⇑ *i*P		**Pn**	**12 26 26.3**	**-4.0**
GYA				S		**Sn**	**12 27 58.9**	**-3.6**
GYA				pmax	pmax			
	comp=Z,280nm,1.0s							
GYA				pmax	pmax			
	comp=Z,11μm,5.2s							
GYA				LR	LR			
	comp=N,327μm,13.7s							
GYA				LR	LR			
	comp=E,76μm,11.3s							
GYA				LR	LR			
	comp=Z,72μm,10.6s							
GTK	**Gangtok**	**8.44**	**286**	*e*PKP		**Pn**	**12 26 35.0**	**+0.7**
TAPN	**Taplejung**	**9.24**	**286**	*e*P		**Pn**	**12 26 47.4**	**+2.2**
	comp=Z,370nm,0.7s							
ODAN	**Odare**	**9.44**	**282**	*e*P		**Pn**	**12 26 50.0**	**+2.1**
	comp=Z,812nm,0.9s							
RAMN	**Ramite**	**10.15**	**282**	*e*P		**Pn**	**12 26 58.7**	**+1.0**
	comp=Z,555nm,0.7s							
JIRN	**Jiri**	**10.62**	**286**	*e*P		**Pn**	**12 27 05.5**	**+1.4**
	comp=Z,471nm,0.7s							
GUN	**Gumba**	**10.94**	**287**	*e*P		**Pn**	**12 27 08.9**	**+0.4**
	comp=Z,2μm,1.0s							
PKI	**Pulchoki**	**11.29**	**285**	*e*P		**Pn**	**12 27 14.0**	**+0.7**
	comp=Z,287nm,0.7s							
PKIN	**Phulchoki**	**11.30**	**285**	*e*P		**Pn**	**12 27 13.5**	**+0.1**
PKIN	**Phulchoki**	**11.30**	**285**	*e*P		**Pn**	**12 27 15.0**	**+1.6**
	comp=Z,326nm,0.6s							
KKN	**Kakani**	**11.44**	**286**	*e*P		**Pn**	**12 27 15.7**	**+0.4**
	comp=Z,166nm,0.5s							
DMN	**Daman**	**11.56**	**285**	*e*P		**Pn**	**12 27 18.0**	**+1.0**
	comp=Z,516nm,1.0s							
ENH	**Enshi**	**11.57**	**62**	*e*Pn		**Pn**	**12 27 16.8**	**-0.3**
	comp=Z,513nm,1.2s							
BWNR	**Bhubaneshwar**	**12.03**	**248**	*ex*		**Pn**	**12 27 24.0**	**+0.5**
GKN	**Gorkha**	**12.04**	**286**	*e*P		**Pn**	**12 27 23.1**	**-0.4**
	comp=Z,227nm,0.6s							
LZH	**Lanzhou**	**12.05**	**24**	*e*P		**Pn**	**12 27 27.5**	**+3.8**
LZH				pP			12 27 30.8	
LZH				sP			12 27 33.4	
LZH				PP			12 27 40.3	
LZH				*e*S		**Sn**	**12 29 46.4**	**+8.3**
LZH				sS			12 29 51.6	
LZH				SS			12 29 58.1	
LZH				pmax	pmax			
	comp=Z,33nm,1.0s							
LZH				pmax	pmax			
	comp=Z,250nm,5.9s							
LZH				LR	LR			
	comp=N,101μm,14.3s							
LZH				LR	LR			
	comp=E,215μm,14.7s							
LZH				LR	LR			
	comp=Z,124μm,15.4s							
QIZ	**Qiongzhong**	**12.80**	**116**	P		**Pn**	**12 27 31.3**	**-2.7**
QIZ				pP			12 27 33.9	
QIZ				sP			12 27 38.8	
QIZ				S		**Sn**	**12 29 53.8**	**-2.8**
QIZ				pmax	pmax			
	comp=Z,94nm,1.4s							
QIZ				pmax	pmax			
	comp=Z,2μm,12.3s							
QIZ				LR	LR			
	comp=N,142μm,14.7s							
QIZ				LR	LR			
	comp=E,53μm,18.1s							
QIZ				LR	LR			
	comp=Z,48μm,10.7s							
QIZ	**Qiongzhong**	**12.80**	**116**	*e*Pn		**Pn**	**12 27 32.3**	**-1.7**
	comp=Z,194nm,1.3s							
DANN	**Dangsing**	**12.86**	**287**	*e*P		**Pn**	**12 27 34.1**	**-0.7**
	comp=Z,87nm,0.5s							
KOLN	**Koldanda**	**12.90**	**284**	*e*P		**Pn**	**12 27 34.5**	**-0.9**
	comp=Z,163nm,0.8s							
XAN	**Xi'an**	**13.12**	**45**	P		**Pn**	**12 27 39.8**	**+1.5**
XAN				pP			12 27 45.9	
XAN				LR	LR			
	comp=N,65μm,14.1s							
XAN				LR	LR			
	comp=E,19μm,14.1s							
XAN				LR	LR			
	comp=Z,16μm,16.1s							
GTA	**Gaotai**	**14.27**	**7**	⇓P		**Pn**	**12 27 56.8**	**+2.8**
GTA				pP			12 27 59.9	-4.2
GTA				sP			12 28 02.3	-3.1
GTA				S		**Sn**	**12 30 35.9**	**+3.6**
GTA				SS			12 30 50.0	
GTA				LR	LR			
	comp=N,28μm,18.3s							
GTA				LR	LR			
	comp=E,183μm,16.8s							
GTA				LR	LR			
	comp=Z,26μm,14.7s							
GZH	**Guangzhou**	**14.42**	**95**	P		**Pn**	**12 28 04.3**	**+8.3**
GZH				S		**Sn**	**12 30 49.5**	**+13**
GZH				LR	LR			
	comp=N,41μm,9.0s							
GZH				LR	LR			
	comp=E,59μm,13.5s							
GZH				LR	LR			
	comp=Z,74μm,14.8s							
VIS	**Vishakhapatnam**	**15.32**	**244**	*e*PKP		**Pn**	**12 28 08.7**	**+0.4**
VIS				*i* x		x	12 31 10.8	
WHN	**Wuhan**	**15.63**	**66**	P		**Pn**	**12 28 07.5**	**-4.7**
WHN				S		**Sn**	**12 31 00.4**	**-5.1**
WHN				LR	LR			
	comp=N,184μm,13.7s							
WHN				LR	LR			
	comp=E,55μm,8.2s							
WHN				LR	LR			
	comp=Z,45μm,8.2s							
JOSI	**Joshimath**	**16.92**	**292**	*e*PKP		**Pn**	**12 28 29.1**	**+0.4**
TIY	**Taiyuan**	**17.66**	**42**	*e*P		**Pn**	**12 28 38.3**	**+0.3**
TIY				pP			12 28 41.9	+0.2
TIY				sP			12 28 45.4	+2.4
TIY				S		**Sn**	**12 31 55.3**	**+0.6**
TIY				sS			12 32 01.5	-5.2
TIY				pmax	pmax			
	comp=Z,150nm,1.0s							
TIY				pmax	pmax			
	comp=Z,2μm,4.8s							
TIY				LR	LR			
	comp=N,21μm,13.2s							
TIY				LR	LR			
	comp=E,13μm,9.3s							
TIY				LR	LR			
	comp=Z,32μm,18.1s							
AGRA	**Agra**	**17.86**	**281**	*e*PKP		**Pn**	**12 28 40.7**	**+0.2**
DDI	**Dehra Dun**	**18.13**	**291**	*e*PKP		**Pn**	**12 28 45.5**	**+1.7**
DDI				*ex*		x	12 32 16.0	
KLP	**Kalpa**	**18.25**	**295**	*e*PKP		**Pn**	**12 28 43.8**	**-1.5**
KLP				AMb	AMB		12 29 02.4	
	comp=Z,516nm,1.6s							
BTO	**Baotou**	**18.47**	**31**	*e*P		**Pn**	**12 28 45.8**	**-2.1**
BTO				LR	LR			
	comp=N,40μm,14.2s							
BTO				LR	LR			
	comp=E,11μm,12.7s							
NDI	**New Delhi**	**18.61**	**285**	*ex*		**Pn**	**12 28 47.0**	**-2.7**
NDI				*ex*		x	12 32 37.0	
BHPL	**Bhopal**	**18.62**	**268**	*e*PKP		**Pn**	**12 28 50.4**	**+0.6**
BHPL				AMb	AMB		12 28 59.5	
	comp=Z,600nm,1.5s							
AYAN	**Aya Nagar**	**18.66**	**285**	*e*PKP		**Pn**	**12 28 48.8**	**-1.6**
AYAN				AMb	AMB		12 29 01.5	
	comp=Z,400nm,1.3s							
SONA	**Sohna**	**18.68**	**284**	*e*PKP		**Pn**	**12 28 50.1**	**-0.5**
SONA				AMb	AMB		12 29 02.0	
	comp=Z,445nm,1.4s							
QZH	**Quanzhou**	**18.91**	**86**	⇑ *i*P		**Pn**	**12 28 53.5**	**+0.2**
QZH				S		**Sn**	**12 32 16.3**	**-8.8**
QZH				LR	LR			
	comp=E,52μm,9.5s							
QZH				LR	LR			
	comp=Z,97μm,11.4s							
SMLA	**Simla**	**19.05**	**293**	*i* P		**Pn**	**12 28 55.1**	**+0.1**
SMLA				AMb	AMB		12 28 56.2	
	comp=Z,128nm,0.1s							
SMLA				*i* x		x	12 32 32.5	
KKR	**Kurukshetra**	**19.12**	**289**	*e*PKP		**Pn**	**12 28 55.4**	**-0.5**
KUDL	**Kundal**	**19.20**	**283**	*e*PKP		**Pn**	**12 28 54.1**	**-2.7**
KUDL				AMb	AMB		12 29 08.2	
	comp=Z,504nm,1.3s							
SDNR	**Sundarnagar**	**19.30**	**294**	*e*PKP		**Pn**	**12 28 56.1**	**-1.9**
HHC	**Hu-ho-hao-te**	**19.40**	**33**	*e*P		**Pn**	**12 29 01.8**	**+2.6**
HHC				pP		pP	12 29 05.3	+4.4
HHC				sP		sP	12 29 09.0	+6.8
HHC				PP			12 29 20.3	
HHC				S		**Sn**	**12 32 35.8**	**-1.0**
HHC				sS		sS	12 32 42.4	+0.6
HHC				SS			12 33 03.9	
HHC				pmax	pmax			
	comp=Z,110nm,1.4s							
HHC				LR	LR			
	comp=N,42μm,12.0s							
HHC				LR	LR			
	comp=E,30μm,12.3s							
HHC				LR	LR			
	comp=Z,38μm,14.0s							
HYB	**Hyderabad**	**19.46**	**250**	*i* P		**Pn**	**12 28 59.0**	**-1.0**
	comp=Z,740nm,1.0s							
HYB				*e*S		**Sn**	**12 32 44.0**	**+5.6**
HYB				LR	LR		12 37 12.0	
	comp=Z,61nm,20.0s							
AKL	**Akola**	**19.59**	**261**	*e*PKP		**Pn**	**12 29 00.5**	**-1.0**
AKL				*ex*		x	12 29 07.3	
	comp=Z,629nm,1.7s							
AKL				*i* x		x	12 32 35.8	
BSI	**Banda Aceh**	**19.74**	**187**	P		**Pn**	**12 29 06.3**	**+3.0**
	comp=Z,5μmcomp=Z,330nm,1.5s							
BHK	**Bhakra**	**19.74**	**293**	*e*PKP		**Pn**	**12 29 01.4**	**-1.9**
NJ2	**Nanjing**	**19.75**	**65**	*e*P		**Pn**	**12 29 00.0**	**-3.4**
NJ2				pP		pP	12 29 08.0	+3.3
NJ2				sP		sP	12 29 12.0	+6.0
NJ2				PP			12 29 15.8	
NJ2				S		**Sn**	**12 32 32.0**	**-13**
NJ2				sS		sS	12 32 51.0	+2.0
NJ2				pmax	pmax			
	comp=N,100nm,1.0s							
NJ2				pmax	pmax			
	comp=Z,2μm,5.6s							
NJ2				LR	LR			
	comp=N,79μm,11.4s							
NJ2				LR	LR			
	comp=E,33μm,10.8s							
NJ2				LR	LR			
	comp=Z,19μm,9.1s							
KHET	**Khetri**	**19.80**	**283**	*e*PKP		**Pn**	**12 29 02.9**	**-1.1**
KHET				AMb	AMB		12 29 18.2	
	comp=Z,741nm,1.5s							
TIA	**Tai'an**	**19.93**	**52**	*e*P		**Pn**	**12 29 02.4**	**-3.1**
TIA				S		**Sn**	**12 32 48.5**	**-1.0**
TIA				pmax	pmax			
	comp=Z,60nm,1.6s							
TIA				pmax	pmax			
	comp=Z,8μm,12.4s							
TIA				LR	LR			
	comp=N,40μm,16.0s							
TIA				LR	LR			
	comp=E,24μm,15.5s							
TIA				LR	LR			
	comp=Z,13μm,14.9s							
WMQ	**Urumqi**	**20.30**	**339**	P		**P**	**12 29 09.0**	**+1.3**
WMQ				pP			12 29 13.0	
WMQ				sP		sP	12 29 16.0	+4.1
WMQ				PP			12 29 29.3	
WMQ				S		**S**	**12 32 51.1**	**-4.1**
WMQ				SS			12 33 20.4	
WMQ				PcP		PcP	12 33 22.0	+0.9
WMQ				ScP		ScP	12 36 56.6	-1.1
WMQ				pmax	pmax			
	comp=Z,490nm,1.1s							
WMQ				pmax	pmax			
	comp=Z,7μm,6.0s							
WMQ				LR	LR			
	comp=N,34μm,14.2s,MS6.0							
WMQ				LR	LR			
	comp=E,37μm,17.0s,MS6.0							
WMQ				LR	LR			
	comp=Z,22μm,16.4s,MS5.6							
DLH	**Dalhousie**	**20.39**	**296**	*ex*		**P**	**12 29 11.0**	**+2.2**
DLH				*ex*		x	12 33 12.0	
MDRS	**Chennai**	**20.43**	**237**	⇓ *i*P		Px	12 29 30.2	
MDRS				*i* S		Sx	12 33 16.9	
KTGM	**Kuala Trenggan**	**20.44**	**164**	P		**P**	**12 29 10.7**	**+1.2**
LATR	**Latur**	**20.77**	**255**	*e*PKP		**P**	**12 29 14.4**	**+1.3**
AJM	**Ajmer**	**20.81**	**278**	*e*PKP		**P**	**12 29 14.3**	**+0.8**
IPM	**Ipoh**	**20.85**	**171**	P		**P**	**12 29 15.1**	**+1.1**
IPM	**Ipoh**	**20.85**	**171**	P		**P**	**12 29 13.9**	**-0.1**
	comp=Z,4μmcomp=Z,322nm,1.2s							
TPUB	**Ta-pu**	**20.97**	**90**	*e*P		**P**	**12 29 13.1**	**-2.2**
	comp=Z,516nm,1.2s							
TPUB				*e*S		**S**	**12 33 08.4**	**-0.6**
SSLB	**Suanglung**	**21.18**	**89**	*e*P		**P**	**12 29 17.4**	**-0.1**
	comp=Z,417nm,1.2s,mb5.6							
BJT	**Baijiatuau**	**21.37**	**42**	*e*P		**P**	**12 29 19.2**	**-0.3**
	comp=Z,306nm,1.0s,mb5.6							
BJT				LR	LR			
	comp=Z,18μm,22.0s,MS5.4							
BJT	**Baijiatuau**	**21.37**	**42**	*e*P		**P**	**12 29 19.2**	**-0.3**
BJT				pmax	pmax			
	comp=Z,306nm,1.0s							
BJT				MLR	MLR			
	comp=Z,18μm,22.0s							
BJI	**Beijing**	**21.39**	**42**	P		**P**	**12 29 18.8**	**-0.8**
BJI				S		**S**	**12 33 19.8**	**+2.8**
BJI				sS		sS	12 33 25.4	+3.8
BJI				pmax	pmax			
	comp=Z,270nm,1.8s,mb5.3							
BJI				pmax	pmax			
	comp=Z,4μm,8.9s							
BJI				LR	LR			
	comp=N,55μm,15.4s,MS6.2							
BJI				LR	LR			
	comp=E,46μm,15.9s,MS6.2							
BJI				LR	LR			
	comp=Z,15μm,22.1s							
YHNB	**Yeheng**	**21.45**	**86**	*e*P		**P**	**12 29 20.1**	**-0.3**
	comp=Z,370nm,1.3s,mb5.5							
YHNB				LR	LR			
	comp=Z,40μm,20.0s,MS5.8							
TWG	**Pinlang**	**21.46**	**91**	*e*P		**P**	**12 29 19.9**	**-0.6**
	comp=Z,566nm,1.2s,mb5.8							
SSE	**Sheshan**	**21.48**	**69**	P		**P**	**12 29 22.0**	**+1.3**
SSE				sS		sS	12 33 27.4	+3.8
SSE				pmax	pmax			
	comp=Z,250nm,1.0s,mb5.5							
SSE				pmax	pmax			
	comp=Z,3μm,8.4s							
SSE				LR	LR			
	comp=N,111μm,18.5s,MS6.3							
SSE				LR	LR			
	comp=E,15μm,18.5s,MS6.3							
SSE				LR	LR			
	comp=Z,30μm,10.6s							
TATO	**Taipei**	**21.52**	**86**	*e*P		**P**	**12 29 23.0**	**+1.8**
	comp=Z,2μm,2.6s,mb6.2							
TATO				LR	LR			
	comp=Z,32μm,19.0s,MS5.7							
YULB	**Yu-li**	**21.56**	**90**	*e*P		**P**	**12 29 21.8**	**+0.2**
	comp=Z,349nm,1.3s,mb5.6							
NACB	**Ninganchiao**	**21.71**	**88**	*e*P		**P**	**12 29 23.8**	**+0.6**
	comp=Z,660nm,1.4s,mb5.9							
TPTI		**21.83**	**181**	P		**P**	**12 29 29.4**	**+4.9**
	comp=Z,2μmcomp=Z,148nm,1.3s,mb5.3							
FRIM	**Kepong**	**22.16**	**170**	P		**P**	**12 29 29.5**	**+1.4**
PSI	**Prapat**	**22.31**	**177**	P		**P**	**12 29 28.2**	**-1.4**
	comp=Z,84nm,1.0s,mb5.1,baz=349,slow=11,SNR=15							
PSI				LR	LR		12 39 22.9	
	comp=Z,39μm,18.1s,MS5.9,baz=166,slow=40							
PSI	**Prapat**	**22.31**	**177**	P		**P**	**12 29 28.3**	**-1.3**
PSI				pmax	pmax			
	comp=Z,84nm,1.0s,mb5.1							
PSI				MLR	MLR			
	comp=Z,39μm,18.1s,MS5.9							
POO	**Poona**	**23.11**	**258**	*e*PKP		**P**	**12 29 36.8**	**-1.4**
POO				AMb	AMB		12 29 56.7	
	comp=Z,267nm,1.4s,mb5.5							
KSH	**Kashi**	**23.18**	**313**	⇑ *i*P		**P**	**12 29 40.5**	**+1.8**
KSH				*e*pP			12 29 44.8	
KSH				*e*sP		sP	12 29 47.6	+4.7
KSH				*e*PP			12 30 11.6	
KSH				*e*PcP		PcP	12 33 30.3	+3.4
KSH				S		**S**	**12 33 49.0**	**-1.3**
KSH				sS		sS	12 33 55.8	+0.5
KSH				*e*SS			12 34 36.3	
KSH				*e*ScP		ScP	12 37 04.6	-0.4
KSH				PcS		PcS	12 37 06.8	+0.8
KSH				*e*ScS		ScS	12 40 50.3	-0.7
KSH				pmax	pmax			
	comp=Z,37nm,0.9s,mb4.8							
KSH				LR	LR			
	comp=N,9μm,11.9s,MS5.7							
KSH				LR	LR			
	comp=E,12μm,12.2s,MS5.7							
KSH				LR	LR			
	comp=Z,12μm,10.5s,MS5.6							
SONM	**Songino Array**	**23.60**	**15**	P		**P**	**12 29 43.2**	**+0.3**
	comp=Z,25nm,0.9s,mb4.6,baz=197,slow=8.7,SNR=27							
SONM				S		**S**	**12 34 08.0**	**+11**
	comp=Z,6.1nm,1.1s,baz=175,slow=17,SNR=3.4							

SONM LR LR 12 39 07.6
comp=Z,16μm,18.1s,MS5.5,baz=197,slow=37
KGM Kluang 23.68 166 P **P** **12 29 44.9 +0.9**
BHV Bhavnagar 23.70 267 *e*PKP **P** **12 29 44.5 +0.3**
GSI Gunungsitoli 23.76 180 P **P** **12 29 43.1 -1.6**
comp=Z,5μmcomp=Z,233nm,1.2s,mb5.5
GSI Gunungsitoli 23.76 180 P **P** **12 29 44.8 +0.1**
comp=Z,4μmcomp=Z,233nm,1.2s,mb5.5
ULN Ulaanbaatar 23.79 16 *e*P **P** **12 29 45.4 +0.7**
comp=Z,111nm,1.0s,mb5.2
ULN LR LR
comp=Z,20μm,20.0s,MS5.6
ULN Ulaanbaatar 23.79 16⇑ *i*P **P** **12 29 45.8 +1.1**
ULN Ulaanbaatar 23.79 16 P **P** **12 29 47.1 +2.4**
comp=Z,2μmcomp=Z,124nm,1.0s,mb5.3
ULN Ulaanbaatar 23.79 16 P **P** **12 29 46.0 +1.3**
SNR=52
MYKOM Kota Tinggi 24.02 165 P **P** **12 29 48.1 +1.0**
MYKOM Kota Tinggi 24.02 165 P **P** **12 29 48.2 +1.1**
comp=Z,4μmcomp=Z,86nm,1.8s,mb4.9
MYKOM Kota Tinggi 24.02 165 P **P** **12 29 47.5 +0.4**
comp=Z,4μmcomp=Z,86nm,1.8s,mb4.9
LUBP Lubang 24.07 114 *e*P **P** **12 29 43.3 -4.2**
PALK Pallekele 24.14 225 *e*P **P** **12 29 48.1 -0.1**
comp=Z,153nm,1.0s,mb5.4
PALK Pallekele 24.14 225 *e*P **P** **12 29 48.1 0.0**
PALK pmax pmax
comp=Z,153nm,1.0s,mb5.4
PALK Pallekele 24.14 225 P **P** **12 29 50.1 +2.0**
comp=Z,2μmcomp=Z,81nm,1.9s,mb4.8
PALK Pallekele 24.14 225 P **P** **12 29 50.2 +2.1**
comp=Z,2μmcomp=Z,81nm,1.9s,mb4.8
PALK Pallekele 24.14 225 P **P** **12 29 50.3 +2.2**
SNR=7.9
BALP Baler 24.21 108 *e*P **P** **12 29 49.0 +0.1**
MNSI Mandailing Nat 24.34 175 P **P** **12 29 48.3 -1.6**
comp=Z,2μmcomp=Z,81nm,1.1s,mb5.1
MNSI Mandailing Nat 24.34 175 P **P** **12 29 48.2 -1.7**
comp=Z,2μmcomp=Z,81nm,1.1s,mb5.1
DL2 Dalian 24.34 50 ⇑P **P** **12 29 50.9 +1.1**
DL2 S **S** **12 34 11.3 +2.1**
DL2 pmax pmax
comp=Z,720nm,2.0s,mb5.8
DL2 LR LR
comp=N,14μm,15.7s
DL2 LR LR
comp=Z,13μm,15.3s,MS5.5
GOA Goa 24.37 251 AMb AMB 12 29 48.3
comp=Z,20nm,0.2s,mb5.1
GOA ⇓*e*PKP 12 29 49.1
GOA *ex* x 12 34 16.2
PALP Palanan 24.39 105 *e*P **P** **12 29 52.0 +1.5**
ULHL Ulahol 24.55 319 P **P** **12 29 53.5 +1.8**
SNR=42
AAA Alma-Ata 24.78 322 *i* P **P** **12 29 55.4 +1.6**
AAA pmax pmax
comp=Z,6μm,2.6s,mb6.7
AAA MLR MLR
comp=Z,23μm,23.0s,MS5.6
MNGI Mangalore 24.80 245 *i* P Px 12 30 32.9
MNGI *i* S Sx 12 34 59.4
MK31 Makanchi Array 24.81 334 *e*P **P** **12 29 55.5 +1.5**
MKAR Makanchi Array 24.81 334 P **P** **12 29 55.1 +1.1**
comp=Z,50nm,0.7s,mb5.2,baz=147,slow=9.2,SNR=40
MKAR S **S** **12 34 30.2 +14**
comp=Z,3.2nm,0.9s,baz=271,slow=16,SNR=2.3
MKAR LR LR 12 41 26.2
comp=Z,16μm,19.3s,MS5.5,baz=45,slow=40
ENPP El Nido 24.82 120 *e*P **P** **12 29 53.9 -0.5**
BKNI Bangkinang 24.94 172 P **P** **12 29 58.2 +2.7**
comp=Z,4μmcomp=Z,299nm,1.0s,mb5.8
BKNI Bangkinang 24.94 172 P **P** **12 29 59.4 +3.9**
comp=Z,4μmcomp=Z,299nm,1.0s,mb5.8
KZA Kyzart 25.05 318 P **P** **12 29 58.2 +2.0**
SNR=13
BATP Bataraza 25.14 127 *e*P **P** **12 29 53.0 -4.2**
TKM2 Tokmak 2 25.34 320 P **P** **12 30 00.6 +1.7**
SNR=12
TKM2 Tokmak 2 25.34 320 *e*P **P** **12 30 00.3 +1.5**
TKM2 LR LR
comp=Z,17μm,21.0s,MS5.5
TKM2 Tokmak 2 25.34 320 *e*P **P** **12 30 00.3 +1.5**
TKM2 MLR MLR
comp=Z,17μm,21.0s,MS5.5
ZAK Zakamensk 25.50 8 *e*P **P** **12 30 02.5 +2.3**
ZAK pmax pmax
comp=Z,48nm,1.1s,mb4.9
KBK Karagaybulak 25.56 319 P **P** **12 30 03.3 +2.4**
SNR=27
UCH Uchtor 25.58 317 P **P** **12 30 03.4 +2.3**
SNR=15
UCH Uchtor 25.58 317 PFAKE 12 30 10.0 +8.9
UCH LR LR
comp=Z,13μm,21.0s,MS5.4
PPI Padang Panjang 25.64 174 P **P** **12 30 06.2 +4.4**
comp=Z,6μmcomp=Z,44nm,1.1s,mb4.9
PPI Padang Panjang 25.64 174 P **P** **12 30 06.3 +4.5**
comp=Z,6μmcomp=Z,44nm,1.1s,mb4.9
KDM Kudat 25.78 132 P **P** **12 30 03.5 +0.4**
RGRI Rengat 25.79 169 P **P** **12 30 05.7 +2.5**
comp=Z,248nm,1.2s,mb5.6
RGRI Rengat 25.79 169 P **P** **12 30 07.6 +4.4**
comp=Z,248nm,1.2s,mb5.6
AAK Ala-Archa 25.82 318 P **P** **12 30 05.6 +2.4**
SNR=21
AAK Ala-Archa 25.82 318 *e*P **P** **12 30 05.5 +2.2**
comp=Z,847nm,1.6s,mb6.0
AAK LR LR
comp=Z,20μm,20.0s,MS5.7
AAK Ala-Archa 25.82 318 P **P** **12 30 05.0 +1.7**
comp=Z,46nm,0.8s,mb5.0,baz=114,slow=4.3,SNR=21
AAK LR LR 12 41 53.4
comp=Z,24μm,21.7s,MS5.7,baz=26,slow=40
AAK Ala-Archa 25.82 318*c i*P **P** **12 30 05.3 +2.0**
AAK pmax pmax
comp=Z,211nm,2.5s,mb5.2
AAK MLR MLR
comp=Z,10μm,18.0s,MS5.4
AAK Ala-Archa 25.82 318 P **P** **12 30 05.6 +2.3**
comp=Z,2μm,0.9s,mb6.5,SNR=52
AAK Ala-Archa 25.82 318 P **P** **12 30 05.8 +2.5**
SNR=113
FRU Bishkek 25.86 319 *e*P **P** **12 30 05.5 +1.9**
FRU *e* 12 35 41.0
FRU pmax pmax
comp=Z,660nm,2.0s,mb5.8
CHMS Chumysh 25.88 319 P **P** **12 30 05.1 +1.4**
SNR=22
KKM Kota Kinabalu 26.01 134 *e*P **P** **12 30 04.2 -1.0**
comp=Z,209nm,1.0s,mb5.6
KKM LR LR
comp=Z,14μm,20.0s,MS5.5
KKM Kota Kinabalu 26.01 134 P **P** **12 30 05.6 +0.4**
KKM Kota Kinabalu 26.01 134 P **P** **12 30 05.2 0.0**
comp=Z,3μmcomp=Z,214nm,1.2s,mb5.5
KKM Kota Kinabalu 26.01 134 P **P** **12 30 05.3 +0.1**
comp=Z,3μmcomp=Z,214nm,1.2s,mb5.5
AML Almayashu 26.04 316 P **P** **12 30 07.5 +2.3**
SNR=52
AML Almayashu 26.04 316 *e*P **P** **12 30 07.2 +2.0**
comp=Z,240nm,0.8s,mb5.8
AML LR LR
comp=Z,13μm,19.0s,MS5.5
PDSI Padang 26.10 174 P **P** **12 30 06.5 +0.5**
comp=Z,3μmcomp=Z,160nm,0.9s,mb5.5
PDSI Padang 26.10 174 P **P** **12 30 06.6 +0.6**
comp=Z,3μmcomp=Z,160nm,0.9s,mb5.5
USP Ospenovka 26.19 319 P **P** **12 30 08.1 +1.5**
SNR=13
SDSI Sungai Dareh 26.23 172 P **P** **12 30 10.8 +3.6**
comp=Z,2μmcomp=Z,154nm,1.1s,mb5.4
SDSI Sungai Dareh 26.23 172 P **P** **12 30 09.8 +2.6**
comp=Z,2μmcomp=Z,154nm,1.1s,mb5.4
EKS2 Erkin-Say 26.28 317 P **P** **12 30 09.3 +2.0**
SNR=45
EKS2 Erkin-Say 26.28 317 *e*P **P** **12 30 09.0 +1.7**
EKS2 LR LR
comp=Z,18μm,21.0s,MS5.6
BTM Bintulu 26.41 144 P **P** **12 30 09.4 +0.6**
SISI Saibi 26.41 177 P **P** **12 30 10.6 +1.8**
comp=Z,238nm,1.4s,mb5.5
SISI Saibi 26.41 177 P **P** **12 30 10.6 +1.8**
comp=Z,238nm,1.4s,mb5.5
KBL Kabul 26.48 297 *e*P **P** **12 30 10.6 +1.3**
comp=Z,387nm,1.0s,mb5.9
KBL Kabul 26.48 297 *e*P **P** **12 30 10.6 +1.3**
KBL pmax pmax
comp=Z,387nm,1.0s,mb5.9
SBUM Sibu 26.59 146 P **P** **12 30 10.7 +0.3**
SBUM Sibu 26.59 146 P **P** **12 30 07.7 -2.7**
SBUM Sibu 26.59 146 P **P** **12 30 10.1 -0.3**
comp=Z,2μmcomp=Z,81nm,1.4s,mb5.0
TLY Talaya 26.82 8⇓ *e*P **P** **12 30 13.8 +1.7**
TLY LR LR
comp=Z,17μm,22.0s,MS5.6
TLY Talaya 26.82 8 *e*P **P** **12 30 12.8 +0.7**
TLY *e* 12 30 53.4
TLY *e*S **S** **12 34 54.4 +6.2**
TLY *e*SS 12 36 07.7
TLY pmax pmax
comp=Z,22nm,1.0s,mb4.6
TLY MLR MLR
comp=Z,13μm,17.0s,MS5.6
SDKM Sandakan 26.96 133 P **P** **12 30 14.1 +0.3**
SNY Shenyang 27.04 46 ⇓P **P** **12 30 15.6 +1.3**
SNY S **S** **12 34 48.1 -3.9**
SNY pmax pmax
comp=Z,100nm,2.0s,mb5.0
SNY pmax pmax
comp=Z,2μm,10.8s
SNY LR LR
comp=N,23μm,13.5s,MS6.0
SNY LR LR
comp=E,12μm,12.2s,MS6.0
SNY LR LR
comp=Z,19μm,15.3s,MS5.8
INCN Inchon 27.44 57 *e*P **P** **12 30 17.7 -0.2**
comp=Z,492nm,2.2s,mb5.7
INCN LR LR
comp=Z,11μm,19.0s,MS5.5
IRK Irkutsk 27.45 9 *e*P **P** **12 30 22.1 +4.3**
IRK pmax pmax
comp=Z,110nm,2.1s,mb5.0
QUE Quetta 27.65 287 *e*P **P** **12 30 20.0 +0.1**
QUE *e*S **S** **12 34 56.0 -5.8**
MYLDM Lahad Datu 28.17 132 P **P** **12 30 25.1 +0.4**
MYLDM Lahad Datu 28.17 132 P **P** **12 30 24.8 +0.1**
comp=Z,2μmcomp=Z,121nm,1.2s,mb5.4
MYLDM Lahad Datu 28.17 132 P **P** **12 30 23.0 -1.6**
comp=Z,2μmcomp=Z,121nm,1.2s,mb5.4
STKI Sintang 28.31 150 P **P** **12 30 28.2 +2.3**
comp=Z,82nm,1.3s,mb5.2
STKI Sintang 28.31 150 P **P** **12 30 28.3 +2.4**
comp=Z,82nm,1.3s,mb5.2
TSM Tawau 28.41 134 P **P** **12 30 26.2 -0.5**
KSRS Korea Array 28.41 57 P **P** **12 30 22.4 -4.2**
comp=Z,7.7nm,0.7s,mb4.4,baz=245,slow=9.5,SNR=19
KSRS LR LR 12 41 49.9
comp=Z,8μm,19.4s,MS5.3,baz=51,slow=37
KSRS Korea Array 28.41 57 P **P** **12 30 22.4 -4.2**
KSRS pmax pmax
comp=Z,8.0nm,0.7s,mb4.5
KSRS MLR MLR
comp=Z,8μm,19.4s,MS5.3
KK31 Karatay Array 28.55 316*ce*P **P** **12 30 28.1 +0.4**
KK31 pmax pmax
comp=Z,47nm,1.0s,mb5.2
KSI Kapahiang 29.07 170 P **P** **12 30 37.0 +4.4**
comp=Z,4μmcomp=Z,85nm,1.2s,mb5.3
CN2 Changchun 29.22 44 *e*P **P** **12 30 34.8 +1.1**
CN2 *e*pP pP 12 30 38.9 +2.1
CN2 *e*sP sP 12 30 41.9 +3.9
CN2 pmax pmax
comp=Z,20nm,0.9s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,6μm,12.0s,MS5.8
CN2 LR LR
comp=E,14μm,12.0s,MS5.8
CN2 LR LR
comp=Z,8μm,14.0s,MS5.5
CIT Chita 29.36 20 *e*P **P** **12 30 35.8 +1.0**
CIT *e* 12 30 48.6
CIT pmax pmax
comp=Z,243nm,2.5s,mb5.5
KURK Kurchatov 29.41 335 *e*P **P** **12 30 35.1 -0.2**
comp=Z,70nm,0.9s,mb5.4
KURK LR LR
comp=Z,26μm,20.0s,MS5.8
KURK Kurchatov 29.41 335 P **P** **12 30 35.0 -0.3**
comp=Z,6.8nm,0.6s,mb4.5,baz=139,slow=9.8,SNR=8.0
KURK S **S** **12 35 38.5 +9.4**
comp=Z,1.1nm,0.3s,baz=334,slow=15,SNR=2.9
KURK Kurchatov 29.41 335*ce*P **P** **12 30 37.0 +1.7**
KURK pmax pmax
comp=Z,84nm,2.5s,mb5.0
KURK Kurchatov 29.41 335 P **P** **12 30 36.5 +1.2**
SNR=26
TPI Tanjungpandan 29.42 159 P **P** **12 30 37.4 +1.7**
comp=Z,2μmcomp=Z,112nm,1.0s,mb5.5
TPI Tanjungpandan 29.42 159 P **P** **12 30 38.0 +2.3**
comp=Z,2μmcomp=Z,111nm,1.0s,mb5.5
HIA Hailar 29.52 30 *e*P **P** **12 30 36.8 +0.4**
comp=Z,240nm,1.8s,mb5.6
HIA LR LR
comp=Z,22μm,19.0s,MS5.8
MDSI Maura Dua 30.17 167 P **P** **12 30 47.3 +4.9**
MDSI Maura Dua 30.17 167 P **P** **12 30 47.2 +4.8**
comp=Z,1μmcomp=Z,47nm,1.2s,mb5.1
ZAA0 Zalesovo Array 30.28 345 *e*P **P** **12 30 43.5 +0.5**
ZALV Zalesovo Beam 30.28 345 P **P** **12 30 43.6 +0.7**
comp=Z,24nm,0.6s,mb5.1,baz=167,slow=8.4,SNR=39
ZALV LR LR 12 43 28.1
comp=Z,4μm,20.8s,MS5.1,baz=334,slow=37
ZALV Zalesovo Beam 30.28 345 P **P** **12 30 43.7 +0.8**
ZALV pmax pmax
comp=Z,24nm,0.6s,mb5.1
ZALV MLR MLR
comp=Z,4μm,20.8s,MS5.1
KLSI 30.49 166 P **P** **12 30 45.1 -0.1**
comp=Z,3μmcomp=Z,126nm,1.0s,mb5.6
KLSI 30.49 166 P **P** **12 30 46.0 +0.8**
comp=Z,3μmcomp=Z,126nm,1.0s,mb5.6
LWLI Liwa 30.67 168 P **P** **12 30 47.8 +1.1**
comp=Z,6μmcomp=Z,114nm,0.9s,mb5.7
LWLI Liwa 30.67 168 P **P** **12 30 48.8 +2.0**
comp=Z,6μmcomp=Z,114nm,0.9s,mb5.7
KLI Kotabumi 30.68 166 P **P** **12 30 56.7 +10**
KLI Kotabumi 30.68 166 P Px 12 30 57.3
PBKI Pangkalan Bun 30.87 152 P **P** **12 30 51.0 +2.5**
NVS Novosibirsk 31.48 344⇑ *i*P **P** **12 30 53.5 0.0**
NVS *e*S **S** **12 35 50.6 -11**
NVS pmax pmax
comp=N,279nm,1.7s
NVS pmax pmax
comp=E,204nm,1.7s
NVS pmax pmax
comp=Z,269nm,1.7s,mb5.8
NVS smax
comp=N,141nm,2.0s
NVS smax
comp=E,70nm,2.1s
DAV Davao City (W) 32.15 119 PFAKE 12 31 10.0 +10
DAV LR LR
comp=Z,12μm,21.0s,MS5.6
DAV Davao City (W) 32.15 119⇓ *e*P **P** **12 31 04.8 +5.0**
MDJ Mudanjiang 32.23 45 P **P** **12 30 57.9 -2.4**
MDJ pP pP 12 31 01.3 -2.0
MDJ PP PP 12 32 10.0 -3.0
MDJ S **S** **12 36 13.3 -0.1**
MDJ pmax pmax
comp=Z,38nm,2.0s,mb4.9
MDJ pmax pmax
comp=Z,530nm,14.6s
MDJ LR LR
comp=N,19μm,16.9s,MS5.9
MDJ LR LR
comp=E,12μm,16.9s,MS5.9
MDJ LR LR
comp=Z,17μm,17.8s,MS5.8
MDJ Mudanjiang 32.23 45 *e*P **P** **12 31 01.1 +0.8**
comp=Z,125nm,1.6s,mb5.5
MDJ LR LR
comp=Z,17μm,20.0s,MS5.8
TOLI Toli-Toli 32.70 134 P **P** **12 31 05.2 +0.5**
comp=Z,2μmcomp=Z,100nm,1.1s,mb5.6
DBJI Dramaga 32.77 163 P **P** **12 31 13.4 +8.2**
comp=Z,4μmcomp=Z,144nm,1.4s,mb5.7
MRSI Marisa 33.94 133 P **P** **12 31 18.1 +2.6**
comp=Z,1μmcomp=Z,59nm,1.3s,mb5.3
MRSI Marisa 33.94 133 P **P** **12 31 17.2 +1.7**
comp=Z,1μmcomp=Z,59nm,1.3s,mb5.3
SGSI Sangihe 34.24 124 P **P** **12 31 17.1 -1.0**
SGSI Sangihe 34.24 124 P **P** **12 31 17.2 -0.9**
comp=Z,4μmcomp=Z,237nm,1.2s,mb6.0
BJII Banjamegara 34.38 159 P **P** **12 31 21.6 +2.3**
comp=Z,4μmcomp=Z,277nm,1.4s,mb6.0
BVA0 Borovoye Array 34.55 331 P **P** **12 31 21.2 +0.8**
BVAR Borovoye Array 34.55 331 P **P** **12 31 19.9 -0.5**
comp=Z,1.3nm,0.6s,mb4.0,baz=225,slow=38,SNR=15
BVAR S **S** **12 36 52.2 +3.1**
comp=Z,0.4nm,0.3s,baz=259,slow=23,SNR=3.7
BVAR LR LR 12 47 06.3
comp=Z,158nm,18.0s,baz=172,slow=39
BVAR Borovoye Array 34.55 331 P **P** **12 31 19.9 -0.5**
BVAR S **S** **12 36 52.2 +3.1**
BRVK Borovoye 34.62 331 P **P** **12 31 21.1 +0.1**
comp=Z,414nm,0.8s,mb6.4,SNR=13
BRVK Borovoye 34.62 331 *e*P **P** **12 31 21.4 +0.5**
comp=Z,65nm,0.9s,mb5.6
BRVK LR LR
comp=Z,8μm,21.0s,MS5.4
BRVK Borovoye 34.62 331*c i*P **P** **12 31 21.5 +0.5**
BRVK pmax pmax
comp=Z,56nm,1.2s,mb5.4
BRVK MLR MLR
comp=Z,7μm,14.0s,MS5.6
BRVK Borovoye 34.62 331 P **P** **12 31 22.1 +1.2**
SNR=29
NGJI Ngawi 35.03 156 P **P** **12 31 29.3 +4.4**
comp=Z,119nm,1.2s,mb5.7
KMSI Cibinong 35.26 130 P **P** **12 31 27.2 +0.3**
comp=Z,5μmcomp=Z,522nm,1.1s,mb6.4
TTSI Tana Toraja 35.33 139 P **P** **12 31 27.8 +0.3**
comp=Z,2μmcomp=Z,105nm,1.3s,mb5.6
WBK Wadi Bani Khal 35.44 274 P **P** **12 31 36.5 +8.1**
SNR=6.4
SJI Sawahan 35.48 156 P **P** **12 31 30.7 +1.9**
comp=Z,155nm,1.6s,mb5.7
LUWI Luwuk 35.62 133 P **P** **12 31 30.1 +0.1**
comp=Z,3μmcomp=Z,292nm,1.2s,mb6.1
KLR Kul'dur 35.71 39 *e*P **P** **12 31 24.8 -5.6**
KLR *e* 12 32 52.5
KLR *e*S **S** **12 36 59.0 -8.1**
KLR pmax pmax
comp=E,70nm,1.8s
KLR pmax pmax
comp=Z,100nm,1.8s,mb5.4
KLR smax
comp=N,1μm,19.0s
KLR smax
comp=E,2μm,19.0s
KLR MLR MLR
comp=Z,17μm,13.0s,MS6.0
KMMI Kalianget 35.75 152 P **P** **12 31 35.0 +3.9**
comp=Z,3μmcomp=Z,155nm,1.1s,mb5.8
PWJI Pagerwojo 35.76 156 P **P** **12 31 36.6 +5.4**
comp=Z,2μmcomp=Z,76nm,1.4s,mb5.4
ABKT Ailbek 35.79 300 P **P** **12 31 32.0 +0.7**
comp=Z,581nm,1.0s,mb6.5,SNR=14
VAN Vannovskaya 35.80 300*c i*P **P** **12 31 32.5 +1.1**
SPSI Sidrap Palu 36.04 140 P **P** **12 31 33.6 -0.1**
comp=Z,3μmcomp=Z,101nm,1.3s,mb5.6
KRKI Karangkates 36.13 155 P **P** **12 31 40.4 +6.0**
comp=Z,262nm,1.4s,mb6.0
SMDO Samad 36.18 275 P **P** **12 31 42.9 +8.1**
SNR=14
MAJO Matsushiro 36.30 62 *e*P **P** **12 31 34.9 -0.7**
comp=Z,474nm,2.2s,mb6.0
MAJO LR LR
comp=Z,10μm,20.0s,MS5.6
MAJO Matsushiro 36.30 62 *e*P **P** **12 31 34.9 -0.7**
MAJO pmax pmax
comp=Z,474nm,2.2s,mb6.0
MAJO MLR MLR
comp=Z,10μm,20.0s,MS5.6
MAT Matsushiro 36.30 62 P **P** **12 31 35.6 0.0**
MAT S **S** **12 37 17.0 +0.6**
MJAR Matsushiro Arr 36.30 62 P **P** **12 31 32.0 -3.6**
comp=Z,11nm,0.7s,mb4.9,baz=270,slow=9.3,SNR=20
MJAR LR LR 12 46 08.4
comp=Z,10μm,20.2s,MS5.6,baz=270,slow=36
MJAR Matsushiro Arr 36.30 62 P **P** **12 31 32.0 -3.7**
MJAR pmax pmax
comp=Z,11nm,0.7s
MJAR MLR MLR
comp=Z,10μm,20.2s
GMJI Gumukmas 36.63 153 P **P** **12 31 41.3 +2.7**
comp=Z,3μmcomp=Z,71nm,1.8s,mb5.2
HOQ Hoqain 36.75 276 P **P** **12 31 43.2 +3.6**
SNR=13
BSY Bisya 37.01 275 P **P** **12 31 45.5 +3.5**
SNR=15
CLNS Chul'man 37.18 25 *e*P **P** **12 31 45.8 +3.0**
CLNS *e* 12 33 11.0
CLNS *e*PPP 12 33 26.4
CLNS *e* 12 34 06.7
CLNS *e*S **S** **12 37 28.9 -0.4**
CLNS pmax pmax
comp=Z,93nm,1.1s,mb5.5
CLNS pmax pmax
comp=N,78nm,1.1s
CLNS pmax pmax
comp=E,60nm,1.1s
CLNS pmax pmax
comp=E,19nm,1.3s
CLNS pmax pmax
comp=N,17nm,1.3s
CLNS pmax pmax
comp=Z,21nm,1.3s,mb4.8
CLNS smax
comp=N,522nm,16.8s
CLNS smax
comp=E,1μm,16.3s
CLNS MLR MLR
comp=Z,23μm,17.0s,MS6.0
CLNS MLR MLR
comp=N,12μm,17.0s,MS6.0
CLNS MLR MLR
comp=E,18μm,17.0s,MS6.0
COCO West Island 37.18 181 PFAKE 12 31 50.0 +6.7
COCO LR LR
comp=Z,13μm,19.0s,MS5.8
HABR Khabarovsk 37.30 42*ce*P **P** **12 31 42.3 -1.7**
HABR *e**PP pP 12 31 51.8 +4.7
HABR *e**SP sP 12 31 56.3 +8.0
HABR *e* 12 33 07.8
HABR *e* 12 34 01.4
HABR *e*S **S** **12 37 27.9 -3.5**
HABR *e**SS sS 12 37 44.8 +8.4
HABR *e*SS SS 12 40 06.4 -8.2
HABR *e* 12 41 53.2
HABR pmax pmax
comp=N,42nm,2.3s
HABR pmax pmax
comp=Z,280nm,2.3s,mb5.7
HABR pmax pmax
comp=E,155nm,2.3s
HABR MLR MLR
comp=E,17μm,16.0s,MS6.0
HABR MLR MLR
comp=Z,12μm,17.0s,MS5.8
HABR MLR MLR
comp=N,8μm,15.0s,MS6.0
ARQ Araqi 37.51 276 P **P** **12 31 49.9 +3.8**
SNR=6.5
TNTI Ternate 37.54 126 P **P** **12 31 44.6 -1.9**
comp=N,3μmcomp=N,277nm,1.2s,mb5.8
KHKI Kahang-Kahang 37.64 150 P **P** **12 31 51.7 +4.5**
comp=N,2μmcomp=N,110nm,1.4s,mb5.4
ASHO Ashiyiah 37.67 278 P **P** **12 31 51.2 +3.7**
SNR=11
ABKAR Akbulak array 37.90 319 *e*P **P** **12 31 49.7 +0.6**
LBMI Labuha 38.60 127 P **P** **12 31 54.0 -1.4**
AKTK Aktyubinsk 39.53 320 P **P** **12 32 02.9 +0.2**
AKTK LR LR 12 49 35.8
AKTO Aktyubinsk 39.53 320 P **P** **12 32 02.9 +0.2**
comp=N,28nm,0.8s,mb5.0,baz=114,slow=9.2,SNR=14
AKTO LR LR 12 49 35.8
comp=N,13μm,19.6s,MS5.8,baz=338,slow=38
AKTO Aktyubinsk 39.53 320 P **P** **12 32 02.9 +0.2**
AKTO pmax pmax
comp=Z,28nm,0.8s,mb5.0
AKTO MLR MLR
comp=Z,13μm,19.6s,MS5.8
CBIJ Chichi jima 39.80 77 LR LR 12 47 47.6
comp=Z,7μm,18.6s,MS5.6,baz=95,slow=35
DGAR Diego Garcia 40.70 220 PFAKE 12 32 20.0 +7.2

DGAR LR LR
comp=Z,8μm,20.0s,MS5.6
ASAJ Asahikawa 40.87 51 P **P 12 32 11.5 -2.5**
comp=Z,140nm,0.9s,mb5.6,baz=269,slow=13,SNR=34
ASAJ S **S 12 38 18.1 -7.2**
comp=Z,6.1nm,1.0s,baz=278,slow=19,SNR=2.0
ASAJ Asahikawa 40.87 51 P **P 12 32 11.5 -2.5**
ASAJ S **S 12 38 18.1 -7.2**
ASAJ pmax pmax
comp=Z,140nm,0.9s
ASAJ smax
comp=N,6.0nm,1.0s
ERM Erimo 40.87 54 P **P 12 32 15.4 +1.4**
comp=N,916nm,1.2s,mb6.3,SNR=9.6
ERM Erimo 40.87 54 *eP* **P 12 32 15.2 +1.1**
comp=N,252nm,1.2s,mb5.7
ERM LR LR
comp=Z,11μm,19.0s,MS5.7
ERM Erimo 40.87 54*d iP* **P 12 32 14.9 +0.9**
ERM pmax pmax
comp=Z,126nm,1.0s,mb5.5
ERM MLR MLR
comp=Z,10μm,17.0s,MS5.7
RBK Rabkut 41.11 268 P **P 12 32 22.5 +6.2**
SNR=5.7
MMRI Maumere 41.25 142 P **P 12 32 18.3 +0.9**
SVE Sverdlovsk 41.32 330⇓ *eP* **P 12 32 18.6 +1.2**
SVE *eS* **S 12 38 35.6 +4.0**
SVE *eSS* SS 12 41 37.2 +2.2
SVE pmax pmax
comp=Z,242nm,1.4s,mb5.6
SVE MLR MLR
comp=Z,10μm,17.0s,MS5.8
YSS Yuzh-Sakhalins 41.66 47 *eP* **P 12 32 18.5 -1.9**
comp=Z,163nm,1.2s,mb5.5
YSS LR LR
comp=Z,5μm,20.0s,MS5.4
YSS Yuzh-Sakhalins 41.66 47 *eP* **P 12 32 18.0 -2.4**
YSS *eS* **S 12 38 33.0 -3.9**
YSS *eSS* SS 12 41 36.0 -6.0
YSS pmax pmax
comp=N,30nm,1.0s
YSS pmax pmax
comp=E,60nm,1.0s
YSS pmax pmax
comp=Z,120nm,1.0s,mb5.5
YSS pmax pmax
comp=E,600nm,6.0s
YSS pmax pmax
comp=Z,1μm,6.0s
YSS MLR MLR
comp=E,6μm,16.0s
YSS MLR MLR
comp=Z,10μm,16.0s,MS5.8
ARU Arti 42.06 328 *eP* **P 12 32 24.0 +0.5**
comp=Z,245nm,1.4s,mb5.6
ARU LR LR
comp=Z,10μm,21.0s,MS5.7
ARU Arti 42.06 328*c iP* **P 12 32 24.0 +0.4**
ARU *e* 12 34 03.4
ARU *e* 12 34 16.7
ARU S **S 12 38 42.9 +0.2**
ARU SS SS 12 41 52.2 +2.4
ARU SSS 12 42 33.4
ARU pmax pmax
comp=Z,54nm,1.0s,mb5.1
ARU MLR MLR
comp=Z,7μm,16.0s,MS5.6
ARU Arti 42.06 328 P **P 12 32 24.3 +0.7**
comp=Z,619nm,1.7s,mb6.0,SNR=19
YAK Yakutsk 42.62 22 *eP* **P 12 32 27.9 -0.1**
YAK *e**PP pP 12 32 38.1 +7.0
YAK *e* 12 34 06.2
YAK *e* 12 34 20.1
YAK *e*PPP 12 34 38.8
YAK *eS* **S 12 38 48.0 -2.7**
YAK *eSS* SS 12 41 54.7 -5.8
YAK *e* 12 42 25.4
YAK *eSSS* 12 42 41.8
YAK pmax pmax
comp=Z,73nm,0.9s,mb5.4
YAK pmax pmax
comp=N,14nm,1.1s
YAK pmax pmax
comp=E,30nm,1.0s
YAK pmax pmax
comp=Z,19nm,0.9s,mb4.8
YAK pmax pmax
comp=E,40nm,1.5s
YAK pmax pmax
comp=N,62nm,1.7s
YAK smax
comp=E,935nm,8.4s
YAK smax
comp=N,113nm,2.5s
YAK MLR MLR
comp=Z,10μm,15.0s,MS5.8
YAK MLR MLR
comp=N,8μm,15.0s,MS5.8
YAK MLR MLR
comp=E,4μm,15.0s,MS5.8
YUK Yuzh-Kuril'sk 43.16 52⇓ *iP* **P 12 32 30.0 -2.7**
YUK *i* S **S 12 38 55.0 -4.2**
YUK *i* SSS 12 42 55.0
YUK MLR MLR
comp=N,1μm,14.0s,MS5.5
YUK MLR MLR
comp=E,4μm,14.0s,MS5.5
YUK MLR MLR
comp=Z,6μm,14.0s,MS5.6
QRN Al-Qurain 44.27 286 *eP* **P 12 32 40.6 -1.2**
QRN AMb AMB 12 32 55.4
comp=Z,111nm,1.2s,mb5.5
KBD Kabd 44.41 287 *eP* **P 12 32 42.5 -0.4**
KBD AMb AMB 12 32 56.7
comp=Z,90nm,1.3s,mb5.3
MAK Makhachkala 44.51 306 *eP* **P 12 32 45.6 +2.0**
MAK *e* 12 34 30.7
MAK *e*PPP 12 35 07.4
MAK *eS* **S 12 39 17.0 -1.9**
MAK *eSS* SS 12 42 38.7 +0.6
MAK pmax pmax
comp=N,36nm,0.4s
MAK pmax pmax
comp=E,142nm,1.8s
MAK pmax pmax
comp=Z,184nm,1.4s,mb5.7
MAK pmax pmax
comp=Z,2μm,6.8s
MAK MLR MLR
comp=Z,15μm,16.0s,MS6.0
MAK MLR MLR
comp=N,14μm,20.0s,MS6.1
MAK MLR MLR
comp=E,18μm,21.0s,MS6.1
SOKR Solikamsk 44.52 332*c iP* **P 12 32 44.4 +1.0**
SOKR S **S 12 39 22.1 +3.5**
SOKR SS SS 12 42 38.6 +0.7
SOKR pmax pmax
comp=Z,310nm,1.5s,mb5.9
SOKR MLR MLR
comp=Z,14μm,22.0s,MS5.8
MIB Mutribah 44.64 288 *eP* **P 12 32 44.2 -0.6**
MIB AMb AMB 12 32 57.2
comp=Z,208nm,0.9s,mb6.0
NAY Al-Naaiem 44.80 287 *eP* **P 12 32 45.3 -0.8**
NAY AMb AMB 12 32 58.8
comp=Z,141nm,1.1s,mb5.7
GUMO Guam 45.73 95 PFAKE 12 33 00.0 +6.4
GUMO LR LR
comp=Z,5μm,20.0s,MS5.4
GUMO Guam 45.73 95 LR LR 12 51 01.4
comp=Z,5μm,19.2s,MS5.4,baz=117,slow=35
DGRG David-gareji 45.95 304 P **P 12 32 55.7 +0.7**
GNI Garni 46.37 302 *eP* **P 12 32 59.2 +0.9**
GNI Garni 46.37 302 *eP* **P 12 32 59.8 +1.5**
comp=Z,198nm,1.1s,mb6.0
GNI LR LR
comp=Z,9μm,20.0s,MS5.7
GNI Garni 46.37 302 P **P 12 33 00.2 +1.9**
comp=Z,43nm,1.1s,mb5.3,baz=360,slow=7.5,SNR=8.6
GNI LR LR 12 55 23.2
comp=Z,8μm,19.7s,MS5.7,baz=211,slow=40
GNI Garni 46.37 302*c iP* **P 12 32 59.9 +1.6**
GNI pmax pmax
comp=Z,54nm,1.0s
GNI MLR MLR
comp=Z,7μm,18.0s
GNI Garni 46.37 302 P **P 12 33 00.8 +2.5**
SNR=26
MTA Mtatsminda 46.40 304 P **P 12 32 59.5 +1.0**
TBLG Delisi 46.44 304 P **P 12 33 03.1 +4.2**
TBLG Delisi 46.44 304 P **P 12 33 03.1 +4.2**
BHD Baghdad 46.82 293 *i* x x 12 33 02.0
BHD *i* x x 12 33 05.3
BHD *i* x x 12 34 35.3
BHD *i* x x 12 34 54.0
BHD *i* x x 12 39 51.7
BHD *i* x x 12 39 59.3
GOR Gori 46.93 305 P **P 12 33 04.1 +1.4**
CLDR Caldiran 46.98 301 *eP* **P 12 33 03.4 +0.3**
VANB Van 47.39 300 *eP* **P 12 33 10.0 +3.7**
KARS Kars 47.65 303 *eP* **P 12 33 10.9 +2.6**
AGRB Hanur-Agry 47.70 301 *eP* **P 12 33 09.8 +1.1**
KIV Kislovodsk 48.10 307 *eP* **P 12 33 12.5 +0.7**
comp=Z,256nm,1.4s,mb6.1
KIV LR LR
comp=Z,13μm,21.0s,MS5.9
KIV Kislovodsk 48.10 307*c iP* **P 12 33 12.1 +0.3**
KIV *i* PPP 12 35 08.9
KIV *i* S **S 12 39 59.8 -11**
KIV pmax pmax
comp=Z,194nm,1.3s,mb6.0
KIV MLR MLR
comp=Z,15μm,24.0s,MS5.9
KIV Kislovodsk 48.10 307 P **P 12 33 12.9 +1.1**
comp=Z,608nm,1.1s,mb6.5,SNR=18
KIV Kislovodsk 48.10 307 P **P 12 33 12.5 +0.7**
SNR=40
BCA Borcka 48.77 304 *eP* **P 12 33 17.2 +0.3**
TIXI Tiksi 49.66 12 *eP* **P 12 33 23.4 +0.1**
comp=Z,43nm,1.0s,mb5.4
TIXI LR LR
comp=Z,10μm,20.0s,MS5.8
TIXI Tiksi 49.66 12 *eP* **P 12 33 22.6 -0.7**
TIXI *eS* **S 12 40 27.1 -4.5**
TIXI *e* 12 43 11.5
TIXI *eSS* SS 12 44 03.6 +0.1
TIXI pmax pmax
comp=Z,97nm,2.0s,mb5.5
TIXI MLR MLR
comp=Z,7μm,14.0s,MS5.8
VRHR Novokhopersk 49.66 317 *eP* **P 12 33 22.8 -0.8**
VRHR *e* 12 33 28.1
VRHR *eS* **S 12 40 32.8 +0.7**
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.7s
VRHR pmax pmax
comp=Z,30nm,0.7s,mb5.4
VRHR smax
comp=N,70nm,1.7s
VRHR smax
comp=E,170nm,1.7s
VRHR smax
comp=Z,30nm,1.7s
KTUT Trabzon 50.16 303 *eP* **P 12 33 32.6 +5.0**
SOC Sochi 50.23 307 *eP* **P 12 33 28.1 0.0**
SOC Sochi 50.23 307*d iP* **P 12 33 28.3 +0.2**
SOC *e**PP pP 12 33 36.1 +4.9
SOC *e**SP sP 12 33 40.6 +8.1
SOC *e*PPP 12 36 28.3
SOC *eS* **S 12 40 39.7 -0.6**
SOC *e**SS sS 12 40 56.6 +11
SOC *eSS* SS 12 44 01.8 -12
SOC pmax pmax
comp=Z,373nm,2.0s,mb6.1
SOC pmax pmax
comp=Z,96nm,1.1s,mb5.7
SOC MLR MLR
comp=Z,10μm,20.0s,MS5.8
GUMT Gumushane 50.39 303 *eP* **P 12 33 30.3 +1.0**
EZC Erzincan 50.51 302 *eP* **P 12 33 35.3 +5.0**
PTK Pertek 50.51 301 *eP* **P 12 33 29.9 -0.4**
SVRC Sivrice-ELAZID 50.60 300 *eP* **P 12 33 31.8 +0.9**
MSEY Mahe Island 50.65 240 PFAKE 12 33 40.0 +8.4
MSEY LR LR
comp=Z,13μm,20.0s,MS5.9
KAKA Kakadu 50.65 134 *eP* **P 12 33 28.9 -2.7**
comp=Z,70nm,1.1s,mb5.5
KAKA Kakadu 50.65 134 *eP* **P 12 33 30.2 -1.4**
comp=Z,196nm,1.1s,mb6.0
MBWA Marble Bar 50.81 153 *eP* **P 12 33 31.1 -1.5**
comp=Z,75nm,1.1s,mb5.5
MBWA LR LR
comp=Z,8μm,19.0s,MS5.8
FITZ Fitzroy Crossi 50.91 145 *eP* **P 12 33 29.2 -4.2**
comp=Z,48nm,0.8s,mb5.5
FITZ *eS* **S 12 40 54.4 +4.3**
FITZ Fitzroy Crossi 50.91 145 LR LR 12 59 48.4
comp=Z,5μm,19.3s,MS5.5,baz=314,slow=42
ESPY Espiye-Giresun 50.95 303 *eP* **P 12 33 33.9 +0.3**
SKR Severo-Kuril's 51.04 44 *eP* **P 12 33 36.0 +1.9**
SKR MLR MLR
comp=N,6μm,16.0s
SKR MLR MLR
comp=Z,10μm,16.0s,MS5.9
URFA Urfa 51.04 299 *eP* **P 12 33 31.1 -3.2**
VSR Storozhevoye 51.21 316 *eP* **P 12 33 34.3 -1.0**
VSR *e**PP pP 12 33 44.3 +5.8
VSR *e* 12 35 30.1
VSR *e*PPP 12 36 37.5
VSR *eS* **S 12 40 51.0 -2.6**
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VSR pmax pmax
comp=N,4.0nm,0.3s
VSR pmax pmax
comp=E,3.0nm,0.3s
VSR pmax pmax
comp=E,90nm,1.6s
VSR pmax pmax
comp=Z,130nm,1.6s,mb5.6
VSR pmax pmax
comp=N,60nm,0.8s
VSR smax
comp=N,280nm,2.4s
VSR smax
comp=Z,50nm,2.4s
VSR smax
comp=E,20nm,1.2s
VSR MLR MLR
comp=N,1μm,16.0s,MS5.8
VSR MLR MLR
comp=E,7μm,16.0s,MS5.8
VSR MLR MLR
comp=Z,9μm,16.0s,MS5.9
MALT Malatya 51.29 300 *eP* **P 12 33 37.0 +0.8**
MALT Malatya 51.29 300 *eP* **P 12 33 37.0 +0.8**
comp=Z,30nm,1.1s,mb5.1
MALT LR LR
comp=Z,5μm,20.0s,MS5.5
MALT Malatya 51.29 300⇓ *eP* **P 12 33 36.7 +0.5**
MALT Malatya 51.29 300⇓ *iP* **P 12 33 36.7 +0.5**
ANN Anapa 51.90 308 *i* P **P 12 33 43.7 +3.1**
ANN Anapa 51.90 308 *eP* **P 12 33 39.3 -1.3**
ANN *eS* **S 12 41 00.1 -3.3**
ANN *eSS* SS 12 44 38.3 -1.7
ANN pmax pmax
comp=Z,85nm,1.4s,mb5.5
ANN MLR MLR
comp=N,6μm,17.0s,MS5.8
ANN MLR MLR
comp=E,5μm,17.0s,MS5.8
ANN MLR MLR
comp=Z,7μm,17.0s,MS5.7
SEY Seymchan 51.95 28⇓ *eP* **P 12 33 40.9 +0.2**
SEY Seymchan 51.95 28⇓ *eP* **P 12 33 40.8 +0.1**
RSDY Resadiye-TOKAT 52.03 303 *eP* **P 12 33 42.7 +1.0**
SVSK Karacayir 52.31 302 *eP* **P 12 33 43.5 -0.3**
PETK Petropavlovsk- 52.32 41 P **P 12 33 43.4 -0.2**
PETK LR LR 12 58 47.3
PETK Petropavlovsk- 52.32 41 P **P 12 33 43.4 -0.2**
comp=Z,12nm,1.1s,mb4.8,baz=211,slow=1.7,SNR=14
PETK LR LR 12 58 47.3
comp=Z,5μm,19.5s,MS5.6,baz=122,slow=39
PETK Petropavlovsk- 52.32 41 P **P 12 33 43.4 -0.2**
PETK pmax pmax
comp=Z,12nm,1.1s,mb4.7
PETK MLR MLR
comp=Z,5μm,19.5s,MS5.6
KMRS Kahramanmaras 52.56 299 *eP* **P 12 33 45.5 -0.1**
SARI SarD1z-Kayseri 52.62 300 *eP* **P 12 33 46.8 +0.7**
MOS Moscow 52.79 322 *eP* **P 12 33 45.2 -1.9**
MOS *e* 12 35 44.9
MOS *e*PPP 12 36 52.9
MOS *eS* **S 12 41 11.5 -3.8**
MOS pmax pmax
comp=Z,800nm,1.7s,mb6.4
MOS pmax pmax
comp=Z,487nm,1.5s,mb6.2
MOS MLR MLR
comp=E,13μm,21.0s
MOS MLR MLR
comp=Z,16μm,21.0s,MS6.0
PET Petropavlovsk 52.88 41 *eP* **P 12 33 49.0 +1.2**
comp=Z,42nm,1.2s,mb5.2
PET LR LR
comp=Z,6μm,19.0s,MS5.6
PET Petropavlovsk 52.88 41 *eP* **P 12 33 49.6 +1.8**
PET *i* 12 35 51.5
PET *e*PPP 12 36 47.3
PET *eS* **S 12 41 13.2 -3.4**
PET *eSS* SS 12 44 49.0 -6.2
PET pmax pmax
comp=Z,34nm,1.1s,mb5.2
PET pmax pmax
comp=Z,400nm,18.8s
PET pmax pmax
comp=Z,500nm,17.6s
PET pmax pmax
comp=Z,500nm,12.4s
PET pmax pmax
comp=Z,400nm,16.0s
PET MLR MLR
comp=Z,5μm,17.0s,MS5.7
PET MLR MLR
comp=Z,4μm,18.0s
KLMR Klimovskoe 52.92 329*c iP* **P 12 33 47.6 -0.3**
KLMR *e* 12 35 49.7
KLMR *i* S **S 12 41 19.2 +2.4**
KLMR *i* SS SS 12 44 58.6 +3.2
KLMR pmax pmax
comp=Z,452nm,1.7s,mb6.1
KLMR pmax pmax
comp=Z,124nm,4.3s
KLMR MLR MLR
comp=Z,7μm,16.0s,MS5.8
KVT Kavak 52.98 304 *eP* **P 12 33 48.4 -0.2**
ASF Jabal al Asfar 53.21 292 S **S 12 41 22.0 +0.4**
comp=Z,1.0nm,0.4s,baz=37,slow=4.0,SNR=1.6
ASF LR LR 13 00 39.7
comp=Z,5μm,18.3s,MS5.6,baz=312,slow=40
OBN Obninsk 53.29 321 *eP* **P 12 33 50.9 +0.1**
comp=Z,271nm,1.3s,mb6.0
OBN LR LR
comp=Z,9μm,19.0s,MS5.8
OBN Obninsk 53.29 321*c iP* **P 12 33 50.2 -0.5**
OBN *i* 12 34 02.2
OBN *e* 12 34 58.5
OBN *e* 12 35 56.8
OBN *i* S **S 12 41 24.1 +2.0**
OBN pmax pmax
comp=Z,223nm,2.5s,mb5.7
OBN MLR MLR
comp=Z,11μm,23.0s,MS5.8
OBN Obninsk 53.29 321 P **P 12 33 54.1 +3.4**
comp=Z,662nm,1.7s,mb6.3,SNR=11
KOZT Kozan 53.41 299 *eP* **P 12 33 54.6 +2.7**
ATD Arta Tunnel 53.49 266 S **S 12 41 24.6 -1.3**
comp=Z,3.5nm,0.3s,baz=126,slow=22,SNR=2.3
ATD LR LR 12 56 37.4
comp=Z,5μm,18.5s,MS5.6,baz=247,slow=36
CEYT Ceyhan 53.52 298 *eP* **P 12 33 52.7 0.0**
HWQ Hawqa 53.69 295 *eP* **P 12 33 58.4 +4.4**
KARA Karaisali 54.04 299 *eP* **P 12 33 55.9 -0.6**
CORM Corum 54.11 303 *eP* **P 12 33 51.9 -5.1**
SIM Simferopol' 54.26 308*c iP* **P 12 34 02.0 +4.0**
SIM *eS* **S 12 41 37.0 +1.5**
SIM pmax pmax
comp=Z,30nm,0.9s,mb5.2
SIM MLR MLR
comp=Z,12μm,23.9s,MS5.9
MMAI Mount Meron Ar 54.32 294 LR LR 13 01 39.3
comp=Z,4μm,18.0s,MS5.5,baz=70,slow=41
BZK Bozkurt 54.46 305 *eP* **P 12 33 58.6 -0.9**
CANT Cankiri 54.84 303 *eP* **P 12 34 02.5 +0.2**
BR131 Keskin Array S 54.90 302 *eP* **P 12 34 02.6 -0.2**
BR131 LR LR
comp=Z,3μm,21.0s,MS5.3
BRTR Keskin Array B 54.90 302 P **P 12 34 02.1 -0.6**
comp=Z,11nm,0.6s,mb5.1,baz=110,slow=7.5,SNR=11
BRTR S **S 12 41 49.2 +4.9**
comp=Z,0.4nm,0.7s,baz=139,slow=24,SNR=3.0
BRTR LR LR 13 00 09.9
comp=Z,3μm,21.4s,MS5.3,baz=253,slow=39
BRTR Keskin Array B 54.90 302 P **P 12 34 02.2 -0.6**
BRTR S **S 12 41 49.2 +4.8**
BRTR pmax pmax
comp=Z,11nm,0.6s
BRTR MLR MLR
comp=Z,3μm,21.4s
SULT Sultanhani-AKS 55.15 300 *eP* **P 12 34 05.2 +0.6**
IKL Isikli 55.26 298 *eP* **P 12 34 06.5 +1.1**
EIL Elat 55.30 290 LR LR 13 01 04.4
comp=Z,6μm,18.8s,MS5.7,baz=88,slow=39
LFK Lefkose 55.51 297 *eP* **P 12 34 09.5 +2.2**
LOD Lodumlu 55.56 302 *eP* **P 12 34 04.4 -3.1**
KONT Konya--Tatoy 56.09 300 *eP* **P 12 34 10.0 -1.3**
HDMB Hadim 56.12 299 *eP* **P 12 34 09.0 -2.6**
KIZT Kizilcal 56.35 301 *eP* **P 12 34 10.1 -3.1**
KDZE Karadeniz Ereo 56.42 304 *eP* **P 12 34 10.3 -3.4**
SVRH Sivrihisar-ESK 56.56 302 *eP* **P 12 34 13.9 -0.8**
MDU Mudurnu 56.68 303 *eP* **P 12 34 13.8 -1.8**
LVZ Lovozero 56.82 336⇓ *eP* **P 12 34 14.8 -1.2**
LVZ pmax pmax
comp=Z,86nm,1.7s,mb5.5
LVZ MLR MLR
comp=Z,12μm,21.0s,MS6.0
JOF Joensuu 57.15 330 *eP* **P 12 34 17.1 -1.3**
JOF pmax pmax
comp=Z,25nm,0.7s,mb5.3
JOF Joensuu 57.15 330 *ep* **P 12 34 17.1 -1.3**
comp=Z,25nm,0.7s,mb5.3
APA Apatity 57.20 336⇑ *iP* **P 12 34 16.0 -2.7**
APA *i* 12 34 23.0
APA *i* S **S 12 42 10.0 -4.0**
APA *eSS* SS 12 45 57.0 -5.6
APA MLR MLR
comp=Z,8μm,19.0s,MS5.8
GULT Gulveren 57.22 303 *eP* **P 12 34 21.4 +2.1**
SUTC Sutluce-Ispart 57.22 300 *eP* **P 12 34 18.2 -1.2**
WRA Warramunga Arr 57.29 138 P **P 12 34 16.1 -3.9**
WRA S **S 12 42 11.7 -4.6**
WRA ⇑ *e* 13 04 22.0
WRA Warramunga Arr 57.29 138 P **P 12 34 16.1 -3.9**
comp=Z,30nm,0.7s,mb5.5,baz=329,slow=7.7,SNR=30
WRA S **S 12 42 11.7 -4.6**
comp=Z,1.9nm,1.3s,baz=312,slow=14,SNR=2.4
WRA PKP2bc 13 04 22.0
comp=Z,2.1nm,0.9s,baz=141,slow=1.3,SNR=7.2
WRA Warramunga Arr 57.29 138 P **P 12 34 16.1 -3.9**
WRA S **S 12 42 11.7 -4.6**
WRA pmax pmax
comp=Z,30nm,0.7s
WRA smax
comp=N,2.0nm,1.3s
SPNC Sapanca-Adapaz 57.34 303 *eP* **P 12 34 22.0 +1.7**
AKASG Malin Array Be 57.45 315 P **P 12 34 19.1 -1.7**
AKASG Malin Array Be 57.45 315 P **P 12 34 19.1 -1.7**
comp=N,16nm,0.6s,mb5.2,baz=79,slow=7.2,SNR=21
AKASG Malin Array Be 57.45 315 P **P 12 34 19.1 -1.7**
AKASG pmax pmax
comp=Z,16nm,0.6s
KIEV Kiev 57.46 315 *eP* **P 12 34 19.9 -1.0**
comp=Z,48nm,0.9s,mb5.5
KIEV LR LR
comp=Z,6μm,20.0s,MS5.7
KIEV Kiev 57.46 315 *eP* **P 12 34 19.9 -1.0**
KIEV pmax pmax
comp=Z,48nm,0.9s,mb5.5
KIEV MLR MLR
comp=Z,6μm,20.0s,MS5.7
ISP Isparta 57.55 300 *eP* **P 12 34 23.8 +2.0**
ISP Isparta 57.55 300 PFAKE 12 34 30.0 +8.3

ISP LR LR
comp=Z,4μm,19.0s,MS5.5
ISP Isparta 57.55 300 P **P** **12 34 21.0 -0.7**
ALT Altintas 57.70 302 *e*P **P** **12 34 21.6 -1.1**
CAVI Cavuskoy 57.75 303 *e*P **P** **12 34 21.4 -1.7**
ADVT Abdulvahap 57.80 303 *e*P **P** **12 34 24.9 +1.4**
HRT Hereke 57.81 304 *e*P **P** **12 34 22.1 -1.5**
KIS Kishinev 57.86 311 *e*PP PP 12 36 32.0 +0.2
KIS Kishinev 57.86 311 *e*P **P** **12 34 26.0 +2.2**
KIS *e* 12 34 42.0
KIS *e* 12 36 32.0
KIS *e*PPP 12 38 00.0
KIS *e*PS 12 42 28.0
KIS *e*SS SS 12 46 12.0 -1.9
KIS Kishinev 57.86 311 *e*P **P** **12 34 26.0 +2.2**
KIS Kishinev 57.86 311 *e*PP PP 12 36 32.0 +0.2
KIS Kishinev 57.86 311 *e*PPP 12 38 00.0
KIS *e*ScP ScP 12 39 20.0 +3.6
KIS *e*S **S** **12 42 10.0 -13**
KIS Kishinev 57.86 311 LRM 13 01 56.0
comp=Z,4μm,16.0s
ELL Elmali 58.19 299 *e*P **P** **12 34 24.6 -1.7**
GEMT Gemlik 58.22 303 *e*P **P** **12 34 29.5 +3.1**
KLYT Kilyos 58.23 304 *e*P **P** **12 34 27.1 +0.7**
ISK Istanbul-Kandi 58.24 304 *e*P **P** **12 34 24.6 -2.0**
MICGM Minsk 58.26 320 *e*P **P** **12 34 25.0 -1.4**
MNK Minsk 58.28 320 *e*P **P** **12 34 25.0 -1.6**
MNK *e*PPP 12 38 02.0
MNK *e*S **S** **12 42 20.0 -8.7**
MNK pmax pmax
comp=Z,370nm,1.2s,mb6.3
MNK pmax pmax
comp=E,520nm,1.4s
MNK MLR MLR
comp=Z,32μm,26.0s,MS6.3
MNK MLR MLR
comp=E,21μm,26.0s
MNK MLR MLR
comp=N,45μm,20.0s
TIRR Tirgusor 58.34 308 *e*P **P** **12 34 26.9 -0.3**
comp=N,65nm,1.3s,mb5.5
TIRR Tirgusor 58.34 308⇑P **P** **12 34 26.6 -0.6**
TIRR Tirgusor 58.34 308⇑*i*P **P** **12 34 26.6 -0.6**
BGKT Bogazkoy 58.44 304 *e*P **P** **12 34 30.8 +2.9**
ARMT Armutlu 58.45 304 *e*P **P** **12 34 30.4 +2.4**
PSN Preselentsi 58.59 307 *e*P **P** **12 34 28.4 -0.5**
BILL Bilibino 58.86 24 *i*P **P** **12 34 30.2 -0.2**
BILL Bilibino 58.86 24⇓*i*P **P** **12 34 30.1 -0.3**
BILL *e* 12 38 10.3
BILL *i*S **S** **12 42 38.1 +2.3**
BILL pmax pmax
comp=Z,65nm,1.4s,mb5.5
BILL MLR MLR
comp=Z,18μm,19.0s,MS6.2
KCTX Karacabey (Bur 58.87 303 *e*P **P** **12 34 29.8 -1.2**
KULA Kula-Manisa 58.90 301 *e*P **P** **12 34 29.8 -1.4**
NACGM Naroch 58.90 320 *e*P **P** **12 34 28.0 -2.8**
PMG Port Moresby 59.17 119 *e*P **P** **12 34 32.4 -0.9**
comp=Z,63nm,0.9s,mb5.7
PMG LR LR
comp=Z,2μm,20.0s,MS5.3
PMG Port Moresby 59.17 119 *e*P **P** **12 34 32.4 -0.9**
PMG pmax pmax
comp=Z,63nm,0.9s
PMG MLR MLR
comp=Z,2μm,20.0s
PRD Provadia 59.21 307 *e*P **P** **12 34 32.6 -0.6**
BALB Balikesir 59.33 303 *e*P **P** **12 34 36.4 +2.3**
TESR 59.39 311⇑P **P** **12 34 33.8 -0.6**
TESR 59.39 311⇑*i*P **P** **12 34 33.8 -0.6**
VRI Vrincioaia 59.40 310⇑P **P** **12 34 34.4 0.0**
VRI Vrincioaia 59.40 310⇑*i*P **P** **12 34 34.4 -0.1**
GONE Gonen-Balikesi 59.41 303 *e*P **P** **12 34 33.5 -1.2**
FINES FINESS Array B 59.44 328 P **P** **12 34 34.2 -0.2**
FINES S **S** **12 42 43.4 0.0**
FINES LR LR 13 02 49.1
FINES FINESS Array B 59.44 328 P **P** **12 34 34.2 -0.2**
comp=Z,15nm,0.7s,mb5.2,baz=98,slow=7.9,SNR=12
FINES S **S** **12 42 43.4 0.0**
comp=Z,1.6nm,0.7s,baz=174,slow=14,SNR=2.4
FINES LR LR 13 02 49.1
comp=Z,9μm,19.7s,MS5.9,baz=94,slow=38
FINES FINESS Array B 59.44 328 P **P** **12 34 34.2 -0.3**
FINES S **S** **12 42 43.4 0.0**
FINES pmax pmax
comp=Z,15nm,0.7s
FINES smax
comp=N,2.0nm,0.7s
FINES MLR MLR
comp=Z,9μm,19.7s
PLOR Plostina 59.45 310⇓P **P** **12 34 35.0 +0.1**
PLOR Plostina 59.45 310⇓*i*P **P** **12 34 35.0 +0.1**
KLBR Kellerberrin 59.64 160 *e*P **P** **12 34 36.9 +0.7**
comp=Z,32nm,0.9s,mb5.3
RKY Sarkoy-Tekirda 59.70 304 *e*P **P** **12 34 39.6 +2.9**
MLSB Milas 59.78 300 *e*P **P** **12 34 38.6 +1.3**
ASAR Alice Springs 59.91 141 P **P** **12 34 34.7 -3.5**
ASAR ⇑*e* 13 04 12.9
ASAR Alice Springs 59.91 141 P **P** **12 34 34.7 -3.5**
comp=Z,14nm,0.8s,mb5.0,baz=326,slow=6.2,SNR=22
ASAR PKP2bc 13 04 12.9
comp=Z,1.1nm,0.9s,baz=159,slow=2.6,SNR=5.3
KEV Kevo 59.92 338 *e*P **P** **12 34 37.5 -0.2**
comp=Z,7.8nm,1.0s,mb4.7
KEV LR LR
comp=Z,8μm,19.0s,MS5.9
KEV Kevo 59.92 338 *e*P **P** **12 34 37.5 -0.2**
KEV pmax pmax
comp=Z,31nm,1.0s,mb5.3
KEV MLR MLR
comp=Z,8μm,19.0s,MS5.9
MLR Muntele Rosu 59.98 309⇑P **P** **12 34 38.5 0.0**
MLR Muntele Rosu 59.98 309 P **P** **12 34 39.1 +0.6**
MLR Muntele Rosu 59.98 309⇑*i*P **P** **12 34 38.5 0.0**
ERIK Erikli-Kesan 60.20 304 *e*P **P** **12 34 43.6 +3.5**
BURAR Bucovina Array 60.26 312⇓P **P** **12 34 39.8 -0.6**
BURAR Bucovina Array 60.26 312 P **P** **12 34 40.7 +0.3**
BURAR Bucovina Array 60.26 312⇓*i*P **P** **12 34 39.8 -0.6**
BUR08 Bucovina Ar. S 60.27 312 *e*P **P** **12 34 40.2 -0.2**
GELI Tayfur-Gelibol 60.28 304 *e*P **P** **12 34 42.6 +2.0**
ARCES ARCESS Array B 60.41 337 P **P** **12 34 39.1 -1.9**
comp=Z,5.9nm,0.8s,mb4.7,baz=87,slow=8.0,SNR=23
ARCES LR LR 13 03 29.1
comp=Z,10μm,20.3s,MS5.9,baz=281,slow=39
ALN Alexandroupoli 60.52 304 *e*P **P** **12 34 44.8 +2.5**
ALN Alexandroupoli 60.52 304 P **P** **12 34 40.9 -1.4**
VOIR 60.61 310⇑P **P** **12 34 41.0 -1.8**
VOIR 60.61 310⇑*i*P **P** **12 34 41.0 -1.8**
PRK Paraskevi 60.62 302 P **P** **12 34 49.5 +6.5**
NWAO Narrogin (SRO) 60.73 161 P **P** **12 34 40.1 -3.5**
comp=Z,12nm,0.7s,mb5.1,baz=272,slow=16,SNR=3.5
NWAO LR LR 13 00 10.6
comp=Z,15μm,20.2s,MS6.1,baz=325,slow=35
LVV L'vov 60.83 315 *e*P **P** **12 34 43.7 -0.5**
LVV *e* 12 37 01.7
LVV *e*PPP 12 38 32.3
LVV *e*S **S** **12 43 02.7 +1.1**
LVV *e*PS 12 43 32.5
LVV MLR MLR
comp=Z,4μm,21.0s,MS5.6
LVV MLR MLR
comp=E,3μm,20.0s,MS5.6
LVV MLR MLR
comp=N,2μm,20.0s,MS5.6
CHOS Chios Island 60.93 301 *e*P **P** **12 34 48.5 +3.3**
SUW Suwalki 61.03 319 *e*P **P** **12 34 44.7 -0.8**
SUW *e*pP pP 12 34 48.4 -0.3
SUW *e*sP sP 12 34 55.9 +6.0
SUW LMZ 13 02 09.6
comp=N,11μm,29.6s
SUW Suwalki 61.03 319 *e*P **P** **12 34 45.2 -0.3**
comp=N,194nm,1.0s,mb6.2
SUW Suwalki 61.03 319 *e*P **P** **12 34 44.7 -0.8**
SUW *e**SP sP 12 34 55.9 +6.0
KTK1 Kautokeino 61.16 337 *e*P **P** **12 34 45.9 -0.2**
KTK1 AMB AMB 12 34 51.7
comp=Z,77nm,0.9s,mb5.8
KTK1 *e*S **S** **12 43 07.4 +2.1**
KTK1 *e*SS SS 12 47 07.8 +3.1
KTK1 AMS AMS 13 03 47.3
comp=Z,14μm,19.1s,MS6.1
PLD Plovdiv 61.33 306 P **P** **12 34 51.6 +3.8**
RER Riviere de l'E 61.54 225 PFAKE 12 35 00.0 +11
RER LR LR
comp=Z,4μm,21.0s,MS5.6
PGB Panagyurishte 61.65 306 *e*P **P** **12 34 48.8 -1.1**
KWP Kalwaria Pacla 61.70 314 *e*P **P** **12 34 50.1 -0.1**
KWP *e*pP pP 12 34 55.5 +2.1
KWP *e*sP sP 12 35 01.1 +6.5
KWP LMZ 13 01 58.8
comp=Z,12μm,26.2s
KWP Kalwaria Pacla 61.70 314⇑P **P** **12 34 49.8 -0.3**
KWP LR LR
comp=Z,7μm,19.0s,MS5.8
KWP Kalwaria Pacla 61.70 314 *e*P **P** **12 34 50.1 0.0**
KWP *e**SP sP 12 35 01.1 +6.5
KWP Kalwaria Pacla 61.70 314⇑*i*P **P** **12 34 49.8 -0.3**
MPEP Malo Peshtene 61.83 307 *e*P **P** **12 34 50.8 -0.3**
TRPA Tarpa 61.99 313⇓*i*P **P** **12 34 56.1 +4.0**
LAST Lasithi 62.02 298 *e*P **P** **12 34 50.6 -2.0**
LAST Lasithi 62.02 298 P **P** **12 34 56.3 +3.7**
DRGR 62.05 311⇑P **P** **12 34 52.7 +0.1**
DRGR 62.05 311⇑*i*P **P** **12 34 52.7 +0.2**
UZH Uzhgorod 62.09 313 *e*P **P** **12 34 52.0 -0.8**
UZH *e* 12 37 12.5
UZH *i*S **S** **12 43 13.0 -4.7**
UZH *e*PS 12 44 37.0
UZH *e*SS SS 12 47 18.6 -1.4
UZH MLR MLR
comp=N,4μm,17.0s,MS5.8
UZH MLR MLR
comp=E,4μm,17.0s,MS5.8
UZH MLR MLR
comp=Z,1μm,17.0s,MS5.0
OUR Ouranopolis 62.16 304 P **P** **12 34 52.1 -1.3**
VTS Vitosha 62.34 307⇓P **P** **12 34 54.0 -0.6**
VTS Vitosha 62.34 307 P **P** **12 34 54.0 -0.6**
VTS Vitosha 62.34 307⇓*i*P **P** **12 34 54.0 -0.6**
VTS Vitosha 62.34 307 *e*P **P** **12 34 53.3 -1.3**
PAIG Paliouri 62.47 304 P **P** **12 34 54.2 -1.3**
WAR Warsaw 62.47 318 *e*P **P** **12 34 56.0 +0.7**
WAR *e*pP pP 12 35 00.7 +2.1
WAR LMZ 13 05 50.2
comp=Z,8μm,19.6s
PLG Polygyros 62.56 304 P **P** **12 34 59.2 +3.1**
CRVS Cervenica-Dubn 62.60 314 *e*P **P** **12 34 56.8 +0.6**
comp=Z,167nm,2.2s,mb5.8
CRVS *e*S **S** **12 43 23.0 -1.1**
CRVS *e*SS SS 12 47 40.1 +12
CRVS LR LR
comp=Z,4μm,27.2s,MS5.5
CRVS Cervenica-Dubn 62.60 314 *e*P **P** **12 34 56.8 +0.6**
CRVS *e*S **S** **12 43 23.0 -1.1**
CRVS *e*SS SS 12 47 40.1 +12
STHS Stebnicka Huta 62.67 314 *e*P **P** **12 34 56.8 +0.1**
comp=Z,12nm,0.8s,mb5.1
STHS Stebnicka Huta 62.67 314 *e*P **P** **12 34 56.8 +0.1**
STHS pmax pmax
comp=Z,12nm,0.8s,mb5.1
STHS Stebnicka Huta 62.67 314 *e*P **P** **12 34 56.8 +0.1**
TRO Tromso 62.72 337 *e*P **P** **12 34 56.0 -0.6**
TRO AMB AMB 12 35 02.0
comp=Z,37nm,1.8s,mb5.2
TRO *e*S **S** **12 43 28.1 +3.1**
TRO *e*SS SS 12 47 33.9 +4.8
TRO AMS AMS 13 04 52.5
comp=Z,7μm,18.1s,MS5.9
FORT Forrest 62.79 151 *e*P **P** **12 34 58.3 +0.7**
comp=Z,38nm,0.7s,mb5.6
FORT Forrest 62.79 151 *e*P **P** **12 35 01.3 +3.7**
KNT Kendrikon 62.82 305 P **P** **12 34 56.7 -1.1**
BJO Bjornoya 62.85 343 *e*S **S** **12 43 29.8 +3.3**
BJO *e*SS SS 12 47 38.2 +7.3
BJO AMS AMS 13 04 24.5
comp=Z,5μm,18.2s,MS5.8
BZS Buzias 62.98 310⇓P **P** **12 34 58.8 0.0**
BZS Buzias 62.98 310⇓*i*P **P** **12 34 58.8 0.0**
VAY Valandovo 63.04 305 *e*P **P** **12 34 58.9 -0.3**
GVD Gavdhos 63.20 298 *e*P **P** **12 35 01.5 +1.0**
comp=Z,76nm,0.8s,mb5.9
KARN Karanos 63.21 298 *e*P **P** **12 35 02.1 +1.6**
KARN Karanos 63.21 298 P **P** **12 34 59.2 -1.3**
NIE Niedzica 63.27 314 *e*P **P** **12 35 01.2 +0.5**
LIT Litokhoron 63.33 304 P **P** **12 34 57.5 -3.7**
WAKE Wake Island 63.47 80 PFAKE 12 35 10.0 +7.5
WAKE LR LR
comp=Z,3μm,20.0s,MS5.5
OJC Ojcow 63.49 315 *e*P **P** **12 35 01.7 -0.4**
OJC *e*sP sP 12 35 06.3 -0.2
OJC *e*S **S** **12 43 33.6 -1.6**
OJC L 13 02 49.6
comp=Z,7.6nm,22.5s
AGG Agios Georgios 63.67 303 *e*P **P** **12 35 00.5 -3.0**
AGG Agios Georgios 63.67 303 P **P** **12 34 53.8 -10**
VLI Veliai 63.70 300 *e*P **P** **12 34 58.4 -5.3**
SPITS Spitsbergen Ar 63.73 347 P **P** **12 35 02.7 -0.6**
comp=Z,15nm,0.8s,mb5.0,baz=110,slow=11,SNR=6.7
SPITS Spitsbergen Ar 63.73 347 P **P** **12 35 02.7 -0.6**
SPITS pmax pmax
comp=Z,15nm,0.8s
SKO Skopje 63.74 306 *e*P **P** **12 35 03.6 -0.3**
PSZ Piszkesteto 63.78 313 *e*P **P** **12 35 04.3 +0.3**
comp=Z,59nm,1.4s,mb5.4
PSZ LR LR
comp=Z,7μm,19.0s,MS5.8
PSZ Piszkesteto 63.78 313⇑*i*P **P** **12 35 04.3 +0.3**
PSZ Piszkesteto 63.78 313⇑*e*P **P** **12 35 05.7 +1.7**
KZN Kozani 63.83 304 P **P** **12 35 02.9 -1.6**
GUR Goura 63.89 302 *e*P **P** **12 35 02.9 -2.1**
KRUS Krusevo 64.00 305 *e*P **P** **12 35 05.1 -0.5**
KMBO Kilima Mbogo 64.02 255 *e*P **P** **12 35 05.7 -0.4**
comp=Z,38nm,1.2s,mb5.3
KMBO LR LR
comp=Z,3μm,22.0s,MS5.4
KMBO Kilima Mbogo 64.02 255 P **P** **12 35 05.2 -0.9**
comp=Z,20nm,1.0s,mb5.1,baz=179,slow=24,SNR=8.1
KMBO LR LR 13 05 00.2
comp=Z,3μm,18.3s,MS5.5,baz=78,slow=38
KMBO Kilima Mbogo 64.02 255 *e*P **P** **12 35 05.7 -0.4**
KMBO pmax pmax
comp=Z,38nm,1.2s
KMBO MLR MLR
comp=Z,3μm,22.0s
KMBO Kilima Mbogo 64.02 255 P **P** **12 35 06.7 +0.6**
SNR=14.
NEST Nestorio 64.35 304 P **P** **12 35 10.2 +2.3**
DIVS Divibare 64.38 309 P **P** **12 35 07.4 -0.7**
ITM Ithomi 64.38 301 *e*P **P** **12 35 05.4 -2.8**
VYHS Vyhne 64.38 314 *e*P **P** **12 35 07.8 -0.2**
comp=Z,49nm,1.8s,mb5.2
VYHS *e*S **S** **12 43 49.0 +2.7**
VYHS *e*SS SS 12 48 11.1 +15
VYHS LR LR
comp=Z,2μm,25.9s,MS5.3
VYHS Vyhne 64.38 314 *e*P **P** **12 35 07.8 -0.2**
VYHS *e*S **S** **12 43 49.0 +2.7**
VYHS *e*SS SS 12 48 11.1 +15
BUD Budapest 64.43 312⇓*e*P **P** **12 35 08.6 +0.3**
MOR8 Moi Rana 64.53 333 *e*P **P** **12 35 10.3 +1.6**
PYL PYLOS 64.59 301 *e*P **P** **12 35 06.4 -3.2**
OKC Ostrava-Krasne 64.60 315 *e*P **P** **12 35 09.3 -0.1**
OKC *e* 12 35 15.1
OKC *e*S **S** **12 43 46.9 -2.1**
OKC MLR MLR
comp=Z,6μm,19.5s,MS5.8
OKC Ostrava-Krasne 64.60 315 *e*P **P** **12 35 09.3 -0.1**
OKC *ex* pP 12 35 15.1 +2.5
OKC *e*S **S** **12 43 46.9 -2.1**
OKC AMS AMS 13 05 10.0
comp=Z,6μm,19.5s
KBS Kingsbay 64.63 348 *e*P **P** **12 35 12.8 +3.7**
KBS *e*S **S** **12 43 51.0 +2.3**
KBS *e*SS SS 12 48 07.7 +9.1
KBS AMS AMS 13 05 31.2
comp=Z,6μm,20.8s,MS5.8
KBS Kingsbay 64.63 348 *e*P **P** **12 35 09.3 +0.1**
KBS MLR MLR
comp=Z,7μm,20.0s,MS5.9
KOLL Kolacno 64.65 314 *e*P **P** **12 35 11.3 +1.6**
KOLL Kolacno 64.65 314 *e*P **P** **12 35 11.3 +1.6**
IVA Berane 64.69 307⇓*i*P **P** **12 35 08.8 -1.3**
IVA Berane 64.69 307⇓*e*P **P** **12 35 08.8 -1.2**
PVY Plav 64.69 307⇓*i*P **P** **12 35 09.0 -1.1**
PKSM Moragy 64.92 311 P **P** **12 35 11.0 -0.5**
PLE Pljevlja 64.96 308⇓*i*P **P** **12 35 11.2 -0.6**
MORC Moravsky Berou 65.00 315 *e*P **P** **12 35 12.1 +0.1**
comp=Z,54nm,1.1s,mb5.5
MORC Moravsky Berou 65.00 315⇓*e*P **P** **12 35 11.6 -0.4**
MORC Moravsky Berou 65.00 315⇓*i*P **P** **12 35 11.6 -0.4**
VLS Valsamata 65.19 302 *e*P **P** **12 35 07.7 -5.7**
CTA Charters Tower 65.21 129 *e*P **P** **12 35 10.5 -3.2**
comp=Z,24nm,1.1s,mb5.1
CTA *e*S S 12 43 52.0 -5.2
CTA Charters Tower 65.21 129 PKP2bc 13 03 58.5
comp=Z,4.7nm,1.0s,baz=52,slow=1.9,SNR=3.4
CTAO Charters Tower 65.21 129 *e*P **P** **12 35 12.4 -1.3**
comp=Z,44nm,1.1s,mb5.4
CTAO LR LR
comp=Z,5μm,19.0s,MS5.7
CTAO Charters Tower 65.21 129 *e*P **P** **12 35 12.4 -1.3**
CTAO pmax pmax
comp=Z,44nm,1.1s,mb5.4
CTAO MLR MLR
comp=Z,5μm,19.0s,MS5.7
TTG Podgorica 65.24 307⇓*i*P **P** **12 35 12.2 -1.5**
TTG Podgorica 65.24 307⇓*e*P **P** **12 35 12.3 -1.4**
UPM Unac-Piva 65.33 308⇓*i*P **P** **12 35 12.9 -1.4**
ULC Ulcinj 65.34 306⇓*i*P **P** **12 35 13.2 -1.2**
NKY Niksic 65.35 307⇓*i*P **P** **12 35 13.2 -1.2**
KRLC Kraliky 65.43 316 *e*P **P** **12 35 14.5 -0.3**
KRLC *e*pP pP 12 35 18.6 +0.6
BUM Brajici-Budva 65.53 307⇓*i*P **P** **12 35 14.2 -1.4**
BUM Brajici-Budva 65.53 307⇓*i*P **P** **12 35 14.3 -1.3**
ZST Bratislava 65.57 314 *e*P **P** **12 35 16.0 +0.3**
comp=Z,59nm,1.8s,mb5.3
ZST *e*S S 12 44 06.4 +5.4
ZST LR LR
comp=Z,2μm,18.5s,MS5.3
ZST Bratislava 65.57 314 *e*P **P** **12 35 16.0 +0.3**
ZST *e*S S 12 44 06.4 +5.4
KSP Ksiaz 65.60 316 *e*P **P** **12 35 16.1 +0.2**
KSP *e*pP pP 12 35 19.5 +0.4
KSP *e*sP sP 12 35 27.1 +6.8
KSP *e*S S 12 43 45.0 -16
KSP LMZ 13 00 48.0
comp=Z,13μm,37.1s
KSP Ksiaz 65.60 316⇑*e*P **P** **12 35 16.0 +0.1**
KSP *e* 12 37 43.0
KSP *e*PPP 12 39 22.0
BRY Bratogost 65.65 308⇓*i*P **P** **12 35 15.7 -0.7**
BRY Bratogost 65.65 308⇓*i*P **P** **12 35 15.8 -0.6**
DPC Dobruska-Polom 65.67 316 *e*P **P** **12 35 16.9 +0.6**
DPC *e*S S 12 44 03.6 +1.5
DPC MLR MLR
comp=Z,6μm,19.9s,MS5.8
DPC Dobruska-Polom 65.67 316 *e*P **P** **12 35 16.9 +0.6**
DPC *ex* pP 12 35 20.6 +1.0
DPC *e*S S 12 44 03.6 +1.5
DPC AMS AMS 13 04 40.0
comp=Z,6μm,19.9s
BSD Bornholm Skovb 65.68 321 *i*P **P** **12 35 19.0 +2.7**
BSD MLR MLR
comp=Z,7μm,21.0s,MS5.8
BSD Bornholm Skovb 65.68 321 *i*P **P** **12 35 19.0 +2.7**
BSD
comp=Z,7μm,21.0s
VRAC Vranov 65.69 315⇓*e*P **P** **12 35 16.6 +0.1**
VRAC Vranov 65.69 315⇓*i*P **P** **12 35 16.6 +0.1**
NSS Namsos 65.74 332 *e*P **P** **12 35 16.3 -0.2**
NSS *e*S S 12 44 05.0 +2.5
NSS *e*SS SS 12 48 19.1 +2.8
NSS AMS AMS 13 06 30.1
comp=Z,8μm,16.4s,MS6.0
HCY Herceg Novi 65.78 307⇓*i*P **P** **12 35 16.1 -1.1**
HCY Herceg Novi 65.78 307⇓*i*P **P** **12 35 16.2 -1.0**
UPC Upice 65.84 316 *e*P **P** **12 35 17.9 +0.5**
UPC *e* 12 35 23.2
UPC Upice 65.84 316 *e*P **P** **12 35 17.9 +0.5**
UPC *ex* x 12 35 23.2
ABPO Ambohimpanom 65.92 233 *e*P **P** **12 35 17.8 -0.5**
comp=Z,54nm,1.3s,mb5.4
ABPO LR LR
comp=Z,9μm,20.0s,MS6.0
ABPO Ambohimpanom 65.92 233 *e*P **P** **12 35 17.8 -0.5**
ABPO pmax pmax
comp=Z,54nm,1.3s,mb5.4
ABPO MLR MLR
comp=Z,9μm,20.0s,MS6.0
SOP Sopron 66.03 313⇓*e*P **P** **12 35 19.0 +0.3**
TREC Trest 66.41 315 *e*P **P** **12 35 21.1 0.0**
TREC MLR MLR
comp=Z,9μm,22.7s,MS5.9
TREC Trest 66.41 315 *e*P **P** **12 35 21.1 0.0**
TREC AMS AMS 13 06 00.0
comp=Z,9μm,22.7s
CONA Conrad Observa 66.44 313 *i*P **P** **12 35 21.4 +0.1**
comp=Z,21nm,1.2s,mb5.1,SNR=8.0
CONA ⇓*i*sP sP 12 35 27.8 +2.0
comp=Z,96nm,1.1s
CSNA Conrad Observa 66.44 313⇑*i*P **P** **12 35 21.4 0.0**
comp=Z,19nm,1.2s,mb5.0
NOA NORSAR Array B 66.62 328 P **P** **12 35 20.6 -1.6**
comp=Z,6.0nm,0.6s,mb4.8,baz=81,slow=6.3,SNR=15
NOA LR LR 13 06 59.2
comp=Z,9μm,19.3s,MS6.0,baz=85,slow=38
NOA NORSAR Array B 66.62 328 P **P** **12 35 20.6 -1.6**
NOA pmax pmax
comp=Z,6.0nm,0.6s
NOA MLR MLR
comp=Z,9μm,19.3s
PVCC Panska Ves 66.74 316 *e*P **P** **12 35 23.3 +0.1**
PVCC MLR MLR
comp=Z,6μm,20.8s,MS5.8
PVCC Panska Ves 66.74 316 *e*P **P** **12 35 23.3 +0.1**
PVCC *e*pP pP 12 35 28.2 +1.8
PVCC AMS AMS 13 04 20.0
comp=Z,6μm,20.8s
ARSA Arzberg 66.81 313⇑*i*P **P** **12 35 22.6 -1.1**
comp=Z,9.0nm,1.0s,mb4.7
ARSA ⇑*i*sP sP 12 35 27.8 -0.3
comp=Z,26nm,0.9s,SNR=8.4
RUE Ruedersdorf 66.83 319 *e*P **P** **12 35 24.2 +0.5**
comp=Z,259nm,1.6s,mb6.0
PRU Pruhonice 66.86 316 *e*P **P** **12 35 24.9 +0.9**
PRU *e*S S 12 44 22.1 +5.4
PRU MLR MLR
comp=Z,5μm,17.4s,MS5.8
PRU Pruhonice 66.86 316 *e*P **P** **12 35 24.9 +0.9**
PRU *e*pP pP 12 35 28.5 +1.3
PRU *e*S S 12 44 22.1 +5.4
PRU AMS AMS 13 06 20.0
comp=Z,5μm,17.4s
PRA Prague 66.92 316 P **P** **12 35 25.0 +0.7**
PRA S S 12 44 22.0 +4.7
PRA AMS AMS 13 07 30.0
COP Copenhagen 66.97 322 *i*P **P** **12 35 27.5 +2.9**
COP MLR MLR
comp=Z,4μm,17.0s,MS5.7
COP Copenhagen 66.97 322 *i*P **P** **12 35 27.5 +2.9**
COP
comp=Z,4μm,17.0s
BRG Berggiesshubel 67.05 317 *e*P **P** **12 35 25.7 +0.5**
comp=Z,115nm,1.6s,mb5.7
BRG Berggiesshubel 67.05 317 *i*P **P** **12 35 25.1 -0.1**
comp=Z,12nm,1.1s,mb4.9
BRG *i* 12 35 31.1
comp=Z,115nm,1.6s
BRG PP PP 12 37 48.0 -4.6
BRG S S 12 44 12.0 -6.9
BRG
comp=N,13μm,21.9s
BRG
comp=E,6μm,26.8s
BRG
comp=Z,7μm,24.2s
BRG Berggiesshubel 67.05 317 *i*P **P** **12 35 25.1 -0.1**
BRG *i* 12 35 31.1
BRG 12 37 48.0
BRG S S 12 44 12.0 -6.9
BRG pmax pmax
comp=Z,70nm,1.1s,mb5.6
BRG MLR MLR
comp=N,8μm,21.9s
BRG MLR MLR
comp=Z,4μm,24.2s,MS5.5
OSL Oslo 67.06 327 *e*P **P** **12 35 28.7 +3.7**
PERS Pernice 67.22 312 *i*P **P** **12 35 25.6 -0.7**
PERS *e*PP PP 12 37 58.8 +4.7
PERS *e*S S 12 44 18.5 -2.5
SOKA Soboth 67.26 312⇑*i*P **P** **12 35 26.3 -0.3**

comp=Z,36nm,1.4s,mb5.2
BOJS Bojanci 67.38 311 *i* P **P** **12 35 27.1 -0.3**
BOJS *e*PP PP 12 38 02.0 +6.4
BOJS *e*S S 12 44 20.3 -2.8
BOJS *e*SS SS 12 48 48.2 +5.6
MOA Molln 67.51 314 *i* P **P** **12 35 27.7 -0.4**
comp=Z,13nm,0.9s,mb4.9,SNR=16
CLL Collm 67.54 317 *e*P **P** **12 35 28.4 +0.1**
comp=Z,87nm,1.6s,mb5.5
CLL Collm 67.54 317 *e*P **P** **12 35 28.0 -0.3**
comp=Z,91nm,1.6s,mb5.5
CLL *e*S S 12 44 27.0 +2.2
CLL LR LR
comp=Z,4µm,19.6s,MS5.7
CLL Collm 67.54 317 *e*P **P** **12 35 28.0 -0.3**
CLL *e*S S 12 44 27.0 +2.2
CLL pmax pmax
comp=Z,91nm,1.6s,mb5.5
CLL MLR MLR
comp=Z,4µm,19.6s,MS5.7
CLL Collm 67.54 317 *e*P **P** **12 35 28.0 -0.3**
comp=Z,91nm,1.6s,mb5.5
CLL *i* 12 35 35.7
CLL *e*PP PP 12 37 59.0 +2.2
CLL *e*PPP 12 39 34.0
CLL *e*S S 12 44 27.0 +2.2
comp=N,900nm,16.4s
CLL *e*S S 12 44 27.0 +2.2
comp=E,1µm,14.0s
CLL *e*S S 12 44 27.0 +2.2
comp=Z,1µm,17.1s
CLL *e*PPS 12 44 55.0
CLL *e*ScS ScS 12 45 28.0 +1.4
CLL *e*SS SS 12 48 48.0 +3.2
CLL *e*SSS 12 52 01.0
CLL L 13 09 00.0
comp=Z,4µm,19.6s
OBKA Obir 67.63 312⇑ *i*P **P** **12 35 29.2 +0.3**
comp=Z,9.9nm,1.1s,mb4.7
GEC2 GERESS Array S 67.65 315 *e*P **P** **12 35 29.6 +0.6**
comp=Z,152nm,1.8s,mb5.7
GEC2 GERESS Array S 67.65 315 *e*P **P** **12 35 29.6 +0.6**
comp=Z,152nm,1.8s,mb5.7
GEC2 GERESS Array S 67.65 315 *e*P **P** **12 35 29.6 +0.6**
GEC2 pmax pmax
comp=Z,152nm,1.8s,mb5.7
KHC Kasperske Hory 67.66 315 *e*P **P** **12 35 28.9 -0.2**
comp=Z,53nm,1.4s,mb5.4
KHC Kasperske Hory 67.66 315 *e*P **P** **12 35 28.9 -0.2**
KHC *e*S S 12 44 29.5 +3.2
KHC MLR MLR
comp=Z,8µm,19.9s,MS6.0
KHC Kasperske Hory 67.66 315 *e*P **P** **12 35 28.9 -0.2**
KHC *e*pP pP 12 35 32.9 +0.6
KHC *e*S S 12 44 29.5 +3.2
KHC AMS AMS 13 06 50.0
comp=Z,8µm,19.9s
KONO Kongsberg 67.67 327 *e*P **P** **12 35 35.0 +6.1**
KONO *e*S S 12 44 28.4 +2.4
KONO *e*SS SS 12 48 52.9 +6.4
KONO AMS AMS 13 07 31.6
comp=Z,6µm,17.0s,MS5.9
KONO Kongsberg 67.67 327⇑ *e*P **P** **12 35 27.5 -1.4**
KONO MLR MLR
comp=Z,6µm,19.0s,MS5.8
LJU Ljubljana 67.75 312 *i* P **P** **12 35 29.1 -0.6**
LJU *e*S S 12 44 26.6 -0.8
LJU *i* SS SS 12 48 51.2 +3.0
MOL Molde 68.03 330 *e*S S 12 44 30.5 +0.2
MOL *e*SS SS 12 48 54.5 +2.7
JAVS Javornik 68.10 312 *i* P **P** **12 35 31.1 -0.8**
JAVS *e*S S 12 44 31.5 -0.2
JAVS Javornik 68.10 312 P **P** **12 35 31.1 -0.8**
JAVS *e*S S 12 44 31.5 -0.1
WET Wettzell 68.11 315 *e*P **P** **12 35 32.5 +0.6**
comp=Z,144nm,1.8s,mb5.7
WET Wettzell 68.11 315 *e*P **P** **12 35 32.5 +0.6**
comp=Z,144nm,1.8s,mb5.7
WET Wettzell 68.11 315 *e*P **P** **12 35 32.5 +0.6**
WET pmax pmax
comp=Z,144nm,1.8s,mb5.7
NKC Novy Kostel 68.12 316 *e*P **P** **12 35 31.6 -0.4**
NKC *e* 12 35 36.9
NKC MLR MLR
comp=Z,7µm,19.4s,MS5.9
NKC Novy Kostel 68.12 316 *e*P **P** **12 35 31.6 -0.4**
NKC *ex* x 12 35 36.9
NKC AMS AMS 13 06 00.0
comp=Z,7µm,19.4s
WERN Wernitzgrün 68.16 316 *e*P **P** **12 35 32.8 +0.6**
comp=Z,105nm,1.8s,mb5.6
WERD Werda 68.16 317 *e*P **P** **12 35 32.6 +0.4**
comp=Z,79nm,1.6s,mb5.5
GUNZ Gunzen 68.17 317 *e*P **P** **12 35 32.8 +0.6**
comp=Z,112nm,1.6s,mb5.7
VOY Vojsko 68.18 312 *e*P **P** **12 35 31.8 -0.6**
VOY *e* pP 12 35 36.7 +1.0
VOY *e* 12 35 42.3
VOY *e* 12 35 52.6
VOY Vojsko 68.18 312 *e*P **P** **12 35 31.8 -0.6**
MYKA Terra Mystica 68.21 312⇑ *i*P **P** **12 35 31.5 -1.0**
comp=Z,5.6nm,0.9s,mb4.6
MYKA ⇑ *i*sP sP 12 35 37.5 +0.4
comp=Z,19nm,1.1s
KBA Koelnbreinsper 68.30 313⇑ *i*P **P** **12 35 32.5 -0.6**
comp=Z,19nm,0.8s,mb5.2
TRI Trieste 68.35 311 *e*P **P** **12 35 32.2 -1.3**
comp=Z,55nm,1.0s,mb5.5
TRI LR LR
comp=Z,5µm,21.0s,MS5.7
TRI Trieste 68.35 311 *e*P **P** **12 35 32.2 -1.2**
TRI pmax pmax
comp=Z,55nm,1.0s,mb5.5
TRI MLR MLR
comp=Z,5µm,21.0s,MS5.7
BSEG Bad Segeberg 68.54 321 *e*P **P** **12 35 35.6 +1.1**
comp=Z,154nm,1.5s,mb5.7
BSEG Bad Segeberg 68.54 321 *e*P **P** **12 35 35.6 +1.1**
BSEG Bad Segeberg 68.54 321 *e*P **P** **12 35 35.6 +1.1**
BSEG pmax pmax
comp=Z,154nm,1.5s,mb5.7
MOX Moxa 68.55 317 *e*P **P** **12 35 34.3 -0.3**
comp=Z,154nm,2.0s,mb5.6
MOX *e*S S 12 44 26.0 -11
MOX
comp=Z,3µm,21.0s
MOX Moxa 68.55 317 *e*P **P** **12 35 35.0 +0.4**
comp=Z,84nm,1.6s,mb5.4
MOX Moxa 68.55 317 *e*P **P** **12 35 34.3 -0.3**
MOX *e*S S 12 44 26.0 -11
MOX pmax pmax
comp=Z,154nm,2.0s,mb5.6
MOX MLR MLR
comp=Z,3µm,21.0s,MS5.5
MUD Monsted U'grnd 68.59 323 *i* P **P** **12 35 38.1 +3.3**
MUD pmax pmax
comp=Z,12nm,0.9s,mb4.8
MUD MLR MLR
comp=Z,7µm,17.0s,MS5.9
MUD Monsted U'grnd 68.59 323 *i* P **P** **12 35 38.1 +3.3**
comp=Z,12nm,0.9s,mb4.8
MUD
comp=Z,7µm,17.0s
ABTA Abfaltersbach 68.93 313⇑ *i*P **P** **12 35 35.7 -1.4**
comp=Z,28nm,0.9s,mb5.2
NRDL Niedersach Rie 69.01 319 *e*P **P** **12 35 37.4 -0.1**
comp=Z,461nm,2.2s,mb6.0
CLZ Clausthal 69.01 318 *e*P **P** **12 35 38.2 +0.7**
comp=Z,174nm,1.6s,mb5.7
CLZ Clausthal 69.01 318 *e*P **P** **12 35 38.2 +0.7**
comp=Z,174nm,1.6s,mb5.7
CLZ Clausthal 69.01 318 *e*P **P** **12 35 38.2 +0.7**
CLZ pmax pmax
comp=Z,174nm,1.6s,mb5.7
GRA1 Grafenberg Arr 69.02 316 *e*P **P** **12 35 38.5 +0.9**
comp=Z,256nm,1.8s,mb5.8
GRA1 *e*S S 12 44 48.1 +5.6
GRA1 *e*SS SS 12 49 17.1 +9.4
GRA1 LR LR
comp=Z,7µm,21.7s,MS5.8
GRF Grafenberg Arr 69.02 316 *e*P **P** **12 35 38.5 +0.9**
comp=Z,256nm,1.8s,mb5.8
GRF *e*S S 12 44 48.1 +5.6
GRF *e*SS SS 12 49 17.1 +9.4
GRF *e*L 13 06 57.1
comp=Z,7µm,21.7s
GRF Grafenberg Arr 69.02 316 *e*P **P** **12 35 38.5 +0.9**
comp=Z,256nm,1.8s,mb5.8
GRF *e*S S 12 44 48.1 +5.6
GRF *e*SS SS 12 49 17.1 +9.4
GRF LR LR
comp=Z,7µm,21.7s,MS5.8
GRF Grafenberg Arr 69.02 316 *e*P **P** **12 35 38.5 +0.9**
GRF *e*S S 12 44 48.1 +5.6
GRF pmax pmax
comp=Z,256nm,1.8s,mb5.8
GRF MLR MLR
comp=Z,7µm,21.7s,MS5.8
GRF Grafenberg Arr 69.02 316 *e*P **P** **12 35 38.5 +0.9**
GRF *e*S S 12 44 48.1 +5.6
GRF pmax pmax
comp=Z,256nm,1.8s,mb5.8
GRF MLR MLR
comp=Z,7µm,21.7s,MS5.8
WTTA Wattenberg 69.38 313⇑ *i*P **P** **12 35 39.0 -0.8**
comp=Z,55nm,1.2s,mb5.3
FUR Furstenfeldbru 69.38 314 *e*P **P** **12 35 40.4 +0.6**
comp=Z,257nm,1.7s,mb5.9
FUR Furstenfeldbru 69.38 314 *e*P **P** **12 35 40.4 +0.6**
comp=Z,257nm,1.7s,mb5.9
FUR Furstenfeldbru 69.38 314 *e*P **P** **12 35 40.4 +0.6**
FUR pmax pmax
comp=Z,257nm,1.7s,mb5.9
FOO Floro 69.41 329 *e*P **P** **12 35 47.7 +7.9**
FOO *e*S S 12 44 49.8 +3.2
FOO *e*SS SS 12 49 19.7 +6.6
FOO AMS AMS 13 08 46.0
comp=Z,6µm,16.5s,MS5.9
MBAR Mbarara 69.53 259 PFAKE 12 35 50.0 +8.7
MBAR LR LR
comp=Z,991nm,22.0s,MS5.0
BER Bergen 69.58 328 *e*P pP 12 35 50.8 +6.7
BER *e*S S 12 44 50.6 +1.8
BER *e*SS SS 12 49 21.5 +5.7
BER AMS AMS 13 08 33.2
comp=Z,10µm,21.3s,MS6.0
HNR Honiara 69.66 111 PFAKE 12 35 50.0 +7.9
HNR LR LR
comp=Z,3µm,20.0s,MS5.6
HNR Honiara 69.66 111 LR LR 13 04 56.3
comp=Z,3µm,20.2s,MS5.5,baz=163,slow=35
MOTA Moosalm 69.70 314 *i* P **P** **12 35 41.6 -0.2**
comp=Z,27nm,1.1s,mb5.1,SNR=16
RETA Reutte 69.89 314⇑ *i*P **P** **12 35 42.5 -0.5**
comp=Z,18nm,1.2s,mb4.9,SNR=21
FETA Feichten 70.04 313⇑ *i*P **P** **12 35 43.2 -0.7**
comp=Z,16nm,1.0s,mb4.9,SNR=14
FETA ⇓ *i*sP sP 12 35 49.9 +1.5
comp=Z,82nm,1.5s
IBBN Ibbenburen 70.45 319 *e*P **P** **12 35 46.9 +0.6**
comp=Z,317nm,2.0s,mb5.9
WDD Wield Dalam 70.48 301 PFAKE 12 36 00.0 +13
WDD LR LR
comp=Z,2µm,21.0s,MS5.3
DAVA Damuels 70.52 314⇑ *i*P **P** **12 35 46.0 -0.9**
comp=Z,17nm,1.1s,mb4.9
DAVA ⇓ *i*sP sP 12 35 52.8 +1.4
comp=Z,70nm,1.1s
STKA Stephens Creek 70.55 141 *e*P **P** **12 35 43.6 -3.5**
comp=Z,36nm,0.9s,mb5.3
STKA Stephens Creek 70.55 141 *e*P **P** **12 35 44.5 -2.7**
comp=Z,8.8nm,0.8s,mb4.7
STKA Stephens Creek 70.55 141 P **P** **12 35 43.5 -3.6**
comp=Z,19nm,0.7s,mb5.1,baz=332,slow=5.5,SNR=11
STKA LR LR 13 08 56.1
comp=Z,8µm,21.7s,MS5.9,baz=304,slow=38
STU Stuttgart 70.55 315 *e*P **P** **12 35 47.4 +0.4**
comp=Z,154nm,1.7s,mb5.7
STU Stuttgart 70.55 315 *e*P **P** **12 35 47.2 +0.2**
STU Stuttgart 70.55 315 *e*P **P** **12 35 47.2 +0.2**
TNS Taunus Mts 70.61 317 *e*P **P** **12 35 47.8 +0.4**
comp=Z,70nm,1.3s,mb5.4
TNS Taunus Mts 70.61 317 *e*P **P** **12 35 47.8 +0.4**
comp=Z,70nm,1.3s,mb5.4
TNS Taunus Mts 70.61 317 *e*P **P** **12 35 47.8 +0.4**
TNS pmax pmax
comp=Z,70nm,1.3s,mb5.4
BUG Bochum--Univer 70.98 319 *e*P **P** **12 35 50.2 +0.6**
comp=Z,136nm,1.8s,mb5.6
BFO Black Forest 71.23 315 P **P** **12 35 51.8 +0.7**
comp=Z,121nm,1.1s,mb5.7,SNR=5.6
BFO Black Forest 71.23 315 *e*P **P** **12 35 51.1 0.0**
comp=Z,77nm,1.7s,mb5.4
BFO Black Forest 71.23 315 *e*P **P** **12 35 51.1 0.0**
comp=Z,77nm,1.7s,mb5.4
BFO Black Forest 71.23 315 *e*P **P** **12 35 51.1 0.0**
BFO pmax pmax
comp=Z,77nm,1.7s,mb5.4
LANF Langenberg 71.37 316 *e*P **P** **12 35 52.3 +0.3**
DAG Danmarks Havn 71.37 347⇑ *i*P **P** **12 35 50.1 -1.4**
DAG pmax pmax
comp=Z,46nm,1.3s,mb5.2
DAG Danmarks Havn 71.37 347⇑ *i*P **P** **12 35 50.1 -1.4**
comp=Z,46nm,1.3s,mb5.2
JMIC Jan Mayen 71.51 341 *e*P **P** **12 35 54.0 +1.5**
JMIC *e*S S 12 45 18.0 +7.0
JMIC AMS AMS 13 07 56.8
comp=Z,4µm,16.9s,MS5.7
FELD Feldberg im Sc 71.57 315 *e*P **P** **12 35 52.1 -1.1**
RUP Ruppelstein 71.62 317 *e*P **P** **12 35 53.8 +0.3**
CDF Champ du Feu 71.87 315 *e*P **P** **12 35 54.4 -0.6**
comp=Z,97nm,1.2s,mb5.3
CDF Champ du Feu 71.87 315 *e*P **P** **12 35 54.4 -0.6**
comp=Z,48nm,1.2s,mb5.3
CDF Champ du Feu 71.87 315 *e*P **P** **12 35 54.4 -0.6**
CDF pmax pmax
comp=Z,48nm,1.2s,mb5.3
ECH Echery 72.01 315 *e*P **P** **12 35 53.4 -2.4**
ECH Echery 72.01 315 *e*P **P** **12 35 55.6 -0.2**
comp=Z,17nm,1.1s,mb4.9
ECH LR LR
comp=Z,5µm,22.0s,MS5.8
ECH Echery 72.01 315 *e*P **P** **12 35 55.6 -0.2**
ECH pmax pmax
comp=Z,17nm,1.1s,mb4.9
ECH MLR MLR
comp=Z,5µm,22.0s,MS5.8
EIDS Eidsvold 72.02 130 *e*P **P** **12 35 55.6 -0.6**
comp=Z,36nm,1.1s,mb5.2
MOF Molkenrain 72.14 315 *e*P **P** **12 35 56.6 0.0**
WLF Walferdange 72.19 317 *e*P **P** **12 35 58.0 +1.1**
comp=Z,789nm,2.5s,mb6.2
WLF Walferdange 72.19 317 *e*P **P** **12 35 57.8 +0.9**
WLF LR LR
comp=Z,5µm,22.0s,MS5.7
WLF Walferdange 72.19 317 *e*P **P** **12 35 57.8 +0.9**
WLF MLR MLR
comp=Z,5µm,22.0s,MS5.7
HINF Hinteralfeld 72.33 315 *e*P **P** **12 35 57.0 -0.7**
comp=Z,137nm,1.5s,mb5.4
HINF Hinteralfeld 72.33 315 *e*P **P** **12 35 57.0 -0.7**
comp=Z,68nm,1.5s,mb5.4
HINF Hinteralfeld 72.33 315 *e*P **P** **12 35 57.0 -0.7**
HINF pmax pmax
comp=Z,68nm,1.5s,mb5.4
HAU Haudompre 72.59 315 *e*P **P** **12 35 59.5 +0.2**
comp=Z,159nm,1.5s,mb5.4
HAU *e*MLR MLR
comp=Z,7µm,22.5s,MS5.6
HAU Haudompre 72.59 315 *e*P **P** **12 35 59.5 +0.2**
comp=Z,80nm,1.5s,mb5.4
HAU LR LR
comp=Z,7µm,22.5s,MS5.9
HAU Haudompre 72.59 315 *e*P **P** **12 35 59.5 +0.2**
HAU pmax pmax
comp=Z,80nm,1.5s,mb5.4
HAU MLR MLR
comp=Z,7µm,22.5s,MS5.9
THEF They Montfort 72.75 316 *e*P **P** **12 35 58.8 -1.5**
LRW Lerwick 72.75 329 *e* S 12 45 26.7 +1.3
LRW AMS AMS 13 10 29.4
comp=Z,8µm,19.3s,MS6.0
GIVF Givet 72.87 318 *e*P **P** **12 36 00.6 -0.4**
comp=Z,94nm,1.2s,mb5.3
GIVF Givet 72.87 318 *e*P **P** **12 36 00.6 -0.4**
comp=Z,47nm,1.2s,mb5.3
GIVF Givet 72.87 318 *e*P **P** **12 36 00.6 -0.4**
GIVF pmax pmax
comp=Z,47nm,1.2s,mb5.3
WAL1 Walls 72.91 329 *e*P **P** **12 36 00.4 -0.6**
SAOF Saorge 73.07 311 *e*P **P** **12 35 59.8 -2.5**
LPG La Plagne 73.13 313 *e*P **P** **12 36 02.6 0.0**
comp=Z,219nm,1.2s,mb5.7
LPG La Plagne 73.13 313 *e*P **P** **12 36 02.6 0.0**
comp=Z,110nm,1.2s,mb5.7
LPG La Plagne 73.13 313 *e*P **P** **12 36 02.6 0.0**
LPG pmax pmax
comp=Z,110nm,1.2s,mb5.7
LPL La Plagne 73.13 313 *e*P **P** **12 36 02.5 -0.1**
comp=Z,142nm,1.0s,mb5.6
LPL La Plagne 73.13 313 *e*P **P** **12 36 02.5 -0.1**
comp=Z,71nm,1.0s,mb5.5
LPL La Plagne 73.13 313 *e*P **P** **12 36 02.5 -0.1**
LPL pmax pmax
comp=Z,71nm,1.0s,mb5.5
AUTN L'Aution 73.16 311 *e*P **P** **12 36 03.1 +0.3**
SBF Sospel 73.19 311 *e*P **P** **12 36 02.2 -0.8**
comp=Z,142nm,1.0s,mb5.5
SBF Sospel 73.19 311 *e*P **P** **12 36 02.2 -0.8**
comp=Z,71nm,1.0s,mb5.5
SBF Sospel 73.19 311 *e*P **P** **12 36 02.2 -0.8**
SBF pmax pmax
comp=Z,71nm,1.0s,mb5.5
CABF La Chapelle 73.20 314 *e*P **P** **12 36 02.6 -0.4**
comp=Z,128nm,1.3s,mb5.4
CABF La Chapelle 73.20 314 *e*P **P** **12 36 02.6 -0.4**
comp=Z,64nm,1.3s,mb5.4
CABF La Chapelle 73.20 314 *e*P **P** **12 36 02.6 -0.4**
CABF pmax pmax
comp=Z,64nm,1.3s,mb5.4
MEZF Maizieres J'vi 73.25 316 *e*P **P** **12 36 02.9 -0.3**
comp=Z,298nm,1.4s,mb5.7
MEZF Maizieres J'vi 73.25 316 *e*P **P** **12 36 02.9 -0.3**
comp=Z,298nm,1.4s,mb6.0
BAIF Baives 73.26 318 *e*P **P** **12 36 03.1 -0.2**
comp=Z,104nm,1.3s,mb5.3
BAIF Baives 73.26 318 *e*P **P** **12 36 03.1 -0.2**
comp=Z,52nm,1.3s,mb5.3
BAIF Baives 73.26 318 *e*P **P** **12 36 03.1 -0.2**
BAIF pmax pmax
comp=Z,52nm,1.3s,mb5.3
TOUF Mont Tournerai 73.27 311 *e*P **P** **12 36 03.5 +0.1**
MBDF Montbardon 73.36 312 *e*P **P** **12 36 02.7 -1.3**
comp=Z,96nm,1.0s,mb5.4
MBDF Montbardon 73.36 312 *e*P **P** **12 36 02.7 -1.3**
comp=Z,48nm,1.0s,mb5.4
MBDF Montbardon 73.36 312 *e*P **P** **12 36 02.7 -1.3**
MBDF pmax pmax
comp=Z,48nm,1.0s,mb5.4
FRF La Foret Royal 73.83 311 *e*P **P** **12 36 05.8 -1.0**
comp=Z,77nm,1.0s,mb5.3
FRF La Foret Royal 73.83 311 *e*P **P** **12 36 05.8 -1.0**
comp=Z,38nm,1.0s,mb5.3
FRF La Foret Royal 73.83 311 *e*P **P** **12 36 05.8 -1.0**
FRF pmax pmax
comp=Z,38nm,1.0s,mb5.3
ORIF Oris-en-Rattie 73.90 312 *e*P **P** **12 36 06.2 -0.9**
comp=Z,130nm,1.2s,mb5.4
ORIF *e*MLR MLR
comp=Z,6µm,22.5s,MS5.5
ORIF Oris-en-Rattie 73.90 312 *e*P **P** **12 36 06.2 -0.9**
comp=Z,65nm,1.2s,mb5.4
ORIF Oris-en-Rattie 73.90 312 *e*P **P** **12 36 06.2 -0.9**
ORIF pmax pmax
comp=Z,65nm,1.2s,mb5.4
LMR La Mourre 74.00 311 *e*P **P** **12 36 07.1 -0.7**
comp=Z,258nm,1.5s,mb5.6
LMR La Mourre 74.00 311 *e*P **P** **12 36 07.1 -0.7**
comp=Z,129nm,1.5s,mb5.6
LMR La Mourre 74.00 311 *e*P **P** **12 36 07.1 -0.7**
LMR pmax pmax
comp=Z,129nm,1.5s,mb5.6
MIDW Midway 74.33 66 PFAKE 12 36 20.0 +10
MIDW LR LR
comp=Z,2µm,21.0s,MS5.4
OG26 St.-Nazaire-De 74.40 312 *e*P **P** **12 36 09.4 -0.7**
OCF Saint Nazaire 74.40 312 *e*P **P** **12 36 09.4 -0.7**
LOR Lormes 74.42 315 *e*P **P** **12 36 09.1 -1.0**
comp=Z,179nm,1.5s,mb5.5
LOR *e*MLR MLR
comp=Z,2µm,20.8s,MS5.2
LOR Lormes 74.42 315 *e*P **P** **12 36 09.1 -1.0**
comp=Z,90nm,1.5s,mb5.5
LOR LR LR
comp=Z,2µm,20.8s,MS5.5
LOR Lormes 74.42 315 *e*P **P** **12 36 09.1 -1.0**
LOR pmax pmax
comp=Z,90nm,1.5s,mb5.5
LOR MLR MLR
comp=Z,2µm,20.8s,MS5.5
SMRF Simiane la Rot 74.42 311 *e*P **P** **12 36 09.8 -0.4**
comp=Z,166nm,1.6s,mb5.4
SMRF Simiane la Rot 74.42 311 *e*P **P** **12 36 09.8 -0.4**
comp=Z,166nm,1.6s,mb5.7
KEST Kesra 74.51 302 *e*P **P** **12 36 11.1 +0.2**
KEST Kesra 74.51 302 P **P** **12 36 10.8 -0.1**
comp=Z,6.1nm,1.0s,mb4.5,baz=169,slow=4.9,SNR=8.9
KEST LR LR 13 16 43.1
comp=Z,908nm,18.0s,MS5.1,baz=249,slow=42
ORE Reay 74.57 328 *e*P **P** **12 36 10.7 0.0**
SOFL Sornfelli, Far 74.60 332 AMS AMS 13 11 27.8
comp=Z,6µm,21.2s,MS5.8
SMF Signal de Mont 74.65 315 *e*P **P** **12 36 10.8 -0.7**
comp=Z,228nm,1.4s,mb5.6
SMF Signal de Mont 74.65 315 *e*P **P** **12 36 10.8 -0.7**
comp=Z,114nm,1.4s,mb5.6
SMF Signal de Mont 74.65 315 *e*P **P** **12 36 10.8 -0.7**
SMF pmax pmax
comp=Z,114nm,1.4s,mb5.6
MME1 Meikle Cairn 74.66 326⇑ *e*P **P** **12 36 10.4 -0.9**
SSB Saint Sauveur 74.67 313 *e*P **P** **12 36 11.2 -0.4**
SSB Saint Sauveur 74.67 313 *e*P **P** **12 36 11.1 -0.5**
comp=Z,41nm,1.3s,mb5.2
SSB LR LR
comp=Z,3µm,19.0s,MS5.7
SSB Saint Sauveur 74.67 313 *e*P **P** **12 36 11.1 -0.5**
SSB pmax pmax
comp=Z,41nm,1.3s,mb5.2
SSB MLR MLR
comp=Z,3µm,19.0s,MS5.7
MCD Coleburn Disti 74.70 327 *e*P **P** **12 36 10.9 -0.6**
SSF Saint Saulge 74.72 315 *e*P **P** **12 36 11.2 -0.7**
comp=Z,83nm,1.0s,mb5.3
SSF Saint Saulge 74.72 315 *e*P **P** **12 36 11.2 -0.7**
comp=Z,42nm,1.0s,mb5.3
SSF Saint Saulge 74.72 315 *e*P **P** **12 36 11.2 -0.7**
SSF pmax pmax
comp=Z,42nm,1.0s,mb5.3
VIVF Saint-Julien-l 74.73 313 *e*P **P** **12 36 11.3 -0.6**
comp=Z,174nm,1.4s,mb5.5
VIVF Saint-Julien-l 74.73 313 *e*P **P** **12 36 11.3 -0.6**
comp=Z,87nm,1.4s,mb5.5
VIVF Saint-Julien-l 74.73 313 *e*P **P** **12 36 11.3 -0.6**
VIVF pmax pmax
comp=Z,87nm,1.4s,mb5.5
TTA Tatalina 74.90 27 *e*P **P** **12 36 13.0 +0.4**
AVF Avril sur Loir 74.91 315 *e*P **P** **12 36 12.2 -0.8**
comp=Z,300nm,1.5s,mb5.7
AVF Avril sur Loir 74.91 315 *e*P **P** **12 36 12.2 -0.8**
comp=Z,150nm,1.5s,mb5.7
AVF Avril sur Loir 74.91 315 *e*P **P** **12 36 12.2 -0.8**
AVF pmax pmax
comp=Z,150nm,1.5s,mb5.7
ESY Stoneypath 75.02 325⇑ *e*P **P** **12 36 13.4 0.0**
PLDF La Plantade 75.03 314 *e*P **P** **12 36 13.1 -0.6**
COLD Coldfoot 75.07 22 *e*P **P** **12 36 13.4 -0.1**
comp=Z,15nm,1.0s,mb4.9
HYF Humbligny 75.20 315 *e*P **P** **12 36 14.4 -0.2**
XAL Allendale 75.22 324 *e*P **P** **12 36 14.1 -0.4**
HPK Haverah Park 75.24 323 *e* S 12 44 54.3 -59
HPK AMS AMS 13 12 43.6
comp=Z,6µm,18.4s,MS6.0
EBL Broad Law 75.30 325⇑ *e*P **P** **12 36 15.6 +0.5**
MDO Dochfour 75.30 327⇑ *e*P **P** **12 36 13.3 -1.7**
EDI Edinburgh 75.31 325 AMS AMS 15 10 17.3
comp=Z,8µm,17.8s,MS6.1
AGO Saint Agoulin 75.32 314 *e*P **P** **12 36 15.2 -0.1**
RSC Scourie 75.33 328⇑ *e*P **P** **12 36 14.9 -0.2**
EAU Auchinoon 75.48 325⇑ *e*P **P** **12 36 15.6 -0.4**
PYM Petit Puy Mans 75.51 314 *e*P **P** **12 36 16.1 -0.3**
CWF Charnwood Fore 75.53 322 *e* S 12 45 58.7 +1.7
CWF AMS AMS 13 12 14.1
comp=Z,7µm,19.7s,MS6.0
LBL Lubilhac 75.54 313 *e*P **P** **12 36 16.4 -0.2**
LASF Ste Croix 75.55 312 *e*P **P** **12 36 16.4 -0.3**
comp=Z,232nm,1.5s,mb5.6
ESK Eskdalemuir 75.56 325⇑ *e*P **P** **12 36 14.9 -1.6**

ESK AMB AMB 12 36 20.5
comp=Z,63nm,2.3s,mb5.1
ESK *e* 12 45 10.8
ESK AMS AMS 13 08 38.7
comp=Z,4µm,23.3s,MS5.7
ESK Eskdalemuir 75.56 325 *eP* **P 12 36 16.3 -0.2**
ESK MLR MLR
comp=Z,5µm,19.0s,MS5.8
ECK Cauldkaine Hil 75.57 324 *eP* **P 12 36 15.7 -0.9**
SCO Scoresbysund 75.63 342 *i P* PcP 12 36 29.6 +0.1
SCO pmax pmax
comp=Z,47nm,1.0s,mb5.4
SCO MLR MLR
comp=Z,5µm,27.0s,MS5.7
CMAH Djebel Manchou 75.66 304 P **P 12 36 17.0 -0.5**
ARMA Armidale 75.66 134 *eP* **P 12 36 19.7 +2.3**
ARMA *eS* S 12 46 06.5 +7.6
ARMA Armidale 75.66 134 *eP* **P 12 36 16.2 -1.2**
ABSA Djebel Ababsia 75.74 304 P **P 12 36 17.0 -0.9**
EAB Aberfoyle 75.80 326 *eP* **P 12 36 19.5 +1.6**
TCF Toulx Ste Croi 75.83 315 *eP* **P 12 36 17.9 -0.4**
comp=Z,147nm,1.1s,mb5.5
TCF Toulx Ste Croi 75.83 315 *eP* **P 12 36 17.9 -0.4**
comp=Z,73nm,1.1s,mb5.5
TCF Toulx Ste Croi 75.83 315 *eP* **P 12 36 17.9 -0.4**
TCF pmax pmax
comp=Z,73nm,1.1s,mb5.5
VERF Verneugheol 75.85 314 *eP* **P 12 36 18.6 +0.2**
SVW2 Sparrevohn 75.89 29 *eP* **P 12 36 17.7 -0.6**
comp=Z,39nm,1.2s,mb5.2
SVW2 LR LR
comp=Z,9µm,17.0s,MS6.1
STNC Stoke 75.90 322 AMS AMS 13 12 57.1
comp=Z,6µm,20.9s,MS5.9
KPL Plockton 75.98 327 *e* S 12 45 37.1 -25
KPL AMS AMS 13 12 38.3
comp=Z,5µm,17.9s,MS5.9
PGBU Glenifferbraes 76.03 325 *eP* **P 12 36 19.2 0.0**
PGBU AMB AMB 12 36 33.7
comp=Z,74nm,1.7s,mb5.3
PGBU AMS AMS 13 13 01.8
comp=Z,4µm,17.0s,MS5.8
WOL Wolverton 76.04 320 AMS AMS 13 13 41.1
comp=Z,6µm,17.3s,MS6.0
RRH Rhenigidale 76.24 328 *eP* **P 12 36 19.4 -0.9**
KAR1 Arisaig 76.25 327 *eP* **P 12 36 19.5 -0.9**
SWN1 Swindon 76.29 321 AMS AMS 13 13 40.5
comp=Z,6µm,18.1s,MS5.9
BPAW Bear Paw Mtn. 76.35 25 *eP* **P 12 36 20.9 0.0**
comp=Z,3µm,0.8s
CAF Calviac 76.43 313 *eP* **P 12 36 21.6 -0.1**
comp=Z,160nm,1.5s,mb5.4
CAF Calviac 76.43 313 *eP* **P 12 36 21.6 -0.1**
comp=Z,80nm,1.5s,mb5.4
CAF Calviac 76.43 313 *eP* **P 12 36 21.6 -0.1**
CAF pmax pmax
comp=Z,80nm,1.5s,mb5.4
LDF La Druitiere 76.43 317 *eP* **P 12 36 20.8 -0.8**
comp=Z,22nm,0.9s,mb4.8
LDF La Druitiere 76.43 317 *eP* **P 12 36 20.8 -0.8**
comp=Z,11nm,0.9s,mb4.8
LDF La Druitiere 76.43 317 *eP* **P 12 36 20.8 -0.8**
LDF pmax pmax
comp=Z,11nm,0.9s,mb4.8
PPLA Purkeypile 76.47 26 *eP* **P 12 36 21.7 +0.2**
comp=Z,115nm,1.3s,mb5.7
CASM Ain Smara 76.49 304 P **P 12 36 21.0 -1.2**
GAL1 Galloway 76.53 325 *eP* **P 12 36 22.9 +0.7**
GAL1 AMB AMB 12 36 31.9
comp=Z,53nm,3.3s
GAL1 *e* 12 45 37.1
GAL1 AMS AMS 13 09 18.3
comp=Z,5µm,24.7s,MS5.7
FLN La Foliniere 76.58 318 *eP* **P 12 36 22.0 -0.5**
comp=Z,206nm,1.6s,mb5.5
FLN *e*MLR MLR
comp=Z,5µm,22.2s,MS5.5
FLN La Foliniere 76.58 318 *eP* **P 12 36 22.0 -0.5**
comp=Z,103nm,1.6s,mb5.5
FLN LR LR
comp=Z,5µm,22.3s,MS5.8
FLN La Foliniere 76.58 318 *eP* **P 12 36 22.0 -0.5**
FLN pmax pmax
comp=Z,103nm,1.6s,mb5.5
FLN MLR MLR
comp=Z,5µm,22.3s,MS5.8
CTEI Djebel Teioual 76.62 304 P **P 12 36 28.0 +5.0**
RJF Les Rejaudoux 76.65 314 *eP* **P 12 36 23.1 +0.2**
comp=Z,360nm,1.5s,mb5.8
RJF *e*MLR MLR
comp=Z,6µm,21.8s,MS5.6
RJF Les Rejaudoux 76.65 314 *eP* **P 12 36 23.1 +0.2**
comp=Z,180nm,1.5s,mb5.8
RJF LR LR
comp=Z,6µm,21.8s,MS5.9
RJF Les Rejaudoux 76.65 314 *eP* **P 12 36 23.1 +0.2**
RJF pmax pmax
comp=Z,180nm,1.5s,mb5.8
RJF MLR MLR
comp=Z,6µm,21.8s,MS5.9
MCH1 Michaelchurch 76.78 321 *eP* **P 12 36 22.9 -0.6**
MCH1 AMB AMB 12 36 29.5
comp=Z,50nm,2.0s,mb5.1
MCH1 *e* 12 45 54.5
MCH1 AMS AMS 13 14 14.5
comp=Z,6µm,17.0s,MS6.0
DFRA Djebel Bou Aff 76.84 304 P **P 12 36 28.0 +3.8**
LRDF Laroque-de-Fa 76.86 311 *eP* **P 12 36 22.3 -1.9**
TOO Toolangi 76.90 143 *eP* **P 12 36 27.4 +3.1**
MTLF Montolieu 76.92 312 *eP* **P 12 36 24.1 -0.4**
comp=Z,166nm,1.5s,mb5.5
MTLF Montolieu 76.92 312 *eP* **P 12 36 24.1 -0.4**
comp=Z,83nm,1.5s,mb5.4
MTLF Montolieu 76.92 312 *eP* **P 12 36 24.1 -0.4**
MTLF pmax pmax
comp=Z,83nm,1.5s,mb5.4
TRF Thorofare Moun 76.94 25 *eP* **P 12 36 25.1 +0.9**
comp=Z,20nm,1.1s,mb5.0
GRR Gorron 76.96 317 *eP* **P 12 36 24.0 -0.6**
comp=Z,89nm,1.1s,mb5.3
GRR Gorron 76.96 317 *eP* **P 12 36 24.0 -0.6**
comp=Z,44nm,1.1s,mb5.3
GRR Gorron 76.96 317 *eP* **P 12 36 24.0 -0.6**
GRR pmax pmax
comp=Z,44nm,1.1s,mb5.3
WLF1 Llynfaes 77.02 323 P **P 12 36 25.3 +0.4**
WLF1 AMB AMB 12 36 31.3
comp=Z,209nm,1.5s,mb5.8
WLF1 AMS AMS 13 13 14.8
comp=Z,17µm,18.2s
WLF1 Llynfaes 77.02 323 *eP* **P 12 36 25.3 +0.4**
WLF1 AMB AMB 12 36 31.3
comp=Z,209nm,1.5s,mb5.8
WLF1 AMS AMS 13 13 14.8
comp=Z,17µm,18.2s,MS6.4
COLA College 77.11 24 *eP* **P 12 36 25.7 +0.6**
comp=Z,26nm,0.9s,mb5.2
COLA LR LR
comp=Z,9µm,20.0s,MS6.1
COLA College 77.11 24 *eP* **P 12 36 25.7 +0.5**
COLA pmax pmax
comp=Z,26nm,0.9s,mb5.2
COLA MLR MLR
comp=Z,9µm,20.0s,MS6.1
MFF Saint Martin d 77.22 316 *eP* **P 12 36 25.5 -0.6**
comp=Z,111nm,1.5s,mb5.3
MFF Saint Martin d 77.22 316 *eP* **P 12 36 25.5 -0.6**
comp=Z,56nm,1.5s,mb5.3
MFF Saint Martin d 77.22 316 *eP* **P 12 36 25.5 -0.6**
MFF pmax pmax
comp=Z,56nm,1.5s,mb5.3
LFF La Frestale 77.29 314 *eP* **P 12 36 26.5 -0.1**
comp=Z,91nm,1.1s,mb5.3
LFF La Frestale 77.29 314 *eP* **P 12 36 26.5 -0.1**
comp=Z,45nm,1.1s,mb5.3
LFF La Frestale 77.29 314 *eP* **P 12 36 26.5 -0.1**
LFF pmax pmax
comp=Z,45nm,1.1s,mb5.3
CAN Canberra 77.31 139 PFAKE 12 36 40.0 +13
CAN LR LR
comp=Z,6µm,21.0s,MS5.9
MCK McKinley 77.31 25 *eP* **P 12 36 26.6 +0.3**
SET Setif 77.33 304 P **P 12 36 31.0 +4.0**
RSO Redoubt South 77.42 29 *eP* **P 12 36 29.9 +3.0**
VALF Valcebollere 77.42 311 *eP* **P 12 36 26.6 -0.7**
JSA Saint Aubin 77.44 319 AMS AMS 13 11 20.0
comp=Z,5µm,22.5s,MS5.8
GMM Mts of Mourne 77.46 324 *eP* **P 12 36 26.7 -0.6**
ILAR Eielson Array 77.51 23 P **P 12 36 25.8 -1.6**
comp=Z,4.9nm,0.9s,mb4.4,baz=282,slow=4.9,SNR=18
ILAR LR LR 13 10 55.2
comp=Z,6µm,18.3s,MS5.9,baz=318,slow=36
ILAR Eielson Array 77.51 23 P **P 12 36 25.8 -1.6**
ILAR pmax pmax
comp=Z,5.0nm,0.9s
ILAR MLR MLR
comp=Z,6µm,18.3s
CNB Canberra Magne 77.52 139 *eP* **P 12 36 29.3 +1.5**
AKF Akfadou 77.79 305 P **P 12 36 34.2 +4.7**
MLS Moulis 77.83 312 *eP* **P 12 36 28.2 -1.4**
DYA Yadsworthy 77.96 320 *e* S 12 46 18.0 -5.6
DYA AMS AMS 13 14 52.3
comp=Z,8µm,17.8s,MS6.1
HTL Hartland 78.04 321 AMS AMS 13 13 45.3
comp=Z,4µm,19.7s,MS5.8
SGMF Saint Gilles 78.05 318 *eP* **P 12 36 30.5 -0.2**
comp=Z,179nm,1.4s,mb5.5
SGMF Saint Gilles 78.05 318 *eP* **P 12 36 30.5 -0.2**
comp=Z,89nm,1.4s,mb5.5
SGMF Saint Gilles 78.05 318 *eP* **P 12 36 30.5 -0.2**
SGMF pmax pmax
comp=Z,89nm,1.4s,mb5.5
SUMG Summit 78.06 348 *eP* **P 12 36 29.9 -0.4**
SUMG Summit 78.06 348 *i P* **P 12 36 29.6 -0.7**
comp=Z,47nm,1.0s,mb5.4
SUMG
comp=Z,5µm,27.0s
PAF Port-aux-Franc 78.17 198 PFAKE
PAF LR LR 12 36 40.0 +8.9
comp=Z,10µm,20.0s,MS6.1
EPF Esparros 78.31 312 *eP* **P 12 36 31.2 -1.1**
comp=Z,106nm,1.6s,mb5.2
EPF Esparros 78.31 312 *eP* **P 12 36 31.2 -1.1**
comp=Z,53nm,1.6s,mb5.2
EPF Esparros 78.31 312 *eP* **P 12 36 31.2 -1.1**
EPF pmax pmax
comp=Z,53nm,1.6s,mb5.2
PMR Palmer 78.36 27 *eP* **P 12 36 32.3 +0.1**
comp=Z,29nm,1.3s,mb5.0
PMR LR LR
comp=Z,6µm,17.0s,MS6.0
PMR Palmer 78.36 27 *eP* **P 12 36 32.3 +0.1**
PMR pmax pmax
comp=Z,29nm,1.3s,mb5.0
PMR MLR MLR
comp=Z,6µm,17.0s,MS6.0
ROSF Rostrenen 78.45 318 *eP* **P 12 36 32.7 -0.3**
comp=Z,54nm,0.9s,mb5.2
ROSF Rostrenen 78.45 318 *eP* **P 12 36 32.7 -0.3**
comp=Z,27nm,0.9s,mb5.2
ROSF Rostrenen 78.45 318 *eP* **P 12 36 32.7 -0.3**
ROSF pmax pmax
comp=Z,27nm,0.9s,mb5.2
AKET Djebel Ketaf 78.52 304 P **P 12 36 41.3 +7.7**
QUIF Quistinic 78.56 318 *eP* **P 12 36 33.2 -0.4**
comp=Z,250nm,1.6s,mb5.6
QUIF Quistinic 78.56 318 *eP* **P 12 36 33.2 -0.4**
comp=Z,125nm,1.6s,mb5.6
QUIF Quistinic 78.56 318 *eP* **P 12 36 33.2 -0.4**
QUIF pmax pmax
comp=Z,125nm,1.6s,mb5.6
VIEF Viey 78.58 312 *eP* **P 12 36 33.6 -0.2**
OHAK Old Harbor 78.75 32 *eP* **P 12 36 34.7 +0.3**
LSZ Lusaka 78.77 247 *eP* **P 12 36 33.7 -1.5**
LSZ LR LR
comp=Z,12µm,19.0s,MS6.2
LSZ Lusaka 78.77 247 P **P 12 36 35.1 0.0**
SNR=10
KDAK Kodiak Island 78.81 31 P **P 12 36 37.9 +3.2**
comp=Z,376nm,1.0s,mb6.3,SNR=6.5
KDAK Kodiak Island 78.81 31 P **P 12 36 36.0 +1.3**
comp=Z,29nm,0.7s,mb5.3,baz=284,slow=3.1,SNR=20
KDAK Kodiak Island 78.81 31 *eP* **P 12 36 35.6 +0.9**
KDAK MLR MLR
comp=Z,8µm,19.0s,MS6.1
CCA1 Carnmenellis 78.82 320 AMS AMS 13 14 45.0
comp=Z,6µm,17.8s,MS6.0
BORG Borgarnes 78.82 338 P **P 12 36 35.8 +1.2**
comp=Z,16nm,1.0s,mb4.9,baz=34,slow=3.8,SNR=4.0
BORG Borgarnes 78.82 338 P **P 12 36 35.8 +1.1**
BORG pmax pmax
comp=Z,16nm,1.0s
ETSF Etsaut 78.97 312 *eP* **P 12 36 35.7 -0.2**
comp=Z,57nm,1.1s,mb5.1
ETSF Etsaut 78.97 312 *eP* **P 12 36 35.7 -0.2**
comp=Z,28nm,1.1s,mb5.1
ETSF Etsaut 78.97 312 *eP* **P 12 36 35.7 -0.2**
ETSF pmax pmax
comp=Z,28nm,1.1s,mb5.1
PAX Paxson 79.04 25 *eP* **P 12 36 37.7 +1.8**
comp=Z,20nm,1.1s,mb5.0
PAX Paxson 79.04 25 *eP* **P 12 36 37.7 +1.8**
PAX pmax pmax
comp=Z,20nm,1.1s,mb5.0
EMHD Djebel Mahouad 79.16 305 P **P 12 36 41.0 +3.9**
SJPF Ste Jean 79.33 313 *eP* **P 12 36 37.7 -0.2**
comp=Z,104nm,1.5s,mb5.2
SJPF Ste Jean 79.33 313 *eP* **P 12 36 37.7 -0.2**
comp=Z,52nm,1.5s,mb5.2
SJPF Ste Jean 79.33 313 *eP* **P 12 36 37.7 -0.2**
SJPF pmax pmax
comp=Z,52nm,1.5s,mb5.2
INK Inuvik 79.49 17 *eP* **P 12 36 38.8 +0.5**
INK Inuvik 79.49 17 P **P 12 36 37.3 -1.0**
comp=Z,16nm,1.1s,mb4.9,baz=306,slow=7.2,SNR=13
INK Inuvik 79.49 17 P **P 12 36 37.3 -1.0**
INK pmax pmax
comp=Z,16nm,1.1s
EGAK Eagle 79.51 22 *eP* **P 12 36 40.0 +1.6**
EGAK LR LR
comp=Z,10µm,20.0s,MS6.2
MENT Mentasta 79.71 24 *eP* **P 12 36 40.7 +1.1**
BMRM Bremner River 80.53 26 *eP* **P 12 36 43.9 -0.1**
comp=Z,98nm,1.0s,mb5.7
DAWY Dawson 80.55 22 *eP* **P 12 36 43.9 -0.2**
EANR 'Ain N'Sour 80.63 305 P **P 12 36 48.0 +2.9**
ETRT Tiaret 80.71 305 P **P 12 36 50.5 +5.0**
DZM Mont Dzumac 81.56 119 *eS* S 12 46 56.8 -5.6
comp=Z,750nm,30.1s
DZM *e*SS SS 12 52 10.1 -10
comp=Z,2µm,33.2s
DZM *e*LR LR 13 02 14.5
comp=Z,5µm,26.7s
TAM Tamanrasset 82.47 292 *eP* **P 12 36 55.1 0.0**
comp=Z,85nm,1.8s,mb5.4
TAM LR LR
comp=Z,3µm,22.0s,MS5.7
TAM Tamanrasset 82.47 292 *eP* **P 12 36 55.1 +0.1**
TAM pmax pmax
comp=Z,85nm,1.8s,mb5.4
TAM MLR MLR
comp=Z,3µm,22.0s,MS5.7
ESDC Sonseca Array 82.66 310 P **P 12 36 55.4 -0.3**
ESDC LR LR 13 15 46.1
ESDC Sonseca Array 82.66 310 P **P 12 36 55.4 -0.3**
comp=Z,3.3nm,0.8s,mb4.4,baz=48,slow=5.5,SNR=11
ESDC LR LR 13 15 46.1
comp=Z,2µm,21.8s,MS5.5,baz=30,slow=37
ESLA Sonseca Array 82.66 310 *eP* **P 12 36 55.7 -0.1**
ESLA LR LR
comp=Z,17µm,21.0s,MS6.4
PAB San Pablo 82.99 310 *eP* **P 12 36 55.3 -2.1**
comp=Z,42nm,1.4s,mb5.3
PAB LR LR
comp=Z,3µm,20.0s,MS5.6
PAB San Pablo 82.99 310 *eP* **P 12 36 55.3 -2.1**
PAB pmax pmax
comp=Z,42nm,1.4s,mb5.3
PAB MLR MLR
comp=Z,3µm,20.0s,MS5.6
HYT Haines Junctio 83.33 24 *eP* **P 12 37 02.7 +3.9**
PNL Peninsula 83.38 25 *eP* **P 12 37 00.1 +1.0**
comp=Z,30nm,0.9s,mb5.3
MVO Moncorvo 84.06 313 *eP* **P 12 37 02.7 -0.2**
comp=Z,88nm,1.2s,mb5.8
MVO *e*S S 12 47 27.7 +0.2
MVO *e*SS SS 12 53 03.9 +8.7
MVO *e*LR LR 13 05 34.8
comp=Z,3µm,22.0s
PCAB Cabril 84.45 314 *eP* **P 12 37 07.0 +2.1**
comp=Z,94nm,1.3s,mb5.8
PVRL Vila Real 84.46 313 *eP* **P 12 37 06.3 +1.4**
comp=Z,67nm,1.3s,mb5.6
MTE Manteigas 84.76 312 *eP* **P 12 37 07.1 +0.6**
comp=Z,108nm,1.4s,mb5.8
MTE *e*S S 12 47 35.2 +0.6
MTE *e*SS SS 12 53 13.5 +7.8
MTE *e*LR LR 13 05 37.4
comp=Z,4µm,22.0s
MTE Manteigas 84.76 312 *eP* **P 12 37 07.0 +0.5**
MTE LR LR
comp=Z,5µm,22.0s,MS5.9
PVIS Viseu 84.85 313 *eP* **P 12 37 07.2 +0.3**
comp=Z,79nm,1.4s,mb5.7
PCBR Castelo Branco 84.99 312 *eP* **P 12 37 08.1 +0.5**
comp=Z,62nm,1.4s,mb5.5
SKAG Skagway 85.06 24 *eP* **P 12 37 08.7 +1.1**
PMRV Marv??o 85.13 311 *eP* **P 12 37 08.7 +0.4**
comp=Z,58nm,1.4s,mb5.5
PMRV *e*S S 12 47 39.9 +1.7
PMRV *e*SS SS 12 53 14.3 +3.3
PMRV *e*LR LR 13 06 20.7
comp=Z,2µm,20.0s
JOHN Johnston Islan 85.44 74 PFAKE 12 37 20.0 +10
JOHN LR LR
comp=Z,4µm,22.0s,MS5.8
PBAR Barrancos 85.48 310 *eP* **P 12 37 09.8 -0.4**
comp=Z,84nm,1.2s,mb5.7
PBAR *e*S S 12 47 42.6 +0.8
PBAR *e*LR LR 13 06 47.0
comp=Z,3µm,22.0s
PESTR Estremoz 85.53 311 *eP* **P 12 37 09.6 -0.8**
comp=Z,45nm,1.5s,mb5.5
PESTR *e*S S 12 47 43.0 +0.8
PESTR *e*SS SS 12 53 24.1 +7.1
PESTR *e*LQ 13 03 56.4
PESTR *e*LR LR 13 07 01.3
comp=Z,2µm,20.0s
SFS San Fernando 85.71 308 PFAKE 12 37 20.0 +8.7
SFS LR LR
comp=Z,7µm,20.0s,MS6.1
LBTB Lobatse 85.75 240 *eP* **P 12 37 10.5 -1.1**
LBTB LR LR
comp=Z,6µm,22.0s,MS6.0
EVO Evora 85.98 311 *eP* **P 12 37 12.8 +0.2**
comp=Z,92nm,1.2s,mb5.6
EVO *e*MLR MLR
comp=Z,3µm,21.5s,MS5.4
EVOP Sao Brissos 86.06 311 *eP* **P 12 37 12.5 -0.6**
EVOP *e*S SKSac 12 47 38.3 -1.0
EVOP *e*S SKSac 12 47 38.4 -0.9
EVOP *e*SS SS 12 53 26.8 +2.0
EVOP AMS AMS 13 16 18.3
comp=E,3µm,15.7s
EVOP Sao Brissos 86.06 311 *eP* **P 12 37 12.4 -0.6**
EVOP *e*S SKSac 12 47 38.3 -1.0
PBEJ Beja 86.13 310 *eP* **P 12 37 13.7 +0.4**
comp=E,72nm,1.3s,mb5.7
PVAQ Vaqueiros 86.32 310 *eP* **P 12 37 14.2 -0.1**
comp=E,93nm,1.2s,mb5.9
PVAQ *e*S S 12 47 52.4 +2.3
PVAQ *e*LR LR 13 07 06.7
comp=E,3µm,20.0s
PCVE Castro Verde 86.44 310 *eP* **P 12 37 13.5 -1.4**
comp=E,39nm,1.2s,mb5.5
PCVE *e*S S 12 47 51.1 -0.1
PCVE *e*SS SS 12 53 34.5 +4.1
PCVE *e*LR LR 13 07 22.5
comp=E,3µm,20.0s
MESJ Messejana 86.46 310 *eP* **P 12 37 14.7 -0.3**
MESJ *e*S SKSac 12 47 41.0 -0.8
MESJ *e*S SKSac 12 47 41.4 -0.4
MESJ AMS AMS 13 14 34.0
comp=N,4µm,25.8s
MESJ Messejana 86.46 310 *eP* **P 12 37 14.7 -0.3**
MESJ *e*S SKSac 12 47 41.0 -0.8
PBDV Barranco-do-Ve 86.55 310 *eP* **P 12 37 16.4 +0.9**
comp=N,139nm,1.2s,mb6.1
PBDV *e*S S 12 47 51.7 -0.6
PBDV *e*SS SS 12 53 36.2 +4.1
PBDV *e*LR LR 13 07 22.6
comp=N,3µm,22.0s
PMAFR Mafra 86.64 312 *eP* **P 12 37 16.3 +0.4**
comp=N,138nm,1.3s,mb6.0
PMAFR *e*S S 12 47 54.9 +1.8
PMAFR *e*SS SS 12 53 39.0 +5.7
PMAFR *e*LQ 13 04 16.2
PMAFR *e*LR LR 13 07 21.6
comp=N,3µm,20.0s
LIS Lisbon 86.67 311 *eP* **P 12 37 15.9 -0.1**
LIS AMS AMS 13 16 28.9
comp=E,4µm,20.9s
PTEO Sao Teotonio 86.95 310 *eP* **P 12 37 17.8 +0.4**
comp=E,103nm,1.1s,mb6.0
MORF Marmelete 87.02 310 *eP* **P 12 37 18.7 +0.9**
comp=E,99nm,1.2s,mb5.9
MORF *e*S S 12 47 58.0 +1.2
MORF *e*SS SS 12 53 45.5 +6.5
MORF *e*LR LR 13 08 26.4
comp=E,3µm,20.0s
MORF Marmelete 87.02 310 *eP* **P 12 37 17.5 -0.3**
MORF *e*S SKSac 12 47 43.7 -1.6
PFVI Vila Bisbo 87.23 310 *eP* **P 12 37 19.5 +0.7**
comp=E,81nm,1.1s,mb5.9
PFVI *e*S S 12 47 59.6 +0.8
PFVI *e*SS SS 12 53 48.8 +6.8
PFVI *e*LR LR 13 07 40.4
comp=E,3µm,20.0s
DLBC Dease Lake 87.72 23 *eP* **P 12 37 20.5 -0.1**
BOSA Boshof 87.81 237 *eP* **P 12 37 20.8 -0.8**
BOSA LR LR
comp=Z,6µm,19.0s,MS6.0
BOSA Boshof 87.81 237 P **P 12 37 20.4 -1.2**
comp=Z,15nm,0.8s,mb5.3,baz=75,slow=5.4,SNR=12
BOSA LR LR 13 16 36.0
comp=Z,5µm,19.4s,MS6.0,baz=66,slow=36
BOSA Boshof 87.81 237 P **P 12 37 20.4 -1.2**
BOSA pmax pmax
comp=Z,15nm,0.8s,mb5.3
BOSA MLR MLR
comp=Z,5µm,19.4s,MS6.0
YKA Yellowknife Ar 88.87 14 P **P 12 37 25.2 -0.9**
YKA Yellowknife Ar 88.87 14 P **P 12 37 25.2 -0.8**
comp=Z,3.8nm,0.8s,mb4.8,baz=327,slow=4.5,SNR=7.8
YKA Yellowknife Ar 88.87 14 P **P 12 37 25.2 -0.8**
YKA pmax pmax
comp=Z,4.0nm,0.8s
MSVF Nonsavu 89.03 110 PFAKE 12 37 40.0 +12
MSVF LR LR
comp=Z,3µm,22.0s,MS5.7
TSUM Tsumeb 89.53 249 *eP* **P 12 37 28.1 -1.8**
comp=Z,4.1nm,1.6s,mb4.5
TSUM LR LR
comp=Z,5µm,21.0s,MS6.0
TORD Torodi Ar. Bea 89.83 284 P **P 12 37 30.3 -1.1**
comp=Z,7.9nm,0.9s,mb5.0,baz=56,slow=2.9,SNR=15
TORD LR LR 13 21 08.2
comp=Z,3µm,20.7s,MS5.7,baz=55,slow=38
MIR Mirnyy 91.54 182 *eP* **P 12 37 36.0 -2.1**
MIR pmax pmax
comp=Z,43nm,1.2s,mb5.7
MIR MLR MLR
comp=N,3µm,18.0s,MS5.8
MIR MLR MLR
comp=E,1µm,18.0s,MS5.8
MIR MLR MLR
comp=Z,5µm,18.0s,MS6.0
CASY Casey 91.72 175 *eP* **P 12 37 35.0 -3.9**
CASY Casey 91.72 175 *eP* **P 12 37 37.8 -1.1**
comp=Z,40nm,1.4s,mb5.5
CASY LR LR
comp=Z,5µm,20.0s,MS5.9
SUR Sutherland 92.99 236 PFAKE 12 37 50.0 +4.3
SUR LR LR
comp=Z,6µm,22.0s,MS6.0
KIP Kipapa 93.10 65 PFAKE 12 38 00.0 +13
KIP LR LR
comp=Z,2µm,21.0s,MS5.5
POHA Pohakuloa 95.94 65 PFAKE 12 38 10.0 +10
POHA LR LR
comp=Z,2µm,22.0s,MS5.6
MAW Mawson 96.11 193 *eP* **P 12 38 00.5 +1.4**
comp=Z,11nm,1.2s,mb5.2
MAW Mawson 96.11 193 P **P 12 37 59.3 +0.2**
comp=Z,13nm,1.1s,mb5.3,baz=2.2,slow=6.5,SNR=7.2
MAW LR LR 13 18 17.8
comp=Z,2µm,19.1s,MS5.7,baz=25,slow=34
MAW Mawson 96.11 193 *eP* **P 12 37 58.2 -0.9**

MAW MLR MLR
comp=Z,4μm,20.0s
AFI Afiamalu 96.25 102 PFAKE 12 38 10.0 +9.0
AFI LR LR
comp=Z,3μm,19.0s,MS5.8
DRV Dumont d'Urvil 96.98 164 SS SS 12 55 58.0 -4.1
DRV R 13 10 00.0
SNZO South Karori 97.17 132 PFAKE 12 38 10.0 +5.5
SNZO LR LR
comp=Z,5μm,19.0s,MS6.0
EDM Edmonton 97.36 18 *e*P **P 12 38 07.7 +2.3**
DBIC Dimbokro 98.46 281 P **P 12 38 08.7 -2.4**
comp=Z,2.7nm,1.0s,mb4.7,baz=66,slow=18,SNR=1.8
DBIC LR LR 13 26 01.1
comp=Z,2μm,20.3s,MS5.7,baz=41,slow=37
DBIC Dimbokro 98.46 281 P **P 12 38 08.7 -2.4**
DBIC pmax pmax
comp=Z,3.0nm,1.0s
DBIC MLR MLR
comp=Z,2μm,20.3s
NLWA Neilton Lookou 98.60 27 PFAKE 12 38 20.0 +8.9
NLWA LR LR
comp=Z,6μm,20.0s,MS6.1
FFC Flin Flon 98.61 11 PFAKE 12 38 20.0 +9.1
FFC LR LR
comp=Z,5μm,20.0s,MS6.0
SCHQ Schefferville 99.19 351 P **P 12 38 12.1 -1.5**
comp=Z,4.1nm,0.8s,mb5.0,baz=30,slow=14,SNR=2.2
SCHQ LR LR 13 25 21.2
comp=Z,4μm,20.7s,MS5.9,baz=12,slow=37
NEW Newport 100.47 23 PFAKE 12 38 30.0 +11
NEW LR LR
comp=Z,7μm,21.0s,MS6.2
COR Corvallis 101.07 29 PFAKE 12 38 30.0 +8.0
COR LR LR
comp=Z,4μm,20.0s,MS5.9
HAWA Hanford 101.15 25 PFAKE 12 38 30.0 +7.7
HAWA LR LR
comp=Z,5μm,19.0s,MS6.0
XMAS Kiritimati 102.52 82 PFAKE 12 38 40.0 +12
XMAS LR LR
comp=Z,3μm,20.0s,MS5.8
MSO Missoula 102.80 22 PFAKE 12 38 40.0 +10
MSO LR LR
comp=Z,5μm,19.0s,MS6.0
HUMO Hull Mountain 102.80 30 PFAKE 12 38 40.0 +10
HUMO LR LR
comp=Z,6μm,20.0s,MS6.1
SYO Syowa Base 102.87 198⇑ *e*P SP 12 51 43.0 -6.4
SYO Syowa Base 102.87 198⇓ *e*P PS 12 51 46.4 -4.9
EGMT Eagleton 103.04 19 PFAKE 12 38 40.0 +9.3
EGMT LR LR
comp=Z,6μm,22.0s,MS6.1
YBH Yreka Blue Hor 103.60 30 PFAKE 12 38 40.0 +6.7
YBH LR LR
comp=Z,3μm,19.0s,MS5.9
DGMT Dagmar 104.07 15 PFAKE 12 38 50.0 +15
DGMT LR LR
comp=Z,6μm,20.0s,MS6.1
MOD Modoc 104.53 28 PFAKE 12 38 50.0 +13
MOD LR LR
comp=Z,2μm,20.0s,MS5.7
BOZ Bozeman (W) 104.60 21 PFAKE 12 38 50.0 +12
BOZ LR LR
comp=Z,6μm,21.0s,MS6.1
WDC Whiskeytown Da 104.60 31 PFAKE 12 38 50.0 +12
WDC LR LR
comp=Z,3μm,21.0s,MS5.8
WVOR Wild Horse Val 104.79 27 PFAKE 12 38 50.0 +11
WVOR LR LR
comp=Z,5μm,22.0s,MS6.0
LAO LASA Array 105.23 17 PFAKE 12 43 00.0 +5.3
LAO LR LR
comp=Z,6μm,20.0s,MS6.2
HLID Hailey 105.47 24 PFAKE 12 43 00.0 +4.7
HLID LR LR
comp=Z,5μm,20.0s,MS6.1
HOPS Hopland 105.60 32 PFAKE 12 43 10.0 +14
HOPS LR LR
comp=Z,5μm,21.0s,MS6.0
RLMT Red Lodge 105.81 20 PFAKE 12 43 10.0 +14
RLMT LR LR
comp=Z,6μm,22.0s,MS6.1
AGMN Agassiz Nation 105.83 9 PFAKE 12 43 10.0 +14
AGMN LR LR
comp=Z,3μm,20.0s,MS5.8
LKWY Lake 105.95 21 PFAKE 12 43 10.0 +14
LKWY LR LR
comp=Z,11μm,21.0s,MS6.4
MCCM Marconi Confer 106.36 32 PFAKE 12 43 10.0 +13
MCCM LR LR
comp=Z,3μm,22.0s,MS5.7
EYMN Ely 106.72 6 PFAKE 12 43 10.0 +13
EYMN LR LR
comp=Z,4μm,20.0s,MS6.0
BMN Battle Mountai 107.05 27 PFAKE 12 43 10.0 +12
BMN LR LR
comp=Z,3μm,20.0s,MS5.9
AHID Auburn Hatcher 107.33 22 PFAKE 12 43 10.0 +11
AHID LR LR
comp=Z,6μm,21.0s,MS6.1
CMB Columbia Colle 107.64 31 PFAKE 12 43 10.0 +11
CMB LR LR
comp=Z,2μm,21.0s,MS5.7
BW06 Boulder Array 107.84 21 PFAKE 12 43 10.0 +10
BW06 LR LR
comp=Z,5μm,19.0s,MS6.1
SAO San Andreas Ge 108.15 32 PFAKE 12 43 10.0 +10
SAO LR LR
comp=Z,3μm,22.0s,MS5.8
RSSD Black Hills 108.19 16 PFAKE 12 43 10.0 +10
RSSD LR LR
comp=Z,4μm,20.0s,MS6.0
HWUT Hardware Ranch 108.20 23 PFAKE 12 43 10.0 +10
HWUT LR LR
comp=Z,5μm,22.0s,MS6.0
NVAR Mina Array Bea 108.25 29 PKKP PKKPbc 12 54 20.1 +8.2
comp=Z,1.0nm,0.9s,baz=140,slow=4.8,SNR=5.3
SHEL Horse Pasture 108.58 261 PFAKE 12 43 10.0 +8.4
SHEL LR LR
comp=Z,2μm,20.0s,MS5.8
COWI Conover 108.76 5 PFAKE 12 43 10.0 +8.7
COWI LR LR
comp=Z,4μm,20.0s,MS6.0
PKME Peaks-Kenny Pk 108.88 350 PFAKE 12 43 10.0 +8.5
PKME LR LR
comp=Z,5μm,22.0s,MS6.0
DUG Dugway 108.99 24 PFAKE 12 43 10.0 +8.1
DUG LR LR
comp=Z,5μm,22.0s,MS6.0
TPH Tonopah 109.02 29 PFAKE 12 43 10.0 +8.0
TPH LR LR
comp=Z,3μm,21.0s,MS5.9
ECSD EROS Data Cent 110.15 11 PFAKE 12 43 10.0 +6.0
ECSD LR LR
comp=Z,5μm,19.0s,MS6.1
LONY Lake Ozonia 110.16 354 PFAKE 12 43 10.0 +6.0
LONY LR LR
comp=Z,3μm,20.0s,MS5.9
SBA Scott Base 110.20 168 PFAKE 12 43 10.0 +7.0
SBA LR LR
comp=Z,3μm,19.0s,MS5.9
LBNH Lisbon 110.25 352 PFAKE 12 43 10.0 +5.8
LBNH LR LR
comp=Z,3μm,19.0s,MS5.9
DAC Darwin (Calif) 110.35 30 PFAKE 12 43 10.0 +5.4
DAC LR LR
comp=Z,3μm,21.0s,MS5.9
MVU Marysvale 110.69 25 PFAKE 12 43 10.0 +4.8
MVU LR LR
comp=Z,4μm,22.0s,MS6.0
NCB Newcomb 110.77 354 PFAKE 12 43 10.0 +4.9
NCB LR LR
comp=Z,3μm,20.0s,MS5.9
OGNE Ogallala 111.67 16 PFAKE 12 43 20.0 +13
OGNE LR LR
comp=Z,5μm,22.0s,MS6.1
ISCO Idaho Springs 111.76 19 PFAKE 12 43 20.0 +13
ISCO LR LR
comp=Z,6μm,20.0s,MS6.2
JFWS Jewell Farm 111.82 6 PFAKE 12 43 20.0 +13
JFWS LR LR
comp=Z,3μm,21.0s,MS5.9
SCIA State Center 112.46 9 PFAKE 12 43 20.0 +12
SCIA LR LR
comp=Z,7μm,21.0s,MS6.2
BINY Binghamton 112.68 355 PFAKE 12 43 20.0 +11
BINY LR LR
comp=Z,4μm,20.0s,MS6.0
AAM Ann Arbor 112.82 1 PFAKE 12 43 20.0 +11
AAM LR LR
comp=Z,9μm,20.0s,MS6.4
ERPA Erie 112.98 358 PFAKE 12 43 20.0 +11
ERPA LR LR
comp=Z,7μm,22.0s,MS6.2
PFO Pinyon Flat Ob 113.08 31 PFAKE 12 43 20.0 +10
PFO LR LR
comp=Z,3μm,20.0s,MS5.9
MVCO Mesa Verde 113.19 23 PFAKE 12 43 20.0 +10
MVCO LR LR
comp=Z,4μm,20.0s,MS6.1
WUAZ Wupatki 113.63 26 PFAKE 12 43 20.0 +9.2
WUAZ LR LR
comp=Z,4μm,22.0s,MS6.0
SDCO Great Sand Dun 113.69 20 PFAKE 12 43 20.0 +9.1
SDCO LR LR
comp=Z,6μm,21.0s,MS6.2
CBKS Cedar Bluff 114.25 15 PFAKE 12 43 20.0 +8.1
CBKS LR LR
comp=Z,4μm,20.0s,MS6.0
HDIL Hopedale 114.25 6 PFAKE 12 43 20.0 +8.1
HDIL LR LR
comp=Z,4μm,21.0s,MS6.0
KSU1 Kansas State U 114.64 12 PFAKE 12 43 20.0 +7.3
KSU1 LR LR
comp=Z,8μm,19.0s,MS6.3
QSPA South Pole Qui 115.01 180 PFAKE 12 43 20.0 +8.0
QSPA LR LR
comp=Z,4μm,22.0s,MS6.0
MCWV Mont Chateau 115.43 358 PFAKE 12 43 20.0 +5.8
MCWV LR LR
comp=Z,5μm,20.0s,MS6.2
ANMO Albuquerque 115.93 22 *e*PKPdf PKPdf 12 43 15.6 +0.3
ANMO LR LR
comp=Z,3μm,21.0s,MS5.9
LAZ Ladron 116.19 23 *e*PKPdf PKPdf 12 43 15.0 -0.8
CCM Cathedral Cave 116.51 8 PFAKE 12 43 30.0 +14
CCM LR LR
comp=Z,4μm,20.0s,MS6.0
BNM Barren Site 116.60 22 *e*PKPdf PKPdf 12 43 20.4 +3.8
TUC Tucson 116.67 27 PFAKE 12 43 30.0 +13
TUC LR LR
comp=Z,4μm,21.0s,MS6.0
CBN Corbin 116.76 356 PFAKE 12 43 30.0 +13
CBN LR LR
comp=Z,4μm,22.0s,MS6.0
WCI Wyandotte Cave 116.79 4 PFAKE 12 43 30.0 +13
WCI LR LR
comp=Z,3μm,20.0s,MS5.9
PPT Papeete 117.42 97 *e*Sdif Sdif 12 52 14.0 -3.2
comp=Z,393nm,33.2s
PPT Papeete 117.42 97 *e*PS PS 12 54 08.3 -6.4
comp=Z,454nm,26.5s
PPT *e*SS SS 13 00 29.1 -13
comp=Z,2μm,27.2s
PPT *e*LQ 13 13 49.2
comp=Z,5μm,34.0s
PPT *e*LR LR 13 18 37.0
comp=Z,6μm,24.2s
AMTX Amarillo 117.47 18 PFAKE 12 43 30.0 +12
AMTX LR LR
comp=Z,4μm,21.0s,MS6.0
BLA Blacksburg 117.89 358 PFAKE 12 43 30.0 +11
BLA LR LR
comp=Z,6μm,20.0s,MS6.2
VNA1 Neumayer--Stat 118.85 201 *e*PKPdf PKPdf 12 43 21.8 +2.2
VNA3 Neumayer Olymp 119.23 201 *e*PKPdf PKPdf 12 43 22.0 +1.6
MNTX Cornudas Mount 119.26 23 *e*PKPdf PKPdf 12 43 20.9 -0.8
MNTX LR LR
comp=Z,3μm,21.0s,MS5.9
MIAR Mount Ida 119.62 11 PFAKE 12 43 30.0 +7.6
MIAR LR LR
comp=Z,6μm,21.0s,MS6.2
CNNC Cliffs of the 119.74 356 PFAKE 12 43 30.0 +7.4
CNNC LR LR
comp=Z,4μm,20.0s,MS6.1
TRIS Tristan da Cun 120.17 240 PFAKE 12 43 30.0 +6.8
TRIS LR LR
comp=Z,5μm,22.0s,MS6.1
BBSR BB Station 120.34 343 PFAKE 12 43 30.0 +6.2
BBSR LR LR
comp=Z,2μm,22.0s,MS5.7
GOGA Godfrey 121.70 1 PFAKE 12 43 40.0 +14
GOGA LR LR
comp=Z,4μm,20.0s,MS6.1
LRAL Lakeview Retre 121.91 5 PFAKE 12 43 40.0 +13
LRAL LR LR
comp=Z,7μm,20.0s,MS6.3
NHSC New Hope 121.98 358 PFAKE 12 43 40.0 +13
NHSC LR LR
comp=Z,7μm,19.0s,MS6.3
TXAR Lajitas Array 122.01 22 PKP PKPdf 12 43 25.4 -1.7
comp=Z,1.8nm,0.7s,baz=24,slow=0.9,SNR=6.6
NATX Nacogdoches 122.13 12 PFAKE 12 43 40.0 +13
NATX LR LR
comp=Z,6μm,20.0s,MS6.2
JCT Junction City 122.14 18 *e*PKPdf PKPdf 12 43 25.9 -1.5
JCT LR LR
comp=Z,7μm,21.0s,MS6.3
VBMS Vicksburg 122.36 8 PFAKE 12 43 40.0 +12
VBMS LR LR
comp=Z,4μm,21.0s,MS6.0
TAOE Nuku Hiva Isla 122.74 84 *e*LR LR 13 21 13.6
comp=Z,3μm,22.6s
HKT Hockley 123.64 14 PFAKE 12 43 40.0 +10
HKT LR LR
comp=Z,7μm,21.0s,MS6.3
BRAL Brewton 123.91 5 PFAKE 12 43 40.0 +9.3
BRAL LR LR
comp=Z,5μm,20.0s,MS6.2
KVTX Kingsville 125.44 17 PFAKE 12 43 40.0 +6.2
KVTX LR LR
comp=Z,7μm,20.0s,MS6.3
DWPF Disney 126.98 359 PFAKE 12 43 50.0 +13
DWPF LR LR
comp=Z,4μm,19.0s,MS6.1
RCBR Riachuelo 131.65 285 PFAKE 12 44 00.0 +14
RCBR LR LR
comp=Z,2μm,20.0s,MS5.8
RKT Rikitea 132.13 99 *e*LR LR 13 25 42.3
comp=Z,2μm,25.2s
GRTK Grand Turk 132.32 346 PFAKE 12 44 00.0 +13
GRTK LR LR
comp=Z,3μm,21.0s,MS6.0
ANWB Willy Bob 132.94 333 PFAKE 12 44 00.0 +12
ANWB LR LR
comp=Z,1μm,20.0s,MS5.6
SJG San Juan 134.17 338 PFAKE 12 44 00.0 +9.5
SJG LR LR
comp=Z,2μm,21.0s,MS5.8
TEIG Tepich 134.46 8 PFAKE 12 44 00.0 +9.0
TEIG LR LR
comp=Z,4μm,19.0s,MS6.1
GTBY Guantanamo Bay 134.60 351 PFAKE 12 44 00.0 +8.7
GTBY LR LR
comp=Z,3μm,19.0s,MS6.0
SDDR Presa de Saban 134.79 345 PFAKE 12 44 00.0 +8.3
SDDR LR LR
comp=Z,3μm,21.0s,MS6.0
FDF Fort de France 135.28 330 PFAKE 12 44 00.0 +7.3
FDF LR LR
comp=Z,1μm,20.0s,MS5.6
BBGH Gun Hill 135.91 327 PFAKE 12 44 00.0 +6.1
BBGH LR LR
comp=Z,3μm,20.0s,MS6.0
MTDJ Mount Denham 136.58 353 PFAKE 12 44 00.0 +5.0
MTDJ LR LR
comp=Z,3μm,20.0s,MS6.0
GRGR Grenville 137.79 329 PFAKE 12 44 10.0 +13
GRGR LR LR
comp=Z,1μm,21.0s,MS5.7
PMSA Palmer Station 138.71 192 PFAKE 12 44 10.0 +13
PMSA LR LR
comp=Z,4μm,20.0s,MS6.1
TGUH Tegucigalpa,Un 140.67 8 PFAKE 12 44 10.0 +7.4
TGUH LR LR
comp=Z,2μm,22.0s,MS5.8
SDV Santo Domingo 144.26 340 *e*PKPdf PKPdf 12 44 05.9 -3.1
SDV LR LR
comp=Z,949nm,22.0s,MS5.5
JTS JuntasAbangare 144.62 5 PFAKE 12 44 20.0 +10
JTS LR LR
comp=Z,3μm,22.0s,MS6.0
BCIP Isla Barro Col 145.75 356 *e*PKPdf PKPdf 12 44 11.8 +0.2
BCIP LR LR
comp=Z,2μm,22.0s,MS5.9
SPB Sao Paulo 148.28 265 PFAKE 12 44 20.0 +4.5
SPB LR LR
comp=Z,3μm,19.0s,MS6.1
ROSC El Rosal 149.13 344 *e*PKPbc PKPbc 12 44 22.4 +1.1
ROSC El Rosal 149.13 344 PKPbc PKPbc 12 44 21.0 -0.4
comp=Z,25nm,0.7s,baz=94,slow=18,SNR=11
PAYG Puerto Ayora 154.41 19 PFAKE 12 44 30.0 +4.8
PAYG LR LR
comp=Z,2μm,21.0s,MS6.0
OTAV Otavalo 154.44 351 PFAKE 12 44 40.0 +15
OTAV LR LR
comp=Z,2μm,22.0s,MS5.8
RPN Rapa Nui 155.66 100 PFAKE 12 44 40.0 +14
RPN LR LR
comp=Z,890nm,20.0s,MS5.6
CPUP Villa Florida 157.51 262 PKP PKPdf 12 44 28.2 -0.7
CPUP LR LR
comp=Z,617nm,20.0s,MS5.4
CPUP Villa Florida 157.51 262 PKP PKPdf 12 44 28.2 -0.7
comp=Z,0.2nm,0.3s,baz=18,slow=3.2,SNR=2.2
TRQA Tornquist 158.55 228 PFAKE 12 44 40.0 +10
TRQA LR LR
comp=Z,4μm,21.0s,MS6.2
PLCA Paso Flores 161.69 209 PFAKE 12 44 40.0 +6.8
PLCA LR LR
comp=Z,540nm,22.0s
LPAZ La Paz 164.08 301 PKP PKPdf 12 44 35.4 -0.8
comp=Z,1.1nm,0.8s,baz=225,slow=4.3,SNR=3.3
LPAZ La Paz 164.08 301 PKIKP PKPdf 12 44 35.4 -0.8
LPAZ pmax pmax
comp=Z,1.0nm,0.8s
NNA Nana 165.88 338 PFAKE 12 44 50.0 +12
NNA LR LR
comp=Z,2μm,20.0s
LCO Las Campanas 169.01 247 PFAKE 12 44 50.0 +10
LCO LR LR
comp=Z,3μm,22.0s

BJI ***21*** *12:36:50.9,25.10N×97.72E,h19km,ML4.0/5*
IDC ***21*** *12:36:50.6±1.2,24.87N×98.19E,h0km,mb3.6/5, mb1 3.7/6,mb1mx3.5/25,mbtmp3.6/6,ML4.0/1,Error ellipse: s-maj=60.5km s-min=16.3km az=74.0*
NEIC ***21*** *12:36:52.2±0.6,24.84N×98.21E,h10km,Error ellipse: s-maj=37.1km s-min=9.6km az=77.0*
ISC 21 12:36:51.1±2.2,24.79N±0.07×98.0E±0.1,h3km±15km,n10, σ0s92/12,mb3.6/5,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**4.28**	**85**	Pg	**Pg**	**12 38 14.1**	**+1.0**
KMI				Sg	**Sg**	**12 39 08.4**	**-0.2**
KMI				smax			
	comp=N,120nm,0.8s						
KMI				smax			
	comp=E,140nm,0.8s						
CHTO	**Chiang Mai**	**6.01**	**172**	*e*Pn	**Pn**	**12 38 20.9**	**0.0**
CMAR	**Chiang Mai Arr**	**6.36**	**172**	Pn	**Pn**	**12 38 27.7**	**+1.9**
	comp=E,0.8nm,0.3s,baz=348,slow=13,SNR=2.9						
CMAR				Pg	**Pg**	**12 38 51.9**	**-1.1**
	comp=E,1.8nm,0.3s,baz=348,slow=15,SNR=8.6						
CMAR				Lg		12 40 16.4	
	comp=E,3.5nm,0.3s,baz=355,slow=30,SNR=7.2						
LZH	**Lanzhou**	**12.31**	**23**	*e*P	**Pn**	**12 39 46.3**	**-1.0**
LZH				pP		12 39 49.3	
LZH				sP		12 39 52.3	
SONM	**Songino Array**	**23.93**	**14**	P	**P**	**12 42 06.6**	**+0.4**
	comp=E,0.2nm,0.3s,mb3.0,baz=89,slow=6.3,SNR=2.0						
MK31	**Makanchi Array**	**25.30**	**334**	*e*P	**P**	**12 42 20.2**	**+1.4**
MKAR	**Makanchi Array**	**25.30**	**334**	P	**P**	**12 42 18.7**	**-0.1**
	comp=E,1.7nm,0.7s,mb3.7,baz=145,slow=9.4,SNR=7.6						
ZALV	**Zalesovo Beam**	**30.75**	**345**	P	**P**	**12 43 06.5**	**-0.8**
	comp=E,1.2nm,0.6s,mb3.9,baz=171,slow=9.3,SNR=4.6						
WRA	**Warramunga Arr**	**56.79**	**138**	P	**P**	**12 46 36.3**	**-0.5**
	comp=E,0.5nm,0.6s,mb3.7,baz=327,slow=7.4,SNR=3.7						
ASAR	**Alice Springs**	**59.41**	**141**	P	**P**	**12 46 54.2**	**-0.8**
	comp=E,0.7nm,1.1s,mb3.6,baz=318,slow=6.8,SNR=2.8						

ISCJB ***21*** *12:40:09.4±0.4,26.10N±0.05×59.51E±0.05,h10km, mb4.2/34,Error ellipse: s-maj=8.5km s-min=5.5km az=147.2*
IDC ***21*** *12:40:09.2±0.9,25.97N×59.51E,h0km,mb4.0/18, mb1 4.2/18,mb1mx4.1/29,mbtmp4.1/18,Error ellipse: s-maj=22.6km s-min=16.7km az=11.0*
NEIC ***21*** *12:40:10.2±0.5,25.92N×59.50E,h10km,mb4.4/17,Error ellipse: s-maj=10.7km s-min=6.1km az=175.0*
OMAN ***21*** *12:40:12.7±99.0,26.20N×59.61E,h40km±171km,Error ellipse: s-maj=322.6km s-min=14.8km az=33.0*
CSEM ***21*** *12:40:13.8±0.2,26.04N×59.49E,h30km,mb4.5/17,Error ellipse: s-maj=7.1km s-min=5.3km az=151.0*
ISC 21 12:40:11.1±0.4,26.07N±0.06×59.52E±0.05,h10km,n144, σ0s85/149,mb4.2/34,4C-1D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BANOM	**Banah**	**2.90**	**268**	P	**Pn**	**12 40 57.5**	**+0.2**
	SNR=52						
BANOM				S	**Sn**	**12 41 32.3**	**0.0**
BANOM	**Banah**	**2.90**	**268**	⇑P	**Pn**	**12 40 57.5**	**+0.1**
	SNR=52						
BANOM				⇓S	**Sn**	**12 41 32.3**	**0.0**
ARQ	**Araqi**	**3.85**	**226**	P	**Pn**	**12 41 11.6**	**+1.2**
	SNR=36						
ARQ				S	**Sn**	**12 41 57.9**	**+2.2**
ARQ	**Araqi**	**3.85**	**226**	⇑P	**Pn**	**12 41 11.6**	**+1.2**
	SNR=36						
ARQ				⇑S	**Sn**	**12 41 57.9**	**+2.2**
JMDO	**Jabal Madar**	**3.90**	**200**	P	**Pn**	**12 41 10.5**	**-0.6**
	SNR=15						
JMDO	**Jabal Madar**	**3.90**	**200**	⇑P	**Pn**	**12 41 10.5**	**-0.6**
	SNR=15						
NAY	**Al-Naaiem**	**11.33**	**289**	*e*P	**Pn**	**12 42 52.3**	**-0.8**
NAY				*e*S	**Sn**	**12 44 52.4**	**-7.5**
MIB	**Mutribah**	**11.39**	**292**	*e*P	**Pn**	**12 42 53.2**	**-0.7**
MIB				*e*S	**Sn**	**12 44 56.0**	**-5.3**
EKS2	**Erkin-Say**	**20.26**	**32**	*e*P	**P**	**12 44 47.7**	**+1.0**
	10nm,0.8s						
EKS2	**Erkin-Say**	**20.26**	**32**	*e*P	**P**	**12 44 47.7**	**+1.0**
	10nm,0.8s						
AAK	**Ala-Archa**	**20.59**	**33**	P	**P**	**12 44 51.9**	**+1.7**
	1.4nm,0.3s,baz=238,slow=9.5,SNR=1.8						
AAK	**Ala-Archa**	**20.59**	**33**	P	**P**	**12 44 51.9**	**+1.7**
ASF	**Jabal al Asfar**	**20.66**	**292**	P	**P**	**12 44 51.5**	**+0.4**
	2.6nm,0.5s,baz=82,slow=2.5,SNR=5.4						
TKM2	**Tokmak 2**	**21.34**	**34**	*e*P	**P**	**12 44 58.8**	**+0.4**
	6.0nm,1.2s,mb3.8						
TKM2	**Tokmak 2**	**21.34**	**34**	*e*P	**P**	**12 44 58.8**	**+0.4**
	5.9nm,1.2s,mb3.8						
MALT	**Malatya**	**21.57**	**310**	*e*P	**P**	**12 45 03.5**	**+2.7**
	11nm,0.9s,mb4.3						
EIL	**Elat**	**22.00**	**285**	P	**P**	**12 45 08.4**	**+2.8**
	8.3nm,0.8s,mb4.2,baz=51,slow=4.8,SNR=7.2						
ABKAR	**Akbulak array**	**23.15**	**1**	*e*P	**P**	**12 45 17.3**	**-0.3**
	8.3nm,0.6s,mb4.3						
ABKAR	**Akbulak array**	**23.15**	**1**	*e*P	**P**	**12 45 17.3**	**-0.2**
	8.3nm,0.6s,mb4.3						
AKTK	**Aktyubinsk**	**24.36**	**358**	P	**P**	**12 45 30.0**	**+0.9**
AKTK	**Aktyubinsk**	**24.36**	**358**	P	**P**	**12 45 30.0**	**+0.9**
AKTO	**Aktyubinsk**	**24.36**	**358**	P	**P**	**12 45 30.0**	**+0.9**
	6.1nm,0.6s,mb4.2,baz=174,slow=8.8,SNR=19						
BR131	**Keskin Array S**	**25.54**	**309**	*e*P	**P**	**12 45 40.1**	**+0.2**
	3.8nm,0.8s,mb4.0						
BR131	**Keskin Array S**	**25.54**	**309**	*e*P	**P**	**12 45 40.1**	**+0.2**
	3.8nm,0.8s,mb4.0						
BRTR	**Keskin Array B**	**25.54**	**309**	P	**P**	**12 45 41.7**	**+1.8**
	4.0nm,0.8s,mb4.0,baz=127,slow=11,SNR=16						
BRTR				PcP	PcP	12 49 12.8	+1.6
	0.6nm,0.7s,baz=131,slow=5.2,SNR=3.8						
BRTR	**Keskin Array B**	**25.54**	**309**	P	**P**	**12 45 41.7**	**+1.8**
BRTR	**Keskin Array B**	**25.54**	**309**	PcP	PcP	12 49 12.9	+1.7
MKAR	**Makanchi Array**	**27.46**	**35**	P	**P**	**12 45 56.9**	**-0.3**
	0.4nm,0.4s,mb3.3,baz=214,slow=8.6,SNR=4.1						
ZALV	**Zalesovo Beam**	**33.57**	**27**	P	**P**	**12 46 51.3**	**+0.1**
	0.9nm,0.3s,mb4.2,baz=219,slow=12,SNR=4.8						
AKASG	**Malin Array Be**	**33.78**	**325**	P	**P**	**12 46 51.4**	**-1.6**
	0.4nm,0.3s,mb3.9,baz=121,slow=8.1,SNR=5.0						
AKASG	**Malin Array Be**	**33.78**	**325**	P	**P**	**12 46 51.4**	**-1.6**

JOF	**Joensuu**	**41.29 341**	*e*P		**P**	**12 47 57.1**	**+0.7**
JOF	**Joensuu**	**41.29 341**	*e*p		**P**	**12 47 57.1**	**+0.7**
	1.5nm,0.7s,mb3.7						
JOF	**Joensuu**	**41.29 341**	*e*P		**P**	**12 47 57.1**	**+0.7**
FINES	**FINESS Array B**	**41.93 337**	P		**P**	**12 48 02.0**	**+0.3**
	3.8nm,0.4s,mb4.4,baz=133,slow=8.9,SNR=35						
FINES	**FINESS Array B**	**41.93 337**	P		**P**	**12 48 02.0**	**+0.3**
SONM	**Songino Array**	**42.51 47**	P		**P**	**12 48 08.7**	**+2.1**
	1.1nm,0.6s,mb3.8,baz=258,slow=8.7,SNR=7.1						
SONM	**Songino Array**	**42.51 47**	P		**P**	**12 48 08.7**	**+2.1**
SBF	**Sospel**	**45.45 307**	*e*P		**P**	**12 48 30.2**	**0.0**
	14nm,0.6s,mb4.7						
SBF	**Sospel**	**45.45 307**	*e*P		**P**	**12 48 30.2**	**0.0**
	6.8nm,0.6s,mb4.7						
SBF	**Sospel**	**45.45 307**	*e*P		**P**	**12 48 30.2**	**0.0**
	6.8nm,0.6s,mb4.7						
FRF	**La Foret Royal**	**45.99 306**	*e*P		**P**	**12 48 34.2**	**-0.3**
FRF	**La Foret Royal**	**45.99 306**	*e*P		**P**	**12 48 34.2**	**-0.3**
FRF	**La Foret Royal**	**45.99 306**	*e*P		**P**	**12 48 34.2**	**-0.3**
MBDF	**Montbardon**	**46.00 308**	*e*P		**P**	**12 48 34.2**	**-0.4**
	5.5nm,0.6s,mb4.3						
MBDF	**Montbardon**	**46.00 308**	*e*P		**P**	**12 48 34.2**	**-0.4**
	2.8nm,0.6s,mb4.4						
MBDF	**Montbardon**	**46.00 308**	*e*P		**P**	**12 48 34.2**	**-0.4**
	2.8nm,0.6s,mb4.3						
LPG	**La Plagne**	**46.09 309**	*e*P		**P**	**12 48 35.2**	**-0.1**
LPG	**La Plagne**	**46.09 309**	*e*P		**P**	**12 48 35.2**	**-0.1**
LPG	**La Plagne**	**46.09 309**	*e*P		**P**	**12 48 35.2**	**-0.1**
LPL	**La Plagne**	**46.11 309**	*e*P		**P**	**12 48 35.2**	**-0.3**
LPL	**La Plagne**	**46.11 309**	*e*P		**P**	**12 48 35.2**	**-0.3**
LPL	**La Plagne**	**46.11 309**	*e*P		**P**	**12 48 35.2**	**-0.3**
CDF	**Champ du Feu**	**46.14 313**	*e*P		**P**	**12 48 35.5**	**-0.2**
CDF	**Champ du Feu**	**46.14 313**	*e*P		**P**	**12 48 35.5**	**-0.2**
CDF	**Champ du Feu**	**46.14 313**	*e*P		**P**	**12 48 35.5**	**-0.2**
HINF	**Hinteralfeld**	**46.33 312**	*e*P		**P**	**12 48 36.4**	**-0.7**
HINF	**Hinteralfeld**	**46.33 312**	*e*P		**P**	**12 48 36.4**	**-0.7**
HINF	**Hinteralfeld**	**46.33 312**	*e*P		**P**	**12 48 36.4**	**-0.7**
CABF	**La Chapelle**	**46.68 310**	*e*P		**P**	**12 48 39.4**	**-0.5**
CABF	**La Chapelle**	**46.68 310**	*e*P		**P**	**12 48 39.4**	**-0.5**
CABF	**La Chapelle**	**46.68 310**	*e*P		**P**	**12 48 39.4**	**-0.5**
HAU	**Haudompre**	**46.69 312**	*e*P		**P**	**12 48 39.1**	**-0.9**
HAU	**Haudompre**	**46.69 312**	*e*P		**P**	**12 48 39.1**	**-0.9**
HAU	**Haudompre**	**46.69 312**	*e*P		**P**	**12 48 39.1**	**-0.9**
SMRF	**Simiane la Rot**	**46.79 307**	*e*P		**P**	**12 48 40.2**	**-0.7**
SMRF	**Simiane la Rot**	**46.79 307**	*e*P		**P**	**12 48 40.2**	**-0.7**
SMRF	**Simiane la Rot**	**46.79 307**	*e*P		**P**	**12 48 40.2**	**-0.7**
VIVF	**Saint-Julien-l**	**47.50 308**	*e*P		**P**	**12 48 45.9**	**-0.5**
	13nm,0.8s,mb4.7						
VIVF	**Saint-Julien-l**	**47.50 308**	*e*P		**P**	**12 48 45.9**	**-0.5**
	6.3nm,0.8s,mb4.7						
VIVF	**Saint-Julien-l**	**47.50 308**	*e*P		**P**	**12 48 45.9**	**-0.5**
	6.3nm,0.8s,mb4.7						
KEV	**Kevo**	**47.64 345**	*e*P		**P**	**12 48 47.3**	**+0.2**
	2.3nm,0.7s,mb4.3						
KEV	**Kevo**	**47.64 345**	*e*p		**P**	**12 48 47.3**	**+0.2**
	2.3nm,0.7s,mb4.3						
KEV	**Kevo**	**47.64 345**	*e*P		**P**	**12 48 47.3**	**+0.2**
	2.3nm,0.7s,mb4.3						
NB2	**NORSAR Subarra**	**47.70 331**	P		**P**	**12 48 47.7**	**0.0**
	3.6nm,0.9s,mb4.4,SNR=5.5						
NOA	**NORSAR Array B**	**47.70 331**	P		**P**	**12 48 47.1**	**-0.5**
	2.0nm,0.8s,mb4.2,baz=119,slow=7.4,SNR=6.2						
NOA	**NORSAR Array B**	**47.70 331**	P		**P**	**12 48 47.2**	**-0.5**
ARCES	**ARCESS Array B**	**47.83 345**	P		**P**	**12 48 49.1**	**+0.6**
	3.7nm,0.7s,mb4.5,baz=140,slow=8.2,SNR=17						
ARCES	**ARCESS Array B**	**47.83 345**	P		**P**	**12 48 49.1**	**+0.6**
LASF	**Ste Croix**	**48.04 307**	*e*P		**P**	**12 48 50.6**	**+0.1**
	6.9nm,0.7s,mb4.5						
LASF	**Ste Croix**	**48.04 307**	*e*P		**P**	**12 48 50.6**	**+0.1**
LASF	**Ste Croix**	**48.04 307**	*e*P		**P**	**12 48 50.6**	**+0.1**
	3.5nm,0.7s,mb4.5						
SMF	**Signal de Mont**	**48.23 310**	*e*P		**P**	**12 48 51.7**	**-0.2**
	14nm,0.6s,mb4.9						
SMF	**Signal de Mont**	**48.23 310**	*e*P		**P**	**12 48 51.7**	**-0.2**
	6.8nm,0.6s,mb4.8						
SMF	**Signal de Mont**	**48.23 310**	*e*P		**P**	**12 48 51.7**	**-0.2**
	6.8nm,0.6s,mb4.9						
LOR	**Lormes**	**48.27 311**	*e*P		**P**	**12 48 51.8**	**-0.5**
LOR	**Lormes**	**48.27 311**	*e*P		**P**	**12 48 51.8**	**-0.5**
LOR	**Lormes**	**48.27 311**	*e*P		**P**	**12 48 51.8**	**-0.5**
BAIF	**Baives**	**48.39 315**	*e*P		**P**	**12 48 51.8**	**-1.3**
BAIF	**Baives**	**48.39 315**	*e*P		**P**	**12 48 51.8**	**-1.3**
BAIF	**Baives**	**48.39 315**	*e*P		**P**	**12 48 51.8**	**-1.3**
SSF	**Saint Saulge**	**48.49 311**	*e*P		**P**	**12 48 53.8**	**-0.2**
	4.7nm,0.5s,mb4.5						
SSF	**Saint Saulge**	**48.49 311**	*e*P		**P**	**12 48 53.8**	**-0.2**
	2.3nm,0.5s,mb4.5						
SSF	**Saint Saulge**	**48.49 311**	*e*P		**P**	**12 48 53.8**	**-0.2**
	2.3nm,0.5s,mb4.5						
AVF	**Avril sur Loir**	**48.57 310**	*e*P		**P**	**12 48 54.1**	**-0.5**
AVF	**Avril sur Loir**	**48.57 310**	*e*P		**P**	**12 48 54.1**	**-0.5**
AVF	**Avril sur Loir**	**48.57 310**	*e*P		**P**	**12 48 54.1**	**-0.5**
BGF	**Bois d'Agland**	**48.90 310**	*e*P		**P**	**12 48 57.0**	**-0.2**
BGF	**Bois d'Agland**	**48.90 310**	*e*P		**P**	**12 48 57.0**	**-0.2**
BGF	**Bois d'Agland**	**48.90 310**	*e*P		**P**	**12 48 57.0**	**-0.2**
MTLF	**Montolieu**	**49.20 306**	*e*P		**P**	**12 49 00.1**	**+0.6**
	5.0nm,0.7s,mb4.3						
MTLF	**Montolieu**	**49.20 306**	*e*P		**P**	**12 49 00.1**	**+0.6**
	2.5nm,0.7s,mb4.3						
MTLF	**Montolieu**	**49.20 306**	*e*P		**P**	**12 49 00.1**	**+0.6**
	2.5nm,0.7s,mb4.3						
TCF	**Toulx Ste Croi**	**49.32 310**	*e*P		**P**	**12 49 00.3**	**-0.1**
	6.8nm,0.7s,mb4.5						
TCF	**Toulx Ste Croi**	**49.32 310**	*e*P		**P**	**12 49 00.3**	**-0.1**
	3.4nm,0.6s,mb4.5						
TCF	**Toulx Ste Croi**	**49.32 310**	*e*P		**P**	**12 49 00.3**	**-0.1**
	3.4nm,0.7s,mb4.5						
CAF	**Calviac**	**49.36 308**	*e*P		**P**	**12 49 01.0**	**+0.3**
	6.5nm,0.8s,mb4.4						
CAF	**Calviac**	**49.36 308**	*e*P		**P**	**12 49 01.0**	**+0.3**
	3.3nm,0.8s,mb4.4						
CAF	**Calviac**	**49.36 308**	*e*P		**P**	**12 49 01.0**	**+0.3**
	3.2nm,0.8s,mb4.4						
RJF	**Les Rejaudoux**	**49.76 308**	*e*P		**P**	**12 49 04.2**	**+0.5**
	3.8nm,0.4s,mb4.4						
RJF	**Les Rejaudoux**	**49.76 308**	*e*P		**P**	**12 49 04.2**	**+0.5**
	1.9nm,0.4s,mb4.5						
RJF	**Les Rejaudoux**	**49.76 308**	*e*P		**P**	**12 49 04.2**	**+0.5**
	1.9nm,0.4s,mb4.4						
LDF	**La Druitiere**	**51.05 313**	*e*P		**P**	**12 49 12.8**	**-0.6**
	7.6nm,0.6s,mb4.5						
LDF	**La Druitiere**	**51.05 313**	*e*P		**P**	**12 49 12.8**	**-0.6**
	3.8nm,0.6s,mb4.5						
LDF	**La Druitiere**	**51.05 313**	*e*P		**P**	**12 49 12.8**	**-0.6**
	3.8nm,0.6s,mb4.5						
ETSF	**Etsaut**	**51.23 305**	*e*P		**P**	**12 49 14.9**	**0.0**
ETSF	**Etsaut**	**51.23 305**	*e*P		**P**	**12 49 14.9**	**0.0**
ETSF	**Etsaut**	**51.23 305**	*e*P		**P**	**12 49 14.9**	**0.0**
FLN	**La Foliniere**	**51.30 313**	*e*P		**P**	**12 49 14.9**	**-0.4**
FLN	**La Foliniere**	**51.30 313**	*e*P		**P**	**12 49 14.9**	**-0.4**
FLN	**La Foliniere**	**51.30 313**	*e*P		**P**	**12 49 14.9**	**-0.4**
SJPF	**Ste Jean**	**51.72 306**	*e*P		**P**	**12 49 19.2**	**+0.7**
	4.7nm,0.6s,mb4.3						
SJPF	**Ste Jean**	**51.72 306**	*e*P		**P**	**12 49 19.2**	**+0.7**
	2.3nm,0.6s,mb4.3						
SJPF	**Ste Jean**	**51.72 306**	*e*P		**P**	**12 49 19.2**	**+0.7**
	2.3nm,0.6s,mb4.3						
SGMF	**Saint Gilles**	**52.65 312**	*e*P		**P**	**12 49 25.3**	**-0.1**
SGMF	**Saint Gilles**	**52.65 312**	*e*P		**P**	**12 49 25.3**	**-0.1**
SGMF	**Saint Gilles**	**52.65 312**	*e*P		**P**	**12 49 25.3**	**-0.1**
ROSF	**Rostrenen**	**53.13 312**	*e*P		**P**	**12 49 28.7**	**-0.3**
ROSF	**Rostrenen**	**53.13 312**	*e*P		**P**	**12 49 28.7**	**-0.3**
ROSF	**Rostrenen**	**53.13 312**	*e*P		**P**	**12 49 28.7**	**-0.3**
ESDC	**Sonseca Array**	**53.99 301**	P		**P**	**12 49 34.4**	**-1.0**
	0.3nm,0.3s,mb3.7,baz=83,slow=6.7,SNR=3.1						
ESDC	**Sonseca Array**	**53.99 301**	P		**P**	**12 49 34.4**	**-1.0**
TORD	**Torodi Ar. Bea**	**55.57 268**	P		**P**	**12 49 47.1**	**-0.1**
	1.8nm,0.5s,mb4.3,baz=62,slow=7.0,SNR=25						
SPITS	**Spitsbergen Ar**	**55.74 350**	P		**P**	**12 49 48.3**	**+0.8**
	1.5nm,0.4s,mb4.3,baz=287,slow=14,SNR=4.1						
SPITS	**Spitsbergen Ar**	**55.74 350**	P		**P**	**12 49 48.3**	**+0.8**
KSRS	**Korea Array**	**58.12 61**	P		**P**	**12 50 04.5**	**-0.5**
	0.9nm,0.6s,mb4.0,baz=274,slow=6.7,SNR=3.4						
WRA	**Warramunga Arr**	**85.79 114**	P		**P**	**12 52 50.2**	**-1.0**
	0.9nm,0.7s,mb4.1,baz=310,slow=4.3,SNR=13						
WRA	**Warramunga Arr**	**85.79 114**	P		**P**	**12 52 50.2**	**-0.9**
WB2	**Warramunga Arr**	**85.80 114**	*e*P		**P**	**12 52 49.0**	**-2.2**
WB2	**Warramunga Arr**	**85.80 114**	*e*P		**P**	**12 52 49.0**	**-2.2**
ILAR	**Eielson Array**	**87.16 11**	P		**P**	**12 52 56.4**	**-0.7**
	0.4nm,0.7s,mb3.8,baz=326,slow=5.0,SNR=5.8						
ILAR	**Eielson Array**	**87.16 11**	P		**P**	**12 52 56.4**	**-0.7**
ASAR	**Alice Springs**	**87.28 118**	P		**P**	**12 52 58.0**	**-0.3**
	1.2nm,0.8s,mb4.2,baz=303,slow=4.8,SNR=15						
ASAR	**Alice Springs**	**87.28 118**	P		**P**	**12 52 58.0**	**-0.3**

*CSEM **21** 12:54:32.7±0.3,38°.26N×22°.03E,h15km,ML1.5/4, Error ellipse: s-maj=7.5km s-min=6.0km az=89.0*
*ATH **21** 12:54:32.6,38°.24N×22°.02E,h9km±5km,MD2.7/4*
*NEIC **21** 12:54:32.6,38°.24N×22°.02E,h9km,MD2.7(ATH), After ATH.*
*ISCJB **21** 12:54:33.4±0.6,38°.26N±0°.03×22°.05E±0°.04,h16km±6km, Error ellipse: s-maj=5.8km s-min=5.3km az=0.9*
*THE **21** 12:54:34.8,38°.36N×22°.01E,h10km±1km,ML1.5/4, Error ellipse: s-maj=1.3km s-min=0.5km az=290.0*

ISC 21 12:54:32.7±0.8,38°.26N±0°.03×22°.02E±0°.04,h20km±6km, n25,σ0s92/46,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAKA	**Lakka**	**0.04**	**239**	P	**Pg**	**12 54 37.5**	**+1.4**
LAKA				S	**Sg**	**12 54 40.1**	**+1.7**
LAKA	**Lakka**	**0.04**	**239**	P	**Pg**	**12 54 37.5**	**+1.4**
LAKA				S	**Sg**	**12 54 40.1**	**+1.7**
TRIZ	**Trizonia**	**0.12**	**22**	P	**Pg**	**12 54 36.5**	**-0.2**
TRIZ				S	**Sg**	**12 54 37.9**	**-1.5**
TRIZ	**Trizonia**	**0.12**	**22**	P	**Pg**	**12 54 36.5**	**-0.2**
TRIZ				S	**Sg**	**12 54 37.9**	**-1.5**
KALE	**Kalithea**	**0.16**	**36**	P	**Pg**	**12 54 37.4**	**+0.1**
KALE				S	**Sg**	**12 54 39.8**	**-0.6**
KALE	**Kalithea**	**0.16**	**36**	P	**Pg**	**12 54 37.4**	**+0.1**
KALE				S	**Sg**	**12 54 39.8**	**-0.6**
EFP	**Efpalio**	**0.19**	**333**	*e*PG	**Pg**	**12 54 37.2**	**-0.4**
EFP				*e*SG	**Sg**	**12 54 39.7**	**-1.3**
EFP	**Efpalio**	**0.19**	**333**	P	**Pg**	**12 54 37.2**	**-0.4**
EFP				S	**Sg**	**12 54 39.5**	**-1.5**
EFP	**Efpalio**	**0.19**	**333**	P	**Pg**	**12 54 37.2**	**-0.4**
EFP				*e*Sg	**Sg**	**12 54 39.7**	**-1.3**
GUR	**Goura**	**0.41**	**141**	*e*PB	**Pg**	**12 54 40.7**	**-0.5**
GUR				*e*SB	**Sg**	**12 54 46.1**	**-0.9**
GUR	**Goura**	**0.41**	**141**	*e*Pb	**Pg**	**12 54 40.7**	**-0.5**
GUR				*e*Sb	**Sg**	**12 54 46.1**	**-0.9**
DSF	**Desfina**	**0.43**	**69**	P	**Pg**	**12 54 42.6**	**+1.1**
DSF				S	**Sg**	**12 54 49.0**	**+1.5**
DSF	**Desfina**	**0.43**	**69**	P	**Pg**	**12 54 42.6**	**+1.1**
EVR	**Evrytania**	**0.68**	**346**	*e*Pb	**Pg**	**12 54 46.0**	**-0.1**
EVR				*e*Sb	**Sg**	**12 54 55.2**	**0.0**
EVR	**Evrytania**	**0.68**	**346**	*e*PB	**Pg**	**12 54 46.0**	**-0.1**
EVR				*e*SB	**Sg**	**12 54 55.2**	**0.0**
EVR	**Evrytania**	**0.68**	**346**	*e*Pb	**Pg**	**12 54 46.0**	**-0.1**
EVR				*e*Sb	**Sg**	**12 54 55.2**	**0.0**
AGG	**Agios Georgios**	**0.80**	**18**	*e*Pg	**Pg**	**12 54 47.7**	**-0.7**
AGG				*e*Sb	**Sg**	**12 54 59.8**	**+0.8**
AGG	**Agios Georgios**	**0.80**	**18**	*e*PG	**Pg**	**12 54 47.7**	**-0.7**
AGG				*e*SB	**Sg**	**12 54 59.8**	**+0.8**
AGG	**Agios Georgios**	**0.80**	**18**	*e*Pg	**Pg**	**12 54 47.7**	**-0.7**
AGG				*e*Sb	**Sg**	**12 54 59.8**	**+0.8**
ITM	**Ithomi**	**1.08**	**184**	*e*Pg	**Pg**	**12 54 52.6**	**-1.0**
ITM	**Ithomi**	**1.08**	**184**	*e*PG	**Pg**	**12 54 52.6**	**-1.0**
ITM	**Ithomi**	**1.08**	**184**	*e*Pg	**Pg**	**12 54 52.6**	**-1.0**
VLS	**Valsamata**	**1.13**	**266**	*e*Pb	**Pg**	**12 54 54.6**	**+0.1**
VLS				*e*Sb	**Sg**	**12 55 10.1**	**+0.8**
VLS	**Valsamata**	**1.13**	**266**	*e*PB	**Pg**	**12 54 54.6**	**+0.1**
VLS				*e*SB	**Sg**	**12 55 10.1**	**+0.8**
VLS	**Valsamata**	**1.13**	**266**	*e*Pb	**Pg**	**12 54 54.6**	**+0.1**
VLS				*e*Sb	**Sg**	**12 55 10.1**	**+0.8**

*ISCJB **21** 13:02:39.4±0.5,37°.72N±0°.03×37°.45E±0°.04,h1km±8km, Error ellipse: s-maj=6.1km s-min=3.5km az=39.5*
*DDA **21** 13:02:39.5,37°.70N×37°.47E,h12km±2km,Md2.8*
*ISK **21** 13:02:39.6,37°.73N×37°.44E,h5km,MD2.9*
*CSEM **21** 13:02:40.1±0.1,37°.74N×37°.42E,h2km,MD2.9,Error ellipse: s-maj=4.9km s-min=2.6km az=133.0*

ISC 21 13:02:40.2±0.5,37.72N±0°.03×37.46E±0°.04,h5km±7km, n28,σ0s77/43,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GZT	**Gaziantep**	**0.37**	**167**	*i* P	**Pg**	**13 02 46.3**	**-0.1**
GZT				*i* S	**Sg**	**13 02 51.6**	**-0.7**
KMRS	**Kahramanmaras**	**0.49**	**244**	*e*PG	**Pg**	**13 02 49.3**	**-0.4**
KMRS				*e*SG	**Sg**	**13 02 56.0**	**0.0**
KMRS	**Kahramanmaras**	**0.49**	**244**	*e*Pg	**Pg**	**13 02 49.3**	**-0.3**
KMRS				*e*Sg	**Sg**	**13 02 56.0**	**0.0**
GAZ	**Gaziantep**	**0.58**	**200**	*e*PG	**Pg**	**13 02 52.1**	**+0.8**
GAZ				*e*SG	**Sg**	**13 03 00.0**	**+1.2**
GAZ	**Gaziantep**	**0.58**	**200**	*e*Pg	**Pg**	**13 02 52.1**	**+0.8**
GAZ				*e*Sg	**Sg**	**13 03 00.0**	**+1.1**
AKCD	**Akcadag**	**0.68**	**32**	*i* P	**Pg**	**13 02 52.8**	**-0.6**
AKCD				*i* S	**Sg**	**13 03 03.7**	**+1.4**
AKCD	**Akcadag**	**0.68**	**32**	*i* P	**Pg**	**13 02 52.8**	**-0.6**
AKCD				*i* S	**Sg**	**13 03 03.7**	**+1.4**
ANDN	**Andirin**	**0.89**	**261**	*i* P	**Pg**	**13 02 57.0**	**-0.4**
ANDN				*i* S	**Sg**	**13 03 09.4**	**+0.4**
ANDN	**Andirin**	**0.89**	**261**	*i* P	**Pg**	**13 02 57.0**	**-0.3**
ANDN				*i* S	**Sg**	**13 03 09.4**	**+0.5**
MALT	**Malatya**	**0.97**	**52**	*e*PG	**Pg**	**13 02 58.4**	**-0.4**
MALT	**Malatya**	**0.97**	**52**	*e*Pg	**Pg**	**13 02 58.4**	**-0.4**
MYA	**Malatasya**	**0.98**	**51**	*e*PG	**Pg**	**13 02 58.6**	**-0.4**
MYA	**Malatasya**	**0.98**	**51**	*e*Pg	**Pg**	**13 02 58.6**	**-0.4**
KUZU	**Kuzuini**	**0.99**	**198**	*i* P	**Pg**	**13 02 59.7**	**+0.5**
KUZU				*i* S	**Sg**	**13 03 12.7**	**+0.6**
KUZU	**Kuzuini**	**0.99**	**198**	*i* P	**Pg**	**13 02 59.7**	**+0.5**
KUZU				*i* S	**Sg**	**13 03 12.7**	**+0.6**
SARI	**SarD1z-Kayseri**	**1.13**	**328**	*e*PG	**Pg**	**13 03 00.6**	**-1.3**
SARI	**SarD1z-Kayseri**	**1.13**	**328**	*e*Pg	**Pg**	**13 03 00.6**	**-1.3**
KOZT	**Kozan**	**1.32**	**260**	*e*PN	**Pn**	**13 03 04.7**	**-0.5**
ELZG	**Elazig**	**1.44**	**57**	*e*P	**Pn**	**13 03 07.4**	**+0.5**
ELZG				*e*S	**Sg**	**13 03 27.3**	**+0.9**
ELZG	**Elazig**	**1.44**	**57**	*e*P	**Pn**	**13 03 07.4**	**+0.6**
ELZG				*e*S	**Sg**	**13 03 27.3**	**+1.0**
PTK	**Pertek**	**1.92**	**52**	*e*PN	**Pb**	**13 03 14.2**	**-1.5**
PTK	**Pertek**	**1.92**	**52**	*e*Pn	**Pb**	**13 03 14.2**	**-1.5**
YAYL	**Yayladag**	**2.00**	**213**	*i* P	**Pn**	**13 03 14.1**	**-0.5**
YAYL				*e*S	**Sg**	**13 03 44.2**	**-0.2**
YAYL	**Yayladag**	**2.00**	**213**	*i* P	**Pn**	**13 03 14.1**	**-0.5**
YAYL				*e*S	**Sg**	**13 03 44.2**	**-0.2**
SVSK	**Karacayir**	**2.22**	**351**	*e*PN	**Pn**	**13 03 18.3**	**+0.6**
SVSK	**Karacayir**	**2.22**	**351**	*e*Pn	**Pn**	**13 03 18.3**	**+0.6**
YOZ	**Yozgat**	**2.54**	**320**	*e*PN	**Pn**	**13 03 22.9**	**+0.8**
YOZ	**Yozgat**	**2.54**	**320**	*e*Pn	**Pn**	**13 03 22.9**	**+0.8**

*BEO **21** 13:14:54.7±1.8,40°.62N×24°.71E,h5km±8km,ML2.3/2*
*CSEM **21** 13:15:01.9±0.2,41°.09N×24°.34E,h8km,ML1.6/3,Error ellipse: s-maj=5.8km s-min=4.2km az=178.0*
*ATH **21** 13:15:01.3,41°.17N×24°.34E,h5km,MD3.1/3*
*SKO **21** 13:15:02.7,41°.13N×24°.36E,h1km,M1.5,ML1.8*
*THE **21** 13:15:02.5,41°.10N×24°.32E,h3km±3km,ML1.6/3,Error ellipse: s-maj=3.3km s-min=0.8km az=213.0*

ISC 21 13:15:01.9±0.6,41°.15N±0°.03×24°.35E±0°.04,h5km±8km, n25,σ0s85/45,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAVA	**Kavala**	**0.20**	**140**	P	**Pg**	**13 15 05.7**	**0.0**
KAVA				S	**Sg**	**13 15 09.3**	**+1.0**
KAVA	**Kavala**	**0.20**	**140**	P	**Pg**	**13 15 05.7**	**0.0**
KAVA				S	**Sg**	**13 15 09.3**	**+1.0**
SRS	**Serrai**	**0.57**	**267**	P	**Pg**	**13 15 12.6**	**-0.3**
SRS				S	**Sg**	**13 15 21.7**	**+1.3**
SRS	**Serrai**	**0.57**	**267**	P	**Pg**	**13 15 12.6**	**-0.3**
SRS				S	**Sg**	**13 15 21.7**	**+1.3**
SOH	**Sokhos**	**0.82**	**247**	*e*PG	**Pg**	**13 15 16.8**	**-0.8**
SOH				*e*SB	**Sg**	**13 15 28.3**	**0.0**
SOH	**Sokhos**	**0.82**	**247**	P	**Pg**	**13 15 16.1**	**-1.5**
SOH	**Sokhos**	**0.82**	**247**	P	**Pg**	**13 15 16.1**	**-1.5**
SOH	**Sokhos**	**0.82**	**247**	*e*Pg	**Pg**	**13 15 16.8**	**-0.8**
SOH				*e*Sb	**Sg**	**13 15 28.3**	**0.0**
OUR	**Ouranopolis**	**0.86**	**199**	P	**Pg**	**13 15 17.6**	**-0.8**
OUR				S	**Sg**	**13 15 29.7**	**+0.2**
OUR	**Ouranopolis**	**0.86**	**199**	P	**Pg**	**13 15 17.6**	**-0.8**
OUR				S	**Sg**	**13 15 29.7**	**+0.2**
PLG	**Polygyros**	**1.03**	**222**	*e*PN	**Pg**	**13 15 21.5**	**-0.2**
PLG				*e*SB	**Sg**	**13 15 34.7**	**-0.4**
PLG	**Polygyros**	**1.03**	**222**	P	**Pg**	**13 15 21.1**	**-0.6**
PLG				S	**Sg**	**13 15 34.7**	**-0.4**
PLG	**Polygyros**	**1.03**	**222**	P	**Pg**	**13 15 21.1**	**-0.6**
PLG	**Polygyros**	**1.03**	**222**	*e*Pn	**Pg**	**13 15 21.5**	**-0.2**
PLG				S	**Sg**	**13 15 34.7**	**-0.4**
KNT	**Kendrikon**	**1.10**	**271**	P	**Pg**	**13 15 22.4**	**-0.5**
KNT				S	**Sg**	**13 15 38.6**	**+1.5**
ALN	**Alexandroupoli**	**1.31**	**100**	*e*PB	**Pb**	**13 15 26.1**	**-0.8**
ALN				*e*SB	**Sb**	**13 15 44.2**	**+0.3**
ALN	**Alexandroupoli**	**1.31**	**100**	P	**Pn**	**13 15 26.2**	**-0.5**
ALN				S	**Sb**	**13 15 46.4**	**+2.5**
ALN	**Alexandroupoli**	**1.31**	**100**	P	**Pn**	**13 15 26.2**	**-0.5**
ALN				*e*Sb	**Sb**	**13 15 44.2**	**+0.3**
VAY	**Valandovo**	**1.35**	**278**	*e*Pg	**Pg**	**13 15 27.4**	**-0.5**
VAY				*e*Sg	**Sg**	**13 15 45.9**	**+0.5**
VAY				*e*Lg		13 15 47.4	
	comp=N,12nm,0.4s						
VAY				*e*Lg		13 15 47.7	
	comp=E,13nm,0.6s						
VTS	**Vitosha**	**1.68**	**330**	*e*Pn	**Pn**	**13 15 33.5**	**+1.7**
VTS				*e*Sn	**Sg**	**13 16 00.1**	**+4.3**
VTS	**Vitosha**	**1.68**	**330**	*e*Pn	**Pn**	**13 15 33.5**	**+1.7**
ZAPS	**Zavoj**	**2.48**	**330**	*e*Pg	**Pg**	**13 15 49.9**	**+0.5**
ZAPS				*e*Sn	**Sg**	**13 16 21.3**	**-0.2**
BARS	**Barje**	**2.52**	**312**	*e*Pn	**Pn**	**13 15 43.1**	**-0.3**
BARS				*e*Sn	**Sg**	**13 16 21.4**	**-1.5**
BARS	**Barje**	**2.52**	**312**	*e*Pn	**Pn**	**13 15 43.1**	**-0.3**

*ISCJB **21** 13:19:56.8±1.2,0°.9S±0°.3×22°.1W±0°.1,h10km,mb4.1/8, Error ellipse: s-maj=50.5km s-min=13.5km az=162.6*
*IDC **21** 13:19:57.9±1.0,0°.60S×22°.21W,h0km,mb4.2/7,mb1 4.3/8, mb1mx4.0/22,mbtmp4.2/8,ML3.4/1, Error ellipse: s-maj=40.6km s-min=21.0km az=148.0*
*NEIC **21** 13:19:59.5±0.9,0°.68S×22°.19W,h10km,mb4.5/4, Error ellipse: s-maj=35.3km s-min=15.5km az=157.0*

ISC 21 13:19:58.2±1.2,1°.1S±0°.4×22°.0W±0°.1,h10km,n14, σ0s83/12,mb4.1/8,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIC	**Lamto**	**18.48**	**67**	*e*P	**Pn**	**13 24 14.6**	**-0.1**
	54nm,1.2s						
TIC	**Toumodi**	**18.66**	**65**	*e*P	**Pn**	**13 24 18.4**	**+1.6**
	5.6nm,0.2s						
KIC	**Kosan Boka**	**18.80**	**67**	*e*P	**Pn**	**13 24 18.3**	**-0.2**
	35nm,1.0s						
DBIC	**Dimbokro**	**18.81**	**66**	P	**Pn**	**13 24 17.6**	**-1.1**
	0.1nm,0.3s,baz=234,slow=14,SNR=5.9						
TORD	**Torodi Ar. Bea**	**27.48**	**58**	P	**P**	**13 25

403nm,0.2s
DOI San Damiano 0.60 132 Pg Pg 14 02 12.6 -0.5
DOI Sg Sg 14 02 20.5 -0.3

403nm,0.2s
LPL La Plagne 0.61 7 *e*Pg Pg 14 02 14.0 +0.6
LPL *e*Sg Sg 14 02 22.2 +0.8

97nm,0.3s
LPL La Plagne 0.61 7 *e*Pg Pg 14 02 14.0 +0.6
LPL *e*Sg Sg 14 02 22.2 +0.8

49nm,0.3s
LSD Lago del Serru 0.66 33⇓ *i*Pg Pg 14 02 14.6 +0.4
LSD Sg Sg 14 02 23.3 +0.5

129nm,0.3s
LSD Lago del Serru 0.66 33⇓ *i*Pg Pg 14 02 14.6 +0.4
LSD Sg Sg 14 02 23.3 +0.5

129nm,0.3s
MRGE Morge 0.91 19 Pg Pg 14 02 20.0 +0.9
MRGE Sg Sg 14 02 32.1 +1.1

30nm,0.6s
MRGE Morge 0.91 19 Pg Pg 14 02 20.0 +0.9
MRGE Sg Sg 14 02 32.1 +1.1

30nm,0.6s
MONC Moncucco Torin 0.94 79 Pn Pn 14 02 20.4 -0.6

122nm,0.4s
MONC Moncucco Torin 0.94 79 Pn Pn 14 02 20.4 -0.6

122nm,0.4s
TRAV Traversella 0.99 52⇓ *i*Pg Pg 14 02 20.7 0.0
TRAV Sg Sg 14 02 34.1 +0.5

60nm,0.3s
TRAV Traversella 0.99 52⇓ *i*Pg Pg 14 02 20.7 0.0
TRAV Sg Sg 14 02 34.1 +0.5

60nm,0.3s
TOUF Mont Tournerai 1.00 153 Pg Pg 14 02 20.2 -0.5
TOUF Mont Tournerai 1.00 153 Pg Pg 14 02 20.2 -0.5
OCF Saint Nazaire 1.00 251 Pg Pg 14 02 22.0 +1.2
OCF Saint Nazaire 1.00 251 Pg Pg 14 02 22.0 +1.2
OG26 St.-Nazaire-De 1.00 251 Pg Pg 14 02 22.0 +1.2
OG26 St.-Nazaire-De 1.00 251 Pg Pg 14 02 22.0 +1.2
AUTN L'Aution 1.08 148 Pg Pg 14 02 22.0 -0.2
AUTN Sg Sg 14 02 36.6 +0.4
AUTN L'Aution 1.08 148 Pg Pg 14 02 22.0 -0.2
MVIF Mont Vial 1.08 159 Pg Pg 14 02 25.0 +2.7
MVIF Sg Sg 14 02 37.7 +1.5
MVIF Mont Vial 1.08 159 Pg Pg 14 02 25.0 +2.7
SAOF Saorge 1.14 144 Pg Pg 14 02 22.5 -0.8
SAOF Sg Sg 14 02 36.6 -1.4
SAOF Saorge 1.14 144 Pg Pg 14 02 22.5 -0.8
LUCF Luceram 1.14 153 Pg Pg 14 02 23.0 -0.4
LUCF Sg Sg 14 02 38.3 +0.2
LUCF Luceram 1.14 153 Pg Pg 14 02 23.0 -0.4
CALN Calern 1.17 171 Pg Pg 14 02 23.8 -0.2
CALN Calern 1.17 171 Pg Pg 14 02 23.8 -0.2
SBF Sospel 1.19 151 *e*Pg Pg 14 02 24.2 -0.3
SBF *e*Sg Sg 14 02 39.5 -0.4

78nm,0.2s
SBF Sospel 1.19 151 *e*Pg Pg 14 02 24.2 -0.3
SBF *e*Sg Sg 14 02 39.5 -0.4

39nm,0.2s
SMRF Simiane la Rot 1.20 219 *e*Pg Pg 14 02 25.1 +0.5
SMRF *e*Sg Sg 14 02 41.4 +1.3

28nm,0.3s
SMRF Simiane la Rot 1.20 219 *e*Pg Pg 14 02 25.1 +0.5
SMRF *e*Sg Sg 14 02 41.4 +1.3

14nm,0.3s
FRF La Foret Royal 1.35 179 *e*Pg Pg 14 02 27.3 -0.1
FRF *e*Sg Sg 14 02 44.6 -0.2

36nm,0.2s
FRF La Foret Royal 1.35 179 *e*Pn Pn 14 02 26.4 -0.3
FRF *e*Pg Pg 14 02 27.3 -0.1
FRF *e*Sg Sg 14 02 44.6 -0.2
FRF La Foret Royal 1.35 179 *e*Pn Pn 14 02 26.4 -0.3
FRF La Foret Royal 1.35 179 *e*Pg Pg 14 02 27.3 -0.1
FRF *e*Sg Sg 14 02 44.6 -0.2

18nm,0.2s
VIVF Saint-Julien-l 1.39 269 *e*Pg Pg 14 02 28.8 +0.5
VIVF *e*Sn Sn 14 02 46.0 +0.1
VIVF *e*Sg Sg 14 02 48.2 +1.9

28nm,0.3s
VIVF Saint-Julien-l 1.39 269 *e*Pn Pn 14 02 27.7 +0.4
VIVF *e*Pg Pg 14 02 28.8 +0.5
VIVF *e*Sn Sn 14 02 46.0 +0.1
VIVF *e*Sg Sg 14 02 48.2 +1.9
VIVF Saint-Julien-l 1.39 269 *e*Pn Pn 14 02 27.7 +0.4
VIVF Saint-Julien-l 1.39 269 *e*Pg Pg 14 02 28.8 +0.5
VIVF *e*Sn Sn 14 02 46.0 +0.1
VIVF *e*Sg Sg 14 02 48.2 +1.9

14nm,0.3s
PCP Piancastagn 1.41 104 Pn Pn 14 02 27.6 0.0
30nm,0.3s
PCP Piancastagn 1.41 104 Pn Pn 14 02 27.6 0.0
30nm,0.3s
SSB Saint Sauveur 1.52 285 Pg Pg 14 02 29.6 -1.2
SSB Sg Sg 14 02 50.9 +0.3
SSB Saint Sauveur 1.52 285 Pg Pg 14 02 29.6 -1.2
SSB Sg Sg 14 02 50.9 +0.3
LMR La Mourre 1.58 183 *e*Pg Pg 14 02 31.0 -0.8
LMR *e*Sg Sg 14 02 51.8 -0.4

47nm,0.3s
LMR La Mourre 1.58 183 *e*Pn Pn 14 02 29.8 0.0
LMR *e*Pg Pg 14 02 31.0 -0.8
LMR *e*Sg Sg 14 02 51.8 -0.4
LMR La Mourre 1.58 183 *e*Pn Pn 14 02 29.8 0.0
LMR La Mourre 1.58 183 *e*Pg Pg 14 02 31.0 -0.8
LMR *e*Sg Sg 14 02 51.8 -0.4

23nm,0.3s
CABF La Chapelle 1.75 348 *e*Pg Pg 14 02 35.6 +0.6
CABF *e*Sg Sg 14 02 57.6 -0.1

17nm,0.4s
CABF La Chapelle 1.75 348 *e*P Pn 14 02 33.8 +1.6
CABF *e*Pg Pg 14 02 35.6 +0.6
CABF *e*Sg Sg 14 02 57.6 -0.1
CABF La Chapelle 1.75 348 *e*P Pn 14 02 33.8 +1.6
CABF La Chapelle 1.75 348 *e*Pg Pg 14 02 35.6 +0.6
CABF *e*Sg Sg 14 02 57.6 -0.1

8.4nm,0.4s
LASF Ste Croix 2.15 248 *e*Pg Pg 14 02 43.1 +0.3
LASF *e*Sn Sn 14 03 03.4 -1.2

5.9nm,0.3s
LASF Ste Croix 2.15 248 *e*Pn Pn 14 02 37.7 -0.1
LASF *e*Pg Pg 14 02 43.1 +0.3
LASF *e*Sn Sn 14 03 03.4 -1.2
LASF Ste Croix 2.15 248 *e*Pn Pn 14 02 37.7 -0.1
LASF Ste Croix 2.15 248 *e*Pg Pg 14 02 43.1 +0.3
LASF *e*Sn Sn 14 03 03.4 -1.2

3.0nm,0.3s
PLDF La Plantade 2.37 298 Pn Pn 14 02 41.3 +0.5
PLDF La Plantade 2.37 298 Pn Pn 14 02 41.3 +0.5
LBL Lubilhac 2.42 279 Pn Pn 14 02 42.1 +0.7
LBL Lubilhac 2.42 279 Pn Pn 14 02 42.1 +0.7
SMF Signal de Mont 2.61 313 *e*Pg Pg 14 02 51.3 -0.3
SMF *e*Sg Sg 14 03 24.8 -0.7

10nm,0.3s
SMF Signal de Mont 2.61 313 *e*Pn Pn 14 02 44.4 +0.3
SMF *e*Pg Pg 14 02 51.3 -0.3
SMF *e*Sg Sg 14 03 24.8 -0.7
SMF Signal de Mont 2.61 313 *e*Pn Pn 14 02 44.4 +0.3
SMF Signal de Mont 2.61 313 *e*Pg Pg 14 02 51.3 -0.3
SMF *e*Sg Sg 14 03 24.8 -0.7

5.2nm,0.3s
PYM Petit Puy Mans 2.69 290 Pn Pn 14 02 46.5 +1.3
PYM Petit Puy Mans 2.69 290 Pn Pn 14 02 46.5 +1.3
AGO Saint Agoulin 2.71 296 Pn Pn 14 02 46.9 +1.4
AGO Saint Agoulin 2.71 296 Pn Pn 14 02 46.9 +1.4
HINF Hinteralfeld 2.91 3 *e*Pn Pn 14 02 47.7 -0.5
HINF *e*Sg Sg 14 03 33.5 -1.6

8.3nm,0.5s
HINF Hinteralfeld 2.91 3 *e*Pn Pn 14 02 47.7 -0.5
HINF *e*Sg Sg 14 03 33.5 -1.6

4.2nm,0.5s
AVF Avril sur Loir 2.96 311 *e*Pn Pn 14 02 49.7 +0.8
AVF *e*Sg Sg 14 03 36.2 -0.6

2.8nm,0.2s
AVF Avril sur Loir 2.96 311 *e*Pn Pn 14 02 49.7 +0.8
AVF *e*Sg Sg 14 03 36.2 -0.6

1.4nm,0.2s
LOR Lormes 3.05 322 *e*Pg Pg 14 02 59.5 -0.5
LOR *e*Sn Sn 14 03 25.2 -1.6
LOR *e*Sg Sg 14 03 38.3 -1.2

4.8nm,0.3s
LOR Lormes 3.05 322 *e*Pn Pn 14 02 49.9 -0.2
LOR *e*Pg Pg 14 02 59.5 -0.5
LOR *e*Sn Sn 14 03 25.2 -1.6
LOR *e*Sg Sg 14 03 38.3 -1.2

LOR Lormes 3.05 322 *e*Pn Pn 14 02 49.9 -0.2
LOR Lormes 3.05 322 *e*Pg Pg 14 02 59.5 -0.5
LOR *e*Sn Sn 14 03 25.2 -1.6
LOR *e*Sg Sg 14 03 38.3 -1.2

2.4nm,0.3s
SSF Saint Saulge 3.06 316 *e*Pg Pg 14 02 59.5 -0.8
SSF *e*Sg Sg 14 03 39.3 -0.6

5.2nm,0.5s
SSF Saint Saulge 3.06 316 *e*Pn Pn 14 02 50.4 +0.1
SSF *e*Pg Pg 14 02 59.5 -0.8
SSF *e*Sg Sg 14 03 39.3 -0.6
SSF Saint Saulge 3.06 316 *e*Pn Pn 14 02 50.4 +0.1
SSF Saint Saulge 3.06 316 *e*Pg Pg 14 02 59.5 -0.8
SSF *e*Sg Sg 14 03 39.3 -0.6

2.6nm,0.5s
HAU Haudompre 3.10 357 *e*Pg Pg 14 02 59.6 -1.5
HAU *e*Sg Sg 14 03 39.6 -1.7

11nm,0.3s
HAU Haudompre 3.10 357 *e*Pn Pn 14 02 50.2 -0.7
HAU *e*Pg Pg 14 02 59.6 -1.5
HAU *e*Sg Sg 14 03 39.6 -1.7
HAU Haudompre 3.10 357 *e*Pn Pn 14 02 50.2 -0.7
HAU Haudompre 3.10 357 *e*Pg Pg 14 02 59.6 -1.5
HAU *e*Sg Sg 14 03 39.6 -1.7

5.3nm,0.3s
BGF Bois d'Agland 3.12 303 *e*Pg Pg 14 03 00.8 -0.6
BGF *e*Sg Sg 14 03 42.0 +0.2

14nm,0.3s
BGF Bois d'Agland 3.12 303 *e*Pn Pn 14 02 52.1 +1.0
BGF *e*Pg Pg 14 03 00.8 -0.6
BGF *e*Sg Sg 14 03 42.0 +0.2
BGF Bois d'Agland 3.12 303 *e*Pn Pn 14 02 52.1 +1.0
BGF Bois d'Agland 3.12 303 *e*Pg Pg 14 03 00.8 -0.6
BGF *e*Sg Sg 14 03 42.0 +0.2

6.9nm,0.3s
CAF Calvac 3.24 272 *e*Pn Pn 14 02 53.0 +0.2
CAF Calvac 3.24 272 *e*Pn Pn 14 02 53.0 +0.2
TCF Toulx Ste Croi 3.40 296 *e*Pn Pn 14 02 54.9 0.0
TCF Toulx Ste Croi 3.40 296 *e*Pn Pn 14 02 54.9 0.0
CDF Champ du Feu 3.53 7 *e*Pn Pn 14 02 56.5 -0.3
CDF Champ du Feu 3.53 7 *e*Pn Pn 14 02 56.5 -0.3
MTLF Montolieu 3.54 245 *e*Pn Pn 14 02 56.9 0.0
MTLF *e*Pg Pg 14 03 08.5 -0.9
MTLF Montolieu 3.54 245 *e*Pn Pn 14 02 56.9 0.0
EPF Esparros 4.91 250 *e*Pn Pn 14 03 15.4 -0.3
EPF Esparros 4.91 250 *e*Pn Pn 14 03 15.4 -0.3

*THE **21** 14:08:13.4, 36°.85N×28°.20E, h4km±8km, ML3.6/1, Error ellipse: s-maj=8.3km s-min=1.6km az=183.0*
*NEIC **21** 14:08:14.0, 36°.89N×28°.01E, h15km, MD3.3(ISK), MD3.2(ATH), After ISK.*
*ISK **21** 14:08:14.9, 36°.87N×28°.02E, h15km, MD3.2*
*ATH **21** 14:08:14.0, 36°.82N×28°.01E, h23km±1km, MD3.2/7*
*DDA **21** 14:08:14.2, 36°.80N×28°.11E, h7km±2km, Md3.3*
*CSEM **21** 14:08:15.0±0.1, 36°.82N×28°.04E, h15km, MD3.2, Error ellipse: s-maj=3.0km s-min=2.7km az=166.0*
*ISCJB **21** 14:08:15.3±0.4, 36°.81N±0°.02×28°.03E±0°.03, h21km±4km, Error ellipse: s-maj=3.6km s-min=3.3km az=149.0*

ISC 21 14:08:15.2±0.4, 36°.82N±0°.02×28°.05E±0°.03, h15km±3km, n71, σ0s84/115, 2C-2D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.37**	**31**		**ePG**	**Pg**	**14 08 22.0**	**-0.8**
YER					*e*SG	Sg	14 08 27.9	+0.1
YER	**Yerkesik**	**0.37**	**31**		**ePg**	**Pg**	**14 08 22.0**	**-0.8**
YER					*e*Sg	Sg	14 08 28.0	+0.1
DAT	**Datca**	**0.39**	**257**		**ePG**	**Pg**	**14 08 22.6**	**-0.5**
DAT					*e*SG	Sg	14 08 30.1	+1.8
DAT	**Datca**	**0.39**	**257**		**ePg**	**Pg**	**14 08 22.6**	**-0.4**
DAT					*e*Sg	Sg	14 08 30.1	+1.8
MLSB	**Milas**	**0.53**	**336**		**ePG**	**Pg**	**14 08 25.3**	**-0.3**
MLSB	**Milas**	**0.53**	**336**		**ePg**	**Pg**	**14 08 25.3**	**-0.3**
BDRM	**Kayabasi**	**0.54**	**298**	⇑	*i*P	**Pg**	**14 08 25.3**	**-0.6**
BDRM					*i* S	Sg	14 08 34.6	+1.4
BDRM	**Kayabasi**	**0.54**	**298**		*i* P	**Pg**	**14 08 25.3**	**-0.6**
BDRM					*i* S	Sg	14 08 34.6	+1.4
ARG	**Arkhangelos**	**0.60**	**174**		**ePb**	**Pg**	**14 08 25.6**	**-1.4**
ARG					*e*Sn	Sg	14 08 35.3	+0.3
ARG	**Arkhangelos**	**0.60**	**174**		**ePB**	**Pg**	**14 08 25.6**	**-1.4**
ARG					*e*SN	Sg	14 08 35.3	+0.3
ARG	**Arkhangelos**	**0.60**	**174**		**eP**	**Pg**	**14 08 25.5**	**-1.5**
ARG					S	Sg	14 08 35.4	+0.4
ARG	**Arkhangelos**	**0.60**	**174**		**ePb**	**Pg**	**14 08 25.6**	**-1.4**
ARG					S	Sg	14 08 35.4	+0.4
BODT	**Bodrum**	**0.64**	**293**		**ePG**	**Pg**	**14 08 26.3**	**-1.4**
BODT	**Bodrum**	**0.64**	**293**		**ePg**	**Pg**	**14 08 26.3**	**-1.4**
NIS1	**Nisyros Isl.**	**0.73**	**253**		**P**	**Pg**	**14 08 29.6**	**+0.2**
NIS1					S	Sg	14 08 43.0	+4.0
NIS1	**Nisyros Isl.**	**0.73**	**253**		**P**	**Pg**	**14 08 29.6**	**+0.2**
NIS1					S	Sg	14 08 43.0	+4.0
AYDN	**Tasoluk**	**0.85**	**351**	⇑	*i*P	**Pg**	**14 08 31.4**	**-0.3**
AYDN					*i* S	Sg	14 08 43.7	+0.7
AYDN	**Tasoluk**	**0.85**	**351**		*i* P	**Pg**	**14 08 31.5**	**-0.3**
AYDN					*i* S	Sg	14 08 43.7	+0.7
GCAM	**G?zelcaml?**	**1.09**	**324**	⇓	*i*P	**Pg**	**14 08 36.1**	**-0.2**
GCAM					*i* S	Sg	14 08 52.0	+1.4
GCAM	**G?zelcaml?**	**1.09**	**324**		*i* P	**Pg**	**14 08 36.1**	**-0.3**
GCAM					*i* S	Sg	14 08 52.0	+1.3
DNZL	**Cakiroluk**	**1.18**	**42**		**eP**	**Pn**	**14 08 36.6**	**-0.5**
DNZL					*e*S	Sb	14 08 53.0	+0.5
DNZL	**Cakiroluk**	**1.18**	**42**		**eP**	**Pn**	**14 08 36.6**	**-0.6**
DNZL					*e*S	Sb	14 08 53.0	+0.6
GLHS	**Glhisar (BURDU**	**1.21**	**73**		**ePN**	**Pn**	**14 08 37.9**	**+0.4**
GLHS	**Glhisar (BURDU**	**1.21**	**73**		**ePn**	**Pn**	**14 08 37.9**	**+0.3**
DENT	**Denizli**	**1.22**	**40**		**ePN**	**Pn**	**14 08 37.3**	**-0.4**
DENT	**Denizli**	**1.22**	**40**		**ePn**	**Pn**	**14 08 37.3**	**-0.4**
GOLH	**Golhisar**	**1.28**	**70**		**eP**	**Pn**	**14 08 36.9**	**-1.7**
GOLH					*e*S	Sb	14 08 55.4	+0.1
GOLH	**Golhisar**	**1.28**	**70**		**eP**	**Pn**	**14 08 36.9**	**-1.7**
GOLH					*e*S	Sb	14 08 55.4	+0.1
SMG	**Samos**	**1.31**	**313**		**ePn**	**Pn**	**14 08 38.9**	**-0.1**
SMG					*e*Sn	Sn	14 08 57.0	+0.8
SMG	**Samos**	**1.31**	**313**		**ePN**	**Pn**	**14 08 38.9**	**-0.1**
SMG					*e*SN	Sn	14 08 57.0	+0.8
SMG	**Samos**	**1.31**	**313**		**ePn**	**Pn**	**14 08 38.9**	**-0.1**
SMG					*e*Sn	Sn	14 08 57.0	+0.8
AKAS	**Kas**	**1.38**	**114**	⇓	*i*P	**Pn**	**14 08 39.6**	**-0.3**
AKAS					*i* S	Sn	14 08 59.6	+1.7
AKAS	**Kas**	**1.38**	**114**		*i* P	**Pn**	**14 08 39.6**	**-0.3**
AKAS					*i* S	Sn	14 08 59.6	+1.7
KSL	**Kastellorizon**	**1.41**	**118**		**ePn**	**Pn**	**14 08 40.7**	**+0.5**
KSL	**Kastellorizon**	**1.41**	**118**		**ePN**	**Pn**	**14 08 40.7**	**+0.5**
KARP	**Karpathos**	**1.45**	**210**		**ePn**	**Pn**	**14 08 40.3**	**-0.6**
KARP					*e*Sn	Sn	14 09 00.2	+0.5
KARP	**Karpathos**	**1.45**	**210**		**ePN**	**Pn**	**14 08 40.3**	**-0.6**
KARP					*e*SN	Sn	14 09 00.2	+0.5
KARP	**Karpathos**	**1.45**	**210**		**ePn**	**Pn**	**14 08 40.3**	**-0.6**
KARP					*e*Sn	Sn	14 09 00.2	+0.5
ELL	**Elmali**	**1.50**	**92**		**ePN**	**Pn**	**14 08 42.5**	**+1.0**
ELL	**Elmali**	**1.50**	**92**		**ePn**	**Pn**	**14 08 42.5**	**+1.0**
IZM	**Izmir**	**1.70**	**339**		**ePN**	**Pn**	**14 08 43.7**	**-0.6**
IZM	**Izmir**	**1.70**	**339**		**ePn**	**Pn**	**14 08 43.7**	**-0.5**
BLCB	**Balcova**	**1.76**	**333**		**ePN**	**Pn**	**14 08 44.3**	**-0.8**
BLCB	**Balcova**	**1.76**	**333**		**eP**	**Pn**	**14 08 44.3**	**-0.8**
BLCB					S	Sn	14 09 06.1	-1.1
BLCB	**Balcova**	**1.76**	**333**		P	**Pn**	**14 08 44.3**	**-0.8**
BLCB					S	Sn	14 09 06.1	-1.1
KULA	**Kula-Manisa**	**1.77**	**16**		**ePN**	**Pn**	**14 08 45.2**	**0.0**
KULA	**Kula-Manisa**	**1.77**	**16**		**ePn**	**Pn**	**14 08 45.2**	**0.0**
KHL	**Karahalli**	**1.91**	**38**		**ePN**	**Pn**	**14 08 47.3**	**+0.1**
KHL	**Karahalli**	**1.91**	**38**		**ePn**	**Pn**	**14 08 47.3**	**+0.1**
APE	**Apeiranthos**	**2.03**	**278**		**ePN**	**Pn**	**14 08 50.1**	**+1.3**
APE	**Apeiranthos**	**2.03**	**278**		**ePn**	**Pn**	**14 08 48.7**	**-0.1**
APE					*e*Sn	Sn	14 09 14.2	+0.3
APE	**Apeiranthos**	**2.03**	**278**		**ePN**	**Pn**	**14 08 48.7**	**-0.1**
APE					*e*SN	Sn	14 09 14.2	+0.3
APE	**Apeiranthos**	**2.03**	**278**		**ePn**	**Pn**	**14 08 48.7**	**-0.1**
APE					*e*Sn	Sn	14 09 14.2	+0.3
AKS	**Akhisar**	**2.07**	**355**		**ePN**	**Pn**	**14 08 48.7**	**-0.6**
AKS	**Akhisar**	**2.07**	**355**		**ePn**	**Pn**	**14 08 48.7**	**-0.6**
BCK	**Bucak**	**2.13**	**72**		**ePN**	**Pn**	**14 08 50.9**	**+0.7**
BCK	**Bucak**	**2.13**	**72**		**ePn**	**Pn**	**14 08 50.9**	**+0.7**
CHOS	**Chios island**	**2.23**	**315**		**ePN**	**Pn**	**14 08 50.7**	**-0.8**
CHOS					*e*SN	Sn	14 09 18.7	0.0
CHOS	**Chios island**	**2.23**	**315**		**ePn**	**Pn**	**14 08 50.7**	**-0.8**
CHOS					*e*Sn	Sn	14 09 18.7	0.0
ZKR	**Zakros**	**2.25**	**222**		**ePb**	**Pb**	**14 08 52.5**	**-3.1**
ZKR					*e*Sn	**Sn**	**14 09 19.8**	**+0.4**
ZKR	**Zakros**	**2.25**	**222**		**ePB**	**Pb**	**14 08 52.5**	**-3.1**
ZKR					*e*SN	**Sn**	**14 09 19.8**	**+0.4**
ZKR	**Zakros**	**2.25**	**222**		**P**	**Pn**	**14 08 52.4**	**+0.5**
ZKR	**Zakros**	**2.25**	**222**		**P**	**Pn**	**14 08 52.4**	**+0.5**
ZKR					*e*Sn	**Sn**	**14 09 19.8**	**+0.4**
SUTC	**Sutluce-Ispart**	**2.45**	**74**		**ePN**	**Pn**	**14 08 56.0**	**+1.4**
SUTC	**Sutluce-Ispart**	**2.45**	**74**		**ePn**	**Pn**	**14 08 56.1**	**+1.5**
NPS	**Neapolis**	**2.51**	**233**		**ePn**	**Pn**	**14 08 55.5**	**+0.1**
NPS					*e*Sn	**Sn**	**14 09 24.7**	**-1.0**
NPS	**Neapolis**	**2.51**	**233**		**ePN**	**Pn**	**14 08 55.5**	**+0.1**
NPS					*e*SN	**Sn**	**14 09 24.7**	**-1.0**
NPS	**Neapolis**	**2.51**	**233**		**ePn**	**Pn**	**14 08 55.5**	**+0.1**
NPS					*e*Sn	**Sn**	**14 09 24.7**	**-1.0**
PRK	**Paraskevi**	**2.80**	**331**		**ePn**	**Pn**	**14 08 59.1**	**-0.3**
PRK					*e*Sn	**Sn**	**14 09 33.3**	**+0.4**
PRK	**Paraskevi**	**2.80**	**331**		**ePN**	**Pn**	**14 08 59.1**	**-0.3**
PRK					*e*SN	**Sn**	**14 09 33.3**	**+0.4**
PRK	**Paraskevi**	**2.80**	**331**		**ePn**	**Pn**	**14 08 59.1**	**-0.3**
PRK					*e*Sn	**Sn**	**14 09 33.3**	**+0.4**

*ISCJB **21** 14:21:41.7±0.7, 40°.79N±0°.06×37°.67E±0°.04, h5km±8km, Error ellipse: s-maj=11.2km s-min=4.4km az=158.8*
*DDA **21** 14:21:41.7, 40°.78N×37°.74E, h7km±6km, Md2.8*
*CSEM **21** 14:21:42.5±0.3, 40°.72N×37°.67E, h10km, MD2.6, Error ellipse: s-maj=8.7km s-min=3.6km az=162.0*
*ISK **21** 14:21:42.0, 40°.71N×37°.68E, h13km, MD2.6*

ISC 21 14:21:42.4±0.7, 40°.76N±0°.07×37°.69E±0°.05, h6km±7km, n18, σ1s10/32, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RSDY	**Resadiye-TOKAT**	**0.46**	**217**		**ePG**	**Pg**	**14 21 50.7**	**-0.5**
RSDY					*e*SG	Sg	14 21 56.9	-0.3
RSDY	**Resadiye-TOKAT**	**0.46**	**217**		**ePg**	**Pg**	**14 21 50.7**	**-0.5**
RSDY					*e*Sg	Sg	14 21 56.9	-0.2
GRSN	**GIRESUNGRSN**	**0.47**	**70**	⇓	*i*P	**Pg**	**14 21 51.7**	**+0.2**
GRSN					*i* S	Sg	14 21 55.5	-2.1
GRSN	**GIRESUNGRSN**	**0.47**	**70**		*i* P	**Pg**	**14 21 51.7**	**+0.2**
GRSN					*i* S	Sg	14 21 55.5	-2.1
ERBA	**Erbaa**	**0.71**	**264**		**eP**	**Pg**	**14 21 56.1**	**0.0**
ERBA					*e*S	Sg	14 22 07.0	+1.7
ERBA	**Erbaa**	**0.71**	**264**		**eP**	**Pg**	**14 21 56.1**	**0.0**
ERBA					*e*S	Sg	14 22 07.0	+1.7
ESPY	**Espiye-Giresun**	**0.81**	**79**		**ePG**	**Pg**	**14 21 59.0**	**+1.1**
ESPY					*e*SG	Sg	14 22 09.8	+1.5
ESPY	**Espiye-Giresun**	**0.81**	**79**		**ePg**	**Pg**	**14 21 59.0**	**+1.2**
ESPY					*e*Sg	Sg	14 22 09.8	+1.5
SVSK	**Karacayir**	**0.99**	**212**		**ePG**	**Pg**	**14 22 00.1**	**-1.4**
SVSK	**Karacayir**	**0.99**	**212**		**ePg**	**Pg**	**14 22 00.1**	**-1.4**
KELT	**Kelkit**	**1.35**	**117**		**eP**	**Pn**	**14 22 06.7**	**-0.9**
KELT					*e*S	Sb	14 22 25.5	+0.1
KELT	**Kelkit**	**1.35**	**117**		**eP**	**Pn**	**14 22 06.7**	**-0.9**
KELT					*e*S	Sb	14 22 25.5	+0.1
GUMT	**Gumushane**	**1.40**	**102**		**ePN**	**Pn**	**14 22 08.2**	**-0.2**
GUMT					*e*SN	**Sn**	**14 22 26.5**	**-0.6**
GUMT	**Gumushane**	**1.40**	**102**		**ePn**	**Pn**	**14 22 08.2**	**-0.2**
GUMT					*e*Sn	**Sn**	**14 22 26.5**	**-0.6**
KEMA	**Kemaliye**	**1.62**	**157**		**eP**	**Pn**	**14 22 11.8**	**+0.4**
KEMA					*e*S	**Sn**	**14 22 34.8**	**+2.3**
KEMA	**Kemaliye**	**1.62**	**157**		**eP**	**Pn**	**14 22 11.8**	**+0.4**
KEMA					*e*S	**Sn**	**14 22 34.8**	**+2.3**
YOZ	**Yozgat**	**2.13**	**239**		**ePN**	**Pn**	**14 22 17.4**	**-1.1**
YOZ	**Yozgat**	**2.13**	**239**		**ePn**	**Pn**	**14 22 17.4**	**-1.1**

*IDC **21** 14:43:42.1±2.2, 5°.90S×130°.54E, h0km, mb3.9/1, mb1 3.9/4, mb1mx3.6/16, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=93.9km s-min=27.0km az=77.0*
*NEIC **21** 14:43:58.0±3.7, 6°.49S×129°.86E, h134km±40km, Error ellipse: s-maj=31.6km s-min=24.3km az=173.0*

ISC 21 14:44:00.5±1.9, 6°.7S±0°.1×129°.9E±0°.2, h164km±19km, n8, σ0s82/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.52**	**158**		**eP**	**Pn**	**14 45 33.7**	**-0.6**
	57nm,0.4s							
FITZ	**Fitzroy Crossi**	**12.11**	**200**		Pn	**Pn**	**14 46 48.5**	**+0.6**
	0.8nm,0.3s,baz=32,slow=19,SNR=35							
FITZ					Sn	Sx	14 48 54.3	
	0.7nm,0.3s,baz=100,slow=20,SNR=8.3							
WRA	**Warramunga Arr**	**13.90**	**162**		Pn	**Pn**	**14 47 07.1**	**-3.6**
WRA					Sn	Sx	14 49 36.5	
WRA	**Warramunga Arr**	**13.90**	**162**		Pn	**Pn**	**14 47 07.1**	**-3.6**
	0.2nm,0.3s,baz=349,slow=13,SNR=5.8							
WRA					Sn	Sx	14 49 36.5	
	1.5nm,0.3s,baz=329,slow=23,SNR=14							
WB2	**Warramunga Arr**	**13.90**	**162**		**eP**	**Pn**	**14 47 10.1**	**-0.6**
COEN	**Coen**	**14.94**	**120**		**eP**	**Pn**	**14 47 24.4**	**+0.7**
ASAR	**Alice Springs**	**17.35**	**168**		P	**Pn**	**14 47 54.0**	**+1.1**
	0.2nm,0.3s,baz=349,slow=11,SNR=18							
ASAR					S	**S**	**14 51 03.7**	**-0.2**
	0.3nm,0.3s,baz=359,slow=26,SNR=6.8							
MKAR	**Makanchi Array**	**67.88**	**327**		P	**P**	**14 54 40.9**	**-0.3**
	0.8nm,0.5s,baz=117,slow=8.2,SNR=15							

IDC 21 14:59:56.7±3.0, 6°.43S×129°.16E, h0km, mb3.6/1, mb1 3.6/3, mb1mx3.4/16, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=295.2km s-min=30.9km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.35**	**160**		Pn	Pn	15 03 19.7	-1.5
	0.1nm,0.3s,baz=336,slow=14,SNR=3.4							
WRA					Sn	Sn	15 05 49.0	-12
	0.3nm,0.3s,baz=338,slow=22,SNR=5.5							
ASAR	**Alice Springs**	**17.74**	**166**		P	Pn	15 04 06.2	+1.1
	0.1nm,0.3s,baz=351,slow=11,SNR=9.9							
MKAR	**Makanchi Array**	**67.29**

MIPR				*e*S	Sn	15 14 49.9	-0.5
AVH	**Avacha**	**2.64**	**25**	*e*P	Pn	15 14 42.5	+0.3
GNL	**Ganaly**	**2.88**	**13**	*e*P	Pn	15 14 47.0	+1.9

*IDC **21** 15:20:28.9±0.8,41°.32S×172°.84E,h217km±10km,mb3.4/2, mb1 3.7/4,mb1mx3.5/13,mbtmp3.6/4,Error ellipse: s-maj=28.4km s-min=9.9km az=133.0*
*ISCJB **21** 15:20:29.5±0.3,41°.19S±0°.04×172°.45E±0°.06,h223km±5km, mb3.7/2,Error ellipse: s-maj=9.8km s-min=3.6km az=41.1*
*NEIC **21** 15:20:30.4,41°.21S×172°.51E,h214km,MG4.4(WEL), After WEL.*
*WEL **21** 15:20:31.9±0.2,41°.20S×172°.52E,h214km±1km,ML4.4/23, Error ellipse: s-maj=2.5km s-min=2.4km az=0.0*

ISC 21 15:20:30.3±0.3,41°.19S±0°.04×172°.46E±0°.06,h219km±5km, n157,σ0§67/160,mb3.7/2,22C-3D,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNZ	**Nelson**	**0.69**	**93**	⇑PN	**Pn**	**15 21 01.0**	**+0.6**
NNZ				*i* S	**S**	15 21 23.3	-0.5
NNZ	**Nelson**	**0.69**	**93**	⇑P	**Pn**	**15 21 01.0**	**+0.6**
NNZ				*i* S	**S**	15 21 23.3	-0.4
DSZ	**Denniston Nort**	**0.75**	**221**	⇑PN	**Pn**	**15 21 01.7**	**+1.1**
DSZ				SN	**S**	15 21 23.7	-0.6
DSZ	**Denniston Nort**	**0.75**	**221**	⇑P	**Pn**	**15 21 01.7**	**+1.1**
DSZ				S	**S**	15 21 23.7	-0.6
TUWZ	**Tuamarina**	**1.14**	**103**	⇑PN	**Pn**	**15 21 03.8**	**+0.9**
DUWZ	**D'Urville Isla**	**1.17**	**71**	PN	**Pn**	**15 21 03.8**	**+0.6**
DUWZ				SN	**S**	15 21 28.2	-0.5
BSWZ	**Blackbirch Sta**	**1.19**	**117**	⇑PN	**Pn**	**15 21 04.1**	**+0.9**
BSWZ	**Blackbirch Sta**	**1.19**	**117**	P	**Pn**	**15 21 04.1**	**+0.9**
TCW	**Tory Channel**	**1.37**	**92**	⇑PN	**Pn**	**15 21 05.4**	**+0.8**
TCW	**Tory Channel**	**1.37**	**92**	⇑P	**Pn**	**15 21 05.4**	**+0.8**
CMWZ	**Cape Campbell**	**1.43**	**114**	PN	**Pn**	**15 21 06.2**	**+1.1**
KHZ	**Kahutara**	**1.47**	**147**	⇑PN	**Pn**	**15 21 06.1**	**+0.7**
KHZ	**Kahutara**	**1.47**	**147**	⇓P	**Pn**	**15 21 06.1**	**+0.7**
LTZ	**Lake Taylor**	**1.60**	**185**	⇓PN	**Pn**	**15 21 07.5**	**+1.0**
LTZ	**Lake Taylor**	**1.60**	**185**	P	**Pn**	**15 21 07.5**	**+1.0**
SNZO	**South Karori**	**1.69**	**95**	⇑PN	**Pn**	**15 21 07.8**	**+0.4**
SNZO	**South Karori**	**1.69**	**95**	⇑P	**Pn**	**15 21 07.8**	**+0.4**
WEL	**Wellington**	**1.74**	**94**	PN	**Pn**	**15 21 08.3**	**+0.5**
WEL	**Wellington**	**1.74**	**94**	P	**Pn**	**15 21 08.3**	**+0.5**
BHW	**Baring Head**	**1.83**	**98**	⇑PN	**Pn**	**15 21 08.9**	**+0.4**
BHW	**Baring Head**	**1.83**	**98**	P	**Pn**	**15 21 08.9**	**+0.3**
KIW	**Kapiti Island**	**1.88**	**81**	⇑PN	**Pn**	**15 21 09.6**	**+0.5**
KIW	**Kapiti Island**	**1.88**	**81**	P	**Pn**	**15 21 09.6**	**+0.5**
CAW	**Cannon Point**	**1.97**	**89**	⇑PN	**Pn**	**15 21 10.3**	**+0.4**
CAW	**Cannon Point**	**1.97**	**89**	P	**Pn**	**15 21 10.3**	**+0.4**
OGWZ	**Otaki Gorge**	**2.08**	**81**	⇑PN	**Pn**	**15 21 11.6**	**+0.6**
MSWZ	**Moikau Station**	**2.11**	**97**	⇑PN	**Pn**	**15 21 11.7**	**+0.3**
MSWZ	**Moikau Station**	**2.11**	**97**	P	**Pn**	**15 21 11.7**	**+0.4**
PLWZ	**Palliser**	**2.14**	**101**	⇑PN	**Pn**	**15 21 11.9**	**+0.4**
NRZ	**Ngariki Road**	**2.16**	**32**	PN	**Pn**	**15 21 12.4**	**+0.5**
NRZ	**Ngariki Road**	**2.16**	**32**	P	**Pn**	**15 21 12.4**	**+0.5**
NWEZ	**Newall Road**	**2.19**	**30**	PN	**Pn**	**15 21 12.8**	**+0.7**
NWEZ	**Newall Road**	**2.19**	**30**	P	**Pn**	**15 21 12.8**	**+0.6**
DFE	**Dawson Falls**	**2.24**	**35**	PN	**Pn**	**15 21 13.1**	**+0.4**
DFE	**Dawson Falls**	**2.24**	**35**	P	**Pn**	**15 21 13.1**	**+0.4**
PAWZ	**Paruwai Farm**	**2.24**	**96**	PN	**Pn**	**15 21 13.0**	**+0.3**
PAWZ	**Paruwai Farm**	**2.24**	**96**	P	**Pn**	**15 21 13.0**	**+0.3**
NEZ	**North Egmont**	**2.28**	**34**	PN	**Pn**	**15 21 13.3**	**+0.2**
NEZ	**North Egmont**	**2.28**	**34**	P	**Pn**	**15 21 13.3**	**+0.1**
WVZ	**Waitaha Valley**	**2.29**	**214**	PN	**Pn**	**15 21 13.5**	**+0.5**
WVZ	**Waitaha Valley**	**2.29**	**214**	P	**Pn**	**15 21 13.5**	**+0.4**
MTW	**Mount Morrison**	**2.29**	**90**	PN	**Pn**	**15 21 13.6**	**+0.4**
MTW	**Mount Morrison**	**2.29**	**90**	P	**Pn**	**15 21 13.6**	**+0.4**
PKE	**Pukeiti**	**2.30**	**31**	PN	**Pn**	**15 21 13.8**	**+0.5**
PKE	**Pukeiti**	**2.30**	**31**	P	**Pn**	**15 21 13.8**	**+0.4**
HOWZ	**Holdsworth Sta**	**2.33**	**84**	⇑PN	**Pn**	**15 21 14.0**	**+0.5**
CRLZ	**Canterbury Las**	**2.39**	**177**	PN	**Pn**	**15 21 14.5**	**+0.3**
CRLZ	**Canterbury Las**	**2.39**	**177**	P	**Pn**	**15 21 14.5**	**+0.3**
DREZ	**Durham Road**	**2.40**	**34**	PN	**Pn**	**15 21 14.7**	**+0.3**
WAZ	**Wanganui**	**2.40**	**54**	PN	**Pn**	**15 21 14.8**	**+0.3**
WAZ	**Wanganui**	**2.40**	**54**	P	**Pn**	**15 21 14.8**	**+0.5**
RAEZ	**Rainy Point**	**2.40**	**39**	PN	**Pn**	**15 21 14.6**	**+0.2**
RAEZ	**Rainy Point**	**2.40**	**39**	P	**Pn**	**15 21 14.6**	**+0.2**
MRZ	**Mangatainoka R**	**2.42**	**79**	⇑PN	**Pn**	**15 21 14.7**	**+0.1**
MRZ	**Mangatainoka R**	**2.42**	**79**	P	**Pn**	**15 21 14.7**	**+0.2**
TRWZ	**Traveller**	**2.44**	**96**	PN	**Pn**	**15 21 15.3**	**+0.6**
MQZ	**McQueen's Vall**	**2.53**	**177**	PN	**Pn**	**15 21 15.6**	**0.0**
MQZ	**McQueen's Vall**	**2.53**	**177**	P	**Pn**	**15 21 15.6**	**0.0**
MHEZ	**Mangahewa**	**2.54**	**35**	PN	**Pn**	**15 21 16.2**	**+0.3**
MHEZ				SN	**S**	15 21 51.5	0.0
TMWZ	**Te Maipa**	**2.59**	**89**	⇑PN	**Pn**	**15 21 16.9**	**+0.5**
TIWZ	**Tintock**	**2.62**	**82**	PN	**Pn**	**15 21 17.3**	**+0.5**
POWZ	**Post Office Ro**	**2.63**	**74**	PN	**Pn**	**15 21 17.0**	**+0.2**
VRZ	**Vera Road**	**2.71**	**41**	PN	**Pn**	**15 21 17.1**	**-0.5**
VRZ	**Vera Road**	**2.71**	**41**	P	**Pn**	**15 21 17.1**	**-0.6**
RPZ	**Rata Peaks**	**2.74**	**202**	PN	**Pn**	**15 21 18.3**	**+0.4**
RPZ	**Rata Peaks**	**2.74**	**202**	P	**Pn**	**15 21 18.3**	**+0.4**
RPZ	**Rata Peaks**	**2.74**	**202**	P	**Pn**	**15 21 18.3**	**+0.4**
	43nm,0.3s,baz=6.9,slow=0.8,SNR=141						
RPZ				S	**S**	**15 21 53.6**	**-1.8**
	20nm,0.3s,baz=352,slow=22,SNR=14						
TSZ	**Takapari Road**	**2.89**	**68**	PN	**Pn**	**15 21 19.7**	**0.0**
TSZ	**Takapari Road**	**2.89**	**68**	P	**Pn**	**15 21 19.7**	**0.0**
PKVZ	**Pokaka**	**2.91**	**50**	PN	**Pn**	**15 21 19.6**	**-0.3**
BFZ	**Birch Farm**	**2.91**	**81**	⇑PN	**Pn**	**15 21 20.3**	**+0.4**
BFZ	**Birch Farm**	**2.91**	**81**	P	**Pn**	**15 21 20.3**	**+0.4**
MTVZ	**Mangateitei**	**2.92**	**53**	PN	**Pn**	**15 21 19.9**	**-0.1**
DVHZ	**Dannevirke**	**2.95**	**74**	PN	**Pn**	**15 21 20.4**	**0.0**
WNVZ	**Wahianoa**	**3.03**	**53**	PN	**Pn**	**15 21 21.2**	**-0.1**
WNVZ	**Wahianoa**	**3.03**	**53**	P	**Pn**	**15 21 21.2**	**-0.1**
DRZ	**Dome Shelter**	**3.04**	**52**	PN	**Pn**	**15 21 21.9**	**+0.4**
DRZ	**Dome Shelter**	**3.04**	**52**	P	**Pn**	**15 21 21.9**	**+0.4**
FWVZ	**Far West T-bar**	**3.05**	**52**	PN	**Pn**	**15 21 21.0**	**-0.5**
FWVZ	**Far West T-bar**	**3.05**	**52**	P	**Pn**	**15 21 21.3**	**-0.2**
MOVZ	**Moawhango**	**3.08**	**56**	PN	**Pn**	**15 21 21.1**	**-0.8**
WPVZ	**Whakapapa**	**3.08**	**51**	PN	**Pn**	**15 21 21.4**	**-0.5**
TUVZ	**Tukino**	**3.10**	**53**	PN	**Pn**	**15 21 21.8**	**-0.3**
TUVZ	**Tukino**	**3.10**	**53**	P	**Pn**	**15 21 21.8**	**-0.3**
TWVZ	**Taurewa**	**3.11**	**48**	PN	**Pn**	**15 21 21.6**	**-0.6**
TWVZ	**Taurewa**	**3.11**	**48**	P	**Pn**	**15 21 21.6**	**-0.6**
PNHZ	**Pukenui**	**3.12**	**67**	PN	**Pn**	**15 21 22.3**	**0.0**
NGZ	**Ngauruhoe**	**3.13**	**51**	PN	**Pn**	**15 21 21.9**	**-0.6**
NGZ	**Ngauruhoe**	**3.13**	**51**	P	**Pn**	**15 21 21.9**	**-0.6**
FOZ	**Fox Glacier**	**3.14**	**220**	PN	**Pn**	**15 21 21.5**	**-1.0**
FOZ	**Fox Glacier**	**3.14**	**220**	P	**Pn**	**15 21 21.5**	**-1.0**
WTVZ	**West Tongariro**	**3.16**	**50**	PN	**Pn**	**15 21 22.2**	**-0.6**
WTVZ	**West Tongariro**	**3.16**	**50**	P	**Pn**	**15 21 22.2**	**-0.7**
OTVZ	**Oturere**	**3.18**	**52**	PN	**Pn**	**15 21 22.7**	**-0.2**
KRVZ	**Karewarewa**	**3.21**	**50**	PN	**Pn**	**15 21 22.4**	**-1.0**
WPHZ	**Waipukurau**	**3.23**	**71**	PN	**Pn**	**15 21 22.7**	**+0.2**
BHHZ	**Black Hill Sta**	**3.23**	**60**	PN	**Pn**	**15 21 23.1**	**-0.6**
HIZ	**Hauiti**	**3.24**	**35**	PN	**Pn**	**15 21 23.2**	**-0.6**
HIZ	**Hauiti**	**3.24**	**35**	P	**Pn**	**15 21 23.2**	**-0.6**
PRHZ	**Porangahau**	**3.30**	**75**	PN	**Pn**	**15 21 24.9**	**+0.5**
RITZ	**Rihia Road**	**3.41**	**51**	PN	**Pn**	**15 21 25.4**	**-0.3**
RITZ	**Rihia Road**	**3.41**	**51**	P	**Pn**	**15 21 25.4**	**-0.3**
RATZ	**Rangitukua**	**3.44**	**49**	PN	**Pn**	**15 21 25.6**	**-0.4**
PXZ	**Pawanui**	**3.54**	**72**	PN	**Pn**	**15 21 27.4**	**+0.1**
LBZ	**Lake Benmore**	**3.61**	**207**	PN	**Pn**	**15 21 27.8**	**-0.3**
LBZ	**Lake Benmore**	**3.61**	**207**	P	**Pn**	**15 21 27.8**	**-0.2**
KAHZ	**Kahuranaki**	**3.64**	**69**	PN	**Pn**	**15 21 28.9**	**+0.4**
MCHZ	**McNeill Hill**	**3.67**	**63**	PN	**Pn**	**15 21 28.9**	**0.0**
BKZ	**Black Stump Fm**	**3.69**	**58**	PN	**Pn**	**15 21 28.0**	**-1.0**
BKZ	**Black Stump Fm**	**3.69**	**58**	P	**Pn**	**15 21 28.0**	**-1.0**
CKHZ	**Cape Kidnapper**	**3.84**	**68**	PN	**Pn**	**15 21 31.2**	**+0.4**
NMHZ	**Naumai**	**3.93**	**59**	PN	**Pn**	**15 21 32.1**	**+0.2**
JCZ	**Jackson Bay**	**3.98**	**222**	PN	**Pn**	**15 21 32.2**	**-0.2**
JCZ	**Jackson Bay**	**3.98**	**222**	P	**Pn**	**15 21 32.2**	**-0.2**
ODZ	**Otahua Downs**	**4.08**	**198**	PN	**Pn**	**15 21 33.7**	**0.0**
ODZ	**Otahua Downs**	**4.08**	**198**	P	**Pn**	**15 21 33.7**	**0.0**
RAHZ	**Arahi**	**4.21**	**59**	PN	**Pn**	**15 21 34.9**	**-0.4**
WKZ	**Wanaka**	**4.43**	**214**	PN	**Pn**	**15 21 37.1**	**-0.9**
WKZ	**Wanaka**	**4.43**	**214**	P	**Pn**	**15 21 37.1**	**-0.9**
KNZ	**Kokohu**	**4.54**	**63**	PN	**Pn**	**15 21 38.8**	**-0.7**
KNZ	**Kokohu**	**4.54**	**63**	P	**Pn**	**15 21 38.8**	**-0.7**
URZ	**Urewera**	**4.62**	**52**	PN	**Pn**	**15 21 38.4**	**-2.1**
URZ	**Urewera**	**4.62**	**52**	P	**Pn**	**15 21 38.4**	**-2.1**
URZ	**Urewera**	**4.62**	**52**	P	**Pn**	**15 21 38.5**	**-2.0**
	6.0nm,0.3s,baz=224,slow=4.9,SNR=80						
URZ				S	**S**	**15 22 31.0**	**-5.0**
	31nm,0.3s,baz=94,slow=16,SNR=26						
MHGZ	**Mahia Peninsul**	**4.64**	**66**	PN	**Pn**	**15 21 40.5**	**-0.1**
EAZ	**Earnscleugh**	**4.66**	**209**	PN	**Pn**	**15 21 39.6**	**-1.2**
EAZ	**Earnscleugh**	**4.66**	**209**	P	**Pn**	**15 21 39.6**	**-1.2**
PRGZ	**Paritu Road**	**4.73**	**63**	PN	**Pn**	**15 21 41.2**	**-0.7**
MSZ	**Milford Sound**	**4.82**	**222**	PN	**Pn**	**15 21 42.5**	**-0.4**
MSZ	**Milford Sound**	**4.82**	**222**	P	**Pn**	**15 21 42.5**	**-0.3**
MWZ	**Matawai**	**4.83**	**56**	PN	**Pn**	**15 21 41.6**	**-1.5**
MWZ	**Matawai**	**4.83**	**56**	P	**Pn**	**15 21 41.6**	**-1.5**
KUZ	**Kuaotunu**	**5.11**	**31**	PN	**Pn**	**15 21 47.5**	**+0.9**
KUZ	**Kuaotunu**	**5.11**	**31**	P	**Pn**	**15 21 47.5**	**+0.9**
CNGZ	**Carnagh Statio**	**5.18**	**60**	PN	**Pn**	**15 21 47.1**	**-0.3**
TUZ	**Tuapeka**	**5.19**	**202**	PN	**Pn**	**15 21 47.2**	**-0.3**
TUZ	**Tuapeka**	**5.19**	**202**	P	**Pn**	**15 21 47.2**	**-0.3**
MLZ	**Mavora Lakes**	**5.21**	**216**	PN	**Pn**	**15 21 47.6**	**-0.1**
MLZ	**Mavora Lakes**	**5.21**	**216**	P	**Pn**	**15 21 47.6**	**-0.1**
PUZ	**Puketiti**	**5.45**	**57**	PN	**Pn**	**15 21 49.2**	**-1.6**
WHZ	**Wether Hill Ro**	**5.74**	**213**	PN	**Pn**	**15 21 53.5**	**-0.9**
WHZ	**Wether Hill Ro**	**5.74**	**213**	P	**Pn**	**15 21 53.5**	**-0.9**
MXZ	**Matakaoa Point**	**5.79**	**53**	PN	**Pn**	**15 21 53.8**	**-1.4**
MXZ	**Matakaoa Point**	**5.79**	**53**	P	**Pn**	**15 21 53.8**	**-1.4**
SYZ	**Scrubby Hill**	**5.87**	**203**	PN	**Pn**	**15 21 56.1**	**0.0**
SYZ	**Scrubby Hill**	**5.87**	**203**	P	**Pn**	**15 21 56.1**	**+0.1**
APZ	**The Paps**	**6.50**	**208**	PN	**Pn**	**15 22 03.4**	**-0.8**
CTZ	**Chatham Island**	**8.47**	**111**	*e*PN	**Pn**	**15 22 33.7**	**+4.2**
CTZ	**Chatham Island**	**8.47**	**111**	P	**Pn**	**15 22 34.2**	**+4.7**
EIDS	**Eidsvold**	**23.75**	**305**	P	**P**	**15 25 24.2**	**+1.5**
ASAR	**Alice Springs**	**36.58**	**286**	P	**P**	**15 27 16.6**	**+1.2**
	0.7nm,0.4s,mb3.6,baz=124,slow=7.3,SNR=32						
ASAR				PcP	PcP	15 29 32.9	-0.8
	0.3nm,0.9s,baz=122,slow=4.1,SNR=4.4						
WRA	**Warramunga Arr**	**38.65**	**292**	P	**P**	**15 27 34.0**	**+1.3**
	1.3nm,0.4s,mb3.8,baz=126,slow=8.4,SNR=5.5						
SYO	**Syowa Base**	**64.73**	**197**⇑	*e*P	PcP	15 31 07.6	-8.6
ARCES	**ARCESS Array B**	**146.78**	**340**	PKPbc	PKPbc	15 39 44.3	-0.9
	1.4nm,0.9s,baz=35,slow=4.4,SNR=5.3						
TORD	**Torodi Ar. Bea**	**150.93**	**199**	PKPbc	PKPbc	15 39 55.5	-1.7
	0.3nm,0.4s,baz=146,slow=2.0,SNR=6.7						
FINES	**FINESS Array B**	**151.32**	**326**	PKPbc	PKPbc	15 39 56.1	-0.7
FINES	**FINESS Array B**	**151.32**	**326**	PKPbc	PKPbc	15 39 56.1	-0.7
	1.8nm,1.0s,baz=48,slow=4.1,SNR=3.2						

*NEIC **21** 15:59:31.0,15°.68N×94°.04W,h57km,MD4.0(MEX),After MEX.*

MEX 21 15:59:31.0±0.5,15°.68N×94°.04W,h57km±11km,MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.79**	**88**	*i* P	Pn	15 59 45.0	-1.2
PCIG				*i* S	Sn	15 59 55.4	-2.0
TGIG		**1.40**	**39**	*i* P	Pn	15 59 52.7	-1.6
TGIG				*i* S	Sn	16 00 10.1	-1.7
SCX	**San Cristobal**	**1.71**	**52**	*e*P	Pn	15 59 57.2	-1.3
SCX				*i* S	Sn	16 00 17.9	-1.4
SCX	**San Cristobal**	**1.71**	**52**	*e*P	Pn	15 59 57.2	-1.3
SCX				*i* S	Sn	16 00 17.9	-1.4
THIG		**1.88**	**114**	*i* P	Pn	15 59 59.9	-0.9
THIG				*i* S	Sn	16 00 20.4	-3.0
HUIG	**Huatulco**	**1.99**	**273**	*i* P	Pn	16 00 00.6	-1.7
HUIG				*i* S	Sn	16 00 24.6	-1.6
HUIG	**Huatulco**	**1.99**	**273**	*i* P	Pn	16 00 00.6	-1.7
HUIG				*i* S	Sn	16 00 24.6	-1.6
VHO	**Vista Hermosa**	**2.93**	**298**	*i* P	Pn	16 00 14.3	-0.8
VHO				*i* S	Sn	16 00 47.6	-1.6
VHO	**Vista Hermosa**	**2.93**	**298**	*i* P	Pn	16 00 14.3	-0.8
VHO				*i* S	Sn	16 00 47.6	-1.6
PNIG	**Pinotepa**	**3.99**	**281**	*i* P	Pn	16 00 28.5	-1.2
PNIG				*i* S	Sn	16 01 14.1	-1.2
PNIG	**Pinotepa**	**3.99**	**281**	*i* P	Pn	16 00 28.5	-1.2
PNIG				*i* S	Sn	16 01 14.1	-1.2
TPIG	**Tehuac#an**	**4.18**	**311**	*i* S	Sn	16 01 29.0	+0.8
UTMO	**Huajuapan**	**4.19**	**301**	*i* P	Pn	16 00 31.6	-0.8
UTMO				*i* S	Sn	16 01 20.2	+0.1
PPM	**Popocatepetl**	**5.52**	**308**	*i* P	Pn	16 00 53.2	+2.5
PPM				*i* S	Sn	16 01 52.9	0.0
PPM	**Popocatepetl**	**5.52**	**308**	*i* P	Pn	16 00 53.2	+2.5
PPM				*i* S	Sn	16 01 52.9	0.0
CAIG	**El Cayaco**	**6.13**	**284**	*e*P	Pn	16 00 58.6	-0.4
CAIG				*i* S	Sn	16 02 06.7	-1.1
CAIG	**El Cayaco**	**6.13**	**284**	*e*P	Pn	16 00 58.6	-0.4
CAIG				*i* S	Sn	16 02 06.7	-1.1

*ISCJB **21** 16:00:44.8±0.3,51°.44N±0°.02×16°.08E±0°.02,h0km,Error ellipse: s-maj=2.4km s-min=1.7km az=17.5*
*NEIC **21** 16:00:45.1±0.5,51°.64N×16°.09E,h5km,ML3.5(SZGRF), ML3.2(BRA),Error ellipse: s-maj=7.5km s-min=5.7km az=184.0*
*IDC **21** 16:00:46.2±0.8,51°.56N×15°.63E,h0km,mb1 3.5/8, mb1mx3.3/27,mbtmp3.4/8,ML3.3/8,Error ellipse: s-maj=15.4km s-min=7.2km az=82.0*
*CSEM **21** 16:00:46.2±0.1,51°.49N×16°.11E,h2km,ML3.8/14,Ms3.2, Error ellipse: s-maj=2.5km s-min=1.6km az=14.0*
*IPEC **21** 16:00:46.6±0.2,51°.50N×16°.16E,h4km±1km,ML2.8/3, Error ellipse: s-maj=1.4km s-min=0.6km az=39.0*
*BGR **21** 16:00:47.6±0.4,51°.48N×16°.09E,h1km,ML3.5,Error ellipse: s-maj=4.4km s-min=2.2km az=9.0*
*WAR **21** 16:00:47.7,51°.49N×16°.10E,ML3.0,Mining Induced*
*PRU **21** 16:00:47.6,51°.46N×16°.09E,h0km*
*VIE **21** 16:00:48.4±0.3,51°.32N×16°.04E,h0km,mb2.8/9,ML3.1/9, Ms3.2/2,Error ellipse: s-maj=2.3km s-min=1.6km az=5.0*
72 km WNW of Wroclaw Suspected Mining induced.
*LDG **21** 16:00:51.1±0.2,51°.15N×15°.74E,h1km,Ml3.7/7,Error ellipse: s-maj=6.3km s-min=2.2km az=7.0,Suspected Mining induced.*

ISC 21 16:00:45.4±0.3,51°.53N±0°.02×16°.13E±0°.02,h0km,n161, σ1§06/269,9C-11D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.70**	**172**	*e*Pg	**Pg**	**16 00 59.7**	**+0.9**
KSP				*e*Sg	**Sg**	**16 01 09.2**	**+1.4**
KSP	**Ksiaz**	**0.70**	**172**	*e*Pg	**Pg**	**16 00 59.8**	**+1.0**
KSP	**Ksiaz**	**0.70**	**172**	*i* Pg	**Pg**	**16 00 59.7**	**+0.9**
KSP				*e*Sg	**Sg**	**16 01 08.5**	**+0.7**
KSP				eL		16 01 11.5	
KSP	**Ksiaz**	**0.70**	**172**	*e*Pg	**Pg**	**16 00 59.7**	**+0.9**
	baz=353						
KSP				*e*Sg	**Sg**	**16 01 07.7**	**-0.1**
	baz=353						
UPC	**Upice**	**1.03**	**184**	*e*PG	**Pg**	**16 01 05.7**	**+0.6**
UPC	**Upice**	**1.03**	**184**	Pg	**Pg**	**16 01 05.7**	**+0.6**
DPC	**Dobruska-Polom**	**1.19**	**174**	*e*PG	**Pg**	**16 01 08.6**	**+0.4**
DPC				*e*SG	**Sg**	**16 01 22.6**	**-1.0**
	comp=Z,106nm,0.4s						
DPC	**Dobruska-Polom**	**1.19**	**174**	*e*Pg	**Pg**	**16 01 08.4**	**+0.2**
	baz=355						
DPC				*e*Sg	**Sg**	**16 01 23.1**	**-0.5**
	baz=355						
PVCC	**Panska Ves**	**1.41**	**225**	*e*PG	**Pg**	**16 01 12.7**	**+0.3**
PVCC				*e*SG	**Sg**	**16 01 30.0**	**-0.7**
	comp=Z,349nm,0.3s						
PVCC	**Panska Ves**	**1.41**	**225**	*e*Pn	**Pn**	**16 01 12.6**	**+0.3**
	baz=45						
PVCC				Sg	**Sg**	**16 01 30.0**	**-0.7**
	comp=Z,349nm,0.3s						
KRLC	**Kraliky**	**1.52**	**164**	*e*PG	**Pg**	**16 01 14.1**	**-0.4**
KRLC	**Kraliky**	**1.52**	**164**	Pg	**Pg**	**16 01 14.1**	**-0.4**
BRG	**Berggiesshubel**	**1.53**	**245**	*e*Pn	**Pn**	**16 01 13.6**	**-0.3**
BRG				*e*Pg	**Pg**	**16 01 15.1**	**+0.4**
BRG				*e*Sg	**Sg**	**16 01 35.1**	**+0.7**
BRG	**Berggiesshubel**	**1.53**	**245**	PN	**Pn**	**16 01 13.4**	**-0.5**
BRG				PG	**Pg**	**16 01 15.3**	**+0.6**
BRG				SG	**Sg**	**16 01 35.2**	**+0.7**
	comp=Z,242nm,0.5s						
BRG	**Berggiesshubel**	**1.53**	**245**	Pg	**Pg**	**16 01 15.1**	**+0.4**
BRG				*e*Sg	**Sg**	**16 01 34.4**	**-0.1**
	baz=65						
RUE	**Ruedersdorf**	**1.74**	**304**	*e*Pn	**Pn**	**16 01 15.9**	**-0.9**
RUE				*e*Sg	**Sg**	**16 01 43.0**	**+1.8**
RUE	**Ruedersdorf**	**1.74**	**304**	*e*Pn	**Pn**	**16 01 16.2**	**-0.6**
	baz=123						
RUE				Sg	**Sg**	**16 01 43.4**	**+2.3**
PRU	**Pruhonice**	**1.85**	**214**	*e*PG	**Pg**	**16 01 20.5**	**-0.3**
PRU				*e*SG	**Sg**	**16 01 44.2**	**-0.5**
	comp=Z,132nm,0.6s						
PRU	**Pruhonice**	**1.85**	**214**	*e*Pn	**Pn**	**16 01 18.8**	**+0.5**
	baz=33						
PRU	**Pruhonice**	**1.85**	**214**	Pg	**Pg**	**16 01 20.5**	**-0.3**
PRU				Sg	**Sg**	**16 01 44.2**	**-0.5**
	comp=Z,132nm,0.6s						
GKP	**Gorka Klasztor**	**1.87**	**21**	*e*Pn	**Pn**	**16 01 17.3**	**-1.3**
GKP				*e*		16 01 28.7	
GKP				*e*Sg	**Sg**	**16 01 50.2**	**+4.8**
GKP	**Gorka Klasztor**	**1.87**	**21**	*e*Pn	**Pn**	**16 01 17.5**	**-1.1**
GKP	**Gorka Klasztor**	**1.87**	**21**	*e*Pn	**Pn**	**16 01 17.3**	**-1.3**
GKP				*e*Sg	**Sg**	**16 01 50.2**	**+4.9**
RAC	**Raciborz**	**1.95**	**137**	*e*Pg	**Pg**	**16 01 23.1**	**+0.3**
RAC				*e*Sg	**Sg**	**16 01 48.9**	**+0.8**
CLL	**Collm**	**1.97**	**265**	*e*Pn	**Pn**	**16 01 19.9**	**-0.1**
CLL				*i* Pg	**Pg**	**16 01 22.5**	**-0.7**
CLL				*e*Sg	**Sg**	**16 01 49.0**	**+0.3**
CLL	**Collm**	**1.97**	**265**	*i* Pn	**Pn**	**16 01 20.0**	**0.0**
CLL				*i* Pg	**Pg**	**16 01 22.5**	**-0.7**
CLL				*e*Sg	**Sg**	**16 01 49.0**	**+0.3**
CLL	**Collm**	**1.97**	**265**	*i* Pn	**Pn**	**16 01 20.0**	**0.0**
	comp=Z,16nm,0.4s						
CLL				*i* Pg	**Pg**	**16 01 22.5**	**-0.7**
CLL				*i*		16 01 27.5	
CLL				*e*Sg	**Sg**	**16 01 49.0**	**+0.3**
	comp=Z,50nm,0.6s						
CLL	**Collm**	**1.97**	**265**	*i* Pn	**Pn**	**16 01 20.0**	**0.0**
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn	**Pn**	**16 01 20.0**	**0.0**
MORC				*e*Sn	**Sn**	**16 01 44.0**	**-1.4**
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn	**Pn**	**16 01 20.2**	**+0.1**
	baz=334						
MORC				*e*Sn	**Sn**	**16 01 44.0**	**-1.5**
MORC				*e*Sg	**Sg**	**16 01 46.8**	**-2.0**
	comp=Z,81nm,0.6s,baz=334						
OKC	**Ostrava-Krasne**	**2.13**	**142**	*e*PN	**Pn**	**16 01 22.0**	**-0.2**
OKC				*e*PG	**Pg**	**16 01 25.8**	**-0.4**
OKC				*e*SG	**Sg**	**16 01 52.5**	**-1.2**
OKC	**Ostrava-Krasne**	**2.13**	**142**	Pn	**Pn**	**16 01 22.0**	**-0.2**
VRAC	**Vranov**	**2.25**	**172**	Pn	**Pn**	**16 01 24.8**	**+1.0**
	comp=Z,5.0nm,0.3s,baz=336,

GRF				*e*Sg		**Sg**	**16 02 42.0**	**0.0**
BSD	**Bornholm Skovb**	**3.66**	**349**	*i* P		**Pn**	**16 01 43.3**	**+0.1**
BSD				*i* S		**Sn**	**16 02 24.2**	**-2.8**
BSD	**Bornholm Skovb**	**3.66**	**349**	*i* P		**Pn**	**16 01 43.3**	**+0.1**
SOP	**Sopron**	**3.86**	**176**	⇓*e*PB		**Pb**	**16 01 52.9**	**-1.5**
SOP				*e*SB		**Sb**	**16 02 44.3**	**+2.6**
MOA	**Molln**	**3.88**	**199**	⇓*i*Pn		**Pn**	**16 01 46.4**	**+0.1**
	SNR=12							
MOA				⇑*i*Sg		**Sg**	**16 02 49.3**	**-0.7**
	comp=Z,63nm,0.5s							
MOA	**Molln**	**3.88**	**199**	Pn		**Pn**	**16 01 46.4**	**+0.1**
	SNR=12							
MOA				Sg		**Sg**	**16 02 49.3**	**-0.7**
	comp=Z,63nm,0.5s							
STHS	**Stebnicka Huta**	**3.89**	**121**	*e*Pn		**Pn**	**16 01 47.8**	**+1.4**
STHS				*e*			16 02 02.0	
STHS				*e*Sg		**Sg**	**16 02 52.9**	**+2.5**
STHS	**Stebnicka Huta**	**3.89**	**121**	*e*PN		**Pn**	**16 01 47.8**	**+1.4**
STHS				*e*			16 02 02.0	
STHS	**Stebnicka Huta**	**3.89**	**121**	*e*SG		**Sg**	**16 02 52.9**	**+2.5**
STHS	**Stebnicka Huta**	**3.89**	**121**	*e*Pn		**Pn**	**16 01 47.8**	**+1.4**
STHS				*e*Sg		**Sg**	**16 02 52.9**	**+2.5**
HROE	**Hohe Rhon--Fla**	**3.90**	**258**	⇓*i*Pn		**Pn**	**16 01 47.2**	**+0.7**
HROE	**Hohe Rhon--Fla**	**3.90**	**258**	Pn		**Pn**	**16 01 47.2**	**+0.7**
UBBA	**Unterbreizbach**	**3.92**	**262**	*e*Pg		**Pg**	**16 01 59.9**	**-0.7**
UBBA				*e*Sg		**Sg**	**16 02 51.4**	**0.0**
UBBA	**Unterbreizbach**	**3.92**	**262**	Pg		**Pg**	**16 01 59.9**	**-0.7**
UBBA				Sg		**Sg**	**16 02 51.4**	**0.0**
ARSA	**Arzberg**	**4.31**	**186**	⇑*i*Pn		**Pn**	**16 01 52.7**	**+0.6**
ARSA				⇓*i*Sg		**Sg**	**16 03 03.6**	**0.0**
	comp=Z,47nm,0.7s							
ARSA	**Arzberg**	**4.31**	**186**	Pn		**Pn**	**16 01 52.7**	**+0.6**
ARSA				Sg		**Sg**	**16 03 03.6**	**-0.1**
	comp=Z,47nm,0.7s							
CRVS	**Cervenica-Dubn**	**4.32**	**126**	*e*Pn		**Pn**	**16 01 53.1**	**+0.8**
CRVS				*e*			16 02 09.4	
CRVS				*e*Sg		**Sg**	**16 03 04.0**	**0.0**
CRVS	**Cervenica-Dubn**	**4.32**	**126**	*e*PN		**Pn**	**16 01 53.1**	**+0.8**
CRVS				*e*			16 02 09.4	
CRVS	**Cervenica-Dubn**	**4.32**	**126**	*e*SG		**Sg**	**16 03 04.0**	**0.0**
CRVS	**Cervenica-Dubn**	**4.32**	**126**	*e*Pn		**Pn**	**16 01 53.1**	**+0.8**
CRVS				*e*Sg		**Sg**	**16 03 04.0**	**0.0**
PSZ	**Piszkesteto**	**4.36**	**145**	*e*Pn		**Pn**	**16 01 53.6**	**+0.7**
PSZ	**Piszkesteto**	**4.36**	**145**	⇑*e*Pn		**Pn**	**16 01 54.0**	**+1.1**
PSZ				*e*SB		**Sb**	**16 03 03.3**	**+7.2**
PSZ	**Piszkesteto**	**4.36**	**145**	*e*Pn		**Pn**	**16 01 53.6**	**+0.7**
KWP	**Kalwaria Pacla**	**4.60**	**112**	*e*Pg		**Pg**	**16 02 11.0**	**-2.5**
KWP	**Kalwaria Pacla**	**4.60**	**112**	*e*Pg		**Pg**	**16 02 11.0**	**-2.6**
KBA	**Koelnbreinsper**	**4.82**	**203**	⇑*i*Pn		**Pn**	**16 01 59.4**	**+0.3**
KBA	**Koelnbreinsper**	**4.82**	**203**	Pn		**Pn**	**16 01 59.4**	**+0.3**
TNS	**Taunus Mts**	**5.04**	**258**	*e*Pn		**Pn**	**16 02 02.9**	**+0.7**
TNS	**Taunus Mts**	**5.04**	**258**	Pn		**Pn**	**16 02 02.9**	**+0.7**
WATA	**Walderalm**	**5.15**	**217**	⇓*i*Pn		**Pn**	**16 02 03.8**	**+0.2**
WATA				⇓*i*Sg		**Sg**	**16 03 31.6**	**+0.9**
	comp=Z,12nm,0.5s							
WATA	**Walderalm**	**5.15**	**217**	Pn		**Pn**	**16 02 03.8**	**+0.2**
WATA				Sg		**Sg**	**16 03 31.6**	**+1.0**
	comp=Z,12nm,0.5s							
WTTA	**Wattenberg**	**5.18**	**216**	⇓*i*Pn		**Pn**	**16 02 04.6**	**+0.4**
WTTA				⇓*i*Sg		**Sg**	**16 03 33.0**	**+1.1**
	comp=Z,19nm,0.5s							
WTTA	**Wattenberg**	**5.18**	**216**	Pn		**Pn**	**16 02 04.6**	**+0.4**
WTTA				Sg		**Sg**	**16 03 33.0**	**+1.2**
	comp=Z,19nm,0.5s							
MOTA	**Moosalm**	**5.32**	**220**	⇑*i*Pn		**Pn**	**16 02 06.8**	**+0.7**
MOTA				⇑*i*Sg		**Sg**	**16 03 37.2**	**+0.9**
	comp=Z,14nm,0.7s							
MOTA	**Moosalm**	**5.32**	**220**	Pn		**Pn**	**16 02 06.8**	**+0.7**
MOTA				Sg		**Sg**	**16 03 37.2**	**+0.9**
	comp=Z,14nm,0.7s							
VOY	**Vojsko**	**5.70**	**196**	*e*Pn		**Pg**	**16 02 33.4**	**-1.2**
VOY				*e*Sn		**Sg**	**16 03 53.7**	**+5.3**
FETA	**Feichten**	**5.74**	**220**	⇑*i*Pn		**Pn**	**16 02 12.5**	**+0.8**
FETA	**Feichten**	**5.74**	**220**	Pn		**Pn**	**16 02 12.5**	**+0.8**
DAVA	**Damuels**	**5.89**	**226**	⇑*i*Pn		**Pn**	**16 02 14.1**	**+0.2**
DAVA				⇓*i*Sg		**Sg**	**16 03 55.8**	**+1.3**
	comp=Z,16nm,0.6s							
DAVA	**Damuels**	**5.89**	**226**	Pn		**Pn**	**16 02 14.1**	**+0.2**
DAVA				Sg		**Sg**	**16 03 55.8**	**+1.3**
	comp=Z,16nm,0.6s							
BFO	**Black Forest**	**5.97**	**241**	*e*Sg		**Sg**	**16 03 57.0**	**0.0**
BFO	**Black Forest**	**5.97**	**241**	*e*Pn		**Pn**	**16 02 11.9**	**-3.0**
	comp=Z,5.4nm,0.5s							
BFO				*e*Sg		**Sg**	**16 03 56.0**	**-1.0**
BFO	**Black Forest**	**5.97**	**241**	Sg		**Sg**	**16 03 57.0**	**-0.1**
DAVOX	**Davos/Dischmat**	**6.28**	**223**	Pn		**Pn**	**16 02 18.8**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=45,slow=8.6,SNR=5.5							
DAVOX				Lg			16 03 59.7	
	comp=Z,0.3nm,0.3s,baz=186,slow=19,SNR=2.4							
DAVOX	**Davos/Dischmat**	**6.28**	**223**	Pn		**Pn**	**16 02 18.8**	**-0.4**
CDF	**Champ du Feu**	**6.51**	**245**	*e*Pn		**Pn**	**16 02 22.5**	**+0.1**
CDF				*e*Sg		**Sb**	**16 04 02.9**	**+5.2**
	comp=Z,43nm,1.0s							
CDF	**Champ du Feu**	**6.51**	**245**	*e*Pn		**Pn**	**16 02 22.5**	**+0.1**
WLF	**Walferdange**	**6.62**	**257**	*e*Pn		**Pn**	**16 02 21.9**	**-2.0**
WLF				*e*Sg		**Sg**	**16 04 20.1**	**+2.1**
BUR08	**Bucovina Ar. S**	**7.06**	**120**	*e*Pn		**Pn**	**16 02 31.6**	**+1.7**
BUR08	**Bucovina Ar. S**	**7.06**	**120**	*e*Pn		**Pn**	**16 02 31.6**	**+1.7**
HINF	**Hinteralfeld**	**7.08**	**242**	*e*Pn		**Pn**	**16 02 29.3**	**-0.8**
HINF				*e*Sg		**Sb**	**16 04 19.5**	**+5.5**
	comp=Z,21nm,0.8s							
HINF	**Hinteralfeld**	**7.08**	**242**	*e*Pn		**Pn**	**16 02 29.3**	**-0.8**
HAU	**Haudompre**	**7.25**	**245**	*e*Pn		**Pn**	**16 02 30.3**	**-2.2**
HAU				*e*Sg		**Sb**	**16 04 25.8**	**+6.7**
	comp=Z,27nm,0.8s							
GIVF	**Givet**	**7.31**	**263**	*e*Sg		**Sb**	**16 04 31.0**	**+10**
	comp=Z,20nm,0.8s							
CABF	**La Chapelle**	**8.23**	**237**	*e*Sg		**Sb**	**16 04 57.6**	**+10**
	comp=Z,30nm,0.9s							
KIEV	**Kiev**	**8.27**	**91**	*e*Pn		**Pn**	**16 02 45.9**	**-0.6**
	comp=Z,4.5nm,0.5s							
KIEV				*e*Pg		**Pg**	**16 03 23.7**	**-0.1**
KIEV	**Kiev**	**8.27**	**91**	*e*Pn		**Pn**	**16 02 45.9**	**-0.6**
	comp=Z,4.5nm,0.5s							
AKASG	**Malin Array Be**	**8.28**	**91**	Pn		**Pn**	**16 02 48.0**	**+1.3**
	comp=Z,1.9nm,0.3s,baz=281,slow=12,SNR=8.8							
AKASG	**Malin Array Be**	**8.28**	**91**	Pn		**Pn**	**16 02 48.0**	**+1.3**
LPL	**La Plagne**	**8.66**	**230**	*e*Pn		**Pn**	**16 02 49.1**	**-2.8**
LPG	**La Plagne**	**8.67**	**230**	*e*Pn		**Pn**	**16 02 49.6**	**-2.4**
HFS	**Hagfors**	**8.73**	**352**	Pn		**Pn**	**16 02 52.0**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=170,slow=16,SNR=4.0							
HFS				Sn		**Sn**	**16 04 26.9**	**-4.9**
	comp=Z,0.2nm,0.3s,baz=163,slow=24,SNR=2.9							
NOA	**NORSAR Array B**	**9.91**	**346**	Pn		**Pn**	**16 03 05.1**	**-3.9**
	comp=Z,0.1nm,0.3s,baz=174,slow=13,SNR=2.6							
NOA				Sn		**Sn**	**16 04 51.0**	**-10**
	comp=Z,0.1nm,0.3s,baz=216,slow=22,SNR=2.6							
FINES	**FINESS Array B**	**11.34**	**25**	Pn		**Pn**	**16 03 26.2**	**-2.2**
	comp=Z,0.2nm,0.3s,baz=210,slow=11,SNR=7.7							
FINES				Sn		**Sn**	**16 05 27.7**	**-7.9**
	comp=Z,0.3nm,0.3s,baz=212,slow=23,SNR=4.6							
EKA	**Eskdalemuir Ar**	**12.11**	**296**	Pn		**Pn**	**16 03 36.0**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=105,slow=14,SNR=3.3							
ARCES	**ARCESS Array B**	**18.60**	**10**	Pn		**Pn**	**16 05 00.2**	**-3.8**
	comp=Z,0.3nm,0.3s,baz=200,slow=12,SNR=13							

MAN 21 16:04:33,17.60N×122.57E,h23km,mb4.6,ML3.5,MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.55**	**195**	*e*P	Pb	16 04 45.5	+1.4
CAUP	**Cauayan**	**0.97**	**228**	*e*P	Pb	16 04 52.7	+1.6
APYP	**Conner**	**1.29**	**282**	*e*P	Pn	16 04 55.7	0.0
BALP	**Baler**	**2.08**	**207**	*e*P	Pn	16 05 07.9	+1.4

*NEIC **21** 16:05:43.1±4.4, 18.97S×177.91W, h622km±51km, mb3.8/2, Error ellipse: s-maj=31.7km s-min=24.3km az=155.0*

IDC 21 16:05:41.1±5.1, 18.77S×177.91W, h591km±61km, mb3.0/7, mb1 3.3/7, mb1mx3.1/16, mbtmp3.0/7, Error ellipse: s-maj=77.7km s-min=23.4km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAO	**Charters Tower**	**33.78**	**262**	*e*P	P	16 11 35.1	-0.4
	3.3nm,0.7s						
STKA	**Stephens Creek**	**38.63**	**242**	P	P	16 12 14.8	-0.4
	3.1nm,0.9s,baz=139,slow=4.9,SNR=3.5						
WRA	**Warramunga Arr**	**44.94**	**260**	P	P	16 13 04.5	-0.4
WRA	**Warramunga Arr**	**44.94**	**260**	P	P	16 13 04.5	-0.4
	0.3nm,0.3s,baz=98,slow=5.9,SNR=5.0						

ASAR	**Alice Springs**	**45.02**	**255**	P		P	16 13 05.5	+0.1
	1.3nm,0.5s,baz=87,slow=7.8,SNR=23							
ASAR				PcP		PcP	16 14 33.2	-0.3
	0.6nm,0.6s,baz=97,slow=4.0,SNR=6.2							
QSPA	**South Pole Qui**	**71.29**	**180**	P		P	16 15 59.9	-1.4
	1.2nm,0.6s							
NVAR	**Mina Array Bea**	**79.72**	**44**	P		P	16 16 49.2	+0.6
NVAR	**Mina Array Bea**	**79.72**	**44**	P		P	16 16 49.2	+0.6
	0.6nm,0.6s,baz=226,slow=9.2,SNR=5.6							
TXAR	**Lajitas Array**	**86.06**	**57**	P		P	16 17 21.1	+0.6
	0.5nm,0.7s,baz=218,slow=6.1,SNR=9.4							
ILAR	**Eielson Array**	**86.62**	**13**	P		P	16 17 21.4	-0.8
	0.4nm,0.4s,baz=230,slow=5.1,SNR=9.6							
CMAR	**Chiang Mai Arr**	**89.62**	**290**	P		P	16 17 38.5	+1.2
	0.4nm,0.7s,baz=117,slow=2.8,SNR=4.8							
MKAR	**Makanchi Array**	**110.07**	**314**	PKiKP		PKiKP	16 23 04.2	-2.0
	0.3nm,0.5s,baz=131,slow=1.6,SNR=5.9							
ARCES	**ARCESS Array B**	**127.25**	**350**	PKP		PKPdf	16 23 38.1	-0.4
	0.6nm,0.4s,baz=353,slow=0.3,SNR=15							
BRTR	**Keskin Array B**	**145.72**	**314**	PKPbc		PKPbc	16 24 14.6	-0.4
	1.1nm,0.6s,baz=150,slow=3.3,SNR=7.4							
MMAI	**Mount Meron Ar**	**147.00**	**302**	PKPbc		PKPbc	16 24 18.8	+0.1
	1.0nm,0.4s,baz=56,slow=6.4,SNR=3.8							

*ISCJB **21** 16:13:01.5±0.4, 12.90N±0.04×88.97W±0.03, h55km±3km, mb4.3/32, MS3.7/13, Error ellipse: s-maj=8.5km s-min=3.0km az=36.6*

*IDC **21** 16:13:01.4±2.5, 13.13N×88.73W, h41km±19km, mb3.9/10, mb1 4.2/11, mb1mx3.9/23, mbtmp4.0/11, ML3.9/1, MS3.7/12, Ms1 3.7/12, ms1mx3.5/27, Error ellipse: s-maj=29.8km s-min=18.0km az=41.0*

*MEX **21** 16:13:01.0±0.8, 12.31N×89.41W, h33km±999km, MD4.7*

*CASC **21** 16:13:02.2±2.7, 12.92N×88.97W, h34km±21km, MD4.3, ML4.6, mb4.5(NEIC)*

*NEIC **21** 16:13:03.2±0.8, 12.90N×88.91W, h66km±7km, mb4.5/26, MD4.8(SNET), Error ellipse: s-maj=11.4km s-min=6.9km az=206.0*

NEIC Felt [III] at San Salvador.

ISC 21 16:13:02.6±0.3, 12.93N±0.04×88.95W±0.03, h45km±3km, n264, σ0.99/253, mb4.3/31, MS3.7/13, 83C-66D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNVI	**San Vicente**	**0.69**	**9**	*e*P	**Pn**	**16 13 15.8**	**-0.2**
LFRS	**El Faro**	**0.70**	**351**	⇑*i*P	**Pn**	**16 13 15.7**	**-0.5**
SNET	**Serv Nac Est T**	**0.80**	**340**	*e*P	**Pn**	**16 13 17.0**	**-0.6**
SNET				*e*S	**Sn**	**16 13 28.5**	**+0.1**
SNET				AML	AML	16 13 29.8	
	comp=Z,29µm,0.2s						
VSM	**San Miguel**	**0.83**	**53**	⇑*i*P	**Pn**	**16 13 18.4**	**+0.5**
BOQS	**Boqueron**	**0.86**	**338**	⇓*i*P	**Pn**	**16 13 18.1**	**-0.3**
BLLM	**Bellamira**	**0.86**	**54**	⇑*i*P	**Pn**	**16 13 18.5**	**+0.1**
SONS	**Sonsonate**	**1.09**	**317**	*e*P	**Pn**	**16 13 20.5**	**-1.1**
SONS				*e*S	**Sn**	**16 13 34.0**	**-1.5**
SONS				AML	AML	16 13 38.1	
	comp=Z,11µm,0.7s						
CAHU	**Cacacuatique**	**1.10**	**41**	⇑*i*P	**Pn**	**16 13 22.7**	**+1.0**
SBLS	**San Blas**	**1.11**	**324**	⇑*i*P	**Pn**	**16 13 21.4**	**-0.5**
CNCH	**Conchagua**	**1.14**	**72**	⇑*i*P	**Pn**	**16 13 22.2**	**0.0**
MTO2	**Montecristo 2**	**1.51**	**345**	⇑*i*P	**Pn**	**16 13 27.6**	**+0.3**
IXG	**Ixpaco**	**1.91**	**110**	*e*P	**Pn**	**16 13 32.7**	**-0.1**
TGUH	**Tegucigalpa,Un**	**1.98**	**55**	⇑*i*Pn	**Pn**	**16 13 34.5**	**+0.8**
TGUH				*e*Sn	**Sn**	**16 14 01.8**	**+4.5**
NBG	**Las Nubes**	**2.13**	**321**	*e*P	**Pn**	**16 13 37.1**	**+1.4**
PCG	**Pacaya**	**2.17**	**312**	*e*P	**Pn**	**16 13 37.2**	**+0.9**
MRL	**Marmol**	**2.24**	**341**	*e*P	**Pn**	**16 13 39.0**	**+1.7**
CNGN	**Cerro Negro**	**2.24**	**101**	*e*P	**Pn**	**16 13 36.6**	**-0.7**
CNGN				*e*S	**Sn**	**16 14 05.5**	**+1.8**
FUG	**Fuego 3**	**2.38**	**310**	*e*P	**Pn**	**16 13 39.4**	**+0.2**
MOMN	**Momotombo**	**2.41**	**102**	*e*P	**Pn**	**16 13 39.2**	**-0.4**
COPN	**Copaltepe**	**2.42**	**108**	*e*P	**Pn**	**16 13 39.8**	**0.0**
CSAN		**2.58**	**106**	*e*P	**Pn**	**16 13 41.0**	**-0.9**
XAVN	**Gruta Xavier**	**2.68**	**107**	*e*P	**Pn**	**16 13 41.8**	**-1.5**
TISN	**Laguna Tiscapa**	**2.73**	**106**	*e*P	**Pn**	**16 13 42.3**	**-1.8**
MGAN	**Managua**	**2.75**	**106**	*e*P	**Pn**	**16 13 41.8**	**-2.5**
CRUN	**El Crucero**	**2.76**	**110**	*e*P	**Pn**	**16 13 44.5**	**+0.2**
HUEN		**2.78**	**102**	*e*P	**Pn**	**16 13 44.0**	**-0.7**
APON	**Apoyo**	**2.99**	**109**	*e*P	**Pn**	**16 13 47.2**	**-0.4**
SSN	**San Juan del S**	**3.44**	**118**	*e*P	**Pn**	**16 13 53.8**	**+0.1**
CONN	**Concepcion**	**3.52**	**112**	*e*P	**Pn**	**16 13 53.3**	**-1.6**
THIG		**3.77**	**302**	*i*P	**Pn**	**16 13 55.3**	**-3.0**
THIG				*i*S	**Sn**	**16 14 38.7**	**-2.7**
JTS	**JuntasAbangare**	**4.72**	**123**	*e*Pn	**Pn**	**16 14 12.1**	**+0.8**
JTS				*e*Sn	**Sn**	**16 15 03.5**	**-1.3**
JCR	**Jicaral**	**4.85**	**129**	*e*P	**Pn**	**16 14 14.6**	**+1.4**
PCIG		**4.97**	**304**	*e*P	**Pn**	**16 14 14.4**	**-0.3**
PCIG				*i*S	**Sn**	**16 15 09.3**	**-1.6**
CGA2	**Cerro Gallo 2**	**5.27**	**123**	*e*P	**Pn**	**16 14 21.4**	**+2.6**
PRS1	**Puriscal**	**5.41**	**122**	*e*P	**Pn**	**16 14 23.7**	**+2.8**
TGIG		**5.56**	**314**	*i*P	**Pn**	**16 14 23.4**	**+0.6**
TGIG				*i*S	**Sn**	**16 15 26.2**	**+0.7**
LAJ	**Bijagual**	**5.63**	**122**	*e*P	**Pn**	**16 14 22.2**	**-1.7**
QCR	**Quepos**	**5.85**	**126**	*e*P	**Pn**	**16 14 28.5**	**+1.7**
URSC	**Urasca**	**5.93**	**121**	*e*P	**Pn**	**16 14 29.9**	**+1.9**
URSC				*e*S	**Sn**	**16 15 40.7**	**+6.0**
BUS	**Buena Vista**	**6.10**	**123**	*e*P	**Pn**	**16 14 33.4**	**+3.1**
CMIG	**Matias Romero**	**7.07**	**307**	P	**Pn**	**16 14 44.4**	**+0.8**
	comp=Z,2.0nm,0.3s,baz=109,slow=9.6,SNR=17						
CMIG				S	**Sn**	**16 16 01.1**	**-1.6**
	comp=Z,4.3nm,0.3s,baz=84,slow=19,SNR=4.3						
ACR	**Cerro Adams**	**7.10**	**126**	*e*P	**Pn**	**16 14 45.9**	**+1.9**
ACR				*e*S	**Sn**	**16 16 01.3**	**-2.0**
TEIG	**Tepich**	**7.28**	**5**	*e*Pn	**Pn**	**16 14 47.7**	**+1.2**
	comp=Z,33nm,0.7s						
HUIG	**Huatulco**	**7.49**	**293**	*i*P	**Pn**	**16 14 51.1**	**+1.7**
HUIG	**Huatulco**	**7.49**	**293**	*e*P	**Pn**	**16 14 44.6**	**-4.7**
VHO	**Vista Hermosa**	**8.57**	**300**	*e*P	**Pn**	**16 15 03.2**	**-1.0**
VHO				*i*S	**Sn**	**16 16 38.1**	**-1.5**
PNIG	**Pinotepa**	**9.52**	**292**	*i*P	**Pn**	**16 15 14.8**	**-2.4**
PNIG	**Pinotepa**	**9.52**	**292**	*i*P	**Pn**	**16 15 14.8**	**-2.4**
BCIP	**Isla Barro Col**	**9.70**	**112**	*e*Pn	**Pn**	**16 15 17.7**	**-1.9**
PPM	**Popocatepetl**	**11.12**	**305**	*i*P	**Pn**	**16 15 41.6**	**+2.5**
PPM	**Popocatepetl**	**11.12**	**305**	*i*P	**Pn**	**16 15 41.6**	**+2.5**
SOR	**Soroa**	**11.32**	**29**	*e*	**Pn**	**16 15 45.8**	**+4.0**
SOR	**Soroa**	**11.32**	**29**	*e*	**Pn**	**16 15 45.8**	**+4.0**
MTDJ	**Mount Denham**	**12.19**	**63**	*e*Pn	**Pn**	**16 15 54.8**	**+1.0**
GTBY	**Guantanamo Bay**	**14.98**	**61**	*e*Pn	**Pn**	**16 16 35.2**	**+3.6**
DWPF	**Disney**	**16.66**	**24**	*e*Pn	**Pn**	**16 16 55.1**	**+2.2**
	comp=Z,44nm,0.8s						
VBMS	**Vicksburg**	**19.25**	**356**	*e*P	**Pn**	**16 17 24.9**	**+0.3**
	comp=Z,54nm,0.8s						
VBMS				*e*		16 17 38.8	
LRAL	**Lakeview Retre**	**20.09**	**5**	*e*P	**P**	**16 17 33.2**	**+0.7**
	comp=Z,11nm,0.8s						
JCT	**Junction City**	**20.14**	**332**	⇑P	**P**	**16 17 33.2**	**+0.2**
	baz=20,SNR=8.1						
JCT	**Junction City**	**20.14**	**332**	*e*P	**P**	**16 17 32.9**	**-0.1**
	comp=Z,16nm,0.8s						
628A	**Black Gap, Mar**	**20.95**	**324**	⇑P	**P**	**16 17 42.4**	**+0.7**
	baz=21,SNR=15						
GOGA	**Godfrey**	**20.99**	**13**	*e*P	**P**	**16 17 42.4**	**+0.2**
	comp=Z,38nm,0.7s						
GOGA				*e*		16 17 56.9	
627A	**Terlingua Ranc**	**21.21**	**323**	⇓P	**P**	**16 17 45.6**	**+1.0**
	baz=22,SNR=20						
TXAR	**Lajitas Array**	**21.29**	**322**	P	**P**	**16 17 45.8**	**+0.3**
	comp=Z,6.2nm,0.6s,mb4.1,baz=144,slow=11,SNR=70						
TXAR				ScP	ScP	16 25 23.4	+1.0
	comp=Z,0.7nm,0.8s,baz=144,slow=5.6,SNR=7.6						
TXAR				LR	LR	16 27 01.9	
	comp=Z,60nm,19.4s,MS3.0,baz=180,slow=40						
626A	**Big Bend Ranch**	**21.73**	**322**	⇓P	**P**	**16 17 51.1**	**+1.0**
	baz=22						
428A	**Kincaid Ranch,**	**21.78**	**327**	⇑P	**P**	**16 17 51.7**	**+1.0**
	baz=22						
527A	**Woodward Ranch**	**21.85**	**324**	⇑P	**P**	**16 17 53.0**	**+1.5**
	baz=22,SNR=6.5						
MIAR	**Mount Ida**	**21.92**	**350**	*e*P	**P**	**16 17 50.9**	**-1.3**
	comp=Z,20nm,0.8s,mb4.6						
UALR	**University of**	**21.96**	**353**	*e*P	**P**	**16 17 53.2**	**+0.6**
	comp=Z,14nm,0.8s,mb4.4						
UALR				*e*		16 18 07.5	
526A	**Mary Lane Ranc**	**22.07**	**323**	⇓P	**P**	**16 17 54.6**	**+0.8**
	baz=22						
427A	**Hayter Ranch,**	**22.27**	**326**	⇑P	**P**	**16 17 56.3**	**+0.4**
	baz=23						
SWET	**Sewanee**	**22.36**	**7**	*e*P	**P**	**16 17 56.4**	**-0.4**
328A	**Wristen Ranch,**	**22.36**	**327**	⇑P	**P**	**16 17 57.9**	**+1.0**
	baz=23,SNR=11						
426A	**McDonald Obser**	**22.48**	**324**	⇑P	**P**	**16 17 58.2**	**0.0**
	baz=23						
SJG	**San Juan**	**22.56**	**74**	*e*P	**P**	**16 17 52.3**	**-6.8**
	comp=Z,25nm,0.7s,mb4.8						
CBYP	**Canovanas**	**22.86**	**74**	*e*P	**P**	**16 17 54.1**	**-8.3**
	comp=Z,27nm,0.9s,mb4.7						
TKL	**Tuckaleechee C**	**23.11**	**11**	P	**P**	**16 18 02.6**	**-2.1**
	comp=Z,1.5nm,0.4s,mb3.8,baz=192,slow=6.7,SNR=3.8						
TKL				LR	LR	16 28 45.7	
	comp=Z,59nm,19.4s,MS3.0,baz=6.6,slow=41						
227A	**Bennet, Jal**	**23.11**	**328**	⇑P	**P**	**16 18 04.9**	**+0.1**
	baz=23						
WVT	**Waverly**	**23.12**	**2**	*e*P	**P**	**16 18 03.1**	**-1.7**
	comp=Z,4.4nm,0.7s,mb4.0						
425A	**Indio Mountain**	**23.12**	**323**	⇑P	**P**	**16 18 04.2**	**-0.8**
	baz=23						
WMOK	**Wichita Mounta**	**23.47**	**339**	*e*P	**P**	**16 18 06.5**	**-1.8**
	comp=Z,9.9nm,0.9s,mb4.2						
WMOK				*e*		16 18 18.9	
325A	**Bean Ranch, Si**	**23.54**	**324**	⇓P	**P**	**16 18 08.6**	**-0.4**
	baz=24,SNR=6.9						
127A	**Arkansas Junct**	**23.67**	**328**	⇑P	**P**	**16 18 09.6**	**-0.5**
	baz=24						
PCRV	**Puerto La Cruz**	**23.98**	**94**	LR	LR	16 29 23.9	
	comp=Z,86nm,18.0s,MS3.3,baz=64,slow=41						
126A	**Clayton Basin,**	**23.99**	**327**	⇑P	**P**	**16 18 12.6**	**-0.5**
	baz=24						
225A	**Deer Hill, Car**	**24.01**	**325**	⇓P	**P**	**16 18 13.1**	**-0.2**
	baz=24						
MNTX	**Cornudas Mount**	**24.02**	**324**	⇓P	**P**	**16 18 12.8**	**-0.6**
	baz=24,SNR=7.0						
MNTX	**Cornudas Mount**	**24.02**	**324**	*e*P	**P**	**16 18 11.7**	**-1.7**
	comp=Z,3.9nm,0.9s,mb3.8						
MSTX	**Muleshoe**	**24.43**	**331**	⇓P	**P**	**16 18 16.1**	**-1.0**
	baz=25,SNR=13						
Z26A	**Caprock**	**24.46**	**328**	⇓P	**P**	**16 18 16.8**	**-0.5**
	baz=25						
Y27A	**Causey**	**24.54**	**331**	⇓P	**P**	**16 18 17.4**	**-0.7**
	baz=25						
AMTX	**Amarillo**	**24.71**	**334**	⇑P	**P**	**16 18 19.4**	**-0.3**
	baz=25,SNR=5.4						
AMTX	**Amarillo**	**24.71**	**334**	*e*P	**P**	**16 18 19.2**	**-0.4**
	comp=Z,18nm,0.9s,mb4.6						
124A	**Stringfield Ra**	**24.80**	**325**	⇑P	**P**	**16 18 21.3**	**+0.8**

baz=32
MONP Monument Peak 32.00 313 ⇓P P 16 19 25.6 +0.8
baz=32
N21A Black Mountain 32.15 333 ⇑P P 16 19 26.5 +0.6
baz=32
BELC Belle Mtn. Jos 32.31 315 ⇓P P 16 19 28.3 +0.8
baz=33
SRU San Rafael 32.32 328 ⇓P P 16 19 28.7 +1.2
baz=33
SRU San Rafael 32.32 328 *e*P P 16 19 28.5 +1.0
comp=Z,3.1nm,0.6s,mb4.3
PFO Pinyon Flat Ob 32.41 314 ⇓P P 16 19 29.2 +0.8
baz=33
U13A Pakoon Wash 32.42 320 ⇑P P 16 19 29.0 +0.5
baz=33
L23A Garrett 32.52 336 ⇓P P 16 19 28.9 -0.2
baz=33,SNR=5.7
N20A Spence Gulch, 32.54 332 ⇑P P 16 19 29.8 +0.4
baz=33,SNR=7.7
M21A Separation Pea 32.77 334 ⇑P P 16 19 31.7 +0.3
baz=33
SADO Sadowa 32.82 13 P P 16 19 29.1 -2.7
comp=Z,6.1nm,0.7s,mb4.7,baz=224,slow=9.2,SNR=6.9
M20A Sweetwater, Wa 33.04 333 ⇑P P 16 19 33.8 +0.1
baz=33
L21A Rawlins 33.07 334 ⇓P P 16 19 33.8 -0.2
baz=33,SNR=11
S13A Holt Ranch, En 33.12 322 ⇓P P 16 19 35.0 +0.6
baz=33
K22A Casper 33.30 336 ⇓P P 16 19 36.2 +0.2
baz=34
L20A Wamsutter 33.52 333 ⇓P P 16 19 37.8 -0.1
baz=34
RSSD Black Hills 33.67 340 *e*P P 16 19 38.6 -0.6
comp=Z,6.2nm,0.7s,mb4.7
Q14A Sevier Lake (B 33.73 325 ⇓P P 16 19 40.5 +0.7
baz=34
P14A Drum Mountains 34.03 326 ⇓P P 16 19 42.8 +0.5
baz=34
L19A Farson 34.05 332 ⇑P P 16 19 42.8 +0.3
baz=34
LRMC Laurel Mountai 34.29 316 ⇑P P 16 19 45.0 +0.3
baz=35
K19A Absolon Red Bu 34.40 334 ⇓P P 16 19 45.8 +0.3
baz=35
P13A Bates Ranch, G 34.46 325 ⇑P P 16 19 46.6 +0.4
baz=35
BW06 Boulder Array 34.67 333 ⇑P P 16 19 47.3 -0.6
baz=35
HWUT Hardware Ranch 34.71 330 *e*P P 16 19 49.8 +1.5
comp=Z,3.3nm,0.8s,mb4.3
K18A Toltan Ranch, 34.78 332 ⇓P P 16 19 49.5 +0.7
baz=35
I20A Worland 35.02 336 ⇑P P 16 19 51.1 +0.2
baz=35
J18A Kendall Valley 35.23 333 ⇑P P 16 19 52.7 0.0
baz=36
L15A Malad City 35.41 329 ⇑P P 16 19 54.3 0.0
baz=36
LPAZ La Paz 35.59 144 P P 16 19 59.9 +3.8
comp=Z,0.6nm,0.4s,mb3.8,baz=21,slow=9.4,SNR=3.2
REDW Red Top Meadow 35.72 332 *e*P P 16 19 56.1 -0.8
comp=Z,1.7nm,1.0s,mb4.9
AGMN Agassiz Nation 35.73 352 *e*P P 16 19 51.7 -5.2
comp=Z,20nm,0.9s,mb5.0
LOHW Long Hollow 35.80 333 *e*P P 16 19 56.9 -0.7
comp=Z,6.7nm,0.9s,mb4.6
L14A Malta 35.87 328 ⇑P P 16 19 58.0 -0.2
baz=36
K15A Arbon 35.99 330 ⇓P P 16 19 58.9 -0.3
baz=36
K14A Jones Ranch, D 36.21 329 ⇓P P 16 20 00.9 -0.2
baz=36
NVAR Mina Array Bea 36.38 320 P P 16 20 03.0 +0.4
comp=Z,1.3nm,0.7s,mb4.0,baz=136,slow=6.9,SNR=8.0
NVAR PcP PcP 16 22 26.2 -0.2
comp=Z,1.3nm,0.7s,baz=137,slow=4.2,SNR=5.8
NVAR ScP ScP 16 26 08.9 -0.5
comp=Z,0.7nm,0.6s,baz=143,slow=5.2,SNR=5.1
LAO LASA Array 36.66 340 ⇓P P 16 20 04.6 -0.3
baz=37
F19A Roth Farm, Mol 36.93 337 ⇑P P 16 20 06.6 -0.6
baz=37
E20A Meyer Farm, Mu 37.17 338 ⇓P P 16 20 09.4 +0.2
baz=37
I14A Mackay 37.37 330 ⇓P P 16 20 11.5 +0.6
baz=38
H15A Lima 37.51 332 ⇑P P 16 20 12.4 +0.3
baz=38
DGMT Dagmar 37.63 343 ⇓P P 16 20 12.2 -0.9
baz=38
DGMT Dagmar 37.63 343 *e*P P 16 20 10.9 -2.1
comp=Z,13nm,0.6s,mb4.8
ULM Lac du Bonnet 37.64 353 LR LR 16 37 27.2
comp=Z,170nm,18.8s,MS3.9,baz=129,slow=39
F17A Fitzpatrick Pl 37.66 335 ⇑P P 16 20 13.0 -0.3
baz=38
I13A Wildhorse Cree 37.68 330 ⇑P P 16 20 13.8 +0.2
baz=38
MCMT McKenzie Canyo 37.77 332 *e*P P 16 20 13.4 -0.9
comp=Z,3.2nm,0.7s,mb4.2
H14A Leadore 37.84 331 ⇓P P 16 20 15.0 0.0
baz=38
BOZ Bozeman (W) 37.86 334 ⇑P P 16 20 15.0 -0.1
baz=38
I12A Atlanta 38.10 329 ⇓P P 16 20 17.3 +0.2
baz=38
H13A Challis 38.23 330 ⇑P P 16 20 18.0 -0.2
baz=38
H12A Diamond D Ranc 38.51 330 ⇓P P 16 20 20.3 -0.3
baz=39
D17A Six Diamond Ra 38.68 336 ⇑P P 16 20 21.5 -0.4
baz=39
E15A Deer Lodge 38.91 334 ⇑P P 16 20 23.5 -0.4
baz=39
D16A Dana Ranch, Ca 38.93 335 ⇓P P 16 20 23.4 -0.7
baz=39
EGMT Eagleton 39.05 338 ⇑P P 16 20 24.5 -0.5
baz=39
C17A Wharram Farm, 39.10 337 ⇑P P 16 20 23.7 -1.8
baz=39
G12A Big Creek, Yel 39.16 330 ⇑P P 16 20 24.8 -1.2
baz=39
F13A Darby 39.18 332 ⇓P P 16 20 25.7 -0.4
baz=39
D15A Lincoln 39.34 334 ⇑P P 16 20 26.9 -0.5
baz=40
B18A Beardsley Farm 39.37 338 ⇓P P 16 20 27.2 -0.5
baz=40
E13A Victor 39.60 332 ⇓P P 16 20 28.8 -0.9
baz=40
C16A Fuhringer Ranc 39.63 336 ⇑P P 16 20 29.0 -0.9
baz=40
B17A L&G Farms, Che 39.66 337 ⇑P P 16 20 29.1 -1.0
baz=40
D14A Greenough 39.79 334 ⇑P P 16 20 31.2 0.0
baz=40
SIV San Ignacio 39.83 135 P P 16 20 31.4 -0.5
comp=Z,1.0nm,0.4s,mb3.9,baz=336,slow=7.6,SNR=8.0
C15A Salmond Ranch, 39.96 335 ⇓P P 16 20 32.5 -0.1
baz=40
A17A Triple J Farms 40.16 338 ⇑P P 16 20 33.0 -1.3
baz=40
E12A Beaver Dam Sad 40.22 331 ⇑P P 16 20 33.4 -1.4
baz=40
D13A Huson 40.22 333 ⇑P P 16 20 33.3 -1.5
baz=40
D12A Red Ives Fores 40.59 332 ⇓P P 16 20 37.0 -0.9
baz=41
F10A Beach Ranch, E 40.70 330 ⇑P P 16 20 38.0 -0.7
baz=41
A14A Double T Ranch 41.24 336 ⇓P P 16 20 42.3 -0.8
baz=42
WALA Waterton Lakes 41.50 335 P P 16 20 44.5 -0.9
comp=Z,0.1nm,0.8s
C11A Tepee Creek (N 41.59 332 ⇑P P 16 20 45.6 -0.4
baz=42
EDM Edmonton 44.64 339 *e*P P 16 21 08.4 -2.2
SCHQ Schefferville 45.26 18 P P 16 21 12.1 -3.5
comp=Z,1.5nm,0.4s,mb4.2,baz=196,slow=7.1,SNR=6.4
SCHQ LR LR 16 40 54.1
comp=Z,105nm,20.8s,MS3.8,baz=171,slow=37
CPUP Villa Florida 49.69 142 LR LR 16 44 19.0
comp=Z,78nm,21.6s,MS3.7,baz=88,slow=38
YKA Yellowknife Ar 52.77 345 P P 16 22 10.7 -2.2
YKA Yellowknife Ar 52.77 345 P P 16 22 10.7 -2.2
comp=Z,3.6nm,0.6s,mb4.5,baz=139,slow=7.7,SNR=14
DLBC Dease Lake 54.85 335 *e*P P 16 22 27.7 -0.5

TAOE Nuku Hiva Isla 55.26 250 *e*LR LR 16 38 33.8
comp=Z,198nm,26.7s
PLCA Paso Flores 56.05 163 LR LR 16 42 44.1
comp=Z,114nm,18.6s,MS4.0,baz=268,slow=32
RKT Rikitea 57.55 232 *e*LR LR 16 39 42.9
comp=Z,182nm,30.5s
RKT *e*T 17 24 33.0
comp=Z,2.8nm,0.2s
INK Inuvik 62.31 343 *e*P P 16 23 17.6 -2.3
comp=Z,4.3nm,0.8s,mb4.6
PMOR Pomariorio Ree 64.60 246 *e*T 17 33 46.5
comp=Z,4.5nm,0.2s
ILAR Eielson Array 64.99 336 P P 16 23 35.6 -2.0
ILAR LR LR 16 53 40.0
ILAR Eielson Array 64.99 336 P P 16 23 35.6 -2.0
comp=Z,0.5nm,0.4s,mb3.9,baz=163,slow=4.3,SNR=9.0
ILAR LR LR 16 53 40.0
comp=Z,64nm,18.9s,MS3.8,baz=135,slow=38
PPT Papeete 67.07 244 *e*LR LR 16 43 55.1
comp=Z,196nm,26.5s
PPT Papeete 67.07 244 LR LR 16 44 21.3
comp=Z,299nm,19.8s,MS4.5,baz=54,slow=28
ESDC Sonseca Array 78.05 52 LR LR 16 56 13.8
comp=Z,49nm,18.8s,MS3.9,baz=240,slow=33
NOA NORSAR Array B 83.66 29 LR LR 17 00 03.5
comp=Z,35nm,18.9s,MS3.8,baz=275,slow=34
ARCES ARCESS Array B 86.21 19 P P 16 25 36.5 -2.5
ARCES ARCESS Array B 86.21 19 P P 16 25 36.5 -2.5
comp=Z,1.1nm,1.0s,mb4.0,baz=289,slow=3.7,SNR=6.9
FINES FINESS Array B 90.19 26 LR LR 17 10 22.6
comp=Z,35nm,18.9s,MS3.8,baz=0.0,slow=38
CN2 Changchun 115.41 333 *e*PKP PKPdf 16 31 36.5 -3.3
CN2 PP PP 16 32 42.8 +2.3
SONM Songino Array 117.98 348 PKP PKPdf 16 31 42.9 -1.7
comp=Z,0.2nm,0.5s,baz=14,slow=1.7,SNR=2.8
MKAR Makanchi Array 120.03 7 PKP PKPdf 16 31 45.8 -2.8
comp=Z,0.2nm,0.4s,baz=331,slow=3.8,SNR=5.0
HHC Hu-ho-hao-te 123.22 341 *e*PKP PKPdf 16 31 49.8 -5.1
HHC PP PP 16 33 35.3 +1.3
HHC PKS 16 35 25.0
WMQ Urumqi 123.44 3 *e*PKP PKPdf 16 31 50.9 -4.3
WMQ LR LR
comp=N,75nm,25.6s
WMQ LR LR
comp=Z,79nm,26.8s,MS4.2
KSH Kashi 125.97 14 *e*PKP PKPdf 16 32 01.0 +0.8
KSH *e*PKS 16 35 36.1
KSH *e*SKS SKSdf 16 39 01.6 -7.0
GTA Gaotai 127.29 351 *e*PKP PKPdf 16 32 01.6 -1.1
LZH Lanzhou 129.77 347 *e*PKP PKPdf 16 32 03.0 -4.5
WRA Warramunga Arr 137.99 255 PKP PKPdf 16 32 22.2 -1.1
comp=Z,0.4nm,0.3s,baz=89,slow=2.5,SNR=4.5
ASAR Alice Springs 138.08 249 PKP PKPdf 16 32 24.0 +0.6
comp=Z,0.4nm,0.6s,baz=100,slow=2.9,SNR=7.4
CMAR Chiang Mai Arr 147.85 346 PKPbc PKPbc 16 32 41.3 -2.4
comp=Z,1.4nm,0.8s,baz=344,slow=3.5,SNR=10

IDC 21 16:29:21.0±4.8, 15°.93N×145°.78E, h220km±97km, mb3.0/4, mb1 3.2/5, mb1mx2.9/23, mbtmp3.1/5, Error ellipse: s-maj=136.9km s-min=40.9km az=177.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.48**	**201**	P	Pn	16 30 06.6	+0.5
	2.5nm,0.3s,baz=350,slow=17,SNR=5.2						
GUMO				S	S	16 30 41.7	+0.3
	9.7nm,0.3s,baz=1.1,slow=23,SNR=9.6						
SONM	**Songino Array**	**45.37**	**323**	P	P	16 37 17.3	-0.2
	0.2nm,0.5s,baz=115,slow=8.2,SNR=3.6						
MKAR	**Makanchi Array**	**60.44**	**315**	P	P	16 39 08.0	+0.4
	0.2nm,0.4s,baz=83,slow=9.0,SNR=4.7						
KURK	**Kurchatov**	**63.39**	**319**	P	P	16 39 27.2	+0.2
	1.3nm,0.5s,baz=98,slow=7.0,SNR=7.3						
ILAR	**Eielson Array**	**66.09**	**26**	P	P	16 39 44.2	0.0
	0.2nm,0.4s,baz=249,slow=5.5,SNR=4.8						

IDC 21 16:33:09.0±6.4, 17°.59S×178°.58W, h622km±80km, mb3.1/5, mb1 3.4/5, mb1mx3.1/16, mbtmp3.1/5, Error ellipse: s-maj=106.4km s-min=29.4km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.64**	**241**	P	P	16 39 41.2	0.0
	2.4nm,0.4s,baz=90,slow=9.1,SNR=9.4						
WRA	**Warramunga Arr**	**44.53**	**259**	P	P	16 40 27.5	0.0
	2.0nm,0.3s,baz=89,slow=7.1,SNR=22						
ASAR	**Alice Springs**	**44.72**	**254**	P	P	16 40 29.1	+0.1
	8.2nm,0.6s,baz=88,slow=8.6,SNR=242						
ASAR				PcP	PcP	16 41 57.0	-0.3
	0.5nm,0.4s,baz=102,slow=4.0,SNR=6.2						
NVAR	**Mina Array Bea**	**79.31**	**44**	P	P	16 44 11.9	+0.3
	0.5nm,0.7s,baz=224,slow=8.3,SNR=3.7						
TXAR	**Lajitas Array**	**85.97**	**58**	P	P	16 44 45.4	+0.3
	0.2nm,0.6s,baz=230,slow=8.1,SNR=3.6						
BRTR	**Keskin Array B**	**144.44**	**315**	PKP	PKPdf	16 51 35.9	0.0
	0.6nm,0.7s,baz=46,slow=4.2,SNR=3.8						

*ISCJB **21** 16:38:59.1±0.4, 24°.76N±0°.04×97°.98E±0°.07, h10km, mb3.6/13, Error ellipse: s-maj=9.9km s-min=4.7km az=157.2*
*IDC **21** 16:39:01.0±1.0, 24°.94N×98°.11E, h0km, mb3.5/7, mb1 3.6/8, mb1mx3.5/27, mbtmp3.5/8, ML3.3/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/27, Error ellipse: s-maj=55.3km s-min=14.9km az=72.0*
*BJI **21** 16:39:03.2, 24°.98N×97°.96E, h15km, ML3.9/9*
*NEIC **21** 16:39:04.2±3.2, 24°.76N×97°.68E, h21km±26km, mb3.9/6, Error ellipse: s-maj=14.7km s-min=8.3km az=63.0*
ISC 21 16:39:01.8±0.4, 24°.84N±0°.03×98°.02E±0°.04, h10km, n26, σ1s21/32, mb3.6/13, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**3.71**	**270**	*e*PKP	Pn	16 40 04.0	+4.8
KMI	**Kunming**	**4.30**	**85**	Pg	Pg	16 40 24.6	+0.5
KMI				Sg	Sg	16 41 18.5	-1.3
KMI				smax			
	comp=N,260nm,1.2s						
KMI				smax			
	comp=E,130nm,0.8s						
CHRT	**Chiangrai**	**5.21**	**161**	PG	Pg	16 40 40.0	-1.6
CHRT				SG	Sg	16 41 50.0	+0.9
SHL	**Shillong**	**5.60**	**279**	*e*PKP	Pb	16 40 35.0	-4.7
SHL				*i* S	Sg	16 42 01.0	-0.7
CHG	**Chiang Mai**	**6.06**	**172**	PG	Pg	16 40 54.7	-3.2
CHG				SG	Sg	16 42 16.3	-0.1
CHTO	**Chiang Mai**	**6.06**	**172**	*e*Pn	Pn	16 40 31.7	+0.2
	comp=E,13nm,0.4s						
CHTO				*e*Pg	Pg	16 40 54.3	-3.6
CHTO				*e*Sg	Sg	16 42 13.7	-2.7
CMAR	**Chiang Mai Arr**	**6.41**	**172**	Pn	Pn	16 40 37.5	+1.3
	comp=E,0.2nm,0.3s,baz=347,slow=13,SNR=5.8						
CMAR				Pg	Pg	16 40 59.7	-4.9
	comp=E,0.7nm,0.3s,baz=347,slow=18,SNR=15						
CMAR				Lg		16 42 24.4	
	comp=E,0.7nm,0.3s,baz=322,slow=19,SNR=4.6						
LSA	**Lhasa**	**7.79**	**310**	*e*Pn	Pn	16 40 54.3	-1.0
	comp=E,4.8nm,0.6s						
ENH	**Enshi**	**11.52**	**59**	Pn	Pn	16 41 51.8	+5.4
LZH	**Lanzhou**	**12.28**	**23**	*e*P	Pn	16 41 56.5	-0.2
LZH				pP		16 42 01.5	
LZH				sP		16 42 03.0	
SONM	**Songino Array**	**23.89**	**14**	P	P	16 44 13.7	-1.8
	comp=E,0.3nm,0.5s,mb2.9,baz=200,slow=7.7,SNR=3.2						
ULN	**Ulaanbaatar**	**24.07**	**15**	*e*P	P	16 44 20.6	+3.4
	comp=E,2.8nm,0.9s,mb3.7						
MK31	**Makanchi Array**	**25.25**	**334**	*e*P	P	16 44 25.4	-2.5
MKAR	**Makanchi Array**	**25.25**	**334**	P	P	16 44 27.9	-0.1
	comp=E,1.2nm,0.6s,mb3.6,baz=143,slow=8.9,SNR=12						
TKM2	**Tokmak 2**	**25.79**	**320**	*e*P	P	16 44 33.0	+0.1
	comp=E,2.3nm,0.9s,mb3.7						
UCH	**Uchtor**	**26.03**	**318**	*e*P	P	16 44 29.6	-5.5
	comp=E,1.7nm,0.6s,mb3.8						
AML	**Almayashu**	**26.48**	**317**	*e*P	P	16 44 40.5	+1.4
	comp=E,2.4nm,0.7s,mb3.8						
EKS2	**Erkin-Say**	**26.72**	**318**	*e*P	P	16 44 41.8	+0.4
	comp=E,2.0nm,0.6s,mb3.8						
KURK	**Kurchatov**	**29.85**	**335**	P	P	16 45 10.0	+0.9
	comp=E,0.3nm,0.5s,mb3.3,baz=151,slow=6.3,SNR=2.2						
ZAA0	**Zalesovo Array**	**30.70**	**345**	P	P	16 45 17.9	+1.3
ZALV	**Zalesovo Beam**	**30.70**	**345**	P	P	16 45 16.9	+0.3
	comp=E,1.0nm,0.5s,mb3.9,baz=166,slow=11,SNR=6.9						
BVAR	**Borovoye Array**	**35.00**	**331**	P	P	16 45 54.4	+0.3
	comp=E,0.3nm,0.5s,mb3.5,baz=143,slow=8.7,SNR=3.0						
ABKAR	**Akbulak array**	**38.35**	**319**	P	P	16 46 21.7	-1.1
	comp=E,1.1nm,0.7s,mb3.7						
PETK	**Petropavlovsk-**	**52.42**	**41**	LR	LR	17 11 42.2	
	comp=E,19nm,18.3s,baz=241,slow=38						
WRA	**Warramunga Arr**	**56.84**	**138**	P	P	16 48 48.6	+1.9
	comp=E,0.5nm,0.4s,mb3.9,baz=327,slow=7.4,SNR=3.7						
ASAR	**Alice Springs**	**59.46**	**141**	P	P	16 49 06.3	+1.3
	comp=E,0.5nm,1.1s,mb3.5,baz=325,slow=6.2,SNR=2.7						

IDC 21 16:49:35.5±3.6, 29°.37S×178°.07W, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.8/14, mbtmp3.8/3, Error ellipse: s-maj=132.2km s-min=44.4km az=153.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.11**	**266**	P	P	16 57 37.1	-0.7
	0.4nm,0.7s,baz=102,slow=6.9,SNR=6.3						
WRA	**Warramunga Arr**	**44.01**	**271**	P	P	16 57 45.4	+0.3
	1.7nm,0.8s,baz=109,slow=7.7,SNR=5.2						
MJAR	**Matsushiro Arr**	**77.36**	**325**	P	P	17 01 32.4	+0.2
	2.4nm,0.9s,baz=168,slow=7.0,SNR=4.4						
NOA	**NORSAR Array B**	**147.73**	**352**	PKPbc	PKPbc	17 09 19.9	-1.5
	2.7nm,0.9s,baz=15,slow=4.4,SNR=5.0						
AKASG	**Malin Array Be**	**150.44**	**324**	PKPbc	PKPbc	17 09 29.2	+0.5
	1.7nm,0.6s,baz=49,slow=2.9,SNR=4.8						

*ISCJB **21** 17:03:54.7±1.0, 25°.59S±0°.03×177°.79W±0°.05, h164km±9km, mb4.7/49, Error ellipse: s-maj=7.6km s-min=4.1km az=27.7*
*IDC **21** 17:03:58.2±1.9, 25°.12S×177°.87W, h181km±16km, mb4.2/15, mb1 4.4/16, mb1mx4.4/17, mbtmp4.3/16, MS3.9/1, Ms1 3.9/1, ms1mx2.9/17, Error ellipse: s-maj=13.8km s-min=12.5km az=102.0*
*MOS **21** 17:03:58.3±2.1, 25°.00S×177°.74W, h192km, mb5.2/10, Error ellipse: s-maj=12.6km s-min=10.8km az=108.0*
*NEIC **21** 17:03:59.9±0.2, 25°.21S×177°.78W, mb4.8/23, Error ellipse: s-maj=9.7km s-min=7.8km az=142.0*
*GCMT **21** 17:04:02.3±0.8, 25°.35S×177°.66W, h199km±4km, MW5.1, Moment Tensor Solution. s23,c26; Moment tensor: Scale 10^{16}Nm; M_{rr}2.26±.35; $M_{\theta\theta}$-5.03±.61; $M_{\phi\phi}$2.77±.55; $M_{r\theta}$-2.85±.44; $M_{r\phi}$0.69±.60; $M_{\theta\phi}$-2.41±.42; Best double couple: $M_0$5.80000×10^{16} NP1:ϕ_s133.00000°, δ43.00000°, λ157.00000°. NP2:ϕ_s240.00000°, δ75.00000°, λ49.00000°. Principal axes: T 5.5200, Plg45.0000°, Azm109.0000°; N 0.4900, Plg39.0000°, Azm252.0000°; P -6.0100, Plg19.0000°, Azm359.0000°; Data Used: IU II G IC.*
*BJI **21** 17:04:02.9, 24°.20S×178°.09W, h193km, mB5.0/14, mb4.7/21*
ISC 21 17:03:55.6±0.9, 25°.70S±0°.04×177°.76W±0°.05, h163km±8km, h193km±3.9km; pP-P, n400, σ0s91/251, mb4.7/47, 109C-59D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.83**	**333**	*e*P	Pn	17 06 00.0	0.0
	682nm,1.3s						
MSVF	**Nonsavu**	**8.83**	**333**	*e*P	Pn	17 06 00.0	0.0
MSVF				pmax	pmax		
	comp=Z,682nm,1.3s						
OUZ	**Omahuta**	**12.06**	**216**	*e*P	Pn	17 06 53.7	+11
	comp=Z,106nm,1.3s						
OUZ	**Omahuta**	**12.06**	**216**	PN	Pn	17 06 53.6	+11
MXZ	**Matakaoa Point**	**12.29**	**195**	SN	Sn	17 09 02.1	+0.9
PUZ	**Puketiti**	**12.79**	**194**	*e*P	Pn	17 06 50.8	-0.7
PUZ				S	Sn	17 09 10.9	-2.2
PUZ	**Puketiti**	**12.79**	**194**	*e*PN	Pn	17 06 50.8	-0.7
PUZ				SN	Sn	17 09 10.9	-2.3
AFI	**Afiamalu**	**13.01**	**27**	*e*P	Pn	17 06 44.2	-10
	comp=Z,607nm,1.0s						
AFI	**Afiamalu**	**13.01**	**27**	P	Pn	17 06 43.8	-11
	comp=Z,39nm,0.3s,baz=238,slow=5.4,SNR=30						
AFI				S	Sn	17 08 49.5	-29
	comp=Z,7.1nm,0.3s,baz=310,slow=16,SNR=4.2						
AFI	**Afiamalu**	**13.01**	**27**	*e*P	Pn	17 06 44.2	-10
AFI				pmax	pmax		
	comp=Z,607nm,1.0s						
CNGZ	**Carnagh Statio**	**13.19**	**194**	*e*PN	Pn	17 06 56.8	+0.2
MWZ	**Matawai**	**13.21**	**196**	P	Pn	17 06 56.5	-0.4
MWZ				S	Sn	17 09 22.1	-1.2
MWZ	**Matawai**	**13.21**	**196**	PN	Pn	17 06 56.5	-0.4
MWZ				SN	Sn	17 09 22.1	-1.2
URZ	**Urewera**	**13.25**	**198**	*e*P	Pn	17 06 58.5	+1.1
URZ	**Urewera**	**13.25**	**198**	P	Pn	17 07 00.8	+3.4
	comp=Z,1.1nm,0.3s,baz=270,slow=7.4,SNR=7.2						
URZ				S	Sn	17 09 24.7	+0.4
	comp=Z,4.9nm,0.3s,baz=120,slow=20,SNR=7.8						
URZ	**Urewera**	**13.25**	**198**	*e*PN	Pn	17 06 58.5	+1.1
URZ				SN	Sn	17 09 23.2	-1.0
RAHZ	**Arahi**	**13.88**	**197**	SN	Sn	17 09 39.9	+0.7
BKZ	**Black Stump Fm**	**14.27**	**198**	*e*P	Pn	17 07 12.5	+2.3
BKZ				S	Sn	17 09 47.0	-1.7
BKZ	**Black Stump Fm**	**14.27**	**198**	*e*PN	Pn	17 07 12.5	+2.3
BKZ				SN	Sn	17 09 47.0	-1.7
DZM	**Mont Dzumac**	**14.89**	**281**	*e*P	Pn	17 07 24.4	+6.3
	comp=Z,115nm,1.3s						
DZM	**Mont Dzumac**	**14.89**	**281**	*e*P	Pn	17 07 24.5	+6.3
	comp=Z,23nm,0.7s						
WAZ	**Wanganui**	**15.28**	**202**	SN	Sn	17 10 12.3	-0.5
MRZ	**Mangatainoka R**	**15.92**	**199**	SN	Sn	17 10 18.5	-10
HOWZ	**Holdsworth Sta**	**16.16**	**199**	SN	Sn	17 10 25.3	-8.5
KIW	**Kapiti Island**	**16.30**	**200**	SN	Sn	17 10 29.6	-7.8
TCW	**Tory Channel**	**16.82**	**201**	SN	Sn	17 10 40.4	-9.3
RAR	**Rarotonga**	**17.09**	**79**	*e*P	Pn	17 07 45.5	+0.6
	comp=Z,75nm,0.9s						
RAR	**Rarotonga**	**17.09**	**79**	P	Pn	17 07 45.5	+0.6
	comp=Z,1.5nm,0.3s,baz=243,slow=6.1,SNR=10.0						
RAR	**Rarotonga**	**17.09**	**79**	*e*P	Pn	17 07 45.5	+0.6
RAR				pmax	pmax		
	comp=Z,75nm,0.9s						
TUWZ	**Tuamarina**	**17.13**	**202**	SN	Sn	17 10 50.0	-7.1
NNZ	**Nelson**	**17.14**	**203**	*e*P	Pn	17 07 45.8	+0.6
NNZ				S	S	17 10 49.7	-4.6
NNZ	**Nelson**	**17.14**	**203**	*e*PN	Pn	17 07 45.8	+0.6
NNZ				SN	Sn	17 10 49.7	-7.4
KHZ	**Kahutara**	**18.15**	**201**	SN	Sn	17 11 11.1	-10
MQZ	**McQueen's Vall**	**19.59**	**201**	SN	S	17 11 41.1	-2.1
WVZ	**Waitaha Valley**	**19.73**	**206**	SN	S	17 11 46.1	+0.1
RPZ	**Rata Peaks**	**20.15**	**204**	P	P	17 08 23.5	+6.5
RPZ				S	S	17 11 54.1	-0.2
RPZ	**Rata Peaks**	**20.15**	**204**	P	P	17 08 23.5	+6.5
	comp=Z,6.4nm,0.4s,baz=24,slow=24,SNR=7.5						
RPZ				S	S	17 11 54.1	-0.2
	comp=Z,12nm,0.4s,baz=7.7,slow=22,SNR=10						
PPT	**Papeete**	**27.38**	**78**	*e*LR	LR	17 16 25.8	
	comp=Z,97nm,26.0s						
PPT	**Papeete**	**27.38**	**78**	LR	LR	17 16 48.4	
	comp=Z,256nm,20.2s,baz=304,slow=28						
EIDS	**Eidsvold**	**28.09**	**264**	*e*P	P	17 09 35.5	+3.4
	comp=Z,7.4nm,0.8s,mb4.5						
EIDS				*e*pP	pP	17 10 15.7	+10
RMQ	**Roma**	**30.04**	**261**	*e*P	P	17 09 53.6	+4.3
	comp=Z,17nm,0.8s,mb4.8						
CTA	**Charters Tower**	**33.55**	**272**	*e*P	P	17 10 22.1	+2.0
	comp=Z,12nm,0.7s,mb4.7						
CTAO	**Charters Tower**	**33.55**	**272**	*e*P	P	17 10 21.9	+1.8
	comp=Z,10nm,0.6s,mb4.7						
CTAO				*e*pP	pP	17 11 00.1	+5.6
CTAO	**Charters Tower**	**33.55**	**272**	*e*P	P	17 10 21.9	+1.8
CTAO				*e**PP	pP	17 11 00.1	+5.6
CTAO				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
MTSU	**Mount Surprise**	**35.88**	**274**	*e*P	P	17 10 42.2	+2.1
	comp=Z,57nm,0.7s,mb5.3						
STKA	**Stephens Creek**	**36.00**	**251**	P	P	17 10 43.2	+2.3
	comp=Z,4.5nm,0.8s,mb4.1,baz=85,slow=6.1,SNR=10						
STKA	**Stephens Creek**	**36.00**	**251**	*e*P	P	17 10 43.7	+2.8
PMG	**Port Moresby**	**37.01**	**290**	*e*P	P	17 10 49.7	0.0
PMG				pmax	pmax		
	comp=Z,54nm,0.8s						
COEN	**Coen**	**38.42**	**280**	*e*P	P	17 11 03.3	+1.

WRA	Warramunga Arr	44.34	267	P		P	17 11 49.4	-0.3		
WRA				pP		pP	17 12 34.8	+9.1		
WRA				ScP		ScP	17 17 06.5	-1.2		
WRA				S		S	17 18 06.8	-4.9		
WRA	Warramunga Arr	44.34	267	P		P	17 11 49.4	-0.3		
comp=Z,5.7nm,0.6s,mb4.4,baz=103,slow=8.0,SNR=18										
WRA				pP		pP	17 12 34.8	+9.1		
comp=Z,8.7nm,0.8s,baz=101,slow=8.5,SNR=5.7										
WRA				ScP		ScP	17 17 06.5	-1.2		
comp=Z,1.1nm,0.5s,baz=102,slow=4.0,SNR=5.5										
WRA				S		S	17 18 06.8	-4.9		
comp=Z,1.7nm,1.0s,baz=98,slow=15,SNR=4.0										
WRA	Warramunga Arr	44.34	267	P		P	17 11 49.4	-0.3		
WRA				*PP		pP	17 12 34.8	+9.2		
WRA				S		S	17 18 06.9	-4.9		
FORT	Forrest	47.62	251	eP		P	17 12 15.7	+0.4		
comp=Z,23nm,0.6s,mb5.0										
KAKA	Kakadu	48.51	276	eP		P	17 12 21.9	-0.4		
comp=Z,12nm,0.6s,mb4.7										
KAKA	Kakadu	48.51	276	eP		P	17 12 21.9	-0.3		
comp=Z,28nm,0.6s,mb5.1										
SBA	Scott Base	52.72	184	eP		P	17 12 59.9	+7.0		
comp=Z,8.4nm,0.8s,mb4.5										
SBA				epP		pP	17 13 44.2	+14		
SBA				esP		sP	17 14 03.2	+15		
SBA	Scott Base	52.72	184	eP		P	17 12 59.9	+7.0		
SBA				e*PP		pP	17 13 44.2	+14		
SBA				e*SP		sP	17 14 03.2	+15		
SBA				pmax		pmax				
comp=Z,8.0nm,0.8s,mb4.5										
FITZ	Fitzroy Crossi	52.73	266	eP		P	17 12 53.8	-0.1		
comp=Z,11nm,0.9s,mb4.6										
CASY	Casey	59.40	207	eP		P	17 13 43.6	+3.2		
CASY	Casey	59.40	207	eP		P	17 13 43.7	+3.2		
comp=Z,20nm,0.8s,mb5.0										
QSPA	South Pole Qui	64.39	180	P		P	17 14 18.7	+5.1		
QSPA	South Pole Qui	64.39	180	P		P	17 14 18.7	+5.1		
comp=Z,17nm,0.8s,mb4.9,baz=37,slow=1.4,SNR=51										
MJAR	Matsushiro Arr	74.53	324	P		P	17 15 13.2	-3.1		
comp=Z,8.2nm,0.8s,mb4.4,baz=163,slow=5.7,SNR=15										
MAT	Matsushiro	74.53	324	P		P	17 15 12.5	-3.8		
MAW	Mawson	76.77	200	eP		P	17 15 32.3	+3.7		
comp=Z,16nm,0.7s,mb4.8										
MAW	Mawson	76.77	200	eP		P	17 15 32.4	+3.8		
comp=Z,7.9nm,1.1s,mb4.3										
MAW	Mawson	76.77	200	P		P	17 15 32.5	+3.9		
comp=Z,19nm,0.7s,mb4.8,baz=129,slow=7.3,SNR=66										
MAW	Mawson	76.77	200	eP		P	17 15 32.4	+3.8		
MAW				pmax		pmax				
comp=Z,8.0nm,1.1s										
SMY	Shemya	78.42	355	eP		P	17 15 35.0	-2.7		
comp=Z,321nm,1.6s,mb5.7										
SMY	Shemya	78.42	355	eP		P	17 15 35.0	-2.7		
SMY				pmax		pmax				
comp=Z,321nm,1.6s,mb5.7										
UNV	Unalaska Valle	79.81	7	eP		P	17 15 42.1	-3.1		
comp=Z,3µm,0.6s										
YSS	Yuzh-Sakhalins	80.63	334	eP		P	17 15 48.3	-1.5		
comp=Z,9.6nm,0.8s,mb4.5										
YSS	Yuzh-Sakhalins	80.63	334	⇑i P		P	17 15 48.2	-1.6		
KSRS	Korea Array	80.93	319	P		P	17 15 50.0	-1.7		
comp=Z,5.3nm,0.8s,mb4.2,baz=135,slow=5.9,SNR=21										
PET	Petropavlovsk	81.04	346	eP		P	17 15 48.6	-3.2		
PET				pmax		pmax				
comp=Z,16nm,1.0s,mb4.6										
PETK	Petropavlovsk-	81.33	345	P		P	17 15 50.8	-2.6		
comp=Z,24nm,0.8s,mb4.9,baz=128,slow=7.4,SNR=57										
SYO	Syowa Base	81.73	193	⇓eP		P	17 15 56.4	+1.0		
SYO	Syowa Base	81.73	193	⇓ePcP		PcP	17 16 01.6	+0.8		
MONP	Monument Peak	82.47	48	⇑P		P	17 15 59.3	-0.6		
baz=82										
DVTC	Desert V Tower	82.55	48	⇓P		P	17 16 00.2	0.0		
baz=82										
EDW2	Edwards Air Fo	82.65	46	⇑P		P	17 16 00.3	-0.4		
baz=82										
ISA	Isabella	82.82	45	⇑P		P	17 16 01.6	0.0		
baz=83										
PFO	Pinyon Flat Ob	82.88	48	⇑P		P	17 16 02.0	+0.1		
baz=83										
VNA3	Neumayer Olymp	82.96	176	eP		P	17 16 01.8	0.0		
VNA3				e			17 16 52.8			
LRMC	Laurel Mountai	83.21	45	⇑P		P	17 16 03.4	-0.2		
baz=83										
NJ2	Nanjing	83.37	310	eP		P	17 16 03.3	-1.2		
NJ2				pmax		pmax				
comp=Z,10.0nm,0.5s,mb4.8										
BELC	Belle Mtn. Jos	83.42	47	⇓P		P	17 16 04.8	+0.1		
baz=83										
BC3	Big Chuckawall	83.58	48	⇑P		P	17 16 05.6	+0.1		
baz=83										
VNA1	Neumayer--Stat	83.63	176	eP		P	17 16 06.0	+0.7		
VNA1				e			17 16 55.1			
GLA	Glamis	83.65	49	⇑P		P	17 16 06.1	+0.2		
baz=83										
HEC	Hector,Ludlow	83.70	47	⇑P		P	17 16 06.2	+0.1		
baz=84										
IRM	Iron Mountain	84.08	48	⇑P		P	17 16 07.8	-0.2		
baz=84,SNR=5.4										
GMRC	Granite Mounta	84.11	47	⇑P		P	17 16 07.9	-0.3		
baz=84										
Y12C	Blythe	84.26	48	⇓P		P	17 16 08.9	0.0		
baz=84										
WCN	Washoe City	84.33	41	⇑P		P	17 16 09.6	+0.4		
baz=84										
TUQ	Turquoise Moun	84.33	46	⇓P		P	17 16 09.4	+0.1		
baz=84										
GRAC	Grapevine Rang	84.35	44	⇑P		P	17 16 09.1	-0.3		
baz=84										
Z13A	Yuma Proving G	84.53	49	⇓P		P	17 16 10.1	-0.2		
baz=84										
NVAR	Mina Array Bea	84.66	43	P		P	17 16 10.3	-0.6		
comp=Z,2.0nm,0.7s,mb4.0,baz=221,slow=8.4,SNR=16										
114A	Black Gap (USA	84.80	50	⇑P		P	17 16 11.7	0.0		
baz=85										
PDMCI	Parker Dam,Lak	84.84	48	⇓P		P	17 16 11.8	0.0		
baz=85										
MDJ	Mudanjiang	84.89	325	P		P	17 16 12.6	+0.7		
MDJ				pP		pP	17 16 58.8	+6.4		
MDJ				pmax		pmax				
comp=Z,15nm,1.1s,mb4.6										
MDJ				pmax		pmax				
comp=Z,110nm,5.1s										
MDJ				LR		LR				
comp=N,49nm,26.8s										
MDJ				LR		LR				
comp=E,49nm,25.0s										
MDJ				LR		LR				
comp=Z,100nm,20.5s										
MDJ	Mudanjiang	84.89	325	P		P	17 16 10.0	-1.9		
Z14A	Wintersburg	85.11	49	⇓P		P	17 16 13.3	+0.1		
baz=85										
X13A	Yucca	85.22	48	⇑P		P	17 16 13.8	+0.1		
baz=85										
216A	Three Points,	85.38	51	⇑P		P	17 16 14.7	+0.1		
baz=85										
Y14A	Wickenburg	85.40	49	⇑P		P	17 16 14.9	+0.2		
baz=85										
S10A	Tonopah Range,	85.40	44	⇑P		P	17 16 14.2	-0.4		
baz=85										
W13A	Hualapai Mount	85.47	48	⇑P		P	17 16 15.2	+0.2		
baz=85										
116A	Eloy	85.52	51	⇑P		P	17 16 15.5	+0.2		
baz=85										
PLCA	Paso Flores	85.55	133	P		P	17 16 17.7	+2.2		
comp=Z,6.8nm,0.8s,mb4.4,baz=238,slow=5.4,SNR=11										
217A	Green Valley	85.70	52	⇓P		P	17 16 16.8	+0.6		
baz=86										
X14A	Yava	85.78	49	⇑P		P	17 16 16.9	+0.4		
baz=86										
Y15A	Casa Rosa Ranc	85.86	49	⇓P		P	17 16 17.1	+0.1		
baz=86										
TUC	Tucson	86.02	51	eP		P	17 16 18.3	+0.5		
comp=Z,20nm,1.4s,mb4.7										
TUC	Tucson	86.02	51	eP		P	17 16 18.3	+0.5		
TUC				pmax		pmax				
comp=Z,20nm,1.4s,mb4.7										
W14A	Seligman	86.08	48	⇓P		P	17 16 18.5	+0.5		
baz=86										
U13A	Pakoon Wash	86.19	46	⇓P		P	17 16 18.7	+0.2		
baz=86										
117A	Oracle	86.20	51	⇓P		P	17 16 19.2	+0.6		
baz=86,SNR=5.3										
X15A	Humboldt	86.23	49	⇑P		P	17 16 19.1	+0.3		
baz=86										
R11A	Troy Canyon, C	86.29	44	⇑P		P	17 16 19.1	+0.1		
baz=86										
V14A	Boquillas Ranc	86.30	48	⇓P		P	17 16 19.3	+0.2		
baz=86										
S12A	Delamar Landin	86.32	45	⇓P		P	17 16 19.7	+0.6		
baz=86										
218A	Dragoon	86.36	52	⇓P		P	17 16 19.7	+0.2		
baz=86										
Y16A	Circle Bar Ran	86.41	50	⇑P		P	17 16 19.9	+0.3		
baz=86,SNR=6.7										
CN2	Changchun	86.54	323	eP		P	17 16 20.9	+0.9		
CN2				eS		S	17 26 39.9	-2.8		
CN2				pmax		pmax				
comp=Z,20nm,1.0s,mb4.9										
CN2				pmax		pmax				
comp=Z,300nm,6.0s										
319A	Douglas	86.58	53	⇓P		P	17 16 21.0	+0.5		
baz=86										
U14A	Mt Trumbull	86.71	47	⇑P		P	17 16 21.3	+0.2		
baz=86										
X16A	Lo Mia Camp, P	86.74	49	⇑P		P	17 16 21.3	+0.1		
baz=86,SNR=5.5										
Y17A	Roosevelt	86.75	50	⇓P		P	17 16 21.6	+0.3		
baz=86										
R12A	Pony Springs,	86.90	45	⇑P		P	17 16 22.2	+0.3		
baz=87										
219A	White Tail Can	86.93	52	⇑P		P	17 16 22.7	+0.5		
baz=87										
S13A	Holt Ranch, En	86.94	46	⇑P		P	17 16 22.7	+0.6		
baz=87										
V15A	Kaibab Nationa	87.03	48	⇑P		P	17 16 23.6	+1.0		
baz=87										
W16A	Flagstaff	87.06	49	⇓P		P	17 16 23.6	+0.8		
baz=87										
KLR	Kul'dur	87.10	330	eP		P	17 16 18.0	-4.6		
320A	Kipp Ranch, An	87.10	53	⇑P		P	17 16 24.0	+1.0		
baz=87										
Q12A	Willow Creek R	87.18	44	⇑P		P	17 16 23.1	-0.1		
baz=87										
U15A	North Rim	87.30	47	⇑P		P	17 16 24.2	+0.4		
baz=87										
119A	Ashpeak Ranch,	87.32	52	⇑P		P	17 16 25.0	+1.0		
baz=87										
Y18A	Canyon Day Jun	87.35	50	⇑P		P	17 16 24.9	+0.7		
baz=87										
220A	Playas Peak, P	87.41	53	⇑P		P	17 16 25.1	+0.6		
baz=87										
120A	U Bar Ranch, L	87.67	52	⇓P		P	17 16 26.1	+0.3		
baz=88										
X18A	Snowflake	87.82	50	⇑P		P	17 16 26.6	+0.2		
baz=88										
V17A	Tonalea, Kykot	87.85	49	⇑P		P	17 16 26.4	-0.1		
baz=88,SNR=5.5										
P13A	Bates Ranch, G	87.94	44	⇑P		P	17 16 26.8	0.0		
baz=88										
O12A	Currie	87.96	43	⇓P		P	17 16 26.1	-0.8		
baz=88										
Y19A	Nutrioso	88.00	51	⇑P		P	17 16 28.1	+0.8		
baz=88										
Z20A	Nine Sixteen R	88.01	52	⇑P		P	17 16 28.0	+0.7		
baz=88										
Q14A	Sevier Lake (B	88.13	45	⇑P		P	17 16 27.2	-0.5		
baz=88										
Y20A	Horse Springs,	88.58	51	⇓P		P	17 16 30.6	+0.5		
baz=88,SNR=7.2										
Z21A	St. Cloud Mine	88.76	52	⇑P		P	17 16 31.5	+0.6		
baz=89										
X20A	Quemado	88.84	51	⇓P		P	17 16 32.2	+1.0		
baz=89										
Y21A	Point of Rocks	89.13	51	⇑P		P	17 16 33.3	+0.7		
baz=89,SNR=8.2										
ENH	Enshi	89.14	304	eP		P	17 16 31.8	-0.9		
comp=Z,9.0nm,0.8s,mb4.8										
W20A	Ramah	89.15	50	⇑P		P	17 16 32.6	0.0		
baz=89										
Z22A	Elephant Butte	89.24	52	⇓P		P	17 16 33.2	+0.1		
baz=89,SNR=9.6										
X21A	Alamocita Cree	89.28	51	⇓P		P	17 16 33.4	+0.1		
baz=89,SNR=7.6										
U19A	Dine' College,	89.29	49	⇑P		P	17 16 33.5	+0.2		
baz=89										
T18A	Mexican Hat	89.30	48	⇑P		P	17 16 33.7	+0.4		
baz=89										
GYA	Guiyang	89.41	300	P		P	17 16 35.4	+1.3		
GYA				pP		pP	17 17 22.9	+7.9		
GYA				sP		sP	17 17 44.0	+12		
GYA				PP		PP	17 20 11.8	+4.0		
GYA				SKS			17 26 44.6			
GYA				S		S	17 27 05.4	-5.2		
GYA				sS		sS	17 28 30.0	+8.4		
GYA				pmax		pmax				
comp=Z,10.0nm,1.0s,mb4.7										
GYA				pmax		pmax				
comp=Z,80nm,6.0s										
425A	Indio Mountain	89.41	55	⇑P		P	17 16 33.6	-0.4		
baz=89,SNR=5.6										
626A	Big Bend Ranch	89.43	57	⇑P		P	17 16 34.3	+0.2		
baz=89										
MNTX	Cornudas Mount	89.58	54	⇑P		P	17 16 34.0	-0.7		
baz=89										
MNTX	Cornudas Mount	89.58	54	eP		P	17 16 33.9	-0.8		
comp=Z,6.2nm,1.3s,mb4.4										
Y22A	Socorro	89.59	52	⇑P		P	17 16 35.2	+0.5		
baz=89										
224A	Cornudas Mount	89.67	54	⇓P		P	17 16 35.4	+0.2		
baz=90										
TXAR	Lajitas Array	89.67	57	P		P	17 16 35.4	+0.2		
comp=Z,2.3nm,0.8s,mb4.2,baz=215,slow=7.5,SNR=27										
T19A	Beclabito	89.71	48	⇑P		P	17 16 34.7	-0.5		
baz=90										
526A	Mary Lane Ranc	89.72	56	⇓P		P	17 16 35.0	-0.4		
baz=90,SNR=6.0										
325A	Bean Ranch, Si	89.72	55	⇑P		P	17 16 34.8	-0.6		
baz=90,SNR=5.6										
BJT	Baijiatuan	89.73	315	eP		P	17 16 35.8	+0.6		
comp=Z,31nm,0.8s,mb5.3										
BJT	Baijiatuan	89.73	315	eP		P	17 16 35.8	+0.6		
BJT				pmax		pmax				
comp=Z,31nm,0.8s										
BJI	Beijing	89.74	315	P		P	17 16 36.3	+1.1		
BJI				pmax		pmax				
comp=Z,10.0nm,0.7s,mb4.8										
D08A	Wollman Farm,	89.75	36	⇑P		P	17 16 35.4	+0.3		
baz=90										
E09A	Wood Farm, Sta	89.81	37	⇑P		P	17 16 35.5	+0.1		
baz=90										
I12A	Atlanta	89.83	40	⇑P		P	17 16 34.8	-0.8		
baz=90										
627A	Terlingua Ranc	89.94	57	⇓P		P	17 16 36.4	-0.1		
baz=90										
PMR	Palmer	90.00	13	eP		P	17 16 32.2	-3.7		
comp=Z,12nm,0.7s,mb4.9										
PMR				epP		pP	17 17 17.6	+0.7		
PMR	Palmer	90.00	13	eP		P	17 16 32.2	-3.7		
PMR				e*PP		pP	17 17 17.6	+0.7		
PMR				pmax		pmax				
comp=Z,12nm,0.7s,mb4.9										
TTA	Tatalina	90.01	10	eP		P	17 16 34.7	-1.2		
comp=Z,5.0nm,0.8s,mb4.5										
TTA	Tatalina	90.01	10	eP		P	17 16 34.7	-1.2		
TTA				pmax		pmax				
comp=Z,5.0nm,0.8s,mb4.5										
124A	Stringfield Ra	90.04	53	⇑P		P	17 16 37.3	+0.5		
baz=90										
426A	McDonald Obser	90.06	56	⇑P		P	17 16 36.6	-0.4		
baz=90,SNR=6.6										
527A	Woodward Ranch	90.12	56	⇑P		P	17 16 37.5	+0.2		
baz=90										
225A	Deer Hill, Car	90.20	54	⇑P		P	17 16 38.2	+0.6		
baz=90										
Q18A	Rafter H Ranch	90.21	46	⇓P		P	17 16 37.9	+0.4		
baz=90										
Y23A	Lovelace Mesa,	90.24	52	⇓P		P	17 16 37.5	-0.2		
baz=90										
L15A	Malad City	90.42	43	⇓P		P	17 16 38.3	-0.1		
baz=90										
U21A	Nageezi	90.42	49	⇑P		P	17 16 38.3	-0.2		
baz=90										
Z24A	Sheeppen Canyo	90.42	53	⇓P		P	17 16 39.1	+0.5		
baz=90										
H12A	Diamond D Ranc	90.44	40	⇑P		P	17 16 38.5	+0.1		
baz=90										
BMRM	Bremner River	90.46	15	eP		P	17 16 36.6	-1.5		
comp=Z,20nm,0.8s,mb5.1										
J14A	Carey	90.50	41	⇓P		P	17 16 38.6	-0.1		
baz=90										
G12A	Big Creek, Yel	90.52	39	⇓P		P	17 16 38.3	-0.4		
baz=90										
427A	Hayter Ranch,	90.62	56	⇓P		P	17 16 39.2	-0.4		
baz=90,SNR=6.6										
Y24A	Capitan	90.68	52	⇓P		P	17 16 39.2	-0.5		
baz=90,SNR=7.1										
PNL	Peninsula	90.72	18	eP		P	17 16 38.5	-0.8		
N17A	Moffit Pass	90.78	44	⇓P		P	17 16 40.0	-0.1		
baz=91										
I14A	Mackay	90.89	41	⇓P		P	17 16 40.8	+0.3		
baz=91										
F12A	Elk City	90.94	38	⇑P		P	17 16 39.6	-1.1		
baz=91										
S21A	Coal Bank Pass	90.98	48	⇑P		P	17 16 41.8	+0.7		
baz=91										
J15A	Blackfoot	91.19	41	⇑P		P	17 16 42.3	+0.4		
baz=91										
Y25A	Mesa, Roswell	91.21	53	⇓P		P	17 16 42.0	-0.3		
baz=91										
H14A	Leadore	91.34	40	⇓P		P	17 16 42.4	-0.2		
baz=91										
W24A	Lazy 6 Ranch,	91.35	51	⇑P		P	17 16 42.5	-0.4		
baz=91										
Z26A	Caprock	91.40	54	⇑P		P	17 16 42.7	-0.4		
baz=91										
SEY	Seymchan	91.47	347	d iP		P	17 16 40.6	-2.1		
TRF	Thorofare Moun	91.47	12	eP		P	17 16 40.1	-2.6		
comp=Z,2µm,0.6s										
TRF				epP		pP	17 17 29.0	+5.4		
F13A	Darby	91.47	39	⇑P		P	17 16 42.2	-0.9		
baz=91										
R21A	Cimarron	91.52	48	⇓P		P	17 16 44.1	+0.5		
baz=91										
M18A	Lyman	91.53	44	⇓P		P	17 16 43.4	-0.1		
baz=91										
J16A	Bone	91.61	42	⇓P		P	17 16 44.0	+0.1		
baz=91										
S22A	4UR Ranch, Cre	91.68	49	⇓P		P	17 16 44.3	0.0		
baz=92										
H15A	Lima	91.76	40	⇑P		P	17 16 44.8	+0.3		
baz=92										
MCMT	McKenzie Canyo	91.76	40	eP		P	17 16 44.6	+0.1		
comp=Z,1.3nm,0.8s,mb4.0										
KMI	Kunming	91.90	297	P		P	17 16 47.9	+2.3		
KMI				pmax		pmax				
comp=Z,11nm,2.0s,mb4.5										
MCK	McKinley	91.98	12	eP		P	17 16 43.1	-2.0		
comp=Z,8.3nm,0.8s,mb4.8										
MCK	McKinley	91.98	12	eP		P	17 16 43.1	-2.0		
MCK				pmax		pmax				
comp=Z,8.0nm,0.8s,mb4.8										
W25A	X Bar L Ranch,	92.02	52	⇓P		P	17 16 45.8	-0.2		
baz=92										
CMAR	Chiang Mai Arr	92.05	289	P		P	17 16 47.0	+0.5		
comp=Z,6.0nm,0.8s,mb4.7,baz=139,slow=3.4,SNR=45										
CHTO	Chiang Mai	92.21	290	eP		P	17 16 46.2	-1.0		
comp=Z,7.6nm,0.8s,mb4.8										
CHTO				epP		pP	17 17 40.0	+12		
CHTO	Chiang Mai	92.21	290	eP		P	17 16 46.2	-1.0		
CHTO				pmax		pmax				
comp=Z,8.0nm,0.8s,mb4.8										
K18A	Toltan Ranch,	92.21	43	⇑P		P	17 16 46.5	-0.2		
baz=92										
L19A	Farson	92.35	44	⇑P		P	17 16 46.9	-0.4		
baz=92										
J18A	Kendall Valley	92.54	43	⇑P		P	17 16 47.2	-1.0		
baz=92										
F15A	Butte	92.55	39	⇓P		P	17 16 47.6	-0.6		
baz=92										
BW06	Boulder Array	92.58	43	⇓P		P	17 16 47.6	-0.7		
baz=92										
MSTX	Muleshoe	92.62	53	⇑P		P	17 16 48.6	-0.2		
baz=92										
HHC	Hu-ho-hao-te	93.13	314	eP		P	17 16 51.9	+1.0		
HHC				pP		pP	17 17 39.0	+7.1		
HHC				sP		sP	17 17 58.9	+10		
HHC				PP		PP	17 20 39.0	+2.2		
HHC				SKS			17 27 05.3			
HHC				S		S	17 27 37.6	-5.9		
HHC				sS		sS	17 29 00.9	+5.8		
HHC				pmax		pmax				
comp=Z,12nm,0.9s,mb5.0										
HHC				pmax		pmax				
comp=Z,260nm,5.1s										
ILAR	Eielson Array	93.31	13	P		P	17 16 48.7	-2.5		
comp=Z,2.0nm,0.8s,mb4.3,baz=225,slow=5.2,SNR=18										
CD2	Chengdu	93.76	302	P		P	17 16 55.8	+1.7		
CD2				pmax		pmax				
comp=Z,30nm,1.1s,mb5.3										
L22A	Ellis Ranch, M	94.16	45	⇓P		P	17 16 55.4	-0.3		
baz=94										
BILL	Bilibino	94.21	354	c iP		P	17 16 53.5	-1.7		
BILL				pmax		pmax				
comp=Z,21nm,1.4s,mb5.1										
EGAK	Eagle	94.55	15	eP		P	17 16 54.9	-1.9		
comp=Z,4.6nm,0.7s,mb4.8										
LZH	Lanzhou	96.08	307	eP		P	17 17 07.5	+2.9		
LZH				pP		pP	17 17 54.0	+8.4		
LZH				sP		sP	17 18 13.5	+11		
LZH				pmax		pmax				
comp=Z,16nm,1.2s,mb5.2										
YAK	Yakutsk	97.00	338	eP		P	17 17 04.4	-3.6		
YAK				pmax		pmax				
comp=Z,13nm,0.8s,mb5.3										
SONM	Songino Array	99.79	318	P		Pdif	17 17 19.7	-1.4		
comp=Z,0.5nm,0.7s,baz=108,slow=4.5,SNR=3.3										
L

SIM	Simferopol'	147.97	315	ePKP2	PKPbc	17 23 21.0	-0.5		
SIM				pmax	pmax				
	comp=Z,25nm,0.8s								
BR131	Keskin Array S	150.28	306	ePKPbc	PKPbc	17 23 26.3	-1.2		
BRTR	Keskin Array B	150.28	306	PKPbc	PKPbc	17 23 26.5	-1.0		
	comp=Z,4.8nm,0.8s,baz=138,slow=4.3,SNR=18								
BRTR				PKPab	PKPab	17 23 33.1	-1.1		
	comp=Z,4.3nm,0.6s,baz=73,slow=4.5,SNR=14								
LVV	L'vov	150.60	331	ePKHKP	PKPbc	17 23 26.3	-1.6		
TLCR		151.11	319	⇑PKIKP	PKPbc	17 23 28.6	-0.6		
TLCR		151.11	319	⇑iP	PKPbc	17 23 28.5	-0.7		
KWP	Kalwaria Pacla	151.32	332	ePKP	PKPbc	17 23 28.9	-0.6		
KWP				e		17 23 36.7			
KWP	Kalwaria Pacla	151.32	332	ePKIKP	PKPbc	17 23 28.7	-0.8		
KWP	Kalwaria Pacla	151.32	332	⇓iP	PKPbc	17 23 28.9	-0.6		
CFR	Carcaliu	151.52	320	⇑PKIKP	PKPbc	17 23 29.3	-0.9		
CFR	Carcaliu	151.52	320	⇑iP	PKPbc	17 23 29.3	-0.9		
TESR		151.56	323	⇓iP	PKPbc	17 23 29.3	-0.9		
BUR08	Bucovina Ar. S	151.58	326	ePKPbc	PKPbc	17 23 29.9	-0.3		
BURAR	Bucovina Array	151.59	326	⇓PKIKP	PKPbc	17 23 30.9	+0.7		
BURAR	Bucovina Array	151.59	326	⇓iP	PKPbc	17 23 30.9	+0.7		
TIRR	Tirgusor	151.75	318	ePKPbc	PKPbc	17 23 29.7	-1.0		
TIRR	Tirgusor	151.75	318	⇑iP	PKPbc	17 23 30.0	-0.7		
VRI	Vrincioaia	151.92	322	⇑PKIKP	PKPbc	17 23 30.1	-0.9		
VRI	Vrincioaia	151.92	322	⇑iP	PKPbc	17 23 30.1	-0.9		
OJC	Ojcow	152.02	336	ePKP	PKPbc	17 23 30.3	-0.8		
STHS	Stebnicka Huta	152.10	333	ePKP	PKPbc	17 23 31.2	-0.1		
STHS	Stebnicka Huta	152.10	333	ePKP	PKPbc	17 23 31.2	-0.1		
UZH	Uzhgorod	152.25	331	⇑iPKIKP	PKPab	17 23 40.0	-2.1		
UZH				i		17 24 26.6			
PSN	Preselentsi	152.31	317	ePKP	PKPab	17 23 41.4	-1.2		
CRVS	Cervenica-Dubn	152.40	332	ePKP	PKPbc	17 23 31.6	-0.4		
CRVS				e		17 23 41.4			
CRVS	Cervenica-Dubn	152.40	332	ePKP	PKPbc	17 23 31.6	-0.4		
CRVS				e		17 23 41.4			
MLR	Muntele Rosu	152.58	322	⇑PKIKP	PKPbc	17 23 30.3	-2.2		
MLR	Muntele Rosu	152.58	322	⇑iP	PKPbc	17 23 30.3	-2.2		
DOPR	Dopca	152.59	323	⇑iP	PKPbc	17 23 31.6	-0.9		
KSP	Ksiaz	152.68	340	ePKP	PKPbc	17 23 32.4	-0.2		
KSP				e		17 23 42.7			
KSP	Ksiaz	152.68	340	ePKIKP	PKPbc	17 23 32.0	-0.6		
OKC	Ostrava-Krasne	152.94	337	ePKIKP	PKPbc	17 23 32.3	-0.9		
OKC				e		17 23 43.1			
OKC	Ostrava-Krasne	152.94	337	⇑ePKP	PKPbc	17 23 32.3	-0.9		
OKC				ePKPAB	PKPab	17 23 43.1	-1.9		
PRD	Provadia	153.04	317	ePKP	PKPab	17 23 44.8	-0.9		
DPC	Dobruska-Polom	153.10	340	ePKIKP	PKPbc	17 23 33.0	-0.5		
DPC				e		17 23 39.5			
DPC	Dobruska-Polom	153.10	340	⇑ePKP	PKPbc	17 23 33.0	-0.5		
DPC				ex	x	17 23 39.5			
DPC				ePKPAB	PKPab	17 23 44.4	-1.2		
IBBN	Ibbenburen	153.10	353	ePKPab	PKPab	17 23 43.7	-1.9		
VOIR		153.11	323	⇑PKIKP	PKPbc	17 23 32.9	-0.8		
VOIR		153.11	323	⇑iP	PKPbc	17 23 32.9	-0.8		
CLL	Collm	153.14	345	ePKPbc	PKPbc	17 23 33.0	-0.6		
CLL				ePKPab	PKPab	17 23 43.7	-2.1		
CLL	Collm	153.14	345	⇑ePKIKP	PKPdf	17 23 25.0	-1.0		
CLL				pmax	pmax				
	comp=Z,9.0nm,0.8s								
CLL	Collm	153.14	345	ePKPdf	PKPdf	17 23 25.0	-1.0		
CLL				⇑iPKPbc	PKPbc	17 23 32.9	-0.7		
	comp=Z,9.0nm,0.8s								
CLL				i PKPab	PKPab	17 23 43.5	-2.3		
CLL				i		17 23 47.8			
	comp=Z,23nm,0.9s								
KRLC	Kraliky	153.19	339	ePKPAB	PKPab	17 23 44.3	-1.8		
MORC	Moravsky Berou	153.20	338	ePKPbc	PKPbc	17 23 32.5	-1.3		
MORC	Moravsky Berou	153.20	338	⇑iP	PKPbc	17 23 32.7	-1.0		
BRG	Berggiesshubel	153.31	343	ePKPbc	PKPbc	17 23 33.5	-0.4		
BRG				ePKPab	PKPab	17 23 44.8	-1.7		
BRG	Berggiesshubel	153.31	343	eP	PKPbc	17 23 33.0	-0.9		
	comp=Z,5.3nm,0.7s								
BRG				e		17 23 44.0			
	comp=Z,13nm,0.9s								
BRG				i		17 23 48.6			
	comp=Z,13nm,0.9s								
BRG	Berggiesshubel	153.31	343	ePKIKP	PKPbc	17 23 33.0	-0.9		
BRG				e		17 23 44.0			
BRG				pmax	pmax				
	comp=Z,3.0nm,0.7s								
BRG				pmax	pmax				
	comp=Z,8.0nm,0.9s								
BRG				pmax	pmax				
	comp=Z,8.0nm,0.9s								
DRGR		153.40	328	⇑PKIKP	PKPbc	17 23 31.9	-2.4		
DRGR		153.40	328	⇑iP	PKPbc	17 23 31.9	-2.4		
PVCC	Panska Ves	153.46	342	ePKIKP	PKPbc	17 23 33.6	-0.7		
PVCC				e		17 23 41.4			
PVCC	Panska Ves	153.46	342	⇑ePKP	PKPbc	17 23 33.6	-0.7		
PVCC				ePKPAB	PKPab	17 23 41.4	-5.7		
VYHS	Vyhne	153.79	335	ePKP	PKPbc	17 23 34.4	-0.7		
VYHS				e		17 23 47.3			
VYHS	Vyhne	153.79	335	ePKP	PKPbc	17 23 34.4	-0.7		
VYHS				e		17 23 47.3			
PSZ	Piszkesteto	153.83	332	ePKPab	PKPab	17 23 46.4	-2.4		
PSZ	Piszkesteto	153.83	332	⇑iP	PKPab	17 23 46.5	-2.3		
KOLL	Kolacno	153.89	335	ePKP	PKPbc	17 23 34.9	-0.4		
KOLL				e		17 23 47.7			
KOLL	Kolacno	153.89	335	ePKP	PKPbc	17 23 34.9	-0.4		
KOLL				e		17 23 47.7			
VRAC	Vranov	153.92	338	⇑iP	PKPab	17 23 47.8	-1.3		
PRU	Pruhonice	153.95	342	ePKPAB	PKPab	17 23 47.7	-1.6		
PRU				ex	x	17 23 52.1			
MOX	Moxa	154.07	346	ePKP	PKPab	17 23 47.7	-2.0		
	comp=Z,17nm,1.1s								
MOX	Moxa	154.07	346	ePKPab	PKPab	17 23 47.8	-1.9		
WERD	Werda	154.10	345	ePKPab	PKPab	17 23 48.3	-1.6		
GUNZ	Gunzen	154.18	345	ePKPab	PKPab	17 23 48.7	-1.5		
WERN	Wernitzgruen	154.24	345	ePKPab	PKPab	17 23 49.1	-1.4		
NKC	Novy Kostel	154.27	345	ePKPAB	PKPab	17 23 48.7	-1.9		
NKC				ex	x	17 23 53.3			
KHC	Kasperske Hory	155.00	342	ePKPbc	PKPbc	17 23 36.9	-0.7		
KHC				ePKPab	PKPab	17 23 52.4	-1.4		
KHC	Kasperske Hory	155.00	342	⇑ePKP	PKPbc	17 23 36.9	-0.8		
KHC				x	x	17 23 44.5			
KHC				ePKPAB	PKPab	17 23 52.4	-1.3		
TNS	Taunus Mts	155.05	351	ePKPab	PKPab	17 23 51.9	-2.0		
GRF	Grafenberg Arr	155.06	346	ePKPab	PKPab	17 23 52.7	-1.3		
WET	Wettzell	155.17	343	ePKPab	PKPab	17 23 53.1	-1.4		
GEC2	GERESS Array S	155.22	342	ePKPab	PKPab	17 23 53.1	-1.6		
CONA	Conrad Observa	155.35	338	⇑iPKPab	PKPab	17 23 53.8	-1.5		
	comp=Z,12nm,0.7s								
GIVF	Givet	155.56	356	ePKP2	PKPab	17 23 53.9	-2.2		
BAIF	Baives	155.63	357	ePKP2	PKPab	17 23 54.4	-2.0		
	comp=Z,7.8nm,0.7s								
PKSM	Moragy	155.70	332	⇓PKIKP	PKPdf	17 23 34.5	+4.7		
PKSM	Moragy	155.70	332	⇓iP	PKPdf	17 23 34.5	+4.7		
VTS	Vitosha	155.92	320	⇑iP	PKPab	17 23 56.1	-1.9		
VTS	Vitosha	155.92	320	eP	PKPab	17 23 56.2	-1.8		
ARSA	Arzberg	156.06	337	⇑iPKPab	PKPab	17 23 56.9	-1.4		
	comp=Z,9.1nm,1.2s								
FUR	Furstenfeldbru	156.48	345	ePKPab	PKPab	17 23 58.7	-1.4		
SOKA	Soboth	156.72	337	⇑iPKPab	PKPab	17 23 59.4	-1.9		
	comp=Z,13nm,1.4s								
FLN	La Foliniere	156.88	5	ePKP2	PKPab	17 23 59.3	-2.5		
	comp=Z,14nm,0.7s								
BFO	Black Forest	156.91	350	ePKPab	PKPab	17 23 59.8	-2.2		
KBA	Koelnbreinsper	156.92	340	⇑iPKPab	PKPab	17 24 01.2	-0.8		
	comp=Z,7.3nm,0.6s								
CDF	Champ du Feu	156.99	351	ePKP2	PKPab	17 23 59.7	-2.6		
	comp=Z,13nm,0.8s								
ROSF	Rostrenen	157.00	9	ePKP2	PKPab	17 24 00.4	-1.9		
LDF	La Druitiere	157.07	4	ePKP2	PKPab	17 23 59.9	-2.8		
	comp=Z,6.9nm,0.6s								
MEZF	Maizieres J'vi	157.13	355	ePKP2	PKPab	17 24 00.8	-2.1		
	comp=Z,17nm,0.7s								
SGMF	Saint Gilles	157.18	8	ePKP2	PKPab	17 24 01.2	-1.9		
	comp=Z,22nm,0.6s								
WATA	Walderalm	157.18	343	⇓iPKPab	PKPab	17 24 01.6	-1.5		
	comp=Z,7.3nm,0.8s								
GRR	Gorron	157.22	5	ePKP2	PKPab	17 24 01.0	-2.3		
WTTA	Wattenberg	157.23	343	i PKPab	PKPab	17 24 02.2	-1.2		
	comp=Z,20nm,0.7s,SNR=7.5								
RETA	Reutte	157.24	345	⇑iPKPab	PKPab	17 24 01.8	-1.6		
	comp=Z,17nm,1.0s,SNR=6.8								
MOTA	Moosalm	157.29	344	⇑iPKPab	PKPab	17 24 01.9	-1.7		
	comp=Z,5.3nm,0.6s								
QUIF	Quistinic	157.42	10	ePKP2	PKPab	17 24 02.1	-2.1		
SFTF	Sexfontaines	157.43	355	ePKP2	PKPab	17 24 01.9	-2.3		
HAU	Haudompre	157.50	353	ePKP2	PKPab	17 24 02.0	-2.5		
	comp=Z,18nm,0.8s								
HINF	Hinteralfeld	157.63	352	ePKP2	PKPab	17 24 02.2	-2.9		
	comp=Z,6.2nm,0.7s								
FETA	Feichten	157.68	345	⇑iPKPab	PKPab	17 24 03.8	-1.5		
	comp=Z,8.5nm,0.9s								
DAVOX	Davos/Dischmat	158.10	346	PKPab	PKPab	17 24 05.7	-1.5		
	comp=Z,14nm,0.8s,baz=90,slow=3.1,SNR=7.6								
LOR	Lormes	158.44	357	ePKP2	PKPab	17 24 06.3	-2.3		
	comp=Z,12nm,0.9s								
SSF	Saint Saulge	158.66	358	ePKP2	PKPab	17 24 07.5	-2.0		
	comp=Z,20nm,0.7s								
CABF	La Chapelle	158.91	353	ePKP2	PKPab	17 24 09.1	-1.6		
	comp=Z,9.2nm,0.7s								
AVF	Avril sur Loir	158.94	358	ePKP2	PKPab	17 24 08.5	-2.3		
	comp=Z,11nm,0.9s								
MFF	Saint Martin d	159.06	5	ePKP2	PKPab	17 24 09.0	-2.3		
	comp=Z,16nm,0.9s								
SMF	Signal de Mont	159.06	357	ePKP2	PKPab	17 24 09.0	-2.3		
	comp=Z,21nm,0.8s								
BGF	Bois d'Agland	159.18	359	ePKP2	PKPab	17 24 09.6	-2.2		
LIC	Lamto	159.42	159	ePKP2	PKPab	17 24 16.1	+2.4		
	comp=Z,40nm,0.9s								
LIC	Lamto	159.42	159	ePKP2	PKPab	17 24 16.1	+2.4		
	comp=Z,28nm,0.9s								
TCF	Toulx Ste Croi	159.46	0	ePKP2	PKPab	17 24 10.9	-2.1		
	comp=Z,27nm,1.2s								
KIC	Kosan Boka	159.64	160	ePKP2	PKPab	17 24 17.0	+2.3		
	comp=Z,30nm,0.8s								
TIC	Toumodi	159.82	159	ePKP2	PKPab	17 24 17.9	+2.4		
	comp=Z,18nm,0.2s								
DBIC	Dimbokro	159.90	159	PKP	PKPdf	17 23 36.4	+0.5		
	comp=Z,2.3nm,0.7s,baz=272,slow=12,SNR=3.6								
DBIC				PKPab	PKPab	17 24 17.7	+1.9		
	comp=Z,7.5nm,0.8s,baz=163,slow=5.2,SNR=8.9								
LPL	La Plagne	159.90	351	ePKP2	PKPab	17 24 13.8	-1.2		
	comp=Z,10nm,0.7s								
LPG	La Plagne	159.92	351	ePKP2	PKPab	17 24 14.0	-1.1		
	comp=Z,15nm,0.7s								
RJF	Les Rejaudoux	160.43	2	ePKP2	PKPab	17 24 14.9	-2.4		
ORIF	Oris-en-Rattie	160.60	352	ePKP2	PKPab	17 24 16.6	-1.5		
	comp=Z,17nm,0.7s								
MBDF	Montbardon	160.67	350	ePKP2	PKPab	17 24 16.0	-2.4		
LFF	La Frestale	160.77	3	ePKP2	PKPab	17 24 16.7	-2.1		
	comp=Z,34nm,1.1s								
VIVF	Saint-Julien-l	160.79	355	ePKP2	PKPab	17 24 17.1	-1.8		
	comp=Z,16nm,1.0s								
CAF	Calviac	160.82	0	ePKP2	PKPab	17 24 17.1	-1.9		
SBF	Sospel	161.39	348	ePKP2	PKPab	17 24 19.1	-2.5		
	comp=Z,44nm,1.0s								
SMRF	Simiane la Rot	161.57	352	ePKP2	PKPab	17 24 19.8	-2.5		
FRF	La Foret Royal	161.82	350	ePKP2	PKPab	17 24 21.0	-2.5		
SJPF	Ste Jean	162.40	8	ePKP2	PKPab	17 24 23.8	-2.2		
	comp=Z,12nm,0.9s								
MTLF	Montolieu	162.40	0	ePKP2	PKPab	17 24 24.2	-1.8		
	comp=Z,5.2nm,0.9s								
EPF	Esparros	162.64	5	ePKP2	PKPab	17 24 24.6	-2.5		
ETSF	Etsaut	162.69	7	ePKP2	PKPab	17 24 25.8	-1.5		
	comp=Z,15nm,1.2s								
ESDC	Sonseca Array	165.13	19	PKPab	PKPab	17 24 36.3	-1.8		
	comp=Z,0.1nm,0.3s,baz=328,slow=6.8,SNR=5.0								
TORD	Torodi Ar. Bea	167.50	178	PKP	PKPdf	17 23 42.3	-0.6		
	comp=Z,1.9nm,0.8s,baz=269,slow=0.7,SNR=10								
TORD				PKPab	PKPab	17 24 51.5	+2.5		
	comp=Z,5.6nm,0.8s,baz=174,slow=3.7,SNR=22								
KEST	Kesra	168.29	330	PKPab	PKPab	17 24 50.3	-1.9		
	comp=Z,2.7nm,0.8s,baz=291,slow=1.1,SNR=7.4								

LDG ***21*** *17:19:49.1±0.3, 41.84N×75.97E, h10km, Mb4.5/13, Ms3.3/6, Error ellipse: s-maj=17.7km s-min=5.2km az=164.0*

IDC ***21*** *17:19:49.8±0.8, 41.82N×75.96E, h0km, mb4.2/15, mb1 4.2/19, mb1mx4.1/31, mbtmp4.2/19, ML3.9/4, MS3.3/7, Ms1 3.4/7, ms1mx3.1/27, Error ellipse: s-maj=14.8km s-min=10.5km az=172.0*

NNC ***21*** *17:19:50.9±0.9, 41.93N×75.96E, h0km, mb4.5, mpv4.5, Error ellipse: s-maj=5.5km s-min=4.4km az=3.0*

NEIC ***21*** *17:19:51.6±1.3, 41.95N×75.97E, h8km±6km, mb4.5/20, Error ellipse: s-maj=9.7km s-min=4.4km az=157.0*

KNET ***21*** *17:19:51.7±0.8, 41.99N×75.95E, h0km±13km, ml4.2, Error ellipse: s-maj=5.2km s-min=2.5km az=0.0*

ISCJB ***21*** *17:19:53.0±0.6, 42.02N±0.03×76.09E±0.03, h29km±4km, mb4.4/42, MS3.4/7, Error ellipse: s-maj=4.7km s-min=3.9km az=44.6*

MOS ***21*** *17:19:54.4±0.9, 42.10N×75.97E, h33km, mb4.6/24, Error ellipse: s-maj=8.0km s-min=5.3km az=116.5*

BJI ***21*** *17:19:59.8, 42.04N×76.97E, h15km, mB5.0/2, mb4.4/12, ML4.2/8, Ms4.2/3, Ms7 3.9/3*

ISC 21 17:19:52.5±0.6, 41.99N±0.02×75.98E±0.03, h10km±3km, n171, σ0=98/186, mb4.4/42, MS3.4/7, 27C-17D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	Ulahol	0.32	37	⇑P	Pg	17 19 58.1	-0.7
	3μm,0.2s						
ULHL				⇓S	Sg	17 20 03.1	0.0
	29μm,0.2s						
TKM2	Tokmak 2	0.97	343	⇑P	Pg	17 20 10.8	-0.3
	1μm,0.5s						
TKM2				⇑S	Sg	17 20 24.9	+1.1
	2μm,0.6s						
TKM2	Tokmak 2	0.97	343	P	Pg	17 20 10.8	-0.3
	2μm,0.2s,SNR=2980						
TKM2				⇑S	Sg	17 20 24.9	+1.1
	4μm,0.1s						
TKM2	Tokmak 2	0.97	343	eP	Pg	17 20 10.6	-0.5
TKM2	Tokmak 2	0.97	343	i PG	Pg	17 20 10.8	-0.3
TKM2				pmax	pmax		
	comp=Z,1μm,0.4s						
KBK	Karagaybulak	1.01	311	P	Pg	17 20 11.9	-0.1
	comp=Z,891nm,0.2s,SNR=281						
KBK				⇓S	Sg	17 20 26.4	+1.3
	comp=Z,5μm,0.2s						
UCH	Uchtor	1.12	283	⇑P	Pb	17 20 13.0	-0.8
	comp=Z,245nm,0.2s,SNR=659						
UCH				⇑S	Sg	17 20 29.0	+0.6
	comp=Z,506nm,0.1s						
UCH	Uchtor	1.12	283	i P	Pb	17 20 12.9	-1.0
AAK	Ala-Archa	1.28	301	P	Pn	17 20 16.2	-0.1
	comp=Z,1μm,0.5s,SNR=292						
AAK				⇓S	Sb	17 20 33.7	+0.7
	comp=Z,3μm,0.4s						
AAK	Ala-Archa	1.28	301	Pg	Pg	17 20 16.2	-0.7
	comp=Z,207nm,0.3s,baz=117,slow=11,SNR=649						
AAK				Lg		17 20 33.4	
	comp=Z,276nm,0.3s,baz=218,slow=22,SNR=30						
AAK	Ala-Archa	1.28	301	cePG	Pg	17 20 16.0	-0.9
AAK				pmax	pmax		
	comp=Z,678nm,1.2s						
FRU	Bishkek	1.31	310	⇓iPG	Pg	17 20 17.0	-0.7
FRU				i		17 20 35.5	
FRU				pmax	pmax		
	comp=Z,960nm,1.4s						
FRU				smax			
	comp=N,2μm,1.6s						
CHMS	Chumysh	1.36	318	P	Pn	17 20 17.7	+0.3
	comp=N,594nm,0.3s,SNR=364						
CHMS				⇓S	Sb	17 20 36.4	+1.1
	comp=N,2μm,0.2s						
KNDC	Almaty	1.42	30	⇑P	Pn	17 20 18.6	+0.3
	comp=N,2μm,0.6s						
KNDC				⇓S	Sn	17 20 38.5	+1.4
	comp=N,3μm,0.5s						
AAA	Alma-Ata	1.46	29	i PG	Pg	17 20 18.4	-2.1
AAA				pmax	pmax		
	comp=Z,3μm,0.1s						
USP	Ospenovka	1.68	320	P	Pn	17 20 23.5	+1.6
	comp=Z,2μm,0.4s,SNR=2087						
AML	Almayashu	1.71	275	P	Pn	17 20 23.5	+1.2
	comp=Z,1μm,0.4s,SNR=692						
AML	Almayashu	1.71	275	eP	Pn	17 20 23.4	+1.2
EKS2	Erkin-Say	1.77	293	⇓P	Pn	17 20 25.1	+2.1
	comp=Z,978nm,0.5s,SNR=590						
EKS2	Erkin-Say	1.77	293	eP	Pn	17 20 24.0	+0.9
KK31	Karatay Array	4.19	287	⇑Pn	Pn	17 20 58.7	+2.4
	comp=Z,11nm,0.9s,baz=103,slow=12,SNR=1382						
KK31				⇑Pg	Pg	17 21 09.7	-3.0
	comp=Z,56nm,0.5s,baz=122,slow=13,SNR=213						
KK31				⇑Lg		17 22 02.2	
	comp=Z,221nm,0.5s,baz=103,slow=28,SNR=12						
MK31	Makanchi Array	6.59	41	Pn	Pn	17 21 30.9	+1.6
	comp=Z,22nm,0.6s,baz=215,slow=15,SNR=272						
MK31				⇓Sn	Sn	17 22 54.1	+10
	comp=Z,26nm,0.6s						
MK31				⇑Lg		17 23 16.7	
	comp=Z,97nm,0.7s						
MK31	Makanchi Array	6.59	41	ePN	Pn	17 21 30.8	+1.5
MKAR	Makanchi Array	6.59	41	Pn	Pn	17 21 31.1	+1.8
	comp=Z,1.4nm,0.3s,baz=217,slow=16,SNR=45						
MKAR	Makanchi Array	6.59	41	PN	Pn	17 21 31.1	+1.8
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WMQ	Urumqi	8.79	74	eP	Pn	17 21 59.9	+0.4
WMQ				smax			
	comp=E,51nm,0.8s						
KURBB	Kurchatov Arra	8.81	11	⇑Pn	Pn	17 22 00.8	+1.1
	comp=E,1.1nm,0.5s						
KURBB				⇓Lg		17 24 32.7	
	comp=E,46nm,0.7s						
KURK	Kurchatov	8.91	11	Pn	Pn	17 22 01.2	+0.1
	comp=E,0.4nm,0.3s,baz=197,slow=12,SNR=16						
KURK				Lg		17 24 30.2	
	comp=E,1.8nm,0.3s,baz=207,slow=29,SNR=5.7						
KURK				LR	LR	17 25 40.0	
	comp=E,259nm,18.6s,baz=200,slow=39						
KURK	Kurchatov	8.91	11	⇑eP	Pn	17 22 02.3	+1.2
KURK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KBL	Kabul	9.22	218	eP	Pn	17 22 09.1	+3.6
	comp=Z,17nm,0.5s						
KBL	Kabul	9.22	218	eP	Pn	17 22 09.1	+3.6
KBL				pmax	pmax		
	comp=Z,17nm,0.5s						
VOSK	Vostochnaya	11.26	344	⇓Pn	Pn	17 22 29.4	-3.8
	comp=Z,9.7nm,0.8s						
VOSK				⇑Sn	Sn	17 24 45.2	+6.2
	comp=Z,13nm,0.8s						
VOSK				⇑Lg		17 25 49.8	
	comp=Z,111nm,0.9s						
BVA0	Borovoye Array	11.66	343	⇑Pn	Pn	17 22 30.7	-8.1
	comp=Z,3.2nm,1.1s,baz=136,slow=1.7,SNR=13						
BVA0				⇓Sn	Sn	17 24 52.5	+3.6
	comp=Z,2.7nm,0.8s						
BVA0				⇑Lg		17 26 01.2	
	comp=Z,14nm,0.8s,baz=177,slow=25,SNR=4.9						
BVAR	Borovoye Array	11.66	343	Pn	Pn	17 22 37.5	-1.3
BVAR				Lg		17 25 58.6	
BVAR	Borovoye Array	11.66	343	Pn	Pn	17 22 37.5	-1.3
	comp=Z,0.7nm,0.3s,baz=149,slow=11,SNR=11						
BVAR				Lg		17 25 58.6	
	comp=Z,2.3nm,0.3s,baz=163,slow=21,SNR=4.9						
BVAR	Borovoye Array	11.66	343	P	Pn	17 22 37.5	-1.3
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	11.72	343	eP	Pn	17 22 39.6	+0.1
	comp=Z,3.4nm,1.0s						
BRVK	Borovoye	11.72	343	deP	Pn	17 22 39.4	-0.1
DDI	Dehra Dun	11.77	171	ex	Pn	17 22 41.5	+1.2
ZRNK	Zerenda	11.93	339	⇓Pn	Pn	17 22 31.7	-11
	comp=Z,15nm,1.0s						
ZRNK				⇑Sn	Sn	17 24 56.1	+0.7
	comp=Z,14nm,0.7s						
ZRNK				⇓Lg		17 26 08.7	
	comp=Z,92nm,1.1s						
ZAA0	Zalesovo Array	13.33	23	eP	Pn	17 23 00.8	-0.8
ZALV	Zalesovo Beam	13.33	23	Pn	Pn	17 23 00.9	-0.6
	comp=Z,1.1nm,0.3s,baz=217,slow=14,SNR=16						
ZALV				Sn	Sn	17 25 28.1	-1.6
	comp=Z,0.5nm,0.3s,baz=221,slow=22,SNR=6.4						
ZALV				Lg		17 26 54.4	
	comp=Z,0.7nm,0.3s,baz=198,slow=26,SNR=5.3						
ZALV	Zalesovo Beam	13.33	23	P	Pn	17 23 00.9	-0.7
ZALV						17 25 28.1	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				smax			
	comp=N,1.0nm,0.3s						
AB31	Akbulak array	13.35	308	⇑Pn	Pn	17 23 00.5	-1.4
	comp=N,7.8nm,0.6s						
AB31		

KIV	**Kislovodsk**	**24.35**	**286**	⇓	*i*P	**P**	**17 25 11.2**	**+0.9**
KIV					pmax	pmax			
	comp=Z,10.0nm,0.6s,mb4.4								
HYB	**Hyderabad**	**24.59**	**174**		*i* P	**P**	**17 25 11.5**	**-1.2**
VRHR	**Novokhopersk**	**25.12**	**303**		*e*P	**P**	**17 25 17.1**	**-0.2**
VRHR					pmax	pmax			
	comp=N,10.0nm,0.7s								
VRHR					pmax	pmax			
	comp=E,10.0nm,0.7s								
VRHR					pmax	pmax			
	comp=Z,10.0nm,0.7s,mb4.5								
VORD	**Divnogorie**	**26.57**	**302**		*e*P	**P**	**17 25 30.1**	**-0.3**
VORD					pmax	pmax			
	comp=N,5.0nm,0.7s								
VORD					pmax	pmax			
	comp=E,20nm,0.7s								
VORD					pmax	pmax			
	comp=Z,9.0nm,0.7s,mb4.4								
VSR	**Storozhevoye**	**26.68**	**303**		*e*P	**P**	**17 25 31.5**	**+0.2**
VSR					pmax	pmax			
	comp=N,5.0nm,0.5s								
VSR					pmax	pmax			
	comp=E,5.0nm,0.5s								
VSR					pmax	pmax			
	comp=Z,6.0nm,0.5s,mb4.4								
ANN	**Anapa**	**27.98**	**289**		*e*P	**P**	**17 25 43.6**	**+0.5**
ANN					pmax	pmax			
	comp=Z,45nm,1.7s,mb4.8								
MALT	**Malatya**	**28.79**	**275**		*e*P	**P**	**17 25 52.5**	**+2.2**
	comp=Z,5.4nm,1.1s,mb4.2								
MALT	**Malatya**	**28.79**	**275**		*e*P	**P**	**17 25 52.5**	**+2.1**
MALT					pmax	pmax			
	comp=Z,5.0nm,1.1s,mb4.2								
BR131	**Keskin Array S**	**31.87**	**280**		*e*P	**P**	**17 26 17.7**	**+0.1**
	comp=Z,2.3nm,0.6s,mb4.2								
BRTR	**Keskin Array B**	**31.87**	**280**		P	**P**	**17 26 18.5**	**+0.8**
	comp=Z,4.7nm,0.9s,mb4.3,baz=98,slow=8.1,SNR=15								
BRTR	**Keskin Array B**	**31.87**	**280**		P	**P**	**17 26 18.5**	**+0.9**
BRTR					pmax	pmax			
	comp=Z,5.0nm,0.9s								
AKASG	**Malin Array Be**	**32.95**	**302**		P	**P**	**17 26 26.6**	**-0.3**
	comp=Z,1.5nm,0.6s,mb4.1,baz=78,slow=8.8,SNR=4.2								
AKASG	**Malin Array Be**	**32.95**	**302**		P	**P**	**17 26 26.6**	**-0.3**
AKASG					pmax	pmax			
	comp=Z,2.0nm,0.6s								
NJ2	**Nanjing**	**35.32**	**92**		*e*P	**P**	**17 26 51.3**	**+3.6**
NJ2					pmax	pmax			
	comp=Z,20nm,0.7s,mb5.2								
FINES	**FINESS Array B**	**35.39**	**321**		P	**P**	**17 26 48.3**	**+0.4**
	comp=Z,1.6nm,0.8s,mb4.0,baz=123,slow=12,SNR=2.7								
FINES					LR	LR	17 44 13.7		
	comp=Z,29nm,20.5s,MS3.0,baz=272,slow=41								
FINES	**FINESS Array B**	**35.39**	**321**		P	**P**	**17 26 48.3**	**+0.4**
FINES					pmax	pmax			
	comp=Z,2.0nm,0.8s								
FINES					MLR	MLR			
	comp=Z,29nm,20.5s								
KWP	**Kalwaria Pacla**	**37.23**	**301**		*e*P	**P**	**17 27 04.2**	**+0.4**
	comp=Z,11nm,1.0s,mb4.6								
KWP	**Kalwaria Pacla**	**37.23**	**301**		*e*P	**P**	**17 27 04.2**	**+0.4**
KWP					pmax	pmax			
	comp=Z,11nm,1.0s,mb4.6								
ARCES	**ARCESS Array B**	**37.74**	**334**		P	**P**	**17 27 08.0**	**0.0**
	comp=Z,1.1nm,0.7s,mb3.7,baz=96,slow=7.4,SNR=5.2								
ARCES	**ARCESS Array B**	**37.74**	**334**		P	**P**	**17 27 08.0**	**+0.1**
ARCES					pmax	pmax			
	comp=Z,1.0nm,0.7s								
CRVS	**Cervenica-Dubn**	**38.16**	**300**		*e*P	**P**	**17 27 10.1**	**-1.6**
	comp=Z,1.8nm,1.1s,mb3.7								
CRVS	**Cervenica-Dubn**	**38.16**	**300**		*e*P	**P**	**17 27 10.1**	**-1.6**
CRVS					pmax	pmax			
	comp=Z,2.0nm,1.1s,mb3.8								
CRVS	**Cervenica-Dubn**	**38.16**	**300**		*e*P	**P**	**17 27 10.1**	**-1.6**
KSRS	**Korea Array**	**39.70**	**79**		LR	LR	17 44 03.7		
	comp=Z,72nm,18.5s,MS3.5,baz=321,slow=37								
VYHS	**Vyhne**	**39.94**	**299**		*e*P	**P**	**17 27 28.4**	**+1.8**
	comp=Z,1.5nm,1.0s,mb3.7								
VYHS	**Vyhne**	**39.94**	**299**		*e*P	**P**	**17 27 28.4**	**+1.8**
VYHS					pmax	pmax			
	comp=Z,2.0nm,1.0s,mb3.8								
VYHS	**Vyhne**	**39.94**	**299**		*e*P	**P**	**17 27 28.4**	**+1.8**
KOLL	**Kolacno**	**40.20**	**300**		*e*P	**P**	**17 27 29.8**	**+1.0**
KOLL	**Kolacno**	**40.20**	**300**		*e*P	**P**	**17 27 29.8**	**+1.0**
NOA	**NORSAR Array B**	**42.53**	**319**		P	**P**	**17 27 47.7**	**-0.1**
	comp=Z,0.7nm,0.7s,mb3.5,baz=89,slow=7.9,SNR=3.0								
NOA					LR	LR	17 46 12.7		
	comp=Z,55nm,18.5s,MS3.5,baz=70,slow=37								
NOA	**NORSAR Array B**	**42.53**	**319**		P	**P**	**17 27 47.7**	**0.0**
NOA					pmax	pmax			
	comp=Z,1.0nm,0.7s								
NOA					MLR	MLR			
	comp=Z,55nm,18.5s								
CLL	**Collm**	**42.99**	**305**	⇑	*i*P	**P**	**17 27 51.6**	**0.0**
	comp=Z,5.0nm,1.0s,mb4.2								
CLL	**Collm**	**42.99**	**305**	⇑	*i*P	**P**	**17 27 51.6**	**0.0**
CLL					pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.2								
CLL	**Collm**	**42.99**	**305**	⇑	*i*P	**P**	**17 27 51.6**	**0.0**
	comp=Z,5.0nm,1.0s,mb4.2								
CLL					*e*sP	sP	17 27 56.0	0.0	
CLL					LmV		17 49 00.0		
	comp=Z,100nm,18.1s								
DAVOX	**Davos/Dischmat**	**46.23**	**300**		P	**P**	**17 28 17.6**	**0.0**
	comp=Z,2.4nm,0.6s,mb4.3,baz=111,slow=14,SNR=3.7								
CDF	**Champ du Feu**	**47.36**	**302**		*e*P	**P**	**17 28 25.5**	**-0.8**
SEY	**Seymchan**	**47.71**	**37**	⇑	*e*P	**P**	**17 28 29.6**	**+0.8**
HINF	**Hinteralfeld**	**47.83**	**302**		*e*P	**P**	**17 28 29.8**	**-0.2**
HAU	**Haudompre**	**48.08**	**302**		*e*P	**P**	**17 28 31.5**	**-0.4**
HAU					*e*MLR	MLR			
	comp=Z,49nm,18.5s,MS3.2								
HAU	**Haudompre**	**48.08**	**302**		*e*P	**P**	**17 28 31.5**	**-0.4**
HAU					MLR	MLR			
	comp=Z,50nm,18.5s,MS3.5								
BAIF	**Baives**	**48.71**	**305**		*e*P	**P**	**17 28 36.3**	**-0.4**
LPG	**La Plagne**	**48.72**	**299**		*e*P	**P**	**17 28 37.3**	**+0.4**
	comp=Z,5.8nm,0.7s,mb4.4								
LPG	**La Plagne**	**48.72**	**299**		*e*P	**P**	**17 28 37.3**	**+0.4**
	comp=Z,2.9nm,0.7s,mb4.4								
LPG	**La Plagne**	**48.72**	**299**		*e*P	**P**	**17 28 37.3**	**+0.4**
LPG					pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.4								
LPL	**La Plagne**	**48.73**	**299**		*e*P	**P**	**17 28 37.3**	**+0.4**
	comp=Z,4.4nm,0.5s,mb4.4								
LPL	**La Plagne**	**48.73**	**299**		*e*P	**P**	**17 28 37.3**	**+0.4**
	comp=Z,2.2nm,0.5s,mb4.4								
LPL	**La Plagne**	**48.73**	**299**		*e*P	**P**	**17 28 37.3**	**+0.4**
LPL					pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.4								
CABF	**La Chapelle**	**48.74**	**301**		*e*P	**P**	**17 28 36.4**	**-0.6**
SBF	**Sospel**	**48.89**	**297**		*e*P	**P**	**17 28 38.2**	**-0.1**
	comp=Z,19nm,0.8s,mb4.9								
SBF	**Sospel**	**48.89**	**297**		*e*P	**P**	**17 28 38.2**	**-0.1**
	comp=Z,9.7nm,0.8s,mb4.9								
SBF	**Sospel**	**48.89**	**297**		*e*P	**P**	**17 28 38.2**	**-0.1**
SBF					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.9								
MBDF	**Montbardon**	**49.00**	**298**		*e*P	**P**	**17 28 38.4**	**-0.7**
	comp=Z,6.1nm,0.7s,mb4.5								
MBDF	**Montbardon**	**49.00**	**298**		*e*P	**P**	**17 28 38.4**	**-0.7**
	comp=Z,3.0nm,0.7s,mb4.4								
MBDF	**Montbardon**	**49.00**	**298**		*e*P	**P**	**17 28 38.4**	**-0.7**
MBDF					pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.4								
ORIF	**Oris-en-Rattie**	**49.51**	**299**		*e*P	**P**	**17 28 42.3**	**-0.7**
	comp=Z,12nm,1.0s,mb4.6								
ORIF					*e*MLR	MLR			
	comp=Z,73nm,20.8s,MS3.4								
ORIF	**Oris-en-Rattie**	**49.51**	**299**		*e*P	**P**	**17 28 42.3**	**-0.7**
	comp=Z,5.8nm,1.0s,mb4.6								
ORIF	**Oris-en-Rattie**	**49.51**	**299**		*e*P	**P**	**17 28 42.3**	**-0.7**
ORIF					pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.6								
FRF	**La Foret Royal**	**49.54**	**297**		*e*P	**P**	**17 28 42.7**	**-0.5**
LMR	**La Mourre**	**49.72**	**296**		*e*P	**P**	**17 28 44.2**	**-0.4**
	comp=Z,22nm,1.0s,mb4.9								
LMR	**La Mourre**	**49.72**	**296**		*e*P	**P**	**17 28 44.2**	**-0.4**
	comp=Z,11nm,1.0s,mb4.8								
LMR	**La Mourre**	**49.72**	**296**		*e*P	**P**	**17 28 44.2**	**-0.4**
LMR					pmax	pmax			
	comp=Z,11nm,1.0s,mb4.8								
SMRF	**Simiane la Rot**	**50.08**	**298**		*e*P	**P**	**17 28 47.2**	**-0.1**
	comp=Z,12nm,0.9s,mb4.6								
SMRF	**Simiane la Rot**	**50.08**	**298**		*e*P	**P**	**17 28 47.2**	**-0.1**
	comp=Z,12nm,0.9s,mb4.9								
SSF	**Saint Saulge**	**50.22**	**302**		*e*P	**P**	**17 28 47.6**	**-0.7**
VIVF	**Saint-Julien-l**	**50.32**	**299**		*e*P	**P**	**17 28 48.9**	**-0.3**
	comp=Z,7.6nm,0.7s,mb4.6								
VIVF	**Saint-Julien-l**	**50.32**	**299**		*e*P	**P**	**17 28 48.9**	**-0.3**
	comp=Z,3.8nm,0.7s,mb4.5								
VIVF	**Saint-Julien-l**	**50.32**	**299**		*e*P	**P**	**17 28 48.9**	**-0.3**
VIVF					pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.6								
AVF	**Avril sur Loir**	**50.42**	**302**		*e*P	**P**	**17 28 49.2**	**-0.6**
	comp=Z,10nm,0.8s,mb4.6								
AVF	**Avril sur Loir**	**50.42**	**302**		*e*P	**P**	**17 28 49.2**	**-0.6**
	comp=Z,5.1nm,0.8s,mb4.6								
AVF	**Avril sur Loir**	**50.42**	**302**		*e*P	**P**	**17 28 49.2**	**-0.6**
AVF					pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.6								
LASF	**Ste Croix**	**51.17**	**298**		*e*P	**P**	**17 28 55.5**	**-0.1**
	comp=Z,17nm,1.1s,mb4.6								
LDF	**La Druitiere**	**51.88**	**305**		*e*P	**P**	**17 29 00.1**	**-0.7**
BILL	**Bilibino**	**51.96**	**29**		*e*P	**P**	**17 29 05.1**	**+4.0**
BILL					pmax	pmax			
	comp=Z,9.0nm,1.6s,mb4.5								
GRR	**Gorron**	**52.41**	**305**		*e*P	**P**	**17 29 03.9**	**-0.8**
MTLF	**Montolieu**	**52.56**	**298**		*e*P	**P**	**17 29 05.8**	**-0.1**
LFF	**La Frestale**	**52.84**	**300**		*e*P	**P**	**17 29 08.0**	**+0.1**
SGMF	**Saint Gilles**	**53.50**	**305**		*e*P	**P**	**17 29 12.2**	**-0.6**
ROSF	**Rostrenen**	**53.90**	**306**		*e*P	**P**	**17 29 14.5**	**-1.2**
ESDC	**Sonseca Array**	**58.38**	**297**		P	**P**	**17 29 47.1**	**-0.7**
	comp=Z,0.3nm,0.3s,mb3.8,baz=55,slow=6.9,SNR=6.7								
INK	**Inuvik**	**67.82**	**11**		*e*P	**P**	**17 30 49.9**	**-0.2**
	comp=Z,10nm,1.3s,mb4.7								
INK	**Inuvik**	**67.82**	**11**		*e*P	**P**	**17 30 49.9**	**-0.2**
INK					pmax	pmax			
	comp=Z,10.0nm,1.3s								
ILAR	**Eielson Array**	**68.40**	**18**		P	**P**	**17 30 53.0**	**-0.7**
	comp=Z,2.5nm,0.8s,mb4.3,baz=320,slow=5.1,SNR=30								
ILAR	**Eielson Array**	**68.40**	**18**		P	**P**	**17 30 53.1**	**-0.7**
ILAR					pmax	pmax			
	comp=Z,3.0nm,0.8s								
TOA0	**Torodi Ar. Sit**	**69.68**	**270**		*e*P	**P**	**17 31 01.3**	**-1.2**
TORD	**Torodi Ar. Bea**	**69.68**	**270**		P	**P**	**17 31 01.2**	**-1.2**
	comp=Z,13nm,0.7s,mb5.0,baz=45,slow=5.3,SNR=83								
KDAK	**Kodiak Island**	**72.63**	**25**		P	**P**	**17 31 19.7**	**0.0**
	comp=Z,10nm,0.6s,mb4.9,baz=347,slow=6.6,SNR=8.1								
KDAK	**Kodiak Island**	**72.63**	**25**		*i* P	**P**	**17 31 19.6**	**-0.1**
YKA	**Yellowknife Ar**	**75.52**	**5**		P	**P**	**17 31 36.1**	**-0.3**
	comp=Z,2.3nm,0.8s,mb4.2,baz=354,slow=6.0,SNR=5.1								
YKA	**Yellowknife Ar**	**75.52**	**5**		P	**P**	**17 31 36.1**	**-0.4**
YKA					pmax	pmax			
	comp=Z,2.0nm,0.8s								
DBIC	**Dimbokro**	**78.77**	**269**		P	**P**	**17 31 54.3**	**-1.2**
	comp=Z,3.5nm,0.7s,mb4.4,baz=31,slow=5.7,SNR=5.4								
DBIC	**Dimbokro**	**78.77**	**269**		P	**P**	**17 31 54.3**	**-1.2**
DBIC					pmax	pmax			
	comp=Z,4.0nm,0.7s								
KIC	**Kosan Boka**	**78.88**	**269**		*e*P	**P**	**17 31 54.8**	**-1.4**
	comp=Z,7.1nm,0.6s,mb4.8								
TIC	**Toumodi**	**78.91**	**269**		*e*P	**P**	**17 31 57.1**	**+0.8**
	comp=Z,55nm,0.2s								
TIC	**Toumodi**	**78.91**	**269**		*e*P	**P**	**17 31 57.1**	**+0.8**
TIC					pmax	pmax			
	comp=Z,55nm,0.2s								
LIC	**Lamto**	**79.19**	**269**		*e*P	**P**	**17 31 56.3**	**-1.5**
	comp=Z,65nm,1.8s,mb5.3								
ASAR	**Alice Springs**	**84.44**	**129**		P	**P**	**17 32 23.7**	**-1.5**
	comp=Z,0.8nm,1.0s,mb3.8,baz=335,slow=4.1,SNR=3.7								
ASAR	**Alice Springs**	**84.44**	**129**		P	**P**	**17 32 23.7**	**-1.5**
ASAR					pmax	pmax			
	comp=Z,1.0nm,1.0s								

IDC 21 17:20:45.0±3.2, 30.06N×140.66E, h0km, mb4.1/2, mb1 4.1/4, mb1mx3.6/22, mbtmp3.9/4, ML2.9/2, Error ellipse: s-maj=218.7km s-min=20.6km az=83.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**3.14**	**346**	Pn	Pn	17 21 35.5	-0.2
	2.1nm,0.3s,baz=79,slow=10,SNR=3.8						
JHJ				Sn	Sn	17 22 16.1	+2.2
	5.0nm,0.3s,baz=66,slow=20,SNR=4.3						
MJAR	**Matsushiro Arr**	**6.78**	**343**	Pn	Pn	17 22 24.9	-0.8
	0.4nm,0.3s,baz=160,slow=12,SNR=4.3						
WRA	**Warramunga Arr**	**50.09**	**188**	P	P	17 29 42.0	+0.2
	2.7nm,1.0s,baz=11,slow=7.9,SNR=9.8						
WRA				pP		17 29 53.3	
	0.9nm,0.6s,baz=359,slow=6.7,SNR=2.6						
ASAR	**Alice Springs**	**53.81**	**188**	P	P	17 30 09.4	-0.2
	0.7nm,0.6s,baz=6.8,slow=7.4,SNR=18						
ASAR				pP		17 30 21.4	
	0.3nm,0.4s,baz=7.8,slow=7.2,SNR=2.7						

MAN 21 17:21:56, 13.32N×124.68E, h17km, mb4.7, ML3.6, MS3.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.58**	**298**	*e*P	Pg	17 22 08.3	+0.7
CNP	**Catarman**	**0.81**	**181**	*e*P	Pb	17 22 11.7	+0.1
AUQP	**San Andres**	**1.96**	**270**	*e*P	Pn	17 22 29.1	+0.7
BOAC	**Boac**	**2.77**	**273**	*e*P	Pn	17 22 40.8	+1.3

MEX 21 17:47:31.8±1.0, 15.07N×94.93W, h16km±19km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.33**	**301**	*i* P	Pn	17 47 51.5	-4.3
HUIG				*i* S	Sn	17 48 07.9	-5.3
PCIG		**1.76**	**69**	*i* P	Pn	17 47 58.9	-2.8
PCIG				*i* S	Sn	17 48 17.8	-6.1
TGIG		**2.43**	**45**	*i* P	Pn	17 48 08.3	-2.5
TGIG				*i* S	Sn	17 48 36.0	-4.2
VHO	**Vista Hermosa**	**2.64**	**319**	*e*P	Pn	17 48 11.9	-1.9
VHO				*i* S	Sn	17 48 42.8	-2.6
PNIG	**Pinotepa**	**3.35**	**293**	*e*P	Pn	17 48 21.8	-1.8
PNIG				*i* S	Sn	17 48 58.9	-4.1
UTMO	**Huajuapan**	**3.89**	**315**	*i* P	Pn	17 48 29.1	-1.9
UTMO				*i* S	Sn	17 49 13.2	-3.1

*ISCJB **21** 18:09:37.9±1.2, 40.33N±0.09×79.31E±0.06, h10km, mb3.8/3, Error ellipse: s-maj=13.5km s-min=6.9km az=174.0*
*IDC **21** 18:09:39.0±2.2, 40.37N×79.20E, h0km, mb3.5/4, mb1 3.6/8, mb1mx3.4/28, mbtmp3.5/8, ML3.3/4, Error ellipse: s-maj=32.3km s-min=19.2km az=149.0*
*BJI **21** 18:09:42.8, 40.76N×78.58E, h13km, ML3.2/7*
*NNC **21** 18:09:45.7±3.6, 40.94N×78.83E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=37.7km s-min=19.9km az=6.0*
*NEIC **21** 18:09:45.7±3.1, 40.58N×78.99E, h43km±20km, Error ellipse: s-maj=39.9km s-min=10.4km az=161.0*

ISC 21 18:09:40.1±1.2, 40.31N±0.10×79.29E±0.07, h10km, n30, σ1§60/35, mb3.8/3, 2C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**3.00**	**311**	P	**Pn**	**18 10 25.9**	**-1.8**
	SNR=133						
KNDC	**Almaty**	**3.39**	**330**	⇓Pn	**Pn**	**18 10 31.7**	**-1.2**
	64nm,0.5s						
KNDC				⇓Lg		18 11 10.7	
	197nm,0.6s						
TKM2	**Tokmak 2**	**3.81**	**314**	⇓Pn	**Pn**	**18 10 37.2**	**-1.5**
	66nm,0.6s						
TKM2				⇓Lg		18 11 22.7	
	123nm,0.5s						
TKM2	**Tokmak 2**	**3.81**	**314**	P	**Pn**	**18 10 37.1**	**-1.6**
	SNR=13						
TKM2	**Tokmak 2**	**3.81**	**314**	*e*P	**Pn**	**18 10 36.8**	**-2.0**
TKM2				*e*S	**Sn**	**18 11 22.6**	**-0.9**
KBK	**Karagaybulak**	**4.02**	**307**	P	**Pn**	**18 10 45.5**	**+3.9**
	SNR=9.9						
UCH	**Uchtor**	**4.08**	**300**	P	**Pn**	**18 10 46.3**	**+3.8**
	SNR=7.7						
UCH	**Uchtor**	**4.08**	**300**	*e*P	**Pn**	**18 10 40.1**	**-2.3**
UCH				*e*S	**Sn**	**18 11 31.4**	**+1.1**
AAK	**Ala-Archa**	**4.29**	**304**	P	**Pn**	**18 10 49.5**	**+4.1**
	SNR=6.1						
AAK	**Ala-Archa**	**4.29**	**304**	Pn	**Pn**	**18 10 48.8**	**+3.5**
AAK				Sn	**Sn**	**18 11 37.4**	**+2.1**
AAK	**Ala-Archa**	**4.29**	**304**	Pn	**Pn**	**18 10 48.8**	**+3.5**
	9.0nm,0.3s,baz=118,slow=9.6,SNR=59						
AAK				Sn	**Sn**	**18 11 37.4**	**+2.1**
	5.9nm,0.3s,baz=220,slow=24,SNR=14						

CHMS	**Chumysh**	**4.33**	**310**		P	**Pn**	**18 10 49.6**	**+3.6**
	SNR=15								
AML	**Almayashu**	**4.60**	**295**		P	**Pn**	**18 10 56.3**	**+6.7**
	SNR=11								
AML	**Almayashu**	**4.60**	**295**		*e*P	**Pn**	**18 10 49.4**	**-0.2**
USP	**Ospenovka**	**4.64**	**311**		P	**Pn**	**18 10 53.9**	**+3.6**
	SNR=23								
EKS2	**Erkin-Say**	**4.76**	**301**		P	**Pn**	**18 10 58.7**	**+6.9**
	SNR=12								
EKS2	**Erkin-Say**	**4.76**	**301**		*e*P	**Pn**	**18 10 50.9**	**-1.0**
MK31	**Makanchi Array**	**6.84**	**18**		Pn	**Pn**	**18 11 22.5**	**+2.1**
	0.7nm,0.5s,baz=204,slow=15,SNR=27								
MK31				⇑	Lg		18 13 07.3		
	5.3nm,0.7s,baz=206,slow=28,SNR=3.7								
MK31	**Makanchi Array**	**6.84**	**18**		*e*P	**Pn**	**18 11 22.7**	**+2.4**
MKAR	**Makanchi Array**	**6.84**	**18**		Pn	**Pn**	**18 11 22.4**	**+2.1**
MKAR					Sn	**Sn**	**18 12 37.9**	**-0.3**
MKAR					Lg		18 13 10.8		
MKAR	**Makanchi Array**	**6.84**	**18**		Pn	**Pn**	**18 11 22.4**	**+2.1**
	0.5nm,0.3s,baz=200,slow=13,SNR=26								
MKAR					Sn	**Sn**	**18 12 37.9**	**-0.3**
	0.5nm,0.3s,baz=203,slow=20,SNR=2.8								
MKAR					Lg		18 13 10.8		
	0.9nm,0.3s,baz=202,slow=32,SNR=5.3								
KK31	**Karatay Array**	**7.14**	**296**		Pg	**Pb**	**18 11 40.7**	**-3.4**
	2.0nm,0.5s,baz=103,slow=15,SNR=36								
KK31				⇑	Lg		18 13 08.2		
	4.3nm,0.6s,baz=129,slow=26,SNR=5.7								
KURBB	**Kurchatov Arra**	**10.33**	**357**		⇓Lg		18 14 53.3		
	3.1nm,0.8s								
KURK	**Kurchatov**	**10.42**	**358**		Pn	**Pn**	**18 12 07.5**	**-1.8**
	0.1nm,0.3s,baz=185,slow=12,SNR=4.4								
KURK					Lg		18 14 53.2		
	0.1nm,0.3s,baz=190,slow=28,SNR=6.6								
ZAA0	**Zalesovo Array**	**14.14**	**13**		P	**Pn**	**18 12 58.8**	**-1.5**
ZALV	**Zalesovo Beam**	**14.14**	**13**		Pn	**Pn**	**18 13 00.2**	**-0.1**
	0.2nm,0.3s,baz=190,slow=14,SNR=2.4								
SONM	**Songino Array**	**20.80**	**60**		P	**P**	**18 14 23.0**	**+1.7**
	0.2nm,0.3s,baz=257,slow=10,SNR=2.7								
BRTR	**Keskin Array B**	**34.67**	**284**		P	**P**	**18 16 29.3**	**-0.4**
	0.8nm,0.6s,mb3.8,baz=91,slow=10.0,SNR=5.0								
FINES	**FINESS Array B**	**38.27**	**322**		P	**P**	**18 16 58.4**	**-1.7**
	0.9nm,0.6s,mb3.6,baz=107,slow=7.6,SNR=2.7								
ARCES	**ARCESS Array B**	**40.35**	**334**		P	**P**	**18 17 16.4**	**-1.1**
	2.1nm,1.1s,mb3.8,baz=98,slow=8.9,SNR=7.6								

CSEM 21 18:22:45.9, 51.43N×16.18E, h0km, After GFU, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPC	**Upice**	**0.93**	**187**	*e*PG	Pg	18 23 03.1	-0.6
UPC	**Upice**	**0.93**	**187**	Pg	Pg	18 23 03.1	-0.6
DPC	**Dobruska-Polom**	**1.08**	**175**	*e*PG	Pg	18 23 05.1	-1.6
DPC	**Dobruska-Polom**	**1.08**	**175**	Pg	Pg	18 23 05.1	-1.6
PVCC	**Panska Ves**	**1.36**	**229**	*e*PG	Pg	18 23 10.2	-1.8
PVCC	**Panska Ves**	**1.36**	**229**	Pg	Pg	18 23 10.2	-1.8
KRLC	**Kraliky**	**1.41**	**164**	*e*PG	Pg	18 23 11.1	-1.8
KRLC	**Kraliky**	**1.41**	**164**	Pg	Pg	18 23 11.1	-1.8

*ISCJB **21** 18:22:49.5±1.0, 51.49N±0.05×16.13E±0.05, h0km, Error ellipse: s-maj=7.8km s-min=3.8km az=13.5*
*CSEM **21** 18:22:51.7±0.8, 51.43N×16.11E, h1km, ML2.7/5, Error ellipse: s-maj=13.0km s-min=5.8km az=179.0*
*WAR **21** 18:22:52.6, 51.47N×16.15E, ML2.3, Mining Induced*
*PRU **21** 18:22:53.1, 51.35N×16.17E, h0km*

ISC 21 18:22:52.0±1.0, 51.43N±0.05×16.13E±0.05, h0km, n20, σ0§94/36, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.60**	**170**	*e*Pg	**Pg**	**18 23 03.8**	**+0.3**
KSP				*e*Sg	**Sg**	**18 23 12.6**	**+1.4**
KSP	**Ksiaz**	**0.60**	**170**	*e*Pg	**Pg**	**18 23 04.1**	**+0.6**
KSP				*e*Sg	**Sg**	**18 23 12.5**	**+1.3**
UPC	**Upice**	**0.93**	**185**	*e*PG	**Pg**	**18 23 10.

	44nm,0.3s,SNR=118								
UCH				⇓S		Sn	19 02 03.7	-1.3	
	50nm,0.2s								
KBK	**Karagaybulak**	**1.79**	**328**	⇓P		**Pn**	**19 01 44.5**	**-0.3**	
	35nm,0.1s,SNR=47								
KBK				⇓S		**Sn**	**19 02 08.2**	**+0.6**	
	233nm,0.2s								
TKM2	**Tokmak 2**	**1.83**	**345**	⇓P		**Pn**	**19 01 46.0**	**+0.5**	
	9.7nm,0.5s								
TKM2				⇑S		**Sn**	**19 02 09.8**	**+1.0**	
	43nm,0.3s								
TKM2	**Tokmak 2**	**1.83**	**345**	⇓P		**Pn**	**19 01 46.0**	**+0.5**	
	15nm,0.2s,SNR=25								
AAK	**Ala-Archa**	**1.97**	**319**	⇓P		**Pn**	**19 01 47.8**	**+0.4**	
	28nm,0.2s,SNR=13								
AAK				⇑S		**Sn**	**19 02 12.9**	**+0.8**	
	48nm,0.2s								
AML	**Almayashu**	**2.14**	**298**	⇑P		**Pn**	**19 01 49.1**	**-0.6**	
	32nm,0.2s,SNR=91								
AML				⇓S		**Sn**	**19 02 18.0**	**+1.7**	
	83nm,0.4s								
KNDC	**Almaty**	**2.14**	**15**	⇑Pn		**Pn**	**19 01 52.0**	**+2.3**	
	13nm,0.2s								
KNDC				⇓Sn		**Sn**	**19 02 22.2**	**+5.9**	
	230nm,0.6s								
CHMS	**Chumysh**	**2.15**	**330**	⇑P		**Pn**	**19 01 50.7**	**+0.8**	
	19nm,0.3s,SNR=12								
EKS2	**Erkin-Say**	**2.38**	**310**	⇑P		**Pn**	**19 01 53.5**	**+0.5**	
	5.2nm,0.2s,SNR=13								
KK31	**Karatay Array**	**4.68**	**297**	Pg		**Pb**	**19 02 34.5**	**-1.6**	
	1.1nm,0.4s,baz=120,slow=15,SNR=23								
KK31				Lg			19 03 36.3		
	1.8nm,0.3s,baz=119,slow=22,SNR=7.9								
MK31	**Makanchi Array**	**7.14**	**36**	⇓Pn		**Pb**	**19 03 10.6**	**-7.4**	
	0.5nm,0.6s,baz=212,slow=14,SNR=5.9								
MK31				⇑Lg			19 04 59.1		
	1.1nm,0.7s,baz=214,slow=29,SNR=4.2								

*ISCJB **21** 19:01:22.9±0.9, 7°.12N±0°.08×73°.82W±0°.09, h120km±10km, mb3.5/10, Error ellipse: s-maj=19.0km s-min=8.5km az=41.2*

*NEIC **21** 19:01:23.8±0.8, 7°.04N×73°.85W, h117km±9km, Error ellipse: s-maj=13.9km s-min=9.4km az=131.0*

*IDC **21** 19:01:24.3±1.7, 7°.04N×73°.81W, h120km±19km, mb3.3/10, mb1 3.6/12, mb1mx3.5/23, mbtmp3.4/12, Error ellipse: s-maj=20.9km s-min=18.0km az=66.0*

ISC 21 19:01:24.1±0.8, 7°.10N±0°.08×73°.81W±0°.09, h115km±9km, n18, σ0s95/19, mb3.5/10, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.29**	**193**	P		**Pn**		**19 02 01.2**	**+0.2**
	18nm,0.3s,baz=294,slow=4.5,SNR=27								
ROSC				S		**Sn**		**19 02 30.0**	**+0.7**
	64nm,0.3s,baz=84,slow=18,SNR=14								
SDV	**Santo Domingo**	**3.61**	**60**	*eP*		**Pn**		**19 02 18.8**	**+0.4**
SDV				*eS*		**Sn**		**19 02 59.5**	**-0.9**
OTAV	**Otavalo**	**8.24**	**214**	P		**Pn**		**19 03 18.7**	**-2.1**
PCRV	**Puerto La Cruz**	**9.57**	**71**	P		**Pn**		**19 03 39.9**	**+0.9**
	3.3nm,0.3s,baz=203,slow=5.9,SNR=4.1								
LPAZ	**La Paz**	**23.91**	**166**	P		**P**		**19 06 28.9**	**+1.6**
	0.4nm,0.3s,mb3.2,baz=324,slow=5.7,SNR=2.7								
SIV	**San Ignacio**	**26.18**	**151**	P		**P**		**19 06 46.4**	**-1.5**
	0.3nm,0.4s,mb3.0,baz=325,slow=12,SNR=4.0								
TXAR	**Lajitas Array**	**35.77**	**312**	P		**P**		**19 08 11.8**	**-0.3**
	0.4nm,0.7s,mb3.5,baz=130,slow=9.6,SNR=3.9								
NVAR	**Mina Array Bea**	**50.80**	**315**	P		**P**		**19 10 13.8**	**+1.0**
	0.3nm,0.6s,mb3.5,baz=131,slow=7.1,SNR=3.9								
YKA	**Yellowknife Ar**	**62.77**	**340**	P		**P**		**19 11 36.5**	**-0.3**
YKA	**Yellowknife Ar**	**62.77**	**340**	P		**P**		**19 11 36.5**	**-0.3**
	2.1nm,0.5s,mb4.3,baz=131,slow=6.6,SNR=13								
ESDC	**Sonseca Array**	**70.00**	**50**	P		**P**		**19 12 24.2**	**+0.7**
ESDC	**Sonseca Array**	**70.00**	**50**	P		**P**		**19 12 24.2**	**+0.7**
	0.3nm,0.5s,mb3.4,baz=263,slow=5.3,SNR=4.3								
TORD	**Torodi Ar. Bea**	**74.35**	**78**	P		**P**		**19 12 48.6**	**-1.2**
	0.2nm,0.5s,mb3.1,baz=297,slow=5.4,SNR=4.4								
ILAR	**Eielson Array**	**76.42**	**335**	P		**P**		**19 13 00.6**	**0.0**
	0.2nm,0.6s,mb3.0,baz=94,slow=5.1,SNR=4.5								
NOA	**NORSAR Array B**	**81.42**	**29**	P		**P**		**19 13 28.6**	**+0.6**
	1.5nm,0.7s,mb4.0,baz=269,slow=5.5,SNR=5.4								
ARCES	**ARCESS Array B**	**86.65**	**20**	P		**P**		**19 13 54.2**	**-0.2**
ARCES	**ARCESS Array B**	**86.65**	**20**	P		**P**		**19 13 54.2**	**-0.1**
	0.5nm,0.5s,mb3.7,baz=270,slow=2.4,SNR=6.7								
ASAR	**Alice Springs**	**148.71**	**235**	PKPbc		PKPbc		19 20 57.5	-1.2
	0.2nm,0.4s,baz=119,slow=3.2,SNR=6.3								

IDC 21 19:04:41.2±1.4, 8°.46S×124°.36E, h0km, mb3.6/2, mb1 3.7/5, mb1mx3.5/19, mbtmp3.5/5, ML3.5/3, Error ellipse: s-maj=104.2km s-min=22.2km az=68.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.66**	**173**	Pn		Pn		19 07 02.8	+1.2
	0.2nm,0.3s,baz=349,slow=5.2,SNR=7.9								
FITZ				Sn		Sn		19 08 51.0	+0.1
	0.2nm,0.3s,baz=87,slow=16,SNR=4.9								
WRA	**Warramunga Arr**	**14.95**	**141**	Pn		Pn		19 08 12.2	-1.8
	0.3nm,0.3s,baz=314,slow=15,SNR=8.8								
WRA				Sn		Sn		19 10 55.6	-4.8
	0.1nm,0.3s,baz=318,slow=24,SNR=4.0								
ASAR	**Alice Springs**	**17.67**	**150**	P		Pn		19 08 49.5	+0.6
	0.1nm,0.3s,baz=321,slow=12,SNR=7.0								
MKAR	**Makanchi Array**	**66.53**	**330**	P		P		19 15 33.5	+0.7
	0.7nm,0.8s,baz=133,slow=6.9,SNR=5.8								
KURK	**Kurchatov**	**70.97**	**331**	P		P		19 15 59.9	-0.6
	0.3nm,0.5s,baz=136,slow=5.5,SNR=2.5								

*ISCJB **21** 19:09:45.6±0.4, 58°.57S±0°.07×25°.2W±0°.1, h10km, mb4.7/20, Error ellipse: s-maj=10.5km s-min=10.2km az=22.0*

*IDC **21** 19:09:45.6±0.4, 58°.58S×25°.21W, h0km, mb4.5/15, mb1 4.6/15, mb1mx4.5/21, mbtmp4.5/15, MS4.6/1, Ms1 4.6/1, ms1mx3.7/26, Error ellipse: s-maj=17.8km s-min=13.9km az=31.0*

*NEIC **21** 19:09:49.5±3.6, 58°.57S×25°.13W, h26km±24km, mb5.0/3, Error ellipse: s-maj=9.3km s-min=8.3km az=182.0*

ISC 21 19:09:47.2±0.4, 58°.70S±0°.06×25°.1W±0°.1, h10km, n90, σ1s13/31, mb4.7/20, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.91**	**156**	*e*		**Pn**		**19 13 01.0**	**-3.1**
VNA1				*eS*		**Sn**		**19 15 26.9**	**-11**
VNA3	**Neumayer Olymp**	**14.11**	**159**	*e*		**Pn**		**19 13 03.0**	**-3.8**
VNA3				*eS*		**Sn**		**19 15 24.8**	**-18**
PMSA	**Palmer Station**	**19.15**	**235**	P		**Pn**		**19 14 12.1**	**+1.0**
MAIT	**Maitri**	**19.42**	**143**	*eP*		**Pn**		**19 14 15.1**	**+0.8**
USHA	**Ushuaia**	**23.73**	**260**	P		**P**		**19 14 59.5**	**+0.3**
	30nm,1.0s,mb4.7,baz=83,slow=7.0,SNR=5.5								
QSPA	**South Pole Qui**	**31.55**	**180**	P		**P**		**19 16 10.4**	**+1.4**
	8.5nm,0.7s,mb4.7,baz=205,slow=4.1,SNR=76								
QSPA				PcP		PcP		19 19 01.4	+0.4
	6.0nm,0.9s,baz=198,slow=3.2,SNR=2.4								
PLCA	**Paso Flores**	**33.61**	**282**	P		**P**		**19 16 27.5**	**+0.1**
	8.8nm,0.8s,mb4.8,baz=146,slow=8.6,SNR=16								
PLCA				PcP		PcP		19 19 07.8	+0.4
	1.7nm,0.6s,baz=123,slow=2.8,SNR=2.9								
MAW	**Mawson**	**37.37**	**141**	P		**P**		**19 17 00.2**	**+0.8**
	2.6nm,0.9s,mb4.0,baz=282,slow=10,SNR=4.0								
MAW				PcP		PcP		19 19 17.8	-0.2
	1.9nm,0.7s,baz=291,slow=8.6,SNR=3.6								
CPUP	**Villa Florida**	**39.40**	**311**	P		**P**		**19 17 13.9**	**-3.0**
	1.0nm,0.5s,mb3.8,baz=145,slow=6.5,SNR=5.4								
CPUP				PcP		PcP		19 19 25.1	+0.1
	0.4nm,0.3s,baz=45,slow=4.3,SNR=3.3								
CFAA	**Coronel Fontan**	**39.65**	**294**	P		**P**		**19 17 17.6**	**-1.3**
	1.1nm,0.7s,mb3.7,baz=154,slow=5.6,SNR=13								
CFAA				PcP		PcP		19 19 25.2	-0.4
	0.7nm,0.6s,baz=183,slow=2.8,SNR=5.8								
SUR	**Sutherland**	**40.37**	**70**	LR		LR		19 30 14.9	
	comp=Z,771nm,18.4s,baz=324,slow=30								
SBA	**Scott Base**	**43.51**	**184**	*eP*		**P**		**19 17 51.3**	**+1.3**
	9.8nm,0.3s,mb5.0								
BOSA	**Boshof**	**45.65**	**71**	P		**P**		**19 18 07.7**	**+0.1**
BOSA	**Boshof**	**45.65**	**71**	P		**P**		**19 18 07.7**	**+0.1**
	4.0nm,0.8s,mb4.4,baz=232,slow=9.0,SNR=7.3								
LBTB	**Lobatse**	**48.81**	**69**	P		**P**		**19 18 32.5**	**+0.2**
	3.7nm,0.9s,mb4.4,baz=252,slow=9.6,SNR=3.1								
SIV	**San Ignacio**	**50.21**	**313**	P		**P**		**19 18 41.4**	**-1.6**
	3.7nm,0.6s,mb4.6,baz=152,slow=8.3,SNR=17								
SIV				PcP		PcP		19 20 02.6	+0.5
	1.7nm,0.8s,baz=138,slow=8.1,SNR=3.7								
LPAZ	**La Paz**	**52.82**	**305**	P		**P**		**19 19 02.3**	**-0.3**
	8.0nm,0.7s,mb4.8,baz=184,slow=6.1,SNR=28								
LSZ	**Lusaka**	**58.37**	**65**	*eP*		**P**		**19 19 40.5**	**-2.0**
LIC	**Lamto**	**66.69**	**22**	*eP*		**P**		**19 20 38.5**	**+0.5**
	12nm,0.3s,mb5.4								
KIC	**Kosan Boka**	**66.88**	**22**	*eP*		**P**		**19 20 39.6**	**+0.3**
	52nm,1.3s,mb5.4								
TIC	**Toumodi**	**67.10**	**22**	*eP*		**P**		**19 20 41.0**	**+0.3**
	6.1nm,0.2s,mb5.2								
DBIC	**Dimbokro**	**67.16**	**22**	P		**P**		**19 20 41.2**	**+0.1**
DBIC	**Dimbokro**	**67.16**	**22**	P		**P**		**19 20 41.2**	**+0.2**
	5.3nm,0.8s,mb4.6,baz=170,slow=5.9,SNR=6.5								
TOA0	**Torodi Ar. Sit**	**74.86**	**27**	*eP*		**P**		**19 21 28.0**	**+0.3**
TORD	**Torodi Ar. Bea**	**74.86**	**27**	P		**P**		**19 21 28.3**	**+0.6**
TORD	**Torodi Ar. Bea**	**74.86**	**27**	P		**P**		**19 21 28.3**	**+0.6**
	16nm,0.8s,mb5.0,baz=199,slow=6.5,SNR=66								
URZ	**Urewera**	**81.64**	**198**	P		**P**		**19 22 07.0**	**+1.9**
	5.9nm,0.5s,mb4.8,baz=270,slow=5.1,SNR=3.2								
TAM	**Tamanrasset**	**85.06**	**28**	*eP*		**P**		**19 22 24.2**	**+1.6**
	3.0nm,1.0s,mb4.4								
STKA	**Stephens Creek**	**89.09**	**169**	P		**P**		**19 22 41.8**	**-0.6**
	4.4nm,0.8s,mb4.8,baz=139,slow=18,SNR=5.9								
PPT	**Papeete**	**91.49**	**232**	*e*PP		PP		19 26 34.0	+3.0
	55nm,25.8s								
PPT				*e*SS		SS		19 39 28.1	-30
	191nm,29.2s								
PPT				*e*LR		LR		19 52 04.7	
	249nm,23.0s								
ASAR	**Alice Springs**	**96.12**	**161**	P		**P**		**19 23 14.1**	**-0.9**
	2.0nm,0.8s,mb4.6,baz=182,slow=4.0,SNR=17								
DZM	**Mont Dzumac**	**98.97**	**191**	*e*LR		LR		19 55 35.3	
	235nm,23.3s								
TXAR	**Lajitas Array**	**108.98**	**295**	PKiKP		PKiKP		19 28 16.6	+0.3
	0.6nm,0.9s,baz=151,slow=2.1,SNR=4.2								
CLL	**Collm**	**113.96**	**25**	*e*PS		PKKPbc		19 39 10.0	+4.0
CLL				*e*(PKKSbc)				19 42 54.0	
CLL				*e*SSS				19 49 24.0	
AKASG	**Malin Array Be**	**117.69**	**36**	PKP		PKPdf		19 28 29.9	-2.3
	0.1nm,0.3s,baz=226,slow=2.5,SNR=4.5								
MSU	**Marysvale**	**120.52**	**295**	*e*PKPdf		PKPdf		19 28 38.8	+0.7
DUG	**Dugway**	**122.15**	**295**	*e*PKPdf		PKPdf		19 28 40.8	-0.4
HWUT	**Hardware Ranch**	**122.68**	**297**	*e*PKPdf		PKPdf		19 28 41.6	-0.5
NOA	**NORSAR Array B**	**122.70**	**20**	PKP		PKPdf		19 28 40.4	-1.1
	1.8nm,0.9s,baz=187,slow=1.7,SNR=3.4								
CMAR	**Chiang Mai Arr**	**123.09**	**110**	PKP		PKPdf		19 28 43.4	-0.3
	2.8nm,0.9s,baz=233,slow=3.5,SNR=20								
NVAR	**Mina Array Bea**	**123.42**	**290**	PKP		PKPdf		19 28 44.9	+1.3
NVAR	**Mina Array Bea**	**123.42**	**290**	PKP		PKPdf		19 28 44.9	+1.3
	3.7nm,0.7s,baz=140,slow=3.2,SNR=28								
TPAW	**Teton Pass**	**123.87**	**299**	*e*PKPdf		PKPdf		19 28 43.8	-0.5
MOOW	**Moose Ponds**	**123.97**	**299**	*e*PKPdf		PKPdf		19 28 44.4	-0.1
LAO	**LASA Array**	**124.27**	**305**	*e*PKPdf		PKPdf		19 28 44.7	-0.3
RLMT	**Red Lodge**	**124.38**	**301**	*e*PKPdf		PKPdf		19 28 44.4	-0.9
BMN	**Battle Mountai**	**124.44**	**292**	*e*PKPdf		PKPdf		19 28 46.0	+0.5
FINES	**FINESS Array B**	**126.21**	**28**	PKP		PKPdf		19 28 47.7	-0.5
FINES	**FINESS Array B**	**126.21**	**28**	PKP		PKPdf		19 28 47.7	-0.5
	2.0nm,0.6s,baz=261,slow=5.0,SNR=6.9								
LRM	**Limekiln Ridge**	**126.35**	**300**	*e*PKPdf		PKPdf		19 28 50.2	+1.2
HRY	**Holter Researc**	**126.74**	**301**	*e*PKPdf		PKPdf		19 28 49.9	+0.2
KAF	**Kangasniemi**	**126.84**	**27**	*e*PKP		PKPdf		19 28 44.6	-4.8
KAF	**Kangasniemi**	**126.84**	**27**	*e*pkp		PKPdf		19 28 44.6	-4.8
CHMT	**Chamberlain Mo**	**127.54**	**300**	*e*PKPdf		PKPdf		19 28 51.4	+0.2
MSO	**Missoula**	**127.78**	**300**	*e*PKPdf		PKPdf		19 28 52.0	+0.3
ABKAR	**Akbulak array**	**127.94**	**56**	*e*PKPdf		PKPdf		19 28 50.5	-1.5
YBH	**Yreka Blue Hor**	**128.11**	**289**	PKP		PKPdf		19 28 52.0	-0.5
	1.0nm,0.5s,baz=63,slow=2.3,SNR=4.3								
SWMT	**Swartz Lake**	**128.32**	**300**	*e*PKPdf		PKPdf		19 28 53.0	+0.3
JOF	**Joensuu**	**128.76**	**29**	*e*PKP		PKPdf		19 28 50.5	-2.5
JOF	**Joensuu**	**128.76**	**29**	*e*pkp		PKPdf		19 28 50.5	-2.5
OD2	**Odessa Site #2**	**130.39**	**297**	*e*PKPdf		PKPdf		19 28 57.2	+0.5
ARCES	**ARCESS Array B**	**132.99**	**22**	PKP		PKPdf		19 29 00.4	-0.5
	2.9nm,0.7s,baz=184,slow=4.2,SNR=5.2								
MKAR	**Makanchi Array**	**136.63**	**73**	PKhKP		PKPpre		19 28 56.8	
	0.8nm,1.0s,baz=236,slow=4.4,SNR=4.4								
MKAR				PKP		PKPdf		19 29 09.7	+1.3
	0.9nm,0.9s,baz=216,slow=0.9,SNR=4.6								
YKA	**Yellowknife Ar**	**138.87**	**315**	PKP		PKPdf		19 29 11.5	-0.5
YKA	**Yellowknife Ar**	**138.87**	**315**	PKP		PKPdf		19 29 11.5	-0.5
	7.9nm,0.7s,baz=132,slow=2.3,SNR=20								
ZALV	**Zalesovo Beam**	**142.48**	**66**	PKhKP		PKPpre		19 29 15.0	
	1.2nm,0.5s,baz=218,slow=3.9,SNR=6.7								
PNL	**Peninsula**	**147.55**	**300**	*e*PKPbc		PKPbc		19 29 30.9	+0.9
INK	**Inuvik**	**148.54**	**317**	*e*PKPbc		PKPbc		19 29 31.8	-0.6
DAWY	**Dawson**	**149.36**	**308**	*e*PKPbc		PKPbc		19 29 34.1	-0.5
SONM	**Songino Array**	**149.70**	**89**	PKPbc		PKPbc		19 29 35.8	-0.2
	11nm,0.9s,baz=228,slow=3.3,SNR=37								
ULN	**Ulaanbaatar**	**150.06**	**90**	*e*PKPbc		PKPbc		19 29 36.0	-0.8
EGAK	**Eagle**	**150.32**	**309**	*e*PKPbc		PKPbc		19 29 36.2	-0.7
BMRM	**Bremner River**	**150.44**	**301**	*e*PKPbc		PKPbc		19 29 37.5	+0.2
TLY	**Talaya**	**150.56**	**81**	*e*PKPbc		PKPbc		19 29 36.8	-1.1
MENT	**Mentasta**	**150.78**	**305**	*e*PKPbc		PKPbc		19 29 37.9	-0.2
DIV	**Divide**	**151.03**	**300**	*e*PKPbc		PKPbc		19 29 39.0	+0.3
KSRS	**Korea Array**	**152.47**	**129**	PKPbc		PKPbc		19 29 42.6	-0.2
	2.3nm,0.9s,baz=211,slow=2.1,SNR=5.9								
KSRS				PKPab		PKPab		19 29 53.4	+0.3
	2.1nm,0.9s,baz=238,slow=2.7,SNR=4.4								
ILAR	**Eielson Array**	**152.67**	**307**	PKPbc		PKPbc		19 29 42.0	-0.3
	29nm,0.9s,baz=147,slow=2.4,SNR=168								
RC01	**Rabbit Creek A**	**152.82**	**299**	*e*PKPbc		PKPbc		19 29 42.3	-0.5
KDAK	**Kodiak Island**	**152.91**	**291**	PKPbc		PKPbc		19 29 43.4	+0.3
	25nm,0.7s,baz=95,slow=2.6,SNR=27								
OHAK	**Old Harbor**	**153.02**	**289**	*e*PKPbc		PKPbc		19 29 43.0	-0.3
COLA	**College**	**153.10**	**307**	*e*PKPbc		PKPbc		19 29 42.4	-0.9
MCK	**McKinley**	**153.26**	**305**	*e*PKPbc		PKPbc		19 29 43.8	+0.1
TRF	**Thorofare Moun**	**153.77**	**304**	*e*PKPbc		PKPbc		19 29 44.6	-0.1
RSO	**Redoubt South**	**154.00**	**296**	*e*PKPbc		PKPbc		19 29 44.3	-1.0
BPAW	**Bear Paw Mtn.**	**154.23**	**305**	*e*PKPbc		PKPbc		19 29 44.9	-0.8
PPLA	**Purkeypile**	**154.46**	**302**	*e*PKPdf		PKPdf		19 29 37.1	-0.8
COLD	**Coldfoot**	**154.48**	**312**	*e*PKPbc		PKPbc		19 29 46.2	+0.1
TTA	**Tatalina**	**156.17**	**301**	*e*PKP		PKPdf		19 29 49.8	+10
PETK	**Petropavlovsk-**	**174.18**	**197**	PKPab		PKPab		19 31 27.6	+0.1
	2.4nm,0.8s,baz=142,slow=7.3,SNR=3.5								

*ISCJB **21** 19:12:09.2±0.5, 37°.29N±0°.05×72°.0E±0°.1, h203km±8km, mb3.4/4, Error ellipse: s-maj=14.6km s-min=6.3km az=17.4*

*NEIC **21** 19:12:10.2±0.8, 37°.31N×72°.00E, h194km±7km, mb4.5/2, Error ellipse: s-maj=16.3km s-min=7.5km az=133.0*

*IDC **21** 19:12:14.2±4.7, 37°.61N×72°.01E, h217km±34km, mb3.1/4, mb1 3.2/9, mb1mx3.0/28, mbtmp3.2/9, Error ellipse: s-maj=45.3km s-min=20.2km az=176.0*

*NNC **21** 19:12:19.1±5.6, 38°.40N×71°.23E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=44.6km s-min=36.8km az=20.0*

ISC 21 19:12:10.2±0.5, 37°.30N±0°.04×72°.0E±0°.1, h192km±8km, n32, σ0s73/39, mb3.4/4, 5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.47**	**181**	P		**Pn**		**19 13 04.7**	**-0.4**
CEP				S		**Sn**		**19 13 47.0**	**-1.1**
KBL	**Kabul**	**3.65**	**222**	*eP*		**Pn**		**19 13 07.5**	**+0.2**
CHCP	**Chirah Chowk**	**3.78**	**164**	⇓P		**Pn**		**19 13 09.8**	**+0.8**
AML	**Almayashu**	**5.00**	**15**	P		**Pn**		**19 13 24.8**	**+0.5**
	SNR=302								
AML	**Almayashu**	**5.00**	**15**	*eP*		**Pn**		**19 13 24.5**	**+0.2**
AML				*eS*		**Sn**		**19 14 17.8**	**-5.0**
UCH	**Uchtor**	**5.29**	**21**	P		**Pn**		**19 13 28.7**	**+0.6**
	SNR=81								
UCH	**Uchtor**	**5.29**	**21**	*eP*		**Pn**		**19 13 28.3**	**+0.2**
	86μm,0.7s								
EKS2	**Erkin-Say**	**5.53**	**14**	P		**Pn**		**19 13 31.5**	**+0.4**
	SNR=48								
EKS2	**Erkin-Say**	**5.53**	**14**	*eP*		**Pn**		**19 13 31.2**	**+0.1**
	31nm,0.6s								
EKS2				*eS*		**Sn**		**19 14 26.9**	**-8.2**
AAK	**Ala-Archa**	**5.66**	**19**	P		**Pn**		**19 13 33.7**	**+0.8**
	SNR=27								
AAK	**Ala-Archa**	**5.66**	**19**	P		**Pn**		**19 13 33.6**	**+0.8**
	14nm,0.3s,baz=165,slow=6.5,SNR=44								
AAK				S		**Sn**		**19 14 37.3**	**-0.9**
	2.1nm,0.3s,baz=310,slow=22,SNR=12								
KBK	**Karagaybulak**	**5.81**	**22**	P		**Pn**		**19 13 35.5**	**+0.7**
	SNR=17								
KK31	**Karatay Array**	**5.91**	**349**	Pn		**Pn**		**19 13 35.6**	**-0.4**
	2.8nm,0.3s,baz=167,slow=11,SNR=153								
KK31				⇓Sn		**Sn**		**19 14 33.7**	**-10**
	19nm,0.5s,baz=173,slow=19,SNR=14								
ULHL	**Ulahol**	**5.93**	**32**	P		**Pn**		**19 13 26.8**	**-10**
	SNR=5.1								
CHMS	**Chumysh**	**6.07**	**20**	P		**Pn**		**19 13 38.8**	**+0.6**
	SNR=13								
TKM2	**Tokmak 2**	**6.26**	**25**	⇓Pn		**Pn**		**19 13 40.8**	**+0.2**
	12nm,0.5s								
TKM2				⇓Sn		**Sn**		**19 14 51.1**	**-1.0**
	3.8nm,0.7s								
TKM2	**Tokmak 2**	**6.26**	**25**	P		**Pn**		**19 13 40.9**	**+0.4**
	SNR=32								
TKM2	**Tokmak 2**	**6.26**	**25**	*eP*		**Pn**		**19 13 40.8**	**+0.2**
	7.7nm,0.4s								
USP	**Ospenovka**	**6.26**	**17**	P		**Pn**		**19 13 41.2**	**+0.6**
	SNR=13								
MKAR	**Makanchi Array**	**12.18**	**36**	P		**Pn**		**19 14 57.0**	**-0.4**
	0.1nm,0.3s,baz=228,slow=13,SNR=4.7								
KURK	**Kurchatov**	**14.23**	**17**	P		**Pn**		**19 15 23.4**	**+0.4**
KURK	**Kurchatov**	**14.23**	**17**	P		**Pn**		**19 15 23.4**	**+0.5**
	0.1nm,0.3s,baz=205,slow=11,SNR=6.8								
AB31	**Akbulak array**	**14.80**	**328**	Pn		**Pn**		**19 15 31.2**	**+1.2**
	0.3nm,0.5s,baz=132,slow=14,SNR=7.3								
AB31				⇓Sn		**Sn**		**19 18 01.1**	**-14**
	0.4nm,0.4s,baz=154,slow=21,SNR=5.3								
BVAR	**Borovoye Array**	**15.77**	**356**	P		**Pn**		**19 15 41.5**	**-0.3**
	0.4nm,0.3s,baz=172,slow=11,SNR=7.3								
AKTK	**Aktyubinsk**	**16.51**	**327**	P		**Pn**		**19 15 49.9**	**-0.8**
AKTO	**Aktyubinsk**	**16.51**	**327**	P		**Pn**		**19 15 49.9**	**-0.8**
	0.8nm,0.3s,baz=134,slow=10,SNR=15								
ZAA0	**Zalesovo Array**	**18.86**	**24**	*eP*		**P**		**19 16 15.0**	**-0.6**
ZALV	**Zalesovo Beam**	**18.86**	**24**	P		**P**		**19 16 15.2**	**-0.3**
	1.6nm,0.3s,baz=207,slow=9.7,SNR=28								
SONM	**Songino Array**	**27.23**	**56**	P		**P**		**19 17 36.5**	**+0.4**
	0.3nm,0.4s,mb3.3,baz=260,slow=8.5,SNR=2.4								
BRTR	**Keskin Array B**	**29.95**	**287**	P		**P**		**19 18 02.0**	**+1.6**
	0.3nm,0.5s,mb3.2,baz=101,slow=8.8,SNR=2.5								
FINES	**FINESS Array B**	**37.27**	**325**	P		**P**		**19 19 02.0**	**-1.0**
	2.3nm,1.0s,mb3.7,baz=119,slow=16,SNR=3.5								
ARCES	**AR

CNB	Canberra Magne	86.27	176	*e*P		P	19 26 21.7	+0.3
FORT	Forrest	88.14	157	*e*P		P	19 26 30.5	0.0
	30nm,0.9s,mb5.5							
STKA	Stephens Creek	89.13	169	*e*P		P	19 26 35.0	-0.2
	8.3nm,0.9s,mb5.1							
STKA	Stephens Creek	89.13	169	P		P	19 26 34.9	-0.3
	8.6nm,0.9s,mb5.1,baz=161,slow=8.1,SNR=9.1							
STKA				LR		LR	20 06 01.2	
	comp=Z,721nm,18.2s,MS5.1,baz=204,slow=35							
PPT	Papeete	91.50	232	*e*LR		LR	19 56 12.0	
	398nm,21.5s,baz=161							
PPT	Papeete	91.50	232	LR		LR	20 00 10.4	
	comp=Z,562nm,19.4s,MS5.0,baz=170,slow=30							
TAOE	Nuku Hiva Isla	95.05	244	*e*LR		LR	19 57 42.2	
	643nm,25.6s							
ASAR	Alice Springs	96.16	161	P		P	19 27 06.7	-1.1
	4.1nm,0.8s,mb4.9,baz=183,slow=4.0,SNR=28							
ASAR				PKKP		PKKPbc	19 43 52.8	+1.2
	0.9nm,0.6s,baz=26,slow=2.2,SNR=16							
KEST	Kesra	98.34	28	LR		LR	20 07 55.7	
	comp=Z,97nm,18.3s,MS4.3,baz=230,slow=33							
DZM	Mont Dzumac	99.00	191	*e*LR		LR	19 59 49.0	
	235nm,23.3s							
ESDC	Sonseca Array	99.55	16	LR		LR	20 09 43.8	
	comp=Z,124nm,18.9s,MS4.4,baz=160,slow=34							
TXAR	Lajitas Array	108.94	295	PKPdf	PKiKP		19 32 09.3	+0.4
TXAR	Lajitas Array	108.94	295	PKiKP	PKiKP		19 32 09.3	+0.4
	0.5nm,0.8s,baz=52,slow=2.1,SNR=4.8							
BRTR	Keskin Array B	109.50	44	PKKP		PKKPab	19 43 26.1	+2.8
	0.8nm,0.8s,baz=108,slow=2.4,SNR=4.9							
AKASG	Malin Array Be	117.66	36	PKP		PKPdf	19 32 23.6	-1.1
	1.3nm,0.7s,baz=234,slow=1.3,SNR=5.4							
MSU	Marysvale	120.49	295	*e*PKPdf		PKPdf	19 32 31.2	+0.6
RSSD	Black Hills	121.26	304	*e*PKPdf		PKPdf	19 32 31.3	-0.6
ISA	Isabella	121.30	288	*e*PKPdf		PKPdf	19 32 32.4	+0.1
DUG	Dugway	122.12	295	*e*PKPdf		PKPdf	19 32 33.6	-0.1
HWUT	Hardware Ranch	122.65	297	*e*PKPdf		PKPdf	19 32 33.4	-1.2
NOA	NORSAR Array B	122.67	20	PKP		PKPdf	19 32 34.2	+0.1
	2.7nm,0.9s,baz=194,slow=1.6,SNR=5.8							
NOA				PKKPbc		PKKPbc	19 42 27.6	+0.5
	0.5nm,0.7s,baz=28,slow=2.9,SNR=3.3							
BGU	Big Grassy Mou	122.80	296	*e*PKPdf		PKPdf	19 32 35.1	+0.2
ULM	Lac du Bonnet	122.88	314	PKP		PKPdf	19 32 33.2	-1.6
ULM	Lac du Bonnet	122.88	314	PKP		PKPdf	19 32 33.2	-1.6
	4.1nm,0.4s,baz=132,slow=4.9,SNR=4.5							
CMAR	Chiang Mai Arr	123.12	110	PKP		PKPdf	19 32 35.6	-0.7
	6.0nm,0.9s,baz=232,slow=3.6,SNR=30							
NVAR	Mina Array Bea	123.39	290	PKP		PKPdf	19 32 37.5	+1.2
	5.2nm,0.7s,baz=142,slow=3.2,SNR=15							
TPAW	Teton Pass	123.83	299	*e*PKPdf		PKPdf	19 32 35.5	-1.4
MOOW	Moose Ponds	123.94	299	*e*PKPdf		PKPdf	19 32 37.0	0.0
LAO	LASA Array	124.23	305	*e*PKPdf		PKPdf	19 32 36.3	-1.2
RLMT	Red Lodge	124.34	301	*e*PKPdf		PKPdf	19 32 37.5	-0.3
BMN	Battle Mountai	124.41	292	*e*PKPdf		PKPdf	19 32 38.4	+0.3
GCMT	Greycliff	125.04	302	*e*PKPdf		PKPdf	19 32 38.0	-1.1
HLID	Hailey	125.49	297	*e*PKPdf		PKPdf	19 32 40.5	+0.5
FINES	FINESS Array B	126.18	28	PKP		PKPdf	19 32 40.1	-0.6
	3.6nm,0.7s,baz=199,slow=3.4,SNR=9.9							
FRB	Frobisher Bay	126.49	338	PKP		PKPdf	19 32 40.4	-0.9
	7.9nm,0.8s,baz=93,slow=3.0,SNR=6.6							
HRY	Holter Researc	126.71	301	*e*PKPdf		PKPdf	19 32 42.9	+0.6
KAF	Kangasniemi	126.81	27	*e*PKP		PKPdf	19 32 39.3	-2.7
KAF	Kangasniemi	126.81	27	*e*pkp		PKPdf	19 32 39.3	-2.7
MOD	Modoc	127.03	291	*e*PKPdf		PKPdf	19 32 44.0	+0.9
CHMT	Chamberlain Mo	127.50	300	*e*PKPdf		PKPdf	19 32 43.4	-0.4
MSO	Missoula	127.75	300	*e*PKPdf		PKPdf	19 32 44.5	+0.2
ABKAR	Akbulak array	127.93	56	*e*PKPdf		PKPdf	19 32 43.2	-1.3
AKTK	Aktyubinsk	128.00	54	PKP		PKPdf	19 32 44.2	-0.4
AKTO	Aktyubinsk	128.00	54	PKP		PKPdf	19 32 44.2	-0.4
	5.4nm,0.8s,baz=205,slow=2.6,SNR=12							
YBH	Yreka Blue Hor	128.09	289	PKP		PKPdf	19 32 45.1	0.0
	3.3nm,0.8s,baz=177,slow=3.7,SNR=6.9							
SWMT	Swartz Lake	128.29	300	*e*PKPdf		PKPdf	19 32 44.8	-0.4
JOF	Joensuu	128.74	29	*e*PKP		PKPdf	19 32 43.6	-2.0
JOF	Joensuu	128.74	29	*e*pkp		PKPdf	19 32 43.6	-2.0
AML	Almayashu	129.01	71	*e*PKPdf		PKPdf	19 32 46.6	-0.2
AAK	Ala-Archa	129.78	71	PKP		PKPdf	19 32 47.3	-1.0
AAK				PKPdf		PKPdf	19 32 47.7	-0.6
AAK	Ala-Archa	129.78	71	PKP		PKPdf	19 32 47.3	-1.0
	2.0nm,0.4s,baz=234,slow=3.2,SNR=6.0							
OD2	Odessa Site #2	130.36	297	*e*PKPdf		PKPdf	19 32 49.6	+0.4
ARCES	ARCESS Array B	132.96	22	PKP		PKPdf	19 32 53.0	-0.4
	4.0nm,0.8s,baz=224,slow=3.3,SNR=3.7							
KEV	Kevo	133.44	22	*e*pkp		PKPpre	19 32 46.9	
BVAR	Borovoye Array	135.22	59	PKP		PKPdf	19 32 58.6	+0.4
	4.5nm,0.8s,baz=181,slow=2.1,SNR=16							
MKAR	Makanchi Array	136.64	73	PKhKP		PKPpre	19 32 50.8	
	1.3nm,0.9s,baz=243,slow=4.0,SNR=6.4							
MKAR				PKP		PKPdf	19 33 01.8	+0.7
	2.4nm,1.0s,baz=76,slow=1.5,SNR=6.3							
KURK	Kurchatov	137.49	66	PKhKP		PKPpre	19 32 51.8	
	0.7nm,0.6s,baz=229,slow=2.8,SNR=2.4							
KURK				PKP		PKPdf	19 33 03.2	+0.8
	2.6nm,0.8s,baz=237,slow=2.6,SNR=7.2							
YKA	Yellowknife Ar	138.83	315	PKP		PKPpre	19 32 57.1	
YKA				PKP		PKPdf	19 33 03.9	-0.7
YKA	Yellowknife Ar	138.83	315	PKhKP		PKPpre	19 32 57.1	
	1.6nm,0.8s,baz=126,slow=3.1,SNR=5.1							
YKA				PKP		PKPdf	19 33 03.9	-0.7
	12nm,0.7s,baz=131,slow=2.3,SNR=27							
GTA	Gaotai	140.45	94	*e*PKP		PKPdf	19 33 05.6	-2.7
ZALV	Zalesovo Beam	142.48	66	PKhKP		PKPpre	19 33 06.6	
	1.4nm,0.3s,baz=239,slow=4.3,SNR=8.9							
DLBC	Dease Lake	142.72	303	*e*PKPdf		PKPdf	19 33 07.7	-4.0
PNL	Peninsula	147.51	301	*e*PKPbc		PKPbc	19 33 23.1	+0.5
INK	Inuvik	148.50	318	*e*PKPbc		PKPbc	19 33 24.3	-0.7
BJI	Beijing	149.27	110	PKPbc		PKPbc	19 33 27.3	-0.5
BJI				LR		LR		
	comp=Z,63nm,15.6s,MS4.5							
DAWY	Dawson	149.32	308	*e*PKPbc		PKPbc	19 33 26.5	-0.7
SONM	Songino Array	149.71	89	PKP		PKPdf	19 33 23.3	-0.6
	comp=Z,6.9nm,1.1s,baz=174,slow=1.4,SNR=4.3							
SONM				PKPbc		PKPbc	19 33 28.2	-0.4
	comp=Z,16nm,0.9s,baz=220,slow=2.5,SNR=47							
ULN	Ulaanbaatar	150.08	90	*e*PKPbc		PKPbc	19 33 28.7	-0.8
EGAK	Eagle	150.28	309	*e*PKPbc		PKPbc	19 33 28.4	-1.0
BMRM	Bremner River	150.41	301	*e*PKPbc		PKPbc	19 33 30.2	+0.3
TLY	Talaya	150.57	81	*e*PKPbc		PKPbc	19 33 30.2	-0.3
MENT	Mentasta	150.74	305	*e*PKPbc		PKPbc	19 33 30.7	+0.1
DIV	Divide	151.00	301	*e*PKPbc		PKPbc	19 33 31.8	+0.5
KSRS	Korea Array	152.51	129	PKPbc		PKPbc	19 33 35.0	-0.5
	comp=Z,4.9nm,0.9s,baz=192,slow=2.2,SNR=11							
KSRS				PKPab		PKPab	19 33 46.0	+0.2
	comp=Z,5.1nm,0.9s,baz=214,slow=4.7,SNR=8.5							
ILAR	Eielson Array	152.63	308	PKPbc		PKPbc	19 33 34.6	-0.3
	comp=Z,42nm,0.9s,baz=146,slow=1.8,SNR=119							
RC01	Rabbit Creek A	152.78	299	*e*PKPbc		PKPbc	19 33 34.5	-0.8
KDAK	Kodiak Island	152.88	291	PKPbc		PKPbc	19 33 36.0	+0.4
KDAK	Kodiak Island	152.88	291	PKPbc		PKPbc	19 33 36.0	+0.4
	comp=Z,37nm,0.7s,baz=120,slow=2.5,SNR=33							
OHAK	Old Harbor	152.99	290	*e*PKPbc		PKPbc	19 33 35.7	-0.2
COLA	College	153.06	308	*e*PKPbc		PKPbc	19 33 36.2	-0.6
MCK	McKinley	153.23	305	*e*PKPbc		PKPbc	19 33 36.2	0.0
TRF	Thorofare Moun	153.74	304	*e*PKPbc		PKPbc	19 33 36.9	-0.4
RSO	Redoubt South	153.97	297	*e*PKPbc		PKPbc	19 33 37.7	-0.2
BPAW	Bear Paw Mtn.	154.20	305	*e*PKPbc		PKPbc	19 33 37.9	-0.4
PPLA	Purkeypile	154.43	302	*e*PKPbc		PKPbc	19 33 38.5	-0.3
MJAR	Matsushiro Arr	155.33	146	PKPab		PKPab	19 33 56.8	-1.1
	comp=Z,4.5nm,0.9s,baz=178,slow=4.2,SNR=4.9							
TTA	Tatalina	156.14	301	*e*PKP		PKPdf	19 33 42.5	+10
PETK	Petropavlovsk-	174.21	197	PKP		PKPdf	19 33 46.1	-2.1
	comp=Z,3.6nm,0.9s,baz=130,slow=6.0,SNR=5.0							
PETK				PKPab		PKPab	19 35 19.7	-0.5
	comp=Z,3.0nm,0.8s,baz=104,slow=6.3,SNR=4.3							

MAN 21 19:15:32,10.69N×122.07E,h1km,mb4.4,ML3.2,MS3.1, Panay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIM	Jordan	0.52	97	*e*P	Pg	19 15 42.3	+0.4
CUYO	Cuyo Island	1.08	279	*e*P	Pg	19 15 54.5	+2.5
OTRP	Odiongan	1.66	359	*e*P	Pn	19 16 02.8	+0.5
SNPH	Sibulan	1.77	139	*i* P	Pn	19 16 04.4	+0.6
SNPH				*e*S	Sn	19 16 27.9	+1.0
LLP	Lapu-Lapu	1.91	101	*e*P	Pn	19 16 05.1	-0.6
LLP				*e*S	Sn	19 16 31.8	+1.5
BUSP	Coron	2.25	306	*e*P	Pn	19 16 10.6	+0.3
ENPP	El Nido	2.64	281	*e*P	Pn	19 16 16.6	+0.8
BOAC	Boac	2.76	356	*e*P	Pn	19 16 18.1	+0.7
IPIL	Ipil	2.93	170	*e*P	Pn	19 16 20.0	+0.3
PAGZ	Pagadian	3.11	155	*e*P	Pn	19 16 23.6	+1.4
LUBP	Lubang	3.51	330	*e*P	Pn	19 16 28.9	+1.2

IDC 21 19:31:18.5±1.2,58.78S×25.25W,h0km,mb3.8/3, mb1 3.9/3,mb1mx3.7/16,mbtmp3.8/3,Error ellipse: s-maj=51.2km s-min=31.3km az=90.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QSPA	South Pole Qui	31.46	180	P	P	19 37 41.3	+0.3
	1.0nm,0.7s,baz=203,slow=3.4,SNR=6.7						
LPAZ	La Paz	52.81	305	P	P	19 40 35.8	+0.4
	0.8nm,0.6s,baz=238,slow=9.1,SNR=4.2						
TORD	Torodi Ar. Bea	74.97	27	P	P	19 43 01.2	0.0
	0.5nm,0.3s,baz=199,slow=6.2,SNR=12						
ILAR	Eielson Array	152.67	307	PKPbc	PKPbc	19 51 15.8	+0.5
	2.0nm,0.8s,baz=126,slow=1.6,SNR=8.7						

DJA 21 19:33:33,1.34N×98.95E,h15km,MLv3.5/3,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNSI	Mandailing Nat	0.83	131	P	Pb	19 33 48.4	-0.7
MNSI				S	Sg	19 34 01.1	+1.0
GSI	Gunungsitoli	1.38	269	P	Pn	19 33 57.7	0.0
GSI				S	Sn	19 34 15.3	-0.3
TPTI		2.60	317	P	Pn	19 34 19.1	+4.6
TPTI				S	Sn	19 34 47.8	+1.9
PDSI	Padang	2.70	146	P	Pn	19 34 17.0	+1.1

*IDC **21** 19:34:03.6±1.6,41.72N×75.69E,h0km,mb3.5/3, mb1 3.5/7,mb1mx3.4/28,mbtmp3.4/7,ML3.4/4,Error ellipse: s-maj=24.6km s-min=14.5km az=174.0*
*NNC **21** 19:34:05.0±0.9,41.95N×75.96E,h0km,mb3.8,mpv3.9, Error ellipse: s-maj=5.9km s-min=3.9km az=19.0*
*BJI **21** 19:34:04.0,42.04N×75.68E,h10km,ML3.3/5*
*ISCJB **21** 19:34:04.5±0.8,41.90N±0.05×75.99E±0.05,h10km, mb3.7/4,Error ellipse: s-maj=7.6km s-min=5.0km az=160.5*
*KNET **21** 19:34:05.7±0.4,42.00N×75.98E,h7km±4km,ml3.3,Error ellipse: s-maj=3.3km s-min=1.8km az=173.0*
*NEIC **21** 19:34:06.9±1.0,41.93N×75.80E,h10km,mb4.3/1,Error ellipse: s-maj=14.6km s-min=8.8km az=171.0*
*MOS **21** 19:34:08.6±1.4,42.03N×75.79E,h33km,mb4.4/1,Error ellipse: s-maj=19.5km s-min=10.1km az=81.4*

ISC 21 19:34:06.5±0.7,41.96N±0.05×75.91E±0.05,h10km,n35, σ1s25/41,mb3.7/4,10C-8D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	Ulahol	0.38	40	⇓P	Pg	19 34 12.0	-1.9
	1μm,0.1s,SNR=344						
ULHL				⇑S	Sg	19 34 16.6	-2.4
	3μm,0.1s						
TKM2	Tokmak 2	0.99	347	⇑P	Pg	19 34 24.4	-1.2
	94nm,0.3s						
TKM2				⇓S	Sg	19 34 38.6	+0.1
	116nm,0.3s						
TKM2	Tokmak 2	0.99	347	P	Pg	19 34 24.5	-1.1
	222nm,0.1s,SNR=460						
TKM2				⇑S	Sg	19 34 38.6	+0.1
	539nm,0.1s						
TKM2	Tokmak 2	0.99	347	*e*PG	Pg	19 34 24.0	-1.6
KBK	Karagaybulak	1.00	315	P	Pg	19 34 25.4	-0.3
	130nm,0.2s,SNR=199						
KBK				⇑S	Sg	19 34 40.0	+1.3
	658nm,0.2s						
UCH	Uchtor	1.07	285	⇓P	Pg	19 34 26.6	-0.5
	34nm,0.2s,SNR=121						
UCH	Uchtor	1.07	285	*e*P	Pg	19 34 26.1	-1.0
AAK	Ala-Archa	1.25	303	Pn	Pn	19 34 29.8	-0.2
	36nm,0.3s,baz=118,slow=11,SNR=89						
AAK				Sn	Sn	19 34 46.4	-0.4
	15nm,0.3s,baz=86,slow=9.9,SNR=9.5						
AAK	Ala-Archa	1.25	303	PG	Pg	19 34 29.8	-0.7
AAK						19 34 46.4	
AAK				pmax	pmax		
	comp=Z,36nm,0.3s						
AAK				smax			
	comp=N,15nm,0.3s						
CHMS	Chumysh	1.35	321	⇓P	Pn	19 34 31.4	0.0
	comp=N,46nm,0.1s,SNR=81						
KNDC	Almaty	1.48	31	⇑P	Pn	19 34 32.4	-0.7
	comp=N,47nm,0.1s						
KNDC				⇑S	Sn	19 34 52.5	-0.1
	comp=N,285nm,0.6s						
AAA	Alma-Ata	1.52	30	*i* PG	Pg	19 34 32.1	-3.6
AAA				pmax	pmax		
	comp=Z,365nm,0.1s						
AML	Almayashu	1.66	277	⇑P	Pn	19 34 37.2	+1.6
	comp=Z,135nm,0.2s,SNR=160						
AML	Almayashu	1.66	277	*e*P	Pn	19 34 36.6	+1.0
USP	Ospenovka	1.67	322	⇓P	Pn	19 34 37.1	+1.3
	comp=Z,125nm,0.2s,SNR=385						
EKS2	Erkin-Say	1.73	295	⇓P	Pn	19 34 38.7	+2.1
	comp=Z,55nm,0.3s,SNR=162						
EKS2	Erkin-Say	1.73	295	*e*P	Pn	19 34 38.5	+1.9
KK31	Karatay Array	4.15	288	⇓Pg	Pg	19 35 23.4	-2.5
	comp=Z,5.5nm,0.5s,baz=108,slow=13,SNR=44						
KK31				⇑Lg		19 36 17.7	
	comp=Z,67nm,0.9s,baz=103,slow=28,SNR=12						
MK31	Makanchi Array	6.65	41	⇑Pn	Pn	19 35 45.4	+1.2
	comp=Z,2.2nm,0.6s,baz=216,slow=15,SNR=22						
MK31				⇓Lg		19 37 31.8	
	comp=Z,6.1nm,0.7s,baz=224,slow=23,SNR=3.5						
MK31	Makanchi Array	6.65	41	*e*PN	Pn	19 35 45.1	+0.9
MKAR	Makanchi Array	6.65	41	Pn	Pn	19 35 45.9	+1.7
MKAR				Lg		19 37 32.2	
MKAR	Makanchi Array	6.65	41	Pn	Pn	19 35 45.9	+1.7
	comp=Z,0.5nm,0.3s,baz=224,slow=15,SNR=12						
MKAR				Lg		19 37 32.2	
	comp=Z,0.9nm,0.3s,baz=223,slow=33,SNR=5.7						
KURK	Kurchatov	8.96	11	Pn	Pn	19 36 17.6	+1.8
	comp=Z,0.1nm,0.3s,baz=153,slow=17,SNR=5.1						
KURK	Kurchatov	8.96	11	P	Pn	19 36 17.7	+1.9
BVAR	Borovoye Array	11.68	343	Pn	Pn	19 36 53.9	+0.9
	comp=Z,0.2nm,0.3s,baz=148,slow=8.5,SNR=2.9						
AB31	Akbulak array	13.34	309	Pn	Pn	19 37 14.7	-0.9
	comp=Z,0.7nm,0.5s,baz=101,slow=16,SNR=4.7						
AB31				⇑Lg		19 41 06.9	
	comp=Z,5.4nm,1.1s						
ABKAR	Akbulak array	13.34	309	*e*P	Pn	19 37 14.9	-0.8
	comp=Z,28nm,1.2s						
ZALV	Zalesovo Beam	13.39	23	Pn	Pn	19 37 19.2	+2.8
	comp=Z,0.2nm,0.3s,baz=214,slow=14,SNR=3.1						
AKTK	Aktyubinsk	14.99	311	Pn	Pn	19 37 38.3	+0.1
AKTO	Aktyubinsk	14.99	311	Pn	Pn	19 37 38.3	+0.1
	comp=Z,0.1nm,0.3s,baz=107,slow=16,SNR=3.9						
SONM	Songino Array	22.29	64	P	P	19 39 07.1	+3.4
	comp=Z,0.6nm,0.7s,mb3.1,baz=251,slow=8.7,SNR=3.1						
ILAR	Eielson Array	68.46	18	P	P	19 45 07.3	-0.8
	comp=Z,0.3nm,0.8s,mb3.4,baz=325,slow=4.5,SNR=3.7						
TORD	Torodi Ar. Bea	69.62	270	P	P	19 45 15.1	-1.1
	comp=Z,1.3nm,0.7s,mb4.0,baz=47,slow=4.5,SNR=9.9						
NWAO	Narrogin (SRO)	83.64	146	P	P	19 46 34.4	-0.5
	comp=Z,1.4nm,0.7s,mb4.2						
NWAO	Narrogin (SRO)	83.64	146	P	P	19 46 34.4	-0.5
NWAO				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*NEIC **21** 19:38:10.4±2.1,19.21S×169.34E,h125km±18km,mb4.5/4, Error ellipse: s-maj=18.9km s-min=11.3km az=199.0*
*ISCJB **21** 19:38:11.1±1.8,19.35S±0.1×169.25E±0.1,h138km±14km, mb4.4/11,Error ellipse: s-maj=21.3km s-min=16.7km az=178.1*
*NOU **21** 19:38:11.0±1.0,18.80S×168.86E,h30km,MD3.1,ML3.2, MS3.6*
*IDC **21** 19:38:11.7±3.6,19.26S×169.29E,h135km±31km,mb4.1/8, mb1 4.3/8,mb1mx3.9/17,mbtmp4.1/8,MS3.6/1,Ms1 3.6/1, ms1mx2.8/18,Error ellipse: s-maj=29.4km s-min=19.7km az=171.0*

ISC 21 19:38:11.8±1.8,19.35S±0.1×169.25E±0.1,h131km±14km, n31,σ0s77/32,mb4.4/11,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAYA	Yate Dam	3.57	218	*e*P	Pn	19 39 06.0	+0.1
BAYA				*e*S	Sn	19 39 47.5	+0.5
DZM	Mont Dzumac	3.78	223	*e*P	Pn	19 39 08.9	+0.2
DZM				*e*S	Sn	19 39 50.9	-1.1
				AMP		19 39 54.2	
	comp=Z,2μm,11.1s						
DZM	Mont Dzumac	3.78	223	*e*P	Pn	19 39 08.9	+0.2
PLUM	Mont Dore	3.81	219	*e*P	Pn	19 39 09.6	+0.6
PLUM				*e*S	Sn	19 39 53.7	+1.0
NORM	Noumea	3.87	221	*e*P	Pn	19 39 10.4	+0.6
NOUC	Port Laguerre	3.89	224	*e*P	Pn	19 39 10.8	+0.7
NOUC				*e*S	Sn	19 39 54.6	-0.2
NOUC				AMP		19 39 59.9	
	comp=Z,122nm,0.6s						
ARMA	Armidale	19.39	232	*e*P	P	19 42 29.6	+2.1
ARMA	Armidale	19.39	232	*e*P	P	19 42 29.6	+2.1
	comp=Z,11nm,0.9s						
URZ	Urewera	20.07	162	P	P	19 42 34.9	+0.1
	comp=Z,21nm,0.6s,baz=0.9,slow=1.3,SNR=18						
CTA	Charters Tower	21.65	264	*e*P	P	19 42 53.0	+1.2
	comp=Z,3.9nm,0.6s,mb4.0						
CTA	Charters Tower	21.65	264	P	P	19 42 52.9	+1.1
	comp=Z,4.6nm,0.6s,mb4.1,baz=84,slow=11,SNR=14						
CTAO	Charters Tower	21.65	264	*e*P	P	19 42 52.8	+1.0
	comp=Z,4.6nm,0.6s,mb4.1						
SNZO	South Karori	22.41	169	*e*P	P	19 42 59.3	-0.2
	comp=Z,28nm,0.8s,mb4.8						
CNB	Canberra Magne	23.71	224	*e*P	P	19 43 12.3	+0.7
STKA	Stephens Creek	27.80	238	*e*P	P	19 43 48.5	0.0
	comp=Z,5.8nm,0.5s,mb4.6						
STKA	Stephens Creek	27.80	238	P	P	19 43 48.9	+0.4
	comp=Z,5.6nm,0.5s,mb4.6,baz=76,slow=10,SNR=22						
WRA	Warramunga Arr	32.84	263	P	P	19 44 32.1	-1.0
	comp=Z,2.3nm,0.5s,mb4.1,baz=97,slow=9.1,SNR=12						
ASAR	Alice Springs	33.10	256	P	P	19 44 35.0	-0.4
	comp=Z,20nm,0.5s,mb5.1,baz=83,slow=8.8,SNR=402						
ASAR				ScP	ScP	19 50 46.8	-1.1
	comp=Z,0.6nm,0.9s,baz=99,slow=6.5,SNR=4.3						
KAKA	Kakadu	35.92	275	*e*P	P	19 44 59.8	+0.1
	comp=Z,14nm,1.0s,mb4.5						
KAKA	Kakadu	35.92	275	*e*P	P	19 44 59.5	-0.2
FORT	Forrest	38.81	245	*e*P	P	19 45 23.4	-0.5
	comp=Z,16nm,0.7s,mb4.8						
FITZ	Fitzroy Crossi	41.23	264	*e*P	P	19 45 44.4	+0.4
	comp=Z,17nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	41.23	264	P	P	19 45 44.8	+0.8
	comp=Z,10nm,0.7s,mb4.6,baz=118,slow=7.3,SNR=39						
FITZ				LR	LR	20 02 02.1	
	comp=Z,73nm,20.1s,baz=198,slow=35						
MBWA	Marble Bar	46.33	259	*e*P	P	19 46 24.6	-0.3
	comp=Z,9.5nm,0.5s,mb4.8						
RKT	Rikitea	51.89	105	*e*LR	LR	19 46 51.9	
	comp=Z,547nm,26.5s						
NVAR	Mina Array Bea	88.86	49	P	P	19 50 51.0	-0.1
	comp=Z,0.5nm,0.6s,mb3.6,baz=226,slow=9.8,SNR=4.9						
VNA3	Neumayer Olymp	89.67	180	*e*	P	19 50 49.6	-4.8
ILAR	Eielson Array	90.31	17	P	P	19 50 55.6	-1.6
ILAR	Eielson Array	90.31	17	P	P	19 50 55.6	-1.6
	comp=Z,0.5nm,0.7s,mb3.6,baz=240,slow=4.9,SNR=2.6						
ARCES	ARCESS Array B	125.15	345	PKP	PKPdf	19 56 54.8	-1.2
	comp=Z,1.3nm,1.0s,baz=330,slow=11,SNR=17						
DAVOX	Davos/Dischmat	147.81	333	PKPbc	PKPbc	19 57 41.2	0.0
	comp=Z,1.1nm,0.5s,baz=293,slow=3.8,SNR=6.3						

IDC 21 19:41:12.6±3.5,59.76S×23.47W,h0km,mb3.9/1, mb1 3.9/1,mb1mx3.5/14,mbtmp3.9/1,Error ellipse: s-maj=277.3km s-min=73.6km az=133.0,South Sandwich Islands region

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

RC01				*e*Sn	Sn	19 48 48.3	+6.6
PPLA	**Purkeypile**	**3.33**	**265**	*e*Pn	Pn	19 48 07.0	+2.4
HYT	**Haines Junctio**	**4.32**	**123**	⇑Pn	Pn	19 48 18.5	+0.3
HYT				Sg	Sg	19 49 27.4	-2.7
HYT	**Haines Junctio**	**4.32**	**123**	⇑Pn	Pn	19 48 18.5	+0.3
HYT				⇓Pg	Pg	19 48 30.7	-3.5
HYT				⇓Sg	Sg	19 49 27.3	-2.8
WHY	**Whitehorse**	**5.45**	**115**	⇓Pn	Pn	19 48 33.5	-0.2
WHY				⇑Sg	Sg	19 49 59.9	-6.5

CASC 21 20:18:20.6±2.8, 15°.15N×89°.21W, h0km±6km, MD3.6, ML2.8, 1C, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.47**	**260**	⇑*e*P	Pg	20 18 29.7	0.0
MRL				*e*S	Sg	20 18 36.3	+0.5
MTO2	**Montecristo 2**	**0.76**	**191**	*e*P	Pg	20 18 34.7	-0.5
MTO2				*e*S	Sg	20 18 49.6	+4.5
NBG	**Las Nubes**	**1.23**	**243**	*e*P	Pg	20 18 44.6	+0.3
NBG				*e*S	Sg	20 19 03.1	+2.8
SBLS	**San Blas**	**1.36**	**197**	*e*P	Pg	20 18 45.2	-1.5
BOQS	**Boqueron**	**1.41**	**183**	*e*P	Pn	20 18 47.0	-0.5
LFRS	**El Faro**	**1.52**	**175**	*e*P	Pn	20 18 48.2	-0.9
LFRS				*e*S	Sg	20 19 10.9	+1.3
IXG	**Ixpaco**	**1.55**	**231**	*e*P	Pn	20 18 49.7	+0.3
IXG				*e*S	Sn	20 19 11.9	+1.7
SNVI	**San Vicente**	**1.57**	**167**	*e*P	Pn	20 18 49.3	-0.4
SNVI				*e*S	Sn	20 19 11.7	+0.9
SNVI				AML	AML	20 19 15.1	
	comp=Z,123nm,0.3s						
CAHU	**Cacacuatique**	**1.68**	**145**	*e*P	Pn	20 18 50.5	-0.8
CAHU				*e*S	Sn	20 19 15.7	+2.2
FG6		**1.72**	**250**	*e*P	Pn	20 18 54.2	+2.4
FUG	**Fuego 3**	**1.73**	**246**	*e*P	Pn	20 18 52.6	+0.8
FUG				*e*S	Sn	20 19 18.3	+3.7
TP2	**Tecpan 2**	**1.79**	**258**	*e*P	Pn	20 18 54.4	+1.7
TP2				*e*S	Sn	20 19 20.3	+4.1
VSM	**San Miguel**	**1.94**	**152**	*e*P	Pn	20 18 53.7	-1.1
BLLM	**Bellamira**	**1.94**	**151**	*e*P	Pn	20 18 54.7	-0.2
BLLM				*e*S	Sn	20 19 21.8	+1.8
TGUH	**Tegucigalpa,Un**	**2.17**	**120**	*e*P	Pn	20 18 57.8	-0.2
TGUH				*e*S	Sn	20 19 27.1	+1.6

IDC 21 20:23:21.5±1.9, 58°.78S×25°.32W, h0km, mb4.0/2, mb1 4.1/2, mb1mx3.8/15, mbtmp4.0/2, Error ellipse: s-maj=75.7km s-min=47.0km az=180.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.88**	**156**	*e*	Pn	20 26 38.9	-0.2
VNA3	**Neumayer Olymp**	**14.07**	**159**	*e*	Pn	20 26 39.0	-2.7
VNA3				*e*		20 26 40.8	
VNA3				*e*S	Sn	20 28 58.8	-20
LPAZ	**La Paz**	**52.78**	**305**	P	P	20 32 38.6	+0.4
	1.4nm,0.9s,baz=223,slow=4.6,SNR=3.8						
TORD	**Torodi Ar. Bea**	**74.98**	**27**	P	P	20 35 04.5	+0.1
	1.0nm,0.4s,baz=200,slow=6.3,SNR=44						
SONM	**Songino Array**	**149.80**	**90**	PKPbc	PKPbc	20 43 11.7	-0.5
	1.4nm,0.8s,baz=222,slow=1.9,SNR=4.7						
ILAR	**Eielson Array**	**152.64**	**307**	PKPbc	PKPbc	20 43 18.6	+0.3
	2.1nm,0.8s,baz=132,slow=1.3,SNR=22						

MEX 21 20:31:55.3±0.8, 16°.67N×99°.25W, h20km±10km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.62**	**289**	*i*P	Pb	20 32 05.7	-1.7
ACX				*i*S	Sb	20 32 14.8	-0.9
CAIG	**El Cayaco**	**1.05**	**291**	*i*P	Pb	20 32 12.0	-2.8
CAIG				*i*S	Sb	20 32 24.1	-4.0
PNIG	**Pinotepa**	**1.11**	**104**	*i*P	Pn	20 32 12.1	-3.6
PNIG				*i*S	Sb	20 32 26.4	-3.4
UTMO	**Huajuapan**	**1.80**	**50**	*i*P	Pn	20 32 23.0	-2.2
UTMO				*i*S	Sn	20 32 42.6	-4.9

IDC 21 20:37:40.6±3.2, 58°.57S×25°.56W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/14, mbtmp3.9/3, MS3.4/1, Ms1 3.3/1, ms1mx3.0/12, Error ellipse: s-maj=112.8km s-min=36.2km az=168.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**14.32**	**159**	*e*	Pn	20 40 57.7	-6.5
VNA3				*e*S	Sn	20 43 20.8	-23
PLCA	**Paso Flores**	**33.36**	**282**	P	P	20 44 20.5	+0.4
	1.8nm,0.7s,baz=162,slow=9.6,SNR=3.9						
BOSA	**Boshof**	**45.82**	**72**	LR	LR	21 02 05.0	
	comp=Z,45nm,21.0s,baz=337,slow=32						
LPAZ	**La Paz**	**52.55**	**305**	P	P	20 46 56.1	+0.5
	0.7nm,0.6s,baz=153,slow=9.0,SNR=3.4						
TORD	**Torodi Ar. Bea**	**74.85**	**28**	P	P	20 49 22.8	+0.2
	0.4nm,0.4s,baz=201,slow=6.2,SNR=17						
ILAR	**Eielson Array**	**152.41**	**308**	PKPbc	PKPbc	20 57 36.7	-0.1
	2.4nm,0.9s,baz=131,slow=1.6,SNR=18						

IDC 21 20:38:14.3±1.9, 59°.01S×25°.39W, h0km, mb4.0/2, mb1 4.1/2, mb1mx3.8/15, mbtmp4.0/2, Error ellipse: s-maj=77.1km s-min=46.0km az=1.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**52.88**	**305**	P	P	20 47 31.7	0.0
	1.2nm,0.7s,baz=165,slow=6.3,SNR=5.5						
TORD	**Torodi Ar. Bea**	**75.20**	**27**	P	P	20 49 58.4	+0.1
	0.8nm,0.4s,baz=201,slow=6.3,SNR=12						
YKA	**Yellowknife Ar**	**138.99**	**315**	PKP	PKPdf	20 57 41.4	+0.4
	1.2nm,0.7s,baz=125,slow=2.4,SNR=5.1						
SONM	**Songino Array**	**149.84**	**90**	PKPbc	PKPbc	20 58 04.0	-1.1
	0.8nm,0.5s,baz=247,slow=2.8,SNR=3.5						
ILAR	**Eielson Array**	**152.75**	**307**	PKPbc	PKPbc	20 58 12.3	+1.0
	2.0nm,0.7s,baz=148,slow=6.0,SNR=11						

IDC 21 20:39:07.8±14.0, 48°.51S×107°.66E, h0km, mb3.7/2, mb1 3.9/2, mb1mx3.7/13, mbtmp3.7/2, Error ellipse: s-maj=797.2km s-min=51.7km az=120.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**32.33**	**49**	P	P	20 45 39.2	+0.7
	0.4nm,0.8s,baz=206,slow=8.0,SNR=4.8						
WRA	**Warramunga Arr**	**35.69**	**46**	P	P	20 46 07.2	-0.5
	1.4nm,0.9s,baz=208,slow=7.9,SNR=3.4						
TXAR	**Lajitas Array**	**149.32**	**117**	PKPbc	PKPbc	20 58 57.9	-0.3
	0.5nm,1.0s,baz=188,slow=6.1,SNR=3.0						

*IDC **21** 20:46:41.2±1.5, 32°.44N×104°.87E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/23, mbtmp3.6/5, Error ellipse: s-maj=166.9km s-min=27.5km az=56.0*
*BJI **21** 20:46:43.4, 32°.34N×104°.77E, h17km, ML3.2/8*
ISC 21 20:46:42.6±2.6, 32°.18N±0°.06×104°.7E±0°.2, h12km±16km, n7, σ0s84/11, mb3.6/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.49**	**212**	Pg	**Pg**	**20 47 10.3**	**-0.9**
CD2				Sg	**Sg**	**20 47 31.5**	**+1.0**
LZH	**Lanzhou**	**3.95**	**350**	*e*Pn	**Pn**	**20 47 42.8**	**-0.3**
LZH				Pg	**Pb**	**20 47 51.8**	**-0.5**
LZH				Sn	**Sn**	**20 48 29.9**	**+0.5**
LZH				Sg	**Sb**	**20 48 41.4**	**+1.4**
LZH				smax			
	comp=N,74nm,0.6s						
LZH				smax			
	comp=E,160nm,0.6s						
MKAR	**Makanchi Array**	**22.50**	**317**	P	**P**	**20 51 41.8**	**-0.2**
	comp=E,0.6nm,0.7s,mb3.1,baz=116,slow=11,SNR=4.9						
ZALV	**Zalesovo Beam**	**25.97**	**333**	P	**P**	**20 52 14.6**	**-0.4**
	comp=E,0.8nm,0.6s,mb3.5,baz=128,slow=9.6,SNR=4.1						
ARCES	**ARCESS Array B**	**56.48**	**336**	P	**P**	**20 56 23.1**	**-0.9**
	comp=E,1.0nm,0.8s,mb3.9,baz=80,slow=8.7,SNR=6.1						
FINES	**FINESS Array B**	**56.94**	**326**	P	**P**	**20 56 26.6**	**-0.9**
	comp=E,0.9nm,0.7s,mb3.9,baz=107,slow=10,SNR=4.8						
WRA	**Warramunga Arr**	**59.11**	**147**	P	**P**	**20 56 44.5**	**+1.3**
	comp=E,0.2nm,0.4s,mb3.5,baz=330,slow=9.6,SNR=2.8						

*NEIC **21** 21:04:24.5, 18°.00N×99°.26W, h52km, MD4.0(MEX), After MEX.*
MEX 21 21:04:24.4±0.9, 18°.00N×99°.26W, h53km±7km, MD4.0, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.35**	**258**	*i*P	Pn	21 04 33.1	-1.0
MEIG				*i*S	Sn	21 04 40.5	-0.7
PLIG	**Platanillo**	**0.46**	**330**	*i*P	Pn	21 04 33.6	-1.7
PLIG				*i*S	Sn	21 04 41.1	-2.1
PLIG	**Platanillo**	**0.46**	**330**	*i*P	Pn	21 04 33.6	-1.7
PLIG				*i*S	Sn	21 04 41.1	-2.1
MZVM		**1.19**	**2**	*i*P	Pn	21 04 43.8	-1.0
MZVM				*i*S	Sn	21 04 57.5	-2.4
PPM	**Popocatepetl**	**1.22**	**29**	*i*P	Pn	21 04 43.7	-1.5
PPM				*i*P		21 04 43.8	
PPM				*i*S	Sn	21 04 59.4	-1.3
PPM	**Popocatepetl**	**1.22**	**29**	*i*P	Pn	21 04 43.7	-1.5
PPM				*i*P		21 04 43.8	
PPM				*i*S	Sn	21 04 59.4	-1.3
ACX	**Acapulco**	**1.26**	**207**	*i*P	Pn	21 04 44.2	-1.4
ACX				*i*S	Sn	21 04 59.4	-2.1
ACX	**Acapulco**	**1.26**	**207**	*i*P	Pn	21 04 44.2	-1.4
ACX				*i*S	Sn	21 04 59.4	-2.1
UNM	**Universidad Na**	**1.33**	**3**	*i*P	Pn	21 04 45.6	-1.0
UNM				*i*S	Sn	21 05 01.7	-1.5
UNM	**Universidad Na**	**1.33**	**3**	*i*P	Pn	21 04 45.6	-1.0
UNM				*i*S	Sn	21 05 01.7	-1.5
CAIG	**El Cayaco**	**1.34**	**226**	*i*P	Pn	21 04 45.3	-1.5
CAIG				*i*S	Sn	21 05 01.3	-2.3
CAIG	**El Cayaco**	**1.34**	**226**	*i*P	Pn	21 04 45.3	-1.5
CAIG				*i*S	Sn	21 05 01.3	-2.3
UTMO	**Huajuapan**	**1.40**	**97**	*i*P	Pn	21 04 47.4	-0.2
UTMO				*i*S	Sn	21 05 02.9	-2.0
PBVM	**Pinon**	**1.45**	**7**	*i*P	Pn	21 04 47.1	-1.1
PBVM				*i*S	Sn	21 05 04.5	-1.6
PBVM	**Pinon**	**1.45**	**7**	*i*P	Pn	21 04 47.1	-1.1
PBVM				*i*S	Sn	21 05 04.5	-1.6
PTVM	**Pico Tres Padr**	**1.59**	**5**	*i*P	Pn	21 04 48.8	-1.4
PTVM				*i*S	Sn	21 05 08.7	-1.0
PTVM	**Pico Tres Padr**	**1.59**	**5**	*i*P	Pn	21 04 48.8	-1.4
PTVM				*i*S	Sn	21 05 08.7	-1.0
IIO	**Organos**	**1.67**	**18**	*i*P	Pn	21 04 49.9	-1.3
IIO				*i*S	Sn	21 05 10.3	-1.2
IIO	**Organos**	**1.67**	**18**	*i*P	Pn	21 04 49.9	-1.3
IIO				*i*S	Sn	21 05 10.3	-1.2
TPIG	**Tehuac#an**	**1.86**	**77**	*i*P	Pn	21 04 53.0	-0.8
TPIG				*i*S	Sn	21 05 14.2	-1.9
PNIG	**Pinotepa**	**1.93**	**146**	*i*P	Pn	21 04 53.0	-1.9
PNIG				*i*S	Sn	21 05 16.0	-1.9
PNIG	**Pinotepa**	**1.93**	**146**	*i*P	Pn	21 04 53.0	-1.9
PNIG				*i*S	Sn	21 05 16.0	-1.9
ZIIG	**Zihuatanejo**	**2.13**	**260**	*i*P	Pn	21 04 56.9	-0.7
ZIIG				*i*S	Sn	21 05 21.1	-1.8
ZIIG	**Zihuatanejo**	**2.13**	**260**	*i*P	Pn	21 04 56.9	-0.7
ZIIG				*i*S	Sn	21 05 21.1	-1.8
DEIG	**Demacu**	**2.30**	**5**	*i*P	Pn	21 04 57.9	-2.1
VHO	**Vista Hermosa**	**2.58**	**110**	*e*P	Pn	21 05 04.7	+0.9
VHO				*i*S	Sn	21 05 34.5	+0.6
VHO	**Vista Hermosa**	**2.58**	**110**	*e*P	Pn	21 05 04.7	+0.9
VHO				*i*S	Sn	21 05 34.5	+0.6
HUIG	**Huatulco**	**3.75**	**126**	*e*P	Pn	21 05 18.8	-0.9
HUIG				*i*S	Sn	21 06 01.0	-1.6
HUIG	**Huatulco**	**3.75**	**126**	*e*P	Pn	21 05 18.8	-0.9
HUIG				*i*S	Sn	21 06 01.0	-1.6
MMIG	**Aquila**	**3.89**	**275**	*i*P	Pn	21 05 21.9	+0.2
MMIG				*i*S	Sn	21 06 03.6	-2.6
TGIG		**5.99**	**101**	*e*P	Pn	21 05 56.4	+6.0
TGIG				*i*S	Sn	21 06 56.7	-1.0

*ISCJB **21** 21:07:00.8±0.5, 37°.72N±0°.03×37°.48E±0°.03, h1km±7km, Error ellipse: s-maj=5.4km s-min=3.4km az=138.1*
*ISK **21** 21:07:00.9, 37°.71N×37°.49E, h7km, MD2.9*
*DDA **21** 21:07:01.0, 37°.71N×37°.47E, h10km±2km, Md3.0*
*CSEM **21** 21:07:01.3±0.1, 37°.72N×37°.48E, h10km, MD2.9, Error ellipse: s-maj=4.1km s-min=2.4km az=141.0*
ISC 21 21:07:01.5±0.4, 37°.72N±0°.03×37°.48E±0°.03, h5km±6km, n26, σ0s71/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZT	**Gaziantep**	**0.37**	**170**	*e*P	**Pg**	**21 07 07.9**	**-0.7**
GZT				*e*S	**Sg**	**21 07 12.2**	**-1.2**
KMRS	**Kahramanmaras**	**0.51**	**246**	*e*PG	**Pg**	**21 07 11.0**	**-0.3**
KMRS				*e*SG	**Sg**	**21 07 18.0**	**+0.1**
KMRS	**Kahramanmaras**	**0.51**	**246**	*e*Pg	**Pg**	**21 07 11.0**	**-0.3**
KMRS				*e*Sg	**Sg**	**21 07 18.0**	**+0.1**
GAZ	**Gaziantep**	**0.59**	**202**	*e*PG	**Pg**	**21 07 12.8**	**+0.1**
GAZ				*e*SG	**Sg**	**21 07 21.4**	**+1.0**
GAZ	**Gaziantep**	**0.59**	**202**	*e*Pg	**Pg**	**21 07 12.8**	**0.0**
GAZ				*e*Sg	**Sg**	**21 07 21.4**	**+1.0**
AKCD	**Akcadag**	**0.67**	**31**	*e*P	**Pg**	**21 07 14.4**	**-0.1**
AKCD				*e*S	**Sg**	**21 07 24.4**	**+1.2**
AKCD	**Akcadag**	**0.67**	**31**	*e*P	**Pg**	**21 07 14.4**	**0.0**
AKCD				*e*S	**Sg**	**21 07 24.4**	**+1.2**
ATAB	**Bozova**	**0.69**	**111**	*e*P	**Pg**	**21 07 14.1**	**-0.7**
ATAB				*e*S	**Sg**	**21 07 24.1**	**+0.3**
ATAB	**Bozova**	**0.69**	**111**	*e*P	**Pg**	**21 07 14.1**	**-0.7**
ATAB				*e*S	**Sg**	**21 07 24.1**	**+0.4**
ANDN	**Andirin**	**0.91**	**262**	*e*P	**Pg**	**21 07 18.6**	**-0.5**
ANDN				*e*S	**Sg**	**21 07 30.7**	**-0.2**
ANDN	**Andirin**	**0.91**	**262**	*e*P	**Pg**	**21 07 18.6**	**-0.4**
ANDN				*e*S	**Sg**	**21 07 30.7**	**-0.2**
MALT	**Malatya**	**0.95**	**51**	*e*PG	**Pg**	**21 07 19.4**	**-0.4**
MALT				*e*SG	**Sg**	**21 07 33.5**	**+1.3**
MALT	**Malatya**	**0.95**	**51**	*e*Pg	**Pg**	**21 07 19.4**	**-0.4**
MALT				*e*Sg	**Sg**	**21 07 33.5**	**+1.3**
MYA	**Malataya**	**0.96**	**50**	*e*PG	**Pg**	**21 07 20.0**	**+0.1**
MYA	**Malataya**	**0.96**	**50**	*e*Pg	**Pg**	**21 07 20.0**	**+0.1**
KUZU	**Kuzuini**	**1.00**	**199**	*e*P	**Pg**	**21 07 20.6**	**0.0**
KUZU				*e*S	**Sg**	**21 07 35.0**	**+1.5**
KUZU	**Kuzuini**	**1.00**	**199**	*e*P	**Pg**	**21 07 20.6**	**0.0**
KUZU				*e*S	**Sg**	**21 07 35.0**	**+1.4**
SARI	**SarD1z-Kayseri**	**1.14**	**327**	*e*PN	**Pg**	**21 07 22.4**	**-1.0**
SARI	**SarD1z-Kayseri**	**1.14**	**327**	*e*Pn	**Pg**	**21 07 22.4**	**-1.0**
KOZT	**Kozan**	**1.34**	**260**	*e*PN	**Pn**	**21 07 26.7**	**-0.1**
KOZT				*e*SN	**Sn**	**21 07 46.0**	**+1.0**
SVRC	**Sivrice-ELAZID**	**1.58**	**65**	*e*PN	**Pn**	**21 07 29.6**	**-0.6**
SVRC	**Sivrice-ELAZID**	**1.58**	**65**	*e*Pn	**Pn**	**21 07 29.6**	**-0.6**
PTK	**Pertek**	**1.91**	**51**	*e*PN	**Pn**	**21 07 34.0**	**-0.6**
PTK	**Pertek**	**1.91**	**51**	*e*Pn	**Pn**	**21 07 34.0**	**-0.6**
SVSK	**Karacayir**	**2.23**	**350**	*e*PN	**Pn**	**21 07 38.8**	**-0.2**
SVSK	**Karacayir**	**2.23**	**350**	*e*Pn	**Pn**	**21 07 38.8**	**-0.3**

WEL 21 21:10:19.0±0.4, 38°.11S×176°.25E, h154km±3km, ML3.5/10, Error ellipse: s-maj=4.9km s-min=2.9km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.69**	**102**	PN	Pn	21 10 42.4	+0.6
URZ				SN	Sn	21 10 59.1	-0.1
MWZ	**Matawai**	**1.03**	**103**	PN	Pn	21 10 44.3	0.0
MWZ				SN	Sn	21 11 03.6	-0.1
BKZ	**Black Stump Fm**	**1.07**	**170**	PN	Pn	21 10 44.8	+0.1
BKZ				SN	Sn	21 11 04.8	+0.3
BKZ				SN	Sn	21 11 04.8	+0.4
KNZ	**Kokohu**	**1.44**	**130**	SN	Sn	21 11 10.6	0.0
MHGZ	**Mahia Peninsul**	**1.66**	**129**	SN	Sn	21 11 14.9	+0.1
KAHZ	**Kahuranaki**	**1.75**	**164**	PN	Pn	21 10 51.5	+0.1
TSZ	**Takapari Road**	**1.96**	**187**	PN	Pn	21 10 53.0	-0.8
PXZ	**Pawanui**	**1.97**	**166**	PN	Pn	21 10 53.3	-0.6
PXZ				SN	Sn	21 11 20.2	-0.8
MRZ	**Mangatainoka R**	**2.60**	**191**	PN	Pn	21 10 59.5	-1.9
OGWZ	**Otaki Gorge**	**2.83**	**197**	PN	Pn	21 11 02.2	-2.1
OGWZ				SN	Sn	21 11 35.7	-3.6
KIW	**Kapiti Island**	**2.94**	**200**	PN	Pn	21 11 03.1	-2.5
MTW	**Mount Morrison**	**3.10**	**191**	PN	Pn	21 11 04.8	-2.8
CAW	**Cannon Point**	**3.13**	**197**	PN	Pn	21 11 05.3	-2.7
TCW	**Tory Channel**	**3.45**	**206**	PN	Pn	21 11 09.3	-2.8
PLWZ	**Palliser**	**3.54**	**192**	PN	Pn	21 11 10.0	-3.3
TUWZ	**Tuamarina**	**3.76**	**208**	SN	Sn	21 11 56.0	-4.6
KHZ	**Kahutara**	**4.77**	**205**	PN	Pn	21 11 25.5	-3.9
MQZ	**McQueen's Vall**	**6.22**	**205**	SN	Sn	21 12 49.2	-9.4

*ISCJB **21** 21:18:01.2±0.7, 37°.81N±0°.05×21°.44E±0°.04, h5km±12km, Error ellipse: s-maj=7.7km s-min=4.8km az=166.7*
*THE **21** 21:18:01.5, 37°.82N×21°.44E, h17km±1km, ML2.3/4, Error ellipse: s-maj=1.6km s-min=0.7km az=173.0*
*ATH **21** 21:18:01.5, 37°.88N×21°.41E, h23km±2km, MD3.4/7*
*CSEM **21** 21:18:02.2±0.2, 37°.90N×21°.44E, h20km, MD3.4*
ISC 21 21:18:01.8±0.7, 37°.82N±0°.05×21°.43E±0°.04, h11km±10km, n28, σ0s75/45, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.24**	**6**	*e*PB	**Pg**	**21 18 06.6**	**-0.2**
RLS				*e*SB	**Sg**	**21 18 10.4**	**+0.3**
RLS	**Riolos of Patr**	**0.24**	**6**	*e*Pb	**Pg**	**21 18 06.6**	**-0.2**
RLS				*e*Sb	**Sg**	**21 18 10.4**	**+0.3**
UPR	**University Cam**	**0.54**	**31**	*e*PN	**Pg**	**21 18 12.2**	**-0.1**
UPR				*e*SN	**Sg**	**21 18 20.2**	**+0.7**
UPR	**University Cam**	**0.54**	**31**	*e*Pn	**Pg**	**21 18 12.2**	**-0.1**
UPR				*e*Sn	**Sg**	**21 18 20.2**	**+0.7**
KFL	**Anninata**	**0.59**	**300**	P	**Pg**	**21 18 13.3**	**+0.1**
KFL	**Anninata**	**0.59**	**300**	P	**Pg**	**21 18 13.3**	**+0.1**
LAKA	**Lakka**	**0.60**	**46**	P	**Pg**	**21 18 13.0**	**-0.5**
LAKA				S	**Sg**	**21 18 22.1**	**+0.7**
LAKA	**Lakka**	**0.60**	**46**	P	**Pg**	**21 18 13.0**	**-0.5**
LAKA				S	**Sg**	**21 18 22.1**	**+0.7**
EFP	**Efpalio**	**0.71**	**31**	*e*PN	**Pg**	**21 18 14.4**	**-1.2**
EFP				*e*SN	**Sg**	**21 18 25.0**	**+0.1**
EFP	**Efpalio**	**0.71**	**31**	P	**Pg**	**21 18 14.5**	**-1.1**
EFP				S	**Sg**	**21 18 24.9**	**0.0**
EFP	**Efpalio**	**0.71**	**31**	P	**Pg**	**21 18 14.5**	**-1.1**
EFP				*e*Sn	**Sg**	**21 18 25.0**	**+0.1**
GUR	**Goura**	**0.73**	**81**	*e*PB	**Pg**	**21 18 15.3**	**-0.6**
GUR	**Goura**	**0.73**	**81**	P	**Pg**	**21 18 15.4**	**-0.5**
GUR				S	**Sg**	**21 18 25.9**	**+0.5**
GUR	**Goura**	**0.73**	**81**	P	**Pg**	**21 18 15.4**	**-0.5**
GUR				S	**Sg**	**21 18 25.9**	**+0.5**
TRIZ	**Trizonia**	**0.74**	**43**	P	**Pg**	**21 18 15.1**	**-1.1**
TRIZ				S	**Sg**	**21 18 26.9**	**+1.0**
TRIZ	**Trizonia**	**0.74**	**43**	P	**Pg**	**21 18 15.1**	**-1.1**
VLS	**Valsamata**	**0.76**	**298**	P	**Pg**	**21 18 16.0**	**-0.4**
VLS				S	**Sg**	**21 18 27.1**	**+0.8**
VLS	**Valsamata**	**0.76**	**298**	P	**Pg**	**21 18 16.0**	**-0.4**
VLS				S	**Sg**	**21 18 27.1**	**+0.8**
KALE	**Kalithea**	**0.80**	**44**	P	**Pg**	**21 18 16.0**	**-1.2**
KALE				S	**Sg**	**21 18 28.3**	**+0.7**
KALE	**Kalithea**	**0.80**	**44**	P	**Pg**	**21 18 16.0**	**-1.2**
PYL	**PYLOS**	**0.95**	**165**	*e*PN	**Pg**	**21 18 21.1**	**+0.9**
PYL	**PYLOS**	**0.95**	**165**	*e*Pn	**Pg**	**21 18 21.1**	**+0.9**
DSF	**Desfina**	**1.04**	**55**	P	**Pg**	**21 18 20.1**	**-1.8**
DSF				S	**Sg**	**21 18 35.6**	**+0.1**
DSF	**Desfina**	**1.04**	**55**	P	**Pg**	**21 18 20.1**	**-1.8**
DSF				S	**Sg**	**21 18 35.6**	**+0.1**
LTK	**Loutraki**	**1.23**	**80**	*e*PN	**Pn**	**21 18 24.8**	**-0.1**
LTK	**Loutraki**	**1.23**	**80**	*e*Pn	**Pn**	**21 18 24.8**	**-0.1**
DID	**Didima**	**1.47**	**102**	*e*PN	**Pn**	**21 18 29.0**	**+0.9**
DID	**Didima**	**1.47**	**102**	*e*Pn	**Pn**	**21 18 29.0**	**+0.9**

MAN 21 21:23:44, 8°.95N×122°.58E, h33km, mb4.1, ML2.9, MS2.6, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.76**	**59**	⇓*i*P	Pn	21 23 59.4	+1.0
SNPH				*i*S	Sn	21 24 10.5	+1.7
IPIL	**Ipil**	**1.15**	**180**	*e*P	Pn	21 24 04.9	+1.1
IPIL				*e*S	Sn	21 24 17.4	-1.0
PAGZ	**Pagadian**	**1.35**	**144**	*e*P	Pn	21 24 08.4	+1.9
GUIM	**Jordan**	**1.67**	**0**	*e*P	Pn	21 24 12.4	+1.4

*BJI **21** 21:30:42.4, 0°.86S×119°.88E, h56km, mB5.3/29, mb5.0/44, Ms5.0/20, Ms7 4.5/20*
*MOS **21** 21:30:43.7±1.0, 0°.25S×119°.72E, h33km, mb5.2/27, Error ellipse: s-maj=12.2km s-min=6.4km az=117.6*
*ISCJB **21** 21:30:45.8±0.1, 0°.35S±0°.02×119°.66E±0°.02, h51km, mb5.0/85, MS4.1/24, Error ellipse: s-maj=3.3km s-min=2.7km az=150.1*
*DJA **21** 21:30:45, 0°.39S×119°.64E, h13km, mb5.0/28*
*IDC **21** 21:30:47.4±0.5, 0°.33S×119°.68E, h50km±4km, mb4.4/23, mb1 4.4/24, mb1mx4.4/26, mbtmp4.3/24, MS4.0/16, Ms1 4.1/16, ms1mx3.9/28, Error ellipse: s-maj=17.6km s-min=9.6km az=71.0*
*NEIC **21** 21:30:48.0±1.0, 0°.29S×119°.73E, h57km±9km, mb5.0/23, Error ellipse: s-maj=8.0km s-min=4.8km az=66.0*
NEIC Felt [III] at Palu.
*GCMT **21** 21:30:49.0±0.3, 0°

PWJI Pagerwojo 10.92 226 P **Pn** **21 33 19.9 -1.5**
43nm,0.8s
BNDI Bandanaira 11.03 112 P **Pn** **21 33 23.6 +0.6**
633nm,0.9s
PCJI Pacitan 11.49 227 P **Pn** **21 33 29.8 +0.5**
90nm,1.3s
BJII Banjamegara 12.10 235 P **Pn** **21 33 38.3 +0.7**
41nm,1.4s
TPI Tanjungpandan 12.24 259 P **Pn** **21 33 37.7 -1.8**
25nm,1.0s
LEM Lembang 13.62 242 P Px 21 34 11.6
CISI Cisompet, Garu 13.80 239 P **Pn** **21 33 59.2 -1.7**
79nm,0.9s
CBJI Citeko 14.13 245 P **Pn** **21 34 14.5 +9.3**
BLSI Bandar Lampung 15.23 251 P **Pn** **21 34 24.7 +5.1**
KLSI 15.52 254 P **Pn** **21 34 28.7 +5.3**
MYKOM Kota Tinggi 15.95 278 P **Pn** **21 34 29.3 +0.4**
MYKOM Kota Tinggi 15.95 278 P pP 21 34 43.5 0.0
MDSI Maura Dua 16.00 255 P **Pn** **21 34 34.2 +4.7**
LWLI Liwa 16.25 253 P **Pn** **21 34 38.2 +5.5**
KGM Kluang 16.51 278 P **Pn** **21 34 36.0 +0.1**
KTGM Kuala Trenggan 17.45 289 P **Pn** **21 34 47.9 +0.3**
KAKA Kakadu 17.64 135 *e*P **Pn** **21 34 51.1 +1.2**
32nm,0.6s
KAKA Kakadu 17.64 135 *e*Pn **Pn** **21 34 50.7 +0.8**
98nm,0.7s
KAKA Kakadu 17.64 135 P **Pn** **21 34 52.2 +2.3**
KNA Kununurra 17.73 150 *e*P **Pn** **21 34 50.4 -0.7**
23nm,0.9s
KNA Kununurra 17.73 150 P **Pn** **21 34 51.0 -0.1**
661nm85nm,0.9s
SDSI Sungai Dareh 18.24 268 P pP 21 35 10.7 +1.8
FRIM Kepong 18.38 281 P **Pn** **21 34 59.4 +0.4**
FITZ Fitzroy Crossi 18.58 162 *e*P **Pn** **21 34 59.7 -1.6**
22nm,0.9s
FITZ Fitzroy Crossi 18.58 162 P **Pn** **21 34 60.0 -1.4**
0.4nm,0.3s,baz=1.0,slow=5.6,SNR=17
FITZ LR LR 21 43 57.2
comp=Z,697nm,18.2s,baz=347,slow=42
FITZ Fitzroy Crossi 18.58 162 P **Pn** **21 35 01.5 +0.2**
35nm,1.0s
PDSI Padang 19.21 268 P **Pn** **21 35 09.0 0.0**
2µm106nm,1.2s
IPM Ipoh 19.23 285 P **Pn** **21 35 08.9 -0.3**
IPM Ipoh 19.23 285 P **Pn** **21 35 09.6 +0.4**
904nm38nm,0.8s
PPI Padang Panjang 19.27 270 P **Pn** **21 35 10.2 +0.6**
8µm43nm,0.8s
MNSI Mandailing Nat 20.11 273 P **P** **21 35 20.3 +2.8**
900nm50nm,1.3s
SISI Saibi 20.59 267 P **P** **21 35 23.1 +0.5**
152nm,0.7s
MBWA Marble Bar 20.67 180 *e*P **P** **21 35 23.1 -0.2**
MBWA Marble Bar 20.67 180 *e*P **P** **21 35 23.0 -0.3**
MBWA *e*S **S** **21 39 13.4 +2.0**
PSI Prapat 20.97 279 P **P** **21 35 27.0 +0.3**
4.7nm,0.7s,baz=94,slow=11,SNR=4.7
PSI LR LR 21 44 29.9
comp=Z,897nm,19.7s,MS4.2,baz=93,slow=39
QIZ Qiongzhong 21.55 334 P **P** **21 35 33.8 +1.0**
QIZ S **S** **21 39 31.4 +2.6**
QIZ pmax pmax
comp=Z,440nm,3.9s
WRA Warramunga Arr 24.19 144 P **P** **21 35 58.3 -1.1**
comp=Z,11nm,1.0s,mb4.2,baz=316,slow=11,SNR=15
WRA LR LR 21 47 56.7
comp=Z,578nm,18.1s,MS4.1,baz=320,slow=42
NACB Ninganchiao 24.46 4 P **P** **21 36 00.1 -1.8**
YHNB Yeheng 24.94 4 *e*P **P** **21 36 04.6 -1.6**
comp=Z,9.0nm,0.5s,mb4.6
MEEK Meekatharra 26.14 182 *e*P **P** **21 36 16.1 -1.0**
ASAR Alice Springs 26.97 150 P **P** **21 36 24.5 -0.1**
comp=Z,2.8nm,0.8s,mb3.8,baz=343,slow=12,SNR=16
ASAR PcP PcP 21 39 45.0 -0.5
comp=Z,2.3nm,0.9s,baz=349,slow=2.5,SNR=5.3
CMAR Chiang Mai Arr 27.65 314 P **P** **21 36 30.8 0.0**
comp=Z,3.2nm,0.7s,mb4.0,baz=136,slow=7.3,SNR=26
CMAR PcP PcP 21 39 47.8 +0.6
comp=Z,1.9nm,0.8s,baz=185,slow=1.5,SNR=9.6
CMAR LR LR 21 48 27.5
comp=Z,350nm,20.5s,MS3.9,baz=294,slow=38
CMAR Chiang Mai Arr 27.65 314 P **P** **21 36 30.8 +0.1**
CMAR 21 39 47.8
GUMO Guam 28.56 60 LR LR 21 46 48.6
comp=Z,410nm,21.4s,MS4.0,baz=223,slow=34
MORW Morawa 28.75 187 *e*P **P** **21 36 39.7 -0.7**
PMG Port Moresby 28.80 109 P **P** **21 36 40.5 -0.7**
GYA Guiyang 29.46 336⇑ *i*P **P** **21 36 49.0 +2.2**
GYA pP pP 21 37 02.4 +2.0
GYA sP sP 21 37 08.8 +2.1
GYA PP PP 21 37 46.5 -7.7
GYA PcP PcP 21 39 53.0 +1.5
GYA S **S** **21 41 39.4 +1.9**
GYA sS sS 21 42 02.8 +2.4
GYA ScP ScP 21 43 29.3 +0.2
GYA PcS PcS 21 43 36.0 +1.3
GYA ScS ScS 21 47 23.5 -0.3
GYA pmax pmax
comp=Z,20nm,0.8s,mb4.9
GYA pmax pmax
comp=Z,120nm,4.6s
GYA LR LR
comp=N,580nm,16.7s,MS4.4
GYA LR LR
comp=E,420nm,17.3s,MS4.4
GYA LR LR
comp=Z,550nm,16.6s,MS4.3
KMI Kunming 30.17 328 P **P** **21 36 56.4 +3.4**
KMI pmax pmax
comp=Z,7.0nm,1.6s,mb4.1
NJ2 Nanjing 32.25 359 *e*P **P** **21 37 10.3 -1.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
NWAO Narrogin (SRO) 32.47 184 *e*P **P** **21 37 13.3 +0.1**
comp=Z,13nm,0.7s,mb4.9
NWAO Narrogin (SRO) 32.47 184 *e*P **P** **21 37 13.3 +0.1**
NWAO pmax pmax
comp=Z,13nm,0.7s
CTA Charters Tower 32.58 129 P **P** **21 37 15.5 +1.1**
comp=Z,1.6nm,0.4s,mb4.3,baz=303,slow=13,SNR=4.0
CTAO Charters Tower 32.58 129 *e*P **P** **21 37 14.9 +0.5**
CD2 Chengdu 34.58 335 P **P** **21 37 32.0 +0.4**
CD2 pmax pmax
comp=Z,40nm,0.8s,mb5.4
CD2 pmax pmax
comp=Z,1µm,4.8s
SHL Shillong 37.21 316 *e*PKP **P** **21 37 54.0 -0.2**
STKA Stephens Creek 37.58 149 *e*P **P** **21 37 59.1 +1.8**
comp=Z,5.0nm,0.6s,mb4.4
STKA Stephens Creek 37.58 149 *e*P **P** **21 37 57.7 +0.5**
comp=Z,1.6nm,0.8s,mb3.8
STKA LR LR 21 55 29.3
STKA Stephens Creek 37.58 149 P **P** **21 37 58.1 +0.9**
comp=Z,4.9nm,0.8s,mb4.3,baz=324,slow=13,SNR=6.3
STKA LR LR 21 55 29.3
comp=Z,315nm,21.2s,MS4.1,baz=151,slow=39
KSRS Korea Array 38.40 11 P **P** **21 38 05.2 +1.2**
comp=Z,8.1nm,0.7s,mb4.5,baz=194,slow=7.6,SNR=23
KSRS pP pP 21 38 17.2 -0.6
comp=Z,5.9nm,0.8s,baz=198,slow=9.2,SNR=6.8
KSRS LR LR 21 54 33.5
comp=Z,186nm,18.4s,MS3.9,baz=189,slow=37
LZH Lanzhou 39.14 340 *e*P **P** **21 38 11.4 +1.1**
LZH pP pP 21 38 25.6 +1.5
LZH sP sP 21 38 32.8 +2.4
LZH pmax pmax
comp=Z,24nm,1.2s,mb4.8
PALK Pallekele 39.59 282 P **P** **21 38 14.9 +0.5**
CMSA Cobar Meteorol 39.60 144 *e*P **P** **21 38 14.2 0.0**
VIS Vishakhapatnam 40.01 299 *e*PKP **P** **21 38 18.3 +0.5**
BJT Baijiatuao 40.32 356 *e*P **P** **21 38 19.7 -0.3**
comp=Z,31nm,0.6s,mb5.2
BJT Baijiatuau 40.32 356 *e*P **P** **21 38 19.7 -0.3**
BJT pmax pmax
comp=Z,31nm,0.6s
BJI Beijing 40.34 356 P **P** **21 38 20.9 +0.7**
BJI pP pP 21 38 34.3 +0.2
BJI sP sP 21 38 40.4 +0.1
BJI S **S** **21 44 28.1 +3.9**
BJI sS sS 21 44 49.4 +1.7
BJI SS SS 21 47 29.6 +4.8
BJI pmax pmax
comp=Z,42nm,0.7s,mb5.3
BJI pmax pmax
comp=Z,200nm,4.7s

LSA Lhasa 40.41 320 *e*P **P** **21 38 23.2 +2.3**
comp=Z,22nm,0.8s,mb5.0
LSA Lhasa 40.41 320 *e*P **P** **21 38 23.2 +2.2**
LSA pmax pmax
comp=Z,22nm,0.8s,mb4.9
MAJO Matsushiro 40.56 23 *e*P **P** **21 38 21.2 -0.9**
comp=Z,17nm,0.9s,mb4.7
MAJO Matsushiro 40.56 23 *e*P **P** **21 38 21.2 -0.8**
MAJO pmax pmax
comp=Z,17nm,0.9s,mb4.7
MAT Matsushiro 40.56 23 P **P** **21 38 20.3 -1.8**
MJAR Matsushiro Arr 40.56 23 P **P** **21 38 20.7 -1.3**
comp=Z,14nm,0.8s,mb4.7,baz=198,slow=8.6,SNR=30
ODAN Odare 41.19 314 *e*P **P** **21 38 28.3 +0.8**
comp=Z,90nm,1.1s,mb5.3
TAPN Taplejung 41.25 314 *e*P **P** **21 38 28.9 +1.0**
comp=Z,69nm,0.9s,mb5.3
MDRS Chennai 41.29 290 *ex* pP 21 38 40.7 -1.7
MDRS AMb AMB 21 39 13.1
comp=Z,94nm,2.4s,mb5.0
HHC Hu-ho-hao-te 41.68 351 *e*P **P** **21 38 32.4 +1.2**
HHC pP pP 21 38 47.8 +2.7
HHC sP sP 21 38 55.1 +3.7
HHC PP PP 21 40 12.1 +3.7
HHC *e*S **S** **21 44 44.9 +0.8**
HHC sS sS 21 45 11.5 +3.9
HHC SS SS 21 47 48.3 -3.0
HHC pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
HHC pmax pmax
comp=Z,320nm,5.0s
HHC LR LR
comp=N,330nm,15.9s,MS4.6
HHC LR LR
comp=E,460nm,14.7s,MS4.6
HHC LR LR
comp=Z,360nm,16.7s,MS4.3
RAMN Ramite 41.82 313 *e*P **P** **21 38 33.6 +1.0**
comp=Z,78nm,0.8s,mb5.4
JIRN Jiri 42.53 314 *e*P **P** **21 38 39.3 +1.0**
comp=Z,118nm,0.8s,mb5.7
GUN Gumba 42.90 314 *e*P **P** **21 38 42.2 +0.9**
comp=Z,151nm,0.6s,mb5.9
PKI Pulchoki 43.04 313 *e*P **P** **21 38 43.5 +1.0**
comp=Z,35nm,0.7s,mb5.2
PKIN Phulchoki 43.06 313 *e*P **P** **21 38 43.5 +0.9**
comp=Z,35nm,0.7s,mb5.2
KKN Kakani 43.26 313 *e*P **P** **21 38 45.2 +0.9**
comp=Z,47nm,0.8s,mb5.3
DMN Daman 43.29 313 *e*P **P** **21 38 45.2 +0.7**
comp=Z,40nm,0.8s,mb5.2
GTA Gaotai 43.56 338⇑ P **P** **21 38 48.0 +1.5**
GTA pP pP 21 39 00.3 -0.2
GTA sP sP 21 39 06.8 +0.1
GTA PcP PcP 21 40 34.8 +1.4
GTA S **S** **21 45 15.6 +3.8**
GTA pmax pmax
comp=Z,30nm,0.7s,mb5.1
GKN Gorkha 43.85 313 *e*P **P** **21 38 49.4 +0.4**
comp=Z,53nm,0.6s,mb5.4
HYB Hyderabad 44.16 296 *i* P **P** **21 38 51.5 -0.1**
CN2 Changchun 44.27 6 *e*P **P** **21 38 54.3 +2.2**
CN2 *e*S **S** **21 45 24.4 +2.3**
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
CN2 pmax pmax
comp=Z,200nm,5.0s
KOLN Koldanda 44.49 312 *e*P **P** **21 38 54.8 +0.7**
comp=Z,34nm,0.7s,mb5.2
DANN Dangsing 44.69 313 *e*P **P** **21 38 56.2 +0.5**
comp=Z,108nm,0.7s,mb5.8
MDJ Mudanjiang 45.65 10 P **P** **21 39 03.3 +0.3**
MDJ pP pP 21 39 15.6 -1.6
MDJ S **S** **21 45 43.1 +1.1**
MDJ pmax pmax
comp=Z,23nm,1.0s,mb5.1
MDJ pmax pmax
comp=Z,240nm,8.7s
MDJ LR LR
comp=Z,170nm,23.1s,MS3.9
MDJ Mudanjiang 45.65 10 *e*P **P** **21 39 02.8 -0.3**
comp=Z,34nm,1.0s,mb5.2
BHPL Bhopal 47.27 303 *e*PKP **P** **21 39 16.2 0.0**
BHPL AMb AMB 21 39 18.1
comp=Z,21nm,0.6s,mb5.3
KAD Karad 48.09 294 *e*PKP **P** **21 39 22.3 -0.3**
POO Poona 48.75 295 *e*PKP **P** **21 39 27.4 -0.3**
ASAJ Asahikawa 48.78 22 P **P** **21 39 26.9 -0.5**
comp=Z,13nm,0.8s,mb5.0,baz=225,slow=9.4,SNR=11
ASAJ LR LR 21 59 46.9
comp=Z,203nm,19.6s,MS4.1,baz=184,slow=36
ULN Ulaanbaatar 49.27 349 *e*P **P** **21 39 32.0 +0.9**
comp=Z,16nm,0.9s,mb5.1
ULN Ulaanbaatar 49.27 349 *e*P **P** **21 39 32.0 +0.9**
ULN pmax pmax
comp=Z,16nm,0.9s,mb5.0
ULN Ulaanbaatar 49.27 349 P **P** **21 39 31.9 +0.8**
comp=Z,21nm,0.8s,mb5.2
SONM Songino Array 49.38 348 P **P** **21 39 32.1 +0.1**
comp=Z,8.6nm,0.8s,mb4.8,baz=164,slow=9.1,SNR=19
SONM pP pP 21 39 46.1 -0.1
comp=Z,3.5nm,0.7s,baz=171,slow=8.4,SNR=3.4
SONM PcP PcP 21 40 53.8 0.0
comp=Z,1.8nm,0.5s,baz=193,slow=5.6,SNR=2.7
HABR Khabarovsk 50.44 13 *e*P **P** **21 39 38.6 -1.4**
HABR *SP sP 21 39 57.1 -3.3
HABR 21 40 56.4
HABR *e*S **S** **21 46 49.3 -0.3**
HABR *e*SS sS 21 47 10.7 -3.0
HABR *e* 21 49 27.4
HABR SS SS 21 50 25.1 +0.9
HABR pmax pmax
comp=Z,91nm,2.8s,mb5.3
HABR pmax pmax
comp=N,46nm,2.5s
HABR pmax pmax
comp=E,73nm,2.8s
HABR MLR MLR
comp=Z,170nm,17.0s,MS4.1
KLR Kul'dur 50.49 10 *e*P **P** **21 39 36.6 -3.7**
AJM Ajmer 50.90 305 *e*PKP **P** **21 39 43.7 -0.2**
AJM AMb AMB 21 39 46.5
comp=Z,19nm,0.7s,mb5.2
YSS Yuzh-Sakhalins 51.28 20 *e*P **P** **21 39 45.7 -0.6**
WMQ Urumqi 52.43 331 *e*P **P** **21 39 57.0 +2.0**
WMQ pP pP 21 40 11.0 +1.6
WMQ sP sP 21 40 17.4 +1.9
WMQ PcP PcP 21 41 07.3 +2.1
WMQ PP PP 21 41 57.4 +3.1
WMQ pmax pmax
comp=Z,22nm,0.8s,mb5.1
WMQ pmax pmax
comp=Z,190nm,4.7s
WMQ LR LR
comp=N,120nm,21.6s,MS4.1
WMQ LR LR
comp=E,140nm,21.6s,MS4.1
WMQ LR LR
comp=Z,130nm,20.7s,MS4.0
ZAK Zakamensk 52.46 347 *e*P **P** **21 39 55.3 +0.3**
ZAK pmax pmax
comp=Z,3.0nm,1.7s,mb4.0
TLY Talaya 53.59 348 *e*P **P** **21 40 03.4 0.0**
TLY *e*pP pP 21 40 18.8 +0.9
TLY Talaya 53.59 348 *e*P **P** **21 40 05.1 +1.7**
TLY *e* pP 21 40 19.4 +1.6
TLY pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
TLY MLR MLR
comp=Z,50nm,14.0s,MS3.7
KSH Kashi 56.27 320⇑ P **P** **21 40 24.3 +1.4**
KSH *e*pP pP 21 40 40.1 +2.6
KSH *e*sP sP 21 40 47.0 +3.4
KSH *e*PP PP 21 42 29.5 +0.7
KSH *e*ScP ScP 21 45 16.1 +1.1
KSH *e*PcS PcS 21 45 22.8 +2.3
KSH *e*S **S** **21 48 06.1 -3.0**
KSH *e*ScS ScS 21 50 04.1 -3.6
KSH pmax pmax
comp=Z,8.0nm,0.5s,mb5.0
KSH pmax pmax
comp=Z,160nm,3.6s
KSH LR LR
comp=N,350nm,11.7s,MS4.8
KSH LR LR
comp=E,340nm,11.8s,MS4.8
KSH LR LR
comp=Z,260nm,7.4s
CLNS Chul'man 57.18 3 *e*P **P** **21 40 29.5 +0.5**
CLNS pmax pmax
comp=E,5.0nm,0.9s
CLNS pmax pmax
comp=Z,19nm,1.0s,mb5.1
CLNS pmax pmax
comp=N,11nm,1.0s
MK31 Makanchi Array 57.22 330 *e*P **P** **21 40 30.4 +0.8**
MK31 *e*pP pP 21 40 45.4 +1.3
MK31 *e*PcP PcP 21 41 24.4 +0.9
MKAR Makanchi Array 57.22 330 P **P** **21 40 30.3 +0.7**
comp=N,10nm,0.7s,mb5.0,baz=134,slow=7.3,SNR=90
MKAR PcP PcP 21 41 23.1 -0.5
comp=N,5.3nm,0.7s,baz=132,slow=5.3,SNR=5.2
TKM2 Tokmak 2 58.43 323 P **P** **21 40 39.4 +1.3**
SNR=20
TKM2 Tokmak 2 58.43 323 *e*P **P** **21 40 38.9 +0.7**
comp=N,14nm,0.8s,mb5.0
TKM2 Tokmak 2 58.43 323 *e*P **P** **21 40 38.9 +0.8**
TKM2 pmax pmax
comp=Z,14nm,0.8s,mb5.0
KBL Kabul 58.66 312 *e*P **P** **21 40 40.1 +0.2**
KBK Karagaybulak 58.67 323 P **P** **21 40 41.7 +1.9**
SNR=15
UCH Uchtor 58.70 322 P **P** **21 40 42.0 +2.0**
SNR=9.8
UCH Uchtor 58.70 322 *e*P **P** **21 40 41.0 +1.0**
comp=Z,54nm,0.6s,mb5.8
UCH *e*pP pP 21 40 56.3 +1.8
UCH *e*PcP PcP 21 41 30.5 +1.0
AAK Ala-Archa 58.93 322 P **P** **21 40 43.4 +1.8**
SNR=7.7
AAK Ala-Archa 58.93 322 *e*P **P** **21 40 42.8 +1.1**
AAK *e*PcP PcP 21 41 30.8 +0.4
AAK Ala-Archa 58.93 322 P **P** **21 40 43.3 +1.7**
comp=Z,8.8nm,0.7s,mb4.9,baz=112,slow=7.0,SNR=20
AAK Ala-Archa 58.93 322⇑ *i*P **P** **21 40 42.7 +1.1**
AAK pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
AAK Ala-Archa 58.93 322 P **P** **21 40 43.1 +1.5**
comp=Z,4.7nm,0.8s,mb4.6
FRU Bishkek 58.97 323 *e*P **P** **21 40 40.5 -1.4**
FRU *e* pP 21 40 52.5 -4.0
AML Almayashu 59.15 321 P **P** **21 40 44.6 +1.5**
SNR=16
AML Almayashu 59.15 321 *e*P **P** **21 40 44.5 +1.4**
comp=Z,14nm,0.8s,mb5.1
AML *e*pP pP 21 40 59.4 +1.7
AML *e*PcP PcP 21 41 31.8 +0.6
USP Ospenovka 59.29 323 P **P** **21 40 44.7 +0.7**
SNR=7.0
EKS2 Erkin-Say 59.39 322 P **P** **21 40 46.0 +1.2**
SNR=9.5
EKS2 Erkin-Say 59.39 322 *e*P **P** **21 40 45.0 +0.3**
comp=Z,7.5nm,0.8s,mb4.8
EKS2 *e*PcP PcP 21 41 32.6 +0.4
ZAA0 Zalesovo Array 61.31 337 *e*P **P** **21 40 56.9 -0.8**
ZAA0 *e*pP pP 21 41 11.1 -1.3
ZALV Zalesovo Beam 61.31 337 P **P** **21 40 57.0 -0.7**
ZALV pP pP 21 41 11.6 -0.8
ZALV LR LR 22 07 23.8
ZALV Zalesovo Beam 61.31 337 P **P** **21 40 57.0 -0.7**
comp=Z,5.7nm,0.7s,mb4.8,baz=126,slow=6.0,SNR=21
ZALV pP pP 21 41 11.6 -0.8
comp=Z,6.6nm,0.7s,baz=123,slow=5.5,SNR=8.6
ZALV LR LR 22 07 23.8
comp=Z,85nm,20.4s,MS3.9,baz=252,slow=36
ZALV Zalesovo Beam 61.31 337 P **P** **21 40 57.0 -0.7**
ZALV *PP pP 21 41 11.6 -0.8
KURK Kurchatov 61.67 332 *e*P **P** **21 41 00.6 +0.4**
KURK *e*pP pP 21 41 15.2 +0.4
KURK Kurchatov 61.67 332 P **P** **21 41 00.2 +0.1**
comp=Z,9.8nm,0.8s,mb5.0,baz=145,slow=6.5,SNR=31
KURK pP pP 21 41 13.8 -1.0
comp=Z,7.4nm,0.9s,baz=140,slow=6.2,SNR=7.4
KURK PcP PcP 21 41 41.0 -0.2
comp=Z,4.0nm,0.7s,baz=130,slow=3.4,SNR=4.4
KURK Kurchatov 61.67 332 *c i*P **P** **21 41 00.3 +0.2**
KURK pmax pmax
comp=Z,28nm,0.8s,mb5.4
PETK Petropavlovsk- 61.98 25 P **P** **21 41 01.9 -0.3**
comp=Z,12nm,0.7s,mb5.1,baz=202,slow=4.4,SNR=26
PETK LR LR 22 04 27.1
comp=Z,57nm,21.8s,MS3.7,baz=120,slow=33
NVS Novosibirsk 62.59 337 *e*P **P** **21 41 05.0 -1.3**
NVS pmax pmax
comp=N,11nm,1.8s
NVS pmax pmax
comp=E,14nm,1.8s
NVS pmax pmax
comp=Z,16nm,1.8s,mb4.8
YAK Yakutsk 62.70 5 *e*P **P** **21 41 05.2 -1.6**
YAK pmax pmax
comp=Z,52nm,0.9s,mb5.7
YAK pmax pmax
comp=N,12nm,1.1s
CASY Casey 66.10 184 *e*P **P** **21 41 29.3 +0.4**
comp=N,5.7nm,0.8s,mb4.7
BRVK Borovoye 67.17 330 *e*P **P** **21 41 36.6 +0.5**
BRVK Borovoye 67.17 330 *c i*P **P** **21 41 36.2 +0.1**
BRVK pmax pmax
comp=Z,14nm,1.0s,mb5.0
SEY Seymchan 67.71 16‖ *e*P **P** **21 41 39.9 +0.6**
ABKT Ailbek 68.10 311 P **P** **21 41 43.0 +0.7**
comp=Z,103nm,0.9s,mb5.9,SNR=6.2
ABKAR Akbulak array 71.00 323 *e*P **P** **21 41 59.7 -0.2**
comp=Z,7.3nm,0.7s,mb4.7
TIXI Tiksi 72.14 3 *e*P **P** **21 42 02.5 -3.8**
AKTK Aktyubinsk 72.61 324 P **P** **21 42 09.7 +0.2**
AKTK pP pP 21 42 23.1 -1.5
AKTO Aktyubinsk 72.61 324 P **P** **21 42 09.7 +0.2**
comp=Z,12nm,0.8s,mb4.9,baz=101,slow=4.6,SNR=44
AKTO pP pP 21 42 23.1 -1.5
comp=Z,7.7nm,0.7s,baz=115,slow=6.9,SNR=7.2
SVE Sverdlovsk 73.88 331‖ *e*P **P** **21 42 16.9 0.0**
SVE pmax pmax
comp=Z,38nm,1.0s,mb5.3
ARU Arti 74.74 330 *e*P **P** **21 42 21.4 -0.5**
comp=Z,20nm,0.8s,mb5.1
ARU Arti 74.74 330 *c i*P **P** **21 42 21.2 -0.7**
ARU *e* pP 21 42 34.4 -2.6
ARU *e* 21 45 05.5
ARU PPP 21 46 52.8
ARU S S 21 51 55.1 +1.0
ARU SS SS 21 56 37.2 -5.5
ARU pmax pmax
comp=Z,26nm,1.0s,mb5.1
ARU Arti 74.74 330 P **P** **21 42 21.7 -0.2**
comp=Z,143nm,0.8s,mb6.0,SNR=12
SOKR Solikamsk 76.90 332⇑ *i*P **P** **21 42 32.8 -1.3**
SOKR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
MAW Mawson 77.54 199 *e*P **P** **21 42 38.5 +0.9**
comp=Z,7.8nm,1.0s,mb4.6
MAW Mawson 77.54 199 P **P** **21 42 38.9 +1.3**
comp=Z,8.9nm,0.8s,mb4.7,baz=61,slow=6.1,SNR=14
MAW pP pP 21 42 52.4 -0.4
comp=Z,4.7nm,0.7s,baz=67,slow=12,SNR=4.3
MAW Mawson 77.54 199 *e*P **P** **21 42 38.9 +1.3**
DGRG David-gareji 78.50 312 P **P** **21 42 43.4 -0.1**
GNI Garni 78.73 311 *e*P **P** **21 42 45.5 +0.7**
GNI *e*pP pP 21 43 01.3 +1.3
GNI Garni 78.73 311⇑ *e*P **P** **21 42 46.0 +1.2**
GNI pmax pmax
comp=Z,9.0nm,1.7s
MTA Mtatsminda 78.97 313 P **P** **21 42 46.5 +0.4**
TBLG Delisi 79.02 313 *e*P **P** **21 42 46.9 +0.6**
TBLG Delisi 79.02 313 P **P** **21 42 46.9 +0.6**
NIKO Nikolski 79.22 36 *e*P **P** **21 42 45.9 -1.2**
comp=Z,10nm,0.5s,mb5.0
GOR Gori 79.53 313 P **P** **21 42 50.4 +1.3**
UNV Unalaska Valle 80.80 35 *e*P **P** **21 42 54.7 -1.0**
comp=Z,11nm,0.7s,mb4.9
KIV Kislovodsk 80.89 315 *e*P **P** **21 42 56.1 -0.3**
KIV Kislovodsk 80.89 315‖ *e*P **P** **21 42 56.5 +0.1**
KIV pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
KIV MLR MLR
comp=Z,100nm,23.0s,MS4.1
AKUT Akutan 81.29 35 *e*P **P** **21 42 56.8 -1.5**
SBA Scott Base 81.35 171 *e*P **P** **21 43 00.9 +2.7**
KMBO Kilima Mbogo 82.41 269 *e*P **P** **21 43 05.8 +0.7**

comp=Z,3.7nm,0.9s,mb4.3
KMBO Kilima Mbogo 82.41 269 *e*P **P** **21 43 05.8 +0.8**
KMBO pmax pmax
comp=Z,4.0nm,0.9s
VRHR Novokhopersk 82.77 322 *e*P **P** **21 43 05.2 -0.9**
VRHR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VRHR pmax pmax
comp=N,3.0nm,0.4s
VRHR pmax pmax
comp=E,8.0nm,0.9s
MALT Malatya 83.34 308 *e*P **P** **21 43 10.3 +1.0**
comp=E,3.4nm,0.8s,mb4.4
MALT Malatya 83.34 308 ⇑P **P** **21 43 10.1 +0.7**
MALT Malatya 83.34 308 ⇑*i*P **P** **21 43 10.1 +0.7**
MALT Malatya 83.34 308 P **P** **21 43 10.5 +1.1**
VSR Storozhevoye 84.32 321 *e*P **P** **21 43 13.4 -0.7**
VSR pmax pmax
comp=Z,30nm,0.9s,mb5.4
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=E,20nm,0.9s
ANN Anapa 84.73 315 *e*P **P** **21 43 15.6 -0.7**
ANN pmax pmax
comp=Z,15nm,1.7s,mb4.8
KLMR Klimovskoe 85.51 331 *e*P **P** **21 43 17.9 -1.9**
KLMR pmax pmax
comp=Z,57nm,1.4s,mb5.6
MOS Moscow 85.81 326 *e*P **P** **21 43 16.4 -5.0**
MOS *e* pP 21 43 33.5 -3.3
SYO Syowa Base 86.10 201 ⇑*e*P **P** **21 43 21.5 -1.1**
OBN Obninsk 86.33 325 *d i*P **P** **21 43 23.3 -0.7**
OBN *i* pP 21 43 39.1 -0.3
OBN pmax pmax
comp=Z,43nm,1.6s,mb5.4
OBN MLR MLR
comp=Z,100nm,24.0s,MS4.1
SIM Simferopol' **87.09 315** *c i*P **P** **21 43 27.0 -1.0**
SIM pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
SIM MLR MLR
comp=Z,60nm,20.5s,MS4.0
BR131 Keskin Array S 87.17 310 *e*P **P** **21 43 27.1 -1.4**
comp=Z,5.2nm,0.8s,mb4.8
BRTR Keskin Array B 87.17 310 P **P** **21 43 27.6 -0.8**
comp=Z,6.4nm,0.9s,mb4.8,baz=121,slow=5.4,SNR=32
BRTR pP pP 21 43 42.1 -1.7
comp=Z,3.9nm,1.1s,baz=116,slow=6.3,SNR=3.9
BRTR LR LR 22 31 43.1
comp=Z,36nm,18.0s,MS3.8,baz=259,slow=42
BRTR Keskin Array B 87.17 310 P **P** **21 43 27.6 -0.8**
BRTR *PP pP 21 43 42.2 -1.6
LVZ Lovozero 88.45 338 ⇓*i*P **P** **21 43 33.3 -0.6**
LVZ pmax pmax
comp=Z,12nm,1.2s,mb5.0
JOF Joensuu 89.57 333 *e*P **P** **21 43 36.6 -2.7**
JOF Joensuu 89.57 333 *e*pkp **P** **21 43 36.6 -2.7**
QSPA South Pole Qui 89.57 180 *e*P **P** **21 43 40.0 +1.0**
comp=Z,19nm,1.0s,mb5.4
AKASG Malin Array Be 90.56 321 P **P** **21 43 42.6 -1.6**
comp=Z,0.3nm,0.3s,mb4.1,baz=77,slow=4.1,SNR=6.8
AKASG LR LR 22 30 41.6
comp=Z,70nm,19.3s,MS4.1,baz=55,slow=40
KIS Kishinev 90.84 317 ⇑P **P** **21 43 50.9 +5.3**
KIS Kishinev 90.84 317 ⇑*i*P **P** **21 43 50.9 +5.3**
PMR Palmer 90.89 29 *e*P **P** **21 43 45.8 +0.3**
comp=Z,6.6nm,0.6s,mb5.1
PMR Palmer 90.89 29 *e*P **P** **21 43 45.8 +0.3**
PMR pmax pmax
comp=Z,7.0nm,0.6s,mb5.2
TIRR Tirgusor 91.15 314 ⇑P **P** **21 43 54.9 +7.8**
TIRR Tirgusor 91.15 314 ⇑*i*P **P** **21 43 54.9 +7.8**
ILAR Eielson Array 91.81 25 P **P** **21 43 47.6 -2.1**
comp=Z,0.2nm,0.6s,baz=259,slow=1.8,SNR=4.1
ILAR LR LR 22 28 51.3
comp=Z,49nm,18.2s,MS4.0,baz=78,slow=38
KAF Kangasniemi 91.90 332 *e*P **P** **21 43 47.2 -2.9**
KAF Kangasniemi 91.90 332 *e*pkp **P** **21 43 47.2 -2.9**
FINES FINESS Array B 92.04 331 P **P** **21 43 49.0 -1.8**
comp=Z,2.6nm,0.7s,mb4.7,baz=110,slow=8.3,SNR=7.8
FINES LR LR 22 32 02.4
comp=Z,82nm,18.9s,MS4.2,baz=301,slow=40
VRI Vrincioaia 92.31 316 ⇓P **P** **21 43 50.7 -1.7**
VRI Vrincioaia 92.31 316 ⇓*i*P **P** **21 43 50.7 -1.7**
MLR Muntele Rosu 92.87 315 ⇓P **P** **21 43 53.2 -1.8**
MLR Muntele Rosu 92.87 315 ⇓*i*P **P** **21 43 53.2 -1.8**
BURAR Bucovina Array 93.27 317 ⇓P **P** **21 43 56.9 +0.1**
BURAR Bucovina Array 93.27 317 ⇓*i*P **P** **21 43 56.9 +0.1**
BUR08 Bucovina Ar. S 93.28 318 *e*P **P** **21 43 56.7 -0.1**
LBTB Lobatse 93.54 245 *e*P **P** **21 43 59.1 +0.5**
BOSA Boshof 93.70 241 P **P** **21 43 59.3 +0.1**
comp=Z,5.6nm,1.1s,mb4.9,baz=129,slow=7.4,SNR=3.3
MAIT Maitri 95.51 198 *e*P **P** **21 44 07.8 +1.2**
NOA NORSAR Array B 99.18 332 P **P** **21 44 21.4 -1.9**
NOA LR LR 22 36 12.7
NOA NORSAR Array B 99.18 332 P **P** **21 44 21.4 -1.9**
comp=Z,2.4nm,0.8s,mb4.8,baz=73,slow=4.5,SNR=7.4
NOA LR LR 22 36 12.7
comp=Z,72nm,19.0s,MS4.2,baz=75,slow=40
TORD Torodi Ar. Bea 117.28 285 PKP PKPdf 21 49 26.8 -1.5
comp=Z,1.3nm,0.7s,baz=59,slow=1.9,SNR=10.0
TXAR Lajitas Array 129.66 51 PKP PKPdf 21 49 51.8 +0.1
comp=Z,0.4nm,0.6s,baz=256,slow=1.1,SNR=4.5
CPUP Villa Florida 153.30 186 PKPbc PKPbc 21 50 39.9 -0.9
comp=Z,7.8nm,0.8s,baz=133,slow=1.0,SNR=14
CPUP PKPab PKPab 21 50 53.4 +0.8
comp=Z,11nm,0.8s,baz=157,slow=3.8,SNR=14
LPAZ La Paz 161.75 155 PKP PKPdf 21 50 45.4 +1.4
LPAZ PKPab PKPab 21 51 31.2 +2.0
LPAZ La Paz 161.75 155 PKP PKPdf 21 50 45.4 +1.4
comp=Z,1.9nm,0.9s,baz=54,slow=2.0,SNR=7.4
LPAZ PKPab PKPab 21 51 31.2 +2.0
comp=Z,5.0nm,0.8s,baz=202,slow=4.1,SNR=14

*NNC **21** 21:45:44.0±1.1, 41.97N×75.97E, h0km, mb3.1, mpv2.9, Error ellipse: s-maj=6.7km s-min=4.2km az=14.0*
*KNET **21** 21:45:44.1±0.6, 42.00N×75.99E, h13km±10km, ml2.0, Error ellipse: s-maj=7.5km s-min=4.0km az=97.0*
ISC 21 21:45:44.9±1.3, **41.97N**±0.07×**76.04E**±0.06, **h10**km, **n10, σ1s01/17, 9C-8D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.31**	**29**	⇓P		**Pg**		**21 45 50.6**	**-0.6**
ULHL	53nm,0.1s,SNR=482			⇑S		**Sg**		**21 45 55.3**	**-0.1**
	205nm,0.1s								
TKM2	**Tokmak 2**	**1.00**	**341**	⇑P		**Pg**		**21 46 03.0**	**-1.3**
TKM2	4.0nm,0.2s			⇑S		**Sg**		**21 46 17.0**	**-0.3**
	22nm,0.3s								
TKM2	**Tokmak 2**	**1.00**	**341**	⇓P		**Pg**		**21 46 03.1**	**-1.1**
TKM2	21nm,0.2s,SNR=64			⇑S		**Sg**		**21 46 17.2**	**-0.1**
	65nm,0.1s								
KBK	**Karagaybulak**	**1.06**	**310**	⇓P		**Pg**		**21 46 04.2**	**-1.1**
KBK	7.5nm,0.1s,SNR=6.9			⇓S		**Sg**		**21 46 18.8**	**-0.3**
	40nm,0.2s								
UCH	**Uchtor**	**1.17**	**283**	⇓P		**Pb**		**21 46 05.3**	**-1.8**
	2.3nm,0.1s,SNR=6.5								
AAK	**Ala-Archa**	**1.32**	**300**	⇑P		**Pn**		**21 46 08.7**	**-0.8**
	4.0nm,0.1s								
KNDC	**Almaty**	**1.42**	**28**	⇓P		**Pn**		**21 46 10.7**	**0.0**
KNDC	9.8nm,0.2s			⇓S		**Sn**		**21 46 30.7**	**+1.2**
	18nm,0.3s								
USP	**Ospenovka**	**1.72**	**319**	⇑P		**Pn**		**21 46 15.8**	**+0.9**
	6.6nm,0.2s,SNR=13								
USP				⇑S		**Sn**		**21 46 38.6**	**+1.7**
	18nm,0.2s								
AML	**Almayashu**	**1.75**	**276**	⇑P		**Pn**		**21 46 16.3**	**+0.9**
	7.7nm,0.2s,SNR=20								
AML				⇑S		**Sn**		**21 46 39.1**	**+1.3**
	11nm,0.2s								
KK31	**Karatay Array**	**4.24**	**287**	⇓Pg		**Pg**		**21 47 01.5**	**-4.6**
	0.8nm,0.9s,baz=104,slow=16,SNR=4.9								
KK31				Lg				21 47 56.1	
	1.0nm,0.6s,baz=91,slow=22,SNR=4.9								

*IDC **21** 22:15:55.6±1.7, 4.72S×101.83E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.7/19, mbtmp3.7/8, Error ellipse: s-maj=74.3km s-min=20.9km az=52.0*
*ISCJB **21** 22:15:57.2±5.1, 4.78S±0.09×101.83E±0.10, h28km±39km, mb3.8/11, Error ellipse: s-maj=17.0km s-min=14.1km az=148.3*
*NEIC **21** 22:15:59.2±3.3, 4.74S×101.87E, h27km±25km, mb3.9/3, Error ellipse: s-maj=10.2km s-min=8.2km az=60.0*
ISC 21 22:15:59.3±5.1, **4.75S**±0.09×**101.88E**±0.10, **h27**km±39km, **n19, σ0s59/17, mb3.8/11, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
COCO	**West Island**	**8.92**	**214**	*e*Pn		**Pn**		**22 18 06.5**	**0.0**
KKM	**Kota Kinabalu**	**17.88**	**53**	Pn		**Pn**		**22 20 06.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**23.24**	**353**	P		**P**		**22 21 04.5**	**-0.1**
	0.6nm,0.6s,mb3.2,baz=190,slow=7.3,SNR=4.3								
QIZ	**Qiongzhong**	**24.89**	**18**	P		**P**		**22 21 19.5**	**-0.6**
FITZ	**Fitzroy Crossi**	**26.76**	**122**	*e*P		**P**		**22 21 36.7**	**-0.4**
	0.7nm,0.3s,mb3.7								
WRA	**Warramunga Arr**	**35.02**	**118**	P		**P**		**22 22 51.3**	**+1.3**
	0.4nm,0.5s,mb3.6,baz=300,slow=8.7,SNR=2.6								
ASAR	**Alice Springs**	**36.15**	**124**	P		**P**		**22 22 59.6**	**0.0**
	0.4nm,0.5s,mb3.6,baz=301,slow=7.8,SNR=4.7								
STKA	**Stephens Creek**	**45.94**	**131**	P		**P**		**22 24 19.0**	**-1.1**
GUMO	**Guam**	**46.40**	**66**	P		**P**		**22 24 23.9**	**-0.1**
KBL	**Kabul**	**49.84**	**324**	*e*P		**P**		**22 24 49.8**	**-0.4**
	0.9nm,0.4s,mb4.2								
SONM	**Songino Array**	**52.51**	**4**	P		**P**		**22 25 10.5**	**+0.5**
	0.7nm,0.5s,mb3.9,baz=182,slow=8.0,SNR=3.2								
MKAR	**Makanchi Array**	**54.17**	**343**	P		**P**		**22 25 22.7**	**+0.5**
	1.2nm,0.6s,mb4.0,baz=150,slow=8.7,SNR=12								
KURK	**Kurchatov**	**58.76**	**343**	P		**P**		**22 25 54.1**	**-0.7**
	0.6nm,0.6s,mb3.8,baz=159,slow=6.5,SNR=4.3								
ZALV	**Zalesovo Beam**	**60.20**	**348**	P		**P**		**22 26 04.5**	**-0.3**
ZALV	**Zalesovo Beam**	**60.20**	**348**	P		**P**		**22 26 04.5**	**-0.3**
	1.7nm,0.4s,mb4.4,baz=162,slow=4.6,SNR=9.8								
ABKAR	**Akbulak array**	**64.93**	**331**	*e*P		**P**		**22 26 36.7**	**+0.3**
	0.5nm,0.6s,mb3.7								
BRTR	**Keskin Array B**	**76.55**	**313**	P		**P**		**22 27 48.2**	**+0.8**
	0.4nm,0.5s,mb3.6,baz=138,slow=7.8,SNR=3.6								
TXAR	**Lajitas Array**	**145.61**	**42**	PKPbc		PKPbc		22 35 36.5	+0.3
TXAR	**Lajitas Array**	**145.61**	**42**	PKPbc		PKPbc		22 35 36.5	+0.3
	0.8nm,0.7s,baz=276,slow=0.9,SNR=9.5								

*ISCJB **21** 22:22:06.7±1.2, 24.82N±0.05×98.15E±0.06, h10km, Error ellipse: s-maj=8.3km s-min=7.2km az=41.1*
*BJI **21** 22:22:10.1, 25.09N×97.90E, h27km, ML3.6/8*
ISC 21 22:22:11.1±1.2, **24.88N**±0.06×**98.15E**±0.06, **h10**km, **n4, σ0s66/7, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**4.17**	**86**	Pg		**Pg**		**22 23 31.0**	**0.0**
KMI				Sg		**Sg**		**22 24 25.3**	**+0.2**
KMI				smax					
	comp=N,120nm,1.0s								
KMI				smax					
	comp=E,73nm,0.7s								
CHRT	**Chiangrai**	**5.21**	**163**	PG		**Pg**		**22 23 50.0**	**-1.0**
CHRT				SG		**Sg**		**22 24 59.0**	**+0.5**
SHL	**Shillong**	**5.72**	**278**	*e*PKP		**Pg**		**22 24 01.0**	**+0.3**
CHG	**Chiang Mai**	**6.08**	**173**	PG		**Pg**		**22 24 03.9**	**-3.8**
CHG				SG		**Sg**		**22 25 26.8**	**+0.3**

*IDC **21** 22:24:24.1±1.4, 42.32N×81.21E, h0km, mb3.5/4, mb1 3.6/10, mb1mx3.5/29, mbtmp3.6/10, ML3.4/6, MS2.6/1, Ms1 2.6/1, ms1mx2.1/22, Error ellipse: s-maj=19.5km s-min=11.6km az=136.0*
*BJI **21** 22:24:25.4, 42.23N×81.46E, h22km, ML3.7/8*
*ISCJB **21** 22:24:26.4±0.5, 42.61N±0.05×81.12E±0.05, h10km, mb3.7/6, Error ellipse: s-maj=7.0km s-min=4.1km az=154.6*
*NNC **21** 22:24:29.4±3.4, 42.81N×81.00E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=39.1km s-min=11.9km az=149.0*
*MOS **21** 22:24:29.7±1.3, 42.63N×81.17E, h33km, mb4.4/2, Error ellipse: s-maj=12.2km s-min=9.5km az=97.4*
*NEIC **21** 22:24:31.7±0.9, 42.62N×81.16E, h43km±9km, mb3.8/4, Error ellipse: s-maj=10.6km s-min=5.5km az=155.0*
ISC 21 22:24:27.9±0.5, **42.52N**±0.04×**81.13E**±0.04, **h10**km, **n44, σ1s33/69, mb3.7/6, 5C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**3.14**	**284**	⇓Pg		**Pb**		**22 25 21.2**	**-2.5**
KNDC	203nm,0.9s			⇑Lg				22 26 03.7	
	215nm,0.8s								
AAA	**Alma-Ata**	**3.16**	**285**	*i* PN		**Pb**		**22 25 22.1**	**-2.0**
AAA				*i* S		**Sb**		**22 26 05.2**	**+2.5**
AAA				pmax	pmax				
	comp=Z,194nm,0.8s								
AAA				smax					
	comp=E,391nm,0.8s								
TKM2	**Tokmak 2**	**4.09**	**277**	⇑Pn		**Pn**		**22 25 33.6**	**+3.1**
	comp=E,29nm,0.9s								
TKM2				⇓Pg		**Pg**		**22 25 45.0**	**-1.3**
	comp=E,17nm,0.5s								
TKM2				⇑Lg				22 26 34.2	
	comp=E,64nm,0.7s								
TKM2	**Tokmak 2**	**4.09**	**277**	*e*Pn		**Pn**		**22 25 31.8**	**+1.3**
TKM2				*e*Pg		**Pg**		**22 25 46.2**	**-0.1**
TKM2				*e*Sg		**Sg**		**22 26 37.6**	**-1.7**
MK31	**Makanchi Array**	**4.35**	**11**	Pn		**Pn**		**22 25 34.8**	**+0.8**
	comp=E,2.2nm,0.3s,baz=196,slow=12,SNR=322								
MK31				Pg		**Pg**		**22 25 46.3**	**-4.9**
	comp=E,12nm,0.4s,baz=190,slow=14,SNR=18								
MK31				⇓Lg				22 26 39.4	
	comp=E,17nm,0.4s,baz=194,slow=27,SNR=6.2								
MK31	**Makanchi Array**	**4.35**	**11**	*e*Pn		**Pn**		**22 25 35.2**	**+1.2**
MK31				*e*Pg		**Pg**		**22 25 47.0**	**-4.2**
MK31				*e*Sn		**Sn**		**22 26 23.5**	**-1.2**
MKAR	**Makanchi Array**	**4.35**	**11**	Pn		**Pn**		**22 25 35.2**	**+1.2**
MKAR				Pg		**Pg**		**22 25 46.5**	**-4.7**
MKAR				Sn		**Sn**		**22 26 29.1**	**+4.4**
MKAR				Lg				22 26 47.6	
MKAR	**Makanchi Array**	**4.35**	**11**	Pn		**Pn**		**22 25 35.2**	**+1.3**
	comp=E,4.8nm,0.3s,baz=194,slow=13,SNR=116								
MKAR				Pg		**Pg**		**22 25 46.5**	**-4.7**
	comp=E,14nm,0.3s,baz=184,slow=16,SNR=31								
MKAR				Sn		**Sn**		**22 26 29.1**	**+4.4**
	comp=E,6.6nm,0.3s,baz=213,slow=13,SNR=4.7								
MKAR				Lg				22 26 47.6	
	comp=E,22nm,0.3s,baz=200,slow=29,SNR=8.1								
MKAR	**Makanchi Array**	**4.35**	**11**	PN		**Pn**		**22 25 35.2**	**+1.2**
MKAR								22 25 46.5	
MKAR								22 26 29.1	
MKAR				pmax	pmax				
	comp=Z,5.0nm,0.3s								
MKAR				pmax	pmax				
	comp=Z,14nm,0.3s								
MKAR				smax					
	comp=N,7.0nm,0.3s								
AAK	**Ala-Archa**	**4.90**	**274**	*e*Pn		**Pn**		**22 25 43.4**	**+1.8**
AAK				Pg		**Pg**		**22 25 55.1**	**-6.6**
AAK				Sn		**Sn**		**22 26 40.8**	**+2.5**
AAK				Lg				22 27 02.5	
AAK				*e*Sg		**Sg**		**22 27 03.9**	**-1.2**
AAK				LR	LR			22 28 01.3	
AAK	**Ala-Archa**	**4.90**	**274**	Pn		**Pn**		**22 25 43.4**	**+1.8**
	comp=N,1.0nm,0.3s,baz=138,slow=6.2,SNR=3.6								
AAK				Pg		**Pg**		**22 25 55.1**	**-6.6**
	comp=N,2.8nm,0.3s,baz=95,slow=9.3,SNR=17								
AAK				Sn		**Sn**		**22 26 40.8**	**+2.5**
	comp=N,1.4nm,0.3s,baz=123,slow=18,SNR=3.7								
AAK				Lg				22 27 02.5	
	comp=N,3.2nm,0.3s,baz=309,slow=23,SNR=5.8								
AAK				LR	LR			22 28 01.3	
	comp=N,76nm,21.6s,baz=112,slow=44								
AAK	**Ala-Archa**	**4.90**	**274**	PN		**Pn**		**22 25 43.4**	**+1.9**
AAK								22 26 40.8	
AAK				pmax	pmax				
	comp=Z,1.0nm,0.3s								
AAK				pmax	pmax				
	comp=Z,3.0nm,0.3s								
AAK				smax					
	comp=N,1.0nm,0.3s								
AAK				MLR	MLR				
	comp=E,76nm,21.6s								
UCH	**Uchtor**	**4.91**	**269**	*e*Pn		**Pn**		**22 25 44.4**	**+2.7**
UCH				*e*Pg		**Pg**		**22 25 59.5**	**-2.3**
UCH				*e*Sn		**Sn**		**22 26 39.6**	**+1.1**
WMQ	**Urumqi**	**4.97**	**73**	*e*Pn		**Pn**		**22 25 44.4**	**+1.8**
WMQ				Sn		**Sn**		**22 26 45.0**	**+4.9**
WMQ				smax					
	comp=N,67nm,0.6s								
WMQ				smax					
	comp=E,100nm,0.6s								
EKS2	**Erkin-Say**	**5.43**	**274**	*e*Pn		**Pn**		**22 25 51.0**	**+2.2**
	comp=E,12nm,0.6s								
EKS2				*e*Pg		**Pg**		**22 26 06.8**	**-5.0**
EKS2				*e*Sg		**Sg**		**22 27 22.5**	**+0.4**
AML	**Almayashu**	**5.53**	**268**	*e*Pn		**Pn**		**22 25 51.6**	**+1.5**
AML				*e*Pg		**Pg**		**22 26 12.8**	**-0.8**
AML				*e*Sg		**Sg**		**22 27 25.4**	**+0.2**
KK31	**Karatay Array**	**7.83**	**278**	⇑Pg		**Pb**		**22 26 51.1**	**+7.5**
	comp=E,4.9nm,0.8s,baz=91,slow=16,SNR=12								
KK31				Lg				22 28 32.0	
	comp=E,5.6nm,0.7s,baz=88,slow=25,SNR=7.2								
KURBB	**Kurchatov Arra**	**8.30**	**348**	Lg				22 28 47.2	
	comp=E,7.2nm,0.7s								
KURK	**Kurchatov**	**8.37**	**349**	⇑Lg				22 28 47.2	
	comp=E,51nm,0.8s								
KURK	**Kurchatov**	**8.37**	**349**	Pn		**Pn**		**22 26 29.2**	**0.0**
	comp=E,0.1nm,0.3s,baz=176,slow=12,SNR=6.9								
KURK				Sn		**Sn**		**22 28 04.4**	**+0.7**
	comp=E,0.3nm,0.3s,baz=136,slow=22,SNR=5.1								
KURK				Lg				22 28 53.2	
	comp=E,0.8nm,0.3s,baz=243,slow=41,SNR=8.8								
KURK	**Kurchatov**	**8.37**	**349**	P		**Pn**		**22 26 29.2**	**0.0**
KURK								22 28 04.4	
ZAA0	**Zalesovo Array**	**11.69**	**11**	*e*Pn		**Pn**		**22 27 13.4**	**-1.2**
ZAA0				*e*Sn		**Sn**		**22 29 25.1**	**+0.1**
ZALV	**Zalesovo Beam**	**11.69**	**11**	Pn		**Pn**		**22 27 13.3**	**-1.3**
ZALV				Sn		**Sn**		**22 29 25.8**	**+0.7**
ZALV				Lg				22 30 42.5	
ZALV	**Zalesovo Beam**	**11.69**	**11**	Pn		**Pn**		**22 27 13.3**	**-1.3**
	comp=E,0.8nm,0.3s,baz=193,slow=13,SNR=17								
ZALV				Sn		**Sn**		**22 29 25.8**	**+0.7**
	comp=E,0.5nm,0.3s,baz=194,slow=24,SNR=4.6								
ZALV				Lg				22 30 42.5	
	comp=E,0.1nm,0.3s,baz=224,slow=27,SNR=3.9								
ZALV	**Zalesovo Beam**	**11.69**	**11**	P		**Pn**		**22 27 13.3**	**-1.3**
ZALV								22 29 25.8	
ZALV				pmax	pmax				
	comp=Z,1.0nm,0.3s								
ZALV				smax					
	comp=N,1.0nm,0.3s								
BRVK	**Borovoye**	**12.80**	**329**	Pn		**Pn**		**22 27 29.3**	**-0.4**
GTA	**Gaotai**	**14.46**	**96**	*e*P		**Pn**		**22 27 46.3**	**-6.1**
GTA				pP		pP		22 27 51.9	-10
GTA				sP		sP		22 27 54.5	-8.9
ABKAR	**Akbulak array**	**16.18**	**302**	*e*Pn		**Pn**		**22 28 15.4**	**+0.2**
	comp=N,1.0nm,0.6s								
ZAK	**Zakamensk**	**17.12**	**55**	*e*P		**Pn**		**22 28 29.3**	**+2.2**
ZAK				pmax	pmax				
	comp=Z,1.0nm,1.0s								
AKTK	**Aktyubinsk**	**17.72**	**304**	P		**Pn**		**22 28 34.2**	**-0.4**
AKTO	**Aktyubinsk**	**17.72**	**304**	P		**Pn**		**22 28 34.2**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=107,slow=8.1,SNR=2.7								
SONM	**Songino Array**	**18.55**	**65**	P		**Pn**		**22 28 44.6**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=273,slow=12,SNR=6.6								
ARU	**Arti**	**20.09**	**322**	*e*P		**P**		**22 29 00.9**	**-0.3**
	comp=Z,2.9nm,0.9s								
ARU	**Arti**	**20.09**	**322**	P		**P**		**22 29 02.4**	**+1.1**
ENH	**Enshi**	**25.77**	**109**	P		**P**		**22 29 58.0**	**-0.8**
BJT	**Baijiatuao**	**26.34**	**84**	*e*P		**P**		**22 30 03.6**	**-0.3**
	comp=Z,5.8nm,1.3s,mb4.0								
BJT	**Baijiatuao**	**26.34**	**84**	*e*P		**P**		**22 30 03.6**	**-0.3**
BJT				pmax	pmax				
	comp=Z,6.0nm,1.3s								
GNI	**Garni**	**27.29**	**277**	*e*P		**P**		**22 30 12.6**	**+0.1**
	comp=Z,6.2nm,1.0s,mb4.1								
GNI	**Garni**	**27.29**	**277**	*e*P		**P**		**22 30 12.6**	**+0.2**
GNI				pmax	pmax				
	comp=Z,6.0nm,1.0s								
HIA	**Hailar**	**27.48**	**62**	*e*P		**P**		**22 30 12.8**	**-1.1**
BRTR	**Keskin Array B**	**35.52**	**282**	P		**P**		**22 31 24.1**	**-0.6**
	comp=Z,0.4nm,0.6s,mb3.6,baz=81,slow=8.9,SNR=2.5								
ARCES	**ARCESS Array B**	**38.99**	**333**	P		**P**		**22 31 54.1**	**+0.2**
	comp=Z,0.4nm,0.4s,mb3.5,baz=100,slow=8.4,SNR=12								
ILAR	**Eielson Array**	**66.64**	**20**	P		**P**		**22 35 16.6**	**-1.5**
	comp=Z,0.4nm,0.8s,mb3.5,baz=3.8,slow=4.3,SNR=4.2								
TORD	**Torodi Ar. Bea**	**73.48**	**273**	P		**P**		**22 35 58.4**	**-2.5**
	comp=Z,0.5nm,0.6s,mb3.6,baz=47,slow=5.3,SNR=12								

*IDC **21** 22:29:29.1±0.9, 50.93N×160.67E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.7/24, mbtmp3.9/7, ML3.6/1, Error ellipse: s-maj=29.6km s-min=21.7km az=55.0*
*ISCJB **21** 22:29:32.0±1.1, 51.07N±0.05×160.98E±0.07, h35km±9km, mb3.9/10, Error ellipse: s-maj=9.2km s-min=6.8km az=145.2*
*KRSC **21** 22:29:31.8±0.4, 51.09N×160.82E, h39km±39km, ML4.3*
*MOS **21** 22:29:32.2±0.9, 51.03N×160.76E, h36km, mb4.2/7, Error ellipse: s-maj=21.4km s-min=8.0km az=99.3*
*NEIC **21** 22:29:34.4±2.2, 51.18N×160.96E, h36km±17km, mb4.1/4, Error ellipse: s-maj=18.8km s-min=12.7km az=142.0*
ISC 21 22:29:33.0±1.8, **51.07N**±0.04×**160.91E**±0.07, **h27**km±14km, **n42, σ0s97/56, mb3.9/10, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**2.10**	**345**	*e*P		**Pn**		**22 30 06.0**	**-0.3**
SPN				*i* S		**Sn**		**22 30 31.3**	**-0.2**
GRL	**Gorelyy**	**2.30**	**311**	*e*P		**Pn**		**22 30 09.6**	**+0.5**
GRL				*i* S		**Sn**		**22 30 36.3**	**-0.2**
NLC	**Nalytchevo**	**2.31**	**336**	*e*P		**Pn**		**22 30 09.6**	**+0.4**
NLC				*i* S		**Sn**		**22 30 37.5**	**+0.8**
PET	**Petropavlovsk**	**2.40**	**325**	*e*Pn		**Pn**		**22 30 10.2**	**-0.3**
PET				*e*Sn		**Sn**		**22 30 39.2**	**+0.3**
PET	**Petropavlovsk**	**2.40**	**325**	*e*P		**Pn**		**22 30 09.8**	**-0.7**
PET				*i* S		**Sn**		**22 30 38.4**	**-0.5**
PET	**Petropavlovsk**	**2.40**	**325**	*e*PN		**Pn**		**22 30 10.1**	**-0.4**
PET				*e*S		**Sn**		**22 30 39.0**	**+0.1**
PET				smax					
	comp=N,310nm,0.4s								
PET				MLR	MLR			

ARU	**Arti**	**55.24**	**319**	*e*P		**P**		**22 39 03.1**	**0.0**	
ARU				pmax		pmax				
	comp=Z,1.0nm,0.4s,mb4.2									
TKM2	**Tokmak 2**	**55.65**	**298**	*e*P		**P**		**22 39 05.9**	**-0.3**	
	comp=Z,1.2nm,0.9s,mb3.9									
TKM2	**Tokmak 2**	**55.65**	**298**	*e*P		**P**		**22 39 05.9**	**-0.4**	
TKM2				pmax		pmax				
	comp=Z,1.0nm,0.9s,mb3.9									
EKS2	**Erkin-Say**	**56.83**	**298**	*e*P		**P**		**22 39 14.4**	**-0.3**	
	comp=Z,1.3nm,0.8s,mb4.0									
AKASG	**Malin Array Be**	**70.61**	**330**	P		**P**		**22 40 45.4**	**0.0**	
	comp=Z,0.6nm,0.5s,mb3.8,baz=29,slow=6.4,SNR=2.7									
AKASG	**Malin Array Be**	**70.61**	**330**	P		**P**		**22 40 45.4**	**0.0**	
AKASG				pmax		pmax				
	comp=Z,1.0nm,0.5s									
TXAR	**Lajitas Array**	**70.97**	**67**	P		**P**		**22 40 50.0**	**+2.0**	
TXAR	**Lajitas Array**	**70.97**	**67**	P		**P**		**22 40 50.0**	**+2.0**	
	comp=Z,1.0nm,0.5s,mb4.0,baz=299,slow=4.6,SNR=15									
TXAR	**Lajitas Array**	**70.97**	**67**	P		**P**		**22 40 50.0**	**+2.1**	
TXAR				pmax		pmax				
	comp=Z,1.0nm,0.5s									
WRA	**Warramunga Arr**	**74.47**	**206**	P		**P**		**22 41 07.6**	**-1.0**	
	comp=Z,1.2nm,0.6s,mb4.0,baz=20,slow=6.2,SNR=4.5									
WRA	**Warramunga Arr**	**74.47**	**206**	P		**P**		**22 41 07.6**	**-1.0**	
WRA				pmax		pmax				
	comp=Z,1.0nm,0.6s									
ASAR	**Alice Springs**	**78.13**	**205**	P		**P**		**22 41 29.1**	**-0.3**	
	comp=Z,0.6nm,0.5s,mb3.8,baz=17,slow=4.9,SNR=7.2									
ASAR	**Alice Springs**	**78.13**	**205**	P		**P**		**22 41 29.1**	**-0.2**	
ASAR				pmax		pmax				
	comp=Z,1.0nm,0.5s									

*ISCJB **21** 22:30:40.0±0.2,36°.82N±0°.02×28°.31E±0°.02, h77km±4km, Error ellipse: s-maj=3.5km s-min=3.2km az=170.1*
*CSEM **21** 22:30:40.8±0.1,36°.83N×28°.32E, h80km, MD3.4, Error ellipse: s-maj=3.7km s-min=3.6km az=27.0*
*DDA **21** 22:30:40.1,36°.84N×28°.37E, h7km±6km, Md3.2*
*ISK **21** 22:30:40.6,36°.90N×28°.26E, h66km, MD3.4*
*NEIC **21** 22:30:41.2,36°.93N×28°.29E, h30km, MD3.4(ISK), ML3.6(THE), After ISK.*
*ATH **21** 22:30:41.1,36°.87N×28°.24E, h64km±1km*
*THE **21** 22:30:43.3,36°.93N×28°.18E, h19km±5km, ML3.6/1, Error ellipse: s-maj=6.6km s-min=1.0km az=89.0*
*HLW **21** 22:30:47.5,36°.23N×28°.50E, h35km±44km, Ml2.9*

ISC 21 22:30:41.4±0.3,36°.83N±0°.02×28°.31E±0°.02,h64km±5km, n145,σ0s98/193,1C-5D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.30**	**356**	*e*PG	**Pn**	**22 30 51.6**	**-0.3**
YER				*e*SG	**Sn**	**22 30 59.1**	**-0.4**
YER	**Yerkesik**	**0.30**	**356**	*e*Pg	**Pn**	**22 30 51.6**	**-0.3**
YER				*e*Sg	**Sn**	**22 30 59.1**	**-0.5**
DAT	**Datca**	**0.59**	**260**	*e*PG	**Pn**	**22 30 54.5**	**-0.2**
DAT				*e*SG	**Sn**	**22 31 04.4**	**0.0**
DAT	**Datca**	**0.59**	**260**	*e*Pg	**Pn**	**22 30 54.5**	**-0.2**
DAT				*e*Sg	**Sn**	**22 31 04.4**	**+0.1**
MLSB	**Milas**	**0.63**	**318**	*e*PG	**Pn**	**22 30 55.2**	**+0.1**
MLSB				*e*SG	**Sn**	**22 31 04.6**	**-0.4**
MLSB	**Milas**	**0.63**	**318**	Pg	**Pn**	**22 30 53.5**	**-1.6**
MLSB				Sg	**Sn**	**22 31 02.5**	**-2.5**
MLSB	**Milas**	**0.63**	**318**	*e*Pg	**Pn**	**22 30 55.2**	**+0.1**
MLSB				*e*Sg	**Sn**	**22 31 04.9**	**-0.1**
ARG	**Arkhangelos**	**0.63**	**193**	*e*P	**Pn**	**22 30 56.0**	**+0.9**
ARG				*e*S	**Sn**	**22 31 06.7**	**+1.7**
ARG	**Arkhangelos**	**0.63**	**193**	*e*P	**Pn**	**22 30 56.0**	**+0.9**
ARG				*e*S	**Sn**	**22 31 06.7**	**+1.7**
ARG	**Arkhangelos**	**0.63**	**193**	P	**Pn**	**22 30 55.9**	**+0.8**
ARG				S	**Sn**	**22 31 07.7**	**+2.7**
ARG	**Arkhangelos**	**0.63**	**193**	P	**Pn**	**22 30 55.9**	**+0.8**
ARG				*e*S	**Sn**	**22 31 06.7**	**+1.7**
BDRM	**Kayabasi**	**0.73**	**289**	⇓*i*P	**Pn**	**22 30 56.3**	**0.0**
BDRM				*i*S	**Sn**	**22 31 06.5**	**-0.6**
BDRM	**Kayabasi**	**0.73**	**289**	*i*P	**Pn**	**22 30 56.3**	**+0.1**
BDRM				*i*S	**Sn**	**22 31 06.5**	**-0.6**
BODT	**Bodrum**	**0.83**	**286**	*e*PG	**Pn**	**22 30 56.7**	**-0.7**
BODT				*e*SG	**Sn**	**22 31 08.1**	**-1.1**
BODT	**Bodrum**	**0.83**	**286**	Pg	**Pn**	**22 30 55.9**	**-1.5**
BODT	**Bodrum**	**0.83**	**286**	*e*Pg	**Pn**	**22 30 56.7**	**-0.8**
AYDN	**Tasoluk**	**0.90**	**338**	⇓*i*P	**Pn**	**22 30 58.5**	**+0.2**
AYDN				*i*S	**Sn**	**22 31 10.5**	**-0.3**
AYDN	**Tasoluk**	**0.90**	**338**	*i*P	**Pn**	**22 30 58.5**	**+0.2**
AYDN				*i*S	**Sn**	**22 31 10.5**	**-0.2**
GLHS	**Glhisar (BURDU**	**1.01**	**71**	*e*PG	**Pn**	**22 30 59.5**	**-0.2**
GLHS	**Glhisar (BURDU**	**1.01**	**71**	*e*Pg	**Pn**	**22 30 59.5**	**-0.2**
DNZL	**Cakiroluk**	**1.04**	**34**	⇓*i*P	**Pn**	**22 31 00.2**	**+0.1**
DNZL				*i*S	**Sn**	**22 31 13.9**	**-0.1**
DNZL	**Cakiroluk**	**1.04**	**34**	*i*P	**Pn**	**22 31 00.2**	**+0.1**
DNZL				*i*S	**Sn**	**22 31 13.9**	**-0.1**
GOLH	**Golhisar**	**1.08**	**68**	⇑*i*P	**Pn**	**22 31 00.5**	**-0.1**
GOLH				*i*S	**Sn**	**22 31 15.2**	**+0.3**
GOLH	**Golhisar**	**1.08**	**68**	*i*P	**Pn**	**22 31 00.5**	**-0.1**
GOLH				*i*S	**Sn**	**22 31 15.2**	**+0.3**
DENT	**Denizli**	**1.09**	**32**	*e*PG	**Pn**	**22 31 00.6**	**-0.1**
DENT	**Denizli**	**1.09**	**32**	Pg	**Pn**	**22 31 00.0**	**-0.7**
DENT	**Denizli**	**1.09**	**32**	*e*Pg	**Pn**	**22 31 00.6**	**-0.1**
AKAS	**Kas**	**1.20**	**119**	⇓*i*P	**Pn**	**22 31 02.0**	**-0.2**
AKAS				*i*S	**Sn**	**22 31 18.6**	**+0.9**
AKAS	**Kas**	**1.20**	**119**	*i*P	**Pn**	**22 31 02.0**	**-0.2**
AKAS				*i*S	**Sn**	**22 31 18.6**	**+0.9**
GCAM	**G?zelcaml?**	**1.22**	**316**	⇓*i*P	**Pn**	**22 31 02.6**	**+0.1**
GCAM				*i*S	**Sn**	**22 31 17.7**	**-0.5**
GCAM	**G?zelcaml?**	**1.22**	**316**	*i*P	**Pn**	**22 31 02.6**	**+0.2**
GCAM				*i*S	**Sn**	**22 31 17.7**	**-0.5**
ELL	**Elmali**	**1.29**	**93**	*e*PN	**Pn**	**22 31 04.0**	**+0.7**
ELL	**Elmali**	**1.29**	**93**	*e*Pn	**Pn**	**22 31 04.0**	**+0.7**
SMG	**Samos**	**1.47**	**307**	*e*P	**Pn**	**22 31 05.6**	**-0.1**
SMG	**Samos**	**1.47**	**307**	*e*P	**Pn**	**22 31 05.6**	**-0.1**
SMG	**Samos**	**1.47**	**307**	*e*P	**Pn**	**22 31 05.6**	**-0.1**
KARP	**Karpathos**	**1.58**	**216**	*e*P	**Pn**	**22 31 08.1**	**+0.8**
KARP				*e*S	**Sn**	**22 31 27.9**	**+1.1**
KARP	**Karpathos**	**1.58**	**216**	*e*P	**Pn**	**22 31 08.1**	**+0.8**
KARP				*e*S	**Sn**	**22 31 27.9**	**+1.1**
KARP	**Karpathos**	**1.58**	**216**	*e*P	**Pn**	**22 31 08.1**	**+0.8**
KARP				*e*S	**Sn**	**22 31 27.9**	**+1.1**
KULA	**Kula-Manisa**	**1.70**	**9**	*e*PN	**Pn**	**22 31 08.2**	**-0.7**
KULA	**Kula-Manisa**	**1.70**	**9**	*e*Pn	**Pn**	**22 31 08.2**	**-0.7**
IZM	**Izmir**	**1.77**	**332**	*e*PN	**Pn**	**22 31 09.0**	**-0.8**
IZM	**Izmir**	**1.77**	**332**	*e*Pn	**Pn**	**22 31 09.0**	**-0.8**
KHL	**Karahalli**	**1.78**	**33**	*e*PN	**Pn**	**22 31 09.6**	**-0.3**
KHL	**Karahalli**	**1.78**	**33**	*e*Pn	**Pn**	**22 31 09.6**	**-0.3**
BLCB	**Balcova**	**1.85**	**327**	*e*PN	**Pn**	**22 31 10.1**	**-0.8**
BLCB	**Balcova**	**1.85**	**327**	Pn	**Pn**	**22 31 10.1**	**-0.8**
BLCB				S	**Sn**	**22 31 31.9**	**-1.3**
BLCB	**Balcova**	**1.85**	**327**	P	**Pn**	**22 31 10.6**	**-0.3**
BLCB				S	**Sn**	**22 31 31.9**	**-1.3**
BLCB	**Balcova**	**1.85**	**327**	*e*Pn	**Pn**	**22 31 10.1**	**-0.8**
BLCB	**Balcova**	**1.85**	**327**	P	**Pn**	**22 31 10.6**	**-0.3**
BLCB				S	**Sn**	**22 31 31.9**	**-1.3**
ANTB	**Antalya**	**1.88**	**87**	*e*PN	**Pn**	**22 31 12.3**	**+1.0**
ANTB	**Antalya**	**1.88**	**87**	*e*Pn	**Pn**	**22 31 12.3**	**+1.0**
BCK	**Bucak**	**1.93**	**70**	*e*PN	**Pn**	**22 31 12.5**	**+0.6**
BCK	**Bucak**	**1.93**	**70**	*e*Pn	**Pn**	**22 31 12.5**	**+0.6**
ISP	**Isparta**	**2.02**	**60**	*e*PN	**Pn**	**22 31 13.8**	**+0.6**
ISP	**Isparta**	**2.02**	**60**	*e*Pn	**Pn**	**22 31 13.8**	**+0.6**
AKS	**Akhisar**	**2.08**	**349**	*e*PN	**Pn**	**22 31 13.3**	**-0.7**
AKS	**Akhisar**	**2.08**	**349**	*e*Pn	**Pn**	**22 31 13.3**	**-0.7**
APE	**Apeiranthos**	**2.24**	**277**	*e*PN	**Pn**	**22 31 16.4**	**+0.3**
APE	**Apeiranthos**	**2.24**	**277**	*e*P	**Pn**	**22 31 16.8**	**+0.7**
APE				*e*S	**Sn**	**22 31 42.4**	**-0.3**
APE	**Apeiranthos**	**2.24**	**277**	*e*P	**Pn**	**22 31 16.8**	**+0.7**
APE				*e*S	**Sn**	**22 31 42.4**	**-0.3**
APE	**Apeiranthos**	**2.24**	**277**	*e*Pn	**Pn**	**22 31 16.4**	**+0.3**
APE	**Apeiranthos**	**2.24**	**277**	*e*P	**Pn**	**22 31 16.8**	**+0.7**
APE				*e*S	**Sn**	**22 31 42.4**	**-0.3**
SUTC	**Sutluce-Ispart**	**2.25**	**73**	*e*PN	**Pn**	**22 31 17.4**	**+1.1**
SUTC	**Sutluce-Ispart**	**2.25**	**73**	*e*Pn	**Pn**	**22 31 17.4**	**+1.2**
CHOS	**Chios island**	**2.37**	**312**	*e*P	**Pn**	**22 31 18.2**	**+0.3**
CHOS				*e*S	**Sn**	**22 31 45.1**	**-0.8**
CHOS	**Chios island**	**2.37**	**312**	P	**Pn**	**22 31 18.4**	**+0.5**
CHOS				S	**Sn**	**22 31 44.6**	**-1.3**
CHOS	**Chios island**	**2.37**	**312**	*e*P	**Pn**	**22 31 18.2**	**+0.3**
CHOS				*e*S	**Sn**	**22 31 45.1**	**-0.8**
ALT	**Altintas**	**2.64**	**32**	*e*PN	**Pn**	**22 31 21.8**	**+0.2**
ALT	**Altintas**	**2.64**	**32**	*e*Pn	**Pn**	**22 31 21.8**	**+0.2**
NPS	**Neapolis**	**2.69**	**235**	*e*P	**Pn**	**22 31 22.7**	**+0.5**
NPS				*e*S	**Sn**	**22 31 53.5**	**-0.1**
NPS	**Neapolis**	**2.69**	**235**	*e*P	**Pn**	**22 31 22.7**	**+0.5**
NPS				*e*S	**Sn**	**22 31 53.5**	**-0.1**
NPS	**Neapolis**	**2.69**	**235**	*e*P	**Pn**	**22 31 22.7**	**+0.5**
NPS				*e*S	**Sn**	**22 31 53.5**	**-0.1**
LAST	**Lasithi**	**2.83**	**235**	*e*P	**Pn**	**22 31 25.4**	**+1.1**
LAST				S	Sn	22 31 31.9	-25
LAST	**Lasithi**	**2.83**	**235**	*e*P	**Pn**	**22 31 25.4**	**+1.1**
LAST	**Lasithi**	**2.83**	**235**	P	**Pn**	**22 31 25.4**	**+1.1**
LAST				S	**Sn**	**22 31 59.1**	**+1.8**
LAST	**Lasithi**	**2.83**	**235**	*e*P	**Pn**	**22 31 25.4**	**+1.1**
LAST				S	**Sn**	**22 31 59.1**	**+1.8**
PRK	**Paraskevi**	**2.90**	**327**	*e*P	**Pn**	**22 31 25.4**	**+0.3**
PRK	**Paraskevi**	**2.90**	**327**	*e*P	**Pn**	**22 31 25.4**	**+0.3**
PRK	**Paraskevi**	**2.90**	**327**	P	**Pn**	**22 31 25.4**	**+0.3**
PRK	**Paraskevi**	**2.90**	**327**	*e*P	**Pn**	**22 31 25.4**	**+0.3**
GONE	**Gonen-Balikesi**	**3.25**	**352**	*e*PN	**Pn**	**22 31 29.1**	**-0.8**
GONE	**Gonen-Balikesi**	**3.25**	**352**	*e*Pn	**Pn**	**22 31 29.1**	**-0.8**
HDMB	**Hadim**	**3.35**	**86**	*e*PN	**Pn**	**22 31 33.2**	**+1.9**
HDMB	**Hadim**	**3.35**	**86**	*e*Pn	**Pn**	**22 31 33.2**	**+1.9**
KONT	**Konya--Tatoy**	**3.41**	**70**	*e*PN	**Pn**	**22 31 33.7**	**+1.5**
KONT	**Konya--Tatoy**	**3.41**	**70**	*e*Pn	**Pn**	**22 31 33.7**	**+1.5**
KIZT	**Kizilcal**	**3.49**	**53**	*e*PN	**Pn**	**22 31 34.6**	**+1.4**
KIZT	**Kizilcal**	**3.49**	**53**	*e*Pn	**Pn**	**22 31 34.6**	**+1.4**
KARN	**Karanos**	**3.83**	**249**	*e*P	**Pn**	**22 31 39.3**	**+1.4**
KARN	**Karanos**	**3.83**	**249**	P	**Pn**	**22 31 40.1**	**+2.2**
KARN				S	**Sn**	**22 32 22.9**	**+1.3**
KARN	**Karanos**	**3.83**	**249**	*e*P	**Pn**	**22 31 39.3**	**+1.4**
KARN				S	**Sn**	**22 32 22.9**	**+1.3**
GELI	**Tayfur-Gelibol**	**3.84**	**339**	*e*PN	**Pn**	**22 31 38.2**	**+0.2**
GELI	**Tayfur-Gelibol**	**3.84**	**339**	*e*Pn	**Pn**	**22 31 38.2**	**+0.2**
GVD	**Gavdhos**	**3.96**	**241**	*e*P	**Pn**	**22 31 41.3**	**+1.6**
GVD	**Gavdhos**	**3.96**	**241**	*e*P	**Pn**	**22 31 41.3**	**+1.6**
GVD	**Gavdhos**	**3.96**	**241**	P	**Pn**	**22 31 41.4**	**+1.7**
GVD	**Gavdhos**	**3.96**	**241**	*e*P	**Pn**	**22 31 41.3**	**+1.6**
GULT	**Gulveren**	**3.99**	**25**	*e*PN	**Pn**	**22 31 41.0**	**+1.0**
GULT	**Gulveren**	**3.99**	**25**	*e*Pn	**Pn**	**22 31 41.0**	**+1.0**
LEF	**Lefka**	**4.09**	**113**	*e*PN	**Pn**	**22 31 43.8**	**+2.4**
VLI	**Veliai**	**4.31**	**270**	*e*P	**Pn**	**22 31 45.4**	**+0.9**
VLI	**Veliai**	**4.31**	**270**	*e*P	**Pn**	**22 31 45.4**	**+0.9**
VLI	**Veliai**	**4.31**	**270**	*e*P	**Pn**	**22 31 45.4**	**+0.9**
NEO	**Neokhori**	**4.71**	**303**	*e*P	**Pn**	**22 31 51.3**	**+1.4**
NEO	**Neokhori**	**4.71**	**303**	*e*P	**Pn**	**22 31 51.3**	**+1.4**
NEO	**Neokhori**	**4.71**	**303**	*e*P	**Pn**	**22 31 51.3**	**+1.4**
BR131	**Keskin Array S** 1.7nm,0.3s	**5.09**	**54**	*e*Pn	**Pn**	**22 31 55.9**	**+0.8**
BR131				*e*Sn	**Sn**	**22 32 51.8**	**-0.8**
BR131	**Keskin Array S** 1.7nm,0.3s	**5.09**	**54**	*e*Pn	**Pn**	**22 31 55.9**	**+0.8**
BR131				*e*Sn	**Sn**	**22 32 51.8**	**-0.8**
KDZ	**Kurdzhali**	**5.31**	**336**	P	**Pn**	**22 31 58.4**	**+0.3**
KDZ	**Kurdzhali**	**5.31**	**336**	P	**Pn**	**22 31 58.4**	**+0.3**
RZN	**Rozhen**	**5.59**	**331**	P	**Pn**	**22 32 02.5**	**+0.5**
HMAT	**Matruh** baz=194	**5.81**	**190**	P	**Pn**	**22 32 03.9**	**-1.1**
HMAT	baz=194			S	**Sn**	**22 33 01.5**	**-8.8**
HMAT	**Matruh**	**5.81**	**190**	P	**Pn**	**22 32 03.9**	**-1.1**
SLUM	baz=211	**5.91**	**207**	P	**Pn**	**22 32 05.7**	**-0.6**
SLUM		**5.91**	**207**	P	**Pn**	**22 32 05.7**	**-0.7**
MMB	**Musomiste**	**5.94**	**325**	P	**Pn**	**22 32 07.5**	**+0.9**
SQR	baz=159	**7.34**	**160**	P	**Pn**	**22 32 23.7**	**-2.2**
SQR		**7.34**	**160**	P	**Pn**	**22 32 23.7**	**-2.2**
AMAG	**Maghara** baz=143	**7.40**	**145**	P	**Pn**	**22 32 24.9**	**-1.9**
AMAG	**Maghara**	**7.40**	**145**	P	**Pn**	**22 32 24.9**	**-1.8**
KOT	**Kottamia** baz=155	**7.49**	**156**	P	**Pn**	**22 32 27.0**	**-0.9**
KOT	**Kottamia**	**7.49**	**156**	P	**Pn**	**22 32 27.0**	**-0.9**
HHAG	**Hagoal** baz=153	**7.55**	**154**	P	**Pn**	**22 32 27.4**	**-1.5**
HHAG	comp=E,10µm,0.1s,logA/T=4.8,baz=153			AMP		22 33 00.0	
HHAG	**Hagoal**	**7.55**	**154**	P	**Pn**	**22 32 27.4**	**-1.5**
HSAF	**As Saff** baz=157	**7.69**	**158**	P	**Pn**	**22 32 29.5**	**-1.2**
HSAF	**As Saff**	**7.69**	**158**	P	**Pn**	**22 32 29.5**	**-1.2**
GLL	**Jalalah** baz=157	**7.77**	**158**	P	**Pn**	**22 32 30.5**	**-1.4**
GLL	**Jalalah**	**7.77**	**158**	P	**Pn**	**22 32 30.5**	**-1.4**
SUZ	baz=149	**7.93**	**150**	P	**Pn**	**22 32 33.2**	**-0.8**
SUZ		**7.93**	**150**	P	**Pn**	**22 32 33.2**	**-0.8**
SWA2	baz=202	**7.94**	**198**	P	**Pn**	**22 32 33.8**	**-0.3**
SWA2	baz=202			S	**Sn**	**22 33 54.4**	**-8.0**
SWA2		**7.94**	**198**	P	**Pn**	**22 32 33.8**	**-0.3**
HNKL	**Nakhl** baz=142	**8.36**	**144**	P	**Pn**	**22 32 37.9**	**-1.9**
HNKL	baz=142			S	**Sn**	**22 34 03.2**	**-10**
HNKL	**Nakhl**	**8.36**	**144**	P	**Pn**	**22 32 37.9**	**-1.9**
AWBH	baz=177	**8.50**	**176**	P	**Pn**	**22 32 40.5**	**-1.3**
AWBH		**8.50**	**176**	P	**Pn**	**22 32 40.5**	**-1.3**
TIP	**Timpagrande**	**9.41**	**288**	*e*Pn	**Pn**	**22 32 53.3**	**-0.9**
TIP	**Timpagrande**	**9.41**	**288**	*e*Pn	**Pn**	**22 32 53.3**	**-0.9**
HKAT	**Jabal Katrina** baz=147	**9.57**	**148**	P	**Pn**	**22 32 55.1**	**-1.2**
HKAT	**Jabal Katrina**	**9.57**	**148**	P	**Pn**	**22 32 55.1**	**-1.3**
HFRF	**Wahat Farafira** baz=182	**9.65**	**180**	P	**Pn**	**22 32 55.9**	**-1.7**
HFRF	**Wahat Farafira**	**9.65**	**180**	P	**Pn**	**22 32 55.9**	**-1.7**
AQU	**L'Aquila**	**12.75**	**300**	*e*Pn	**Pn**	**22 33 40.1**	**+0.4**
AQU	**L'Aquila**	**12.75**	**300**	*e*Pn	**Pn**	**22 33 40.1**	**+0.4**

*STR **21** 22:33:54.9±0.2,43°.00N×0°.02W, h5km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **21** 22:33:54.4±0.1,43°.02N×0°.03E, h12km, ML2.3/12, Error ellipse: s-maj=2.3km s-min=1.7km az=171.0*
*LDG **21** 22:33:55.4±0.1,43°.01N×0°.03E, h2km, Md2.6/3, Ml2.3/10, Error ellipse: s-maj=1.2km s-min=1.0km az=176.0*

MDD 21 22:33:55.4±0.2,43°.01N×0°.02E,h10km,mbLg1.7/28, 4C-2D,Error ellipse: s-maj=2.3km s-min=1.6km az=14.0, PRIMO,France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LABF	**Labassere**	**0.05**	**48**	Pg	Pg	22 33 57.2	-0.3
LABF				Lg		22 33 58.6	
LABF	**Labassere**	**0.05**	**48**	Pg	Pg	22 33 57.2	-0.3
LABF				Lg		22 33 58.6	
VIEF	**Viey**	**0.13**	**179**	Pg	Pg	22 33 58.2	-0.2
VIEF				Sg	Sg	22 34 00.4	-0.1
VIEF	**Viey**	**0.13**	**179**	Pg	Pg	22 33 58.3	-0.2
VIEF				Lg		22 34 00.4	
VIEF	**Viey**	**0.13**	**179**	Pg	Pg	22 33 58.3	-0.2
VIEF				Lg		22 34 00.4	
VIEF	**Viey**	**0.13**	**179**	Pg	Pg	22 33 58.2	-0.2
VIEF				Sg	Sg	22 34 00.4	-0.1
EPF	**Esparros**	**0.23**	**85**	*e*Pg	Pg	22 33 59.9	-0.4
EPF				*e*Sg	Sg	22 34 03.3	-0.2
	42nm,0.2s						
EPF	**Esparros**	**0.23**	**85**	Pg	Pg	22 33 59.9	-0.4
EPF				Lg		22 34 03.3	
	21nm,0.2s						
EPF	**Esparros**	**0.23**	**85**	Pg	Pg	22 33 59.9	-0.4
EPF				Lg		22 34 03.3	
	21nm,0.2s						
EPF	**Esparros**	**0.23**	**85**	*e*Pg	Pg	22 33 59.9	-0.4
EPF				*e*Sg	Sg	22 34 03.3	-0.2
	21nm,0.2s						
REYF	**Montagne du Re**	**0.31**	**281**	Pg	Pg	22 34 00.7	-0.9
REYF				Sg	Sg	22 34 05.3	-0.4
REYF	**Montagne du Re**	**0.31**	**281**	Pg	Pg	22 34 00.8	-0.8
REYF				Lg		22 34 05.4	
REYF	**Montagne du Re**	**0.31**	**281**	Pg	Pg	22 34 00.8	-0.8
REYF				Lg		22 34 05.4	
REYF	**Montagne du Re**	**0.31**	**281**	Pg	Pg	22 34 00.7	-0.9
REYF				Sg	Sg	22 34 05.3	-0.4
RESF	**Ens**	**0.31**	**131**	Pg	Pg	22 34 01.4	-0.2
RESF				Sg	Sg	22 34 05.9	+0.1
RESF	**Ens**	**0.31**	**131**	Pg	Pg	22 34 01.4	-0.2
RESF				Lg		22 34 06.1	
RESF	**Ens**	**0.31**	**131**	Pg	Pg	22 34 01.4	-0.2
RESF				Lg		22 34 06.1	
RESF	**Ens**	**0.31**	**131**	Pg	Pg	22 34 01.4	-0.2
RESF				Sg	Sg	22 34 05.9	+0.1
EBIE	**Bielsa**	**0.34**	**164**	⇑Pg	Pg	22 34 01.8	-0.3
	22nm,0.3s,SNR=18						
EBIE				Lg		22 34 06.5	
	15nm,0.2s,SNR=12						
EBIE	**Bielsa**	**0.34**	**164**	Pg	Pg	22 34 01.8	-0.3
	22nm,0.3s,SNR=85						
EBIE				Lg		22 34 06.1	
	15nm,0.2s,SNR=12						
ETSF	**Etsaut**	**0.44**	**255**	*e*Pg	Pg	22 34 03.3	-0.7
ETSF				*e*Sg	Sg	22 34 09.1	-0.8
	41nm,0.2s						
ETSF	**Etsaut**	**0.44**	**255**	Pg	Pg	22 34 03.3	-0.7
ETSF				Lg		22 34 09.1	
	20nm,0.2s						
ETSF	**Etsaut**	**0.44**	**255**	Pg	Pg	22 34 03.3	-0.7
ETSF				Lg		22 34 09.1	
	20nm,0.2s						
ETSF	**Etsaut**	**0.44**	**255**	*e*Pg	Pg	22 34 03.3	-0.7
ETSF				*e*Sg	Sg	22 34 09.1	-0.8
	20nm,0.2s						
MELF	**Melles**	**0.56**	**104**	Pg	Pg	22 34 05.5	-0.8
MELF				Sg	Sg	22 34 14.1	+0.5
MELF	**Melles**	**0.56**	**104**	Pg	Pg	22 34 05.4	-0.9
MELF				Lg		22 34 13.6	
MELF	**Melles**	**0.56**	**104**	Pg	Pg	22 34 05.4	-0.9
MELF				Lg		22 34 13.6	
MELF	**Melles**	**0.56**	**104**	Pg	Pg	22 34 05.5	-0.8
MELF				Sg	Sg	22 34 14.1	+0.5
ORDF	**Ordiarp**	**0.73**	**286**	Pg	Pg	22 34 09.0	-0.5
ORDF				Lg		22 34 18.5	
ORDF	**Ordiarp**	**0.73**	**286**	Pg	Pg	22 34 09.0	-0.5
ORDF				Lg		22 34 18.5	
LARF	**Larrau**	**0.74**	**272**	Pg	Pg	22 34 07.7	-2.0
LARF				Sg	Sg	22 34 18.3	-1.0
LARF	**Larrau**	**0.74**	**272**	Pg	Pg	22 34 07.8	-1.8
LARF				Lg		22 34 18.0	
LARF	**Larrau**	**0.74**	**272**	Pg	Pg	22 34 07.8	-1.8
LARF				Lg		22 34 18.0	
LARF	**Larrau**	**0.74**	**272**	Pg	Pg	22 34 07.7	-2.0
LARF				Sg	Sg	22 34 18.3	-1.0
MLS	**Moulis**	**0.79**	**94**	Pg	Pg	22 34 11.8	+1.2
MLS	**Moulis**	**0.79**	**94**	Lg		22 34 19.7	
MLS	**Moulis**	**0.79**	**94**	Lg		22 34 19.7	
MLS	**Moulis**	**0.79**	**94**	Pg	Pg	22 34 11.8	+1.2
CTRE	**Tremp**	**0.88**	**141**	Pg	Pg	22 34 12.3	-0.1
CTRE				Lg		22 34 24.6	
	9.1nm,0.2s						
CTRE	**Tremp**	**0.88**	**141**	Pg	Pg	22 34 12.3	-0.1
CTRE				Lg		22 34 24.6	
	9.1nm,0.2s						
SJPF	**Ste Jean**	**0.92**	**277**	*e*Pg	Pg	22 34 12.7	-0.4
SJPF				*e*Sg	Sg	22 34 24.4	-0.6
	7.4nm,0.4s						
SJPF	**Ste Jean**	**0.92**	**277**	Pg	Pg	22 34 12.7	-0.4
SJPF				Lg		22 34 24.4	
	3.7nm,0.4s						
SJPF	**Ste Jean**	**0.92**	**277**	Pg	Pg	22 34 12.7	-0.4
SJPF				Lg		22 34 24.4	
	3.7nm,0.4s						
SJPF	**Ste Jean**	**0.92**	**277**	*e*Pg	Pg	22 34 12.7	-0.4
SJPF				*e*Sg	Sg	22 34 24.4	-0.6
	3.7nm,0.4s						
CEST	**Esterri de Car**	**1.00**	**114**	Pg	Pg	22 34 14.

CAVN Les Avellanes 1.25 154 Pg Pg 22 34 19.2 -0.2
CAVN Lg 22 34 36.4
29nm,0.2s
ESAC San Caprasio 1.34 196 Pg Pg 22 34 20.1 -1.0
2.0nm,0.1s,SNR=7.4
ESAC Lg 22 34 39.1
30nm,0.2s
ESAC San Caprasio 1.34 196 Pg Pg 22 34 20.1 -1.0
2.0nm,0.1s,SNR=7.4
ESAC Lg 22 34 39.1
30nm,0.2s
ESAC San Caprasio 1.34 196 Pg Pg 22 34 20.1 -1.0
2.0nm,0.1s,SNR=7.4
ESAC Lg 22 34 36.9
30nm,0.2s
CLLI Llivia 1.54 110 Pg Pg 22 34 24.0 -0.8
0.8nm,0.2s,SNR=15
CLLI Lg 22 34 44.0
4.5nm,0.6s
CLLI Llivia 1.54 110 Pg Pg 22 34 24.0 -0.8
0.8nm,0.2s,SNR=15
CLLI Lg 22 34 44.0
4.5nm,0.6s
CLLI Llivia 1.54 110 Pg Pg 22 34 24.0 -0.8
0.8nm,0.2s,SNR=15
CLLI Lg 22 34 44.0
4.5nm,0.6s
EMIR Miracle 1.56 134 ⇓Pg Pg 22 34 23.4 -2.0
0.9nm,0.1s,SNR=18
EMIR Lg 22 34 44.5
5.0nm,0.3s,SNR=4.0
EMIR Miracle 1.56 134 ⇓Pg Pg 22 34 23.4 -2.0
0.9nm,0.1s,SNR=18
EMIR Lg 22 34 44.5
5.0nm,0.3s,SNR=4.0
EMIR Miracle 1.56 134 Pg Pg 22 34 24.1 -1.3
0.9nm,0.1s,SNR=7.3
EMIR Lg 22 34 44.5
5.0nm,0.3s,SNR=10
VALF Valcebollere 1.59 112 Pg Pg 22 34 26.2 +0.2
VALF Sg Sg 22 34 46.9 +0.3
VALF Valcebollere 1.59 112 Pn Pn 22 34 26.2 +2.6
VALF Sn Sn 22 34 46.6 +2.5
VALF Valcebollere 1.59 112 Pn Pn 22 34 26.2 +2.6
VALF Sn Sn 22 34 46.6 +2.5
VALF Valcebollere 1.59 112 Pg Pg 22 34 26.2 +0.2
VALF Sg Sg 22 34 46.9 +0.3
MTLF Montolieu 1.64 78 ePg Pg 22 34 25.7 -1.2
MTLF eSg Sg 22 34 46.8 -1.4
11nm,0.3s
MTLF Montolieu 1.64 78 Pg Pg 22 34 25.7 -1.2
MTLF Lg 22 34 46.8
5.3nm,0.3s
MTLF Montolieu 1.64 78 Pg Pg 22 34 25.7 -1.2
MTLF Lg 22 34 46.8
5.3nm,0.3s
MTLF Montolieu 1.64 78 ePg Pg 22 34 25.7 -1.2
MTLF eSg Sg 22 34 46.8 -1.4
5.3nm,0.3s
EPOB Poblet 1.83 154 Pg Pg 22 34 29.0 -1.6
3.1nm,0.3s,SNR=7.6
EPOB Lg 22 34 52.6
5.1nm,0.2s,SNR=7.9
EPOB Poblet 1.83 154 Pg Pg 22 34 29.0 -1.6
3.1nm,0.3s,SNR=7.6
EPOB Lg 22 34 52.6
5.1nm,0.2s,SNR=7.9
EPOB Poblet 1.83 154 Pg Pg 22 34 29.0 -1.6
3.1nm,0.3s,SNR=7.6
EPOB Lg 22 34 52.6
5.1nm,0.2s,SNR=7.9
LFF La Frestale 2.00 15 ePn Pn 22 34 28.5 -0.6
LFF La Frestale 2.00 15 ePg Pg 22 34 32.5 -1.2
LFF eSn Sn 22 34 52.5 -1.6
LFF eSg Sg 22 34 58.5 -1.0
5.3nm,0.3s
LFF La Frestale 2.00 15 Pn Pn 22 34 28.5 -0.6
LFF Pg Pg 22 34 32.5 -1.2
LFF Sn Sn 22 34 52.5 -1.6
LFF Lg 22 34 58.5
2.7nm,0.3s
LFF La Frestale 2.00 15 Pn Pn 22 34 28.5 -0.6
LFF Pg Pg 22 34 32.5 -1.2
LFF Sn Sn 22 34 52.5 -1.6
LFF Lg 22 34 58.5
2.7nm,0.3s
LFF La Frestale 2.00 15 ePn Pn 22 34 28.5 -0.6
LFF La Frestale 2.00 15 ePg Pg 22 34 32.5 -1.2
LFF eSn Sn 22 34 52.5 -1.6
LFF eSg Sg 22 34 58.5 -1.0
2.7nm,0.3s
ERTA Horta de San J 2.07 173 Pg Pg 22 34 33.0 -2.1
0.2nm,0.1s,SNR=4.0
ERTA Lg 22 35 00.8
2.6nm,0.2s,SNR=7.9
ERTA Horta de San J 2.07 173 Pg Pg 22 34 33.0 -2.1
0.2nm,0.1s,SNR=4.0
ERTA Lg 22 35 00.8
2.6nm,0.2s,SNR=7.9
ERTA Horta de San J 2.07 173 Pg Pg 22 34 33.0 -2.0
0.2nm,0.1s,SNR=8.9
ERTA Lg 22 35 00.8
2.6nm,0.2s,SNR=7.9
CFON Fontmartina 2.18 124 Pg Pg 22 34 33.3 -3.9
0.8nm,0.2s,SNR=5.9
CFON Lg 22 35 03.5
14nm,0.2s
CFON Fontmartina 2.18 124 Pg Pg 22 34 33.3 -3.9
0.8nm,0.2s,SNR=5.9
CFON Lg 22 35 03.5
14nm,0.2s
CFON Fontmartina 2.18 124 Pg Pg 22 34 33.3 -3.9
0.8nm,0.2s,SNR=5.9
CFON Lg 22 35 03.5
14nm,0.2s
EJON La Jonquera 2.19 104 Pg Pg 22 34 34.6 -2.7
0.2nm,0.1s,SNR=7.9
EJON Lg 22 35 04.0
0.4nm,0.1s,SNR=7.9
EJON La Jonquera 2.19 104 Pg Pg 22 34 34.6 -2.7
0.2nm,0.1s,SNR=7.9
EJON Lg 22 35 04.0
0.4nm,0.1s,SNR=7.9
EJON La Jonquera 2.19 104 Pg Pg 22 34 34.6 -2.7
0.2nm,0.1s,SNR=7.9
EJON Lg 22 35 04.0
0.4nm,0.1s,SNR=7.9
CAF Calviac 2.42 37 ePn Pn 22 34 34.1 -0.8
CAF Calviac 2.42 37 ePg Pg 22 34 40.1 -1.6
CAF eSg Sg 22 35 11.4 -1.6
5.0nm,0.3s
CAF Calviac 2.42 37 Pn Pn 22 34 34.1 -0.8
CAF Pg Pg 22 34 40.1 -1.6
CAF Lg 22 35 11.4
2.5nm,0.3s
CAF Calviac 2.42 37 Pn Pn 22 34 34.1 -0.8
CAF Pg Pg 22 34 40.1 -1.6
CAF Lg 22 35 11.4
2.5nm,0.3s
CAF Calviac 2.42 37 ePn Pn 22 34 34.1 -0.8
CAF Calviac 2.42 37 ePg Pg 22 34 40.1 -1.6
CAF eSg Sg 22 35 11.4 -1.6
2.5nm,0.3s
RJF Les Rejaudoux 2.53 25 ePn Pn 22 34 35.7 -0.8
RJF Les Rejaudoux 2.53 25 ePg Pg 22 34 42.5 -1.4
RJF eSg Sg 22 35 15.0 -1.7
3.5nm,0.3s
RJF Les Rejaudoux 2.53 25 Pn Pn 22 34 35.7 -0.8
RJF Pg Pg 22 34 42.5 -1.4
RJF Lg 22 35 15.0
1.8nm,0.3s
RJF Les Rejaudoux 2.53 25 Pn Pn 22 34 35.7 -0.8
RJF Pg Pg 22 34 42.5 -1.4
RJF Lg 22 35 15.0
1.8nm,0.3s
RJF Les Rejaudoux 2.53 25 ePn Pn 22 34 35.7 -0.8
RJF Les Rejaudoux 2.53 25 ePg Pg 22 34 42.5 -1.4
RJF eSg Sg 22 35 15.0 -1.7
1.8nm,0.3s
EMOS Mosqueruela 2.67 188 Pg Pg 22 34 42.4 -4.2
0.2nm,0.2s,SNR=4.0
EMOS Lg 22 35 18.4
0.4nm,0.2s,SNR=7.9
EMOS Mosqueruela 2.67 188 Pg Pg 22 34 42.4 -4.2
0.2nm,0.2s,SNR=4.0
EMOS Lg 22 35 18.4
0.4nm,0.2s,SNR=7.9
EMOS Mosqueruela 2.67 188 Pg Pg 22 34 42.4 -4.2
0.2nm,0.2s,SNR=7.9
EMOS Lg 22 35 18.4
0.4nm,0.2s,SNR=7.9
ETOR Torete 2.68 216 Pn Pn 22 34 38.0 -0.6
0.7nm,0.2s,SNR=7.9
ETOR Sn Sn 22 35 09.0 -2.0
1.2nm,0.2s,SNR=7.9
ETOR Lg 22 35 19.1
1.8nm,0.2s,SNR=7.9
ETOR Torete 2.68 216 Pn Pn 22 34 38.0 -0.6
0.7nm,0.2s,SNR=7.9
ETOR Sn Sn 22 35 09.0 -2.0
1.2nm,0.2s,SNR=7.9
ETOR Lg 22 35 19.1
1.8nm,0.2s,SNR=7.9
ETOR Torete 2.68 216 Pn Pn 22 34 38.0 -0.6
0.7nm,0.2s,SNR=7.9
ETOR Sn Sn 22 35 09.0 -2.1
1.2nm,0.2s,SNR=7.9
ETOR Lg 22 35 19.1
1.8nm,0.2s,SNR=7.9
LASF Ste Croix 2.98 68 ePn Pn 22 34 41.9 -0.8
LASF Ste Croix 2.98 68 ePg Pg 22 34 50.4 -2.2
LASF eSn Sn 22 35 15.8 -2.7
LASF eSg Sg 22 35 28.9 -2.4
2.7nm,0.3s
LASF Ste Croix 2.98 68 Pn Pn 22 34 41.9 -0.8
LASF Pg Pg 22 34 50.4 -2.2
LASF Sn Sn 22 35 15.8 -2.7
LASF Lg 22 35 28.9
1.4nm,0.3s
LASF Ste Croix 2.98 68 Pn Pn 22 34 41.9 -0.8
LASF Pg Pg 22 34 50.4 -2.2
LASF Sn Sn 22 35 15.8 -2.7
LASF Lg 22 35 28.9
1.4nm,0.3s
LASF Ste Croix 2.98 68 ePn Pn 22 34 41.9 -0.8
LASF Ste Croix 2.98 68 ePg Pg 22 34 50.4 -2.2
LASF eSn Sn 22 35 15.8 -2.7
LASF eSg Sg 22 35 28.9 -2.4
1.4nm,0.3s
MFF Saint Martin d 3.59 358 ePn Pn 22 34 50.6 -0.4
MFF eSg Sg 22 35 48.0 -2.7
0.8nm,0.3s
MFF Saint Martin d 3.59 358 Pn Pn 22 34 50.6 -0.4
MFF Lg 22 35 48.0
0.4nm,0.3s
MFF Saint Martin d 3.59 358 Pn Pn 22 34 50.6 -0.4
MFF Lg 22 35 48.0
0.4nm,0.3s
MFF Saint Martin d 3.59 358 eSg Sg 22 35 48.0 -2.7
0.4nm,0.3s
MFF Saint Martin d 3.59 358 ePn Pn 22 34 50.6 -0.4
TCF Toulx Ste Croi 3.63 25 eSg Sg 22 35 49.1 -2.8
0.8nm,0.2s
TCF Toulx Ste Croi 3.63 25 Lg 22 35 49.1
0.4nm,0.2s
TCF Toulx Ste Croi 3.63 25 Lg 22 35 49.1
0.4nm,0.2s
TCF Toulx Ste Croi 3.63 25 eSg Sg 22 35 49.1 -2.8
0.4nm,0.2s
VIVF Saint-Julien-l 3.83 60 eSn Sn 22 35 36.3 -3.1
VIVF eSg Sg 22 35 55.4 -3.0
0.8nm,0.2s
VIVF Saint-Julien-l 3.83 60 Sn Sn 22 35 36.3 -3.1
VIVF Lg 22 35 55.4
0.4nm,0.2s
VIVF Saint-Julien-l 3.83 60 Sn Sn 22 35 36.3 -3.1
VIVF Lg 22 35 55.4
0.4nm,0.2s
VIVF Saint-Julien-l 3.83 60 eSn Sn 22 35 36.3 -3.1
VIVF eSg Sg 22 35 55.4 -3.0
0.4nm,0.2s
BGF Bois d'Agland 4.08 29 eSg Sg 22 36 02.9 -3.3
5.3nm,0.4s
BGF Bois d'Agland 4.08 29 Lg 22 36 02.9
2.7nm,0.4s
BGF Bois d'Agland 4.08 29 Lg 22 36 02.9
2.7nm,0.4s
BGF Bois d'Agland 4.08 29 eSg Sg 22 36 02.9 -3.3
2.7nm,0.4s

DJA 21 22:34:24,7.17S×108.88E,h6km,MLv3.6/9,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	Cimerak	0.74	215	S	Sg	22 34 50.0	+2.0
BJII	Banjamegara	0.84	101	P	Pg	22 34 39.0	-1.1
JCJI	Jatiwangi	0.91	318	P	Pg	22 34 39.2	-2.2
JCJI				S	Sg	22 34 48.2	-5.0
CISI	Cisompet, Garu	1.12	250	P	Pg	22 34 45.6	0.0
CISI				S	Sg	22 34 58.4	-1.8
LEM	Lembang	1.30	285	P	Pn	22 34 48.8	+0.1
LEM				S	Sb	22 35 04.8	-1.0
YOGI	Yogyakarta	1.54	115	P	Pn	22 34 50.6	-1.5
UGM	Wanagama	1.79	114	P	Pn	22 35 07.4	+12
CBJI	Citeko	2.15	290	P	Pn	22 34 58.6	-1.8
CBJI				S	Sn	22 35 24.9	-2.5
DBJI	Dramaga	2.20	286	P	Pn	22 35 03.9	+2.8
DBJI				S	Sn	22 35 30.4	+1.7
SKJI	Sukabumi	2.31	274	P	Pn	22 35 02.5	-0.1
RBSI	Rajabasa	3.38	293	P	Pn	22 35 17.4	0.0

ISCJB 21 22:51:39.6±1.7, 5.24N±0.04×82.62W±0.02, h0km±10km, mb4.8/93, MS4.1/22, Error ellipse: s-maj=6.3km s-min=3.6km az=20.2

MOS 21 22:51:40.5±1.3, 5.25N×82.86W, h10km, mb5.0/36, MS4.2/5, Error ellipse: s-maj=10.1km s-min=6.4km az=95.8

IDC 21 22:51:40.3±0.6, 5.25N×82.57W, h0km, mb4.5/19, mb1 4.7/22, mb1mx4.6/26, mbtmp4.5/22, ML4.1/3, MS4.1/17, Ms1 4.2/17, ms1mx4.1/22, Error ellipse: s-maj=22.6km s-min=11.3km az=60.0

NEIC 21 22:51:42.2±0.3, 5.24N×82.68W, h10km, mb4.9/68, MS4.1/3, Error ellipse: s-maj=6.2km s-min=4.5km az=209.0

GCMT 21 22:51:46.6±0.2, 5.20N×82.59W, h26km, MW5.2, Moment Tensor Solution. s50,c79; s84,c141; Moment tensor: Scale 10^{16}Nm; M_{rr}0.00±.15; $M_{\theta\theta}$0.78±.14; $M_{\phi\phi}$-0.78±.18; $M_{r\theta}$1.16±.28; $M_{\theta\phi}$6.61±.13; $M_{\phi r}$0.39±.31; Best double couple: $M_0$6.80000×10^{16} NP1:ϕ_s3.00000°, δ80.00000°, λ176.00000°. NP2:ϕ_s94.00000°, δ86.00000°, λ10.00000°. Principal axes: T 6.8400, Plg9.0000°, Azm319.0000°; N -0.1500, Plg80.0000°, Azm114.0000°; P -6.6900, Plg4.0000°, Azm228.0000°; Data Used: II IU IC G CN.

ISC 21 22:51:44.5±1.4, 5.22N±0.04×82.63W±0.02, h21km±10km, n549, σ0.75/519, mb4.7/93, MS4.1/22, 166C-149D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCIP	Isla Barro Col	4.79	35	ePn	Pn	22 52 53.6	-2.0
BCIP				eSn	Sn	22 53 51.8	+1.3
JTS	JuntasAbangare	5.54	336	Pn	Pn	22 53 02.9	-2.9
	3μm,0.4s						
JTS	JuntasAbangare	5.54	336	ePn	Pn	22 53 01.7	-4.1
JTS				eSn	Sn	22 54 05.2	-3.7
OTAV	Otavalo	6.47	140	ePn	Pn	22 53 15.5	-3.1
OTAV				eSn	Sn	22 54 20.4	-12
ROSC	El Rosal	8.27	92	Pn	Pn	22 53 44.6	+1.2
	4.2nm,0.3s,baz=105,slow=21,SNR=13						
ROSC				Sn	Sn	22 55 18.1	+1.8
	2.4nm,0.3s,baz=72,slow=23,SNR=3.5						
PAYG	Puerto Ayora	9.64	233	ePn	Pn	22 54 02.7	+0.6
TGUH	Tegucigalpa,Un	9.90	333	ePn	Pn	22 54 06.6	+1.0
SDV	Santo Domingo	12.44	72	ePn	Pn	22 54 40.6	0.0
ATAH	Atahualpa	12.98	161	Pn	Pn	22 54 49.2	+1.4
	1.2nm,0.3s,baz=353,slow=7.4,SNR=12						
ATAH				LR	LR	22 59 21.5	
	comp=Z,4μm,19.7s,baz=334,slow=36						
TEIG	Tepich	15.89	340	eP	Pn	22 55 27.6	+0.5
	36nm,1.3s						
RCC	Rio Carpintero	16.16	24	e	Pn	22 55 30.4	0.0
CMIG	Matias Romero	16.83	315	Pn	Pn	22 55 38.2	-0.8
	0.2nm,0.3s,baz=95,slow=9.4,SNR=8.3						
CMIG				LR	LR	23 01 08.9	
	comp=Z,951nm,19.2s,baz=321,slow=34						
SDDR	Presa de Saban	17.59	38	eP	Pn	22 55 49.4	+0.9
	48nm,1.0s						
NNA	Nana	18.04	161	ePn	Pn	22 55 53.4	-0.6
	101nm,1.2s						
NNA	Nana	18.04	161	P	Pn	22 55 53.9	-0.2
	0.8nm,0.3s,baz=343,slow=3.5,SNR=7.5						
NNA				LR	LR	23 02 14.4	
	comp=Z,589nm,20.0s,baz=317,slow=35						
NNA	Nana	18.04	161	eP	Pn	22 55 53.4	-0.7
NNA				pmax	pmax		
	comp=Z,101nm,1.2s						
PCRV	Puerto La Cruz	18.49	73	P	Pn	22 55 59.3	-0.3
	comp=Z,1.9nm,0.3s,baz=244,slow=7.2,SNR=6.9						
GRTK	Grand Turk	19.65	33	eP	Pn	22 56 10.5	-3.1
MPR	Mayaguez	19.89	48	ePn	Pn	22 56 15.5	-0.9
AGP	Aguadilla	20.01	48	ePn	P	22 56 17.9	+1.9
CELP	Cerrillos	20.23	50	ePn	P	22 56 19.0	+0.6
AOPR	Arecibo Observ	20.26	49	eP	P	22 56 18.9	+0.1
	comp=Z,115nm,0.8s						
SJG	San Juan	20.57	50	eP	P	22 56 22.2	+0.1
	comp=Z,94nm,1.0s						
SJG	San Juan	20.57	50	P	P	22 56 21.1	-1.0
	comp=Z,51nm,0.6s,baz=260,slow=10,SNR=17						
SJG				LR	LR	23 03 35.8	
	comp=Z,505nm,21.1s,MS3.9,baz=12,slow=35						
SJG	San Juan	20.57	50	eP	P	22 56 22.2	+0.1
SJG				pmax	pmax		
	comp=Z,94nm,1.0s						
HUMP	Col San Antoni	20.82	51	eP	P	22 56 24.5	-0.4
	comp=Z,105nm,1.1s						
CBYP	Canovanas	20.89	50	eP	P	22 56 25.1	-0.5
	comp=Z,189nm,1.3s						
MTP	Monte Pirata	21.02	51	eP	P	22 56 27.1	0.0
	comp=Z,195nm,1.2s,mb5.3						
STVI	Saint Thomas	21.64	51	eP	P	22 56 33.7	+0.1
LPAZ	La Paz	25.74	146	P	P	22 57 12.6	-1.1
	comp=Z,6.9nm,1.0s,mb4.2,baz=334,slow=9.6,SNR=13						
LPAZ				LR	LR	23 08 28.2	
	comp=Z,1μm,20.1s,MS4.5,baz=305,slow=39						
HKT	Hockley	27.57	335	eP	P	22 57 29.6	-0.6
	comp=Z,26nm,1.7s,mb4.6						
HKT	Hockley	27.57	335	eP	P	22 57 29.6	-0.6
HKT				pmax	pmax		
	comp=Z,26nm,1.7s,mb4.6						
LRAL	Lakeview Retre	27.97	352	eP	P	22 57 32.7	-1.1
	comp=Z,16nm,0.8s,mb4.7						
JCT	Junction City	29.88	329	⇑P	P	22 57 50.7	0.0
	baz=30						
SIV	San Ignacio	29.99	135	P	P	22 57 49.7	-2.1
	comp=Z,5.2nm,0.8s,mb4.3,baz=320,slow=11,SNR=15						
TKL	Tuckaleechee C	30.30	358	LR	LR	23 09 35.7	
	comp=Z,334nm,19.4s,MS4.0,baz=184,slow=36						
UALR	University of	30.75	344	eP	P	22 57 57.2	-1.2
	comp=Z,19nm,0.9s,mb4.9						
MIAR	Mount Ida	30.89	342	eP	P	22 57 58.5	-1.1
	comp=Z,12nm,1.2s,mb4.6						
MIAR	Mount Ida	30.89	342	eP	P	22 57 58.5	-1.1
MIAR				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.6						
WVT	Waverly	31.13	352	eP	P	22 57 59.3	-2.4
	comp=Z,23nm,0.7s,mb5.1						
WVT	Waverly	31.13	352	eP	P	22 57 59.3	-2.4
WVT				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.1						
TXAR	Lajitas Array	31.16	323	P	P	22 58 02.1	0.0
	comp=Z,1.3nm,0.8s,mb3.8,baz=145,slow=11,SNR=2.4						
TXAR				LR	LR	23 10 47.7	
	comp=Z,204nm,19.2s,MS3.8,baz=45,slow=37						
428A	Kincaid Ranch,	31.62	326	⇑P	P	22 58 06.6	+0.5
	baz=32						
527A	Woodward Ranch	31.72	324	⇑P	P	22 58 07.7	+0.7
	baz=32						
526A	Mary Lane Ranc	31.94	323	⇓P	P	22 58 09.5	+0.6
	baz=32						
328A	Wristen Ranch,	32.19	326	⇓P	P	22 58 10.7	-0.4
	baz=32,SNR=6.7						
426A	McDonald Obser	32.35	324	⇓P	P	22 58 12.7	+0.2
	baz=32						
SIUC	Southern Illin	32.90	350	eP	P	22 58 15.2	-2.0
	comp=Z,38nm,0.9s,mb5.3						
USIN	University of	32.91	353	eP	P	22 58 16.1	-1.3
	comp=Z,48nm,0.8s,mb5.5						
227A	Bennet, Jal	32.93	327	⇑P	P	22 58 17.6	0.0
	baz=33						
WMOK	Wichita Mounta	32.96	335	eP	P	22 58 15.8	-2.0
	comp=Z,10nm,1.1s,mb4.7						
WMOK	Wichita Mounta	32.96	335	eP	P	22 58 15.8	-2.0
WMOK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
425A	Indio Mountain	33.00	323	⇓P	P	22 58 17.3	-0.9
	baz=33,SNR=12						
WCI	Wyandotte Cave	33.02	355	eP	P	22 58 16.3	-2.0
	comp=Z,51nm,1.2s,mb5.3						
WCI	Wyandotte Cave	33.02	355	eP	P	22 58 16.3	-2.0
WCI				pmax	pmax		
	comp=Z,51nm,1.2s,mb5.3						
FVM	French Village	33.37	349	eP	P	22 58 17.9	-3.5
	comp=Z,34nm,1.1s,mb5.2						
FVM	French Village	33.37	349	eP	P	22 58 17.9	-3.5
FVM				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2						
325A	Bean Ranch, Si	33.41	324	⇑P	P	22 58 21.3	-0.5
	baz=33						
CCM	Cathedral Cave	33.61	348	eP	P	22 58 20.7	-2.7
	comp=Z,34nm,0.9s,mb5.3						
CCM				e		22 58 28.8	
CCM	Cathedral Cave	33.61	348	eP	P	22 58 20.7	-2.7
CCM				e		22 58 28.8	
CCM				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.3						
OLIL	Olney	33.73	352	eP	P	22 58 22.5	-1.9
	comp=Z,67nm,0.9s,mb5.6						
126A	Clayton Basin,	33.81	326	⇓P	P	22 58 25.2	-0.1
	baz=34						
225A	Deer Hill, Car	33.87	325	⇑P	P	22 58 25.8	0.0
	baz=34						
MNTX	Cornudas Mount	33.89	324	⇑P	P	22 58 25.0	-0.9
	baz=34,SNR=7.8						
MNTX	Cornudas Mount	33.89	324	eP	P	22 58 25.2	-0.8
	comp=Z,12nm,1.2s,mb4.7						
MNTX				PP	PP	22 59 41.6	-1.3
BLO	Bloomington	33.98	355	eP	P	22 58 24.4	-2.2
	comp=Z,22nm,0.7s,mb5.2						
BLO	Bloomington	33.98	355	eP	P	22 58 24.4	-2.2
BLO				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.2						
MSTX	Muleshoe	34.18	329	⇑P	P	22 58 27.9	-0.6
	baz=34						
224A	Cornudas Mount	34.24	324	⇓P	P	22 58 28.4	-0.7
	baz=34						
Z26A	Caprock	34.27	327	⇑P	P	22 58 28.7	-0.5
	baz=34						
Y27A	Causey	34.31	329	⇑P	P	22 58 29.1	-0.5
	baz=34						
AMTX	Amarillo	34.37	332	⇑P	P	22 58 29.5	-0.7
	baz=34						
124A	Stringfield Ra	34.66	325	⇓P	P	22 58 32.6	0.0
	baz=35,SNR=5.6						
Z25A	Roswell	34.67	326	⇑P	P	22 58 32.4	-0.3
	baz=35,SNR=8.2						
Z24A	Sheeppen Canyo	35.07	326	⇓P	P	22 58 35.8	-0.3
	baz=35						
MVL	Millersville	35.08	8	eP	P	22 58 36.5	+0.4
	comp=Z,34nm,1.5s,mb5.0						
Y25A	Mesa, Roswell	35.15	327	⇓P	P	22 58 36.3	-0.5
	baz=35,SNR=6.7						
X26A	CR and CF Fran	35.16	329	⇑P	P	22 58 36.4	-0.6
	baz=35						
W27A	Bowe Ranch, En	35.19	330	⇑P	P	22 58 36.9	-0.3
	baz=35						
Z23A	Rita Site, Whi	35.52	325	⇓P	P	22 58 40.2	+0.1
	baz=35						
Y24A	Capitan	35.55	326	⇓P	P	22 58 39.9	-0.4
	baz=36,SNR=7.0						
221A	Mesquite Ranch	35.55	322	⇑P	P	22 58 41.0	+0.6
	baz=36						
320A	Kipp Ranch, An	35.58	320	⇑P	P	22 58 40.9	+0.3
	baz=36,SNR=7.0						
X25A	Clemmons Ranch	35.59	328	⇓P	P	22 58 40.1	-0.5
	baz=36,SNR=5.2						
HDIL	Hopedale	35.68	351	eP	P	22 58 38.6	-2.7
	comp=Z,46nm,0.7s,mb5.5						
Y23A	Lovelace Mesa,	35.90	326	⇓P	P	22 58 43.6	+0.3
	baz=36,SNR=7.4						
121A	Cookes Peak, D	35.92	322	⇓P	P	22 58 44.4	+0.9
	baz=36,SNR=5.8						
Z22A	Elephant Butte	35.94	324	⇓P	P	22 58 44.5	+0.9
	baz=36						

220A **Playas Peak, P** 35.95 321 ⇑P P 22 58 44.1 +0.3
baz=36,SNR=10
W25A **X Bar L Ranch,** 36.02 329 ⇑P P 22 58 44.5 +0.2
baz=36
KSU1 **Kansas State U** 36.02 341 eP P 22 58 43.1 -1.1
comp=Z,14nm,0.6s,mb5.1
X24A **Lazy VL Ranch,** 36.03 327 ⇑P P 22 58 44.8 +0.4
baz=36
319A **Douglas** 36.09 319 ⇓P P 22 58 45.2 +0.3
baz=36,SNR=6.1
V26A **Tequesquite Ra** 36.13 330 ⇑P P 22 58 44.7 -0.5
baz=36,SNR=5.1
BNM **Barren Site** 36.39 325 eP P 22 58 47.6 +0.2
comp=Z,5.3nm,1.1s,mb4.4
Z21A **St. Cloud Mine** 36.39 323 ⇓P P 22 58 48.3 +0.8
baz=36
Y22A **Socorro** 36.42 325 ⇓P P 22 58 48.5 +0.7
baz=36,SNR=6.8
120A **U Bar Ranch, L** 36.45 321 ⇓P P 22 58 48.8 +0.7
baz=36
219A **White Tail Can** 36.48 320 ⇑P P 22 58 48.8 +0.5
baz=36,SNR=9.4
W24A **Lazy 6 Ranch,** 36.51 328 ⇑P P 22 58 48.8 +0.3
baz=36,SNR=6.3
V25A **Rancho No Teng** 36.58 329 ⇓P P 22 58 49.1 0.0
baz=36,SNR=15
U26A **Atchley Ranch,** 36.58 331 ⇑P P 22 58 49.9 +0.8
baz=36
Z20A **Nine Sixteen R** 36.81 322 ⇑P P 22 58 52.0 +0.9
baz=37
V24A **Rampart Ranch,** 36.83 328 ⇓P P 22 58 51.3 +0.1
baz=37,SNR=7.9
LAZ **Ladron** 36.86 325 eP P 22 58 51.1 -0.4
comp=Z,5.4nm,1.0s,mb4.3
LAZ ePP PP 23 00 14.6 -1.1
CBKS **Cedar Bluff** 36.87 337 ⇑P P 22 58 51.4 0.0
baz=37
W23A **Werner Place,** 36.87 327 ⇑P P 22 58 51.9 +0.4
baz=37,SNR=7.4
ANMO **Albuquerque** 36.88 326 eP P 22 58 50.8 -0.9
comp=Z,9.3nm,0.8s,mb4.7
ANMO ePP PP 23 00 17.2 +1.3
ANMO **Albuquerque** 36.88 326 P P 22 58 52.5 +0.9
comp=Z,9.2nm,1.0s,mb4.6,baz=142,slow=9.7,SNR=17
ANMO **Albuquerque** 36.88 326 eP P 22 58 50.8 -0.9
ANMO e 23 00 17.2
ANMO pmax pmax
comp=Z,9.0nm,0.8s
Y21A **Point of Rocks** 36.89 324 ⇓P P 22 58 52.7 +0.9
baz=37
U25A **Circle Dot Ran** 36.91 330 ⇓P P 22 58 52.3 +0.4
baz=37
218A **Dragoon** 36.97 319 ⇓P P 22 58 52.7 +0.3
baz=37,SNR=9.1
119A **Ashpeak Ranch,** 37.02 321 ⇑P P 22 58 53.5 +0.6
baz=37
W22A **Albuquerque** 37.20 326 ⇑P P 22 58 55.3 +1.0
baz=37
Y20A **Horse Springs,** 37.23 323 ⇑P P 22 58 55.3 +0.6
baz=37,SNR=6.1
X21A **Alamocita Cree** 37.26 325 ⇓P P 22 58 55.5 +0.5
baz=37,SNR=6.7
BINY **Binghamton** 37.29 8 eP P 22 58 55.0 0.0
comp=Z,59nm,1.6s,mb5.2
V23A **Ortiz Mt. (NFS** 37.32 328 ⇑P P 22 58 56.0 +0.6
baz=37
217A **Green Valley** 37.35 318 ⇓P P 22 58 55.8 +0.1
baz=37,SNR=14
118A **Homack Ranch,** 37.35 320 ⇓P P 22 58 55.8 +0.1
baz=37,SNR=12
T25A **Trinidad** 37.50 331 ⇓P P 22 58 57.2 +0.3
baz=37,SNR=7.9
W21A **San Fidel** 37.66 325 ⇑P P 22 58 59.0 +0.7
baz=38
X20A **Quemado** 37.74 324 ⇓P P 22 58 59.8 +0.8
baz=38
U23A **El Rito** 37.77 328 ⇑P P 22 58 59.8 +0.6
baz=38,SNR=12
Y19A **Nutrioso** 37.79 323 ⇑P P 22 59 00.1 +0.7
baz=38
117A **Oracle** 37.80 320 ⇑P P 22 58 59.9 +0.3
baz=38,SNR=12
V22A **San Miguel Ran** 37.84 327 ⇓P P 22 59 00.4 +0.6
baz=38
216A **Three Points,** 37.91 318 ⇑P P 22 59 01.0 +0.5
baz=38
S25A **Robets Cordova** 37.92 331 ⇑P P 22 59 01.0 +0.6
baz=38
Z17A **San Carlos Hig** 38.10 321 ⇓P P 22 59 02.8 +0.7
baz=38
X19A **St. Johns** 38.13 323 ⇑P P 22 59 02.8 +0.5
baz=38,SNR=5.5
JFWS **Jewell Farm** 38.14 351 eP P 22 58 59.3 -2.9
comp=Z,9.5nm,0.8s,mb4.6
JFWS **Jewell Farm** 38.14 351 eP P 22 58 59.3 -2.9
JFWS pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
Y18A **Canyon Day Jun** 38.15 322 ⇓P P 22 59 03.1 +0.7
baz=38
U22A **Llaves** 38.16 328 ⇑P P 22 59 03.2 +0.7
baz=38,SNR=16
W20A **Ramah** 38.16 325 ⇑P P 22 59 03.4 +0.9
baz=38
V21A **Milan** 38.16 326 ⇑P P 22 59 03.2 +0.7
baz=38
T23A **Casias Ranch,** 38.23 329 ⇓P P 22 59 03.4 +0.3
baz=38,SNR=6.4
S24A **Houchin Ranch,** 38.28 331 ⇓P P 22 59 04.1 +0.6
baz=38,SNR=6.5
116A **Eloy** 38.42 319 ⇑P P 22 59 04.4 -0.4
baz=38,SNR=5.6
SDCO **Great Sand Dun** 38.51 330 eP P 22 59 05.8 +0.5
comp=Z,32nm,1.3s,mb4.9
Y17A **Roosevelt** 38.60 321 ⇑P P 22 59 06.5 +0.2
baz=38
X18A **Snowflake** 38.60 323 ⇑P P 22 59 06.8 +0.6
baz=38
V20A **Brimhall** 38.62 325 ⇑P P 22 59 07.0 +0.7
baz=38
U21A **Nageezi** 38.63 327 ⇑P P 22 59 07.0 +0.6
baz=39
T22A **Edith** 38.66 328 ⇓P P 22 59 07.4 +0.7
baz=39
W19A **Sanders** 38.66 324 ⇓P P 22 59 07.3 +0.6
baz=39
R24A **Sanders Place,** 38.70 331 ⇓P P 22 59 07.6 +0.6
baz=39
Z16A **Peralta Trail,** 38.74 320 ⇑P P 22 59 07.7 +0.3
baz=39
214A **Organ Pipe Nat** 38.79 317 ⇓P P 22 59 07.9 0.0
baz=39,SNR=8.1
ACCN **Adirondack Com** 38.82 10 eP P 22 59 08.0 0.0
comp=Z,16nm,1.1s,mb4.7
Q25A **Bedland, Calha** 38.84 333 ⇓P P 22 59 08.7 +0.5
baz=39
115A **Sonoran Desert** 38.86 318 ⇓P P 22 59 08.6 +0.1
baz=39,SNR=6.8
W18A **Petrified Fore** 38.88 323 ⇓P P 22 59 08.8 +0.3
baz=39,SNR=5.6
T21A **Navajo Lake** 38.98 328 ⇑P P 22 59 09.7 +0.3
baz=39,SNR=6.5
X17A **Forest Lakes** 38.99 322 ⇑P P 22 59 10.3 +0.7
baz=39
U20A **Newcomb** 39.06 326 ⇓P P 22 59 10.3 +0.3
baz=39,SNR=10.0
CFAA **Coronel Fontan** 39.11 160 P P 22 59 09.7 -0.8
comp=Z,0.8nm,0.9s,baz=325,slow=9.0,SNR=7.5
Y16A **Circle Bar Ran** 39.12 320 ⇑P P 22 59 10.7 +0.2
baz=39,SNR=12
S22A **4UR Ranch, Cre** 39.18 329 ⇑P P 22 59 11.5 +0.5
baz=39,SNR=11
P25A **Willow Gulch B** 39.29 333 ⇓P P 22 59 12.5 +0.5
baz=39
Q24A **Divide** 39.30 332 ⇑P P 22 59 12.5 +0.5
baz=39
114A **Black Gap (USA** 39.32 318 ⇑P P 22 59 12.5 +0.2
baz=39,SNR=13
U19A **Dine' College,** 39.39 325 ⇑P P 22 59 13.0 +0.2
baz=39
X16A **Lo Mia Camp, P** 39.44 321 ⇓P P 22 59 13.5 +0.3
baz=39,SNR=10
SADO **Sadowa** 39.51 4 P P 22 59 11.4 -2.2
comp=Z,2.5nm,0.7s,mb4.0,baz=289,slow=6.4,SNR=3.3
Q23A **Hartsel** 39.58 331 ⇓P P 22 59 14.6 +0.3
baz=40
OGNE **Ogallala** 39.59 337 ⇑P P 22 59 14.1 -0.3
baz=40
S21A **Coal Bank Pass** 39.61 328 ⇓P P 22 59 14.8 +0.2
baz=40,SNR=6.9
MVCO **Mesa Verde** 39.66 327 ⇑P P 22 59 15.2 +0.1
baz=40,SNR=13
T19A **Beclabito** 39.67 326 ⇓P P 22 59 15.0 -0.1
baz=40,SNR=7.5
Y15A **Casa Rosa Ranc** 39.71 320 ⇓P P 22 59 15.6 +0.1
baz=40,SNR=12
Z14A **Wintersburg** 39.74 319 ⇓P P 22 59 15.9 +0.1
baz=40,SNR=5.9
O25A **Wiggins** 39.76 334 ⇑P P 22 59 16.4 +0.5
baz=40
CPUP **Villa Florida** 39.81 143 P P 22 59 14.2 -2.2
comp=Z,1.1nm,0.6s,mb3.7,baz=302,slow=14,SNR=3.7
CPUP LR LR 23 16 45.3
comp=Z,360nm,18.3s,MS4.2,baz=304,slow=38
V17A **Tonalea, Kykot** 39.85 323 ⇑P P 22 59 17.2 +0.6
baz=40,SNR=8.8
U18A **Rough Rock, Ch** 39.86 325 ⇑P P 22 59 16.9 +0.2
baz=40
113A **Mohawk Valley,** 39.93 317 ⇑P P 22 59 17.7 +0.4
baz=40
W16A **Flagstaff** 39.94 322 ⇓P P 22 59 17.7 +0.3
baz=40
P23A **Jefferson** 39.95 332 ⇓P P 22 59 17.7 +0.3
baz=40,SNR=6.8
X15A **Humboldt** 39.99 321 ⇓P P 22 59 17.9 +0.1
baz=40,SNR=12
R21A **Cimarron** 40.02 329 ⇓P P 22 59 18.6 +0.6
baz=40
Q22A **Crested Butte,** 40.07 330 ⇓P P 22 59 18.7 +0.3
baz=40,SNR=8.1
Z13A **Yuma Proving G** 40.11 318 ⇑P P 22 59 18.8 -0.1
baz=40,SNR=14
WUAZ **Wupatki** 40.13 322 ⇓P P 22 59 19.2 +0.3
baz=40,SNR=7.2
WUAZ **Wupatki** 40.13 322 eP P 22 59 20.0 +1.0
Y14A **Wickenburg** 40.13 319 ⇑P P 22 59 19.1 0.0
baz=40,SNR=6.6
ISCO **Idaho Springs** 40.18 332 ⇓P P 22 59 19.5 +0.2
baz=40,SNR=5.8
R20A **Redvale** 40.31 328 ⇓P P 22 59 21.0 +0.5
baz=40
T18A **Mexican Hat** 40.37 326 ⇑P P 22 59 20.6 -0.3
baz=40,SNR=6.6
Q21A **Lamborn Mesa,** 40.38 329 ⇓P P 22 59 20.8 -0.2
baz=40,SNR=7.1
X14A **Yava** 40.39 320 ⇓P P 22 59 21.7 +0.5
baz=40,SNR=15
S19A **Harvey Farm, M** 40.40 327 ⇑P P 22 59 21.3 +0.1
baz=40,SNR=6.6
U16A **Tuba City** 40.40 323 ⇓P P 22 59 21.9 +0.7
baz=40
W15A **Williams** 40.45 321 ⇑P P 22 59 22.2 +0.6
baz=40
P22A **Eagle** 40.57 331 ⇑P P 22 59 23.2 +0.7
baz=40
O23A **Lake Granby, G** 40.65 332 ⇑P P 22 59 23.8 +0.6
baz=41
N24A **Carr** 40.68 334 ⇑P P 22 59 24.2 +0.7
baz=41
T17A **Navajo Res., N** 40.80 325 ⇓P P 22 59 24.8 +0.3
baz=41
GLA **Glamis** 40.81 317 ⇓P P 22 59 24.8 +0.1
baz=41,SNR=8.1
V15A **Kaibab Nationa** 40.81 322 ⇓P P 22 59 25.2 +0.6
baz=41,SNR=13
S18A **Hurst Farm, Bl** 40.83 326 ⇑P P 22 59 24.5 -0.2
baz=41
Q20A **Ridgley Place,** 40.84 329 ⇓P P 22 59 25.3 +0.5
baz=41
R19A **Curley Farm, L** 40.86 327 ⇓P P 22 59 24.7 -0.3
baz=41,SNR=6.4
O22A **Kremmling** 40.91 332 ⇑P P 22 59 25.8 +0.4
baz=41
W14A **Seligman** 40.99 321 ⇑P P 22 59 26.3 +0.3
baz=41,SNR=8.1
Y12C **Blythe** 41.02 318 ⇓P P 22 59 26.7 +0.3
baz=41
X13A **Yucca** 41.08 319 ⇓P P 22 59 26.7 -0.1
baz=41,SNR=8.8
PDMCI **Parker Dam,Lak** 41.10 319 ⇑P P 22 59 27.5 +0.5
baz=41
M24A **Cheyenne** 41.18 334 ⇓P P 22 59 28.7 +1.1
baz=41
N23A **Red Feather La** 41.21 333 ⇑P P 22 59 28.2 +0.3
baz=41
S17A **Black Ridge (B** 41.24 325 ⇑P P 22 59 28.5 +0.3
baz=41
V14A **Boquillas Ranc** 41.27 321 ⇓P P 22 59 29.0 +0.6
baz=41,SNR=18
R18A **Canyonlands Na** 41.27 327 ⇓P P 22 59 27.7 -0.6
baz=41,SNR=6.8
U15A **North Rim** 41.29 323 ⇓P P 22 59 29.1 +0.6
baz=41,SNR=9.4
P20A **De Beque** 41.30 329 ⇓P P 22 59 29.1 +0.5
baz=41
N22A **Wattenberg Ran** 41.37 332 ⇑P P 22 59 29.9 +0.8
baz=41
SWSC **Sam W. Stewart** 41.42 316 ⇑P P 22 59 30.0 +0.4
baz=41
W13A **Hualapai Mount** 41.42 320 ⇓P P 22 59 30.2 +0.5
baz=41,SNR=11
DVTC **Desert V Tower** 41.47 315 ⇑P P 22 59 30.3 +0.2
baz=41
BC3 **Big Chuckawall** 41.59 317 ⇓P P 22 59 30.8 -0.2
baz=42,SNR=8.9
IRM **Iron Mountain** 41.68 318 ⇑P P 22 59 31.9 +0.1
baz=42,SNR=9.7
L24A **Wheatland** 41.70 335 ⇑P P 22 59 32.1 +0.3
baz=42
O20A **White River Ci** 41.71 330 ⇓P P 22 59 32.5 +0.6
baz=42
T15A **Red Dirt Ranch** 41.74 323 ⇑P P 22 59 32.8 +0.6
baz=42,SNR=6.0
R17A **Hanksville Air** 41.74 326 ⇑P P 22 59 32.6 +0.3
baz=42
S16A **Weppner Ranch,** 41.76 325 ⇓P P 22 59 32.2 -0.1
baz=42,SNR=8.7
MONP **Monument Peak** 41.82 315 ⇓P P 22 59 33.0 0.0
baz=42
U14A **Mt Trumbull** 41.82 322 ⇑P P 22 59 33.3 +0.4
baz=42
N21A **Black Mountain** 41.84 331 ⇓P P 22 59 33.8 +0.8
baz=42
M22A **Cedar Creek Ra** 41.91 333 ⇑P P 22 59 33.6 0.0
baz=42
Q18A **Rafter H Ranch** 41.92 327 ⇑P P 22 59 33.5 -0.1
baz=42,SNR=10
R16A **Teasdale** 42.08 325 ⇑P P 22 59 35.0 +0.1
baz=42
L23A **Garrett** 42.09 334 ⇑P P 22 59 35.0 0.0
baz=42
SRU **San Rafael** 42.13 327 ⇓P P 22 59 35.3 -0.1
baz=42,SNR=9.4
BELC **Belle Mtn. Jos** 42.16 317 ⇓P P 22 59 35.9 +0.1
baz=42,SNR=15
LDFC **Landfair** 42.20 319 eP P 22 59 36.6 +0.6
PFO **Pinyon Flat Ob** 42.25 316 ⇓P P 22 59 36.5 0.0
baz=42,SNR=7.3
PFO **Pinyon Flat Ob** 42.25 316 eP P 22 59 37.0 +0.6
N20A **Spence Gulch,** 42.25 331 ⇑P P 22 59 37.0 +0.6
baz=42
O19A **Miners Draw (B** 42.27 330 ⇓P P 22 59 36.5 -0.1
baz=42
U13A **Pakoon Wash** 42.30 321 ⇑P P 22 59 37.5 +0.7
baz=42,SNR=9.3
Q16A **Castle Valley** 42.35 326 ⇑P P 22 59 37.6 +0.4
baz=42
P18A **Preston Nutter** 42.36 328 ⇑P P 22 59 37.5 +0.2
baz=42
GMRC **Granite Mounta** 42.39 318 ⇓P P 22 59 37.5 -0.1
baz=42,SNR=7.6
M21A **Separation Pea** 42.43 332 ⇑P P 22 59 37.7 -0.1
baz=42,SNR=6.9
V12A **Nelson** 42.43 320 ⇓P P 22 59 37.9 0.0
baz=42,SNR=11
P17A **Butcher Ranch,** 42.51 327 ⇓P P 22 59 38.5 0.0
baz=42
T13A **Saint George** 42.66 322 ⇓P P 22 59 40.1 +0.3
baz=43,SNR=6.4
U12A **Valley of Fire** 42.67 321 ⇑P P 22 59 40.3 +0.5
baz=43
S14A **Cedar City** 42.70 324 ⇑P P 22 59 40.5 +0.5
baz=43
O18A **Roosevelt** 42.70 329 ⇑P P 22 59 40.6 +0.6
baz=43
M20A **Sweetwater, Wa** 42.72 331 ⇓P P 22 59 39.6 -0.5
baz=43,SNR=5.7
MURC **Murrieta** 42.76 316 ⇓P P 22 59 40.8 +0.2
baz=43
HEC **Hector,Ludlow** 42.86 318 ⇑P P 22 59 41.6 +0.2
baz=43
V11A **Goodsprings** 42.87 320 ⇓P P 22 59 41.3 -0.2
baz=43,SNR=6.4
K22A **Casper** 42.88 334 ⇑P P 22 59 41.6 +0.2
baz=43
TUQ **Turquoise Moun** 42.95 319 ⇑P P 22 59 42.5 +0.3
baz=43
T12A **Moapa** 42.97 321 ⇑P P 22 59 42.5 +0.3
baz=43
S13A **Holt Ranch, En** 42.99 323 ⇑P P 22 59 43.0 +0.6
baz=43,SNR=18
O17A **Robinson Place** 43.03 328 ⇓P P 22 59 43.0 +0.3
baz=43
N18A **Larsen Ranch,** 43.06 330 ⇑P P 22 59 43.1 +0.2
baz=43
L20A **Wamsutter** 43.20 332 ⇓P P 22 59 44.1 +0.2
baz=43
P15A **Leamington** 43.42 326 ⇑P P 22 59 46.2 +0.4
baz=43
BFSC **Mount Baldy Ra** 43.43 316 ⇓P P 22 59 46.2 +0.2
baz=43
O16A **Springville** 43.45 327 ⇓P P 22 59 46.4 +0.4
baz=43
R13A **O'Grain Ranch,** 43.45 323 ⇓P P 22 59 46.6 +0.5
baz=43,SNR=11
Q14A **Sevier Lake (B** 43.58 325 ⇑P P 22 59 47.6 +0.4
baz=44,SNR=17
M18A **Lyman** 43.59 330 ⇓P P 22 59 47.2 0.0
baz=44
T11A **Corn Creek, Al** 43.61 321 ⇑P P 22 59 47.7 +0.3
baz=44,SNR=5.5
K20A **Yellowstone Ra** 43.70 332 ⇑P P 22 59 48.1 +0.1
baz=44
L19A **Farson** 43.75 331 ⇑P P 22 59 48.5 +0.1
baz=44
U10A **Ash Meadows, A** 43.80 320 ⇑P P 22 59 49.6 +0.6
baz=44
P14A **Drum Mountains** 43.88 326 ⇓P P 22 59 49.9 +0.4
baz=44,SNR=11
N16A **Rees Ranch, Co** 43.90 328 ⇑P P 22 59 50.6 +1.0
baz=44
R12A **Pony Springs,** 43.93 323 ⇑P P 22 59 50.1 +0.2
baz=44,SNR=6.4
M17A **Scullys Gap (B** 43.93 329 ⇑P P 22 59 49.3 -0.6
baz=44,SNR=13
Q13A **Wheeler Ranch,** 43.99 324 ⇓P P 22 59 50.5 +0.1
baz=44,SNR=11
EDW2 **Edwards Air Fo** 44.01 317 ⇓P P 22 59 50.5 -0.2
baz=44,SNR=6.8
O15A **The Old Anders** 44.02 327 ⇓P P 22 59 51.0 +0.4
baz=44
K19A **Absolon Red Bu** 44.06 332 ⇑P P 22 59 50.2 -0.8
baz=44,SNR=15
I21A **Big Trails, Te** 44.15 334 ⇓P P 22 59 51.0 -0.6
baz=44,SNR=6.0
LRMC **Laurel Mountai** 44.15 318 ⇓P P 22 59 52.0 +0.2
baz=44
DUG **Dugway** 44.15 326 ⇓P P 22 59 52.0 +0.3
baz=44
FURC **Furnace Creek,** 44.18 319 ⇑P P 22 59 52.0 +0.1
baz=44,SNR=9.0
S11A **Rachel** 44.19 322 ⇓P P 22 59 52.8 +0.8
baz=44
P13A **Bates Ranch, G** 44.32 325 ⇑P P 22 59 53.4 +0.3
baz=44,SNR=7.3
BLG **Laguna Peak** 44.34 315 ⇑P P 22 59 53.5 +0.2
baz=44
MPMC **Manual Prospec** 44.35 318 ⇑P P 22 59 53.0 -0.3
baz=44,SNR=11
BW06 **Boulder Array** 44.35 332 ⇓P P 22 59 53.3 0.0
baz=44
BW06 **Boulder Array** 44.35 332 eP P 22 59 53.0 -0.3
K18A **Toltan Ranch,** 44.49 331 ⇑P P 22 59 54.3 -0.1
baz=44,SNR=5.5
L17A **Cokeville** 44.49 330 ⇑P P 22 59 54.2 -0.2
baz=44
Q12A **Willow Creek R** 44.52 324 ⇑P P 22 59 55.2 +0.5
baz=44
R11A **Troy Canyon, C** 44.53 322 ⇓P P 22 59 54.8 0.0
baz=44,SNR=14
I20A **Worland** 44.62 334 ⇓P P 22 59 55.1 -0.3
baz=44,SNR=7.5
H21A **Big Horn, Sher** 44.70 335 ⇑P P 22 59 55.2 -0.8
baz=45
BGU **Big Grassy Mou** 44.78 327 eP P 22 59 56.7 0.0
comp=Z,12nm,1.1s,mb4.7
BGU ePcP PcP 23 01 37.7 -1.0
ISA **Isabella** 44.78 317 ⇓P P 22 59 56.7 -0.1
baz=45,SNR=5.1
GRAC **Grapevine Rang** 44.82 320 ⇓P P 22 59 57.4 +0.3
baz=45
M15A **Larsen Ranch,** 44.84 328 ⇓P P 22 59 56.8 -0.4
baz=45,SNR=13
S10A **Tonopah Range,** 44.88 321 ⇓P P 22 59 57.8 +0.2
baz=45,SNR=6.8
Q11A **Duckwater** 44.89 323 ⇑P P 22 59 57.5 -0.1
baz=45,SNR=10
J18A **Kendall Valley** 44.91 332 ⇓P P 22 59 57.1 -0.6
baz=45,SNR=11
R10A **Warm Springs** 44.93 322 ⇓P P 22 59 58.2 +0.2
baz=45,SNR=6.4
H20A **Greybull** 44.99 334 ⇓P P 22 59 57.4 -1.0
baz=45,SNR=7.2
K17A **Gardner Place,** 45.00 330 ⇓P P 22 59 58.1 -0.3
baz=45
L15A **Malad City** 45.20 329 ⇑P P 22 59 59.2 -0.9
baz=45,SNR=9.5
G21A **Lodge Grass** 45.25 336 ⇑P P 22 59 59.1 -1.3
baz=45,SNR=6.7
O12A **Currie** 45.28 325 ⇑P P 23 00 01.2 +0.5
baz=45
PKM **Peak Mountain** 45.28 316 ⇑P P 23 00 00.6 -0.2
baz=45,SNR=6.9
VES **Vestal, Richgr** 45.29 317 ⇑P P 23 00 00.4 -0.5
baz=45,SNR=5.9
Q10A **Clear Creek Ra** 45.32 322 ⇓P P 23 00 01.5 +0.4
baz=45,SNR=7.5
J17A **Brown Place, J** 45.36 331 ⇑P P 23 00 01.3 0.0
baz=45
SNOW **Snow King Moun** 45.45 331 eP P 23 00 00.8 -1.3
SNOW ePcP PcP 23 01 41.4 +0.5
SMMC **Simmler** 45.63 316 ⇑P P 23 00 04.2 +0.6
baz=46
RRI2 **Red Ridge** 45.64 331 eP P 23 00 03.2 -0.3
comp=Z,10nm,0.9s,mb4.8
RRI2 ePcP PcP 23 01 42.7 +1.1
RCTC **Rector, Farmer** 45.65 318 ⇓P P 23 00 03.4 -0.4
baz=46
L14A **Malta** 45.67 328 ⇑P P 23 00 02.6 -1.1
baz=46,SNR=5.4
F21A **Absaloka Mine,** 45.70 336 ⇑P P 23 00 03.5 -0.5
baz=46
J16A **Bone** 45.73 330 ⇓P P 23 00 03.6 -0.6
baz=46,SNR=7.1
K15A **Arbon** 45.76 329 ⇑P P 23 00 04.8 +0.3
baz=46
K14A **Jones Ranch, D** 45.99 329 ⇓P P 23 00 06.3 -0.1
baz=46
F20A **Billings** 46.11 335 ⇓P P 23 00 06.1 -1.0
baz=46,SNR=6.1
ULM **Lac du Bonnet** 46.24 348 P P 23 00 05.6 -2.5
comp=Z,4.4nm,0.6s,mb4.5,baz=133,slow=9.7,SNR=3.5
NVAR **Mina Array Bea** 46.26 321 P P 23 00 08.2 -0.4
comp=Z,9.8nm,0.8s,mb4.8,baz=132,slow=7.1,SNR=43
E21A **Keefer Ranch,** 46.27 337 ⇓P P 23 00 08.2 -0.2
baz=46
G18A **Lazy EL Ranch,** 46.33 334 ⇓P P 23 00 08.1 -0.8
baz=46,SNR=5.3
F19A **Roth Farm, Mol** 46.48 335 ⇑P P 23 00 09.2 -1.0
baz=46,SNR=8.2
E20A **Meyer Farm, Mu** 46.66 336 ⇓P P 23 00 11.1 -0.4
baz=47,SNR=9.5
J14A **Carey** 46.72 329 ⇑P P 23 00 12.4 +0.3
baz=47
BMN **Battle Mountai** 46.83 324 eP P 23 00 12.5 -0.4
comp=Z,28nm,1.5s,mb5.0
BMN ePcP PcP 23 01 45.5 -0.3
BMN **Battle Mountai** 46.83 324 eP P 23 00 12.5 -0.4
BMN e 23 01 45.5
BMN pmax pmax
comp=Z,28nm,1.5s,mb5.0
DGMT **Dagmar** 46.85 340 ⇑P P 23 00 13.0 0.0
baz=47
F18A **Big Timber** 46.85 334 ⇓P P 23 00 12.3 -0.8
baz=47,SNR=15

G17A Pierce Place, 46.86 333 ⇓P P **23 00 13.9 +0.9**
baz=47
E19A Rath Farm, Rou 46.90 335 ⇑P P **23 00 12.8 -0.6**
baz=47,SNR=11
PLCA Paso Flores 47.05 167 P P **23 00 15.3 +0.7**
comp=Z,8.6nm,0.9s,mb4.7,baz=346,slow=8.5,SNR=9.7
J13A Cove Ranch, Pi 47.11 329 ⇓P P **23 00 15.3 +0.1**
baz=47
I14A Mackay 47.12 330 ⇑P P **23 00 15.4 +0.3**
baz=47
H15A Lima 47.22 331 ⇓P P **23 00 16.1 +0.2**
baz=47,SNR=12
F17A Fitzpatrick Pl 47.27 333 ⇓P P **23 00 16.0 -0.3**
baz=47
G16A Moss Hill, Enn 47.28 332 ⇓P P **23 00 16.2 -0.2**
baz=47,SNR=8.0
HLID Hailey 47.35 329 ⇑P P **23 00 16.7 -0.2**
baz=47
I13A Wildhorse Cree 47.45 329 ⇓P P **23 00 17.3 -0.4**
baz=47,SNR=9.9
E18A Harlowton 47.46 335 ⇑P P **23 00 17.8 +0.1**
baz=47
MCMT McKenzie Canyo 47.48 331 *e*P P **23 00 17.6 -0.3**
comp=Z,2.4nm,1.1s,mb4.0
MCMT *e*PcP PcP 23 01 46.7 -1.3
BOZ Bozeman (W) 47.51 333 ⇑P P **23 00 17.7 -0.5**
baz=47,SNR=5.6
BOZ Bozeman (W) 47.51 333 *e*P P **23 00 17.6 -0.6**
comp=Z,19nm,1.4s,mb4.9
BOZ Bozeman (W) 47.51 333 *e*P P **23 00 17.6 -0.6**
BOZ pmax pmax
comp=Z,19nm,1.4s,mb4.9
G15A Dillon 47.55 331 ⇓P P **23 00 19.1 +0.6**
baz=48
H14A Leadore 47.58 330 ⇓P P **23 00 18.9 +0.3**
baz=48
F16A Kennard Place, 47.61 333 ⇑P P **23 00 19.4 +0.4**
baz=48
WCN Washoe City 47.69 321 ⇑P P **23 00 20.0 +0.3**
baz=48
E17A Martinsdale 47.79 334 ⇓P P **23 00 20.3 0.0**
baz=48
I12A Atlanta 47.89 328 ⇑P P **23 00 21.0 -0.1**
baz=48
D18A Linhart Farms, 47.91 335 ⇑P P **23 00 21.4 +0.2**
baz=48
H13A Challis 47.98 330 ⇑P P **23 00 21.8 0.0**
baz=48
MFID Camas Ranch 48.00 328 ⇑P P **23 00 21.6 -0.3**
baz=48
F15A Butte 48.06 332 ⇓P P **23 00 22.0 -0.4**
baz=48
D17A Six Diamond Ra 48.25 335 ⇓P P **23 00 23.2 -0.7**
baz=48
H12A Diamond D Ranc 48.27 329 ⇑P P **23 00 23.9 -0.2**
baz=48
G13A Cobalt 48.35 330 ⇑P P **23 00 24.5 -0.1**
baz=48
D16A Dana Ranch, Ca 48.53 334 ⇑P P **23 00 25.4 -0.6**
baz=48,SNR=6.3
EGMT Eagleton 48.55 336 ⇓P P **23 00 26.0 -0.1**
baz=48
E15A Deer Lodge 48.56 333 ⇑P P **23 00 26.0 -0.3**
baz=48
C17A Wharram Farm, 48.66 335 ⇓P P **23 00 26.4 -0.6**
baz=49,SNR=6.1
B18A Beardsley Farm 48.85 336 ⇑P P **23 00 28.6 +0.2**
baz=49
F13A Darby 48.89 331 ⇑P P **23 00 28.4 -0.5**
baz=49
WVOR Wild Horse Val 48.91 325 *e*P P **23 00 28.3 -0.7**
E14A Clinton 48.95 332 ⇑P P **23 00 28.8 -0.4**
baz=49
C16A Fuhringer Ranc 49.21 334 ⇑P P **23 00 30.9 -0.3**
baz=49
E13A Victor 49.30 331 ⇓P P **23 00 31.3 -0.6**
baz=49
F12A Elk City 49.32 330 ⇑P P **23 00 31.0 -1.1**
baz=49,SNR=8.4
J08A Circle Bar Ran 49.41 326 ⇓P P **23 00 32.2 -0.6**
baz=49
MSO Missoula 49.46 332 ⇑P P **23 00 32.0 -1.2**
baz=49,SNR=8.3
C15A Salmond Ranch, 49.56 334 ⇑P P **23 00 33.4 -0.5**
baz=50
MOD Modoc 49.56 323 P P **23 00 32.9 -1.2**
A17A Triple J Farms 49.66 336 ⇑P P **23 00 34.6 0.0**
baz=50
D13A Huson 49.90 332 ⇓P P **23 00 35.5 -1.0**
baz=50
B15A Bradely Ranch, 49.95 334 ⇑P P **23 00 36.6 -0.2**
baz=50
B14A Marquette Ranc 50.30 334 ⇑P P **23 00 39.5 0.0**
baz=50
I07A Izee 50.45 326 ⇓P P **23 00 40.4 -0.2**
baz=50
F10A Beach Ranch, E 50.47 329 ⇓P P **23 00 40.5 -0.3**
baz=50
A15A Johnson Ranch, 50.53 335 ⇓P P **23 00 40.3 -0.9**
baz=50,SNR=6.6
A14A Double T Ranch 50.82 334 ⇓P P **23 00 43.3 -0.1**
baz=51
B13A Whitefish 50.84 333 ⇑P P **23 00 43.5 -0.1**
baz=51
G08A Pilot Rock 50.92 327 ⇑P P **23 00 44.3 +0.1**
baz=51
YBH Yreka Blue Hor 50.93 322 P P **23 00 42.9 -1.5**
comp=Z,2.1nm,0.8s,mb4.1,baz=58,slow=3.2,SNR=5.0
SCHQ Schefferville 51.08 12 P P **23 00 44.5 -0.8**
SCHQ LR LR 23 24 35.1
SCHQ Schefferville 51.08 12 P P **23 00 44.5 -0.8**
comp=Z,19nm,1.2s,mb4.9,baz=199,slow=4.1,SNR=5.6
SCHQ LR LR 23 24 35.1
comp=Z,154nm,18.3s,MS4.1,baz=151,slow=39
E09A Wood Farm, Sta 51.30 329 ⇑P P **23 00 46.9 -0.2**
baz=51
G06A Carlson Farm, 51.80 326 ⇑P P **23 00 50.9 +0.1**
baz=52
NEW Newport 52.00 331 ⇓P P **23 00 51.9 -0.4**
baz=52
H04A Detroit Lake 52.33 325 ⇓P P **23 00 54.5 -0.3**
baz=52
G04A Mulino 52.81 325 ⇑P P **23 00 58.3 -0.1**
baz=53
B08A Colville Reser 53.14 330 ⇑P P **23 01 00.7 0.0**
baz=53
D05A Enumclaw 53.75 328 ⇓P P **23 01 05.0 -0.2**
baz=54
EDM Edmonton 54.05 338 *e*P P **23 01 05.7 -1.6**
RKT Rikitea 58.35 239 *e*S S **23 09 39.1 -1.3**
comp=Z,294nm,32.5s
RKT *e*LR LR 23 18 50.8
comp=Z,498nm,27.2s
TAOE Nuku Hiva Isla 59.03 256 *e*LR LR 23 19 08.5
comp=Z,317nm,27.0s
YKA Yellowknife Ar 61.81 344 P P **23 01 60.0 -1.6**
comp=Z,4.8nm,0.9s,mb4.6,baz=138,slow=6.5,SNR=19
DLBC Dease Lake 64.44 335 *e*P P **23 02 18.6 -0.5**
PPT Papeete 69.83 249 *e*S S **23 12 01.6 -1.4**
comp=Z,52nm,24.2s
PPT *e*LR LR 23 24 08.9
comp=Z,216nm,24.8s
PPT Papeete 69.83 249 LR LR 23 26 50.6
comp=Z,226nm,18.1s,MS4.5,baz=46,slow=30
DAWY Dawson 71.26 337 *e*P P **23 03 00.7 -1.2**
BMRM Bremner River 72.11 333 *e*P P **23 03 06.6 -0.5**
comp=Z,17nm,0.9s,mb5.0
EGAK Eagle 72.27 337 *e*P P **23 03 06.9 -1.2**
comp=Z,7.7nm,0.9s,mb4.6
PFVI Vila Bisbo 73.95 53 *e*LR LR 23 26 23.5
comp=Z,108nm,20.0s
ILAR Eielson Array 74.51 336 P P **23 03 19.5 -1.7**
comp=Z,4.0nm,0.8s,mb4.4,baz=118,slow=4.1,SNR=36
ILAR LR LR 23 37 33.5
comp=Z,146nm,19.2s,MS4.3,baz=303,slow=37
PTOM Tomar 74.53 50 *e*P P **23 03 23.9 +2.0**
comp=Z,30nm,1.5s,mb5.0
PBDV Barranco-do-Ve 74.67 53 *e*LR LR 23 28 05.0
comp=Z,130nm,22.0s
EVO Evora 74.73 52 *e*P P **23 03 21.8 -1.3**
comp=Z,30nm,1.0s,mb4.9
EVO *e*MLR MLR
comp=Z,104nm,20.8s,MS3.8
EVO Evora 74.73 52 *e*P P **23 03 22.8 -0.3**
comp=Z,20nm,1.4s,mb4.9
PVAQ Vaqueiros 74.86 53 *e*LR LR 23 27 10.0
comp=Z,114nm,22.0s
PVIS Viseu 75.04 49 *e*P P **23 03 26.8 +2.0**
comp=Z,20nm,1.3s,mb4.9
PESTR Estremoz 75.09 51 *e*P P **23 03 24.9 -0.3**
comp=Z,52nm,1.3s,mb5.3
PESTR *e*LR LR 23 26 52.4
comp=Z,67nm,22.0s
PVRL Vila Real 75.23 49 *e*P P **23 03 27.7 +1.8**
comp=Z,19nm,1.7s,mb4.7
PCBR Castelo Branco 75.27 50 *e*P P **23 03 25.9 -0.3**
comp=Z,17nm,1.1s,mb4.9
MTE Manteigas 75.27 50 *e*S S 23 13 03.2 -1.3
MTE *e*LR LR 23 26 49.2
comp=Z,152nm,22.0s
PMRV Marv??o 75.30 51 *e*P P **23 03 27.2 +0.9**
comp=Z,21nm,1.3s,mb4.9
PMRV *e*LR LR 23 26 50.1
comp=Z,85nm,20.0s
PBAR Barrancos 75.46 52 *e*P P **23 03 26.7 -0.6**
comp=Z,26nm,1.3s,mb5.0
PBAR *e*LR LR 23 27 05.3
comp=Z,84nm,18.0s
TRF Thorofare Moun 75.47 335 *e*P P **23 03 25.5 -1.3**
comp=Z,6.9nm,0.8s,mb4.6
TRF *e*PP PP 23 06 15.9 0.0
MVO Moncorvo 75.74 49 *e*P P **23 03 30.1 +1.3**
comp=Z,21nm,1.4s,mb4.9
MVO *e*LR LR 23 29 03.4
comp=Z,100nm,20.0s
BPAW Bear Paw Mtn. 75.96 335 *e*P P **23 03 28.0 -1.6**
comp=Z,9.1nm,0.8s,mb4.8
BPAW *e*PcP PcP 23 03 43.0 +1.0
PPLA Purkeypile 76.13 334 *e*P P **23 03 28.9 -1.7**
comp=Z,18nm,1.2s,mb4.9
COLD Coldfoot 76.63 338 *e*P P **23 03 32.1 -1.3**
comp=Z,14nm,1.2s,mb4.8
COLD *e*PcP PcP 23 03 41.7 -3.1
TIC Toumodi 77.13 84 *e*P P **23 03 35.3 -2.0**
comp=Z,5.6nm,0.2s,mb5.2
TIC Toumodi 77.13 84 *e*P P **23 03 35.3 -2.0**
TIC pmax pmax
comp=Z,6.0nm,0.2s,mb5.2
LIC Lamto 77.15 85 *e*P P **23 03 36.2 -1.2**
comp=Z,30nm,0.9s,mb5.2
LIC Lamto 77.15 85 *e*P P **23 03 36.5 -0.9**
comp=Z,21nm,0.9s,mb4.8
LIC Lamto 77.15 85 *e*P P **23 03 36.5 -0.9**
comp=Z,10nm,0.9s,mb4.8
DBIC Dimbokro 77.29 84 P P **23 03 36.1 -2.1**
comp=Z,4.4nm,0.9s,mb4.4,baz=297,slow=7.9,SNR=4.3
KIC Kosan Boka 77.42 85 *e*P P **23 03 37.4 -1.5**
comp=Z,31nm,1.1s,mb5.1
PAB San Pablo 77.65 51 *e*P P **23 03 38.9 -0.8**
comp=Z,6.1nm,1.0s,mb4.5
PAB *e*PP PP 23 06 34.2 -0.7
PAB San Pablo 77.65 51 *e*P P **23 03 38.9 -0.8**
PAB *e* 23 06 34.2
PAB pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
TTA Tatalina 77.84 333 *e*P P **23 03 37.6 -2.6**
comp=Z,9.8nm,1.1s,mb4.7
TTA Tatalina 77.84 333 *e*P P **23 03 37.6 -2.6**
TTA pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
ESDC Sonseca Array 77.96 51 P P **23 03 41.3 -0.1**
comp=Z,5.9nm,0.9s,mb4.5,baz=276,slow=5.4,SNR=28
ESDC LR LR 23 31 20.0
comp=Z,77nm,21.7s,MS4.0,baz=270,slow=30
ESLA Sonseca Array 77.96 51 *e*P P **23 03 40.9 -0.5**
comp=Z,2.2nm,1.0s,mb4.0
ROSF Rostrenen 79.04 42 *e*P P **23 03 48.0 +0.9**
SGMF Saint Gilles 79.51 42 *e*P P **23 03 51.2 +1.5**
SJPF Ste Jean 80.17 47 *e*P P **23 03 54.6 +1.1**
comp=Z,28nm,1.2s,mb4.8
SJPF Ste Jean 80.17 47 *e*P P **23 03 54.6 +1.1**
comp=Z,14nm,1.2s,mb4.8
SJPF Ste Jean 80.17 47 *e*P P **23 03 54.6 +1.1**
SJPF pmax pmax
comp=Z,14nm,1.2s,mb4.8
GRR Gorron 80.65 42 *e*P P **23 03 56.4 +0.5**
ETSF Etsaut 80.66 48 *e*P P **23 03 57.2 +1.2**
comp=Z,8.6nm,1.0s,mb4.3
ETSF Etsaut 80.66 48 *e*P P **23 03 57.2 +1.2**
comp=Z,4.3nm,1.0s,mb4.3
ETSF Etsaut 80.66 48 *e*P P **23 03 57.2 +1.2**
ETSF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
FLN La Foliniere 80.92 42 *e*P P **23 03 58.0 +0.7**
FLN *e*MLR MLR
comp=Z,158nm,22.5s,MS4.0
FLN La Foliniere 80.92 42 *e*P P **23 03 58.0 +0.7**
FLN MLR MLR
comp=Z,160nm,22.5s,MS4.3
MFF Saint Martin d 81.06 44 *e*P P **23 03 58.6 +0.5**
LDF La Druitiere 81.15 42 *e*P P **23 03 58.9 +0.4**
comp=Z,7.0nm,0.9s,mb4.3
LDF La Druitiere 81.15 42 *e*P P **23 03 58.9 +0.4**
comp=Z,3.5nm,0.9s,mb4.3
LDF La Druitiere 81.15 42 *e*P P **23 03 58.9 +0.4**
LDF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
EPF Esparros 81.32 47 *e*P P **23 04 00.5 +0.9**
comp=Z,9.9nm,1.1s,mb4.4
EPF Esparros 81.32 47 *e*P P **23 04 00.5 +0.9**
comp=Z,4.9nm,1.1s,mb4.3
EPF Esparros 81.32 47 *e*P P **23 04 00.5 +0.9**
EPF pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
RJF Les Rejaudoux 82.19 45 *e*P P **23 04 04.6 +0.5**
comp=Z,40nm,1.6s,mb4.8
RJF *e*MLR MLR
comp=Z,128nm,20.8s,MS4.0
RJF Les Rejaudoux 82.19 45 *e*P P **23 04 04.6 +0.5**
comp=Z,20nm,1.6s,mb4.8
RJF LR LR
comp=Z,130nm,20.8s,MS4.3
RJF Les Rejaudoux 82.19 45 *e*P P **23 04 04.6 +0.5**
RJF pmax pmax
comp=Z,20nm,1.6s,mb4.8
RJF MLR MLR
comp=Z,130nm,20.8s,MS4.3
CAF Calviac 82.58 46 *e*P P **23 04 06.8 +0.6**
comp=Z,20nm,1.4s,mb4.7
CAF Calviac 82.58 46 *e*P P **23 04 06.8 +0.6**
comp=Z,10nm,1.4s,mb4.7
CAF Calviac 82.58 46 *e*P P **23 04 06.8 +0.6**
CAF pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
TCF Toulx Ste Croi 82.69 44 *e*P P **23 04 07.0 +0.3**
MTLF Montolieu 82.69 47 *e*P P **23 04 07.4 +0.6**
comp=Z,13nm,1.0s,mb4.6
MTLF Montolieu 82.69 47 *e*P P **23 04 07.4 +0.6**
comp=Z,6.6nm,1.0s,mb4.6
MTLF Montolieu 82.69 47 *e*P P **23 04 07.4 +0.6**
MTLF pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
BGF Bois d'Agland 83.12 44 *e*P P **23 04 09.1 +0.1**
TOA0 Torodi Ar. Sit 83.31 77 *e*P P **23 04 09.0 -1.5**
TOA0 *e*PP PP 23 07 20.0 -2.4
TORD Torodi Ar. Bea 83.31 77 P P **23 04 09.4 -1.2**
comp=Z,2.5nm,0.8s,mb4.3,baz=292,slow=6.6,SNR=25
TORD LR LR 23 37 19.9
comp=Z,134nm,19.8s,MS4.3,baz=260,slow=33
AVF Avril sur Loir 83.47 44 *e*P P **23 04 10.7 0.0**
SSF Saint Saulge 83.57 43 *e*P P **23 04 11.2 -0.1**
SMF Signal de Mont 83.81 44 *e*P P **23 04 12.4 -0.1**
comp=Z,6.8nm,0.9s,mb4.5
SMF Signal de Mont 83.81 44 *e*P P **23 04 12.4 -0.1**
comp=Z,3.4nm,0.9s,mb4.5
SMF Signal de Mont 83.81 44 *e*P P **23 04 12.4 -0.1**
SMF pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
LOR Lormes 83.81 43 *e*P P **23 04 13.1 +0.6**
LOR *e*MLR MLR
comp=Z,85nm,21.0s,MS3.8
LOR Lormes 83.81 43 *e*P P **23 04 13.1 +0.6**
LOR MLR MLR
comp=Z,80nm,21.0s,MS4.1
BAIF Baives 84.00 40 *e*P P **23 04 13.6 +0.3**
GIVF Givet 84.39 40 *e*P P **23 04 15.8 +0.4**
VIVF Saint-Julien-l 84.44 46 *e*P P **23 04 16.9 +1.2**
comp=Z,18nm,1.2s,mb4.8
VIVF Saint-Julien-l 84.44 46 *e*P P **23 04 16.9 +1.2**
comp=Z,8.9nm,1.2s,mb4.8
VIVF Saint-Julien-l 84.44 46 *e*P P **23 04 16.9 +1.2**
VIVF pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
WLF Walferdange 85.27 41 P P **23 04 21.0 +1.2**
comp=Z,7.3nm,1.6s,mb4.6
ORIF Oris-en-Rattie 85.29 45 *e*P P **23 04 20.3 +0.3**
comp=Z,20nm,1.2s,mb4.8
ORIF *e*MLR MLR
comp=Z,90nm,21.0s,MS3.8
ORIF Oris-en-Rattie 85.29 45 *e*P P **23 04 20.3 +0.3**
comp=Z,9.9nm,1.2s,mb4.8
ORIF Oris-en-Rattie 85.29 45 *e*P P **23 04 20.3 +0.3**
ORIF pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
CABF La Chapelle 85.36 44 *e*P P **23 04 20.9 +0.6**
comp=Z,22nm,1.2s,mb4.9
CABF La Chapelle 85.36 44 *e*P P **23 04 20.9 +0.6**
comp=Z,11nm,1.2s,mb4.9
CABF La Chapelle 85.36 44 *e*P P **23 04 20.9 +0.6**
CABF pmax pmax
comp=Z,11nm,1.2s,mb4.9
HAU Haudompre 85.47 42 *e*P P **23 04 21.1 +0.3**
HAU *e*MLR MLR
comp=Z,70nm,19.0s,MS3.8
HAU Haudompre 85.47 42 *e*P P **23 04 21.1 +0.3**
HAU MLR MLR
comp=Z,70nm,19.0s,MS4.1
KBS Kingsbay 85.79 11 *e*P P **23 04 20.8 -1.1**
comp=Z,9.6nm,1.0s,mb5.0
KBS Kingsbay 85.79 11 *d iP* P **23 04 21.3 -0.6**
KBS pmax pmax
comp=Z,14nm,1.2s,mb5.1
HINF Hinteralfeld 85.82 43 *e*P P **23 04 22.6 0.0**
comp=Z,12nm,1.1s,mb4.8
HINF Hinteralfeld 85.82 43 *e*P P **23 04 22.6 0.0**
comp=Z,6.2nm,1.1s,mb4.8
HINF Hinteralfeld 85.82 43 *e*P P **23 04 22.6 0.0**
HINF pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
LPL La Plagne 85.86 45 *e*P P **23 04 24.2 +1.4**
comp=Z,14nm,1.2s,mb4.8
LPL La Plagne 85.86 45 *e*P P **23 04 24.2 +1.4**
comp=Z,6.9nm,1.2s,mb4.8
LPL La Plagne 85.86 45 *e*P P **23 04 24.2 +1.4**
LPL pmax pmax
comp=Z,7.0nm,1.2s,mb4.8
LPG La Plagne 85.88 45 *e*P P **23 04 24.5 +1.6**
comp=Z,16nm,1.2s,mb4.8
LPG La Plagne 85.88 45 *e*P P **23 04 24.5 +1.6**
comp=Z,7.8nm,1.2s,mb4.8
LPG La Plagne 85.88 45 *e*P P **23 04 24.5 +1.6**
LPG pmax pmax
comp=Z,8.0nm,1.2s,mb4.8
MBDF Montbardon 85.93 46 *e*P P **23 04 23.4 +0.2**
comp=Z,13nm,1.1s,mb4.8
MBDF Montbardon 85.93 46 *e*P P **23 04 23.4 +0.2**
comp=Z,6.7nm,1.1s,mb4.8
MBDF Montbardon 85.93 46 *e*P P **23 04 23.4 +0.2**
MBDF pmax pmax
comp=Z,7.0nm,1.1s,mb4.8
ECH Echery 86.00 42 *e*P P **23 04 23.5 0.0**
comp=Z,4.3nm,1.0s,mb4.6
ECH Echery 86.00 42 *e*P P **23 04 23.5 0.0**
ECH pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
CDF Champ du Feu 86.07 42 *e*P P **23 04 24.2 +0.4**
comp=Z,20nm,1.4s,mb4.9
CDF Champ du Feu 86.07 42 *e*P P **23 04 24.2 +0.4**
comp=Z,9.8nm,1.4s,mb4.8
CDF Champ du Feu 86.07 42 *e*P P **23 04 24.2 +0.4**
CDF pmax pmax
comp=Z,10.0nm,1.4s,mb4.8
TAM Tamanrasset 86.30 68 *e*P P **23 04 25.6 +0.1**
comp=Z,1.2nm,0.6s,mb4.3
TAM Tamanrasset 86.30 68 *e*P P **23 04 25.6 +0.1**
TAM pmax pmax
comp=Z,1.0nm,0.6s,mb4.2
NOA NORSAR Array B 87.33 29 P P **23 04 30.0 +0.3**
comp=Z,4.3nm,1.1s,mb4.6,baz=281,slow=4.6,SNR=3.7
NOA LR LR 23 41 03.1
comp=Z,50nm,19.0s,MS3.9,baz=265,slow=34
DAVA Damuels 87.90 43 ⇑ *iPcP* P **23 04 34.0 +1.2**
comp=Z,6.4nm,0.9s,mb4.8
RETA Reutte 88.48 43 ⇑ *ipP* P **23 04 37.1 +1.7**
comp=Z,3.1nm,1.0s,mb4.5
FETA Feichten 88.50 43 ⇑ *ipP* P **23 04 37.3 +1.7**
comp=Z,4.6nm,1.0s,mb4.8
KEST Kesra 88.58 54 LR LR 23 41 46.1
comp=Z,33nm,18.5s,MS3.8,baz=201,slow=34
CLL Collm 89.48 39 P P **23 04 41.0 +0.9**
CLL Collm 89.48 39 *e*P P **23 04 41.0 +0.9**
comp=Z,5.0nm,1.1s,mb4.8
CLL *e*SS SS 23 21 30.0 +5.2
VNA3 Neumayer Olymp 89.49 162 *e*P P **23 04 34.7 -5.0**
VNA3 *e* 23 04 37.5
ARCES ARCESS Array B 91.39 20 P P **23 04 48.4 -0.2**
comp=Z,1.3nm,0.9s,mb4.2,baz=242,slow=6.7,SNR=3.8
BILL Bilibino 92.93 339 ⇓ *eP* P **23 04 55.0 -0.7**
BILL pmax pmax
comp=Z,12nm,1.4s,mb5.1
BILL MLR MLR
comp=Z,200nm,22.0s,MS4.5
FINES FINESS Array B 94.25 27 LR LR 23 42 09.3
comp=Z,4.6nm,21.9s,MS4.2,baz=306,slow=32
AKASG Malin Array Be 99.55 37 LR LR 23 45 26.0
comp=Z,77nm,21.2s,MS4.2,baz=310,slow=32
KURK Kurchatov 121.98 14 ⇑ *iPKIKP* PKPdf 23 10 37.1 -0.4
MDJ Mudanjiang 122.58 333 PKP PKPdf 23 10 38.8 0.0
MDJ PP PP 23 12 15.4 +0.5
CN2 Changchun 125.02 335 *e*PKP PKPdf 23 10 45.8 +2.3
CN2 PP PP 23 12 36.6 +5.3
AAK Ala-Archa 128.03 21 ⇓ *iPKIKP* PKPdf 23 10 49.7 +0.4
AAK pmax pmax
comp=Z,2.0nm,1.2s
WMQ Urumqi 130.41 9 *e*PKP PKPdf 23 10 54.8 +1.0
WMQ LR LR
comp=Z,94nm,24.6s,MS4.4
KSH Kashi 131.29 22 *e*PKP PKPdf 23 10 57.3 +1.7
KSH *e*PP PP 23 13 16.1 +3.6
KSH *e*PKS 23 14 32.1
KSH *e*SKS SKSdf 23 18 03.1 -3.0
KSH *e*SKKS SKKSac 23 20 03.1 -5.9
HHC Hu-ho-hao-te 132.34 345 *e*PKP PKPdf 23 10 54.8 -2.7
HHC PP PP 23 13 19.6 +0.6
HHC PKS 23 14 29.1
HHC SKS SKSdf 23 18 00.3 -7.7
NJ2 Nanjing 137.66 333 *e*PKP PKPdf 23 11 02.4 -5.4
LZH Lanzhou 138.46 352 *e*PKP PKPdf 23 11 04.0 -5.1
LZH sPKP 23 11 09.1
ASAR Alice Springs 140.34 239 PKhKP PKPpre 23 11 04.2
comp=Z,0.3nm,0.7s,baz=99,slow=3.9,SNR=3.7
ASAR PKP PKPdf 23 11 11.7 -1.1
comp=Z,0.9nm,0.7s,baz=103,slow=2.8,SNR=5.0
WRA Warramunga Arr 141.19 245 PKhKP PKPpre 23 11 06.9
comp=Z,0.8nm,0.9s,baz=40,slow=34,SNR=4.7
WRA PKP PKPdf 23 11 15.2 +0.8
comp=Z,1.8nm,0.8s,baz=110,slow=2.0,SNR=6.1
CD2 Chengdu 143.56 351 PKP PKPdf 23 11 14.4 -4.0
GKN Gorkha 144.76 20 *e*P PKPdf 23 11 18.1 -2.5
comp=Z,55nm,1.2s
KKN Kakani 145.16 19 *e*P PKPbc 23 11 19.4 -1.4
GUN Gumba 145.24 18 *e*P PKPbc 23 11 19.8 -1.3
DMN Daman 145.28 19 *e*P PKPbc 23 11 19.8 -1.4
comp=Z,57nm,1.2s
PKIN Phulchoki 145.40 19 *e*P PKPbc 23 11 19.5 -2.1
comp=Z,30nm,1.1s
PKI Pulchoki 145.41 19 *e*P PKPbc 23 11 19.8 -1.8
comp=Z,38nm,1.1s
JIRN Jiri 145.57 18 *e*P PKPdf 23 11 21.1 -0.9
TAPN Taplejung 146.30 16 *e*P PKPdf 23 11 24.2 +0.9
GYA Guiyang 147.25 344 PKPbc PKPbc 23 11 25.0 -2.1
GYA PKS 23 14 58.3
GYA SKKS SKKSac 23 21 41.0 -2.2
GYA SS SS 23 33 50.9 +0.2
GYA AMB AMB
comp=Z,120nm,7.8s
KMI Kunming 149.39 350 PKPbc PKPbc 23 11 31.5 -1.3
CMAR Chiang Mai Arr 156.42 356 PKPab PKPab 23 12 05.5 -1.4
comp=Z,0.5nm,0.4s,baz=339,slow=4.4,SNR=5.4

CASC 21 22:55:30.1±2.0, 10°12N×83°27W, h13^{km}±16^{km}, MD3.7, 1C-5D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
URSC	**Urasca**	**0.57**	**241**	⇓ *iP*		Pg	22 55 41.1	-0.2
URSC				*eS*		Sg	22 55 51.1	+2.2
BUS	**Buena Vista**	**0.74**	**221**	⇓ *iP*		Pg	22 55 44.1	-0.4
BUS				*eS*		Sg	22 55 54.9	+0.7
LAJ	**Bijagual**	**0.88**	**253**	⇓ *eP*		Pg	22 55 54.7	+7.7

LAJ				*e*S	Sg	22 56 11.5	+13
PRS1	**Puriscal**	**1.03**	**263**	*e*P	Pb	22 55 49.6	-0.2
QCR	**Quepos**	**1.12**	**232**⇓	*e*P	Pb	22 55 50.5	-0.8
QCR				*e*S	Sb	22 56 05.8	0.0
CGA2	**Cerro Gallo 2**	**1.18**	**265**	*e*P	Pn	22 55 51.4	-0.9
CGA2				*e*S	Sb	22 56 06.8	-0.7
BRU2	**Volcan**	**1.44**	**156**	*e*P	Pn	22 55 56.2	+0.4
BRU2				*e*S	Sn	22 56 15.1	+0.6
ACR	**Cerro Adams**	**1.46**	**176**⇑	*e*P	Pn	22 55 56.2	0.0
ACR				*e*S	Sn	22 56 15.1	0.0
JCR	**Jicaral**	**1.83**	**262**⇓	*i*P	Pn	22 56 02.4	+1.2
CONN	**Concepcion**	**2.72**	**302**	*e*P	Pn	22 56 13.7	+0.2
BCIP	**Isla Barro Col**	**3.52**	**105**	*e*P	Pn	22 56 22.7	-1.7
BCIP				*e*S	Sn	22 57 01.2	-4.7

*ISCJB **21** 23:12:00.7±0.7, 39.°77N±0.°03×38.°91E±0.°06, h1km±12km, Error ellipse: s-maj=8.0km s-min=4.9km az=24.7*
*DDA **21** 23:12:00.6, 39.°77N×38.°91E, h7km±2km, Md2.9*
*ISK **21** 23:12:00.5, 39.°76N×38.°92E, h6km, MD2.8*
*CSEM **21** 23:12:00.8±0.1, 39.°77N×38.°93E, h5km, MD2.8, Error ellipse: s-maj=3.0km s-min=2.6km az=126.0*

ISC 21 23:12:01.2±0.6, 39.°77N±0.°03×38.°91E±0.°04, h4km±12km, n17, σ0°53/28, 2D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.34**	**93**		*e*PG		**Pg**	**23 12 07.9**	**+0.1**
EZC					*e*SG		**Sg**	**23 12 12.4**	**+0.3**
KELT	**Kelkit**	**0.46**	**35**⇓		*i*P		**Pg**	**23 12 09.8**	**-0.3**
KELT					*i* S		**Sg**	**23 12 16.6**	**+0.5**
KELT	**Kelkit**	**0.46**	**35**		*i* P		**Pg**	**23 12 09.8**	**-0.3**
KELT					*i* S		**Sg**	**23 12 16.6**	**+0.5**
KEMA	**Kemaliye**	**0.59**	**213**⇓		*i*P		**Pg**	**23 12 12.2**	**-0.3**
KEMA					*i* S		**Sg**	**23 12 21.0**	**+0.8**
KEMA	**Kemaliye**	**0.59**	**213**		*i* P		**Pg**	**23 12 12.2**	**-0.3**
KEMA					*i* S		**Sg**	**23 12 21.0**	**+0.7**
GUMT	**Gumushane**	**0.82**	**32**		*e*PG		**Pg**	**23 12 16.7**	**-0.1**
GUMT	**Gumushane**	**0.82**	**32**		*e*Pg		**Pg**	**23 12 16.7**	**-0.1**
PTK	**Pertek**	**0.95**	**157**		*e*PG		**Pg**	**23 12 18.5**	**-0.9**
PTK	**Pertek**	**0.95**	**157**		*e*Pg		**Pg**	**23 12 18.5**	**-0.9**
ESPY	**Espiye-Giresun**	**1.16**	**353**		*e*PN		**Pg**	**23 12 23.5**	**+0.2**
ESPY					*e*SN		**Sg**	**23 12 39.2**	**+0.9**
ESPY	**Espiye-Giresun**	**1.16**	**353**		*e*Pn		**Pg**	**23 12 23.5**	**+0.2**
ESPY					*e*Sn		**Sg**	**23 12 39.2**	**+0.9**
GRSN	**GIRESUNGRSN**	**1.25**	**337**		*e*P		**Pg**	**23 12 24.6**	**-0.6**
GRSN					*e*S		**Sg**	**23 12 40.5**	**-1.0**
GRSN	**GIRESUNGRSN**	**1.25**	**337**		*e*P		**Pg**	**23 12 24.6**	**-0.6**
GRSN					*e*S		**Sg**	**23 12 40.5**	**-1.0**
SCER	**sogukcermik**	**1.38**	**274**		*e*P		**Pn**	**23 12 27.1**	**0.0**
SCER					*e*S		**Sg**	**23 12 45.6**	**+0.3**
SCER	**sogukcermik**	**1.38**	**274**		*e*P		**Pn**	**23 12 27.1**	**0.0**
SCER					*e*S		**Sg**	**23 12 45.7**	**+0.3**
SVSK	**Karacayir**	**1.48**	**276**		*e*PN		**Pn**	**23 12 28.8**	**+0.2**
SVSK	**Karacayir**	**1.48**	**276**		*e*Pn		**Pn**	**23 12 28.8**	**+0.2**

FUNV 21 23:22:47.2, 6.°73N×73.°09W, h152km, MW3.5, 3C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.36**	**34**⇑		*i*P		Pn	23 23 15.7	+0.2
CAPV					*e*S		Sn	23 23 35.2	-2.0
SOCV	**Socops**	**2.70**	**55**		*e*P		Pn	23 23 30.5	-0.4
SOCV					*e*S		Sn	23 24 01.0	-3.6
VIGV	**El Vigia**	**2.70**	**39**		*e*P		Pn	23 23 30.2	-0.7
VIGV					*e*S		Sn	23 24 01.6	-3.2
VIRV	**Villa del Rosa**	**3.81**	**10**		*e*P		Pn	23 23 42.7	-2.4
VIRV					*e*S		Sn	23 24 25.1	-4.9
QARV	**Quebrada Arrib**	**4.29**	**36**⇑		*i*P		Pn	23 23 50.1	-1.1
QARV					*e*S		Sn	23 24 36.3	-4.8
SANV	**Sanarito**	**4.46**	**52**		*e*P		Pn	23 23 52.3	-1.3
CURV	**Curarigua**	**4.50**	**43**		*e*P		Pn	23 23 52.5	-1.5
CURV					*e*S		Sn	23 24 40.7	-5.4
DABV	**Dabajuro**	**4.82**	**30**		*e*P		Pn	23 23 56.8	-1.5
DABV					*e*S		Sn	23 24 47.9	-5.8
TEPV	**Terepaima**	**5.02**	**50**		*e*P		Pn	23 23 59.6	-1.3
SIQV	**Siquisique**	**5.07**	**40**		*e*P		Pn	23 23 59.5	-2.0
SIQV					*e*S		Sn	23 24 54.0	-5.6
BAUV	**El Baul**	**5.46**	**66**⇑		*i*P		Pn	23 24 03.9	-2.8
BAUV					*e*S		Sn	23 25 02.2	-6.7
MAPV	**Macapo**	**5.52**	**56**		*e*P		Pn	23 24 05.8	-1.7
CAOV	**Caicara del Or**	**6.74**	**85**		*e*P		Pn	23 24 20.9	-2.9

IDC 21 23:27:53.6±2.0, 56.°94S×27.°35W, h0km, mb3.7/1, mb1 3.7/1, mb1mx3.4/14, mbtmp3.7/1, Error ellipse: s-maj=111.7km s-min=72.4km az=132.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**73.88**	**29**		P		P	23 39 30.0	0.0
	0.5nm,0.7s,baz=200,slow=6.2,SNR=10								
ZALV	**Zalesovo Beam**	**142.84**	**65**		PKP		PKPdf	23 47 27.0	-0.6
	0.3nm,0.3s,baz=225,slow=1.8,SNR=2.2								
ILAR	**Eielson Array**	**150.63**	**310**		PKPbc		PKPbc	23 47 45.6	-0.2
	0.4nm,0.8s,baz=150,slow=5.1,SNR=5.7								
SONM	**Songino Array**	**150.86**	**88**		PKPbc		PKPbc	23 47 46.8	0.0
	0.8nm,0.6s,baz=270,slow=3.0,SNR=3.8								

*ISCJB **21** 23:46:33.3±1.6, 5.°20S±0.°08×146.°02E±0.°10, h196km±16km, mb4.1/12, Error ellipse: s-maj=16.2km s-min=12.8km az=24.0*
*NEIC **21** 23:46:34.5±1.1, 5.°20S×146.°06E, h196km±11km, mb4.2/7, Error ellipse: s-maj=10.7km s-min=9.0km az=109.0*
*IDC **21** 23:46:34.4±7.0, 5.°20S×146.°10E, h195km±65km, mb3.9/7, mb1 4.0/9, mb1mx3.8/18, mbtmp3.8/9, Error ellipse: s-maj=35.3km s-min=22.9km az=80.0*

ISC 21 23:46:34.4±1.6, 5.°20S±0.°08×146.°05E±0.°10, h192km±16km, n37, σ0°66/33, mb4.1/12, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.32**	**165**		Pn		**Pn**	**23 47 40.5**	**+0.6**
PMG					*e*Sn		**Sn**	**23 48 15.8**	**-16**
HNR	**Honiara**	**14.41**	**108**		Pn		**Pn**	**23 49 48.8**	**-1.0**
CTA	**Charters Tower**	**14.80**	**179**		P		**Pn**	**23 49 56.0**	**+1.4**
	0.3nm,0.3s,baz=340,slow=9.4,SNR=4.3								
KAKA	**Kakadu**	**15.37**	**240**		*e*Pn		**Pn**	**23 50 00.1**	**-1.5**
	82nm,0.6s								
WB2	**Warramunga Arr**	**18.56**	**217**		*e*P		**P**	**23 50 36.8**	**-0.1**
WRA	**Warramunga Arr**	**18.57**	**217**		P		**P**	**23 50 36.8**	**-0.2**
	3.9nm,0.3s,baz=41,slow=10,SNR=41								
ASAR	**Alice Springs**	**21.77**	**211**		P		**P**	**23 51 11.1**	**-0.1**
	9.9nm,0.4s,mb4.7,baz=45,slow=7.6,SNR=168								
FITZ	**Fitzroy Crossi**	**23.71**	**236**		P		**P**	**23 51 29.2**	**+0.1**
	30nm,0.5s,mb5.2,baz=52,slow=12,SNR=81								
STKA	**Stephens Creek**	**26.87**	**188**		*e*P		**P**	**23 51 56.8**	**-0.5**
	0.7nm,0.6s,mb3.5								
STKA	**Stephens Creek**	**26.87**	**188**		P		**P**	**23 51 56.8**	**-0.5**
	3.2nm,0.5s,mb4.2,baz=358,slow=10.0,SNR=5.9								
MBWA	**Marble Bar**	**30.05**	**236**		*e*P		**P**	**23 52 25.7**	**-0.1**
	43nm,1.5s,mb4.9								
NACB	**Ninganchiao**	**37.69**	**322**		*e*P		**P**	**23 53 32.0**	**+0.5**
	13nm,0.7s,mb4.6								
NWAO	**Narrogin (SRO)**	**38.50**	**221**		*e*P		**P**	**23 53 37.3**	**-0.8**
COCO	**West Island**	**49.08**	**258**		*e*P		**P**	**23 55 03.6**	**+0.9**
ENH	**Enshi**	**49.69**	**317**		*e*P		**P**	**23 55 07.0**	**-0.1**
ULN	**Ulaanbaatar**	**62.96**	**332**		P		**P**	**23 56 41.1**	**+0.7**
CASY	**Casey**	**65.78**	**195**		*e*P		**P**	**23 56 58.8**	**+0.4**
	2.9nm,0.6s,mb4.1								
PALK	**Pallekele**	**66.37**	**280**		*e*P		**P**	**23 57 03.6**	**+0.4**
TLY	**Talaya**	**67.21**	**333**		P		**P**	**23 57 08.2**	**+0.5**
MK31	**Makanchi Array**	**76.28**	**321**		*e*Pn		**P**	**23 58 01.4**	**-0.5**
MKAR	**Makanchi Array**	**76.28**	**321**		P		**P**	**23 58 02.5**	**+0.5**
	0.4nm,0.5s,mb3.3,baz=99,slow=8.6,SNR=6.4								
ZALV	**Zalesovo Beam**	**77.84**	**328**		P		**P**	**23 58 10.2**	**-0.3**
	0.4nm,0.3s,mb3.5,baz=119,slow=5.9,SNR=2.7								
TKM2	**Tokmak 2**	**79.42**	**315**		*e*P		**P**	**23 58 18.3**	**-1.0**
UCH	**Uchtor**	**79.98**	**314**		*e*P		**P**	**23 58 21.8**	**-0.6**
	1.2nm,0.8s,mb3.6								
KURK	**Kurchatov**	**80.01**	**323**		P		**P**	**23 58 22.1**	**-0.2**
AAK	**Ala-Archa**	**80.11**	**315**		P		**P**	**23 58 23.1**	**0.0**
KBL	**Kabul**	**82.30**	**306**		*e*P		**P**	**23 58 34.7**	**-0.1**
MAW	**Mawson**	**82.62**	**203**		*e*P		**P**	**23 58 35.7**	**-0.1**
QSPA	**South Pole Qui**	**84.76**	**180**		*e*P		**P**	**23 58 46.7**	**+0.2**
	2.1nm,0.5s,mb4.1								
QSPA	**South Pole Qui**	**84.76**	**180**		P		**P**	**23 58 46.9**	**+0.5**
	3.1nm,0.7s,mb4.1,baz=316,slow=0.5,SNR=19								
ILAR	**Eielson Array**	**85.12**	**23**		P		**P**	**23 58 47.8**	**-0.7**
	2.4nm,0.6s,mb4.1,baz=251,slow=5.1,SNR=26								
ILAR					pP		pP	23 59 28.5	-7.1
	0.5nm,0.7s,baz=261,slow=4.3,SNR=3.3								
BRVK	**Borovoye**	**85.64**	**324**		*e*P		**P**	**23 58 52.6**	**+1.4**
	2.2nm,0.7s,mb4.0								
SUR	**Sutherland**	**115.99**	**230**		PKPdf		PKPdf	00 04 56.6	+1.6
TSUM	**Tsumeb**	**123.78**	**243**		PKPdf		PKPdf	00 05 10.1	-0.2
TOA0	**Torodi Ar. Sit**	**143.97**	**285**		*e*PKPdf		PKPdf	00 05 46.2	-1.7
TORD	**Torodi Ar. Bea**	**143.97**	**285**		PKP		PKPdf	00 05 46.3	-1.7
	0.5nm,0.5s,baz=76,slow=3.3,SNR=14								
DBIC	**Dimbokro**	**151.03**	**274**		*e*PKPdf		PKPdf	00 05 59.2	-0.4

*LDG **22** 00:01:08.9±0.3, 33.°07N×92.°50E, h10km, Mb4.7/7, Ms3.6/7, Error ellipse: s-maj=12.8km s-min=4.1km az=126.0*
*ISCJB **22** 00:01:13.5±0.3, 33.°23N±0.°03×92.°10E±0.°05, h10km, mb4.1/23, MS3.7/9, Error ellipse: s-maj=5.5km s-min=4.0km az=9.7*
*IDC **22** 00:01:14.4±0.7, 33.°18N×92.°00E, h0km, mb4.0/15, mb1 4.2/18, mb1mx4.1/29, mbtmp4.1/18, ML3.8/3, MS3.6/10, Ms1 3.7/10, ms1mx3.4/31, Error ellipse: s-maj=26.7km s-min=13.3km az=55.0*
*NEIC **22** 00:01:15.7±0.3, 33.°16N×92.°02E, h10km, mb4.0/18, Error ellipse: s-maj=7.2km s-min=4.3km az=223.0*
*MOS **22** 00:01:16.8±1.0, 33.°16N×92.°03E, h33km, mb4.3/15, Error ellipse: s-maj=14.5km s-min=6.7km az=116.6*
*BJI **22** 00:01:16.8, 33.°30N×92.°17E, h9km, mB4.4/2, mb4.2/6, ML4.3/4, Ms4.3/6, Ms7 3.9/5*
*DMN **22** 00:01:53.6±12.0, 31.°56N×89.°38E, h10km, Mb5.2/7, Error ellipse: s-maj=298.3km s-min=15.4km az=48.0*

ISC 22 00:01:15.8±0.3, 33.°26N±0.°03×92.°08E±0.°05, h10km, n113, σ1°33/114, mb4.1/23, MS3.7/9, 1D, Qinghai

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.64**	**193**		Pn		**Pb**	**00 02 15.9**	**-4.2**
LSA					Sg		**Sg**	**00 03 07.3**	**-5.3**
LSA					smax				
	comp=N,440nm,1.0s								
LSA					smax				
	comp=E,930nm,0.9s								
GUN	**Gumba**	**7.55**	**227**		*e*P		**Pn**	**00 03 07.6**	**+1.7**
	comp=E,45nm,0.6s								
JIRN	**Jiri**	**7.55**	**224**		*e*P		**Pn**	**00 03 07.9**	**+2.0**
	comp=E,46nm,0.6s								
SHL	**Shillong**	**7.67**	**181**⇓		*i*P		**Pn**	**00 03 08.0**	**+0.5**
SHL					*e*S		**Sn**	**00 04 33.0**	**-1.5**
KKN	**Kakani**	**8.01**	**229**		*e*P		**Pn**	**00 03 14.2**	**+2.0**
	comp=E,40nm,0.5s								
PKI	**Pulchoki**	**8.08**	**227**		*e*P		**Pn**	**00 03 15.2**	**+2.0**
	comp=E,62nm,0.5s								
PKIN	**Phulchoki**	**8.08**	**227**		*e*P		**Pn**	**00 03 14.6**	**+1.4**
	comp=E,94nm,0.6s								
DMN	**Daman**	**8.24**	**229**		*e*P		**Pn**	**00 03 16.9**	**+1.5**
	comp=E,44nm,0.6s								
GKN	**Gorkha**	**8.28**	**233**		*e*P		**Pn**	**00 03 16.9**	**+1.0**
	comp=E,58nm,0.5s								
IMP	**Imphal**	**8.60**	**169**		*e*PKP		**Pn**	**00 03 19.0**	**-1.3**
IMP					*e*S		**Sn**	**00 04 51.0**	**-6.4**
DANN	**Dangsing**	**8.67**	**238**		*e*P		**Pn**	**00 03 22.9**	**+1.7**
	comp=E,59nm,0.5s								
GTA	**Gaotai**	**8.75**	**43**		*e*P		**Pn**	**00 03 24.8**	**+2.5**
GTA					pP			00 03 29.3	
GTA					sP			00 03 32.8	
GTA					S		**Sn**	**00 05 01.9**	**+0.9**
GTA					sS			00 05 08.4	
GTA					pmax	pmax			
	comp=Z,5.0nm,1.1s								
GTA					pmax	pmax			
	comp=Z,170nm,7.4s								
GTA					LR	LR			
	comp=N,950nm,12.8s								
GTA					LR	LR			
	comp=E,910nm,10.1s								
GTA					LR	LR			
	comp=Z,600nm,13.4s								
KOLN	**Koldanda**	**9.13**	**235**		*e*P		**Pn**	**00 03 29.0**	**+1.4**
	comp=Z,28nm,0.5s								
LZH	**Lanzhou**	**10.09**	**70**		*e*P		**Pn**	**00 03 33.6**	**-7.1**
LZH					pP			00 03 36.0	
LZH					sP			00 03 38.4	
LZH					*e*S		**Sn**	**00 05 25.0**	**-9.0**
LZH					sS			00 05 30.1	
LZH					SS			00 05 35.3	
LZH					pmax	pmax			
	comp=Z,22nm,1.2s								
LZH					pmax	pmax			
	comp=Z,93nm,4.6s								
LZH					LR	LR			
	comp=N,1μm,5.0s								
LZH					LR	LR			
	comp=E,980nm,6.0s								
LZH					LR	LR			
	comp=Z,2μm,7.5s								
ENH	**Enshi**	**15.10**	**97**		*e*Pn		**Pn**	**00 04 50.4**	**+1.2**
	comp=Z,17nm,0.9s								
ULHL	**Ulahol**	**15.39**	**310**		P		**Pn**	**00 05 01.0**	**+8.1**
	SNR=5.7								
MK31	**Makanchi Array**	**15.44**	**334**		*e*Pn		**Pn**	**00 04 53.4**	**-0.1**
MKAR	**Makanchi Array**	**15.44**	**334**		Pn		**Pn**	**00 04 53.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=141,slow=14,SNR=23								
MKAR					LR		LR	00 10 45.4	
	comp=Z,119nm,20.7s,baz=148,slow=37								
CHTO	**Chiang Mai**	**15.64**	**155**		*e*Pn		**Pn**	**00 04 54.8**	**-1.5**
	comp=Z,6.3nm,1.0s								
CHTO	**Chiang Mai**	**15.64**	**155**		*e*P		**Pn**	**00 04 54.8**	**-1.6**
CHTO					pmax	pmax			
	comp=Z,6.0nm,1.0s								
CMAR	**Chiang Mai Arr**	**15.97**	**156**		Pn		**Pn**	**00 04 58.5**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=330,slow=11,SNR=24								
CMAR					LR		LR	00 11 43.1	
	comp=Z,135nm,19.6s,baz=350,slow=40								
TKM2	**Tokmak 2**	**16.14**	**311**		P		**Pn**	**00 05 09.4**	**+6.7**
	SNR=5.5								
TKM2	**Tokmak 2**	**16.14**	**311**		*e*Pn		**Pn**	**00 05 03.8**	**+1.0**
	comp=Z,6.4nm,1.0s								
TKM2	**Tokmak 2**	**16.14**	**311**		*e*P		**Pn**	**00 05 03.8**	**+1.1**
TKM2					pmax	pmax			
	comp=Z,6.0nm,1.0s								
KBK	**Karagaybulak**	**16.42**	**310**		P		**Pn**	**00 05 13.4**	**+7.1**
	SNR=13								
UCH	**Uchtor**	**16.50**	**308**		P		**Pn**	**00 05 13.7**	**+6.4**
	SNR=12								
UCH	**Uchtor**	**16.50**	**308**		*e*Pn		**Pn**	**00 05 09.3**	**+1.9**
	comp=Z,12nm,0.8s								
AAK	**Ala-Archa**	**16.71**	**309**		*e*Pn		**Pn**	**00 05 11.9**	**+2.1**
	comp=Z,4.6nm,0.6s								
AAK					LR		LR	00 12 57.0	
AAK	**Ala-Archa**	**16.71**	**309**		Pn		**Pn**	**00 05 14.0**	**+4.1**
	comp=Z,0.4nm,0.3s,baz=148,slow=4.9,SNR=8.8								
AAK					LR		LR	00 12 57.0	
	comp=Z,358nm,19.8s,baz=86,slow=42								
AAK	**Ala-Archa**	**16.71**	**309**		*e*P		**Pn**	**00 05 12.0**	**+2.1**
AAK					pmax	pmax			
	comp=Z,5.0nm,0.6s								
FRU	**Bishkek**	**16.72**	**310**		*e*P		**Pn**	**00 05 14.0**	**+3.9**
AML	**Almayashu**	**17.01**	**307**		P		**Pn**	**00 05 17.4**	**+3.7**
	SNR=6.0								
AML	**Almayashu**	**17.01**	**307**		*e*Pn		**Pn**	**00 05 13.9**	**+0.2**
	comp=Z,4.0nm,0.6s								
EKS2	**Erkin-Say**	**17.19**	**308**		P		**Pn**	**00 05 20.8**	**+4.9**
	SNR=9.4								
EKS2	**Erkin-Say**	**17.19**	**308**		*e*Pn		**Pn**	**00 05 16.3**	**+0.3**
	comp=Z,6.0nm,0.7s								
SONM	**Songino Array**	**18.13**	**32**		P		**Pn**	**00 05 30.1**	**+2.5**
	comp=Z,0.3nm,0.3s,baz=214,slow=12,SNR=15								
SONM					LR		LR	00 12 15.4	
	comp=Z,125nm,18.9s,baz=6.9,slow=36								
ULN	**Ulaanbaatar**	**18.45**	**33**		P		**Pn**	**00 05 32.2**	**+0.7**
	comp=Z,3.0nm,0.7s								
ULN	**Ulaanbaatar**	**18.45**	**33**		P		**Pn**	**00 05 32.2**	**+0.7**
ULN					pmax	pmax			
	comp=Z,3.0nm,0.7s								
KBL	**Kabul**	**19.16**	**280**		*e*P		**Pn**	**00 05 39.3**	**-1.0**
	comp=Z,19nm,0.9s								
KBL	**Kabul**	**19.16**	**280**		*e*P		**Pn**	**00 05 39.3**	**-0.9**
KBL					pmax	pmax			
	comp=Z,19nm,0.9s								
KURK	**Kurchatov**	**20.05**	**334**		*e*P		**P**	**00 05 48.8**	**-0.1**
	comp=Z,4.0nm,0.7s								
KURK	**Kurchatov**	**20.05**	**334**		P		**P**	**00 05 49.0**	**+0.1**
	comp=Z,5.9nm,0.7s,baz=144,slow=12,SNR=40								
KURK	**Kurchatov**	**20.05**	**334**		*e*P		**P**	**00 05 48.8**	**-0.1**
KURK					pmax	pmax			
	comp=Z,4.0nm,0.7s								
ZAA0	**Zalesovo Array**	**21.32**	**348**		*e*P		**P**	**00 06 03.2**	**+0.6**
ZALV	**Zalesovo Beam**	**21.32**	**348**		P		**P**	**00 06 02.8**	**+0.2**
	comp=Z,6.0nm,0.9s,mb3.9,baz=157,slow=9.6,SNR=18								
ZALV					LR		LR	00 15 03.2	
	comp=Z,80nm,19.1s,MS3.1,baz=243,slow=39								
ZALV	**Zalesovo Beam**	**21.32**	**348**		P		**P**	**00 06 02.8**	**+0.2**
ZALV					pmax	pmax			
	comp=Z,6.0nm,0.9s,mb3.9								
ZALV					MLR		MLR		
	comp=Z,80nm,19.1s,MS3.1								
NVS	**Novosibirsk**	**22.46**	**347**		*e*P		**P**	**00 06 14.2**	**-0.6**
NVS					pmax	pmax			
	comp=N,8.0nm,1.5s								
NVS					pmax	pmax			
	comp=E,8.0nm,1.5s								
NVS					pmax	pmax			
	comp=Z,11nm,1.5s,mb4.1								
BVAR	**Borovoye Array**	**25.14**	**328**		P		**P**	**00 06 41.6**	**+0.8**
	comp=Z,2.3nm,0.6s,mb3.9,baz=134,slow=10,SNR=18								
BVAR	**Borovoye Array**	**25.14**	**328**		P		**P**	**00 06 41.6**	**+0.8**
BVAR					pmax	pmax			
	comp=Z,2.0nm,0.6s								
BRVK	**Borovoye**	**25.21**	**328**		*e*P		**P**	**00 06 42.3**	**+0.9**
	comp=Z,6.0nm,0.8s,mb4.2								
BRVK	**Borovoye**	**25.21**	**328**		*e*P		**P**	**00 06 42.3**	**+0.9**
BRVK					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.2								
HIA	**Hailar**	**26.03**	**44**		*e*P		**P**	**00 06 49.1**	**+0.2**
NACB	**Ninganchiao**	**27.35**	**102**		P		**P**	**00 07 01.1**	**+0.1**
ABKAR	**Akbulak array**	**28.69**	**313**		*e*P		**P**	**00 07 14.2**	**+1.4**
	comp=Z,1.1nm,0.6s,mb3.8								
PSI	**Prapat**	**30.97**	**167**		P		**P**	**00 07 34.1**	**+0.8**
	comp=Z,4.4nm,0.9s,mb4.3,baz=340,slow=15,SNR=3.5								
PSI	**Prapat**	**30.97**	**167**		P		**P**	**00 07 34.1**	**+0.8**
PSI					pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.2								
SVE	**Sverdlovsk**	**31.90**	**327**		*e*P		**P**	**00 07 42.8**	**+1.7**
ARU	**Arti**	**32.65**	**325**		*e*P		**P**	**00 07 48.9**	**+1.2**
	comp=Z,1.6nm,0.6s,mb4.1								
ARU	**Arti**	**32.65**	**325**		P		**P**	**00 07 48.1**	**+0.4**
GNI	**Garni**	**38.21**	**294**		*e*P		**P**	**00 08 35.8**	**+0.1**
	comp=Z,13nm,1.2s,mb4.5								
GNI	**Garni**	**38.21**	**294**		P		**P**	**00 08 37.4**	**+1.7**
	comp=Z,1.6nm,0.6s,mb4.0,baz=101,slow=5.2,SNR=3.0								
GNI	**Garni**	**38.21**	**294**		*e*P		**P**	**00 08 35.8**	**+0.1**
GNI					pmax	pmax			
	comp=Z,13nm,1.2s								
KIV	**Kislovodsk**	**39.52**	**300**		P		**P**	**00 08 45.3**	**-1.4**
KIV	**Kislovodsk**	**39.52**	**300**		P		**P**	**00 08 45.3**	**-1.3**
ASAJ	**Asahikawa**	**40.33**	**59**		LR		LR	00 26 18.7	
	comp=Z,95nm,19.3s,MS3.7,baz=194,slow=37								
MALT	**Malatya**	**43.31**	**293**		*e*P		**P**	**00 09 17.6**	**-0.2**
	comp=Z,1.2nm,0.6s,mb3.8								
MALT	**Malatya**	**43.31**	**293**		*e*P		**P**	**00 09 17.6**	**-0.2**
MALT					pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.7								
CBIJ	**Chichi jima**	**43.42**	**84**		LR		LR	00 27 26.6	
	comp=Z,72nm,19.6s,MS3.6,baz=229,slow=36								
OBN	**Obninsk**	**44.00**	**317**		P		**P**	**00 09 21.0**	**-2.1**
OBN					MLR		MLR		
	comp=Z,100nm,17.0s,MS3.8								
BR131	**Keskin Array S**	**46.71**	**295**		*e*P		**P**	**00 09 45.4**	**+0.5**
	comp=Z,1.7nm,0.7s,mb4.1								
BRTR	**Keskin Array B**	**46.71**	**295**		P		**P**	**00 09 45.2**	**+0.3**
	comp=Z,2.6nm,0.8s,mb4.2,baz=96,slow=7.6,SNR=15								
BRTR	**Keskin Array B**	**46.71**	**295**		P		**P**	**00 09 45.2**	**+0.3**
BRTR					pmax	pmax			
	comp=Z,3.0nm,0.8s								
AKASG	**Malin Array Be**	**48.37**	**311**		P		**P**	**00 09 56.5**	**-1

BSO3 Boso 3 0.53 126 P Pb 00 25 54.6 -0.3

NEIC ***22*** *00:25:47.2±4.1,34.°90N×139.°96E,h8km±26km,mb4.3/5, Error ellipse: s-maj=10.0km s-min=6.7km az=92.0*
ISCJB ***22*** *00:25:49.9±0.3,35.°00N±0.°04×139.°96E±0.°04,h43km±3km, mb3.9/8,Error ellipse: s-maj=6.3km s-min=4.3km az=29.9*
JMA ***22*** *00:25:50.9±0.2,35.°09N×139.°98E,h27km±2km,M3.2*
JMA Felt II J1.
IDC ***22*** *00:25:51.5±3.2,34.°96N×139.°96E,h35km±27km,mb3.4/4, mb1 3.6/5,mb1mx3.3/24,mbtmp3.4/5,ML3.5/1,Error ellipse: s-maj=34.8km s-min=15.7km az=82.0*
ISC 22 00:25:50.6±0.3,34.°99N±0.°03×139.°95E±0.°03,h33km±2km, n36,σ0°99/51,mb3.9/8,9C-1D,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TATJ	**Tateyama 2**	**0.06**	**311**	⇓P	**Pb**	**00 25 55.8**	**-0.3**
TATJ				*eS*	**Sb**	**00 26 00.3**	**+0.4**
BSO4	**Boso 4**	**0.32**	**90**	⇑P	**Pb**	**00 25 58.6**	**0.0**
JYO	**Yokosk**	**0.33**	**315**	P	**Pb**	**00 25 58.2**	**-0.5**
JYO				*eS*	**Sb**	**00 26 05.5**	**+1.3**
KTR	**Katsuura**	**0.34**	**63**	⇑P	**Pb**	**00 25 57.6**	**-1.3**
KTR				*eS*	**Sb**	**00 26 03.1**	**-1.4**
BSO3	**Boso 3**	**0.50**	**112**	⇑P	**Pb**	**00 26 01.4**	**+0.2**
BSO3				*eS*	**Sb**	**00 26 10.7**	**+2.2**
JIM2	**Oshima 3**	**0.50**	**237**	⇑P	**Pb**	**00 26 01.4**	**+0.2**
JIM2				*eS*	**Sb**	**00 26 09.5**	**+1.0**
KTJJ	**Kamata 2**	**0.73**	**265**	⇑P	**Pn**	**00 26 04.0**	**-0.6**
KTJJ				*eS*	**Sb**	**00 26 14.0**	**-0.6**
JOD2	**Odawara 2**	**0.75**	**291**	⇑P	**Pn**	**00 26 03.8**	**-1.2**
JOD2				*eS*	**Sn**	**00 26 14.1**	**-1.1**
BSO1	**Boso 1**	**0.91**	**111**	⇑P	**Pn**	**00 26 06.2**	**-1.0**
BSO1				S	**Sn**	**00 26 18.8**	**-0.4**
JIZS	**Izushimoda**	**0.92**	**253**	⇑P	**Pn**	**00 26 07.2**	**0.0**
JHU	**Hanno**	**1.01**	**328**	⇑P	**Pn**	**00 26 07.3**	**-1.3**
JHJ	**Hachijo jima 2** 24nm,0.3s,baz=59,slow=11,SNR=5.4	**1.87**	**184**	Pn	**Pn**	**00 26 21.1**	**+0.8**
JHJ				S	**Sn**	**00 26 45.1**	**+2.2**
	92nm,0.3s,baz=130,slow=23,SNR=12						
MJAR	**Matsushiro Arr**	**2.09**	**318**	Pn	**Pn**	**00 26 23.7**	**+0.3**
MJAR				Pg	**Pn**	**00 26 30.8**	**+7.4**
MJAR				Sn	**Sn**	**00 26 48.8**	**+0.5**
MJAR	**Matsushiro Arr** 15nm,0.3s,baz=147,slow=11,SNR=54	**2.09**	**318**	Pn	**Pn**	**00 26 23.7**	**+0.3**
MJAR				Pg	**Pn**	**00 26 30.8**	**+7.4**
	23nm,0.3s,baz=139,slow=14,SNR=75						
MJAR				Sn	**Sn**	**00 26 48.8**	**+0.5**
	11nm,0.3s,baz=139,slow=29,SNR=6.0						
MAJO	**Matsushiro**	**2.10**	**318**	*e*Pn	**Pn**	**00 26 24.1**	**+0.7**
MAJO				*e*		00 26 34.0	
MAJO				Sn	**Sn**	**00 26 50.2**	**+1.8**
MAT	**Matsushiro**	**2.10**	**318**	P	**Pn**	**00 26 23.9**	**+0.5**
MAT				S	**Sn**	**00 26 48.5**	**+0.1**
INCN	**Inchon**	**11.04**	**287**	Pn	**Pn**	**00 28 25.3**	**-0.8**
NACB	**Ninganchiao** 14nm,0.7s	**19.23**	**241**	*e*P	**Pn**	**00 30 10.7**	**-2.5**
BJT	**Baijiatuau**	**19.50**	**292**	P	**Pn**	**00 30 16.1**	**-0.3**
SSLB	**Suanglung**	**19.93**	**241**	P	**Pn**	**00 30 19.4**	**-2.1**
GUMO	**Guam**	**21.77**	**167**	P	**P**	**00 30 38.4**	**-1.2**
MKAR	**Makanchi Array**	**44.23**	**304**	P	**P**	**00 33 57.6**	**+1.0**
MKAR	**Makanchi Array** 0.4nm,0.8s,mb3.2,baz=91,slow=7.6,SNR=3.8	**44.23**	**304**	P	**P**	**00 33 57.6**	**+1.0**
KURK	**Kurchatov** 0.9nm,0.4s,mb4.0	**46.28**	**309**	*e*P	**P**	**00 34 13.1**	**+0.2**
PMR	**Palmer**	**50.97**	**36**	P	**P**	**00 34 49.2**	**+0.5**
MCK	**McKinley** 1.8nm,0.4s,mb4.3	**50.99**	**33**	*e*P	**P**	**00 34 49.6**	**+0.8**
AML	**Almayashu** 0.8nm,0.5s,mb3.9	**51.13**	**299**	*e*P	**P**	**00 34 51.0**	**+0.8**
ILAR	**Eielson Array**	**51.85**	**31**	P	**P**	**00 34 56.0**	**+0.8**
ILAR	**Eielson Array** 0.5nm,0.9s,mb3.5,baz=275,slow=6.4,SNR=7.1	**51.85**	**31**	P	**P**	**00 34 56.0**	**+0.8**
FITZ	**Fitzroy Crossi**	**54.52**	**197**	P	**P**	**00 35 14.8**	**-0.6**
WRA	**Warramunga Arr**	**54.89**	**186**	P	**P**	**00 35 17.8**	**-0.2**
WRA	**Warramunga Arr** 1.6nm,0.6s,mb4.2,baz=4.0,slow=7.7,SNR=5.2	**54.89**	**186**	P	**P**	**00 35 17.8**	**-0.2**
KBL	**Kabul** 1.4nm,0.5s,mb4.2	**57.05**	**292**	*e*P	**P**	**00 35 34.6**	**+1.1**
ASAR	**Alice Springs**	**58.62**	**186**	P	**P**	**00 35 44.8**	**+0.4**
ASAR	**Alice Springs** 0.2nm,0.4s,mb3.5,baz=1.4,slow=6.6,SNR=4.7	**58.62**	**186**	P	**P**	**00 35 44.8**	**+0.4**
MBWA	**Marble Bar**	**59.05**	**202**	P	**P**	**00 35 47.1**	**-0.4**

IDC 22 00:53:32.1±1.6,20.°32S×67.°78E,h0km,mb3.9/7, mb1 4.1/7,mb1mx3.8/21,mbtmp3.9/7,MS3.6/1,Ms1 3.8/1, ms1mx3.0/21,Error ellipse: s-maj=46.6km s-min=30.8km az=36.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr** 2.8nm,0.9s,baz=232,slow=8.7,SNR=12	**49.17**	**40**	P	P	01 02 22.5	+0.3
CMAR				LR	LR	01 18 53.6	
	comp=Z,57nm,19.4s,baz=60,slow=31						
ASAR	**Alice Springs** 0.5nm,0.7s,baz=260,slow=5.9,SNR=4.9	**60.91**	**106**	P	P	01 03 47.5	+0.2
WRA	**Warramunga Arr** 0.7nm,0.8s,baz=260,slow=6.4,SNR=2.6	**62.08**	**102**	P	P	01 03 54.8	-0.4
MKAR	**Makanchi Array** 1.1nm,0.8s,baz=199,slow=6.0,SNR=8.9	**68.07**	**11**	P	P	01 04 33.2	-0.2
TORD	**Torodi Ar. Bea** 0.3nm,0.7s,baz=124,slow=4.8,SNR=2.8	**72.99**	**291**	P	P	01 05 04.5	+0.3
ZALV	**Zalesovo Beam** 1.5nm,0.6s,baz=197,slow=4.6,SNR=7.6	**75.40**	**10**	P	P	01 05 17.2	-0.2
SONM	**Songino Array** 1.1nm,0.8s,baz=208,slow=5.9,SNR=2.6	**76.17**	**26**	P	P	01 05 22.6	+0.7

IDC 22 01:05:49.8±5.1,17.°61S×68.°89W,h163km±30km,mb3.6/2, mb1 3.4/3,mb1mx3.1/15,mbtmp3.5/3,Error ellipse: s-maj=80.9km s-min=32.5km az=14.0,Central Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz** 9.2nm,0.3s,baz=222,slow=6.6,SNR=328	**1.50**	**29**	P	Pn	01 06 20.9	+0.5
LPAZ				S	Sn	01 06 45.2	+1.3
	1.8nm,0.3s,baz=267,slow=11,SNR=3.8						
SIV	**San Ignacio** 1.3nm,0.3s,baz=267,slow=14,SNR=18	**7.66**	**79**	P	Pn	01 07 38.6	-0.1
SIV				S	Sn	01 09 05.1	+0.6
	0.2nm,0.3s,baz=351,slow=19,SNR=3.2						
DBIC	**Dimbokro** 1.6nm,0.7s,baz=243,slow=6.8,SNR=2.3	**67.67**	**75**	P	P	01 16 30.0	+0.2
TORD	**Torodi Ar. Bea** 0.5nm,0.4s,baz=257,slow=5.8,SNR=18	**76.07**	**71**	P	P	01 17 19.9	0.0

NEIC ***22*** *01:08:23.9,59.°22N×138.°06W,h10km,ML3.7(PGC), ML3.5(AEIC),After PGC.*
PGC 22 01:08:23.9±0.8,59.°22N×138.°06W,h10km,ML3.7/5,8D, 81km east of Yakutat, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DHAK	**Deception Hill**	**0.15**	**213**	P	Pg	01 08 25.6	-1.5
PNL	**Peninsula**	**0.82**	**304**	P	Pg	01 08 37.3	-2.4
PNL				S	Sg	01 08 49.1	-1.2
YKU2	**Yakutat**	**0.88**	**290**	*e*P	Pg	01 08 39.3	-1.4
PLBC	**Pleasant Camp**	**0.90**	**74**	⇓P	Pg	01 08 39.9	-1.3
PLBC				⇓S	Sg	01 08 52.4	-0.5
SKAG	**Skagway**	**1.42**	**79**	*e*P	Pn	01 08 48.7	-1.0
SKAG				S	Sn	01 09 07.9	-0.5
PCA	**Pinnacle**	**1.42**	**309**	P	Pn	01 08 47.2	-2.5
PCA				S	Sn	01 09 06.0	-2.4
HYT	**Haines Junctio**	**1.64**	**10**	⇑Pn	Pn	01 08 52.2	-0.5
HYT				⇑Sg	Sg	01 09 14.3	-2.2
BESE	**Bessie Mountai**	**1.78**	**110**	P	Pn	01 08 54.0	-0.6
WHY	**Whitehorse**	**2.16**	**46**	⇓Pn	Pn	01 08 59.6	-0.2
WHY				⇓Pg	Pg	01 09 02.4	-2.8
WHY				⇓Sg	Sg	01 09 27.5	-5.6
SIT	**Sitka**	**2.61**	**145**	*e*P	Pn	01 09 11.5	+5.5
RAGM	**Ragged Mountai**	**3.54**	**292**	P	Pn	01 09 15.8	-3.0
BMRM	**Bremner River**	**3.72**	**301**	P	Pn	01 09 19.8	-1.4
WRAK	**Wrangell Islan**	**4.15**	**130**	*e*Pn	Pn	01 09 26.5	-0.6
DLBC	**Dease Lake**	**4.25**	**97**	⇑Pn	Pn	01 09 28.5	0.0
DLBC				⇑Pg	Pg	01 09 39.5	-5.7
DLBC				⇓Sn	Sn	01 10 18.0	-0.1
DLBC				⇑Sg	Sg	01 10 34.1	-6.0
DIV	**Divide**	**4.30**	**300**	P	Pn	01 09 28.6	-0.7
MENT	**Mentasta**	**4.64**	**326**	*e*Pn	Pn	01 09 30.9	-2.9
DAWY	**Dawson**	**4.91**	**353**	P	Pn	01 09 37.8	+0.2
DAWY	**Dawson**	**4.91**	**353**	⇓Pn	Pn	01 09 37.7	+0.1
DAWY				⇓Sn	Sn	01 10 33.3	-1.0
DAWY				⇑Sg	Sg	01 10 58.6	-2.6
PAX	**Paxson** 6.7nm,0.7s	**5.21**	**319**	*e*Pn	Pn	01 09 41.9	+0.3
SML	**Sawmill**	**5.70**	**301**	P	Pn	01 09 47.4	-1.0
EGAK	**Eagle** 16nm,0.6s	**5.77**	**347**	*e*Pn	Pn	01 09 48.5	-0.9
EGAK				*e*Sg	Sg	01 11 26.5	-2.3
SEW	**Seward**	**5.84**	**284**	*e*Pn	Pn	01 09 46.8	-3.6
DHY	**Denali Highway**	**5.94**	**315**	P	Pn	01 09 51.5	-0.2
PMR	**Palmer**	**5.98**	**298**	*e*P	Pn	01 09 51.4	-0.9
NDB	**Naden**	**5.98**	**150**	⇑Pn	Pn	01 09 50.8	-1.6
RC01	**Rabbit Creek A**	**6.13**	**293**	P	Pn	01 09 53.2	-1.0
RND	**Reindeer**	**6.68**	**314**	P	Pn	01 10 01.3	-0.6
TRF	**Thorofare Moun**	**7.25**	**311**	P	Pn	01 10 08.9	-0.8
RSO	**Redoubt South**	**7.51**	**286**	*e*Pn	Pn	01 10 10.5	-2.7
BPAW	**Bear Paw Mtn.**	**7.85**	**314**	P	Pn	01 10 16.6	-1.3
BM3	**Burnt Mountain**	**8.74**	**343**	P	Pn	01 10 28.0	-2.0
TT01	**Tatalina**	**9.45**	**301**	P	Pn	01 10 37.5	-2.4
IM3	**Indian Mountai**	**9.89**	**320**	P	Pn	01 10 44.0	-1.9

IDC ***22*** *01:17:07.8±1.1,5.°63S×77.°42W,h0km,mb3.4/4,mb1 3.7/5, mb1mx3.6/17,mbtmp3.4/5,ML3.2/1,MS3.0/1,Ms1 3.1/1, ms1mx2.7/9,Error ellipse: s-maj=29.8km s-min=14.4km az=114.0*
ISCJB ***22*** *01:17:12.5±1.2,5.°70S±0.°06×77.°4W±0.°1,h47km±15km, mb3.5/6,Error ellipse: s-maj=22.3km s-min=9.7km az=172.2*
NEIC ***22*** *01:17:14.5±1.0,5.°67S×77.°36W,h50km±12km,mb3.9/2, Error ellipse: s-maj=23.9km s-min=9.3km az=76.0*
ISC 22 01:17:14.6±0.9,5.°70S±0.°06×77.°4W±0.°1,h48km±13km,n12, σ0°76/12,mb3.5/6,Northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa** 140nm,0.3s,baz=25,slow=13,SNR=313	**1.72**	**214**	Pn	**Pn**	**01 17 41.6**	**-0.5**
ATAH				Lg		01 18 03.6	
	142nm,0.3s,baz=32,slow=20,SNR=16						
OTAV	**Otavalo** 16nm,0.8s	**5.99**	**350**	*e*Pn	**Pn**	**01 18 41.1**	**+0.4**
NNA	**Nana** 28nm,0.5s	**6.27**	**175**	*e*Pn	**Pn**	**01 18 44.7**	**+0.2**
NNA				*e*Sn	**Sn**	**01 19 55.0**	**0.0**
ROSC	**El Rosal** 0.6nm,0.3s,baz=108,slow=20,SNR=2.0	**10.94**	**16**	Pn	**Pn**	**01 19 48.1**	**-0.4**
ROSC				Lg		01 22 55.9	
	1.3nm,0.3s,baz=90,slow=20,SNR=2.3						
LPAZ	**La Paz** 0.1nm,0.3s,baz=325,slow=11,SNR=2.3	**13.92**	**140**	Pn	**Pn**	**01 20 29.6**	**+0.4**
LPAZ				LR	LR	01 26 57.7	
	comp=Z,61nm,19.5s,baz=318,slow=42						
TXAR	**Lajitas Array** 0.3nm,0.9s,mb3.0,baz=135,slow=10,SNR=2.3	**43.01**	**326**	P	**P**	**01 25 07.4**	**-2.1**
ANMO	**Albuquerque** 1.3nm,0.8s,mb4.0	**48.82**	**328**	*e*P	**P**	**01 25 55.8**	**+0.6**
SDCO	**Great Sand Dun** 1.1nm,0.9s,mb3.8	**50.52**	**331**	*e*P	**P**	**01 26 08.4**	**+0.4**
NVAR	**Mina Array Bea** 0.1nm,0.4s,mb3.2,baz=127,slow=5.8,SNR=2.5	**58.01**	**323**	P	**P**	**01 27 03.8**	**+1.2**
TORD	**Torodi Ar. Bea** 0.7nm,0.8s,mb3.6,baz=270,slow=5.5,SNR=6.2	**80.76**	**76**	P	**P**	**01 29 22.9**	**-0.7**
ILAR	**Eielson Array** 0.3nm,0.8s,mb3.6,baz=101,slow=2.8,SNR=3.2	**86.53**	**336**	P	**P**	**01 29 52.3**	**+0.2**
WRA	**Warramunga Arr** 1.1nm,0.8s,baz=135,slow=1.5,SNR=3.2	**139.68**	**230**	PKP	PKPdf	01 36 38.5	+0.4

SZGRF ***22*** *01:33:42.9,21.°95S×171.°44E,h33km,Southeast of Loyalty Islands*
NOU ***22*** *01:33:52.9±1.3,20.°78S×170.°47E,h10km,MD3.4,ML4.9, MS2.4*
ISCJB ***22*** *01:33:54.5±0.9,21.°46S±0.°06×170.°38E±0.°06,h122km±8km, mb4.9/49,Error ellipse: s-maj=9.6km s-min=8.6km az=159.7*
LDG ***22*** *01:33:56.2±0.2,21.°04S×170.°24E,h120km,Mb5.2/4, Ms4.0/5,Error ellipse: s-maj=19.5km s-min=3.7km az=154.0*
IDC ***22*** *01:33:56.8±1.1,21.°51S×170.°35E,h130km±8km,mb4.3/13, mb1 4.5/16,mb1mx4.5/20,mbtmp4.4/16,MS3.6/9, Ms1 3.6/9,ms1mx3.3/26,Error ellipse: s-maj=15.9km s-min=14.5km az=115.0*
GCMT ***22*** *01:33:57.9±0.3,21.°56S×170.°22E,h124km±3km,MW5.0, Moment Tensor Solution. s29,c30; s77,c106; Moment tensor: Scale 10^16Nm; Mrr1.02±.12; Mθθ0.80±.17; Mφφ-1.83±.15; Mrθ1.50±.10; Mrφ3.11±.13; Mθφ0.97±.10; Best double couple: M0 3.90000×10^16 NP1:φ=7.00000°, δ68.00000°,λ157.00000°. NP2:φs106.00000°,δ69.00000°, λ24.00000°. Principal axes: T 3.9500, Plg31.0000°, Azm327.0000°; N -0.0700, Plg59.0000°, Azm146.0000°; P -3.8900, Plg0.0000°, Azm236.0000°; Data Used: II G IU IC CN.*
BJI ***22*** *01:33:58.8,21.°02S×170.°57E,h153km,mB5.2/15, mb5.0/25*
MOS ***22*** *01:33:58.9±1.4,21.°37S×170.°28E,h153km,mb4.9/13, Error ellipse: s-maj=11.7km s-min=10.4km az=34.7*
NEIC ***22*** *01:34:00.1±1.0,21.°44S×170.°38E,h162km±9km,mb4.9/28, Error ellipse: s-maj=7.8km s-min=6.3km az=144.0*
BGS ***22*** *01:34:02.2±5.7,21.°44S×170.°38E,h162km,mb4.9(NEIC)*
ISC 22 01:33:55.3±0.9,21.°46S±0.°06×170.°41E±0.°06,h117km±8km, h159km±4.3km:pP-P,n400,σ1s05/100,mb4.9/49,95C-7D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAYA	**Yate Dam**	**3.34**	**258**	*e*P	**Pn**	**01 34 46.3**	**+0.2**
BAYA				*e*S	**Sn**	**01 35 23.4**	**-1.8**
LASL	**Noumea**	**3.67**	**257**	*e*S	**Sn**	**01 35 33.0**	**-0.1**
NORM	**Noumea**	**3.72**	**258**	*e*P	**Pn**	**01 34 50.9**	**-0.2**
NORM				*e*S	**Sn**	**01 35 33.7**	**-0.6**
NORM				AMP		01 35 39.8	
	comp=Z,558nm,9.9s						
DZM	**Mont Dzumac** comp=Z,262nm,0.2s	**3.73**	**260**	*e*Pn	**Pn**	**01 34 52.0**	**+0.8**
DZM				*e*Sn	**Sn**	**01 35 31.3**	**-3.2**
	comp=Z,411nm,0.3s						
DZM	**Mont Dzumac**	**3.73**	**260**	*e*P	**Pn**	**01 34 50.6**	**-0.6**
DZM				*e*S	**Sn**	**01 35 33.5**	**-1.0**
DZM				AMP		01 35 36.6	
	comp=Z,6μm,3.6s						
NOUC	**Port Laguerre**	**3.87**	**260**	*e*P	**Pn**	**01 34 52.9**	**-0.1**
NOUC				*e*S	**Sn**	**01 35 38.8**	**+1.1**
NOUC				AMP		01 35 53.9	
	comp=Z,292nm,23.5s						
MSVF	**Nonsavu** comp=Z,47nm,0.8s	**8.10**	**64**	*e*Pn	**Pn**	**01 35 54.7**	**+4.4**
OUZ	**Omahuta** comp=Z,56nm,0.8s	**13.99**	**169**	*e*Pn	**Pn**	**01 37 12.9**	**+4.5**
HNR	**Honiara** comp=Z,600nm,1.1s	**15.63**	**318**	*e*P	**Pn**	**01 37 31.3**	**+1.9**
HNR	**Honiara** comp=Z,26nm,0.3s,baz=224,slow=2.2,SNR=9.7	**15.63**	**318**	P	**Pn**	**01 37 31.8**	**+2.5**
HNR	**Honiara**	**15.63**	**318**	*e*P	**Pn**	**01 37 31.3**	**+2.0**
HNR				pmax	pmax		
	comp=Z,600nm,1.1s						
URZ	**Urewera** comp=Z,24nm,0.6s	**17.71**	**162**	*e*P	**Pn**	**01 37 54.9**	**+0.4**
URZ	**Urewera** comp=Z,2.7nm,0.3s,baz=333,slow=4.5,SNR=17	**17.71**	**162**	P	**Pn**	**01 37 55.1**	**+0.6**
URZ				LR	LR	01 42 12.1	
	comp=Z,168nm,21.9s,baz=136,slow=28						
EIDS	**Eidsvold** comp=Z,54nm,1.1s	**18.16**	**254**	*e*P	**P**	**01 38 01.0**	**+2.3**
AFI	**Afiamalu** comp=Z,0.5nm,0.3s,baz=270,slow=20,SNR=1.9	**18.55**	**69**	P	**P**	**01 38 05.5**	**+2.4**
ARMA	**Armidale**	**19.08**	**238**	*e*P	**P**	**01 38 11.0**	**+2.3**
ARMA	**Armidale** comp=Z,71nm,1.1s	**19.08**	**238**	*e*P	**P**	**01 38 11.1**	**+2.3**
RPZ	**Rata Peaks** comp=Z,11nm,1.0s,mb4.1,baz=22,slow=11,SNR=2.0	**22.20**	**179**	P	**P**	**01 38 42.1**	**+0.1**
RPZ				pP		01 39 06.7	
	comp=Z,26nm,1.0s,baz=342,slow=13,SNR=3.8						
RPZ				LR	LR	01 46 35.8	
	comp=Z,152nm,18.8s,baz=25,slow=34						
CTA	**Charters Tower** comp=Z,16nm,0.9s,mb4.3	**22.62**	**269**	*e*P	**P**	**01 38 46.4**	**-0.3**
CTA	**Charters Tower**	**22.62**	**269**	P	**P**	**01 38 46.4**	**-0.3**
CTA				pP		01 39 11.6	
CTA				LR	LR	01 46 27.2	
CTA	**Charters Tower** comp=Z,18nm,0.8s,mb4.4,baz=102,slow=11,SNR=13	**22.62**	**269**	P	P	**01 38 46.4**	**-0.3**
CTA				pP		01 39 11.6	
	comp=Z,7.2nm,0.7s,baz=100,slow=14,SNR=2.4						
CTA				LR	LR	01 46 27.2	
	comp=Z,180nm,20.5s,baz=258,slow=33						
CTAO	**Charters Tower** comp=Z,27nm,1.0s,mb4.5	**22.62**	**269**	*e*P	**P**	**01 38 47.0**	**+0.2**
CTAO	**Charters Tower**	**22.62**	**269**	*e*P	**P**	**01 38 47.0**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,27nm,1.0s,mb4.5						
CAN	**Canberra** comp=Z,50nm,0.8s,mb4.9	**23.29**	**229**	*e*P	**P**	**01 38 53.0**	**+0.4**
CAN	**Canberra**	**23.29**	**229**	*e*P	**P**	**01 38 53.0**	**+0.3**
CAN				pmax	pmax		
	comp=Z,50nm,0.8s,mb4.9						
PMG	**Port Moresby** comp=Z,96nm,0.8s,mb5.3	**25.37**	**295**	*e*P	**P**	**01 39 11.6**	**-0.3**
PMG	**Port Moresby**	**25.37**	**295**	*c i*P	**P**	**01 39 12.2**	**+0.4**
PMG				pmax	pmax		
	comp=Z,128nm,1.0s						
COEN	**Coen** comp=Z,174nm,1.2s,mb5.5	**26.97**	**282**	*e*P	**P**	**01 39 27.4**	**+1.2**
STKA	**Stephens Creek** comp=Z,6.5nm,0.7s,mb4.3,baz=99,slow=10,SNR=13	**27.68**	**242**	P	**P**	**01 39 32.0**	**-0.4**
STKA				pP	pP	01 39 58.6	+0.8
	comp=Z,5.6nm,0.8s,baz=30,slow=10,SNR=2.8						
STKA				LR	LR	01 48 28.3	
	comp=Z,146nm,20.3s,baz=27,slow=32						
ASAR	**Alice Springs** comp=Z,8.5nm,0.8s,mb4.6,baz=88,slow=9.7,SNR=53	**33.73**	**259**	P	**P**	**01 40 25.0**	**-0.7**
ASAR				pP	pP	01 40 54.0	+2.5
	comp=Z,3.9nm,0.9s,baz=90,slow=9.6,SNR=3.7						
ASAR				PcP	PcP	01 43 02.1	-0.7
	comp=Z,1.9nm,0.8s,baz=108,slow=4.2,SNR=6.6						
WRA	**Warramunga Arr** comp=Z,9.9nm,0.9s,mb4.7,baz=98,slow=9.3,SNR=17	**33.73**	**266**	P	**P**	**01 40 24.3**	**-1.5**
KAKA	**Kakadu** comp=Z,30nm,0.6s,mb5.4	**37.24**	**277**	*e*P	**P**	**01 40 54.9**	**-1.0**
KAKA	**Kakadu** comp=Z,94nm,0.6s,mb5.9	**37.24**	**277**	*e*P	**P**	**01 40 54.9**	**-1.0**
PPT	**Papeete** comp=Z,51nm,24.0s	**37.84**	**91**	*e*LR	LR	01 51 44.0	
FITZ	**Fitzroy Crossi** comp=Z,69nm,0.8s,mb5.4	**42.16**	**266**	⇑*i*P	**P**	**01 41 36.5**	**-0.1**
FITZ	**Fitzroy Crossi** comp=Z,83nm,21.8s,baz=101,slow=35	**42.16**	**266**	LR	LR	01 58 29.4	
MBWA	**Marble Bar** comp=Z,22nm,0.7s,mb5.0	**47.04**	**261**	*e*P	**P**	**01 42 14.7**	**-0.7**
KLBR	**Kellerberrin** comp=Z,18nm,0.8s,mb5.0	**47.79**	**246**	*e*P	**P**	**01 42 19.0**	**-2.0**
SBA	**Scott Base** comp=Z,13nm,1.1s,mb4.9	**56.47**	**181**	*e*P	**P**	**01 43 27.1**	**+2.6**
SBA	**Scott Base**	**56.47**	**181**	*e*P	**P**	**01 43 27.1**	**+2.6**
SBA				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
CASY	**Casey** comp=Z,20nm,1.4s,mb5.0	**58.54**	**204**	*e*P	**P**	**01 43 39.8**	**+0.5**
KKM	**Kota Kinabalu**	**59.74**	**291**	*e*P	**P**	**01 43 48.9**	**+0.6**
MJAR	**Matsushiro Arr** comp=Z,9.0nm,0.4s,mb5.0,baz=164,slow=6.0,SNR=25	**65.22**	**332**	P	**P**	**01 44 24.1**	**-0.1**
MAJO	**Matsushiro**	**65.22**	**332**	*e*P	**P**	**01 44 24.5**	**+0.2**
MAT	**Matsushiro**	**65.22**	**332**	P	**P**	**01 44 24.3**	**0.0**
YHNB	**Yanheng** comp=Z,86nm,1.1s,mb5.5	**66.13**	**311**	*e*P	**P**	**01 44 30.6**	**+0.2**
QSPA	**South Pole Qui** comp=Z,11nm,1.0s,mb4.6	**68.60**	**180**	*e*P	**P**	**01 44 45.3**	**+0.2**
KSRS	**Korea Array** comp=Z,11nm,1.0s,mb4.6,baz=139,slow=6.6,SNR=14	**70.95**	**325**	P	**P**	**01 45 00.5**	**+0.4**
KSRS				LR	LR	02 09 34.3	
	comp=Z,25nm,21.5s,baz=197,slow=30						
NJ2	**Nanjing**	**72.56**	**316**	*e*P	**P**	**01 45 10.3**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.1						
ATKA	**Atka Island**	**74.58**	**10**	*e*P	**P**	**01 45 20.3**	**-0.9**
WHN	**Wuhan**	**74.65**	**312**	*e*P	**P**	**01 45 22.4**	**+0.3**
PETK	**Petropavlovsk-** comp=Z,21nm,0.9s,mb4.9,baz=134,slow=6.4,SNR=27	**75.07**	**352**	P	**P**	**01 45 24.7**	**+0.7**
PETK				LR	LR	02 17 58.4	
	comp=Z,25nm,18.0s,baz=147,slow=35						
MAW	**Mawson** comp=Z,1.1nm,0.4s,mb3.9,baz=99,slow=16,SNR=4.8	**76.79**	**202**	P	**P**	**01 45 34.8**	**+1.0**
UNV	**Unalaska Valle** comp=Z,35nm,0.8s,mb5.1	**77.60**	**14**	*e*P	**P**	**01 45 37.1**	**-1.1**
GYA	**Guiyang**	**77.98**	**305**	P	**P**	**01 45 41.3**	**+0.3**
GYA				PcP	PcP	01 45 50.9	+0.6
GYA				pP	pP	01 46 22.5	+12
GYA				sP	sP	01 46 40.4	+17
GYA				PP	PP	01 48 41.0	+2.1
GYA				S	S	01 55 20.6	-4.8
GYA				SKS		01 55 34.5	
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
AKUT	**Akutan**	**78.03**	**14**	*e*P	**P**	**01 45 40.1**	**-0.5**
KLR	**Kul'dur**	**78.34**	**335**	*e*P	**P**	**01 45 39.2**	**-3.2**
KLR				pmax	pmax		
	comp=Z,40nm,1.8s,mb4.8						
BJI	**Beijing**	**79.35**	**

GTA sP sP 01 47 37.0 +15
GTA pmax pmax
comp=Z,8,0nm,1.1s,mb4.7
NVAR Mina Array Bea 89.45 48 P **P 01 46 39.5 +0.3**
comp=Z,2,6nm,0.8s,mb4.3,baz=228,slow=7.5,SNR=8.6
SONM Songino Array 89.65 323 P **P 01 46 39.9 +0.1**
comp=Z,10nm,1.0s,mb4.9,baz=139,slow=5.1,SNR=28
TRF Thorofare Moun 90.06 17 *eP* **P 01 46 39.7 -1.7**
comp=Z,4ium,1.0s
MCK McKinley 90.65 17 *eP* **P 01 46 43.2 -1.0**
comp=Z,3.7nm,0.7s,mb4.6
MCK McKinley 90.65 17 *eP* **P 01 46 43.2 -0.9**
MCK pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
WVOR Wild Horse Val 91.12 44 *eP* **P 01 46 46.5 -0.3**
comp=Z,2.0nm,0.9s,mb4.2
WVOR Wild Horse Val 91.12 44 *eP* **P 01 46 46.5 -0.3**
WVOR pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
COLA College 91.85 17 *eP* **P 01 46 48.7 -0.9**
comp=Z,5.1nm,0.7s,mb4.9
COLA College 91.85 17 *eP* **P 01 46 48.7 -0.9**
COLA pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
ILAR Eielson Array 92.02 17 P **P 01 46 48.9 -1.6**
comp=Z,2.1nm,0.6s,mb4.5,baz=236,slow=5.1,SNR=42
ILAR LR LR 02 25 32.1
comp=Z,29nm,18.6s,baz=127,slow=34
TUC Tucson 92.31 56 *eP* **P 01 46 51.8 -0.8**
comp=Z,1.8nm,0.9s,mb4.3
TUC Tucson 92.31 56 *eP* **P 01 46 51.8 -0.8**
TUC pmax pmax
comp=Z,2.0nm,0.9s,mb4.3
ZAK Zakamensk 92.73 324 *eP* **P 01 46 53.8 -0.3**
ZAK pmax pmax
comp=Z,5.0nm,1.3s,mb4.7
COLD Coldfoot 93.14 14 *eP* **P 01 46 55.6 0.0**
comp=Z,1.3nm,0.6s,mb4.4
TLY Talaya 93.20 325 *eP* **P 01 46 55.5 -0.7**
TLY pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
EGAK Eagle 93.66 19 *eP* **P 01 46 57.4 -0.7**
comp=Z,11nm,0.7s,mb5.3
DAWY Dawson 93.70 20 *eP* **P 01 46 58.0 -0.2**
TPAW Teton Pass 96.66 46 *eP* **P 01 47 10.1 -2.1**
comp=Z,2.0nm,0.5s,mb4.8
TXAR Lajitas Array 96.86 61 LR LR 02 19 52.0
comp=Z,49nm,21.0s,baz=185,slow=28
SDCO Great Sand Dun 98.38 53 *eP* **P 01 47 18.1 -2.0**
comp=Z,3.1nm,0.7s,mb5.0
WMQ Urumqi 99.53 313 *eP* Pdif 01 47 26.0 +0.9
WMQ pP pP 01 48 06.8 +11
WMQ sP sP 01 48 23.8 +16
WMQ pmax pmax
comp=Z,23nm,1.0s,mb5.8
WMQ pmax pmax
comp=Z,120nm,4.2s
WMQ LR LR
comp=N,28nm,19.0s
WMQ LR LR
comp=Z,29nm,20.1s
YKA Yellowknife Ar 102.13 27 P Pdif 01 47 37.4 +0.7
comp=Z,0.5nm,0.6s,baz=252,slow=4.8,SNR=4.8
YKA PKiKP PKiKP 01 51 56.5 -1.3
comp=Z,0.5nm,0.7s,baz=248,slow=1.4,SNR=3.6
MKAR Makanchi Array 104.08 315 Pdiff Pdif 01 47 46.4 +1.0
comp=Z,0.8nm,0.6s,baz=90,slow=6.9,SNR=7.4
MKAR PP PP 01 52 04.3 -0.4
comp=Z,1.4nm,0.9s,baz=107,slow=8.1,SNR=7.8
ZALV Zalesovo Beam 104.54 322 Pdiff Pdif 01 47 46.4 -1.0
comp=Z,0.5nm,0.5s,baz=158,slow=4.2,SNR=2.7
BRVK Borovoye 112.89 320 *d i* PKiKP PKiKP 01 52 16.9 -1.3
BRVK pmax pmax
comp=Z,3.0nm,1.7s
ABKAR Akbulak array 119.22 315 *e*PKPdf PKPdf 01 52 29.4 -1.1
ARU Arti 119.67 324 *e*PKPdf PKPdf 01 52 29.6 -1.5
ARU Arti 119.67 324 *e*PKIKP PKPdf 01 52 29.6 -1.5
KEV Kevo 126.97 345 *e*PKIKP PKPdf 01 52 42.8 -1.9
KEV pmax pmax
comp=Z,3.0nm,0.6s
KEV Kevo 126.97 345 *ep* PKPdf 01 52 42.8 -1.9
comp=Z,2.6nm,0.6s
ARCES ARCESS Array B 127.49 345 PKP PKPdf 01 52 44.6 -1.1
comp=Z,3.3nm,0.4s,baz=85,slow=2.4,SNR=91
JOF Joensuu 130.22 337 *e*PKIKP PKPdf 01 52 49.2 -1.9
JOF pmax pmax
comp=Z,5.0nm,0.6s
JOF Joensuu 130.22 337 *ep* PKPdf 01 52 49.2 -1.9
comp=Z,4.9nm,0.6s
OBN Obninsk 131.95 326 PKIKP PKPdf 01 52 53.0 -1.6
OBN pmax pmax
comp=Z,4.0nm,0.9s
KAF Kangasniemi 132.52 338 *e*PKIKP PKPdf 01 52 52.9 -2.6
KAF pmax pmax
comp=Z,4.0nm,0.7s
KAF Kangasniemi 132.52 338 *ep* PKPdf 01 52 52.9 -2.6
comp=Z,4.1nm,0.7s
FINES FINESS Array B 133.05 337 PKP PKPdf 01 52 53.9 -2.7
comp=Z,5.5nm,0.8s,baz=90,slow=2.2,SNR=16
FINES SKPbc SKPbc 01 56 11.9 -1.8
comp=Z,2.4nm,0.8s,baz=94,slow=4.3,SNR=5.3
MALT Malatya 135.62 303 *e*PKPdf PKPdf 01 53 01.3 -0.8
NOA NORSAR Array B 137.87 345 PKhKP PKPpre 01 52 58.7
comp=Z,1.0nm,0.8s,baz=31,slow=2.7,SNR=3.9
NOA PKP PKPdf 01 53 05.0 -0.5
comp=Z,1.2nm,0.6s,baz=30,slow=2.0,SNR=4.6
AKASG Malin Array Be 137.93 323 PKhKP PKPpre 01 53 01.2
comp=Z,2.5nm,0.8s,baz=66,slow=2.3,SNR=8.1
AKASG PKP PKPdf 01 53 05.0 -0.9
comp=Z,2.2nm,0.8s,baz=48,slow=1.7,SNR=8.2
KIEV Kiev 137.94 323 *e*PKPdf PKPdf 01 53 05.0 -0.9
BRTR Keskin Array B 139.03 306 PKhKP PKPpre 01 52 59.2
comp=Z,0.4nm,0.7s,baz=96,slow=2.9,SNR=3.5
BRTR PKP PKPdf 01 53 05.8 -2.5
comp=Z,0.6nm,0.7s,baz=150,slow=4.2,SNR=3.2
LVV L'vov 141.22 325 *e*PKIKP PKPdf 01 53 13.6 +1.6
BUR08 Bucovina Ar. S 141.75 321 *e*PKPdf PKPdf 01 53 13.0 0.0
BURAR Bucovina Array 141.75 321 ⇑*P* PKPdf 01 53 11.4 -1.6
BURAR Bucovina Array 141.75 321 ⇑*P* PKPdf 01 53 11.4 -1.6
KWP Kalwaria Pacla 142.03 326 *e*PKPpre PKPpre 01 53 07.9
KWP Kalwaria Pacla 142.03 326 ⇑PKHKP PKPpre 01 53 08.5
KWP Kalwaria Pacla 142.03 326 ⇑*P* PKPpre 01 53 08.5
MLR Muntele Rosu 142.35 318 ⇑*P* PKPdf 01 53 11.2 -2.9
MLR Muntele Rosu 142.35 318 ⇑*P* PKPdf 01 53 11.2 -2.9
UZH Uzhgorod 142.84 325 ⇑*P*KIKP PKPdf 01 53 11.8 -3.1
STHS Stebnicka Huta 142.92 326 *e*PKP PKPdf 01 53 14.0 -1.0
STHS Stebnicka Huta 142.92 326 *e*PKP PKPdf 01 53 14.0 -1.0
VOIR 142.93 318 ⇑*P* PKPdf 01 53 13.7 -1.4
VOIR 142.93 318 ⇑*P* PKPdf 01 53 13.7 -1.4
CRVS Cervenica-Dubn 143.12 325 *e*PKP PKPdf 01 53 13.5 -1.9
CRVS Cervenica-Dubn 143.12 325 *e*PKP PKPdf 01 53 13.5 -1.9
SZH Strazhica 143.34 315 P PKPdf 01 53 12.4 -3.5
MCD Coleburn Disti 143.63 354 ⇑*eP* PKPdf 01 53 12.3 -3.7
DRGR 143.64 322 ⇑*P* PKPdf 01 53 13.9 -2.4
DRGR 143.64 322 ⇑*P* PKPdf 01 53 13.9 -2.4
MDO Dochfour 143.86 355 *eP* PKPdf 01 53 13.6 -2.8
KPL Plockton 144.05 356 ⇑*eP* PKPdf 01 53 13.9 -2.8
KPL AMB AMB 01 53 15.1
comp=Z,28nm,1.3s
OKC Ostrava-Krasne 144.20 329 *e*PKIKP PKPdf 01 53 15.1 -2.1
OKC Ostrava-Krasne 144.20 329 *e*PKP PKPdf 01 53 15.1 -2.1
ALN Alexandroupoli 144.21 311 *eP* PKPdf 01 53 14.9 -2.6
BSEG Bad Segeberg 144.22 340 *e*PKPbc PKPdf 01 53 15.3 -1.8
GZR Gura Zlata 144.34 320 ⇑*P* PKPdf 01 53 16.0 -1.6
GZR Gura Zlata 144.34 320 ⇑*P* PKPdf 01 53 16.0 -1.6
KDZ Kurdzhali 144.35 312 P PKPdf 01 53 15.8 -2.0
KSP Ksiaz 144.35 332 *e*PKP PKPdf 01 53 16.2 -1.3
KSP Ksiaz 144.35 332 ⇑*i*PKIKP PKPdf 01 53 16.0 -1.5
KAR1 Arisaig 144.48 356 ⇑*eP* PKPdf 01 53 15.2 -2.3
MORC Moravsky Berou 144.53 329 *e*PKPdf PKPdf 01 53 16.2 -1.6
MORC Moravsky Berou 144.53 329 ⇑PKIKP PKPdf 01 53 16.5 -1.3
MORC Moravsky Berou 144.53 329 ⇑*P* PKPdf 01 53 16.5 -1.3
PSZ Piszkesteto 144.55 325 *e*PKPdf PKPdf 01 53 16.6 -1.3
PSZ Piszkesteto 144.55 325 ⇓PKIKP PKPdf 01 53 16.7 -1.2
PSZ Piszkesteto 144.55 325 ⇓*P* PKPdf 01 53 16.7 -1.2
PSZ Piszkesteto 144.55 325 ⇑*e*PKP PKPdf 01 53 16.7 -1.2
PRK Paraskevi 144.63 308 *eP* PKPdf 01 53 16.5 -1.8
SMG Samos 144.69 305 *eP* PKPdf 01 53 43.8 +25
DPC Dobruska-Polom 144.69 331 *e*PKIKP PKPdf 01 53 17.4 -0.7
DPC Dobruska-Polom 144.69 331 *e*PKP PKPdf 01 53 17.4 -0.7
DPC *ex* x 01 53 24.4
UPC Upice 144.72 331 *e*PKIKP PKPdf 01 53 17.4 -0.7
UPC Upice 144.72 331 *e*PKP PKPdf 01 53 17.4 -0.7
MPEP Malo Peshtene 144.74 316 P PKPdf 01 53 16.6 -1.8

VYHS Vyhne 144.74 327 *e*PKP PKPdf 01 53 17.8 -0.4
VYHS Vyhne 144.74 327 *e*PKP PKPdf 01 53 17.8 -0.4
RZN Rozhen 144.82 313 P PKPdf 01 53 17.4 -1.2
PGB Panagyurishte 144.82 315 P PKPdf 01 53 17.3 -1.2
KOLL Kolacno 144.91 327 *e*PKP PKPdf 01 53 18.8 +0.3
KOLL Kolacno 144.91 327 *e*PKP PKPdf 01 53 18.8 +0.3
BZS Buzias 144.91 321 ⇓*P* PKPdf 01 53 17.7 -0.9
BZS Buzias 144.91 321 ⇓*i*P PKPdf 01 53 17.7 -0.9
EBH Black Hill 144.97 354 ⇑*eP* PKPdf 01 53 16.6 -1.8
CHOS Chios island 145.07 307 *eP* PKPbc 01 53 18.2 -0.6
EAB Aberfoyle 145.10 355 ⇑*eP* PKPbc 01 53 17.3 -1.0
ESY Stoneypath 145.20 353 ⇑*i*P PKPbc 01 53 17.5 -1.1
BUD Budapest 145.28 325 ⇑*e*PKP PKPdf 01 53 19.1 -0.1
VRAC Vranov 145.30 330 ⇑*P* PKPdf 01 53 19.3 +0.2
VRAC Vranov 145.30 330 ⇑*i*P PKPdf 01 53 19.3 +0.2
PVCC Panska Ves 145.34 333 *e*PKIKP PKPdf 01 53 19.4 +0.2
PVCC Panska Ves 145.34 333 *e*PKP PKPdf 01 53 19.4 +0.2
BRG Berggiesshubel 145.34 334 *e*PKPbc PKPbc 01 53 19.3 +0.1
BRG Berggiesshubel 145.34 334 *i* PKP PKPdf 01 53 19.2 0.0
comp=Z,115nm,0.9s
BRG Berggiesshubel 145.34 334 *i* PKP2 PKPab 01 53 19.2 -0.3
BRG pmax pmax
comp=Z,69nm,0.9s
EAU Auchinoon 145.36 354 ⇑*eP* PKPdf 01 53 18.4 -0.6
CLL Collm 145.39 335 *e*PKPdf PKPdf 01 53 18.0 -1.2
CLL ⇑*i*PKPbc PKPbc 01 53 19.2 -0.2
comp=Z,109nm,0.9s
EBL Broad Law 145.39 353 ⇑*eP* PKPdf 01 53 18.2 -0.9
VTS Vitosha 145.44 315 ⇑*P* PKPdf 01 53 19.8 +0.2
VTS Vitosha 145.44 315 *P* PKPdf 01 53 19.6 0.0
VTS Vitosha 145.44 315 ⇑*iP* PKPdf 01 53 19.8 +0.2
VTS Vitosha 145.44 315 *P* PKPdf 01 53 19.3 -0.3
PGBU Glenifferbraes 145.49 355 ⇑*eP* PKPdf 01 53 17.9 -1.3
PGBU AMB AMB 01 53 19.8
comp=Z,79nm,1.7s
NRDL Niedersach Rie 145.49 339 *e*PKPbc PKPbc 01 53 18.5 -1.2
MMB Musomiste 145.53 313 *P* PKPdf 01 53 19.5 -0.3
NVR Nevrokopi 145.54 313 *eP* PKPdf 01 53 19.7 -0.1
MODS Modra-Piesok 145.60 328 *e*PKP PKPdf 01 53 20.7 +1.0
MODS Modra-Piesok 145.60 328 *e*PKP PKPdf 01 53 20.7 +1.0
PRU Pruhonice 145.75 332 *e*PKP2 PKPab 01 53 21.1 +0.1
PRU Pruhonice 145.75 332 *e*PKP PKPdf 01 53 21.1 +1.2
PRU *ex* x 01 53 25.6
ZST Bratislava 145.81 328 *e*PKP PKPdf 01 53 21.6 +1.5
ZST Bratislava 145.81 328 *e*PKP PKPdf 01 53 21.6 +1.5
SRS Serrai 145.82 313 *P* PKPdf 01 53 19.5 -0.8
TREC Trest 145.83 330 *e*PKP2 PKPab 01 53 20.7 -0.7
TREC Trest 145.83 330 *e*PKP PKPdf 01 53 20.7 +0.7
ESK Eskdalemuir 145.86 353 ⇑*eP* PKPdf 01 53 18.3 -1.6
ESK AMB AMB 01 53 19.3
comp=Z,31nm,1.0s
ESK Eskdalemuir 145.86 353 *e*PKPbc PKPbc 01 53 19.5 -1.2
ESK Eskdalemuir 145.86 353 *i* PKP2 PKPab 01 53 20.2 -1.1
OUR Ouranopolis 145.87 311 *P* PKPdf 01 53 19.6 -0.8
CLZ Clausthal 145.94 338 *e*PKPbc PKPbc 01 53 21.3 +0.2
ECK Cauldkaine Hil 145.98 353 *eP* PKPdf 01 53 20.0 -0.1
SOH Sokhos 146.11 312 *eP* PKPdf 01 53 20.3 -0.5
XAL Allendale 146.19 352 ⇑*eP* PKPdf 01 53 20.7 +0.2
PLG Polygyros 146.23 311 *eP* PKPdf 01 53 20.7 -0.3
PKSM Moragy 146.27 324 ⇑*P* PKPdf 01 53 21.8 +0.9
PKSM Moragy 146.27 324 ⇑*iP* PKPdf 01 53 21.8 +0.9
KNT Kendrikon 146.28 313 *P* PKPdf 01 53 21.2 +0.1
NPS Neapolis 146.30 302 *eP* PKPbc 01 53 22.5 -0.2
WERD Werda 146.34 335 *e*PKPbc PKPbc 01 53 22.3 0.0
GUNZ Gunzen 146.39 334 *e*PKPbc PKPbc 01 53 22.6 +0.2
IBBN Ibbenburen 146.41 341 *e*PKPbc PKPbc 01 53 22.3 -0.1
SOP Sopron 146.43 327 ⇑*eP* PKPbc 01 53 22.6 0.0
LAST Lasithi 146.43 302 *eP* PKPbc 01 53 22.7 -0.4
WERN Wernitzgruen 146.43 334 *e*PKPbc PKPbc 01 53 22.9 +0.3
VAY Valandovo 146.43 314 *e*PKP PKPdf 01 53 21.3 -0.1
NKC Novy Kostel 146.44 334 *e*PKP2 PKPab 01 53 22.6 -1.1
NKC Novy Kostel 146.44 334 *e*PKP PKPdf 01 53 22.6 +1.5
GAL1 Galloway 146.45 355 ⇑*eP* PKPdf 01 53 21.4 +0.5
GAL1 AMB AMB 01 53 22.1
comp=Z,56nm,0.9s
MOX Moxa 146.45 335 *e*PKP PKPbc 01 53 22.3 -0.3
comp=Z,34nm,1.1s
MOX Moxa 146.45 335 *e*PKPbc PKPbc 01 53 22.4 -0.2
CONA Conrad Observa 146.60 328 ⇑*i*PKPab PKPab 01 53 23.2 -1.2
comp=Z,43nm,1.2s,SNR=26
XDE Dent Fell 146.69 354 ⇑*eP* PKPdf 01 53 22.2 +0.9
GRG Griva 146.71 313 *P* PKPdf 01 53 22.0 +0.2
DIVS Divibare 146.71 320 *P* PKPdf 01 53 23.2 +1.5
KHC Kasperske Hory 146.80 332 *e*PKPbc PKPbc 01 53 23.2 -0.4
KHC Kasperske Hory 146.80 332 *e*PKP PKPbc 01 53 23.7 0.0
KHC *ex* x 01 53 28.9
PTL Penteli 146.81 307 *eP* PKPdf 01 53 23.1 +1.0
XOR Xorichti 146.81 310 *P* PKPdf 01 53 22.2 +0.2
SKO Skopje 146.89 315 *e*PKP PKPbc 01 53 24.1 -0.1
VLY Voula,Athens 146.93 307 *eP* PKPdf 01 53 23.0 +0.7
ATH Athens Observa 146.94 307 *eP* PKPdf 01 53 23.2 +0.9
GEC2 GERESS Array S 146.96 331 *e*PKPbc PKPbc 01 53 24.1 0.0
HPK Haverah Park 147.00 351 ⇑*eP* PKPdf 01 53 23.3 +1.4
HPK AMB AMB 01 53 23.9
comp=Z,64nm,1.3s
SIVA Sivas 147.00 302 *eP* PKPbc 01 53 24.7 0.0
LIT Litokhoron 147.01 312 *eP* PKPdf 01 53 22.0 -0.4
WET Wettzell 147.10 332 *e*PKPbc PKPbc 01 53 24.5 0.0
NAIG Nisos Aigina 147.19 307 *eP* PKPdf 01 53 22.8 +0.1
LKR Lokris 147.22 309 *eP* PKPdf 01 53 22.8 0.0
ARSA Arzberg 147.24 328 ⇑*i*PKPbc PKPbc 01 53 24.4 -0.6
comp=Z,8.8nm,0.8s,SNR=6.3
KRUS Krusevo 147.30 314 *e*PKP PKPdf 01 53 24.1 +1.3
GRA1 Grafenberg Arr 147.36 335 *e*PKPbc PKPbc 01 53 25.3 +0.1
GRF Grafenberg Arr 147.36 335 *e*PKPbc PKPbc 01 53 25.3 +0.1
VAM Vamos 147.37 303 *eP* PKPbc 01 53 25.3 -0.4
MOA Molln 147.43 330 ⇓*i*PKPbc PKPbc 01 53 25.0 -0.4
comp=Z,10nm,0.5s,SNR=12
LHO Holmfirth 147.43 351 ⇑*eP* PKPdf 01 53 24.0 +1.4
DID Didima 147.46 307 *eP* PKPdf 01 53 23.8 +0.6
DID Didima 147.46 307 *P* PKPdf 01 53 23.8 +0.6
LTK Loutraki 147.48 308 *eP* PKPdf 01 53 24.1 +0.9
LTK Loutraki 147.48 308 *P* PKPdf 01 53 24.1 +0.9
FNA Florina 147.48 313 *P* PKPbc 01 53 25.3 -0.5
AGG Agios Georgios 147.56 310 *eP* PKPdf 01 53 24.4 +1.1
KARN Karanos 147.60 303 *eP* PKPbc 01 53 26.0 -0.3
DSF Desfina 147.66 309 *P* PKPdf 01 53 24.8 +1.3
NEST Nestorio 147.87 313 *P* PKPbc 01 53 26.1 -0.8
SOKA Soboth 147.87 327 ⇑*i*PKPbc PKPbc 01 53 25.9 -0.7
comp=Z,33nm,1.2s
STNC Stoke 147.92 352 *P* PKPbc 01 53 26.1 -0.5
STNC AMB AMB 01 53 27.3
comp=Z,84nm,1.1s
STNC Stoke 147.92 352 ⇑*eP* PKPbc 01 53 26.1 -0.5
STNC AMB AMB 01 53 27.3
comp=Z,84nm,1.1s
KALE Kalithea 147.95 309 *P* PKPbc 01 53 26.0 -1.2
VLI Veliai 147.95 305 *eP* PKPbc 01 53 25.7 -1.5
TNS Taunus Mts 147.97 338 *e*PKPbc PKPbc 01 53 26.7 -0.1
GUR Goura 147.97 308 *eP* PKPbc 01 53 26.2 -1.0
GUR Goura 147.97 308 *P* PKPbc 01 53 26.2 -1.0
SISC Sisak 147.97 324 *P* PKPbc 01 53 27.1 +0.1
EVR Evrytania 147.98 310 *eP* PKPbc 01 53 27.0 -0.2
TRIZ Trizonia 148.00 309 *P* PKPbc 01 53 26.4 -0.9
KYTH Kithira 148.02 305 *eP* PKPbc 01 53 26.9 -0.5
EFP Efpalio 148.10 309 *eP* PKPbc 01 53 27.7 +0.1
LAKA Lakka 148.12 309 *P* PKPbc 01 53 27.2 -0.4
CWF Charnwood Fore 148.13 350 ⇑*eP* PKPbc 01 53 25.3 -1.9
CWF AMB AMB 01 53 26.4
comp=Z,56nm,0.9s
VLX Vlachokerasia 148.15 307 *eP* PKPbc 01 53 27.2 -0.5
OBKA Obir 148.23 328 ⇓*i*PKPbc PKPbc 01 53 26.7 -0.9
comp=Z,16nm,0.9s,SNR=9.8
JAN Janina 148.34 312 *eP* PKPbc 01 53 28.3 +0.2
TOD Tromm 148.35 337 PKP2 PKPbc 01 53 27.5 -0.3
KBA Koelnbreinsper 148.41 329 ⇑*i*PKPbc PKPbc 01 53 27.0 -1.0
comp=Z,34nm,1.1s,SNR=21
MEM Membach 148.43 341 PKPbc PKPbc 01 53 27.7 -0.3
FUR Furstenfeldbru 148.53 333 *e*PKPbc PKPbc 01 53 28.4 +0.1
FUR *e*PKPab PKPab 01 53 32.6 +0.5
FUR Furstenfeldbru 148.53 333 *e*PKP2 PKPab 01 53 32.6 +0.5
ITM Ithomi 148.55 307 *eP* PKPbc 01 53 27.9 -0.9
LJU Ljubljana 148.56 327 *e*PKPdf PKPdf 01 53 23.1 -1.6
LJU *e*PKPbc PKPbc 01 53 26.8 -1.7
RLS Riolos of Patr 148.56 309 *eP* PKPbc 01 53 28.7 -0.1
VISS Visnje 148.56 326 *e*PKPbc PKPbc 01 53 27.9 -0.6
ABH Alteburg 148.57 339 PKP PKPbc 01 53 28.2 -0.2
MYKA Terra Mystica 148.59 329 ⇑*i*PKPbc PKPbc 01 53 27.4 -1.1
comp=Z,22nm,0.6s
CRNS Crni Vrh 148.67 327 *e*PKPbc PKPbc 01 53 28.0 -0.8
STON Ston 148.78 319 *P* PKPdf 01 53 26.8 +1.6

PYL PYLOS 148.79 306 *eP* PKPbc 01 53 27.7 -1.7
BCLA Clavier 148.81 341 PKPbc PKPbc 01 53 28.4 -0.6
CADS Cadrg 148.83 328 *i* PKPbc PKPbc 01 53 27.9 -1.3
RUP Ruppelstein 148.88 339 PKP2 PKPbc 01 53 29.3 +0.1
VOY Vojsko 148.89 327 *e*PKPbc PKPbc 01 53 28.3 -1.0
VOY *e* 01 53 40.1
STU Stuttgart 148.89 336 *e*PKPbc PKPbc 01 53 29.1 -0.1
STU Stuttgart 148.89 336 *e*PKP2 PKPbc 01 53 29.0 -0.2
SNF Seneffe 149.03 343 PKPbc PKPbc 01 53 29.1 -0.4
WATA Walderalm 149.04 331 ⇑*i*PKPbc PKPbc 01 53 29.0 -0.7
comp=Z,12nm,0.5s,SNR=17
KEK Kerkira 149.04 313 *eP* PKPbc 01 53 28.3 -1.6
ABTA Abfaltersbach 149.05 330 *i* PKPbc PKPbc 01 53 28.5 -1.2
comp=Z,33nm,0.7s,SNR=16
HTR Trewern Hill 149.05 352 ⇑*eP* PKPbc 01 53 28.3 -1.2
WTTA Wattenberg 149.06 331 *i* PKiKP PKiKP 01 53 29.3 -1.6
comp=Z,59nm,1.1s,SNR=21
MCH1 Michaelchurch 149.10 352 ⇑*eP* PKPbc 01 53 28.6 -1.0
MCH1 AMB AMB 01 53 29.8
comp=Z,57nm,1.5s
VLS Valsamata 149.15 309 *eP* PKPbc 01 53 29.6 -0.6
TRI Trieste 149.18 327 *e*PKPbc PKPbc 01 53 27.7 -2.4
WLF Walferdange 149.21 340 PKPbc PKPbc 01 53 30.4 +0.4
WLF Walferdange 149.21 340 *e*PKPbc PKPbc 01 53 30.4 +0.4
WLF Walferdange 149.21 340 *e*PKP2 PKPbc 01 53 29.9 -0.1
GIVF Givet 149.24 342 ⇑*i*PKP1 PKPbc 01 53 29.8 -0.2
comp=Z,144nm,0.8s
LANF Langenberg 149.24 337 PKP PKPbc 01 53 29.9 -0.2
MOTA Moosalm 149.24 332 ⇑*i*PKPbc PKPbc 01 53 29.6 -0.6
comp=Z,66nm,1.0s,SNR=57
RETA Reutte 149.28 333 *i* PKPbc PKPbc 01 53 29.6 -0.7
comp=Z,26nm,1.1s,SNR=18
SQTA Sankt Quirin 149.29 332 ⇑*i*PKiKP PKiKP 01 53 30.0 -1.4
DOU Dourbes 149.31 342 PKPbc PKPbc 01 53 30.0 -0.2
NVLJ Novalja 149.37 324 P PKPbc 01 53 29.5 -1.0
SWN1 Swindon 149.40 350 P PKPbc 01 53 29.6 -0.8
SWN1 AMB AMB 01 53 30.4
comp=Z,153nm,0.8s
SWN1 Swindon 149.40 350 ⇑*eP* PKPbc 01 53 29.6 -0.8
SWN1 AMB AMB 01 53 30.4
comp=Z,153nm,0.8s
HGH Gray Hill 149.42 352 ⇑*eP* PKPbc 01 53 28.9 -1.6
BAIF Baives 149.45 342 ⇑*i*PKP1 PKPbc 01 53 30.3 -0.3
comp=Z,75nm,0.9s
WOL Wolverton 149.50 350 ⇑*eP* PKPbc 01 53 29.8 -0.9
WOL AMB AMB 01 53 30.4
comp=Z,84nm,0.8s
BFO Black Forest 149.59 336 *e*PKPbc PKPbc 01 53 30.4 -0.6
SPAK Spaichingen-Ko 149.60 335 PKP PKPbc 01 53 30.4 -0.6
FETA Feichten 149.65 332 *i* PKiKP PKiKP 01 53 31.0 -1.2
comp=Z,51nm,0.8s,SNR=26
DAVA Damuels 149.81 333 *i* PKiKP PKiKP 01 53 31.1 -1.3
comp=Z,45nm,1.2s,SNR=21
CDF Champ du Feu 149.91 337 ⇑*i*PKP1 PKPbc 01 53 31.3 -0.4
comp=Z,97nm,1.0s
FELD Feldberg im Sc 150.08 336 PKP PKPbc 01 53 31.4 -0.8
HEX Exmoor 150.11 353 ⇑*eP* PKPbc 01 53 31.4 -0.7
ECH Echery 150.11 337 PKP PKPbc 01 53 31.4 -0.9
ECH Echery 150.11 337 *e*PKHKP PKPbc 01 53 30.8 -1.5
HTL Hartland 150.26 353 ⇑*eP* PKPbc 01 53 31.3 -1.2
HTL AMB AMB 01 53 33.8
comp=Z,44nm,1.3s
MOF Molkenrain 150.43 337 PKP PKPbc 01 53 32.3 -0.7
THEF They Montfort 150.51 339 PKP PKPbc 01 53 32.7 -0.5
HINF Hinteralfeld 150.56 337 ⇑*i*PKP1 PKPbc 01 53 32.7 -0.6
comp=Z,57nm,0.8s
HAU Haudompre 150.58 338 ⇑*i*PKP1 PKPbc 01 53 32.8 -0.6
comp=Z,105nm,0.8s
HAU *e*MLR MLR
comp=Z,43nm,19.2s
MEZF Maizieres J'vi 150.58 340 ⇑*i*PKP1 PKPbc 01 53 33.3 -0.1
comp=Z,176nm,0.8s
BBS Basel-Blauen 150.61 336 PKIKP PKPbc 01 53 32.3 -1.2
TUE Stuetta 150.68 333 *e*PKPbc PKPbc 01 53 33.0 -0.7
SFTF Sexfontaines 150.85 340 ⇑*i*PKP1 PKPbc 01 53 33.6 -0.4
comp=Z,137nm,0.9s
LOMF Lomont 150.96 337 PKP PKPbc 01 53 33.8 -0.5
CCA1 Carnmenellis 151.13 354 *eP* PKPbc 01 53 32.7 -1.9
CCA1 AMB AMB 01 53 33.3
comp=Z,62nm,0.9s
TIP Timpagrande 151.36 314 *e*PKPbc PKPbc 01 53 34.8 -0.7
CUC Castrocucco 151.56 316 *e*PKPbc PKPbc 01 53 34.0 -1.9
AQU L'Aquila 151.62 322 *e*PKPbc PKPbc 01 53 35.0 -1.0
AQU L'Aquila 151.62 322 ⇑*iP* PKPbc 01 53 35.0 -1.0
JSA Saint Aubin 151.71 350 *eP* PKPbc 01 53 33.1 -2.9
JSA AMB AMB 01 53 35.0
comp=Z,37nm,1.1s
FLN La Foliniere 151.81 347 ⇑*i*PKP1 PKPbc 01 53 35.3 -0.9
comp=Z,71nm,0.8s
FLN *e*MLR MLR
comp=Z,29nm,17.8s
CABF La Chapelle 151.86 337 ⇑*i*PKP1 PKPbc 01 53 36.2 -0.2
comp=Z,40nm,0.7s
LDF La Druitiere 151.89 347 ⇑*i*PKP1 PKPbc 01 53 35.4 -1.0
comp=Z,13nm,0.5s
LOR Lormes 152.05 340 ⇑*i*PKP1 PKPbc 01 53 36.2 -0.6
comp=Z,49nm,0.8s
LOR *e*MLR MLR
comp=Z,32nm,20.0s
GRR Gorron 152.24 347 ⇑*i*PKP1 PKPbc 01 53 36.4 -0.8
comp=Z,63nm,0.9s
SSF Saint Saulge 152.34 341 ⇑*i*PKP1 PKPbc 01 53 36.8 -0.7
comp=Z,42nm,1.0s
CEL Celeste 152.41 313 *e*PKPbc PKPbc 01 53 36.7 -1.2
CEL *e*PKPab PKPab 01 53 48.2 -0.2
HYF Humbligny 152.42 342 *e*PKP1 PKPbc 01 53 37.3 -0.3
LPL La Plagne 152.53 335 ⇑*i*PKP1 PKPbc 01 53 37.8 -0.1
comp=Z,29nm,0.8s
LPG La Plagne 152.53 335 ⇑*i*PKP1 PKPbc 01 53 37.9 0.0
comp=Z,33nm,0.8s
SMF Signal de Mont 152.61 340 ⇑*i*PKP1 PKPbc 01 53 37.1 -1.0
comp=Z,34nm,1.2s
AVF Avril-sur Loir 152.63 340 ⇑*i*PKP1 PKPbc 01 53 36.9 -1.2
comp=Z,19nm,1.1s
SGMF Saint Gilles 152.68 350 ⇑*i*PKP1 PKPbc 01 53 37.1 -1.1
comp=Z,50nm,1.0s
ROSF Rostrenen 152.71 351 ⇑*i*PKP1 PKPbc 01 53 37.1 -1.1
comp=Z,26nm,0.9s
BGF Bois d'Agland 153.00 341 ⇑*i*PKP1 PKPbc 01 53 38.2 -0.7
comp=Z,21nm,0.8s
QUIF Quistinic 153.11 350 *e*PKP1 PKPbc 01 53 37.9 -1.2
MBDF Montbardon 153.16 334 ⇑*i*PKP1 PKPbc 01 53 38.6 -0.7
comp=Z,21nm,0.8s
PLDF La Plantade 153.28 339 PKP PKPbc 01 53 40.0 +0.5
ORIF Oris-en-Rattie 153.36 335 ⇑*i*PKP1 PKPbc 01 53 39.3 -0.5
comp=Z,30nm,0.7s
ORIF *e*MLR MLR
comp=Z,46nm,20.5s
AGO Saint Agoulin 153.36 340 PKP PKPbc 01 53 40.1 +0.4
SAOF Saorge 153.41 332 PKP PKPbc 01 53 37.9 -2.0
TCF Toulx Ste Croi 153.43 342 ⇑*i*PKP1 PKPbc 01 53 39.0 -0.9
comp=Z,27nm,1.1s
AUTN L'Aution 153.46 332 PKP PKPbc 01 53 39.7 -0.3
TOUF Mont Tournerai 153.53 332 PKP PKPbc 01 53 39.5 -0.7
SBF Sospel 153.56 332 ⇑*i*PKP1 PKPbc 01 53 39.2 -1.0
comp=Z,34nm,1.0s
LUCF Luceram 153.58 332 PKP PKPbc 01 53 39.7 -0.6
PYM Petit Puy Mans 153.67 340 PKP PKPbc 01 53 40.8 +0.4
REVF Revere 153.69 332 PKP PKPbc 01 53 39.7 -0.8
MFF Saint Martin d 153.77 345 ⇑*i*PKP1 PKPbc 01 53 39.8 -0.8
comp=

comp=Z,1.2nm,0.7s,baz=11,slow=3.2,SNR=11
DBIC Dimbokro 164.60 198 PKPab PKPab 01 54 41.0 -0.7
comp=Z,2.1nm,0.8s,baz=115,slow=7.6,SNR=3.3
DBIC Dimbokro 164.60 198 *e*PKP2 PKPab 01 54 41.0 -0.6
TAM Tamanrasset 165.93 278 *e*PKPdf PKPdf 01 53 46.2 -0.8
TAM *e*PKPab PKPab 01 54 48.0 +0.4
TOA0 Torodi Ar. Sit 166.42 234 *e*PKPab PKPab 01 54 48.8 -1.1
TORD Torodi Ar. Bea 166.42 234 PKP PKPdf 01 53 46.4 -1.2
TORD PKPab PKPab 01 54 47.8 -2.0
TORD Torodi Ar. Bea 166.42 234 PKP PKPdf 01 53 46.4 -1.2
comp=Z,1.3nm,1.0s,baz=76,slow=0.1,SNR=5.5
TORD PKPab PKPab 01 54 47.8 -2.0
comp=Z,1.1nm,0.9s,baz=134,slow=1.9,SNR=4.2

*ISCJB **22** 01:37:49.9±0.7,24°.83N±0°.04×122°.09E±0°.03, h100km±5km, Error ellipse: s-maj=6.5km s-min=3.7km az=163.6*
*JMA **22** 01:37:49.7±0.3,24°.86N×122°.11E, h106km, M2.7*
*TAP **22** 01:37:49.9,24°.86N×122°.06E, h103km±1km, ML3.6, D*
ISC 22 01:37:50.3±0.8, 24°.83N±0°.04×122°.09E±0°.03, h99km±6km, n32, σ0s68/60, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.20**	**333**	*i* P	**Pn**	**01 38 04.5**	**0.0**
	baz=338						
TWB1				S	**Sn**	**01 38 14.6**	**-0.3**
	baz=338						
NWF	**Wu-fen Shan**	**0.37**	**311**	P	**Pn**	**01 38 05.2**	**0.0**
	baz=309						
NWF				S	**Sn**	**01 38 16.4**	**+0.1**
	baz=309						
TWE	**Neicheng**	**0.40**	**255**	*e*P	**Pn**	**01 38 05.4**	**0.0**
	baz=247						
TWE				*e*S	**Sn**	**01 38 15.2**	**-1.3**
	baz=247						
TWA	**Mucha**	**0.48**	**288**	P	**Pn**	**01 38 05.6**	**-0.3**
	baz=285						
TWA				*e*S	**Sn**	**01 38 18.4**	**+0.8**
	baz=285						
ENA	**Nanau**	**0.51**	**219**	P	**Pn**	**01 38 06.6**	**+0.5**
	baz=213						
ENA				*e*S	**Sn**	**01 38 19.4**	**+1.5**
	baz=213						
ENTT	**Nioudou**	**0.51**	**249**	*e*P	**Pn**	**01 38 06.6**	**+0.5**
	baz=243						
TWY	**Chenhua**	**0.63**	**315**	P	**Pn**	**01 38 06.8**	**-0.3**
	baz=315						
TWY				*e*S	**Sn**	**01 38 19.3**	**-0.3**
	baz=315						
TWS1	**Kuangyinshan**	**0.67**	**294**	*e*P	**Pn**	**01 38 07.4**	**0.0**
	baz=292						
TWS1				*e*S	**Sn**	**01 38 20.0**	**-0.2**
	baz=292						
NSK	**Sanguang**	**0.68**	**257**	*i* P	**Pn**	**01 38 07.5**	**0.0**
	baz=253						
NSK				S	**Sn**	**01 38 20.1**	**-0.3**
	baz=253						
NNS	**Nan Shan**	**0.76**	**240**	P	**Pn**	**01 38 08.6**	**+0.4**
	baz=235						
NNS				S	**Sn**	**01 38 22.5**	**+0.9**
	baz=235						
TWD	**Chiawan**	**0.87**	**211**	P	**Pn**	**01 38 08.9**	**-0.5**
	baz=208						
TWD				S	**Sn**	**01 38 22.7**	**-0.9**
	baz=208						
YOJ	**Yonaguni jima**	**0.91**	**113**	P	**Pn**	**01 38 09.8**	**0.0**
YOJ				S	**Sn**	**01 38 25.3**	**+0.9**
NSTT	**Nanjuang**	**1.01**	**259**	*i* P	**Pn**	**01 38 10.5**	**-0.2**
	baz=256						
NSTT				*e*S	**Sn**	**01 38 25.7**	**-0.5**
	baz=256						
TWT	**Tachien**	**1.01**	**236**	*e*P	**Pn**	**01 38 11.4**	**+0.6**
	baz=233						
TWT				*e*S	**Sn**	**01 38 25.3**	**-0.9**
	baz=233						
WHF	**Hehuan Shan**	**1.01**	**228**	*i* P	**Pn**	**01 38 11.4**	**+0.5**
	baz=225						
WHF				*e*S	**Sn**	**01 38 26.5**	**+0.3**
	baz=225						
NSY	**Sanyi**	**1.28**	**252**	*e*P	**Pn**	**01 38 13.7**	**-0.1**
	baz=249						
NSY				*e*S	**Sn**	**01 38 31.6**	**0.0**
	baz=249						
TWQ1	**Liyutan**	**1.29**	**249**	*i* P	**Pn**	**01 38 13.8**	**-0.2**
	baz=246						
TWQ1				S	**Sn**	**01 38 31.6**	**-0.3**
	baz=246						
SMLT	**Sun Moon Lake**	**1.44**	**229**	*e*P	**Pn**	**01 38 15.2**	**-0.6**
	baz=227						
TYC	**Yuchr**	**1.45**	**231**	*e*P	**Pn**	**01 38 16.2**	**+0.2**
	baz=228						
TYC				*e*S	**Sn**	**01 38 35.9**	**+0.5**
	baz=228						
EHY	**Hungye**	**1.49**	**208**	*e*P	**Pn**	**01 38 16.6**	**+0.1**
	baz=206						
EHY				*e*S	**Sn**	**01 38 34.8**	**-1.5**
	baz=206						
IRIF	**Iriomote-Funau**	**1.57**	**108**	P	**Pn**	**01 38 17.2**	**-0.2**
IRIF				*e*S	**Sn**	**01 38 38.3**	**+0.3**
TWF1	**Yuli**	**1.64**	**206**	*e*P	**Pn**	**01 38 17.0**	**-1.3**
	baz=204						
TWF1				*e*S	**Sn**	**01 38 39.7**	**+0.2**
	baz=204						
YUS	**Yu-Shan**	**1.69**	**218**	*e*P	**Pn**	**01 38 20.2**	**+1.2**
	baz=216						
YUS				*e*S	**Sn**	**01 38 44.0**	**+3.3**
	baz=216						
ALS	**Alishan**	**1.76**	**222**	*e*S	**Sn**	**01 38 43.5**	**+1.3**
	baz=220						
CHN5	**Tsauling**	**1.78**	**227**	*e*P	**Pn**	**01 38 20.2**	**+0.1**
	baz=225						
CHN5				*e*S	**Sn**	**01 38 42.1**	**-0.5**
	baz=225						
JKRS	**Kuro-shima**	**1.84**	**108**	P	**Pn**	**01 38 21.1**	**+0.2**
JKRS				S	**Sn**	**01 38 44.4**	**+0.3**
CHKT	**Chengkung**	**1.84**	**201**	*e*S	**Sn**	**01 38 41.4**	**-2.7**
	baz=199						
JIJ	**Ishigaki jima**	**1.93**	**103**	P	**Pn**	**01 38 21.8**	**-0.1**
JIJ				S	**Sn**	**01 38 45.1**	**-0.9**
CHN4	**Tsaushan**	**2.01**	**223**	*e*P	**Pn**	**01 38 23.4**	**+0.4**
	baz=221						
CHN4				*e*S	**Sn**	**01 38 48.2**	**+0.3**
	baz=221						
WTP	**Ta-pu**	**2.08**	**221**	*e*P	**Pn**	**01 38 24.0**	**+0.2**
	baz=219						
WTP				*e*S	**Sn**	**01 38 49.7**	**+0.2**
	baz=219						
CHN1	**Nanshi**	**2.17**	**221**	*e*P	**Pn**	**01 38 24.7**	**-0.5**
	baz=220						
CHN1				*e*S	**Sn**	**01 38 51.8**	**+0.1**
	baz=220						
JTJ	**Tarama**	**2.38**	**94**	P	**Pn**	**01 38 28.4**	**+0.5**
JTJ				*e*S	**Sn**	**01 38 56.0**	**-0.6**

*MOS **22** 01:44:53.9±1.0,49°.66N×157°.06E, h10km, mb4.3/1, Error ellipse: s-maj=57.3km s-min=15.1km az=80.4*
KRSC 22 01:44:53.9±1.2, 49°.66N×157°.06E, h10km±10km, ML4.2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.19**	**330**	*e*PN	Pn	01 45 15.9	-0.7
SKR				*e*S	Sb	01 45 31.1	-0.9
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
SKR				smax			
	comp=N,350nm,0.2s						
SKR				smax			
	comp=E,590nm,0.2s						
SKR				smax			
	comp=Z,80nm,0.5s						
ALID	**Alaid**	**1.55**	**322**	*e*P	Pn	01 45 20.9	-0.6
ALID				*i* S	Sn	01 45 40.6	-1.1
MIPR	**Malaya Ipel'ka**	**2.63**	**356**	*e*P	Pn	01 45 37.8	+1.5
MIPR				*i* S	Sn	01 46 10.1	+1.9
PET	**Petropavlovsk**	**3.51**	**16**	*e*P	Pn	01 45 51.9	+3.4
PET				*i* S	Sn	01 46 34.0	+3.9
AVH	**Avacha**	**3.76**	**16**	*e*P	Pn	01 45 55.6	+3.7
NLC	**Nalytchevo**	**3.80**	**21**	*e*P	Pn	01 45 53.7	+1.3
SPN	**Mys Shipunski**	**3.91**	**27**	*e*P	Pn	01 45 56.9	+3.0
SPN				*i* S	Sn	01 46 42.3	+2.4
GNL	**Ganaly**	**4.08**	**7**	*e*P	Pn	01 45 59.6	+3.4
MKZ	**Mys Kozlova**	**5.68**	**29**	*e*P	Pn	01 46 20.3	+2.0
MKZ				*i* S	Sn	01 47 22.8	-0.7
KBTR	**Krutoberegovo**	**7.42**	**26**	*e*P	Pn	01 46 43.8	+1.7

IDC 22 01:50:38.3±2.5, 2°.48S×133°.41E, h0km, mb3.5/2, mb1 3.9/4, mb1mx3.7/17, mbtmp3.7/4, Error ellipse: s-maj=95.0km s-min=27.3km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**17.30**	**206**	P	Pn	01 54 40.0	-1.3
	0.4nm,0.3s,baz=32,slow=11,SNR=16						
FITZ				Sn	Sn	01 57 45.9	-8.7
	0.1nm,0.3s,baz=223,slow=19,SNR=3.0						
WRA	**Warramunga Arr**	**17.38**	**177**	P	Pn	01 54 43.1	+0.7
	0.5nm,0.3s,baz=357,slow=12,SNR=6.9						
ASAR	**Alice Springs**	**21.07**	**179**	P	P	01 55 24.6	+0.3
	0.6nm,0.3s,baz=4.8,slow=12,SNR=8.6						
MKAR	**Makanchi Array**	**66.44**	**324**	P	P	02 01 29.6	+0.1
	0.5nm,0.6s,baz=121,slow=8.3,SNR=5.8						

*IDC **22** 01:53:08.1±1.1,9°.53N×126°.73E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.8/22, mbtmp3.9/9, ML4.4/1, Error ellipse: s-maj=65.2km s-min=17.0km az=75.0*
*ISCJB **22** 01:53:13.9±2.2,9°.42N±0°.07×126°.4E±0°.2, h52km±19km, mb3.8/8, Error ellipse: s-maj=28.4km s-min=7.4km az=161.2*
*NEIC **22** 01:53:18.1±4.1,9°.28N×126°.23E, h74km±33km, Error ellipse: s-maj=76.5km s-min=10.3km az=67.0*
ISC 22 01:53:15.0±2.6, 9°.43N±0°.08×126°.4E±0°.2, h44km±23km, n16, σ0s91/21, mb3.8/8, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.96**	**292**	*e*P	**Pn**	**01 53 31.4**	**-0.6**
SCPH				*e*S	**Sn**	**01 53 43.4**	**-1.1**
CGP	**Cagayan de Oro**	**1.93**	**240**	⇓*i*P	**Pn**	**01 53 43.2**	**-2.2**
CGP				*i* S	**Sn**	**01 54 02.2**	**-6.2**
DAV	**Davao City (W)**	**2.47**	**199**	Pn	**Pn**	**01 53 53.6**	**+0.8**
DAV				Sn	**Sn**	**01 54 23.1**	**+1.3**
DAV	**Davao City (W)**	**2.47**	**199**	Pn	**Pn**	**01 53 53.6**	**+0.8**
	60nm,0.3s,baz=80,slow=17,SNR=3.1						
DAV				Sn	**Sn**	**01 54 23.1**	**+1.3**
	108nm,0.3s,baz=317,slow=22,SNR=6.8						
DMPH	**Davao City--Mi**	**2.49**	**201**	⇑*e*P	**Pn**	**01 53 57.3**	**+4.3**
DMPH				*e*S	**Sn**	**01 54 22.0**	**-0.1**
LLP	**Lapu-Lapu**	**2.55**	**291**	*e*P	**Pn**	**01 53 55.9**	**+2.0**
LLP				*e*S	**Sn**	**01 54 23.9**	**+0.3**
FITZ	**Fitzroy Crossi**	**27.36**	**182**	P	**P**	**01 58 55.6**	**-0.5**
	3.8nm,1.0s,mb3.9,baz=12,slow=9.3,SNR=2.4						
WRA	**Warramunga Arr**	**30.21**	**165**	P	**P**	**01 59 20.5**	**-1.0**
	0.3nm,0.3s,mb3.5,baz=351,slow=9.3,SNR=2.6						
ASAR	**Alice Springs**	**33.70**	**168**	P	**P**	**01 59 51.5**	**-0.5**
	0.5nm,0.3s,mb3.9,baz=350,slow=7.6,SNR=7.8						
STKA	**Stephens Creek**	**43.57**	**161**	P	**P**	**02 01 14.6**	**-0.2**
	1.5nm,0.5s,mb4.0,baz=346,slow=12,SNR=2.5						
MK31	**Makanchi Array**	**52.77**	**323**	*e*P	**P**	**02 02 26.0**	**+0.4**
MKAR	**Makanchi Array**	**52.77**	**323**	P	**P**	**02 02 25.9**	**+0.4**
	0.4nm,0.6s,mb3.5,baz=134,slow=6.2,SNR=4.3						
ZALV	**Zalesovo Beam**	**55.42**	**332**	P	**P**	**02 02 45.2**	**+0.4**
	0.4nm,0.4s,mb3.8,baz=116,slow=9.8,SNR=3.4						
ARCES	**ARCESS Array B**	**85.02**	**340**	P	**P**	**02 05 45.4**	**-0.1**
	0.5nm,0.7s,mb3.8,baz=82,slow=6.5,SNR=6.2						
FINES	**FINESS Array B**	**86.69**	**332**	P	**P**	**02 05 54.3**	**+0.5**
	1.7nm,0.9s,mb4.3,baz=64,slow=3.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	**120.69**	**291**	PKP	PKPdf	02 12 01.8	-1.3
	0.1nm,0.5s,baz=127,slow=2.0,SNR=4.0						

CASC 22 01:57:01.6±2.6, 11°.96N×87°.96W, h33km±28km, MD4.0, ML3.2, 1C-3D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**1.32**	**5**	*e*P	Pn	01 57 23.6	-0.1
CNCH				AML	AML	01 57 53.2	
	comp=Z,597nm,0.3s						
CNGN	**Cerro Negro**	**1.35**	**66**	*e*P	Pn	01 57 24.1	+0.1
CNGN				AML	AML	01 57 58.4	
	comp=Z,199nm,0.5s						
COPN	**Copaltepe**	**1.36**	**80**	⇓*e*P	Pn	01 57 24.1	-0.1
MOMN	**Momotombo**	**1.46**	**72**	*e*P	Pn	01 57 25.8	+0.2
VSM	**San Miguel**	**1.49**	**348**	*e*P	Pn	01 57 25.5	-0.6
BLLM	**Bellamira**	**1.50**	**350**	⇓*i*P	Pn	01 57 25.7	-0.6
BLLM				*e*S	Sn	01 57 48.1	+3.5
CSAN		**1.52**	**81**	*e*P	Pn	01 57 26.3	-0.2
XAVN	**Gruta Xavier**	**1.61**	**83**	*e*P	Pn	01 57 27.5	-0.1
TISN	**Laguna Tiscapa**	**1.66**	**83**	*e*P	Pn	01 57 28.7	+0.3
MGAN	**Managua**	**1.69**	**83**	*e*P	Pn	01 57 28.6	-0.2
HUEN		**1.79**	**78**	⇓*e*P	Pn	01 57 30.2	+0.1
CAHU	**Cacacuatique**	**1.82**	**352**	*e*P	Pn	01 57 30.8	+0.2
APON	**Apoyo**	**1.85**	**91**	*e*P	Pn	01 57 30.6	-0.4
LFRS	**El Faro**	**1.97**	**327**	*i* P	Pn	01 57 31.6	-1.2
SSN	**San Juan del S**	**2.16**	**107**	*e*P	Pn	01 57 34.8	-0.5
TGUH	**Tegucigalpa,Un**	**2.19**	**18**	⇑*e*P	Pn	01 57 36.2	+0.5
BOAB	**BOACO BROADBAN**	**2.29**	**77**	*e*P	Pn	01 57 36.3	-0.8
CGA2	**Cerro Gallo 2**	**3.94**	**119**	*e*P	Pn	01 58 01.9	+2.1
CGA2				*e*S	Sn	01 58 44.4	-0.4
PRS1	**Puriscal**	**4.08**	**118**	*e*P	Pn	01 58 04.8	+3.0
PRS1				*e*S	Sn	01 58 48.2	-0.2
LAJ	**Bijagual**	**4.31**	**119**	*e*P	Pn	01 58 02.1	-2.7
QCR	**Quepos**	**4.50**	**124**	*e*P	Pn	01 58 08.2	+0.7
URSC	**Urasca**	**4.62**	**117**	*e*P	Pn	01 58 11.0	+1.9
BUS	**Buena Vista**	**4.77**	**120**	*e*P	Pn	01 58 13.0	+1.8
ACR	**Cerro Adams**	**5.75**	**124**	*e*P	Pn	01 58 26.1	+1.4

IDC 22 02:15:25.1±12.0, 6°.79S×127°.20E, h200km±138km, mb3.1/1, mb1 3.0/4, mb1mx2.9/17, mbtmp2.9/4, MS3.2/1, Ms1 3.2/1, ms1mx2.5/14, Error ellipse: s-maj=118.2km s-min=42.7km az=44.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.35**	**188**	P	Pn	02 18 02.2	+0.4
	0.1nm,0.3s,baz=32,slow=9.5,SNR=3.6						
WRA	**Warramunga Arr**	**14.80**	**153**	P	Pn	02 18 45.3	+0.4
	0.1nm,0.3s,baz=325,slow=12,SNR=2.3						
WRA				S	S	02 21 34.2	+4.7
	0.7nm,0.3s,baz=332,slow=22,SNR=4.6						
ASAR	**Alice Springs**	**17.98**	**160**	P	P	02 19 19.4	-1.4
	0.1nm,0.3s,baz=335,slow=10,SNR=4.0						
CBIJ	**Chichi jima**	**36.67**	**23**	LR	LR	02 34 26.9	
	comp=Z,39nm,19.8s,baz=162,slow=31						
MKAR	**Makanchi Array**	**66.55**	**328**	P	P	02 25 53.8	+0.3
	0.2nm,0.4s,baz=111,slow=7.9,SNR=3.6						

*ISCJB **22** 02:15:51.0±0.8, 8°.0N±0°.1×59°.2E±0°.1, h10km, mb3.9/19, MS3.3/2, Error ellipse: s-maj=17.4km s-min=15.4km az=168.0*
*IDC **22** 02:15:50.9±1.1, 7°.97N×59°.18E, h0km, mb3.7/13, mb1 3.9/13, mb1mx3.8/24, mbtmp3.7/13, MS3.3/2, Ms1 3.3/2, ms1mx2.8/25, Error ellipse: s-maj=28.8km s-min=20.7km az=37.0*
*NEIC **22** 02:15:52.5±0.7, 7°.97N×59°.18E, h10km, mb4.2/5, Error ellipse: s-maj=15.8km s-min=14.4km az=175.0*
ISC 22 02:15:52.7±0.8, 8°.0N±0°.1×59°.2E±0°.1, h10km, n28, σ0s82/27, mb3.9/19, MS3.3/2, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**23.65**	**249**	*e*P	**P**	**02 21 04.7**	**+0.1**
	2.8nm,1.1s,mb3.6						
BRTR	**Keskin Array B**	**39.02**	**328**	P	**P**	**02 23 20.6**	**+1.1**
	1.1nm,0.8s,mb3.6,baz=153,slow=9.3,SNR=10						
BR131	**Keskin Array S**	**39.02**	**328**	*e*P	**P**	**02 23 20.0**	**+0.5**
	1.1nm,0.7s,mb3.7						
ABKAR	**Akbulak array**	**41.16**	**1**	*e*P	**P**	**02 23 37.8**	**+0.7**
	4.4nm,0.7s,mb4.2						
AKTK	**Aktyubinsk**	**42.34**	**359**	P	**P**	**02 23 47.0**	**+0.1**
AKTO	**Aktyubinsk**	**42.34**	**359**	P	**P**	**02 23 47.0**	**+0.1**
	0.9nm,0.8s,mb3.5,baz=193,slow=11,SNR=5.5						
MKAR	**Makanchi Array**	**43.46**	**23**	P	**P**	**02 23 56.0**	**+0.2**
	0.2nm,0.4s,mb3.2,baz=215,slow=6.8,SNR=2.8						
KURK	**Kurchatov**	**45.57**	**17**	P	**P**	**02 24 09.7**	**-3.0**
KURK	**Kurchatov**	**45.57**	**17**	P	**P**	**02 24 09.7**	**-3.0**
	0.2nm,0.2s,mb3.7,baz=201,slow=7.6,SNR=2.2						
BOSA	**Boshof**	**48.92**	**221**	LR	LR	02 46 32.5	
	comp=Z,73nm,18.1s,MS3.7,baz=336,slow=38						
BUR08	**Bucovina Ar. S**	**48.94**	**330**	*e*P	**P**	**02 24 39.7**	**+0.6**
AKASG	**Malin Array Be**	**49.31**	**335**	P	**P**	**02 24 41.1**	**-0.8**
	0.2nm,0.3s,mb3.6,baz=149,slow=7.5,SNR=6.8						
KIEV	**Kiev**	**49.31**	**335**	*e*P	**P**	**02 24 41.3**	**-0.5**
	3.8nm,0.8s,mb4.5						
ZALV	**Zalesovo Beam**	**50.30**	**19**	P	**P**	**02 24 49.8**	**+0.5**
	0.5nm,0.3s,mb4.0,baz=232,slow=6.6,SNR=4.5						
ZALV				LR	LR	02 46 08.5	
	comp=Z,12nm,18.2s,MS3.0,baz=262,slow=36						
MORC	**Moravsky Berou**	**54.21**	**328**	*e*P	**P**	**02 25 18.0**	**-0.5**
	3.8nm,1.0s,mb4.3						
SONM	**Songino Array**	**56.30**	**36**	P	**P**	**02 25 34.5**	**+1.0**
	0.3nm,0.6s,mb3.5,baz=235,slow=5.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**56.64**	**280**	P	**P**	**02 25 36.9**	**+0.3**
TORD	**Torodi Ar. Bea**	**56.64**	**280**	P	**P**	**02 25 36.9**	**+0.3**
	0.8nm,0.8s,mb3.8,baz=100,slow=6.6,SNR=5.3						
LPL	**La Plagne**	**58.51**	**319**	*e*P	**P**	**02 25 51.0**	**+1.8**
FINES	**FINESS Array B**	**58.71**	**342**	P	**P**	**02 25 48.4**	**-1.9**
	3.6nm,1.0s,mb4.4,baz=119,slow=14,SNR=3.3						
CDF	**Champ du Feu**	**59.34**	**322**	*e*P	**P**	**02 25 54.4**	**-0.6**
	21nm,1.2s,mb4.7						
CABF	**La Chapelle**	**59.35**	**320**	*e*P	**P**	**02 25 54.8**	**-0.2**
	23nm,0.9s,mb4.9						
ESDC	**Sonseca Array**	**64.34**	**310**	P	**P**	**02 26 28.4**	**-0.4**
ESDC	**Sonseca Array**	**64.34**	**310**	P	**P**	**02 26 28.4**	**-0.4**
	0.5nm,0.6s,mb3.7,baz=85,slow=5.3,SNR=5.6						
ARCES	**ARCESS Array B**	**65.24**	**348**	P	**P**	**02 26 34.2**	**+0.1**
ARCES	**ARCESS Array B**	**65.24**	**348**	P	**P**	**02 26 34.2**	**+0.1**
	1.4nm,0.7s,mb4.1,baz=163,slow=6.1,SNR=6.9						
WRA	**Warramunga Arr**	**78.94**	**112**	P	**P**	**02 27 57.0**	**-0.1**
	0.7nm,0.4s,mb4.0,baz=298,slow=4.5,SNR=3.2						
ASAR	**Alice Springs**	**79.39**	**116**	P	**P**	**02 27 59.3**	**-0.2**
	0.5nm,0.7s,mb3.6,baz=289,slow=4.7,SNR=6.1						

IDC 22 02:16:07.4±3.0, 8°.59N×126°.90E, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.7/21, mbtmp4.0/5, Error ellipse: s-maj=284.5km s-min=20.5km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**29.28**	**166**	P	P	02 22 13.5	+2.0
	1.2nm,0.4s,baz=344,slow=9.0,SNR=4.0						
ASAR	**Alice Springs**	**32.78**	**168**	P	P	02 22 42.4	0.0
	1.4nm,0.3s,baz=343,slow=7.0,SNR=24						
STKA	**Stephens Creek**	**42.62**	**161**	P	P	02 24 03.5	-2.1
	1.0nm,0.4s,baz=328,slow=9.5,SNR=3.3						
MKAR	**Makanchi Array**	**53.74**	**323**	P	P	02 25 31.4	0.0
	0.8nm,0.5s,baz=129,slow=8.1,SNR=7.6						
KURK	**Kurchatov**	**57.80**	**326**	P	P	02 26 00.6	+0.1
	0.7nm,0.6s,baz=128,slow=6.5,SNR=5.1						

CASC 22 02:16:14.5±2.4, 8°.99N×84°.17W, h8km, MD3.9, 1C-5D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QCR	**Quepos**	**0.43**	**0**	⇓*i*P	Pg	02 16 23.5	+0.6
BUS	**Buena Vista**	**0.69**	**36**	⇓*e*P	Pg	02 16 28.0	+0.1
LAJ	**Bijagual**	**0.87**	**3**	⇓*e*P	Pg	02 16 30.4	-0.9
LAJ				*e*S	Sg	02 16 43.1	+0.5
URSC	**Urasca**	**0.92**	**25**	⇓*e*P	Pg	02 16 32.0	-0.3
PRS1	**Puriscal**	**1.00**	**352**	⇓*e*P	Pg	02 16 31.8	-1.9
ACR	**Cerro Adams**	**1.04**	**109**	*e*P	Pg	02 16 33.4	-1.2
ACR				*e*S	Sg	02 16 48.4	+0.2
CGA2	**Cerro Gallo 2**	**1.06**	**344**	⇑*e*P	Pg	02 16 34.3	-0.6
CGA2				*e*S	Sg	02 16 48.4	-0.3
JCR	**Jicaral**	**1.26**	**313**	*e*P	Pn	02 16 35.9	-2.6
CTCR	**Cotoan**	**1.39**	**94**	*e*P	Pn	02 16 39.3	-1.0
CTCR				*e*S	Sb	02 16 58.6	-0.1
BRU2	**Volcan**	**1.47**	**97**	*e*P	Pn	02 16 40.7	-0.6
BRU2				*e*S	Sn	02 16 59.9	-0.9
TBS2		**1.50**	**97**	*e*P	Pn	02 16 46.9	+5.1
TBS2				*e*S	Sn	02 17 08.0	+6.4
JTS	**JuntasAbangare**	**1.51**	**329**	*e*P	Pn	02 16 40.8	-1.0
CUI	**Cuipilapa**	**1.93**	**329**	*i* P	Pn	02 16 46.5	-1.1
CUI				*i* S	Sn	02 17 17.6	+5.6
LIM1	**Limonal**	**2.01**	**328**	*i* P	Pn	02 16 47.8	-0.9
GPS3	**Bodega del ICE**	**2.11**	**326**	*i* P	Pn	02 16 48.1	-2.1
NY14	**Universidad de**	**2.13**	**321**	*i* P	Pn	02 16 49.5	-0.9
GB1A	**Borinquen Arri**	**2.19**	**326**	*i* P	Pn	02 16 51.0	-0.1

*ISCJB **22** 02:22:38.5±0.3, 23°.77N±0°.02×121°.78E±0°.02, h32km±2km, Error ellipse: s-maj=3.7km s-min=2.6km az=136.4*
*TAP **22** 02:22:38.8, 23°.80N×121°.72E, h33km, ML3.5, D*
*JMA **22** 02:22:39.4±0.4, 23°.84N×121°.81E, h73km, M3.0*
ISC 22 02:22:38.9±0.3, 23°.77N±0°.02×121°.76E±0°.02, h32km±2km, n38, σ0s84/72, 1C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEGC	**Jichi Village**	**0.21**	**252**	*e*P	**Pb**	**02 22 45.6**	**+0.2**
	baz=240						
TEGC				*e*S	**Sb**	**02 22 51.2**	**+1.3**
	baz=240						
HWA	**Hwalien**	**0.25**	**326**	P	**Pb**	**02 22 46.0**	**+0.1**
	baz=331						
HWA				S	**Sb**	**02 22 52.0**	**+1.4**
	baz=331						
ESF	**Shoufeng Towns**	**0.25**	**293**	*e*P	**Pb**	**02 22 46.4**	**+0.5**
	baz=290						
ESF				*e*S	**Sb**	**02 22 51.5**	**+0.9**
	baz=290						
ESL	**Shilin**	**0.30**	**278**	⇓*i*P	**Pb**	**02 22 46.3**	**-0.3**
	baz=273			

TWQ1					S		Sn	02 23 12.3	+1.0
	baz=302								
NSTT	**Nanjuang**	**1.10**	**321**		P		**Pn**	**02 22 58.6**	**+0.6**
	baz=321								
NSTT					S		**Sn**	**02 23 12.4**	**+0.3**
	baz=321								
WGK	**Gukeng**	**1.10**	**266**	*eP*			**Pn**	**02 22 57.6**	**-0.4**
	baz=263								
WGK					*eS*		**Sn**	**02 23 13.0**	**+0.9**
	baz=263								
STYT	**Tauyuan**	**1.10**	**237**	*eP*			**Pn**	**02 22 57.9**	**-0.2**
	baz=234								
STYT					*eS*		**Sn**	**02 23 11.8**	**-0.3**
	baz=234								
NSY	**Sanyi**	**1.11**	**305**	*eP*			**Pn**	**02 22 58.8**	**+0.5**
	baz=305								
TWG	**Pinlang**	**1.14**	**214**	*eP*			**Pn**	**02 22 59.3**	**+0.7**
	baz=211								
TWG					*eS*		**Sn**	**02 23 11.8**	**-1.3**
	baz=211								
CHN4	**Tsaushan**	**1.15**	**249**	*eP*			**Pn**	**02 22 59.3**	**+0.6**
	baz=246								
CHN4					*eS*		**Sn**	**02 23 14.6**	**+1.3**
	baz=246								
WTP	**Ta-pu**	**1.17**	**244**	P			**Pn**	**02 22 59.5**	**+0.4**
	baz=241								
WTP					S		**Sn**	**02 23 15.2**	**+1.3**
	baz=241								
TWA	**Mucha**	**1.21**	**353**	*eS*			**Sn**	**02 23 14.9**	**0.0**
	baz=354								
TWB1	**Santiao Chiao**	**1.25**	**10**	*eP*			**Pn**	**02 23 00.5**	**+0.4**
	baz=11								
TWB1					*eS*		**Sn**	**02 23 16.3**	**+0.5**
	baz=11								
CHN1	**Nanshi**	**1.27**	**243**	P			**Pn**	**02 23 01.2**	**+0.8**
	baz=240								
CHN1					*eS*		**Sn**	**02 23 17.9**	**+1.5**
	baz=240								
NWF	**Wu-fen Shan**	**1.29**	**1**	*eP*			**Pn**	**02 23 02.0**	**+1.3**
	baz=2.0								
NWF					*eS*		**Sn**	**02 23 18.5**	**+1.6**
	baz=2.0								
YOJ	**Yonaguni jima**	**1.33**	**59**	P			**Pn**	**02 23 01.6**	**+0.3**
YOJ					S		**Sn**	**02 23 18.0**	**0.0**
SSD	**Sandimen**	**1.45**	**226**	*eP*			**Pn**	**02 23 03.8**	**+0.9**
	baz=223								
SSD					*eS*		**Sn**	**02 23 22.4**	**+1.5**
	baz=223								
IRIF	**Iriomote-Funau**	**1.89**	**72**	P			**Pn**	**02 23 09.5**	**+0.6**
IRIF					*eS*		**Sn**	**02 23 32.3**	**+0.7**
HATJ	**Hateruma jima**	**1.90**	**81**	P			**Pn**	**02 23 09.3**	**+0.3**
HATJ					S		**Sn**	**02 23 31.6**	**-0.2**
JKRS	**Kuro-shima**	**2.11**	**77**	P			**Pn**	**02 23 12.6**	**+0.6**
JKRS					S		**Sn**	**02 23 37.9**	**+0.8**
JIJ	**Ishigaki jima**	**2.26**	**74**	P			**Pn**	**02 23 13.9**	**-0.1**
JIJ					S		**Sn**	**02 23 40.0**	**-0.8**
JTJ	**Tarama**	**2.83**	**72**	*eS*			**Sn**	**02 23 53.3**	**-1.4**

*ISCJB **22** 02:23:58.6±0.6, 62.°9S±0.°1×158.°3W±0.°2, h10km, mb4.6/13, MS4.4/13, Error ellipse: s-maj=16.2km s-min=12.6km az=14.4*
*IDC **22** 02:23:58.3±0.6, 62.°79S×157.°99W, h0km, mb4.5/9, mb1 4.6/9, mb1mx4.5/12, mbtmp4.5/9, MS4.4/13, Ms1 4.4/13, ms1mx4.4/13, Error ellipse: s-maj=29.5km s-min=16.3km az=19.0*
*NEIC **22** 02:24:00.0±0.4, 62.°84S×158.°21W, h10km, mb4.9/6, Error ellipse: s-maj=14.7km s-min=10.7km az=195.0*
*GCMT **22** 02:24:05.4±0.2, 63.°02S×158.°12W, h14km±1km, MW5.2, Moment Tensor Solution. s64,c95; s78,c122; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.24±.17; $M_{\theta\theta}$8.24±.22; $M_{\phi\phi}$-7.00±.18; $M_{r\theta}$-0.76±.36; $M_{\theta\phi}$2.63±.18; $M_{\phi r}$2.06±.43; Best double couple: $M_0$8.40000×10^{16} NP1:$\phi_1$217.00000°, δ76.00000°, λ-169.00000°. NP2:$\phi_2$124.00000°, δ80.00000°, λ-14.00000°. Principal axes: T 8.7000, Plg2.0000°, Azm171.0000°; N -0.5800, Plg72.0000°, Azm269.0000°; P -8.1200, Plg17.0000°, Azm80.0000°; Data Used: II IU IC G CN.*

ISC 22 02:24:01.0±0.5, 63.°05S±0.°09×158.°3W±0.°2, h10km, n45, σ1.9/12, mb4.6/13, MS4.4/13, 2D, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SBA	**Scott Base**	**18.38**	**203**	*eP*		**Pn**	**02 28 16.1**	**+0.7**
	65nm,1.1s							
RPZ	**Rata Peaks**	**26.21**	**303**	LR		LR	02 37 37.4	
	comp=Z,476nm,18.3s,MS4.1,baz=133,slow=31							
QSPA	**South Pole Qui**	**27.07**	**180**	P		**P**	**02 29 44.6**	**+1.5**
	28nm,0.9s,mb4.8,baz=63,slow=4.0,SNR=76							
QSPA				LR		LR	02 38 37.5	
	comp=Z,815nm,21.3s,MS4.3,baz=243,slow=32							
URZ	**Urewera**	**28.95**	**317**	LR		LR	02 38 30.7	
	comp=Z,990nm,20.6s,MS4.4,baz=165,slow=30							
CASY	**Casey**	**35.89**	**224**	*eP*		**P**	**02 31 01.4**	**+0.8**
	11nm,1.0s,mb4.8							
PMSA	**Palmer Station**	**37.82**	**136**	*eP*		**P**	**02 31 16.8**	**-0.2**
	38nm,1.1s,mb5.0							
VNA1	**Neumayer--Stat**	**44.95**	**166**	*e*		**P**	**02 32 13.0**	**-2.4**
VNA1				*e*			02 32 20.0	
PPT	**Papeete**	**45.83**	**12**	*eS*		**S**	**02 39 09.4**	**+2.8**
	424nm,25.5s							
PPT				*e*LQ			02 42 45.7	
	2μm,30.2s							
PPT				*e*LR		LR	02 44 56.1	
	2μm,27.2s,baz=192							
PPT	**Papeete**	**45.83**	**12**	LR		LR	02 46 33.3	
	comp=Z,647nm,18.7s,MS4.6,baz=188,slow=30							
MAIT	**Maitri**	**46.27**	**175**	*eP*		**P**	**02 32 25.8**	**-0.1**
MAW	**Mawson**	**46.32**	**200**	P		**P**	**02 32 27.4**	**+1.2**
	5.8nm,1.0s,mb4.5,baz=169,slow=8.4,SNR=8.5							
MAW				LR		LR	02 51 00.2	
	comp=Z,338nm,18.2s,MS4.3,baz=38,slow=35							
DZM	**Mont Dzumac**	**47.35**	**313**	*e*LR		LR	02 45 56.1	
	857nm,22.6s							
SYO	**Syowa Base**	**47.62**	**189**	*e*P		**P**	**02 32 35.0**	**-1.4**
SYO	**Syowa Base**	**47.62**	**189**	*e*P		**P**	**02 32 40.6**	**+4.2**
STKA	**Stephens Creek**	**48.64**	**281**	P		**P**	**02 32 45.4**	**+0.6**
	2.1nm,0.5s,mb4.4,baz=196,slow=7.4,SNR=4.0							
STKA				LR		LR	02 48 37.1	
	comp=Z,435nm,19.5s,MS4.5,baz=303,slow=30							
PLCA	**Paso Flores**	**53.67**	**110**	*eP*		**P**	**02 33 21.7**	**-0.6**
	12nm,1.2s,mb4.7							
PLCA				LR		LR	02 51 06.3	
PLCA	**Paso Flores**	**53.67**	**110**	P		**P**	**02 33 21.7**	**-0.7**
	4.3nm,0.8s,mb4.4,baz=213,slow=11,SNR=12							
PLCA				LR		LR	02 51 06.3	
	comp=Z,377nm,21.0s,MS4.4,baz=45,slow=30							
TAOE	**Nuku Hiva Isla**	**55.66**	**22**	*eS*		**S**	**02 41 24.6**	**+1.6**
	193nm,26.9s							
TAOE				*e*LR		LR	02 49 43.4	
	756nm,24.5s,baz=209							
CTA	**Charters Tower**	**56.87**	**292**	P		**P**	**02 33 45.0**	**-0.7**
CTA	**Charters Tower**	**56.87**	**292**	P		**P**	**02 33 45.0**	**-0.7**
	1.2nm,0.3s,mb4.5,baz=188,slow=7.1,SNR=2.0							
ASAR	**Alice Springs**	**59.14**	**278**	P		**P**	**02 34 00.1**	**-1.4**
	2.7nm,1.1s,mb4.2,baz=146,slow=8.4,SNR=8.4							
TRQA	**Tornquist**	**59.53**	**114**	*eP*		**P**	**02 34 04.9**	**+0.8**
	9.6nm,1.0s,mb4.8							
WRA	**Warramunga Arr**	**62.19**	**281**	P		**P**	**02 34 21.6**	**-0.8**
	1.7nm,0.9s,mb4.2,baz=158,slow=5.6,SNR=4.9							
WRA				LR		LR	02 58 08.5	
	comp=Z,412nm,19.2s,MS4.6,baz=140,slow=33							
CPUP	**Villa Florida**	**71.63**	**112**	P		**P**	**02 35 20.8**	**-1.6**
	3.2nm,0.6s,mb4.4,baz=205,slow=4.4,SNR=12							
CPUP				LR		LR	03 03 02.6	
	comp=Z,201nm,19.4s,MS4.4,baz=193,slow=33							
LPAZ	**La Paz**	**75.69**	**98**	P		**P**	**02 35 46.2**	**-0.1**
	7.7nm,1.1s,mb4.6,baz=174,slow=2.2,SNR=16							
LPAZ				LR		LR	03 02 10.4	
	comp=Z,99nm,19.2s,MS4.1,baz=343,slow=30							
ATAH	**Atahualpa**	**79.08**	**84**	LR		LR	03 03 21.9	
	comp=Z,358nm,21.6s,MS4.7,baz=222,slow=30							
OTAV	**Otavalo**	**85.58**	**81**	*eP*		**P**	**02 36 40.3**	**+0.9**
	29nm,1.5s,mb5.3							
BOSA	**Boshof**	**88.62**	**183**	LR		LR	03 11 14.8	
	comp=Z,429nm,20.2s,MS4.9,baz=171,slow=32							
ROSC	**El Rosal**	**91.54**	**82**	LR		LR	03 10 34.8	
	comp=Z,74nm,18.3s,MS4.2,baz=198,slow=31							
ILAR	**Eielson Array**	**127.79**	**6**	PKP		PKPdf	02 43 02.8	-2.0
	1.9nm,0.8s,baz=229,slow=1.8,SNR=8.9							
TORD	**Torodi Ar. Bea**	**128.19**	**155**	PKP		PKPdf	02 43 06.5	-0.7
	0.5nm,1.0s,baz=208,slow=3.4,SNR=3.0							
MK31	**Makanchi Array**	**143.20**	**273**	*e*PKPdf		PKPdf	02 43 33.7	-0.3
MKAR	**Makanchi Array**	**143.20**	**273**	PKhKP		PKPpre	02 43 30.0	
	0.6nm,0.9s,baz=107,slow=4.8,SNR=3.5							
AML	**Almayashu**	**143.50**	**260**	*e*PKPdf		PKPdf	02 43 33.3	-1.4
EKS2	**Erkin-Say**	**143.88**	**261**	*e*PKPdf		PKPdf	02 43 33.0	-2.4
ZALV	**Zalesovo Beam**	**147.13**	**284**	PKPbc		PKPbc	02 43 40.9	-1.8
ZALV	**Zalesovo Beam**	**147.13**	**284**	PKPbc		PKPbc	02 43 40.9	-1.8
	0.6nm,0.4s,baz=108,slow=3.3,SNR=3.2							
KURK	**Kurchatov**	**147.72**	**275**	*e*PKPbc		PKPbc	02 43 42.5	-2.0
KEST	**Kesra**	**151.60**	**158**	PKPbc		PKPbc	02 43 53.3	-1.3
	1.7nm,1.1s,baz=284,slow=4.2,SNR=2.4							
ESDC	**Sonseca Array**	**152.00**	**135**	PKPbc		PKPbc	02 43 55.3	0.0
	1.2nm,0.6s,baz=279,slow=0.7,SNR=7.8							
ESDC						PKPab	PKPab	02 44 01.4	-3.3
	2.3nm,0.8s,baz=231,slow=1.4,SNR=14								
BRTR	**Keskin Array B**	**155.58**	**203**	PKP		PKPdf	02 43 57.8	+3.9
	0.3nm,0.8s,baz=167,slow=3.7,SNR=2.7								
BRTR						PKPab	PKPab	02 44 20.8	+0.8
	0.8nm,0.8s,baz=166,slow=6.4,SNR=4.6								
MTLF	**Montlieu**	**157.24**	**141**	*e*PKP2		PKPab	02 44 27.5	+0.5
	6.6nm,1.0s								
ORIF	**Oris-en-Rattie**	**159.69**	**146**	*e*PKP2		PKPab	02 44 39.2	+1.7
	14nm,1.1s								
LPG	**La Plagne**	**160.45**	**147**	*e*PKP2		PKPab	02 44 40.6	-0.2
LPL	**La Plagne**	**160.47**	**147**	*e*PKP2		PKPab	02 44 40.8	-0.1
	20nm,1.4s								

*DDA **22** 02:34:07.5, 38.°56N×41.°73E, h4km±6km, Md2.9*
*ISCJB **22** 02:34:08.5±0.7, 38.°55N±0.°03×41.°72E±0.°04, h4km±6km, Error ellipse: s-maj=5.0km s-min=4.8km az=15.8*
*CSEM **22** 02:34:08.9±0.3, 38.°57N×41.°71E, h2km, MD2.9, Error ellipse: s-maj=7.5km s-min=5.2km az=8.0*
*ISK **22** 02:34:10.1, 38.°59N×41.°65E, h12km, MD3.0*

ISC 22 02:34:08.8±0.6, 38.°55N±0.°03×41.°72E±0.°04, h5km±6km, n20, σ1.9/00/32, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
TATV	**Tatvan**	**0.43**	**96**	⇑*iP*		**Pg**	**02 34 16.5**	**-0.7**
TATV				*i*	S	**Sg**	**02 34 22.5**	**-0.3**
TATV	**Tatvan**	**0.43**	**96**	*i*	P	**Pg**	**02 34 16.5**	**-0.7**
TATV				*i*	S	**Sg**	**02 34 22.5**	**-0.3**
BNGL	**BINGOL**	**0.60**	**312**	⇓*iP*		**Pg**	**02 34 19.4**	**-0.9**
BNGL				*i*	S	**Sg**	**02 34 28.4**	**+0.4**
BEST	**Besiri**	**0.75**	**208**	*eP*		**Pg**	**02 34 23.4**	**+0.2**
BEST				*eS*		**Sg**	**02 34 34.0**	**+1.1**
BINT	**Bingol**	**1.01**	**289**	*e*PG		**Pg**	**02 34 28.7**	**+0.4**
BINT				*e*SG		**Sg**	**02 34 42.9**	**+1.4**
BINT	**Bingol**	**1.01**	**289**	*e*Pg		**Pg**	**02 34 28.7**	**+0.4**
BINT				*e*Sg		**Sg**	**02 34 42.9**	**+1.5**
ERZM	**Erzurum**	**1.38**	**349**	*eP*		**Pn**	**02 34 34.7**	**0.0**
ERZM				*eS*		**Sg**	**02 34 51.8**	**-1.3**
ERZM	**Erzurum**	**1.38**	**349**	*eP*		**Pn**	**02 34 34.7**	**0.0**
ERZM				*eS*		**Sg**	**02 34 51.8**	**-1.3**
EZM	**Erzurum**	**1.38**	**349**	*e*PN		**Pn**	**02 34 35.9**	**+1.2**
EZM				*e*SN		**Sn**	**02 34 52.6**	**-0.8**
DIYA	**Diyarbakir**	**1.41**	**244**	*eP*		**Pn**	**02 34 34.5**	**-0.6**
DIYA				*eS*		**Sg**	**02 34 53.3**	**-0.7**
DIYA	**Diyarbakir**	**1.41**	**244**	*eP*		**Pn**	**02 34 34.5**	**-0.6**
DIYA				*eS*		**Sg**	**02 34 53.3**	**-0.7**
AGRB	**Hanur-Agry**	**1.42**	**44**	*e*PN		**Pn**	**02 34 36.2**	**+0.9**
AGRB	**Hanur-Agry**	**1.42**	**44**	*e*Pn		**Pn**	**02 34 36.3**	**+1.0**
MARD	**Mardin**	**1.44**	**211**	*eP*		**Pn**	**02 34 33.9**	**-1.7**
MARD				*eS*		**Sb**	**02 34 53.3**	**-1.5**
PTK	**Pertek**	**1.85**	**281**	*e*PN		**Pn**	**02 34 41.7**	**+0.5**
PTK	**Pertek**	**1.85**	**281**	*e*Pn		**Pn**	**02 34 41.7**	**+0.5**
SVRC	**Sivrice-ELAZID**	**1.90**	**265**	*e*PN		**Pn**	**02 34 42.2**	**+0.3**
SVRC	**Sivrice-ELAZID**	**1.90**	**265**	*e*Pn		**Pn**	**02 34 42.2**	**+0.3**
CUKT	**Cukurca**	**1.98**	**131**	*e*PN		**Pn**	**02 34 45.4**	**+2.3**
CUKT	**Cukurca**	**1.98**	**131**	*e*Pn		**Pn**	**02 34 45.4**	**+2.4**

IDC 22 02:52:31.6±1.9, 22.°46S×179.°41W, h0km, mb4.1/4, mb1 4.4/4, mb1mx4.0/15, mbtmp4.1/4, Error ellipse: s-maj=155.6km s-min=30.2km az=160.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
STKA	**Stephens Creek**	**35.77**	**246**	P		P	02 59 32.7	+0.2
	1.5nm,0.4s,baz=85,slow=11,SNR=3.8							
ASAR	**Alice Springs**	**42.82**	**259**	P		P	03 00 31.2	-0.3
	2.1nm,0.5s,baz=95,slow=8.1,SNR=28							
WRA	**Warramunga Arr**	**43.06**	**264**	P		P	03 00 33.5	0.0
	2.5nm,0.3s,baz=102,slow=8.2,SNR=18							
TXAR	**Lajitas Array**	**89.21**	**58**	P		P	03 05 29.8	+0.2
	0.2nm,0.8s,baz=229,slow=8.2,SNR=2.8							

*NEIC **22** 02:55:56.7±0.5, 24.°06N×121.°32E, h10km, ML4.1(TAP), Error ellipse: s-maj=11.1km s-min=6.0km az=112.0*
NEIC Recorded [5 TAP] in Nan-t'ou, [3 TAP] in Hua-lien, [2 TAP] in T'ai-chung and [1 TAP] in I-lan.
*IDC **22** 02:55:56.4±1.6, 23.°77N×120.°80E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/22, mbtmp3.8/6, Error ellipse: s-maj=166.7km s-min=19.6km az=64.0*
*TAP **22** 02:55:57.3, 24.°11N×121.°30E, h5km, ML4.0, B*
*ISCJB **22** 02:55:58.1±0.2, 24.°11N±0.°01×121.°32E±0.°02, h5km±2km, mb3.8/6, Error ellipse: s-maj=2.6km s-min=2.0km az=22.0*

ISC 22 02:55:58.3±0.2, 24.°11N±0.°01×121.°33E±0.°02, h10km±2km, n68, σ1.9/13/103, mb3.8/6, 4C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
WHF	**Hehuan Shan**	**0.07**	**305**	⇑*iP*		**Pg**	**02 55 59.4**	**-1.2**
	baz=318							
TWT	**Tachien**	**0.20**	**317**	⇑*iP*		**Pg**	**02 56 01.9**	**-0.7**
	baz=315							
TWT				*i*	S	**Sg**	**02 56 04.4**	**-1.0**
	baz=315							
TWD	**Chiawan**	**0.25**	**96**	⇓*iP*		**Pg**	**02 56 03.7**	**+0.2**
	baz=98							
TWD				*i*	S	**Sg**	**02 56 07.6**	**+0.8**
	baz=98							
NACB	**Ninganchiao**	**0.26**	**75**	*e*Pn		**Pg**	**02 56 03.2**	**-0.4**
HWA	**Hwalien**	**0.29**	**117**	⇓*iP*		**Pg**	**02 56 04.6**	**+0.5**
	baz=117							
HWA				*i*	S	**Sg**	**02 56 09.4**	**+1.5**
	baz=117							
ESF	**Shoufeng Towns**	**0.29**	**145**	*eP*		**Pg**	**02 56 03.7**	**-0.4**
	baz=156							
ESF				*eS*		**Sg**	**02 56 08.4**	**+0.4**
	baz=156							
ESL	**Shilin**	**0.31**	**161**	*i*	P	**Pg**	**02 56 04.3**	**-0.2**
	baz=158							
ESL				*i*	S	**Sg**	**02 56 08.5**	**-0.1**
	baz=158							
NNS	**Nan Shan**	**0.34**	**7**	*i*	P	**Pg**	**02 56 04.3**	**-0.7**
	baz=13							
NNS				*i*	S	**Sg**	**02 56 08.9**	**-0.6**
	baz=13							
EHP	**Heping Village**	**0.43**	**62**	*eP*		**Pg**	**02 56 06.6**	**-0.1**
	baz=65							
EHP				*eS*		**Sg**	**02 56 13.9**	**+1.4**
	baz=65							
TEGC	**Jichi Village**	**0.44**	**154**	*eP*		**Pg**	**02 56 08.2**	**+1.2**
	baz=161							
TEGC				*eS*		**Sg**	**02 56 16.0**	**+3.2**
	baz=161							
SSLB	**Suanglung**	**0.47**	**227**	*e*Pn		**Pg**	**02 56 05.7**	**-1.7**
TYC	**Yuchr**	**0.47**	**245**	⇓*iP*		**Pg**	**02 56 06.6**	**-1.0**
	baz=241							
TYC					S	**Sg**	**02 56 12.2**	**-1.7**
	baz=241							
ENA	**Nanau**	**0.50**	**50**	*i*	P	**Pg**	**02 56 07.7**	**-0.3**
	baz=42							
ENA				*eS*		**Sg**	**02 56 14.8**	**+0.2**
	baz=42							
TWQ1	**Liyutan**	**0.56**	**296**	⇓*iP*		**Pg**	**02 56 09.2**	**-0.1**
	baz=294							
TWQ1					S	**Sg**	**02 56 16.9**	**+0.3**
	baz=294							
YHNB	**Yeheng**	**0.56**	**5**	*e*Pn		**Pg**	**02 56 08.2**	**-1.1**
NSK	**Sanguang**	**0.57**	**3**	P		**Pg**	**02 56 08.7**	**-0.7**
	baz=354							
ENTT	**Nioudou**	**0.57**	**22**	*eP*		**Pg**	**02 56 08.7**	**-0.8**
	baz=24							
TCU	**Taichung**	**0.59**	**274**	⇓P		**Pg**	**02 56 10.2**	**+0.3**
	baz=262							
TCU				*eS*		**Sg**	**02 56 18.3**	**+0.6**
	baz=262							
EHY	**Hungye**	**0.60**	**180**	⇑*iP*		**Pg**	**02 56 09.2**	**-0.8**
	baz=178							
EHY				*eS*		**Sg**	**02 56 17.9**	**+0.2**
	baz=178							
NSTT	**Nanjuang**	**0.60**	**331**	*i*	P	**Pg**	**02 56 09.8**	**-0.2**
	baz=332							
NSTT				*i*	S	**Sg**	**02 56 17.5**	**-0.4**
	baz=332							
NSY	**Sanyi**	**0.60**	**301**	*eP*		**Pg**	**02 56 10.3**	**+0.3**
	baz=301							
WNT	**Mingjian**	**0.63**	**249**	*eP*		**Pg**	**02 56 10.5**	**0.0**
	baz=246							
WNT				*eS*		**Sg**	**02 56 19.5**	**+0.7**
	baz=246							
TWE	**Neicheng**	**0.69**	**27**	P		**Pg**	**02 56 11.2**	**-0.5**
	baz=41							
TWE				S		**Sg**	**02 56 21.8**	**+1.1**
	baz=41							
YUS	**Yu-Shan**	**0.70**	**209**	*eP*		**Pg**	**02 56 10.3**	**-1.6**
	baz=208							
YULB	**Yu-li**	**0.71**	**182**	*e*Pn		**Pn**	**02 56 10.8**	**-3.7**
YULB				*e*Sn		**Sg**	**02 56 21.7**	**+0.3**
TWF1	**Yuli**	**0.75**	**182**	⇓*iP*		**Pg**	**02 56 11.9**	**-0.9**
	baz=180							
TWF1				*eS*		**Sg**	**02 56 22.2**	**-0.5**
	baz=180							
ALS	**Alishan**	**0.76**	**219**	⇓*iP*		**Pg**	**02 56 12.1**	**-1.0**
	baz=224							
ALS				*eS*		**Sg**	**02 56 24.7**	**+1.8**
	baz=224							
ILA	**Ilan**	**0.76**	**30**	*eP*		**Pg**	**02 56 13.1**	**0.0**
	baz=31							
HSN	**Hsinchu**	**0.77**	**335**	*eP*		**Pg**	**02 56 14.3**	**+1.2**
	baz=339							
HSN				*eS*		**Sg**	**02 56 25.4**	**+2.2**
	baz=339							
CHN5	**Tsauling**	**0.78**	**230**	⇓*iP*		**Pg**	**02 56 13.2**	**-0.2**
	baz=227							
CHN5				S		**Sg**	**02 56 24.2**	**+0.6**
	baz=227							
WGK	**Gukeng**	**0.81**	**239**	*eP*		**Pg**	**02 56 13.9**	**-0.1**
	baz=238							
NCU	**National Centr**	**0.87**	**352**	*eP*		**Pg**	**02 56 16.3**	**+1.2**
	baz=352							
NCU				*eS*		**Sg**	**02 56 30.6**	**+4.2**
	baz=352							
TATO	**Taipei**	**0.88**	**10**	*e*Pn		**Pn**	**02 56 15.1**	**-1.7**
TWA	**Mucha**	**0.90**	**15**	*eP*		**Pg**	**02 56 15.6**	**-0.1**
	baz=17							
TWA				*eS*		**Sg**	**02 56 29.5**	**+2.0**
	baz=17							
TAP1	**Taipei**	**0.95**	**11**	*eP*		**Pg**	**02 56 16.9**	**+0.3**
	baz=3.0							
ELDTW	**Lidau**	**0.96**	**197**	*eP*		**Pg**	**02 56 15.2**	**-1.5**
	baz=185							
WTCT	**Ta-ch'eng**	**0.99**	**256**	*eP*		**Pg**	**02 56 17.2**	**-0.1**
	baz=254							
WTCT				*eS*		**Sg**	**02 56 30.8**	**+0.7**
	baz=254							
TWS1	**Kuangyinshan**	**0.99**	**5**	⇑P		**Pg**	**02 56 18.2**	**+0.7**
	baz=4.0							
CHKT	**Chengkung**	**1.00**	**178**	*eP*		**Pg**	**02 56 17.2**	**-0.4**
	baz=162							
CHN4	**Tsaushan**	**1.01**	**222**	⇓*iP*		**Pg**	**02 56 17.4**	**-0.4**
	baz=220							
CHN4				*eS*		**Sg**	**02 56 33.5**	**+2.7**
	baz=220							
CHY	**Chiayi**	**1.02**	**234**	*eP*		**Pg**	**02 56 18.0**	**-0.1**
	baz=232							
CHY				*eS*		**Sg**	**02 56 31.8**	**+0.4**
	baz=232							
TPUB	**Ta-pu**	**1.02**	**219**	*e*Pn		**Pn**	**02 56 16.7**	**-2.1**
TPUB				*e*Sn		**Sn**	**02 56 32.9**	**-0.2**
NWF	**Wu-fen Shan**	**1.05**	**23**	*eP*		**Pg**	**02 56 18.1**	**-0.4**
	baz=22							
STYT	**Tauyuan**	**1.07**	**209**	*eP*		**Pg**	**02 56 17.3**	**-1.7**
	baz=202							
WTP	**Ta-pu**	**1.08**	**217**	⇓P		**Pg**	**02 56 18.1**	**-0.9**
	baz=227							
WTP				*eS*		**Sg**	**02 56 34.6**	**+1.6**
	baz=227							
TWB1	**Santiao Chiao**	**1.08**	**34**	*eP*		**Pg**	**02 56 18.6**	**-0.5**
	baz=36							
TWB1				*eS*		**Sg**	**02 56 32.9**	**-0.4**
	baz=36							
CHN1	**Nanshi**	**1.17**	**219**	*eP*		**Pg**	**02 56 19.8**	**-0.9**
	baz=229							
CHN1				*eS*		**Sb**	**02 56 37.0**	**+1.0**
	baz=229							
TWY	**Chenhua**	**1.19**	**12**	*eP*		**Pb**	**02 56 22.9**	**+1.9**
	baz=22							
CHN8	**Yiju**	**1.27**	**234**	*eP*		**Pn**	**02 56 21.2**	**-1.0**
	baz=232							
TWG	**Pinlang**	**1.30**	**190**	*e*Pn		**Pn**	**02 56 20.9**	**-1.6**
TWG				*e*Sn		**Sn**	**02 56 37.5**	**-2.5**
TWG	**Pinlang**	**1.30**	**190**	*eP*		**Pn**	**02 56 21.3**	**-1.3**
	baz=191							
TTN	**Taitung**	**1.36**	**187**	*eP*		**Pn**	**02 56 21.4**	**-1.9**
	baz=175							
SCLT	**Jiali**	**1.39**	**228**	*eP*		**Pn**	**02 56 24.1**

TLL				*i* S		**Sb**	**03 32 55.4**	**+0.1**
TLL	**Tololo Astrono**	**1.15**	**56**	⇑ *i* P		**Pn**	**03 32 39.8**	**-0.8**
TLL				*i* S		**Sb**	**03 32 55.4**	**+0.1**
TLL				AML	AML		03 33 02.0	
	comp=N,2μm,0.3s							
LCO	**Las Campanas**	**2.08**	**30**	⇑ *i* P		**Pn**	**03 32 53.1**	**-0.3**
LCO				*e*S		**Sn**	**03 33 19.4**	**+0.4**
LCO	**Las Campanas**	**2.08**	**30**	⇑ *i* P		**Pn**	**03 32 53.1**	**-0.3**
LCO				*e*S		**Sn**	**03 33 19.4**	**+0.4**
LCO				AML	AML		03 33 30.4	
	comp=E,702nm,0.7s							
JACH	**Jahuel**	**2.17**	**149**	*e*P		**Pn**	**03 32 54.7**	**+0.1**
JACH	**Jahuel**	**2.17**	**149**	*e*P		**Pn**	**03 32 54.7**	**+0.1**
PEL	**Peldehue**	**2.54**	**156**	⇑ *i* P		**Pn**	**03 32 59.2**	**-0.5**
PEL				*i* S		**Sn**	**03 33 30.8**	**+0.5**
PEL				AML	AML		03 33 37.7	
	comp=E,2μm,0.6s							
CLCH	**Cerro Calan**	**2.82**	**156**	*e*P		**Pn**	**03 33 03.8**	**+0.3**
CLCH				*e*S		**Sn**	**03 33 37.3**	**0.0**
CLCH				AML	AML		03 33 52.5	
	comp=N,1μm,0.5s							
FCH	**Farellones**	**2.85**	**152**	*e*P		**Pn**	**03 33 04.1**	**+0.1**
LMEL	**Las Melosas**	**3.34**	**155**	*e*P		**Pn**	**03 33 10.8**	**0.0**
LMEL				*i* S		**Sn**	**03 33 50.1**	**-0.1**
LMEL	**Las Melosas**	**3.34**	**155**	*e*P		**Pn**	**03 33 10.8**	**0.0**
LMEL				*i* S		**Sn**	**03 33 50.1**	**-0.1**
LMEL				AML	AML		03 34 05.5	
	comp=N,410nm,0.3s							
CACH	**El Canelo**	**3.47**	**162**	*e*P		**Pn**	**03 33 12.9**	**+0.5**
CACH	**El Canelo**	**3.47**	**162**	*e*P		**Pn**	**03 33 12.9**	**+0.5**
PLCA	**Paso Flores**	**9.95**	**174**	Pn		**Pn**	**03 34 41.4**	**-0.1**
	comp=N,0.1nm,0.3s,baz=324,slow=9.1,SNR=3.4							
TRQA	**Tornquist**	**10.91**	**134**	*e*Pn		**Pn**	**03 34 55.9**	**+1.2**
	comp=N,4.1nm,0.6s							
CPUP	**Villa Florida**	**13.56**	**74**	Pn		**Pn**	**03 35 30.9**	**0.0**
	comp=N,0.2nm,0.3s,baz=238,slow=15,SNR=1.7							
CPUP				Sn		**Sn**	**03 38 01.5**	**+0.1**
	comp=N,0.3nm,0.3s,baz=270,slow=20,SNR=1.9							
LPAZ	**La Paz**	**14.87**	**14**	Pn		**Pn**	**03 35 50.1**	**+1.3**
	comp=N,0.2nm,0.3s,baz=203,slow=11,SNR=6.4							
TXAR	**Lajitas Array**	**67.03**	**330**	P		**P**	**03 43 11.2**	**-0.2**
	comp=N,0.2nm,0.6s,mb3.3,baz=157,slow=10,SNR=3.3							
TORD	**Torodi Ar. Bea**	**83.03**	**70**	P		**P**	**03 44 42.6**	**-1.5**
	comp=N,0.8nm,0.6s,mb3.9,baz=276,slow=5.9,SNR=12							
ZALV	**Zalesovo Beam**	**151.44**	**29**	PKPbc	PKPbc		03 52 10.7	-1.0
	comp=N,1.3nm,0.6s,baz=327,slow=2.5,SNR=4.9							

IDC 22 03:46:33.8±9.3, 21°.84S×66°.76W, h184km±65km, mb3.1/2, mb1 3.2/3, mb1mx3.0/14, mbtmp3.0/3, Error ellipse: s-maj=98.4km s-min=31.1km az=20.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**5.67**	**347**	P	Pn	03 47 57.2	**+0.7**
	0.4nm,0.3s,baz=174,slow=10,SNR=17						
LPAZ				S	Sn	03 49 03.1	+1.4
	0.1nm,0.3s,baz=74,slow=20,SNR=2.7						
TXAR	**Lajitas Array**	**62.06**	**324**	P	P	03 56 35.2	+0.3
	0.1nm,0.5s,baz=161,slow=8.6,SNR=2.5						
TORD	**Torodi Ar. Bea**	**75.59**	**69**	P	P	03 57 58.9	+0.1
	1.3nm,0.3s,baz=254,slow=5.5,SNR=46						
MKAR	**Makanchi Array**	**144.70**	**38**	PKP	PKPdf	04 05 47.4	-1.0
	0.2nm,0.8s,baz=297,slow=1.8,SNR=4.2						

*ISCJB **22** 03:51:48.9±0.6, 38°.53N±0°.03×41°.70E±0°.03, h1km±7km, Error ellipse: s-maj=4.9km s-min=4.1km az=24.1*
*DDA **22** 03:51:48.5, 38°.55N×41°.65E, h17km±3km, Md3.1*
*CSEM **22** 03:51:49.6±0.1, 38°.55N×41°.70E, h2km, MD3.1, Error ellipse: s-maj=3.4km s-min=2.2km az=17.0*
*ISK **22** 03:51:49.7, 38°.51N×41°.66E, h8km, MD3.0*
ISC 22 03:51:49.7±0.6, 38°.54N±0°.03×41°.69E±0°.03, h6km±6km, n25, σ0°91/37, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TATV	**Tatvan**	**0.45**	**93**	⇑ *i* P	**Pg**	**03 51 56.9**	**-1.5**
TATV				*i* S	**Sg**	**03 52 03.3**	**-0.9**
TATV	**Tatvan**	**0.45**	**93**	*i* P	**Pg**	**03 51 56.9**	**-1.5**
TATV				*i* S	**Sg**	**03 52 03.3**	**-0.9**
BNGL	**BINGOL**	**0.59**	**315**	⇓ *i* P	**Pg**	**03 51 59.8**	**-1.3**
BNGL				*i* S	**Sg**	**03 52 09.0**	**+0.1**
BEST	**Besiri**	**0.72**	**208**	*e*P	**Pg**	**03 52 03.8**	**+0.2**
BEST				*e*S	**Sg**	**03 52 13.9**	**+0.9**
BINT	**Bingol**	**1.00**	**290**	*e*PG	**Pg**	**03 52 09.0**	**+0.1**
BINT				*e*SG	**Sg**	**03 52 23.2**	**+1.3**
BINT	**Bingol**	**1.00**	**290**	*e*Pg	**Pg**	**03 52 09.0**	**+0.1**
BINT				*e*Sg	**Sg**	**03 52 23.2**	**+1.3**
DIYA	**Diyarbakir**	**1.38**	**244**	*e*P	**Pn**	**03 52 14.4**	**-1.1**
DIYA				*e*S	**Sb**	**03 52 33.4**	**-0.4**
DIYA	**Diyarbakir**	**1.38**	**244**	*e*P	**Pn**	**03 52 14.4**	**-1.0**
DIYA				*e*S	**Sb**	**03 52 33.3**	**-0.4**
ERZM	**Erzurum**	**1.39**	**350**	*e*P	**Pn**	**03 52 15.0**	**-0.6**
ERZM				*e*S	**Sb**	**03 52 33.6**	**-0.5**
ERZM	**Erzurum**	**1.39**	**350**	*e*P	**Pn**	**03 52 15.0**	**-0.6**
ERZM				*e*S	**Sb**	**03 52 33.6**	**-0.5**
EZM	**Erzurum**	**1.39**	**349**	*e*PN	**Pn**	**03 52 16.4**	**+0.8**
MARD	**Mardin**	**1.42**	**211**	*e*P	**Pn**	**03 52 14.3**	**-1.7**
MARD				*e*S	**Sb**	**03 52 33.6**	**-1.2**
AGRB	**Hanur-Agry**	**1.45**	**44**	*e*PN	**Pn**	**03 52 17.1**	**+0.7**
AGRB	**Hanur-Agry**	**1.45**	**44**	*e*Pn	**Pn**	**03 52 17.1**	**+0.7**
PTK	**Pertek**	**1.84**	**282**	*e*PN	**Pn**	**03 52 21.6**	**0.0**
PTK	**Pertek**	**1.84**	**282**	*e*Pn	**Pn**	**03 52 21.7**	**0.0**
HAKT	**HAKKARI**	**1.86**	**121**	*e*P	**Pn**	**03 52 23.0**	**+0.9**
HAKT				*e*S	**Sg**	**03 52 50.9**	**+1.4**
HAKT	**HAKKARI**	**1.86**	**121**	*e*P	**Pn**	**03 52 23.0**	**+0.9**
SVRC	**Sivrice-ELAZID**	**1.88**	**266**	*e*PN	**Pn**	**03 52 22.5**	**+0.2**
SVRC	**Sivrice-ELAZID**	**1.88**	**266**	*e*Pn	**Pn**	**03 52 22.5**	**+0.2**
CUKT	**Cukurca**	**1.99**	**130**	*e*PN	**Pn**	**03 52 24.6**	**+0.8**
CUKT	**Cukurca**	**1.99**	**130**	*e*Pn	**Pn**	**03 52 24.6**	**+0.8**
EZC	**Erzincan**	**2.19**	**304**	*e*PN	**Pn**	**03 52 27.3**	**+0.8**
MALT	**Malatya**	**2.58**	**266**	*e*PN	**Pn**	**03 52 32.7**	**+0.8**
MALT	**Malatya**	**2.58**	**266**	*e*Pn	**Pn**	**03 52 32.7**	**+0.8**

WEL 22 04:05:31.4±1.1, 41°.64S×178°.93E, h33km, ML3.7/2, Error ellipse: s-maj=8.2km s-min=7.6km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNHZ	**Pukenui**	**2.70**	**309**	PN	Pn	04 06 12.0	-0.3
TSZ	**Takapari Road**	**2.75**	**304**	PN	Pn	04 06 12.6	-0.5
TSZ				SN	Sn	04 06 42.7	-2.5
KNZ	**Kokohu**	**2.79**	**339**	PN	Pn	04 06 12.6	-1.1
BHHZ	**Black Hill Sta**	**3.06**	**314**	PN	Pn	04 06 17.6	+0.2
KIW	**Kapiti Island**	**3.13**	**283**	*e*PN	Pn	04 06 17.5	-0.8
KIW				SN	Sn	04 06 51.3	-3.2
MWZ	**Matawai**	**3.47**	**341**	PN	Pn	04 06 22.2	-0.9
MWZ				SN	Sn	04 07 01.9	-1.1
FWVZ	**Far West T-bar**	**3.51**	**312**	PN	Pn	04 06 24.6	+1.0

DJA 22 04:08:32, 0°.48S×119°.62E, h30km, MLv4.4/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOLI	**Toli-Toli**	**1.98**	**36**	P	Pn	04 09 04.2	+0.7
TOLI				S	Sn	04 09 29.3	+2.1
APSI	**Ampana**	**2.07**	**102**	P	Pn	04 09 04.6	-0.2
APSI				S	Sn	04 09 31.9	+2.3
MRSI	**Marisa**	**2.51**	**68**	P	Pn	04 09 07.0	-3.8
TTSI	**Tana Toraja**	**2.56**	**176**	P	Pn	04 09 12.6	+1.2
LUWI	**Luwuk**	**3.20**	**100**	P	Pn	04 09 21.8	+1.5
LUWI				S	Sn	04 10 00.0	+2.5

DJA 22 04:13:32, 6°.35S×103°.27E, h26km, MLv3.6/4, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**1.47**	**56**	P	Pn	04 13 57.2	+0.4
KASI				S	Sn	04 14 16.1	+0.8
LWLI	**Liwa**	**1.54**	**31**	P	Pn	04 13 58.2	+0.4
LWLI				S	Sn	04 14 18.3	+1.4
MNAI	**Manna**	**2.00**	**351**	P	Pn	04 14 03.5	-0.6
MDSI	**Maura Dua**	**2.06**	**26**	P	Pn	04 14 05.7	+0.7
KLSI		**2.20**	**41**	P	Pn	04 14 07.9	+1.0

NEIC 22 04:24:25.8, 64°.64N×147°.76W, h19km, ML3.5(PMR), ML3.1(AEIC), After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COLA	**College**	**0.24**	**351**	P	Pg	04 24 31.4	+0.1
COLA				S	Sg	04 24 35.1	0.0
MDM	**Murphy Dome**	**0.38**	**328**	P	Pg	04 24 33.6	-0.1
MDM				S	Sg	04 24 39.0	+0.1
MCK	**McKinley**	**1.05**	**210**	P	Pb	04 24 44.9	-0.3
RND	**Reindeer**	**1.33**	**202**	P	Pn	04 24 49.1	-0.2
RND				S	Sn	04 25 07.2	+0.8
BPAW	**Bear Paw Mtn.**	**1.50**	**250**	P	Pn	04 24 50.8	-0.9
BPAW				S	Sn	04 25 12.6	+1.9
DHY	**Denali Highway**	**1.58**	**174**	P	Pn	04 24 53.4	+0.7
TRF	**Thorofare Moun**	**1.63**	**224**	P	Pn	04 24 53.2	-0.2
DOT	**Dot Lake**	**1.90**	**120**	P	Pn	04 24 55.8	-1.4
PAX	**Paxson**	**1.96**	**148**	P	Pn	04 24 58.3	+0.3
CHUM	**Lake Minchumin**	**2.13**	**251**	P	Pn	04 24 59.2	-1.0
MENT	**Mentasta**	**2.48**	**132**	*e*Pn	Pn	04 25 03.9	-1.2
MENT				*e*Pg	Pg	04 25 10.0	-3.2
MENT				*e*Sg	Sg	04 25 43.1	-2.2
PPLA	**Purkeypile**	**2.63**	**230**	P	Pn	04 25 06.8	-0.4
COLD	**Coldfoot**	**2.78**	**340**	P	Pn	04 25 10.2	+0.9
EGAK	**Eagle**	**2.84**	**84**	*e*Pn	Pn	04 25 08.9	-1.1
EGAK				*e*Pg	Pg	04 25 17.6	-2.5
EGAK				*e*Sg	Sg	04 25 51.7	-5.2
SML	**Sawmill**	**2.86**	**185**	P	Pn	04 25 10.2	0.0
PMR	**Palmer**	**3.12**	**192**	*e*Pn	Pn	04 25 15.3	+1.4
DIV	**Divide**	**3.64**	**165**	*e*Pn	Pn	04 25 22.4	+1.4
DIV				*e*Pg	Pg	04 25 32.2	-3.2
DIV				*e*Sg	Sg	04 26 17.6	-5.0
RC01	**Rabbit Creek A**	**3.68**	**195**	P	Pn	04 25 23.0	+1.5
DAWY	**Dawson**	**3.69**	**95**	P	Pn	04 25 20.9	-0.8
BMRM	**Bremner River**	**3.96**	**157**	*e*Pn	Pn	04 25 26.2	+0.7
BMRM				*e*Pg	Pg	04 25 38.9	-2.6
TTA	**Tatalina**	**4.04**	**249**	*e*P	Pn	04 25 32.3	+5.7

*ISCJB **22** 04:32:29.6±0.7, 36°.40N±0°.03×22°.36E±0°.04, h6km±4km, Error ellipse: s-maj=6.0km s-min=3.3km az=139.2*
*NEIC **22** 04:32:30.4, 36°.43N×22°.38E, h23km, ML3.1(ATH), After ATH.*
*ATH **22** 04:32:30.4, 36°.43N×22°.38E, h23km, MD3.5/21, ML3.1*
*THE **22** 04:32:30.0, 36°.41N×22°.48E, h0km±2km, MD3.1/2, Error ellipse: s-maj=3.7km s-min=1.6km az=245.0*
*CSEM **22** 04:32:30.0±0.3, 36°.39N×22°.28E, h10km, MD3.5, Error ellipse: s-maj=7.3km s-min=4.0km az=48.0*
ISC 22 04:32:30.2±0.7, 36°.40N±0°.03×22°.35E±0°.04, h7km±4km, n106, σ1°16/149, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KYTH	**Kithira**	**0.57**	**102**	*e*Pn	**Pg**	**04 32 42.1**	**+1.0**
KYTH	**Kithira**	**0.57**	**102**	*e*PN	**Pg**	**04 32 42.1**	**+1.0**
KYTH	**Kithira**	**0.57**	**102**	*e*Pn	**Pg**	**04 32 42.1**	**+1.0**
VLI	**Veliai**	**0.57**	**56**	*e*Pn	**Pg**	**04 32 41.5**	**+0.3**
VLI				*e*Sn	**Sg**	**04 32 48.9**	**+0.2**
VLI	**Veliai**	**0.57**	**56**	*e*PN	**Pg**	**04 32 41.5**	**+0.3**
VLI				*e*SN	**Sg**	**04 32 48.9**	**+0.2**
VLI	**Veliai**	**0.57**	**56**	*e*Pn	**Pg**	**04 32 41.5**	**+0.3**
VLI				*e*Sn	**Sg**	**04 32 48.9**	**+0.2**
PYL	**PYLOS**	**0.70**	**316**	*e*PN	**Pg**	**04 32 43.7**	**+0.1**
PYL				*e*SN	**Sg**	**04 32 54.5**	**+1.9**
PYL	**PYLOS**	**0.70**	**316**	P	**Pg**	**04 32 43.0**	**-0.6**
PYL	**PYLOS**	**0.70**	**316**	*e*Pn	**Pg**	**04 32 43.7**	**+0.1**
PYL				*e*Sn	**Sg**	**04 32 54.5**	**+1.9**
ITM	**Ithomi**	**0.85**	**337**	*e*Pb	**Pg**	**04 32 45.7**	**-0.8**
ITM				*e*Sn	**Sg**	**04 32 58.4**	**+0.8**
ITM	**Ithomi**	**0.85**	**337**	*e*PB	**Pg**	**04 32 45.7**	**-0.8**
ITM				*e*SN	**Sg**	**04 32 58.4**	**+0.8**
ITM	**Ithomi**	**0.85**	**337**	P	**Pg**	**04 32 46.4**	**-0.1**
ITM	**Ithomi**	**0.85**	**337**	*e*Pb	**Pg**	**04 32 45.7**	**-0.8**
ITM				*e*Sn	**Sg**	**04 32 58.4**	**+0.8**
VLX	**Vlachokerasia**	**0.97**	**2**	*e*PB	**Pg**	**04 32 47.9**	**-0.9**
VLX				*e*SN	**Sg**	**04 33 01.7**	**+0.2**
VLX	**Vlachokerasia**	**0.97**	**2**	P	**Pg**	**04 32 48.0**	**-0.8**
VLX				S	**Sg**	**04 33 03.0**	**+1.5**
VLX	**Vlachokerasia**	**0.97**	**2**	*e*Pb	**Pg**	**04 32 47.9**	**-0.9**
VLX				*e*Sn	**Sg**	**04 33 01.7**	**+0.2**
VLX				S	**Sg**	**04 33 03.0**	**+1.5**
DID	**Didima**	**1.32**	**33**	*e*PN	**Pn**	**04 32 54.1**	**-0.9**
DID	**Didima**	**1.32**	**33**	P	**Pn**	**04 32 53.1**	**-1.9**
DID				S	**Sb**	**04 33 11.2**	**-1.1**
DID	**Didima**	**1.32**	**33**	P	**Pn**	**04 32 53.1**	**-1.9**
DID	**Didima**	**1.32**	**33**	*e*Pn	**Pn**	**04 32 54.1**	**-0.9**
DID				S	**Sb**	**04 33 11.2**	**-1.1**
GUR	**Goura**	**1.54**	**360**	*e*PN	**Pn**	**04 32 58.0**	**0.0**
GUR	**Goura**	**1.54**	**360**	P	**Pn**	**04 32 58.2**	**+0.2**
GUR	**Goura**	**1.54**	**360**	P	**Pn**	**04 32 58.2**	**+0.2**
KARN	**Karanos**	**1.62**	**127**	*e*PN	**Pn**	**04 33 00.1**	**+1.0**
KARN				*e*SN	**Sn**	**04 33 20.6**	**+0.4**
KARN	**Karanos**	**1.62**	**127**	P	**Pn**	**04 32 58.7**	**-0.4**
KARN				S	**Sn**	**04 33 19.4**	**-0.8**
KARN	**Karanos**	**1.62**	**127**	P	**Pn**	**04 32 58.7**	**-0.4**
KARN	**Karanos**	**1.62**	**127**	*e*Pn	**Pn**	**04 33 00.1**	**+1.0**
KARN				S	**Sn**	**04 33 20.6**	**+0.4**
NAIG	**Nisos Aigina**	**1.64**	**34**	*e*Pn	**Pn**	**04 32 59.4**	**0.0**
NAIG	**Nisos Aigina**	**1.64**	**34**	*e*PN	**Pn**	**04 32 59.4**	**0.0**
NAIG	**Nisos Aigina**	**1.64**	**34**	*e*Pn	**Pn**	**04 32 59.4**	**0.0**
LTK	**Loutraki**	**1.70**	**17**	*e*PN	**Pn**	**04 32 59.7**	**-0.5**
LTK				*e*SN	**Sn**	**04 33 22.3**	**+0.1**
LTK	**Loutraki**	**1.70**	**17**	P	**Pn**	**04 32 58.6**	**-1.6**
LTK				S	**Sn**	**04 33 21.8**	**-0.4**
LTK	**Loutraki**	**1.70**	**17**	P	**Pn**	**04 32 58.6**	**-1.6**
LTK	**Loutraki**	**1.70**	**17**	*e*Pn	**Pn**	**04 32 59.7**	**-0.5**
LTK				S	**Sn**	**04 33 21.8**	**-0.4**
LTK				*e*Sn	**Sn**	**04 33 22.3**	**+0.1**
VAM	**Vamos**	**1.80**	**123**	*e*Pn	**Pn**	**04 33 02.2**	**+0.6**
VAM				*e*Sn	**Sn**	**04 33 25.5**	**+0.8**
VAM	**Vamos**	**1.80**	**123**	*e*PN	**Pn**	**04 33 02.2**	**+0.6**
VAM				*e*SN	**Sn**	**04 33 25.5**	**+0.8**
VAM	**Vamos**	**1.80**	**123**	*e*Pn	**Pn**	**04 33 02.2**	**+0.6**
VAM				*e*Sn	**Sn**	**04 33 25.5**	**+0.8**
RLS	**Riolos of Patr**	**1.80**	**337**	*e*PN	**Pn**	**04 33 02.0**	**+0.4**
RLS				*e*Sn	**Sn**	**04 33 25.3**	**+0.6**
RLS	**Riolos of Patr**	**1.80**	**337**	*e*PN	**Pn**	**04 33 02.0**	**+0.4**
RLS				*e*SN	**Sn**	**04 33 25.3**	**+0.6**
RLS	**Riolos of Patr**	**1.80**	**337**	*e*PN	**Pn**	**04 33 02.0**	**+0.4**
RLS				*e*Sn	**Sn**	**04 33 25.3**	**+0.6**
VLY	**Voula,Athens**	**1.86**	**38**	*e*Pb	**Pb**	**04 33 01.7**	**-2.7**
VLY				*e*Sn	**Sn**	**04 33 25.9**	**-0.2**
VLY	**Voula,Athens**	**1.86**	**38**	*e*PB	**Pb**	**04 33 01.7**	**-2.7**
VLY				*e*SN	**Sn**	**04 33 25.9**	**-0.2**
LAKA	**Lakka**	**1.86**	**351**	P	**Pn**	**04 33 03.4**	**+0.9**
LAKA				S	**Sn**	**04 33 28.6**	**+2.3**
LAKA	**Lakka**	**1.86**	**351**	P	**Pn**	**04 33 03.4**	**+0.9**
LAKA				S	**Sn**	**04 33 28.6**	**+2.3**
ATH	**Athens Observa**	**1.92**	**34**	*e*Pn	**Pn**	**04 32 02.9**	**-0.3**
ATH				*e*Sn	**Sn**	**04 33 27.4**	**-0.2**
ATH	**Athens Observa**	**1.92**	**34**	*e*PN	**Pn**	**04 32 02.9**	**-0.3**
ATH				*e*SN	**Sn**	**04 33 27.4**	**-0.2**
ATH	**Athens Observa**	**1.92**	**34**	*e*Pn	**Pn**	**04 32 02.9**	**-0.3**
ATH				*e*Sn	**Sn**	**04 33 27.4**	**-0.2**
ATHU	**Athens Univers**	**1.94**	**36**	P	**Pn**	**04 33 02.0**	**-1.6**
KALE	**Kalithea**	**2.00**	**355**	P	**Pn**	**04 33 04.2**	**-0.1**
KALE				S	**Sn**	**04 33 30.6**	**+1.0**
KALE	**Kalithea**	**2.00**	**355**	P	**Pn**	**04 33 04.2**	**-0.1**
KALE				S	**Sn**	**04 33 30.6**	**+1.0**
DSF	**Desfina**	**2.02**	**4**	P	**Pn**	**04 33 04.3**	**-0.3**
DSF	**Desfina**	**2.02**	**4**	P	**Pn**	**04 33 04.3**	**-0.3**
PTL	**Penteli**	**2.05**	**36**	*e*Pb	**Pb**	**04 33 05.0**	**-2.7**
PTL	**Penteli**	**2.05**	**36**	*e*PB	**Pb**	**04 33 05.0**	**-2.7**
EFP	**Efpalio**	**2.06**	**350**	*e*PB	**Pb**	**04 33 05.0**	**-2.8**
EFP	**Efpalio**	**2.06**	**350**	P	**Pn**	**04 33 06.4**	**+1.2**
EFP	**Efpalio**	**2.06**	**350**	P	**Pn**	**04 33 06.4**	**+1.2**
VLS	**Valsamata**	**2.26**	**322**	*e*Pb	**Pb**	**04 33 08.1**	**-3.2**
VLS				*e*Sn	**Sn**	**04 33 37.2**	**+1.1**
VLS	**Valsamata**	**2.26**	**322**	*e*PB	**Pb**	**04 33 08.1**	**-3.2**
VLS				*e*SN	**Sn**	**04 33 37.2**	**+1.1**
LKR	**Lokris**	**2.31**	**13**	*e*Pn	**Pn**	**04 33 08.8**	**+0.2**
LKR				*e*Sn	**Sn**	**04 33 36.5**	**-0.8**
LKR	**Lokris**	**2.31**	**13**	*e*PN	**Pn**	**04 33 08.8**	**+0.2**
LKR				*e*SN	**Sn**	**04 33 36.5**	**-0.8**
LKR	**Lokris**	**2.31**	**13**	*e*Pn	**Pn**	**04 33 08.8**	**+0.2**
LKR				*e*Sn	**Sn**	**04 33 36.5**	**-0.8**
SIVA	**Sivas**	**2.43**	**124**	*e*Pn	**Pn**	**04 33 11.2**	**+0.9**
SIVA	**Sivas**	**2.43**	**124**	*e*PN	**Pn**	**04 33 11.2**	**+0.9**
SIVA	**Sivas**	**2.43**	**124**	*e*Pn	**Pn**	**04 33 11.2**	**+0.9**
EVR	**Evrytania**	**2.55**	**351**	*e*Pn	**Pn**	**04 33 12.3**	**+0.3**
EVR	**Evrytania**	**2.55**	**351**	*e*PN	**Pn**	**04 33 12.3**	**+0.3**
EVR	**Evrytania**	**2.55**	**351**	*e*Pn	**Pn**	**04 33 12.3**	**+0.3**
AGG	**Agios Georgios**	**2.62**	**360**	*e*Pn	**Pn**	**04 33 13.4**	**+0.5**
AGG				P		04 33 16.6	
AGG	**Agios Georgios**	**2.62**	**360**	*e*PN	**Pn**	**04 33 13.4**	**+0.5**
AGG	**Agios Georgios**	**2.62**	**360**	*e*Pn	**Pn**	**04 33 13.4**	**+0.5**
APE	**Apeiranthos**	**2.64**	**74**	P	**Pn**	**04 33 12.6**	**-0.6**
APE	**Apeiranthos**	**2.64**	**74**	P	**Pn**	**04 33 12.6**	**-0.6**
LAST	**Lasithi**	**2.83**	**115**	*e*Pn	**Pn**	**04 33 16.4**	**+0.6**
LAST	**Lasithi**	**2.83**	**115**	*e*PN	**Pn**	**04 33 16.4**	**+0.6**
LAST	**Lasithi**	**2.83**	**115**	*e*Pn	**Pn**	**04 33 16.4**	**+0.6**
NPS	**Neapolis**	**2.88**	**112**	P	**Pn**	**04 33 13.6**	**-2.9**
NPS				*e*Pn	**Pn**	**04 33 16.7**	**+0.2**
NPS	**Neapolis**	**2.88**	**112**	P	**Pn**	**04 33 13.6**	**-2.9**
NEO	**Neokhori**	**2.99**	**13**	*e*Pn	**Pn**	**04 33 18.2**	**+0.3**
NEO	**Neokhori**	**2.99**	**13**	*e*PN	**Pn**	**04 33 18.2**	**+0.3**
NEO	**Neokhori**	**2.99**	**13**	*e*Pn	**Pn**	**04 33 18.2**	**+0.3**
AOS	**Alonnisos**	**3.02**	**23**	P	**Pn**	**04 33 19.9**	**+1.5**
AOS	**Alonnisos**	**3.02**	**23**	P	**Pn**	**04 33 19.9**	**+1.5**
XOR	**Xorichti**	**3.04**	**12**	P	**Pn**	**04 33 19.9**	**+1.2**
XOR	**Xorichti**	**3.04**	**12**	P	**Pn**	**04 33 19.9**	**+1.2**
IGT	**Igoumenitsa**	**3.51**	**334**	P	**Pn**	**04 33 24.2**	**-1.0**
IGT	**Igoumenitsa**	**3.51**	**334**	P	**Pn**	**04 33 24.2**	**-1.0**
PAIG	**Paliouri**	**3.68**	**16**	P	**Pn**	**04 33 27.7**	**+0.3**
PAIG	**Paliouri**	**3.68**	**16**	P	**Pn**	**04 33 27.7**	**+0.3**
KEK	**Kerkira**	**3.87**	**329**	P	**Pn**	**04 33 29.9**	**-0.2**
KEK	**Kerkira**	**3.87**	**329**	P	**Pn**	**04 33 29.9**	**-0.2**
PLG	**Polygyros**	**4.06**	**12**	P	**Pn**	**04 33 34.4**	**+1.7**
PLG	**Polygyros**	**4.06**	**12**	P	**Pn**	**04 33 34.4**	**+1.7**
OUR	**Ouranopolis**	**4.14**	**18**	P	**Pn**	**04 33 33.7**	**0.0**
OUR	**Ouranopolis**	**4.14**	**18**	P	**Pn**	**04 33 33.7**	**0.0**
HORT	**Hortiatis**	**4.24**	**8**	P	**Pn**	**04 33 38.4**	**+3.3**
HORT	**Hortiatis**	**4.24**	**8**	P	**Pn**	**04 33 38.4**	**+3.3**
ARG	**Arkhangelos**	**4.67**	**91**	*e*Pn	**Pn**	**04 33 42.5**	**+1.4**
ARG	**Arkhangelos**	**4.67**	**91**	*e*PN	**Pn**	**04 33 42.5**	**+1.4**
ARG	**Arkhangelos**	**4.67**	**91**	*e*Pn	**Pn**	**04 33 42.5**	**+1.4**
TIP	**Timpagrande**	**5.22**	**304**	P	**Pn**	**04 33 46.3**	**-2.4**
TIP	**Timpagrande**	**5.22**	**304**	P	**Pn**	**04 33 46.3**	**-2.4**
PE1	**Pezze di Greco**	**5.85**	**320**	*e*Pn	**Pn**	**04 33 54.6**	**-2.7**
CUC	**Castrocucco**	**6.27**	**307**	P	**Pn**	**04 34 02.2**	**-0.9**
CUC	**Castrocucco**	**6.27**	**307**	P	**Pn**	**04 34 02.2**	**-0.9**
SG1	**Sgolgore (BA)**	**6.27**	**317**	*e*Pn	**Pn**	**04 34 00.3**	**-2.8**

CASC 22 04:38:10.9±1.8, 15°.16N×89°.22W, h0km±4km, MD3.8, 1C-2D, Guatemala

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

JRY	**Ryogami san**	**3.63**	**244**	P	**Pn**	**05 10 07.9**	**0.0**
JRY				*e*S	**Sn**	**05 10 49.3**	**-0.6**
MJAR	**Matsushiro Arr**	**3.93**	**255**	Pn	**Pn**	**05 10 13.6**	**+1.4**
	2.8nm,0.3s,baz=75,slow=14,SNR=9.0						
MJAR				Sn	**Sn**	**05 11 02.4**	**+4.8**
	1.2nm,0.3s,baz=84,slow=15,SNR=2.5						
MAJO	**Matsushiro**	**3.94**	**255**	*e*Pn	**Pn**	**05 10 14.4**	**+2.2**
MAT	**Matsushiro**	**3.94**	**255**	P	**Pn**	**05 10 14.0**	**+1.8**
MAT				*e*S	**Sn**	**05 11 01.6**	**+4.0**
ERM	**Erimo**	**4.33**	**2**	*e*Pn	**Pn**	**05 10 17.3**	**-0.3**
ERM				*e*Sn	**Sn**	**05 11 08.4**	**+1.1**
SONM	**Songino Array**	**28.43**	**303**	P	**P**	**05 15 09.0**	**+3.1**
	0.4nm,0.4s,mb3.4,baz=120,slow=8.7,SNR=2.9						
SONM				PcP	PcP	05 18 19.3	+1.7
	0.8nm,0.6s,baz=92,slow=4.8,SNR=3.6						
ZALV	**Zalesovo Beam**	**42.37**	**312**	P	**P**	**05 17 05.8**	**+0.5**
ZALV	**Zalesovo Beam**	**42.37**	**312**	P	**P**	**05 17 05.8**	**+0.5**
	0.5nm,0.4s,mb3.5,baz=80,slow=8.9,SNR=3.2						
MKAR	**Makanchi Array**	**44.80**	**302**	P	**P**	**05 17 25.6**	**+0.6**
	0.7nm,0.7s,mb3.6,baz=87,slow=8.9,SNR=6.5						
KURK	**Kurchatov**	**46.48**	**308**	*e*P	**P**	**05 17 38.3**	**+0.1**
	3.3nm,0.8s,mb4.3						
ILAR	**Eielson Array**	**48.30**	**33**	P	**P**	**05 17 51.8**	**-0.4**
	0.4nm,0.6s,mb3.6,baz=264,slow=6.1,SNR=7.4						
WRA	**Warramunga Arr**	**57.88**	**190**	P	**P**	**05 19 01.9**	**-1.3**
	1.1nm,0.7s,mb4.0,baz=9.4,slow=7.2,SNR=6.3						
NVAR	**Mina Array Bea**	**73.64**	**54**	P	**P**	**05 20 44.8**	**+0.1**
	0.5nm,0.7s,mb3.5,baz=305,slow=3.2,SNR=4.2						

*IDC **22** 05:15:33.3±14.0, 15˚.82N×92˚.23W, h111km±151km, mb3.4/4, mb1 3.7/5, mb1mx3.3/22, mbtmp3.3/5, ML4.0/1, Error ellipse: s-maj=275.1km s-min=23.8km az=52.0*

*ISCJB **22** 05:15:40.1±0.6, 15˚.78N±0˚.07×92˚.95W±0˚.05, h162km±4km, mb3.5/5, Error ellipse: s-maj=11.4km s-min=6.0km az=23.7*

*NEIC **22** 05:15:40.3, 15˚.79N×92˚.86W, h174km, mb3.7/3, MD4.0(MEX), After MEX.*

*MEX **22** 05:15:40.3±1.0, 15˚.79N×92˚.86W, h174km±7km, MD4.0*

ISC 22 05:15:40.6±0.6, 15˚.80N±0˚.06×92˚.92W±0˚.04, h161km±4km, n30, σ0°93°/49, mb3.5/5, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PCIG		**0.30**	**252**	*i* P		**Pn**	**05 16 02.5**	**+0.1**
PCIG				*i* S		**Sn**	**05 16 20.4**	**+1.3**
SCX	**San Cristobal**	**0.97**	**17**	*i* P		**Pn**	**05 16 06.2**	**0.0**
SCX				*i* S		**Sn**	**05 16 26.6**	**+0.7**
SCX	**San Cristobal**	**0.97**	**17**	*i* P		**Pn**	**05 16 06.2**	**0.0**
SCX				*i* S		**Sn**	**05 16 26.6**	**+0.7**
TGIG		**0.99**	**349**	*i* P		**Pn**	**05 16 06.0**	**-0.4**
TGIG				*i* S		**Sn**	**05 16 25.3**	**-0.8**
THIG		**1.09**	**144**	*i* P		**Pn**	**05 16 06.0**	**-1.2**
THIG				*i* S		**Sn**	**05 16 26.9**	**-0.6**
CMIG	**Matias Romero**	**2.28**	**305**	*i* P		**Pn**	**05 16 20.0**	**+0.4**
CMIG				*i* S		**Sn**	**05 16 50.4**	**+0.6**
CMIG	**Matias Romero**	**2.28**	**305**	*i* P		**Pn**	**05 16 20.0**	**+0.4**
CMIG				*i* S		**Sn**	**05 16 50.4**	**+0.6**
HUIG	**Huatulco**	**3.07**	**270**	*i* P		**Pn**	**05 16 28.6**	**-0.6**
HUIG				*i* S		**Sn**	**05 17 05.7**	**-1.2**
HUIG	**Huatulco**	**3.07**	**270**	*i* P		**Pn**	**05 16 28.6**	**-0.6**
HUIG				*i* S		**Sn**	**05 17 05.7**	**-1.2**
VHO	**Vista Hermosa**	**3.87**	**290**	*i* P		**Pn**	**05 16 40.0**	**+0.6**
VHO				*i* S		**Sn**	**05 17 24.4**	**-0.8**
VHO	**Vista Hermosa**	**3.87**	**290**	*i* P		**Pn**	**05 16 40.0**	**+0.6**
VHO				*i* S		**Sn**	**05 17 24.4**	**-0.8**
TPIG	**Tehuac#an**	**4.98**	**302**	*i* P		**Pn**	**05 16 54.3**	**+0.4**
TPIG				*i* S		**Sn**	**05 17 51.3**	**0.0**
PNIG	**Pinotepa**	**5.04**	**277**	*i* P		**Pn**	**05 16 55.1**	**+0.4**
PNIG				*i* S		**Sn**	**05 17 52.9**	**+0.3**
PNIG	**Pinotepa**	**5.04**	**277**	*i* P		**Pn**	**05 16 55.1**	**+0.4**
PNIG				*i* S		**Sn**	**05 17 52.9**	**+0.3**
UTMO	**Huajuapan**	**5.09**	**294**	*e*P		**Pn**	**05 16 55.4**	**0.0**
UTMO				*i* S		**Sn**	**05 17 53.8**	**0.0**
TGUH	**Tegucigalpa,Un**	**5.73**	**107**	*e*Pn		**Pn**	**05 17 06.2**	**+2.4**
TEIG	**Tepich**	**6.24**	**44**	*e*Pn		**Pn**	**05 17 04.7**	**-5.9**
PPM	**Popocatepetl**	**6.34**	**302**	*i* P		**Pn**	**05 17 10.7**	**-1.2**
PPM				*i* S		**Sn**	**05 18 30.0**	**+6.5**
PPM	**Popocatepetl**	**6.34**	**302**	*i* P		**Pn**	**05 17 10.7**	**-1.2**
PPM				*i* S		**Sn**	**05 18 30.0**	**+6.5**
MZVM		**6.90**	**300**	*i* P		**Pn**	**05 17 23.8**	**+4.5**
CAIG	**El Cayaco**	**7.16**	**281**	*e*P		**Pn**	**05 17 24.6**	**+1.9**
CAIG				*i* S		**Sn**	**05 18 49.3**	**+6.2**
CAIG	**El Cayaco**	**7.16**	**281**	*e*P		**Pn**	**05 17 24.6**	**+1.9**
CAIG				*i* S		**Sn**	**05 18 49.3**	**+6.2**
TXAR	**Lajitas Array**	**16.71**	**326**	P		**Pn**	**05 19 25.7**	**+0.3**
	0.1nm,0.3s,baz=156,slow=13,SNR=13							
MIAR	**Mount Ida**	**18.68**	**358**	*e*P		**P**	**05 19 44.4**	**-2.0**
	4.1nm,0.9s							
OTAV	**Otavalo**	**21.05**	**136**	*e*P		**P**	**05 20 12.4**	**+0.2**
	2.2nm,0.8s,mb3.5							
ANMO	**Albuquerque**	**22.61**	**330**	*e*P		**P**	**05 20 27.1**	**-0.6**
	0.9nm,0.7s,mb3.3							
ANMO	**Albuquerque**	**22.61**	**330**	P		**P**	**05 20 27.6**	**-0.2**
	0.3nm,0.5s,mb3.0,baz=150,slow=8.1,SNR=5.7							
NVAR	**Mina Array Bea**	**31.72**	**320**	P		**P**	**05 21 50.8**	**+1.6**
	0.8nm,0.6s,mb3.6,baz=130,slow=9.5,SNR=7.9							
LPAZ	**La Paz**	**40.19**	**141**	P		**P**	**05 22 56.3**	**-5.1**
	1.2nm,0.7s,mb3.6,baz=311,slow=10,SNR=6.3							
CPUP	**Villa Florida**	**54.33**	**140**	P		**P**	**05 24 45.3**	**-5.3**
	0.3nm,0.4s,mb3.3,baz=352,slow=7.1,SNR=3.5							

*SZGRF **22** 05:22:52.3, 35˚.91N×80˚.21E, h33km, mb4.6, Kashmir-Xizang border region*

*MOS **22** 05:23:07.9±1.2, 36˚.57N×76˚.79E, h33km, mb4.7/40, Error ellipse: s-maj=10.2km s-min=5.1km az=118.4*

*LDG **22** 05:23:09.3±0.1, 36˚.44N×76˚.83E, h60km, Mb4.5/17, Ms3.1/6, Error ellipse: s-maj=6.2km s-min=5.6km az=27.0*

*ISCJB **22** 05:23:12.9±0.3, 36˚.54N±0˚.02×76˚.99E±0˚.03, h89km±4km, mb4.4/58, Error ellipse: s-maj=4.5km s-min=2.9km az=160.0*

*BJI **22** 05:23:13.9, 36˚.68N×76˚.93E, h96km, mB4.9/9, mb4.6/20*

*IDC **22** 05:23:14.4±4.4, 36˚.65N×76˚.96E, h82km±37km, mb4.0/11, mb1 4.2/16, mb1mx4.0/27, mbtmp4.0/16, MS2.9/5, Ms1 2.9/5, ms1mx2.6/33, Error ellipse: s-maj=26.1km s-min=16.1km az=10.0*

*NEIC **22** 05:23:16.1±0.9, 36˚.67N×76˚.95E, h97km±7km, mb4.6/26, Error ellipse: s-maj=9.2km s-min=7.3km az=186.0*

*NNC **22** 05:23:17.1±3.9, 36˚.80N×77˚.29E, h125km±31km, mb3.7, mpv4.6, Error ellipse: s-maj=37.3km s-min=29.8km az=71.0*

ISC 22 05:23:14.5±0.3, 36°.54N±0°.02×77°.02E±0°.03, h88km±3km, h87km±6.0km; pP-P, n228, σ1§29/251, mb4.4/58, 12C-11D, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.08**	**345**	⇓*i* P		**Pn**	**05 23 58.9**	**-2.1**
KSH				S		**Sn**	**05 24 25.3**	**-12**
KSH				smax				
	comp=N,3μm,0.8s							
KSH				smax				
	comp=E,3μm,0.7s							
JMU	**Jammu**	**4.20**	**205**	*e*S		**Sn**	**05 25 05.0**	**+0.9**
CHCP	**Chirah Chowk**	**4.21**	**228**	P		**Pn**	**05 24 19.8**	**+3.4**
SDNR	**Sundarnagar**	**5.03**	**180**	*e*PKP		**Pn**	**05 24 29.5**	**+2.0**
SDNR				ex		x	05 25 07.5	
BHK	**Bhakra**	**5.14**	**186**	*e*PKP		**Pn**	**05 24 27.8**	**-1.2**
BHK				*e*S		**Sn**	**05 25 22.8**	**-4.2**
SMLA	**Simla**	**5.40**	**179**	*i* P		**Pn**	**05 24 34.7**	**+2.1**
SMLA				*i* S		**Sn**	**05 25 31.9**	**-1.5**
SMLA							05 25 35.5	
	comp=E,4μm,0.3s							
SMLA				⇓			05 25 36.3	
	comp=N,4μm,0.3s							
KZA	**Kyzart**	**5.69**	**347**	P		**Pn**	**05 24 38.0**	**+1.5**
	SNR=18							
ULHL	**Ulahol**	**5.72**	**354**	P		**Pn**	**05 24 38.2**	**+1.3**
	SNR=62							
THW	**Thamme Wali**	**5.74**	**231**	P		**Pn**	**05 24 38.0**	**+0.9**
SARP	**Sargodha**	**5.85**	**219**	P		**Pn**	**05 24 39.5**	**+0.9**
UCH	**Uchtor**	**6.00**	**342**	P		**Pn**	**05 24 42.6**	**+2.0**
	SNR=86							
UCH	**Uchtor**	**6.00**	**342**	*e*Pn		**Pn**	**05 24 42.2**	**+1.6**
	comp=N,95nm,0.6s							
UCH				*e*Sn		**Sn**	**05 25 47.4**	**-0.4**
AML	**Almayashu**	**6.14**	**336**	P		**Pn**	**05 24 44.7**	**+2.1**
	SNR=49							
AML	**Almayashu**	**6.14**	**336**	*e*Pn		**Pn**	**05 24 43.0**	**+0.5**
DDI	**Dehra Dun**	**6.26**	**172**	*e*PKP		**Pn**	**05 24 46.0**	**+1.7**
DDI				ex		x	05 26 47.0	
KBK	**Karagaybulak**	**6.31**	**346**	P		**Pn**	**05 24 47.6**	**+2.8**
	SNR=7.1							
JOSI	**Joshimath**	**6.34**	**160**	*e*PKP		**Pn**	**05 24 48.0**	**+2.7**
JOSI				*e*S		**Sn**	**05 25 55.2**	**-1.0**
AAK	**Ala-Archa**	**6.39**	**343**	P		**Pn**	**05 24 48.1**	**+2.2**
	SNR=24							
AAK	**Ala-Archa**	**6.39**	**343**	*e*Pn		**Pn**	**05 24 47.9**	**+2.0**
	comp=N,56nm,0.7s							
AAK				*e*Sn		**Sn**	**05 25 57.1**	**-0.2**
AAK	**Ala-Archa**	**6.39**	**343**	P		**Pn**	**05 24 47.0**	**+1.2**
	comp=N,9,8nm,0.3s,baz=149,slow=16,SNR=45							
AAK				S		**Sn**	**05 25 56.0**	**-1.2**
	comp=N,8.3nm,0.3s,baz=322,slow=19,SNR=6.9							
AAK				LR		LR	05 26 56.2	
	comp=N,120nm,19.3s,baz=180,slow=35							
AAK	**Ala-Archa**	**6.39**	**343**	P		**Pn**	**05 24 47.0**	**+1.1**
AAK				S		**Sn**	**05 25 56.0**	**-1.3**
AAK				pmax		pmax		
	comp=Z,10.0nm,0.3s							
AAK				smax				
	comp=N,8.0nm,0.3s							
AAK				MLR		MLR		
	comp=Z,120nm,19.3s							
TKM2	**Tokmak 2**	**6.46**	**351**	⇓Pn		**Pn**	**05 24 47.3**	**+0.4**
	comp=Z,25nm,0.5s							
TKM2				⇑Sn		**Sn**	**05 25 57.9**	**-1.3**
	comp=Z,77nm,0.8s							
TKM2	**Tokmak 2**	**6.46**	**351**	P		**Pn**	**05 24 48.5**	**+1.6**
	SNR=54							
TKM2	**Tokmak 2**	**6.46**	**351**	*e*Pn		**Pn**	**05 24 48.2**	**+1.3**
	comp=Z,42nm,0.6s							
TKM2	**Tokmak 2**	**6.46**	**351**	*e*P		**Pn**	**05 24 48.2**	**+1.3**
TKM2				pmax		pmax		
	comp=Z,42nm,0.6s							
FRU	**Bishkek**	**6.55**	**344**	*e*P		**Pn**	**05 24 49.0**	**+0.9**
FRU				pmax		pmax		
	comp=Z,45nm,1.8s							
FRU				pmax		pmax		
	comp=N,152nm,1.8s							
KKR	**Kurukshetra**	**6.57**	**182**	*e*PKP		**Pn**	**05 24 51.9**	**+3.4**
KKR				ex		x	05 25 40.9	
EKS2	**Erkin-Say**	**6.60**	**339**	P		**Pn**	**05 24 51.1**	**+2.3**
	SNR=14							
EKS2	**Erkin-Say**	**6.60**	**339**	*e*Pn		**Pn**	**05 24 51.0**	**+2.2**
	comp=N,34nm,0.8s							
CHMS	**Chumysh**	**6.68**	**346**	P		**Pn**	**05 24 51.6**	**+1.8**
	SNR=13							
KBL	**Kabul**	**6.80**	**255**	*e*Pn		**Pn**	**05 24 51.3**	**-0.3**
	comp=N,30nm,0.3s							
KBL				*e*Sn		**Sn**	**05 26 05.4**	**-2.2**
KBL	**Kabul**	**6.80**	**255**	*e*P		**Pn**	**05 24 51.3**	**-0.3**
KBL				*e*			05 26 05.4	
KBL				pmax		pmax		
	comp=Z,31nm,0.3s							
USP	**Ospenovka**	**6.99**	**345**	P		**Pn**	**05 24 56.8**	**+2.8**
	SNR=12							
PTH	**Pithoragarh**	**7.47**	**158**	*ex*		x	05 25 06.2	
PTH				*e*S		**Sn**	**05 26 21.4**	**-2.6**
NDI	**New Delhi**	**7.84**	**179**	*e*PKP		**Pn**	**05 25 07.6**	**+1.8**
NDI				AMb		AMB	05 25 09.8	
	comp=Z,72nm,1.0s							
NDI				*e*S		**Sn**	**05 26 27.3**	**-5.7**
AYAN	**Aya Nagar**	**8.04**	**179**	*e*PKP		**Pn**	**05 25 10.0**	**+1.5**
AYAN				*e*S		**Sn**	**05 26 31.6**	**-6.2**
SONA	**Sohna**	**8.27**	**180**	*e*PKP		**Pn**	**05 25 13.4**	**+1.7**
SONA				*e*S		**Sn**	**05 26 38.8**	**-4.7**
KUDL	**Kundal**	**8.39**	**183**	*e*PKP		**Pn**	**05 25 11.0**	**-2.3**
KUDL				*e*S		**Sn**	**05 26 37.1**	**-9.2**
KHET	**Khetri**	**8.51**	**187**	*e*PKP		**Pn**	**05 25 15.6**	**+0.7**
KHET				*e*S		**Sn**	**05 26 43.1**	**-6.1**
DANN	**Dangsing**	**9.96**	**143**	*e*P		**Pn**	**05 25 34.1**	**-0.5**
AJM	**Ajmer**	**10.24**	**192**	*e*PKP		**Pn**	**05 25 38.7**	**+0.2**
AJM				*e*S		**Sn**	**05 27 23.7**	**-7.7**
KOLN	**Koldanda**	**10.37**	**146**	*e*P		**Pn**	**05 25 39.6**	**-0.7**
GKN	**Gorkha**	**10.68**	**141**	*e*P		**Pn**	**05 25 43.5**	**-0.9**
	comp=Z,99nm,0.3s							
WMQ	**Urumqi**	**10.93**	**45**	P		**Pn**	**05 25 48.0**	**+0.3**
WMQ				PP			05 25 59.3	
WMQ				sP			05 26 14.6	
WMQ				S		**Sn**	**05 27 49.6**	**+1.7**
WMQ				SS			05 28 06.1	
WMQ				PcP		PcP	05 31 39.0	-0.4
WMQ				pmax		pmax		
	comp=Z,22nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,140nm,4.0s							
WMQ				LR		LR		
	comp=N,180nm,4.6s							
WMQ				LR		LR		
	comp=E,210nm,4.8s							
WMQ				LR		LR		
	comp=Z,230nm,5.0s							
MKAR	**Makanchi Array**	**10.97**	**19**	P		**Pn**	**05 25 47.1**	**-1.2**
	comp=Z,4.6nm,0.3s,baz=207,slow=14,SNR=116							
MKAR				S		**Sn**	**05 27 43.2**	**-5.8**
	comp=Z,3.0nm,0.3s,baz=199,slow=25,SNR=5.9							
MKAR	**Makanchi Array**	**10.97**	**19**	P		**Pn**	**05 25 47.1**	**-1.2**
MKAR				S		**Sn**	**05 27 43.2**	**-5.8**
MKAR				pmax		pmax		
	comp=Z,5.0nm,0.3s							
MKAR				smax				
	comp=N,3.0nm,0.3s							
KKN	**Kakani**	**11.18**	**139**	*e*P		**Pn**	**05 25 50.0**	**-1.3**
DMN	**Daman**	**11.24**	**140**	*e*P		**Pn**	**05 25 50.8**	**-1.3**
GUN	**Gumba**	**11.41**	**136**	*e*P		**Pn**	**05 25 53.9**	**-0.5**
	comp=N,27nm,0.3s							
PKIN	**Phulchoki**	**11.41**	**139**	*e*P		**Pn**	**05 25 53.7**	**-0.8**
PKI	**Phulchoki**	**11.43**	**139**	*e*P		**Pn**	**05 25 53.5**	**-1.1**
JIRN	**Jiri**	**11.78**	**136**	*e*P		**Pn**	**05 25 58.8**	**-0.6**
	comp=N,96nm,0.4s							
RAMN	**Ramite**	**12.56**	**137**	*e*P		**Pn**	**05 26 08.2**	**-1.7**
TAPN	**Taplejung**	**12.89**	**132**	*e*P		**Pn**	**05 26 12.4**	**-1.9**
	comp=N,40nm,0.4s							
ODAN	**Odare**	**13.07**	**135**	*e*P		**Pn**	**05 26 14.3**	**-2.4**
	comp=N,40nm,0.6s							
BHPL	**Bhopal**	**13.26**	**178**	*e*PKP		**Pn**	**05 26 19.4**	**+0.2**
BHPL				AMb		AMB	05 26 22.3	
	comp=Z,18nm,0.9s							
BHPL				*e*S		**Sn**	**05 28 34.2**	**-11**
LSA	**Lhasa**	**13.66**	**116**	*e*Pn		**Pn**	**05 26 26.6**	**+2.2**
	comp=Z,11nm,0.7s							
LSA	**Lhasa**	**13.66**	**116**	*e*P		**Pn**	**05 26 26.7**	**+2.3**
LSA				pmax		pmax		
	comp=Z,11nm,0.7s							
KURBB	**Kurchatov Arra**	**14.12**	**4**	⇑P		**Pn**	**05 26 27.3**	**-2.9**
	comp=Z,1.9nm,0.8s							
KURK	**Kurchatov**	**14.21**	**4**	⇑P		**Pn**	**05 26 28.6**	**-2.8**
	comp=Z,23nm,1.4s							
KURK	**Kurchatov**	**14.21**	**4**	*e*Pn		**Pn**	**05 26 28.6**	**-2.9**
	comp=Z,8.4nm,0.4s							
KURK	**Kurchatov**	**14.21**	**4**	P		**Pn**	**05 26 27.4**	**-4.1**
	comp=Z,0.1nm,0.3s,baz=188,slow=12,SNR=35							
KURK				LR		LR	05 32 25.6	
	comp=Z,51nm,21.1s,baz=145,slow=39							
KURK	**Kurchatov**	**14.21**	**4**	*c i*P		**Pn**	**05 26 29.0**	**-2.4**
KURK				pmax		pmax		
	comp=Z,19nm,1.7s							
VOSK	**Vostochnaya**	**16.73**	**347**	⇓P		**Pn**	**05 27 02.0**	**-1.1**
	comp=Z,3.7nm,0.5s							
SHL	**Shillong**	**16.77**	**127**	*ex*		**Pn**	**05 27 03.0**	**-0.9**
BVAR	**Borovoye Array**	**17.12**	**346**	P		**Pn**	**05 27 05.7**	**-2.3**
	comp=Z,0.9nm,0.3s,baz=161,slow=14,SNR=16							
BVAR	**Borovoye Array**	**17.12**	**346**	P		**Pn**	**05 27 05.7**	**-2.3**
BVAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
BRVK	**Borovoye**	**17.18**	**346**	P		**Pn**	**05 27 06.8**	**-1.9**
BRVK	**Borovoye**	**17.18**	**346**	*e*P		**Pn**	**05 27 06.7**	**-1.9**
	comp=Z,26nm,1.0s							
BRVK	**Borovoye**	**17.18**	**346**	*d i*P		**Pn**	**05 27 07.4**	**-1.2**
BRVK				pmax		pmax		
	comp=Z,11nm,1.0s							
ZRNK	**Zerenda**	**17.34**	**344**	⇑P		**Pn**	**05 27 09.7**	**-1.0**
	comp=Z,3.0nm,0.5s							
AB31	**Akbulak array**	**17.78**	**321**	P		**Pn**	**05 27 13.3**	**-2.7**
	comp=Z,8.5nm,0.4s,baz=129,slow=13,SNR=193							
ABKAR	**Akbulak array**	**17.78**	**321**	*e*P		**Pn**	**05 27 15.3**	**-0.7**
	comp=Z,18nm,0.4s							
GTA	**Gaotai**	**18.19**	**74**	*e*P		**Pn**	**05 27 24.1**	**+3.0**
GTA				pmax		pmax		
	comp=Z,4.0nm,0.9s							
ZAA0	**Zalesovo Array**	**18.23**	**15**	*e*P		**Pn**	**05 27 19.1**	**-2.3**
ZALV	**Zalesovo Beam**	**18.23**	**15**	P		**Pn**	**05 27 18.8**	**-2.6**
	comp=Z,1.1nm,0.3s,baz=202,slow=11,SNR=23							
ZALV	**Zalesovo Beam**	**18.23**	**15**	P		**Pn**	**05 27 18.8**	**-2.6**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.3s							
NVS	**Novosibirsk**	**18.79**	**11**	*e*P		**Pn**	**05 27 25.9**	**-2.2**
NVS				pmax		pmax		
	comp=N,26nm,1.2s							
NVS				pmax		pmax		
	comp=E,12nm,1.2s							
NVS				pmax		pmax		
	comp=Z,24nm,1.2s							
HYB	**Hyderabad**	**19.10**	**176**	*i* P		**Pn**	**05 27 31.5**	**-0.6**
AKTK	**Aktyubinsk**	**19.49**	**321**	P		**Pn**	**05 27 34.0**	**-2.3**
AKTK				S		**S**	**05 31 04.8**	**-4.8**
AKTK				LR		LR	05 36 00.1	
AKTO	**Aktyubinsk**	**19.49**	**321**	⇑P		**Pn**	**05 27 33.9**	**-2.5**
	comp=Z,4.0nm,0.8s							
AKTO	**Aktyubinsk**	**19.49**	**321**	P		**Pn**	**05 27 34.0**	**-2.3**
	comp=Z,3.3nm,0.3s,baz=113,slow=12,SNR=67							
AKTO				S		**S**	**05 31 04.8**	**-4.8**
	comp=Z,0.2nm,0.3s,baz=300,slow=16,SNR=3.0							
AKTO				LR		LR	05 36 00.1	
	comp=Z,36nm,20.4s,baz=173,slow=40							
AKTO	**Aktyubinsk**	**19.49**	**321**	P		**Pn**	**05 27 34.1**	**-2.3**
AKTO				S		**S**	**05 31 04.8**	**-4.8**
AKTO				pmax		pmax		
	comp=Z,3.0nm,0.3s							
AKTO				MLR		MLR		
	comp=Z,36nm,20.4s							
LZH	**Lanzhou**	**21.60**	**83**	*e*P		**P**	**05 28 04.6**	**+7.4**
LZH				pP			05 28 27.5	
LZH				sP		sP	05 28 44.8	+19
LZH				pmax		pmax		
	comp=Z,32nm,1.2s,mb4.5							
LZH				pmax		pmax		
	comp=Z,270nm,4.8s							
CD2	**Chengdu**	**22.90**	**96**	P		**P**	**05 28 11.0**	**0.0**
SVE	**Sverdlovsk**	**23.08**	**337**	*e*P		**P**	**05 28 12.5**	**+0.2**
SVE				pmax		pmax		
	comp=Z,34nm,1.4s,mb4.5							
ZAK	**Zakamensk**	**23.39**	**46**	*e*P		**P**	**05 28 15.6**	**+0.3**
ZAK				*e*			05 28 47.9	
ZAK				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb3.7							
ARU	**Arti**	**23.46**	**334**	*e*P		**P**	**05 28 16.1**	**+0.2**
	comp=Z,19nm,0.7s,mb4.5							
ARU	**Arti**	**23.46**	**334**	*d i*P		**P**	**05 28 15.6**	**-0.2**
ARU				*e*			05 28 44.3	
ARU				S		**S**	**05 32 21.6**	**-0.9**
ARU				SS			05 33 05.7	
ARU				pmax		pmax		
	comp=Z,18nm,0.8s,mb4.5							
SONM	**Songino Array**	**24.37**	**53**	P		**P**	**05 28 25.9**	**+1.7**
	comp=Z,6.4nm,1.0s,mb3.9,baz=252,slow=7.1,SNR=16							
SONM				LR		LR	05 39 59.3	
	comp=Z,12nm,19.3s,baz=22,slow=41							
SONM	**Songino Array**	**24.37**	**53**	P		**P**	**05 28 25.9**	**+1.7**
SONM				pmax		pmax		
	comp=Z,6.0nm,1.0s							
SONM				MLR		MLR		
	comp=Z,12nm,19.3s							
KMI	**Kunming**	**24.77**	**110**	P		**P**	**05 28 26.8**	**-1.3**
KMI				pmax		pmax		
	comp=Z,15nm,0.6s,mb4.6							
ULN	**Ulaanbaatar**	**24.80**	**53**	*e*P		**P**	**05 28 30.2**	**+2.0**
	comp=Z,3.5nm,0.8s,mb3.8							
ULN	**Ulaanbaatar**	**24.80**	**53**	*e*P		**P**	**05 28 30.2**	**+2.1**
ULN				pmax		pmax		
	comp=Z,4.0nm,0.8s,mb3.9							
GNI	**Garni**	**25.49**	**288**	⇓*e*P		**P**	**05 28 38.0**	**+3.5**
GNI				pmax		pmax		
	comp=Z,16nm,1.7s							
MIB	**Mutribah**	**25.67**	**263**	*e*P		**P**	**05 28 36.7**	**+0.5**
RDF	**Al-Radifah**	**25.86**	**261**	*e*P		**P**	**05 28 40.7**	**+2.8**
NAY	**Al-Naaiem**	**25.97**	**262**	*e*P		**P**	**05 28 39.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**26.40**	**127**	P		**P**	**05 28 46.6**	**+3.8**
	comp=Z,3.9nm,0.7s,mb4.0,baz=311,slow=11,SNR=23							
CMAR	**Chiang Mai Arr**	**26.40**	**127**	P		**P**	**05 28 46.7**	**+3.8**
CMAR				pmax		pmax		
	comp=Z,4.0nm,0.7s							
KIV	**Kislovodsk**	**27.09**	**297**	⇑*e*P		**P**	**05 28 56.0**	**+7.2**
KIV				*e**PP		pP	05 29 12.8	+4.2
KIV							05 29 40.0	
KIV				pmax		pmax		
	comp=Z,5.0nm,0.9s,mb4.0							
GYA	**Guiyang**	**27.11**	**103

MDJ	**Mudanjiang**	**40.14**	**62**	P	**P**	**05 30 42.1**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,15nm,2.4s,mb4.4						
MDJ				pmax	pmax		
	comp=Z,190nm,5.4s						
FINES	**FINESS Array B**	**40.20**	**325**	P	**P**	**05 30 41.8**	**-0.1**
	comp=Z,8.4nm,0.3s,mb5.1,baz=112,slow=9.5,SNR=74						
FINES	**FINESS Array B**	**40.20**	**325**	P	**P**	**05 30 41.8**	**-0.1**
FINES				pmax	pmax		
	comp=Z,8.0nm,0.3s						
KAF	**Kangasniemi**	**40.27**	**326**	*eP*	**P**	**05 30 42.0**	**-0.5**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
KAF	**Kangasniemi**	**40.27**	**326**	*ep*	**P**	**05 30 42.0**	**-0.5**
	comp=Z,2.4nm,0.7s,mb4.1						
DRGR		**41.10**	**302**	⇓*iP*	**P**	**05 30 50.9**	**+1.4**
GZR	**Gura Zlata**	**41.21**	**300**	⇑*iP*	**P**	**05 30 51.5**	**+1.0**
NIE	**Niedzica**	**42.47**	**306**	*eP*	**P**	**05 31 02.2**	**+1.6**
KEV	**Kevo**	**42.62**	**337**	*eP*	**P**	**05 31 00.3**	**-1.2**
KEV				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
KEV	**Kevo**	**42.62**	**337**	*ep*	**P**	**05 31 00.3**	**-1.2**
	comp=Z,4.3nm,0.7s,mb4.3						
ARCES	**ARCESS Array B**	**43.01**	**336**	P	**P**	**05 31 04.7**	**0.0**
	comp=Z,8.3nm,0.6s,mb4.7,baz=100,slow=8.3,SNR=122						
ARCES	**ARCESS Array B**	**43.01**	**336**	P	**P**	**05 31 04.7**	**0.0**
ARCES				pmax	pmax		
	comp=Z,8.0nm,0.6s						
VYHS	**Vyhne**	**43.52**	**305**	*eP*	**P**	**05 31 10.8**	**+1.6**
VYHS	**Vyhne**	**43.52**	**305**	*eP*	**P**	**05 31 10.8**	**+1.6**
DPC	**Dobruska-Polom**	**44.95**	**308**	*eP*	**P**	**05 31 21.7**	**+1.2**
DPC	**Dobruska-Polom**	**44.95**	**308**	*eP*	**P**	**05 31 21.7**	**+1.2**
UPC	**Upice**	**45.13**	**308**	*eP*	**P**	**05 31 22.6**	**+0.7**
UPC	**Upice**	**45.13**	**308**	*eP*	**P**	**05 31 22.6**	**+0.7**
CONA	**Conrad Observa**	**45.57**	**304**	⇑*iP*	**P**	**05 31 26.0**	**+0.5**
	comp=Z,5.8nm,1.0s,mb4.3						
SOKA	**Soboth**	**46.34**	**303**	⇑*iP*	**P**	**05 31 32.2**	**+0.6**
	comp=Z,8.6nm,1.2s,mb4.4						
BRG	**Berggiesshubel**	**46.39**	**309**	*eP*	sP	05 32 06.9	+4.0
	comp=Z,6.7nm,1.1s						
KHC	**Kasperske Hory**	**46.88**	**306**	*eP*	**P**	**05 31 36.1**	**+0.4**
	comp=Z,2.4nm,0.8s,mb4.0						
KHC	**Kasperske Hory**	**46.88**	**306**	*eP*	**P**	**05 31 36.4**	**+0.7**
CLL	**Collm**	**46.92**	**309**	*eP*	**P**	**05 31 36.0**	**0.0**
	comp=Z,5.0nm,0.9s,mb4.2						
CLL	**Collm**	**46.92**	**309**	*eP*	**P**	**05 31 36.0**	**0.0**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
CLL	**Collm**	**46.92**	**309**	*eP*	**P**	**05 31 36.0**	**0.0**
NOA	**NORSAR Array B**	**47.27**	**323**	P	**P**	**05 31 37.9**	**-0.7**
	comp=Z,5.9nm,0.6s,mb4.5,baz=91,slow=7.6,SNR=29						
NOA				LR	LR	05 52 13.4	
	comp=Z,17nm,18.6s,baz=230,slow=37						
NOA	**NORSAR Array B**	**47.27**	**323**	P	**P**	**05 31 37.9**	**-0.7**
NOA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NOA				MLR	MLR		
	comp=Z,17nm,18.6s						
GRA1	**Grafenberg Arr**	**48.30**	**308**	*eP*	**P**	**05 31 48.1**	**+1.4**
	comp=Z,8.0nm,0.9s,mb4.5						
GRF	**Grafenberg Arr**	**48.30**	**308**	*eP*	**P**	**05 31 48.1**	**+1.4**
	comp=Z,8.0nm,0.9s,mb4.5						
GRF	**Grafenberg Arr**	**48.30**	**308**	*eP*	**P**	**05 31 48.1**	**+1.4**
GRF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
KBS	**Kingsbay**	**49.66**	**347**	*ceP*	**P**	**05 31 57.7**	**+1.0**
KBS				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.8						
CDF	**Champ du Feu**	**51.11**	**307**	*eP*	**P**	**05 32 07.8**	**-0.2**
HINF	**Hinteralfeld**	**51.53**	**306**	*eP*	**P**	**05 32 10.3**	**-0.8**
SEY	**Seymchan**	**51.66**	**34**	⇑*eP*	**P**	**05 32 12.3**	**+0.4**
HAU	**Haudompre**	**51.81**	**306**	*eP*	**P**	**05 32 13.1**	**-0.1**
	comp=Z,11nm,0.9s,mb4.6						
HAU				*e*MLR	MLR		
	comp=Z,30nm,19.0s						
HAU	**Haudompre**	**51.81**	**306**	*eP*	**P**	**05 32 13.1**	**-0.1**
	comp=Z,5.7nm,0.9s,mb4.6						
HAU				LR	LR		
	comp=Z,30nm,19.0s						
HAU	**Haudompre**	**51.81**	**306**	*eP*	**P**	**05 32 13.1**	**-0.1**
HAU				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
HAU				MLR	MLR		
	comp=Z,30nm,19.0s						
LPG	**La Plagne**	**52.22**	**303**	*eP*	**P**	**05 32 16.9**	**+0.6**
	comp=Z,8.4nm,0.7s,mb4.5						
LPG	**La Plagne**	**52.22**	**303**	*eP*	**P**	**05 32 16.9**	**+0.6**
	comp=Z,4.2nm,0.7s,mb4.6						
LPG	**La Plagne**	**52.22**	**303**	*eP*	**P**	**05 32 16.9**	**+0.6**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
LPL	**La Plagne**	**52.23**	**303**	*eP*	**P**	**05 32 16.8**	**+0.4**
	comp=Z,16nm,0.8s,mb4.8						
LPL	**La Plagne**	**52.23**	**303**	*eP*	**P**	**05 32 16.8**	**+0.4**
	comp=Z,8.1nm,0.8s,mb4.8						
LPL	**La Plagne**	**52.23**	**303**	*eP*	**P**	**05 32 16.8**	**+0.4**
LPL				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
SBF	**Sospel**	**52.23**	**301**	*eP*	**P**	**05 32 16.5**	**+0.1**
	comp=Z,21nm,0.8s,mb4.9						
SBF	**Sospel**	**52.23**	**301**	*eP*	**P**	**05 32 16.5**	**+0.1**
	comp=Z,10nm,0.8s,mb4.9						
SBF	**Sospel**	**52.23**	**301**	*eP*	**P**	**05 32 16.5**	**+0.1**
SBF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
CABF	**La Chapelle**	**52.35**	**305**	*eP*	**P**	**05 32 17.2**	**-0.1**
	comp=Z,12nm,0.9s,mb4.6						
CABF	**La Chapelle**	**52.35**	**305**	*eP*	**P**	**05 32 17.2**	**-0.1**
	comp=Z,6.0nm,0.9s,mb4.6						
CABF	**La Chapelle**	**52.35**	**305**	*eP*	**P**	**05 32 17.2**	**-0.1**
CABF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
MBDF	**Montbardon**	**52.43**	**302**	*eP*	**P**	**05 32 17.3**	**-0.6**
	comp=Z,4.5nm,0.7s,mb4.3						
MBDF	**Montbardon**	**52.43**	**302**	*eP*	**P**	**05 32 17.3**	**-0.6**
	comp=Z,2.3nm,0.7s,mb4.3						
MBDF	**Montbardon**	**52.43**	**302**	*eP*	**P**	**05 32 17.3**	**-0.6**
MBDF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
BAIF	**Baives**	**52.65**	**309**	*eP*	**P**	**05 32 19.0**	**-0.4**
SMF	**Signal de Mont**	**53.82**	**305**	*eP*	**P**	**05 32 27.6**	**-0.5**
	comp=Z,6.9nm,0.6s,mb4.5						
SMF	**Signal de Mont**	**53.82**	**305**	*eP*	**P**	**05 32 27.6**	**-0.5**
	comp=Z,3.5nm,0.6s,mb4.5						
SMF	**Signal de Mont**	**53.82**	**305**	*eP*	**P**	**05 32 27.6**	**-0.5**
SMF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
SSF	**Saint Saulge**	**53.92**	**306**	*eP*	**P**	**05 32 28.3**	**-0.5**
	comp=Z,14nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**53.92**	**306**	*eP*	**P**	**05 32 28.3**	**-0.5**
	comp=Z,7.0nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**53.92**	**306**	*eP*	**P**	**05 32 28.3**	**-0.5**
SSF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
AVF	**Avril sur Loir**	**54.10**	**306**	*eP*	**P**	**05 32 29.7**	**-0.4**
	comp=Z,7.5nm,0.6s,mb4.6						
AVF	**Avril sur Loir**	**54.10**	**306**	*eP*	**P**	**05 32 29.7**	**-0.4**
	comp=Z,3.8nm,0.6s,mb4.6						
AVF	**Avril sur Loir**	**54.10**	**306**	*eP*	**P**	**05 32 29.7**	**-0.4**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
BGF	**Bois d'Agland**	**54.51**	**305**	*eP*	**P**	**05 32 32.7**	**-0.3**
LASF	**Ste Croix**	**54.61**	**302**	*eP*	**P**	**05 32 33.1**	**-0.8**
TCF	**Toulx Ste Croi**	**55.01**	**305**	*eP*	**P**	**05 32 36.5**	**-0.2**
	comp=Z,16nm,1.1s,mb4.7						
TCF	**Toulx Ste Croi**	**55.01**	**305**	*eP*	**P**	**05 32 36.5**	**-0.2**
	comp=Z,7.9nm,1.1s,mb4.7						
TCF	**Toulx Ste Croi**	**55.01**	**305**	*eP*	**P**	**05 32 36.5**	**-0.2**
TCF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
CAF	**Calviac**	**55.55**	**304**	*eP*	**P**	**05 32 40.7**	**+0.1**
	comp=Z,8.1nm,1.0s,mb4.4						
CAF	**Calviac**	**55.55**	**304**	*eP*	**P**	**05 32 40.7**	**+0.1**
	comp=Z,4.1nm,1.0s,mb4.4						
CAF	**Calviac**	**55.55**	**304**	*eP*	**P**	**05 32 40.7**	**+0.1**
CAF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
LDF	**La Druitiere**	**55.78**	**308**	*eP*	**P**	**05 32 41.6**	**-0.6**
	comp=Z,7.2nm,0.5s,mb4.6						
LDF	**La Druitiere**	**55.78**	**308**	*eP*	**P**	**05 32 41.6**	**-0.6**
	comp=Z,3.6nm,0.5s,mb4.7						
LDF	**La Druitiere**	**55.78**	**308**	*eP*	**P**	**05 32 41.6**	**-0.6**
LDF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
RJF	**Les Rejaudoux**	**55.79**	**304**	*eP*	**P**	**05 32 42.5**	**+0.2**
	comp=Z,15nm,1.0s,mb4.7						
RJF				*e*MLR	MLR		
	comp=Z,36nm,21.8s						
RJF	**Les Rejaudoux**	**55.79**	**304**	*eP*	**P**	**05 32 42.5**	**+0.2**
	comp=Z,7.6nm,1.0s,mb4.7						
RJF				LR	LR		
	comp=Z,40nm,21.8s						
RJF	**Les Rejaudoux**	**55.79**	**304**	*eP*	**P**	**05 32 42.5**	**+0.2**
RJF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
RJF				MLR	MLR		
	comp=Z,40nm,21.8s						
FLN	**La Foliniere**	**55.96**	**309**	*eP*	**P**	**05 32 42.7**	**-0.7**
FLN				*e*MLR	MLR		
	comp=Z,36nm,21.2s						
FLN	**La Foliniere**	**55.96**	**309**	*eP*	**P**	**05 32 42.7**	**-0.7**
FLN				MLR	MLR		
	comp=Z,40nm,21.3s						
GRR	**Gorron**	**56.31**	**308**	*eP*	**P**	**05 32 45.2**	**-0.8**
	comp=Z,12nm,0.7s,mb4.8						
GRR	**Gorron**	**56.31**	**308**	*eP*	**P**	**05 32 45.2**	**-0.8**
	comp=Z,6.2nm,0.7s,mb4.8						
GRR	**Gorron**	**56.31**	**308**	*eP*	**P**	**05 32 45.2**	**-0.8**
GRR				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
LFF	**La Frestale**	**56.43**	**304**	*eP*	**P**	**05 32 46.8**	**0.0**
SGMF	**Saint Gilles**	**57.43**	**309**	*eP*	**P**	**05 32 53.6**	**-0.2**
ROSF	**Rostrenen**	**57.85**	**309**	*eP*	**P**	**05 32 56.2**	**-0.6**
QUIF	**Quistinic**	**57.93**	**309**	*eP*	**P**	**05 32 56.5**	**-0.9**
ETSF	**Etsaut**	**58.04**	**302**	*eP*	**P**	**05 32 58.1**	**-0.1**
	comp=Z,7.2nm,0.8s,mb4.5						
ETSF	**Etsaut**	**58.04**	**302**	*eP*	**P**	**05 32 58.1**	**-0.1**
	comp=Z,3.6nm,0.8s,mb4.5						
ETSF	**Etsaut**	**58.04**	**302**	*eP*	**P**	**05 32 58.1**	**-0.1**
ETSF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
SUMG	**Summit**	**62.55**	**342**	*eP*	**P**	**05 33 30.0**	**+1.5**
	comp=Z,14nm,0.9s,mb4.9						
SUMG	**Summit**	**62.55**	**342**	*iP*	**P**	**05 33 30.0**	**+1.5**
	comp=Z,10nm,1.0s,mb4.7						
TORD	**Torodi Ar. Bea**	**70.57**	**272**	P	**P**	**05 34 19.8**	**-0.6**
	comp=Z,4.9nm,0.5s,mb4.6,baz=47,slow=6.0,SNR=88						
INK	**Inuvik**	**72.99**	**11**	*eP*	**P**	**05 34 34.4**	**+0.3**
	comp=Z,8.6nm,1.4s,mb4.4						
INK	**Inuvik**	**72.99**	**11**	*eP*	**P**	**05 34 34.4**	**+0.3**
INK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
COLA	**College**	**73.00**	**18**	*eP*	**P**	**05 34 34.0**	**-0.2**
	comp=Z,6.4nm,0.9s,mb4.5						
COLA	**College**	**73.00**	**18**	*eP*	**P**	**05 34 34.0**	**-0.2**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
ILAR	**Eielson Array**	**73.32**	**18**	P	**P**	**05 34 35.5**	**-0.6**
	comp=Z,2.0nm,0.9s,mb4.0,baz=320,slow=4.4,SNR=25						
ILAR	**Eielson Array**	**73.32**	**18**	P	**P**	**05 34 35.5**	**-0.6**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PAX	**Paxson**	**75.17**	**19**	*eP*	**P**	**05 34 47.2**	**+0.4**
	comp=Z,2.2nm,0.8s,mb3.9						
PAX	**Paxson**	**75.17**	**19**	*eP*	**P**	**05 34 47.2**	**+0.4**
PAX				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
WRA	**Warramunga Arr**	**77.99**	**126**	P	**P**	**05 35 04.1**	**+0.8**
	comp=Z,0.8nm,0.7s,mb3.5,baz=321,slow=6.5,SNR=3.6						
WRA	**Warramunga Arr**	**77.99**	**126**	P	**P**	**05 35 04.1**	**+0.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**80.40**	**129**	P	**P**	**05 35 17.6**	**+1.2**
	comp=Z,0.5nm,0.8s,mb3.4,baz=323,slow=5.8,SNR=5.2						
ASAR	**Alice Springs**	**80.40**	**129**	P	**P**	**05 35 17.6**	**+1.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**80.86**	**5**	P	**P**	**05 35 18.2**	**-0.2**
	comp=Z,2.8nm,0.6s,mb4.3,baz=343,slow=5.5,SNR=16						
YKA	**Yellowknife Ar**	**80.86**	**5**	P	**P**	**05 35 18.2**	**-0.2**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
RAR	**Rarotonga**	**128.67**	**89**	PKP	PKPdf	05 42 12.5	+0.7
	comp=Z,18nm,0.4s,baz=183,slow=3.8,SNR=6.3						
RAR	**Rarotonga**	**128.67**	**89**	PKIKP	PKPdf	05 42 12.5	+0.7
RAR				pmax	pmax		
	comp=Z,18nm,0.4s						
CFAA	**Coronel Fontan**	**150.90**	**269**	PKPbc	PKPbc	05 42 57.9	+0.9
	comp=Z,0.2nm,0.7s,baz=27,slow=4.5,SNR=5.5						

NEIC ***22*** *05:23:48.9, 17.58N×101.99W, h19km, MD3.8(MEX), After MEX.*

MEX 22 05:23:48.9±0.9, 17.58N×101.99W, h19km±63km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.50**	**86**	*i* P	Pg	05 23 56.6	-2.4
ZIIG				*i* S	Sg	05 24 04.5	-1.3
ZIIG	**Zihuatanejo**	**0.50**	**86**	*i* P	Pg	05 23 56.6	-2.4
ZIIG				*i* S	Sg	05 24 04.5	-1.3
MMIG	**Aquila**	**1.48**	**299**	*i* P	Pn	05 24 11.2	-3.3
MMIG				*i* S	Sn	05 24 29.4	-3.9
CAIG	**El Cayaco**	**1.72**	**107**	*i* P	Pn	05 24 15.8	-2.2
CAIG				*i* S	Sn	05 24 34.9	-4.5
CAIG	**El Cayaco**	**1.72**	**107**	*i* P	Pn	05 24 15.8	-2.2
CAIG				*i* S	Sn	05 24 34.9	-4.5
ACX	**Acapulco**	**2.15**	**109**	*eP*	Pn	05 24 20.6	-3.3
ACX				*i* S	Sn	05 24 45.1	-4.9
ACX	**Acapulco**	**2.15**	**109**	*eP*	Pn	05 24 20.6	-3.3
ACX				*i* S	Sn	05 24 45.1	-4.9
MEIG	**Mezcala**	**2.28**	**81**	*eP*	Pn	05 24 23.3	-2.3
MEIG				*i* S	Sn	05 24 49.6	-3.6
MZVM		**3.07**	**58**	*i* P	Pn	05 24 37.2	+0.7
MZVM				*i* S	Sn	05 25 11.1	-1.7
PPM	**Popocatepetl**	**3.52**	**65**	*eP*	Pn	05 24 40.3	-2.3
PPM				*i* S	Sn	05 25 21.1	-2.7
PPM	**Popocatepetl**	**3.52**	**65**	*eP*	Pn	05 24 40.3	-2.3
PPM				*i* S	Sn	05 25 21.1	-2.7
PNIG	**Pinotepa**	**3.88**	**107**	*i* P	Pn	05 24 46.0	-1.5
PNIG				*i* S	Sn	05 25 32.1	-0.5
PNIG	**Pinotepa**	**3.88**	**107**	*i* P	Pn	05 24 46.0	-1.5
PNIG				*i* S	Sn	05 25 32.1	-0.5
UTMO	**Huajuapan**	**4.00**	**86**	*i* P	Pn	05 24 52.6	+3.4
UTMO				*i* S	Sn	05 25 35.1	-0.5

IDC 22 05:39:36.6±1.4, 27.13S×113.29W, h0km, mb4.0/5, mb1 4.3/5, mb1mx4.0/16, mbtmp3.9/5, MS3.7/4, Ms1 3.8/4, ms1mx3.3/18, Error ellipse: s-maj=46.0km s-min=36.1km az=37.0, Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**3.53**	**91**	LR	LR	05 41 14.2	
	comp=Z,1μm,21.3s,baz=194,slow=28						
RKT	**Rikitea**	**20.03**	**277**	*e*LR	LR	05 48 41.9	
	256nm,29.8s						
RKT				*e*T		06 04 15.7	
	1.7nm,0.2s						
TBI	**Tubuai**	**32.86**	**268**	*e*T		06 20 23.6	
	34nm,0.3s						
PPT	**Papeete**	**34.77**	**278**	*e*LR	LR	05 55 26.2	
	249nm,27.0s						
LPAZ	**La Paz**	**43.12**	**85**	P	P	05 47 39.4	+0.4
	0.9nm,0.8s,baz=241,slow=8.1,SNR=2.4						
LPAZ				LR	LR	06 01 17.6	
	comp=Z,102nm,20.6s,baz=238,slow=30						
ROSC	**El Rosal**	**49.28**	**56**	LR	LR	06 06 01.7	
	comp=Z,48nm,18.2s,baz=215,slow=32						
TXAR	**Lajitas Array**	**56.90**	**10**	P	P	05 49 24.0	+0.7
	1.4nm,1.0s,baz=185,slow=9.0,SNR=12						
NVAR	**Mina Array Bea**	**65.38**	**356**	P	P	05 50 21.9	+1.0
	3.3nm,0.9s,baz=180,slow=9.6,SNR=17						
PDAR	**Pinedale Array**	**69.63**	**3**	P	P	05 50 47.0	-0.6
	0.7nm,0.7s,baz=171,slow=7.9,SNR=7.6						
CTA	**Charters Tower**	**89.83**	**248**	LR	LR	06 23 01.2	
	comp=Z,72nm,19.9s,baz=48,slow=29						
ILAR	**Eielson Array**	**95.26**	**346**	P	P	05 53 00.7	-1.0
	0.6nm,0.9s,baz=190,slow=4.6,SNR=5.4						
CMAR	**Chiang Mai Arr**	**149.12**	**261**	PKPbc	PKPbc	05 59 27.6	0.0
	0.9nm,0.7s,baz=131,slow=2.5,SNR=5.4						
BRTR	**Keskin Array B**	**149.85**	**57**	PKPbc	PKPbc	05 59 29.4	+0.6
	1.6nm,0.9s,baz=236,slow=1.6,SNR=6.4						
ZALV	**Zalesovo Beam**	**150.06**	**338**	PKPbc	PKPbc	05 59 27.7	-1.1
	2.2nm,0.5s,baz=27,slow=3.0,SNR=9.8						

ISCJB ***22*** *05:45:15.5±0.6, 39.14N±0.03×140.94E±0.04, h12km±5km, mb3.3/2, Error ellipse: s-maj=6.2km s-min=5.4km az=137.5*
JMA ***22*** *05:45:15.8, 39.13N×140.93E, h9km±1km, M3.2*
JMA Felt I J1.
IDC ***22*** *05:45:15.9±2.2, 39.27N×140.88E, h0km, mb3.3/2, mb1 3.5/4, mb1mx3.3/24, mbtmp3.3/4, ML2.9/2, Error ellipse: s-maj=58.2km s-min=28.0km az=143.0*

ISC 22 05:45:16.2±0.6, 39.13N±0.03×140.95E±0.04, h4km±7km, n10, σ0.47/16, mb3.3/2, 2C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.28**	**129**	⇓P	**Pg**	**05 45 21.5**	**0.0**
JMK				S	**Sg**	**05 45 25.5**	**+0.4**
JRG	**Rokugo**	**0.36**	**318**	⇓P	**Pg**	**05 45 22.9**	**-0.3**
JRG				S	**Sg**	**05 45 28.5**	**+0.6**
JOM	**Ohasama**	**0.44**	**38**	P	**Pg**	**05 45 24.4**	**-0.2**
JOM				S	**Sg**	**05 45 30.4**	**+0.1**
JYK	**Kaneyama**	**0.50**	**246**	⇓P	**Pg**	**05 45 25.5**	**-0.3**
JYK				S	**Sg**	**05 45 32.1**	**-0.3**
JIO	**Ouri**	**0.74**	**155**	⇑P	**Pg**	**05 45 30.0**	**-0.4**
JIO				S	**Sg**	**05 45 40.0**	**0.0**
JOU	**Okura**	**0.79**	**196**	⇑P	**Pg**	**05 45 31.0**	**-0.3**
JOU				S	**Sg**	**05 45 41.7**	**+0.1**
MJAR	**Matsushiro Arr**	**3.37**	**221**	Pn	**Pn**	**05 46 10.6**	**+1.0**
	1.0nm,0.3s,baz=34,slow=12,SNR=4.9						
KSRS	**Korea Array**	**10.38**	**265**	Pn	**Pn**	**05 47 46.4**	**+0.7**
	0.1nm,0.3s,baz=77,slow=13,SNR=3.1						
MKAR	**Makanchi Array**	**42.72**	**300**	P	**P**	**05 53 13.4**	**-0.8**
	0.5nm,0.8s,mb3.3,baz=86,slow=9.1,SNR=4.2						
ILAR	**Eielson Array**	**47.94**	**33**	P	**P**	**05 53 54.9**	**-0.4**
	0.2nm,0.6s,mb3.3,baz=271,slow=6.7,SNR=3.4						

FUNV 22 05:49:21.1, 6.74N×73.16W, h158km, MW3.7,2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.40**	**37**	⇓*iP*	Pn	05 49 50.2	-0.1
CAPV				*e*S	Sn	05 50 10.6	-2.0
VIGV	**El Vigia**	**2.74**	**40**	*eP*	Pn	05 50 04.4	-1.2
VIGV				*e*S	Sn	05 50 36.8	-3.2
SOCV	**Socops**	**2.75**	**56**	*eP*	Pn	05 50 05.0	-0.7
SOCV				*e*S	Sn	05 50 36.2	-4.0
ELOV	**Elorza**	**3.66**	**86**	*eP*	Pn	05 50 16.5	-0.7
VIRV	**Villa del Rosa**	**3.81**	**11**	*eP*	Pn	05 50 17.3	-1.9
VIRV				*e*S	Sn	05 50 59.9	-4.4
QARV	**Quebrada Arrib**	**4.32**	**37**	⇓*iP*	Pn	05 50 24.6	-1.1
QARV				*e*S	Sn	05 51 10.9	-5.2
SANV	**Sanarito**	**4.51**	**52**	*eP*	Pn	05 50 26.6	-1.7
SANV				*e*S	Sn	05 51 16.0	-4.7
CURV	**Curarigua**	**4.54**	**44**	*eP*	Pn	05 50 27.0	-1.6
CURV				*e*S	Sn	05 51 15.5	-5.7
TEPV	**Terepaima**	**5.07**	**51**	*eP*	Pn	05 50 34.0	-1.6
TEPV				*e*S	Sn	05 51 28.2	-5.5
SIQV	**Siquisique**	**5.10**	**40**	*eP*	Pn	05 50 34.1	-1.9
SIQV				*e*S	Sn	05 51 28.3	-6.3
MAPV	**Macapo**	**5.57**	**56**	*eP*	Pn	05 50 40.3	-2.0
CAOV	**Caicara del Or**	**6.81**	**85**	*eP*	Pn	05 50 55.8	-3.0
CUPV	**Cœpira**	**8.00**	**65**	*eP*	Pn	05 51 11.6	-3.0

NIED ***22*** *06:02:00, 39.10N×140.90E, h5km, Mw4.0 Best double couple: M0 1.32000×10^15 NP1:φ8 18.00000°, δ55.00000°, λ88.00000°. NP2:φ8 201.00000°, δ35.00000°, λ93.00000°.*
ISCJB ***22*** *06:02:39.4±0.6, 39.15N±0.03×140.95E±0.04, h14km±3km, mb4.4/34, MS3.3/6, Error ellipse: s-maj=4.7km s-min=4.2km az=179.2*
JMA ***22*** *06:02:39.7, 39.13N×140.93E, h10km±1km, M4.1*
JMA Felt II J1.
NEIC ***22*** *06:02:39.7, 39.14N×140.93E, h10km, mb4.5/8, MW4.0(NIED), After JMA.*
NEIC Recorded [2 JMA] in Akita, Iwate and Miyagi.
BJI ***22*** *06:02:41.7, 39.11N×140.43E, h8km, mB4.9/7, mb4.7/16, Ms4.2/5, Ms7 4.0/5*
MOS ***22*** *06:02:42.1±1.2, 39.13N×140.88E, h33km, mb4.6/14, Error ellipse: s-maj=13.1km s-min=7.9km az=83.4*
IDC ***22*** *06:02:46.0±3.1, 39.10N×140.81E, h56km±29km, mb3.8/16, mb1 4.0/18, mb1mx3.9/26, mbtmp3.8/18, ML3.9/2, MS3.1/6, Ms1 3.1/6, ms1mx2.9/25, Error ellipse: s-maj=17.8km s-min=16.3km az=101.0*

ISC 22 06:02:40.0±0.5, 39.12N±0.03×140.93E±0.04, h7km±3km, h19km±1.2km; pP-P, n78, σ1.04/88, mb4.4/34, MS3.3/6, 7C-5D, Eastern Honshu

comp=Z,16nm,20.7s,MS2.5,baz=6.9,slow=34
SONM Songino Array 26.35 301 P **P** **06 08 17.4 +0.8**
comp=Z,1.2nm,0.8s,mb3.5,baz=104,slow=10,SNR=4.2
SONM LR LR 06 18 51.8
comp=Z,61nm,18.8s,MS3.2,baz=116,slow=37
SONM Songino Array 26.35 301 P **P** **06 08 17.4 +0.8**
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM MLR MLR
comp=Z,61nm,18.8s
TLY Talaya 28.71 308 *e*P **P** **06 08 44.7 +7.0**
TLY pmax pmax
comp=Z,7.0nm,1.4s,mb4.2
TLY MLR MLR
comp=Z,72nm,14.0s,MS3.4
LZH Lanzhou 29.41 276 *e*P **P** **06 08 48.5 +4.4**
LZH pP pP 06 08 53.3 +7.2
LZH sP sP 06 08 56.3 +9.4
LZH pmax pmax
comp=Z,21nm,1.0s,mb4.8
GYA Guiyang 31.27 257 *e*P **P** **06 09 01.3 +0.7**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
CD2 Chengdu 31.36 266 P **P** **06 09 02.3 +1.0**
CD2 pmax pmax
comp=Z,20nm,0.5s,mb5.2
CD2 pmax pmax
comp=Z,120nm,4.5s
KMI Kunming 34.96 258 P **P** **06 09 31.0 -1.8**
KMI pP pP 06 09 36.8 +1.9
KMI sP sP 06 09 38.8 +3.1
KMI pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
WMQ Urumqi 39.59 295 *e*P **P** **06 10 12.0 +0.1**
WMQ pP pP 06 10 16.4 +2.4
WMQ sP sP 06 10 19.0 +4.2
WMQ PP PP 06 11 46.4 +3.8
WMQ pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
WMQ pmax pmax
comp=Z,90nm,4.2s
ZAA0 Zalesovo Array 40.25 311 *e*P **P** **06 10 16.5 -0.8**
ZALV Zalesovo Beam 40.25 311 P **P** **06 10 15.9 -1.4**
comp=Z,5.0nm,0.8s,mb4.3,baz=91,slow=8.0,SNR=17
ZALV PcP PcP 06 12 19.3 -1.6
comp=Z,0.6nm,0.3s,baz=93,slow=2.0,SNR=3.3
ZALV Zalesovo Beam 40.25 311 P **P** **06 10 15.9 -1.4**
ZALV 06 12 19.3
ZALV pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
MKAR Makanchi Array 42.72 300 P **P** **06 10 36.6 -1.0**
comp=Z,3.9nm,0.8s,mb4.2,baz=87,slow=11,SNR=26
MKAR LR LR 06 28 39.1
comp=Z,40nm,20.7s,MS3.3,baz=175,slow=36
MKAR Makanchi Array 42.72 300 P **P** **06 10 36.6 -1.0**
MKAR pmax pmax
comp=Z,4.0nm,0.8s
MKAR MLR MLR
comp=Z,40nm,20.7s
KURK Kurchatov 44.37 306 *e*P **P** **06 10 50.2 -0.7**
comp=Z,9.9nm,0.9s,mb4.5
KURK Kurchatov 44.37 306↓↓ *i*P **P** **06 10 49.9 -0.9**
KURK pmax pmax
comp=Z,13nm,1.0s,mb4.6
KDAK Kodiak Island 45.82 43 P **P** **06 11 02.5 +0.2**
KDAK Kodiak Island 45.82 43 P **P** **06 11 02.5 +0.2**
comp=Z,2.7nm,0.5s,mb4.4,baz=263,slow=8.1,SNR=6.9
KDAK Kodiak Island 45.82 43 *i* P **P** **06 11 03.5 +1.2**
ILAR Eielson Array 47.95 33 P **P** **06 11 18.2 -0.6**
comp=Z,1.8nm,0.8s,mb4.2,baz=266,slow=6.2,SNR=19
ILAR Eielson Array 47.95 33 P **P** **06 11 18.2 -0.6**
ILAR pmax pmax
comp=Z,2.0nm,0.8s
TKM2 Tokmak 2 48.33 297 *e*P **P** **06 11 22.6 +0.5**
comp=Z,12nm,0.8s,mb5.0
TKM2 Tokmak 2 48.33 297 *e*P **P** **06 11 22.6 +0.5**
TKM2 pmax pmax
comp=Z,12nm,0.8s,mb5.0
AAK Ala-Archa 49.19 297↑↑ *e*P **P** **06 11 29.3 +0.6**
AAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
KSH Kashi 49.23 292 *e*P **P** **06 11 33.8 +4.7**
KSH *e*pP pP 06 11 39.8 +8.6
KSH *e*sP sP 06 11 42.8 +11
KSH *e*PcP PcP 06 12 56.1 +4.0
KSH *e*PP PP 06 13 28.0 +5.3
KSH *e*ScP ScP 06 16 49.0 +1.3
KSH *e*PcS PcS 06 16 51.3 +2.8
KSH *e*S **S** **06 18 39.1 +3.8**
KSH *e*sS sS 06 18 47.1 +8.4
KSH *e*SS SS 06 22 07.1 +0.8
KSH pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
KSH pmax pmax
comp=Z,68nm,7.1s
KSH LR LR
comp=N,75nm,5.2s
KSH LR LR
comp=E,90nm,4.8s
KSH LR LR
comp=Z,100nm,4.5s
EKS2 Erkin-Say 49.68 297 *e*P **P** **06 11 32.4 -0.1**
comp=Z,3.2nm,0.8s,mb4.4
AML Almayashu 49.92 296 *e*P **P** **06 11 35.1 +0.8**
comp=Z,8.5nm,1.0s,mb4.7
INK Inuvik 52.71 28 *e*P **P** **06 11 55.0 +0.1**
comp=Z,2.8nm,0.7s,mb4.3
INK Inuvik 52.71 28 P **P** **06 11 55.1 +0.3**
comp=Z,1.9nm,0.6s,mb4.2,baz=300,slow=3.8,SNR=8.6
INK Inuvik 52.71 28 P **P** **06 11 55.1 +0.2**
INK pmax pmax
comp=Z,2.0nm,0.6s
ARU Arti 54.56 317 *e*P **P** **06 12 07.6 -0.9**
comp=Z,8.2nm,0.8s,mb4.8
ARU Arti 54.56 317 *c i*P **P** **06 12 07.8 -0.7**
ARU 06 14 06.7
ARU S **S** **06 19 45.3 -2.6**
ARU SS SS 06 23 24.1 -5.8
ARU pmax pmax
comp=Z,12nm,1.2s,mb4.8
ABKAR Akbulak array 56.32 309 *e*P **P** **06 12 20.2 -1.1**
comp=Z,2.6nm,0.6s,mb4.4
WRA Warramunga Arr 59.08 187 P **P** **06 12 39.8 -1.1**
comp=Z,1.6nm,0.6s,mb4.2,baz=4.9,slow=7.4,SNR=7.9
WRA Warramunga Arr 59.08 187 P **P** **06 12 39.8 -1.1**
WRA pmax pmax
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 61.91 339 P **P** **06 12 58.7 -1.1**
comp=Z,1.4nm,0.9s,mb4.1,baz=61,slow=7.3,SNR=7.7
ARCES ARCESS Array B 61.91 339 P **P** **06 12 58.7 -1.1**
ARCES pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 62.20 31 P **P** **06 13 00.9 -1.0**
comp=Z,0.7nm,0.8s,mb3.8,baz=302,slow=6.6,SNR=3.6
YKA Yellowknife Ar 62.20 31 P **P** **06 13 00.9 -0.9**
YKA pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 62.80 187 P **P** **06 13 05.4 -0.8**
comp=Z,1.3nm,0.8s,mb4.1,baz=10.0,slow=5.8,SNR=9.7
ASAR Alice Springs 62.80 187 P **P** **06 13 05.4 -0.8**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
FINES FINESS Array B 66.80 332 P **P** **06 13 30.6 -1.3**
comp=Z,5.1nm,0.8s,mb4.6,baz=35,slow=10,SNR=5.9
FINES LR LR 06 43 37.7
comp=Z,48nm,18.1s,MS3.8,baz=59,slow=37
FINES FINESS Array B 66.80 332 P **P** **06 13 30.6 -1.3**
FINES pmax pmax
comp=Z,5.0nm,0.8s
FINES MLR MLR
comp=Z,48nm,18.1s
KIV Kislovodsk 69.26 310↑↑ *e*P **P** **06 13 48.7 +1.0**
KIV pmax pmax
comp=Z,16nm,1.0s,mb4.9
ANN Anapa 71.82 313 *e*P **P** **06 14 04.3 +1.0**
ANN pmax pmax
comp=Z,31nm,1.0s,mb5.2
NOA NORSAR Array B 72.12 337 P **P** **06 14 03.9 -0.8**
comp=Z,1.3nm,0.7s,mb4.0,baz=38,slow=6.1,SNR=6.5
AKASG Malin Array Be 72.42 322 P **P** **06 14 05.7 -1.1**
comp=Z,0.9nm,0.3s,mb4.1,baz=45,slow=6.5,SNR=5.9
AKASG Malin Array Be 72.42 322 P **P** **06 14 05.7 -1.1**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
NVAR Mina Array Bea 74.05 53 P **P** **06 14 17.3 +0.7**
comp=Z,1.4nm,0.8s,mb3.9,baz=302,slow=5.2,SNR=6.7

BW06 Boulder Array 76.48 46 *e*P **P** **06 14 34.9 +4.4**
comp=Z,0.8nm,0.6s,mb3.8
PDAR Pinedale Array 76.48 46 P **P** **06 14 30.8 +0.3**
comp=Z,1.0nm,0.7s,mb3.8,baz=279,slow=2.3,SNR=7.3
PV10 Paradox Valley 79.68 49 *e*P **P** **06 14 49.8 +1.4**
comp=Z,71nm,0.8s
TXAR Lajitas Array 89.14 52 P P **06 15 35.9 -0.6**
comp=Z,2.0nm,0.5s,mb3.7,baz=284,slow=4.5,SNR=3.5
TORD Torodi Ar. Bea 115.59 315 PKP PKPdf 06 21 22.0 -1.4
comp=Z,0.1nm,0.4s,baz=8.4,slow=2.6,SNR=3.6
LPAZ La Paz 145.91 56 PKPbc PKPbc 06 22 20.5 -0.1
comp=Z,1.1nm,0.7s,baz=195,slow=3.7,SNR=4.7

IDC 22 06:04:32.0±3.2, 2°.81S×136°.06E, h0km, mb3.6/2, mb1 3.9/4, mb1mx3.7/16, mbtmp3.7/4, ML3.3/2, Error ellipse: s-maj=109.6km s-min=29.5km az=85.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.11**	**186**	P	Pn	06 08 30.9	-1.8
	0.1nm,0.3s,baz=4.8,slow=14,SNR=3.5						
FITZ	**Fitzroy Crossi**	**18.31**	**213**	P	Pn	06 08 47.6	0.0
	0.1nm,0.3s,baz=41,slow=12,SNR=3.3						
ASAR	**Alice Springs**	**20.84**	**186**	P	P	06 09 16.4	+1.0
	1.5nm,0.5s,baz=11,slow=11,SNR=17						
MKAR	**Makanchi Array**	**68.27**	**323**	P	P	06 15 34.8	0.0
	0.7nm,1.0s,baz=117,slow=8.1,SNR=3.7						

IDC 22 06:05:40.6±1.5, 7°.86N×59°.27E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/22, mbtmp3.7/6, MS3.4/2, Ms1 3.4/2, ms1mx2.8/20, Error ellipse: s-maj=42.0km s-min=29.9km az=25.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRTR	**Keskin Array B**	**39.16**	**328**	P	P	06 13 10.7	+0.5
	1.1nm,0.9s,baz=149,slow=11,SNR=6.4						
BOSA	**Boshof**	**48.91**	**221**	LR	LR	06 33 20.1	
	comp=Z,57nm,20.7s,baz=350,slow=34						
AKASG	**Malin Array Be**	**49.44**	**335**	P	P	06 14 31.8	-0.5
	0.2nm,0.4s,baz=142,slow=6.7,SNR=6.3						
ZALV	**Zalesovo Beam**	**50.36**	**19**	P	P	06 14 38.8	-0.6
	0.4nm,0.3s,baz=215,slow=4.6,SNR=3.7						
SONM	**Songino Array**	**56.32**	**36**	P	P	06 15 24.0	+0.8
	1.0nm,0.8s,baz=241,slow=8.1,SNR=3.0						
TORD	**Torodi Ar. Bea**	**56.76**	**281**	P	P	06 15 27.0	0.0
	1.2nm,1.1s,baz=90,slow=5.3,SNR=4.8						
KSRS	**Korea Array**	**68.33**	**53**	LR	LR	06 47 22.6	
	comp=Z,21nm,19.6s,baz=210,slow=37						
ASAR	**Alice Springs**	**79.25**	**116**	P	P	06 17 48.5	+0.1
	1.2nm,1.0s,baz=292,slow=4.9,SNR=4.6						

*ISCJB **22** 06:13:04.3±0.4, 39°.80N±0°.02×28°.68E±0°.02, h1km±4km, Error ellipse: s-maj=3.1km s-min=2.6km az=37.4*
*DDA **22** 06:13:04.1, 39°.77N×28°.70E, h16km±2km, Md3.2, Ml3.2*
*ISK **22** 06:13:04.8, 39°.84N×28°.63E, h9km, MD3.1*
*CSEM **22** 06:13:04.8±0.1, 39°.80N×28°.66E, h5km, ML3.2, Error ellipse: s-maj=2.3km s-min=2.1km az=134.0*
ISC 22 06:13:05.0±0.3, 39°.80N±0°.02×28°.67E±0°.02, h6km±3km, n96, σ0°.74/127, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DURS	**Dursunbey**	**0.25**	**218**	*i* P	**Pg**	**06 13 08.3**	**-1.6**
DURS				*i* S	**Sg**	**06 13 14.2**	**+0.8**
DURS	**Dursunbey**	**0.25**	**218**	*i* P	**Pg**	**06 13 08.3**	**-1.7**
DURS				*i* S	**Sg**	**06 13 14.1**	**+0.8**
MDNY	**Mudanya-Bursa**	**0.59**	**16**	*e*PG	**Pg**	**06 13 16.3**	**0.0**
MDNY				*e*SG	**Sg**	**06 13 24.2**	**+0.2**
MDNY	**Mudanya-Bursa**	**0.59**	**16**	*e*Pg	**Pg**	**06 13 16.3**	**0.0**
MDNY				*e*Sg	**Sg**	**06 13 24.2**	**+0.2**
BALB	**Balikesir**	**0.63**	**255**	*e*PG	**Pg**	**06 13 17.4**	**+0.2**
BALB				*e*SG	**Sg**	**06 13 25.9**	**+0.5**
BALB	**Balikesir**	**0.63**	**255**	*e*Pg	**Pg**	**06 13 17.4**	**+0.2**
BALB				*e*Sg	**Sg**	**06 13 25.9**	**+0.5**
GEMT	**Gemlik**	**0.74**	**32**	*e*PG	**Pg**	**06 13 19.5**	**+0.2**
GEMT				*e*SG	**Sg**	**06 13 30.1**	**+1.1**
GEMT	**Gemlik**	**0.74**	**32**	*e*Pg	**Pg**	**06 13 19.5**	**+0.2**
GEMT				*e*Sg	**Sg**	**06 13 30.1**	**+1.1**
DEMI	**Demirci**	**0.76**	**178**	*i* P	**Pg**	**06 13 19.5**	**-0.1**
DEMI				*i* S	**Sg**	**06 13 29.4**	**0.0**
DEMI	**Demirci**	**0.76**	**178**	*i* P	**Pg**	**06 13 19.5**	**-0.1**
DEMI				*i* S	**Sg**	**06 13 29.4**	**0.0**
ARMT	**Armutlu**	**0.78**	**11**	*e*PG	**Pg**	**06 13 19.9**	**-0.1**
ARMT				*e*SG	**Sg**	**06 13 30.4**	**+0.4**
ARMT	**Armutlu**	**0.78**	**11**	*e*Pg	**Pg**	**06 13 19.9**	**0.0**
ARMT				*e*Sg	**Sg**	**06 13 30.4**	**+0.4**
GONE	**Gonen-Balikesi**	**0.80**	**288**	*e*PG	**Pg**	**06 13 20.0**	**-0.3**
GONE	**Gonen-Balikesi**	**0.80**	**288**	*e*Pg	**Pg**	**06 13 20.0**	**-0.3**
BNT	**Bandirma**	**0.80**	**314**	*e*PG	**Pg**	**06 13 20.1**	**-0.3**
BALY	**Balya**	**0.81**	**266**	*i* P	**Pg**	**06 13 21.0**	**+0.3**
BALY				*i* S	**Sg**	**06 13 31.3**	**0.0**
BALY	**Balya**	**0.81**	**266**	*i* P	**Pg**	**06 13 21.0**	**+0.4**
BALY				*i* S	**Sg**	**06 13 31.3**	**+0.1**
EDC	**Edincik**	**0.83**	**311**	*e*PG	**Pg**	**06 13 20.3**	**-0.6**
EDC	**Edincik**	**0.83**	**311**	*e*Pg	**Pg**	**06 13 20.3**	**-0.6**
YLV	**Yalova**	**0.93**	**35**	*e*PG	**Pg**	**06 13 23.6**	**+0.7**
YLV	**Yalova**	**0.93**	**35**	*e*Pg	**Pg**	**06 13 23.6**	**+0.7**
GDZ	**Gediz**	**0.95**	**138**	*i* P	**Pg**	**06 13 21.6**	**-1.5**
GDZ				*i* S	**Sg**	**06 13 34.6**	**-0.8**
GDZ	**Gediz**	**0.95**	**138**	*i* P	**Pg**	**06 13 21.6**	**-1.6**
GDZ				*i* S	**Sg**	**06 13 34.6**	**-0.9**
CAVI	**Cavuskoy**	**0.98**	**66**	*e*PG	**Pg**	**06 13 24.4**	**+0.5**
CAVI	**Cavuskoy**	**0.98**	**66**	*e*Pg	**Pg**	**06 13 24.4**	**+0.5**
ADVT	**Abdulvahap**	**1.03**	**52**	*e*PG	**Pg**	**06 13 25.4**	**+0.7**
ADVT	**Abdulvahap**	**1.03**	**52**	*e*Pg	**Pg**	**06 13 25.5**	**+0.7**
AKHS	**Akhisar**	**1.14**	**216**	*i* P	**Pg**	**06 13 26.3**	**-0.5**
AKHS				*i* S	**Sg**	**06 13 41.9**	**+0.4**
AKHS	**Akhisar**	**1.14**	**216**	*i* P	**Pg**	**06 13 26.3**	**-0.5**
AKHS				*i* S	**Sg**	**06 13 41.9**	**+0.4**
AKS	**Akhisar**	**1.14**	**216**	*e*PN	**Pg**	**06 13 26.5**	**-0.3**
AKS	**Akhisar**	**1.14**	**216**	*e*Pn	**Pg**	**06 13 26.5**	**-0.3**
HRT	**Hereke**	**1.27**	**36**	*e*PN	**Pn**	**06 13 29.0**	**-0.3**
HRT	**Hereke**	**1.27**	**36**	*e*Pn	**Pn**	**06 13 29.0**	**-0.3**
KULA	**Kula-Manisa**	**1.29**	**180**	*e*PN	**Pn**	**06 13 29.9**	**+0.4**
KULA	**Kula-Manisa**	**1.29**	**180**	*e*Pn	**Pn**	**06 13 29.9**	**+0.4**
ISK	**Istanbul-Kandi**	**1.30**	**13**	*e*PN	**Pn**	**06 13 28.5**	**-1.2**
ISK	**Istanbul-Kandi**	**1.30**	**13**	*e*Pn	**Pn**	**06 13 28.5**	**-1.1**
ALT	**Altintas**	**1.34**	**123**	*e*PN	**Pn**	**06 13 30.6**	**+0.4**
ALT	**Altintas**	**1.34**	**123**	*e*Pn	**Pn**	**06 13 30.6**	**+0.4**
GPA	**Golpazari**	**1.35**	**68**	*e*PN	**Pn**	**06 13 30.5**	**+0.2**
GPA	**Golpazari**	**1.35**	**68**	*e*Pn	**Pn**	**06 13 30.5**	**+0.2**
ELBA	**Catalca**	**1.36**	**352**	*i* P	**Pn**	**06 13 29.4**	**-1.1**
ELBA				*i* S	**Sb**	**06 13 46.9**	**-1.5**
ELBA	**Catalca**	**1.36**	**352**	*i* P	**Pn**	**06 13 29.4**	**-1.1**
ELBA				*i* S	**Sb**	**06 13 46.9**	**-1.5**
BORA	**Eskisehir**	**1.37**	**86**	*i* P	**Pn**	**06 13 30.7**	**0.0**
BORA				*i* S	**Sb**	**06 13 48.5**	**-0.4**
BORA	**Eskisehir**	**1.37**	**86**	*i* P	**Pn**	**06 13 30.7**	**0.0**
BORA				*i* S	**Sb**	**06 13 48.5**	**-0.4**
BGKT	**Bogazkoy**	**1.38**	**3**	*e*PN	**Pn**	**06 13 30.4**	**-0.4**
BGKT	**Bogazkoy**	**1.38**	**3**	*e*Pn	**Pn**	**06 13 30.4**	**-0.4**
CTKS	**Kestanelik-??a**	**1.44**	**355**	*e*PN	**Pn**	**06 13 31.0**	**-0.6**
CTKS	**Kestanelik-??a**	**1.44**	**355**	*e*Pn	**Pn**	**06 13 31.0**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.45**	**308**	*e*PN	**Pn**	**06 13 31.0**	**-0.7**
RKY	**Sarkoy-Tekirda**	**1.45**	**308**	*e*Pn	**Pn**	**06 13 31.0**	**-0.7**
MFT	**Murefte**	**1.45**	**313**	*e*PN	**Pn**	**06 13 31.7**	**0.0**
MFT	**Murefte**	**1.45**	**313**	*e*Pn	**Pn**	**06 13 31.7**	**-0.1**
SLVT	**Silivri**	**1.47**	**346**	*e*PN	**Pn**	**06 13 31.6**	**-0.5**
SLVT	**Silivri**	**1.47**	**346**	*e*Pn	**Pn**	**06 13 31.6**	**-0.4**
TKR	**Tekirdag**	**1.47**	**324**	*e*PN	**Pn**	**06 13 31.5**	**-0.6**
TKR	**Tekirdag**	**1.47**	**324**	*e*Pn	**Pn**	**06 13 31.5**	**-0.5**
KLYT	**Kilyos**	**1.48**	**11**	*e*PN	**Pn**	**06 13 31.8**	**-0.3**
KLYT	**Kilyos**	**1.48**	**11**	*e*Pn	**Pn**	**06 13 31.8**	**-0.3**
SILT	**Sile**	**1.54**	**28**	*e*PN	**Pn**	**06 13 32.5**	**-0.4**
SILT	**Sile**	**1.54**	**28**	*e*Pn	**Pn**	**06 13 32.5**	**-0.5**
GULT	**Gulveren**	**1.55**	**65**	*e*PN	**Pn**	**06 13 33.5**	**+0.4**
GULT	**Gulveren**	**1.55**	**65**	*e*Pn	**Pn**	**06 13 33.5**	**+0.4**
KHAL	**Karahalli**	**1.56**	**156**	*i* P	**Pn**	**06 13 32.8**	**-0.5**
KHAL				*i* S	**Sn**	**06 13 53.5**	**-0.4**
KHAL	**Karahalli**	**1.56**	**156**	*i* P	**Pn**	**06 13 32.8**	**-0.5**
KHAL				*i* S	**Sn**	**06 13 53.5**	**-0.4**
AYVA	**Ayvalik**	**1.61**	**253**	*i* P	**Pn**	**06 13 34.8**	**+0.8**
AYVA				*i* S	**Sn**	**06 13 56.5**	**+1.4**
AYVA	**Ayvalik**	**1.61**	**253**	*i* P	**Pn**	**06 13 34.8**	**+0.8**
KHL	**Karahalli**	**1.62**	**156**	*e*PN	**Pn**	**06 13 34.4**	**+0.3**
KHL	**Karahalli**	**1.62**	**156**	*e*Pn	**Pn**	**06 13 34.4**	**+0.3**
ESKT	**Eskisehir**	**1.70**	**99**	*i* P	**Pn**	**06 13 34.7**	**-0.6**
ESKT				*i* S	**Sn**	**06 13 55.6**	**-1.7**
SEYT	**Eskypehyr**	**1.70**	**99**	*i* P	**Pn**	**06 13 34.7**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.79**	**290**	*e*PN	**Pn**	**06 13 36.9**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.79**	**290**	*e*Pn	**Pn**	**06 13 36.9**	**+0.5**
EZN	**Ezine**	**1.81**	**271**	*e*PN	**Pn**	**06 13 36.6**	**0.0**
EZN	**Ezine**	**1.81**	**271**	*e*Pn	**Pn**	**06 13 36.6**	**-0.1**
ERIK	**Erikli-Kesan**	**1.87**	**298**	*e*PN	**Pn**	**06 13 37.3**	**-0.2**
ERIK	**Erikli-Kesan**	**1.87**	**298**	*e*Pn	**Pn**	**06 13 37.3**	**-0.2**
BLCB	**Balcova**	**1.90**	**222**	*e*PN	**Pn**	**06 13 38.4**	**+0.4**
BLCB	**Balcova**	**1.90**	**222**	*e*Pn	**Pn**	**06 13 38.4**	**+0.4**
HENT	**Hendek**	**1.98**	**58**	*i* P	**Pn**	**06 13 40.5**	**+1.4**
HENT				*i* S	**Sn**	**06 14 05.3**	**+1.1**
HENT	**Hendek**	**1.98**	**58**	*i* P	**Pn**	**06 13 40.5**	**+1.4**
BOZC	**Bozcaada**	**2.02**	**272**	*i* P	**Pn**	**06 13 43.6**	**+4.0**
BOZC				*i* P		06 13 43.6	
BOZC				*i* S	**Sn**	**06 14 09.4**	**+4.3**
BOZC				*i* S	**Sn**	**06 14 09.4**	**+4.3**
MDU	**Mudurnu**	**2.06**	**70**	*e*PN	**Pn**	**06 13 40.7**	**+0.6**
MDU	**Mudurnu**	**2.06**	**70**	*e*Pn	**Pn**	**06 13 40.7**	**+0.6**
BOLV	**Bolvadin**	**2.07**	**121**	*i* P	**Pn**	**06 13 44.2**	**+3.9**
BOLV				*i* S	**Sn**	**06 14 11.2**	**+4.7**
ENEZ	**Enez**	**2.14**	**297**	*e*PN	**Pn**	**06 13 41.1**	**-0.1**
ENEZ	**Enez**	**2.14**	**297**	*e*Pn	**Pn**	**06 13 41.1**	**-0.2**
GADA	**Gvkgeada**	**2.17**	**281**	*e*PN	**Pn**	**06 13 41.6**	**0.0**
GADA	**Gvkgeada**	**2.17**	**281**	*e*Pn	**Pn**	**06 13 41.6**	**0.0**
AYDN	**Tasoluk**	**2.23**	**196**	*i* P	**Pn**	**06 13 47.4**	**+4.9**
AYDN				*i* S	**Sn**	**06 14 14.9**	**+4.7**
SVRH	**Sivrihisar-ESK**	**2.23**	**98**	*e*PN	**Pn**	**06 13 43.4**	**+1.0**
SVRH	**Sivrihisar-ESK**	**2.23**	**98**	*e*Pn	**Pn**	**06 13 43.4**	**+0.9**
EDRB	**Edirne**	**2.51**	**325**	*e*PN	**Pn**	**06 13 46.7**	**+0.3**
EDRB	**Edirne**	**2.51**	**325**	*e*Pn	**Pn**	**06 13 46.7**	**+0.3**
KIZT	**Kizilcal**	**2.65**	**109**	*e*PN	**Pn**	**06 13 50.2**	**+2.0**
KIZT	**Kizilcal**	**2.65**	**109**	*e*Pn	**Pn**	**06 13 50.2**	**+1.9**

*CSEM **22** 06:17:16.0, 36°.82N×24°.13W, h5km, ML2.6, After PDA*
PDA 22 06:17:16.0±0.8, 36°.82N×24°.13W, h5km, MD4.1, ML2.6, Error ellipse: s-maj=5.8km s-min=4.7km az=73.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSMN	**Pico do Norte,**	**0.77**	**284**	*e*P	Pg	06 17 28.2	-2.6
PSMN				*e*S	Sg	06 17 37.7	-3.0
PSMN	**Pico do Norte,**	**0.77**	**284**	*e*P	Pg	06 17 28.2	-2.6
PSMN				*e*S	Sg	06 17 37.7	-3.0
PSMA	**Santa Maria**	**0.82**	**283**	*e*P	Pg	06 17 29.1	-2.6
PSMA				*e*S	Sg	06 17 39.5	-2.8
PSMA				A		06 17 41.9	
	94nm,0.2s						
BART	**Pico Bartolome**	**1.26**	**319**	*e*P	Pg	06 17 35.2	-5.0
BART				*e*S	Sg	06 17 50.3	-6.3
BART				A		06 17 53.0	
	86nm,0.2s						
BART	**Pico Bartolome**	**1.26**	**319**	*e*P	Pg	06 17 35.2	-5.0
BART				*e*S	Sg	06 17 50.3	-6.3
GRON	**Grota Negra**	**1.46**	**311**	*e*P	Pn	06 17 37.0	-6.0
GRON				*e*S	Sn	06 17 52.6	-10
GRON				A		06 17 53.9	
	12nm,0.1s						
PSET	**Sete Cidades**	**1.61**	**309**	*e*P	Pn	06 17 40.5	-4.6
PSET				*e*S	Sn	06 17 58.3	-8.0
PSET				A		06 17 59.3	
	3.3nm,0.2s						
PSET	**Sete Cidades**	**1.61**	**309**	*e*P	Pn	06 17 40.5	-4.6
PSET				*e*S	Sn	06 17 58.3	-8.0
ADH	**Angra Heroismo**	**3.06**	**308**	*e*P	Pn	06 18 00.6	-4.5
ADH	**Angra Heroismo**	**3.06**	**308**	*e*P	Pn	06 18 00.6	-4.5
PMAN	**Manadas**	**3.62**	**301**	*e*P	Pn	06 18 08.2	-4.5
PMAN	**Manadas**	**3.62**	**301**	*e*P	Pn	06 18 08.2	-4.5
ROSA	**Rosais**	**3.77**	**301**	*e*P	Pn	06 18 10.4	-4.3
ROSA	**Rosais**	**3.77**	**301**	*e*P	Pn	06 18 10.4	-4.3
PICO	**Pico**	**3.80**	**297**	*e*P	Pn	06 18 12.1	-3.0
PICO	**Pico**	**3.80**	**297**	*e*P	Pn	06 18 12.1	-3.0
PCAN	**Candelaria**	**3.82**	**297**	*e*P	Pn	06 18 11.1	-4.4
PCAN				*e*S	Sn	06 18 52.3	-8.5
PCAN				A		06 18 53.6	
	16nm,0.2s						
PCAN	**Candelaria**	**3.82**	**297**	*e*P	Pn	06 18 11.1	-4.4
PCAN				*e*S	Sn	06 18 52.3	-8.5
CALA	**Caldeira**	**4.03**	**297**	*e*P	Pn	06 18 13.9	-4.4
CALA	**Caldeira**	**4.03**	**297**	*e*P	Pn	06 18 13.9	-4.4
PCED	**Cedros**	**4.05**	**298**	*e*P	Pn	06 18 13.3	-5.3

IDC 22 06:34:04.5±1.9, 24°.40S×66°.69W, h148km±25km, mb3.1/1, mb1 3.2/3, mb1mx3.1/16, mbtmp3.1/3, Error ellipse: s-maj=64.2km s-min=17.9km az=99.0, Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CFAA	**Coronel Fontan**	**7.31**	**190**	P	Pn	06 35 50.6	+2.0
	0.0nm,0.3s,baz=21,slow=8.6,SNR=5.9						
CFAA				S	Sn	06 37 08.9	-1.4
	0.1nm,0.3s,baz=301,slow=18,SNR=3.8						
LPAZ	**La Paz**	**8.18**	**350**	P	Pn	06 36 00.5	+0.1
	0.9nm,0.3s,baz=169,slow=6.9,SNR=30						
SIV	**San Ignacio**	**9.89**	**33**	P	Pn	06 36 23.3	+0.2
	0.2nm,0.3s,baz=236,slow=12,SNR=5.9						
TORD	**Torodi Ar. Bea**	**76.45**	**69**	P	P	06 45 38.1	-0.2
	0.2nm,0.5s,baz=251,slow=5.1,SNR=3.9						
MKAR	**Makanchi Array**	**146.65**	**40**	PKPbc	PKPbc	06 53 28.2	-0.5
	0.6nm,0.6s,baz=317,slow=2.8,SNR=7.6						

*NEIC **22** 06:44:17.8, 16°.82N×100°.36W, h15km, MD3.6(MEX), After MEX.*
MEX 22 06:44:17.8±0.9, 16°.82N×100°.36W, h15km±20km, MD3.6, Near coast of Guerrero

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

0.5nm,0.7s,mb3.3,baz=301,slow=9.1,SNR=3.0
ASAR Alice Springs 43.47 127 P **P 06 54 58.5 -0.7**
0.3nm,0.6s,mb3.2,baz=291,slow=7.7,SNR=4.7
KSRS Korea Array 45.95 35 P **P 06 55 17.7 -1.0**
2.0nm,0.8s,mb4.1,baz=214,slow=8.5,SNR=3.9
SONM Songino Array 47.19 9 P **P 06 55 28.6 +0.3**
0.6nm,0.4s,mb3.8,baz=187,slow=12,SNR=2.3
MKAR Makanchi Array 47.25 346 P **P 06 55 30.1 +1.3**
0.7nm,0.5s,mb3.9,baz=162,slow=8.3,SNR=12
KURK Kurchatov 51.80 345 P **P 06 56 05.2 +1.8**
1.8nm,0.2s,mb4.6,baz=172,slow=8.2,SNR=7.3
ZALV Zalesovo Beam 53.58 351 P **P 06 56 17.4 +0.9**
1.2nm,0.4s,mb4.2,baz=169,slow=8.2,SNR=6.4
ARCES ARCESS Array B 82.53 340 P **P 06 59 18.5 +0.5**
0.6nm,0.8s,mb3.7,baz=107,slow=6.0,SNR=5.3

ISK ***22*** *06:55:29.6, 37.02N×0.16E, h6km, MD3.0*
ISCJB ***22*** *06:55:30.7±0.4, 36.98N±0.03×29.19E±0.03, h10km, Error ellipse: s-maj=4.2km s-min=3.2km az=14.2*
CSEM ***22*** *06:55:30.6±0.2, 36.99N×29.19E, h8km, MD3.0, Error ellipse: s-maj=5.3km s-min=3.8km az=11.0*
DDA ***22*** *06:55:30.9, 37.01N×29.22E, h7km±2km, Md2.9*
ISC 22 06:55:31.0±0.5, 36.99N±0.03×29.19E±0.03, h7km±5km, n32,σ1s00/52, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.30**	**56**	*e*PG			**Pg**	**06 55 36.2**	**-0.6**
GLHS				*e*SG			**Sg**	**06 55 40.9**	**0.0**
GLHS	**Glhisar (BURDU**	**0.30**	**56**	*e*Pg			**Pg**	**06 55 36.2**	**-0.7**
GLHS				*e*Sg			**Sg**	**06 55 40.9**	**0.0**
GOLH	**Golhisar**	**0.39**	**51**	*i* P			**Pg**	**06 55 37.0**	**-1.6**
GOLH				*i* S			**Sg**	**06 55 43.5**	**-0.2**
GOLH	**Golhisar**	**0.39**	**51**	*i* P			**Pg**	**06 55 37.0**	**-1.5**
GOLH				*i* S			**Sg**	**06 55 43.5**	**-0.1**
ELL	**Elmali**	**0.63**	**112**	*e*PG			**Pg**	**06 55 43.3**	**+0.3**
ELL				*e*SG			**Sg**	**06 55 51.9**	**+0.6**
ELL	**Elmali**	**0.63**	**112**	*e*Pg			**Pg**	**06 55 43.3**	**+0.2**
ELL				*e*Sg			**Sg**	**06 55 51.9**	**+0.7**
DNZL	**Cakiroluk**	**0.71**	**351**	*i* P			**Pg**	**06 55 44.5**	**-0.1**
DNZL				*i* S			**Sg**	**06 55 55.2**	**+1.4**
DNZL	**Cakiroluk**	**0.71**	**351**	*i* P			**Pg**	**06 55 44.5**	**-0.1**
DNZL				*i* S			**Sg**	**06 55 55.2**	**+1.4**
YER	**Yerkesik**	**0.74**	**282**	*e*PG			**Pg**	**06 55 43.6**	**-1.5**
YER				*e*SG			**Sg**	**06 55 53.7**	**-1.0**
YER	**Yerkesik**	**0.74**	**282**	*e*Pg			**Pg**	**06 55 43.6**	**-1.5**
YER				*e*Sg			**Sg**	**06 55 53.7**	**-1.0**
AKAS	**Kas**	**0.83**	**156**	*i* P			**Pg**	**06 55 45.5**	**-1.3**
AKAS				*i* S			**Sg**	**06 55 59.0**	**+1.4**
AKAS	**Kas**	**0.83**	**156**	*i* P			**Pg**	**06 55 45.5**	**-1.3**
AKAS				*i* S			**Sg**	**06 55 59.0**	**+1.4**
KORT	**Korkueli**	**0.93**	**89**	*i* P			**Pg**	**06 55 48.9**	**0.0**
KORT				*i* S			**Sg**	**06 56 04.5**	**+3.5**
KORT	**Korkueli**	**0.93**	**89**	*i* P			**Pg**	**06 55 48.9**	**0.0**
KORT				*i* S			**Sg**	**06 56 04.5**	**+3.5**
AYDN	**Tasoluk**	**1.24**	**303**	*i* P			**Pb**	**06 55 55.1**	**+0.4**
AYDN				*i* S			**Sg**	**06 56 13.0**	**+2.2**
AYDN	**Tasoluk**	**1.24**	**303**	*i* P			**Pb**	**06 55 55.1**	**+0.5**
AYDN				*i* S			**Sg**	**06 56 13.0**	**+2.2**
DAT	**Datca**	**1.31**	**259**	*e*PN			**Pn**	**06 55 55.5**	**-0.2**
DAT	**Datca**	**1.31**	**259**	*e*Pn			**Pn**	**06 55 55.5**	**-0.2**
KHL	**Karahalli**	**1.36**	**11**	*e*PN			**Pn**	**06 55 55.3**	**-1.0**
KHL	**Karahalli**	**1.36**	**11**	*e*Pn			**Pn**	**06 55 55.3**	**-1.0**
BDRM	**Kayabasi**	**1.40**	**274**	*i* P			**Pn**	**06 55 57.5**	**+0.7**
BDRM				*i* S			**Sb**	**06 56 16.5**	**+1.1**
BDRM	**Kayabasi**	**1.40**	**274**	*i* P			**Pn**	**06 55 57.5**	**+0.7**
BDRM				*i* S			**Sb**	**06 56 16.5**	**+1.2**
KHAL	**Karahalli**	**1.40**	**10**	*i* P			**Pn**	**06 55 56.9**	**0.0**
KHAL				*i* S			**Sb**	**06 56 16.2**	**+0.7**
KHAL	**Karahalli**	**1.40**	**10**	*i* P			**Pn**	**06 55 56.9**	**0.0**
KHAL				*i* S			**Sb**	**06 56 16.2**	**+0.7**
BODT	**Bodrum**	**1.50**	**273**	*e*PN			**Pn**	**06 55 57.4**	**-0.9**
BODT	**Bodrum**	**1.50**	**273**	*e*Pn			**Pn**	**06 55 57.4**	**-0.9**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*PN			**Pn**	**06 55 58.1**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.53**	**71**	*e*Pn			**Pn**	**06 55 58.2**	**-0.4**
KULA	**Kula-Manisa**	**1.58**	**345**	*e*PN			**Pn**	**06 55 58.0**	**-1.3**
KULA	**Kula-Manisa**	**1.58**	**345**	*e*Pn			**Pn**	**06 55 58.0**	**-1.3**
HDMB	**Hadim**	**2.64**	**90**	*e*PN			**Pn**	**06 56 14.8**	**+0.8**
HDMB	**Hadim**	**2.64**	**90**	*e*Pn			**Pn**	**06 56 14.8**	**+0.8**

NEIC ***22*** *07:21:22.6±2.4, 5.63S×103.04E, h18km±14km, mb5.2/33, Error ellipse: s-maj=7.9km s-min=5.2km az=49.0*
ISCJB ***22*** *07:21:23.5±0.2, 5.78S±0.03×102.90E±0.02, h42km, mb5.1/111, MS4.5/16, Error ellipse: s-maj=4.4km s-min=2.3km az=29.5*
MOS ***22*** *07:21:24.4±1.0, 5.28S×103.27E, h33km, mb5.2/38, MS4.5/4, Error ellipse: s-maj=13.1km s-min=6.0km az=113.4*
DJA ***22*** *07:21:25, 5.78S×102.87E, h42km, Mw5.5/36*
IDC ***22*** *07:21:26.1±0.5, 5.59S×103.08E, h44km±3km, mb4.6/18, mb1 4.7/19, mb1mx4.6/22, mbtmp4.6/19, MS4.1/3, Ms1 4.1/3, ms1mx3.2/27, Error ellipse: s-maj=19.1km s-min=9.7km az=59.0*
ISC 22 07:21:25.8±0.2, 5.75S±0.03×102.92E±0.02, h44km, h44km±1.3km; pP-P, n363, σ1s20/325, mb5.1/111, MS4.5/16, 28C-10D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.35**	**58**	P			**Pn**	**07 21 47.2**	**-0.9**
LWLI				S			**Sn**	**07 22 07.2**	**+2.4**
MNAI	**Manna**	**1.38**	**2**	P			**Pn**	**07 21 48.0**	**-0.5**
MNAI				S			**Sn**	**07 22 05.3**	**-0.2**
KASI	**Kota Agung**	**1.59**	**82**	P			**Pn**	**07 21 52.0**	**+0.8**
KASI				S			**Sn**	**07 22 12.5**	**+1.8**
MDSI	**Maura Dua**	**1.77**	**45**	P			**Pn**	**07 21 53.5**	**-0.5**
MDSI				S			**Sn**	**07 22 17.8**	**+2.5**
KLSI		**2.09**	**60**	P			**Pn**	**07 21 58.8**	**+0.5**
KSI	**Kapahiang**	**2.10**	**351**	P			**Pn**	**07 21 58.7**	**+0.2**
KLI	**Kotabumi**	**2.12**	**66**	P			**Pn**	**07 21 59.1**	**+0.4**
KLI				S			**Sn**	**07 22 26.9**	**+3.0**
BLSI	**Bandar Lampung**	**2.35**	**81**	P			**Pn**	**07 22 02.0**	**+0.1**
BLSI				S			**Sn**	**07 22 31.7**	**+2.2**
RBSI	**Rajabasa**	**2.81**	**92**	P			**Pn**	**07 22 08.3**	**+0.1**
RBSI				S			**Sn**	**07 22 42.9**	**+1.9**
CGJI	**Cibinong**	**2.89**	**108**	P			**Pn**	**07 22 08.3**	**-1.0**
SBJI	**Serang**	**3.22**	**97**	P			**Pn**	**07 22 14.7**	**+0.9**
TNG	**Tangerang**	**3.73**	**97**	P			**Pn**	**07 22 21.8**	**+0.9**
TNG	**Tangerang**	**3.73**	**97**	P			**Pn**	**07 22 21.8**	**+0.9**
SKJI	**Sukabumi**	**3.83**	**109**	P			**Pn**	**07 22 23.8**	**+1.6**
DBJI	**Dramaga**	**3.90**	**102**	P			**Pn**	**07 22 23.3**	**+0.2**
KRJI	**Kerinci**	**3.91**	**338**	P			**Pn**	**07 22 24.7**	**+1.4**
CBJI	**Citeko**	**3.97**	**100**	P			**Pn**	**07 22 27.2**	**+3.1**
JMBI	**JAMBI**	**4.15**	**10**	P			**Pn**	**07 22 27.0**	**+0.4**
PPBI	**Pangkal Pinang**	**4.79**	**42**	P			**Pn**	**07 22 35.3**	**-0.2**
LEM	**Lembang**	**4.79**	**103**	P			**Pn**	**07 22 36.7**	**+1.2**
SDSI	**Sungai Dareh** 1.5nm173nm,1.2s	**5.01**	**343**	P			**Pn**	**07 22 39.7**	**+1.3**
CISI	**Cisompet, Garu** 6.7nm614nm,0.6s	**5.19**	**111**	P			**Pn**	**07 22 39.9**	**-1.0**
JCJI	**Jatiwangi** 2.3nm437nm,0.9s	**5.38**	**98**	P			**Pn**	**07 22 44.1**	**+0.6**
PDSI	**Padang** 7.2nm536nm,0.8s	**5.39**	**333**	P			**Pn**	**07 22 42.4**	**-1.3**
RGRI	**Rengat** 8.0nm555nm,0.9s	**5.39**	**354**	P			**Pn**	**07 22 44.2**	**+0.5**
TPI	**Tanjungpandan** 0.9nm2μm109nm,0.8s	**5.58**	**58**	P			**Pn**	**07 22 46.0**	**-0.3**
SISI	**Saibi** 3.2nm4μm246nm,0.7s	**5.82**	**319**	P			**Pn**	**07 22 49.4**	**-0.2**
PPI	**Padang Panjang** 2.2nm5μm163nm,1.1s	**5.82**	**334**	P			**Pn**	**07 22 49.4**	**-0.2**
CMJI	**Cimerak** 2μm,0.8s	**5.86**	**111**	P			**Pn**	**07 22 50.6**	**+0.5**
BKNI	**Bangkinang** 3.4nm3μm345nm,1.1s	**6.32**	**343**	P			**Pn**	**07 22 56.0**	**-0.4**
CLJI	**Cilicap** 3.5nm522nm,0.6s	**6.37**	**108**	P			**Pn**	**07 22 57.3**	**+0.2**
BJII	**Banjamegara** 0.6nm2μm90nm,1.2s	**6.93**	**104**	P			**Pn**	**07 23 05.5**	**+0.7**
MNSI	**Mandailing Nat** 0.7nm91nm,0.8s	**7.30**	**333**	P			**Pn**	**07 23 08.1**	**-1.8**
MYKOM	**Kota Tinggi**	**7.54**	**7**	P			**Pn**	**07 23 16.0**	**+2.8**
MYKOM	**Kota Tinggi** 0.3nm915nm86nm,1.0s	**7.54**	**7**	P			**Pn**	**07 23 14.3**	**+1.1**
YOGI	**Yogyakarta** 2.0nm438nm,0.9s	**7.61**	**106**	P			**Pn**	**07 23 14.2**	**0.0**
KGM	**Kluang**	**7.72**	**3**	P			**Pn**	**07 23 18.5**	**+2.8**
UGM	**Wanagama**	**7.85**	**106**	P			**Pn**	**07 23 17.7**	**+0.2**
	1.4nm5μm432nm,1.1s								
PCJI	**Pacitan** 3μm276nm,0.7s	**8.55**	**107**	P			**Pn**	**07 23 25.8**	**-1.3**
NGJI	**Ngawi** 157nm,0.9s	**8.64**	**101**	P			**Pn**	**07 23 29.6**	**+1.3**
COCO	**West Island** 9μm,0.9s,SNR=8.6	**8.78**	**223**	Pn			**Pn**	**07 23 28.4**	**-1.8**
COCO	**West Island**	**8.78**	**223**	*e*P			**Pn**	**07 23 29.1**	**-1.1**
COCO	**West Island** 1μm,0.9s	**8.78**	**223**	P			**Pn**	**07 23 27.9**	**-2.3**
GSI	**Gunungsitoli** 97nm,0.6s	**8.80**	**323**	P			**Pn**	**07 23 28.3**	**-2.2**
SJI	**Sawahan** 6μm140nm,0.6s	**9.01**	**103**	P			**Pn**	**07 23 33.4**	**0.0**
FRIM	**Kepong**	**9.01**	**352**	P			**Pn**	**07 23 36.0**	**+2.6**
PWJI	**Pagerwojo** 3μm242nm,0.7s	**9.11**	**105**	P			**Pn**	**07 23 33.5**	**-1.2**
PSI	**Prapat**	**9.38**	**335**	P			**Pn**	**07 23 34.7**	**-3.7**
PSI				LR			LR	07 27 43.5	
PSI	**Prapat** 1.3nm,0.3s,baz=186,slow=9.2,SNR=6.2	**9.38**	**335**	P			**Pn**	**07 23 34.7**	**-3.7**
PSI	comp=Z,1μm,19.7s,baz=147,slow=41			LR			LR	07 27 43.5	
KRKI	**Karangkates** 379nm,0.5s	**9.77**	**105**	P			**Pn**	**07 23 43.8**	**+0.1**
TSI	**Tuntungan** 8μm115nm,0.9s	**10.16**	**335**	P			**Pn**	**07 23 49.6**	**+0.5**
STKI	**Sintang**	**10.31**	**56**	P			**Pn**	**07 23 56.9**	**+5.7**
IPM	**Ipoh** 97nm,1.0s	**10.33**	**349**	P			**Pn**	**07 23 53.0**	**+1.5**
TPTI	433nm24nm,0.8s	**10.62**	**327**	P			**Pn**	**07 23 56.0**	**+0.5**
GMJI	**Gumukmas** 2μm100nm,0.9s	**10.75**	**104**	P			**Pn**	**07 23 57.6**	**+0.4**
KTGM	**Kuala Trenggan**	**11.00**	**1**	P			**Pn**	**07 24 03.8**	**+3.2**
KMMI	**Kalianget** 151nm,1.2s	**11.06**	**97**	P			**Pn**	**07 24 01.2**	**-0.2**
KULM	**Kulim**	**11.19**	**348**	*e*Pn			**Pn**	**07 24 01.4**	**-1.8**
KULM	**Kulim** 36nm,1.3s	**11.19**	**348**	P			**Pn**	**07 24 01.1**	**-2.2**
ABJI	**Asem Bagus** 788nm,0.7s	**11.42**	**101**	P			**Pn**	**07 24 06.5**	**+0.1**
JAGI	**Jajag, Banyuwa** 5μm199nm,0.6s	**11.47**	**104**	P			**Pn**	**07 24 05.6**	**-1.5**
BYJI	**Banyuwangi** 277nm,0.8s	**11.62**	**103**	P			**Pn**	**07 24 09.3**	**+0.2**
NBBI	**Negara** 8μm335nm,0.9s	**11.90**	**103**	P			**Pn**	**07 24 13.0**	**0.0**
SBUM	**Sibu**	**12.35**	**49**	P			**Pn**	**07 24 21.4**	**+2.2**
SBUM	**Sibu** 6μm149nm,1.3s	**12.35**	**49**	P			**Pn**	**07 24 20.1**	**+1.0**
SRBI	**Singaraja** 3μm196nm,0.7s	**12.43**	**101**	P			**Pn**	**07 24 19.8**	**-0.3**
DNP	**Denpasar** 629nm,0.7s	**12.54**	**104**	P			**Pn**	**07 24 21.1**	**-0.6**
KHKI	**Kahang-Kahang** 1μm127nm,0.8s	**12.86**	**102**	P			**Pn**	**07 24 24.4**	**-1.7**
BTM	**Bintulu**	**13.49**	**49**	P			**Pn**	**07 24 36.4**	**+1.7**
BSI	**Banda Aceh** 54nm,0.9s	**13.51**	**326**	P			**Pn**	**07 24 31.3**	**-3.7**
SPSI	**Sidrap Palu** 1μm46nm,1.1s	**16.89**	**85**	P			**Pn**	**07 25 18.4**	**-0.7**
TTSI	**Tana Toraja** 1μm90nm,1.0s	**17.06**	**82**	P			**Pn**	**07 25 20.4**	**-0.9**
BKSI	**Bulukumba** 695nm70nm,1.3s	**17.13**	**89**	P			**Pn**	**07 25 20.0**	**-2.2**
BNSI	**Bone** 2μm183nm,1.1s	**17.18**	**86**	P			**Pn**	**07 25 23.1**	**+0.4**
PCI	**Palu** 7.2nm,0.8s	**17.56**	**75**	P			**Pn**	**07 25 28.9**	**+1.4**
KKM	**Kota Kinabalu** 32nm,0.8s	**17.70**	**49**	*e*P			**Pn**	**07 25 28.7**	**-0.5**
KKM	**Kota Kinabalu**	**17.70**	**49**	P			**Pn**	**07 25 29.5**	**+0.3**
KKM	**Kota Kinabalu** 620nm48nm,1.0s	**17.70**	**49**	P			**Pn**	**07 25 28.5**	**-0.7**
SDKM	**Sandakan**	**18.20**	**52**	P			**Pn**	**07 25 35.0**	**-0.3**
KDM	**Kudat**	**18.74**	**48**	P			**Pn**	**07 25 40.2**	**-1.6**
TOLI	**Toli-Toli** 269nm,0.8s	**19.11**	**70**	P			**Pn**	**07 25 43.1**	**-3.2**
MMRI	**Maumere** 171nm,0.9s	**19.38**	**100**	P			**Pn**	**07 25 48.8**	**-0.8**
KDI	**Kendari** 35nm,0.9s	**19.71**	**86**	P			**Pn**	**07 25 51.0**	**-2.5**
MRSI	**Marisa** 2μm257nm,0.7s	**19.98**	**73**	P			**Pn**	**07 25 53.5**	**-3.1**
LUWI	**Luwuk** 2μm264nm,1.3s	**20.36**	**77**	P			**P**	**07 25 59.0**	**+0.2**
NST	**Nakhon Sawan**	**21.46**	**353**	P			**P**	**07 26 08.0**	**-2.6**
MBWA	**Marble Bar** 8.4nm,0.6s,mb4.3	**22.37**	**135**	*e*P			**P**	**07 26 21.3**	**+1.0**
BDT	**Bhumibol Dam** 29nm,0.8s,mb4.8	**23.17**	**350**	P			**P**	**07 26 26.0**	**-2.7**
CMAR	**Chiang Mai Arr** 31nm,0.5s,mb5.0,baz=181,slow=8.8,SNR=135	**24.36**	**351**	P			**P**	**07 26 38.2**	**-1.7**
CMAR	3.6nm,0.7s,baz=206,slow=3.0,SNR=8.9			PcP			PcP	07 30 19.9	+1.1
CMAR	comp=Z,316nm,18.0s,MS3.9,baz=183,slow=40			LR			LR	07 37 35.2	
CMAR	**Chiang Mai Arr**	**24.36**	**351**	P			**P**	**07 26 38.2**	**-1.7**
CMAR				⇑P				07 30 19.9	
CHG	**Chiang Mai** 36nm,0.7s,mb5.0	**24.71**	**351**	⇑P			**P**	**07 26 41.3**	**-1.8**
CHTO	**Chiang Mai** 27nm,0.7s,mb4.9	**24.71**	**351**	*e*P			**P**	**07 26 41.0**	**-2.1**
CHTO	**Chiang Mai**	**24.71**	**351**	*e*P			**P**	**07 26 41.0**	**-2.1**
CHTO	comp=Z,27nm,0.7s,mb4.9			pmax			pmax		
CHTO	**Chiang Mai** comp=Z,49nm,0.8s,mb5.1	**24.71**	**351**	P			**P**	**07 26 41.2**	**-1.9**
LBMI	**Labuha** comp=Z,3μmcomp=Z,218nm,1.2s,mb5.6	**25.06**	**79**	P			**P**	**07 26 47.2**	**+0.9**
TNTI	**Ternate** comp=Z,7μmcomp=Z,95nm,0.7s,mb5.5	**25.26**	**76**	P			**P**	**07 26 45.9**	**-2.2**
QIZ	**Qiongzhong**	**25.55**	**15**	P			**P**	**07 26 50.8**	**+0.2**
QIZ				S			**S**	**07 31 18.1**	**+2.7**
QIZ	comp=N,710nm,24.1s			LR			LR		
QIZ	comp=Z,780nm,20.1s,MS4.2			LR			LR		
CHRT	**Chiangrai**	**25.64**	**353**	P			**P**	**07 26 49.0**	**-2.5**
DAV	**Davao City (W)** comp=Z,386nm,19.7s,MS3.9,baz=176,slow=38	**25.95**	**61**	LR			LR	07 37 40.9	
KNA	**Kununurra** comp=Z,2μmcomp=Z,124nm,0.7s,mb5.6	**27.24**	**113**	P			**P**	**07 27 04.7**	**-1.3**
KAKA	**Kakadu** comp=Z,27nm,0.9s,mb5.0	**29.93**	**105**	*e*P			**P**	**07 27 27.9**	**-2.1**
KAKA	**Kakadu** comp=Z,68nm,0.7s,mb5.5	**29.93**	**105**	*e*P			**P**	**07 27 27.9**	**-2.1**
KAKA	**Kakadu** comp=Z,502nmcomp=Z,51nm,0.8s,mb5.3	**29.93**	**105**	P			**P**	**07 27 29.4**	**-0.6**
KMI	**Kunming**	**30.68**	**360**	P			**P**	**07 27 36.6**	**+0.2**
KMI				sP			sP	07 27 48.0	-5.4
KMI				S			**S**	**07 32 39.0**	**+2.8**
KMI	comp=Z,18nm,0.7s,mb5.0			pmax			pmax		
KMI	comp=N,1μm,13.9s			LR			LR		
KMI	comp=E,380nm,6.9s			LR			LR		
KMI	comp=Z,1μm,15.7s,MS4.6			LR			LR		
GYA	**Guiyang**	**32.22**	**6**	P			**P**	**07 27 51.0**	**+1.1**
GYA				pP			pP	07 27 58.9	-2.8
GYA				S			**S**	**07 33 02.3**	**+2.1**
GYA				ScP			ScP	07 34 21.0	+2.8
GYA				SS			SS	07 34 57.8	-22
GYA	comp=Z,20nm,0.8s,mb5.0			pmax			pmax		
GYA	comp=Z,130nm,4.3s			pmax			pmax		
GYA	comp=N,680nm,16.7s,MS4.5			LR			LR		
GYA	comp=E,520nm,17.3s,MS4.5			LR			LR		
GYA	comp=Z,750nm,16.6s,MS4.5			LR			LR		
SHL	**Shillong**	**32.92**	**341**	*e*PKP			**P**	**07 27 55.0**	**-1.1**
WRA	**Warramunga Arr** comp=Z,11nm,0.7s,mb4.9,baz=292,slow=10.0,SNR=37	**33.64**	**118**	P			**P**	**07 28 01.6**	**-0.9**
WRA	comp=Z,1.9nm,0.6s,baz=302,slow=1.5,SNR=3.4			PcP			PcP	07 30 42.2	+0.2
ASAR	**Alice Springs** comp=Z,12nm,0.7s,mb4.9,baz=299,slow=8.1,SNR=118	**34.73**	**124**	P			**P**	**07 28 11.8**	**-0.1**
ASAR	comp=Z,2.7nm,0.8s,baz=296,slow=3.0,SNR=4.2			PcP			PcP	07 30 45.8	+0.7
ASAR	comp=Z,3.8nm,1.1s,baz=291,slow=16,SNR=6.8			S			**S**	**07 33 37.1**	**-2.3**
ASAR				ScP			ScP	07 34 28.3	+1.1
	comp=Z,1.5nm,0.9s,baz=302,slow=2.1,SNR=5.2								
ASAR	**Alice Springs**	**34.73**	**124**	P			**P**	**07 28 11.9**	**-0.1**
ASAR								07 30 45.8	
ASAR				S			**S**	**07 33 37.1**	**-2.3**
ODAN	**Odare** comp=Z,120nm,0.8s,mb5.9	**35.73**	**336**	*e*P			**P**	**07 28 20.5**	**+0.1**
TAPN	**Taplejung** comp=Z,168nm,0.9s,mb6.0	**36.04**	**337**	*e*P			**P**	**07 28 23.6**	**+0.5**
RAMN	**Ramite** comp=Z,51nm,0.7s,mb5.6	**36.14**	**335**	*e*P			**P**	**07 28 24.6**	**+0.7**
ENH	**Enshi** comp=Z,15nm,0.5s,mb5.2	**36.36**	**10**	*e*P			**P**	**07 28 24.1**	**-1.7**
CD2	**Chengdu**	**36.45**	**1**	P			**P**	**07 28 29.8**	**+3.2**
CD2				pP			pP	07 28 35.6	-2.8
CD2				sP			sP	07 28 38.6	-5.0
CD2				PP			PP	07 29 54.3	+4.1
CD2				S			**S**	**07 34 11.0**	**+5.5**
CD2				sS			sS	07 34 20.8	-4.5
CD2				PcS			PcS	07 34 39.8	+1.9
CD2	comp=Z,20nm,0.5s,mb5.3			pmax			pmax		
CD2	comp=Z,480nm,5.7s			pmax			pmax		
CD2	comp=N,1μm,18.1s,MS4.8			LR			LR		
CD2	comp=E,1μm,17.5s,MS4.8			LR			LR		
CD2	comp=Z,890nm,17.8s,MS4.6			LR			LR		
KAD	**Karad**	**36.48**	**309**	*e*PKP			**P**	**07 28 27.3**	**+0.4**
KAD				AMb			AMB	07 28 29.2	
LSA	**Lhasa** comp=Z,22nm,0.7s,mb5.2	**37.01**	**343**	*e*P			**P**	**07 28 31.8**	**+0.5**
LSA	**Lhasa** comp=Z,42nm,0.9s,mb5.3	**37.01**	**343**	*e*P			**P**	**07 28 31.8**	**+0.5**
LSA	comp=Z,42nm,0.9s,mb5.3			pmax			pmax		
PKI	**Pulchoki**	**37.19**	**334**	*e*P			**P**	**07 28 33.2**	**+0.3**
GUN	**Gumba** comp=Z,162nm,0.8s,mb5.9	**37.28**	**335**	*e*P			**P**	**07 28 34.3**	**+0.6**
DMN	**Daman** comp=Z,77nm,1.0s,mb5.5	**37.36**	**333**	*e*P			**P**	**07 28 34.6**	**+0.3**
KKN	**Kakani** comp=Z,102nm,1.0s,mb5.6	**37.44**	**334**	*e*P			**P**	**07 28 35.2**	**+0.2**
POO	**Poona**	**37.46**	**311**	*e*PKP			**P**	**07 28 35.4**	**+0.1**
WHN	**Wuhan**	**37.71**	**16**	*e*P			**P**	**07 28 29.4**	**-7.8**
WHN				*e*S			**S**	**07 34 22.0**	**-2.6**
WHN	comp=Z,2μm,18.0s,MS4.9			LR			LR		
GKN	**Gorkha** comp=Z,161nm,1.1s,mb5.7	**37.91**	**333**	*e*P			**P**	**07 28 39.3**	**+0.4**
BHPL	**Bhopal**	**38.08**	**320**	*e*PKP			**P**	**07 28 40.9**	**+0.4**
BHPL				AMb			AMB	07 28 45.6	
KOLN	**Koldanda** comp=Z,87nm,0.7s,mb5.6	**38.19**	**332**	*e*P			**P**	**07 28 41.9**	**+0.6**
DANN	**Dangsing** comp=Z,206nm,0.8s,mb5.9	**38.60**	**332**	*e*P			**P**	**07 28 45.4**	**+0.6**
XAN	**Xi'an** comp=Z,16nm,0.8s,mb4.8	**39.97**	**8**	P			pP	07 29 06.9	-1.2
XAN				pmax			pmax		
XAN	**Xi'an** comp=Z,7.0nm,0.8s,mb4.4	**39.97**	**8**	P			**P**	**07 28 54.3**	**-1.8**
XAN				pmax			pmax		
COEN	**Coen**	**40.44**	**105**	*e*P			**P**	**07 28 58.8**	**-1.6**
COEN	**Coen** comp=Z,201nm,0.9s,mb5.8	**40.44**	**105**	*e*P			**P**	**07 28 59.0**	**-1.3**
NJ2	**Nanjing** comp=Z,20nm,0.5s,mb5.0	**40.54**	**21**	*e*P			**P**	**07 29 00.4**	**-0.5**
NJ2				pmax			pmax		
LZH	**Lanzhou**	**41.62**	**1**	*e*P			**P**	**07 29 09.1**	**-0.6**
LZH				pP			pP	07 29 15.8	-5.9
LZH				sP			sP	07 29 18.6	-8.2
LZH				PP			PP	07 30 48.5	+1.9
LZH				PcP			PcP	07 31 06.8	+0.7
LZH				*e*S			**S**	**07 35 25.1**	**+2.1**
LZH				sS			sS	07 35 38.3	-4.8
LZH				SS			SS	07 38 28.3	-1.3
LZH				pmax			pmax		
LZH	comp=Z,26nm,1.2s,mb4.7			pmax			pmax		
LZH	comp=Z,130nm,4.0s			LR			LR		
LZH	comp=N,510nm,13.6s,MS4.8			LR			LR		
LZH	comp=E,690nm,14.1s,MS4.8			LR			LR		
LZH	comp=Z,670nm,15.8s,MS4.6			LR			LR		
SONA	**Sohna**	**41.99**	**325**	*e*PKP			**P**	**07 29 13.1**	**+0.2**
SONA				AMb			AMB	07 29 13.9	
AYAN	**Aya Nagar** comp=Z,38nm,0.9s,mb5.0	**42.14**	**325**	*e*PKP			**P**	**07 29 14.0**	**0.0**
AYAN				AMb			AMB	07 29 16.4	
AJM	**Ajmer** comp=Z,36nm,1.5s,mb4.8	**42.15**	**321**	*e*PKP			**P**	**07 29 14.8**	**+0.6**
AJM				AMb			AMB	07 29 16.5	
MTSU	**Mount Surprise** comp=Z,13nm,0.7s,mb4.7	**42.22**	**111**	*e*P			**P**	**07 29 15.0**	**+0.1**
NDI	**New Delhi** comp=Z,76nm,0.8s,mb5.4	**42.24**	**325**	*e*PKP			**P**	**07 29 14.5**	**-0.4**
KUDL	**Kundal**	**42.25**	**324**	*ex*			**P**	**07 29 12.0**	**-3.0**
KUDL	comp=Z,46nm,1.2s,mb5.0

comp=Z,140nm,4.0s
HHC LR LR
comp=N,480nm,16.3s,MS4.8
HHC LR LR
comp=E,600nm,14.3s,MS4.8
HHC LR LR
comp=Z,510nm,17.3s,MS4.5
BJT Baijiatuau 47.15 14 *e*P **P 07 29 52.7 -1.1**
comp=Z,18nm,0.6s,mb5.2
BJT *e* pP 07 30 04.3 -1.7
BJT Baijiatuau 47.15 14 *e*P **P 07 29 52.7 -1.1**
BJT *e* pP 07 30 04.3 -1.7
BJT pmax pmax
comp=Z,18nm,0.6s
BJI Beijing 47.17 14 P **P 07 29 52.8 -1.2**
BJI pP pP 07 29 59.9 -6.2
BJI sP sP 07 30 03.8 -7.4
BJI sS sS 07 36 57.4 -6.5
BJI pmax pmax
comp=Z,28nm,0.7s,mb5.3
BJI pmax pmax
comp=Z,150nm,4.2s
BJI LR LR
comp=N,470nm,23.5s,MS4.5
BJI LR LR
comp=E,310nm,23.0s,MS4.5
BJI LR LR
comp=Z,270nm,22.2s,MS4.2
CMSA Cobar Meteorol 47.51 128 *e*P **P 07 29 57.8 +0.9**
KSRS Korea Array 48.90 27 P **P 07 30 06.4 -1.0**
comp=Z,18nm,0.6s,mb5.3,baz=224,slow=7.6,SNR=59
EIDS Eidsvold 50.00 118 *e*P **P 07 30 16.5 +0.4**
EIDS Eidsvold 50.00 118 *e*P **P 07 30 16.8 +0.8**
comp=Z,38nm,1.5s,mb5.2
YNG Young 50.70 130 *e*P **P 07 30 21.9 +0.7**
comp=Z,9.1nm,0.7s,mb4.8
WMQ Urumqi 51.22 346 P **P 07 30 25.6 +0.8**
WMQ pP pP 07 30 33.1 -4.0
WMQ sP sP 07 30 36.4 -5.8
WMQ PcP PcP 07 31 41.3 +1.6
WMQ PP PP 07 32 23.0 +0.9
WMQ pmax pmax
comp=Z,100nm,0.7s,mb5.8
WMQ pmax pmax
comp=Z,280nm,5.4s
KBL Kabul 51.25 324 *e*P **P 07 30 25.5 +0.2**
comp=Z,8.3nm,0.8s,mb4.7
KBL Kabul 51.25 324 *e*P **P 07 30 25.5 +0.2**
KBL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
KSH Kashi 51.45 333⇑*i*P **P 07 30 25.5 -1.2**
KSH *e*pP pP 07 30 35.4 -3.6
KSH *e*sP sP 07 30 39.3 -4.8
KSH *e*PcP PcP 07 31 40.1 -0.6
KSH *e*PP PP 07 32 23.0 -1.4
KSH *e*ScP ScP 07 35 33.1 -0.8
KSH *e*PcS PcS 07 35 37.3 -1.2
KSH *e*S **S 07 37 39.8 -3.9**
KSH *e*sS sS 07 37 57.1 -7.1
KSH *e*ScS ScS 07 40 10.3 -3.2
KSH *e*SS SS 07 41 13.0 -7.3
KSH pmax pmax
comp=Z,21nm,0.6s,mb5.2
KSH pmax pmax
comp=Z,63nm,2.9s,mb5.0
KSH LR LR
comp=N,510nm,11.1s
KSH LR LR
comp=E,170nm,6.8s
KSH LR LR
comp=Z,570nm,9.2s
CN2 Changchun 53.35 20 *e*P **P 07 30 39.0 -1.7**
CN2 *e*sP sP 07 30 49.9 -8.2
CN2 *e*S **S 07 38 18.1 +8.6**
CN2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,300nm,15.0s,MS4.7
CN2 LR LR
comp=E,400nm,15.0s,MS4.7
CN2 LR LR
comp=Z,500nm,16.0s,MS4.7
SONM Songino Array 53.44 3 P **P 07 30 41.4 +0.1**
comp=Z,21nm,0.7s,mb5.2,baz=182,slow=8.7,SNR=27
SONM pP pP 07 30 53.9 +0.3
comp=Z,38nm,0.8s,baz=183,slow=9.4,SNR=21
MAJO Matsushiro 53.48 35 *e*P **P 07 30 38.9 -2.9**
comp=Z,21nm,1.1s,mb5.0
MAJO *e* pP 07 30 52.3 -1.8
MAJO Matsushiro 53.48 35 *e*P **P 07 30 38.9 -2.9**
MAJO *e* pP 07 30 52.3 -1.8
MAJO pmax pmax
comp=Z,21nm,1.1s,mb5.0
MAT Matsushiro 53.48 35 P **P 07 30 38.9 -2.9**
MJAR Matsushiro Arr 53.48 35 P **P 07 30 39.4 -2.4**
comp=Z,2.8nm,0.4s,mb4.5,baz=216,slow=7.4,SNR=9.5
ULN Ulaanbaatar 53.50 3 *e*P **P 07 30 41.7 0.0**
comp=Z,22nm,0.9s,mb5.1
ULN *e* pP 07 30 54.5 +0.4
ULN Ulaanbaatar 53.50 3 *e*P **P 07 30 41.7 0.0**
ULN *e* pP 07 30 54.5 +0.4
ULN pmax pmax
comp=Z,22nm,0.9s,mb5.1
ULN Ulaanbaatar 53.50 3 P **P 07 30 41.6 -0.1**
comp=Z,27nm,1.1s,mb5.1
TKM2 Tokmak 2 54.41 336 P **P 07 30 49.1 +0.6**
SNR=9.5
KBK Karagaybulak 54.47 335 P **P 07 30 49.6 +0.7**
SNR=9.5
AML Almayashu 54.58 334 P **P 07 30 50.6 +0.9**
SNR=7.3
AAK Ala-Archa 54.64 334 *e*P **P 07 30 50.4 +0.3**
comp=Z,8.5nm,0.6s,mb5.0
AAK Ala-Archa 54.64 334 P **P 07 30 50.2 0.0**
comp=Z,5.0nm,0.6s,mb4.7,baz=160,slow=12,SNR=8.5
AAK Ala-Archa 54.64 334⇑*i*P **P 07 30 50.4 +0.3**
AAK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
AAK Ala-Archa 54.64 334 P **P 07 30 50.4 +0.3**
comp=Z,2.8nm,0.8s,mb4.3
EKS2 Erkin-Say 54.97 334 P **P 07 30 53.0 +0.5**
SNR=31
USP Ospenovka 55.15 335 P **P 07 30 53.5 -0.4**
SNR=22
MKAR Makanchi Array 55.42 343 P **P 07 30 55.1 -0.6**
comp=Z,27nm,0.7s,mb5.4,baz=154,slow=8.6,SNR=198
MKAR pP pP 07 31 07.5 -0.6
comp=Z,24nm,0.7s,baz=148,slow=9.1,SNR=15
MDJ Mudanjiang 55.57 23 P **P 07 30 54.4 -2.4**
MDJ pmax pmax
comp=Z,9.0nm,1.4s,mb4.6
MDJ pmax pmax
comp=Z,110nm,4.9s
ZAK Zakamensk 55.90 0 *e*P **P 07 30 58.1 -0.9**
ZAK pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KK31 Karatay Array 56.80 332 *i* P **P 07 31 04.5 -1.1**
KK31 pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
TLY Talaya 57.20 1 *e*P **P 07 31 08.6 +0.3**
comp=Z,12nm,0.6s,mb5.1
TLY Talaya 57.20 1 *e*P **P 07 31 08.5 +0.2**
TLY pmax pmax
comp=Z,14nm,0.7s,mb5.1
TLY MLR MLR
comp=Z,231nm,16.0s,MS4.4
TLY Talaya 57.20 1 P **P 07 31 08.7 +0.4**
comp=Z,128nm,0.8s,mb6.0,SNR=5.3
KURK Kurchatov 60.01 342 P **P 07 31 27.7 -0.2**
comp=Z,164nm,1.2s,mb5.9,SNR=27
KURK Kurchatov 60.01 342 *e*P **P 07 31 27.3 -0.6**
comp=Z,36nm,0.8s,mb5.5
KURK *e* pP 07 31 39.7 -0.7
KURK Kurchatov 60.01 342 P **P 07 31 26.8 -1.1**
comp=Z,14nm,0.8s,mb5.0,baz=160,slow=6.7,SNR=40
KURK pP pP 07 31 39.8 -0.7
comp=Z,27nm,0.8s,baz=159,slow=6.4,SNR=23
KURK Kurchatov 60.01 342 *e*P **P 07 31 27.3 -0.6**
KURK *e* pP 07 31 39.7 -0.7
KURK pmax pmax
comp=Z,36nm,0.8s,mb5.5
KLR Kul'dur 60.24 21 *e*P **P 07 31 24.2 -5.3**
ZAA0 Zalesovo Array 61.39 348 *e*P **P 07 31 36.2 -0.9**
ZAA0 *e* pP 07 31 49.1 -0.6
ZALV Zalesovo Beam 61.39 348 P **P 07 31 36.2 -0.9**
comp=Z,42nm,0.4s,mb5.9,baz=161,slow=4.6,SNR=182
ZALV pP pP 07 31 49.0 -0.7
comp=Z,79nm,0.9s,baz=164,slow=4.4,SNR=13
NVS Novosibirsk 62.56 347 *e*P **P 07 31 43.3 -1.7**
NVS *e* 07 40 06.2
NVS pmax pmax
comp=N,22nm,1.2s
NVS pmax pmax
comp=Z,26nm,1.2s,mb5.2
NVS pmax pmax
comp=E,19nm,1.3s
YSS Yuzh-Sakhalins 63.19 29 *e*P **P 07 31 48.5 -0.9**
comp=E,50nm,0.8s,mb5.7
YSS Yuzh-Sakhalins 63.19 29⇓*i*P **P 07 31 48.2 -1.2**
YSS *e* pP 07 32 02.2 +0.2
YSS pmax pmax
comp=Z,60nm,0.9s,mb5.7
RDF Al-Radifah 63.39 306 *e*P **P 07 31 52.3 +1.2**
RDF AMb AMB 07 31 53.7
comp=Z,42nm,1.0s,mb5.5
UMR Umm Al-Rimmam 63.51 307 *e*P **P 07 31 52.6 +0.7**
UMR AMb AMB 07 31 56.3
comp=Z,32nm,1.2s,mb5.2
NAY Al-Naaiem 63.77 306 *e*P **P 07 31 54.0 +0.4**
NAY AMb AMB 07 31 55.2
comp=Z,13nm,1.0s,mb4.9
MIB Mutribah 63.91 307 *e*P **P 07 31 55.0 +0.5**
MIB AMb AMB 07 31 56.4
comp=Z,27nm,1.0s,mb5.2
VOSK Vostochnaya 64.23 339 P **P 07 31 54.4 -1.7**
VOSK pmax pmax
comp=Z,18nm,0.5s,mb5.4
BVA2 Borovoye Array 64.68 339 P **P 07 31 57.8 -1.3**
BVA2 pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
BVAR Borovoye Array 64.69 339 P **P 07 31 58.3 -0.8**
comp=Z,35nm,0.6s,mb5.5,baz=143,slow=8.9,SNR=141
BVAR pP pP 07 32 11.4 -0.3
comp=Z,20nm,0.8s,baz=144,slow=8.4,SNR=9.6
BRVK Borovoye 64.75 339 P **P 07 31 58.8 -0.7**
comp=Z,264nm,0.6s,mb6.4,SNR=10
BRVK Borovoye 64.75 339 *e*P **P 07 31 58.8 -0.8**
comp=Z,25nm,0.6s,mb5.4
BRVK Borovoye 64.75 339*c i*P **P 07 31 58.6 -0.9**
BRVK pmax pmax
comp=Z,18nm,0.6s,mb5.3
AB31 Akbulak array 66.30 331 *i* P **P 07 32 08.8 -0.8**
AB31 pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
ABKAR Akbulak array 66.30 331 *e*P **P 07 32 08.9 -0.7**
comp=Z,16nm,0.6s,mb5.2
ABKAR *e* pP 07 32 22.4 +0.1
MAW Mawson 67.43 195 *e*P **P 07 32 18.0 +1.5**
comp=Z,1.8nm,0.6s,mb4.3
MAW *e*pP pP 07 32 30.6 +1.4
MAW Mawson 67.43 195 *e*P **P 07 32 18.2 +1.7**
comp=Z,2.9nm,0.9s,mb4.3
MAW *e* pP 07 32 30.8 +1.5
MAW Mawson 67.43 195 P **P 07 32 18.0 +1.5**
comp=Z,4.2nm,0.9s,mb4.5,baz=53,slow=10,SNR=9.8
MAW pP pP 07 32 30.6 +1.3
comp=Z,9.6nm,0.8s,baz=43,slow=8.8,SNR=13
MAW Mawson 67.43 195 *e*P **P 07 32 18.2 +1.7**
MAW *e* pP 07 32 30.8 +1.6
MAW pmax pmax
comp=Z,3.0nm,0.9s
DGRG David-gareji 70.38 318 P **P 07 32 36.0 +0.8**
YAK Yakutsk 70.66 13 *e*P **P 07 32 33.8 -2.8**
YAK *e* pP 07 32 46.9 -2.4
YAK pmax pmax
comp=Z,58nm,0.9s,mb5.5
YAK pmax pmax
comp=E,9.0nm,1.1s
YAK pmax pmax
comp=N,17nm,1.3s
TBLG Delisi 70.93 318 *e*P **P 07 32 39.7 +1.1**
TBLG Delisi 70.93 318 P **P 07 32 39.7 +1.1**
SVE Sverdlovsk 71.24 337⇑*e*P **P 07 32 40.6 +0.4**
SVE pmax pmax
comp=Z,44nm,0.9s,mb5.4
GOR Gori 71.46 318 P **P 07 32 48.2 +6.3**
ARU Arti 71.78 336 *e*P **P 07 32 43.1 -0.4**
comp=Z,24nm,0.9s,mb5.1
ARU Arti 71.78 336*c i*P **P 07 32 43.0 -0.5**
ARU *e* 07 32 59.6
ARU *e* 07 35 20.3
ARU S S 07 42 04.0 +3.5
ARU SS SS 07 46 29.1 -8.3
ARU pmax pmax
comp=Z,30nm,1.0s,mb5.2
ARU Arti 71.78 336 P **P 07 32 43.3 -0.2**
comp=Z,147nm,0.8s,mb6.0,SNR=6.2
KIV Kislovodsk 73.26 319 P **P 07 32 53.0 +0.5**
KIV *e* pP 07 33 05.3 -0.1
KIV *e* 07 33 09.7
KIV pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
MALT Malatya 73.99 312 *e*P **P 07 32 58.5 +1.5**
comp=Z,22nm,1.2s,mb5.0
MALT *e* pP 07 33 11.2 +1.3
MALT Malatya 73.99 312 *e*P **P 07 32 58.5 +1.5**
MALT *e* pP 07 33 11.2 +1.4
MALT pmax pmax
comp=Z,22nm,1.2s,mb5.0
MALT Malatya 73.99 312 P **P 07 32 58.9 +1.9**
PETK Petropavlovsk- 74.54 31 P **P 07 32 58.0 -1.8**
comp=Z,8.5nm,0.7s,mb4.8,baz=215,slow=3.2,SNR=22
SOKR Solikamsk 74.61 338⇑*i*P **P 07 33 00.3 +0.2**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb5.0
PET Petropavlovsk 74.98 31 *e*P **P 07 33 00.7 -1.7**
PET *e*S S 07 42 34.6 -2.2
PET pmax pmax
comp=Z,41nm,0.6s,mb5.5
PET MLR MLR
comp=Z,100nm,16.0s,MS4.2
SOC Sochi 75.06 318 *e*P **P 07 33 00.8 -2.3**
SOC *e* 07 35 51.3
SOC *e*PPP 07 37 40.0
SOC *e*S S 07 42 37.6 -0.5
SOC *e* 07 43 20.7
SOC pmax pmax
comp=Z,15nm,0.6s,mb5.1
BOSA Boshof 76.45 242 pP pP 07 33 24.1 -0.2
comp=Z,4.9nm,1.1s,baz=100,slow=6.1,SNR=2.1
VRHR Novokhopersk 77.04 325 *e*P **P 07 33 14.1 -0.1**
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
VRHR pmax pmax
comp=N,5.0nm,0.2s
VRHR pmax pmax
comp=E,3.0nm,0.2s
BRTR Keskin Array B 77.98 312 P **P 07 33 19.6 -0.1**
comp=E,8.9nm,0.8s,mb4.8,baz=115,slow=6.5,SNR=55
BRTR pP pP 07 33 32.2 -0.4
comp=E,12nm,0.8s,baz=129,slow=6.5,SNR=18
SEY Seymchan 78.03 21⇓*i*P **P 07 33 18.2 -1.2**
VSR Storozhevoye 78.49 325 *e*P **P 07 33 21.6 -0.6**
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,5.0nm,0.6s
VSR pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
TIXI Tiksi 79.10 8 *e*P **P 07 33 22.9 -2.3**
TIXI pmax pmax
comp=Z,17nm,0.9s,mb5.0
SIM Simferopol' 79.31 318 P **P 07 33 28.1 +1.2**
SIM pmax pmax
comp=Z,21nm,0.6s,mb5.2
SIM MLR MLR
comp=Z,400nm,18.0s,MS4.8
OBN Obninsk 81.49 328 P **P 07 33 39.0 +0.7**
OBN *e* pP 07 33 53.2 +1.8
OBN *e*SS SS 07 49 11.5 +7.4
OBN pmax pmax
comp=Z,27nm,1.5s,mb5.0
TIRR Tirgusor 83.05 316 *e*P **P 07 33 46.7 0.0**
comp=Z,13nm,0.8s,mb5.0
TIRR *e* pP 07 33 59.4 -0.4
TIRR Tirgusor 83.05 316 *e*P **P 07 33 46.7 -0.1**
TIRR *e* pP 07 33 59.4 -0.4
TIRR pmax pmax
comp=Z,13nm,0.8s,mb5.0
TIRR Tirgusor 83.05 316⇓*i*P **P 07 33 47.2 +0.4**
AKASG Malin Array Be 84.21 322 P **P 07 33 52.2 -0.3**
comp=Z,3.4nm,0.7s,mb4.6,baz=94,slow=4.9,SNR=14
KIEV Kiev 84.21 322 *e*P **P 07 33 52.1 -0.5**
comp=Z,4.7nm,0.7s,mb4.7
KIEV Kiev 84.21 322 *e*P **P 07 33 52.1 -0.5**
KIEV pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
VRI Vrincioaia 84.56 317⇑*i*P **P 07 33 55.7 +1.3**
VRI Vrincioaia 84.56 317⇑*i*P **P 07 33 55.7 +1.3**
PLOR Plostina 84.61 317⇑*i*P **P 07 33 56.7 +2.0**
PLOR Plostina 84.61 317⇑*i*P **P 07 33 56.7 +2.0**
MLR Muntele Rosu 85.00 317⇑*i*P **P 07 33 58.0 +1.3**
MLR Muntele Rosu 85.00 317⇑*i*P **P 07 33 58.0 +1.3**
MAIT Maitri 85.01 199 *e*P **P 07 33 58.5 +2.3**
MAIT *e* pP 07 34 10.5 +1.2
VOIR 85.60 316⇓*i*P **P 07 33 59.1 -0.6**
VOIR 85.60 316⇓*i*P **P 07 33 59.1 -0.6**
BILL Bilibino 85.66 20⇓*e*P **P 07 33 58.7 -0.7**
BILL *e* 07 34 07.5
BILL 07 37 24.0
BILL pmax pmax
comp=Z,13nm,1.0s,mb5.1
BURAR Bucovina Array 85.97 318⇑*i*P **P 07 34 03.2 +1.8**
BURAR Bucovina Array 85.97 318⇑*i*P **P 07 34 03.2 +1.7**
BUR08 Bucovina Ar. S 85.99 319 *e*P **P 07 34 03.4 +1.9**
MICGM Minsk 86.04 326 *e* pP 07 34 14.0 -0.7
MNK Minsk 86.06 326 *e*P pP 07 34 14.0 -0.8
VTS Vitosha 86.32 313⇑*i*P **P 07 34 04.4 +1.1**
VTS Vitosha 86.32 313⇑*i*P **P 07 34 04.4 +1.1**
JOF Joensuu 86.83 334 *e*P **P 07 34 06.3 +1.0**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
JOF Joensuu 86.83 334 *ep* **P 07 34 06.3 +1.0**
comp=Z,4.9nm,0.7s,mb4.8
DRGR 87.47 317⇑*i*P **P 07 34 10.6 +1.8**
DRGR 87.47 317⇑*i*P **P 07 34 10.6 +1.8**
APA Apatity 87.60 339⇓*i*P pP 07 34 24.3 +2.2
APA pmax pmax
comp=Z,27nm,1.4s,mb5.3
APA MLR MLR
comp=Z,600nm,20.0s,MS5.0
BZS Buzias 88.00 316⇑*i*P **P 07 34 12.4 +1.0**
BZS Buzias 88.00 316⇑*i*P **P 07 34 12.4 +1.0**
KWP Kalwaria Pacla 88.02 320 *e*P **P 07 34 10.9 -0.4**
comp=Z,19nm,1.3s,mb5.2
KWP *e* pP 07 34 25.1 +0.6
KWP Kalwaria Pacla 88.02 320 *e*P **P 07 34 11.0 -0.4**
KWP *e* pP 07 34 25.1 +0.6
KWP pmax pmax
comp=Z,19nm,1.3s,mb5.2
KWP Kalwaria Pacla 88.02 320⇑*i*P **P 07 34 12.5 +1.1**
UZH Uzhgorod 88.10 319 *e*P **P 07 34 13.2 +1.4**
UZH *e* 07 34 22.0
CRVS Cervenica-Dubn 88.69 319 *e*P **P 07 34 16.2 +1.7**
comp=Z,3.7nm,1.0s,mb4.7
CRVS *e*PP pP 07 34 29.2 +1.5
CRVS Cervenica-Dubn 88.69 319 *e*P **P 07 34 16.2 +1.7**
CRVS pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
CRVS Cervenica-Dubn 88.69 319 *e*P **P 07 34 16.2 +1.7**
CRVS *e*pP pP 07 34 29.2 +1.5
FINES FINESS Array B 88.76 332 P **P 07 34 14.9 +0.3**
comp=Z,1.4nm,0.5s,mb4.5,baz=122,slow=7.2,SNR=5.6
KAF Kangasniemi 88.82 333 *e*P **P 07 34 16.1 +1.3**
KAF pmax pmax
comp=Z,6.0nm,0.7s,mb5.0
KAF Kangasniemi 88.82 333 *ep* **P 07 34 16.1 +1.3**
comp=Z,5.7nm,0.7s,mb5.0
STHS Stebnicka Huta 88.92 320 *e*P **P 07 34 17.4 +1.8**
comp=Z,10.0nm,0.7s,mb5.2
STHS *e*PP pP 07 34 31.0 +2.2
STHS Stebnicka Huta 88.92 320 *e*P **P 07 34 17.4 +1.8**
STHS pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
STHS Stebnicka Huta 88.92 320 *e*P **P 07 34 17.4 +1.8**
STHS *e*pP pP 07 34 31.0 +2.2
PSZ Piszkesteto 89.56 318 *e*P **P 07 34 19.7 +1.1**
comp=Z,19nm,1.1s,mb5.3
PSZ Piszkesteto 89.56 318⇑*i*P **P 07 34 19.8 +1.2**
PSZ Piszkesteto 89.56 318⇑*i*P **P 07 34 19.6 +1.0**
PSZ Piszkesteto 89.56 318⇑*i*P **P 07 34 19.8 +1.2**
PSZ Piszkesteto 89.56 318⇑*e*PcP PcP 07 34 19.6 -0.4
PKSM Moragy 90.15 316 ⇓P pP 07 34 35.1 +0.5
PKSM Moragy 90.15 316⇓*i*P pP 07 34 35.1 +0.5
VYHS Vyhne 90.34 319 *e*P **P 07 34 23.2 +0.9**
comp=Z,8.9nm,1.9s,mb4.8
VYHS *e*PP pP 07 34 36.2 +0.8
VYHS Vyhne 90.34 319 *e*P **P 07 34 23.2 +0.9**
VYHS pmax pmax
comp=Z,9.0nm,1.9s,mb4.8
VYHS Vyhne 90.34 319 *e*P **P 07 34 23.2 +0.9**
VYHS *e*pP pP 07 34 36.2 +0.8
KEV Kevo 90.51 340 *e*P **P 07 34 21.8 -0.8**
KEV pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
KEV Kevo 90.51 340 *ep* **P 07 34 21.8 -0.8**
comp=Z,2.0nm,0.8s,mb4.5
KOLL Kolacno 90.64 319 *e*P **P 07 34 25.5 +1.8**
KOLL Kolacno 90.64 319 *e*P **P 07 34 25.5 +1.8**
ARCES ARCESS Array B 90.96 340 P **P 07 34 24.7 0.0**
comp=Z,0.8nm,0.5s,mb4.3,baz=100,slow=4.7,SNR=3.2
OKC Ostrava-Krasne 90.98 320 *e*P **P 07 34 31.2 +6.0**
OKC *e* 07 34 39.8
OKC Ostrava-Krasne 90.98 320 *ep*P pP 07 34 31.2 -7.2
OKC *ex* x 07 34 39.8
MORC Moravsky Berou 91.36 320 *e*P **P 07 34 28.4 +1.5**
comp=Z,12nm,1.1s,mb5.1
MORC *e* pP 07 34 40.7 +0.5
MORC Moravsky Berou 91.36 320⇓*i*P **P 07 34 28.4 +1.4**
VNA1 Neumayer--Stat 91.50 198 *e*P pP 07 34 39.6 -0.8
DPC Dobruska-Polom 92.20 320 *e*P **P 07 34 32.6 +1.7**
DPC *e* pP 07 34 45.5 +1.4
DPC Dobruska-Polom 92.20 320 *e*P **P 07 34 32.6 +1.7**
DPC *ex* x 07 34 45.5
BOJS Bojanci 92.42 315 *i* P **P 07 34 32.7 +0.7**
BOJS *i* pP 07 34 45.6 +0.4
PERS Pernice 92.62 316 *i* P **P 07 34 34.1 +1.2**
PERS *j* pP 07 34 46.8 +0.7
SOKA Soboth 92.68 316⇑*i*PcP PcP 07 34 34.3 +0.5
comp=Z,5.6nm,0.9s
VISS Visnje 92.73 316 *i* P **P 07 34 33.6 +0.1**
VISS *i* pP 07 34 47.1 +0.5
JAVS Javornik 93.28 316 *i* P **P 07 34 36.8 +0.8**
JAVS *i* pP 07 34 48.9 -0.2
NIKO Nikolski 93.47 37 *e*P **P 07 34 35.2 -1.4**
comp=Z,66nm,1.3s,mb5.9
BRG Berggiesshubel 93.76 321 *e*P **P 07 34 38.1 0.0**
comp=Z,3.2nm,0.6s,mb4.9
BRG Berggiesshubel 93.76 321 *e*P **P 07 34 38.1 0.0**
BRG pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
CLL Collm 94.39 321 *e*P **P 07 34 38.0 -2.9**
CLL pmax pmax
comp=Z,5.0nm,0.4s,mb5.3
GRF Grafenberg Arr 95.44 319 *e*P pP 07 34 59.9 +1.0
ILAR Eielson Array 103.71 24 Pdiff Pdif 07 35 20.8 -1.9
comp=Z,0.2nm,0.6s,baz=267,slow=3.4,SNR=5.3
YKA Yellowknife Ar 117.03 19 PKP PKPdf 07 40 04.0 -1.6
comp=Z,0.8nm,0.8s,baz=340,slow=2.2,SNR=4.1
HEBO Mount Hebo 123.57 38 *e*PKPdf PKPdf 07 40 20.1 +1.4
EDM Edmonton 124.19 25 *e*PKPdf PKPdf 07 40 19.4 -0.2
HAWA Hanford 125.45 35 *e*PKPdf PKPdf 07 40 23.3 +1.0
MSO Missoula 128.24 32 *e*PKPdf PKPdf 07 40 27.8 +0.2
DLMT Dillon 129.91 32 *e*PKPdf PKPdf 07 40 32.0 +1.3
BOZ Bozeman (W) 130.22 31 *e*PKPdf PKPdf 07 40 32.0 +0.6
SCHQ Schefferville 130.36 352 PKP PKPdf 07 40 31.9 +0.6
comp=Z,2.2nm,0.6s,baz=49,slow=9.3,SNR=5.7
SCHQ pPKP pPKPdf 07 40 45.2 +0.3
comp=Z,1.7nm,0.5s,baz=54,slow=5.9,SNR=2.6
NVAR Mina Array Bea 130.50 43 PKP PKPdf 07 40 33.6 +1.4
comp=Z,0.9nm,0.6s,baz=316,slow=2.5,SNR=8.9
NVAR SKP 07 44 04.8
comp=Z,0.8nm,0.8s,baz=270,slow=3.6,SNR=4.2
RRI2 Red Ridge 131.92 33 *e*PKPdf PKPdf 07 40 36.8 +2.1
REDW Red Top Meadow 132.17 33 *e*PKPdf PKPdf 07 40 36.4 +1.2
HWUT Hardware Ranch 132.91 35 *e*PKPdf PKPdf 07 40 36.9 +0.3
DUG Dugway 133.05 38 *e*PKPdf PKPdf 07 40 38.8 +1.9
DUG *e* 07 40 52.7
PDAR Pinedale Array 133.27 33 PKP PKPdf 07 40 38.2 +1.0
comp=Z,0.5nm,0.5s,baz=131,slow=2.3,SNR=6.3
PDAR pPKP pPKPdf 07 40 52.5 +1.6
comp=Z,1.0nm,0.6s,baz=150,slow=0.5,SNR=6.4

PDAR				SKPab			07 44 03.3	
	comp=Z,0.4nm,0.7s,baz=29,slow=3.4,SNR=3.5							
MSU	**Marysvale**	**134.46**	**39**	*e*PKPdf	PKPdf		07 40 41.5	+1.9
RSSD	**Black Hills**	**135.06**	**28**	*e*PKPdf	PKPdf		07 40 40.4	-0.1
RWWY	**Rawlins**	**135.27**	**32**	*e*Pdif	Pdif		07 37 43.4	+0.3
ECSD	**EROS Data Cent**	**138.44**	**21**	*e*PKPdf	PKPdf		07 40 47.5	+0.7
ANMO	**Albuquerque**	**140.26**	**39**	*e*PKPdf	PKPdf		07 40 50.2	-0.2
CPUP	**Villa Florida**	**142.80**	**210**	pPKP	pPKPdf		07 41 08.4	-0.4
	comp=Z,2.0nm,0.7s,baz=136,slow=4.7,SNR=4.4							
WMOK	**Wichita Mounta**	**144.87**	**32**	*e*PKPdf	PKPdf		07 40 57.1	-1.5
CCM	**Cathedral Cave**	**145.35**	**20**	*e*PKPdf	PKPdf		07 40 58.2	-1.1
TXAR	**Lajitas Array**	**145.64**	**44**	PKPbc	PKPbc		07 41 00.8	+0.5
	comp=Z,44nm,0.7s,baz=302,slow=2.0,SNR=516							
TXAR				pPKPbc	pPKPbc		07 41 13.8	-0.1
	comp=Z,44nm,0.8s,baz=318,slow=1.2,SNR=20							
BLO	**Bloomington**	**145.65**	**13**	*e*PKPdf	PKPdf		07 40 58.7	-1.1
OLIL	**Olney**	**145.68**	**15**	*e*PKPdf	PKPdf		07 40 59.6	-0.2
FVM	**French Village**	**145.69**	**19**	*e*PKPdf	PKPdf		07 40 59.2	-0.7
MVL	**Millersville**	**145.89**	**359**	*e*PKPdf	PKPdf		07 41 00.4	+0.2
MCWV	**Mont Chateau**	**146.15**	**4**	*e*PKPdf	PKPdf		07 41 01.2	+0.5
SIUC	**Southern Illin**	**146.31**	**17**	*e*PKPdf	PKPdf		07 41 01.2	+0.2
WCI	**Wyandotte Cave**	**146.60**	**13**	*e*PKPdf	PKPdf		07 41 02.3	+0.9
JCT	**Junction City**	**147.41**	**38**	*e*PKPdf	PKPdf		07 41 03.9	+0.9
JCT				*e*PKPbc	PKPbc		07 41 05.7	+0.1
MIAR	**Mount Ida**	**147.53**	**26**	*e*PKPbc	PKPbc		07 41 05.4	-0.3
GNAR	**Gosnell**	**147.66**	**20**	*e*PKPbc	PKPbc		07 41 05.9	-0.1
UTMT	**University of**	**147.69**	**18**	*e*PKPbc	PKPbc		07 41 05.8	-0.3
WVT	**Waverly**	**148.19**	**17**	*e*PKPbc	PKPbc		07 41 07.0	-0.4
SWET	**Sewanee**	**149.56**	**14**	*e*PKPbc	PKPbc		07 41 10.0	-0.9
TKL	**Tuckaleechee C**	**149.60**	**11**	*e*PKPbc	PKPbc		07 41 10.4	-0.6
CPCT	**Cooper Cave**	**149.65**	**12**	*e*PKPbc	PKPbc		07 41 10.9	-0.3
HKT	**Hockley**	**150.13**	**34**	*e*PKPbc	PKPbc		07 41 13.0	+0.5
VBMS	**Vicksburg**	**150.82**	**24**	*e*PKPbc	PKPbc		07 41 14.2	+0.1
LRAL	**Lakeview Retre**	**151.32**	**18**	*e*PKPbc	PKPbc		07 41 14.5	-0.7
JSC	**Jenkinsville**	**151.34**	**7**	*e*PKPbc	PKPbc		07 41 15.2	0.0

*CSEM **22** 07:36:58.8, 43.59N×47.21E, h19km, mb4.1, After OBN*
MOS 22 07:36:58.8±1.5, 43.59N×47.21E, h19km, mb4.1/1, 1C-2D, Error ellipse: s-maj=11.8km s-min=7.7km az=53.9, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DBC	**Dubki**	**0.63**	**206**	⇑ *i*	PG	Pg	07 37 10.0	-1.2
DBC	**Dubki**	**0.63**	**206**	*i*	Pg	Pg	07 37 10.0	-1.2
BUJR	**Buynaksk**	**0.76**	**185**	*e*	PG	Pg	07 37 17.5	+3.7
BUJR				*e*	S	Sb	07 37 22.5	-0.9
BUJR	**Buynaksk**	**0.76**	**185**	*e*	Pg	Pg	07 37 17.5	+3.7
BUJR				*e*	Sg	Sg	07 37 22.5	-1.4
KRNR	**Karanay**	**0.79**	**196**	*e*	PG	Pg	07 37 12.5	-1.7
KRNR					pmax	pmax		
	comp=Z,57nm,0.2s							
KRNR	**Karanay**	**0.79**	**196**	*e*	Pg	Pg	07 37 12.5	-1.7
	comp=Z,57nm,0.2s							
UNCR	**Uncukul**	**0.92**	**199**	⇓ *i*	PG	Pg	07 37 14.0	-2.7
UNCR					pmax	pmax		
	comp=Z,64nm,0.3s							
UNCR	**Uncukul**	**0.92**	**199**	*i*	Pg	Pg	07 37 14.0	-2.7
	comp=Z,64nm,0.3s							
XNZR	**Khunzakh**	**1.11**	**200**	*e*	PG	Pg	07 37 18.0	-2.2
XNZR					pmax	pmax		
	comp=Z,73nm,0.1s							
XNZR	**Khunzakh**	**1.11**	**200**	*e*	Pg	Pg	07 37 18.0	-2.2
	comp=Z,73nm,0.1s							
GNBR	**Gunib**	**1.21**	**189**	*e*	PG	Pg	07 37 26.6	+4.4
GNBR				*e*	S	Sb	07 37 39.8	+3.6
GNBR	**Gunib**	**1.21**	**189**	*e*	Pg	Pg	07 37 26.6	+4.4
GNBR				*e*	Sg	Sg	07 37 39.8	+1.8
KMKR	**Kumukh**	**1.46**	**183**	*e*	PG	Pg	07 37 26.5	-0.4
KMKR				*e*	S	Sn	07 37 44.0	+1.4
KMKR					pmax	pmax		
	comp=Z,63nm,0.4s							
KMKR	**Kumukh**	**1.46**	**183**	*e*	Pg	Pg	07 37 26.5	-0.4
	comp=Z,63nm,0.4s							
KMKR				*e*	Sg	Sg	07 37 44.0	-1.8
SNJR	**Sundja**	**1.82**	**254**	*e*	PN	Pn	07 37 30.1	+1.0
SNJR	**Sundja**	**1.82**	**254**	*e*	Pn	Pn	07 37 30.1	+1.0
VLKR	**Vladikavkaz**	**1.92**	**255**	*e*	PN	Pn	07 37 31.6	+1.1
VLKR	**Vladikavkaz**	**1.92**	**255**	*e*	Pn	Pn	07 37 31.6	+1.1
BTKR	**Batakoyurt**	**1.95**	**265**	*e*	PN	Pn	07 37 33.8	+2.9
BTKR	**Batakoyurt**	**1.95**	**265**	*e*	Pn	Pn	07 37 33.8	+2.9
KMSR	**Komsomolskaya**	**2.13**	**265**	*e*	PN	Pn	07 37 36.3	+3.0
KMSR				*e*	S	Sn	07 38 02.3	+3.0
KMSR	**Komsomolskaya**	**2.13**	**265**	*e*	Pn	Pn	07 37 36.3	+3.0
KMSR				*e*	Sb	Sb	07 38 02.3	-0.5
ARNR	**Ardon**	**2.17**	**261**	*e*	PN	Pn	07 37 36.0	+2.1
ARNR				*e*	S	Sn	07 38 01.6	+1.4
ARNR	**Ardon**	**2.17**	**261**	*e*	Pn	Pn	07 37 36.0	+2.1
ARNR				*e*	Sn	Sn	07 38 01.6	+1.4
LACR	**Lac**	**2.26**	**251**	⇓ *i*	PN	Pn	07 37 35.6	+0.5
LACR	**Lac**	**2.26**	**251**	*i*	Pn	Pn	07 37 35.6	+0.5
KORR	**Kora**	**2.34**	**259**	*e*	PN	Pn	07 37 38.0	+1.7
KORR				*e*	S	Sn	07 38 05.1	+0.6
KORR	**Kora**	**2.34**	**259**	*e*	Pn	Pn	07 37 38.0	+1.7
KORR				*e*	Sn	Sn	07 38 05.1	+0.6
LSNR	**Lesken**	**2.49**	**264**	*e*	PN	Pn	07 37 40.8	+2.5
LSNR				*e*	S	Sn	07 38 10.1	+2.0
LSNR	**Lesken**	**2.49**	**264**	*e*	Pn	Pn	07 37 40.8	+2.5
LSNR				*e*	Sn	Sn	07 38 10.1	+2.0
DGRG	**David-gareji**	**2.53**	**213**	P		Pn	07 37 40.5	+1.7
DGRG				S		Sn	07 38 12.4	+3.4
MTA	**Mtatsminda**	**2.60**	**224**	P		Pn	07 37 42.4	+2.7
MTA				S		Sn	07 38 11.0	+0.3
TBLG	**Delisi**	**2.60**	**225**	*e*	PN	Pn	07 37 41.2	+1.5
TBLG				S		Sn	07 38 11.1	+0.3
TBLG	**Delisi**	**2.60**	**225**	P		Pn	07 37 41.2	+1.5
TBLG				S		Sn	07 38 11.1	+0.4
TBLG	**Delisi**	**2.60**	**225**	*e*	Pn	Pn	07 37 41.2	+1.5
TBLG				*e*	Sn	Sn	07 38 11.1	+0.3
DIGR	**Digorskoe uzhe**	**2.74**	**257**	*e*	PN	Pn	07 37 42.7	+1.0
DIGR	**Digorskoe uzhe**	**2.74**	**257**	*e*	Pn	Pn	07 37 42.7	+1.0
GOR	**Gori**	**2.79**	**236**	P		Pn	07 37 44.5	+2.2
GOR				S		Sn	07 38 15.9	+0.5
KIV	**Kislovodsk**	**3.29**	**278**	PN		Pg	07 38 07.0	+5.1
KIV				*e*	S	Sn	07 38 37.0	+9.0
KIV				*e*			07 38 45.1	
KIV					pmax	pmax		
	comp=Z,11nm,0.9s							
KIV					smax			
	comp=N,16nm,0.8s							
KIV	**Kislovodsk**	**3.29**	**278**		Pn	Pg	07 38 07.0	+5.1
	comp=N,16nm,0.8s							
KIV				*e*	Sn	Sn	07 38 37.0	+9.0
KIV				*e*	Sb	Sb	07 38 45.1	+8.8
GOF	**Gofitskoye**	**3.34**	**298**	*e*	PN	Pn	07 37 49.2	-0.7
GOF				*e*	S	Sn	07 38 32.2	+3.2
GOF					pmax	pmax		
	comp=Z,20nm,0.8s							
GOF					smax			
	comp=N,150nm,1.3s							
GOF					smax			
	comp=E,80nm,1.3s							
GOF	**Gofitskoye**	**3.34**	**298**	*e*	Pn	Pn	07 37 49.2	-0.7
	comp=E,20nm,0.8s							
GOF				*e*	Sn	Sn	07 38 32.2	+3.2

*NEIC **22** 07:40:18.2, 16.70N×100.25W, h18km, MD4.4(MEX), After MEX.*
MEX 22 07:40:17.2±0.8, 16.73N×100.23W, h5km±9km, MD4.4, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MEIG	**Mezcala**	**1.33**	**26**	*i*	P	Pn	07 37 38.2	-4.2
MEIG				*e*	S	Sg	07 40 55.6	-4.3
ZIIG	**Zihuatanejo**	**1.47**	**307**	*i*	P	Pn	07 40 40.9	-3.4
ZIIG				*e*	S	Sn	07 40 58.6	-5.4
ZIIG	**Zihuatanejo**	**1.47**	**307**	*i*	P	Pn	07 40 40.9	-3.4
ZIIG				*e*	S	Sn	07 40 58.6	-5.4
PLIG	**Platanillo**	**1.79**	**23**	*i*	P	Pn	07 40 46.3	-2.5
PLIG				*e*	S	Sn	07 41 08.0	-4.0
PLIG	**Platanillo**	**1.79**	**23**	*i*	P	Pn	07 40 46.3	-2.5
PLIG				*e*	S	Sn	07 41 08.0	-4.0
PNIG	**Pinotepa**	**2.04**	**99**	*i*	P	Pn	07 40 49.5	-2.8
PNIG				*e*	S	Sn	07 41 13.4	-4.8
PNIG	**Pinotepa**	**2.04**	**99**	*i*	P	Pn	07 40 49.5	-2.8
PNIG				*e*	S	Sn	07 41 13.4	-4.8
UTMO	**Huajuapan**	**2.56**	**64**	*i*	P	Pn	07 40 56.5	-2.9
UTMO				*e*	S	Sn	07 41 27.4	-3.7
UNM	**Universidad Na**	**2.77**	**21**	*i*	P	Pn	07 40 60.0	-2.4
UNM				*e*	S	Sn	07 41 32.6	-3.6
UNM	**Universidad Na**	**2.77**	**21**	*i*	P	Pn	07 40 60.0	-2.4
UNM				*e*	S	Sn	07 41 32.6	-3.6
PPM	**Popocatepetl**	**2.78**	**33**	*i*	P	Pn	07 40 58.9	-3.5
PPM				*e*	S	Sn	07 41 32.8	-3.6
PPM	**Popocatepetl**	**2.78**	**33**	*i*	P	Pn	07 40 58.9	-3.5
PPM				*e*	S	Sn	07 41 32.8	-3.6
MOIG	**Morelia**	**3.07**	**343**	*e*	P	Pn	07 41 06.0	-0.4
MOIG				*e*	S	Sn	07 41 39.8	-3.8
MOIG	**Morelia**	**3.07**	**343**	*e*	P	Pn	07 41 04.9	-1.5
MOIG				*e*	S	Sn	07 41 39.8	-3.8
TPIG	**Tehuac#an**	**3.21**	**58**	*i*	P	Pn	07 41 04.8	-3.5
TPIG				*e*	S	Sn	07 41 43.8	-3.3
VHO	**Vista Hermosa**	**3.37**	**84**	*i*	P	Pn	07 41 08.0	-2.4
VHO				*e*	S	Sn	07 41 47.7	-3.1
VHO	**Vista Hermosa**	**3.37**	**84**	*i*	P	Pn	07 41 08.0	-2.4
VHO				*e*	S	Sn	07 41 47.7	-3.1

*ISCJB **22** 07:47:36.7±1.0, 17.82S±0.03×65.46E±0.02, h0km±6km, mb5.6/276, MS5.6/245, Error ellipse: s-maj=5.0km s-min=4.0km az=173.5*
*IDC **22** 07:47:38.0±0.5, 17.77S×65.50E, h0km, mb5.0/24, mb1 5.1/25, mb1mx5.1/28, mbtmp5.1/25, ML5.3/1, MS5.4/26, Ms1 5.4/26, ms1mx5.4/30, Error ellipse: s-maj=15.7km s-min=12.6km az=7.0*
*BJI **22** 07:47:38.6, 17.31S×65.06E, h8km, mB5.7/48, mb5.3/56, Ms5.7/63, Ms7 5.5/57*
*NEIC **22** 07:47:39.6±0.2, 17.77S×65.39E, h6km, mb5.6/142, MS5.7/181, MW6.0, MW5.9, Error ellipse: s-maj=6.4km s-min=4.4km az=15.0, Moment Tensor Solution. s48 Moment tensor: Scale 10^{17}Nm; M_{rr}1.39; $M_{\theta\theta}$-8.08; $M_{\phi\phi}$6.69; $M_{r\theta}$-1.99; $M_{\theta\phi}$3.76; $M_{\phi r}$1.96; Best double couple: $M_0$8.80000×10^{17} NP1:ϕ_s58.00000°, δ72.00000°, λ0.00000°. NP2:ϕ_s328.00000°, δ90.00000°, λ162.00000°. Principal axes: T 7.9300, Plg13.0000°, Azm281.0000°; N 1.5900, Plg71.0000°, Azm146.0000°; P -9.5100, Plg12.0000°, Azm14.0000°;*
*MOS **22** 07:47:41.6±1.1, 17.30S×65.38E, h15km, mb5.7/111, MS5.4/74 Error ellipse: s-maj=9.1km s-min=4.3km az=111.3*
*PRE **22** 07:47:42.0±2.6, 17.80S×65.44E, h23km, mb5.2*
*TEH **22** 07:47:43.0, 17.94S×65.41E, h33km*
*GCMT **22** 07:47:44.2±0.1, 17.71S×65.42E, h16km, MW6.0, Moment Tensor Solution. s107,c225; s89,c124; Moment tensor: Scale 10^{18}Nm; M_{rr}-0.12±.01; $M_{\theta\theta}$-1.10±.01; $M_{\phi\phi}$1.22±.01; $M_{r\theta}$-0.17±.02; $M_{\theta\phi}$0.57±.01; $M_{\phi r}$0.03±.02; Best double couple: $M_0$1.30000×10^{18} NP1:ϕ_s148.00000°, δ84.00000°, λ-174.00000°. NP2:ϕ_s58.00000°, δ84.00000°, λ-7.00000°. Principal axes: T 1.3500, Plg1.0000°, Azm103.0000°; N -0.0900, Plg81.0000°, Azm197.0000°; P -1.2600, Plg9.0000°, Azm13.0000°; Data Used: II IU IC G CN. Surface waves: sta=110, comp=245, per= 50.*
*DJA **22** 07:47:44, 17.73S×65.33E, h20km, mb5.5/25*
*SZGRF **22** 07:47:45.8, 17.40S×64.27E, h33km, mb5.6, MS5.2, Mauritius - Reunion region*
ISC 22 07:47:41.0±1.1, 17.84S±0.03×65.42E±0.02, h16km±7km, h17km±1.6km:pP-P, n1103, σ98/761, mb5.5/276, MS5.6/245, 100C-83D, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MRIV	**Mauritius Mete**	**7.88**	**251**	*e*	Pn	**Pn**	**07 49 31.0**	**-4.1**
MRIV				*e*	Sn	**Sn**	**07 50 56.0**	**-8.0**
RER	**Riviere de l'E**	**9.71**	**249**	*e*	Pn	**Pn**	**07 49 56.0**	**-4.1**
	795nm,0.6s							
RER				*e*	Sn	**Sn**	**07 51 42.8**	**-6.0**
DGAR	**Diego Garcia**	**12.43**	**34**		Pn	**Pn**	**07 50 37.2**	**-0.2**
	3μm,1.4s,SNR=6.2							
DGAR	**Diego Garcia**	**12.43**	**34**	*e*	Pn	**Pn**	**07 50 37.6**	**+0.3**
	787nm,1.3s							
DGAR	**Diego Garcia**	**12.43**	**34**	*e*	P	**Pn**	**07 50 37.6**	**+0.2**
DGAR					pmax	pmax		
	comp=Z,787nm,1.3s							
DGAR	**Diego Garcia**	**12.43**	**34**		Pn	**Pn**	**07 50 38.7**	**+1.3**
	SNR=5.7							
MSEY	**Mahe Island**	**16.31**	**322**		Pn	**Pn**	**07 51 30.1**	**+0.5**
	comp=Z,2μm,1.5s,SNR=36							
MSEY	**Mahe Island**	**16.31**	**322**	*e*	P	**Pn**	**07 51 30.6**	**+1.0**
	comp=Z,2μm,1.9s							
MSEY	**Mahe Island**	**16.31**	**322**	*e*	P	**Pn**	**07 51 30.6**	**+1.0**
MSEY					pmax	pmax		
	comp=Z,2μm,1.9s							
MSEY	**Mahe Island**	**16.31**	**322**		Pn	**Pn**	**07 51 31.2**	**+1.6**
	SNR=69							
ABPO	**Ambohimpanom**	**17.31**	**263**		Pn	**Pn**	**07 51 45.0**	**+2.9**
	comp=Z,552nm,0.4s,SNR=12							
ABPO	**Ambohimpanom**	**17.31**	**263**	*e*	P	**Pn**	**07 51 41.5**	**-0.6**
	comp=Z,463nm,1.1s							
ABPO	**Ambohimpanom**	**17.31**	**263**	*e*	P	**Pn**	**07 51 41.5**	**-0.6**
ABPO					pmax	pmax		
	comp=Z,463nm,1.1s							
OPO	**Ambohidratompo**	**17.34**	**265**		P	**Pn**	**07 51 41.5**	**-1.0**
	comp=Z,9.3nm,0.3s,baz=84,slow=14,SNR=50							
OPO					S	**Sn**	**07 54 49.6**	**-5.7**
	comp=Z,1.0nm,0.3s,baz=90,slow=15,SNR=2.1							
HMDM	**Hanimaadhoo**	**25.63**	**18**		P	**P**	**07 53 13.0**	**+3.0**
	comp=Z,194nm,1.5s,mb5.4							
COCO	**West Island**	**30.83**	**84**		PFAKE		07 54 10.0	+13
COCO					LR	LR		
	comp=Z,12μm,20.0s,MS5.5							
KMBO	**Kilima Mbogo**	**32.28**	**298**	*e*	P	**P**	**07 54 10.5**	**+1.1**
	comp=Z,411nm,2.9s,mb5.8							
KMBO					LR	LR		
	comp=Z,15μm,21.0s,MS5.7							
KMBO	**Kilima Mbogo**	**32.28**	**298**		P	**P**	**07 54 08.0**	**-1.4**
	comp=Z,16nm,0.9s,mb4.9,baz=128,slow=12,SNR=7.3							
KMBO					LR	LR	08 05 09.7	
	comp=Z,15μm,18.1s,MS5.7,baz=100,slow=33							
KMBO	**Kilima Mbogo**	**32.28**	**298**	*e*	P	**P**	**07 54 10.6**	**+1.2**
KMBO	**Kilima Mbogo**	**32.28**	**298**		P	**P**	**07 54 10.4**	**+1.1**
	SNR=11							
POGA	**Pongola**	**32.53**	**247**	*e*	P	**P**	**07 54 11.7**	**+0.2**
POGA					AMb	AMB	07 54 15.1	
	comp=Z,100nm,4.2s							
MSNA	**Messina**	**33.50**	**256**	*e*	P	**P**	**07 54 19.0**	**-1.0**
MSNA					AMb	AMB	07 54 34.1	
	comp=Z,88nm,4.3s							
MDRS	**Chennai**	**34.02**	**26**	*ex*		x	07 55 49.2	
MDRS					AMb	AMB	07 56 02.0	
	comp=Z,102nm,0.2s,mb6.3							
GOA	**Goa**	**34.14**	**15**	⇑ *i*	P	**P**	**07 54 25.8**	**+0.3**
SLR	**Silverton**	**35.28**	**251**	*e*	P	**P**	**07 54 35.8**	**+0.4**
SLR					AMb	AMB	07 54 44.0	
	comp=Z,147nm,4.4s							
ERPM	**east rand prop**	**35.38**	**250**	*e*	P	**P**	**07 54 37.1**	**+0.9**
ERPM					AMb	AMB	07 54 40.2	
	comp=Z,129nm,3.8s							
LSZ	**Lusaka**	**35.75**	**268**		PFAKE		07 54 50.0	+11
LSZ					LR	LR		
	comp=Z,9μm,20.0s,MS5.5							
KAD	**Karad**	**35.98**	**14**	*e*	PKP	**P**	**07 54 40.2**	**-1.1**
SEK	**Senekal**	**36.17**	**246**	*e*	P	**P**	**07 54 42.5**	**-0.4**
SEK					AMb	AMB	07 54 54.0	
	comp=Z,153nm,2.9s,mb5.4							
PRYS	**Parys**	**36.22**	**249**	⇑ *i*	P	**P**	**07 54 43.9**	**+0.5**
PRYS					AMb	AMB	07 54 47.3	
	comp=Z,166nm,3.8s							
POO	**Poona**	**37.08**	**13**	⇑ *i*	P	**P**	**07 54 49.0**	**-1.7**
	comp=Z,91nm,1.2s,mb5.5							
POO				*e*	PKP		07 54 49.8	
BOM	**Bombay**	**37.22**	**12**	*e*	PKP	PcP	07 57 16.5	+4.8
BOM				*e*	S	Sx	08 03 01.1	
HYB	**Hyderabad**	**37.34**	**21**	*i*	P	**P**	**07 54 52.5**	**-0.5**
	comp=Z,80nm,1.0s,mb5.5							
HYB				*e*	PP	PP	07 56 17.0	-1.4
HYB				*e*	S	**S**	**08 00 40.0**	**-0.3**
HYB					LR	LR	08 06 56.0	
	comp=Z,17nm,16.0s							
AAE	**Adis Abeba**	**37.50**	**313**	*e*	P	**P**	**07 54 52.7**	**-1.7**
AAE				*e*	S	S	08 00 01.6	-41
BSI	**Banda Aceh**	**37.51**	**55**		P	**P**	**07 54 55.5**	**+1.0**
	comp=Z,60nm,1.5s,mb5.1							
LBTB	**Lobatse**	**37.65**	**252**	*e*	P	**P**	**07 54 55.7**	**+0.1**
	comp=Z,63nm,1.0s,mb5.3							
LBTB					LR	LR		
	comp=Z,15μm,21.0s,MS5.8							
LBTB	**Lobatse**	**37.65**	**252**	*e*	P	**P**	**07 54 55.7**	**+0.1**
LBTB					pmax	pmax		
	comp=Z,63nm,1.0s,mb5.3							
LBTB					MLR	MLR		
	comp=Z,15μm,21.0s,MS5.8							
LBTB	**Lobatse**	**37.65**	**252**	*e*	P	**P**	**07 54 54.7**	**-0.9**
LBTB					AMb	AMB	07 54 59.6	
	comp=Z,110nm,4.2s							
TPTI		**37.68**	**59**		P	**P**	**07 54 59.9**	**+3.9**
	comp=Z,830nmcomp=Z,98nm,1.7s,mb4.8							
SWZ	**Schweizer**	**38.05**	**249**	*e*	P	**P**	**07 54 59.3**	**+0.4**
SWZ					AMb	AMB	07 55 01.8	
	comp=Z,114nm,2.5s,mb5.2							
GRM	**Grahamstown**	**38.09**	**239**	*e*	P	**P**	**07 55 04.2**	**+5.0**
GRM					AMb	AMB	07 55 07.6	
	comp=Z,257nm,4.5s							
MBAR	**Mbarara**	**38.15**	**293**		PFAKE		07 55 10.0	+10
MBAR					LR	LR		
	comp=Z,1μm,21.0s,MS4.7							
MBAR	**Mbarara**	**38.15**	**293**	*e*	P	**P**	**07 55 00.3**	**+0.4**
BOSA	**Boshof**	**38.28**	**246**	*e*	P	**P**	**07 55 01.6**	**+0.8**
	comp=Z,78nm,1.2s,mb5.3							
BOSA					LR	LR		
	comp=Z,8μm,20.0s,MS5.5							
BOSA	**Boshof**	**38.28**	**246**		P	**P**	**07 55 01.4**	**+0.5**
	comp=Z,43nm,1.0s,mb5.1,baz=80,slow=10,SNR=21							
BOSA					LR	LR	08 07 53.6	
	comp=Z,8μm,20.3s,MS5.5,baz=87,slow=32							
BOSA	**Boshof**	**38.28**	**246**	⇓ *i*	P	**P**	**07 55 01.0**	**+0.1**
BOSA					AMb	AMB	07 55 04.9	
	comp=Z,136nm,3.8s							
DESE	**Dese**	**38.43**	**317**	*e*	P	**P**	**07 55 03.1**	**+0.9**
DESE				*e*	S	**S**	**08 01 09.8**	**+13**
PPI	**Padang Panjang**	**38.47**	**67**		P	**P**	**07 55 04.1**	**+1.4**
	comp=Z,4μmcomp=Z,55nm,1.2s,mb5.2							
SOE	**Somerset East**	**38.72**	**240**	*e*	P	**P**	**07 55 04.8**	**+0.3**
SOE					AMb	AMB	07 55 16.3	
	comp=Z,186nm,3.2s							
PSI	**Prapat**	**38.87**	**61**		P	**P**	**07 55 03.8**	**-2.2**
	comp=Z,16nm,0.9s,mb4.7,baz=234,slow=8.6,SNR=5.7							
PSI					LR	LR	08 07 41.0	
	comp=Z,5μm,18.3s,MS5.4,baz=233,slow=31							
VIS	**Vishakhapatnam**	**39.49**	**27**	*e*	PKP	**P**	**07 55 10.1**	**-0.9**
VIS					AMb	AMB	07 55 13.9	
	comp=Z,47nm,0.8s,mb5.3							
VIS				*i*	S	**S**	**08 01 12.1**	**-0.7**
AKL	**Akola**	**39.96**	**17**	⇑ *i*	P	**P**	**07 55 14.8**	**-0.1**
AKL				*i*	x	x	08 01 14.1	
PKA	**Prieska**	**40.58**	**245**	*e*	P	**P**	**07 55 18.7**	**-1.4**
PKA					AMb	AMB	07 55 25.9	
	comp=Z,30nm,3.6s							
KLSI		**40.60**	**76**		P	**P**	**07 55 21.8**	**+1.4**
	comp=Z,3μmcomp=Z,198nm,1.1s,mb5.6							
WBK	**Wadi Bani Khal**	**40.70**	**351**		P	**P**	**07 55 22.2**	**+1.2**
	SNR=5.2							
BSY	**Bisya**	**41.13**	**348**		P	**P**	**07 55 25.9**	**+1.4**
	SNR=31							
SMDO	**Samad**	**41.28**	**350**		P	**P**	**07 55 27.1**	**+1.3**
	SNR=17							
IPM	**Ipoh**	**41.54**	**61**		P	**P**	**07 55 29.0**	**+0.9**
	comp=Z,1μmcomp=Z,92nm,1.1s,mb5.3							
KULM	**Kulim**	**41.68**	**60**	*e*	P	**P**	**07 55 29.1**	**-0.2**
	comp=Z,91nm,1.0s,mb5.4							
KULM					LR	LR		
	comp=Z,6μm,21.0s,MS5.5							
KULM	**Kulim**	**41.68**	**60**		P	**P**	**07 55 29.8**	**+0.5**
UPI	**Upington**	**41.75**	**247**	*e*	P	**P**	**07 55 30.2**	**+0.4**
UPI					AMb	AMB	07 56 05.0	
	comp=Z,111nm,5.6s							
ARQ	**Araqi**	**41.84**	**348**		P	**P**	**07 55 32.0**	**+1.6**
	SNR=18							
HOQ	**Hoqain**	**41.93**	**349**		P	**P**	**07 55 32.2**	**+1.2**
	SNR=23							
KGM	**Kluang**	**42.22**	**66**		P	**P**	**07 55 34.3**	**+0.6**
BHPL	**Bhopal**	**42.48**	**16**	*e*	PKP	**P**	**07 55 34.8**	**-0.8**
BHPL					AMb	AMB	07 55 37.7	
	comp=Z,27nm,0.8s,mb4.9							
LEM	**Lembang**	**42.55**	**81**		P	**P**	**07 55 38.8**	**+2.4**
	comp=Z,3μmcomp=Z,134nm,1.6s,mb5.4							
MYKOM	**Kota Tinggi**	**42.58**	**67**		P	**P**	**07 55 37.2**	**+0.6**
SUR	**Sutherland**

comp=Z,148nm,0.9s,mb6.0
ODAN Odare 49.29 26 *e*P **P 07 56 28.6 -0.7**
comp=Z,72nm,1.0s,mb5.7
QRN Al-Qurain 49.31 340 *e*P **P 07 56 27.9 -1.5**
QRN AMb AMB 07 56 32.7
comp=Z,74nm,1.2s,mb5.6
DDI Dehra Dun 49.41 14 *e*PKP **P 07 56 29.0 -1.1**
DDI *ex* x 07 58 27.0
GUN Gumba 49.61 24 *e*P **P 07 56 31.3 -0.4**
comp=Z,215nm,0.8s,mb6.2
MAW Mawson 49.76 181 *e*P **P 07 56 32.7 +0.3**
comp=Z,35nm,0.9s,mb5.4
MAW *e*S **S 08 03 45.6 +4.8**
MAW Mawson 49.76 181 *e*P **P 07 56 33.1 +0.7**
comp=Z,18nm,1.1s,mb5.0
MAW LR LR
comp=Z,5μm,21.0s,MS5.5
MAW Mawson 49.76 181 P **P 07 56 33.2 +0.8**
comp=Z,17nm,0.7s,mb5.2,baz=3.9,slow=9.2,SNR=37
MAW LR LR 08 12 30.0
comp=Z,4μm,21.1s,MS5.4,baz=0.0,slow=30
MAW Mawson 49.76 181 *e*P **P 07 56 33.1 +0.7**
MAW pmax pmax
comp=Z,18nm,1.1s
MAW MLR MLR
comp=Z,5μm,21.0s
KBD Kabd 49.78 340 *e*P **P 07 56 32.3 -0.8**
KBD AMb AMB 07 56 36.4
comp=Z,37nm,1.1s,mb5.3
TAPN Taplejung 49.85 26 *e*P **P 07 56 33.3 -0.3**
comp=Z,128nm,1.1s,mb5.9
NAY Al-Naaiem 50.00 339 *e*P **P 07 56 33.5 -1.2**
NAY AMb AMB 07 56 38.0
comp=Z,29nm,1.1s,mb5.2
BHK Bhakra 50.10 12 *ex* **P 07 56 31.8 -3.6**
UMR Umm Al-Rimmam 50.12 340 *e*P **P 07 56 34.8 -0.8**
UMR AMb AMB 07 56 38.9
comp=Z,105nm,1.3s,mb5.7
SHL Shillong 50.25 32↓ *i*P **P 07 56 36.5 -0.1**
SHL *i* x x 08 03 36.0
SBUM Sibu 50.31 71 P **P 07 56 38.1 +0.7**
CHRT Chiangrai 50.42 44 P **P 07 56 37.0 -1.0**
comp=Z,200nm,0.7s,mb6.3
MIB Mutribah 50.48 340 *e*P **P 07 56 37.2 -1.1**
MIB AMb AMB 07 56 46.7
comp=Z,104nm,0.9s,mb5.8
MBWA Marble Bar 51.10 103 *e*P **P 07 56 43.0 -0.3**
MBWA Marble Bar 51.10 103 *e*P **P 07 56 42.7 -0.5**
comp=Z,51nm,1.2s,mb5.3
MBWA LR LR
comp=Z,6μm,20.0s,MS5.6
MBWA Marble Bar 51.10 103 P **P 07 56 47.2 +3.9**
comp=Z,53nm,2.0s,mb5.1
BTM Bintulu 51.41 71 P **P 07 56 46.5 +0.8**
MIR Mirnyy 51.91 166 *e*P **P 07 56 50.0 +1.4**
MIR *e*S **S 08 04 12.0 +1.4**
MIR pmax pmax
comp=Z,375nm,2.4s,mb5.9
MIR pmax pmax
comp=Z,909nm,3.5s
MIR pmax pmax
comp=N,505nm,4.0s
MIR pmax pmax
comp=E,404nm,3.0s
MIR smax
comp=N,2μm,14.0s
MIR smax
comp=E,3μm,18.0s
IZEF Zefreh 51.98 346 *e*P **P 07 56 49.9 +0.4**
IPIR Pirpir 52.13 344 *e*P **P 07 56 50.5 -0.1**
KBL Kabul 52.20 4 *e*P **P 07 56 51.6 +0.5**
comp=E,76nm,1.0s,mb5.6
KBL Kabul 52.20 4 *e*P **P 07 56 51.6 +0.4**
KBL pmax pmax
comp=Z,76nm,1.0s,mb5.6
KMBL Kambalda 52.56 116 *e*P **P 07 56 53.4 -0.6**
comp=Z,149nm,1.3s,mb5.8
LSA Lhasa 53.38 28 P **P 07 57 00.1 +0.1**
LSA S **S 08 04 25.1 -6.5**
LSA pmax pmax
comp=Z,30nm,0.9s,mb5.2
LSA pmax pmax
comp=Z,360nm,5.0s
LSA LR LR
comp=N,5μm,22.0s
LSA LR LR
comp=Z,8μm,21.0s,MS5.7
LSA Lhasa 53.38 28 *e*P **P 07 57 00.7 +0.8**
comp=Z,176nm,1.6s,mb5.7
LSA LR LR
comp=Z,8μm,21.0s,MS5.8
LSA Lhasa 53.38 28 *e*P **P 07 57 00.7 +0.7**
LSA pmax pmax
comp=Z,176nm,1.6s,mb5.7
LSA MLR MLR
comp=Z,8μm,21.0s,MS5.8
ISFB Sefidab 53.40 346 *e*P **P 07 56 59.0 -1.0**
SYO Syowa Base 53.63 191↓ *e*P **P 07 57 00.6 -0.7**
IFIR Firoozkooh 54.53 347 *e*P **P 07 57 09.2 +1.0**
IKIA Kiasar 54.89 348 *e*P **P 07 57 11.7 +0.9**
IGLO Ghaloghah 55.15 349 *e*P **P 07 57 13.7 +1.0**
IPRN Peran 55.20 347 *e*P **P 07 57 13.2 +0.1**
KKM Kota Kinabalu 55.46 69 *e*P **P 07 57 14.7 -0.8**
comp=Z,87nm,1.2s,mb5.7
KKM LR LR
comp=Z,4μm,20.0s,MS5.5
KKM Kota Kinabalu 55.46 69 P **P 07 57 16.3 +0.8**
ABKT Ailbek 55.90 353 P **P 07 57 17.1 -1.0**
comp=Z,100nm,1.1s,mb5.8,SNR=12
KMI Kunming 56.08 41 ↓*i*P **P 07 57 20.9 +1.3**
KMI pP pP 07 57 24.8 +0.1
KMI S **S 08 05 09.8 +1.8**
KMI pmax pmax
comp=Z,25nm,0.8s,mb5.3
KMI pmax pmax
comp=Z,630nm,4.5s
KMI LR LR
comp=N,3μm,18.9s,MS5.6
KMI LR LR
comp=E,4μm,19.9s,MS5.6
KMI LR LR
comp=Z,3μm,22.4s,MS5.3
SDKM Sandakan 56.16 70 P **P 07 57 21.3 +0.8**
CASY Casey 56.60 160 *e*P **P 07 57 23.2 +0.4**
CASY Casey 56.60 160 PFAKE 07 57 40.0 +17
CASY LR LR
comp=Z,3μm,21.0s,MS5.4
ASF Jabal al Asfar 56.75 331 LR LR 08 17 50.2
comp=Z,3μm,20.2s,MS5.4,baz=192,slow=32
QIZ Qiongzhong 56.98 52 P **P 07 57 27.8 +1.6**
QIZ S **S 08 05 19.4 -0.8**
QIZ pmax pmax
comp=Z,22nm,1.7s,mb4.9
QIZ pmax pmax
comp=Z,340nm,4.1s
QIZ LR LR
comp=N,5μm,13.0s,MS5.8
QIZ LR LR
comp=E,2μm,13.8s,MS5.8
QIZ LR LR
comp=Z,4μm,20.0s
QIZ Qiongzhong 56.98 52 PFAKE 07 57 40.0 +14
QIZ LR LR
comp=Z,4μm,20.0s,MS5.5
MYLDM Lahad Datu 57.14 71 P **P 07 57 28.3 +0.8**
FORT Forrest 57.87 115 *e*P **P 07 57 31.9 -0.5**
comp=Z,53nm,1.0s,mb5.5
FORT Forrest 57.87 115 *e*P **P 07 57 32.1 -0.2**
comp=Z,123nm,1.2s,mb5.8
KSH Kashi 57.90 10 P **P 07 57 27.6 -4.7**
KSH *e*pP pP 07 57 32.8 -4.5
KSH *e*sP sP 07 57 34.9 -4.4
KSH *e*PcP PcP 07 58 22.4 -2.1
KSH *e*PP PP 07 59 35.5 -5.4
KSH *e*ScP ScP 08 02 20.3 -3.8
KSH *e*PcS PcS 08 02 22.3 -3.4
KSH *e*S **S 08 05 19.6 -12**
KSH *e*sS sS 08 05 27.8 -12
KSH *e*ScS ScS 08 07 13.0 -8.3
KSH pmax pmax
comp=Z,150nm,1.4s,mb5.8
KSH LR LR
comp=N,4μm,14.7s,MS5.7
KSH LR LR
comp=E,2μm,12.9s,MS5.7
KSH LR LR
comp=Z,4μm,12.7s,MS5.7
MMAI Mount Meron Ar 58.15 330 LR LR 08 19 47.8
comp=Z,2μm,18.4s,MS5.3,baz=165,slow=33
LUWI Luwuk 58.71 80 P **P 07 57 39.0 +0.5**
comp=Z,3μmcomp=Z,198nm,1.0s,mb6.1
HWQ Hawqa 58.94 332 *e*P **P 07 57 44.5 +4.8**
GYA Guiyang 59.53 43 P **P 07 57 43.1 -0.8**
GYA PP PP 07 59 56.6 +1.0
GYA ScP ScP 08 02 33.0 +1.3
GYA S **S 08 05 52.6 -0.6**
GYA SS SS 08 09 49.3 +0.3
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.5
GYA pmax pmax
comp=Z,280nm,4.5s
GYA LR LR
comp=N,2μm,17.7s,MS5.5
GYA LR LR
comp=E,2μm,17.4s,MS5.5
GYA LR LR
comp=Z,3μm,19.8s,MS5.5
VANB Van 59.82 340 *e*P **P 07 57 45.9 +0.2**
CLDR Caldiran 60.15 341 *e*P **P 07 57 48.2 +0.4**
AML Almayashu 60.16 7 P **P 07 57 48.0 +0.2**
SNR=7.9
KNA Kununurra 60.42 98 *e*P **P 07 57 49.7 -0.6**
comp=Z,96nm,1.0s,mb5.8
URFA Urfa 60.43 336 *e*P **P 07 57 51.0 +1.2**
ULHL Ulahol 60.61 9 P **P 07 57 50.1 -0.8**
SNR=6.8
EKS2 Erkin-Say 60.69 7 P **P 07 57 51.1 -0.4**
SNR=26
AAK Ala-Archa 60.75 8 P **P 07 57 52.6 +0.7**
SNR=9.1
AAK Ala-Archa 60.75 8 *e*P **P 07 57 51.2 -0.7**
comp=Z,40nm,1.1s,mb5.5
AAK LR LR
comp=Z,3μm,19.0s,MS5.5
AAK Ala-Archa 60.75 8 P **P 07 57 51.3 -0.6**
comp=Z,11nm,0.8s,mb5.0,baz=191,slow=10,SNR=18
AAK LR LR 08 22 08.2
comp=Z,3μm,20.3s,MS5.5,baz=189,slow=34
AAK Ala-Archa 60.75 8*c i*P **P 07 57 51.9 0.0**
AAK pmax pmax
comp=Z,26nm,1.7s,mb5.1
AAK Ala-Archa 60.75 8 P **P 07 57 51.3 -0.6**
comp=Z,146nm,1.3s,mb6.0,SNR=8.2
AAK Ala-Archa 60.75 8 P **P 07 57 52.2 +0.3**
SNR=22
EREN Erenkoy 60.79 331 *e*P **P 07 57 56.9 +4.5**
GNI Garni 60.83 342 *e*P **P 07 57 53.7 +1.2**
comp=Z,157nm,1.0s,mb6.1
GNI LR LR
comp=Z,2μm,19.0s,MS5.3
GNI Garni 60.83 342 LR LR 08 24 35.8
comp=Z,2μm,18.4s,MS5.4,baz=105,slow=36
GNI Garni 60.83 342*d i*P **P 07 57 52.9 +0.4**
GNI pmax pmax
comp=Z,155nm,1.2s
GNI Garni 60.83 342 P **P 07 57 54.9 +2.4**
SNR=44
AGRB Hanur-Agry 60.84 340 *e*P **P 07 57 54.1 +1.5**
LFK Lefkose 60.88 330 *e*P **P 07 57 58.3 +5.4**
CD2 Chengdu 60.89 38 P **P 07 57 54.3 +1.2**
CD2 pP pP 07 57 58.9 +0.7
CD2 sP sP 07 58 01.3 +1.2
CD2 PP PP 08 00 11.1 +3.6
CD2 ScP ScP 08 02 36.5 -1.1
CD2 S **S 08 06 11.5 +1.0**
CD2 sS sS 08 06 19.3 +0.4
CD2 ScS ScS 08 07 41.3 -2.5
CD2 pmax pmax
comp=Z,70nm,1.0s,mb5.8
CD2 pmax pmax
comp=Z,940nm,5.8s
CD2 LR LR
comp=N,3μm,23.0s,MS5.6
CD2 LR LR
comp=E,4μm,22.1s,MS5.6
CD2 LR LR
comp=Z,3μm,25.0s,MS5.3
FRU Bishkek 60.96 8 *e*P **P 07 57 52.2 -1.1**
FRU pmax pmax
comp=Z,266nm,3.2s
LEF Lefka 61.06 330 *e*P **P 07 57 55.2 +1.0**
SVRC Sivrice-ELAZID 61.06 337 *e*P **P 07 57 56.1 +2.0**
TKM2 Tokmak 2 61.18 9 P **P 07 57 53.4 -1.4**
SNR=21
KMRS Kahramanmaras 61.26 334 *e*P **P 07 57 59.2 +3.8**
CEYT Ceyhan 61.32 333 *e*P **P 07 57 57.1 +1.2**
MALT Malatya 61.34 336 *e*P **P 07 58 00.1 +4.2**
MALT Malatya 61.34 336 *e*P **P 07 57 57.5 +1.5**
comp=Z,286nm,2.6s,mb5.9
MALT LR LR
comp=Z,4μm,19.0s,MS5.6
MALT Malatya 61.34 336 *e*P **P 07 57 57.5 +1.5**
MALT pmax pmax
comp=Z,286nm,2.6s,mb5.9
MALT MLR MLR
comp=Z,4μm,19.0s,MS5.6
MALT Malatya 61.34 336 P **P 07 57 58.0 +2.0**
USP Ospenovka 61.38 8 P **P 07 57 54.9 -1.2**
SNR=13
PTK Pertek 61.48 337 *e*P **P 07 57 58.2 +1.3**
NVL N'lazarevskaya 61.66 198↓ *i*P **P 07 57 56.9 -0.9**
NVL pmax pmax
comp=Z,30nm,0.7s,mb5.5
KOZT Kozan 61.68 333 *e*P **P 07 57 58.2 -0.2**
MAIT Maitri 61.69 198 *e*P **P 07 57 58.6 +0.6**
KARS Kars 61.77 341 *e*P **P 07 58 00.5 +1.6**
KARA Karaisali 61.83 333 *e*P **P 07 58 03.2 +3.9**
DGRG David-gareji 61.85 343 P **P 07 57 59.4 0.0**
DGRG S **S 08 06 24.0 +1.7**
MTA Mtatsminda 62.24 343 P **P 07 58 02.5 +0.5**
MTA S **S 08 06 28.1 +0.9**
TBLG Delisi 62.29 343 *e*P **P 07 58 02.8 +0.5**
TBLG Delisi 62.29 343 P **P 07 58 02.8 +0.5**
GOR Gori 62.70 342 P **P 07 58 06.6 +1.5**
MAK Makhachkala 62.71 345 *e*P **P 07 58 04.5 -0.6**
MAK *e* 07 58 38.0
MAK *e* 08 00 23.6
MAK *e*S **S 08 06 31.2 -1.9**
MAK *e* 08 07 52.6
MAK pmax pmax
comp=Z,167nm,1.3s,mb6.0
MAK MLR MLR
comp=Z,1μm,17.0s,MS5.1
HDMB Hadim 62.75 331 *e*P **P 07 58 06.0 +0.5**
BCA Borcka 62.98 340 *e*P **P 07 58 07.4 +0.5**
KTUT Trabzon 63.19 338 *e*P **P 07 58 10.8 +2.5**
SVSK Karacayir 63.28 336 *e*P **P 07 58 10.4 +1.5**
TGY Tagaytay City 63.28 64 P **P 07 58 10.3 +0.8**
comp=Z,139nm,0.3s,mb6.6,baz=155,slow=14,SNR=5.9
TGY LR LR 08 24 24.9
comp=Z,7,6nm,18.7s,baz=64,slow=35
ESPY Espiye-Giresun 63.50 338 *e*P **P 07 58 12.7 +2.3**
KONT Konya--Tatoy 63.60 331 *e*P **P 07 58 13.4 +2.2**
ASAR Alice Springs 63.77 108 P **P 07 58 10.9 -1.8**
comp=Z,18nm,0.8s,mb5.2,baz=269,slow=5.6,SNR=73
ASAR PKP2ab 08 27 17.8
comp=Z,1.3nm,1.0s,baz=86,slow=4.7,SNR=5.2
ASAR Alice Springs 63.77 108 P **P 07 58 10.9 -1.8**
ASAR pmax pmax
comp=Z,18nm,0.8s
ASAR pmax pmax
comp=Z,1.0nm,1.0s
SUTC Sutluce-Ispart 63.86 330 *e*P **P 07 58 07.5 -5.4**
ENH Enshi 63.94 42 *e*P **P 07 58 12.6 -0.9**
comp=Z,77nm,0.8s,mb5.8
ENH LR LR
comp=Z,5μm,21.0s,MS5.7
DAV Davao City (W) 64.33 73 PFAKE 07 58 30.0 +14
DAV LR LR
comp=Z,3μm,20.0s,MS5.4
DAV Davao City (W) 64.33 73 LR LR 08 24 05.6
comp=Z,3μm,20.0s,MS5.4,baz=66,slow=34
ISP Isparta 64.36 330 PFAKE 07 58 30.0 +14
ISP LR LR
comp=Z,3μm,19.0s,MS5.5
CORM Corum 64.46 334 *e*P **P 07 58 17.4 +0.7**
BRTR Keskin Array B 64.50 333 P **P 07 58 16.6 -0.4**
comp=Z,5.5nm,1.1s,mb4.5,baz=144,slow=5.2,SNR=17
BRTR LR LR 08 24 50.4
comp=Z,4μm,21.0s,MS5.5,baz=138,slow=35
BRTR PKP2ab 08 27 15.3
comp=Z,0.3nm,0.3s,baz=116,slow=3.4,SNR=3.6
BBOO Buckleboo 64.52 118 *e*P **P 07 58 17.1 -0.4**
comp=Z,17nm,1.0s,mb5.0
KAKA Kakadu 64.56 96 *e*P **P 07 58 16.2 -1.8**
comp=Z,84nm,0.9s,mb5.8
KAKA Kakadu 64.56 96 *e*P **P 07 58 16.5 -1.5**
comp=Z,268nm,0.9s,mb6.3
KIZT Kizilcal 64.58 331 *e*P **P 07 58 18.0 +0.4**
KVT Kavak 64.65 336 *e*P **P 07 58 19.8 +1.8**
WMQ Urumqi 64.67 18 P **P 07 58 19.8 +1.8**
WMQ pP pP 07 58 24.4 +1.3
WMQ sP sP 07 58 26.8 +1.8
WMQ PcP PcP 07 58 53.3 +1.6
WMQ PP PP 08 00 43.9 +3.3
WMQ ScP 08 02 54.1
WMQ S **S 08 06 57.9 +0.5**
WMQ sS sS 08 07 05.8 0.0
WMQ ScS ScS 08 08 10.0 -1.9
WMQ pmax pmax
comp=Z,100nm,1.4s,mb5.7
WMQ pmax pmax
comp=Z,790nm,4.5s
WMQ LR LR
comp=N,6μm,21.8s,MS5.8
WMQ LR LR
comp=E,4μm,21.0s,MS5.8
WMQ LR LR
comp=Z,6μm,19.0s,MS5.8
LZH Lanzhou 64.79 34 *e*P **P 07 58 21.3 +2.3**
LZH pP pP 07 58 24.1 0.0
LZH sP sP 07 58 27.3 +1.3
LZH PcP PcP 07 58 55.3 +2.9
LZH PP PP 08 00 47.3 +5.4
LZH *e*S **S 08 06 59.0 -0.3**
LZH sS sS 08 07 06.1 -1.6
LZH SS SS 08 11 10.3 -0.9
LZH pmax pmax
comp=Z,42nm,1.2s,mb5.3
LZH pmax pmax
comp=Z,180nm,4.6s
LZH LR LR
comp=N,1μm,14.5s,MS5.5
LZH LR LR
comp=E,2μm,13.8s,MS5.5
LZH LR LR
comp=Z,3μm,18.2s,MS5.6
WRA Warramunga Arr 64.81 104 P **P 07 58 18.3 -1.3**
WRA LR LR 08 25 47.5
WRA Warramunga Arr 64.81 104 P **P 07 58 18.3 -1.3**
comp=Z,81nm,1.0s,mb5.7,baz=263,slow=6.1,SNR=117
WRA LR LR 08 25 47.5
comp=Z,7μm,18.1s,MS5.9,baz=270,slow=35
KIV Kislovodsk 64.92 342 *e*P **P 07 58 20.6 +0.9**
comp=Z,70nm,1.0s,mb5.7
KIV LR LR
comp=Z,2μm,20.0s,MS5.3
KIV Kislovodsk 64.92 342↑ *e*P **P 07 58 20.1 +0.4**
KIV *i* pP 07 58 26.6 +1.8
KIV *i* 07 58 52.4
KIV *e* 08 00 48.1
KIV PPP 08 02 20.0
KIV *i* S **S 08 07 02.7 +2.1**
KIV pmax pmax
comp=Z,48nm,1.2s,mb5.4
KIV MLR MLR
comp=Z,1μm,16.0s,MS5.2
KIV Kislovodsk 64.92 342 P **P 07 58 22.0 +2.3**
comp=Z,322nm,1.1s,mb6.3,SNR=8.0
KIV Kislovodsk 64.92 342 P **P 07 58 20.8 +1.1**
SNR=21
SVRH Sivrihisar-ESK 65.20 332 *e*P **P 07 58 25.3 +3.7**
CANT Cankiri 65.24 334 *e*P **P 07 58 25.1 +3.4**
GTA Gaotai 65.39 29 P **P 07 58 22.3 -0.5**
GTA pP pP 07 58 26.8 -1.2
GTA sP sP 07 58 30.1 +0.2
GTA S S 08 07 07.3 +0.7
GTA sS sS 08 07 17.3 +2.3
GTA pmax pmax
comp=Z,19nm,1.5s,mb4.9
GTA pmax pmax
comp=Z,410nm,6.5s
GTA LR LR
comp=N,3μm,22.3s,MS5.5
GTA LR LR
comp=E,2μm,23.5s,MS5.5
GTA LR LR
comp=Z,4μm,24.4s,MS5.5
SOC Sochi 65.52 340*d i*P **P 07 58 25.3 +1.8**
SOC *e**PP pP 07 58 31.9 +3.3
SOC *e* 07 58 53.8
SOC *e*PPP 08 02 24.7
SOC *e*S S 08 07 07.9 0.0
SOC *e* 08 08 12.6
SOC *e*SS SS 08 11 09.0 -13
SOC pmax pmax
comp=Z,56nm,1.2s,mb5.5
SOC MLR MLR
comp=Z,2μm,20.0s,MS5.2
KULA Kula-Manisa 65.81 329 *e*P **P 07 58 31.0 +5.5**
MKAR Makanchi Array 66.11 13 P **P 07 58 25.4 -1.9**
comp=Z,8.0nm,0.8s,mb4.8,baz=191,slow=6.6,SNR=44
MKAR LR LR 08 25 22.2
comp=Z,3μm,21.0s,MS5.4,baz=13,slow=34
MKAR PKP2ab 08 27 06.0
comp=Z,0.2nm,0.2s,baz=20,slow=4.6,SNR=5.6
MDU Mudurnu 66.17 332 *e*P **P 07 58 24.7 -3.1**
XAN Xi'an 66.17 39 P **P 07 58 26.6 -1.3**
XAN S S 08 07 08.1 -8.1
XAN SS SS 08 11 29.8 -2.8
XAN pmax pmax
comp=Z,16nm,0.9s,mb5.0
XAN pmax pmax
comp=Z,67nm,4.8s
XAN LR LR
comp=N,3μm,18.7s
XAN LR LR
comp=E,350nm,12.7s
XAN LR LR
comp=Z,810nm,21.2s,MS4.9
GULT Gulveren 66.45 332 *e*P **P 07 58 31.4 +1.8**
CAVI Cavuskoy 66.58 331 *e*P **P 07 58 34.1 +3.7**
ADVT Abdulvahap 66.81 331 *e*P **P 07 58 31.8 -0.2**
AB31 Akbulak array 66.97 356 *i*P **P 07 58 31.7 -1.0**
AB31 pmax pmax
comp=Z,110nm,1.3s,mb5.7
ABKAR Akbulak array 66.97 356 *e*P **P 07 58 31.2 -1.5**
comp=Z,40nm,0.9s,mb5.5
GEMT Gemlik 67.07 331 *e*P **P 07 58 37.0 +3.5**
YLV Yalova 67.08 331 *e*P **P 07 58 33.3 -0.3**
HRT Hereke 67.15 331 *e*P **P 07 58 34.0 -0.1**
WHN Wuhan 67.30 45 ↓*i*P **P 07 58 34.8 -0.5**
WHN pP pP 07 58 43.9 +3.5
WHN S S 08 07 27.6 -2.5
WHN pmax pmax
comp=Z,150nm,0.8s,mb6.1
WHN LR LR
comp=N,3μm,14.8s,MS6.0
WHN LR LR
comp=E,6μm,16.1s,MS6.0
WHN LR LR
comp=Z,5μm,16.8s,MS5.8
ANN Anapa 67.36 339 *e*P **P 07 58 35.4 +0.1**
ANN *i* S S 08 07 29.9 -0.3
ANN *e*SS SS 08 11 50.9 +0.1
ANN pmax pmax
comp=Z,124nm,2.0s,mb5.6
ANN MLR MLR
comp=N,2μm,19.0s,MS5.5
ANN MLR MLR
comp=E,481nm,19.0s,MS5.5
ANN MLR MLR
comp=Z,1μm,19.0s,MS5.1
GONE Gonen-Balikesi 67.48 329 *e*P **P 07 58 36.6 +0.4**
ISK Istanbul-Kandi 67.62 331 *e*P **P 07 58 37.0 -0.1**
DRV Dumont d'Urvil 67.65 155 S S 08 07 38.0 +4.7
DRV L 08 16 00.0
SHEL Horse Pasture 67.73 260 PFAKE 07 58 50.0 +12
SHEL LR LR
comp=Z,7μm,20.0s,MS5.9
VNA1 Neumayer--Stat 67.89 200 *e*P **P 07 58 37.2 -1.2**
VNA1 *e* pP 07 58 41.0 -2.6
VNA1 *e* 08 01 03.7
SSLB Suanglung 68.18 54 *e*P **P 07 58 43.0 +2.1**
comp=Z,47nm,1.1s,mb5.4
YULB Yu-li 68.24 55 *e*P **P 07 58 41.3 0.0**

comp=Z,29nm,0.8s,mb5.4
AKTO Aktyubinsk 68.29 355 LR LR 08 26 49.8
comp=Z,970nm,20.6s,MS5.0,baz=1.3,slow=34
AKTO Aktyubinsk 68.29 355 P **P** **07 58 39.5 -1.5**
AKTO pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
SIM Simferopol' 68.69 337 *e*P **P** **07 58 46.5 +2.9**
SIM *e*S S 08 07 47.0 +0.9
SIM pmax pmax
comp=Z,33μm,1.0s
ARPS Mount Arapiles 68.83 123 *e*P **P** **07 58 45.0 +0.1**
comp=Z,184nm,1.3s,mb5.8
NACB Ninganchiao 68.88 54 *e*P **P** **07 58 45.4 +0.1**
comp=Z,45nm,0.8s,mb5.5
YHNB Yeheng 68.97 54 *e*P **P** **07 58 46.5 +0.6**
comp=Z,30nm,0.9s,mb5.2
YHNB LR LR
comp=Z,5μm,21.0s,MS5.7
TATO Taipei 69.22 54 PFAKE 07 59 00.0 +13
TATO LR LR
comp=Z,4μm,20.0s,MS5.6
KURK Kurchatov 69.24 9 P **P** **07 58 45.6 -1.3**
comp=Z,159nm,0.8s,mb6.0,SNR=11
KURK Kurchatov 69.24 9 *e*P **P** **07 58 45.7 -1.3**
comp=Z,89nm,1.4s,mb5.5
KURK LR LR
comp=Z,4μm,20.0s,MS5.7
KURK Kurchatov 69.24 9 P **P** **07 58 44.7 -2.2**
comp=Z,14nm,0.9s,mb4.9,baz=207,slow=6.8,SNR=33
KURK LR LR 08 26 48.6
comp=Z,4μm,20.2s,MS5.6,baz=190,slow=34
KURK PKP2bc 08 26 57.2
comp=Z,1.4nm,1.0s,baz=4.3,slow=3.2,SNR=6.4
KURK Kurchatov 69.24 9*d iP* **P** **07 58 45.9 -1.0**
KURK pmax pmax
comp=Z,56nm,1.7s,mb5.2
KURK Kurchatov 69.24 9 P **P** **07 58 46.0 -0.9**
SNR=30
STKA Stephens Creek 69.28 118 *e*P **P** **07 58 46.6 -1.2**
comp=Z,13nm,0.8s,mb4.9
STKA *e*S S 08 07 54.5 +0.6
STKA Stephens Creek 69.28 118 *e*P **P** **07 58 47.0 -0.8**
comp=Z,62nm,2.3s,mb5.1
STKA Stephens Creek 69.28 118 P **P** **07 58 46.8 -1.0**
comp=Z,21nm,1.0s,mb5.0,baz=275,slow=7.2,SNR=18
STKA LR LR 08 25 24.6
comp=Z,5μm,19.5s,MS5.8,baz=254,slow=33
EDRB Edirne 69.32 330 *e*P **P** **07 58 47.6 -0.1**
KDZ Kurdzhali 69.81 329 *e*P **P** **07 58 50.8 +0.1**
TOA0 Torodi Ar. Sit 70.01 292 *e*P **P** **07 58 51.4 -1.1**
TORD Torodi Ar. Bea 70.01 292 P **P** **07 58 51.8 -0.7**
comp=Z,11nm,0.9s,mb4.8,baz=124,slow=5.6,SNR=48
TORD LR LR 08 28 15.9
comp=Z,5μm,19.8s,MS5.7,baz=100,slow=35
PSN Preselentsi 70.09 332 *e*P **P** **07 58 54.9 +2.5**
RZN Rozhen 70.18 329 *e*P **P** **07 58 53.0 0.0**
VOSK Vostochnaya 70.43 4 P **P** **07 58 51.6 -2.6**
VOSK pmax pmax
comp=Z,300nm,3.0s
ZRNK Zerenda 70.56 2 P **P** **07 58 54.5 -0.5**
ZRNK pmax pmax
comp=Z,175nm,2.4s,mb5.6
MMB Musomiste 70.60 328 *e*P **P** **07 58 58.7 +3.1**
TIRR Tirgusor 70.60 333 *e*P **P** **07 58 55.3 -0.1**
comp=Z,34nm,0.9s,mb5.3
TIRR Tirgusor 70.60 333 ⇑P **P** **07 58 55.4 -0.1**
TIRR Tirgusor 70.60 333⇑*iP* **P** **07 58 55.4 -0.1**
BVA0 Borovoye Array 70.70 3 *i* P **P** **07 58 54.1 -1.8**
BVA0 pmax pmax
comp=Z,12nm,1.5s,mb4.6
BRVK Borovoye 70.73 3 P **P** **07 58 55.1 -0.9**
comp=Z,129nm,1.4s,mb5.7,SNR=9.4
BRVK Borovoye 70.73 3 *e*P **P** **07 58 55.0 -1.0**
comp=Z,17nm,0.8s,mb5.0
BRVK LR LR
comp=Z,3μm,21.0s,MS5.5
BRVK Borovoye 70.73 3⇓*iP* **P** **07 58 55.2 -0.8**
BRVK pmax pmax
comp=Z,49nm,1.7s,mb5.2
BRVK Borovoye 70.73 3 P **P** **07 58 55.5 -0.6**
SNR=20
TIY Taiyuan 70.76 38 *e*P **P** **07 58 56.8 +0.2**
TIY S S 08 08 11.8 +1.1
TIY LR LR
comp=N,2μm,16.6s,MS5.5
TIY LR LR
comp=E,1μm,13.8s,MS5.5
TIY LR LR
comp=Z,2μm,17.0s,MS5.4
SZH Strazhica 70.79 331 *e*P **P** **07 58 56.0 -0.7**
PVL Pavlikeni 71.04 330 *e*P **P** **07 58 58.7 +0.5**
PGB Panagyurishte 71.10 329 *e*P **P** **07 58 56.7 -1.8**
TAM Tamanrasset 71.12 302 *e*P **P** **07 58 59.8 +0.6**
comp=Z,19nm,1.3s,mb4.9
TAM LR LR
comp=Z,5μm,20.0s,MS5.8
TAM Tamanrasset 71.12 302 *e*P **P** **07 58 59.8 +0.7**
TAM pmax pmax
comp=Z,19nm,1.3s,mb4.9
TAM MLR MLR
comp=Z,5μm,20.0s,MS5.8
NJ2 Nanjing 71.27 46 *e*P **P** **07 58 59.3 -0.5**
NJ2 pP pP 07 59 04.1 -0.9
NJ2 sP sP 07 59 06.3 -0.6
NJ2 S S 08 08 17.0 +0.1
NJ2 sS sS 08 08 24.5 -1.0
NJ2 SKS 08 08 59.5
NJ2 pmax pmax
comp=Z,60nm,1.0s,mb5.5
NJ2 pmax pmax
comp=Z,820nm,5.6s
NJ2 LR LR
comp=N,3μm,26.8s,MS5.7
NJ2 LR LR
comp=E,4μm,25.6s,MS5.7
NJ2 LR LR
comp=Z,3μm,28.1s,MS5.4
VTS Vitosha 71.60 328 ⇑P **P** **07 59 02.6 +1.0**
VTS Vitosha 71.60 328⇑*iP* **P** **07 59 02.6 +1.0**
VTS Vitosha 71.60 328 *e*P **P** **07 59 00.7 -0.9**
TOO Toolangi 71.61 124 *e*P **P** **07 59 02.9 +1.0**
TOO *e*S S 08 08 22.3 +1.4
VRHR Novokhopersk 71.75 344 *e*P **P** **07 59 02.5 +0.2**
VRHR pmax pmax
comp=N,50nm,0.7s
VRHR pmax pmax
comp=E,40nm,0.7s
VRHR pmax pmax
comp=Z,60nm,0.7s,mb5.6
MPEP Malo Peshtene 71.91 329 *e*P **P** **07 59 03.0 -0.4**
WDD Wield Dalam 71.92 318 PFAKE 07 59 20.0 +16
WDD LR LR
comp=Z,3μm,22.0s,MS5.6
VORD Divnogorie 72.25 343 *e*P **P** **07 59 06.8 +1.5**
VORD *e*'PP pP 07 59 13.2 +2.7
VORD *e*S S 08 08 26.3 -1.1
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,20nm,0.6s,mb5.2
VORD smax
comp=E,270nm,3.5s
VORD smax
comp=Z,60nm,3.5s
VORD smax
comp=N,10.0nm,0.9s
VORD MLR MLR
comp=N,920nm,18.0s,MS5.2
VORD MLR MLR
comp=E,600nm,18.0s,MS5.2
VORD MLR MLR
comp=Z,1μm,18.0s,MS5.2
SSE Sheshan 72.35 48 P **P** **07 59 08.3 +1.9**
SSE PP PP 08 01 50.5 +3.0
SSE S S 08 08 32.8 +3.4
SSE pmax pmax
comp=Z,49nm,0.8s,mb5.5
SSE pmax pmax
comp=Z,750nm,5.2s
SSE LR LR
comp=N,2μm,22.0s,MS5.5
SSE LR LR
comp=E,2μm,22.0s,MS5.5
SSE LR LR
comp=Z,2μm,29.3s
TIR Tirane 72.44 326 *e*P **P** **07 59 07.0 +0.3**
comp=Z,32nm,0.6s,mb5.4
TIR LR LR
comp=Z,2μm,22.0s,MS5.3
TIR Tirane 72.44 326 *e*P **P** **07 59 07.0 +0.4**
TIR pmax pmax
comp=Z,32nm,0.6s,mb5.4
TIR MLR MLR
comp=Z,2μm,22.0s,MS5.3
VRI Vrincioaia 72.45 333 P **P** **07 59 07.5 +1.0**
VRI Vrincioaia 72.45 333 ⇑P **P** **07 59 07.4 +0.8**
VRI Vrincioaia 72.45 333*i*P **P** **07 59 07.4 +0.8**
KIS Kishinev 72.46 335 *e*PP PP 08 02 10.0 +22
KIS Kishinev 72.46 335 *e*P **P** **07 59 08.0 +1.4**
KIS *e*S S 08 08 30.0 0.0
KIS *e*SSS 08 16 07.0
PLOR Plostina 72.47 333 ⇓P **P** **07 59 10.9 +4.2**
PLOR Plostina 72.47 333⇓*iP* **P** **07 59 10.9 +4.2**
MLR Muntele Rosu 72.50 332 P **P** **07 59 08.0 +1.1**
MLR Muntele Rosu 72.50 332⇑*iP* **P** **07 59 07.9 +1.0**
VSR Storozhevoye 72.51 343 *e*P **P** **07 59 06.5 -0.3**
VSR *e*S S 08 08 28.8 -1.6
VSR *e*SS SS 08 13 08.5 -1.4
VSR pmax pmax
comp=N,40nm,1.0s
VSR pmax pmax
comp=E,20nm,1.0s
VSR pmax pmax
comp=Z,60nm,1.0s,mb5.5
VSR smax
comp=N,250nm,5.0s
VSR smax
comp=E,650nm,5.0s
VSR smax
comp=Z,180nm,5.0s
VSR MLR MLR
comp=N,1μm,19.0s,MS5.2
VSR MLR MLR
comp=E,240nm,19.0s,MS5.2
VSR MLR MLR
comp=Z,1μm,19.0s,MS5.2
CEL Celeste 72.61 321 *e*P **P** **07 59 10.8 +3.1**
comp=Z,28nm,0.9s,mb5.2
CEL LR LR
comp=Z,1μm,22.0s,MS5.1
TIA Tai'an 72.64 42 *e*P **P** **07 59 07.0 -1.0**
TIP Timpagrande 72.70 322 *e*P **P** **07 59 07.8 -0.5**
comp=Z,36nm,1.3s,mb5.2
TIP LR LR
comp=Z,2μm,21.0s,MS5.2
VOIR 72.86 331 P **P** **07 59 09.2 +0.2**
VOIR 72.86 331 ⇑P **P** **07 59 08.7 -0.4**
VOIR 72.86 331⇑*iP* **P** **07 59 08.7 -0.4**
DOPR Dopca 73.12 332⇑*iP* **P** **07 59 16.6 +6.0**
KIC Kosan Boka 73.28 283 *e*P **P** **07 59 12.0 -0.3**
comp=Z,82nm,0.8s,mb5.7
ZAA0 Zalesovo Array 73.42 12 *e*P **P** **07 59 10.3 -1.8**
ZALV Zalesovo Beam 73.42 12 P **P** **07 59 10.3 -1.8**
comp=Z,19nm,0.8s,mb5.1,baz=200,slow=4.1,SNR=32
ZALV LR LR 08 29 57.2
comp=Z,2μm,19.8s,MS5.4,baz=198,slow=35
DBIC Dimbokro 73.50 283 *e*P **P** **07 59 13.8 +0.3**
comp=Z,40nm,0.9s,mb5.3
DBIC LR LR
comp=Z,5μm,20.0s,MS5.8
DBIC Dimbokro 73.50 283 P **P** **07 59 13.2 -0.3**
comp=Z,29nm,0.8s,mb5.2,baz=113,slow=7.4,SNR=28
DBIC LR LR 08 30 29.1
comp=Z,4μm,18.8s,MS5.8,baz=96,slow=35
DBIC Dimbokro 73.50 283⇑*iP* **P** **07 59 13.4 -0.1**
LIC Lamto 73.50 282 *e*P **P** **07 59 13.3 -0.3**
comp=Z,150nm,0.9s,mb5.9
LIC Lamto 73.50 282⇑*iP* **P** **07 59 13.3 -0.3**
comp=Z,101nm,0.9s,mb5.5,baz=110
LIC *e*MLR MLR
comp=Z,10μm,23.0s,MS5.7
LIC Lamto 73.50 282⇑*iP* **P** **07 59 13.3 -0.3**
comp=Z,51nm,0.9s,mb5.5
LIC LR LR
comp=Z,5μm,23.0s,MS5.7
TIC Toumodi 73.64 283 *e*P **P** **07 59 14.1 -0.3**
comp=Z,114nm,1.1s,mb5.7
TIC Toumodi 73.64 283 *e*P **P** **07 59 14.1 -0.3**
TIC pmax pmax
comp=Z,114nm,1.1s,mb5.7
CUC Castrocucco 73.79 322 *e*P **P** **07 59 13.9 -0.8**
comp=Z,12nm,0.8s,mb4.9
CUC LR LR
comp=Z,1μm,20.0s,MS5.1
GZR Gura Zlata 73.89 330 P **P** **07 59 15.4 +0.3**
GZR Gura Zlata 73.89 330 ⇑P **P** **07 59 16.9 +1.8**
GZR Gura Zlata 73.89 330⇑*iP* **P** **07 59 16.9 +1.8**
NVS Novosibirsk 73.97 11⇑*iP* **P** **07 59 14.2 -1.2**
NVS pmax pmax
comp=N,129nm,2.1s
NVS pmax pmax
comp=Z,191nm,2.1s,mb5.7
NVS pmax pmax
comp=E,32nm,1.4s
ARU Arti 74.21 356 *e*P **P** **07 59 16.2 -0.5**
comp=E,81nm,1.1s,mb5.6
ARU LR LR
comp=Z,2μm,21.0s,MS5.4
ARU Arti 74.21 356*d iP* **P** **07 59 15.8 -0.9**
ARU *e* 07 59 32.0
ARU *e* 08 02 05.7
ARU *e*PPP 08 03 48.6
ARU S S 08 08 47.1 -2.3
ARU 08 09 19.8
ARU SS SS 08 13 27.2 -8.4
ARU pmax pmax
comp=Z,83nm,1.7s,mb5.4
ARU MLR MLR
comp=Z,2μm,19.0s,MS5.4
ARU Arti 74.21 356 P **P** **07 59 16.6 -0.1**
comp=Z,326nm,1.0s,mb6.2,SNR=10
COEN Coen 74.38 100 *e*P **P** **07 59 18.4 -0.3**
comp=Z,89nm,0.9s,mb5.7
MTSU Mount Surprise 74.41 104 *e*P **P** **07 59 19.7 +0.8**
comp=Z,197nm,1.1s,mb6.0
BUR01 Bucovina Ar. S 74.46 333 P **P** **07 59 20.0 +1.6**
BURAR Bucovina Array 74.46 333 P **P** **07 59 20.2 +1.9**
BURAR Bucovina Array 74.46 333 ⇑P **P** **07 59 17.9 -0.5**
BURAR Bucovina Array 74.46 333⇑*iP* **P** **07 59 17.9 -0.5**
BJT Baijiatuau 74.47 38 *e*P **P** **07 59 19.1 +0.5**
comp=Z,59nm,1.3s,mb5.4
BJT LR LR
comp=Z,2μm,19.0s,MS5.5
BJT Baijiatuau 74.47 38 *e*P **P** **07 59 19.2 +0.6**
BJT pmax pmax
comp=Z,59nm,1.3s
BJT MLR MLR
comp=Z,2μm,19.0s
BJI Beijing 74.48 38 P **P** **07 59 18.3 -0.4**
BJI PP PP 08 02 06.1 +0.6
BJI S S 08 08 52.0 -1.2
BJI SS SS 08 13 43.4 +3.0
BJI pmax pmax
comp=Z,27nm,1.6s,mb4.9
BJI pmax pmax
comp=Z,340nm,5.0s
BJI LR LR
comp=N,1μm,23.5s,MS5.4
BJI LR LR
comp=E,2μm,22.4s,MS5.4
BJI LR LR
comp=Z,2μm,18.6s,MS5.3
BUR08 Bucovina Ar. S 74.49 333 *e*P **P** **07 59 19.7 +1.2**
SVE Sverdlovsk 74.49 357 *e*P **P** **07 59 18.7 +0.4**
SVE *e*S S 08 08 51.4 -1.1
SVE *e* 08 09 29.1
SVE pmax pmax
comp=Z,87nm,1.4s,mb5.5
SVE MLR MLR
comp=Z,2μm,18.0s,MS5.4
BZS Buzias 74.60 330 P **P** **07 59 19.8 +0.5**
BZS Buzias 74.60 330 ⇑P **P** **07 59 19.5 +0.2**
BZS Buzias 74.60 330⇑*iP* **P** **07 59 19.5 +0.2**
CAN Canberra 74.78 123 PFAKE 07 59 30.0 +9.3
CAN LR LR
comp=Z,2μm,19.0s,MS5.5
DRGR 74.95 331 P **P** **07 59 21.4 +0.2**
DRGR 74.95 331 ⇑P **P** **07 59 22.2 +0.9**
DRGR 74.95 331⇑*iP* **P** **07 59 22.2 +0.9**
SONM Songino Array 74.96 27 P **P** **07 59 20.7 -0.5**
comp=Z,24nm,0.9s,mb5.1,baz=217,slow=5.0,SNR=45
SONM LR LR 08 31 03.5
comp=Z,6μm,20.8s,MS5.9,baz=212,slow=35
SBA Scott Base 75.05 168 PFAKE 07 59 30.0 +8.5
SBA LR LR
comp=Z,3μm,20.0s,MS5.5
KEST Kesra 75.20 316 P **P** **07 59 23.7 +0.7**
comp=Z,5.1nm,0.8s,mb4.5,baz=117,slow=3.9,SNR=12
KEST LR LR 08 34 57.3
comp=Z,2μm,18.2s,MS5.4,baz=316,slow=38
ULN Ulaanbaatar 75.27 28 *e*P **P** **07 59 23.6 +0.5**
comp=Z,63nm,1.4s,mb5.4
ULN LR LR
comp=Z,5μm,22.0s,MS5.8
ULN Ulaanbaatar 75.27 28⇑*iP* **P** **07 59 22.7 -0.4**
ULN Ulaanbaatar 75.27 28 P **P** **07 59 23.1 0.0**
SNR=18
AKASG Malin Array Be 75.30 337 P **P** **07 59 22.5 -0.7**
comp=Z,12nm,0.7s,mb4.9,baz=138,slow=5.1,SNR=28
AKASG LR LR 08 31 42.3
comp=Z,751nm,21.0s,MS5.0,baz=170,slow=35
AKASG Malin Array Be 75.30 337 P **P** **07 59 22.5 -0.7**
AKASG pmax pmax
comp=Z,12nm,0.7s
AKASG MLR MLR
comp=Z,751nm,21.0s
KIEV Kiev 75.30 337 *e*P **P** **07 59 22.3 -0.8**
comp=Z,50nm,1.0s,mb5.4
KIEV LR LR
comp=Z,1μm,19.0s,MS5.2
KIEV Kiev 75.30 337 *e*P **P** **07 59 22.3 -0.9**
KIEV pmax pmax
comp=Z,50nm,1.0s,mb5.4
KIEV MLR MLR
comp=Z,1μm,19.0s,MS5.2
ZAK Zakamensk 75.67 24 *e*P **P** **07 59 24.3 -1.0**
ZAK pmax pmax
comp=Z,9.0nm,2.0s,mb4.3
CTA Charters Tower 75.72 107 *e*P **P** **07 59 25.8 -0.6**
comp=Z,23nm,1.0s,mb5.0
CTA *e*S S 08 09 08.3 +0.4
CTAO Charters Tower 75.72 107 *e*P **P** **07 59 25.5 -0.9**
comp=Z,38nm,1.0s,mb5.3
CTAO LR LR
comp=Z,7μm,19.0s,MS6.0
CTAO Charters Tower 75.72 107 *e*P **P** **07 59 25.5 -0.9**
CTAO pmax pmax
comp=Z,38nm,1.0s,mb5.3
CTAO MLR MLR
comp=Z,7μm,19.0s,MS6.0
TRPA Tarpa 76.03 332⇓*iP* **P** **07 59 27.9 +0.5**
PKSM Moragy 76.48 329 P **P** **07 59 29.7 -0.3**
PKSM Moragy 76.48 329 ⇓P **P** **07 59 30.1 +0.1**
PKSM Moragy 76.48 329⇓*iP* **P** **07 59 30.1 +0.1**
UZH Uzhgorod 76.51 332⇑*iP* **P** **07 59 30.0 -0.1**
UZH *e* 07 59 40.0
UZH *i* S S 08 09 14.0 -1.3
UZH *e* 08 09 42.8
UZH *e*SS SS 08 14 12.8 +2.0
UZH MLR MLR
comp=N,600nm,18.0s,MS5.1
UZH MLR MLR
comp=E,500nm,18.0s,MS5.1
UZH MLR MLR
comp=Z,400nm,18.0s,MS4.8
LVV L'vov 76.65 334 *e*P **P** **07 59 30.4 -0.5**
LVV *e*S S 08 09 16.0 -0.8
AQU L'Aquila 76.70 323 *e*P **P** **07 59 32.0 +0.7**
comp=Z,92nm,1.3s,mb5.5
AQU LR LR
comp=Z,1μm,21.0s,MS5.1
AQU L'Aquila 76.70 323 ⇑P **P** **07 59 33.5 +2.1**
AQU L'Aquila 76.70 323⇑*iP* **P** **07 59 33.5 +2.1**
OBN Obninsk 76.70 343 *e*P **P** **07 59 31.5 +0.5**
comp=Z,121nm,1.1s,mb5.7
OBN LR LR
comp=Z,1μm,21.0s,MS5.2
OBN Obninsk 76.70 343 P **P** **07 59 32.0 +0.9**
OBN *i* pP 07 59 35.4 -0.9
OBN pP 07 59 37.0 +0.7
OBN *i* 07 59 44.5
OBN 08 02 29.0
OBN *i* S S 08 09 17.1 0.0
OBN *i* PS 08 10 02.3
OBN pmax pmax
comp=Z,149nm,1.7s,mb5.6
OBN MLR MLR
comp=Z,1μm,20.0s,MS5.2
OBN Obninsk 76.70 343 P **P** **07 59 29.7 -1.4**
comp=Z,468nm,0.9s,mb6.4,SNR=5.2
ABSA Djebel Ababsia 76.76 315 P **P** **07 59 33.4 +1.6**
TLY Talaya 76.84 23 *e*P **P** **07 59 32.0 0.0**
comp=Z,30nm,1.2s,mb5.1
TLY LR LR
comp=Z,6μm,19.0s,MS5.9
TLY Talaya 76.84 23 *e*P **P** **07 59 32.2 +0.2**
TLY *e*S S 08 09 19.1 +0.3
TLY *e* 08 09 36.6
TLY *e*PS 08 09 57.5
TLY *e*PPS 08 10 16.1
TLY *e*SS SS 08 14 15.5 -0.3
TLY pmax pmax
comp=Z,20nm,1.2s,mb4.9
TLY Talaya 76.84 23 P **P** **07 59 32.8 +0.8**
SNR=12
MOS Moscow 76.98 344 *e*P **P** **07 59 32.7 +0.1**
MOS *e* 07 59 44.3
MOS *e* 08 02 23.8
MOS *e*S S 08 09 17.8 -2.3
MOS pmax pmax
comp=Z,163nm,1.5s,mb5.7
MOS pmax pmax
comp=Z,400nm,2.0s,mb6.0
MOS MLR MLR
comp=Z,3μm,25.0s,MS5.5
CMAH Djebel Manchou 76.99 316 P **P** **07 59 34.5 +1.3**
KWP Kalwaria Pacla 77.08 333 *e*P **P** **07 59 33.2 -0.1**
KWP LMZ 08 32 31.2
comp=Z,2μm,21.8s
KWP Kalwaria Pacla 77.08 333 *e*P **P** **07 59 33.0 -0.3**
comp=Z,76nm,1.0s,mb5.6
KWP LR LR
comp=Z,2μm,22.0s,MS5.3
KWP Kalwaria Pacla 77.08 333 ⇓P **P** **07 59 34.2 +0.9**
KWP Kalwaria Pacla 77.08 333⇓*iP* **P** **07 59 34.2 +0.9**
CRVS Cervenica-Dubn 77.08 332 *e*P **P** **07 59 33.6 +0.2**
comp=Z,37nm,1.3s,mb5.2
CRVS *e*PcP PcP 07 59 44.0 -0.2
CRVS *e*S S 08 09 22.8 +1.3
CRVS Cervenica-Dubn 77.08 332 *e*P **P** **07 59 33.6 +0.2**
CRVS pmax pmax
comp=Z,37nm,1.3s,mb5.2
CRVS Cervenica-Dubn 77.08 332 *e*P **P** **07 59 33.5 +0.1**
CRVS *e*PCP PcP 07 59 44.0 -0.2
CRVS *e*S S 08 09 22.8 +1.3
PSZ Piszkesteto 77.08 330 P **P** **07 59 33.0 -0.4**
PSZ LR LR
comp=Z,1μm,19.0s,MS5.2
PSZ Piszkesteto 77.08 330 *e*P **P** **07 59 33.0 -0.4**
BUD Budapest 77.19 330 *e*P **P** **07 59 33.8 -0.2**
CKFL Kef-Lekhel 77.33 315 P **P** **07 59 36.5 +1.4**
VSL Villasalto 77.37 319 *e*P **P** **07 59 35.4 +0.2**
comp=Z,73nm,1.3s,mb5.5
VSL LR LR
comp=Z,2μm,20.0s,MS5.4
CASM Ain Smara 77.41 315 P **P** **07 59 36.5 +1.0**
SOKR Solikamsk 77.45 356*c iP* **P** **07 59 35.5 +0.3**
SOKR S S 08 09 23.5 -1.6
SOKR SS SS 08 14 18.1 -6.5
SOKR pmax pmax
comp=Z,80nm,1.2s,mb5.5
SOKR MLR MLR
comp=Z,2μm,20.0s,MS5.3
IRK Irkutsk 77.53 23 *e*P **P** **07 59 36.0 +0.2**
IRK pmax pmax
comp=Z,318nm,1.6s,mb6.0
STHS Stebnicka Huta 77.56 332 *e*P **P** **07 59 35.0 -1.0**
comp=Z,9.0nm,1.0s,mb4.7
STHS Stebnicka Huta 77.56 332 *e*P **P** **07 59 35.0 -1.0**
STHS pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
STHS Stebnicka Huta 77.56 332 *e*P **P** **07 59 35.0 -1.0**
BOJS Bojanci 77.73 326 *i* P **P** **07 59 36.5 -0.6**
BOJS *i* 07 59 46.3

DFRA Djebel Bou Aff 77.98 315 P **P** 07 59 40.0 +1.3
VYHS Vyhne 77.99 330 *e*P **P** 07 59 38.1 -0.4
comp=Z,17nm,1.4s,mb4.8
VYHS *e*PcP PcP 07 59 48.8 +0.7
VYHS *e*S S 08 09 30.5 -0.9
VYHS *e*SS SS 08 14 43.6 +10
VYHS Vyhne 77.99 330 *e*P **P** 07 59 38.1 -0.4
VYHS pmax pmax
comp=Z,17nm,1.4s,mb4.8
VYHS Vyhne 77.99 330 *e*P **P** 07 59 38.1 -0.4
VYHS *e*PCP PcP 07 59 48.8 +0.7
VYHS *e*S S 08 09 30.5 -0.9
VYHS *e*SS SS 08 14 43.6 +10
ARMA Armidale 78.00 118 *e*P **P** 07 59 40.3 +1.2
ARMA *e*S S 08 09 36.1 +3.6
ARMA Armidale 78.00 118 *e*P **P** 07 59 40.5 +1.4
comp=Z,61nm,1.4s,mb5.3
SET Setif 78.12 314 P **P** 07 59 41.0 +1.5
VISS Visnje 78.14 326 *i* P **P** 07 59 38.6 -0.7
VISS *i* 07 59 48.0
KOLL Kolacno 78.26 330 *e*P **P** 07 59 40.2 +0.3
KOLL Kolacno 78.26 330 *e*P **P** 07 59 40.2 +0.3
LJU Ljubljana 78.47 327 *e*P **P** 07 59 44.0 +2.8
SOP Sopron 78.53 329 *e*P **P** 07 59 41.8 +0.3
PERS Pernice 78.55 327 *i* P **P** 07 59 40.8 -0.8
PERS *i* 07 59 50.5
JAVS Javornik 78.61 326 *i* P **P** 07 59 41.1 -0.9
JAVS *i* 07 59 50.3
ZST Bratislava 78.61 329 *e*P **P** 07 59 41.8 -0.1
comp=Z,42nm,1.6s,mb5.1
ZST *e*S S 08 09 36.3 -1.8
ZST Bratislava 78.61 329 *e*P **P** 07 59 41.8 -0.1
ZST pmax pmax
comp=Z,42nm,1.6s,mb5.1
ZST Bratislava 78.61 329 *e*P **P** 07 59 41.8 -0.1
ZST *e*S S 08 09 36.3 -1.8
SOKA Soboth 78.62 327⇑ *i*P **P** 07 59 41.8 -0.2
comp=Z,32nm,1.5s,mb5.0
TRI Trieste 78.65 326 *e*P **P** 07 59 41.1 -1.1
comp=Z,23nm,1.1s,mb5.0
TRI LR LR
comp=Z,941nm,22.0s,MS5.1
TRI Trieste 78.65 326 *e*P **P** 07 59 41.1 -1.1
TRI pmax pmax
comp=Z,23nm,1.1s,mb5.0
TRI MLR MLR
comp=Z,941nm,22.0s,MS5.1
ARSA Arzberg 78.75 328⇑ *i*P **P** 07 59 42.5 -0.2
comp=Z,42nm,0.9s,mb5.3,SNR=12
EIDS Eidsvold 78.75 113 *e*P **P** 07 59 43.9 +0.5
comp=Z,41nm,1.3s,mb5.2
OBKA Obir 78.76 327⇑ *i*P **P** 07 59 42.8 0.0
comp=Z,42nm,1.2s,mb5.2
OJC Ojcow 78.78 332 *e*P **P** 07 59 44.3 +1.5
OJC *e*pP pP 07 59 46.8 -1.2
OJC *e* pP 07 59 50.1 +2.1
OJC *e*S S 08 09 39.4 -0.4
OJC L 08 33 48.4
comp=Z,1.0nm,21.3s
OJC Ojcow 78.78 332 *e*P **P** 07 59 44.3 +1.5
OJC *e**PP pP 07 59 46.8 -1.2
OJC *e* pP 07 59 50.1 +2.1
OJC *e*S S 08 09 39.4 -0.4
OJC MLR MLR
comp=Z,1μm,21.3s,MS5.1
VOY Vojsko 78.79 326 *e*P **P** 07 59 42.3 -0.7
VOY *e* pP 07 59 47.3 -0.9
VOY *e* 07 59 58.3
MICGM Minsk 78.86 339 *e*P **P** 07 59 42.0 -1.1
MNK Minsk 78.88 339 *e*P **P** 07 59 42.0 -1.2
MNK *e*S S 08 09 38.0 -2.7
CONA Conrad Observa 79.04 329⇑ *i*P **P** 07 59 43.9 -0.4
comp=Z,56nm,1.1s,mb5.4,SNR=16
OKC Ostrava-Krasne 79.26 331 *e*P **P** 07 59 43.5 -1.9
OKC *e* 07 59 52.4
OKC *e*S S 08 09 45.9 +1.0
OKC MLR MLR
comp=Z,1μm,17.0s,MS5.3
OKC Ostrava-Krasne 79.26 331 *e*P **P** 07 59 43.5 -1.9
OKC *e*PCP PcP 07 59 52.4 -1.2
OKC *e*S S 08 09 45.9 +1.0
OKC AMS AMS 08 34 20.0
comp=Z,1μm,17.0s
MYKA Terra Mystica 79.31 327⇑ *i*P **P** 07 59 45.2 -0.6
comp=Z,25nm,1.5s,mb4.9
PMG Port Moresby 79.36 97 *e*P **P** 07 59 47.3 +0.4
comp=Z,41nm,1.0s,mb5.3
PMG LR LR
comp=Z,4μm,19.0s,MS5.7
PGF Pioggiola 79.39 321 *e*P **P** 07 59 46.0 -0.3
comp=Z,203nm,1.6s,mb5.5
PGF Pioggiola 79.39 321 *e*P **P** 07 59 46.0 -0.3
comp=Z,101nm,1.6s,mb5.5
PGF Pioggiola 79.39 321 *e*P **P** 07 59 46.0 -0.3
PGF pmax pmax
comp=Z,101nm,1.6s,mb5.5
MORC Moravsky Berou 79.50 331⇓ *i*P **P** 07 59 40.1 -6.6
MORC Moravsky Berou 79.50 331⇓ *i*P **P** 07 59 40.1 -6.6
VLC Villacollemand 79.55 323 PFAKE 08 00 00.0 +13
VLC LR LR
comp=Z,1μm,22.0s,MS5.2
NACGM Naroch 79.57 338 *e* **P** 07 59 46.0 -1.0
INCN Inchon 79.61 45 PFAKE 08 00 00.0 +12
INCN LR LR
comp=Z,3μm,22.0s,MS5.6
VRAC Vranov 79.62 330 P **P** 07 59 47.7 +0.3
VRAC Vranov 79.62 330⇓ *i*P **P** 07 59 49.4 +2.0
VRAC Vranov 79.62 330⇓ *i*P **P** 07 59 49.4 +2.0
WAR Warsaw 79.73 334 *e*P **P** 07 59 51.8 +3.8
WAR *e*PcP PcP 07 59 59.4 +3.8
WAR LMZ 08 35 35.5
comp=Z,2μm,20.9s
KBA Koelnbreinsper 79.76 327⇑ *i*P **P** 07 59 47.6 -0.6
comp=Z,37nm,1.2s,mb5.2
MOA Molln 79.79 328⇑ *i*P **P** 07 59 47.6 -0.7
comp=Z,46nm,1.2s,mb5.3,SNR=12
EMHD Djebel Mahouad 79.81 313 P **P** 07 59 50.0 +1.3
ABTA Abfaltersbach 79.99 326⇑ *i*P **P** 07 59 49.2 -0.2
comp=Z,42nm,1.3s,mb5.2,SNR=22
TREC Trest 80.14 329 *e*P **P** 07 59 49.9 -0.3
TREC *e* 07 59 56.9
TREC *e*S S 08 09 54.1 -0.2
TREC MLR MLR
comp=Z,1μm,16.8s,MS5.3
TREC Trest 80.14 329 *e*P **P** 07 59 49.9 -0.3
TREC *e*PCP PcP 07 59 56.9 -0.6
TREC *e*S S 08 09 54.1 -0.2
TREC AMS AMS 08 36 50.0
comp=Z,1μm,16.8s
SUW Suwalki 80.19 336 *e*P **P** 07 59 52.9 +2.5
SUW *e*pP pP 07 59 57.0 +1.4
SUW *e*PcP PcP 08 00 00.8 +3.2
SUW *e*S S 08 09 55.1 +0.5
SUW LMZ 08 31 48.5
comp=Z,1μm,29.0s
SUW Suwalki 80.19 336 *e*P **P** 07 59 52.4 +2.0
comp=Z,46nm,0.4s,mb5.8
SUW Suwalki 80.19 336 *e*P **P** 07 59 52.9 +2.5
SUW *e**PP pP 07 59 57.0 +1.4
SUW *e* 08 00 00.8
SUW *e*S S 08 09 55.1 +0.5
DPC Dobruska-Polom 80.46 331 *e*P **P** 07 59 50.9 -1.0
DPC *e* 08 00 02.0
DPC *e*S S 08 09 59.5 +1.9
DPC MLR MLR
comp=Z,1μm,18.0s,MS5.2
DPC Dobruska-Polom 80.46 331 *e*P **P** 07 59 50.9 -1.0
DPC *e*PCP PcP 08 00 02.0 +3.1
DPC *e*S S 08 09 59.5 +1.9
DPC AMS AMS 08 34 40.0
comp=Z,1μm,18.0s
KSRS Korea Array 80.47 46 P **P** 07 59 51.0 -1.2
comp=Z,27nm,0.9s,mb5.2,baz=237,slow=5.4,SNR=29
KSRS LR LR 08 33 03.1
comp=Z,2μm,20.7s,MS5.5,baz=237,slow=34
ETRT Tiaret 80.56 312 P **P** 07 59 54.0 +1.2
UPC Upice 80.72 331 *e*P **P** 07 59 53.3 0.0
UPC *e* 08 00 03.7
UPC Upice 80.72 331 *e*P **P** 07 59 53.3 0.0
UPC *ex* x 08 00 03.7
GEC2 GERESS Array S 80.73 328 *e*P **P** 07 59 51.9 -1.5
comp=Z,34nm,1.5s,mb5.1
GEC2 GERESS Array S 80.73 328 *e*P **P** 07 59 51.9 -1.5
GEC2 pmax pmax
comp=Z,34nm,1.5s,mb5.1
WTTA Wattenberg 80.78 326⇑ *i*P **P** 07 59 53.1 -0.6
comp=Z,25nm,0.7s,mb5.2
KSP Ksiaz 80.81 331 *e*P **P** 07 59 56.9 +3.1
KSP *e*S S 08 10 03.9 +2.6
KSP Ksiaz 80.81 331 *e*P **P** 07 59 54.5 +0.7
KSP *e**PP pP 07 59 57.1 -1.9
KSP *e* pP 08 00 01.1 +2.1
KSP *e*S S 08 10 03.0 +1.7
KHC Kasperske Hory 80.97 328 *e*P **P** 07 59 53.8 -0.9
comp=Z,38nm,1.3s,mb5.2
KHC Kasperske Hory 80.97 328 *e*P **P** 07 59 53.7 -1.0
KHC *e* 08 00 03.0
KHC *e*S S 08 10 01.4 -1.6
KHC MLR MLR
comp=Z,800nm,20.7s,MS5.0
KHC Kasperske Hory 80.97 328 *e*P **P** 07 59 53.7 -1.0
KHC *e*PCP PcP 08 00 03.0 +1.9
KHC *e*S S 08 10 01.4 -1.6
KHC *e*SS SS 08 15 26.1 +8.2
KHC AMS AMS 08 35 50.0
comp=Z,800nm,20.7s
EANR 'Ain N'Sour 80.97 312 P **P** 07 59 56.5 +1.5
PRU Pruhonice 81.07 330 *e*P **P** 07 59 55.7 +0.5
PRU *e* 08 00 05.7
PRU *e*S S 08 10 04.0 +0.1
PRU MLR MLR
comp=Z,1μm,19.8s,MS5.2
PRU Pruhonice 81.07 330 *e*P **P** 07 59 55.7 +0.5
PRU *ex* x 08 00 05.7
PRU *e*S S 08 10 04.0 +0.1
PRU *ex* x 08 14 55.8
PRU AMS AMS 08 38 10.0
comp=Z,1μm,19.8s
SAOF Saorge 81.09 322 *e*P **P** 07 59 55.1 -0.3
SBF Sospel 81.09 322 *e*P **P** 07 59 55.2 -0.2
comp=Z,326nm,1.5s,mb5.7
SBF Sospel 81.09 322 *e*P **P** 07 59 55.2 -0.2
comp=Z,163nm,1.5s,mb5.7
SBF Sospel 81.09 322 *e*P **P** 07 59 55.2 -0.2
SBF pmax pmax
comp=Z,163nm,1.5s,mb5.7
FETA Feichten 81.11 326⇓ *i*P **P** 07 59 54.9 -0.6
comp=Z,31nm,1.2s,mb5.1,SNR=12
MOTA Moosalm 81.11 326⇑ *i*P **P** 07 59 54.7 -0.8
comp=Z,15nm,0.8s,mb5.0
KLMR Klimovskoe 81.15 347 *c* *i*P **P** 07 59 55.1 -0.2
KLMR *e* 08 03 00.1
KLMR *i* S S 08 10 03.0 -1.3
KLMR *e*SS SS 08 15 14.8 -5.2
KLMR pmax pmax
comp=Z,139nm,1.3s,mb5.7
KLMR pmax pmax
comp=Z,63nm,4.9s
LUCF Luceram 81.16 322 *e*P **P** 07 59 55.6 -0.2
AUTN L'Aution 81.17 322 *e*P **P** 07 59 57.7 +1.8
PRA Prague 81.17 330 S S 08 10 06.0 +1.0
PRA P 07 59 56.0
PRA AMS AMS 08 39 00.0
CIT Chita 81.17 28 *e*P **P** 07 59 55.4 -0.3
MVIF Mont Vial 81.27 322 *e*P **P** 07 59 56.9 +0.5
TOUF Mont Tournerai 81.28 322 *e*P **P** 07 59 57.2 +0.7
WET Wettzell 81.33 328 *e*P **P** 07 59 54.8 -1.8
comp=Z,37nm,1.7s,mb5.0
WET Wettzell 81.33 328 *e*P **P** 07 59 54.8 -1.8
WET pmax pmax
comp=Z,37nm,1.7s,mb5.0
LMR La Mourre 81.34 321 *e*P **P** 07 59 56.6 -0.2
comp=Z,125nm,1.3s,mb5.4
LMR La Mourre 81.34 321 *e*P **P** 07 59 56.6 -0.2
comp=Z,62nm,1.3s,mb5.4
LMR La Mourre 81.34 321 *e*P **P** 07 59 56.6 -0.2
LMR pmax pmax
comp=Z,62nm,1.3s,mb5.4
RETA Reutte 81.38 326⇑ *i*P **P** 07 59 56.3 -0.6
comp=Z,27nm,1.5s,mb4.9
FRF La Foret Royal 81.38 321 *e*P **P** 07 59 56.8 -0.2
comp=Z,227nm,1.6s,mb5.5
FRF La Foret Royal 81.38 321 *e*P **P** 07 59 56.8 -0.2
comp=Z,114nm,1.6s,mb5.5
FRF La Foret Royal 81.38 321 *e*P **P** 07 59 56.8 -0.2
FRF pmax pmax
comp=Z,114nm,1.6s,mb5.5
PVCC Panska Ves 81.41 330 *e*P **P** 07 59 57.3 +0.3
PVCC *e*S S 08 10 09.3 +1.8
PVCC MLR MLR
comp=Z,900nm,19.5s,MS5.1
PVCC Panska Ves 81.41 330 *e*P **P** 07 59 57.3 +0.3
PVCC *e*S S 08 10 09.3 +1.8
PVCC AMS AMS 08 38 40.0
comp=Z,900nm,19.5s
TUE Stuetta 81.53 325 *e*P **P** 07 59 57.5 -0.3
comp=Z,50nm,1.2s,mb5.3
TUE LR LR
comp=Z,1μm,21.0s,MS5.3
FUR Furstenfeldbru 81.53 327 *e*P **P** 07 59 56.9 -0.8
comp=Z,227nm,1.3s,mb5.9
FUR Furstenfeldbru 81.53 327 *e*P **P** 07 59 56.9 -0.8
FUR pmax pmax
comp=Z,227nm,1.3s,mb5.9
DAVA Damuels 81.73 325⇑ *i*P **P** 07 59 58.3 -0.5
comp=Z,30nm,1.0s,mb5.2
ETOS Mallorca 81.74 316 P **P** 07 59 58.0 -1.0
comp=Z,112nm,1.7s,mb5.5
SURF Saint Ours 81.81 322 *e*P **P** 07 59 59.7 +0.5
BRG Berggiesshubel 81.94 330 *e*P **P** 07 59 59.4 -0.4
comp=Z,82nm,1.9s,mb5.3
BRG Berggiesshubel 81.94 330 *e*P **P** 08 00 01.6 +1.8
comp=Z,22nm,1.5s,mb4.9
BRG *e* 08 00 10.6
comp=Z,82nm,1.9s
BRG *e*PP PP 08 03 19.4 +12
comp=Z,23nm,1.8s
BRG S S 08 10 18.0 +5.1
BRG SP 08 11 04.0
BRG SS SS 08 15 35.0 +2.8
BRG
comp=N,959nm,20.2s
BRG
comp=E,590nm,20.3s
BRG
comp=Z,738nm,19.6s
BRG Berggiesshubel 81.94 330 *e*P **P** 08 00 01.6 +1.8
BRG *e* 08 00 10.6
BRG S S 08 10 18.0 +5.1
BRG SP 08 11 04.0
BRG SS SS 08 15 35.0 +2.8
BRG pmax pmax
comp=Z,13nm,1.5s,mb4.6
BRG pmax pmax
comp=Z,49nm,1.9s,mb5.1
BRG pmax pmax
comp=Z,14nm,1.8s,mb4.6
BRG MLR MLR
comp=N,574nm,20.2s,MS5.0
BRG MLR MLR
comp=E,353nm,20.3s,MS5.0
BRG MLR MLR
comp=Z,442nm,19.6s,MS4.8
BRG smax
comp=N,4.0nm,0.9s
MBDF Montbardon 81.97 322 *e*P **P** 08 00 00.4 +0.3
comp=N,156nm,1.4s,mb5.4
MBDF Montbardon 81.97 322 *e*P **P** 08 00 00.4 +0.3
comp=N,78nm,1.4s,mb5.5
MBDF Montbardon 81.97 322 *e*P **P** 08 00 00.4 +0.3
MBDF pmax pmax
comp=Z,78nm,1.4s,mb5.5
GKP Gorka Klasztor 82.07 333 *e*P **P** 08 00 03.6 +3.2
GKP *e*S S 08 10 17.4 +3.2
GKP LMZ 08 32 28.5
comp=Z,1μm,24.4s
GKP Gorka Klasztor 82.07 333 *e*P **P** 08 00 03.6 +3.2
GKP *e*S S 08 10 17.4 +3.2
NKC Novy Kostel 82.25 329 *e*P **P** 08 00 01.6 +0.2
NKC *e* 08 00 12.1
NKC *e*S S 08 10 17.5 +1.4
NKC MLR MLR
comp=Z,1μm,21.0s,MS5.2
NKC Novy Kostel 82.25 329 *e*P **P** 08 00 01.6 +0.2
NKC *ex* x 08 00 12.1
NKC *e*S S 08 10 17.5 +1.4
NKC AMS AMS 08 36 20.0
comp=Z,1μm,21.0s
SMRF Simiane la Rot 82.26 321 *e*P **P** 08 00 02.3 +0.7
comp=Z,234nm,1.7s,mb5.5
SMRF Simiane la Rot 82.26 321 *e*P **P** 08 00 02.3 +0.7
comp=Z,234nm,1.7s,mb5.8
CN2 Changchun 82.27 39 *e*P **P** 08 00 03.0 +1.3
CN2 *es*P sP 08 00 10.0 +1.2
CN2 *e*S S 08 10 15.4 -1.2
CN2 SS SS 08 15 41.4 +4.0
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,2μm,19.0s,MS5.5
CN2 LR LR
comp=E,1μm,19.0s,MS5.5
CN2 LR LR
comp=Z,2μm,22.0s,MS5.4
HIA Hailar 82.31 32 *e*P **P** 08 00 01.0 -0.8
comp=Z,11nm,0.8s,mb4.8
HIA LR LR
comp=Z,2μm,21.0s,MS5.5
HIA Hailar 82.31 32 *e*P **P** 08 00 01.0 -0.7
HIA pmax pmax
comp=Z,11nm,0.8s
HIA MLR MLR
comp=Z,2μm,21.0s
WERN Wernitzgruen 82.32 329 *e*P **P** 08 00 01.5 -0.3
comp=Z,84nm,1.8s,mb5.4
EIBI Ibiza 82.34 315 P **P** 08 00 01.5 -0.6
comp=Z,248nm,2.0s,mb5.8
GUNZ Gunzen 82.39 329 *e*P **P** 08 00 01.8 -0.3
comp=Z,96nm,1.7s,mb5.5
LPG La Plagne 82.42 323 *e*P **P** 08 00 01.7 -0.7
comp=Z,25nm,0.8s,mb4.9
LPG La Plagne 82.42 323 *e*P **P** 08 00 01.7 -0.7
comp=Z,12nm,0.8s,mb4.9
LPG La Plagne 82.42 323 *e*P **P** 08 00 01.7 -0.7
LPG pmax pmax
comp=Z,12nm,0.8s,mb4.9
LPL La Plagne 82.45 323 *e*P **P** 08 00 01.8 -0.8
comp=Z,29nm,0.8s,mb5.0
LPL La Plagne 82.45 323 *e*P **P** 08 00 01.8 -0.8
comp=Z,15nm,0.8s,mb5.0
LPL La Plagne 82.45 323 *e*P **P** 08 00 01.8 -0.8
LPL pmax pmax
comp=Z,15nm,0.8s,mb5.0
WERD Werda 82.45 329 *e*P **P** 08 00 02.1 -0.4
comp=Z,54nm,1.6s,mb5.2
GRA1 Grafenberg Arr 82.52 328 *e*P **P** 08 00 01.7 -1.1
comp=Z,94nm,1.1s,mb5.7
GRA1 LR LR
comp=Z,1μm,20.5s,MS5.2
GRF Grafenberg Arr 82.52 328 *e*P **P** 08 00 01.7 -1.1
comp=Z,94nm,1.1s,mb5.7
GRF *e*L 08 38 20.2
comp=Z,1μm,20.5s
GRF Grafenberg Arr 82.52 328 *e*P **P** 08 00 01.7 -1.1
GRF pmax pmax
comp=Z,94nm,1.1s,mb5.7
GRF MLR MLR
comp=Z,1μm,20.5s,MS5.2
ORIF Oris-en-Rattie 82.61 322 *e*P **P** 08 00 03.5 +0.1
comp=Z,237nm,1.5s,mb5.7
ORIF *e*MLR MLR
comp=Z,2μm,19.8s,MS5.1
ORIF Oris-en-Rattie 82.61 322 *e*P **P** 08 00 03.5 +0.1
comp=Z,118nm,1.5s,mb5.7
ORIF Oris-en-Rattie 82.61 322 *e*P **P** 08 00 03.5 +0.1
ORIF pmax pmax
comp=Z,119nm,1.5s,mb5.7
CLL Collm 82.67 330 *e*P **P** 08 00 03.2 -0.4
comp=Z,63nm,1.5s,mb5.4
CLL Collm 82.67 330 *e*P **P** 08 00 04.0 +0.4
comp=Z,46nm,1.7s,mb5.2
CLL *e*S S 08 10 21.0 +0.6
CLL LR LR
comp=Z,1μm,20.5s,MS5.2
CLL Collm 82.67 330 *e*P **P** 08 00 04.0 +0.4
CLL *e*S S 08 10 21.0 +0.6
CLL pmax pmax
comp=Z,46nm,1.7s,mb5.2
CLL MLR MLR
comp=Z,1μm,20.5s,MS5.2
CLL Collm 82.67 330 *e*P **P** 08 00 04.0 +0.4
comp=Z,46nm,1.7s,mb5.2
CLL *i* 08 00 14.1
CLL *i* 08 00 20.0
comp=Z,63nm,1.5s
CLL *e* 08 00 26.0
CLL *e*S S 08 10 21.0 +0.6
comp=N,1μm,16.1s
CLL *e*S S 08 10 21.0 +0.6
comp=E,2μm,16.6s
CLL *e*SS SS 08 15 47.0 +3.9
CLL *e*SSS 08 19 06.0
CLL L 08 38 00.0
comp=Z,1μm,20.5s
OCF Saint Nazaire 82.76 321 *e*P **P** 08 00 01.9 -2.3
OG26 St.-Nazaire-De 82.76 321 *e*P **P** 08 00 01.9 -2.3
SPAK Spaichingen-Ko 82.81 326 *e*P **P** 08 00 04.6 +0.2
MOX Moxa 82.92 329 *e*P **P** 08 00 05.5 +0.6
comp=Z,69nm,2.0s,mb5.3
MOX *e*S S 08 10 21.0 -2.0
MOX
comp=Z,1μm,20.0s
MOX Moxa 82.92 329 *e*P **P** 08 00 04.4 -0.5
comp=Z,35nm,1.3s,mb5.2
MOX Moxa 82.92 329 *e*P **P** 08 00 05.5 +0.6
MOX *e*S S 08 10 21.0 -2.0
MOX pmax pmax
comp=Z,69nm,2.0s,mb5.3
MOX MLR MLR
comp=Z,1μm,20.0s,MS5.2
STU Stuttgart 83.00 326 *e*P **P** 08 00 04.4 -0.9
comp=Z,71nm,1.6s,mb5.5
STU Stuttgart 83.00 326 *e*P **P** 08 00 07.7 +2.4
CFON Fontmartina 83.02 318 P **P** 08 00 05.2 -0.4
comp=Z,126nm,2.1s,mb5.6
RUE Ruedersdorf 83.08 331 *e*P **P** 08 00 05.2 -0.5
comp=Z,40nm,0.8s,mb5.5
FELD Feldberg im Sc 83.10 325 *e*P **P** 08 00 05.3 -0.6
BBS Basel-Blauen 83.13 325 *e*P **P** 08 00 05.9 -0.2
BFO Black Forest 83.19 326 P **P** 08 00 06.2 -0.2
comp=Z,108nm,1.4s,mb5.7,SNR=5.4
BFO Black Forest 83.19 326 *e*P **P** 08 00 05.6 -0.8
comp=Z,177nm,2.2s,mb5.7
BFO Black Forest 83.19 326 *e*P **P** 08 00 05.6 -0.8
BFO pmax pmax
comp=Z,177nm,2.2s,mb5.7
CART Cartagena 83.24 313 *e*P **P** 08 00 07.4 +0.5
comp=Z,59nm,0.9s,mb5.6
VIVF Saint-Julien-l 83.28 321 *e*P **P** 08 00 06.8 -0.1
comp=Z,64nm,1.3s,mb5.2
VIVF Saint-Julien-l 83.28 321 *e*P **P** 08 00 06.8 -0.1
comp=Z,32nm,1.3s,mb5.2
VIVF Saint-Julien-l 83.28 321 *e*P **P** 08 00 06.8 -0.1
VIVF pmax pmax
comp=Z,32nm,1.3s,mb5.2
LASF Ste Croix 83.35 320 *e*P **P** 08 00 07.2 -0.1
comp=Z,145nm,1.5s,mb5.5
CABF La Chapelle 83.44 323 *e*P **P** 08 00 07.6 -0.1
comp=Z,127nm,1.3s,mb5.5
CABF La Chapelle 83.44 323 *e*P **P** 08 00 07.6 -0.1
comp=Z,64nm,1.3s,mb5.5
CABF La Chapelle 83.44 323 *e*P **P** 08 00 07.6 -0.1
CABF pmax pmax
comp=Z,63nm,1.3s,mb5.5
LOMF Lomont 83.44 324 *e*P **P** 08 00 07.6 -0.1
EMUR La Murta 83.53 313 P **P** 08 00 07.8 -0.6
comp=Z,153nm,2.8s,mb5.6
MOF Molkenrain 83.56 325 *e*P **P** 08 00 07.6 -0.7
SSB Saint Sauveur 83.59 322 *e*P **P** 08 00 07.7 -0.8
SSB Saint Sauveur 83.59 322 *e*P **P** 08 00 08.4 -0.1
comp=Z,35nm,1.2s,mb5.4
SSB LR LR
comp=Z,1μm,19.0s,MS5.2
SSB Saint Sauveur 83.59 322 *e*P **P** 08 00 08.4 -0.1
SSB pmax pmax
comp=Z,35nm,1.2s,mb5.4
SSB MLR MLR
comp=Z,1μm,19.0s,MS5.2
VALF Valcebollere 83.61 318 *e*P **P** 08 00 07.5 -1.2
EMIR Miracle 83.68 318 P **P** 08 00 09.0 0.0
comp=Z,51nm,1.3s,mb5.5
CLLI Llivia 83.68 318 P **P** 08 00 09.4 +0.4

EPOB Poblet 83.68 317 P **P** **08 00 08.2 -0.8**
comp=Z,335nm,3.0s
HINF Hinteralfeld 83.70 325 *e*P **P** **08 00 08.2 -0.8**
comp=Z,63nm,1.0s,mb5.4
HINF Hinteralfeld 83.70 325 *e*P **P** **08 00 08.2 -0.8**
comp=Z,31nm,1.0s,mb5.4
HINF Hinteralfeld 83.70 325 *e*P **P** **08 00 08.2 -0.8**
HINF pmax pmax
comp=Z,31nm,1.0s,mb5.4
ECH Echery 83.76 325 *e*P **P** **08 00 08.3 -1.0**
ECH Echery 83.76 325 *e*P **P** **08 00 08.1 -1.2**
comp=Z,27nm,1.2s,mb5.3
ECH LR LR
comp=Z,784nm,19.0s,MS5.1
ECH Echery 83.76 325 *e*P **P** **08 00 08.1 -1.2**
ECH pmax pmax
comp=Z,27nm,1.2s,mb5.2
ECH MLR MLR
comp=Z,784nm,19.0s,MS5.1
CDF Champ du Feu 83.81 325 *e*P **P** **08 00 09.0 -0.5**
comp=Z,103nm,1.3s,mb5.5
CDF Champ du Feu 83.81 325 *e*P **P** **08 00 09.0 -0.5**
comp=Z,52nm,1.3s,mb5.5
CDF Champ du Feu 83.81 325 *e*P **P** **08 00 09.0 -0.5**
CDF pmax pmax
comp=Z,52nm,1.3s,mb5.5
ERTA Horta de San J 83.97 316 P **P** **08 00 10.4 -0.2**
comp=Z,248nm,1.7s,mb6.1
MTLF Montolieu 83.97 319 *e*P **P** **08 00 10.4 -0.1**
comp=Z,70nm,1.1s,mb5.4
MTLF Montolieu 83.97 319 *e*P **P** **08 00 10.4 -0.1**
comp=Z,35nm,1.1s,mb5.4
MTLF Montolieu 83.97 319 *e*P **P** **08 00 10.4 -0.1**
MTLF pmax pmax
comp=Z,35nm,1.1s,mb5.4
HAU Haudompre 84.08 325 *e*P **P** **08 00 10.3 -0.7**
comp=Z,265nm,1.7s,mb5.8
HAU *e*MLR MLR
comp=Z,1μm,22.0s,MS4.9
HAU Haudompre 84.08 325 *e*P **P** **08 00 10.3 -0.7**
comp=Z,133nm,1.7s,mb5.8
HAU LR LR
comp=Z,1μm,22.0s,MS5.2
HAU Haudompre 84.08 325 *e*P **P** **08 00 10.3 -0.7**
HAU pmax pmax
comp=Z,133nm,1.7s,mb5.8
HAU MLR MLR
comp=Z,1μm,22.0s,MS5.2
ETOB Tobarra 84.12 314 P **P** **08 00 10.2 -1.2**
comp=Z,163nm,2.0s,mb5.8
CSOR Sort 84.16 318 P **P** **08 00 11.1 -0.4**
comp=Z,210nm,2.1s,mb5.9
ECHE Chera 84.18 315 P **P** **08 00 11.2 -0.5**
comp=Z,55nm,1.2s,mb5.6
ECHE Chera 84.18 315 P **P** **08 00 11.2 -0.4**
ECHE pmax pmax
comp=Z,55nm,1.2s,mb5.6
EMOS Mosqueruela 84.22 315 P **P** **08 00 12.2 +0.4**
comp=Z,88nm,2.3s,mb5.5
EBER Berja 84.25 312 P **P** **08 00 11.7 -0.4**
comp=Z,335nm,2.5s,mb6.0
TNS Taunus Mts 84.26 327 *e*P **P** **08 00 11.3 -0.5**
comp=Z,141nm,1.9s,mb5.8
TNS Taunus Mts 84.26 327 *e*P **P** **08 00 11.3 -0.5**
TNS pmax pmax
comp=Z,141nm,1.9s,mb5.8
CLZ Clausthal 84.28 329 *e*P **P** **08 00 11.5 -0.3**
comp=Z,132nm,1.9s,mb5.7
CLZ Clausthal 84.28 329 *e*P **P** **08 00 11.5 -0.3**
CLZ pmax pmax
comp=Z,132nm,1.9s,mb5.7
BSD Bornholm Skovb 84.33 334 *i* P **P** **08 00 12.4 +0.4**
BSD *i* S S 08 10 36.6 -0.4
BSD pmax pmax
comp=Z,25nm,0.9s,mb5.3
BSD MLR MLR
comp=Z,710nm,27.0s,MS4.9
BSD Bornholm Skovb 84.33 334 *i* P **P** **08 00 12.4 +0.4**
comp=Z,25nm,0.9s,mb5.3
BSD Bornholm Skovb 84.33 334 *i* S S 08 10 36.6 -0.4
BSD
comp=Z,710nm,27.0s
GUMO Guam 84.34 74 PFAKE 08 00 20.0 +7.0
GUMO LR LR
comp=Z,903nm,20.0s,MS5.2
THEF They Montfort 84.41 325 *e*P **P** **08 00 11.1 -1.5**
EHUE Huescar 84.47 312 P **P** **08 00 12.2 -0.9**
comp=Z,29nm,1.0s,mb5.4
EHUE Huescar 84.47 312 P **P** **08 00 12.2 -0.9**
EHUE pmax pmax
comp=Z,29nm,1.0s,mb5.4
MLS Moulis 84.48 318 *e*P **P** **08 00 12.0 -1.1**
PLDF La Plantade 84.51 322 *e*P **P** **08 00 12.7 -0.5**
RGN Rugen 84.64 332 *e*P **P** **08 00 13.5 -0.1**
comp=Z,212nm,1.4s,mb6.1
RUP Ruppelstein 84.68 326 *e*P **P** **08 00 13.5 -0.4**
EGUA Guajares 84.71 311 P **P** **08 00 13.4 -1.0**
comp=Z,94nm,0.9s,mb5.9
EGUA Guajares 84.71 311 P **P** **08 00 13.4 -1.0**
EGUA pmax pmax
comp=Z,94nm,0.9s,mb5.9
SMF Signal de Mont 84.75 323 *e*P **P** **08 00 13.6 -0.7**
comp=Z,118nm,1.6s,mb5.5
SMF Signal de Mont 84.75 323 *e*P **P** **08 00 13.6 -0.7**
comp=Z,59nm,1.6s,mb5.5
SMF Signal de Mont 84.75 323 *e*P **P** **08 00 13.6 -0.7**
SMF pmax pmax
comp=Z,59nm,1.6s,mb5.5
EVIA Vianos 84.78 313 P **P** **08 00 12.9 -1.9**
comp=Z,20nm,0.6s,mb5.4
EVIA Vianos 84.78 313 P **P** **08 00 12.9 -1.8**
EVIA pmax pmax
comp=Z,20nm,0.6s,mb5.4
EQES Quesada 84.80 312 P **P** **08 00 12.5 -2.3**
comp=Z,84nm,1.7s,mb5.6
NRDL Niedersach Rie 84.81 330 *e*P **P** **08 00 13.3 -1.2**
comp=Z,44nm,1.7s,mb5.3
JOF Joensuu 84.83 345 *e*P **P** **08 00 12.9 -1.5**
JOF pmax pmax
comp=Z,16nm,0.7s,mb5.3
JOF Joensuu 84.83 345 *e*p **P** **08 00 12.9 -1.5**
comp=Z,16nm,0.7s,mb5.3
AGO Saint Agoulin 84.84 322 *e*P **P** **08 00 13.4 -1.4**
ESAC San Caprasio 84.88 317 P **P** **08 00 14.4 -0.7**
comp=Z,74nm,1.3s,mb5.7
CAF Calviac 84.89 320 *e*P **P** **08 00 15.1 0.0**
comp=Z,70nm,1.3s,mb5.3
CAF Calviac 84.89 320 *e*P **P** **08 00 15.1 0.0**
comp=Z,35nm,1.3s,mb5.3
CAF Calviac 84.89 320 *e*P **P** **08 00 15.1 0.0**
CAF pmax pmax
comp=Z,35nm,1.3s,mb5.3
SFTF Sexfontaines 84.92 324 *e*P **P** **08 00 15.1 -0.1**
comp=Z,143nm,1.2s,mb5.7
SFTF Sexfontaines 84.92 324 *e*P **P** **08 00 15.1 -0.1**
comp=Z,143nm,1.2s,mb6.0
EBIE Bielsa 84.95 318 P **P** **08 00 15.7 +0.2**
comp=Z,300nm,2.9s,mb5.9
EPF Esparros 85.00 318 *e*P **P** **08 00 16.3 +0.6**
comp=Z,36nm,1.0s,mb5.2
EPF Esparros 85.00 318 *e*P **P** **08 00 16.3 +0.6**
comp=Z,18nm,1.0s,mb5.2
EPF Esparros 85.00 318 *e*P **P** **08 00 16.3 +0.6**
EPF pmax pmax
comp=Z,18nm,1.0s,mb5.2
FINES FINESS Array B 85.02 342 P **P** **08 00 15.1 -0.2**
comp=Z,14nm,1.1s,mb5.0,baz=158,slow=4.5,SNR=12
FINES FINESS Array B 85.02 342 P **P** **08 00 15.1 -0.2**
FINES pmax pmax
comp=Z,14nm,1.1s
LOR Lormes 85.07 323 *e*P **P** **08 00 15.5 -0.5**
comp=Z,77nm,1.4s,mb5.3
LOR *e*MLR MLR
comp=Z,1μm,22.8s,MS5.0
LOR Lormes 85.07 323 *e*P **P** **08 00 15.5 -0.5**
comp=Z,38nm,1.4s,mb5.3
LOR LR LR
comp=Z,1μm,22.8s,MS5.3
LOR Lormes 85.07 323 *e*P **P** **08 00 15.5 -0.5**
LOR pmax pmax
comp=Z,38nm,1.4s,mb5.3
LOR MLR MLR
comp=Z,1μm,22.8s,MS5.3
MEZF Maizieres J'vi 85.08 325 *e*P **P** **08 00 15.8 -0.2**
comp=Z,190nm,1.3s,mb5.8
MEZF Maizieres J'vi 85.08 325 *e*P **P** **08 00 15.8 -0.2**
comp=Z,190nm,1.3s,mb6.1

AVF Avril sur Loir 85.11 322 *e*P **P** **08 00 15.5 -0.7**
VIEF Viey 85.13 318 *e*P **P** **08 00 16.8 +0.4**
WLF Walferdange 85.14 326 P **P** **08 00 16.8 +0.5**
comp=Z,25nm,1.4s,mb5.2
WLF Walferdange 85.14 326 *e*P **P** **08 00 15.5 -0.7**
comp=Z,39nm,1.1s,mb5.5
WLF Walferdange 85.14 326 *e*P **P** **08 00 16.6 +0.4**
comp=Z,52nm,1.2s,mb5.5
WLF LR LR
comp=Z,1μm,21.0s,MS5.2
WLF Walferdange 85.14 326 *e*P **P** **08 00 16.6 +0.4**
WLF pmax pmax
comp=Z,52nm,1.2s,mb5.5
WLF MLR MLR
comp=Z,1μm,21.0s,MS5.2
SSF Saint Saulge 85.17 323 *e*P **P** **08 00 16.0 -0.4**
comp=Z,55nm,1.1s,mb5.3
SSF Saint Saulge 85.17 323 *e*P **P** **08 00 16.0 -0.4**
comp=Z,27nm,1.1s,mb5.3
SSF Saint Saulge 85.17 323 *e*P **P** **08 00 16.0 -0.4**
SSF pmax pmax
comp=Z,27nm,1.1s,mb5.3
MDJ Mudanjiang 85.22 40 P **P** **08 00 19.1 +2.3**
MDJ PP PP 08 03 35.9 +1.1
MDJ S S 08 10 52.1 +5.7
MDJ pmax pmax
comp=Z,14nm,1.5s,mb4.9
MDJ pmax pmax
comp=Z,200nm,5.6s
MDJ LR LR
comp=N,3μm,32.1s,MS5.5
MDJ LR LR
comp=E,2μm,34.4s,MS5.5
MDJ LR LR
comp=Z,1μm,32.1s,MS5.0
MDJ Mudanjiang 85.22 40 PFAKE 08 00 30.0 +13
MDJ LR LR
comp=Z,2μm,19.0s,MS5.4
BGF Bois d'Agland 85.28 322 *e*P **P** **08 00 17.0 0.0**
comp=Z,250nm,1.7s,mb5.8
BGF Bois d'Agland 85.28 322 *e*P **P** **08 00 17.0 0.0**
comp=Z,125nm,1.7s,mb5.8
BGF Bois d'Agland 85.28 322 *e*P **P** **08 00 17.0 0.0**
BGF pmax pmax
comp=Z,125nm,1.7s,mb5.8
RJF Les Rejaudoux 85.42 321 *e*P **P** **08 00 17.7 0.0**
comp=Z,200nm,1.7s,mb5.7
RJF *e*MLR MLR
comp=Z,3μm,21.2s,MS5.4
RJF Les Rejaudoux 85.42 321 *e*P **P** **08 00 17.7 0.0**
comp=Z,100nm,1.7s,mb5.7
RJF LR LR
comp=Z,3μm,21.3s,MS5.7
RJF Les Rejaudoux 85.42 321 *e*P **P** **08 00 17.7 0.0**
RJF pmax pmax
comp=Z,100nm,1.7s,mb5.7
RJF MLR MLR
comp=Z,3μm,21.3s,MS5.7
EMIJ Mijas 85.46 311 P **P** **08 00 16.7 -1.5**
comp=Z,133nm,1.6s,mb5.8
KAF Kangasniemi 85.49 343 *e*P **P** **08 00 16.8 -0.9**
KAF pmax pmax
comp=Z,31nm,0.7s,mb5.5
KAF Kangasniemi 85.49 343 *e*p **P** **08 00 16.8 -0.9**
comp=Z,31nm,0.7s,mb5.5
ETOR Torete 85.49 315 P **P** **08 00 17.5 -0.7**
comp=Z,28nm,2.2s,mb5.0
ETOR Torete 85.49 315 P **P** **08 00 17.5 -0.7**
ETOR pmax pmax
comp=Z,28nm,2.2s,mb5.0
ETSF Etsaut 85.51 318 *e*P **P** **08 00 18.4 +0.1**
comp=Z,135nm,1.4s,mb5.7
ETSF Etsaut 85.51 318 *e*P **P** **08 00 18.4 +0.1**
comp=Z,67nm,1.4s,mb5.7
ETSF Etsaut 85.51 318 *e*P **P** **08 00 18.4 +0.1**
ETSF pmax pmax
comp=Z,67nm,1.4s,mb5.7
TCF Toulx Ste Croi 85.51 322 *e*P **P** **08 00 18.0 -0.2**
comp=Z,90nm,1.7s,mb5.4
TCF Toulx Ste Croi 85.51 322 *e*P **P** **08 00 18.0 -0.2**
comp=Z,45nm,1.7s,mb5.4
TCF Toulx Ste Croi 85.51 322 *e*P **P** **08 00 18.0 -0.2**
TCF pmax pmax
comp=Z,45nm,1.7s,mb5.4
BUG Bochum-Univer 85.58 328 *e*P **P** **08 00 18.2 -0.2**
comp=Z,237nm,2.5s,mb6.0
BSEG Bad Segeberg 85.61 331 *e*P **P** **08 00 18.1 -0.4**
comp=Z,52nm,1.4s,mb5.6
BSEG Bad Segeberg 85.61 331 *e*P **P** **08 00 18.1 -0.4**
BSEG pmax pmax
comp=Z,52nm,1.4s,mb5.6
LFF La Frestale 85.71 320 *e*P **P** **08 00 19.4 +0.2**
comp=Z,258nm,1.6s,mb5.9
LFF La Frestale 85.71 320 *e*P **P** **08 00 19.4 +0.2**
comp=Z,129nm,1.6s,mb5.9
LFF La Frestale 85.71 320 *e*P **P** **08 00 19.4 +0.2**
LFF pmax pmax
comp=Z,129nm,1.6s,mb5.9
MEM Membach 85.75 327 XP sP 08 00 22.7 -3.7
COP Copenhagen 85.77 333 *i* S S 08 10 49.6 -1.7
COP
comp=Z,340nm,17.0s
IBBN Ibbenburen 85.85 329 *e*P **P** **08 00 19.6 -0.1**
comp=Z,312nm,2.5s,mb6.1
EJIF Jimena Fronter 85.92 310 P **P** **08 00 18.1 -2.3**
BCLA Clavier 86.02 326 P **P** **08 00 21.8 +1.2**
comp=Z,21nm,1.5s,mb5.1
EADA Adamuz 86.02 312 P **P** **08 00 20.2 -0.8**
comp=Z,152nm,1.9s,mb5.9
SJPF Ste Jean 86.04 318 *e*P **P** **08 00 21.1 +0.2**
comp=Z,55nm,1.0s,mb5.5
SJPF Ste Jean 86.04 318 *e*P **P** **08 00 21.1 +0.2**
comp=Z,27nm,1.0s,mb5.4
SJPF Ste Jean 86.04 318 *e*P **P** **08 00 21.1 +0.2**
SJPF pmax pmax
comp=Z,27nm,1.0s,mb5.4
GIVF Givet 86.09 326 *e*P **P** **08 00 21.1 +0.1**
comp=Z,332nm,1.8s,mb6.0
GIVF Givet 86.09 326 *e*P **P** **08 00 21.1 +0.1**
comp=Z,166nm,1.8s,mb6.0
GIVF Givet 86.09 326 *e*P **P** **08 00 21.1 +0.1**
GIVF pmax pmax
comp=Z,166nm,1.8s,mb6.0
DOU Dourbes 86.21 326 P **P** **08 00 22.1 +0.6**
ESDC Sonseca Array 86.27 314 P **P** **08 00 21.4 -0.7**
comp=Z,48nm,1.3s,mb5.6
ESDC Sonseca Array 86.27 314 P **P** **08 00 22.0 0.0**
comp=Z,6.2nm,0.8s,mb4.9,baz=116,slow=3.8,SNR=25
ESDC LR LR 08 38 26.7
comp=Z,2μm,21.0s,MS5.6,baz=140,slow=35
ESLA Sonseca Array 86.27 314 *e*P **P** **08 00 21.9 -0.1**
comp=Z,13nm,1.1s,mb5.1
ESLA LR LR
comp=Z,17μm,20.0s,MS6.4
ESPR Espera 86.38 310 P **P** **08 00 22.2 -0.5**
comp=Z,113nm,1.4s,mb5.9
BAIF Baives 86.40 326 *e*P **P** **08 00 22.8 +0.3**
comp=Z,202nm,1.6s,mb5.8
BAIF Baives 86.40 326 *e*P **P** **08 00 22.8 +0.3**
comp=Z,101nm,1.6s,mb5.8
BAIF Baives 86.40 326 *e*P **P** **08 00 22.8 +0.3**
BAIF pmax pmax
comp=Z,101nm,1.6s,mb5.8
SFS San Fernando 86.46 310 PFAKE 08 00 30.0 +6.9
SFS LR LR
comp=Z,11μm,21.0s,MS6.2
PAB San Pablo 86.47 313 *e*P **P** **08 00 23.2 +0.1**
comp=Z,29nm,0.8s,mb5.6
PAB LR LR
comp=Z,2μm,20.0s,MS5.6
PAB San Pablo 86.47 313 *e*P **P** **08 00 23.3 +0.2**
PAB pmax pmax
comp=Z,29nm,0.8s,mb5.6
PAB MLR MLR
comp=Z,2μm,20.0s,MS5.6
SNF Seneffe 86.61 326 P **P** **08 00 23.9 +0.4**
comp=Z,33nm,1.9s,mb5.2
GUD Guadarrama 86.83 314 P **P** **08 00 25.1 +0.2**
comp=Z,41nm,1.1s,mb5.6
GUD Guadarrama 86.83 314 P **P** **08 00 25.1 +0.3**
GUD pmax pmax
comp=Z,41nm,1.1s,mb5.6
MFF Saint Martin d 87.07 321 *e*P **P** **08 00 25.6 -0.3**
comp=Z,121nm,1.4s,mb5.6
MFF Saint Martin d 87.07 321 *e*P **P** **08 00 25.6 -0.3**
comp=Z,61nm,1.4s,mb5.6
MFF Saint Martin d 87.07 321 *e*P **P** **08 00 25.6 -0.3**
MFF pmax pmax
comp=Z,61nm,1.4s,mb5.6
MAJO Matsushiro 87.33 50 *e*P **P** **08 00 28.4 +1.0**
comp=Z,70nm,1.1s,mb5.8
MAJO LR LR
comp=Z,1μm,20.0s,MS5.4
MAJO Matsushiro 87.33 50 *e*P **P** **08 00 28.4 +1.0**
MAJO pmax pmax
comp=Z,70nm,1.1s,mb5.8
MAJO MLR MLR
comp=Z,1μm,20.0s,MS5.4
MAT Matsushiro 87.33 50 P **P** **08 00 26.7 -0.7**
MAT S S 08 11 03.0 -4.3
MJAR Matsushiro Arr 87.34 50 P **P** **08 00 26.9 -0.5**
comp=Z,33nm,0.9s,mb5.6,baz=244,slow=4.7,SNR=38
MJAR LR LR 08 39 16.4
comp=Z,1μm,19.9s,MS5.4,baz=225,slow=36
MJAR Matsushiro Arr 87.34 50 P **P** **08 00 26.9 -0.5**
MJAR pmax pmax
comp=Z,33nm,0.9s
MJAR MLR MLR
comp=Z,1μm,19.9s
EMIN Mina Concepcio 87.34 311 P **P** **08 00 26.7 -0.8**
comp=Z,148nm,1.5s,mb6.0
MUD Monsted U'grnd 87.68 332 *i* P **P** **08 00 33.8 +5.2**
MUD *i* S S 08 11 12.4 +2.7
MUD pmax pmax
comp=Z,22nm,1.1s,mb5.3
MUD MLR MLR
comp=Z,890nm,20.0s,MS5.2
MUD Monsted U'grnd 87.68 332 *i* P **P** **08 00 33.8 +5.2**
comp=Z,22nm,1.1s,mb5.3
MUD Monsted U'grnd 87.68 332 *i* S S 08 11 12.4 +2.7
MUD
comp=Z,880nm,20.0s
PBAR Barrancos 87.78 311 *e*P **P** **08 00 31.4 +1.9**
comp=Z,58nm,1.7s,mb5.5
PBAR *e*S S 08 11 14.8 +3.3
PBAR *e*LQ 08 23 50.5
PBAR *e*LR LR 08 29 19.8
comp=Z,3μm,18.0s
MENF Mencas 87.78 325 *e*P **P** **08 00 29.1 -0.1**
PVAQ Vaqueiros 87.95 310 *e*S S 08 11 16.9 +3.7
PVAQ *e*LQ 08 23 55.3
PVAQ *e*LR LR 08 29 34.4
comp=Z,3μm,19.9s
EBAD Badajoz 88.00 312 P **P** **08 00 29.9 -0.7**
comp=Z,202nm,2.9s,mb5.8
PBDV Barranco-do-Ve 88.04 310 *e*S S 08 11 20.7 +6.6
PBDV *e*LQ 08 23 59.5
PBDV *e*LR LR 08 29 28.1
comp=Z,2μm,19.9s
LDF La Druitiere 88.05 323 *e*P **P** **08 00 30.1 -0.4**
PCVE Castro Verde 88.28 310 *e*P **P** **08 00 34.0 +2.1**
comp=Z,62nm,1.8s,mb5.5
PCVE *e*S S 08 11 19.7 +3.4
PCVE *e*LQ 08 24 03.1
PCVE *e*LR LR 08 29 39.8
comp=Z,3μm,18.1s
FLN La Foliniere 88.34 323 *e*P **P** **08 00 31.6 -0.3**
comp=Z,172nm,1.6s,mb5.7
FLN *e*MLR MLR
comp=Z,2μm,22.0s,MS5.3
FLN La Foliniere 88.34 323 *e*P **P** **08 00 31.6 -0.3**
comp=Z,86nm,1.6s,mb5.7
FLN LR LR
comp=Z,2μm,22.0s,MS5.6
FLN La Foliniere 88.34 323 *e*P **P** **08 00 31.6 -0.3**
FLN pmax pmax
comp=Z,86nm,1.6s,mb5.7
FLN MLR MLR
comp=Z,2μm,22.0s,MS5.6
APA Apatity 88.36 348 ⇑ *i*P **P** **08 00 32.0 +0.5**
APA *i* 08 04 02.0
APA *i* S S 08 11 18.0 +2.2
APA pmax pmax
comp=Z,200nm,3.7s
APA pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
GRR Gorron 88.38 322 *e*P **P** **08 00 31.9 -0.2**
comp=Z,136nm,1.7s,mb5.6
GRR Gorron 88.38 322 *e*P **P** **08 00 31.9 -0.2**
comp=Z,68nm,1.7s,mb5.6
GRR Gorron 88.38 322 *e*P **P** **08 00 31.9 -0.2**
GRR pmax pmax
comp=Z,68nm,1.7s,mb5.6
LVZ Lovozero 88.41 349 ⇑ *i*P **P** **08 00 32.0 +0.2**
LVZ pmax pmax
comp=Z,25nm,1.2s,mb5.3
PESTR Estremoz 88.46 312 *e*P **P** **08 00 32.9 +0.2**
comp=Z,90nm,1.5s,mb5.8
PESTR *e*S S 08 11 21.4 +3.4
PESTR *e*LQ 08 24 05.5
PESTR *e*LR LR 08 30 16.4
comp=Z,3μm,16.0s
MESJ Messejana 88.49 311 *e*P **P** **08 00 31.6 -1.3**
MESJ *e*S SKSac 08 11 00.6 -0.9
MESJ *e*S SKSac 08 11 00.8 -0.7
MESJ Messejana 88.49 311 *e*P **P** **08 00 31.6 -1.3**
MESJ *e*S SKSac 08 11 00.6 -0.9
MESJ Messejana 88.49 311 *e*P **P** **08 00 31.5 -1.4**
MESJ *e*S SKSac 08 11 00.6 -0.9
PMRV Marv??o 88.55 312 *e*P **P** **08 00 34.9 +1.8**
comp=Z,74nm,1.6s,mb5.8
PMRV *e*S S 08 11 20.7 +1.9
PMRV *e*LQ 08 24 11.4
PMRV *e*LR LR 08 31 00.6
comp=Z,5μm,18.9s
MORF Marmelete 88.59 310 *e*S S 08 11 25.1 +5.8
MORF *e*LR LR 08 30 17.8
comp=Z,3μm,20.3s
MORF Marmelete 88.59 310 *e*P **P** **08 00 32.1 -1.3**
MORF *e*S SKSac 08 11 02.2 +0.1
EVO Evora 88.62 311 *e*P **P** **08 00 34.1 +0.6**
comp=Z,134nm,1.4s,mb5.8
EVO *e*MLR MLR
comp=Z,5μm,20.8s,MS5.6
EVO Evora 88.62 311 *e*P **P** **08 00 34.6 +1.1**
comp=Z,88nm,1.5s,mb5.9
PFVI Vila Bisbo 88.65 310 *e*S S 08 11 22.4 +2.5
PFVI *e*LR LR 08 30 03.4
comp=Z,3μm,20.4s
EVOP Sao Brissos 88.70 311 *e*P **P** **08 00 34.6 +0.7**
EVOP *e*S SKSac 08 11 04.1 +1.4
EVOP *e*S SKSac 08 11 04.5 +1.7
EVOP AMS AMS 08 40 28.2
comp=Z,3μm,22.7s,MS5.7
EVOP Sao Brissos 88.70 311 *e*P **P** **08 00 34.5 +0.6**
EVOP *e*S SKSac 08 11 04.1 +1.4
KLR Kul'dur 88.81 37 *e*P **P** **08 00 30.0 -4.1**
KLR *e*S SKSac 08 11 04.5 +1.7
KLR pmax pmax
comp=Z,1μm,2.0s,mb6.8
KLR MLR MLR
comp=E,2μm,17.0s
KLR MLR MLR
comp=Z,2μm,17.0s,MS5.6
MVO Moncorvo 89.02 314 *e*P **P** **08 00 35.6 +0.3**
comp=Z,68nm,1.4s,mb5.8
MVO *e*S S 08 11 25.4 +2.2
MVO *e*LQ 08 24 10.6
MVO *e*LR LR 08 31 16.2
comp=Z,2μm,19.4s
MTE Manteigas 89.06 313 *e*P **P** **08 00 35.9 +0.4**
comp=Z,66nm,1.7s,mb5.7
MTE *e*S S 08 11 24.7 +1.1
MTE *e*LQ 08 24 14.7
MTE *e*LR LR 08 31 16.2
comp=Z,2μm,18.0s
MTE Manteigas 89.06 313 PFAKE 08 00 50.0 +15
MTE LR LR
comp=Z,3μm,19.0s,MS5.7
PMSA Palmer Station 89.10 199 PFAKE 08 00 50.0 +15
PMSA LR LR
comp=Z,4μm,20.0s,MS5.9
ECAL Calabor 89.15 315 P **P** **08 00 35.5 -0.4**
comp=Z,270nm,2.6s,mb6.1
SGMF Saint Gilles 89.31 322 *e*P **P** **08 00 35.6 -0.8**
CLNS Chul'man 89.34 28 *e*P **P** **08 00 36.3 -0.1**
CLNS pmax pmax
comp=Z,13nm,1.1s,mb5.2
CLNS pmax pmax
comp=N,6.0nm,1.1s
CLNS pmax pmax
comp=E,10.0nm,0.8s

CLNS MLR MLR
comp=E,2µm,18.0s,MS5.7
CLNS MLR MLR
comp=N,939nm,18.0s,MS5.7
CLNS MLR MLR
comp=Z,2µm,17.0s,MS5.7
KONO Kongsberg 89.46 335 eP **P** **08 00 38.0 +1.1**
KONO e 08 11 23.4
KONO eSS SS 08 17 23.3 +0.8
KONO AMS AMS 08 41 22.6
comp=Z,916nm,19.3s,MS5.2
KONO Kongsberg 89.46 335 PFAKE 08 00 50.0 +13
KONO LR LR
comp=Z,1µm,19.0s,MS5.3
QUIF Quistinic 89.51 321 eP **P** **08 00 36.7 -0.7**
comp=Z,207nm,1.7s,mb5.9
QUIF Quistinic 89.51 321 eP **P** **08 00 36.7 -0.7**
comp=Z,104nm,1.7s,mb5.9
QUIF Quistinic 89.51 321 eP **P** **08 00 36.7 -0.7**
QUIF pmax pmax
comp=Z,104nm,1.7s,mb5.9
LIS Lisbon 89.51 311 eP **P** **08 00 36.9 -0.8**
LIS eS SKSac 08 11 07.7 +0.2
LIS eS SKSac 08 11 08.0 +0.4
LIS AMS AMS 08 44 56.9
comp=Z,3µm,18.0s,MS5.8
LIS Lisbon 89.51 311 eP **P** **08 00 36.9 -0.8**
LIS eS SKSac 08 11 07.7 +0.2
LIS A 08 44 56.9
comp=Z,3µm,18.0s
LIS Lisbon 89.51 311 eP **P** **08 00 36.8 -0.9**
LIS eS SKSac 08 11 07.6 +0.1
PMAFR Mafra 89.70 311 eS S 08 11 34.2 +4.5
PMAFR eLQ 08 24 39.5
PMAFR eLR LR 08 31 12.6
comp=Z,3µm,16.7s
NOA NORSAR Array B 89.71 337 P **P** **08 00 37.3 -0.7**
comp=Z,2.4nm,0.9s,mb4.5,baz=122,slow=4.5,SNR=3.2
NOA NORSAR Array B 89.71 337 P **P** **08 00 37.3 -0.7**
NOA pmax pmax
comp=Z,2.0nm,1.0s
ROSF Rostrenen 89.77 322 eP **P** **08 00 37.8 -0.8**
comp=Z,138nm,1.5s,mb5.8
ROSF Rostrenen 89.77 322 eP **P** **08 00 37.8 -0.8**
comp=Z,69nm,1.5s,mb5.8
ROSF Rostrenen 89.77 322 eP **P** **08 00 37.8 -0.8**
ROSF pmax pmax
comp=Z,69nm,1.5s,mb5.8
HABR Khabarovsk 90.38 39 eP **P** **08 00 40.5 -1.0**
HABR e*PP pP 08 00 49.8 +3.1
HABR e 08 04 12.2
HABR PPP 08 06 09.4
HABR S SKSac 08 11 06.5 -5.6
HABR e 08 11 33.8
HABR ePS PS 08 12 40.8 -3.5
HABR SS SS 08 17 30.1 -6.2
HABR eSSS 08 21 07.1
HABR pmax pmax
comp=E,72nm,1.6s
HABR pmax pmax
comp=Z,73nm,1.6s,mb5.8
HABR pmax pmax
comp=N,43nm,2.0s
HABR MLR MLR
comp=Z,2µm,20.0s,MS5.5
HNR Honiara 91.41 100 PFAKE 08 01 00.0 +13
HNR LR LR
comp=Z,3µm,19.0s,MS5.8
KEV Kevo 91.47 348 eP **P** **08 00 45.8 -0.3**
comp=Z,31nm,1.5s,mb5.4
KEV LR LR
comp=Z,957nm,21.0s,MS5.2
KEV Kevo 91.47 348 eP **P** **08 00 45.8 -0.3**
KEV pmax pmax
comp=Z,31nm,1.5s,mb5.4
KEV MLR MLR
comp=Z,957nm,21.0s,MS5.2
KEV Kevo 91.47 348 ep **P** **08 00 45.3 -0.8**
comp=Z,4.6nm,0.7s,mb4.9
ARCES ARCESS Array B 91.61 347 P **P** **08 00 46.7 -0.1**
comp=Z,7.9nm,0.8s,mb5.1,baz=148,slow=3.9,SNR=29
ARCES PP PP 08 04 31.8 +6.5
comp=Z,5.0nm,1.1s,baz=134,slow=6.4,SNR=4.5
ARCES LR LR 08 39 34.0
comp=Z,1µm,21.2s,MS5.3,baz=324,slow=34
ARCES ARCESS Array B 91.61 347 P **P** **08 00 46.7 0.0**
ARCES 08 04 31.8
ARCES pmax pmax
comp=Z,8.0nm,0.8s
ARCES pmax pmax
comp=Z,5.0nm,1.1s
BER Bergen 91.63 334 eP **P** **08 00 49.4 +2.4**
BER e 08 11 47.4
BER eSS SS 08 17 54.9 +1.1
BER AMS AMS 08 46 39.2
comp=Z,825nm,25.0s,MS5.1
KTK1 Kautokeino 91.71 346 eP **P** **08 00 51.8 +4.6**
KTK1 e 08 11 17.8
KTK1 eSS SS 08 17 51.0 -3.6
SNZO South Karori 92.10 135 PFAKE 08 01 00.0 +10
SNZO LR LR
comp=Z,2µm,20.0s,MS5.5
FOO Floro 92.43 335 e S 08 11 50.0 -3.4
FOO eSS SS 08 18 02.1 -3.1
FOO AMS AMS 08 47 11.1
comp=Z,1µm,25.7s,MS5.2
ESK Eskdalemuir 92.95 328 PFAKE 08 01 00.0 +6.8
ESK LR LR
comp=Z,1µm,19.0s,MS5.3
ERM Erimo 93.00 47 PFAKE 08 01 00.0 +6.2
ERM LR LR
comp=Z,1µm,20.0s,MS5.3
DZM Mont Dzumac 93.16 114 ePP PP 08 04 29.2 -9.1
comp=Z,268nm,24.8s
DZM Mont Dzumac 93.16 114 ePS PS 08 13 14.9 -1.0
comp=Z,4µm,28.4s
DZM eSS SS 08 18 16.7 -0.1
comp=Z,4µm,28.1s
DZM eLR LR 08 30 49.3
comp=Z,10µm,21.2s
TRO Tromso 93.19 345 eSKS 08 11 27.1
TRO eSS SS 08 18 14.8 -1.1
TRO AMS AMS 08 43 56.4
comp=Z,933nm,16.7s,MS5.3
YAK Yakutsk 94.22 25 eP **P** **08 00 54.1 -4.8**
YAK e 08 13 16.2
YAK MLR MLR
comp=N,1µm,17.0s,MS5.7
YAK MLR MLR
comp=Z,3µm,20.0s,MS5.8
YAK MLR MLR
comp=E,2µm,20.0s,MS5.7
YSS Yuzh-Sakhalins 94.52 42 PFAKE 08 01 10.0 +9.4
YSS LR LR
comp=Z,301nm,20.0s,MS4.8
YSS Yuzh-Sakhalins 94.52 42 eP **P** **08 01 00.0 -0.6**
YSS e 08 04 54.0
YSS e 08 11 40.0
YSS eS S 08 12 03.0 -10
YSS eSS SS 08 18 33.0 -2.8
YSS MLR MLR
comp=N,1µm,18.0s
YSS MLR MLR
comp=Z,700nm,18.0s,MS5.2
TIXI Tiksi 98.86 17 PFAKE 08 01 30.0 +10
TIXI LR LR
comp=Z,4µm,20.0s,MS5.9
TIXI Tiksi 98.86 17 eP **P** **08 01 20.9 +1.2**
TIXI e 08 05 22.5
TIXI eS SKSac 08 11 55.8 -1.0
TIXI ePS PS 08 14 13.7 -3.1
TIXI pmax pmax
comp=Z,21nm,1.3s,mb5.5
TIXI MLR MLR
comp=Z,4µm,19.0s,MS5.9
RCBR Riachuelo 98.94 261 PFAKE 08 01 30.0 +8.5
RCBR LR LR
comp=Z,5µm,21.0s,MS6.0
KBS Kingsbay 100.91 351 eSS SS 08 20 07.2 +2.9
KBS Kingsbay 100.91 351 PFAKE 08 01 40.0 +11
KBS LR LR
comp=Z,1µm,20.0s,MS5.5
JMIC Jan Mayen 101.62 341 e SP 08 14 44.8 +1.0
SPB Sao Paulo 102.60 240 PFAKE 08 01 50.0 +13
SPB LR LR
comp=Z,2µm,21.0s,MS5.5
BORG Borgarnes 104.59 334 PFAKE 08 02 00.0 +14
BORG LR LR
comp=Z,1µm,21.0s,MS5.3
MSVF Nonsavu 104.89 114 PFAKE 08 02 00.0 +13
MSVF LR LR
comp=Z,5µm,21.0s,MS6.0
TRQA Tornquist 105.65 221 PFAKE 08 06 20.0 +16
TRQA LR LR
comp=Z,3µm,22.0s,MS5.8
PET Petropavlovsk 105.97 39 PFAKE 08 06 20.0 +16
PET LR LR
comp=Z,1µm,21.0s,MS5.5
WAKE Wake Island 105.97 75 PFAKE 08 06 20.0 +15
WAKE LR LR
comp=Z,913nm,21.0s,MS5.3
PLCA Paso Flores 108.81 214 PFAKE 08 06 20.0 +10
PLCA LR LR
comp=Z,3µm,22.0s,MS5.8
AFI Afiamalu 115.36 115 PFAKE 08 06 40.0 +17
AFI LR LR
comp=Z,2µm,21.0s,MS5.7
LCO Las Campanas 117.03 223 PFAKE 08 06 40.0 +14
LCO LR LR
comp=Z,2µm,21.0s,MS5.7
LPAZ La Paz 123.05 236 PKP PKPdf 08 06 38.7 +1.0
LPAZ La Paz 123.05 236 PKP PKPdf 08 06 38.7 +1.0
comp=Z,2.5nm,0.8s,baz=122,slow=1.6,SNR=9.2
LPAZ La Paz 123.05 236 PKIKP PKPdf 08 06 38.7 +1.0
LPAZ pmax pmax
comp=Z,3.0nm,0.8s
COLD Coldfoot 125.59 16 ePKPdf PKPdf 08 06 41.8 +0.8
TTA Tatalina 126.69 22 ePKPdf PKPdf 08 06 45.7 +2.4
BBGH Gun Hill 126.93 273 PFAKE 08 07 00.0 +15
BBGH LR LR
comp=Z,3µm,19.0s,MS6.0
BPAW Bear Paw Mtn. 127.61 19 ePKPdf PKPdf 08 06 45.9 +1.0
JOHN Johnston Islan 127.68 82 PFAKE 08 07 00.0 +14
JOHN LR LR
comp=Z,2µm,20.0s,MS5.7
COLA College 127.98 17 ePKPdf PKPdf 08 06 46.8 +1.1
COLA LR LR
comp=Z,2µm,21.0s,MS5.8
SVW2 Sparrevohn 127.98 24 eP PKPdf 08 06 50.2 +4.4
PPLA Purkeypile 128.05 21 ePKPdf PKPdf 08 06 46.4 +0.5
INK Inuvik 128.15 9 ePKPdf PKPdf 08 06 45.7 -0.2
TRF Thorofare Moun 128.29 20 ePKPdf PKPdf 08 06 48.0 +1.8
ILAR Eielson Array 128.33 17 PKP PKPdf 08 06 44.8 -1.5
comp=Z,3.0nm,1.0s,baz=318,slow=3.2,SNR=19
ILAR PKKP
comp=Z,0.5nm,0.8s,baz=175,slow=3.6,SNR=4.6
ILAR Eielson Array 128.33 17 PKIKP PKPdf 08 06 44.8 -1.5
ILAR pmax pmax
comp=Z,3.0nm,1.0s
ILAR pmax pmax
comp=Z,1.0nm,0.8s
MCK McKinley 128.51 19 ePKPdf PKPdf 08 06 47.7 +1.0
GRGR Grenville 128.70 271 PFAKE 08 07 00.0 +11
GRGR LR LR
comp=Z,1µm,21.0s,MS5.5
FDF Fort de France 128.76 275 PFAKE 08 07 00.0 +11
FDF LR LR
comp=Z,910nm,19.0s,MS5.5
EGAK Eagle 129.80 14 ePKPdf PKPdf 08 06 50.0 +0.9
EGAK LR LR
comp=Z,951nm,21.0s,MS5.5
ANWB Willy Bob 129.87 278 PFAKE 08 07 00.0 +9.4
ANWB LR LR
comp=Z,2µm,22.0s,MS5.7
PMR Palmer 129.99 21 ePKPdf PKPdf 08 06 48.7 -0.8
PAX Paxson 130.12 18 ePKPdf PKPdf 08 06 49.6 -0.1
RC01 Rabbit Creek A 130.13 21 ePKPdf PKPdf 08 06 50.8 +1.0
PPT Papeete 130.76 134 eSS SS 08 26 34.8 -1.3
comp=Z,2µm,27.0s
PPT eLQ 08 42 36.5
comp=Z,5µm,39.5s
PPT eLR LR 08 48 08.5
comp=Z,4µm,29.2s
DAWY Dawson 130.82 14 ePKPdf PKPdf 08 06 51.7 +0.7
SEW Seward 130.92 22 ePKPdf PKPdf 08 06 53.4 +2.1
KDAK Kodiak Island 131.24 26 PFAKE 08 07 00.0 +8.0
KDAK LR LR
comp=Z,2µm,22.0s,MS5.8
NNA Nana 132.40 234 PFAKE 08 07 10.0 +14
NNA LR LR
comp=Z,1µm,19.0s,MS5.7
BBSR BB Station 132.97 298 PFAKE 08 07 10.0 +14
BBSR LR LR
comp=Z,1µm,20.0s,MS5.7
PKME Peaks-Kenny Pk 133.54 316 PFAKE 08 07 10.0 +13
PKME LR LR
comp=Z,2µm,20.0s,MS5.8
SJG San Juan 134.05 278 PFAKE 08 07 10.0 +11
SJG LR LR
comp=Z,2µm,21.0s,MS5.7
RKT Rikitea 134.67 153 eSS SS 08 27 22.1 -0.2
comp=Z,545nm,44.5s
RKT eLQ 08 44 22.2
comp=Z,3µm,37.8s
RKT eLR LR 08 50 02.3
comp=Z,2µm,29.0s
XMAS Kiritimati 135.11 106 PFAKE 08 07 10.0 +9.3
XMAS LR LR
comp=Z,2µm,20.0s,MS5.9
YKA Yellowknife Ar 135.40 0 PKP PKPdf 08 07 00.3 +0.6
comp=Z,2.7nm,0.8s,baz=359,slow=2.7,SNR=8.1
YKA PP PP 08 09 35.3 -0.4
comp=Z,1.8nm,0.9s,baz=356,slow=6.7,SNR=4.3
YKA Yellowknife Ar 135.40 0 PKIKP PKPdf 08 07 00.3 +0.6
YKA 08 09 35.3
YKA pmax pmax
comp=Z,3.0nm,0.8s
YKA pmax pmax
comp=Z,2.0nm,0.9s
LBNH Lisbon 135.67 316 ePKPdf PKPdf 08 07 02.5 +1.7
LBNH LR LR
comp=Z,2µm,21.0s,MS5.9
SDV Santo Domingo 136.42 264 PFAKE 08 07 20.0 +17
SDV LR LR
comp=Z,1µm,19.0s,MS5.6
LONY Lake Ozonia 137.25 317 ePKPdf PKPdf 08 07 03.6 -0.1
LONY LR LR
comp=Z,1µm,20.0s,MS5.7
NCB Newcomb 137.29 316 ePKPdf PKPdf 08 07 04.2 +0.4
NCB LR LR
comp=Z,2µm,20.0s,MS5.8
ROSC El Rosal 138.59 257 PKP PKPdf 08 07 05.9 -1.3
comp=Z,3.1nm,0.5s,baz=54,slow=19,SNR=1.9
SDDR Presa de Saban 138.99 279 PFAKE 08 07 20.0 +12
SDDR LR LR
comp=Z,2µm,19.0s,MS5.9
GRTK Grand Turk 139.03 282 PFAKE 08 07 20.0 +12
GRTK LR LR
comp=Z,2µm,20.0s,MS6.0
BINY Binghamton 139.20 315 ePKPdf PKPdf 08 07 09.9 +2.5
BINY LR LR
comp=Z,3µm,22.0s,MS6.0
WRAK Wrangell Islan 139.22 15 PFAKE 08 07 20.0 +13
WRAK LR LR
comp=Z,1µm,19.0s,MS5.7
POHA Pohakuloa 141.25 80 PFAKE 08 07 20.0 +8.2
POHA LR LR
comp=Z,2µm,21.0s,MS5.8
CBN Corbin 141.75 310 PFAKE 08 07 20.0 +7.9
CBN LR LR
comp=Z,4µm,22.0s,MS6.1
ERPA Erie 141.90 317 PFAKE 08 07 20.0 +7.7
ERPA LR LR
comp=Z,4µm,22.0s,MS6.1
GTBY Guantanamo Bay 142.66 280 PFAKE 08 07 30.0 +16
GTBY LR LR
comp=Z,2µm,20.0s,MS5.8
MCWV Mont Chateau 142.93 313 PFAKE 08 07 30.0 +16
MCWV LR LR
comp=Z,3µm,21.0s,MS6.1
CNNC Cliffs of the 143.15 305 PFAKE 08 07 30.0 +15
CNNC LR LR
comp=Z,2µm,21.0s,MS5.9
TAOE Nuku Hiva Isla 143.37 134 eLR LR 08 53 57.3
comp=Z,3µm,32.8s
AAM Ann Arbor 144.14 319 PFAKE 08 07 30.0 +14
AAM LR LR
comp=Z,3µm,21.0s,MS6.0
BLA Blacksburg 144.36 310 PFAKE 08 07 30.0 +13
BLA LR LR
comp=Z,1µm,19.0s,MS5.8
ULM Lac du Bonnet 144.36 339 PKP PKPdf 08 07 14.3 -2.1
comp=Z,15nm,0.7s,baz=12,slow=2.8,SNR=11
EYMN Ely 144.54 333 ePKPdf PKPdf 08 07 16.3 -0.5
EYMN LR LR
comp=Z,2µm,20.0s,MS6.0
EDM Edmonton 144.68 359 ePKPdf PKPdf 08 07 15.3 -1.5
COWI Conover 144.81 329 ePKPdf PKPdf 08 07 15.4 -1.9
COWI LR LR
comp=Z,2µm,20.0s,MS5.8
MTDJ Mount Denham 144.81 276 ePKPdf PKPdf 08 07 19.4 +1.3
MTDJ LR LR
comp=Z,1µm,21.0s,MS5.7
BCIP Isla Barro Col 145.19 260 ePKPdf PKPdf 08 07 18.8 -0.1
BCIP LR LR
comp=Z,3µm,20.0s,MS6.0
NHSC New Hope 145.61 303 PFAKE 08 07 30.0 +11
NHSC LR LR
comp=Z,2µm,20.0s,MS5.8
AGMN Agassiz Nation 146.01 337 ePKPdf PKPdf 08 07 21.2 +1.9
AGMN LR LR
comp=Z,2µm,21.0s,MS5.9
JSC Jenkinsville 146.08 305 ePKPdf PKPdf 08 07 20.5 +0.6
TKL Tuckaleechee C 147.46 309 ePKPbc PKPbc 08 07 24.1 -0.6
JFWS Jewell Farm 147.59 326 ePKPbc PKPbc 08 07 24.1 -0.7
JFWS LR LR
comp=Z,2µm,21.0s,MS5.9
BLO Bloomington 147.67 317 ePKPbc PKPbc 08 07 24.2 -0.9
DWPF Disney 147.91 295 PFAKE 08 07 30.0 +6.9
DWPF LR LR
comp=Z,3µm,19.0s,MS6.1
WCI Wyandotte Cave 148.03 315 ePKPbc PKPbc 08 07 25.1 -1.0
WCI LR LR
comp=Z,1µm,21.0s,MS5.7
GOGA Godfrey 148.11 305 ePKPbc PKPbc 08 07 25.6 -0.9
GOGA LR LR
comp=Z,2µm,22.0s,MS5.9
DGMT Dagmar 148.30 347 ⇓P PKPbc 08 07 27.3 +0.8
baz=148
DGMT Dagmar 148.30 347 ePKPbc PKPbc 08 07 25.1 -1.4
DGMT LR LR
comp=Z,2µm,20.0s,MS5.8
A05A Maple Falls 148.33 9 ⇓P PKPbc 08 07 27.1 +0.5
baz=148
HDIL Hopedale 148.59 321 ePKPdf PKPbc 08 07 26.0 -1.5
HDIL LR LR
comp=Z,3µm,20.0s,MS6.0
A17A Triple J Farms 148.82 355 ⇑P PKPbc 08 07 28.2 +0.4
baz=149
WALA Waterton Lakes 148.86 359 ePKPbc PKPbc 08 07 28.0 +0.1
A16A West Butte Ran 148.88 356 ⇑P PKPbc 08 07 28.5 +0.6
baz=149
B06A Marblemount 148.89 9 ⇓P PKPbc 08 07 28.6 +0.6
baz=149
A15A Johnson Ranch, 148.91 358 ⇓P PKPbc 08 07 28.8 +0.8
baz=149,SNR=22
A14A Double T Ranch 148.94 359 ⇓P PKPbc 08 07 29.0 +0.9
baz=149,SNR=15
OLIL Olney 148.94 317 ePKPbc PKPbc 08 07 27.9 -0.5
RPW Rockport 148.96 9 ePKPbc PKPbc 08 07 28.3 +0.2
A12A Yaak River Ran 148.98 1 ⇑P PKPbc 08 07 29.1 +0.9
baz=149,SNR=30
A13A Flathead Natio 148.99 360 ⇑P PKPbc 08 07 29.6 +1.3
baz=149
USIN University of 149.08 316 ePKPdf PKPdf 08 07 25.6 +0.9
JCW Jim Creek 149.14 10 P PKPbc 08 07 29.6 +0.9
SWET Sewanee 149.24 310 ePKPbc PKPbc 08 07 28.4 -0.9
B18A Beardsley Farm 149.28 354 ⇓P PKPbc 08 07 30.0 +1.1
baz=149
B08A Colville Reser 149.32 6 ⇑P PKPbc 08 07 30.0 +0.9
baz=149,SNR=9.4
B16A M & M Farms, S 149.42 356 ⇓P PKPbc 08 07 30.1 +0.8
baz=149
B12A Libby 149.44 1 ⇓P PKPbc 08 07 30.5 +1.2
baz=149,SNR=7.6
B17A L&G Farms, Che 149.47 355 ⇓P PKPbc 08 07 30.3 +0.9
baz=149
B14A Marquette Ranc 149.54 358 ⇓P PKPbc 08 07 30.6 +0.9
baz=149,SNR=17
B13A Whitefish 149.55 360 ⇓P PKPbc 08 07 30.8 +1.2
baz=149,SNR=13
NLWA Neilton Lookou 149.56 13 ePKPbc PKPbc 08 07 31.5 +1.8
NLWA LR LR
comp=Z,2µm,19.0s,MS6.0
B15A Bradely Ranch, 149.57 357 ⇓P PKPbc 08 07 30.7 +1.0
baz=149,SNR=27
NEW Newport 149.59 3 ⇑P PKPbc 08 07 31.1 +1.3
baz=150,SNR=19
NEW Newport 149.59 3 ePKIKP PKPdf 08 07 26.0 +0.8
NEW e 08 07 30.8
NEW MLR MLR
comp=Z,2µm,22.0s
EGMT Eagleton 149.64 354 ⇓P PKPbc 08 07 30.6 +0.7
baz=150
EGMT Eagleton 149.64 354 ePKPdf PKPdf 08 07 26.4 +1.1
EGMT LR LR
comp=Z,1µm,22.0s,MS5.7
PAYG Puerto Ayora 149.83 235 PFAKE 08 07 40.0 +13
PAYG LR LR
comp=Z,2µm,20.0s,MS6.0
SCIA State Center 149.86 327 ePKPbc PKPbc 08 07 30.5 -0.2
SCIA LR LR
comp=Z,3µm,22.0s,MS6.1
ETW Entiat 149.94 8 ePKPbc PKPbc 08 07 31.0 +0.4
C09A Chrisman Ranch 149.97 5 ⇑P PKPbc 08 07 31.5 +0.8
baz=150,SNR=8.1
C16A Fuhringer Ranc 150.03 356 ⇑P PKPbc 08 07 31.6 +0.7
baz=150
YBMT Yellow Bay 150.06 359 ePKPbc PKPbc 08 07 32.7 +1.8
ECSD EROS Data Cent 150.06 333 ePKPdf PKPdf 08 07 25.2 -0.8
ECSD ePKPbc PKPbc 08 07 30.7 -0.3
ECSD ePKPab PKPab 08 07 38.1 +1.3
ECSD LR LR
comp=Z,3µm,21.0s,MS6.0
BSMT Bassoo Peak 150.07 0 ePKPbc PKPbc 08 07 31.9 +1.0
C15A Salmond Ranch, 150.10 357 ⇓P PKPbc 08 07 32.1 +1.0
baz=150,SNR=15
D05A Enumclaw 150.10 10 ⇓P PKPbc 08 07 32.1 +1.0
baz=150,SNR=8.6
C17A Wharram Farm, 150.13 355 ⇑P PKPbc 08 07 32.1 +1.0
baz=150,SNR=18
C14A Swan Lake 150.15 359 ⇓P PKPbc 08 07 31.6 +0.5
baz=150
WVT Waverly 150.16 313 ePKPbc PKPbc 08 07 30.4 -1.1
WVT LR LR
comp=Z,1µm,20.0s,MS5.7
JTMT Jette 150.18 360 ePKPbc PKPbc 08 07 33.6 +2.5
C12B Naegeli Ranch, 150.21 1 ⇓P PKPbc 08 07 32.3 +1.1
baz=150,SNR=9.4
SIUC Southern Illin 150.24 317 ePKPbc PKPbc 08 07 31.5 -0.2
C13A Hot Springs 150.24 360 ⇓P PKPbc 08 07 32.3 +0.9
baz=150
JTS JuntasAbangare 150.33 259 PFAKE 08 07 40.0 +13
JTS LR LR
comp=Z,2µm,21.0s,MS6.0
OD2 Odessa Site #2 150.34 6 P PKPbc 08 07 32.5 +0.9
SLM Saint Louis 150.35 319 ePKPbc PKPbc 08 07 31.9 0.0
D20A Manuel Ranch, 150.35 351 ⇑P PKPbc 08 07 32.3 +0.6
baz=150,SNR=16
FMW Mount Fremont 150.41 10 P PKPbc 08 07 32.8 +1.0
SWMT Swartz Lake 150.41 359 ePKPbc PKPbc 08 07 32.3 +0.5
LAO LASA Array 150.42 348 ePKPdf PKPdf 08 07 28.4 +1.8
LAO LR LR
comp=Z,1µm,20.0s,MS5.7
E03A Lebam 150.43 13 ⇑P PKPbc 08 07 32.5 +0.6
baz=150
D18A Linhart Farms, 150.47 353 ⇓P PKPbc 08 07 32.8 +0.9
baz=150,SNR=12
RCM Mount Rainier- 150.49 10 P PKPbc 08 07 34.0 +2.1
LON Longmire 150.56 10 ePKPbc PKPbc 08 07 32.5 +0.4
D17A Six Diamond Ra 150.60 355 ⇑P PKPbc 08 07 33.1 +0.9
baz=150,SNR=20
D08A Wollman Farm, 150.65 6 ⇓P PKPbc 08 07 33.2 +0.8
baz=150,SNR=6.6
SLMT Seeley Lake 150.67 358 ePKPbc PKPbc 08 07 33.2 +0.8
E21A Keefer Ranch, 150.72 349 ⇓P PKPbc 08 07 33.1 +0.6
baz=151,SNR=9.5
D16A Dana Ranch, Ca 150.79 356 ⇓P PKPbc 08 07 33.4 +0.7
baz=151,SNR=16
D13A Huson 150.83 360 ⇑P PKPbc 08 07 33.6 +0.8
baz=151,SNR=8.6
D14A Greenough 150.83 358 ⇑P PKPbc 08 07 33.6 +0.8
baz=151,SNR=23
D15A Lincoln 150.83 357 ⇑P PKPbc 08 07 33.7 +0.9
baz=151,SNR=26
FVM French Village 150.86 318 ePKPbc PKPbc 08 07 32.5 -0.6

D12A	Red Ives Fores	150.86	1	⇑P		PKPbc	08 07 33.7	+0.9	
	baz=151								
TDL	Tradedollar La	150.88	11	P		PKPbc	08 07 34.8	+1.9	
E20A	Meyer Farm, Mu	150.93	351	⇓P		PKPbc	08 07 34.0	+1.0	
	baz=151,SNR=27								
LRAL	Lakeview Retre	150.98	307	*e*PKPbc		PKPbc	08 07 32.3	-1.2	
LRAL				LR		LR			
	comp=Z,1μm,21.0s,MS5.8								
CHMT	Chamberlain Mo	150.99	358	*e*PKPbc		PKPbc	08 07 34.2	+1.1	
E07A	Sunnyside	151.03	8	⇓P		PKPbc	08 07 34.1	+0.9	
	baz=151								
E19A	Rath Farm, Rou	151.06	352	⇑P		PKPbc	08 07 34.2	+0.8	
	baz=151,SNR=32								
MSO	Missoula	151.09	359	⇑P		PKPbc	08 07 34.7	+1.3	
	baz=151,SNR=23								
MSO	Missoula	151.09	359	*e*PKPdf		PKPdf	08 07 28.1	+0.5	
MSO				*e*PKPbc		PKPbc	08 07 34.3	+0.9	
MSO				*e*PKPab		PKPab	08 07 40.9	0.0	
MSO				LR		LR			
	comp=Z,1μm,21.0s,MS5.7								
E18A	Harlowton	151.10	353	⇑P		PKPbc	08 07 34.8	+1.4	
	baz=151,SNR=20								
HRY	Holter Researc	151.12	356	*e*PKPbc		PKPbc	08 07 34.4	+0.9	
HRY				*e*PKPab		PKPab	08 07 41.5	+0.5	
PARMO	Parma	151.19	316	*e*PKPbc		PKPbc	08 07 34.0	0.0	
E08A	Dider Farm, El	151.19	6	⇓P		PKPbc	08 07 34.9	+1.3	
	baz=151,SNR=6.8								
RSW	Rattlesnake Hi	151.23	7	*e*PKPbc		PKPbc	08 07 35.7	+2.0	
HAWA	Hanford	151.24	7	*e*PKPbc		PKPbc	08 07 34.6	+0.9	
HAWA				LR		LR			
	comp=Z,1μm,21.0s,MS5.8								
F04A	Amboy	151.24	11	⇑P		PKPbc	08 07 35.0	+1.2	
	baz=151								
E09A	Wood Farm, Sta	151.26	5	⇓P		PKPbc	08 07 35.1	+1.3	
	baz=151,SNR=9.2								
E16A	East Helena	151.29	356	⇑P		PKPbc	08 07 35.1	+1.3	
	baz=151,SNR=7.6								
E17A	Martinsdale	151.30	355	⇓P		PKPbc	08 07 35.3	+1.4	
	baz=151,SNR=6.8								
CCM	Cathedral Cave	151.33	319	*e*PKPbc		PKPbc	08 07 34.1	-0.1	
CCM				LR		LR			
	comp=Z,2μm,22.0s,MS5.8								
F21A	Absaloka Mine,	151.42	349	⇓P		PKPbc	08 07 34.8	+0.6	
	baz=151								
E15A	Deer Lodge	151.45	357	⇑P		PKPbc	08 07 34.8	+0.6	
	baz=151,SNR=18								
E13A	Victor	151.48	359	⇓P		PKPbc	08 07 34.9	+0.6	
	baz=151,SNR=17								
E14A	Clinton	151.49	358	⇑P		PKPbc	08 07 34.8	+0.5	
	baz=151,SNR=9.9								
F20A	Billings	151.62	351	⇓P		PKPbc	08 07 35.9	+1.3	
	baz=152,SNR=8.5								
F19A	Roth Farm, Mol	151.68	352	⇓P		PKPbc	08 07 36.0	+1.2	
	baz=152,SNR=15								
F18A	Big Timber	151.73	353	⇓P		PKPbc	08 07 35.8	+0.9	
	baz=152,SNR=13								
GNAR	Gosnell	151.75	315	*e*PKPbc		PKPbc	08 07 37.7	+2.4	
BRAL	Brewton	151.81	303	*e*PKPbc		PKPbc	08 07 34.7	-0.9	
BRAL				LR		LR			
	comp=Z,2μm,20.0s,MS5.9								
F17A	Fitzpatrick Pl	151.83	354	⇓P		PKPbc	08 07 36.7	+1.6	
	baz=152,SNR=7.8								
F10A	Beach Ranch, E	151.86	4	⇑P		PKPbc	08 07 36.3	+1.1	
	baz=152,SNR=10								
LNOR	Lincton Mounta	151.88	6	*e*PKPbc		PKPbc	08 07 35.9	+0.7	
G04A	Mulino	151.93	12	⇑P		PKPbc	08 07 36.6	+1.3	
	baz=152								
HOOD	Mount Hood Mea	151.97	11	*e*PKPbc		PKPbc	08 07 37.0	+1.6	
VFP	Flag Point	152.01	10	P		PKPbc	08 07 37.2	+1.7	
G21A	Lodge Grass	152.01	349	⇓P		PKPbc	08 07 36.6	+1.0	
	baz=152,SNR=6.7								
F15A	Butte	152.03	357	⇑P		PKPbc	08 07 36.7	+1.2	
	baz=152								
F16A	Kennard Place,	152.03	356	⇑P		PKPbc	08 07 36.9	+1.3	
	baz=152								
LRM	Limekiln Ridge	152.05	357	*e*PKPbc		PKPbc	08 07 35.9	+0.2	
LRM				*e*PKPab		PKPab	08 07 43.3	-1.6	
F14A	Wisdom	152.09	358	⇓P		PKPbc	08 07 36.8	+1.1	
	baz=152,SNR=7.4								
F13A	Darby	152.13	360	⇓P		PKPbc	08 07 36.8	+1.0	
	baz=152,SNR=19								
F12A	Elk City	152.16	1	⇓P		PKPbc	08 07 36.7	+0.8	
	baz=152								
BOZ	Bozeman (W)	152.17	356	⇑P		PKPbc	08 07 36.7	+0.8	
	baz=152,SNR=20								
BOZ	Bozeman (W)	152.17	356	*e*PKIKP		PKPbc	08 07 36.7	+0.8	
BOZ				*e*			08 07 44.3		
BOZ				MLR		MLR			
	comp=Z,2μm,20.0s,MS5.8								
G06A	Carlson Farm,	152.22	9	⇓P		PKPbc	08 07 37.2	+1.1	
	baz=152								
G18A	Lazy EL Ranch,	152.29	352	⇓P		PKPbc	08 07 37.2	+1.1	
	baz=152								
RSSD	Black Hills	152.34	344	*e*PKPbc		PKPbc	08 07 36.6	+0.2	
RSSD				LR		LR			
	comp=Z,2μm,20.0s,MS6.0								
COR	Corvallis	152.35	14	PFAKE			08 07 40.0	+10	
COR				LR		LR			
	comp=Z,2μm,21.0s,MS5.8								
G08A	Pilot Rock	152.39	7	⇑P		PKPbc	08 07 37.5	+1.1	
	baz=152								
HBAR	Harrisburg	152.41	314	*e*PKPbc		PKPbc	08 07 39.1	+2.4	
G17A	Pierce Place,	152.42	354	⇓P		PKPbc	08 07 37.6	+1.1	
	baz=152,SNR=11								
RLMT	Red Lodge	152.44	352	⇓P		PKPbc	08 07 38.1	+1.6	
	baz=152,SNR=16								
RLMT	Red Lodge	152.44	352	*e*PKPbc		PKPbc	08 07 37.5	+0.9	
RLMT				LR		LR			
	comp=Z,2μm,22.0s,MS5.9								
H04A	Detroit Lake	152.49	12	⇓P		PKPbc	08 07 37.3	+0.7	
	baz=152								
DLMT	Dillon	152.51	357	*e*PKPdf		PKPdf	08 07 30.0	+0.2	
DLMT				*e*PKPbc		PKPbc	08 07 37.9	+1.2	
H21A	Big Horn, Sher	152.56	348	⇓P		PKPbc	08 07 37.6	+0.8	
	baz=152								
G16A	Moss Hill, Enn	152.60	356	⇓P		PKPbc	08 07 38.3	+1.5	
	baz=152,SNR=9.7								
G14A	Jackson	152.66	358	⇑P		PKPbc	08 07 38.3	+1.3	
	baz=152,SNR=7.8								
G15A	Dillon	152.70	357	⇑P		PKPbc	08 07 38.9	+1.8	
	baz=153,SNR=14								
G12A	Big Creek, Yel	152.79	1	⇑P		PKPbc	08 07 38.4	+1.1	
	baz=153								
H20A	Greybull	152.87	350	⇑P		PKPbc	08 07 38.5	+1.0	
	baz=153								
VIPM	Ingram Point	152.94	10	P		PKPbc	08 07 39.3	+1.7	
YNR	Norris Junctio	153.01	354	*e*PKPbc		PKPbc	08 07 39.8	+2.0	
YNR				*e*PKPab		PKPab	08 07 48.6	-0.4	
MCMT	McKenzie Canyo	153.06	357	*e*PKPbc		PKPbc	08 07 40.0	+2.1	
H16A	Russell Place,	153.07	355	⇑P		PKPbc	08 07 38.8	+0.8	
	baz=153								
YMR	Madison River	153.08	354	*e*PKPbc		PKPbc	08 07 39.4	+1.4	
LKWY	Lake	153.13	353	PFAKE			08 07 40.0	+9.3	
LKWY				LR		LR			
	comp=Z,3μm,20.0s,MS6.2								
H15A	Lima	153.26	357	⇓P		PKPbc	08 07 39.7	+1.3	
	baz=153								
YFT	Old Faithful	153.29	354	*e*PKPbc		PKPbc	08 07 40.9	+2.5	
H14A	Leadore	153.29	358	⇓P		PKPbc	08 07 39.4	+0.9	
	baz=153,SNR=7.8								
H17A	Grant Village	153.32	354	⇓P		PKPbc	08 07 39.1	+0.6	
	baz=153								
H13A	Challis	153.36	359	⇓P		PKPbc	08 07 39.6	+1.0	
	baz=153								
H12A	Diamond D Ranc	153.37	0	⇑P		PKPbc	08 07 39.3	+0.7	
	baz=153								
I21A	Big Trails, Te	153.39	348	⇑P		PKPbc	08 07 39.0	+0.3	
	baz=153								
I20A	Worland	153.41	350	⇓P		PKPbc	08 07 39.3	+0.6	
	baz=153								
TGUH	Tegucigalpa,Un	153.49	266	*e*PKPdf		PKPdf	08 07 32.5	+0.5	
TGUH				LR		LR			
	comp=Z,2μm,19.0s,MS5.9								
I07A	Izee	153.51	8	⇓P		PKPbc	08 07 39.7	+0.7	
	baz=153								
FLWY	Flagg Ranch	153.64	354	*e*PKPbc		PKPbc	08 07 41.9	+2.7	
KSU1	Kansas State U	153.68	327	*e*PKPbc		PKPbc	08 07 38.8	-0.7	
KSU1				LR		LR			
	comp=Z,3μm,22.0s,MS6.0								
IMW	Indian Meadow	153.85	354	*e*PKPbc		PKPbc	08 07 40.3	+0.6	
I18A	Diamond G Ranc	153.91	352	⇑P		PKPbc	08 07 40.2	+0.4	
	baz=154								
I16A	Newdale	153.92	355	⇑P		PKPbc	08 07 39.9	0.0	
	baz=154								
MOOW	Moose Ponds	153.97	354	*e*PKPbc		PKPbc	08 07 40.4	+0.5	
I14A	Mackay	153.98	358	⇓P		PKPbc	08 07 40.3	+0.4	
	baz=154								
UALR	University of	153.99	315	*e*PKPbc		PKPbc	08 07 40.1	-0.2	
VBMS	Vicksburg	154.00	308	*e*PKPab		PKPab	08 07 54.1	+0.3	
VBMS				LR		LR			
	comp=Z,2μm,20.0s,MS5.9								
I13A	Wildhorse Cree	154.01	359	⇑P		PKPbc	08 07 40.9	+0.9	
	baz=154,SNR=8.0								
LOHW	Long Hollow	154.09	353	*e*PKPdf		PKPdf	08 07 34.1	+2.0	
LOHW				*e*PKPbc		PKPbc	08 07 43.1	+2.9	
I12A	Atlanta	154.12	1	⇑P		PKPbc	08 07 40.9	+0.6	
	baz=154								
TPAW	Teton Pass	154.25	354	*e*PKPbc		PKPbc	08 07 38.9	-1.7	
SNOW	Snow King Moun	154.26	354	*e*PKPbc		PKPbc	08 07 41.7	+1.2	
HUMO	Hull Mountain	154.31	14	*e*PKPdf		PKPdf	08 07 34.6	+2.2	
HUMO				*e*PKPbc		PKPbc	08 07 41.5	+0.8	
HUMO				LR		LR			
	comp=Z,2μm,20.0s,MS5.8								
K22A	Casper	154.34	346	⇓P		PKPbc	08 07 40.9	+0.2	
	baz=154								
J17A	Brown Place, J	154.35	353	⇑P		PKPbc	08 07 41.3	+0.6	
	baz=154								
J08A	Circle Bar Ran	154.35	7	⇓P		PKPbc	08 07 40.9	+0.1	
	baz=154								
HLID	Hailey	154.36	360	⇓P		PKPbc	08 07 41.5	+0.7	
	baz=154								
HLID	Hailey	154.36	360	*e*PKPdf		PKPdf	08 07 34.9	+2.4	
HLID				LR		LR			
	comp=Z,2μm,21.0s,MS6.0								
REDW	Red Top Meadow	154.37	354	*e*PKPdf		PKPdf	08 07 34.9	+2.4	
J18A	Kendall Valley	154.42	352	⇑P		PKPbc	08 07 41.4	+0.5	
	baz=154								
RRI2	Red Ridge	154.43	354	*e*PKPbc		PKPbc	08 07 39.4	-1.5	
J15A	Blackfoot	154.46	356	⇓P		PKPbc	08 07 41.7	+0.7	
	baz=154								
MFID	Camas Ranch	154.49	2	⇓P		PKPbc	08 07 41.2	+0.1	
	baz=154								
J13A	Cove Ranch, Pi	154.52	359	⇓P		PKPbc	08 07 40.7	-0.4	
	baz=154								
J16A	Bone	154.53	355	⇑P		PKPbc	08 07 41.1	-0.1	
	baz=154								
OGNE	Ogallala	154.57	337	PFAKE			08 07 40.0	+7.1	
OGNE				LR		LR			
	comp=Z,3μm,20.0s,MS6.1								
K05A	Summer Lake	154.62	11	⇓P		PKPbc	08 07 41.1	-0.2	
	baz=154								
K19A	Absolon Red Bu	154.63	350	⇑P		PKPbc	08 07 40.6	-0.8	
	baz=154								
L23A	Garrett	154.65	344	⇑P		PKPbc	08 07 41.1	-0.3	
	baz=154								
K20A	Yellowstone Ra	154.70	349	⇑P		PKPbc	08 07 40.8	-0.7	
	baz=154								
BW06	Boulder Array	154.79	351	⇑P		PKPbc	08 07 41.1	-0.6	
	baz=155								
BW06	Boulder Array	154.79	351	PFAKE			08 07 40.0	+6.9	
BW06				LR		LR			
	comp=Z,4μm,19.0s,MS6.2								
PDAR	Pinedale Array	154.79	351	PKP		PKPdf	08 07 32.8	-0.3	
	comp=Z,1.6nm,0.9s,baz=78,slow=2.1,SNR=11								
PDAR				PP		PP	08 11 30.8	-0.5	
	comp=Z,1.7nm,1.0s,baz=325,slow=1.8,SNR=4.6								
L22A	Ellis Ranch, M	154.91	346	⇑P		PKPbc	08 07 41.6	-0.4	
	baz=155								
MIAR	Mount Ida	154.95	316	*e*PKPbc		PKPbc	08 07 41.7	-0.6	
MIAR				LR		LR			
	comp=Z,2μm,21.0s,MS5.8								
K16A	Soda Springs	154.96	355	⇓P		PKPbc	08 07 41.4	-0.6	
	baz=155								
AHID	Auburn Hatcher	154.98	354	PFAKE			08 07 40.0	+6.6	
AHID				LR		LR			
	comp=Z,3μm,20.0s,MS6.1								
K18A	Toltan Ranch,	154.99	352	⇑P		PKPbc	08 07 42.5	+0.3	
	baz=155								
M24A	Cheyenne	155.01	342	⇑P		PKPdf	08 07 42.3	+8.9	
	baz=155								
TEIG	Tepich	155.03	280	*e*PKPdf		PKPdf	08 07 34.0	-0.1	
TEIG				*e*PKPbc		PKPdf	08 07 42.2	+8.1	
TEIG				LR		LR			
	comp=Z,2μm,20.0s,MS5.9								
L21A	Rawlins	155.18	347	⇓P		PKPdf	08 07 42.7	+9.0	
	baz=155								
YBH	Yreka Blue Hor	155.19	15	PFAKE			08 07 50.0	+16	
YBH				LR		LR			
	comp=Z,2μm,19.0s,MS5.9								
WVOR	Wild Horse Val	155.25	7	*e*PKPbc		PKPdf	08 07 42.4	+8.7	
WVOR				LR		LR			
	comp=Z,3μm,21.0s,MS6.0								
L20A	Wamsutter	155.33	349	⇑P		PKPdf	08 07 42.9	+9.1	
	baz=155								
PHWY	Pilot Hill	155.34	343	*e*PKPab		PKPab	08 08 01.5	+2.4	
RWWY	Rawlins	155.41	347	*e*PKPbc		PKPdf	08 07 42.8	+8.9	
CBKS	Cedar Bluff	155.43	331	*e*PKPab		PKPab	08 08 00.0	+0.5	
CBKS				LR		LR			
	comp=Z,2μm,21.0s,MS5.9								
MOD	Modoc	155.53	10	*e*PKPdf		PKPdf	08 07 35.4	+1.2	
MOD				LR		LR			
	comp=Z,2μm,22.0s,MS5.9								
HVU	Hansel Valley	156.09	357	*e*PKPab		PKPab	08 08 01.0	-1.2	
HWUT	Hardware Ranch	156.18	354	*e*PKPdf		PKPdf	08 07 34.4	-0.6	
HWUT				*e*PKPab		PKPab	08 08 05.0	+2.4	
HWUT				LR		LR			
	comp=Z,4μm,21.0s,MS6.2								
WDC	Whiskeytown Da	156.32	15	PFAKE			08 07 50.0	+15	
WDC				LR		LR			
	comp=Z,2μm,20.0s,MS5.8								
ISCO	Idaho Springs	156.78	342	PFAKE			08 07 50.0	+14	
ISCO				LR		LR			
	comp=Z,3μm,20.0s,MS6.1								
NATX	Nacogdoches	157.28	311	PFAKE			08 07 50.0	+13	
NATX				LR		LR			
	comp=Z,2μm,21.0s,MS5.9								
DAU	Daniels Canyon	157.33	353	*e*PKPdf		PKPdf	08 07 39.5	+2.9	
DAU				*e*PKPab		PKPab	08 08 09.7	+2.2	
BMN	Battle Mountai	157.38	5	PFAKE			08 07 50.0	+13	
BMN				LR		LR			
	comp=Z,1μm,20.0s,MS5.8								
HOPS	Hopland	157.66	18	PFAKE			08 07 50.0	+13	
HOPS				LR		LR			
	comp=Z,2μm,20.0s,MS6.0								
DUG	Dugway	157.67	356	*e*PKPdf		PKPdf	08 07 37.5	+0.6	
DUG				*e*PKPab		PKPab	08 08 11.5	+2.5	
DUG				LR		LR			
	comp=Z,2μm,21.0s,MS5.9								
WMOK	Wichita Mounta	158.06	323	*e*PKPdf		PKPdf	08 07 40.1	+2.5	
WMOK				LR		LR			
	comp=Z,2μm,20.0s,MS5.8								
MCCM	Marconi Confer	158.51	18	PFAKE			08 07 50.0	+12	
MCCM				LR		LR			
	comp=Z,2μm,20.0s,MS5.9								
SRU	San Rafael	158.52	351	*e*PKPdf		PKPdf	08 07 39.0	+0.9	
SDCO	Great Sand Dun	158.63	340	*e*PKPdf		PKPdf	08 07 39.4	+1.2	
SDCO				LR		LR			
	comp=Z,3μm,22.0s,MS6.0								
PV04	Paradox Valley	158.93	348	*e*PKPdf		PKPdf	08 07 39.3	+0.8	
PV04				*e*PKPab		PKPab	08 08 16.0	+1.4	
HKT	Hockley	159.09	309	*e*PKPdf		PKPdf	08 07 39.8	+0.8	
HKT				LR		LR			
	comp=Z,2μm,19.0s,MS5.9								
PV01	Paradox Valley	159.11	347	*e*PKPdf		PKPdf	08 07 42.5	+3.7	
NVAR	Mina Array Bea	159.23	8	PKP		PKPdf	08 07 40.1	+1.2	
	comp=Z,1.2nm,0.8s,baz=284,slow=0.4,SNR=10								
NVAR				PKPab		PKPab	08 08 17.2	+1.3	
	comp=Z,9.9nm,0.9s,baz=353,slow=3.8,SNR=10								
NVAR				PP		PP	08 12 01.8	+6.0	
	comp=Z,4.6nm,1.2s,baz=336,slow=4.0,SNR=5.4								
CMB	Columbia Colle	159.25	13	PFAKE			08 07 50.0	+11	
CMB				LR		LR			
	comp=Z,3μm,21.0s,MS6.1								
MSU	Marysvale	159.30	355	*e*PKPdf		PKPdf	08 07 40.6	+1.6	
MVU	Marysvale	159.31	355	PFAKE			08 07 50.0	+11	
MVU				LR		LR			
	comp=Z,3μm,20.0s,MS6.1								
AMTX	Amarillo	159.50	328	PFAKE			08 07 50.0	+11	
AMTX				LR		LR			
	comp=Z,2μm,21.0s,MS6.0								
TPH	Tonopah	159.71	6	PFAKE			08 07 50.0	+11	
TPH				LR		LR			
	comp=Z,2μm,20.0s,MS6.0								
MVCO	Mesa Verde	159.98	346	PFAKE			08 07 50.0	+10	
MVCO				LR		LR			
	comp=Z,3μm,22.0s,MS6.1								
SAO	San Andreas Ge	160.20	16	PFAKE			08 07 50.0	+10	
SAO				LR		LR			
	comp=Z,3μm,21.0s								
CCUT	Cedar City	160.34	357	*e*PKPdf		PKPdf	08 07 42.4	+2.2	
DAC	Darwin (Calif)	161.44	8	PFAKE			08 07 50.0	+8.6	
DAC				LR		LR			
	comp=Z,2μm,20.0s								
ANMO	Albuquerque	161.49	339	*e*PKPdf		PKPdf	08 07 43.2	+1.7	
ANMO				LR		LR			
	comp=Z,3μm,22.0s								
JCT	Junction City	161.59	316	*e*PKPdf		PKPdf	08 07 41.9	+0.2	
JCT				LR		LR			
	comp=Z,2μm,21.0s								
KVTX	Kingsville	161.85	305	PFAKE			08 07 50.0	+7.9	
KVTX				LR		LR			
	comp=Z,2μm,22.0s								
ISA	Isabella	161.92	10	*e*PKPdf		PKPdf	08 07 44.0	+2.1	
WUAZ	Wupatki	162.17	351	PFAKE			08 07 50.0	+7.8	
WUAZ				LR		LR			
	comp=Z,2μm,21.0s								
LAZ	Ladron	162.22	339	*e*PKPdf		PKPdf	08 07 43.6	+1.3	
BNM	Barren Site	162.27	338	*e*PKPdf		PKPdf	08 07 43.1	+0.8	
GSC	Goldstone	162.50	6	*e*PKPdf		PKPdf	08 07 43.9	+1.4	
MNTX	Cornudas Mount	163.89	331	*e*PKPdf		PKPdf	08 07 44.2	+0.2	
MNTX				LR		LR			
	comp=Z,2μm,21.0s								
PFO	Pinyon Flat Ob	164.21	6	PFAKE			08 08 00.0	+16	
PFO				LR		LR			
	comp=Z,2μm,21.0s								
TXAR	Lajitas Array	164.82	321	PKP		PKPdf	08 07 44.7	-0.2	
	comp=Z,2.0nm,0.8s,baz=54,slow=1.6,SNR=20								
TXAR				PKPab		PKPab	08 08 40.1	-0.6	
	comp=Z,3.9nm,0.9s,baz=64,slow=2.0,SNR=9.8								
TXAR				PP		PP	08 12 33.4	+6.9	
	comp=Z,1.0nm,0.8s,baz=58,slow=3.4,SNR=3.7								
TXAR	Lajitas Array	164.82	321	PKIKP		PKPdf	08 07 44.7	-0.2	
TXAR							08 08 40.1		
TXAR							08 12 33.4		
TXAR				pmax		pmax			
	comp=Z,2.0nm,0.8s								
TXAR				pmax		pmax			
	comp=Z,4.0nm,0.9s								
TXAR				pmax		pmax			
	comp=Z,1.0nm,0.8s								
TUC	Tucson	165.19	347	*e*PKPdf		PKPdf	08 07 45.6	+0.5	
TUC				LR		LR			
	comp=Z,1μm,19.0s								

ISCJB ***22*** *07:49:40.6±0.8, 24°.84N±0°.05×98°.03E±0°.06, h10km, mb3.5/2, Error ellipse: s-maj=8.4km s-min=7.0km az=167.3*

IDC ***22*** *07:49:41.9±1.8, 25°.13N×98°.38E, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.4/25, mbtmp3.6/3, ML4.1/1, MS4.7/1, Ms1 4.7/1, ms1mx2.9/32, Error ellipse: s-maj=62.7km s-min=19.1km az=80.0*

BJI ***22*** *07:49:42.2, 25°.08N×97°.71E, h30km, ML3.8/8*

ISC 22 07:49:43.2±0.8, 24°.91N±0°.05×97°.95E±0°.06, h10km, n9, σ1°12/12, mb3.5/2, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	Kunming	4.35	86	Pg	Pg	07 51 05.9	-0.7
KMI				Sg	Sg	07 52 03.3	+0.4
KMI				smax			
	comp=N,66nm,0.8s						
KMI				smax			
	comp=E,71nm,1.1s						
CHRT	Chiangrai	5.29	161	PN	Pn	07 51 02.5	+0.2
CHRT	Chiangrai	5.29	161	PG	Pg	07 51 24.0	-0.6
CHRT				SG	Sg	07 52 34.0	+0.8
CHG	Chiang Mai	6.13	171	PG	Pn	07 51 19.0	+5.1
CHG				SG	Pg	07 51 39.7	-1.0
CMAR	Chiang Mai Arr	6.49	172	Pn	Pn	07 51 21.5	+2.7
	comp=E,1.1nm,0.3s,baz=346,slow=13,SNR=10						
CMAR				Pg	Pg	07 51 44.4	-3.0
	comp=E,1.6nm,0.3s,baz=351,slow=18,SNR=31						
CMAR				Lg		07 53 12.2	
	comp=E,0.7nm,0.3s,baz=353,slow=29,SNR=4.3						
MKAR	Makanchi Array	25.17	334	P	P	07 55 08.4	-0.2
	comp=E,0.6nm,0.6s,mb3.3,baz=155,slow=9.3,SNR=10						
KURK	Kurchatov	29.77	335	LR	LR	08 08 40.4	
	comp=E,1μm,18.5s,baz=220,slow=38						
ZALV	Zalesovo Beam	30.62	345	P	P	07 55 56.7	-0.6
	comp=E,0.5nm,0.4s,mb3.7,baz=156,slow=7.6,SNR=3.5						
COP	Copenhagen	67.33	322	*i* P	P	08 00 39.4	+1.2

NNC 22 08:00:28.9±2.0, 49°.27N×68°.30E, h0km, mb3.6, mpv3.2, 3C-2D, Error ellipse: s-maj=27.8km s-min=10.3km az=138.0, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZRNK	Zerenda	3.72	7	⇑Pn	Pn	08 01 28.1	+0.7
	14nm,1.3s						
ZRNK				⇓Lg		08 02 27.5	
	9.1nm,1.1s						
VOSK	Vostochnaya	3.85	25	⇑Pn	Pn	08 01 28.8	-0.

AAK S Sn 08 13 34.5 -0.6
AAK pmax pmax
comp=Z,18nm,0.3s
AAK smax
comp=N,4.0nm,0.3s
SDNR Sundarnagar 6.91 133 *e*PKP Pn 08 12 19.5 -0.7
SDNR *e*S Sn 08 13 33.5 -4.1
KBK Karagaybulak 6.98 24 P Pn 08 12 21.9 +0.9
SNR=7.9
FRU Bishkek 7.04 22 *e*PN Pn 08 12 22.0 +0.2
FRU *i* 08 13 45.0
FRU pmax pmax
comp=Z,44nm,1.4s
FRU pmax pmax
comp=E,190nm,1.8s
ULHL Ulahol 7.13 33 P Pn 08 12 23.3 +0.2
SNR=14
CHMS Chumysh 7.23 22 P Pn 08 12 24.5 +0.2
SNR=22
SMLA Simla 7.30 134 *i* P Pn 08 12 24.6 -0.8
SMLA *i* S Sn 08 13 42.9 -4.0
USP Ospenovka 7.40 20 P Pn 08 12 27.1 +0.5
SNR=19
TKM2 Tokmak 2 7.44 27 P Pn 08 12 27.6 +0.4
SNR=14
DDI Dehra Dun 8.41 134 *e*PKP Pn 08 12 40.0 -0.3
DDI *ex* x 08 13 44.5
KHET Khetri 9.19 153 *e*PKP Pn 08 12 47.4 -3.4
KHET *e*S Sn 08 14 24.2 -8.4
NDI New Delhi 9.26 144 *e*PKP Pn 08 12 50.2 -1.4
NDI *e*S Sn 08 14 27.3 -6.9
KUDL Kundal 9.40 149 *e*PKP Pn 08 12 49.2 -4.3
KUDL *e*S Sn 08 14 26.6 -11
SONA Sohna 9.56 146 *e*PKP Pn 08 12 54.3 -1.5
SONA *e*S Sn 08 14 33.4 -8.2
AJM Ajmer 10.32 162 *e*PKP Pn 08 13 05.2 -0.5
AJM AMb AMB 08 13 06.3
comp=Z,38nm,0.6s
AJM *e*S Sn 08 14 50.8 -9.0
DANN Dangsing 13.39 123 *e*P Pn 08 13 45.4 -0.4
comp=Z,28nm,0.4s
MK31 Makanchi Array 13.39 35 P Pn 08 13 46.0 +0.2
comp=Z,1.5nm,0.6s,baz=226,slow=12,SNR=17
MKAR Makanchi Array 13.39 35 P Pn 08 13 46.0 +0.2
MKAR ScP ScP 08 22 21.6 -1.1
MKAR Makanchi Array 13.39 35 P Pn 08 13 46.0 +0.2
comp=Z,0.2nm,0.3s,baz=223,slow=13,SNR=11
MKAR ScP ScP 08 22 21.6 -1.1
comp=Z,0.1nm,0.3s,baz=241,slow=2.2,SNR=4.0
KOLN Koldanda 13.66 125 *e*P Pn 08 13 48.8 -0.5
comp=Z,14nm,0.3s
BHPL Bhopal 14.19 155 *e*PKP Pn 08 13 55.9 -0.2
BHPL AMb AMB 08 14 03.2
comp=Z,15nm,0.5s
BHPL *ex* x 08 16 26.3
GKN Gorkha 14.20 122 *e*P Pn 08 13 55.4 -0.8
comp=Z,41nm,0.5s
WMQ Urumqi 14.76 55 *e*P Pn 08 14 06.3 +3.3
WMQ pmax pmax
comp=Z,15nm,0.6s
WMQ pmax pmax
comp=Z,160nm,3.8s
DMN Daman 14.77 122 *e*P Pn 08 14 03.6 +0.2
comp=Z,27nm,0.4s
KKN Kakani 14.78 121 *e*P Pn 08 14 02.7 -0.7
comp=Z,36nm,0.6s
PKI Pulchoki 15.01 122 *e*P Pn 08 14 06.6 +0.3
comp=Z,30nm,0.3s
GUN Gumba 15.12 120 *e*P Pn 08 14 08.1 +0.4
AB31 Akbulak array 15.22 331 P Pn 08 14 07.8 -0.9
comp=Z,5.8nm,0.5s,baz=170,slow=11,SNR=225
AB31 ⇓S S 08 16 49.9 -14
comp=Z,21nm,0.8s,baz=161,slow=22,SNR=17
ABKAR Akbulak array 15.22 331 *e*P Pn 08 14 07.6 -1.1
comp=Z,7.7nm,0.4s
ABKAR *e*S S 08 16 48.4 -15
KURBB Kurchatov Arra 15.25 18 ⇑P Pn 08 14 07.8 -1.3
comp=Z,1.2nm,0.6s
KURK Kurchatov 15.36 18 ⇑P Pn 08 14 10.0 -0.4
comp=Z,9.3nm,0.9s
KURK Kurchatov 15.36 18 *e*P Pn 08 14 11.8 +1.4
comp=Z,13nm,1.1s
KURK S S 08 17 15.5 +8.9
KURK Kurchatov 15.36 18 P Pn 08 14 06.8 -3.6
comp=Z,0.1nm,0.3s,baz=214,slow=12,SNR=5.7
KURK S S 08 17 15.5 +8.9
comp=Z,0.1nm,0.3s,baz=202,slow=27,SNR=3.0
KURK Kurchatov 15.36 18 ⇓ *i*P Pn 08 14 08.6 -1.8
KURK pmax pmax
comp=Z,15nm,1.4s
JIRN Jiri 15.49 120 *e*P Pn 08 14 13.0 +0.7
RAMN Ramite 16.22 121 *e*P Pn 08 14 21.3 +0.1
comp=Z,20nm,0.4s
VOSK Vostochnaya 16.37 360 ⇑P Pn 08 14 20.6 -2.2
comp=Z,9.5nm,0.8s
ZRNK Zerenda 16.66 356 ⇓P Pn 08 14 25.4 -0.9
comp=Z,6.8nm,0.8s
BVA0 Borovoye Array 16.67 359 P Pn 08 14 26.0 -0.6
comp=Z,1.5nm,0.9s,baz=158,slow=19,SNR=57
BVA0 S S 08 17 29.0 -3.0
comp=Z,0.3nm,0.8s,baz=170,slow=22,SNR=5.1
BVAR Borovoye Array 16.67 359 P Pn 08 14 25.7 -0.8
comp=Z,1.4nm,0.3s,baz=167,slow=8.9,SNR=30
BVAR Borovoye Array 16.67 359 P Pn 08 14 25.7 -0.8
BVAR pmax pmax
comp=Z,1.0nm,0.3s
BRVK Borovoye 16.71 358 *e*P Pn 08 14 26.6 -0.4
BRVK Borovoye 16.71 358 ⇑ *i*P Pn 08 14 27.1 +0.1
BRVK pmax pmax
comp=Z,15nm,1.4s
TAPN Taplejung 16.76 118 *e*P Pn 08 14 29.0 +1.2
AKTK Aktyubinsk 16.92 330 P Pn 08 14 29.9 +0.3
AKTK S S 08 17 30.9 -6.8
AKTO Aktyubinsk 16.92 330 P Pn 08 14 29.9 +0.3
comp=Z,2.8nm,0.3s,baz=137,slow=8.9,SNR=93
AKTO S S 08 17 30.9 -6.8
comp=Z,0.7nm,0.3s,baz=228,slow=20,SNR=6.5
AKTO Aktyubinsk 16.92 330 P Pn 08 14 29.9 +0.4
AKTO S S 08 17 30.9 -6.7
AKTO pmax pmax
comp=Z,3.0nm,0.3s
AKTO smax
comp=N,1.0nm,0.3s
MAK Makhachkala 19.25 297 *e*P Px 08 15 06.5
MAK pmax pmax
comp=Z,154nm,1.3s
MAK MLR MLR
comp=Z,3μm,23.0s
ZALV Zalesovo Beam 20.04 24 P P 08 15 03.6 +0.5
comp=Z,11nm,0.3s,baz=218,slow=10,SNR=7.1
ZALV Zalesovo Beam 20.04 24 P P 08 15 03.6 +0.5
ZALV pmax pmax
comp=Z,11nm,0.4s
NVS Novosibirsk 20.31 21 *e*P P 08 15 06.9 +0.9
NVS pmax pmax
comp=Z,6.0nm,0.7s
NVS pmax pmax
comp=N,7.0nm,0.8s
NVS pmax pmax
comp=E,5.0nm,0.5s
MIB Mutribah 20.88 259 *e*P P 08 15 12.3 -0.1
MIB AMb AMB 08 15 13.8
comp=Z,18nm,0.8s
GNI Garni 20.96 288 ⇑ *e*P P 08 15 16.7 +3.5
GNI pmax pmax
comp=Z,11nm,1.6s
RDF Al-Radifah 21.09 256 *e*P P 08 15 14.7 +0.1
RDF AMb AMB 08 15 16.5
comp=Z,26nm,1.3s,mb4.4
NAY Al-Naaiem 21.18 257 *e*P P 08 15 15.3 -0.4
NAY AMb AMB 08 15 17.7
comp=Z,9.6nm,1.2s,mb4.0
ARU Arti 21.78 341 *e*P P 08 15 22.5 +0.9
comp=Z,22nm,1.0s,mb4.5
ARU Arti 21.78 341 *c i*P P 08 15 22.4 +0.8
ARU *e* 08 15 51.8
ARU S S 08 19 13.4 +0.2
ARU SS 08 19 50.6
ARU pmax pmax
comp=Z,21nm,1.2s,mb4.4
GTA Gaotai 22.88 74 *e*P P 08 15 36.0 +3.3
GTA pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
LZH Lanzhou 26.41 81 *e*P P 08 16 08.5 +3.8
LZH pP pP 08 16 41.5 +7.1
LZH pmax pmax
comp=Z,23nm,1.2s,mb4.7
ANN Anapa 26.73 299 *e*P P 08 16 11.6 +4.1
ANN pmax pmax
comp=Z,51nm,1.1s,mb5.1
CD2 Chengdu 27.70 92 P P 08 16 18.0 +1.6
CD2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
CD2 pmax pmax
comp=Z,860nm,6.0s
KMI Kunming 29.34 103 P P 08 16 34.8 +3.9
KMI pP pP 08 17 06.0 +5.1
KMI sP sP 08 17 24.3 +7.2
KMI pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
BRTR Keskin Array B 29.50 288 P P 08 16 32.1 -0.2
comp=Z,0.7nm,0.6s,mb3.5,baz=74,slow=5.2,SNR=2.6
BRTR Keskin Array B 29.50 288 P P 08 16 32.1 -0.1
BRTR pmax pmax
comp=Z,1.0nm,0.6s
OBN Obninsk 30.07 320 ⇑ *e*P P 08 16 38.5 +1.5
OBN pmax pmax
comp=Z,10.0nm,1.5s,mb4.3
HHC Hu-ho-hao-te 31.79 69 *e*P P 08 16 54.5 +2.2
HHC pP pP 08 17 28.3 +5.9
HHC sP sP 08 17 47.3 +8.7
HHC PP PP 08 18 07.3 +0.5
HHC S S 08 21 49.8 -2.2
HHC sS sS 08 22 51.8 +7.0
HHC SS SS 08 23 54.6 -20
HHC pmax pmax
comp=Z,18nm,0.7s,mb4.9
HHC pmax pmax
comp=Z,110nm,5.0s
HHC LR LR
comp=N,1μm,15.9s
HHC LR LR
comp=E,2μm,16.7s
GYA Guiyang 31.82 98 P P 08 16 55.3 +2.6
GYA pP pP 08 17 27.6 +4.7
GYA sP sP 08 17 46.3 +7.3
GYA PP PP 08 18 06.0 -1.3
GYA PcP PcP 08 19 41.3 +0.9
GYA S S 08 21 53.8 +1.0
GYA sS sS 08 22 51.0 +5.4
GYA ScP ScP 08 23 09.8 -0.8
GYA PcS PcS 08 23 24.3 -1.0
GYA ScS ScS 08 27 06.8 -2.5
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
AKASG Malin Array Be 33.06 309 P P 08 17 03.5 +0.2
AKASG Malin Array Be 33.06 309 P P 08 17 03.5 +0.2
comp=Z,0.8nm,0.4s,mb3.8,baz=82,slow=7.3,SNR=4.3
AKASG Malin Array Be 33.06 309 P P 08 17 03.5 +0.3
AKASG pmax pmax
comp=Z,1.0nm,0.4s
JOF Joensuu 36.01 330 *e*P P 08 17 29.3 +0.9
JOF pmax pmax
comp=Z,8.0nm,0.5s,mb4.6
JOF Joensuu 36.01 330 *ep* P 08 17 29.3 +0.9
comp=Z,8.0nm,0.5s,mb4.6
WHN Wuhan 36.38 86 *e*P P 08 17 30.9 -1.1
FINES FINESS Array B 37.62 326 P P 08 17 43.2 +1.1
FINES FINESS Array B 37.62 326 P P 08 17 43.2 +1.1
comp=Z,3.6nm,0.5s,mb4.3,baz=123,slow=8.9,SNR=19
FINES FINESS Array B 37.62 326 P P 08 17 43.2 +1.1
FINES pmax pmax
comp=Z,4.0nm,0.5s
KAF Kangasniemi 37.76 327 *e*P P 08 17 42.2 -1.1
KAF pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
KAF Kangasniemi 37.76 327 *ep* P 08 17 42.2 -1.1
comp=Z,2.4nm,0.8s,mb3.9
NJ2 Nanjing 39.47 82 *e*P P 08 17 52.8 -5.1
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
KEV Kevo 40.95 338 *e*P P 08 18 09.5 -0.1
KEV pmax pmax
comp=Z,2.0nm,0.3s,mb4.2
KEV Kevo 40.95 338 *ep* P 08 18 09.5 -0.1
comp=Z,1.9nm,0.3s,mb4.2
ARCES ARCESS Array B 41.29 338 P P 08 18 13.7 +1.3
comp=Z,5.5nm,0.5s,mb4.5,baz=112,slow=8.6,SNR=90
ARCES ARCESS Array B 41.29 338 P P 08 18 13.7 +1.3
ARCES pmax pmax
comp=Z,6.0nm,0.5s
NOA NORSAR Array B 44.51 323 P P 08 18 38.8 +0.4
comp=Z,6.2nm,0.7s,mb4.3,baz=96,slow=7.8,SNR=22
NOA NORSAR Array B 44.51 323 P P 08 18 38.8 +0.4
NOA pmax pmax
comp=Z,6.0nm,0.7s
TOA0 Torodi Ar. Sit 65.74 269 *e*P P 08 21 09.2 -2.2
TORD Torodi Ar. Bea 65.74 269 P P 08 21 09.8 -1.6
comp=Z,1.6nm,0.6s,mb4.0,baz=51,slow=5.9,SNR=17
ILAR Eielson Array 74.91 16 P P 08 22 06.2 -0.1
comp=Z,0.4nm,0.7s,mb3.2,baz=314,slow=5.5,SNR=6.6
BOSA Boshof 77.65 220 P P 08 22 20.4 -1.7
BOSA Boshof 77.65 220 P P 08 22 20.4 -1.7
comp=Z,3.2nm,0.7s,mb4.0,baz=339,slow=5.1,SNR=3.7
BOSA Boshof 77.65 220 P P 08 22 20.4 -1.8
BOSA pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
YKA Yellowknife Ar 81.39 3 P P 08 22 43.0 +1.1
comp=Z,1.4nm,0.6s,mb3.8,baz=351,slow=5.3,SNR=7.3
YKA Yellowknife Ar 81.39 3 P P 08 22 43.0 +1.0
YKA pmax pmax
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 81.89 122 P P 08 22 44.8 -0.4
comp=Z,0.5nm,0.4s,mb3.5,baz=313,slow=6.5,SNR=9.5
WRA Warramunga Arr 81.89 122 P P 08 22 44.8 -0.4
WRA pmax pmax
comp=Z,1.0nm,0.4s
ASAR Alice Springs 84.15 125 P P 08 22 57.0 +0.2
comp=Z,0.9nm,0.6s,mb3.7,baz=313,slow=4.8,SNR=14
ASAR Alice Springs 84.15 125 P P 08 22 57.0 +0.2
ASAR pmax pmax
comp=Z,1.0nm,0.6s

IDC ***22*** *08:26:55.5±0.7, 41˚21N×69˚28E, h0km, mb4.2/16, mb1 4.3/22, mb1mx4.2/30, mbtmp4.2/22, ML4.2/5, Error ellipse: s-maj=11.3km s-min=8.3km az=180.0*
NNC ***22*** *08:26:57.7±1.4, 41˚47N×68˚91E, h0km, mb4.8, mpv5.3, Error ellipse: s-maj=12.5km s-min=8.2km az=158.0*
NEIC ***22*** *08:26:58.7±0.5, 41˚44N×69˚20E, h10km, mb4.4/10, Error ellipse: s-maj=9.2km s-min=7.8km az=170.0*
NEIC Felt at Tashkent.
MOS ***22*** *08:26:59.7±2.0, 41˚45N×69˚27E, h33km, mb4.5/22, Error ellipse: s-maj=8.3km s-min=5.5km az=90.8*
MOS Felt (II) at Chimkent.
BJI ***22*** *08:27:04.4, 41˚49N×70˚13E, h10km, mB5.0/7, mb4.7/19, ML4.4/3, Ms4.3/4, Ms7 4.1/3*

ISC 22 08:26:56.9±1.0, **41˚41N**±0˚02×**69˚17E**±0˚03, **h0**km±6km, **n142**,σ1**$45**/172, **mb4.3**/42, **17C-10D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**1.96**	**30**	⇓P		**Pb**		**08 27 34.1**	**+0.6**
	1μm,0.6s,baz=214,slow=17,SNR=9630								
KK31				⇓S		**Sb**		**08 27 60.0**	**+1.6**
	2μm,0.4s,baz=209,slow=27,SNR=24								
KK31	**Karatay Array**	**1.96**	**30**	P		**Pb**		**08 27 34.1**	**+0.6**
KK31				S		**Sb**		**08 27 60.0**	**+1.6**
KK31	**Karatay Array**	**1.96**	**30**	PN		**Pb**		**08 27 34.0**	**+0.5**
KK31				S		**Sb**		**08 27 59.9**	**+1.5**
KK31				pmax	pmax				
	comp=Z,510nm,0.2s								
KK31				smax					
	comp=N,3μm,0.3s								
AML	**Almayashu**	**3.46**	**77**	P		**Pn**		**08 27 51.8**	**-0.1**
	SNR=14								
EKS2	**Erkin-Say**	**3.65**	**68**	P		**Pn**		**08 27 55.2**	**+0.6**
	SNR=29								
UCH	**Uchtor**	**4.08**	**77**	P		**Pb**		**08 28 10.8**	**+1.3**
	SNR=10								
AAK	**Ala-Archa**	**4.15**	**71**	P		**Pn**		**08 28 02.0**	**+0.6**
	SNR=26								
AAK	**Ala-Archa**	**4.15**	**71**	*e*Pn		**Pn**		**08 28 01.7**	**+0.3**
AAK				*e*Pg		**Pb**		**08 28 12.5**	**+1.7**
AAK				*e*Sn		**Sn**		**08 28 48.0**	**-2.5**
AAK	**Ala-Archa**	**4.15**	**71**	Pn		**Pn**		**08 28 01.5**	**+0.1**
	comp=N,4.0nm,0.3s,baz=231,slow=4.8,SNR=28								
AAK				Pg		**Pb**		**08 28 12.3**	**+1.6**
	comp=N,39nm,0.3s,baz=222,slow=7.1,SNR=25								
AAK				Sn		**Sn**		**08 28 48.0**	**-2.6**
	comp=N,50nm,0.3s,baz=203,slow=3.6,SNR=8.7								
AAK				Lg				08 29 05.7	
	comp=N,38nm,0.3s,baz=358,slow=22,SNR=8.2								
AAK	**Ala-Archa 4.15**		**71**	*d i*PN		**Pn**		**08 28 01.6**	**+0.2**
AAK				pmax	pmax				
	comp=Z,5.0nm,0.9s								
FRU	**Bishkek 4.29**		**69**	*e*PN		**Pn**		**08 28 03.5**	**+0.1**
FRU				*i*				08 28 19.0	
FRU				*e*S		**Sg**		**08 29 09.0**	**-5.8**
FRU				pmax	pmax				
	comp=Z,228nm,1.8s								
FRU				smax					
	comp=N,3μm,1.8s								
USP	**Ospenovka 4.36**		**63**	P		**Pn**		**08 28 07.6**	**+3.2**
	SNR=13								
CHMS	**Chumysh 4.44**		**67**	P		**Pn**		**08 28 08.0**	**+2.6**
	SNR=7.8								
KBK	**Karagaybulak 4.48**		**72**	P		**Pn**		**08 28 06.8**	**+0.8**
	SNR=22								
KZA	**Kyzart 4.60**		**80**	P		**Pn**		**08 28 08.3**	**+0.7**
	SNR=12								
TKM2	**Tokmak 2 5.01**		**70**	P		**Pn**		**08 28 12.9**	**-0.3**
	SNR=17								
ULHL	**Ulahol 5.35**		**79**	P		**Pn**		**08 28 17.8**	**-0.1**
	SNR=6.3								
KSH	**Kashi 5.52**		**108**	⇑ *i*Pn		**Pn**		**08 28 17.1**	**-3.2**
KSH				Sn		**Sn**		**08 29 22.3**	**-2.1**
KSH				smax					
	comp=N,530nm,0.9s								
KSH				smax					
	comp=E,440nm,0.9s								
KNDC	**Almaty 6.05**		**70**	⇑Pg		**Pg**		**08 28 50.6**	**-2.3**
	comp=E,260nm,0.8s								
KNDC				⇑Lg				08 30 12.8	
	comp=E,1μm,0.8s								
AAA	**Alma-Ata 6.05**		**70**	*e*PN		**Pg**		**08 28 50.5**	**-2.4**
AAA				*e*S		**Sg**		**08 30 03.5**	**-7.8**
AAA				pmax	pmax				
	comp=Z,190nm,0.6s								
AAA				smax					
	comp=N,1μm,0.8s								
KBL	**Kabul 6.86**		**181**	*e*Pn		**Pn**		**08 28 38.6**	**-0.1**
	comp=N,32nm,0.6s								
KBL				*e*S		**Sb**		**08 30 26.6**	**+7.2**
KBL	**Kabul 6.86**		**181**	*e*PN		**Pn**		**08 28 38.6**	**-0.1**
KBL				*e*S		**Sb**		**08 30 26.6**	**+7.2**
KBL				pmax	pmax				
	comp=Z,32nm,0.6s								
VAN	**Vannovskaya 9.20**		**252**	*e*P		**Pn**		**08 29 10.9**	**+0.1**
ABKAR	**Akbulak array 10.18**		**324**	*e*Pn		**Pn**		**08 29 23.6**	**-0.5**
	comp=Z,12nm,1.6s								
ABKAR				*e*Sn		**Sn**		**08 31 18.2**	**-0.6**
MK31	**Makanchi Array 10.86**		**56**	⇓Pn		**Pn**		**08 29 33.5**	**+0.1**
	comp=Z,4.7nm,0.4s,baz=234,slow=12,SNR=33								
MK31				⇑Lg				08 32 42.5	
	comp=Z,88nm,0.8s,baz=244,slow=23,SNR=4.0								
MKAR	**Makanchi Array 10.86**		**56**	Pn		**Pn**		**08 29 33.4**	**0.0**
	comp=Z,0.5nm,0.3s,baz=238,slow=12,SNR=22								
MKAR				Lg				08 32 40.3	
	comp=Z,5.2nm,0.3s,baz=252,slow=23,SNR=6.8								
KURBB	**Kurchatov Arra 11.27**		**32**	⇓Pn		**Pn**		**08 29 39.4**	**+0.4**
	comp=Z,1.7nm,0.7s								
KURBB				⇑Lg				08 32 54.2	
	comp=Z,54nm,1.4s								
KURK	**Kurchatov 11.38**		**32**	⇓Pn		**Pn**		**08 29 40.5**	**0.0**
	comp=Z,8.9nm,0.9s								
KURK				⇑Lg				08 33 00.4	
	comp=Z,276nm,0.9s								
KURK	**Kurchatov 11.38**		**32**	*e*Pn		**Pn**		**08 29 40.7**	**+0.2**
	comp=Z,7.2nm,0.6s								
KURK				*e*Sn		**Sn**		**08 31 55.6**	**+7.4**
KURK	**Kurchatov 11.38**		**32**	Pn		**Pn**		**08 29 38.3**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=219,slow=13,SNR=23								
KURK				Sn		**Sn**		**08 31 46.5**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=137,slow=25,SNR=2.9								
KURK				Lg				08 32 56.2	
	comp=Z,1.1nm,0.3s,baz=228,slow=27,SNR=7.8								
KURK	**Kurchatov 11.38**		**32**	*e*P		**Pn**		**08 29 40.6**	**+0.1**
KURK				pmax	pmax				
	comp=Z,8.0nm,1.1s								
VOSK	**Vostochnaya 11.38**		**6**	⇑Pn		**Pn**		**08 29 39.9**	**-0.6**
	comp=Z,12nm,0.8s								
VOSK				⇑Lg				08 32 56.9	
	comp=Z,216nm,1.4s								
VOSK	**Vostochnaya 11.38**		**6**	Pn		**Pn**		**08 29 39.9**	**-0.6**
VOSK				Lg				08 32 56.9	
ZRNK	**Zerenda 11.54**		**359**	⇑Pn		**Pn**		**08 29 41.7**	**-1.1**
	comp=Z,27nm,0.6s								
ZRNK				⇑Sn		**Sn**		**08 31 52.5**	**+0.2**
	comp=Z,37nm,0.7s								
ZRNK				⇑Lg				08 33 02.1	
	comp=Z,180nm,1.1s								
ZRNK	**Zerenda 11.54**		**359**	*i* P		**Pn**		**08 29 41.6**	**-1.2**
ZRNK				pmax	pmax				
	comp=Z,27nm,0.6s								
BVA0	**Borovoye Array 11.65**		**4**	Pn		**Pn**		**08 29 43.2**	**-1.0**
	comp=Z,2.3nm,0.6s,baz=179,slow=14,SNR=61								
BVA0				⇓Sn		**Sn**		**08 31 56.1**	**+1.3**
	comp=Z,6.3nm,0.7s								
BVA0				⇓Lg				08 33 05.4	
	comp=Z,12nm,0.8s								
BVA0	**Borovoye Array 11.65**		**4**	*i* P		**Pn**		**08 29 43.2**	**-1.0**
BVA0								08 31 50.1	
BVA0				pmax	pmax				
	comp=Z,2.0nm,0.3s								
BVA0				smax					
	comp=N,6.0nm,0.6s								
BVAR	**Borovoye Array 11.65**		**4**	Pn		**Pn**		**08 29 43.2**	**-1.0**
	comp=N,4.7nm,0.3s,baz=176,slow=13,SNR=27								
BVAR				Sn		**Sn**		**08 31 52.4**	**-2.4**
	comp=N,5.0nm,0.3s,baz=200,slow=12,SNR=3.9								
BVAR				Lg				08 33 11.8	
	comp=N,3.5nm,0.3s,baz=165,slow=24,SNR=3.4								
BVAR	**Borovoye Array 11.65**		**4**	P		**Pn**		**08 29 43.2**	**-1.0**
BVAR								08 31 52.4	
BVAR				pmax	pmax				
	comp=Z,5.0nm,0.3s								
BVAR				smax					
	comp=N,5.0nm,0.3s								
BRVK	**Borovoye 11.68**		**3**	⇑Lg				08 33 06.6	
	comp=N,134nm,0.9s								
BRVK	**Borovoye 11.68**		**3**	*e*Pn		**Pn**		**08 29 43.6**	**-0.9**
	comp=N,23nm,0.6s								
BRVK				*e*Sn		**Sn**		**08 31 54.4**	**-1.1**
BRVK	**Borovoye 11.68**		**3**	⇑ *e*P		**Pn**		**08 29 43.8**	**-0.8**
BRVK				pmax	pmax				
	comp=Z,4.0nm,0.7s								
AKTK	**Aktyubinsk 11.89**		**323**	Pn		**Pn**		**08 29 47.5**	**-0.1**
AKTK				Sn		**Sn**		**08 31 59.9**	**-1.0**
AKTK				Lg				08 33 21.1	
AKTO	**Aktyubinsk 11.89**		**323**	⇓Pn		**Pn**		**08 29 47.1**	**-0.5**
	comp=Z,4.8nm,0.8s								
AKTO				⇑Sn		**Sn**		**08 31 58.2**	**-2.6**
	comp=Z,11nm,0.8s								
AKTO				⇑Lg				08 33 11.3	
	comp=Z,9.9nm,0.7s								
AKTO	**Aktyubinsk 11.89**		**323**	Pn		**Pn**		**08 29 47.5**	**-0.1**
	comp=Z,1.5nm,0.3s,baz=142,slow=14,SNR=23								
AKTO				Sn		**Sn**		**08 31 59.9**	**-1.0**
	comp=Z,6.1nm,0.3s,baz=35,slow=9.1,SNR=7.7								
AKTO				Lg				08 33 21.1	
	baz=218,slow=14,SNR=2.7								
AKTO	**Aktyubinsk 11.89**		**323**	P		**Pn**		**08 29 47.5**	**-0.1**
AKTO								08 31 59.9	
AKTO				pmax	pmax				
	comp=Z,2.0nm,0.3s								
AKTO				smax					
	comp=N,6.0nm,0.3s								
DDI	**Dehra Dun 13.19**		**144**	*e*PKP		**Pn**		**08 30 04.0**	**-1.5**
DDI				*e*S		**Sn**		**08 32 18.0**	**-15**
WMQ	**Urumqi 13.85**		**74**	*e*P		**Pn**		**08 30 16.5**	**+2.1**
WMQ				pP				08 30 19.9	
WMQ				sP				08 30 23.3	
WMQ				PP				08 30 27.6	
WMQ				pmax	pmax				
	comp=Z,14nm,0.6s								
WMQ				pmax	pmax				
	comp=Z,150nm,4.2s								
ZAA0	**Zalesovo Array 16.33**		**35**	*e*P		**Pn**		**08 30 47.4**	**+0.1**
ZAA0				*e*Sn		**Sn**		**08 33 48.0**	**-1.0**
ZALV	**Zalesovo Beam 16.33**		**35**	Pn		**Pn**		**08 30 46.4**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=231,slow=11,SNR=17								
ZALV				Sn		**Sn**		**08 33 52.2**	**+3.3**
	comp=Z,0.4nm,0.3s,baz=211,slow=22,SNR=3.4								
ZALV				Lg				08 35 49.7	

comp=Z,0.3nm,0.3s,baz=222,slow=26,SNR=3.6
ZALV Zalesovo Beam 16.33 35 P **Pn** **08 30 46.4 -0.9**
ZALV 08 33 52.2
ZALV pmax pmax
comp=Z,1.0nm,0.3s
NVS Novosibirsk 16.34 30 *e*P **Pn** **08 30 48.9 +1.4**
NVS pmax pmax
comp=N,15nm,1.2s
NVS pmax pmax
comp=E,22nm,1.2s
NVS pmax pmax
comp=Z,28nm,1.2s
SVE Sverdlovsk 16.39 343‖ *e*P **Pn** **08 30 45.9 -2.1**
SVE pmax pmax
comp=Z,39nm,0.6s
ARU Arti 16.54 339 *e*P **Pn** **08 30 47.7 -2.2**
comp=Z,12nm,0.6s
ARU *e*S **Sn** **08 33 48.6 -5.3**
ARU Arti 16.54 339*c i*P **Pn** **08 30 47.9 -2.0**
ARU S **Sn** **08 33 50.0 -3.9**
ARU pmax pmax
comp=Z,10.0nm,1.0s
DANN Dangsing 17.66 133 *e*P **Pn** **08 30 59.7 -4.6**
comp=Z,154nm,1.0s
DGRG David-gareji 17.84 278 P **Pn** **08 31 08.1 +1.7**
KOLN Koldanda 18.03 134 *e*P **Pn** **08 31 02.6 -6.2**
comp=Z,28nm,0.5s
GKN Gorkha 18.42 132 *e*P **Pn** **08 31 09.5 -4.1**
comp=Z,78nm,0.5s
GNI Garni 18.53 274 *e*P **Pn** **08 31 19.0 +4.1**
comp=Z,18nm,0.8s
GNI Garni 18.53 274 P **Pn** **08 31 18.8 +3.9**
comp=Z,1.7nm,0.3s,baz=133,slow=14,SNR=6.3
GNI Garni 18.53 274 *i* P **Pn** **08 31 17.9 +3.0**
GNI pmax pmax
comp=Z,28nm,1.3s
KKN Kakani 18.94 131 *e*P **Pn** **08 31 15.9 -4.1**
comp=Z,34nm,0.5s
DMN Daman 18.98 132 *e*P **Pn** **08 31 16.8 -3.7**
comp=Z,40nm,0.8s
PKI Pulchoki 19.18 131 *e*P **Pn** **08 31 18.5 -4.4**
comp=Z,86nm,1.1s
GUN Gumba 19.20 129 *e*P **Pn** **08 31 20.3 -2.7**
comp=Z,36nm,0.4s
KIV Kislovodsk 19.61 286 *e*P **Pn** **08 31 27.0 -0.9**
comp=Z,18nm,0.4s
KIV Kislovodsk 19.61 286 P **Pn** **08 31 28.0 +0.1**
KIV S **Sn** **08 35 06.0 -2.5**
KIV pmax pmax
comp=Z,15nm,1.0s
SOKR Solikamsk 19.75 341 *e*P **Pn** **08 31 22.0 -7.4**
SOKR *i* S **Sn** **08 35 02.7 -8.9**
SOKR pmax pmax
comp=Z,10.0nm,0.6s
RAMN Ramite 20.34 130 *e*P **P** **08 31 32.7 -2.0**
comp=Z,30nm,0.5s
ODAN Odare 20.87 128 *e*P **P** **08 31 39.4 -1.0**
UMR Umm Al-Rimmam 21.04 243 *e*P **P** **08 31 41.5 -0.7**
UMR AMb AMB 08 31 51.5
comp=Z,29nm,1.0s,mb4.6
VRHR Novokhopersk 21.25 306 *e*P **P** **08 31 48.1 +3.7**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,20nm,0.6s,mb4.6
LSA Lhasa 21.30 116 *e*P **P** **08 31 47.0 +2.0**
comp=Z,17nm,0.7s,mb4.5
LSA Lhasa 21.30 116 *e*P **P** **08 31 47.0 +2.0**
LSA pmax pmax
comp=Z,17nm,0.7s,mb4.5
NAY Al-Naaiem 21.55 243 *e*P **P** **08 31 47.1 -0.6**
NAY AMb AMB 08 31 51.5
comp=Z,12nm,1.0s,mb4.3
RDF Al-Radifah 21.56 242 *e*P **P** **08 31 47.8 0.0**
RDF AMb AMB 08 31 57.5
comp=Z,32nm,1.1s,mb4.7
VORD Divnogorie 22.64 305 *e*P **P** **08 31 59.9 +0.6**
VORD *e* 08 32 07.4
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,2.0nm,0.5s
VORD pmax pmax
comp=Z,2.0nm,0.5s,mb3.9
VSR Storozhevoye 22.78 306 *e*P **P** **08 32 00.5 -0.2**
VSR *e* 08 32 04.5
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,4.0nm,0.4s
VSR pmax pmax
comp=Z,4.0nm,0.4s,mb4.3
GTA Gaotai 23.36 85 *e*P **P** **08 32 09.3 +2.3**
GTA pP 08 32 13.4
GTA sP sP 08 32 16.9 +10
GTA pmax pmax
comp=Z,5.0nm,1.4s,mb3.9
MALT Malatya 23.74 273 *e*P **P** **08 32 13.0 +2.3**
comp=Z,8.7nm,0.9s,mb4.3
MALT Malatya 23.74 273 *e*P **P** **08 32 13.0 +2.3**
MALT pmax pmax
comp=Z,9.0nm,0.9s,mb4.3
SHL Shillong 24.56 123 *e*PKP **P** **08 32 15.0 -3.3**
ZAK Zakamensk 25.19 58 *e*P **P** **08 32 19.1 -4.7**
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb3.8
OBN Obninsk 25.39 314 P **P** **08 32 28.0 +2.4**
OBN *e* 08 32 35.5
OBN *e* 08 32 40.4
OBN *e* 08 33 00.0
OBN pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
BR131 Keskin Array S 25.93 278 *e*P **P** **08 32 40.1 +0.4**
comp=Z,1.1nm,0.5s,mb3.8
BRTR Keskin Array B 26.93 278 P **P** **08 32 40.5 +0.8**
comp=Z,1.3nm,0.5s,mb3.9,baz=87,slow=7.5,SNR=7.6
BRTR Keskin Array B 26.93 278 P **P** **08 32 40.6 +0.9**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
SONM Songino Array 27.07 64 P **P** **08 32 41.3 +0.5**
comp=Z,1.3nm,0.6s,mb3.8,baz=263,slow=8.6,SNR=2.9
SONM Songino Array 27.07 64 P **P** **08 32 41.3 +0.5**
SONM pmax pmax
comp=Z,1.0nm,0.6s
LZH Lanzhou 27.44 90 *e*P **P** **08 32 48.0 +3.7**
LZH pP 08 32 52.0
LZH sP sP 08 32 55.5 +11
LZH pmax pmax
comp=Z,13nm,1.0s,mb4.6
AKASG Malin Array Be 28.92 302 P **P** **08 32 58.6 +1.2**
comp=Z,0.4nm,0.4s,mb3.6,baz=52,slow=32,SNR=5.0
CD2 Chengdu 29.65 100 P **P** **08 33 05.8 +1.8**
CD2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.0
CD2 pmax pmax
comp=Z,310nm,7.2s
JOF Joensuu 30.94 327 *e*P **P** **08 33 14.5 -0.6**
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
JOF Joensuu 30.94 327 *e*p **P** **08 33 14.5 -0.6**
comp=Z,2.0nm,0.5s,mb4.3
HHC Hu-ho-hao-te 31.70 77 *e*P **P** **08 33 23.3 +1.2**
HHC pP 08 33 26.9
HHC sP sP 08 33 30.3 +8.0
HHC PP PP 08 34 28.3 -5.1
HHC S **S** **08 38 31.1 -1.4**
HHC sS sS 08 38 37.0 +4.3
HHC pmax pmax
comp=Z,14nm,0.8s,mb4.9
HHC pmax pmax
comp=Z,650nm,7.7s
HHC LR LR
comp=N,230nm,12.3s
HHC LR LR
comp=E,430nm,13.7s
HHC LR LR
comp=Z,320nm,12.0s
KMI Kunming 32.18 110 P **P** **08 33 29.8 +3.4**
KMI pP 08 33 34.3
KMI sP sP 08 33 36.9 +10
KMI pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
FINES FINESS Array B 32.67 323 P **P** **08 33 30.6 +0.3**
comp=Z,3.2nm,0.4s,mb4.6,baz=118,slow=9.8,SNR=17
FINES FINESS Array B 32.67 323 P **P** **08 33 30.6 +0.3**
FINES pmax pmax
comp=Z,3.0nm,0.4s
CMAR Chiang Mai Arr 34.20 123 P **P** **08 33 42.3 -1.8**
comp=Z,1.4nm,0.9s,mb3.9,baz=320,slow=10,SNR=5.4
CMAR Chiang Mai Arr 34.20 123 P **P** **08 33 42.3 -1.8**
CMAR pmax pmax
comp=Z,1.0nm,0.9s
GYA Guiyang 34.21 104 *e*P **P** **08 33 47.8 +3.7**
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
KEV Kevo 35.73 336 *e*P **P** **08 33 58.9 +2.2**
KEV pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
KEV Kevo 35.73 336 *e*p **P** **08 33 58.9 +2.2**
comp=Z,1.1nm,0.5s,mb3.9
ARCES ARCESS Array B 36.08 336 P **P** **08 34 00.3 +0.6**
ARCES ARCESS Array B 36.08 336 P **P** **08 34 00.3 +0.6**
comp=Z,1.8nm,0.5s,mb4.2,baz=114,slow=8.5,SNR=13
ARCES ARCESS Array B 36.08 336 P **P** **08 34 00.3 +0.6**
ARCES pmax pmax
comp=Z,2.0nm,0.5s
WHN Wuhan 37.76 92 P **P** **08 34 16.1 +1.6**
NOA NORSAR Array B 39.66 320 P **P** **08 34 29.7 -0.4**
NOA NORSAR Array B 39.66 320 P **P** **08 34 29.7 -0.4**
comp=Z,1.6nm,0.6s,mb3.8,baz=93,slow=8.4,SNR=7.6
NOA NORSAR Array B 39.66 320 P **P** **08 34 29.7 -0.4**
NOA pmax pmax
comp=Z,2.0nm,0.6s
NJ2 Nanjing 40.42 87 *e*P **P** **08 34 36.4 -0.4**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
QIZ Qiongzhong 41.13 110 P **P** **08 34 44.3 +1.6**
QIZ pP 08 34 48.1
QIZ sP sP 08 34 49.8 +6.9
QIZ S **S** **08 40 58.0 +1.3**
QIZ sS sS 08 41 04.1 +7.1
QIZ pmax pmax
comp=Z,440nm,3.9s
TIXI Tiksi 41.82 24 *e*P **P** **08 34 50.5 +2.7**
TIXI pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
SPITS Spitsbergen Ar 42.39 346 P **P** **08 34 53.4 +1.0**
comp=Z,3.5nm,0.4s,mb4.2,baz=146,slow=12,SNR=7.8
SPITS Spitsbergen Ar 42.39 346 P **P** **08 34 53.4 +1.0**
SPITS pmax pmax
comp=Z,2.0nm,0.4s
MBDF Montbardon 44.72 296 *e*P **P** **08 35 14.2 +2.6**
comp=Z,6.4nm,0.7s,mb4.4
MBDF Montbardon 44.72 296 *e*P **P** **08 35 14.2 +2.6**
comp=Z,3.2nm,0.7s,mb4.4
MBDF Montbardon 44.72 296 *e*P **P** **08 35 14.2 +2.6**
MBDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
SSF Saint Saulge 46.15 300 *e*P **P** **08 35 23.9 +1.0**
KEST Kesra 46.31 283 P **P** **08 35 28.0 +3.7**
comp=Z,0.6nm,0.5s,mb3.9,baz=326,slow=2.9,SNR=5.8
TCF Toulx Ste Croi 47.24 300 *e*P **P** **08 35 32.4 +1.0**
MJAR Matsushiro Arr 52.60 71 P **P** **08 36 12.3 0.0**
comp=Z,1.9nm,0.7s,mb4.2,baz=294,slow=11,SNR=5.3
MJAR Matsushiro Arr 52.60 71 P **P** **08 36 12.3 0.0**
MJAR pmax pmax
comp=Z,2.0nm,0.7s
SUMG Summit 55.96 340 *i* P **P** **08 36 41.7 +5.4**
comp=Z,4.9nm,0.7s,mb4.7
TORD Torodi Ar. Bea 64.56 265 P **P** **08 37 34.5 -1.5**
TORD Torodi Ar. Bea 64.56 265 P **P** **08 37 34.5 -1.5**
comp=Z,1.6nm,0.5s,mb4.5,baz=51,slow=6.2,SNR=14
COLD Coldfoot 67.63 15 *e*P **P** **08 37 57.6 +2.7**
comp=Z,4.2nm,0.9s,mb4.7
INK Inuvik 69.28 9 *e*P **P** **08 38 08.3 +3.1**
comp=Z,11nm,1.3s,mb4.9
INK Inuvik 69.28 9 *e*P **P** **08 38 08.3 +3.0**
INK pmax pmax
comp=Z,11nm,1.3s
ILAR Eielson Array 70.44 16 P **P** **08 38 11.4 -1.1**
comp=Z,1.7nm,0.8s,mb4.2,baz=328,slow=4.8,SNR=22
ILAR Eielson Array 70.44 16 P **P** **08 38 11.4 -1.0**
ILAR pmax pmax
comp=Z,2.0nm,0.8s
PPLA Purkeypile 70.90 19 *e*P **P** **08 38 17.7 +2.4**
comp=Z,1.9nm,0.5s,mb4.5
YKA Yellowknife Ar 76.40 2 P **P** **08 38 47.1 -0.5**
comp=Z,2.2nm,0.7s,mb4.4,baz=355,slow=5.4,SNR=8.3
YKA Yellowknife Ar 76.40 2 P **P** **08 38 47.1 -0.5**
YKA pmax pmax
comp=Z,2.0nm,0.7s
BOSA Boshof 80.65 218 P **P** **08 39 09.5 -1.9**
comp=Z,4.4nm,0.9s,mb4.5,baz=88,slow=2.3,SNR=3.1
BOSA Boshof 80.65 218 P **P** **08 39 09.5 -1.9**
BOSA pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
WRA Warramunga Ar 85.77 121 P **P** **08 39 35.4 -2.6**
comp=Z,1.9nm,0.6s,mb4.4,baz=326,slow=4.9,SNR=5.2
WRA Warramunga Ar 85.77 121 P **P** **08 39 35.4 -2.6**
WRA pmax pmax
comp=Z,2.0nm,0.6s
ASAR Alice Springs 88.20 124 P **P** **08 39 46.6 -3.2**
comp=Z,0.6nm,0.6s,mb4.1,baz=325,slow=4.3,SNR=6.0
ASAR Alice Springs 88.20 124 P **P** **08 39 46.6 -3.2**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
PDAR Pinedale Array 96.20 359 P **P** **08 40 27.6 +0.9**
comp=Z,0.4nm,0.9s,mb4.0,baz=5.7,slow=11,SNR=2.3

*IDC **22** 08:45:56.5±0.7, 26°.82N×67°.12E, h0km, mb4.1/18, mb1 4.2/19, mb1mx4.1/30, mbtmp4.1/19, ML3.4/1, Error ellipse: s-maj=18.8km s-min=16.8km az=96.0*
*ISCJB **22** 08:45:58.3±2.6, 26°.92N±0°.05×67°.26E±0°.08, h21km±19km, mb4.1/25, Error ellipse: s-maj=12.4km s-min=8.3km az=22.5*
*NEIC **22** 08:46:01.9±0.5, 26°.87N×67°.12E, h35km, mb4.2/6, Error ellipse: s-maj=11.8km s-min=9.4km az=107.0*
ISC 22 08:46:01.0±2.7, 26°.88N±0°.05×67°.20E±0°.08, h28km±20km, n39, σ0s76/41, mb4.1/25, 1C, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BHV	**Bhavnagar**	**6.81**	**138**	*ex*	**Pn**	**08 47 39.5**	**+0.4**
SARP	**Sargodha**	**6.92**	**42**	‖P	**Pn**	**08 47 39.9**	**-0.7**
SARP				S	**Sn**	**08 48 57.0**	**-1.4**
THW	**Thamme Wali**	**7.09**	**33**	P	**Pn**	**08 47 42.7**	**-0.1**
KBL	**Kabul**	**7.79**	**11**	*e*Pn	**Pn**	**08 47 52.6**	**+0.1**
	7.7nm,0.6s						
KBL				*e*Sn	**Sn**	**08 49 21.0**	**+1.2**
CEP	**Cherat**	**8.02**	**29**	P	**Pn**	**08 47 55.8**	**+0.2**
CEP				S	**Sn**	**08 49 25.0**	**-0.4**
CHCP	**Chirah Chowk**	**8.54**	**36**	P	**Pn**	**08 48 02.7**	**-0.1**
NDI	**New Delhi**	**9.05**	**76**	*e*PKP	**Pn**	**08 48 05.0**	**-4.8**
AAK	**Ala-Archa**	**16.80**	**19**	*e*P	**Pn**	**08 49 53.9**	**-0.3**
	3.5nm,0.5s						
AAK	**Ala-Archa**	**16.80**	**19**	Pn	**Pn**	**08 49 53.6**	**-0.6**
	0.7nm,0.3s,baz=163,slow=1.0,SNR=4.5						
ABKAR	**Akbulak array**	**23.03**	**348**	*e*P	**P**	**08 51 04.3**	**+0.6**
	3.3nm,0.5s,mb4.0						
MKAR	**Makanchi Array**	**23.18**	**27**	P	**P**	**08 51 04.8**	**-0.4**
	1.7nm,0.6s,mb3.6,baz=208,slow=12,SNR=15						
AKTK	**Aktyubinsk**	**24.55**	**346**	P	**P**	**08 51 18.7**	**+0.6**
AKTO	**Aktyubinsk**	**24.55**	**346**	P	**P**	**08 51 18.7**	**+0.6**
	2.3nm,0.4s,mb4.0,baz=156,slow=13,SNR=11						
KURK	**Kurchatov**	**25.35**	**17**	*e*P	**P**	**08 51 25.9**	**+0.6**
	3.1nm,0.8s,mb3.9						
KURK	**Kurchatov**	**25.35**	**17**	P	**P**	**08 51 25.1**	**-0.3**
	3.5nm,0.6s,mb4.0,baz=210,slow=8.7,SNR=15						
BVAR	**Borovoye Array**	**26.22**	**4**	P	**P**	**08 51 33.5**	**+0.2**
	2.9nm,0.5s,mb4.1,baz=172,slow=11,SNR=14						
BRVK	**Borovoye**	**26.25**	**4**	*e*P	**P**	**08 51 36.0**	**+2.5**
	3.9nm,0.5s,mb4.2						
ZALV	**Zalesovo Beam**	**30.01**	**21**	P	**P**	**08 52 07.2**	**+0.2**
	1.1nm,0.5s,mb3.9,baz=232,slow=7.3,SNR=3.9						
SONM	**Songino Array**	**36.99**	**45**	P	**P**	**08 53 10.1**	**+2.2**
	0.5nm,0.3s,mb3.8,baz=302,slow=8.2,SNR=2.5						
AKASG	**Malin Array Be**	**37.36**	**320**	P	**P**	**08 53 10.4**	**-0.6**
	2.2nm,0.6s,mb4.2,baz=113,slow=7.2,SNR=6.5						
BUR08	**Bucovina Ar. S**	**38.73**	**314**	*e*P	**P**	**08 53 23.0**	**+0.5**
JOF	**Joensuu**	**43.02**	**337**	*e*p	**P**	**08 53 57.0**	**-0.7**
	3.7nm,0.5s,mb4.4						
FINES	**FINESS Array B**	**44.13**	**333**	P	**P**	**08 54 06.5**	**-0.2**
	1.2nm,0.4s,mb4.0,baz=120,slow=6.9,SNR=9.8						
KAF	**Kangasniemi**	**44.41**	**334**	*e*p	**P**	**08 54 07.2**	**-1.7**
	2.7nm,0.4s,mb4.3						
KEV	**Kevo**	**48.77**	**343**	*e*p	**P**	**08 54 42.4**	**-0.5**
	0.8nm,0.5s,mb4.0						
ARCES	**ARCESS Array B**	**49.04**	**342**	P	**P**	**08 54 45.1**	**+0.1**
	1.6nm,0.4s,mb4.4,baz=139,slow=8.0,SNR=46						
HFS	**Hagfors**	**49.06**	**328**	P	**P**	**08 54 45.0**	**-0.4**
	2.1nm,0.4s,mb4.5,baz=129,slow=8.6,SNR=12						
KEST	**Kesra**	**49.60**	**295**	P	**P**	**08 54 50.5**	**+0.7**
	1.1nm,0.6s,mb4.1,baz=6.4,slow=2.0,SNR=5.5						
NOA	**NORSAR Array B**	**50.50**	**328**	P	**P**	**08 54 55.5**	**-0.8**
	1.5nm,0.6s,mb4.1,baz=108,slow=7.4,SNR=6.5						
KBS	**Kingsbay**	**57.34**	**349**	*e*P	**P**	**08 55 46.3**	**+0.3**
	4.3nm,0.6s,mb4.7						
TORD	**Torodi Ar. Bea**	**62.46**	**271**	P	**P**	**08 56 21.4**	**-0.7**
	4.3nm,0.6s,mb4.8,baz=65,slow=5.7,SNR=57						
BOSA	**Boshof**	**68.30**	**219**	P	**P**	**08 56 58.7**	**-0.8**
BOSA	**Boshof**	**68.30**	**219**	P	**P**	**08 56 58.7**	**-0.8**
	1.1nm,0.6s,mb4.1,baz=67,slow=7.7,SNR=2.9						
WRA	**Warramunga Arr**	**79.98**	**118**	P	**P**	**08 58 08.4**	**+0.5**
	2.0nm,0.8s,mb4.1,baz=315,slow=4.7,SNR=8.7						
ASAR	**Alice Springs**	**81.70**	**122**	P	**P**	**08 58 17.0**	**-0.1**
	0.4nm,0.6s,mb3.6,baz=309,slow=5.5,SNR=9.1						
INK	**Inuvik**	**83.86**	**8**	*e*P	**P**	**08 58 27.9**	**+0.3**
	3.2nm,0.5s,mb4.7						
ILAR	**Eielson Array**	**84.87**	**14**	P	**P**	**08 58 32.9**	**+0.1**
	0.2nm,0.6s,mb3.5,baz=323,slow=4.8,SNR=6.5						
YKA	**Yellowknife Ar**	**90.93**	**1**	P	**P**	**08 59 01.7**	**-0.1**
	1.0nm,0.7s,mb4.2,baz=349,slow=3.1,SNR=4.3						
TXAR	**Lajitas Array**	**123.42**	**350**	PKP	PKPdf	09 04 56.6	+0.6
	0.1nm,0.3s,baz=91,slow=3.1,SNR=3.6						

*IDC **22** 08:55:51.1±2.6, 42°.66N×19°.01E, h0km, mb3.7/2, mb1 3.5/3, mb1mx3.4/23, mbtmp3.5/3, ML2.5/1, Error ellipse: s-maj=93.8km s-min=29.6km az=144.0*
*SKO **22** 08:55:57.9, 38°.42N×23°.95E, h0km*
*ISCJB **22** 08:55:59.4±0.4, 38°.53N±0°.02×24°.05E±0°.03, h6km±3km, mb3.6/2, Error ellipse: s-maj=4.0km s-min=2.7km az=11.9*
*ATH **22** 08:55:59.7, 38°.51N×24°.03E, h22km±1km, ML3.3*
*NEIC **22** 08:55:59.7, 38°.51N×24°.03E, h22km, ML3.3(ATH), After ATH.*
*THE **22** 08:56:00.6, 38°.53N×24°.02E, h10km±1km, ML3.2/5, Error ellipse: s-maj=1.4km s-min=0.8km az=283.0*
*CSEM **22** 08:56:00.4±0.2, 38°.50N×24°.05E, h20km, ML3.3, Error ellipse: s-maj=6.6km s-min=4.4km az=101.0*
ISC 22 08:56:00.4±0.4, 38°.52N±0°.02×24°.03E±0°.03, h10km±3km, n128, σ0s75/163, mb3.6/2, 7C-2D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTL	**Penteli**	**0.49**	**195**	*e*Pb	**Pg**	**08 56 09.5**	**-0.4**
PTL				*e*Sb	**Sg**	**08 56 16.4**	**0.0**
PTL	**Penteli**	**0.49**	**195**	*e*PB	**Pg**	**08 56 09.5**	**-0.4**
PTL				*e*SB	**Sg**	**08 56 16.4**	**0.0**
PTL	**Penteli**	**0.49**	**195**	*e*Pb	**Pg**	**08 56 09.5**	**-0.4**
PTL				*e*Sb	**Sg**	**08 56 16.4**	**0.0**
ATHU	**Athens Univers**	**0.59**	**199**	P	**Pg**	**08 56 12.0**	**+0.2**
ATHU				S	**Sg**	**08 56 20.2**	**+0.8**
ATHU	**Athens Univers**	**0.59**	**199**	P	**Pg**	**08 56 12.0**	**+0.2**
ATHU				S	**Sg**	**08 56 20.2**	**+0.8**
ATH	**Athens Observa**	**0.60**	**204**	*e*Pn	**Pg**	**08 56 11.5**	**-0.5**
ATH				*e*Sn	**Sg**	**08 56 20.8**	**+0.3**
ATH	**Athens Observa**	**0.60**	**204**	*e*PN	**Pg**	**08 56 11.5**	**-0.5**
ATH				*e*SN	**Sg**	**08 56 20.2**	**+0.3**
ATH	**Athens Observa**	**0.60**	**204**	*e*Pn	**Pg**	**08 56 11.5**	**-0.5**
ATH				*e*Sn	**Sg**	**08 56 20.2**	**+0.3**
AOS	**Alonnisos**	**0.66**	**350**	P	**Pg**	**08 56 12.4**	**-0.7**
AOS	**Alonnisos**	**0.66**	**350**	P	**Pg**	**08 56 12.8**	**-0.3**
AOS				S	**Sg**	**08 56 22.2**	**+0.4**
AOS	**Alonnisos**	**0.66**	**350**	P	**Pg**	**08 56 12.4**	**-0.7**
AOS				S	**Sg**	**08 56 22.2**	**+0.4**
VLY	**Voula,Athens**	**0.69**	**195**	*e*Pn	**Pg**	**08 56 13.2**	**-0.6**
VLY				*e*Sn	**Sg**	**08 56 22.9**	**+0.1**
VLY	**Voula,Athens**	**0.69**	**195**	*e*PN	**Pg**	**08 56 13.2**	**-0.6**
VLY				*e*SN	**Sg**	**08 56 22.9**	**+0.1**
VLY	**Voula,Athens**	**0.69**	**195**	*e*Pn	**Pg**	**08 56 13.2**	**-0.6**
VLY				*e*Sn	**Sg**	**08 56 22.9**	**+0.1**
ATAL	**Atalanti**	**0.81**	**283**	P	**Pg**	**08 56 14.9**	**-1.0**
ATAL				S	**Sg**	**08 56 27.3**	**+0.9**
ATAL	**Atalanti**	**0.81**	**283**	P	**Pg**	**08 56 14.9**	**-1.0**
ATAL				S	**Sg**	**08 56 27.3**	**+0.9**
LKR	**Lokris**	**0.81**	**279**	*e*Pn	**Pg**	**08 56 14.7**	**-1.4**
LKR	**Lokris**	**0.81**	**279**	*e*PN	**Pg**	**08 56 14.7**	**-1.4**
LKR	**Lokris**	**0.81**	**279**	P	**Pg**	**08 56 15.5**	**-0.6**
LKR				S	**Sg**	**08 56 27.9**	**+1.2**
LKR	**Lokris**	**0.81**	**279**	*e*Pn	**Pg**	**08 56 14.7**	**-1.4**
LKR	**Lokris**	**0.81**	**279**	P	**Pg**	**08 56 15.5**	**-0.6**
LKR				S	**Sg**	**08 56 27.9**	**+1.2**
NAIG	**Nisos Aigina**	**0.87**	**209**	*e*Pn	**Pg**	**08 56 16.6**	**-0.6**
NAIG	**Nisos Aigina**	**0.87**	**209**	*e*PN	**Pg**	**08 56 16.6**	**-0.6**
NAIG	**Nisos Aigina**	**0.87**	**209**	*e*Pn	**Pg**	**08 56 16.6**	**-0.6**
LTK	**Loutraki**	**0.97**	**239**	*e*PN	**Pg**	**08 56 18.5**	**-0.6**
LTK	**Loutraki**	**0.97**	**239**	P	**Pg**	**08 56 18.4**	**-0.7**
LTK				S	**Sg**	**08 56 33.1**	**+1.4**
LTK	**Loutraki**	**0.97**	**239**	P	**Pg**	**08 56 18.4**	**-0.7**
LTK				S	**Sg**	**08 56 33.1**	**+1.4**
NEO	**Neokhori**	**1.00**	**322**	*e*Pn	**Pg**	**08 56 19.2**	**-0.5**
NEO				*e*Sn	**Sg**	**08 56 32.7**	**-0.1**
NEO	**Neokhori**	**1.00**	**322**	*e*PN	**Pg**	**08 56 19.2**	**-0.5**
NEO				*e*SN	**Sg**	**08 56 32.7**	**-0.1**
NEO	**Neokhori**	**1.00**	**322**	*e*Pn	**Pg**	**08 56 19.2**	**-0.5**
NEO				*e*Sn	**Sg**	**08 56 32.7**	**-0.1**
XOR	**Xorichti**	**1.06**	**323**	P	**Pg**	**08 56 20.2**	**-0.7**
XOR	**Xorichti**	**1.06**	**323**	P	**Pg**	**08 56 20.8**	**-0.1**
XOR				S	**Sg**	**08 56 35.4**	**+0.7**
XOR	**Xorichti**	**1.06**	**323**	P	**Pg**	**08 56 20.2**	**-0.7**
XOR				S	**Sg**	**08 56 35.4**	**+0.7**
DSF	**Desfina**	**1.18**	**265**	P	**Pb**	**08 56 21.4**	**-1.5**
DSF				S	**Sb**	**08 56 38.1**	**-0.1**
DSF	**Desfina**	**1.18**	**265**	P	**Pb**	**08 56 21.4**	**-1.5**
DSF				S	**Sb**	**08 56 38.1**	**-0.1**
DID	**Didima**	**1.19**	**212**	*e*PN	**Pb**	**08 56 22.2**	**-0.8**
DID				*e*SN	**Sn**	**08 56 39.0**	**-0.3**
DID	**Didima**	**1.19**	**212**	P	**Pb**	**08 56 22.2**	**-0.8**
DID				S	**Sb**	**08 56 38.8**	**+0.3**
DID	**Didima**	**1.19**	**212**	*e*Pn	**Pn**	**08 56 22.3**	**-0.8**
DID				S	**Sb**	**08 56 38.8**	**+0.3**
AGG	**Agios Georgios**	**1.42**	**291**	*e*Pn	**Pn**	**08 56 26.1**	**-0.1**
AGG	**Agios Georgios**	**1.42**	**291**	*e*PN	**Pn**	**08 56 26.1**	**-0.1**
AGG	**Agios Georgios**	**1.42**	**291**	P	**Pn**	**08 56 26.1**	**-0.1**
AGG	**Agios Georgios**	**1.42**	**291**	*e*Pn	**Pn**	**08 56 26.1**	**-0.1**
PAIG	**Paliouri**	**1.43**	**349**	P	**Pn**	**08 56 25.1**	**-1.3**
PAIG	**Paliouri**	**1.43**	**349**	P	**Pn**	**08 56 25.2**	**-1.2**
PAIG	**Paliouri**	**1.43**	**349**	P	**Pn**	**08 56 25.2**	**-1.2**
GUR	**Goura**	**1.45**	**247**	*e*PN	**Pn**	**08 56 26.1**	**-0.5**
GUR				*e*SN	**Sn**	**08 56 46.4**	**+0.7**
GUR	**Goura**	**1.45**	**247**	P	**Pn**	**08 56 26.2**	**-0.4**
GUR	**Goura**	**1.45**	**247**	P	**Pn**	**08 56 26.2**	**-0.4**
GUR				*e*Sn	**Sn**	**08 56 46.4**	**+0.7**
KALE	**Kalithea**	**1.49**	**266**	P	**Pn**	**08 56 26.9**	**-0.3**
KALE	**Kalithea**	**1.49**	**266**	P	**Pn**	**08 56 26.9**	**-0.3**
TRIZ	**Trizonia**	**1.54**	**265**	P	**Pn**	**08 56 27.8**	**-0.1**
TRIZ				S	**Sn**	**08 56 47.4**	**-0.6**
TRIZ	**Trizonia**	**1.54**	**265**	P	**Pn**	**08 56 27.8**	**-0.1**
TRIZ				S	**Sn**	**08 56 47.4**	**-0.6**
SIGR	**SIGRI**	**1.59**	**64**	P	**Pg**	**08 56 31.5**	**+0.7**
SIGR	**SIGRI**	**1.59**	**64**	P	**Pg**	**08 56 31.5**	**+0.7**
CHOS	**Chios island**	**1.60**	**94**	*e*PN	**Pn**	**08 56 28.5**	**-0.2**
CHOS	**Chios island**	**1.60**	**94**	*e*Pn	**Pn**	**08 56 28.5**	**-0.2**
LAKA	**Lakka**	**1.63**	**261**	P	**Pn**	**08 56 29.4**	**+0.2**
LAKA	**Lakka**	**1.63**	**261**	P	**Pn**	**08 56 29.4**	**+0.2**
EFP	**Efpalio**	**1.67**	**267**	*e*PN	**Pn**	**08 56 30.3**	**+0.7**
EFP	**Efpalio**	**1.67**	**267**	P	**Pn**	**08 56 29.4**	**-0.2**
EFP	**Efpalio**	**1.67**	**267**	P	**Pn**	**08 56 29.4**	**-0.2**
EFP	**Efpalio**	**1.67**	**267**	*e*Pn	**Pn**	**08 56 30.3**	**+0.7**
VLX	**Vlachokerasia**	**1.74**	**229**	*e*PB	**Pn**	**08 56 30.0**	**-0.6**
VLX				*e*SN	**Sn**	**08 56 53.4**	**+0.6**
VLX	**Vlachokerasia**	**1.74**	**229**	P	**Pn**	**08 56 30.4**	**-0.2**

PRK	**Paraskevi**	**1.90**	**67**	*e*Pn	**Pn**	**08 56 33.4**	**+0.6**
PLG	**Polygyros**	**1.90**	**347**	*e*Pb	**Pn**	**08 56 32.1**	**-0.8**
PLG	**Polygyros**	**1.90**	**347**	*e*PB	**Pn**	**08 56 32.1**	**-0.8**
PLG	**Polygyros**	**1.90**	**347**	P	**Pn**	**08 56 32.0**	**-0.9**
PLG	**Polygyros**	**1.90**	**347**	*e*Pb	**Pn**	**08 56 32.1**	**-0.8**
LIT	**Litokhoron**	**1.98**	**323**	*e*Pb	**Pn**	**08 56 34.0**	**+0.1**
LIT	**Litokhoron**	**1.98**	**323**	*e*PB	**Pn**	**08 56 34.0**	**+0.1**
LIT	**Litokhoron**	**1.98**	**323**	*e*Pb	**Pn**	**08 56 34.0**	**+0.1**
VLI	**Veliai**	**2.00**	**206**	*e*Pb	**Pn**	**08 56 33.6**	**-0.6**
VLI	**Veliai**	**2.00**	**206**	*e*PB	**Pn**	**08 56 33.6**	**-0.6**
VLI	**Veliai**	**2.00**	**206**	*e*Pb	**Pn**	**08 56 33.6**	**-0.6**
RLS	**Riolos of Patr**	**2.07**	**258**	*e*Pn	**Pn**	**08 56 35.7**	**+0.6**
RLS	**Riolos of Patr**	**2.07**	**258**	*e*PN	**Pn**	**08 56 35.7**	**+0.6**
RLS	**Riolos of Patr**	**2.07**	**258**	*e*Pn	**Pn**	**08 56 35.7**	**+0.6**
ITM	**Ithomi**	**2.13**	**232**	*e*Pn	**Pn**	**08 56 36.5**	**+0.4**
ITM	**Ithomi**	**2.13**	**232**	*e*PN	**Pn**	**08 56 36.5**	**+0.4**
ITM	**Ithomi**	**2.13**	**232**	P	**Pn**	**08 56 36.4**	**+0.3**
ITM	**Ithomi**	**2.13**	**232**	*e*Pn	**Pn**	**08 56 36.5**	**+0.4**
HORT	**Hortiatis**	**2.19**	**341**	P	**Pn**	**08 56 36.7**	**-0.2**
HORT	**Hortiatis**	**2.19**	**341**	P	**Pn**	**08 56 36.7**	**-0.2**
SOH	**Sokhos**	**2.35**	**347**	*e*Pn	**Pn**	**08 56 38.8**	**-0.3**
SOH	**Sokhos**	**2.35**	**347**	*e*PN	**Pn**	**08 56 38.8**	**-0.3**
SOH	**Sokhos**	**2.35**	**347**	*e*Pn	**Pn**	**08 56 38.8**	**-0.3**
KYTH	**Kithira**	**2.37**	**200**	*e*Pn	**Pn**	**08 56 39.5**	**+0.2**
KYTH	**Kithira**	**2.37**	**200**	*e*PN	**Pn**	**08 56 39.5**	**+0.2**
KYTH	**Kithira**	**2.37**	**200**	*e*Pn	**Pn**	**08 56 39.5**	**+0.2**
SRS	**Serrai**	**2.61**	**353**	P	**Pn**	**08 56 42.4**	**-0.3**
SRS	**Serrai**	**2.61**	**353**	P	**Pn**	**08 56 42.3**	**-0.4**
SRS	**Serrai**	**2.61**	**353**	P	**Pn**	**08 56 42.4**	**-0.3**
GRG	**Griva**	**2.73**	**333**	P	**Pn**	**08 56 44.2**	**-0.1**
GRG	**Griva**	**2.73**	**333**	P	**Pn**	**08 56 44.2**	**-0.1**
ALN	**Alexandroupoli**	**2.84**	**33**	*e*Pb	**Pn**	**08 56 47.1**	**+1.4**
ALN	**Alexandroupoli**	**2.84**	**33**	*e*PB	**Pn**	**08 56 47.1**	**+1.4**
ALN	**Alexandroupoli**	**2.84**	**33**	*e*Pb	**Pn**	**08 56 47.1**	**+1.4**
VAY	**Valandovo**	**3.01**	**339**	*e*Pn	**Pn**	**08 56 48.7**	**+0.5**
KRUS	**Krusevo**	**3.56**	**324**	*e*Pn	**Pn**	**08 56 55.3**	**-0.3**
VTS	**Vitosha**	**4.11**	**352**	P	**Pn**	**08 57 04.6**	**+1.3**
VTS	**Vitosha**	**4.11**	**352**	ǁ *i*P	**Pn**	**08 57 01.7**	**-1.6**
VTS	**Vitosha**	**4.11**	**352**	P	**Pn**	**08 57 04.6**	**+1.3**
TIP	**Timpagrande**	**5.71**	**279**	P	**Pn**	**08 57 28.5**	**+3.3**
GZR	**Gura Zlata**	**6.93**	**353**	ǁ *i*P	**Pn**	**08 57 37.1**	**-4.8**
VOIR		**6.95**	**6**	ǁ *i*P	**Pn**	**08 57 42.2**	**0.0**
VOIR		**6.95**	**6**	ǁ *i*P	**Pn**	**08 57 42.2**	**0.0**
MLR	**Muntele Rosu**	**7.11**	**11**	ǁ *i*P	**Pn**	**08 57 45.4**	**+1.0**
MLR	**Muntele Rosu**	**7.11**	**11**	ǁ *i*P	**Pn**	**08 57 45.4**	**+1.0**
BRTR	**Keskin Array B**	**7.57**	**78**	Pn	**Pg**	**08 58 35.5**	**+10**
	0.0nm,0.3s,baz=259,slow=12,SNR=3.6						
PSZ	**Piszkesteto**	**9.86**	**344**	ǁ *i*P	**Pn**	**08 58 15.7**	**-6.4**
TORD	**Torodi Ar. Bea**	**32.11**	**224**	P	**P**	**09 02 27.9**	**0.0**
	1.1nm,0.6s,mb3.9,baz=35,slow=8.7,SNR=11						
MKAR	**Makanchi Array**	**42.77**	**59**	P	**P**	**09 04 00.6**	**+2.7**
	0.3nm,0.4s,mb3.4,baz=278,slow=6.9,SNR=3.5						

BJI ***22*** *09:48:31.8, 6°.64N× 144°.86E, h14km, mB5.1/8, mb4.9/17*
IDC ***22*** *09:48:32.5±0.7, 6°.61N× 144°.64E, h0km, mb4.3/15, mb1 4.4/16, mb1mx4.3/23, mbtmp4.3/16, ML5.1/1, MS4.0/8, Ms1 4.0/8, ms1mx3.6/27, Error ellipse: s-maj=26.9km s-min=14.2km az=86.0*
NEIC ***22*** *09:48:34.5±0.4, 6°.59N× 144°.57E, h10km, mb4.6/6, Error ellipse: s-maj=15.6km s-min=8.4km az=92.0*
ISCJB ***22*** *09:48:36.0±0.5, 6°.53N±0°.07× 144°.5E±0°.1, h33km, mb4.3/23, MS4.0/7, Error ellipse: s-maj=18.2km s-min=10.6km az=176.9*
GCMT ***22*** *09:48:37.3±0.4, 6°.64N× 144°.44E, h18km±2km, MW5.0, Moment Tensor Solution. s10,c10; s66,c91; Moment tensor: Scale 10^16 Nm; Mrr 0.04±.25; Mθθ 0.53±.19; Mφφ -0.57±.23; Mrθ 0.77±.48; Mrφ 3.51±.14; Mθφ -0.87±.44; Best double couple: M0 3.70000×10^16 NP1: φs 6.00000°, δ 78.00000°, λ -169.00000°. NP2: φs 273.00000°, δ 79.00000°, λ -12.00000°. Principal axes: T 3.5300, Plg 0.0000°, Azm 320.0000°; N 0.3800, Plg 74.0000°, Azm 51.0000°; P -3.9100, Plg 16.0000°, Azm 229.0000°; Data Used: II IU G IC CN.*

ISC 22 09:48:38.1±0.5, 6°.55N±0°.07× 144°.6E±0°.1, h35km, n34, σ0 s 79/28, mb4.3/23, MS4.0/7, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**7.00**	**3**	Pn	**Pn**	**09 50 14.6**	**-3.6**
	33nm,0.3s,baz=194,slow=5.8,SNR=24						
GUMO				Sn	**Sn**	**09 51 28.3**	**-8.4**
	87nm,0.3s,baz=253,slow=23,SNR=12						
GUMO				LR	LR	09 52 10.4	
	comp=Z,717nm,19.9s,baz=309,slow=31						
CBIJ	**Chichi jima**	**20.56**	**354**	LR	LR	10 00 10.0	
	comp=Z,561nm,20.5s,MS3.9,baz=68,slow=34						
CTA	**Charters Tower**	**26.52**	**176**	P	**P**	**09 54 13.3**	**+0.8**
	3.9nm,1.0s,mb3.9,baz=77,slow=11,SNR=2.3						
WRA	**Warramunga Arr**	**28.18**	**201**	P	**P**	**09 54 26.5**	**-0.9**
	4.1nm,0.9s,mb4.0,baz=22,slow=9.8,SNR=9.3						
MJAR	**Matsushiro Arr**	**30.41**	**350**	LR	LR	10 05 37.6	
	comp=Z,208nm,20.6s,MS3.8,baz=185,slow=34						
ASAR	**Alice Springs**	**31.78**	**199**	P	**P**	**09 54 58.6**	**-0.6**
	0.4nm,0.7s,mb3.4,baz=221,slow=12,SNR=6.4						
KSRS	**Korea Array**	**34.29**	**336**	P	**P**	**09 55 20.2**	**-0.9**
	1.6nm,0.7s,mb4.1,baz=164,slow=8.1,SNR=3.8						
KSRS				LR	LR	10 07 52.5	
	comp=Z,100nm,18.9s,MS3.6,baz=135,slow=34						
STKA	**Stephens Creek**	**38.31**	**184**	P	**P**	**09 55 55.4**	**-0.1**
	1.8nm,0.8s,mb3.9,baz=342,slow=9.6,SNR=6.5						
BJT	**Baijiatuau**	**41.94**	**327**	*e*P	**P**	**09 56 25.1**	**-0.4**
	8.4nm,0.6s,mb4.5						
CMAR	**Chiang Mai Arr**	**45.94**	**289**	P	**P**	**09 56 59.9**	**+2.0**
	8.4nm,0.9s,mb4.7,baz=92,slow=6.1,SNR=33						
LZH	**Lanzhou**	**47.43**	**314**	*e*P	**P**	**09 57 10.3**	**+1.0**
LZH				pP	pP	09 57 14.0	-5.8
LZH				sP	sP	09 57 16.1	-7.8
LZH				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
PETK	**Petropavlovsk-**	**47.65**	**11**	P	**P**	**09 57 11.0**	**+0.3**
	comp=Z,2.4nm,0.8s,mb4.3,baz=132,slow=2.1,SNR=3.9						
GTA	**Gaotai**	**51.80**	**316**	*e*P	**P**	**09 57 42.8**	**+0.2**
GTA				pP	pP	09 57 47.1	-6.0
GTA				sP	sP	09 57 50.8	-6.5
GTA				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
ULN	**Ulaanbaatar**	**52.08**	**329**	*e*P	**P**	**09 57 44.9**	**+0.4**
	comp=Z,12nm,0.8s,mb4.9						
SONM	**Songino Array**	**52.40**	**328**	P	**P**	**09 57 47.4**	**+0.5**
	comp=Z,4.6nm,0.8s,mb4.5,baz=140,slow=7.6,SNR=14						
SONM				LR	LR	10 19 09.7	
	comp=Z,186nm,18.3s,MS4.2,baz=64,slow=35						
RPZ	**Rata Peaks**	**55.48**	**157**	LR	LR	10 18 08.5	
	comp=Z,45nm,18.6s,MS4.6,baz=267,slow=32						
MKAR	**Makanchi Array**	**66.42**	**318**	P	**P**	**09 59 23.7**	**0.0**
	comp=Z,2.4nm,0.6s,mb4.4,baz=98,slow=8.0,SNR=14						
ZALV	**Zalesovo Beam**	**67.21**	**326**	P	**P**	**09 59 27.9**	**-0.7**
ZALV	**Zalesovo Beam**	**67.21**	**326**	P	**P**	**09 59 27.9**	**-0.7**
	comp=Z,3.8nm,0.7s,mb4.6,baz=99,slow=6.3,SNR=13						
KURK	**Kurchatov**	**69.81**	**322**	P	**P**	**09 59 44.4**	**-0.6**
	comp=Z,2.9nm,0.5s,mb4.5,baz=108,slow=5.7,SNR=5.8						
PPLA	**Purkeypile**	**72.22**	**25**	*e*P	**P**	**09 59 59.4**	**+0.1**
	comp=Z,4.1nm,0.7s,mb4.5						
COLD	**Coldfoot**	**74.56**	**22**	*e*P	**P**	**10 00 13.6**	**+0.6**
	comp=Z,5.4nm,1.0s,mb4.4						
ILAR	**Eielson Array**	**75.05**	**24**	P	**P**	**10 00 14.1**	**-1.8**
	comp=Z,2.3nm,0.6s,mb4.3,baz=254,slow=5.2,SNR=31						
ILAR				LR	LR	10 30 32.0	
	comp=Z,116nm,18.5s,MS4.2,baz=282,slow=34						
BVAR	**Borovoye Array**	**75.28**	**323**	P	**P**	**10 00 17.2**	**-0.3**
	comp=Z,4.3nm,0.7s,mb4.5,baz=100,slow=7.9,SNR=15						
EGAK	**Eagle**	**77.43**	**25**	*e*P	**P**	**10 00 30.4**	**+1.0**
	comp=Z,3.4nm,0.8s,mb4.3						
DAWY	**Dawson**	**78.05**	**26**	*e*P	**P**	**10 00 33.6**	**+0.7**
ABKAR	**Akbulak array**	**81.56**	**319**	*e*P	**P**	**10 00 51.7**	**-0.5**
	comp=Z,3.2nm,0.9s,mb4.2						
AKTK	**Aktyubinsk**	**82.79**	**320**	P	**P**	**10 00 58.4**	**-0.2**
AKTO	**Aktyubinsk**	**82.79**	**320**	P	**P**	**10 00 58.4**	**-0.2**
	comp=Z,0.6nm,0.3s,mb4.1,baz=87,slow=10,SNR=5.0						
SPITS	**Spitsbergen Ar**	**90.91**	**351**	LR	LR	10 40 53.6	
	comp=Z,69nm,18.2s,MS4.1,baz=35,slow=35						
NVAR	**Mina Array Bea**	**91.55**	**51**	P	**P**	**10 01 42.1**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.9,baz=281,slow=6.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**138.24**	**298**	PKP	PKPdf	10 08 01.1	+0.4
	comp=Z,0.5nm,0.9s,baz=93,slow=2.9,SNR=2.4						
LPAZ	**La Paz**	**146.59**	**110**	PKPbc	PKPbc	10 08 18.7	+1.8
	comp=Z,1.3nm,0.6s,baz=238,slow=5.4,SNR=8.7						
DBIC	**Dimbokro**	**146.77**	**293**	PKPbc	PKPbc	10 08 18.6	+1.0
	comp=Z,5.6nm,1.0s,baz=334,slow=3.4,SNR=2.5						

ISK ***22*** *10:02:12.6, 38°.73N× 29°.29E, h6km, MD2.7*
DDA ***22*** *10:02:12.6, 38°.75N× 29°.34E, h7km±1km, Md2.8*
ISCJB ***22*** *10:02:13.1±0.5, 38°.72N±0°.03× 29°.30E±0°.04, h10km, Error ellipse: s-maj=4.1km s-min=3.8km az=15.9*
CSEM ***22*** *10:02:13.2±0.1, 38°.73N× 29°.30E, h0km±4km, MD2.8, Error ellipse: s-maj=2.5km s-min=2.1km az=46.0*

ISC 22 10:02:13.5±0.5, 38.73N±0°.03× 29.31E±0°.04, h4km±8km, n20, σ0 s 62/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.38**	**21**	*i* P	**Pg**	**10 02 20.0**	**-0.9**
GDZ				*i* S	**Sg**	**10 02 26.1**	**+0.4**
GDZ	**Gediz**	**0.38**	**21**	*i* P	**Pg**	**10 02 20.0**	**-0.8**
GDZ				*i* S	**Sg**	**10 02 26.1**	**+0.3**
KHAL	**Karahalli**	**0.39**	**158**	*i* P	**Pg**	**10 02 20.4**	**-0.6**
KHAL				*i* S	**Sg**	**10 02 26.7**	**+0.6**
KHAL	**Karahalli**	**0.39**	**158**	*i* P	**Pg**	**10 02 20.4**	**-0.6**
KHAL				*i* S	**Sg**	**10 02 26.7**	**+0.6**
KHL	**Karahalli**	**0.44**	**158**	*e*PG	**Pg**	**10 02 22.1**	**0.0**
KHL				*e*SG	**Sg**	**10 02 28.4**	**+0.6**
KHL	**Karahalli**	**0.44**	**158**	*e*Pg	**Pg**	**10 02 22.1**	**+0.1**
KHL				*e*Sg	**Sg**	**10 02 28.4**	**+0.6**
KULA	**Kula-Manisa**	**0.55**	**247**	*e*PG	**Pg**	**10 02 23.3**	**-0.8**
KULA				*e*SG	**Sg**	**10 02 31.0**	**-0.3**
KULA	**Kula-Manisa**	**0.55**	**247**	*e*Pg	**Pg**	**10 02 23.3**	**-0.8**
KULA				*e*Sg	**Sg**	**10 02 31.0**	**-0.3**
DEMI	**Demirci**	**0.56**	**304**	*i* P	**Pg**	**10 02 24.0**	**-0.2**
DEMI				*i* S	**Sg**	**10 02 32.1**	**+0.8**
DEMI	**Demirci**	**0.56**	**304**	*i* P	**Pg**	**10 02 24.0**	**-0.2**
DEMI				*i* S	**Sg**	**10 02 32.1**	**+0.7**
ALT	**Altintas**	**0.70**	**63**	*e*PG	**Pg**	**10 02 26.9**	**-0.1**
ALT				*e*SG	**Sg**	**10 02 36.4**	**+0.2**
ALT	**Altintas**	**0.70**	**63**	*e*Pg	**Pg**	**10 02 26.9**	**-0.1**
ALT				*e*Sg	**Sg**	**10 02 36.4**	**+0.2**
ESKT	**Eskisehir**	**1.43**	**56**	*i* P	**Pn**	**10 02 38.8**	**-1.5**
ESKT				*i* S	**Sb**	**10 02 59.2**	**-0.1**
SEYT	**Eskypehyr**	**1.43**	**56**	*i* P	**Pn**	**10 02 38.8**	**-1.5**
SEYT				*i* S	**Sb**	**10 02 59.2**	**-0.2**
GONE	**Gonen-Balikesi**	**1.82**	**317**	*e*PN	**Pn**	**10 02 45.8**	**+0.2**
GONE	**Gonen-Balikesi**	**1.82**	**317**	*e*Pn	**Pn**	**10 02 45.8**	**+0.3**
ARMT	**Armutlu**	**1.86**	**349**	*e*PN	**Pn**	**10 02 47.0**	**+0.8**
ARMT	**Armutlu**	**1.86**	**349**	*e*Pn	**Pn**	**10 02 47.0**	**+0.9**
GULT	**Gulveren**	**1.94**	**28**	*e*PN	**Pn**	**10 02 47.8**	**+0.6**
GULT	**Gulveren**	**1.94**	**28**	*e*Pn	**Pn**	**10 02 47.8**	**+0.6**

JMA ***22*** *10:14:04.7±0.9, 45°.51N× 151°.90E, h30km, M4.0*
ISCJB ***22*** *10:14:07.9±0.9, 45°.0N±0°.2× 151°.7E±0°.1, h47km, mb3.8/12, Error ellipse: s-maj=24.5km s-min=5.3km az=151.7*
MOS ***22*** *10:14:07.0±0.9, 45°.39N× 151°.64E, h27km, mb4.2/5, Error ellipse: s-maj=21.2km s-min=16.6km az=68.5*
NEIC ***22*** *10:14:11.0±0.8, 45°.30N× 151°.66E, mb4.1/2, Error ellipse: s-maj=22.0km s-min=10.3km az=159.0*
IDC ***22*** *10:14:11.3±1.8, 45°.38N× 151°.71E, h47km±6km, mb3.4/10, mb1 3.6/11, mb1mx3.5/24, mbtmp3.5/11, Error ellipse: s-maj=50.4km s-min=17.1km az=178.0*

ISC 22 10:14:10.0±0.9, 45°.0N±0°.1× 151°.7E±0°.1, h49km, h49km±1.4km: pP-P, n36, σ1 s 01/41, mb3.8/12, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.59**	**251**	P	**Pn**	**10 15 15.4**	**-1.4**
NEM2				*e*S	**Sn**	**10 16 08.3**	**-0.5**
JNK	**Nakash**	**5.21**	**256**	P	**Pn**	**10 15 25.2**	**-0.1**
JNK				*e*S	**Sn**	**10 16 25.2**	**+1.2**
JAK	**Akkeshi**	**5.44**	**251**	P	**Pn**	**10 15 27.1**	**-1.3**
JTKR	**Abashiri--Toko**	**5.67**	**262**	P	**Pn**	**10 15 32.2**	**+0.6**
JAR	**Ashorobuto**	**5.96**	**256**	P	**Pn**	**10 15 35.8**	**+0.3**
JAR				*e*S	**Sn**	**10 16 43.2**	**+0.8**
JMP	**Maruseppu**	**6.04**	**263**	P	**Pn**	**10 15 37.5**	**+0.7**
JOB	**Onbets**	**6.05**	**252**	P	**Pn**	**10 15 36.6**	**-0.3**
JOB				*e*S	**Sn**	**10 16 43.5**	**-1.3**
SKR	**Severo-Kuril's**	**6.40**	**26**	*e*PN	**Pn**	**10 15 38.0**	**-3.5**
JCH	**Churui**	**6.49**	**251**	P	**Pn**	**10 15 42.6**	**-0.3**
JCH				*e*S	**Sn**	**10 16 54.3**	**-1.2**
JKK2	**Kamakawa 2**	**6.50**	**263**	P	**Pn**	**10 15 44.4**	**+1.3**
ASAJ	**Asahikawa**	**6.56**	**265**	P	**Pn**	**10 15 45.0**	**+1.1**
	1.0nm,0.3s,baz=112,slow=16,SNR=5.5						
ASAJ	**Asahikawa**	**6.56**	**265**	PN	**Pn**	**10 15 45.0**	**+1.2**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**6.89**	**247**	*e*Pn	**Pn**	**10 15 50.2**	**+1.8**
	comp=Z,24nm,0.4s						
ERM	**Erimo**	**6.89**	**247**	*e*PN	**Pn**	**10 15 50.2**	**+1.8**
ERM				pmax	pmax		
	comp=Z,24nm,0.4s						
JNBK	**Urakawa-nobuka**	**7.04**	**250**	P	**Pn**	**10 15 49.1**	**-1.3**
JNB	**Noboribetsu**	**8.12**	**255**	P	**Pn**	**10 16 05.5**	**+0.2**
JKB	**Kayabe**	**8.36**	**252**	P	**Pn**	**10 16 07.6**	**-0.9**
GTA	**Gaotai**	**38.28**	**280**	*e*P	**P**	**10 21 27.6**	**+2.2**
GTA				pP	pP	10 21 32.6	-5.8
GTA				sP	sP	10 21 35.6	-8.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
ILAR	**Eielson Array**	**38.52**	**37**	P	**P**	**10 21 26.1**	**-1.0**
	comp=Z,0.2nm,0.6s,mb3.1,baz=258,slow=8.4,SNR=5.9						
ILAR				pP	pP	10 21 38.9	-1.2
	comp=Z,0.3nm,0.5s,baz=258,slow=8.3,SNR=4.9						
ZALV	**Zalesovo Beam**	**42.84**	**307**	P	**P**	**10 22 03.1**	**+0.3**
	comp=Z,0.7nm,0.4s,mb3.8,baz=87,slow=7.7,SNR=2.2						
ZALV	**Zalesovo Beam**	**42.84**	**307**	P	**P**	**10 22 03.1**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
MKAR	**Makanchi Array**	**46.87**	**298**	P	**P**	**10 22 35.6**	**+0.6**
	comp=Z,0.4nm,0.2s,mb3.9,baz=70,slow=7.6,SNR=8.0						
MKAR				pP	pP	10 22 49.6	+1.3
	comp=Z,0.3nm,0.2s,baz=69,slow=6.6,SNR=1.7						
KURK	**Kurchatov**	**47.51**	**304**	*e*P	**P**	**10 22 39.8**	**-0.1**
	comp=Z,0.7nm,0.5s,mb4.0						
KURK	**Kurchatov**	**47.51**	**304**	P	**P**	**10 22 39.3**	**-0.6**
	comp=Z,0.4nm,0.3s,mb4.0,baz=70,slow=8.5,SNR=3.0						
KURK	**Kurchatov**	**47.51**	**304**	*e*P	**P**	**10 22 39.8**	**-0.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
ABKAR	**Akbulak array**	**58.77**	**310**	*e*P	**P**	**10 24 02.2**	**-0.5**
	comp=Z,1.2nm,0.4s,mb4.3						
ABKAR				*e*pP	pP	10 24 16.0	-0.4
ARCES	**ARCESS Array B**	**59.16**	**341**	P	**P**	**10 24 04.2**	**-0.9**
	comp=Z,1.4nm,0.9s,mb4.0,baz=25,slow=11,SNR=4.7						
ARCES				pP	pP	10 24 18.1	-0.7
	comp=Z,0.6nm,0.7s,baz=32,slow=7.1,SNR=2.1						
ARCES	**ARCESS Array B**	**59.16**	**341**	P	**P**	**10 24 04.2**	**-0.9**
ARCES				*PP	pP	10 24 18.1	-0.7
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NVAR	**Mina Array Bea**	**64.13**	**61**	P	**P**	**10 24 40.0**	**+0.9**
	comp=Z,0.2nm,0.5s,mb3.4,baz=288,slow=7.5,SNR=2.8						
NVAR				pP	pP	10 24 52.9	0.0
	comp=Z,0.2nm,0.6s,baz=289,slow=4.5,SNR=3.4						
FINES	**FINESS Array B**	**65.17**	**335**	P	**P**	**10 24 44.5**	**-1.0**
FINES				pP	pP	10 24 57.8	-1.5
FINES	**FINESS Array B**	**65.17**	**335**	P	**P**	**10 24 44.5**	**-1.0**
	comp=Z,2.5nm,0.9s,mb4.2,baz=160,slow=34,SNR=2.7						
FINES				pP	pP	10 24 57.8	-1.5
	comp=Z,1.1nm,0.4s,baz=57,slow=9.1,SNR=2.5						
FINES	**FINESS Array B**	**65.17**	**335**	P	**P**	**10 24 44.5**	**-1.0**
FINES				*PP	pP	10 24 57.8	-1.5
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NOA	**NORSAR Array B**	**69.53**	**341**	P	**P**	**10 25 12.4**	**-0.6**
	comp=Z,0.7nm,0.5s,mb3.8,baz=27,slow=6.7,SNR=4.3						
NOA				pP	pP	10 25 26.1	-0.9
	comp=Z,1.0nm,0.5s,baz=27,slow=6.3,SNR=4.5						
NOA	**NORSAR Array B**	**69.53**	**341**	P	**P**	**10 25 12.4**	**-0.6**
NOA				*PP	pP	10 25 26.1	-0.9
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**78.96**	**316**	P	**P**	**10 26 09.1**	**+0.9**
	comp=Z,0.4nm,0.6s,mb3.5,baz=72,slow=4.7,SNR=3.2						
TXAR	**Lajitas Array**	**79.22**	**59**	P	**P**	**10 26 11.0**	**+1.2**
	comp=Z,0.1nm,0.4s,mb3.1,baz=217,slow=3.1,SNR=2.7						
TXAR				pP	pP	10 26 23.4	-0.7
	comp=Z,0.2nm,0.6s,baz=292,slow=3.6,SNR=3.2						

CNRM ***22*** *10:18:46.8, 32°.42N× 6°.63W, h6km, MD3.5*
ISCJB ***22*** *10:18:48.7±0.7, 32°.37N±0°.05× 6°.47W±0°.05, h16km±8km, Error ellipse: s-maj=8.0km s-min=6.9km az=12.3*
CSEM ***22*** *10:18:48.9±0.4, 32°.29N× 6°.33W, h8km, ML3.3/4, Error ellipse: s-maj=8.2km s-min=7.1km az=24.0*
INMG ***22*** *10:18:52.0±0.8, 32°.50N× 6°.18W, h0km, ML2.6, Error ellipse: s-maj=6.0km s-min=5.3km az=74.0*

ISC 22 10:18:49.6±0.7, 32°.35N±0°.04× 6°.39W±0°.04, h11km±6km, n18, σ1 s 20/32, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TZC	**Tazercounte**	**0.21**	**203**	*i* P	**Pg**	**10 18 53.0**	**-1.1**
TZC				*i* S	**Sg**	**10 18 57.0**	**-0.1**
KIB	**El Ksiba**	**0.38**	**52**	*i* P	**Pg**	**10 18 56.0**	**-1.1**
KIB				*i* S	**Sg**	**10 19 03.0**	**+0.8**
CZD	**Col de Zad**	**1.33**	**59**	*i* P	**Pn**	**10 19 13.0**	**-1.0**
CZD				*i* S	**Sb**	**10 19 32.0**	**+0.5**
ZFT	**Errachidia**	**1.76**	**100**	*i* P	**Pn**	**10 19 19.0**	**-0.9**
ZFT				*i* S	**Sn**	**10 19 43.0**	**+0.7**
TZK	**Tazeka**	**2.54**	**46**	*e*P	**Pn**	**10 19 30.0**	**-0.7**
PBDV	**Barranco-do-Ve**	**5.05**	**346**	*e*Pn	**Pn**	**10 20 06.4**	**+1.3**
PBDV				*e*Sn	**Sn**	**10 21 02.8**	**-0.6**
PBDV				A		10 21 06.9	
	4.1nm,0.5s						
PBDV	**Barranco-do-Ve**	**5.05**	**346**	*e*Pn	**Pn**	**10 20 06.4**	**+1.3**
PBDV				*e*Sn	**Sn**	**10 21 02.8**	**-0.6**
	4.1nm,0.5s						
PVAQ	**Vaqueiros**	**5.16**	**348**	*e*Pn	**Pn**	**10 20 08.2**	**+1.5**
PVAQ				*e*Sn	**Sn**	**10 21 05.5**	**-0.8**
PVAQ				A		10 21 09.8	
	5.1nm,0.4s						
PVAQ	**Vaqueiros**	**5.16**	**348**	*e*Pn	**Pn**	**10 20 08.2**	**+1.5**
PVAQ				*e*Sn	**Sn**	**10 21 05.5**	**-0.8**
	5.1nm,0.4s						
PFVI	**Vila Bisbo**	**5.18**	**338**	*e*Pn	**Pn**	**10 20 08.3**	**+1.3**
PFVI				*e*Sn	**Sn**	**10 21 08.7**	**+2.0**
PFVI				A		10 21 16.8	
	5.7nm,0.5s						
PFVI	**Vila Bisbo**	**5.18**	**338**	*e*Pn	**Pn**	**10 20 08.3**	**+1.3**
PFVI				*e*Sn	**Sn**	**10 21 08.7**	**+2.0**
	5.7nm,0.5s						
PCVE	**Castro Verde**	**5.45**	**346**	*e*Pn	**Pn**	**10 20 12.1**	**+1.5**
PCVE				*e*Sn	**Sn**	**10 21 12.5**	**-0.7**
PCVE				A		10 21 16.2	
	5.1nm,0.3s						
PCVE	**Castro Verde**	**5.45**	**346**	*e*Pn	**Pn**	**10 20 12.1**	**+1.5**
PCVE				*e*Sn	**Sn**	**10 21 12.5**	**-0.7**
	5.1nm,0.3s						
PBAR	**Barrancos**	**5.84**	**

BJI ***22*** *10:59:43.2,36˚.31N×140˚.94E,h41km,mB5.2/28,mb5.4/62, Ms4.6/51,Ms7 4.3/49*

MOS ***22*** *10:59:46.6±0.8,36˚.52N×140˚.45E,h33km,mb5.7/113, MS4.3/35,Error ellipse: s-maj=7.0km s-min=3.6km az=107.8*

SZGRF ***22*** *10:59:47.6,37˚.14N×141˚.70E,h33km, mb5.7,MS4.8,Near east coast of eastern Honshu, Japan*

NEIC ***22*** *10:59:50.1±0.5,36˚.46N×140˚.40E,h52km±4km,mb5.2/152, MS4.6/5,MW5.1(NIED),Error ellipse: s-maj=3.5km s-min=2.5km az=153.0*

JMA ***22*** *10:59:50.1±0.1,36˚.44N×140˚.62E,h56km±1km,M5.2 Broadband fault plane solution: P waves. NP1: ϕs213.00000°,δ16.00000°,λ102.00000°. NP2: ϕs20.00000°,δ74.00000°,λ86.00000°. Principal axes: T Plg61.0000°, Azm285.0000°; N Plg3.0000°, Azm21.0000°; P Plg29.0000°, Azm113.0000°;*

JMA Felt IV J1.

ISCJB ***22*** *10:59:50.5±0.2,36˚.48N±0˚.02×140˚.44E±0˚.02,h65km±1km, mb5.3/332 Error ellipse: s-maj=2.9km s-min=2.0km az=153.7*

IDC ***22*** *10:59:51.9±1.1,36˚.43N×140˚.45E,h70km±9km,mb4.9/30, mb1 5.0/31,mb1mx5.0/32,mbtmp4.9/31,MS4.1/17, Ms1 4.2/17,ms1mx4.0/27,Error ellipse: s-maj=10.7km s-min=7.0km az=88.0*

BGS ***22*** *10:59:54.5±1.6,36˚.56N×137˚.60E,h50km±999km,mb5.4*

GCMT ***22*** *10:59:54.5±0.2,36˚.45N×140˚.72E,h59km±1km,MW5.2, Moment Tensor Solution. s50,c71; s86,c145; Moment tensor: Scale 10¹⁶Nm; Mrr6.32±.23; Mθθ-0.47±.17; Mϕϕ-5.85±.16; Mrθ0.61±.13; Mθϕ-2.21±.12; Mϕr3.13±.12; Best double couple: M₀7.20000×10¹⁶ NP1:ϕs204.00000°, δ32.00000°,λ97.00000°. NP2:ϕs16.00000°,δ58.00000°, λ86.00000°. Principal axes: T 7.0800, Plg76.0000°, Azm272.0000°; N 0.2900, Plg4.0000°, Azm18.0000°; P -7.3700, Plg13.0000°, Azm109.0000°; Data Used: ll IU IC CN G.*

DJA ***22*** *10:59:56,36˚.41N×140˚.32E,h94km,mb5.7/43*

ISC 22 10:59:51.5±0.2,36˚.50N±0˚.02×140˚.44E±0˚.02,h61km±1km, h46km±2.5km:pP-P,n1334,c0s74/1349,mb5.4/332, 428C-215D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.15**	**42**	⇑P		**Pn**	**10 59 59.0**	**-1.8**
JHO					S	**Sn**	**11 00 05.0**	**-2.5**
JYT	**Yasato**	**0.34**	**217**	⇓P		**Pn**	**11 00 00.8**	**-1.2**
JYT					S	**Sn**	**11 00 08.3**	**-1.3**
ONAJ	**Iwakimizuishiy**	**0.66**	**25**	⇓P		**Pn**	**11 00 03.3**	**-2.1**
ONAJ					*e*S	**Sn**	**11 00 13.1**	**-2.4**
JAG	**Ashikaga**	**0.80**	**265**	⇓P		**Pn**	**11 00 07.5**	**+0.5**
JAG					S	**Sn**	**11 00 19.6**	**+1.1**
JFK	**Kawauchi**	**0.93**	**22**	⇑P		**Pn**	**11 00 06.7**	**-2.0**
JFK					*e*S	**Sn**	**11 00 18.8**	**-2.6**
TOK	**Tokyo**	**0.98**	**215**	⇓P		**Pn**	**11 00 09.1**	**-0.2**
TOK					S	**Sn**	**11 00 22.7**	**+0.2**
JKT	**Katashina**	**1.00**	**286**	⇓P		**Pn**	**11 00 10.5**	**+1.0**
JKT					S	**Sn**	**11 00 25.6**	**+2.7**
JFT	**Otama**	**1.02**	**355**	⇓P		**Pn**	**11 00 09.5**	**-0.3**
JFT					S	**Sn**	**11 00 23.6**	**+0.2**
JFY	**Yanaizu**	**1.08**	**327**	⇓P		**Pn**	**11 00 11.2**	**+0.6**
JFY					S	**Sn**	**11 00 26.7**	**+1.9**
JRY	**Ryogami san**	**1.34**	**249**	⇓P		**Pn**	**11 00 14.4**	**+0.4**
JHK	**Hiroka**	**1.37**	**304**	⇓P		**Pn**	**11 00 15.6**	**+1.2**
JMM	**Marumori**	**1.39**	**11**	⇓P		**Pn**	**11 00 14.0**	**-0.7**
JMM					S	**Sn**	**11 00 31.2**	**-1.0**
JGK	**Kuni**	**1.46**	**273**	⇓P		**Pn**	**11 00 16.9**	**+1.3**
JOD2	**Odawara 2**	**1.65**	**222**	⇓P		**Pn**	**11 00 18.1**	**-0.2**
JIZZ	**Izumozaki**	**1.73**	**307**	⇓P		**Pn**	**11 00 21.4**	**+2.1**
JYS	**Shirataka**	**1.74**	**350**	⇓P		**Pn**	**11 00 20.1**	**+0.6**
MJAR	**Matsushiro Arr**	**1.80**	**272**	P		**Pn**	**11 00 20.4**	**+0.1**
	1μm,0.3s,baz=98,slow=8.5,SNR=5375							
MJAR					S	**Sn**	**11 00 36.6**	**-5.5**
	1μm,0.3s,baz=99,slow=10,SNR=26							
MAJO	**Matsushiro**	**1.80**	**272**	*e*Pn		**Pn**	**11 00 21.5**	**+1.3**
MAJO				*e*Sn		**Sn**	**11 00 37.0**	**-5.1**
MAT	**Matsushiro**	**1.80**	**272**	P		**Pn**	**11 00 21.4**	**+1.1**
MAT					S	**Sn**	**11 00 45.6**	**+3.5**
AJI	**Ajiro2**	**1.82**	**218**	⇓P		**Pn**	**11 00 20.2**	**-0.3**
JYN	**Shimob**	**1.84**	**238**	⇓P		**Pn**	**11 00 21.8**	**+1.1**
JJN	**Nakama**	**1.93**	**289**	⇓P		**Pn**	**11 00 24.2**	**+2.2**
JAW	**Awa shima**	**2.17**	**334**	⇓P		**Pn**	**11 00 25.9**	**+0.6**
SHZ3	**Shizuoka 3**	**2.31**	**232**	⇓P		**Pn**	**11 00 28.7**	**+1.5**
SHZ3					S	**Sn**	**11 00 58.8**	**+4.3**
JNY	**Yasuok**	**2.39**	**242**	⇓P		**Pn**	**11 00 30.1**	**+1.9**
JYK	**Kaneyama**	**2.42**	**353**	⇓P		**Pn**	**11 00 28.9**	**+0.3**
JGN	**Niukaw**	**2.54**	**265**	⇓P		**Pn**	**11 00 32.6**	**+2.3**
JSZ	**Suzu**	**2.64**	**292**	⇓P		**Pn**	**11 00 33.1**	**+1.4**
JGF	**Kuroka**	**2.66**	**251**	⇓P		**Pn**	**11 00 34.2**	**+2.3**
HMMJ	**Hamamatsu 2**	**2.76**	**234**	⇓P		**Pn**	**11 00 34.9**	**+1.6**
JAO	**Obara**	**2.87**	**245**	⇓P		**Pn**	**11 00 36.8**	**+2.1**
JAO					S	**Sn**	**11 01 14.4**	**+6.4**
JRG	**Rokugo**	**2.90**	**3**	⇓P		**Pn**	**11 00 35.8**	**+0.7**
JYW	**Yuwa**	**3.04**	**357**	⇓P		**Pn**	**11 00 38.6**	**+1.5**
JHJ	**Hachijo jima 2**	**3.42**	**189**	P		**Pn**	**11 00 41.3**	**-1.0**
	448nm,0.3s,baz=161,slow=3.0,SNR=76							
JHJ					S	**Sn**	**11 01 21.0**	**-0.5**
	587nm,0.3s,baz=87,slow=21,SNR=9.6							
JAH	**Hinai**	**3.69**	**2**	⇓P		**Pn**	**11 00 47.1**	**+1.1**
JWT	**Wachi**	**4.27**	**255**	⇓P		**Pn**	**11 00 56.1**	**+2.1**
JKY	**Yasaka**	**4.41**	**260**	⇓P		**Pn**	**11 00 58.5**	**+2.6**
JKB	**Kayabe**	**5.40**	**5**	P		**Pn**	**11 01 09.1**	**-0.3**
ERM	**Erimo**	**5.90**	**20**	Pn		**Pn**	**11 01 13.2**	**-3.0**
	1μm,0.4s,SNR=16							
ERM	**Erimo**	**5.90**	**20**	*e*Pn		**Pn**	**11 01 13.4**	**-2.7**
ERM				*e*Sn		**Sn**	**11 02 20.5**	**-1.8**
JNBK	**Urakawa-nobuka**	**6.04**	**16**	P		**Pn**	**11 01 16.3**	**-1.9**
ASAJ	**Asahikawa**	**7.78**	**12**	P		**Pn**	**11 01 39.4**	**-2.6**
	20nm,0.3s,baz=220,slow=12,SNR=98							
ASAJ					LR	LR	11 05 43.6	
	comp=Z,658nm,19.9s,baz=5.7,slow=45							
ASAJ	**Asahikawa**	**7.78**	**12**	P		**Pn**	**11 01 39.4**	**-2.6**
ASAJ					pmax	pmax		
	comp=Z,20nm,0.3s							
ASAJ					MLR	MLR		
	comp=Z,658nm,19.9s							
YUK	**Yuzh-Kuril'sk**	**8.59**	**27**	⇑*i*P		**Pn**	**11 01 48.9**	**-4.1**
YUK				*i*S		**Sn**	**11 03 19.4**	**-8.9**
YUK					pmax	pmax		
	comp=Z,255nm,0.4s							
YUK					pmax	pmax		
	comp=N,49nm,0.2s							
YUK					pmax	pmax		
	comp=E,127nm,0.2s							
YUK					pmax	pmax		
	comp=Z,250nm,0.6s							
YUK					smax			
	comp=N,200nm,0.5s							
YUK					smax			
	comp=E,2μm,0.6s							
YUK					smax			
	comp=N,174nm,0.5s							
YUK					smax			
	comp=E,2μm,0.5s							
CBIJ	**Chichi jima**	**9.49**	**171**	P		**Pn**	**11 02 00.5**	**-5.0**
	comp=E,122nm,0.3s,baz=33,slow=4.1,SNR=20							
KSRS	**Korea Array**	**10.06**	**279**	P		**Pn**	**11 02 18.1**	**+4.9**
	comp=E,7.5nm,0.3s,baz=93,slow=14,SNR=202							
KSRS					LR	LR	11 06 01.2	
	comp=E,2μm,21.2s,baz=98,slow=36							
KSRS	**Korea Array**	**10.06**	**279**	P		**Pn**	**11 02 18.2**	**+5.0**
KSRS					pmax	pmax		
	comp=Z,8.0nm,0.3s							
KSRS					MLR	MLR		
	comp=Z,2μm,21.2s							
KUR	**Kuril'sk**	**10.37**	**30**	*e*P		**Pn**	**11 02 13.0**	**-4.4**
KUR				*e*S		**Sn**	**11 04 03.0**	**-9.0**
KUR					pmax	pmax		
	comp=N,80nm,0.6s							
KUR					pmax	pmax		
	comp=E,60nm,0.6s							
KUR					pmax	pmax		
	comp=Z,140nm,0.6s							
KUR					smax			
	comp=N,2μm,1.2s							
KUR					smax			
	comp=E,2μm,1.2s							
KUR					smax			
	comp=N,570nm,0.8s							
KUR					smax			
	comp=E,390nm,0.8s							
YSS	**Yuzh-Sakhalins**	**10.59**	**9**	*e*Pn		**Pn**	**11 02 17.2**	**-3.1**
YSS	**Yuzh-Sakhalins**	**10.59**	**9**	*e*P		**Pn**	**11 02 16.3**	**-4.0**
YSS				*e*S		**Sn**	**11 04 12.0**	**-5.2**
YSS					MLR	MLR		
	comp=Z,600nm,16.0s							
YSS					MLR	MLR		
	comp=N,700nm,18.0s							
YSS					MLR	MLR		
	comp=E,500nm,14.0s							
INCN	**Inchon**	**11.09**	**279**	*e*Pn		**Pn**	**11 02 22.9**	**-4.4**
MDJ	**Mudanjiang**	**11.56**	**318**	P		**Pn**	**11 02 37.8**	**+4.2**
MDJ				S		**Sn**	**11 04 41.3**	**+0.3**
MDJ				PcP		PcP	11 08 22.9	+2.5
MDJ				PcS		PcS	11 11 55.3	+1.1
MDJ					pmax	pmax		
	comp=Z,280nm,1.1s							
MDJ					LR	LR		
	comp=N,1μm,24.1s							
MDJ					LR	LR		
	comp=E,630nm,20.7s							
MDJ					LR	LR		
	comp=Z,2μm,27.6s							
MDJ	**Mudanjiang**	**11.56**	**318**	Pn		**Pn**	**11 02 32.5**	**-1.1**
	comp=Z,230nm,0.8s							
HABR	**Khabarovsk**	**12.61**	**343**	*c*P		**Pn**	**11 02 41.9**	**-5.9**
HABR							11 04 58.9	
HABR					MLR	MLR		
	comp=Z,783nm,16.0s							
CN2	**Changchun**	**13.58**	**307**	*e*P		**Pn**	**11 03 01.3**	**+0.2**
CN2				*e*pP			11 03 09.8	
CN2				*e*S		**Sn**	**11 05 31.8**	**+1.6**
CN2					pmax	pmax		
	comp=Z,10.0nm,1.1s							
CN2					pmax	pmax		
	comp=Z,200nm,3.0s							
CN2					LR	LR		
	comp=N,700nm,16.0s							
CN2					LR	LR		
	comp=E,600nm,16.0s							
CN2					LR	LR		
	comp=Z,200nm,16.0s							
SNY	**Shenyang**	**14.12**	**297**	⇓P		**Pn**	**11 03 10.8**	**+2.5**
SNY					pmax	pmax		
	comp=Z,42nm,0.9s							
SNY					pmax	pmax		
	comp=Z,580nm,4.2s							
SNY					LR	LR		
	comp=N,730nm,13.8s							
SNY					LR	LR		
	comp=E,890nm,20.4s							
SNY					LR	LR		
	comp=Z,1μm,18.6s							
KLR	**Kul'dur**	**14.22**	**336**	*e*P		**Pn**	**11 03 04.0**	**-5.5**
KLR					MLR	MLR		
	comp=E,600nm,13.0s							
KLR					MLR	MLR		
	comp=Z,1μm,13.0s							
DL2	**Dalian**	**15.09**	**285**	P		**Pn**	**11 03 25.3**	**+4.4**
DL2				S		**S**	**11 06 19.0**	**-2.1**
DL2					pmax	pmax		
	comp=Z,70nm,0.7s							
DL2					pmax	pmax		
	comp=Z,290nm,4.1s							
DL2					LR	LR		
	comp=E,720nm,16.8s							
DL2					LR	LR		
	comp=Z,890nm,16.9s							
SSE	**Sheshan**	**16.88**	**257**	P		**Pn**	**11 03 43.1**	**-0.6**
SSE				S		**S**	**11 06 51.1**	**-6.7**
SSE					pmax	pmax		
	comp=Z,32nm,0.9s							
SSE					pmax	pmax		
	comp=Z,630nm,6.2s							
SSE					LR	LR		
	comp=N,810nm,24.7s							
SSE					LR	LR		
	comp=E,910nm,24.7s							
SSE					LR	LR		
	comp=Z,1μm,20.3s							
SKR	**Severo-Kuril's**	**18.11**	**34**	*e*P		**Pn**	**11 03 56.0**	**-2.5**
SKR					pmax	pmax		
	comp=Z,110nm,1.0s							
SKR					pmax	pmax		
	comp=N,40μm,1.0s							
SKR					pmax	pmax		
	comp=E,110μm,1.0s							
NJ2	**Nanjing**	**18.38**	**262**	*e*P		**Pn**	**11 04 01.0**	**-1.0**
NJ2				pP		pP	11 04 09.0	-5.4
NJ2				sP		sP	11 04 13.5	-8.5
NJ2				PP			11 04 16.6	
NJ2				S		**S**	**11 07 24.5**	**-3.0**
NJ2				sS		sS	11 07 37.5	-12
NJ2					pmax	pmax		
	comp=Z,100nm,0.7s							
NJ2					pmax	pmax		
	comp=Z,960nm,4.7s							
NJ2					LR	LR		
	comp=N,920nm,15.6s							
NJ2					LR	LR		
	comp=E,1μm,16.6s							
NJ2					LR	LR		
	comp=Z,1μm,17.6s							
TIA	**Tai'an**	**18.78**	**276**	⇑P		**Pn**	**11 04 05.0**	**-1.8**
TIA					pmax	pmax		
	comp=Z,120nm,0.5s							
BJI	**Beijing**	**19.36**	**288**	P		**Pn**	**11 04 11.6**	**-2.1**
BJI				pP		pP	11 04 19.8	-5.4
BJI				S		**S**	**11 07 43.9**	**-3.9**
BJI					pmax	pmax		
	comp=Z,240nm,0.7s							
BJI					pmax	pmax		
	comp=Z,190nm,3.5s							
BJI					LR	LR		
	comp=N,430nm,19.8s							
BJI					LR	LR		
	comp=E,450nm,16.9s							
BJI					LR	LR		
	comp=Z,500nm,28.2s							
BJT	**Baijiatuan**	**19.37**	**288**	P		**Pn**	**11 04 11.0**	**-2.8**
	comp=Z,212nm,0.4s							
BJT	**Baijiatuan**	**19.37**	**288**	P		**Pn**	**11 04 11.0**	**-2.8**
BJT					pmax	pmax		
	comp=Z,212nm,0.4s							
HIA	**Hailar**	**19.74**	**317**	*e*P		**Pn**	**11 04 15.8**	**-2.3**
	comp=Z,42nm,0.7s							
HIA	**Hailar**	**19.74**	**317**	*e*P		**Pn**	**11 04 15.8**	**-2.3**
HIA					pmax	pmax		
	comp=Z,42nm,0.7s							
TATO	**Taipei**	**19.90**	**240**	*e*P		**Pn**	**11 04 17.8**	**-2.3**
YHNB	**Yeheng**	**20.17**	**240**	*e*P		**P**	**11 04 19.5**	**-1.5**
	comp=Z,46nm,0.7s							
NACB	**Ninganchiao**	**20.34**	**238**	*e*P		**P**	**11 04 21.5**	**-1.3**
	comp=Z,34nm,0.4s							
PETK	**Petropavlovsk-**	**20.54**	**31**	P		**Pn**	**11 04 24.1**	**-0.6**
	comp=Z,11nm,0.7s,baz=269,slow=2.5,SNR=16							
PETK					PcP	PcP	11 08 33.5	-0.2
	comp=Z,4.4nm,0.9s,baz=132,slow=4.1,SNR=6.4							
PETK					LR	LR	11 12 30.5	
	comp=Z,186nm,21.0s,baz=221,slow=37							
PETK	**Petropavlovsk-**	**20.54**	**31**	P		**P**	**11 04 24.2**	**-0.5**
PETK							11 08 33.5	
PETK					pmax	pmax		
	comp=Z,11nm,0.7s							
PETK					MLR	MLR		
	comp=Z,186nm,21.0s							
PET	**Petropavlovsk**	**20.88**	**32**	*e*P		**P**	**11 04 28.2**	**-0.2**
	comp=Z,48nm,1.0s							
PET	**Petropavlovsk**	**20.88**	**32**	⇑*i*P		**P**	**11 04 27.9**	**-0.5**
PET				*e*S		**S**	**11 08 13.6**	**-4.0**
PET					pmax	pmax		
	comp=Z,200nm,3.1s							
PET					pmax	pmax		
	comp=Z,100nm,11.8s							
PET					pmax	pmax		
	comp=Z,48nm,0.8s							
PET					smax			
	comp=N,500nm,6.6s							
PET					smax			
	comp=N,600nm,10.6s							
PET					MLR	MLR		
	comp=Z,700nm,22.0s							
PET					MLR	MLR		
	comp=Z,500nm,17.0s							
SSLB	**Suanglung**	**21.04**	**238**	*e*P		**P**	**11 04 27.6**	**-2.8**
	comp=Z,63nm,0.8s,mb5.0							
YULB	**Yu-li**	**21.07**	**237**	*e*P		**P**	**11 04 27.5**	**-3.1**
	comp=Z,22nm,0.4s,mb4.8							
TPUB	**Ta-pu**	**21.58**	**238**	*e*P		**P**	**11 04 34.0**	**-2.1**
	comp=Z,137nm,0.8s,mb5.4							
TWG	**Pinlang**	**21.61**	**236**	*e*P		**P**	**11 04 34.4**	**-2.0**
	comp=Z,169nm,1.0s,mb5.4							
WHN	**Wuhan**	**22.52**	**262**	⇓P		**P**	**11 04 44.8**	**-1.2**
WHN				S		**S**	**11 08 40.1**	**-9.0**
WHN					pmax	pmax		
	comp=Z,110nm,0.7s,mb5.4							
WHN					LR	LR		
	comp=N,1μm,17.8s							
WHN					LR	LR		
	comp=E,2μm,15.9s							
WHN					LR	LR		
	comp=Z,2μm,13.6s							
CLNS	**Chul'man**	**22.87**	**338**	*e*P		**P**	**11 04 47.3**	**-2.2**
CLNS				*e**PP			11 04 56.1	
CLNS				*e*			11 05 13.9	
CLNS				*e*			11 08 39.9	
CLNS				*e*S		**S**	**11 08 48.7**	**-5.6**
CLNS					pmax	pmax		
	comp=N,17nm,0.7s							
CLNS					pmax	pmax		
	comp=Z,50nm,0.8s,mb5.0							
CLNS					pmax	pmax		
	comp=E,10.0nm,0.7s							
CLNS					pmax	pmax		
	comp=Z,31nm,1.0s,mb4.7							
CLNS					pmax	pmax		
	comp=E,24nm,1.0s							
CLNS					pmax	pmax		
	comp=N,47nm,1.1s							
CLNS					smax			
	comp=N,415nm,11.5s							
CLNS					smax			
	comp=E,332nm,13.5s							
CLNS					MLR	MLR		
	comp=Z,314nm,15.0s							
CLNS					MLR	MLR		
	comp=E,317nm,15.0s							
CLNS					MLR	MLR		
	comp=N,251nm,14.0s							
HHC	**Hu-ho-hao-te**	**22.91**	**290**	*e*P		**P**	**11 04 49.8**	**-0.3**
HHC				pP			11 05 00.4	
HHC				sP		sP	11 05 06.5	-4.7
HHC				PP			11 05 19.6	
HHC				*e*S		**S**	**11 08 49.6**	**-5.8**
HHC				sS		sS	11 09 10.3	-9.2
HHC				PcS		PcS	11 12 19.1	+1.6
HHC					pmax	pmax		
	comp=Z,53nm,0.7s,mb5.1							
HHC					pmax	pmax		
	comp=Z,180nm,4.8s							
HHC					LR	LR		
	comp=N,240nm,8.6s							
HHC					LR	LR		
	comp=E,470nm,13.5s							
HHC					LR	LR		
	comp=Z,530nm,14.5s							
GUMO	**Guam**	**23.16**	**169**	P		**P**	**11 04 51.5**	**-1.3**
GUMO				*e*P			11 05 01.5	
GUMO	**Guam**	**23.16**	**169**	P		**P**	**11 04 51.5**	**-1.3**
	comp=Z,24nm,0.7s,mb4.8,baz=152,slow=14,SNR=2.5							
GUMO	**Guam**	**23.16**	**169**	P		**P**	**11 04 51.5**	**-1.3**
GUMO					pmax	pmax		
	comp=Z,24nm,0.7s,mb4.7							
GUMO	**Guam**	**23.16**	**169**	P		sP	11 05 12.7	-1.2
BTO	**Baotou**	**24.08**	**289**	*e*P		**P**	**11 04 56.9**	**-4.2**
CIT	**Chita**	**24.54**	**318**	*e*P		**P**	**11 05 01.9**	**-3.2**
CIT				*e*			11 05 12.2	
CIT					pmax	pmax		
	comp=Z,98nm,1.2s,mb5.2							
XAN	**Xi'an**	**25.80**	**274**	P		**P**	**11 05 16.1**	**-0.7**
XAN				S		**S**	**11 09 39.3**	**-2.5**
XAN					pmax	pmax		
	comp=Z,34nm,0.5s,mb5.1							
XAN					LR	LR		
	comp=N,340nm,25.3s							
XAN					LR	LR		
	comp=E,150nm,30.5s							
XAN					LR	LR		
	comp=Z,230nm,34.7s							
YAK	**Yakutsk**	**26.43**	**349**	*c*P		**P**	**11 05 21.1**	**-1.1**
YAK				*e**PP		pP	11 05 30.9	-6.1
YAK				*e*PPP			11 06 07.9	
YAK				*e*			11 08 45.6	
YAK				*e*S		**S**	**11 09 47.6**	**-3.6**
YAK				*e**SS		sS	11 10 03.7	-13
YAK				*e*SSS			11 10 55.0	
YAK				*e*			11 16 06.3	
YAK					pmax	pmax		
	comp=Z,222nm,1.0s,mb5.7							
YAK					pmax	pmax		
	comp=N,104nm,1.1s							
YAK					pmax	pmax		
	comp=E,34nm,1.1s							
YAK					pmax	pmax		
	comp=Z,68nm,1.1s,mb5.1							
YAK					pmax	pmax		
	comp=N,21nm,1.1s							
YAK					pmax	pmax		
	comp=E,29nm,1.3s							
YAK					smax			
	comp=E,124nm,2.5s							
YAK					smax			
	comp=N,106nm,1.8s							
YAK					MLR	MLR		
	comp=Z,695nm,22.0s							
YAK					MLR	MLR		
	comp=N,564nm,25.0s							
YAK					MLR	MLR		
	comp=E,127nm,14.0s							
ENH	**Enshi**	**26.51**	**265**	*e*P		**P**	**11 05 22.6**	**-0.7**
	comp=E,195nm,0.6s,mb5.8							
ULN	**Ulaanbaatar**	**27.02**	**305**	*e*P		**P**	**11 05 27.5**	**-0.1**
	comp=E,42nm,0.9s,mb5.0							
ULN	**Ulaanbaatar**	**27.02**	**305**	⇑*i*P		**P**	**11 05 27.2**	**-0.5**
ULN	**Ulaanbaatar**	**27.02**	**305**	P		**P**	**11 05 28.0**	**+0.3**
	comp=E,453nmcomp=E,60nm,0.9s,mb5.1							
ULN	**Ulaanbaatar**	**27.02**	**305**	P		**P**	**11 05 27.4**	**-0.3**
	SNR=21							
SONM	**Songino Array**	**27.45**	**305**	P		**P**	**11 05 31.4**	**-0.1**
	comp=E,50nm,0.6s,mb5.2,baz=105,slow=9.1,SNR=60							
SONM					PcP	PcP	11 08 49.3	+0.7
	comp=E,7.8nm,0.8s,baz=131,slow=2.5,SNR=4.1							
SONM					LR	LR	11 17 01.5	
	comp=E,295nm,19.1s,baz=75,slow=38							
SONM	**Songino Array**	**27.45**	**305**	P		**P**	**11 05 31.4**	**-0.1**
SONM							11 08 49.3	
SONM					pmax	pmax		
	comp=Z,50nm,0.6s							
SONM					MLR	MLR		
	comp=Z,295nm,19.1s							
SEY	**Seymchan**	**27.47**	**12**	*c*P		**P**	**11 05 30.9**	**-0.6**
LZH	**Lanzhou**	**29.39**	**280**	*e*P		**P**	**11 05 48.4**	**-0.5**
LZH				pP		pP	11 05 58.4	-5.5
LZH				sP		sP	11 06 04.1	-7.0
LZH				PP		PP	11 06 51.0	-5.1
LZH				PcP		PcP	11 08 54.9	+1.2
LZH				*e*S		**S**	**11 10 38.0**	**-0.4**
LZH					pmax	pmax		
	comp=Z,110nm,1.4s,mb5.4							
LZH					pmax	pmax		
	comp=Z,210nm,4.1s							
LZH					LR	LR		
	comp=N,480nm,14.3s							
LZH					LR	LR		
	comp=E,2μm,14.0s							
LZH					LR	LR		
	comp=Z,2μm,15.7s							
IRK	**Irkutsk**	**29.89**	**313**	*e*P		**P**	**11 05 52.4**	**-0.7**
IRK				*e*			11 06 56.8	
IRK					pmax	pmax		
	comp=Z,45nm,1.4s,mb5.0							
ZAK	**Zakamensk**	**30.00**	**309**	⇓*i*P		**P**	**11 05 54.1**	**0.0**
ZAK				*e*			11 08 54.9	
ZAK					pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.4							
TLY	**Talaya**	**30.10**	**312**	*e*P		**P**	**11 05 54.9**	**-0.1**
	comp=Z,25nm,0.8s,mb5.0							
TLY				*e*P			11 05 55.5	
TLY	**Talaya**	**30.10**	**312**	⇑*i*P		**P**	**11 05 55.5**	**+0.5**
TLY				*e*			11 07 00.7	
TLY				*e*S		**S**	**11 10 54.8**	**+5.7**
TLY					pmax	pmax		
	comp=Z,22nm,0.7s,mb5.0							

TLY MLR MLR
comp=Z,275nm,14.0s
TLY Talaya 30.10 312 P **P** **11 05 55.1 +0.1**
comp=Z,194nm,0.8s,mb5.9,SNR=7.5
TLY Talaya 30.10 312 P **P** **11 05 55.9 +0.9**
SNR=6.1
GYA Guiyang 30.36 260⇓*iP* **P** **11 05 57.3 -0.3**
GYA pP pP 11 06 06.8 -5.8
GYA sP sP 11 06 10.8 -9.0
GYA PP PP 11 06 55.5 -12
GYA S **S** **11 10 54.5 +0.7**
GYA pmax pmax
comp=Z,30nm,0.9s,mb5.0
GYA pmax pmax
comp=Z,200nm,3.7s
GYA LR LR
comp=N,420nm,15.9s
GYA LR LR
comp=E,310nm,16.4s
GYA LR LR
comp=Z,300nm,17.7s
CD2 Chengdu 30.90 270 P **P** **11 06 02.5 +0.2**
CD2 pP pP 11 06 14.4 -2.9
CD2 sP sP 11 06 19.5 -4.9
CD2 PP PP 11 07 04.5 -8.4
CD2 S **S** **11 11 01.5 -0.6**
CD2 sS sS 11 11 21.8 -5.8
CD2 PcS PcS 11 12 41.8 0.0
CD2 pmax pmax
comp=Z,120nm,0.6s,mb5.9
CD2 pmax pmax
comp=Z,340nm,4.2s
CD2 LR LR
comp=N,920nm,14.7s
CD2 LR LR
comp=E,680nm,17.1s
CD2 LR LR
comp=Z,890nm,18.1s
MOY Mondy 31.70 311 *eP* **P** **11 06 09.5 +0.4**
GTA Gaotai 31.98 288 P **P** **11 06 11.4 -0.3**
GTA pP pP 11 06 20.4 -6.3
GTA sP sP 11 06 24.8 -9.1
GTA PcP PcP 11 09 01.4 +1.0
GTA S **S** **11 11 21.1 +2.3**
GTA sS sS 11 11 37.3 -7.1
GTA SS SS 11 13 16.3 -22
GTA pmax pmax
comp=Z,40nm,1.4s,mb5.1
GTA pmax pmax
comp=Z,200nm,5.9s
GTA LR LR
comp=N,240nm,16.4s
GTA LR LR
comp=E,350nm,18.1s
GTA LR LR
comp=Z,420nm,19.0s
QIZ Qiongzhong 32.00 245 P **P** **11 06 08.5 -3.6**
QIZ S **S** **11 11 20.8 +1.4**
QIZ pmax pmax
comp=Z,26nm,1.9s,mb4.7
QIZ pmax pmax
comp=Z,150nm,3.2s
QIZ LR LR
comp=Z,310nm,37.9s
KMI Kunming 34.11 261⇑*iP* **P** **11 06 29.9 -0.5**
KMI pP pP 11 06 41.4 -4.1
KMI sP sP 11 06 46.6 -6.1
KMI PcP PcP 11 09 07.3 +0.7
KMI S **S** **11 11 51.0 -1.1**
KMI pmax pmax
comp=Z,60nm,1.3s,mb5.4
KMI LR LR
comp=N,380nm,11.1s
KMI LR LR
comp=E,550nm,18.0s
KMI LR LR
comp=Z,730nm,20.3s
BILL Bilibino 34.76 17⇓*iP* **P** **11 06 35.1 -0.4**
BILL Bilibino 34.76 17⇓*iP* **P** **11 06 35.0 -0.5**
BILL *e**PP pP 11 06 46.5 -4.2
BILL *i* pP 11 06 49.1 -1.6
BILL 11 09 08.0
BILL pmax pmax
comp=Z,18nm,1.0s,mb5.0
BILL MLR MLR
comp=Z,100nm,17.0s
TIXI Tiksi 35.73 354 *eP* **P** **11 06 43.0 -0.9**
comp=Z,77nm,0.6s,mb5.8
TIXI Tiksi 35.73 354*c iP* **P** **11 06 43.0 -0.8**
TIXI *e*S **S** **11 12 15.1 -0.9**
TIXI pmax pmax
comp=Z,99nm,0.9s,mb5.7
TIXI MLR MLR
comp=Z,225nm,17.0s
MYLDM Lahad Datu 37.11 218 P **P** **11 06 55.7 -0.5**
MYLDM Lahad Datu 37.11 218 P **P** **11 06 58.1 +1.9**
comp=Z,90nm,0.9s,mb5.6
SDKM Sandakan 37.38 220 P **P** **11 06 58.1 -0.4**
TNTI Ternate 37.56 202 P **P** **11 07 00.2 +0.2**
comp=Z,76nm,0.7s,mb5.5
TSM Tawau 38.18 218 P **P** **11 07 04.4 -0.8**
NIKO Nikolski 38.71 48 *eP* **P** **11 07 09.0 -0.3**
LBMI Labuha 38.86 201 P **P** **11 07 10.3 -0.6**
comp=Z,85nm,0.9s,mb5.5
MRSI Marisa 39.74 210 P **P** **11 07 17.6 -0.6**
comp=Z,880nmcomp=Z,81nm,0.9s,mb5.5
WMQ Urumqi 40.39 297 P **P** **11 07 24.6 +1.2**
WMQ pP pP 11 07 35.8 -3.0
WMQ sP sP 11 07 40.3 -5.5
WMQ PP PP 11 09 02.0 +4.8
WMQ PcP PcP 11 09 28.0 +2.6
WMQ S **S** **11 13 30.0 +2.9**
WMQ SS SS 11 16 24.8 -3.0
WMQ ScS ScS 11 17 25.9 +2.4
WMQ pmax pmax
comp=Z,110nm,0.8s,mb5.6
WMQ pmax pmax
comp=Z,270nm,3.0s
WMQ LR LR
comp=N,220nm,20.6s
WMQ LR LR
comp=E,340nm,26.3s
WMQ LR LR
comp=Z,390nm,23.8s
CHG Chiang Mai 40.41 256⇑*iP* **P** **11 07 23.6 -0.2**
comp=Z,33nm,1.0s,mb5.0
CHTO Chiang Mai 40.41 256 *eP* **P** **11 07 23.8 0.0**
comp=Z,21nm,0.7s,mb5.0
CHTO Chiang Mai 40.41 256 *eP* **P** **11 07 23.8 0.0**
CHTO pmax pmax
comp=Z,21nm,0.7s,mb5.0
CHTO Chiang Mai 40.41 256 P **P** **11 07 24.6 +0.8**
comp=Z,38nm,1.1s,mb5.0
CHTO Chiang Mai 40.41 256 P **P** **11 07 24.2 +0.4**
SNR=9.8
CMAR Chiang Mai Arr 40.61 255 P **P** **11 07 25.6 +0.1**
comp=Z,6.0nm,0.4s,mb4.5,baz=45,slow=8.1,SNR=43
CMAR PcP PcP 11 09 27.1 +0.6
comp=Z,6.8nm,0.7s,baz=7.9,slow=2.5,SNR=9.8
CMAR LR LR 11 26 32.5
comp=Z,338nm,18.2s,baz=195,slow=39
CMAR Chiang Mai Arr 40.61 255 P **P** **11 07 25.6 +0.1**
CMAR 11 09 27.1
CMAR pmax pmax
comp=Z,6.0nm,0.4s
CMAR MLR MLR
comp=Z,338nm,18.2s
LUWI Luwuk 40.81 208 P **P** **11 07 26.6 -0.5**
comp=Z,93nm,0.9s,mb5.4
BDT Bhumibol Dam 41.26 254 P **P** **11 07 30.5 -0.3**
NST Nakhon Sawan 41.34 251 P **P** **11 07 32.0 +0.6**
NLAI Namlea 41.45 200 P **P** **11 07 32.6 +0.3**
comp=Z,2μmcomp=Z,86nm,0.9s,mb5.4
LSA Lhasa 41.48 275 *eP* **P** **11 07 34.6 +2.1**
comp=Z,42nm,0.7s,mb5.2
LSA Lhasa 41.48 275 *eP* **P** **11 07 34.6 +2.0**
LSA pmax pmax
comp=Z,42nm,0.7s,mb5.2
BTM Bintulu 41.64 224 P **P** **11 07 33.6 -0.4**
ZAA0 Zalesovo Array 41.70 313 *eP* **P** **11 07 33.7 -0.4**
ZALV Zalesovo Beam 41.70 313 P **P** **11 07 33.9 -0.2**
comp=Z,145nm,0.6s,mb5.8,baz=90,slow=7.0,SNR=471
ZALV PcP PcP 11 09 28.9 -0.6
comp=Z,12nm,0.7s,baz=75,slow=2.3,SNR=4.0
ZALV ScP ScP 11 13 14.5 +0.1
comp=Z,2.4nm,0.8s,baz=96,slow=3.0,SNR=3.6
ZALV LR LR 11 25 27.9
comp=Z,141nm,19.3s,baz=319,slow=37
SHL Shillong 42.62 269 *e*PKP **P** **11 07 42.0 +0.1**
SHL *ex* x 11 14 24.0
NVS Novosibirsk 42.65 314⇑*iP* **P** **11 07 41.6 -0.1**
NVS pmax pmax
comp=Z,158nm,1.1s,mb5.7
NVS pmax pmax
comp=N,50nm,1.0s
NVS pmax pmax
comp=E,170nm,1.1s
SBUM Sibu 42.74 224 P **P** **11 07 42.9 0.0**
SBUM Sibu 42.74 224 P **P** **11 07 42.3 -0.6**
comp=E,21nm,0.9s,mb4.8
MKAR Makanchi Array 43.75 302 P **P** **11 07 51.0 +0.4**
comp=E,64nm,0.8s,mb5.4,baz=87,slow=10.0,SNR=294
MKAR PcP PcP 11 09 36.1 -0.4
comp=E,9.2nm,0.8s,baz=78,slow=4.5,SNR=3.4
MKAR ScP ScP 11 13 22.5 -0.3
comp=E,0.4nm,0.3s,baz=90,slow=2.2,SNR=3.4
MKAR LR LR 11 26 56.3
comp=E,244nm,18.9s,baz=77,slow=37
SPSI Sidrap Palu 44.65 210 P **P** **11 07 57.5 -0.7**
comp=E,35nm,1.2s,mb5.1
BNSI Bone 44.91 209 P **P** **11 08 01.1 +0.8**
comp=E,84nm,1.1s,mb5.5
STKI Sintang 45.12 223 P **P** **11 08 02.3 +0.3**
comp=E,71nm,1.0s,mb5.5
TAPN Taplejung 45.20 274 *eP* **P** **11 08 03.7 +1.2**
KBKI Kotabaru 45.62 215 P **P** **11 08 06.2 +0.3**
comp=E,1μmcomp=E,47nm,1.2s,mb5.3
KURK Kurchatov 45.65 308 P **P** **11 08 05.4 -0.4**
comp=E,1μm,0.6s
KURK Kurchatov 45.65 308 *eP* **P** **11 08 05.5 -0.3**
KURK Kurchatov 45.65 308 P **P** **11 08 05.9 +0.1**
comp=E,93nm,0.5s,mb6.0,baz=83,slow=7.9,SNR=163
KURK S **S** **11 14 43.3 -0.6**
comp=E,0.6nm,0.4s,baz=81,slow=11,SNR=3.2
KURK LR LR 11 27 39.1
comp=E,286nm,21.7s,baz=90,slow=36
KURK Kurchatov 45.65 308*c iP* **P** **11 08 05.7 -0.1**
KURK pmax pmax
comp=Z,155nm,1.0s,mb5.9
KURK Kurchatov 45.65 308 P **P** **11 08 06.0 +0.2**
SNR=61
ODAN Odare 45.67 274 *eP* **P** **11 08 06.7 +0.5**
comp=Z,135nm,0.6s,mb6.0
BKSI Bulukumba 45.75 209 P **P** **11 08 06.9 0.0**
comp=Z,48nm,0.8s,mb5.5
PMG Port Moresby 46.09 171 *eP* **P** **11 08 09.0 -0.6**
comp=Z,12nm,0.7s,mb5.0
PMG Port Moresby 46.09 171 *eP* **P** **11 08 09.0 -0.6**
PMG pmax pmax
comp=Z,12nm,0.7s
KTGM Kuala Trenggan 46.15 237 P **P** **11 08 10.6 +0.5**
RAMN Ramite 46.27 274 *eP* **P** **11 08 11.6 +0.7**
comp=Z,693nm,0.7s,mb6.7
JIRN Jiri 46.29 275 *eP* **P** **11 08 12.7 +1.6**
comp=Z,219nm,0.5s,mb6.3
TTA Tatalina 46.30 35 *eP* **P** **11 08 11.3 +0.6**
comp=Z,2.5nm,0.4s,mb4.5
TTA Tatalina 46.30 35 *eP* **P** **11 08 11.3 +0.6**
TTA pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
SVW2 Sparrevohn 46.42 37 *eP* **P** **11 08 12.5 +0.9**
comp=Z,28nm,1.0s,mb5.2
GUN Gumba 46.43 276 *eP* **P** **11 08 13.3 +1.1**
comp=Z,357nm,0.6s,mb6.5
PKI Pulchoki 46.95 275 *eP* **P** **11 08 16.9 +0.6**
comp=Z,261nm,0.8s,mb6.2
PKIN Phulchoki 46.96 275 *eP* **P** **11 08 16.8 +0.4**
KKN Kakani 46.97 276 *eP* **P** **11 08 17.1 +0.7**
comp=Z,326nm,0.9s,mb6.3
DMN Daman 47.18 276 *eP* **P** **11 08 18.7 +0.6**
comp=Z,100nm,0.6s,mb5.9
GKN Gorkha 47.39 276 *eP* **P** **11 08 20.5 +0.8**
comp=Z,692nm,0.7s,mb6.7
OHAK Old Harbor 47.67 42 *eP* **P** **11 08 21.1 -0.4**
comp=Z,19nm,0.9s,mb5.1
RSO Redoubt South 47.80 38 *eP* **P** **11 08 23.2 +0.8**
KULM Kulim 47.88 239 *eP* **P** **11 08 23.8 +0.2**
comp=Z,10nm,0.5s,mb5.1
KULM Kulim 47.88 239 P **P** **11 08 24.5 +1.0**
DANN Dangsing 47.95 277 *eP* **P** **11 08 25.2 +1.2**
comp=Z,881nm,0.7s,mb6.9
KDAK Kodiak Island 48.02 42 P **P** **11 08 23.9 -0.2**
comp=Z,312nm,0.8s,mb6.4,SNR=9.4
KDAK Kodiak Island 48.02 42 *eP* **P** **11 08 23.6 -0.5**
MMRI Maumere 48.05 205 P **P** **11 08 24.3 -0.5**
comp=Z,2μmcomp=Z,169nm,1.1s,mb6.0
PPLA Purkeypile 48.05 35 *eP* **P** **11 08 25.5 +1.2**
IPM Ipoh 48.20 238 P **P** **11 08 26.3 +0.2**
IPM Ipoh 48.20 238 P **P** **11 08 25.8 -0.3**
comp=Z,827nmcomp=Z,72nm,0.9s,mb5.7
MYKOM Kota Tinggi 48.32 233 P **P** **11 08 27.1 +0.1**
KOLN Koldanda 48.32 277 *eP* **P** **11 08 27.6 +0.7**
comp=Z,144nm,0.7s,mb6.1
KGM Kluang 48.49 234 P **P** **11 08 28.8 +0.5**
BPAW Bear Paw Mtn. 48.60 33 *eP* **P** **11 08 29.4 +0.9**
comp=Z,4μm,1.0s
FRIM Kepong 48.70 236 P **P** **11 08 30.1 +0.2**
TRF Thorofare Moun 48.91 34 *eP* **P** **11 08 31.5 +0.6**
comp=Z,2μm,0.7s
ULHL Ulahol 48.92 298 P **P** **11 08 33.5 +2.1**
SNR=5.3
RC01 Rabbit Creek A 49.26 37 *eP* **P** **11 08 33.3 -0.3**
comp=Z,14nm,0.8s,mb5.0
SEW Seward 49.47 38 *eP* **P** **11 08 34.8 -0.4**
comp=Z,3μm,0.6s
MCK McKinley 49.51 34 *eP* **P** **11 08 35.5 0.0**
PMR Palmer 49.52 36 *eP* **P** **11 08 34.8 -0.8**
KAKA Kakadu 49.52 190 *eP* **P** **11 08 32.1 -4.0**
comp=Z,43nm,0.8s,mb5.5
KAKA Kakadu 49.52 190 *eP* **P** **11 08 35.3 -0.8**
comp=Z,118nm,0.7s,mb6.0
TPI Tanjungpandan 49.59 225 P **P** **11 08 37.2 +0.5**
comp=Z,1μmcomp=Z,139nm,0.8s,mb6.0
KZA Kyzart 49.68 298 P **P** **11 08 37.6 +0.5**
SNR=12
KBK Karagaybulak 49.73 298 P **P** **11 08 38.7 +1.2**
SNR=49
CHMS Chumysh 49.78 299 P **P** **11 08 38.6 +0.8**
SNR=15
USP Ospenovka 49.88 299 P **P** **11 08 39.4 +0.7**
SNR=20
KSH Kashi 49.91 294⇑*iP* **P** **11 08 43.4 +4.5**
KSH epP pP 11 08 56.3 +1.6
KSH esP sP 11 09 03.1 +1.4
KSH *e*PcP PcP 11 10 02.5 +4.0
KSH *e*PP PP 11 10 40.1 +6.1
KSH *e*ScP ScP 11 13 53.0 +4.2
KSH *e*PcS PcS 11 13 58.3 +2.9
KSH *e*S **S** **11 15 51.0 +6.4**
KSH sS sS 11 16 12.3 +0.9
KSH *e*ScS ScS 11 18 27.4 +2.7
KSH *e*SS SS 11 19 21.6 +3.8
KSH pmax pmax
comp=Z,34nm,0.8s,mb5.4
KSH LR LR
comp=N,410nm,15.6s
KSH LR LR
comp=E,530nm,18.3s
KSH LR LR
comp=Z,190nm,4.7s
FRU Bishkek 49.92 299⇑*iP* **P** **11 08 39.0 +0.1**
FRU pmax pmax
comp=Z,114nm,1.8s,mb5.6
KMMI Kalianget 49.93 215 P **P** **11 08 39.8 +0.5**
comp=Z,234nm,1.0s,mb6.2
COLA College 49.94 32 *eP* **P** **11 08 39.4 +0.6**
comp=Z,22nm,0.8s,mb5.2
COLA College 49.94 32 *eP* **P** **11 08 39.4 +0.6**
COLA pmax pmax
comp=Z,22nm,0.8s,mb5.2
PPBI Pangkal Pinang 49.99 227 P **P** **11 08 40.1 +0.4**
comp=Z,4μmcomp=Z,104nm,1.0s,mb5.8
VOSK Vostochnaya 50.06 312 P **P** **11 08 39.1 -0.7**
VOSK pmax pmax
comp=Z,135nm,1.5s,mb5.8
AAK Ala-Archa 50.06 298 P **P** **11 08 40.9 +0.9**
SNR=14
AAK Ala-Archa 50.06 298 P **P** **11 08 40.4 +0.4**
AAK *e*P 11 08 40.8
AAK LR LR 11 31 15.1
AAK Ala-Archa 50.06 298 P **P** **11 08 40.4 +0.4**
comp=Z,23nm,0.7s,mb5.3,baz=118,slow=5.4,SNR=28
AAK LR LR 11 31 15.1
comp=Z,592nm,19.7s,baz=88,slow=38
AAK Ala-Archa 50.06 298*c iP* **P** **11 08 40.9 +0.9**
AAK pmax pmax
comp=Z,23nm,1.2s,mb5.1
AAK Ala-Archa 50.06 298 P **P** **11 08 40.1 +0.1**
comp=Z,266nm,0.6s,mb6.5,SNR=12
AAK Ala-Archa 50.06 298 P **P** **11 08 41.1 +1.1**
SNR=16
UCH Uchtor 50.16 298 P **P** **11 08 43.0 +2.3**
SNR=5.3
COEN Coen 50.25 177 *eP* **P** **11 08 41.6 0.0**
comp=Z,310nm,0.9s,mb6.3
COEN Coen 50.25 177 P **P** **11 08 41.5 -0.1**
comp=Z,183nm,0.9s,mb6.1
SRBI Singaraja 50.28 213 P **P** **11 08 42.0 +0.1**
comp=Z,1μmcomp=Z,122nm,1.2s,mb5.8
BVA0 Borovoye Array 50.36 312 P **P** **11 08 41.8 -0.3**
BVA0 pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
BVAR Borovoye Array 50.36 312 P **P** **11 08 42.0 0.0**
comp=Z,17nm,0.5s,mb5.3,baz=80,slow=7.7,SNR=58
BVAR PcP PcP 11 09 59.4 -0.4
comp=Z,13nm,0.7s,baz=69,slow=2.7,SNR=3.8
BVAR Borovoye Array 50.36 312 P **P** **11 08 42.0 -0.1**
BVAR 11 09 59.4
BVAR pmax pmax
comp=Z,17nm,0.5s
KHKI Kahang-Kahang 50.36 213 P **P** **11 08 41.9 -0.6**
comp=Z,5μmcomp=Z,524nm,1.0s,mb6.5
ILAR Eielson Array 50.36 32 P **P** **11 08 41.4 -0.5**
comp=Z,20nm,0.7s,mb5.2,baz=270,slow=6.3,SNR=328
ILAR Eielson Array 50.36 32 P **P** **11 08 41.4 -0.5**
ILAR pmax pmax
comp=Z,20nm,0.7s
BRVK Borovoye 50.41 313 P **P** **11 08 42.7 +0.2**
comp=Z,260nm,0.5s,mb6.5,SNR=11
BRVK Borovoye 50.41 313*c iP* **P** **11 08 42.6 +0.1**
BRVK pmax pmax
comp=Z,36nm,0.8s,mb5.5
BRVK Borovoye 50.41 313 P **P** **11 08 43.0 +0.6**
SNR=16
EKS2 Erkin-Say 50.56 299 P **P** **11 08 44.4 +0.6**
SNR=25
AML Almayashu 50.77 298 P **P** **11 08 47.3 +1.9**
SNR=274
PSI Prapat 50.85 239 P **P** **11 08 46.3 0.0**
comp=Z,38nm,0.7s,mb5.4,baz=74,slow=3.8,SNR=8.4
PSI Prapat 50.85 239 P **P** **11 08 46.3 0.0**
PSI pmax pmax
comp=Z,38nm,0.7s,mb5.4
JAGI Jajag, Banyuwa 51.10 214 P **P** **11 08 47.7 -0.3**
comp=Z,55nm,1.1s,mb5.4
PAX Paxson 51.12 34 *eP* **P** **11 08 48.2 +0.5**
comp=Z,7.1nm,0.8s,mb4.7
PAX Paxson 51.12 34 *eP* **P** **11 08 48.2 +0.6**
PAX pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
ZRNK Zerenda 51.19 313 P **P** **11 08 48.3 0.0**
ZRNK pmax pmax
comp=Z,54nm,0.7s,mb5.6
BKNI Bangkinang 51.25 234 P **P** **11 08 50.2 +1.0**
comp=Z,308nm,0.9s,mb6.2
GMJI Gumukmas 51.25 215 P **P** **11 08 48.2 -1.0**
comp=Z,102nm,1.0s,mb5.7
NGJI Ngawi 51.41 218 P **P** **11 08 51.8 +1.4**
comp=Z,117nm,0.9s,mb5.8
SJI Sawahan 51.58 217 P **P** **11 08 51.1 -0.6**
comp=Z,3μmcomp=Z,132nm,1.3s,mb5.7
KRKI Karangkates 51.62 216 P **P** **11 08 51.1 -0.8**
comp=Z,672nm,1.0s,mb6.5
TPTI 51.74 241 P **P** **11 08 53.3 +0.4**
comp=Z,17nm,0.8s,mb5.1
BMRM Bremner River 51.75 37 *eP* **P** **11 08 53.2 +0.8**
PWJI Pagerwojo 51.81 217 P **P** **11 08 51.5 -1.9**
comp=Z,3μmcomp=Z,325nm,0.8s,mb6.3
MNSI Mandailing Nat 51.87 236 P **P** **11 08 53.0 -0.9**
comp=Z,2μmcomp=Z,74nm,0.6s,mb5.8
MENT Mentasta 51.91 34 *eP* **P** **11 08 54.3 +0.7**
SDSI Sungai Dareh 51.95 233 P **P** **11 08 54.6 +0.2**
comp=Z,2μmcomp=Z,205nm,1.1s,mb6.0
SMLA Simla 52.02 284 *i P* **P** **11 08 54.0 -0.9**
SDNR Sundarnagar 52.02 284 *e*PKP **P** **11 08 54.5 -0.4**
UGM Wanagama 52.35 219 P **P** **11 08 56.7 -0.7**
comp=Z,402nm,1.2s,mb6.2
BHK Bhakra 52.49 284 *e*PKP **P** **11 08 58.0 -0.3**
PDSI Pandang 52.56 234 P **P** **11 08 58.6 -0.4**
comp=Z,44nm,1.1s,mb5.3
KK31 Karatay Array 52.72 300 *i P* **P** **11 08 59.9 0.0**
KK31 pmax pmax
comp=Z,20nm,0.6s,mb5.2
EGAK Eagle 52.80 32 *eP* **P** **11 08 60.0 -0.2**
KLI Kotabumi 52.91 227 P **P** **11 09 01.0 -0.6**
comp=Z,4μmcomp=Z,443nm,0.9s,mb6.4
LEM Lembang 52.96 222 P **P** **11 09 01.6 -0.3**
comp=Z,4μmcomp=Z,373nm,1.0s,mb6.2
NDI New Delhi 53.01 281 *e*PKP **P** **11 09 02.5 +0.2**
KNA Kununurra 53.12 194 P **P** **11 09 05.3 +2.3**
comp=Z,1μmcomp=Z,178nm,0.9s,mb6.0
AYAN Aya Nagar 53.17 281 *e*PKP **P** **11 09 03.0 -0.4**
AYAN AMb AMB 11 09 03.9
comp=Z,44nm,0.6s,mb5.6
SONA Sohna 53.30 280 *e*PKP **P** **11 09 04.4 0.0**
SONA AMb AMB 11 09 05.0
comp=Z,64nm,0.7s,mb5.7
KSI Kapahiang 53.31 230 P **P** **11 09 04.0 -0.5**
comp=Z,119nm,1.0s,mb5.8
KUDL Kundal 53.82 281 *ex* x 11 09 04.7
KUDL AMb AMB 11 09 12.3
comp=Z,36nm,0.6s,mb5.5
KHET Khetri 54.39 281 *e*PKP **P** **11 09 12.6 +0.2**
KHET AMb AMB 11 09 13.6
comp=Z,60nm,1.1s,mb5.4
SVE Sverdlovsk 55.03 319⇓*eP* **P** **11 09 17.0 +0.5**
SVE pmax pmax
comp=Z,79nm,0.9s,mb5.7
NGP Nagpur 55.07 272 *e*PKP **P** **11 09 16.8 -0.6**
BHPL Bhopal 55.35 275 *e*PKP **P** **11 09 18.7 -0.6**
BHPL AMb AMB 11 09 20.5
comp=Z,75nm,0.9s,mb5.7
AJM Ajmer 56.04 280 *e*PKP **P** **11 09 24.3 +0.1**
ARU Arti 56.24 319 *eP* **P** **11 09 24.8 -0.4**
ARU *eP* 11 09 25.2
ARU Arti 56.24 319*c iP* **P** **11 09 25.1 -0.1**
ARU *e* 11 10 23.0
ARU *e* 11 11 27.9
ARU S **S** **11 17 12.8 +2.6**
ARU SS SS 11 20 53.7 -3.3
ARU pmax pmax
comp=Z,121nm,0.8s,mb6.0
ARU Arti 56.24 319 P **P** **11 09 25.3 +0.1**
comp=Z,873nm,0.7s,mb6.9,SNR=29
SOKR Solikamsk 56.28 323*c iP* **P** **11 09 25.3 -0.1**
SOKR pmax pmax
comp=Z,50nm,1.4s,mb5.3
SOKR MLR MLR
comp=Z,430nm,23.0s
WRA Warramunga Arr 56.43 187 P **P** **11 09 25.5 -1.4**
comp=Z,51nm,0.7s,mb5.7,baz=2.9,slow=7.5,SNR=357
WRA S **S** **11 17 11.5 -1.8**
comp=Z,1.5nm,0.9s,baz=7.8,slow=13,SNR=4.6
WRA Warramunga Arr 56.43 187 P **P** **11 09 25.5 -1.3**
WRA S **S** **11 17 11.5 -1.8**
WRA pmax pmax
comp=Z,51nm,0.7s
WRA smax
comp=N,2.0nm,0.9s
CTA Charters Tower 56.55 173 *eP* **P** **11 09 26.2 -1.5**
comp=N,4.2nm,0.6s,mb4.7
CTA Charters Tower 56.55 173 P **P** **11 09 26.6 -1.0**
comp=N,4.2nm,0.9s,mb4.5,baz=7.1,slow=12,SNR=4.7
CTA Charters Tower 56.55 173 P **P** **11 09 26.6 -1.1**
CTA pmax pmax
comp=Z,4.0nm,0.9s
CTAO Charters Tower 56.55 173 *eP* **P** **11 09 27.2 -0.5**
comp=Z,10nm,1.1s,mb4.8
CTAO Charters Tower 56.55 173 *eP* **P** **11 09 27.2 -0.5**
CTAO pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
SKAG Skagway 56.59 37 *eP* **P** **11 09 28.6 +1.0**
KBL Kabul 56.88 291 *eP* **P** **11 09 30.3 +0.2**
comp=Z,82nm,1.2s,mb5.6
KBL Kabul 56.88 291 *eP* **P** **11 09 30.3 +0.2**
KBL pmax pmax
comp=Z,82nm,1.2s,mb5.6

AKL Akola 56.94 272 ePKP P 11 09 31.1 +0.4
HYB Hyderabad 57.41 268 i P P 11 09 34.5 +0.5
comp=Z,290nm,1.0s,mb6.3
HYB epP pP 11 09 49.0 -1.1
HYB esP sP 11 09 54.0 -3.0
HYB ePcP PcP 11 10 27.0 -0.3
ABKAR Akbulak array 57.69 310 eP P 11 09 35.4 -0.1
comp=Z,52nm,0.6s,mb5.7
AKTO Aktyubinsk 58.45 312 P P 11 09 40.1 -0.7
AKTO pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
LATR Latur 58.49 270 ePKP P 11 09 41.8 +0.3
ASAR Alice Springs 60.16 187 P P 11 09 51.8 -1.0
ASAR S S 11 17 58.9 -2.8
ASAR ⇑e 11 39 24.7
ASAR Alice Springs 60.16 187 P P 11 09 51.8 -1.0
comp=Z,28nm,0.8s,mb5.4,baz=15,slow=6.3,SNR=163
ASAR S S 11 17 58.9 -2.8
comp=Z,0.6nm,1.0s,baz=358,slow=6.5,SNR=4.8
ASAR PKP2bc 11 39 24.7
comp=Z,1.8nm,0.8s,baz=160,slow=2.3,SNR=12
ASAR Alice Springs 60.16 187 P P 11 09 51.8 -1.0
ASAR S S 11 17 58.9 -2.8
ASAR pmax pmax
comp=Z,28nm,0.8s
ASAR smax
comp=N,1.0nm,1.0s
ASAR pmax pmax
comp=Z,2.0nm,0.8s
MBWA Marble Bar 60.60 202 eP P 11 09 55.4 -0.4
comp=Z,38nm,0.7s,mb5.6
MBWA Marble Bar 60.60 202 P P 11 09 55.3 -0.5
comp=Z,78nm,1.0s,mb5.8
POO Poona 60.61 272 ePKP P 11 09 56.5 +0.4
ALE Alert 60.69 3 P P 11 09 56.0 +0.2
comp=Z,411nm,0.8s,mb6.6,SNR=17
KAD Karad 60.99 271 ePKP P 11 09 58.6 -0.1
KAD AMb AMB 11 10 00.3
comp=Z,103nm,1.4s,mb5.8
KBS Kingsbay 61.05 350 eP P 11 09 57.2 -1.1
KBS AMB AMB 11 09 59.8
comp=Z,81nm,1.0s,mb5.8
KBS AMS AMS 11 52 19.3
comp=Z,193nm,20.1s
KBS Kingsbay 61.05 350 ceP P 11 09 57.1 -1.2
KBS pmax pmax
comp=Z,106nm,1.0s,mb5.9
PALK Pallekele 61.49 257 eP P 11 10 03.1 +0.9
comp=Z,64nm,1.1s,mb5.7
PALK i P 11 10 03.5
PALK Pallekele 61.49 257 eP P 11 10 03.1 +0.9
PALK pmax pmax
comp=Z,65nm,1.1s,mb5.7
PALK Pallekele 61.49 257 P P 11 10 01.3 -0.9
comp=Z,36nm,0.9s,mb5.5
LVZ Lovozero 62.28 336 ciP P 11 10 05.9 -0.8
LVZ pmax pmax
comp=Z,54nm,1.1s,mb5.6
LVZ Lovozero 62.28 336 P P 11 10 06.6 -0.1
comp=Z,283nm,0.6s,mb6.6,SNR=10.0
EIDS Eidsvold 62.35 169 eP P 11 10 07.3 -0.3
comp=Z,14nm,0.9s,mb5.1
BJO Bjornoya 62.74 345 eP P 11 10 08.6 -1.0
APA Apatity 62.85 336 ⇓iP P 11 10 10.7 +0.2
APA i pP 11 10 25.0 -1.8
APA pmax pmax
comp=Z,60nm,0.8s,mb5.8
APA MLR MLR
comp=Z,400nm,20.0s
DZM Mont Dzumac 63.22 153 eLR LR 11 29 07.1
comp=Z,614nm,34.8s
ABKT Ailbek 63.41 299 P P 11 10 15.0 +0.3
comp=Z,288nm,1.3s,mb6.2,SNR=16
KEV Kevo 63.66 339 eP P 11 10 16.0 +0.1
comp=Z,46nm,0.8s,mb5.5
KEV Kevo 63.66 339 eP P 11 10 16.0 +0.2
KEV pmax pmax
comp=Z,45nm,0.8s,mb5.5
KEV Kevo 63.66 339 ep P 11 10 14.3 -1.5
comp=Z,27nm,0.6s,mb5.5
KLMR Klimovskoe 63.79 328 ciP P 11 10 16.5 -0.3
KLMR pmax pmax
comp=Z,182nm,1.5s,mb5.9
ARCES ARCESS Array B 64.22 339 P P 11 10 19.6 +0.1
comp=Z,39nm,0.7s,mb5.5,baz=58,slow=8.1,SNR=182
ARCES LR LR 11 40 53.9
comp=Z,285nm,20.4s,baz=293,slow=38
ARCES ARCESS Array B 64.22 339 P P 11 10 19.6 +0.1
ARCES pmax pmax
comp=Z,39nm,0.7s
ARCES MLR MLR
comp=Z,285nm,20.4s
YKA Yellowknife Ar 64.66 30 P P 11 10 21.8 -0.6
YKA Yellowknife Ar 64.66 30 P P 11 10 21.8 -0.6
comp=Z,6.8nm,0.8s,mb4.7,baz=302,slow=6.7,SNR=14
YKA Yellowknife Ar 64.66 30 P P 11 10 21.8 -0.6
YKA pmax pmax
comp=Z,7.0nm,0.8s
KTK1 Kautokeino 65.18 339 eP P 11 10 25.7 0.0
KTK1 AMB AMB 11 10 26.8
comp=Z,109nm,0.9s,mb5.9
KTK1 eS S 11 19 04.4 +0.6
TRO Tromso 65.97 341 eP P 11 10 30.6 -0.2
TRO AMB AMB 11 10 31.4
comp=Z,43nm,0.9s,mb5.5
JOF Joensuu 66.07 332 eP P 11 10 29.6 -1.9
JOF pmax pmax
comp=Z,57nm,0.5s,mb5.9
JOF Joensuu 66.07 332 ep P 11 10 29.6 -1.9
comp=Z,56nm,0.5s,mb5.8
DAG Danmarks Havn 66.24 355 ⇓iP P 11 10 32.2 -0.2
DAG pmax pmax
comp=Z,29nm,0.6s,mb5.5
DAG Danmarks Havn 66.24 355 ⇓i P 11 10 32.2 -0.2
comp=Z,29nm,0.6s,mb5.5
MOS Moscow 67.21 323 eP P 11 10 38.4 -0.6
MOS e pP 11 10 52.0 -3.5
MOS e 11 11 06.1
MOS pmax pmax
comp=Z,112nm,1.0s,mb5.8
MOS pmax pmax
comp=Z,200nm,1.1s,mb6.1
ARMA Armidale 67.39 170 eP P 11 10 38.7 -1.5
VRHR Novokhopersk 67.56 318 eP P 11 10 39.9 -1.3
VRHR pmax pmax
comp=Z,150nm,0.6s,mb6.2
VRHR pmax pmax
comp=N,4.0nm,0.3s
VRHR pmax pmax
comp=E,10.0nm,0.6s
A05A Maple Falls 67.87 45 ⇑P P 11 10 42.6 -0.6
baz=68
FORT Forrest 67.93 191 eP P 11 10 42.9 -0.7
comp=E,131nm,0.6s,mb6.1
FORT Forrest 67.93 191 eP P 11 10 43.3 -0.3
comp=E,139nm,0.6s,mb6.2
STKA Stephens Creek 68.03 179 eP P 11 10 43.3 -0.9
comp=E,14nm,0.8s,mb5.0
STKA Stephens Creek 68.03 179 P P 11 10 43.5 -0.8
STKA eP 11 10 43.8
STKA Stephens Creek 68.03 179 P P 11 10 43.5 -0.8
comp=E,19nm,0.8s,mb5.2,baz=340,slow=6.6,SNR=28
OBN Obninsk 68.06 323 eP P 11 10 44.3 0.0
comp=E,68nm,0.6s,mb5.8
OBN Obninsk 68.06 323 αiP P 11 10 44.0 -0.3
OBN e 11 10 54.6
OBN i pP 11 10 58.5 -2.3
OBN 11 11 09.0
OBN 11 13 14.0
OBN e 11 20 40.0
OBN pmax pmax
comp=Z,84nm,0.6s,mb6.0
OBN MLR MLR
comp=Z,200nm,19.0s
OBN Obninsk 68.06 323 P P 11 10 44.2 -0.1
comp=Z,934nm,0.6s,SNR=5.1
E03A Lebam 68.25 48 ⇑P P 11 10 45.9 +0.3
baz=68
PUL Pulkovo 68.25 329⇑eP P 11 10 45.3 -0.1
JCW Jim Creek 68.37 46 P P 11 10 46.9 +0.5
LOF Lofoten 68.42 341 eP P 11 10 46.1 -0.3
KAF Kangasniemi 68.42 333 eP P 11 10 44.6 -1.9
KAF pmax pmax
comp=Z,77nm,0.5s,mb6.0
KAF Kangasniemi 68.42 333 ep P 11 10 44.6 -1.9
comp=Z,77nm,0.5s,mb6.0

B06A Marblemount 68.46 45 ⇑P P 11 10 46.9 0.0
baz=68
VSR Storozhevoye 68.82 319 ciP P 11 10 48.7 -0.4
VSR pmax pmax
comp=N,60nm,0.8s
VSR pmax pmax
comp=E,60nm,0.8s
VSR pmax pmax
comp=Z,160nm,0.8s,mb6.0
VSR MLR MLR
comp=N,170nm,16.0s
VSR MLR MLR
comp=E,160nm,16.0s
VSR MLR MLR
comp=Z,200nm,16.0s
D05A Enumclaw 68.86 46 ⇓P P 11 10 49.9 +0.5
baz=69
VORD Divnogorie 68.88 318 ciP P 11 10 49.1 -0.4
VORD pmax pmax
comp=N,4.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,60nm,0.6s,mb5.7
VORD MLR MLR
comp=N,150nm,14.0s
VORD MLR MLR
comp=E,110nm,14.0s
VORD MLR MLR
comp=Z,150nm,14.0s
FINES FINESS Array B 68.92 332 P P 11 10 49.3 -0.2
comp=Z,92nm,0.8s,mb5.8,baz=47,slow=6.3,SNR=176
FINES LR LR 11 46 22.4
comp=Z,131nm,19.4s,baz=15,slow=40
FINES FINESS Array B 68.92 332 P P 11 10 49.3 -0.3
FINES pmax pmax
comp=Z,92nm,0.8s
FINES MLR MLR
comp=Z,131nm,19.4s
TDL Tradedollar La 69.16 47 P P 11 10 51.7 +0.4
LON Longmire 69.19 47 eP P 11 10 51.6 +0.2
comp=Z,6.1nm,0.9s,mb4.5
LON Longmire 69.19 47 eP P 11 10 51.6 +0.1
LON pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
F04A Amboy 69.25 48 ⇓P P 11 10 51.9 0.0
baz=69
NLW Nelson Butte 69.34 45 P P 11 10 51.9 -0.5
MOR8 Moi Rana 69.59 339 eP P 11 10 52.3 -1.3
MOR8 AMB AMB 11 10 53.2
comp=Z,112nm,0.8s,mb5.8
G04A Mulino 69.59 48 ⇑P P 11 10 54.0 0.0
baz=69
ETW Entiat 69.60 45 P P 11 10 54.0 0.0
B08A Colville Reser 69.76 44 ⇓P P 11 10 54.5 -0.5
baz=70
EBG Ellensburg 69.83 46 P P 11 10 55.8 +0.4
HOOD Mount Hood Mea 70.03 48 eP P 11 10 57.5 +0.8
comp=Z,24nm,0.9s,mb5.1
H04A Detroit Lake 70.04 49 ⇓P P 11 10 56.9 +0.1
baz=70
VFP Flag Point 70.14 48 P P 11 10 58.1 +0.7
DGRG David-gareji 70.31 307 P P 11 10 57.6 -0.9
WBK Wadi Bani Khal 70.32 284 P P 11 11 00.2 +1.4
SNR=6.3
E07A Sunnyside 70.43 46 ⇓P P 11 10 59.1 0.0
baz=70
ZEI Tsey 70.55 309 eP P 11 10 58.9 -1.0
ZEI pmax pmax
comp=Z,42nm,1.0s,mb5.3
MTA Mtatsminda 70.55 308 P P 11 10 59.8 -0.1
TBLG Delisi 70.56 308 eP P 11 11 00.3 +0.3
TBLG Delisi 70.56 308 P P 11 11 00.3 +0.3
OD2 Odessa Site #2 70.64 45 P P 11 10 60.0 -0.4
C09A Chrisman Ranch 70.66 44 ⇓P P 11 11 00.3 -0.2
baz=70
KIV Kislovodsk 70.67 311 eP P 11 11 01.4 +0.8
comp=Z,188nm,0.9s,mb6.0
KIV Kislovodsk 70.67 311 αiP P 11 11 01.3 +0.7
KIV i pP 11 11 13.2 -4.0
KIV i pP 11 11 16.2 -1.0
KIV i pP 11 11 20.6 +3.4
KIV pmax pmax
comp=Z,224nm,1.0s,mb6.0
KIV MLR MLR
comp=Z,100nm,16.0s
KIV Kislovodsk 70.67 311 P P 11 11 01.7 +1.1
comp=Z,1μm,0.8s,mb6.9,SNR=13
KIV Kislovodsk 70.67 311 P P 11 11 01.5 +0.9
SNR=38
G06A Carlson Farm, 70.68 48 ⇓P P 11 11 00.9 +0.2
baz=70
D08A Wollman Farm, 70.70 45 ⇓P P 11 11 00.6 -0.1
baz=70
WRD Warden 70.71 46 P P 11 11 00.4 -0.4
SMDO Samad 70.80 285 P P 11 11 02.6 +0.9
SNR=7.7
GOR Gori 70.83 308 P P 11 11 02.2 +0.6
E08A Dider Farm, El 70.93 46 ⇓P P 11 11 02.1 0.0
baz=71
KLBR Kellerberrin 70.99 200 eP P 11 11 01.3 -1.2
comp=Z,26nm,0.9s,mb5.2
NEW Newport 71.05 44 ⇓P P 11 11 02.5 -0.4
baz=71,SNR=13
NEW Newport 71.05 44 eP P 11 11 02.7 -0.1
comp=Z,6.8nm,0.8s,mb4.6
NEW Newport 71.05 44 eP P 11 11 02.7 -0.2
NEW pmax pmax
comp=Z,7.0nm,0.8s
VIPM Ingram Point 71.08 48 P P 11 11 03.3 +0.2
HOQ Hoqain 71.10 286 P P 11 11 04.4 +0.8
SNR=8.7
JMDO Jabal Madar 71.12 284 P P 11 11 04.3 +0.6
SNR=7.9
SUMG Summit 71.22 360 eP P 11 11 04.6 +1.1
comp=Z,71nm,1.0s,mb5.5
SUMG Summit 71.22 360 i P P 11 11 04.6 +1.2
comp=Z,45nm,1.0s,mb5.4
HATD Hatta, Dubai 71.35 287 P P 11 11 05.8 +0.8
SNR=8.7
GNI Garni 71.40 306 ciP P 11 11 06.3 +1.2
GNI pmax pmax
comp=Z,85nm,1.4s
GNI Garni 71.40 306 P P 11 11 06.8 +1.6
SNR=16
E09A Wood Farm, Sta 71.44 46 ⇑P P 11 11 05.3 0.0
baz=71
ASHO Ashiyiah 71.48 287 P P 11 11 06.6 +0.8
SNR=8.3
A12A Yaak River Ran 71.49 42 ⇓P P 11 11 05.6 +0.1
baz=71
NSS Namsos 71.51 339 eP P 11 11 03.6 -1.7
NAZ Nazwa, Dubai 71.62 288 P P 11 11 07.5 +0.8
SNR=5.5
BSY Bisya 71.63 285 P P 11 11 06.7 -0.1
SNR=12
G08A Pilot Rock 71.65 47 ⇑P P 11 11 06.4 -0.1
baz=72
LNOR Lincton Mounta 71.72 46 eP P 11 11 07.7 +0.8
comp=Z,6.4nm,0.8s,mb4.6
LNOR Lincton Mounta 71.72 46 eP P 11 11 07.7 +0.8
LNOR pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
C11A Tepee Creek (N 71.77 44 ⇓P P 11 11 07.5 +0.3
baz=72
ARQ Araqi 71.84 286 P P 11 11 08.9 +0.9
SNR=14
K05A Summer Lake 71.89 50 ⇑P P 11 11 07.7 -0.3
baz=72
I07A Izee 71.99 48 ⇑P P 11 11 08.4 -0.1
baz=72
WDC Whiskeytown Da 72.01 53 eP P 11 11 09.2 +0.4
comp=Z,4.4nm,0.8s,mb4.4
WDC Whiskeytown Da 72.01 53 eP P 11 11 09.2 +0.4
WDC pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
ASUD Al Ashush, Dub 72.07 288 P P 11 11 10.2 +0.8
SNR=7.2
A13A Flathead Natio 72.16 42 ⇓P P 11 11 09.0 -0.5
baz=72
F10A Beach Ranch, E 72.28 46 ⇓P P 11 11 09.8 -0.5
baz=72
C12B Naegeli Ranch, 72.28 43 ⇓P P 11 11 10.0 -0.2
baz=72
NWAO Narrogin (SRO) 72.40 200 P P 11 11 10.0 -0.9
NWAO eP 11 11 10.6
NWAO Narrogin (SRO) 72.40 200 P P 11 11 10.0 -0.9
comp=Z,23nm,0.8s,mb5.2,baz=19,slow=6.1,SNR=15
NWAO Narrogin (SRO) 72.40 200 P P 11 11 10.0 -0.9
NWAO pmax pmax
comp=Z,23nm,0.8s
IZAR Zarasai 72.44 327 eP P 11 11 10.8 -0.3
IZAR AMB AMB 11 11 12.0
comp=Z,32nm,0.7s,mb5.4
B13A Whitefish 72.45 42 ⇑P P 11 11 11.3 0.0
baz=72,SNR=9.6
IDID Didziasalis 72.50 327 eP P 11 11 11.1 -0.3
IDID AMB AMB 11 11 13.3
comp=Z,39nm,1.0s,mb5.3
MICGM Minsk 72.50 326 ⇑iP P 11 11 11.0 -0.4
MNK Minsk 72.52 326 ⇑iP P 11 11 11.0 -0.6
MNK pmax pmax
comp=Z,280nm,1.0s,mb6.2
SCO Scoresbysund 72.56 354 ⇑iP P 11 11 12.2 +0.7
SCO pmax pmax
comp=Z,27nm,0.8s,mb5.2
SCO MLR MLR
comp=Z,180nm,21.0s
SCO Scoresbysund 72.56 354 ⇑iP P 11 11 12.2 +0.7
comp=Z,27nm,0.8s,mb5.2
SCO
comp=Z,180nm,21.0s
ISAL Salakas 72.61 327 eP P 11 11 11.7 -0.4
ISAL AMB AMB 11 11 14.1
comp=Z,65nm,1.2s,mb5.4
A14A Double T Ranch 72.67 42 ⇑P P 11 11 12.5 0.0
baz=72,SNR=8.4
SOC Sochi 72.67 312 eP P 11 11 12.5 -0.2
SOC e*PP pP 11 11 21.3 -8.0
SOC ePPP 11 15 39.8
SOC eS S 11 20 33.3 +0.2
SOC e 11 21 20.5
SOC eSS SS 11 25 22.6 +10
SOC eSSS 11 28 31.4
SOC pmax pmax
comp=Z,50nm,0.6s,mb5.6
SOC MLR MLR
comp=Z,382nm,22.0s
MOD Modoc 72.70 51 eP P 11 11 13.4 +0.5
comp=Z,4.0nm,0.7s,mb4.5
IIGN Ignalina 72.70 327 eP P 11 11 12.3 -0.3
IIGN AMB AMB 11 11 14.6
comp=Z,44nm,1.1s,mb5.3
D12A Red Ives Fores 72.72 44 ⇑P P 11 11 12.7 -0.3
baz=72
NACGM Naroch 72.74 326 e P 11 11 10.0 -2.9
C13A Hot Springs 72.80 43 ⇓P P 11 11 13.4 +0.1
baz=73,SNR=12
DBAD Bademkaya 72.88 309 i P P 11 11 14.2 +0.3
JTMT Jette 72.92 43 eP P 11 11 14.6 +0.6
comp=Z,13nm,0.9s,mb4.9
E12A Beaver Dam Sad 72.97 45 ⇑P P 11 11 14.5 +0.1
baz=73
J08A Circle Bar Ran 73.01 48 ⇑P P 11 11 14.4 -0.3
baz=73
A15A Johnson Ranch, 73.03 41 ⇑P P 11 11 13.9 -0.7
baz=73,SNR=7.0
B14A Marquette Ranc 73.11 42 ⇑P P 11 11 15.0 -0.1
baz=73,SNR=9.7
C14A Swan Lake 73.20 43 ⇑P P 11 11 15.7 0.0
baz=73
D13A Huson 73.20 44 ⇑P P 11 11 15.1 -0.6
baz=73,SNR=13
SWMT Swartz Lake 73.21 43 eP P 11 11 16.2 +0.4
comp=Z,14nm,0.9s,mb4.9
HOMI Horasan 73.28 308 i P P 11 11 17.6 +1.3
ANN Anapa 73.34 314 eP P 11 11 15.5 -1.1
ANN pmax pmax
comp=Z,116nm,1.2s,mb5.7
WVOR Wild Horse Val 73.43 49 eP P 11 11 17.5 +0.3
comp=Z,7.1nm,1.1s,mb4.5
WVOR Wild Horse Val 73.43 49 eP P 11 11 17.5 +0.3
WVOR pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
HAKT HAKKARI 73.48 305 i P P 11 11 17.1 -0.4
B15A Bradely Ranch, 73.52 42 ⇑P P 11 11 17.6 0.0
baz=73,SNR=19
F12A Elk City 73.53 45 ⇑P P 11 11 17.3 -0.4
baz=73,SNR=24
MSO Missoula 73.64 44 ⇓P P 11 11 17.9 -0.4
baz=73
SLMT Seeley Lake 73.65 43 eP P 11 11 18.5 +0.2
comp=Z,19nm,0.8s,mb5.1
A16A West Butte Ran 73.65 41 ⇑P P 11 11 17.9 -0.5
baz=73
E13A Victor 73.73 44 ⇓P P 11 11 18.6 -0.3
baz=74,SNR=6.2
D14A Greenough 73.73 43 ⇓P P 11 11 18.0 -0.9
baz=74,SNR=22
C15A Salmond Ranch, 73.81 42 ⇑P P 11 11 19.8 +0.5
baz=74,SNR=23
B16A M & M Farms, S 73.91 41 ⇓P P 11 11 19.3 -0.6
baz=74
CHMT Chamberlain Mo 73.97 43 eP P 11 11 20.3 0.0
comp=Z,4.5nm,0.9s,mb4.4
F13A Darby 74.03 45 ⇓P P 11 11 20.0 -0.6
baz=74,SNR=12
A17A Triple J Farms 74.12 40 ⇓P P 11 11 20.7 -0.4
baz=74
E14A Clinton 74.14 44 ⇓P P 11 11 20.7 -0.5
baz=74,SNR=8.0
AKASG Malin Array Be 74.24 322 P P 11 11 21.3 -0.4
comp=Z,75nm,0.6s,mb5.8,baz=47,slow=6.0,SNR=289
AKASG LR LR 11 47 02.5
comp=Z,364nm,19.2s,baz=250,slow=38
AKASG Malin Array Be 74.24 322 P P 11 11 21.3 -0.4
AKASG pmax pmax
comp=Z,75nm,0.6s
AKASG MLR MLR
comp=Z,364nm,19.2s
KIEV Kiev 74.25 322 eP P 11 11 21.2 -0.6
comp=Z,93nm,0.7s,mb5.8
KIEV Kiev 74.25 322 eP P 11 11 21.2 -0.6
KIEV pmax pmax
comp=Z,93nm,0.7s,mb5.8
C16A Fuhringer Ranc 74.26 42 ⇑P P 11 11 21.9 0.0
baz=74,SNR=15
MOL Molde 74.28 339 eP P 11 11 20.9 -0.8
MOL AMB AMB 11 11 21.9
comp=Z,54nm,0.7s,mb5.6
D15A Lincoln 74.30 43 ⇓P P 11 11 21.9 -0.2
baz=74
NOA NORSAR Array B 74.38 337 P P 11 11 22.2 -0.1
comp=Z,81nm,0.8s,mb5.7,baz=39,slow=5.8,SNR=278
NOA LR LR 11 46 57.5
comp=Z,153nm,18.5s,baz=40,slow=38
NOA NORSAR Array B 74.38 337 P P 11 11 22.2 -0.1
NOA pmax pmax
comp=Z,81nm,0.8s
NOA MLR MLR
comp=Z,153nm,18.5s
H12A Diamond D Ranc 74.46 46 ⇓P P 11 11 23.0 -0.1
baz=74,SNR=18
B17A L&G Farms, Che 74.47 41 ⇑P P 11 11 22.9 -0.2
baz=74,SNR=5.9
G13A Cobalt 74.50 45 ⇓P P 11 11 22.9 -0.5
baz=74,SNR=10
WCN Washoe City 74.50 53 ⇑P P 11 11 23.1 -0.4
baz=74
MFID Camas Ranch 74.56 47 ⇓P P 11 11 23.6 -0.1
baz=74,SNR=7.8
F14A Wisdom 74.56 44 ⇑P P 11 11 23.3 -0.4
baz=74,SNR=8.8
E15A Deer Lodge 74.60 43 ⇑P P 11 11 23.7 -0.2
baz=74,SNR=21
I12A Atlanta 74.75 47 ⇓P P 11 11 24.9 +0.1
baz=75,SNR=15
H13A Challis 74.80 46 ⇓P P 11 11 25.1 0.0
baz=75,SNR=24
CMB Columbia Colle 74.81 54 eP P 11 11 25.2 -0.1
comp=Z,14nm,1.1s,mb4.8
CMB Columbia Colle 74.81 54 eP P 11 11 25.2 -0.1
CMB pmax pmax
comp=Z,14nm,1.1s,mb4.8
D16A Dana Ranch, Ca 74.83 42 ⇑P P 11 11 25.3 0.0
baz=75,SNR=10
G14A Jackson 74.85 45 ⇓P P 11 11 24.8 -0.6
baz=75
HRY Holter Researc 74.88 43 eP P 11 11 25.9 +0.5
comp=Z,24nm,0.8s,mb5.2
C17A Wharram Farm, 74.89 42 ⇑P P 11 11 24.9 -0.6
baz=75,SNR=5.1
KELT Kelkit 74.90 309 i P P 11 11 25.8 0.0
SUW Suwalki 74.92 327 eP P 11 11 25.7 +0.1

SUW **Suwalki** 74.92 327 *e*P P 11 11 26.1 +0.5
comp=Z,83nm,0.5s,mb5.9
SUW **Suwalki** 74.92 327 *e*P P 11 11 26.1 +0.5
SUW pmax pmax
comp=Z,83nm,0.5s,mb5.9
B18A **Beardsley Farm** 74.94 41 ⇑P P 11 11 25.5 -0.4
baz=75
F15A **Butte** 75.04 44 ⇓P P 11 11 26.3 -0.1
baz=75,SNR=33
E16A **East Helena** 75.07 43 ⇑P P 11 11 26.6 0.0
baz=75
LRM **Limekiln Ridge** 75.07 44 *e*P P 11 11 27.1 +0.4
comp=Z,171nm,0.8s,mb6.0
D17A **Six Diamond Ra** 75.23 42 ⇓P P 11 11 27.5 0.0
baz=75,SNR=7.9
DLMT **Dillon** 75.27 44 *e*P P 11 11 28.5 +0.7
comp=Z,23nm,0.8s,mb5.2
I13A **Wildhorse Cree** 75.27 46 ⇓P P 11 11 28.1 +0.2
baz=75,SNR=15
H14A **Leadore** 75.28 45 ⇓P P 11 11 27.5 -0.4
baz=75
HLID **Hailey** 75.31 47 ⇑P P 11 11 28.1 +0.1
baz=75,SNR=9.7
HLID **Hailey** 75.31 47 *e*P P 11 11 28.4 +0.4
comp=Z,5.8nm,0.9s,mb4.5
OSL **Oslo** 75.38 336 *e*P P 11 11 28.4 +0.3
G15A **Dillon** 75.45 44 ⇑P P 11 11 28.9 +0.1
baz=75,SNR=26
MCMT **McKenzie Canyo** 75.45 45 *e*P P 11 11 28.9 +0.1
comp=Z,1.4nm,0.7s,mb4.0
BMN **Battle Mountai** 75.45 50 *e*P P 11 11 29.6 +0.7
comp=Z,8.0nm,0.7s,mb4.8
BMN **Battle Mountai** 75.45 50 *e*P P 11 11 29.6 +0.7
BMN pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
J13A **Cove Ranch, Pi** 75.54 47 ⇓P P 11 11 29.6 +0.2
baz=75,SNR=10
F16A **Kennard Place,** 75.55 43 ⇑P P 11 11 29.7 +0.2
baz=75,SNR=21
E17A **Martinsdale** 75.56 43 ⇓P P 11 11 29.7 +0.2
baz=75,SNR=15
BOZ **Bozeman (W)** 75.64 44 ⇓P P 11 11 30.0 +0.1
baz=75,SNR=22
BOZ **Bozeman (W)** 75.64 44 *e*P P 11 11 30.2 +0.3
comp=Z,8.9nm,0.8s,mb4.8
BOZ **Bozeman (W)** 75.64 44 *e*P P 11 11 30.2 +0.3
BOZ pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
I14A **Mackay** 75.64 46 ⇑P P 11 11 30.3 +0.4
baz=75,SNR=42
D18A **Linhart Farms,** 75.67 41 ⇑P P 11 11 30.2 +0.1
baz=76,SNR=10
H15A **Lima** 75.69 45 ⇓P P 11 11 30.0 -0.3
baz=76
FOO **Floro** 75.77 340 *e*P P 11 11 29.6 -0.7
G16A **Moss Hill, Enn** 75.79 44 ⇑P P 11 11 30.7 -0.1
baz=76,SNR=5.5
KEMA **Kemaliye** 75.89 308 *i* P P 11 11 32.6 +1.1
NVAR **Mina Array Bea** 75.93 53 P P 11 11 32.1 +0.4
comp=Z,8.6nm,0.7s,mb4.8,baz=290,slow=5.5,SNR=89
KONO **Kongsberg** 75.96 337 *e*P P 11 11 31.6 +0.1
KONO AMB AMB 11 11 32.4
comp=Z,40nm,0.7s,mb5.5
KONO **Kongsberg** 75.96 337⇑*i*P P 11 11 30.8 -0.7
J14A **Carey** 75.97 46 ⇑P P 11 11 32.2 +0.4
baz=76,SNR=16
E18A **Harlowton** 76.01 42 ⇓P P 11 11 32.1 +0.1
baz=76,SNR=7.2
F17A **Fitzpatrick Pl** 76.01 43 ⇑P P 11 11 32.1 +0.1
baz=76,SNR=7.8
ELZG **Elazig** 76.02 308 *i* P P 11 11 33.5 +1.2
I15A **Monteview** 76.16 45 ⇑P P 11 11 33.4 +0.5
baz=76
G17A **Pierce Place,** 76.33 43 ⇓P P 11 11 34.3 +0.5
baz=76,SNR=10
P10A **Eureka** 76.40 51 ⇓P P 11 11 34.7 +0.4
baz=76
H16A **Russell Place,** 76.43 44 ⇑P P 11 11 34.5 +0.1
baz=76,SNR=6.2
MALT **Malatya** 76.49 308 P P 11 11 36.5 +1.7
MALT **Malatya** 76.49 308 ⇑P P 11 11 36.1 +1.2
MALT **Malatya** 76.49 308⇑*i*P P 11 11 36.1 +1.2
MALT **Malatya** 76.49 308 P P 11 11 36.2 +1.3
F18A **Big Timber** 76.53 42 ⇑P P 11 11 35.6 +0.6
baz=76,SNR=8.2
J15A **Blackfoot** 76.55 46 ⇑P P 11 11 35.8 +0.6
baz=76,SNR=9.8
YMR **Madison River** 76.61 44 *e*P P 11 11 36.4 +1.0
comp=Z,5.9nm,0.8s,mb4.6
SMMC **Simmler** 76.62 56 ⇓P P 11 11 36.2 +0.5
baz=76
D20A **Manuel Ranch,** 76.62 41 ⇓P P 11 11 35.5 0.0
baz=76,SNR=12
K14A **Jones Ranch, D** 76.64 47 ⇓P P 11 11 36.3 +0.6
baz=76,SNR=11
BER **Bergen** 76.68 339 *e*P P 11 11 36.2 +0.7
E19A **Rath Farm, Rou** 76.68 42 ⇓P P 11 11 36.0 +0.2
baz=76,SNR=35
TIN **Tinemaha** 76.78 54 ⇓P P 11 11 36.9 +0.4
baz=77
I16A **Newdale** 76.80 45 ⇑P P 11 11 37.7 +1.1
baz=77,SNR=35
YFT **Old Faithful** 76.81 44 *e*P P 11 11 38.9 +2.3
comp=Z,11nm,0.7s,mb4.9
AKCD **Akcadag** 76.82 308 *i* P P 11 11 38.0 +1.2
P11A **Circle Ranch,** 76.88 50 ⇓P P 11 11 37.5 +0.4
baz=77
Q10A **Clear Creek Ra** 76.91 51 ⇑P P 11 11 37.5 +0.3
baz=77,SNR=12
L14A **Malta** 76.91 47 ⇓P P 11 11 37.8 +0.6
baz=77,SNR=6.2
VES **Vestal, Richgr** 76.92 55 ⇑P P 11 11 36.8 -0.6
baz=77,SNR=5.4
K15A **Arbon** 76.93 46 ⇓P P 11 11 38.1 +0.8
baz=77
F19A **Roth Farm, Mol** 76.98 42 ⇑P P 11 11 37.6 +0.1
baz=77,SNR=12
G18A **Lazy EL Ranch,** 76.98 43 ⇑P P 11 11 38.0 +0.5
baz=77
PKM **Peak Mountain** 76.98 56 ⇓P P 11 11 38.0 +0.3
baz=77
H17A **Grant Village** 77.00 44 ⇓P P 11 11 39.0 +1.4
baz=77,SNR=16
E20A **Meyer Farm, Mu** 77.00 41 ⇑P P 11 11 37.9 +0.2
baz=77,SNR=21
ATAB **Bozova** 77.07 307 *i* P P 11 11 38.5 +0.4
O12A **Currie** 77.07 49 ⇑P P 11 11 38.4 +0.3
baz=77,SNR=18
IMW **Indian Meadow** 77.10 45 *e*P P 11 11 39.3 +1.1
comp=Z,12nm,0.8s,mb4.9
J16A **Bone** 77.10 45 ⇓P P 11 11 38.9 +0.6
baz=77,SNR=7.0
FLWY **Flagg Ranch** 77.12 44 *e*P P 11 11 39.9 +1.6
comp=Z,9.2nm,0.8s,mb4.8
DCID1 **Drake Creek** 77.15 45 *e*P P 11 11 39.8 +1.3
comp=Z,36nm,1.1s,mb5.2
RRI2 **Red Ridge** 77.22 45 *e*P P 11 11 40.1 +1.1
comp=Z,10.0nm,0.9s,mb4.8
CWC **Cottonwood Cre** 77.23 54 ⇓P P 11 11 39.1 0.0
baz=77
RLMT **Red Lodge** 77.27 43 ⇓P P 11 11 39.5 +0.4
baz=77,SNR=6.8
RLMT **Red Lodge** 77.27 43 *e*P P 11 11 39.9 +0.8
comp=Z,8.0nm,1.0s,mb4.6
R10A **Warm Springs** 77.29 52 ⇓P P 11 11 39.5 +0.1
baz=77,SNR=5.3
I17A **Pilgrim Ck.** 77.29 44 ⇓P P 11 11 40.1 +0.8
baz=77
MOOW **Moose Ponds** 77.30 45 *e*P P 11 11 40.2 +0.8
comp=Z,3.0nm,0.7s,mb4.3
S10A **Tonopah Range,** 77.32 52 ⇑P P 11 11 39.6 0.0
baz=77,SNR=20
IAS **Iasi** 77.32 320 P P 11 11 39.7 +0.3
HVU **Hansel Valley** 77.34 47 *e*P P 11 11 40.4 +0.8
comp=Z,9.6nm,0.7s,mb4.8
HVU **Hansel Valley** 77.34 47 *e*P P 11 11 40.4 +0.8
HVU pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
TPAW **Teton Pass** 77.35 45 *e*P P 11 11 40.5 +0.9
comp=Z,8.7nm,0.9s,mb4.7
LVV **L'vov** 77.35 324 *i* P P 11 11 39.5 0.0
Q11A **Duckwater** 77.36 51 ⇓P P 11 11 39.5 -0.2
baz=77,SNR=8.1
GRAC **Grapevine Rang** 77.37 53 ⇑P P 11 11 39.9 0.0
baz=77,SNR=8.0
CTKT **Corum** 77.37 311 *i* P P 11 11 39.5 -0.4
K16A **Soda Springs** 77.39 46 ⇓P P 11 11 40.1 +0.3
baz=77,SNR=9.3
ISA **Isabella** 77.43 55 ⇓P P 11 11 39.6 -0.6
baz=77
ISA **Isabella** 77.43 55 *e*P P 11 11 39.4 -0.9
comp=Z,2.6nm,0.8s,mb4.2
ISA **Isabella** 77.43 55 *e*P P 11 11 39.4 -0.8
ISA pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
L15A **Malad City** 77.44 47 ⇑P P 11 11 40.4 +0.2
baz=77,SNR=7.4
F20A **Billings** 77.44 42 ⇑P P 11 11 39.9 -0.2
baz=77
P12A **McGill** 77.45 50 ⇑P P 11 11 40.0 -0.2
baz=77,SNR=16
LOHW **Long Hollow** 77.47 45 *e*P P 11 11 41.2 +1.0
comp=Z,6.0nm,1.1s,mb4.4
SNOW **Snow King Moun** 77.48 45 *e*P P 11 11 41.6 +1.3
comp=Z,10nm,1.0s,mb4.7
REDW **Red Top Meadow** 77.48 45 *e*P P 11 11 41.0 +0.6
comp=Z,17nm,1.3s,mb4.8
ARVC **Arvin** 77.51 56 ⇓P P 11 11 40.6 -0.1
baz=77
BSD **Bornholm Skovb** 77.54 331⇑*i*P P 11 11 40.1 -0.4
BSD pmax pmax
comp=Z,120nm,0.8s,mb5.9
BSD MLR MLR
comp=Z,170nm,16.0s
BSD **Bornholm Skovb** 77.54 331⇑*i*P P 11 11 40.1 -0.4
comp=Z,124nm,0.8s,mb5.9
BSD
comp=Z,160nm,16.0s
J17A **Brown Place, J** 77.56 45 ⇓P P 11 11 41.1 +0.3
baz=77
O13A **Hicks Ranch, I** 77.62 49 ⇓P P 11 11 41.8 +0.6
baz=77,SNR=7.8
BSC **Santa Cruz Isl** 77.63 57 ⇓P P 11 11 42.0 +0.7
baz=78
BALT **Daday** 77.66 313 *i* P P 11 11 41.3 -0.1
R11A **Troy Canyon, C** 77.70 51 ⇑P P 11 11 41.9 +0.2
baz=78,SNR=22
M15A **Larsen Ranch,** 77.73 47 ⇑P P 11 11 41.9 +0.1
baz=78
DGMT **Dagmar** 77.74 38 ⇑P P 11 11 41.6 -0.1
baz=78
DGMT **Dagmar** 77.74 38 *e*P P 11 11 40.8 -0.9
comp=Z,13nm,1.1s,mb4.8
ILGA **Ilgaz** 77.76 312 *i* P P 11 11 43.1 +1.2
SNART **Snartemo** 77.76 337 *e*P P 11 11 42.2 +0.6
SNART AMB AMB 11 11 42.8
comp=Z,75nm,0.8s,mb5.7
Q12A **Willow Creek R** 77.76 50 ⇑P P 11 11 42.4 +0.4
baz=78,SNR=8.4
K17A **Gardner Place,** 77.83 46 ⇑P P 11 11 42.4 +0.1
baz=78
MPMC **Manual Prospec** 77.84 54 ⇓P P 11 11 42.8 +0.3
baz=78,SNR=9.1
I18A **Diamond G Ranc** 77.86 44 ⇑P P 11 11 43.1 +0.6
baz=78
LAO **LASA Array** 77.89 40 ⇑P P 11 11 42.7 +0.1
baz=78
LAO **LASA Array** 77.89 40 *e*P P 11 11 43.0 +0.5
comp=Z,12nm,0.8s,mb4.9
F21A **Absaloka Mine,** 77.97 41 ⇑P P 11 11 43.1 0.0
baz=78
L16A **Fish Haven** 77.99 46 ⇓P P 11 11 43.5 +0.3
baz=78,SNR=7.6
FURC **Furnace Creek,** 78.01 54 ⇓P P 11 11 43.2 -0.2
baz=78
P13A **Bates Ranch, G** 78.01 50 ⇑P P 11 11 43.6 +0.2
baz=78,SNR=12
S11A **Rachel** 78.02 52 ⇑P P 11 11 43.9 +0.4
baz=78
N15A **Stansbury Isla** 78.04 48 ⇑P P 11 11 44.2 +0.6
baz=78
COP **Copenhagen** 78.05 333⇑*i*P P 11 11 43.4 +0.1
COP pmax pmax
comp=Z,82nm,0.8s,mb5.7
COP MLR MLR
comp=Z,110nm,16.0s
COP **Copenhagen** 78.05 333⇑*i*P P 11 11 43.4 +0.1
comp=Z,82nm,0.8s,mb5.7
COP
comp=Z,100nm,16.0s
J18A **Kendall Valley** 78.05 45 ⇑P P 11 11 43.7 +0.2
baz=78,SNR=9.3
LRMC **Laurel Mountai** 78.06 55 ⇑P P 11 11 43.4 -0.3
baz=78
BORG **Borgarnes** 78.07 352 *e*P P 11 11 45.6 +2.4
comp=Z,83nm,0.8s,mb5.7
BORG **Borgarnes** 78.07 352 *e*P P 11 11 45.6 +2.4
BORG pmax pmax
comp=Z,83nm,0.8s
KWP **Kalwaria Pacla** 78.11 324 *i* P P 11 11 44.4 +0.7
KWP **Kalwaria Pacla** 78.11 324⇑*i*P P 11 11 44.4 +0.7
TPNV **Topoah Spring** 78.12 53 ⇑P P 11 11 45.3 +1.3
baz=78
TPNV **Topopah Spring** 78.12 53 *e*P P 11 11 45.7 +1.7
HWUT **Hardware Ranch** 78.16 47 *e*P P 11 11 44.7 +0.5
comp=Z,46nm,1.0s,mb5.4
EDW2 **Edwards Air Fo** 78.21 55 ⇓P P 11 11 44.8 +0.2
baz=78,SNR=6.3
BUR08 **Bucovina Ar. S** 78.23 321 *e*P P 11 11 45.0 +0.5
CDAG **Cicekdag** 78.24 311 *i* P P 11 11 45.0 +0.4
TESR 78.24 320 ⇑P P 11 11 44.6 +0.1
TESR 78.24 320⇑*i*P P 11 11 44.6 +0.1
BUR01 **Bucovina Ar. S** 78.25 321 P P 11 11 45.3 +0.8
BURAR **Bucovina Array** 78.25 321 ⇑P P 11 11 45.0 +0.5
BURAR **Bucovina Array** 78.25 321⇑*i*P P 11 11 45.0 +0.5
L17A **Cokeville** 78.26 46 ⇑P P 11 11 44.9 +0.2
baz=78,SNR=10
DUG **Dugway** 78.29 49 ⇓P P 11 11 45.1 +0.2
baz=78,SNR=15
DUG **Dugway** 78.29 49 *e*P P 11 11 45.4 +0.5
comp=Z,13nm,0.8s,mb4.9
DUG **Dugway** 78.29 49 *e*P P 11 11 45.4 +0.5
DUG pmax pmax
comp=Z,13nm,0.8s,mb4.9
Q13A **Wheeler Ranch,** 78.31 50 ⇓P P 11 11 45.6 +0.5
baz=78
G21A **Lodge Grass** 78.32 42 ⇑P P 11 11 45.0 0.0
baz=78,SNR=6.1
CFR **Carcaliu** 78.33 318 ⇑P P 11 11 45.3 +0.3
CFR **Carcaliu** 78.33 318⇑*i*P P 11 11 45.3 +0.3
R12A **Pony Springs,** 78.33 51 ⇓P P 11 11 45.4 +0.2
baz=78,SNR=18
H20A **Greybull** 78.37 43 ⇑P P 11 11 45.1 -0.1
baz=78
U10A **Ash Meadows, A** 78.38 53 ⇑P P 11 11 46.0 +0.5
baz=78,SNR=7.3
K18A **Toltan Ranch,** 78.40 45 ⇑P P 11 11 46.0 +0.5
baz=78,SNR=10.0
O15A **The Old Anders** 78.45 48 ⇓P P 11 11 45.8 0.0
baz=78
AVNT **Avonos** 78.45 310 *i* P P 11 11 46.3 +0.5
PETR 78.45 319 ⇓P P 11 11 46.6 +0.9
PETR 78.45 319⇓*i*P P 11 11 46.6 +0.9
P14A **Drum Mountains** 78.51 49 ⇓P P 11 11 46.4 +0.3
baz=78,SNR=17
RGN **Rugen** 78.58 332 *e*P P 11 11 46.6 +0.4
comp=Z,177nm,1.2s,mb5.9
BW06 **Boulder Array** 78.59 45 ⇓P P 11 11 46.6 +0.1
baz=78,SNR=10.0
BW06 **Boulder Array** 78.59 45 *e*P P 11 11 46.7 +0.2
comp=Z,21nm,1.2s,mb4.9
PDAR **Pinedale Array** 78.59 45 P P 11 11 46.3 -0.2
comp=Z,5.7nm,0.7s,mb4.6,baz=272,slow=2.4,SNR=65
PDAR PKKPbc PKKPbc 11 30 40.5 -0.2
comp=Z,0.6nm,0.8s,baz=111,slow=3.3,SNR=5.8
MUD **Monsted U'grnd** 78.61 335⇑*i*P P 11 11 46.4 +0.1
MUD pmax pmax
comp=Z,46nm,0.8s,mb5.5
MUD MLR MLR
comp=Z,270nm,17.0s
MUD **Monsted U'grnd** 78.61 335⇑*i*P P 11 11 46.4 +0.1
comp=Z,46nm,0.8s,mb5.5
MUD
comp=Z,270nm,17.0s
S12A **Delamar Landin** 78.61 52 ⇑P P 11 11 47.0 +0.3
baz=78
BRTR **Keskin Array B** 78.62 311 P P 11 11 47.0 +0.3
comp=Z,30nm,0.8s,mb5.3,baz=95,slow=4.0,SNR=133
BRTR PP PP 11 14 44.2 -0.5
comp=Z,6.3nm,1.0s,baz=68,slow=4.5,SNR=5.9
BRTR LR LR 11 50 58.3
comp=Z,81nm,20.1s,baz=197,slow=39
BRTR **Keskin Array B** 78.62 311 P P 11 11 47.0 +0.3
BRTR 11 14 44.3
BRTR pmax pmax
comp=Z,30nm,0.8s
BRTR pmax pmax
comp=Z,6.0nm,1.0s
BRTR MLR MLR
comp=Z,81nm,20.1s
VRI **Vrincioaia** 78.63 319 ⇑P P 11 11 47.1 +0.5
VRI **Vrincioaia** 78.63 319 P P 11 11 47.5 +0.9
VRI **Vrincioaia** 78.63 319⇑*i*P P 11 11 47.1 +0.5
I20A **Worland** 78.64 43 ⇑P P 11 11 47.0 +0.2
baz=78,SNR=7.2
TIRR **Tirgusor** 78.64 317 ⇑P P 11 11 46.6 -0.1
TIRR **Tirgusor** 78.64 317⇑*i*P P 11 11 46.6 -0.2
LRW **Lerwick** 78.66 342 *e*P P 11 11 46.6 0.0
LRW AMB AMB 11 11 55.0
comp=Z,63nm,2.9s,mb5.0
WAL1 **Walls** 78.67 342⇑*e*P P 11 11 46.6 0.0
PLOR **Plostina** 78.68 319 ⇑P P 11 11 47.5 +0.6
PLOR **Plostina** 78.68 319⇑*i*P P 11 11 47.5 +0.6
N16A **Rees Ranch, Co** 78.69 47 ⇓P P 11 11 47.3 +0.2
baz=78,SNR=5.2
GSC **Goldstone** 78.74 54 ⇑P P 11 11 47.3 -0.2
baz=79
Q14A **Sevier Lake (B** 78.75 50 ⇑P P 11 11 47.8 +0.4
baz=79,SNR=25
M17A **Scullys Gap (B** 78.77 46 ⇓P P 11 11 47.7 +0.2
baz=79,SNR=7.4
H21A **Big Horn, Sher** 78.80 42 ⇑P P 11 11 47.7 +0.1
baz=79,SNR=9.9
CIS **Catalina Islan** 78.80 57 ⇑P P 11 11 48.0 +0.2
baz=79
BFSC **Mount Baldy Ra** 78.81 56 ⇑P P 11 11 48.1 +0.2
baz=79
GRER 78.82 319 ⇑P P 11 11 48.9 +1.1
GRER 78.82 319⇑*i*P P 11 11 48.8 +1.1
R13A **O'Grain Ranch,** 78.82 51 ⇑P P 11 11 48.2 +0.4
baz=79,SNR=6.8
L18A **Fontenelle, Gr** 78.85 46 ⇓P P 11 11 48.4 +0.4
baz=79,SNR=7.0
JLU **Jordanelle** 78.86 48 *e*P P 11 11 48.8 +0.7
comp=Z,5.3nm,0.7s,mb4.6
NLU **North Lily Min** 78.89 48 *e*P P 11 11 48.9 +0.7
comp=Z,10nm,0.8s,mb4.8
STHS **Stebnicka Huta** 78.94 324 *e*P P 11 11 49.1 +0.8
comp=Z,28nm,0.8s,mb5.2
STHS **Stebnicka Huta** 78.94 324 *e*P P 11 11 49.1 +0.8
STHS pmax pmax
comp=Z,28nm,0.8s,mb5.2
STHS **Stebnicka Huta** 78.94 324 *e*P P 11 11 49.1 +0.8
K19A **Absolon Red Bu** 78.96 45 ⇓P P 11 11 48.4 -0.1
baz=79,SNR=5.4
U11A **Corn Creek** 78.99 53 ⇑P P 11 11 49.0 +0.2
baz=79
UZH **Uzhgorod** 78.99 323⇓*i*P P 11 11 48.3 -0.3
UZH *e* 11 11 55.2
P15A **Leamington** 79.00 49 ⇑P P 11 11 49.0 +0.2
baz=79,SNR=6.9
N17A **Moffit Pass** 79.01 47 ⇓P P 11 11 49.0 +0.2
baz=79,SNR=13
SGKT **Sivrigoynuk** 79.04 313 *i* P P 11 11 48.1 -1.0
BBAL **Bala** 79.05 311 *i* P P 11 11 49.6 +0.6
OJC **Ojcow** 79.05 326 *i* P P 11 11 49.2 +0.3
BMR **Baia Mare** 79.06 322 P P 11 11 50.0 +1.0
O16A **Springville** 79.07 48 ⇑P P 11 11 49.4 +0.2
baz=79,SNR=6.4
DAU **Daniels Canyon** 79.09 48 *e*P P 11 11 50.5 +1.1
comp=Z,34nm,1.3s,mb5.1
DAU **Daniels Canyon** 79.09 48 *e*P P 11 11 50.5 +1.2
DAU pmax pmax
comp=Z,34nm,1.3s,mb5.1
MPU **Maple Canyon** 79.11 48 *e*P P 11 11 50.2 +0.8
comp=Z,15nm,0.8s,mb5.0
L19A **Farson** 79.13 45 ⇓P P 11 11 49.4 0.0
baz=79,SNR=8.9
M18A **Lyman** 79.15 46 ⇑P P 11 11 49.8 +0.1
baz=79
I21A **Big Trails, Te** 79.19 43 ⇓P P 11 11 49.8 0.0
baz=79,SNR=9.5
CRVS **Cervenica-Dubn** 79.20 324 *e*P P 11 11 50.2 +0.5
comp=Z,23nm,0.9s,mb5.1
CRVS **Cervenica-Dubn** 79.20 324 *e*P P 11 11 50.2 +0.5
CRVS pmax pmax
comp=Z,23nm,0.9s,mb5.1
CRVS **Cervenica-Dubn** 79.20 324 *e*P P 11 11 50.2 +0.5
TRPA **Tarpa** 79.22 323⇑*i*P P 11 11 50.6 +0.8
T12A **Moapa** 79.23 52 ⇓P P 11 11 50.6 +0.4
baz=79
TUQ **Turquoise Moun** 79.24 54 ⇑P P 11 11 50.6 +0.4
baz=79,SNR=5.9
S13A **Holt Ranch, En** 79.25 51 ⇑P P 11 11 50.7 +0.4
baz=79,SNR=14
DOPR **Dopca** 79.26 320⇓*i*P P 11 11 51.3 +1.2
PSN **Preselentsi** 79.27 317 *e*P P 11 11 49.9 -0.3
BBRC **Big Bear Solar** 79.29 55 ⇑P P 11 11 50.4 -0.1
baz=79
MLR **Muntele Rosu** 79.29 319 ⇑P P 11 11 50.5 +0.2
MLR **Muntele Rosu** 79.29 319 P P 11 11 50.8 +0.5
MLR **Muntele Rosu** 79.29 319⇑*i*P P 11 11 50.5 +0.2
V11A **Goodsprings** 79.31 53 ⇑P P 11 11 50.9 +0.3
baz=79
YAYL **Yayladag** 79.33 307 *i* P P 11 11 51.5 +0.8
R14A **James Farms, M** 79.33 50 ⇑P P 11 11 50.7 0.0
baz=79
HEC **Hector,Ludlow** 79.34 55 ⇓P P 11 11 50.6 -0.1
baz=79
P16A **Fountain Green** 79.35 48 ⇓P P 11 11 50.9 +0.1
baz=79
K20A **Yellowstone Ra** 79.35 44 ⇑P P 11 11 50.3 -0.4
baz=79,SNR=5.5
NIE **Niedzica** 79.38 325 *e*P P 11 11 51.7 +1.0
ARUT **Antelope Range** 79.39 51 *e*P P 11 11 51.7 +0.7
comp=Z,8.4nm,0.9s,mb4.7
ARUT **Antelope Range** 79.39 51 *e*P P 11 11 51.7 +0.7
ARUT pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
GULE **Gulek** 79.42 309 *i* P P 11 11 51.8 +0.6
MURC **Murrieta** 79.50 56 ⇓P P 11 11 51.5 -0.2
baz=79
U12A **Valley of Fire** 79.53 52 ⇓P P 11 11 52.2 +0.4
baz=79
O17A **Robinson Place** 79.54 48 ⇑P P 11 11 52.1 +0.3
baz=79,SNR=9.4
T13A **Saint George** 79.57 52 ⇑P P 11 11 52.5 +0.5
baz=79,SNR=13
CCUT **Cedar City** 79.58 51 *e*P P 11 11 53.0 +0.9
comp=Z,4.2nm,0.8s,mb4.4
N18A **Larsen Ranch,** 79.67 46 ⇓P P 11 11 52.4 0.0
baz=80,SNR=7.8
MSU **Marysvale** 79.72 50 *e*P P 11 11 53.6 +0.9
comp=Z,7.3nm,0.9s,mb4.6
MSU **Marysvale** 79.72 50 *e*P P 11 11 53.7 +0.9
MSU pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
V12A **Nelson** 79.75 53 ⇑P P 11 11 52.9 -0.1
baz=80
L20A **Wamsutter** 79.77 45 ⇓P P 11 11 52.8 -0.2
baz=80
VOIR 79.79 320 ⇑P P 11 11 53.4 +0.4
VOIR 79.79 320⇑*i*P P 11 11 53.4 +0.4
GMRC **Granite Mounta** 79.81 54 ⇑P P 11 11 53.4 +0.1
baz=80,SNR=8.2
R15A **Junction** 79.85 50 ⇑P P 11 11 53.9 +0.5
baz=80,SNR=18
U13A **Pakoon Wash** 79.90 52 ⇑P P 11 11 54.2 +0.4
baz=80,SNR=18
O18A **Roosevelt** 79.92 47 ⇓P P 11 11 54.4 +0.6
baz=80,SNR=18
RUE **Ruedersdorf** 79.96 330 *e*P P 11 11 54.1 +0.3
comp=Z,70nm,1.1s,mb5.5
LDFC **Landfair** 79.98 54 *e*P P 11 11 54.3 0.0
comp=Z,40nm,1.1s,mb5.3
109C **Camp Elliot, M** 79.99 57 ⇑P P 11 11 54.2 -0.1
baz=80
PFO **Pinyon Flat Ob** 79.99 56 ⇓P P 11 11 54.5 +0.2
baz=80
PFO **Pinyon Flat Ob** 79.99 56 *e*P P 11 11 54.4 0.0
comp=Z,6.5nm,0.9s,mb4.6
PFO **Pinyon Flat Ob** 79.99 56 *e*P P 11 11 54.4 +0.1
PFO pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
P17A **Butcher Ranch,** 79.99 48 ⇓P P 11 11 54.5 +0.3
baz=80,SNR=12
W12A **Cal Nev Ari** 80.00 53 ⇑P P 11 11 54.4 0.0
baz=80
N19A **John Jarvie Ra** 80.01 46 ⇓P P 11 11 54.5 +0.2
baz=80,SNR=7.2

BELC **Belle Mtn. Jos** 80.05 55 ⇓P P 11 11 54.8 +0.2
baz=80
DRGR 80.06 322 ⇓P P 11 11 54.7 +0.3
DRGR 80.06 322 ⇓*i*P P 11 11 54.7 +0.3
T14A **Hurricane** 80.06 51 ⇑P P 11 11 54.9 +0.3
baz=80,SNR=6.0
OKC **Ostrava-Krasne** 80.06 326 *i* P P 11 11 54.5 +0.1
OKC MLR MLR
comp=Z,300nm,20.6s
OKC **Ostrava-Krasne** 80.06 326 ⇑*i*P P 11 11 54.5 +0.1
OKC AMS AMS 11 53 10.0
comp=Z,300nm,20.6s
Q16A **Castle Valley** 80.08 49 ⇓P P 11 11 55.1 +0.4
baz=80,SNR=7.4
S15A **Panguitch** 80.13 50 ⇓P P 11 11 55.4 +0.5
baz=80,SNR=8.8
KSP **Ksiaz** 80.14 328 *i* P P 11 11 55.4 +0.6
KSP **Ksiaz** 80.14 328 ⇑*i*P P 11 11 55.3 +0.5
KSP *e* 11 12 01.8
BSEG **Bad Segeberg** 80.18 333 *e*P P 11 11 55.2 +0.3
comp=Z,97nm,1.0s,mb5.7
BSEG **Bad Segeberg** 80.18 333 *e*P P 11 11 55.2 +0.3
BSEG pmax pmax
comp=Z,97nm,1.0s,mb5.7
LIKS **Likavka** 80.20 325 *e*P P 11 11 55.6 +0.5
comp=Z,50nm,1.1s,mb5.4
LIKS **Likavka** 80.20 325 *e*P P 11 11 55.6 +0.5
LIKS pmax pmax
comp=Z,51nm,1.1s,mb5.4
LIKS **Likavka** 80.20 325 *e*P P 11 11 55.6 +0.5
M20A **Sweetwater, Wa** 80.20 45 ⇓P P 11 11 55.3 0.0
baz=80
R16A **Teasdale** 80.29 49 ⇑P P 11 11 56.3 +0.5
baz=80,SNR=23
KDHN **Kadinhani** 80.30 311 *i* P P 11 11 55.7 -0.1
SRU **San Rafael** 80.35 48 ⇑P P 11 11 56.5 +0.4
baz=80,SNR=32
SRU **San Rafael** 80.35 48 *e*P P 11 11 56.3 +0.1
comp=Z,26nm,0.8s,mb5.2
SRU **San Rafael** 80.35 48 *e*P P 11 11 56.3 +0.2
SRU pmax pmax
comp=Z,26nm,0.8s,mb5.2
L21A **Rawlins** 80.35 44 ⇓P P 11 11 56.3 +0.2
baz=80,SNR=9.1
K22A **Casper** 80.38 44 ⇓P P 11 11 56.3 +0.1
baz=80,SNR=5.6
ULM **Lac du Bonnet** 80.38 33 P P 11 11 54.7 -1.4
ULM **Lac du Bonnet** 80.38 33 P P 11 11 54.7 -1.4
comp=Z,8.7nm,0.7s,mb4.8,baz=304,slow=4.6,SNR=7.3
MORC **Moravsky Berou** 80.38 326 *e*P P 11 11 55.7 -0.4
comp=Z,43nm,0.9s,mb5.4
MORC **Moravsky Berou** 80.38 326 *e*P P 11 11 55.7 -0.4
MORC pmax pmax
comp=Z,43nm,0.9s,mb5.4
U14A **Mt Trumbull** 80.40 52 ⇑P P 11 11 56.8 +0.4
baz=80,SNR=10
O19A **Miners Draw (B** 80.42 47 ⇑P P 11 11 56.3 -0.2
baz=80
ESKT **Eskisehir** 80.42 312 *i* P P 11 11 55.5 -1.1
MONP **Monument Peak** 80.44 56 ⇑P P 11 11 56.8 0.0
baz=80,SNR=6.5
DPC **Dobruska-Polom** 80.49 327 ⇑*i*P P 11 11 57.4 +0.7
DPC MLR MLR
comp=Z,300nm,18.4s
DPC **Dobruska-Polom** 80.49 327 ⇑*i*P P 11 11 57.4 +0.7
DPC AMS AMS 11 51 50.0
comp=Z,300nm,18.4s
UPC **Upice** 80.51 328 ⇑*i*P P 11 11 57.2 +0.4
UPC **Upice** 80.51 328 ⇑*i*P P 11 11 57.2 +0.4
IRM **Iron Mountain** 80.52 55 ⇓P P 11 11 57.1 -0.1
baz=80
T15A **Red Dirt Ranch** 80.53 51 ⇑P P 11 11 57.4 +0.2
baz=80,SNR=12
S16A **Weppner Ranch,** 80.57 50 ⇓P P 11 11 57.7 +0.3
baz=80,SNR=13
N20A **Spence Gulch,** 80.58 46 ⇑P P 11 11 57.6 +0.3
baz=80,SNR=11
M21A **Separation Pea** 80.59 45 ⇑P P 11 11 57.4 +0.1
baz=80,SNR=6.6
Q18A **Rafter H Ranch** 80.59 48 ⇑P P 11 11 57.6 +0.2
baz=80,SNR=7.5
BC3 **Big Chuckawall** 80.62 55 ⇑P P 11 11 58.0 +0.3
baz=80
PSZ **Piszkesteto** 80.64 324 P P 11 11 58.4 +0.9
PSZ **Piszkesteto** 80.64 324 ⇑P P 11 11 58.2 +0.7
PSZ **Piszkesteto** 80.64 324 ⇑*i*P P 11 11 58.2 +0.7
PSZ **Piszkesteto** 80.64 324 ⇑*e*P P 11 11 58.2 +0.7
R17A **Hanksville Air** 80.67 49 ⇑P P 11 11 58.1 +0.2
baz=80,SNR=26
VYHS **Vyhne** 80.72 325 *e*P P 11 11 58.7 +0.8
comp=Z,27nm,1.2s,mb5.0
VYHS **Vyhne** 80.72 325 *e*P P 11 11 58.7 +0.8
VYHS pmax pmax
comp=Z,27nm,1.2s,mb5.0
VYHS **Vyhne** 80.72 325 *e*P P 11 11 58.7 +0.8
RSSD **Black Hills** 80.74 41 *e*P P 11 11 58.0 -0.2
comp=Z,16nm,1.0s,mb4.9
RSSD **Black Hills** 80.74 41 *e*P P 11 11 58.0 -0.2
RSSD pmax pmax
comp=Z,16nm,1.0s,mb4.9
W13A **Hualapai Mount** 80.76 53 ⇑P P 11 11 58.7 +0.3
baz=81
SZH **Strazhica** 80.78 318 *e*P P 11 11 57.2 -1.2
DVTC **Desert V Tower** 80.80 56 ⇓P P 11 11 58.6 -0.1
baz=81
SWSC **Sam W. Stewart** 80.83 56 ⇑P P 11 11 58.6 -0.2
baz=81
KOLL **Kolacno** 80.86 325 *e*P P 11 11 59.5 +0.8
KOLL **Kolacno** 80.86 325 *e*P P 11 11 59.5 +0.8
BOLV **Bolvadin** 80.88 312 *i* P P 11 11 59.2 +0.2
V14A **Boquillas Ranc** 80.93 52 ⇓P P 11 11 59.6 +0.3
baz=81,SNR=14
P19A **Cripple Cowboy** 80.93 47 ⇑P P 11 11 59.4 +0.2
baz=81,SNR=36
U15A **North Rim** 80.95 51 ⇓P P 11 11 59.8 +0.4
baz=81,SNR=18
GZR **Gura Zlata** 80.99 321 ⇓P P 11 11 59.9 +0.4
GZR **Gura Zlata** 80.99 321 ⇓*i*P P 11 11 59.8 +0.3
O20A **White River Ci** 81.04 46 ⇓P P 11 12 00.0 +0.2
baz=81,SNR=12
N21A **Black Mountain** 81.05 45 ⇓P P 11 11 60.0 +0.1
baz=81,SNR=10
PDMCI **Parker Dam,Lak** 81.09 54 ⇓P P 11 12 00.0 -0.2
baz=81,SNR=5.9
T16A **Glen Canyon Da** 81.09 50 ⇑P P 11 12 00.1 -0.1
baz=81
PVCC **Panska Ves** 81.11 328 *i* P P 11 12 00.5 +0.5
PVCC MLR MLR
comp=Z,300nm,20.6s
PVCC **Panska Ves** 81.11 328 ⇑*i*P P 11 12 00.5 +0.5
PVCC AMS AMS 11 51 10.0
comp=Z,300nm,20.6s
X13A **Yucca** 81.11 53 ⇑P P 11 12 00.5 +0.3
baz=81,SNR=12
BRG **Berggiesshubel** 81.11 329 *e*P P 11 12 00.0 0.0
comp=Z,57nm,1.1s,mb5.4
BRG **Berggiesshubel** 81.11 329 ⇑*i*P P 11 12 00.1 +0.1
comp=Z,44nm,0.8s,mb5.5
BRG *i* pP 11 12 14.6 -2.4
comp=Z,15nm,0.8s
BRG
comp=N,180nm,15.1s
BRG
comp=E,174nm,17.4s
BRG
comp=Z,261nm,11.5s
BRG **Berggiesshubel** 81.11 329 ⇑*i*P P 11 12 00.1 +0.1
BRG *i* pP 11 12 14.6 -2.3
BRG pmax pmax
comp=Z,26nm,0.8s,mb5.2
BRG pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
BRG MLR MLR
comp=N,108nm,15.1s
BRG MLR MLR
comp=E,104nm,17.4s
BRG MLR MLR
comp=Z,156nm,11.5s
S17A **Black Ridge (B** 81.12 50 ⇑P P 11 12 00.6 +0.3
baz=81,SNR=15
PVL **Pavlikeni** 81.14 318 *e*P P 11 12 00.4 +0.1
CLL **Collm** 81.17 330 *e*P P 11 12 00.1 -0.2
comp=Z,101nm,0.9s,mb5.8
CLL **Collm** 81.17 330 ⇑*i*P P 11 12 00.2 -0.1
comp=Z,101nm,0.9s,mb5.8
CLL **Collm** 81.17 330 ⇑*i*P P 11 12 00.2 -0.1
CLL pmax pmax
comp=Z,101nm,0.9s,mb5.8
CLL **Collm** 81.17 330 ⇑*i*P P 11 12 00.2 -0.1
comp=Z,200nm,19.5s
CLL LmV 11 51 00.0
comp=Z,200nm,19.5s
Y12C **Blythe** 81.18 55 ⇑P P 11 12 01.2 +0.5
baz=81
L23A **Garrett** 81.19 44 ⇑P P 11 12 00.2 -0.4
baz=81
R18A **Canyonlands Na** 81.19 48 ⇑P P 11 12 00.5 -0.1
baz=81,SNR=15
W14A **Seligman** 81.21 53 ⇑P P 11 12 01.1 +0.3
baz=81,SNR=11
MVH1 **Achvaich** 81.36 342 ⇑*i*P P 11 12 01.2 0.0
BUD **Budapest** 81.36 324 ⇓*e*P P 11 12 02.3 +0.9
P20A **De Beque** 81.37 47 ⇓P P 11 12 01.7 +0.1
baz=81
NRDL **Niedersach Rie** 81.39 332 *e*P P 11 12 00.3 -1.1
comp=Z,33nm,0.8s,mb5.3
GLA **Glamis** 81.41 55 ⇑P P 11 12 02.1 +0.2
baz=81
V15A **Kaibab Nationa** 81.41 52 ⇑P P 11 12 02.3 +0.4
baz=81,SNR=14
MCD **Coleburn Disti** 81.42 341 ⇑*e*P P 11 12 01.3 -0.2
BZS **Buzias** 81.42 322 ⇑P P 11 12 01.5 -0.3
BZS **Buzias** 81.42 322 ⇑*i*P P 11 12 01.5 -0.2
O21A **Pagoda** 81.44 46 ⇑P P 11 12 02.1 +0.1
baz=81
GDZ **Gediz** 81.52 313 *i* P P 11 12 01.5 -0.8
T17A **Navajo Res., N** 81.52 50 ⇓P P 11 12 02.1 -0.4
baz=81
MODS **Modra-Piesok** 81.52 326 *e*P P 11 12 03.0 +0.8
MODS **Modra-Piesok** 81.52 326 *e*P P 11 12 03.0 +0.8
PRU **Pruhonice** 81.53 328 ⇑*i*P P 11 12 03.1 +0.9
PRU MLR MLR
comp=Z,400nm,17.1s
PRU **Pruhonice** 81.53 328 ⇑*i*P P 11 12 03.1 +0.9
PRU AMS AMS 11 52 00.0
comp=Z,400nm,17.1s
S18A **Hurst Farm, Bl** 81.57 49 ⇑P P 11 12 03.1 +0.5
baz=81,SNR=14
MME1 **Meikle Cairn** 81.58 341 ⇑*i*P P 11 12 01.9 -0.4
R19A **Curley Farm, L** 81.63 48 ⇓P P 11 12 03.4 +0.5
baz=81,SNR=18
N22A **Wattenberg Ran** 81.63 45 ⇓P P 11 12 03.4 +0.4
baz=81,SNR=6.5
TREC **Trest** 81.64 327 ⇑*i*P P 11 12 03.2 +0.4
TREC MLR MLR
comp=Z,400nm,20.4s
TREC **Trest** 81.64 327 ⇑*i*P P 11 12 03.2 +0.4
TREC AMS AMS 11 51 10.0
comp=Z,400nm,20.4s
ISP **Isparta** 81.71 311 ⇓P P 11 12 03.4 0.0
ISP **Isparta** 81.71 311 ⇓*i*P P 11 12 03.4 0.0
ZST **Bratislava** 81.73 326 *e*P P 11 12 04.2 +0.9
comp=Z,17nm,0.8s,mb5.0
ZST **Bratislava** 81.73 326 *e*P P 11 12 04.2 +0.9
ZST pmax pmax
comp=Z,17nm,0.8s,mb5.0
ZST **Bratislava** 81.73 326 *e*P P 11 12 04.2 +0.9
NEUB **Neuenburg** 81.74 330 *e*P P 11 12 03.3 0.0
comp=Z,112nm,0.9s,mb5.8
W15A **Williams** 81.75 52 ⇓P P 11 12 04.0 +0.3
baz=82,SNR=5.3
DURS **Dursunbey** 81.77 314 *i* P P 11 12 03.6 -0.1
Q20A **Ridgley Place,** 81.78 47 ⇓P P 11 12 04.1 +0.4
baz=82,SNR=16
PV04 **Paradox Valley** 81.78 48 *e*P P 11 12 04.5 +0.8
X14A **Yava** 81.79 53 ⇑P P 11 12 04.4 +0.5
baz=82,SNR=10
CLZ **Clausthal** 81.80 331 *e*P P 11 12 03.9 +0.3
comp=Z,88nm,1.1s,mb5.6
CLZ **Clausthal** 81.80 331 *e*P P 11 12 03.9 +0.3
CLZ pmax pmax
comp=Z,88nm,1.1s,mb5.6
AGMN **Agassiz Nation** 81.82 34 *e*P P 11 12 02.7 -1.1
comp=Z,3.0nm,0.6s,mb4.4
MDO **Dochfour** 81.83 342 ⇑*e*P P 11 12 03.1 -0.5
U16A **Tuba City** 81.86 51 ⇑P P 11 12 04.9 +0.6
baz=82,SNR=19
N23A **Red Feather La** 81.86 45 ⇑P P 11 12 04.4 +0.3
baz=82,SNR=9.5
MPEP **Malo Peshtene** 81.89 319 *e*P P 11 12 03.9 -0.4
KHAL **Karahalli** 81.97 312 *i* P P 11 12 04.6 -0.2
T18A **Mexican Hat** 82.00 49 ⇑P P 11 12 04.7 -0.3
baz=82,SNR=18
O22A **Kremmling** 82.00 45 ⇑P P 11 12 05.2 +0.3
baz=82,SNR=15
KAC **Achnashellach** 82.01 342 ⇑*i*P P 11 12 04.8 +0.2
Y14A **Wickenburg** 82.05 54 ⇑P P 11 12 05.4 +0.1
baz=82,SNR=18
S19A **Harvey Farm, M** 82.06 49 ⇓P P 11 12 05.5 +0.2
baz=82,SNR=24
Z13A **Yuma Proving G** 82.09 55 ⇑P P 11 12 05.6 +0.1
baz=82
WUAZ **Wupatki** 82.10 51 ⇓P P 11 12 05.6 +0.1
baz=82,SNR=16
WUAZ **Wupatki** 82.10 51 *e*P P 11 12 06.0 +0.5
comp=Z,15nm,0.9s,mb4.9
M24A **Cheyenne** 82.11 44 ⇓P P 11 12 06.0 +0.6
baz=82,SNR=5.2
WERD **Werda** 82.11 329 *e*P P 11 12 05.4 +0.1
comp=Z,23nm,0.8s,mb5.2
KDZ **Kurdzhali** 82.15 317 *e*P P 11 12 05.7 +0.1
PV01 **Paradox Valley** 82.15 48 *e*P P 11 12 06.0 +0.3
comp=Z,1μm,0.9s,mb6.8
GUNZ **Gunzen** 82.17 329 *e*P P 11 12 05.7 +0.2
comp=Z,40nm,0.7s,mb5.5
BALY **Balya** 82.18 314 *i* P P 11 12 06.0 +0.1
X15A **Humboldt** 82.20 53 ⇓P P 11 12 06.2 +0.1
baz=82,SNR=18
WERN **Wernitzgruen** 82.21 329 *e*P P 11 12 06.1 +0.3
comp=Z,43nm,0.7s,mb5.5
PGB **Panagyurishte** 82.22 318 *e*P P 11 12 05.0 -1.0
NKC **Novy Kostel** 82.22 329 ⇑*i*P P 11 12 06.0 +0.2
NKC **Novy Kostel** 82.22 329 ⇑*i*P P 11 12 06.0 +0.2
R20A **Redvale** 82.23 48 ⇑P P 11 12 06.1 -0.1
baz=82,SNR=24
MOX **Moxa** 82.24 330 *e*P P 11 12 05.7 -0.2
comp=Z,51nm,0.9s,mb5.5
MOX **Moxa** 82.24 330 *e*P P 11 12 05.9 0.0
comp=Z,33nm,0.8s,mb5.3
MOX **Moxa** 82.24 330 *e*P P 11 12 05.7 -0.2
MOX pmax pmax
comp=Z,51nm,0.9s,mb5.5
KPL **Plockton** 82.24 342 ⇑*i*P P 11 12 06.1 +0.3
KPL AMB AMB 11 12 06.8
comp=Z,88nm,0.9s,mb5.7
P22A **Eagle** 82.26 46 ⇑P P 11 12 06.7 +0.5
baz=82,SNR=32
W16A **Flagstaff** 82.27 52 ⇑P P 11 12 05.7 -0.7
baz=82
113A **Mohawk Valley,** 82.28 55 ⇓P P 11 12 06.1 -0.4
baz=82,SNR=18
KSB **Sheil Bridge** 82.30 342 *e*P P 11 12 05.9 -0.2
KORT **Korkueli** 82.34 311 *i* P P 11 12 06.3 -0.5
SOP **Sopron** 82.36 326 ⇑*e*P P 11 12 07.2 +0.6
KSK **Scoval** 82.39 343 *e*P P 11 12 07.1 +0.6
SMCO **Snowmass** 82.41 46 *e*P P 11 12 06.9 -0.2
comp=Z,11nm,0.9s,mb4.8
IBBN **Ibbenburen** 82.42 333 *e*P P 11 12 06.6 -0.2
comp=Z,102nm,0.9s,mb5.8
PKSM **Moragy** 82.46 323 ⇓P P 11 12 07.2 +0.1
PKSM **Moragy** 82.46 323 ⇓*i*P P 11 12 07.3 +0.1
CONA **Conrad Observa** 82.49 326 ⇑*i*P P 11 12 08.0 +0.7
comp=Z,26nm,0.9s,mb5.2
RZN **Rozhen** 82.51 317 *e*P P 11 12 05.9 -1.6
KHC **Kasperske Hory** 82.59 328 ⇑*i*P P 11 12 08.0 +0.2
KHC MLR MLR
comp=Z,300nm,20.8s
KHC **Kasperske Hory** 82.59 328 ⇑*i*P P 11 12 08.0 +0.2
KHC AMS AMS 11 51 50.0
comp=Z,300nm,20.8s
EBH **Black Hill** 82.66 341 *e*P P 11 12 07.9 -0.2
KAR1 **Arisaig** 82.66 342 *e*P P 11 12 08.1 +0.1
GOLH **Golhisar** 82.67 311 *i* P P 11 12 06.8 -1.7
ROTZ **Rotzenmuhle** 82.68 329 *e*P P 11 12 08.8 +0.6
comp=Z,39nm,0.8s,mb5.5
DNZL **Cakiroluk** 82.69 312 *i* P P 11 12 09.1 +0.6
VTS **Vitosha** 82.70 319 ⇑P P 11 12 09.0 +0.5
VTS **Vitosha** 82.70 319 P P 11 12 09.2 +0.7
VTS **Vitosha** 82.70 319 ⇑*i*P P 11 12 09.0 +0.5
VTS **Vitosha** 82.70 319 *e*P P 11 12 08.6 +0.1
ESY **Stoneypath** 82.71 340 *e*P P 11 12 07.4 -0.9
UBBA **Unterbreizbach** 82.75 331 *e*P P 11 12 08.1 -0.5
comp=Z,17nm,0.8s,mb5.1
GEC2 **GERESS Array S** 82.75 328 *e*P P 11 12 08.5 -0.1
comp=Z,28nm,0.6s,mb5.5
GEC2 **GERESS Array S** 82.75 328 *e*P P 11 12 08.5 -0.1
GEC2 pmax pmax
comp=Z,28nm,0.6s,mb5.5
MVCO **Mesa Verde** 82.79 49 ⇓P P 11 12 09.3 +0.3
baz=83
WET **Wettzell** 82.88 328 *e*P P 11 12 09.6 +0.3
comp=Z,24nm,1.0s,mb5.2
WET **Wettzell** 82.88 328 *e*P P 11 12 09.6 +0.3
WET pmax pmax
comp=Z,24nm,1.0s,mb5.2
V18A **Ganado** 82.88 51 ⇑P P 11 12 10.1 +0.5
baz=83
S21A **Coal Bank Pass** 82.92 48 ⇓P P 11 12 10.6 +0.9
baz=83
EAB **Aberfoyle** 82.94 341 ⇑*i*P P 11 12 09.4 -0.1
EBL **Broad Law** 82.95 340 ⇑*i*P P 11 12 09.5 -0.1
U19A **Dine' College,** 82.95 50 ⇑P P 11 12 10.3 +0.4
baz=83
EAU **Auchinoon** 83.00 340 ⇑*i*P P 11 12 09.8 0.0
KAVA **Kavala** 83.09 317 P P 11 12 10.9 +0.4
MMB **Musomiste** 83.11 318 *e*P P 11 12 09.7 -1.0
GRA1 **Grafenberg Arr** 83.14 330 *e*P P 11 12 11.1 +0.5
comp=Z,143nm,0.8s,mb6.0
GRA1 LR LR
comp=Z,500nm,21.4s
GRF **Grafenberg Arr** 83.14 330 *e*P P 11 12 11.1 +0.5
comp=Z,143nm,0.8s,mb6.0
GRF *e*L 11 50 20.8
comp=Z,485nm,21.4s
GRF **Grafenberg Arr** 83.14 330 *e*P P 11 12 11.1 +0.5
GRF pmax pmax
comp=Z,143nm,0.8s,mb6.0
GRF MLR MLR
comp=Z,500nm,21.4s
ARSA **Arzberg** 83.15 326 ⇑*i*P P 11 12 11.0 +0.3
comp=Z,21nm,1.0s,mb5.1
MOA **Molln** 83.26 327 ⇑*i*P P 11 12 11.5 +0.2
comp=Z,33nm,1.1s,mb5.3
KDAG **Bornova** 83.27 313 *i* P P 11 12 10.8 -0.7
PRK **Paraskevi** 83.28 314 *e*P P 11 12 11.5 -0.1
BUG **Bochum--Univer** 83.29 333 *e*P P 11 12 10.9 -0.5
comp=Z,39nm,0.8s,mb5.5
PGBU **Glenifferbraes** 83.31 341 ⇑*e*P P 11 12 11.4 +0.1
PGBU AMB AMB 11 12 13.1
comp=Z,84nm,0.8s,mb5.8
DIVS **Divibare** 83.31 321 P P 11 12 11.2 -0.4
ESK **Eskdalemuir** 83.40 340 P P 11 12 12.3 +0.5
comp=Z,238nm,0.7s,mb6.3,SNR=5.4
ESK **Eskdalemuir** 83.40 340 ⇑*e*P P 11 12 10.7 -1.2
ESK AMB AMB 11 12 13.1
comp=Z,36nm,2.9s,mb4.9
ESK **Eskdalemuir** 83.40 340 *e*P P 11 12 12.2 +0.4
comp=Z,21nm,0.6s,mb5.3
ESK **Eskdalemuir** 83.40 340 *e*P P 11 12 12.3 +0.5
ESK pmax pmax
comp=Z,21nm,0.6s,mb5.3
AYDN **Tasoluk** 83.40 312 *i* P P 11 12 13.3 +1.1
V19A **Window Rock** 83.43 50 ⇑P P 11 12 12.3 -0.1
baz=83
S22A **4UR Ranch, Cre** 83.44 47 ⇓P P 11 12 12.3 -0.1
baz=83
ECK **Cauldkaine Hil** 83.50 340 ⇑*e*P P 11 12 12.4 0.0
T21A **Navajo Lake** 83.52 48 ⇑P P 11 12 12.9 +0.1
baz=83
XAL **Allendale** 83.52 339 ⇑*e*P P 11 12 11.7 -0.8
Y17A **Roosevelt** 83.60 53 ⇓P P 11 12 13.4 +0.2
baz=83
Q24A **Divide** 83.61 46 ⇓P P 11 12 13.4 +0.1
baz=83
W19A **Sanders** 83.61 51 ⇑P P 11 12 13.5 +0.1
baz=83
X18A **Snowflake** 83.63 51 ⇑P P 11 12 13.5 0.0
baz=83
V20A **Brimhall** 83.73 50 ⇑P P 11 12 14.1 +0.1
baz=84
SOKA **Soboth** 83.80 326 ⇑*i*P P 11 12 13.7 -0.3
comp=Z,66nm,1.0s,mb5.7
TNS **Taunus Mts** 83.83 331 *e*P P 11 12 14.1 0.0
comp=Z,42nm,0.8s,mb5.6
TNS **Taunus Mts** 83.83 331 *e*P P 11 12 14.1 0.0
TNS pmax pmax
comp=Z,42nm,0.8s,mb5.6
KNT **Kendrikon** 83.86 318 P P 11 12 14.5 0.0
T22A **Edith** 83.88 48 ⇑P P 11 12 15.3 +0.6
baz=84
VAY **Valandovo** 83.93 318 *e*P P 11 12 13.9 -1.0
RJOB **Jochberg** 83.99 327 *e*P P 11 12 15.5 +0.5
comp=Z,45nm,1.0s,mb5.5
BDRM **Kayabasi** 84.06 312 *i* P P 11 12 15.7 +0.1
Y18A **Canyon Day Jun** 84.06 52 ⇓P P 11 12 16.2 +0.5
baz=84
PLG **Polygyros** 84.11 317 *e*P P 11 12 15.5 -0.3
PLG **Polygyros** 84.11 317 P P 11 12 15.7 -0.1
X19A **St. Johns** 84.11 51 ⇑P P 11 12 16.2 +0.3
baz=84
R24A **Sanders Place,** 84.13 46 ⇓P P 11 12 16.6 +0.7
baz=84
HPK **Haverah Park** 84.14 339 *e*P P 11 12 15.4 -0.2
HPK AMB AMB 11 12 16.3
comp=Z,86nm,1.0s,mb5.8
OBKA **Obir** 84.15 326 ⇑*i*P P 11 12 15.6 -0.2
comp=Z,14nm,0.7s,mb5.2
W20A **Ramah** 84.15 50 ⇓P P 11 12 16.3 +0.3
baz=84
Q25A **Bedland, Calha** 84.16 45 ⇓P P 11 12 16.2 +0.1
baz=84
PLE **Pljevlja** 84.17 321 ⇑*i*P P 11 12 16.8 +0.8
PLE **Pljevlja** 84.17 321 ⇑*i*P P 11 12 16.9 +0.9
TOD **Tromm** 84.18 331 *e*P P 11 12 15.9 0.0
GAL1 **Galloway** 84.21 341 ⇑*e*P P 11 12 15.5 -0.4
GAL1 AMB AMB 11 12 16.5
comp=Z,51nm,0.9s,mb5.7
ARG **Arkhangelos** 84.21 311 *e*P P 11 12 16.0 -0.4
ARG **Arkhangelos** 84.21 311 P P 11 12 16.6 +0.2
SDCO **Great Sand Dun** 84.22 47 ⇓P P 11 12 17.0 +0.6
baz=84
V21A **Milan** 84.23 49 ⇑P P 11 12 16.6 +0.1
baz=84
IVA **Berane** 84.24 320 ⇑*i*P P 11 12 16.7 +0.3
IVA **Berane** 84.24 320 ⇑*i*P P 11 12 16.8 +0.4
KBA **Koelnbreinsper** 84.25 327 ⇑*i*P P 11 12 16.2 -0.1
comp=Z,30nm,0.8s,mb5.5
GRG **Griva** 84.27 318 P P 11 12 16.3 -0.3
PDKS **Podkum** 84.28 325 *i* P P 11 12 15.9 -0.6
FUR **Furstenfeldbru** 84.31 329 *e*P P 11 12 16.8 +0.2
comp=Z,119nm,0.7s,mb6.1
FUR **Furstenfeldbru** 84.31 329 *e*P P 11 12 16.8 +0.2
FUR pmax pmax
comp=Z,119nm,0.7s,mb6.1
U22A **Llaves** 84.33 48 ⇓P P 11 12 17.4 +0.4
baz=84
T23A **Casias Ranch,** 84.38 48 ⇑P P 11 12 17.8 +0.6
baz=84
PVY **Plav** 84.40 320 ⇑*i*P P 11 12 17.0 -0.2
PVY **Plav** 84.40 320 ⇑*i*P P 11 12 17.1 -0.1
MEM **Membach** 84.43 333 P P 11 12 17.1 -0.1
comp=Z,29nm,1.0s,mb5.4
ABH **Alteburg** 84.44 332 *e*P P 11 12 17.0 -0.3
MYKA **Terra Mystica** 84.46 326 ⇑*i*P P 11 12 16.5 -0.9
comp=Z,26nm,0.6s,mb5.6
S24A **Houchin Ranch,** 84.46 47 ⇑P P 11 12 18.0 +0.4
baz=84
UPM **Unac-Piva** 84.50 321 *e*P P 11 12 16.8 -0.9
UPM **Unac-Piva** 84.50 321 *e*P P 11 12 16.8 -0.9
LJU **Ljubljana** 84.51 325 *e*P P 11 12 16.8 -0.9
X20A **Quemado** 84.53 51 ⇓P P 11 12 18.3 +0.3
baz=84
VISS **Visnje** 84.55 325 *i* P P 11 12 17.3 -0.5
LHO **Holmfirth** 84.56 338 ⇑*e*P P 11 12 17.7 -0.1
BOJS **Bojanci** 84.58 325 *i* P P 11 12 17.7 -0.3
KRUS **Krusevo** 84.60 319 *e*P P 11 12 17.6 -0.7
V22A **San Miguel Ran** 84.61 49 ⇓P P 11 12 19.0 +0.6
baz=84
W21A **San Fidel** 84.68 50 ⇓P P 11 12 19.3 +0.5
baz=84
STU **Stuttgart** 84.69 330 *e*P P 11 12 18.5 0.0
comp=Z,100nm,1.0s,mb5.9
STU **Stuttgart** 84.69 330 *e*P P 11 12 18.9 +0.4
comp=Z,78nm,0.9s,mb5.8
STU **Stuttgart** 84.69 330 *e*P P 11 12 18.9 +0.4
STU pmax pmax
comp=Z,79nm,0.9s,mb5.8
KTD **Kalmit** 84.69 331 *e*P P 11 12 18.3 -0.2

NKY Niksic 84.74 321⇑iP P 11 12 17.8 -1.1
NKY Niksic 84.74 321⇑iP P 11 12 17.9 -1.0
U23A El Rito 84.76 48⇑P P 11 12 19.7 +0.5
baz=85
RUP Ruppelstein 84.78 332 eP P 11 12 18.9 -0.1
CEY Cerknica 84.78 325 eP P 11 12 18.4 -0.7
VOY Vojsko 84.81 326 eP P 11 12 17.8 -1.4
VOY e 11 12 23.8
LIT Litokhoron 84.82 317 P P 11 12 17.7 -1.7
WATA Walderalm 84.82 328⇑iP P 11 12 19.2 -0.1
comp=Z,12nm,0.5s,mb5.3
JAVS Javornik 84.83 326 iP P 11 12 18.3 -1.0
118A Homack Ranch, 84.84 53⇓P P 11 12 19.7 +0.2
baz=85
217A Green Valley 84.84 54⇑P P 11 12 19.9 +0.3
baz=85
BCLA Clavier 84.85 333 P P 11 12 18.9 -0.3
WTTA Wattenberg 84.85 328⇑iP P 11 12 19.2 -0.2
comp=Z,12nm,0.6s,mb5.2
ABTA Abfaltersbach 84.87 327⇓iP P 11 12 18.2 -1.3
comp=Z,32nm,1.2s,mb5.3
TTG Podgorica 84.88 321⇑iP P 11 12 19.0 -0.6
S25A Robets Cordova 84.90 46⇓P P 11 12 20.0 +0.1
baz=85
BRY Bratogost 84.91 321⇑iP P 11 12 18.6 -1.1
FNA Florina 84.95 318 P P 11 12 19.4 -0.6
MOTA Moosalm 85.02 328⇑iPcP PcP 11 12 20.2 -3.2
comp=Z,21nm,0.9s
Y20A Horse Springs, 85.02 51⇓P P 11 12 21.0 +0.5
baz=85
X21A Alamocita Cree 85.04 50⇓P P 11 12 21.2 +0.6
baz=85
RETA Reutte 85.05 328⇓iP P 11 12 20.3 -0.1
comp=Z,38nm,0.7s,mb5.7
LANF Langenberg 85.07 331 eP P 11 12 20.4 0.0
LANF Langenberg 85.07 331 eP P 11 12 20.4 0.0
LANF Langenberg 85.07 331 eP P 11 12 20.4 0.0
GMM Mts of Mourne 85.09 341⇑iP P 11 12 20.2 -0.2
PPT Papeete 85.10 116 eS S 11 22 46.0 +0.1
comp=Z,107nm,26.0s
PPT eLR LR 11 39 07.4
comp=Z,631nm,26.5s,baz=314
CWF Charnwood Fore 85.10 338 eP P 11 12 19.2 -1.3
CWF AMB AMB 11 12 19.9
comp=Z,52nm,0.8s,mb5.7
TRI Trieste 85.11 326 eP P 11 12 19.7 -1.0
comp=Z,14nm,0.8s,mb5.1
TRI Trieste 85.11 326 eP P 11 12 19.7 -1.0
TRI pmax pmax
comp=Z,14nm,0.8s,mb5.1
SNF Seneffe 85.14 334 P P 11 12 20.5 -0.3
comp=Z,29nm,1.3s,mb5.2
WLF Walferdange 85.15 332 P P 11 12 21.1 +0.3
comp=Z,26nm,1.6s,mb5.1
WLF Walferdange 85.15 332 eP P 11 12 21.1 +0.3
comp=Z,29nm,1.0s,mb5.4
WLF Walferdange 85.15 332 eP P 11 12 21.2 +0.4
comp=Z,68nm,1.5s,mb5.6
WLF Walferdange 85.15 332 eP P 11 12 21.2 +0.4
WLF pmax pmax
comp=Z,68nm,1.5s,mb5.6
V23A Ortiz Mt. (NFS 85.16 49⇓P P 11 12 21.7 +0.5
baz=85
BUM Brajici-Budva 85.16 321⇑iP P 11 12 20.8 -0.2
BUM Brajici-Budva 85.16 321⇑iP P 11 12 20.8 -0.2
APE Apeiranthos 85.19 313⇑P P 11 12 20.6 -0.7
APE Apeiranthos 85.19 313⇑iP P 11 12 20.6 -0.7
W22A Albuquerque 85.19 49⇓P P 11 12 21.8 +0.5
baz=85
218A Dragoon 85.22 54⇑P P 11 12 22.3 +0.8
baz=85
ULC Ulcinj 85.22 320⇑iP P 11 12 20.9 -0.5
KARP Karpathos 85.24 311 eP P 11 12 21.0 -0.5
U24A Moreno Valley 85.25 48⇑P P 11 12 22.4 +0.7
baz=85
HCY Herceg Novi 85.26 321⇑iP P 11 12 20.9 -0.6
T25A Trinidad 85.27 47⇑P P 11 12 22.2 +0.5
baz=85
GIVF Givet 85.28 333⇑iP P 11 12 20.6 -0.9
comp=Z,41nm,0.8s,mb5.3
GIVF Givet 85.28 333⇑iP P 11 12 20.6 -0.9
comp=Z,20nm,0.8s,mb5.3
GIVF Givet 85.28 333⇑iP P 11 12 20.6 -0.9
GIVF pmax pmax
comp=Z,20nm,0.8s,mb5.3
TIR Tirane 85.35 319 eP P 11 12 22.3 +0.3
comp=Z,22nm,0.6s,mb5.5
TIR Tirane 85.35 319 eP P 11 12 22.3 +0.3
TIR pmax pmax
comp=Z,22nm,0.6s,mb5.5
DOU Dourbes 85.37 333 P P 11 12 21.4 -0.5
comp=Z,14nm,1.3s,mb4.9
SPAK Spaichingen-Ko 85.38 330 eP P 11 12 21.7 -0.3
BFO Black Forest 85.39 330 P P 11 12 21.0 -1.0
comp=Z,500nm,0.7s,mb6.8,SNR=32
BFO Black Forest 85.39 330 eP P 11 12 21.8 -0.2
comp=Z,75nm,0.9s,mb5.8
BFO Black Forest 85.39 330 eP P 11 12 21.8 -0.2
BFO pmax pmax
comp=Z,75nm,0.9s,mb5.8
Y21A Point of Rocks 85.40 51⇓P P 11 12 22.8 +0.4
baz=85
Z20A Nine Sixteen R 85.41 52⇑P P 11 12 23.1 +0.6
baz=85
FETA Feichten 85.43 328⇑iP P 11 12 22.0 -0.3
comp=Z,18nm,0.7s,mb5.3
PTL Penteli 85.48 315 eP P 11 12 32.5 +10
X22A Bernardo 85.48 50⇑P P 11 12 23.5 +0.7
baz=85
ATAL Atalanti 85.51 316 P P 11 12 22.0 -0.8
ANMO Albuquerque 85.52 49 P P 11 12 23.8 +0.8
comp=Z,7.9nm,0.9s,mb4.9,baz=241,slow=2.4,SNR=13
ANMO Albuquerque 85.52 49 P P 11 12 23.8 +0.8
ANMO pmax pmax
comp=Z,8.0nm,0.9s
BAIF Baives 85.54 333⇑iP P 11 12 22.0 -0.8
comp=Z,40nm,0.8s,mb5.4
BAIF Baives 85.54 333⇑iP P 11 12 22.0 -0.8
comp=Z,20nm,0.8s,mb5.4
BAIF Baives 85.54 333⇑iP P 11 12 22.0 -0.8
BAIF pmax pmax
comp=Z,20nm,0.8s,mb5.4
LKR Lokris 85.55 316 eP P 11 12 21.0 -2.1
W23A Werner Place, 85.57 49⇓P P 11 12 23.0 -0.2
baz=85
DAVA Damuels 85.58 329⇑iPcP P 11 12 22.9 -0.1
comp=Z,64nm,1.0s,mb5.8
VLY Voula,Athens 85.65 315 eP pP 11 12 34.0 -6.7
AGG Agios Georgios 85.67 316 P P 11 12 22.3 -1.3
ELSH Elham, Standar 85.69 336⇑eP P 11 12 22.8 -0.7
ELSH AMB AMB 11 12 24.2
comp=Z,190nm,0.8s,mb6.4
219A White Tail Can 85.71 53⇑P P 11 12 24.1 +0.2
baz=86
V24A Rampart Ranch, 85.72 48⇓P P 11 12 24.4 +0.5
baz=86
CDF Champ du Feu 85.74 331⇑iP P 11 12 23.3 -0.5
comp=Z,128nm,0.8s,mb5.9
CDF Champ du Feu 85.74 331⇑iP P 11 12 23.3 -0.5
comp=Z,64nm,0.8s,mb5.9
CDF Champ du Feu 85.74 331⇑iP P 11 12 23.3 -0.5
CDF pmax pmax
comp=Z,64nm,0.8s,mb5.9
120A U Bar Ranch, L 85.75 52⇓P P 11 12 24.7 +0.5
baz=86
U25A Circle Dot Ran 85.78 47⇑P P 11 12 24.1 -0.1
baz=86
LIBD Limburg 85.82 331 eP P 11 12 24.1 -0.1
MENF Mencas 85.85 335 eP P 11 12 23.7 -0.6
MENF Mencas 85.85 335 eP P 11 12 23.7 -0.6
Z21A St. Cloud Mine 85.86 51⇓P P 11 12 25.0 +0.3
baz=86
FELD Feldberg im Sc 85.88 330 eP P 11 12 23.9 -0.6
Y22A Socorro 85.89 50⇑P P 11 12 24.9 +0.1
baz=86
ECH Echery 85.94 331 eP P 11 12 24.5 -0.3
ECH Echery 85.94 331 eP P 11 12 24.5 -0.3
ECH Echery 85.94 331 eP P 11 12 24.5 -0.3
W24A Lazy 6 Ranch, 85.99 49⇓P P 11 12 25.8 +0.5
baz=86
V25A Rancho No Teng 86.03 48⇓P P 11 12 26.1 +0.6
baz=86
SCHQ Schefferville 86.06 15 P P 11 12 25.7 +0.4
SCHQ Schefferville 86.06 15 P P 11 12 25.7 +0.4
comp=Z,4.6nm,0.8s,mb4.8,baz=333,slow=4.3,SNR=5.5
ZKR Zakros 86.10 311 eP P 11 12 27.5 +1.7

U26A Atchley Ranch, 86.17 47⇑P P 11 12 26.4 +0.2
baz=86
DID Didima 86.21 315 eP P 11 12 25.0 -1.3
MOF Molkenrain 86.25 331 eP P 11 12 25.8 -0.5
MOF Molkenrain 86.25 331 eP P 11 12 25.8 -0.5
MOF Molkenrain 86.25 331 eP P 11 12 25.8 -0.5
MCH1 Michaelchurch 86.26 338⇑eP P 11 12 25.4 -0.8
MCH1 AMB AMB 11 12 26.8
comp=Z,97nm,0.8s,mb6.1
HTR Trewern Hill 86.27 339⇑iP P 11 12 26.2 -0.1
121A Cookes Peak, D 86.30 52⇓P P 11 12 27.1 +0.3
baz=86
WOL Wolverton 86.31 337 eP P 11 12 26.1 -0.4
WOL AMB AMB 11 12 26.8
comp=Z,87nm,0.8s,mb6.0
EFP Efpalio 86.32 316 eP P 11 12 28.0 +1.1
Z22A Elephant Butte 86.34 51⇑P P 11 12 26.9 -0.1
baz=86
HINF Hinteralfeld 86.39 331⇑iP P 11 12 26.0 -1.0
comp=Z,37nm,0.8s,mb5.4
HINF Hinteralfeld 86.39 331⇑iP P 11 12 26.0 -1.0
comp=Z,18nm,0.8s,mb5.4
HINF Hinteralfeld 86.39 331⇑iP P 11 12 26.0 -1.0
HINF pmax pmax
comp=Z,18nm,0.8s,mb5.3
THEF They Montfort 86.39 331 eP P 11 12 26.5 -0.5
THEF They Montfort 86.39 331 eP P 11 12 26.5 -0.5
THEF They Montfort 86.39 331 eP P 11 12 26.5 -0.5
X24A Lazy VL Ranch, 86.41 49⇓P P 11 12 27.5 +0.1
baz=86
BBS Basel-Blauen 86.41 330 eP P 11 12 26.7 -0.4
GUR Goura 86.42 316 eP P 11 12 26.0 -1.4
GUR Goura 86.42 316 P P 11 12 26.2 -1.2
HAU Haudompre 86.43 331⇑iP P 11 12 26.3 -0.9
comp=Z,58nm,0.7s,mb5.6
HAU eMLR MLR
comp=Z,162nm,21.5s
HAU Haudompre 86.43 331⇑iP P 11 12 26.3 -0.9
comp=Z,29nm,0.7s,mb5.6
HAU LR LR
comp=Z,160nm,21.5s
HAU Haudompre 86.43 331⇑iP P 11 12 26.3 -0.9
HAU pmax pmax
comp=Z,29nm,0.7s,mb5.6
HAU MLR MLR
comp=Z,160nm,21.5s
TUE Stuetta 86.45 329 eP P 11 12 27.0 -0.3
comp=Z,12nm,0.7s,mb5.2
Y23A Lovelace Mesa, 86.45 50⇓P P 11 12 27.6 0.0
baz=86
LAST Lasithi 86.51 312 eP P 11 12 29.0 +1.1
HGH Gray Hill 86.51 338⇑P P 11 12 27.2 -0.3
MEZF Maizieres J'vi 86.52 332⇑iP P 11 12 27.1 -0.5
comp=Z,76nm,0.9s,mb5.6
MEZF Maizieres J'vi 86.52 332⇑iP P 11 12 27.1 -0.5
comp=Z,76nm,0.9s,mb5.9
W25A X Bar L Ranch, 86.55 48⇓P P 11 12 27.9 -0.1
baz=86
V26A Tequesquite Ra 86.56 47⇑P P 11 12 27.9 -0.1
baz=86
SFTF Sexfontaines 86.77 332⇑iP P 11 12 28.2 -0.7
comp=Z,159nm,1.0s,mb5.9
SFTF Sexfontaines 86.77 332⇑iP P 11 12 28.2 -0.7
comp=Z,159nm,1.0s,mb6.2
LOMF Lomont 86.77 330 eP P 11 12 28.4 -0.5
LOMF Lomont 86.77 330 eP P 11 12 28.4 -0.5
LOMF Lomont 86.77 330 eP P 11 12 28.4 -0.5
IDI Anoyia 86.78 312 eP P 11 12 28.0 -1.2
Z23A Rita Site, Whi 86.79 50⇓P P 11 12 29.1 -0.1
baz=87
TAOE Nuku Hiva Isla 86.80 103 eLR LR 11 39 45.3
comp=Z,592nm,24.4s
RLS Riolos of Patr 86.82 316 eP P 11 12 28.5 -0.8
SIVA Sivas 87.01 312 eP P 11 12 30.0 -0.3
VAM Vamos 87.11 313 eP P 11 12 30.5 -0.2
KYTH Kithira 87.18 314 eP P 11 12 30.0 -1.1
ITM Ithomi 87.19 315 eP P 11 12 29.5 -1.6
VLS Valsamata 87.23 317 eP P 11 12 30.5 -0.8
KARN Karanos 87.28 313 eP P 11 12 31.0 -0.6
Z24A Sheeppen Canyo 87.28 50⇓P P 11 12 31.0 -0.6
baz=87
Y25A Mesa, Roswell 87.29 49⇑P P 11 12 31.2 -0.5
baz=87
X26A CR and CF Fran 87.39 48⇓P P 11 12 32.2 0.0
baz=87
W27A Bowe Ranch, En 87.49 47⇓P P 11 12 32.7 +0.1
baz=87
PYL PYLOS 87.49 315 eP P 11 12 30.5 -2.1
HTL Hartland 87.58 339 eP P 11 12 32.6 -0.1
HTL AMB AMB 11 12 33.2
comp=Z,49nm,1.0s,mb5.7
124A Stringfield Ra 87.65 50⇑P P 11 12 33.4 0.0
baz=88
CABF La Chapelle 87.67 330⇑iP P 11 12 32.4 -0.8
comp=Z,23nm,0.8s,mb5.1
CABF La Chapelle 87.67 330⇑iP P 11 12 32.4 -0.8
comp=Z,12nm,0.8s,mb5.2
CABF La Chapelle 87.67 330⇑iP P 11 12 32.4 -0.8
CABF pmax pmax
comp=Z,12nm,0.8s,mb5.2
Z25A Roswell 87.71 50⇑P P 11 12 33.7 0.0
baz=88
X27A F and S Farms, 87.75 48⇓P P 11 12 33.9 0.0
baz=88
AQU L'Aquila 87.84 324 P P 11 12 34.9 +0.8
AQU L'Aquila 87.84 324⇓iP P 11 12 34.7 +0.6
LOR Lormes 87.99 332⇑iP P 11 12 34.0 -0.8
comp=Z,43nm,0.8s,mb5.4
LOR eMLR MLR
comp=Z,242nm,20.0s
LOR Lormes 87.99 332⇑iP P 11 12 34.0 -0.8
comp=Z,21nm,0.8s,mb5.4
LOR LR LR
comp=Z,240nm,20.0s
LOR Lormes 87.99 332⇑iP P 11 12 34.0 -0.8
LOR pmax pmax
comp=Z,21nm,0.8s,mb5.4
LOR MLR MLR
comp=Z,240nm,20.0s
224A Cornudas Mount 88.03 51⇑P P 11 12 34.8 -0.5
baz=88
Z26A Caprock 88.17 49⇑P P 11 12 35.4 -0.5
baz=88
KSU1 Kansas State U 88.22 41 eP P 11 12 35.6 -0.4
comp=Z,19nm,0.7s,mb5.4
FLN La Foliniere 88.27 335⇑iP P 11 12 35.2 -0.9
comp=Z,39nm,0.8s,mb5.4
FLN eMLR MLR
comp=Z,270nm,20.5s
FLN La Foliniere 88.27 335⇑iP P 11 12 35.2 -0.9
comp=Z,20nm,0.8s,mb5.4
FLN LR LR
comp=Z,270nm,20.5s
FLN La Foliniere 88.27 335⇑iP P 11 12 35.2 -0.9
FLN pmax pmax
comp=Z,20nm,0.8s,mb5.4
FLN MLR MLR
comp=Z,270nm,20.5s
SSF Saint Saulge 88.30 332⇑iP P 11 12 35.6 -0.6
comp=Z,12nm,0.6s,mb5.0
SSF Saint Saulge 88.30 332⇑iP P 11 12 35.6 -0.6
comp=Z,5.8nm,0.6s,mb5.0
SSF Saint Saulge 88.30 332⇑iP P 11 12 35.6 -0.6
SSF pmax pmax
comp=Z,6.0nm,0.6s,mb5.0
LDF La Druitiere 88.30 335⇑iP P 11 12 35.2 -1.0
comp=Z,16nm,0.5s,mb5.2
LDF La Druitiere 88.30 335⇑iP P 11 12 35.2 -1.0
comp=Z,7.8nm,0.5s,mb5.2
LDF La Druitiere 88.30 335⇑iP P 11 12 35.2 -1.0
LDF pmax pmax
comp=Z,8.0nm,0.5s,mb5.2
LPL La Plagne 88.30 329⇑iP P 11 12 35.8 -0.5
comp=Z,31nm,0.6s,mb5.4
LPL La Plagne 88.30 329⇑iP P 11 12 35.8 -0.5
comp=Z,15nm,0.6s,mb5.4
LPL La Plagne 88.30 329⇑iP P 11 12 35.8 -0.5
LPL pmax pmax
comp=Z,15nm,0.6s,mb5.4
LPG La Plagne 88.31 329⇑iP P 11 12 35.9 -0.4
comp=Z,36nm,0.6s,mb5.5
LPG La Plagne 88.31 329⇑iP P 11 12 35.9 -0.4
comp=Z,18nm,0.6s,mb5.5
LPG La Plagne 88.31 329⇑iP P 11 12 35.9 -0.4
LPG pmax pmax
comp=Z,18nm,0.6s,mb5.5

MNTX Cornudas Mount 88.37 51⇑P P 11 12 36.6 -0.2
baz=88
AMTX Amarillo 88.43 47⇑P P 11 12 36.8 -0.3
baz=88
CUC Castrocucco 88.43 321 eP P 11 12 35.7 -1.3
comp=Z,15nm,0.9s,mb5.2
HYF Humbligny 88.45 333 eP P 11 12 36.9 0.0
SMF Signal de Mont 88.52 332⇑iP P 11 12 36.3 -0.9
comp=Z,44nm,1.1s,mb5.4
SMF Signal de Mont 88.52 332⇑iP P 11 12 36.3 -0.9
comp=Z,22nm,1.1s,mb5.4
SMF Signal de Mont 88.52 332⇑iP P 11 12 36.3 -0.9
SMF pmax pmax
comp=Z,22nm,1.1s,mb5.4
TIP Timpagrande 88.55 320 eP P 11 12 37.5 0.0
comp=Z,19nm,0.9s,mb5.4
126A Clayton Basin, 88.57 50⇓P P 11 12 36.9 -0.9
baz=88
AVF Avril sur Loir 88.58 332⇑iP P 11 12 36.7 -0.8
comp=Z,76nm,0.8s,mb5.8
AVF Avril sur Loir 88.58 332⇑iP P 11 12 36.7 -0.8
comp=Z,38nm,0.8s,mb5.8
AVF Avril sur Loir 88.58 332⇑iP P 11 12 36.7 -0.8
AVF pmax pmax
comp=Z,38nm,0.8s,mb5.8
GRR Gorron 88.72 335⇑iP P 11 12 37.6 -0.6
comp=Z,91nm,1.2s,mb5.7
GRR Gorron 88.72 335⇑iP P 11 12 37.6 -0.6
comp=Z,45nm,1.2s,mb5.7
GRR Gorron 88.72 335⇑iP P 11 12 37.6 -0.6
GRR pmax pmax
comp=Z,45nm,1.2s,mb5.7
MBDF Montbardon 88.93 329⇑iP P 11 12 38.0 -1.2
comp=Z,27nm,0.6s,mb5.4
MBDF Montbardon 88.93 329⇑iP P 11 12 38.0 -1.2
comp=Z,13nm,0.6s,mb5.5
MBDF Montbardon 88.93 329⇑iP P 11 12 38.0 -1.2
MBDF pmax pmax
comp=Z,13nm,0.6s,mb5.4
BGF Bois d'Agland 88.97 332⇑iP P 11 12 38.8 -0.6
comp=Z,24nm,0.8s,mb5.3
BGF Bois d'Agland 88.97 332⇑iP P 11 12 38.8 -0.6
comp=Z,12nm,0.8s,mb5.3
BGF Bois d'Agland 88.97 332⇑iP P 11 12 38.8 -0.6
BGF pmax pmax
comp=Z,12nm,0.8s,mb5.3
ORIF Oris-en-Rattie 89.14 330⇑iP P 11 12 39.5 -0.7
comp=Z,23nm,0.6s,mb5.4
ORIF eMLR MLR
comp=Z,177nm,21.8s
ORIF Oris-en-Rattie 89.14 330⇑iP P 11 12 39.5 -0.7
comp=Z,12nm,0.6s,mb5.4
ORIF Oris-en-Rattie 89.14 330⇑iP P 11 12 39.5 -0.7
ORIF pmax pmax
comp=Z,12nm,0.6s,mb5.4
PLDF La Plantade 89.17 331 eP P 11 12 40.0 -0.3
PLDF La Plantade 89.17 331 eP P 11 12 40.0 -0.3
PLDF La Plantade 89.17 331 eP P 11 12 40.0 -0.3
SAOF Saorge 89.20 328 eP P 11 12 39.2 -1.3
SAOF Saorge 89.20 328 eP P 11 12 39.2 -1.3
SAOF Saorge 89.20 328 eP P 11 12 39.2 -1.3
425A Indio Mountain 89.24 52⇑P P 11 12 41.0 0.0
baz=89
AGO Saint Agoulin 89.28 332 eP P 11 12 40.5 -0.4
AGO Saint Agoulin 89.28 332 eP P 11 12 40.5 -0.4
TOUF Mont Tournerai 89.31 328 eP P 11 12 40.1 -0.9
TOUF Mont Tournerai 89.31 328 eP P 11 12 40.1 -0.9
TOUF Mont Tournerai 89.31 328 eP P 11 12 40.1 -0.9
SBF Sospel 89.35 328⇑iP P 11 12 39.8 -1.4
comp=Z,39nm,0.8s,mb5.5
SBF Sospel 89.35 328⇑iP P 11 12 39.8 -1.4
comp=Z,20nm,0.8s,mb5.5
SBF Sospel 89.35 328⇑iP P 11 12 39.8 -1.4
SBF pmax pmax
comp=Z,19nm,0.8s,mb5.5
LUCF Luceram 89.36 328 eP P 11 12 40.1 -1.2
LUCF Luceram 89.36 328 eP P 11 12 40.1 -1.2
SSB Saint Sauveur 89.38 331 eP P 11 12 41.3 0.0
comp=Z,7.1nm,0.8s,mb5.0
SSB Saint Sauveur 89.38 331 eP P 11 12 41.3 0.0
SSB pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
SGMF Saint Gilles 89.40 336⇑iP P 11 12 41.0 -0.4
comp=Z,47nm,0.9s,mb5.5
SGMF Saint Gilles 89.40 336⇑iP P 11 12 41.0 -0.4
comp=Z,24nm,0.9s,mb5.5
SGMF Saint Gilles 89.40 336⇑iP P 11 12 41.0 -0.4
SGMF pmax pmax
comp=Z,23nm,0.9s,mb5.5
TCF Toulx Ste Croi 89.43 332⇑iP P 11 12 41.1 -0.5
comp=Z,48nm,1.1s,mb5.4
TCF Toulx Ste Croi 89.43 332⇑iP P 11 12 41.1 -0.5
comp=Z,24nm,1.1s,mb5.4
TCF Toulx Ste Croi 89.43 332⇑iP P 11 12 41.1 -0.5
TCF pmax pmax
comp=Z,24nm,1.1s,mb5.4
MVIF Mont Vial 89.44 328 eP P 11 12 40.5 -1.1
MVIF Mont Vial 89.44 328 eP P 11 12 40.5 -1.1
MVIF Mont Vial 89.44 328 eP P 11 12 40.5 -1.1
326A Caldwell Ranch 89.51 51⇓P P 11 12 42.0 -0.3
baz=89
ROSF Rostrenen 89.56 337⇑iP P 11 12 41.7 -0.4
comp=Z,123nm,1.2s,mb5.8
ROSF Rostrenen 89.56 337⇑iP P 11 12 41.7 -0.4
comp=Z,62nm,1.2s,mb5.8
ROSF Rostrenen 89.56 337⇑iP P 11 12 41.7 -0.4
ROSF pmax pmax
comp=Z,62nm,1.2s,mb5.8
CALN Calern 89.67 328 eP P 11 12 43.3 +0.6
CALN Calern 89.67 328 eP P 11 12 43.3 +0.6
CALN Calern 89.67 328 eP P 11 12 43.3 +0.6
VIVF Saint-Julien-l 89.68 330⇑iP P 11 12 42.0 -0.7
comp=Z,28nm,0.7s,mb5.4
VIVF Saint-Julien-l 89.68 330⇑iP P 11 12 42.0 -0.7
comp=Z,14nm,0.7s,mb5.4
VIVF Saint-Julien-l 89.68 330⇑iP P 11 12 42.0 -0.7
VIVF pmax pmax
comp=Z,14nm,0.7s,mb5.4
CEL Celeste 89.69 320 eP P 11 12 41.9 -1.0
comp=Z,53nm,0.9s,mb5.9
PGF Pioggiola 89.72 326⇑iP P 11 12 41.8 -1.2
comp=Z,47nm,0.9s,mb5.5
PGF Pioggiola 89.72 326⇑iP P 11 12 41.8 -1.2
comp=Z,23nm,0.9s,mb5.5
PGF Pioggiola 89.72 326⇑iP P 11 12 41.8 -1.2
PGF pmax pmax
comp=Z,23nm,0.9s,mb5.5
BST Brest 89.84 337 eP P 11 12 43.4 0.0
BST Brest 89.84 337 eP P 11 12 43.4 0.0
QUIF Quistinic 89.89 336⇑iP P 11 12 43.0 -0.7
comp=Z,29nm,0.8s,mb5.3
QUIF Quistinic 89.89 336⇑iP P 11 12 43.0 -0.7
comp=Z,14nm,0.8s,mb5.3
QUIF Quistinic 89.89 336⇑iP P 11 12 43.0 -0.7
QUIF pmax pmax
comp=Z,14nm,0.8s,mb5.3
426A McDonald Obser 89.92 51⇓P P 11 12 43.6 -0.5
baz=90
LBL Lubilhac 89.92 331 eP P 11 12 43.3 -0.6
LBL Lubilhac 89.92 331 eP P 11 12 43.3 -0.6
LBL Lubilhac 89.92 331 eP P 11 12 43.3 -0.6
FRF La Foret Royal 89.93 328⇑iP P 11 12 42.6 -1.3
comp=Z,59nm,1.2s,mb5.5
FRF La Foret Royal 89.93 328⇑iP P 11 12 42.6 -1.3
comp=Z,30nm,1.2s,mb5.5
FRF La Foret Royal 89.93 328⇑iP P 11 12 42.6 -1.3
FRF pmax pmax
comp=Z,30nm,1.2s,mb5.5
MFF Saint Martin d 90.02 334⇑iP P 11 12 44.0 -0.3
comp=Z,75nm,0.9s,mb5.7
MFF Saint Martin d 90.02 334⇑iP P 11 12 44.0 -0.3
comp=Z,37nm,0.9s,mb5.7
MFF Saint Martin d 90.02 334⇑iP P 11 12 44.0 -0.3
MFF pmax pmax
comp=Z,37nm,0.9s,mb5.7
SMRF Simiane la Rot 90.04 329⇑iP P 11 12 43.9 -0.5
LMR La Mourre 90.17 328⇑iP P 11 12 43.9 -1.2
comp=Z,76nm,1.1s,mb5.6
LMR La Mourre 90.17 328⇑iP P 11 12 43.9 -1.2
comp=Z,38nm,1.1s,mb5.6
LMR La Mourre 90.17 328⇑iP P 11 12 43.9 -1.2
LMR pmax pmax
comp=Z,38nm,1.1s,mb5.6
328A Wristen Ranch, 90.19 50⇓P P 11 12 45.1 -0.3
baz=90
427A Hayter Ranch, 90.19 51⇑P P 11 12 44.8 -0.6

baz=90
WMOK **Wichita Mounta** 90.21 45 *e*P P 11 12 45.1 -0.3
RJF **Les Rejaudoux** 90.52 332⇑*i*P P 11 12 46.4 -0.3
comp=Z,57nm,0.8s,mb5.7
RJF *e*MLR MLR
comp=Z,276nm,22.0s
RJF **Les Rejaudoux** 90.52 332⇑*i*P P 11 12 46.4 -0.3
comp=Z,29nm,0.8s,mb5.7
RJF LR LR
comp=Z,280nm,22.0s
RJF **Les Rejaudoux** 90.52 332⇑*i*P P 11 12 46.4 -0.3
RJF pmax pmax
comp=Z,29nm,0.8s,mb5.7
RJF MLR MLR
comp=Z,280nm,22.0s
527A **Woodward Ranch** 90.54 51 ⇓P P 11 12 46.7 -0.4
baz=90
626A **Big Bend Ranch** 90.62 52 ⇑P P 11 12 47.0 -0.4
baz=90
CAF **Calviac** 90.64 332⇑*i*P P 11 12 47.3 +0.1
comp=Z,63nm,1.0s,mb5.6
CAF **Calviac** 90.64 332⇑*i*P P 11 12 47.3 +0.1
comp=Z,32nm,1.0s,mb5.6
CAF **Calviac** 90.64 332⇑*i*P P 11 12 47.3 +0.1
CAF pmax pmax
comp=Z,32nm,1.0s,mb5.6
LASF **Ste Croix** 90.65 330⇑*i*P P 11 12 46.9 -0.4
comp=Z,30nm,0.8s,mb5.4
428A **Kincaid Ranch,** 90.72 50 ⇓P P 11 12 47.6 -0.3
baz=90
528A **Cox Ranch, San** 91.05 51 ⇑P P 11 12 49.0 -0.4
baz=91
TXAR **Lajitas Array** 91.06 52 P P 11 12 49.3 -0.2
TXAR PKKPbc PKKPbc 11 30 13.3 +1.8
TXAR LR LR 11 47 40.1
TXAR **Lajitas Array** 91.06 52 P P 11 12 49.3 -0.2
comp=Z,5.3nm,0.7s,mb5.0,baz=300,slow=3.2,SNR=42
TXAR PKKPbc PKKPbc 11 30 13.3 +1.8
comp=Z,0.5nm,0.5s,baz=145,slow=6.3,SNR=11
TXAR LR LR 11 47 40.1
comp=Z,100nm,21.4s,baz=85,slow=32
LFF **La Frestale** 91.12 333⇑*i*P P 11 12 49.4 -0.1
comp=Z,50nm,0.6s,mb5.7
LFF **La Frestale** 91.12 333⇑*i*P P 11 12 49.4 -0.1
comp=Z,25nm,0.6s,mb5.7
LFF **La Frestale** 91.12 333⇑*i*P P 11 12 49.4 -0.1
LFF pmax pmax
comp=Z,25nm,0.6s,mb5.7
627A **Terlingua Ranc** 91.16 52 ⇑P P 11 12 49.4 -0.5
baz=91
628A **Black Gap, Mar** 91.45 51 ⇑P P 11 12 51.0 -0.3
baz=91
MTLF **Montolieu** 91.92 331⇑*i*P P 11 12 52.9 -0.3
comp=Z,54nm,1.1s,mb5.5
MTLF **Montolieu** 91.92 331⇑*i*P P 11 12 52.9 -0.3
comp=Z,27nm,1.1s,mb5.5
MTLF **Montolieu** 91.92 331⇑*i*P P 11 12 52.9 -0.3
MTLF pmax pmax
comp=Z,27nm,1.1s,mb5.5
JCT **Junction City** 92.66 49 ⇑P P 11 12 56.0 -0.8
baz=92
MLS **Moulis** 92.68 331 *e*P P 11 12 56.8 +0.1
MLS **Moulis** 92.68 331 *e*P P 11 12 56.8 +0.1
VALF **Valcebollere** 92.79 331 *e*P P 11 12 57.3 +0.1
VALF **Valcebollere** 92.79 331 *e*P P 11 12 57.3 +0.1
EPF **Esparros** 92.90 332⇑*i*P P 11 12 56.9 -0.8
comp=Z,9.0nm,0.8s,mb5.0
EPF **Esparros** 92.90 332⇑*i*P P 11 12 56.9 -0.8
comp=Z,4.5nm,0.8s,mb5.0
EPF **Esparros** 92.90 332⇑*i*P P 11 12 56.9 -0.8
EPF pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
RESF **Ens** 93.09 332 *e*P P 11 12 59.5 +0.9
RESF **Ens** 93.09 332 *e*P P 11 12 59.5 +0.9
ETSF **Etsaut** 93.35 332⇑*i*P P 11 12 59.9 +0.1
comp=Z,31nm,0.7s,mb5.5
ETSF **Etsaut** 93.35 332⇑*i*P P 11 12 59.9 +0.1
comp=Z,16nm,0.7s,mb5.5
ETSF **Etsaut** 93.35 332⇑*i*P P 11 12 59.9 +0.1
ETSF pmax pmax
comp=Z,16nm,0.7s,mb5.6
SJPF **Ste Jean** 93.42 333⇑*i*P P 11 12 59.1 -1.0
comp=Z,20nm,0.9s,mb5.2
SJPF **Ste Jean** 93.42 333⇑*i*P P 11 12 59.1 -1.0
comp=Z,9.8nm,0.9s,mb5.2
SJPF **Ste Jean** 93.42 333⇑*i*P P 11 12 59.1 -1.0
SJPF pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
KEST **Kesra** 94.97 322 *e*P P 11 13 07.0 -0.4
KEST **Kesra** 94.97 322 P P 11 13 06.5 -0.9
comp=Z,2.4nm,0.6s,mb4.8,baz=343,slow=2.3,SNR=8.9
KEST LR LR 12 05 00.9
comp=Z,83nm,18.3s,baz=307,slow=41
TKL **Tuckaleechee C** 97.27 35 *e*P P 11 13 19.8 +2.0
TKL **Tuckaleechee C** 97.27 35 LR LR 11 59 17.2
comp=Z,77nm,19.7s,baz=255,slow=37
ESDC **Sonseca Array** 97.42 333 P P 11 13 17.5 -0.9
comp=Z,1.5nm,0.5s,mb4.7,baz=24,slow=4.0,SNR=10
RKT **Rikitea** 99.28 112 *e*LR LR 11 45 32.2
comp=Z,343nm,25.2s,baz=306
TORD **Torodi Ar. Bea** 117.15 314 PKP PKPdf 11 18 29.0 -1.2
TORD PP PP 11 19 31.1 -9.0
TORD PKKPbc PKKPbc 11 28 54.7 +1.2
TORD **Torodi Ar. Bea** 117.15 314 PKP PKPdf 11 18 29.0 -1.2
comp=Z,3.0nm,0.6s,baz=40,slow=1.0,SNR=11
TORD PP PP 11 19 31.1 -9.0
comp=Z,3.7nm,0.8s,baz=28,slow=7.8,SNR=6.4
TORD PKKPbc PKKPbc 11 28 54.7 +1.2
comp=Z,0.9nm,0.7s,baz=214,slow=3.3,SNR=4.2
MAW **Mawson** 118.72 205 *e*P PKPdf 11 18 31.3 -0.2
comp=Z,3.3nm,0.9s
MAW **Mawson** 118.72 205 PKP PKPdf 11 18 31.3 -0.3
comp=Z,7.2nm,0.8s,baz=258,slow=0.9,SNR=21
MAW **Mawson** 118.72 205 PKIKP PKPdf 11 18 31.3 -0.2
MAW pmax pmax
comp=Z,7.0nm,0.8s
BOSA **Boshof** 125.71 258 PKP PKPdf 11 18 45.5 -0.7
BOSA **Boshof** 125.71 258 PKP PKPdf 11 18 45.5 -0.7
comp=Z,8.7nm,0.8s,baz=95,slow=1.7,SNR=12
BOSA **Boshof** 125.71 258 PKIKP PKPdf 11 18 45.5 -0.7
BOSA pmax pmax
comp=Z,9.0nm,0.8s
DBIC **Dimbokro** 126.14 316 PKP PKPdf 11 18 47.0 -0.6
DBIC PP PP 11 20 36.3 -5.0
DBIC **Dimbokro** 126.14 316 PKP PKPdf 11 18 47.0 -0.6
comp=Z,9.2nm,0.8s,baz=57,slow=3.4,SNR=6.7
DBIC PP PP 11 20 36.3 -5.0
comp=Z,6.9nm,0.9s,baz=29,slow=10,SNR=4.3
DBIC **Dimbokro** 126.14 316 PKIKP PKPdf 11 18 47.0 -0.5
DBIC pmax pmax
comp=Z,9.0nm,0.8s
DBIC pmax pmax
comp=Z,7.0nm,0.9s
SDV **Santo Domingo** 126.23 39 *e*PKPdf PKPdf 11 18 47.4 -0.3
QSPA **South Pole Qui** 126.24 180 *e*PKPdf PKPdf 11 18 45.4 -0.3
TIC **Toumodi** 126.25 316 *e*PKIKP PKPdf 11 18 46.6 -1.1
comp=Z,6.4nm,0.2s
KIC **Kosan Boka** 126.32 315 *e*PKIKP PKPdf 11 18 47.0 -0.9
comp=Z,47nm,1.0s
LIC **Lamto** 126.60 315 *e*PKIKP PKPdf 11 18 47.2 -1.2
comp=Z,64nm,1.1s
TSUM **Tsumeb** 127.36 273 *e*PKPdf PKPdf 11 18 50.2 +0.6
NNA **Nana** 138.55 64 *e*PKPdf PKPdf 11 19 10.4 -0.4
NNA PKP PKPdf 11 19 10.4 -0.3
NNA **Nana** 138.55 64 PKP PKPdf 11 19 10.4 -0.3
comp=Z,13nm,0.7s,baz=254,slow=2.2,SNR=4.1
VNA1 **Neumayer--Stat** 141.99 196 *e* PKPdf 11 19 15.8 +0.5
LPAZ **La Paz** 147.63 59 PKPbc PKPbc 11 19 28.3 -1.2
LPAZ **La Paz** 147.63 59 PKPbc PKPbc 11 19 28.3 -1.2
comp=Z,9.9nm,0.7s,baz=302,slow=2.5,SNR=29
CFAA **Coronel Fontan** 155.78 87 PKP PKPdf 11 19 38.6 +0.1
comp=Z,0.2nm,0.6s,baz=225,slow=1.4,SNR=3.0
CFAA PKPbc PKPdf 11 19 46.9 +8.3
comp=Z,0.4nm,0.8s,baz=276,slow=4.7,SNR=4.6
CFAA PKPab PKPab 11 20 05.5 0.0
comp=Z,0.8nm,0.7s,baz=275,slow=4.6,SNR=9.0
CPUP **Villa Florida** 161.78 61 PKP PKPdf 11 19 45.0 -0.8
comp=Z,0.5nm,0.4s,baz=337,slow=12,SNR=3.3
CPUP **Villa Florida** 161.78 61 PKIKP PKPdf 11 19 45.0 -0.8
CPUP pmax pmax
comp=Z,1.0nm,0.4s

*MOS **22** 11:04:50.8±1.3,8.59N×82.71W,h10km,mb5.2/32, Error ellipse: s-maj=16.9km s-min=6.2km az=119.1*
*CASC **22** 11:04:52.1±2.6,8.26N×82.75W,h17km±8km,MD4.5, ML4.4,mb5.0(NEIC)*
*ISCJB **22** 11:04:54.1±0.4,8.40N±0.04×82.76W±0.02,h41km±2km, mb5.0/91,MS4.5/11,Error ellipse: s-maj=7.0km s-min=3.0km az=18.5*
*BJI **22** 11:04:55.5,8.30N×82.80W,h44km,mB5.4/11,Ms5.4/10, Ms7 4.9/10*
*NEIC **22** 11:04:56.5±0.7,8.32N×82.80W,h54km±6km,mb5.0/89, Error ellipse: s-maj=7.0km s-min=4.1km az=209.0*
NEIC Felt at Dolega and Gualaca, Panama. Also felt at Coto Brus, Costa Rica.
*IDC **22** 11:04:56.9±2.8,8.33N×82.76W,h63km±25km,mb4.2/15, mb1 4.4/19,mb1mx4.3/25,mbtmp4.3/19,ML3.9/2,MS4.1/10, Ms1 4.1/10,ms1mx3.9/24,Error ellipse: s-maj=20.9km s-min=11.6km az=51.0*
*GCMT **22** 11:04:57.5±0.3,8.36N×82.75W,h28km,MW5.0,Moment Tensor Solution. s37,c46; s67,c99; Moment tensor: Scale 10^{16}Nm; M_{rr}3.73±.20; $M_{\theta\theta}$-2.16±.13; $M_{\phi\phi}$-1.57±.16; $M_{r\theta}$0.22±.17; $M_{\theta\phi}$2.34±.08; $M_{\phi r}$0.76±.24; Best double couple: M_o4.10000×10^{16} NP1:ϕ_s120.00000°,δ44.00000°, λ73.00000°. NP2:ϕ_s323.00000°,δ49.00000°,λ106.00000°. Principal axes: T 3.8900, Plg78.0000°, Azm300.0000°; N 0.3400, Plg12.0000°, Azm132.0000°; P -4.2400, Plg2.0000°, Azm42.0000°; Data Used: II IU G CN IC.*

ISC 22 11:04:55.5±0.5,8.35N±0.04×82.75W±0.02,h39km±2km, n595,$_{o}$0$_{g}$82/583,mb5.0/91,MS4.5/11,179C-150D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.45**	**7**	⇓*i*P		**Pn**		**11 05 02.5**	**-3.0**
BRU2				*e*S		**Sn**		**11 05 09.5**	**-3.1**
TBS2		**0.46**	**12**	⇓*e*P		**Pn**		**11 05 09.8**	**+4.3**
TBS2				*e*S		**Sn**		**11 05 18.3**	**+5.6**
ACR	**Cerro Adams**	**0.51**	**307**	⇑*e*P		**Pn**		**11 05 01.4**	**-5.0**
BUS	**Buena Vista**	**1.56**	**320**	⇓*e*P		**Pn**		**11 05 18.6**	**-2.1**
QCR	**Quepos**	**1.76**	**308**	⇑*e*P		**Pn**		**11 05 21.1**	**-2.4**
URSC	**Urasca**	**1.79**	**326**	⇓*e*P		**Pn**		**11 05 22.4**	**-1.5**
LAJ	**Bijagual**	**2.03**	**318**	*e*P		**Pn**		**11 05 28.1**	**+0.9**
PRS1	**Puriscal**	**2.24**	**317**	⇑*e*P		**Pn**		**11 05 28.3**	**-1.8**
CGA2	**Cerro Gallo 2**	**2.37**	**315**	⇓*e*P		**Pn**		**11 05 31.1**	**-0.7**
JCR	**Jicaral**	**2.77**	**303**	⇑*e*P		**Pn**		**11 05 35.0**	**-2.4**
PINA	**Piqa, Costa Ab**	**2.81**	**71**	*e*P		**Pn**		**11 05 37.1**	**-0.7**
CASO	**Castillo**	**2.85**	**317**	*i* P		**Pn**		**11 05 38.5**	**0.0**
CASO				*i* S		**Sn**		**11 06 18.9**	**+7.2**
JTS	**JuntasAbangare**	**2.91**	**312**	Pn		**Pn**		**11 05 37.7**	**-1.6**
	16µm,0.4s,SNR=62								
JTS	**JuntasAbangare**	**2.91**	**312**	*e*Pn		**Pn**		**11 05 37.5**	**-1.8**
JTS				*e*Sn		**Sn**		**11 06 10.9**	**-2.1**
JTS	**JuntasAbangare**	**2.91**	**312**	*e*P		**Pn**		**11 05 38.6**	**-0.6**
JTS				*e*S		**Sn**		**11 06 18.2**	**+5.2**
BCIP	**Isla Barro Col**	**2.99**	**74**	*e*Pn		**Pn**		**11 05 39.8**	**-0.6**
BCIP				*e*Sn		**Sn**		**11 06 15.7**	**+0.6**
BCIP	**Isla Barro Col**	**2.99**	**74**	⇓*e*P		**Pn**		**11 05 39.2**	**-1.2**
BCIP				*e*S		**Sn**		**11 06 14.2**	**-0.9**
PTEN	**Parque Tenorio**	**3.23**	**317**	*i* P		**Pn**		**11 05 44.1**	**+0.5**
UPIG		**3.24**	**78**	*e*P		**Pn**		**11 05 43.2**	**-0.7**
UPIG				*e*S		**Sn**		**11 06 30.0**	**+8.8**
CUI	**Cuipilapa**	**3.31**	**314**	*i* P		**Pn**		**11 05 43.4**	**-1.4**
CUI				*i* S		**Sn**		**11 06 25.9**	**+3.0**
COLC	**Colonia**	**3.34**	**314**	*i* P		**Pn**		**11 05 44.7**	**-0.5**
VCR	**Vista de Mar**	**3.35**	**302**	⇓*e*P		**Pn**		**11 05 43.7**	**-1.6**
MESS	**Mesas**	**3.39**	**315**	*i* P		**Pn**		**11 05 45.5**	**-0.3**
LIM1	**Limonal**	**3.40**	**314**	*i* P		**Pn**		**11 05 45.2**	**-0.9**
GPS2	**Hotel Rinc˜‡n**	**3.51**	**313**	*i* P		**Pn**		**11 05 47.2**	**-0.3**
GPS3	**Bodega del ICE**	**3.52**	**313**	*i* P		**Pn**		**11 05 48.1**	**+0.4**
GPS1	**Guardaparques**	**3.52**	**313**	*i* P		**Pn**		**11 05 47.4**	**-0.3**
NY14	**Universidad de**	**3.57**	**310**	*i* P		**Pn**		**11 05 48.1**	**-0.3**
LAPC	**Finca la Perla**	**3.58**	**313**	*i* P		**Pn**		**11 05 47.9**	**-0.6**
BUEV	**Buena Vista**	**3.58**	**313**	*i* P		**Pn**		**11 05 47.8**	**-0.7**
GB1A	**Borinquen Arri**	**3.59**	**313**	*i* P		**Pn**		**11 05 48.2**	**-0.3**
GBS3	**Finca Las Im˜¡**	**3.60**	**312**	*i* P		**Pn**		**11 05 48.0**	**-0.8**
GBS3				*i* S		**Sn**		**11 06 34.9**	**+4.8**
GBS2	**Las Lilas**	**3.64**	**313**	*i* P		**Pn**		**11 05 48.4**	**-0.9**
SSN	**San Juan del S**	**4.24**	**314**	*e*P		**Pn**		**11 05 58.0**	**+0.5**
CONN	**Concepcion**	**4.27**	**319**	⇓*e*P		**Pn**		**11 05 58.7**	**+0.7**
CONN					AML	AML		11 06 08.9	
	comp=Z,138nm,0.5s								
BOAB	**BOACO BROADBAN**	**4.99**	**325**	⇑*e*P		**Pn**		**11 06 07.6**	**-0.2**
CRUN	**El Crucero**	**5.03**	**316**	*e*P		**Pn**		**11 06 10.0**	**+1.6**
ICCO	**Coco Island**	**5.10**	**237**	*e*P		**Pn**		**11 06 04.3**	**-5.2**
ICCO				*e*S		**Sn**		**11 07 00.4**	**-6.7**
MGAN	**Managua**	**5.11**	**318**	*e*P		**Pn**		**11 06 09.7**	**+0.2**
TISN	**Laguna Tiscapa**	**5.12**	**318**	*e*P		**Pn**		**11 06 10.0**	**+0.3**
XAVN	**Gruta Xavier**	**5.16**	**317**	*e*P		**Pn**		**11 06 10.7**	**+0.4**
CSAN		**5.25**	**317**	*e*P		**Pn**		**11 06 11.6**	**+0.1**
CSAN					AML	AML		11 06 13.4	
	comp=Z,6µm,0.4s								
COPN	**Copaltepe**	**5.37**	**316**	*e*P		**Pn**		**11 06 12.8**	**-0.3**
CNGN	**Cerro Negro**	**5.67**	**317**	*e*P		**Pn**		**11 06 16.9**	**-0.3**
CNCH	**Conchagua**	**7.00**	**315**	*e*P		**Pn**		**11 06 35.6**	**+0.2**
CNCH				*e*S		**Sn**		**11 07 55.6**	**+1.8**
TGUH	**Tegucigalpa,Un**	**7.20**	**322**	*e*Pn		**Pn**		**11 06 39.5**	**+1.2**
TGUH	**Tegucigalpa,Un**	**7.20**	**322**	*e*P		**Pn**		**11 06 39.0**	**+0.6**
BLLM	**Bellamira**	**7.39**	**314**	*e*P		**Pn**		**11 06 40.8**	**-0.2**
BLLM				*e*S		**Sn**		**11 08 04.4**	**+0.8**
VSM	**San Miguel**	**7.41**	**313**	*e*P		**Pn**		**11 06 41.6**	**+0.5**
LFRS	**El Faro**	**8.12**	**311**	*e*P		**Pn**		**11 06 51.5**	**+0.7**
LFRS				*e*S		**Sn**		**11 08 21.9**	**+0.5**
SBLS	**San Blas**	**8.68**	**310**	*e*P		**Pn**		**11 06 59.6**	**+1.1**
RBDL	**Robledal**	**8.89**	**311**	*e*P		**Pn**		**11 07 02.2**	**+0.7**
ROSC	**El Rosal**	**9.05**	**112**	P		**Pn**		**11 07 07.0**	**+3.3**
ROSC				*e*Pn		**Pn**		**11 07 08.7**	**+5.0**
ROSC				S		**Sn**		**11 08 48.7**	**+4.3**
ROSC				LR	LR	LR		11 10 13.9	
ROSC	**El Rosal**	**9.05**	**112**	P		**Pn**		**11 07 07.0**	**+3.3**
	comp=Z,2.8nm,0.3s,baz=263,slow=19,SNR=11								
ROSC				S		**Sn**		**11 08 48.7**	**+4.3**
	comp=Z,2.5nm,0.3s,baz=284,slow=21,SNR=2.1								
ROSC				LR	LR	LR		11 10 13.9	
	comp=Z,1µm,19.9s,baz=352,slow=35								
OTAV	**Otavalo**	**9.12**	**152**	*e*Pn		**Pn**		**11 07 07.5**	**+2.8**
	comp=Z,33nm,1.0s								
MTDJ	**Mount Denham**	**11.05**	**27**	*e*Pn		**Pn**		**11 07 31.7**	**+0.6**
SDV	**Santo Domingo**	**11.99**	**87**	*e*Pn		**Pn**		**11 07 46.5**	**+2.5**
TEIG	**Tepich**	**12.96**	**336**	*e*Pn		**Pn**		**11 07 59.0**	**+1.7**
GTBY	**Guantanamo Bay**	**13.69**	**32**	*e*Pn		**Pn**		**11 08 07.5**	**+0.5**
CMIG	**Matias Romero**	**14.68**	**307**	P		**Pn**		**11 08 18.4**	**-2.2**
	comp=Z,1.4nm,0.3s,baz=116,slow=9.3,SNR=18								
CMIG					LR	LR		11 14 23.8	
	comp=Z,925nm,21.0s,baz=128,slow=39								
SDDR	**Presa de Saban**	**15.35**	**45**	*e*Pn		**Pn**		**11 08 28.8**	**-0.5**
	comp=Z,68nm,1.0s								
ATAH	**Atahualpa**	**15.98**	**164**	P		**Pn**		**11 08 38.1**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=40,slow=14,SNR=2.6								
ATAH					LR	LR		11 14 04.6	
	comp=Z,1µm,21.0s,baz=115,slow=34								
PCRV	**Puerto La Cruz**	**17.97**	**83**	P		**Pn**		**11 09 03.9**	**+1.4**
	comp=Z,1.0nm,0.3s,baz=273,slow=4.5,SNR=6.4								
LSP	**Las Mesas**	**18.09**	**56**	*e*Pn		**Pn**		**11 09 05.7**	**+1.8**
AGP	**Aguadilla**	**18.17**	**55**	*e*Pn		**Pn**		**11 09 07.7**	**+2.9**
AGPR	**Aguadilla, PR**	**18.22**	**55**	*e*P		**Pn**		**11 09 07.9**	**+2.3**
	comp=Z,372nm,1.4s								
LRS	**Lares**	**18.35**	**56**	*e*Pn		**Pn**		**11 09 09.2**	**+2.1**
ICM	**Isla Caja Muer**	**18.42**	**57**	*e*P		**Pn**		**11 09 09.3**	**+1.4**
OBIP	**Obispado Ponce**	**18.42**	**57**	*e*Pn		**Pn**		**11 09 09.6**	**+1.7**
	comp=Z,160nm,1.4s								
AOPR	**Arecibo Observ**	**18.45**	**56**	*e*Pn		**Pn**		**11 09 10.2**	**+1.9**
	comp=Z,43nm,1.1s								
SJG	**San Juan**	**18.84**	**57**	*e*Pn		**Pn**		**11 09 13.4**	**+0.5**
	comp=Z,96nm,0.9s								
SJG	**San Juan**	**18.84**	**57**	P		**Pn**		**11 09 12.7**	**-0.2**
	comp=Z,3.1nm,0.3s,baz=270,slow=6.9,SNR=26								
SJG					LR	LR		11 15 57.1	
	comp=Z,537nm,19.3s,baz=260,slow=35								
SJG	**San Juan**	**18.84**	**57**	*e*P		**Pn**		**11 09 13.4**	**+0.5**
SJG					pmax	pmax			
	comp=Z,97nm,0.9s								
HUMP	**Col San Antoni**	**19.10**	**58**	*e*Pn		**Pn**		**11 09 16.8**	**+0.7**
	comp=Z,39nm,1.0s								
CBYP	**Canovanas**	**19.16**	**57**	*e*P		**Pn**		**11 09 17.9**	**+1.1**
	comp=Z,206nm,1.5s								
MTP	**Monte Pirata**	**19.33**	**58**	*e*P		**Pn**		**11 09 18.4**	**-0.4**
	comp=Z,61nm,1.1s								
CDVI	**St. Croix**	**19.84**	**60**	*e*Pn		**Pn**		**11 09 25.3**	**+0.4**
	comp=Z,234nm,1.0s								
STVI	**Saint Thomas**	**19.95**	**58**	*e*P		**Pn**		**11 09 25.6**	**-0.6**
	comp=Z,69nm,1.0s								
NNA	**Nana**	**21.04**	**164**	*e*P		**P**		**11 09 35.9**	**-0.2**
	comp=Z,49nm,1.0s,mb4.8								
NNA	**Nana**	**21.04**	**164**	P		**P**		**11 09 34.2**	**-1.9**
	comp=Z,26nm,0.9s,mb4.6,baz=343,slow=6.4,SNR=7.3								
GRGR	**Grenville**	**21.09**	**78**	*e*P		**P**		**11 09 40.7**	**+3.9**
	comp=Z,184nm,0.9s,mb5.4								
BRAL	**Brewton**	**22.91**	**350**	*e*P		**P**		**11 09 58.3**	**+2.4**
	comp=Z,260nm,1.3s,mb5.5								
HKT	**Hockley**	**24.75**	**332**	*e*P		**P**		**11 10 13.2**	**-0.2**
	comp=Z,94nm,1.5s,mb5.1								
HKT	**Hockley**	**24.75**	**332**	*e*P		**P**		**11 10 13.2**	**-0.2**
HKT					pmax	pmax			
	comp=Z,94nm,1.5s,mb5.1								
VBMS	**Vicksburg**	**24.83**	**344**	*e*P		**P**		**11 10 14.7**	**+0.6**
	comp=Z,157nm,0.3s,mb6.0								
LRAL	**Lakeview Retre**	**24.88**	**351**	*e*P		**P**		**11 10 15.2**	**+0.6**
	comp=Z,83nm,1.2s,mb5.1								
GOGA	**Godfrey**	**24.95**	**359**	*e*P		**P**		**11 10 15.6**	**+0.4**
	comp=Z,78nm,1.4s,mb5.0								
GOGA	**Godfrey**	**24.95**	**359**	*e*P		**P**		**11 10 15.6**	**+0.4**
GOGA					pmax	pmax			
	comp=Z,78nm,1.4s,mb5.0								
NATX	**Nacogdoches**	**25.80**	**336**	*e*P		**P**		**11 10 22.4**	**-0.6**
	comp=Z,58nm,1.2s,mb5.0								
SWET	**Sewanee**	**26.90**	**354**	*e*P		**P**		**11 10 32.9**	**+0.1**
CPCT	**Cooper Cave**	**27.03**	**357**	*e*P		**P**		**11 10 35.4**	**+1.4**
JCT	**Junction City**	**27.19**	**326**	⇑P		**P**		**11 10 34.3**	**-1.2**
	baz=27								
JCT	**Junction City**	**27.19**	**326**	*e*P		**P**		**11 10 35.1**	**-0.4**
	comp=Z,15nm,0.8s,mb4.6								
JCT				*e*PcP		PcP		11 13 55.6	+0.4
JCT	**Junction City**	**27.19**	**326**	*e*P		**P**		**11 10 35.1**	**-0.4**
JCT				*e*				11 13 55.6	
JCT				pmax	pmax				
	comp=Z,15nm,0.8s,mb4.6								
TKL	**Tuckaleechee C**	**27.20**	**358**	LR	LR			11 21 11.6	
	comp=Z,609nm,20.3s,MS4.2,baz=34,slow=36								
UALR	**University of**	**27.74**	**343**	*e*P		**P**		**11 10 39.1**	**-1.3**
	comp=Z,42nm,1.0s,mb5.0								
MIAR	**Mount Ida**	**27.91**	**341**	*e*P		**P**		**11 10 40.9**	**-1.0**
	comp=Z,33nm,1.1s,mb4.9								
MIAR	**Mount Ida**	**27.91**	**341**	*e*P		**P**		**11 10 40.9**	**-1.0**
MIAR					pmax	pmax			
	comp=Z,33nm,1.1s,mb4.9								
WVT	**Waverly**	**28.04**	**351**	*e*P		**P**		**11 10 41.8**	**-1.3**
	comp=Z,26nm,1.1s,mb4.8								
WVT	**Waverly**	**28.04**	**351**	*e*P		**P**		**11 10 41.8**	**-1.3**
WVT					pmax	pmax			
	comp=Z,26nm,1.1s,mb4.8								
628A	**Black Gap, Mar**	**28.28**	**321**	⇓P		**P**		**11 10 44.3**	**-1.0**
	baz=28								
LPAZ	**La Paz**	**28.43**	**149**	LR	LR			11 23 57.1	
	comp=Z,395nm,18.1s,MS4.0,baz=182,slow=40								
627A	**Terlingua Ranc**	**28.57**	**320**	⇓P		**P**		**11 10 47.7**	**-0.2**
	baz=29,SNR=8.8								
TXAR	**Lajitas Array**	**28.67**	**319**	P		**P**		**11 10 48.2**	**-0.5**
TXAR				PcP		PcP		11 13 58.7	-0.2
TXAR				LR	LR	LR		11 23 45.3	
TXAR	**Lajitas Array**	**28.67**	**319**	P		**P**		**11 10 48.2**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=140,slow=7.9,SNR=8.7								
TXAR				PcP		PcP		11 13 58.7	-0.2
	comp=Z,3.0nm,0.9s,baz=153,slow=7.2,SNR=4.9								
TXAR				LR	LR			11 23 45.3	
	comp=Z,181nm,18.3s,MS3.7,baz=175,slow=39								
TXAR	**Lajitas Array**	**28.67**	**319**	P		**P**		**11 10 48.2**	**-0.6**
TXAR								11 13 58.7	
528A	**Cox Ranch, San**	**28.69**	**322**	⇑P		**P**		**11 10 48.5**	**-0.4**
	baz=29,SNR=8.8								
PARMO	**Parma**	**28.90**	**348**	*e*P		**P**		**11 10 50.7**	**0.0**
PARMO				*e*pP		pP		11 11 04.4	+2.9
428A	**Kincaid Ranch,**	**29.03**	**323**	⇓P		**P**		**11 10 51.4**	**-0.5**
	baz=29,SNR=5.7								
626A	**Big Bend Ranch**	**29.12**	**319**	⇓P		**P**		**11 10 52.2**	**-0.5**
	baz=29								
527A	**Woodward Ranch**	**29.19**	**321**	⇓P		**P**		**11 10 52.7**	**-0.7**
	baz=29								
427A	**Hayter Ranch,**	**29.55**	**322**	⇓P		**P**		**11 10 56.1**	**-0.4**
	baz=30								
328A	**Wristen Ranch,**	**29.58**	**324**	⇑P		**P**		**11 10 56.0**	**-0.7**
	baz=30								
426A	**McDonald Obser**	**29.81**	**321**	⇓P		**P**		**11 10 58.7**	**-0.2**
	baz=30								
SIUC	**Southern Illin**	**29.82**	**350**	*e*P		**P**		**11 10 58.2**	**-0.6**
	comp=Z,74nm,1.5s,mb5.2								
WCI	**Wyandotte Cave**	**29.92**	**354**	*e*P		**P**		**11 10 59.4**	**-0.3**
	comp=Z,64nm,1.1s,mb5.3								
WCI	**Wyandotte Cave**	**29.92**	**354**	*e*P		**P**		**11 10 59.4**	**-0.3**
WCI					pmax	pmax			
	comp=Z,64nm,1.1s,mb5.3								
WMOK	**Wichita Mounta**	**30.11**	**333**	*e*P		**P**		**11 10 59.5**	**-1.9**
	comp=Z,5.3nm,1.0s,mb4.2								
WMOK	**Wichita Mounta**	**30.11**	**333**	*e*P		**P**		**11 10 59.5**	**-2.0**
WMOK					pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.2								
326A	**Caldwell Ranch**	**30.23**	**322**

BNM **Barren Site** 33.80 323 *e*P P 11 11 31.8 -2.1
comp=Z,5.9nm,1.1s,mb4.4
U26A **Atchley Ranch,** 33.84 329 ⇓P P 11 11 33.8 -0.4
baz=34
W24A **Lazy 6 Ranch,** 33.85 326 ⇓P P 11 11 34.4 +0.2
baz=34
Y22A **Socorro** 33.86 322 ⇓P P 11 11 34.8 +0.4
baz=34,SNR=10.0
V25A **Rancho No Teng** 33.88 327 ⇓P P 11 11 34.3 -0.2
baz=34
120A **U Bar Ranch, L** 33.99 319 ⇑P P 11 11 36.4 +0.8
baz=34,SNR=17
219A **White Tail Can** 34.06 317 ⇑P P 11 11 36.5 +0.3
baz=34,SNR=24
V24A **Rampart Ranch,** 34.15 326 ⇑P P 11 11 36.8 -0.1
baz=34,SNR=6.6
U25A **Circle Dot Ran** 34.19 328 ⇓P P 11 11 37.3 +0.1
baz=34
W23A **Werner Place,** 34.23 325 ⇓P P 11 11 38.0 +0.4
baz=34
ANMO **Albuquerque** 34.26 324 *e*P P 11 11 37.9 0.0
comp=Z,9.2nm,0.9s,mb4.7
ANMO **Albuquerque** 34.26 324 P P 11 11 37.9 0.0
comp=Z,5.5nm,1.0s,mb4.4,baz=143,slow=11,SNR=15
ANMO **Albuquerque** 34.26 324 *e*P P 11 11 37.9 0.0
ANMO pmax pmax
comp=Z,9.0nm,0.9s
LAZ **Ladron** 34.28 323 *e*P P 11 11 39.2 +1.2
comp=Z,6.8nm,1.3s,mb4.4
Z20A **Nine Sixteen R** 34.33 320 ⇓P P 11 11 39.3 +0.8
baz=34,SNR=12
Y21A **Point of Rocks** 34.34 322 ⇑P P 11 11 38.8 +0.3
baz=34,SNR=14
218A **Dragoon** 34.58 317 ⇑P P 11 11 41.4 +0.7
baz=35,SNR=15
U24A **Moreno Valley** 34.66 327 ⇑P P 11 11 41.7 +0.5
baz=35
V23A **Ortiz Mt. (NFS** 34.67 325 ⇓P P 11 11 41.9 +0.5
baz=35
SCIA **State Center** 34.68 346 *e*P P 11 11 40.0 -1.4
comp=Z,50nm,1.1s,mb5.4
X21A **Alamocita Cree** 34.70 322 ⇑P P 11 11 42.2 +0.5
baz=35,SNR=12
Y20A **Horse Springs,** 34.71 321 ⇓P P 11 11 42.1 +0.4
baz=35,SNR=8.2
T25A **Trinidad** 34.75 329 ⇑P P 11 11 42.6 +0.5
baz=35,SNR=7.5
118A **Homack Ranch,** 34.93 318 ⇑P P 11 11 44.7 +1.0
baz=35,SNR=16
217A **Green Valley** 34.99 316 ⇑P P 11 11 44.9 +0.7
baz=35,SNR=15
JFWS **Jewell Farm** 35.06 350 *e*P P 11 11 42.9 -1.7
comp=Z,26nm,0.9s,mb5.2
JFWS **Jewell Farm** 35.06 350 *e*P P 11 11 42.9 -1.7
JFWS pmax pmax
comp=Z,26nm,0.9s,mb5.2
W21A **San Fidel** 35.08 323 ⇓P P 11 11 45.2 +0.3
baz=35,SNR=5.5
U23A **El Rito** 35.10 326 ⇓P P 11 11 45.2 +0.2
baz=35,SNR=14
S25A **Robets Cordova** 35.17 329 ⇓P P 11 11 45.7 0.0
baz=35,SNR=7.3
X20A **Quemado** 35.20 322 ⇑P P 11 11 45.9 -0.1
baz=35
V22A **San Miguel Ran** 35.20 325 ⇓P P 11 11 45.8 -0.1
baz=35
TUC **Tucson** 35.28 316 *e*P P 11 11 48.1 +1.4
comp=Z,22nm,1.1s,mb5.0
TUC **Tucson** 35.28 316 *e*P P 11 11 48.2 +1.5
TUC pmax pmax
comp=Z,22nm,1.1s,mb5.0
Y19A **Nutrioso** 35.29 320 ⇑P P 11 11 47.1 +0.3
baz=35,SNR=8.0
117A **Oracle** 35.41 317 ⇑P P 11 11 48.8 +1.0
baz=35,SNR=15
U22A **Llaves** 35.50 325 ⇓P P 11 11 49.0 +0.5
baz=36,SNR=11
T23A **Casias Ranch,** 35.53 327 ⇑P P 11 11 49.5 +0.7
baz=36,SNR=16
V21A **Milan** 35.55 324 ⇓P P 11 11 49.0 +0.1
baz=36
S24A **Houchin Ranch,** 35.55 329 ⇓P P 11 11 49.2 +0.2
baz=36
216A **Three Points,** 35.57 315 ⇓P P 11 11 49.6 +0.4
baz=36,SNR=11
W20A **Ramah** 35.59 322 ⇓P P 11 11 50.0 +0.7
baz=36,SNR=6.1
X19A **St. Johns** 35.62 321 ⇑P P 11 11 50.3 +0.7
baz=36,SNR=6.9
Z17A **San Carlos Hig** 35.67 318 ⇑P P 11 11 51.0 +1.0
baz=36,SNR=9.8
Y18A **Canyon Day Jun** 35.68 319 ⇓P P 11 11 50.8 +0.7
baz=36,SNR=10
SDCO **Great Sand Dun** 35.78 328 ⇑P P 11 11 50.9 0.0
baz=36,SNR=17
SDCO **Great Sand Dun** 35.78 328 *e*P P 11 11 50.7 -0.2
comp=Z,16nm,1.3s,mb4.8
R24A **Sanders Place,** 35.95 329 ⇑P P 11 11 52.6 +0.3
baz=36
T22A **Edith** 35.99 326 ⇓P P 11 11 53.0 +0.3
baz=36
U21A **Nageezi** 35.99 325 ⇓P P 11 11 52.6 -0.1
baz=36,SNR=6.7
V20A **Brimhall** 36.03 323 ⇓P P 11 11 53.1 +0.1
baz=36
Q25A **Bedland, Calha** 36.05 331 ⇑P P 11 11 53.1 -0.1
baz=36,SNR=7.9
116A **Eloy** 36.06 316 ⇓P P 11 11 53.8 +0.4
baz=36,SNR=11
X18A **Snowflake** 36.10 320 ⇑P P 11 11 53.9 +0.2
baz=36,SNR=7.4
Y17A **Roosevelt** 36.16 318 ⇑P P 11 11 54.5 +0.3
baz=36,SNR=8.5
T21A **Navajo Lake** 36.32 325 ⇑P P 11 11 55.7 +0.1
baz=36
Z16A **Peralta Trail,** 36.33 317 ⇑P P 11 11 56.0 +0.4
baz=36
W18A **Petrified Fore** 36.34 321 ⇑P P 11 11 56.9 +1.1
baz=36,SNR=11
S22A **4UR Ranch, Cre** 36.48 327 ⇓P P 11 11 56.9 +0.1
baz=36,SNR=12
P25A **Willow Gulch B** 36.49 332 ⇓P P 11 11 57.1 +0.2
baz=36,SNR=17
214A **Organ Pipe Nat** 36.49 314 ⇑P P 11 11 57.4 +0.4
baz=36,SNR=16
X17A **Forest Lakes** 36.53 319 ⇑P P 11 11 57.6 +0.3
baz=36,SNR=15
Q24A **Divide** 36.53 330 ⇑P P 11 11 57.3 0.0
baz=36,SNR=6.2
Y16A **Circle Bar Ran** 36.69 318 ⇓P P 11 11 59.8 +1.1
baz=37,SNR=24
OGNE **Ogallala** 36.71 335 ⇓P P 11 11 58.5 -0.3
baz=37
OGNE **Ogallala** 36.71 335 *e*P P 11 11 58.4 -0.4
comp=Z,70nm,0.9s,mb5.5
R22A **Saguache, Gunn** 36.80 328 ⇓P P 11 11 59.8 +0.2
baz=37,SNR=12
U19A **Dine' College,** 36.80 323 ⇓P P 11 11 59.3 -0.3
baz=37,SNR=13
Q23A **Hartsel** 36.83 329 ⇓P P 11 11 59.8 0.0
baz=37,SNR=7.2
P24A **Kohler Place,** 36.84 331 ⇑P P 11 12 00.4 +0.4
baz=37
V18A **Ganado** 36.85 322 ⇑P P 11 12 00.4 +0.3
baz=37
O25A **Wiggins** 36.94 332 ⇑P P 11 12 00.6 -0.1
baz=37,SNR=6.5
S21A **Coal Bank Pass** 36.94 326 ⇓P P 11 12 01.1 +0.3
baz=37
114A **Black Gap (USA** 36.98 315 ⇑P P 11 12 01.2 -0.1
baz=37,SNR=18
X16A **Lo Mia Camp, P** 36.99 319 ⇓P P 11 12 03.0 +1.8
baz=37,SNR=16
MVCO **Mesa Verde** 37.02 325 ⇓P P 11 12 01.6 +0.1
baz=37,SNR=15
MVCO **Mesa Verde** 37.02 325 *e*P P 11 12 01.7 +0.2
comp=Z,14nm,0.8s,mb4.8
T19A **Beclabito** 37.06 324 ⇑P P 11 12 01.9 +0.1
baz=37,SNR=12
P23A **Jefferson** 37.19 330 ⇓P P 11 12 03.1 +0.3
baz=37,SNR=14
ECSD **EROS Data Cent** 37.28 343 *e*P P 11 12 01.6 -1.9
comp=Z,29nm,1.1s,mb5.0
U18A **Rough Rock, Ch** 37.28 323 ⇑P P 11 12 03.9 +0.2
baz=37,SNR=19
Y15A **Casa Rosa Ranc** 37.30 317 ⇑P P 11 12 05.0 +1.1
baz=37,SNR=19
R21A **Cimarron** 37.32 327 ⇑P P 11 12 04.3 +0.3
baz=37,SNR=7.4
V17A **Tonalea, Kykot** 37.33 321 ⇑P P 11 12 04.6 +0.5
baz=37,SNR=23
Q22A **Crested Butte,** 37.35 328 ⇑P P 11 12 04.2 0.0
baz=37,SNR=33
Z14A **Wintersburg** 37.37 316 ⇑P P 11 12 04.6 +0.1
baz=37,SNR=9.0
S20A **Disappointment** 37.38 326 ⇑P P 11 12 04.8 +0.3
baz=37,SNR=12
O24A **Longmont** 37.40 331 ⇑P P 11 12 04.9 +0.3
baz=37
ISCO **Idaho Springs** 37.40 330 ⇑P P 11 12 04.5 -0.2
baz=37,SNR=14
ISCO **Idaho Springs** 37.40 330 *e*P P 11 12 04.5 -0.2
comp=Z,9.3nm,0.8s,mb4.7
O23A **Lake Granby, G** 37.87 331 ⇓P P 11 12 07.1 -1.6
baz=38,SNR=29
112A **Yuma** 38.06 314 ⇓P P 11 12 10.6 +0.2
baz=38
PV10 **Paradox Valley** 38.14 326 *e*P P 11 12 04.1 -6.9
M24A **Cheyenne** 38.35 333 ⇓P P 11 12 13.1 +0.5
baz=38
N23A **Red Feather La** 38.41 331 ⇓P P 11 12 14.0 +0.8
baz=38
GLA **Glamis** 38.51 314 ⇓P P 11 12 14.8 +0.6
baz=38
GLA **Glamis** 38.51 314 *e*P P 11 12 15.9 +1.7
comp=Z,78nm,1.1s,mb5.3
P20A **De Beque** 38.59 328 ⇑P P 11 12 15.1 +0.3
baz=39
R18A **Canyonlands Na** 38.63 325 ⇑P P 11 12 15.1 0.0
baz=39
O21A **Pagoda** 38.64 329 ⇓P P 11 12 15.9 +0.7
baz=39
T16A **Glen Canyon Da** 38.65 322 ⇓P P 11 12 15.8 +0.6
baz=39
S17A **Black Ridge (B** 38.65 323 ⇑P P 11 12 15.8 +0.5
baz=39
X13A **Yucca** 38.68 317 ⇑P P 11 12 16.0 +0.4
baz=39
Y12C **Blythe** 38.68 315 ⇓P P 11 12 16.3 +0.8
baz=39
PDMCI **Parker Dam,Lak** 38.72 316 ⇑P P 11 12 16.2 +0.3
baz=39
L24A **Wheatland** 38.85 333 ⇓P P 11 12 17.3 +0.4
baz=39
N21A **Black Mountain** 39.08 330 ⇑P P 11 12 19.3 +0.5
baz=39
R17A **Hanksville Air** 39.12 324 ⇑P P 11 12 19.4 +0.2
baz=39
SWSC **Sam W. Stewart** 39.15 313 ⇓P P 11 12 19.3 -0.2
baz=39
S16A **Weppner Ranch,** 39.18 323 ⇑P P 11 12 19.5 -0.2
baz=39
T15A **Red Dirt Ranch** 39.21 321 ⇑P P 11 12 19.8 -0.2
baz=39
L23A **Garrett** 39.26 333 ⇓P P 11 12 20.7 +0.5
baz=39
Q18A **Rafter H Ranch** 39.26 326 ⇑P P 11 12 20.7 +0.4
baz=39,SNR=5.5
BC3 **Big Chuckawall** 39.28 315 ⇑P P 11 12 20.0 -0.6
baz=39
IRM **Iron Mountain** 39.34 315 ⇓P P 11 12 21.3 +0.2
baz=39
R16A **Teasdale** 39.48 323 ⇑P P 11 12 22.8 +0.5
baz=40
N20A **Spence Gulch,** 39.51 329 ⇑P P 11 12 22.8 +0.5
baz=40
M21A **Separation Pea** 39.64 331 ⇑P P 11 12 23.5 0.0
baz=40
W12A **Cal Nev Ari** 39.78 317 ⇓P P 11 12 25.2 +0.4
baz=40
LDFC **Landfair** 39.82 317 *e*P P 11 12 27.4 +2.4
BELC **Belle Mtn. Jos** 39.85 315 ⇑P P 11 12 25.9 +0.6
baz=40,SNR=6.1
L21A **Rawlins** 39.92 331 ⇓P P 11 12 26.2 +0.4
baz=40
M20A **Sweetwater, Wa** 39.96 330 ⇓P P 11 12 26.2 +0.1
baz=40
PFO **Pinyon Flat Ob** 39.96 314 ⇑P P 11 12 27.4 +1.1
baz=40
PFO **Pinyon Flat Ob** 39.96 314 *e*P P 11 12 28.1 +1.8
comp=Z,16nm,0.9s,mb4.8
PFO **Pinyon Flat Ob** 39.96 314 *e*P P 11 12 28.1 +1.8
PFO pmax pmax
comp=Z,16nm,0.9s,mb4.8
V12A **Nelson** 40.01 318 ⇓P P 11 12 27.8 +1.1
baz=40
N19A **John Jarvie Ra** 40.02 328 ⇓P P 11 12 26.5 -0.2
baz=40
GMRC **Granite Mounta** 40.03 316 ⇑P P 11 12 27.8 +0.9
baz=40
K22A **Casper** 40.05 332 ⇑P P 11 12 26.9 0.0
baz=40
MVU **Marysvale** 40.06 323 *e*P P 11 12 33.0 +6.0
109C **Camp Elliot, M** 40.07 312 ⇑P P 11 12 27.8 +0.7
baz=40
RSSD **Black Hills** 40.17 336 *e*P P 11 12 28.2 +0.4
U12A **Valley of Fire** 40.22 319 ⇑P P 11 12 29.4 +1.0
baz=40
O17A **Robinson Place** 40.36 326 ⇓P P 11 12 29.9 +0.5
baz=40
R14A **James Farms, M** 40.41 322 ⇓P P 11 12 29.5 -0.4
baz=40
L20A **Wamsutter** 40.42 330 ⇑P P 11 12 30.5 +0.5
baz=40
V11A **Goodsprings** 40.47 317 ⇓P P 11 12 31.4 +0.9
baz=40
P16A **Fountain Green** 40.47 325 ⇓P P 11 12 30.7 +0.3
baz=40
S13A **Holt Ranch, En** 40.48 321 ⇓P P 11 12 31.3 +0.8
baz=40
MURC **Murrieta** 40.49 313 ⇑P P 11 12 31.3 +0.7
baz=40,SNR=5.3
T12A **Moapa** 40.51 319 ⇓P P 11 12 31.5 +0.8
baz=40
HEC **Hector,Ludlow** 40.52 316 ⇑P P 11 12 31.9 +1.0
baz=40,SNR=8.5
TUQ **Turquoise Moun** 40.57 317 ⇑P P 11 12 31.7 +0.4
baz=40,SNR=5.9
BBRC **Big Bear Solar** 40.63 314 ⇑P P 11 12 32.7 +0.8
baz=41,SNR=8.7
O16A **Springville** 40.79 326 ⇑P P 11 12 33.2 +0.2
baz=41
P15A **Leamington** 40.80 324 ⇑P P 11 12 33.5 +0.4
baz=41
M18A **Lyman** 40.87 328 ⇑P P 11 12 34.5 +0.8
baz=41
K20A **Yellowstone Ra** 40.91 331 ⇓P P 11 12 33.8 -0.2
baz=41
R13A **O'Grain Ranch,** 40.91 321 ⇓P P 11 12 35.9 +1.8
baz=41
L19A **Farson** 41.00 329 ⇑P P 11 12 34.7 0.0
baz=41
Q14A **Sevier Lake (B** 41.01 323 ⇓P P 11 12 35.1 +0.3
baz=41
JLU **Jordanelle** 41.03 326 *e*P P 11 12 36.0 +1.0
comp=Z,32nm,1.5s,mb4.7
JLU *e*PcP PcP 11 14 36.8 +2.3
SHOC **Shoshone** 41.07 317 ⇑P P 11 12 36.5 +1.1
baz=41
GSC **Goldstone** 41.10 316 ⇑P P 11 12 36.2 +0.5
baz=41,SNR=9.8
GSC **Goldstone** 41.10 316 *e*P P 11 12 37.4 +1.7
comp=Z,37nm,1.1s,mb4.9
GSC **Goldstone** 41.10 316 *e*P P 11 12 37.4 +1.7
GSC pmax pmax
comp=Z,37nm,1.1s,mb4.9
S12A **Delmar Landin** 41.12 320 ⇓P P 11 12 37.3 +1.5
baz=41
BFSC **Mount Baldy Ra** 41.15 314 ⇑P P 11 12 37.0 +0.9
baz=41
SCI **San Clemente I** 41.17 312 ⇓P P 11 12 36.7 +0.4
baz=41
L18A **Fontenelle, Gr** 41.21 329 ⇓P P 11 12 36.1 -0.4
baz=41,SNR=7.7
M17A **Scullys Gap (B** 41.22 328 ⇑P P 11 12 35.7 -0.8
baz=41,SNR=14
N16A **Rees Ranch, Co** 41.22 326 ⇓P P 11 12 36.7 +0.1
baz=41
CIS **Catalina Islan** 41.27 312 ⇑P P 11 12 37.8 +0.7
baz=41
P14A **Drum Mountains** 41.27 324 ⇑P P 11 12 37.8 +0.8
baz=41
K19A **Absolon Red Bu** 41.28 331 ⇑P P 11 12 36.4 -0.6
baz=41,SNR=11
AGMN **Agassiz Nation** 41.33 347 *e*P P 11 12 35.6 -1.8
comp=Z,35nm,1.2s,mb4.9
AGMN *e*pP pP 11 12 46.4 -2.0
O15A **The Old Anders** 41.38 325 ⇓P P 11 12 39.1 +1.2
baz=41
U10A **Ash Meadows, A** 41.39 318 ⇓P P 11 12 39.0 +0.9
baz=41,SNR=6.9
R12A **Pony Springs,** 41.40 321 ⇓P P 11 12 39.4 +1.3
baz=41
MWC **Mount Wilson** 41.42 314 *e*P P 11 12 40.0 +1.6
comp=Z,29nm,1.3s,mb4.8
MWC **Mount Wilson** 41.42 314 *e*P P 11 12 40.0 +1.7
MWC pmax pmax
comp=Z,29nm,1.3s,mb4.8
Q13A **Wheeler Ranch,** 41.43 322 ⇑P P 11 12 39.7 +1.4
baz=41
DUG **Dugway** 41.52 325 ⇓P P 11 12 39.5 +0.4
baz=42
PDAR **Pinedale Array** 41.59 330 P P 11 12 37.3 -2.2
comp=Z,5.9nm,0.9s,mb4.2,baz=140,slow=4.7,SNR=13
PDAR LR LR 11 33 46.9
comp=Z,125nm,19.6s,MS3.8,baz=263,slow=42
BW06 **Boulder Array** 41.59 330 ⇑P P 11 12 39.3 -0.3
baz=42
EDW2 **Edwards Air Fo** 41.71 315 ⇓P P 11 12 40.6 0.0
baz=42,SNR=7.2
K18A **Toltan Ranch,** 41.73 329 ⇓P P 11 12 41.1 +0.4
baz=42,SNR=15
P13A **Bates Ranch, G** 41.74 323 ⇑P P 11 12 41.5 +0.6
baz=42
L17A **Cokeville** 41.77 328 ⇑P P 11 12 40.2 -0.8
baz=42,SNR=8.1
FURC **Furnace Creek,** 41.78 317 ⇑P P 11 12 41.7 +0.6
baz=42,SNR=6.3
HWUT **Hardware Ranch** 41.79 327 *e*P P 11 12 41.1 -0.1
I20A **Worland** 41.80 332 ⇓P P 11 12 40.7 -0.6
baz=42,SNR=9.3
LRMC **Laurel Mountai** 41.81 315 ⇓P P 11 12 42.3 +0.8
baz=42,SNR=20
Q12A **Willow Creek R** 41.98 322 ⇓P P 11 12 43.4 +0.6
baz=42
MPMC **Manual Prospec** 41.98 316 ⇓P P 11 12 43.1 +0.3
baz=42,SNR=7.6
L16A **Fish Haven** 42.01 328 ⇑P P 11 12 42.5 -0.5
baz=42
SPUT **South Promonto** 42.07 326 *e*P P 11 12 44.5 +1.0
comp=Z,41nm,1.2s,mb4.9
CFAA **Coronel Fontan** 42.08 161 P P 11 12 42.4 -1.3
comp=Z,0.9nm,0.7s,baz=333,slow=5.8,SNR=11
BGU **Big Grassy Mou** 42.13 325 *e*P P 11 12 44.1 +0.1
comp=Z,19nm,1.1s,mb4.6
J18A **Kendall Valley** 42.15 330 ⇓P P 11 12 43.5 -0.6
baz=42,SNR=13
H20A **Greybull** 42.16 333 ⇑P P 11 12 43.9 -0.3
baz=42,SNR=5.2
DAC **Darwin (Calif)** 42.17 317 *e*P P 11 12 41.6 -2.8
comp=Z,15nm,1.0s,mb4.6
DAC **Darwin (Calif)** 42.17 317 *e*P P 11 12 41.6 -2.8
DAC pmax pmax
comp=Z,15nm,1.0s,mb4.6
M15A **Larsen Ranch,** 42.17 326 ⇑P P 11 12 43.9 -0.4
baz=42,SNR=6.6
K17A **Gardner Place,** 42.26 329 ⇑P P 11 12 44.6 -0.4
baz=42,SNR=6.0
Q11A **Duckwater** 42.37 321 ⇓P P 11 12 46.4 +0.4
baz=42
G21A **Lodge Grass** 42.39 334 ⇑P P 11 12 46.2 +0.1
baz=42
CPUP **Villa Florida** 42.40 145 P P 11 12 43.9 -2.4
CPUP LR LR 11 33 08.9
CPUP **Villa Florida** 42.40 145 P P 11 12 43.9 -2.4
comp=Z,0.7nm,0.4s,baz=334,slow=7.0,SNR=4.4
CPUP LR LR 11 33 08.9
comp=Z,232nm,19.5s,MS4.1,baz=297,slow=40
I18A **Diamond G Ranc** 42.41 331 ⇓P P 11 12 46.0 -0.2
baz=42
GRAC **Grapevine Rang** 42.41 318 ⇑P P 11 12 47.0 +0.6
baz=42
S10A **Tonopah Range,** 42.42 319 ⇓P P 11 12 47.5 +1.1
baz=42
ARVC **Arvin** 42.43 314 ⇑P P 11 12 47.2 +0.7
baz=42,SNR=8.0
R10A **Warm Springs** 42.45 320 ⇓P P 11 12 47.4 +0.8
baz=42
ISA **Isabella** 42.45 315 ⇑P P 11 12 47.3 +0.6
baz=42,SNR=8.9
ISA **Isabella** 42.45 315 *e*P P 11 12 48.4 +1.7
comp=Z,31nm,1.1s,mb4.8
ISA **Isabella** 42.45 315 *e*P P 11 12 48.4 +1.7
ISA pmax pmax
comp=Z,31nm,1.1s,mb4.8
L15A **Malad City** 42.51 327 ⇓P P 11 12 46.8 -0.2
baz=42,SNR=8.5
CWC **Cottonwood Cre** 42.59 316 ⇑P P 11 12 48.4 +0.6
baz=43,SNR=8.0
J17A **Brown Place, J** 42.60 330 ⇑P P 11 12 47.4 -0.4
baz=43,SNR=14
SNOW **Snow King Moun** 42.69 330 *e*P P 11 12 48.6 0.0
comp=Z,55nm,1.4s,mb5.1
F21A **Absaloka Mine,** 42.83 335 ⇑P P 11 12 49.1 -0.5
baz=43
RRI2 **Red Ridge** 42.90 329 *e*P P 11 12 50.2 0.0
comp=Z,20nm,0.8s,mb4.9
MOOW **Moose Ponds** 42.90 330 *e*P P 11 12 49.9 -0.3
comp=Z,15nm,1.1s,mb4.6
I17A **Pilgrim Ck.** 42.94 330 ⇑P P 11 12 51.2 +0.6
baz=43
VES **Vestal, Richgr** 42.97 315 ⇓P P 11 12 51.5 +0.6
baz=43,SNR=13
J16A **Bone** 42.99 329 ⇓P P 11 12 50.5 -0.4
baz=43,SNR=7.0
L14A **Malta** 42.99 326 ⇑P P 11 12 50.2 -0.8
baz=43,SNR=7.0
TIN **Tinemaha** 43.02 317 ⇑P P 11 12 52.1 +0.8
baz=43,SNR=5.5
PKM **Peak Mountain** 43.02 313 ⇑P P 11 12 50.8 -0.5
baz=43
K15A **Arbon** 43.06 328 ⇑P P 11 12 51.1 -0.3
baz=43
FLWY **Flagg Ranch** 43.12 330 *e*P P 11 12 52.2 +0.2
comp=Z,26nm,1.0s,mb4.9
LAO **LASA Array** 43.16 336 ⇑P P 11 12 51.3 -0.9
baz=43
LAO **LASA Array** 43.16 336 *e*P P 11 12 51.5 -0.8
comp=Z,27nm,0.9s,mb5.0
ULM **Lac du Bonnet** 43.18 348 P P 11 12 50.1 -2.2
comp=Z,27nm,0.8s,mb5.0,baz=157,slow=7.6,SNR=11
RLMT **Red Lodge** 43.22 333 ⇓P P 11 12 52.1 -0.7
baz=43,SNR=7.5
RLMT **Red Lodge** 43.22 333 *e*P P 11 12 52.1 -0.7
comp=Z,33nm,1.1s,mb5.0
F20A **Billings** 43.25 334 ⇓P P 11 12 52.2 -0.8
baz=43,SNR=18
K14A **Jones Ranch, D** 43.30 327 ⇑P P 11 12 53.1 -0.4
baz=43,SNR=19
RCTC **Rector, Farmer** 43.31 316 ⇑P P 11 12 54.4 +0.7
baz=43,SNR=9.5
SMMC **Simmler** 43.35 314 ⇓P P 11 12 55.3 +1.3
baz=43,SNR=6.5
E21A **Keefer Ranch,** 43.39 336 ⇑P P 11 12 53.4 -0.7
baz=43,SNR=5.6
MTUM **Tungsten Hills** 43.40 317 *e*P P 11 12 55.9 +1.5
YFT **Old Faithful** 43.46 331 *e*P P 11 12 56.0 +1.3
comp=Z,22nm,1.0s,mb4.8
J15A **Blackfoot** 43.50 328 ⇓P P 11 12 54.6 -0.4
baz=44,SNR=11
G18A **Lazy EL Ranch,** 43.51 332 ⇓P P 11 12 54.3 -0.8
baz=44,SNR=6.0
F19A **Roth Farm, Mol** 43.64 333 ⇑P P 11 12 55.6 -0.5
baz=44,SNR=8.1
YMR **Madison River** 43.68 331 *e*P P 11 12 56.9 +0.4
comp=Z,36nm,1.3s,mb5.0
E20A **Meyer Farm, Mu** 43.80 335 ⇑P P 11 12 57.4 0.0
baz=44,SNR=13
NVAR **Mina Array Bea** 43.82 319 P P 11 12 58.7 +1.0
NVAR PcP PcP 11 14 44.0 +0.3
NVAR **Mina Array Bea** 43.82 319 P P 11 12 58.7 +1.0
comp=Z,17nm,1.1s,mb4.7,baz=136,slow=7.4,SNR=17
NVAR PcP PcP 11 14 44.0 +0.3
comp=Z,1.8nm,0.8s,baz=144,slow=5.2,SNR=5.2
H16A **Russell Place,** 43.84 331 ⇑P P 11 12 57.9 +0.1
baz=44
DGMT **Dagmar** 43.90 339 ⇑P P 11 12 57.8 -0.3
baz=44,SNR=6.4
DGMT **Dagmar** 43.90 339 *e*P P 11 12 57.6 -0.6
comp=Z,39nm,0.9s,mb5.1
I15A **Monteview** 43.95 329 ⇓P P 11 12 58.8 +0.1
baz=44
J14A **Carey** 44.02 328 ⇑P P 11 12 59.3 0.0
baz=44,SNR=6.4

F18A	Big Timber	44.02	333	⇓P		P		11 12 58.9	-0.3	
	baz=44,SNR=14									
E19A	Rath Farm, Rou	44.04	334	⇓P		P		11 12 59.1	-0.3	
	baz=44									
G17A	Pierce Place,	44.05	332	⇑P		P		11 13 00.4	+0.9	
	baz=44,SNR=5.7									
D20A	Manuel Ranch,	44.26	335	⇑P		P		11 13 01.0	-0.1	
	baz=44									
BMN	Battle Mountai	44.29	322	*e*P		P		11 13 02.3	+0.8	
	comp=Z,38nm,0.9s,mb5.1									
BMN	Battle Mountai	44.29	322	*e*P		P		11 13 02.3	+0.9	
BMN				pmax		pmax				
	comp=Z,38nm,0.9s,mb5.1									
I14A	Mackay	44.40	328	⇑P		P		11 13 02.6	+0.3	
	baz=44									
J13A	Cove Ranch, Pi	44.42	327	⇑P		P		11 13 02.5	0.0	
	baz=44,SNR=7.6									
F17A	Fitzpatrick Pl	44.45	332	⇓P		P		11 13 02.8	+0.2	
	baz=44,SNR=10									
H15A	Lima	44.47	329	⇑P		P		11 13 03.2	+0.3	
	baz=44,SNR=32									
G16A	Moss Hill, Enn	44.50	331	⇑P		P		11 13 03.1	+0.1	
	baz=44,SNR=15									
WAKR	Walker	44.60	318	*e*P		P		11 13 05.7	+1.7	
E18A	Harlowton	44.62	333	⇓P		P		11 13 03.3	-0.7	
	baz=45									
HLID	Hailey	44.66	327	⇑P		P		11 13 04.3	-0.1	
	baz=45,SNR=11									
HLID	Hailey	44.66	327	*e*P		P		11 13 04.5	+0.1	
	comp=Z,13nm,0.9s,mb4.8									
HLID				*e*PcP		PcP		11 14 47.8	+1.3	
BOZ	Bozeman (W)	44.72	331	⇑P		P		11 13 04.7	-0.1	
	baz=45,SNR=11									
I13A	Wildhorse Cree	44.74	328	⇓P		P		11 13 05.3	+0.3	
	baz=45,SNR=13									
G15A	Dillon	44.78	330	⇑P		P		11 13 05.7	+0.4	
	baz=45,SNR=6.1									
F16A	Kennard Place,	44.82	331	⇓P		P		11 13 05.3	-0.2	
	baz=45,SNR=8.1									
H14A	Leadore	44.84	329	⇑P		P		11 13 06.1	+0.3	
	baz=45,SNR=15									
E17A	Martinsdale	44.96	333	⇓P		P		11 13 06.5	-0.2	
	baz=45,SNR=6.9									
CMB	Columbia Colle	44.99	317	*e*P		P		11 13 07.7	+0.7	
	comp=Z,28nm,1.4s,mb4.9									
CMB	Columbia Colle	44.99	317	*e*P		P		11 13 07.7	+0.6	
CMB				pmax		pmax				
	comp=Z,28nm,1.4s,mb4.9									
D18A	Linhart Farms,	45.05	334	⇓P		P		11 13 07.2	-0.3	
	baz=45,SNR=12									
I12A	Atlanta	45.20	327	⇑P		P		11 13 08.6	-0.1	
	baz=45,SNR=8.1									
PAHR	Pah Rah Range	45.23	320	*e*P		P		11 13 09.8	+0.9	
	comp=Z,34nm,1.3s,mb5.0									
WCN	Washoe City	45.24	319	⇑P		P		11 13 09.5	+0.5	
	baz=45,SNR=6.1									
H13A	Challis	45.26	328	⇑P		P		11 13 08.8	-0.3	
	baz=45,SNR=6.6									
F15A	Butte	45.27	331	⇓P		P		11 13 08.9	-0.3	
	baz=45,SNR=6.3									
G14A	Jackson	45.32	330	⇑P		P		11 13 09.3	-0.3	
	baz=45									
MFID	Camas Ranch	45.34	326	⇓P		P		11 13 09.4	-0.3	
	baz=45,SNR=8.0									
E16A	East Helena	45.39	332	⇑P		P		11 13 09.8	-0.3	
	baz=45,SNR=7.0									
D17A	Six Diamond Ra	45.41	333	⇑P		P		11 13 10.1	-0.2	
	baz=45,SNR=15									
H12A	Diamond D Ranc	45.56	328	⇑P		P		11 13 11.2	-0.4	
	baz=46,SNR=10									
HRY	Holter Researc	45.60	332	*e*P		P		11 13 11.5	-0.3	
G13A	Cobalt	45.61	329	⇓P		P		11 13 11.1	-0.8	
	baz=46,SNR=6.4									
F14A	Wisdom	45.68	330	⇑P		P		11 13 12.4	0.0	
	baz=46									
D16A	Dana Ranch, Ca	45.70	333	⇑P		P		11 13 12.1	-0.4	
	baz=46,SNR=14									
E15A	Deer Lodge	45.77	331	⇑P		P		11 13 13.0	-0.1	
	baz=46,SNR=15									
C17A	Wharram Farm,	45.81	334	⇓P		P		11 13 12.9	-0.5	
	baz=46,SNR=15									
B18A	Beardsley Farm	45.97	335	⇓P		P		11 13 14.6	-0.1	
	baz=46									
F13A	Darby	46.14	329	⇑P		P		11 13 15.4	-0.7	
	baz=46,SNR=14									
D15A	Lincoln	46.16	332	⇓P		P		11 13 15.6	-0.6	
	baz=46,SNR=9.1									
E14A	Clinton	46.17	331	⇑P		P		11 13 15.6	-0.6	
	baz=46,SNR=11									
B17A	L&G Farms, Che	46.33	334	⇑P		P		11 13 16.9	-0.5	
	baz=46									
WVOR	Wild Horse Val	46.34	323	*e*P		P		11 13 17.5	-0.2	
C16A	Fuhringer Ranc	46.37	333	⇑P		P		11 13 17.3	-0.6	
	baz=46									
OHCM	Honcut	46.40	318	*e*P		P		11 13 18.9	+0.8	
CHMT	Chamberlain Mo	46.41	331	*e*P		P		11 13 17.5	-0.7	
	comp=Z,2.4nm,0.8s,mb4.2									
E13A	Victor	46.53	330	⇑P		P		11 13 18.4	-0.7	
	baz=46,SNR=19									
F12A	Elk City	46.59	329	⇓P		P		11 13 18.8	-0.8	
	baz=47,SNR=15									
D14A	Greenough	46.65	331	⇑P		P		11 13 19.1	-1.0	
	baz=47,SNR=5.7									
MSO	Missoula	46.68	331	⇑P		P		11 13 19.4	-0.9	
	baz=47,SNR=6.3									
MSO	Missoula	46.68	331	*e*P		P		11 13 19.4	-0.8	
	comp=Z,15nm,1.1s,mb4.8									
C15A	Salmond Ranch,	46.74	333	⇓P		P		11 13 20.5	-0.2	
	baz=47,SNR=9.9									
A17A	Triple J Farms	46.79	335	⇑P		P		11 13 20.4	-0.6	
	baz=47									
J08A	Circle Bar Ran	46.80	324	⇑P		P		11 13 20.5	-0.7	
	baz=47									
B16A	M & M Farms, S	46.81	334	⇓P		P		11 13 20.2	-1.0	
	baz=47									
MOD	Modoc	47.03	322	*e*P		P		11 13 22.6	-0.5	
B15A	Bradely Ranch,	47.12	333	⇓P		P		11 13 23.2	-0.4	
	baz=47,SNR=10									
D13A	Huson	47.12	331	⇓P		P		11 13 23.3	-0.4	
	baz=47,SNR=7.9									
A16A	West Butte Ran	47.17	334	⇑P		P		11 13 23.3	-0.8	
	baz=47									
E12A	Beaver Dam Sad	47.20	329	⇑P		P		11 13 23.4	-0.9	
	baz=47									
C14A	Swan Lake	47.26	332	⇑P		P		11 13 24.3	-0.5	
	baz=47									
B14A	Marquette Ranc	47.47	333	⇑P		P		11 13 25.8	-0.6	
	baz=48,SNR=32									
JTMT	Jette	47.50	331	*e*P		P		11 13 26.3	-0.4	
D12A	Red Ives Fores	47.53	330	⇓P		P		11 13 26.2	-0.7	
	baz=48									
C13A	Hot Springs	47.59	331	⇓P		P		11 13 26.8	-0.5	
	baz=48,SNR=6.3									
A15A	Johnson Ranch,	47.69	334	⇑P		P		11 13 27.4	-0.7	
	baz=48,SNR=19									
BLMT	Blacktail Moun	47.72	332	*e*P		P		11 13 28.3	-0.1	
F10A	Beach Ranch, E	47.76	328	⇓P		P		11 13 27.8	-0.9	
	baz=48,SNR=7.1									
BSMT	Bassoo Peak	47.81	331	*e*P		P		11 13 28.8	-0.2	
I07A	Izee	47.83	324	⇑P		P		11 13 28.3	-1.0	
	baz=48,SNR=7.5									
A14A	Double T Ranch	47.99	333	⇓P		P		11 13 29.8	-0.6	
	baz=48,SNR=7.4									
B13A	Whitefish	48.03	332	⇓P		P		11 13 30.4	-0.4	
	baz=48,SNR=12									
C12B	Naegeli Ranch,	48.04	331	⇑P		P		11 13 30.5	-0.4	
	baz=48,SNR=18									
SCHQ	Schefferville	48.07	12	P		P		11 13 29.0	-2.0	
	comp=Z,9.2nm,0.9s,mb4.8,baz=212,slow=9.5,SNR=3.9									
G08A	Pilot Rock	48.26	326	⇑P		P		11 13 31.8	-0.8	
	baz=48,SNR=5.9									
WALA	Waterton Lakes	48.27	333	*e*P		P		11 13 32.2	-0.4	
	comp=Z,0.5nm,1.0s									
A13A	Flathead Natio	48.41	332	⇑P		P		11 13 33.4	-0.2	
	baz=48									
YBH	Yreka Blue Hor	48.45	320	*e*P		P		11 13 33.3	-0.8	
	comp=Z,12nm,1.1s,mb4.8									
YBH	Yreka Blue Hor	48.45	320	*e*P		P		11 13 33.3	-0.8	
YBH				pmax		pmax				
	comp=Z,12nm,1.1s									
C11A	Tepee Creek (N	48.52	330	⇓P		P		11 13 34.2	-0.3	
	baz=48									
E09A	Wood Farm, Sta	48.60	328	⇓P		P		11 13 34.4	-0.7	
	baz=49									
B12A	Libby	48.63	331	⇓P		P		11 13 35.3	0.0	
	baz=49									
KHMM	Horse Mountain	48.66	319	*e*P		P		11 13 36.5	+0.7	
	comp=Z,43nm,0.9s,mb5.5									
A12A	Yaak River Ran	48.98	332	⇓P		P		11 13 38.1	0.0	
	baz=49									
E08A	Dider Farm, El	49.07	327	⇓P		P		11 13 38.1	-0.6	
	baz=49									
G06A	Carlson Farm,	49.17	325	⇑P		P		11 13 39.8	+0.3	
	baz=49									
NEW	Newport	49.23	330	⇓P		P		11 13 39.7	-0.3	
	baz=49,SNR=11									
NEW	Newport	49.23	330	*e*P		P		11 13 38.9	-1.1	
	comp=Z,13nm,1.0s,mb4.9									
NEW	Newport	49.23	330	*e*P		P		11 13 38.9	-1.1	
NEW				pmax		pmax				
	comp=Z,13nm,1.0s									
HAWA	Hanford	49.26	327	*e*P		P		11 13 39.3	-0.9	
	comp=Z,19nm,1.2s,mb5.0									
RSW	Rattlesnake Hi	49.29	327	*e*P		P		11 13 40.5	0.0	
D08A	Wollman Farm,	49.35	328	⇓P		P		11 13 40.8	-0.1	
	baz=49									
OD2	Odessa Site #2	49.46	328	P		P		11 13 40.8	-0.9	
C09A	Chrisman Ranch	49.50	329	⇓P		P		11 13 41.9	-0.1	
	baz=50									
E07A	Sunnyside	49.54	327	⇓P		P		11 13 42.1	-0.3	
	baz=50									
H04A	Detroit Lake	49.74	324	⇑P		P		11 13 43.4	-0.5	
	baz=50									
HOOD	Mount Hood Mea	49.80	325	*e*P		P		11 13 44.7	+0.4	
	comp=Z,38nm,1.0s,mb5.4									
TRQA	Tornquist	50.07	159	*e*P		P		11 13 44.9	-1.6	
	comp=Z,14nm,1.2s,mb4.9									
G04A	Mulino	50.21	324	⇑P		P		11 13 47.2	-0.3	
	baz=50									
TBM	Table Mountain	50.32	327	P		P		11 13 48.1	-0.1	
B08A	Colville Reser	50.40	329	⇑P		P		11 13 48.2	-0.7	
	baz=50,SNR=6.1									
ETW	Entiat	50.44	328	P		P		11 13 49.0	-0.2	
WPW	White Pass	50.55	326	P		P		11 13 50.2	+0.2	
LON	Longmire	50.73	326	*e*P		P		11 13 50.9	-0.4	
	comp=Z,6.3nm,0.8s,mb4.6									
LON	Longmire	50.73	326	*e*P		P		11 13 50.9	-0.5	
LON				pmax		pmax				
	comp=Z,6.0nm,0.8s,mb4.6									
FCC	Fort Churchill	51.05	352	*e*P		P		11 13 52.2	-1.3	
D05A	Enumclaw	51.08	326	⇓P		P		11 13 53.4	-0.7	
	baz=51									
EDM	Edmonton	51.14	337	*e*P		P		11 13 53.1	-1.2	
B06A	Marblemount	51.62	328	⇑P		P		11 13 57.4	-0.6	
	baz=52									
JCW	Jim Creek	51.66	327	*e*P		P		11 13 57.2	-1.1	
NLWA	Neilton Lookou	52.24	326	*e*P		P		11 14 03.0	+0.3	
	comp=Z,21nm,0.9s,mb5.1									
OSD	Olympics--Snow	52.40	326	P		P		11 14 04.3	+0.5	
YKA	Yellowknife Ar	58.80	343	P		P		11 14 47.7	-1.9	
	comp=Z,4.6nm,0.8s,mb4.6,baz=133,slow=7.5,SNR=16									
YKA				PcP		PcP		11 15 37.7	-1.1	
	comp=Z,2.2nm,0.8s,baz=149,slow=3.7,SNR=3.8									
YKA	Yellowknife Ar	58.80	343	P		P		11 14 47.7	-1.9	
YKA								11 15 37.7		
DLBC	Dease Lake	61.59	334	*e*P		P		11 15 08.8	0.0	
INK	Inuvik	68.50	342	*e*P		P		11 15 53.0	-0.4	
	comp=Z,31nm,1.1s,mb5.2									
INK	Inuvik	68.50	342	*e*P		P		11 15 53.0	-0.4	
INK				pmax		pmax				
	comp=Z,31nm,1.1s									
EGAK	Eagle	69.37	337	*e*P		P		11 15 58.6	-0.3	
SUMG	Summit	69.46	13	*e*P		P		11 15 58.6	-0.8	
MENT	Mentasta	69.64	335	*e*P		P		11 16 01.0	+0.4	
PAX	Paxson	70.40	334	*e*P		P		11 16 05.1	-0.1	
	comp=Z,34nm,1.7s,mb5.0									
PAX	Paxson	70.40	334	*e*P		P		11 16 05.1	-0.1	
PAX				pmax		pmax				
	comp=Z,34nm,1.7s,mb5.0									
PMR	Palmer	71.56	332	*e*P		P		11 16 11.3	-1.1	
ILAR	Nelson Array	71.62	336	P		P		11 16 11.8	-0.8	
	comp=Z,8.3nm,0.9s,mb4.7,baz=111,slow=4.3,SNR=65									
ILAR				PP		PP		11 18 48.0	-3.7	
	comp=Z,2.5nm,1.1s,baz=114,slow=5.6,SNR=7.0									
ILAR				LR		LR		11 51 15.5		
	comp=Z,111nm,18.7s,MS4.2,baz=102,slow=39									
ILAR	Eielson Array	71.62	336	P		P		11 16 11.9	-0.7	
ILAR								11 18 48.1		
RC01	Rabbit Creek A	71.70	332	*e*P		P		11 16 12.9	-0.2	
	comp=Z,14nm,1.0s,mb4.8									
COLA	College	72.05	336	*e*P		P		11 16 14.1	-1.1	
	comp=Z,13nm,1.1s,mb4.8									
COLA	College	72.05	336	*e*P		P		11 16 14.1	-1.1	
COLA				pmax		pmax				
	comp=Z,13nm,1.1s,mb4.8									
MCK	McKinley	72.13	335	*e*P		P		11 16 15.1	-0.6	
	comp=Z,28nm,1.2s,mb5.1									
MCK	McKinley	72.13	335	*e*P		P		11 16 15.1	-0.6	
MCK				pmax		pmax				
	comp=Z,28nm,1.2s,mb5.1									
KDAK	Kodiak Island	72.27	328	*i* P		P		11 16 17.5	+0.8	
OHAK	Old Harbor	72.52	327	*e*P		P		11 16 17.8	-0.4	
TRF	Thorofare Moun	72.62	334	*e*P		P		11 16 18.3	-0.4	
	comp=Z,14nm,1.0s,mb4.8									
RSO	Redoubt South	72.97	331	*e*P		P		11 16 19.9	-0.9	
BPAW	Bear Paw Mtn.	73.10	335	*e*P		P		11 16 20.6	-0.9	
	comp=Z,24nm,1.1s,mb5.0									
COLD	Coldfoot	73.71	338	*e*P		P		11 16 25.4	+0.4	
	comp=Z,17nm,0.9s,mb5.0									
SVW2	Sparrevohn	74.46	331	*e*P		P		11 16 27.8	-1.7	
	comp=Z,24nm,1.2s,mb5.0									
TTA	Tatalina	75.01	333	*e*P		P		11 16 32.1	-0.6	
CHGN	Chignik	75.15	326	*e*P		P		11 16 33.1	-0.5	
ESDC	Sonseca Array	76.10	51	P		P		11 16 39.1	-0.2	
	comp=Z,1.0nm,0.6s,mb4.0,baz=276,slow=5.5,SNR=7.5									
SDPT	Sand Point	76.20	325	*e*P		P		11 16 40.0	+0.3	
TIC	Toumodi	76.97	85	*e*P		P		11 16 44.3	-0.5	
	comp=Z,8.1nm,0.2s,mb5.3									
TIC	Toumodi	76.97	85	*e*P		P		11 16 44.3	-0.5	
TIC				pmax		pmax				
	comp=Z,8.0nm,0.2s,mb5.3									
LIC	Lamto	77.01	86	*e*P		P		11 16 44.7	-0.3	
	comp=Z,123nm,1.2s,mb5.7									
DBIC	Dimbokro	77.13	85	*e*P		P		11 16 45.6	-0.1	
	comp=Z,52nm,1.3s,mb5.3									
DBIC	Dimbokro	77.13	85	P		P		11 16 45.0	-0.6	
	comp=Z,25nm,1.1s,mb5.0,baz=268,slow=6.3,SNR=9.1									
DBIC	Dimbokro	77.13	85	*e*P		P		11 16 45.6	-0.1	
DBIC				pmax		pmax				
	comp=Z,52nm,1.3s									
KIC	Kosan Boka	77.28	85	*e*P		P		11 16 46.2	-0.3	
	comp=Z,92nm,1.3s,mb5.6									
FALS	False Pass	77.85	324	*e*P		P		11 16 48.6	-0.3	
UNV	Unalaska Valle	79.63	323	*e*P		P		11 16 59.0	+0.3	
TOA0	Torodi Ar. Sit	82.77	78	*e*P		P		11 17 16.0	-0.2	
TORD	Torodi Ar. Bea	82.77	78	P		P		11 17 14.4	-1.7	
	comp=Z,8.2nm,0.9s,mb4.7,baz=248,slow=3.4,SNR=27									
KBS	Kingsbay	82.77	11	*ce*P		P		11 17 14.9	-0.1	
KBS				pmax		pmax				
	comp=Z,12nm,1.2s,mb4.8									
KONO	Kongsberg	84.05	31	*i* P		P		11 17 24.4	+2.5	
NOA	NORSAR Array B	84.68	29	P		P		11 17 23.1	-1.9	
	comp=Z,1.7nm,0.9s,mb4.2,baz=276,slow=5.0,SNR=4.1									
TAM	Tamanrasset	85.24	68	*e*P		P		11 17 29.2	+0.6	
	comp=Z,14nm,1.2s,mb5.0									
TAM	Tamanrasset	85.24	68	*e*P		P		11 17 29.2	+0.6	
TAM				pmax		pmax				
	comp=Z,14nm,1.2s,mb5.0									
CLL	Collm	87.14	39	*e*P		P		11 17 37.0	-0.4	
	comp=Z,4.0nm,0.8s,mb4.7									
CLL				*e*S		S		11 28 14.0	0.0	
CLL	Collm	87.14	39	*e*P		P		11 17 37.0	-0.4	
CLL				*e*S		S		11 28 14.0	0.0	
CLL				pmax		pmax				
	comp=Z,4.0nm,0.8s,mb4.7									
CLL	Collm	87.14	39	*e*P		P		11 17 37.0	-0.4	
	comp=Z,4.0nm,0.8s,mb4.7									
CLL				*e*S		S		11 28 14.0	0.0	
CLL				*e*SS		SS		11 33 54.0	-3.6	
BILL	Bilibino	89.98	339	*i* P		P		11 17 50.5	0.0	
BILL	Bilibino	89.98	339	*e*P		P		11 17 50.4	-0.1	
BILL				*e*				11 17 58.4		
BILL				pmax		pmax				
	comp=Z,36nm,1.6s,mb5.5									
TIXI	Tiksi	97.48	350	⇓*e*P		P		11 18 23.3	-1.6	
KIV	Kislovodsk	108.34	38	P		Pdif		11 19 13.0	-0.5	
KIV				pmax		pmax				
	comp=Z,7.0nm,0.6s									
ABKAR	Akbulak array	114.00	26	*e*PKPdf		PKiKP		11 23 29.9	-0.6	
ZALV	Zalesovo Beam	117.06	8	PKP		PKPdf		11 23 34.0	-2.2	
	comp=Z,0.9nm,0.7s,baz=315,slow=0.8,SNR=5.0									
KURK	Kurchatov	119.00	13	⇑*e*PKP		PKPdf		11 23 38.7	-1.3	
CN2	Changchun	122.14	336	*e*PKP		PKPdf		11 23 38.8	-7.5	
CN2				PP		PP		11 25 17.6	-2.8	
CN2				AMB		AMB				
	comp=Z,200nm,3.0s									
CN2				LR		LR				
	comp=N,500nm,17.0s,MS5.4									
CN2				LR		LR				
	comp=E,500nm,17.0s,MS5.4									
CN2				LR		LR				
	comp=Z,500nm,21.0s,MS5.1									
SONM	Songino Array	123.48	353	PKP		PKPdf		11 23 46.4	-2.4	
	comp=Z,2.5nm,0.6s,baz=329,slow=1.7,SNR=5.6									
MKAR	Makanchi Array	123.51	12	PKP		PKPdf		11 23 46.6	-2.2	
	comp=Z,0.7nm,0.5s,baz=335,slow=1.7,SNR=12									
AAK	Ala-Archa	125.18	20	⇑*e*PKP		PKPdf		11 23 51.8	-0.3	
AAK	Ala-Archa	125.18	20	⇑*i* PKiKP		PKPdf		11 23 51.8	-0.3	
AAK				pmax		pmax				
	comp=Z,2.0nm,1.2s									
KSRS	Korea Array	126.16	330	PKP		PKPdf		11 23 53.3	-0.9	
	comp=Z,7.9nm,0.9s,baz=76,slow=0.6,SNR=13									
WMQ	Urumqi	127.36	9	*e*PKP		PKPdf		11 23 56.1	-0.2	
WMQ				LR		LR				
	comp=N,290nm,20.6s,MS5.0									
WMQ				LR		LR				
	comp=E,120nm,18.6s,MS5.0									
WMQ				LR		LR				
	comp=Z,200nm,20.9s,MS4.8									
KSH	Kashi	128.46	21	*e*PKP		PKPdf		11 23 59.0	+0.5	
KSH				*es*PKP				11 24 13.3		
KSH				*e*PKS				11 27 34.3		
KSH				*e*SKS		SKSdf		11 31 06.1	-1.3	
KSH				AMB		AMB				
	comp=Z,200nm,6.9s									
KSH				LR		LR				
	comp=N,120nm,9.4s									
KSH				LR		LR				
	comp=E,150nm,11.5s									
KSH				LR		LR				
	comp=Z,93nm,6.8s									
BJI	Beijing	128.77	341	PKP		PKPdf		11 23 57.9	-1.2	
BJI				AMB		AMB				
	comp=Z,210nm,5.2s									
BJI				LR		LR				
	comp=N,500nm,10.8s,MS5.5									
BJI				LR		LR				
	comp=E,430nm,13.4s,MS5.5									
BJI				LR		LR				
	comp=Z,220nm,23.0s									
HHC	Hu-ho-hao-te	129.31	346	*e*PKP		PKPdf		11 23 59.8	-0.3	
HHC				sPKP				11 24 14.0		
HHC				PP		PP		11 26 11.4	+3.6	
HHC				PKS				11 27 34.9		
HHC				SKS		SKSdf		11 31 06.0	-2.9	
HHC				SKKS		SKKSac		11 33 00.3	-2.9	
HHC				SS		SS		11 43 26.3	+1.0	
HHC				AMB		AMB				
	comp=Z,91nm,4.0s									
HHC				LR		LR				
	comp=N,160nm,14.5s,MS5.1									
HHC				LR		LR				
	comp=E,250nm,14.3s,MS5.1									
HHC				LR		LR				
	comp=Z,160nm,14.4s,MS4.8									
STKA	Stephens Creek	132.68	234	PKP		PKPdf		11 24 05.2	-1.4	
	comp=Z,3.2nm,0.9s,baz=83,slow=8.1,SNR=3.7									
NJ2	Nanjing	134.84	334	*e*PKP		PKPdf		11 24 11.5	+0.7	
LZH	Lanzhou	135.37	352	*e*PKP		PKPdf		11 24 12.0	+0.3	
LZH				sPKP				11 24 29.0		
WHN	Wuhan	137.99	338	PKPbc		PKPdf		11 24 24.9	+8.2	
CD2	Chengdu	140.47	351	PKP		PKPdf		11 24 21.3	+0.1	
ASAR	Alice Springs	141.76	242	PKhKP		PKPpre		11 24 16.4		
	comp=Z,1.6nm,0.5s,baz=116,slow=3.8,SNR=32									
WRA	Warramunga Arr	142.32	248	PKhKP		PKPpre		11 24 19.0		
	comp=Z,6.4nm,0.8s,baz=98,slow=2.6,SNR=32									
GYA	Guiyang	144.22	345	*e*PKP		PKPdf		11 24 25.1	-2.9	
GYA				sPKP				11 24 44.3		
GYA				PP		PP		11 27 43.0	+1.8	
GYA				PKS				11 28 01.3		
GYA				SKKS		SKKSac		11 34 27.9	-4.6	
GYA				SS		SS		11 46 21.3	-1.7	
GYA				AMB		AMB				
	comp=Z,120nm

comp=E,0.7nm,0.6s,mb3.4,baz=124,slow=9.5,SNR=3.9

WRA	**Warramunga Arr**	**58.67**	**146**	P		**P**		**11 34 54.0**	**+5.4**
	comp=E,0.5nm,0.6s,mb3.8,baz=338,slow=7.6,SNR=3.5								

DDA ***22*** *11:53:18.8, 36.°90N×26.°38E, h7km±7km, Md3.0*
ISK ***22*** *11:53:20.9, 37.°02N×26.°54E, h5km, MD3.2*
ISCJB ***22*** *11:53:21.2±0.7, 36.°94N±0.°04×26.°54E±0.°04, h2km±7km, Error ellipse: s-maj=6.6km s-min=4.3km az=153.9*
CSEM ***22*** *11:53:21.1±0.5, 36.°91N×26.°52E, h12km, MD3.2, Error ellipse: s-maj=12.7km s-min=6.2km az=7.0*

ISC 22 11:53:22.1±0.6**, 36.°95N**±0.°04×**26.°55E**±0.°04, **h7**km±6km, **n33**, σ1**s19**/45**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.62**	**79**	*e*PG		**Pg**	**11 53 33.0**	**-1.1**
BODT				*e*SG		**Sg**	**11 53 42.1**	**-0.1**
BODT	**Bodrum**	**0.62**	**79**	*e*Pg		**Pg**	**11 53 33.0**	**-1.1**
BODT				*e*Sg		**Sg**	**11 53 42.1**	**-0.1**
BDRM	**Kayabasi**	**0.73**	**80**	*i* P		**Pg**	**11 53 35.4**	**-0.7**
BDRM				*i* S		**Sg**	**11 53 47.1**	**+1.5**
BDRM	**Kayabasi**	**0.73**	**80**	*i* P		**Pg**	**11 53 35.4**	**-0.7**
BDRM				*i* S		**Sg**	**11 53 47.1**	**+1.5**
APE	**Apeiranthos**	**0.82**	**279**	*e*PG		**Pg**	**11 53 37.0**	**-0.9**
APE				*e*SG		**Sg**	**11 53 48.3**	**-0.3**
APE	**Apeiranthos**	**0.82**	**279**	*e*P		**Pg**	**11 53 39.5**	**+1.6**
APE	**Apeiranthos**	**0.82**	**279**	*e*Pg		**Pg**	**11 53 37.0**	**-0.9**
APE				*e*Sg		**Sg**	**11 53 48.3**	**-0.3**
DAT	**Datca**	**0.85**	**104**	*e*PG		**Pg**	**11 53 38.8**	**+0.2**
DAT	**Datca**	**0.85**	**104**	*e*Pg		**Pg**	**11 53 38.8**	**+0.3**
GCAM	**G?zelcaml?**	**0.93**	**36**	*i* P		**Pg**	**11 53 40.5**	**+0.5**
GCAM				*i* S		**Sg**	**11 53 53.8**	**+1.7**
GCAM	**G?zelcaml?**	**0.93**	**36**	*i* P		**Pg**	**11 53 40.5**	**+0.5**
GCAM				*i* S		**Sg**	**11 53 53.8**	**+1.7**
MLSB	**Milas**	**1.04**	**70**	*e*PG		**Pg**	**11 53 40.5**	**-1.6**
MLSB	**Milas**	**1.04**	**70**	*e*Pg		**Pg**	**11 53 40.5**	**-1.6**
AYDN	**Tasoluk**	**1.28**	**56**	*i* P		**Pn**	**11 53 45.0**	**-1.4**
AYDN				*i* S		**Sb**	**11 54 05.6**	**+2.4**
AYDN	**Tasoluk**	**1.28**	**56**	*i* P		**Pn**	**11 53 45.0**	**-1.4**
AYDN				*i* S		**Sb**	**11 54 05.6**	**+2.5**
YER	**Yerkesik**	**1.40**	**82**	*e*PN		**Pn**	**11 53 47.4**	**-0.6**
YER	**Yerkesik**	**1.40**	**82**	*e*Pn		**Pn**	**11 53 47.4**	**-0.6**
URLA	**Izmir**	**1.41**	**2**	*i* P		**Pn**	**11 53 45.1**	**-3.1**
URLA				*i* S		**Sb**	**11 54 07.3**	**+0.4**
URLA	**Izmir**	**1.41**	**2**	*i* P		**Pn**	**11 53 45.1**	**-3.1**
URLA				*i* S		**Sb**	**11 54 07.3**	**+0.3**
KARP	**Karpathos**	**1.48**	**160**	*e*P		**Pn**	**11 53 41.5**	**-7.6**
BLCB	**Balcova**	**1.49**	**15**	*e*PN		**Pn**	**11 53 47.9**	**-1.4**
BLCB	**Balcova**	**1.49**	**15**	*e*Pn		**Pn**	**11 53 47.9**	**-1.3**
IZM	**Izmir**	**1.56**	**21**	*e*PN		**Pn**	**11 53 49.2**	**-0.9**
IZM	**Izmir**	**1.56**	**21**	*e*Pn		**Pn**	**11 53 49.2**	**-1.0**
NPS	**Neapolis**	**1.84**	**205**	*e*P		**Pn**	**11 53 53.5**	**-0.6**
ZKR	**Zakros**	**1.85**	**188**	*e*P		**Pn**	**11 53 52.5**	**-1.6**
LAST	**Lasithi**	**1.98**	**206**	*e*P		**Pn**	**11 53 56.5**	**+0.6**
IDI	**Anoyia**	**2.13**	**220**	*e*P		**Pn**	**11 53 59.5**	**+1.5**
KULA	**Kula-Manisa**	**2.29**	**46**	*e*PN		**Pn**	**11 54 00.6**	**+0.3**
KULA	**Kula-Manisa**	**2.29**	**46**	*e*Pn		**Pn**	**11 54 00.6**	**+0.3**
SIVA	**Sivas**	**2.38**	**217**	*e*P		**Pn**	**11 54 02.5**	**+1.0**
KARN	**Karanos**	**2.63**	**235**	*e*P		**Pn**	**11 54 07.0**	**+2.2**
KYTH	**Kithira**	**2.90**	**258**	*e*P		**Pn**	**11 54 09.0**	**+0.4**

SZGRF ***22*** *12:06:13.0, 23.°82N×99.°04E, h33km, mb4.7, Myanmar-China border region*
IDC ***22*** *12:06:14.9±0.6, 24.°95N×98.°04E, h0km, mb4.3/20, mb1 4.4/21, mb1mx4.3/30, mbtmp4.3/21, ML5.1/1, MS3.7/12, Ms1 3.7/12, ms1mx3.4/31, Error ellipse: s-maj=22.6km s-min=12.4km az=63.0*
ISCJB ***22*** *12:06:15.2±0.3, 24.°91N±0.°04×97.°83E±0.°04, h10km, mb4.4/46, MS3.7/17, Error ellipse: s-maj=5.4km s-min=4.9km az=165.4*
BJI ***22*** *12:06:15.5, 24.°85N×97.°88E, h18km, mB4.8/11, mb4.4/23, ML4.8/9, Ms4.3/9, Ms7 4.0/12*
MOS ***22*** *12:06:17.8±1.2, 24.°95N×98.°03E, h33km, mb4.6/20, Error ellipse: s-maj=19.3km s-min=7.9km az=111.5*
NEIC ***22*** *12:06:18.3±0.2, 24.°97N×98.°05E, h20km, mb4.6/16, MS3.9/1, Error ellipse: s-maj=8.5km s-min=4.9km az=66.0*

ISC 22 12:06:17.1±0.2**, 24.°95N**±0.°03×**97.°86E**±0.°03**, h10**km**, n155**, σ1**s14**/157**, mb4.4**/46**, MS3.7**/17**, 6C-5D, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**4.43**	**87**	Pg		**Pb**	**12 07 37.4**	**+2.3**
KMI				Sg		**Sg**	**12 08 33.6**	**-5.9**
KMI				smax				
	comp=N,2μm,0.8s							
KMI				smax				
	comp=E,1μm,1.0s							
KMI				LR	LR			
	comp=Z,2μm,5.4s							
CHRT	**Chiangrai**	**5.35**	**160**	⇑PN		**Pn**	**12 07 35.5**	**-1.6**
CHRT	**Chiangrai**	**5.35**	**160**	PG		**Pg**	**12 07 56.0**	**-3.7**
CHRT				SG		Sx	12 09 35.0	
SHL	**Shillong**	**5.45**	**278**	*e*PKP		**Pn**	**12 07 40.0**	**+1.6**
SHL				*ex*		x	12 08 47.0	
AGT	**Agartala**	**6.12**	**261**	*i* x		**Pg**	**12 08 15.0**	**+0.7**
CHG	**Chiang Mai**	**6.18**	**170**	PG		**Pn**	**12 07 48.5**	**0.0**
CHG				SG		**Pg**	**12 08 11.4**	**-4.2**
CHG	**Chiang Mai**	**6.18**	**170**	PN		**Pg**	**12 08 10.5**	**-5.1**
CHTO	**Chiang Mai**	**6.18**	**170**	*e*Pn		**Pn**	**12 07 48.3**	**-0.2**
	comp=Z,110nm,0.6s							
CHTO				*e*Sg		**Sg**	**12 09 34.2**	**-1.6**
CMAR	**Chiang Mai Arr**	**6.53**	**171**	Pn		**Pn**	**12 07 53.0**	**-0.3**
	comp=Z,10nm,0.3s,baz=344,slow=14,SNR=34							
CMAR				Pg		**Pg**	**12 08 16.7**	**-5.6**
	comp=Z,11nm,0.3s,baz=349,slow=18,SNR=43							
CMAR				Lg			12 09 43.3	
	comp=Z,23nm,0.3s,baz=358,slow=29,SNR=7.2							
CMAR				LR	LR		12 10 11.2	
	comp=Z,355nm,20.9s,baz=360,slow=36							
LSA	**Lhasa**	**7.62**	**310**	*e*Pn		**Pn**	**12 08 09.1**	**+0.9**
	comp=Z,30nm,0.6s							
BDT	**Bhumibol Dam**	**7.74**	**172**	PN		**Pb**	**12 08 34.0**	**+2.6**
GYA	**Guiyang**	**8.09**	**77**	P		**Pn**	**12 08 13.9**	**-0.7**
GYA				S		**Sn**	**12 09 55.3**	**+9.2**
GYA				pmax	pmax			
	comp=Z,10.0nm,1.0s							
GYA				pmax	pmax			
	comp=Z,50nm,3.6s							
GYA				LR	LR			
	comp=Z,2μm,6.6s							
TAPN	**Taplejung**	**9.43**	**287**	*e*P		**Pn**	**12 08 32.3**	**-0.7**
	comp=Z,73nm,0.6s							
NST	**Nakhon Sawan**	**9.47**	**167**	PG		**Pn**	**12 08 41.0**	**+7.4**
NST				SG		**Sn**	**12 10 22.0**	**+1.8**
ODAN	**Odare**	**9.62**	**284**	*e*P		**Pn**	**12 08 35.4**	**-0.2**
	comp=Z,41nm,0.4s							
RAMN	**Ramite**	**10.33**	**284**	*e*P		**Pn**	**12 08 44.6**	**-0.8**
	comp=Z,110nm,0.7s							
GUN	**Gumba**	**11.13**	**288**	*e*P		**Pn**	**12 08 55.2**	**-1.2**
	comp=Z,162nm,0.9s							
PKI	**Pulchoki**	**11.47**	**286**	*e*P		**Pn**	**12 08 59.2**	**-1.9**
	comp=Z,62nm,0.6s							
PKIN	**Phulchoki**	**11.49**	**286**	*e*P		**Pn**	**12 08 59.6**	**-1.7**
ENH	**Enshi**	**11.60**	**60**	*e*Pn		**Pn**	**12 09 00.6**	**-2.1**
	comp=Z,10.0nm,0.5s							
KKN	**Kakani**	**11.63**	**287**	*e*P		**Pn**	**12 09 01.3**	**-1.9**
	comp=Z,55nm,0.7s							
DMN	**Daman**	**11.75**	**286**	*e*P		**Pn**	**12 09 03.4**	**-1.4**
	comp=Z,45nm,0.9s							
GKN	**Gorkha**	**12.23**	**287**	*e*P		**Pn**	**12 09 09.4**	**-2.0**
	comp=Z,44nm,0.5s							
LZH	**Lanzhou**	**12.24**	**23**	*e*P		**Pn**	**12 09 13.3**	**+1.8**
LZH				pP			12 09 17.4	
LZH				sP			12 09 21.8	
LZH				*e*S		**Sn**	**12 11 32.8**	**+4.7**
LZH				sS			12 11 37.3	
LZH				SS			12 11 47.0	
LZH				pmax	pmax			
	comp=Z,25nm,1.1s							
LZH				pmax	pmax			
	comp=Z,180nm,4.6s							
KOLN	**Koldanda**	**13.09**	**286**	*e*P		**Pn**	**12 09 20.5**	**-2.7**
	comp=Z,33nm,0.8s							
GTA	**Gaotai**	**14.52**	**6**	*e*P		**Pn**	**12 09 44.4**	**+1.8**
GTA				pP	pP		12 09 48.5	-3.6
GTA				sP	sP		12 09 52.4	-1.0
GTA				pmax	pmax			
	comp=Z,3.0nm,1.0s							

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
VIS	**Vishakhapatnam**	**15.32**	**245**	*e*PKP		**Pn**	**12 09 55.2**	**+1.7**
PTH	**Pithoragarh**	**16.34**	**290**	*ex*		**Pn**	**12 10 05.5**	**-1.2**
NGP	**Nagpur**	**17.71**	**262**	*e*PKP		**Pn**	**12 10 25.7**	**+1.6**
NGP				AMb	AMB		12 10 29.8	
	comp=Z,50nm,1.6s							
DDI	**Dehra Dun**	**18.34**	**291**	*ex*		**Pn**	**12 10 29.5**	**-2.2**
BHPL	**Bhopal**	**18.73**	**269**	*e*PKP		**Pn**	**12 10 37.4**	**+0.8**
BHPL				AMb	AMB		12 10 42.3	
	comp=Z,42nm,0.8s							
NDI	**New Delhi**	**18.79**	**286**	*ex*		**Pn**	**12 10 34.0**	**-3.2**
AYAN	**Aya Nagar**	**18.85**	**285**	*e*PKP		**Pn**	**12 10 37.9**	**-0.1**
AYAN				AMb	AMB		12 10 42.9	
	comp=Z,28nm,0.8s							
SONA	**Sohna**	**18.87**	**285**	*e*PKP		**Pn**	**12 10 36.4**	**-1.7**
SONA				AMb	AMB		12 10 43.5	
	comp=Z,17nm,0.4s							
KKR	**Kurukshetra**	**19.32**	**290**	*e*PKP		**Pn**	**12 10 43.9**	**+0.4**
KUDL	**Kundal**	**19.38**	**284**	*ex*		**Pn**	**12 10 40.7**	**-3.6**
KUDL				AMb	AMB		12 10 42.5	
	comp=Z,13nm,0.6s							
KUDL				*ex*	x		12 14 14.1	
HYB	**Hyderabad**	**19.48**	**251**	*i* P		**Pn**	**12 10 47.5**	**+1.9**
AKL	**Akola**	**19.67**	**262**	*e*PKP		**Pn**	**12 10 47.9**	**+0.1**
AKL				AMb	AMB		12 10 52.1	
	comp=Z,38nm,0.0s							
KHET	**Khetri**	**19.98**	**284**	*e*PKP		**Pn**	**12 10 50.2**	**-1.2**
KHET				AMb	AMB		12 10 55.9	
	comp=Z,37nm,0.6s							
WMQ	**Urumqi**	**20.58**	**339**	*e*P		**P**	**12 10 54.8**	**-1.3**
WMQ				pmax	pmax			
	comp=Z,29nm,1.2s							
WMQ				pmax	pmax			
	comp=Z,250nm,4.0s							
WMQ				LR	LR			
	comp=N,290nm,21.8s,MS3.8							
WMQ				LR	LR			
	comp=E,370nm,21.8s,MS3.8							
WMQ				LR	LR			
	comp=Z,200nm,20.8s,MS3.5							
AJM	**Ajmer**	**20.97**	**279**	*e*PKP		**P**	**12 11 01.0**	**+0.5**
AJM				AMb	AMB		12 11 05.2	
	comp=Z,65nm,0.9s							
BJI	**Beijing**	**21.51**	**41**	P		**P**	**12 11 05.3**	**-0.9**
BJI				pmax	pmax			
	comp=Z,16nm,1.5s,mb4.2							
BJI				pmax	pmax			
	comp=Z,190nm,4.5s							
BJI				LR	LR			
	comp=N,530nm,8.3s							
BJI				LR	LR			
	comp=E,310nm,7.7s							
BJI				LR	LR			
	comp=Z,160nm,21.4s,MS3.4							
PSI	**Prapat**	**22.04**	**177**	P		**P**	**12 11 12.4**	**+0.4**
	comp=Z,11nm,0.7s,mb4.4,baz=0.1,slow=7.5,SNR=5.7							
PSI				LR	LR		12 21 14.0	
	comp=Z,131nm,20.0s,MS3.4,baz=335,slow=41							
PSI	**Prapat**	**22.04**	**177**	P		**P**	**12 11 12.4**	**+0.4**
PSI				pmax	pmax			
	comp=Z,11nm,0.7s,mb4.4							
PSI				MLR	MLR			
	comp=Z,131nm,20.0s,MS3.4							
KAD	**Karad**	**23.33**	**256**	*e*PKP		**P**	**12 11 25.8**	**0.0**
KAD				AMb	AMB		12 11 35.8	
	comp=Z,25nm,0.3s,mb5.1							
KSH	**Kashi**	**23.45**	**314**	*e*P		**P**	**12 11 26.8**	**0.0**
KSH				*ep*P			12 11 32.3	
KSH				*es*P		sP	12 11 34.6	+3.6
KSH				pmax	pmax			
	comp=Z,6.0nm,0.4s,mb4.4							
KSH				pmax	pmax			
	comp=Z,170nm,3.3s							
KSH				LR	LR			
	comp=N,290nm,12.7s,MS4.2							
KSH				LR	LR			
	comp=E,320nm,10.0s,MS4.2							
KSH				LR	LR			
	comp=Z,140nm,6.4s							
SONM	**Songino Array**	**23.82**	**14**	P		**P**	**12 11 28.6**	**-1.7**
	comp=Z,5.4nm,0.9s,mb4.0,baz=202,slow=7.5,SNR=7.1							
SONM	**Songino Array**	**23.82**	**14**	P		**P**	**12 11 28.6**	**-1.7**
SONM				pmax	pmax			
	comp=Z,5.0nm,0.9s							
ULN	**Ulaanbaatar**	**24.01**	**15**	*e*P		**P**	**12 11 31.4**	**-0.6**
	comp=Z,7.2nm,0.9s,mb4.1							
MK31	**Makanchi Array**	**25.10**	**334**	*e*P		**P**	**12 11 41.2**	**-0.7**
MKAR	**Makanchi Array**	**25.10**	**334**	P		**P**	**12 11 41.0**	**-0.9**
	comp=Z,15nm,0.8s,mb4.6,baz=148,slow=9.0,SNR=56							
MKAR				LR	LR		12 22 04.2	
	comp=Z,195nm,20.1s,MS3.6,baz=236,slow=38							
MKAR	**Makanchi Array**	**25.10**	**334**	P		**P**	**12 11 41.0**	**-0.9**
MKAR				pmax	pmax			
	comp=Z,15nm,0.8s							
MKAR				MLR	MLR			
	comp=Z,195nm,20.2s							
ZAK	**Zakamensk**	**25.74**	**8**	*e*P		**P**	**12 11 44.3**	**-3.4**
ZAK				*e*			12 11 49.2	
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.1s,mb3.9							
AAK	**Ala-Archa**	**26.10**	**318**	P		**P**	**12 11 51.8**	**+0.8**
	comp=Z,7.3nm,0.6s,mb4.4,baz=148,slow=3.4,SNR=18							
AAK				LR	LR		12 23 35.1	
	comp=Z,294nm,20.8s,MS3.8,baz=29,slow=40							
AAK	**Ala-Archa**	**26.10**	**318**	⇑P		**P**	**12 11 51.5**	**+0.5**
FRU	**Bishkek**	**26.14**	**319**	*e*P		**P**	**12 11 51.0**	**-0.4**
FRU				pmax	pmax			
	comp=Z,34nm,1.8s,mb4.6							
KSRS	**Korea Array**	**28.45**	**57**	LR	LR		12 22 42.6	
	comp=Z,76nm,20.8s,MS3.3,baz=99,slow=35							
KURK	**Kurchatov**	**29.70**	**335**	P		**P**	**12 12 22.3**	**-0.9**
	comp=Z,1.6nm,0.5s,mb4.0,baz=136,slow=10,SNR=7.4							
KURK				PcP		PcP	12 15 27.8	+0.6
	comp=Z,0.6nm,0.3s,baz=160,slow=2.2,SNR=3.9							
KURK	**Kurchatov**	**29.70**	**335**	⇓P		**P**	**12 12 24.0**	**+0.9**
ZALV	**Zalesovo Beam**	**30.56**	**345**	P		**P**	**12 12 29.4**	**-1.3**
ZALV	**Zalesovo Beam**	**30.56**	**345**	P		**P**	**12 12 29.4**	**-1.3**
	comp=Z,13nm,0.7s,mb4.9,baz=158,slow=10.0,SNR=49							
ZALV	**Zalesovo Beam**	**30.56**	**345**	P		**P**	**12 12 29.4**	**-1.3**
ZALV				pmax	pmax			
	comp=Z,13nm,0.7s,mb4.9							
BRVK	**Borovoye**	**34.91**	**331**	*e*P		**P**	**12 13 09.3**	**+0.6**
MJAR	**Matsushiro Arr**	**36.31**	**62**	LR	LR		12 27 51.7	
	comp=Z,133nm,18.8s,MS3.7,baz=335,slow=36							
ABKAR	**Akbulak array**	**38.18**	**319**	*e*P		**P**	**12 13 35.9**	**-0.8**
	comp=Z,4.2nm,0.6s,mb4.3							
ASAJ	**Asahikawa**	**40.94**	**51**	P		**P**	**12 13 58.2**	**-1.6**
	comp=Z,13nm,1.0s,mb4.5,baz=250,slow=13,SNR=6.2							
ASAJ	**Asahikawa**	**40.94**	**51**	P		**P**	**12 13 58.2**	**-1.6**
ASAJ				pmax	pmax			
	comp=Z,13nm,1.0s							
ARU	**Arti**	**42.35**	**329**	*e*P		**P**	**12 14 11.7**	**+0.5**
	comp=Z,3.1nm,0.6s,mb4.1							
ARU	**Arti**	**42.35**	**329**	P		**P**	**12 14 10.6**	**-0.6**
ZEI	**Tsey**	**47.38**	**306**	*e*P		**P**	**12 14 52.3**	**+0.8**
ZEI				pmax	pmax			
	comp=Z,11nm,0.5s,mb5.0							
KIV	**Kislovodsk**	**48.35**	**308**	P		**P**	**12 14 58.0**	**-1.0**
KIV				MLR	MLR			
	comp=Z,100nm,14.0s,MS4.0							
BRTR	**Keskin Array B**	**55.15**	**302**	P		**P**	**12 15 50.3**	**+0.5**
	comp=Z,1.6nm,0.7s,mb4.2,baz=110,slow=9.2,SNR=10							
BRTR				LR	LR		12 42 03.4	
	comp=Z,34nm,20.4s,MS3.4,baz=287,slow=39							
BRTR	**Keskin Array B**	**55.15**	**302**	P		**P**	**12 15 50.3**	**+0.5**
BRTR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
BRTR				MLR	MLR			
	comp=Z,34nm,20.4s							
WRA	**Warramunga Arr**	**57.01**	**138**	P		**P**	**12 16 01.3**	**-2.0**
WRA	**Warramunga Arr**	**57.01**	**138**	P		**P**	**12 16 01.3**	**-2.0**
	comp=Z,2.5nm,0.5s,mb4.5,baz=327,slow=7.6,SNR=12							
WRA	**Warramunga Arr**	**57.01**	**138**	P		**P**	**12 16 01.3**	**-2.0**
WRA				pmax	pmax			
	comp=Z,3.0nm,0.5s							
JOF	**Joensuu**	**57.43**	**330**	*e*P		**P**	**12 16 05.6**	**-0.1**
JOF				pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.7							
JOF	**Joensuu**	**57.43**	**330**	*ep*		**P**	**12 16 05.6**	**-0.1**
	comp=Z,6.0nm,0.7s,mb4.7							
AKASG	**Malin Array Be**	**57.72**	**316**	P		**P**	**12 16 06.7**	**-1.3**
	comp=Z,4.1nm,0.6s,mb4.6,baz=79,slow=6.7,SNR=12							
AKASG	**Malin Array Be**	**57.72**	**316**	P		**P**	**12 16 06.7**	**-1.3**
AKASG				pmax	pmax			
	comp=Z,4.0nm,0.6s							
ASAR	**Alice Springs**	**59.63**	**141**	P		**P**	**12 16 19.8**	**-1.8**
	comp=Z,2.0nm,0.8s,mb4.2,baz=323,slow=6.1,SNR=11							

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**59.63**	**141**	P		**P**	**12 16 19.8**	**-1.8**
ASAR				pmax	pmax			
	comp=Z,2.0nm,0.8s							
KAF	**Kangasniemi**	**59.65**	**329**	*e*P		**P**	**12 16 16.6**	**-4.6**
KAF				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.2							
KAF	**Kangasniemi**	**59.65**	**329**	*ep*		**P**	**12 16 16.6**	**-4.6**
	comp=Z,2.3nm,0.8s,mb4.3							
VRI	**Vrinioaia**	**59.66**	**310**	⇑*i*P		**P**	**12 16 22.9**	**+1.3**
PLOR	**Plostina**	**59.71**	**310**	⇓*i*P		**P**	**12 16 23.3**	**+1.4**
FINES	**FINESS Array B**	**59.72**	**328**	P		**P**	**12 16 22.5**	**+0.8**
	comp=Z,4.6nm,0.8s,mb4.6,baz=94,slow=7.6,SNR=9.7							
FINES				LR	LR		12 42 54.2	
	comp=Z,78nm,19.5s,MS3.9,baz=166,slow=37							
FINES	**FINESS Array B**	**59.72**	**328**	P		**P**	**12 16 22.5**	**+0.8**
FINES				pmax	pmax			
	comp=Z,5.0nm,0.8s							
FINES				MLR	MLR			
	comp=Z,78nm,19.5s							
KEV	**Kevo**	**60.21**	**338**	*e*P		**P**	**12 16 24.3**	**-0.6**
KEV				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.3							
KEV	**Kevo**	**60.21**	**338**	*ep*		**P**	**12 16 24.3**	**-0.6**
	comp=Z,2.3nm,0.7s,mb4.3							
MLR	**Muntele Rosu**	**60.24**	**310**	⇑*i*P		**P**	**12 16 27.0**	**+1.4**
NWAO	**Narrogin (SRO)**	**60.44**	**161**	LR	LR		12 40 52.6	
	comp=Z,121nm,20.1s,MS4.0,baz=153,slow=34							
BURAR	**Bucovina Array**	**60.52**	**312**	⇓*i*P		**P**	**12 16 28.5**	**+1.0**
ARCES	**ARCESS Array B**	**60.70**	**337**	P		**P**	**12 16 29.0**	**+0.7**
	comp=Z,1.9nm,0.7s,mb4.3,baz=90,slow=7.8,SNR=14							
ARCES	**ARCESS Array B**	**60.70**	**337**	P		**P**	**12 16 29.0**	**+0.7**
ARCES				pmax	pmax			
	comp=Z,2.0nm,0.7s							
VOIR		**60.87**	**310**	⇑*i*P		**P**	**12 16 30.2**	**+0.3**
KWP	**Kalwaria Pacla**	**61.97**	**315**	⇑*i*P		**P**	**12 16 38.3**	**+1.1**
DRGR		**62.31**	**311**	⇓*i*P		**P**	**12 16 40.7**	**+1.1**
GZR	**Gura Zlata**	**62.47**	**310**	⇓*i*P		**P**	**12 16 42.3**	**+1.7**
CRVS	**Cervenica-Dubn**	**62.87**	**314**	*e*P		**P**	**12 16 45.0**	**+1.7**
	comp=Z,3.9nm,0.9s,mb4.5							
CRVS	**Cervenica-Dubn**	**62.87**	**314**	*e*P		**P**	**12 16 45.0**	**+1.7**
CRVS				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.5							
CRVS	**Cervenica-Dubn**	**62.87**	**314**	*e*P		**P**	**12 16 45.0**	**+1.7**
VYHS	**Vyhne**	**64.65**	**314**	*e*P		**P**	**12 16 55.9**	**+0.9**
	comp=Z,2.0nm,0.8s,mb4.2							
VYHS	**Vyhne**	**64.65**	**314**	*e*P		**P**	**12 16 55.9**	**+0.9**
VYHS				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.2							
VYHS	**Vyhne**	**64.65**	**314**	*e*P		**P**	**12 16 55.9**	**+0.9**
CTA	**Charters Tower**	**64.95**	**129**	LR	LR		12 45 56.4	
	comp=Z,79nm,19.3s,MS3.9,baz=51,slow=37							
NOA	**NORSAR Array B**	**66.91**	**328**	P		**P**	**12 17 09.0**	**-0.3**
	comp=Z,2.0nm,0.7s,mb4.2,baz=79,slow=6.4,SNR=10							
NOA				LR	LR		12 47 33.4	
	comp=Z,48nm,18.5s,MS3.7,baz=80,slow=37							
NOA	**NORSAR Array B**	**66.91**	**328**	P		**P**	**12 17 09.0**	**-0.3**
NOA				pmax	pmax			
	comp=Z,2.0nm,0.7s							
NOA				MLR	MLR			
	comp=Z,48nm,18.5s							
CLL	**Collm**	**67.82**	**318**	*e*P		**P**	**12 17 15.0**	**-0.3**
GRA1	**Grafenberg Arr**	**69.30**	**316**	*e*P		**P**	**12 17 26.0**	**+1.4**
	comp=Z,6.0nm,0.9s,mb4.5							
GRF	**Grafenberg Arr**	**69.30**	**316**	*e*P		**P**	**12 17 26.0**	**+1.4**
	comp=Z,6.0nm,0.9s,mb4.5							
GRF	**Grafenberg Arr**	**69.30**	**316**	*e*P		**P**	**12 17 26.0**	**+1.4**
GRF				pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.5							
STKA	**Stephens Creek**	**70.27**	**141**	P		**P**	**12 17 29.2**	**-1.4**
	comp=Z,1.7nm,0.7s,mb4.1,baz=9.5,slow=4.9,SNR=2.9							
CDF	**Champ du Feu**	**72.14**	**316**	*e*P		**P**	**12 17 42.2**	**+0.3**
	comp=Z,4.6nm,0.6s,mb4.3							
CDF	**Champ du Feu**	**72.14**	**316**	*e*P		**P**	**12 17 42.2**	**+0.3**
	comp=Z,2.3nm,0.6s,mb4.3							
LPG	**La

0.5nm,0.5s,baz=90,slow=8.4,SNR=11
PETK Petropavlovsk- 75.44 344 P P 12 26 43.1 +0.3
0.5nm,0.5s,baz=124,slow=8.8,SNR=4.9
ILAR Eielson Array 86.90 12 P P 12 27 43.6 0.0
0.1nm,0.4s,baz=216,slow=5.2,SNR=7.4

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*ISCJB **22** 12:23:27.0±0.6, 37.°94N±0.°03×27.°05E±0.°07, h23km±6km, Error ellipse: s-maj=9.4km s-min=4.1km az=158.7*
*ISK **22** 12:23:26.6, 37.°96N×27.°24E, h8km, MD2.7*
*CSEM **22** 12:23:26.6±0.1, 37.°94N×27.°11E, h15km, MD2.8, Error ellipse: s-maj=3.3km s-min=1.5km az=67.0*
*DDA **22** 12:23:27.3, 37.°93N×27.°06E, h7km±6km, Md2.8*
ISC 22 12:23:26.8±0.5, 37.°95N±0.°02×27.°09E±0.°05, h20km±5km, n30, σ0°74/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.27**	**156**	*i* P	**Pg**	**12 23 32.8**	**-0.2**
GCAM				*i* S	**Sg**	**12 23 36.9**	**-0.4**
GCAM	**G?zelcaml?**	**0.27**	**156**	*i* P	**Pg**	**12 23 32.8**	**-0.2**
GCAM				*i* S	**Sg**	**12 23 36.9**	**-0.3**
BLCB	**Balcova**	**0.44**	**355**	*e*PG	**Pg**	**12 23 36.0**	**+0.1**
BLCB				*e*SG	**Sg**	**12 23 42.1**	**+0.1**
BLCB	**Balcova**	**0.44**	**355**	*e*Pg	**Pg**	**12 23 36.0**	**+0.1**
BLCB				*e*Sg	**Sg**	**12 23 42.1**	**+0.2**
IZM	**Izmir**	**0.47**	**17**	*e*PG	**Pg**	**12 23 36.0**	**-0.4**
IZM	**Izmir**	**0.47**	**17**	*e*Pg	**Pg**	**12 23 36.0**	**-0.4**
URLA	**Izmir**	**0.57**	**317**	*i* P	**Pg**	**12 23 37.8**	**-0.4**
URLA				*i* S	**Sg**	**12 23 45.8**	**0.0**
URLA	**Izmir**	**0.57**	**317**	*i* P	**Pg**	**12 23 37.8**	**-0.4**
URLA				*i* S	**Sg**	**12 23 45.8**	**-0.1**
AYDN	**Tasoluk**	**0.69**	**115**	*i* P	**Pg**	**12 23 41.4**	**+1.0**
AYDN				*i* S	**Sg**	**12 23 50.1**	**+0.5**
AYDN	**Tasoluk**	**0.69**	**115**	*i* P	**Pg**	**12 23 41.4**	**+1.0**
AYDN				*i* S	**Sg**	**12 23 50.1**	**+0.5**
MLSB	**Milas**	**0.85**	**140**	*e*PG	**Pg**	**12 23 42.3**	**-1.2**
MLSB				*e*SG	**Sg**	**12 23 53.5**	**-1.2**
MLSB	**Milas**	**0.85**	**140**	*e*Pg	**Pg**	**12 23 42.3**	**-1.1**
MLSB				*e*Sg	**Sg**	**12 23 53.5**	**-1.2**
BODT	**Bodrum**	**0.90**	**169**	*e*PG	**Pg**	**12 23 44.2**	**-0.3**
BODT	**Bodrum**	**0.90**	**169**	*e*Pg	**Pg**	**12 23 44.2**	**-0.2**
BDRM	**Kayabasi**	**0.93**	**162**	*i* P	**Pg**	**12 23 45.2**	**+0.3**
BDRM				*i* S	**Sg**	**12 23 57.6**	**+0.5**
BDRM	**Kayabasi**	**0.93**	**162**	*i* P	**Pg**	**12 23 45.2**	**+0.3**
BDRM				*i* S	**Sg**	**12 23 57.6**	**+0.5**
AKHS	**Akhisar**	**1.09**	**31**	*i* P	**Pg**	**12 23 48.1**	**+0.2**
AKHS				*i* S	**Sg**	**12 24 03.7**	**+1.4**
AKHS	**Akhisar**	**1.09**	**31**	*i* P	**Pg**	**12 23 48.2**	**+0.3**
YER	**Yerkesik**	**1.25**	**130**	*e*PN	**Pn**	**12 23 49.4**	**+0.2**
YER	**Yerkesik**	**1.25**	**130**	*e*Pn	**Pn**	**12 23 49.4**	**+0.3**
DAT	**Datca**	**1.28**	**162**	*e*PN	**Pn**	**12 23 50.9**	**+1.3**
DAT	**Datca**	**1.28**	**162**	*e*Pn	**Pn**	**12 23 50.9**	**+1.4**
KULA	**Kula-Manisa**	**1.36**	**65**	*e*PN	**Pn**	**12 23 50.9**	**+0.3**
KULA	**Kula-Manisa**	**1.36**	**65**	*e*Pn	**Pn**	**12 23 50.9**	**+0.2**
APE	**Apeiranthos**	**1.52**	**235**	*e*PN	**Pg**	**12 23 57.0**	**+0.9**
APE	**Apeiranthos**	**1.52**	**235**	*e*Pn	**Pg**	**12 23 57.0**	**+0.9**
TURN	**Turunc**	**1.61**	**131**	*e*P	**Pn**	**12 23 53.0**	**-1.1**
TURN	**Turunc**	**1.61**	**131**	*e*P	**Pn**	**12 23 53.0**	**-1.2**
BALY	**Balya**	**1.83**	**13**	*i* P	**Pn**	**12 23 56.2**	**-1.0**
BALY				*i* S	**Sg**	**12 24 25.1**	**-0.9**
BALY	**Balya**	**1.83**	**13**	*i* P	**Pn**	**12 23 56.2**	**-1.0**

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*ISK **22** 12:25:13.1, 38.°95N×38.°31E, h8km, MD2.8*
*ISCJB **22** 12:25:14.6±0.8, 38.°94N±0.°04×38.°33E±0.°08, h28km±9km, Error ellipse: s-maj=9.9km s-min=5.9km az=7.2*
*DDA **22** 12:25:14.9, 38.°92N×38.°31E, h7km±4km, Md2.9*
*CSEM **22** 12:25:14.1±0.3, 38.°92N×38.°33E, h15km, MD2.9, Error ellipse: s-maj=7.1km s-min=5.5km az=93.0*
ISC 22 12:25:14.7±0.7, 38.°93N±0.°03×38.°33E±0.°08, h26km±10km, n18, σ0°85/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEMA	**Kemaliye**	**0.36**	**21**	*i* P	**Pb**	**12 25 21.9**	**-0.8**
KEMA				*i* S	**Sb**	**12 25 28.9**	**+0.8**
KEMA	**Kemaliye**	**0.36**	**21**	*i* P	**Pb**	**12 25 21.9**	**-0.8**
KEMA				*i* S	**Sb**	**12 25 28.9**	**+0.8**
MYA	**Malataya**	**0.61**	**173**	*e*PG	**Pb**	**12 25 25.6**	**-1.2**
MYA				*e*SG	**Sb**	**12 25 34.9**	**-0.1**
MYA	**Malataya**	**0.61**	**173**	*e*Sg	**Sb**	**12 25 34.9**	**-0.1**
MYA	**Malataya**	**0.61**	**173**	*e*Pg	**Pb**	**12 25 25.6**	**-1.2**
MALT	**Malatya**	**0.62**	**173**	*e*PG	**Pb**	**12 25 26.1**	**-0.9**
MALT				*e*SG	**Sb**	**12 25 35.3**	**0.0**
MALT	**Malatya**	**0.62**	**173**	*e*Sg	**Sb**	**12 25 35.3**	**0.0**
MALT	**Malatya**	**0.62**	**173**	*e*Pg	**Pb**	**12 25 26.1**	**-0.9**
ELZG	**Elazig**	**0.67**	**130**	*i* P	**Pb**	**12 25 27.9**	**+0.1**
ELZG				*i* S	**Sb**	**12 25 38.2**	**+1.5**
ELZG	**Elazig**	**0.67**	**130**	*i* P	**Pb**	**12 25 27.9**	**+0.1**
ELZG				*i* S	**Sb**	**12 25 38.2**	**+1.5**
AKCD	**Akcadag**	**0.71**	**207**	*i* P	**Pb**	**12 25 27.7**	**-0.8**
AKCD				*i* S	**Sb**	**12 25 39.3**	**+1.5**
AKCD	**Akcadag**	**0.71**	**207**	*i* P	**Pb**	**12 25 27.7**	**-0.8**
AKCD				*i* S	**Sb**	**12 25 39.3**	**+1.5**
PTK	**Pertek**	**0.83**	**92**	*e*PG	**Pb**	**12 25 29.7**	**-0.7**
PTK	**Pertek**	**0.83**	**92**	*e*Pg	**Pb**	**12 25 29.7**	**-0.8**
SVRC	**Sivrice-ELAZID**	**0.94**	**126**	*e*PG	**Pn**	**12 25 32.3**	**0.0**
SVRC	**Sivrice-ELAZID**	**0.94**	**126**	*e*Pg	**Pn**	**12 25 32.3**	**0.0**
SVSK	**Karacayir**	**1.43**	**314**	*e*PN	**Pn**	**12 25 39.6**	**+0.7**
SVSK	**Karacayir**	**1.43**	**314**	*e*Pn	**Pn**	**12 25 39.6**	**+0.7**

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*NEIC **22** 12:34:19.6±2.6, 22.°96N×121.°75E, h10km, Error ellipse: s-maj=26.1km s-min=11.5km az=135.0*
*ISCJB **22** 12:34:20.9±0.5, 22.°99N±0.°02×121.°69E±0.°02, h14km±3km, Error ellipse: s-maj=3.3km s-min=2.4km az=152.0*
*TAP **22** 12:34:22.3, 23.°00N×121.°61E, h14km, ML3.6, B*
*JMA **22** 12:34:22.9±0.3, 23.°00N×121.°76E, h22km, M3.2*
ISC 22 12:34:21.2±0.5, 22.°99N±0.°02×121.°66E±0.°02, h14km±2km, n61, σ0°91/112, 5C-7D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.29**	**291**	⇑*i* P	**Pg**	**12 34 27.7**	**+0.3**
	baz=295						
CHKT				*e*S	**Sg**	**12 34 31.2**	**-0.3**
	baz=295						
TWF1	**Yuli**	**0.49**	**317**	⇓*i* P	**Pg**	**12 34 31.4**	**+0.4**
	baz=321						
TWF1				S	**Sg**	**12 34 37.7**	**+0.1**
	baz=321						
YULB	**Yu-li**	**0.52**	**320**	*e*Pg	**Pg**	**12 34 31.4**	**-0.1**
YULB				*e*Sg	**Sg**	**12 34 40.1**	**+1.6**
TTN	**Taitung**	**0.53**	**244**	⇓*i* P	**Pg**	**12 34 32.2**	**+0.5**
	baz=240						
TTN				*i* S	**Sg**	**12 34 39.5**	**+0.7**
	baz=240						
TWG	**Pinlang**	**0.57**	**253**	*e*Pg	**Pg**	**12 34 32.1**	**-0.3**
TWG				*e*Sg	**Sg**	**12 34 40.9**	**+0.9**
TWG	**Pinlang**	**0.57**	**253**	⇓*i* P	**Pg**	**12 34 32.3**	**-0.1**
	baz=250						
TWG				S	**Sg**	**12 34 40.4**	**+0.4**
	baz=250						
EHY	**Hungye**	**0.60**	**329**	⇓*i* P	**Pg**	**12 34 33.3**	**+0.3**
	baz=333						
EHY				S	**Sg**	**12 34 41.7**	**+0.7**
	baz=333						
ELDTW	**Lidau**	**0.63**	**288**	⇑*i* P	**Pg**	**12 34 33.0**	**-0.4**
	baz=289						
ELDTW				S	**Sg**	**12 34 41.2**	**-0.5**
	baz=289						
ECL	**Taimali**	**0.76**	**239**	⇓*i* P	**Pg**	**12 34 35.4**	**-0.7**
	baz=252						
ECL				*e*S	**Sg**	**12 34 44.7**	**-1.4**
	baz=252						
YUS	**Yu-Shan**	**0.82**	**307**	P	**Pg**	**12 34 37.3**	**+0.1**
	baz=300						
YUS				*e*S	**Sg**	**12 34 47.2**	**-0.8**
	baz=300						
ESL	**Shilin**	**0.85**	**346**	P	**Pg**	**12 34 37.3**	**-0.4**
	baz=358						
ESL				S	**Sg**	**12 34 47.7**	**-1.1**
	baz=358						
STYT	**Tauyuan**	**0.85**	**282**	*e*S	**Sg**	**12 34 47.3**	**-1.6**
	baz=282						
ALS	**Alishan**	**0.94**	**303**	⇑*i* P	**Pb**	**12 34 39.5**	**+0.1**
	baz=297						
ALS				*e*S	**Sb**	**12 34 51.0**	**-0.8**
	baz=297						
LAY	**Lan-yu**	**0.95**	**186**	*e*P	**Pb**	**12 34 38.1**	**-1.4**
	baz=183						
EAST	**Anshuo**	**0.97**	**231**	⇓*i* P	**Pb**	**12 34 38.6**	**-1.2**
	baz=229						
SSD	**Sandimen**	**0.98**	**256**	*e*P	**Pb**	**12 34 38.9**	**-1.1**
	baz=255						
SSD				*e*S	**Sb**	**12 34 50.0**	**-2.8**
	baz=255						
HWA	**Hwalien**	**0.98**	**357**	*e*P	**Pb**	**12 34 39.5**	**-0.5**
	baz=13						
HWA				*e*S	**Sb**	**12 34 52.9**	**0.0**
	baz=13						
WTP	**Ta-pu**	**1.00**	**285**	P	**Pb**	**12 34 40.1**	**-0.2**
	baz=286						
WTP				*e*S	**Sb**	**12 34 53.9**	**+0.5**
	baz=286						
TPUB	**Ta-pu**	**1.00**	**288**	*e*Pg	**Pg**	**12 34 40.1**	**-0.5**
TPUB				*e*Sg	**Sg**	**12 34 53.5**	**-0.1**
SSLB	**Suanglung**	**1.03**	**321**	*e*Pg	**Pg**	**12 34 40.8**	**-0.3**
SSLB				*e*Sg	**Sg**	**12 34 55.8**	**+1.3**
CHN4	**Tsaushan**	**1.05**	**290**	P	**Pb**	**12 34 41.4**	**+0.2**
	baz=299						
CHN4				*e*S	**Sb**	**12 34 54.4**	**-0.4**
	baz=299						
CHN1	**Nanshi**	**1.06**	**281**	⇑*i* P	**Pb**	**12 34 41.6**	**+0.2**
	baz=281						
CHN1				*e*S	**Sb**	**12 34 55.2**	**0.0**
	baz=281						
TWD	**Chiawan**	**1.09**	**357**	*e*P	**Pb**	**12 34 40.8**	**-1.0**
	baz=13						
TWD				*e*S	**Sb**	**12 34 54.9**	**-1.0**
	baz=13						
CHN5	**Tsauling**	**1.09**	**304**	⇑*i* P	**Pb**	**12 34 42.3**	**+0.5**
	baz=298						
CHN5				*e*S	**Sb**	**12 34 55.8**	**-0.2**
	baz=298						
SGLT	**Jiouru**	**1.11**	**256**	*e*P	**Pb**	**12 34 43.4**	**+1.1**
	baz=248						
SMLT	**Sun Moon Lake**	**1.13**	**322**	*e*P	**Pb**	**12 34 42.2**	**-0.4**
	baz=333						
SCZT	**Fangliau**	**1.14**	**238**	*e*P	**Pb**	**12 34 41.6**	**-1.2**
	baz=227						
SCZT				*e*S	**Sb**	**12 34 56.3**	**-1.2**
	baz=227						
TWM1	**Shoushan**	**1.16**	**262**	*e*P	**Pb**	**12 34 44.1**	**+1.1**
	baz=250						
TYC	**Yuchr**	**1.17**	**321**	*e*P	**Pn**	**12 34 42.8**	**-0.4**
	baz=334						
TYC				*e*S	**Sb**	**12 34 58.2**	**-0.1**
	baz=334						
NACB	**Ninganchiao**	**1.18**	**357**	*e*Pn	**Pn**	**12 34 42.0**	**-1.3**
NACB				*e*Sn	**Sn**	**12 34 57.1**	**-2.1**
CHN3	**Shinhua**	**1.20**	**274**	*e*P	**Pn**	**12 34 43.8**	**+0.2**
	baz=274						
CHN3				*e*S	**Sb**	**12 35 01.8**	**+2.7**
	baz=274						
WHF	**Hehuan Shan**	**1.21**	**342**	⇓*i* P	**Pn**	**12 34 43.1**	**-0.6**
	baz=345						
WHF				*e*S	**Sb**	**12 34 57.5**	**-1.8**
	baz=345						
CHY	**Chiayi**	**1.25**	**294**	*e*P	**Pn**	**12 34 45.8**	**+1.6**
	baz=295						
CHY				*e*S	**Sb**	**12 35 01.5**	**+1.0**
	baz=295						
WNT	**Mingjian**	**1.26**	**315**	*e*P	**Pn**	**12 34 44.6**	**+0.1**
	baz=316						
WNT				*e*S	**Sb**	**12 35 01.0**	**+0.1**
	baz=316						
TWT	**Tachien**	**1.33**	**341**	*e*P	**Pn**	**12 34 45.5**	**0.0**
	baz=342						
TWT				*e*S	**Sb**	**12 35 01.2**	**-1.8**
	baz=342						
CHN8	**Yiju**	**1.38**	**285**	*e*P	**Pn**	**12 34 46.0**	**-0.1**
	baz=286						
CHN8				*e*S	**Sn**	**12 35 05.3**	**+1.1**
	baz=286						
ENA	**Nanau**	**1.43**	**3**	*e*P	**Pn**	**12 34 46.1**	**-0.8**
	baz=18						
ENA				*e*S	**Sn**	**12 35 03.9**	**-1.6**
	baz=18						
TCU	**Taichung**	**1.47**	**322**	*e*P	**Pn**	**12 34 48.5**	**+1.3**
	baz=323						
NNS	**Nan Shan**	**1.47**	**350**	*e*P	**Pn**	**12 34 47.3**	**0.0**
	baz=6.0						
NNS				*e*S	**Sn**	**12 35 05.5**	**-0.9**
	baz=6.0						
WSF	**Szhu**	**1.47**	**296**	*e*P	**Pn**	**12 34 48.1**	**+0.8**
	baz=297						
WSF				*e*S	**Sn**	**12 35 06.9**	**+0.4**
	baz=297						
WTCT	**Ta-ch'eng**	**1.54**	**305**	*e*P	**Pn**	**12 34 48.5**	**+0.2**
	baz=306						
WTCT				*e*S	**Sn**	**12 35 08.2**	**+0.1**
	baz=306						
TWQ1	**Liyutan**	**1.58**	**329**	*e*P	**Pn**	**12 34 50.5**	**+1.7**
	baz=331						
TWQ1				*e*S	**Sn**	**12 35 10.8**	**+1.7**
	baz=331						
TWC	**Suao**	**1.62**	**6**	P	**Pn**	**12 34 49.5**	**+0.1**
	baz=20						
TWC				S	**Sn**	**12 35 10.1**	**0.0**
	baz=20						
NSY	**Sanyi**	**1.64**	**330**	*e*P	**Pn**	**12 34 51.4**	**+1.7**
	baz=332						
NSY				*e*S	**Sn**	**12 35 12.7**	**+2.0**
	baz=332						
ENTT	**Nioudou**	**1.64**	**357**	*e*P	**Pn**	**12 34 49.6**	**-0.1**
	baz=359						
ENTT				*e*S	**Sn**	**12 35 10.1**	**-0.6**
	baz=359						
YHNB	**Yeheng**	**1.69**	**351**	*e*Pn	**Pn**	**12 34 50.7**	**+0.3**
NSK	**Sanguang**	**1.70**	**351**	*e*P	**Pn**	**12 34 50.8**	**+0.3**
	baz=352						
NSK				*e*S	**Sn**	**12 35 11.2**	**-0.9**
	baz=352						
TWE	**Neicheng**	**1.72**	**0**	P	**Pn**	**12 34 50.9**	**+0.1**
	baz=349						
TWE				*e*S	**Sn**	**12 35 12.6**	**-0.1**
	baz=349						
NSTT	**Nanjuang**	**1.74**	**340**	*e*P	**Pn**	**12 34 52.2**	**+1.1**
	baz=356						
NSTT				*e*S	**Sn**	**12 35 13.0**	**-0.2**
	baz=356						
YOJ	**Yonaguni jima**	**1.92**	**40**	P	**Pn**	**12 34 54.1**	**+0.6**
YOJ				S	**Sn**	**12 35 17.9**	**+0.5**
YOJ	**Yonaguni jima**	**1.92**	**40**	*e*P	**Pn**	**12 34 54.2**	**+0.8**
	baz=55						
YOJ				*e*S	**Sn**	**12 35 18.0**	**+0.6**
	baz=55						
TWA	**Mucha**	**1.98**	**358**	*e*P	**Pn**	**12 34 54.6**	**+0.2**
	baz=359						
TWA				*e*S	**Sn**	**12 35 18.7**	**-0.3**
	baz=359						
PNG	**Penghu**	**2.02**	**287**	*e*P	**Pn**	**12 34 55.2**	**+0.2**
	baz=287						
PNG				*e*S	**Sn**	**12 35 18.9**	**-1.1**
	baz=287						
TWB1	**Santiao Chiao**	**2.03**	**8**	*e*P	**Pn**	**12 34 56.2**	**+1.2**
	baz=22						
NWF	**Wu-fen Shan**	**2.07**	**3**	*e*P	**Pn**	**12 34 56.5**	**+0.8**
	baz=353						
NWF				*e*S	**Sn**	**12 35 21.6**	**+0.3**
	baz=353						
TWS1	**Kuangyinshan**	**2.11**	**354**	*e*P	**Pn**	**12 34 57.8**	**+1.6**
	baz=11						
HATJ	**Hateruma jima**	**2.23**	**61**	P	**Pn**	**12 34 58.6**	**+0.8**
HATJ				S	**Sn**	**12 35 24.5**	**-0.8**
IRIF	**Iriomote-Funau**	**2.32**	**54**	P	**Pn**	**12 35 00.1**	**+1.1**
IRIF				S	**Sn**	**12 35 27.4**	**0.0**
JKRS	**Kuro-shima**	**2.48**	**60**	P	**Pn**	**12 35 02.1**	**+0.8**
JKRS				*e*S	**Sn**	**12 35 30.8**	**-0.6**
JIJ	**Ishigaki jima**	**2.65**	**59**	P	**Pn**	**12 35 04.7**	**+1.1**
JIJ				S	**Sn**	**12 35 34.3**	**-1.3**
JTJ	**Tarama**	**3.23**	**59**	P	**Pn**	**12 35 12.9**	**+1.3**
JTJ				S	**Sn**	**12 35 49.3**	**-0.6**

CASC 22 12:39:14.1±1.5, 8.°34N×82.°82W, h8km, MD3.6, 3C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**0.47**	**312**	⇑*e*P	Pg	12 39 23.0	-0.1
ACR				*e*S	Sg	12 39 30.4	+1.1
BRU2	**Volcan**	**0.47**	**16**	⇓*e*P	Pg	12 39 24.1	+0.9
TBS2		**0.48**	**20**	*e*P	Pg	12 39 29.9	+6.4
BUS	**Buena Vista**	**1.52**	**323**	*e*P	Pn	12 39 41.3	-0.4
BUS				*e*S	Sn	12 40 03.0	+1.3
QCR	**Quepos**	**1.71**	**309**	*e*P	Pn	12 39 43.7	-0.5
QCR				*e*S	Sn	12 40 06.1	-0.3
URSC	**Urasca**	**1.76**	**328**	⇑*e*P	Pn	12 39 44.4	-0.6
URSC				*e*S	Sn	12 40 08.7	+1.1
LAJ	**Bijagual**	**1.99**	**320**	*e*P	Pn	12 39 50.0	+2.0
PRS1	**Puriscal**	**2.20**	**318**	⇑*e*P	Pn	12 39 50.6	-0.3
PRS1				*e*S	Sn	12 40 19.5	+1.1
CGA2	**Cerro Gallo 2**	**2.33**	**316**	*e*P	Pn	12 39 53.6	+0.9
CGA2				*e*S	Sn	12 40 24.0	+2.4

IDC 22 12:39:36.1±2.3, 10.°94S×124.°20E, h0km, mb3.5/1, mb1 3.5/3, mb1mx3.4/16, mbtmp3.4/3, ML3.2/2, Error ellipse: s-maj=192.1km s-min=30.5km az=54.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.24**	**134**	P	Pn	12 42 45.0	-0.5
	0.1nm,0.3s,baz=308,slow=15,SNR=5.2						
WRA				S	Sn	12 45 08.1	-5.4
	0.1nm,0.3s,baz=306,slow=25,SNR=3.3						
ASAR	**Alice Springs**	**15.67**	**145**	Pn	Pn	12 43 20.2	+1.9
	0.1nm,0.3s,baz=320,slow=11,SNR=13						
ASAR				S	Sn	12 46 11.2	-1.5
	0.1nm,0.3s,baz=312,slow=21,SNR=6.9						
MKAR	**Makanchi Array**	**68.59**	**330**	P	P	12 50 40.8	0.0
	0.3nm,0.7s,baz=140,slow=5.4,SNR=3.4						

IDC 22 12:41:15.0±2.0, 23.°68S×175.°82W, h0km, mb4.0/7, mb1 4.2/7, mb1mx4.0/18, mbtmp3.9/7, MS3.7/2, Ms1 3.6/2, ms1mx2.7/23, Error ellipse: s-maj=89.6km s-min=26.9km az=156.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**16.42**	**272**	*e*LR	LR	12 48 45.6	
	178nm,23.1s						
PPT	**Papeete**	**25.28**	**81**	*e*LR	LR	12 53 02.0	
	125nm,24.0s						
CTA	**Charters Tower**	**35.30**	**268**	P	P	12 48 11.5	-0.5
	1.7nm,0.4s,baz=108,slow=6.4,SNR=2.9						
STKA	**Stephens Creek**	**38.36**	**248**	LR	LR	13 03 03.2	
	comp=Z,156nm,18.4s,baz=205,slow=34						
ASAR	**Alice Springs**	**45.84**	**259**	P	P	12 49 39.3	+0.2
	1.2nm,0.9s,baz=95,slow=9.1,SNR=6.5						
WRA	**Warramunga Arr**	**46.24**	**265**	P	P	12 49 41.6	-0.7
	1.4nm,0.9s,baz=102,slow=8.5,SNR=4.7						
GUMO	**Guam**	**53.38**	**310**	LR	LR	13 10 40.2	
	comp=Z,36nm,18.0s,baz=88,slow=33						
PETK	**Petropavlovsk-**	**79.85**	**344**	P	P	12 53 24.4	-0.7
	2.3nm,0.8s,baz=120,slow=8.7,SNR=5.8						
TXAR	**Lajitas Array**	**87.09**	**56**	P	P	12 54 02.8	-0.1
	0.8nm,0.9s,baz=220,slow=7.6,SNR=7.8						
ILAR	**Eielson Array**	**90.97**	**12**	P	P	12 54 21.5	+1.2
	0.2nm,0.7s,baz=198,slow=5.5,SNR=3.1						
CMAR	**Chiang Mai Arr**	**93.06**	**289**	P	P	12 54 33.0	+1.8
	1.1nm,0.8s,baz=140,slow=3.2,SNR=6.1						
AKASG	**Malin Array Be**	**146.76**	**331**	PKPbc	PKPbc	13 00 57.2	-1.5
	2.1nm,0.7s,baz=38,slow=3.9,SNR=6.7						
BRTR	**Keskin Array B**	**150.44**	**310**	PKPbc	PKPbc	13 01 07.9	-0.7
	0.7nm,0.7s,baz=132,slow=4.8,SNR=3.6						
BRTR				PKPab	PKPab	13 01 15.6	+0.5
	0.3nm,0.5s,baz=117,slow=0.3,SNR=5.5						

IDC 22 12:57:27.8±5.9, 22.°72S×175.°80W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.8/17, mbtmp3.9/3, Error ellipse: s-maj=248.5km s-min=38.0km az=146.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**46.04**	**258**	P	P	13 05 52.7	-0.8
	1.5nm,0.4s,baz=91,slow=7.2,SNR=94						
WRA	**Warramunga Arr**	**46.35**	**264**	P	P	13 05 56.7	+0.7
	1.5nm,0.5s,baz=103,slow=7.8,SNR=32						
ILAR	**Eielson Array**	**90.03**	**12**	P	P	13 10 28.8	0.0
	0.2nm,0.8s,baz=207,slow=5.8,SNR=2.7						

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*IDC **22** 13:14:02.5±5.0, 19.°27S×176.°10W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/17, mbtmp3.9/3, Error ellipse: s-maj=165.9km s-min=96.5km az=155.0*
NEIC 22 13:15:23.0±1.7, 20.°89S×179.°09W, h643km±44km, mb3.6/3, Error ellipse: s-maj=111.5km s-min=27.1km az=205.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.14**	**319**	*i* Pn	P	13 16 52.8	+0.1
CTAO	**Charters Tower**	**32.44**	**265**	P	P	13 21 03.4	+0.1
	0.7nm,0.6s						
STKA	**Stephens Creek**	**36.70**	**244**	P	P	13 21 38.5	+0.1
STKA	**Stephens Creek**	**36.70**	**244**	P	P	13 21 38.5	+0.1
	2.4nm,1.1s,baz=90,slow=13,SNR=3.0						
ASAR	**Alice Springs**	**43.44**	**257**	P	P	13 22 32.1	+0.3
ASAR				PcP	PcP	13 24 06.3	+1.4
ASAR	**Alice Springs**	**43.44**	**257**	P	P	13 22 32.1	+0.3
	1.1nm,0.5s,baz=95,slow=7.8,SNR=29						
ASAR				PcP	PcP	13 24 06.3	+1.4
	0.1nm,0.7s,baz=103,slow=3.7,SNR=4.7						
WRA	**Warramunga Arr**	**43.54**	**263**	P	P	13 22 32.5	-0.1
WRA	**Warramunga Arr**	**43.54**	**263**	P	P	13 22 32.5	-0.1
	0.4nm,0.3s,baz=97,slow=7.6,SNR=5.9						
CASY	**Casey**	**63.18**	**205**	*e*P	P	13 24 49.6	-0.2
	1.8nm,0.6s						
QSPA	**South Pole Qui**	**69.19**	**180**	*e*P	P	13 25 27.1	+0.6
	2.5nm,0.6s						

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*IDC **22** 13:17:53.5±0.7, 2.°44N×96.°22E, h0km, mb4.5/18, mb1 4.6/20, mb1mx4.5/26, mbtmp4.5/20, ML4.3/2, MS3.7/8, Ms1 3.7/8, ms1mx3.4/28, Error ellipse: s-maj=26.0km s-min=13.9km az=48.0*
*BJI **22** 13:17:54.6, 2.°31N×96.°32

0.2nm57nm,0.7s
MDSI Maura Dua 10.46 131 P Pn 13 20 25.8 -1.0
669nm63nm,0.9s
KLSI 11.01 130 P Pn 13 20 33.8 -0.5
50nm,0.9s
STKI Sintang 15.36 99 P Pn 13 21 38.6 +5.2
SBUM Sibu 15.91 90 P Pn 13 21 37.8 -2.8
SBUM Sibu 15.91 90 P Pn 13 21 40.7 +0.2
18nm,1.3s
CMAR Chiang Mai Arr 16.14 9 Pn Pn 13 21 42.4 -0.9
1.1nm,0.3s,baz=199,slow=11,SNR=82
CMAR LR LR 13 28 40.5
comp=Z,361nm,18.3s,baz=195,slow=40
CHTO Chiang Mai 16.48 9 *e*Pn **Pn 13 21 45.6 -2.1**
5.4nm,0.5s
CHTO Chiang Mai 16.48 9 *e*P **Pn 13 21 45.7 -2.0**
CHTO pmax pmax
comp=Z,5.0nm,0.5s
CHTO Chiang Mai 16.48 9 P Pn 13 21 46.5 -1.2
comp=Z,13nm,0.9s
KKM Kota Kinabalu 20.19 79 *e*P **P 13 22 29.9 -0.9**
comp=Z,36nm,0.8s
KKM Kota Kinabalu 20.19 79 P P 13 22 30.1 -0.7
comp=Z,46nm,0.9s
KDM Kudat 20.95 77 P P 13 22 41.3 +2.3
SDKM Sandakan 21.09 81 P P 13 22 44.0 +3.4
QIZ Qiongzhong 21.16 38 P P 13 22 39.4 -1.9
QIZ pP 13 22 49.5
QIZ sP sP 13 22 53.6 -2.7
QIZ pmax pmax
comp=Z,21nm,1.6s,mb4.2
QIZ LR LR
comp=N,810nm,21.5s
QIZ LR LR
comp=Z,620nm,19.1s,MS4.0
MYLDM Lahad Datu 22.32 82 P P 13 22 55.4 +1.6
MYLDM Lahad Datu 22.32 82 P P 13 22 54.9 +1.1
comp=Z,47nm,1.5s,mb4.7
HYB Hyderabad 22.92 312 *i* P **P 13 23 04.0 +4.0**
SHL Shillong 23.39 350 *e*PKP **P 13 23 03.5 -1.3**
KMI Kunming 23.40 15 P P 13 23 05.9 +1.0
KMI pmax pmax
comp=Z,17nm,1.1s,mb4.4
BKSI Bulukumba 25.02 108 P P 13 23 19.7 -0.2
ODAN Odare 25.74 341 *e*P **P 13 23 27.5 +1.2**
comp=Z,56nm,0.7s,mb5.2
GYA Guiyang 25.88 22 P P 13 23 27.8 +0.3
GYA pmax pmax
comp=Z,40nm,0.8s,mb5.0
RAMN Ramite 26.09 340 *e*P **P 13 23 30.8 +1.4**
comp=Z,84nm,0.6s,mb5.4
TAPN Taplejung 26.10 342 *e*P **P 13 23 30.3 +0.8**
comp=Z,63nm,0.8s,mb5.2
PKI Pulchoki 27.08 338 *e*P **P 13 23 39.1 +0.8**
comp=Z,38nm,0.8s,mb5.0
GUN Gumba 27.22 340 *e*P **P 13 23 40.9 +1.3**
comp=Z,82nm,0.7s,mb5.4
DMN Daman 27.23 338 *e*P **P 13 23 40.6 +1.0**
KKN Kakani 27.32 338 *e*P **P 13 23 41.4 +0.9**
comp=Z,54nm,0.7s,mb5.2
LSA Lhasa 27.55 350 *e*P **P 13 23 42.7 +0.1**
comp=Z,15nm,0.7s,mb4.7
LSA Lhasa 27.55 350 *e*P **P 13 23 42.7 +0.2**
LSA pmax pmax
comp=Z,15nm,0.7s,mb4.7
GKN Gorkha 27.76 337 *e*P **P 13 23 45.2 +0.8**
comp=Z,90nm,0.8s,mb5.5
KOLN Koldanda 27.96 335 *e*P **P 13 23 47.3 +1.1**
comp=Z,62nm,0.7s,mb5.3
ENH Enshi 30.38 23 P P 13 24 05.9 -1.8
comp=Z,8.8nm,0.8s,mb4.5
WHN Wuhan 32.77 30 P P 13 24 33.3 +4.6
LZH Lanzhou 34.21 11 *e*P **P 13 24 38.8 -2.3**
LZH pmax pmax
comp=Z,24nm,1.3s,mb5.0
NJ2 Nanjing 36.32 33 *e*P **P 13 24 59.1 -0.2**
NJ2 pmax pmax
comp=Z,20nm,1.0s,mb5.0
GTA Gaotai 36.94 5 P P 13 25 04.8 +0.2
GTA pP pP 13 25 12.3 -3.3
GTA sP sP 13 25 14.8 -5.6
GTA pmax pmax
comp=Z,31nm,1.0s,mb5.1
KAKA Kakadu 38.92 114 *e*P **P 13 25 20.3 -1.3**
comp=Z,24nm,0.6s,mb5.1
KAKA Kakadu 38.92 114 *e*P **P 13 25 20.1 -1.5**
comp=Z,61nm,0.6s,mb5.5
KSH Kashi 41.28 336 *e*P **P 13 25 40.3 -0.5**
KSH *ep*P pP 13 25 49.9 -2.1
KSH *es*P sP 13 25 53.8 -2.9
KSH *e*PcP PcP 13 27 38.5 -0.5
KSH *e*ScP ScP 13 31 24.4 -1.7
KSH *e*PcS PcS 13 31 28.1 -2.0
KSH *e*S **S 13 31 53.1 +0.8**
KSH sS sS 13 32 08.6 -2.2
KSH *e*SS SS 13 34 52.9 -4.0
KSH *e*ScS ScS 13 35 39.1 -2.7
KSH pmax pmax
comp=Z,4.0nm,0.3s,mb4.5
KSH pmax pmax
comp=Z,61nm,5.9s
KSH LR LR
comp=N,470nm,8.7s
KSH LR LR
comp=E,730nm,7.3s
KSH LR LR
comp=Z,510nm,8.0s
BJT Baijiatuan 41.53 23 *e*P **P 13 25 43.4 +0.5**
comp=Z,49nm,0.6s,mb5.3
BJT Baijiatuan 41.53 23 *e*P **P 13 25 43.4 +0.5**
BJT pmax pmax
comp=Z,49nm,0.6s
WRA Warramunga Arr 43.46 123 P P 13 25 58.7 -0.1
comp=Z,5.1nm,0.6s,mb4.5,baz=300,slow=9.2,SNR=27
AAK Ala-Archa 44.52 337 *e*P **P 13 26 08.0 +1.0**
AAK pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
ASAR Alice Springs 44.86 128 P P 13 26 10.1 +0.1
comp=Z,2.8nm,0.7s,mb4.2,baz=301,slow=7.9,SNR=28
KSRS Korea Array 45.37 36 P P 13 26 13.5 -0.4
comp=Z,4.1nm,0.9s,mb4.3,baz=233,slow=8.6,SNR=5.7
KSRS LR LR 13 46 20.5
comp=Z,165nm,19.3s,MS4.0,baz=30,slow=38
MK31 Makanchi Array 45.84 347 *e*P **P 13 26 17.6 +0.2**
MK31 Makanchi Array 45.84 347 *ce*P **P 13 26 17.1 -0.3**
MK31 pmax pmax
comp=Z,15nm,0.5s,mb5.2
MKAR Makanchi Array 45.84 347 P P 13 26 17.6 +0.3
MKAR LR LR 13 50 07.2
MKAR Makanchi Array 45.84 347 P P 13 26 17.6 +0.3
comp=Z,32nm,0.7s,mb5.3,baz=161,slow=8.0,SNR=133
MKAR LR LR 13 50 07.2
comp=Z,52nm,19.0s,MS3.5,baz=262,slow=42
SONM Songino Array 46.06 9 P P 13 26 19.3 +0.2
comp=Z,11nm,0.7s,mb4.9,baz=190,slow=9.1,SNR=44
SONM PcP PcP 13 27 56.2 +1.1
comp=Z,3.0nm,0.8s,baz=186,slow=3.8,SNR=4.9
SONM LR LR 13 47 52.8
comp=Z,219nm,18.5s,MS4.1,baz=91,slow=39
SONM Songino Array 46.06 9 P P 13 26 19.3 +0.2
SONM 13 27 56.2
ULN Ulaanbaatar 46.20 10 *e*P **P 13 26 20.0 -0.2**
comp=Z,12nm,1.2s,mb4.7
ULN Ulaanbaatar 46.20 10 *e*P **P 13 26 20.0 -0.2**
ULN pmax pmax
comp=Z,12nm,1.2s,mb4.7
ZAK Zakamensk 48.14 6 *e*P **P 13 26 35.3 0.0**
ZAK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
MOY Mondy 49.22 4 *e*P **P 13 26 44.8 +1.2**
TLY Talaya 49.46 6 *e*P **P 13 26 46.4 +1.0**
comp=Z,11nm,0.8s,mb4.9
TLY Talaya 49.46 6 *e*P **P 13 26 46.4 +1.0**
TLY pmax pmax
comp=Z,11nm,0.8s,mb4.9
KURK Kurchatov 50.38 345 *e*P **P 13 26 52.8 +0.4**
comp=Z,13nm,1.0s,mb4.9
KURK Kurchatov 50.38 345 P **P 13 26 52.2 -0.1**
comp=Z,8.9nm,0.8s,mb4.8,baz=169,slow=6.9,SNR=17
KURK Kurchatov 50.38 345 *c i*P **P 13 26 52.6 +0.2**
KURK pmax pmax
comp=Z,18nm,1.2s,mb5.0
HIA Hailar 50.78 20 *e*P **P 13 26 55.6 +0.1**
comp=Z,15nm,0.9s,mb4.9
HIA Hailar 50.78 20 *e*P **P 13 26 55.6 +0.1**
HIA pmax pmax
comp=Z,15nm,0.9s
MJAR Matsushiro Arr 51.41 43 P P 13 27 00.6 +0.1
comp=Z,1.9nm,0.7s,mb4.1,baz=193,slow=5.0,SNR=4.2
MJAR LR LR 13 50 39.1
comp=Z,89nm,18.7s,MS3.8,baz=195,slow=38
ZALV Zalesovo Beam 52.21 351 P P 13 27 06.2 +0.1
comp=Z,17nm,0.4s,mb5.3,baz=182,slow=6.0,SNR=101
ZALV LR LR 13 51 36.9
comp=Z,19nm,21.4s,MS3.1,baz=181,slow=39
NVS Novosibirsk 53.32 351 *e*P **P 13 27 13.6 -0.6**
NVS pmax pmax
comp=Z,17nm,0.9s,mb5.0
NVS pmax pmax
comp=N,13nm,0.9s
NVS pmax pmax
comp=E,12nm,0.9s
CTA Charters Tower 53.86 117 *e*P **P 13 27 19.3 +0.4**
comp=E,6.9nm,0.9s,mb4.6
CTAO Charters Tower 53.86 117 *e*P **P 13 27 19.2 +0.3**
comp=E,10nm,0.9s,mb4.8
CTAO Charters Tower 53.86 117 *e*P **P 13 27 19.2 +0.3**
CTAO pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BVA0 Borovoye Array 54.80 341 P P 13 27 24.1 -1.0
BVA0 pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
BVAR Borovoye Array 54.80 341 P P 13 27 24.8 -0.2
comp=Z,8.3nm,0.7s,mb4.9,baz=140,slow=8.7,SNR=54
STKA Stephens Creek 54.85 132 *e*P **P 13 27 26.5 +0.6**
comp=Z,4.2nm,0.8s,mb4.5
STKA Stephens Creek 54.85 132 P P 13 27 26.7 +0.8
comp=Z,7.3nm,1.0s,mb4.7,baz=311,slow=6.6,SNR=7.4
BRVK Borovoye 54.86 341 *e*P **P 13 27 25.1 -0.4**
comp=Z,7.7nm,0.6s,mb4.9
BRVK Borovoye 54.86 341 *c i*P **P 13 27 25.4 -0.1**
BRVK pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
KLR Kul'dur 55.57 27 *e*P **P 13 27 27.6 -3.1**
ABKAR Akbulak array 56.01 332 *e*P **P 13 27 33.8 0.0**
comp=Z,7.3nm,0.8s,mb4.8
HABR Khabarovsk 56.64 30 *e*P **P 13 27 36.7 -1.7**
HABR *e**SP sP 13 27 50.3 -4.2
HABR PPP 13 31 00.2
HABR *e**SS sS 13 35 46.9 0.0
HABR *e*SS SS 13 39 20.4 +4.5
HABR pmax pmax
comp=Z,74nm,3.0s
HABR pmax pmax
comp=E,56nm,2.7s
HABR pmax pmax
comp=N,48nm,2.8s
HABR MLR MLR
comp=Z,45nm,18.0s,MS3.6
AKTK Aktyubinsk 57.72 332 P P 13 27 45.9 -0.1
AKTO Aktyubinsk 57.72 332 P P 13 27 45.9 -0.1
comp=Z,2.8nm,0.5s,mb4.5,baz=132,slow=6.2,SNR=11
AKTO Aktyubinsk 57.72 332 *i* P **P 13 27 45.0 -1.0**
AKTO pmax pmax
comp=Z,2.0nm,1.2s,mb4.0
CMSA Cobar Meteorol 57.78 130 *e*P **P 13 27 47.6 +0.9**
KMBO Kilima Mbogo 59.13 267 *e*P **P 13 27 58.6 +2.1**
comp=Z,3.6nm,0.8s,mb4.5
KMBO *e* 13 28 06.0
KMBO Kilima Mbogo 59.13 267 *e*P **P 13 27 58.6 +2.1**
KMBO *e* 13 28 06.0
KMBO pmax pmax
comp=Z,4.0nm,0.8s
SVE Sverdlovsk 61.22 339 *e*P **P 13 28 10.1 +0.1**
SVE *e* 13 28 49.4
SVE *e*S **S 13 36 41.3 +14**
SVE pmax pmax
comp=Z,18nm,0.8s,mb5.2
ARU Arti 61.70 337 *e*P **P 13 28 12.9 -0.4**
comp=Z,7.5nm,0.9s,mb4.8
ARU Arti 61.70 337 *e*P **P 13 28 12.9 -0.4**
ARU pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
KIV Kislovodsk 62.79 319 P P 13 28 21.4 +0.6
KIV 13 28 58.0
KIV pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
YAK Yakutsk 64.50 17 *e*P **P 13 28 30.9 -0.8**
YAK pmax pmax
YAK comp=Z,31nm,0.8s,mb5.4
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK pmax pmax
comp=E,8.0nm,1.1s
YAK MLR MLR
comp=Z,129nm,18.0s,MS4.2
YAK MLR MLR
comp=E,59nm,18.0s,MS4.0
YAK MLR MLR
comp=N,71nm,17.0s,MS4.0
VRHR Novokhopersk 66.60 326 *e*P **P 13 28 49.9 +4.4**
VRHR pmax pmax
comp=N,7.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
BRTR Keskin Array B 67.62 312 P P 13 28 51.4 -0.9
comp=Z,1.3nm,0.9s,mb4.0,baz=119,slow=7.6,SNR=6.2
VSR Storozhevoye 68.05 325 *e*P **P 13 28 52.7 -2.0**
VSR pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
VSR pmax pmax
comp=N,1.0nm,0.3s
VSR pmax pmax
comp=E,4.0nm,0.6s
LSZ Lusaka 69.60 253 P P 13 29 07.6 +2.6
comp=E,1.6nm,0.8s,mb4.0
LSZ Lusaka 69.60 253 P P 13 29 07.6 +2.6
LSZ pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
OBN Obninsk 71.10 328 P P 13 29 14.0 +0.6
OBN *e* pP 13 29 22.4 -2.9
OBN 13 29 29.0
PETK Petropavlovsk- 71.22 34 P P 13 29 13.7 -0.5
comp=Z,2.1nm,0.8s,mb4.1,baz=162,slow=1.4,SNR=5.4
TIXI Tiksi 72.14 10 *e*P **P 13 29 18.1 -1.2**
comp=Z,9.1nm,0.8s,mb4.8
TIXI Tiksi 72.14 10 *c i*P **P 13 29 18.5 -0.9**
TIXI pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KLMR Klimovskoe 72.25 335 *e*P **P 13 29 19.4 -0.8**
KLMR pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
SEY Seymchan 72.99 23 *e*P **P 13 29 24.6 0.0**
AKASG Malin Array Be 73.73 322 P P 13 29 28.6 -0.7
comp=Z,1.9nm,0.6s,mb4.2,baz=88,slow=5.1,SNR=7.5
BOSA Boshof 74.61 240 LR LR 13 57 53.0
comp=Z,65nm,18.7s,MS4.0,baz=329,slow=32
JOF Joensuu 76.65 335 *e*P **P 13 29 44.5 -1.2**
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
JOF Joensuu 76.65 335 *ep* **P 13 29 44.5 -1.2**
comp=Z,1.7nm,0.5s,mb4.2
FINES FINESS Array B 78.49 333 P P 13 29 56.0 0.0
comp=Z,3.9nm,0.6s,mb4.5,baz=118,slow=7.8,SNR=9.8
KAF Kangasniemi 78.58 333 *e*P **P 13 29 55.9 -0.6**
KAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KAF Kangasniemi 78.58 333 *ep* **P 13 29 55.9 -0.6**
comp=Z,3.7nm,0.7s,mb4.4
KEV Kevo 80.64 341 *e*P **P 13 30 06.9 -0.7**
KEV pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
KEV Kevo 80.64 341 *ep* **P 13 30 06.9 -0.7**
comp=Z,2.5nm,0.7s,mb4.2
ARCES ARCESS Array B 81.08 340 P P 13 30 10.5 +0.6
comp=Z,3.0nm,0.7s,mb4.3,baz=104,slow=5.1,SNR=14
NOA NORSAR Array B 85.49 331 P P 13 30 32.9 +0.1
comp=Z,1.9nm,0.8s,mb4.3,baz=93,slow=5.3,SNR=5.1
NVL N'lazarevskaya 90.45 199 *e*P pP 13 31 05.6 -2.9
NVL pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
JMIC Jan Mayen 92.51 342 LR LR 14 17 58.6
comp=Z,27nm,19.8s,MS3.7,baz=103,slow=39
ILAR Eielson Array 98.92 23 P P 13 31 35.1 -0.1
comp=Z,0.2nm,0.7s,mb3.8,baz=289,slow=5.6,SNR=3.2
ILAR PP PP 13 35 32.9 -4.0
comp=Z,0.3nm,0.8s,baz=295,slow=8.5,SNR=5.2
NVAR Mina Array Bea 128.31 35 PKP PKPdf 13 37 02.8 +0.8
comp=Z,0.5nm,0.7s,baz=318,slow=2.0,SNR=5.2
PDAR Pinedale Array 129.32 25 PKP PKPdf 13 37 04.4 +0.6
comp=Z,0.4nm,0.5s,baz=108,slow=3.3,SNR=3.7
TXAR Lajitas Array 143.08 30 PKhKP PKPpre 13 37 25.2
comp=Z,0.6nm,0.8s,baz=318,slow=0.6,SNR=7.2
TXAR PKP PKPdf 13 37 28.2 -1.5
comp=Z,0.4nm,0.6s,baz=338,slow=1.0,SNR=7.3
JCT Junction City 143.85 24 *e*PKPdf PKPdf 13 37 29.3 -1.7
CPUP Villa Florida 145.27 224 PKPbc PKPbc 13 37 34.2 +0.9
comp=Z,0.7nm,0.4s,baz=135,slow=4.6,SNR=4.3

CSEM ***22*** *13:24:18.5±0.6, 34.78N×33.99E, h25km±2km, Mw2.9, Error ellipse: s-maj=10.9km s-min=5.5km az=157.0*
ISK ***22*** *13:24:18.0, 34.80N×34.03E, h25km, ML2.4*
NIC ***22*** *13:24:19.7±0.1, 34.70N×33.99E, h30km, ML2.8, MW2.9*
ISC 22 13:24:18.7±1.9, 34.76N±0.10×34.01E±0.08, h28km±6km, n14, σ0.978/26, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PHNC	**Paralimni**	**0.25**	**4**	P	**Pb**		**13 24 25.8**	**+0.5**
	22nm,0.3s							
PHNC				S	**Sb**		**13 24 30.3**	**+0.5**
PHNC	**Paralimni**	**0.25**	**4**	P	**Pb**		**13 24 25.8**	**+0.5**
	22nm,0.3s							
PHNC				S	**Sb**		**13 24 30.3**	**+0.5**
CSS	**Prodhromos**	**0.60**	**290**	P	**Pb**		**13 24 29.8**	**-0.9**
	2.7nm,0.4s							
CSS				S	**Sb**		**13 24 38.0**	**-0.8**
CSS	**Prodhromos**	**0.60**	**290**	P	**Pb**		**13 24 29.8**	**-0.9**
	2.7nm,0.4s							
CSS				S	**Sb**		**13 24 38.0**	**-0.8**
LFK	**Lefkose**	**0.65**	**323**	*e*PG	**Pb**		**13 24 30.6**	**-1.0**
LFK				*e*SG	**Sb**		**13 24 41.1**	**+0.7**
LFK	**Lefkose**	**0.65**	**323**	*e*Pg	**Pb**		**13 24 30.6**	**-1.0**
LFK				*e*Sg	**Sb**		**13 24 41.1**	**+0.7**
EREN	**Erenkoy**	**0.78**	**9**	*e*PG	**Pb**		**13 24 33.4**	**-0.4**
EREN				*e*SG	**Sb**		**13 24 44.4**	**+0.4**
EREN	**Erenkoy**	**0.78**	**9**	*e*Pg	**Pb**		**13 24 33.4**	**-0.4**
EREN				*e*Sg	**Sb**		**13 24 44.4**	**+0.4**
LEF	**Lefka**	**0.99**	**292**	*e*PG	**Pn**		**13 24 37.2**	**+0.4**
LEF				*e*SG	**Sn**		**13 24 51.1**	**+1.3**
LEF	**Lefka**	**0.99**	**292**	*e*Pg	**Pn**		**13 24 37.2**	**+0.4**
LEF				*e*Sg	**Sn**		**13 24 51.2**	**+1.4**
IKL	**Isikli**	**1.50**	**350**	*e*PN	**Pn**		**13 24 43.7**	**-0.1**
IKL				*e*SN	**Sn**		**13 25 01.1**	**-1.4**
IKL	**Isikli**	**1.50**	**350**	*e*Pn	**Pn**		**13 24 43.7**	**-0.1**
IKL				*e*Sn	**Sn**		**13 25 01.1**	**-1.4**
HDMB	**Hadim**	**2.53**	**331**	*e*PN	**Pn**		**13 24 58.5**	**+0.6**
HDMB	**Hadim**	**2.53**	**331**	*e*Pn	**Pn**		**13 24 58.5**	**+0.6**

IDC ***22*** *13:52:21.9±2.0, 19.32S×177.46W, h555km±30km, mb2.8/5, mb1 3.1/7, mb1mx2.9/20, mbtmp3.0/7, Error ellipse: s-maj=31.4km s-min=20.2km az=134.0*
ISCJB ***22*** *13:52:22.1±1.0, 19.3S±0.2×177.4W±0.2, h576km±16km, mb3.5/6, Error ellipse: s-maj=29.6km s-min=19.8km az=147.0*
NEIC ***22*** *13:52:22.8±0.9, 19.28S×177.42W, h571km±13km, mb3.8/3, Error ellipse: s-maj=23.8km s-min=16.0km az=153.0*
ISC 22 13:52:22.9±1.0, 19.3S±0.2×177.4W±0.2, h571km±15km, n11, σ0.989/11, mb3.4/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.56**	**289**	*e*Pn	**P**		**13 53 51.7**	**+1.2**
AFI	**Afiamalu**	**7.60**	**46**	P	**P**		**13 54 16.6**	**-0.9**
	2.8nm,0.3s,baz=14,slow=18,SNR=4.2							
URZ	**Urewera**	**19.50**	**193**	*e*P	**P**		**13 56 12.4**	**-0.9**
	2.1nm,0.3s							
URZ	**Urewera**	**19.50**	**193**	P	**P**		**13 56 12.5**	**-0.8**
	1.1nm,0.3s,baz=224,slow=5.1,SNR=7.4							
CTA	**Charters Tower**	**34.17**	**262**	P	**P**		**13 58 21.6**	**-0.1**
	1.1nm,0.4s,mb3.7,baz=90,slow=10,SNR=3.1							
CTAO	**Charters Tower**	**34.17**	**262**	*e*P	**P**		**13 58 21.3**	**-0.4**
	1.1nm,0.4s,mb3.7							
STKA	**Stephens Creek**	**38.81**	**243**	P	**P**		**13 58 59.4**	**-0.3**
	1.3nm,0.7s,mb3.6,baz=94,slow=13,SNR=3.1							
WRA	**Warramunga Arr**	**45.32**	**261**	P	**P**		**13 59 50.2**	**-0.7**
	0.5nm,0.4s,mb3.4,baz=98,slow=7.9,SNR=8.8							
ASAR	**Alice Springs**	**45.34**	**255**	P	**P**		**13 59 50.5**	**-0.4**
	0.5nm,0.4s,mb3.4,baz=86,slow=8.2,SNR=30							
ASAR				PcP	PcP		14 01 18.8	+0.4
	0.3nm,0.7s,baz=108,slow=4.2,SNR=4.5							
QSPA	**South Pole Qui**	**70.78**	**180**	*e*P	**P**		**14 02 43.6**	**+1.9**
	0.8nm,0.8s,mb3.3							
ILAR	**Eielson Array**	**87.01**	**13**	P	**P**		**14 04 08.2**	**+0.6**
	0.7nm,1.2s,mb3.2,baz=213,slow=6.5,SNR=3.8							

NEIC ***22*** *14:01:37.0, 32.34S×71.52W, h15km, ML3.0(GUC), After GUC.*
GUC 22 14:01:37.7±0.8, 32.31S×71.48W, h34km±3km, MD3.6, ML2.9, 10C-12D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.42**	**358**	*i*P		Pb	14 01 46.0	-1.2
CHNG				*i* S		Sb	14 01 53.4	-0.3
CHNG				AML		AML	14 01 53.7	
	comp=E,1μm,0.4s							
ROCH	**El Roble**	**0.77**	**149**	↑*i*P		Pn	14 01 52.9	+0.7
ROCH				*i* S		Sn	14 02 03.4	+0.8
ROCH	**El Roble**	**0.77**	**149**	↓*i*P		Pn	14 01 52.8	+0.6
ROCH				*i* S		Sn	14 02 04.0	+1.4
ROCH				AML		AML	14 02 05.7	
	comp=N,860nm,0.3s							
JACH	**Jahuel**	**0.84**	**117**	↑*i*P		Pn	14 01 53.8	+0.7
JACH				*i* S		Sn	14 02 05.9	+1.7
JACH	**Jahuel**	**0.84**	**117**	↑*i*P		Pn	14 01 53.8	+0.7
JACH				*i* S		Sn	14 02 05.7	+1.5
PEL	**Peldehue**	**1.07**	**141**	↑*i*P		Pn	14 01 57.1	+0.8
PEL				*i* S		Sn	14 02 11.3	+1.4
PEL				AML		AML	14 02 12.2	
	comp=N,800nm,0.2s							
LCCH	**Las Cruces**	**1.17**	**184**	↓*i*P		Pn	14 01 58.6	+1.0
LCCH				*i* S		Sn	14 02 13.8	+1.4
LCCH	**Las Cruces**	**1.17**	**184**	↓*i*P		Pn	14 01 58.7	+1.0
LCCH				*i* S		Sn	14 02 13.6	+1.2
CMCH	**Combarbala**	**1.20**	**20**	↓*i*P		Pn	14 01 59.0	+1.0
CMCH				*i* S		Sn	14 02 14.8	+1.6
CMCH	**Combarbala**	**1.20**	**20**	↓*i*P		Pn	14 01 59.0	+1.0
CMCH				*i* S		Sn	14 02 14.8	+1.6
CMCH				AML		AML	14 02 15.6	
	comp=E,2μm,0.5s							
CLCH	**Cerro Calan**	**1.35**	**144**	↓*i*P		Pn	14 02 01.7	+1.6
CLCH				*i* S		Sn	14 02 19.4	+2.7
CLCH	**Cerro Calan**	**1.35**	**144**	↓*i*P		Pn	14 02 01.1	+1.1
CLCH				*i* S		Sn	14 02 19.1	+2.4
CLCH				AML		AML	14 02 20.3	
	comp=E,314nm,0.6s							
TACH	**Talagante**	**1.42**	**161**	↑*i*P		Pn	14 02 01.6	+0.6
TACH				*i* S		Sn	14 02 20.1	+1.6
TACH	**Talagante**	**1.42**	**161**	↑*i*P		Pn	14 02 02.0	+1.0
FCH	**Farellones**	**1.43**	**136**	↓*i*P		Pn	14 02 02.2	+1.0
FCH				*i* S		Sn	14 02 21.3	+2.5
FCH	**Farellones**	**1.43**	**136**	↓*i*P		Pn	14 02 03.6	+2.4
FCH				*i* S		Sn	14 02 22.2	+3.4
FCH				AML		AML	14 02 23.6	
	comp=E,256nm,0.2s							
ANTU	**Antumapu**	**1.45**	**151**	*i* S		Sn	14 02 21.8	+2.6
ANTU				AML		AML	14 02 23.2	
	comp=N,196nm,0.1s							
PCH	**Pirque**	**1.54**	**148**	↓*i*P		Pn	14 02 04.1	+1.4
PCH	**Pirque**	**1.54**	**148**	↑*i*P		Pn	14 02 04.2	+1.5
LNV	**Longovilo**	**1.65**	**178**	*e*P		Pn	14 02 04.5	+0.3
LNV				*e*S		Sn	14 02 24.6	+0.5
CHCH	**Chadas Angostu**	**1.77**	**157**	*e*P		Pn	14 02 07.1	+1.2
CHCH				*i* S		Sn	14 02 29.3	+2.2
CHCH	**Chadas Angostu**	**1.77**	**157**	*e*P		Pn	14 02 07.6	+1.8
LMEL	**Las Melosas**	**1.87**	**145**	↑*i*P		Pn	14 02 08.9	+1.6
LMEL				*i* S		Sn	14 02 33.2	+3.4
LMEL	**Las Melosas**	**1.87**	**145**	↑*i*P		Pn	14 02 08.9	+1.6
LMEL				*i* S		Sn	14 02 33.2	+3.4
LMEL				AML		AML	14 02 34.6	
	comp=N,202nm,0.1s							
CACH	**El Canelo**	**1.95**	**158**	↑*i*P		Pn	14 02 10.7	+2.3
TLL	**Tololo Astrono**	**2.21**	**15**	↓*i*P		Pn	14 02 15.2	+3.3
TLL	**Tololo Astrono**	**2.21**	**15**	*e*P		Pn	14 02 14.2	+2.3
TLL				*e*S		Sn	14 02 41.4	+3.3
TLL				AML		AML	14 02 48.5	
	comp=E,74nm,0.4s							
LCO	**Las Campanas**	**3.35**	**12**	Pn		Pn	14 02 28.2	+0.5

LCO *e*Sn Sn 14 03 07.9 +1.7

*ISCJB **22** 14:05:58.4±0.7, 5°.29N×0°.03×126°.37E±0°.08, h62km±7km, mb4.2/17, Error ellipse: s-maj=12.7km s-min=4.9km az=172.2*

*DJA **22** 14:05:58, 5°.22N×126°.38E, h10km, MLv4.7/9*

*IDC **22** 14:06:01.0±1.6, 5°.31N×126°.42E, h68km±14km, mb3.9/14, mb1 4.0/14, mb1mx4.0/21, mbtmp3.9/14, MS3.4/5, Ms1 3.4/5, ms1mx2.8/23, Error ellipse: s-maj=28.9km s-min=11.0km az=73.0*

*NEIC **22** 14:06:02.0±1.2, 5°.35N×126°.47E, h79km±11km, mb4.5/5, Error ellipse: s-maj=19.0km s-min=7.3km az=70.0*

ISC 22 14:05:60.0±0.7, 5°.30N±0°.03×126°.35E±0°.08, h59km±7km, n46, σ1§24/49, mb4.2/17, MS3.4/4, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.60**	**299**	⇓*i* P	**Pn**	**14 06 23.0**	**-3.0**
GSPH				*i* S	**Sn**	**14 06 42.8**	**-2.7**
SGSI	**Sangihe**	**1.80**	**207**	P	**Pn**	**14 06 27.0**	**-1.8**
SGSI				S	**Sn**	**14 06 51.2**	**+0.8**
DAV	**Davao City (W)**	**1.92**	**336**	P	**Pn**	**14 06 32.4**	**+2.0**
DAV				S	**Sn**	**14 06 55.6**	**+2.3**
DAV	**Davao City (W)**	**1.92**	**336**	P	**Pn**	**14 06 32.4**	**+2.0**
	84nm,0.3s,baz=94,slow=16,SNR=5.5						
DAV				S	**Sn**	**14 06 55.6**	**+2.3**
	202nm,0.3s,baz=347,slow=8.7,SNR=6.7						
DAV	**Davao City (W)**	**1.92**	**336**	P	**Pn**	**14 06 31.1**	**+0.7**
DMPH	**Davao City--Mi**	**1.96**	**335**	⇑*e*P	**Pn**	**14 06 29.9**	**-1.0**
DMPH				*e*S	**Sn**	**14 06 54.7**	**+0.4**
KCP	**Kidapawan**	**2.11**	**324**	⇓*e*P	**Pn**	**14 06 31.4**	**-1.6**
KCP				*i* S	**Sn**	**14 07 03.2**	**+5.2**
CGP	**Cagayan de Oro**	**3.54**	**332**	*e*P	**Pn**	**14 06 51.4**	**-1.1**
MNI	**Manado**	**4.12**	**202**	P	**Pn**	**14 06 59.4**	**-1.0**
SCPH	**Surigao**	**4.53**	**349**	*e*P	**Pn**	**14 07 06.2**	**+0.1**
SCPH				*e*S	**Sn**	**14 08 08.3**	**+11**
ZMPH	**Zamboanga City**	**4.57**	**291**	⇑*i* P	**Pn**	**14 07 06.4**	**-0.2**
TNTI	**Ternate**	**4.61**	**167**	P	**Pn**	**14 07 08.5**	**+1.3**
KMSI	**Cibinong**	**5.26**	**207**	P	**Pn**	**14 07 17.7**	**+1.6**
	1.6nm228nm,0.7s						
LBMI	**Labuha**	**6.01**	**169**	P	**Pn**	**14 07 27.0**	**+0.6**
	0.3nm942nm83nm,0.8s						
MRSI	**Marisa**	**6.51**	**223**	P	**Pn**	**14 07 33.1**	**-0.1**
	0.4nm1µm88nm,0.8s						
LUWI	**Luwuk**	**7.25**	**210**	P	**Pn**	**14 07 43.8**	**+0.5**
	0.4nm99nm,1.0s						
MYLDM	**Lahad Datu**	**7.82**	**269**	P	**Pn**	**14 07 53.9**	**+2.7**
	0.1nm26nm,0.8s						
NLAI	**Namlea**	**8.52**	**175**	P	**Pn**	**14 07 59.3**	**-1.4**
	1µm48nm,0.9s						
PCI	**Palu**	**8.96**	**227**	P	**Pn**	**14 08 05.5**	**-1.4**
	771nm46nm,0.8s						
TTSI	**Tana Toraja**	**10.55**	**218**	P	**Pn**	**14 08 28.7**	**+0.1**
	24nm,0.8s						
SBUM	**Sibu**	**14.38**	**259**	P	**Pn**	**14 09 24.1**	**+3.5**
KAKA	**Kakadu**	**18.89**	**161**	*e*P	**Pn**	**14 10 17.3**	**+0.4**
	20nm,0.5s						
KAKA	**Kakadu**	**18.89**	**161**	P	**Pn**	**14 10 18.1**	**+1.2**
GUMO	**Guam**	**20.02**	**64**	LR	LR	14 16 44.9	
	comp=Z,96nm,19.8s,MS3.1,baz=102,slow=32						
WRA	**Warramunga Arr**	**26.29**	**163**	P	**P**	**14 11 30.7**	**+0.6**
	6.7nm,0.7s,mb4.3,baz=344,slow=10,SNR=19						
WRA				ScP	ScP	14 18 32.3	+1.9
	1.7nm,0.8s,baz=343,slow=3.4,SNR=10						
ASAR	**Alice Springs**	**29.72**	**166**	P	**P**	**14 12 00.1**	**-0.6**
	0.4nm,0.3s,mb3.6,baz=344,slow=7.0,SNR=22						
ASAR				PcP	PcP	14 15 03.4	-0.4
	1.0nm,0.7s,baz=13,slow=1.1,SNR=6.6						
ASAR				ScP	ScP	14 18 41.4	+0.5
	0.9nm,0.8s,baz=8.7,slow=2.9,SNR=8.4						
CMAR	**Chiang Mai Arr**	**29.78**	**298**	P	**P**	**14 12 03.1**	**+1.7**
	0.7nm,0.7s,mb3.5,baz=94,slow=7.0,SNR=5.8						
CTA	**Charters Tower**	**31.93**	**143**	P	**P**	**14 12 19.9**	**-0.3**
	2.7nm,0.8s,mb4.1,baz=339,slow=12,SNR=3.6						
CTAO	**Charters Tower**	**31.93**	**143**	*e*P	**P**	**14 12 19.4**	**-0.9**
	2.2nm,0.7s,mb4.1						
KSRS	**Korea Array**	**32.03**	**2**	P	**P**	**14 12 22.3**	**+1.3**
	1.9nm,0.7s,mb4.0,baz=190,slow=9.1,SNR=6.5						
MJAR	**Matsushiro Arr**	**32.94**	**18**	P	**P**	**14 12 30.2**	**+1.2**
	1.7nm,0.9s,mb4.0,baz=196,slow=7.6,SNR=3.5						
MJAR				LR	LR	14 24 37.1	
	comp=Z,41nm,20.6s,MS3.1,baz=195,slow=34						
STKA	**Stephens Creek**	**39.72**	**160**	P	**P**	**14 13 26.6**	**-0.2**
	2.6nm,0.5s,mb4.2,baz=335,slow=8.3,SNR=10						
LSA	**Lhasa**	**41.13**	**310**	*e*P	**P**	**14 13 40.7**	**+2.1**
	4.7nm,0.5s,mb4.4						
ULN	**Ulaanbaatar**	**45.52**	**342**	*e*P	**P**	**14 14 12.8**	**-0.9**
	6.4nm,1.0s,mb4.5						
SONM	**Songino Array**	**45.70**	**341**	P	**P**	**14 14 14.9**	**-0.1**
	1.6nm,0.7s,mb4.0,baz=153,slow=6.9,SNR=7.1						
SONM				PcP	PcP	14 15 52.3	+0.2
	3.3nm,0.8s,baz=173,slow=3.9,SNR=4.3						
PETK	**Petropavlovsk-**	**54.13**	**23**	P	**P**	**14 15 18.8**	**-0.1**
PETK	**Petropavlovsk-**	**54.13**	**23**	P	**P**	**14 15 18.8**	**-0.1**
	2.4nm,0.9s,mb4.1,baz=178,slow=3.2,SNR=8.3						
MKAR	**Makanchi Array**	**56.06**	**325**	LR	LR	14 40 18.6	
	comp=Z,45nm,20.1s,MS3.5,baz=160,slow=37						
YAK	**Yakutsk**	**56.66**	**2**	*e*P	**P**	**14 15 36.5**	**-0.5**
	24nm,0.8s,mb5.3						
ILAR	**Eielson Array**	**83.86**	**25**	P	**P**	**14 18 22.1**	**-0.9**
	0.3nm,0.8s,mb3.5,baz=216,slow=5.6,SNR=4.0						
MAW	**Mawson**	**85.09**	**200**	P	**P**	**14 18 30.2**	**+1.1**
	1.7nm,0.9s,mb4.2,baz=41,slow=9.3,SNR=4.8						
ARCES	**ARCESS Array B**	**88.86**	**340**	P	**P**	**14 18 46.2**	**-1.1**
	5.0nm,0.7s,mb5.0,baz=69,slow=6.6,SNR=11						
FINES	**FINESS Array B**	**90.28**	**332**	P	**P**	**14 18 53.1**	**-1.1**
	2.9nm,0.8s,mb4.7,baz=72,slow=4.9,SNR=8.3						
NOA	**NORSAR Array B**	**97.22**	**334**	P	**P**	**14 19 24.6**	**-1.6**
	1.6nm,0.8s,mb4.5,baz=65,slow=4.5,SNR=5.5						
NOA				LR	LR	15 07 08.4	
	comp=Z,22nm,20.7s,MS3.6,baz=50,slow=38						
TXAR	**Lajitas Array**	**120.93**	**51**	PKP	PKPdf	14 24 46.6	+0.1
	0.1nm,0.4s,baz=343,slow=2.8,SNR=2.8						
TORD	**Torodi Ar. Bea**	**122.07**	**289**	PKP	PKPdf	14 24 48.8	-0.2
	1.5nm,0.8s,baz=54,slow=2.5,SNR=5.0						

*NNC **22** 14:10:21.0±2.2, 41°.86N×83°.95E, h1km±9km, mb4.5, mpv4.7, Error ellipse: s-maj=17.8km s-min=10.6km az=111.0*

*IDC **22** 14:10:21.7±0.6, 42°.04N×83°.85E, h0km, mb4.1/13, mb1 4.2/18, mb1mx4.0/31, mbtmp4.0/18, ML3.7/5, MS3.8/14, Ms1 3.8/14, ms1mx3.5/32, Error ellipse: s-maj=17.1km s-min=11.3km az=55.0*

*ISCJB **22** 14:10:21.3±0.3, 41°.96N±0°.04×83°.84E±0°.05, h10km, mb4.2/26, MS3.8/12, Error ellipse: s-maj=5.8km s-min=4.9km az=44.8*

*NEIC **22** 14:10:22.9±0.4, 42°.02N×83°.84E, h10km, mb4.5/7, Error ellipse: s-maj=9.6km s-min=7.7km az=49.0*

*BJI **22** 14:10:23.0, 41°.92N×83°.80E, h15km, mB4.8/4, mb4.1/11, ML4.6/9, Ms4.6/5, Ms7 4.2/3*

*MOS **22** 14:10:24.9±0.8, 42°.02N×83°.84E, h35km, mb4.5/10, Error ellipse: s-maj=14.8km s-min=7.3km az=114.1*

ISC 22 14:10:23.2±0.3, 41°.99N±0°.03×83°.90E±0°.04, h10km, n95, σ1§23/111, mb4.2/26, MS3.8/12, 14C-12D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**3.34**	**55**	P	**Pn**	**14 11 19.4**	**+4.0**
WMQ				Sg	**Sg**	**14 12 09.3**	**-1.0**
WMQ				LR	LR		
	comp=E,10µm,7.0s						
MK31	**Makanchi Array**	**4.94**	**347**	⇑Pn	**Pn**	**14 11 38.6**	**+1.2**
	comp=E,5.9nm,0.5s,baz=163,slow=14,SNR=553						
MK31				⇓Pg	**Pg**	**14 11 54.2**	**-3.6**
	comp=E,148nm,0.8s,baz=170,slow=17,SNR=113						
MK31				⇓Lg		14 13 00.2	
	comp=E,380nm,0.7s,baz=168,slow=29,SNR=4.9						
MK31	**Makanchi Array**	**4.94**	**347**	*e*Pn	**Pn**	**14 11 38.6**	**+1.2**
MK31				*e*Pg	**Pg**	**14 11 54.6**	**-3.2**
MK31				*e*Sg	**Sg**	**14 13 01.4**	**-0.4**
MKAR	**Makanchi Array**	**4.94**	**347**	Pn	**Pn**	**14 11 38.6**	**+1.2**
MKAR				Pg	**Pg**	**14 11 53.4**	**-4.4**
MKAR				Sn	**Sn**	**14 12 40.3**	**+5.7**
MKAR				Lg		14 12 57.4	
MKAR				LR	LR	14 13 46.5	
	comp=E,1.3nm,0.3s,baz=165,slow=13,SNR=31						
MKAR				Pg	**Pg**	**14 11 53.4**	**-4.4**
	comp=E,12nm,0.3s,baz=178,slow=16,SNR=58						
MKAR				Sn	**Sn**	**14 12 40.3**	**+5.7**
	comp=E,10.0nm,0.3s,baz=174,slow=15,SNR=6.0						
MKAR				Lg		14 12 57.4	
	comp=E,34nm,0.3s,baz=168,slow=30,SNR=5.9						
MKAR				LR	LR	14 13 46.5	
	comp=E,940nm,18.6s,baz=226,slow=42						
MKAR	**Makanchi Array**	**4.94**	**347**	P	**Pn**	**14 11 38.6**	**+1.2**
MKAR						14 12 40.3	
KNDC	**Almaty**	**5.26**	**286**	⇓Pn	**Pn**	**14 11 43.2**	**+1.4**
	comp=E,75nm,0.8s						
KNDC				⇑Pg	**Pg**	**14 11 58.0**	**-6.0**
	comp=E,491nm,0.9s						
KNDC				⇓Lg		14 13 11.2	
	comp=E,3µm,1.0s						
AAA	**Alma-Ata**	**5.29**	**286**	*e*P	**Pg**	**14 12 01.4**	**-3.0**
AAA				pmax	pmax		
	comp=Z,437nm,0.9s						
ULHL	**Ulahol**	**5.70**	**275**	P	**Pn**	**14 11 48.1**	**+0.2**
	SNR=20						
TKM2	**Tokmak 2**	**6.21**	**281**	P	**Pn**	**14 11 55.2**	**+0.3**
	SNR=44						
KZA	**Kyzart**	**6.44**	**274**	P	**Pn**	**14 11 59.1**	**+1.1**
	SNR=6.1						
KSH	**Kashi**	**6.50**	**250**	Pn	**Pn**	**14 12 05.1**	**+6.2**
KSH				Sn	**Sn**	**14 13 21.3**	**+8.2**
KSH				smax			
	comp=N,390nm,1.0s						
KSH				smax			
	comp=E,280nm,0.8s						
KBK	**Karagaybulak**	**6.67**	**279**	P	**Pn**	**14 12 01.6**	**+0.4**
	SNR=33						
FRU	**Bishkek**	**6.92**	**280**	*e*P	**Pb**	**14 12 25.0**	**+1.5**
FRU				pmax	pmax		
	comp=Z,250nm,1.4s						
UCH	**Uchtor**	**6.99**	**275**	P	**Pn**	**14 12 07.8**	**+2.3**
	SNR=6.1						
AAK	**Ala-Archa**	**7.00**	**278**	Pn	**Pn**	**14 12 06.5**	**+0.7**
AAK				Pg	**Pg**	**14 12 32.5**	**-4.7**
AAK				Lg		14 14 01.9	
AAK				LR	LR	14 15 05.2	
AAK	**Ala-Archa**	**7.00**	**278**	Pn	**Pn**	**14 12 06.5**	**+0.7**
	comp=Z,1.7nm,0.3s,baz=69,slow=8.6,SNR=8.2						
AAK				Pg	**Pg**	**14 12 32.5**	**-4.7**
	comp=Z,3.1nm,0.3s,baz=87,slow=12,SNR=18						
AAK				Lg		14 14 01.9	
	comp=Z,2.6nm,0.3s,baz=192,slow=21,SNR=4.9						
AAK				LR	LR	14 15 05.2	
	comp=Z,1µm,19.8s,baz=73,slow=41						
USP	**Ospenovka**	**7.05**	**284**	P	**Pn**	**14 12 06.4**	**0.0**
	SNR=16						
KURBB	**Kurchatov Arra**	**9.40**	**339**	⇓Pn	**Pn**	**14 12 39.3**	**+0.8**
	comp=Z,3.8nm,0.9s						
KURBB				⇑Sn	**Sn**	**14 14 26.3**	**+2.1**
	comp=Z,13nm,0.8s						
KURBB				⇓Lg		14 15 22.5	
	comp=Z,61nm,0.9s						
KURK	**Kurchatov**	**9.46**	**339**	Pn	**Pn**	**14 12 41.0**	**+1.6**
	comp=Z,18nm,0.9s						
KURK				Sn	**Sn**	**14 14 30.6**	**+4.9**
	comp=Z,74nm,1.2s						
KURK				⇑Lg		14 15 24.0	
	comp=Z,219nm,0.9s						
KURK	**Kurchatov**	**9.46**	**339**	Pn	**Pn**	**14 12 37.6**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=155,slow=13,SNR=16						
KURK				Sn	**Sn**	**14 14 34.1**	**+8.4**
	comp=Z,0.5nm,0.3s,baz=138,slow=30,SNR=4.2						
KURK				Lg		14 15 19.6	
	comp=Z,0.6nm,0.3s,baz=156,slow=30,SNR=4.3						
KURK	**Kurchatov**	**9.46**	**339**	P	**Pn**	**14 12 37.6**	**-1.8**
KURK						14 14 34.1	
KK31	**Karatay Array**	**9.95**	**281**	Pn	**Pn**	**14 12 45.0**	**-1.1**
	comp=Z,3.0nm,0.7s,baz=90,slow=13,SNR=20						
KK31				⇓Pg	Pn	14 13 25.4	+39
	comp=Z,16nm,0.8s,baz=90,slow=15,SNR=7.3						
KK31				⇑Lg		14 15 36.2	
	comp=Z,156nm,1.2s,baz=95,slow=26,SNR=8.5						
ZAA0	**Zalesovo Array**	**11.98**	**3**	*e*Pn	**Pn**	**14 13 12.5**	**-1.4**
ZALV	**Zalesovo Beam**	**11.98**	**3**	Pn	**Pn**	**14 13 12.2**	**-1.7**
	comp=Z,0.8nm,0.3s,baz=180,slow=12,SNR=13						
ZALV				Sn	**Sn**	**14 15 32.6**	**+5.1**
	comp=Z,0.7nm,0.3s,baz=188,slow=20,SNR=3.2						
ZALV				Lg		14 16 40.6	
	comp=Z,0.2nm,0.3s,baz=186,slow=23,SNR=2.6						
ZALV				LR	LR	14 18 16.0	
	comp=Z,286nm,18.8s,baz=23,slow=40						
ZALV	**Zalesovo Beam**	**11.98**	**3**	P	**Pn**	**14 13 12.2**	**-1.7**
ZALV						14 15 32.6	
GTA	**Gaotai**	**12.35**	**97**	*e*P	**Pn**	**14 13 20.3**	**+1.3**
GTA				pP		14 13 25.1	
GTA				sP		14 13 28.3	
GTA				S	**Sn**	**14 15 47.6**	**+11**
GTA				sS		14 15 54.4	
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,110nm,7.1s						
GTA				LR	LR		
	comp=N,640nm,9.8s						
GTA				LR	LR		
	comp=E,1µm,10.1s						
GTA				LR	LR		
	comp=Z,1µm,10.7s						
NVS	**Novosibirsk**	**12.87**	**358**	*e*P	**Pn**	**14 13 28.0**	**+2.0**
NVS				*e*		14 15 58.0	
KBL	**Kabul**	**13.83**	**242**	*e*Pn	**Pn**	**14 13 36.5**	**-2.6**
VOSK	**Vostochnaya**	**13.83**	**325**	⇑Pn	**Pn**	**14 13 38.3**	**-0.9**
	comp=Z,20nm,1.0s						
VOSK				⇑Sn	**Sn**	**14 16 17.8**	**+5.1**
	comp=Z,15nm,0.8s						
VOSK				⇓Lg		14 17 44.7	
	comp=Z,121nm,1.4s						
BVA0	**Borovoye Array**	**14.30**	**325**	⇑Pn	**Pn**	**14 13 48.5**	**+2.9**
	comp=Z,1.6nm,1.0s,baz=138,slow=12,SNR=13						
BVA0				⇑Sn	**Sn**	**14 16 29.3**	**+5.3**
	comp=Z,2.6nm,1.1s,baz=98,slow=30,SNR=5.5						
BVA0				⇓Lg		14 17 56.5	
	comp=Z,16nm,1.2s,baz=116,slow=30,SNR=3.5						
BVAR	**Borovoye Array**	**14.30**	**325**	Pn	**Pn**	**14 13 45.4**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=130,slow=14,SNR=8.9						
BVAR				Sn	**Sn**	**14 16 26.9**	**+2.9**
	comp=Z,0.2nm,0.3s,baz=114,slow=21,SNR=2.6						
BVAR				Lg		14 17 53.3	
	comp=Z,0.3nm,0.3s,baz=122,slow=24,SNR=6.5						
BVAR	**Borovoye Array**	**14.30**	**325**	P	**Pn**	**14 13 45.4**	**-0.1**
BVAR						14 16 26.9	
NDI	**New Delhi**	**14.34**	**204**	*e*PKP	**Pn**	**14 13 42.0**	**-4.2**
NDI				*e*S	**Sn**	**14 16 16.0**	**-9.3**
BRVK	**Borovoye**	**14.37**	**325**	*e*Pn	**Pn**	**14 13 42.9**	**-3.6**
ZRNK	**Zerenda**	**14.86**	**323**	⇓Pn	**Pn**	**14 13 51.9**	**-1.2**
	comp=Z,15nm,1.0s						
ZRNK				⇓Sn	**Sn**	**14 16 43.9**	**+6.2**
	comp=Z,17nm,0.9s						
ZRNK				⇑Lg		14 18 16.2	
	comp=Z,148nm,1.6s						
ZAK	**Zakamensk**	**15.80**	**51**	⇑*i*P	**Pn**	**14 14 06.7**	**+1.2**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SONM	**Songino Array**	**16.95**	**62**	Lg		14 19 26.3	
	comp=Z,0.1nm,0.3s,baz=261,slow=28,SNR=4.0						
SONM				LR	LR	14 21 32.2	
	comp=Z,421nm,18.6s,baz=246,slow=40						
ULN	**Ulaanbaatar**	**17.39**	**62**	Pn	**Pn**	**14 14 25.4**	**-0.3**
AB31	**Akbulak array**	**18.22**	**302**	⇑P	**Pn**	**14 14 33.7**	**-2.3**
	comp=Z,4.1nm,0.6s,baz=94,slow=14,SNR=63						
ABKAR	**Akbulak array**	**18.22**	**302**	*e*P	**Pn**	**14 14 33.3**	**-2.6**
	comp=Z,6.3nm,0.6s						
AKTK	**Aktyubinsk**	**19.73**	**304**	P	**Pn**	**14 14 50.5**	**-3.6**
AKTK				Lg		14 20 47.0	
AKTK				LR	LR	14 22 43.1	
AKTO	**Aktyubinsk**	**19.73**	**304**	⇑P	**Pn**	**14 14 52.3**	**-1.9**
	comp=Z,1.2nm,0.9s						
AKTO	**Aktyubinsk**	**19.73**	**304**	P	**Pn**	**14 14 50.5**	**-3.7**
	comp=Z,0.7nm,0.3s,baz=97,slow=14,SNR=13						
AKTO				Lg		14 20 47.0	
	comp=Z,0.2nm,0.3s,baz=246,slow=12,SNR=1.6						
AKTO				LR	LR	14 22 43.1	
	comp=Z,198nm,18.4s,baz=116,slow=38						
SVE	**Sverdlovsk**	**21.05**	**323**	*e*P	**P**	**14 15 06.8**	**-0.2**
SVE				pmax	pmax		
	comp=Z,35nm,1.0s,mb4.6						
XAN	**Xi'an**	**21.20**	**104**	P	**P**	**14 15 16.8**	**+8.0**
XAN				pP		14 15 26.8	
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.6						
ARU	**Arti**	**21.80**	**320**	*e*P	**P**	**14 15 14.0**	**-1.1**
	comp=Z,16nm,0.8s,mb4.5						
ARU	**Arti**	**21.80**	**320**	*d i*P	**P**	**14 15 14.9**	**-0.2**
ARU				*e*		14 15 32.8	
ARU				S	**S**	**14 19 02.6**	**-13**
ARU				SS		14 19 18.6	
ARU				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.4						
ARU				MLR	MLR		
	comp=Z,226nm,16.0s,MS3.7						
KMI	**Kunming**	**22.93**	**131**	P	**P**	**14 15 31.9**	**+4.6**
KMI				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
ENH	**Enshi**	**23.65**	**111**	P	**P**	**14 15 33.2**	**-1.6**
	comp=Z,11nm,0.7s,mb4.4						
SOKR	**Solikamsk**	**24.29**	**326**	⇑*i*P	**P**	**14 15 41.1**	**+0.8**
SOKR				S	**S**	**14 19 55.0**	**-4.0**
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
SOKR				MLR	MLR		
	comp=Z,590nm,22.0s,MS4.0						
HYB	**Hyderabad**	**24.91**	**192**	*i* P	**P**	**14 15 46.5**	**+0.2**
CHTO	**Chiang Mai**	**26.41**	**146**	*e*P	**P**	**14 16 00.8**	**+0.9**
	comp=Z,9.5nm,1.1s,mb4.2						
CHTO	**Chiang Mai**	**26.41**	**146**	*e*P	**P**	**14 16 00.8**	**+0.9**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.2						
CMAR	**Chiang Mai Arr**	**26.73**	**147**	P	**P**	**14 16 03.9**	**+1.1**
	comp=Z,3.2nm,0.7s,mb4.0,baz=322,slow=9.0,SNR=19						
OBN	**Obninsk**	**33.30**	**310**	P	**P**	**14 17 00.0**	**-0.7**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
OBN				MLR	MLR		
	comp=Z,100nm,14.0s,MS3.7						
KSRS	**Korea Array**	**33.88**	**83**	LR	LR	14 31 14.9	
	comp=Z,93nm,19.2s,MS3.5,baz=61,slow=37						
JOF	**Joensuu**	**36.88**	**323**	*e*P	**P**	**14 17 31.5**	**+0.1**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
JOF	**Joensuu**	**36.88**	**323**	*e*p	**P**	**14 17 31.5**	**+0.1**
	comp=Z,2.4nm,0.5s,mb4.3						
BRTR	**Keskin Array B**	**37.64**	**284**	P	**P**	**14 17 38.7**	**+0.5**
	comp=Z,1.6nm,0.7s,mb3.9,baz=82,slow=8.9,SNR=9.3						
AKASG	**Malin Array Be**	**37.96**	**302**	P	**P**	**14 17 40.1**	**-0.6**
	comp=Z,1.5nm,0.6s,mb3.9,baz=72,slow=8.2,SNR=3.5						
KAF	**Kangasniemi**	**39.10**	**321**	*e*P	**P**	**14 17 54.7**	**+4.5**
KAF	**Kangasniemi**	**39.10**	**321**	*e*p	**P**	**14 17 54.7**	**+4.5**
FINES	**FINESS Array B**	**39.17**	**320**	P	**P**	**14 17 51.3**	**+0.5**
FINES				LR	LR	14 36 48.5	
FINES	**FINESS Array B**	**39.17**	**320**	P	**P**	**14 17 51.3**	**+0.5**
	comp=Z,1.3nm,0.6s,mb3.9,baz=100,slow=9.9,SNR=7.9						
FINES				LR	LR	14 36 48.5	
	comp=Z,52nm,20.8s,MS3.3,baz=166,slow=41						
KEV	**Kevo**	**39.96**	**333**	*e*P	**P**	**14 17 57.3**	**+0.1**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
KEV	**Kevo**	**39.96**	**333**	*e*p	**P**	**14 17 57.3**	**+0.1**
	comp=Z,2.0nm,0.7s,mb4.0						
ARCES	**ARCESS Array B**	**40.42**	**332**	P	**P**	**14 18 01.9**	**+0.9**
	comp=Z,1.1nm,0.5s,mb3.9,baz=94,slow=8.0,SNR=24						
ARCES	**ARCESS Array B**	**40.42**	**332**	P	**P**	**14 18 01.9**	**+0.8**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
EIL	**Elat**	**41.03**	**269**	P	**P**	**14 18 08.1**	**+1.5**
EIL	**Elat**	**41.03**	**269**	P	**P**	**14 18 08.1**	**+1.5**
	comp=Z,2.0nm,0.6s,mb3.9,baz=39,slow=13,SNR=4.1						
MJAR	**Matsushiro Arr**	**41.81**	**79**	LR	LR	14 36 27.6	
	comp=Z,147nm,18.7s,MS3.9,baz=270,slow=37						
JHJ	**Hachijo jima 2**	**44.49**	**82**	LR	LR	14 39 12.2	
	comp=Z,177nm,18.1s,MS4.0,baz=264,slow=39						
NOA	**NORSAR Array B**	**46.35**	**320**	P	**P**	**14 18 48.3**	**-0.7**
	comp=Z,1.9nm,0.5s,mb4.3,baz=80,slow=7.9,SNR=11						
NOA				LR	LR	14 38 54.3	
	comp=Z,159nm,18.4s,MS4.0,baz=70,slow=37						
PETK	**Petropavlovsk-**	**48.92**	**50**	LR	LR	14 41 05.0	
	comp=Z,130nm,20.0s,MS3.9,baz=152,slow=38						
TIP	**Timpagrande**	**49.88**	**291**	*e*P	**P**	**14 19 14.3**	**-2.2**
	comp=Z,7.8nm,1.1s,mb4.7						
LPG	**La Plagne**	**53.82**	**302**	*e*P	**P**	**14 19 46.1**	**+0.2**
LPL	**La Plagne**	**53.82**	**302**	*e*P	**P**	**14 19 46.0**	**+0.1**
	comp=Z,8.0nm,0.6s,mb4.5						
LPL	**La Plagne**	**53.82**	**302**	*e*P	**P**	**14 19 46.0**	**+0.1**
	comp=Z,4.0nm,0.6s,mb4.5						
LPL	**La Plagne**	**53.82**	**302**	*e*P	**P**	**14 19 46.0**	**+0.1**
LPL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
MBDF	**Montbardon**	**54.14**	**301**	*e*P	**P**	**14 19 48.7**	**+0.4**
ORIF	**Oris-en-Rattie**	**54.62**	**302**	*e*P	**P**	**14 19 50.8**	**-1.0**
	comp=Z,3.9nm,0.6s,mb4.3						
ORIF	**Oris-en-Rattie**	**54.62**	**302**	*e*P

SG1 eSg Sg 14 21 54.5 +2.3
CDT Castel del Mon 0.88 233 ePg Pg 14 21 41.2 +0.1
CDT eSg Sg 14 21 55.6 +3.1
MRVN Minervino Murg 0.94 234 Pg Pg 14 21 41.6 -0.7
MRVN Sg Sg 14 21 55.8 +1.3
498nm,0.8s
MRVN Minervino Murg 0.94 234 Pg Pg 14 21 41.6 -0.7
MRVN Sg Sg 14 21 55.8 +1.3
498nm,0.8s
MS1 Monte Sant'Ang 0.95 276 ePg Pg 14 21 42.9 +0.4
MS1 eSg Sg 14 21 58.8 +4.1
MSAG Monte S. Angel 0.97 276 P Pg 14 21 42.9 0.0
MSAG Monte S. Angel 0.97 276 Pg Pg 14 21 43.2 +0.3
MSAG Sg Sg 14 21 58.3 +2.8
2µm,1.1s
MSAG Monte S. Angel 0.97 276 P Pg 14 21 42.9 0.0
MSAG Monte S. Angel 0.97 276 Pg Pg 14 21 43.2 +0.3
MSAG Sg Sg 14 21 58.3 +2.8
2µm,1.1s
MATE Matera 1.04 201 Pn Pn 14 21 43.2 -2.1
MATE Sn Sn 14 21 57.0 -3.1
887nm,0.7s
MATE Matera 1.04 201 Pn Pn 14 21 43.2 -2.1
TAR1 Taranto 1.09 177 ePg Pg 14 21 42.5 -2.7
TAR1 eSg Sg 14 21 59.4 +0.1
SGRT San Giovanni R 1.10 278 P Pg 14 21 45.0 -0.4
SGRT San Giovanni R 1.10 278 Pn Pn 14 21 44.8 -1.4
SGRT Sn Sn 14 22 01.2 -0.5
492nm,0.6s
SGRT San Giovanni R 1.10 278 Pn Pn 14 21 44.8 -1.4
SGRT San Giovanni R 1.10 278 P Pg 14 21 45.0 -0.4
SGRT Sn Sn 14 22 01.2 -0.5
492nm,0.6s
PALZ Palazzo San Ge 1.15 235 Pn Pn 14 21 45.3 -1.6
PALZ Sn Sn 14 22 03.2 +0.2
1µm,0.7s
PALZ Palazzo San Ge 1.15 235 Pn Pn 14 21 45.3 -1.6
PALZ Sn Sn 14 22 03.2 +0.2
1µm,0.7s
MIGL Miglionico 1.16 210 Pn Pn 14 21 45.6 -1.5
MIGL Sn Sn 14 22 03.1 -0.1
3µm,0.8s
MIGL Miglionico 1.16 210 Pn Pn 14 21 45.6 -1.5
MIGL Sn Sn 14 22 03.1 -0.1
3µm,0.8s
RGNG Rignano Grg 1.21 273 Pn Pn 14 21 46.6 -1.1
RGNG Rignano Grg 1.21 273 Pn Pn 14 21 46.6 -1.1
ACER Acerenza 1.26 229 Pn Pn 14 21 47.2 -1.2
ACER Sn Sn 14 22 05.8 +0.1
768nm,0.6s
ACER Acerenza 1.26 229 Pn Pn 14 21 47.2 -1.2
ACER Sn Sn 14 22 05.8 +0.1
768nm,0.6s
HCY Herceg Novi 1.27 49⇑*i*Pg Pn 14 21 46.6 -2.0
HCY eSg Sg 14 22 05.8 +0.6
HCY Herceg Novi 1.27 49⇑*i*Pg Pn 14 21 46.6 -2.0
HCY eSg Sg 14 22 05.8 +0.6
STON Ston 1.31 16 ePg Pn 14 21 47.4 -1.7
STON Sg Sg 14 22 05.1 -1.2
STON Ston 1.31 16 ePg Pn 14 21 47.3 -1.8
STON Sg Sg 14 22 05.1 -1.2
VULT Monte Vulture 1.36 242 Pn Pn 14 21 49.7 -0.1
1µm,1.2s
VULT Monte Vulture 1.36 242 Pn Pn 14 21 49.7 -0.1
1µm,1.2s
CRAC Craco 1.38 205 Pn Pn 14 21 49.0 -1.0
CRAC Sn Sn 14 22 09.0 +0.4
959nm,0.7s
CRAC Craco 1.38 205 Pn Pn 14 21 49.0 -1.0
CRAC Sn Sn 14 22 09.0 +0.4
959nm,0.7s
PTRP Pietrapertosa 1.39 219 Pn Pn 14 21 50.2 0.0
610nm,0.7s
PTRP Pietrapertosa 1.39 219 Pn Pn 14 21 50.2 0.0
610nm,0.7s
PZUN Potenza 1.43 228 Pn Pn 14 21 51.1 +0.3
PZUN Potenza 1.43 228 Pn Pn 14 21 51.1 +0.3
BUM Brajici-Budva 1.44 61⇓*i*Pg Pn 14 21 49.0 -1.9
BUM eSg Sg 14 22 11.2 +0.7
BUM Brajici-Budva 1.44 61⇓*i*Pg Pn 14 21 49.0 -1.9
BUM eSg Sg 14 22 11.2 +0.7
SGTA Sant Agata di 1.46 251 Pn Pn 14 21 51.6 +0.4
429nm,0.6s
SGTA Sant Agata di 1.46 251 Pn Pn 14 21 51.6 +0.4
429nm,0.6s
FG5 Orsara di Pugl 1.49 258 Pn Pn 14 21 52.5 +0.9
363nm,0.7s
FG5 Orsara di Pugl 1.49 258 Pn Pn 14 21 52.5 +0.9
363nm,0.7s
FG2 Serracapriola 1.54 278 Pn Pn 14 21 52.9 +0.7
241nm,0.3s
FG2 Serracapriola 1.54 278 Pn Pn 14 21 52.9 +0.7
241nm,0.3s
MRLC Muro Lucano 1.55 237 Pn Pn 14 21 52.7 +0.3
318nm,0.7s
MRLC Muro Lucano 1.55 237 Pn Pn 14 21 52.7 +0.3
318nm,0.7s
MOCO Biccari - m.te 1.56 262 Pn Pn 14 21 53.6 +1.2
543nm,1.3s
ULC Ulcinj 1.57 77⇑*i*Pg Pn 14 21 51.8 -0.9
ULC eSg Sg 14 22 15.3 +0.6
ULC Ulcinj 1.57 77⇑*i*Pg Pn 14 21 51.8 -0.9
ULC eSg Sg 14 22 15.3 +0.6
CAFE Carife 1.59 249 Pn Pn 14 21 53.9 +0.9
207nm,1.2s
CAFE Carife 1.59 249 Pn Pn 14 21 53.9 +0.9
207nm,1.2s
BRY Bratogost 1.62 37⇓*i*Pn Pn 14 21 52.4 -1.0
BRY eSn Sn 14 22 17.4 +2.7
BRY Bratogost 1.62 37⇓*i*Pn Pn 14 21 52.4 -1.0
BRY eSn Sn 14 22 17.4 +2.7
SCHR S. Chirico Rap 1.65 211 Pn Pn 14 21 53.5 -0.3
139nm,0.6s
SCHR S. Chirico Rap 1.65 211 Pn Pn 14 21 53.5 -0.3
139nm,0.6s
MCEL Monticello 1.67 220 Pn Pn 14 21 54.5 +0.5
251nm,0.7s
MCEL Monticello 1.67 220 Pn Pn 14 21 54.5 +0.5
251nm,0.7s
CIGN Sant'Elia a Pi 1.72 272 Pn Pn 14 21 55.9 +1.2
324nm,0.9s
CIGN Sant'Elia a Pi 1.72 272 Pn Pn 14 21 55.9 +1.2
324nm,0.9s
PDG Podgorica 1.74 61⇓*i*Pn Pn 14 21 53.8 -1.2
PDG eSn Sn 14 22 20.9 +3.5
TTG Podgorica 1.74 61⇓*i*Pn Pn 14 21 53.8 -1.2
TTG eSn Sn 14 22 20.9 +3.5
TTG Podgorica 1.74 61⇓*i*Pn Pn 14 21 53.8 -1.2
TTG eSn Sn 14 22 20.9 +3.5
MTSN Montesano sull 1.74 220 Pn Pn 14 21 55.9 +0.9
242nm,0.7s
MTSN Montesano sull 1.74 220 Pn Pn 14 21 55.9 +0.9
242nm,0.7s
MCRV Calabrutti - M 1.75 242 Pn Pn 14 21 56.0 +0.9
163nm,0.4s
MCRV Calabrutti - M 1.75 242 Pn Pn 14 21 56.0 +0.9
163nm,0.4s
SIRI Monte Sirino - 1.75 216 Pn Pn 14 21 55.6 +0.4
147nm,0.3s
SIRI Monte Sirino - 1.75 216 Pn Pn 14 21 55.6 +0.4
147nm,0.3s
SGO Sicignano 1.78 234 Pn Pn 14 21 56.4 +0.9
82nm,0.5s
SGO Sicignano 1.78 234 Pn Pn 14 21 56.4 +0.9
82nm,0.5s
NKY Niksic 1.79 48⇓*i*Pn Pn 14 21 55.4 -0.3
NKY eSn Sn 14 22 22.0 +3.2
NKY Niksic 1.79 48⇓*i*Pn Pn 14 21 55.4 -0.3
NKY eSn Sn 14 22 22.0 +3.2
SCTE Santa Cesarea 1.82 148 Pn Pn 14 21 54.7 -1.4
SCTE Santa Cesarea 1.82 148 Pn Pn 14 21 54.7 -1.4
CDRU Civita di Ruta 1.82 232 Pn Pn 14 21 54.8 -1.3
122nm,0.8s
CDRU Civita di Ruta 1.82 232 Pn Pn 14 21 54.8 -1.3
122nm,0.8s
SACR S. Croce Del S 1.89 264 Pn Pn 14 21 59.8 +2.8
314nm,1.2s
SACR S. Croce Del S 1.89 264 Pn Pn 14 21 59.8 +2.8
314nm,1.2s
FRES Fresagrandinar 1.93 282 Pn Pn 14 21 58.2 +0.6
385nm,0.8s
FRES Fresagrandinar 1.93 282 Pn Pn 14 21 58.2 +0.6
385nm,0.8s
CUC Castrocucco 1.93 213 ePn Pn 14 21 57.9 +0.2
CUC Castrocucco 1.93 213 ePn Pn 14 21 57.9 +0.2

BSSO Busso 1.96 269 Pn Pn 14 22 00.3 +2.3
BSSO Busso 1.96 269 Pn Pn 14 22 00.3 +2.3
UPM Unac-Piva 2.03 38⇑*i*Pn Pn 14 21 59.2 +0.2
UPM eSn Sn 14 22 27.7 +3.1
UPM Unac-Piva 2.03 38⇑*i*Pn Pn 14 21 59.2 +0.2
UPM eSn Sn 14 22 27.7 +3.1
PUK Puka 2.06 77 ePN Pn 14 21 58.9 -0.4
PUK Puka 2.06 77 ePn Pn 14 21 58.9 -0.4
BULG Bulgheria - Ca 2.07 223 Pn Pn 14 21 57.9 -1.6
191nm,0.7s
BULG Bulgheria - Ca 2.07 223 Pn Pn 14 21 57.9 -1.6
191nm,0.7s
VAGA Valle Agricola 2.24 266 Pn Pn 14 22 02.5 +0.7
177nm,0.7s
VAGA Valle Agricola 2.24 266 Pn Pn 14 22 02.5 +0.7
177nm,0.7s
BCI Bajram Curri 2.26 70 ePN Pn 14 22 02.4 +0.2
BCI Bajram Curri 2.26 70 ePn Pn 14 22 02.4 +0.2
PVY Plav 2.28 64⇑*i*Pn Pn 14 22 02.9 +0.4
PVY eSn Sn 14 22 33.4 +2.5
PVY Plav 2.28 64⇑*i*Pn Pn 14 22 02.9 +0.4
PVY eSn Sn 14 22 33.4 +2.5
PLE Pljevlja 2.36 43⇓*i*Pn Pn 14 22 03.4 -0.1
PLE eSn Sn 14 22 35.4 +2.6
PLE Pljevlja 2.36 43⇓*i*Pn Pn 14 22 03.4 -0.1
PLE eSn Sn 14 22 35.4 +2.6
BEY Berane 2.36 57⇓*i*Pn Pn 14 22 03.5 -0.1
BEY eSn Sn 14 22 35.5 +2.6
IVA Berane 2.36 57⇓*i*Pn Pn 14 22 03.5 -0.1
IVA eSn Sn 14 22 35.5 +2.6
IVA Berane 2.36 57⇓*i*Pn Pn 14 22 03.5 -0.1
IVA eSn Sn 14 22 35.5 +2.6
CERA Filignano 2.39 271 Pn Pn 14 22 04.8 +0.9
236nm,0.8s
CERA Filignano 2.39 271 Pn Pn 14 22 04.8 +0.9
236nm,0.8s
TIP Timpagrande 2.46 188 ePn Pn 14 22 03.6 -1.3
TIP Timpagrande 2.46 188 ePn Pn 14 22 03.6 -1.3
SDI San Donato 2.54 273 Pn Pn 14 22 07.8 +1.8
32nm,0.4s
SDI San Donato 2.54 273 Pn Pn 14 22 07.8 +1.8
32nm,0.4s
SERS Sersale 2.61 189 Pn Pn 14 22 08.8 +1.9
SERS Sersale 2.61 189 Pn Pn 14 22 08.8 +1.9
POFI Posta Fibreno 2.62 273 Pn Pn 14 22 07.8 +0.8
88nm,0.9s
POFI Posta Fibreno 2.62 273 Pn Pn 14 22 07.8 +0.8
88nm,0.9s
SRN Sarande 2.74 128 ePN Pn 14 22 14.1 +5.3
AQU L'Aquila 2.93 286 eP Pn 14 22 17.3 +6.0
NVLJ Novalja 3.40 331 ePn Pn 14 22 16.6 -1.3
NVLJ Sn Sn 14 22 56.0 -2.5
NVLJ Novalja 3.40 331 ePn Pn 14 22 16.5 -1.4
NVLJ Sn Sn 14 22 56.0 -2.5
BOJS Bojanci 4.14 341 *i* Pn Pn 14 22 28.0 0.0
BOJS *i* Sn Sn 14 23 16.6 0.0
BOJS Bojanci 4.14 341 *i* Pn Pn 14 22 28.0 +0.1
BOJS *i* Sn Sn 14 23 16.6 0.0
SKDS Skadanscina 4.56 331 *i* Pn Pn 14 22 33.4 -0.3
SKDS *i* Sn Sn 14 23 25.5 -1.5
VOY Vojsko 5.02 333 ePn Pn 14 22 39.5 -0.6
VOY eSn Sn 14 23 36.3 -2.1
VOY *e* 14 24 19.5
VOY Vojsko 5.02 333 ePn Pn 14 22 39.5 -0.6
VOY eSn Sn 14 23 36.3 -2.1

*CSEM **22** 14:21:24.9±0.5, 34°.79N×34°.01E, h18km±2km, Mw3.0, Error ellipse: s-maj=11.6km s-min=5.8km az=160.0*
*ISK **22** 14:21:25.9, 34°.91N×34°.02E, h28km, ML2.4*
*NIC **22** 14:21:25.4±0.2, 34°.75N×33°.94E, h10km, ML2.7, MW3.0*
*NEIC **22** 14:21:25.4, 34°.75N×33°.94E, h10km, ML2.7(NIC), After NIC.*

ISC 22 14:21:25.7±1.5, **34°.84N**±0°.09×**34°.05E**±0°.08, **h27**km±5km, **n18**, σ0**°95**/30, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PHNC	**Paralimni**	**0.16**	**356**	P		**Pb**	**14 21 31.2**	**+0.1**
	44nm,0.2s							
PHNC				S		**Sb**	**14 21 35.2**	**+0.4**
PHNC	**Paralimni**	**0.16**	**356**	P		**Pb**	**14 21 31.2**	**+0.1**
	44nm,0.2s							
PHNC				S		**Sb**	**14 21 35.2**	**+0.4**
CSS	**Prodhromos**	**0.60**	**282**	P		**Pb**	**14 21 35.9**	**-1.7**
	2.7nm,0.4s							
CSS				S		**Sb**	**14 21 44.6**	**-1.1**
CSS	**Prodhromos**	**0.60**	**282**	P		**Pb**	**14 21 35.9**	**-1.7**
	2.7nm,0.4s							
CSS				S		**Sb**	**14 21 44.6**	**-1.1**
LFK	**Lefkose**	**0.60**	**316**	ePG		**Pb**	**14 21 36.7**	**-1.1**
LFK				eSG		**Sb**	**14 21 46.6**	**+0.7**
LFK	**Lefkose**	**0.60**	**316**	ePG		**Pb**	**14 21 36.7**	**-1.0**
LFK				eSG		**Sb**	**14 21 46.6**	**+0.7**
EREN	**Erenkoy**	**0.69**	**8**	ePG		**Pb**	**14 21 40.0**	**+0.8**
EREN	**Erenkoy**	**0.69**	**8**	ePG		**Pb**	**14 21 40.0**	**+0.8**
LEF	**Lefka**	**0.99**	**287**	ePG		**Pn**	**14 21 43.5**	**-0.3**
LEF				eSG		**Sb**	**14 21 58.0**	**+1.2**
LEF	**Lefka**	**0.99**	**287**	ePg		**Pn**	**14 21 43.5**	**-0.3**
LEF				eSG		**Sb**	**14 21 58.0**	**+1.2**
ALFC	**Alevga**	**1.23**	**285**	P		**Pn**	**14 21 47.4**	**+0.3**
	2.0nm,0.3s							
ALFC				S		**Sn**	**14 22 03.6**	**+0.8**
ALFC	**Alevga**	**1.23**	**285**	P		**Pn**	**14 21 47.4**	**+0.3**
	2.0nm,0.3s							
ALFC				S		**Sn**	**14 22 03.6**	**+0.8**
PPCY	**Paphos**	**1.40**	**272**	P		**Pn**	**14 21 49.6**	**+0.2**
PPCY	**Paphos**	**1.40**	**272**	P		**Pn**	**14 21 49.6**	**+0.2**
IKL	**Isikli**	**1.42**	**348**	ePN		**Pn**	**14 21 49.8**	**0.0**
IKL				eSN		**Sn**	**14 22 05.7**	**-1.9**
IKL	**Isikli**	**1.42**	**348**	ePn		**Pn**	**14 21 49.8**	**0.0**
IKL				eSn		**Sn**	**14 22 05.7**	**-1.9**
HDMB	**Hadim**	**2.47**	**330**	ePN		**Pn**	**14 22 05.3**	**+1.2**
HDMB	**Hadim**	**2.47**	**330**	ePn		**Pn**	**14 22 05.3**	**+1.2**

*IDC **22** 14:22:08.5±3.1, 25°.82S×177°.58W, h60km±28km, mb4.1/11, mb1 4.4/14, mb1mx4.3/21, mbtmp4.3/14, ML4.1/3, Error ellipse: s-maj=22.0km s-min=15.1km az=131.0*
*NEIC **22** 14:22:23.9±1.6, 25°.74S×177°.79W, h196km±14km, mb4.5/6, Error ellipse: s-maj=15.6km s-min=10.1km az=109.0*

ISC 22 14:22:16.2±2.2, **26°.1S**×**177°.5W**±0°.1, **h133**km±20km, **n39**, σ1**°03**/32, **mb4.2**/16, **2D**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MSVF	**Nonsavu**	**9.33**	**333**	ePn		**Pn**	**14 24 28.4**	**+0.9**
OUZ	**Omahuta**	**11.85**	**218**	ePn		**Pn**	**14 25 08.6**	**+7.8**
URZ	**Urewera**	**12.91**	**199**	ePn		**Pn**	**14 25 10.8**	**-3.9**
URZ				eS		Sx	14 27 33.7	
URZ	**Urewera**	**12.91**	**199**	P		**Pn**	**14 25 11.0**	**-3.6**
	1.1nm,0.3s,baz=32,slow=14,SNR=9.9							
URZ				S		Sx	14 27 33.8	
	3.8nm,0.3s,baz=325,slow=23,SNR=9.7							
AFI	**Afiamalu**	**13.30**	**25**	P		**Pn**	**14 25 10.9**	**-9.0**
AFI				S		Sx	14 27 24.1	
AFI	**Afiamalu**	**13.30**	**25**	P		**Pn**	**14 25 10.9**	**-9.0**
	27nm,0.3s,baz=103,slow=1.3,SNR=41							
AFI				S		Sx	14 27 24.1	
	7.3nm,0.3s,baz=29,slow=17,SNR=4.0							
RAR	**Rarotonga**	**16.96**	**77**	P		**Pn**	**14 26 03.6**	**-2.0**
	1.2nm,0.3s,baz=234,slow=9.1,SNR=2.5							
RAR				S		Sx	14 29 04.4	
	baz=68,slow=19,SNR=2.8							
RPZ	**Rata Peaks**	**19.85**	**205**	P		**P**	**14 26 35.6**	**-1.0**
	9.5nm,0.8s,baz=16,slow=15,SNR=3.0							
RPZ				S		Sx	14 30 04.2	
	6.1nm,0.8s,baz=190,slow=17,SNR=1.8							
CTA	**Charters Tower**	**33.80**	**273**	eP		**P**	**14 28 46.8**	**+1.2**
	7.2nm,0.5s,mb4.7							
CTAO	**Charters Tower**	**33.80**	**273**	eP		**P**	**14 28 46.6**	**+1.0**
	10.0nm,0.6s,mb4.7							
STKA	**Stephens Creek**	**36.07**	**251**	eP		**P**	**14 29 05.8**	**+0.8**
	0.4nm,0.5s,mb3.3							
STKA	**Stephens Creek**	**36.07**	**251**	P		**P**	**14 29 05.3**	**+0.4**
	1.9nm,0.5s,mb4.0,baz=71,slow=12,SNR=13							
ASAR	**Alice Springs**	**43.94**	**262**	P		**P**	**14 30 09.9**	**-0.1**
	3.5nm,0.4s,mb4.4,baz=91,slow=7.1,SNR=214							
WRA	**Warramunga Arr**	**44.55**	**268**	P		**P**	**14 30 14.3**	**-0.7**
	3.7nm,0.3s,mb4.4,baz=101,slow=7.7,SNR=42							
FORT	**Forrest**	**47.70**	**251**	eP		**P**	**14 30 38.6**	**-0.9**
	18nm,0.5s,mb5.0							

KAKA Kakadu 48.78 276 eP P **14 30 46.4 -1.6**
13nm,0.5s,mb4.8
KNA Kununurra 50.93 271 eP P **14 31 03.9 -0.3**
20nm,1.2s,mb4.6
SBA Scott Base 52.30 184 eP P **14 31 18.9 +5.4**
8.1nm,0.8s,mb4.4
CASY Casey 59.11 207⇓*i*P P **14 32 02.8 +0.6**
QSPA South Pole Qui 63.95 180 eP P **14 32 38.2 +3.7**
12nm,0.8s,mb4.8
QSPA ePcP PcP 14 33 10.8 +2.0
QSPA South Pole Qui 63.95 180 P P **14 32 38.4 +3.9**
14nm,0.9s,mb4.8,baz=34,slow=1.8,SNR=70
MAW Mawson 76.44 200⇓*i*P P **14 33 53.0 +2.3**
14nm,0.5s,mb4.8
MAW Mawson 76.44 200 eP P **14 33 52.9 +2.2**
3.3nm,0.5s,mb4.2
MAW Mawson 76.44 200 P P **14 33 52.9 +2.2**
16nm,0.5s,mb4.9,baz=134,slow=6.4,SNR=177
PETK Petropavlovsk- 81.82 345 P P **14 34 19.6 -0.3**
0.7nm,0.5s,mb3.5,baz=106,slow=7.6,SNR=6.0
VNA3 Neumayer Olymp 82.51 176 *e* P **14 34 22.6 -0.9**
VNA1 Neumayer--Stat 83.18 176 *e* P **14 34 26.8 -0.1**
NVAR Mina Array Bea 84.82 43 P P **14 34 36.1 +0.4**
3.0nm,0.7s,mb4.1,baz=221,slow=8.6,SNR=18
TXAR Lajitas Array 89.72 57 P P **14 35 00.3 +0.8**
0.8nm,0.8s,mb3.7,baz=224,slow=7.0,SNR=8.9
MCMT McKenzie Canyo 91.95 40 eP P **14 35 10.0 +0.6**
0.6nm,0.7s,mb3.7
PDAR Pinedale Array 92.75 43 P P **14 35 13.2 +0.1**
1.4nm,0.6s,mb4.2,baz=219,slow=1.7,SNR=10.0
ILAR Eielson Array 93.69 13 P P **14 35 15.6 -1.4**
0.2nm,0.7s,mb3.4,baz=210,slow=6.6,SNR=5.8
LBTB Lobatse 124.46 206 ePKPdf PKPdf 14 41 02.5 +2.3
ARCES ARCESS Array B 134.53 349 PKP PKPdf 14 41 16.7 -1.0
1.3nm,0.7s,baz=90,slow=1.2,SNR=10.0
FINES FINESS Array B 141.28 342 PKhKP PKPpre 14 41 22.8
0.9nm,0.5s,baz=46,slow=5.5,SNR=4.4
NOA NORSAR Array B 144.61 353 PKP PKPdf 14 41 34.1 -2.2
0.6nm,0.5s,baz=0.0,slow=1.8,SNR=9.2
AKASG Malin Array Be 148.07 327 PKPbc PKPbc 14 41 44.1 -1.7
0.7nm,0.4s,baz=50,slow=3.9,SNR=4.6
BRTR Keskin Array B 150.72 305 PKPbc PKPbc 14 41 52.5 -0.2
0.6nm,0.6s,baz=143,slow=6.5,SNR=3.8
BRTR PKPab PKPab 14 42 01.2 +1.0
1.0nm,0.8s,baz=99,slow=3.1,SNR=3.7
TORD Torodi Ar. Bea 167.05 177 PKPab PKPab 14 43 12.7 +1.5
1.8nm,0.7s,baz=182,slow=3.6,SNR=12

IDC 22 14:22:45.7±4.1, **24°.45S**×**178°.28W**, **h0**km, **mb4.3**/3, **mb1 4.6**/3, **mb1mx4.0**/15, **mbtmp4.3**/3, **MS3.3**/1, **Ms1 3.3**/1, **ms1mx2.1**/19, **Error ellipse: s-maj=233.4km s-min=33.3km az=157.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
URZ	**Urewera**	**14.31**	**195**	LR		LR	14 30 00.8	
	comp=Z,121nm,19.7s,baz=312,slow=30							
ASAR	**Alice Springs**	**43.50**	**261**	P		P	14 30 50.4	-0.7
	4.5nm,0.7s,baz=106,slow=9.2,SNR=14							
WRA	**Warramunga Arr**	**43.94**	**266**	P		P	14 30 55.1	+0.5
	8.7nm,0.9s,baz=104,slow=8.4,SNR=12							
NVAR	**Mina Array Bea**	**84.07**	**43**	P		P	14 35 18.3	0.0
	0.7nm,0.7s,baz=212,slow=8.4,SNR=3.6							
AKASG	**Malin Array Be**	**146.28**	**328**	PKPbc		PKPbc	14 42 27.6	-0.3
	0.5nm,0.4s,baz=40,slow=3.7,SNR=4.3							

*ISCJB **22** 14:31:33.1±2.3, 18°.8N±0°.1×145°.5E±0°.3, h218km±24km, mb3.3/7, Error ellipse: s-maj=39.4km s-min=23.0km az=179.7*
*IDC **22** 14:31:35.0±3.2, 18°.82N×145°.92E, h234km±32km, mb3.1/6, mb1 3.3/7, mb1mx3.1/21, mbtmp3.1/7, Error ellipse: s-maj=33.0km s-min=18.3km az=91.0*
*NEIC **22** 14:31:34.6±2.0, 18°.84N×145°.62E, h222km±20km, Error ellipse: s-maj=30.3km s-min=18.6km az=87.0*

ISC 22 14:31:33.7±2.2, **18°.8N**±0°.1×**145°.6E**±0°.3, **h208**km±23km, **n12**, σ0**°93**/12, **mb3.3**/7, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
GUMO	**Guam**	**5.26**	**187**	P		**Pn**	**14 32 52.7**	**+1.1**
GUMO				*e*S		**Sn**	**14 33 52.7**	**-0.5**
GUMO	**Guam**	**5.26**	**187**	P		**Pn**	**14 32 52.7**	**+1.1**
	1.7nm,0.3s,baz=170,slow=22,SNR=1.8							
GUMO				S		**Sn**	**14 33 50.6**	**-2.6**
	3.4nm,0.3s,baz=194,slow=21,SNR=1.9							
WRA	**Warramunga Arr**	**40.07**	**197**	P		**P**	**14 38 49.2**	**+0.3**
	0.3nm,0.3s,mb3.2,baz=20,slow=8.2,SNR=4.7							
SONM	**Songino Array**	**42.95**	**321**	P		**P**	**14 39 12.7**	**+0.7**
	0.3nm,0.3s,mb3.2,baz=109,slow=7.8,SNR=2.8							
ASAR	**Alice Springs**	**43.74**	**196**	P		**P**	**14 39 18.8**	**+0.2**
	0.1nm,0.3s,mb2.6,baz=14,slow=6.5,SNR=7.8							
MKAR	**Makanchi Array**	**58.27**	**314**	P		**P**	**14 41 06.4**	**-0.1**
	0.3nm,0.2s,mb3.5,baz=86,slow=10,SNR=4.0							
ILAR	**Eielson Array**	**62.59**	**26**	P		**P**	**14 41 40.9**	**-1.0**
	0.7nm,0.8s,mb3.4,baz=262,slow=4.6,SNR=9.1							
NVAR	**Mina Array Bea**	**83.17**	**52**	P		**P**	**14 43 37.6**	**+0.9**
	1.1nm,0.7s,mb3.7,baz=266,slow=6.0,SNR=7.6							
FINES	**FINESS Array B**	**86.70**	**335**	P		**P**	**14 43 52.5**	**-1.3**
FINES	**FINESS Array B**	**86.70**	**335**	P		**P**	**14 43 52.5**	**-1.3**
	0.6nm,0.4s,mb3.7,baz=46,slow=5.5,SNR=4.7							
LPAZ	**La Paz**	**147.82**	**91**	*e*PKPdf		PKPdf	14 50 50.1	-1.5
LPAZ	**La Paz**	**147.82**	**91**	PKPbc		PKPbc	14 50 50.4	-4.5
	0.9nm,0.3s,baz=304,slow=3.6,SNR=5.3							

*BJI **22** 14:40:17.2, 24°.09N×97°.24E, h10km, ML3.8/7*
*ISCJB **22** 14:40:28.8±0.9, 25°.03N±0°.07×98°.2E±0°.1, h10km, mb3.5/3, Error ellipse: s-maj=16.6km s-min=9.6km az=173.2*
*IDC **22** 14:40:29.2±1.3, 24°.93N×98°.01E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=51.8km s-min=17.3km az=73.0*

ISC 22 14:40:30.8±0.9, **24°.99N**±0°.08×**98°.2E**±0°.1, **h10**km, **n7**, σ0**°71**/9, **mb3.5**/3, **Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
KMI	**Kunming**	**4.17**	**87**	Pg		**Pg**	**14 41 50.6**	**0.0**
KMI				smax				
	comp=N,51nm,0.7s							
KMI				smax				
	comp=E,42nm,0.9s							
CHRT	**Chiangrai**	**5.31**	**163**	PN		**Pn**	**14 41 50.0**	**-0.2**
CHG	**Chiang Mai**	**6.19**	**173**	PG		**Pn**	**14 42 09.0**	**+6.8**
CHG				SG		**Sn**	**14 43 16.5**	**+3.5**
CMAR	**Chiang Mai Arr**	**6.54**	**173**	Pn		**Pn**	**14 42 06.1**	**-0.9**
	comp=E,0.4nm,0.3s,baz=347,slow=13,SNR=7.8							
CMAR				Pg		**Pg**	**14 42 29.6**	**-6.4**
	comp=E,0.8nm,0.3s,baz=349,slow=18,SNR=24							
CMAR				Lg			14 43 55.1	
	comp=E,1.5nm,0.3s,baz=347,slow=31,SNR=7.2							
MKAR	**Makanchi Array**	**25.18**	**334**	P		**P**	**14 45 56.4**	**+0.1**
	comp=E,0.6nm,0.6s,mb3.3,baz=139,slow=8.0,SNR=6.6							
ZALV	**Zalesovo Beam**	**30.59**	**344**	P		**P**	**14 46 44.8**	**+0.1**
	comp=E,0.3nm,0.3s,mb3.6,baz=156,slow=7.6,SNR=2.3							
WRA	**Warramunga Arr**	**56.87**	**138**	P		**P**	**14 50 16.0**	**+0.1**
	comp=E,0.5nm,0.8s,mb3.6,baz=323,slow=7.8,SNR=2.8							

*NEIC **22** 14:54:17.2±3.8, 6°.13S×146°.20E, h90km±33km, mb3.1/1, Error ellipse: s-maj=47.8km s-min=26.1km az=136.0*
*ISCJB **22** 14:54:20.5±3.3, 6°.6S±0°.2×146°.4E±0°.2, h124km±31km, mb3.6/2, Error ellipse: s-maj=43.6km s-min=20.2km az=136.5*
*IDC **22** 14:54:24.4±10.0, 6°.28S×146°.02E, h157km±106km, mb3.3/3, mb1 3.5/5, mb1mx3.2/16, mbtmp3.3/5, Error ellipse: s-maj=70.4km s-min=45.0km az=119.0*

ISC 22 14:54:20.8±3.0, **6°.6S**±0°.2×**146°.4E**±0°.2, **h116**km±28km, **n10**, σ1**°24**/12, **mb3.6**/2, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.93**	**165**	ePn		**Pn**	**14 55 06.8**	**+0.7**
PMG				*e*Sn		**Sn**	**14 55 40.4**	**-0.7**
COEN	**Coen**	**8.01**	**203**	ePn		**Pn**	**14 56 15.7**	**+1.3**
COEN				*e*Sn		**Sn**	**14 57 41.5**	**-1.9**
CTA	**Charters Tower**	**13.45**	**181**	P		**Pn**	**14 57 32.9**	**+5.8**
**CTA

ASAR	**Alice Springs**	**20.82**	**214**	P	**P**	**14 58 54.0**	**+0.8**
	1.2nm,0.5s,baz=50,slow=9.0,SNR=33						
STKA	**Stephens Creek**	**25.59**	**189**	*e*P	**P**	**14 59 40.6**	**+1.4**
	0.3nm,0.4s,mb3.1						
STKA	**Stephens Creek**	**25.59**	**189**	P	**P**	**14 59 41.2**	**+2.0**
	0.9nm,0.4s,mb3.5,baz=12,slow=12,SNR=5.8						
ILAR	**Eielson Array**	**86.22**	**23**	P	**P**	**15 06 47.3**	**-1.7**
	0.9nm,0.7s,mb3.8,baz=254,slow=4.9,SNR=15						

*IDC **22** 15:09:45.6±0.6,58°.64S×25°.20W,h0km,mb4.2/11, mb1 4.3/11,mb1mx4.2/19,mbtmp4.2/11,MS3.9/8, Ms1 3.8/8,ms1mx3.7/19,Error ellipse: s-maj=22.4km s-min=16.8km az=13.0*

*ISCJB **22** 15:09:47.6±0.5,58°.97S×0°.09×25°.2W±0°.2,h35km, mb4.2/13,MS3.9/8,Error ellipse: s-maj=15.8km s-min=10.4km az=135.9*

*NEIC **22** 15:09:50.5±0.3,58°.65S×25°.04W,h35km,mb4.3/8,Error ellipse: s-maj=15.3km s-min=10.5km az=186.0*

ISC 22 15:09:49.8±0.5,58°.92S±0°.09×25°.1W±0°.2,h35km,n48, σ1°.908/23,mb4.2/13,MS3.9/8,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.71**	**156**	*e*P	**Pn**	**15 13 00.8**	**-0.5**
VNA3	**Neumayer Olymp**	**13.90**	**159**	*e*P	**Pn**	**15 13 02.4**	**-1.6**
VNA3				*e*S	**Sn**	**15 15 27.8**	**-8.9**
USHA	**Ushuaia**	**23.71**	**261**	P	**P**	**15 14 59.8**	**+1.7**
	5.3nm,0.8s,mb4.0,baz=90,slow=9.1,SNR=2.8						
USHA				LR	LR	15 22 04.7	
	comp=Z,610nm,21.3s,MS4.0,baz=44,slow=31						
QSPA	**South Pole Qui**	**31.32**	**180**	*e*P	**P**	**15 16 09.5**	**+3.4**
	8.9nm,1.1s,mb4.5						
QSPA	**South Pole Qui**	**31.32**	**180**	P	**P**	**15 16 10.1**	**+4.0**
	3.8nm,0.9s,mb4.2,baz=216,slow=6.3,SNR=13						
TRQA	**Tornquist**	**31.53**	**295**	P	**P**	**15 16 08.7**	**+0.4**
	1.9nm,0.8s,mb4.0						
PLCA	**Paso Flores**	**33.67**	**282**	P	**P**	**15 16 26.8**	**-0.2**
	8.1nm,1.1s,mb4.6,baz=144,slow=5.6,SNR=7.3						
PLCA				LR	LR	15 30 05.4	
	comp=Z,183nm,18.4s,MS3.8,baz=284,slow=36						
MAW	**Mawson**	**37.19**	**141**	*e*P	**P**	**15 16 58.1**	**+1.1**
	1.0nm,1.2s,mb3.5						
MAW	**Mawson**	**37.19**	**141**	P	**P**	**15 16 59.3**	**+2.4**
	3.5nm,1.2s,mb4.1,baz=219,slow=6.5,SNR=4.4						
MAW				LR	LR	15 30 35.0	
	comp=Z,198nm,19.6s,MS3.9,baz=69,slow=33						
CPUP	**Villa Florida**	**39.56**	**311**	P	**P**	**15 17 15.6**	**-1.7**
	0.8nm,0.5s,mb3.7,baz=140,slow=7.9,SNR=2.7						
CFAA	**Coronel Fontan**	**39.75**	**294**	P	**P**	**15 17 17.9**	**-1.0**
	0.3nm,0.4s,mb3.4,baz=159,slow=8.6,SNR=4.8						
BOSA	**Boshof**	**45.71**	**71**	*e*P	**P**	**15 18 07.2**	**0.0**
	11nm,1.1s,mb4.7						
BOSA	**Boshof**	**45.71**	**71**	P	**P**	**15 18 07.6**	**+0.5**
	2.5nm,0.6s,mb4.3,baz=242,slow=9.4,SNR=6.2						
BOSA				LR	LR	15 32 53.2	
	comp=Z,138nm,18.5s,MS3.9,baz=193,slow=30						
LBTB	**Lobatse**	**48.88**	**69**	*e*P	**P**	**15 18 32.0**	**+0.2**
	2.6nm,0.7s,mb4.4						
LBTB	**Lobatse**	**48.88**	**69**	P	**P**	**15 18 32.3**	**+0.4**
	3.4nm,0.8s,mb4.4,baz=212,slow=9.5,SNR=4.3						
TSUM	**Tsumeb**	**50.22**	**56**	P	**P**	**15 18 38.6**	**-3.5**
	1.6nm,0.6s,mb4.2						
LPAZ	**La Paz**	**52.95**	**305**	*e*P	**P**	**15 19 02.8**	**+0.2**
	1.8nm,0.5s,mb4.3						
LPAZ	**La Paz**	**52.95**	**305**	P	**P**	**15 19 02.6**	**0.0**
	1.9nm,0.4s,mb4.4,baz=182,slow=1.5,SNR=14						
DBIC	**Dimbokro**	**67.36**	**22**	P	**P**	**15 20 40.3**	**-0.9**
	1.8nm,0.6s,mb4.3						
DBIC	**Dimbokro**	**67.36**	**22**	P	**P**	**15 20 41.4**	**+0.2**
	2.3nm,0.6s,mb4.4,baz=159,slow=8.6,SNR=3.6						
DBIC				LR	LR	15 44 34.5	
	comp=Z,54nm,18.6s,MS3.8,baz=137,slow=31						
ROSC	**El Rosal**	**74.59**	**308**	LR	LR	15 54 23.4	
	comp=Z,46nm,19.7s,MS3.8,baz=196,slow=36						
TOA0	**Torodi Ar. Sit**	**75.06**	**27**	*e*P	**P**	**15 21 28.1**	**+0.4**
TORD	**Torodi Ar. Bea**	**75.06**	**27**	P	**P**	**15 21 28.2**	**+0.6**
	4.0nm,0.4s,mb4.7,baz=201,slow=6.3,SNR=43						
TORD				LR	LR	15 48 07.7	
	comp=Z,79nm,19.6s,MS4.0,baz=185,slow=31						
CMIG	**Matias Romero**	**94.49**	**296**	LR	LR	15 59 45.0	
	comp=Z,22nm,19.7s,MS3.6,slow=32						
PDAR	**Pinedale Array**	**122.78**	**299**	PKP	PKPdf	15 28 41.5	+0.6
	0.3nm,0.6s,baz=158,slow=1.0,SNR=3.9						
CMAR	**Chiang Mai Arr**	**123.00**	**110**	PKP	PKPdf	15 28 43.3	+1.2
	1.0nm,0.9s,baz=251,slow=4.1,SNR=5.3						
NVAR	**Mina Array Bea**	**123.50**	**290**	PKP	PKPdf	15 28 44.9	+2.4
	0.7nm,0.6s,baz=148,slow=4.0,SNR=7.1						
ABKAR	**Akbulak array**	**128.06**	**56**	*e*PKPdf	PKPdf	15 28 51.4	+0.6
KURK	**Kurchatov**	**137.57**	**66**	PKP	PKPdf	15 29 11.3	+2.7
	0.3nm,0.3s,baz=220,slow=3.5,SNR=3.0						
YKA	**Yellowknife Ar**	**139.03**	**315**	PKP	PKPdf	15 29 11.5	+0.6
	1.3nm,0.5s,baz=135,slow=1.9,SNR=5.9						
ZALV	**Zalesovo Beam**	**142.56**	**66**	PKhKP	PKPpre	15 29 11.6	
	0.4nm,0.3s,baz=159,slow=4.9,SNR=2.6						
ZALV				PKP	PKPdf	15 29 18.6	+1.1
	0.5nm,0.4s,baz=212,slow=4.6,SNR=2.6						
PNL	**Peninsula**	**147.67**	**300**	*e*PKPbc	PKPbc	15 29 30.2	+1.2
INK	**Inuvik**	**148.71**	**317**	*e*PKPbc	PKPbc	15 29 31.9	+0.4
DAWY	**Dawson**	**149.50**	**308**	*e*PKPbc	PKPbc	15 29 34.3	+0.7
SONM	**Songino Array**	**149.69**	**90**	PKPbc	PKPbc	15 29 35.6	+1.1
	3.2nm,0.8s,baz=214,slow=3.4,SNR=14						
EGAK	**Eagle**	**150.47**	**309**	*e*PKPbc	PKPbc	15 29 36.1	+0.2
BMRM	**Bremner River**	**150.56**	**300**	*e*PKPbc	PKPbc	15 29 37.9	+1.7
MENT	**Mentasta**	**150.91**	**304**	*e*PKPbc	PKPbc	15 29 38.1	+1.1
PAX	**Paxson**	**151.68**	**304**	*e*PKPdf	PKPdf	15 29 31.4	-1.0
PAX				*e*PKPbc	PKPbc	15 29 39.1	+0.3
SEW	**Seward**	**152.44**	**297**	*e*PKPdf	PKPdf	15 29 33.1	-0.6
SEW				*e*PKPbc	PKPbc	15 29 41.4	+0.8
ILAR	**Eielson Array**	**152.81**	**307**	PKPbc	PKPbc	15 29 42.0	+0.7
	11nm,1.0s,baz=146,slow=1.6,SNR=72						
RC01	**Rabbit Creek A**	**152.93**	**299**	*e*PKPbc	PKPbc	15 29 43.2	+1.5
KDAK	**Kodiak Island**	**153.00**	**291**	PKPbc	PKPbc	15 29 43.0	+1.1
KDAK	**Kodiak Island**	**153.00**	**291**	PKPbc	PKPbc	15 29 43.0	+1.1
	6.7nm,0.7s,baz=156,slow=3.3,SNR=6.5						
MCK	**McKinley**	**153.40**	**304**	*e*PKPbc	PKPbc	15 29 43.7	+1.1
MCK				*e*PKPab	PKPab	15 29 55.0	0.0
TRF	**Thorofare Moun**	**153.90**	**303**	*e*PKPbc	PKPbc	15 29 44.6	+0.9
BPAW	**Bear Paw Mtn.**	**154.37**	**305**	*e*PKPbc	PKPbc	15 29 45.6	+0.9
PPLA	**Purkeypile**	**154.59**	**302**	*e*PKPdf	PKPdf	15 29 35.4	-1.3
PPLA				*e*PKPbc	PKPbc	15 29 46.0	+0.8

*IDC **22** 15:14:37.0±2.2,19°.81S×177°.58W,h290km±24km,mb3.2/8, mb1 3.5/10,mb1mx3.3/21,mbtmp3.3/10,Error ellipse: s-maj=22.7km s-min=13.7km az=133.0*

*NEIC **22** 15:14:45.3±1.3,19°.99S×177°.70W,h376km±12km,mb3.7/3, Error ellipse: s-maj=17.0km s-min=13.4km az=108.0*

ISC 22 15:14:45.6±1.8,20°.0S±0°.1×177°.7W±0°.2,h378km±16km, n17,σ0°.957/19,mb3.3/9,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.59**	**299**	*e*Pn	**Pn**	**15 16 02.3**	**+0.1**
AFI	**Afiamalu**	**8.30**	**44**	P	**Pn**	**15 16 31.4**	**-12**
AFI				S	**S**	**15 18 04.2**	**-16**
AFI	**Afiamalu**	**8.30**	**44**	P	**Pn**	**15 16 31.4**	**-12**
	1.8nm,0.3s,baz=256,slow=23,SNR=9.5						
AFI				S	**S**	**15 18 04.2**	**-16**
	1.5nm,0.3s,baz=16,slow=19,SNR=2.6						
URZ	**Urewera**	**18.76**	**193**	P	**P**	**15 18 38.3**	**-0.7**
	2.2nm,0.3s,baz=330,slow=3.1,SNR=17						
CTA	**Charters Tower**	**33.80**	**264**	P	**P**	**15 20 54.6**	**+0.7**
	3.7nm,0.5s,mb3.9,baz=94,slow=11						
CTAO	**Charters Tower**	**33.80**	**264**	*e*P	**P**	**15 20 54.1**	**+0.2**
	3.3nm,0.5s,mb3.8						
STKA	**Stephens Creek**	**38.25**	**244**	P	**P**	**15 21 31.5**	**+0.4**
STKA	**Stephens Creek**	**38.25**	**244**	P	**P**	**15 21 31.5**	**+0.4**
	1.3nm,0.7s,mb3.3,baz=75,slow=13,SNR=3.1						
ASAR	**Alice Springs**	**44.89**	**256**	P	**P**	**15 22 24.4**	**-0.1**
	1.8nm,0.7s,mb3.3,baz=96,slow=8.5,SNR=45						
WRA	**Warramunga Arr**	**44.93**	**261**	P	**P**	**15 22 24.2**	**-0.6**
	1.0nm,0.5s,mb3.2,baz=96,slow=5.4,SNR=6.0						
QSPA	**South Pole Qui**	**70.08**	**180**	*e*P	**P**	**15 25 18.2**	**+0.9**
	2.4nm,1.0s,mb3.9						
QSPA	**South Pole Qui**	**70.08**	**180**	P	**P**	**15 25 18.3**	**+1.0**
	1.4nm,0.9s,mb3.7,baz=79,slow=14,SNR=6.5						
PETK	**Petropavlovsk**	**75.84**	**345**	P	**P**	**15 25 51.2**	**+0.3**
PETK	**Petropavlovsk-**	**75.84**	**345**	P	**P**	**15 25 51.2**	**+0.3**
	0.7nm,0.5s,mb3.6,baz=104,slow=8.3,SNR=9.1						
MAW	**Mawson**	**82.14**	**200**	*e*P	**P**	**15 26 24.5**	**-0.2**
	0.3nm,0.9s,mb3.1						
TXAR	**Lajitas Array**	**86.56**	**57**	P	**P**	**15 26 47.7**	**+0.4**
	0.2nm,0.7s,mb3.0,baz=250,slow=7.3,SNR=2.8						
ILAR	**Eielson Array**	**87.75**	**13**	P	**P**	**15 26 51.0**	**-1.0**
	0.1nm,0.6s,mb2.8,baz=236,slow=4.4,SNR=4.3						

DJA 22 15:19:46,1°.55N×122°.69E,h30km,MLv4.2/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**1.30**	**215**	P	Pn	15 20 03.3	-4.9
KMSI	**Cibinong**	**1.61**	**127**	P	Pn	15 20 12.9	+0.5
KMSI				S	Sn	15 20 35.6	+3.3
TOLI	**Toli-Toli**	**1.94**	**257**	P	Pn	15 20 17.8	+0.8
TOLI				S	Sn	15 20 43.6	+3.2
LUWI	**Luwuk**	**2.58**	**178**	P	Pn	15 20 24.5	-1.2
TTSI	**Tana Toraja**	**5.39**	**212**	P	Pn	15 21 04.9	+0.5
	25nm,1.0s						
SPSI	**Sidrap Palu**	**6.21**	**208**	P	Pn	15 21 16.6	+0.9
	22nm,0.9s						
BNSI	**Bone**	**6.45**	**204**	P	Pn	15 21 19.5	+0.5

IDC 22 15:28:28.6±3.8,21°.16S×70°.26W,h0km,mb4.0/1, mb1 4.0/2,mb1mx3.6/15,mbtmp3.9/2,ML3.7/1,MS3.0/1, Ms1 3.1/1,ms1mx2.8/14,Error ellipse: s-maj=140.1km s-min=45.6km az=102.0,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**5.25**	**23**	Pn	Pn	15 29 47.9	-0.5
	1.5nm,0.3s,baz=205,slow=8.2,SNR=16						
LPAZ				Sn	Sn	15 30 54.0	+4.3
	0.9nm,0.3s,baz=165,slow=10,SNR=2.3						
LPAZ				LR	LR	15 31 53.4	
	comp=Z,152nm,19.2s,baz=13,slow=39						
TORD	**Torodi Ar. Bea**	**78.43**	**71**	P	P	15 40 31.8	0.0
	0.7nm,0.6s,baz=264,slow=4.2,SNR=4.3						
MKAR	**Makanchi Array**	**146.09**	**35**	PKPbc	PKPbc	15 48 10.0	-0.5
	1.0nm,0.7s,baz=335,slow=4.0,SNR=4.0						

*IDC **22** 15:38:34.0±1.4,2°.32N×96°.13E,h0km,mb4.0/9, mb1 4.1/11,mb1mx3.9/25,mbtmp4.0/11,ML3.9/2,MS3.7/2, Ms1 3.7/2,ms1mx3.0/24,Error ellipse: s-maj=47.0km s-min=17.6km az=50.0*

*BJI **22** 15:38:35.3,2°.39N×96°.61E,h18km,mB5.2/2,mb4.5/3*

*DJA **22** 15:38:36,2°.43N×96°.16E,h13km,MLv4.3/8*

*ISCJB **22** 15:38:37.8±1.5,2°.40N±0°.07×96°.2E±0°.1,h37km±13km, mb4.1/11,MS3.8/2,Error ellipse: s-maj=22.3km s-min=9.2km az=156.5*

*NEIC **22** 15:38:39.6±2.1,2°.36N×96°.24E,h37km±18km,mb4.3/1, Error ellipse: s-maj=25.6km s-min=8.5km az=66.0*

ISC 22 15:38:38.9±3.8,2°.42N±0°.07×96°.2E±0°.1,h29km±28km,n28, σ0°.965/27,mb4.1/11,MS3.8/2,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPTI		**1.27**	**49**	P	**Pn**	**15 38 59.7**	**-1.0**
GSI	**Gunungsitoli**	**1.75**	**129**	P	**Pn**	**15 39 06.5**	**-0.8**
GSI	**Gunungsitoli**	**1.75**	**129**	P	**Pn**	**15 39 06.5**	**-0.8**
PSI	**Prapat**	**2.72**	**82**	Pn	**Pn**	**15 39 20.8**	**+0.1**
PSI	**Prapat**	**2.72**	**82**	Pn	**Pn**	**15 39 20.8**	**+0.1**
	5.8nm,0.3s,baz=270,slow=6.1,SNR=26						
BSI	**Banda Aceh**	**3.19**	**343**	P	**Pn**	**15 39 26.2**	**-1.0**
MNSI	**Mandailing Nat**	**3.72**	**116**	P	**Pn**	**15 39 34.5**	**0.0**
SISI	**Saibi**	**4.70**	**142**	P	**Pn**	**15 39 48.8**	**+0.9**
IPM	**Ipoh**	**5.21**	**67**	P	**Pn**	**15 39 55.4**	**+0.5**
	0.2nm641nm54nm,1.1s						
KULM	**Kulim**	**5.25**	**57**	*e*Pn	**Pn**	**15 39 55.7**	**+0.1**
KULM	**Kulim**	**5.25**	**57**	P	**Pn**	**15 39 55.6**	**0.0**
	0.3nm721nm78nm,1.2s						
PDSI	**Padang**	**5.38**	**128**	P	**Pn**	**15 39 58.3**	**+1.1**
	0.6nm1µm53nm,0.4s						
MDSI	**Maura Dua**	**10.50**	**131**	P	**Pn**	**15 41 06.7**	**-0.9**
CMAR	**Chiang Mai Arr**	**16.16**	**9**	Pn	**Pn**	**15 42 25.6**	**+1.6**
	0.3nm,0.3s,baz=199,slow=12,SNR=15						
GTA	**Gaotai**	**36.96**	**5**	*e*P	**P**	**15 45 45.8**	**+0.2**
GTA				pP	pP	15 45 49.8	-4.4
GTA				sP	sP	15 45 53.5	-4.3
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.3						
WRA	**Warramunga Arr**	**43.51**	**122**	P	**P**	**15 46 39.6**	**-0.6**
	comp=Z,2.1nm,0.8s,mb3.9,baz=300,slow=9.1,SNR=6.3						
ASAR	**Alice Springs**	**44.90**	**127**	P	**P**	**15 46 50.9**	**-0.4**
	comp=Z,92nm,18.6s,MS3.8,baz=215,slow=39						
KSRS	**Korea Array**	**45.42**	**36**	LR	LR	16 08 01.2	
	comp=Z,92nm,18.6s,MS3.8,baz=215,slow=39						
MK31	**Makanchi Array**	**45.83**	**347**	*e*P	**P**	**15 46 58.1**	**-0.2**
MK31				*e*		15 48 09.3	
MKAR	**Makanchi Array**	**45.83**	**347**	P	**P**	**15 46 58.3**	**+0.1**
	comp=Z,2.4nm,0.6s,mb4.3,baz=162,slow=7.6,SNR=41						
SONM	**Songino Array**	**46.09**	**10**	P	**P**	**15 47 00.1**	**-0.1**
	comp=Z,1.2nm,0.5s,mb4.0,baz=190,slow=8.5,SNR=7.7						
KURK	**Kurchatov**	**50.37**	**346**	P	**P**	**15 47 32.9**	**-0.4**
	comp=Z,0.9nm,0.5s,mb4.0,baz=162,slow=6.8,SNR=8.0						
ZALV	**Zalesovo Beam**	**52.21**	**351**	P	**P**	**15 47 46.8**	**-0.2**
	comp=Z,2.9nm,0.5s,mb4.5,baz=175,slow=7.5,SNR=19						
BVAR	**Borovoye Array**	**54.79**	**341**	P	**P**	**15 48 05.5**	**-0.5**
BVAR	**Borovoye Array**	**54.79**	**341**	P	**P**	**15 48 05.5**	**-0.5**
	comp=Z,1.2nm,0.5s,mb4.2,baz=140,slow=9.7,SNR=7.8						
ABKAR	**Akbulak array**	**55.99**	**332**	*e*P	**P**	**15 48 14.9**	**+0.3**
	comp=Z,3.5nm,1.0s,mb4.3						
FINES	**FINESS Array B**	**78.47**	**333**	P	**P**	**15 50 37.4**	**+0.4**
	comp=Z,2.0nm,0.8s,mb4.1,baz=141,slow=5.3,SNR=3.7						
FINES				LR	LR	16 30 06.4	
	comp=Z,49nm,20.0s,MS3.8,baz=359,slow=39						
ARCES	**ARCESS Array B**	**81.07**	**340**	P	**P**	**15 50 51.7**	**+0.8**
	comp=Z,0.4nm,0.5s,mb3.6,baz=93,slow=6.1,SNR=7.5						

*ISCJB **22** 15:46:22.3±0.7,40°.03N±0°.04×28°.09E±0°.05,h14km±9km, Error ellipse: s-maj=7.5km s-min=5.9km az=161.2*

*CSEM **22** 15:46:22.8±0.2,40°.03N×28°.06E,h15km,MD2.5,Error ellipse: s-maj=6.9km s-min=5.2km az=159.0*

*DDA **22** 15:46:23.0,40°.01N×28°.05E,h7km±2km,Md2.8*

*ISK **22** 15:46:22.3,40°.06N×28°.09E,h14km,MD2.5*

ISC 22 15:46:22.9±0.7,40°.04N±0°.04×28°.07E±0°.05,h16km±8km, n12,σ0°.964/20,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GONE	**Gonen-Balikesi**	**0.29**	**272**	*e*PG	**Pg**	**15 46 28.9**	**-0.3**
GONE				*e*SG	**Sg**	**15 46 34.2**	**+0.8**
GONE	**Gonen-Balikesi**	**0.29**	**272**	*e*Pg	**Pg**	**15 46 28.9**	**-0.3**
GONE				*e*Sg	**Sg**	**15 46 34.2**	**+0.8**
BALY	**Balya**	**0.46**	**230**	*i*P	**Pg**	**15 46 30.8**	**-1.3**
BALY				*i*S	**Sg**	**15 46 38.2**	**+0.1**
BALY	**Balya**	**0.46**	**230**	*i*P	**Pg**	**15 46 30.8**	**-1.2**
BALY				*i*S	**Sg**	**15 46 38.2**	**0.0**
ARMT	**Armutlu**	**0.80**	**49**	*e*PG	**Pg**	**15 46 38.8**	**+0.2**
ARMT				*e*SG	**Sg**	**15 46 49.0**	**-0.2**
ARMT	**Armutlu**	**0.80**	**49**	*e*Pg	**Pg**	**15 46 38.8**	**+0.3**
ARMT				*e*Sg	**Sg**	**15 46 49.0**	**-0.1**
DEMI	**Demirci**	**1.11**	**153**	*i*P	**Pg**	**15 46 43.6**	**-0.7**
DEMI				*i*S	**Sg**	**15 46 59.8**	**+1.0**
DEMI	**Demirci**	**1.11**	**153**	*i*P	**Pg**	**15 46 43.6**	**-0.7**
DEMI				*i*S	**Sg**	**15 46 59.8**	**+0.9**
GELI	**Tayfur-Gelibol**	**1.27**	**287**	*e*PN	**Pn**	**15 46 46.6**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.27**	**287**	*e*Pn	**Pn**	**15 46 46.6**	**+0.6**
ERIK	**Erikli-Kesan**	**1.35**	**299**	*e*PN	**Pn**	**15 46 46.8**	**-0.2**
ERIK	**Erikli-Kesan**	**1.35**	**299**	*e*Pn	**Pn**	**15 46 46.8**	**-0.2**

JSN 22 16:05:37.6±1.0,18°.16N×78°.31W,h0km±9km,MD3.6, 6C-4D,Jamaica region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCJ	**Malvern**	**0.64**	**112**	⇑*i*P	Pg	16 05 49.9	0.0
MCJ				⇑*i*S	Sg	16 05 58.8	+0.6
BBJ	**Bamboo Saint A**	**1.02**	**77**	⇓*i*P	Pg	16 05 56.3	-0.8
BBJ				⇑*i*S	Sg	16 06 10.1	-0.3
STH	**Stony Hill**	**1.43**	**93**	⇑*i*P	Pn	16 06 03.1	-1.7
STH				⇑*i*S	Sg	16 06 22.3	-1.4
STH				*i*S	Sg	16 06 22.4	-1.3
HOJ	**Hope**	**1.50**	**96**	⇓*i*P	Pn	16 06 03.1	-2.6
GWJ	**Greenwich**	**1.51**	**93**	⇑*i*P	Pn	16 06 04.5	-1.5
GWJ				⇓*i*S	Sg	16 06 24.4	-1.8
CMJ	**Castle Mountai**	**1.85**	**91**	⇓*i*P	Pn	16 06 09.7	-0.8

*IDC **22** 16:18:52.4±5.6,32°.59N×104°.68E,h0km,mb3.6/4, mb1 3.6/5,mb1mx3.4/25,mbtmp3.5/5,ML3.2/1,Error ellipse: s-maj=150.5km s-min=45.7km az=88.0*

*NEIC **22** 16:18:53.3±0.7,32°.58N×104°.82E,h10km,Error ellipse: s-maj=19.2km s-min=11.1km az=58.0*

*BJI **22** 16:18:54.1,32°.28N×104°.71E,h9km,ML3.1/11,Ms3.3/2, Ms7 3.2/2*

ISC 22 16:18:50.6±1.0,32°.20N±0°.05×104°.83E±0°.06,h12km±11km, n11,σ0°.972/17,mb3.5/4,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.57**	**216**	Pg	**Pg**	**16 19 20.3**	**-0.5**
CD2				Sg	**Sg**	**16 19 41.9**	**+0.7**
CD2				smax			
	comp=N,2µm,0.7s						
CD2				smax			
	comp=E,1µm,0.7s						
XAN	**Xi'an**	**3.90**	**61**	Pg	**Pg**	**16 20 04.9**	**-0.3**
XAN				Sg	**Sg**	**16 20 56.9**	**+1.2**
XAN				smax			
	comp=N,53nm,0.9s						
XAN				smax			
	comp=E,31nm,0.8s						
LZH	**Lanzhou**	**3.97**	**348**	*e*Pn	**Pn**	**16 19 50.9**	**-0.2**
LZH				Pg	**Pb**	**16 19 59.0**	**-1.4**
LZH				Sn	**Sn**	**16 20 36.8**	**-0.7**
LZH				Sg	**Sb**	**16 20 48.9**	**+0.6**
LZH				smax			
	comp=N,160nm,0.6s						
LZH				smax			
	comp=E,170nm,0.7s						
LZH				LR	LR		
	comp=N,280nm,4.3s						
LZH				LR	LR		
	comp=Z,370nm,5.4s						
ENH	**Enshi**	**4.43**	**114**	Pn	**Pn**	**16 20 03.0**	**+5.5**
ENH				*e*Sg	**Sg**	**16 21 12.0**	**-0.7**
CMAR	**Chiang Mai Arr**	**14.67**	**203**	Pn	**Pn**	**16 22 25.9**	**+8.0**
	comp=Z,0.0nm,0.3s,baz=4.6,slow=9.3,SNR=2.7						
MKAR	**Makanchi Array**	**22.59**	**317**	P	**P**	**16 23 50.4**	**-0.3**
MKAR	**Makanchi Array**	**22.59**	**317**	P	**P**	**16 23 50.4**	**-0.3**
	comp=Z,0.1nm,0.3s,mb2.8,baz=112,slow=11,SNR=3.0						
ZALV	**Zalesovo Beam**	**26.02**	**333**	P	**P**	**16 24 23.8**	**+0.5**
ZALV	**Zalesovo Beam**	**26.02**	**333**	P	**P**	**16 24 23.8**	**+0.5**
	comp=Z,0.8nm,0.6s,mb3.5,baz=137,slow=9.3,SNR=4.7						
KURK	**Kurchatov**	**26.76**	**321**	P	**P**	**16 24 30.9**	**+0.9**
	comp=Z,0.2nm,0.2s,mb3.2,baz=134,slow=8.2,SNR=3.2						
FINES	**FINESS Array B**	**57.01**	**326**	P	**P**	**16 28 35.8**	**+0.1**
	comp=Z,4.5nm,1.1s,mb4.4,baz=113,slow=11,SNR=3.8						

*ISCJB **22** 16:23:41.3±0.9,8°.0N±0°.1×59°.2E±0°.1,h10km,mb3.7/14, Error ellipse: s-maj=20.7km s-min=15.0km az=153.1*

*IDC **22** 16:23:41.4±1.3,8°.01N×59°.21E,h0km,mb3.8/12, mb1 3.9/12,mb1mx3.8/25,mbtmp3.8/12,MS3.1/2, Ms1 3.1/2,ms1mx2.7/22,Error ellipse: s-maj=31.3km s-min=22.7km az=8.0*

*NEIC **22** 16:23:42.8±0.7,8°.00N×59°.19E,h10km,mb4.1/2,Error ellipse: s-maj=17.9km s-min=13.2km az=155.0*

*CSEM **22** 16:23:42.8,8°.00N×59°.19E,h10km,mb4.1/2,After NEIC*

ISC 22 16:23:42.8±0.9,8°.0N±0°.1×59°.2E±0°.1,h10km,n31, σ0°.983/27,mb3.7/14,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**16.50**	**284**	LR	LR	16 32 58.6	
	comp=Z,33nm,20.1s,baz=178,slow=34						
KMBO	**Kilima Mbogo**	**23.69**	**248**	*e*P	**P**	**16 28 54.8**	**-0.3**
	4.6nm,1.0s,mb3.9						
KMBO	**Kilima Mbogo**	**23.69**	**248**	*e*P	**P**	**16 28 54.8**	**-0.3**
	4.6nm,1.0s,mb3.9						
AAK	**Ala-Archa**	**37.04**	**19**	LR	LR	16 44 41.2	
	comp=Z,47nm,18.6s,baz=34

WAZ	Wanganui	0.34	359	P*	Pb	16 43 24.2	+0.6	KIF			Sg	17 01 41.0	-0.8
WAZ				S*	Sb	16 43 30.5	+2.0	RNF	Rovaniemi	2.01	101 *e*P	17 01 15.0	+0.9
POWZ	Post Office Ro	0.66	117	P*	Pb	16 43 29.5	+0.3	RNF			*e*SG	17 01 43.3	-0.2
POWZ				S*	Sb	16 43 37.9	0.0	RNF	Rovaniemi	2.01	101 P	17 01 15.0	+0.8
MRZ	Mangatainoka R	0.72	142	⇑P*	Pb	16 43 30.3	+0.1	RNF			Sg	17 01 43.3	-0.2
MRZ				S*	Sb	16 43 40.2	+0.6	KTK1	Kautokeino	2.12	22 *e*P	17 01 16.8	+1.1
OGWZ	Otaki Gorge	0.74	170	⇑P*	Pb	16 43 29.8	-0.6	KTK1			*e*S	17 01 45.0	+2.2
TSZ	Takapari Road	0.74	88	P*	Pb	16 43 30.6	+0.1	KTK1			AML	AML	17 01 49.3
KIW	Kapiti Island	0.77	185	P*	Pb	16 43 29.8	-1.2		comp=Z,20nm,0.1s				
MTVZ	Mangateitei	0.80	28	P*	Pb	16 43 31.0	-0.4	KTK1	Kautokeino	2.12	22 *e*P	17 01 16.8	+1.1
PKVZ	Pokaka	0.85	19	P*	Pb	16 43 31.6	-0.6	KTK1			*e*S	17 01 45.0	+2.2
PKVZ				S*	Sb	16 43 42.9	-0.2	KTK1			AML	AML	17 01 49.3
WNVZ	Wahianoa	0.89	32	P*	Pb	16 43 32.6	-0.4		comp=Z,20nm,0.1s				
HOWZ	Holdsworth Sta	0.90	154	P*	Pb	16 43 32.7	-0.4	KTK1	Kautokeino	2.12	22 P	17 01 16.8	+1.0
MOVZ	Moawhango	0.90	41	P*	Pb	16 43 32.3	-0.8	KTK1			S	17 01 44.9	+2.1
TRVZ	Turoa	0.90	28	P*	Pb	16 43 32.6	-0.5		comp=Z,20nm,0.1s				
DVHZ	Dannevirke	0.92	103	P*	Pb	16 43 34.0	+0.5	SGF	Sodankyl	2.16	77 *e*P	17 01 17.4	+1.1
DRZ	Dome Shelter	0.93	28	P*	Pb	16 43 33.1	-0.5	SGF			*e*S	17 01 45.8	+2.2
RAEZ	Rainy Point	0.93	330	P*	Pb	16 43 33.8	+0.2	SGF	Sodankyl	2.16	77 P	17 01 17.3	+1.1
FWVZ	Far West T-bar	0.94	27	P*	Pb	16 43 33.1	-0.8	SGF			S	17 01 45.7	+2.1
PNHZ	Pukenui	0.94	79	P*	Pb	16 43 33.6	-0.3	STEI	Steigen	2.41	294 *e*P	17 01 19.2	-0.4
TIWZ	Tintock	0.96	135	P*	Pb	16 43 34.4	+0.1	STEI	Steigen	2.41	294 *e*P	17 01 19.2	-0.4
TUVZ	Tukino	0.97	32	P*	Pb	16 43 33.8	-0.6	STEI	Steigen	2.41	294 P	17 01 19.2	-0.4
VRZ	Vera Road	0.98	349	P*	Pb	16 43 34.0	-0.6	TRO	Tromso	2.70	344 *e*P	17 01 25.8	+2.1
CAW	Cannon Point	1.02	177	PN	Pn	16 43 34.0	-1.3	TRO			*e*SG	17 02 04.6	-1.2
BHHZ	Black Hill Sta	1.02	54	PN	Pn	16 43 34.0	-1.4	TRO			AML	AML	17 02 06.8
NGZ	Ngauruhoe	1.03	27	PN	Pn	16 43 34.5	-1.0		comp=Z,10.0nm,0.1s				
DFE	Dawson Falls	1.03	318	PN	Pn	16 43 35.4	-0.1	TRO	Tromso	2.70	344 *e*P	17 01 25.8	+2.1
OTVZ	Oturere	1.06	29	PN	Pn	16 43 35.1	-0.9	TRO			*e*SG	17 02 04.6	-1.2
NEZ	North Egmont	1.07	319	PN	Pn	16 43 35.8	-0.3	TRO			AML	AML	17 02 06.8
TWVZ	Taurewa	1.07	19	PN	Pn	16 43 34.7	-1.4		comp=Z,10.0nm,0.1s				
WTVZ	West Tongariro	1.08	25	PN	Pn	16 43 35.1	-1.1	TRO	Tromso	2.70	344 P	17 01 25.7	+2.0
DREZ	Durham Road	1.09	326	PN	Pn	16 43 36.2	-0.1	TRO			*e*Sg	17 02 04.6	-1.2
WPHZ	Waipukurau	1.11	89	PN	Pn	16 43 36.9	+0.3		comp=Z,10.0nm,0.1s,SNR=90				
KRVZ	Karewarewa	1.11	27	PN	Pn	16 43 35.5	-1.1	MOR8	Moi Rana	2.79	254 *e*P	17 01 24.0	-0.9
NRZ	Ngariki Road	1.11	312	PN	Pn	16 43 36.2	-0.4	MOR8	Moi Rana	2.79	254 *e*P	17 01 24.0	-0.9
MTW	Mount Morrison	1.13	160	PN	Pn	16 43 36.4	-0.5	MOR8	Moi Rana	2.79	254 *e*P	17 01 24.0	-0.9
MHEZ	Mangahewa	1.14	333	PN	Pn	16 43 37.2	+0.2		SNR=50				
PKE	Pukeiti	1.19	319	PN	Pn	16 43 38.0	+0.4	OUL	Oulu	2.79	133 *e*P	17 01 26.0	+1.1
NWEZ	Newall Road	1.19	313	PN	Pn	16 43 37.7	-0.1	OUL			*e*SB	17 02 04.6	+0.1
WEL	Wellington	1.20	188	PN	Pn	16 43 37.0	-0.9	OUL	Oulu	2.79	133 P	17 01 26.0	+1.0
TMWZ	Te Maipa	1.22	146	PN	Pn	16 43 37.6	-0.6	ARA0	ARCESS Array S	2.98	32 Pn	17 01 27.7	+0.1
SNZO	South Karori	1.24	190	PN	Pn	16 43 37.2	-1.1		baz=206,slow=16				
KATZ	Kakaramea	1.24	26	PN	Pn	16 43 37.7	-0.7	ARA0			Sn	Sn	17 02 02.8 -1.2
PRHZ	Porangahau	1.27	98	PN	Pn	16 43 39.4	+0.6		baz=221,slow=28				
RITZ	Rihia Road	1.30	31	PN	Pn	16 43 39.2	+0.1	ARA0	ARCESS Array S	2.98	32 *e*P	Pn	17 01 27.5 0.0
BHW	Baring Head	1.32	184	PN	Pn	16 43 38.9	-0.6	ARA0			*e*SB	Sb	17 02 07.5 -2.4
PAWZ	Paruwai Farm	1.33	166	PN	Pn	16 43 39.6	-0.1	ARA0	ARCESS Array S	2.98	32 P	Pn	17 01 27.5 -0.1
MSWZ	Moikau Station	1.33	172	PN	Pn	16 43 39.1	-0.6	ARA0	ARCESS Array S	2.98	32 Pn	Pn	17 01 27.7 +0.1
RATZ	Rangitukua	1.36	26	*e*PN	Pn	16 43 39.4	-0.7		baz=206,slow=14,SNR=50				
TRWZ	Traveller	1.41	158	PN	Pn	16 43 41.1	+0.4	ARA0			Sn	Sn	17 02 02.8 -1.1
PXZ	Pawanui	1.43	88	PN	Pn	16 43 41.0	0.0		baz=221,slow=23,SNR=50				
KAHZ	Kahuranaki	1.48	79	PN	Pn	16 43 42.0	+0.4	LOF	Lofoten	3.08	294 *e*P	Pn	17 01 28.1 -0.7
BKZ	Black Stump Fm	1.48	52	PN	Pn	16 43 42.1	+0.4	LOF	Lofoten	3.08	294 *e*P	Pn	17 01 28.1 -0.7
PLWZ	Palliser	1.49	172	*e*PN	Pn	16 43 40.5	-1.3	LOF	Lofoten	3.08	294 P	Pn	17 01 28.1 -0.7
TUWZ	Tuamarina	1.56	211	*e*PN	Pn	16 43 40.9	-1.8	FLOS	Flostrand	3.15	260 *e*P	Pn	17 01 29.8 0.0
HIZ	Hauiti	1.58	356	PN	Pn	16 43 42.2	-0.8	FLOS	Flostrand	3.15	260 *e*P	Pn	17 01 29.8 0.0
NNZ	Nelson	1.67	227	*e*PN	Pn	16 43 42.7	-1.5	KONS	Konsvik	3.20	264 *e*P	Pn	17 01 31.4 +0.9
BSWZ	Blackbirch Sta	1.83	207	*e*PN	Pn	16 43 45.8	-0.6	KONS	Konsvik	3.20	264 *e*P	Pn	17 01 31.4 +0.9
PRRZ	Plateau Road	1.93	35	*e*PN	Pn	16 43 47.5	-0.3	VRF	Varrio	3.37	74 *e*P	Pn	17 01 33.3 +0.4
URZ	Urewera	2.46	43	*e*PN	Pn	16 43 53.9	-1.3	VRF			*e*SG	Sg	17 02 22.7 -4.5
KHZ	Kahutara	2.57	205	PN	Pn	16 43 55.4	-1.2	VRF			MSG		17 02 25.3
MWZ	Matawai	2.64	49	PN	Pn	16 43 57.4	-0.2		comp=Z,2.2nm,0.1s				
DSZ	Denniston Nort	2.93	235	PN	Pn	16 44 01.1	-0.5	VRF	Varrio	3.37	74 P	Pn	17 01 33.2 +0.3
PUZ	Puketiti	3.24	53	PN	Pn	16 44 05.0	-0.9	MSF	Maaselka	3.40	106 *e*P	Pn	17 01 33.8 +0.6
LTZ	Lake Taylor	3.38	216	*e*PN	Pn	16 44 09.4	-1.9	MSF			*e*S	Sn	17 02 14.3 +0.1
MQZ	McQueen's Vall	4.01	205	PN	Pn	16 44 12.8	-3.6	MSF	Maaselka	3.40	106 P	Pn	17 01 33.8 +0.5
ODZ	Otahua Downs	5.90	212	PN	Pn	16 44 39.0	-3.4	MSF			S	Sn	17 02 14.3 +0.1
								KEV	Kevo	3.48	36 *e*P	Pn	17 01 34.8 +0.4
								KEV			*e*S	Sn	17 02 15.2 -1.2
								KEV	Kevo	3.48	36 P	Pn	17 01 34.8 +0.4
								KEV			S	Sn	17 02 15.1 -1.2
								KJN	Kajaani	4.07	134 *e*S	Sn	17 02 29.3 -1.4
								KJN	Kajaani	4.07	134 S	Sn	17 02 29.2 -1.4
								VAF	Ylistaro	4.09	170 *e*P	Pn	17 01 42.7 -0.1
								VAF	Ylistaro	4.09	170 P	Pn	17 01 42.6 -0.2
								SUF	Sumiainen	4.87	151 *e*P	Pn	17 01 55.4 +2.0
								SUF			*e*S	Sn	17 02 49.1 -1.2
								SUF	Sumiainen	4.87	151 P	Pn	17 01 55.4 +2.0
								SUF			S	Sn	17 02 49.1 -1.3
								KEF	Keuruu	5.18	160 *e*P	Pn	17 01 58.6 +0.9
								KEF			*e*S	Sn	17 02 57.0 -1.1
								KEF	Keuruu	5.18	160 P	Pn	17 01 58.6 +0.9
								KEF			S	Sn	17 02 56.9 -1.1
								KAF	Kangasniemi	5.46	153 *e*P	Pn	17 02 02.5 +1.0
								KAF			*e*S	Sn	17 03 03.3 -1.5
								KAF	Kangasniemi	5.46	153 P	Pn	17 02 02.4 +0.9
								KAF			S	Sn	17 03 03.3 -1.5
								JOF	Joensuu	6.01	129 *e*P	Pn	17 02 09.4 +0.3
								JOF	Joensuu	6.01	129 P	Pn	17 02 09.3 +0.2
								FIA0	FINESS Array S	6.05	157 Pn	Pn	17 02 09.9 +0.3
									baz=346,slow=14				
								FIA0			Sn	Sn	17 03 17.2 -2.2
									baz=345,slow=28				
								FIA0	FINESS Array S	6.05	157 *e*S	Sn	17 03 16.3 -3.1
								FIA0	FINESS Array S	6.05	157 Pn	Pn	17 02 09.9 +0.3
									baz=346,slow=14,SNR=50				
								FIA0			Sn	Sn	17 03 17.2 -2.2
									baz=345,slow=25,SNR=50				

LEF	Lefka	0.03	223	PG	Pb	17 33 12.3	0.0	MAMC	Mammari	0.25	83 P	Pb	17 33 14.5 -0.1
LEF				*e*SG	Sb	17 33 15.0	+0.2	MAMC	Mammari	0.25	83 P	Pb	17 33 14.5 -0.1
LEF	Lefka	0.03	223	*i* Pg	Pb	17 33 12.3	0.0	ALFC	Alevga	0.26	274 ⇑P	Pb	17 33 14.6 -0.1
LEF				*e*Sg	Sb	17 33 15.0	+0.2		58nm,0.2s				
MAMC	Mammari	0.25	83 P		Pb	17 33 14.5	-0.1	ALFC			S	Sb	17 33 19.1 +0.2
MAMC	Mammari	0.25	83 P		Pb	17 33 14.5	-0.1	ALFC	Alevga	0.26	274 ⇑P	Pb	17 33 14.6 -0.1
ALFC	Alevga	0.26	274 ⇑P		Pb	17 33 14.6	-0.1		58nm,0.2s				
	58nm,0.2s							ALFC			S	Sb	17 33 19.1 +0.2
ALFC				S	Sb	17 33 19.1	+0.2	SZAC	Souni-Zanaja	0.38	184 P	Pb	17 33 16.1 -0.7
ALFC	Alevga	0.26	274 ⇑P		Pb	17 33 14.6	-0.1	SZAC	Souni-Zanaja	0.38	184 P	Pb	17 33 16.1 -0.7
	58nm,0.2s							CSS	Prodhromos	0.39	117 ⇑P	Pb	17 33 15.3 -1.5
ALFC				S	Sb	17 33 19.1	+0.2		23nm,0.4s				
SZAC	Souni-Zanaja	0.38	184 P		Pb	17 33 16.1	-0.7	CSS			S	Sb	17 33 21.7 -0.6
SZAC	Souni-Zanaja	0.38	184 P		Pb	17 33 16.1	-0.7	CSS	Prodhromos	0.39	117 ⇑P	Pb	17 33 15.3 -1.5
CSS	Prodhromos	0.39	117 ⇑P		Pb	17 33 15.3	-1.5		23nm,0.4s				
	23nm,0.4s							CSS			S	Sb	17 33 21.7 -0.6
CSS				S	Sb	17 33 21.7	-0.6	LFK	Lefkose	0.53	74 *e*PG	Pb	17 33 18.9 -0.2
CSS	Prodhromos	0.39	117 ⇑P		Pb	17 33 15.3	-1.5	LFK			*e*SG	Sb	17 33 26.2 -0.1
	23nm,0.4s							LFK	Lefkose	0.53	74 *e*Pg	Pb	17 33 18.9 -0.3
CSS				S	Sb	17 33 21.7	-0.6	LFK			*e*Sg	Sb	17 33 26.2 -0.1
LFK	Lefkose	0.53	74 *e*PG	Pb		17 33 18.9	-0.2	PPCY	Paphos	0.53	242 P	Pb	17 33 19.1 -0.2
LFK				*e*SG	Sb	17 33 26.2	-0.1	PPCY	Paphos	0.53	242 P	Pb	17 33 19.1 -0.2
LFK	Lefkose	0.53	74 *e*Pg	Pb		17 33 18.9	-0.3	PHNC	Paralimni	0.93	98 P	Pb	17 33 27.7 +1.7
LFK				*e*Sg	Sb	17 33 26.2	-0.1		4.0nm,0.4s				
PPCY	Paphos	0.53	242 P		Pb	17 33 19.1	-0.2	PHNC			S	Sb	17 33 39.1 +1.2
PPCY	Paphos	0.53	242 P		Pb	17 33 19.1	-0.2	PHNC	Paralimni	0.93	98 P	Pb	17 33 27.7 +1.7
PHNC	Paralimni	0.93	98 P		Pb	17 33 27.7	+1.7		4.0nm,0.4s				
	4.0nm,0.4s							PHNC			S	Sb	17 33 39.1 +1.2
PHNC				S	Sb	17 33 39.1	+1.2	EREN	Erenkoy	1.10	69 *e*PG	Pn	17 33 29.6 +0.9
EREN	Erenkoy	1.10	69 *e*PG	Pn		17 33 29.6	+0.9	EREN	Erenkoy	1.10	69 *e*Pg	Pn	17 33 29.6 +0.9
EREN	Erenkoy	1.10	69 *e*Pg	Pn		17 33 29.6	+0.9	IKL	Isikli	1.26	30 *e*PN	Pn	17 33 29.7 -1.3
IKL	Isikli	1.26	30 *e*PN	Pn		17 33 29.7	-1.3	IKL			*e*SN	Sn	17 33 45.4 -2.0
IKL				*e*SN	Sn	17 33 45.4	-2.0	IKL	Isikli	1.26	30 *e*Pn	Pn	17 33 29.7 -1.3
IKL	Isikli	1.26	30 *e*Pn	Pn		17 33 29.7	-1.3	HDMB	Hadim	1.85	349 *e*PN	Pn	17 33 39.1 0.0
HDMB	Hadim	1.85	349 *e*PN	Pn		17 33 39.1	0.0	HDMB	Hadim	1.85	349 *e*Pn	Pn	17 33 39.1 0.0
HDMB	Hadim	1.85	349 *e*Pn	Pn		17 33 39.1	0.0	KARA	Karaisali	2.73	39 *e*PN	Pn	17 33 52.5 +1.3
KARA	Karaisali	2.73	39 *e*PN	Pn		17 33 52.5	+1.3	KARA	Karaisali	2.73	39 *e*Pn	Pn	17 33 52.5 +1.3
KARA	Karaisali	2.73	39 *e*Pn	Pn		17 33 52.5	+1.3	SUTC	Sutluce-Ispart	2.80	327 *e*PN	Pn	17 33 52.9 +0.8
SUTC	Sutluce-Ispart	2.80	327 *e*PN	Pn		17 33 52.9	+0.8	SUTC	Sutluce-Ispart	2.80	327 *e*Pn	Pn	17 33 52.9 +0.8
SUTC	Sutluce-Ispart	2.80	327 *e*Pn	Pn		17 33 52.9	+0.8	KONT	Konya--Tatoy	2.83	351 *e*PN	Pn	17 33 53.0 +0.4
KONT	Konya--Tatoy	2.83	351 *e*PN	Pn		17 33 53.0	+0.4	KONT	Konya--Tatoy	2.83	351 *e*Pn	Pn	17 33 53.0 +0.4

*ISCJB **22** 17:38:58.7±0.3,58°67S±0°06×25°1W±0°1,h10km, mb4.7/28,MS4.8/23,Error ellipse: s-maj=10.0km s-min=7.5km az=146.2*

*IDC **22** 17:38:58.8±0.4,58°64S×25°08W,h0km,mb4.7/16, mb1 4.7/17,mb1mx4.7/21,mbtmp4.7/17,ML4.9/1,MS4.7/19, Ms1 4.6/19,ms1mx4.6/23,Error ellipse: s-maj=15.7km s-min=14.1km az=30.0*

*NEIC **22** 17:38:59.9±4.9,58°60S×25°05W,h8km±29km,mb4.8/18, Error ellipse: s-maj=9.4km s-min=8.5km az=214.0*

*GCMT **22** 17:39:08.6±0.2,58°91S×24°78W,h30km,MW5.3, Moment Tensor Solution. s69,c105; s82,c127; Moment tensor: Scale 10^17^Nm; Mrr0.85±.03; Mθθ0.39±.03; Mφφ-1.24±.02; Mrθ-0.13±.04; Mrφ0.27±.02; Mθφ0.23±.04; Best double couple: M0 1.10000×10^17^ NP1:φs183.00000°, δ40.00000°,λ107.00000°. NP2:φs341.00000°,δ53.00000°, λ77.00000°. Principal axes: T 0.8900, Plg77.0000°, Azm202.0000°; N 0.4200, Plg11.0000°, Azm349.0000°; P -1.3100, Plg7.0000°, Azm81.0000°; Data Used: II IU G IC CN.*

ISC 22 17:39:00.6±0.3,58°68S±0°06×25°2W±0°1,h10km,n132, σ1§14/42,mb4.8/27,MS4.8/23,1D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.94	156		Op *e*Pn	Pn	17 42 14.9	-3.0
VNA1					*e*S	Sn	17 44 31.1	-21
PMSA	Palmer Station	19.14	235	P		Pn	17 43 24.0	-0.4
	0.3nm,0.3s,baz=45,slow=7.1,SNR=2.8							
PMSA				LR		LR	17 47 59.7	
	comp=Z,475nm,20.5s,baz=81,slow=28							
MAIT	Maitri	19.45	143	*e*P		Pn	17 43 27.4	-0.6
MAIT				*e*S		Sn	17 46 58.2	-7.6
USHA	Ushuaia	23.71	260	P		P	17 44 12.6	+0.1
	30nm,0.8s,mb4.8,baz=124,slow=8.6,SNR=9.0							
USHA				LR		LR	17 51 28.4	
	comp=Z,3μm,19.5s,MS4.8,baz=298,slow=32							
SYO	Syowa Base	28.87	138‖	*e*pP		pP	17 45 09.7	+7.8
TRQA	Tornquist	31.40	295	*e*P		P	17 45 19.6	-1.9
	14nm,1.4s,mb4.6							
QSPA	South Pole Qui	31.56	180	P		P	17 45 23.4	+0.9
	16nm,0.7s,mb5.0,baz=207,slow=3.1,SNR=71							
QSPA				PcP		PcP	17 48 15.3	+0.8
	5.8nm,0.8s,baz=238,slow=9.5,SNR=2.8							
QSPA				LR		LR	17 57 12.6	
	comp=Z,981nm,21.6s,MS4.5,baz=15,slow=35							
PLCA	Paso Flores	33.59	282	P		P	17 45 41.2	+0.6
PLCA				LR		LR	17 59 28.9	
PLCA	Paso Flores	33.59	282	P		P	17 45 41.2	+0.6
	16nm,1.0s,mb4.9,baz=138,slow=8.4,SNR=21							
PLCA				LR		LR	17 59 28.9	
	comp=Z,1μm,18.1s,MS4.7,baz=135,slow=37							
MAW	Mawson	37.39	141	*e*P		P	17 46 12.7	-0.3
	4.9nm,0.7s,mb4.5							
MAW	Mawson	37.39	141	*e*P		P	17 46 13.1	+0.1
	1.9nm,0.9s,mb3.9							
MAW				*e*PcP		PcP	17 48 31.4	0.0
MAW	Mawson	37.39	141	P		P	17 46 12.3	-0.7
	6.7nm,0.8s,mb4.5,baz=249,slow=6.4,SNR=12							
MAW				PcP		PcP	17 48 32.0	+0.5
	4.0nm,0.9s,baz=287,slow=6.8,SNR=4.0							
MAW				LR		LR	17 59 50.4	
	comp=Z,2μm,19.3s,MS4.8,baz=250,slow=34							
CPUP	Villa Florida	39.38	311	*e*P		P	17 46 28.5	-1.6
	22nm,0.9s,mb4.9							
CPUP				PcP		PcP	17 48 38.3	0.0
CPUP				ScP		ScP	17 52 26.0	-0.5
CPUP				LR		LR	18 01 24.5	
CPUP	Villa Florida	39.38	311	P		P	17 46 28.6	-1.5
	1.4nm,0.4s,mb4.0,baz=133,slow=9.6,SNR=4.6							
CPUP				PcP		PcP	17 48 38.3	0.0
	0.9nm,0.4s,baz=78,slow=4.9,SNR=3.1							
CPUP				ScP		ScP	17 52 26.0	-0.5
	0.8nm,0.5s,baz=150,slow=2.3,SNR=3.1							
CPUP				LR		LR	18 01 24.5	
	comp=Z,695nm,20.9s,MS4.5,baz=142,slow=34							
CFAA	Coronel Fontan	39.62	294	P		P	17 46 31.2	-0.9
	1.1nm,0.7s,mb3.7,baz=165,slow=7.8,SNR=11							
CFAA				PcP		PcP	17 48 39.3	+0.3
	0.7nm,0.6s,baz=159,slow=3.3,SNR=4.3							
SUR	Sutherland	40.39	70	LR		LR	17 58 07.8	
	comp=Z,741nm,19.9s,MS4.5,baz=6.4,slow=28							
SBA	Scott Base	43.52	184	*e*P		P	17 47 06.0	+2.4
	32nm,1.3s,mb4.9							
BOSA	Boshof	45.66	71	*e*P		P	17 47 20.5	-0.7
	8.7nm,0.9s,mb4.7							
BOSA	Boshof	45.66	71	P		P	17 47 20.1	-1.1
	5.2nm,0.8s,mb4.5,baz=219,slow=6.3,SNR=14							
BOSA				LR		LR	18 02 29.3	
	comp=Z,761nm,18.7s,MS4.7,baz=219,slow=31							
TSUM	Tsumeb	50.11	57	*e*P		P	17 47 55.6	-0.2
	12nm,1.1s,mb4.8							
TSUM	Tsumeb	50.11	57	P		P	17 47 55.4	-0.3
	3.4nm,0.5s,mb4.6,baz=197,slow=5.6,SNR=16							
CASY	Casey	51.05	159	*e*P		P	17 48 03.1	+0.8
CASY	Casey	51.05	159	*e*P		P	17 48 02.9	+0.6
	8.2nm,0.8s,mb4.7							
CASY				*e*PcP		PcP	17 49 17.8	-0.1
LPAZ	La Paz	52.79	305	*e*P		P	17 48 15.7	-0.1
	5.5nm,0.7s,mb4.6							
LPAZ				*e*PcP		PcP	17 49 25.8	+0.6
LPAZ	La Paz	52.79	305	P		P	17 48 16.1	+0.3
	5.0nm,0.6s,mb4.6,baz=196,slow=8.3,SNR=14							
LPAZ				PcP		PcP	17 49 26.2	+1.0
	2.8nm,0.5s,baz=124,slow=1.9,SNR=3.4							
RCBR	Riachuelo	53.37	347	P		P	17 48 19.2	-0.9
	40nm,1.3s,mb5.2							
LSZ	Lusaka	58.39	65	*e*P		P	17 48 54.5	-1.6
	3.1nm,0.6s,mb4.5							
ABPO	Ambohimpanom	64.81	85	P		P	17 49 35.6	-3.8
	15nm,1.2s,mb4.9							
LIC	Lamto	66.69	22	*e*P		P	17 49 52.1	+0.6
	52nm,0.9s,mb5.6							
KIC	Kosan Boka	66.88	22	*e*P		P	17 49 53.0	+0.3
	22nm,0.8s,mb5.2							

WEL 22 16:48:01.8±0.1,38°85S×175°97E,h5km,ML3.6/34,33C, Error ellipse: s-maj=0.9km s-min=0.6km az=90.0,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HATZ	Hinemaiaia	0.10	113	⇑PG		Pg	16 48 04.0	+0.1
HATZ				SG		Sg	16 48 05.7	+0.3
RITZ	Rihia Road	0.15	215	⇑PG		Pg	16 48 05.8	+0.9
RITZ				SG		Sg	16 48 08.8	+1.8
RATZ	Rangitukua	0.16	264	⇑PG		Pg	16 48 05.9	+0.9
WHTZ	Whakaora	0.18	356	⇑PG		Pg	16 48 06.4	+0.9
WATZ	Wairara	0.23	307	PG		Pg	16 48 07.1	+0.7
KATZ	Kakaramea	0.25	240	⇑PG		Pg	16 48 07.4	+0.7
KRVZ	Karewarewa	0.35	227	⇑PG		Pg	16 48 09.2	+0.5
OTVZ	Oturere	0.39	217	⇑PG		Pg	16 48 09.9	+0.5
WTVZ	West Tongariro	0.40	228	⇑PG		Pg	16 48 10.0	+0.4
ALRZ	Allen Road	0.41	45	⇑PG		Pg	16 48 09.5	-0.2
NGZ	Ngauruhoe	0.43	222	⇑PG		Pg	16 48 10.7	+0.5
TWVZ	Taurewa	0.47	242	PG		Pg	16 48 11.2	+0.3
PRRZ	Plateau Road	0.48	43	⇑PG		Pg	16 48 10.9	-0.2
TUVZ	Tukino	0.48	211	⇑PG		Pg	16 48 11.5	+0.4
BKZ	Black Stump Fm	0.51	128	⇑PG		Pg	16 48 12.3	+0.5
FWVZ	Far West T-bar	0.52	219	⇑PG		Pg	16 48 12.1	+0.3
HRDZ	Handcock Road	0.52	28	⇑PG		Pg	16 48 12.7	+0.3
DRZ	Dome Shelter	0.53	217	PG		Pg	16 48 12.2	+0.2
TRVZ	Turoa	0.56	216	⇑PG		Pg	16 48 12.7	+0.2
WNVZ	Wahianoa	0.56	211	PG		Pg	16 48 12.7	+0.2
MOVZ	Moawhango	0.58	197	⇑PG		Pg	16 48 12.9	-0.1
BHHZ	Black Hill Sta	0.64	174	⇑P*		Pb	16 48 14.4	-1.1
PKVZ	Pokaka	0.66	228	P*		Pb	16 48 14.6	-1.2
RRRZ	Republican Roa	0.66	40	⇑P*		Pb	16 48 14.4	-1.5
NMHZ	Naumai	0.69	111	⇑P*		Pb	16 48 16.2	-0.2
UTU	Utuhina	0.69	14	⇑P*		Pb

TIC	**Toumodi**	**67.10**	**22**	*e*P		**P**	**17 49 54.7**	**+0.6**
	20nm,0.5s,mb5.4							
DBIC	**Dimbokro**	**67.16**	**22**	P		**P**	**17 49 55.0**	**+0.6**
	7.9nm,0.9s,mb4.8,baz=175,slow=6.5,SNR=6.0							
DBIC				LR	LR		18 13 31.1	
	comp=Z,309nm,18.6s,MS4.5,baz=167,slow=31							
OTAV	**Otavalo**	**72.02**	**303**	*e*P		**P**	**17 50 25.4**	**+0.9**
	12nm,1.3s,mb4.7							
ROSC	**El Rosal**	**74.42**	**308**	LR	LR		18 24 20.4	
	comp=Z,385nm,19.7s,MS4.7,baz=193,slow=37							
TORD	**Torodi Ar. Bea**	**74.86**	**27**	P		**P**	**17 50 41.3**	**+0.2**
	8.8nm,0.6s,mb4.9,baz=200,slow=6.3,SNR=75							
TORD				LR	LR		18 18 19.7	
	comp=Z,534nm,19.0s,MS4.9,baz=185,slow=32							
KMBO	**Kilima Mbogo**	**75.02**	**67**	P		**P**	**17 50 45.0**	**+2.8**
	3.0nm,1.0s,mb4.2							
RPZ	**Rata Peaks**	**77.08**	**192**	P		**P**	**17 50 55.0**	**+1.3**
RPZ				LR	LR		18 22 44.7	
RPZ	**Rata Peaks**	**77.08**	**192**	P		**P**	**17 50 54.9**	**+1.3**
	18nm,1.0s,mb5.0,baz=210,slow=8.1,SNR=3.5							
RPZ				LR	LR		18 22 44.7	
	comp=Z,600nm,19.4s,MS4.9,baz=106,slow=34							
RKT	**Rikitea**	**80.22**	**242**	*e*LQ			18 12 55.8	
	623nm,34.5s							
RKT				*e*LR	LR		18 16 18.7	
	1µm,25.8s,baz=148							
URZ	**Urewera**	**81.64**	**198**	P		**P**	**17 51 19.1**	**+0.6**
	8.8nm,0.9s,mb4.7,baz=238,slow=9.5,SNR=3.3							
URZ				LR	LR		18 22 29.8	
	comp=Z,341nm,22.0s,MS4.7,baz=169,slow=32							
TAM	**Tamanrasset**	**85.06**	**28**	*e*P		**P**	**17 51 38.5**	**+2.3**
	6.3nm,1.0s,mb4.7							
STKA	**Stephens Creek**	**89.11**	**169**	*e*P		**P**	**17 51 55.6**	**-0.3**
	1.6nm,0.9s,mb4.3							
STKA	**Stephens Creek**	**89.11**	**169**	P		**P**	**17 51 56.2**	**+0.3**
	7.2nm,0.8s,mb5.0,baz=154,slow=6.3,SNR=10							
STKA				LR	LR		18 32 07.8	
	comp=Z,673nm,18.9s,MS5.1,baz=202,slow=36							
PPT	**Papeete**	**91.48**	**232**	*e*PS	PS		18 04 23.5	+7.7
	187nm,30.2s							
PPT				*e*LR	LR		18 21 34.3	
	487nm,21.8s,baz=161							
PPT	**Papeete**	**91.48**	**232**	LR	LR		18 26 16.5	
	comp=Z,582nm,18.5s,MS5.0,baz=162,slow=31							
MDT	**Midelt**	**92.76**	**17**	LR	LR		18 29 21.3	
	comp=Z,361nm,19.0s,MS4.8,baz=207,slow=33							
TAOE	**Nuku Hiva Isla**	**95.03**	**244**	*e*LR	LR		18 23 14.4	
	864nm,26.3s							
ASAR	**Alice Springs**	**96.14**	**161**	P		**P**	**17 52 27.8**	**-0.8**
	2.5nm,0.8s,mb4.7,baz=180,slow=4.1,SNR=26							
ASAR				PKKPbc	PKKPbc		18 09 14.2	+1.7
	0.4nm,0.6s,baz=16,slow=1.7,SNR=12							
KEST	**Kesra**	**98.37**	**28**	LR	LR		18 32 48.3	
	comp=Z,104nm,19.6s,MS4.3,baz=202,slow=33							
DZM	**Mont Dzumac**	**98.98**	**191**	*e*PS	PS		18 05 43.7	+6.1
	79nm,25.6s							
DZM				*e*LR	LR		18 25 03.5	
	562nm,22.5s							
ESDC	**Sonseca Array**	**99.58**	**16**	LR	LR		18 35 14.3	
	comp=Z,130nm,18.9s,MS4.5,baz=150,slow=34							
WRA	**Warramunga Arr**	**99.86**	**160**	P		Pdif	17 52 44.8	-0.6
	0.5nm,0.6s,baz=192,slow=3.9,SNR=2.8							
WRA				LR	LR		18 35 47.6	
	comp=Z,664nm,20.8s,MS5.1,baz=190,slow=34							
CTAO	**Charters Tower**	**101.20**	**172**	*e*P	Pdif		17 52 54.4	+3.1
SDCO	**Great Sand Dun**	**116.76**	**299**	*e*PKPdf	PKPdf		17 57 39.6	-4.7
MSU	**Marysvale**	**120.49**	**295**	*e*PKPdf	PKPdf		17 57 52.4	+0.9
TMUT	**Trail Mountain**	**120.66**	**296**	*e*PKPdf	PKPdf		17 57 51.4	-0.3
RSSD	**Black Hills**	**121.26**	**304**	*e*PKPdf	PKPdf		17 57 52.2	-0.6
DUG	**Dugway**	**122.12**	**295**	*e*PKPdf	PKPdf		17 57 54.2	-0.4
PDAR	**Pinedale Array**	**122.64**	**300**	PKP	PKPdf		17 57 54.7	-0.7
	1.6nm,0.8s,baz=127,slow=3.9,SNR=12							
NOA	**NORSAR Array B**	**122.70**	**20**	PKP	PKPdf		17 57 54.5	-0.4
	4.0nm,1.1s,baz=200,slow=1.6,SNR=4.3							
NOA				PKKPbc	PKKPbc		18 07 48.7	+0.8
	0.8nm,0.8s,baz=29,slow=4.1,SNR=3.9							
ULM	**Lac du Bonnet**	**122.89**	**314**	PKP	PKPdf		17 57 54.6	-1.0
	3.0nm,0.5s,baz=74,slow=3.7,SNR=3.9							
CM31	**Chiang Mai Arr**	**123.12**	**110**	*e*PKPdf	PKPdf		17 57 56.9	-0.3
CMAR	**Chiang Mai Arr**	**123.12**	**110**	PKP	PKPdf		17 57 57.0	-0.1
	4.6nm,0.9s,baz=235,slow=3.6,SNR=22							
NVAR	**Mina Array Bea**	**123.39**	**290**	PKP	PKPdf		17 57 57.9	+0.9
NVAR	**Mina Array Bea**	**123.39**	**290**	PKP	PKPdf		17 57 57.9	+0.9
	2.7nm,0.7s,baz=147,slow=2.7,SNR=15							
CHTO	**Chiang Mai**	**123.42**	**110**	*e*PKPdf	PKPdf		17 57 57.7	0.0
LOHW	**Long Hollow**	**123.78**	**299**	*e*PKPdf	PKPdf		17 57 57.7	+0.1
TPAW	**Teton Pass**	**123.84**	**299**	*e*PKPdf	PKPdf		17 57 58.3	+0.5
MOOW	**Moose Ponds**	**123.95**	**299**	*e*PKPdf	PKPdf		17 57 57.9	0.0
IMW	**Indian Meadow**	**124.15**	**299**	*e*PKPdf	PKPdf		17 57 58.6	+0.3
BOZ	**Bozeman (W)**	**125.81**	**300**	*e*PKPdf	PKPdf		17 58 02.8	+1.4
DLMT	**Dillon**	**126.03**	**299**	*e*PKPdf	PKPdf		17 58 02.5	+0.6
FINES	**FINESS Array B**	**126.21**	**28**	PKP	PKPdf		17 57 59.4	-2.3
	1.4nm,0.6s,baz=260,slow=1.6,SNR=9.0							
LRM	**Limekiln Ridge**	**126.32**	**300**	*e*PKPdf	PKPdf		17 58 03.8	+1.4
WVOR	**Wild Horse Val**	**126.63**	**293**	*e*PKPdf	PKPdf		17 58 04.5	+1.4
HRY	**Holter Researc**	**126.72**	**301**	*e*PKPdf	PKPdf		17 58 03.5	+0.4
KAF	**Kangasniemi**	**126.84**	**27**	*e*pkp	PKPdf		17 58 01.6	-1.2
MOD	**Modoc**	**127.04**	**291**	*e*PKPdf	PKPdf		17 58 05.3	+1.4
CHMT	**Chamberlain Mo**	**127.51**	**300**	*e*PKPdf	PKPdf		17 58 05.4	+0.8
MSO	**Missoula**	**127.76**	**300**	*e*PKPdf	PKPdf		17 58 05.9	+0.8
ABKAR	**Akbulak array**	**127.95**	**56**	*e*PKPdf	PKPdf		17 58 04.5	-0.8
KSH	**Kashi**	**128.20**	**75**	*e*PKP	PKPdf		17 58 07.6	+1.4
KSH				*e*PKP			18 01 43.3	
KSH				*e*SKS	SKSdf		18 05 14.8	-2.7
KSH				AMB	AMB			
	comp=Z,180nm,4.9s							
KSH				LR	LR			
	comp=N,31nm,4.0s							
KSH				LR	LR			
	comp=E,16nm,3.4s							
KSH				LR	LR			
	comp=Z,35nm,3.7s							
SWMT	**Swartz Lake**	**128.29**	**300**	*e*PKPdf	PKPdf		17 58 06.2	+0.1
JOF	**Joensuu**	**128.76**	**29**	*e*pkp	PKPdf		17 58 05.4	-1.1
OD2	**Odessa Site #2**	**130.36**	**297**	*e*PKPdf	PKPdf		17 58 11.1	+1.0
KMI	**Kunming**	**130.61**	**110**	PKP	PKPdf		17 58 10.9	-0.4
KMI				PP	PP		18 00 30.1	+3.7
KMI				SS	SS		18 17 52.6	-2.2
KMI				LR	LR			
	comp=N,330nm,22.0s,MS5.1							
KMI				LR	LR			
	comp=E,290nm,23.4s,MS5.1							
KMI				LR	LR			
	comp=Z,290nm,22.7s,MS4.9							
JCW	**Jim Creek**	**132.45**	**296**	*e*PKPdf	PKPdf		17 58 14.1	+0.2
ARCES	**ARCESS Array B**	**132.99**	**22**	PKP	PKPdf		17 58 13.5	-0.9
	comp=Z,2.5nm,0.7s,baz=200,slow=1.3,SNR=11							
KEV	**Kevo**	**133.46**	**22**	*e*pkp	PKPdf		17 58 14.5	-0.7
MKAR	**Makanchi Array**	**136.66**	**73**	PKP	PKPpre		17 58 09.7	
MKAR				PKP	PKPdf		17 58 21.4	-0.5
MKAR	**Makanchi Array**	**136.66**	**73**	PKhKP	PKPpre		17 58 09.7	
	comp=Z,1.0nm,0.9s,baz=253,slow=3.3,SNR=6.3							
MKAR				PKP	PKPdf		17 58 21.4	-0.5
	comp=Z,1.3nm,0.9s,baz=264,slow=1.2,SNR=6.0							
WMQ	**Urumqi**	**137.33**	**80**	*e*PKP	PKPdf		17 58 24.3	+1.1
WMQ				PP	PP		18 01 12.6	+3.4
WMQ				PKS			18 01 59.0	
WMQ				SKS	SKSdf		18 05 29.6	-3.9
WMQ				SKKS	SKKSac		18 07 59.8	-2.9
WMQ				SS	SS		18 19 13.9	-2.2
WMQ				AMB	AMB			
	comp=Z,190nm,4.4s							
WMQ				LR	LR			
	comp=N,130nm,20.3s,MS4.8							
WMQ				LR	LR			
	comp=E,140nm,20.8s,MS4.8							
WMQ				LR	LR			
	comp=Z,140nm,18.3s,MS4.7							
YKA	**Yellowknife Ar**	**138.84**	**315**	PKP	PKPpre		17 58 16.4	
YKA				PKP	PKPdf		17 58 25.5	+0.1
YKA	**Yellowknife Ar**	**138.84**	**315**	PKhKP	PKPpre		17 58 16.4	
	comp=Z,0.9nm,0.6s,baz=149,slow=6.4,SNR=3.2							
YKA				PKP	PKPdf		17 58 25.5	+0.1
	comp=Z,4.5nm,0.6s,baz=129,slow=2.3,SNR=11							
LZH	**Lanzhou**	**140.03**	**102**	*e*PKP	PKPdf		17 58 33.3	+4.8
GTA	**Gaotai**	**140.46**	**94**	*e*PKP	PKPdf		17 58 28.3	-0.8
GTA				PP	PP		18 01 31.1	+2.5
GTA				PKS			18 02 03.3	
GTA				SKKS	SKKSac		18 08 16.6	-4.8
GTA				SS	SS		18 19 50.3	-2.7
GTA				AMB	AMB			
	comp=Z,94nm,7.4s							
GTA				LR	LR			
	comp=N,160nm,18.7s,MS5.0							
GTA				LR	LR			
	comp=E,190nm,15.5s,MS5.0							
GTA				LR	LR			
	comp=Z,240nm,17.5s,MS5.0							
ZAA0	**Zalesovo Array**	**142.50**	**66**	*e*PKPpre	PKPpre		17 58 28.2	
ZALV	**Zalesovo Beam**	**142.50**	**66**	PKhKP	PKPpre		17 58 27.1	
	comp=Z,1.6nm,0.5s,baz=230,slow=3.6,SNR=9.9							
NJ2	**Nanjing**	**144.03**	**122**	*e*PKP	PKPdf		17 58 39.0	+3.3
SKAG	**Skagway**	**145.60**	**302**	*e*PKPdf	PKPdf		17 58 37.1	-0.4
PNL	**Peninsula**	**147.52**	**300**	*e*PKPbc	PKPbc		17 58 43.5	+0.1
HHC	**Hu-ho-hao-te**	**147.58**	**104**	*e*PKPbc	PKPbc		17 58 44.5	+0.3
HHC				PKPab	PKPab		17 58 52.6	+6.2
HHC				PKS			18 02 17.8	
HHC				PP	PP		18 02 19.6	+8.4
HHC				SKS	SKSdf		18 05 47.5	-2.1
HHC				SKKS	SKKSac		18 09 03.8	+1.8
HHC				SS	SS		18 21 20.3	+5.7
HHC				AMB	AMB			
	comp=Z,140nm,4.5s							
HHC				LR	LR			
	comp=N,190nm,19.0s,MS5.0							
HHC				LR	LR			
	comp=E,160nm,15.9s,MS5.0							
HHC				LR	LR			
	comp=Z,180nm,16.8s,MS4.9							
INK	**Inuvik**	**148.51**	**317**	*e*PKPbc	PKPbc		17 58 45.3	-0.5
BJT	**Baijiatuau**	**149.25**	**110**	*e*PKPbc	PKPbc		17 58 48.4	-0.1
BJI	**Beijing**	**149.27**	**110**	PKPbc	PKPbc		17 58 46.6	-2.0
BJI				PP	PP		18 02 25.5	+4.5
BJI				LR	LR			
	comp=Z,93nm,24.4s,MS4.5							
DAWY	**Dawson**	**149.33**	**308**	*e*PKPbc	PKPbc		17 58 47.2	-0.8
SONM	**Songino Array**	**149.72**	**89**	PKPbc	PKPbc		17 58 48.6	-0.8
	comp=Z,12nm,0.9s,baz=221,slow=2.6,SNR=38							
ULN	**Ulaanbaatar**	**150.09**	**90**	*e*PKPdf	PKPdf		17 58 43.8	-1.5
ULN				*e*PKPbc	PKPbc		17 58 49.4	-0.9
EGAK	**Eagle**	**150.29**	**309**	*e*PKPbc	PKPbc		17 58 50.0	-0.3
BMRM	**Bremner River**	**150.42**	**301**	*e*PKPbc	PKPbc		17 58 50.7	0.0
TLY	**Talaya**	**150.59**	**81**	*e*PKPdf	PKPdf		17 58 46.6	+0.7
TLY				*e*PKPbc	PKPbc		17 58 51.1	-0.3
MENT	**Mentasta**	**150.75**	**305**	*e*PKPbc	PKPbc		17 58 51.8	+0.4
DIV	**Divide**	**151.00**	**300**	*e*PKPbc	PKPbc		17 58 52.2	+0.1
PAX	**Paxson**	**151.52**	**304**	*e*PKPbc	PKPbc		17 58 53.3	+0.1
SEW	**Seward**	**152.30**	**297**	*e*PKPbc	PKPbc		17 58 54.5	-0.5
KSRS	**Korea Array**	**152.50**	**129**	PKPbc	PKPbc		17 58 54.1	-2.2
	comp=Z,3.9nm,0.9s,baz=167,slow=1.6,SNR=5.0							
ILAR	**Eielson Array**	**152.64**	**308**	PKPbc	PKPbc		17 58 55.5	-0.2
	comp=Z,37nm,1.0s,baz=148,slow=1.3,SNR=57							
PMR	**Palmer**	**152.68**	**300**	*e*PKPbc	PKPbc		17 58 56.1	+0.2
PMR				*e*PKPab	PKPab		17 59 05.5	-1.2
RC01	**Rabbit Creek A**	**152.79**	**299**	*e*PKPdf	PKPdf		17 58 49.6	+0.7
RC01				*e*PKPbc	PKPbc		17 58 56.5	+0.4
KDAK	**Kodiak Island**	**152.88**	**291**	*e*PKPbc	PKPbc		17 58 56.1	-0.4
OHAK	**Old Harbor**	**152.99**	**290**	*e*P	PKPbc		17 58 57.4	+0.7
COLA	**College**	**153.07**	**307**	*e*PKPbc	PKPbc		17 58 56.5	-0.1
MCK	**McKinley**	**153.24**	**305**	*e*PKPbc	PKPbc		17 58 56.6	-0.5
TRF	**Thorofare Moun**	**153.75**	**304**	*e*PKPdf	PKPdf		17 58 46.9	-3.4
TRF				*e*PKPbc	PKPbc		17 58 58.3	+0.2
RSO	**Redoubt South**	**153.97**	**297**	*e*PKPbc	PKPbc		17 58 58.5	-0.2
BPAW	**Bear Paw Mtn.**	**154.21**	**305**	*e*PKPbc	PKPbc		17 58 58.3	-0.9
PPLA	**Purkeypile**	**154.43**	**302**	PKPdf	PKPdf		17 58 50.7	-0.6
PPLA				*e*PKPbc	PKPbc		17 59 00.2	+0.6
COLD	**Coldfoot**	**154.45**	**312**	*e*PKPdf	PKPdf		17 58 48.3	-2.8
COLD				*e*PKPbc	PKPbc		17 59 00.1	+0.5
MJAR	**Matsushiro Arr**	**155.31**	**147**	PKPab	PKPab		17 59 17.3	-1.3
MJAR	**Matsushiro Arr**	**155.31**	**147**	PKPab	PKPab		17 59 17.3	-1.3
	comp=Z,2.6nm,0.9s,baz=184,slow=3.9,SNR=4.2							
CN2	**Changchun**	**156.59**	**117**	*e*PKP	PKPdf		17 58 50.3	-4.5
PETK	**Petropavlovsk-**	**174.19**	**197**	PKPab	PKPab		18 00 39.8	-1.2
	comp=Z,2.0nm,0.8s,baz=133,slow=6.1,SNR=4.9							

NIC 22 17:39:01.6±0.2, 35°02N×32°91E, h30km, ML2.3, MW2.6, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEF	**Lefka**	**0.10**	**352**	*e*PG	Pb	17 39 08.8	+1.8
LEF				*e*SG	Sb	17 39 11.5	+0.8
ALFC	**Alevga**	**0.29**	**299**	P	Pb	17 39 07.7	-1.2
	10nm,0.1s						
ALFC				S	Sb	17 39 11.8	-2.1
MAMC	**Mammari**	**0.30**	**59**	P	Pb	17 39 07.6	-1.5
CSS	**Prodhromos**	**0.35**	**99**	P	Pb	17 39 08.4	-1.4
	1.8nm,0.3s						
CSS				S	Sb	17 39 13.2	-2.2

*ISK **22** 17:57:57.8, 35°.86N×27°.78E, h22km, ML2.7*
*DDA **22** 17:57:58.2, 36°.03N×28°.06E, h7km±2km, Md3.0*
*ISCJB **22** 17:57:58.4±0.9, 35°.82N±0°.05×27°.86E±0°.05, h30km±9km, Error ellipse: s-maj=9.0km s-min=5.0km az=143.3*
*CSEM **22** 17:57:59.7±0.4, 35°.90N×27°.84E, h30km, MD3.0, Error ellipse: s-maj=10.1km s-min=6.4km az=144.0*
*ATH **22** 17:58:00.0, 36°.10N×27°.56E, h28km±3km, MD3.0/6*
*NEIC **22** 17:58:00.0, 36°.10N×27°.56E, h28km, MD3.0(ATH), After ATH.*

ISC 22 17:57:58.6±1.0, 35°.82N±0°.04×27°.87E±0°.05, h25km±8km, n36, σ1§11/52, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.45**	**28**	*e*Pb	**Pb**	**17 58 10.3**	**+2.3**
ARG	**Arkhangelos**	**0.45**	**28**	*e*PB	**Pb**	**17 58 10.3**	**+2.3**
ARG	**Arkhangelos**	**0.45**	**28**	*e*Pb	**Pb**	**17 58 10.3**	**+2.3**
KARP	**Karpathos**	**0.64**	**245**	*e*Pn	**Pn**	**17 58 13.5**	**+1.5**
KARP				*e*Sn	**Sn**	**17 58 22.1**	**+0.9**
KARP	**Karpathos**	**0.64**	**245**	*e*PN	**Pn**	**17 58 13.5**	**+1.5**
KARP				*e*SN	**Sn**	**17 58 22.1**	**+0.9**
KARP	**Karpathos**	**0.64**	**245**	*e*Pn	**Pn**	**17 58 13.5**	**+1.5**
KARP				*e*Sn	**Sn**	**17 58 22.1**	**+0.9**
DAT	**Datca**	**0.94**	**346**	*e*PG	**Pn**	**17 58 15.7**	**-0.4**
DAT				*e*SG	**Sb**	**17 58 28.6**	**+0.4**
DAT	**Datca**	**0.94**	**346**	*e*Pg	**Pn**	**17 58 15.7**	**-0.4**
DAT				*e*Sg	**Sb**	**17 58 28.6**	**+0.4**
BDRM	**Kayabasi**	**1.29**	**345**	*i* P	**Pn**	**17 58 20.1**	**-0.9**
BDRM				*i* S	**Sn**	**17 58 37.0**	**-0.5**
BDRM	**Kayabasi**	**1.29**	**345**	*i* P	**Pn**	**17 58 20.1**	**-0.9**
BDRM				*i* S	**Sn**	**17 58 37.0**	**-0.4**
BODT	**Bodrum**	**1.32**	**340**	*e*PN	**Pn**	**17 58 19.7**	**-1.7**
BODT	**Bodrum**	**1.32**	**340**	*e*Pn	**Pn**	**17 58 19.7**	**-1.7**
YER	**Yerkesik**	**1.35**	**14**	*e*PN	**Pn**	**17 58 21.9**	**0.0**
YER				*e*SN	**Sn**	**17 58 39.1**	**+0.1**
YER	**Yerkesik**	**1.35**	**14**	*e*Pn	**Pn**	**17 58 21.9**	**0.0**
YER				*e*Sn	**Sn**	**17 58 39.1**	**+0.1**
AKAS	**Kas**	**1.47**	**73**	*i* P	**Pn**	**17 58 22.1**	**-1.4**
AKAS				*i* S	**Sn**	**17 58 40.6**	**-1.2**
AKAS	**Kas**	**1.47**	**73**	*i* P	**Pn**	**17 58 22.1**	**-1.3**
AKAS				*i* S	**Sn**	**17 58 40.6**	**-1.2**
MLSB	**Milas**	**1.48**	**357**	*e*PN	**Pn**	**17 58 22.7**	**-0.8**
MLSB	**Milas**	**1.48**	**357**	*e*Pn	**Pn**	**17 58 22.7**	**-0.8**
AYDN	**Tasoluk**	**1.84**	**0**	*i* P	**Pn**	**17 58 28.8**	**+0.3**
AYDN				*i* S	**Sn**	**17 58 51.6**	**+0.7**
AYDN	**Tasoluk**	**1.84**	**0**	*i* P	**Pn**	**17 58 28.8**	**+0.3**
AYDN				*i* S	**Sn**	**17 58 51.7**	**+0.8**
GLHS	**Glhisar (BURDU**	**1.87**	**44**	*e*PN	**Pn**	**17 58 29.7**	**+0.7**
GLHS	**Glhisar (BURDU**	**1.87**	**44**	*e*Pn	**Pn**	**17 58 29.7**	**+0.7**
ELL	**Elmali**	**1.89**	**60**	*e*PN	**Pn**	**17 58 31.1**	**+1.8**
ELL	**Elmali**	**1.89**	**60**	*e*Pn	**Pn**	**17 58 31.1**	**+1.8**
NPS	**Neapolis**	**1.92**	**254**	*e*Pb	**Pb**	**17 58 31.3**	**-1.6**
NPS	**Neapolis**	**1.92**	**254**	*e*PB	**Pb**	**17 58 31.3**	**-1.6**
LAST	**Lasithi**	**2.06**	**252**	*e*Pb	**Pb**	**17 58 33.4**	**-1.8**
LAST	**Lasithi**	**2.06**	**252**	*e*PB	**Pb**	**17 58 33.4**	**-1.8**
IDI	**Anoyia**	**2.48**	**259**	*e*Pn	**Pn**	**17 58 38.6**	**+1.2**
IDI				*e*Sn	**Sn**	**17 59 06.5**	**-0.4**
IDI	**Anoyia**	**2.48**	**259**	*e*PN	**Pn**	**17 58 38.6**	**+1.2**
IDI				*e*SN	**Sn**	**17 59 06.5**	**-0.4**
IDI	**Anoyia**	**2.48**	**259**	*e*Pn	**Pn**	**17 58 38.6**	**+1.2**
IDI				*e*Sn	**Sn**	**17 59 06.5**	**-0.4**
KARN	**Karanos**	**3.25**	**264**	*e*PN	**Pn**	**17 58 49.1**	**+1.2**
KARN	**Karanos**	**3.25**	**264**	*e*Pn	**Pn**	**17 58 49.1**	**+1.2**
KYTH	**Kithira**	**3.94**	**278**	*e*Pn	**Pn**	**17 58 57.3**	**-0.1**
KYTH	**Kithira**	**3.94**	**278**	*e*PN	**Pn**	**17 58 57.3**	**-0.1**
KYTH	**Kithira**	**3.94**	**278**	*e*Pn	**Pn**	**17 58 57.3**	**-0.1**

*ISCJB **22** 18:04:37.1±0.4, 58°.60S±0°.07×25°.0W±0°.1, h10km, mb4.4/21, Error ellipse: s-maj=10.4km s-min=9.9km az=27.9*
*IDC **22** 18:04:37.2±0.5, 58°.66S×25°.14W, h0km, mb4.3/14, mb1 4.3/14, mb1mx4.3/20, mbtmp4.3/14, MS3.7/1, Ms1 3.7/1, ms1mx3.2/17, Error ellipse: s-maj=18.9km s-min=15.2km az=14.0*
*NEIC **22** 18:04:42.7±2.5, 58°.61S×25°.04W, h36km±21km, mb4.4/6, Error ellipse: s-maj=10.2km s-min=9.1km az=186.0*

ISC 22 18:04:38.9±0.4, 58°.67S±0°.07×25°.1W±0°.1, h10km, n59, σ1§04/30, mb4.4/21, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.93**	**156**	*e*	**Pn**	**18 07 53.5**	**-2.5**
PMSA	**Palmer Station**	**19.19**	**235**	P	**Pn**	**18 09 05.6**	**+2.3**
PMSA	**Palmer Station**	**19.19**	**235**	P	**Pn**	**18 09 05.6**	**+2.3**
	baz=144,slow=8.7,SNR=2.8						
MAIT	**Maitri**	**19.43**	**143**	*e*P	**Pn**	**18 09 05.6**	**-0.4**
USHA	**Ushuaia**	**23.77**	**260**	P	**P**	**18 09 51.5**	**+0.3**
	17nm,0.9s,mb4.5,baz=29,slow=3.5,SNR=3.6						
TRQA	**Tornquist**	**31.44**	**295**	P	**P**	**18 10 59.0**	**-1.0**
	5.4nm,1.0s,mb4.3						
QSPA	**South Pole Qui**	**31.58**	**180**	P	**P**	**18 11 02.4**	**+1.5**
	5.1nm,0.7s,mb4.5,baz=206,slow=4.4,SNR=40						
QSPA				PcP	PcP	18 13 53.2	+0.5
	2.5nm,0.8s,baz=121,slow=3.4,SNR=4.2						
PLCA	**Paso Flores**	**33.63**	**282**	P	**P**	**18 11 18.9**	**-0.4**
PLCA				PcP	PcP	18 13 59.7	+0.6
PLCA				LR	LR	18 23 37.4	
PLCA	**Paso Flores**	**33.63**	**282**	P	**P**	**18 11 18.9**	**-0.4**
	4.4nm,0.8s,mb4.5,baz=122,slow=8.8,SNR=12						
PLCA				PcP	PcP	18 13 59.7	+0.6
	1.6nm,0.8s,baz=29,slow=3.5,SNR=3.7						
PLCA				LR	LR	18 23 37.4	
	comp=Z,125nm,18.5s,baz=284,slow=34						
MAW	**Mawson**	**37.37**	**141**	P	**P**	**18 11 50.2**	**-0.9**
MAW	**Mawson**	**37.37**	**141**	P	**P**	**18 11 50.3**	**-0.8**
	0.9nm,0.6s,mb3.8,baz=262,slow=7.1,SNR=2.3						
CPUP	**Villa Florida**	**39.40**	**311**	P	**P**	**18 12 06.7**	**-1.9**
	1.5nm,0.6s,mb3.9,baz=112,slow=3.2,SNR=4.1						
CFAA	**Coronel Fontan**	**39.66**	**294**	P	**P**	**18 12 09.2**	**-1.5**
	0.2nm,0.3s,mb3.3,baz=164,slow=5.3,SNR=3.9						
CFAA				PcP	PcP	18 14 17.1	-0.3
	0.4nm,0.5s,baz=175,slow=4.8,SNR=4.5						
SBA	**Scott Base**	**43.54**	**184**	*e*P	**P**	**18 12 43.6**	**+1.6**
	4.5nm,0.9s,mb4.2						
BOSA	**Boshof**	**45.61**	**71**	*e*P	**P**	**18 12 58.8**	**-0.2**
	7.7nm,1.1s,mb4.5						
BOSA	**Boshof**	**45.61**	**71**	P	**P**	**18 12 59.4**	**+0.4**
	1.3nm,0.6s,mb4.1,baz=217,slow=15,SNR=5.6						
LBTB	**Lobatse**	**48.77**	**69**	P	**P**	**18 13 23.9**	**+0.2**
	1.8nm,0.7s,mb4.2,baz=90,slow=20,SNR=3.6						
TSUM	**Tsumeb**	**50.06**	**57**	P	**P**	**18 13 33.8**	**+0.3**
	1.7nm,0.6s,mb4.2,baz=209,slow=8.6,SNR=3.9						

CMAR Chiang Mai Arr 7.23 122 P **Pn** **18 08 37.2 +0.7**
5.0nm,0.3s,baz=300,slow=13,SNR=526
CMAR LR LR 18 11 23.3
comp=Z,205nm,20.6s,baz=334,slow=38
CHRT Chiangrai 7.27 109 ⇑P **Pn** **18 08 37.0 -0.2**
526nm,0.7s
LSA Lhasa 7.35 351 Pn **Pn** **18 08 39.8 +1.6**
LSA Sn **Sn** **18 09 58.8 -1.7**
LSA smax
comp=N,110nm,0.7s
LSA smax
comp=E,270nm,0.7s
LSA Lhasa 7.35 351 *e*Pn **Pn** **18 08 39.5 +1.3**
comp=E,113nm,0.7s
JIRN Jiri 7.73 314 *e*Pn **Pn** **18 08 45.2 +1.7**
JIRN *e*Sn **Sn** **18 10 07.9 -2.0**
comp=E,300nm,0.2s
BDT Bhumibol Dam 8.01 129 P **Pn** **18 08 48.5 +1.2**
comp=E,13nm,1.0s
GUN Gumba 8.10 314 *e*Pn **Pn** **18 08 50.2 +1.6**
PKI Pulchoki 8.21 310 *e*Pn **Pn** **18 08 51.1 +1.0**
PKIN Phulchoki 8.22 310 *e*Pn **Pn** **18 08 51.2 +0.9**
KKN Kakani 8.44 311 *e*Pn **Pn** **18 08 54.1 +1.0**
DMN Daman 8.45 309 *e*Pn **Pn** **18 08 54.5 +1.1**
GKN Gorkha 9.02 310 *e*Pn **Pn** **18 09 01.7 +0.6**
KOLN Koldanda 9.65 305 *e*Pn **Pn** **18 09 09.8 0.0**
VIS Vishakhapatnam 9.79 243 *e*PKP **Pn** **18 09 09.6 -2.1**
VIS *e*S **Sn** **18 10 51.4 -9.1**
DANN Dangsing 9.85 309 *e*Pn **Pn** **18 09 12.7 +0.2**
NGP Nagpur 12.54 267 *e*PKP **Pn** **18 09 48.0 -1.4**
NGP AMb AMB 18 09 51.2
comp=Z,24nm,0.9s
PTH Pithoragarh 13.11 305 *e*PKP **Pn** **18 09 57.8 +0.6**
PTH *ex* x 18 12 15.6
GYA Guiyang 13.53 70 P **Pn** **18 10 12.3 +9.4**
GYA pmax pmax
comp=Z,20nm,0.7s
BHPL Bhopal 13.91 276 *e*PKP **Pn** **18 10 06.2 -1.9**
BHPL *ex* x 18 12 34.3
HYB Hyderabad 14.01 252 *i* P **Pn** **18 10 07.0 -2.5**
HYB *e* 18 12 34.0
HYB *e*S **Sn** **18 12 45.0 +1.1**
AGRA Agra 14.04 293 *e*PKP **Pn** **18 10 10.1 +0.2**
AGRA *ex* x 18 12 36.1
AKL Akola 14.49 266 *e*PKP **Pn** **18 10 14.5 -1.6**
MDRS Chennai 14.90 233 *ex* x 18 13 18.2
SONA Sohna 15.08 296 *e*PKP **Pn** **18 10 22.2 -1.7**
SONA *ex* x 18 12 59.0
NDI New Delhi 15.12 298 *ex* **Pn** **18 10 19.5 -4.9**
NDI *ex* x 18 10 26.9
NDI *ex* x 18 12 55.5
AYAN Aya Nagar 15.12 297 *e*PKP **Pn** **18 10 23.7 -0.7**
AYAN AMb AMB 18 10 30.3
comp=Z,29nm,0.9s
DDI Dehra Dun 15.13 304 *ex* **Pn** **18 10 29.3 +4.8**
DDI *ex* x 18 13 15.5
LATR Latur 15.45 258 *ex* x 18 13 03.2
KUDL Kundal 15.54 295 *ex* **Pn** **18 10 24.3 -5.7**
KUDL AMb AMB 18 10 34.2
comp=Z,30nm,0.8s
KUDL *ex* x 18 12 56.2
KLP Kalpa 15.59 309 *e*PKP **Pn** **18 10 31.0 +0.5**
KLP *ex* x 18 13 10.4
KHET Khetri 16.10 294 *e*PKP **Pn** **18 10 35.7 -1.5**
KHET *ex* x 18 13 18.9
QIZ Qiongzhong 16.59 99 P **Pn** **18 10 36.1 -7.3**
QIZ S Sn 18 13 29.3 -17
QIZ pmax pmax
comp=Z,280nm,3.9s
QIZ LR LR
comp=Z,110nm,37.5s
AJM Ajmer 16.74 288 *e*PKP **Pn** **18 10 44.9 -0.3**
AJM AMb AMB 18 10 45.6
comp=Z,24nm,0.6s
AJM *ex* x 18 13 39.0
LZH Lanzhou 16.83 33 *e*P **Pn** **18 10 43.5 -2.8**
LZH pP pP 18 10 55.5 -1.2
LZH sP sP 18 11 00.0 -0.9
LZH pmax pmax
comp=Z,14nm,1.0s
ENH Enshi 17.12 59 *e*Pn **Pn** **18 10 48.9 -1.1**
comp=Z,31nm,0.8s
POO Poona 17.88 261 *e*PKP **Pn** **18 10 58.4 -1.1**
POO AMb AMB 18 11 02.4
comp=Z,9.5nm,0.6s
POO *ex* x 18 14 03.8
KAD Karad 17.94 257 *ex* x 18 14 04.9
GTA Gaotai 18.06 19 *e*P **Pn** **18 11 01.3 -0.2**
GTA pP pP 18 11 05.4 -4.9
GTA sP sP 18 11 08.8 -5.7
XAN Xi'an 18.52 48 P **Pn** **18 11 08.5 +1.3**
XAN pP pP 18 11 14.6 -0.8
XAN pmax pmax
comp=Z,3.0nm,0.6s
KULM Kulim 18.77 154 *e*P **Pn** **18 11 09.9 -0.5**
comp=Z,8.3nm,0.7s
TSI Tuntungan 19.71 162 P **Pn** **18 11 22.0 +0.4**
comp=Z,209nm,0.8s
PSI Prapat 20.48 161 P **P** **18 11 29.5 +1.1**
comp=Z,5.1nm,0.5s,baz=330,slow=15,SNR=5.0
PSI LR LR 18 20 21.9
comp=Z,162nm,20.2s,MS3.4,baz=145,slow=39
WHN Wuhan 21.16 63 ⇑P **P** **18 11 35.4 -0.2**
WHN pmax pmax
comp=Z,65nm,0.7s,mb5.1
WMQ Urumqi 21.71 351 P **P** **18 11 42.4 +1.0**
WMQ pP 18 11 46.4
WMQ sP sP 18 11 49.4 -4.9
WMQ pmax pmax
comp=Z,78nm,0.7s,mb5.2
WMQ pmax pmax
comp=Z,230nm,4.3s
WMQ LR LR
comp=N,170nm,25.0s,MS3.6
WMQ LR LR
comp=E,240nm,26.0s,MS3.6
MNSI Mandailing Nat 22.57 161 P **P** **18 11 51.8 +0.9**
comp=E,24nm,0.9s,mb4.6
MYKOM Kota Tinggi 23.29 150 P **P** **18 11 58.8 +0.3**
comp=E,33nm,2.1s,mb4.4
BTO Baotou 23.42 35 *e*P **P** **18 11 58.0 -1.6**
KBL Kabul 23.82 306 *e*P **P** **18 12 03.6 +0.3**
comp=E,27nm,1.0s,mb4.6
KBL *e*S **S** **18 16 18.3 +1.4**
ULHL Ulahol 23.99 329 P **P** **18 12 07.0 +2.3**
SNR=5.3
TKM2 Tokmak 2 24.81 329 P **P** **18 12 14.0 +1.8**
SNR=19
UCH Uchter 24.82 327 P **P** **18 12 15.4 +3.1**
SNR=6.7
KBK Karagaybulak 24.92 328 P **P** **18 12 14.9 +1.6**
SNR=9.4
AAK Ala-Archa 25.13 328 P **P** **18 12 17.1 +2.0**
SNR=7.8
AAK Ala-Archa 25.13 328 P **P** **18 12 15.8 +0.6**
comp=E,3.9nm,0.6s,mb4.2,baz=128,slow=5.2,SNR=16
AAK LR LR 18 24 08.0
comp=E,125nm,18.6s,MS3.5,baz=132,slow=41
AML Almayashu 25.17 326 P **P** **18 12 17.0 +1.5**
SNR=7.5
FRU Bishkek 25.21 328 *e*P **P** **18 12 17.0 +1.1**
CHMS Chumysh 25.27 328 P **P** **18 12 17.6 +1.1**
SNR=12
NJ2 Nanjing 25.28 62 *e*P **P** **18 12 16.4 -0.2**
NJ2 pmax pmax
comp=Z,30nm,0.7s,mb4.9
USP Ospenovka 25.60 329 P **P** **18 12 20.8 +1.5**
SNR=16
MKAR Makanchi Array 25.68 344 P **P** **18 12 20.6 +0.5**
MKAR LR LR 18 24 52.1
MKAR Makanchi Array 25.68 344 P **P** **18 12 20.6 +0.5**
comp=Z,20nm,0.8s,mb4.7,baz=158,slow=9.0,SNR=163
MKAR LR LR 18 24 52.1
comp=Z,152nm,21.1s,MS3.5,baz=157,slow=42
YULB Yu-li 26.55 82 *e*P **P** **18 12 29.0 +0.8**
comp=Z,48nm,1.1s,mb4.9
YHNB Yeheng 26.56 79 P **P** **18 12 20.7 -7.7**
comp=Z,25nm,1.0s,mb4.7
NACB Ninganchiao 26.78 81 *e*P **P** **18 12 30.6 +0.4**
comp=Z,36nm,0.8s,mb5.0
SONM Songino Array 27.71 20 P **P** **18 12 38.3 0.0**
comp=Z,2.4nm,0.7s,mb3.9,baz=195,slow=8.7,SNR=13
ULN Ulaanbaatar 27.95 21 *e*P **P** **18 12 40.1 -0.4**
comp=Z,2.6nm,0.6s,mb4.0
ULN Ulaanbaatar 27.95 21 P **P** **18 12 40.5 0.0**
comp=Z,5.6nm,2.0s,mb3.8
KKM Kota Kinabalu 28.11 122 *e*P **P** **18 12 42.8 +0.6**
comp=Z,15nm,0.9s,mb4.6
ZAK Zakamensk 29.17 14 *e*P **P** **18 12 58.8 +7.5**
ZAK pmax pmax
comp=Z,1.0nm,1.6s
KURK Kurchatov 30.25 342 P **P** **18 12 59.9 -1.0**
KURK *e*pP pP 18 13 13.8 +3.5
KURK LR LR 18 27 56.5
KURK Kurchatov 30.25 342 P **P** **18 12 59.9 -1.0**
comp=Z,7.4nm,0.8s,mb4.5,baz=161,slow=8.3,SNR=35
KURK LR LR 18 27 56.5
comp=Z,149nm,19.5s,MS3.6,baz=165,slow=42
KURK Kurchatov 30.25 342 ⇑*i*P **P** **18 13 00.8 -0.1**
KURK pmax pmax
comp=Z,16nm,1.7s,mb4.5
MYLDM Lahad Datu 30.44 120 P **P** **18 13 04.6 +1.7**
comp=Z,19nm,1.1s,mb4.7
ZAA0 Zalesovo Array 32.01 351 *e*P **P** **18 13 16.4 +0.1**
ZAA0 *e*pP pP 18 13 28.4 +2.5
ZALV Zalesovo Beam 32.01 351 P **P** **18 13 16.0 -0.4**
comp=Z,5.5nm,0.8s,mb4.5,baz=170,slow=8.7,SNR=31
ZALV LR LR 18 29 26.9
comp=Z,37nm,18.3s,MS3.1,baz=204,slow=42
NVS Novosibirsk 33.11 350 *e*P **P** **18 13 25.0 -1.0**
NVS *e*S **S** **18 18 51.0 +8.1**
NVS pmax pmax
comp=Z,15nm,1.6s,mb4.7
NVS pmax pmax
comp=N,14nm,1.7s
NVS pmax pmax
comp=E,6.0nm,1.3s
NVS smax
comp=E,18nm,1.9s
KSRS Korea Array 33.95 56 P **P** **18 13 30.8 -2.7**
comp=E,1.1nm,0.5s,mb4.0,baz=252,slow=9.2,SNR=4.5
BVAR Borovoye Array 34.91 337 P **P** **18 13 41.3 -0.3**
comp=E,0.8nm,0.5s,mb3.9,baz=141,slow=9.6,SNR=9.1
BVAR PcP PcP 18 16 14.9 +1.1
comp=E,0.8nm,0.9s,baz=151,slow=3.3,SNR=2.7
BVAR ScP ScP 18 19 55.1 -1.8
comp=E,0.6nm,0.7s,baz=93,slow=5.8,SNR=3.7
BRVK Borovoye 34.97 337 *e*P **P** **18 13 42.0 -0.1**
comp=E,3.1nm,0.8s,mb4.3
BRVK Borovoye 34.97 337 ⇑*i*P **P** **18 13 42.1 0.0**
BRVK pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
ABKAR Akbulak array 37.10 324 *e*P **P** **18 14 00.7 +0.3**
comp=Z,4.3nm,0.6s,mb4.5
ABKAR *e*pP pP 18 14 13.2 +3.2
ABKAR *e*sP sP 18 14 17.9 +4.0
LUWI Luwuk 37.62 124 P **P** **18 14 05.7 +0.4**
comp=Z,47nm,1.2s,mb5.1
AKTK Aktyubinsk 38.80 325 P **P** **18 14 14.7 0.0**
AKTK pP pP 18 14 27.1 +2.8
AKTO Aktyubinsk 38.80 325 P **P** **18 14 14.7 0.0**
comp=Z,1.8nm,0.7s,mb3.9,baz=124,slow=8.3,SNR=9.7
AKTO pP pP 18 14 27.1 +2.8
comp=Z,2.2nm,0.8s,baz=113,slow=10,SNR=4.6
RDF Al-Radifah 40.83 289 *e*P sP 18 14 45.1 -0.3
RDF AMb AMB 18 14 45.9
comp=Z,17nm,0.7s,mb4.8
MIB Mutribah 40.99 290 *e*P sP 18 14 46.0 -0.8
MIB AMb AMB 18 14 46.8
comp=Z,24nm,1.0s,mb4.8
NAY Al-Naaiem 41.09 289 *e*P sP 18 14 46.4 -1.2
NAY AMb AMB 18 14 47.0
comp=Z,12nm,0.8s,mb4.6
SVE Sverdlovsk 41.51 334 ⇑*e*P **P** **18 14 37.8 +0.7**
SVE pmax pmax
comp=Z,14nm,0.8s,mb4.6
MAJO Matsushiro 41.84 60 *e*P **P** **18 14 38.5 -1.6**
comp=Z,24nm,1.2s,mb4.7
MAT Matsushiro 41.84 60 P **P** **18 14 37.5 -2.6**
MJAR Matsushiro Arr 41.84 60 P **P** **18 14 39.2 -0.9**
comp=Z,6.2nm,0.8s,mb4.3,baz=274,slow=9.9,SNR=12
ARU Arti 42.11 332 *e*P **P** **18 14 41.7 -0.4**
comp=Z,7.8nm,1.0s,mb4.3
ARU *e*pP pP 18 14 54.8 +3.1
ARU Arti 42.11 332 *d i*P **P** **18 14 42.2 +0.2**
ARU *e* 18 16 19.7
ARU *e* 18 16 34.8
ARU S **S** **18 21 01.0 +1.7**
ARU SS SS 18 24 09.3 +1.9
ARU SSS 18 24 43.8
ARU pmax pmax
comp=Z,14nm,1.7s,mb4.3
ZEI Tsey 44.98 309 *e*P **P** **18 15 04.4 -1.0**
ZEI pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
KIV Kislovodsk 46.08 310 P **P** **18 15 12.7 -1.3**
comp=Z,7.2nm,0.9s,mb4.6
KIV *e*pP pP 18 15 26.0 +2.3
KIV Kislovodsk 46.08 310 P **P** **18 15 16.0 +2.0**
KIV *e* pP 18 15 27.2 +3.4
KIV *e* 18 15 33.5
KIV *e* 18 17 05.0
ASAJ Asahikawa 46.34 50 P **P** **18 15 14.8 -1.3**
comp=Z,3.0nm,0.5s,mb4.4,baz=354,slow=29,SNR=4.9
YAK Yakutsk 47.01 23 *e*P **P** **18 15 18.4 -2.6**
comp=Z,8.6nm,0.6s,mb4.9
YAK *e*pP pP 18 15 32.3 +1.6
VRHR Novokhopersk 48.50 319 *e*P pP 18 15 44.3 +1.8
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
VRHR pmax pmax
comp=E,1.0nm,0.2s
VSR Storozhevoye 50.02 319 *e*P **P** **18 15 45.0 +0.6**
VSR pmax pmax
comp=N,3.0nm,0.3s
VSR pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
VSR pmax pmax
comp=E,6.0nm,0.7s
MBWA Marble Bar 50.82 147 *e*P **P** **18 15 50.4 -0.3**
comp=E,17nm,0.8s,mb5.0
OBN Obninsk 52.53 323 P **P** **18 16 03.0 -0.2**
OBN *e* 18 16 15.9
OBN pmax pmax
comp=Z,13nm,1.4s,mb4.7
OBN MLR MLR
comp=Z,100nm,27.0s,MS3.7
AKASG Malin Array Be 56.12 317 P **P** **18 16 28.0 -1.3**
AKASG pP pP 18 16 41.0 +1.8
AKASG Malin Array Be 56.12 317 P **P** **18 16 28.0 -1.3**
comp=Z,0.6nm,0.4s,mb4.0,baz=81,slow=6.7,SNR=5.5
AKASG pP pP 18 16 41.0 +1.8
comp=Z,1.4nm,0.5s,baz=76,slow=6.7,SNR=4.1
JOF Joensuu 57.22 332 *e*P **P** **18 16 35.6 -1.4**
JOF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
JOF Joensuu 57.22 332 *ep* **P** **18 16 35.6 -1.4**
comp=Z,3.4nm,0.7s,mb4.5
VRI Vrincioaia 57.54 311 ⇓P **P** **18 16 42.6 +3.2**
VRI Vrincioaia 57.54 311 ⇓*i*P **P** **18 16 42.6 +3.1**
WRA Warramunga Arr 58.68 133 P **P** **18 16 47.5 -0.2**
comp=Z,21nm,0.8s,mb5.2,baz=323,slow=7.3,SNR=45
FINES FINESS Array B 59.30 329 P **P** **18 16 51.2 -0.3**
FINES pP pP 18 17 04.0 +2.6
FINES FINESS Array B 59.30 329 P **P** **18 16 51.2 -0.3**
comp=Z,2.6nm,0.7s,mb4.3,baz=90,slow=6.5,SNR=6.5
FINES pP pP 18 17 04.0 +2.5
comp=Z,2.9nm,0.8s,baz=103,slow=8.2,SNR=3.5
KAF Kangasniemi 59.31 330 *e*P pP 18 17 03.2 +1.7
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
KAF Kangasniemi 59.31 330 *ep* pP 18 17 03.2 +1.7
comp=Z,1.5nm,0.5s
NWAO Narrogin (SRO) 59.89 156 P **P** **18 16 53.5 -2.4**
comp=Z,25nm,1.4s,mb5.0
KWP Kalwaria Pacla 60.26 315 ⇓P **P** **18 16 58.8 +0.5**
KWP Kalwaria Pacla 60.26 315 ⇓*i*P **P** **18 16 58.8 +0.5**
KEV Kevo 60.72 339 *e*P **P** **18 17 00.3 -0.8**
KEV pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
KEV Kevo 60.72 339 *ep* **P** **18 17 00.3 -0.8**
comp=Z,1.5nm,0.8s,mb4.2
ASAR Alice Springs 61.00 136 P **P** **18 17 03.9 +0.3**
comp=Z,18nm,0.7s,mb5.3,baz=316,slow=6.7,SNR=227
CRVS Cervenica-Dubn 61.09 315 *e*P **P** **18 17 07.4 +3.4**
CRVS Cervenica-Dubn 61.09 315 *e*P **P** **18 17 07.4 +3.4**
ARCES ARCESS Array B 61.17 338 P **P** **18 17 04.2 0.0**
comp=Z,2.7nm,0.9s,mb4.4,baz=76,slow=5.1,SNR=8.2
ARCES pP pP 18 17 16.9 +2.7
comp=Z,2.6nm,0.7s,baz=68,slow=4.3,SNR=6.2
PMG Port Moresby 62.20 114 *e*P **P** **18 17 12.2 +0.2**
comp=Z,21nm,0.7s,mb5.4
BILL Bilibino 63.35 24 ⇑*e*P **P** **18 17 18.6 -0.2**
BILL *e* 18 17 32.3
BILL 18 17 50.0
BILL pmax pmax
comp=Z,7.0nm,1.7s,mb4.5
BRG Berggiesshubel 65.81 317 *e*P **P** **18 17 43.8 +8.7**
comp=Z,1.7nm,0.2s,mb4.8
BRG
comp=N,227nm,21.7s
BRG
comp=E,114nm,22.5s
BRG
comp=Z,102nm,22.7s
BRG Berggiesshubel 65.81 317 *e*P **P** **18 17 43.8 +8.7**
BRG pmax pmax
comp=Z,1.0nm,0.2s,mb4.5
BRG MLR MLR
comp=N,136nm,21.7s,MS4.2
BRG MLR MLR
comp=E,68nm,22.5s,MS4.2
BRG MLR MLR
comp=Z,61nm,22.7s,MS3.8
CLL Collm 66.34 318 *e*P **P** **18 17 38.0 -0.6**
CLL Collm 66.34 318 *e*P **P** **18 17 38.0 -0.6**
CLL *e*pP pP 18 17 50.0 +1.3
CLL *e*sP sP 18 17 56.0 +3.5
NOA NORSAR Array B 66.45 328 P **P** **18 17 37.7 -1.4**
NOA pP pP 18 17 51.7 +2.6
NOA LR LR 18 49 16.1
NOA NORSAR Array B 66.45 328 P **P** **18 17 37.7 -1.4**
comp=Z,1.6nm,0.7s,mb4.2,baz=86,slow=6.4,SNR=8.8
NOA pP pP 18 17 51.7 +2.6
comp=Z,3.7nm,0.7s,baz=86,slow=6.4,SNR=12
NOA LR LR 18 49 16.1
comp=Z,39nm,20.0s,MS3.6,baz=190,slow=38
CDF Champ du Feu 70.47 315 *e*P **P** **18 18 04.6 +0.2**
comp=Z,28nm,1.3s,mb4.7
CDF Champ du Feu 70.47 315 *e*P **P** **18 18 04.6 +0.2**
comp=Z,14nm,1.3s,mb4.7
PGF Pioggiola 70.54 309 *e*P **P** **18 18 05.2 +0.2**
HINF Hinteralfeld 70.87 315 *e*P **P** **18 18 07.1 +0.2**
SBF Sospel 71.36 310 *e*P **P** **18 18 09.6 -0.3**
LPG La Plagne 71.46 312 *e*P **P** **18 18 11.4 +0.9**
LPL La Plagne 71.47 312 *e*P **P** **18 18 10.7 +0.2**
comp=Z,13nm,1.1s,mb4.5
LPL La Plagne 71.47 312 *e*P **P** **18 18 10.7 +0.2**
comp=Z,6.6nm,1.1s,mb4.5
STKA Stephens Creek 71.58 137 P **P** **18 18 09.9 -1.3**
comp=Z,2.6nm,0.6s,mb4.3,baz=358,slow=21,SNR=7.3
FRF La Foret Royal 71.99 310 *e*P **P** **18 18 13.3 -0.4**
BAIF Baives 72.07 317 *e*P **P** **18 18 13.9 -0.2**
SMRF Simiane la Rot 72.64 311 *e*P **P** **18 18 16.7 -0.9**
LSZ Lusaka 73.26 245 *e*P **P** **18 18 22.2 +0.6**
comp=Z,4.5nm,0.6s,mb4.6
LSZ *e*pP pP 18 18 35.4 +3.6
QUIF Quistinic 77.33 317 *e*P **P** **18 18 44.7 +0.1**
comp=Z,140nm,1.7s,mb5.3
QUIF Quistinic 77.33 317 *e*P **P** **18 18 44.7 +0.1**
comp=Z,70nm,1.7s,mb5.3
LBTB Lobatse 80.20 238 P **P** **18 19 00.9 +0.2**
comp=Z,2.4nm,0.7s,mb4.2,baz=270,slow=20,SNR=3.0
LBTB LR LR 18 53 34.7
comp=Z,73nm,18.3s,MS4.1,baz=307,slow=35
ILAR Eielson Array 81.92 22 P **P** **18 19 09.0 -0.2**
comp=Z,0.4nm,0.7s,mb3.4,baz=305,slow=5.3,SNR=4.5
ILAR pP pP 18 19 21.4 +1.9
comp=Z,2.4nm,1.1s,baz=295,slow=4.7,SNR=9.2
BOSA Boshof 82.28 235 P **P** **18 19 12.2 +0.5**
comp=Z,3.0nm,1.0s,mb4.2,baz=104,slow=8.3,SNR=3.0
BOSA pP pP 18 19 25.3 +3.3
comp=Z,2.3nm,0.7s,baz=184,slow=2.9,SNR=2.3
KDAK Kodiak Island 83.62 29 *i* P **P** **18 19 17.4 -0.7**
TORD Torodi Ar. Bea 85.80 282 P **P** **18 19 30.9 +0.9**
comp=Z,0.2nm,0.5s,mb3.6,baz=198,slow=0.9,SNR=2.9
TORD pP pP 18 19 42.8 +2.5
comp=Z,2.6nm,0.9s,baz=71,slow=3.9,SNR=7.1
FRB Frobisher Bay 92.84 352 LR LR 19 05 38.0
comp=Z,124nm,19.2s,MS4.4,baz=9.6,slow=38
TXAR Lajitas Array 126.25 18 PKP PKPdf 18 25 52.0 -1.0
comp=Z,0.3nm,0.6s,baz=72,slow=2.9,SNR=3.6
CPUP Villa Florida 152.26 256 PKPbc PKPbc 18 26 45.0 -1.2
CPUP pPKPbc pPKPbc 18 26 59.5 +2.7
CPUP Villa Florida 152.26 256 PKPbc PKPbc 18 26 45.0 -1.2
comp=Z,1.3nm,0.5s,baz=100,slow=6.1,SNR=4.5
CPUP pPKPbc pPKPbc 18 26 59.5 +2.7
comp=Z,1.4nm,0.6s,baz=117,slow=2.3,SNR=3.1

IDC ***22*** *18:07:18.0±5.5,25°.37S×179°.53E,h554km±61km,mb3.3/6, mb1 3.5/7,mb1mx3.3/17,mbtmp3.3/7,Error ellipse: s-maj=31.7km s-min=22.7km az=44.0*
ISCJB ***22*** *18:07:20.4±0.7,25°.4S±0°.2×179°.4E±0°.1,h600km, mb4.1/11,Error ellipse: s-maj=22.2km s-min=13.7km az=162.8*
NEIC ***22*** *18:07:20.0±3.7,25°.36S×179°.46E,h581km±44km,mb4.5/3, Error ellipse: s-maj=24.2km s-min=16.9km az=219.0*
ISC 22 18:07:21.7±0.7,25°.4S±0°.2×179°.5E±0°.1,h600km,n20,
σ0s47/16,mb4.1/11,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**19.53**	**198**	P	**P**	**18 11 10.9**	**0.0**
	0.4nm,0.3s,baz=0.0,slow=6.1,SNR=2.9						
EIDS	**Eidsvold**	**25.61**	**264**	*e*P	**P**	**18 12 05.3**	**0.0**
EIDS	**Eidsvold**	**25.61**	**264**	*e*P	**P**	**18 12 04.9**	**-0.4**
	12nm,0.8s,mb4.6						
RMQ	**Roma**	**27.59**	**261**	*e*P	**P**	**18 12 23.6**	**+1.0**
	32nm,1.6s,mb4.7						
CMSA	**Cobar Meteorol**	**30.22**	**250**	*e*P	**P**	**18 12 45.7**	**+0.4**
CTA	**Charters Tower**	**31.01**	**273**	*e*P	**P**	**18 12 52.2**	**0.0**
	9.7nm,0.7s,mb4.5						
CTAO	**Charters Tower**	**31.01**	**273**	*e*P	**P**	**18 12 52.0**	**-0.2**
	16nm,0.8s,mb4.7						
MTSU	**Mount Surprise**	**33.34**	**275**	*e*P	**P**	**18 13 12.3**	**+0.4**
	32nm,0.8s,mb5.0						
STKA	**Stephens Creek**	**33.73**	**250**	P	**P**	**18 13 14.1**	**-0.8**
	3.5nm,1.1s,mb3.9,baz=90,slow=11,SNR=2.5						
ASAR	**Alice Springs**	**41.32**	**262**	P	**P**	**18 14 16.6**	**-0.1**
	1.7nm,0.4s,mb3.9,baz=90,slow=6.6,SNR=83						
WRA	**Warramunga Arr**	**41.83**	**268**	P	**P**	**18 14 20.0**	**-0.7**
	3.8nm,0.5s,mb4.2,baz=103,slow=8.0,SNR=17						
QSPA	**South Pole Qui**	**64.70**	**180**	P	**P**	**18 17 01.2**	**0.0**
	1.4nm,0.7s,mb3.5,baz=320,slow=3.2,SNR=7.1						
ISA	**Isabella**	**84.41**	**46**	*e*P	**P**	**18 18 51.5**	**-0.5**
	2.5nm,0.8s,mb3.8						
NVAR	**Mina Array Bea**	**86.16**	**44**	P	**P**	**18 19 00.5**	**+0.2**
NVAR	**Mina Array Bea**	**86.16**	**44**	P	**P**	**18 19 00.5**	**+0.2**
	0.9nm,0.7s,mb3.5,baz=220,slow=9.1,SNR=7.0						
TXAR	**Lajitas Array**	**91.64**	**58**	P	**P**	**18 19 26.3**	**+0.3**
	0.7nm,0.8s,mb3.8,baz=221,slow=6.6,SNR=8.1						
BVAR	**Borovoye Array**	**121.21**	**318**	PKP	PKPdf	18 25 07.7	+0.7
	0.3nm,0.4s,baz=90,slow=1.4,SNR=2.8						
NOA	**NORSAR Array B**	**143.46**	**350**	PKP	PKPdf	18 25 47.3	-0.9
	1.7nm,0.7s,baz=21,slow=3.8,SNR=7.2						
MMAI	**Mount Meron Ar**	**147.82**	**292**	PKPbc	PKPbc	18 26 02.8	+2.5
	0.7nm,0.4s,baz=67,slow=3.7,SNR=4.9						
TORD	**Torodi Ar. Bea**	**167.65**	**190**	PKPab	PKPab	18 27 30.7	-0.3
	0.7nm,0.8s,baz=151,slow=3.3,SNR=3.0						

ISCJB ***22*** *18:08:06.5±1.1,8°.2N±0°.1×59°.2E±0°.1,h10km,mb4.3/22, MS3.8/6,Error ellipse: s-maj=23.7km s-min=12.6km az=135.5*
IDC ***22*** *18:08:06.2±3.2,8°.01N×59°.26E,h0km,mb4.0/9,mb1 4.0/9, mb1mx3.8/25,mbtmp4.0/9,MS3.2/2,Ms1 3.2/2, ms1mx2.8/30,Error ellipse: s-maj=70.6km s-min=28.8km az=161.0*
NEIC ***22*** *18:08:07.8±1.1,8°.07N×59°.29E,h10km,mb4.0/6,Error ellipse: s-maj=25.7km s-min=12.9km az=134.0*
CSEM ***22*** *18:08:11.5±0.6,8°.10N×59°.26E,h33km,mb4.9/10,Error ellipse: s-maj=24.5km s-min=13.7km az=134.0*
ISC 22 18:08:08.2±1.1,8°.1N±0°.1×59°.2E±0°.1,h10km,n91,
σ1s08/87,mb4.3/22,MS3.8/6,3C-17D,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**23.74**	**248**	*e*P	**P**	**18 13 21.1**	**0.0**
	3.3nm,0.8s,mb3.8						
KMBO				*e*		18 13 27.1	
KMBO	**Kilima Mbogo**	**23.74**	**248**	*e*P	**P**	**18 13 21.1**	**0.0**
KBL	**Kabul**	**27.80**	**18**	P	**P**	**18 13 56.7**	**-0.9**

	11nm,1.1s,mb4.4						
KBL	**Kabul**	**27.80**	**18**	P	**P**	**18 13 56.7**	**-0.9**
	11nm,1.1s,mb4.4						
EIL	**Elat**	**31.26**	**316**	P	**P**	**18 14 30.7**	**+2.3**
	7.0nm,0.9s,mb4.5,baz=143,slow=12,SNR=6.7						
EIL				LR	LR	18 25 45.8	
	comp=Z,43nm,19.4s,MS3.1,baz=296,slow=34						
EIL	**Elat**	**31.26**	**316**	P	**P**	**18 14 30.7**	**+2.3**
ASF	**Jabal al Asfar**	**31.65**	**322**	LR	LR	18 27 30.7	
	comp=Z,37nm,20.1s,MS3.0,baz=72,slow=37						
MALT	**Malatya**	**35.42**	**331**	P	**P**	**18 15 05.7**	**+1.2**
	2.1nm,0.9s,mb4.1						
MALT	**Malatya**	**35.42**	**331**	P	**P**	**18 15 05.7**	**+1.2**
	2.1nm,0.9s,mb4.1						
AAK	**Ala-Archa**	**36.91**	**19**	P	**P**	**18 15 18.6**	**+1.4**
AAK	**Ala-Archa**	**36.91**	**19**	P	**P**	**18 15 18.5**	**+1.3**
BR131	**Keskin Array S**	**38.90**	**328**	*e*P	**P**	**18 15 34.8**	**+0.7**
	1.5nm,0.8s,mb3.8						
BR131	**Keskin Array S**	**38.90**	**328**	*e*P	**P**	**18 15 34.8**	**+0.7**
	1.5nm,0.8s,mb3.8						
BRTR	**Keskin Array B**	**38.90**	**328**	P	**P**	**18 15 34.8**	**+0.7**
	2.0nm,0.9s,mb3.8,baz=146,slow=9.0,SNR=12						
BRTR	**Keskin Array B**	**38.90**	**328**	P	**P**	**18 15 34.8**	**+0.7**
AKTK	**Aktyubinsk**	**42.18**	**359**	P	**P**	**18 16 01.7**	**+0.7**
AKTK	**Aktyubinsk**	**42.18**	**359**	P	**P**	**18 16 01.7**	**+0.7**
AKTO	**Aktyubinsk**	**42.18**	**359**	P	**P**	**18 16 01.7**	**+0.7**
	2.0nm,0.5s,mb4.0,baz=197,slow=8.9,SNR=4.7						
BVAR	**Borovoye Array**	**45.68**	**9**	P	**P**	**18 16 28.2**	**-0.9**
	1.0nm,0.7s,mb3.9,baz=183,slow=2.9,SNR=4.3						
BVAR	**Borovoye Array**	**45.68**	**9**	P	**P**	**18 16 28.2**	**-0.9**
BRVK	**Borovoye**	**45.69**	**9**	*e*P	**P**	**18 16 26.8**	**-2.4**
	2.6nm,1.0s,mb4.1						
LBTB	**Lobatse**	**46.45**	**224**	*e*P	**P**	**18 16 35.8**	**+0.3**
	32nm,1.5s,mb5.0						
LBTB	**Lobatse**	**46.45**	**224**	*e*P	**P**	**18 16 35.8**	**+0.2**
	32nm,1.5s,mb5.0						
PLOR	**Plostina**	**46.86**	**329**	⇓P	**P**	**18 16 40.1**	**+1.6**
PLOR	**Plostina**	**46.86**	**329**	⇓*i*P	**P**	**18 16 40.1**	**+1.6**
PLOR	**Plostina**	**46.86**	**329**	⇓*i*P	**P**	**18 16 40.1**	**+1.6**
MLR	**Muntele Rosu**	**46.98**	**328**	P	**P**	**18 16 44.1**	**+4.6**
MLR	**Muntele Rosu**	**46.98**	**328**	P	**P**	**18 16 44.1**	**+4.6**
	3.9nm,0.8s,mb4.4,baz=194,slow=1.9,SNR=11						
MLR	**Muntele Rosu**	**46.98**	**328**	⇓P	**P**	**18 16 41.8**	**+2.3**
MLR	**Muntele Rosu**	**46.98**	**328**	⇓*i*P	**P**	**18 16 41.8**	**+2.3**
MLR	**Muntele Rosu**	**46.98**	**328**	⇓*i*P	**P**	**18 16 41.8**	**+2.3**
TESR		**47.32**	**330**	⇑P	**P**	**18 16 40.8**	**-1.3**
TESR		**47.32**	**330**	⇑*i*P	**P**	**18 16 40.8**	**-1.3**
TESR		**47.32**	**330**	⇑*i*P	**P**	**18 16 40.8**	**-1.3**
VOIR		**47.42**	**328**	⇓P	**P**	**18 16 43.2**	**+0.4**
VOIR		**47.42**	**328**	⇓*i*P	**P**	**18 16 43.3**	**+0.4**
VOIR		**47.42**	**328**	⇓*i*P	**P**	**18 16 43.3**	**+0.4**
BURAR	**Bucovina Array**	**48.79**	**330**	⇓P	**P**	**18 16 50.3**	**-3.2**
BURAR	**Bucovina Array**	**48.79**	**330**	⇓*i*P	**P**	**18 16 50.3**	**-3.1**
AKASG	**Malin Array Be**	**49.17**	**335**	P	**P**	**18 16 56.1**	**-0.2**
	0.9nm,0.5s,mb4.0,baz=135,slow=7.3,SNR=6.3						
AKASG	**Malin Array Be**	**49.17**	**335**	P	**P**	**18 16 56.1**	**-0.2**
ZALV	**Zalesovo Beam**	**50.13**	**19**	P	**P**	**18 17 04.0**	**+0.4**
	0.3nm,0.3s,mb3.8,baz=233,slow=7.0,SNR=3.6						
PKSM	**Moragy**	**51.44**	**325**	⇓P	**P**	**18 17 14.4**	**+0.9**
PKSM	**Moragy**	**51.44**	**325**	⇓*i*P	**P**	**18 17 14.4**	**+0.8**
PKSM	**Moragy**	**51.44**	**325**	⇓*i*P	**P**	**18 17 14.4**	**+0.8**
CRVS	**Cervenica-Dubn**	**51.53**	**329**	*e*	**P**	**18 17 14.8**	**+0.6**
CRVS	**Cervenica-Dubn**	**51.53**	**329**	*e*pP	**P**	**18 17 14.8**	**+0.6**
VYHS	**Vyhne**	**52.65**	**327**	*e*P	**P**	**18 17 22.4**	**-0.2**
	1.8nm,1.0s,mb4.0						
VYHS	**Vyhne**	**52.65**	**327**	*e*P	**P**	**18 17 22.4**	**-0.2**
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
VYHS	**Vyhne**	**52.65**	**327**	*e*P	**P**	**18 17 22.4**	**-0.2**
VYHS	**Vyhne**	**52.65**	**327**	*e*P	**P**	**18 17 22.4**	**-0.2**
	comp=Z,1.8nm,1.0s,mb4.0						
OKC	**Ostrava-Krasne**	**53.81**	**328**	*e*P	**P**	**18 17 31.5**	**+0.4**
OKC				MLR	MLR		
	comp=Z,200nm,25.4s,MS4.1						
OKC	**Ostrava-Krasne**	**53.81**	**328**	*e*pP	**P**	**18 17 31.5**	**+0.4**
OKC				AMS	AMS	18 40 40.0	
	comp=Z,200nm,25.4s						
MORC	**Moravsky Berou**	**54.09**	**328**	⇓P	**P**	**18 17 32.9**	**-0.2**
MORC	**Moravsky Berou**	**54.09**	**328**	⇓P	**P**	**18 17 32.9**	**-0.3**
MORC	**Moravsky Berou**	**54.09**	**328**	⇓*i*P	**P**	**18 17 32.9**	**-0.3**
MORC	**Moravsky Berou**	**54.09**	**328**	*e*P	**P**	**18 17 32.8**	**-0.4**
TREC	**Trest**	**54.92**	**326**	*e*P	**P**	**18 17 38.5**	**-0.7**
TREC				MLR	MLR		
	comp=Z,200nm,19.7s,MS4.2						
TREC	**Trest**	**54.92**	**326**	*e*pP	**P**	**18 17 38.5**	**-0.7**
TREC				AMS	AMS	18 39 00.0	
	comp=Z,200nm,19.7s						
DPC	**Dobruska-Polom**	**55.07**	**328**	*e*P	**P**	**18 17 37.6**	**-2.6**
DPC				MLR	MLR		
	comp=Z,200nm,17.2s,MS4.3						
DPC	**Dobruska-Polom**	**55.07**	**328**	*e*pP	**P**	**18 17 37.6**	**-2.6**
DPC				AMS	AMS	18 41 50.0	
	comp=Z,200nm,17.2s						
UPC	**Upice**	**55.32**	**328**	*e*P	**P**	**18 17 40.6**	**-1.4**
UPC	**Upice**	**55.32**	**328**	*e*pP	**P**	**18 17 40.6**	**-1.4**
PRU	**Pruhonice**	**55.82**	**327**	AMS	AMS	18 39 30.0	
	comp=Z,200nm,23.3s						
KHC	**Kasperske Hory**	**55.90**	**325**	*e*P	**P**	**18 17 44.6**	**-1.6**
KHC				*e*		18 17 51.1	
KHC				MLR	MLR		
	comp=Z,200nm,17.7s,MS4.2						
KHC	**Kasperske Hory**	**55.90**	**325**	*e*pP	pP	18 17 51.1	+1.7
KHC				AMS	AMS	18 38 30.0	
	comp=Z,200nm,17.7s						
PVCC	**Panska Ves**	**56.10**	**327**	AMS	AMS	18 41 30.0	
	comp=Z,300nm,20.6s						
SONM	**Songino Array**	**56.14**	**37**	P	**P**	**18 17 49.0**	**+1.0**
	comp=Z,0.4nm,0.6s,mb3.6,baz=244,slow=6.4,SNR=4.5						
SONM	**Songino Array**	**56.14**	**37**	P	**P**	**18 17 49.0**	**+1.0**
TORD	**Torodi Ar. Bea**	**56.65**	**280**	P	**P**	**18 17 52.2**	**0.0**
	comp=Z,2.5nm,1.1s,mb4.2,baz=91,slow=6.1,SNR=5.0						
TORD	**Torodi Ar. Bea**	**56.65**	**280**	P	**P**	**18 17 52.2**	**0.0**
CABF	**La Chapelle**	**59.24**	**320**	*e*P	**P**	**18 18 09.8**	**-0.1**
	comp=Z,58nm,1.0s,mb5.2						
CABF	**La Chapelle**	**59.24**	**320**	*e*P	**P**	**18 18 09.8**	**-0.1**
	comp=Z,29nm,1.0s,mb5.3						
CABF	**La Chapelle**	**59.24**	**320**	*e*P	**P**	**18 18 09.8**	**-0.1**
	comp=Z,57nm,1.0s,mb5.5						
SMF	**Signal de Mont**	**60.69**	**319**	*e*P	**P**	**18 18 19.9**	**+0.1**
	comp=Z,21nm,1.1s,mb4.9						
SMF	**Signal de Mont**	**60.69**	**319**	*e*P	**P**	**18 18 19.9**	**+0.1**
	comp=Z,10nm,1.1s,mb4.9						
SMF	**Signal de Mont**	**60.69**	**319**	*e*P	**P**	**18 18 19.9**	**+0.1**
	comp=Z,20nm,1.1s,mb5.2						
LOR	**Lormes**	**60.91**	**320**	*e*P	**P**	**18 18 20.4**	**-0.9**
	comp=Z,10nm,1.0s,mb4.6						
LOR	**Lormes**	**60.91**	**320**	*e*P	**P**	**18 18 20.4**	**-0.9**
	comp=Z,5.1nm,1.0s,mb4.6						
LOR	**Lormes**	**60.91**	**320**	*e*P	**P**	**18 18 20.4**	**-0.9**
	comp=Z,10.0nm,1.0s,mb4.9						
SSF	**Saint Saulge**	**61.06**	**320**	*e*P	**P**	**18 18 21.4**	**-0.9**
	comp=Z,12nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**61.06**	**320**	*e*P	**P**	**18 18 21.4**	**-0.9**
	comp=Z,5.9nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**61.06**	**320**	*e*P	**P**	**18 18 21.4**	**-0.9**
	comp=Z,11nm,1.0s,mb5.0						
BGF	**Bois d'Agland**	**61.30**	**319**	*e*P	**P**	**18 18 23.4**	**-0.6**
	comp=Z,24nm,1.1s,mb4.9						
BGF	**Bois d'Agland**	**61.30**	**319**	*e*P	**P**	**18 18 23.4**	**-0.6**
	comp=Z,12nm,1.1s,mb4.9						
BGF	**Bois d'Agland**	**61.30**	**319**	*e*P	**P**	**18 18 23.4**	**-0.6**
	comp=Z,24nm,1.1s,mb5.2						
TCF	**Toulx Ste Croi**	**61.63**	**319**	*e*P	**P**	**18 18 27.4**	**+1.2**
	comp=Z,17nm,1.2s,mb4.8						
TCF	**Toulx Ste Croi**	**61.63**	**319**	*e*P	**P**	**18 18 27.4**	**+1.2**
	comp=Z,8.6nm,1.2s,mb4.8						
TCF	**Toulx Ste Croi**	**61.63**	**319**	*e*P	**P**	**18 18 27.4**	**+1.2**
	comp=Z,17nm,1.2s,mb5.0						
ESDC	**Sonseca Array**	**64.27**	**310**	P	**P**	**18 18 43.8**	**-0.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=94,slow=6.8,SNR=6.7						
ESDC	**Sonseca Array**	**64.27**	**310**	P	**P**	**18 18 43.8**	**-0.1**

JMA ***22*** *18:37:56.3±0.2,24°.27N×122°.50E, h48km±5km, M2.6*

TAP 22 18:37:56.7,24°.14N×122°.52E, h46km, ML3.6, 4C, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.55**	**54**	P	Pn	18 38 07.5	-0.9
YOJ				S	Sn	18 38 15.7	-1.0
ENA	**Nanau**	**0.77**	**292**	⇑*i*P	Pn	18 38 11.3	+0.2
	baz=292						
ENA				S	Sn	18 38 22.7	+1.1
	baz=292						
TWC	**Suao**	**0.77**	**308**	*i* P	Pn	18 38 11.3	+0.1
	baz=308						
TWC				*e*S	Sn	18 38 21.9	+0.2
	baz=308						
TWD	**Chiawan**	**0.84**	**266**	*e*P	Pn	18 38 12.0	-0.2
	baz=256						
TWD				S	Sn	18 38 23.2	-0.3
	baz=256						
HWA	**Hwalien**	**0.85**	**260**	*e*P	Pn	18 38 12.5	+0.2
	baz=248						
TWE	**Neicheng**	**0.97**	**307**	⇑*i*P	Pn	18 38 14.8	+0.8
	baz=300						
TWE				S	Sn	18 38 27.7	+1.1
	baz=300						
TWB1	**Santiao Chiao**	**0.99**	**331**	P	Pn	18 38 14.4	+0.2
	baz=342						
TWB1				*e*S	Sn	18 38 27.9	+0.8
	baz=342						
ENTT	**Nioudou**	**1.00**	**300**	⇑*i*P	Pn	18 38 15.3	+0.9
	baz=300						
ENTT				S	Sn	18 38 28.8	+1.4
	baz=300						
ESL	**Shilin**	**1.04**	**252**	*e*P	Pn	18 38 14.4	-0.4
	baz=243						
ESL				S	Sn	18 38 28.0	-0.3
	baz=243						
NNS	**Nan Shan**	**1.09**	**286**	*i* P	Pn	18 38 16.1	+0.6
	baz=286						
NNS				S	Sn	18 38 30.6	+1.2
	baz=286						
IRIF	**Iriomote-Funau**	**1.12**	**80**	P	Pn	18 38 16.0	0.0
IRIF				S	Sn	18 38 30.7	+0.4
WHF	**Hehuan Shan**	**1.15**	**271**	*i* P	Pn	18 38 16.7	+0.5
	baz=271						
WHF				*e*S	Sn	18 38 32.0	+1.2
	baz=271						
NWF	**Wu-fen Shan**	**1.15**	**324**	P	Pn	18 38 17.1	+0.7
	baz=324						
NWF				*e*S	Sn	18 38 31.8	+0.9
	baz=324						
HATJ	**Hateruma jima**	**1.18**	**94**	P	Pn	18 38 17.1	+0.4
HATJ				S	Sn	18 38 33.0	+1.4
NSK	**Sanguang**	**1.19**	**297**	⇑*i*P	Pn	18 38 17.8	+1.0
	baz=285						
NSK				S	Sn	18 38 32.8	+1.0
	baz=285						
TWA	**Mucha**	**1.20**	**315**	*i* P	Pn	18 38 18.0	+1.0
	baz=329						
TWA				S	Sn	18 38 33.6	+1.5
	baz=329						
TWT	**Tachien**	**1.23**	**276**	*e*P	Pn	18 38 18.6	+1.2
	baz=264						
TWT				*e*S	Sn	18 38 34.8	+1.9
	baz=264						
EHY	**Hungye**	**1.26**	**241**	P	Pn	18 38 18.0	+0.1
	baz=240						
EHY				*e*S	Sn	18 38 33.2	-0.4
	baz=240						
TAP1	**Taipei**	**1.28**	**315**	*e*P	Pn	18 38 19.6	+1.5
	baz=327						
TAP1				S	Sn	18 38 36.0	+2.0
	baz=327						
TWF1	**Yuli**	**1.36**	**235**	*i* P	Pn	18 38 19.4	+0.1
	baz=226						
TWF1				S	Sn	18 38 36.2	0.0
	baz=226						
JKRS	**Kuro-shima**	**1.36**	**85**	P	Pn	18 38 20.2	+0.9
JKRS				S	Sn	18 38 37.3	+1.1
TWS1	**Kuangyinshan**	**1.39**	**314**	*e*P	Pn	18 38 22.0	+2.4
	baz=326						
TWS1				*e*S	Sn	18 38 39.7	+2.9
	baz=326						
TWY	**Chenhua**	**1.41**	**324**	P	Pn	18 38 20.9	+1.0
	baz=324						
TWY				S	Sn	18 38 38.7	+1.4
	baz=324						
NSTT	**Nanjuang**	**1.47**	**290**	*i* P	Pn	18 38 22.5	+1.8
	baz=290						
NSTT				S	Sn	18 38 40.6	+1.9
	baz=290						
CHKT	**Chengkung**	**1.48**	**226**	*e*P	Pn	18 38 20.1	-0.7
	baz=217						
CHKT				*e*S	Sn	18 38 37.0	-2.0
	baz=217						
JIJ	**Ishigaki jima**	**1.50**	**81**	P	Pn	18 38 21.1	0.0
JIJ				S	Sn	18 38 39.2	-0.3
TYC	**Yuchr**	**1.54**	**262**	P	Pn	18 38 22.6	+1.0
	baz=261						
TYC				*e*S	Sn	18 38 41.2	+0.7
	baz=261						
YUS	**Yu-Shan**	**1.57**	**246**	*e*P	Pn	18 38 23.7	+1.6
	baz=246						
YUS				*e*S	Sn	18 38 42.4	+1.1
	baz=246						
TWQ1	**Liyutan**	**1.61**	**278**	*e*P	Pn	18 38 24.7	+2.1
	baz=278						
TWQ1				S	Sn	18 38 43.9	+1.7
	baz=278						
NSY	**Sanyi**	**1.63**	**280**	*e*P	Pn	18 38 25.2	+2.3
	baz=280						
NSY				*e*S	Sn	18 38 46.2	+3.5
	baz=280						
ELDTW	**Lidau**	**1.67**	**236**	*i* P	Pn	18 38 23.5	+0.1
	baz=235						
ELDTW				*e*S	Sn	18 38 43.4	-0.3
	baz=235						
TCU	**Taichung**	**1.68**	**271**	*e*P	Pn	18 38 25.9	+2.3
	baz=270						
TCU				*e*S	Sn	18 38 47.3	+3.3
	baz=270						
ALS	**Alishan**	**1.69**	**249**	*e*P	Pn	18 38 25.3	+1.6
	baz=248						
ALS				*e*S	Sn	18 38 44.4	+0.3
	baz=248						
WNT	**Mingjian**	**1.70**	**262**	*e*P	Pn	18 38 26.1	+2.2
	baz=261						
WNT				*e*S	Sn	18 38 47.9	+3.5
	baz=261						
CHN5	**Tsauling**	**1.77**	**253**	*e*S	Sn	18 38 47.2	+1.1
	baz=252						
WGK	**Gukeng**	**1.85**	**256**	*e*P	Pn	18 38 27.6	+1.8
	baz=256						
WGK				*e*S	Sn	18 38 50.8	+2.8
	baz=256						
TWG	**Pinlang**	**1.86**	**226**	*e*P	Pn	18 38 25.8	-0.3
	baz=235						
TWG				*e*S	Sn	18 38 47.6	-0.8
	baz=235						
STYT	**Tauyuan**	**1.88**	**239**	*e*S	Sn	18 38 48.8	-0.2
	baz=232						
CHN4	**Tsaushan**	**1.93**	**247**	*e*P	Pn	18 38 29.5	+2.4
	baz=246						
CHN4				*e*S	Sn	18 38 53.1	+3.0
	baz=246						
WTP	**Ta-pu**	**1.96**	**244**	*e*P	Pn	18 38 29.4	+2.0
	baz=243						
WTP				*e*S	Sn	18 38 54.3	+3.5
	baz=243						
JTJ	**Tarama**	**2.05**	**75**	P	Pn	18 38 29.7	+1.0
CHN1	**Nanshi**	**2.06**	**243**	*e*P	Pn	18 38 31.2	+2.5
	baz=243						
CHN1				*e*S	Sn	18 38 55.8	+2.7
	baz=243						
WTCT	**Ta-ch'eng**	**2.06**	**263**	*e*P	Pn	18 38 31.8	+3.0
	baz=275						
ECL	**Taimali**	**2.10**	**224**	*e*P	Pn	18 38 28.6	-0.7
	baz=232						
ECL				*e*S	Sn	18 38 52.8	-1.5
	baz=232						
WSF	**Szhu**	**2.16**	**257**	*e*P	Pn	18 38 33.6	+3.4
	baz=257						
WSF				*e*S	Sn	18 38 59.6	+3.8
	baz=257						
SSD	**Sandimen**	**2.22**	**232**	*e*P	Pn	18 38 33.0	+2.1
	baz=228						
SSD				*e*S	Sn	18 38 57.5	+0.3
	baz=228						
CHN8	**Yiju**	**2.26**	**250**	*e*S	Sn	18 39 01.7	+3.6
	baz=250						
LAY	**Lan-yu**	**2.27**	**203**	*e*P	Pn	18 38 32.0	+0.3
	baz=203						
LAY				*e*S	Sn	18 38 55.6	-2.8
	baz=203						
EAST	**Anshuo**	**2.32**	**222**	*e*P	Pn	18 38 33.2	+0.7
	baz=228						
TWM1	**Shoushan**	**2.33**	**236**	*e*P	Pn	18 38 36.2	+3.8
	baz=236						
SCZT	**Fangliau**	**2.48**	**225**	*e*P	Pn	18 38 38.0	+3.5
	baz=224						

ISCJB ***22*** *19:05:53.6±0.4,37°.73N±0°.03×37°.44E±0°.03, h10km, Error ellipse: s-maj=4.5km s-min=3.0km az=44.0*
DDA ***22*** *19:05:53.7,37°.70N×37°.46E, h8km±3km, Md2.9*
ISK ***22*** *19:05:53.6,37°.79N×37°.42E, h7km, MD3.2*
CSEM ***22*** *19:05:54.1±0.1,37°.75N×37°.44E, h4km±2km, MD3.2, Error ellipse: s-maj=3.5km s-min=2.0km az=148.0*

ISC 22 19:05:54.1±0.5, 37°.73N±0°.03×37°.45E±0°.03, h3km±7km, n28, σ0s81/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZT	**Gaziantep**	**0.38**	**166**	*i* P	**Pg**	**19 06 00.7**	**-0.8**
GZT				*i* S	**Sg**	**19 06 05.7**	**-0.8**
KMRS	**Kahramanmaras**	**0.49**	**243**	*e*PG	**Pg**	**19 06 03.8**	**+0.3**
KMRS				*e*SG	**Sg**	**19 06 10.5**	**+0.7**
KMRS	**Kahramanmaras**	**0.49**	**243**	*e*Pg	**Sg**	**19 06 03.8**	**+0.3**
KMRS				*e*Sg	**Sg**	**19 06 10.5**	**+0.7**
GAZ	**Gaziantep**	**0.58**	**199**	*e*PG	**Pg**	**19 06 05.5**	**+0.2**
GAZ				*e*SG	**Sg**	**19 06 16.7**	**+3.8**
GAZ	**Gaziantep**	**0.58**	**199**	*e*Pg	**Pg**	**19 06 05.5**	**+0.2**
AKCD	**Akcadag**	**0.68**	**33**	*i* P	**Pg**	**19 06 07.1**	**-0.1**
AKCD				*i* S	**Sg**	**19 06 17.4**	**+1.3**
AKCD	**Akcadag**	**0.68**	**33**	*i* P	**Pg**	**19 06 07.1**	**-0.1**
AKCD				*i* S	**Sg**	**19 06 17.4**	**+1.3**
ATAB	**Bozova**	**0.72**	**111**	*i* P	**Pg**	**19 06 06.8**	**-1.2**
ATAB				*i* S	**Sg**	**19 06 18.6**	**+1.2**
ATAB	**Bozova**	**0.72**	**111**	*i* P	**Pg**	**19 06 06.8**	**-1.2**
ATAB				*i* S	**Sg**	**19 06 18.6**	**+1.2**
ANDN	**Andirin**	**0.89**	**261**	*i* P	**Pg**	**19 06 11.0**	**-0.1**
ANDN				*i* S	**Sg**	**19 06 23.5**	**+0.9**
ANDN	**Andirin**	**0.89**	**261**	*i* P	**Pg**	**19 06 11.0**	**-0.1**
ANDN				*i* S	**Sg**	**19 06 23.5**	**+0.9**
MALT	**Malatya**	**0.97**	**53**	*e*PG	**Pg**	**19 06 11.8**	**-1.0**
MALT	**Malatya**	**0.97**	**53**	*e*Pg	**Pg**	**19 06 11.8**	**-1.0**
KUZU	**Kuzuini**	**1.00**	**197**	*i* P	**Pg**	**19 06 13.5**	**+0.3**
KUZU				*i* S	**Sg**	**19 06 26.6**	**+0.5**
KUZU	**Kuzuini**	**1.00**	**197**	*i* P	**Pg**	**19 06 13.5**	**+0.3**
KUZU				*i* S	**Sg**	**19 06 26.6**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.12**	**328**	*e*PG	**Pg**	**19 06 14.0**	**-1.6**
SARI	**SarD1z-Kayseri**	**1.12**	**328**	*e*Pg	**Pg**	**19 06 14.0**	**-1.6**
KOZT	**Kozan**	**1.31**	**260**	*e*PN	**Pn**	**19 06 18.5**	**-0.8**
ELZG	**Elazig**	**1.44**	**57**	*i* P	**Pn**	**19 06 20.5**	**-0.6**
ELZG				*i* S	**Sb**	**19 06 41.3**	**+1.0**
ELZG	**Elazig**	**1.44**	**57**	*i* P	**Pn**	**19 06 20.5**	**-0.6**
ELZG				*i* S	**Sb**	**19 06 41.3**	**+1.0**
SVRC	**Sivrice-ELAZID**	**1.61**	**66**	*e*PN	**Pn**	**19 06 23.5**	**+0.1**
SVRC	**Sivrice-ELAZID**	**1.61**	**66**	*e*Pn	**Pn**	**19 06 23.5**	**+0.1**
KEMA	**Kemaliye**	**1.75**	**28**	*i* P	**Pg**	**19 06 26.9**	**-0.7**
KEMA				*i* S	**Sg**	**19 06 50.7**	**+0.5**
KEMA	**Kemaliye**	**1.75**	**28**	*i* P	**Pg**	**19 06 26.9**	**-0.7**
KEMA				*i* S	**Sg**	**19 06 50.7**	**+0.5**
PTK	**Pertek**	**1.92**	**52**	*e*PN	**Pn**	**19 06 28.2**	**+0.4**
PTK	**Pertek**	**1.92**	**52**	*e*Pn	**Pn**	**19 06 28.2**	**+0.4**
KARA	**Karaisali**	**1.96**	**257**	*e*PN	**Pn**	**19 06 28.0**	**-0.2**
KARA	**Karaisali**	**1.96**	**257**	*e*Pn	**Pn**	**19 06 28.0**	**-0.2**

MAN 22 19:11:33, 9°.72N×122°.31E, h20km, mb4.3, ML3.2, MS3.0, 1C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.94**	**17**	*e*P	Pb	19 11 51.0	+0.4
SNPH	**Sibulan**	**0.99**	**112**	⇑*i*P	Pb	19 11 51.2	-0.3
SNPH				*i* S	Sb	19 12 05.5	+1.5
CUYO	**Cuyo Island**	**1.70**	**311**	*e*P	Pn	19 12 02.6	+1.1
LLP	**Lapu-Lapu**	**1.73**	**70**	*e*P	Pn	19 12 02.6	+0.6
LLP				*e*S	Sn	19 12 23.4	-0.2
IPIL	**Ipil**	**1.94**	**172**	*e*P	Pn	19 12 05.1	+0.3
PAGZ	**Pagadian**	**2.14**	**150**	*e*P	Pn	19 12 10.2	+2.5
OCLP	**Ormoc**	**2.62**	**60**	*e*P	Pn	19 12 15.5	+1.3
CGP	**Cagayan de Oro**	**2.67**	**118**	*e*P	Pn	19 12 10.1	-4.8
ZMPH	**Zamboanga City**	**2.76**	**185**	⇓*i*P	Pn	19 12 16.5	+0.3
BUSP	**Coron**	**3.07**	**318**	*e*P	Pn	19 12 21.5	+1.1
ENPP	**El Nido**	**3.20**	**298**	*e*P	Pn	19 12 23.2	+1.1
BUKP	**Musuan**	**3.28**	**124**	*e*P	Pn	19 12 25.4	+2.1
LUBP	**Lubang**	**4.47**	**333**	*e*P	Pn	19 12 42.0	+2.4

IDC ***22*** *19:14:27.8±1.0,55°.84N×153°.71W, h0km, mb3.8/12, mb1 3.9/15, mb1mx3.8/30, mbtmp3.8/15, ML3.8/3, MS3.1/1, Ms1 3.2/1, ms1mx2.6/31, Error ellipse: s-maj=20.9km s-min=19.7km az=100.0*
ISCJB ***22*** *19:14:29.5±2.3,56°.11N±0°.07×153°.3W±0°.1, h19km±16km, mb3.8/12, Error ellipse: s-maj=12.2km s-min=11.8km az=44.3*
NEIC ***22*** *19:14:32.0,56°.03N×153°.30W, h20km, ML3.3(AEIC), ML2.8(PMR), After AEIC.*

ISC 22 19:14:31.1±2.4, 56°.13N±0°.05×153°.4W±0°.1, h15km±15km, n27, σ0s85/32, mb3.8/12, Kodiak Island region

| Code | Station

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**16.48**	**284**	LR	LR	19 29 18.4	
	comp=Z,35nm,18.1s,baz=276,slow=36						
KMBO	**Kilima Mbogo**	**23.69**	**248**	*eP*	**P**	**19 24 49.6**	**+0.7**
	5.8nm,1.0s,mb4.0						
KMBO	**Kilima Mbogo**	**23.69**	**248**	*eP*	**P**	**19 24 49.6**	**+0.7**
	5.8nm,1.0s,mb4.0						
MALT	**Malatya**	**35.51**	**331**	*eP*	**P**	**19 26 36.1**	**+2.5**
	5.8nm,1.2s,mb4.4						
MALT	**Malatya**	**35.51**	**331**	*eP*	**P**	**19 26 36.1**	**+2.5**
	5.8nm,1.2s,mb4.4						
BRTR	**Keskin Array B**	**38.99**	**328**	P	**P**	**19 27 03.1**	**0.0**
	1.3nm,0.9s,mb3.7,baz=1.4,slow=5.8,SNR=9.1						
BRTR	**Keskin Array B**	**38.99**	**328**	P	**P**	**19 27 03.1**	**0.0**
CMAR	**Chiang Mai Arr**	**39.97**	**71**	P	**P**	**19 27 13.3**	**+1.7**
	0.3nm,0.7s,mb3.1,baz=246,slow=11,SNR=4.1						
CMAR				LR	LR	19 42 57.8	
	comp=Z,27nm,18.0s,MS3.1,baz=0.0,slow=35						
CMAR	**Chiang Mai Arr**	**39.97**	**71**	P	**P**	**19 27 13.3**	**+1.7**
ABKAR	**Akbulak array**	**41.10**	**1**	*eP*	**P**	**19 27 21.2**	**+0.6**
	4.7nm,0.9s,mb4.1						
ABKAR	**Akbulak array**	**41.10**	**1**	*eP*	**P**	**19 27 21.2**	**+0.7**
	4.7nm,0.9s,mb4.1						
MKAR	**Makanchi Array**	**43.40**	**23**	P	**P**	**19 27 39.7**	**+0.4**
MKAR				PcP	PcP	19 29 27.1	-0.6
MKAR	**Makanchi Array**	**43.40**	**23**	P	**P**	**19 27 39.7**	**+0.4**
	0.7nm,1.1s,mb3.3,baz=234,slow=15,SNR=4.4						
MKAR				PcP	PcP	19 29 27.1	-0.6
	0.7nm,1.0s,baz=236,slow=1.6,SNR=3.7						
KURK	**Kurchatov**	**45.51**	**17**	P	**P**	**19 27 54.9**	**-1.3**
	3.0nm,1.3s,mb4.1						
KURK	**Kurchatov**	**45.51**	**17**	P	**P**	**19 27 55.1**	**-1.0**
	0.2nm,0.3s,mb3.5,baz=214,slow=7.8,SNR=4.2						
KURK	**Kurchatov**	**45.51**	**17**	P	**P**	**19 27 54.9**	**-1.3**
	3.0nm,1.3s,mb4.1						
BVAR	**Borovoye Array**	**45.79**	**9**	P	**P**	**19 27 59.3**	**+1.0**
	0.4nm,0.7s,mb3.5,baz=183,slow=5.8,SNR=4.1						
BVAR	**Borovoye Array**	**45.79**	**9**	P	**P**	**19 27 59.3**	**+1.0**
BRVK	**Borovoye**	**45.80**	**9**	P	**P**	**19 27 56.9**	**-1.5**
BRVK	**Borovoye**	**45.80**	**9**	P	**P**	**19 27 56.9**	**-1.5**
ARU	**Arti**	**48.29**	**360**	*eP*	**P**	**19 28 17.6**	**-0.2**
	6.1nm,1.1s,mb4.5						
ARU	**Arti**	**48.29**	**360**	*eP*	**P**	**19 28 17.5**	**-0.3**
	6.1nm,1.1s,mb4.5						
BOSA	**Boshof**	**48.98**	**221**	LR	LR	19 45 46.5	
	comp=Z,65nm,20.7s,MS3.6,baz=151,slow=32						
AKASG	**Malin Array Be**	**49.27**	**335**	P	**P**	**19 28 25.1**	**-0.3**
	0.3nm,0.4s,mb3.6,baz=132,slow=7.0,SNR=8.9						
AKASG	**Malin Array Be**	**49.27**	**335**	P	**P**	**19 28 25.1**	**-0.3**
ZALV	**Zalesovo Beam**	**50.23**	**19**	P	**P**	**19 28 32.0**	**-0.7**
	1.4nm,0.9s,mb4.0,baz=245,slow=6.4,SNR=5.9						
KWP	**Kalwaria Pacla**	**51.46**	**330**	*eP*	**P**	**19 28 42.1**	**0.0**
	7.8nm,1.0s,mb4.6						
KWP	**Kalwaria Pacla**	**51.46**	**330**	*eP*	**P**	**19 28 42.1**	**+0.1**
	7.8nm,1.0s,mb4.6						
CRVS	**Cervenica-Dubn**	**51.61**	**329**	*eP*	**P**	**19 28 44.9**	**+1.7**
CRVS	**Cervenica-Dubn**	**51.61**	**329**	*eP*	**P**	**19 28 44.9**	**+1.7**
CRVS	**Cervenica-Dubn**	**51.61**	**329**	*eP*	**P**	**19 28 44.9**	**+1.7**
VYHS	**Vyhne**	**52.73**	**327**	*eP*	**P**	**19 28 51.5**	**0.0**
VYHS	**Vyhne**	**52.73**	**327**	*eP*	**P**	**19 28 51.5**	**0.0**
VYHS	**Vyhne**	**52.73**	**327**	*eP*	**P**	**19 28 51.5**	**0.0**
MORC	**Moravsky Berou**	**54.18**	**328**	*eP*	**P**	**19 29 00.8**	**-1.3**
	7.7nm,1.4s,mb4.4						
MORC	**Moravsky Berou**	**54.18**	**328**	*eP*	**P**	**19 29 00.8**	**-1.3**
	7.7nm,1.4s,mb4.4						
SUR	**Sutherland**	**54.34**	**220**	LR	LR	19 49 15.1	
	comp=Z,86nm,21.1s,MS3.8,baz=154,slow=33						
SONM	**Songino Array**	**56.23**	**36**	P	**P**	**19 29 17.7**	**+0.7**
	1.0nm,1.0s,mb3.8,baz=232,slow=7.3,SNR=6.0						
SONM	**Songino Array**	**56.23**	**36**	P	**P**	**19 29 17.7**	**+0.7**
TORD	**Torodi Ar. Bea**	**56.66**	**280**	P	**P**	**19 29 20.6**	**0.0**
	0.7nm,0.9s,mb3.7,baz=96,slow=8.4,SNR=6.5						
TORD	**Torodi Ar. Bea**	**56.66**	**280**	P	**P**	**19 29 20.6**	**0.0**
ESDC	**Sonseca Array**	**64.33**	**310**	P	**P**	**19 30 11.3**	**-1.2**
	1.0nm,0.8s,mb3.9,baz=70,slow=5.6,SNR=6.3						
ESDC	**Sonseca Array**	**64.33**	**310**	P	**P**	**19 30 11.4**	**-1.2**
ARCES	**ARCESS Array B**	**65.19**	**348**	P	**P**	**19 30 16.7**	**-1.0**
	0.5nm,0.7s,mb3.7,baz=124,slow=6.0,SNR=4.8						
ARCES	**ARCESS Array B**	**65.19**	**348**	P	**P**	**19 30 16.7**	**-1.0**
ASAR	**Alice Springs**	**79.39**	**116**	P	**P**	**19 31 42.3**	**-1.1**
	1.3nm,1.1s,mb3.8,baz=255,slow=5.5,SNR=4.9						
ASAR	**Alice Springs**	**79.39**	**116**	P	**P**	**19 31 42.3**	**-1.1**

*THE **22** 19:49:43.8, 37.°95N×20.°60E, h0^{km}±2^{km}, ML2.8/4, Error ellipse: s-maj=3.2km s-min=1.1km az=228.0*
*ISCJB **22** 19:49:46.9±0.5, 38.°11N±0.°03×20.°74E±0.°03, h10^{km}, Error ellipse: s-maj=4.2km s-min=2.8km az=37.4*
*ATH **22** 19:49:46.9, 38.°13N×20.°75E, h5^{km}±1^{km}, ML2.8*
*NEIC **22** 19:49:46.9, 38.°13N×20.°75E, h5^{km}, ML2.8(ATH), After ATH.*
*CSEM **22** 19:49:47.0±0.2, 38.°15N×20.°81E, h0^{km}±1^{km}, ML2.8, Error ellipse: s-maj=4.7km s-min=3.5km az=26.0*
ISC 22 19:49:46.5±0.5, 38.°10N±0.°03×20.°69E±0.°03, h11^{km}±3^{km}, n78, σ1^{s}13/117, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.08**	**86**	P	**Pg**	**19 49 47.3**	**-1.6**
KFL	**Anninata**	**0.08**	**86**	P	**Pg**	**19 49 47.3**	**-1.6**
VLS	**Valsamata**	**0.11**	**313**	*ePg*	**Pg**	**19 49 49.6**	**+0.3**
VLS				*eSg*	**Sg**	**19 49 52.3**	**+0.9**
VLS	**Valsamata**	**0.11**	**313**	*ePG*	**Pg**	**19 49 49.6**	**+0.3**
VLS				*eSG*	**Sg**	**19 49 52.3**	**+0.9**
VLS	**Valsamata**	**0.11**	**313**	P	**Pg**	**19 49 49.5**	**+0.2**
VLS				S	**Sg**	**19 49 52.2**	**+0.8**
VLS	**Valsamata**	**0.11**	**313**	*ePg*	**Pg**	**19 49 49.6**	**+0.3**
VLS				S	**Sg**	**19 49 52.2**	**+0.8**
RLS	**Riolos of Patr**	**0.61**	**94**	*ePg*	**Pg**	**19 49 57.7**	**-0.7**
RLS				*eSb*	**Sg**	**19 50 06.0**	**-0.5**
RLS	**Riolos of Patr**	**0.61**	**94**	*ePG*	**Pg**	**19 49 57.7**	**-0.7**
RLS				*eSB*	**Sg**	**19 50 06.0**	**-0.5**
RLS	**Riolos of Patr**	**0.61**	**94**	*ePg*	**Pg**	**19 49 57.7**	**-0.7**
RLS				*eSb*	**Sg**	**19 50 06.0**	**-0.5**
LKD2	**Lefkada island**	**0.68**	**358**	P	**Pg**	**19 49 59.1**	**-0.7**
LKD2				S	**Sg**	**19 50 11.4**	**+2.6**
LKD2	**Lefkada island**	**0.68**	**358**	P	**Pg**	**19 49 59.1**	**-0.7**
LKD2				S	**Sg**	**19 50 11.4**	**+2.6**
UPR	**University Cam**	**0.88**	**78**	*ePB*	**Pg**	**19 50 03.2**	**-0.3**
UPR				*eSB*	**Sg**	**19 50 14.8**	**-0.2**
UPR	**University Cam**	**0.88**	**78**	*ePb*	**Pg**	**19 50 03.2**	**-0.3**
UPR				*eSb*	**Sg**	**19 50 14.8**	**-0.2**
EFP	**Efpalio**	**1.01**	**71**	*ePG*	**Pg**	**19 50 04.8**	**-1.1**
EFP				*eSB*	**Sg**	**19 50 18.8**	**-0.3**
EFP	**Efpalio**	**1.01**	**71**	P	**Pg**	**19 50 04.6**	**-1.3**
EFP				S	**Sg**	**19 50 22.0**	**+2.9**
EFP	**Efpalio**	**1.01**	**71**	P	**Pg**	**19 50 04.6**	**-1.3**
EFP				*eSb*	**Sg**	**19 50 18.8**	**-0.3**
LAKA	**Lakka**	**1.02**	**82**	P	**Pg**	**19 50 05.2**	**-1.0**
LAKA				S	**Sg**	**19 50 21.8**	**+2.2**
LAKA	**Lakka**	**1.02**	**82**	P	**Pg**	**19 50 05.2**	**-1.0**
LAKA				S	**Sg**	**19 50 21.8**	**+2.2**
TRIZ	**Trizonia**	**1.12**	**76**	P	**Pg**	**19 50 06.4**	**-1.6**
TRIZ				S	**Sg**	**19 50 24.6**	**+2.0**
TRIZ	**Trizonia**	**1.12**	**76**	P	**Pg**	**19 50 06.4**	**-1.6**
TRIZ				S	**Sg**	**19 50 24.6**	**+2.0**
KALE	**Kalithea**	**1.18**	**75**	P	**Pg**	**19 50 07.6**	**-1.5**
KALE				S	**Sg**	**19 50 26.8**	**+2.4**
KALE	**Kalithea**	**1.18**	**75**	P	**Pg**	**19 50 07.6**	**-1.5**
KALE				S	**Sg**	**19 50 26.8**	**+2.4**
EVR	**Evrytania**	**1.20**	**47**	*ePn*	**Pg**	**19 50 08.5**	**-1.0**
EVR	**Evrytania**	**1.20**	**47**	*ePN*	**Pg**	**19 50 08.5**	**-1.0**
EVR	**Evrytania**	**1.20**	**47**	*ePn*	**Pg**	**19 50 08.5**	**-1.0**
GUR	**Goura**	**1.31**	**97**	*ePB*	**Pb**	**19 50 11.1**	**-0.1**
GUR				*eSB*	**Sb**	**19 50 28.8**	**+0.8**
GUR	**Goura**	**1.31**	**97**	P	**Pn**	**19 50 09.8**	**-1.0**
GUR				S	**Sb**	**19 50 29.7**	**+1.7**
GUR	**Goura**	**1.31**	**97**	P	**Pn**	**19 50 09.8**	**-1.0**
GUR	**Goura**	**1.31**	**97**	*ePb*	**Pb**	**19 50 11.1**	**-0.1**
GUR				*eSb*	**Sb**	**19 50 28.8**	**+0.8**
GUR				S	**Sb**	**19 50 29.7**	**+1.7**
ITM	**Ithomi**	**1.35**	**133**	*ePb*	**Pb**	**19 50 12.4**	**+0.7**
ITM				*eSb*	**Sg**	**19 50 31.1**	**+1.2**
ITM	**Ithomi**	**1.35**	**133**	*ePB*	**Pb**	**19 50 12.4**	**+0.7**
ITM				*eSB*	**Sg**	**19 50 31.1**	**+1.2**
ITM	**Ithomi**	**1.35**	**133**	*ePb*	**Pb**	**19 50 12.4**	**+0.7**
ITM				*eSb*	**Sg**	**19 50 31.1**	**+1.2**
IGT	**Igoumenitsa**	**1.45**	**349**	P	**Pn**	**19 50 14.2**	**+1.5**
IGT	**Igoumenitsa**	**1.45**	**349**	P	**Pn**	**19 50 13.8**	**+1.1**
IGT	**Igoumenitsa**	**1.45**	**349**	P	**Pn**	**19 50 13.8**	**+1.1**
PYL	**PYLOS**	**1.47**	**145**	*ePB*	**Pb**	**19 50 14.8**	**+1.0**
PYL				*eSB*	**Sg**	**19 50 34.6**	**+0.9**
PYL	**PYLOS**	**1.47**	**145**	*ePb*	**Pb**	**19 50 14.8**	**+1.0**
PYL				*eSb*	**Sg**	**19 50 34.6**	**+0.9**
DSF	**Desfina**	**1.48**	**77**	P	**Pn**	**19 50 12.6**	**-0.4**
DSF				S	**Sg**	**19 50 34.6**	**+0.5**
DSF	**Desfina**	**1.48**	**77**	P	**Pn**	**19 50 12.6**	**-0.4**
DSF				S	**Sg**	**19 50 34.6**	**+0.5**
VLX	**Vlachokerasia**	**1.53**	**118**	*ePB*	**Pb**	**19 50 15.2**	**+0.4**
VLX	**Vlachokerasia**	**1.53**	**118**	*ePb*	**Pb**	**19 50 15.2**	**+0.4**
JAN	**Janina**	**1.56**	**5**	*ePb*	**Pb**	**19 50 15.8**	**+0.5**
JAN				*eSb*	**Sg**	**19 50 36.5**	**-0.1**
JAN	**Janina**	**1.56**	**5**	*ePB*	**Pb**	**19 50 15.8**	**+0.5**
JAN				*eSB*	**Sg**	**19 50 36.5**	**-0.1**
JAN	**Janina**	**1.56**	**5**	*ePb*	**Pb**	**19 50 15.8**	**+0.5**
JAN				*eSb*	**Sg**	**19 50 36.5**	**-0.1**
AGG	**Agios Georgios**	**1.58**	**54**	*ePg*	**Pg**	**19 50 15.5**	**-1.3**
AGG	**Agios Georgios**	**1.58**	**54**	*ePG*	**Pg**	**19 50 15.5**	**-1.3**
AGG	**Agios Georgios**	**1.58**	**54**	P	**Pn**	**19 50 13.6**	**-0.8**
AGG	**Agios Georgios**	**1.58**	**54**	P	**Pn**	**19 50 13.6**	**-0.8**
AGG	**Agios Georgios**	**1.58**	**54**	*ePg*	**Pg**	**19 50 15.5**	**-1.3**
KEK	**Kerkira**	**1.75**	**337**	*ePn*	**Pb**	**19 50 20.2**	**+1.6**
KEK	**Kerkira**	**1.75**	**337**	*ePN*	**Pb**	**19 50 20.2**	**+1.6**
KEK	**Kerkira**	**1.75**	**337**	*ePn*	**Pb**	**19 50 20.2**	**+1.6**
LTK	**Loutraki**	**1.80**	**92**	*ePN*	**Pb**	**19 50 20.0**	**+0.6**
LTK	**Loutraki**	**1.80**	**92**	*ePn*	**Pb**	**19 50 20.0**	**+0.6**
LKR	**Lokris**	**1.90**	**73**	*ePn*	**Pb**	**19 50 21.9**	**+0.8**
LKR	**Lokris**	**1.90**	**73**	*ePN*	**Pb**	**19 50 21.9**	**+0.8**
DID	**Didima**	**2.10**	**106**	*ePG*	**Pg**	**19 50 25.6**	**-1.2**
DID				*eSN*	**Sg**	**19 50 53.3**	**-0.8**
DID	**Didima**	**2.10**	**106**	*ePg*	**Pg**	**19 50 25.6**	**-1.2**
NAIG	**Nisos Aigina**	**2.24**	**98**	*ePn*	**Pb**	**19 50 27.1**	**+0.2**
NAIG	**Nisos Aigina**	**2.24**	**98**	*ePN*	**Pb**	**19 50 27.1**	**+0.2**
VLI	**Veliai**	**2.26**	**127**	*ePn*	**Pb**	**19 50 27.9**	**+0.6**
VLI	**Veliai**	**2.26**	**127**	*ePN*	**Pb**	**19 50 27.9**	**+0.6**
NEO	**Neokhori**	**2.32**	**58**	P	**Pb**	**19 50 29.9**	**+1.6**
KZN	**Kozani**	**2.35**	**21**	*ePn*	**Pb**	**19 50 28.7**	**-0.2**
KZN	**Kozani**	**2.35**	**21**	*ePN*	**Pb**	**19 50 28.7**	**-0.2**
ATH	**Athens Observa**	**2.39**	**92**	*ePn*	**Pb**	**19 50 29.1**	**-0.5**
ATH	**Athens Observa**	**2.39**	**92**	*ePN*	**Pb**	**19 50 29.1**	**-0.5**
LIT	**Litokhoron**	**2.44**	**35**	P	**Pb**	**19 50 33.1**	**+2.8**
VLY	**Voula,Athens**	**2.47**	**95**	*ePn*	**Pb**	**19 50 30.3**	**-0.5**
VLY	**Voula,Athens**	**2.47**	**95**	*ePN*	**Pb**	**19 50 30.3**	**-0.5**
PTL	**Penteli**	**2.51**	**90**	*ePn*	**Pb**	**19 50 30.3**	**-1.2**
PTL				*eSn*	**Sb**	**19 51 01.6**	**-0.7**
PTL	**Penteli**	**2.51**	**90**	*ePN*	**Pb**	**19 50 30.3**	**-1.2**
PTL				*eSN*	**Sb**	**19 51 01.6**	**-0.7**
KYTH	**Kithira**	**2.61**	**133**	*ePn*	**Pb**	**19 50 32.8**	**-0.5**
KYTH	**Kithira**	**2.61**	**133**	*ePN*	**Pb**	**19 50 32.8**	**-0.5**
TIP	**Timpagrande**	**3.26**	**290**	P	**Pn**	**19 50 42.1**	**+4.6**
TIP	**Timpagrande**	**3.26**	**290**	P	**Pn**	**19 50 42.1**	**+4.6**
STON	**Ston**	**5.28**	**335**	*ePn*	**Pn**	**19 51 03.8**	**-1.5**
STON				Sn	**Sn**	**19 52 04.5**	**-1.6**
STON	**Ston**	**5.28**	**335**	*ePn*	**Pn**	**19 51 03.7**	**-1.5**
STON				Sn	**Sn**	**19 52 04.4**	**-1.6**

IDC 22 20:13:41.9±10.0, 1.°71N×126.°34E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.5/18, mbtmp3.5/3, Error ellipse: s-maj=183.8km s-min=169.0km az=77.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.91**	**160**	P	P	20 18 47.8	+0.3
	0.5nm,0.5s,baz=336,slow=11,SNR=5.3						
ASAR	**Alice Springs**	**26.28**	**164**	P	P	20 19 20.8	+1.6
	0.5nm,0.4s,baz=352,slow=7.9,SNR=16						
STKA	**Stephens Creek**	**36.41**	**158**	P	P	20 20 46.2	-2.0
	0.4nm,0.3s,baz=350,slow=12,SNR=5.2						

*BJI **22** 20:15:17.7, 41.°84N×84.°13E, h12^{km}, ML2.8/7*
NNC 22 20:15:41.2±1.9, 42.°70N×83.°50E, h0^{km}, mb3.2, mpv2.8, 3C, Error ellipse: s-maj=41.6km s-min=14.4km az=72.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**4.18**	**349**	Pn	Pn	20 16 46.4	+0.1
	1.5nm,0.7s,baz=166,slow=16,SNR=9.4						
MK31				⇑Lg		20 17 54.3	
	5.2nm,0.6s,baz=170,slow=26,SNR=10						
KSH	**Kashi**	**6.51**	**243**	Pg	Pn	20 17 25.3	+7.0
KSH				smax			
	comp=N,13nm,0.1s						
KSH				smax			
	comp=E,18nm,0.2s						
KURBB	**Kurchatov Arra**	**8.63**	**338**	⇑Lg		20 20 15.3	
	comp=E,0.6nm,0.7s						
KURK	**Kurchatov**	**8.69**	**339**	⇑Lg		20 20 17.2	
	comp=E,3.7nm,1.1s						

*NIED **22** 20:16:00, 21.°50N×121.°30E, h35^{km}, Mw4.5 Best double couple: M0 7.18000×10^{15} NP1:φ$_0$=42.00000°, δ79.00000°, λ77.00000°. NP2:φ$_0$=273.00000°, δ17.00000°, λ140.00000°.*
*IDC **22** 20:16:01.3±0.7, 21.°25N×121.°31E, h0^{km}, mb3.9/10, mb1 4.1/11, mb1mx3.9/22, mbtmp4.0/11, ML3.5/1, MS3.6/7, Ms1 3.7/7, ms1mx3.2/31, Error ellipse: s-maj=31.4km s-min=14.7km az=68.0*
*NEIC **22** 20:16:02.9±4.8, 21.°27N×121.°21E, h13^{km}±30^{km}, mb4.4/14, Error ellipse: s-maj=13.7km s-min=10.8km az=97.0*
*ISCJB **22** 20:16:04.1±2.1, 21.°23N±0.°05×121.°05E±0.°06, h32^{km}±15^{km}, mb4.2/21, MS3.6/7, Error ellipse: s-maj=10.5km s-min=6.8km az=135.9*
*JMA **22** 20:16:08.6±0.4, 21.°51N×121.°34E, h196^{km}, M3.9*
ISC 22 20:16:04.6±2.2, 21.°24N±0.°05×121.°04E±0.°06, h20^{km}±16^{km}, n48, σ1^{s}16/49, mb4.2/21, MS3.6/7, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**1.57**	**1**	*ePn*	**Pn**	**20 16 28.5**	**-3.0**
TPUB	**Ta-pu**	**2.09**	**350**	*ePn*	**Pn**	**20 16 37.8**	**-0.7**
YULB	**Yu-li**	**2.16**	**6**	*ePn*	**Pn**	**20 16 37.9**	**-1.5**
SSLB	**Suanglung**	**2.54**	**358**	*ePn*	**Pn**	**20 16 44.6**	**0.0**
NACB	**Ninganchiao**	**2.96**	**10**	*ePn*	**Pn**	**20 16 47.8**	**-2.8**
YHNB	**Yeheng**	**3.43**	**5**	*ePn*	**Pn**	**20 16 57.4**	**+0.4**
YOJ	**Yonaguni jima**	**3.69**	**29**	P	**Pn**	**20 17 02.3**	**+1.8**
YOJ				*eS*	**Sn**	**20 17 44.0**	**+0.7**
TATO	**Taipei**	**3.74**	**6**	*ePn*	**Pn**	**20 17 00.1**	**-1.1**
HATJ	**Hateruma jima**	**3.79**	**42**	P	**Pn**	**20 17 03.5**	**+1.6**
HATJ				S	**Sn**	**20 17 45.2**	**-0.8**
IRIF	**Iriomote-Funau**	**3.96**	**38**	P	**Pn**	**20 17 05.4**	**+1.2**
IRIF				*eS*	**Sn**	**20 17 50.1**	**+0.1**
JKRS	**Kuro-shima**	**4.05**	**42**	P	**Pn**	**20 17 06.4**	**+0.9**
JIJ	**Ishigaki jima**	**4.23**	**42**	P	**Pn**	**20 17 08.3**	**+0.4**
JIJ				S	**Sn**	**20 17 56.0**	**-0.7**
JTJ	**Tarama**	**4.78**	**44**	P	**Pn**	**20 17 16.0**	**+0.5**
NJ2	**Nanjing**	**10.94**	**350**	*eP*	Px	20 18 52.3	
NJ2				S	**Sn**	**20 20 50.3**	**+8.4**
NJ2				pmax	pmax		
	comp=Z,30nm,0.9s						
NJ2				LR	LR		
	comp=N,370nm,16.7s						
NJ2				LR	LR		
	comp=E,600nm,14.6s						
NJ2				LR	LR		
	comp=Z,500nm,14.0s						
KSRS	**Korea Array**	**17.23**	**19**	P	**Pn**	**20 20 03.2**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=204,slow=11,SNR=5.4						
BJT	**Baijiatuan**	**19.18**	**349**	*eP*	**Pn**	**20 20 27.3**	**-0.6**
	comp=Z,14nm,0.9s						
BJI	**Beijing**	**19.20**	**349**	P	**Pn**	**20 20 27.5**	**-0.6**
BJI				S	**Sn**	**20 24 09.8**	**+7.1**
BJI				pmax	pmax		
	comp=Z,11nm,0.9s						
BJI				LR	LR		
	comp=N,260nm,21.3s						
BJI				LR	LR		
	comp=E,400nm,18.8s						
BJI				LR	LR		
	comp=Z,110nm,21.3s						
CM31	**Chiang Mai Arr**	**20.97**	**266**	*eP*	**P**	**20 20 45.5**	**-1.1**
	comp=Z,1.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**20.97**	**266**	P	**P**	**20 20 48.2**	**+1.6**
	comp=Z,1.0nm,0.7s,baz=71,slow=10,SNR=7.6						
MAJO	**Matsushiro**	**21.36**	**41**	P	**P**	**20 20 47.1**	**-3.6**
MJAR	**Matsushiro Arr**	**21.36**	**41**	P	**P**	**20 20 53.1**	**+2.4**
	comp=Z,2.6nm,0.7s,mb3.7,baz=233,slow=8.1,SNR=9.0						
MDJ	**Mudanjiang**	**24.36**	**15**	P	**P**	**20 21 20.1**	**-1.1**
	comp=Z,9.0nm,0.9s,mb4.2						
PSI	**Prapat**	**28.27**	**233**	LR	LR	20 34 05.4	
	comp=Z,90nm,18.7s,MS3.4,baz=18,slow=38						
ULN	**Ulaanbaatar**	**28.86**	**340**	*eP*	**P**	**20 22 02.6**	**+0.9**
	comp=Z,4.3nm,0.9s,mb4.2						
SONM	**Songino Array**	**29.04**	**339**	P	**P**	**20 22 04.0**	**+0.7**
	comp=Z,2.2nm,0.8s,mb3.9,baz=150,slow=8.7,SNR=15						
SONM				LR	LR	20 35 31.8	
	comp=Z,302nm,19.9s,MS3.9,baz=156,slow=40						
MKAR	**Makanchi Array**	**40.40**	**318**	P	**P**	**20 23 42.1**	**+0.9**
	comp=Z,0.3nm,0.3s,mb3.6,baz=106,slow=9.5,SNR=7.2						
MKAR				LR	LR	20 40 35.2	
	comp=Z,54nm,19.0s,MS3.4,baz=33,slow=36						
PETK	**Petropavlovsk-**	**42.39**	**32**	LR	LR	20 42 09.1	
	comp=Z,28nm,20.2s,MS3.1,baz=68,slow=37						
ZALV	**Zalesovo Beam**	**42.66**	**329**	P	**P**	**20 24 00.1**	**+0.4**
	comp=Z,2.9nm,0.7s,mb4.1,baz=113,slow=7.8,SNR=15						
ZALV				LR	LR	20 43 42.9	
	comp=Z,51nm,18.2s,MS3.5,baz=55,slow=39						
WRA	**Warramunga Arr**	**42.95**	**161**	P	**P**	**20 24 00.8**	**-1.5**
WRA	**Warramunga Arr**	**42.95**	**161**	P	**P**	**20 24 00.8**	**-1.5**
	comp=Z,4.5nm,0.9s,mb4.2,baz=344,slow=9.0,SNR=9.3						
KURK	**Kurchatov**	**44.29**	**322**	*eP*	**P**	**20 24 13.2**	**+0.4**
	comp=Z,3.7nm,1.1s,mb4.0						
KURK	**Kurchatov**	**44.29**	**322**	P	**P**	**20 24 13.8**	**+1.0**
	comp=Z,1.6nm,0.8s,mb3.8,baz=116,slow=7.7,SNR=13						
ASAR	**Alice Springs**	**46.36**	**164**	P	**P**	**20 24 29.4**	**-0.1**
	comp=Z,0.7nm,0.5s,mb3.8,baz=351,slow=10,SNR=15						
CTAO	**Charters Tower**	**47.91**	**147**	*eP*	**P**	**20 24 42.2**	**+0.6**
	comp=Z,9.9nm,1.0s,mb4.8						
STKA	**Stephens Creek**	**56.37**	**159**	P	**P**	**20 25 43.9**	**-0.5**
STKA	**Stephens Creek**	**56.37**	**159**	P	**P**	**20 25 43.9**	**-0.5**
	comp=Z,3.9nm,0.7s,mb4.6,baz=342,slow=9.3,SNR=16						
ARU	**Arti**	**57.39**	**324**	*eP*	**P**	**20 25 51.8**	**+0.4**
	comp=Z,1.6nm,0.6s,mb4.2						
PPLA	**Purkeypile**	**69.87**	**29**	*eP*	**P**	**20 27 14.0**	**+0.3**
	comp=Z,9.0nm,1.3s,mb4.5						
BPAW	**Bear Paw Mtn.**	**70.24**	**28**	*eP*	**P**	**20 27 14.2**	**-1.8**
	comp=Z,2.2nm,0.8s,mb4.1						
MCK	**McKinley**	**71.19**	**28**	P	**P**	**20 27 21.3**	**-0.5**
	comp=Z,6.0nm,0.9s,mb4.5						
MALT	**Malatya**	**71.54**	**305**	*eP*	**P**	**20 27 24.3**	**-0.1**
	comp=Z,1.7nm,0.7s,mb4.1						
ILAR	**Eielson Array**	**71.89**	**27**	P	**P**	**20 27 24.3**	**-1.6**
	comp=Z,0.8nm,0.8s,mb3.7,baz=282,slow=6.2,SNR=12						
ARCES	**ARCESS Array B**	**72.21**	**338**	P	**P**	**20 27 29.6**	**+1.8**
	comp=Z,0.7nm,0.7s,mb3.7,baz=64,slow=6.9,SNR=4.8						
FINES	**FINESS Array B**	**73.92**	**330**	LR	LR	21 04 14.1	
	comp=Z,69nm,19.4s,MS4.0,baz=144,slow=39						
INK	**Inuvik**	**76.00**	**22**	*eP*	**P**	**20 27 46.0**	**-4.0**
	comp=Z,4.1nm,0.9s,mb4.4						
RPZ	**Rata Peaks**	**79

PDAR Pinedale Array 128.40 349 PKP PKPdf 21 11 27.8 -0.9
0.5nm,0.6s,baz=54,slow=6.1,SNR=3.7
PDAR Pinedale Array 128.40 349 PKIKP PKPdf 21 11 27.8 -0.9

WEL 22 21:02:35.1±0.5, 38°23S×175°91E, h184km±4km, ML3.6/17, 1C-1D, Error ellipse: s-maj=3.6km s-min=3.1km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**0.94**	**92**	⇓P	Pn	21 03 02.7	0.0
URZ				SN	Sn	21 03 23.2	-0.8
NGZ	**Ngauruhoe**	**0.98**	**194**	PN	Pn	21 03 03.3	+0.4
BKZ	**Black Stump Fm**	**1.04**	**154**	PN	Pn	21 03 03.3	-0.1
TUVZ	**Tukino**	**1.06**	**191**	PN	Pn	21 03 03.8	+0.3
FWVZ	**Far West T-bar**	**1.06**	**195**	PN	Pn	21 03 03.9	+0.3
NMHZ	**Naumai**	**1.11**	**141**	PN	Pn	21 03 04.8	+0.9
NMHZ				SN	Sn	21 03 26.6	+0.2
WNVZ	**Wahianoa**	**1.12**	**193**	PN	Pn	21 03 04.2	+0.2
PKVZ	**Pokaka**	**1.15**	**202**	PN	Pn	21 03 04.3	+0.1
RAHZ	**Arahi**	**1.15**	**127**	PN	Pn	21 03 04.9	+0.6
RAHZ				SN	Sn	21 03 27.0	+0.2
MOVZ	**Moawhango**	**1.18**	**186**	PN	Pn	21 03 04.2	-0.4
MTVZ	**Mangateitei**	**1.20**	**196**	PN	Pn	21 03 04.8	+0.1
BHHZ	**Black Hill Sta**	**1.26**	**175**	PN	Pn	21 03 04.9	-0.3
VRZ	**Vera Road**	**1.27**	**225**	PN	Pn	21 03 05.5	+0.2
MWZ	**Matawai**	**1.28**	**95**	PN	Pn	21 03 05.5	+0.2
MWZ				SN	Sn	21 03 27.5	-1.1
MCHZ	**McNeill Hill**	**1.36**	**153**	PN	Pn	21 03 06.6	+0.6
KNZ	**Kokohu**	**1.59**	**120**	PN	Pn	21 03 08.3	+0.1
WAZ	**Wanganui**	**1.69**	**205**	PN	Pn	21 03 08.4	-0.7
PNHZ	**Pukenui**	**1.70**	**172**	PN	Pn	21 03 08.5	-0.7
KAHZ	**Kahuranaki**	**1.73**	**155**	PN	Pn	21 03 09.5	0.0
PKE	**Pukeiti**	**1.79**	**237**	PN	Pn	21 03 10.4	+0.3
MHGZ	**Mahia Peninsul**	**1.81**	**121**	PN	Pn	21 03 10.4	0.0
CNGZ	**Carnagh Statio**	**1.82**	**99**	PN	Pn	21 03 11.2	+0.7
TSZ	**Takapari Road**	**1.83**	**179**	⇑PN	Pn	21 03 09.7	-0.9
PUZ	**Puketiti**	**1.86**	**86**	PN	Pn	21 03 10.6	-0.2
WPHZ	**Waipukurau**	**1.88**	**168**	PN	Pn	21 03 10.3	-0.8
PXZ	**Pawanui**	**1.94**	**158**	PN	Pn	21 03 11.0	-0.8
PXZ				SN	Sn	21 03 37.7	-2.6
MXZ	**Matakaoa Point**	**2.01**	**71**	PN	Pn	21 03 12.8	+0.3
DVHZ	**Dannevirke**	**2.08**	**175**	PN	Pn	21 03 11.6	-1.5
PRHZ	**Porangahau**	**2.11**	**165**	PN	Pn	21 03 12.5	-1.1
POWZ	**Post Office Ro**	**2.16**	**183**	PN	Pn	21 03 12.6	-1.6
MRZ	**Mangatainoka R**	**2.44**	**186**	PN	Pn	21 03 15.2	-2.0
TIWZ	**Tintock**	**2.54**	**180**	PN	Pn	21 03 16.3	-2.1
OGWZ	**Otaki Gorge**	**2.65**	**192**	PN	Pn	21 03 17.6	-2.0
HOWZ	**Holdsworth Sta**	**2.68**	**186**	PN	Pn	21 03 17.6	-2.4
KIW	**Kapiti Island**	**2.74**	**196**	PN	Pn	21 03 18.3	-2.4
TMWZ	**Te Maipa**	**2.87**	**180**	PN	Pn	21 03 20.0	-2.3
MTW	**Mount Morrison**	**2.94**	**186**	PN	Pn	21 03 20.1	-3.0
CAW	**Cannon Point**	**2.95**	**192**	PN	Pn	21 03 20.7	-2.5
TRWZ	**Traveller**	**3.17**	**183**	PN	Pn	21 03 23.0	-2.9
SNZO	**South Karori**	**3.21**	**196**	PN	Pn	21 03 23.4	-3.0
MSWZ	**Moikau Station**	**3.22**	**189**	PN	Pn	21 03 23.4	-3.1
BHW	**Baring Head**	**3.27**	**194**	PN	Pn	21 03 24.0	-3.1
PLWZ	**Palliser**	**3.37**	**188**	PN	Pn	21 03 25.0	-3.4
TUWZ	**Tuamarina**	**3.54**	**205**	PN	Pn	21 03 27.2	-3.2
NNZ	**Nelson**	**3.57**	**212**	PN	Pn	21 03 27.4	-3.4
BSWZ	**Blackbirch Sta**	**3.81**	**204**	PN	Pn	21 03 31.0	-2.9
KHZ	**Kahutara**	**4.56**	**203**	PN	Pn	21 03 40.0	-3.4
DSZ	**Denniston Nort**	**4.72**	**221**	PN	Pn	21 03 41.1	-4.4
LTZ	**Lake Taylor**	**5.33**	**210**	PN	Pn	21 03 49.1	-4.2
MQZ	**McQueen's Vall**	**6.00**	**203**	PN	Pn	21 03 56.8	-5.2
MQZ				SN	Sn	21 05 00.2	-10

*SZGRF **22** 21:02:53.8, 12°.29S×75°.48W, h33km, mb5.6, Central Peru*
*BGS **22** 21:03:22.8±1.6, 8°.62S×74°.36W, h149km, mb5.3*
*NEIC **22** 21:03:24.8±0.5, 8°.36S×74°.27W, h149km±4km, mb5.2/235, Error ellipse: s-maj=4.0km s-min=2.6km az=217.0*
NEIC Felt [III] at Pucallpa.
*ISCJB **22** 21:03:24.4±0.2, 8°.33S±0°.03×74°.38W±0°.02, h158km, mb5.1/297, Error ellipse: s-maj=4.8km s-min=2.4km az=25.2*
*IDC **22** 21:03:25.2±0.4, 8°.31S×74°.27W, h154km±2km, mb4.7/22, mb1 4.8/27, mb1mx4.8/29, mbtmp4.7/27, MS3.6/2, Ms1 3.6/2, ms1mx2.9/25, Error ellipse: s-maj=10.6km s-min=7.3km az=53.0*
*BJI **22** 21:03:26.4, 8°.37S×74°.92W, h168km, mB5.3/22*
*MOS **22** 21:03:26.4±0.7, 8°.00S×74°.31W, h162km, mb5.3/89, Error ellipse: s-maj=7.7km s-min=5.2km az=75.5*
*GCMT **22** 21:03:26.5±0.2, 8°.37S×74°.36W, h158km±1km, MW5.2, Moment Tensor Solution. s54,c72; s80,c123; Moment tensor: Scale 10^16 Nm; Mrr 2.04±.16; Mθθ 0.51±.18; Mφφ -2.55±.21; Mrθ 2.48±.11; Mθφ 1.03±.20; Mφr -6.32±.14; Best double couple: M0 7.20000×10^16 NP1: ϕs 351.00000°, δ 10.00000°, λ 103.00000°. NP2: ϕs 159.00000°, δ 80.00000°, λ 88.00000°. Principal axes: T 6.8200, Plg 55.0000°, Azm 66.0000°; N 0.8000, Plg 2.0000°, Azm 159.0000°; P -7.6200, Plg 35.0000°, Azm 251.0000°; Data Used: II IU IC G CN.*

ISC 22 21:03:26.3±0.2, 8°.35S±0°.03×74°.27W±0°.02, h160km, h160km±1.9km; pP-P, n1069, σ0°.66/983, mb5.1/298, 310C-188D, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**4.26**	**286**	P	**Pn**	**21 04 27.5**	**-2.7**
	120nm,0.3s,baz=153,slow=11,SNR=270						
ATAH				S	**Sn**	**21 05 16.4**	**-3.7**
	443nm,0.3s,baz=72,slow=20,SNR=15						
NNA	**Nana**	**4.42**	**215**	*e*Pn	**Pn**	**21 04 30.5**	**-1.8**
NNA				*e*Sn	**Sn**	**21 05 17.8**	**-5.9**
NNA	**Nana**	**4.42**	**215**	P	**Pn**	**21 04 30.8**	**-1.5**
	205nm,0.3s,baz=35,slow=6.9,SNR=234						
NNA				S	**Sn**	**21 05 17.2**	**-6.5**
	1μm,0.3s,baz=225,slow=19,SNR=18						
NNA	**Nana**	**4.42**	**215**	Pn	**Pn**	**21 04 31.0**	**-1.3**
	4μm,0.2s						
OTAV	**Otavalo**	**9.49**	**334**	*e*Pn	**Pn**	**21 05 37.8**	**-1.7**
	39nm,0.8s						
LPAZ	**La Paz**	**9.91**	**143**	P	**Pn**	**21 05 44.1**	**-1.0**
	0.7nm,0.3s,baz=324,slow=10,SNR=30						
LPAZ				S	**Sn**	**21 07 35.1**	**+0.1**
	5.0nm,0.3s,baz=163,slow=14,SNR=4.6						
ROSC	**El Rosal**	**13.11**	**360**	P	**Pn**	**21 06 27.4**	**+0.7**
	2.1nm,0.3s,baz=258,slow=23,SNR=10						
ROSC				S	**Sn**	**21 08 53.1**	**+1.0**
	4.0nm,0.3s,baz=101,slow=16,SNR=1.9						
SIV	**San Ignacio**	**14.96**	**122**	P	**Pn**	**21 06 49.2**	**-0.7**
	2.4nm,0.3s,baz=304,slow=11,SNR=63						
SIV				S	**Sn**	**21 09 30.5**	**-6.1**
	2.8nm,0.3s,baz=266,slow=19,SNR=2.1						
SDV	**Santo Domingo**	**17.50**	**12**	*e*P	**Pn**	**21 07 19.8**	**-0.9**
	76nm,0.6s						
SDV				*e*S	**S**	**21 10 30.9**	**-2.2**
PAYG	**Puerto Ayora**	**17.68**	**295**	*e*P	**Pn**	**21 07 21.8**	**-1.2**
	170nm,1.3s						
BCIP	**Isla Barro Col**	**18.26**	**342**	*e*P	**P**	**21 07 28.6**	**+0.8**
PCRV	**Puerto La Cruz**	**20.75**	**28**	P	**P**	**21 07 54.7**	**0.0**
	74nm,0.7s,baz=176,slow=5.8,SNR=21						
LCO	**Las Campanas**	**20.83**	**171**	*e*P	**P**	**21 07 55.4**	**0.0**
	16nm,0.9s						
CFAA	**Coronel Fontan**	**23.82**	**167**	P	**P**	**21 08 25.0**	**+0.4**
	1.6nm,0.6s,mb3.7,baz=342,slow=12,SNR=23						
CFAA				pP		21 08 56.1	
	2.1nm,0.7s,baz=349,slow=8.6,SNR=6.1						
CFAA				PcP	PcP	21 12 04.4	+0.8
	0.4nm,0.6s,baz=281,slow=5.2,SNR=2.5						
GRGR	**Grenville**	**23.90**	**32**	*e*P	**P**	**21 08 25.1**	**-0.4**
	294nm,0.6s,mb6.0						
GRW	**Mount Saint Ca**	**23.92**	**32**	*e*P	**P**	**21 08 24.6**	**-1.0**
GRW	**Mount Saint Ca**	**23.92**	**32**	*e*P	**P**	**21 08 24.6**	**-1.0**
GRHS	**Sauteurs**	**23.98**	**32**	*e*P	**P**	**21 08 27.1**	**+0.9**
GRHS	**Sauteurs**	**23.98**	**32**	*e*P	**P**	**21 08 27.1**	**+0.9**
CPUP	**Villa Florida**	**24.06**	**140**	P	**P**	**21 08 25.2**	**-1.6**
	11nm,0.6s,mb4.6,baz=305,slow=10.0,SNR=30						
GRSS	**Sisters**	**24.06**	**32**	*e*P	**P**	**21 08 27.6**	**+0.6**
GRSS	**Sisters**	**24.06**	**32**	*e*P	**P**	**21 08 27.6**	**+0.6**
GRIC	**Isle de Caille**	**24.06**	**32**	*e*P	**P**	**21 08 27.4**	**+0.4**
GRCU	**Cariacou**	**24.29**	**32**	*e*P	**P**	**21 08 28.8**	**-0.3**
GRCU	**Cariacou**	**24.29**	**32**	*e*P	**P**	**21 08 28.8**	**-0.3**
MTDJ	**Mount Denham**	**26.60**	**353**	*e*P	**P**	**21 08 50.3**	**+0.5**
	108nm,1.2s,mb5.4						
MTDJ				*e*pP	pP	21 09 28.6	+5.5
CRPR	**Cabo Rojo, PR**	**27.12**	**15**	*e*P	**P**	**21 08 54.3**	**-0.2**
	38nm,1.0s,mb5.0						
ICM	**Isla Caja Muer**	**27.17**	**16**	*e*P	**P**	**21 08 54.5**	**-0.4**
LSP	**Las Mesas**	**27.29**	**15**	*e*P	**P**	**21 08 56.3**	**+0.3**
OBIP	**Obispado Ponce**	**27.29**	**16**	*e*P	**P**	**21 08 56.2**	**+0.2**
	178nm,0.9s,mb5.7						
MPR	**Mayaguez**	**27.31**	**15**	*e*P	**P**	**21 08 55.9**	**-0.3**
SDDR	**Presa de Saban**	**27.31**	**6**	*e*P	**P**	**21 08 56.5**	**+0.3**
	47nm,0.6s,mb5.3						
CELP	**Cerrillos**	**27.33**	**16**	*e*P	**P**	**21 08 55.9**	**-0.5**
SJG	**San Juan**	**27.48**	**17**	P	**P**	**21 08 57.3**	**-0.4**
	115nm,0.5s,mb5.8,baz=182,slow=3.0,SNR=23						
AOPR	**Arecibo Observ**	**27.54**	**16**	*e*P	**P**	**21 08 57.9**	**-0.3**
	131nm,0.7s,mb5.8						
CDVI	**St. Croix**	**27.58**	**20**	*e*P	**P**	**21 08 58.0**	**-0.5**
	259nm,0.9s,mb6.0						
HUMP	**Col San Antoni**	**27.60**	**17**	*e*P	**P**	**21 08 58.3**	**-0.5**
	86nm,0.7s,mb5.6						
STVI	**Saint Thomas**	**28.07**	**19**	*e*P	**P**	**21 09 02.1**	**-0.9**
	54nm,0.6s,mb5.5						
ANWB	**Willy Bob**	**28.64**	**25**	*e*P	**P**	**21 09 05.4**	**-2.6**
	452nm,1.1s,mb6.1						
GRTK	**Grand Turk**	**29.83**	**6**	*e*P	**P**	**21 09 18.6**	**+0.1**
	70nm,0.7s,mb5.5						
TEIG	**Tepich**	**31.56**	**334**	*e*P	**P**	**21 09 33.0**	**-0.7**
	97nm,1.1s,mb5.4						
TRQA	**Tornquist**	**31.59**	**161**	*e*P	**P**	**21 09 33.2**	**-0.7**
	26nm,1.3s,mb4.8						
TRQA				*e*pP	pP	21 10 08.6	+0.9
TRQA				*e*PcP	PcP	21 12 23.0	+0.6
PLCA	**Paso Flores**	**32.42**	**175**	P	**P**	**21 09 39.8**	**-1.2**
	3.5nm,0.8s,mb4.2,baz=345,slow=10,SNR=9.1						
PLCA				pP	pP	21 10 14.6	-0.3
	10nm,0.9s,baz=352,slow=8.8,SNR=8.1						
PLCA				PcP	PcP	21 12 25.5	+0.9
	4.1nm,0.8s,baz=330,slow=2.4,SNR=4.0						
CMIG	**Matias Romero**	**32.47**	**321**	P	**P**	**21 09 41.5**	**-0.2**
	7.2nm,0.5s,mb4.7,baz=118,slow=6.8,SNR=23						
RPN	**Rapa Nui**	**38.07**	**236**	LR	LR	21 22 31.2	
	comp=Z,342nm,20.7s,baz=336,slow=30						
RCBR	**Riachuelo**	**38.15**	**89**	*e*P	**P**	**21 10 29.4**	**-1.0**
	43nm,1.0s,mb5.0						
RCBR				*e*pP	pP	21 11 04.7	-0.3
NHSC	**New Hope**	**41.60**	**353**	*e*P	**P**	**21 10 59.8**	**+1.2**
	297nm,0.8s,mb6.0						
KVTX	**Kingsville**	**42.38**	**328**	*e*P	**P**	**21 11 06.3**	**+1.4**
	65nm,0.7s,mb5.4						
GOGA	**Godfrey**	**42.44**	**349**	*e*P	**P**	**21 11 05.3**	**0.0**
	42nm,1.1s,mb5.0						
GOGA	**Godfrey**	**42.44**	**349**	*e*P	**P**	**21 11 05.3**	**0.0**
GOGA				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.0						
HKT	**Hockley**	**43.35**	**332**	*e*P	**P**	**21 11 13.6**	**+0.8**
	comp=Z,35nm,1.4s,mb4.8						
HKT	**Hockley**	**43.35**	**332**	*e*P	**P**	**21 11 13.6**	**+0.8**
HKT				pmax	pmax		
	comp=Z,35nm,1.4s,mb4.8						
NATX	**Nacogdoches**	**44.39**	**335**	*e*P	**P**	**21 11 21.0**	**0.0**
	comp=Z,336nm,1.6s,mb5.7						
CPCT	**Cooper Cave**	**44.62**	**348**	*e*P	**P**	**21 11 22.8**	**0.0**
SWET	**Sewanee**	**44.70**	**346**	*e*P	**P**	**21 11 22.8**	**-0.6**
VWCC	**Virginia Weste**	**45.66**	**354**	*e*P	**P**	**21 11 30.7**	**-0.3**
BLA	**Blacksburg**	**45.68**	**353**	⇑*i*P	**P**	**21 11 31.6**	**+0.5**
	comp=Z,69nm,0.6s,mb5.5						
BLA	**Blacksburg**	**45.68**	**353**	⇑*i*P	**P**	**21 11 31.6**	**+0.5**
BLA				pmax	pmax		
	comp=Z,69nm,0.6s,mb5.5						
JCT	**Junction City**	**45.73**	**329**	⇓P	**P**	**21 11 31.2**	**-0.4**
	baz=46,SNR=7.3						
JCT	**Junction City**	**45.73**	**329**	*e*P	**P**	**21 11 31.3**	**-0.3**
	comp=Z,17nm,0.8s,mb4.7						
JCT	**Junction City**	**45.73**	**329**	*e*P	**P**	**21 11 31.3**	**-0.3**
JCT				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.7						
JSRW	**J. Sargeant Re**	**45.92**	**356**	*e*P	**P**	**21 11 33.4**	**+0.5**
WVT	**Waverly**	**46.04**	**345**	*e*P	**P**	**21 11 31.4**	**-2.6**
	comp=Z,56nm,1.5s,mb5.0						
WVT	**Waverly**	**46.04**	**345**	*e*P	**P**	**21 11 31.4**	**-2.5**
WVT				pmax	pmax		
	comp=Z,56nm,1.5s,mb5.0						
UALR	**University of**	**46.17**	**339**	*e*P	**P**	**21 11 33.6**	**-1.3**
	comp=Z,50nm,0.8s,mb5.2						
MIAR	**Mount Ida**	**46.41**	**338**	*e*P	**P**	**21 11 36.3**	**-0.5**
	comp=Z,14nm,0.8s,mb4.7						
MIAR				*e*PcP	PcP	21 13 08.7	-0.3
MIAR	**Mount Ida**	**46.41**	**338**	*e*P	**P**	**21 11 36.3**	**-0.5**
MIAR				*e*		21 13 08.7	
MIAR				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6						
628A	**Black Gap, Mar**	**46.63**	**325**	⇓P	**P**	**21 11 39.2**	**+0.6**
	baz=47						
627A	**Terlingua Ranc**	**46.89**	**324**	⇓P	**P**	**21 11 41.2**	**+0.6**
	baz=47						
TXAR	**Lajitas Array**	**46.96**	**324**	P	**P**	**21 11 40.5**	**-0.7**
	comp=Z,8.5nm,0.7s,mb4.5,baz=148,slow=8.6,SNR=71						
TXAR				pP	pP	21 12 13.7	-3.4
	comp=Z,2.0nm,0.4s,baz=153,slow=9.5,SNR=3.4						
TXAR				PcP	PcP	21 13 11.2	+0.1
	comp=Z,4.5nm,0.8s,baz=134,slow=7.2,SNR=5.8						
TXAR				ScP	ScP	21 16 49.8	-0.2
	comp=Z,0.5nm,0.8s,baz=123,slow=6.5,SNR=2.8						
TXAR	**Lajitas Array**	**46.96**	**324**	P	**P**	**21 11 40.6**	**-0.6**
TXAR				*PP	pP	21 12 13.7	-3.4
TXAR						21 13 11.2	
PARMO	**Parma**	**47.07**	**343**	*e*P	**P**	**21 11 41.3**	**-0.6**
528A	**Cox Ranch, San**	**47.08**	**326**	⇓P	**P**	**21 11 43.0**	**+0.9**
	baz=47						
626A	**Big Bend Ranch**	**47.39**	**324**	⇓P	**P**	**21 11 44.3**	**-0.3**
	baz=48,SNR=82						
428A	**Kincaid Ranch,**	**47.45**	**326**	⇑P	**P**	**21 11 45.1**	**+0.1**
	baz=48,SNR=10.0						
527A	**Woodward Ranch**	**47.53**	**325**	⇑P	**P**	**21 11 45.6**	**0.0**
	baz=48						
SDMD	**Soldier's Deli**	**47.57**	**357**	*e*P	**P**	**21 11 46.3**	**+0.6**
	comp=Z,62nm,1.4s,mb5.0						
WCI	**Wyandotte Cave**	**47.67**	**347**	*e*P	**P**	**21 11 45.2**	**-1.4**
	comp=Z,40nm,0.4s,mb5.4						
WCI	**Wyandotte Cave**	**47.67**	**347**	*e*P	**P**	**21 11 45.2**	**-1.3**
WCI				pmax	pmax		
	comp=Z,40nm,0.4s,mb5.4						
USIN	**University of**	**47.74**	**346**	*e*P	**P**	**21 11 45.9**	**-1.1**
	comp=Z,43nm,0.6s,mb5.2						
SIUC	**Southern Illin**	**47.90**	**344**	*e*P	**P**	**21 11 46.9**	**-1.5**
	comp=Z,46nm,1.0s,mb5.1						
427A	**Hayter Ranch,**	**47.95**	**326**	⇓P	**P**	**21 11 48.9**	**+0.1**
	baz=48,SNR=10.0						
328A	**Wristen Ranch,**	**48.03**	**327**	⇑P	**P**	**21 11 49.0**	**-0.4**
	baz=48,SNR=20						
MCWV	**Mont Chateau**	**48.04**	**354**	*e*P	**P**	**21 11 48.5**	**-0.8**
	comp=Z,35nm,0.6s,mb5.2						
MVL	**Millersville**	**48.14**	**358**	*e*P	**P**	**21 11 49.9**	**-0.2**
	comp=Z,92nm,1.0s,mb5.4						
426A	**McDonald Obser**	**48.16**	**325**	⇓P	**P**	**21 11 49.8**	**-0.7**
	baz=48,SNR=26						
FVM	**French Village**	**48.49**	**343**	*e*P	**P**	**21 11 50.8**	**-2.1**
	comp=Z,47nm,0.7s,mb5.2						
FVM	**French Village**	**48.49**	**343**	*e*P	**P**	**21 11 50.8**	**-2.1**
FVM				pmax	pmax		
	comp=Z,47nm,0.7s,mb5.2						
OLIL	**Olney**	**48.57**	**346**	*e*P	**P**	**21 11 52.0**	**-1.5**
	comp=Z,29nm,0.9s,mb4.9						
326A	**Caldwell Ranch**	**48.62**	**326**	⇑P	**P**	**21 11 53.3**	**-0.7**
	baz=49,SNR=6.0						
BLO	**Bloomington**	**48.62**	**347**	*e*P	**P**	**21 11 51.8**	**-2.1**
	comp=Z,80nm,0.5s,mb5.6						
BLO	**Bloomington**	**48.62**	**347**	*e*P	**P**	**21 11 51.8**	**-2.0**
BLO				pmax	pmax		
	comp=Z,80nm,0.5s,mb5.6						
WMOK	**Wichita Mounta**	**48.72**	**333**	*e*P	**P**	**21 11 53.7**	**-1.0**
	comp=Z,20nm,0.6s,mb4.9						
WMOK				*e*PcP	PcP	21 13 16.9	-0.5
WMOK	**Wichita Mounta**	**48.72**	**333**	*e*P	**P**	**21 11 53.7**	**-1.0**
WMOK				*e*		21 13 16.9	
WMOK				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.9						
227A	**Bennet, Jal**	**48.77**	**327**	⇓P	**P**	**21 11 55.2**	**+0.1**
	baz=49,SNR=7.4						
425A	**Indio Mountain**	**48.80**	**324**	⇓P	**P**	**21 11 55.0**	**-0.4**
	baz=49,SNR=40						
CCM	**Cathedral Cave**	**48.80**	**342**	*e*P	**P**	**21 11 52.8**	**-2.4**
	comp=Z,30nm,0.7s,mb5.0						
CCM				*e*PcP	PcP	21 13 17.1	-0.5
CCM	**Cathedral Cave**	**48.80**	**342**	*e*P	**P**	**21 11 52.8**	**-2.4**
CCM				*e*		21 13 17.1	
CCM				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.0						
PAL	**Palisades**	**49.10**	**0**	*e*P	**P**	**21 11 57.6**	**+0.1**
	comp=Z,28nm,0.9s,mb4.9						
PAL	**Palisades**	**49.10**	**0**	*e*P	**P**	**21 11 57.6**	**+0.1**
PAL				pmax	pmax		
	comp=Z,28nm,0.9s,mb4.9						
325A	**Bean Ranch, Si**	**49.22**	**325**	⇑P	**P**	**21 11 58.4**	**-0.1**
	baz=49,SNR=23						
226A	**Malaga, Loving**	**49.25**	**326**	⇓P	**P**	**21 11 58.6**	**-0.2**
	baz=49,SNR=20						
127A	**Arkansas Junct**	**49.32**	**327**	⇓P	**P**	**21 11 58.3**	**-0.9**
	baz=50,SNR=5.4						
YLE	**Yale**	**49.43**	**1**	*e*P	**P**	**21 12 00.6**	**+0.7**
324A	**Moseley Ranch,**	**49.57**	**324**	⇑P	**P**	**21 12 00.5**	**-0.7**
	baz=50,SNR=27						
126A	**Clayton Basin,**	**49.65**	**327**	⇑P	**P**	**21 12 01.1**	**-0.7**
	baz=50,SNR=13						
225A	**Deer Hill, Car**	**49.69**	**326**	⇑P	**P**	**21 12 02.1**	**0.0**
	baz=50						
MNTX	**Cornudas Mount**	**49.70**	**325**	⇓P	**P**	**21 12 01.2**	**-1.0**
	baz=50,SNR=18						
MNTX	**Cornudas Mount**	**49.70**	**325**	*e*P	**P**	**21 12 01.7**	**-0.5**
MSTX	**Muleshoe**	**50.02**	**329**	⇓P	**P**	**21 12 03.3**	**-1.2**
	baz=50,SNR=12						
ALLY	**Allegheny Colle**	**50.04**	**354**	*e*P	**P**	**21 12 04.5**	**0.0**
	comp=Z,50nm,0.8s,mb5.2						
224A	**Cornudas Mount**	**50.06**	**325**	⇓P	**P**	**21 12 04.6**	**-0.3**
	baz=50						
Z26A	**Caprock**	**50.11**	**327**	⇑P	**P**	**21 12 05.0**	**-0.3**
	baz=50						
Y27A	**Causey**	**50.15**	**328**	⇑P	**P**	**21 12 04.6**	**-0.9**
	baz=50,SNR=11						
AMTX	**Amarillo**	**50.20**	**330**	⇑P	**P**	**21 12 04.7**	**-1.2**
	baz=50						
AMTX	**Amarillo**	**50.20**	**330**	*e*P	**P**	**21 12 04.3**	**-1.6**
	comp=Z,45nm,1.2s,mb5.0						
BINY	**Binghamton**	**50.32**	**358**	⇑*i*P	**P**	**21 12 07.0**	**+0.4**
	comp=Z,139nm,0.8s,mb5.6						
124A	**Stringfield Ra**	**50.49**	**326**	⇓P	**P**	**21 12 08.4**	**+0.3**
	baz=51						
ERPA	**Erie**	**50.49**	**354**	*e*P	**P**	**21 12 07.8**	**-0.1**
	comp=Z,47nm,0.7s,mb5.2						
Z25A	**Roswell**	**50.52**	**327**	⇑P	**P**	**21 12 07.9**	**-0.4**
	baz=51						
Y26A	**Elida**	**50.53**	**328**	⇑P	**P**	**21 12 08.0**	**-0.4**
	baz=51						
HDIL	**Hopedale**	**50.59**	**345**	*e*P	**P**	**21 12 06.0**	**-2.7**
	comp=Z,126nm,0.6s,mb5.7						
HDIL				*e*PcP	PcP	21 13 23.1	-1.0
X27A	**F and S Farms,**	**50.72**	**329**	⇑P	**P**	**21 12 09.3**	**-0.5**
	baz=51						
TRY	**Troy**	**50.83**	**1**	*e*P	**P**	**21 12 11.2**	**+0.7**
Z24A	**Sheeppen Canyo**	**50.91**	**326**	⇓P	**P**	**21 12 10.6**	**-0.6**
	baz=51,SNR=38						
Y25A	**Mesa, Roswell**	**50.99**	**327**	⇓P	**P**	**21 12 10.8**	**-1.0**
	baz=51,SNR=11						
222A	**Williams Famil**	**50.99**	**324**	⇓P	**P**	**21 12 11.5**	**-0.3**
	baz=51,SNR=13						
X26A	**CR and CF Fran**	**51.01**	**328**	⇑P	**P**	**21 12 11.3**	**-0.7**
	baz=51,SNR=26						
W27A	**Bowe Ranch, En**	**51.03**	**329**	⇓P	**P**	**21 12 10.8**	**-1.3**
	baz=51,SNR=16						
221A	**Mesquite Ranch**	**51.33**	**323**	⇓P	**P**	**21 12 14.2**	**-0.1**
	baz=52						
Z23A	**Rita Site, Whi**	**51.34**	**325**	⇓P	**P**	**21 12 13.8**	**-0.6**
	baz=52,SNR=16						
122A	**Conniff Cattle**	**51.37**	**324**	⇓P	**P**	**21 12 15.6**	**+1.0**
	baz=52						
Y24A	**Capitan**	**51.40**	**327**	⇑P	**P**	**21 12 14.4**	**-0.4**
	baz=52,SNR=13						
W26A	**Owens Ranch, T**	**51.40**	**329**	⇑P	**P**	**21 12 15.1**	**+0.3**
	baz=52						
X25A	**Clemmons Ranch**	**51.44**	**328**	⇓P	**P**	**21 12 14.5**	**-0.7**
	baz=52,SNR=9.4				

Z19A	T-Link Ranch, baz=53	53.12	323	⇑P		P	21 12 27.6	+0.1
V23A	Ortiz Mt. (NFS baz=53	53.17	328	⇓P		P	21 12 28.6	+0.7
U24A	Moreno Valley baz=53	53.20	329	⇓P		P	21 12 28.7	+0.6
T25A	Trinidad baz=54,SNR=20	53.33	330	⇓P		P	21 12 28.7	-0.3
TUC	Tucson comp=Z,15nm,1.1s,mb4.6	53.36	321	eP		P	21 12 29.0	-0.4
TUC	Tucson comp=Z,15nm,1.1s,mb4.6	53.36	321	eP		P	21 12 29.0	-0.4
TUC					pmax	pmax		
W21A	San Fidel baz=54	53.50	326	⇓P		P	21 12 30.3	0.0
117A	Oracle baz=54,SNR=15	53.51	321	⇑P		P	21 12 30.4	0.0
PKME	Peaks-Kenny Pk comp=Z,50nm,0.7s,mb5.4	53.55	4	⇑iP		P	21 12 30.3	-0.2
X20A	Quemado baz=54	53.56	325	⇓P		P	21 12 30.9	+0.1
216A	Three Points, baz=54	53.58	320	⇓P		P	21 12 30.5	-0.4
Y19A	Nutrioso baz=54,SNR=12	53.58	324	⇓P		P	21 12 30.7	-0.2
U23A	El Rito baz=54,SNR=8.2	53.62	328	⇓P		P	21 12 30.8	-0.4
V22A	San Miguel Ran baz=54,SNR=11	53.68	327	⇑P		P	21 12 31.8	+0.1
S25A	Robets Cordova baz=54,SNR=24	53.75	330	⇓P		P	21 12 32.1	0.0
Z17A	San Carlos Hig baz=54	53.84	322	⇓P		P	21 12 32.5	-0.3
Y18A	Canyon Day Jun baz=54,SNR=5.1	53.91	323	⇑P		P	21 12 33.3	0.0
X19A	St. Johns baz=54,SNR=5.4	53.93	324	⇑P		P	21 12 33.4	-0.1
W20A	Ramah baz=54	53.98	325	⇓P		P	21 12 34.0	+0.1
V21A	Milan baz=54	54.00	326	⇑P		P	21 12 34.1	+0.2
U22A	Llaves baz=54	54.00	328	⇓P		P	21 12 34.2	+0.2
T23A	Casias Ranch, baz=54	54.07	329	⇓P		P	21 12 35.2	+0.8
116A	Eloy baz=54	54.10	321	⇑P		P	21 12 35.1	+0.4
S24A	Houchin Ranch, baz=54,SNR=12	54.12	330	⇓P		P	21 12 35.0	+0.2
Y17A	Roosevelt baz=54,SNR=8.1	54.34	322	⇑P		P	21 12 36.3	-0.1
SDCO	Great Sand Dun baz=55,SNR=35	54.35	330	⇑P		P	21 12 35.9	-0.5
SDCO	Great Sand Dun comp=Z,34nm,1.0s,mb5.0	54.35	330	⇑iP		P	21 12 36.5	0.0
X18A	Snowflake baz=55,SNR=7.2	54.39	324	⇓P		P	21 12 36.6	-0.2
214A	Organ Pipe Nat baz=55,SNR=6.0	54.41	319	⇓P		P	21 12 37.2	+0.2
V20A	Brimhall baz=55	54.45	326	⇑P		P	21 12 37.4	+0.2
Z16A	Peralta Trail, baz=55	54.46	322	⇑P		P	21 12 37.1	-0.2
U21A	Nageezi baz=55,SNR=11	54.47	327	⇓P		P	21 12 37.2	-0.1
W19A	Sanders baz=55	54.48	325	⇓P		P	21 12 37.6	+0.2
T22A	Edith baz=55,SNR=8.1	54.51	328	⇑P		P	21 12 37.8	+0.3
115A	Sonoran Desert baz=55	54.53	320	⇑P		P	21 12 37.7	-0.2
R24A	Sanders Place, baz=55	54.53	330	⇓P		P	21 12 38.0	+0.3
Q25A	Bedland, Calha baz=55	54.65	331	⇓P		P	21 12 38.6	0.0
W18A	Petrified Fore baz=55	54.68	324	⇓P		P	21 12 39.1	+0.2
V19A	Window Rock baz=55	54.71	325	⇑P		P	21 12 39.2	+0.1
X17A	Forest Lakes baz=55,SNR=5.7	54.76	323	⇑P		P	21 12 39.6	+0.1
T21A	Navajo Lake baz=55	54.82	328	⇓P		P	21 12 40.6	+0.7
Y16A	Circle Bar Ran baz=55,SNR=12	54.85	322	⇓P		P	21 12 40.3	+0.1
U20A	Newcomb baz=55,SNR=6.4	54.90	326	⇑P		P	21 12 40.5	+0.1
114A	Black Gap (USA baz=55,SNR=5.3	54.98	320	⇑P		P	21 12 41.0	-0.1
S22A	4UR Ranch, Cre baz=55,SNR=23	55.02	329	⇓P		P	21 12 41.1	-0.1
P25A	Willow Gulch B baz=55,SNR=17	55.09	332	⇓P		P	21 12 41.6	-0.2
Q24A	Divide baz=55,SNR=6.3	55.12	331	⇓P		P	21 12 41.3	-0.7
X16A	Lo Mia Camp, P baz=55,SNR=18	55.20	323	⇓P		P	21 12 42.7	+0.1
OGNE	Ogallala baz=56,SNR=6.5	55.31	335	⇓P		P	21 12 42.9	-0.3
OGNE	Ogallala comp=Z,62nm,0.6s,mb5.5	55.31	335	eP		P	21 12 43.0	-0.3
R22A	Saguache, Gunn baz=56,SNR=17	55.35	329	⇑P		P	21 12 43.6	0.0
Q23A	Hartsel baz=56	55.41	330	⇓P		P	21 12 44.5	+0.4
Y15A	Casa Rosa Ranc baz=56,SNR=6.9	55.43	322	⇑P		P	21 12 44.3	0.0
P24A	Kohler Place, baz=56	55.44	331	⇑P		P	21 12 44.8	+0.6
S21A	Coal Bank Pass baz=56,SNR=14	55.46	328	⇓P		P	21 12 44.6	+0.1
MVCO	Mesa Verde baz=56,SNR=5.7	55.50	327	⇓P		P	21 12 44.9	+0.2
MVCO	Mesa Verde comp=Z,72nm,1.8s,mb5.2	55.50	327	eP		P	21 12 44.2	-0.5
T19A	Beclabito baz=56,SNR=11	55.51	326	⇓P		P	21 12 45.2	+0.4
O25A	Wiggins baz=56	55.55	332	⇑P		P	21 12 45.5	+0.5
113A	Mohawk Valley, baz=56	55.55	319	⇑P		P	21 12 45.4	+0.2
V17A	Tonalea, Kykot baz=56,SNR=24	55.65	324	⇑P		P	21 12 46.0	+0.2
ECSD	EROS Data Cent comp=Z,19nm,0.6s,mb5.1	55.66	341	eP		P	21 12 43.5	-2.2
ECSD					ePcP	PcP	21 13 42.8	-0.4
U18A	Rough Rock, Ch baz=56,SNR=7.5	55.68	325	⇓P		P	21 12 46.0	-0.1
W16A	Flagstaff baz=56,SNR=7.9	55.72	323	⇑P		P	21 12 47.0	+0.7
X15A	Humboldt baz=56,SNR=6.8	55.73	322	⇑P		P	21 12 46.6	+0.3
Z13A	Yuma Proving G baz=56	55.76	320	⇑P		P	21 12 46.6	0.0
P23A	Jefferson baz=56,SNR=8.3	55.78	331	⇑P		P	21 12 47.6	+1.0
COWI	Conover comp=Z,33nm,0.8s,mb5.2	55.81	348	eP		P	21 12 45.3	-1.4
COWI					ePcP	PcP	21 13 43.9	+0.2
Y14A	Wickenburg baz=56	55.83	321	⇓P		P	21 12 47.4	+0.2
R21A	Cimarron baz=56,SNR=8.5	55.86	329	⇑P		P	21 12 47.4	+0.1
S20A	Disappointment baz=56,SNR=20	55.89	328	⇑P		P	21 12 47.7	+0.3
Q22A	Crested Butte, baz=56,SNR=8.3	55.91	329	⇑P		P	21 12 47.9	+0.3
WUAZ	Wupatki baz=56,SNR=13	55.91	324	⇑P		P	21 12 47.8	+0.1
WUAZ	Wupatki comp=Z,29nm,1.0s,mb5.1	55.91	324	⇑iP		P	21 12 47.8	+0.1
ISCO	Idaho Springs baz=56,SNR=11	56.00	331	⇑P		P	21 12 48.6	+0.4
ISCO	Idaho Springs comp=Z,38nm,1.4s,mb5.0	56.00	331	⇑iP		P	21 12 48.5	+0.2
ISCO					ePcP	PcP	21 13 45.0	+0.4
ISCO	Idaho Springs	56.00	331	⇑/P		P	21 12 48.5	+0.3
ISCO				e			21 13 45.0	
ISCO					pmax	pmax		
X14A	Yava baz=56,SNR=8.2	56.12	322	⇓P		P	21 12 49.7	+0.5
R20A	Redvale baz=56,SNR=20	56.16	328	⇑P		P	21 12 49.9	+0.5
SMCO	Snowmass comp=Z,16nm,0.8s,mb4.9	56.19	330	eP		P	21 12 50.5	+0.9
T18A	Mexican Hat baz=56,SNR=16	56.20	326	⇑P		P	21 12 49.4	-0.3
U16A	Tuba City baz=56,SNR=13	56.21	324	⇑P		P	21 12 49.9	+0.1
W15A	Williams baz=56	56.21	323	⇑P		P	21 12 50.1	+0.3
S19A	Harvey Farm, M baz=56,SNR=17	56.24	327	⇓P		P	21 12 49.6	-0.3
P22A	Eagle baz=57,SNR=13	56.40	330	⇓P		P	21 12 51.2	+0.1
GLA	Glamis baz=57	56.42	319	⇑P		P	21 12 51.2	-0.1
O23A	Lake Granby, G baz=57,SNR=16	56.47	331	⇑P		P	21 12 51.5	0.0
PV04	Paradox Valley	56.59	328	eP		P	21 12 53.4	+0.9
V15A	Kaibab Nationa baz=57,SNR=11	56.59	323	⇓P		P	21 12 53.2	+0.7
T17A	Navajo Res., N baz=57,SNR=13	56.62	325	⇓P		P	21 12 52.9	+0.2
S18A	Hurst Farm, Bl baz=57,SNR=20	56.67	326	⇓P		P	21 12 52.9	-0.1
Y12C	Blythe baz=57	56.67	320	⇑P		P	21 12 53.1	+0.1
Q20A	Ridgley Place, baz=57	56.69	329	⇓P		P	21 12 53.5	+0.4
R19A	Curley Farm, L baz=57,SNR=5.8	56.70	327	⇓P		P	21 12 53.0	-0.2
W14A	Seligman baz=57,SNR=9.2	56.73	322	⇓P		P	21 12 53.7	+0.3
O22A	Kremmling baz=57,SNR=25	56.73	331	⇑P		P	21 12 53.3	-0.1
X13A	Yucca baz=57	56.78	321	⇑P		P	21 12 54.1	+0.3
PDMCI	Parker Dam,Lak baz=57	56.78	321	⇑P		P	21 12 54.3	+0.5
M24A	Cheyenne baz=57,SNR=16	56.95	333	⇓P		P	21 12 54.9	0.0
SWSC	Sam W. Stewart baz=57	56.98	318	⇑P		P	21 12 55.4	+0.1
DVTC	Desert V Tower baz=57	57.01	318	⇑P		P	21 12 55.2	-0.2
T16A	Glen Canyon Da baz=57	57.01	325	⇓P		P	21 12 55.8	+0.4
N23A	Red Feather La baz=57,SNR=8.1	57.02	332	⇓P		P	21 12 55.9	+0.5
V14A	Boquillas Ranc baz=57,SNR=20	57.02	322	⇑P		P	21 12 55.7	+0.1
S17A	Black Ridge (B baz=57	57.07	326	⇑P		P	21 12 56.3	+0.5
U15A	North Rim baz=57,SNR=16	57.08	324	⇑P		P	21 12 56.0	+0.1
PHWY	Pilot Hill comp=Z,30nm,0.9s,mb5.1	57.11	332	⇑iP		P	21 12 56.1	+0.1
R18A	Canyonlands Na baz=57,SNR=6.2	57.11	327	⇓P		P	21 12 56.1	-0.1
W13A	Hualapai Mount baz=57,SNR=16	57.14	322	⇑P		P	21 12 56.8	+0.4
P20A	De Beque baz=57	57.15	329	⇑P		P	21 12 56.8	+0.5
N22A	Wattenberg Ran baz=57	57.19	331	⇓P		P	21 12 57.4	+0.9
BC3	Big Chuckawall baz=57,SNR=8.2	57.20	319	⇓P		P	21 12 56.9	+0.1
O21A	Pagoda baz=57	57.23	330	⇓P		P	21 12 57.8	+0.9
IRM	Iron Mountain baz=58,SNR=17	57.33	320	⇓P		P	21 12 57.7	0.0
MONP	Monument Peak baz=58	57.36	318	⇓P		P	21 12 58.5	+0.5
L24A	Wheatland baz=58	57.46	333	⇓P		P	21 12 59.0	+0.5
T15A	Red Dirt Ranch baz=58	57.54	324	⇓P		P	21 12 59.6	+0.5
O20A	White River Ci baz=58,SNR=7.7	57.55	329	⇑P		P	21 12 59.4	+0.3
P19A	Cripple Cowboy baz=58,SNR=18	57.55	329	⇑P		P	21 12 58.8	-0.3
S16A	Weppner Ranch, baz=58,SNR=6.1	57.58	325	⇑P		P	21 12 59.5	+0.1
R17A	Hanksville Air baz=58	57.58	326	⇓P		P	21 12 60.0	+0.6
U14A	Mt Trumbull baz=58,SNR=15	57.60	323	⇑P		P	21 12 59.9	+0.4
N21A	Black Mountain baz=58,SNR=19	57.67	330	⇓P		P	21 13 00.4	+0.5
V13A	Grand Canyon W baz=58,SNR=14	57.70	322	⇓P		P	21 13 00.6	+0.3
M22A	Cedar Creek Ra baz=58	57.72	332	⇑P		P	21 13 00.9	+0.6
Q18A	Rafter H Ranch baz=58,SNR=18	57.76	327	⇓P		P	21 13 00.8	+0.2
BELC	Belle Mtn. Jos baz=58,SNR=6.9	57.77	319	⇓P		P	21 13 01.4	+0.6
PFO	Pinyon Flat Ob baz=58	57.83	319	⇑P		P	21 13 01.6	+0.4
PFO	Pinyon Flat Ob comp=Z,5.2nm,0.8s,mb4.4	57.83	319	eP		P	21 13 01.9	+0.7
PFO	Pinyon Flat Ob	57.83	319	eP		P	21 13 01.9	+0.7
PFO					pmax	pmax		
L23A	Garrett baz=58,SNR=27	57.87	333	⇑P		P	21 13 01.3	0.0
R16A	Teasdale baz=58,SNR=10	57.91	326	⇑P		P	21 13 01.8	+0.1
T14A	Hurricane baz=58,SNR=11	57.98	324	⇑P		P	21 13 02.4	+0.3
SRU	San Rafael baz=58,SNR=14	57.98	327	⇓P		P	21 13 02.0	-0.2
SRU	San Rafael comp=Z,34nm,1.3s,mb5.0	57.98	327	eP		P	21 13 01.8	-0.3
SRU	San Rafael	57.98	327	eP		P	21 13 01.8	-0.3
SRU					pmax	pmax		
GMRC	Granite Mounta baz=58,SNR=11	58.05	320	⇑P		P	21 13 02.9	+0.2
U13A	Pakoon Wash baz=58,SNR=8.1	58.06	323	⇓P		P	21 13 03.0	+0.2
EYMN	Ely comp=Z,42nm,1.0s,mb5.2	58.08	346	eP		P	21 13 00.8	-1.8
N20A	Spence Gulch, baz=58,SNR=28	58.09	330	⇑P		P	21 13 03.0	+0.2
O19A	Miners Draw (B baz=58,SNR=13	58.12	329	⇑P		P	21 13 03.0	-0.1
V12A	Nelson baz=58,SNR=7.3	58.15	321	⇑P		P	21 13 03.1	-0.3
Q16A	Castle Valley baz=58	58.19	327	⇓P		P	21 13 04.2	+0.6
P18A	Preston Nutter baz=58,SNR=10.0	58.20	328	⇓P		P	21 13 03.9	+0.2
RWWY	Rawlins comp=Z,54nm,0.9s,mb5.4	58.23	331	eP		P	21 13 04.7	+0.9
M21A	Separation Pea baz=58,SNR=30	58.24	331	⇑P		P	21 13 04.1	+0.1
R15A	Junction baz=58	58.30	325	⇑P		P	21 13 05.2	+0.8
MURC	Murrieta baz=58	58.31	318	⇑P		P	21 13 04.9	+0.4
P17A	Butcher Ranch, baz=59,SNR=12	58.36	327	⇓P		P	21 13 04.8	+0.1
U12A	Way of Fire baz=59	58.42	322	⇑P		P	21 13 05.6	+0.3
T13A	Saint George baz=59	58.43	323	⇓P		P	21 13 05.9	+0.6
MSU	Marysvale	58.46	326	eP		P	21 13 06.9	+1.4
MSU					ePcP	PcP	21 13 54.1	-0.2
CCUT	Cedar City comp=Z,29nm,1.7s,mb4.8	58.47	324	eP		P	21 13 06.4	+0.8
CCUT					ePcP	PcP	21 13 54.4	-0.1
TMUT	Trail Mountain comp=Z,28nm,0.5s,mb5.3	58.48	327	eP		P	21 13 06.8	+1.2
HEC	Hecor,Ludlow baz=59,SNR=7.3	58.51	320	⇓P		P	21 13 06.5	+0.6
L21A	Rawlins baz=59,SNR=32	58.52	331	⇓P		P	21 13 05.7	-0.1
O18A	Roosevelt baz=59,SNR=6.9	58.55	328	⇑P		P	21 13 06.1	+0.1
M20A	Sweetwater, Wa baz=59,SNR=22	58.55	331	⇓P		P	21 13 06.0	-0.1
N19A	John Jarvie Ra baz=59	58.59	329	⇑P		P	21 13 06.5	+0.2
K22A	Casper baz=59,SNR=15	58.66	333	⇓P		P	21 13 06.9	+0.1
RSSD	Black Hills comp=Z,30nm,0.9s,mb5.1	58.76	335	⇑iP		P	21 13 08.0	+0.5
RSSD	Black Hills	58.76	335	⇑iP		P	21 13 08.0	+0.6
RSSD					pmax	pmax		
S13A	Holt Ranch, En baz=59,SNR=9.1	58.78	324	⇓P		P	21 13 08.1	+0.4
O17A	Robinson Place	58.88	328	⇑P		P	21 13 08.7	+0.3
N18A	Larsen Ranch, baz=59,SNR=10	58.90	329	⇓P		P	21 13 08.3	-0.2
Q15A	Fillmore baz=59	58.91	326	⇓P		P	21 13 09.0	+0.4
M19A	Rock Springs baz=59	59.04	330	⇑P		P	21 13 09.9	+0.4
SHOC	Shoshone baz=59,SNR=5.2	59.15	321	⇑P		P	21 13 10.4	+0.1
MPU	Maple Canyon comp=Z,23nm,1.0s,mb5.0	59.22	327	eP		P	21 13 11.1	+0.4
R13A	O'Grain Ranch, baz=59,SNR=15	59.25	324	⇑P		P	21 13 11.1	+0.1
O16A	Springville baz=60,SNR=10.0	59.29	327	⇑P		P	21 13 11.3	+0.1
DAU	Daniels Canyon	59.31	328	eP		P	21 13 11.6	+0.3
T11A	Corn Creek, Al baz=60,SNR=8.3	59.37	323	⇑P		P	21 13 11.9	+0.2
Q14A	Sevier Lake (B baz=60,SNR=18	59.41	325	⇓P		P	21 13 12.5	+0.5
NLU	North Lily Min comp=Z,19nm,1.2s,mb4.8	59.42	327	eP		P	21 13 13.9	+1.8
M18A	Lyman baz=60,SNR=8.7	59.43	329	⇓P		P	21 13 11.7	-0.4
N17A	Moffit Pass baz=60	59.47	328	⇑P		P	21 13 12.7	+0.3
U10A	Ash Meadows, A baz=60	59.51	321	⇑P		P	21 13 12.9	+0.1
K20A	Yellowstone Ra baz=60,SNR=38	59.52	331	⇓P		P	21 13 12.1	-0.6
AGMN	Agassiz Nation comp=Z,40nm,0.6s,mb5.4	59.53	343	eP		P	21 13 10.7	-2.0
AGMN					epP	pP	21 13 47.9	-2.2
JLU	Jordanelle comp=Z,40nm,1.1s,mb5.2	59.55	328	eP		P	21 13 13.5	+0.5
L19A	Farson baz=60,SNR=26	59.58	330	⇑P		P	21 13 13.1	0.0
EDW2	Edwards Air Fo baz=60	59.61	319	⇓P		P	21 13 13.1	-0.4
P14A	Drum Mountains baz=60,SNR=19	59.71	326	⇓P		P	21 13 15.2	+1.1
R12A	Pony Springs, baz=60,SNR=8.7	59.72	324	⇓P		P	21 13 14.5	+0.3
N16A	Rees Ranch, Co baz=60,SNR=9.3	59.74	328	⇓P		P	21 13 14.4	+0.1
M17A	Scullys Gap (B baz=60,SNR=9.0	59.77	329	⇑P		P	21 13 14.1	-0.3
LRMC	Laurel Mountai baz=60	59.78	320	⇑P		P	21 13 15.1	+0.4
Q13A	Wheeler Ranch, baz=60,SNR=12	59.81	325	⇓P		P	21 13 15.0	+0.3
O15A	The Old Anders baz=60,SNR=9.3	59.86	327	⇓P		P	21 13 16.1	+1.0
RKT	Ikitea comp=Z,235nm,30.8s	59.86	248	eLR		LR	21 31 12.9	
FURC	Furnace Creek, baz=60,SNR=8.0	59.87	321	⇓P		P	21 13 15.0	-0.3
K19A	Absolon Red Bu baz=60,SNR=34	59.88	331	⇓P		P	21 13 14.6	-0.6
I21A	Big Trails, Te baz=60,SNR=33	59.92	333	⇓P		P	21 13 14.8	-0.6
DUG	Dugway baz=60,SNR=44	59.99	327	⇑P		P	21 13 16.5	+0.5
DUG	Dugway comp=Z,48nm,1.1s,mb5.2	59.99	327	eP		P	21 13 15.9	-0.1
DUG	Dugway comp=Z,48nm,1.1s,mb5.2	59.99	327	eP		P	21 13 15.9	-0.1
DUG					pmax	pmax		
MPMC	Manual Prospec baz=60,SNR=10.0	60.01	320	⇑P		P	21 13 15.9	-0.3
P13A	Bates Ranch, G baz=60,SNR=21	60.15	325	⇓P		P	21 13 17.3	+0.3
BW06	Boulder Array baz=60,SNR=30	60.18	331	⇓P		P	21 13 16.8	-0.4
BW06	Boulder Array comp=Z,32nm,1.3s,mb5.0	60.18	331	eP		P	21 13 16.3	-0.9
PDAR	Pinedale Array comp=Z,10nm,0.6s,mb4.8,baz=134,slow=8.5,SNR=66	60.18	331	P		P	21 13 16.0	-1.2
R11A	Troy Canyon, C baz=60,SNR=15	60.31	323	⇓P		P	21 13 18.9	+0.7
K18A	Toltan Ranch, baz=60,SNR=17	60.32	330	⇑P		P	21 13 18.0	-0.2
N15A	Stansbury Isla baz=60,SNR=6.8	60.32	327	⇑P		P	21 13 18.1	-0.1
Q12A	Willow Creek R baz=60	60.33	324	⇓P		P	21 13 18.9	+0.6
HWUT	Hardware Ranch comp=Z,41nm,0.9s,mb5.3	60.33	328	eP		P	21 13 17.4	-0.9
L17A	Cokeville baz=60,SNR=32	60.34	329	⇑P		P	21 13 17.9	-0.4
ISA	Isabella baz=61	60.40	319	⇓P		P	21 13 18.7	-0.2
ISA	Isabella comp=Z,8.3nm,1.0s,mb4.5	60.40	319	eP		P	21 13 20.1	+1.2
ISA	Isabella comp=Z,8.0nm,1.0s,mb4.5	60.40	319	eP		P	21 13 20.1	+1.2
ISA					pmax	pmax		
I20A	Worland baz=61,SNR=32	60.41	332	⇓P		P	21 13 18.3	-0.5
H21A	Big Horn, Sher baz=61,SNR=17	60.45	334	⇑P		P	21 13 18.7	-0.3
L16A	Fish Haven baz=61	60.56	329	⇑P		P	21 13 20.2	+0.4
SPUT	South Promonto comp=Z,49nm,1.1s,mb5.2	60.58	328	eP		P	21 13 20.9	+0.9
O13A	Hicks Ranch, I baz=61	60.59	326	⇑P		P	21 13 20.4	+0.3
BGU	Big Grassy Mou comp=Z,21nm,1.1s,mb4.9	60.62	327	eP		P	21 13 19.5	-0.7
S10A	Tonopah Range, baz=61	60.64	322	⇓P		P	21 13 20.6	+0.2
Q11A	Duckwater baz=61,SNR=27	60.68	324	⇑P		P	21 13 21.0	+0.3
M15A	Larsen Ranch, baz=61,SNR=6.0	60.69	328	⇓P		P	21 13 20.9	+0.2
R10A	Warm Springs baz=61,SNR=7.1	60.70	323	⇓P		P	21 13 21.5	+0.7
J18A	Kendall Valley baz=61,SNR=57	60.74	331	⇓P		P	21 13 20.3	-0.7
H20A	Coneybull baz=61,SNR=18	60.77	333	⇑P		P	21 13 20.2	-1.0
PKM	Peak Mountain baz=61	60.82	318	⇑P		P	21 13 21.3	-0.4
K17A	Gardner Place, baz=61,SNR=10	60.84	330	⇓P		P	21 13 21.4	-0.3
AHID	Auburn Hatcher comp=Z,31nm,0.9s,mb5.1	60.94	330	eP		P	21 13 22.5	+0.2
G21A	Lodge Grass baz=61,SNR=10	60.99	334	⇓P		P	21 13 22.3	-0.3
I18A	Diamond G Ranc baz=61	61.01	331	⇑P		P	21 13 23.3	+0.5
HVU	Hansel Valley comp=Z,20nm,0.9s,mb4.9	61.09	328	eP		P	21 13 23.2	-0.1
HVU	Hansel Valley comp=Z,20nm,0.9s,mb5.0	61.09	328	eP		P	21 13 23.2	-0.2
HVU					pmax	pmax		
Q10A	Clear Creek Ra baz=61,SNR=9.0	61.10	323	⇓P		P	21 13 23.7	+0.2
O12A	Currie baz=61,SNR=33	61.11	325	⇑P		P	21 13 23.8	+0.3
SMMC	Simmler baz=61	61.19	318	⇑P		P	21 13 23.6	-0.5
J17A	Brown Place, J baz=61,SNR=10	61.19	330	⇑P		P	21 13 24.0	0.0
K16A	Soda Springs baz=61,SNR=26	61.23	329	⇑P		P	21 13 24.9	+0.6
REDW	Red Top Meadow comp=Z,42nm,1.3s,mb5.1	61.26	330	eP		P	21 13 24.6	+0.1
SNOW	Snow King Moun comp=Z,22nm,0.8s,mb5.0	61.28	330	eP		P	21 13 25.6	+1.0
ULM	Lac du Bonnet	61.31	344	P		P	21 13 22.6	-2.0
ULM					pP	pP	21 14 00.5	-1.9
ULM	Lac du Bonnet comp=Z,26nm,0.6s,mb5.3,baz=158,slow=6.3,SNR=20	61.31	344	P		P	21 13 22.6	-2.0
ULM	comp=Z,23nm,1.0s,baz=155,slow=6.2,SNR=3.1				pP	pP	21 14 00.5	-1.9
LOHW	Long Hollow comp=Z,22nm,0.8s,mb5.0	61.32	331	eP		P	21 13 24.5	-0.4
LOHW					ePP	PP	21 15 39.3	-2.7
TPAW	Teton Pass comp=Z,12nm,0.7s,mb4.8	61.40	330	eP		P	21 13 25.1	-0.3
F21A	Absaloka Mine, baz=62,SNR=5.0	61.43	334	⇓P		P	21 13 25.4	-0.2
RRI2	Red Ridge comp=Z,49nm,0.8s,mb5.4	61.48	330	eP		P	21 13 25.9	0.0
MOOW	Moose Ponds comp=Z,49nm,1.6s,mb5.1	61.49	331	eP		P	21 13 25.5	-0.5
MTUM	Tungsten Hills	61.49	321	eP		P	21 13 26.4	+0.2

L14A **Malta** 61.51 328 ⇓P P 21 13 26.5 +0.2
baz=62,SNR=25
I17A **Pilgrim Ck.** 61.54 331 ⇑P P 21 13 26.4 +0.1
baz=62,SNR=6.4
J16A **Bone** 61.57 330 ⇓P P 21 13 26.4 -0.2
baz=62,SNR=20
K15A **Arbon** 61.61 329 ⇑P P 21 13 27.0 +0.2
baz=62
P10A **Eureka** 61.66 324 ⇓P P 21 13 28.1 +0.8
baz=62,SNR=6.0
IMW **Indian Meadow** 61.70 331 *e*P P 21 13 27.1 -0.3
comp=Z,74nm,1.4s,mb5.3
FLWY **Flagg Ranch** 61.72 331 *e*P P 21 13 26.9 -0.7
comp=Z,59nm,0.8s,mb5.5
RLMT **Red Lodge** 61.83 333 ⇑P P 21 13 28.2 -0.1
baz=62,SNR=22
RLMT **Red Lodge** 61.83 333 *e*P P 21 13 27.9 -0.4
comp=Z,27nm,0.9s,mb5.1
K14A **Jones Ranch, D** 61.84 328 ⇑P P 21 13 28.0 -0.4
baz=62,SNR=10.0
F20A **Billings** 61.85 334 ⇓P P 21 13 27.9 -0.6
baz=62,SNR=6.8
H17A **Grant Village** 61.89 331 ⇑P P 21 13 29.2 +0.5
baz=62,SNR=12
I16A **Newdale** 61.95 330 ⇓P P 21 13 29.6 +0.5
baz=62,SNR=7.5
E21A **Keefer Ranch,** 61.98 335 ⇑P P 21 13 29.3 +0.1
baz=62
NVAR **Mina Array Bea** 62.00 322 P P 21 13 29.6 0.0
comp=Z,4.3nm,0.8s,mb4.3,baz=130,slow=6.5,SNR=23
NVAR pP pP 21 14 07.3 0.0
comp=Z,3.0nm,0.7s,baz=129,slow=5.9,SNR=4.7
YFT **Old Faithful** 62.06 331 *e*P P 21 13 32.2 +2.4
comp=Z,46nm,1.2s,mb5.2
J15A **Blackfoot** 62.07 329 ⇑P P 21 13 29.9 0.0
baz=62,SNR=25
G18A **Lazy EL Ranch,** 62.12 333 ⇓P P 21 13 29.9 -0.3
baz=62,SNR=47
YNR **Norris Junctio** 62.18 331 *e*P P 21 13 31.3 +0.6
comp=Z,23nm,0.8s,mb5.0
F19A **Roth Farm, Mol** 62.25 333 ⇓P P 21 13 30.7 -0.3
baz=62,SNR=44
E20A **Meyer Farm, Mu** 62.40 334 ⇑P P 21 13 32.1 +0.1
baz=63,SNR=45
DGMT **Dagmar** 62.41 338 ⇑P P 21 13 32.0 -0.1
baz=63,SNR=5.0
DGMT **Dagmar** 62.41 338 *e*P P 21 13 33.2 +1.1
comp=Z,49nm,1.0s,mb5.3
H16A **Russell Place,** 62.44 331 ⇓P P 21 13 33.0 +0.6
baz=63,SNR=67
GCMT **Greycliff** 62.52 333 *e*P P 21 13 32.7 -0.2
comp=Z,40nm,0.8s,mb5.3
I15A **Monteview** 62.53 330 ⇑P P 21 13 33.5 +0.6
baz=63
J14A **Carey** 62.57 329 ⇓P P 21 13 33.6 +0.4
baz=63,SNR=44
F18A **Big Timber** 62.63 333 ⇑P P 21 13 33.6 -0.1
baz=63,SNR=75
E19A **Rath Farm, Rou** 62.65 334 ⇑P P 21 13 33.4 -0.3
baz=63,SNR=46
G17A **Pierce Place,** 62.66 332 ⇑P P 21 13 34.1 +0.3
baz=63,SNR=7.6
WAKR **Walker** 62.74 321 *e*P P 21 13 36.2 +1.7
D20A **Manuel Ranch,** 62.86 335 ⇓P P 21 13 34.6 -0.4
baz=63,SNR=5.3
J13A **Cove Ranch, Pi** 62.96 328 ⇑P P 21 13 35.6 -0.2
baz=63,SNR=11
I14A **Mackay** 62.97 329 ⇓P P 21 13 36.2 +0.4
baz=63,SNR=27
CMB **Columbia Colle** 63.05 320 *e*P P 21 13 37.4 +0.8
comp=Z,9.5nm,1.3s,mb4.5
CMB pmax pmax
comp=Z,10.0nm,1.3s,mb4.5
H15A **Lima** 63.06 330 ⇑P P 21 13 36.8 +0.4
baz=63,SNR=23
F17A **Fitzpatrick Pl** 63.06 332 ⇓P P 21 13 36.7 +0.2
baz=63,SNR=27
G16A **Moss Hill, Enn** 63.09 331 ⇓P P 21 13 36.9 +0.2
baz=63,SNR=17
HLID **Hailey** 63.20 328 ⇓P P 21 13 37.8 +0.4
baz=63,SNR=22
HLID **Hailey** 63.20 328 *e*P P 21 13 37.5 +0.1
comp=Z,16nm,0.8s,mb4.9
E18A **Harlowton** 63.23 333 ⇑P P 21 13 37.3 -0.2
baz=63,SNR=44
SCHQ **Schefferville** 63.25 5 P P 21 13 36.5 -1.0
comp=Z,55nm,0.7s,mb5.5,baz=178,slow=0.3,SNR=68
SCHQ pP pP 21 14 13.9 -1.5
comp=Z,17nm,0.7s,baz=187,slow=1.6,SNR=2.9
I13A **Wildhorse Cree** 63.29 329 ⇓P P 21 13 38.0 0.0
baz=64,SNR=45
MCMT **McKenzie Canyo** 63.31 330 *e*P P 21 13 38.0 -0.1
comp=Z,16nm,1.2s,mb4.7
BOZ **Bozeman (W)** 63.32 332 ⇑P P 21 13 37.8 -0.4
baz=64,SNR=51
BOZ **Bozeman (W)** 63.32 332 *e*P P 21 13 37.4 -0.8
comp=Z,27nm,0.9s,mb5.1
BOZ **Bozeman (W)** 63.32 332 *e*P P 21 13 37.4 -0.8
BOZ pmax pmax
comp=Z,27nm,0.9s,mb5.1
G15A **Dillon** 63.38 331 ⇑P P 21 13 38.4 -0.1
baz=64,SNR=11
H14A **Leadore** 63.41 330 ⇑P P 21 13 38.4 -0.4
baz=64,SNR=45
F16A **Kennard Place,** 63.42 332 ⇑P P 21 13 38.5 -0.3
baz=64,SNR=19
WCN **Washoe City** 63.43 322 ⇑P P 21 13 38.9 -0.1
baz=64
PAHR **Pah Rah Range** 63.45 322 *e*P P 21 13 39.6 +0.4
comp=Z,27nm,1.1s,mb5.0
E17A **Martinsdale** 63.57 333 ⇑P P 21 13 39.9 +0.1
baz=64,SNR=41
DLMT **Dillon** 63.57 331 *e*P P 21 13 39.7 -0.1
comp=Z,23nm,1.0s,mb5.0
D18A **Linhart Farms,** 63.66 334 ⇓P P 21 13 40.4 +0.1
baz=64,SNR=5.3
I12A **Atlanta** 63.74 328 ⇑P P 21 13 40.8 -0.1
baz=64,SNR=28
H13A **Challis** 63.82 329 ⇑P P 21 13 41.9 +0.4
baz=64
LRM **Limekiln Ridge** 63.84 331 *e*P P 21 13 41.3 -0.3
MFID **Camas Ranch** 63.84 327 ⇑P P 21 13 41.7 0.0
baz=64,SNR=72
F15A **Butte** 63.87 331 ⇓P P 21 13 41.8 0.0
baz=64,SNR=14
G14A **Jackson** 63.91 330 ⇑P P 21 13 41.6 -0.4
baz=64,SNR=5.5
E16A **East Helena** 64.00 332 ⇓P P 21 13 42.4 -0.1
baz=64,SNR=10
D17A **Six Diamond Ra** 64.02 333 ⇓P P 21 13 42.6 0.0
baz=64,SNR=45
H12A **Diamond D Ranc** 64.12 329 ⇑P P 21 13 43.5 +0.1
baz=64,SNR=36
G13A **Cobalt** 64.19 330 ⇓P P 21 13 43.5 -0.4
baz=64,SNR=48
HRY **Holter Researc** 64.20 332 *e*P P 21 13 43.7 -0.2
F14A **Wisdom** 64.27 331 ⇓P P 21 13 44.5 +0.1
baz=64,SNR=6.0
EGMT **Eagleton** 64.28 334 ⇑P P 21 13 43.7 -0.7
baz=64,SNR=6.9
EGMT **Eagleton** 64.28 334 *e*P P 21 13 43.8 -0.5
comp=Z,39nm,0.8s,mb5.3
D16A **Dana Ranch, Ca** 64.31 333 ⇓P P 21 13 44.8 +0.2
baz=64,SNR=38
E15A **Deer Lodge** 64.37 332 ⇑P P 21 13 44.7 -0.3
baz=65,SNR=14
C17A **Wharram Farm,** 64.41 334 ⇓P P 21 13 45.1 -0.2
baz=65,SNR=13
B18A **Beardsley Farm** 64.57 335 ⇓P P 21 13 46.5 +0.2
baz=65,SNR=38
F13A **Darby** 64.73 330 ⇓P P 21 13 47.2 -0.1
baz=65,SNR=27
WVOR **Wild Horse Val** 64.74 325 *e*P P 21 13 47.0 -0.4
comp=Z,20nm,1.1s,mb4.8
WVOR **Wild Horse Val** 64.74 325 *e*P P 21 13 47.0 -0.5
WVOR pmax pmax
comp=Z,19nm,1.1s,mb4.8
D15A **Lincoln** 64.77 332 ⇓P P 21 13 48.0 +0.5
baz=65,SNR=14
E14A **Clinton** 64.77 331 ⇓P P 21 13 48.0 +0.4
baz=65,SNR=28
B17A **L&G Farms, Che** 64.93 334 ⇑P P 21 13 48.5 -0.1
baz=65
C16A **Fuhringer Ranc** 64.98 333 ⇓P P 21 13 48.8 -0.1
baz=65,SNR=19
CHMT **Chamberlain Mo** 65.02 332 *e*P P 21 13 48.9 -0.3
TAOE **Nuku Hiva Isla** 65.06 264 *e*LR LR 21 33 35.3
comp=Z,209nm,26.2s
E13A **Victor** 65.12 331 ⇓P P 21 13 49.8 -0.1
baz=65,SNR=31
F12A **Elk City** 65.16 330 ⇓P P 21 13 50.2 0.0
baz=65,SNR=29
D14A **Greenough** 65.26 332 ⇓P P 21 13 51.0 +0.2
baz=66,SNR=9.4
MSO **Missoula** 65.28 331 ⇑P P 21 13 51.0 +0.1
baz=66,SNR=42
MSO **Missoula** 65.28 331 *e*P P 21 13 51.0 +0.1
comp=Z,70nm,1.3s,mb5.3
C15A **Salmond Ranch,** 65.35 333 ⇑P P 21 13 51.9 +0.6
baz=66,SNR=38
MOD **Modoc** 65.36 324 *e*P P 21 13 51.0 -0.5
comp=Z,60nm,1.5s,mb5.2
SLMT **Seeley Lake** 65.37 332 *e*P P 21 13 51.9 +0.5
A17A **Triple J Farms** 65.39 334 ⇓P P 21 13 51.4 -0.2
baz=66,SNR=47
B16A **M & M Farms, S** 65.42 334 ⇑P P 21 13 51.2 -0.5
baz=66,SNR=16
D13A **Huson** 65.72 331 ⇑P P 21 13 53.9 +0.3
baz=66,SNR=22
B15A **Bradely Ranch,** 65.72 333 ⇓P P 21 13 54.2 +0.5
baz=66,SNR=16
A16A **West Butte Ran** 65.77 334 ⇑P P 21 13 54.1 +0.1
baz=66,SNR=18
SWMT **Swartz Lake** 65.80 332 *e*P P 21 13 54.7 +0.5
YBMT **Yellow Bay** 66.06 332 *e*P P 21 13 56.0 +0.1
B14A **Marquette Ranc** 66.08 333 ⇓P P 21 13 56.0 0.0
baz=66,SNR=36
JTMT **Jette** 66.10 332 *e*P P 21 13 52.9 -3.3
K05A **Summer Lake** 66.21 324 ⇑P P 21 13 57.7 +0.7
baz=66,SNR=20
I07A **Izee** 66.28 326 ⇑P P 21 13 57.6 +0.2
baz=66,SNR=49
A15A **Johnson Ranch,** 66.29 333 ⇑P P 21 13 56.8 -0.5
baz=66,SNR=9.3
F10A **Beach Ranch, E** 66.31 329 ⇑P P 21 13 57.7 +0.2
baz=66,SNR=41
BLMT **Blacktail Moun** 66.33 332 *e*P P 21 13 58.7 +1.1
BSMT **Bassoo Peak** 66.42 331 *e*P P 21 13 58.2 +0.1
A14A **Double T Ranch** 66.60 333 ⇓P P 21 13 59.2 0.0
baz=67,SNR=9.6
B13A **Whitefish** 66.64 332 ⇓P P 21 13 59.3 -0.2
baz=67,SNR=6.4
C12B **Naegeli Ranch,** 66.64 331 ⇑P P 21 13 59.6 0.0
baz=67,SNR=30
YBH **Yreka Blue Hor** 66.69 322 *e*P P 21 13 59.7 -0.3
comp=Z,7.3nm,0.9s,mb4.5
YBH pmax pmax
comp=Z,7.0nm,0.9s
BUOR **Burton Butte** 66.73 323 P P 21 14 00.9 +0.7
G08A **Pilot Rock** 66.77 327 ⇓P P 21 14 00.3 -0.1
baz=67,SNR=16
LNOR **Lincton Mounta** 66.79 328 *e*P P 21 14 00.8 +0.3
KHMM **Horse Mountain** 66.81 321 *e*P P 21 14 01.9 +1.1
comp=Z,277nm,2.6s,mb5.6
WALA **Warton Lakes** 66.88 333 *e*P P 21 14 00.5 -0.6
comp=Z,1.0nm,1.0s,mb3.6
E09A **Wood Farm, Sta** 67.15 329 ⇓P P 21 14 02.7 -0.1
baz=67,SNR=6.3
VIPM **Ingram Point** 67.17 326 P P 21 14 03.3 +0.3
HUMO **Hull Mountain** 67.35 323 *e*P P 21 14 03.5 -0.6
comp=Z,97nm,2.5s,mb5.2
A12A **Yaak River Ran** 67.59 332 ⇑P P 21 14 06.0 +0.5
baz=68,SNR=14
E08A **Dider Farm, El** 67.61 328 ⇓P P 21 14 06.0 +0.4
baz=68
G06A **Carlson Farm,** 67.64 326 ⇓P P 21 14 06.7 +0.8
baz=68,SNR=7.5
HAWA **Hanford** 67.79 328 *e*P P 21 14 06.3 -0.5
comp=Z,9.4nm,0.6s,mb4.7
RSW **Rattlesnake Hi** 67.82 328 *e*P P 21 14 08.0 +0.9
NEW **Newport** 67.82 331 ⇓P P 21 14 06.9 -0.1
baz=68,SNR=12
NEW **Newport** 67.82 331 *e*P P 21 14 06.3 -0.6
comp=Z,18nm,0.9s,mb4.8
NEW **Newport** 67.82 331 *e*P P 21 14 06.3 -0.7
NEW pmax pmax
comp=Z,18nm,0.9s
D08A **Wollman Farm,** 67.91 329 ⇑P P 21 14 08.1 +0.5
baz=68
OD2 **Odessa Site #2** 68.02 329 P P 21 14 08.2 -0.1
E07A **Sunnyside** 68.07 328 ⇓P P 21 14 09.2 +0.6
baz=68
C09A **Chrisman Ranch** 68.08 330 ⇑P P 21 14 08.6 0.0
baz=68,SNR=12
FUL **Funchal** 68.11 50 *e*P P 21 14 08.9 -0.2
comp=Z,157nm,1.6s,mb5.5
PMAR **Madeira** 68.14 50 *e*P P 21 14 09.5 +0.2
comp=Z,189nm,1.3s,mb5.7
H04A **Detroit Lake** 68.16 325 ⇑P P 21 14 08.8 -0.4
baz=68,SNR=7.3
HOOD **Mount Hood Mea** 68.25 326 *e*P P 21 14 11.3 +1.5
comp=Z,26nm,1.1s,mb4.9
TDH **Tom, Dick, Har** 68.31 326 P P 21 14 11.2 +1.1
EPH **Ephrata** 68.45 329 P P 21 14 12.1 +1.2
G04A **Mulino** 68.64 326 ⇑P P 21 14 12.4 +0.3
baz=69
TBM **Table Mountain** 68.85 328 P P 21 14 13.6 +0.2
B08A **Colville Reser** 68.98 330 ⇓P P 21 14 14.0 -0.2
baz=69,SNR=17
ETW **Entiat** 68.99 329 *e*P P 21 14 15.4 +1.2
F04A **Amboy** 69.05 326 ⇑P P 21 14 14.4 -0.3
baz=69,SNR=5.5
WPW **White Pass** 69.05 327 P P 21 14 15.6 +0.9
SLFW **Sugar Loaf** 69.19 329 P P 21 14 17.0 +1.5
LON **Longmire** 69.23 327 *e*P P 21 14 16.2 +0.5
comp=Z,11nm,0.9s,mb4.6
LON **Longmire** 69.23 327 *e*P P 21 14 16.2 +0.5
LON pmax pmax
comp=Z,11nm,0.9s,mb4.6
D05A **Enumclaw** 69.60 327 ⇓P P 21 14 17.6 -0.4
baz=70,SNR=9.2
F03A **Seaside** 69.68 326 ⇓P P 21 14 18.9 +0.4
baz=70
EDM **Edmonton** 69.72 336 *e*P P 21 14 17.2 -1.4
BMW **Boistfort Moun** 69.83 326 P P 21 14 19.4 0.0
E03A **Lebam** 70.06 326 ⇑P P 21 14 21.0 +0.2
baz=70
RPW **Rockport** 70.14 329 *e*P P 21 14 23.4 +2.1
B06A **Marblemount** 70.17 329 ⇑P P 21 14 20.8 -0.7
baz=70,SNR=8.0
JCW **Jim Creek** 70.20 328 P P 21 14 20.4 -1.2
LIC **Lamto** 70.54 80 *e*P P 21 14 22.9 -1.6
comp=Z,182nm,1.2s,mb5.7
LIC **Lamto** 70.54 80 *e*P P 21 14 22.8 -1.7
comp=Z,170nm,1.2s,mb5.3,baz=254
LIC *e*MLR MLR
comp=Z,85nm,21.2s
LIC **Lamto** 70.54 80 *e*P P 21 14 22.8 -1.7
comp=Z,85nm,1.2s,mb5.3
LIC LR LR
comp=Z,40nm,21.3s
TIC **Toumodi** 70.63 80 *e*P P 21 14 23.8 -1.2
comp=Z,184nm,1.0s,mb5.8
TIC **Toumodi** 70.63 80 *e*P P 21 14 23.8 -1.2
TIC pmax pmax
comp=Z,184nm,1.0s,mb5.8
NLWA **Neilton Lookou** 70.73 327 *e*P P 21 14 25.1 +0.2
comp=Z,33nm,0.8s,mb5.1
A05A **Maple Falls** 70.78 329 ⇑P P 21 14 24.9 -0.3
baz=71,SNR=16
DBIC **Dimbokro** 70.79 80 P P 21 14 24.8 -1.2
comp=Z,68nm,0.5s,mb5.6,baz=240,slow=6.0,SNR=130
KIC **Kosan Boka** 70.84 80 *e*P P 21 14 25.0 -1.3
comp=Z,223nm,0.7s,mb6.0
OSD **Olympics--Snow** 70.90 327 P P 21 14 27.5 +1.6
PGC **Sidney** 71.27 328 *e*P P 21 14 29.3 +1.1
comp=Z,2.3nm,1.1s,mb3.8
PPT **Papeete** 73.58 254 *e*LR LR 21 37 33.6
comp=Z,438nm,30.0s
PPT **Papeete** 73.58 254 LR LR 21 40 47.2
comp=Z,9.7nm,18.4s,baz=108,slow=30
VNA1 **Neumayer--Stat** 74.33 162 *e*P P 21 14 44.8 -1.0
VNA1 *e* pP 21 15 23.3 -1.6
PFVI **Vila Bisbo** 75.99 49 *e*P P 21 14 55.3 -0.6
comp=Z,110nm,1.1s,mb5.4
MORF **Marmelete** 76.19 48 *e*P P 21 14 58.3 +1.3
comp=Z,163nm,1.2s,mb5.5
PBDV **Barranco-do-Ve** 76.70 49 *e*P P 21 15 01.3 +1.4
comp=Z,60nm,1.2s,mb5.1
MESJ **Messejana** 76.70 48 *e*P P 21 14 58.6 -1.3
PCVE **Castro Verde** 76.76 48 *e*P P 21 15 01.3 +1.0
comp=Z,70nm,1.4s,mb5.1
PVAQ **Vaqueiros** 76.92 49 *e*P P 21 15 02.0 +0.9
comp=Z,39nm,1.5s,mb4.8
EVOP **Sao Brissos** 77.03 47 *e*P P 21 15 00.3 -1.4
PBEJ **Beja** 77.03 48 *e*P P 21 15 02.6 +0.8
comp=Z,39nm,1.2s,mb4.9
EVO **Evora** 77.11 47 *e*P P 21 15 01.3 -0.9
comp=Z,68nm,0.5s,mb5.2
EVO *e*MLR MLR
comp=Z,40nm,18.2s
EVO **Evora** 77.11 47 *e*P P 21 15 02.6 +0.4
comp=Z,58nm,1.3s,mb5.0
EGRO **El Granado** 77.14 49 P P 21 15 03.5 +1.1
comp=Z,27nm,0.5s,mb5.1
YKA **Yellowknife Ar** 77.14 342 P P 21 15 00.2 -1.6
comp=Z,14nm,0.6s,mb4.8,baz=141,slow=5.8,SNR=37
YKA pP pP 21 15 40.5 -0.6
comp=Z,3.1nm,0.6s,baz=138,slow=5.2,SNR=1.9
PTOM **Tomar** 77.23 46 *e*P P 21 15 03.2 +0.4
comp=Z,78nm,0.6s,mb5.5
PESTR **Estremoz** 77.54 47 *e*P P 21 15 05.1 +0.5
comp=Z,86nm,1.3s,mb5.2
PTO **Porto** 77.67 45 *e*P P 21 15 05.6 +0.3
comp=Z,57nm,0.6s,mb5.4
PBAR **Barrancos** 77.69 48 *e*P P 21 15 06.2 +0.7
comp=Z,34nm,1.2s,mb4.8
EMIN **Mina Concepcio** 77.82 49 P P 21 15 05.3 -0.9
comp=Z,24nm,0.9s,mb4.8
PMRV **Marv??o** 77.89 47 *e*P P 21 15 06.8 +0.3
comp=Z,21nm,2.0s,mb4.4
EBAD **Badajoz** 77.92 48 P P 21 15 06.0 -0.7
comp=Z,33nm,0.6s,mb5.2
PCBR **Castelo Branco** 77.98 46 *e*P P 21 15 07.2 +0.2
comp=Z,37nm,1.7s,mb4.7
PVIS **Viseu** 78.01 45 *e*P P 21 15 07.2 +0.1
comp=Z,69nm,1.3s,mb5.1
ESPR **Espera** 78.12 50 P P 21 15 09.2 +1.3
comp=Z,50nm,0.7s,mb5.3
MTE **Manteigas** 78.14 46 *e*P P 21 15 07.9 +0.1
comp=Z,57nm,0.7s,mb5.3
MTE **Manteigas** 78.14 46 *e*P P 21 15 07.8 -0.1
comp=Z,41nm,0.6s,mb5.2
EJIF **Jimena Fronter** 78.27 50 P P 21 15 09.4 +0.7
comp=Z,32nm,0.8s,mb5.0
EJIF **Jimena Fronter** 78.27 50 P P 21 15 09.4 +0.7
EJIF pmax pmax
comp=Z,32nm,0.8s,mb5.0
PCAB **Cabril** 78.29 44 *e*P P 21 15 09.0 +0.3
comp=Z,73nm,1.6s,mb5.1
ELOB **Lobios** 78.33 44 P P 21 15 09.2 +0.3
comp=Z,17nm,0.9s,mb4.7
PVRL **Vila Real** 78.34 45 *e*P P 21 15 09.0 0.0
comp=Z,36nm,0.9s,mb5.0
STS **Santiago** 78.39 43 P P 21 15 07.7 -1.5
comp=Z,21nm,0.7s,mb4.9
STS **Santiago** 78.39 43 P P 21 15 07.7 -1.4
STS pmax pmax
comp=Z,21nm,0.7s,mb4.9
TORD **Torodi Ar. Bea** 78.39 75 P P 21 15 08.1 -1.6
TORD pP pP 21 15 48.9 -0.3
TORD sP sP 21 16 02.6 -3.5
TORD S S 21 24 49.3 -3.4
TORD **Torodi Ar. Bea** 78.39 75 P P 21 15 08.1 -1.6
comp=Z,55nm,0.7s,mb5.3,baz=258,slow=4.1,SNR=275
TORD pP pP 21 15 48.9 -0.3
comp=Z,5.0nm,0.7s,baz=288,slow=8.8,SNR=1.8
TORD sP sP 21 16 02.7 -3.5
comp=Z,12nm,0.8s,baz=276,slow=5.2,SNR=4.4
TORD S S 21 24 49.3 -3.4
comp=Z,2.9nm,1.1s,baz=258,slow=12,SNR=4.5
MVO **Moncorvo** 78.78 45 *e*P P 21 15 11.6 +0.2
comp=Z,64nm,0.8s,mb5.3
MVO **Moncorvo** 78.78 45 P P 21 15 11.1 -0.3
EMIJ **Mijas** 78.84 50 P P 21 15 11.9 +0.2
comp=Z,68nm,0.7s,mb5.4
EPLA **Plasencia** 79.06 47 P P 21 15 11.6 -1.3
comp=Z,24nm,0.6s,mb5.0
EPLA **Plasencia** 79.06 47 P P 21 15 11.6 -1.3
EPLA pmax pmax
comp=Z,24nm,0.6s,mb5.0
ERUA **La Rua** 79.16 44 P P 21 15 12.7 -0.7
comp=Z,31nm,0.8s,mb5.0
ERUA **La Rua** 79.16 44 P P 21 15 12.7 -0.7
ERUA pmax pmax
comp=Z,31nm,0.8s,mb5.0
PBRG **Braganca** 79.22 45 *e*P P 21 15 14.0 +0.3
comp=Z,35nm,0.7s,mb5.1
ECAL **Calabor** 79.27 45 P P 21 15 14.2 +0.1
comp=Z,88nm,1.4s,mb5.2
ELOJ **Sierra Loja** 79.50 50 P P 21 15 16.6 +1.2
comp=Z,62nm,0.8s,mb5.3
ELOJ **Sierra Loja** 79.50 50 P P 21 15 16.6 +1.2
ELOJ pmax pmax
comp=Z,62nm,0.8s,mb5.3
EADA **Adamuz** 79.51 49 P P 21 15 14.3 -1.1
comp=Z,84nm,1.2s,mb5.2
ELUQ **Luque** 79.55 49 P P 21 15 16.3 +0.7
comp=Z,42nm,0.8s,mb5.1
ELUQ **Luque** 79.55 49 P P 21 15 16.3 +0.7
ELUQ pmax pmax
comp=Z,42nm,0.8s,mb5.1
ERON **Agron** 79.72 50 P P 21 15 17.2 +0.7
comp=Z,71nm,0.6s,mb5.5
EGUA **Guajares** 79.84 50 P P 21 15 17.8 +0.6
comp=Z,204nm,1.2s,mb5.6
EGUA **Guajares** 79.84 50 P P 21 15 17.8 +0.6
EGUA pmax pmax
comp=Z,204nm,1.2s,mb5.6
EALB **Alboran** 79.97 51 P P 21 15 17.1 -0.9
comp=Z,61nm,0.5s,mb5.5
ECOG **Cogollos-Vega** 79.98 50 P P 21 15 18.6 +0.6
comp=Z,68nm,0.7s,mb5.4
ECOG **Cogollos-Vega** 79.98 50 P P 21 15 18.6 +0.6
ECOG pmax pmax
comp=Z,68nm,0.7s,mb5.4
EBAN **Banos Encina** 80.10 49 P P 21 15 19.0 +0.4
comp=Z,21nm,0.7s,mb4.9
EBAN **Banos Encina** 80.10 49 P P 21 15 19.0 +0.4
EBAN pmax pmax
comp=Z,21nm,0.7s,mb4.9
PAB **San Pablo** 80.14 47⇑*i*P P 21 15 19.5 +0.8
comp=Z,46nm,0.8s,mb5.2
PAB **San Pablo** 80.14 47⇑*i*P P 21 15 19.5 +0.8
PAB pmax pmax
comp=Z,46nm,0.8s,mb5.2
DLBC **Dease Lake** 80.20 334 *e*P P 21 15 19.8 +1.2
DLBC **Dease Lake** 80.20 334 P P 21 15 19.1 +0.6
comp=Z,6.6nm,0.7s,mb4.4,baz=180,slow=1.0
EBER **Berja** 80.38 50 P P 21 15 21.0 +0.9
comp=Z,66nm,0.9s,mb5.3
ESDC **Sonseca Array** 80.46 47 P P 21 15 20.6 +0.1
comp=Z,42nm,0.8s,mb5.1
ESDC **Sonseca Array** 80.46 47 P P 21 15 19.9 -0.6
comp=Z,24nm,0.8s,mb4.9,baz=256,slow=5.3,SNR=67
EQES **Quesada** 80.52 49 P P 21 15 20.0 -0.8
comp=Z,59nm,0.8s,mb5.3
GUD **Guadarrama** 80.64 46 P P 21 15 20.9 -0.5
comp=Z,28nm,0.6s,mb5.1
GUD **Guadarrama** 80.64 46 P P 21 15 20.9 -0.5
GUD pmax pmax
comp=Z,28nm,0.6s,mb5.1
EARI **Arriondas** 80.81 44 P P 21 15 22.8 +0.6
comp=Z,34nm,1.0s,mb4.9
EHUE **Huescar** 80.89 50 P P 21 15 22.3 -0.4
comp=Z,32nm,0.4s,mb5.3
EHUE **Huescar** 80.89 50 P P 21 15 22.3 -0.5
EHUE pmax pmax
comp=Z,32nm,0.4s,mb5.3
NVL **N'lazarevskaya** 80.89 160 *i*P P 21 15 23.1 +0.9
NVL pmax pmax
comp=Z,15nm,0.8s,mb4.7
ENIJ **Nijar** 80.92 50 P P 21 15 22.2 -0.8
comp=Z,30nm,0.6s,mb5.1
ENIJ **Nijar** 80.92 50 P P 21 15 22.2 -0.8
ENIJ pmax pmax
comp=Z,30nm,0.6s,mb5.1
EVIA **Vianos** 81.21 49 P P 21 15 25.7 +1.2
comp=Z,121nm,0.7s,mb5.6
EVIA **Vianos** 81.21 49 P P 21 15 25.7 +1.2
EVIA pmax pmax
comp=Z,121nm,0.7s,mb5.6
QSPA **South Pole Qui** 81.77 180 *e*P P 21 15 27.6 +0.9
comp=Z,28nm,0.9s,mb4.9
QSPA *e*pP pP 21 16 04.5 -1.8
EMUR **La Murta** 81.92 50 P P 21 15 28.1 -0.1
comp=Z,10nm,0.5s,mb4.7
ETOB **Tobarra** 81.92 49 P P 21 15 28.1 -0.1
comp=Z,85nm,0.9s,mb5.4
ELAN **Lanestosa** 82.01 44 P P 21 15 28.9 +0.4

comp=Z,21nm,0.8s,mb4.8
CART **Cartagena** **82.02** **50** *e*P **P** **21 15 28.5 -0.2**
comp=Z,18nm,0.8s,mb4.8
ETOR **Torete** **82.21** **47** P **P** **21 15 29.6 -0.1**
comp=Z,54nm,0.7s,mb5.3
ETOR **Torete** **82.21** **47** P **P** **21 15 29.6 0.0**
ETOR pmax pmax
comp=Z,54nm,0.7s,mb5.3
ECHE **Chera** **82.63** **48** P **P** **21 15 32.5 +0.7**
comp=Z,83nm,0.7s,mb5.6
ECHE **Chera** **82.63** **48** P **P** **21 15 32.5 +0.6**
ECHE pmax pmax
comp=Z,83nm,0.7s,mb5.6
BORG **Borgarnes** **82.79** **20** *e*P **P** **21 15 33.2 +1.1**
comp=Z,76nm,0.8s,mb5.5
BORG **Borgarnes** **82.79** **20** *e*P **P** **21 15 33.2 +1.1**
BORG pmax pmax
comp=Z,76nm,0.8s
BORG **Borgarnes** **82.79** **20** P **P** **21 15 33.0 +0.9**
comp=Z,635nm,0.8s,mb6.4,SNR=7.7
EBEN **Beniarda** **82.93** **49** P **P** **21 15 34.4 +1.0**
comp=Z,83nm,0.9s,mb5.5
EANR **'Ain N'Sour** **83.19** **52** P **P** **21 15 36.5 +1.7**
EMOS **Mosqueruela** **83.22** **48** P **P** **21 15 35.0 +0.1**
comp=Z,134nm,0.8s,mb5.7
CCA1 **Carnmenellis** **83.28** **37⇑** *e*P **P** **21 15 33.8 -1.1**
CCA1 AMB AMB 21 15 35.3
comp=Z,92nm,1.1s,mb5.4
ELIZ **Elizondo** **83.31** **45** P **P** **21 15 35.3 +0.1**
comp=Z,28nm,0.8s,mb5.0
ELIZ **Elizondo** **83.31** **45** P **P** **21 15 35.3 +0.1**
ELIZ pmax pmax
comp=Z,28nm,0.8s,mb5.0
BST **Brest** **83.31** **39** *e*P **P** **21 15 35.4 +0.2**
EALK **Alkurruntz** **83.34** **45** P **P** **21 15 36.1 +0.7**
comp=Z,58nm,0.9s,mb5.3
ECHA **Ech Chlef** **83.45** **52** P **P** **21 15 38.3 +2.1**
SJPF **Ste Jean** **83.50** **45** *e*P **P** **21 15 36.4 +0.1**
comp=Z,123nm,0.8s,mb5.4
SJPF **Ste Jean** **83.50** **45** *e*P **P** **21 15 36.4 +0.1**
comp=Z,62nm,0.8s,mb5.4
SJPF **Ste Jean** **83.50** **45** *e*P **P** **21 15 36.4 +0.1**
SJPF pmax pmax
comp=Z,62nm,0.8s,mb5.4
OSSF **Osses** **83.52** **45** *e*P **P** **21 15 36.5 +0.2**
EBNR **Beni Rached** **83.62** **52** P **P** **21 15 38.5 +1.5**
ESAC **San Caprasio** **83.62** **46** P **P** **21 15 38.0 +1.2**
comp=Z,74nm,0.7s,mb5.5
LARF **Larrau** **83.65** **45** *e*P **P** **21 15 37.2 +0.2**
DLF **Lyons Farm** **83.70** **34** *e*P **P** **21 15 36.2 -0.8**
QUIF **Quistinic** **83.75** **40⇑** *i*P **P** **21 15 37.4 0.0**
comp=Z,60nm,1.0s,mb5.0
QUIF **Quistinic** **83.75** **40⇑** *i*P **P** **21 15 37.4 0.0**
comp=Z,30nm,1.0s,mb5.0
QUIF **Quistinic** **83.75** **40⇑** *i*P **P** **21 15 37.4 0.0**
QUIF pmax pmax
comp=Z,30nm,1.0s,mb5.0
DSB **Dublin** **83.77** **34** *e*P **P** **21 15 37.1 -0.3**
comp=Z,25nm,0.9s,mb5.0
ROSF **Rostrenen** **83.82** **39⇑** *i*P **P** **21 15 37.8 +0.1**
comp=Z,76nm,0.8s,mb5.2
ROSF **Rostrenen** **83.82** **39⇑** *i*P **P** **21 15 37.8 +0.1**
comp=Z,38nm,0.8s,mb5.2
ROSF **Rostrenen** **83.82** **39⇑** *i*P **P** **21 15 37.8 +0.1**
ROSF pmax pmax
comp=Z,38nm,0.8s,mb5.2
ATE **Arette** **83.86** **45** *e*P **P** **21 15 39.0 +0.9**
TAM **Tamanrasset** **83.90** **66** *e*P **P** **21 15 39.1 +0.4**
comp=Z,43nm,0.9s,mb5.2
TAM **Tamanrasset** **83.90** **66** *e*P **P** **21 15 39.2 +0.5**
TAM pmax pmax
comp=Z,43nm,0.9s,mb5.2
ETSF **Etsaut** **83.90** **45** *e*P **P** **21 15 38.4 +0.1**
comp=Z,53nm,0.9s,mb5.0
ETSF **Etsaut** **83.90** **45** *e*P **P** **21 15 38.4 +0.1**
comp=Z,27nm,0.9s,mb5.0
ETSF **Etsaut** **83.90** **45** *e*P **P** **21 15 38.4 +0.1**
ETSF pmax pmax
comp=Z,27nm,0.9s,mb5.0
ERTA **Horta de San J** **83.98** **47** P **P** **21 15 39.7 +1.0**
comp=Z,125nm,0.9s,mb5.6
SUMG **Summit** **84.01** **10** *e*P **P** **21 15 38.2 0.0**
comp=Z,104nm,1.0s,mb5.5
SUMG *e*pP pP 21 16 17.0 -1.1
SUMG **Summit** **84.01** **10** *i* P **P** **21 15 38.1 -0.1**
comp=Z,81nm,0.8s,mb5.5
REYF **Montagne du Re** **84.07** **45** *e*P **P** **21 15 40.2 +1.1**
SGMF **Saint Gilles** **84.25** **40⇑** *i*P **P** **21 15 39.8 -0.1**
comp=Z,133nm,1.2s,mb5.2
SGMF **Saint Gilles** **84.25** **40⇑** *i*P **P** **21 15 39.8 -0.1**
comp=Z,67nm,1.2s,mb5.2
SGMF **Saint Gilles** **84.25** **40⇑** *i*P **P** **21 15 39.8 -0.1**
SGMF pmax pmax
comp=Z,67nm,1.2s,mb5.2
VIEF **Viey** **84.31** **45** *e*P **P** **21 15 41.5 +1.2**
EBIE **Bielsa** **84.34** **46** P **P** **21 15 41.1 +0.6**
comp=Z,91nm,1.0s,mb5.5
GMM **Mts of Mourne** **84.38** **33⇑** *e*P **P** **21 15 40.2 -0.2**
LABF **Labassere** **84.39** **45** *e*P **P** **21 15 41.7 +0.9**
HEX **Exmoor** **84.44** **37⇑** *e*P **P** **21 15 40.7 -0.1**
RESF **Ens** **84.51** **45** *e*P **P** **21 15 42.3 +0.9**
EPF **Esparros** **84.57** **45⇑** *i*P **P** **21 15 42.3 +0.6**
comp=Z,117nm,1.1s,mb5.2
EPF **Esparros** **84.57** **45⇑** *i*P **P** **21 15 42.3 +0.6**
comp=Z,58nm,1.1s,mb5.2
EPF **Esparros** **84.57** **45⇑** *i*P **P** **21 15 42.3 +0.6**
EPF pmax pmax
comp=Z,59nm,1.1s,mb5.2
EMHD **Djebel Mahouad** **84.71** **52** P **P** **21 15 43.5 +1.0**
ADJB **Djebel Djouab** **85.08** **53** P **P** **21 15 46.4 +2.0**
MLS **Moulis** **85.08** **45** *e*P **P** **21 15 45.2 +1.0**
HTR **Trewern Hill** **85.10** **36⇑** *e*P **P** **21 15 43.6 -0.4**
GIM **North Isle of** **85.21** **34⇑** *e*P **P** **21 15 44.5 -0.1**
HGH **Gray Hill** **85.22** **36** *e*P **P** **21 15 44.1 -0.6**
MCH1 **Michaelchurch** **85.23** **36** *e*P **P** **21 15 43.8 -0.9**
MCH1 AMB AMB 21 15 44.9
comp=Z,62nm,1.2s,mb5.2
MFF **Saint Martin d** **85.28** **42⇑** *i*P **P** **21 15 45.4 +0.3**
comp=Z,93nm,0.7s,mb5.3
MFF **Saint Martin d** **85.28** **42⇑** *i*P **P** **21 15 45.4 +0.3**
comp=Z,46nm,0.7s,mb5.3
MFF **Saint Martin d** **85.28** **42⇑** *i*P **P** **21 15 45.4 +0.3**
MFF pmax pmax
comp=Z,46nm,0.7s,mb5.3
GAL1 **Galloway** **85.29** **33** *e*P **P** **21 15 44.2 -0.8**
GAL1 AMB AMB 21 15 45.3
comp=Z,72nm,1.0s,mb5.3
GRR **Gorron** **85.36** **40⇑** *i*P **P** **21 15 45.4 -0.1**
comp=Z,76nm,0.7s,mb5.2
GRR **Gorron** **85.36** **40⇑** *i*P **P** **21 15 45.4 -0.1**
comp=Z,38nm,0.7s,mb5.2
GRR **Gorron** **85.36** **40⇑** *i*P **P** **21 15 45.4 -0.1**
GRR pmax pmax
comp=Z,38nm,0.7s,mb5.2
LFF **La Frestale** **85.39** **43** *e*P **P** **21 15 44.9 -0.8**
comp=Z,175nm,0.7s,mb5.6
LFF **La Frestale** **85.39** **43** *e*P **P** **21 15 44.9 -0.8**
comp=Z,87nm,0.7s,mb5.6
LFF **La Frestale** **85.39** **43** *e*P **P** **21 15 44.9 -0.8**
LFF pmax pmax
comp=Z,87nm,0.7s,mb5.6
CLLI **Llivia** **85.58** **46** P **P** **21 15 46.8 +0.1**
GCD **Castle Douglas** **85.70** **33** *e*P **P** **21 15 45.9 -1.1**
FLN **La Foliniere** **85.72** **40⇑** *i*P **P** **21 15 47.3 +0.1**
comp=Z,113nm,0.9s,mb5.3
FLN *e*MLR MLR
comp=Z,30nm,22.2s
FLN **La Foliniere** **85.72** **40⇑** *i*P **P** **21 15 47.3 +0.1**
comp=Z,56nm,0.9s,mb5.3
FLN LR LR
comp=Z,30nm,22.3s
FLN **La Foliniere** **85.72** **40⇑** *i*P **P** **21 15 47.3 +0.1**
FLN pmax pmax
comp=Z,56nm,0.9s,mb5.3
FLN MLR MLR
comp=Z,30nm,22.3s
KPL **Plockton** **85.73** **30⇑** *e*P **P** **21 15 46.5 -0.6**
KPL AMB AMB 21 15 47.4
comp=Z,81nm,1.0s,mb5.4
KSB **Sheil Bridge** **85.79** **31⇑** *e*P **P** **21 15 46.9 -0.5**
LDF **La Druitiere** **85.89** **40⇑** *i*P **P** **21 15 48.0 -0.1**
comp=Z,60nm,1.1s,mb5.0
LDF **La Druitiere** **85.89** **40⇑** *i*P **P** **21 15 48.0 -0.1**
comp=Z,30nm,1.1s,mb4.9
LDF **La Druitiere** **85.89** **40⇑** *i*P **P** **21 15 48.0 -0.1**
LDF pmax pmax
comp=Z,30nm,1.1s,mb4.9
KAC **Achnashellach** **85.97** **30⇑** *e*P **P** **21 15 47.5 -0.7**
EAB **Aberfoyle** **85.97** **32** *e*P **P** **21 15 47.0 -1.2**
MTLF **Montolieu** **85.98** **45⇑** *i*P **P** **21 15 48.3 -0.3**
comp=Z,16nm,0.8s,mb4.5
MTLF **Montolieu** **85.98** **45⇑** *i*P **P** **21 15 48.3 -0.3**
comp=Z,8.3nm,0.8s,mb4.5
MTLF **Montolieu** **85.98** **45⇑** *i*P **P** **21 15 48.3 -0.3**
MTLF pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
FILF **Fillols** **86.02** **46** *e*P **P** **21 15 48.8 -0.1**
RJF **Les Rejaudoux** **86.02** **43⇑** *i*P **P** **21 15 48.6 -0.2**
comp=Z,104nm,1.1s,mb5.2
RJF *e*MLR MLR
comp=Z,53nm,17.2s
RJF **Les Rejaudoux** **86.02** **43⇑** *i*P **P** **21 15 48.6 -0.2**
comp=Z,52nm,1.1s,mb5.2
RJF LR LR
comp=Z,50nm,17.3s
RJF **Les Rejaudoux** **86.02** **43⇑** *i*P **P** **21 15 48.6 -0.2**
RJF pmax pmax
comp=Z,52nm,1.1s,mb5.2
RJF MLR MLR
comp=Z,50nm,17.3s
SCO **Scoresbysund** **86.13** **15** *i* P **P** **21 15 48.8 0.0**
SCO pmax pmax
comp=Z,14nm,1.0s,mb4.7
SCO **Scoresbysund** **86.13** **15** *i* P **P** **21 15 48.8 0.0**
comp=Z,14nm,1.0s,mb4.7
ECK **Cauldkaine Hil** **86.25** **33⇑** *e*P **P** **21 15 49.1 -0.6**
ESK **Eskdalemuir** **86.26** **33** *e*P **P** **21 15 49.0 -0.7**
comp=Z,10nm,0.8s,mb4.6
ESK **Eskdalemuir** **86.26** **33** *e*P **P** **21 15 49.0 -0.7**
ESK pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
CAF **Calviac** **86.30** **44⇑** *i*P **P** **21 15 50.0 -0.1**
comp=Z,29nm,0.5s,mb5.0
CAF **Calviac** **86.30** **44⇑** *i*P **P** **21 15 50.0 -0.1**
comp=Z,15nm,0.5s,mb5.0
CAF **Calviac** **86.30** **44⇑** *i*P **P** **21 15 50.0 -0.1**
CAF pmax pmax
comp=Z,15nm,0.5s,mb5.0
EAU **Auchinoon** **86.31** **32** *e*P **P** **21 15 48.7 -1.3**
MDO **Dochfour** **86.41** **31⇑** *i*P **P** **21 15 50.1 -0.3**
EBH **Black Hill** **86.42** **32** *e*P **P** **21 15 50.8 +0.3**
EBL **Broad Law** **86.50** **32** *e*P **P** **21 15 50.0 -0.8**
SET **Setif** **86.63** **53** P **P** **21 15 54.0 +2.0**
MVH1 **Achvaich** **86.68** **30⇑** *i*P **P** **21 15 51.6 -0.1**
TCF **Toulx Ste Croi** **86.76** **42⇑** *i*P **P** **21 15 52.0 -0.4**
comp=Z,16nm,0.6s,mb4.8
TCF **Toulx Ste Croi** **86.76** **42⇑** *i*P **P** **21 15 52.0 -0.4**
comp=Z,8.0nm,0.6s,mb4.7
TCF **Toulx Ste Croi** **86.76** **42⇑** *i*P **P** **21 15 52.0 -0.4**
TCF pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
ESY **Stoneypath** **86.78** **32⇑** *e*P **P** **21 15 51.9 -0.4**
INK **Inuvik** **86.89** **341** *e*P **P** **21 15 51.7 -0.9**
comp=Z,30nm,1.0s,mb5.1
INK **Inuvik** **86.89** **341** P **P** **21 15 51.5 -1.1**
comp=Z,19nm,0.8s,mb5.0,baz=128,slow=6.5,SNR=12
INK **Inuvik** **86.89** **341** *e*P **P** **21 15 51.7 -0.8**
INK pmax pmax
comp=Z,30nm,1.0s
DAWY **Dawson** **86.93** **336** *e*P **P** **21 15 52.3 -0.5**
MCD **Coleburn Disti** **87.02** **31⇑** *i*P **P** **21 15 53.1 -0.3**
MME1 **Meikle Cairn** **87.08** **31⇑** *i*P **P** **21 15 53.0 -0.6**
DFRA **Djebel Bou Aff** **87.08** **53** P **P** **21 15 54.6 +0.4**
PYM **Petit Puy Mans** **87.15** **43** *e*P **P** **21 15 54.5 +0.2**
LBL **Lubilhac** **87.18** **44** *e*P **P** **21 15 54.8 +0.3**
BGF **Bois d'Agland** **87.25** **42⇑** *i*P **P** **21 15 54.5 -0.3**
comp=Z,68nm,0.6s,mb5.3
BGF **Bois d'Agland** **87.25** **42⇑** *i*P **P** **21 15 54.5 -0.3**
comp=Z,34nm,0.6s,mb5.3
BGF **Bois d'Agland** **87.25** **42⇑** *i*P **P** **21 15 54.5 -0.3**
BGF pmax pmax
comp=Z,34nm,0.6s,mb5.3
HYF **Humbligny** **87.30** **42⇑** *i*P **P** **21 15 54.9 -0.1**
AGO **Saint Agoulin** **87.31** **43** *e*P **P** **21 15 55.0 -0.1**
LASF **Ste Croix** **87.32** **45⇑** *i*P **P** **21 15 55.3 +0.2**
comp=Z,42nm,1.0s,mb4.9
CASM **Ain Smara** **87.50** **53** P **P** **21 15 55.5 -0.7**
PLDF **La Plantade** **87.62** **43** *e*P **P** **21 15 56.6 +0.1**
AVF **Avril sur Loir** **87.65** **42⇑** *i*P **P** **21 15 56.0 -0.6**
comp=Z,36nm,0.7s,mb5.0
AVF **Avril sur Loir** **87.65** **42⇑** *i*P **P** **21 15 56.0 -0.6**
comp=Z,18nm,0.7s,mb5.0
AVF **Avril sur Loir** **87.65** **42⇑** *i*P **P** **21 15 56.0 -0.6**
AVF pmax pmax
comp=Z,18nm,0.7s,mb5.0
CKFL **Kef-Lekhel** **87.72** **53** P **P** **21 15 57.8 +0.6**
SSF **Saint Saulge** **87.82** **42⇑** *i*P **P** **21 15 56.6 -0.8**
comp=Z,25nm,0.9s,mb4.8
SSF **Saint Saulge** **87.82** **42⇑** *i*P **P** **21 15 56.6 -0.8**
comp=Z,13nm,0.9s,mb4.8
SSF **Saint Saulge** **87.82** **42⇑** *i*P **P** **21 15 56.6 -0.8**
SSF pmax pmax
comp=Z,13nm,0.9s,mb4.8
MENF **Mencas** **87.87** **38** *e*P **P** **21 15 57.2 -0.4**
CAEH **'Ain El Ouahch** **87.90** **53** P **P** **21 15 58.4 +0.3**
BMRM **Bremner River** **87.90** **333** *e*P **P** **21 15 57.6 +0.2**
comp=Z,12nm,0.8s,mb4.8
EGAK **Eagle** **87.93** **337** *e*P **P** **21 15 56.0 -1.5**
comp=Z,29nm,1.0s,mb5.1
SMF **Signal de Mont** **87.94** **42⇑** *i*P **P** **21 15 57.6 -0.4**
comp=Z,86nm,0.8s,mb5.3
SMF **Signal de Mont** **87.94** **42⇑** *i*P **P** **21 15 57.6 -0.4**
comp=Z,43nm,0.8s,mb5.3
SMF **Signal de Mont** **87.94** **42⇑** *i*P **P** **21 15 57.6 -0.4**
SMF pmax pmax
comp=Z,43nm,0.8s,mb5.3
VIVF **Saint-Julien-l** **88.07** **44⇑** *i*P **P** **21 15 58.9 +0.2**
comp=Z,70nm,1.0s,mb5.1
VIVF **Saint-Julien-l** **88.07** **44⇑** *i*P **P** **21 15 58.9 +0.2**
comp=Z,35nm,1.0s,mb5.1
VIVF **Saint-Julien-l** **88.07** **44⇑** *i*P **P** **21 15 58.9 +0.2**
VIVF pmax pmax
comp=Z,35nm,1.0s,mb5.1
SSB **Saint Sauveur** **88.08** **44** *e*P **P** **21 15 58.9 +0.2**
SSB **Saint Sauveur** **88.08** **44** *e*P **P** **21 15 59.0 +0.3**
comp=Z,35nm,1.1s,mb5.1
SSB **Saint Sauveur** **88.08** **44** *e*P **P** **21 15 59.0 +0.3**
SSB pmax pmax
comp=Z,35nm,1.1s,mb5.1
LOR **Lormes** **88.11** **42⇑** *i*P **P** **21 15 58.1 -0.7**
comp=Z,41nm,0.8s,mb5.0
LOR *e*MLR MLR
comp=Z,45nm,22.8s
LOR **Lormes** **88.11** **42⇑** *i*P **P** **21 15 58.1 -0.7**
comp=Z,20nm,0.8s,mb5.0
LOR LR LR
comp=Z,40nm,22.8s
LOR **Lormes** **88.11** **42⇑** *i*P **P** **21 15 58.1 -0.7**
LOR pmax pmax
comp=Z,21nm,0.8s,mb5.0
LOR MLR MLR
comp=Z,40nm,22.8s
ABSA **Djebel Ababsia** **88.29** **53** P **P** **21 16 01.0 +1.1**
CMAH **Djebel Manchou** **88.31** **53** P **P** **21 16 03.0 +3.0**
DIV **Divide** **88.49** **333** *e*P **P** **21 15 59.8 -0.4**
comp=Z,34nm,0.8s,mb5.2
SMRF **Simiane la Rot** **88.50** **45⇑** *i*P **P** **21 16 01.2 +0.5**
comp=Z,52nm,1.0s,mb5.0
SMRF **Simiane la Rot** **88.50** **45⇑** *i*P **P** **21 16 01.2 +0.5**
comp=Z,52nm,1.0s,mb5.3
WAL1 **Walls** **88.73** **28** *e*P **P** **21 16 00.6 -0.8**
ORIF **Oris-en-Rattie** **88.92** **44⇑** *i*P **P** **21 16 02.5 -0.2**
comp=Z,94nm,0.6s,mb5.6
ORIF *e*MLR MLR
comp=Z,43nm,20.2s
ORIF **Oris-en-Rattie** **88.92** **44⇑** *i*P **P** **21 16 02.5 -0.2**
comp=Z,47nm,0.6s,mb5.6
ORIF **Oris-en-Rattie** **88.92** **44⇑** *i*P **P** **21 16 02.5 -0.2**
ORIF pmax pmax
comp=Z,47nm,0.6s,mb5.6
BAIF **Baives** **89.02** **39⇑** *i*P **P** **21 16 02.7 -0.3**
comp=Z,22nm,0.8s,mb4.8
BAIF **Baives** **89.02** **39⇑** *i*P **P** **21 16 02.7 -0.3**
comp=Z,11nm,0.8s,mb4.8
BAIF **Baives** **89.02** **39⇑** *i*P **P** **21 16 02.7 -0.3**
BAIF pmax pmax
comp=Z,11nm,0.8s,mb4.8
LMR **La Mourre** **89.02** **46⇑** *i*P **P** **21 16 03.1 -0.1**
comp=Z,51nm,0.8s,mb5.2
LMR **La Mourre** **89.02** **46⇑** *i*P **P** **21 16 03.1 -0.1**
comp=Z,25nm,0.8s,mb5.2
LMR **La Mourre** **89.02** **46⇑** *i*P **P** **21 16 03.1 -0.1**
LMR pmax pmax
comp=Z,25nm,0.8s,mb5.2
TSUM **Tsumeb** **89.03** **109** *e*P **P** **21 16 03.5 -0.3**
SFTF **Sexfontaines** **89.10** **41⇑** *i*P **P** **21 16 03.0 -0.4**
comp=Z,85nm,1.1s,mb5.3
SFTF **Sexfontaines** **89.10** **41⇑** *i*P **P** **21 16 03.0 -0.4**
comp=Z,85nm,1.1s,mb5.6
FRF **La Foret Royal** **89.17** **46⇑** *i*P **P** **21 16 03.8 0.0**
comp=Z,129nm,1.1s,mb5.5
FRF **La Foret Royal** **89.17** **46⇑** *i*P **P** **21 16 03.8 0.0**
comp=Z,65nm,1.1s,mb5.5
FRF **La Foret Royal** **89.17** **46⇑** *i*P **P** **21 16 03.8 0.0**
FRF pmax pmax
comp=Z,65nm,1.1s,mb5.5
SNF **Seneffe** **89.17** **39** P **P** **21 16 03.7 0.0**
comp=Z,12nm,1.1s,mb4.7
MEZF **Maizieres J'vi** **89.18** **41⇑** *i*P **P** **21 16 03.5 -0.3**
comp=Z,17nm,0.6s,mb4.8
MEZF **Maizieres J'vi** **89.18** **41⇑** *i*P **P** **21 16 03.5 -0.3**
comp=Z,17nm,0.6s,mb5.2
DOU **Dourbes** **89.27** **39** P **P** **21 16 04.1 -0.1**
comp=Z,25nm,1.2s,mb5.0
CALN **Calern** **89.38** **46** *e*P **P** **21 16 05.2 +0.4**
GIVF **Givet** **89.41** **39⇑** *i*P **P** **21 16 04.8 0.0**
comp=Z,133nm,0.8s,mb5.6
GIVF **Givet** **89.41** **39⇑** *i*P **P** **21 16 04.8 0.0**
comp=Z,66nm,0.8s,mb5.6
GIVF **Givet** **89.41** **39⇑** *i*P **P** **21 16 04.8 0.0**
GIVF pmax pmax
comp=Z,67nm,0.8s,mb5.6
CABF **La Chapelle** **89.44** **43⇑** *i*P **P** **21 16 05.0 0.0**
comp=Z,51nm,0.9s,mb5.2
CABF **La Chapelle** **89.44** **43⇑** *i*P **P** **21 16 05.0 0.0**
comp=Z,25nm,0.9s,mb5.2
CABF **La Chapelle** **89.44** **43⇑** *i*P **P** **21 16 05.0 0.0**
CABF pmax pmax
comp=Z,25nm,0.9s,mb5.1
MBDF **Montbardon** **89.50** **45** *e*P **P** **21 16 05.6 +0.2**
MVIF **Mont Vial** **89.59** **46** *e*P **P** **21 16 06.1 +0.3**
LPL **La Plagne** **89.64** **44** *e*P **P** **21 16 06.0 0.0**
comp=Z,93nm,0.7s,mb5.5
LPL **La Plagne** **89.64** **44** *e*P **P** **21 16 06.0 0.0**
comp=Z,46nm,0.7s,mb5.5
LPL **La Plagne** **89.64** **44** *e*P **P** **21 16 06.0 0.0**
LPL pmax pmax
comp=Z,46nm,0.7s,mb5.5
LPG **La Plagne** **89.65** **44** *e*P **P** **21 16 06.2 +0.1**
comp=Z,111nm,0.8s,mb5.6
LPG **La Plagne** **89.65** **44** *e*P **P** **21 16 06.2 +0.1**
comp=Z,56nm,0.8s,mb5.5
LPG **La Plagne** **89.65** **44** *e*P **P** **21 16 06.2 +0.1**
LPG pmax pmax
comp=Z,55nm,0.8s,mb5.5
KEST **Kesra** **89.67** **54** P **P** **21 16 06.6 +0.2**
comp=Z,11nm,0.9s,mb4.8,baz=272,slow=2.6,SNR=30
TOUF **Mont Tournerai** **89.69** **46** *e*P **P** **21 16 06.6 +0.3**
REVF **Revere** **89.71** **46** *e*P **P** **21 16 06.8 +0.4**
THEF **They Montfort** **89.72** **41** *e*P **P** **21 16 06.1 -0.2**
BCLA **Clavier** **89.78** **39** P **P** **21 16 06.9 +0.3**
comp=Z,15nm,0.8s,mb5.0
SBF **Sospel** **89.79** **46⇑** *i*P **P** **21 16 06.6 -0.1**
comp=Z,59nm,0.9s,mb5.2
SBF **Sospel** **89.79** **46⇑** *i*P **P** **21 16 06.6 -0.1**
comp=Z,29nm,0.9s,mb5.2
SBF **Sospel** **89.79** **46⇑** *i*P **P** **21 16 06.6 -0.1**
SBF pmax pmax
comp=Z,29nm,0.9s,mb5.2
AUTN **L'Aution** **89.81** **46** *e*P **P** **21 16 07.0 +0.2**
SEW **Seward** **89.88** **331** *e*P **P** **21 16 06.0 -0.8**
comp=Z,4.7nm,0.6s,mb4.6
SAOF **Saorge** **89.90** **46** *e*P **P** **21 16 07.4 +0.1**
HAU **Haudompre** **89.91** **41⇑** *i*P **P** **21 16 06.7 -0.5**
comp=Z,14nm,0.6s,mb4.8
HAU *e*MLR MLR
comp=Z,36nm,18.8s
HAU **Haudompre** **89.91** **41⇑** *i*P **P** **21 16 06.7 -0.5**
comp=Z,7.1nm,0.6s,mb4.8
HAU LR LR
comp=Z,40nm,18.8s
HAU **Haudompre** **89.91** **41⇑** *i*P **P** **21 16 06.7 -0.5**
HAU pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
HAU MLR MLR
comp=Z,40nm,18.8s
LOMF **Lomont** **90.09** **42** *e*P **P** **21 16 08.1 0.0**
WLF **Walferdange** **90.15** **40** P **P** **21 16 08.4 +0.1**
comp=Z,39nm,1.2s,mb5.2
WLF **Walferdange** **90.15** **40** *e*P **P** **21 16 08.6 +0.3**
comp=Z,55nm,1.0s,mb5.4
WLF **Walferdange** **90.15** **40** *e*P **P** **21 16 08.6 +0.3**
WLF pmax pmax
comp=Z,55nm,1.0s,mb5.4
ILAR **Eielson Array** **90.20** **336** P **P** **21 16 07.9 -0.3**
comp=Z,4.7nm,0.7s,mb4.5,baz=141,slow=3.0,SNR=12
ILAR pP pP 21 16 45.3 -3.3
comp=Z,0.7nm,0.5s,baz=170,slow=25,SNR=0.5
ILAR PP PP 21 19 43.4 -0.8
comp=Z,2.8nm,0.9s,baz=105,slow=7.1,SNR=9.3
HINF **Hinteralfeld** **90.20** **42⇑** *i*P **P** **21 16 08.1 -0.5**
comp=Z,21nm,0.9s,mb4.8
HINF **Hinteralfeld** **90.20** **42⇑** *i*P **P** **21 16 08.1 -0.5**
comp=Z,11nm,0.9s,mb4.8
HINF **Hinteralfeld** **90.20** **42⇑** *i*P **P** **21 16 08.1 -0.5**
HINF pmax pmax
comp=Z,11nm,0.9s,mb4.8
MEM **Membach** **90.27** **39** P **P** **21 16 08.7 -0.1**
RC01 **Rabbit Creek A** **90.31** **332** *e*P **P** **21 16 08.7 -0.1**
comp=Z,6.8nm,0.5s,mb4.8
VSL **Villasalto** **90.38** **50** *e*P **P** **21 16 09.6 0.0**
comp=Z,20nm,1.0s,mb5.0
MOF **Molkenrain** **90.40** **42** *e*P **P** **21 16 09.2 -0.3**
ECH **Echery** **90.49** **41** *e*P **P** **21 16 09.8 -0.1**
ECH **Echery** **90.49** **41⇑** *i*P **P** **21 16 09.5 -0.4**
comp=Z,38nm,1.2s,mb5.2
ECH **Echery** **90.49** **41⇑** *i*P **P** **21 16 09.5 -0.4**
ECH pmax pmax
comp=Z,38nm,1.2s,mb5.2
SYO **Syowa Base** **90.56** **161⇑** *e*P **P** **21 16 08.8 -1.1**
BBS **Basel-Blauen** **90.57** **42** *e*P **P** **21 16 10.2 -0.1**
CDF **Champ du Feu** **90.61** **41⇑** *i*P **P** **21 16 10.1 -0.3**
comp=Z,47nm,0.8s,mb5.3
CDF **Champ du Feu** **90.61** **41⇑** *i*P **P** **21 16 10.1 -0.3**
comp=Z,24nm,0.8s,mb5.3
CDF **Champ du Feu** **90.61** **41⇑** *i*P **P** **21 16 10.1 -0.3**
CDF pmax pmax
comp=Z,24nm,0.8s,mb5.3
COLA **College** **90.63** **336** *e*P **P** **21 16 09.8 -0.3**
comp=Z,29nm,0.9s,mb5.3
COLA **College** **90.63** **336** *e*P **P** **21 16 09.8 -0.4**
COLA pmax pmax
comp=Z,29nm,0.9s,mb5.3
PGF **Pioggiola** **90.65** **47** *e*P **P** **21 16 10.6 -0.2**
DAG **Danmarks Havn** **90.66** **11⇓** *i*P **P** **21 16 10.1 0.0**
DAG pmax pmax
comp=Z,20nm,0.8s,mb5.2
DAG **Danmarks Havn** **90.66** **11⇓** *i*P **P** **21 16 10.1 0.0**
comp=Z,20nm,0.8s,mb5.2
MCK **McKinley** **90.73** **335** *e*P **P** **21 16 10.6 -0.1**
comp=Z,11nm,0.8s,mb4.9
MCK **McKinley** **90.73** **335** *e*P **P** **21 16 10.6 0.0**
MCK pmax pmax
comp=Z,11nm,0.8s,mb4.9
RUP **Ruppelstein** **90.73** **40** *e*P **P** **21 16 11.1 +0.1**
KDAK **Kodiak Island** **90.82** **328** *e*P **P** **21 16 10.4 -0.8**
comp=Z,16nm,0.6s,mb5.2
KDAK **Kodiak Island** **90.82** **328** P **P** **21 16 10.4 -0.9**
comp=Z,16nm,0.6s,mb5.2,baz=109,slow=2.8,SNR=20
KDAK pP pP 21 16 51.4 -0.2
comp=Z,11nm,0.7s,baz=113,slow=4.9,SNR=5.7
KDAK **Kodiak Island** **90.82** **328** *i* P **P** **21 16 10.8 -0.4**
FELD **Feldberg im Sc** **90.98** **42** *e*P **P** **21 16 12.2 0.0**
OHAK **Old Harbor** **91.06** **328** *e*P **P** **21 16 11.3 -1.0**
comp=Z,30nm,0.8s,mb5.4
OHAK *e*pP pP 21 16 53.0 +0.3
LANF **Langenberg** **91.06** **41** *e*P **P** **21 16 12.6 0.0**
BFO **Black Forest** **91.28** **41** *e*P **P** **21 16 12.9 -0.6**
comp=Z,4.4nm,0.8s,mb4.5
BFO **Black Forest** **91.28** **41** *e*P **P** **21 16 13.0 -0.6**
BFO pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
RSO **Redoubt South** **91.57** **331** *e*P **P** **21 16 14.7 +0.1**
TUE **Stuetta** **91.61** **43⇑** *i*P **P** **21 16 15.3 +0.2**
comp=Z,9.7nm,0.6s,mb5.0
BPAW **Bear Paw Mtn.** **91.70** **335** *e*P **P** **21 16 14.5 -0.6**
comp=Z,23nm,0.9s,mb5.2
STU **Stuttgart** **91.92** **41** *e*P **P** **21 16 16.0 -0.5**

comp=Z,20nm,0.8s,mb5.2
STU Stuttgart 91.92 41 *e*P **P 21 16 16.0 -0.5**
STU pmax pmax
comp=Z,19nm,0.8s,mb5.2
DAVA Damuels 92.12 43 *i* PcP **P 21 16 17.9 +0.4**
comp=Z,33nm,1.2s,mb5.2,SNR=9.3
COLD Coldfoot 92.25 338 *e*P **P 21 16 18.2 +0.6**
comp=Z,9.4nm,1.0s,mb4.8
FETA Feichten 92.64 43 *i* PcP **P 21 16 20.2 +0.3**
comp=Z,26nm,1.3s,mb5.2,SNR=14
RETA Reutte 92.74 43⇑ *i*P **P 21 16 20.5 +0.1**
comp=Z,21nm,1.2s,mb5.1,SNR=9.3
MOTA Moosalm 92.95 43⇑ *i*P **P 21 16 21.5 +0.2**
comp=Z,12nm,0.5s,mb5.2,SNR=18
WATA Walderalm 93.26 43⇑ *i*P **P 21 16 22.9 +0.2**
comp=Z,8.8nm,0.7s,mb5.0
MUD Monsted U'grnd 93.28 34 *i* P **P 21 16 23.6 +1.0**
MUD pmax pmax
comp=Z,14nm,0.9s,mb5.1
MUD Monsted U'grnd 93.28 34 *i* P **P 21 16 23.6 +1.0**
comp=Z,14nm,0.9s,mb5.1
WTTA Wattenberg 93.29 43⇓ *i*PcP **P 21 16 23.3 +0.4**
comp=Z,48nm,1.5s,mb5.4
GRA1 Grafenberg Arr 93.39 40 *e*P **P 21 16 23.5 +0.2**
comp=Z,24nm,1.5s,mb5.1
GRF Grafenberg Arr 93.39 40 *e*P **P 21 16 23.5 +0.2**
comp=Z,24nm,1.5s,mb5.1
GRF Grafenberg Arr 93.39 40 *e*P **P 21 16 23.5 +0.2**
GRF pmax pmax
comp=Z,24nm,1.5s,mb5.1
MOX Moxa 93.78 40 *e*P **P 21 16 25.6 +0.5**
comp=Z,18nm,1.6s,mb5.0
MOX Moxa 93.78 40 *e*P **P 21 16 25.6 +0.5**
MOX pmax pmax
comp=Z,18nm,1.6s,mb5.0
ABTA Abfaltersbach 93.81 43⇑ *i*PcP **P 21 16 25.6 +0.3**
comp=Z,51nm,1.5s,mb5.4,SNR=30
AQU L'Aquila 93.84 48 *e*P **P 21 16 25.7 +0.2**
comp=Z,11nm,0.8s,mb5.0
AQU L'Aquila 93.84 48 *e*P **P 21 16 25.7 +0.2**
AQU pmax pmax
comp=Z,11nm,0.8s,mb5.0
BOSA Boshof 94.32 120 P **P 21 16 27.9 -0.2**
comp=Z,2.3nm,0.7s,mb4.4,baz=334,slow=12,SNR=5.0
KBA Koelnbreinsper 94.42 43⇑ *i*PcP **P 21 16 28.2 +0.1**
comp=Z,19nm,1.0s,mb5.2,SNR=14
MYKA Terra Mystica 94.57 44⇑ *i*PcP **P 21 16 29.0 +0.2**
comp=Z,17nm,0.7s,mb5.4
CADS Cadrg 94.58 44 *e*P **P 21 16 28.9 +0.1**
SKDS Skadanscina 94.69 45 *i* P **P 21 16 29.0 -0.4**
CLL Collm 94.74 39 *i* P **P 21 16 29.6 +0.2**
comp=Z,11nm,1.0s,mb5.0
CLL Collm 94.74 39 *i* P **P 21 16 29.6 +0.2**
CLL pmax pmax
comp=Z,11nm,1.0s,mb5.0
CLL Collm 94.74 39 *i* P **P 21 16 29.6 +0.2**
comp=Z,11nm,1.0s,mb5.0
JAVS Javornik 94.77 44 *i* P **P 21 16 30.0 +0.3**
KHC Kasperske Hory 94.83 41 *e*P **P 21 16 29.9 -0.1**
comp=Z,9.2nm,1.4s,mb4.8
KHC Kasperske Hory 94.83 41 *e*P **P 21 16 29.6 -0.3**
KHC *ex* x 21 16 54.4
CEY Cerknica 95.00 45 *i* P **P 21 16 30.8 0.0**
NOA NORSAR Array B 95.05 29 P **P 21 16 30.9 +0.3**
comp=Z,7.3nm,0.8s,mb4.9,baz=259,slow=4.5,SNR=20
NOA pP pP 21 17 10.9 -0.1
comp=Z,1.4nm,0.8s,baz=259,slow=4.5,SNR=2.2
LJU Ljubljana 95.10 44 *i* P **P 21 16 30.9 -0.4**
MOA Molln 95.14 43⇑ *i*PcP **P 21 16 31.4 +0.1**
comp=Z,18nm,1.0s,mb5.2,SNR=13
OBKA Obir 95.17 44⇑ *i*PcP **P 21 16 31.8 +0.2**
comp=Z,13nm,0.7s,mb5.3,SNR=8.6
BRG Berggiesshubel 95.28 39 *e*P **P 21 16 32.2 +0.3**
comp=Z,16nm,1.2s,mb5.1
BRG Berggiesshubel 95.28 39 *e*P **P 21 16 32.2 +0.3**
BRG pmax pmax
comp=Z,10.0nm,1.2s,mb4.9
CUC Castrocucco 95.36 50 *e*P **P 21 16 31.7 -0.8**
comp=Z,7.5nm,1.0s,mb4.9
SOKA Soboth 95.52 44⇑ *i*P **P 21 16 32.9 -0.2**
comp=Z,8.2nm,1.0s,mb5.0
BOJS Bojanci 95.55 45 *e*P **P 21 16 33.4 +0.2**
PRU Pruhonice 95.56 40 *e*P **P 21 16 33.9 +0.7**
PRU Pruhonice 95.56 40 *e*P **P 21 16 33.9 +0.7**
PVCC Panska Ves 95.63 40 *e*P **P 21 16 33.7 +0.2**
PVCC Panska Ves 95.63 40 *e*P **P 21 16 33.7 +0.2**
ARSA Arzberg 95.92 43⇑ *i*PcP **P 21 16 35.0 +0.1**
comp=Z,12nm,0.7s,mb5.3,SNR=6.2
TIP Timpagrande 96.00 51 *e*P **P 21 16 33.7 -1.8**
comp=Z,12nm,1.2s,mb5.1
TREC Trest 96.10 41 *e*P **P 21 16 36.5 +0.8**
TREC Trest 96.10 41 *e*P **P 21 16 36.5 +0.8**
CONA Conrad Observa 96.21 43⇑ *i*PcP **P 21 16 36.4 +0.2**
comp=Z,16nm,0.9s,mb5.4
UPC Upice 96.55 40 *e*P **P 21 16 38.5 +0.8**
UPC Upice 96.55 40 *e*P **P 21 16 38.5 +0.8**
DPC Dobruska-Polom 96.73 40 *e*P **P 21 16 39.2 +0.7**
DPC Dobruska-Polom 96.73 40 *e*P **P 21 16 39.2 +0.7**
DPC *ex* x 21 16 57.7
KSP Ksiaz 96.76 40⇑ *e*P **P 21 16 39.3 +0.7**
ZST Bratislava 97.06 42 *e*P **P 21 16 40.6 +0.5**
comp=Z,14nm,1.0s,mb5.2
ZST Bratislava 97.06 42 *e*P **P 21 16 40.6 +0.5**
ZST pmax pmax
comp=Z,14nm,1.0s,mb5.2
ZST Bratislava 97.06 42 PDIF **P 21 16 40.6 +0.5**
MODS Modra-Piesok 97.19 42 *e*P **P 21 16 40.9 +0.2**
MODS Modra-Piesok 97.19 42 PDIF **P 21 16 40.9 +0.2**
MORC Moravsky Berou 97.47 41 *e*P **P 21 16 42.7 +0.8**
comp=Z,34nm,1.6s,mb5.4
MORC Moravsky Berou 97.47 41 *e*P **P 21 16 42.7 +0.8**
MORC pmax pmax
comp=Z,34nm,1.6s,mb5.4
OKC Ostrava-Krasne 97.87 41 *e*P **P 21 16 44.5 +0.9**
OKC Ostrava-Krasne 97.87 41 *e*P **P 21 16 44.5 +0.9**
KOLL Kolacno 97.96 42 *e*P **P 21 16 44.8 +0.7**
KOLL Kolacno 97.96 42 *e* **P 21 16 44.8 +0.7**
VYHS Vyhne 98.24 42 *e*P **P 21 16 45.8 +0.5**
comp=Z,6.7nm,1.1s,mb5.0
VYHS Vyhne 98.24 42 *e*P **P 21 16 45.8 +0.5**
VYHS pmax pmax
comp=Z,7.0nm,1.1s,mb5.0
VYHS Vyhne 98.24 42 PDIF **P 21 16 45.8 +0.5**
PSZ Piszkesteto 98.92 43 *e*P **P 21 16 48.6 +0.2**
comp=Z,3.2nm,0.8s,mb4.8
PSZ Piszkesteto 98.92 43 *e*P **P 21 16 48.6 +0.2**
PSZ pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
OJC Ojcow 98.95 40 *e*P **P 21 16 49.0 +0.5**
NIE Niedzica 99.25 41 *e*P Pdif 21 16 51.4 +1.6
CRVS Cervenica-Dubn 99.99 42 *e*P Pdif 21 16 54.1 +1.0**
comp=Z,4.3nm,1.3s
CRVS Cervenica-Dubn 99.99 42 *e*P Pdif 21 16 54.1 +1.0**
CRVS pmax pmax
comp=Z,4.0nm,1.3s,mb4.7
CRVS Cervenica-Dubn 99.99 42 PDIF Pdif 21 16 54.1 +1.0
ARCES ARCESS Array B 101.19 21 P Pdif 21 16 57.7 -0.7**
comp=Z,4.3nm,0.9s,baz=264,slow=4.4,SNR=10.0
ARCES PKKPbc PKKPbc 21 33 07.1 -3.7
comp=Z,1.3nm,1.0s,baz=114,slow=4.8,SNR=4.6
BRTR Keskin Array B 109.05 51 PP PP 21 21 59.8 -8.0
comp=Z,1.0nm,1.0s,baz=249,slow=6.5,SNR=3.9
GNI Garni 117.42 49 PKP PKPdf 21 21 52.6 -0.6
comp=Z,3.9nm,0.8s,baz=328,slow=2.9,SNR=3.9
GNI Garni 117.42 49 *e*PKIKP PKPdf 21 21 52.8 -0.4
PETK Petropavlovsk- 118.86 327 SKP 21 25 08.7
comp=Z,3.6nm,0.5s,baz=32,slow=5.8,SNR=5.0
ARU Arti 119.58 28 *e*PKPdf PKPdf 21 21 56.6 -0.3
ARU Arti 119.58 28 *i* PKIKP PKPdf 21 21 57.0 +0.1
ARU 21 23 22.1
ARU 21 28 38.6
ARU SS SS 21 39 31.2 -0.4
MIB Mutribah 121.47 60 *e*P PKPdf 21 22 00.9 -0.4
MIB AMb AMB 21 22 02.8
comp=Z,21nm,0.8s
NAY Al-Naaiem 121.47 61 *e*P PKPdf 21 22 01.3 -0.1
NAY AMb AMB 21 22 02.5
comp=Z,8.1nm,0.9s
RDF Al-Radifah 121.78 61 *e*P PKPdf 21 22 01.5 -0.4
RDF AMb AMB 21 22 03.2
comp=Z,41nm,1.1s
UMR Umm Al-Rimmam 121.83 60 *e*P PKPdf 21 22 02.3 +0.3
UMR AMb AMB 21 22 03.2
comp=Z,40nm,0.6s
AKTK Aktyubinsk 122.45 34 PKP PKPdf 21 22 02.8 +0.2
comp=Z,28nm,0.8s
KNA *ep*PKP pPKPdf 21 23 31.9 +0.8
BJI Beijing 147.09 345 PKPbc PKPdf 21 22 47.5 -0.9
BJI pPKP pPKPdf 21 23 26.3 -4.4
BJI SS SS 21 45 04.8 +2.1
BJT Baijiatuau 147.11 345 *e*PKPbc PKPbc 21 22 49.9 -0.8
HHC Hu-ho-hao-te 147.22 352 *e*PKPbc PKPdf 21 22 47.9 -0.7
HHC PKPab PKPab 21 22 53.4 +0.4
HHC pPKP pPKPdf 21 23 30.0 -0.9
HHC sPKP 21 23 47.3
HHC PP PP 21 26 19.5 +3.3
HHC PKS 21 26 21.8
HHC SKS SKSdf 21 29 38.5 -3.9
HHC SKKS SKKSac 21 32 52.5 -1.0
HHC AMB AMB
comp=Z,44nm,4.1s
POO Poona 147.44 69 *e*PKP PKPdf 21 22 48.8 -0.8
POO *e*PKP 21 22 50.0
MBWA Marble Bar 147.62 205 *e*PKP PKPbc 21 22 51.9 -0.8
MBWA *ep*PKP pPKPdf 21 23 34.0 +1.8
MBWA Marble Bar 147.62 205 *e*PKPbc PKPbc 21 22 51.9 -0.8
BTO Baotou 147.65 354 *e*PKPbc PKPbc 21 22 51.4 -0.8
KAD Karad 148.02 71 *e*PKP PKPdf 21 22 50.3 -0.2
GTA Gaotai 148.62 9 PKPbc PKPdf 21 22 52.1 +1.2
GTA pPKP pPKPdf 21 23 34.3 +1.0
GTA sPKP 21 23 51.1
GTA PKS 21 26 25.8
GTA PP PP 21 26 30.3 +5.9
GTA SKS SKSdf 21 29 42.8 -1.5
GTA SKKS SKKSac 21 33 01.6 +0.3
GTA SS SS 21 45 21.9 +2.2
GTA AMB AMB
comp=Z,67nm,8.3s
GTA LR LR
comp=N,78nm,13.4s
GTA LR LR
comp=E,83nm,11.9s
GTA LR LR
comp=Z,110nm,11.9s
BHPL Bhopal 149.09 58 *e*PKP PKPdf 21 22 52.1 0.0
DANN Dangsing 151.28 43 *e*P PKPdf 21 22 56.7 +1.3
comp=Z,318nm,0.8s
KOLN Koldanda 151.53 44 *e*P PKPdf 21 22 56.5 +0.7
HYB Hyderabad 152.05 68 *i* PKP PKPdf 21 22 57.5 +0.6
HYB *e* 21 23 04.0
HYB *e*PKPAB PKPab 21 23 14.5 +0.9
HYB *e* 21 23 55.5
HYB *e* 21 24 00.0
GKN Gorkha 152.09 43 *e*P PKPdf 21 22 57.4 +0.7
LZH Lanzhou 152.33 3 *e*PKPbc PKPdf 21 22 51.8 -5.0
LZH pPKP pPKPdf 21 23 34.8 -4.4
LZH sPKP 21 23 52.0
LZH SKS SKSdf 21 29 41.1 -8.2
LZH SKKS SKKSac 21 33 16.3 -5.5
LZH SS SS 21 45 56.3 -4.5
LZH AMB AMB
comp=Z,130nm,4.2s
KKN Kakani 152.66 42 *e*P PKPdf 21 22 58.0 +0.5
comp=Z,50nm,0.7s
DMN Daman 152.66 43 *e*P PKPdf 21 22 58.0 +0.5
PKI Pulchoki 152.89 43 *e*P PKPdf 21 22 58.1 +0.2
comp=Z,63nm,0.8s
RAMN Ramite 154.09 42 *e*P PKPdf 21 23 00.3 +0.7
comp=Z,56nm,0.8s
TAPN Taplejung 154.54 40 *e*P PKPdf 21 23 01.3 +1.1
ODAN Odare 154.67 41 *e*P PKPdf 21 23 01.1 +0.7
comp=Z,31nm,0.8s
LSA Lhasa 154.73 31 *e*PKPdf PKPdf 21 23 01.8 +1.4
LSA *e*PKPbc PKPbc 21 23 10.3 +1.2
LSA *e*PKPab PKPab 21 23 26.3 +1.7
CD2 Chengdu 157.47 4 PKP PKPdf 21 23 01.5 -2.5
SHL Shillong 158.38 36 *e*PKP PKPdf 21 23 07.0 +1.8
GYA Guiyang 161.96 357 PKP PKPdf 21 23 10.9 +1.7
GYA pPKP pPKPdf 21 23 48.0 -3.7
GYA PKPab PKPab 21 23 56.5 +0.7
GYA PKS 21 26 38.8
GYA PP PP 21 27 41.0 +2.4
GYA SKS SKSdf 21 29 57.1 -2.3
GYA SKKS SKKSac 21 34 15.1 +2.2
GYA SS SS 21 47 44.3 +0.8
GYA AMB AMB
comp=Z,200nm,7.1s
GYA LR LR
comp=N,170nm,24.2s
GYA LR LR
comp=E,120nm,25.5s
GYA LR LR
comp=Z,160nm,24.3s
KMI Kunming 163.07 9 PKP PKPdf 21 23 09.8 -0.5
CHTO Chiang Mai 167.68 32 *e*PKPdf PKPdf 21 23 13.3 -1.0
CHTO *e*PKPab PKPab 21 24 21.3 0.0
CMAR Chiang Mai Arr 167.98 33 PKP PKPdf 21 23 14.9 +0.4
comp=Z,3.8nm,0.8s,baz=274,slow=1.8,SNR=26
CMAR pPKP pPKPdf 21 23 54.0 -3.1
comp=Z,1.7nm,0.8s,baz=282,slow=1.8,SNR=5.0
CMAR PKPab PKPab 21 24 22.4 -0.1
comp=Z,6.0nm,0.9s,baz=323,slow=6.0,SNR=20
CMAR PP PP 21 28 15.5 +4.9
comp=Z,1.9nm,1.0s,baz=339,slow=5.5,SNR=5.5

CASC 22 21:06:02.3±3.4, **9°.15N**×**82°.62W, h11**km, **MD3.6, 2C,**
Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBS2		**0.36**	**186**	*e*P		Pg 21 06 08.0	-1.5
BRU2	**Volcan**	**0.36**	**191**	*e*P		Pg 21 06 09.4	-0.2
BRU2				*e*S		Sg 21 06 17.3	+2.9
ACR	**Cerro Adams**	**0.73**	**227**⇑	*e*P		Pg 21 06 07.2	-9.3
ACR				*e*S		Sg 21 06 22.1	-4.1
BUS	**Buena Vista**	**1.19**	**290**	*e*P		Pb 21 06 24.7	-0.2
URSC	**Urasca**	**1.33**	**301**⇑	*e*P		Pn 21 06 28.6	+1.9
LAJ	**Bijagual**	**1.64**	**296**	*e*P		Pn 21 06 34.2	+3.1
PRS1	**Puriscal**	**1.86**	**296**	*e*P		Pn 21 06 32.9	-1.2
CGA2	**Cerro Gallo 2**	**2.01**	**295**	*e*P		Pn 21 06 36.0	-0.2

*ISCJB **22** 21:10:40.4±0.6, 22°.00N±0°.04×121°.38E±0°.02, h13km±6km,*
Error ellipse: s-maj=7.2km s-min=3.6km az=5.7
*NEIC **22** 21:10:41.7±6.0, 22°.12N×121°.34E, h10km, MG3.5(JMA),*
Error ellipse: s-maj=64.5km s-min=34.6km az=192.0
*TAP **22** 21:10:41.7, 21°.98N×121°.22E, h33km, ML3.6, C*
*JMA **22** 21:10:42.3±0.2, 21°.96N×121°.39E, h90km, M3.5*

ISC 22 21:10:41.1±0.6, **22°.04N**±0°.03×**121°.36E**±0°.03, **h7**km±3km,
n57, σ1°.07/95, **1C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAY	**Lan-yu** baz=79	**0.18**	**92**	*i* P		**Pg 21 10 49.6**	**+4.9**
LAY				*e*S		**Sg 21 10 55.5**	**+8.4**
TSEB	**Hengchuen, Pin** baz=265	**0.45**	**252**	*e*P		**Pg 21 10 50.6**	**+0.7**
TSEB				*e*S		**Sg 21 10 56.8**	**+1.1**
TWK1	**Hengchun** baz=271	**0.53**	**259**⇑	*i* P		**Pg 21 10 50.7**	**-0.5**
TWK1				*i* S		**Sg 21 10 57.1**	**-1.1**
TAW	**Tawu** baz=330	**0.53**	**306**⇓	*i* P		**Pg 21 10 51.9**	**+0.5**
TAW				S		**Sg 21 10 59.3**	**+0.9**
HEN	**Hengchun** baz=277	**0.58**	**266**	*e*P		**Pg 21 10 52.2**	**0.0**
HEN				S		**Sg 21 10 59.2**	**-0.7**
EAST	**Anshuo** baz=326	**0.58**	**305**⇓	*i*P		**Pg 21 10 52.7**	**+0.3**
EAST				S		**Sg 21 11 00.4**	**+0.5**
ECL	**Taimali** baz=339	**0.67**	**326**	*i* P		**Pg 21 10 53.9**	**0.0**
ECL				*e*S		**Sg 21 11 02.8**	**+0.2**
TTN	**Taitung** baz=355	**0.73**	**344**	*e*P		**Pg 21 10 57.4**	**+2.2**
SCZT	**Fangliau** baz=306	**0.76**	**296**⇓	*i*P		**Pg 21 10 55.4**	**-0.3**
SCZT				*e*S		**Sg 21 11 05.2**	**-0.4**
TWG	**Pinlang** baz=306	**0.82**	**341**	*e*Pn		**Pn 21 10 56.1**	**-2.9**

TWG				*e*Sn		**Sn**	**21 11 05.2**	**-6.1**
TWG	**Pinlang**	**0.82**	**341**	P		**Pg**	**21 10 56.4**	**-0.4**
	baz=341							
TWG				*e*S		**Sg**	**21 11 07.6**	**+0.2**
	baz=341							
SSD	**Sandimen**	**0.97**	**316**	*i* P		**Pg**	**21 10 58.8**	**-1.0**
	baz=325							
SSD				*e*S		**Sg**	**21 11 10.7**	**-1.7**
	baz=325							
CHKT	**Chengkung**	**1.05**	**0**	*e*P		**Pb**	**21 11 00.4**	**-1.1**
	baz=356							
CHKT				*e*S		**Sb**	**21 11 15.1**	**-0.4**
	baz=356							
SGLT	**Jiouru**	**1.05**	**310**	*e*P		**Pb**	**21 11 02.2**	**+0.6**
	baz=318							
TWM1	**Shoushan**	**1.17**	**312**	P		**Pb**	**21 11 03.3**	**-0.2**
	baz=333							
ELDTW	**Lidau**	**1.18**	**344**	*e*P		**Pb**	**21 11 01.9**	**-1.9**
	baz=360							
ELDTW				*e*S		**Sb**	**21 11 16.5**	**-2.8**
	baz=360							
STYT	**Tauyuan**	**1.25**	**333**	*e*P		**Pn**	**21 11 03.7**	**-1.2**
	baz=350							
TWF1	**Yuli**	**1.30**	**357**	P		**Pn**	**21 11 03.7**	**-1.9**
	baz=354							
TWF1				*e*S		**Sb**	**21 11 19.6**	**-3.2**
	baz=354							
YULB	**Yu-li**	**1.34**	**357**	*e*Pn		**Pn**	**21 11 04.1**	**-2.1**
YULB				*e*Sn		**Sn**	**21 11 24.3**	**+0.1**
CHN1	**Nanshi**	**1.37**	**326**	P		**Pn**	**21 11 06.0**	**-0.6**
	baz=332							
CHN1				*e*S		**Sb**	**21 11 25.2**	**+0.5**
	baz=332							
CHN3	**Shinhua**	**1.38**	**318**	*e*P		**Pn**	**21 11 08.2**	**+1.6**
	baz=325							
WTP	**Ta-pu**	**1.38**	**330**	P		**Pn**	**21 11 06.2**	**-0.5**
	baz=348							
WTP				*e*S		**Sn**	**21 11 25.6**	**+0.4**
	baz=348							
TPUB	**Ta-pu**	**1.42**	**332**	*e*Pn		**Pn**	**21 11 06.5**	**-0.8**
TPUB				*e*Sn		**Sn**	**21 11 26.5**	**+0.3**
EHY	**Hungye**	**1.46**	**359**	*e*P		**Pn**	**21 11 05.7**	**-2.1**
	baz=4.0							
CHN4	**Tsaushan**	**1.48**	**332**	*e*P		**Pn**	**21 11 08.4**	**+0.3**
	baz=337							
CHN4				*e*S		**Sn**	**21 11 29.5**	**+1.8**
	baz=337							
YUS	**Yu-Shan**	**1.49**	**345**	*e*P		**Pn**	**21 11 08.1**	**-0.1**
	baz=359							
ALS	**Alishan**	**1.55**	**341**	*e*P		**Pn**	**21 11 09.6**	**+0.6**
	baz=354							
CHN5	**Tsauling**	**1.67**	**338**	P		**Pn**	**21 11 11.2**	**+0.6**
	baz=342							
CHN5				*i* S		**Sn**	**21 11 32.9**	**+0.6**
	baz=342							
CHY	**Chiayi**	**1.69**	**329**	*e*P		**Pn**	**21 11 10.7**	**-0.2**
	baz=334							
CHY				*e*S		**Sn**	**21 11 31.4**	**-1.4**
	baz=334							
ESL	**Shilin**	**1.76**	**2**	*e*P		**Pn**	**21 11 10.3**	**-1.7**
	baz=360							
SSLB	**Suanglung**	**1.78**	**348**	*e*Pn		**Pn**	**21 11 12.1**	**-0.1**
SSLB				*e*Sn		**Sn**	**21 11 36.5**	**+1.6**
WGK	**Gukeng**	**1.79**	**336**	*e*P		**Pn**	**21 11 13.4**	**+1.0**
	baz=340							
WGK				*e*S		**Sn**	**21 11 35.8**	**+0.4**
	baz=340							
SMLT	**Sun Moon Lake**	**1.88**	**347**	P		**Pn**	**21 11 14.4**	**+0.8**
	baz=2.0							
WSF	**Szhu**	**1.90**	**327**	*e*P		**Pn**	**21 11 12.4**	**-1.5**
	baz=331							
WSF				*e*S		**Sn**	**21 11 35.9**	**-2.2**
	baz=331							
TYC	**Yuchr**	**1.91**	**346**	P		**Pn**	**21 11 14.6**	**+0.6**
	baz=350							
TYC				*e*S		**Sn**	**21 11 40.0**	**+1.7**
	baz=350							
WNT	**Mingjian**	**1.93**	**341**	*e*P		**Pn**	**21 11 14.8**	**+0.5**
	baz=345							
WNT				*e*S		**Sn**	**21 11 39.8**	**+1.1**
	baz=345							
TWD	**Chiawan**	**2.04**	**6**	*e*P		**Pn**	**21 11 15.9**	**+0.2**
	baz=1.0							
WHF	**Hehuan Shan**	**2.09**	**358**	*e*P		**Pn**	**21 11 16.5**	**0.0**
	baz=10.0							
WHF				*e*S		**Sn**	**21 11 42.6**	**-0.2**
	baz=10.0							
NACB	**Ninganchiao**	**2.13**	**6**	*e*Pn		**Pn**	**21 11 16.5**	**-0.5**
NACB				*e*Sn		**Sn**	**21 11 43.5**	**-0.2**
TWT	**Tachien**	**2.21**	**356**	*e*P		**Pn**	**21 11 18.4**	**+0.4**
	baz=359							
PNG	**Penghu**	**2.25**	**313**	*e*P		**Pn**	**21 11 16.4**	**-2.4**
	baz=317							
TWQ1	**Liyutan**	**2.36**	**347**	*e*P		**Pn**	**21 11 20.9**	**+0.7**
	baz=350							
TWQ1				*e*S		**Sn**	**21 11 51.8**	**+2.5**
	baz=350							
NNS	**Nan Shan**	**2.38**	**0**	*e*P		**Pn**	**21 11 22.5**	**+2.0**
	baz=11							
ENA	**Nanau**	**2.40**	**8**	*e*P		**Pn**	**21 11 20.4**	**-0.3**
	baz=2.0							
NSY	**Sanyi**	**2.42**	**347**	*e*P		**Pn**	**21 11 23.1**	**+2.0**
	baz=352							
ENTT	**Nioudou**	**2.59**	**4**	*e*P		**Pn**	**21 11 23.1**	**-0.3**
	baz=7.0							
TWC	**Suao**	**2.59**	**10**	*e*P		**Pn**	**21 11 24.9**	**+1.5**
	baz=3.0							
NSTT	**Nanjuang**	**2.60**	**353**	*e*P		**Pn**	**21 11 24.8**	**+1.4**
	baz=355							
NSTT				*e*S		**Sn**	**21 11 57.9**	**+2.7**
	baz=355							
YHNB	**Yeheng**	**2.61**	**0**	*e*Pn		**Pn**	**21 11 24.1**	**+0.4**
YHNB				*e*Sn		**Sn**	**21 11 54.8**	**-0.8**
NSK	**Sanguang**	**2.62**	**360**	*e*P		**Pn**	**21 11 24.3**	**+0.5**
	baz=350							
NSK				*e*S		**Sn**	**21 11 55.0**	**-0.8**
	baz=350							
TWE	**Neicheng**	**2.68**	**6**	*e*P		**Pn**	**21 11 26.4**	**+1.8**
	baz=9.0							
YOJ	**Yonaguni jima**	**2.84**	**32**	P		**Pn**	**21 11 27.3**	**+0.5**
YOJ				S		**Sn**	**21 12 01.5**	**+0.2**
HATJ	**Hateruma jima**	**3.01**	**48**	P		**Pn**	**21 11 29.3**	**+0.2**
HATJ				S		**Sn**	**21 12 04.7**	**-0.8**
IRIF	**Iriomote-Funau**	**3.15**	**43**	P		**Pn**	**21 11 31.5**	**+0.4**
IRIF				eS		**Sn**	**21 12 09.1**	**+0.1**
JKRS	**Kuro-shima**	**3.27**	**48**	P		**Pn**	**21 11 33.0**	**+0.3**
JKRS				S		**Sn**	**21 12 11.5**	**-0.4**
JIJ	**Ishigaki jima**	**3.45**	**47**	P		**Pn**	**21 11 35.1**	**0.0**
JIJ				S		**Sn**	**21 12 15.5**	**-0.7**
JTJ	**Tarama**	**4.01**	**49**	P		**Pn**	**21 11 43.1**	**+0.2**
JTJ				eS		**Sn**	**21 12 29.6**	**-0.6**

*IDC **22** 21:15:49.9±1.4, 52.°52N×168.°50W, h0km, mb3.9/13, mb1 4.1/14, mb1mx3.9/27, mbtmp3.9/14, ML3.9/1, Error ellipse: s-maj=39.4km s-min=18.2km az=177.0*
*NEIC **22** 21:15:50.8, 52.°17N×168.°49W, h7km, ML3.4(AEIC), After AEIC.*
*ISCJB **22** 21:15:52.9±1.5, 52.°2N±0.°1×168.°6W±0.°1, h44km±10km, mb3.9/15, Error ellipse: s-maj=18.2km s-min=9.8km az=168.5*

ISC 22 21:15:55.0±1.3, 52.°3N±0.°1×168.°55W±0.°10, h43km±9km, n26, σ0s90/28, mb3.9/15, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.71**	**345**		P		**Pn**	**21 16 06.5**	**-2.1**
NIKO					S		**Sn**	**21 16 19.8**	**+1.3**
UNV	**Unalaska Valle**	**1.99**	**38**		P		**Pn**	**21 16 25.3**	**-0.8**
UNV					S		**Sn**	**21 16 50.7**	**+1.0**
AKLV	**Akutan Long Va**	**2.44**	**39**		P		**Pn**	**21 16 32.9**	**+0.6**
AKGG	**Akutan Green G**	**2.45**	**38**		P		**Pn**	**21 16 31.6**	**-0.9**
SPIA	**Saint Paul Isl**	**5.00**	**349**		P		**Pn**	**21 17 07.9**	**+0.6**
SDPT	**Sand Point**	**5.68**	**54**		*e*P		**Pn**	**21 17 18.1**	**+1.4**
AMKA	**Amchitka**	**7.58**	**268**		P		**Pn**	**21 17 43.0**	**+0.1**
KDAK	**Kodiak Island**	**10.68**	**53**		Pn		**Pn**	**21 18 23.7**	**-1.4**
	1.0nm,0.3s,baz=225,slow=6.0,SNR=6.8								
PETK	**Petropavlovsk-**	**20.37**	**286**		P		**P**	**21 20 27.9**	**+0.2**
	4.7nm,0.5s,baz=85,slow=13,SNR=6.2								
INK	**Inuvik**	**23.14**	**33**		P		**P**	**21 20 55.7**	**-1.4**
INK	**Inuvik**	**23.14**	**33**		P		**P**	**21 20 55.7**	**-1.4**
	1.7nm,0.6s,mb3.7,baz=256,slow=7.9,SNR=2.8								
PDAR	**Pinedale Array**	**39.92**	**80**		P		**P**	**21 23 25.9**	**+1.2**
	0.8nm,0.5s,mb3.7,baz=303,slow=3.1,SNR=7.4								
SONM	**Songino Array**	**51.77**	**301**		P		**P**	**21 24 58.4**	**+0.5**
	0.5nm,0.5s,mb3.7,baz=70,slow=7.3,SNR=4.2								
TXAR	**Lajitas Array**	**52.25**	**89**		P		**P**	**21 25 02.1**	**+0.5**
	0.2nm,0.5s,mb3.3,baz=322,slow=7.1,SNR=3.7								
KEV	**Kevo**	**57.74**	**354**		*e*p		**P**	**21 25 39.9**	**-0.9**
	1.3nm,0.6s,mb4.1								
ARCES	**ARCESS Array B**	**58.05**	**354**		P		**P**	**21 25 42.7**	**-0.3**
	0.7nm,0.8s,mb3.8,baz=8.9,slow=8.6,SNR=4.4								
JOF	**Joensuu**	**64.08**	**350**		*e*p		**P**	**21 26 23.1**	**-0.7**
	0.7nm,0.4s,mb4.0								
MKAR	**Makanchi Array**	**64.22**	**314**		P		**P**	**21 26 24.7**	**-0.4**
MKAR	**Makanchi Array**	**64.22**	**314**		P		**P**	**21 26 24.7**	**-0.4**
	0.3nm,0.3s,mb3.8,baz=56,slow=7.5,SNR=3.1								
KAF	**Kangasniemi**	**65.34**	**352**		*e*p		**P**	**21 26 31.2**	**-0.9**
	1.3nm,0.4s,mb4.3								
FINES	**FINESS Array B**	**66.02**	**352**		P		**P**	**21 26 36.2**	**-0.3**
	1.9nm,0.4s,mb4.4,baz=18,slow=7.8,SNR=22								
NOA	**NORSAR Array B**	**67.02**	**0**		P		**P**	**21 26 43.0**	**+0.1**
	1.0nm,0.8s,mb3.9,baz=359,slow=6.2,SNR=4.4								
AKASG	**Malin Array Be**	**76.29**	**348**		P		**P**	**21 27 38.6**	**-0.2**
	1.4nm,0.5s,mb4.2,baz=16,slow=6.4,SNR=3.7								
CMAR	**Chiang Mai Arr**	**77.12**	**283**		P		**P**	**21 27 44.5**	**+0.6**
	1.6nm,0.9s,mb4.0,baz=20,slow=6.4,SNR=7.0								
BRTR	**Keskin Array B**	**86.35**	**343**		P		**P**	**21 28 33.5**	**+1.3**
	0.5nm,0.7s,mb3.9,baz=0.0,slow=0.1,SNR=4.6								
ESDC	**Sonseca Array**	**87.44**	**12**		P		**P**	**21 28 38.1**	**+0.6**
	0.5nm,0.6s,mb3.9,baz=352,slow=5.8,SNR=4.7								

*CSEM **22** 21:40:31.6, 37.°83N×26.°08W, h4km, ML2.6, After PDA*

PDA 22 21:40:31.6±0.7, 37.°83N×26.°08W, h4km±3km, MD3.8, ML2.6, Error ellipse: s-maj=3.3km s-min=1.6km az=34.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PSET	**Sete Cidades**	**0.29**	**92**		*e*P		Pg	21 40 36.8	-0.3
PSET					*e*S		Sg	21 40 41.1	+0.2
PSET					A			21 40 42.8	
	136nm,0.3s								
PSET	**Sete Cidades**	**0.29**	**92**		*e*P		Pg	21 40 36.8	-0.3
PSET					*e*S		Sg	21 40 41.1	+0.2
PDA	**Ponta Delgada**	**0.34**	**104**		*e*P		Pg	21 40 37.6	-0.6
PDA	**Ponta Delgada**	**0.34**	**104**		*e*P		Pg	21 40 37.6	-0.6
GRON	**Grota Negra**	**0.44**	**98**		*e*P		Pg	21 40 41.2	+1.1
GRON					*e*S		Sg	21 40 48.6	+2.8
GRON					A			21 40 49.9	
	33nm,0.2s								
BART	**Pico Bartolome**	**0.73**	**94**		*e*P		Pg	21 40 43.9	-1.6
BART					*e*S		Sg	21 40 52.9	-2.0
BART					A			21 40 55.8	
	41nm,0.2s								
BART	**Pico Bartolome**	**0.73**	**94**		*e*P		Pg	21 40 43.9	-1.6
BART					*e*S		Sg	21 40 52.9	-2.0
PSMA	**Santa Maria**	**1.13**	**137**		*e*P		Pg	21 40 49.4	-3.9
PSMA					*e*S		Sg	21 41 02.5	-5.4
PSMA					A			21 41 04.2	
	21nm,0.1s								
PSMN	**Pico do Norte,**	**1.16**	**135**		*e*P		Pg	21 40 49.6	-4.2
PSMN					*e*S		Sg	21 41 03.3	-5.5
PSMN	**Pico do Norte,**	**1.16**	**135**		*e*P		Pg	21 40 49.6	-4.2
PSMN					*e*S		Sg	21 41 03.3	-5.5
ADH	**Angra Heroismo**	**1.22**	**312**		*e*P		Pg	21 40 50.1	-5.0
ADH					*e*S		Sg	21 41 04.8	-6.1
ADH					A			21 41 06.4	
	47nm,0.1s								
ADH	**Angra Heroismo**	**1.22**	**312**		*e*P		Pg	21 40 50.1	-5.0
ADH					*e*S		Sg	21 41 04.8	-6.1
PID	**Ribeirinha**	**1.72**	**291**		*e*P		Pn	21 40 57.5	-4.8
PID	**Ribeirinha**	**1.72**	**291**		*e*P		Pn	21 40 57.5	-4.8
PMAN	**Manadas**	**1.77**	**297**		*e*P		Pn	21 40 58.2	-4.8
PMAN					*e*S		Sn	21 41 18.1	-7.9
PMAN					A			21 41 21.2	
	38nm,0.2s								
PMAN	**Manadas**	**1.77**	**297**		*e*P		Pn	21 40 58.2	-4.8
PMAN					*e*S		Sn	21 41 18.1	-7.9
ROSA	**Rosais**	**1.92**	**298**		*e*P		Pn	21 41 00.6	-4.4
ROSA					*e*S		Sn	21 41 21.6	-8.0
ROSA	**Rosais**	**1.92**	**298**		*e*P		Pn	21 41 00.6	-4.4
ROSA					*e*S		Sn	21 41 21.6	-8.0
PICO	**Pico**	**1.96**	**291**		*e*P		Pn	21 41 01.1	-4.6
PICO	**Pico**	**1.96**	**291**		*e*P		Pn	21 41 01.1	-4.6
PCAN	**Candelaria**	**2.00**	**289**		*e*P		Pn	21 41 01.6	-4.5
PCAN					*e*S		Sn	21 41 23.8	-7.8
PCAN					A			21 41 25.4	
	44nm,0.1s								
PCAN	**Candelaria**	**2.00**	**289**		*e*P		Pn	21 41 01.6	-4.5
PCAN					*e*S		Sn	21 41 23.8	-7.8
HOR	**Horta**	**2.12**	**290**		*e*S		Sn	21 41 26.9	-7.8
HOR	**Horta**	**2.12**	**290**		*e*S		Sn	21 41 26.9	-7.8
CALA	**Caldeira**	**2.19**	**291**		*e*P		Pn	21 41 04.4	-4.4
CALA					*e*S		Sn	21 41 28.8	-7.7
CALA	**Caldeira**	**2.19**	**291**		*e*P		Pn	21 41 04.4	-4.4
CALA					*e*S		Sn	21 41 28.8	-7.7
PCED	**Cedros**	**2.21**	**292**		*e*P		Pn	21 41 04.2	-4.9
PCED					*e*S		Sn	21 41 29.0	-7.8
PCED					A			21 41 30.0	
	26nm,0.2s								
PCED	**Cedros**	**2.21**	**292**		*e*P		Pn	21 41 04.2	-4.9
PCED					*e*S		Sn	21 41 29.0	-7.8

*ISCJB **22** 22:04:09.3±0.4, 58.°70S±0.°08×25.°1W±0.°1, h10km, mb4.7/24, MS4.4/10, Error ellipse: s-maj=11.5km s-min=9.8km az=38.3*
*IDC **22** 22:04:09.1±0.5, 58.°68S×25.°16W, h0km, mb4.5/12, mb1 4.6/12, mb1mx4.5/18, mbtmp4.5/12, MS4.3/11, Ms1 4.3/11, ms1mx4.2/17, Error ellipse: s-maj=20.0km s-min=15.7km az=32.0*
*NEIC **22** 22:04:17.3±0.2, 58.°72S×25.°18W, h55km, mb4.7/11, Error ellipse: s-maj=8.4km s-min=6.9km az=207.0*

ISC 22 22:04:11.0±0.4, 58.°77S±0.°07×25.°2W±0.°1, h10km, n101, σ0s88/31, mb4.7/24, MS4.4/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.86**	**156**		*e*		**Pn**	**22 07 25.0**	**-2.1**
VNA1					*e*S		**Sn**	**22 09 49.9**	**-11**
PMSA	**Palmer Station**	**19.09**	**235**		P		**Pn**	**22 08 40.6**	**+6.5**
	1.1nm,0.3s,baz=156,slow=1.7,SNR=6.6								
PMSA					LR		LR	22 14 48.9	
	comp=Z,1μm,18.3s,baz=267,slow=33								
USHA	**Ushuaia**	**23.69**	**261**		P		**P**	**22 09 22.5**	**-0.2**
	22nm,0.8s,mb4.6,baz=82,slow=5.8,SNR=4.4								
USHA					LR		LR	22 16 39.2	
	comp=Z,1μm,19.1s,MS4.4,baz=209,slow=32								
TRQA	**Tornquist**	**31.43**	**295**		*e*P		**P**	**22 10 32.6**	**+0.5**
	9.0nm,1.0s,mb4.5								
QSPA	**South Pole Qui**	**31.47**	**180**		*e*P		**P**	**22 10 33.2**	**+1.1**
	26nm,1.0s,mb5.0								
QSPA	**South Pole Qui**	**31.47**	**180**		P		**P**	**22 10 33.9**	**+1.8**
	20nm,0.9s,mb4.9,baz=202,slow=5.1,SNR=39								
PLCA	**Paso Flores**	**33.60**	**282**		P		**P**	**22 10 50.9**	**-0.2**
	11nm,1.1s,mb4.7,baz=133,slow=8.8,SNR=13								
PLCA					PcP		PcP	22 13 31.6	+0.5
	1.9nm,0.8s,baz=236,slow=8.4,SNR=3.7								
PLCA					LR		LR	22 24 30.5	
	comp=Z,608nm,18.5s,MS4.3,baz=109,slow=36								
MAW	**Mawson**	**37.33**	**141**		P		**P**	**22 11 22.5**	**-0.3**
	4.1nm,0.8s,mb4.3,baz=266,slow=8.6,SNR=4.7								
MAW					LR		LR	22 25 00.1	
	comp=Z,671nm,20.0s,MS4.4,baz=249,slow=34								
CPUP	**Villa Florida**	**39.43**	**311**		P		**P**	**22 11 39.8**	**-1.1**
	1.0nm,0.4s,mb3.9,baz=86,slow=7.4,SNR=3.9								
CFAA	**Coronel Fontan**	**39.65**	**294**		P		**P**	**22 11 41.4**	**-1.3**
CFAA					PcP		PcP	22 13 48.9	-0.5
CFAA	**Coronel Fontan**	**39.65**	**294**		P		**P**	**22 11 41.4**	**-1.3**
	0.8nm,0.9s,baz=153,slow=5.6,SNR=12								
CFAA					PcP		PcP	22 13 48.9	-0.5
	0.6nm,0.8s,baz=165,slow=3.2,SNR=4.4								
LCO	**Las Campanas**	**42.98**	**294**		*e*P		**P**	**22 12 10.4**	**+0.3**
	6.7nm,0.8s,mb4.4								
SBA	**Scott Base**	**43.43**	**184**		*e*P		**P**	**22 12 15.8**	**+2.5**
	21nm,1.0s,mb4.8								
BOSA	**Boshof**	**45.70**	**71**		P		**P**	**22 12 31.2**	**-0.6**
	3.6nm,0.6s,mb4.5,baz=206,slow=5.8,SNR=9.6								
BOSA					LR		LR	22 28 06.5	
	comp=Z,280nm,18.5s,MS4.2,baz=215,slow=32								
TSUM	**Tsumeb**	**50.16**	**57**		*e*P		**P**	**22 13 06.3**	**-0.2**
	3.3nm,0.6s,mb4.5								
CASY	**Casey**	**50.97**	**159**		*e*P		**P**	**22 13 12.5**	**+0.5**
	12nm,1.2s,mb4.7								
LPAZ	**La Paz**	**52.83**	**305**		P		**P**	**22 13 25.9**	**-0.6**
LPAZ					PcP		PcP	22 14 37.2	+1.5
LPAZ	**La Paz**	**52.83**	**305**		P		**P**	**22 13 25.9**	**-0.6**
	3.8nm,0.8s,mb4.4,baz=185,slow=6.6,SNR=16								
LPAZ					PcP		PcP	22 14 37.2	+1.5
	2.0nm,0.6s,baz=166,slow=5.3,SNR=3.2								
LSZ	**Lusaka**	**58.43**	**65**		*e*P		**P**	**22 14 07.2**	**+0.4**
	3.4nm,0.7s,mb4.5								
LIC	**Lamto**	**66.77**	**22**		*e*P		**P**	**22 15 02.5**	**+0.1**
	108nm,1.7s,mb5.6								
KIC	**Kosan Boka**	**66.96**	**22**		*e*P		**P**	**22 15 03.8**	**+0.2**
	100nm,1.7s,mb5.6								
TIC	**Toumodi**	**67.18**	**22**		*e*P		**P**	**22 15 05.4**	**+0.4**
	6.4nm,0.2s,mb5.3								
DBIC	**Dimbokro**	**67.24**	**22**		P		**P**	**22 15 04.5**	**-0.8**
	2.3nm,0.5s,mb4.5,baz=161,slow=12,SNR=9.7								
DBIC					LR		LR	22 38 31.5	
	comp=Z,113nm,18.3s,MS4.1,baz=156,slow=31								
OTAV	**Otavalo**	**72.06**	**303**		*e*P		**P**	**22 15 35.7**	**+0.5**
	6.9nm,1.2s,mb4.5								
TORD	**Torodi Ar. Bea**	**74.94**	**27**		P		**P**	**22 15 52.0**	**+0.1**
	6.8nm,0.5s,mb4.9,baz=201,slow=6.3,SNR=85								
TORD					LR		LR	22 43 29.3	
	comp=Z,195nm,18.1s,MS4.5,baz=165,slow=32								
RKT	**Rikitea**	**80.17**	**242**		*e*LR		LR	22 41 23.1	
	371nm,25.0s,baz=157								
JTS	**JuntasAbangare**	**83.88**	**301**		*e*P		**P**	**22 16 41.1**	**+0.4**
	21nm,0.7s,mb5.4								
TAM	**Tamanrasset**	**85.14**	**28**		*e*P		**P**	**22 16 48.5**	**+1.7**
	4.4nm,1.2s,mb4.5								
FORT	**Forrest**	**88.04**	**157**		*e*P		**P**	**22 17 01.1**	**-0.1**
	24nm,1.0s,mb5.4								
STKA	**Stephens Creek**	**89.02**	**169**		P		**P**	**22 17 05.9**	**0.0**
	4.6nm,0.8s,mb4.9,baz=130,slow=5.9,SNR=8.5								
STKA					LR		LR	22 53 24.7	
	comp=Z,252nm,19.5s,MS4.7,baz=205,slow=33								
PPT	**Papeete**	**91.42**	**232**		*e*LR		LR	22 46 35.9	
	203nm,22.8s								
PPT	**Papeete**	**91.42**	**232**		LR		LR	22 51 38.6	
	comp=Z,220nm,19.9s,MS4.6,baz=180,slow=31								
TAOE	**Nuku Hiva Isla**	**94.98**	**244**		*e*LR		LR	22 48 07.8	
	257nm,26.6s								
ASAR	**Alice Springs**	**96.06**	**161**		P		**P**	**22 17 37.5**	**-0.9**
	2.3nm,0.9s,mb4.6,baz=178,slow=4.9,SNR=13								
KEST	**Kesra**	**98.45**	**28**		LR		LR	22 58 26.9	
	comp=Z,35nm,18.3s,MS3.9,baz=212,slow=33								
DZM	**Mont Dzumac**	**98.89**	**191**		*e*LR		LR	22 50 04.6	
	246nm,25.6s								
WRA	**Warramunga Arr**	**99.78**	**160**		LR		LR	22 58 23.5	
	comp=Z,168nm,21.0s,MS4.5,baz=200,slow=33								
TXAR	**Lajitas Array**	**108.98**	**295**		PKiKP		PKiKP	22 22 40.9	+0.8
	0.9nm,1.1s,baz=101,slow=2.8,SNR=4.2								
LAZ	**Ladron**	**114.82**	**296**		*e*PKP		PKiKP	22 22 50.3	-0.7
KIV	**Kislovodsk**	**116.65**	**48**		*e*PKPdf		PKPdf	22 22 54.0	-0.3
SDCO	**Great Sand Dun**	**116.80**	**299**		*e*PKPdf		PKPdf	22 22 55.0	+0.2
MSU	**Marysvale**	**120.53**	**295**		*e*PKPdf		PKPdf	22 23 03.0	+1.1
RSSD	**Black Hills**	**121.31**	**304**		*e*PKPdf		PKPdf	22 23 03.2	0.0
DAU	**Daniels Canyon**	**121.60**	**297**		*e*PKPdf		PKPdf	22 23 04.7	+0.8
DUG	**Dugway**	**122.16**	**295**		*e*PKPdf		PKPdf	22 23 05.6	+0.7
BW06	**Boulder Array**	**122.68**	**299**		*e*PKPdf		PKPdf	22 23 05.3	-0.5
PDAR	**Pinedale Array**	**122.68**	**299**		PKP		PKPdf	22 23 05.7	-0.2
	1.1nm,0.8s,baz=132,slow=2.2,SNR=10								
HWUT	**Hardware Ranch**	**122.69**	**297**		*e*PKPdf		PKPdf	22 23 06.2	+0.3
NOA	**NORSAR Array B**	**122.78**	**20**		PKP		PKPdf	22 23 05.4	-0.1
	1.1nm,0.9s,baz=183,slow=1.6,SNR=3.0								
CMAR	**Chiang Mai Arr**	**123.09**	**110**		PKP		PKPdf	22 23 07.0	-0.4
	3.2nm,0.9s,baz=236,slow=3.8,SNR=14								
NVAR	**Mina Array Bea**	**123.41**	**290**		PKP		PKPdf	22 23 08.3	+0.9
	2.5nm,0.8s,baz=155,slow=2.7,SNR=15								
LOHW	**Long Hollow**	**123.81**	**299**		*e*PKPdf		PKPdf	22 23 08.4	+0.4
TPAW	**Teton Pass**	**123.88**	**299**		*e*PKPdf		PKPdf	22 23 09.1	+1.0
MOOW	**Moose Ponds**	**123.98**	**299**		*e*PKPdf		PKP

σ0ˢ93/49, **mb4.2**/33, **Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**16.39**	**284**	Pn	**Pn**	**23 00 58.0**	**+2.1**
ATD	**Arta Tunnel**	**16.39**	**284**	Pn	**Pn**	**23 00 58.0**	**+2.1**
	0.1nm,0.3s,baz=72,slow=20,SNR=3.9						
KMBO	**Kilima Mbogo**	**23.56**	**248**	*e*P	**P**	**23 02 16.7**	**0.0**
	4.3nm,0.9s,mb3.9						
OPO	**Ambohidratompo**	**28.85**	**204**	P	**P**	**23 03 03.8**	**-0.6**
	0.8nm,0.8s,mb3.5,baz=73,slow=8.5,SNR=3.2						
MALT	**Malatya**	**35.52**	**331**	*e*P	**P**	**23 04 02.8**	**+0.1**
	0.9nm,0.4s,mb4.0						
AAK	**Ala-Archa**	**37.11**	**19**	P	**P**	**23 04 18.6**	**+2.4**
	1.1nm,0.3s,mb4.2,baz=230,slow=10,SNR=3.5						
BRTR	**Keskin Array B**	**38.98**	**328**	P	**P**	**23 04 33.4**	**+1.3**
	2.0nm,0.9s,mb3.8,baz=146,slow=9.0,SNR=12						
CMAR	**Chiang Mai Arr**	**40.10**	**71**	P	**P**	**23 04 42.9**	**+1.2**
	0.5nm,0.3s,mb3.7,baz=242,slow=9.1,SNR=4.2						
CHTO	**Chiang Mai**	**40.16**	**70**	*e*P	**P**	**23 04 42.1**	**-0.1**
	1.3nm,0.6s,mb3.8						
ABKAR	**Akbulak array**	**41.17**	**1**	*e*P	**P**	**23 04 50.4**	**+0.3**
	5.7nm,0.9s,mb4.2						
AKTK	**Aktyubinsk**	**42.35**	**359**	P	**P**	**23 04 60.0**	**+0.2**
AKTO	**Aktyubinsk**	**42.35**	**359**	P	**P**	**23 04 60.0**	**+0.2**
	2.5nm,0.9s,mb3.9,baz=183,slow=9.2,SNR=7.3						
MKAR	**Makanchi Array**	**43.50**	**23**	P	**P**	**23 05 09.1**	**0.0**
	0.3nm,0.2s,mb3.6,baz=219,slow=9.4,SNR=4.1						
MKAR				PcP	PcP	23 06 57.3	+0.3
	0.2nm,0.2s,baz=224,slow=3.3,SNR=3.8						
KURK	**Kurchatov**	**45.61**	**17**	P	**P**	**23 05 25.4**	**-0.5**
	0.5nm,0.2s,mb4.0,baz=206,slow=6.2,SNR=3.6						
BVAR	**Borovoye Array**	**45.87**	**9**	P	**P**	**23 05 28.0**	**0.0**
	0.4nm,0.5s,mb3.6,baz=188,slow=10,SNR=6.8						
BVAR				PcP	PcP	23 07 05.5	+0.5
	0.7nm,0.8s,baz=233,slow=6.7,SNR=4.5						
ARU	**Arti**	**48.35**	**360**	*e*P	**P**	**23 05 47.0**	**-0.2**
	2.9nm,0.9s,mb4.3						
AKASG	**Malin Array Be**	**49.28**	**335**	P	**P**	**23 05 54.4**	**-0.1**
AKASG	**Malin Array Be**	**49.28**	**335**	P	**P**	**23 05 54.4**	**-0.1**
	1.1nm,0.6s,mb4.1,baz=125,slow=7.1,SNR=6.5						
ZALV	**Zalesovo Beam**	**50.34**	**19**	P	**P**	**23 06 01.4**	**-1.1**
	0.8nm,0.8s,mb3.8,baz=219,slow=8.8,SNR=6.3						
ZALV				LR	LR	23 28 26.4	
	comp=Z,52nm,19.7s,baz=342,slow=37						
KWP	**Kalwaria Pacla**	**51.47**	**330**	*e*P	**P**	**23 06 11.5**	**+0.5**
	6.9nm,1.1s,mb4.5						
CRVS	**Cervenica-Dubn**	**51.61**	**329**	*e*P	**P**	**23 06 13.1**	**+0.9**
	4.0nm,1.3s,mb4.2						
CRVS	**Cervenica-Dubn**	**51.61**	**329**	*e*P	**P**	**23 06 13.1**	**+0.9**
STHS	**Stebnicka Huta**	**52.05**	**329**	*e*P	**P**	**23 06 17.3**	**+1.9**
STHS	**Stebnicka Huta**	**52.05**	**329**	*e*P	**P**	**23 06 17.3**	**+1.9**
VYHS	**Vyhne**	**52.73**	**327**	*e*P	**P**	**23 06 20.7**	**+0.2**
	1.8nm,1.2s,mb3.9						
VYHS	**Vyhne**	**52.73**	**327**	*e*P	**P**	**23 06 20.7**	**+0.2**
OKC	**Ostrava-Krasne**	**53.90**	**328**	*e*P	**P**	**23 06 29.3**	**+0.3**
MORC	**Moravsky Berou**	**54.18**	**328**	*e*P	**P**	**23 06 30.6**	**-0.5**
	6.6nm,1.1s,mb4.5						
DPC	**Dobruska-Polom**	**55.15**	**328**	*e*P	**P**	**23 06 37.3**	**-0.8**
UPC	**Upice**	**55.40**	**328**	*e*P	**P**	**23 06 38.8**	**-1.2**
PRU	**Pruhonice**	**55.90**	**327**	*e*P	**P**	**23 06 41.1**	**-2.4**
KHC	**Kasperske Hory**	**55.97**	**326**	*e*P	**P**	**23 06 43.3**	**-0.8**
SONM	**Songino Array**	**56.35**	**17**	P	**P**	**23 06 47.4**	**+0.6**
	1.3nm,1.1s,mb3.9,baz=228,slow=8.2,SNR=5.5						
TORD	**Torodi Ar. Bea**	**56.56**	**280**	P	**P**	**23 06 51.0**	**+2.1**
TORD	**Torodi Ar. Bea**	**56.56**	**280**	P	**P**	**23 06 51.0**	**+2.1**
	2.0nm,1.1s,mb4.0,baz=142,slow=5.6,SNR=6.6						
NKC	**Novy Kostel**	**57.17**	**326**	*e*P	**P**	**23 06 49.7**	**-2.9**
CABF	**La Chapelle**	**59.30**	**320**	*e*P	**P**	**23 07 07.9**	**+0.3**
	70nm,1.1s,mb5.3						
CDF	**Champ du Feu**	**59.30**	**322**	*e*P	**P**	**23 07 07.3**	**-0.2**
	21nm,1.2s,mb4.7						
HINF	**Hinteralfeld**	**59.31**	**322**	*e*P	**P**	**23 07 07.0**	**-0.6**
	14nm,1.3s,mb4.5						
HAU	**Haudompre**	**59.70**	**322**	*e*P	**P**	**23 07 09.7**	**-0.6**
SFTF	**Sexfontaines**	**60.58**	**322**	*e*P	**P**	**23 07 16.2**	**-0.1**
	36nm,1.2s,mb5.1						
LOR	**Lormes**	**60.96**	**320**	*e*P	**P**	**23 07 18.4**	**-0.6**
	18nm,1.2s,mb4.8						
SSF	**Saint Saulge**	**61.11**	**320**	*e*P	**P**	**23 07 19.4**	**-0.6**
	7.2nm,0.9s,mb4.5						
CAF	**Calviac**	**61.33**	**317**	*e*P	**P**	**23 07 21.1**	**-0.4**
	18nm,1.4s,mb4.7						
BGF	**Bois d'Agland**	**61.36**	**319**	*e*P	**P**	**23 07 21.4**	**-0.3**
	18nm,1.0s,mb4.8						
BAIF	**Baives**	**61.81**	**323**	*e*P	**P**	**23 07 23.6**	**-1.0**
	10nm,1.0s,mb4.6						
NOA	**NORSAR Array B**	**63.67**	**336**	P	**P**	**23 07 36.4**	**-0.5**
	1.5nm,1.1s,mb3.9,baz=120,slow=7.0,SNR=2.7						
ESDC	**Sonseca Array**	**64.28**	**310**	P	**P**	**23 07 42.0**	**+0.7**
	1.5nm,0.9s,mb4.0,baz=90,slow=6.6,SNR=6.1						
ASAR	**Alice Springs**	**79.46**	**116**	P	**P**	**23 09 12.7**	**-0.1**
	0.4nm,0.9s,mb3.4,baz=235,slow=6.8,SNR=4.5						
PDAR	**Pinedale Array**	**128.47**	**349**	PKP	PKPdf	23 16 11.8	-1.3
	0.5nm,1.0s,baz=66,slow=2.3,SNR=3.9						

*ISCJB **22** 22:57:26.2±0.5, 58°.65S±0°.09×25°.1W±0°.2, h10ᵏᵐ, mb4.1/15, Error ellipse: s-maj=14.8km s-min=10.9km az=43.8*
*IDC **22** 22:57:26.4±0.6, 58°.70S×25°.14W, h0ᵏᵐ, mb4.0/12, mb1 4.1/12, mb1mx4.0/20, mbtmp4.0/12, Error ellipse: s-maj=22.8km s-min=17.8km az=7.0*
*NEIC **22** 22:57:30.2±4.8, 58°.64S×25°.19W, h24ᵏᵐ±33ᵏᵐ, mb4.3/5, Error ellipse: s-maj=11.6km s-min=9.0km az=48.0*

ISC 22 22:57:28.1±0.5, **58°.67S**±0°.09×**25°.1W**±0°.2, **h10**ᵏᵐ, **n35**, σ0ˢ**77**/20, **mb4.1**/15, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAIT	**Maitri**	**19.44**	**143**	*e*P	**Pn**	**23 01 54.0**	**-1.4**
TRQA	**Tornquist**	**31.41**	**295**	*e*P	**P**	**23 03 48.4**	**-0.6**
	8.3nm,1.2s,mb4.4						
QSPA	**South Pole Qui**	**31.57**	**180**	P	**P**	**23 03 50.5**	**+0.4**
	2.8nm,0.6s,mb4.3						
QSPA	**South Pole Qui**	**31.57**	**180**	P	**P**	**23 03 50.4**	**+0.3**
	3.6nm,0.7s,mb4.3,baz=189,slow=2.3,SNR=23						
PLCA	**Paso Flores**	**33.60**	**282**	P	**P**	**23 04 08.6**	**+0.4**
PLCA	**Paso Flores**	**33.60**	**282**	P	**P**	**23 04 08.6**	**+0.4**
	1.4nm,0.7s,mb4.0,baz=130,slow=9.7,SNR=3.8						
CPUP	**Villa Florida**	**39.38**	**311**	P	**P**	**23 04 57.9**	**+0.3**
	0.6nm,0.5s,mb3.6,baz=153,slow=14,SNR=2.3						
CFAA	**Coronel Fontan**	**39.63**	**294**	P	**P**	**23 04 59.7**	**0.0**
	0.2nm,0.4s,mb3.2,baz=228,slow=1.2,SNR=3.7						
SBA	**Scott Base**	**43.53**	**184**	*e*P	**P**	**23 05 31.8**	**+0.7**
	3.6nm,0.9s,mb4.1						
BOSA	**Boshof**	**45.64**	**71**	P	**P**	**23 05 48.4**	**-0.1**
BOSA	**Boshof**	**45.64**	**71**	P	**P**	**23 05 48.4**	**-0.1**
	2.4nm,1.0s,mb4.1,baz=265,slow=9.2,SNR=3.9						
TSUM	**Tsumeb**	**50.09**	**57**	P	**P**	**23 06 23.8**	**+0.8**
	1.6nm,0.7s,mb4.1,baz=167,slow=4.8,SNR=2.8						
SIV	**San Ignacio**	**50.19**	**313**	P	**P**	**23 06 22.2**	**-1.5**
	0.5nm,0.5s,mb3.8,baz=148,slow=12,SNR=3.6						
CASY	**Casey**	**51.06**	**159**	*e*P	**P**	**23 06 30.8**	**+1.1**
	2.7nm,0.6s,mb4.3						
LPAZ	**La Paz**	**52.80**	**305**	P	**P**	**23 06 43.5**	**+0.2**
	1.4nm,0.8s,mb4.0,baz=187,slow=7.2,SNR=6.7						
LSZ	**Lusaka**	**58.37**	**65**	*e*P	**P**	**23 07 22.3**	**-1.1**
	1.5nm,0.7s,mb4.1						
LSZ	**Lusaka**	**58.37**	**65**	P	**P**	**23 07 22.7**	**-0.7**
	0.8nm,0.6s,mb3.9,baz=207,slow=6.8,SNR=2.9						
DBIC	**Dimbokro**	**67.14**	**22**	P	**P**	**23 08 22.1**	**+0.3**
	5.2nm,1.1s,mb4.5,baz=196,slow=7.7,SNR=4.3						
TORD	**Torodi Ar. Bea**	**74.84**	**27**	P	**P**	**23 09 09.4**	**+1.0**
	2.2nm,0.4s,mb4.4,baz=201,slow=6.4,SNR=84						
STKA	**Stephens Creek**	**89.12**	**169**	P	**P**	**23 10 22.8**	**-0.6**
	1.5nm,0.9s,mb4.3,baz=185,slow=11,SNR=3.2						
PDAR	**Pinedale Array**	**122.65**	**299**	PKP	PKPdf	23 16 22.3	-0.6
	0.4nm,0.7s,baz=114,slow=4.0,SNR=3.8						
NVAR	**Mina Array Bea**	**123.40**	**290**	PKP	PKPdf	23 16 25.6	+1.1
	0.8nm,0.7s,baz=134,slow=4.1,SNR=5.7						
CHMT	**Chamberlain Mo**	**127.52**	**300**	*e*PKPdf	PKPdf	23 16 32.4	+0.3
BVAR	**Borovoye Array**	**135.22**	**59**	PKP	PKPdf	23 16 47.3	+0.8
	0.6nm,0.6s,baz=222,slow=2.0,SNR=4.5						
INK	**Inuvik**	**148.52**	**318**	*e*PKPbc	PKPbc	23 17 12.6	-0.6
INK	**Inuvik**	**148.52**	**318**	PKPbc	PKPbc	23 17 13.2	-0.1
	7.7nm,0.8s,baz=105,slow=2.7,SNR=15						
DAWY	**Dawson**	**149.34**	**308**	*e*PKPbc	PKPbc	23 17 15.0	-0.5
SONM	**Songino Array**	**149.71**	**89**	PKPbc	PKPbc	23 17 16.2	-0.7
	2.8nm,0.9s,baz=222,slow=3.1,SNR=14						
EGAK	**Eagle**	**150.30**	**309**	*e*PKPbc	PKPbc	23 17 17.1	-0.6
ILAR	**Eielson Array**	**152.65**	**308**	PKPbc	PKPbc	23 17 22.8	-0.4
	3.4nm,0.7s,baz=150,slow=2.7,SNR=30						
KDAK	**Kodiak Island**	**152.90**	**291**	*e*PKPbc	PKPbc	23 17 23.7	-0.2
KDAK	**Kodiak Island**	**152.90**	**291**	PKPbc	PKPbc	23 17 23.9	0.0
	4.2nm,0.6s,baz=142,slow=5.3,SNR=5.9						
MCK	**McKinley**	**153.24**	**305**	*e*PKPbc	PKPbc	23 17 24.9	+0.4
BPAW	**Bear Paw Mtn.**	**154.21**	**305**	*e*PKPbc	PKPbc	23 17 25.8	-0.8
COLD	**Coldfoot**	**154.46**	**312**	*e*PKPbc	PKPbc	23 17 27.6	+0.6

IGQ 22 22:58:04.9, 0°.25S×80°.44W, h37ᵏᵐ±1ᵏᵐ**, Mb4.2, Ms4.0, 2C-2D, Error ellipse: s-maj=4.7km s-min=1.3km az=39.8, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMA	**Jama**	**0.23**	**94**	⇑P	Pn	22 58 11.8	-0.3
PECV	**Mancha de Ca P**	**0.66**	**144**	P	Pn	22 58 15.6	-2.1
MAG1	**Magdalena**	**0.69**	**75**	P	Pn	22 58 20.9	+2.9
CHIS	**Cerro-Chispas-**	**0.85**	**200**	S	Sn	22 58 32.6	+1.0
CHIS	**Cerro-Chispas-**	**0.85**	**200**	P	Pn	22 58 20.7	+0.4
GOLV	**Golondrinas**	**1.38**	**71**	P	Pn	22 58 32.4	+4.8
JUA2	**San Juan 2**	**1.83**	**89**	S	Sn	22 58 58.8	+2.9
JUA2	**San Juan 2**	**1.83**	**89**	P	Pn	22 58 36.1	+2.2
TERV	**Terraza Guagua**	**1.83**	**88**	P	Pn	22 58 37.4	+3.5
GGP	**Refugio Guagua**	**1.84**	**88**	P	Pn	22 58 35.8	+1.8
YANA	**Yana**	**1.87**	**86**	P	Pn	22 58 36.5	+2.1
CAMI	**Rancho Maria**	**1.98**	**103**	P	Pn	22 58 42.9	+7.0
PITA	**Cotopaxi Volc**	**2.03**	**99**	P	Pn	22 58 39.2	+2.7
BMOR	**Cotopaxi Volca**	**2.04**	**104**	P	Pn	22 58 39.3	+2.6
BRFF	**Cotopaxi Volca**	**2.04**	**102**	⇓P	Pn	22 58 40.0	+3.2
MOV1	**Cotopaxi Vol s**	**2.05**	**103**	P	Pn	22 58 39.5	+2.6
MOV1	**Cotopaxi Vol s**	**2.05**	**103**	S	Sn	22 59 02.5	+1.2
BVC2	**Cotopaxi Volca**	**2.07**	**101**	⇓P	Pn	22 58 40.3	+3.2
VC1	**Cotopaxi 1**	**2.07**	**101**	P	Pn	22 58 40.4	+3.2
BTAM	**Cotopaxi Volca**	**2.08**	**102**	P	Pn	22 58 40.6	+3.3
TAMB	**Tambo**	**2.12**	**102**	P	Pn	22 58 40.9	+3.1
COV1	**Cotopaxi Volc**	**2.13**	**101**	P	Pn	22 58 40.2	+2.1
COTA	**Cotacachi**	**2.18**	**75**	S	Sn	22 59 08.0	+3.6
COTA	**Cotacachi**	**2.18**	**75**	P	Pn	22 58 41.8	+3.1
IGUA	**Igualata**	**2.18**	**125**	P	Pn	22 58 40.7	+2.0
ANTI	**Antisana**	**2.28**	**95**	P	Pn	22 58 43.7	+3.6
JUI6	**Juive**	**2.29**	**121**	P	Pn	22 58 42.7	+2.6
BMAS	**Trigal station**	**2.32**	**123**	P	Pn	22 58 43.3	+2.7
RETU	**Refugio**	**2.32**	**121**	P	Pn	22 58 48.2	+7.5
BRUN	**Tungurahua Vol**	**2.34**	**120**	P	Pn	22 58 43.3	+2.4
BRUN	**Tungurahua Vol**	**2.34**	**120**	S	Sn	22 59 09.3	+0.9
ARRY	**Arrayan**	**2.34**	**122**	S	Sn	22 59 09.3	+0.8
ARRY	**Arrayan**	**2.34**	**122**	P	Pn	22 58 43.3	+2.3
BULB	**Ulba Tungurahu**	**2.35**	**120**	⇑P	Pn	22 58 43.8	+2.8
PAT1	**Patacocha**	**2.36**	**122**	P	Pn	22 58 44.8	+3.7
CAYR	**Refugio Cayamb**	**2.44**	**84**	P	Pn	22 58 47.2	+4.9
CAYA	**Cayambe**	**2.47**	**83**	P	Pn	22 58 46.9	+4.2

*ISCJB **22** 22:58:53.7±0.5, 58°.69S±0°.10×25°.4W±0°.2, h10ᵏᵐ, mb4.1/13, Error ellipse: s-maj=16.0km s-min=11.8km az=42.9*
*IDC **22** 22:58:54.1±0.6, 58°.76S×25°.38W, h0ᵏᵐ, mb4.1/10, mb1 4.2/10, mb1mx4.1/20, mbtmp4.1/10, Error ellipse: s-maj=26.2km s-min=18.8km az=6.0*
*NEIC **22** 22:58:59.8±0.2, 58°.68S×25°.31W, h35ᵏᵐ, mb4.3/5, Error ellipse: s-maj=12.1km s-min=9.9km az=211.0*

ISC 22 22:58:55.6±0.5, **58°.71S**±0°.10×**25°.3W**±0°.2, **h10**ᵏᵐ, **n47**, σ0ˢ**82**/18, **mb4.1**/13, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAIT	**Maitri**	**19.48**	**143**	*e*P	**Pn**	**23 03 22.7**	**-0.7**
QSPA	**South Pole Qui**	**31.54**	**180**	P	**P**	**23 05 17.4**	**+0.1**
	6.1nm,1.0s,mb4.4						
QSPA	**South Pole Qui**	**31.54**	**180**	P	**P**	**23 05 17.2**	**-0.1**
	3.9nm,0.7s,mb4.3,baz=207,slow=7.3,SNR=5.5						
PLCA	**Paso Flores**	**33.50**	**282**	P	**P**	**23 05 33.6**	**-1.3**
	2.3nm,0.8s,mb4.1,baz=112,slow=7.6,SNR=4.6						
CFAA	**Coronel Fontan**	**39.55**	**294**	P	**P**	**23 06 26.2**	**-0.4**
CFAA	**Coronel Fontan**	**39.55**	**294**	P	**P**	**23 06 26.2**	**-0.3**
	0.3nm,0.4s,mb3.3,baz=185,slow=4.6,SNR=4.6						
SBA	**Scott Base**	**43.49**	**184**	*e*P	**P**	**23 07 00.6**	**+2.2**
	5.2nm,1.0s,mb4.2						
BOSA	**Boshof**	**45.76**	**71**	P	**P**	**23 07 16.6**	**-0.4**
	1.9nm,0.7s,mb4.2,baz=190,slow=5.6,SNR=4.5						
SIV	**San Ignacio**	**50.13**	**313**	P	**P**	**23 07 50.6**	**-0.3**
	0.4nm,0.4s,mb3.8,baz=200,slow=11,SNR=3.7						
TSUM	**Tsumeb**	**50.20**	**57**	P	**P**	**23 07 51.8**	**+0.4**
	2.5nm,0.7s,mb4.3,baz=210,slow=4.4,SNR=3.5						
CASY	**Casey**	**51.06**	**159**	*e*P	**P**	**23 07 57.4**	**0.0**
	2.4nm,0.8s,mb4.2						
LPAZ	**La Paz**	**52.73**	**305**	P	**P**	**23 08 11.3**	**+0.9**
	1.0nm,0.4s,mb4.1,baz=173,slow=5.3,SNR=4.9						
LPAZ				PcP	PcP	23 09 20.1	+0.1
	0.6nm,0.5s,baz=74,slow=7.2,SNR=2.0						
LSZ	**Lusaka**	**58.48**	**66**	*e*P	**P**	**23 08 51.1**	**-0.6**
	1.7nm,0.7s,mb4.2						
LSZ	**Lusaka**	**58.48**	**66**	P	**P**	**23 08 51.5**	**-0.2**
	1.6nm,0.7s,mb4.2,baz=190,slow=10,SNR=4.9						
OTAV	**Otavalo**	**71.95**	**303**	*e*P	**P**	**23 10 19.4**	**+0.2**
	4.2nm,1.2s,mb4.2						
TORD	**Torodi Ar. Bea**	**74.92**	**27**	P	**P**	**23 10 37.5**	**+1.0**
TORD	**Torodi Ar. Bea**	**74.92**	**27**	P	**P**	**23 10 37.5**	**+1.0**
	3.4nm,0.5s,mb4.5,baz=202,slow=6.5,SNR=20						
ASAR	**Alice Springs**	**96.15**	**161**	P	**P**	**23 12 22.8**	**-0.8**
	1.0nm,1.1s,mb4.2,baz=164,slow=3.3,SNR=4.2						
BW06	**Boulder Array**	**122.57**	**300**	*e*PKPdf	PKPdf	23 17 50.1	-0.3
HWUT	**Hardware Ranch**	**122.58**	**297**	*e*PKPdf	PKPdf	23 17 50.9	+0.5
CMAR	**Chiang Mai Arr**	**123.19**	**110**	PKP	PKPdf	23 17 52.6	+0.4
	0.5nm,0.3s,baz=248,slow=2.4,SNR=4.8						
NVAR	**Mina Array Bea**	**123.31**	**290**	PKP	PKPdf	23 17 53.3	+1.4
	0.9nm,0.7s,baz=141,slow=4.8,SNR=5.1						
LOHW	**Long Hollow**	**123.71**	**300**	*e*PKPdf	PKPdf	23 17 53.4	+0.9
TPAW	**Teton Pass**	**123.77**	**299**	*e*PKPdf	PKPdf	23 17 53.5	+0.9
MOOW	**Moose Ponds**	**123.88**	**300**	*e*PKPdf	PKPdf	23 17 53.5	+0.7
FLWY	**Flagg Ranch**	**124.12**	**300**	*e*PKPdf	PKPdf	23 17 54.3	+1.1
WVOR	**Wild Horse Val**	**126.56**	**293**	*e*PKPdf	PKPdf	23 17 59.0	+1.0
CHMT	**Chamberlain Mo**	**127.44**	**300**	*e*PKPdf	PKPdf	23 18 01.2	+1.7
ABKAR	**Akbulak array**	**128.04**	**56**	*e*PKPdf	PKPdf	23 17 59.9	-0.6
SWMT	**Swartz Lake**	**128.22**	**300**	*e*PKPdf	PKPdf	23 18 02.2	+1.2
ARCES	**ARCESS Array B**	**133.04**	**22**	PKP	PKPdf	23 18 10.3	+0.8
ARCES	**ARCESS Array B**	**133.04**	**22**	PKP	PKPdf	23 18 10.3	+0.8
	0.6nm,0.6s,baz=197,slow=3.7,SNR=3.7						
INK	**Inuvik**	**148.47**	**318**	*e*PKPbc	PKPbc	23 18 40.8	+0.1
INK	**Inuvik**	**148.47**	**318**	PKPbc	PKPbc	23 18 40.9	+0.2
	11nm,0.8s,baz=108,slow=3.2,SNR=14						
DAWY	**Dawson**	**149.27**	**308**	*e*PKPbc	PKPbc	23 18 43.3	+0.5
SONM	**Songino Array**	**149.81**	**90**	PKPbc	PKPbc	23 18 44.7	+0.1
	3.2nm,0.8s,baz=222,slow=3.1,SNR=14						
EGAK	**Eagle**	**150.24**	**309**	*e*PKPbc	PKPbc	23 18 45.2	0.0
BMRM	**Bremner River**	**150.35**	**301**	*e*PKPbc	PKPbc	23 18 46.6	+1.1
MENT	**Mentasta**	**150.69**	**305**	*e*PKPbc	PKPbc	23 18 47.4	+1.1
DIV	**Divide**	**150.94**	**301**	*e*PKPbc	PKPbc	23 18 48.0	+1.1
ILAR	**Eielson Array**	**152.59**	**308**	PKPbc	PKPbc	23 18 51.2	+0.6
	8.0nm,1.0s,baz=141,slow=1.8,SNR=24						
KDAK	**Kodiak Island**	**152.81**	**291**	*e*PKPbc	PKPbc	23 18 51.8	+0.5
KDAK	**Kodiak Island**	**152.81**	**291**	PKPbc	PKPbc	23 18 52.0	+0.7
	5.5nm,0.7s,baz=147,slow=1.9,SNR=5.6						
OHAK	**Old Harbor**	**152.91**	**290**	*e*PKPbc	PKPbc	23 18 52.1	+0.6
BPAW	**Bear Paw Mtn.**	**154.14**	**305**	*e*PKPbc	PKPbc	23 18 54.3	+0.3
PPLA	**Purkeypile**	**154.37**	**302**	*e*PKPbc	PKPbc	23 18 55.6	+1.1
COLD	**Coldfoot**	**154.40**	**312**	*e*PKPbc	PKPbc	23 18 56.0	+1.5

IDC 22 23:14:41.7±3.5, **58°.94S×25°.12W, h0**ᵏᵐ, **mb4.0**/2, **mb1 4.1**/2, **mb1mx3.7**/15, **mbtmp4.0**/2, **MS3.7**/3, **Ms1 3.6**/3, **ms1mx3.3**/13, **Error ellipse: s-maj=153.6km s-min=40.9km az=159.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**33.66**	**282**	P	P	23 21 23.9	+0.1
	1.6nm,0.7s,baz=150,slow=8.1,SNR=3.2						
PLCA				LR	LR	23 35 12.7	
	comp=Z,89nm,18.4s,baz=153,slow=37						
BOSA	**Boshof**	**45.73**	**71**	LR	LR	23 38 57.7	
	comp=Z,77nm,18.2s,baz=152,slow=32						
TORD	**Torodi Ar. Bea**	**75.08**	**27**	P	P	23 26 25.2	+0.1
	0.5nm,0.4s,baz=201,slow=6.2,SNR=19						
TORD				LR	LR	23 54 02.8	
	comp=Z,45nm,19.0s,baz=140,slow=31						
INK	**Inuvik**	**148.72**	**317**	PKPbc	PKPbc	23 34 28.6	-0.5
	6.2nm,0.9s,baz=89,slow=3.4,SNR=7.7						
ILAR	**Eielson Array**	**152.82**	**307**	PKPbc	PKPbc	23 34 38.8	-0.1
	3.6nm,0.9s,baz=97,slow=2.2,SNR=26						

IDC 22 23:36:35.9±1.7, **58°.90S×25°.11W, h0**ᵏᵐ, **mb4.0**/3, **mb1 4.1**/3, **mb1mx3.8**/15, **mbtmp4.0**/3, **MS3.4**/1, **Ms1 3.3**/1, **ms1mx2.9**/13, **Error ellipse: s-maj=73.2km**

s-min=34.9km az=176.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**33.66**	**282**	P	P	23 43 18.6	+0.5
	1.5nm,0.9s,baz=134,slow=5.3,SNR=3.1						
BOSA	**Boshof**	**45.71**	**71**	LR	LR	23 59 27.1	
	comp=Z,44nm,20.3s,baz=313,slow=30						
LPAZ	**La Paz**	**52.94**	**305**	P	P	23 45 54.0	+0.2
	0.4nm,0.5s,baz=122,slow=6.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	**75.04**	**27**	P	P	23 48 19.3	+0.2
	2.4nm,0.8s,baz=200,slow=6.3,SNR=17						
INK	**Inuvik**	**148.70**	**317**	PKPbc	PKPbc	23 56 22.4	-0.8
	6.8nm,1.0s,baz=120,slow=3.0,SNR=7.8						
SONM	**Songino Array**	**149.70**	**90**	PKPbc	PKPbc	23 56 26.0	-0.4
	1.2nm,0.8s,baz=244,slow=2.4,SNR=5.7						
ILAR	**Eielson Array**	**152.80**	**307**	PKPbc	PKPbc	23 56 33.2	+0.2
	3.9nm,1.0s,baz=101,slow=1.8,SNR=28						

*ISCJB **22** 23:37:31.0±0.6, 32°.37N±0°.04×6°.39W±0°.05, h24ᵏᵐ±6ᵏᵐ, Error ellipse: s-maj=7.9km s-min=6.0km az=27.4*
*CSEM **22** 23:37:31.5±0.5, 32°.26N×6°.30W, h15ᵏᵐ, MD3.2, Error ellipse: s-maj=9.8km s-min=8.3km az=25.0*
*CNRM **22** 23:37:32.3, 32°.29N×6°.33W, h9ᵏᵐ, MD3.2*
*MDD **22** 23:37:32.0±0.5, 32°.25N×6°.28W, h8ᵏᵐ±4ᵏᵐ, mb4.1/1, Error ellipse: s-maj=8.2km s-min=3.8km az=138.0, PRIMO*
*INMG **22** 23:37:34.9±1.0, 32°.53N×6°.17W, h0ᵏᵐ, ML2.4, Error ellipse: s-maj=8.5km s-min=6.3km az=57.0*

ISC 22 23:37:31.9±0.6, **32°.33N**±0°.04×**6°.33W**±0°.04, **h18**ᵏᵐ±4ᵏᵐ, **n58**, σ1ˢ**15**/94, **Morocco**

| Code | Station Name | Δ° | AZ° | Phase ID Op |

*ISCJB **22** 23:38:48.3±0.6, 32°.36N±0°.05×6°.43W±0°.04, h21km±7km, Error ellipse: s-maj=7.7km s-min=6.2km az=16.7*
*CSEM **22** 23:38:48.0±0.4, 32°.29N×6°.37W, h12km, ML3.1/5, Error ellipse: s-maj=8.9km s-min=8.0km az=57.0*
*CNRM **22** 23:38:49.0, 32°.34N×6°.40W, h3km, MD3.3*
*MDD **22** 23:38:49.0±0.6, 32°.25N×6°.27W, h1km±6km, mb3.9/1, Error ellipse: s-maj=8.3km s-min=3.4km az=140.0, PRIMO*
*INMG **22** 23:38:53.6±0.9, 32°.55N×6°.24W, h0km, ML2.4, Error ellipse: s-maj=6.9km s-min=5.6km az=6.0*

ISC 22 23:38:49.2±0.6, 32°.34N±0°.04×6°.37W±0°.04, h14km±5km, n49, σ1°25/83, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TZC	**Tazercounte**	**0.21**	**209**	P	**Pg**	**23 38 52.5**	**-1.4**
TZC				S	**Sg**	**23 38 57.0**	**-0.1**
TZC	**Tazercounte**	**0.21**	**209**	P	**Pg**	**23 38 52.5**	**-1.4**
TZC				S	**Sg**	**23 38 57.0**	**-0.1**
TZC	**Tazercounte**	**0.21**	**209**	*i* P	**Pg**	**23 38 52.5**	**-1.4**
TZC				*i* S	**Sg**	**23 38 57.0**	**-0.1**
KIB	**El Ksiba**	**0.37**	**49**	P	**Pg**	**23 38 56.0**	**-0.6**
KIB				S	**Sg**	**23 39 02.0**	**+0.3**
KIB	**El Ksiba**	**0.37**	**49**	P	**Pg**	**23 38 56.0**	**-0.6**
KIB				S	**Sg**	**23 39 02.0**	**+0.3**
KIB	**El Ksiba**	**0.37**	**49**	*i* P	**Pg**	**23 38 56.0**	**-0.6**
KIB				*i* S	**Sg**	**23 39 02.0**	**+0.3**
CZD	**Col de Zad**	**1.32**	**58**	P	**Pn**	**23 39 11.0**	**-2.1**
CZD				S	**Sb**	**23 39 32.0**	**+1.6**
CZD	**Col de Zad**	**1.32**	**58**	P	**Pn**	**23 39 11.0**	**-2.1**
CZD				S	**Sb**	**23 39 32.0**	**+1.6**
CZD	**Col de Zad**	**1.32**	**58**	*i* P	**Pn**	**23 39 11.0**	**-2.1**
CZD				*i* S	**Sb**	**23 39 32.0**	**+1.6**
ZFT	**Errachidia**	**1.74**	**99**	P	**Pn**	**23 39 18.0**	**-0.9**
ZFT				S	**Sn**	**23 39 41.0**	**+0.2**
ZFT	**Errachidia**	**1.74**	**99**	P	**Pn**	**23 39 18.0**	**-0.9**
ZFT				S	**Sn**	**23 39 41.0**	**+0.2**
ZFT	**Errachidia**	**1.74**	**99**	*i* P	**Pn**	**23 39 18.0**	**-0.9**
ZFT				*i* S	**Sn**	**23 39 41.0**	**+0.2**
TZK	**Tazeka**	**2.53**	**46**	P	**Pn**	**23 39 30.0**	**+0.1**
TZK				S	**Sn**	**23 40 01.0**	**+0.5**
TZK	**Tazeka**	**2.53**	**46**	P	**Pn**	**23 39 30.0**	**+0.1**
TZK				S	**Sn**	**23 40 01.0**	**+0.5**
TZK	**Tazeka**	**2.53**	**46**	*i* P	**Pn**	**23 39 30.0**	**+0.1**
TZK				*i* S	**Sn**	**23 40 01.0**	**+0.5**
PBDV	**Barranco-do-Ve**	**5.06**	**346**	*e*Sn	**Sn**	**23 41 02.9**	**0.0**
PBDV	**Barranco-do-Ve**	**5.06**	**346**	Sn	**Sn**	**23 41 02.9**	**0.0**
PBDV	**Barranco-do-Ve**	**5.06**	**346**	Sn	**Sn**	**23 41 02.9**	**0.0**
PBDV	**Barranco-do-Ve**	**5.06**	**346**	*e*Sn	**Sn**	**23 41 02.9**	**0.0**
PVAQ	**Vaqueiros**	**5.18**	**348**	*e*Pn	**Pn**	**23 40 07.1**	**+0.9**
PVAQ				*e*Sn	**Sn**	**23 41 04.9**	**-0.8**
PVAQ				A		23 41 11.9	
	3.2nm,0.6s						
PVAQ	**Vaqueiros**	**5.18**	**348**	Pn	**Pn**	**23 40 07.1**	**+0.9**
PVAQ				Sn	**Sn**	**23 41 04.9**	**-0.8**
	3.2nm,0.6s						
PVAQ	**Vaqueiros**	**5.18**	**348**	Pn	**Pn**	**23 40 07.1**	**+0.9**
PVAQ				Sn	**Sn**	**23 41 04.9**	**-0.8**
	3.2nm,0.6s						
PVAQ	**Vaqueiros**	**5.18**	**348**	*e*Pn	**Pn**	**23 40 07.1**	**+0.9**
PVAQ				*e*Sn	**Sn**	**23 41 04.9**	**-0.8**
	3.2nm,0.6s						
PFVI	**Vila Bisbo**	**5.20**	**338**	*e*Sn	**Sn**	**23 41 06.7**	**+0.5**
PFVI				A		23 41 12.0	
	11nm,0.8s						
PFVI	**Vila Bisbo**	**5.20**	**338**	P	**Pn**	**23 40 08.0**	**+1.5**
	0.1nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**23 41 07.1**	**+0.9**
	0.9nm,0.0s,SNR=7.9						
PFVI	**Vila Bisbo**	**5.20**	**338**	P	**Pn**	**23 40 08.0**	**+1.5**
	0.1nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**23 41 07.1**	**+0.9**
	0.9nm,0.0s,SNR=7.9						
PFVI	**Vila Bisbo**	**5.20**	**338**	*e*Sn	**Sn**	**23 41 06.7**	**+0.5**
	11nm,0.8s						
EGRO	**El Granado**	**5.27**	**350**	P	**Pn**	**23 40 08.4**	**+1.0**
	0.9nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**23 41 09.6**	**+1.7**
	1.3nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**5.27**	**350**	P	**Pn**	**23 40 08.4**	**+1.0**
	0.9nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**23 41 09.6**	**+1.7**
	1.3nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.43**	**357**	P	**Pn**	**23 40 10.1**	**+0.5**
	0.2nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**23 41 10.7**	**-1.1**
	0.3nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.43**	**357**	P	**Pn**	**23 40 10.1**	**+0.5**
	0.2nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**23 41 10.7**	**-1.1**
	0.3nm,0.1s,SNR=7.9						
PCVE	**Castro Verde**	**5.46**	**346**	*e*Pn	**Pn**	**23 40 12.7**	**+2.6**
PCVE				*e*Sn	**Sn**	**23 41 12.3**	**-0.4**
PCVE				A		23 41 15.1	
	3.4nm,0.5s						
PCVE	**Castro Verde**	**5.46**	**346**	Pn	**Pn**	**23 40 12.7**	**+2.6**
PCVE				Sn	**Sn**	**23 41 12.3**	**-0.4**
	3.4nm,0.5s						
PCVE	**Castro Verde**	**5.46**	**346**	Pn	**Pn**	**23 40 12.7**	**+2.6**
PCVE				Sn	**Sn**	**23 41 12.3**	**-0.4**
	3.4nm,0.5s						
PBEJ	**Beja**	**5.81**	**348**	*e*Pn	**Pn**	**23 40 18.1**	**+3.2**
PBEJ	**Beja**	**5.81**	**348**	Pn	**Pn**	**23 40 18.1**	**+3.2**
PBEJ	**Beja**	**5.81**	**348**	Pn	**Pn**	**23 40 18.1**	**+3.2**
PBAR	**Barrancos**	**5.85**	**355**	*e*Pn	**Pn**	**23 40 16.6**	**+1.1**
PBAR				*e*Sn	**Sn**	**23 41 21.1**	**-1.2**
PBAR				A		23 41 26.0	
	2.5nm,0.9s						
PBAR	**Barrancos**	**5.85**	**355**	Pn	**Pn**	**23 40 16.6**	**+1.1**
PBAR				Sn	**Sn**	**23 41 21.1**	**-1.2**
	2.5nm,0.9s						
PBAR	**Barrancos**	**5.85**	**355**	Pn	**Pn**	**23 40 16.6**	**+1.1**
PBAR				Sn	**Sn**	**23 41 21.1**	**-1.2**
	2.5nm,0.9s						
PBAR	**Barrancos**	**5.85**	**355**	*e*Pn	**Pn**	**23 40 16.6**	**+1.1**
PBAR				*e*Sn	**Sn**	**23 41 21.1**	**-1.2**
	2.5nm,0.9s						
EADA	**Adamuz**	**6.00**	**14**	S	**Sn**	**23 41 23.9**	**-2.1**
	0.2nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.00**	**14**	S	**Sn**	**23 41 23.9**	**-2.1**
	0.2nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**6.43**	**355**	P	**Pn**	**23 40 24.2**	**+0.9**
	1.5nm,0.3s,SNR=7.9						
EBAD				S	**Sn**	**23 41 34.6**	**-1.9**
	0.4nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**6.43**	**355**	P	**Pn**	**23 40 24.2**	**+0.9**
	1.5nm,0.3s,SNR=7.9						
EBAD				S	**Sn**	**23 41 34.6**	**-1.9**
	0.4nm,0.1s,SNR=7.9						
PMRV	**Marv??o**	**7.13**	**354**	*e*Sn	**Sn**	**23 41 51.7**	**-2.0**
PMRV				A		23 41 53.2	
	2.0nm,0.5s						
PMRV	**Marv??o**	**7.13**	**354**	Sn	**Sn**	**23 41 51.7**	**-2.0**
	2.0nm,0.5s						
PMRV	**Marv??o**	**7.13**	**354**	Sn	**Sn**	**23 41 51.7**	**-2.0**
	2.0nm,0.5s						
PMRV	**Marv??o**	**7.13**	**354**	*e*Sn	**Sn**	**23 41 51.7**	**-2.0**
	2.0nm,0.5s						

*IDC **22** 23:49:22.3±2.3, 44°.08N×105°.83W, h0km, mb3.8/3, mb1 3.9/5, mb1mx3.5/24, mbtmp3.8/5, ML3.4/2, Error ellipse: s-maj=82.1km s-min=8.8km az=146.0*
*NEIC **22** 23:49:22.1±0.2, 43°.79N×105°.23W, h0km, ML3.2, Error ellipse: s-maj=3.1km s-min=3.0km az=58.0, Suspected Mining explosion.*
NEIC 60 km [35 miles] SSE of Gillette.

ISC 22 23:49:22.1±0.3, 43°.68N±0°.02×105°.35W±0°.03, h0km, n59, σ1°64/110, mb3.9/3, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.05**	**65**	*e*Pg	**Pg**	**23 49 40.7**	**-1.5**
PHWY	**Pilot Hill**	**2.38**	**182**	*e*Pn	**Pn**	**23 50 03.8**	**+1.4**
PHWY				*e*Sn	**Sn**	**23 50 35.0**	**+2.9**
RWWY	**Rawlins**	**2.42**	**215**	*e*Pn	**Pn**	**23 50 05.3**	**+2.5**
RWWY				*e*Sg	**Sg**	**23 50 39.3**	**-0.4**
LAO	**LASA Array**	**3.07**	**349**	*e*Pn	**Pn**	**23 50 10.6**	**-1.2**
RLMT	**Red Lodge**	**3.15**	**299**	*e*Pn	**Pn**	**23 50 13.2**	**+0.2**
PDAR	**Pinedale Array**	**3.21**	**255**	Pn	**Pn**	**23 50 14.9**	**+1.2**
	4.8nm,0.3s,baz=71,slow=16,SNR=82						
PDAR				Lg		23 50 55.9	
	3.2nm,0.3s,baz=93,slow=33,SNR=3.1						
BW06	**Boulder Array**	**3.21**	**255**	*e*Pn	**Pn**	**23 50 15.1**	**+1.4**
BW06				*e*Sg	**Sg**	**23 51 03.7**	**-1.4**
OGNE	**Ogallala**	**3.68**	**137**	*e*Pn	**Pn**	**23 50 21.4**	**+1.2**
OGNE				*e*Pg	**Pg**	**23 50 31.3**	**-1.3**
GCMT	**Greycliff**	**3.73**	**306**	*e*Pn	**Pn**	**23 50 21.4**	**+0.5**
GCMT				*e*Pg	**Pg**	**23 50 30.7**	**-2.9**
LKWY	**Lake**	**3.74**	**285**	*e*Pn	**Pn**	**23 50 25.5**	**+4.5**
LKWY				*e*Pg	**Pg**	**23 50 33.5**	**-0.3**
LOHW	**Long Hollow**	**3.81**	**271**	*e*Pn	**Pn**	**23 50 23.7**	**+1.7**
LOHW				*e*Pg	**Pg**	**23 50 32.1**	**-3.0**
ISCO	**Idaho Springs**	**3.88**	**183**	*e*Pn	**Pn**	**23 50 25.0**	**+2.0**
ISCO				*e*Sg	**Sg**	**23 51 25.6**	**-1.2**
FLWY	**Flagg Ranch**	**3.89**	**278**	*e*Pn	**Pn**	**23 50 23.9**	**+0.8**
FLWY				*e*Pg	**Pg**	**23 50 33.9**	**-2.7**
MOOW	**Moose Ponds**	**3.91**	**273**	*e*Pn	**Pn**	**23 50 25.3**	**+1.9**
MOOW				*e*Pg	**Pg**	**23 50 36.7**	**-0.3**
SNOW	**Snow King Moun**	**3.93**	**269**	*e*Pn	**Pn**	**23 50 24.3**	**+0.6**
SNOW				*e*Pg	**Pg**	**23 50 34.8**	**-2.6**
YNR	**Norris Junctio**	**3.97**	**287**	*e*Pn	**Pn**	**23 50 24.5**	**+0.3**
YNR				*e*Pg	**Pg**	**23 50 33.4**	**-4.8**
REDW	**Red Top Meadow**	**4.01**	**267**	*e*Pn	**Pn**	**23 50 25.4**	**+0.6**
REDW				*e*Pg	**Pg**	**23 50 36.6**	**-2.4**
REDW				*e*Sn	**Sn**	**23 51 15.0**	**+2.5**
REDW				*e*Sg	**Sg**	**23 51 27.4**	**-3.6**
YFT	**Old Faithful**	**4.03**	**283**	*e*Pg	**Pg**	**23 50 37.7**	**-1.6**
YFT				*e*Sg	**Sg**	**23 51 31.2**	**-0.2**
IMW	**Indian Meadow**	**4.05**	**275**	*e*Pn	**Pn**	**23 50 26.1**	**+0.8**
IMW				*e*Pg	**Pg**	**23 50 38.4**	**-1.3**
TPAW	**Teton Pass**	**4.07**	**269**	*e*Pn	**Pn**	**23 50 27.1**	**+1.5**
TPAW				*e*Pg	**Pg**	**23 50 36.9**	**-3.3**
TPAW				*e*Sn	**Sn**	**23 51 16.6**	**+2.7**
RRI2	**Red Ridge**	**4.35**	**268**	*e*Pn	**Pn**	**23 50 30.9**	**+1.5**
RRI2				*e*Pg	**Pg**	**23 50 40.8**	**-4.8**
RRI2				*e*Sg	**Sg**	**23 51 41.6**	**-0.3**
SMCO	**Snowmass**	**4.66**	**196**	*e*Pg	**Pg**	**23 50 47.1**	**-4.3**
DGMT	**Dagmar**	**4.86**	**9**	*e*Pn	**Pn**	**23 50 36.0**	**-0.4**
DGMT				*e*Pg	**Pg**	**23 50 47.7**	**-7.5**
BOZ	**Bozeman (W)**	**4.89**	**296**	*e*Pn	**Pn**	**23 50 37.4**	**+0.5**
BOZ				*e*Pg	**Pg**	**23 50 49.5**	**-6.3**
HWUT	**Hardware Ranch**	**5.03**	**248**	*e*Pn	**Pn**	**23 50 39.8**	**+1.0**
	9.7nm,0.4s						
EGMT	**Eagleton**	**5.32**	**326**	*e*Pn	**Pn**	**23 50 41.8**	**-1.0**
	24nm,0.5s						
EGMT				*e*Pg	**Pg**	**23 50 55.9**	**-8.1**
DLMT	**Dillon**	**5.45**	**290**	*e*Pn	**Pn**	**23 50 45.7**	**+1.3**
	6.6nm,0.8s						
DLMT				*e*Pg	**Pg**	**23 51 00.2**	**-6.2**
DAU	**Daniels Canyon**	**5.47**	**235**	*e*Pn	**Pn**	**23 50 47.9**	**+3.0**
	10nm,0.5s						
HRY	**Holter Researc**	**5.49**	**306**	*e*Pn	**Pn**	**23 50 44.9**	**-0.2**
	12nm,0.4s						
LRM	**Limekiln Ridge**	**5.49**	**295**	*e*Pn	**Pn**	**23 50 45.5**	**+0.5**
	15nm,0.3s						
MCMT	**McKenzie Canyo**	**5.51**	**285**	*e*Pn	**Pn**	**23 50 50.1**	**+4.8**
	2.0nm,0.4s						
MCMT				*e*Pg	**Pg**	**23 51 05.7**	**-1.9**
MCMT				*e*Sg	**Sg**	**23 52 21.5**	**+2.5**
HVU	**Hansel Valley**	**5.79**	**253**	*e*Pg	**Pg**	**23 51 09.5**	**-3.5**
	11nm,0.6s						
HVU				*e*Sg	**Sg**	**23 52 25.2**	**-2.8**
PV04	**Paradox Valley**	**5.92**	**208**	*e*Pn	**Pn**	**23 50 53.0**	**+1.9**
PV04				*e*Pg	**Pg**	**23 51 10.7**	**-5.0**
PV04				*e*Sg	**Sg**	**23 52 29.7**	**-2.7**
SDCO	**Great Sand Dun**	**5.93**	**181**	*e*Pn	**Pn**	**23 50 53.0**	**+1.9**
	2.6nm,0.6s						
SDCO				*e*Pg	**Pg**	**23 51 16.6**	**+0.9**
SDCO				*e*Sg	**Sg**	**23 52 30.8**	**-1.7**
MPU	**Maple Canyon**	**5.95**	**234**	*e*Pn	**Pn**	**23 50 52.9**	**+1.4**
	10.0nm,0.7s						
MPU				*e*Pg	**Pg**	**23 51 12.1**	**-4.0**
SRU	**San Rafael**	**6.00**	**222**	*e*Pn	**Pn**	**23 50 53.5**	**+1.5**
	11nm,0.3s						
SRU				*e*Pg	**Pg**	**23 51 14.3**	**-2.7**
SRU				*e*Sg	**Sg**	**23 52 33.2**	**-1.4**
PV01	**Paradox Valley**	**6.05**	**205**	*e*Pn	**Pn**	**23 50 55.4**	**+2.5**
	480nm,0.5s						
PV01				*e*Pg	**Pg**	**23 51 13.8**	**-4.3**
PV01				*e*Sg	**Sg**	**23 52 34.6**	**-1.9**
TMUT	**Trail Mountain**	**6.21**	**227**	*e*Pn	**Pn**	**23 50 57.1**	**+2.1**
	10nm,0.6s						
TMUT				*e*Pg	**Pg**	**23 51 18.4**	**-2.6**
TMUT				*e*Sg	**Sg**	**23 52 38.8**	**-2.6**
NLU	**North Lily Min**	**6.25**	**236**	*e*Pn	**Pn**	**23 50 56.9**	**+1.4**
NLU				*e*Pg	**Pg**	**23 51 15.1**	**-6.8**
BGU	**Big Grassy Mou**	**6.32**	**247**	*e*Pn	**Pn**	**23 50 58.0**	**+1.5**
	3.7nm,0.8s						
BGU				*e*Pg	**Pg**	**23 51 20.1**	**-3.1**
ECSD	**EROS Data Cent**	**6.33**	**87**	*e*Pn	**Pn**	**23 50 56.1**	**-0.6**
	6.0nm,0.3s						
ECSD				*e*Pg	**Pg**	**23 51 18.1**	**-5.3**
ECSD				*e*Sg	**Sg**	**23 52 38.1**	**-7.4**
CHMT	**Chamberlain Mo**	**6.44**	**303**	*e*Pn	**Pn**	**23 50 58.2**	**+0.1**
	2.6nm,0.5s						
CHMT				*e*Pg	**Pg**	**23 51 18.3**	**-7.2**
CHMT				*e*Sg	**Sg**	**23 52 40.5**	**-8.4**
CBKS	**Cedar Bluff**	**6.44**	**137**	*e*Pg	**Pg**	**23 51 24.0**	**-1.6**
	19nm,0.6s						
DUG	**Dugway**	**6.56**	**240**	*e*Pn	**Pn**	**23 51 01.1**	**+1.3**
	3.5nm,0.6s						
DUG				*e*Pg	**Pg**	**23 51 28.9**	**+1.1**
DUG				*e*Sg	**Sg**	**23 52 54.0**	**+1.2**
HLID	**Hailey**	**6.58**	**272**	*e*Pn	**Pn**	**23 51 02.7**	**+2.7**
	2.5nm,0.8s						
MSO	**Missoula**	**6.83**	**300**	*e*Pn	**Pn**	**23 51 03.3**	**-0.2**
	1.5nm,0.3s						
MSO				*e*Sg	**Sg**	**23 52 51.0**	**-10**
MVCO	**Mesa Verde**	**6.89**	**201**	*e*Pn	**Pn**	**23 51 07.0**	**+2.7**
	5.8nm,0.6s						
MVCO				*e*Pg	**Pg**	**23 51 31.3**	**-2.9**
SWMT	**Swartz Lake**	**7.17**	**305**	*e*Pn	**Pn**	**23 51 08.0**	**-0.2**
	2.6nm,0.5s						
MSU	**Marysvale**	**7.29**	**227**	*e*Pn	**Pn**	**23 51 11.5**	**+1.7**
	7.0nm,0.7s						
MSU				*e*Pg	**Pg**	**23 51 39.6**	**-2.2**
YBMT	**Yellow Bay**	**7.36**	**308**	*e*Pn	**Pn**	**23 51 11.4**	**+0.7**
	4.0nm,0.3s						
KSU1	**Kansas State U**	**8.01**	**122**	*e*Pg	**Pg**	**23 51 47.3**	**-8.2**
	12nm,0.6s						
AGMN	**Agassiz Nation**	**8.06**	**52**	*e*Pg	**Pg**	**23 51 47.5**	**-8.9**
	11nm,0.4s						
AGMN				*e*Sg	**Sg**	**23 53 31.9**	**-8.9**
ARUT	**Antelope Range**	**8.50**	**229**	*e*Pn	**Pn**	**23 51 28.8**	**+2.3**
	2.7nm,0.5s						
CCUT	**Cedar City**	**8.63**	**228**	*e*Pn	**Pn**	**23 51 30.5**	**+2.3**
	1.9nm,0.7s						
ULM	**Lac du Bonnet**	**9.22**	**41**	Pn	**Pn**	**23 51 33.1**	**-3.2**
	1.0nm,0.3s,baz=232,slow=13,SNR=4.1						
ULM				Pg	Pn	23 52 04.8	+28
	0.9nm,0.3s,baz=232,slow=15,SNR=2.7						
ULM				Lg		23 54 03.6	
	1.0nm,0.3s,baz=321,slow=20,SNR=2.7						
ARCES	**ARCESS Array B**	**61.49**	**18**	P	**P**	**23 59 38.0**	**-2.1**
	0.8nm,0.8s,mb3.9,baz=327,slow=6.5,SNR=5.3						
ZALV	**Zalesovo Beam**	**82.36**	**354**	P	**P**	**00 01 44.0**	**-1.5**
	0.5nm,0.5s,mb3.9,baz=0.0,slow=2.9,SNR=3.4						
MKAR	**Makanchi Array**	**89.66**	**355**	P	**P**	**00 02 20.8**	**-0.9**
MKAR	**Makanchi Array**	**89.66**	**355**	P	**P**	**00 02 20.8**	**-0.9**
	0.4nm,0.7s,mb3.8,baz=24,slow=5.7,SNR=4.8						

*ISK **23** 00:36:18.8, 38°.99N×41°.14E, h5km, MD3.5*
*CSEM **23** 00:36:19.9±0.2, 39°.00N×41°.16E, h2km, MD3.5, Error ellipse: s-maj=4.8km s-min=4.0km az=9.0*
*DDA **23** 00:36:19.4, 39°.01N×41°.16E, h11km±2km, Md3.2*
*ISCJB **23** 00:36:20.3±0.3, 39°.00N±0°.02×41°.18E±0°.03, h10km, Error ellipse: s-maj=3.5km s-min=2.8km az=7.5*

ISC 23 00:36:20.3±0.5, 39°.00N±0°.02×41°.17E±0°.03, h1km±4km, n41, σ0°88/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.05**	**196**	*i* P	**Pg**	**00 36 21.5**	**+0.2**
BNGL				*i* S	**Sg**	**00 36 23.3**	**+1.4**
BINT	**Bingol**	**0.54**	**257**	*e*PG	**Pg**	**00 36 29.6**	**-1.1**
BINT				*e*SG	**Sg**	**00 36 38.2**	**+0.4**
BINT	**Bingol**	**0.54**	**257**	*e*Pg	**Pg**	**00 36 29.6**	**-1.1**
BINT				*e*Sg	**Sg**	**00 36 38.2**	**+0.5**
EZM	**Erzurum**	**0.92**	**9**	*e*PG	**Pg**	**00 36 37.5**	**-0.3**
EZM				*e*SG	**Sg**	**00 36 51.7**	**+2.0**
ERZM	**Erzurum**	**0.92**	**10**	*i* P	**Pg**	**00 36 36.6**	**-1.3**
ERZM				*i* S	**Sg**	**00 36 48.9**	**-0.8**
ERZM	**Erzurum**	**0.92**	**10**	*i* P	**Pg**	**00 36 36.6**	**-1.2**
ERZM				*i* S	**Sg**	**00 36 48.9**	**-0.8**
TATV	**Tatvan**	**0.99**	**119**	*i* P	**Pg**	**00 36 37.4**	**-1.8**
TATV				*i* S	**Sg**	**00 36 51.6**	**-0.5**
TATV	**Tatvan**	**0.99**	**119**	*i* P	**Pg**	**00 36 37.4**	**-1.9**
TATV				*i* S	**Sg**	**00 36 51.6**	**-0.5**
BEST	**Besiri**	**1.11**	**176**	*i* P	**Pg**	**00 36 41.6**	**+0.1**
BEST				*i* S	**Sg**	**00 36 57.6**	**+1.7**
KOPT	**Kop Dagi**	**1.14**	**333**	*i* P	**Pg**	**00 36 41.4**	**-0.8**
KOPT				*i* S	**Sg**	**00 36 57.8**	**+0.8**
KOPT	**Kop Dagi**	**1.14**	**333**	*i* P	**Pg**	**00 36 41.4**	**-0.7**
KOPT				*i* S	**Sg**	**00 36 57.8**	**+0.9**
HOMI	**Horasan**	**1.19**	**28**	*i* P	**Pg**	**00 36 43.1**	**0.0**
HOMI				*i* S	**Sg**	**00 36 59.5**	**+1.0**
DIYA	**Diyarbakir**	**1.35**	**218**	*i* P	**Pg**	**00 36 45.4**	**-0.8**
DIYA				*i* S	**Sg**	**00 37 04.0**	**+0.3**
DIYA	**Diyarbakir**	**1.35**	**218**	*i* P	**Pg**	**00 36 45.4**	**-0.8**
AGRB	**Hanur-Agry**	**1.53**	**67**	*e*PN	**Pn**	**00 36 48.0**	**-0.7**
AGRB	**Hanur-Agry**	**1.53**	**67**	*e*Pn	**Pn**	**00 36 48.0**	**-0.7**
SVRC	**Sivrice-ELAZID**	**1.58**	**247**	*e*PN	**Pn**	**00 36 48.8**	**-0.7**
SVRC	**Sivrice-ELAZID**	**1.58**	**247**	*e*Pn	**Pn**	**00 36 48.8**	**-0.7**
EZC	**Erzincan**	**1.59**	**299**	*e*PN	**Pn**	**00 36 49.1**	**-0.5**
MARD	**Mardin**	**1.71**	**190**	*i* P	**Pn**	**00 36 50.2**	**-1.0**
MARD				*i* S	**Sn**	**00 37 13.4**	**-0.3**
KELT	**Kelkit**	**1.87**	**308**	*i* P	**Pn**	**00 36 52.5**	**-1.0**
KELT				*i* S	**Sn**	**00 37 18.1**	**+0.4**
KELT	**Kelkit**	**1.87**	**308**	*i* P	**Pn**	**00 36 52.5**	**-0.9**
KELT				*i* S	**Sn**	**00 37 18.0**	**+0.3**
DDEM	**Demirkent**	**1.94**	**13**	*i* P	**Pn**	**00 36 54.2**	**-0.2**
DDEM				*i* S	**Sn**	**00 37 23.9**	**+4.5**
DDEM	**Demirkent**	**1.94**	**13**	*i* P	**Pn**	**00 36 54.2**	**-0.2**
GUMT	**Gumushane**	**1.95**	**319**	*e*PN	**Pn**	**00 36 54.7**	**+0.1**
KEMA	**Kemaliye**	**2.10**	**278**	*i* P	**Pn**	**00 36 55.7**	**-0.9**
KEMA				*i* S	**Sn**	**00 37 24.5**	**+1.2**
KEMA	**Kemaliye**	**2.10**	**278**	*i* P	**Pn**	**00 36 55.7**	**-0.8**
KEMA				*i* S	**Sn**	**00 37 24.5**	**+1.2**
CLDR	**Caldiran**	**2.15**	**85**	*e*PN	**Pn**	**00 36 57.1**	**-0.1**
CLDR	**Caldiran**	**2.15**	**85**	*e*Pn	**Pn**	**00 36 57.1**	**-0.1**
KARS	**Kars**	**2.19**	**42**	*e*PN	**Pn**	**00 36 58.8**	**+0.9**
KARS	**Kars**	**2.19**	**42**	*e*Pn	**Pn**	**00 36 58.8**	**+0.9**
MALT	**Malatya**	**2.25**	**253**	*e*PN	**Pn**	**00 36 58.6**	**0.0**
MALT	**Malatya**	**2.25**	**253**	*e*Pn	**Pn**	**00 36 58.7**	**0.0**
HKR	**Hakkari**	**2.47**	**124**	*e*PN	**Pn**	**00 37 02.7**	**+1.0**
HKR	**Hakkari**	**2.47**	**124**	*e*Pn	**Pn**	**00 37 02.7**	**+1.0**
CUKT	**Cukurca**	**2.60**	**132**	*e*PN	**Pn**	**00 37 03.6**	**+0.2**
CUKT	**Cukurca**	**2.60**	**132**	*e*Pn	**Pn**	**00 37 03.7**	**+0.2**
GNI	**Garni**	**2.99**	**66**	*e*PN	**Pn**	**00 37 10.1**	**+1.3**
GNI	**Garni**	**2.99**	**66**	*e*Pn	**Pn**	**00 37 10.1**	**+1.3**
SVSK	**Karacayir**	**3.35**	**287**	*e*PN	**Pn**	**00 37 13.9**	**+0.1**
SVSK	**Karacayir**	**3.35**	**287**	*e*Pn	**Pn**	**00 37 13.9**	**+0.1**

*IDC **23** 00:46:54.0±3.6, 7°.83N×59°.27E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.7/21, mbtmp3.7/7, MS3.5/2, Ms1 3.5/2, ms1mx2.9/20, Error ellipse: s-maj=84.0km s-min=29.9km az=161.0*
*ISCJB **23** 00:46:56.5±1.7, 8°.3N±0°.2×59°.0E±0°.2, h10km, mb4.2/20, MS3.5/2, Error ellipse: s-maj=37.4km s-min=15.5km az=145.2*
*NEIC **23** 00:46:57.1±1.3, 8°.13N×59°.07E, h10km, mb4.5/12, Error ellipse: s-maj=30.2km s-min=13.3km az=146.0*
*CSEM **23** 00:46:57.1, 8°.13N×59°.07E, h10km, mb4.5/12, After NEIC*

**ISC 23 00:46:57.5±1.6, 8°.2N±

*BJI **23** 00:50:53.9,24°.89N×97°.91E,h29km,ML3.5/7*
ISC 23 00:50:52.9±1.0, 24°.88N±0°.05×98°.13E±0°.07, h10km, n5, σ1813/8, mb3.3/2, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**4.19**	**86**	Pg	**Pg**	**00 52 14.8**	**+1.7**
KMI				Sg	**Sg**	**00 53 06.3**	**-1.1**
KMI				*s*max			
	comp=N,81nm,1.1s						
KMI				*s*max			
	comp=E,51nm,1.2s						
CHRT	**Chiangrai**	**5.21**	**163**	PG	**Pg**	**00 52 32.0**	**-0.7**
CHRT				SG	**Sg**	**00 53 41.5**	**+1.3**
CMAR	**Chiang Mai Arr**	**6.43**	**173**	Pn	**Pn**	**00 52 28.3**	**+0.6**
	comp=E,1.0nm,0.3s,baz=347,slow=14,SNR=5.8						
CMAR				Pg	**Pg**	**00 52 54.1**	**-2.0**
	comp=E,0.9nm,0.3s,baz=348,slow=18,SNR=11						
CMAR				Lg		00 54 16.4	
	comp=E,1.6nm,0.3s,baz=344,slow=29,SNR=7.8						
MKAR	**Makanchi Array**	**25.27**	**334**	P	**P**	**00 56 18.9**	**-0.3**
	comp=E,0.3nm,0.5s,mb3.1,baz=140,slow=9.6,SNR=7.9						
ZALV	**Zalesovo Beam**	**30.70**	**345**	P	**P**	**00 57 08.0**	**+0.4**
	comp=E,0.2nm,0.3s,mb3.5,baz=171,slow=12,SNR=2.0						

IDC 23 01:11:28.7±2.3, 2°.52N×95°.17E, h0km, mb3.4/4, mb1 3.7/6, mb1mx3.5/24, mbtmp3.5/6, ML3.6/2, Error ellipse: s-maj=66.4km s-min=25.2km az=54.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.76**	**86**	Pn	Pn	01 12 27.3	-0.7
	1.1nm,0.3s,baz=286,slow=7.4,SNR=6.3						
CMAR	**Chiang Mai Arr**	**16.27**	**13**	Pn	Pn	01 15 20.8	+2.1
	0.2nm,0.3s,baz=201,slow=11,SNR=4.2						
WRA	**Warramunga Arr**	**44.45**	**122**	P	P	01 19 42.5	+0.6
	0.3nm,0.3s,baz=302,slow=8.8,SNR=2.6						
MKAR	**Makanchi Array**	**45.50**	**348**	P	P	01 19 49.2	-0.7
	0.2nm,0.4s,baz=163,slow=8.0,SNR=3.1						
ASAR	**Alice Springs**	**45.80**	**127**	P	P	01 19 52.2	-0.4
	0.4nm,0.8s,baz=298,slow=8.0,SNR=3.3						
ZALV	**Zalesovo Beam**	**51.97**	**352**	P	P	01 20 39.5	+0.1
	0.4nm,0.4s,baz=167,slow=6.8,SNR=3.0						

*BYKL **23** 01:35:29.1±0.3, 55°.14N×109°.97E*
MOS 23 01:35:27.6±1.1, 55°.15N×109°.94E, h7km, mb4.2/1, 6C-7D, Error ellipse: s-maj=31.7km s-min=12.1km az=71.8, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.67**	**340**	*e*Pg	Pg	01 35 41.6	+1.2
NIZ				*e*		01 35 51.2	
NIZ				pmax	pmax		
	comp=Z,76nm,0.3s						
NIZ				smax			
	comp=E,341nm,0.3s						
NIZ	**Nizh Angarsk**	**0.67**	**340**	⇑*i*Pg	Pg	01 35 41.5	+1.1
NIZ				*e*		01 35 48.1	
NIZ				*e*Sg	Sg	01 35 51.0	+1.9
NIZ				Pmax			
	comp=E,48nm,0.3s						
NIZ				Smax			
	comp=E,342nm,0.2s						
YLYR	**Ulyunkhan**	**0.76**	**111**	⇑*i*Pg	Pg	01 35 41.5	-0.6
YLYR				*e*Sg	Sg	01 35 51.6	-0.4
YLYR				Pmax			
	comp=E,56nm,0.6s						
YLYR				Smax			
	comp=E,335nm,1.1s						
KMO	**Kumora**	**1.03**	**44**	*e*PG	Pg	01 35 47.1	-0.3
KMO				*e*		01 35 59.5	
KMO				pmax	pmax		
	comp=Z,103nm,0.4s						
KMO				smax			
	comp=E,480nm,0.7s						
KMO	**Kumora**	**1.03**	**44**	⇑*i*Pg	Pg	01 35 47.1	-0.3
KMO				*e*Sg	Sg	01 36 01.8	+1.0
KMO				*e*		01 36 10.9	
KMO				Pmax			
	comp=E,120nm,0.3s						
KMO				max			
	comp=E,530nm,1.6s						
YOA	**Uoyan**	**1.42**	**45**	*e*PG	Pg	01 35 53.9	-0.8
YOA	**Uoyan**	**1.42**	**45**	*e*Pg	Pg	01 35 55.3	+0.6
YOA				*e*		01 36 06.0	
YOA				*e*Sg	Sg	01 36 14.4	+1.4
YOA				Pmax			
	comp=E,247nm,0.2s						
YOA				Smax			
	comp=E,941nm,0.6s						
SYVR	**Suvo**	**1.50**	**179**	*e*PG	Pg	01 35 55.3	-0.9
SYVR				*e*		01 36 16.0	
SYVR				pmax	pmax		
	comp=Z,68nm,0.4s						
SYVR				smax			
	comp=N,377nm,0.6s						
SYVR	**Suvo**	**1.50**	**179**	⇓*i*Pg	Pg	01 35 55.6	-0.6
SYVR				*e*		01 35 57.6	
SYVR				*i* Sg	Sg	01 36 16.2	+0.6
SYVR				*e*		01 36 19.7	
SYVR				max			
	comp=N,66nm,0.6s						
SYVR				max			
	comp=N,346nm,1.1s						
MXMB	**Maximikha**	**2.02**	**201**	⇓*i*Pg	Pg	01 36 04.9	-1.3
MXMB				*e*		01 36 21.9	
MXMB				*e*Sg	Sg	01 36 31.3	-1.0
MXMB				*e*		01 36 41.6	
MXMB				Pmax			
	comp=N,115nm,0.6s						
MXMB				Smax			
	comp=N,454nm,0.8s						
OGRR	**Ongureny**	**2.04**	**223**	*e*PN	Pn	01 36 04.8	+2.6
OGRR				*e*		01 36 06.6	
OGRR				*e*		01 36 32.8	
OGRR				pmax	pmax		
	comp=Z,98nm,0.6s						
OGRR				smax			
	comp=N,352nm,1.0s						
OGRR	**Ongureny**	**2.04**	**223**	⇓*i*Pg	Pg	01 36 04.7	-1.9
OGRR				*i* Sg	Sg	01 36 32.9	-0.1
OGRR				*e*		01 36 35.5	
OGRR				Pmax			
	comp=N,74nm,0.5s						
OGRR				max			
	comp=N,308nm,1.2s						
TRG	**Tyrgan**	**3.20**	**223**	⇓*i*Pn	Pn	01 36 21.0	+2.8
TRG				*e*		01 36 24.8	
TRG				*e*Pg	Pg	01 36 26.5	-2.3
TRG				*e*		01 36 50.9	
TRG				*e*Sg	Sg	01 37 08.9	-1.3
TRG				Pmax			
	comp=N,10.0nm,0.5s						
TRG				Smax			
	comp=N,66nm,1.1s						
NLYR	**Nelyaty**	**3.52**	**65**	*e*PN	Pn	01 36 24.8	+2.2
NLYR				*e*		01 36 34.0	
NLYR				*e*		01 37 19.2	
NLYR				pmax	pmax		
	comp=Z,44nm,0.6s						
NLYR				smax			
	comp=E,175nm,1.3s						
NLYR	**Nelyaty**	**3.52**	**65**	*e*Pn	Pn	01 36 25.0	+2.4
NLYR				*e*Pg	Pg	01 36 31.5	-3.5
NLYR				*e*PgPg		01 36 35.0	
NLYR				*e*Sg	Sg	01 37 19.4	-1.2
NLYR				max			
	comp=E,15nm,0.8s						
NLYR				Smax			
	comp=E,176nm,1.3s						
UUDB	**Ulan-Yde**	**3.56**	**203**	*e*Pn	Pn	01 36 26.6	+3.5
UUDB				*e*Pg	Pg	01 36 32.5	-3.2
UUDB				*e*PgPg		01 36 35.5	
UUDB				*e*		01 36 57.2	
UUDB				*e*Sg	Sg	01 37 20.2	-1.5
UUDB				max			
	comp=E,37nm,1.0s						
UUDB				Smax			
	comp=E,74nm,0.9s						
KAB	**Kabansk**	**3.67**	**214**	*e*Pg	Pg	01 36 34.5	-3.3
KAB				*e*Sg	Sg	01 37 23.3	-2.0
KAB				Pmax			
	comp=E,197nm,0.4s						
KAB				Smax			
	comp=E,454nm,1.0s						
CIT	**Chita**	**3.80**	**144**	*e*	Sn	01 37 08.0	-3.4
CIT				*e*Sg	Sg	01 37 25.1	-4.5
CIT				Smax			
	comp=E,192nm,0.4s						
HRMR	**Khuramsha**	**3.95**	**208**	*e*Pn	Pn	01 36 31.5	+2.9
HRMR				⇑*i*Pg	Pg	01 36 39.9	-3.4
HRMR				*e*		01 37 12.5	
HRMR				*e*Sg	Sg	01 37 31.8	-2.6
HRMR				*e*		01 37 34.1	
HRMR				Pmax			
	comp=E,45nm,0.4s						
HRMR				max			
	comp=E,267nm,1.0s						
LSTR	**Listvyanka**	**4.48**	**225**	*e*Pn	Pn	01 36 37.9	+2.1
LSTR				⇑*i*Pg	Pg	01 36 49.0	-4.4
LSTR				*e*		01 37 34.6	
LSTR				*e*Sg	Sg	01 37 48.4	-3.0
LSTR				Pmax			
	comp=E,19nm,1.4s						
LSTR				Smax			
	comp=E,95nm,1.4s						
CRS	**Chara**	**4.99**	**66**	*e*PN	Pb	01 36 57.7	+2.5
CRS				*e*S	Sn	01 37 41.3	+0.6
CRS				*e*		01 38 01.9	
CRS				pmax	pmax		
	comp=Z,26nm,1.0s						
CRS				smax			
	comp=E,101nm,1.4s						
CRS	**Chara**	**4.99**	**66**	*e*Pg	Pg	01 36 57.8	-5.4
CRS				*e*Sg	Sg	01 38 04.3	-3.5
CRS				Pmax			
	comp=E,18nm,0.6s						
CRS				Smax			
	comp=E,101nm,1.5s						
TLY	**Talaya**	**5.12**	**230**	*e*PN	Pn	01 36 44.3	-0.3
TLY				*e*		01 36 59.1	
TLY				*e*		01 38 05.5	
TLY				pmax	pmax		
	comp=Z,11nm,0.5s						
TLY				smax			
	comp=N,49nm,1.5s						
TLY	**Talaya**	**5.12**	**230**	*e*Pn	Pn	01 36 46.5	+1.9
TLY				*e*		01 36 59.1	
TLY				*e*Sg	Sg	01 38 05.9	-6.0
TLY				max			
	comp=N,9.0nm,0.5s						
TLY				Smax			
	comp=N,49nm,1.5s						
ARS	**Arshan**	**5.52**	**237**	*e*Pn	Pn	01 36 54.4	+4.3
ARS				*e*Sn	Sn	01 37 55.4	+1.6
ARS				*e*Sg	Sg	01 38 20.3	-4.5
ARS				max			
	comp=N,17nm,0.5s						
ARS				Smax			
	comp=N,129nm,1.0s						
TUP	**Tupik**	**5.84**	**93**	*e*Pn	Pn	01 36 53.5	-1.0
TUP				*e*		01 38 05.9	
TUP				*e*Sg	Sg	01 38 29.3	-5.7
TUP				Smax			
	comp=N,46nm,1.2s						
ZAK	**Zakamensk**	**6.25**	**223**	*e*Sg	Sg	01 38 43.3	-4.9
ZAK				Smax			
	comp=N,23nm,1.1s						
MOY	**Mondy**	**6.38**	**241**	*e*PN	Pn	01 37 05.5	+3.6
MOY				*e*		01 37 23.8	
MOY				*e*		01 38 46.9	
MOY				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MOY				smax			
	comp=E,36nm,1.0s						
MOY	**Mondy**	**6.38**	**241**	⇑*i*Pn	Pn	01 37 05.7	+3.8
MOY				*e*		01 37 12.5	
MOY				*e*		01 38 18.8	
MOY				*e*Sg	Sg	01 38 48.5	-3.8
MOY				max			
	comp=E,10.0nm,0.6s						
MOY				Smax			
	comp=E,35nm,1.8s						
ORL	**Orlik**	**6.54**	**251**	⇓*i*Pn	Pn	01 37 07.4	+3.4
	comp=E,8.0nm,1.6s						
ORL				⇓*i*Pn	Pn	01 37 07.4	+3.4
	comp=E,10.0nm,1.6s						
ORL				⇓*i*Pn	Pn	01 37 07.4	+3.4
	comp=E,8.0nm,1.6s						
ORL				*e*Sn	Sn	01 38 19.5	+0.7
ORL				*e*Sg	Sg	01 38 53.3	-4.0
ORL				max			
	comp=E,17nm,1.1s						
ORL				Smax			
	comp=E,54nm,1.3s						
ULN	**Ulaanbaatar**	**7.51**	**195**	*e*	Sn	01 38 43.0	+0.2
ULN				*e*Sg	Sg	01 39 21.0	-7.5
TDJR	**Todzha**	**8.64**	**257**	*e*	Sn	01 39 31.1	+21
TDJR				*e*Sg	Sn	01 39 57.0	+46

*IDC **23** 01:46:57.5±1.4, 2°.76N×95°.36E, h0km, mb4.2/8, mb1 4.3/10, mb1mx4.0/24, mbtmp4.3/10, ML4.3/2, Error ellipse: s-maj=43.2km s-min=20.2km az=49.0*
*NEIC **23** 01:46:59.6±10.0, 2°.75N×95°.36E, h14km±62km, mb4.4/7, Error ellipse: s-maj=35.9km s-min=8.8km az=53.0*
*ISCJB **23** 01:47:00.2±2.6, 2°.77N±0°.07×95°.34E±0°.07, h32km±19km, mb4.3/16, Error ellipse: s-maj=14.1km s-min=7.8km az=138.7*
*DJA **23** 01:47:01, 2°.76N×95°.39E, h30km, MLv4.0/4*
ISC 23 01:47:02.1±2.7, 2°.79N±0°.07×95°.38E±0°.07, h31km±20km, n30, σ0899/30, mb4.3/16, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.86**	**75**	P	**Pn**	**01 47 31.0**	**-0.9**
TPTI				S	**Sn**	**01 47 55.5**	**+1.1**
GSI	**Gunungsitoli**	**2.65**	**124**	P	**Pn**	**01 47 42.8**	**+0.1**
GSI				S	**Sn**	**01 48 11.7**	**-2.1**
BSI	**Banda Aceh**	**2.69**	**358**	P	**Pn**	**01 47 41.6**	**-1.8**
PSI	**Prapat**	**3.54**	**90**	Pn	**Pn**	**01 47 54.8**	**-0.3**
	5.9nm,0.3s,baz=277,slow=5.3,SNR=19						
MNSI	**Mandailing Nat**	**4.64**	**115**	P	**Pn**	**01 48 04.9**	**-5.3**
SISI	**Saibi**	**5.52**	**138**	P	**Pn**	**01 48 23.1**	**+0.8**
	0.3nm45nm,2.6s						
KULM	**Kulim**	**5.82**	**65**	*e*Pn	**Pn**	**01 48 26.5**	**+0.2**
	46nm,0.8s						
KULM	**Kulim**	**5.82**	**65**	P	**Pn**	**01 48 26.5**	**+0.1**
	59nm,0.8s						
IPM	**Ipoh**	**5.88**	**73**	P	**Pn**	**01 48 27.9**	**+0.7**
PPI	**Padang Panjang**	**5.96**	**123**	P	**Pn**	**01 48 30.3**	**+1.9**
CMAR	**Chiang Mai Arr**	**15.96**	**12**	Pn	**Pn**	**01 50 45.4**	**+0.8**
	1.2nm,0.3s,baz=202,slow=11,SNR=44						
CHTO	**Chiang Mai**	**16.30**	**12**	*e*P	**Pn**	**01 50 47.3**	**-1.7**
	5.9nm,1.0s						
KKM	**Kota Kinabalu**	**21.02**	**80**	*e*P	**P**	**01 51 42.5**	**-1.0**
	25nm,0.9s,mb4.5						
LSA	**Lhasa**	**27.06**	**352**	*e*P	**P**	**01 52 43.2**	**+1.2**
	7.5nm,0.7s,mb4.3						
BJT	**Baijiatuau**	**41.58**	**24**	*e*P	**P**	**01 54 48.1**	**+1.0**
	11nm,0.7s,mb4.6						
BJI	**Beijing**	**41.60**	**24**	P	**P**	**01 54 48.3**	**+1.0**
BJI				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**44.42**	**122**	P	**P**	**01 55 10.5**	**+0.1**
	comp=Z,0.9nm,0.5s,mb3.8,baz=301,slow=9.1,SNR=4.3						
MKAR	**Makanchi Array**	**45.29**	**347**	P	**P**	**01 55 17.4**	**+0.4**
	comp=Z,5.6nm,0.6s,mb4.6,baz=166,slow=7.6,SNR=68						
KSRS	**Korea Array**	**45.63**	**37**	P	**P**	**01 55 18.8**	**-1.0**
	comp=Z,1.5nm,0.7s,mb4.0,baz=221,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**45.80**	**127**	P	**P**	**01 55 21.2**	**-0.2**
	comp=Z,0.5nm,0.8s,mb3.5,baz=298,slow=7.7,SNR=3.4						
SONM	**Songino Array**	**45.87**	**10**	P	**P**	**01 55 21.5**	**-0.1**
	comp=Z,4.8nm,0.7s,mb4.5,baz=191,slow=9.3,SNR=20						
SONM				PcP	PcP	01 56 59.1	+0.7
	comp=Z,1.1nm,0.6s,baz=202,slow=1.4,SNR=4.4						
KURK	**Kurchatov**	**49.81**	**346**	*e*P	**P**	**01 55 52.7**	**+0.7**
	comp=Z,3.8nm,1.0s,mb4.4						
ZALV	**Zalesovo Beam**	**51.73**	**352**	P	**P**	**01 56 06.8**	**+0.4**
	comp=Z,15nm,0.6s,mb5.1,baz=182,slow=7.1,SNR=70						
BRVK	**Borovoye**	**54.23**	**342**	*e*P	**P**	**01 56 24.7**	**-0.2**
	comp=Z,1.8nm,0.6s,mb4.2						
ABKAR	**Akbulak array**	**55.27**	**332**	*e*P	**P**	**01 56 32.5**	**0.0**
	comp=Z,2.3nm,0.8s,mb4.3						
FINES	**FINESS Array B**	**77.76**	**333**	P	**P**	**01 58 55.9**	**-0.2**
	comp=Z,2.3nm,0.6s,mb4.3,baz=108,slow=5.8,SNR=12						
KAF	**Kangasniemi**	**77.85**	**333**	*e*p	**P**	**01 58 54.4**	**-2.1**
	comp=Z,1.5nm,0.5s,mb4.2						
ARCES	**ARCESS Array B**	**80.44**	**340**	P	**P**	**01 59 11.2**	**+0.7**
	comp=Z,0.9nm,0.6s,mb3.9,baz=103,slow=5.2,SNR=9.2						
TXAR	**Lajitas Array**	**143.21**	**28**	PKP	PKPdf	02 06 30.9	-3.1
TXAR	**Lajitas Array**	**143.21**	**28**	PKhKP	PKPpre	02 06 30.9	
	comp=Z,0.5nm,1.0s,baz=318,slow=1.7,SNR=3.5						

IDC 23 01:57:25.0±1.7, 58°.80S×25°.34W, h0km, mb3.8/1, mb1 3.8/1, mb1mx3.5/15, mbtmp3.8/1, Error ellipse: s-maj=93.6km s-min=66.1km az=143.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**75.01**	**27**	P	P	02 09 08.1	+0.1
	0.8nm,0.8s,baz=203,slow=6.3,SNR=9.2						
INK	**Inuvik**	**148.54**	**317**	PKPbc	PKPbc	02 17 11.3	-0.7
	1.6nm,0.8s,baz=122,slow=5.2,SNR=4.1						
SONM	**Songino Array**	**149.81**	**90**	PKPbc	PKPbc	02 17 15.5	-0.2
	0.4nm,0.5s,baz=320,slow=3.8,SNR=2.5						
ILAR	**Eielson Array**	**152.65**	**307**	PKPbc	PKPbc	02 17 21.8	0.0
	0.9nm,0.8s,baz=85,slow=2.3,SNR=8.3						

IDC 23 01:58:29.4±2.1, 8°.41S×118°.89E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.8/19, mbtmp3.9/5, ML4.1/1, Error ellipse: s-maj=147.1km s-min=20.5km az=57.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.84**	**129**	P	Pn	02 02 50.8	-0.7
	0.7nm,0.3s,baz=304,slow=12,SNR=8.5						
ASAR	**Alice Springs**	**20.90**	**138**	P	P	02 03 14.2	+0.7
	4.4nm,0.4s,baz=314,slow=9.0,SNR=50						
STKA	**Stephens Creek**	**31.47**	**141**	P	P	02 04 52.7	-0.2
	3.7nm,0.4s,baz=317,slow=7.7,SNR=11						
SONM	**Songino Array**	**57.08**	**350**	P	P	02 08 17.5	+0.2
	0.2nm,0.4s,baz=147,slow=8.1,SNR=2.7						
MKAR	**Makanchi Array**	**63.89**	**333**	P	P	02 09 04.0	+0.1
	0.2nm,0.6s,baz=142,slow=7.6,SNR=4.2						

*ISCJB **23** 02:01:02.4±2.0, 4°.07S±0°.08×142°.26E±0°.09, h102km±19km, mb4.4/23, Error ellipse: s-maj=14.7km s-min=12.8km az=165.6*
*IDC **23** 02:01:04.5±0.8, 4°.10S×142°.46E, h109km±6km, mb4.0/13, mb1 4.0/13, mb1mx4.0/18, mbtmp4.0/13, MS2.9/2, Ms1 2.9/2, ms1mx2.2/22, Error ellipse: s-maj=24.9km s-min=12.0km az=83.0*
*NEIC **23** 02:01:05.1±1.5, 4°.16S×142°.31E, h118km±14km, mb4.6/10, Error ellipse: s-maj=12.1km s-min=10.2km az=87.0*
ISC 23 02:01:04.1±1.6, 4°.09S±0°.07×142°.28E±0°.09, h104km±16km, h111km±1.4km: pP-P, n47, σ0981/33, mb4.4/23, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.16**	**138**	*e*Pn	**Pn**	**02 02 47.0**	**+0.7**
	27nm,0.6s						
COEN	**Coen**	**9.84**	**175**	*e*Pn	**Pn**	**02 03 23.0**	**+0.3**
KAKA	**Kakadu**	**12.96**	**228**	*e*P	**Pn**	**02 04 02.9**	**-1.5**
	125nm,0.4s						
KAKA	**Kakadu**	**12.96**	**228**	*e*Pn	**Pn**	**02 04 02.7**	**-1.7**
	272nm,0.4s						
KAKA				*e*Sn	**Sn**	**02 06 18.7**	**-8.3**
CTA	**Charters Tower**	**16.36**	**167**	LR	LR	02 10 59.1	
	comp=Z,47nm,18.3s,baz=229,slow=36						
WRA	**Warramunga Arr**	**17.55**	**206**	P	**Pn**	**02 05 01.1**	**-1.1**
	1.9nm,0.3s,baz=24,slow=12,SNR=53						
KNA	**Kununurra**	**17.63**	**228**	*e*P	**Pn**	**02 05 03.8**	**+0.6**
	12nm,0.2s						
GUMO	**Guam**	**17.75**	**8**	LR	LR	02 11 02.5	
	comp=Z,32nm,19.8s,baz=98,slow=34						
ASAR	**Alice Springs**	**21.07**	**202**	P	**P**	**02 05 40.0**	**0.0**
	10nm,0.7s,mb4.2,baz=34,slow=13,SNR=37						
ASAR				pP		02 06 02.5	
	12nm,0.5s,baz=29,slow=10,SNR=8.0						
QLP	**Quilpie**	**22.44**	**175**	*e*P	**P**	**02 05 54.4**	**-0.1**
EIDS	**Eidsvold**	**22.78**	**159**	*e*P	**P**	**02 05 59.3**	**+1.2**
EIDS	**Eidsvold**	**22.78**	**159**	*e*P	**P**	**02 05 58.0**	**-0.1**
	7.0nm,0.7s,mb4.1						
RMQ	**Roma**	**23.11**	**165**	*e*P	**P**	**02 06 02.4**	**+1.3**
	30nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**27.65**	**181**	P	**P**	**02 06 41.5**	**-0.5**
	2.3nm,0.7s,mb3.8,baz=12,slow=6.9,SNR=4.4						
MBWA	**Marble Bar**	**27.71**	**230**	*e*P	**P**	**02 06 43.7**	**+0.9**
	40nm,1.4s,mb4.8						
MJAR	**Matsushiro Ar**	**40.60**	**355**	P	**P**	**02 08 33.0**	**-0.6**
	2.8nm,0.9s,mb4.1,baz=184,slow=11,SNR=5.6						
KSRS	**Korea Array**	**43.44**	**343**	P	**P**	**02 08 56.0**	**-0.7**
	2.2nm,0.7s,mb4.0,baz=158,slow=11,SNR=5.4						
URZ	**Urewera**	**46.51**	**142**	P	**P**	**02 09 20.2**	**-0.8**
	1.9nm,0.3s,mb4.3,baz=229,slow=11,SNR=5.1						
RPZ	**Rata Peaks**	**46.94**	**151**	P	**P**	**02 09 23.9**	**-0.4**
	3.9nm,0.9s,mb4.5,baz=355,slow=18,SNR=4.2						
PETK	**Petropavlovsk-**	**58.45**	**11**	P	**P**	**02 10 49.0**	**+0.2**
	5.2nm,0.9s,mb4.6,baz=180,slow=7.0,SNR=5.6						
SONM	**Songino Array**	**60.52**	**333**	P	**P**	**02 11 04.9**	**+1.7**
	0.6nm,0.5s,mb3.9,baz=147,slow=8.3,SNR=3.1						
MKAR	**Makanchi Array**	**73.07**	**322**	P	**P**	**02 12 24.1**	**+1.2**
	1.5nm,0.4s,mb4.1,baz=100,slow=7.4,SNR=18						
ZALV	**Zalesovo Beam**	**74.93**	**329**	P	**P**	**02 12 33.4**	**-0.1**
	2.5nm,0.6s,mb4.1,baz=120,slow=5.6,SNR=11						
ZALV				pP	pP	02 13 02.1	+2.0
	1.7nm,0.7s,baz=102,slow=6.2,SNR=3.2						
KURK	**Kurchatov**	**76.90**	**324**	*e*P	**P**	**02 12 45.0**	**+0.2**
	2.8nm,0.9s,mb4.0						
KURK	**Kurchatov**	**76.90**	**324**	P	**P**	**02 12 45.5**	**+0.7**
	1.4nm,0.8s,mb3.7,baz=111,slow=4.3,SNR=6.9						
KDAK	**Kodiak Island**	**80.51**	**30**	P	**P**	**02 13 04.7**	**+0.2**
	3.4nm,0.6s,mb4.3,baz=301,slow=6.9,SNR=4.0						
BVAR	**Borovoye Array**	**82.48**	**325**	P	**P**	**02 13 15.8**	**+0.9**
	5.2nm,0.6s,mb4.5,baz=115,slow=6.7,SNR=33						
BVAR				pP	pP	02 13 44.0	+2.1
	2.9nm,0.6s,baz=112,slow=7.5,SNR=6.4						
BRVK	**Borovoye**	**82.56**	**325**	*e*P	**P**	**02 13 16.0**	**+0.7**
	4.8nm,0.8s,mb4.4						
MCK	**McKinley**	**84.42**	**25**	*e*P	**P**	**02 13 24.1**	**-0.6**
	7.6nm,0.7s,mb4.6						
DIV	**Divide**	**84.95**	**28**	*e*P	**P**	**02 13 27.2**	**-0.1**
	21nm,1.2s,mb5.0						
COLA	**College**	**85.27**	**24**	*e*P	**P**	**02 13 28.0**	**-0.9**
	8.0nm,0.6s,mb4.8						
ILAR	**Eielson Array**	**85.62**	**24**	P	**P**	**02 13 29.2**	**-1.4**
	10nm,0.6s,mb5.0,baz=260,slow=4.6,SNR=154						
ILAR				pP	pP	02 13 57.3	-0.4
	2.3nm,0.8s,baz=260,slow=4.6,SNR=3.7						
EGAK	**Eagle**	**87.98**	**25**	*e*P	**P**	**02 13 42.2**	**+0.1**
	6.3nm,0.8s,mb4.7						
ABKAR	**Akbulak array**	**88.08**	**319**	*e*P	**P**	**02 13 42.1**	**-0.8**
	1.2nm,0.6s,mb4.1						
TXAR	**Lajitas Array**	**112.92**	**60**	PKKPbc	PKKPbc	02 30 20.1	+2.6
	0.2nm,0.8s,baz=138,slow=5.6,SNR=2.7						
TXAR				PKKPab	PKKPab	02 30 25.8	+0.7
	0.4nm,0.8s,baz=96,slow=6.8,SNR=4.2						
EKA

mb1 4.1/5,mb1mx3.9/17,mbtmp3.8/5,Error ellipse: s-maj=126.1km s-min=19.3km az=154.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.21**	**259**	P	P	02 14 37.7	+0.8
	0.7nm,0.5s,baz=97,slow=7.2,SNR=2.9						
ASAR	**Alice Springs**	**45.43**	**253**	P	P	02 14 39.1	+0.4
	1.6nm,0.6s,baz=88,slow=9.3,SNR=9.3						
ASAR				S	S	02 21 21.6	+0.2
	0.7nm,0.9s,baz=93,slow=13,SNR=4.2						
NVAR	**Mina Array Bea**	**78.52**	**44**	P	P	02 18 21.6	+0.6
	0.1nm,0.3s,baz=242,slow=7.7,SNR=3.6						
ILAR	**Eielson Array**	**84.96**	**13**	P	P	02 18 53.9	-0.5
	0.2nm,0.4s,baz=223,slow=4.4,SNR=6.2						
TXAR	**Lajitas Array**	**85.18**	**58**	P	P	02 18 56.4	+0.1
	0.4nm,0.7s,baz=216,slow=5.6,SNR=6.5						

*ISCJB **23** 02:18:03.3±0.8, 16°.7N±0°.1×46°.7W±0°.1, h10km, mb3.7/9, Error ellipse: s-maj=21.1km s-min=19.9km az=37.4*
*IDC **23** 02:18:03.4±0.9, 16°.65N×46°.66W, h0km, mb3.7/7, mb1 4.0/7, mb1mx3.7/22, mbtmp3.7/7, MS2.5/1, Ms1 2.5/1, ms1mx2.2/22, Error ellipse: s-maj=28.0km s-min=24.3km az=113.0*
*NEIC **23** 02:18:05.0±0.6, 16°.62N×46°.62W, h10km, mb4.1/2, Error ellipse: s-maj=16.2km s-min=15.3km az=218.0*

ISC 23 02:18:05.2±0.8, 16°.6N±0°.1×46°.6W±0°.1, h10km, n11, σ0s55/10, mb3.7/9, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**18.70**	**277**	LR	LR	02 26 36.5	
	comp=Z,14nm,20.9s,baz=93,slow=28						
LPAZ	**La Paz**	**38.99**	**214**	P	P	02 25 32.4	+0.4
	1.3nm,0.7s,mb3.8,baz=30,slow=8.1,SNR=6.8						
CPUP	**Villa Florida**	**43.95**	**194**	P	P	02 26 12.3	-0.3
CPUP	**Villa Florida**	**43.95**	**194**	P	P	02 26 12.3	-0.3
	2.1nm,0.5s,mb4.1,baz=18,slow=6.5,SNR=13						
TORD	**Torodi Ar. Bea**	**46.73**	**87**	P	P	02 26 34.9	-0.1
	0.7nm,1.0s,mb3.5,baz=280,slow=5.3,SNR=4.8						
TXAR	**Lajitas Array**	**53.56**	**294**	P	P	02 27 26.0	-0.7
	0.1nm,0.5s,mb3.0,baz=117,slow=7.6,SNR=2.8						
PDAR	**Pinedale Array**	**59.10**	**310**	P	P	02 28 05.6	-0.3
	0.3nm,0.4s,mb3.7,baz=110,slow=5.3,SNR=1.7						
HWUT	**Hardware Ranch**	**60.49**	**309**	*e*P	P	02 28 16.9	+1.4
	1.8nm,0.8s,mb4.2						
DUG	**Dugway**	**61.36**	**307**	*e*P	P	02 28 21.1	-0.4
	0.6nm,0.5s,mb4.0						
BRTR	**Keskin Array B**	**72.17**	**53**	P	P	02 29 30.6	+0.2
	0.5nm,0.8s,mb3.5,baz=269,slow=5.8,SNR=3.6						
ILAR	**Eielson Array**	**79.41**	**335**	P	P	02 30 11.2	-0.1
	0.9nm,0.9s,mb3.7,baz=70,slow=5.0,SNR=11						

IDC 23 02:27:12.1±2.2, 6°.68S×128°.80E, h0km, mb3.4/1, mb1 3.6/3, mb1mx3.4/16, mbtmp3.4/3, ML3.6/2, Error ellipse: s-maj=117.7km s-min=33.3km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.24**	**158**	Pn	Pn	02 30 34.1	-1.0
	0.3nm,0.3s,baz=337,slow=13,SNR=3.6						
WRA				Sn	Sn	02 32 58.9	-15
	0.3nm,0.3s,baz=339,slow=25,SNR=3.5						
ASAR	**Alice Springs**	**17.59**	**164**	P	Pn	02 31 19.4	+0.7
	0.2nm,0.3s,baz=345,slow=11,SNR=11						
ASAR				S	Sn	02 34 25.8	-10
	0.1nm,0.3s,baz=330,slow=14,SNR=4.1						
MKAR	**Makanchi Array**	**67.31**	**327**	P	P	02 38 08.8	+0.1
	0.2nm,0.3s,baz=118,slow=8.2,SNR=2.5						

IDC 23 02:36:35.7±1.8, 4°.32S×144°.35E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.7/15, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=73.8km s-min=26.7km az=107.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.34**	**211**	P	Pn	02 40 49.7	-1.9
	0.3nm,0.3s,baz=32,slow=13,SNR=5.2						
ASAR	**Alice Springs**	**21.72**	**207**	P	P	02 41 29.7	+1.1
	1.2nm,0.8s,baz=31,slow=11,SNR=8.5						
MKAR	**Makanchi Array**	**74.53**	**321**	P	P	02 48 17.2	+0.9
	0.4nm,0.3s,baz=116,slow=6.5,SNR=4.3						
ZALV	**Zalesovo Beam**	**76.19**	**328**	P	P	02 48 25.3	-0.4
	0.7nm,0.5s,baz=122,slow=5.4,SNR=3.4						
ILAR	**Eielson Array**	**85.00**	**24**	P	P	02 49 12.8	+0.1
	0.4nm,0.6s,baz=254,slow=4.7,SNR=9.2						
TORD	**Torodi Ar. Bea**	**142.10**	**286**	PKhKP	PKPpre	02 56 05.0	
	0.5nm,1.0s,baz=62,slow=2.7,SNR=4.6						
TORD				PKP	PKPdf	02 56 10.0	-1.0
	0.3nm,0.8s,baz=76,slow=1.9,SNR=4.1						

IDC 23 02:52:09.6±3.8, 3°.56S×102°.39E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.5/19, mbtmp3.4/5, Error ellipse: s-maj=161.1km s-min=23.7km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.14**	**351**	P	P	02 57 07.2	+0.1
	0.5nm,0.3s,baz=176,slow=16,SNR=2.5						
WRA	**Warramunga Arr**	**35.15**	**120**	P	P	02 59 05.8	+0.5
	0.5nm,0.3s,baz=306,slow=9.0,SNR=4.1						
ASAR	**Alice Springs**	**36.41**	**126**	P	P	02 59 15.4	-0.7
	0.3nm,0.8s,baz=300,slow=7.5,SNR=3.0						
SONM	**Songino Array**	**51.30**	**3**	P	P	03 01 15.4	0.0
	0.2nm,0.5s,baz=187,slow=7.3,SNR=2.1						
MKAR	**Makanchi Array**	**53.19**	**343**	P	P	03 01 29.5	0.0
	0.3nm,0.2s,baz=151,slow=8.3,SNR=4.4						
TXAR	**Lajitas Array**	**144.39**	**41**	PKP	PKPdf	03 11 48.5	-0.1
	0.5nm,0.8s,baz=270,slow=0.7,SNR=7.7						

*CSEM **23** 03:01:21.9±0.1, 38°.31N×22°.10E, h14km, ML1.6/3, Error ellipse: s-maj=2.9km s-min=2.1km az=65.0*
*ISCJB **23** 03:01:22.2±0.7, 38°.30N±0°.03×22°.11E±0°.04, h13km±5km, Error ellipse: s-maj=5.2km s-min=4.6km az=22.7*
*ATH **23** 03:01:22.3, 38°.29N×22°.12E, h11km±3km, MD2.9/7*
*THE **23** 03:01:22.7, 38°.30N×22°.11E, h10km, ML1.6/3, Error ellipse: s-maj=1.0km s-min=0.4km az=285.0*
*NEIC **23** 03:01:22.3, 38°.29N×22°.12E, h11km, MD2.9(ATH), After ATH.*

ISC 23 03:01:22.6±0.7, 38°.30N±0°.03×22°.11E±0°.04, h11km±6km, n31, σ0s33/55, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.07**	**337**	P	**Pg**	**03 01 24.9**	**-0.1**
TRIZ				S	**Sg**	**03 01 26.5**	**-0.3**
TRIZ	**Trizonia**	**0.07**	**337**	P	**Pg**	**03 01 24.9**	**-0.1**
TRIZ				S	**Sg**	**03 01 26.5**	**-0.3**
KALE	**Kalithea**	**0.10**	**13**	P	**Pg**	**03 01 25.4**	**+0.1**
KALE				S	**Sg**	**03 01 27.3**	**0.0**
KALE	**Kalithea**	**0.10**	**13**	P	**Pg**	**03 01 25.4**	**+0.1**
KALE				S	**Sg**	**03 01 27.3**	**0.0**
LAKA	**Lakka**	**0.12**	**242**	P	**Pg**	**03 01 25.7**	**+0.1**
LAKA				S	**Sg**	**03 01 27.6**	**-0.1**
LAKA	**Lakka**	**0.12**	**242**	P	**Pg**	**03 01 25.7**	**+0.1**
LAKA				S	**Sg**	**03 01 27.6**	**-0.1**
EFP	**Efpalio**	**0.21**	**309**	*e*PG	**Pg**	**03 01 27.1**	**+0.1**
EFP				*e*SG	**Sg**	**03 01 30.5**	**+0.5**
EFP	**Efpalio**	**0.21**	**309**	P	**Pg**	**03 01 27.1**	**+0.1**
EFP				S	**Sg**	**03 01 30.2**	**+0.2**
EFP	**Efpalio**	**0.21**	**309**	P	**Pg**	**03 01 27.1**	**+0.1**
EFP				S	**Sg**	**03 01 30.2**	**+0.2**
EFP				*e*Sg	**Sg**	**03 01 30.5**	**+0.5**
DSF	**Desfina**	**0.35**	**71**	P	**Pg**	**03 01 29.4**	**-0.1**
DSF				S	**Sg**	**03 01 34.8**	**+0.6**
DSF	**Desfina**	**0.35**	**71**	P	**Pg**	**03 01 29.4**	**-0.1**
DSF				S	**Sg**	**03 01 34.8**	**+0.6**
GUR	**Goura**	**0.40**	**153**	*e*PB	**Pg**	**03 01 30.3**	**-0.2**
GUR				*e*SB	**Sg**	**03 01 35.5**	**-0.4**
GUR	**Goura**	**0.40**	**153**	P	**Pg**	**03 01 30.6**	**+0.1**
GUR				S	**Sg**	**03 01 36.6**	**+0.7**
GUR	**Goura**	**0.40**	**153**	*e*Pb	**Pg**	**03 01 30.3**	**-0.2**
GUR	**Goura**	**0.40**	**153**	P	**Pg**	**03 01 30.6**	**+0.1**
GUR				*e*Sb	**Sg**	**03 01 35.5**	**-0.4**
GUR				S	**Sg**	**03 01 36.6**	**+0.7**
RLS	**Riolos of Patr**	**0.56**	**245**	*e*Pb	**Pg**	**03 01 33.3**	**-0.2**
RLS				*e*Sb	**Sg**	**03 01 41.1**	**+0.2**
RLS	**Riolos of Patr**	**0.56**	**245**	*e*PB	**Pg**	**03 01 33.3**	**-0.2**
RLS				*e*SB	**Sg**	**03 01 41.1**	**+0.2**
RLS	**Riolos of Patr**	**0.56**	**245**	*e*Pb	**Pg**	**03 01 33.3**	**-0.2**
RLS				*e*Sb	**Sg**	**03 01 41.1**	**+0.2**
EVR	**Evrytania**	**0.66**	**339**	*e*Pb	**Pg**	**03 01 35.5**	**0.0**
EVR				*e*Sb	**Sg**	**03 01 44.2**	**0.0**
EVR	**Evrytania**	**0.66**	**339**	*e*PB	**Pg**	**03 01 35.5**	**0.0**
EVR				*e*SB	**Sg**	**03 01 44.2**	**0.0**
EVR	**Evrytania**	**0.66**	**339**	*e*Pb	**Pg**	**03 01 35.5**	**0.0**
EVR				*e*Sb	**Sg**	**03 01 44.2**	**0.0**
AGG	**Agios Georgios**	**0.74**	**13**	*e*Pb	**Pg**	**03 01 36.5**	**-0.5**
AGG	**Agios Georgios**	**0.74**	**13**	*e*PB	**Pg**	**03 01 36.5**	**-0.5**
AGG	**Agios Georgios**	**0.74**	**13**	P	**Pg**	**03 01 36.2**	**-0.8**
AGG				S	**Sg**	**03 01 47.2**	**+0.4**
AGG	**Agios Georgios**	**0.74**	**13**	P	**Pg**	**03 01 36.2**	**-0.8**
AGG	**Agios Georgios**	**0.74**	**13**	*e*Pb	**Pg**	**03 01 36.5**	**-0.5**
AGG				S	**Sg**	**03 01 47.2**	**+0.4**
LKR	**Lokris**	**0.78**	**63**	*e*Pb	**Pg**	**03 01 37.0**	**-0.7**
LKR	**Lokris**	**0.78**	**63**	*e*PB	**Pg**	**03 01 37.0**	**-0.7**
LKR	**Lokris**	**0.78**	**63**	*e*Pb	**Pg**	**03 01 37.0**	**-0.7**
DID	**Didima**	**1.19**	**131**	*e*PB	**Pb**	**03 01 45.2**	**+0.1**
DID	**Didima**	**1.19**	**131**	*e*Pb	**Pb**	**03 01 45.2**	**+0.1**

*THE **23** 03:02:40.1, 41°.61N×19°.77E, h17km±1km, ML2.6/2, Error ellipse: s-maj=4.1km s-min=1.8km az=305.0*
*ISCJB **23** 03:02:42.7±0.4, 41°.28N±0°.02×19°.83E±0°.04, h6km±3km, Error ellipse: s-maj=5.2km s-min=2.7km az=153.2*
*CSEM **23** 03:02:42.7±0.2, 41°.25N×19°.75E, h8km, ML2.2, Error ellipse: s-maj=6.3km s-min=3.2km az=63.0*
*TIR **23** 03:02:43.5±1.9, 41°.32N×19°.94E, h39km±41km, ML3.2*
*SKO **23** 03:02:43.8, 41°.24N×19°.93E, h11km*
*BEO **23** 03:02:45.2±0.5, 41°.33N×20°.06E, h0km±4km, ML2.2/6*
*PDG **23** 03:02:45.3±0.2, 41°.38N×19°.67E, h8km, ML2.5/8, Error ellipse: s-maj=1.2km s-min=1.5km az=0.0*
*NEIC **23** 03:02:45.3, 41°.38N×19°.67E, h8km, ML2.5(PDG), After PDG.*

ISC 23 03:02:42.7±0.5, 41°.25N±0°.02×19°.85E±0°.04, h0km±3km, n63, σ1s26/112, 11C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.10**	**8**	*e*Pg	**Pg**	**03 02 46.9**	**+2.2**
TIR				*i* Sg	**Sg**	**03 02 50.5**	**+4.5**
TIR	**Tirane**	**0.10**	**8**	P	**Pg**	**03 02 46.5**	**+1.8**
TIR				S	**Sg**	**03 02 50.0**	**+4.0**
TIR	**Tirane**	**0.10**	**8**	P	**Pg**	**03 02 46.5**	**+1.8**
TIR	**Tirane**	**0.10**	**8**	*e*Pg	**Pg**	**03 02 46.9**	**+2.2**
TIR				S	**Sg**	**03 02 50.0**	**+4.0**
PUK	**Puka**	**0.79**	**2**	*e*PG	**Pg**	**03 02 57.5**	**-0.5**
PUK				*i* SG	**Sg**	**03 03 10.3**	**+2.0**
PUK	**Puka** SNR=109	**0.79**	**2**	*e*Pg	**Pg**	**03 02 57.5**	**-0.5**
PUK	SNR=109			*i* Sg	**Sg**	**03 03 10.3**	**+2.0**
ULC	**Ulcinj**	**0.84**	**328**	⇓*i*Pg	**Pg**	**03 02 58.5**	**-0.4**
ULC				*e*Sg	**Sg**	**03 03 08.3**	**-1.5**
ULC	**Ulcinj**	**0.84**	**328**	⇓*i*Pg	**Pg**	**03 02 58.5**	**-0.4**
ULC				*e*Sg	**Sg**	**03 03 08.3**	**-1.5**
KBN	**Korca**	**0.95**	**131**	*e*PG	**Pg**	**03 03 01.2**	**+0.3**
KBN				*i* SG	**Sg**	**03 03 16.5**	**+3.4**
KBN	**Korca** SNR=103	**0.95**	**131**	*e*Pg	**Pg**	**03 03 01.2**	**+0.3**
KBN	SNR=103			*i* Sg	**Sg**	**03 03 16.5**	**+3.4**
KRUS	**Krusevo**	**1.06**	**83**	*i* Pg	**Pg**	**03 03 01.1**	**-2.0**
BCI	**Bajram Curri**	**1.13**	**8**	*e*PG	**Pg**	**03 03 03.7**	**-0.7**
BCI				*i* SG	**Sg**	**03 03 20.2**	**+1.2**
BCI	**Bajram Curri** SNR=101	**1.13**	**8**	*e*Pg	**Pg**	**03 03 03.7**	**-0.7**
BCI	SNR=101			*i* Sg	**Sg**	**03 03 20.2**	**+1.2**
BIA	**Bitola**	**1.14**	**101**	P	**Pg**	**03 03 02.6**	**-1.9**
BIA	**Bitola**	**1.14**	**101**	*e*Pg	**Pg**	**03 03 03.0**	**-1.5**
BIA				*e*Sg	**Sg**	**03 03 18.4**	**-0.9**
BIA	**Bitola**	**1.14**	**101**	P	**Pg**	**03 03 02.6**	**-1.9**
NEST	**Nestorio**	**1.23**	**132**	P	**Pg**	**03 03 06.3**	**-0.1**
NEST				S	**Sg**	**03 03 26.6**	**+4.2**
NEST	**Nestorio**	**1.23**	**132**	P	**Pg**	**03 03 06.3**	**-0.1**
NEST				S	**Sg**	**03 03 26.6**	**+4.2**
FNA	**Florina**	**1.25**	**111**	P	**Pg**	**03 03 05.7**	**-0.9**
FNA				S	**Sg**	**03 03 23.9**	**+1.1**
FNA	**Florina**	**1.25**	**111**	P	**Pg**	**03 03 05.7**	**-0.9**
FNA				S	**Sg**	**03 03 23.9**	**+1.1**
PDG	**Podgorica**	**1.26**	**340**	*e*Pg	**Pg**	**03 03 06.2**	**-0.7**
PDG				*i* Sg	**Sg**	**03 03 24.3**	**+1.7**
PDG	**Podgorica**	**1.26**	**340**	⇓*i*Pg	**Pg**	**03 03 06.9**	**-1.0**
PDG				*e*Sg	**Sg**	**03 03 22.8**	**-0.4**
TTG	**Podgorica**	**1.26**	**340**	⇓*i*Pg	**Pg**	**03 03 05.9**	**-1.0**
TTG				*e*Sg	**Sg**	**03 03 22.8**	**-0.4**
TTG	**Podgorica**	**1.26**	**340**	⇓*i*Pg	**Pg**	**03 03 05.9**	**-1.0**
TTG				*e*Sg	**Sg**	**03 03 22.8**	**-0.4**
PVY	**Plav**	**1.35**	**4**	⇑*i*Pg	**Pg**	**03 03 08.0**	**-0.6**
PVY				*e*Sg	**Sg**	**03 03 26.9**	**+0.8**
PVY	**Plav**	**1.35**	**4**	⇑*i*Pg	**Pg**	**03 03 08.0**	**-0.6**
PVY				*e*Sg	**Sg**	**03 03 26.9**	**+0.8**
SRN	**Sarande**	**1.37**	**175**	*e*PG	**Pg**	**03 03 10.2**	**+1.2**
SRN				*i* SG	**Sg**	**03 03 31.2**	**+4.4**
SRN	**Sarande** SNR=96	**1.37**	**175**	*e*Pg	**Pg**	**03 03 10.2**	**+1.2**
SRN	SNR=96			*i* Sg	**Sg**	**03 03 31.2**	**+4.4**
SKO	**Skopje**	**1.40**	**58**	*e*Pg	**Pn**	**03 03 08.1**	**-1.3**
KEK	**Kerkira**	**1.53**	**181**	P	**Pn**	**03 03 10.6**	**-0.7**
KEK				S	**Sn**	**03 03 34.4**	**+2.5**
KEK	**Kerkira**	**1.53**	**181**	P	**Pn**	**03 03 10.6**	**-0.7**
KEK				S	**Sn**	**03 03 34.4**	**+2.5**
HCY	**Herceg Novi**	**1.57**	**320**	⇓*i*Pg	**Pn**	**03 03 10.8**	**-1.0**
HCY				*e*Sg	**Sg**	**03 03 32.2**	**-0.8**
HCY	**Herceg Novi**	**1.57**	**320**	⇓*i*Pg	**Pn**	**03 03 10.8**	**-1.0**
HCY				*e*Sg	**Sg**	**03 03 32.2**	**-0.8**
BEY	**Berane**	**1.62**	**1**	⇑*i*Pg	**Pn**	**03 03 13.0**	**+0.4**
BEY				*e*Sg	**Sg**	**03 03 35.8**	**+0.9**
IVA	**Berane**	**1.62**	**1**	⇑*i*Pg	**Pn**	**03 03 13.0**	**+0.4**
IVA				*e*Sg	**Sg**	**03 03 35.8**	**+0.9**
IVA	**Berane**	**1.62**	**1**	⇑*i*Pg	**Pn**	**03 03 13.0**	**+0.4**
IVA				*e*Sg	**Sg**	**03 03 35.8**	**+0.9**
NKY	**Niksic**	**1.69**	**338**	⇑*i*Pg	**Pn**	**03 03 13.4**	**0.0**
NKY				*e*Sg	**Sg**	**03 03 36.7**	**-0.2**
NKY	**Niksic**	**1.69**	**338**	⇑*i*Pg	**Pn**	**03 03 13.4**	**0.0**
NKY				*e*Sg	**Sg**	**03 03 36.7**	**-0.2**
IGT	**Igoumenitsa**	**1.75**	**168**	P	**Pn**	**03 03 13.8**	**-0.5**
IGT				S	**Sn**	**03 03 42.1**	**+4.7**
IGT	**Igoumenitsa**	**1.75**	**168**	P	**Pn**	**03 03 13.8**	**-0.5**
BRY	**Bratogost**	**1.92**	**330**	⇑*i*Pn	**Pn**	**03 03 16.8**	**+0.2**
BRY				*e*Sn	**Sn**	**03 03 41.9**	**+0.5**
BRY	**Bratogost**	**1.92**	**330**	*e*Sn	**Sn**	**03 03 41.9**	**+0.5**
BRY	**Bratogost**	**1.92**	**330**	⇑*i*Pn	**Pn**	**03 03 16.8**	**+0.2**
SJES	**Sjenica**	**2.01**	**3**	*e*Pn	**Pn**	**03 03 19.1**	**+1.2**
SJES				*i* Sg	**Sg**	**03 03 46.5**	**-0.9**
SJES	**Sjenica**	**2.01**	**3**	*e*Pn	**Pn**	**03 03 19.1**	**+1.2**
VAY	**Valandovo**	**2.05**	**87**	*e*Pn	**Pn**	**03 03 18.9**	**+0.4**
VAY				*e*Sn	**Sn**	**03 03 42.5**	**-2.3**
VAY	**Valandovo**	**2.05**	**87**	*e*Pn	**Pn**	**03 03 18.9**	**+0.4**
UPM	**Unac-Piva**	**2.07**	**341**	⇑*i*Pn	**Pn**	**03 03 19.2**	**+0.4**
UPM				*e*Sn	**Sn**	**03 03 45.7**	**-0.4**
UPM	**Unac-Piva**	**2.07**	**341**	*e*Sn	**Sn**	**03 03 45.7**	**-0.4**
UPM	**Unac-Piva**	**2.07**	**341**	⇑*i*Pn	**Pn**	**03 03 19.2**	**+0.4**
PLE	**Pljevlja**	**2.11**	**351**	⇓*i*Pn	**Pn**	**03 03 20.2**	**+1.0**
PLE				*e*Sn	**Sn**	**03 03 47.5**	**+1.4**
PLE	**Pljevlja**	**2.11**	**351**	*e*Sn	**Sn**	**03 03 47.5**	**+1.4**
PLE	**Pljevlja**	**2.11**	**351**	⇓*i*Pn	**Pn**	**03 03 20.2**	**+1.0**
BARS	**Barje**	**2.15**	**42**	*e*Pn	**Pn**	**03 03 20.0**	**+0.3**
BARS				*e*Sn	**Sn**	**03 03 46.0**	**-1.1**
BARS	**Barje**	**2.15**	**42**	*e*Pn	**Pn**	**03 03 20.0**	**+0.3**
BARS				*e*Sn	**Sn**	**03 03 46.0**	**-1.1**
STON	**Ston**	**2.28**	**316**	*e*Pn	**Pn**	**03 03 18.7**	**-2.8**
STON				Sn	**Sn**	**03 03 47.0**	**-3.3**
STON	**Ston**	**2.28**	**316**	*e*Pn	**Pn**	**03 03 18.7**	**-2.9**
STON				Sn	**Sn**	**03 03 46.9**	**-3.4**
BBLS	**Lazići**	**2.64**	**353**	*e*Pn	**Pn**	**03 03 28.6**	**+2.1**
BBLS				*e*Sn	**Sn**	**03 04 00.5**	**+1.3**
DIVS	**Divibare**	**2.85**	**2**	*e*Pn	**Pn**	**03 03 31.7**	**+2.3**
DIVS				*e*Sn	**Sn**	**03 04 04.2**	**-0.2**
ZAPS	**Zavoj**	**2.89**	**45**	*e*Pn	**Pn**	**03 03 30.5**	**+0.5**
ZAPS				*e*Sn	**Sn**	**03 04 03.1**	**-2.4**
ZAPS	**Zavoj**	**2.89**	**45**	*e*Pn	**Pn**	**03 03 30.5**	**+0.5**
ZAPS				*e*Sn	**Sn**	**03 04 03.1**	**-2.4**
NVLJ	**Novalja**	**4.93**	**314**	*e*Pn	**Pn**	**03 03 56.0**	**-2.0**
NVLJ				Sn	**Sn**	**03 04 52.0**	**-3.8**
NVLJ	**Novalja**	**4.93**	**314**	*e*Pn	**Pn**	**03 03 56.0**	**-2.0**
NVLJ				Sn	**Sn**	**03 04 52.0**	**-3.8**

*ISCJB **23** 03:09:02.7±0.7, 0°.5N±0°.2×25°.26W±0°.08, h10km, mb4.2/23, MS3.7/7, Error ellipse: s-maj=25.7km s-min=9.2km az=165.6*
*IDC **23** 03:09:03.0±0.9, 0°.73N×25°.35W, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.9/22, mbtmp3.9/8, MS3.7/7, Ms1 3.7/7, ms1mx3.3/28, Error ellipse: s-maj=39.6km s-min=19.8km az=159.0*
*NEIC **23** 03:09:04.7±0.5, 0°.66N×25°.36W, h10km, mb4.3/13, Error ellipse: s-maj=18.3km s-min=7.7km az=167.0*

ISC 23 03:09:04.8±0.6, 0.7N±0°.2×25°.33W±0°.07, h10km, n31, σ0s87/25, mb4.2/23, MS3.7/7, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**12.37**	**238**	*e*Pn	**Pn**	**03 12 00.6**	**-0.6**
LIC	**Lamto**	**21.00**	**74**	*e*P	**P**	**03 13 48.5**	**-0.2**
	79nm,1.2s						
TIC	**Toumodi**	**21.11**	**73**	*e*P	**P**	**03 13 52.9**	**+3.0**
	6.7nm,0.3s,mb4.5						
DBIC	**Dimbokro**	**21.27**	**73**	P	**P**	**03 13 51.4**	**-0.3**
	11nm,0.8s,mb4.3,baz=243,slow=12,SNR=7.4						
DBIC				LR	LR	03 20 26.7	
	comp=Z,120nm,19.1s,MS3.3,baz=217,slow=32						
KIC	**Kosan Boka**	**21.30**	**74**	*e*P	**P**	**03 13 52.0**	**0.0**
	33nm,0.8s,mb4.7						
TORD	**Torodi Ar. Bea**	**29.50**	**64**	P	**P**	**03 15 09.2**	**-0.4**
	1.6nm,0.6s,mb3.9,baz=249,slow=9.2,SNR=15						
TORD				LR	LR	03 25 40.9	
	comp=Z,141nm,19.2s,MS3.6,baz=255,slow=34						
TAM	**Tamanrasset**	**37.19**	**52**	*e*P	**P**	**03 16 16.2**	**-0.3**
	1.6nm,0.9s,mb3.9						
CPUP	**Villa Florida**	**40.89**	**227**	LR	LR	03 31 38.3	
	comp=Z,133nm,18.3s,MS3.8,baz=224,slow=33						
ESDC	**Sonseca Array**	**43.45**	**24**	P	**P**	**03 17 06.8**	**-1.3**
	0.7nm,0.8s,mb3.4,baz=214,slow=9.4,SNR=3.5						
LPAZ	**La Paz**	**45.46**	**246**	P	**P**	**03 17 24.4**	**-0.2**
	1.6nm,0.7s,mb4.0,baz=46,slow=4.1,SNR=8.0						
LPAZ				LR	LR	03 35 43.3	
	comp=Z,150nm,19.1s,MS4.0,baz=78,slow=35						
KEST	**Kesra**	**47.49**	**39**	LR	LR	03 37 50.1	
	comp=Z,76nm,20.5s,MS3.6,baz=194,slow=36						
ROSC	**El Rosal**	**49.11**	**276**	LR	LR	03 36 56.0	
	comp=Z,52nm,19.9s,MS3.5,baz=53,slow=34						
PLCA	**Paso Flores**	**58.15**	**219**	LR	LR	03 45 37.1	
	comp=Z,69nm,20.0s,MS3.8,baz=281,slow=38						
BRTR	**Keskin Array B**	**66.12**	**46**	P	**P**	**03 19 53.5**	**+1.1**
	0.6nm,0.7s,mb3.7,baz=255,slow=6.0,SNR=5.1						
AKASG	**Malin Array Be**	**67.81**	**34**	P	**P**	**03 20 01.4**	**-1.7**
	0.3nm,0.3s,mb3.7,baz=239,slow=7.6,SNR=2.7						
WMOK	**Wichita Mounta**	**76.05**	**306**	*e*P	**P**	**03 20 52.0**	**-0.9**
	2.4nm,0.6s,mb4.3						
JCT	**Junction City**	**76.30**	**301**	*e*P	**P**	**03 20 52.7**	**-1.7**
	3.9nm,0.7s,mb4.5						
TXAR	**Lajitas Array**	**79.51**	**300**	P	**P**	**03 21 12.7**	**+0.4**
	1.2nm,0.8s,mb3.9,baz=119,slow=7.3,SNR=16						
MNTX	**Cornudas Mount**	**81.19**	**302**	*e*P	**P**	**03 21 20.3**	**-1.0**
	0.9nm,0.9s,mb3.7						
ANMO	**Albuquerque**	**82.35**	**305**	*e*P	**P**	**03 21 28.2**	**+0.8**
	1.7nm,1.0s,mb3.9						
LAO	**LASA Array**	**83.27**	**317**	*e*P	**P**	**03 21 32.6**	**+0.8**
	6.8nm,0.9s,mb4.7						
PDAR	**Pinedale Array**	**85.31**	**313**	P	**P**	**03 21 42.2**	**0.0**
	0.8nm,0.9s,mb3.8,baz=69,slow=5.1,SNR=5.7						
BW06	**Boulder Array**	**85.31**	**313**	*e*P	**P**	**03 21 42.3**	**0.0**
	1.5nm,1.0s,mb4.1						
LOHW	**Long Hollow**	**86.12**	**313**	*e*P	**P**	**03 21 47.1**	**+

*MOS **23** 03:48:49.1±1.0,51°.24N×179°.92W,h27km,mb4.6/46, Error ellipse: s-maj=9.9km s-min=6.7km az=88.4*
*NEIC **23** 03:48:49.6,51°.02N×179°.86W,h14km,mb4.5/51, ML4.7(PMR),ML4.4(AEIC),After AEIC.*
*BJI **23** 03:48:50.6,51°.00N×179°.90W,h53km,mB5.0/14, mb4.7/26,Ms4.6/12,Ms7 4.4/13*
*ISCJB **23** 03:48:50.2±0.8,51°.09N±0°.06×179°.83W±0°.03,h38km±5km, mb4.5/90,MS4.0/30,Error ellipse: s-maj=9.7km s-min=3.2km az=4.4*
*GCMT **23** 03:48:53.2±0.4,51°.03N×179°.75W,h30km±1km,MW4.9, Moment Tensor Solution. s26,c33; s61,c82; Moment tensor: Scale 10¹⁶Nm; Mrr 2.37±.16; Mθθ -2.04±.10; Mφφ-0.33±.10; Mrθ 1.29±.13; Mθφ-0.66±.07; Mφr 0.87±.14; Best double couple: M₀2.80000×10¹⁶ NP1:φ₁258.00000°, δ29.00000°, λ104.00000°. NP2:φ₂63.00000°, δ62.00000°, λ83.00000°. Principal axes: T 2.8700, Plg72.0000°, Azm316.0000°; N -0.1500, Plg7.0000°, Azm67.0000°; P -2.7100, Plg17.0000°, Azm159.0000°; Data Used: II IU G IC CN.*

ISC 23 03:48:51.2±0.9,51°.15N±0°.06×179°.83W±0°.03,h31km±5km, h44km±1.3km;pP-P,n349,o092/345,mb4.5/90,MS4.0/30, 59C-61D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID	Time h m s	Res ISC
AMKA	**Amchitka**	**0.59**	**293**	*e*P	**Pb**	**03 49 01.5**	**-1.6**
AMKA				S	**Sb**	**03 49 11.0**	**-0.2**
ADK	**Adak**	**2.10**	**68**	P	**Pn**	**03 49 25.1**	**+0.9**
ADK				S	**Sn**	**03 49 52.2**	**+2.9**
ADK	**Adak**	**2.10**	**68**	P	**Pn**	**03 49 25.1**	**+0.9**
ADK				S	**Sn**	**03 49 52.1**	**+2.9**
SMY	**Shemya**	**4.08**	**295**	P	**Pn**	**03 49 51.3**	**0.0**
SMY				S	**Sn**	**03 50 37.9**	**-0.1**
SPIA	**Saint Paul Isl**	**8.25**	**39**	*e*Pn	**Pn**	**03 50 53.1**	**+4.5**
UNV	**Unalaska Valle**	**8.57**	**66**	*e*Pn	**Pn**	**03 50 53.9**	**+0.9**
PET	**Petropavlovsk**	**13.36**	**286**	*e*P	**Pn**	**03 52 04.4**	**+6.0**
PET				*e*S	**Sn**	**03 54 33.2**	**+7.5**
PET	comp=Z,100nm,17.1s			pmax	pmax		
PET	comp=Z,600nm,19.0s			MLR	MLR		
GAMB	**Gambell**	**13.38**	**16**	*e*Pn	**Pn**	**03 52 01.1**	**+2.4**
PETK	**Petropavlovsk-**	**13.93**	**287**	Pn	**Pn**	**03 52 05.3**	**-1.0**
PETK	comp=Z,0.7nm,0.3s,baz=87,slow=16,SNR=3.3			LR	LR	03 57 09.3	
PETK	comp=Z,519nm,21.9s,baz=286,slow=36			P	**Pn**	**03 52 05.3**	**-1.0**
PETK	comp=Z,1.0nm,0.3s			pmax	pmax		
PETK	comp=Z,519nm,21.9s			MLR	MLR		
OHAK	**Old Harbor**	**16.62**	**58**	*e*P	**Pn**	**03 52 38.9**	**-2.6**
	comp=Z,5.2nm,0.3s						
SVW2	**Sparrevohn**	**16.69**	**44**	*e*P	**Pn**	**03 52 45.5**	**+3.1**
	comp=Z,15nm,1.2s						
KDAK	**Kodiak Island**	**17.09**	**57**	*e*Pn	**Pn**	**03 52 44.4**	**-3.1**
	comp=Z,14nm,0.4s						
KDAK	**Kodiak Island**	**17.09**	**57**	P	**Pn**	**03 52 44.3**	**-3.2**
	comp=Z,3.7nm,0.3s,baz=266,slow=6.7,SNR=23						
KDAK	**Kodiak Island**	**17.09**	**57**	P	**Pn**	**03 52 44.3**	**-3.2**
KDAK	comp=Z,4.0nm,0.3s			pmax	pmax		
TTA	**Tatalina**	**17.40**	**38**	*e*P	**Pn**	**03 52 54.7**	**+3.5**
RSO	**Redoubt South**	**17.72**	**48**	*e*Pn	**Pn**	**03 52 58.3**	**+3.0**
BILL	**Bilibino**	**18.26**	**343**	*e*P	**Pn**	**03 53 04.2**	**+2.4**
	comp=Z,30nm,1.0s						
BILL	**Bilibino**	**18.26**	**343**	*d i*P	**Pn**	**03 53 04.0**	**+2.2**
BILL	comp=Z,38nm,1.5s			pmax	pmax		
BILL	comp=Z,700nm,17.0s			MLR	MLR		
PPLA	**Purkeypile**	**18.92**	**41**	*e*P	**Pn**	**03 53 11.2**	**+1.4**
	comp=Z,22nm,0.6s						
SEW	**Seward**	**19.19**	**50**	*e*P	**Pn**	**03 53 11.8**	**-1.4**
	comp=Z,4μm,0.9s						
RC01	**Rabbit Creek A**	**19.33**	**47**	*e*P	**Pn**	**03 53 18.1**	**+3.3**
	comp=Z,3μm,0.8s						
PMR	**Palmer**	**19.76**	**46**	*e*P	**Pn**	**03 53 20.3**	**+0.4**
	comp=Z,6.1nm,0.6s						
PMR	**Palmer**	**19.76**	**46**	*e*P	**Pn**	**03 53 20.3**	**+0.4**
PMR	comp=Z,6.0nm,0.6s			pmax	pmax		
TRF	**Thorofare Moun**	**19.93**	**41**	*e*P	**Pn**	**03 53 20.8**	**-1.1**
BPAW	**Bear Paw Mtn.**	**19.93**	**38**	*e*P	**Pn**	**03 53 20.5**	**-1.5**
	comp=Z,13nm,0.7s						
IMA2	**Indian Mountai**	**19.98**	**32**	*e*Pn	**Pn**	**03 53 23.9**	**+1.3**
MCK	**McKinley**	**20.60**	**40**	*e*P	**P**	**03 53 26.4**	**-0.9**
	comp=Z,13nm,1.1s						
MCK	**McKinley**	**20.60**	**40**	*e*P	**P**	**03 53 26.5**	**-0.9**
MCK	comp=Z,13nm,1.1s			pmax	pmax		
COLA	**College**	**21.50**	**38**	*e*P	**P**	**03 53 38.1**	**+1.2**
	comp=Z,8.3nm,0.8s,mb4.1						
COLA	**College**	**21.50**	**38**	*e*P	**P**	**03 53 38.1**	**+1.1**
COLA	comp=Z,8.0nm,0.8s,mb4.1			pmax	pmax		
BMRM	**Bremner River**	**21.72**	**49**	*e*P	**P**	**03 53 40.5**	**+1.0**
	comp=Z,3.5nm,0.4s,mb4.1						
PAX	**Paxson**	**21.81**	**44**	*e*P	**P**	**03 53 39.8**	**-0.5**
	comp=Z,9.2nm,0.6s,mb4.4						
PAX	**Paxson**	**21.81**	**44**	*e*P	**P**	**03 53 39.8**	**-0.5**
PAX	comp=Z,9.0nm,0.6s,mb4.4			pmax	pmax		
ILAR	**Eielson Array**	**21.83**	**39**	P	**P**	**03 53 38.5**	**-2.1**
	comp=Z,1.5nm,0.5s,mb3.7,baz=229,slow=8.4,SNR=24						
ILAR				PcP	PcP	03 57 37.9	-1.4
	comp=Z,0.4nm,0.7s,baz=254,slow=2.8,SNR=4.0						
ILAR	**Eielson Array**	**21.83**	**39**	P	**P**	**03 53 38.5**	**-2.1**
ILAR						03 57 37.9	
ILAR	comp=Z,2.0nm,0.5s			pmax	pmax		
MENT	**Mentasta**	**22.57**	**45**	*e*P	**P**	**03 53 49.3**	**+0.9**
EGAK	**Eagle**	**24.15**	**41**	*e*P	**P**	**03 54 03.4**	**-0.7**
	comp=Z,18nm,0.9s,mb4.5						
YSS	**Yuzh-Sakhalins**	**24.70**	**275**	*e*P	**P**	**03 54 10.2**	**+1.0**
	comp=Z,18nm,0.7s,mb4.7						
YSS	**Yuzh-Sakhalins**	**24.70**	**275**	*e*P	**P**	**03 54 10.3**	**+1.1**
YSS	comp=Z,400nm,15.0s,MS4.0			MLR	MLR		
YSS	comp=E,400nm,16.0s			MLR	MLR		
DAWY	**Dawson**	**24.72**	**43**	*e*P	**P**	**03 54 08.5**	**-0.7**
HYT	**Haines Junctio**	**25.14**	**51**	*e*P	**P**	**03 54 15.3**	**+2.2**
ASAJ	**Asahikawa**	**26.05**	**269**	P	**P**	**03 54 20.8**	**-0.8**
	comp=E,13nm,0.8s,mb4.5,baz=63,slow=5.0,SNR=4.9						
ASAJ	**Asahikawa**	**26.05**	**269**	P	**P**	**03 54 20.8**	**-0.8**
ASAJ	comp=Z,13nm,0.9s			pmax	pmax		
INK	**Inuvik**	**28.02**	**35**	*e*P	**P**	**03 54 39.6**	**+0.6**
	comp=Z,3.2nm,0.9s,mb4.0						
INK	**Inuvik**	**28.02**	**35**	P	**P**	**03 54 37.6**	**-1.3**
	comp=Z,1.1nm,0.4s,mb3.9,baz=269,slow=12,SNR=7.8						
INK	**Inuvik**	**28.02**	**35**	*e*P	**P**	**03 54 39.6**	**+0.6**
INK	comp=Z,3.0nm,0.9s			pmax	pmax		
KLR	**Kul'dur**	**30.62**	**286**	*e*P	**P**	**03 54 57.9**	**-4.3**
MJAR	**Matsushiro Arr**	**33.11**	**260**	LR	LR	04 07 47.4	
	comp=Z,191nm,18.6s,MS3.8,baz=65,slow=34						
YKA	**Yellowknife Ar**	**35.86**	**46**	P	**P**	**03 55 46.7**	**-1.0**
YKA				LR	LR	04 12 16.4	
YKA	**Yellowknife Ar**	**35.86**	**46**	P	**P**	**03 55 46.7**	**-1.0**
	comp=Z,2.6nm,0.5s,mb4.5,baz=281,slow=7.5,SNR=21						
YKA	comp=Z,64nm,18.7s,MS3.4,baz=90,slow=39			LR	LR	04 12 16.4	
YKA	**Yellowknife Ar**	**35.86**	**46**	P	**P**	**03 55 46.7**	**-1.0**
YKA	comp=Z,3.0nm,0.5s			pmax	pmax		
YKA	comp=Z,64nm,18.7s			MLR	MLR		
NLWA	**Neilton Lookou**	**35.96**	**73**	*e*P	**P**	**03 55 50.5**	**+1.8**
	comp=Z,5.2nm,0.9s,mb4.5						
CN2	**Changchun**	**36.95**	**281**	*e*P	**P**	**03 55 59.3**	**+2.1**
CN2				*ep*P	pP	03 56 13.0	+6.8
CN2				*e*S	**S**	**04 01 39.3**	**-0.9**
CN2	comp=Z,10.0nm,0.8s,mb4.7			pmax	pmax		
CN2	comp=Z,200nm,3.0s			pmax	pmax		
ETW	**Entiat**	**37.99**	**71**	*e*P	**P**	**03 56 07.0**	**+1.0**
B08A	**Colville Reser**	**38.23**	**70**	⇓P	**P**	**03 56 07.6**	**-0.3**
	baz=38,SNR=6.7						
KSRS	**Korea Array**	**38.99**	**270**	P	**P**	**03 56 15.1**	**+0.6**
	comp=Z,2.6nm,0.8s,mb4.0,baz=54,slow=8.1,SNR=6.3						
KSRS				LR	LR	04 13 03.0	
	comp=Z,103nm,18.2s,MS3.7,baz=56,slow=37						
KSRS	**Korea Array**	**38.99**	**270**	P	**P**	**03 56 15.1**	**+0.6**
KSRS	comp=Z,3.0nm,0.8s,mb4.1			pmax	pmax		
KSRS	comp=Z,103nm,18.2s,MS3.7			MLR	MLR		
HAWA	**Hanford**	**39.05**	**73**	*e*P	**P**	**03 56 15.8**	**+0.9**
	comp=Z,8.1nm,1.0s,mb4.4						
EDM	**Edmonton**	**39.49**	**60**	*e*P	**P**	**03 56 18.0**	**-0.5**
YBH	**Yreka Blue Hor**	**39.56**	**81**	P	**P**	**03 56 18.4**	**-0.8**
	comp=Z,3.1nm,1.2s,mb3.9,baz=336,slow=9.7,SNR=1.7						
YBH				LR	LR	04 09 07.1	
	comp=Z,237nm,21.6s,MS4.0,baz=302,slow=31						
NEW	**Newport**	**39.57**	**69**	⇑P	**P**	**03 56 18.6**	**-0.6**
	baz=39,SNR=6.2						
NEW	**Newport**	**39.57**	**69**	*e*P	**P**	**03 56 19.5**	**+0.3**
	comp=Z,5.5nm,0.8s,mb4.3						
NEW	**Newport**	**39.57**	**69**	*e*P	**P**	**03 56 19.5**	**+0.3**
NEW	comp=Z,6.0nm,0.8s			pmax	pmax		
RES	**Resolute Bay**	**40.22**	**24**	LR	LR	04 15 03.6	
	comp=Z,98nm,20.0s,MS3.6,baz=212,slow=39						
I07A	**Izee**	**40.26**	**76**	⇓P	**P**	**03 56 24.0**	**-0.9**
	baz=40						
F10A	**Beach Ranch, E**	**40.65**	**72**	⇓P	**P**	**03 56 27.1**	**-1.0**
	baz=40						
C12B	**Naegeli Ranch,**	**40.81**	**69**	⇑P	**P**	**03 56 29.3**	**-0.2**
	baz=41,SNR=5.7						
BSMT	**Bassoo Peak**	**41.14**	**68**	*e*P	**P**	**03 56 32.8**	**+0.6**
D12A	**Red Ives Fores**	**41.21**	**69**	⇓P	**P**	**03 56 31.9**	**-0.9**
	baz=41						
BLMT	**Blacktail Moun**	**41.31**	**68**	*e*P	**P**	**03 56 34.9**	**+1.4**
C13A	**Hot Springs**	**41.35**	**68**	⇓P	**P**	**03 56 32.9**	**-1.0**
	baz=41						
A14A	**Double T Ranch**	**41.38**	**66**	⇑P	**P**	**03 56 33.7**	**-0.5**
	baz=41,SNR=6.4						
E12A	**Beaver Dam Sad**	**41.41**	**70**	⇓P	**P**	**03 56 34.2**	**-0.2**
	baz=41,SNR=6.4						
WVOR	**Wild Horse Val**	**41.69**	**77**	*e*P	**P**	**03 56 37.5**	**+0.8**
	comp=Z,3.6nm,0.8s,mb4.0						
WVOR	**Wild Horse Val**	**41.69**	**77**	*e*P	**P**	**03 56 37.5**	**+0.8**
WVOR	comp=Z,4.0nm,0.8s,mb4.1			pmax	pmax		
B14A	**Marquette Ranc**	**41.77**	**67**	⇓P	**P**	**03 56 36.7**	**-0.7**
	baz=42						
A15A	**Johnson Ranch,**	**41.77**	**66**	⇓P	**P**	**03 56 36.2**	**-1.1**
	baz=42						
C14A	**Swan Lake**	**41.79**	**68**	⇓P	**P**	**03 56 37.2**	**-0.4**
	baz=42						
F12A	**Elk City**	**41.94**	**71**	⇑P	**P**	**03 56 38.6**	**-0.1**
	baz=42,SNR=11						
MSO	**Missoula**	**42.16**	**69**	⇑P	**P**	**03 56 40.2**	**-0.3**
	baz=42						
MSO	**Missoula**	**42.16**	**69**	*e*P	**P**	**03 56 40.4**	**-0.1**
	comp=Z,4.1nm,1.0s,mb4.0						
B15A	**Bradely Ranch,**	**42.20**	**66**	⇑P	**P**	**03 56 40.0**	**-0.9**
	baz=42,SNR=5.4						
SLMT	**Seeley Lake**	**42.21**	**68**	*e*P	**P**	**03 56 41.0**	**+0.1**
E13A	**Victor**	**42.21**	**70**	⇑P	**P**	**03 56 40.3**	**-0.6**
	baz=42						
D14A	**Greenough**	**42.28**	**68**	⇑P	**P**	**03 56 41.3**	**-0.2**
	baz=42,SNR=14						
A16A	**West Butte Ran**	**42.44**	**65**	⇑P	**P**	**03 56 41.4**	**-1.4**
	baz=42						
C15A	**Salmond Ranch,**	**42.45**	**67**	⇓P	**P**	**03 56 42.9**	**0.0**
	baz=42,SNR=9.7						
F13A	**Darby**	**42.47**	**71**	⇑P	**P**	**03 56 42.9**	**-0.2**
	baz=42						
D15A	**Lincoln**	**42.88**	**68**	⇓P	**P**	**03 56 46.1**	**-0.3**
	baz=43						
G13A	**Cobalt**	**42.90**	**71**	⇓P	**P**	**03 56 46.4**	**-0.1**
	baz=43						
A17A	**Triple J Farms**	**42.95**	**65**	⇓P	**P**	**03 56 46.1**	**-0.9**
	baz=43,SNR=8.3						
I12A	**Atlanta**	**43.07**	**73**	⇓P	**P**	**03 56 47.7**	**-0.2**
	baz=43,SNR=10.0						
E15A	**Deer Lodge**	**43.13**	**69**	⇑P	**P**	**03 56 47.9**	**-0.5**
	baz=43,SNR=6.0						
B17A	**L&G Farms, Che**	**43.23**	**66**	⇑P	**P**	**03 56 48.5**	**-0.7**
	baz=43						
D16A	**Dana Ranch, Ca**	**43.45**	**68**	⇓P	**P**	**03 56 50.6**	**-0.4**
	baz=43						
HRY	**Holter Researc**	**43.45**	**68**	*e*P	**P**	**03 56 51.2**	**+0.2**
C17A	**Wharram Farm,**	**43.59**	**66**	⇓P	**P**	**03 56 51.0**	**-1.1**
	baz=43						
I13A	**Wildhorse Cree**	**43.61**	**73**	⇑P	**P**	**03 56 52.1**	**-0.2**
	baz=44,SNR=8.9						
HLID	**Hailey**	**43.63**	**73**	⇓P	**P**	**03 56 52.4**	**0.0**
	baz=44,SNR=7.4						
HLID	**Hailey**	**43.63**	**73**	*e*P	**P**	**03 56 53.3**	**+0.8**
	comp=Z,4.8nm,1.0s,mb4.2						
E16A	**East Helena**	**43.64**	**68**	⇓P	**P**	**03 56 52.2**	**-0.3**
	baz=44						
H14A	**Leadore**	**43.67**	**71**	⇓P	**P**	**03 56 52.4**	**-0.4**
	baz=44						
B18A	**Beardsley Farm**	**43.76**	**65**	⇑P	**P**	**03 56 52.7**	**-0.8**
	baz=44						
J13A	**Cove Ranch, Pi**	**43.87**	**73**	⇑P	**P**	**03 56 54.3**	**0.0**
	baz=44,SNR=9.0						
MCMT	**McKenzie Canyo**	**43.87**	**71**	*e*P	**P**	**03 56 54.2**	**-0.2**
	comp=Z,2.8nm,0.7s,mb4.1						
G15A	**Dillon**	**43.90**	**70**	⇑P	**P**	**03 56 54.2**	**-0.4**
	baz=44						
EGMT	**Eagleton**	**43.97**	**65**	*e*P	**P**	**03 56 55.9**	**+0.8**
	comp=Z,76nm,2.3s,mb5.0						
I14A	**Mackay**	**44.00**	**72**	⇓P	**P**	**03 56 55.9**	**+0.5**
	baz=44						
F16A	**Kennard Place,**	**44.07**	**69**	⇓P	**P**	**03 56 56.1**	**+0.1**
	baz=44						
H15A	**Lima**	**44.10**	**71**	⇓P	**P**	**03 56 56.7**	**+0.5**
	baz=44						
BOZ	**Bozeman (W)**	**44.14**	**69**	⇓P	**P**	**03 56 56.6**	**+0.1**
	baz=44,SNR=14						
BOZ	**Bozeman (W)**	**44.14**	**69**	*e*P	**P**	**03 56 56.6**	**+0.1**
	comp=Z,5.9nm,0.7s,mb4.4						
BOZ	**Bozeman (W)**	**44.14**	**69**	*e*P	**P**	**03 56 56.6**	**0.0**
BOZ	comp=Z,6.0nm,0.7s,mb4.4			pmax	pmax		
E17A	**Martinsdale**	**44.16**	**68**	⇓P	**P**	**03 56 56.6**	**-0.1**
	baz=44,SNR=7.5						
NVAR	**Mina Array Bea**	**44.23**	**82**	P	**P**	**03 56 57.8**	**+0.5**
	comp=Z,1.1nm,0.6s,mb3.7,baz=293,slow=7.8,SNR=7.1						
G16A	**Moss Hill, Enn**	**44.27**	**70**	⇑P	**P**	**03 56 57.0**	**-0.6**
	baz=44						
J14A	**Carey**	**44.30**	**73**	⇓P	**P**	**03 56 58.5**	**+0.6**
	baz=44						
C19A	**Slack Wire Ran**	**44.52**	**65**	⇓P	**P**	**03 56 59.4**	**-0.2**
	baz=44						
F17A	**Fitzpatrick Pl**	**44.57**	**68**	⇑P	**P**	**03 56 59.8**	**-0.2**
	baz=44						
E18A	**Harlowton**	**44.65**	**67**	⇓P	**P**	**03 57 01.4**	**+0.8**
	baz=44,SNR=8.9						
BJI	**Beijing**	**44.79**	**282**	P	**P**	**03 57 01.4**	**-0.4**
BJI	comp=Z,11nm,0.8s,mb4.7			pmax	pmax		
BJI	comp=N,160nm,23.9s,MS4.2			LR	LR		
BJI	comp=E,290nm,23.9s,MS4.2			LR	LR		
BJI	comp=Z,210nm,19.5s,MS4.1			LR	LR		
BJT	**Baijiatuao**	**44.80**	**282**	*e*P	**P**	**03 57 01.8**	**-0.1**
	comp=Z,7.6nm,0.6s,mb4.7						
BJT	**Baijiatuao**	**44.80**	**282**	*e*P	**P**	**03 57 01.8**	**-0.1**
BJT	comp=Z,8.0nm,0.6s			pmax	pmax		
H16A	**Russell Place,**	**44.89**	**70**	⇑P	**P**	**03 57 02.4**	**-0.1**
	baz=45,SNR=6.7						
F18A	**Big Timber**	**45.12**	**68**	⇓P	**P**	**03 57 03.7**	**-0.7**
	baz=45						
L14A	**Malta**	**45.21**	**74**	⇓P	**P**	**03 57 04.6**	**-0.5**
	baz=45						
K15A	**Arbon**	**45.26**	**73**	⇑P	**P**	**03 57 06.4**	**+0.8**
	baz=45						
O12A	**Currie**	**45.33**	**77**	⇓P	**P**	**03 57 06.3**	**+0.3**
	baz=45,SNR=8.4						
D20A	**Manuel Ranch,**	**45.39**	**66**	⇑P	**P**	**03 57 06.1**	**-0.4**
	baz=45						
H17A	**Grant Village**	**45.46**	**70**	⇓P	**P**	**03 57 07.3**	**+0.2**
	baz=45						
IMW	**Indian Meadow**	**45.52**	**71**	*e*P	**P**	**03 57 08.6**	**+1.0**
	comp=Z,4.0nm,1.0s,mb4.3						
G18A	**Lazy EL Ranch,**	**45.54**	**69**	⇓P	**P**	**03 57 07.8**	**+0.1**
	baz=45						
R10A	**Warm Springs**	**45.56**	**81**	⇓P	**P**	**03 57 07.6**	**-0.3**
	baz=45						
FLWY	**Flagg Ranch**	**45.56**	**71**	*e*P	**P**	**03 57 08.3**	**+0.4**
	comp=Z,9.2nm,1.1s,mb4.6						
HVU	**Hansel Valley**	**45.64**	**74**	*e*P	**P**	**03 57 09.2**	**+0.7**
	comp=Z,8.7nm,1.3s,mb4.5						
HVU	**Hansel Valley**	**45.64**	**74**	*e*P	**P**	**03 57 09.2**	**+0.7**
HVU	comp=Z,9.0nm,1.3s,mb4.5			pmax	pmax		
ULN	**Ulaanbaatar**	**45.78**	**296**	*e*P	**P**	**03 57 10.4**	**+0.8**
	comp=Z,4.3nm,0.8s,mb4.4						
ULN	**Ulaanbaatar**	**45.78**	**296**	*e*P	**P**	**03 57 10.4**	**+0.8**
ULN	comp=Z,4.0nm,0.8s,mb4.4			pmax	pmax		
RLMT	**Red Lodge**	**45.82**	**69**	⇑P	**P**	**03 57 09.7**	**-0.2**
	baz=46,SNR=12						
RLMT	**Red Lodge**	**45.82**	**69**	*e*P	**P**	**03 57 10.7**	**+0.8**
	comp=Z,13nm,0.9s,mb4.9						
R11A	**Troy Canyon, C**	**45.97**	**80**	⇑P	**P**	**03 57 11.7**	**+0.5**
	baz=46						
Q12A	**Willow Creek R**	**46.01**	**79**	⇓P	**P**	**03 57 12.0**	**+0.5**
	baz=46						
M15A	**Larsen Ranch,**	**46.02**	**75**	⇑P	**P**	**03 57 12.3**	**+0.8**
	baz=46						
SONM	**Songino Array**	**46.17**	**296**	P	**P**	**03 57 12.4**	**-0.2**
	comp=Z,3.0nm,0.7s,mb4.3,baz=57,slow=8.9,SNR=18						
SONM				PcP	PcP	03 58 48.4	+0.4
	comp=Z,0.8nm,0.5s,baz=10,slow=3.9,SNR=3.5						
SONM				LR	LR	04 18 10.0	
	comp=Z,489nm,18.6s,MS4.5,baz=40,slow=38						
SONM	**Songino Array**	**46.17**	**296**	P	**P**	**03 57 12.4**	**-0.2**
SONM						03 58 48.4	
SONM	comp=Z,3.0nm,0.7s			pmax	pmax		
SONM				MLR	MLR		
	comp=Z,489nm,18.7s						
L16A	**Fish Haven**	**46.31**	**73**	⇓P	**P**	**03 57 14.6**	**+0.8**
	baz=46						
G20A	**Bridger**	**46.38**	**68**	⇑P	**P**	**03 57 14.2**	**-0.1**
	baz=46						
J18A	**Kendall Valley**	**46.46**	**71**	⇑P	**P**	**03 57 14.8**	**-0.2**
	baz=46						
ZAK	**Zakamensk**	**46.52**	**301**	*e*P	**P**	**03 57 15.1**	**-0.2**
ZAK	comp=Z,4.0nm,1.4s,mb4.2			pmax	pmax		
DUG	**Dugway**	**46.55**	**76**	⇑P	**P**	**03 57 15.7**	**-0.1**
	baz=46,SNR=8.1						
DUG	**Dugway**	**46.55**	**76**	*e*P	**P**	**03 57 16.1**	**+0.4**
	comp=Z,5.5nm,0.7s,mb4.6						
DUG	**Dugway**	**46.55**	**76**	*e*P	**P**	**03 57 16.2**	**+0.5**
DUG	comp=Z,5.0nm,0.7s,mb4.5			pmax	pmax		
LAO	**LASA Array**	**46.71**	**65**	*e*P	**P**	**03 57 17.2**	**+0.3**
	comp=Z,5.2nm,0.6s,mb4.6						
P14A	**Drum Mountains**	**46.76**	**77**	⇑P	**P**	**03 57 17.3**	**-0.1**
	baz=47,SNR=6.3						
K18A	**Toltan Ranch,**	**46.78**	**72**	⇑P	**P**	**03 57 18.1**	**+0.5**
	baz=47,SNR=5.7						
T11A	**Corn Creek, Al**	**46.88**	**81**	⇓P	**P**	**03 57 18.4**	**+0.1**
	baz=47						
BW06	**Boulder Array**	**47.00**	**71**	⇑P	**P**	**03 57 18.9**	**-0.2**
	baz=47,SNR=12						
BW06	**Boulder Array**	**47.00**	**71**	*e*P	**P**	**03 57 19.3**	**+0.1**
	comp=Z,6.6nm,0.9s,mb4.6						
PDAR	**Pinedale Array**	**47.00**	**71**	P	**P**	**03 57 19.5**	**+0.3**
	comp=Z,3.2nm,0.4s,mb4.6,baz=333,slow=3.5,SNR=44						
PDAR				LR	LR	04 14 47.8	
	comp=Z,108nm,18.6s,MS3.8,baz=315,slow=33						
Q14A	**Sevier Lake (B**	**47.00**	**78**	⇑P	**P**	**03 57 19.6**	**+0.3**
	baz=47,SNR=7.4						
HHC	**Hu-ho-hao-te**	**47.13**	**285**	*e*P	**P**	**03 57 21.5**	**+1.3**
HHC				pP	pP	03 57 33.6	+4.2
HHC				sP	sP	03 57 38.8	+5.7
HHC				PP	PP	03 59 11.5	+0.5
HHC				*e*S	**S**	**04 04 08.5**	**-1.9**
HHC				sS	sS	04 04 29.8	+4.3
HHC				ScS	ScS	04 07 09.0	-2.8
HHC				SS	SS	04 07 28.8	-8.4
HHC	comp=Z,19nm,0.9s,mb5.0			pmax	pmax		
HHC	comp=Z,51nm,3.7s			pmax	pmax		
HHC	comp=N,220nm,13.3s,MS4.4			LR	LR		
HHC	comp=E,190nm,12.7s,MS4.4			LR	LR		
HHC	comp=Z,200nm,17.6s,MS4.1			LR	LR		
I20A	**Worland**	**47.16**	**69**	⇓P	**P**	**03 57 20.2**	**-0.3**
	baz=47						
L18A	**Fontenelle, Gr**	**47.21**	**73**	⇑P	**P**	**03 57 21.0**	**+0.1**
	baz=47						
DAU	**Daniels Canyon**	**47.37**	**75**	*e*P	**P**	**03 57 23.7**	**+1.6**
K19A	**Absolon Red Bu**	**47.39**	**71**	⇑P	**P**	**03 57 21.7**	**-0.5**
	baz=47,SNR=10.0						
H21A	**Big Horn, Sher**	**47.40**	**68**	⇑P	**P**	**03 57 22.0**	**-0.4**
	baz=47						
L19A	**Farson**	**47.51**	**72**	⇓P	**P**	**03 57 23.2**	**0.0**
	baz=47						
S13A	**Holt Ranch, En**	**47.51**	**80**	⇑P	**P**	**03 57 24.0**	**+0.7**
	baz=47						
I21A	**Big Trails, Te**	**47.73**	**69**	⇓P	**P**	**03 57 24.3**	**-0.5**
	baz=48						
K20A	**Yellowstone Ra**	**47.79**	**71**	⇑P	**P**	**03 57 24.5**	**-0.8**
	baz=48						
CCUT	**Cedar City**	**47.84**	**79**	*e*P	**P**	**03 57 31.4**	**+5.6**
	comp=Z,30nm,2.4s,mb4.9						
MSU	**Marysvale**	**47.97**	**78**	*e*P	**P**	**03 57 28.4**	**+1.6**
TMUT	**Trail Mountain**	**48.08**	**76**	*e*P	**P**	**03 57 27.1**	**-0.5**
	comp=Z,6.6nm,0.7s,mb4.8						
NJ2	**Nanjing**	**48.17**	**271**	P	**P**	**03 57 32.1**	**+3.7**
R16A	**Teasdale**	**48.54**	**77**	⇑P	**P**	**03 57 31.8**	**+0.6**
	baz=48	

comp=Z,142nm,20.6s,MS4.0,baz=130,slow=33
LZH Lanzhou 54.82 286 *e*P **P 03 58 19.0 +0.9**
LZH pP pP 03 58 32.5 +5.0
LZH sP sP 03 58 41.0 +10
LZH pmax pmax
comp=Z,19nm,1.0s,mb5.1
LZH LR LR
comp=N,230nm,11.8s,MS4.6
LZH LR LR
comp=E,160nm,12.0s,MS4.6
LZH LR LR
comp=Z,290nm,15.6s,MS4.5
GTA Gaotai 55.05 291 *e*P **P 03 58 20.3 +0.6**
GTA pP pP 03 58 32.6 +3.5
GTA sP sP 03 58 37.4 +4.7
GTA S **S 04 05 55.3 -4.6**
GTA sS sS 04 06 17.8 +2.5
GTA SS SS 04 09 37.6 -5.7
GTA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GTA pmax pmax
comp=Z,110nm,5.3s
GTA LR LR
comp=N,180nm,16.6s,MS4.4
GTA LR LR
comp=E,190nm,15.2s,MS4.4
GTA LR LR
comp=Z,200nm,17.2s,MS4.3
MNTX Cornudas Mount 56.63 80 ⇓P **P 03 58 30.2 -0.9**
baz=56
325A Bean Ranch, Si 57.11 80 ⇑P **P 03 58 34.6 0.0**
baz=57
KEV Kevo 57.83 349 *e*P **P 03 58 37.5 -1.5**
KEV pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
KEV Kevo 57.83 349 *e*p **P 03 58 37.5 -1.5**
comp=Z,1.3nm,0.5s,mb4.2
ARCES ARCESS Array B 58.21 350 P **P 03 58 40.3 -1.4**
comp=Z,3.9nm,0.8s,mb4.5,baz=35,slow=8.1,SNR=18
ARCES ARCESS Array B 58.21 350 P **P 03 58 40.3 -1.4**
ARCES pmax pmax
comp=Z,4.0nm,0.8s
CD2 Chengdu 58.38 281 P **P 03 58 44.0 +0.5**
CD2 pP pP 03 58 56.8 +3.9
CD2 sP sP 03 59 02.0 +5.5
CD2 PP PP 04 00 54.8 +2.2
CD2 S **S 04 06 40.6 -3.6**
CD2 sS sS 04 07 02.1 +2.4
CD2 SS SS 04 10 34.3 -1.8
CD2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.2
CD2 pmax pmax
comp=Z,90nm,4.1s
CD2 LR LR
comp=Z,340nm,16.3s,MS4.5
LVZ Lovozero 58.51 345 *ce*P **P 03 58 43.9 +0.1**
LVZ pmax pmax
comp=Z,14nm,0.9s,mb5.0
WMOK Wichita Mounta 58.58 72 *e*P **P 03 58 48.1 +3.3**
KURK Kurchatov 58.71 313 *e*P **P 03 58 44.3 -1.2**
KURK Kurchatov 58.71 313 LR LR 04 25 48.5
comp=Z,195nm,18.3s,MS4.3,baz=65,slow=38
KURK Kurchatov 58.71 313 ⇑*i*P **P 03 58 45.0 -0.5**
KURK pmax pmax
comp=Z,23nm,1.2s,mb5.1
626A Big Bend Ranch 58.89 80 ⇑P **P 03 58 46.4 -0.6**
baz=59
WMQ Urumqi 58.92 302 *e*P **P 03 58 49.8 +2.7**
WMQ pP pP 03 59 02.5 +6.0
WMQ sP sP 03 59 07.8 +7.7
WMQ PcP PcP 03 59 38.5 +2.5
WMQ PP PP 04 01 02.0 +4.9
WMQ *e*S **S 04 06 50.8 0.0**
WMQ ScS ScS 04 08 32.0 -2.4
WMQ SS SS 04 10 46.3 +2.3
WMQ pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
WMQ pmax pmax
comp=Z,170nm,5.8s
WMQ LR LR
comp=N,230nm,20.0s,MS4.4
WMQ LR LR
comp=E,230nm,21.4s,MS4.4
WMQ LR LR
comp=Z,380nm,21.5s,MS4.5
428A Kincaid Ranch, 58.97 78 ⇓P **P 03 58 46.9 -0.7**
baz=59
528A Cox Ranch, San 59.30 79 ⇓P **P 03 58 49.0 -0.9**
baz=59
TXAR Lajitas Array 59.33 80 P **P 03 58 49.4 -0.8**
comp=Z,0.6nm,0.5s,mb3.9,baz=306,slow=5.1,SNR=25
TXAR LR LR 04 25 07.7
comp=Z,96nm,18.0s,MS4.0,baz=355,slow=37
TXAR Lajitas Array 59.33 80 P **P 03 58 49.4 -0.7**
TXAR pmax pmax
comp=Z,1.0nm,0.5s
TXAR MLR MLR
comp=Z,96nm,18.0s
MKAR Makanchi Array 59.67 308 P **P 03 58 51.2 -0.9**
comp=Z,2.9nm,0.6s,mb4.5,baz=52,slow=7.9,SNR=29
MKAR LR LR 04 25 56.0
comp=Z,161nm,19.6s,MS4.2,baz=30,slow=37
MKAR Makanchi Array 59.67 308 P **P 03 58 51.3 -0.9**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR MLR MLR
comp=Z,161nm,19.6s
GYA Guiyang 59.70 275 *e*P **P 03 58 53.4 +0.7**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
628A Black Gap, Mar 59.71 80 ⇓P **P 03 58 51.4 -1.3**
baz=60
SCHQ Schefferville 60.59 38 P **P 03 58 58.1 -0.2**
comp=Z,3.6nm,0.8s,mb4.5,baz=284,slow=8.3,SNR=3.7
BRVK Borovoye 60.66 319 *e*P **P 03 58 59.3 +0.4**
comp=Z,2.6nm,0.5s,mb4.6
BRVK Borovoye 60.66 319 *e*P **P 03 58 59.3 +0.4**
BRVK pmax pmax
comp=Z,14nm,1.5s,mb4.9
MIAR Mount Ida 61.81 69 *e*P **P 03 59 07.7 +0.7**
ARU Arti 62.46 328 *di*P **P 03 59 10.5 -0.4**
ARU S **S 04 07 37.1 +1.5**
ARU pmax pmax
comp=Z,6.0nm,1.7s,mb4.5
KMI Kunming 63.11 277 P **P 03 59 18.1 +2.3**
KMI pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
KMI LR LR
comp=Z,77nm,21.0s,MS3.9
JOF Joensuu 63.65 345 *e*P **P 03 59 16.5 -2.3**
JOF pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
JOF Joensuu 63.65 345 *e*p **P 03 59 16.5 -2.3**
comp=Z,4.7nm,0.5s,mb4.8
KLMR Klimovskoe 63.97 340 *e*P **P 03 59 20.0 -0.9**
KLMR pmax pmax
comp=Z,15nm,1.7s,mb4.8
KAF Kangasniemi 65.19 347 *e*P **P 03 59 26.7 -2.1**
KAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KAF Kangasniemi 65.19 347 *e*p **P 03 59 26.7 -2.1**
comp=Z,3.9nm,0.7s,mb4.5
TKM2 Tokmak 2 65.76 309 P **P 03 59 34.6 +1.8**
SNR=12
FINES FINESS Array B 65.86 347 P **P 03 59 31.6 -1.5**
comp=Z,7.5nm,0.8s,mb4.8,baz=5.5,slow=6.9,SNR=17
FINES LR LR 04 33 33.7
comp=Z,127nm,18.3s,MS4.2,baz=336,slow=41
FINES FINESS Array B 65.86 347 P **P 03 59 31.7 -1.5**
FINES pmax pmax
comp=Z,8.0nm,0.9s
FINES MLR MLR
comp=Z,127nm,18.3s
ULHL Ulahol 65.94 308 P **P 03 59 35.8 +1.8**
SNR=5.3
USP Ospenovka 66.04 310 P **P 03 59 35.1 +0.5**
SNR=17
AAK Ala-Archa 66.51 309 *e*P **P 03 59 38.5 +0.8**
KZA Kyzart 66.56 308 P **P 03 59 40.4 +2.4**
SNR=6.4
EKS2 Erkin-Say 66.84 310 P **P 03 59 40.4 +0.6**
SNR=10
AML Almayashu 67.28 309 P **P 03 59 45.1 +2.6**
SNR=13
ABKAR Akbulak array 67.73 322 *e*P **P 03 59 44.1 -1.1**
comp=Z,0.9nm,0.4s,mb4.2

NOA NORSAR Array B 67.82 354 P **P 03 59 44.6 -1.0**
comp=Z,4.6nm,0.8s,mb4.6,baz=7.9,slow=6.3,SNR=23
NOA LR LR 04 31 49.5
comp=Z,46nm,20.3s,MS3.7,baz=5.0,slow=38
NOA NORSAR Array B 67.82 354 P **P 03 59 44.6 -1.0**
NOA pmax pmax
comp=Z,5.0nm,0.8s
NOA MLR MLR
comp=Z,46nm,20.3s
KSH Kashi 68.12 306 P **P 03 59 51.4 +3.5**
KSH *e*pP pP 04 00 04.0 +6.6
KSH *e*sP sP 04 00 09.3 +8.3
KSH *e*PcP PcP 04 00 16.3 +2.6
KSH *e*PP PP 04 02 25.1 +7.3
KSH *e*ScP 04 04 14.5
KSH *e*PcS 04 04 19.6
KSH *e*S S 04 08 45.8 +0.4
KSH *e*sS sS 04 09 11.8 +11
KSH *e*ScS ScS 04 09 43.3 -1.3
KSH *e*SS SS 04 13 15.0 +7.6
KSH pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KSH pmax pmax
comp=Z,51nm,5.2s
KSH LR LR
comp=N,45nm,4.7s
KSH LR LR
comp=E,28nm,4.1s
KSH LR LR
comp=Z,29nm,4.7s
TAOE Nuku Hiva Isla 68.88 137 *e*LR LR 04 20 48.7
comp=Z,324nm,23.4s
OBN Obninsk 69.86 339 *e*P **P 03 59 59.1 +0.7**
OBN pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
CHTO Chiang Mai 70.12 275 *e*P **P 04 00 00.6 0.0**
comp=Z,4.7nm,0.9s,mb4.4
CHTO Chiang Mai 70.12 275 *e*P **P 04 00 00.6 0.0**
CHTO pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CMAR Chiang Mai Arr 70.39 275 P **P 04 00 01.6 -0.7**
comp=Z,4.1nm,0.8s,mb4.4,baz=30,slow=6.6,SNR=16
CMAR LR LR 04 35 36.6
comp=Z,61nm,18.0s,MS3.9,baz=276,slow=40
CMAR Chiang Mai Arr 70.39 275 P **P 04 00 01.6 -0.6**
CMAR pmax pmax
comp=Z,4.0nm,0.8s
CMAR MLR MLR
comp=Z,61nm,18.0s
TAPN Taplejung 70.68 290 *e*P **P 04 00 04.9 +1.0**
comp=Z,53nm,1.2s,mb5.3
ODAN Odare 71.23 290 *e*P **P 04 00 08.2 +1.0**
GUN Gumba 71.34 291 *e*P **P 04 00 08.3 +0.4**
RAMN Ramite 71.63 290 *e*P **P 04 00 09.7 0.0**
comp=Z,21nm,0.4s,mb5.4
KKN Kakani 71.78 292 *e*P **P 04 00 10.8 +0.3**
comp=Z,13nm,0.6s,mb5.1
PKIN Phulchoki 71.87 291 *e*P **P 04 00 11.4 +0.3**
comp=Z,8.1nm,0.5s,mb5.0
GKN Gorkha 72.00 292 *e*P **P 04 00 11.9 +0.1**
VSR Storozhevoye 72.79 336 *e*P **P 04 00 16.0 -0.2**
VSR pmax pmax
comp=N,2.0nm,0.5s
VSR pmax pmax
comp=E,3.0nm,0.5s
VSR pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
PPT Papeete 73.38 150 *e*LR LR 04 22 49.3
comp=Z,255nm,29.2s
PPT Papeete 73.38 150 LR LR 04 25 50.4
comp=Z,135nm,20.9s,MS4.2,baz=86,slow=30
ESK Eskdalemuir 73.87 2 *e*P **P 04 00 22.6 +0.2**
DZM Mont Dzumac 73.89 193 *e*LR LR 04 23 06.9
comp=Z,280nm,23.1s
AKASG Malin Array Be 75.57 341 P **P 04 00 31.0 -1.3**
AKASG LR LR 04 38 34.4
AKASG Malin Array Be 75.57 341 P **P 04 00 31.0 -1.3**
comp=Z,2.1nm,0.4s,mb4.4,baz=21,slow=6.0,SNR=13
AKASG LR LR 04 38 34.4
comp=Z,138nm,18.3s,MS4.3,baz=5.0,slow=40
AKASG Malin Array Be 75.57 341 P **P 04 00 31.0 -1.4**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG MLR MLR
comp=Z,138nm,18.3s
KIEV Kiev 75.58 341 *e*P **P 04 00 31.3 -1.1**
comp=Z,4.4nm,0.9s,mb4.4
KIEV Kiev 75.58 341 *e*P **P 04 00 31.3 -1.1**
KIEV pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KWP Kalwaria Pacla 77.77 345 *e*P **P 04 00 44.7 -0.2**
KWP Kalwaria Pacla 77.77 345 *e*P **P 04 00 44.7 -0.2**
comp=Z,6.7nm,0.4s,mb4.9
KWP Kalwaria Pacla 77.77 345 ⇑*i*P **P 04 00 44.7 -0.2**
KIV Kislovodsk 78.35 330 *e*P **P 04 00 48.5 +0.3**
KIV pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
MEM Membach 78.50 356 P **P 04 00 49.0 +0.2**
comp=Z,4.3nm,1.4s,mb4.2
SNF Seneffe 78.66 357 P **P 04 00 50.2 +0.4**
BCLA Clavier 78.72 357 P **P 04 00 50.7 +0.6**
ZEI Tsey 79.03 329 *e*P **P 04 00 51.7 -0.2**
ZEI pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
DOU Dourbes 79.07 357 P **P 04 00 52.5 +0.5**
BAIF Baives 79.11 357 *e*P **P 04 00 51.9 -0.3**
comp=Z,11nm,0.7s,mb4.6
BAIF Baives 79.11 357 *e*P **P 04 00 51.9 -0.3**
comp=Z,5.3nm,0.7s,mb4.6
BAIF Baives 79.11 357 *e*P **P 04 00 51.9 -0.3**
BAIF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
BURAR Bucovina Array 79.29 343 ⇓P **P 04 00 53.1 -0.2**
BURAR Bucovina Array 79.29 343 ⇓*i*P **P 04 00 53.1 -0.2**
FLN La Foliniere 80.47 0 *e*P **P 04 00 58.8 -0.8**
FLN *e*MLR MLR
comp=Z,49nm,21.8s,MS3.5
FLN La Foliniere 80.47 0 *e*P **P 04 00 58.8 -0.8**
FLN MLR MLR
comp=Z,50nm,21.8s,MS3.8
DRGR 80.53 345 ⇓P **P 04 00 59.8 -0.2**
DRGR 80.53 345 ⇓*i*P **P 04 00 59.8 -0.2**
CDF Champ du Feu 80.64 355 *e*P **P 04 01 00.5 0.0**
comp=Z,2.6nm,0.6s,mb4.0
CDF Champ du Feu 80.64 355 *e*P **P 04 01 00.5 0.0**
comp=Z,1.3nm,0.6s,mb4.0
CDF Champ du Feu 80.64 355 *e*P **P 04 01 00.5 0.0**
CDF pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
LDF La Druitiere 80.64 0 *e*P **P 04 00 59.5 -1.0**
comp=Z,6.4nm,0.5s,mb4.5
LDF La Druitiere 80.64 0 *e*P **P 04 00 59.5 -1.0**
comp=Z,3.2nm,0.5s,mb4.5
LDF La Druitiere 80.64 0 *e*P **P 04 00 59.5 -1.0**
LDF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
MEZF Maizieres J'vi 80.64 357 *e*P **P 04 01 00.1 -0.4**
comp=Z,11nm,1.0s,mb4.4
MEZF Maizieres J'vi 80.64 357 *e*P **P 04 01 00.1 -0.4**
comp=Z,11nm,1.0s,mb4.7
VRI Vrincioaia 80.68 342 ⇓P **P 04 01 04.4 +3.6**
VRI Vrincioaia 80.68 342 ⇓*i*P **P 04 01 04.4 +3.6**
PLOR Plostina 80.71 342 ⇑P **P 04 01 03.8 +2.8**
PLOR Plostina 80.71 342 ⇑*i*P **P 04 01 03.8 +2.8**
GRR Gorron 80.84 1 *e*P **P 04 01 01.0 -0.6**
comp=Z,14nm,0.8s,mb4.6
GRR Gorron 80.84 1 *e*P **P 04 01 01.0 -0.6**
comp=Z,6.9nm,0.8s,mb4.6
GRR Gorron 80.84 1 *e*P **P 04 01 01.0 -0.6**
GRR pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
ROSF Rostrenen 80.85 2 *e*P **P 04 01 01.1 -0.6**
SFTF Sexfontaines 80.94 357 *e*P **P 04 01 01.7 -0.4**
comp=Z,16nm,0.9s,mb4.6
SFTF Sexfontaines 80.94 357 *e*P **P 04 01 01.7 -0.4**
comp=Z,16nm,0.9s,mb4.9
SGMF Saint Gilles 80.95 2 *e*P **P 04 01 01.7 -0.5**
MLR Muntele Rosu 81.20 342 ⇓P **P 04 01 04.8 +1.3**
MLR Muntele Rosu 81.20 342 ⇓*i*P **P 04 01 04.8 +1.2**
HINF Hinteralfeld 81.25 355 *e*P **P 04 01 03.6 -0.2**
comp=Z,2.9nm,0.6s,mb4.1
HINF Hinteralfeld 81.25 355 *e*P **P 04 01 03.6 -0.2**
comp=Z,1.5nm,0.6s,mb4.1
HINF Hinteralfeld 81.25 355 *e*P **P 04 01 03.6 -0.2**
HINF pmax pmax
comp=Z,1.0nm,0.6s,mb3.9

QUIF Quistinic 81.28 2 *e*P **P 04 01 03.2 -0.7**
WRA Warramunga Arr 81.40 223 P **P 04 01 02.8 -2.0**
comp=Z,1.1nm,0.7s,mb3.9,baz=27,slow=5.5,SNR=4.3
WRA Warramunga Arr 81.40 223 P **P 04 01 02.8 -2.0**
WRA pmax pmax
comp=Z,1.0nm,0.7s
VOIR 81.42 343 ⇑P **P 04 01 06.0 +1.3**
VOIR 81.42 343 ⇑*i*P **P 04 01 06.0 +1.3**
PKSM Moragy 81.72 347 ⇓P **P 04 01 07.6 +1.3**
PKSM Moragy 81.72 347 ⇓*i*P **P 04 01 07.6 +1.3**
BZS Buzias 81.85 345 ⇑P **P 04 01 07.3 +0.3**
BZS Buzias 81.85 345 ⇑*i*P **P 04 01 07.3 +0.3**
GZR Gura Zlata 81.87 344 ⇑P **P 04 01 06.9 -0.2**
GZR Gura Zlata 81.87 344 ⇑*i*P **P 04 01 06.9 -0.2**
LOR Lormes 81.92 357 *e*P **P 04 01 06.8 -0.5**
LOR *e*MLR MLR
comp=Z,50nm,22.8s,MS3.5
LOR Lormes 81.92 357 *e*P **P 04 01 06.8 -0.5**
LOR MLR MLR
comp=Z,50nm,22.8s,MS3.8
SSF Saint Saulge 82.13 358 *e*P **P 04 01 08.1 -0.4**
comp=Z,7.8nm,0.9s,mb4.3
SSF Saint Saulge 82.13 358 *e*P **P 04 01 08.1 -0.4**
comp=Z,3.9nm,0.9s,mb4.3
SSF Saint Saulge 82.13 358 *e*P **P 04 01 08.1 -0.4**
SSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
AVF Avril sur Loir 82.41 358 *e*P **P 04 01 09.5 -0.4**
comp=Z,5.8nm,0.9s,mb4.2
AVF Avril sur Loir 82.41 358 *e*P **P 04 01 09.5 -0.4**
comp=Z,2.9nm,0.9s,mb4.2
AVF Avril sur Loir 82.41 358 *e*P **P 04 01 09.5 -0.4**
AVF pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
CABF La Chapelle 82.49 356 *e*P **P 04 01 10.1 -0.2**
SMF Signal de Mont 82.54 357 *e*P **P 04 01 10.0 -0.6**
MFF Saint Martin d 82.63 0 *e*P **P 04 01 10.7 -0.4**
TCF Toulx Ste Croi 82.93 359 *e*P **P 04 01 12.7 +0.1**
RKT Rikitea 83.81 139 *e*LR LR 04 27 42.0
comp=Z,164nm,26.0s
RJF Les Rejaudoux 83.92 359 *e*P **P 04 01 16.9 -0.9**
CAF Calviac 84.30 359 *e*P **P 04 01 18.5 -1.2**
ASAR Alice Springs 84.88 222 P **P 04 01 21.7 -1.0**
comp=Z,0.8nm,0.7s,mb3.9,baz=32,slow=5.3,SNR=7.6
ASAR Alice Springs 84.88 222 P **P 04 01 21.7 -1.0**
ASAR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 84.89 335 P **P 04 01 21.9 -0.8**
comp=Z,2.0nm,0.8s,mb4.3,baz=73,slow=2.6,SNR=15
BRTR LR LR 04 46 17.9
comp=Z,40nm,18.5s,MS3.8,baz=173,slow=41
TORD Torodi Ar. Bea 115.97 358 PKP PKPdf 04 07 29.2 -1.9
TORD Torodi Ar. Bea 115.97 358 PKP PKPdf 04 07 29.2 -1.9
comp=Z,0.3nm,0.5s,baz=350,slow=1.4,SNR=7.8
TSUM Tsumeb 145.28 330 *e*PKPbc PKPbc 04 08 25.4 0.0
BOSA Boshof 150.64 310 PKPbc PKPbc 04 08 39.1 -0.7
comp=Z,6.0nm,0.8s,baz=32,slow=4.6,SNR=10

BJI ***23*** *03:59:39.8,50˚.90N×179˚.90W,h9km,mb4.7/4,Ms4.5/2, Ms7 4.0/2*
IDC ***23*** *03:59:39.2±1.1,51˚.28N×179˚.80W,h0km,mb4.0/16, mb1 4.2/18,mb1mx4.0/29,mbtmp4.0/18,ML4.4/1,MS3.2/1, Ms1 3.2/1,ms1mx2.4/40,Error ellipse: s-maj=33.6km s-min=15.1km az=3.0*
NEIC ***23*** *03:59:42.8,50˚.95N×179˚.89W,h9km,mb4.2/10, ML4.1(PMR),ML3.7(AEIC), After AEIC.*
ISCJB ***23*** *03:59:45.0±0.7,51˚.4N±0˚.1×179˚.91W±0˚.06,h46km±6km, mb4.2/28, Error ellipse: s-maj=22.5km s-min=6.4km az=174.1*

ISC 23 03:59:45.3±1.0,51˚.4N±0˚.1×179˚.89W±0˚.07,h31km±8km, n42,σ1§19/41,mb4.2/28,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
AMKA	**Amchitka**	**0.51**	**263**	*e*P	**Pb**	**03 59 54.8**	**-1.1**
AMKA				S	**Sb**	**04 00 03.8**	**+0.6**
ADK	**Adak**	**2.04**	**76**	P	**Pn**	**04 00 18.1**	**+0.6**
ADK				S	**Sn**	**04 00 44.2**	**+2.3**
SMY	**Shemya**	**3.93**	**292**	P	**Pn**	**04 00 45.2**	**+1.9**
PETK	**Petropavlovsk-**	**13.82**	**286**	Pn	**Pn**	**04 02 55.8**	**-2.9**
	baz=96,slow=14,SNR=2.1						
PETK				LR	LR	04 08 23.1	
	comp=Z,94nm,18.2s,baz=80,slow=38						
OHAK	**Old Harbor**	**16.49**	**59**	*e*Pn	**Pn**	**04 00 33.0**	**-1.0**
	9.2nm,0.6s						
KDAK	**Kodiak Island**	**16.96**	**57**	P	**Pn**	**04 00 38.3**	**-1.6**
	1.2nm,0.3s,baz=282,slow=11,SNR=8.2						
PPLA	**Purkeypile**	**18.72**	**42**	*e*P	**Pn**	**04 04 03.9**	**+2.4**
	5.5nm,0.6s						
BPAW	**Bear Paw Mtn.**	**19.73**	**39**	*e*P	**Pn**	**04 04 13.9**	**+0.4**
	3.9nm,0.6s						
BMRM	**Bremner River**	**21.56**	**50**	*e*P	**P**	**04 04 33.5**	**+1.8**
	6.4nm,0.7s,mb4.2						
ILAR	**Eielson Array**	**21.62**	**39**	P	**P**	**04 04 30.6**	**-1.8**
	1.0nm,0.6s,mb3.4,baz=228,slow=8.1,SNR=15						
EGAK	**Eagle**	**23.95**	**41**	*e*P	**P**	**04 04 56.5**	**+0.2**
	6.4nm,0.8s,mb4.1						
DAWY	**Dawson**	**24.53**	**43**	*e*P	**P**	**04 05 01.8**	**+0.2**
YKA	**Yellowknife Ar**	**35.68**	**46**	P	**P**	**04 06 39.7**	**-0.5**
YKA	**Yellowknife Ar**	**35.68**	**46**	P	**P**	**04 06 39.7**	**-0.5**
	1.8nm,0.6s,mb4.2,baz=280,slow=7.5,SNR=7.5						
CN2	**Changchun**	**36.87**	**280**	*e*P	**P**	**04 06 52.8**	**+2.3**
BOZ	**Bozeman (W)**	**44.07**	**70**	*e*P	**P**	**04 07 49.5**	**-0.5**
	2.0nm,0.7s,mb4.0						
NVAR	**Mina Array Bea**	**44.22**	**82**	P	**P**	**04 07 50.3**	**-1.0**
	0.4nm,0.5s,mb3.4,baz=294,slow=6.8,SNR=3.0						
BJI	**Beijing**	**44.70**	**281**	P	**P**	**04 07 55.8**	**+0.7**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
BJI				LR	LR		
	comp=N,320nm,22.1s						
BJI				LR	LR		
	comp=E,210nm,20.9s						
BJI				LR	LR		
	comp=Z,97nm,20.8s						
RLMT	**Red Lodge**	**45.74**	**69**	*e*P	**P**	**04 08 03.5**	**+0.1**
	comp=Z,4.8nm,1.0s,mb4.4						
SONM	**Songino Array**	**46.01**	**296**	P	**P**	**04 08 06.1**	**+0.7**
	comp=Z,0.6nm,0.5s,mb3.8,baz=55,slow=9.8,SNR=4.3						
OSI	**Esito Adit**	**46.37**	**87**	*e*P	**P**	**04 08 09.2**	**+0.8**
	comp=Z,5.3nm,0.5s,mb4.7						
DUG	**Dugway**	**46.52**	**76**	*e*P	**P**	**04 08 10.9**	**+1.4**
	comp=Z,3.5nm,1.0s,mb4.2						
LAO	**LASA Array**	**46.62**	**65**	*e*P	**P**	**04 08 09.5**	**-0.6**
	comp=Z,2.0nm,0.6s,mb4.2						
PDAR	**Pinedale Array**	**46.94**	**72**	P	**P**	**04 08 11.7**	**-1.1**
	comp=Z,2.6nm,0.8s,mb4.2,baz=312,slow=4.2,SNR=16						
SPITS	**Spitsbergen Ar**	**50.26**	**356**	P	**P**	**04 08 37.9**	**0.0**
	comp=Z,1.7nm,0.4s,mb4.4,baz=42,slow=6.1,SNR=15						
ZALV	**Zalesovo Beam**	**53.49**	**313**	P	**P**	**04 09 01.4**	**-0.8**
	comp=Z,1.1nm,0.5s,mb4.0,baz=55,slow=7.8,SNR=4.0						
LZH	**Lanzhou**	**54.71**	**285**	*e*P	**P**	**04 09 14.5**	**+3.1**
LZH				pP	pP	04 09 17.5	-3.3
LZH				sP	sP	04 09 20.0	-4.4
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
KEV	**Kevo**	**57.53**	**349**	*e*p	pP	04 09 38.7	-1.7
	comp=Z,1.6nm,0.7s						
ARCES	**ARCESS Array B**	**57.91**	**350**	P	**P**	**04 09 33.5**	**-0.2**
	comp=Z,1.2nm,0.6s,mb4.1,baz=31,slow=7.7,SNR=9.8						
KURK	**Kurchatov**	**58.48**	**313**	P	**P**	**04 09 39.3**	**+1.3**
	comp=Z,4.5nm,0.5s,mb4.8,baz=43,slow=6.6,SNR=13						
TXAR	**Lajitas Array**	**59.32**	**80**	P	**P**	**04 09 42.7**	**-1.3**
	comp=Z,0.3nm,0.5s,mb3.6,baz=303,slow=5.5,SNR=11						
MKAR	**Makanchi Array**	**59.46**	**308**	P	**P**	**04 09 44.6**	**-0.1**
	comp=Z,2.1nm,0.7s,mb4.3,baz=52,slow=6.9,SNR=16						
JOF	**Joensuu**	**63.36**	**345**	*e*p	**P**	**04 10 09.8**	**-1.0**
	comp=Z,2.6nm,0.5s,mb4.6						
KAF	**Kangasniemi**	**64.90**	**347**	*e*p	**P**	**04 10 19.6**	**-1.3**
	comp=Z,2.6nm,0.6s,mb4.4						
FINES	**FINESS Array B**	**65.57**	**347**	P	**P**	**04 10 24.6**	**-0.7**
	comp=Z,1.3nm,0.6s,mb4.2,baz=28,slow=8.6,SNR=8.8						
NOA	**NORSAR Array B**	**67.52**	**354**	P	**P**	**04 10 38.1**	**+0.3**
	comp=Z,3.7nm,0.9s,mb4.4,baz=7.8,slow=6.3,SNR=10						
KSH	**Kashi**	**67.91**	**306**	*e*P	**P**	**04 10 44.6**	**+4.0**
KSH				*e*pP	pP	04 10 57.8	+7.6
KSH				*e*PcP	PcP	04 11 10.3	+3.4
KSH				*e*PP	PP	04 13 17.9	+7.8
KSH				*e*ScP		04 15 08.3	
KSH				*e*PcS		04 15 13.1	
KSH				*e*S	S	04 19 42.1	+5.1
KSH				*e*sS	sS	04 20 05.0	+12
KSH				*e*ScS	ScS	04 20 37.1	+0.1

KSH					pmax	pmax			
	comp=Z,9.0nm,1.3s,mb4.6								
KSH					LR	LR			
	comp=N,33nm,6.5s								
KSH					LR	LR			
	comp=E,42nm,4.3s								
KSH					LR	LR			
	comp=Z,42nm,4.6s								
CMAR	**Chiang Mai Arr**	**70.33**	**275**		P	**P**	**04 10 54.7**	**-1.2**	
	comp=Z,0.7nm,0.4s,mb4.0,baz=23,slow=6.8,SNR=5.1								
AKASG	**Malin Array Be**	**75.28**	**341**		P	**P**	**04 11 24.0**	**-0.7**	
	comp=Z,0.2nm,0.3s,mb3.5,baz=19,slow=6.3,SNR=4.0								
BRTR	**Keskin Array B**	**84.60**	**335**		P	**P**	**04 12 15.8**	**+0.4**	
	comp=Z,0.7nm,0.7s,mb3.9,baz=50,slow=4.7,SNR=4.6								
TORD	**Torodi Ar. Bea**	**115.67**	**358**		PKP	PKPdf	04 18 22.4	-2.1	
	comp=Z,0.9nm,1.1s,baz=9.1,slow=2.6,SNR=2.8								
BOSA	**Boshof**	**150.43**	**311**		PKPbc	PKPbc	04 19 32.5	-0.8	
	comp=Z,2.6nm,0.9s,baz=39,slow=9.5,SNR=6.5								

ISK ***23*** *04:00:47.8, 36.°09N × 28.°85E, h23km, MD3.2*
DDA ***23*** *04:00:47.9, 36.°14N × 28.°92E, h28km ± 2km, Md3.0, Ml3.2*
ATH ***23*** *04:00:50.2, 36.°18N × 28.°96E, h39km ± 4km, MD3.1/5*
NEIC ***23*** *04:00:50.2, 36.°18N × 28.°96E, h39km, MD3.1(ATH), After ATH.*
CSEM ***23*** *04:00:51.2 ± 0.4, 36.°15N × 29.°01E, h40km, MD3.1, Error ellipse: s-maj=9.9km s-min=6.7km az=165.0*

ISC 23 04:00:50.4 ± 1.0, 36.°15N ± 0.°06 × 28.°94E ± 0.°06, h23km ± 13km, n45, σ1°24/65, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**0.52**	**90**	*e*Pn		**Pb**	**04 01 00.8**	**0.0**
KSL				*e*Sn		**Sb**	**04 01 10.2**	**+2.3**
KSL	**Kastellorizon**	**0.52**	**90**	*e*PN		**Pb**	**04 01 00.8**	**0.0**
KSL				*e*SN		**Sb**	**04 01 10.2**	**+2.3**
KSL	**Kastellorizon**	**0.52**	**90**	*e*Pn		**Pb**	**04 01 00.8**	**0.0**
KSL				*e*Sn		**Sb**	**04 01 10.2**	**+2.3**
AKAS	**Kas**	**0.54**	**81**	*i* P		**Pb**	**04 00 59.4**	**-1.8**
AKAS				*i* S		**Sb**	**04 01 08.8**	**+0.2**
AKAS	**Kas**	**0.54**	**81**	*i* P		**Pb**	**04 00 59.4**	**-1.8**
AKAS				*i* S		**Sb**	**04 01 08.8**	**+0.2**
ARG	**Arkhangelos**	**0.66**	**276**	*e*Pn		**Pn**	**04 01 03.6**	**-0.8**
ARG				*e*Sn		**Sn**	**04 01 14.8**	**+0.7**
ARG	**Arkhangelos**	**0.66**	**276**	*e*PN		**Pn**	**04 01 03.6**	**-0.8**
ARG				*e*SN		**Sn**	**04 01 14.8**	**+0.7**
ARG	**Arkhangelos**	**0.66**	**276**	*e*Pn		**Pn**	**04 01 03.6**	**-0.8**
ARG				*e*Sn		**Sn**	**04 01 14.8**	**+0.7**
GLHS	**Glhisar (BURDU**	**1.10**	**24**	*e*PN		**Pn**	**04 01 08.9**	**-1.4**
GLHS				*e*SN		**Sn**	**04 01 25.2**	**+0.4**
GLHS	**Glhisar (BURDU**	**1.10**	**24**	*e*Pn		**Pn**	**04 01 08.9**	**-1.5**
GLHS				*e*Sn		**Sn**	**04 01 25.2**	**+0.4**
YER	**Yerkesik**	**1.12**	**332**	*e*PN		**Pn**	**04 01 08.9**	**-1.7**
YER				*e*SN		**Sn**	**04 01 24.4**	**-0.8**
YER	**Yerkesik**	**1.12**	**332**	*e*Pn		**Pn**	**04 01 09.0**	**-1.6**
YER				*e*Sn		**Sn**	**04 01 24.4**	**-0.9**
GOLH	**Golhisar**	**1.19**	**24**	*i* P		**Pn**	**04 01 10.0**	**-1.6**
GOLH				*i* S		**Sb**	**04 01 28.6**	**+1.3**
GOLH	**Golhisar**	**1.19**	**24**	*i* P		**Pn**	**04 01 10.0**	**-1.7**
GOLH				*i* S		**Sb**	**04 01 28.6**	**+1.3**
MLSB	**Milas**	**1.48**	**321**	*e*PN		**Pn**	**04 01 13.2**	**-2.4**
MLSB	**Milas**	**1.48**	**321**	*e*Pn		**Pn**	**04 01 13.2**	**-2.4**
BDRM	**Kayabasi**	**1.51**	**308**	*i* P		**Pn**	**04 01 18.3**	**+2.2**
BDRM				*i* S		**Sn**	**04 01 36.5**	**+1.4**
BDRM	**Kayabasi**	**1.51**	**308**	*i* P		**Pn**	**04 01 18.3**	**+2.2**
BDRM				*i* S		**Sn**	**04 01 36.5**	**+1.5**
DNZL	**Cakiroluk**	**1.54**	**3**	*i* P		**Pn**	**04 01 16.2**	**-0.2**
DNZL				*i* S		**Sn**	**04 01 37.5**	**+1.9**
DNZL	**Cakiroluk**	**1.54**	**3**	*i* P		**Pn**	**04 01 16.2**	**-0.2**
DNZL				*i* S		**Sn**	**04 01 37.5**	**+1.8**
KARP	**Karpathos**	**1.57**	**248**	*e*Pn		**Pn**	**04 01 17.7**	**+0.9**
KARP	**Karpathos**	**1.57**	**248**	*e*PN		**Pn**	**04 01 17.7**	**+0.9**
KARP	**Karpathos**	**1.57**	**248**	*e*Pn		**Pn**	**04 01 17.7**	**+0.9**
BODT	**Bodrum**	**1.60**	**305**	*e*PN		**Pn**	**04 01 15.2**	**-2.0**
BODT	**Bodrum**	**1.60**	**305**	*e*Pn		**Pn**	**04 01 15.2**	**-2.0**
DENT	**Denizli**	**1.60**	**3**	*e*PN		**Pn**	**04 01 17.4**	**+0.1**
DENT	**Denizli**	**1.60**	**3**	*e*Pn		**Pn**	**04 01 17.4**	**+0.1**
AYDN	**Tasoluk**	**1.73**	**331**	*i* P		**Pn**	**04 01 19.4**	**+0.3**
AYDN				*i* S		**Sn**	**04 01 41.3**	**+0.8**
AYDN	**Tasoluk**	**1.73**	**331**	*i* P		**Pn**	**04 01 19.4**	**+0.3**
AYDN				*i* S		**Sn**	**04 01 41.3**	**+0.9**
BCK	**Bucak**	**1.86**	**45**	*e*PN		**Pn**	**04 01 21.1**	**+0.3**
BCK	**Bucak**	**1.86**	**45**	*e*Pn		**Pn**	**04 01 21.1**	**+0.3**
SUTC	**Sutluce-Ispart**	**2.12**	**51**	*e*PN		**Pn**	**04 01 24.4**	**0.0**
SUTC	**Sutluce-Ispart**	**2.12**	**51**	*e*Pn		**Pn**	**04 01 24.4**	**+0.1**
KHL	**Karahalli**	**2.22**	**12**	*e*PN		**Pn**	**04 01 25.7**	**0.0**
KHL	**Karahalli**	**2.22**	**12**	*e*Pn		**Pn**	**04 01 25.7**	**0.0**
SMG	**Samos**	**2.29**	**313**	*e*Pn		**Pn**	**04 01 27.5**	**+0.7**
SMG	**Samos**	**2.29**	**313**	*e*PN		**Pn**	**04 01 27.5**	**+0.7**
SMG	**Samos**	**2.29**	**313**	*e*Pn		**Pn**	**04 01 27.5**	**+0.7**
KULA	**Kula-Manisa**	**2.37**	**355**	*e*PN		**Pn**	**04 01 27.1**	**-0.8**
KULA	**Kula-Manisa**	**2.37**	**355**	*e*Pn		**Pn**	**04 01 27.1**	**-0.7**
IZM	**Izmir**	**2.61**	**330**	*e*PN		**Pn**	**04 01 29.4**	**-1.8**
IZM	**Izmir**	**2.61**	**330**	*e*Pn		**Pn**	**04 01 29.4**	**-1.8**
SIVA	**Sivas**	**3.55**	**253**	*e*Pn		**Pn**	**04 01 45.7**	**+1.6**
SIVA	**Sivas**	**3.55**	**253**	*e*PN		**Pn**	**04 01 45.7**	**+1.6**
SIVA	**Sivas**	**3.55**	**253**	*e*Pn		**Pn**	**04 01 45.7**	**+1.6**

IDC ***23*** *04:15:08.0 ± 0.8, 51.°29N × 179.°87W, h0km, mb4.2/18, mb1 4.4/19, mb1mx4.2/29, mbtmp4.2/19, ML4.2/1, MS3.6/12, Ms1 3.6/12, ms1mx3.2/43, Error ellipse: s-maj=25.6km s-min=14.1km az=177.0*
BJI ***23*** *04:15:09.9, 51.°33N × 179.°39W, h50km, mB5.2/7, mb4.9/16, Ms4.3/5, Ms7 4.1/6*
MOS ***23*** *04:15:11.5 ± 0.9, 51.°22N × 179.°94W, h33km, mb4.6/31, Error ellipse: s-maj=12.1km s-min=7.5km az=93.2*
NEIC ***23*** *04:15:12.4, 50.97N × 179.93W, h20km, mb4.4/37, ML4.4(PMR), ML4.0(AEIC), After AEIC.*
ISCJB ***23*** *04:15:13.1 ± 0.7, 51.°17N ± 0.°07 × 179.°93W ± 0.°04, h49km ± 5km, mb4.5/65, MS3.7/15, Error ellipse: s-maj=12.1km s-min=3.8km az=3.1*

ISC 23 04:15:14.7 ± 0.7, 51.°21N ± 0.°07 × 179.°93W ± 0.°04, h47km ± 5km, h55km ± 2.6km: pP-P, n237, σ0s90/232, mb4.5/65, MS3.7/15, 48C-43D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.51**	**290**	P		**Pn**	**04 15 23.3**	**-2.6**
AMKA				S		**Sn**	**04 15 32.1**	**-1.8**
ADK	**Adak**	**2.14**	**70**	P		**Pn**	**04 15 46.8**	**-1.0**
ADK				S		**Sn**	**04 16 14.3**	**+1.2**
ADK	**Adak**	**2.14**	**70**	P		**Pn**	**04 15 46.8**	**-1.0**
ADK				S		**Sn**	**04 16 14.2**	**+1.1**
SMY	**Shemya**	**4.00**	**295**	P		**Pn**	**04 16 13.0**	**-0.3**
SMY				*e*P			04 16 14.8	
SMY				S		**Sn**	**04 17 01.7**	**+2.9**
UNV	**Unalaska Valle**	**8.60**	**67**	*e*Pn		**Pn**	**04 17 18.0**	**+1.5**
PETK	**Petropavlovsk-**	**13.86**	**287**	Pn		**Pn**	**04 18 29.1**	**+0.9**
	0.2nm,0.3s,baz=94,slow=17,SNR=5.1							
PETK				LR		LR	04 23 30.8	
	comp=Z,182nm,22.0s,baz=287,slow=36							
OHAK	**Old Harbor**	**16.64**	**58**	*e*P		**Pn**	**04 19 02.6**	**-1.6**
	7.8nm,0.5s							
SVW2	**Sparrevohn**	**16.69**	**44**	*e*P		**Pn**	**04 19 07.2**	**+2.3**
	10nm,1.2s							
KDAK	**Kodiak Island**	**17.11**	**57**	*e*Pn		**Pn**	**04 19 06.0**	**-4.1**
	7.3nm,0.6s							
KDAK	**Kodiak Island**	**17.11**	**57**	P		**Pn**	**04 19 07.4**	**-2.8**
	0.9nm,0.3s,baz=287,slow=6.6,SNR=8.0							
KDAK	**Kodiak Island**	**17.11**	**57**	*e*P		**Pn**	**04 19 06.0**	**-4.2**
KDAK					pmax	pmax		
	comp=Z,7.0nm,0.6s							
TTA	**Tatalina**	**17.39**	**38**	*e*Pn		**Pn**	**04 19 14.2**	**+0.7**
	comp=Z,12nm,1.0s							
TTA	**Tatalina**	**17.39**	**38**	*e*P		**Pn**	**04 19 14.2**	**+0.7**
TTA					pmax	pmax		
	comp=Z,12nm,1.0s							
RSO	**Redoubt South**	**17.73**	**48**	*e*Pn		**Pn**	**04 19 19.1**	**+1.4**
BILL	**Bilibino**	**18.18**	**343**	*e*P		**Pn**	**04 19 24.9**	**+1.7**
	comp=Z,13nm,0.8s							
BILL	**Bilibino**	**18.18**	**343**	⇓*i*P		**Pn**	**04 19 25.5**	**+2.2**
BILL					pmax	pmax		
	comp=Z,38nm,1.8s							
PPLA	**Purkeypile**	**18.91**	**41**	*e*P		**Pn**	**04 19 32.8**	**+0.8**
	comp=Z,0.4nm,0.8s							
RC01	**Rabbit Creek A**	**19.33**	**48**	*e*P		**Pn**	**04 19 36.8**	**-0.3**
BPAW	**Bear Paw Mtn.**	**19.93**	**39**	*e*P		**Pn**	**04 19 42.4**	**-1.7**
	comp=Z,2μm,0.6s							
TRF	**Thorofare Moun**	**19.93**	**41**	*e*P		**Pn**	**04 19 42.2**	**-1.9**
	comp=Z,15nm,0.9s							
MCK	**McKinley**	**20.59**	**41**	*e*P		**P**	**04 19 49.8**	**+0.4**
	comp=Z,4.0nm,0.6s							
MCK	**McKinley**	**20.59**	**41**	*e*P		**P**	**04 19 49.8**	**+0.5**
MCK					pmax	pmax		
	comp=Z,4.0nm,0.6s							
COLA	**College**	**21.48**	**38**	*e*P		**P**	**04 20 00.3**	**+1.4**
	comp=Z,7.3nm,0.8s,mb4.1							
COLA	**College**	**21.48**	**38**	*e*P		**P**	**04 20 00.3**	**+1.4**
COLA					pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.0							
BMRM	**Bremner River**	**21.73**	**50**	*e*P		**P**	**04 20 02.6**	**+1.0**
	comp=Z,437nm,0.6s							
PAX	**Paxson**	**21.80**	**44**	*e*P		**P**	**04 20 02.5**	**+0.1**
	comp=Z,94nm,0.9s,mb5.2							
PAX	**Paxson**	**21.80**	**44**	*e*P		**P**	**04 20 02.5**	**+0.1**
PAX					pmax	pmax		
	comp=Z,94nm,0.9s,mb5.2							
ILAR	**Eielson Array**	**21.82**	**39**	P		**P**	**04 19 59.1**	**-3.4**
	comp=Z,1.2nm,0.5s,mb3.6,baz=233,slow=8.7,SNR=24							
ILAR	**Eielson Array**	**21.82**	**39**	P		**P**	**04 19 59.2**	**-3.3**
ILAR					pmax	pmax		
	comp=Z,1.0nm,0.5s							
MENT	**Mentasta**	**22.57**	**45**	*e*P		**P**	**04 20 12.4**	**+1.9**
EGAK	**Eagle**	**24.14**	**41**	*e*P		**P**	**04 20 25.4**	**-0.4**
	comp=Z,13nm,0.9s,mb4.3							
DAWY	**Dawson**	**24.72**	**43**	*e*P		**P**	**04 20 30.5**	**-0.5**
INK	**Inuvik**	**28.01**	**35**	*e*P		**P**	**04 21 02.4**	**+1.8**
	comp=Z,2.1nm,0.7s,mb3.9							
INK	**Inuvik**	**28.01**	**35**	P		**P**	**04 21 00.4**	**-0.2**
	comp=Z,0.7nm,0.3s,mb3.7,baz=254,slow=16,SNR=5.4							
INK	**Inuvik**	**28.01**	**35**	P		**P**	**04 21 00.4**	**-0.2**
INK					pmax	pmax		
	comp=Z,1.0nm,0.3s							
KLR	**Kul'dur**	**30.55**	**286**	*e*P		**P**	**04 21 20.2**	**-3.1**
MJAR	**Matsushiro Arr**	**33.06**	**260**	LR		LR	04 32 54.5	
	comp=Z,60nm,19.7s,MS3.3,baz=50,slow=32							
YKA	**Yellowknife Ar**	**35.86**	**46**	P		**P**	**04 22 08.2**	**-1.2**
YKA				LR		LR	04 38 38.1	
YKA	**Yellowknife Ar**	**35.86**	**46**	P		**P**	**04 22 08.2**	**-1.2**
	comp=Z,2.0nm,0.5s,mb4.3,baz=281,slow=7.4,SNR=13							
YKA					LR	LR	04 38 38.1	
	comp=Z,28nm,18.1s,MS3.1,baz=165,slow=39							
YKA	**Yellowknife Ar**	**35.86**	**46**	P		**P**	**04 22 08.2**	**-1.3**
YKA					pmax	pmax		
	comp=Z,2.0nm,0.5s							
YKA					MLR	MLR		
	comp=Z,28nm,18.1s							
CN2	**Changchun**	**36.88**	**280**	*e*P		**P**	**04 22 20.3**	**+1.9**
CN2				*e*pP		pP	04 22 33.0	+2.1
CN2					pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7							
ETW	**Entiat**	**38.02**	**71**	*e*P		**P**	**04 22 28.7**	**+0.7**
	comp=Z,4.3nm,0.6s,mb4.4							
B08A	**Colville Reser**	**38.26**	**70**	⇑P		**P**	**04 22 29.8**	**-0.1**
	baz=38,SNR=6.5							
KSRS	**Korea Array**	**38.93**	**270**	LR		LR	04 35 51.8	
	comp=Z,52nm,20.9s,MS3.3,baz=179,slow=32							
NEW	**Newport**	**39.61**	**69**	⇓P		**P**	**04 22 41.2**	**0.0**
	baz=40							
NEW	**Newport**	**39.61**	**69**	*e*P		**P**	**04 22 40.8**	**-0.4**
	comp=Z,4.0nm,0.9s,mb4.2							
NEW	**Newport**	**39.61**	**69**	*e*P		**P**	**04 22 40.8**	**-0.4**
NEW					pmax	pmax		
	comp=Z,4.0nm,0.9s							
YBH	**Yreka Blue Hor**	**39.61**	**81**	P		**P**	**04 22 45.4**	**+4.1**
	comp=Z,2.8nm,0.9s,mb4.0,baz=279,slow=9.6,SNR=5.1							
YBH	**Yreka Blue Hor**	**39.61**	**81**	P		**P**	**04 22 45.4**	**+4.1**
YBH					pmax	pmax		
	comp=Z,3.0nm,0.9s							
K05A	**Summer Lake**	**40.18**	**78**	⇑P		**P**	**04 22 46.7**	**+0.6**
	baz=40							
I07A	**Izee**	**40.30**	**76**	⇓P		**P**	**04 22 47.2**	**+0.2**
	baz=40							
B13A	**Whitefish**	**41.10**	**67**	⇓P		**P**	**04 22 53.6**	**0.0**
	baz=41							
BSMT	**Bassoo Peak**	**41.17**	**68**	*e*P		**P**	**04 22 54.6**	**+0.4**
	comp=Z,5.9nm,1.0s,mb4.2							
C13A	**Hot Springs**	**41.39**	**68**	⇓P		**P**	**04 22 55.9**	**0.0**
	baz=41							
A14A	**Double T Ranch**	**41.41**	**66**	⇑P		**P**	**04 22 55.7**	**-0.5**
	baz=41							
E12A	**Beaver Dam Sad**	**41.44**	**70**	⇑P		**P**	**04 22 55.8**	**-0.6**
	baz=41							
F12A	**Elk City**	**41.97**	**71**	⇑P		**P**	**04 23 00.5**	**-0.3**
	baz=42,SNR=6.2							
MSO	**Missoula**	**42.19**	**69**	⇑P		**P**	**04 23 02.1**	**-0.4**
	baz=42,SNR=5.3							
MSO	**Missoula**	**42.19**	**69**	*e*P		**P**	**04 23 02.5**	**0.0**
	comp=Z,2.8nm,1.0s,mb3.9							
B15A	**Bradely Ranch,**	**42.23**	**66**	⇑P		**P**	**04 23 02.3**	**-0.6**
	baz=42							
E13A	**Victor**	**42.25**	**70**	⇑P		**P**	**04 23 02.5**	**-0.4**
	baz=42							
D14A	**Greenough**	**42.31**	**68**	⇑P		**P**	**04 23 03.1**	**-0.4**
	baz=42,SNR=7.8							
C15A	**Salmond Ranch,**	**42.48**	**67**	⇑P		**P**	**04 23 04.9**	**0.0**
	baz=42,SNR=7.2							
F13A	**Darby**	**42.51**	**71**	⇑P		**P**	**04 23 04.6**	**-0.4**
	baz=42							
E14A	**Clinton**	**42.67**	**69**	⇓P		**P**	**04 23 06.3**	**-0.1**
	baz=42							
D15A	**Lincoln**	**42.91**	**68**	⇓P		**P**	**04 23 07.7**	**-0.6**
	baz=43							
G13A	**Cobalt**	**42.94**	**71**	⇓P		**P**	**04 23 08.2**	**-0.4**
	baz=43							
A17A	**Triple J Farms**	**42.98**	**65**	⇓P		**P**	**04 23 07.7**	**-1.1**
	baz=43,SNR=8.3							
E15A	**Deer Lodge**	**43.17**	**69**	⇓P		**P**	**04 23 10.1**	**-0.3**
	baz=43,SNR=5.9							
HRY	**Holter Researc**	**43.49**	**68**	*e*P		**P**	**04 23 12.4**	**-0.6**
	comp=Z,3.6nm,0.8s,mb4.2							
C17A	**Wharram Farm,**	**43.62**	**66**	⇓P		**P**	**04 23 13.2**	**-0.9**
	baz=44							
I13A	**Wildhorse Cree**	**43.65**	**73**	⇑P		**P**	**04 23 13.9**	**-0.4**
	baz=44							
HLID	**Hailey**	**43.67**	**73**	⇑P		**P**	**04 23 15.0**	**+0.5**
	baz=44							
HLID	**Hailey**	**43.67**	**73**	*e*P		**P**	**04 23 14.8**	**+0.3**
	comp=Z,3.0nm,1.1s,mb3.9							
J13A	**Cove Ranch, Pi**	**43.91**	**73**	⇓P		**P**	**04 23 17.1**	**+0.7**
	baz=44,SNR=6.9							
MCMT	**McKenzie Canyo**	**43.91**	**71**	*e*P		**P**	**04 23 16.6**	**+0.2**
	comp=Z,1.3nm,0.5s,mb3.9							
G15A	**Dilln**	**43.93**	**70**	⇓P		**P**	**04 23 15.5**	**-1.1**
	baz=44							
I14A	**Mackay**	**44.04**	**72**	⇑P		**P**	**04 23 17.6**	**+0.1**
	baz=44							
F16A	**Kennard Place,**	**44.10**	**69**	⇓P		**P**	**04 23 17.6**	**-0.4**
	baz=44							
BOZ	**Bozeman (W)**	**44.18**	**69**	⇑P		**P**	**04 23 18.3**	**-0.3**
	baz=44,SNR=12							
BOZ	**Bozeman (W)**	**44.18**	**69**	*e*P		**P**	**04 23 18.4**	**-0.2**
	comp=Z,5.8nm,1.0s,mb4.3							
BOZ	**Bozeman (W)**	**44.18**	**69**	*e*P		**P**	**04 23 18.4**	**-0.1**
BOZ					pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3							
E17A	**Martinsdale**	**44.19**	**68**	⇓P		**P**	**04 23 18.6**	**-0.1**
	baz=44							
NVAR	**Mina Array Bea**	**44.28**	**82**	P		**P**	**04 23 18.7**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=289,slow=5.4,SNR=3.8							
G16A	**Moss Hill, Enn**	**44.30**	**70**	⇓P		**P**	**04 23 19.4**	**-0.2**
	baz=44,SNR=7.2							
D18A	**Linhart Farms,**	**44.41**	**66**	⇓P		**P**	**04 23 20.6**	**+0.2**
	baz=44							
C19A	**Slack Wire Ran**	**44.55**	**65**	⇑P		**P**	**04 23 20.6**	**-0.9**
	baz=44							
F17A	**Fitzpatrick Pl**	**44.61**	**68**	⇑P		**P**	**04 23 21.7**	**-0.3**
	baz=44							
BJI	**Beijing**	**44.72**	**282**	P		**P**	**04 23 24.3**	**+1.4**
BJI					pmax	pmax		
	comp=Z,12nm,0.6s,mb4.9							
BJI					LR	LR		
	comp=Z,83nm,21.0s,MS3.6							
G17A	**Pierce Place,**	**44.88**	**69**	⇑P		**P**	**04 23 24.8**	**+0.7**
	baz=45							
H16A	**Russell Place,**	**44.92**	**70**	⇓P		**P**	**04 23 24.8**	**+0.3**
	baz=45,SNR=5.3							
O12A	**Currie**	**45.37**	**77**	⇓P		**P**	**04 23 28.4**	**+0.3**
	baz=45,SNR=5.5							
TLY	**Talaya**	**45.56**	**302**	*e*P		**P**	**04 23 30.0**	**+0.6**
TLY					pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5							
TLY					MLR	MLR		
	comp=Z,162nm,19.0s,MS4.0							
IMW	**Indian Meadow**	**45.56**	**71**	*e*P		**P**	**04 23 30.3**	**+0.7**
	comp=Z,3.5nm,1.0s,mb4.2							
FLWY	**Flagg Ranch**	**45.60**	**71**	*e*P		**P**	**04 23 30.9**	**+1.1**
	comp=Z,9.5nm,1.2s,mb4.6							
ULN	**Ulaanbaatar**	**45.70**	**296**	*e*P		**P**	**04 23 31.2**	**+0.6**
RLMT	**Red Lodge**	**45.85**	**69**	⇑P		**P**	**04 23 32.0**	**+0.1**
	baz=46,SNR=10							
RLMT	**Red Lodge**	**45.85**	**69**	*e*P		**P**	**04 23 32.1**	**+0.2**
	comp=Z,11nm,0.9s,mb4.8							
R11A	**Troy Canyon, C**	**46.02**	**80**	⇓P		**P**	**04 23 33.3**	**+0.1**
	baz=46							
M15A	**Larsen Ranch,**	**46.06**	**75**	⇓P		**P**	**04 23 34.1**	**+0.5**
	baz=46							
SONM	**Songino Array**	**46.09**	**296**	P		**P**	**04 23 33.8**	**+0.1**
	comp=Z,1.2nm,0.5s,mb4.1,baz=50,slow=8.8,SNR=8.7							
SONM					LR	LR	04 44 50.0	
	comp=Z,165nm,18.9s,MS4.0,baz=22,slow=39							
SONM	**Songino Array**	**46.09**	**296**	P		**P**	**04 23 33.8**	**+0.1**
SONM					pmax	pmax		
	comp=Z,1.0nm,0.5s							
SONM					MLR	MLR		
	comp=Z,165nm,18.9s							
L16A	**Fish Haven**	**46.35**	**73**	⇑P		**P**	**04 23 35.7**	**-0.1**
	baz=46							
N15A	**Stansbury Isla**	**46.36**	**75**	⇓P		**P**	**04 23 36.4**	**+0.5**
	baz=46							
G20A	**Bridger**	**46.41**	**68**	⇑P		**P**	**04 23 35.5**	**-0.8**
	baz=46							
ZAK	**Zakamensk**	**46.44**	**301**	*e*P		**P**	**04 23 36.5**	**+0.1**
ZAK					pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1							
DUG	**Dugway**	**46.60**	**76**	⇓P		**P**	**04 23 38.3**	**+0.5**
	baz=46							
DUG	**Dugway**	**46.60**	**76**	*e*P		**P**	**04 23 38.4**	**+0.6**
	comp=Z,4.5nm,0.9s,mb4.4							
DUG	**Dugway**	**46.60**	**76**	*e*P		**P**	**04 23 38.4**	**+0.6**
DUG					pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3							
Q13A	**Wheeler Ranch,**	**46.61**	**78**	⇑P		**P**	**04 23 38.5**	**+0.6**
	baz=46							
P14A	**Drum Mountains**	**46.81**	**77**	⇑P		**P**	**04 23 39.1**	**-0.3**
	baz=47							
T11A	**Corn Creek, Al**	**46.93**	**81**	⇓P		**P**	**04 23 40.7**	**+0.3**
	baz=47							
BW06	**Boulder Array**	**47.04**	**71**	⇓P		**P**	**04 23 40.9**	**-0.3**
	baz=47							
PDAR	**Pinedale Array**	**47.04**	**71**	P		**P**	**04 23 41.6**	**+0.5**
	comp=Z,3.1nm,0.6s,mb4.4,baz=331,slow=3.5,SNR=25							
Q14A	**Sevier Lake (B**	**47.05**	**78**	⇓P		**P**	**04 23 41.4**	**+0.1**
	baz=47,SNR=6.9							
HHC	**Hu-ho-hao-te**	**47.05**	**285**	*e*P		**P**	**04 23 40.8**	**-0.5**
HHC					pP	pP	04 23 56.0	+1.8
HHC					sP	sP	04 24 03.4	+3.7
HHC					PP	PP	04 25 30.1	-2.0
HHC				*e*S		**S**	**04 30 27.5**	**-2.1**
HHC					sS	sS	04 30 53.3	+2.1
HHC					ScS	ScS	04 33 26.8	-4.3
HHC					SS	SS	04 33 46.8	-10
HHC					pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0							
HHC					pmax	pmax		
	comp=Z,140nm,5.6s							
HHC					LR	LR		
	comp=N,130nm,14.9s,MS4.2							
HHC					LR	LR		
	comp=E,130nm,14.5s,MS4.2							
HHC					LR	LR		
	comp=Z,130nm,14.3s,MS4.0							
DAU	**Daniels Canyon**	**47.42**	**75**	*e*P		**P**	**04 23 45.4**	**+1.3**
	comp=Z,2.2nm,0.6s,mb4.3							
DAU	**Daniels Canyon**	**47.42**	**75**	*e*P		**P**	**04 23 45.4**	**+1.3**
DAU					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2							
I21A

WMQ LR LR
comp=Z,140nm,20.3s,MS4.1
TXAR Lajitas Array 59.38 80 P **P 04 25 11.1 -0.9**
comp=Z,0.4nm,0.4s,mb3.8,baz=308,slow=5.3,SNR=12
TXAR LR LR 04 48 26.3
comp=Z,34nm,21.8s,MS3.4,baz=0.0,slow=34
MKAR Makanchi Array 59.58 308 P **P 04 25 13.2 0.0**
comp=Z,2.5nm,0.6s,mb4.4,baz=57,slow=7.4,SNR=26
MKAR LR LR 04 52 27.0
comp=Z,64nm,18.5s,MS3.8,baz=255,slow=38
MKAR Makanchi Array 59.58 308 P **P 04 25 13.2 0.0**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR MLR MLR
comp=Z,64nm,18.5s
GYA Guiyang 59.63 275 *e*P **P 04 25 14.5 +0.7**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
BVAR Borovoye Array 60.56 319 P **P 04 25 19.9 +0.1**
comp=Z,3.8nm,0.5s,mb4.8,baz=53,slow=7.6,SNR=21
BVAR Borovoye Array 60.56 319 P **P 04 25 19.9 +0.1**
BVAR pmax pmax
comp=Z,4.0nm,0.5s
BRVK Borovoye 60.58 319 *e*P **P 04 25 20.1 +0.2**
comp=Z,3.4nm,0.5s,mb4.7
BRVK Borovoye 60.58 319 *ce*P **P 04 25 20.8 +0.9**
BRVK pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
KMI Kunming 63.05 277 P **P 04 25 36.8 -0.1**
KMI pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
JOF Joensuu 63.58 345 *e*P **P 04 25 38.5 -1.3**
JOF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
JOF Joensuu 63.58 345 *e*p **P 04 25 38.5 -1.3**
comp=Z,3.5nm,0.5s,mb4.7
KAF Kangasniemi 65.12 347 *e*P **P 04 25 48.1 -1.8**
KAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
KAF Kangasniemi 65.12 347 *e*p **P 04 25 48.1 -1.8**
comp=Z,2.5nm,0.6s,mb4.4
FINES FINESS Array B 65.79 347 P **P 04 25 53.0 -1.3**
comp=Z,4.4nm,0.8s,mb4.5,baz=45,slow=6.2,SNR=10
FINES LR LR 05 00 39.5
comp=Z,70nm,18.0s,MS3.9,baz=5.3,slow=42
AAK Ala-Archa 66.43 309 *e*P **P 04 25 59.7 +1.0**
comp=Z,3.4nm,0.4s,mb4.7
AAK Ala-Archa 66.43 309 LR LR 04 56 36.9
comp=Z,102nm,18.9s,MS4.1,baz=202,slow=38
AAK Ala-Archa 66.43 309 *e*P **P 04 25 59.7 +1.0**
AAK pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
ABKAR Akbulak array 67.64 322 *e*P **P 04 26 06.3 0.0**
comp=Z,0.8nm,0.4s,mb4.1
NOA NORSAR Array B 67.75 354 P **P 04 26 05.8 -0.9**
comp=Z,4.4nm,0.8s,mb4.5,baz=7.4,slow=6.3,SNR=21
NOA LR LR 04 56 04.2
comp=Z,16nm,18.6s,MS3.3,baz=20,slow=36
NOA NORSAR Array B 67.75 354 P **P 04 26 05.9 -0.8**
NOA pmax pmax
comp=Z,4.0nm,0.8s
NOA MLR MLR
comp=Z,16nm,18.7s
OBN Obninsk 69.78 339 *e*P **P 04 26 20.1 +0.7**
OBN *e* 04 28 52.2
OBN pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
CMAR Chiang Mai Arr 70.32 275 P **P 04 26 23.2 -0.2**
comp=Z,1.0nm,0.3s,mb4.2,baz=27,slow=7.3,SNR=7.4
CMAR Chiang Mai Arr 70.32 275 P **P 04 26 23.2 -0.2**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
PMOR Pomariorio Ree 71.62 147 *e*T 05 44 46.6
comp=Z,2.5nm,0.3s
PPT Papeete 73.46 150 *e*LR LR 04 48 55.7
comp=Z,92nm,26.8s
ESK Eskdalemuir 73.81 2 *e*P **P 04 26 43.9 +0.3**
comp=Z,7.7nm,0.9s,mb4.6
ESK Eskdalemuir 73.81 2 *e*P **P 04 26 43.9 +0.3**
ESK pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
AKASG Malin Array Be 75.49 341 P **P 04 26 52.4 -1.0**
comp=Z,1.4nm,0.4s,mb4.2,baz=22,slow=5.9,SNR=6.9
AKASG Malin Array Be 75.49 341 P **P 04 26 52.4 -1.0**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
KIEV Kiev 75.50 341 *e*P **P 04 26 52.4 -1.1**
comp=Z,2.6nm,0.6s,mb4.3
KIEV Kiev 75.50 341 *e*P **P 04 26 52.4 -1.1**
KIEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KWP Kalwaria Pacla 77.70 345 *e*P **P 04 27 06.3 +0.4**
comp=Z,8.3nm,0.6s,mb4.8
KWP Kalwaria Pacla 77.70 345 ⇑P **P 04 27 06.8 +0.9**
KWP Kalwaria Pacla 77.70 345 ⇑*i*P **P 04 27 06.8 +0.9**
DPC Dobruska-Polom 77.88 349 *e*P **P 04 27 06.8 -0.1**
DPC Dobruska-Polom 77.88 349 *e*P **P 04 27 06.8 -0.1**
KIV Kislovodsk 78.27 330 P **P 04 27 09.9 +0.7**
KIV *e* 04 27 17.2
KIV *e* 04 30 06.6
KIV *e*S S 04 37 03.6 +3.2
KIV pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
MORC Moravsky Berou 78.30 349 ⇑P **P 04 27 09.7 +0.4**
MORC Moravsky Berou 78.30 349 ⇑*i*P **P 04 27 09.7 +0.4**
VRAC Vranov 78.87 349 ⇑P **P 04 27 12.7 +0.3**
VRAC Vranov 78.87 349 ⇑*i*P **P 04 27 12.7 +0.3**
ZEI Tsey 78.94 329 *e*P **P 04 27 12.2 -0.8**
ZEI pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
GIVF Givet 78.99 357 *e*P **P 04 27 12.5 -0.6**
BAIF Baives 79.05 357 *e*P **P 04 27 13.3 -0.1**
comp=Z,47nm,1.5s,mb4.9
BAIF Baives 79.05 357 *e*P **P 04 27 13.3 -0.1**
comp=Z,23nm,1.5s,mb4.9
BAIF Baives 79.05 357 *e*P **P 04 27 13.3 -0.1**
BAIF pmax pmax
comp=Z,23nm,1.5s,mb4.9
TRPA Tarpa 79.18 345 ⇑*i*P **P 04 27 15.3 +1.1**
BURAR Bucovina Array 79.22 343 ⇓P **P 04 27 14.7 +0.4**
BURAR Bucovina Array 79.22 343 ⇓*i*P **P 04 27 14.7 +0.4**
KHC Kasperske Hory 79.38 351 *e*P **P 04 27 15.8 +0.6**
KHC Kasperske Hory 79.38 351 *e*P **P 04 27 15.8 +0.6**
PSZ Piszkesteto 79.80 347 ⇑P **P 04 27 19.1 +1.6**
PSZ Piszkesteto 79.80 347 ⇑*i*P **P 04 27 19.1 +1.6**
FLN La Foliniere 80.41 0 *e*P **P 04 27 20.4 -0.4**
DRGR 80.45 344 ⇓P **P 04 27 22.0 +0.9**
DRGR 80.45 344 ⇓*i*P **P 04 27 22.0 +0.9**
LDF La Druitiere 80.58 0 *e*P **P 04 27 21.6 -0.1**
GRR Gorron 80.78 1 *e*P **P 04 27 22.1 -0.7**
comp=Z,40nm,1.1s,mb5.0
GRR Gorron 80.78 1 *e*P **P 04 27 22.1 -0.7**
comp=Z,20nm,1.1s,mb5.0
GRR Gorron 80.78 1 *e*P **P 04 27 22.1 -0.7**
GRR pmax pmax
comp=Z,20nm,1.1s,mb5.0
SFTF Sexfontaines 80.88 357 *e*P **P 04 27 23.0 -0.3**
comp=Z,13nm,0.8s,mb4.6
SFTF Sexfontaines 80.88 357 *e*P **P 04 27 23.0 -0.3**
comp=Z,13nm,0.8s,mb4.9
MLR Muntele Rosu 81.12 342 ⇓P **P 04 27 25.3 +0.7**
MLR Muntele Rosu 81.12 342 ⇓*i*P **P 04 27 25.3 +0.7**
AMRR Amara 81.68 341 ⇑P **P 04 27 24.8 -2.9**
AMRR Amara 81.68 341 ⇑*i*P **P 04 27 24.8 -2.8**
BZS Buzias 81.78 345 ⇓P **P 04 27 23.3 -4.8**
BZS Buzias 81.78 345 ⇓*i*P **P 04 27 23.3 -4.8**
GZR Gura Zlata 81.80 344 ⇑P **P 04 27 26.6 -1.7**
GZR Gura Zlata 81.80 344 ⇑*i*P **P 04 27 26.6 -1.6**
SSF Saint Saulge 82.07 358 *e*P **P 04 27 29.2 -0.4**
comp=Z,19nm,1.3s,mb4.6
SSF Saint Saulge 82.07 358 *e*P **P 04 27 29.2 -0.4**
comp=Z,9.4nm,1.3s,mb4.6
SSF Saint Saulge 82.07 358 *e*P **P 04 27 29.2 -0.4**
SSF pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
TCF Toulx Ste Croi 82.87 359 *e*P **P 04 27 33.0 -0.8**
VTS Vitosha 84.44 343 ⇓P **P 04 27 34.9 -7.0**
VTS Vitosha 84.44 343 ⇓*i*P **P 04 27 34.8 -7.1**
BRTR Keskin Array B 84.80 335 P **P 04 27 44.0 +0.2**
comp=Z,1.1nm,0.8s,mb4.0,baz=37,slow=4.8,SNR=7.5
BRTR Keskin Array B 84.80 335 P **P 04 27 44.1 +0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 84.88 222 P **P 04 27 44.1 -0.1**
comp=Z,0.2nm,0.6s,mb3.5,baz=44,slow=5.4,SNR=3.0
TSUM Tsumeb 145.19 330 *e*PKPbc PKPbc 04 34 47.5 +0.9
TSUM Tsumeb 145.19 330 PKPbc PKPbc 04 34 47.6 +1.1
comp=Z,5.7nm,0.9s,baz=344,slow=6.2,SNR=6.6
LBTB Lobatse 147.34 314 PKPbc PKPbc 04 34 54.1 +1.2
comp=Z,2.1nm,0.5s,baz=310,slow=2.3,SNR=4.6
BOSA Boshof 150.56 310 PKPbc PKPbc 04 35 01.3 +0.4
comp=Z,2.7nm,0.6s,baz=74,slow=5.3,SNR=5.9

ISCJB ***23*** *04:21:20.4±3.5, 58.°05S±0.°08×25.°8W±0.°1, h47km±33km, mb4.6/22, MS3.7/12, Error ellipse: s-maj=14.0km s-min=11.1km az=25.4*
NEIC ***23*** *04:21:24.9±1.8, 58.°07S×25.°92W, h73km±15km, mb4.7/10, Error ellipse: s-maj=7.5km s-min=6.6km az=185.0*
IDC ***23*** *04:21:26.0±0.7, 58.°12S×25.°93W, h83km±5km, mb4.2/14, mb1 4.3/15, mb1mx4.2/20, mbtmp4.2/15, MS3.7/13, Ms1 3.7/13, ms1mx3.5/24, Error ellipse: s-maj=15.1km s-min=12.6km az=0.0*
ISC 23 04:21:22.9±2.8, 58.°09S±0.°08×25.°9W±0.°1, h54km±27km, n70, σ0.°945/30, mb4.6/22, MS3.7/12, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.64**	**156**	*e*		**Pn**	**04 24 46.3**	**-0.2**
PMSA	**Palmer Station**	**19.17**	**234**	*e*P		**Pn**	**04 25 43.2**	**+0.2**
	26nm,0.8s							
PMSA				LR	LR		04 31 43.0	
PMSA	**Palmer Station**	**19.17**	**234**	P		**Pn**	**04 25 43.1**	**+0.2**
	2.2nm,0.3s,baz=77,slow=6.5,SNR=10							
PMSA				LR	LR		04 31 43.0	
	comp=Z,434nm,21.0s,baz=61,slow=32							
MAIT	**Maitri**	**20.16**	**144**	*e*P		**P**	**04 25 52.3**	**0.0**
USHA	**Ushuaia**	**23.43**	**260**	P		**P**	**04 26 27.3**	**+0.3**
	12nm,0.7s,mb4.5,baz=118,slow=12,SNR=6.0							
USHA				LR	LR		04 33 12.4	
	comp=Z,524nm,19.4s,MS4.0,baz=119,slow=30							
TRQA	**Tornquist**	**30.79**	**295**	*e*P		**P**	**04 27 32.2**	**-0.9**
	3.8nm,0.9s,mb4.2							
QSPA	**South Pole Qui**	**32.16**	**180**	*e*P		**P**	**04 27 44.9**	**+0.1**
	9.0nm,0.5s,mb4.9							
QSPA				ScP	ScP		04 34 07.2	-3.6
QSPA	**South Pole Qui**	**32.16**	**180**	P		**P**	**04 27 44.9**	**+0.1**
	8.0nm,0.5s,mb4.8,baz=16,slow=0.3,SNR=80							
QSPA				ScP	ScP		04 34 07.2	-3.6
	5.3nm,1.0s,baz=180,slow=3.2,SNR=8.0							
PLCA	**Paso Flores**	**33.08**	**282**	P		**P**	**04 27 53.3**	**+0.1**
	7.7nm,0.9s,mb4.6,baz=153,slow=7.4,SNR=13							
PLCA				ScP	ScP		04 34 10.0	-4.7
	0.9nm,0.8s,baz=50,slow=22,SNR=3.4							
PLCA				LR	LR		04 39 46.7	
	comp=Z,136nm,18.7s,MS3.7,baz=108,slow=33							
MAW	**Mawson**	**38.10**	**142**	P		**P**	**04 28 36.0**	**+0.1**
	3.3nm,0.6s,mb4.2,baz=240,slow=8.7,SNR=8.6							
MAW				LR	LR		04 42 46.1	
	comp=Z,67nm,19.1s,MS3.5,baz=101,slow=34							
CPUP	**Villa Florida**	**38.69**	**312**	P		**P**	**04 28 40.3**	**-0.9**
	0.4nm,0.3s,mb3.6,baz=138,slow=9.6,SNR=5.5							
CPUP				LR	LR		04 42 42.7	
	comp=Z,61nm,18.6s,MS3.5,baz=154,slow=33							
CFAA	**Coronel Fontan**	**39.02**	**294**	P		**P**	**04 28 44.6**	**+0.6**
	0.7nm,0.8s,mb3.5,baz=156,slow=7.4,SNR=12							
CFAA				LR	LR		04 44 09.8	
	comp=Z,13nm,19.2s,MS2.8,baz=135,slow=35							
SBA	**Scott Base**	**44.09**	**184**	*e*P		**P**	**04 29 25.6**	**+0.6**
	4.0nm,0.6s,mb4.3							
BOSA	**Boshof**	**45.85**	**73**	P		**P**	**04 29 39.4**	**-0.2**
	4.0nm,0.5s,mb4.6,baz=222,slow=7.9,SNR=21							
BOSA				LR	LR		04 45 07.0	
	comp=Z,88nm,21.9s,MS3.7,baz=183,slow=31							
LBTB	**Lobatse**	**48.98**	**70**	P		**P**	**04 30 03.7**	**-0.2**
LBTB				LR	LR		04 46 25.6	
LBTB	**Lobatse**	**48.98**	**70**	P		**P**	**04 30 03.7**	**-0.2**
	8.4nm,0.8s,mb4.8,baz=230,slow=9.3,SNR=11							
LBTB				LR	LR		04 46 25.6	
	comp=Z,146nm,18.6s,MS4.0,baz=274,slow=31							
TSUM	**Tsumeb**	**50.12**	**58**	*e*P		**P**	**04 30 13.1**	**+0.5**
TSUM	**Tsumeb**	**50.12**	**58**	P		**P**	**04 30 12.8**	**+0.2**
	2.3nm,0.3s,mb4.6,baz=220,slow=2.0,SNR=5.8							
CASY	**Casey**	**51.75**	**159**	*e*P		**P**	**04 30 24.2**	**0.0**
	7.0nm,1.0s,mb4.5							
LPAZ	**La Paz**	**52.13**	**305**	P		**P**	**04 30 27.7**	**+0.1**
LPAZ	**La Paz**	**52.13**	**305**	P		**P**	**04 30 27.7**	**+0.1**
	1.9nm,0.5s,mb4.3,baz=142,slow=6.7,SNR=14							
LSZ	**Lusaka**	**58.50**	**66**	*e*P		**P**	**04 31 13.7**	**+0.2**
	4.9nm,0.8s,mb4.6							
NNA	**Nana**	**59.84**	**299**	LR	LR		04 53 40.3	
	comp=Z,82nm,18.5s,MS3.9,baz=17,slow=32							
LIC	**Lamto**	**66.29**	**23**	*e*P		**P**	**04 32 05.7**	**+0.3**
	35nm,0.7s,mb5.5							
KIC	**Kosan Boka**	**66.48**	**23**	*e*P		**P**	**04 32 06.5**	**-0.1**
	65nm,1.4s,mb5.5							
TIC	**Toumodi**	**66.70**	**23**	*e*P		**P**	**04 32 08.3**	**+0.3**
	28nm,0.9s,mb5.3							
DBIC	**Dimbokro**	**66.75**	**23**	P		**P**	**04 32 08.2**	**-0.1**
	3.4nm,0.4s,mb4.8,baz=154,slow=9.8,SNR=15							
DBIC				pP	pP		04 32 30.6	+7.4
	3.5nm,0.6s,baz=168,slow=7.1,SNR=2.0							
OTAV	**Otavalo**	**71.36**	**303**	*e*P		**P**	**04 32 37.5**	**+0.5**
	1.1nm,0.5s,mb4.0							
ROSC	**El Rosal**	**73.74**	**309**	LR	LR		05 05 56.0	
	comp=Z,48nm,19.3s,MS3.8,baz=185,slow=36							
TORD	**Torodi Ar. Bea**	**74.51**	**28**	P		**P**	**04 32 55.9**	**+0.3**
	9.7nm,0.4s,mb5.1,baz=199,slow=6.3,SNR=449							
TORD				pP	pP		04 33 17.9	+7.3
	8.2nm,0.9s,baz=194,slow=6.6,SNR=3.8							
TORD				LR	LR		04 58 37.9	
	comp=Z,72nm,20.3s,MS4.0,baz=280,slow=30							
STKA	**Stephens Creek**	**89.77**	**169**	P		**P**	**04 34 15.2**	**-0.1**
	2.8nm,0.7s,mb4.7,baz=158,slow=11,SNR=4.7							
PPT	**Papeete**	**91.53**	**233**	LR	LR		05 05 26.6	
	comp=Z,161nm,19.4s,MS4.5,baz=165,slow=29							
ASAR	**Alice Springs**	**96.83**	**161**	P		**P**	**04 34 46.6**	**-1.3**
	1.0nm,0.6s,mb4.4,baz=186,slow=4.0,SNR=9.5							
KEST	**Kesra**	**98.03**	**28**	LR	LR		05 16 04.6	
	comp=Z,23nm,19.5s,MS3.7,baz=297,slow=33							
DUG	**Dugway**	**121.51**	**296**	*e*PKPdf	PKPdf		04 40 09.1	-0.3
PDAR	**Pinedale Array**	**122.00**	**300**	PKP	PKPdf		04 40 09.8	-0.4
	0.4nm,0.5s,baz=128,slow=5.4,SNR=6.8							
HWUT	**Hardware Ranch**	**122.03**	**298**	*e*PKPdf	PKPdf		04 40 10.6	+0.3
NOA	**NORSAR Array B**	**122.28**	**20**	PKP	PKPdf		04 40 11.3	+1.2
	1.1nm,1.0s,baz=196,slow=1.5,SNR=3.0							
NVAR	**Mina Array Bea**	**122.81**	**291**	PKP	PKPdf		04 40 13.3	+1.4
	0.3nm,0.6s,baz=157,slow=2.9,SNR=3.7							
LOHW	**Long Hollow**	**123.14**	**300**	*e*PKPdf	PKPdf		04 40 12.6	+0.2
MOOW	**Moose Ponds**	**123.31**	**300**	*e*PKPdf	PKPdf		04 40 12.2	-0.5
FLWY	**Flagg Ranch**	**123.55**	**301**	*e*PKPdf	PKPdf		04 40 13.9	+0.7
CMAR	**Chiang Mai Arr**	**123.69**	**111**	PKP	PKPdf		04 40 13.6	-0.7
	0.6nm,0.3s,baz=240,slow=4.5,SNR=4.3							
HLID	**Hailey**	**124.87**	**298**	*e*PKPdf	PKPdf		04 40 16.4	+0.7
DLMT	**Dillon**	**125.40**	**300**	*e*PKPdf	PKPdf		04 40 17.6	+0.9
FINES	**FINESS Array B**	**125.86**	**28**	PKP	PKPdf		04 40 15.4	-1.6
	1.0nm,0.5s,baz=148,slow=4.0,SNR=11							
FINES				pPKP	pPKPdf		04 40 40.1	+7.1
	1.5nm,0.6s,baz=145,slow=4.0,SNR=2.2							
WVOR	**Wild Horse Val**	**126.04**	**294**	*e*PKPdf	PKPdf		04 40 18.9	+1.0
HRY	**Holter Researc**	**126.07**	**302**	*e*PKPdf	PKPdf		04 40 18.5	+0.6
CHMT	**Chamberlain Mo**	**126.87**	**301**	*e*PKPdf	PKPdf		04 40 19.8	+0.4
SWMT	**Swartz Lake**	**127.65**	**301**	*e*PKPdf	PKPdf		04 40 20.4	-0.4
ARCES	**ARCESS Array B**	**132.58**	**22**	PKP	PKPdf		04 40 29.5	-0.1
ARCES				SKPbc	SKPbc		04 43 49.4	-2.3
ARCES	**ARCESS Array B**	**132.58**	**22**	PKP	PKPdf		04 40 29.5	-0.1
	0.6nm,0.4s,baz=204,slow=1.7,SNR=9.0							
ARCES				SKPbc	SKPbc		04 43 49.4	-2.3
	2.3nm,1.0s,baz=175,slow=4.0,SNR=5.9							
MKAR	**Makanchi Array**	**136.85**	**73**	SKPbc	SKPbc		04 43 59.8	-6.4
	0.2nm,0.2s,baz=192,slow=1.3,SNR=4.8							
YKA	**Yellowknife Ar**	**138.14**	**316**	PKP	PKPdf		04 40 39.1	-1.0
	4.6nm,0.9s,baz=137,slow=2.1,SNR=11							
YKA				SKPbc	SKPbc		04 44 05.7	-3.6
	1.5nm,0.8s,baz=137,slow=2.7,SNR=3.6							
ZALV	**Zalesovo Beam**	**142.61**	**66**	PKhKP	PKPpre		04 40 41.0	
	1.4nm,0.4s,baz=267,slow=2.8,SNR=4.5							
INK	**Inuvik**	**147.81**	**318**	*e*PKPbc	PKPbc		04 40 58.8	-1.2
INK	**Inuvik**	**147.81**	**318**	PKPbc	PKPbc		04 40 59.2	-0.8
	5.2nm,0.5s,baz=114,slow=2.8,SNR=21							
DAWY	**Dawson**	**148.65**	**309**	*e*PKPbc	PKPbc		04 41 00.5	-1.8
EGAK	**Eagle**	**149.61**	**310**	*e*PKPbc	PKPbc		04 41 04.2	-0.5
BMRM	**Bremner River**	**149.77**	**302**	*e*PKPbc	PKPbc		04 41 05.4	+0.2
MENT	**Mentasta**	**150.09**	**306**	*e*PKPbc	PKPbc		04 41 05.6	-0.2
SONM	**Songino Array**	**150.11**	**89**	PKPbc	PKPbc		04 41 05.4	-1.0
	3.2nm,0.5s,baz=217,slow=3.5,SNR=16							
SONM				pPKPbc	pPKPbc		04 41 28.1	+5.7
	1.5nm,0.5s,baz=244,slow=2.9,SNR=3.9							
ILAR	**Eielson Array**	**151.97**	**309**	PKPbc	PKPbc		04 41 09.0	-1.2
	4.1nm,0.7s,baz=318,slow=1.2,SNR=72							
RC01	**Rabbit Creek A**	**152.15**	**300**	*e*PKPbc	PKPbc		04 41 09.8	-1.0
RC01				*e*PKPab	PKPab		04 41 20.6	-0.2
COLA	**College**	**152.39**	**309**	*e*PKPbc	PKPbc		04 41 10.0	-1.1
OHAK	**Old Harbor**	**152.42**	**291**	*e*PKPbc	PKPbc		04 41 11.0	-0.4
MCK	**McKinley**	**152.57**	**306**	*e*PKPbc	PKPbc		04 41 11.4	-0.2
BPAW	**Bear Paw Mtn.**	**153.54**	**306**	*e*PKPbc	PKPbc		04 41 12.7	-1.0
COLD	**Coldfoot**	**153.76**	**313**	*e*PKPbc	PKPbc		04 41 13.8	-0.4
PPLA	**Purkeypile**	**153.78**	**303**	*e*PKPbc	PKPbc		04 41 13.6	-0.7

IDC ***23*** *04:39:18.7±0.9, 7.°28S×129.°62E, h0km, mb4.0/5, mb1 4.0/7, mb1mx3.9/16, mbtmp3.9/7, ML3.9/2, MS3.5/1, Ms1 3.7/1, ms1mx2.4/23, Error ellipse: s-maj=88.7km s-min=20.1km az=68.0*
ISCJB ***23*** *04:39:21.6±0.7, 7.°3S±0.°1×129.°8E±0.°4, h33km, mb4.0/7, Error ellipse: s-maj=51.7km s-min=11.9km az=165.3*
NEIC ***23*** *04:39:23.8±0.6, 7.°31S×129.°75E, h35km, mb4.3/2, Error ellipse: s-maj=43.6km s-min=10.4km az=75.0*
ISC 23 04:39:23.7±0.7, 7.°3S±0.°1×129.°8E±0.°3, h35km, n13, σ0.°970/12, mb4.0/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.31**	**161**	Pn		**Pn**	**04 42 29.8**	**-0.5**
WRA				Sn		**Sn**	**04 44 50.4**	**-6.7**
WRA	**Warramunga Arr**	**13.31**	**161**	Pn		**Pn**	**04 42 29.8**	**-0.5**
	0.7nm,0.3s,baz=340,slow=12,SNR=5.9							
WRA				Sn		**Sn**	**04 44 50.4**	**-6.7**
	1.9nm,0.3s,baz=338,slow=21,SNR=8.8							
ASAR	**Alice Springs**	**16.74**	**167**	Pn		**Pn**	**04 43 15.6**	**0.0**
	0.4nm,0.3s,baz=332,slow=9.3,SNR=12							
FORT	**Forrest**	**23.42**	**184**	*e*P		**P**	**04 44 30.2**	**+0.3**
	8.2nm,0.6s,mb4.3							
STKA	**Stephens Creek**	**26.80**	**157**	P		**P**	**04 45 01.1**	**+0.4**
	1.0nm,0.5s,mb3.6,baz=344,slow=14,SNR=3.2							
CMAR	**Chiang Mai Arr**	**39.80**	**310**	LR	LR		05 05 23.1	
	comp=Z,64nm,18.2s,baz=170,slow=40							
SONM	**Songino Array**	**58.67**	**342**	P		**P**	**04 49 19.0**	**+1.5**
	0.4nm,0.4s,mb3.6,baz=176,slow=4.3,SNR=2.4							
CASY	**Casey**	**60.39**	**189**	*e*P		**P**	**04 49 29.3**	**+0.2**
	1.6nm,0.7s,mb4.2							
MKAR	**Makanchi Array**	**68.38**	**327**	P		**P**	**04 50 21.4**	**-0.4**
	1.4nm,0.5s,mb4.3,baz=123,slow=7.7,SNR=15							
ZALV	**Zalesovo Beam**	**71.77**	**334**	P		**P**	**04 50 41.1**	**-1.3**
	0.8nm,0.3s,mb4.1,baz=121,slow=5.7,SNR=4.3							
ILAR	**Eielson Array**	**93.68**	**25**	P		**P**	**04 52 36.2**	**-0.1**
	0.3nm,0.7s,mb3.8,baz=256,slow=5.9,SNR=4.6							
TORD	**Torodi Ar. Bea**	**128.71**	**281**	PKP	PKPdf		04 58 28.0	-0.3
	0.3nm,0.6s,baz=122,slow=1.6,SNR=4.4							
LPAZ	**La Paz**	**150.59**	**143**	PKPbc	PKPbc		04 59 15.6	+2.6
	1.5nm,0.4s,baz=79,slow=2.8,SNR=26							

IDC ***23*** *04:40:46.6±1.0, 8.°01S×117.°86E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.9/19, mbtmp4.0/7, MS3.6/1, Ms1 3.6/1, ms1mx2.6/26, Error ellipse: s-maj=65.6km s-min=18.8km az=53.0*
DJA ***23*** *04:40:47, 8.°33S×117.°97E, h100km, MLv4.5/13*
ISCJB ***23*** *04:40:48.8±0.5, 7.°99S±0.°06×117.°84E±0.°4, h33km, mb4.0/9, Error ellipse: s-maj=9.2km s-min=5.5km az=165.2*
NEIC ***23*** *04:40:51.8±0.6, 8.°01S×117.°84E, h35km, mb4.2/2, Error ellipse: s-maj=32.4km s-min=10.2km az=60.0*
ISC 23 04:40:50.9±0.5, 7.°99S±0.°06×117.°82E±0.°4, h35km, n28, σ1.°927/30, mb4.0/9, Bali Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KHKI	**Kahang-Kahang**	**2.23**	**260**	P		**Pn**	**04 41 22.8**	**-2.5**
KHKI				S		**Sn**	**04 41 52.6**	**+1.0**
SRBI	**Singaraja**	**2.59**	**268**	P		**Pn**	**04 41 28.8**	**-1.5**
SRBI				S		**Sn**	**04 42 03.2**	**+2.6**
DNP	**Denpasar**	**2.68**	**255**	P		**Pn**	**04 41 38.4**	**+6.9**
IGBI	**Denpasar**	**2.77**	**252**	P		**Pn**	**04 41 26.9**	**-6.0**
IGBI				S		**Sn**	**04 42 09.4**	**+4.2**
NBBI	**Negara**	**3.19**	**263**	P		**Pn**	**04 41 36.8**	**-1.9**
BYJI	**Banyuwangi**	**3.44**	**266**	P		**Pn**	**04 41 40.7**	**-1.4**
BKSI	**Bulukumba**	**3.50**	**41**	P		**Pn**	**04 41 40.9**	**-1.9**
JAGI	**Jajag, Banyuwa**	**3.67**	**262**	P		**Pn**	**04 41 38.7**	**-6.5**
JAGI				S		**Sn**	**04 42 28.1**	**+0.9**
KMMI	**Kalianget**	**3.94**	**283**	P		**Pn**	**04 41 49.1**	**+0.2**
BNSI	**Bone**	**4.22**	**33**	P		**Pn**	**04 41 53.0**	**+0.1**
GMJI	**Gumukmas**	**4.34**	**266**	P		**Pn**	**04 41 52.1**	**-2.4**
MMRI	**Maumere**	**4.42**	**99**	P		**Pn**	**04 41 50.0**	**-5.5**
SPSI	**Sidrap Palu**	**4.44**	**26**	P		**Pn**	**04 41 48.3**	**-7.5**
TTSI	**Tana Toraja**	**5.29**	**22**	P		**Pn**	**04 42 07.6**	**0.0**
	0.3nm1µm49nm,0.9s							
PWJI	**Pagerwojo**	**5.96**	**269**	P		**Pn**	**04 42 16.0**	**-0.8**
	0.3nm66nm,0.8s							
SJI	**Sawahan**	**6.01**	**272**	P		**Pn**	**04 42 17.3**	**-0.1**
MBWA	**Marble Bar**	**13.22**	**172**	*e*P		**Pn**	**04 43 56.7**	**+0.4**
	9.3nm,0.6s							
PSI	**Prapat**	**21.68**	**299**	P		**P**	**04 45

BNDI S **S** 04 49 32.7 -1.9
LBMI Labuha 4.34 23 P **P** 04 48 36.9 +0.8
LUWI Luwuk 4.71 320 P **P** 04 48 40.1 +0.5
MMRI Maumere 5.31 222 P **P** 04 48 47.2 +1.8
1.6nm4µm404nm,0.9s
KMSI Cibinong 5.52 341 S **S** 04 50 00.4 +0.3
TNTI Ternate 5.62 16 P **P** 04 48 48.0 -0.6
4.7nm1µm,0.9s
TNTI S **S** 04 50 00.0 -2.0
4.7nm1µm,0.9s
BNSI Bone 5.70 272 P **P** 04 48 50.4 +1.0
6.9nm2µm,0.8s
BKSI Bulukumba 5.71 263 P **P** 04 48 50.6 +1.1
8.3nm2µm,0.7s
MNI Manado 6.15 351 P **P** 04 48 54.4 +0.3
3.8nm441nm,0.8s
MNI S **S** 04 50 11.5 -0.5
3.8nm441nm,0.8s
MRSI Marisa 6.41 323 P **P** 04 48 57.3 +0.5
5.9nm2µm,0.7s
WSI Waingapu 7.39 227 S **S** 04 50 33.3 -3.0
TOLI Toli-Toli 7.63 319 P **P** 04 49 10.3 +0.4
4.5nm1µm,0.6s
TOLI S **S** 04 50 39.8 -1.3
4.5nm1µm,0.6s
SGSI Sangihe 8.30 358 P **P** 04 49 17.1 -0.2
5µm482nm,0.7s
SGSI S **S** 04 50 52.9 -1.6
5µm482nm,0.7s
KBKI Kotabaru 9.72 278 P **P** 04 49 34.4 +1.6
4µm300nm,1.0s
KAKA Kakadu 10.33 141 *e*P **P** 04 49 39.4 0.0
548nm,0.6s
KAKA Kakadu 10.33 141 *e*Pn **P** 04 49 39.1 -0.3
1µm,0.6s
KHKI Kahang-Kahang 10.79 250 P **P** 04 49 45.1 +0.6
184nm,0.9s
BAKI Biak 10.84 72 P **P** 04 49 46.3 +1.2
2µm242nm,0.8s
IGBI Denpasar 11.37 248 S **S** 04 51 51.8 -4.6
KNA Kununurra 11.39 165 *e*P **P** 04 49 51.6 +0.6
422nm,1.0s
KNA Kununurra 11.39 165 P **P** 04 49 51.9 +0.9
8µm853nm,0.8s
DAV Davao City (W) 11.66 359 S **S** 04 52 02.8 +0.5
62nm,0.3s,baz=214,slow=18,SNR=5.9
TSM Tawau 11.93 318 P **P** 04 49 57.8 +0.8
JAGI Jajag, Banyuwa 12.19 251 P **P** 04 49 59.3 -0.5
2µm202nm,0.9s
JAGI S **S** 04 52 07.2 -5.6
2µm202nm,0.9s
MYLDM **Lahad Datu 12.21 323** P **P** 04 50 02.0 +2.0
MYLDM **Lahad Datu 12.21 323** P **P** 04 50 01.7 +1.7
132nm,1.1s
GMJI Gumukmas 12.80 253 P **P** 04 50 07.2 +0.7
2µm68nm,0.8s
SDKM Sandakan 13.38 320 P **P** 04 50 14.3 +1.6
KRKI Karangkates 13.72 255 S **S** 04 52 40.2 -3.2
SJI Sawahan 14.29 257 S **S** 04 52 54.2 -0.5
PWJI Pagerwojo 14.32 256 P **P** 04 50 22.8 -0.1
51nm,1.1s
PWJI S **S** 04 52 52.5 -2.7
51nm,1.1s
KKM Kota Kinabalu 14.32 318 *e*P **P** 04 50 22.7 -0.2
KKM Kota Kinabalu 14.32 318 P **P** 04 50 24.3 +1.3
KKM Kota Kinabalu 14.32 318 P **P** 04 50 23.5 +0.6
2µm188nm,1.2s
KDM Kudat 14.59 322 P **P** 04 50 26.9 +1.1
BTM Bintulu 14.93 301 P **P** 04 50 30.9 +1.5
PCJI Pacitan 14.96 256 S **S** 04 53 00.2 -7.6
STKI Sintang 15.07 288 P **P** 04 50 32.0 +1.0
215nm,1.1s
SBUM Sibu 15.31 297 P **P** 04 50 35.1 +1.5
SBUM Sibu 15.31 297 P **P** 04 50 35.1 +1.5
3µm259nm,0.9s
UGM Wanagama 15.54 257 S **S** 04 53 19.5 +0.4
YOGI Yogyakarta 15.74 258 S **S** 04 53 23.7 +0.6
BJII Banjamegara 16.23 260 S **S** 04 53 38.0 +5.3
KSM Kuching 16.65 291 *e*P **P** 04 50 47.3 -0.5
136nm,1.0s
KSM Kuching 16.65 291 P **P** 04 50 48.4 +0.6
WRA Warramunga Arr 17.30 152 P **P** 04 50 54.0 -0.6
13nm,0.3s,baz=333,slow=9.8,SNR=73
WRA S **S** 04 53 51.0 -2.0
2.3nm,0.3s,baz=337,slow=17,SNR=19
MBWA Marble Bar 17.43 199 *e*P **P** 04 50 54.7 -1.1
MBWA Marble Bar 17.43 199 *e*P **P** 04 50 54.8 -1.1
50nm,0.6s
CISI Cisompet, Garu 18.13 260 P **P** 04 51 01.3 -2.0
137nm,0.6s
CISI S **S** 04 54 02.5 -5.6
137nm,0.6s
LEM Lembang 18.23 262 P **P** 04 51 04.2 -0.2
59nm,0.8s
TGY Tagaytay City 19.27 346 P **P** 04 51 14.4 +0.2
71nm,0.3s,baz=207,slow=6.8,SNR=3.0
COEN Coen 19.44 120 *e*P **P** 04 51 15.1 -0.8
COEN Coen 19.44 120 *e*P **P** 04 51 15.3 -0.5
456nm,0.8s
COEN Coen 19.44 120 P **P** 04 51 15.5 -0.4
383nm,1.0s
PPBI Pangkal Pinang 19.80 277 P **P** 04 51 19.7 +0.5
4µm63nm,0.9s
ASAR Alice Springs 20.44 158 P **P** 04 51 25.7 +0.9
30nm,0.4s,baz=341,slow=7.8,SNR=240
ASAR S **S** 04 54 45.3 -0.2
31nm,0.9s,baz=351,slow=19,SNR=16
KLSI 21.02 269 P **P** 04 51 29.9 -0.4
57nm,0.7s,mb5.1
KASI Kota Agung 21.25 267 P **P** 04 51 30.2 -2.2
MDSI Maura Dua 21.57 270 P **P** 04 51 34.9 -0.4
1µm24nm,0.7s,mb4.8
PMG Port Moresby 21.69 104 *e*P **P** 04 51 36.6 +0.2
213nm,0.8s,mb5.6
PMG Port Moresby 21.69 104 *c i*P **P** 04 51 36.1 -0.3
PMG pmax pmax
comp=Z,186nm,0.6s
PMG Port Moresby 21.69 104 P **P** 04 51 36.8 +0.4
comp=Z,2µmcomp=Z,302nm,0.8s
MTSU Mount Surprise 22.50 128 *e*P **P** 04 51 44.2 +0.5
comp=Z,23nm,0.5s,mb4.9
MYKOM **Kota Tinggi 22.87 286** P **P** 04 51 46.6 -0.4
SDSI Sungai Dareh 24.64 278 P **P** 04 52 02.9 0.0
comp=Z,34nm,0.9s,mb4.8
CTA Charters Tower 25.11 129 *e*P **P** 04 52 07.8 +0.7
comp=Z,7.3nm,0.6s,mb4.3
CTA *ep*P 04 53 17.6
CTA *e*SCP ScP 04 58 25.6 +0.7
CTA Charters Tower 25.11 129 P **P** 04 52 07.8 +0.8
CTA pP 04 53 18.3
CTA ScP ScP 04 58 25.7 +0.8
CTA Charters Tower 25.11 129 P **P** 04 52 07.8 +0.8
comp=Z,13nm,0.8s,mb4.4,baz=319,slow=9.6,SNR=8.2
CTA pP 04 53 18.3
comp=Z,16nm,0.9s,baz=317,slow=12,SNR=4.9
CTA ScP ScP 04 58 25.7 +0.8
comp=Z,16nm,0.8s,baz=320,slow=3.6,SNR=7.6
CTAO Charters Tower 25.11 129 *e*P **P** 04 52 07.7 +0.7
comp=Z,14nm,0.8s,mb4.4
CTAO Charters Tower 25.11 129 *e*P **P** 04 52 07.7 +0.6
CTAO pmax pmax
comp=Z,14nm,0.8s,mb4.4
PDSI Padang 25.59 278 P **P** 04 52 10.5 -0.9
FORT Forrest 26.06 176 *e*P **P** 04 52 15.4 +0.1
comp=Z,81nm,0.7s,mb5.3
FORT Forrest 26.06 176 *e*P **P** 04 52 15.6 +0.3
comp=Z,83nm,0.7s,mb5.3
IPM Ipoh 26.38 290 P **P** 04 52 17.9 -0.5
KULM Kulim 27.01 291 *e*P **P** 04 52 23.4 -0.6
comp=Z,19nm,0.7s,mb4.6
KULM Kulim 27.01 291 P **P** 04 52 23.7 -0.2
KLBR Kellerberrin 27.83 195 *e*P **P** 04 52 30.6 -0.3
comp=Z,40nm,1.1s,mb4.7
PSI Prapat 27.88 285 P **P** 04 52 31.0 -0.6
comp=Z,9.8nm,0.5s,mb4.4,baz=115,slow=4.6,SNR=12
PSI pP 04 53 50.3
comp=Z,10nm,0.9s,baz=162,slow=7.9,SNR=1.5
PSI S **S** 04 56 41.3 -2.0
comp=Z,3.6nm,0.4s,baz=246,slow=21,SNR=7.4
QLP Quilpie 28.02 143 *e*P **P** 04 52 33.0 +0.4
NWAO Narrogin (SRO) 29.24 195 P **P** 04 52 43.2 0.0
comp=Z,16nm,0.6s,mb4.6,baz=26,slow=9.4,SNR=22
BBOO Buckleboo 29.59 162 *e*P **P** 04 52 46.9 +0.6
comp=Z,5.5nm,0.5s,mb4.1
BBOO *ep*P 04 54 04.2
BBOO *e*S **S** 04 57 08.6 -0.9

STKA Stephens Creek 30.85 153 ‖ *i*P **P** 04 52 58.0 +0.7
comp=Z,34nm,0.5s,mb4.9
STKA *ep*P pP 04 54 14.8 -0.5
STKA *e*S **S** 04 57 28.0 -1.1
STKA *e*SCP ScP 04 58 41.7 -0.8
STKA Stephens Creek 30.85 153 P **P** 04 52 58.0 +0.7
STKA pP pP 04 54 16.9 +1.6
STKA S **S** 04 57 28.4 -0.6
STKA ScP ScP 04 58 42.1 -0.5
STKA Stephens Creek 30.85 153 P **P** 04 52 58.0 +0.7
comp=Z,47nm,0.6s,mb5.0,baz=328,slow=8.4,SNR=135
STKA pP pP 04 54 16.9 +1.6
comp=Z,16nm,0.7s,baz=320,slow=10.0,SNR=4.9
STKA S **S** 04 57 28.4 -0.6
comp=Z,12nm,1.1s,baz=61,slow=22,SNR=3.5
STKA ScP ScP 04 58 42.1 -0.5
comp=Z,8.6nm,0.8s,baz=348,slow=3.8,SNR=4.8
STKA Stephens Creek 30.85 153 P **P** 04 52 58.0 +0.7
STKA *PP pP 04 54 16.9 +1.6
STKA S **S** 04 57 28.4 -0.7
CMSA Cobar Meteorol 32.60 147 *e*P **P** 04 53 13.3 +0.9
CMSA *ep*P pP 04 54 34.6 +3.6
HNR Honiara 34.19 100 P **P** 04 53 26.4 +0.2
comp=Z,90nm,0.4s,mb5.4,baz=288,slow=3.2,SNR=6.0
CMAR Chiang Mai Arr 35.07 312 P **P** 04 53 34.8 +1.3
comp=Z,5.1nm,0.7s,mb4.0,baz=136,slow=7.1,SNR=20
CMAR PcP PcP 04 55 55.5 +1.6
comp=Z,4.4nm,0.7s,baz=164,slow=2.7,SNR=14
CMAR ScP ScP 04 58 58.6 +1.1
comp=Z,1.2nm,0.4s,baz=160,slow=3.1,SNR=9.1
CMAR Chiang Mai Arr 35.07 312 P **P** 04 53 34.8 +1.3
CMAR 04 55 55.5
CHTO Chiang Mai 35.29 312 *e*P **P** 04 53 36.2 +0.9
comp=Z,8.4nm,0.6s,mb4.2
CHTO pmax pmax
comp=Z,8.0nm,0.6s,mb4.2
CHTO Chiang Mai 35.29 312 *e*P **P** 04 53 36.2 +0.9
GYA pmax pmax
comp=Z,90nm,4.5s
YNG Young 36.17 147 *e*P **P** 04 53 43.9 +1.4
comp=Z,22nm,0.7s,mb4.6
ARMA Armidale 35.33 139 *e*P **P** 04 53 37.1 +1.5
GYA Guiyang 36.08 330 *e*P **P** 04 53 42.3 +0.5
GYA pP pP 04 55 04.0 +2.2
GYA sP sP 04 55 51.3 -0.7
GYA S **S** 04 58 52.3 +3.4
GYA ScP ScP 04 59 02.6 +1.5
GYA PcS PcS 04 59 44.5 -0.6
GYA ScS ScS 05 03 08.9 +0.6
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.2
GYA pmax pmax
comp=Z,90nm,4.5s
YNG Young 36.17 147 *e*P **P** 04 53 43.9 +1.4
comp=Z,22nm,0.7s,mb4.6
WHN Wuhan 36.69 343 P **P** 04 53 47.5 +0.6
NJ2 Nanjing 37.11 350 *e*P **P** 04 53 52.3 +2.0
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.3
KMI Kunming 37.15 324 P **P** 04 53 53.6 +2.9
KMI pmax pmax
comp=Z,10.0nm,0.7s,mb4.2
XAN Xi'an 41.68 339 P **P** 04 54 26.0 -1.4
XAN pmax pmax
comp=Z,3.0nm,0.7s,mb3.7
XAN pmax pmax
comp=Z,17nm,3.9s
DZM Mont Dzumac 42.95 118 *e*P **P** 04 54 38.3 +0.5
comp=Z,46nm,1.6s,mb4.5
LZH Lanzhou 45.47 335 *e*P **P** 04 54 55.0 -2.1
LZH pP pP 04 56 24.0 +2.6
LZH sP sP 04 57 10.8 +0.4
LZH pmax pmax
comp=Z,27nm,1.3s,mb4.4
LZH pmax pmax
comp=Z,80nm,4.4s
HHC Hu-ho-hao-te 47.14 345 *e*P **P** 04 55 11.4 +1.6
HHC pP pP 04 56 38.3 +3.4
HHC PP PP 04 57 08.4 +2.5
HHC sP sP 04 57 26.6 +2.9
HHC *e*S **S** 05 01 29.6 +0.7
HHC sS sS 05 04 04.3 +1.8
HHC SS SS 05 05 01.6 -1.6
HHC pmax pmax
comp=Z,14nm,0.8s,mb4.3
HHC pmax pmax
comp=Z,120nm,4.5s
LSA Lhasa 47.67 318 *e*P **P** 04 55 15.2 +1.2
comp=Z,11nm,0.6s,mb4.4
LSA Lhasa 47.67 318 *e*P **P** 04 55 15.2 +1.2
LSA pmax pmax
comp=Z,11nm,0.6s,mb4.4
CN2 Changchun 48.25 360 *e*P **P** 04 55 20.4 +2.3
CN2 *ep*P pP 04 56 47.5 +3.8
CN2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.1
ODAN Odare 48.61 312 *e*P **P** 04 55 21.2 +0.1
comp=Z,27nm,0.6s,mb4.7
TAPN Taplejung 48.65 313 *e*P **P** 04 55 21.6 +0.1
comp=Z,32nm,0.6s,mb4.8
RAMN Ramite 49.24 312 *e*P **P** 04 55 26.1 +0.2
comp=Z,75nm,0.6s,mb5.2
GTA Gaotai 49.99 334 *e*P **P** 04 55 31.5 +0.3
GTA pP pP 04 57 00.3 +2.7
GTA sP sP 04 57 48.3 +2.3
GTA pmax pmax
comp=Z,12nm,0.7s,mb4.3
GUN Gumba 50.30 312 *e*P **P** 04 55 33.9 +0.1
comp=Z,64nm,0.7s,mb5.1
PKI Pulchoki 50.47 312 *e*P **P** 04 55 34.6 -0.3
comp=Z,23nm,0.6s,mb4.7
PKIN Phulchoki 50.48 312 *e*P **P** 04 55 34.5 -0.5
comp=Z,18nm,0.6s,mb4.6
KKN Kakani 50.68 312 *e*P **P** 04 55 36.2 -0.3
comp=Z,30nm,0.7s,mb4.6
DMN Daman 50.71 312 *e*P **P** 04 55 36.7 -0.1
comp=Z,38nm,0.8s,mb4.7
GKN Gorkha 51.27 312 *e*P **P** 04 55 40.8 -0.1
comp=Z,42nm,0.4s,mb5.1
KOLN Koldanda 51.93 311 *e*P **P** 04 55 45.6 0.0
comp=Z,54nm,0.5s,mb5.0
DANN Dangsing 52.11 312 *e*P **P** 04 55 47.4 +0.4
comp=Z,57nm,0.6s,mb5.0
ULN Ulaanbaatar 54.85 345 *e*P **P** 04 56 06.6 +0.5
comp=Z,7.7nm,0.8s,mb4.0
ULN Ulaanbaatar 54.85 345 *e*P **P** 04 56 06.6 +0.5
ULN pmax pmax
comp=Z,8.0nm,0.8s,mb4.0
SONM Songino Array 55.00 344 P **P** 04 56 07.0 -0.1
comp=Z,3.8nm,0.8s,mb3.7,baz=163,slow=7.7,SNR=18
SONM PcP PcP 04 57 02.9 +0.3
comp=Z,2.1nm,0.7s,baz=150,slow=4.8,SNR=5.4
SONM pP pP 04 57 35.1 -0.6
comp=Z,1.1nm,0.7s,baz=162,slow=5.9,SNR=2.3
RPZ Rata Peaks 55.63 141 P **P** 04 56 13.0 +1.3
comp=Z,10nm,0.8s,mb4.2,baz=348,slow=5.0,SNR=5.7
URZ Urewera 57.28 133 P **P** 04 56 23.2 -0.1
comp=Z,5.2nm,0.6s,mb4.1,baz=301,slow=5.0,SNR=4.9
ZAK Zakamensk 58.18 343 *e*P **P** 04 56 28.8 -0.4
ZAK *e* pP 04 57 56.1 -2.8
ZAK pmax pmax
comp=Z,1.0nm,1.0s
WMQ Urumqi 59.22 329 *e*P **P** 04 56 36.6 +0.2
WMQ PcP PcP 04 57 19.6 +0.2
WMQ pP pP 04 58 09.1 +2.6
WMQ sP sP 04 58 56.1 +2.3
WMQ pmax pmax
comp=Z,17nm,0.9s,mb4.4
WMQ pmax pmax
comp=Z,120nm,4.6s
TLY Talaya 59.24 344 *e*P **P** 04 56 36.7 +0.4
TLY pmax pmax
comp=Z,4.0nm,0.9s,mb3.8
CASY Casey 62.43 187 *e*P **P** 04 56 57.3 +0.1
CASY Casey 62.43 187 *e*P **P** 04 56 57.4 +0.2
comp=Z,42nm,1.0s,mb4.9
KSH Kashi 63.51 319 ‖ *i*P **P** 04 57 05.4 +0.6
KSH *e*PcP PcP 04 57 39.3 +2.3
KSH *ep*P pP 04 58 39.0 +2.5
KSH *es*P sP 04 59 25.5 +2.1
KSH *e*PP PP 04 59 31.5 +0.1
KSH *e*ScP 05 00 57.4
KSH *e*PcS 05 01 41.6
KSH *e*ScS ScS 05 06 10.0 -4.5
KSH pmax pmax
comp=Z,13nm,0.6s,mb4.6
KSH pmax pmax
comp=Z,45nm,5.4s
PETK Petropavlovsk- 63.53 21 P **P** 04 57 04.8 +0.2
comp=Z,2.0nm,0.7s,mb3.8,baz=176,slow=3.8,SNR=4.2
PETK PcP PcP 04 57 36.8 +0.1
comp=Z,1.7nm,0.6s,baz=211,slow=1.7,SNR=3.1
MK31 Makanchi Array 64.03 328 *e*P **P** 04 57 07.6 -0.4
MK31 pmax pmax
comp=Z,22nm,0.8s,mb4.7
MKAR Makanchi Array 64.03 328 P **P** 04 57 07.8 -0.2
comp=Z,15nm,0.5s,mb4.7,baz=128,slow=7.8,SNR=179
MKAR PcP PcP 04 57 39.1 +0.1
comp=Z,5.7nm,0.8s,baz=121,slow=5.8,SNR=7.4
MKAR pP pP 04 58 40.0 +0.1
comp=Z,1.3nm,0.7s,baz=122,slow=8.2,SNR=2.4
TKM2 Tokmak 2 65.57 322 P **P** 04 57 18.3 +0.5
SNR=14
AAK Ala-Archa 66.10 321 P **P** 04 57 22.2 +1.0
SNR=5.2
AAK Ala-Archa 66.10 321 *e*P **P** 04 57 21.8 +0.6
comp=Z,11nm,0.9s,mb4.5
AAK Ala-Archa 66.10 321 P **P** 04 57 21.9 +0.7
comp=Z,4.0nm,0.4s,mb4.4,baz=123,slow=6.7,SNR=16
AAK PcP PcP 04 57 48.8 +1.1
comp=Z,1.7nm,0.4s,baz=226,slow=3.3,SNR=3.6
AAK Ala-Archa 66.10 321 *e*P **P** 04 57 21.8 +0.6
AAK pmax pmax
comp=Z,11nm,0.9s,mb4.5
AML Almayashu 66.35 320 P **P** 04 57 23.7 +0.9
SNR=20
USP Ospenovka 66.43 322 P **P** 04 57 23.6 +0.3
SNR=7.5
EKS2 Erkin-Say 66.57 321 P **P** 04 57 24.8 +0.7
SNR=16
YAK Yakutsk 66.57 2 *e*P **P** 04 57 23.2 -0.5
YAK pmax pmax
comp=Z,21nm,0.9s,mb4.8
ZALV Zalesovo Beam 67.70 335 P **P** 04 57 29.7 -1.2
comp=Z,8.6nm,0.6s,mb4.6,baz=121,slow=4.5,SNR=45
KURK Kurchatov 68.40 330 *e*P **P** 04 57 34.7 -0.5
comp=Z,24nm,0.8s,mb4.9
KURK Kurchatov 68.40 330 *d i*P **P** 04 57 34.6 -0.6
KURK pmax pmax
comp=Z,27nm,0.8s,mb4.9
KK31 Karatay Array 68.87 320 *e*P **P** 04 57 37.5 -0.8
KK31 pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
NVS Novosibirsk 68.99 335 *e*P **P** 04 57 37.4 -1.3
SEY Seymchan 70.37 13 ‖ *i*P **P** 04 57 47.6 +0.8
IDAH Dahanechah 72.61 306 *e*P **P** 04 58 00.9 +0.2
IKOO Kooshah 73.22 306 *e*P **P** 04 58 02.9 -1.3
IMYA Miami 73.54 310 *e*P **P** 04 58 06.1 +0.1
BRVK Borovoye 73.98 329 *e*P **P** 04 58 07.2 -0.9
BRVK Borovoye 73.98 329 *d i*P **P** 04 58 07.8 -0.3
BRVK pmax pmax
comp=Z,22nm,1.6s,mb4.5
IAKL Akhelmad 74.65 310 *e*P **P** 04 58 12.2 -0.2
MAW Mawson 75.62 201 *e*P **P** 04 58 17.4 +0.2
comp=Z,14nm,0.8s,mb4.7
MAW Mawson 75.62 201 P **P** 04 58 17.6 +0.5
comp=Z,24nm,0.9s,mb4.8,baz=68,slow=6.5,SNR=41
IBAF Bafgh 75.80 304 *e*P **P** 04 58 18.9 0.0
TIXI Tiksi 76.20 1 *e*P **P** 04 58 19.6 -0.6
comp=Z,5.1nm,0.8s,mb4.2
TIXI Tiksi 76.20 1 *e*P **P** 04 58 19.5 -0.7
TIXI pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
SBA Scott Base 76.20 172 *e*P **P** 04 58 21.5 +1.3
comp=Z,8.6nm,1.1s,mb4.3
SBA Scott Base 76.20 172 *e*P **P** 04 58 21.5 +1.2
SBA pmax pmax
comp=Z,9.0nm,1.1s,mb4.3
IMEH Mehriz 76.54 304 *e*P **P** 04 58 19.4 -3.6
ICHK Chekchek 76.92 304 *e*P **P** 04 58 24.7 -0.4
OPO Ambohidratompo 77.76 252 P **P** 04 58 30.4 +0.4
comp=Z,13nm,0.7s,mb4.7,baz=90,slow=6.1,SNR=20
BILL Bilibino 77.86 14 P **P** 04 58 29.7 +0.3
BILL pmax pmax
comp=Z,2.0nm,1.2s,mb3.6
AB31 Akbulak array 78.12 322 *e*P **P** 04 58 30.6 -0.6
AB31 pmax pmax
comp=Z,8.0nm,0.5s,mb4.6
ABKAR **Akbulak array 78.12 322** *e*P **P** 04 58 30.4 -0.8
comp=Z,8.2nm,0.6s,mb4.5
ISHM Shahmirzad 78.68 308 *e*P **P** 04 58 34.5 -0.1
ILAS Lasjerd 78.84 307 *e*P **P** 04 58 34.5 -1.0
ISFB Sefidab 79.18 306 *e*P **P** 04 58 36.7 -0.6
IKLH Kolahrood 79.48 305 *e*P **P** 04 58 38.5 -0.4
IDMV Damavand 79.62 307 *e*P **P** 04 58 39.0 -0.6
IPIR Pirpir 79.91 304 *e*P **P** 04 58 41.2 0.0
SVE Sverdlovsk 80.65 330 ‖ *e*P **P** 04 58 44.6 +0.1
SVE pmax pmax
comp=Z,22nm,1.0s,mb4.8
ARU Arti 81.55 329 *e*P **P** 04 58 48.7 -0.6
comp=Z,7.7nm,0.5s,mb4.7
ARU Arti 81.55 329 *d i*P **P** 04 58 48.4 -0.8
ARU 05 01 57.8
ARU S S 05 08 25.7 +1.6
ARU pmax pmax
comp=Z,16nm,1.0s,mb4.7
QRN Al-Qurain 81.67 300 *e*P **P** 04 58 50.4 -0.1
QRN AMb AMB 04 58 51.6
comp=Z,110nm,0.5s
RDF Al-Radifah 82.02 300 *e*P **P** 04 58 52.6 +0.3
NAY Al-Naaiem 82.34 300 *e*P **P** 04 58 53.4 -0.5
NAY AMb AMB 04 58 55.5
comp=Z,30nm,0.7s,mb5.2
MIB Mutribah 82.35 301 *e*P **P** 04 58 53.5 -0.5
MIB AMb AMB 04 58 54.9
comp=Z,81nm,0.7s,mb5.5
IKOM Komasi 82.97 305 *e*P **P** 04 58 56.7 -0.3
ISRB Sarab 83.53 309 *e*P **P** 04 58 59.6 -0.1
IGHG Ghaleghazi 83.77 305 *e*P **P** 04 59 00.3 -0.7
IHRS Heris 84.10 309 *e*P **P** 04 59 01.9 -0.7
SYO Syowa Base 84.32 201 ‖ *i*X 04 59 01.0
IAZR Azarshahr 84.82 308 *e*P **P** 04 59 06.4 +0.3
ISHB Shabestar 85.20 309 *e*P **P** 04 59 08.8 +0.8
IMRD Marand 85.21 309 *e*P **P** 04 59 08.7 +0.7
QSPA South Pole Qui 85.30 180 *e*P **P** 04 59 07.5 -0.2
comp=Z,19nm,1.0s,mb4.8
DGRG David-gareji 85.92 312 P **P** 04 59 11.7 +0.3
GNI Garni 86.18 311 *e*P **P** 04 59 13.4 +0.8
comp=Z,5.7nm,0.5s,mb4.6
GNI Garni 86.18 311 *d i*P **P** 04 59 13.6 +0.9
GNI pmax pmax
comp=Z,10.0nm,1.1s
MTA Mtatsminda 86.39 312 P **P** 04 59 14.6 +0.9
TBLG Delisi 86.44 312 *e*P **P** 04 59 14.7 +0.8
TBLG Delisi 86.44 312 P **P** 04 59 14.7 +0.8
ZEI Tsey 87.22 313 *e*P **P** 04 59 17.5 0.0
ZEI pmax pmax
comp=Z,12nm,0.6s,mb4.8
KIV Kislovodsk 88.27 314 ‖ *e*P **P** 04 59 23.4 +1.0
KIV pmax pmax
comp=Z,9.0nm,1.2s,mb4.4
KMBO Kilima Mbogo 88.48 269 *e*P **P** 04 59 24.4 +0.3
comp=Z,4.6nm,0.9s,mb4.2
KMBO Kilima Mbogo 88.48 269 *e*P **P** 04 59 24.4 +0.3
KMBO pmax pmax
comp=Z,5.0nm,0.9s
VRHR Novokhopersk 89.95 321 *e*P **P** 04 59 28.8 -1.3
VRHR pmax pmax
comp=N,6.0nm,0.5s
VRHR pmax pmax
comp=E,8.0nm,0.5s
VRHR pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
MALT Malatya 90.81 308 *e*P **P** 04 59 35.2 +0.9
comp=Z,5.5nm,0.8s,mb4.4
MALT Malatya 90.81 308 *e*P **P** 04 59 35.3 +0.9
MALT pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
VORD Divnogorie 91.40 321 *e*P **P** 04 59 35.9 -0.9
VORD pmax pmax
comp=N,5.0nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
VSR Storozhevoye 91.50 321 *e*P **P** 04 59 36.2 -1.1
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,7.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
ANN Anapa 92.11 315 *e*P **P** 04 59 37.2 -3.0
ANN pmax pmax

	comp=Z,32nm,1.1s,mb5.2								
ILAR	**Eielson Array**	**93.03**	**25**	P		**P**		**04 59 42.5**	**-1.4**
	comp=Z,0.8nm,0.6s,mb3.8,baz=235,slow=5.5,SNR=16								
ILAR				PKKPbc		PKKPbc		05 16 51.6	-2.7
	comp=Z,0.6nm,0.9s,baz=53,slow=1.8,SNR=5.7								
BRTR	**Keskin Array B**	**94.63**	**309**	P		**P**		**04 59 50.9**	**-1.0**
	comp=Z,2.7nm,0.8s,mb4.3,baz=117,slow=4.7,SNR=16								
LSZ	**Lusaka**	**96.11**	**254**	*e*P		**P**		**04 59 58.9**	**-0.2**
	comp=Z,16nm,0.8s,mb5.2								
LSZ	**Lusaka**	**96.11**	**254**	*e*P		**P**		**04 59 58.9**	**-0.2**
LSZ				pmax		pmax			
	comp=Z,16nm,0.8s,mb5.2								
BOSA	**Boshof**	**97.01**	**241**	P		**P**		**05 00 02.6**	**-0.3**
	comp=Z,13nm,0.7s,mb5.2,baz=112,slow=4.3,SNR=32								
AKASG	**Malin Array Be**	**97.77**	**320**	P		**P**		**05 00 03.9**	**-1.9**
	comp=Z,1.2nm,0.6s,mb4.3,baz=77,slow=4.6,SNR=6.2								
ARCES	**ARCESS Array B**	**97.96**	**340**	P		**P**		**05 00 04.3**	**-1.8**
	comp=Z,1.6nm,0.8s,mb4.3,baz=76,slow=5.1,SNR=5.8								
FINES	**FINESS Array B**	**98.74**	**331**	P		Pdif		05 00 08.6	-1.5
	comp=Z,0.9nm,0.9s,baz=79,slow=7.5,SNR=2.8								
YKA	**Yellowknife Ar**	**107.46**	**25**	PKKPbc		PKKPbc		05 16 09.6	-3.7
	comp=Z,0.7nm,0.5s,baz=122,slow=3.3,SNR=4.8								
HINF	**Hinteralfeld**	**112.64**	**320**	*e*PKIKP		PKiKP		05 05 03.8	-0.8
	comp=Z,5.1nm,0.7s								
HAU	**Haudompre**	**112.90**	**321**	*e*PKIKP		PKiKP		05 05 04.6	-0.4
NVAR	**Mina Array Bea**	**113.06**	**50**	PKKPbc		PKKPbc		05 15 52.8	-1.6
	comp=Z,0.4nm,0.8s,baz=114,slow=6.6,SNR=4.0								
LPG	**La Plagne**	**113.45**	**318**	*e*PKIKP		PKiKP		05 05 06.2	0.0
LPL	**La Plagne**	**113.46**	**318**	*e*PKIKP		PKiKP		05 05 06.1	-0.1
	comp=Z,7.5nm,0.8s								
BAIF	**Baives**	**113.48**	**323**	*e*PKIKP		PKiKP		05 05 05.9	-0.2
CABF	**La Chapelle**	**113.53**	**319**	*e*PKIKP		PKiKP		05 05 06.3	0.0
	comp=Z,6.8nm,0.7s								
ORIF	**Oris-en-Rattie**	**114.22**	**318**	*e*PKIKP		PKiKP		05 05 07.3	-0.4
HLID	**Hailey**	**114.54**	**44**	*e*PKP		PKiKP		05 05 09.1	+0.8
LOR	**Lormes**	**114.74**	**320**	*e*PKIKP		PKPdf		05 05 08.1	-0.5
SSF	**Saint Saulge**	**115.04**	**320**	*e*PKIKP		PKPdf		05 05 08.8	-0.4
	comp=Z,10.0nm,0.6s								
AVF	**Avril sur Loir**	**115.23**	**320**	*e*PKIKP		PKPdf		05 05 08.8	-0.8
BGF	**Bois d'Agland**	**115.65**	**320**	*e*PKIKP		PKPdf		05 05 10.2	-0.2
	comp=Z,9.5nm,0.6s								
TCF	**Toulx Ste Croi**	**116.16**	**320**	*e*PKIKP		PKPdf		05 05 11.1	-0.3
	comp=Z,8.2nm,0.9s								
DUG	**Dugway**	**116.71**	**47**	*e*PKP		PKPdf		05 05 13.0	+0.4
CAF	**Calviac**	**116.76**	**319**	*e*PKIKP		PKPdf		05 05 12.7	+0.1
	comp=Z,12nm,1.1s								
TPAW	**Teton Pass**	**116.94**	**43**	*e*PKPdf		PKPdf		05 05 13.7	+0.8
SNOW	**Snow King Moun**	**117.08**	**43**	*e*PKPdf		PKPdf		05 05 13.3	+0.1
MTLF	**Montolieu**	**117.24**	**317**	*e*PKIKP		PKPdf		05 05 13.6	+0.1
MFF	**Saint Martin d**	**117.53**	**321**	*e*PKIKP		PKPdf		05 05 13.6	-0.4
	comp=Z,7.6nm,0.6s								
LFF	**La Frestale**	**117.63**	**319**	*e*PKIKP		PKPdf		05 05 14.1	-0.1
PDAR	**Pinedale Array**	**118.15**	**43**	PKKPbc		PKKPbc		05 15 36.0	-1.1
	comp=Z,2.5nm,0.9s,baz=132,slow=4.2,SNR=10								
SGMF	**Saint Gilles**	**118.27**	**323**	*e*PKIKP		PKPdf		05 05 14.7	-0.7
EPF	**Esparros**	**118.63**	**317**	*e*PKIKP		PKPdf		05 05 15.9	-0.3
ROSF	**Rostrenen**	**118.66**	**324**	*e*PKIKP		PKPdf		05 05 15.4	-0.7
QUIF	**Quistinic**	**118.79**	**323**	*e*PKIKP		PKPdf		05 05 15.7	-0.7
ETSF	**Etsaut**	**119.29**	**317**	*e*PKIKP		PKPdf		05 05 17.8	+0.3
SJPF	**Ste Jean**	**119.65**	**318**	*e*PKIKP		PKPdf		05 05 18.0	-0.2
TAM	**Tamanrasset**	**119.68**	**293**	*e*PKPdf		PKPdf		05 05 19.7	+0.9
RSSD	**Black Hills**	**121.26**	**40**	*e*PKPdf		PKPdf		05 05 21.2	0.0
ESDC	**Sonseca Array**	**122.93**	**315**	PKP		PKPdf		05 05 24.5	-0.1
ESDC	**Sonseca Array**	**122.93**	**315**	PKP		PKPdf		05 05 24.5	-0.1
	comp=Z,0.8nm,0.6s,baz=33,slow=2.9,SNR=6.7								
ANMO	**Albuquerque**	**123.17**	**51**	*e*PKPdf		PKPdf		05 05 26.4	+1.2
TORD	**Torodi Ar. Bea**	**124.26**	**283**	PKP		PKPdf		05 05 27.7	-0.1
	comp=Z,6.8nm,0.8s,baz=86,slow=1.8,SNR=48								
MVO	**Moncorvo**	**124.39**	**318**	*e*PKPdf		PKPdf		05 05 27.0	-0.3
MNTX	**Cornudas Mount**	**125.08**	**54**	*e*PKPdf		PKPdf		05 05 29.7	+0.7
MTE	**Manteigas**	**125.09**	**317**	*e*PKPdf		PKPdf		05 05 29.4	+0.7
PCBR	**Castelo Branco**	**125.30**	**317**	*e*PKPdf		PKPdf		05 05 29.9	+0.8
PTOM	**Tomar**	**126.04**	**317**	*e*PKPdf		PKPdf		05 05 32.2	+1.6
TXAR	**Lajitas Array**	**127.22**	**56**	PKP		PKPdf		05 05 33.2	+0.1
TXAR				SKPbc				05 08 10.1	
TXAR				PKKPbc				05 15 01.6	
TXAR	**Lajitas Array**	**127.22**	**56**	PKP		PKPdf		05 05 33.2	+0.1
	comp=Z,0.5nm,0.8s,baz=202,slow=1.3,SNR=6.0								
TXAR				SKPbc				05 08 10.1	
	comp=Z,0.9nm,0.8s,baz=254,slow=3.2,SNR=7.6								
TXAR				PKKPbc				05 15 01.6	
	comp=Z,0.6nm,0.9s,baz=110,slow=6.5,SNR=5.4								
PFVI	**Vila Bisbo**	**127.47**	**314**	*e*PKPdf		PKPdf		05 05 31.3	-2.1
KIC	**Kosan Boka**	**130.77**	**274**	*e*PKP1		PKPdf		05 05 40.8	+0.5
	comp=Z,22nm,0.9s								
DBIC	**Dimbokro**	**130.89**	**275**	PKP		PKPdf		05 05 40.4	-0.1
	comp=Z,3.0nm,0.5s,baz=82,slow=2.0,SNR=7.0								
DBIC				SKPbc		SKPbc		05 08 24.6	+1.0
	comp=Z,7.8nm,1.0s,baz=182,slow=7.1,SNR=3.8								
TIC	**Toumodi**	**131.05**	**275**	*e*PKP1		PKPdf		05 05 40.5	-0.3
	comp=Z,145nm,1.9s								
LIC	**Lamto**	**131.06**	**274**	*e*PKP1		PKPdf		05 05 41.4	+0.6
	comp=Z,88nm,1.6s								
PLCA	**Paso Flores**	**132.39**	**163**	PKP		PKPdf		05 05 43.8	+1.1
	comp=Z,1.9nm,0.8s,baz=204,slow=6.4,SNR=5.6								
PLCA				SKPbc		SKPbc		05 08 28.9	+0.8
	comp=Z,1.7nm,0.8s,baz=162,slow=9.1,SNR=4.5								
CPUP	**Villa Florida**	**149.04**	**175**	PKPbc		PKPbc		05 06 17.4	+0.1
	comp=Z,5.2nm,0.6s,baz=241,slow=0.9,SNR=16								
CAM4	**Nova Friburgo**	**150.84**	**202**	*i*P		PKPbc		05 06 22.4	+0.8
CAM4				*i*				05 06 24.7	
CAM4				*i*				05 06 26.2	
CAM4				*i*				05 06 40.3	
LPAZ	**La Paz**	**155.02**	**147**	PKP		PKPdf		05 06 23.9	+2.2
	comp=Z,1.0nm,0.8s,baz=112,slow=6.7,SNR=4.9								
LPAZ				PKPab		PKPab		05 06 49.3	+0.9
	comp=Z,1.8nm,0.6s,baz=51,slow=5.2,SNR=7.2								
SIV	**San Ignacio**	**158.37**	**162**	PKP		PKPdf		05 06 26.6	+0.6
	comp=Z,1.3nm,0.8s,baz=201,slow=4.0,SNR=5.3								
SIV				PKPab		PKPab		05 07 03.3	+0.5
	comp=Z,0.8nm,0.5s,baz=205,slow=6.0,SNR=4.6								

WEL 23 05:17:04.0±0.4, 35.77S×178.77E, h224km±8km, ML3.5/5, Error ellipse: s-maj=10.1km s-min=9.1km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.83**	**192**	PN		Pn	05 17 42.4	-0.3
PUZ	**Puketiti**	**2.34**	**190**	PN		Pn	05 17 47.8	+0.2
PUZ				SN		S	05 18 21.0	-1.0
MWZ	**Matawai**	**2.75**	**201**	PN		Pn	05 17 52.7	+0.7
URZ	**Urewera**	**2.82**	**208**	PN		Pn	05 17 52.6	-0.2
URZ				SN		S	05 18 31.4	0.0
KNZ	**Kokohu**	**3.36**	**195**	PN		Pn	05 17 59.0	+0.1
NMHZ	**Naumai**	**3.67**	**205**	PN		Pn	05 18 03.0	+0.4
BKZ	**Black Stump Fm**	**3.85**	**207**	PN		Pn	05 18 05.0	+0.3
BHHZ	**Black Hill Sta**	**4.29**	**209**	PN		Pn	05 18 10.3	+0.2
PRHZ	**Porangahau**	**4.80**	**200**	PN		Pn	05 18 15.7	-0.7

*IDC **23** 05:39:34.0±1.4, 13.54N×125.49E, h0km, mb3.8/5, mb1 3.8/5, mb1mx3.5/22, mbtmp3.8/5, ML4.8/1, Error ellipse: s-maj=66.8km s-min=20.2km az=63.0*

ISC 23 05:39:40.4±1.0, 13.25N±0.07×124.8E±0.1, h35km, n9, σ1§14/12, mb3.8/5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PVCP	**Virac**	**0.69**	**300**	*e*P		**Pn**	**05 39 52.1**	**-1.6**
PVCP				*e*S		**Sn**	**05 40 00.4**	**-2.7**
CNP	**Catarman**	**0.74**	**188**	*e*P		**Pn**	**05 39 56.2**	**+1.8**
CNP				*e*S		**Sn**	**05 40 03.8**	**-0.7**
GQP	**Guinayangan**	**2.35**	**286**	*e*P		**Pn**	**05 40 17.3**	**+0.8**
GQP				*e*S		**Sn**	**05 40 50.0**	**+5.9**
TGY	**Tagaytay City**	**3.82**	**283**	Pn		**Pn**	**05 40 44.3**	**+7.6**
	46nm,0.3s,baz=259,slow=11,SNR=2.5							
WRA	**Warramunga Arr**	**34.30**	**164**	P		**P**	**05 46 22.7**	**-1.0**
	0.3nm,0.7s,mb3.3,baz=343,slow=9.0,SNR=2.3							
ASAR	**Alice Springs**	**37.76**	**166**	P		**P**	**05 46 53.1**	**-0.1**
	0.3nm,0.3s,mb3.5,baz=340,slow=7.6,SNR=7.4							
MKAR	**Makanchi Array**	**48.78**	**322**	P		**P**	**05 48 22.2**	**+0.3**
	1.2nm,0.8s,mb4.0,baz=118,slow=9.4,SNR=11							
KURK	**Kurchatov**	**52.79**	**325**	P		**P**	**05 48 51.7**	**-0.4**
	3.1nm,0.7s,mb4.3,baz=122,slow=7.4,SNR=15							
BVAR	**Borovoye Array**	**58.39**	**325**	P		**P**	**05 49 33.0**	**+0.8**
	0.8nm,0.4s,mb4.1,baz=102,slow=14,SNR=4.2							

IDC 23 05:44:17.4±1.6, 6.21S×151.84E, h38km±9km, mb3.1/3, mb1 3.5/3, mb1mx3.2/15, mbtmp3.2/3, Error ellipse: s-maj=103.2km s-min=21.3km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.80**	**230**	P		P	05 49 06.2	-0.2
	0.6nm,0.5s,baz=56,slow=11,SNR=4.6							
WRA				pP		pP	05 49 17.1	+1.1
	0.8nm,0.6s,baz=53,slow=9.8,SNR=2.8							
ASAR	**Alice Springs**	**24.47**	**223**	P		P	05 49 32.9	-0.2
	0.9nm,0.8s,baz=59,slow=9.5,SNR=8.1							
ASAR				pP		pP	05 49 44.0	+0.6
	0.5nm,0.5s,baz=56,slow=9.2,SNR=3.2							
ILAR	**Eielson Array**	**83.82**	**22**	P		P	05 56 43.3	+0.7
	0.2nm,0.8s,baz=231,slow=5.7,SNR=3.1							
ILAR				pP		pP	05 56 53.7	-0.5
	0.4nm,0.6s,baz=238,slow=5.0,SNR=4.2							
TORD	**Torodi Ar. Bea**	**149.79**	**285**	PKPbc		PKPbc	06 04 03.4	-1.0
	0.4nm,0.7s,baz=67,slow=3.5,SNR=3.1							

*IDC **23** 05:49:14.5±2.9, 35.37N×69.45E, h0km, mb3.5/3, mb1 3.6/6, mb1mx3.4/27, mbtmp3.5/6, ML2.9/3, Error ellipse: s-maj=63.9km s-min=21.8km az=138.0*

*ISCJB **23** 05:49:18.8±5.3, 35.7N±0.2×69.3E±0.2, h31km±39km, mb3.5/3, Error ellipse: s-maj=40.8km s-min=16.3km az=139.8*

ISC 23 05:49:18.3±4.9, 35.6N±0.2×69.2E±0.2, h14km±33km, n8, σ1§05/10, mb3.5/3, 2C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KK31	**Karatay Array**	**7.52**	**7**	⇑P		**Pn**	**05 51 06.4**	**-1.1**
	0.4nm,0.3s,baz=195,slow=14,SNR=16							
KK31				⇑S		**Sn**	**05 52 25.0**	**-7.5**
	2.9nm,0.3s,baz=196,slow=22							
AAK	**Ala-Archa**	**8.10**	**29**	Pn		**Pn**	**05 51 17.6**	**+2.2**
	0.7nm,0.3s,baz=196,slow=8.3,SNR=5.0							
AAK				Sn		**Sn**	**05 52 46.7**	**-0.1**
	0.7nm,0.3s,baz=121,slow=22,SNR=9.3							
MKAR	**Makanchi Array**	**14.85**	**37**	Pn		**Pn**	**05 52 47.7**	**+0.1**
	0.0nm,0.3s,baz=225,slow=17,SNR=2.9							
KURK	**Kurchatov**	**16.54**	**21**	Pn		**Pn**	**05 53 08.4**	**-1.2**
	0.0nm,0.3s,baz=212,slow=10,SNR=3.2							
AKTO	**Aktyubinsk**	**16.87**	**335**	Pn		**Pn**	**05 53 14.0**	**+0.1**
	0.2nm,0.3s,baz=166,slow=15,SNR=4.2							
ZALV	**Zalesovo Beam**	**21.31**	**26**	P		**P**	**05 54 04.0**	**-0.4**
	1.1nm,0.5s,mb3.4,baz=219,slow=9.5,SNR=6.5							
NOA	**NORSAR Array B**	**44.21**	**324**	P		**P**	**05 57 28.2**	**+1.6**
	0.7nm,0.7s,mb3.5,baz=99,slow=8.0,SNR=3.7							
TORD	**Torodi Ar. Bea**	**64.24**	**268**	P		**P**	**05 59 52.4**	**-0.8**
	0.2nm,0.4s,mb3.5,baz=49,slow=5.6,SNR=5.9							

OTT 23 06:49:46.4±2.2, 61.16N×59.84W, h18km, ML3.6/1, LAlbertaRADOR Sea Seismic Zone. 271km east from Resolution Island, Nu, Davis Strait

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
FRB	**Frobisher Bay**	**4.80**	**306**	PN		Pn	06 50 56.6	-1.1
FRB				SN		Sn	06 51 50.0	-2.8
FRB				Trac			06 51 53.6	
	comp=Z,11nm,0.2s							
SCHQ	**Schefferville**	**7.35**	**213**	PN		Pn	06 51 31.0	-1.7
SCHQ				SN		Sn	06 52 51.3	-4.2
SCHQ				Trac			06 52 54.7	
	comp=Z,9.5nm,0.4s							
IVKQ	**Ivujivik**	**8.65**	**286**	SN		Sn	06 53 21.3	-6.0
AKVQ	**Akulivik**	**8.92**	**276**	SN		Sn	06 53 30.1	-4.0
INUQ	**Inukjuak**	**9.59**	**262**	SN		Sn	06 53 42.7	-7.9
INUQ				Trac			06 53 46.2	
	comp=Z,2.8nm,0.5s							
WEMQ	**Wemindji, Queb**	**12.73**	**238**	SN		Sn	06 54 54.3	-13
QILN	**Qililugaq Expl**	**12.83**	**307**	PN		Pn	06 52 37.6	-10
QILN				SN		Sn	06 54 57.0	-13

*DJA **23** 07:17:04, 1.19N×99.70E, h277km, MLv4.0/9*

*ISCJB **23** 07:17:08.2±0.5, 1.39N±0.05×99.61E±0.07, h179km±5km, mb3.8/5, Error ellipse: s-maj=12.2km s-min=8.0km az=155.0*

*IDC **23** 07:17:08.8±2.3, 1.30N×99.60E, h172km±9km, mb3.5/5, mb1 3.5/5, mb1mx3.2/22, mbtmp3.5/5, Error ellipse: s-maj=90.3km s-min=20.8km az=56.0*

ISC 23 07:17:09.4±0.5, 1.39N±0.05×99.63E±0.07, h173km±5km, n28, σ0§75/30, mb3.8/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MNSI	**Mandailing Nat**	**0.59**	**185**	P		**Pn**	**07 17 34.5**	**+0.7**
MNSI				S		**Sn**	**07 17 53.1**	**+0.5**
PSI	**Prapat**	**1.57**	**333**	P		**Pn**	**07 17 41.5**	**0.0**
	17nm,0.3s,baz=80,slow=20,SNR=50							
PSI				S		**Sn**	**07 18 05.2**	**-1.1**
	4.2nm,0.3s,baz=8.2,slow=21,SNR=12							
BKNI	**Bangkinang**	**1.76**	**127**	P		**Sn**	**07 18 08.9**	**-0.8**
PPI	**Padang Panjang**	**1.99**	**157**	P		**Pn**	**07 17 46.6**	**+0.8**
PDSI	**Padang**	**2.43**	**160**	P		**Pn**	**07 17 51.1**	**+0.2**
FRIM	**Kepong**	**2.71**	**47**	P		**Pn**	**07 17 53.8**	**-0.4**
SISI	**Saibi**	**2.75**	**191**	P		**Pn**	**07 17 53.4**	**-1.3**
SDSI	**Sungai Dareh**	**2.92**	**142**	P		**Pn**	**07 17 57.6**	**+0.8**
TPTI		**3.07**	**307**	P		**Pn**	**07 18 02.0**	**+3.4**
IPM	**Ipoh**	**3.37**	**24**	P		**Pn**	**07 18 01.8**	**-0.6**
IPM	**Ipoh**	**3.37**	**24**	P		**Pn**	**07 18 03.3**	**+0.9**
KGM	**Kluang**	**3.74**	**80**	P		**Pn**	**07 18 06.6**	**-0.3**
KULM	**Kulim**	**4.01**	**15**	P		**Pn**	**07 18 10.4**	**0.0**
KULM	**Kulim**	**4.01**	**15**	P		**Pn**	**07 18 10.2**	**-0.2**
MYKOM	**Kota Tinggi**	**4.24**	**85**	P		**Pn**	**07 18 13.3**	**-0.1**
MYKOM	**Kota Tinggi**	**4.24**	**85**	P		**Pn**	**07 18 13.1**	**-0.2**
KTGM	**Kuala Trenggan**	**5.25**	**42**	P		**Pn**	**07 18 27.6**	**+1.1**
BSI	**Banda Aceh**	**5.95**	**313**	P		**Pn**	**07 18 35.4**	**-0.2**
	0.7nm2µm48nm,0.7s							
MDSI	**Maura Dua**	**7.40**	**142**	P		**Pn**	**07 18 46.4**	**-8.4**
SBUM	**Sibu**	**12.63**	**85**	P		**Pn**	**07 20 09.5**	**+6.3**
KKM	**Kota Kinabalu**	**17.18**	**74**	P		**Pn**	**07 21 08.3**	**+9.0**
SDKM	**Sandakan**	**18.03**	**76**	P		**P**	**07 21 16.7**	**+9.2**
MYLDM	**Lahad Datu**	**19.21**	**78**	P		**P**	**07 21 29.4**	**+9.1**
WRA	**Warramunga Arr**	**40.10**	**124**	P		**P**	**07 24 27.3**	**-1.0**
	0.4nm,0.4s,mb3.4,baz=305,slow=9.1,SNR=4.9							
SONM	**Songino Array**	**46.63**	**6**	P		**P**	**07 25 20.9**	**+0.7**
	1.6nm,0.5s,mb3.9,baz=189,slow=9.6,SNR=11							
MKAR	**Makanchi Array**	**47.69**	**344**	P		**P**	**07 25 28.7**	**+0.4**
	0.6nm,0.5s,mb3.5,baz=158,slow=7.6,SNR=9.4							
ZALV	**Zalesovo Beam**	**53.79**	**349**	P		**P**	**07 26 13.9**	**+0.1**
	2.7nm,0.4s,mb4.3,baz=172,slow=5.6,SNR=15							
BVAR	**Borovoye Array**	**56.90**	**339**	P		**P**	**07 26 35.4**	**-0.7**
	0.7nm,0.5s,mb3.8,baz=138,slow=9.4,SNR=4.6							

*NIED **23** 07:21:00, 46.40N×153.10E, h5km, Mw4.2 Best double couple: M₀2.57000×10¹⁵ NP1:φ=221.00000°, δ53.00000°, λ110.00000°. NP2:φ=9.00000°, δ41.00000°, λ65.00000°.*

*BJI **23** 07:21:38.6, 45.78N×153.06E, h15km, mB4.9/3, mb4.2/5*

*ISCJB **23** 07:21:45.8±1.1, 46.62N±0.09×152.7E±0.1, h47km±9km, mb4.0/23, MS3.7/9, Error ellipse: s-maj=18.1km s-min=6.2km az=139.0*

*MOS **23** 07:21:45.2±1.4, 46.77N×152.38E, h32km, mb4.3/15, Error ellipse: s-maj=14.0km s-min=8.7km az=63.0*

*NEIC **23** 07:21:46.2±1.5, 46.61N×152.66E, h36km±14km, mb4.1/2, Error ellipse: s-maj=19.2km s-min=11.0km az=135.0*

*IDC **23** 07:21:48.2±2.9, 46.66N×152.74E, h53km±26km, mb3.6/17, mb1 3.8/20, mb1mx3.7/31, mbtmp3.7/20, ML3.9/3, MS3.7/4, Ms1 3.7/4, ms1mx2.8/36, Error ellipse: s-maj=19.3km s-min=13.8km az=148.0*

ISC 23 07:21:48.1±0.9, 46.63N±0.08×152.7E±0.1, h50km±8km, n60, σ1§07/60, mb4.0/23, MS3.7/9, 1C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**3.62**	**249**	*i*P		**Pn**	**07 22 40.0**	**-1.5**
KUR				*e*S		**Sn**	**07 23 23.0**	**+0.1**
KUR				pmax		pmax		
	comp=N,150nm,0.5s							
KUR				pmax		pmax		
	comp=E,110nm,0.5s							
KUR				pmax		pmax		
	comp=Z,300nm,0.5s							
KUR				smax				
	comp=N,380nm,0.8s							
KUR				smax				
	comp=E,430nm,0.8s							
KUR				smax				
	comp=N,2µm,2.0s							
SKR	**Severo-Kuril's**	**4.66**	**28**	*e*PN		**Pn**	**07 22 56.1**	**+0.3**
SKR				*e*S		**Sn**	**07 23 50.0**	**+1.5**
SKR				pmax		pmax		
	comp=Z,40nm,0.5s							
SKR				smax				
	comp=E,1µm,8.0s							
SKR				smax				
	comp=N,50nm,0.5s							
SKR				smax				
	comp=E,100nm,0.5s							
SKR				smax				
	comp=Z,110nm,1.0s							
SKR				MLR		MLR		
	comp=N,700nm,14.0s							
SKR				MLR		MLR		
	comp=E,1µm,14.0s							
SKR				MLR		MLR		
	comp=Z,1µm,14.0s							
YUK	**Yuzh-Kuril'sk**	**5.44**	**244**	*e*PN		**Pn**	**07 23 01.1**	**-5.4**
YUK				pmax		pmax		
	comp=N,55nm,0.4s							
YUK				pmax		pmax		
	comp=Z,191nm,0.4s							
YUK				pmax		pmax		
	comp=E,99nm,0.5s							
YUK				MLR		MLR		
	comp=Z,400nm,20.0s							
YUK				MLR		MLR		
	comp=N,200nm,10.0s							
YUK				MLR		MLR		
	comp=E,1µm,20.0s							
PETK	**Petropavlovsk-**	**7.26**	**25**	P		**Pn**	**07 23 31.3**	**-0.1**
PETK	**Petropavlovsk-**	**7.26**	**25**	P		**Pn**	**07 23 31.3**	**-0.1**
	comp=E,1.2nm,0.3s,baz=173,slow=12,SNR=33							
PETK	**Petropavlovsk-**	**7.26**	**25**	PN		**Pn**	**07 23 31.3**	**-0.1**
PETK				pmax		pmax		
	comp=Z,1.0nm,0.3s							
ASAJ	**Asahikawa**	**7.51**	**254**	P		**Pn**	**07 23 35.6**	**+0.7**
	comp=Z,2.3nm,0.3s,baz=187,slow=16,SNR=5.2							
ASAJ	**Asahikawa**	**7.51**	**254**	PN		**Pn**	**07 23 35.6**	**+0.7**
ASAJ				pmax		pmax		
	comp=Z,2.0nm,0.3s							
ERM	**Erimo**	**8.22**	**239**	*e*Pn		**Pn**	**07 23 39.4**	**-5.2**
ERM				*e*Sn		**Sn**	**07 25 09.0**	**-7.0**
ERM	**Erimo**	**8.22**	**239**	*i* PN		**Pn**	**07 23 43.0**	**-1.6**
HABR	**Khabarovsk**	**12.03**	**285**	PN		**Pn**	**07 24 33.0**	**-3.7**
HABR				pmax		pmax		
	comp=Z,37nm,1.6s							
HABR				MLR		MLR		
	comp=Z,240nm,16.0s							
MJAR	**Matsushiro Arr**	**14.75**	**232**	P		**Pn**	**07 25 14.6**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=26,slow=12,SNR=4.4							
CN2	**Changchun**	**19.33**	**271**	*e*P		**Pn**	**07 26 08.3**	**-2.2**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.8s							
KSRS	**Korea Array**	**20.45**	**252**	P		**P**	**07 26 22.9**	**+1.6**
	comp=Z,2.3nm,0.8s,baz=56,slow=13,SNR=3.6							
KSRS	**Korea Array**	**20.45**	**252**	P		**P**	**07 26 22.9**	**+1.6**
KSRS				pmax		pmax		
	comp=Z,2.0nm,0.8s							
BILL	**Bilibino**	**22.58**	**13**	*i* P		**P**	**07 26 43.3**	**-0.4**
BILL				*e**PP			07 26 51.7	
BILL				*e*S		**S**	**07 30 47.8**	**+0.1**
BILL				pmax		pmax		
	comp=Z,4.0nm,0.5s,mb4.1							
BILL				MLR		MLR		
	comp=Z,100nm,15.0s,MS3.4							
BJI	**Beijing**	**27.16**	**269**	P		pP	07 27 39.1	-0.1
BJI				pmax		pmax		
	comp=Z,9.0nm,0.7s,mb4.4							
BJI				LR		LR		
	comp=N,180nm,20.6

NOA pmax pmax
comp=Z,1.0nm,0.5s
WRA Warramunga Arr 68.30 199 P **P** **07 32 44.3 +0.6**
comp=Z,0.8nm,0.9s,mb3.7,baz=19,slow=6.8,SNR=3.1
WRA Warramunga Arr 68.30 199 P **P** **07 32 44.3 +0.6**
WRA pmax pmax
comp=Z,1.0nm,1.0s
HFS Hagfors 68.46 339 P **P** **07 32 43.9 -0.4**
comp=Z,2.2nm,0.6s,mb4.4,baz=46,slow=6.4,SNR=16
HFS Hagfors 68.46 339 P **P** **07 32 43.9 -0.4**
HFS pmax pmax
comp=Z,2.0nm,0.6s
ASAR Alice Springs 71.99 198 P **P** **07 33 07.0 +0.8**
comp=Z,0.3nm,0.7s,mb3.4,baz=18,slow=6.0,SNR=4.1
ASAR Alice Springs 71.99 198 *eP* **P** **07 33 08.9 +2.6**
EKA Eskdalemuir Ar 76.38 346 P **P** **07 33 33.2 +1.7**
comp=Z,0.9nm,0.7s,mb3.8,baz=25,slow=5.2,SNR=5.1
EKA Eskdalemuir Ar 76.38 346 P **P** **07 33 33.3 +1.8**
EKA pmax pmax
comp=Z,1.0nm,0.7s
TXAR Lajitas Array 77.83 60 P **P** **07 33 38.0 -2.1**
comp=Z,0.5nm,0.5s,mb3.7,baz=302,slow=4.5,SNR=13
TXAR Lajitas Array 77.83 60 P **P** **07 33 38.1 -2.1**
TXAR pmax pmax
comp=Z,1.0nm,0.5s
PLCA Paso Flores 148.51 95 PKPbc PKPbc 07 41 29.6 +1.0
comp=Z,1.5nm,0.8s,baz=0.8,slow=2.5,SNR=4.2

ISCJB ***23*** *07:29:29.7±0.2, 43.26N±0.02×47.26E±0.02, h14km, mb4.3/19, MS3.2/6, Error ellipse: s-maj=2.3km s-min=2.1km az=24.7*
IDC ***23*** *07:29:30.7±0.8, 42.98N×47.21E, h15km±5km, mb4.0/11, mb1 4.0/15, mb1mx3.8/28, mbtmp4.0/15, ML4.1/2, MS3.1/12, Ms1 3.1/12, ms1mx2.8/44, Error ellipse: s-maj=16.6km s-min=8.1km az=131.0*
MOS ***23*** *07:29:30.1±2.1, 43.24N×47.45E, h12km, mb4.9/5, Error ellipse: s-maj=5.1km s-min=4.2km az=93.2*
MOS Felt (III) at Bogatyrevka, (II-III) at Makhachkala.
CSEM ***23*** *07:29:31.8±0.2, 43.17N×47.31E, h14km, mb4.3/6, Error ellipse: s-maj=5.0km s-min=4.6km az=77.0*
NEIC ***23*** *07:29:32.4±0.5, 43.38N×47.31E, h10km, mb4.7/6, Error ellipse: s-maj=10.6km s-min=6.1km az=161.0*
NNC ***23*** *07:29:44.2±4.5, 43.85N×48.54E, h0km, mb4.1, Error ellipse: s-maj=49.9km s-min=33.3km az=127.0*
ISC 23 07:29:30.6±0.5, 43°22N±0.03×47°25E±0.02, h6km±4km, h15km±.6km; pP-P, n195, σ1°48/259, mb4.3/19, MS3.2/6, 27C-19D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MAK	**Makhachkala**	**0.32**	**144**	⇓*i*	PG	**Pg**	**07 29 37.4**	**+0.6**
MAK				*i*			07 29 42.9	
MAK					pmax	pmax		
	comp=Z,2μm,0.1s							
MAK					pmax	pmax		
	comp=N,489nm,0.2s							
MAK					pmax	pmax		
	comp=E,1μm,0.2s							
MAK					smax			
	comp=E,29μm,0.6s							
MAK	**Makhachkala**	**0.32**	**144**	*i*	Pg	**Pg**	**07 29 37.4**	**+0.6**
	comp=E,2μm,0.1s							
MAK				*i*	Sg	**Sg**	**07 29 42.9**	**+2.0**
DBC	**Dubki**	**0.37**	**237**		Pg	**Pg**	**07 29 37.8**	**+0.1**
DBC	**Dubki**	**0.37**	**237**		Pg	**Pg**	**07 29 37.8**	**+0.1**
BUJR	**Buynaksk**	**0.41**	**195**	⇑*i*	PG	**Pg**	**07 29 38.0**	**-0.5**
BUJR				*e*	S	**Sg**	**07 29 44.5**	**+0.7**
BUJR					pmax	pmax		
	comp=Z,1μm,0.2s							
BUJR	**Buynaksk**	**0.41**	**195**	*i*	Pg	**Pg**	**07 29 38.0**	**-0.5**
	comp=E,1μm,0.2s							
BUJR				*e*	Sg	**Sg**	**07 29 44.5**	**+0.7**
DLMR	**Dylym**	**0.48**	**252**	*e*	PG	**Pg**	**07 29 40.0**	**+0.2**
DLMR				*i*	S	**Sg**	**07 29 48.4**	**+2.3**
DLMR	**Dylym**	**0.48**	**252**	*e*	Pg	**Pg**	**07 29 40.0**	**+0.2**
DLMR				*i*	Sg	**Sg**	**07 29 48.4**	**+2.3**
UNCR	**Uncukul**	**0.61**	**214**	⇓*i*	PG	**Pg**	**07 29 41.5**	**-0.8**
UNCR				*e*	S	**Sg**	**07 29 51.5**	**+1.4**
UNCR	**Uncukul**	**0.61**	**214**	*i*	Pg	**Pg**	**07 29 41.5**	**-0.8**
UNCR				*e*	Sg	**Sg**	**07 29 51.5**	**+1.4**
MNSR	**Manas**	**0.62**	**146**	*e*	PG	**Pg**	**07 29 41.5**	**-1.0**
MNSR				*e*	S	**Sg**	**07 29 52.0**	**+1.4**
MNSR					pmax	pmax		
	comp=Z,2μm,0.1s							
MNSR	**Manas**	**0.62**	**146**	*e*	Pg	**Pg**	**07 29 41.5**	**-1.0**
	comp=Z,2μm,0.1s							
MNSR				*e*	Sg	**Sg**	**07 29 52.0**	**+1.4**
SGKR	**Sergokala**	**0.82**	**158**		PG	**Pg**	**07 29 46.0**	**-0.3**
SGKR					S	**Sg**	**07 30 00.0**	**+3.2**
SGKR					pmax	pmax		
	comp=Z,2μm,0.2s							
SGKR	**Sergokala**	**0.82**	**158**		Pg	**Pg**	**07 29 46.0**	**-0.3**
	comp=Z,2μm,0.2s							
SGKR					Sg	**Sg**	**07 30 00.0**	**+3.2**
GNBR	**Gunib**	**0.86**	**194**	⇑*i*	PG	**Pg**	**07 29 43.3**	**-3.7**
GNBR					pmax	pmax		
	comp=Z,546nm,0.3s							
GNBR	**Gunib**	**0.86**	**194**	*i*	Pg	**Pg**	**07 29 43.3**	**-3.7**
	comp=Z,546nm,0.3s							
BTLR	**Botlikh**	**0.94**	**234**	⇑*i*	PG	**Pg**	**07 29 48.5**	**-0.1**
BTLR				*i*	S	**Sg**	**07 30 03.0**	**+2.2**
BTLR	**Botlikh**	**0.94**	**234**	*i*	Pg	**Pg**	**07 29 48.5**	**-0.1**
BTLR				*i*	Sg	**Sg**	**07 30 03.0**	**+2.2**
URKR	**Urkarakh**	**1.09**	**165**	⇓*i*	PG	**Pg**	**07 29 51.5**	**0.0**
URKR				*e*	S	**Sg**	**07 30 08.5**	**+2.9**
URKR	**Urkarakh**	**1.09**	**165**	*i*	Pg	**Pg**	**07 29 51.5**	**0.0**
URKR				*e*	Sg	**Sg**	**07 30 08.5**	**+2.9**
KMKR	**Kumukh**	**1.09**	**186**	⇑*i*	PG	**Pg**	**07 29 51.0**	**-0.6**
KMKR				*e*	S	**Sg**	**07 30 07.5**	**+1.8**
KMKR					pmax	pmax		
	comp=Z,2μm,0.4s							
KMKR	**Kumukh**	**1.09**	**186**	*i*	Pg	**Pg**	**07 29 51.0**	**-0.6**
	comp=Z,2μm,0.4s							
KMKR				*e*	Sg	**Sg**	**07 30 07.5**	**+1.8**
DRN	**Derbent**	**1.43**	**146**	⇑*i*	PG	**Pg**	**07 29 58.2**	**+0.2**
DRN				*e*	S	**Sg**	**07 30 18.2**	**+1.6**
DRN					pmax	pmax		
	comp=Z,759nm,0.3s							
DRN	**Derbent**	**1.43**	**146**	*i*	Pg	**Pg**	**07 29 58.2**	**+0.2**
	comp=Z,759nm,0.3s							
DRN				*e*	Sg	**Sg**	**07 30 18.2**	**+1.6**
AKT	**Akhty**	**1.77**	**168**	⇑*i*	PN	**Pg**	**07 30 02.0**	**-2.6**
AKT				*e*	S	**Sg**	**07 30 26.0**	**-1.6**
AKT	**Akhty**	**1.77**	**168**	*i*	Pn	**Pg**	**07 30 02.0**	**-2.6**
AKT				*e*	Sg	**Sg**	**07 30 26.0**	**-1.6**
VLKR	**Vladikavkaz**	**1.89**	**266**	⇑*i*	PN	**Pg**	**07 30 08.7**	**+1.8**
VLKR				*i*	S	**Sg**	**07 30 34.6**	**+3.2**
VLKR	**Vladikavkaz**	**1.89**	**266**	*i*	Pn	**Pg**	**07 30 08.7**	**+1.8**
VLKR				*i*	Sg	**Sg**	**07 30 34.6**	**+3.2**
TRKR	**Terskaya**	**1.90**	**286**	⇑*i*	PN	**Pn**	**07 30 07.2**	**+3.7**
TRKR	**Terskaya**	**1.90**	**286**	*i*	Pn	**Pn**	**07 30 07.2**	**+3.7**
BTKR	**Batakoyurt**	**1.98**	**275**	*e*	PN	**Pg**	**07 30 09.6**	**+1.0**
BTKR				*e*	S	**Sg**	**07 30 36.5**	**+2.2**
BTKR	**Batakoyurt**	**1.98**	**275**	*e*	Pn	**Pg**	**07 30 09.6**	**+1.0**
BTKR				*e*	Sb	**Sg**	**07 30 36.5**	**+2.2**
SEKA	**Sheki**	**2.01**	**181**		P	**Pn**	**07 30 08.4**	**+3.4**
	SNR=366							
KMSR	**Komsomolskaya**	**2.17**	**275**	⇓*i*	PN	**Pg**	**07 30 13.2**	**+1.1**
KMSR				*e*	S	**Sg**	**07 30 41.1**	**+0.9**
KMSR	**Komsomolskaya**	**2.17**	**275**	*i*	Pn	**Pg**	**07 30 13.2**	**+1.1**
KMSR				*e*	Sn	**Sg**	**07 30 41.1**	**+0.9**
ARNR	**Ardon**	**2.17**	**270**	⇑*i*	PN	**Pg**	**07 30 13.2**	**+1.0**
ARNR				*e*	S	**Sg**	**07 30 41.8**	**+1.4**
ARNR	**Ardon**	**2.17**	**270**	*i*	Pn	**Pg**	**07 30 13.2**	**+1.0**
ARNR				*e*	Sn	**Sg**	**07 30 41.8**	**+1.4**
LACR	**Lac**	**2.20**	**261**	⇑*i*	PN	**Pg**	**07 30 08.9**	**-3.9**
LACR				*i*	S	**Sg**	**07 30 38.2**	**-3.1**
LACR	**Lac**	**2.20**	**261**	*i*	Pn	**Pg**	**07 30 08.9**	**-3.9**
LACR				*i*	Sn	**Sg**	**07 30 38.2**	**-3.1**
PRTR	**Priterechnaya**	**2.23**	**285**	⇓*i*	PN	**Pg**	**07 30 13.3**	**+0.1**
PRTR				*e*	S	**Sg**	**07 30 41.3**	**-0.8**
PRTR	**Priterechnaya**	**2.23**	**285**	*i*	Pn	**Pg**	**07 30 13.3**	**+0.1**
PRTR				*e*	Sn	**Sg**	**07 30 41.3**	**-0.8**
DGRG	**David-gareji**	**2.25**	**219**		P	**Pg**	**07 30 10.4**	**-3.3**
DGRG					S	**Sg**	**07 30 40.2**	**-2.6**
KORR	**Kora**	**2.33**	**268**	⇑*i*	PN	**Pg**	**07 30 15.4**	**+0.1**
KORR				*e*	S	**Sg**	**07 30 45.8**	**+0.3**
KORR	**Kora**	**2.33**	**268**	*i*	Pn	**Pg**	**07 30 15.4**	**+0.1**
KORR				*e*	Sn	**Sg**	**07 30 45.8**	**+0.3**
MTA	**Mtatsminda**	**2.37**	**231**		P	**Pg**	**07 30 12.6**	**-3.5**
MTA					S	**Sg**	**07 30 44.4**	**-2.4**
TBLG	**Delisi**	**2.38**	**232**	*e*	PN	**Pg**	**07 30 12.9**	**-3.3**
TBLG				*e*	S	**Sg**	**07 30 43.4**	**-3.7**
TBLG	**Delisi**	**2.38**	**232**		P	**Pg**	**07 30 12.9**	**-3.3**
TBLG					S	**Sg**	**07 30 43.4**	**-3.7**
TBLG	**Delisi**	**2.38**	**232**	*e*	Pn	**Pg**	**07 30 12.9**	**-3.3**
TBLG				*e*	Sn	**Sg**	**07 30 43.4**	**-3.7**
ZEI	**Tsey**	**2.50**	**261**	⇓*i*	PN	**Pg**	**07 30 17.5**	**-1.0**
ZEI				*e*	S	**Sg**	**07 30 49.7**	**-1.2**
ZEI	**Tsey**	**2.50**	**261**	*i*	Pn	**Pg**	**07 30 17.5**	**-1.0**
ZEI				*e*	Sn	**Sg**	**07 30 49.7**	**-1.2**
LSNR	**Lesken**	**2.51**	**272**	⇑*i*	PN	**Pg**	**07 30 17.4**	**-1.3**
LSNR				*e*	S	**Sg**	**07 30 49.6**	**-1.6**
LSNR	**Lesken**	**2.51**	**272**	*i*	Pn	**Pg**	**07 30 17.4**	**-1.3**
LSNR				*e*	Sn	**Sg**	**07 30 49.6**	**-1.6**
GOR	**Gori**	**2.63**	**243**		P	**Pg**	**07 30 15.9**	**-5.0**
GOR					S	**Sg**	**07 30 51.7**	**-3.3**
GANJ	**Ganja**	**2.66**	**195**		P	**Pg**	**07 30 15.2**	**-6.4**
	SNR=86							
GANJ					S	**Sg**	**07 30 48.2**	**-7.9**
DIGR	**Digorskoe uzhe**	**2.71**	**264**	⇓*i*	PN	**Pg**	**07 30 20.9**	**-1.6**
DIGR				*e*	S	**Sg**	**07 30 55.0**	**-2.6**
DIGR	**Digorskoe uzhe**	**2.71**	**264**	*i*	Pn	**Pg**	**07 30 20.9**	**-1.6**
DIGR				*e*	Sn	**Sg**	**07 30 55.0**	**-2.6**
PYA	**Pyatigorsk**	**3.15**	**286**	*i*	PN	**Pn**	**07 30 22.7**	**+2.0**
PYA	**Pyatigorsk**	**3.15**	**286**	*i*	Pn	**Pn**	**07 30 22.7**	**+2.0**
BEYR	**Belyy Ugol+**	**3.32**	**285**	*i*	PN	**Pn**	**07 30 24.0**	**+1.0**
BEYR	**Belyy Ugol+**	**3.32**	**285**	*i*	Pn	**Pn**	**07 30 24.0**	**+1.0**
KIV	**Kislovodsk**	**3.40**	**284**	*e*	PN	**Pn**	**07 30 25.8**	**+1.7**
KIV	**Kislovodsk**	**3.40**	**284**	*i*	PN	**Pn**	**07 30 25.4**	**+1.3**
KIV				*e*	SS		07 31 19.5	
KIV					pmax	pmax		
	comp=Z,10.0nm,1.0s							
KIV					MLR	MLR		
	comp=N,100nm,15.0s							
KIV	**Kislovodsk**	**3.40**	**284**	*e*	Pn	**Pn**	**07 30 25.8**	**+1.7**
KIV				*e*	Sb	**Sb**	**07 31 19.5**	**+6.8**
	comp=N,100nm,15.0s							
GNI	**Garni**	**3.60**	**212**	*e*	Pn	**Pn**	**07 30 29.1**	**+2.2**
GNI					Sn	**Sn**	**07 31 05.0**	**-4.6**
GNI					Lg		07 31 19.3	
GNI					LR	LR	07 32 06.1	
GNI	**Garni**	**3.60**	**212**		Pn	**Pn**	**07 30 26.9**	**+0.1**
	comp=N,5.6nm,0.3s,baz=340,slow=9.1,SNR=6.4							
GNI					Sn	**Sn**	**07 31 05.0**	**-4.6**
	comp=N,6.3nm,0.3s,baz=339,slow=20,SNR=6.1							
GNI					Lg		07 31 19.3	
	comp=N,12nm,0.3s,baz=210,slow=22,SNR=5.5							
GNI					LR	LR	07 32 06.1	
	comp=N,297nm,20.6s,baz=39,slow=46							
GNI	**Garni**	**3.60**	**212**	*e*	PN	**Pn**	**07 30 29.1**	**+2.2**
GNI							07 31 19.3	
GNI	**Garni**	**3.60**	**212**	*e*	Pn	**Pn**	**07 30 29.1**	**+2.2**
GNI					Sn	**Sn**	**07 31 05.0**	**-4.6**
GLBA	**Clilabad**	**4.07**	**167**		P	**Pn**	**07 30 35.3**	**+2.0**
	SNR=12							
ANN	**Anapa**	**7.25**	**286**	*e*	P	**Pb**	**07 31 34.8**	**-2.0**
ANN					pmax	pmax		
	comp=Z,10.0nm,0.3s							
ANN					pmax	pmax		
	comp=N,5.0nm,0.4s							
ANN					pmax	pmax		
	comp=E,9.0nm,0.4s							
ANN	**Anapa**	**7.25**	**286**	*e*	P	**Pb**	**07 31 34.8**	**-2.0**
	comp=E,10.0nm,0.3s							
VRHR	**Novokhopersk**	**8.76**	**336**	*e*	P	**Pn**	**07 31 38.2**	**+0.5**
VRHR					pmax	pmax		
	comp=N,9.0nm,0.4s							
VRHR					pmax	pmax		
	comp=E,7.0nm,0.4s							
VRHR					pmax	pmax		
	comp=Z,4.0nm,0.4s							
VRHR	**Novokhopersk**	**8.76**	**336**	*e*	P	**Pn**	**07 31 38.2**	**+0.5**
VSR	**Storozhevoye**	**9.70**	**328**	*e*	P	**Pn**	**07 31 54.0**	**+3.4**
VSR				*e*	S	**Sn**	**07 33 43.0**	**+3.2**
VSR					pmax	pmax		
	comp=E,4.0nm,0.4s							
VSR					pmax	pmax		
	comp=Z,4.0nm,0.4s							
VSR					pmax	pmax		
	comp=N,1.0nm,0.2s							
VSR					smax			
	comp=N,30nm,0.9s							
VSR					smax			
	comp=E,70nm,0.9s							
VSR					smax			
	comp=Z,6.0nm,0.4s							
VSR	**Storozhevoye**	**9.70**	**328**	*e*	P	**Pn**	**07 31 54.0**	**+3.4**
	comp=Z,1.0nm,0.2s							
VSR				*e*	S	**Sn**	**07 33 43.0**	**+3.2**
	comp=Z,6.0nm,0.4s							
AKTK	**Aktyubinsk**	**10.31**	**42**		Pn	**Pn**	**07 31 59.5**	**+0.6**
AKTK					Sn	**Sn**	**07 33 46.8**	**-7.9**
AKTK					LR	LR	07 37 14.4	
AKTK	**Aktyubinsk**	**10.31**	**42**		Pn	**Pn**	**07 31 59.5**	**+0.6**
AKTO	**Aktyubinsk**	**10.31**	**42**		Pn	**Pn**	**07 31 59.5**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=217,slow=14,SNR=16							
AKTO					Sn	**Sn**	**07 33 46.8**	**-7.9**
	comp=Z,2.3nm,0.3s,baz=103,slow=23,SNR=9.5							
AKTO					LR	LR	07 37 14.4	
	comp=Z,107nm,20.9s,baz=86,slow=44							
AKTO	**Aktyubinsk**	**10.31**	**42**		P	**Pn**	**07 31 59.5**	**+0.6**
AKTO							07 33 46.8	
AKTO					pmax	pmax		
	comp=Z,1.0nm,0.3s							
AKTO					smax			
	comp=N,2.0nm,0.3s							
AKTO	**Aktyubinsk**	**10.31**	**42**	⇓	P	**Pn**	**07 32 00.2**	**+1.3**
	comp=N,1.0nm,0.5s							
AKTO				⇑	S	**Sn**	**07 33 46.2**	**-8.5**
	comp=N,4.5nm,0.8s							
AKTO	**Aktyubinsk**	**10.31**	**42**		P	**Pn**	**07 32 00.2**	**+1.3**
	comp=N,1.0nm,0.5s							
AB31	**Akbulak array**	**10.66**	**51**	⇑	P	**Pn**	**07 32 04.5**	**+0.8**
	comp=N,1.6nm,0.3s,baz=247,slow=13,SNR=29							
AB31				⇓	S	**Sn**	**07 33 57.1**	**-6.2**
	comp=N,22nm,0.6s,baz=240,slow=23							
AB31	**Akbulak array**	**10.66**	**51**		P	**Pn**	**07 32 04.5**	**+0.8**
	comp=N,1.6nm,0.3s,baz=247,SNR=29							
ABKAR	**Akbulak array**	**10.66**	**51**	*e*	Pn	**Pn**	**07 32 04.4**	**+0.7**
	comp=N,4.3nm,0.4s							
ABKAR				*e*	Sn	**Sn**	**07 33 58.2**	**-5.1**
ABKAR	**Akbulak array**	**10.66**	**51**	*e*	Pn	**Pn**	**07 32 04.4**	**+0.7**
	comp=N,4.3nm,0.4s							
BRTR	**Keskin Array B**	**10.79**	**256**		Pn	**Pn**	**07 32 07.2**	**+1.6**
	comp=N,0.1nm,0.3s,baz=302,slow=14,SNR=2.3							
BRTR	**Keskin Array B**	**10.79**	**256**		Pn	**Pn**	**07 32 07.2**	**+1.6**
ASF	**Jabal al Asfar**	**13.73**	**220**		LR	LR	07 39 01.2	
	comp=N,49nm,19.3s,baz=6.1,slow=42							
OBN	**Obninsk**	**13.78**	**333**	*i*	P	**Pn**	**07 32 47.4**	**+1.1**
OBN					pmax	pmax		
	comp=Z,4.0nm,0.7s							
MMAI	**Mount Meron Ar**	**13.80**	**226**		LR	LR	07 38 39.8	
	comp=Z,47nm,18.3s,baz=20,slow=40							
MOS	**Moscow**	**13.99**	**337**	*e*	P	Px	07 32 59.3	
MOS					pmax	pmax		
	comp=Z,59nm,0.6s							
AKASG	**Malin Array Be**	**14.38**	**308**		Pn	**Pn**	**07 32 53.6**	**-0.9**
	comp=Z,1.8nm,0.3s,baz=103,slow=11,SNR=10							
AKASG	**Malin Array Be**	**14.38**	**308**		P	**Pn**	**07 32 53.6**	**-0.9**
AKASG					pmax	pmax		
	comp=Z,2.0nm,0.3s							
AKASG	**Malin Array Be**	**14.38**	**308**		P	**Pn**	**07 32 53.6**	**-0.9**
AKASG					pmax	pmax		
	comp=Z,2.0nm,0.3s							
AKASG	**Malin Array Be**	**14.38**	**308**		Pn	**Pn**	**07 32 53.6**	**-0.9**
KIEV	**Kiev**	**14.39**	**308**	*e*	Pn	**Pn**	**07 32 54.2**	**-0.4**
	comp=Z,11nm,0.7s							
KIEV	**Kiev**	**14.39**	**308**	*e*	P	**Pn**	**07 32 54.2**	**-0.4**
KIEV					pmax	pmax		
	comp=Z,11nm,0.7s							
KIEV	**Kiev**	**14.39**	**308**	*e*	P	**Pn**	**07 32 54.2**	**-0.4**
KIEV					pmax	pmax		
	comp=Z,11nm,0.7s							
KIEV	**Kiev**	**14.39**	**308**	*e*	Pn	**Pn**	**07 32 54.2**	**-0.4**
	comp=Z,11nm,0.7s							
VRI	**Vrincioaia**	**14.87**	**287**	⇑	P	**Pn**	**07 33 05.2**	**+3.9**
VRI	**Vrincioaia**	**14.87**	**287**	⇑	P	**Pn**	**07 33 05.2**	**+4.0**
PLOR	**Plostina**	**14.92**	**287**	⇓	P	**Pn**	**07 33 00.6**	**-1.3**
PLOR	**Plostina**	**14.92**	**287**	⇓	P	**Pn**	**07 33 00.6**	**-1.3**
PLOR	**Plostina**	**14.92**	**287**		P	**Pn**	**07 33 00.6**	**-1.3**
TESR		**14.97**	**290**	⇓	P	**Pn**	**07 33 01.9**	**-0.7**
TESR		**14.97**	**290**	⇓	P	**Pn**	**07 33 01.9**	**-0.7**
ARU	**Arti**	**15.07**	**25**	*e*	Pn	**Pn**	**07 33 01.5**	**-2.4**
	comp=Z,8.6nm,0.4s							
ARU	**Arti**	**15.07**	**25**	*c*	P	**Pn**	**07 33 02.3**	**-1.6**
ARU					S	**Sn**	**07 35 49.3**	**-1.7**
ARU					pmax	pmax		
	comp=Z,4.0nm,0.6s							
MLR	**Muntele Rosu**	**15.41**	**286**		Pn	**Pn**	**07 33 12.5**	**+4.1**
	comp=Z,0.1nm,0.3s,baz=186,slow=3.0,SNR=2.5							
MLR	**Muntele Rosu**	**15.41**	**286**	⇑	P	**Pn**	**07 33 16.5**	**+8.1**
MLR	**Muntele Rosu**	**15.41**	**286**		P	**Pn**	**07 33 12.5**	**+4.1**
VOIR		**16.04**	**286**	⇓	P	**Pn**	**07 33 22.6**	**+6.0**
VOIR		**16.04**	**286**	⇓	P	**Pn**	**07 33 22.6**	**+6.0**
VOIR		**16.04**	**286**		P	**Pn**	**07 33 22.6**	**+6.0**
SVE	**Sverdlovsk**	**16.06**	**27**	*e*	P	**Pn**	**07 33 16.3**	**-0.5**
SVE				*e*	S	**Sn**	**07 36 04.0**	**-11**
SVE					pmax	pmax		
	comp=Z,13nm,0.5s							
SVE	**Sverdlovsk**	**16.06**	**27**	*e*	P	**Pn**	**07 33 16.3**	**-0.5**
	comp=Z,13nm,0.5s							
SVE				*e*	S	**Sn**	**07 36 04.0**	**-11**
BURAR	**Bucovina Array**	**16.07**	**293**	⇑	P	**Pn**	**07 33 16.9**	**0.0**
BURAR	**Bucovina Array**	**16.07**	**293**	⇑	P	**Pn**	**07 33 16.9**	**-0.1**
EIL	**Elat**	**16.73**	**220**		Pn	**Pn**	**07 33 29.9**	**+4.4**
	comp=Z,0.3nm,0.3s,baz=350,slow=6.2,SNR=7.8							
EIL					LR	LR	07 39 58.6	
	comp=Z,52nm,19.8s,baz=257,slow=38							
KK31	**Karatay Array**	**16.96**	**82**	⇑	P	**Pn**	**07 33 28.0**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=284,slow=13,SNR=18							
KK31					S	**Sn**	**07 36 31.9**	**-5.3**
	comp=Z,2.7nm,0.7s,baz=277,slow=24,SNR=2.8							
KK31	**Karatay Array**	**16.96**	**82**		P	**Pn**	**07 33 28.0**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=284,SNR=18							
SOKR	**Solikamsk**	**17.39**	**16**	⇑	P	**Pn**	**07 33 31.4**	**-2.2**
SOKR					S	**Sn**	**07 36 36.6**	**-11**
SOKR					pmax	pmax		
	comp=Z,20nm,1.4s							
ZRNK	**Zerenda**	**17.43**	**48**	⇓	P	**Pn**	**07 33 32.0**	**-2.1**
	comp=Z,8.2nm,0.8s							
ZRNK				⇑	S	**Sn**	**07 36 35.4**	**-13**
	comp=Z,18nm,1.3s							
BRVK	**Borovoye**	**18.18**	**49**	*e*	P	**Pn**	**07 33 43.2**	**-0.1**
	comp=Z,9.4nm,0.8s							
BRVK	**Borovoye**	**18.18**	**49**	*e*	P	**Pn**	**07 33 43.2**	**-0.2**
BRVK					pmax	pmax		
	comp=Z,9.0nm,0.8s							
BRVK	**Borovoye**	**18.18**	**49**	⇓	P	**Pn**	**07 33 43.9**	**+0.6**
	comp=Z,10nm,0.7s							
BRVK				⇓	S	**Sn**	**07 36 54.8**	**-11**
	comp=Z,19nm,1.1s							
BRVK	**Borovoye**	**18.18**	**49**		P	**Pn**	**07 33 43.9**	**+0.5**
	comp=Z,10nm,0.7s							
BVA0	**Borovoye Array**	**18.22**	**49**	⇑	P	**Pn**	**07 33 43.5**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=237,slow=14							
BVA0				⇓	S	**Sn**	**07 36 55.6**	**-12**
	comp=Z,1.8nm,0.8s							
BVAR	**Borovoye Array**	**18.22**	**49**		Pn	**Pn**	**07 33 41.6**	**-2.3**
	comp=Z,0.8nm,0.3s,baz=245,slow=13,SNR=13							
BVAR					Sn	**Sn**	**07 36 58.5**	**-8.9**
	comp=Z,1.3nm,0.3s,baz=247,slow=26,SNR=6.6							
BVAR	**Borovoye Array**	**18.22**	**49**		P	**Pn**	**07 33 41.6**	**-2.3**
BVAR							07 36 58.5	
BVAR					pmax	pmax		
	comp=Z,1.0nm,0.3s							
BVAR					smax			
	comp=N,1.0nm,0.3s							
BVAR	**Borovoye Array**	**18.22**	**49**		P	**Pn**	**07 33 43.5**	**-0.4**
	comp=N,1.0nm,0.6s							
KLMR	**Klimovskoe**	**18.27**	**348**	*e*	P	**Pn**	**07 33 41.1**	**-3.3**
KLMR				*e*	S	**Sn**	**07 36 57.6**	**-11**
KLMR					pmax	pmax		
	comp=Z,30nm,1.9s							
VOSK	**Vostochnaya**	**18.44**	**51**	⇑	P	**Pn**	**07 33 45.8**	**-0.8**
	comp=Z,7.8nm,0.9s							
VOSK				⇓	S	**Sn**	**07 36 59.7**	**-13**
	comp=Z,12nm,1.4s							
VOSK	**Vostochnaya**	**18.44**	**51**		P	**Pn**	**07 33 45.8**	**-0.8**
	comp=Z,7.8nm,0.9s							
SUW	**Suwalki**	**19.13**	**313**	*e*	P	**Pn**	**07 33 53.7**	**-1.3**
SUW	**Suwalki**	**19.13**	**313**	*e*	P	**Pn**	**07 33 53.7**	**-1.3**
PSZ	**Piszkesteto**	**19.67**	**293**	*e*	P	**Pn**	**07 34 01.8**	**+0.3**
	comp=Z,7.5nm,0.8s							
PSZ	**Piszkesteto**

SPITS				*PP	pP	07 36 46.9	+3.4	
SPITS				pmax	pmax			
	comp=Z,5.0nm,0.6s							
SPITS	**Spitsbergen Ar**	**37.15**	**350**	P	**P**	**07 36 42.9**	**+1.3**	
SPITS				pP	pP	07 36 46.9	+3.4	
SONM	**Songino Array**	**40.81**	**62**	LR	LR	07 56 00.5		
	comp=Z,112nm,18.5s,MS3.8,baz=157,slow=39							
TORD	**Torodi Ar. Bea**	**49.24**	**247**	P	**P**	**07 38 18.2**	**-1.8**	
	comp=Z,5.7nm,0.8s,mb4.7,baz=36,slow=7.7,SNR=22							
TORD				pP	pP	07 38 22.7	+0.8	
	comp=Z,5.4nm,0.8s,baz=40,slow=6.1,SNR=19							
CMAR	**Chiang Mai Arr**	**49.84**	**103**	P	**P**	**07 38 22.1**	**-2.4**	
	comp=Z,0.8nm,0.4s,mb4.1,baz=313,slow=8.8,SNR=4.2							
CMAR	**Chiang Mai Arr**	**49.84**	**103**	P	**P**	**07 38 22.1**	**-2.5**	
DBIC	**Dimbokro**	**58.35**	**247**	P	**P**	**07 39 24.1**	**-2.6**	
DBIC				pP	pP	07 39 28.5	-0.1	
DBIC	**Dimbokro**	**58.35**	**247**	P	**P**	**07 39 24.1**	**-2.6**	
	comp=Z,5.3nm,0.6s,mb4.8,baz=1.7,slow=8.1,SNR=9.5							
DBIC				pP	pP	07 39 28.5	-0.1	
	comp=Z,5.3nm,0.6s,baz=40,slow=7.1,SNR=2.9							
DBIC	**Dimbokro**	**58.35**	**247**	P	**P**	**07 39 24.2**	**-2.5**	
DBIC				*PP	pP	07 39 28.5	-0.1	
DBIC				pmax	pmax			
	comp=Z,5.0nm,0.6s							
DBIC	**Dimbokro**	**58.35**	**247**	P	**P**	**07 39 24.1**	**-2.6**	
TIC	**Toumodi**	**58.48**	**247**	*eP*	**P**	**07 39 29.9**	**+2.3**	
	comp=Z,24nm,0.9s,mb5.2							
TIC	**Toumodi**	**58.48**	**247**	*eP*	**P**	**07 39 29.9**	**+2.3**	
TIC				pmax	pmax			
	comp=Z,24nm,0.9s,mb5.2							
TIC	**Toumodi**	**58.48**	**247**	*eP*	**P**	**07 39 29.9**	**+2.3**	
	comp=Z,24nm,0.9s,mb5.2							
KIC	**Kosan Boka**	**58.50**	**247**	*eP*	**P**	**07 39 30.1**	**+2.3**	
	comp=Z,57nm,1.4s,mb5.4							
LIC	**Lamto**	**58.79**	**247**	*eP*	**P**	**07 39 32.1**	**+2.3**	
	comp=Z,47nm,0.9s,mb5.5							
KSRS	**Korea Array**	**59.50**	**66**	LR	LR	08 08 19.5		
	comp=Z,38nm,18.2s,MS3.6,baz=285,slow=39							

IDC ***23*** *07:35:53.7±1.3, 4.°29S×102.°41E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.8/19, mbtmp3.9/8, Error ellipse: s-maj=74.9km s-min=17.8km az=52.0*

ISCJB ***23*** *07:35:57.6±1.3, 4.°16S±0.°10×102.°63E±0.°10, h32km±7km, mb3.8/8, Error ellipse: s-maj=22.1km s-min=7.2km az=136.3*

DJA ***23*** *07:35:59, 4.°11S×102.°80E, h10km, MLv4.0/7*

ISC 23 07:35:58.4±1.3, **4.°14S**±0.°09×**102.°7E**±0.°1, **h24**km±8km, **n15, σ1°35/18, mb3.8/8, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**0.36**	**128**	P	**Pb**	**07 36 05.3**	**-1.0**
KSI	**Kapahiang**	**0.49**	**351**	P	**Pb**	**07 36 08.1**	**-0.3**
KSI				S	**Sb**	**07 36 15.7**	**+0.5**
MDSI	**Maura Dua**	**1.55**	**103**	P	**Pn**	**07 36 22.4**	**-2.0**
MDSI				S	**Sn**	**07 36 42.6**	**-1.1**
KASI	**Kota Agung**	**2.29**	**127**	P	**Pn**	**07 36 36.2**	**+1.6**
KASI				S	**Sn**	**07 37 03.9**	**+2.0**
KLI	**Kotabumi**	**2.30**	**108**	P	**Pn**	**07 36 37.7**	**+3.0**
SDSI	**Sungai Dareh**	**3.42**	**339**	P	**Pn**	**07 36 53.7**	**+3.6**
PDSI	**Padang**	**3.89**	**325**	P	**Pn**	**07 37 00.6**	**+4.0**
CMAR	**Chiang Mai Arr**	**22.75**	**351**	P	**P**	**07 41 00.6**	**+1.8**
	0.8nm,0.5s,mb3.4,baz=185,slow=8.9,SNR=3.6						
WRA	**Warramunga Arr**	**34.62**	**120**	P	**P**	**07 42 45.4**	**-0.5**
	0.4nm,0.4s,mb3.7,baz=302,slow=9.0,SNR=4.3						
ASAR	**Alice Springs**	**35.85**	**126**	P	**P**	**07 42 55.6**	**-0.8**
	0.6nm,0.7s,mb3.6,baz=296,slow=7.6,SNR=7.0						
ASAR				PcP	PcP	07 45 23.6	0.0
	0.3nm,0.5s,baz=314,slow=2.6,SNR=5.1						
STKA	**Stephens Creek**	**45.75**	**132**	P	**P**	**07 44 18.8**	**+0.8**
	2.4nm,0.5s,mb4.4,baz=58,slow=8.9,SNR=13						
MKAR	**Makanchi Array**	**53.82**	**343**	P	**P**	**07 45 17.5**	**-1.6**
	0.5nm,0.6s,mb3.6,baz=148,slow=7.9,SNR=5.2						
ZALV	**Zalesovo Beam**	**59.77**	**348**	P	**P**	**07 46 00.3**	**-0.9**
	0.4nm,0.3s,mb3.9,baz=146,slow=5.3,SNR=2.8						
BRTR	**Keskin Array B**	**76.72**	**312**	P	**P**	**07 47 46.5**	**-1.3**
	0.8nm,0.6s,mb3.8,baz=134,slow=7.1,SNR=5.5						
FINES	**FINESS Array B**	**87.23**	**332**	P	**P**	**07 48 42.8**	**+0.4**
	0.6nm,0.6s,mb4.0,baz=113,slow=29,SNR=3.6						

BJI ***23*** *07:45:13.4, 44.°46N×29.°12W, h8km, mB5.3/9, mb5.0/17, Ms4.9/7, Ms7 4.7/7*

ISCJB ***23*** *07:45:16.3±0.1, 44.°30N±0.°03×28.°21W±0.°02, h10km, mb4.7/135, MS4.2/47, Error ellipse: s-maj=4.1km s-min=1.8km az=6.9*

IDC ***23*** *07:45:16.7±0.5, 44.°41N×28.°24W, h0km, mb4.3/25, mb1 4.4/27, mb1mx4.4/35, mbtmp4.3/27, ML4.2/2, MS4.2/31, Ms1 4.2/31, ms1mx4.1/34, Error ellipse: s-maj=15.0km s-min=11.2km az=0.0*

MOS ***23*** *07:45:16.5±0.8, 44.°38N×28.°22W, h10km, mb4.9/60, MS4.1/15, Error ellipse: s-maj=7.3km s-min=4.2km az=161.9*

NEIC ***23*** *07:45:18.5±0.1, 44.°40N×28.°19W, h10km, mb4.8/122, Error ellipse: s-maj=5.9km s-min=2.0km az=184.0*

CSEM ***23*** *07:45:18.1±0.1, 44.°34N×28.°18W, h10km, mb4.8/88, Ms4.4, Error ellipse: s-maj=4.6km s-min=2.6km az=2.0*

GCMT ***23*** *07:45:20.3±0.2, 44.°43N×28.°15W, h12km, MW5.0, Moment Tensor Solution. s39,c54; s88,c143; Moment tensor: Scale 10^16 Nm; Mrr=3.94±.08; Mθθ=0.29±.08; Mφφ=3.64±.06; Mrθ=1.11±.30; Mrφ=0.50±.06; Mθφ=-0.42±.22; Best double couple: Mo=4.00000×10^16 NP1:φ=202.00000°, δ=45.00000°, λ=-69.00000°. NP2:φ=354.00000°, δ=49.00000°, λ=-109.00000°. Principal axes: T 3.7200, Plg=2.0000°, Azm=98.0000°; N 0.5200, Plg=14.0000°, Azm=7.0000°; P =-4.2500, Plg=75.0000°, Azm=195.0000°; Data Used: lI IU CN G IC.*

PDA ***23*** *07:45:24.4±1.2, 44.°18N×27.°40W, h5km, ML4.7 Error ellipse: s-maj=17.3km s-min=6.6km az=81.0*

ISC 23 07:45:18.4±0.1, **44.°33N**±0.°03×**28.°16W**±0.°02, **h10**km, **(h15**km±1.2km**:pP-P), n836, σ0°80/818, mb4.7/135, MS4.2/47, 126C-134D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROSA	**Rosais**	**5.61**	**181**	*eP*	**Pn**	**07 46 48.6**	**+6.8**
PMAN	**Manadas**	**5.69**	**179**	*eP*	**Pn**	**07 46 43.9**	**+0.9**
PMAN				*eS*	**Sn**	**07 47 43.4**	**-4.9**
PMAN				A		07 47 48.9	
	26nm,0.3s						
PMAN	**Manadas**	**5.69**	**179**	*eP*	**Pn**	**07 46 43.9**	**+0.9**
PMAN				*eS*	**Sn**	**07 47 43.4**	**-4.9**
PCED	**Cedros**	**5.71**	**184**	*eP*	**Pn**	**07 46 44.0**	**+0.8**
PCED	**Cedros**	**5.71**	**184**	*eP*	**Pn**	**07 46 44.0**	**+0.8**
ADH	**Angra Heroismo**	**5.71**	**173**	*eP*	**Pn**	**07 46 42.3**	**-0.9**
ADH				*eS*	**Sn**	**07 47 42.1**	**-6.7**
ADH				A		07 47 47.9	
	48nm,0.4s						
ADH	**Angra Heroismo**	**5.71**	**173**	*eP*	**Pn**	**07 46 42.3**	**-0.9**
ADH				*eS*	**Sn**	**07 47 42.1**	**-6.7**
PCAN	**Candelaria**	**5.87**	**183**	*eP*	**Pn**	**07 46 43.7**	**-1.7**
PSET	**Sete Cidades**	**6.75**	**163**	*eP*	**Pn**	**07 46 56.7**	**-0.9**
PSET				*eS*	**Sn**	**07 48 05.2**	**-9.3**
PSET				A		07 48 12.4	
	4.3nm,0.3s						
PSET	**Sete Cidades**	**6.75**	**163**	*eP*	**Pn**	**07 46 56.7**	**-0.9**
PSET				*eS*	**Sn**	**07 48 05.2**	**-9.3**
PDA	**Ponta Delgada**	**6.84**	**163**	*eP*	**Pn**	**07 46 57.7**	**-1.0**
PDA	**Ponta Delgada**	**6.84**	**163**	*eP*	**Pn**	**07 46 57.7**	**-1.0**
GRON	**Grota Negra**	**6.85**	**162**	*eP*	**Pn**	**07 46 57.7**	**-1.1**
GRON				*eS*	**Sn**	**07 48 07.7**	**-9.1**
GRON				A		07 48 14.2	
	3.3nm,0.1s						
BART	**Pico Bartolome**	**6.92**	**160**	*eP*	**Pn**	**07 46 58.6**	**-1.3**
BART				*eS*	**Sn**	**07 48 08.2**	**-10**
BART				A		07 48 13.3	
	18nm,0.3s						
BART	**Pico Bartolome**	**6.92**	**160**	*eP*	**Pn**	**07 46 58.6**	**-1.3**
BART				*eS*	**Sn**	**07 48 08.2**	**-10**
PSMA	**Santa Maria**	**7.68**	**162**	*eP*	**Pn**	**07 47 09.1**	**-1.1**
PSMA				*eS*	**Sn**	**07 48 27.3**	**-10**
PSMA				A		07 48 31.9	
	5.7nm,0.1s						
PSMN	**Pico do Norte,**	**7.69**	**161**	*eP*	**Pn**	**07 47 09.1**	**-1.2**
PSMN				*eS*	**Sn**	**07 48 27.6**	**-10**
PSMN	**Pico do Norte,**	**7.69**	**161**	*eP*	**Pn**	**07 47 09.1**	**-1.2**
PSMN				*eS*	**Sn**	**07 48 27.6**	**-10**
EMAZ	**Mazaricos**	**13.96**	**89**	P	**Pn**	**07 48 32.3**	**-3.9**
	83nm,1.0s						

STS	**Santiago**	**14.28**	**89**	P	**Pn**	**07 48 36.6**	**-3.9**	
	43nm,0.4s							
STS	**Santiago**	**14.28**	**89**	P	**Pn**	**07 48 36.6**	**-3.9**	
STS				pmax	pmax			
	comp=Z,43nm,0.4s							
EZAM	**Zamans**	**14.35**	**92**	P	**Pn**	**07 48 37.1**	**-4.5**	
	comp=Z,58nm,0.8s							
EZAM	**Zamans**	**14.35**	**92**	P	**Pn**	**07 48 37.1**	**-4.4**	
EZAM				pmax	pmax			
	comp=Z,58nm,0.8s							
ELOB	**Lobios**	**14.88**	**93**	P	**Pn**	**07 48 46.0**	**-2.8**	
	comp=Z,145nm,2.0s							
PCAB	**Cabril**	**14.95**	**93**	*eP*	**Pn**	**07 48 46.9**	**-2.8**	
	comp=Z,53nm,1.8s							
PCAB	**Cabril**	**14.95**	**93**	*eP*	**Pn**	**07 48 46.9**	**-2.8**	
	comp=Z,53nm,1.8s							
PMAFR	**Mafra**	**15.09**	**104**	*eS*	Sx	07 52 09.5		
PMAFR	**Mafra**	**15.09**	**104**	*eS*	Sx	07 52 09.5		
LIS	**Lisbon**	**15.29**	**105**	*eP*	**Pn**	**07 48 55.4**	**+1.2**	
LIS				AMb	AMB	07 48 58.9		
	comp=Z,84nm,1.2s							
LIS	**Lisbon**	**15.29**	**105**	*eP*	**Pn**	**07 48 55.4**	**+1.2**	
	comp=Z,84nm,1.2s							
LIS	**Lisbon**	**15.29**	**105**	*eP*	**Pn**	**07 48 55.3**	**+1.1**	
LIS	**Lisbon**	**15.29**	**105**	*eP*	**Pn**	**07 48 55.4**	**+1.2**	
	comp=Z,84nm,1.2s							
PVIS	**Viseu**	**15.37**	**97**	*eP*	**Pn**	**07 48 54.8**	**-0.4**	
	comp=Z,57nm,1.8s							
PVIS	**Viseu**	**15.37**	**97**	*eP*	**Pn**	**07 48 54.8**	**-0.4**	
	comp=Z,57nm,1.8s							
ERUA	**La Rua**	**15.41**	**90**	P	**Pn**	**07 48 51.7**	**-4.0**	
	comp=Z,17nm,0.7s							
ERUA	**La Rua**	**15.41**	**90**	P	**Pn**	**07 48 51.7**	**-4.0**	
ERUA				pmax	pmax			
	comp=Z,17nm,0.7s							
MTE	**Manteigas**	**15.73**	**97**	*eS*	Sx	07 52 40.4		
MTE	**Manteigas**	**15.73**	**97**	*eS*	Sx	07 52 40.4		
ECAL	**Calabor**	**15.81**	**91**	P	**Pn**	**07 48 57.3**	**-3.7**	
	comp=Z,174nm,1.8s							
MVO	**Moncorvo**	**15.84**	**94**	*eS*	Sx	07 52 24.6		
MVO	**Moncorvo**	**15.84**	**94**	*eS*	Sx	07 52 24.6		
PBRG	**Braganca**	**15.85**	**92**	*eP*	**Pn**	**07 49 03.0**	**+1.5**	
	comp=Z,48nm,1.3s							
PBRG	**Braganca**	**15.85**	**92**	*eP*	**Pn**	**07 49 03.0**	**+1.5**	
	comp=Z,48nm,1.3s							
PCBR	**Castelo Branco**	**15.98**	**99**	*eP*	**Pn**	**07 49 08.3**	**+5.1**	
PCBR	**Castelo Branco**	**15.98**	**99**	*eP*	**Pn**	**07 49 08.3**	**+5.1**	
EVOP	**Sao Brissos**	**16.09**	**104**	*eP*	**Pn**	**07 49 05.8**	**+1.2**	
EVOP				AMb	AMB	07 49 10.2		
	comp=Z,45nm,1.2s							
EVOP	**Sao Brissos**	**16.09**	**104**	*eP*	**Pn**	**07 49 05.7**	**+1.1**	
EVOP	**Sao Brissos**	**16.09**	**104**	*eP*	**Pn**	**07 49 03.5**	**-1.1**	
	comp=Z,41nm,1.4s							
EVO	**Evora**	**16.16**	**104**	*eP*	**Pn**	**07 49 03.5**	**-2.1**	
	comp=Z,83nm,1.4s							
EVO				*eM*	LR	MLR		
	comp=Z,2μm,20.5s							
PMRV	**Marv??o**	**16.21**	**100**	*eS*	Sx	07 52 49.0		
PMRV	**Marv??o**	**16.21**	**100**	*eS*	Sx	07 52 49.0		
PFVI	**Vila Bisbo**	**16.30**	**110**	*eS*	Sx	07 52 44.9		
PFVI	**Vila Bisbo**	**16.30**	**110**	*eS*	Sx	07 52 44.9		
PESTR	**Estremoz**	**16.31**	**102**	*eP*	**Pn**	**07 49 10.7**	**+3.3**	
	comp=Z,40nm,1.6s							
PESTR				*eS*	Sn	07 52 32.8	+24	
PESTR	**Estremoz**	**16.31**	**102**	*eP*	**Pn**	**07 49 10.7**	**+3.3**	
	comp=Z,40nm,1.6s							
PESTR				*eS*	Sn	07 52 32.8	+24	
MORF	**Marmelete**	**16.33**	**109**	*eS*	Sx	07 52 53.8		
MORF	**Marmelete**	**16.33**	**109**	*eP*	**Pn**	**07 49 09.4**	**+1.7**	
MORF				*eS*	**Sn**	**07 52 13.4**	**+4.6**	
MORF	**Marmelete**	**16.33**	**109**	*eS*	Sx	07 52 53.8		
MESJ	**Messejana**	**16.35**	**106**	*eP*	**Pn**	**07 49 08.7**	**+0.7**	
MESJ				AMb	AMB	07 49 13.8		
	comp=Z,49nm,1.2s							
MESJ				*eS*	**Sn**	**07 52 13.9**	**+4.5**	
MESJ	**Messejana**	**16.35**	**106**	*eP*	**Pn**	**07 49 08.7**	**+0.7**	
	comp=Z,49nm,1.2s							
MESJ				*eS*	**Sn**	**07 52 13.9**	**+4.5**	
MESJ	**Messejana**	**16.35**	**106**	*eP*	**Pn**	**07 49 08.6**	**+0.6**	
MESJ				*eS*	**Sn**	**07 52 13.9**	**+4.5**	
MESJ	**Messejana**	**16.35**	**106**	*eP*	**Pn**	**07 49 08.7**	**+0.7**	
	comp=Z,49nm,1.2s							
MESJ				*eS*	**Sn**	**07 52 13.9**	**+4.5**	
PBEJ	**Beja**	**16.50**	**105**	*eP*	**Pn**	**07 49 14.1**	**+4.2**	
	comp=Z,83nm,1.5s							
PBEJ	**Beja**	**16.50**	**105**	*eP*	**Pn**	**07 49 14.1**	**+4.2**	
	comp=Z,83nm,1.5s							
PCVE	**Castro Verde**	**16.58**	**107**	*eS*	Sx	07 52 50.5		
PCVE	**Castro Verde**	**16.58**	**107**	*eS*	Sx	07 52 50.5		
EARI	**Arriondas**	**16.59**	**86**	P	**Pn**	**07 49 08.0**	**-2.9**	
	comp=Z,83nm,1.4s							
EBAD	**Badajoz**	**16.76**	**102**	P	**Pn**	**07 49 10.6**	**-2.6**	
	comp=Z,66nm,1.6s							
PBDV	**Barranco-do-Ve**	**16.85**	**108**	*eS*	Sx	07 53 09.2		
PBDV	**Barranco-do-Ve**	**16.85**	**108**	*eS*	Sx	07 53 09.2		
EPLA	**Plasencia**	**16.89**	**97**	P	**Pn**	**07 49 11.0**	**-3.8**	
	comp=Z,145nm,2.3s							
EPLA	**Plasencia**	**16.89**	**97**	P	**Pn**	**07 49 11.0**	**-3.8**	
EPLA				pmax	pmax			
	comp=Z,145nm,2.3s							
PVAQ	**Vaqueiros**	**16.91**	**107**	*eS*	Sx	07 52 54.4		
PVAQ	**Vaqueiros**	**16.91**	**107**	*eS*	Sx	07 52 54.4		
PBAR	**Barrancos**	**17.01**	**104**	*eP*	**Pn**	**07 49 15.6**	**-0.7**	
	comp=Z,50nm,1.6s							
PBAR				*eS*	Sn	07 52 59.8	+34	
PBAR	**Barrancos**	**17.01**	**104**	*eP*	**Pn**	**07 49 15.6**	**-0.7**	
	comp=Z,50nm,1.6s							
PBAR				*eS*	Sn	07 52 59.8	+34	
EGRO	**El Granado**	**17.01**	**106**	P	**Pn**	**07 49 14.6**	**-1.8**	
	comp=Z,174nm,2.0s							
EMIN	**Mina Concepcio**	**17.46**	**105**	P	**Pn**	**07 49 20.5**	**-1.4**	
	comp=Z,132nm,1.5s							
ROSF	**Rostrenen**	**17.62**	**68**	*eP*	**Pn**	**07 49 22.5**	**-1.3**	
	comp=Z,256nm,1.9s							
ROSF	**Rostrenen**	**17.62**	**68**	*eP*	**Pn**	**07 49 22.5**	**-1.3**	
	comp=Z,128nm,1.9s							
ROSF	**Rostrenen**	**17.62**	**68**	*eP*	**Pn**	**07 49 22.5**	**-1.3**	
ROSF				pmax	pmax			
	comp=Z,128nm,1.9s							
ROSF	**Rostrenen**	**17.62**	**68**	*eP*	**Pn**	**07 49 22.5**	**-1.3**	
	comp=Z,128nm,1.9s							
QUIF	**Quistinic**	**17.67**	**69**	*eP*	**Pn**	**07 49 24.1**	**-0.3**	
	comp=Z,58nm,1.2s							
QUIF	**Quistinic**	**17.67**	**69**	*eP*	**Pn**	**07 49 24.1**	**-0.3**	
	comp=Z,29nm,1.2s							
QUIF	**Quistinic**	**17.67**	**69**	*eP*	**Pn**	**07 49 24.1**	**-0.3**	
QUIF				pmax	pmax			
	comp=Z,29nm,1.2s							
QUIF	**Quistinic**	**17.67**	**69**	*eP*	**Pn**	**07 49 24.1**	**-0.3**	
	comp=Z,29nm,1.2s							
ELAN	**Lanestosa**	**17.87**	**85**	P	**Pn**	**07 49 25.3**	**-1.7**	
	comp=Z,85nm,1.4s							
GUD	**Guadarrama**	**18.07**	**93**	P	**Pn**	**07 49 28.0**	**-1.4**	
	comp=Z,26nm,0.9s							
GUD	**Guadarrama**	**18.07**	**93**	P	**Pn**	**07 49 28.0**	**-1.4**	
GUD				pmax	pmax			
	comp=Z,26nm,0.9s							
SGMF	**Saint Gilles**	**18.09**	**68**	*eP*	**Pn**	**07 49 29.6**	**0.0**	
	comp=Z,96nm,1.5s							
SGMF	**Saint Gilles**	**18.09**	**68**	*eP*	**Pn**	**07 49 29.6**	**0.0**	
	comp=Z,48nm,1.5s							
SGMF	**Saint Gilles**	**18.09**	**68**	*eP*	**Pn**	**07 49 29.6**	**0.0**	
SGMF				pmax	pmax			
	comp=Z,48nm,1.5s							
SGMF	**Saint Gilles**	**18.09**	**68**	*eP*	**Pn**	**07 49 29.6**	**0.0**	
	comp=Z,48nm,1.5s							
ESDC	**Sonseca Array**	**18.55**	**96**	P	**Pn**	**07 49 34.1**	**-1.2**	
	comp=Z,0.5nm,0.3s,baz=294,slow=11,SNR=20							
ESDC				LR	LR	07 55 15.2		
	comp=Z,709nm,20.1s,baz=290,slow=32							
EADA	**Adamuz**	**18.74**	**101**	P	**Pn**	**07 49 35.4**	**-2.2**	
	comp=Z,124nm,2.2s							
GRR	**Gorron**	**19.23**	**68**	*eP*	**Pn**	**07 49 42.7**	**-0.8**	
	comp=Z,33nm,0.8s							
GRR	**Gorron**	**19.23**	**68**	*eP*	**Pn**	**07 49 42.7**	**-0.8**	
	comp=Z,16nm,0.8s							
GRR	**Gorron**	**19.23**	**68**	*eP*	**Pn**	**07 49 42.7**	**-0.8**	
GRR				pmax	pmax			
	comp=Z,16nm,0.8s							
GRR	**Gorron**	**19.23**	**68**	*eP*	**Pn**	**07 49 42.7**	**-0.8**	
	comp=Z,16nm,0.8s							
ELUQ	**Luque**	**19.23**	**102**	P	**Pn**	**07 49 42.8**	**-0.8**	
	comp=Z,21nm,0.8s							
ELUQ				pmax	pmax			
	comp=Z,21nm,0.8s							

EBAN	**Banos Encina**	**19.30**	**100**	P	**Pn**	**07 49 43.3**	**-1.1**	
	comp=Z,14nm,1.0s							
EBAN	**Banos Encina**	**19.30**	**100**	P	**Pn**	**07 49 43.3**	**-1.1**	
EBAN				pmax	pmax			
	comp=Z,14nm,1.0s							
EMIJ	**Mijas**	**19.37**	**106**	P	**Pn**	**07 49 44.8**	**-0.4**	
	comp=Z,63nm,1.2s							
EKA	**Eskdalemuir Ar**	**19.41**	**47**	P	**Pn**	**07 49 45.0**	**-0.6**	
	comp=Z,0.1nm,0.3s,baz=241,slow=10,SNR=12							
SJPF	**Ste Jean**	**19.48**	**84**	*eP*	**Pn**	**07 49 46.4**	**-0.1**	
	comp=Z,16nm,0.9s							
SJPF	**Ste Jean**	**19.48**	**84**	*eP*	**Pn**	**07 49 46.4**	**-0.1**	
	comp=Z,8.2nm,0.9s							
SJPF	**Ste Jean**	**19.48**	**84**	*eP*	**Pn**	**07 49 46.4**	**-0.1**	
SJPF				pmax	pmax			
	comp=Z,8.0nm,0.9s							
SJPF	**Ste Jean**	**19.48**	**84**	*eP*	**Pn**	**07 49 46.4**	**-0.1**	
	comp=Z,8.2nm,0.9s							
FLN	**La Foliniere**	**19.49**	**67**	*eP*	**Pn**	**07 49 46.6**	**0.0**	
	comp=Z,126nm,1.5s							
FLN				*eM*	LR	MLR		
	comp=Z,718nm,18.0s							
FLN	**La Foliniere**	**19.49**	**67**	*eP*	**Pn**	**07 49 46.6**	**0.0**	
	comp=Z,63nm,1.5s							
FLN	**La Foliniere**	**19.49**	**67**	*eP*	**Pn**	**07 49 46.6**	**0.0**	
FLN				pmax	pmax			
	comp=Z,63nm,1.5s							
FLN	**La Foliniere**	**19.49**	**67**	*eP*	**Pn**	**07 49 46.6**	**0.0**	
	comp=Z,63nm,1.5s							
ELOJ	**Sierra Loja**	**19.51**	**103**	P	**Pn**	**07 49 46.4**	**-0.6**	
	comp=Z,22nm,1.0s							
ELOJ	**Sierra Loja**	**19.51**	**103**	P	**Pn**	**07 49 46.4**	**-0.5**	
ELOJ				pmax	pmax			
	comp=Z,22nm,1.0s							
ETOR	**Torete**	**19.51**	**91**	P	**Pn**	**07 49 45.7**	**-1.2**	
	comp=Z,8.3nm,1.3s							
ETOR	**Torete**	**19.51**	**91**	P	**Pn**	**07 49 45.7**	**-1.2**	
ETOR				pmax	pmax			
	comp=Z,8.0nm,1.3s							
LDF	**La Druitiere**	**19.73**	**68**	*eP*	**Pn**	**07 49 48.7**	**-0.7**	
	comp=Z,20nm,1.1s							
LDF	**La Druitiere**	**19.73**	**68**	*eP*	**Pn**	**07 49 48.7**	**-0.7**	
	comp=Z,10nm,1.1s							
LDF	**La Druitiere**	**19.73**	**68**	*eP*	**Pn**	**07 49 48.7**	**-0.7**	
LDF				pmax	pmax			
	comp=Z,10.0nm,1.1s							
LDF	**La Druitiere**	**19.73**	**68**	*eP*	**Pn**	**07 49 48.7**	**-0.7**	
	comp=Z,10nm,1.1s							
MFF	**Saint Martin d**	**19.74**	**74**	*eP*	**Pn**	**07 49 48.6**	**-1.0**	
	comp=Z,97nm,1.5s							
MFF	**Saint Martin d**	**19.74**	**74**	*eP*	**Pn**	**07 49 48.6**	**-1.0**	
	comp=Z,48nm,1.5s							
MFF	**Saint Martin d**	**19.74**	**74**	*eP*	**Pn**	**07 49 48.6**	**-1.0**	
MFF				pmax	pmax			
	comp=Z,48nm,1.5s							
MFF	**Saint Martin d**	**19.74**	**74**	*eP*	**Pn**	**07 49 48.6**	**-1.0**	
	comp=Z,48nm,1.5s							
ECOG	**Cogollos-Vega**	**19.86**	**102**	P	**Pn**	**07 49 50.6**	**-0.5**	
	comp=Z,13nm,0.6s							
ECOG	**Cogollos-Vega**	**19.86**	**102**	P	**Pn**	**07 49 50.6**	**-0.5**	
ECOG				pmax	pmax			
	comp=Z,13nm,0.6s							
EQES	**Quesada**	**19.96**	**100**	P	**Pn**	**07 49 51.7**	**-0.6**	
	comp=Z,156nm,1.7s							
ETSF	**Etsaut**	**20.00**	**84**	*eP*	**P**	**07 49 52.2**	**+1.2**	
ETSF	**Etsaut**	**20.00**	**84**	*eP*	**P**	**07 49 52.2**	**+1.2**	
EVIA	**Vianos**	**20.00**	**98**	P	**P**	**07 49 52.0**	**+1.0**	
	comp=Z,32nm,1.2s							
EVIA	**Vianos**	**20.00**	**98**	P	**P**	**07 49 52.0**	**+0.9**	
EVIA				pmax	pmax			
	comp=Z,32nm,1.2s							
EGUA	**Guajares**	**20.07**	**103**	P	**P**	**07 49 53.4**	**+1.5**	
	comp=Z,231nm,1.0s							
EGUA	**Guajares**	**20.07**	**103**	P	**P**	**07 49 53.4**	**+1.6**	
EGUA				pmax	pmax			
	comp=Z,231nm,1.0s							
EHUE	**Huescar**	**20.30**	**100**	P	**P**	**07 49 56.0**	**+1.7**	
	comp=Z,69nm,1.0s							
EHUE	**Huescar**	**20.30**	**100**	P	**P**	**07 49 56.0**	**+1.7**	
EHUE			

MTLF pmax pmax
comp=Z,32nm,1.1s,mb4.7
MTLF Montolieu 21.88 82 *e*P **P 07 50 11.6 +0.3**
comp=Z,32nm,1.1s,mb4.7
CLLI Llivia 21.91 84 P **P 07 50 13.8 +2.1**
PYM Petit Puy Mans 22.00 75 *e*P **P 07 50 12.8 +0.2**
PYM Petit Puy Mans 22.00 75 *e*P **P 07 50 12.8 +0.2**
AGO Saint Agoulin 22.05 74 *e*P **P 07 50 13.3 +0.2**
AGO Saint Agoulin 22.05 74 *e*P **P 07 50 13.3 +0.2**
AVF Avril sur Loir 22.12 72 *e*P **P 07 50 14.1 +0.2**
comp=Z,150nm,1.6s,mb4.9
AVF Avril sur Loir 22.12 72 *e*P **P 07 50 14.1 +0.2**
comp=Z,75nm,1.6s,mb4.9
AVF Avril sur Loir 22.12 72 *e*P **P 07 50 14.1 +0.2**
AVF pmax pmax
comp=Z,75nm,1.6s,mb4.9
AVF Avril sur Loir 22.12 72 *e*P **P 07 50 14.1 +0.2**
comp=Z,75nm,1.6s,mb4.9
SSF Saint Saulge 22.21 72 *e*P **P 07 50 14.8 +0.1**
comp=Z,57nm,0.9s,mb4.7
SSF Saint Saulge 22.21 72 *e*P **P 07 50 14.8 +0.1**
comp=Z,29nm,0.9s,mb4.7
SSF Saint Saulge 22.21 72 *e*P **P 07 50 14.8 +0.1**
SSF pmax pmax
comp=Z,29nm,0.9s,mb4.7
SSF Saint Saulge 22.21 72 *e*P **P 07 50 14.8 +0.1**
comp=Z,29nm,0.9s,mb4.7
LBL Lubilhac 22.24 77 *e*P **P 07 50 16.2 +1.1**
LBL Lubilhac 22.24 77 *e*P **P 07 50 17.0 +1.9**
LBL Lubilhac 22.24 77 *e*P **P 07 50 16.2 +1.1**
PLDF La Plantade 22.40 75 *e*P **P 07 50 16.9 +0.1**
PLDF La Plantade 22.40 75 *e*P **P 07 50 16.9 +0.1**
LOR Lormes 22.43 71 *e*P **P 07 50 17.2 +0.1**
comp=Z,85nm,1.1s,mb4.8
LOR *e*MLR MLR
comp=Z,2µm,20.0s,MS4.1
LOR Lormes 22.43 71 *e*P **P 07 50 17.2 +0.1**
comp=Z,42nm,1.1s,mb4.8
LOR LR LR
comp=Z,2µm,20.0s,MS4.4
LOR Lormes 22.43 71 *e*P **P 07 50 17.2 +0.1**
LOR pmax pmax
comp=Z,43nm,1.1s,mb4.8
LOR MLR MLR
comp=Z,2µm,20.0s,MS4.4
LOR Lormes 22.43 71 *e*P **P 07 50 17.2 +0.1**
comp=Z,42nm,1.1s,mb4.8
SMF Signal de Mont 22.47 73 *e*P **P 07 50 17.5 -0.1**
comp=Z,73nm,1.3s,mb4.7
SMF Signal de Mont 22.47 73 *e*P **P 07 50 17.5 -0.1**
comp=Z,36nm,1.3s,mb4.7
SMF Signal de Mont 22.47 73 *e*P **P 07 50 17.5 -0.1**
SMF pmax pmax
comp=Z,36nm,1.3s,mb4.6
SMF Signal de Mont 22.47 73 *e*P **P 07 50 17.5 -0.1**
comp=Z,36nm,1.3s,mb4.7
BAIF Baives 22.61 64 *e*P **P 07 50 18.9 -0.1**
comp=Z,75nm,1.2s,mb4.7
BAIF Baives 22.61 64 *e*P **P 07 50 18.9 -0.1**
comp=Z,38nm,1.2s,mb4.7
BAIF Baives 22.61 64 *e*P **P 07 50 18.9 -0.1**
BAIF pmax pmax
comp=Z,37nm,1.2s,mb4.7
BAIF Baives 22.61 64 *e*P **P 07 50 18.9 -0.1**
comp=Z,38nm,1.2s,mb4.7
LASF Ste Croix 22.88 79 *e*P **P 07 50 21.2 -0.7**
comp=Z,53nm,1.2s,mb4.5
LASF Ste Croix 22.88 79 *e*P **P 07 50 21.2 -0.7**
comp=Z,26nm,1.2s,mb4.5
GIVF Givet 23.01 64 *e*P **P 07 50 23.1 -0.1**
comp=Z,81nm,1.1s,mb4.8
GIVF Givet 23.01 64 *e*P **P 07 50 23.1 -0.1**
comp=Z,40nm,1.1s,mb4.8
GIVF Givet 23.01 64 *e*P **P 07 50 23.1 -0.1**
GIVF pmax pmax
comp=Z,40nm,1.1s,mb4.8
GIVF Givet 23.01 64 *e*P **P 07 50 23.1 -0.1**
comp=Z,40nm,1.1s,mb4.8
SSB Saint Sauveur 23.14 76 *e*P **P 07 50 26.0 +1.4**
SSB Saint Sauveur 23.14 76 *e*P **P 07 50 25.6 +1.0**
comp=Z,18nm,1.1s,mb4.4
SSB Saint Sauveur 23.14 76 *e*P **P 07 50 25.6 +1.0**
SSB pmax pmax
comp=Z,18nm,1.1s,mb4.4
SSB Saint Sauveur 23.14 76 *e*P **P 07 50 26.0 +1.4**
MEZF Maizieres J'vi 23.16 68 *e*P **P 07 50 24.7 -0.2**
comp=Z,146nm,1.2s,mb5.0
MEZF Maizieres J'vi 23.16 68 *e*P **P 07 50 24.7 -0.2**
comp=Z,146nm,1.2s,mb5.3
MEZF Maizieres J'vi 23.16 68 *e*P **P 07 50 24.7 -0.2**
comp=Z,73nm,1.2s,mb5.0
SFTF Sexfontaines 23.17 69 *e*P **P 07 50 24.7 -0.2**
comp=Z,105nm,1.2s,mb4.8
SFTF Sexfontaines 23.17 69 *e*P **P 07 50 24.7 -0.2**
comp=Z,105nm,1.2s,mb5.1
SFTF Sexfontaines 23.17 69 *e*P **P 07 50 24.7 -0.2**
comp=Z,52nm,1.2s,mb4.8
VIVF Saint-Julien-l 23.30 77 *e*P **P 07 50 26.5 +0.1**
comp=Z,46nm,1.4s,mb4.4
VIVF Saint-Julien-l 23.30 77 *e*P **P 07 50 26.5 +0.1**
comp=Z,23nm,1.4s,mb4.4
VIVF Saint-Julien-l 23.30 77 *e*P **P 07 50 26.5 +0.1**
VIVF pmax pmax
comp=Z,23nm,1.4s,mb4.4
VIVF Saint-Julien-l 23.30 77 *e*P **P 07 50 26.5 +0.1**
comp=Z,23nm,1.4s,mb4.4
THEF They Montfort 23.80 68 *e*P **P 07 50 31.0 -0.2**
THEF They Montfort 23.80 68 *e*P **P 07 50 31.0 -0.2**
WLF Walferdange 23.86 65 *e*P **P 07 50 31.2 -0.5**
comp=Z,74nm,1.8s,mb4.8
WLF Walferdange 23.86 65 *e*P **P 07 50 31.2 -0.6**
WLF pmax pmax
comp=Z,74nm,1.8s,mb4.8
CABF La Chapelle 24.02 72 *e*P **P 07 50 32.3 -0.9**
comp=Z,27nm,0.8s,mb4.4
CABF La Chapelle 24.02 72 *e*P **P 07 50 32.3 -0.9**
comp=Z,14nm,0.8s,mb4.4
CABF La Chapelle 24.02 72 *e*P **P 07 50 32.3 -0.9**
CABF pmax pmax
comp=Z,14nm,0.8s,mb4.4
CABF La Chapelle 24.02 72 *e*P **P 07 50 32.3 -0.9**
comp=Z,14nm,0.8s,mb4.4
HAU Haudompre 24.05 69 *e*P **P 07 50 33.4 -0.1**
comp=Z,52nm,0.9s,mb4.6
HAU *e*MLR MLR
comp=Z,1µm,19.5s,MS4.0
HAU Haudompre 24.05 69 *e*P **P 07 50 33.4 -0.1**
comp=Z,26nm,0.9s,mb4.7
HAU LR LR
comp=Z,1µm,19.5s,MS4.3
HAU Haudompre 24.05 69 *e*P **P 07 50 33.4 -0.1**
HAU pmax pmax
comp=Z,26nm,0.9s,mb4.7
HAU MLR MLR
comp=Z,1µm,19.5s,MS4.3
HAU Haudompre 24.05 69 *e*P **P 07 50 33.4 -0.1**
comp=Z,26nm,0.9s,mb4.6
SMRF Simiane la Rot 24.11 79 *e*P **P 07 50 34.4 +0.3**
comp=Z,28nm,1.0s,mb4.4
SMRF Simiane la Rot 24.11 79 *e*P **P 07 50 34.4 +0.3**
comp=Z,28nm,1.0s,mb4.7
SMRF Simiane la Rot 24.11 79 *e*P **P 07 50 34.4 +0.3**
comp=Z,14nm,1.0s,mb4.4
ORIF Oris-en-Rattie 24.14 77 *e*P **P 07 50 34.4 +0.1**
comp=Z,41nm,1.1s,mb4.5
ORIF *e*MLR MLR
comp=Z,1µm,21.5s,MS4.0
ORIF Oris-en-Rattie 24.14 77 *e*P **P 07 50 34.4 +0.1**
comp=Z,20nm,1.1s,mb4.5
ORIF Oris-en-Rattie 24.14 77 *e*P **P 07 50 34.4 +0.1**
ORIF pmax pmax
comp=Z,21nm,1.1s,mb4.5
ORIF Oris-en-Rattie 24.14 77 *e*P **P 07 50 34.4 +0.1**
comp=Z,20nm,1.1s,mb4.5
HINF Hinteralfeld 24.41 69 *e*P **P 07 50 36.7 -0.1**
comp=Z,28nm,1.1s,mb4.3
HINF Hinteralfeld 24.41 69 *e*P **P 07 50 36.7 -0.1**
comp=Z,14nm,1.1s,mb4.3
HINF Hinteralfeld 24.41 69 *e*P **P 07 50 36.7 -0.1**
HINF pmax pmax
comp=Z,14nm,1.1s,mb4.3
HINF Hinteralfeld 24.41 69 *e*P **P 07 50 36.7 -0.1**
comp=Z,14nm,1.1s,mb4.3
LOMF Lomont 24.43 70 *e*P **P 07 50 38.6 +1.6**
LOMF Lomont 24.43 70 *e*P **P 07 50 39.2 +2.2**
LOMF Lomont 24.43 70 *e*P **P 07 50 38.6 +1.6**
RUP Ruppelstein 24.45 65 *e*P **P 07 50 37.5 +0.4**
RUP Ruppelstein 24.45 65 *e*P **P 07 50 37.5 +0.4**
ECH Echery 24.58 68 *e*P **P 07 50 38.4 +0.1**
ECH Echery 24.58 68 *e*P **P 07 50 37.9 -0.4**
comp=Z,21nm,1.1s,mb4.6
ECH Echery 24.58 68 *e*P **P 07 50 37.9 -0.4**
ECH pmax pmax
comp=Z,21nm,1.1s,mb4.6
ECH Echery 24.58 68 *e*P **P 07 50 38.4 +0.1**
MOF Molkenrain 24.59 69 *e*P **P 07 50 40.3 +1.8**
MOF Molkenrain 24.59 69 *e*P **P 07 50 40.3 +1.8**
LPL La Plagne 24.62 75 *e*P **P 07 50 38.4 -0.3**
LPL La Plagne 24.62 75 *e*P **P 07 50 38.4 -0.3**
LPG La Plagne 24.64 75 *e*P **P 07 50 38.3 -0.6**
LPG La Plagne 24.64 75 *e*P **P 07 50 38.3 -0.6**
CDF Champ du Feu 24.65 68 *e*P **P 07 50 39.1 +0.2**
comp=Z,62nm,1.1s,mb4.7
CDF Champ du Feu 24.65 68 *e*P **P 07 50 39.1 +0.2**
comp=Z,31nm,1.1s,mb4.8
CDF Champ du Feu 24.65 68 *e*P **P 07 50 39.1 +0.2**
CDF pmax pmax
comp=Z,31nm,1.1s,mb4.8
CDF Champ du Feu 24.65 68 *e*P **P 07 50 39.1 +0.2**
comp=Z,31nm,1.1s,mb4.7
ABH Alteburg 24.77 64 *e*P **P 07 50 40.7 +0.7**
ABH Alteburg 24.77 64 *e*P **P 07 50 40.7 +0.7**
MBDF Montbardon 24.79 77 *e*P **P 07 50 39.9 -0.4**
comp=Z,54nm,1.3s,mb4.6
MBDF Montbardon 24.79 77 *e*P **P 07 50 39.9 -0.4**
comp=Z,27nm,1.3s,mb4.6
MBDF Montbardon 24.79 77 *e*P **P 07 50 39.9 -0.4**
MBDF pmax pmax
comp=Z,27nm,1.3s,mb4.6
MBDF Montbardon 24.79 77 *e*P **P 07 50 39.9 -0.4**
comp=Z,27nm,1.3s,mb4.6
LIBD Limburg 24.88 68 *e*P **P 07 50 42.5 +1.4**
LIBD Limburg 24.88 68 *e*P **P 07 50 42.5 +1.4**
BBS Basel-Blauen 24.88 70 *e*P **P 07 50 40.5 -0.6**
BBS Basel-Blauen 24.88 70 *e*P **P 07 50 40.5 -0.6**
LANF Langenberg 24.96 66 *e*P **P 07 50 42.0 +0.2**
LANF Langenberg 24.96 66 *e*P **P 07 50 42.0 +0.2**
FELD Feldberg im Sc 25.18 69 *e*P **P 07 50 40.3 -3.5**
FELD Feldberg im Sc 25.18 69 *e*P **P 07 50 44.9 +1.1**
BFO Black Forest 25.35 68 *e*P **P 07 50 45.3 -0.1**
comp=Z,32nm,1.4s,mb4.7
BFO Black Forest 25.35 68 *e*P **P 07 50 45.3 -0.1**
BFO pmax pmax
comp=Z,32nm,1.4s,mb4.7
SPAK Spaichingen-Ko 25.68 68 *e*P **P 07 50 50.1 +1.8**
SPAK Spaichingen-Ko 25.68 68 *e*P **P 07 50 50.1 +1.8**
STU Stuttgart 25.89 67 *e*P **P 07 50 50.1 -0.1**
comp=Z,7.8nm,0.6s,mb4.4
STU Stuttgart 25.89 67 *e*P **P 07 50 50.1 -0.1**
STU pmax pmax
comp=Z,8.0nm,0.6s,mb4.4
DAVOX Davos/Dischmat 26.58 71 P **P 07 50 56.3 -0.2**
comp=Z,1.2nm,0.5s,mb3.7,baz=329,slow=22,SNR=2.8
DAVOX LR LR 08 00 21.6
comp=Z,869nm,18.5s,MS4.3,baz=260,slow=34
SCHQ Schefferville 26.86 307 P **P 07 50 59.6 +0.8**
comp=Z,9.0nm,1.1s,mb4.2,baz=122,slow=9.2,SNR=3.9
SCHQ LR LR 07 59 37.7
comp=Z,932nm,20.4s,MS4.3,baz=128,slow=32
NKC Novy Kostel 27.91 63 AMS AMS 08 01 10.0
comp=Z,600nm,15.7s
CLL Collm 28.21 61 P **P 07 51 15.0 +4.0**
CLL *e*S **S 07 56 03.0 +6.6**
CLL LR LR
comp=Z,600nm,20.0s,MS4.2
JMIC Jan Mayen 28.43 13 LR LR 07 59 54.6
comp=Z,143nm,18.9s,MS3.6,baz=225,slow=31
NOA NORSAR Array B 28.56 40 LR LR 08 01 34.0
comp=Z,131nm,18.1s,MS3.6,baz=255,slow=34
KHC Kasperske Hory 28.73 65 *e*P **P 07 51 15.2 -0.5**
comp=Z,30nm,1.9s,mb4.7
KHC Kasperske Hory 28.73 65 *e*P **P 07 51 16.0 +0.3**
KHC *e* 07 51 21.7
KHC MLR MLR
comp=Z,500nm,17.1s,MS4.2
KHC Kasperske Hory 28.73 65 *e*P **P 07 51 16.0 +0.3**
KHC *e*pP pP 07 51 21.7 +2.9
KHC AMS AMS 08 01 20.0
comp=Z,500nm,17.1s
KHC Kasperske Hory 28.73 65 P **P 07 51 16.0 +0.3**
SUMG Summit 28.75 354 *i* P **P 07 51 15.0 -0.6**
comp=Z,3.0nm,0.8s,mb4.1
SUMG Summit 28.75 354 *i* P **P 07 51 15.0 -0.6**
comp=Z,3.0nm,0.8s,mb4.1
BRG Berggiesshubel 28.82 62 *e*P **P 07 51 17.3 +0.9**
comp=Z,6.3nm,1.3s,mb4.2
BRG S **S 07 56 11.0 +4.9**
BRG
comp=N,256nm,15.5s
BRG
comp=E,421nm,20.3s
BRG
comp=Z,650nm,19.3s
BRG Berggiesshubel 28.82 62 *e*P **P 07 51 17.3 +0.8**
BRG S **S 07 56 11.0 +4.9**
BRG pmax pmax
comp=Z,4.0nm,1.3s,mb4.0
BRG MLR MLR
comp=N,153nm,15.5s,MS3.9
BRG MLR MLR
comp=E,252nm,20.3s,MS3.9
BRG MLR MLR
comp=Z,389nm,19.3s,MS4.0
PVCC Panska Ves 29.24 62 AMS AMS 08 02 10.0
comp=Z,700nm,16.2s
PRU Pruhonice 29.27 64 AMS AMS 08 01 40.0
comp=Z,600nm,19.6s
HFS Hagfors 29.49 43 LR LR 08 01 38.0
comp=Z,234nm,21.2s,MS3.8,baz=260,slow=33
KEST Kesra 29.76 94 P **P 07 51 25.7 +0.7**
comp=Z,2.8nm,1.0s,mb4.0,baz=209,slow=3.7,SNR=5.3
KEST LR LR 08 02 36.3
comp=Z,162nm,18.4s,MS3.7,baz=243,slow=35
FRB Frobisher Bay 29.91 325 P **P 07 51 25.4 -0.6**
comp=Z,1.1nm,0.9s,mb4.6,baz=269,slow=2.1,SNR=2.9
FRB LR LR 08 00 22.9
comp=Z,664nm,19.4s,MS4.3,baz=35,slow=30
TREC Trest 29.96 65 AMS AMS 08 02 20.0
comp=Z,600nm,16.1s
UPC Upice 30.16 62 *e*P **P 07 51 27.5 -0.9**
UPC Upice 30.16 62 *e*P **P 07 51 27.5 -0.9**
UPC Upice 30.16 62 P **P 07 51 27.5 -0.9**
DPC Dobruska-Polom 30.37 63 *e*P **P 07 51 30.8 +0.6**
DPC MLR MLR
comp=Z,500nm,15.8s,MS4.3
DPC Dobruska-Polom 30.37 63 *e*P **P 07 51 30.8 +0.6**
DPC AMS AMS 08 02 50.0
comp=Z,500nm,15.8s
DPC Dobruska-Polom 30.37 63 P **P 07 51 30.8 +0.6**
VRAC Vranov 30.67 65 P **P 07 51 32.9 0.0**
comp=Z,2.9nm,0.7s,mb4.2,baz=262,slow=14,SNR=3.6
SOP Sopron 30.91 68⇑ *e*P **P 07 51 35.3 +0.3**
MORC Moravsky Berou 31.22 64 *e*P **P 07 51 38.6 +0.8**
comp=Z,4.8nm,1.2s,mb4.2
MORC Moravsky Berou 31.22 64 *e*P **P 07 51 38.6 +0.9**
MORC pmax pmax
comp=Z,5.0nm,1.2s,mb4.2
OKC Ostrava-Krasne 31.60 63 *e*P **P 07 51 45.0 +3.9**
OKC MLR MLR
comp=Z,700nm,16.3s,MS4.4
OKC Ostrava-Krasne 31.60 63 *e*P **P 07 51 45.0 +3.9**
OKC AMS AMS 08 03 20.0
comp=Z,700nm,16.3s
VYHS Vyhne 32.27 66 *e*P **P 07 51 52.1 +5.2**
VYHS Vyhne 32.27 66 *e* **P 07 51 52.1 +5.2**
OJC Ojcow 32.60 62 *e*P **P 07 51 50.7 +0.8**
OJC Ojcow 32.60 62 *e*P **P 07 51 50.7 +0.8**
PKSM Moragy 32.62 70⇓ *e*P **P 07 51 49.7 -0.4**
PSZ Piszkesteto 33.07 66⇓ *e*pP pP 07 52 00.5 +3.4
CRVS Cervenica-Dubn 33.90 64 *e*P **P 07 52 00.1 -1.1**
CRVS Cervenica-Dubn 33.90 64 *e*P **P 07 52 00.1 -1.1**
CRVS Cervenica-Dubn 33.90 64 *e*P **P 07 52 00.1 -1.1**
KWP Kalwaria Pacla 34.55 63 *e*P **P 07 52 06.6 -0.2**
comp=Z,45nm,1.4s,mb5.2
KWP Kalwaria Pacla 34.55 63 *e*P **P 07 52 06.6 -0.3**
KWP pmax pmax
comp=Z,45nm,1.4s,mb5.2
BZS Buzias 34.78 70⇑ *i*P **P 07 52 09.2 +0.3**
BZS Buzias 34.78 70⇑ *i*P **P 07 52 09.2 +0.3**
BZS Buzias 34.78 70⇑ *i*P **P 07 52 09.2 +0.3**
FINES FINESS Array B 35.68 42 P **P 07 52 16.9 +0.5**
comp=Z,3.2nm,0.9s,mb4.3,baz=237,slow=6.3,SNR=6.3
FINES LR LR 08 06 31.7
comp=Z,120nm,18.3s,MS3.7,baz=315,slow=36
BURAR Bucovina Array 36.63 66⇓ *i*P **P 07 52 26.2 +1.5**
BURAR Bucovina Array 36.63 66⇓ *i*P **P 07 52 26.2 +1.5**
BURAR Bucovina Array 36.63 66⇓ *i*P **P 07 52 26.2 +1.5**
VOIR 37.14 69⇓ P **P 07 52 29.8 +0.7**
VOIR 37.14 69⇓ *i*P **P 07 52 29.8 +0.7**
VOIR 37.14 69⇓ *i*P **P 07 52 29.8 +0.7**
MLR Muntele Rosu 37.72 69⇑ P **P 07 52 35.0 +0.9**
MLR Muntele Rosu 37.72 69⇑ *i*P **P 07 52 35.0 +1.0**
MLR Muntele Rosu 37.72 69⇑ *i*P **P 07 52 35.0 +1.0**
SPITS Spitsbergen Ar 38.10 14 P **P 07 52 38.9 +2.1**
comp=Z,8.2nm,1.0s,mb4.4,baz=180,slow=13,SNR=5.1
VRI Vrincioaia 38.13 68⇓ P **P 07 52 34.7 -2.7**
VRI Vrincioaia 38.13 68⇓ *i*P **P 07 52 34.7 -2.7**
KIEV Kiev 38.41 60 *e*P **P 07 52 38.8 -0.9**
comp=Z,4.7nm,0.9s,mb4.2
KIEV Kiev 38.41 60 *e*P **P 07 52 38.8 -1.0**
KIEV pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
AKASG Malin Array Be 38.42 60 P **P 07 52 38.9 -0.9**
AKASG LR LR 08 08 19.2
AKASG Malin Array Be 38.42 60 P **P 07 52 38.9 -0.9**
comp=Z,1.2nm,0.6s,mb3.8,baz=275,slow=8.8,SNR=8.9
AKASG LR LR 08 08 19.2
comp=Z,307nm,18.5s,MS4.2,baz=275,slow=36
TORD Torodi Ar. Bea 40.20 131 P **P 07 52 55.3 +0.2**
comp=Z,12nm,0.8s,mb4.7,baz=326,slow=7.3,SNR=45
TORD LR LR 08 08 22.6
comp=Z,909nm,19.6s,MS4.6,baz=330,slow=34
OBN Obninsk 41.75 51⇓ *e*P **P 07 53 09.0 +1.6**
OBN *e* 07 55 03.4
OBN *e*S **S 07 59 24.1 -0.2**
OBN pmax pmax
comp=Z,21nm,1.2s,mb4.6
OBN MLR MLR
comp=Z,100nm,15.0s,MS3.8
OBN Obninsk 41.75 51 *e*PcP PcP 07 55 03.4 -0.1
comp=Z,100nm,15.0s
OBN *e*S **S 07 59 24.1 -0.2**
DBIC Dimbokro 42.68 145 P **P 07 53 16.6 +1.1**
comp=Z,3.7nm,0.7s,mb4.3,baz=318,slow=7.8,SNR=4.2
DBIC LR LR 08 09 06.0
comp=Z,345nm,20.4s,MS4.2,baz=317,slow=33
DBIC Dimbokro 42.68 145 P **P 07 53 16.5 +1.1**
WCI Wyandotte Cave 43.32 283 *e*P **P 07 53 20.7 +0.3**
comp=Z,71nm,1.9s,mb5.1
WCI Wyandotte Cave 43.32 283 *e*P **P 07 53 20.7 +0.3**
WCI pmax pmax
comp=Z,71nm,1.9s,mb5.1
WCI Wyandotte Cave 43.32 283 *e*P **P 07 53 20.7 +0.3**
comp=Z,71nm,1.9s,mb5.1
SDDR Presa de Saban 43.88 249 *e*P **P 07 53 26.8 +1.7**
comp=Z,42nm,1.1s,mb5.1
SDDR Presa de Saban 43.88 249 *e*P **P 07 53 26.8 +1.7**
comp=Z,42nm,1.1s,mb5.1
VSR Storozhevoye 44.32 56 *e*P **P 07 53 27.5 -0.8**
VSR pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,1.3s
VSR MLR MLR
comp=Z,520nm,19.0s,MS4.5
VSR MLR MLR
comp=N,110nm,15.0s,MS4.2
VSR MLR MLR
comp=E,150nm,12.0s,MS4.2
VSR Storozhevoye 44.32 56 *e*P **P 07 53 27.5 -0.8**
comp=E,110nm,15.0s
VORD Divnogorie 44.48 56 *e*P **P 07 53 28.5 -1.0**
VORD pmax pmax
comp=Z,5.0nm,0.4s,mb4.6
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD MLR MLR
comp=Z,410nm,18.0s,MS4.4
VORD MLR MLR
comp=N,500nm,26.0s
VORD MLR MLR
comp=E,580nm,28.0s
VORD Divnogorie 44.48 56 *e*P **P 07 53 28.5 -1.0**
comp=E,500nm,26.0s
ULM Lac du Bonnet 44.88 303 LR LR 08 10 35.1
comp=E,857nm,19.8s,MS4.7,baz=79,slow=34
BRTR Keskin Array B 45.18 73 P **P 07 53 36.5 +1.2**
comp=E,4.3nm,1.1s,mb4.2,baz=290,slow=5.1,SNR=9.6
BRTR PcP PcP 07 55 15.0 -0.4
comp=E,0.5nm,0.5s,baz=259,slow=1.5,SNR=3.9
BRTR LR LR 08 12 43.9
comp=E,254nm,20.9s,MS4.1,baz=296,slow=36
BRTR Keskin Array B 45.18 73 P **P 07 53 36.5 +1.2**
BRTR 07 55 15.0
BRTR Keskin Array B 45.18 73 P **P 07 53 36.5 +1.2**
BRTR Keskin Array B 45.18 73 PcP PcP 07 55 15.0 -0.4
WVT Waverly 45.40 281 *e*P **P 07 53 36.8 -0.2**
comp=E,46nm,1.8s,mb5.0
WVT Waverly 45.40 281 *e*P **P 07 53 36.8 -0.3**
WVT pmax pmax
comp=Z,46nm,1.8s,mb5.0
WVT Waverly 45.40 281 *e*P **P 07 53 36.8 -0.3**
comp=Z,46nm,1.8s,mb5.0
FVM French Village 46.32 285 *e*P **P 07 53 43.8 -0.5**
comp=Z,12nm,1.0s,mb4.8
FVM French Village 46.32 285 *e*P **P 07 53 43.8 -0.5**
FVM pmax pmax
comp=Z,12nm,1.0s,mb4.8
FVM French Village 46.32 285 *e*P **P 07 53 43.8 -0.5**
comp=Z,12nm,1.0s,mb4.8
HALT Halls 46.57 282 *e*P **P 07 53 46.8 +0.5**
HALT Halls 46.57 282 *e*P **P 07 53 46.8 +0.5**
CCM Cathedral Cave 46.85 285 *e*P **P 07 53 48.4 -0.1**
comp=Z,24nm,1.4s,mb4.9
CCM Cathedral Cave 46.85 285 *e*P **P 07 53 48.4 -0.1**
CCM pmax pmax
comp=Z,24nm,1.4s,mb4.9
CCM Cathedral Cave 46.85 285 *e*P **P 07 53 48.4 -0.1**
comp=Z,24nm,1.4s,mb4.9
ECSD EROS Data Cent 47.88 295 *e*P **P 07 53 57.1 +0.7**
comp=Z,11nm,1.1s,mb4.8
ECSD EROS Data Cent 47.88 295 *e*P **P 07 53 57.1 +0.7**
comp=Z,11nm,1.1s,mb4.8
MALT Malatya 49.13 73 *e*P **P 07 54 08.0 +1.9**
comp=Z,5.5nm,1.0s,mb4.5
MALT Malatya 49.13 73 *e*P **P 07 54 08.0 +1.9**
MALT pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
MALT Malatya 49.13 73 *e*P **P 07 54 08.0 +1.9**
comp=Z,5.5nm,1.0s,mb4.5
VBMS Vicksburg 49.33 278 *e*P **P 07 54 06.8 -0.9**
comp=Z,11nm,0.6s,mb5.0
VBMS Vicksburg 49.33 278 *e*P **P 07 54 06.8 -0.9**
comp=Z,11nm,0.6s,mb5.0
KSU1 Kansas State U 50.02 289 *e*P **P 07 54 12.4 -0.5**
comp=Z,16nm,0.9s,mb5.0
KSU1 Kansas State U 50.02 289 *e*P **P 07 54 12.4 -0.5**
comp=Z,16nm,0.9s,mb5.0
MIAR Mount Ida 50.24 282 *e*P **P 07 54 14.4 -0.2**
comp=Z,34nm,1.4s,mb5.2
MIAR Mount Ida 50.24 282 *e*P **P 07 54 14.4 -0.2**
MIAR pmax pmax
comp=Z,34nm,1.4s,mb5.2
MIAR Mount Ida 50.24 282 *e*P **P 07 54 14.4 -0.2**
comp=Z,34nm,1.4s,mb5.2
YKA Yellowknife Ar 50.40 323 P **P 07 54 14.4 -1.1**
comp=Z,1.9nm,0.7s,mb4.2,baz=64,slow=7.6,SNR=3.3
YKA Yellowknife Ar 50.40 323 P **P 07 54 14.4 -1.0**
ZEI Tsey 50.66 65 *e*P **P 07 54 18.6 +1.0**
ZEI pmax pmax
comp=Z,28nm,1.0s,mb5.2
ZEI Tsey 50.66 65 *e*P **P 07 54 18.6 +1.0**
comp=Z,28nm,1.0s,mb5.2
SDV Santo Domingo 50.95 239 *e*P **P 07 54 21.3 +1.1**
comp=Z,19nm,0.8s,mb5.1
SDV Santo Domingo 50.95 239 *e*P **P 07 54 21.3 +1.1**
comp=Z,19nm,0.8s,mb5.1
EIL Elat 51.28 84 P **P 07 54 26.3 +3.8**
comp=Z,2.3nm,0.6s,mb4.3,baz=345,slow=12,SNR=3.6
GNI Garni 52.48 67 *i* P **P 07 54 33.1 +1.8**
GNI MLR MLR
comp=Z,114nm,21.0s
GNI Garni 52.48 67 *i* P **P 07 54 33.1 +1.8**
comp=Z,114nm,21.0s

LAO **LASA Array** 52.61 302 *e*P P 07 54 31.9 -0.2
comp=Z,23nm,1.3s,mb5.0
LAO **LASA Array** 52.61 302 *e*P P 07 54 31.9 -0.3
comp=Z,23nm,1.3s,mb5.0
ARU **Arti** 53.00 44 *c i*P P 07 54 35.3 +0.4
ARU 07 56 29.7
ARU S S 08 02 05.0 +0.8
ARU pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
ARU **Arti** 53.00 44 *i* P P 07 54 35.3 +0.4
comp=Z,6.0nm,1.2s,mb4.4
D20A **Manuel Ranch,** 53.58 303 ⇑P P 07 54 38.5 -0.7
baz=53,SNR=5.3
EDM **Edmonton** 53.66 312 *e*P P 07 54 39.5 -0.4
EDM **Edmonton** 53.66 312 *e*P P 07 54 39.5 -0.3
WMOK **Wichita Mounta** 53.77 286 *e*P P 07 54 40.2 -0.7
comp=Z,6.7nm,1.1s,mb4.5
WMOK **Wichita Mounta** 53.77 286 *e*P P 07 54 40.2 -0.7
WMOK pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
WMOK **Wichita Mounta** 53.77 286 *e*P P 07 54 40.2 -0.7
comp=Z,6.7nm,1.1s,mb4.5
C19A **Slack Wire Ran** 53.81 304 ⇑P P 07 54 40.5 -0.5
baz=53
E20A **Meyer Farm, Mu** 53.85 303 ⇑P P 07 54 40.4 -0.9
baz=54
B18A **Beardsley Farm** 53.92 305 ⇑P P 07 54 41.1 -0.7
baz=54,SNR=5.7
EGMT **Eagleton** 54.09 305 ⇑P P 07 54 42.1 -1.0
baz=54
EGMT **Eagleton** 54.09 305 *e*P P 07 54 42.8 -0.3
comp=Z,16nm,1.3s,mb4.8
EGMT **Eagleton** 54.09 305 *e*P P 07 54 42.8 -0.2
comp=Z,16nm,1.3s,mb4.8
A17A **Triple J Farms** 54.20 306 ⇑P P 07 54 43.1 -0.7
baz=54,SNR=11
E19A **Rath Farm, Rou** 54.27 303 ⇓P P 07 54 43.4 -1.0
baz=54
M24A **Cheyenne** 54.28 296 ⇑P P 07 54 44.0 -0.6
baz=54
B17A **L&G Farms, Che** 54.57 306 ⇑P P 07 54 45.5 -1.0
baz=54
F19A **Roth Farm, Mol** 54.66 302 ⇓P P 07 54 46.9 -0.4
baz=54,SNR=6.0
I21A **Big Trails, Te** 54.67 299 ⇑P P 07 54 46.5 -0.8
baz=54
A16A **West Butte Ran** 54.71 307 ⇓P P 07 54 46.4 -1.2
baz=54
H20A **Greybull** 54.77 300 ⇓P P 07 54 47.7 -0.4
baz=54,SNR=7.9
K22A **Casper** 54.77 298 ⇑P P 07 54 47.2 -0.8
baz=54
INK **Inuvik** 54.85 334 *e*P P 07 54 46.6 -1.7
comp=Z,48nm,2.5s,mb5.1
INK **Inuvik** 54.85 334 *e*P P 07 54 46.6 -1.6
INK pmax pmax
comp=Z,48nm,2.5s
INK **Inuvik** 54.85 334 *e*P P 07 54 46.6 -1.6
comp=Z,48nm,2.5s,mb5.1
C17A **Wharram Farm,** 54.87 305 ⇓P P 07 54 47.5 -1.2
baz=54
TEIG **Tepich** 54.89 264 *e*P P 07 54 49.9 +0.7
comp=Z,50nm,1.7s,mb5.3
TEIG **Tepich** 54.89 264 *e*P P 07 54 49.9 +0.7
comp=Z,50nm,1.7s,mb5.3
E18A **Harlowton** 54.90 303 ⇑P P 07 54 48.0 -1.0
baz=54
L22A **Ellis Ranch, M** 55.03 297 ⇑P P 07 54 49.7 -0.3
baz=55
B16A **M & M Farms, S** 55.04 306 ⇑P P 07 54 49.6 -0.4
baz=55,SNR=7.4
F18A **Big Timber** 55.11 303 ⇓P P 07 54 50.0 -0.5
baz=55
I20A **Worland** 55.12 300 ⇑P P 07 54 49.9 -0.6
baz=55,SNR=7.5
GCMT **Greycliff** 55.13 302 *e*P P 07 54 50.6 -0.1
comp=Z,11nm,1.3s,mb4.7
GCMT **Greycliff** 55.13 302 *e*P P 07 54 50.6 -0.1
comp=Z,11nm,1.3s,mb4.7
RLMT **Red Lodge** 55.23 302 ⇑P P 07 54 51.1 -0.3
baz=55
RLMT **Red Lodge** 55.23 302 *e*P P 07 54 51.6 +0.2
comp=Z,16nm,1.4s,mb4.9
RLMT **Red Lodge** 55.23 302 *e*P P 07 54 51.6 +0.3
comp=Z,16nm,1.4s,mb4.9
K21A **Alcova** 55.24 298 ⇑P P 07 54 51.2 -0.3
baz=55
N23A **Red Feather La** 55.30 296 ⇓P P 07 54 52.6 +0.7
baz=55,SNR=14
C16A **Fuhringer Ranc** 55.37 305 ⇓P P 07 54 52.1 -0.2
baz=55
E17A **Martinsdale** 55.51 304 ⇓P P 07 54 52.3 -1.1
baz=55
AKTK **Aktyubinsk** 55.53 51 P P 07 54 53.8 +0.3
AKTK LR LR 08 18 15.5
AKTK **Aktyubinsk** 55.53 51 P P 07 54 53.8 +0.4
AKTO **Aktyubinsk** 55.53 51 P P 07 54 53.8 +0.3
comp=Z,2.3nm,0.8s,mb4.2,baz=295,slow=7.6,SNR=8.3
AKTO LR LR 08 18 15.5
comp=Z,186nm,18.7s,MS4.2,baz=296,slow=36
B15A **Bradely Ranch,** 55.59 306 ⇓P P 07 54 53.3 -0.6
baz=55,SNR=7.4
D16A **Dana Ranch, Ca** 55.64 305 ⇓P P 07 54 53.1 -1.2
baz=55
L21A **Rawlins** 55.66 297 ⇑P P 07 54 54.5 0.0
baz=55
ISCO **Idaho Springs** 55.66 294 ⇓P P 07 54 54.2 -0.3
baz=55,SNR=11
ISCO **Idaho Springs** 55.66 294 *e*P P 07 54 54.8 +0.3
comp=Z,8.1nm,1.1s,mb4.7
ISCO **Idaho Springs** 55.66 294 *e*P P 07 54 54.8 +0.2
ISCO pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
ISCO **Idaho Springs** 55.66 294 *e*P P 07 54 54.8 +0.2
comp=Z,8.1nm,1.1s,mb4.7
F17A **Fitzpatrick Pl** 55.68 303 ⇓P P 07 54 54.5 0.0
baz=55
AMTX **Amarillo** 55.68 287 P P 07 54 55.4 +0.6
baz=55,SNR=5.8
AMTX **Amarillo** 55.68 287 *e*P P 07 54 55.3 +0.5
comp=Z,19nm,0.9s,mb5.1
AMTX **Amarillo** 55.68 287 *e*P P 07 54 55.3 +0.5
comp=Z,19nm,0.9s,mb5.1
N22A **Wattenberg Ran** 55.68 296 ⇓P P 07 54 55.4 +0.7
baz=55,SNR=5.8
RWWY **Rawlins** 55.70 297 *e*P P 07 54 54.9 +0.1
comp=Z,16nm,1.3s,mb4.9
RWWY **Rawlins** 55.70 297 *e*P P 07 54 54.9 +0.1
comp=Z,16nm,1.3s,mb4.9
A14A **Double T Ranch** 55.75 307 ⇓P P 07 54 54.6 -0.4
baz=55,SNR=10
Q24A **Divide** 55.80 293 ⇓P P 07 54 55.1 -0.4
baz=56
M21A **Separation Pea** 55.84 297 ⇑P P 07 54 56.0 +0.2
baz=56,SNR=8.4
C15A **Salmond Ranch,** 55.88 306 ⇑P P 07 54 55.0 -1.0
baz=56
K20A **Yellowstone Ra** 55.92 299 ⇑P P 07 54 56.0 -0.4
baz=56
E16A **East Helena** 55.96 304 ⇑P P 07 54 55.7 -0.9
baz=56
HRY **Holter Researc** 55.97 304 *e*P P 07 54 56.5 -0.2
HRY **Holter Researc** 55.97 304 *e*P P 07 54 56.5 -0.1
B14A **Marquette Ranc** 55.97 307 ⇓P P 07 54 55.2 -1.5
baz=56,SNR=6.1
WALA **Waterton Lakes** 55.98 308 *e*P P 07 54 56.4 -0.3
comp=Z,0.9nm,1.4s,mb3.6
WALA **Waterton Lakes** 55.98 308 *e*P P 07 54 56.4 -0.3
comp=Z,0.9nm,1.4s,mb3.6
P23A **Jefferson** 56.04 294 ⇑P P 07 54 57.8 +0.6
baz=56,SNR=5.5
O22A **Kremmling** 56.08 295 ⇓P P 07 54 57.7 +0.2
baz=56,SNR=7.0
K19A **Absolon Red Bu** 56.15 299 ⇓P P 07 54 57.0 -1.0
baz=56
D15A **Lincoln** 56.20 305 ⇓P P 07 54 57.5 -0.8
baz=56
U26A **Atchley Ranch,** 56.25 290 ⇑P P 07 54 58.2 -0.6
baz=56
L20A **Wamsutter** 56.26 298 ⇑P P 07 54 58.5 -0.3
baz=56,SNR=9.8
T25A **Trinidad** 56.30 291 ⇑P P 07 54 59.3 +0.2
baz=56,SNR=9.0
ROSC **El Rosal** 56.37 240 P P 07 55 01.1 +1.2
comp=Z,1.9nm,0.4s,mb4.5,baz=92,slow=20,SNR=4.2
ROSC LR LR 08 14 59.2
comp=Z,202nm,21.4s,MS4.2,baz=5.8,slow=32
ROSC **El Rosal** 56.37 240 P P 07 55 01.1 +1.2

BOZ **Bozeman (W)** 56.39 303 ⇑P P 07 54 59.5 -0.2
baz=56,SNR=9.9
BOZ **Bozeman (W)** 56.39 303 *e*P P 07 54 59.9 +0.2
comp=Z,4.2nm,0.9s,mb4.5
BOZ **Bozeman (W)** 56.39 303 *e*P P 07 54 59.9 +0.2
BOZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
BOZ **Bozeman (W)** 56.39 303 *e*P P 07 54 59.9 +0.2
comp=Z,4.2nm,0.9s,mb4.5
N21A **Black Mountain** 56.39 296 ⇓P P 07 55 00.5 +0.8
baz=56,SNR=13
M20A **Sweetwater, Wa** 56.43 297 ⇓P P 07 55 00.3 +0.3
baz=56,SNR=11
P22A **Eagle** 56.52 295 ⇓P P 07 55 01.2 +0.5
baz=56
W27A **Bowe Ranch, En** 56.53 288 ⇓P P 07 55 00.9 +0.1
baz=56,SNR=9.8
C14A **Swan Lake** 56.55 306 ⇑P P 07 55 00.4 -0.3
baz=56
V26A **Tequesquite Ra** 56.61 289 ⇓P P 07 55 01.1 -0.3
baz=56,SNR=6.8
PDAR **Pinedale Array** 56.62 299 P P 07 55 00.4 -1.0
comp=Z,6.6nm,1.2s,mb4.5,baz=62,slow=6.9,SNR=16
PDAR LR LR 08 17 45.0
comp=Z,608nm,20.9s,MS4.7,baz=78,slow=34
PDAR **Pinedale Array** 56.62 299 P P 07 55 00.4 -1.0
BW06 **Boulder Array** 56.62 299 ⇓P P 07 55 00.3 -1.1
baz=56,SNR=9.3
BW06 **Boulder Array** 56.62 299 *e*P P 07 54 59.8 -1.6
comp=Z,10nm,1.3s,mb4.7
BW06 **Boulder Array** 56.62 299 *e*P P 07 54 59.8 -1.6
comp=Z,10nm,1.3s,mb4.7
FLWY **Flagg Ranch** 56.64 301 *e*P P 07 55 01.9 +0.5
comp=Z,8.8nm,1.1s,mb4.7
FLWY **Flagg Ranch** 56.64 301 *e*P P 07 55 01.9 +0.4
comp=Z,8.8nm,1.1s,mb4.7
B13A **Whitefish** 56.65 307 ⇑P P 07 55 00.9 -0.5
baz=56,SNR=5.7
H16A **Russell Place,** 56.65 302 ⇑P P 07 55 00.6 -1.0
baz=56,SNR=7.3
SLMT **Seeley Lake** 56.67 306 *e*P P 07 55 00.8 -0.8
comp=Z,3.1nm,0.8s,mb4.4
SLMT **Seeley Lake** 56.67 306 *e*P P 07 55 00.8 -0.8
comp=Z,3.1nm,0.8s,mb4.4
J18A **Kendall Valley** 56.68 300 ⇑P P 07 55 01.2 -0.5
baz=56,SNR=6.7
SDCO **Great Sand Dun** 56.69 292 ⇑P P 07 55 01.7 -0.3
baz=56
SDCO **Great Sand Dun** 56.69 292 *e*P P 07 55 02.1 +0.2
comp=Z,13nm,1.5s,mb4.7
SDCO **Great Sand Dun** 56.69 292 *e*P P 07 55 02.1 +0.2
comp=Z,13nm,1.5s,mb4.7
CHMT **Chamberlain Mo** 56.70 305 *e*P P 07 55 01.8 -0.1
CHMT **Chamberlain Mo** 56.70 305 *e*P P 07 55 01.8 0.0
U25A **Circle Dot Ran** 56.70 290 ⇓P P 07 55 02.4 +0.4
baz=56,SNR=23
G16A **Moss Hill, Enn** 56.71 303 ⇑P P 07 55 01.5 -0.4
baz=56
D14A **Greenough** 56.76 305 ⇓P P 07 55 01.6 -0.7
baz=56
X27A **F and S Farms,** 56.78 288 ⇑P P 07 55 02.7 +0.1
baz=56
F15A **Butte** 56.81 304 ⇓P P 07 55 02.2 -0.4
baz=56
LOHW **Long Hollow** 56.83 301 *e*P P 07 55 02.4 -0.4
comp=Z,9.2nm,1.3s,mb4.7
LOHW **Long Hollow** 56.83 301 *e*P P 07 55 02.4 -0.4
comp=Z,9.2nm,1.3s,mb4.7
N20A **Spence Gulch,** 56.83 297 ⇑P P 07 55 03.0 +0.2
baz=56,SNR=9.5
MOOW **Moose Ponds** 56.84 301 *e*P P 07 55 02.4 -0.6
comp=Z,15nm,1.4s,mb4.8
MOOW **Moose Ponds** 56.84 301 *e*P P 07 55 02.4 -0.5
comp=Z,15nm,1.4s,mb4.8
L19A **Farson** 56.85 299 ⇑P P 07 55 02.1 -0.9
baz=56
JCT **Junction City** 56.87 282 *e*P P 07 55 02.5 -0.8
comp=Z,15nm,1.4s,mb4.8
JCT **Junction City** 56.87 282 *e*P P 07 55 02.6 -0.7
JCT pmax pmax
comp=Z,15nm,1.4s,mb4.8
JCT **Junction City** 56.87 282 *e*P P 07 55 02.6 -0.7
comp=Z,15nm,1.4s,mb4.8
IMW **Indian Meadow** 56.88 301 *e*P P 07 55 03.5 +0.3
comp=Z,13nm,1.3s,mb4.8
IMW **Indian Meadow** 56.88 301 *e*P P 07 55 03.5 +0.3
comp=Z,13nm,1.3s,mb4.8
MSTX **Muleshoe** 56.94 287 ⇑P P 07 55 03.5 -0.3
baz=57,SNR=20
SNOW **Snow King Moun** 57.00 301 *e*P P 07 55 04.0 0.0
comp=Z,23nm,1.4s,mb5.0
SNOW **Snow King Moun** 57.00 301 *e*P P 07 55 04.0 0.0
comp=Z,23nm,1.4s,mb5.0
Q22A **Crested Butte,** 57.01 294 ⇑P P 07 55 04.0 -0.2
baz=57,SNR=8.6
J17A **Brown Place, J** 57.03 300 ⇑P P 07 55 04.0 -0.2
baz=57,SNR=8.9
TPAW **Teton Pass** 57.11 301 *e*P P 07 55 03.6 -1.1
comp=Z,10nm,1.3s,mb4.7
TPAW **Teton Pass** 57.11 301 *e*P P 07 55 03.7 -1.1
comp=Z,10nm,1.3s,mb4.7
DLMT **Dillon** 57.12 303 *e*P P 07 55 04.8 -0.1
comp=Z,15nm,1.3s,mb4.8
DLMT **Dillon** 57.12 303 *e*P P 07 55 04.8 -0.1
comp=Z,15nm,1.3s,mb4.8
MSO **Missoula** 57.15 305 ⇑P P 07 55 04.2 -0.8
baz=57
MSO **Missoula** 57.15 305 *e*P P 07 55 04.2 -0.9
comp=Z,11nm,1.7s,mb4.6
MSO **Missoula** 57.15 305 *e*P P 07 55 04.2 -0.8
comp=Z,11nm,1.7s,mb4.6
V25A **Rancho No Teng** 57.15 290 ⇓P P 07 55 05.0 -0.2
baz=57
G15A **Dillon** 57.16 303 ⇓P P 07 55 05.2 +0.1
baz=57,SNR=11
ABKAR **Akbulak array** 57.20 51 *e*P P 07 55 06.4 +1.0
comp=Z,12nm,1.3s,mb4.8
ABKAR **Akbulak array** 57.20 51 *e*P P 07 55 06.4 +1.0
comp=Z,12nm,1.3s,mb4.8
Y27A **Causey** 57.26 287 ⇑P P 07 55 05.7 -0.3
baz=57,SNR=5.4
R22A **Saguache, Gunn** 57.26 293 ⇓P P 07 55 06.1 +0.1
baz=57,SNR=7.2
X26A **CR and CF Fran** 57.32 288 ⇓P P 07 55 06.5 +0.1
baz=57
N19A **John Jarvie Ra** 57.38 297 ⇓P P 07 55 06.3 -0.5
baz=57,SNR=5.6
W25A **X Bar L Ranch,** 57.39 289 ⇓P P 07 55 07.3 +0.4
baz=57
RRI2 **Red Ridge** 57.41 301 *e*P P 07 55 05.3 -1.7
comp=Z,11nm,1.2s,mb4.8
RRI2 **Red Ridge** 57.41 301 *e*P P 07 55 05.3 -1.6
comp=Z,11nm,1.2s,mb4.8
Q21A **Lamborn Mesa,** 57.46 294 ⇑P P 07 55 07.7 +0.3
baz=57,SNR=13
E13A **Victor** 57.49 305 ⇓P P 07 55 06.3 -1.2
baz=57
S22A **4UR Ranch, Cre** 57.57 293 ⇓P P 07 55 08.7 +0.6
baz=57,SNR=8.1
J16A **Bone** 57.63 301 ⇓P P 07 55 07.7 -0.8
baz=57
P20A **De Beque** 57.63 295 ⇑P P 07 55 08.6 0.0
baz=57,SNR=9.7
N18A **Larsen Ranch,** 57.65 298 ⇓P P 07 55 08.8 +0.2
baz=57
O19A **Miners Draw (B** 57.67 297 ⇑P P 07 55 08.7 -0.1
baz=57,SNR=12
I15A **Monteview** 57.78 302 ⇑P P 07 55 09.5 0.0
baz=57,SNR=9.5
D12A **Red Ives Fores** 57.85 306 ⇓P P 07 55 09.1 -0.9
baz=58
Q20A **Ridgley Place,** 57.87 295 ⇓P P 07 55 09.7 -0.5
baz=58,SNR=10
F13A **Darby** 57.93 305 ⇓P P 07 55 09.9 -0.6
baz=58
U23A **El Rito** 57.94 291 ⇓P P 07 55 11.2 +0.5
baz=58,SNR=8.3
C11A **Tepee Creek (N** 57.95 307 ⇑P P 07 55 10.0 -0.7
baz=58
H14A **Leadore** 57.98 303 ⇓P P 07 55 10.9 0.0
baz=58
T22A **Edith** 58.03 292 ⇑P P 07 55 11.4 0.0
baz=58,SNR=21
W24A **Lazy 6 Ranch,** 58.03 290 ⇓P P 07 55 12.0 +0.5
baz=58,SNR=18
127A **Arkansas Junct** 58.08 286 ⇑P P 07 55 10.8 -1.0
baz=58
NEW **Newport** 58.22 308 ⇑P P 07 55 11.5 -1.0
baz=58,SNR=9.0
NEW **Newport** 58.22 308 *e*P P 07 55 11.7 -0.8
comp=Z,18nm,1.4s,mb4.9
NEW **Newport** 58.22 308 *e*P P 07 55 11.7 -0.8
NEW pmax pmax
comp=Z,18nm,1.4s
NEW **Newport** 58.22 308 *e*P P 07 55 11.7 -0.8
comp=Z,18nm,1.4s,mb4.9
G13A **Cobalt** 58.24 304 ⇓P P 07 55 12.9 +0.2
baz=58,SNR=6.5
O18A **Roosevelt** 58.25 297 ⇑P P 07 55 12.8 -0.1
baz=58,SNR=6.1
S21A **Coal Bank Pass** 58.25 293 P P 07 55 13.8 +0.8
baz=58,SNR=16
V23A **Ortiz Mt. (NFS** 58.26 291 ⇑P P 07 55 13.7 +0.7
baz=58,SNR=7.0
Y25A **Mesa, Roswell** 58.28 288 ⇑P P 07 55 13.0 -0.2
baz=58,SNR=6.2
TGUH **Tegucigalpa,Un** 58.29 258 *e*P P 07 55 14.9 +1.4
TGUH **Tegucigalpa,Un** 58.29 258 *e*P P 07 55 14.9 +1.4
E12A **Beaver Dam Sad** 58.32 306 ⇓P P 07 55 12.3 -1.0
baz=58
R20A **Redvale** 58.35 294 ⇓P P 07 55 14.0 +0.4
baz=58
U22A **Llaves** 58.35 292 ⇑P P 07 55 14.2 +0.5
baz=58
I14A **Mackay** 58.40 302 ⇓P P 07 55 14.0 +0.1
baz=58
N17A **Moffit Pass** 58.41 298 ⇑P P 07 55 13.4 -0.6
baz=58
F12A **Elk City** 58.49 305 ⇓P P 07 55 14.2 -0.3
baz=58,SNR=11
HWUT **Hardware Ranch** 58.50 299 *e*P P 07 55 14.5 -0.1
comp=Z,9.6nm,1.1s,mb4.7
HWUT **Hardware Ranch** 58.50 299 *e*P P 07 55 14.5 -0.1
comp=Z,9.6nm,1.1s,mb4.7
H13A **Challis** 58.54 303 ⇓P P 07 55 15.1 +0.2
baz=58,SNR=6.9
W23A **Werner Place,** 58.56 290 ⇑P P 07 55 15.2 +0.1
baz=58,SNR=5.8
PV04 **Paradox Valley** 58.58 295 *e*P P 07 55 15.8 +0.6
PV04 **Paradox Valley** 58.58 295 *e*P P 07 55 15.8 +0.6
V22A **San Miguel Ran** 58.65 291 ⇑P P 07 55 16.6 +0.9
baz=58,SNR=12
Z25A **Roswell** 58.66 287 ⇑P P 07 55 16.5 +0.6
baz=58,SNR=6.4
PV10 **Paradox Valley** 58.67 295 *e*P P 07 55 16.2 +0.4
comp=Z,192nm,1.1s
PV10 **Paradox Valley** 58.67 295 *e*P P 07 55 16.2 +0.3
comp=Z,192nm,1.1s
428A **Kincaid Ranch,** 58.74 284 ⇓P P 07 55 16.2 -0.2
baz=58,SNR=5.1
P18A **Preston Nutter** 58.76 297 ⇓P P 07 55 15.9 -0.6
baz=58,SNR=9.7
O17A **Robinson Place** 58.76 297 ⇓P P 07 55 16.3 -0.1
baz=58,SNR=6.9
J14A **Carey** 58.77 302 ⇑P P 07 55 16.9 +0.4
baz=58,SNR=5.6
Y24A **Capitan** 58.78 288 ⇑P P 07 55 17.4 +0.6
baz=58,SNR=6.6
L15A **Malad City** 58.80 300 ⇑P P 07 55 16.0 -0.7
baz=58,SNR=5.8
I13A **Wildhorse Cree** 58.81 303 ⇓P P 07 55 16.9 +0.1
baz=58,SNR=11
U21A **Nageezi** 58.86 292 ⇑P P 07 55 18.0 +0.8
baz=58,SNR=8.2
R19A **Curley Farm, L** 58.87 295 ⇓P P 07 55 17.5 +0.3
baz=58,SNR=17
ANMO **Albuquerque** 58.89 290 *e*P P 07 55 18.1 +0.7
comp=Z,7.7nm,1.3s,mb4.6
ANMO **Albuquerque** 58.89 290 *e*P P 07 55 18.1 +0.6
ANMO pmax pmax
comp=Z,8.0nm,1.3s
ANMO **Albuquerque** 58.89 290 *e*P P 07 55 18.1 +0.6
comp=Z,7.7nm,1.3s,mb4.6
H12A **Diamond D Ranc** 58.91 304 ⇑P P 07 55 17.0 -0.4
baz=58,SNR=7.2
226A **Malaga, Loving** 58.95 286 ⇓P P 07 55 18.2 +0.3
baz=59,SNR=10
DAU **Daniels Canyon** 58.97 298 *e*P P 07 55 18.5 +0.6
DAU **Daniels Canyon** 58.97 298 *e*P P 07 55 18.5 +0.6
MVCO **Mesa Verde** 58.97 293 ⇓P P 07 55 18.2 +0.2
baz=59,SNR=9.4
MVCO **Mesa Verde** 58.97 293 *e*P P 07 55 19.1 +1.1
comp=Z,26nm,1.4s,mb5.1
MVCO **Mesa Verde** 58.97 293 *e*P P 07 55 19.1 +1.1
comp=Z,26nm,1.4s,mb5.1
K14A **Jones Ranch, D** 58.99 301 ⇓P P 07 55 17.5 -0.5
baz=59,SNR=9.0
Z24A **Sheeppen Canyo** 59.08 288 ⇓P P 07 55 19.7 +1.0
baz=59,SNR=5.5
S19A **Harvey Farm, M** 59.09 294 ⇑P P 07 55 19.0 +0.2
baz=59,SNR=12
J13A **Cove Ranch, Pi** 59.13 302 ⇑P P 07 55 19.2 +0.2
baz=59,SNR=8.4
M15A **Larsen Ranch,** 59.14 299 ⇓P P 07 55 18.6 -0.5
baz=59,SNR=14
528A **Cox Ranch, San** 59.15 283 ⇑P P 07 55 18.5 -0.8
baz=59,SNR=11
HVU **Hansel Valley** 59.16 300 *e*P P 07 55 17.6 -1.6
comp=Z,10nm,1.2s,mb4.7
HVU **Hansel Valley** 59.16 300 *e*P P 07 55 17.6 -1.6
HVU pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
HVU **Hansel Valley** 59.16 300 *e*P P 07 55 17.6 -1.6
comp=Z,10nm,1.2s,mb4.7
427A **Hayter Ranch,** 59.17 284 ⇑P P 07 55 18.9 -0.5
baz=59,SNR=10.0
HLID **Hailey** 59.19 302 ⇑P P 07 55 19.9 +0.5
baz=59,SNR=7.7
HLID **Hailey** 59.19 302 *e*P P 07 55 19.6 +0.2
comp=Z,9.2nm,1.4s,mb4.6
HLID **Hailey** 59.19 302 *e*P P 07 55 19.6 +0.3
comp=Z,9.2nm,1.4s,mb4.6
Y23A **Lovelace Mesa,** 59.20 289 ⇓P P 07 55 19.6 0.0
baz=59,SNR=7.9
R18A **Canyonlands Na** 59.23 295 ⇓P P 07 55 18.7 -1.0
baz=59,SNR=11
DAWY **Dawson** 59.26 332 *e*P P 07 55 19.4 -0.1
DAWY **Dawson** 59.26 332 *e*P P 07 55 19.4 -0.1
326A **Caldwell Ranch** 59.30 285 ⇑P P 07 55 20.8 +0.5
baz=59,SNR=17
B08A **Colville Reser** 59.40 309 ⇓P P 07 55 19.4 -1.4
baz=59,SNR=5.2
225A **Deer Hill, Car** 59.41 286 ⇓P P 07 55 21.5 +0.4
baz=59,SNR=11
BNM **Barren Site** 59.47 289 *e*P P 07 55 22.2 +0.7
comp=Z,14nm,1.3s,mb4.8
BNM **Barren Site** 59.47 289 *e*P P 07 55 22.2 +0.8
comp=Z,14nm,1.3s,mb4.8
I12A **Atlanta** 59.49 303 ⇓P P 07 55 21.3 -0.2
baz=59,SNR=13
124A **Stringfield Ra** 59.51 287 ⇑P P 07 55 22.4 +0.7
baz=59,SNR=18
T19A **Beclabito** 59.53 293 ⇑P P 07 55 21.9 +0.1
baz=59,SNR=11
TMUT **Trail Mountain** 59.56 297 *e*P P 07 55 21.5 -0.5
comp=Z,21nm,1.0s,mb5.1
TMUT **Trail Mountain** 59.56 297 *e*P P 07 55 21.5 -0.5
comp=Z,21nm,1.0s,mb5.1
628A **Black Gap, Mar** 59.62 283 ⇓P P 07 55 22.4 -0.2
baz=59,SNR=8.8
LAZ **Ladron** 59.66 290 *e*P P 07 55 23.7 +0.9
comp=Z,3.9nm,1.3s,mb4.3
LAZ **Ladron** 59.66 290 *e*P P 07 55 23.7 +0.9
comp=Z,3.9nm,1.3s,mb4.3
S18A **Hurst Farm, Bl** 59.68 295 ⇓P P 07 55 22.8 -0.1
baz=59,SNR=12
LENM **Lemitar** 59.69 290 *e*P P 07 55 24.3 +1.3
LENM **Lemitar** 59.69 290 *e*P P 07 55 24.3 +1.3
426A **McDonald Obser** 59.71 285 ⇑P P 07 55 23.6 +0.4
baz=60,SNR=20
527A **Woodward Ranch** 59.73 284 ⇓P P 07 55 22.9 -0.4
baz=60,SNR=14
R17A **Hanksville Air** 59.74 296 ⇓P P 07 55 23.0 -0.3
baz=59,SNR=11
Q16A **Castle Valley** 59.75 296 ⇓P P 07 55 23.0 -0.3
baz=59,SNR=8.2
Y22A **Socorro** 59.82 289 ⇓P P 07 55 24.6 +0.8
baz=60,SNR=15
U19A **Dine` College,** 59.96 293 ⇓P P 07 55 25.2 +0.4
baz=60,SNR=20
627A **Terlingua Ranc** 59.99 283 ⇑P P 07 55 25.1 0.0
baz=60,SNR=19
DUG **Dugway** 60.08 298 ⇓P P 07 55 25.7 +0.2
baz=60,SNR=18
DUG **Dugway** 60.08 298 *e*P P 07 55 25.5 0.0
comp=Z,19nm,1.2s,mb5.0

DUG	Dugway	60.08	298	eP		P		07 55 25.5	0.0	
DUG					pmax	pmax				
	comp=Z,19nm,1.2s,mb5.0									
DUG	Dugway	60.08	298	eP		P		07 55 25.5	0.0	
	comp=Z,19nm,1.2s,mb5.0									
X21A	Alamocita Cree	60.08	290	⇓P		P		07 55 26.1	+0.5	
	baz=60,SNR=20									
526A	Mary Lane Ranc	60.11	284	⇓P		P		07 55 26.2	+0.2	
	baz=60,SNR=11									
W20A	Ramah	60.16	291	⇑P		P		07 55 26.9	+0.7	
	baz=60,SNR=8.5									
LNOR	Lincton Mounta	60.19	306	eP		P		07 55 25.6	-0.7	
LNOR	Lincton Mounta	60.19	306	eP		P		07 55 25.6	-0.6	
Z22A	Elephant Butte	60.21	289	⇓P		P		07 55 27.1	+0.5	
	baz=60,SNR=9.7									
TXAR	Lajitas Array	60.25	283	P		P		07 55 26.7	-0.2	
TXAR				LR		LR		08 21 13.3		
TXAR	Lajitas Array	60.25	283	P		P		07 55 26.7	-0.2	
	comp=Z,5.6nm,1.0s,mb4.5,baz=73,slow=6.2,SNR=39									
TXAR				LR		LR		08 21 13.3		
	comp=Z,513nm,21.0s,MS4.6,baz=0.0,slow=36									
TXAR	Lajitas Array	60.25	283	P		P		07 55 26.7	-0.2	
Y21A	Point of Rocks	60.25	290	⇑P		P		07 55 27.7	+0.9	
	baz=60,SNR=15									
324A	Moseley Ranch,	60.26	286	⇑P		P		07 55 26.1	-0.8	
	baz=60,SNR=5.8									
425A	Indio Mountain	60.30	285	⇓P		P		07 55 27.2	0.0	
	baz=60,SNR=9.9									
U18A	Rough Rock, Ch	60.33	293	⇓P		P		07 55 27.3	0.0	
	baz=60,SNR=11									
626A	Big Bend Ranch	60.45	284	⇓P		P		07 55 28.1	-0.1	
	baz=60,SNR=11									
COLD	Coldfoot	60.45	338	eP		P		07 55 27.2	-0.5	
	comp=Z,4.3nm,0.8s,mb4.5									
COLD	Coldfoot	60.45	338	eP		P		07 55 27.2	-0.5	
	comp=Z,4.3nm,0.8s,mb4.5									
Q15A	Fillmore	60.48	297	⇑P		P		07 55 28.7	+0.4	
	baz=60,SNR=7.0									
X20A	Quemado	60.50	291	⇓P		P		07 55 29.6	+1.0	
	baz=60,SNR=15									
BRVK	Borovoye	60.55	43	eP		P		07 55 28.5	-0.1	
	comp=Z,5.3nm,0.9s,mb4.7									
BRVK	Borovoye	60.55	43⇑	eP		P		07 55 29.0	+0.4	
BRVK					pmax	pmax				
	comp=Z,7.0nm,1.7s,mb4.5									
BRVK					MLR	MLR				
	comp=Z,119nm,17.0s,MS4.1									
BRVK	Borovoye	60.55	43	eP		P		07 55 28.5	-0.1	
	comp=Z,5.3nm,0.9s,mb4.7									
P14A	Drum Mountains	60.58	298	⇓P		P		07 55 29.1	+0.1	
	baz=60,SNR=10									
T17A	Navajo Res., N	60.61	294	⇓P		P		07 55 29.4	+0.1	
	baz=60,SNR=7.3									
MSU	Marysvale	60.63	296	eP		P		07 55 29.9	+0.6	
MSU	Marysvale	60.63	296	eP		P		07 55 29.9	+0.6	
S16A	Weppner Ranch,	60.71	295	⇑P		P		07 55 29.8	-0.1	
	baz=60,SNR=6.4									
V18A	Ganado	60.78	293	⇓P		P		07 55 30.2	-0.2	
	baz=60,SNR=6.7									
Y20A	Horse Springs,	60.79	290	⇓P		P		07 55 31.4	+1.0	
	baz=60,SNR=12									
Q14A	Sevier Lake (B	61.06	297	⇑P		P		07 55 32.2	0.0	
	baz=61,SNR=14									
X19A	St. Johns	61.10	291	⇓P		P		07 55 33.6	+1.0	
	baz=61,SNR=8.3									
121A	Cookes Peak, D	61.19	289	⇑P		P		07 55 34.0	+0.7	
	baz=61,SNR=9.3									
ILAR	Eielson Array	61.23	335	P		P		07 55 32.0	-1.0	
	comp=Z,2.2nm,1.1s,mb4.2,baz=37,slow=4.9,SNR=14									
ILAR					PcP	PcP		07 56 14.8	-0.7	
	comp=Z,1.1nm,0.9s,baz=21,slow=3.7,SNR=6.7									
ILAR					LR	LR		08 20 09.2		
	comp=Z,148nm,18.7s,MS4.2,baz=53,slow=34									
ILAR	Eielson Array	61.23	335	P		P		07 55 32.0	-1.0	
ILAR								07 56 14.8		
ILAR	Eielson Array	61.23	335	P		P		07 55 32.0	-1.0	
ILAR	Eielson Array	61.23	335	PcP		PcP		07 56 14.8	-0.7	
O12A	Currie	61.25	299	⇑P		P		07 55 33.3	-0.2	
	baz=61,SNR=7.9									
P13A	Bates Ranch, G	61.26	298	⇑P		P		07 55 33.9	+0.3	
	baz=61,SNR=12									
U16A	Tuba City	61.32	294	⇑P		P		07 55 34.5	+0.5	
	baz=61,SNR=17									
Y19A	Nutrioso	61.35	291	⇑P		P		07 55 35.5	+1.2	
	baz=61,SNR=18									
V17A	Tonalea, Kykot	61.40	293	⇓P		P		07 55 35.0	+0.4	
	baz=61,SNR=10									
Z20A	Nine Sixteen R	61.40	290	⇑P		P		07 55 35.7	+1.0	
	baz=61,SNR=7.3									
COLA	College	61.45	335	eP		P		07 55 33.3	-1.2	
	comp=Z,2.6nm,0.9s,mb4.4									
COLA	College	61.45	335	eP		P		07 55 33.3	-1.2	
COLA					pmax	pmax				
	comp=Z,3.0nm,0.9s,mb4.4									
COLA	College	61.45	335	eP		P		07 55 33.3	-1.2	
	comp=Z,2.6nm,0.9s,mb4.4									
Q13A	Wheeler Ranch,	61.55	298	⇓P		P		07 55 35.8	+0.2	
	baz=61,SNR=8.5									
T15A	Red Dirt Ranch	61.62	295	⇑P		P		07 55 35.2	-0.9	
	baz=61,SNR=8.7									
S14A	Cedar City	61.70	296	⇓P		P		07 55 36.8	+0.2	
	baz=61,SNR=9.1									
J08A	Circle Bar Ran	61.74	304	⇓P		P		07 55 37.3	+0.5	
	baz=61									
120A	U Bar Ranch, L	61.76	289	⇑P		P		07 55 38.2	+1.1	
	baz=62,SNR=6.2									
P12A	McGill	61.81	299	⇑P		P		07 55 37.9	+0.5	
	baz=62,SNR=8.5									
WUAZ	Wupatki	61.84	293	⇓P		P		07 55 38.0	+0.4	
	baz=62,SNR=6.6									
ARUT	Antelope Range	61.86	296	eP		P		07 55 37.8	+0.1	
	comp=Z,10nm,1.3s,mb4.8									
ARUT	Antelope Range	61.86	296	eP		P		07 55 37.8	+0.1	
ARUT					pmax	pmax				
	comp=Z,10.0nm,1.3s,mb4.8									
ARUT	Antelope Range	61.86	296	eP		P		07 55 37.8	+0.1	
	comp=Z,10nm,1.3s,mb4.8									
U15A	North Rim	61.91	295	⇑P		P		07 55 37.9	-0.1	
	baz=62,SNR=6.8									
CCUT	Cedar City	61.95	296	eP		P		07 55 38.8	+0.5	
	comp=Z,12nm,1.0s,mb5.0									
CCUT	Cedar City	61.95	296	eP		P		07 55 38.8	+0.5	
	comp=Z,12nm,1.0s,mb5.0									
R13A	O'Grain Ranch,	61.97	297	⇓P		P		07 55 38.6	+0.2	
	baz=62,SNR=8.6									
Y18A	Canyon Dav an	61.98	291	⇓P		P		07 55 39.3	+0.8	
	baz=62,SNR=10									
Q12A	Willow Creek R	62.01	298	⇓P		P		07 55 39.3	+0.6	
	baz=62,SNR=9.1									
T14A	Hurricane	62.05	296	⇑P		P		07 55 38.7	-0.3	
	baz=62,SNR=7.9									
220A	Playas Peak, P	62.07	288	⇑P		P		07 55 39.3	+0.1	
	baz=62,SNR=8.2									
119A	Ashpeak Ranch,	62.09	290	⇑P		P		07 55 39.7	+0.4	
	baz=62									
X17A	Forest Lakes	62.16	292	⇑P		P		07 55 40.5	+0.7	
	baz=62,SNR=7.3									
V15A	Kaibab Nationa	62.19	294	⇑P		P		07 55 40.8	+0.9	
	baz=62,SNR=11									
S13A	Holt Ranch, En	62.25	296	⇑P		P		07 55 40.3	0.0	
	baz=62,SNR=18									
R12A	Pony Springs,	62.29	298	⇑P		P		07 55 40.5	-0.1	
	baz=62,SNR=6.7									
WVOR	Wild Horse Val	62.38	303	eP		P		07 55 41.5	+0.4	
	comp=Z,18nm,1.3s,mb5.0									
WVOR	Wild Horse Val	62.38	303	eP		P		07 55 41.5	+0.4	
WVOR					pmax	pmax				
	comp=Z,18nm,1.3s,mb5.0									
WVOR	Wild Horse Val	62.38	303	eP		P		07 55 41.5	+0.4	
	comp=Z,18nm,1.3s,mb5.0									
U14A	Mt Trumbull	62.49	295	⇓P		P		07 55 41.4	-0.5	
	baz=62,SNR=7.1									
219A	White Tail Can	62.51	289	⇓P		P		07 55 42.6	+0.4	
	baz=62,SNR=10									
X16A	Lo Mia Camp, P	62.54	292	⇓P		P		07 55 42.8	+0.6	
	baz=62,SNR=8.3									
Z17A	San Carlos Hig	62.56	291	⇑P		P		07 55 43.0	+0.5	
	baz=62,SNR=5.7									
Y17A	Roosevelt	62.57	291	⇓P		P		07 55 43.3	+0.8	
	baz=62,SNR=11									
118A	Homack Ranch,	62.61	290	⇑P		P		07 55 43.5	+0.7	
	baz=62,SNR=7.0									
T13A	Saint George	62.61	296	⇓P		P		07 55 43.2	+0.4	
	baz=62,SNR=14									
Q11A	Duckwater	62.65	299	⇑P		P		07 55 42.6	-0.4	
	baz=62									
P10A	Eureka	62.70	300	⇑P		P		07 55 43.6	+0.3	
	baz=62									
S12A	Delamar Landin	62.87	297	⇓P		P		07 55 44.4	-0.1	
	baz=62,SNR=5.5									
Y16A	Circle Bar Ran	62.88	292	⇑P		P		07 55 45.1	+0.5	
	baz=63									
R11A	Troy Canyon, C	62.90	298	⇑P		P		07 55 44.5	-0.2	
	baz=62,SNR=5.9									
V14A	Boquillas Ranc	62.91	294	⇓P		P		07 55 44.6	-0.2	
	baz=63									
U13A	Pakoon Wash	63.01	295	⇑P		P		07 55 45.6	+0.2	
	baz=63,SNR=6.3									
X15A	Humboldt	63.02	293	⇓P		P		07 55 46.3	+0.8	
	baz=63,SNR=19									
218A	Dragoon	63.06	289	⇑P		P		07 55 46.9	+1.0	
	baz=63,SNR=5.5									
W14A	Seligman	63.15	294	⇑P		P		07 55 47.4	+1.0	
	baz=63,SNR=16									
117A	Oracle	63.17	290	⇑P		P		07 55 47.4	+0.8	
	baz=63,SNR=9.0									
Z16A	Peralta Trail,	63.17	291	⇓P		P		07 55 47.4	+0.9	
	baz=63,SNR=6.7									
TIXI	Tiksi	63.18	8	eP		P		07 55 45.9	-0.1	
TIXI					pmax	pmax				
	comp=Z,8.0nm,1.3s,mb4.7									
TIXI	Tiksi	63.18	8	eP		P		07 55 45.9	-0.1	
	comp=Z,8.0nm,1.3s,mb4.7									
T11A	Corn Creek, Al	63.32	297	⇑P		P		07 55 47.6	+0.2	
	baz=63,SNR=9.4									
V13A	Grand Canyon W	63.35	295	⇓P		P		07 55 48.1	+0.3	
	baz=63,SNR=12									
TUC	Tucson	63.36	290	eP		P		07 55 48.3	+0.5	
	comp=Z,12nm,1.3s,mb4.9									
TUC	Tucson	63.36	290	eP		P		07 55 48.3	+0.5	
TUC					pmax	pmax				
	comp=Z,12nm,1.3s,mb4.9									
TUC	Tucson	63.36	290	eP		P		07 55 48.3	+0.5	
	comp=Z,12nm,1.3s,mb4.9									
R10A	Warm Springs	63.39	298	⇓P		P		07 55 47.7	-0.2	
	baz=63,SNR=6.3									
Y15A	Casa Rosa Ranc	63.41	292	⇓P		P		07 55 48.2	+0.2	
	baz=63,SNR=7.9									
X14A	Yava	63.47	293	⇓P		P		07 55 48.8	+0.4	
	baz=63,SNR=7.6									
K05A	Summer Lake	63.54	305	⇓P		P		07 55 48.5	-0.4	
	baz=63,SNR=5.8									
MOD	Modoc	63.69	304	eP		P		07 55 49.8	0.0	
	comp=Z,12nm,1.1s,mb4.8									
MOD	Modoc	63.69	304	eP		P		07 55 49.8	0.0	
	comp=Z,12nm,1.1s,mb4.8									
SHPR	Sheep Range	63.72	296	eP		P		07 55 50.6	+0.5	
SHPR	Sheep Range	63.72	296	eP		P		07 55 50.7	+0.6	
S10A	Tonopah Range,	63.79	298	⇓P		P		07 55 50.5	-0.1	
	baz=63,SNR=15									
Y14A	Wickenburg	63.86	293	⇓P		P		07 55 51.8	+0.7	
	baz=64,SNR=5.7									
V12A	Nelson	63.99	295	⇑P		P		07 55 52.1	+0.2	
	baz=64									
216A	Three Points,	64.00	290	⇓P		P		07 55 52.6	+0.6	
	baz=64,SNR=7.7									
X13A	Yucca	64.01	294	⇑P		P		07 55 52.2	+0.2	
	baz=64,SNR=13									
PMR	Palmer	64.22	333	eP		P		07 55 52.6	-0.4	
	comp=Z,13nm,1.2s,mb4.8									
PMR	Palmer	64.22	333	eP		P		07 55 52.6	-0.4	
PMR					pmax	pmax				
	comp=Z,13nm,1.2s,mb4.8									
PMR	Palmer	64.22	333	eP		P		07 55 52.6	-0.4	
	comp=Z,13nm,1.2s,mb4.8									
V11A	Goodsprings	64.30	296	⇓P		P		07 55 54.2	+0.2	
	baz=64,SNR=6.4									
PDMCI	Parker Dam,Lak	64.39	294	⇑P		P		07 55 55.1	+0.5	
	baz=64									
PAHR	Pah Rah Range	64.45	301	eP		P		07 55 55.7	+0.8	
PAHR	Pah Rah Range	64.45	301	eP		P		07 55 55.7	+0.8	
114A	Black Gap (USA	64.50	292	⇑P		P		07 55 56.3	+1.0	
	baz=64,SNR=7.5									
U10A	Ash Meadows, A	64.53	297	⇓P		P		07 55 55.8	+0.4	
	baz=64,SNR=6.0									
LDFC	Landfair	64.55	295	eP		P		07 55 56.3	+0.7	
	comp=Z,36nm,1.3s,mb5.2									
LDFC	Landfair	64.55	295	eP		P		07 55 56.3	+0.7	
	comp=Z,36nm,1.3s,mb5.2									
NVAR	Mina Array Bea	64.56	300	P		P		07 55 54.0	-1.5	
	comp=Z,2.0nm,1.0s,mb4.1,baz=55,slow=4.7,SNR=12									
NVAR	Mina Array Bea	64.56	300	P		P		07 55 54.0	-1.6	
Z13A	Yuma Proving G	64.74	292	⇓P		P		07 55 57.3	+0.4	
	baz=64,SNR=16									
FURC	Furnace Creek,	64.84	297	⇓P		P		07 55 57.8	+0.4	
	baz=64,SNR=14									
WCN	Washoe City	64.93	301	⇓P		P		07 55 58.3	+0.3	
	baz=64									
214A	Organ Pipe Nat	64.94	291	⇑P		P		07 55 58.5	+0.3	
	baz=65									
113A	Mohawk Valley,	65.08	292	⇑P		P		07 55 58.8	-0.3	
	baz=65,SNR=6.5									
GMRC	Granite Mounta	65.09	295	⇓P		P		07 55 59.7	+0.6	
	baz=65,SNR=7.0									
IRM	Iron Mountain	65.14	294	⇓P		P		07 55 59.6	+0.1	
	baz=65,SNR=8.8									
MPMC	Manual Prospec	65.49	297	⇓P		P		07 56 01.8	+0.1	
	baz=65,SNR=17									
GSC	Goldstone	65.52	296	⇓P		P		07 56 02.0	+0.1	
	baz=65,SNR=12									
BC3	Big Chuckawall	65.65	294	⇑P		P		07 56 02.5	-0.2	
	baz=65,SNR=7.2									
BELC	Belle Mtn. Jos	65.79	294	⇓P		P		07 56 03.8	+0.1	
	baz=66,SNR=10									
KURK	Kurchatov	66.06	42	eP		P		07 56 04.9	-0.2	
	comp=Z,8.6nm,1.1s,mb4.7									
KURK	Kurchatov	66.06	42	P		P		07 56 04.7	-0.4	
	comp=Z,5.3nm,0.9s,mb4.6,baz=315,slow=6.7,SNR=23									
KURK					LR	LR		08 27 26.2		
	comp=Z,111nm,18.5s,MS4.1,baz=305,slow=38									
KURK	Kurchatov	66.06	42	d/iP		P		07 56 04.7	-0.4	
KURK					pmax	pmax				
	comp=Z,6.0nm,1.0s,mb4.6									
KURK					MLR	MLR				
	comp=Z,80nm,16.0s,MS4.0									
KURK	Kurchatov	66.06	42	eP		P		07 56 04.9	-0.2	
	comp=Z,8.6nm,1.1s,mb4.7									
CMB	Columbia Colle	66.10	300	eP		P		07 56 05.3	-0.2	
	comp=Z,13nm,1.2s,mb4.8									
CMB	Columbia Colle	66.10	300	eP		P		07 56 05.3	-0.3	
CMB					pmax	pmax				
	comp=Z,13nm,1.2s,mb4.8									
CMB	Columbia Colle	66.10	300	eP		P		07 56 05.3	-0.3	
	comp=Z,13nm,1.2s,mb4.8									
PFO	Pinyon Flat Ob	66.33	294	⇓P		P		07 56 06.8	-0.3	
	baz=66,SNR=5.7									
ISA	Isabella	66.36	297	⇓P		P		07 56 07.7	+0.4	
	baz=66,SNR=7.8									
ZALV	Zalesovo Beam	66.67	36	P		P		07 56 08.6	-0.4	
	comp=Z,1.6nm,0.7s,mb4.2,baz=316,slow=8.3,SNR=7.7									
ZALV					LR	LR		08 24 29.2		
	comp=Z,96nm,21.6s,MS4.0,baz=256,slow=35									
MONP	Monument Peak	66.76	294	⇑P		P		07 56 10.9	+1.0	
	baz=66,SNR=8.4									
BILL	Bilibino	67.43	354⇑	eP		P		07 56 13.7	+0.1	
BILL				e				07 56 40.6		
BILL				e				07 58 39.7		
BILL				eS		S		08 05 06.7	-2.3	
BILL				eSS		SS		08 09 25.4	-2.5	
BILL					pmax	pmax				
	comp=Z,10.0nm,1.7s,mb4.6									
BILL					MLR	MLR				
	comp=Z,100nm,19.0s,MS4.1									
BILL	Bilibino	67.43	354	eP		P		07 56 13.7	+0.1	
	comp=Z,10.0nm,1.7s,mb4.6									
BILL	Bilibino	67.43	354	ePcP		PcP		07 56 40.6	-0.4	
AAK	Ala-Archa	69.27	50	LR		LR		08 28 18.4		
	comp=Z,270nm,19.0s,MS4.5,baz=320,slow=37									
LPAZ	La Paz	70.48	221	P		P		07 56 34.0	+0.9	
	comp=Z,3.6nm,0.9s,mb4.3,baz=30,slow=6.0,SNR=11									
LPAZ					LR	LR		08 24 53.8		
	comp=Z,75nm,18.6s,MS4.0,baz=207,slow=34									
LPAZ	La Paz	70.48	221	P		P		07 56 34.0	+0.9	
MKAR	Makanchi Array	70.51	43	P		P		07 56 33.0	-0.1	
MKAR					LR	LR		08 29 25.7		
MKAR	Makanchi Array	70.51	43	P		P		07 56 33.0	-0.1	
	comp=Z,2.4nm,0.7s,mb4.2,baz=319,slow=5.0,SNR=20									
MKAR					LR	LR		08 29 25.7		
	comp=Z,175nm,18.1s,MS4.3,baz=345,slow=38									
KSH	Kashi	72.19	52	i/P		P		07 56 45.0	+1.6	
KSH				ePP		PP		07 56 49.8	+3.2	
KSH				eSP		SP		07 56 52.1	+4.2	
KSH				ePcP		PcP		07 57 04.1	+2.5	
KSH				ePP		PP		07 59 26.8	+3.5	
KSH				eS		S		08 06 05.1	-0.7	
KSH				eSKS				08 06 44.1		
KSH				eScS		ScS		08 06 46.9	-2.8	
KSH					pmax	pmax				
	comp=Z,7.0nm,0.9s,mb4.6									
KSH					pmax	pmax				
	comp=Z,82nm,4.4s									
KSH					LR	LR				
	comp=N,100nm,9.1s									
KSH					LR	LR				
	comp=E,140nm,8.0s									
KSH					LR	LR				
	comp=Z,130nm,5.6s									
SEY	Seymchan	73.09	360⇑	eP		P		07 56 48.1	-0.2	
SEY	Seymchan	73.09	360	eP		P		07 56 48.1	-0.2	
CPUP	Villa Florida	75.22	207	P		P		07 57 00.8	-0.2	
CPUP					LR	LR		08 27 34.3		
CPUP	Villa Florida	75.22	207	P		P		07 57 00.8	-0.2	
	comp=Z,2.6nm,0.7s,mb4.3,baz=0.7,slow=6.3,SNR=8.5									
CPUP					LR	LR		08 27 34.3		
	comp=Z,82nm,18.5s,MS4.1,baz=199,slow=34									
CPUP	Villa Florida	75.22	207	P		P		07 57 00.8	-0.2	
WMQ	Urumqi	75.29	42	eP		P		07 57 02.1	+0.6	
WMQ				pP		pP		07 57 06.8	+2.1	
WMQ				sP		sP		07 57 09.1	+3.2	
WMQ				PcP		PcP		07 57 16.1	+1.3	
WMQ				PP		PP		07 59 52.4	+3.0	
WMQ					pmax	pmax				
	comp=Z,9.0nm,0.8s,mb4.8									
WMQ					pmax	pmax				
	comp=Z,140nm,4.5s									
WMQ					LR	LR				
	comp=N,140nm,24.0s									
WMQ					LR	LR				
	comp=Z,160nm,20.1s,MS4.3									
SONM	Songino Array	79.90	29	P		P		07 57 27.1	0.0	
	comp=Z,3.0nm,0.9s,mb4.2,baz=324,slow=5.0,SNR=11									
SONM	Songino Array	79.90	29	P		P		07 57 27.1	0.0	
PETK	Petropavlovsk-	82.81	356	LR		LR		08 35 46.1		
	comp=Z,66nm,18.2s,MS4.0,baz=209,slow=37									
GTA	Gaotai	84.36	38	eP		P		07 57 50.8	+0.1	
GTA				pP		pP		07 57 55.0	+1.0	
GTA				sP		sP		07 57 58.8	+3.6	
GTA					pmax	pmax				
	comp=Z,6.0nm,1.0s,mb4.7									
BOSA	Boshof	87.46	135	P		P		07 58 06.3	+0.4	
BOSA					LR	LR		08 35 52.4		
BOSA	Boshof	87.46	135	P		P		07 58 06.3	+0.4	
	comp=Z,3.4nm,0.9s,mb4.6,baz=205,slow=9.4,SNR=3.0									
BOSA					LR	LR		08 35 52.4		
	comp=Z,258nm,18.1s,MS4.7,baz=326,slow=35									
BOSA	Boshof	87.46	135	P		P		07 58 06.3	+0.4	
HHC	Hu-ho-hao-te	87.80	29	eP		P		07 58 05.8	-1.9	
HHC				pP		pP		07 58 09.5	-1.5	
HHC				sP		sP		07 58 12.8	+0.6	
HHC				PP		PP		08 01 32.1	-0.4	
HHC				SKS				08 08 29.8		
HHC				eS		S		08 08 42.8	-7.3	
HHC					pmax	pmax				
	comp=Z,23nm,1.0s,mb5.4									
HHC					pmax	pmax				
	comp=Z,110nm,5.0s									
HHC					LR	LR				
	comp=N,200nm,15.5s,MS4.7									
HHC					LR	LR				
	comp=E,130nm,14.3s,MS4.7									
HHC					LR	LR				
	comp=Z,160nm,17.8s,MS4.5									
LZH	Lanzhou	88.89	37	eP		P		07 58 12.3	-0.6	
LZH				pP		pP		07 58 16.0	-0.2	
LZH				sP		sP		07 58 17.5	+0.1	
LZH					pmax	pmax				
	comp=Z,16nm,1.2s,mb5.2									
CN2	Changchun	89.15	19	eP		P		07 58 10.6	-3.4	
CN2				esP		sP		07 58 17.5	-1.0	
CN2					pmax	pmax				
	comp=Z,10.0nm,1.0s,mb5.1									
PLCA	Paso Flores	92.86	211	LR		LR		08 35 34.3		
	comp=Z,117nm,18.4s,MS4.4,baz=101,slow=32									
CD2	Chengdu	93.22	40	P		P		07 58 31.0	-2.1	
CD2					pmax	pmax				
	comp=Z,20nm,0.4s,mb5.9									
CD2					pmax	pmax				
	comp=Z,220nm,5.0s									
KSRS	Korea Array	95.76	19	LR		LR		08 46 32.0		
	comp=Z,32nm,18.4s,MS3.8,ba

WEL 23 08:09:20.2±0.7, 41°.73S×178°.96E, h33km, ML3.7/10, Error ellipse: s-maj=5.9km s-min=4.6km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRHZ	**Porangahau**	**2.28**	**309**	*e*PN	Pn	08 09 54.7	-0.9
PXZ	**Pawanui**	**2.32**	**316**	PN	Pn	08 09 55.8	-0.3
PXZ				SN	Sn	08 10 20.9	-2.5
KAHZ	**Kahuranaki**	**2.49**	**320**	PN	Pn	08 09 58.6	+0.1
TIWZ	**Tintock**	**2.50**	**291**	SN	Sn	08 10 25.5	-2.4
WPHZ	**Waipukurau**	**2.53**	**310**	PN	Pn	08 09 58.5	-0.4
WPHZ				SN	Sn	08 10 25.8	-2.7
DVHZ	**Dannevirke**	**2.55**	**303**	PN	Pn	08 09 58.5	-0.7
DVHZ				SN	Sn	08 10 26.0	-3.0
MHGZ	**Mahia Peninsul**	**2.69**	**342**	PN	Pn	08 10 00.2	-1.0
POWZ	**Post Office Ro**	**2.75**	**298**	PN	Pn	08 10 01.5	-0.5
MRZ	**Mangatainoka R**	**2.76**	**292**	PN	Pn	08 10 01.0	-1.1
MRZ				SN	Sn	08 10 30.1	-4.2
PNHZ	**Pukenui**	**2.77**	**310**	PN	Pn	08 10 01.7	-0.5
PNHZ				SN	Sn	08 10 32.4	-2.0
TSZ	**Takapari Road**	**2.82**	**305**	PN	Pn	08 10 02.3	-0.6
MCHZ	**McNeill Hill**	**2.86**	**322**	PN	Pn	08 10 03.8	+0.3
KNZ	**Kokohu**	**2.88**	**340**	PN	Pn	08 10 02.4	-1.3
CAW	**Cannon Point**	**2.99**	**281**	PN	Pn	08 10 04.6	-0.7
OGWZ	**Otaki Gorge**	**2.99**	**286**	PN	Pn	08 10 04.5	-0.9
NMHZ	**Naumai**	**3.10**	**327**	PN	Pn	08 10 06.6	-0.1
BHHZ	**Black Hill Sta**	**3.14**	**314**	PN	Pn	08 10 07.1	-0.2
RAHZ	**Arahi**	**3.15**	**332**	PN	Pn	08 10 07.0	-0.4
KIW	**Kapiti Island**	**3.17**	**284**	PN	Pn	08 10 06.9	-0.8
BKZ	**Black Stump Fm**	**3.17**	**323**	PN	Pn	08 10 07.4	-0.4
MOVZ	**Moawhango**	**3.36**	**312**	PN	Pn	08 10 10.7	+0.3
WNVZ	**Wahianoa**	**3.51**	**312**	PN	Pn	08 10 13.2	+0.8
TUVZ	**Tukino**	**3.52**	**313**	PN	Pn	08 10 13.4	+0.9
MTVZ	**Mangateitei**	**3.54**	**310**	PN	Pn	08 10 14.0	+1.2
MWZ	**Matawai**	**3.56**	**342**	PN	Pn	08 10 11.8	-1.3
FWVZ	**Far West T-bar**	**3.58**	**312**	PN	Pn	08 10 14.2	+0.8
OTVZ	**Oturere**	**3.59**	**314**	PN	Pn	08 10 14.4	+0.9
WAZ	**Wanganui**	**3.60**	**302**	PN	Pn	08 10 14.0	+0.4
NGZ	**Ngauruhoe**	**3.61**	**314**	PN	Pn	08 10 14.5	+0.6
WPVZ	**Whakapapa**	**3.62**	**313**	PN	Pn	08 10 14.6	+0.7
PKVZ	**Pokaka**	**3.67**	**310**	PN	Pn	08 10 15.5	+0.9
PUZ	**Puketiti**	**3.69**	**351**	PN	Pn	08 10 13.2	-1.7
URZ	**Urewera**	**3.74**	**337**	PN	Pn	08 10 14.6	-1.0
PRRZ	**Plateau Road**	**3.78**	**328**	PN	Pn	08 10 16.0	-0.1
CTZ	**Chatham Island**	**3.83**	**123**	*e*PN	Pn	08 10 14.3	-2.5
TARZ	**Mount Tarawera**	**3.96**	**331**	PN	Pn	08 10 18.4	-0.3
KHZ	**Kahutara**	**4.09**	**258**	PN	Pn	08 10 16.8	-3.5
VRZ	**Vera Road**	**4.12**	**308**	PN	Pn	08 10 21.5	+0.6
MXZ	**Matakaoa Point**	**4.19**	**353**	PN	Pn	08 10 20.5	-1.3
NNZ	**Nelson**	**4.22**	**275**	PN	Pn	08 10 20.8	-1.4
OPRZ	**Ohinepanea**	**4.29**	**334**	PN	Pn	08 10 21.9	-1.3
HIZ	**Hauiti**	**4.49**	**314**	PN	Pn	08 10 25.7	-0.2
LTZ	**Lake Taylor**	**5.07**	**256**	PN	Pn	08 10 29.7	-4.2
LBZ	**Lake Benmore**	**6.95**	**245**	PN	Pn	08 10 57.3	-2.4

*IDC **23** 08:11:32.7±3.6, 5°.15S×102°.13E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/19, mbtmp3.7/6, MS2.9/1, Ms1 2.9/1, ms1mx1.9/26, Error ellipse: s-maj=165.5km s-min=20.7km az=55.0*

*ISCJB **23** 08:11:41.6±2.2, 5°.0S±0°.2×102°.6E±0°.2, h77km±15km, mb3.6/6, Error ellipse: s-maj=39.5km s-min=8.8km az=137.2*

*DJA **23** 08:11:42, 5°.13S×102°.56E, h33km, MLv4.0/5*

ISC 23 08:11:40.9±2.0, 5°.1S±0°.1×102°.4E±0°.1, h57km±17km, n14, σ1§11/18, mb3.7/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**0.91**	**34**	P	**Pn**	**08 11 57.3**	**-0.5**
MNAI				S	**Sn**	**08 12 07.8**	**-2.3**
KSI	**Kapahiang**	**1.47**	**6**	P	**Pn**	**08 12 05.7**	**+0.5**
KSI				S	**Sn**	**08 12 24.8**	**+1.5**
LWLI	**Liwa**	**1.62**	**86**	P	**Pn**	**08 12 06.8**	**-0.3**
LWLI				S	**Sn**	**08 12 24.1**	**-2.8**
MDSI	**Maura Dua**	**1.84**	**70**	P	**Pn**	**08 12 10.5**	**+0.3**
MDSI				S	**Sn**	**08 12 33.7**	**+1.2**
KASI	**Kota Agung**	**2.09**	**101**	P	**Pn**	**08 12 13.3**	**-0.2**
KASI				S	**Sn**	**08 12 37.8**	**-0.6**
KLSI		**2.32**	**79**	P	**Pn**	**08 12 17.3**	**+0.5**
KLSI				S	**Sn**	**08 12 33.8**	**-10**
PSI	**Prapat**	**8.62**	**336**	LR	LR	08 17 55.7	
	comp=Z,74nm,18.0s,baz=84,slow=45						
WRA	**Warramunga Arr**	**34.35**	**118**	P	**P**	**08 18 22.8**	**+0.2**
	0.7nm,0.7s,mb3.7,baz=297,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**35.47**	**124**	P	**P**	**08 18 33.5**	**+1.2**
	0.3nm,0.5s,mb3.5,baz=293,slow=7.2,SNR=8.2						
STKA	**Stephens Creek**	**45.27**	**131**	P	**P**	**08 19 54.0**	**+0.9**
	0.7nm,0.6s,mb3.6,baz=280,slow=5.5,SNR=5.2						
SONM	**Songino Array**	**52.84**	**3**	P	**P**	**08 20 50.9**	**+0.2**
	0.3nm,0.3s,mb3.7,baz=149,slow=3.0,SNR=3.1						
MKAR	**Makanchi Array**	**54.69**	**343**	P	**P**	**08 21 03.1**	**-1.0**
	0.3nm,0.4s,mb3.7,baz=131,slow=8.3,SNR=6.1						
ZALV	**Zalesovo Beam**	**60.68**	**348**	P	**P**	**08 21 44.1**	**-2.0**
	0.6nm,0.4s,mb4.1,baz=182,slow=7.2,SNR=3.0						
TXAR	**Lajitas Array**	**145.51**	**43**	PKPbc	PKPbc	08 31 14.7	+1.1
	0.6nm,0.8s,baz=225,slow=0.3,SNR=7.2						

*NIED **23** 08:47:00, 43°.20N×146°.80E, h47km, Mw3.6 Best double couple: M03.27000×10^14 NP1:ϕ=170.00000°, δ=63.00000°, λ=-68.00000°. NP2:ϕ=308.00000°, δ=35.00000°, λ=-127.00000°.*

*IDC **23** 08:47:02.9±7.8, 42°.53N×147°.09E, h44km±44km, mb3.7/5, mb1 3.7/7, mb1mx3.4/25, mbtmp3.6/7, ML3.2/2, Error ellipse: s-maj=93.6km s-min=22.6km az=174.0*

*ISCJB **23** 08:47:07.4±1.1, 43°.34N±0°.08×146°.84E±0°.09, h56km±9km, mb3.9/5, Error ellipse: s-maj=15.4km s-min=6.2km az=141.4*

*JMA **23** 08:47:07.6±0.2, 43°.24N×146°.82E, h45km±3km, M3.7*

*SKHL **23** 08:47:08.0±0.4, 43°.25N×146°.90E, h46km±14km, mb5.0/2*

*MOS **23** 08:47:08.6±0.6, 43°.46N×146°.70E, h66km, mb4.1/5, Error ellipse: s-maj=22.8km s-min=20.4km az=81.9*

ISC 23 08:47:08.6±1.0, 43°.35N±0°.07×146°.83E±0°.08, h49km±9km, n26, σ0§65/36, mb3.9/5, 1C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.79**	**271**	P	**Pn**	**08 47 22.5**	**-0.9**
NEM2				*e*S	**Sn**	**08 47 33.6**	**-0.6**
YUK	**Yuzh-Kuril'sk**	**0.98**	**315**	*i*PN	**Pn**	**08 47 25.6**	**-0.3**
YUK				*i* S	**Sn**	**08 47 38.8**	**+0.1**
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				pmax	pmax		
	comp=N,162nm,0.1s						
YUK				pmax	pmax		
	comp=E,173nm,0.1s						
YUK				pmax	pmax		
	comp=Z,300nm,0.3s						
YUK				smax			
	comp=N,4μm,0.5s						
YUK				smax			
	comp=E,6μm,0.7s						
YUK				smax			
	comp=N,10μm,0.3s						
YUK				smax			
	comp=E,4μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**0.98**	**315**	*i*P	**Pn**	**08 47 25.6**	**-0.3**
YUK				AMB	AMB	08 47 26.0	
	comp=E,290nm,0.2s						
YUK				AMB	AMB	08 47 26.0	
	comp=E,2μm,0.2s						
YUK				AMB	AMB	08 47 26.0	
	comp=E,270nm,0.5s						
YUK				*i* S	**Sn**	**08 47 38.8**	**+0.1**
YUK				A		08 47 39.0	
	comp=E,8μm,1.0s						
YUK				A		08 47 39.0	
	comp=E,15μm,1.0s						
YUK				A		08 47 42.0	
	comp=E,11μm,0.4s						
YUK				A		08 47 42.0	
	comp=E,4μm,0.4s						
JRA	**Rausu**	**1.37**	**296**	P	**Pn**	**08 47 31.5**	**+0.3**
JRA				*e*S	**Sn**	**08 47 49.0**	**+0.8**
JNK	**Nakash**	**1.55**	**279**	P	**Pn**	**08 47 33.1**	**-0.6**
JNK				*e*S	**Sn**	**08 47 52.5**	**-0.2**
JAK	**Akkeshi**	**1.60**	**258**	P	**Pn**	**08 47 33.5**	**-0.8**
JAK				*e*S	**Sn**	**08 47 53.0**	**-0.8**
KUR	**Kuril'sk**	**2.02**	**21**	*e*P	**Pn**	**08 47 39.5**	**-0.7**
KUR				AMB	AMB	08 47 47.0	
	comp=E,90nm,0.5s						
KUR				*e*S	**Sn**	**08 48 03.4**	**-0.9**
JTKR	**Abashiri--Toko**	**2.21**	**287**	P	**Pn**	**08 47 43.4**	**+0.7**
JAR	**Ashorobuto**	**2.23**	**270**	P	**Pn**	**08 47 43.1**	**+0.1**
JAR				*e*S	**Sn**	**08 48 09.6**	**+0.3**
JOB	**Onbets**	**2.23**	**259**	P	**Pn**	**08 47 42.9**	**-0.2**
JOB				*e*S	**Sn**	**08 48 09.6**	**+0.2**
JMP	**Maruseppu**	**2.60**	**286**	P	**Pn**	**08 47 49.0**	**+1.0**
JCH	**Churui**	**2.65**	**255**	P	**Pn**	**08 47 49.0**	**+0.3**
JCH				*e*S	**Sn**	**08 48 19.3**	**-0.2**
ERM	**Erimo**	**3.02**	**245⇑**	*e*PN	**Pn**	**08 47 54.9**	**+1.1**
ASAJ	**Asahikawa**	**3.16**	**285**	P	**Pn**	**08 47 56.4**	**+0.6**
	comp=E,2.2nm,0.3s,baz=137,slow=7.2,SNR=7.7						
ASAJ				S	**Sn**	**08 48 39.1**	**+7.0**
	comp=E,2.6nm,0.3s,baz=210,slow=32,SNR=6.7						
PETK	**Petropavlovsk-**	**12.14**	**33**	P	**Pn**	**08 50 00.4**	**+1.7**
	comp=E,0.1nm,0.3s,baz=170,slow=12,SNR=2.9						
MKAR	**Makanchi Array**	**44.56**	**298**	P	**P**	**08 55 15.2**	**-0.2**
	comp=E,1.0nm,0.5s,mb3.9,baz=82,slow=8.4,SNR=13						
MKAR	**Makanchi Array**	**44.56**	**298**	P	**P**	**08 55 15.2**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	**Kurchatov**	**45.56**	**304**	P	**P**	**08 55 22.9**	**-0.3**
	comp=Z,0.6nm,0.3s,mb4.0,baz=72,slow=9.0,SNR=2.8						
KURK	**Kurchatov**	**45.56**	**304**	P	**P**	**08 55 22.9**	**-0.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
INK	**Inuvik**	**46.87**	**30**	P	**P**	**08 55 33.4**	**+0.1**
	comp=Z,0.6nm,0.2s,mb4.1,baz=312,slow=6.1,SNR=11						
INK	**Inuvik**	**46.87**	**30**	P	**P**	**08 55 33.4**	**+0.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.2s						
FINES	**FINESS Array B**	**65.12**	**333**	P	**P**	**08 57 42.9**	**-0.9**
	comp=Z,0.7nm,0.5s,mb4.0,baz=39,slow=9.8,SNR=8.5						
FINES	**FINESS Array B**	**65.12**	**333**	P	**P**	**08 57 42.9**	**-0.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	**NORSAR Array B**	**69.89**	**339**	P	**P**	**08 58 14.3**	**+0.4**
	comp=Z,0.6nm,0.8s,mb3.6,baz=33,slow=6.3,SNR=4.5						
NOA	**NORSAR Array B**	**69.89**	**339**	P	**P**	**08 58 14.3**	**+0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**83.07**	**56**	pP	pP	08 59 42.5	-0.7
	comp=Z,0.2nm,0.7s,baz=277,slow=2.0,SNR=4.5						

*ISCJB **23** 08:57:35.9±0.5, 48°.04N±0°.02×3°.16W±0°.04, h10km, Error ellipse: s-maj=4.0km s-min=2.7km az=163.3*

*NEIC **23** 08:57:36.9, 48°.24N×3°.45W, h11km, ML3.2(LDG), ML3.2(STR), After LDG.*

*STR **23** 08:57:36.0±0.3, 48°.26N×3°.54W, h5km, Ml3.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*LDG **23** 08:57:36.9±0.2, 48°.24N×3°.45W, h11km, Md3.3/3, Ml3.2/19, Error ellipse: s-maj=3.1km s-min=2.3km az=90.0*

*CSEM **23** 08:57:37.2±0.2, 48°.16N×3°.27W, h15km, ML3.1/19, Error ellipse: s-maj=4.5km s-min=3.1km az=79.0*

*BGS **23** 08:57:38.0±1.2, 48°.42N×3°.74W, h15km, ML2.6*

ISC 23 08:57:35.8±0.5, 48°.14N±0°.02×3°.36W±0°.04, h10km, n104, σ1§14/183, France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROSF	**Rostrenen**	**0.21**	**16**	*e*Pg	**Pg**	**08 57 40.7**	**+0.5**
ROSF	SNR=1.0			*e*Sg	**Sg**	**08 57 43.8**	**+0.7**
	321nm,0.2s,SNR=1.0						
ROSF	**Rostrenen**	**0.21**	**16**	*e*Pg	**Pg**	**08 57 40.7**	**+0.5**
ROSF	SNR=1.0			*e*Sg	**Sg**	**08 57 43.8**	**+0.7**
	161nm,0.2s,SNR=1.0						
QUIF	**Quistinic**	**0.26**	**149**	*e*Pg	**Pg**	**08 57 44.0**	**+3.0**
QUIF	SNR=1.0			*e*Sg	**Sg**	**08 57 49.2**	**+4.7**
	113nm,0.2s,SNR=1.0						
QUIF	**Quistinic**	**0.26**	**149**	*e*Pg	**Pg**	**08 57 44.0**	**+3.0**
	SNR=1.0						
BST	**Brest**	**0.50**	**290**	Pg	**Pg**	**08 57 43.2**	**-2.3**
BST				Sg	**Sg**	**08 57 48.1**	**-3.9**
BST	**Brest**	**0.50**	**290**	Pg	**Pg**	**08 57 43.2**	**-2.3**
SGMF	**Saint Gilles**	**0.55**	**77**	*e*Pn	**Pg**	**08 57 50.3**	**+3.8**
SGMF	SNR=1.0			*e*Sg	**Sg**	**08 57 55.8**	**+2.1**
	119nm,0.4s,SNR=1.0						
SGMF	**Saint Gilles**	**0.55**	**77**	*e*Pg	**Pg**	**08 57 48.5**	**+2.0**
SGMF				*e*Pn	**Pg**	**08 57 50.3**	**+3.8**
SGMF				*e*Sg	**Sg**	**08 57 55.8**	**+2.1**
SGMF	**Saint Gilles**	**0.55**	**77**	*e*Pg	**Pg**	**08 57 48.5**	**+2.0**
	SNR=1.0						
SGMF				*e*Sg	**Sg**	**08 57 55.8**	**+2.1**
	60nm,0.4s,SNR=1.0						
JSA	**Saint Aubin**	**1.31**	**36**	P	**Pn**	**08 57 59.5**	**-0.7**
JSA				S	**Sb**	**08 58 16.0**	**-1.5**
JSA				AML	AML	08 58 17.8	
	100nm,0.2s						
JSA				AML	AML	08 58 18.6	
	71nm,0.4s						
JSA	**Saint Aubin**	**1.31**	**36**	*e*P	**Pn**	**08 57 59.5**	**-0.7**
JSA				*e*S	**Sb**	**08 58 16.0**	**-1.5**
JSA				AML	AML	08 58 17.8	
	comp=N,100nm,0.2s						
JSA				AML	AML	08 58 18.6	
	comp=E,71nm,0.4s						
JSA	**Saint Aubin**	**1.31**	**36**	P	**Pn**	**08 57 59.5**	**-0.7**
JSA				S	**Sb**	**08 58 16.0**	**-1.5**
JSA				AML	AML	08 58 17.8	
	comp=E,100nm,0.2s						
JSA				AML	AML	08 58 18.6	
	comp=E,71nm,0.4s						
JSA	**Saint Aubin**	**1.31**	**36**	P	**Pn**	**08 57 59.5**	**-0.7**
JSA				S	**Sb**	**08 58 16.0**	**-1.5**
JSA	**Saint Aubin**	**1.31**	**36**	P	**Pn**	**08 57 59.5**	**-0.7**
JSA				*e*S	**Sb**	**08 58 16.0**	**-1.5**
	comp=E,71nm,0.4s						
JRS	**Jersey**	**1.35**	**38**	P	**Pn**	**08 58 01.3**	**+0.6**
JRS				S	**Sb**	**08 58 18.8**	**+0.3**
JRS				AML	AML	08 58 19.7	
	comp=E,65nm,0.5s						
JRS				AML	AML	08 58 20.2	
	comp=E,63nm,0.2s						
JRS	**Jersey**	**1.35**	**38**	*e*P	**Pn**	**08 58 01.3**	**+0.6**
JRS				*e*S	**Sb**	**08 58 18.8**	**+0.3**
JRS				AML	AML	08 58 19.7	
	comp=Z,65nm,0.5s						
JRS				AML	AML	08 58 20.2	
	comp=E,63nm,0.2s						
JRS	**Jersey**	**1.35**	**38**	P	**Pn**	**08 58 01.3**	**+0.6**
JRS				S	**Sb**	**08 58 18.8**	**+0.3**
JRS				AML	AML	08 58 19.7	
	comp=E,65nm,0.5s						
JRS				AML	AML	08 58 20.2	
	comp=E,63nm,0.2s						
JRS	**Jersey**	**1.35**	**38**	P	**Pn**	**08 58 01.3**	**+0.6**
JRS				S	**Sb**	**08 58 18.8**	**+0.3**
JRS	**Jersey**	**1.35**	**38**	*e*P	**Pn**	**08 58 01.3**	**+0.6**
JRS				*e*S	**Sb**	**08 58 18.8**	**+0.3**
	comp=E,63nm,0.2s						
JQE	**Queens East**	**1.38**	**39**	P	**Pn**	**08 58 01.8**	**+0.7**
JQE	**Queens East**	**1.38**	**39**	*e*P	**Pn**	**08 58 01.8**	**+0.7**
JQE	**Queens East**	**1.38**	**39**	P	**Pn**	**08 58 01.8**	**+0.7**
JQE	**Queens East**	**1.38**	**39**	*e*P	**Pn**	**08 58 01.8**	**+0.7**
JLP	**Les Platons**	**1.39**	**37**	P	**Pn**	**08 58 02.1**	**+0.9**
JLP	**Les Platons**	**1.39**	**37**	*e*P	**Pn**	**08 58 02.1**	**+0.9**
JLP	**Les Platons**	**1.39**	**37**	P	**Pn**	**08 58 02.1**	**+0.9**
JLP	**Les Platons**	**1.39**	**37**	*e*P	**Pn**	**08 58 02.1**	**+0.9**
GRR	**Gorron**	**1.69**	**81**	*e*Pg	**Pg**	**08 58 09.2**	**+1.0**
GRR	SNR=1.0			*e*Sg	**Sg**	**08 58 31.4**	**+1.2**
	comp=E,50nm,0.2s,SNR=1.0						
GRR	**Gorron**	**1.69**	**81**	*e*Pn	**Pn**	**08 58 05.3**	**-0.1**
GRR				*e*Pg	**Pg**	**08 58 09.2**	**+1.0**
GRR				*e*Sg	**Sg**	**08 58 31.4**	**+1.2**
GRR	**Gorron**	**1.69**	**81**	*e*Pn	**Pn**	**08 58 05.3**	**-0.1**
	SNR=1.0						
GRR	**Gorron**	**1.69**	**81**	*e*Pg	**Pg**	**08 58 09.2**	**+1.0**
	SNR=1.0						
GRR				*e*Sg	**Sg**	**08 58 31.4**	**+1.2**
	comp=E,25nm,0.2s,SNR=1.0						
FLN	**La Foliniere**	**2.02**	**71**	*e*Pn	**Pn**	**08 58 09.9**	**+0.1**
	baz=257,SNR=1.0						
FLN	**La Foliniere**	**2.02**	**71**	*e*Pg	**Pg**	**08 58 14.6**	**+0.2**
	baz=255						
FLN				*e*Sg	**Sg**	**08 58 40.9**	**+0.3**
	comp=E,28nm,0.2s,SNR=1.0						
FLN	**La Foliniere**	**2.02**	**71**	*e*Pn	**Pn**	**08 58 09.9**	**+0.1**
FLN				*e*Pg	**Pg**	**08 58 14.6**	**+0.2**
FLN				*e*Sg	**Sg**	**08 58 40.9**	**+0.3**
FLN	**La Foliniere**	**2.02**	**71**	*e*Pn	**Pn**	**08 58 09.9**	**+0.1**
	baz=257,SNR=1.0						
FLN	**La Foliniere**	**2.02**	**71**	*e*Pg	**Pg**	**08 58 14.6**	**+0.2**
	baz=255						
FLN				*e*Sg	**Sg**	**08 58 40.9**	**+0.3**
	comp=E,14nm,0.2s,SNR=1.0						
LDF	**La Druitiere**	**2.21**	**77**	*e*Pg	**Pg**	**08 58 18.5**	**+0.4**
LDF				*e*Sg	**Sg**	**08 58 47.1**	**+0.4**
	comp=E,33nm,0.2s,SNR=1.0						
LDF	**La Druitiere**	**2.21**	**77**	*e*Pn	**Pn**	**08 58 12.5**	**0.0**
LDF				*e*Pg	**Pg**	**08 58 18.5**	**+0.4**
LDF				*e*Sg	**Sg**	**08 58 47.1**	**+0.4**
LDF	**La Druitiere**	**2.21**	**77**	*e*Pn	**Pn**	**08 58 12.5**	**0.0**
	SNR=1.0						
LDF	**La Druitiere**	**2.21**	**77**	*e*Pg	**Pg**	**08 58 18.5**	**+0.4**
LDF				*e*Sg	**Sg**	**08 58 47.1**	**+0.4**
	comp=E,16nm,0.2s,SNR=1.0						
CCA1	**Carnmenellis**	**2.39**	**330**	P	**Pn**	**08 58 10.8**	**-4.1**
CCA1				AML	AML	08 58 52.6	
	comp=E,43nm,0.6s						
CCA1				AML	AML	08 58 52.7	
	comp=E,45nm,0.4s						
CCA1	**Carnmenellis**	**2.39**	**330**	*e*P	**Pn**	**08 58 10.8**	**-4.1**
CCA1				AML	AML	08 58 52.6	
	comp=N,43nm,0.6s						
CCA1				AML	AML	08 58 52.7	
	comp=E,45nm,0.4s						
CCA1	**Carnmenellis**	**2.39**	**330**	P	**Pn**	**08 58 10.8**	**-4.1**
CCA1				AML	AML	08 58 52.6	
	comp=E,43nm,0.6s						
CCA1				AML	AML	08 58 52.7	
	comp=E,45nm,0.4s						
CCA1	**Carnmenellis**	**2.39**	**330**	*e*P	**Pn**	**08 58 10.8**	**-4.2**
	comp=E,44nm,0.4s						
MFF	**Saint Martin d**	**2.67**	**124**	*e*Pg	**Pg**	**08 58 28.3**	**+1.3**
	SNR=1.0						
MFF				*e*Sg	**Sg**	**08 59 03.7**	**+2.1**
	comp=E,26nm,0.2s,SNR=1.0						
MFF	**Saint Martin d**	**2.67**	**124**	*e*Pn	**Pn**	**08 58 20.7**	**+1.9**
MFF				*e*Pg	**Pg**	**08 58 28.3**	**+1.3**
MFF				*e*Sg	**Sg**	**08 59 03.7**	**+2.1**
MFF	**Saint Martin d**	**2.67**	**124**	*e*Pn	**Pn**	**08 58 20.7**	**+1.9**
	SNR=1.0						
MFF	**Saint Martin d**	**2.67**	**124**	*e*Pg	**Pg**	**08 58 28.3**	**+1.3**
	SNR=1.0						
MFF				*e*Sg	**Sg**	**08 59 03.7**	**+2.1**
	comp=E,13nm,0.2s,SNR=1.0						
HTL	**Hartland**	**2.95**	**346**	AML	AML	08 59 12.8	
	comp=E,45nm,0.5s						
HTL				AML	AML	08 59 14.8	
	comp=E,44nm,0.4s						
HTL	**Hartland**	**2.95**	**346**	AML	AML	08 59 12.8	
	comp=E,45nm,0.5s						
HTL				AML	AML	08 59 14.8	
	comp=N,44nm,0.4s						
HTL	**Hartland**	**2.95**	**346**	AML	AML	08 59 12.8	
	comp=E,45nm,0.5s						
HTL				AML	AML	08 59 14.8	
	comp=N,44nm,0.4s						
HTL	**Hartland**	**2.95**	**346**	AML	AML	08 59 12.8	
	comp=N,45nm,0.5s						
HTL				AML	AML	08 59 14.8	
	comp=N,44nm,0.4s						
HYF	**Humbligny**	**4.14**	**100**	*e*Pg	**Pg**	**08 58 54.5**	**-0.7**
HYF				*e*Sg	**Sg**	**08 59 49.0**	**+0.2**
HYF	**Humbligny**	**4.14**	**100**	*e*Pg	**Pg**	**08 58 54.5**	**-0.7**
HYF				*e*Sg	**Sg**	**08 59 49.0**	**+0.2**
TCF	**Toulx Ste Croi**	**4.22**	**114**	*e*Pn	**Pn**	**08 58 41.4**	**+1.2**
	SNR=1.0						
TCF				*e*Sn	**Sn**	**08 59 27.4**	**-2.1**
	SNR=1.0						
TCF				*e*Sg	**Sg**	**08 59 51.7**	**+0.3**
	comp=N,12nm,0.4s,SNR=1.0						
TCF	**Toulx Ste Croi**	**4.22**	**114**	*e*Pn	**Pn**	**08 58 41.4**	**+1.2**
	SNR=1.0						
TCF				*e*Sn	**Sn**	**08 59 27.4**	**-2.1**
	SNR=1.0						
TCF				*e*Sg	**Sg**	**08 59 51.7**	**+0.3**
	comp=N,5.9nm,0.4s,SNR=1.0						
LFF	**La Frestale**	**4.27**	**137**	*e*Pn	**Pn**	**08 58 42.1**	**+1.3**
LFF				*e*Sn	**Sn**	**08 59 28.6**	**-2.1**
	SNR=1.0						
LFF				*e*Sg	**Sg**	**08 59 54.4**	**+1.5**
	comp=N,21nm,0.4s,SNR=1.0						
LFF	**La Frestale**	**4.27**	**137**	*e*Pn	**Pn**	**08 58 42.1**	**+1.3**
LFF				*e*Sn	**Sn**	**08 59 28.6**	**-2.1**
	SNR=1.0						
LFF				*e*Sg	**Sg**	**08 59 54.4**	**+1.5**
	comp=N,10nm,0.4s,SNR=1.0						
RJF	**Les Rejaudoux**	**4.39**	**128**	*e*Pn	**Pn**	**08 58 42.5**	**0.0**
RJF				*e*Sn	**Sn**	**08 59 32.6**	**-1.0**
	SNR=1.0						
RJF				*e*Sg	**Sg**	**08 59 57.2**	**+0.5**
	comp=N,20nm,0.3s,SNR=1.0						
RJF	**Les Rejaudoux**	**4.39**	**128**	*e*Pn	**Pn**	**08 58 42.5**	**0.0**
RJF				*e*Sn	**Sn**	**08 59 32.6**	**-1.0**
	SNR=1.0

	comp=N,1.5nm,0.3s							
PYM	**Petit Puy Mans**	**4.97**	**116**	Pn	**Pn**	**08 58 51.5**	**+1.1**
PYM	**Petit Puy Mans**	**4.97**	**116**	Pn	**Pn**	**08 58 51.5**	**+1.1**
SMF	**Signal de Mont**	**5.11**	**104**	*e*Pn	**Pn**	**08 58 52.7**	**+0.3**
	SNR=1.0							
SMF				*e*Sn	**Sn**	**08 59 48.8**	**-2.6**
SMF				*e*Sg	**Sg**	**09 00 19.2**	**-0.7**
	comp=N,2.4nm,0.2s,SNR=1.0							
SMF	**Signal de Mont**	**5.11**	**104**	*e*Pn	**Pn**	**08 58 52.7**	**+0.3**
	SNR=1.0							
SMF				*e*Sn	**Sn**	**08 59 48.8**	**-2.6**
SMF				*e*Sg	**Sg**	**09 00 19.2**	**-0.7**
	comp=N,1.2nm,0.2s,SNR=1.0							
SJPF	**Ste Jean**	**5.24**	**163**	*e*Pn	**Pn**	**08 58 54.5**	**+0.3**
	SNR=1.0							
SJPF				*e*Sn	**Sn**	**08 59 52.1**	**-2.5**
SJPF				*e*Sg	**Sg**	**09 00 24.1**	**+0.1**
	comp=N,1.6nm,0.3s							
SJPF	**Ste Jean**	**5.24**	**163**	*e*Pn	**Pn**	**08 58 54.5**	**+0.3**
	SNR=1.0							
SJPF				*e*Sg	**Sg**	**09 00 24.1**	**+0.1**
	comp=N,0.8nm,0.3s							
BAIF	**Baives**	**5.33**	**66**	*e*Pn	**Pn**	**08 58 53.8**	**-1.6**
	SNR=1.0							
BAIF	**Baives**	**5.33**	**66**	*e*Pn	**Pn**	**08 58 53.8**	**-1.6**
	SNR=1.0							
LBL	**Lubilhac**	**5.39**	**120**	Pn	**Pn**	**08 58 57.3**	**+1.0**
LBL	**Lubilhac**	**5.39**	**120**	Pn	**Pn**	**08 58 57.3**	**+1.0**
ETSF	**Etsaut**	**5.60**	**158**	*e*Pn	**Pn**	**08 58 59.6**	**+0.6**
ETSF				*e*Sn	**Sn**	**08 59 59.0**	**-4.3**
ETSF	**Etsaut**	**5.60**	**158**	*e*Pn	**Pn**	**08 58 59.6**	**+0.6**
SFTF	**Sexfontaines**	**5.62**	**86**	*e*Pn	**Pn**	**08 58 59.2**	**-0.1**
SFTF	**Sexfontaines**	**5.62**	**86**	*e*Pn	**Pn**	**08 58 59.2**	**-0.1**
MEZF	**Maizieres J'vi**	**5.62**	**83**	*e*Pn	**Pn**	**08 58 59.3**	**-0.1**
	SNR=1.0							
MEZF	**Maizieres J'vi**	**5.62**	**83**	*e*Pn	**Pn**	**08 58 59.3**	**-0.1**
	SNR=1.0							
GIVF	**Givet**	**5.72**	**67**	*e*Pn	**Pn**	**08 58 59.0**	**-1.7**
	SNR=1.0							
GIVF	**Givet**	**5.72**	**67**	*e*Pn	**Pn**	**08 58 59.0**	**-1.7**
	SNR=1.0							
EPF	**Esparros**	**5.73**	**152**	*e*Pn	**Pn**	**08 59 01.2**	**+0.4**
	SNR=1.0							
EPF				*e*Sn	**Sn**	**09 00 01.6**	**-5.0**
EPF				*e*Sg	**Sg**	**09 00 40.1**	**+0.5**
	comp=N,3.3nm,0.3s							
EPF	**Esparros**	**5.73**	**152**	*e*Pn	**Pn**	**08 59 01.2**	**+0.4**
	SNR=1.0							
EPF				*e*Sg	**Sg**	**09 00 40.1**	**+0.5**
	comp=N,1.6nm,0.3s							
MTLF	**Montolieu**	**6.18**	**139**	*e*Pn	**Pn**	**08 59 07.9**	**+0.8**
	SNR=1.0							
MTLF				*e*Sn	**Sn**	**09 00 12.4**	**-5.4**
	comp=N,1.8nm,0.3s,SNR=1.0							
MTLF	**Montolieu**	**6.18**	**139**	*e*Pn	**Pn**	**08 59 07.9**	**+0.8**
	SNR=1.0							
VIVF	**Saint-Julien-l**	**6.44**	**118**	*e*Sg	**Sg**	**09 01 01.6**	**-0.9**
	comp=N,3.2nm,0.4s							
VIVF	**Saint-Julien-l**	**6.44**	**118**	*e*Sg	**Sg**	**09 01 01.6**	**-0.9**
	comp=N,1.6nm,0.4s							
LASF	**Ste Croix**	**6.45**	**126**	*e*Sg	**Sg**	**09 01 02.5**	**-0.4**
	comp=N,6.4nm,0.4s							
LASF	**Ste Croix**	**6.45**	**126**	*e*Sg	**Sg**	**09 01 02.5**	**-0.4**
	comp=N,3.2nm,0.4s							
CABF	**La Chapelle**	**6.60**	**100**	*e*Pn	**Pn**	**08 59 12.8**	**+0.1**
CABF	**La Chapelle**	**6.60**	**100**	*e*Pn	**Pn**	**08 59 12.8**	**+0.1**
CDF	**Champ du Feu**	**7.11**	**84**	*e*Pn	**Pn**	**08 59 19.3**	**-0.4**
	SNR=1.0							
CDF	**Champ du Feu**	**7.11**	**84**	*e*Pn	**Pn**	**08 59 19.3**	**-0.4**
	SNR=1.0							

IDC 23 09:00:12.1±12.0**, 17°.90S**×**177°.77W, h548**km±138km**, mb3.1/5, mb1 3.3/5, mb1mx3.0/17, mbtmp3.1/5, Error ellipse: s-maj=101.6km s-min=45.6km az=128.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.16**	**241**	P	P	09 06 53.3	+0.1
	1.6nm,0.5s,baz=90,slow=12,SNR=12						
WRA	**Warramunga Arr**	**45.23**	**259**	P	P	09 07 40.6	-0.4
	0.9nm,0.4s,baz=95,slow=6.9,SNR=28						
ASAR	**Alice Springs**	**45.38**	**254**	P	P	09 07 41.9	-0.1
	2.0nm,0.4s,baz=89,slow=8.1,SNR=31						
PETK	**Petropavlovsk-**	**73.83**	**345**	P	P	09 10 51.2	+0.5
	2.0nm,0.9s,baz=127,slow=9.0,SNR=4.4						
ILAR	**Eielson Array**	**85.75**	**13**	P	P	09 11 52.5	-0.4
	0.3nm,0.4s,baz=220,slow=5.1,SNR=14						
BRTR	**Keskin Array B**	**145.21**	**315**	PKPbc	PKPbc	09 18 48.2	-0.5
	0.6nm,0.6s,baz=70,slow=3.0,SNR=4.4						

*ISCJB **23** 09:02:16.5±0.7, 48°.28N±0°.05×3°.45W±0°.04, h15km±5km, Error ellipse: s-maj=8.8km s-min=5.0km az=175.1*
*CSEM **23** 09:02:17.2±0.3, 48°.25N×3°.49W, h20km, ML2.3/7, Error ellipse: s-maj=7.8km s-min=5.1km az=1.0*
*LDG **23** 09:02:18.9±0.2, 48°.22N×3°.42W, h9km±1km, Md2.3/3, Ml2.7/4, Error ellipse: s-maj=3.6km s-min=2.1km az=99.0*
*NEIC **23** 09:02:18.9, 48°.22N×3°.42W, h9km, ML2.7(LDG), After LDG.*

ISC 23 09:02:17.2±0.6**, 48°.24N**±0°.05×**3°.48W**±0°.04**, h15**km±5km, **n25,** σ0**°81/49, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSF	**Rostrenen**	**0.17**	**54**	*e*Pg	**Pg**	**09 02 22.4**	**+1.0**
ROSF				*e*Sg	**Sg**	**09 02 25.4**	**+1.2**
	60nm,0.2s						
ROSF	**Rostrenen**	**0.17**	**54**	*e*Pg	**Pg**	**09 02 22.4**	**+1.0**
ROSF				*e*Sg	**Sg**	**09 02 25.4**	**+1.2**
	30nm,0.2s						
QUIF	**Quistinic**	**0.38**	**147**	*e*Pg	**Pg**	**09 02 25.7**	**+0.7**
QUIF				*e*Sg	**Sg**	**09 02 30.8**	**+0.6**
	49nm,0.2s						
QUIF	**Quistinic**	**0.38**	**147**	*e*Pg	**Pg**	**09 02 25.7**	**+0.7**
QUIF				*e*Sg	**Sg**	**09 02 30.8**	**+0.6**
	24nm,0.2s						
BST	**Brest**	**0.40**	**280**	Pg	**Pg**	**09 02 24.9**	**-0.3**
BST				Sg	**Sg**	**09 02 29.4**	**-1.1**
BST	**Brest**	**0.40**	**280**	Pg	**Pg**	**09 02 24.9**	**-0.3**
BST				Sg	**Sg**	**09 02 29.4**	**-1.1**
SGMF	**Saint Gilles**	**0.62**	**88**	*e*Pn	**Pn**	**09 02 32.0**	**+0.7**
SGMF				*e*Sg	**Sg**	**09 02 37.8**	**+0.3**
	7.5nm,0.2s						
SGMF	**Saint Gilles**	**0.62**	**88**	*e*Pg	**Pg**	**09 02 30.2**	**+0.9**
SGMF				*e*Pn	**Pn**	**09 02 32.0**	**+0.7**
SGMF				*e*Sg	**Sg**	**09 02 37.8**	**+0.3**
SGMF	**Saint Gilles**	**0.62**	**88**	*e*Pg	**Pg**	**09 02 30.2**	**+0.9**
SGMF	**Saint Gilles**	**0.62**	**88**	*e*Pn	**Pn**	**09 02 32.0**	**+0.7**
SGMF				*e*Sg	**Sg**	**09 02 37.8**	**+0.3**
	3.8nm,0.2s						
GRR	**Gorron**	**1.76**	**84**	*e*Pg	**Pg**	**09 02 50.8**	**-0.1**
GRR				*e*Sg	**Sg**	**09 03 13.2**	**-0.5**
	8.5nm,0.2s						
GRR	**Gorron**	**1.76**	**84**	*e*Pg	**Pg**	**09 02 50.8**	**-0.1**
GRR				*e*Sg	**Sg**	**09 03 13.2**	**-0.5**
	4.2nm,0.2s						
FLN	**La Foliniere**	**2.06**	**74**	*e*Pn	**Pn**	**09 02 51.5**	**+0.3**
	baz=260						
FLN	**La Foliniere**	**2.06**	**74**	*e*Pg	**Pg**	**09 02 56.2**	**-0.5**
	baz=257						
FLN				*e*Sg	**Sg**	**09 03 22.6**	**-0.9**
	5.7nm,0.3s						
FLN	**La Foliniere**	**2.06**	**74**	*e*Pn	**Pn**	**09 02 51.5**	**+0.3**
FLN				*e*Pg	**Pg**	**09 02 56.2**	**-0.5**
FLN				*e*Sg	**Sg**	**09 03 22.6**	**-0.9**
FLN	**La Foliniere**	**2.06**	**74**	*e*Pn	**Pn**	**09 02 51.5**	**+0.3**
FLN	**La Foliniere**	**2.06**	**74**	*e*Pg	**Pg**	**09 02 56.2**	**-0.5**
FLN				*e*Sg	**Sg**	**09 03 22.6**	**-0.9**
	2.8nm,0.3s						
LDF	**La Druitiere**	**2.27**	**80**	*e*Pg	**Pg**	**09 03 00.2**	**-0.4**
LDF				*e*Sg	**Sg**	**09 03 28.7**	**-1.3**
	5.8nm,0.2s						
LDF	**La Druitiere**	**2.27**	**80**	*e*Pn	**Pn**	**09 02 54.2**	**+0.2**
LDF				*e*Pg	**Pg**	**09 03 00.2**	**-0.4**
LDF				*e*Sg	**Sg**	**09 03 28.7**	**-1.3**
LDF	**La Druitiere**	**2.27**	**80**	*e*Pn	**Pn**	**09 02 54.2**	**+0.2**
LDF	**La Druitiere**	**2.27**	**80**	*e*Pg	**Pg**	**09 03 00.2**	**-0.4**
LDF				*e*Sg	**Sg**	**09 03 28.7**	**-1.3**
	2.9nm,0.2s						
MFF	**Saint Martin d**	**2.79**	**125**	*e*Pg	**Pg**	**09 03 10.1**	**-0.6**
MFF				*e*Sg	**Sg**	**09 03 45.3**	**-1.6**
	5.3nm,0.2s						
MFF	**Saint Martin d**	**2.79**	**125**	*e*Pn	**Pn**	**09 03 02.3**	**+1.1**
MFF				*e*Pg	**Pg**	**09 03 10.1**	**-0.6**
MFF				*e*Sg	**Sg**	**09 03 45.3**	**-1.6**
MFF	**Saint Martin d**	**2.79**	**125**	*e*Pn	**Pn**	**09 03 02.3**	**+1.1**
MFF				*e*Pg	**Pg**	**09 03 10.1**	**-0.6**
MFF				*e*Sg	**Sg**	**09 03 45.3**	**-1.6**
	2.7nm,0.2s						

*ISCJB **23** 09:30:01.8±0.7, 41°.1S±0°.1×86°.08W±0°.09, h10km, mb4.3/13, MS4.4/21, Error ellipse: s-maj=17.8km s-min=9.4km az=0.8*
*IDC **23** 09:30:02.0±1.0, 41°.09S×86°.15W, h0km, mb4.0/6, mb1 4.2/8, mb1mx4.1/17, mbtmp3.9/8, ML3.6/2, MS4.3/24, Ms1 4.3/24, ms1mx4.3/28, Error ellipse: s-maj=27.6km s-min=26.3km az=114.0*
*NEIC **23** 09:30:03.6±0.5, 41°.09S×86°.14W, h10km, mb4.7/9, Error ellipse: s-maj=14.7km s-min=10.7km az=184.0*
*GCMT **23** 09:30:04.3±0.2, 41°.42S×86°.40W, h15km±1km, MW5.2, Moment Tensor Solution. s58,c84; s91,c156; Moment tensor: Scale 10^16Nm; Mrr-0.01±.16; Mθθ1.58±.16; Mϕϕ-1.57±.18; Mrθ0.27±.29; Mrϕ-8.06±.15; Mθϕ-0.60±.31; Best double couple: M0 8.20000×10^16 NP1:ϕs84.00000°, δ86.00000°, λ179.00000°. NP2:ϕs175.00000°, δ89.00000°, λ4.00000°. Principal axes: T 8.2600, Plg4.0000°, Azm40.0000°; N -0.0400, Plg85.0000°, Azm193.0000°; P -8.2200, Plg2.0000°, Azm309.0000°; Data Used: II IU IC CN G.*

ISC 23 09:30:03.6±0.7**, 41°.1S**±0°.1×**86°.14W**±0°.09**, h10km, n44,** σ1s**04/22, mb4.3/13, MS4.4/21, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**11.81**	**93**	Pn	**Pn**	**09 32 53.3**	**+1.3**
	0.1nm,0.3s,baz=296,slow=6.1,SNR=2.8						
PLCA				LR	LR	09 36 25.8	
	comp=Z,2μm,21.3s,baz=264,slow=32						
CFAA	**Coronel Fontan**	**17.24**	**62**	P	**Pn**	**09 34 03.6**	**-0.8**
	0.1nm,0.3s,baz=220,slow=10,SNR=14						
CFAA				LR	LR	09 39 26.3	
	comp=Z,311nm,19.8s,baz=229,slow=33						
LCO	**Las Campanas**	**17.46**	**51**	*e*Pn	**Pn**	**09 34 08.8**	**+1.6**
	165nm,1.8s						
USHA	**Ushuaia**	**18.05**	**145**	LR	LR	09 39 42.2	
	comp=Z,2μm,19.3s,baz=276,slow=32						
TRQA	**Tornquist**	**18.86**	**89**	*e*P	**Pn**	**09 34 22.3**	**-2.0**
	21nm,1.2s						
PMSA	**Palmer Station**	**26.88**	**159**	LR	LR	09 42 55.3	
	comp=Z,726nm,20.2s,MS4.2,baz=322,slow=29						
CPUP	**Villa Florida**	**27.98**	**67**	P	**P**	**09 35 54.4**	**-0.1**
	4.0nm,0.9s,mb4.0,baz=224,slow=9.4,SNR=5.7						
CPUP				LR	LR	09 46 29.5	
	comp=Z,2μm,18.3s,MS4.7,baz=220,slow=35						
LPAZ	**La Paz**	**29.24**	**37**	P	**P**	**09 36 05.5**	**-0.1**
	4.7nm,1.1s,mb4.1,baz=214,slow=6.3,SNR=9.5						
LPAZ				LR	LR	09 45 44.2	
	comp=Z,477nm,20.0s,MS4.1,baz=186,slow=32						
NNA	**Nana**	**30.15**	**18**	LR	LR	09 45 03.1	
	comp=Z,805nm,18.2s,MS4.4,baz=187,slow=30						
ATAH	**Atahualpa**	**34.54**	**14**	LR	LR	09 47 33.5	
	comp=Z,1μm,21.4s,MS4.6,baz=200,slow=30						
OTAV	**Otavalo**	**41.76**	**12**	*e*P	**P**	**09 37 52.2**	**-0.9**
	2.9nm,0.8s,mb4.0						
RKT	**Rikitea**	**44.47**	**278**	*e*S	**S**	**09 44 49.7**	**-0.4**
	159nm,31.0s						
RKT				*e*LQ		09 48 41.5	
	636nm,32.0s						
RKT				*e*LR	LR	09 50 39.8	
	806nm,29.5s,baz=126						
ROSC	**El Rosal**	**47.02**	**16**	LR	LR	09 55 49.7	
	comp=Z,873nm,21.5s,MS4.7,baz=190,slow=33						
QSPA	**South Pole Qui**	**49.11**	**180**	P	**P**	**09 38 50.6**	**-0.1**
QSPA				LR	LR	09 55 45.2	
QSPA	**South Pole Qui**	**49.11**	**180**	P	**P**	**09 38 50.6**	**-0.1**
	1.5nm,1.0s,mb4.0,baz=119,slow=3.6,SNR=3.7						
QSPA				LR	LR	09 55 45.2	
	comp=Z,287nm,20.4s,MS4.3,baz=135,slow=31						
PCRV	**Puerto La Cruz**	**54.76**	**26**	LR	LR	10 02 16.1	
	comp=Z,351nm,19.6s,MS4.4,baz=206,slow=35						
TAOE	**Nuku Hiva Isla**	**57.39**	**288**	*e*S	**S**	**09 47 46.9**	**-2.4**
	295nm,27.3s						
TAOE				*e*LR	LR	09 56 37.5	
	393nm,25.6s						
PPT	**Papeete**	**58.74**	**274**	*e*S	**S**	**09 48 07.9**	**+0.9**
	133nm,25.2s						
PPT				*e*LQ		09 54 49.4	
	1μm,31.2s						
PPT				*e*LR	LR	09 57 06.4	
	500nm,28.0s,baz=138						
PPT	**Papeete**	**58.74**	**274**	LR	LR	09 57 37.5	
	comp=Z,238nm,18.6s,MS4.3,baz=123,slow=28						
MAW	**Mawson**	**69.09**	**168**	LR	LR	10 08 22.4	
	comp=Z,198nm,18.1s,MS4.4,baz=208,slow=33						
TXAR	**Lajitas Array**	**71.96**	**344**	P	**P**	**09 41 26.6**	**-0.5**
	1.8nm,0.9s,mb4.0,baz=166,slow=7.5,SNR=17						
TXAR				LR	LR	10 08 21.1	
	comp=Z,174nm,19.4s,MS4.3,baz=245,slow=32						
TKL	**Tuckaleechee C**	**76.44**	**2**	LR	LR	10 10 07.0	
	comp=Z,133nm,21.8s,MS4.2,baz=8.0,slow=32						
ANMO	**Albuquerque**	**77.97**	**343**	*e*P	**P**	**09 42 01.7**	**-0.1**
	4.9nm,0.9s,mb4.4						
ANMO	**Albuquerque**	**77.97**	**343**	LR	LR	10 13 07.5	
	comp=Z,100nm,19.0s,MS4.2,baz=45,slow=33						
CCM	**Cathedral Cave**	**78.94**	**356**	*e*P	**P**	**09 42 05.7**	**-1.2**
	4.8nm,0.7s,mb4.5						
BLO	**Bloomington**	**79.92**	**360**	*e*P	**P**	**09 42 11.9**	**-0.4**
	10nm,0.8s,mb4.8						
SUR	**Sutherland**	**80.63**	**125**	LR	LR	10 12 21.3	
	comp=Z,232nm,19.2s,MS4.5,baz=255,slow=32						
PV01	**Paradox Valley**	**81.50**	**342**	*e*P	**P**	**09 42 21.6**	**+0.8**
	225nm,0.8s						
SMCO	**Snowmass**	**82.15**	**344**	*e*P	**P**	**09 42 25.5**	**+1.3**
	10nm,1.4s,mb4.6						
NVAR	**Mina Array Bea**	**84.45**	**335**	P	**P**	**09 42 37.4**	**+1.3**
	0.8nm,0.7s,mb3.9,baz=162,slow=4.6,SNR=8.0						
BOSA	**Boshof**	**86.00**	**125**	LR	LR	10 15 00.7	
	comp=Z,292nm,18.9s,MS4.7,baz=201,slow=31						
PDAR	**Pinedale Array**	**86.14**	**343**	P	**P**	**09 42 44.5**	**+0.1**
	1.1nm,0.8s,mb4.1,baz=131,slow=2.5,SNR=9.6						
PDAR				LR	LR	10 15 33.0	
	comp=Z,81nm,21.1s,MS4.1,baz=347,slow=32						
FLWY	**Flagg Ranch**	**87.65**	**343**	*e*P	**P**	**09 42 56.2**	**+4.5**
	24nm,1.7s,mb5.2						
DBIC	**Dimbokro**	**87.82**	**79**	LR	LR	10 20 26.7	
	comp=Z,142nm,19.5s,MS4.4,baz=200,slow=34						
DZM	**Mont Dzumac**	**87.99**	**242**	*e*LR	LR	10 10 51.2	
	721nm,29.2s						
SLMT	**Seeley Lake**	**91.28**	**342**	*e*P	**P**	**09 43 12.6**	**+3.9**
	2.1nm,1.0s,mb4.4						
ULM	**Lac du Bonnet**	**91.39**	**354**	LR	LR	10 20 54.3	
	comp=Z,106nm,21.7s,MS4.2,baz=15,slow=33						
STKA	**Stephens Creek**	**95.05**	**219**	LR	LR	10 17 43.1	
	comp=Z,209nm,20.0s,MS4.6,baz=206,slow=30						
TORD	**Torodi Ar. Bea**	**96.91**	**79**	LR	LR	10 22 40.4	
	comp=Z,142nm,20.7s,MS4.4,baz=245,slow=33						
SCHQ	**Schefferville**	**97.00**	**11**	LR	LR	10 25 03.9	
	comp=Z,140nm,21.8s,MS4.4,baz=270,slow=34						
ABKAR	**Akbulak array**	**154.92**	**60**	*e*PKPdf	PKPdf	09 49 57.1	+1.2
KURK	**Kurchatov**	**165.73**	**43**	PKP	PKPdf	09 50 08.6	+0.7
	0.8nm,0.9s,baz=309,slow=1.2,SNR=4.2						
ZALV	**Zalesovo Beam**	**165.81**	**22**	PKP	PKPdf	09 50 07.9	+0.1
	0.4nm,0.3s,baz=328,slow=5.1,SNR=2.4						
MKAR	**Makanchi Array**	**169.92**	**52**	PKP	PKPdf	09 50 10.9	0.0
	0.3nm,0.2s,baz=292,slow=4.5,SNR=2.8						

*IDC **23** 09:37:01.1±2.3, 52°.98N×159°.22E, h0km, mb3.6/7, mb1 3.9/7, mb1mx3.6/26, mbtmp3.6/7, Error ellipse: s-maj=67.4km s-min=22.0km az=1.0*
*ISCJB **23** 09:37:08.2±0.6, 52°.76N±0°.05×159°.79E±0°.08, h57km±6km, mb3.7/7, Error ellipse: s-maj=9.8km s-min=4.9km az=44.4*
*MOS **23** 09:37:08.3±1.6, 52°.76N×159°.83E, h49km, mb4.1/3, Error ellipse: s-maj=25.7km s-min=10.2km az=84.7*
*KRSC **23** 09:37:08.3±0.6, 52°.76N×159°.83E, h49km±29km, ML4.3*

ISC 23 09:37:09.5±0.6**, 52°.76N**±0°.05×**159°.76E**±0°.07**, h51**km±6km, **n32,** σ1s**14/44, mb3.7/7, 1D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.37**	**26**	*e*P	**Pn**	**09 37 18.8**	**-0.6**
SPN				*i* S	**Sn**	**09 37 26.0**	**-0.4**
NLC	**Nalytchevo**	**0.48**	**329**	*i* P	**Pn**	**09 37 19.7**	**-0.8**
NLC				*i* S	**Sn**	**09 37 27.9**	**-0.5**
PET	**Petropavlovsk**	**0.72**	**292**	*e*P	**Pn**	**09 37 22.4**	**-1.1**
PET				*i* S	**Sn**	**09 37 32.5**	**-1.1**
PET	**Petropavlovsk**	**0.72**	**292**	⇓*i*PN	**Pn**	**09 37 21.7**	**-1.8**
PET				*e*S	**Sn**	**09 37 32.5**	**-1.1**
PET				pmax	pmax		
	comp=Z,847nm,0.3s						
PET				smax			
	comp=E,2μm,0.4s						
PET				smax			
	comp=N,3μm,0.3s						
AVH	**Avacha**	**0.79**	**310**	*e*P	**Pn**	**09 37 24.1**	**-0.4**
AVH				*i* S	**Sn**	**09 37 35.5**	**+0.1**
GRL	**Gorelyy**	**1.05**	**259**	*e*P	**Pn**	**09 37 27.8**	**0.0**
GRL				*i* S	**Sn**	**09 37 41.6**	**+0.2**
KII	**Karymskiy**	**1.29**	**352**	*e*P	**Pn**	**09 37 30.6**	**-0.5**
KII				*i* S	**Sn**	**09 37 46.4**	**-0.8**
GNL	**Ganaly**	**1.44**	**311**	*e*P	**Pn**	**09 37 32.9**	**-0.2**
GNL				*i* S	**Sn**	**09 37 50.3**	**-0.5**
MIPR	**Malaya Ipel'ka**	**1.90**	**256**	*e*P	**Pn**	**09 37 39.8**	**+0.4**
MKZ	**Mys Kozlova**	**2.15**	**32**	*e*P	**Pn**	**09 37 41.4**	**-1.4**
MKZ				*i* S	**Sn**	**09 38 06.0**	**-2.2**
SKR	**Severo-Kuril's**	**3.08**	**229**	*e*PN	**Pn**	**09 37 56.5**	**+1.0**
SKR				*e*S	**Sn**	**09 38 31.4**	**+0.4**
SKR				smax			
	comp=N,110nm,0.4s						
SKR				smax			
	comp=E,160nm,0.4s						
SKR				smax			
	comp=Z,50nm,0.5s						
BZMR	**Bezymyannaya**	**3.21**	**7**	*e*P	**Pn**	**09 37 58.7**	**+1.4**
KPT	**Kopyto**	**3.22**	**5**	*e*P	**Pn**	**09 37 57.7**	**+0.2**
ALID	**Alaid**	**3.23**	**236**	*e*P	**Pn**	**09 37 58.0**	**+0.4**
KOZ	**Kozyrevsk**	**3.30**	**1**	*e*P	**Pn**	**09 38 00.2**	**+1.6**
KOZR	**Kozyr**	**3.31**	**1**	PN	**Pn**	**09 38 00.2**	**+1.5**
ZLN	**Zelenaya**	**3.32**	**10**	*e*P	**Pn**	**09 38 00.6**	**+1.8**
CIRR	**Tsirk**	**3.41**	**9**	*e*P	**Pn**	**09 38 01.9**	**+1.8**
KRSR	**Krestovskiy**	**3.49**	**7**	*e*P	**Pn**	**09 38 02.4**	**+1.2**
SRDR	**Sredinnyy**	**3.56**	**360**	*e*P	**Pn**	**09 38 03.3**	**+1.1**
KLY	**Klyuchi**	**3.59**	**8**	*e*P	**Pn**	**09 38 04.2**	**+1.6**
KLY				*i* S	**Sn**	**09 38 45.5**	**+1.7**
BKI	**Bering**	**4.41**	**54**	*e*P	**Pn**	**09 38 13.2**	**-0.6**
BKI				*i* S	**Sn**	**09 38 59.1**	**-4.7**
ILAR	**Eielson Array**	**29.19**	**45**	P	**P**	**09 43 04.0**	**-1.7**
	comp=Z,0.3nm,0.6s,mb3.2,baz=266,slow=7.9,SNR=8.1						
INK	**Inuvik**	**34.26**	**37**	P	**P**	**09 43 48.4**	**-1.6**
	comp=Z,1.3nm,0.4s,mb4.3,baz=298,slow=6.0,SNR=16						
INK	**Inuvik**	**34.26**	**37**	P	**P**	**09 43 48.4**	**-1.7**
INK				pmax	pmax		
	comp=N,1.0nm,0.4s						
KURK	**Kurchatov**	**47.73**	**302**	P	**P**	**09 45 37.0**	**-3.9**
	comp=Z,0.6nm,0.6s,mb3.8,baz=61,slow=7.6,SNR=4.3						
KURK	**Kurchatov**	**47.73**	**302**	P	**P**	**09 45 37.0**	**-3.9**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
MKAR	**Makanchi Array**	**48.11**	**296**	P	**P**	**09 45 39.0**	**-4.9**
	comp=Z,0.5nm,0.4s,mb3.9,baz=56,slow=6.4,SNR=5.5						
MKAR	**Makanchi Array**	**48.11**	**296**	*e*P	**P**	**09 45 39.0**	**-4.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NVAR	**Mina Array Bea**	**56.05**	**70**	P	**P**	**09 46 44.2**	**+1.2**
	comp=Z,0.3nm,0.7s,mb3.4,baz=292,slow=5.7,SNR=2.8						
NOA	**NORSAR Array B**	**63.80**	**344**	P	**P**	**09 47 32.9**	**-2.9**
	comp=Z,0.3nm,0.5s,mb3.6,baz=25,slow=14,SNR=2.6						
TXAR	**Lajitas Array**	**70.96**	**67**	P	**P**	**09 48 21.1**	**-0.3**
	comp=Z,0.3nm,0.5s,mb3.5,baz=297,slow=5.4,SNR=8.6						

*ISCJB **23** 09:45:21.7±0.5, 19°.79S±0°.05×69°.19W±0°.08, h104km±5km, mb3.8/6, Error ellipse: s-maj=13.2km s-min=9.0km az=0.7*
*IDC **23** 09:45:23.7±2.2, 19°.72S×69°.09W, h109km±20km, mb3.6/6, mb1 3.8/9, mb1mx3.7/19, mbtmp3.6/9, MS4.1/1, Ms1 4.1/1, ms1mx2.7/25, Error ellipse: s-maj=26.8km s-min=16.2km az=85.0*
*GUC **23** 09:45:23.3±0.4, 19°.78S×69°.40W, h101km±5km, ML4.3*
*NEIC **23** 09:45:24.1±1.1, 19°.78S×69°.01W, h115km±10km, mb3.9/2, Error ellipse: s-maj=16.0km s-min=8.0km az=85.0*

ISC 23 09:45:22.7±0.5**, 19°.80S**±0°.05×**69°.18W**±0°.08**, h98**km±5km, **n23,** σ1s**16/21, mb3.9/6, 3C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Miæe Miæ**	**0.77**	**329**	⇓*i*P	**Pn**	**09 45 41.4**	**+0.8**
MNMC	

*NEIC **23** 10:05:46.8, 14.25N×94.07W, h16km, mb3.9/4, MD4.4(MEX), After MEX.*

*ISCJB **23** 10:05:48.3±0.6, 14.45N±0.05×94.15W±0.04, h33km, mb3.8/11, Error ellipse: s-maj=6.6km s-min=5.3km az=14.8*

ISC 23 10:05:50.5±0.6, **14.47N**±0.05×**94.14W**±0.04, **h35**km, **n33**, σ1§**47**/48, **mb3.8**/11, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PCIG		**1.52**	**36**	*i* P		**Pn**	**10 06 11.4**	**-3.8**
PCIG				*i* S		**Sn**	**10 06 30.5**	**-3.2**
THIG		**1.87**	**76**	*e*P		**Pn**	**10 06 14.2**	**-5.8**
THIG				*i* S		**Sn**	**10 06 35.5**	**-6.9**
HUIG	**Huatulco**	**2.29**	**304**	*i* P		**Pn**	**10 06 23.4**	**-2.4**
HUIG				*i* S		**Sn**	**10 06 51.1**	**-1.8**
HUIG	**Huatulco**	**2.29**	**304**	*i* P		**Pn**	**10 06 23.4**	**-2.4**
HUIG				*i* S		**Sn**	**10 06 51.1**	**-1.8**
TGIG		**2.50**	**23**	*e*P		**Pn**	**10 06 27.6**	**-1.0**
TGIG				*i* S		**Sn**	**10 06 58.0**	**+0.1**
SCX	**San Cristobal**	**2.68**	**33**	*i* P		**Pn**	**10 06 30.6**	**-0.6**
SCX				*i* S		**Sn**	**10 07 02.8**	**+0.4**
SCX	**San Cristobal**	**2.68**	**33**	*i* P		**Pn**	**10 06 28.1**	**-3.1**
SCX				*i* S		**Sn**	**10 07 02.4**	**0.0**
CMIG	**Matias Romero**	**2.70**	**345**	*i* P		**Pn**	**10 06 31.0**	**-0.4**
CMIG					Sn	**Sn**	**10 07 03.5**	**+0.6**
CMIG				*i* S		**Sn**	**10 07 03.7**	**+0.8**
CMIG	**Matias Romero**	**2.70**	**345**	Pn		**Pn**	**10 06 31.1**	**-0.4**
	10nm,0.3s,baz=155,slow=11,SNR=129							
CMIG					Sn	**Sn**	**10 07 03.5**	**+0.6**
	26nm,0.3s,baz=34,slow=13,SNR=10							
CMIG	**Matias Romero**	**2.70**	**345**	*i* P		**Pn**	**10 06 31.0**	**-0.4**
CMIG				*i* S		**Sn**	**10 07 03.7**	**+0.8**
VHO	**Vista Hermosa**	**3.59**	**316**	*i* P		**Pn**	**10 06 42.6**	**-1.2**
VHO				*i* S		**Sn**	**10 07 26.7**	**+1.8**
VHO	**Vista Hermosa**	**3.59**	**316**	*i* P		**Pn**	**10 06 42.6**	**-1.2**
VHO				*i* S		**Sn**	**10 07 26.7**	**+1.8**
PNIG	**Pinotepa**	**4.29**	**297**	*i* P		**Pn**	**10 06 51.8**	**-1.6**
PNIG				*i* S		**Sn**	**10 07 41.2**	**-1.0**
PNIG	**Pinotepa**	**4.29**	**297**	*i* P		**Pn**	**10 06 51.8**	**-1.6**
PNIG				*i* S		**Sn**	**10 07 41.2**	**-1.0**
UTMO	**Huajuapan**	**4.85**	**314**	*i* P		**Pn**	**10 06 58.6**	**-2.5**
UTMO				*i* S		**Sn**	**10 07 56.3**	**+0.3**
TEIG	**Tepich**	**8.01**	**44**	*e*Pn		**Pn**	**10 07 39.7**	**-4.7**
	28nm,0.4s							
TEIG					*e*Sn	**Sn**	**10 09 07.6**	**-6.2**
JCT	**Junction City**	**16.76**	**343**	*e*P		**Pn**	**10 09 45.5**	**+2.8**
	3.9nm,0.8s							
TXAR	**Lajitas Array**	**17.21**	**331**	P		**Pn**	**10 09 50.9**	**+2.6**
	0.1nm,0.3s,baz=151,slow=11,SNR=10							
WMOK	**Wichita Mounta**	**20.61**	**349**	*e*P		**P**	**10 10 27.5**	**+0.8**
	1.3nm,0.6s							
AMTX	**Amarillo**	**21.43**	**343**	*e*P		**P**	**10 10 37.0**	**+1.4**
	7.3nm,0.6s,mb4.2							
ROSC	**El Rosal**	**21.72**	**114**	P		**P**	**10 10 38.6**	**-0.3**
	4.1nm,0.4s,mb4.2,baz=282,slow=18,SNR=2.7							
TKL	**Tuckaleechee C**	**23.06**	**22**	LR		LR	10 21 08.7	
	comp=Z,94nm,18.9s,baz=360,slow=40							
ANMO	**Albuquerque**	**23.22**	**334**	P		**P**	**10 10 56.7**	**+2.1**
	0.9nm,0.9s,mb3.2,baz=138,slow=12,SNR=3.2							
PDAR	**Pinedale Array**	**31.17**	**338**	P		**P**	**10 12 07.3**	**+1.2**
	0.6nm,0.9s,mb3.4,baz=104,slow=11,SNR=4.3							
NVAR	**Mina Array Bea**	**32.02**	**323**	P		**P**	**10 12 17.1**	**+3.4**
	2.4nm,1.0s,mb4.0,baz=136,slow=8.5,SNR=9.4							
SNOW	**Snow King Moun**	**32.21**	**337**	*e*P		**P**	**10 12 18.2**	**+3.0**
	4.8nm,1.1s,mb4.2							
LPAZ	**La Paz**	**39.93**	**139**	P		**P**	**10 13 22.9**	**+1.3**
	0.5nm,0.6s,mb3.4,baz=11,slow=5.2,SNR=2.8							
YKA	**Yellowknife Ar**	**50.11**	**348**	P		**P**	**10 14 42.5**	**+0.6**
YKA	**Yellowknife Ar**	**50.11**	**348**	P		**P**	**10 14 42.5**	**+0.6**
	2.5nm,0.6s,mb4.4,baz=156,slow=7.3,SNR=7.2							
CFAA	**Coronel Fontan**	**52.12**	**152**	P		**P**	**10 14 56.2**	**-1.2**
	0.1nm,0.4s,mb3.1,baz=332,slow=6.7,SNR=4.3							
ILAR	**Eielson Array**	**61.60**	**337**	P		**P**	**10 16 04.6**	**+0.4**
	0.7nm,0.7s,mb3.9,baz=148,slow=4.3,SNR=13							
NOA	**NORSAR Array B**	**84.72**	**28**	P		**P**	**10 18 21.4**	**+0.6**
	1.1nm,0.8s,mb4.1,baz=292,slow=5.1,SNR=5.6							
CMAR	**Chiang Mai Arr**	**144.83**	**338**	PKP		PKPdf	10 25 24.3	-0.4
	1.0nm,0.6s,baz=315,slow=1.6,SNR=6.3							

IDC 23 10:29:53.5±50.0, **15.99S**×**175.27W**, **h0**km, **mb4.3**/3, **mb1 4.5**/3, **mb1mx3.9**/15, **mbtmp4.3**/3, **Error ellipse: s-maj=943.1km s-min=157.5km az=78.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.19**	**240**	P		P	10 37 48.8	+0.5
	1.9nm,0.5s,baz=79,slow=8.3,SNR=14							
WRA	**Warramunga Arr**	**47.96**	**257**	P		P	10 38 33.6	-0.7
	0.7nm,0.5s,baz=96,slow=7.4,SNR=19							
ASAR	**Alice Springs**	**48.22**	**252**	P		P	10 38 36.3	0.0
	9.8nm,0.5s,baz=89,slow=8.1,SNR=192							

*ISCJB **23** 10:29:57.4±0.4, 26.03S±0.09×68.82E±0.08, h10km, mb4.2/28, MS3.8/8, Error ellipse: s-maj=13.4km s-min=10.3km az=8.9*

*IDC **23** 10:29:57.4±0.5, 25.98S×68.70E, h0km, mb4.2/17, mb1 4.3/17, mb1mx4.3/22, mbtmp4.2/17, MS3.8/8, Ms1 3.7/8, ms1mx3.3/28, Error ellipse: s-maj=17.2km s-min=16.7km az=75.0*

*NEIC **23** 10:29:58.9±0.3, 25.99S×68.71E, h10km, mb4.5/9, Error ellipse: s-maj=10.6km s-min=8.6km az=188.0*

ISC 23 10:29:59.3±0.4, **26.02S**±0.09×**68.77E**±0.08, **h10**km, **n45**, σ0§**74**/**39**, **mb4.2**/**28**, **MS3.8**/**8**, **5C-1D**, **Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**21.28**	**286**	P		**P**	**10 34 48.7**	**+2.7**
	5.7nm,1.0s,mb3.9,baz=217,slow=7.3,SNR=5.6							
BOSA	**Boshof**	**38.59**	**256**	P		**P**	**10 37 21.8**	**-0.8**
	4.3nm,0.9s,mb4.2,baz=47,slow=5.9,SNR=7.5							
BOSA					LR	LR	10 51 00.8	
	comp=Z,135nm,19.2s,MS3.8,baz=265,slow=33							
LBTB	**Lobatse**	**38.84**	**262**	P		**P**	**10 37 23.7**	**-1.0**
	1.2nm,0.6s,mb3.8,baz=124,slow=11,SNR=2.6							
LSZ	**Lusaka**	**39.30**	**278**	*e*P		**P**	**10 37 29.0**	**+0.4**
	1.9nm,0.6s,mb4.0							
MAW	**Mawson**	**41.76**	**183**	P		**P**	**10 37 48.9**	**+0.6**
	1.2nm,0.5s,mb3.8,baz=14,slow=7.3,SNR=17							
MAW					LR	LR	10 52 14.3	
	comp=Z,88nm,18.3s,MS3.7,baz=324,slow=32							
MBWA	**Marble Bar**	**46.72**	**95**	*e*P		**P**	**10 38 28.1**	**-0.7**
	9.0nm,1.0s,mb4.7							
FORT	**Forrest**	**51.86**	**110**	*e*P		**P**	**10 39 15.4**	**+7.4**
	6.1nm,0.7s,mb4.6							
CMAR	**Chiang Mai Arr**	**53.05**	**37**	P		**P**	**10 39 17.4**	**+0.6**
	4.3nm,1.0s,mb4.3,baz=230,slow=7.0,SNR=18							
CHTO	**Chiang Mai**	**53.35**	**36**	P		**P**	**10 39 19.1**	**+0.2**
	1.6nm,0.7s,mb4.1							
ASAR	**Alice Springs**	**58.60**	**103**	P		**P**	**10 39 56.3**	**-0.4**
	3.0nm,0.7s,mb4.4,baz=246,slow=6.0,SNR=22							
WRA	**Warramunga Arr**	**60.13**	**99**	P		**P**	**10 40 07.0**	**-0.3**
	3.3nm,0.8s,mb4.4,baz=253,slow=6.8,SNR=11							
WRA					PcP	PcP	10 40 52.6	-0.4
	1.5nm,0.8s,baz=255,slow=2.7,SNR=4.6							
KAKA	**Kakadu**	**61.00**	**91**	*e*P		**P**	**10 40 13.3**	**0.0**
STKA	**Stephens Creek**	**62.92**	**114**	P		**P**	**10 40 26.8**	**+0.8**
STKA					LR	LR	11 05 15.6	
STKA	**Stephens Creek**	**62.92**	**114**	P		**P**	**10 40 26.8**	**+0.8**
	2.0nm,0.8s,mb4.3,baz=264,slow=5.9,SNR=4.3							
STKA					LR	LR	11 05 15.6	
	comp=Z,69nm,19.2s,MS3.8,baz=297,slow=34							
QSPA	**South Pole Qui**	**64.12**	**180**	P		**P**	**10 40 33.7**	**+0.6**
	3.5nm,0.8s,mb4.5,baz=272,slow=1.8,SNR=15							
CTA	**Charters Tower**	**70.60**	**103**	LR		LR	11 08 45.8	
	comp=Z,95nm,19.7s,MS4.0,baz=116,slow=33							
GTA	**Gaotai**	**71.25**	**25**	*e*P		**P**	**10 41 19.3**	**+0.7**
GTA					pP	pP	10 41 26.3	+4.4
GTA					sP	sP	10 41 30.1	+7.0
GTA					pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4							
BRTR	**Keskin Array B**	**73.15**	**332**	P		**P**	**10 41 30.1**	**+0.2**
	comp=Z,1.7nm,0.7s,mb4.1,baz=170,slow=4.4,SNR=11							
BRTR					LR	LR	11 10 32.0	
	comp=Z,48nm,21.1s,MS3.8,baz=355,slow=33							
MKAR	**Makanchi Array**	**73.49**	**10**	P		**P**	**10 41 31.0**	**-0.8**
	comp=Z,0.5nm,0.4s,mb3.8,baz=202,slow=5.2,SNR=8.6							
ABKAR	**Akbulak array**	**75.34**	**354**	*e*P		**P**	**10 41 42.2**	**-0.3**
	comp=Z,2.2nm,0.8s,mb4.1							
TORD	**Torodi Ar. Bea**	**75.94**	**292**	P		**P**	**10 41 45.8**	**-1.0**
TORD					LR	LR	11 11 21.9	

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**75.94**	**292**	P		**P**	**10 41 45.8**	**-1.0**
	comp=Z,2.0nm,1.1s,mb4.0,baz=107,slow=5.9,SNR=5.1							
TORD					LR	LR	11 11 21.9	
	comp=Z,64nm,20.6s,MS3.9,baz=215,slow=33							
DBIC	**Dimbokro**	**78.37**	**283**	LR		LR	11 16 21.6	
	comp=Z,43nm,18.7s,MS3.8,baz=92,slow=36							
ZALV	**Zalesovo Beam**	**80.84**	**19**	P		**P**	**10 42 12.8**	**-0.1**
	comp=Z,2.6nm,0.7s,mb4.3,baz=208,slow=5.0,SNR=15							
SONM	**Songino Array**	**80.92**	**25**	P		**P**	**10 42 13.6**	**+0.1**
	comp=Z,4.0nm,0.8s,mb4.4,baz=213,slow=4.7,SNR=17							
VRI	**Vrincioaia**	**81.09**	**332**	*i* P		**P**	**10 42 15.0**	**+0.6**
PLOR	**Plostina**	**81.11**	**332**	*i* P		**P**	**10 42 15.1**	**+0.6**
MLR	**Muntele Rosu**	**81.13**	**331**	*i* P		**P**	**10 42 15.3**	**+0.6**
ULN	**Ulaanbaatar**	**81.20**	**25**	*e*P		**P**	**10 42 15.3**	**+0.4**
	comp=Z,3.3nm,0.6s,mb4.4							
VOIR		**81.48**	**331**	*i* P		**P**	**10 42 16.6**	**+0.1**
BURAR	**Bucovina Array**	**83.11**	**332**	*i* P		**P**	**10 42 25.8**	**+0.8**
AKASG	**Malin Array Be**	**84.00**	**336**	P		**P**	**10 42 29.1**	**-0.3**
	comp=Z,0.4nm,0.4s,mb4.0,baz=135,slow=4.3,SNR=6.5							
KSRS	**Korea Array**	**84.09**	**43**	P		**P**	**10 42 29.9**	**-0.4**
	comp=Z,2.2nm,0.8s,mb4.3,baz=220,slow=6.3,SNR=5.8							
VYHS	**Vyhne**	**86.59**	**329**	*e*P		**P**	**10 42 42.5**	**0.0**
	comp=Z,3.5nm,1.4s,mb4.4							
VYHS	**Vyhne**	**86.59**	**329**	*e*P		**P**	**10 42 42.5**	**0.0**
ZST	**Bratislava**	**87.18**	**328**	*e*P		**P**	**10 42 45.6**	**+0.2**
	comp=Z,5.5nm,0.7s,mb4.9							
ZST	**Bratislava**	**87.18**	**328**	*e*P		**P**	**10 42 45.5**	**+0.1**
MORC	**Moravsky Berou**	**88.10**	**330**	*e*P		**P**	**10 42 48.9**	**-0.9**
	comp=Z,2.8nm,0.8s,mb4.5							
MORC	**Moravsky Berou**	**88.10**	**330**	*i* P		**P**	**10 42 49.3**	**-0.5**
ESDC	**Sonseca Array**	**94.09**	**312**	P		**P**	**10 43 17.4**	**-0.5**
	comp=Z,0.1nm,0.2s,mb3.8,baz=109,slow=3.9,SNR=4.1							
NOA	**NORSAR Array B**	**98.40**	**335**	P		**P**	**10 43 34.5**	**-2.5**
	comp=Z,0.4nm,0.8s,mb4.0,baz=98,slow=3.9,SNR=3.3							
NOA					LR	LR	11 27 37.1	
	comp=Z,20nm,19.1s,MS3.6,baz=95,slow=35							
NCB	**Newcomb**	**145.15**	**310**	*e*PKPbc		PKPbc	10 49 36.6	+0.1
EDM	**Edmonton**	**152.78**	**3**	*e*PKPdf		PKPdf	10 49 46.8	-2.2
EDM				*e*PKPbc		PKPbc	10 49 55.8	-0.2
EDM				*e*PKPab		PKPab	10 50 07.0	+0.1
NVAR	**Mina Array Bea**	**166.26**	**24**	PKPab		PKPab	10 51 06.5	+0.8
	comp=Z,1.2nm,0.8s,baz=294,slow=3.5,SNR=7.9							
TXAR	**Lajitas Array**	**172.52**	**298**	PKP		PKPdf	10 50 08.9	0.0
	comp=Z,0.2nm,0.7s,baz=151,slow=2.9,SNR=3.4							

IDC 23 10:48:16.7±3.8, **25.42N**×**96.88E**, **h0**km, **mb3.5**/3, **mb1 3.8**/3, **mb1mx3.4**/23, **mbtmp3.5**/3, **Error ellipse: s-maj=472.2km s-min=28.5km az=58.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**24.29**	**335**	P		P	10 53 35.8	+0.2
	0.5nm,0.4s,baz=146,slow=9.0,SNR=5.5							
WRA	**Warramunga Arr**	**57.96**	**138**	P		P	10 58 11.3	+0.2
	0.3nm,0.5s,baz=327,slow=7.2,SNR=4.9							
ASAR	**Alice Springs**	**60.55**	**141**	P		P	10 58 29.0	-0.1
	0.3nm,0.4s,baz=322,slow=6.9,SNR=9.4							

*ISCJB **23** 10:50:32.5±2.0, 21.25S±0.1×176.1W±0.2, h144km±25km, mb4.0/7, Error ellipse: s-maj=28.7km s-min=17.2km az=34.7*

*IDC **23** 10:50:35.9±12.0, 21.47S×176.48W, h148km±107km, mb3.8/6, mb1 3.9/7, mb1mx3.6/18, mbtmp3.8/7, Error ellipse: s-maj=48.1km s-min=33.5km az=29.0*

*NEIC **23** 10:50:44.2±2.5, 21.75S×176.43W, h228km±20km, mb4.2/3, Error ellipse: s-maj=26.7km s-min=17.7km az=89.0*

ISC 23 10:50:33.3±1.9, **21.25S**±0.1×**176.1W**±0.2, **h136**km±23km, **n16**, σ1§**29**/**12**, **mb4.0**/**7**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.68**	**303**	*e*Pn		**Pn**	**10 52 19.4**	**+10**
AFI	**Afiamalu**	**8.62**	**29**	Pn		**Pn**	**10 52 34.7**	**-0.5**
AFI	**Afiamalu**	**8.62**	**29**	S		Sx	10 54 09.1	
	1.9nm,0.3s,baz=98,slow=18,SNR=4.7							
DZM	**Mont Dzumac**	**16.22**	**265**	P		**Pn**	**10 54 15.0**	**+1.5**
	8.3nm,0.8s							
URZ	**Urewera**	**17.67**	**198**	P		**Pn**	**10 54 30.3**	**-0.6**
	1.0nm,0.3s,baz=31,slow=6.2,SNR=8.8							
URZ					S	Sx	10 57 32.8	
	1.0nm,0.3s,baz=278,slow=19,SNR=10							
RPZ	**Rata Peaks**	**24.57**	**203**	P		**P**	**10 55 42.0**	**+1.6**
	10nm,0.5s,mb4.6,baz=346,slow=3.0,SNR=9.6							
EIDS	**Eidsvold**	**30.30**	**256**	*e*P		**P**	**10 56 33.3**	**+1.4**
	3.4nm,0.6s,mb4.2							
CTA	**Charters Tower**	**35.16**	**265**	P		**P**	**10 57 14.0**	**-0.3**
	3.1nm,0.3s,mb4.4,baz=96,slow=9.1,SNR=6.2							
CTAO	**Charters Tower**	**35.16**	**265**	*e*P		**P**	**10 57 14.6**	**+0.3**
	2.9nm,0.6s,mb4.1							
STKA	**Stephens Creek**	**38.96**	**246**	P		**P**	**10 57 44.4**	**-1.8**
	0.9nm,0.4s,mb3.8,baz=98,slow=14,SNR=5.7							
ASAR	**Alice Springs**	**46.02**	**257**	P		**P**	**10 58 41.7**	**-1.6**
	2.6nm,0.6s,mb4.0,baz=98,slow=8.4,SNR=45							
ASAR					PcP	PcP	11 00 17.2	-0.5
	0.9nm,0.7s,baz=104,slow=4.5,SNR=7.1							
WRA	**Warramunga Arr**	**46.22**	**261**	P		**P**	**10 58 43.6**	**-1.3**
	1.3nm,0.4s,mb3.9,baz=100,slow=6.8,SNR=17							
ILAR	**Eielson Array**	**88.93**	**12**	P		**P**	**11 03 13.1**	**+1.3**
	0.2nm,0.5s,mb3.3,baz=225,slow=4.9,SNR=5.9							
AKASG	**Malin Array Be**	**144.76**	**332**	PKP		PKPdf	11 09 53.0	-0.7
AKASG	**Malin Array Be**	**144.76**	**332**	PKP		PKPdf	11 09 53.0	-0.7
	2.6nm,0.4s,baz=45,slow=4.3,SNR=14							
BRTR	**Keskin Array B**	**148.84**	**312**	PKPbc		PKPbc	11 10 05.6	+0.6
	1.4nm,0.6s,baz=126,slow=5.0,SNR=8.0							

*MAN **23** 10:54:00, 4.89N×126.52E, h98km, mb5.2, ML4.2, MS4.4*

*ISCJB **23** 10:54:04.0±0.9, 5.06N±0.07×126.2E±0.1, h98km±7km, mb4.1/18, Error ellipse: s-maj=18.2km s-min=10.9km az=170.4*

*NEIC **23** 10:54:04.1±1.1, 5.09N×126.22E, h84km±10km, Error ellipse: s-maj=26.1km s-min=7.8km az=75.0*

*IDC **23** 10:54:04.1±2.5, 5.08N×126.22E, h82km±22km, mb3.8/14, mb1 3.9/15, mb1mx3.8/23, mbtmp3.8/15, Error ellipse: s-maj=37.8km s-min=12.6km az=76.0*

ISC 23 10:54:04.9±1.0, **5.06N**±0.07×**126.3E**±0.1, **h91**km±8km, **n29**, σ0§**99**/**33**, **mb4.1**/**18**, **3C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.66**	**308**	*i* P		**Pn**	**10 54 30.9**	**-1.9**
GSPH				*i* S		**Sn**	**10 54 54.2**	**+0.4**
MATI	**Mati**	**1.88**	**360**	*e*P		**Pn**	**10 54 34.3**	**-1.2**
MATI				*e*S		**Sn**	**10 54 59.6**	**+0.8**
DAV	**Davao City (W)**	**2.11**	**341**	P		**Pn**	**10 54 37.0**	**-1.6**
	33nm,0.3s,baz=164,slow=18,SNR=2.5							
DAV					S	**Sn**	**10 55 09.8**	**+5.5**
	158nm,0.3s,baz=259,slow=19,SNR=3.6							
DMPH	**Davao City--Mi**	**2.15**	**340**	*e*P		**Pn**	**10 54 37.0**	**-2.1**
KCP	**Kidapawan**	**2.26**	**329**	*e*P		**Pn**	**10 54 40.8**	**+0.2**
KCP				*i* S		**Sn**	**10 55 11.0**	**+3.1**
BUKP	**Musuan**	**3.05**	**337**	*e*P		**Pn**	**10 54 51.9**	**+0.8**
BUKP				*e*S		**Sn**	**10 55 26.1**	**-0.6**
CGP	**Cagayan de Oro**	**3.72**	**335**	*e*P		**Pn**	**10 55 01.8**	**+1.7**
PAGZ	**Pagadian**	**3.99**	**314**	*e*P		**Pn**	**10 55 04.9**	**+1.2**
WRA	**Warramunga Arr**	**26.08**	**163**	P		**P**	**10 59 30.9**	**+0.8**
	1.1nm,0.4s,mb3.7,baz=341,slow=10,SNR=5.0							
ASAR	**Alice Springs**	**29.51**	**166**	P		**P**	**11 00 00.7**	**0.0**
	0.6nm,0.5s,mb3.5,baz=348,slow=6.9,SNR=9.1							
ASAR					PcP	PcP	11 03 04.8	+0.7
	0.5nm,0.4s,baz=343,slow=2.0,SNR=6.7							
KSRS	**Korea Array**	**32.28**	**2**	P		**P**	**11 00 26.5**	**+1.6**
	0.6nm,0.6s,mb3.5,baz=179,slow=9.7,SNR=3.2							
BJI	**Beijing**	**35.99**	**347**	P		**P**	**11 00 57.1**	**+0.1**
BJI					pmax	pmax		
	comp=Z,19nm,0.6s,mb5.2							
NWAO	**Narrogin (SRO)**	**38.74**	**192**	P		**P**	**11 01 20.4**	**+0.2**
	comp=Z,2.6nm,0.4s,mb4.4,baz=174,slow=7.0,SNR=6.9							
STKA	**Stephens Creek**	**39.53**	**159**	P		**P**	**11 01 27.6**	**+0.7**
	comp=Z,0.6nm,0.4s,mb3.8,baz=337,slow=12,SNR=2.8							
SONM	**Songino Array**	**45.90**	**341**	P		**P**	**11 02 18.5**	**+0.3**
	comp=Z,0.4nm,0.5s,mb3.4,baz=134,slow=8.3,SNR=3.4							
MKAR	**Makanchi Array**	**56.21**	**325**	P		**P**	**11 03 36.1**	**+0.6**
	comp=Z,1.6nm,0.5s,mb4.3,baz=120,slow=8.1,SNR=21							
MKAR					PcP	PcP	11 04 33.0	+0.8
	comp=Z,0.6nm,0.5s,baz=118,slow=3.9,SNR=3.2							
ZALV	**Zalesovo Beam**	**59.20**	**333**	P		**P**	**11 03 55.5**	**-0.8**
	comp=Z,0.7nm,0.4s,mb4.1,baz=120,slow=5.8,SNR=3.2							
KURK	**Kurchatov**	**60.38**	**327**	P		**P**	**11 04 03.9**	**-0.6**
	comp=Z,2.2nm,0.6s,mb4.4,baz=127,slow=6.7,SNR=10							
KDAK	**Kodiak Island**	**81.02**	**32**	P		**P**	**11 06 10.1**	**+0.5**
KDAK	**Kodiak Island**	**81.02**	**32**	P		**P**	**11 06 10.1**	**+0.5**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
	comp=Z,2.9nm,0.6s,mb4.3,baz=123,slow=8.5,SNR=4.0							
ILAR	**Eielson Array**	**84.11**	**25**	P		**P**	**11 06 25.0**	**-0.4**
	comp=Z,0.4nm,0.6s,mb3.4,baz=242,slow=5.3,SNR=9.6							
JOF	**Joensuu**	**87.79**	**333**	*e*p		**P**	**11 06 42.8**	**-0.8**
	comp=Z,1.8nm,0.5s,mb4.4							
KEV	**Kevo**	**88.49**	**340**	*e*p		**P**	**11 06 51.4**	**+4.6**
	comp=Z,2.0nm,0.8s,mb4.2							
ARCES	**ARCESS Array B**	**89.05**	**340**	P		**P**	**11 06 49.6**	**+0.2**
	comp=Z,2.7nm,0.7s,mb4.4,baz=81,slow=5.9,SNR=9.6							
KAF	**Kangasniemi**	**90.21**	**332**	*e*p		**P**	**11 06 54.2**	**-0.8**
	comp=Z,1.3nm,0.5s,mb4.3							
FINES	**FINESS Array B**	**90.45**	**332**	P		**P**	**11 06 55.4**	**-0.7**
FINES	**FINESS Array B**	**90.45**	**332**	P		**P**	**11 06 55.4**	**-0.7**
	comp=Z,0.7nm,0.5s,mb4.1,baz=57,slow=7.0,SNR=7.3							
NOA	**NORSAR Array B**	**97.40**	**334**	P		**P**	**11 07 27.5**	**-0.5**
	comp=Z,0.3nm,0.5s,mb4.0,baz=66,slow=4.4,SNR=2.6							
TORD	**Torodi Ar. Bea**	**122.06**	**289**	PKP		PKPdf	11 12 50.3	+0.4
	comp=Z,0.4nm,0.3s,baz=65,slow=1.8,SNR=7.0							

JMA 23 10:55:17.0±0.3, **44.04N**×**147.97E**, **h0**km, **M4.1**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.75**	**248**	P		Pn	10 55 49.0	+0.4
NEM2					*e*S	Sn	10 56 12.7	+1.1
JRA	**Rausu**	**2.06**	**268**	P		Pn	10 55 53.5	+0.7
JNK	**Nakash**	**2.40**	**260**	P		Pn	10 55 58.5	+1.0
JNK					*e*S	Sn	10 56 28.5	+1.0
JAK	**Akkeshi**	**2.60**	**247**	P		Pn	10 56 01.1	+0.9
JAK					*e*S	Sn	10 56 33.6	+1.1
JTKR	**Abashiri--Toko**	**2.93**	**270**	P		Pn	10 56 06.9	+2.1
JAR	**Ashorobuto**	**3.14**	**258**	P		Pn	10 56 09.4	+1.8
JAR					*e*S	Sn	10 56 48.4	+2.6
JOB	**Onbets**	**3.22**	**251**	P		Pn	10 56 10.3	+1.6
JOB					*e*S	Sn	10 56 49.4	+1.7
JMP	**Maruseppu**	**3.33**	**271**	P		Pn	10 56 12.1	+1.9
JCH	**Churui**	**3.65**	**249**	*e*S		Sn	10 57 00.7	+2.3
JNBK	**Urakawa-nobuka**	**4.20**	**247**	P		Pn	10 56 24.2	+1.9
JNBK					*e*S	Sn	10 57 13.5	+1.6
JKB	**Kayabe**	**5.53**	**249**	P		Pn	10 56 42.2	+1.7
JKB					*e*S	Sn	10 57 46.6	+1.9

*IDC **23** 10:57:23.1±2.3, 43.93N×127.04W, h0km, mb3.1/2, mb1 3.7/7, mb1mx3.5/26, mbtmp3.3/7, ML3.5/4, MS3.1/7, Ms1 3.1/7, ms1mx2.8/19, Error ellipse: s-maj=48.0km s-min=16.5

THIG				*e*S	**Sn**	11 20 30.2	**+1.8**
PCIG		**1.42**	**10**	*e*P	**Pn**	11 20 10.9	**-2.7**
PCIG				*i* S	**Sn**	11 20 30.9	**-0.1**
TP2	**Tecpan 2**	**2.42**	**78**	*e*P	**Pn**	11 20 27.6	**+0.2**
TGIG		**2.48**	**8**	*e*P	**Pn**	11 20 27.5	**-0.8**
TGIG				*e*S	**Sn**	11 20 59.8	**+2.3**
FG6		**2.52**	**84**	*e*P	**Pn**	11 20 29.0	**+0.3**
FUG	**Fuego 3**	**2.55**	**86**	*e*P	**Pn**	11 20 28.8	**-0.4**
SCX	**San Cristobal**	**2.55**	**18**	*i* P	**Pn**	11 20 30.0	**+0.8**
SCX				*i* S	**Sn**	11 20 59.4	**+0.3**
SCX	**San Cristobal**	**2.55**	**18**	*i* P	**Pn**	11 20 28.0	**-1.2**
SCX				*i* S	**Sn**	11 21 01.4	**+2.3**
HUIG	**Huatulco**	**2.94**	**300**	*i* P	**Pn**	11 20 28.8	**-5.8**
HUIG				*i* S	**Sn**	11 20 59.4	**-9.2**
HUIG	**Huatulco**	**2.94**	**300**	*i* P	**Pn**	11 20 28.8	**-5.8**
HUIG				*i* S	**Sn**	11 20 59.4	**-9.2**
NBG	**Las Nubes**	**3.04**	**84**	*e*P	**Pn**	11 20 37.5	**+1.5**
CMIG	**Matias Romero**	**3.09**	**334**	*i* P	**Pn**	11 20 33.3	**-3.4**
CMIG				Sn	**Sn**	11 21 08.1	**-4.3**
CMIG				*e*S	**Sn**	11 21 09.5	**-2.9**
CMIG				LR	LR	11 21 56.0	
CMIG	**Matias Romero**	**3.09**	**334**	*i* P	**Pn**	11 20 33.3	**-3.3**
	8.7nm,0.3s,baz=146,slow=9.7,SNR=64						
CMIG				Sn	**Sn**	11 21 08.1	**-4.3**
	15nm,0.3s,baz=130,slow=14,SNR=7.2						
CMIG				LR	LR	11 21 56.0	
	comp=Z,265nm,19.6s,baz=149,slow=42						
CMIG	**Matias Romero**	**3.09**	**334**	*i* P	**Pn**	11 20 33.3	**-3.4**
CMIG				*e*S	**Sn**	11 21 09.5	**-2.9**
MRL	**Marmol**	**3.73**	**78**	*e*P	**Pn**	11 20 45.9	**+0.4**
VHO	**Vista Hermosa**	**4.18**	**312**	*i* P	**Pn**	11 20 45.0	**-6.7**
VHO				*i* S	**Sn**	11 21 32.2	**-7.1**
VHO	**Vista Hermosa**	**4.18**	**312**	*i* P	**Pn**	11 20 46.0	**-5.6**
VHO				*i* S	**Sn**	11 21 32.5	**-6.8**
PNIG	**Pinotepa**	**4.95**	**295**	*i* P	**Pn**	11 20 57.5	**-4.8**
PNIG				*i* S	**Sn**	11 21 46.7	**-12**
PNIG	**Pinotepa**	**4.95**	**295**	*i* P	**Pn**	11 20 56.9	**-5.3**
PNIG				*i* S	**Sn**	11 21 46.7	**-12**
TGUH	**Tegucigalpa,Un**	**6.01**	**92**	*e*Pn	**Pn**	11 21 24.6	**+7.8**
TEIG	**Tepich**	**7.70**	**39**	*e*Pn	**Pn**	11 21 39.8	**-0.2**
JCT	**Junction City**	**17.12**	**341**	*e*Pn	**Pn**	11 23 46.2	**-0.8**
	8.2nm,0.9s						
628A	**Black Gap, Mar**	**17.44**	**332**	⇑P	**Pn**	11 23 50.8	**-0.1**
	baz=17,SNR=7.3						
BRAL	**Brewton**	**17.64**	**18**	*e*Pn	**Pn**	11 24 00.2	**+6.8**
	298nm,2.0s						
627A	**Terlingua Ranc**	**17.65**	**330**	⇓P	**Pn**	11 23 53.9	**+0.4**
	baz=17,SNR=15						
TXAR	**Lajitas Array**	**17.68**	**329**	P	**Pn**	11 23 54.1	**+0.2**
	0.1nm,0.3s,baz=151,slow=12,SNR=14						
TXAR				LR	LR	11 31 03.9	
	comp=Z,34nm,19.1s,baz=0.0,slow=38						
528A	**Cox Ranch, San**	**17.97**	**333**	⇓P	**Pn**	11 23 57.7	**+0.3**
	baz=17						
626A	**Big Bend Ranch**	**18.10**	**329**	⇑P	**Pn**	11 23 59.9	**+0.9**
	baz=18,SNR=7.9						
527A	**Woodward Ranch**	**18.33**	**331**	⇑P	**Pn**	11 24 02.0	**+0.1**
	baz=18,SNR=16						
428A	**Kincaid Ranch,**	**18.41**	**334**	⇓P	**Pn**	11 24 02.7	**-0.2**
	baz=18,SNR=5.9						
526A	**Mary Lane Ranc**	**18.49**	**330**	⇑P	**Pn**	11 24 04.3	**+0.5**
	baz=18,SNR=7.3						
426A	**McDonald Obser**	**18.97**	**331**	⇑P	**Pn**	11 24 09.1	**-0.4**
	baz=18,SNR=9.0						
328A	**Wristen Ranch,**	**19.04**	**335**	⇑P	**Pn**	11 24 09.4	**-1.0**
	baz=18						
326A	**Caldwell Ranch**	**19.49**	**332**	⇑P	**Pn**	11 24 14.6	**-1.2**
	baz=19						
MIAR	**Mount Ida**	**20.16**	**360**	*e*P	**P**	11 24 19.4	**-2.2**
	18nm,1.4s						
324A	**Moseley Ranch,**	**20.31**	**329**	⇓P	**P**	11 24 23.1	**-0.1**
	baz=20						
MNTX	**Cornudas Mount**	**20.47**	**330**	⇓P	**P**	11 24 25.2	**+0.2**
	baz=20						
224A	**Cornudas Mount**	**20.84**	**330**	⇑P	**P**	11 24 28.9	**-0.2**
	baz=20,SNR=6.6						
Z27A	**Tatum**	**20.90**	**337**	⇓P	**P**	11 24 29.2	**-0.5**
	baz=20						
WMOK	**Wichita Mounta**	**20.91**	**348**	*e*P	**P**	11 24 28.2	**-1.5**
	77nm,2.8s						
125A	**Gardner Draw,**	**20.93**	**333**	P	**P**	11 24 29.5	**-0.5**
	baz=20						
Z26A	**Caprock**	**21.16**	**335**	⇓P	**P**	11 24 32.5	**0.0**
	baz=21,SNR=8.6						
124A	**Stringfield Ra**	**21.33**	**331**	⇑P	**P**	11 24 34.9	**+0.6**
	baz=21,SNR=6.2						
Z25A	**Roswell**	**21.48**	**334**	⇓P	**P**	11 24 35.6	**-0.4**
	baz=21,SNR=5.8						
Y26A	**Elida**	**21.67**	**336**	⇑P	**P**	11 24 38.9	**+0.9**
	baz=21,SNR=5.6						
AMTX	**Amarillo**	**21.79**	**342**	⇑P	**P**	11 24 38.2	**-1.0**
	baz=21						
AMTX	**Amarillo**	**21.79**	**342**	*e*P	**P**	11 24 37.9	**-1.3**
	17nm,1.1s,mb4.4						
Z24A	**Sheeppen Canyo**	**21.81**	**332**	⇑P	**P**	11 24 39.9	**+0.5**
	baz=21,SNR=15						
Y25A	**Mesa, Roswell**	**22.02**	**334**	⇓P	**P**	11 24 41.8	**0.0**
	baz=22						
Z23A	**Rita Site, Whi**	**22.16**	**331**	⇑P	**P**	11 24 43.7	**+0.5**
	baz=22,SNR=7.7						
X26A	**CR and CF Fran**	**22.22**	**337**	⇑P	**P**	11 24 43.4	**-0.4**
	baz=22,SNR=6.8						
220A	**Playas Peak, P**	**22.29**	**324**	⇑P	**P**	11 24 45.7	**+1.1**
	baz=22						
Y24A	**Capitan**	**22.34**	**333**	⇑P	**P**	11 24 45.5	**+0.3**
	baz=22,SNR=6.8						
121A	**Cookes Peak, D**	**22.36**	**327**	⇑P	**P**	11 24 46.8	**+1.4**
	baz=22,SNR=12						
W27A	**Bowe Ranch, En**	**22.41**	**339**	⇓P	**P**	11 24 45.2	**-0.6**
	baz=22,SNR=6.6						
TKL	**Tuckaleechee C**	**22.98**	**21**	LR	LR	11 35 57.2	
	comp=Z,64nm,18.7s,MS3.1,baz=237,slow=42						
W25A	**X Bar L Ranch,**	**23.06**	**337**	⇓P	**P**	11 24 52.1	**-0.7**
	baz=22,SNR=11						
218A	**Dragoon**	**23.22**	**322**	⇓P	**P**	11 24 55.1	**+0.6**
	baz=23						
V26A	**Tequesquite Ra**	**23.32**	**338**	⇑P	**P**	11 24 55.0	**-0.5**
	baz=23,SNR=5.9						
W24A	**Lazy 6 Ranch,**	**23.43**	**335**	⇓P	**P**	11 24 56.2	**-0.3**
	baz=23,SNR=5.8						
LAZ	**Ladron**	**23.52**	**331**	*e*P	**P**	11 24 57.9	**+0.5**
	1.7nm,1.1s,mb3.4						
LAZ				*e*pP		11 25 09.7	
118A	**Homack Ranch,**	**23.65**	**323**	⇓P	**P**	11 24 59.2	**+0.6**
	baz=23,SNR=5.1						
ANMO	**Albuquerque**	**23.66**	**333**	P	**P**	11 24 58.4	**-0.3**
	0.4nm,0.4s,mb3.2,baz=149,slow=12,SNR=2.7						
V25A	**Rancho No Teng**	**23.66**	**337**	⇓P	**P**	11 24 58.8	**0.0**
	baz=23,SNR=12						
Y20A	**Horse Springs,**	**23.74**	**328**	⇑P	**P**	11 25 00.1	**+0.6**
	baz=23,SNR=5.4						
CCM	**Cathedral Cave**	**23.74**	**4**	*e*P	**P**	11 24 55.8	**-3.5**
	6.0nm,0.7s,mb4.1						
V24A	**Rampart Ranch,**	**23.82**	**336**	⇓P	**P**	11 25 00.5	**+0.3**
	baz=23						
U26A	**Atchley Ranch,**	**23.84**	**339**	⇓P	**P**	11 25 00.1	**-0.3**
	baz=23						
X21A	**Alamocita Cree**	**23.87**	**330**	⇓P	**P**	11 25 01.5	**+0.9**
	baz=23,SNR=8.7						
TUC	**Tucson**	**23.90**	**322**	*e*P	**P**	11 25 01.3	**+0.4**
	6.1nm,1.0s,mb4.0						
U25A	**Circle Dot Ran**	**24.09**	**338**	⇓P	**P**	11 25 02.4	**-0.2**
	baz=24,SNR=9.8						
V23A	**Ortiz Mt. (NFS**	**24.21**	**334**	⇑P	**P**	11 25 04.1	**+0.3**
	baz=24,SNR=8.0						
X20A	**Quemado**	**24.30**	**329**	⇑P	**P**	11 25 05.6	**+1.1**
	baz=24,SNR=12						
WCI	**Wyandotte Cave**	**24.66**	**14**	*e*P	**P**	11 25 06.0	**-1.8**
	10.0nm,0.8s,mb4.4						
U23A	**El Rito**	**24.72**	**335**	⇑P	**P**	11 25 08.7	**+0.4**
	baz=24,SNR=8.2						
T25A	**Trinidad**	**24.75**	**339**	⇓P	**P**	11 25 09.3	**+0.7**
	baz=24,SNR=8.1						
W20A	**Ramah**	**24.76**	**330**	⇑P	**P**	11 25 09.3	**+0.5**
	baz=24						
S25A	**Robets Cordova**	**25.22**	**339**	⇑P	**P**	11 25 13.3	**+0.4**
	baz=25,SNR=14						
T22A	**Edith**	**25.60**	**335**	⇓P	**P**	11 25 17.0	**+0.7**
	baz=25						
SDCO	**Great Sand Dun**	**25.68**	**338**	⇑P	**P**	11 25 17.4	**+0.4**
	baz=25,SNR=7.1						
SDCO	**Great Sand Dun**	**25.68**	**338**	*e*P	**P**	11 25 17.9	**+0.8**
	4.9nm,1.1s,mb4.0						
R24A	**Sanders Place,**	**25.97**	**339**	⇓P	**P**	11 25 20.3	**+0.7**
	baz=25,SNR=7.1						
PV01	**Paradox Valley**	**27.25**	**333**	*e*P	**P**	11 25 31.7	**+0.5**
	289nm,1.0s						
SMCO	**Snowmass**	**27.49**	**337**	*e*P	**P**	11 25 33.3	**-0.1**
	5.6nm,1.3s,mb3.9						
ISCO	**Idaho Springs**	**27.55**	**339**	*e*P	**P**	11 25 33.9	**0.0**
	4.1nm,1.0s,mb4.0						
PCRV	**Puerto La Cruz**	**28.46**	**95**	LR	LR	11 36 02.2	
	comp=Z,40nm,21.5s,MS3.0,baz=298,slow=34						
PDAR	**Pinedale Array**	**31.57**	**337**	P	**P**	11 26 09.1	**-0.4**
	0.5nm,0.7s,mb3.4,baz=134,slow=8.5,SNR=6.7						
L14A	**Malta**	**32.50**	**332**	⇓P	**P**	11 26 17.6	**-0.1**
	baz=32						
J17A	**Brown Place, J**	**32.52**	**336**	⇑P	**P**	11 26 18.2	**+0.4**
	baz=32						
H20A	**Greybull**	**32.53**	**340**	⇑P	**P**	11 26 17.8	**-0.1**
	baz=32						
NVAR	**Mina Array Bea**	**32.55**	**322**	P	**P**	11 26 19.2	**+1.0**
	1.7nm,0.8s,mb4.0,baz=135,slow=9.1,SNR=12						
NVAR				PcP	PcP	11 29 03.0	-1.3
	0.2nm,0.5s,baz=123,slow=3.3,SNR=3.2						
REDW	**Red Top Meadow**	**32.58**	**336**	*e*P	**P**	11 26 18.3	**0.0**
	9.4nm,1.3s,mb4.6						
SNOW	**Snow King Moun**	**32.62**	**336**	*e*P	**P**	11 26 19.3	**+0.6**
	5.4nm,0.7s,mb4.6						
SADO	**Sadowa**	**32.72**	**19**	PcP	PcP	11 29 02.9	-1.7
	3.8nm,0.8s,baz=240,slow=8.1,SNR=3.4						
TPAW	**Teton Pass**	**32.72**	**336**	*e*P	**P**	11 26 19.8	**+0.2**
	4.7nm,1.1s,mb4.3						
H18A	**Shoshone NF, C**	**33.26**	**339**	⇑P	**P**	11 26 24.4	**+0.1**
	baz=33						
F20A	**Billings**	**33.75**	**341**	⇓P	**P**	11 26 28.1	**-0.5**
	baz=33						
G18A	**Lazy EL Ranch,**	**33.78**	**339**	⇑P	**P**	11 26 28.5	**-0.3**
	baz=33						
J13A	**Cove Ranch, Pi**	**34.00**	**333**	⇓P	**P**	11 26 30.9	**+0.1**
	baz=34						
F19A	**Roth Farm, Mol**	**34.05**	**341**	⇑P	**P**	11 26 30.5	**-0.6**
	baz=34						
HLID	**Hailey**	**34.24**	**332**	⇓P	**P**	11 26 33.0	**+0.2**
	baz=34						
H15A	**Lima**	**34.34**	**335**	⇑P	**P**	11 26 34.4	**+0.7**
	baz=34						
MCMT	**McKenzie Canyo**	**34.59**	**335**	*e*P	**P**	11 26 37.2	**+1.3**
	2.3nm,0.8s,mb4.2						
H14A	**Leadore**	**34.63**	**335**	⇑P	**P**	11 26 37.2	**+1.0**
	baz=34						
F17A	**Fitzpatrick Pl**	**34.68**	**339**	⇓P	**P**	11 26 37.4	**+0.8**
	baz=34,SNR=8.7						
G15A	**Dillon**	**34.73**	**336**	⇓P	**P**	11 26 37.6	**+0.6**
	baz=34						
I12A	**Atlanta**	**34.74**	**332**	⇓P	**P**	11 26 37.7	**+0.5**
	baz=34						
DLMT	**Dillon**	**34.94**	**336**	*e*P	**P**	11 26 39.8	**+1.0**
	9.5nm,1.4s,mb4.5						
H13A	**Challis**	**34.96**	**334**	⇓P	**P**	11 26 39.6	**+0.6**
	baz=34						
E18A	**Harlowton**	**35.00**	**340**	⇑P	**P**	11 26 39.2	**-0.1**
	baz=34						
H12A	**Diamond D Ranc**	**35.21**	**333**	⇑P	**P**	11 26 41.6	**+0.4**
	baz=35,SNR=7.8						
D17A	**Six Diamond Ra**	**35.77**	**340**	P	**P**	11 26 45.9	**0.0**
	baz=35,SNR=6.8						
HRY	**Holter Researc**	**35.78**	**338**	*e*P	**P**	11 26 46.2	**+0.2**
E15A	**Deer Lodge**	**35.84**	**337**	⇓P	**P**	11 26 46.4	**-0.2**
	baz=35						
J08A	**Circle Bar Ran**	**36.03**	**328**	⇓P	**P**	11 26 48.6	**+0.4**
	baz=36,SNR=6.0						
C17A	**Wharram Farm,**	**36.21**	**340**	⇑P	**P**	11 26 49.7	**0.0**
	baz=36						
F12A	**Elk City**	**36.34**	**334**	P	**P**	11 26 50.8	**-0.1**
	baz=36,SNR=7.0						
E13A	**Victor**	**36.45**	**336**	⇑P	**P**	11 26 51.7	**-0.1**
	baz=36						
C16A	**Fuhringer Ranc**	**36.69**	**339**	⇓P	**P**	11 26 53.5	**-0.3**
	baz=36						
E12A	**Beaver Dam Sad**	**37.00**	**334**	⇑P	**P**	11 26 56.1	**-0.4**
	baz=36						
D13A	**Huson**	**37.09**	**336**	⇑P	**P**	11 26 56.7	**-0.5**
	baz=36						
A17A	**Triple J Farms**	**37.34**	**341**	⇑P	**P**	11 26 58.9	**-0.4**
	baz=37						
F10A	**Beach Ranch, E**	**37.37**	**332**	⇓P	**P**	11 26 59.3	**-0.4**
	baz=37,SNR=7.2						
B15A	**Bradely Ranch,**	**37.41**	**339**	⇑P	**P**	11 26 59.5	**-0.5**
	baz=37						
D12A	**Red Ives Fores**	**37.42**	**335**	⇓P	**P**	11 26 59.2	**-0.8**
	baz=37						
LON	**Longmire**	**40.10**	**330**	*e*P	**P**	11 27 22.2	**-0.3**
	2.6nm,0.8s,mb4.0						
SCHQ	**Schefferville**	**45.45**	**21**	LR	LR	11 47 58.6	
	comp=Z,88nm,21.0s,MS3.7,baz=79,slow=37						
YKA	**Yellowknife Ar**	**50.41**	**347**	P	**P**	11 28 42.3	**-1.7**
	2.8nm,0.7s,mb4.4,baz=152,slow=7.6,SNR=7.0						
ILAR	**Eielson Array**	**62.00**	**337**	P	**P**	11 30 05.3	**-1.4**
	0.9nm,0.8s,mb3.9,baz=136,slow=3.5,SNR=13						
ESDC	**Sonseca Array**	**80.64**	**51**	P	**P**	11 31 58.0	**-1.8**
	0.8nm,0.7s,mb3.7,baz=308,slow=6.0,SNR=5.6						
NOA	**NORSAR Array B**	**84.56**	**28**	P	**P**	11 32 20.0	**+0.3**
	2.3nm,0.8s,mb4.4,baz=292,slow=4.9,SNR=11						
ARCES	**ARCESS Array B**	**86.29**	**18**	P	**P**	11 32 26.4	**-1.8**
	1.5nm,0.7s,mb4.3,baz=288,slow=4.7,SNR=5.5						
HHC	**Hu-ho-hao-te**	**120.42**	**338**	*e*PKP	PKPdf	11 38 42.0	+3.6
HHC				PP	PP	11 40 10.8	+6.9
HHC				PKS		11 42 17.1	
HHC				SKS	SKSdf	11 45 49.3	+1.3
HHC				SKKS	SKKSac	11 46 58.6	-3.7
HHC				AMB	AMB		
	comp=Z,94nm,5.8s						
HHC				LR	LR		
	comp=N,140nm,16.6s,MS4.8						
HHC				LR	LR		
	comp=E,140nm,16.6s,MS4.8						
HHC				LR	LR		
	comp=Z,110nm,17.8s,MS4.5						
WMQ	**Urumqi**	**122.15**	**359**	*e*PKP	PKPdf	11 38 45.3	+3.7
NJ2	**Nanjing**	**124.47**	**327**	*e*PKP	PKPdf	11 38 50.9	+4.5
LZH	**Lanzhou**	**127.28**	**342**	*e*PKP	PKPdf	11 38 56.0	+4.3
CMAR	**Chiang Mai Arr**	**145.22**	**339**	PKPbc	PKPbc	11 39 23.7	-1.1
	comp=Z,2.2nm,0.7s,baz=336,slow=3.1,SNR=13						

*ISK **23** 11:57:51.1,39°.57N×28°.31E,h14km, ML2.2*
*ISCJB **23** 11:57:52.8±0.6,39°.49N±0°.05×28°.09E±0°.06,h28km±5km, Error ellipse: s-maj=10.0km s-min=5.3km az=39.8*
*DDA **23** 11:57:52.5,39°.51N×28°.15E,h7km±3km,Md2.8*
*CSEM **23** 11:57:52.4±0.2,39°.51N×28°.05E,h30km, MD2.8, Error ellipse: s-maj=5.9km s-min=3.6km az=39.0*

ISC 23 11:57:52.9±0.6, 39°.49N±0°.05×28°.09E±0°.06, h27km±5km, n20, σ0s93/33, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALB	**Balikesir**	**0.23**	**314**	*e*PG	**Pb**	**11 57 58.3**	**-0.7**
BALB				*e*SG	**Sb**	**11 58 03.8**	**+0.6**
BALB	**Balikesir**	**0.23**	**314**	*e*Pg	**Pb**	**11 57 58.3**	**-0.7**
BALB				*e*Sg	**Sb**	**11 58 03.8**	**+0.6**
DURS	**Dursunbey**	**0.32**	**69**	*i* P	**Pb**	**11 57 58.7**	**-1.6**
DURS				*i* S	**Sb**	**11 58 06.4**	**+1.1**
DURS	**Dursunbey**	**0.32**	**69**	*i* P	**Pb**	**11 57 58.7**	**-1.6**
DURS				*i* S	**Sb**	**11 58 06.4**	**+1.0**
BALY	**Balya**	**0.45**	**305**	*i* P	**Pb**	**11 58 01.6**	**-0.7**
BALY				*i* S	**Sb**	**11 58 11.2**	**+2.5**
BALY	**Balya**	**0.45**	**305**	*i* P	**Pb**	**11 58 01.5**	**-0.8**
GONE	**Gonen-Balikesi**	**0.64**	**331**	*e*PG	**Pb**	**11 58 04.7**	**-0.8**
GONE				*e*SG	**Sb**	**11 58 14.2**	**+0.1**
GONE	**Gonen-Balikesi**	**0.64**	**331**	*e*Pg	**Pb**	**11 58 04.7**	**-0.8**
GONE				*e*Sg	**Sb**	**11 58 14.2**	**+0.1**
DEMI	**Demirci**	**0.66**	**132**	*i* P	**Pb**	**11 58 05.0**	**-0.7**
DEMI				*i* S	**Sb**	**11 58 14.8**	**+0.3**
DEMI	**Demirci**	**0.66**	**132**	*i* P	**Pb**	**11 58 05.0**	**-0.8**
DEMI				*i* S	**Sb**	**11 58 14.8**	**+0.3**
ULDT	**Uludag**	**1.04**	**50**	*i* P	**Pn**	**11 58 11.3**	**-0.4**
ULDT				*i* S	**Sn**	**11 58 25.9**	**+0.6**
ULDT	**Uludag**	**1.04**	**50**	*i* P	**Pn**	**11 58 11.3**	**-0.4**
ULDT				*i* S	**Sn**	**11 58 26.0**	**+0.7**
KULA	**Kula-Manisa**	**1.07**	**155**	*e*PN	**Pn**	**11 58 12.2**	**+0.1**
KULA	**Kula-Manisa**	**1.07**	**155**	*e*Pn	**Pn**	**11 58 12.2**	**+0.1**
GDZ	**Gediz**	**1.15**	**110**	*i* P	**Pn**	**11 58 13.9**	**+0.7**
GDZ				*i* S	**Sn**	**11 58 28.8**	**+0.7**
GDZ	**Gediz**	**1.15**	**110**	*i* P	**Pn**	**11 58 13.9**	**+0.7**
GDZ				*i* S	**Sn**	**11 58 28.8**	**+0.8**
ARMT	**Armutlu**	**1.23**	**28**	*e*PN	**Pn**	**11 58 12.9**	**-1.5**
ARMT	**Armutlu**	**1.23**	**28**	*e*Pn	**Pn**	**11 58 12.9**	**-1.4**
RKY	**Sarkoy-Tekirda**	**1.39**	**330**	*e*PN	**Pn**	**11 58 17.0**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.39**	**330**	*e*Pn	**Pn**	**11 58 17.0**	**+0.5**

*ISCJB **23** 12:00:58.0±0.9, 72°.77N±0°.06×5°.8E±0°.2, h10km, mb3.2/2, MS3.0/8, Error ellipse: s-maj=10.6km s-min=8.8km az=152.2*
*IDC **23** 12:00:58.3±1.5, 72°.70N×5°.23E, h0km, mb3.3/2, mb1 3.5/7, mb1mx3.3/27, mbtmp3.4/7, ML3.2/5, MS3.1/12, Ms1 3.0/12, ms1mx2.9/27, Error ellipse: s-maj=25.9km s-min=15.7km az=70.0*
*NAO **23** 12:00:58.0±2.9, 72°.71N×5°.10E, ML2.9*
*NEIC **23** 12:00:59.5±0.8, 72°.79N×5°.42E, h10km, ML2.7(BER), Error ellipse: s-maj=16.3km s-min=6.9km az=83.0*
*BER **23** 12:01:00.9±4.0, 72°.80N×4°.75E, h21km±55km, MD2.8, ML2.6, ML2.9(NAO)*
*CSEM **23** 12:01:00.5±0.4, 72°.80N×5°.46E, h20km, ML2.6, Error ellipse: s-maj=12.6km s-min=6.4km az=82.0*

ISC 23 12:00:59.8±0.8, 72°.82N±0°.05×5°.6E±0°.2, h10km, n37, σ0s80/39, mb3.2/2, MS3.0/8, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMIC	**Jan Mayen**	**4.77**	**254**	LR	LR	12 03 31.7	
	comp=Z,111nm,19.1s,baz=65,slow=33						
LOF	**Lofoten**	**5.40**	**147**	*e*P	**Pn**	**12 02 19.6**	**-0.6**
LOF				*e*S	**Sn**	**12 03 16.6**	**-5.8**
LOF				AML	AML	12 03 23.7	
	comp=Z,11nm,0.6s						
LOF	**Lofoten**	**5.40**	**147**	*e*P	**Pn**	**12 02 19.6**	**-0.6**
LOF				*e*S	**Sn**	**12 03 16.2**	**-6.1**
LOF	**Lofoten**	**5.40**	**147**	*e*P	**Pn**	**12 02 19.6**	**-0.6**
	SNR=53						
SPA0	**Spitsbergen Ar**	**6.02**	**22**	Pn	**Pn**	**12 02 28.5**	**-0.1**
SPITS	**Spitsbergen Ar**	**6.02**	**22**	Pn	**Pn**	**12 02 28.2**	**-0.4**
	baz=185,slow=20,SNR=4.9						
SPITS				Sn	**Sn**	**12 03 36.3**	**-1.1**
	baz=143,slow=29,SNR=2.2						
SPITS	**Spitsbergen Ar**	**6.02**	**22**	Pn	**Pn**	**12 02 28.2**	**-0.4**
SPITS				Sn	**Sn**	**12 03 36.3**	**-1.1**
KONS	**Konsvik**	**6.86**	**154**	*e*P	**Pn**	**12 02 40.1**	**-0.1**
KONS				*e*S	**Sn**	**12 03 50.6**	**-7.5**
KONS				AML	AML	12 03 56.8	
	comp=Z,11nm,0.3s						
STOK	**Stokkvaagen**	**7.00**	**155**	*e*S	**Sn**	**12 03 54.1**	**-7.6**
FLOS	**Flostrand**	**7.05**	**154**	*e*P	**Pn**	**12 02 42.8**	**0.0**
FLOS				AML	AML	12 04 01.2	
	comp=Z,11nm,0.3s						
ARA0	**ARCESS Array S**	**7.21**	**107**	Pn	**Pn**	**12 02 46.6**	**+1.7**
ARA0				Sn	**Sn**	**12 04 06.6**	**-0.1**
ARCES	**ARCESS Array B**	**7.21**	**107**	Pn	**Pn**	**12 02 46.1**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=307,slow=12,SNR=9.2						
ARCES				Sn	**Sn**	**12 04 06.4**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=306,slow=23,SNR=2.7						
ARCES				LR	LR	12 06 01.6	
	comp=Z,153nm,20.1s,baz=268,slow=42						
ARCES	**ARCESS Array B**	**7.21**	**107**	Pn	**Pn**	**12 02 46.2**	**+1.3**
ARCES				Sn	**Sn**	**12 04 06.4**	**-0.3**
MOR8	**Moi Rana**	**7.35**	**151**	*e*P	**Pn**	**12 02 46.7**	**-0.3**
MOR8				*e*S	**Sn**	**12 04 03.5**	**-6.8**
MOR8				AML	AML	12 04 10.5	
	comp=Z,10nm,0.5s						
MOR8	**Moi Rana**	**7.35**	**151**	*e*P	**Pn**	**12 02 46.7**	**-0.3**
MOR8				*e*S	**Sn**	**12 04 03.5**	**-6.8**
MOR8	**Moi Rana**	**7.35**	**151**	*e*P	**Pn**	**12 02 46.7**	**-0.2**
	SNR=51						
NB2	**NORSAR Subarra**	**12.02**	**167**	Pn	**Pn**	**12 03 51.1**	**+0.3**
NOA	**NORSAR Array B**	**12.02**	**167**	Pn	**Pn**	**12 03 50.5**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=349,slow=12,SNR=3.3						
NOA	**NORSAR Array B**	**12.02**	**167**	Pn	**Pn**	**12 03 50.5**	**-0.3**
HFS	**Hagfors**	**13.12**	**162**	Pn	**Pn**	**12 04 04.7**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=353,slow=11,SNR=22						
HFS		

ellipse: s-maj=5.2km s-min=3.8km az=1.0
*DDA **23** 12:15:54.0, 38.47N× 39.15E± 0.03, **h11**km± 6km,*
n19, σ 0.73/38, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.14**	**286**	*i* P	**Pg**	**12 15 57.9**	**+0.3**
ELZG				*i* S	**Sg**	**12 16 00.6**	**+0.6**
ELZG	**Elazig**	**0.14**	**286**	*i* P	**Pg**	**12 15 57.9**	**+0.2**
ELZG				*i* S	**Sg**	**12 16 00.6**	**+0.7**
SVRC	**Sivrice-ELAZID**	**0.15**	**124**	*e*Pg	**Pg**	**12 15 58.0**	**+0.2**
SVRC				*e*Sg	**Sg**	**12 16 00.0**	**-0.1**
SVRC	**Sivrice-ELAZID**	**0.15**	**124**	*e*Pg	**Pg**	**12 15 58.0**	**+0.2**
SVRC				*e*Sg	**Sg**	**12 16 00.0**	**-0.1**
PTK	**Pertek**	**0.47**	**23**	*e*Pg	**Pg**	**12 16 02.6**	**-1.1**
PTK				*e*SG	**Sg**	**12 16 11.4**	**+1.4**
PTK	**Pertek**	**0.47**	**23**	*e*Pg	**Pg**	**12 16 02.6**	**-1.1**
PTK				*e*Sg	**Sg**	**12 16 11.4**	**+1.4**
MYA	**Malataya**	**0.59**	**257**	*e*PG	**Pg**	**12 16 05.1**	**-0.8**
MYA				*e*SG	**Sg**	**12 16 13.7**	**+0.2**
MYA	**Malataya**	**0.59**	**257**	*e*Pg	**Pg**	**12 16 05.1**	**-0.8**
MYA				*e*Sg	**Sg**	**12 16 13.7**	**+0.1**
MALT	**Malatya**	**0.59**	**256**	*e*PG	**Pg**	**12 16 05.3**	**-0.5**
MALT				*e*SG	**Sg**	**12 16 13.7**	**+0.1**
MALT	**Malatya**	**0.59**	**256**	*e*Pg	**Pg**	**12 16 05.3**	**-0.6**
MALT				*e*Sg	**Sg**	**12 16 13.7**	**+0.1**
DIYA	**Diyarbakir**	**0.93**	**125**	*i* P	**Pg**	**12 16 12.8**	**+0.4**
DIYA				*i* S	**Sg**	**12 16 25.7**	**+1.2**
DIYA	**Diyarbakir**	**0.93**	**125**	*i* P	**Pg**	**12 16 12.9**	**+0.5**
DIYA				*i* S	**Sg**	**12 16 25.7**	**+1.1**
KEMA	**Kemaliye**	**0.96**	**328**	*i* P	**Pg**	**12 16 12.3**	**-0.6**
KEMA				*i* S	**Sg**	**12 16 25.8**	**+0.3**
KEMA	**Kemaliye**	**0.96**	**328**	*i* P	**Pg**	**12 16 12.3**	**-0.6**
KEMA				*i* S	**Sg**	**12 16 25.8**	**+0.4**
AKCD	**Akcadag**	**0.98**	**261**	*i* P	**Pg**	**12 16 12.5**	**-0.9**
AKCD				*i* S	**Sg**	**12 16 26.6**	**+0.5**
AKCD	**Akcadag**	**0.98**	**261**	*i* P	**Pg**	**12 16 12.5**	**-0.8**
AKCD				*i* S	**Sg**	**12 16 26.6**	**+0.5**
GZT	**Gaziantep**	**1.67**	**229**	*i* P	**Pg**	**12 16 26.2**	**-0.3**
GZT				*i* S	**Sg**	**12 16 49.1**	**+0.9**
MARD	**Mardin**	**1.72**	**131**	*i* P	**Pg**	**12 16 26.2**	**-1.3**
MARD				*i* S	**Sn**	**12 16 47.4**	**+1.0**
BEST	**Besiri**	**1.76**	**108**	*i* P	**Pg**	**12 16 27.5**	**-0.8**
BEST				*i* S	**Sg**	**12 16 50.8**	**-0.4**

*ISCJB **23** 12:23:05.6± 1.3, 23.93N× 0.03× 122.83E± 0.02,*
h12km± 10km, Error ellipse: s-maj=5.9km s-min=2.9km
az=173.7
*TAP **23** 12:23:05.5, 23.88N× 122.89E, h90km± 2km, ML3.1, C*
*JMA **23** 12:23:06.6± 0.3, 23.98N× 122.85E, h23km, M2.7*
ISC 23 12:23:05.7± 0.8, **23.95N**± 0.04× **122.83E**± 0.02, **h12**km± 6km,
n26, σ 0.87/43, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.53**	**18**	P	**Pg**	**12 23 16.6**	**+0.4**
YOJ				S	**Sg**	**12 23 23.5**	**+0.2**
HATJ	**Hateruma jima**	**0.90**	**83**	P	**Pg**	**12 23 22.9**	**-0.2**
HATJ				S	**Sg**	**12 23 34.9**	**+0.1**
IRIF	**Iriomote-Funau**	**0.91**	**65**	P	**Pg**	**12 23 22.4**	**-0.8**
IRIF				*e*S	**Sg**	**12 23 35.5**	**+0.4**
ENA	**Nanau** baz=303	**1.10**	**296**	*e*P	**Pb**	**12 23 27.1**	**+0.4**
ENA				*e*S	**Sb**	**12 23 40.8**	**-0.3**
TWC	**Suao** baz=302	**1.11**	**306**	P	**Pb**	**12 23 27.1**	**+0.3**
TWC				*e*S	**Sb**	**12 23 39.4**	**-1.9**
JKRS	**Kuro-shima**	**1.11**	**75**	P	**Pb**	**12 23 26.3**	**-0.6**
JKRS				*e*S	**Sb**	**12 23 41.3**	**-0.1**
JIJ	**Ishigaki jima**	**1.27**	**71**	P	**Pn**	**12 23 28.4**	**-0.8**
JIJ				S	**Sb**	**12 23 44.9**	**-0.9**
ESL	**Shilin** baz=267	**1.29**	**264**	*e*P	**Pn**	**12 23 27.5**	**-2.1**
TWB1	**Santiao Chiao** baz=324	**1.30**	**324**	*e*P	**Pn**	**12 23 29.4**	**-0.3**
TWB1				*e*S	**Sb**	**12 23 46.8**	**0.0**
TWE	**Neicheng** baz=316	**1.31**	**306**	P	**Pn**	**12 23 30.5**	**+0.6**
TWE				*e*S	**Sb**	**12 23 47.0**	**0.0**
ENTT	**Nioudou** baz=302	**1.34**	**301**	P	**Pn**	**12 23 31.0**	**+0.7**
ENTT				*e*S	**Sb**	**12 23 48.0**	**0.0**
NNS	**Nan Shan** baz=298	**1.42**	**290**	*e*P	**Pn**	**12 23 32.2**	**+0.9**
NNS				*e*S	**Sn**	**12 23 49.4**	**-0.5**
WHF	**Hehuan Shan** baz=280	**1.45**	**278**	*e*P	**Pn**	**12 23 30.9**	**-0.7**
WHF				*e*S	**Sn**	**12 23 51.2**	**+0.6**
EHY	**Hungye** baz=253	**1.45**	**253**	*e*P	**Pn**	**12 23 30.8**	**-1.0**
NWF	**Wu-fen Shan** baz=312	**1.47**	**320**	P	**Pn**	**12 23 32.0**	**0.0**
NWF				*e*S	**Sn**	**12 23 50.9**	**-0.3**
NSK	**Sanguang** baz=293	**1.53**	**299**	*e*P	**Pn**	**12 23 34.0**	**+1.2**
TWF1	**Yuli** baz=245	**1.53**	**247**	*e*P	**Pn**	**12 23 31.4**	**-1.4**
TWT	**Tachien** baz=283	**1.54**	**282**	*e*P	**Pn**	**12 23 34.2**	**+1.2**
YUS	**Yu-Shan** baz=253	**1.78**	**255**	*e*P	**Pn**	**12 23 36.7**	**+0.3**
TYC	**Yuchr** baz=271	**1.81**	**269**	*e*P	**Pn**	**12 23 36.1**	**-0.6**
ELDTW	**Lidau** baz=254	**1.83**	**246**	*e*P	**Pn**	**12 23 34.9**	**-2.1**
JTJ	**Tarama**	**1.84**	**68**	P	**Pn**	**12 23 38.5**	**+1.4**
JTJ				*e*S	**Sn**	**12 24 00.9**	**+0.6**
ALS	**Alishan** baz=265	**1.91**	**257**	*e*P	**Pn**	**12 23 38.3**	**+0.2**
ALS				*e*S	**Sn**	**12 24 01.3**	**-0.7**
CHN4	**Tsaushan** baz=256	**2.14**	**254**	*e*P	**Pn**	**12 23 43.4**	**+2.2**
CHN4				*e*S	**Sn**	**12 24 08.5**	**+0.8**
WTP	**Ta-pu** baz=253	**2.15**	**251**	*e*P	**Pn**	**12 23 42.5**	**+1.1**
CHN1	**Nanshi** baz=252	**2.25**	**251**	*e*P	**Pn**	**12 23 43.2**	**+0.4**
CHN1				*e*S	**Sn**	**12 24 11.0**	**+0.6**

*ISK **23** 12:35:31.4, 38.72N× 38.16E, h5km, MD2.9*
*CSEM **23** 12:35:32.6± 0.3, 38.70N× 38.14E, h12km, MD2.9, Error*
ellipse: s-maj=6.1km s-min=4.4km az=82.0
*ISCJB **23** 12:35:33.0± 0.8, 38.67N± 0.05× 38.17E± 0.07, h31km± 11km,*
Error ellipse: s-maj=9.0km s-min=7.0km az=30.7
*DDA **23** 12:35:33.5, 38.73N× 38.18E, h7km± 6km, Md2.8*
ISC 23 12:35:33.2± 0.8, **38.69N**± 0.04× **38.16E**± 0.07, **h20**km± 25km,
n14, σ 1.08/26, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	**Malataya**	**0.41**	**150**	*e*PG	**Pb**	**12 35 40.7**	**-1.2**
MYA				*e*SG	**Sb**	**12 35 46.9**	**-0.8**
MYA	**Malataya**	**0.41**	**150**	*e*Pg	**Pb**	**12 35 40.7**	**-1.2**
MYA				*e*Sg	**Sb**	**12 35 46.9**	**-0.8**
MALT	**Malatya**	**0.43**	**151**	*e*PG	**Pb**	**12 35 41.1**	**-0.9**
MALT				*e*SG	**Sb**	**12 35 48.2**	**+0.1**
MALT	**Malatya**	**0.43**	**151**	*e*Pg	**Pb**	**12 35 41.1**	**-1.0**
MALT				*e*Sg	**Sb**	**12 35 48.2**	**+0.1**
AKCD	**Akcadag**	**0.43**	**206**	*i* P	**Pb**	**12 35 42.0**	**-0.2**
AKCD				*i* S	**Sb**	**12 35 51.1**	**+2.8**
AKCD	**Akcadag**	**0.43**	**206**	*i* P	**Pb**	**12 35 42.0**	**-0.2**
AKCD				*i* S	**Sb**	**12 35 51.1**	**+2.8**
KEMA	**Kemaliye**	**0.64**	**24**	*i* P	**Pb**	**12 35 44.3**	**-1.3**
KEMA				*i* S	**Sb**	**12 35 55.0**	**+0.9**
KEMA	**Kemaliye**	**0.64**	**24**	*i* P	**Pb**	**12 35 44.3**	**-1.3**
KEMA				*i* S	**Sb**	**12 35 55.0**	**+0.9**
ELZG	**Elazig**	**0.67**	**106**	*i* P	**Pb**	**12 35 46.4**	**+0.2**
ELZG				*i* S	**Sb**	**12 35 56.6**	**+1.6**
ELZG	**Elazig**	**0.67**	**106**	*i* P	**Pb**	**12 35 46.4**	**+0.2**
ELZG				*i* S	**Sb**	**12 35 56.7**	**+1.6**
PTK	**Pertek**	**0.98**	**78**	*e*PG	**Pb**	**12 35 50.3**	**-1.3**
PTK				*e*SG	**Sb**	**12 36 04.9**	**+0.9**
PTK	**Pertek**	**0.98**	**78**	*e*Pg	**Pb**	**12 35 50.3**	**-1.2**
PTK				*e*Sg	**Sb**	**12 36 04.9**	**+0.9**
SVSK	**Karacayir**	**1.52**	**324**	*e*PN	**Pn**	**12 35 59.6**	**+0.2**
SVSK	**Karacayir**	**1.52**	**324**	*e*Pn	**Pn**	**12 35 59.6**	**+0.3**

*ATH **23** 12:43:20.7, 37.10N× 26.42E, h74km± 1km*
*DDA **23** 12:43:20.0, 36.94N× 26.45E, h7km, 3km, Md2.6*
*NEIC **23** 12:43:20.7, 37.10N× 26.42E, h74km, After ATH.*
*ISCJB **23** 12:43:20.7± 0.6, 36.93N± 0.03× 26.51E± 0.03, h6km± 5km,*
Error ellipse: s-maj=4.8km s-min=4.1km az=141.4
*ISK **23** 12:43:21.8, 36.98N× 26.62E, h15km, ML2.3*
*CSEM **23** 12:43:21.3± 0.2, 36.95N× 26.52E, h10km, ML2.3, Error*
ellipse: s-maj=4.4km s-min=3.2km az=141.0
ISC 23 12:43:21.5± 0.6, **36.94N**± 0.03× **26.52E**± 0.03, **h10**km± 5km,
n46, σ 0.82/76, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.65**	**79**	*e*PG	**Pg**	**12 43 33.5**	**-0.5**
BODT				*e*SG	**Sg**	**12 43 41.6**	**-0.9**
BODT	**Bodrum**	**0.65**	**79**	*e*Pg	**Pg**	**12 43 33.6**	**-0.4**
BODT				*e*Sg	**Sg**	**12 43 41.6**	**-0.9**
BDRM	**Kayabasi**	**0.75**	**80**	*i* P	**Pg**	**12 43 35.6**	**-0.4**
BDRM				*i* S	**Sg**	**12 43 47.3**	**+1.4**
BDRM	**Kayabasi**	**0.75**	**80**	*i* P	**Pg**	**12 43 35.6**	**-0.4**
BDRM				*i* S	**Sg**	**12 43 47.3**	**+1.4**
APE	**Apeiranthos**	**0.80**	**279**	*e*PG	**Pg**	**12 43 39.0**	**+2.1**
APE	**Apeiranthos**	**0.80**	**279**	*e*P	**Pg**	**12 43 36.8**	**-0.2**
APE				*e*S	**Sg**	**12 43 48.5**	**+1.1**
APE	**Apeiranthos**	**0.80**	**279**	*e*P	**Pg**	**12 43 36.8**	**-0.2**
APE				*e*S	**Sg**	**12 43 48.5**	**+1.1**
APE	**Apeiranthos**	**0.80**	**279**	*e*P	**Pg**	**12 43 36.8**	**-0.2**
APE	**Apeiranthos**	**0.80**	**279**	*e*Pg	**Pg**	**12 43 39.0**	**+2.0**
SMG	**Samos**	**0.81**	**18**	*e*P	**Pg**	**12 43 36.5**	**-0.6**
SMG				*e*S	**Sg**	**12 43 47.9**	**+0.3**
SMG	**Samos**	**0.81**	**18**	*e*P	**Pg**	**12 43 36.5**	**-0.6**
SMG				*e*S	**Sg**	**12 43 47.9**	**+0.3**
SMG	**Samos**	**0.81**	**18**	*e*P	**Pg**	**12 43 36.5**	**-0.6**
DAT	**Datca**	**0.88**	**104**	*e*PG	**Pg**	**12 43 38.1**	**-0.3**
DAT				*e*SG	**Sg**	**12 43 49.5**	**-0.4**
DAT	**Datca**	**0.88**	**104**	*e*Pg	**Pg**	**12 43 38.1**	**-0.3**
DAT				*e*Sg	**Sg**	**12 43 49.5**	**-0.4**
GCAM	**G?zelcaml?**	**0.95**	**37**	*i* P	**Pg**	**12 43 39.7**	**-0.1**
GCAM				*i* S	**Sg**	**12 43 52.9**	**+0.8**
GCAM	**G?zelcaml?**	**0.95**	**37**	*i* P	**Pg**	**12 43 39.7**	**-0.1**
GCAM				*i* S	**Sg**	**12 43 52.9**	**+0.8**
AYDN	**Tasoluk**	**1.30**	**56**	*i* P	**Pn**	**12 43 45.7**	**-0.1**
AYDN				*i* S	**Sb**	**12 44 02.9**	**+0.1**
AYDN	**Tasoluk**	**1.30**	**56**	*i* P	**Pn**	**12 43 45.7**	**-0.1**
AYDN				*i* S	**Sb**	**12 44 02.9**	**+0.1**
URLA	**Izmir**	**1.42**	**2**	*i* P	**Pn**	**12 43 46.2**	**-1.1**
URLA				*i* S	**Sn**	**12 44 07.2**	**+1.2**
URLA	**Izmir**	**1.42**	**2**	*i* P	**Pn**	**12 43 46.2**	**-1.1**
URLA				*i* S	**Sn**	**12 44 07.2**	**+1.2**
ARG	**Arkhangelos**	**1.48**	**119**	*e*P	**Pn**	**12 43 48.7**	**+0.4**
ARG	**Arkhangelos**	**1.48**	**119**	*e*P	**Pn**	**12 43 48.7**	**+0.4**
ARG	**Arkhangelos**	**1.48**	**119**	*e*P	**Pn**	**12 43 48.7**	**+0.4**
KARP	**Karpathos**	**1.49**	**159**	*e*P	**Pn**	**12 43 49.1**	**+0.8**
KARP				*e*S	**Sn**	**12 44 09.8**	**+2.0**
KARP	**Karpathos**	**1.49**	**159**	*e*P	**Pn**	**12 43 49.1**	**+0.8**
KARP				*e*S	**Sn**	**12 44 09.8**	**+2.0**
KARP	**Karpathos**	**1.49**	**159**	*e*P	**Pn**	**12 43 49.1**	**+0.8**
KARP				*e*S	**Sn**	**12 44 09.8**	**+2.0**
BLCB	**Balcova**	**1.50**	**16**	*e*PN	**Pn**	**12 43 48.2**	**-0.2**
BLCB	**Balcova**	**1.50**	**16**	*e*Pn	**Pn**	**12 43 48.2**	**-0.3**
IZM	**Izmir**	**1.57**	**22**	*e*PN	**Pn**	**12 43 48.5**	**-1.0**
IZM	**Izmir**	**1.57**	**22**	*e*Pn	**Pn**	**12 43 48.5**	**-0.9**
TURN	**Turunc**	**1.67**	**92**	*i* P	**Pn**	**12 43 46.9**	**-3.9**
TURN				*i* S	**Sn**	**12 44 04.7**	**-7.6**
TURN	**Turunc**	**1.67**	**92**	*i* P	**Pn**	**12 43 46.9**	**-4.0**
TURN				*i* S	**Sn**	**12 44 04.7**	**-7.7**
NPS	**Neapolis**	**1.83**	**204**	*e*P	**Pn**	**12 43 52.6**	**-0.4**
NPS				*e*S	**Sn**	**12 44 15.8**	**-0.4**
NPS	**Neapolis**	**1.83**	**204**	*e*P	**Pn**	**12 43 52.6**	**-0.4**
NPS				*e*S	**Sn**	**12 44 15.8**	**-0.4**
NPS	**Neapolis**	**1.83**	**204**	*e*P	**Pn**	**12 43 52.6**	**-0.4**
NPS				*e*S	**Sn**	**12 44 15.8**	**-0.4**
ZKR	**Zakros**	**1.84**	**188**	*e*P	**Pn**	**12 43 53.5**	**+0.3**
ZKR				*e*S	**Sn**	**12 44 17.3**	**+0.8**
ZKR	**Zakros**	**1.84**	**188**	*e*P	**Pn**	**12 43 53.5**	**+0.3**
ZKR				*e*S	**Sn**	**12 44 17.3**	**+0.8**
ZKR	**Zakros**	**1.84**	**188**	*e*P	**Pn**	**12 43 53.5**	**+0.3**
ZKR				*e*S	**Sn**	**12 44 17.3**	**+0.8**
LAST	**Lasithi**	**1.97**	**206**	*e*P	**Pn**	**12 43 54.7**	**-0.2**
LAST	**Lasithi**	**1.97**	**206**	*e*P	**Pn**	**12 43 54.7**	**-0.2**
LAST	**Lasithi**	**1.97**	**206**	*e*P	**Pn**	**12 43 54.7**	**-0.2**
IDI	**Anoyia**	**2.11**	**219**	*e*P	**Pn**	**12 43 56.1**	**-0.8**
IDI				*e*S	**Sn**	**12 44 22.6**	**-0.6**
IDI	**Anoyia**	**2.11**	**219**	*e*P	**Pn**	**12 43 56.1**	**-0.8**
IDI				*e*S	**Sn**	**12 44 22.6**	**-0.6**
IDI	**Anoyia**	**2.11**	**219**	*e*P	**Pn**	**12 43 56.1**	**-0.8**
IDI				*e*S	**Sn**	**12 44 22.6**	**-0.6**
KARN	**Karanos**	**2.61**	**235**	*e*P	**Pn**	**12 44 02.5**	**-1.2**
KARN	**Karanos**	**2.61**	**235**	*e*P	**Pn**	**12 44 02.5**	**-1.2**

*NEIC **23** 12:46:21.1, 36.57N× 27.10E, h36km, MD2.9(ATH), After*
ATH.
*CSEM **23** 12:46:21.1, 36.57N× 27.10E, h36km, MD2.9, After ATH*
ATH 23 12:46:21.1, 36.57N× 27.10E, h36km± 6km, **MD2.9**/6,
Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.90**	**113**	*e*Pn	Pn	12 46 38.5	+1.3
ARG	**Arkhangelos**	**0.90**	**113**	*e*PN	Pn	12 46 38.5	+1.3
ARG	**Arkhangelos**	**0.90**	**113**	*e*Pn	Pn	12 46 38.5	+1.3
KARP	**Karpathos**	**1.02**	**177**	*e*Pn	Pn	12 46 40.8	+1.9
KARP	**Karpathos**	**1.02**	**177**	*e*PN	Pn	12 46 40.8	+1.9
KARP	**Karpathos**	**1.02**	**177**	*e*Pn	Pn	12 46 40.8	+1.9
SMG	**Samos**	**1.16**	**350**	*e*Pn	Pn	12 46 42.7	+1.9
SMG				*e*Sn	Sn	12 46 58.3	+3.0
SMG	**Samos**	**1.16**	**350**	*e*PN	Pn	12 46 42.7	+1.9
SMG				*e*SN	Sn	12 46 58.3	+3.0
SMG	**Samos**	**1.16**	**350**	*e*Pn	Pn	12 46 42.7	+1.9
SMG				*e*Sn	Sn	12 46 58.3	+3.0
APE	**Apeiranthos**	**1.35**	**292**	*e*Pn	Pn	12 46 45.5	+2.0
APE				*e*Sn	Sn	12 47 03.0	+2.8
APE	**Apeiranthos**	**1.35**	**292**	*e*PN	Pn	12 46 45.5	+2.0
APE				*e*SN	Sn	12 47 03.0	+2.8
APE	**Apeiranthos**	**1.35**	**292**	*e*Pn	Pn	12 46 45.5	+2.0
APE				*e*Sn	Sn	12 47 03.0	+2.8
NPS	**Neapolis**	**1.78**	**223**	*e*Pn	Pn	12 46 51.0	+1.7
NPS	**Neapolis**	**1.78**	**223**	*e*PN	Pn	12 46 51.0	+1.7
NPS	**Neapolis**	**1.78**	**223**	*e*Pn	Pn	12 46 51.0	+1.7
IDI	**Anoyia**	**2.20**	**235**	*e*Pn	Pn	12 46 57.0	+1.8
IDI	**Anoyia**	**2.20**	**235**	*e*PN	Pn	12 46 57.0	+1.8
IDI	**Anoyia**	**2.20**	**235**	*e*Pn	Pn	12 46 57.0	+1.8
GVD	**Gavdhos**	**3.00**	**236**	*e*Pn	Pn	12 47 08.2	+2.1
GVD	**Gavdhos**	**3.00**	**236**	*e*PN	Pn	12 47 08.2	+2.1
GVD	**Gavdhos**	**3.00**	**236**	*e*Pn	Pn	12 47 08.2	+2.1

DDA 23 12:46:38.2, 37.22N× 27.14E, h7km± 4km, **Md2.7, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.29**	**123**	*i* P	Pg	12 46 43.9	+0.1
BDRM				*i* S	Sg	12 46 55.5	+7.9
GCAM	**G?zelcaml?**	**0.48**	**9**	*i* P	Pg	12 46 47.6	0.0
GCAM				*i* S	Sg	12 47 01.0	+7.0
AYDN	**Tasoluk**	**0.73**	**53**	*i* P	Pg	12 46 53.2	+0.9
AYDN				*i* S	Sg	12 47 11.1	+9.2

*IDC **23** 12:48:08.6± 1.1, 17.52S× 178.43W, h532km± 14km,*
mb3.6/14, mb1 3.7/15, mb1mx3.6/22, mbtmp3.6/15, Error
ellipse: s-maj=13.5km s-min=9.4km az=140.0
*ISCJB **23** 12:48:09.7± 0.7, 17.50S± 0.09× 178.46W± 0.08,*
h565km± 10km, mb4.3/22, Error ellipse: s-maj=16.1km
s-min=9.3km az=148.3
*NEIC **23** 12:48:09.8± 0.7, 17.52S× 178.39W, h553km± 9km, mb4.5/7,*
Error ellipse: s-maj=16.6km s-min=9.7km az=154.0
ISC 23 12:48:09.9± 0.7, **17.49S**± 0.09× **178.40W**± 0.08,
h553km± 9km, **n36**, σ 1.00/37, **mb4.3**/22, **1D, Fiji Islands**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.39**	**265**	*e*P	**P**	**12 49 29.6**	**+1.9**
AFI	**Afiamalu**	**7.31**	**62**	P	**P**	**12 49 58.7**	**-2.4**
AFI				S	**S**	**12 51 31.8**	**-0.2**
AFI	**Afiamalu** 9.3nm,0.3s,baz=231,slow=14,SNR=11	**7.31**	**62**	P	**P**	**12 49 58.7**	**-2.4**
AFI	0.6nm,0.3s,baz=73,slow=20,SNR=2.1			S	**S**	**12 51 31.8**	**-0.2**
URZ	**Urewera** 5.0nm,0.5s,mb4.4,baz=333,slow=14,SNR=1.8	**21.06**	**190**	P	**P**	**12 52 14.3**	**-1.0**
URZ	5.2nm,0.9s,baz=248,slow=19,SNR=2.4			S	**S**	**12 55 34.2**	**+0.7**
PPT	**Papeete** 9.7nm,0.5s,mb4.7,baz=333,slow=6.8,SNR=3.7	**27.48**	**95**	P	**P**	**12 53 13.5**	**+1.0**
RPZ	**Rata Peaks** 8.1nm,0.9s,mb4.4,baz=54,slow=19,SNR=4.2	**27.62**	**197**	P	**P**	**12 53 11.5**	**-1.9**
EIDS	**Eidsvold** 8.6nm,0.9s,mb4.4	**29.42**	**249**	*e*P	**P**	**12 53 28.5**	**-0.8**
ARMA	**Armidale**	**30.16**	**239**	*e*P	**P**	**12 53 36.4**	**+0.8**
ARMA	**Armidale** 5.2nm,0.5s,mb4.3	**30.16**	**239**	*e*P	**P**	**12 53 36.8**	**+1.2**
CTA	**Charters Tower** 5.0nm,0.6s,mb4.2	**33.52**	**260**	*e*P	**P**	**12 54 03.7**	**-0.6**
CTA	**Charters Tower**	**33.52**	**260**	P	**P**	**12 54 04.0**	**-0.4**
CTA	**Charters Tower** 7.6nm,0.6s,mb4.4,baz=105,slow=11,SNR=12	**33.52**	**260**	P	**P**	**12 54 04.0**	**-0.4**
CTAO	**Charters Tower** 7.7nm,0.7s,mb4.3	**33.52**	**260**	*e*P	**P**	**12 54 03.8**	**-0.5**
CNB	**Canberra Magne**	**33.69**	**232**	*e*P	**P**	**12 54 06.5**	**+1.0**
CAN	**Canberra** 8.8nm,1.0s,mb4.2	**33.96**	**232**	*e*P	**P**	**12 54 08.9**	**+1.1**
COEN	**Coen** 60nm,0.5s,mb5.4	**37.11**	**270**	*e*P	**P**	**12 54 33.5**	**-0.7**
TOO	**Toolangi**	**37.44**	**230**	*e*P	**P**	**12 54 37.2**	**+0.7**
STKA	**Stephens Creek** 8.9nm,0.4s,mb4.7	**38.84**	**241**	⇓*i*P	**P**	**12 54 48.8**	**+0.8**
STKA	**Stephens Creek** 9.4nm,0.5s,mb4.6,baz=94,slow=9.8,SNR=44	**38.84**	**241**	P	**P**	**12 54 48.7**	**+0.7**
WRA	**Warramunga Arr** 8.0nm,0.4s,mb4.6,baz=93,slow=7.0,SNR=70	**44.72**	**259**	P	**P**	**12 55 33.9**	**-0.6**
WRA	1.1nm,0.7s,baz=91,slow=4.0,SNR=6.5			ScP	ScP	13 00 07.3	+2.6
ASAR	**Alice Springs** 55nm,0.5s,mb5.4,baz=89,slow=8.0,SNR=1166	**44.91**	**254**	P	**P**	**12 55 36.0**	**+0.1**
ASAR	0.7nm,0.5s,baz=95,slow=4.7,SNR=6.7			ScP	ScP	13 00 08.4	+2.9
KAKA	**Kakadu** 11nm,0.4s,mb4.7	**47.60**	**269**	*e*P	**P**	**12 55 55.8**	**-0.6**
KAKA	**Kakadu** 40nm,0.6s,mb5.1	**47.60**	**269**	*e*P	**P**	**12 55 55.8**	**-0.6**
GUMO	**Guam** 12nm,0.5s,mb4.7,baz=90,slow=20,SNR=3.7	**47.62**	**308**	P	**P**	**12 55 57.0**	**+0.5**
FORT	**Forrest** 24nm,0.5s,mb4.9	**50.19**	**244**	*e*P	**P**	**12 56 14.6**	**-0.8**
MBWA	**Marble Bar** 4.7nm,0.5s,mb4.0	**58.18**	**256**	*e*P	**P**	**12 57 11.3**	**-0.4**
KLBR	**Kellerberrin** 9.9nm,0.7s,mb4.2	**59.02**	**243**	*e*P	**P**	**12 57 16.5**	**-0.7**
NWAO	**Narrogin (SRO)** 2.3nm,0.3s,mb3.9,baz=125,slow=12,SNR=3.0	**59.41**	**242**	P	**P**	**12 57 20.1**	**+0.4**
MJAR	**Matsushiro Arr** 0.9nm,0.5s,mb3.6,baz=126,slow=3.9,SNR=6.2	**67.58**	**323**	P	**P**	**12 58 11.1**	**-0.6**
NVAR	**Mina Array Bea** 1.8nm,0.8s,mb3.5,baz=228,slow=8.6,SNR=13	**79.12**	**44**	P	**P**	**12 59 18.5**	**+1.0**
MAW	**Mawson** 0.9nm,0.8s,mb3.4,baz=150,slow=8.6,SNR=5.5	**84.25**	**200**	P	**P**	**12 59 42.6**	**-0.6**
ILAR	**Eielson Array** 0.3nm,0.4s,baz=224,slow=4.9,SNR=14	**85.48**	**13**	P	**P**	**12 59 47.9**	**-1.1**
TXAR	**Lajitas Array** 1.5nm,0.7s,mb3.7,baz=215,slow=6.3,SNR=20	**85.77**	**58**	P	**P**	**12 59 53.4**	**+2.1**
PDAR	**Pinedale Array** 0.9nm,0.5s,mb3.7,baz=210,slow=2.8,SNR=11	**87.05**	**43**	P	**P**	**12 59 57.6**	**+0.6**
FINES	**FINESS Array B** 1.4nm,0.9s,baz=48,slow=2.8,SNR=5.3	**132.79**	**344**	SKPbc	SKPbc	13 09 00.1	+2.2
BRTR	**Keskin Array B** 0.8nm,0.6s,baz=105,slow=4.5,SNR=3.5	**144.49**	**315**	PKP	PKPdf	13 06 44.2	+0.4

*ISCJB **23** 12:52:24.8± 0.4, 59.83N± 0.03× 5.36E± 0.05, h10km, Error*
ellipse: s-maj=4.3km s-min=3.3km az=144.5
*CSEM **23** 12:52:27.9± 0.2, 60.01N× 4.99E, h10km, ML2.8, Error*
ellipse: s-maj=6.8km s-min=4.7km az=139.0
*NEIC **23** 12:52:28.5± 0.4, 60.02N× 4.89E, h10km, ML2.8(BGS),*
ML2.4(BER), Error ellipse: s-maj=6.4km s-min=4.2km
az=135.0
*BGS **23** 12:52:30.1± 0.7, 59.99N× 4.88E, h10km, ML2.8*
*BER **23** 12:52:30.8± 3.1, 60.05N× 5.21E, h10km, MD2.0, ML2.3,*
ML2.4(NAO)
*HEL **23** 12:52:31.3± 0.4, 60.10N× 5.41E, h15km, ML2.8,*
MD2.0(BER), ML2.3(BER)
*NAO **23** 12:52:35.1± 4.9, 60.07N× 5.69E, h23

ODD1	**Odda**	**0.72**	**91**	*eP*	**Pg**	**12 52 45.2**	**+4.1**
ODD1				*eS*	**Sg**	**12 52 55.4**	**+4.9**
ODD1	**Odda**	**0.72**	**91**	*eP*	**Pg**	**12 52 45.2**	**+4.1**
ODD1				*eS*	**Sg**	**12 52 55.4**	**+4.9**
ODD1				AML	AML	12 52 55.9	
	comp=Z,844nm,0.4s						
ODD1	**Odda**	**0.72**	**91**	P	**Pg**	**12 52 45.2**	**+4.0**
ODD1				*eS*	**Sg**	**12 52 55.4**	**+4.9**
	comp=Z,844nm,0.4s,SNR=70						
KMY	**Karmoy**	**0.72**	**178**	*eP*	**Pg**	**12 52 46.1**	**+4.8**
KMY				AML	AML	12 52 58.0	
	comp=Z,144nm,0.2s						
KMY	**Karmoy**	**0.72**	**178**	*eP*	**Pg**	**12 52 46.1**	**+4.8**
KMY				AML	AML	12 52 58.0	
	comp=Z,144nm,0.2s						
KMY	**Karmoy**	**0.72**	**178**	P	**Pg**	**12 52 46.0**	**+4.7**
BLS5	**Blasjo**	**0.82**	**128**	*eP*	**Pg**	**12 52 47.7**	**+4.6**
BLS5				*eS*	**Sg**	**12 52 59.2**	**+5.5**
BLS5				AML	AML	12 53 00.1	
	comp=Z,160nm,0.2s						
BLS5	**Blasjo**	**0.82**	**128**	*eP*	**Pg**	**12 52 47.7**	**+4.6**
BLS5				*eS*	**Sg**	**12 52 59.2**	**+5.5**
BLS5	**Blasjo**	**0.82**	**128**	*eP*	**Pg**	**12 52 47.7**	**+4.6**
BLS5				*eS*	**Sg**	**12 52 59.2**	**+5.5**
BLS5				AML	AML	12 53 00.1	
	comp=Z,160nm,0.2s						
BLS5	**Blasjo**	**0.82**	**128**	P	**Pg**	**12 52 47.6**	**+4.6**
BLS5				*eS*	**Sg**	**12 52 59.2**	**+5.6**
	comp=Z,160nm,0.2s,SNR=70						
SUE	**Sulen**	**1.15**	**349**	*eP*	**Pb**	**12 52 47.8**	**-1.4**
SUE				AML	AML	12 53 10.5	
	comp=Z,55nm,0.2s						
SUE	**Sulen**	**1.15**	**349**	*eP*	**Pb**	**12 52 47.8**	**-1.4**
SUE				AML	AML	12 53 10.5	
	comp=Z,55nm,0.2s						
SUE	**Sulen**	**1.15**	**349**	P	**Pb**	**12 52 47.8**	**-1.4**
HYA	**Hoyanger**	**1.33**	**21**	*eP*	**Pn**	**12 52 52.0**	**+0.1**
HYA	**Hoyanger**	**1.33**	**21**	*eP*	**Pn**	**12 52 52.0**	**+0.1**
HYA	**Hoyanger**	**1.33**	**21**	P	**Pn**	**12 52 52.0**	**+0.1**
FOO	**Floro**	**1.67**	**357**	*eP*	**Pn**	**12 52 55.0**	**-1.6**
FOO				AML	AML	12 53 24.8	
	comp=Z,46nm,0.1s						
FOO	**Floro**	**1.67**	**357**	*eP*	**Pn**	**12 52 55.0**	**-1.6**
FOO				AML	AML	12 53 24.8	
	comp=Z,46nm,0.1s						
FOO	**Floro**	**1.67**	**357**	P	**Pn**	**12 52 54.9**	**-1.7**
SNART	**Snartemo**	**1.90**	**146**	*eP*	**Pn**	**12 53 02.9**	**+3.1**
SNART	**Snartemo**	**1.90**	**146**	*eP*	**Pn**	**12 53 02.9**	**+3.1**
KONO	**Kongsberg**	**2.24**	**95**	*eP*	**Pn**	**12 53 06.5**	**+2.1**
KONO	**Kongsberg**	**2.24**	**95**	*eP*	**Pn**	**12 53 06.5**	**+2.1**
KONO	**Kongsberg**	**2.24**	**95**	P	**Pn**	**12 53 06.4**	**+2.0**
OSL	**Oslo**	**2.78**	**88**	*e*	**Pn**	**12 53 06.2**	**-5.6**
OSL				*e*		12 53 45.0	
OSL	**Oslo**	**2.78**	**88**	*eS*	**Sn**	**12 53 45.0**	**-0.4**
OSL	**Oslo**	**2.78**	**88**	S	**Sn**	**12 53 44.9**	**-0.4**
MOL	**Molde**	**2.88**	**22**	*eP*	**Pn**	**12 53 11.3**	**-1.9**
MOL	**Molde**	**2.88**	**22**	*eP*	**Pn**	**12 53 11.3**	**-1.9**
MOL	**Molde**	**2.88**	**22**	P	**Pn**	**12 53 11.3**	**-1.9**
NB2	**NORSAR Subarra**	**3.18**	**67**	Pn	**Pn**	**12 53 18.0**	**+0.8**
	baz=256,slow=14						
NB2				Pg	**Pg**	**12 53 27.9**	**-0.3**
	baz=251,slow=16						
NB2				Sn	**Sn**	**12 53 52.6**	**-2.5**
	baz=251,slow=22						
NB2				Lg		12 54 07.1	
NB2	**NORSAR Subarra**	**3.18**	**67**	*eP*	**Pn**	**12 53 18.0**	**+0.8**
	baz=256,slow=14						
NB2				*e*PG	**Pg**	**12 53 27.9**	**-0.3**
	baz=251,slow=16						
NB2				*eS*	**Sn**	**12 53 52.6**	**-2.5**
	baz=251,slow=22						
NB2				*e*SG	**Sg**	**12 54 07.1**	**-2.1**
NB2	**NORSAR Subarra**	**3.18**	**67**	P	**Pn**	**12 53 18.0**	**+0.8**
NB2	**NORSAR Subarra**	**3.18**	**67**	Pg	**Pg**	**12 53 27.9**	**-0.2**
NB2				S	**Sn**	**12 53 52.6**	**-2.5**
LRW	**Lerwick**	**3.21**	**276**	P	**Pn**	**12 53 16.8**	**-0.9**
LRW				S	**Sn**	**12 53 50.4**	**-5.5**
LRW				AML	AML	12 53 52.6	
	comp=Z,7.6nm,0.2s						
LRW				AML	AML	12 53 56.3	
	comp=Z,6.9nm,0.4s						
LRW	**Lerwick**	**3.21**	**276**	*eP*	**Pn**	**12 53 16.8**	**-0.9**
LRW				*eS*	**Sn**	**12 53 50.4**	**-5.5**
LRW				AML	AML	12 53 52.6	
	comp=E,7.6nm,0.2s						
LRW				AML	AML	12 53 56.3	
	comp=N,6.9nm,0.4s						
LRW	**Lerwick**	**3.21**	**276**	P	**Pn**	**12 53 16.8**	**-0.9**
LRW				S	**Sn**	**12 53 50.4**	**-5.5**
LRW				AML	AML	12 53 52.6	
	comp=N,7.6nm,0.2s						
LRW				AML	AML	12 53 56.3	
	comp=N,6.9nm,0.4s						
LRW	**Lerwick**	**3.21**	**276**	P	**Pn**	**12 53 16.8**	**-0.9**
LRW				S	**Sn**	**12 53 50.4**	**-5.5**
LRW	**Lerwick**	**3.21**	**276**	*eP*	**Pn**	**12 53 16.8**	**-0.9**
LRW				*eS*	**Sn**	**12 53 50.4**	**-5.5**
	comp=N,6.9nm,0.4s						
WAL1	**Walls**	**3.43**	**278**	P	**Pn**	**12 53 20.1**	**-0.7**
WAL1	**Walls**	**3.43**	**278**	*eP*	**Pn**	**12 53 20.1**	**-0.7**
WAL1	**Walls**	**3.43**	**278**	P	**Pn**	**12 53 20.1**	**-0.7**
WAL1	**Walls**	**3.43**	**278**	*eP*	**Pn**	**12 53 20.1**	**-0.7**
HFS	**Hagfors**	**4.26**	**84**	Pn	**Pn**	**12 53 33.0**	**+0.9**
	baz=269,slow=14						
HFS				Sn	**Sn**	**12 54 18.5**	**-3.4**
	baz=272,slow=22						
HFS				Lg		12 54 41.8	
	baz=270,slow=28						
HFS	**Hagfors**	**4.26**	**84**	*eP*	**Pn**	**12 53 33.0**	**+0.9**
	baz=269,slow=14						
HFS				*eS*	**Sn**	**12 54 18.5**	**-3.4**
	baz=272,slow=22						
HFS				*e*SG	**Sg**	**12 54 41.8**	**-2.3**
	baz=270,slow=28						
HFS	**Hagfors**	**4.26**	**84**	P	**Pn**	**12 53 33.0**	**+0.8**
HFS				Sn	**Sn**	**12 54 18.5**	**-3.4**
	baz=272,slow=20,SNR=7.9						
ORE	**Reay**	**4.81**	**257**	P	**Pn**	**12 53 39.0**	**-0.6**
ORE				S	**Sn**	**12 54 29.0**	**-6.3**
ORE				AML	AML	12 54 33.5	
	comp=N,17nm,0.3s						
ORE				AML	AML	12 54 33.6	
	comp=N,7.8nm,0.3s						
ORE	**Reay**	**4.81**	**257**	*eP*	**Pn**	**12 53 39.0**	**-0.6**
ORE				*eS*	**Sn**	**12 54 29.0**	**-6.3**
ORE				AML	AML	12 54 33.5	
	comp=N,17nm,0.3s						
ORE				AML	AML	12 54 33.6	
	comp=E,7.8nm,0.3s						
ORE	**Reay**	**4.81**	**257**	P	**Pn**	**12 53 39.0**	**-0.6**
ORE				S	**Sn**	**12 54 29.0**	**-6.3**
ORE				AML	AML	12 54 33.5	
	comp=E,17nm,0.3s						
ORE				AML	AML	12 54 33.6	
	comp=E,7.8nm,0.3s						
ORE	**Reay**	**4.81**	**257**	P	**Pn**	**12 53 39.0**	**-0.6**
ORE				S	**Sn**	**12 54 29.0**	**-6.3**
ORE	**Reay**	**4.81**	**257**	*eP*	**Pn**	**12 53 39.0**	**-0.7**
MCD	**Coleburn Disti**	**4.99**	**246**	P	**Pn**	**12 53 42.1**	**-0.1**
MCD				S	**Sn**	**12 54 34.0**	**-6.0**
MCD				AML	AML	12 54 39.5	
	comp=E,9.8nm,0.2s						
MCD				AML	AML	12 54 45.2	
	comp=E,9.6nm,0.6s						
MCD	**Coleburn Disti**	**4.99**	**246**	*eP*	**Pn**	**12 53 42.1**	**-0.1**
MCD				*eS*	**Sn**	**12 54 34.0**	**-6.0**
MCD				AML	AML	12 54 39.5	
	comp=E,9.8nm,0.2s						
MCD				AML	AML	12 54 45.2	
	comp=N,9.6nm,0.6s						
MCD	**Coleburn Disti**	**4.99**	**246**	P	**Pn**	**12 53 42.1**	**-0.1**
MCD				S	**Sn**	**12 54 34.0**	**-6.0**
MCD				AML	AML	12 54 39.5	
	comp=N,9.8nm,0.2s						
MCD				AML	AML	12 54 45.2	
	comp=N,9.6nm,0.6s						
MCD	**Coleburn Disti**	**4.99**	**246**	P	**Pn**	**12 53 42.1**	**-0.1**
MCD				S	**Sn**	**12 54 34.0**	**-6.0**
MCD	**Coleburn Disti**	**4.99**	**246**	*eP*	**Pn**	**12 53 42.1**	**-0.1**
MCD				*eS*	**Sn**	**12 54 34.0**	**-5.9**
	comp=N,9.6nm,0.6s						
MME1	**Meikle Cairn**	**5.01**	**242**	P	**Pn**	**12 53 42.4**	**-0.1**
MME1				S	**Sn**	**12 54 34.8**	**-5.5**
MME1	**Meikle Cairn**	**5.01**	**242**	*eP*	**Pn**	**12 53 42.4**	**-0.1**
MME1				*eS*	**Sn**	**12 54 34.8**	**-5.5**
MME1	**Meikle Cairn**	**5.01**	**242**	*eP*	**Pn**	**12 53 42.4**	**-0.1**
MVH1	**Achvaich**	**5.26**	**252**	P	**Pn**	**12 53 45.1**	**-0.8**
MVH1				S	**Sn**	**12 54 40.1**	**-6.4**
MVH1	**Achvaich**	**5.26**	**252**	*eP*	**Pn**	**12 53 45.1**	**-0.8**
MVH1				*eS*	**Sn**	**12 54 40.1**	**-6.4**
MVH1	**Achvaich**	**5.26**	**252**	P	**Pn**	**12 53 45.1**	**-0.8**
MVH1				S	**Sn**	**12 54 40.1**	**-6.4**
MVH1	**Achvaich**	**5.26**	**252**	*eP*	**Pn**	**12 53 45.1**	**-0.8**
MDO	**Dochfour**	**5.58**	**248**	P	**Pn**	**12 53 49.6**	**-0.7**
MDO	**Dochfour**	**5.58**	**248**	*eP*	**Pn**	**12 53 49.6**	**-0.7**
MDO	**Dochfour**	**5.58**	**248**	P	**Pn**	**12 53 49.6**	**-0.7**
MDO	**Dochfour**	**5.58**	**248**	*eP*	**Pn**	**12 53 49.6**	**-0.7**
ESY	**Stoneypath**	**5.79**	**229**	P	**Pn**	**12 53 53.4**	**+0.3**
ESY	**Stoneypath**	**5.79**	**229**	*eP*	**Pn**	**12 53 53.4**	**+0.3**
ESY	**Stoneypath**	**5.79**	**229**	P	**Pn**	**12 53 53.4**	**+0.3**
ESY	**Stoneypath**	**5.79**	**229**	*eP*	**Pn**	**12 53 53.4**	**+0.2**
EDI	**Edinburgh**	**6.01**	**232**	P	**Pn**	**12 53 56.0**	**-0.1**
EDI	**Edinburgh**	**6.01**	**232**	*eP*	**Pn**	**12 53 56.0**	**-0.1**
EDI	**Edinburgh**	**6.01**	**232**	P	**Pn**	**12 53 56.0**	**-0.1**
EDI	**Edinburgh**	**6.01**	**232**	*eP*	**Pn**	**12 53 56.0**	**-0.2**
EAB	**Aberfoyle**	**6.30**	**238**	P	**Pn**	**12 54 01.0**	**+0.8**
EAB	**Aberfoyle**	**6.30**	**238**	*eP*	**Pn**	**12 54 01.0**	**+0.8**
EAB	**Aberfoyle**	**6.30**	**238**	P	**Pn**	**12 54 01.0**	**+0.8**
EAB	**Aberfoyle**	**6.30**	**238**	*eP*	**Pn**	**12 54 01.0**	**+0.8**
ESK	**Eskdalemuir**	**6.46**	**228**	P	**Pn**	**12 54 01.8**	**-0.6**
ESK	**Eskdalemuir**	**6.46**	**228**	P	**Pn**	**12 54 01.8**	**-0.6**
ESK	**Eskdalemuir**	**6.46**	**228**	*e*Pn	**Pn**	**12 54 03.0**	**+0.6**
ESK				*e*Sn	**Sn**	**12 55 09.4**	**-6.7**
ESK	**Eskdalemuir**	**6.46**	**228**	*eP*	**Pn**	**12 54 01.8**	**-0.6**
ESK	**Eskdalemuir**	**6.46**	**228**	*e*Pn	**Pn**	**12 54 03.0**	**+0.6**
RAF	**Rauma**	**8.25**	**75**	*eP*	**Pn**	**12 54 26.6**	**-0.2**
RAF				*eS*	**Sn**	**12 55 52.4**	**-7.6**
RAF				MSN		12 55 55.1	
	comp=Z,1.9nm,0.2s						
RAF	**Rauma**	**8.25**	**75**	P	**Pn**	**12 54 26.6**	**-0.3**
VAF	**Ylistaro**	**8.91**	**62**	*eP*	**Pn**	**12 54 35.8**	**-0.1**
VAF				*eS*	**Sn**	**12 56 08.2**	**-7.9**
VAF				MSN		12 56 10.2	
	comp=Z,0.8nm,0.2s						
VAF	**Ylistaro**	**8.91**	**62**	P	**Pn**	**12 54 35.8**	**-0.1**
MEF	**Metsahovi**	**9.59**	**80**	*eS*	**Sn**	**12 56 23.6**	**-9.3**
MEF				MSN		12 56 27.6	
	comp=Z,1.4nm,0.2s						
KEF	**Keuruu**	**9.79**	**68**	*eP*	**Pn**	**12 54 48.2**	**+0.3**
KEF				*eS*	**Sn**	**12 56 29.9**	**-7.8**
KEF	**Keuruu**	**9.79**	**68**	P	**Pn**	**12 54 48.1**	**+0.2**
PVF	**Pernaja**	**10.28**	**78**	*eS*	**Sn**	**12 56 41.0**	**-8.8**
PVF				MSN		12 56 42.7	
	comp=Z,1.2nm,0.2s						
FIA0	**FINESS Array S**	**10.34**	**73**	*eP*	**Pn**	**12 54 56.4**	**+1.0**
	baz=267,slow=12						
FIA0				*eS*	**Sn**	**12 56 43.0**	**-8.1**
FIA0	**FINESS Array S**	**10.34**	**73**	P	**Pn**	**12 54 56.4**	**+1.0**
SUF	**Sumiainen**	**10.43**	**65**	*eS*	**Sn**	**12 56 44.5**	**-8.9**
KAF	**Kangasniemi**	**10.46**	**69**	*eS*	**Sn**	**12 56 45.5**	**-8.6**
OUL	**Oulu**	**10.84**	**53**	*eS*	**Sn**	**12 56 50.5**	**-13**
RNF	**Rovaniemi**	**11.46**	**46**	*eS*	**Sn**	**12 57 06.4**	**-12**
MSF	**Maaselka**	**12.34**	**51**	*eS*	**Sn**	**12 57 26.8**	**-13**

GUC 23 13:09:05.8±0.6, 22.62S×66.74W, h260km, ML4.1, 1C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEN1	**Los Morros**	**3.28**	**256**	*i*P	Pn	13 10 06.2	+4.3
CEN1				*i* S	S	13 10 52.9	+6.4
CEN1				AML	AML	13 10 56.5	
	comp=N,96nm,0.5s						
HMBC	**Humberston**	**3.75**	**308**	*i*P	Pn	13 10 11.3	+4.1
HMBC				*i* S	S	13 10 59.8	+3.9
PSGC	**Pisagua**	**4.36**	**313**	*eP*	Pn	13 10 17.9	+3.6
PSGC				*i* S	S	13 11 12.7	+3.8
MNMC	**Miæe Miæ**	**4.38**	**322**	*i*P	Pn	13 10 19.5	+5.0
MNMC				*i* S	S	13 11 14.7	+5.4

NIED ***23*** *13:17:00, 46.30N×153.20E, h35km, Mw4.2 Best double couple: M₀1.89000×10¹⁵ NP1:φ=83.00000°, δ84.00000°, λ-97.00000°. NP2:φ=311.00000°, δ9.00000°, λ-42.00000°.*
JMA ***23*** *13:17:01.6±0.6, 46.27N×153.17E, h30km, M4.4*
MOS ***23*** *13:17:03.8±1.1, 46.25N×152.98E, h41km, mb4.2/8, Error ellipse: s-maj=15.6km s-min=9.9km az=71.5*
ISCJB ***23*** *13:17:03.1±1.0, 46.23N±0.08×153.0E±0.1, h34km±8km, mb3.7/18, Error ellipse: s-maj=17.6km s-min=5.6km az=139.0*
NEIC ***23*** *13:17:05.5±0.5, 46.23N×152.97E, mb4.1/2, Error ellipse: s-maj=12.7km s-min=8.8km az=137.0*
IDC ***23*** *13:17:05.6±0.7, 46.21N×152.98E, h38km±5km, mb3.5/14, mb1 3.7/16, mb1mx3.6/25, mbtmp3.5/16, ML3.5/2, MS3.0/2, Ms1 3.0/2, ms1mx2.5/22, Error ellipse: s-maj=18.4km s-min=15.0km az=147.0*

ISC 23 13:17:05.7±0.9, 46.22N±0.08×153.0E±0.1, h39km±7km, h40km±1.8km: pP-P, n57, σ1°13/60, mb3.7/18, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.70**	**256**	PN	**Pn**	**13 18 00.5**	**+0.2**
KUR				*eS*	**Sn**	**13 18 44.0**	**+1.4**
KUR				pmax	pmax		
	comp=N,70nm,0.4s						
KUR				pmax	pmax		
	comp=Z,190nm,0.4s						
KUR				smax			
	comp=N,320nm,0.7s						
KUR				smax			
	comp=E,260nm,0.7s						
SKR	**Severo-Kuril's**	**4.93**	**24**	*e*PN	**Pn**	**13 18 18.0**	**+0.8**
SKR				*eS*	**Sn**	**13 19 12.5**	**-0.5**
SKR				pmax	pmax		
	comp=Z,50nm,0.6s						
SKR				pmax	pmax		
	comp=N,40nm,0.5s						
SKR				smax			
	comp=E,80nm,0.5s						
SKR				smax			
	comp=E,140nm,0.6s						
SKR				smax			
	comp=Z,40nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**5.48**	**249**	*i*PN	**Pn**	**13 18 24.8**	**+0.1**
YUK				pmax	pmax		
	comp=N,37nm,0.5s						
YUK				pmax	pmax		
	comp=Z,99nm,0.5s						
YUK				pmax	pmax		
	comp=E,38nm,0.7s						
NEM2	**Nemuro 2**	**5.88**	**243**	P	**Pn**	**13 18 28.0**	**-2.2**
NEM2				*eS*	**Sn**	**13 19 32.0**	**-4.2**
JRA	**Rausu**	**6.00**	**250**	P	**Pn**	**13 18 32.8**	**+0.6**
JNK	**Nakash**	**6.42**	**249**	P	**Pn**	**13 18 37.7**	**+0.1**
JAK	**Akkeshi**	**6.72**	**244**	P	**Pn**	**13 18 39.6**	**-2.2**
JAK				*eS*	**Sn**	**13 19 51.1**	**-5.9**
JTKR	**Abashiri--Toko**	**6.79**	**254**	P	**Pn**	**13 18 44.2**	**+1.5**
JMP	**Maruseppu**	**7.14**	**255**	P	**Pn**	**13 18 49.3**	**+1.7**
JAR	**Ashorobuto**	**7.16**	**249**	P	**Pn**	**13 18 48.1**	**+0.2**
JAR				*eS*	**Sn**	**13 20 07.3**	**-0.6**
JOB	**Onbets**	**7.31**	**246**	*eS*	**Sn**	**13 20 08.4**	**-3.1**
PETK	**Petropavlovsk-**	**7.54**	**22**	Pn	**Pn**	**13 18 52.7**	**-0.4**
	comp=E,0.5nm,0.3s,baz=181,slow=12,SNR=17						
PETK				Sn	**Sn**	**13 20 14.2**	**-3.0**
	comp=E,0.1nm,0.3s,baz=230,slow=22,SNR=2.3						
JKK2	**Kamakawa 2**	**7.60**	**256**	P	**Pn**	**13 18 55.2**	**+1.3**
ASAJ	**Asahikawa**	**7.62**	**258**	Pn	**Pn**	**13 18 56.1**	**+2.0**
	comp=E,0.9nm,0.3s,baz=96,slow=27,SNR=6.6						
ASAJ	**Asahikawa**	**7.62**	**258**	PN	**Pn**	**13 18 56.1**	**+2.0**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PET	**Petropavlovsk**	**7.75**	**26**	*e*Pn	**Pn**	**13 18 54.9**	**-0.8**
PET				*e*Sn	**Sn**	**13 20 16.4**	**-5.7**
JCH	**Churui**	**7.76**	**246**	*eS*	**Sn**	**13 20 17.1**	**-5.4**
JNBK	**Urakawa-nobuka**	**8.32**	**245**	*eS*	**Sn**	**13 20 28.9**	**-7.4**
JKB	**Kayabe**	**9.62**	**247**	*eS*	**Sn**	**13 21 01.4**	**-6.7**
JANG	**Nango**	**10.18**	**239**	*eS*	**Sn**	**13 21 12.1**	**-10**
JTM	**Tenmabayashi**	**10.20**	**242**	*eS*	**Sn**	**13 21 13.6**	**-8.9**
JTH	**Tanohata**	**10.26**	**236**	*eS*	**Sn**	**13 21 12.1**	**-12**
MJAR	**Matsushiro Arr**	**14.68**	**234**	LR	LR	13 26 42.9	
	comp=Z,34nm,19.8s,baz=40,slow=39						
BILL	**Bilibino**	**22.93**	**13**	*eP*	**P**	**13 22 08.0**	**+2.0**
BILL				*e*		13 25 52.9	
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.2						
SONM	**Songino Array**	**31.41**	**290**	LR	LR	13 37 13.5	
	comp=Z,35nm,18.1s,baz=60,slow=38						
ILAR	**Eielson Array**	**37.03**	**38**	P	**P**	**13 24 10.8**	**-0.4**
	comp=Z,0.2nm,0.9s,mb3.0,baz=258,slow=8.6,SNR=3.4						
ILAR				pP	pP	13 24 20.7	-1.4
	comp=Z,0.2nm,0.5s,baz=248,slow=7.3,SNR=2.6						
INK	**Inuvik**	**42.16**	**32**	*eP*	**P**	**13 24 54.0**	**+0.2**
	comp=Z,4.2nm,1.2s,mb3.9						
INK	**Inuvik**	**42.16**	**32**	*eP*	**P**	**13 24 54.0**	**+0.1**
INK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ZALV	**Zalesovo Beam**	**42.83**	**306**	P	**P**	**13 24 58.9**	**-0.7**
	comp=Z,0.4nm,0.3s,mb3.6,baz=57,slow=5.3,SNR=1.6						
MKAR	**Makanchi Array**	**47.09**	**298**	P	**P**	**13 25 33.3**	**-0.2**
	comp=Z,0.7nm,0.6s,mb3.8,baz=72,slow=9.1,SNR=1.9						
MKAR	**Makanchi Array**	**47.09**	**298**	P	**P**	**13 25 33.3**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**52.14**	**257**	P	**P**	**13 26 13.9**	**+1.7**
	comp=Z,0.5nm,0.5s,mb3.7,baz=41,slow=8.0,SNR=5.2						
CMAR	**Chiang Mai Arr**	**52.14**	**257**	P	**P**	**13 26 14.0**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FRU	**Bishkek**	**53.79**	**297**	*eP*	**P**	**13 26 22.0**	**-2.1**
FRU				pmax	pmax		
	comp=Z,50nm,2.1s						
FRU				pmax	pmax		
	comp=E,160nm,2.6s						
ARU	**Arti**	**55.33**	**318**	*eP*	**P**	**13 26 35.3**	**+0.3**
ARU	**Arti**	**55.33**	**318**	*eP*	**P**	**13 26 35.3**	**+0.2**
ARCES	**ARCESS Array B**	**58.32**	**341**	P	**P**	**13 26 56.3**	**+0.2**
	comp=E,0.7nm,0.7s,mb3.8,baz=11,slow=10,SNR=2.3						
ARCES	**ARCESS Array B**	**58.32**	**341**	P	**P**	**13 26 56.3**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ABKAR	**Akbulak array**	**58.68**	**310**	*eP*	**P**	**13 26 57.9**	**-1.0**
	comp=Z,0.7nm,0.3s,mb4.2						
NVAR	**Mina Array Bea**	**62.77**	**62**	P	**P**	**13 27 27.8**	**+0.9**
	comp=Z,0.9nm,0.7s,mb4.0,baz=298,slow=7.4,SNR=9.4						
NVAR				pP	pP	13 27 39.5	+1.1
	comp=Z,0.8nm,0.7s,baz=295,slow=7.4,SNR=6.4						
FINES	**FINESS Array B**	**64.47**	**335**	P	**P**	**13 27 37.4**	**-0.3**
	comp=Z,1.4nm,0.8s,mb4.1,baz=36,slow=7.1,SNR=6.5						
FINES	**FINESS Array B**	**64.47**	**335**	P	**P**	**13 27 37.4**	**-0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PDAR	**Pinedale Array**	**65.15**	**54**	P	**P**	**13 27 42.8**	**+0.4**
	comp=Z,0.2nm,0.5s,mb3.4,baz=329,slow=1.1,SNR=3.1						
OBN	**Obninsk**	**65.68**	**326**	*eP*	**P**	**13 27 46.2**	**+0.5**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
WRA	**Warramunga Arr**	**67.98**	**199**	P	**P**	**13 27 59.2**	**-1.4**
	comp=Z,0.4nm,0.7s,mb3.6,baz=18,slow=7.1,SNR=3.1						
NOA	**NORSAR Array B**	**68.69**	**341**	P	**P**	**13 28 04.3**	**-0.4**
	comp=Z,0.3nm,0.4s,mb3.6,baz=28,slow=6.4,SNR=4.3						
KIV	**Kislovodsk**	**71.09**	**314**	*eP*	**P**	**13 28 20.2**	**+0.5**
KIV				pmax	pmax		
	comp=N,4.0nm,0.8s						
ASAR	**Alice Springs**	**71.67**	**198**	P	**P**	**13 28 23.1**	**-0.1**
	comp=N,0.2nm,0.5s,mb3.3,baz=12,slow=6.5,SNR=11						
ASAR	**Alice Springs**	**71.67**	**198**	*eP*	**P**	**13 28 23.4**	**+0.1**
AKASG	**Malin Array Be**	**71.93**	**326**	P	**P**	**13 28 23.8**	**-0.9**
	comp=N,1.5nm,0.4s,mb4.3,baz=35,slow=6.5,SNR=3.9						
AKASG	**Malin Array Be**	**71.93**	**326**	P	**P**	**13 28 23.8**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
TXAR	**Lajitas Array**	**77.85**	**60**	P	**P**	**13 28 59.4**	**+0.2**
TXAR				pP	pP	13 29 11.3	+0.3
TXAR	**Lajitas Array**	**77.85**	**60**	P	**P**	**13 28 59.4**	**+0.2**
	comp=Z,0.6nm,0.5s,mb3.8,baz=300,slow=4.6,SNR=15						
TXAR				pP	pP	13 29 11.3	+0.3
	comp=Z,0.8nm,0.7s,baz=298,slow=4.5,SNR=7.3						
TXAR	**Lajitas Array**	**77.85**	**60**	P	**P**	**13 28 59.4**	**+0.2**
TXAR				*PP	pP	13 29 11.3	+0.3
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**78.70**	**317**	P	**P**	**13 29 05.3**	**+1.5**
	comp=Z,0.3nm,0.3s,mb3.7,baz=55,slow=7.6,SNR=2.2						
PLCA	**Paso Flores**	**148.26**	**96**	PKPbc	PKPbc	13 36 47.0	-0.1
PLCA				pPKPbc	pPKPbc	13 36 57.6	-1.7
PLCA	**Paso Flores**	**148.26**	**96**	PKPbc	PKPbc	13 36 47.0	-0.1
	comp=Z,1.4nm,0.9s,baz=0.0,slow=4.0,SNR=4.5				

ILAR Eielson Array 40.81 37 P P 13 29 13.4 -0.6
comp=Z,0.2nm,0.5s,mb3.2,baz=279,slow=9.9,SNR=5.3
NVAR Mina Array Bea 66.97 58 P P 13 32 25.3 +0.4
comp=Z,0.3nm,0.5s,mb3.4,baz=327,slow=6.5,SNR=3.2
PDAR Pinedale Array 69.26 50 P P 13 32 38.7 -0.5
comp=Z,0.4nm,0.5s,mb3.5,baz=277,slow=3.9,SNR=4.1
TXAR Lajitas Array 82.03 57 P P 13 33 52.2 -0.1
comp=Z,0.3nm,0.6s,mb3.3,baz=296,slow=3.5,SNR=6.3

IDC ***23*** *13:32:32.6±0.8,39.°59N×53.°91E,h0km,mb4.1/18, mb1 4.2/22,mb1mx4.1/33,mbtmp4.1/22,ML3.9/3,MS3.3/15, Ms1 3.4/15,ms1mx3.1/35,Error ellipse: s-maj=18.3km s-min=8.7km az=172.0*
ISCJB ***23*** *13:32:35.4±1.2,39.°96N±0.°04×54.°00E±0.°03,h24km±9km, mb4.2/39,MS3.3/15,Error ellipse: s-maj=6.0km s-min=3.5km az=5.4*
NEIC ***23*** *13:32:37.8±1.1,39.°78N×54.°07E,h35km±9km,mb4.5/15, Error ellipse: s-maj=12.0km s-min=5.0km az=170.0*
BJI ***23*** *13:32:37.3,39.°79N×54.°20E,h26km, mb4.6/7,Ms4.2/2*
MOS ***23*** *13:32:37.7±1.2,39.°93N×53.°99E,h46km,mb4.5/29,Error ellipse: s-maj=6.7km s-min=4.7km az=121.9*
CSEM ***23*** *13:32:39.1±0.3,39.°94N×54.°03E,h40km,mb4.3/30,Ms2.8, Error ellipse: s-maj=11.4km s-min=5.0km az=168.0*
THR ***23*** *13:32:44.4±0.9,38.°53N×54.°05E,h17km±14km,ML4.1*
NNC ***23*** *13:32:45.7±1.7,40.°53N×55.°00E,h0km,mb4.3,Error ellipse: s-maj=18.5km s-min=11.4km az=79.0*

ISC 23 13:32:37.9±1.2,39.°92N±0.°04×54.°03E±0.°03,h29km±9km, n292,σ1ᵠ18/349,mb4.2/39,MS3.3/15,32C-37D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
MRVT	**Maraveh tapeh**	**2.77**	**144**	*e*Pg	**Pn**	**13 33 18.2**	**-2.2**
MRVT				AML	AML	13 33 52.8	
	comp=N,818nm,0.4s						
BJRD	**Bojnurd**	**3.45**	**129**	*e*Pn	**Pn**	**13 33 30.0**	**+0.3**
BJRD				*e*Sg	**Sn**	**13 34 11.0**	**+1.4**
DAMV	**Damavand**	**4.58**	**201**	*e*Pn	**Pn**	**13 33 38.4**	**-6.8**
DAMV				AML	AML	13 34 36.5	
	comp=N,422nm,0.1s						
DAMV				AML	AML	13 34 37.9	
	comp=E,354nm,0.7s						
THKV	**Tehran--Karaj**	**4.71**	**213**	*e*Pn	**Pn**	**13 33 42.4**	**-4.6**
THKV				*e*Sg	**Sn**	**13 34 37.3**	**-3.3**
THKV				AML	AML	13 34 40.0	
	comp=E,496nm,0.4s						
THKV				AML	AML	13 34 40.2	
	comp=N,457nm,0.5s						
ZNJK	**Zanjan**	**5.31**	**234**	*e*Pn	**Pn**	**13 33 56.0**	**+0.8**
ZNJK				AML	AML	13 34 54.6	
	comp=E,131nm,0.3s						
ZNJK				AML	AML	13 34 58.5	
	comp=N,190nm,0.5s						
MAK	**Makhachkala**	**5.77**	**304**	*e*P	**Pn**	**13 34 03.9**	**+2.4**
MAK				*e*		13 35 07.3	
MAK				MLR	MLR		
	comp=Z,231nm,18.0s						
MAK	**Makhachkala**	**5.77**	**304**	*e*P	**Pn**	**13 34 03.9**	**+2.4**
MAK				*e*S	**Sn**	**13 35 07.3**	**+0.7**
	comp=Z,231nm,18.0s						
DGRG	**David-gareji**	**6.75**	**286**	P	**Pn**	**13 34 15.5**	**+0.5**
DGRG				S	**Sn**	**13 35 30.2**	**-0.7**
GNI	**Garni**	**7.13**	**275**	Pn	**Pn**	**13 34 22.2**	**+2.0**
	comp=Z,2.4nm,0.4s						
GNI				Sn	**Sn**	**13 35 39.8**	**-0.4**
GNI	**Garni**	**7.13**	**275**	Pn	**Pn**	**13 34 22.3**	**+2.0**
	comp=Z,1.7nm,0.3s,baz=318,slow=7.5,SNR=3.4						
GNI				Sn	**Sn**	**13 35 39.8**	**-0.4**
	comp=Z,2.3nm,0.3s,baz=153,slow=2.5,SNR=3.3						
GNI				LR	LR	13 38 07.7	
	comp=Z,70nm,21.9s,baz=295,slow=47						
GNI	**Garni**	**7.13**	**275**	P	**Pn**	**13 34 22.3**	**+2.1**
GNI						13 35 39.8	
GNI				pmax	pmax		
	comp=Z,2.0nm,0.3s						
GNI				smax			
	comp=N,2.0nm,0.3s						
GNI				MLR	MLR		
	comp=Z,70nm,21.9s						
GNI	**Garni**	**7.13**	**275**	P	**Pn**	**13 34 22.3**	**+2.1**
	comp=Z,2.0nm,0.3s						
GNI				S	**Sn**	**13 35 39.8**	**-0.4**
	comp=Z,70nm,21.9s						
MTA	**Mtatsminda**	**7.23**	**287**	P	**Pn**	**13 34 21.9**	**+0.4**
MTA				S	**Sn**	**13 35 40.1**	**-2.5**
TBLG	**Delisi**	**7.27**	**287**	P	**Pn**	**13 34 21.9**	**-0.3**
TBLG				S	**Sn**	**13 35 40.0**	**-3.7**
TBLG	**Delisi**	**7.27**	**287**	P	**Pn**	**13 34 21.9**	**-0.3**
TBLG				S	**Sn**	**13 35 40.0**	**-3.7**
TBLG	**Delisi**	**7.27**	**287**	P	**Pn**	**13 34 21.9**	**-0.3**
TBLG				S	**Sn**	**13 35 40.0**	**-3.7**
ZEI	**Tsey**	**8.13**	**294**	*e*P	**Pn**	**13 34 39.5**	**+5.5**
ZEI				pmax	pmax		
	comp=Z,15nm,0.5s						
ZEI	**Tsey**	**8.13**	**294**	*e*P	**Pn**	**13 34 39.5**	**+5.5**
	comp=Z,15nm,0.5s						
KIV	**Kislovodsk**	**9.36**	**299**	*e*Pn	**Pn**	**13 34 51.4**	**+0.6**
	comp=Z,32nm,0.5s						
KIV				*e*Sn	**Sn**	**13 36 32.3**	**-2.7**
KIV	**Kislovodsk**	**9.36**	**299**	⇑*e*P	**Pn**	**13 34 51.9**	**+1.1**
KIV				*e*S	**Sn**	**13 36 34.8**	**-0.2**
KIV				pmax	pmax		
	comp=Z,19nm,0.6s						
KIV	**Kislovodsk**	**9.36**	**299**	*e*P	**Pn**	**13 34 51.9**	**+1.1**
	comp=Z,19nm,0.6s						
KIV				*e*S	**Sn**	**13 36 34.8**	**-0.2**
AB31	**Akbulak array**	**10.24**	**22**	P	**Pn**	**13 35 02.5**	**-0.3**
AB31				S	**Sn**	**13 36 53.9**	**-2.5**
AB31				pmax	pmax		
	comp=Z,8.0nm,0.2s						
AB31				smax			
	comp=Z,26nm,0.2s						
AB31	**Akbulak array**	**10.24**	**22**	P	**Pn**	**13 35 02.5**	**-0.2**
	comp=Z,4.1nm,0.3s,baz=211,slow=15,SNR=210						
AB31				⇓S	**Sn**	**13 36 51.0**	**-5.5**
	comp=Z,47nm,0.5s						
AB31	**Akbulak array**	**10.24**	**22**	P	**Pn**	**13 35 02.5**	**-0.3**
	comp=Z,4.1nm,0.3s,SNR=210						
AB31				S	**Sn**	**13 36 51.0**	**-5.4**
	comp=Z,47nm,0.5s						
ABKAR	**Akbulak array**	**10.24**	**22**	*e*Pn	**Pn**	**13 35 02.4**	**-0.4**
	comp=Z,14nm,0.4s						
ABKAR				*e*Sn	**Sn**	**13 36 47.4**	**-9.1**
AKTK	**Aktyubinsk**	**10.88**	**14**	Pn	**Pn**	**13 35 12.4**	**+0.9**
AKTK				Sn	**Sn**	**13 37 07.3**	**-4.9**
AKTK	**Aktyubinsk**	**10.88**	**14**	P	**Pn**	**13 35 11.8**	**+0.2**
	comp=Z,2.0nm,0.3s						
AKTK				S	**Sn**	**13 37 10.3**	**-1.9**
	comp=Z,15nm,0.3s						
AKTO	**Aktyubinsk**	**10.88**	**14**	Pn	**Pn**	**13 35 12.4**	**+0.9**
	comp=Z,4.9nm,0.3s,baz=193,slow=9.2,SNR=28						
AKTO				Sn	**Sn**	**13 37 07.3**	**-4.9**
	comp=Z,41nm,0.3s,baz=82,slow=17,SNR=17						
AKTO				LR	LR	13 40 40.2	
	comp=Z,300nm,18.6s,baz=34,slow=43						
AKTO	**Aktyubinsk**	**10.88**	**14**	P	**Pn**	**13 35 11.8**	**+0.2**
AKTO				S	**Sn**	**13 37 10.3**	**-1.9**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKTO				smax			
	comp=Z,15nm,0.3s						
AKTO	**Aktyubinsk**	**10.88**	**14**	⇓P	**Pn**	**13 35 12.3**	**+0.8**
	comp=Z,1.6nm,0.4s						
AKTO				⇑S	**Sn**	**13 37 07.0**	**-5.2**
	comp=Z,12nm,0.5s						
AKTO	**Aktyubinsk**	**10.88**	**14**	P	**Pn**	**13 35 12.3**	**+0.7**
	comp=Z,1.6nm,0.4s						
AKTO				S	**Sn**	**13 37 07.0**	**-5.2**
	comp=Z,12nm,0.5s						
KK31	**Karatay Array**	**12.76**	**70**	*e*P	**Pn**	**13 35 35.1**	**-2.2**
KK31				S	**Sn**	**13 37 51.9**	**-6.3**
KK31				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KK31				smax			
	comp=Z,7.0nm,0.4s						
KK31	**Karatay Array**	**12.76**	**70**	P	**Pn**	**13 35 35.1**	**-2.1**
	comp=Z,5.9nm,0.5s,baz=256,slow=15,SNR=89						
KK31				⇑S	**Sn**	**13 37 51.9**	**-6.3**
	comp=Z,6.7nm,0.5s,baz=263,slow=26,SNR=3.8						
KK31	**Karatay Array**	**12.76**	**70**	P	**Pn**	**13 35 35.2**	**-2.1**
	comp=Z,5.9nm,0.5s,SNR=89						
KK31				S	**Sn**	**13 37 51.9**	**-6.3**
	comp=Z,6.7nm,0.5s,SNR=3.8						
ANN	**Anapa**	**13.20**	**297**	*e*P	Px	13 35 55.9	
ANN				pmax	pmax		
	comp=Z,25nm,1.2s						
ANN	**Anapa**	**13.20**	**297**	*e*P	Px	13 35 55.9	
	comp=Z,25nm,1.2s						
VRHR	**Novokhopersk**	**14.13**	**326**	*e*P	**Pn**	**13 35 55.8**	**-0.2**
VRHR				*e*S	**Sn**	**13 38 27.6**	**-4.1**
VRHR				pmax	pmax		
	comp=Z,20nm,1.5s						
VRHR				pmax	pmax		
	comp=N,5.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.5s						
VRHR				pmax	pmax		
	comp=Z,20nm,0.7s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,20nm,0.6s						
VRHR				smax			
	comp=N,310nm,1.2s						
VRHR				smax			
	comp=Z,30nm,0.6s						
VRHR				smax			
	comp=E,310nm,1.1s						
VRHR	**Novokhopersk**	**14.13**	**326**	*e*P	**Pn**	**13 35 55.8**	**-0.2**
	comp=E,310nm,1.2s						
VRHR				*e*S	**Sn**	**13 38 27.6**	**-4.1**
	comp=E,30nm,0.6s						
AML	**Almayashu**	**15.01**	**75**	P	**Pn**	**13 36 06.1**	**-1.8**
	SNR=13						
EKS2	**Erkin-Say**	**15.10**	**73**	P	**Pn**	**13 36 07.8**	**-1.2**
	SNR=14						
VORD	**Divnogorie**	**15.10**	**322**	*de*P	**Pn**	**13 36 07.9**	**-1.1**
VORD				*e*S	Sn	13 38 49.8	-5.3
VORD				pmax	pmax		
	comp=N,30nm,0.6s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,20nm,0.7s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VORD				pmax	pmax		
	comp=N,30nm,0.8s						
VORD				pmax	pmax		
	comp=E,30nm,0.4s						
VORD				smax			
	comp=E,120nm,0.8s						
VORD				smax			
	comp=N,100nm,0.9s						
VORD				smax			
	comp=Z,50nm,0.9s						
VSR	**Storozhevoye**	**15.32**	**322**	*ce*P	**Pn**	**13 36 10.8**	**-1.1**
VSR				*e*S	**Sn**	**13 38 56.0**	**-4.6**
VSR				pmax	pmax		
	comp=Z,30nm,0.5s						
VSR				pmax	pmax		
	comp=N,20nm,0.8s						
VSR				pmax	pmax		
	comp=E,30nm,0.6s						
VSR				pmax	pmax		
	comp=Z,20nm,0.5s						
VSR				pmax	pmax		
	comp=N,20nm,0.6s						
VSR				pmax	pmax		
	comp=E,30nm,0.6s						
VSR				smax			
	comp=N,150nm,0.9s						
VSR				smax			
	comp=Z,50nm,1.3s						
VSR				smax			
	comp=E,140nm,0.9s						
VSR	**Storozhevoye**	**15.32**	**322**	*e*P	**Pn**	**13 36 10.8**	**-1.1**
	comp=E,150nm,0.9s						
VSR				*e*S	**Sn**	**13 38 56.0**	**-4.6**
	comp=E,50nm,1.3s						
AAK	**Ala-Archa**	**15.62**	**73**	P	**Pn**	**13 36 16.7**	**+0.8**
	SNR=7.6						
AAK	**Ala-Archa**	**15.62**	**73**	Pn	**Pn**	**13 36 14.3**	**-1.6**
AAK				Sn	**Sn**	**13 39 03.1**	**-4.9**
AAK	**Ala-Archa**	**15.62**	**73**	Pn	**Pn**	**13 36 14.3**	**-1.6**
	comp=E,1.0nm,0.3s,baz=237,slow=8.6,SNR=21						
AAK				Sn	**Sn**	**13 39 03.1**	**-4.9**
	comp=E,0.6nm,0.3s,baz=221,slow=11,SNR=2.2						
AAK				LR	LR	13 43 18.7	
	comp=E,168nm,18.3s,baz=251,slow=41						
AAK	**Ala-Archa**	**15.62**	**73**	P	**Pn**	**13 36 14.3**	**-1.6**
AAK						13 39 03.1	
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK				smax			
	comp=N,1.0nm,0.3s						
AAK				MLR	MLR		
	comp=Z,168nm,18.3s						
AAK	**Ala-Archa**	**15.62**	**73**	P	**Pn**	**13 36 14.3**	**-1.6**
	comp=Z,1.0nm,0.3s						
AAK				S	**Sn**	**13 39 03.1**	**-4.9**
	comp=Z,168nm,18.3s						
BRTR	**Keskin Array B**	**15.67**	**276**	Pn	**Pn**	**13 36 16.9**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=96,slow=11,SNR=4.2						
BRTR	**Keskin Array B**	**15.67**	**276**	P	**Pn**	**13 36 17.0**	**+0.5**
USP	**Ospenovka**	**15.67**	**71**	P	**Pn**	**13 36 15.8**	**-0.7**
	SNR=9.6						
CHMS	**Chumysh**	**15.83**	**72**	P	**Pn**	**13 36 17.2**	**-1.4**
	SNR=6.7						
ASF	**Jabal al Asfar**	**15.85**	**246**	Pn	**Pn**	**13 36 13.1**	**-5.9**
	comp=Z,0.2nm,0.3s,baz=48,slow=3.3,SNR=2.5						
ASF				Sn	Sn	13 38 52.0	-22
	comp=Z,0.8nm,0.3s,baz=197,slow=11,SNR=5.4						
ASF				LR	LR	13 43 48.6	
	comp=Z,35nm,18.4s,baz=79,slow=43						
KBK	**Karagaybulak**	**15.96**	**73**	P	**Pn**	**13 36 20.7**	**+0.4**
	SNR=8.4						
TKM2	**Tokmak 2**	**16.45**	**72**	P	**Pn**	**13 36 25.1**	**-1.3**
	SNR=16						
ZRNK	**Zerenda**	**16.58**	**33**	⇑P	**Pn**	**13 36 27.3**	**-0.7**
	comp=Z,6.5nm,0.5s						
ZRNK				⇓S	**Sn**	**13 39 22.9**	**-8.1**
	comp=Z,27nm,0.6s						
ARU	**Arti**	**16.79**	**9**	*e*Pn	**Pn**	**13 36 30.0**	**-0.7**
	comp=Z,96nm,0.9s						
ARU				*e*Sn	**Sn**	**13 39 25.7**	**-10**
ARU	**Arti**	**16.79**	**9**	*d*P	**Pn**	**13 36 30.8**	**+0.1**
ARU				S	**Sn**	**13 39 30.8**	**-5.3**
ARU				pmax	pmax		
	comp=Z,27nm,0.8s						
ARU				MLR	MLR		
	comp=Z,246nm,19.0s						
ARU	**Arti**	**16.79**	**9**	*i* P	**Pn**	**13 36 30.8**	**+0.1**
	comp=Z,27nm,0.8s						
ARU				S	**Sn**	**13 39 30.8**	**-5.3**
	comp=Z,246nm,19.0s						
KSH	**Kashi**	**16.89**	**84**	*e*P	**Pn**	**13 36 28.3**	**-3.8**
KSH				*ep*P	pP	13 36 35.3	-6.3
KSH				*es*P	sP	13 36 40.3	-5.0
KSH				*e*PP		13 36 41.4	
KSH				*e*S	Sn	13 39 25.9	-13
KSH				sS	sS	13 39 38.3	-22
KSH				*e*SS		13 39 46.3	
KSH				*e*PcP	PcP	13 41 23.0	+4.9
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,63nm,2.8s						
KSH				LR	LR		
	comp=N,120nm,7.1s						
KSH				LR	LR		
	comp=E,140nm,7.2s						
ULHL	**Ulahol**	**16.90**	**75**	P	**Pn**	**13 36 37.1**	**+4.8**
	SNR=9.0						
BRVK	**Borovoye**	**17.20**	**35**	*e*Pn	**Pn**	**13 36 34.2**	**-1.7**
	comp=E,17nm,0.7s						
BRVK				*e*Sn	**Sn**	**13 39 36.8**	**-9.4**
BRVK	**Borovoye**	**17.20**	**35**	*e*P	**Pn**	**13 36 34.2**	**-1.7**
BRVK				*e*		13 39 36.8	
BRVK				pmax	pmax		
	comp=Z,17nm,0.7s						
BRVK	**Borovoye**	**17.20**	**35**	⇓P	**Pn**	**13 36 36.1**	**+0.2**
	comp=Z,18nm,0.6s						
BRVK				⇑S	**Sn**	**13 39 36.2**	**-10**
	comp=Z,24nm,0.5s						
BRVK	**Borovoye**	**17.20**	**35**	P	**Pn**	**13 36 36.1**	**+0.2**
	comp=Z,18nm,0.6s						
BRVK				S	**Sn**	**13 39 36.2**	**-10**
	comp=Z,24nm,0.5s						
BVA0	**Borovoye Array**	**17.23**	**35**	P	**Pn**	**13 36 35.2**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVA0	**Borovoye Array**	**17.23**	**35**	⇓P	**Pn**	**13 36 36.3**	**+0.1**
	comp=Z,2.4nm,0.8s						
BVA0				⇑S	**Sn**	**13 39 39.5**	**-7.3**
	comp=Z,3.1nm,0.6s						
BVA0	**Borovoye Array**	**17.23**	**35**	P	**Pn**	**13 36 35.2**	**-1.0**
	comp=Z,2.0nm,0.8s						
BVAR	**Borovoye Array**	**17.23**	**35**	P	**Pn**	**13 36 35.9**	**-0.3**
	comp=Z,3.6nm,0.3s,baz=232,slow=12,SNR=49						
BVAR				S	**Sn**	**13 39 38.9**	**-7.8**
	comp=Z,5.0nm,0.3s,baz=230,slow=29,SNR=12						
BVAR	**Borovoye Array**	**17.23**	**35**	P	**Pn**	**13 36 35.9**	**-0.3**
BVAR				S	**Sn**	**13 39 38.9**	**-7.9**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
BVAR				smax			
	comp=N,5.0nm,0.3s						
BVAR	**Borovoye Array**	**17.23**	**35**	P	**Pn**	**13 36 36.3**	**+0.1**
	comp=N,2.4nm,0.8s						
VOSK	**Vostochnaya**	**17.29**	**37**	P	**Pn**	**13 36 35.4**	**-1.6**
VOSK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
VOSK	**Vostochnaya**	**17.29**	**37**	⇓P	**Pn**	**13 36 35.5**	**-1.5**
	comp=Z,9.2nm,0.5s						
VOSK				⇑S	**Sn**	**13 39 36.7**	**-12**
	comp=Z,15nm,0.8s						
VOSK	**Vostochnaya**	**17.29**	**37**	P	**Pn**	**13 36 35.5**	**-1.5**
	comp=Z,9.2nm,0.5s						
VOSK				S	**Sn**	**13 39 36.7**	**-12**
	comp=Z,15nm,0.8s						
SVE	**Sverdlovsk**	**17.46**	**12**	*e*P	**Pn**	**13 36 41.7**	**+2.6**
SVE				*e*S	**Sn**	**13 39 44.4**	**-8.0**
SVE				pmax	pmax		
	comp=Z,14nm,0.8s						
SVE	**Sverdlovsk**	**17.46**	**12**	*e*P	**Pn**	**13 36 41.7**	**+2.6**
	comp=Z,14nm,0.8s						
OBN	**Obninsk**	**19.15**	**328**	P	**Pn**	**13 36 54.8**	**-4.9**
OBN	**Obninsk**	**19.15**	**328**	⇑*e*P	**Pn**	**13 36 58.8**	**-0.9**
OBN				*e*S	**Sn**	**13 40 27.6**	**-5.6**
OBN				pmax	pmax		
	comp=Z,14nm,0.6s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
OBN	**Obninsk**	**19.15**	**328**	*e*P	**Pn**	**13 36 58.8**	**-0.9**
	comp=Z,14nm,0.6s						
MOS	**Moscow**	**19.20**	**331**	*e*P	**Pn**	**13 36 59.1**	**-1.1**
MOS				*e*S	**Sn**	**13 40 26.7**	**-7.7**
MOS				pmax	pmax		
	comp=Z,40nm,0.6s						
MOS	**Moscow**	**19.20**	**331**	*e*P	**Pn**	**13 36 59.1**	**-1.1**
	comp=Z,40nm,0.6s						
MOS				*e*S	**Sn**	**13 40 26.7**	**-7.7**
TLCR		**19.27**	**294**	⇓*i*P	**Pn**	**13 36 58.6**	**-2.6**
TLCR		**19.27**	**294**	⇓*i*P	**Pn**	**13 36 58.6**	**-2.6**
CFR	**Carcaliu**	**19.75**	**294**	⇑P	**Pn**	**13 37 04.1**	**-2.8**
CFR	**Carcaliu**	**19.75**	**294**	⇑*i*P	**Pn**	**13 37 04.1**	**-2.8**
CFR	**Carcaliu**	**19.75**	**294**	⇑*i*P	**Pn**	**13 37 04.1**	**-2.8**
SOKR	**Solikamsk**	**19.75**	**4**	*d*P	**Pn**	**13 37 08.0**	**+1.3**
SOKR				S	**Sn**	**13 40 36.9**	**-11**
SOKR				pmax	pmax		
	comp=Z,30nm,1.0s						
KURBB	**Kurchatov Arra**	**20.20**	**50**	⇑P	**P**	**13 37 11.8**	**+1.6**
	comp=Z,1.8nm,1.2s						
KURBB	**Kurchatov Arra**	**20.20**	**50**	P	**P**	**13 37 11.8**	**+1.7**
	comp=Z,1.8nm,1.2s						
KURK	**Kurchatov**	**20.29**	**50**	P	**P**	**13 37 11.8**	**+0.7**
KURK				*e*Sn	**S**	**13 40 48.3**	**-8.6**
KURK	**Kurchatov**	**20.29**	**50**	P	**P**	**13 37 11.8**	**+0.7**
	comp=Z,9.9nm,1.0s,baz=251,slow=11,SNR=36						
KURK				S	**S**	**13 40 53.1**	**-3.8**
	comp=Z,0.5nm,0.3s,baz=250,slow=20,SNR=3.8						
KURK				LR	LR	13 46 06.9	
	comp=Z,118nm,19.7s,MS3.2,baz=250,slow=40						
KURK	**Kurchatov**	**20.29**	**50**	P	**P**	**13 37 11.8**	**+0.7**
KURK				S	**S**	**13 40 53.1**	**-3.9**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KURK				smax			
	comp=N,1.0nm,0.3s						
KURK				MLR	MLR		
	comp=Z,118nm,19.7s,MS3.2						
KURK	**Kurchatov**	**20.29**	**50**	⇑P	**P**	**13 37 12.5**	**+1.3**
	comp=Z,11nm,0.9s						
KURK	**Kurchatov**	**20.29**	**50**	P	**P**	**13 37 12.5**	**+1.4**
	comp=Z,11nm,0.9s						
KURK				S	**S**	**13 40 53.1**	**-3.9**
	comp=Z,118nm,19.7s						
AKASG	**Malin Array Be**	**20.41**	**310**	P	**P**	**13 37 12.5**	**+0.1**
AKASG				S	**S**	**13 41 01.4**	**+2.1**
AKASG	**Malin Array Be**	**20.41**	**310**	P	**P**	**13 37 12.5**	**+0.1**
	comp=Z,6.3nm,0.3s,baz=102,slow=9.7,SNR=21						
AKASG				S	**S**	**13 41 01.4**	**+2.1**
	comp=Z,0.4nm,0.2s,baz=97,slow=22,SNR=3.4						
AKASG	**Malin Array Be**	**20.41**	**310**	P	**P**	**13 37 12.5**	**+0.1**
AKASG				S	**S**	**13 41 01.4**	**+2.1**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.3s						
AKASG	**Malin Array Be**	**20.41**	**310**	P	**P**	**13 37 12.5**	**+0.1**
	comp=Z,6.0nm,0.3s						
KIEV	**Kiev**	**20.41**	**310**	*e*P	**P**	**13 37 11.9**	**-0.6**
	comp=Z,19nm,0.4s						
KIEV				*e*S	**S**	**13 40 59.6**	**+0.1**
KIEV	**Kiev**	**20.41**	**310**	*e*P	**P**	**13 37 11.9**	**-0.6**
KIEV				*e*S	**S**	**13 40 59.6**	**+0.1**
KIEV				pmax	pmax		
	comp=Z,19nm,0.4s						
KIEV	**Kiev**	**20.41**	**310**	*e*P	**P**	**13 37 11.9**	**-0.6**
	comp=Z,19nm,0.4s						
KIEV				*e*S	**S**	**13 40 59.6**	**+0.1**
GRER		**20.58**	**294**	⇓P	**P**	**13 37 15.4**	**+1.0**
GRER		**20.58**	**294**	⇓*i*P	**P**	**13 37 15.4**	**+1.0**
GRER		**20.58**	**294**	⇓*i*P	**P**	**13 37 15.4**	**+1.0**
VRI	**Vrincioaia**	**20.81**	**296**	⇑P	**P**	**13 37 17.6**	**+0.9**
VRI	**Vrincioaia**	**20.81**	**296**	⇑*i*P	**P**	**13 37 17.6**	**+0.8**
VRI	**Vrincioaia**	**20.81**	**296**	⇑*i*P	**P**	**13 37 17.6**	**+0.8**
PLOR	**Plostina**	**20.86**	**295**	⇓P	**P**	**13 37 18.1**	**+0.7**
PLOR	**Plostina**	**20.86**	**295**	⇓*i*P	**P**	**13 37 18.1**	**+0.7**
PLOR	**Plostina**	**20.86**	**295**	⇓*i*P	**P**	**13 37 18.1**	**+0.7**
TESR		**20.95**	**297**	⇑P	**P**	**13 37 19.8**	**+1.5**
TESR		**20.95**	**297**	⇑*i*P	**P**	**13 37 19.8**	**+1.5**
TESR		**20.95**	**297**	⇑*i*P	**P**	**13 37 19.8**	**+1.5**
SULR		**21.04**	**292**	⇑P	**P**	**13 37 19.6**	**+0.4**
SULR		**21.04**	**292**	⇑*i*P	**P**	**13 37 19.6**	**+0.3**
SULR		**21.04**	**292**	⇑*i*P	**P**	**13 37 19.6**	**+0.3**
MLR	**Muntele Rosu**	**21.32**	**294**	P	**P**	**13 37 22.4**	**+0.2**
	comp=Z,2.6nm,0.3s,mb4.0,baz=348,slow=14,SNR=9.0						
MLR				LR	LR	13 47 32.1	
	comp=Z,60nm,21.8s,MS3.0,baz=87,slow=42						
MLR	**Muntele Rosu**	**21.32**	**294**	⇑P	**P**	**13 37 22.9**	**+0.6**
MLR	**Muntele Rosu**	**21.32**	**294**	⇑*i*P	**P**	**13 37 22.9**	**+0.6**
MLR	**Muntele Rosu**

MNK	**Minsk**	**22.82**	**318**	*e*P		**P**		**13 37 37.0**	**-1.2**
MNK				*e*				13 41 40.0	
MNK	**Minsk**	**22.82**	**318**	*e*P		**P**		**13 37 37.0**	**-1.2**
VTS	**Vitosha**	**23.26**	**287**	⇓P		**P**		**13 37 45.0**	**+2.0**
VTS	**Vitosha**	**23.26**	**287**	⇓*i*P		**P**		**13 37 45.0**	**+2.0**
VTS	**Vitosha**	**23.26**	**287**	⇓*i*P		**P**		**13 37 45.0**	**+2.0**
GZR	**Gura Zlata**	**23.53**	**294**	⇓P		**P**		**13 37 46.7**	**+1.0**
GZR	**Gura Zlata**	**23.53**	**294**	⇓*i*P		**P**		**13 37 46.7**	**+1.0**
GZR	**Gura Zlata**	**23.53**	**294**	⇓*i*P		**P**		**13 37 46.7**	**+1.0**
DRGR		**23.68**	**297**	⇓P		**P**		**13 37 49.4**	**+2.4**
DRGR		**23.68**	**297**	⇓*i*P		**P**		**13 37 49.4**	**+2.5**
DRGR		**23.68**	**297**	⇓*i*P		**P**		**13 37 49.4**	**+2.5**
KWP	**Kalwaria Pacla**	**24.10**	**304**	*e*P		**P**		**13 37 49.4**	**-1.4**
	comp=Z,12nm,0.4s,mb4.7								
KWP	**Kalwaria Pacla**	**24.10**	**304**	*e*P		**P**		**13 37 49.4**	**-1.4**
KWP					pmax	pmax			
	comp=Z,12nm,0.4s,mb4.7								
KWP	**Kalwaria Pacla**	**24.10**	**304**	*e*P		**P**		**13 37 49.4**	**-1.4**
	comp=Z,12nm,0.4s,mb4.7								
UZH	**Uzhgorod**	**24.19**	**302**	*e*P		sP		13 38 05.8	+2.2
UZH				*e*				13 38 13.6	
UZH				*i*				13 38 20.4	
UZH				*i*				13 38 32.4	
UZH	**Uzhgorod**	**24.19**	**302**	*e*P		sP		13 38 05.8	+2.2
NVS	**Novosibirsk**	**24.54**	**43**	*e*P		**P**		**13 37 55.6**	**+0.9**
NVS				*e*S		**S**		**13 42 01.8**	**-12**
NVS					pmax	pmax			
	comp=Z,20nm,1.6s,mb4.4								
NVS					pmax	pmax			
	comp=E,5.0nm,0.5s								
NVS					smax				
	comp=N,6.0nm,0.6s								
NVS					smax				
	comp=E,5.0nm,0.6s								
NVS	**Novosibirsk**	**24.54**	**43**	*e*P		**P**		**13 37 55.6**	**+0.9**
	comp=E,6.0nm,0.6s,mb4.3								
ZALV	**Zalesovo Beam**	**25.03**	**46**	P		**P**		**13 37 60.0**	**+0.7**
ZALV				S		**S**		**13 42 39.2**	**+18**
ZALV	**Zalesovo Beam**	**25.03**	**46**	P		**P**		**13 37 60.0**	**+0.8**
	comp=E,6.9nm,0.5s,mb4.4,baz=256,slow=9.9,SNR=30								
ZALV				S		**S**		**13 42 39.2**	**+18**
	comp=E,0.7nm,0.4s,baz=247,slow=21,SNR=2.3								
ZALV				LR		LR		13 49 21.2	
	comp=E,52nm,21.4s,MS3.0,baz=133,slow=40								
PSZ	**Piszkesteto**	**25.69**	**299**	⇓P		**P**		**13 38 11.3**	**+6.1**
PSZ	**Piszkesteto**	**25.69**	**299**	⇓*i*P		**P**		**13 38 11.3**	**+6.0**
JOF	**Joensuu**	**26.75**	**337**	*e*P		**P**		**13 38 15.4**	**+0.7**
JOF					pmax	pmax			
	comp=Z,4.0nm,0.3s,mb4.4								
JOF	**Joensuu**	**26.75**	**337**	*e*p		**P**		**13 38 15.4**	**+0.7**
	comp=Z,3.6nm,0.3s,mb4.4								
JOF	**Joensuu**	**26.75**	**337**	*e*P		**P**		**13 38 15.4**	**+0.7**
	comp=Z,3.6nm,0.3s,mb4.4								
MORC	**Moravsky Berou**	**27.44**	**303**	P		**P**		**13 38 19.7**	**-1.3**
	comp=Z,3.3nm,0.9s,mb3.9								
MORC				⇑P		pP		13 38 28.0	-1.5
MORC	**Moravsky Berou**	**27.44**	**303**	P		**P**		**13 38 19.7**	**-1.3**
MORC				S		pP		13 38 28.0	-1.4
MORC					pmax	pmax			
	comp=Z,3.0nm,0.9s,mb3.8								
MORC	**Moravsky Berou**	**27.44**	**303**	⇑*i*P		**P**		**13 38 28.0**	**+7.0**
MORC	**Moravsky Berou**	**27.44**	**303**	P		**P**		**13 38 19.7**	**-1.3**
	comp=Z,3.0nm,0.9s,mb3.8								
FINES	**FINESS Array B**	**27.50**	**331**	P		**P**		**13 38 22.3**	**+0.9**
FINES				S		S		13 43 28.6	+28
FINES	**FINESS Array B**	**27.50**	**331**	P		**P**		**13 38 22.3**	**+0.9**
	comp=Z,1.2nm,0.3s,mb4.0,baz=135,slow=11,SNR=16								
FINES				S		S		13 43 28.6	+28
	comp=Z,1.3nm,0.7s,baz=131,slow=21,SNR=2.6								
FINES				LR		LR		13 51 03.0	
	comp=Z,93nm,18.3s,MS3.4,baz=127,slow=40								
FINES	**FINESS Array B**	**27.50**	**331**	P		**P**		**13 38 22.3**	**+0.8**
	comp=Z,93nm,18.3s								
KAF	**Kangasniemi**	**27.84**	**332**	*e*P		**P**		**13 38 31.6**	**+7.1**
KAF					pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.0								
KAF	**Kangasniemi**	**27.84**	**332**	*e*p		**P**		**13 38 31.6**	**+7.1**
	comp=Z,1.9nm,0.5s,mb4.0								
VRAC	**Vranov**	**28.00**	**302**	LR		LR		13 51 41.2	
	comp=Z,50nm,19.3s,MS3.1,baz=103,slow=41								
BRG	**Berggiesshubel**	**29.85**	**305**	*e*(P)		sP		13 38 54.1	-0.4
	comp=Z,3.0nm,0.8s								
BRG	**Berggiesshubel**	**29.85**	**305**	*e*P		sP		13 38 54.1	-0.4
BRG					pmax	pmax			
	comp=Z,2.0nm,0.8s,mb3.9								
AQU	**L'Aquila**	**30.49**	**288**	P		**P**		**13 38 45.7**	**-2.5**
	comp=Z,9.4nm,0.8s,mb4.6								
AQU	**L'Aquila**	**30.49**	**288**	P		**P**		**13 38 45.7**	**-2.5**
AQU					pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.5								
AQU	**L'Aquila**	**30.49**	**288**	P		**P**		**13 38 45.7**	**-2.5**
	comp=Z,9.0nm,0.8s,mb4.5								
HFS	**Hagfors**	**32.14**	**322**	P		**P**		**13 39 02.7**	**+0.2**
	comp=Z,0.8nm,0.3s,mb4.0,baz=103,slow=8.6,SNR=10								
HFS				LR		LR		13 53 29.9	
	comp=Z,70nm,18.3s,MS3.4,baz=126,slow=39								
HFS	**Hagfors**	**32.14**	**322**	P		**P**		**13 39 02.7**	**+0.2**
HFS					pmax	pmax			
	comp=Z,1.0nm,0.3s								
HFS				MLR		MLR			
	comp=Z,71nm,18.3s								
HFS	**Hagfors**	**32.14**	**322**	P		**P**		**13 39 02.7**	**+0.2**
	comp=Z,71nm,18.3s								
KEV	**Kevo**	**33.10**	**343**	*e*P		**P**		**13 39 12.0**	**+1.1**
	comp=Z,9.0nm,0.8s,mb4.8								
KEV	**Kevo**	**33.10**	**343**	*e*P		**P**		**13 39 11.7**	**+0.9**
KEV					pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.6								
KEV	**Kevo**	**33.10**	**343**	*e*p		**P**		**13 39 11.7**	**+0.9**
	comp=Z,3.4nm,0.4s,mb4.6								
KEV	**Kevo**	**33.10**	**343**	*e*P		**P**		**13 39 11.7**	**+0.9**
	comp=Z,3.4nm,0.4s,mb4.6								
ARCES	**ARCESS Array B**	**33.28**	**342**	P		**P**		**13 39 13.6**	**+1.2**
ARCES	**ARCESS Array B**	**33.28**	**342**	P		**P**		**13 39 13.6**	**+1.2**
	comp=Z,0.7nm,0.4s,mb4.0,baz=138,slow=9.0,SNR=11								
ARCES	**ARCESS Array B**	**33.28**	**342**	P		**P**		**13 39 13.6**	**+1.2**
ARCES					pmax	pmax			
	comp=Z,1.0nm,0.4s								
ARCES	**ARCESS Array B**	**33.28**	**342**	P		**P**		**13 39 13.6**	**+1.2**
	comp=Z,1.0nm,0.4s,mb4.1								
NB2	**NORSAR Subarra**	**33.60**	**323**	P		**P**		**13 39 15.0**	**-0.2**
	comp=Z,1.5nm,0.6s,mb4.1,SNR=7.1								
NOA	**NORSAR Array B**	**33.60**	**323**	P		**P**		**13 39 14.6**	**-0.7**
NOA	**NORSAR Array B**	**33.60**	**323**	P		**P**		**13 39 14.6**	**-0.7**
	comp=Z,0.9nm,0.8s,mb3.8,baz=109,slow=8.3,SNR=3.6								
NOA				LR		LR		13 54 16.1	
	comp=Z,77nm,19.3s,MS3.4,baz=115,slow=39								
NOA	**NORSAR Array B**	**33.60**	**323**	P		**P**		**13 39 14.6**	**-0.6**
NOA					pmax	pmax			
	comp=Z,1.0nm,0.8s								
NOA				MLR		MLR			
	comp=Z,77nm,19.3s								
NOA	**NORSAR Array B**	**33.60**	**323**	P		**P**		**13 39 14.6**	**-0.6**
	comp=Z,77nm,19.3s								
CDF	**Champ du Feu**	**34.13**	**300**	*e*P		**P**		**13 39 19.4**	**-0.7**
CDF	**Champ du Feu**	**34.13**	**300**	*e*P		**P**		**13 39 19.4**	**-0.7**
HINF	**Hinteralfeld**	**34.46**	**299**	*e*P		**P**		**13 39 23.1**	**+0.2**
HINF	**Hinteralfeld**	**34.46**	**299**	*e*P		**P**		**13 39 23.1**	**+0.2**
LPG	**La Plagne**	**34.78**	**295**	*e*P		**P**		**13 39 25.9**	**+0.2**
LPG	**La Plagne**	**34.78**	**295**	*e*P		**P**		**13 39 25.9**	**+0.2**
HAU	**Haudompre**	**34.78**	**299**	*e*P		**P**		**13 39 25.2**	**-0.5**
HAU				*e*MLR		MLR			
	comp=Z,34nm,22.8s,MS2.7								
HAU	**Haudompre**	**34.78**	**299**	*e*P		**P**		**13 39 25.2**	**-0.5**
LPL	**La Plagne**	**34.79**	**295**	*e*P		**P**		**13 39 26.0**	**+0.2**
LPL	**La Plagne**	**34.79**	**295**	*e*P		**P**		**13 39 26.0**	**+0.2**
MBDF	**Montbardon**	**34.88**	**294**	*e*P		**P**		**13 39 26.4**	**-0.2**
MBDF	**Montbardon**	**34.88**	**294**	*e*P		**P**		**13 39 26.4**	**-0.2**
GTA	**Gaotai**	**34.95**	**76**	*e*P		**P**		**13 39 29.0**	**+1.8**
GTA				pP		pP		13 39 33.6	-2.2
GTA				sP		sP		13 39 37.0	-2.3
GTA					pmax	pmax			
	comp=Z,4.0nm,1.1s,mb4.3								
CABF	**La Chapelle**	**35.10**	**297**	*e*P		**P**		**13 39 28.1**	**-0.3**
	comp=Z,7.3nm,0.7s,mb4.4								
CABF	**La Chapelle**	**35.10**	**297**	*e*P		**P**		**13 39 28.1**	**-0.3**
	comp=Z,3.7nm,0.7s,mb4.4								
CABF	**La Chapelle**	**35.10**	**297**	*e*P		**P**		**13 39 28.1**	**-0.3**
CABF					pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.5								
CABF	**La Chapelle**	**35.10**	**297**	*e*P		**P**		**13 39 28.1**	**-0.3**
	comp=Z,3.7nm,0.7s,mb4.4								
ORIF	**Oris-en-Rattie**	**35.48**	**294**	*e*P		**P**		**13 39 31.4**	**-0.3**
ORIF				*e*MLR		MLR			
	comp=Z,41nm,20.8s,MS2.9								
ORIF	**Oris-en-Rattie**	**35.48**	**294**	*e*P		**P**		**13 39 31.4**	**-0.3**
ZAK	**Zakamensk**	**35.67**	**56**	*e*P		**P**		**13 39 35.0**	**+1.7**
ZAK					pmax	pmax			
	comp=Z,1.0nm,1.1s,mb3.7								
ZAK	**Zakamensk**	**35.67**	**56**	*e*P		**P**		**13 39 35.0**	**+1.7**
	comp=Z,1.0nm,1.1s,mb3.7								
BAIF	**Baives**	**36.05**	**303**	*e*P		**P**		**13 39 36.0**	**-0.5**
BAIF	**Baives**	**36.05**	**303**	*e*P		**P**		**13 39 36.0**	**-0.5**
SMF	**Signal de Mont**	**36.63**	**297**	*e*P		**P**		**13 39 41.0**	**-0.5**
	comp=Z,4.5nm,0.6s,mb4.2								
SMF	**Signal de Mont**	**36.63**	**297**	*e*P		**P**		**13 39 41.0**	**-0.5**
	comp=Z,2.3nm,0.6s,mb4.2								
SMF	**Signal de Mont**	**36.63**	**297**	*e*P		**P**		**13 39 41.0**	**-0.5**
SMF					pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.1								
SMF	**Signal de Mont**	**36.63**	**297**	*e*P		**P**		**13 39 41.0**	**-0.5**
	comp=Z,2.2nm,0.6s,mb4.2								
SSF	**Saint Saulge**	**36.80**	**298**	*e*P		**P**		**13 39 42.4**	**-0.6**
SSF	**Saint Saulge**	**36.80**	**298**	*e*P		**P**		**13 39 42.4**	**-0.6**
AVF	**Avril sur Loir**	**36.94**	**298**	*e*P		**P**		**13 39 44.1**	**-0.1**
	comp=Z,16nm,1.0s,mb4.5								
AVF	**Avril sur Loir**	**36.94**	**298**	*e*P		**P**		**13 39 44.1**	**-0.1**
	comp=Z,7.9nm,1.0s,mb4.5								
AVF	**Avril sur Loir**	**36.94**	**298**	*e*P		**P**		**13 39 44.1**	**-0.1**
AVF					pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.5								
AVF	**Avril sur Loir**	**36.94**	**298**	*e*P		**P**		**13 39 44.1**	**-0.1**
	comp=Z,7.9nm,1.0s,mb4.5								
BGF	**Bois d'Agland**	**37.32**	**298**	*e*P		**P**		**13 39 48.0**	**+0.6**
BGF	**Bois d'Agland**	**37.32**	**298**	*e*P		**P**		**13 39 48.0**	**+0.6**
TCF	**Toulx Ste Croi**	**37.80**	**297**	*e*P		**P**		**13 39 51.7**	**+0.3**
TCF	**Toulx Ste Croi**	**37.80**	**297**	*e*P		**P**		**13 39 51.7**	**+0.3**
SONM	**Songino Array**	**37.93**	**60**	P		**P**		**13 39 53.2**	**+0.7**
	comp=Z,0.9nm,0.7s,mb3.6,baz=278,slow=10.0,SNR=8.3								
SONM	**Songino Array**	**37.93**	**60**	P		**P**		**13 39 53.2**	**+0.6**
SONM					pmax	pmax			
	comp=Z,1.0nm,0.7s								
SONM	**Songino Array**	**37.93**	**60**	P		**P**		**13 39 53.2**	**+0.6**
	comp=Z,1.0nm,0.7s,mb3.6								
CAF	**Calviac**	**38.14**	**295**	*e*P		**P**		**13 39 54.2**	**-0.2**
CAF	**Calviac**	**38.14**	**295**	*e*P		**P**		**13 39 54.2**	**-0.2**
ULN	**Ulaanbaatar**	**38.37**	**60**	*e*P		**P**		**13 39 57.0**	**+0.7**
	comp=Z,5.4nm,0.8s,mb4.3								
ULN	**Ulaanbaatar**	**38.37**	**60**	*e*P		**P**		**13 39 57.0**	**+0.8**
ULN					pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.3								
ULN	**Ulaanbaatar**	**38.37**	**60**	*e*P		**P**		**13 39 57.0**	**+0.8**
	comp=Z,5.0nm,0.8s,mb4.3								
LDF	**La Druitiere**	**39.01**	**301**	*e*P		**P**		**13 40 01.5**	**-0.1**
	comp=Z,4.4nm,0.5s,mb4.1								
LDF	**La Druitiere**	**39.01**	**301**	*e*P		**P**		**13 40 01.5**	**-0.1**
	comp=Z,2.2nm,0.5s,mb4.1								
LDF	**La Druitiere**	**39.01**	**301**	*e*P		**P**		**13 40 01.5**	**-0.1**
LDF					pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.1								
LDF	**La Druitiere**	**39.01**	**301**	*e*P		**P**		**13 40 01.5**	**-0.1**
	comp=Z,2.2nm,0.5s,mb4.1								
FLN	**La Foliniere**	**39.22**	**302**	*e*P		**P**		**13 40 03.4**	**0.0**
FLN				*e*MLR		MLR			
	comp=Z,50nm,21.0s,MS3.0								
FLN	**La Foliniere**	**39.22**	**302**	*e*P		**P**		**13 40 03.4**	**0.0**
MFF	**Saint Martin d**	**39.35**	**298**	*e*P		**P**		**13 40 03.9**	**-0.5**
MFF	**Saint Martin d**	**39.35**	**298**	*e*P		**P**		**13 40 03.9**	**-0.5**
GRR	**Gorron**	**39.53**	**301**	*e*P		**P**		**13 40 05.4**	**-0.5**
GRR	**Gorron**	**39.53**	**301**	*e*P		**P**		**13 40 05.4**	**-0.5**
EKA	**Eskdalemuir Ar**	**40.30**	**312**	P		**P**		**13 40 12.1**	**-0.1**
	comp=Z,2.1nm,0.7s,mb4.0,baz=95,slow=8.4,SNR=12								
EKA	**Eskdalemuir Ar**	**40.30**	**312**	P		**P**		**13 40 12.1**	**-0.1**
EKA					pmax	pmax			
	comp=Z,2.0nm,0.7s								
EKA	**Eskdalemuir Ar**	**40.30**	**312**	P		**P**		**13 40 12.1**	**-0.1**
	comp=Z,2.0nm,0.7s,mb4.0								
ETSF	**Etsaut**	**40.45**	**293**	*e*P		**P**		**13 40 13.3**	**-0.3**
ETSF	**Etsaut**	**40.45**	**293**	*e*P		**P**		**13 40 13.3**	**-0.3**
SGMF	**Saint Gilles**	**40.67**	**301**	*e*P		**P**		**13 40 15.3**	**-0.1**
	comp=Z,2.1nm,0.8s,mb4.3								
SGMF	**Saint Gilles**	**40.67**	**301**	*e*P		**P**		**13 40 15.3**	**-0.1**
	comp=Z,5.8nm,0.8s,mb4.3								
SGMF	**Saint Gilles**	**40.67**	**301**	*e*P		**P**		**13 40 15.3**	**-0.1**
SGMF					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.3								
SGMF	**Saint Gilles**	**40.67**	**301**	*e*P		**P**		**13 40 15.3**	**-0.1**
	comp=Z,5.8nm,0.8s,mb4.3								
ROSF	**Rostrenen**	**41.12**	**301**	*e*P		**P**		**13 40 19.0**	**-0.1**
ROSF	**Rostrenen**	**41.12**	**301**	*e*P		**P**		**13 40 19.0**	**-0.1**
QUIF	**Quistinic**	**41.13**	**301**	*e*P		**P**		**13 40 19.0**	**-0.2**
QUIF	**Quistinic**	**41.13**	**301**	*e*P		**P**		**13 40 19.0**	**-0.2**
SPITS	**Spitsbergen Ar**	**41.32**	**349**	P		**P**		**13 40 22.3**	**+1.9**
	comp=Z,1.4nm,0.3s,mb4.1,baz=94,slow=5.9,SNR=27								
SPITS	**Spitsbergen Ar**	**41.32**	**349**	P		**P**		**13 40 22.3**	**+1.9**
SPITS					pmax	pmax			
	comp=Z,1.0nm,0.3s								
SPITS	**Spitsbergen Ar**	**41.32**	**349**	P		**P**		**13 40 22.3**	**+1.9**
	comp=Z,1.0nm,0.3s,mb3.9								
KBS	**Kingsbay**	**42.48**	**349**	*c i*P		**P**		**13 40 31.2**	**+1.3**
KBS					pmax	pmax			
	comp=Z,14nm,2.5s,mb4.2								
KBS	**Kingsbay**	**42.48**	**349**	*i*P		**P**		**13 40 31.2**	**+1.3**
	comp=Z,14nm,2.5s,mb4.2								
KMI	**Kunming**	**43.12**	**95**	P		**P**		**13 40 36.3**	**+0.6**
KMI					pmax	pmax			
	comp=Z,14nm,0.9s,mb4.7								
ESDC	**Sonseca Array**	**43.86**	**289**	P		**P**		**13 40 40.9**	**-0.6**
	comp=Z,0.8nm,0.5s,mb3.7,baz=68,slow=8.0,SNR=10.0								
ESDC					PcP	PcP		13 42 27.2	-0.2
	comp=Z,0.3nm,0.5s,baz=86,slow=4.0,SNR=4.4								
JMIC	**Jan Mayen**	**43.94**	**335**	LR		LR		13 59 08.4	
	comp=Z,60nm,20.8s,MS3.5,baz=85,slow=36								
CMAR	**Chiang Mai Arr**	**44.10**	**106**	P		**P**		**13 40 42.8**	**-0.9**
	comp=Z,0.3nm,0.3s,mb3.5,baz=301,slow=7.9,SNR=6.2								
CMAR	**Chiang Mai Arr**	**44.10**	**106**	P		**P**		**13 40 42.8**	**-0.9**
TORD	**Torodi Ar. Bea**	**52.97**	**255**	P		**P**		**13 41 48.9**	**-3.1**
	comp=Z,0.8nm,0.8s,mb3.7,baz=44,slow=6.4,SNR=7.6								
KSRS	**Korea Array**	**56.16**	**67**	P		**P**		**13 42 15.2**	**+0.2**
	comp=Z,3.2nm,0.7s,mb4.5,baz=291,slow=6.7,SNR=11								
KSRS	**Korea Array**	**56.16**	**67**	P		**P**		**13 42 15.2**	**+0.3**
KSRS					pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.4								
KSRS	**Korea Array**	**56.16**	**67**	P		**P**		**13 42 15.2**	**+0.3**
	comp=Z,3.0nm,0.7s,mb4.4								
BILL	**Bilibino**	**61.13**	**23**	*d i*P		**P**		**13 42 50.7**	**+1.7**
BILL				*e*				13 43 05.7	
BILL				*e*				13 45 00.9	
BILL				*e*S		**S**		**13 51 03.8**	**-2.2**
BILL					pmax	pmax			
	comp=Z,4.0nm,1.2s,mb4.4								
BILL					MLR	MLR			
	comp=Z,100nm,18.0s,MS4.0								
BILL	**Bilibino**	**61.13**	**23**	*i*P		**P**		**13 42 50.7**	**+1.7**
	comp=Z,4.0nm,1.2s,mb4.4								
BILL				*e*S		**S**		**13 51 03.8**	**-2.2**
	comp=Z,100nm,18.0s								
DBIC	**Dimbokro**	**62.06**	**254**	P		**P**		**13 42 54.3**	**-1.7**
	comp=Z,7.8nm,0.9s,mb4.8,baz=23,slow=6.1,SNR=4.2								
DBIC	**Dimbokro**	**62.06**	**254**	P		**P**		**13 42 54.3**	**-1.7**
DBIC					pmax	pmax			
	comp=Z,8.0nm,0.9s								
DBIC	**Dimbokro**	**62.06**	**254**	P		**P**		**13 42 54.3**	**-1.7**
	comp=Z,8.0nm,0.9s,mb4.8								
KIC	**Kosan Boka**	**62.18**	**254**	*e*P		**P**		**13 42 55.4**	**-1.4**
	comp=Z,82nm,1.6s								
TIC	**Toumodi**	**62.20**	**254**	*e*P		**P**		**13 42 54.4**	**-2.6**
	comp=Z,6.2nm,0.2s,mb5.3								
TIC	**Toumodi**	**62.20**	**254**	*e*P		**P**		**13 42 54.4**	**-2.6**
TIC					pmax	pmax			
	comp=Z,6.0nm,0.2s,mb5.4								
TIC	**Toumodi**	**62.20**	**254**	*e*P		**P**		**13 42 54.4**	**-2.6**
	comp=Z,6.0nm,0.2s,mb5.4								
LIC	**Lamto**	**62.48**	**254**	*e*P		**P**		**13 42 57.4**	**-1.5**
	comp=Z,86nm,1.7s								
LIC	**Lamto**	**62.48**	**254**	⇑*i*P		**P**		**13 42 57.5**	**-1.4**
	comp=Z,10nm,0.5s,mb4.9								
LIC	**Lamto**	**62.48**	**254**	⇑*i*P		**P**		**13 42 57.5**	**-1.4**
	comp=Z,5.2nm,0.5s,mb4.9								
LIC	**Lamto**	**62.48**	**254**	⇑*i*P		**P**		**13 42 57.5**	**-1.4**
	comp=Z,5.2nm,0.5s,mb4.9								
ILAR	**Eielson Array**	**74.36**	**9**	P		**P**		**13 44 12.9**	**+0.6**
	comp=Z,1.1nm,0.8s,mb3.9,baz=335,slow=4.8,SNR=15								
ILAR				LR		LR		14 18 56.5	
	comp=Z,33nm,18.9s,MS3.6,baz=24,slow=37								
ILAR	**Eielson Array**	**74.36**	**9**	P		**P**		**13 44 13.0**	**+0.7**
ILAR					pmax	pmax			
	comp=Z,1.0nm,0.8s								
ILAR				MLR		MLR			
	comp=Z,33nm,18.9s								
ILAR	**Eielson Array**	**74.36**	**9**	P		**P**		**13 44 12.9**	**+0.6**
ULM	**Lac du Bonnet**	**86.39**	**341**	LR		LR		14 30 05.4	
	comp=Z,34nm,20.9s,MS3.7,baz=24,slow=40								

GUC 23 13:37:25.5±0.7, 22.58S×66.86W, h271km±36km, ML4.3, 1C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MACH	**Maria Elena**	**2.71**	**278**	⇓*i*P		Pn	13 38 18.9	+2.6
MACH				*i* S		S	13 38 59.9	+3.3
CEN1	**Los Morros**	**3.18**	**255**	⇓*i*P		Pn	13 38 26.0	+4.8
CEN1				*i* S		S	13 39 11.4	+6.0
CEN1				AML		AML	13 39 12.4	
	comp=E,88nm,0.2s							
MECH	**Mejillones**	**3.35**	**260**	*e*P		Pn	13 38 25.7	+2.7
MECH				*i* S		S	13 39 11.3	+2.6
MECH				AML		AML	13 39 14.2	
	comp=E,149nm,0.2s							
ANCH	**Antofagasta**	**3.44**	**251**	⇑*i*P		Pn	13 38 22.0	-2.0
ANCH				*i* S		S	13 39 08.0	-2.6
ANCH				AML		AML	13 39 10.1	
	comp=E,278nm,0.1s							
PSGC	**Pisagua**	**4.25**	**314**	*e*P		Pn	13 38 35.4	+2.2
PSGC				*i* S		S	13 39 29.6	+2.4
MNMC	**Miæe Miæ**	**4.28**	**323**	*e*P		Pn	13 38 36.9	+3.3
MNMC				*i* S		S	13 39 32.2	+4.4

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*DJA **23** 13:46:50, 2.50S×121.80E, h120km, MLv3.9/4*
*ISCJB **23** 13:46:55.2±0.9, 2.46S±0.06×121.68E±0.07, h33km, Error ellipse: s-maj=10.7km s-min=8.5km az=29.4*

ISC 23 13:46:56.1±0.9, 2.44S±0.07×121.72E±0.07, h35km, n4, σ1°63/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
APSI	**Ampana**	**1.52**	**357**	P		**Pn**	**13 47 19.7**	**-1.1**
LUWI	**Luwuk**	**1.74**	**37**	P		**Pn**	**13 47 23.4**	**-0.5**
LUWI				S		**Sn**	**13 47 47.5**	**+2.6**
KDI	**Kendari**	**1.76**	**149**	P		**Pn**	**13 47 18.4**	**-5.7**
KDI				S		**Sn**	**13 47 45.3**	**+0.1**
TTSI	**Tana Toraja**	**1.99**	**252**	P		**Pn**	**13 47 24.7**	**-2.6**
TTSI				S		**Sn**	**13 47 53.0**	**+2.0**

GUC 23 13:55:43.8±0.8, 21.59S×68.49W, h111km±43km, ML3.5, 3C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MACH	**Maria Elena**	**1.32**	**243**	⇓*i*P		Pn	13 56 09.4	+0.8
MACH				*i* S		Sn	13 56 29.1	+1.

AYVA	**Ayvalik**	**0.66**	**51**	*i* P	**Pg**	**14 03 19.9**	**-0.4**
AYVA				*i* S	**Sg**	**14 03 29.5**	**+0.6**
AYVA	**Ayvalik**	**0.66**	**51**	*i* P	**Pg**	**14 03 19.9**	**-0.4**
AYVA				*i* S	**Sg**	**14 03 29.5**	**+0.6**
URLA	**Izmir**	**0.69**	**140**	*i* P	**Pg**	**14 03 19.9**	**-0.9**
URLA				*i* S	**Sg**	**14 03 29.6**	**-0.2**
URLA	**Izmir**	**0.69**	**140**	*i* P	**Pg**	**14 03 19.9**	**-1.0**
URLA				*i* S	**Sg**	**14 03 29.6**	**-0.3**
BOZC	**Bozcaada**	**0.95**	**1**	*i* P	**Pg**	**14 03 24.8**	**-1.1**
BOZC				*i* S	**Sg**	**14 03 39.3**	**+1.1**
SMG	**Samos**	**1.34**	**152**	*e*PN	**Pn**	**14 03 32.0**	**0.0**
SMG				*e*SN	**Sn**	**14 03 50.6**	**+0.9**
SMG	**Samos**	**1.34**	**152**	*e*Sn	**Sn**	**14 03 50.6**	**+0.9**
SMG	**Samos**	**1.34**	**152**	*e*Pn	**Pn**	**14 03 32.0**	**0.0**
BALY	**Balya**	**1.49**	**55**	*i* P	**Pn**	**14 03 33.9**	**-0.2**
BALY				*i* S	**Sn**	**14 03 53.1**	**-0.4**
BALY	**Balya**	**1.49**	**55**	*i* P	**Pn**	**14 03 33.9**	**-0.2**
BALY				*i* S	**Sn**	**14 03 53.1**	**-0.4**

*TEH **23** 14:06:05.4, 31°.35N × 47°.44E, h7km*
*KISR **23** 14:06:06.8 ± 0.6, 31°.15N × 47°.98E, h1km ± 5km, ML2.5*
ISC 23 14:06:05.9 ± 1.4, **31°.48N** ± 0°.02 × **47°.55E** ± 0°.05, **h0**km ± 9km,
n22, σ **0§75/32**, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MIB	**Mutribah**	**1.68**	**186**	*e*P		**Pn**	**14 06 36.3**	**-0.2**
MIB				*e*S		**Sn**	**14 06 59.2**	**+0.6**
MIB				AML		AML	14 06 59.9	
	comp=Z,98nm,0.6s							
UMR	**Umm Al-Rimmam**	**1.92**	**176**	*e*P		**Pn**	**14 06 39.6**	**-0.2**
NAY	**Al-Naaiem**	**2.24**	**187**	*e*P		**Pn**	**14 06 45.2**	**+1.1**
NAY				*e*S		**Sn**	**14 07 13.6**	**+1.1**
NAY				AML		AML	14 07 17.0	
	comp=Z,34nm,0.3s							
KBD	**Kabd**	**2.30**	**177**	*e*P		**Pn**	**14 06 44.9**	**0.0**
RDF	**Al-Radifah**	**2.54**	**180**	*e*P		**Pn**	**14 06 48.6**	**+0.2**
IKOM	**Komasi**	**2.69**	**359**	*e*Pn		**Pn**	**14 06 50.2**	**-0.2**
IKOM				*e*Sn		**Sn**	**14 07 24.4**	**+0.8**
IKOM				*e*			14 07 47.3	
	comp=Z,1μm,0.3s							
QRN	**Al-Qurain**	**2.74**	**173**	*e*P		**Pn**	**14 06 50.5**	**-0.5**
QRN				*e*S		**Sn**	**14 07 23.5**	**-1.3**
QRN				AML		AML	14 07 25.4	
	comp=Z,24nm,0.3s							
IGHG	**Ghaleghazi**	**2.96**	**344**	*e*Pn		**Pn**	**14 06 54.3**	**+0.2**
IGHG				*e*			14 08 03.3	
	comp=Z,2μm,0.3s							
IPIR	**Pirpir**	**3.08**	**66**	*e*Pn		**Pn**	**14 06 56.9**	**+1.2**
IPIR				*e*			14 07 13.1	
	comp=Z,496nm,0.2s							
IPIR				*e*Sn		**Sn**	**14 07 34.5**	**+1.3**
IVIS	**Veis**	**3.10**	**349**	*e*Pn		**Pn**	**14 06 55.5**	**-0.5**
IVIS				*e*			14 07 24.9	
	comp=Z,536nm,0.1s							
IVIS				*e*Sn		**Sn**	**14 07 33.5**	**-0.2**
IDHR	**Dehrash**	**3.36**	**343**	*e*Pn		**Pn**	**14 06 59.0**	**-0.6**
IDHR				*e*			14 07 47.7	
	comp=Z,768nm,0.2s							
ILIN	**Lien**	**3.47**	**352**	*e*Pn		**Pn**	**14 07 01.1**	**0.0**
ILIN				*e*Sn		**Sn**	**14 07 41.9**	**-0.9**
ILIN				*e*			14 07 51.1	
	comp=N,646nm,0.0s							
IKLH	**Kolahrood**	**3.87**	**61**	*e*		**Pg**	**14 07 20.3**	**+0.2**
	comp=Z,281nm,0.2s							
IKLH				*e*Pn		**Pn**	**14 07 07.2**	**+0.6**
IKLH				*e*Sn		**Sn**	**14 07 51.7**	**-1.0**
IGAR	**Gharneh**	**3.93**	**75**	*e*		**Pn**	**14 07 08.1**	**+0.8**
	comp=Z,244nm,0.1s							
IGAR				*e*Pn		**Pn**	**14 07 07.3**	**-0.1**
IZEF	**Zefreh**	**4.29**	**69**	*e*Pn		**Pn**	**14 07 12.4**	**+0.1**
IZEF				*e*			14 07 14.2	
	comp=Z,133nm,0.1s							
IRAZ	**Razeghan**	**4.39**	**26**	*e*Pn		**Pn**	**14 07 14.8**	**+1.0**
IRAZ				*e*			14 07 18.3	
	comp=Z,459nm,0.1s							
IR3	**Iran Long-Peri**	**4.93**	**35**	*e*Pn		**Pn**	**14 07 21.5**	**+0.3**
IVRN	**Varamin**	**4.95**	**44**	*e*Pn		**Pn**	**14 07 20.6**	**-0.9**
IPAR	**Pars**	**5.01**	**108**	*e*Pn		**Pn**	**14 07 21.7**	**-0.5**
ISRV	**Sarvestan**	**5.24**	**112**	*e*Pn		**Pn**	**14 07 23.5**	**-1.9**
IDMV	**Damavand**	**5.54**	**41**	*e*Pn		**Pn**	**14 07 29.5**	**-0.1**
IDMV				*e*			14 08 36.0	
	comp=Z,79nm,0.3s							
IMEH	**Mehriz**	**6.03**	**89**	*e*Pn		**Pn**	**14 07 35.9**	**-0.4**
IMEH				*e*			14 07 43.9	
	comp=Z,85nm,0.2s							

CASC 23 14:21:57.8 ± 3.3, **7°.39N** × **82°.84W**, **h28**km ± 14km, **MD4.0,**
South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ACR	**Cerro Adams**	**1.30**	**346**	*e*P		Pn	14 22 19.4	-0.7
BRU2	**Volcan**	**1.41**	**6**	*i* P		Pn	14 22 21.6	-0.1
BRU2				*e*S		Sn	14 22 40.2	+0.9
TBS2		**1.41**	**8**	*i* P		Pn	14 22 18.8	-2.9
URSC	**Urasca**	**2.60**	**339**	*e*P		Pn	14 22 39.5	+1.4
URSC				*e*S		Sn	14 23 10.8	+2.0
LAJ	**Bijagual**	**2.77**	**333**	*e*P		Pn	14 22 41.8	+1.4
PRS1	**Puriscal**	**2.96**	**331**	*e*P		Pn	14 22 43.3	+0.3
PRS1				*e*S		Sn	14 23 18.7	+1.0
BCIP	**Isla Barro Col**	**3.46**	**59**	*e*P		Pn	14 22 50.1	+0.3
BCIP				*e*S		Sn	14 23 32.4	+2.4

*ATH **23** 14:26:26.1, 36°.98N × 27°.73E, h90km ± 5km*
*DDA **23** 14:26:27.7, 36°.92N × 27°.56E, h6km ± 4km, Md3.0*
*ISK **23** 14:26:27.1, 36°.95N × 27°.54E, h2km, MD3.0*
*ISCJB **23** 14:26:28.3 ± 0.5, 36°.93N ± 0°.02 × 27°.53E ± 0°.04, h5km ± 5km,*
Error ellipse: s-maj=5.5km s-min=3.6km az=164.8
*CSEM **23** 14:26:28.3 ± 0.2, 36°.93N × 27°.51E, h5km, MD3.0, Error*
ellipse: s-maj=4.2km s-min=2.7km az=70.0
ISC 23 14:26:28.7 ± 0.5, **36°.92N** ± 0°.02 × **27°.50E** ± 0°.04, **h5**km ± 4km,
n32, σ **1§01/54**, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DAT	**Datca**	**0.20**	**163**	*e*PG		**Pg**	**14 26 32.5**	**-0.1**
DAT				*e*SG		**Sg**	**14 26 36.6**	**+1.3**
DAT	**Datca**	**0.20**	**163**	*e*Pg		**Pg**	**14 26 32.5**	**-0.1**
DAT				*e*Sg		**Sg**	**14 26 36.6**	**+1.3**
BODT	**Bodrum**	**0.21**	**312**	*e*PG		**Pg**	**14 26 32.3**	**-0.5**
BODT				*e*SG		**Sg**	**14 26 36.4**	**+0.8**
BODT	**Bodrum**	**0.21**	**312**	*e*Pg		**Pg**	**14 26 32.3**	**-0.4**
BODT				*e*Sg		**Sg**	**14 26 36.4**	**+0.9**
MLSB	**Milas**	**0.43**	**30**	*e*PG		**Pg**	**14 26 36.0**	**-1.0**
MLSB				*e*SG		**Sg**	**14 26 41.9**	**-0.7**
MLSB	**Milas**	**0.43**	**30**	*e*Pg		**Pg**	**14 26 36.0**	**-1.0**
MLSB				*e*Sg		**Sg**	**14 26 41.9**	**-0.7**
YER	**Yerkesik**	**0.66**	**71**	*e*PG		**Pg**	**14 26 39.9**	**-1.4**
YER	**Yerkesik**	**0.66**	**71**	*e*Pg		**Pg**	**14 26 39.9**	**-1.4**
AYDN	**Tasoluk**	**0.80**	**22**	*i* P		**Pg**	**14 26 42.9**	**-1.0**
AYDN				*i* S		**Sg**	**14 26 53.9**	**-0.3**
AYDN	**Tasoluk**	**0.80**	**22**	*i* P		**Pg**	**14 26 42.9**	**-1.0**
AYDN				*i* S		**Sg**	**14 26 53.9**	**-0.4**
GCAM	**G?zelcaml?**	**0.81**	**345**	*i* P		**Pg**	**14 26 43.8**	**-0.3**
GCAM				*i* S		**Sg**	**14 26 56.0**	**+1.4**
GCAM	**G?zelcaml?**	**0.81**	**345**	*i* P		**Pg**	**14 26 43.8**	**-0.3**
GCAM				*i* S		**Sg**	**14 26 56.0**	**+1.4**
ARG	**Arkhangelos**	**0.87**	**144**	*e*P		**Pg**	**14 26 44.6**	**-0.7**
ARG				*e*S		**Sg**	**14 26 58.4**	**+1.9**
ARG	**Arkhangelos**	**0.87**	**144**	*e*P		**Pg**	**14 26 44.6**	**-0.7**
ARG				*e*S		**Sg**	**14 26 58.4**	**+1.9**
SMG	**Samos**	**0.95**	**326**	*e*P		**Pg**	**14 26 46.7**	**-0.1**
SMG				*e*S		**Sg**	**14 27 01.9**	**+2.8**
SMG	**Samos**	**0.95**	**326**	*e*P		**Pg**	**14 26 46.7**	**-0.1**
SMG				*e*S		**Sg**	**14 27 01.9**	**+2.8**
KARP	**Karpathos**	**1.40**	**191**	*e*P		**Pn**	**14 26 53.7**	**-1.1**
KARP				*e*S		**Sb**	**14 27 12.3**	**-1.1**
KARP	**Karpathos**	**1.40**	**191**	*e*P		**Pn**	**14 26 53.7**	**-1.1**
KARP				*e*S		**Sb**	**14 27 12.3**	**-1.1**
DNZL	**Cakiroluk**	**1.45**	**58**	*i* P		**Pn**	**14 26 55.1**	**-0.4**
DNZL				*i* S		**Sn**	**14 27 17.5**	**+2.6**
DNZL	**Cakiroluk**	**1.45**	**58**	*i* P		**Pn**	**14 26 55.1**	**-0.4**
DNZL				*i* S		**Sn**	**14 27 17.5**	**+2.6**
IZM	**Izmir**	**1.48**	**353**	*e*PN		**Pn**	**14 26 55.7**	**-0.3**
IZM	**Izmir**	**1.48**	**353**	*e*Pn		**Pn**	**14 26 55.7**	**-0.3**
BLCB	**Balcova**	**1.50**	**346**	*e*PN		**Pn**	**14 26 55.5**	**-0.7**
BLCB	**Balcova**	**1.50**	**346**	*e*Pn		**Pn**	**14 26 55.5**	**-0.8**
GOLH	**Golhisar**	**1.68**	**79**	*i* P		**Pn**	**14 26 59.4**	**+0.8**
GOLH				*i* S		**Sn**	**14 27 21.0**	**+0.6**
GOLH	**Golhisar**	**1.68**	**79**	*i* P		**Pn**	**14 26 59.4**	**+0.8**
GOLH				*i* S		**Sn**	**14 27 21.0**	**+0.6**
AKAS	**Kas**	**1.83**	**111**	*i* P		**Pn**	**14 26 59.9**	**-0.7**
AKAS				*i* S		**Sn**	**14 27 24.6**	**+0.4**
AKAS	**Kas**	**1.83**	**111**	*i* P		**Pn**	**14 26 59.9**	**-0.8**
AKAS				*i* S		**Sn**	**14 27 24.5**	**+0.3**
KULA	**Kula-Manisa**	**1.83**	**30**	*e*PN		**Pn**	**14 27 00.9**	**+0.1**
KULA	**Kula-Manisa**	**1.83**	**30**	*e*Pn		**Pn**	**14 27 00.9**	**+0.1**
ELL	**Elmali**	**1.94**	**94**	*e*PN		**Pn**	**14 27 02.5**	**+0.3**
ELL	**Elmali**	**1.94**	**94**	*e*Pn		**Pn**	**14 27 02.5**	**+0.3**

*ISK **23** 14:35:24.5, 36°.98N × 29°.22E, h5km, MD2.9*
*ISCJB **23** 14:35:26.6 ± 0.5, 36°.95N ± 0°.03 × 29°.26E ± 0°.04, h10km, Error*
ellipse: s-maj=5.0km s-min=4.3km az=39.5
*DDA **23** 14:35:26.1, 36°.95N × 29°.15E, h7km ± 5km, Md3.0*
*CSEM **23** 14:35:26.0 ± 0.3, 36°.96N × 29°.23E, h5km, MD2.9, Error*
ellipse: s-maj=6.3km s-min=5.1km az=25.0
ISC 23 14:35:26.7 ± 0.8, **36°.95N** ± 0°.04 × **29°.24E** ± 0°.05, **h9**km ± 8km,
n20, σ **1§04/33**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GLHS	**Glhisar (BURDU**	**0.29**	**46**	*e*PG		**Pg**	**14 35 31.7**	**-0.7**
GLHS				*e*SG		**Sg**	**14 35 36.4**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.29**	**46**	*e*Pg		**Pg**	**14 35 31.7**	**-0.7**
GLHS				*e*Sg		**Sg**	**14 35 36.4**	**+0.1**
ELL	**Elmali**	**0.57**	**111**	*e*PG		**Pg**	**14 35 36.9**	**-0.9**
ELL				*e*SG		**Sg**	**14 35 46.8**	**+1.5**
ELL	**Elmali**	**0.57**	**111**	*e*Pg		**Pg**	**14 35 36.9**	**-0.9**
ELL				*e*Sg		**Sg**	**14 35 46.8**	**+1.5**
DNZL	**Cakiroluk**	**0.75**	**348**	*i* P		**Pg**	**14 35 38.8**	**-2.3**
DNZL				*i* S		**Sg**	**14 35 52.1**	**+1.2**
DNZL	**Cakiroluk**	**0.75**	**348**	*i* P		**Pg**	**14 35 38.8**	**-2.4**
DNZL				*i* S		**Sg**	**14 35 52.1**	**+1.2**
AKAS	**Kas**	**0.78**	**158**	*i* P		**Pg**	**14 35 41.9**	**+0.2**
AKAS				*i* S		**Sg**	**14 35 57.5**	**+5.7**
AKAS	**Kas**	**0.78**	**158**	*i* P		**Pg**	**14 35 41.8**	**+0.2**
AYDN	**Tasoluk**	**1.29**	**303**	*i* P		**Pn**	**14 35 49.8**	**-1.2**
AYDN				*i* S		**Sg**	**14 36 09.5**	**+1.2**
AYDN	**Tasoluk**	**1.29**	**303**	*i* P		**Pn**	**14 35 49.8**	**-1.2**
AYDN				*i* S		**Sg**	**14 36 09.5**	**+1.1**
DAT	**Datca**	**1.35**	**261**	*e*PN		**Pn**	**14 35 51.3**	**-0.5**
DAT				*e*SN		**Sn**	**14 36 11.1**	**+1.3**
DAT	**Datca**	**1.35**	**261**	*e*Pn		**Pn**	**14 35 51.3**	**-0.5**
DAT				*e*Sn		**Sn**	**14 36 11.1**	**+1.2**
KHL	**Karahalli**	**1.39**	**9**	*e*PN		**Pn**	**14 35 51.7**	**-0.5**
KHL	**Karahalli**	**1.39**	**9**	*e*Pn		**Pn**	**14 35 51.7**	**-0.5**
KHAL	**Karahalli**	**1.43**	**8**	*i* P		**Pn**	**14 35 53.9**	**+1.1**
KHAL				*i* S		**Sb**	**14 36 12.6**	**+0.8**
KHAL	**Karahalli**	**1.43**	**8**	*i* P		**Pn**	**14 35 53.9**	**+1.1**
KHAL				*i* S		**Sb**	**14 36 12.6**	**+0.8**
BODT	**Bodrum**	**1.55**	**275**	*e*PN		**Pn**	**14 35 54.1**	**-0.3**
BODT	**Bodrum**	**1.55**	**275**	*e*Pn		**Pn**	**14 35 54.1**	**-0.4**
KULA	**Kula-Manisa**	**1.62**	**344**	*e*PN		**Pn**	**14 35 54.3**	**-1.2**
KULA	**Kula-Manisa**	**1.62**	**344**	*e*Pn		**Pn**	**14 35 54.3**	**-1.2**

*DDA **23** 14:55:02.4, 39°.00N × 32°.77E, h7km ± 4km, Md2.8*
*ISK **23** 14:55:02.3, 38°.99N × 32°.85E, h15km, MD2.8*
*CSEM **23** 14:55:02.7 ± 0.4, 38°.95N × 32°.81E, h8km, MD2.8, Error*
ellipse: s-maj=9.6km s-min=7.2km az=138.0
*ISCJB **23** 14:55:03.2 ± 0.6, 38°.92N ± 0°.04 × 32°.80E ± 0°.04, h10km, Error*
ellipse: s-maj=5.8km s-min=4.2km az=144.2
ISC 23 14:55:03.4 ± 0.7, **38°.93N** ± 0°.04 × **32°.83E** ± 0°.04, **h5**km ± 9km,
n16, σ **1§11/28**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BBAL	**Bala**	**0.65**	**20**	*i* P		**Pg**	**14 55 13.4**	**-2.6**
BBAL				*i* S		**Sg**	**14 55 25.6**	**+1.1**
BBAL	**Bala**	**0.65**	**20**	*i* P		**Pg**	**14 55 13.4**	**-2.6**
BBAL				*i* S		**Sg**	**14 55 25.6**	**+1.1**
KDHN	**Kadinhani**	**0.69**	**234**	*i* P		**Pg**	**14 55 15.5**	**-1.2**
KDHN				*i* S		**Sg**	**14 55 26.8**	**+1.1**
KDHN	**Kadinhani**	**0.69**	**234**	*i* P		**Pg**	**14 55 15.5**	**-1.2**
KDHN				*i* S		**Sg**	**14 55 26.8**	**+1.1**
KIZT	**Kizilcal**	**0.74**	**267**	*e*PG		**Pg**	**14 55 17.6**	**-0.1**
KIZT				*e*SG		**Sg**	**14 55 28.6**	**+1.3**
KIZT	**Kizilcal**	**0.74**	**267**	*e*Pg		**Pg**	**14 55 17.6**	**-0.1**
KIZT				*e*Sg		**Sg**	**14 55 28.6**	**+1.2**
SULT	**Sultanhani-AKS**	**0.91**	**143**	*e*PG		**Pg**	**14 55 21.2**	**+0.4**
SULT	**Sultanhani-AKS**	**0.91**	**143**	*e*Pg		**Pg**	**14 55 21.2**	**+0.4**
KONT	**Konya--Tatoy**	**1.05**	**201**	*e*PN		**Pg**	**14 55 23.5**	**-0.1**
KONT	**Konya--Tatoy**	**1.05**	**201**	*e*Pn		**Pg**	**14 55 23.5**	**-0.1**
SVRH	**Sivrihisar-ESK**	**1.14**	**297**	*e*PN		**Pg**	**14 55 23.5**	**-1.9**
SVRH				*e*SN		**Sg**	**14 55 40.4**	**+0.3**
SVRH	**Sivrihisar-ESK**	**1.14**	**297**	*e*Pn		**Pg**	**14 55 23.4**	**-1.9**
SVRH				*e*Sn		**Sg**	**14 55 40.4**	**+0.3**
CDAG	**Cicekdag**	**1.38**	**59**	*i* P		**Pn**	**14 55 28.9**	**-0.5**
CDAG				*i* S		**Sg**	**14 55 49.1**	**+1.3**
CDAG	**Cicekdag**	**1.38**	**59**	*i* P		**Pn**	**14 55 28.9**	**-0.5**
CDAG				*i* S		**Sg**	**14 55 49.1**	**+1.2**
SGKT	**Sivrigoynuk**	**1.75**	**340**	*i* P		**Pn**	**14 55 33.5**	**-0.9**
SGKT				*i* S		**Sn**	**14 55 58.0**	**+0.9**
SGKT	**Sivrigoynuk**	**1.75**	**340**	*i* P		**Pn**	**14 55 33.5**	**-0.9**
SGKT				*i* S		**Sn**	**14 55 58.0**	**+0.9**

*IDC **23** 15:02:15.6 ± 1.8, 39°.64N × 139°.75E, h0km, mb3.5/2,*
mb1 3.9/2, mb1mx3.3/22, mbtmp3.5/2, ML2.4/1, Error
ellipse: s-maj=86.7km s-min=17.1km az=114.0
*ISCJB **23** 15:02:17.0 ± 0.7, 39°.73N ± 0°.03 × 139°.59E ± 0°.07, h23km ± 7km,*
mb3.7/2, Error ellipse: s-maj=9.4km s-min=4.7km az=11.5
*JMA **23** 15:02:17.2, 39°.74N × 139°.61E, h16km ± 1km, M3.2*
ISC 23 15:02:17.4 ± 0.7, **39°.73N** ± 0°.03 × **139°.63E** ± 0°.06, **h16**km ± 4km,
n12, σ **0§46/23**, **mb3.7/2**, **1C-6D**, **Near west coast of**
eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JOG2	**Oga 2**	**0.23**	**34**	⇓P		**Pg**	**15 02 22.5**	**0.0**
JOG2				*e*S		**Sg**	**15 02 26.1**	**+0.1**
JYW	**Yuwa**	**0.48**	**112**	⇓P		**Pg**	**15 02 27.0**	**0.0**
JYW				S		**Sg**	**15 02 34.3**	**+0.7**
JTB	**Tobi-shima**	**0.53**	**186**	⇓P		**Pg**	**15 02 27.8**	**-0.2**
JTB				*e*S		**Sg**	**15 02 35.0**	**-0.1**
JRG	**Rokugo**	**0.84**	**113**	P		**Pb**	**15 02 33.2**	**-0.4**
JRG				*e*S		**Sb**	**15 02 45.0**	**+0.4**
JAH	**Hinai**	**0.90**	**59**	⇓P		**Pb**	**15 02 34.1**	**-0.5**
JAH				*e*S		**Sb**	**15 02 46.1**	**-0.2**
JIW	**Iwasaki**	**0.91**	**18**	⇑P		**Pb**	**15 02 34.4**	**-0.4**
JIW				S		**Sb**	**15 02 46.8**	**+0.1**
JYK	**Kaneyama**	**0.98**	**145**	⇓P		**Pb**	**15 02 35.4**	**-0.6**
JYK				S		**Sb**	**15 02 48.7**	**-0.1**
JYA	**Atsumi**	**1.13**	**177**	⇓P		**Pn**	**15 02 37.7**	**-0.8**
JYA				*e*S		**Sb**	**15 02 52.9**	**-0.1**
MAT	**Matsushiro**	**3.37**	**200**	P		**Pn**	**15 03 10.0**	**+0.7**
MAT				S		**Sn**	**15 03 48.7**	**-0.3**
MJAR	**Matsushiro Arr**	**3.37**	**200**	Pn		**Pn**	**15 03 10.4**	**+1.1**
	0.4nm,0.3s,baz=21,slow=18,SNR=5.9							
MJAR				Pg		**Pg**	**15 03 16.6**	**-5.4**
	0.8nm,0.3s,baz=6.4,slow=16,SNR=12							
MJAR				Sn		**Sn**	**15 03 48.9**	**-0.1**
	1.8nm,0.3s,baz=19,slow=16,SNR=5.3							
MJAR				Lg			15 03 59.9	
	3.7nm,0.3s,baz=69,slow=28,SNR=5.5							
ILAR	**Eielson Array**	**48.00**	**34**	P		**P**	**15 10 55.6**	**+0.5**
	0.4nm,0.6s,mb3.6,baz=272,slow=6.2,SNR=6.9							
WRA	**Warramunga Arr**	**59.56**	**186**	P		**P**	**15 12 20.4**	**+0.3**
	0.7nm,0.8s,mb3.7,baz=1.5,slow=7.5,SNR=2.5							

*IDC **23** 15:11:33.9 ± 0.7, 6°.83S × 130°.56E, h0km, mb3.9/10,*
mb1 4.0/11, mb1mx4.0/17, mbtmp4.0/11, ML4.8/2, Error
ellipse: s-maj=37.7km s-min=17.3km az=70.0
*NEIC **23** 15:11:42.5 ± 1.5, 6°.96S × 130°.39E, h69km ± 15km, mb4.3/3,*
Error ellipse: s-maj=14.5km s-min=10.1km az=66.0
*ISCJB **23** 15:11:43.2 ± 1.8, 7°.03S ± 0°.07 × 130°.5E ± 0°.1, h95km ± 19km,*
mb4.0/14, Error ellipse: s-maj=17.9km s-min=10.9km
az=171.8
ISC 23 15:11:42.5 ± 2.2, **7°.02S** ± 0°.09 × **130°.4E** ± 0°.1, **h69**km ± 23km,
n31, σ **1§14/36**, **mb4.0/14**, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KAKA	**Kakadu**	**5.99**	**161**	*e*P		**Pn**	**15 13 12.0**	**+3.3**
	84nm,0.2s							
KAKA				*e*S		**Sn**	**15 14 14.8**	**-1.2**
KAKA	**Kakadu**	**5.99**	**161**	*e*Pn		**Pn**	**15 13 11.7**	**+3.0**
KAKA				*e*Sn		**Sn**	**15 14 14.7**	**-1.3**
KNA	**Kununurra**	**8.83**	**191**	*e*P		**Pn**	**15 13 50.5**	**+3.0**
	64nm,0.2s							
KNA				*e*S		**Sn**	**15 15 23.7**	**-1.8**
WRA	**Warramunga Arr**	**13.40**	**164**	Pn		**Pn**	**15 14 48.5**	**-1.2**
	5.1nm,0.3s,baz=346,slow=13,SNR=4.0							
WRA				Sn		**Sn**	**15 17 09.9**	**-7.0**
	4.5nm,0.3s,baz=345,slow=22,SNR=8.8							
COEN	**Coen**	**14.29**	**120**	*e*P		**Pn**	**15 15 03.3**	**+1.7**
COEN				*e*S		**Sn**	**15 17 28.3**	**-11**
COEN	**Coen**	**14.29**	**120**	*e*Pn		**Pn**	**15 15 01.8**	**+0.2**
COEN				*e*Sn		**Sn**	**15 17 28.4**	**-10**
ASAR	**Alice Springs**	**16.89**	**169**	P		**Pn**	**15 15 34.8**	**+0.3**
	3.5nm,0.3s,baz=332,slow=8.3,SNR=193							
ASAR				S		**S**	**15 18 37.1**	**-11**
	0.9nm,0.3s,baz=354,slow=19,SNR=8.5							
MBWA	**Marble Bar**	**17.46**	**215**	*e*P		**Pn**	**15 15 42.6**	**+1.0**
MBWA				*e*S		**S**	**15 18 46.8**	**-13**
MBWA	**Marble Bar**	**17.46**	**215**	*e*Pn		**Pn**	**15 15 41.6**	**0.0**
MBWA				*e*Sn		**Sn**	**15 18 45.5**	**-10**
KKM	**Kota Kinabalu**	**19.23**	**312**	P		**Pn**	**15 15 59.1**	**-3.8**
MEEK	**Meekatharra**	**22.52**	**209**	*e*P		**P**	**15 16 44.6**	**+7.9**
MEEK				*e*S		**S**	**15 20 46.3**	**+7.1**
FORT	**Forrest**	**23.75**	**185**	*e*P		**P**	**15 16 50.8**	**+2.2**
	20nm,0.7s,mb4.6							
GUMO	**Guam**	**24.99**	**35**	P		**P**	**15 17 00.0**	**0.0**
STKA	**Stephens Creek**	**26.84**	**159**	P		**P**	**15 17 18.1**	**+1.5**
	0.6nm,0.4s,mb3.5,baz=333,slow=11,SNR=5.3							
CMAR	**Chiang Mai Arr**	**40.07**	**310**	P		**P**	**15 19 11.6**	**+0.1**
	0.8nm,0.7s,mb3.7,baz=130,slow=6.2,SNR=6.1							
CMAR				PcP		PcP	15 21 16.4	+1.2
	0.6nm,0.8s,baz=157,slow=4.8,SNR=4.4							
ASAJ	**Asahikawa**	**52.07**	**11**	P		**P**	**15 20 44.5**	**-0.8**
	9.8nm,1.0s,mb4.8,baz=225,slow=5.7,SNR=3.1							
ULN	**Ulaanbaatar**	**58.41**	**342**	*e*P		**P**	**15 21 31.4**	**+0.5**
	1.4nm,0.6s,mb4.2							
SONM	**Songino Array**	**58.59**	**341**	P		**P**	**15 21 32.7**	**+0.5**
	0.3nm,0.4s,mb3.6,baz=165,slow=7.6,SNR=5.7							
PETK	**Petropavlovsk-**	**64.20**	**18**	P		**P**	**15 22 09.7**	**-0.2**
	2.4nm,0.8s,mb4.1,baz=203,slow=11,SNR=5.8							
MKAR	**Makanchi Array**	**68.47**	**327**	P		**P**	**15 22 37.5**	**+0.1**
	0.8nm,0.3s,mb4.0,baz=113,slow=8.5,SNR=23							
YAK	**Yakutsk**	**68.84**	**360**	P		**P**	**15 22 38.9**	**-0.5**
	6.3nm,0.7s,mb4.5							
ZALV	**Zalesovo Beam**	**71.79**	**334**	P		**P**	**15 22 56.9**	**-0.6**
	0.3nm,0.3s,mb3.6,baz=108,slow=4.7,SNR=3.3							
KURK	**Kurchatov**	**72.76**	**328**	P		**P**	**15 23 03.5**	**+0.2**
	0.5nm,0.4s,mb3.7,baz=132,slow=4.1,SNR=4.4							
BVAR	**Borovoye Array**	**78.31**	**328**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BYBT	**Boyabat**	**0.35**	**200**	*e*PG	**Pg**	**15 27 26.3**	**-0.6**
BYBT	**Boyabat**	**0.35**	**200**	*e*Pg	**Pg**	**15 27 26.3**	**-0.7**
TOS	**Tosya**	**1.02**	**222**	*e*PG	**Pg**	**15 27 39.8**	**+0.2**
TOS				*e*SG	**Sg**	**15 27 54.1**	**+1.2**
TOS	**Tosya**	**1.02**	**222**	*e*Pg	**Pg**	**15 27 39.8**	**+0.1**
TOS				*e*Sg	**Sg**	**15 27 54.1**	**+1.2**
KVT	**Kavak**	**1.10**	**130**	*e*PG	**Pg**	**15 27 41.7**	**+0.4**
KVT				*e*SG	**Sg**	**15 27 57.2**	**+1.6**
KVT	**Kavak**	**1.10**	**130**	*e*Pg	**Pg**	**15 27 41.7**	**+0.4**
KVT				*e*Sg	**Sg**	**15 27 57.2**	**+1.5**
ILGA	**Ilgaz**	**1.18**	**231**	*i* P	**Pg**	**15 27 42.6**	**0.0**
ILGA				*i* S	**Sg**	**15 27 58.3**	**+0.3**
ILGA	**Ilgaz**	**1.18**	**231**	*i* P	**Pg**	**15 27 42.6**	**-0.1**
ILGA				*i* S	**Sg**	**15 27 58.3**	**+0.4**
CTKT	**Corum**	**1.18**	**185**	*i* P	**Sg**	**15 27 40.6**	**-2.1**
CTKT				*i* S	**Sg**	**15 27 57.2**	**-0.8**
CTKT	**Corum**	**1.18**	**185**	*i* P	**Pg**	**15 27 40.6**	**-2.1**
CTKT				*i* S	**Sg**	**15 27 57.2**	**-0.8**
BALT	**Daday**	**1.18**	**258**	*i* P	**Pb**	**15 27 42.1**	**-0.6**
BALT				*i* S	**Sb**	**15 28 00.2**	**+2.0**
BALT	**Daday**	**1.18**	**258**	*i* P	**Pb**	**15 27 42.1**	**-0.6**
BALT				*i* S	**Sb**	**15 28 00.2**	**+2.1**
CANT	**Cankiri**	**1.55**	**220**	*e*PN	**Pg**	**15 27 48.9**	**-0.8**
CORM	**Corum**	**1.63**	**188**	*e*PN	**Pg**	**15 27 50.0**	**-1.5**
CORM	**Corum**	**1.63**	**188**	*e*Pn	**Pg**	**15 27 50.0**	**-1.4**
ELDT	**Eldivan**	**1.73**	**221**	*i* P	**Pg**	**15 27 52.9**	**-0.3**
ELDT				*i* S	**Sg**	**15 28 16.6**	**+1.0**
ELDT	**Eldivan**	**1.73**	**221**	*i* P	**Pg**	**15 27 52.9**	**-0.3**
ELDT				*i* S	**Sg**	**15 28 16.6**	**+1.0**
SAFT	**Safranbolu**	**1.77**	**252**	*e*PN	**Pb**	**15 27 52.7**	**0.0**
SAFT	**Safranbolu**	**1.77**	**252**	*e*Pn	**Pb**	**15 27 52.7**	**0.0**
ERBA	**Erbaa**	**1.77**	**128**	*i* P	**Pg**	**15 27 54.9**	**+0.8**
ERBA				*i* S	**Sg**	**15 28 18.2**	**+1.2**
ERBA	**Erbaa**	**1.77**	**128**	*i* P	**Pg**	**15 27 54.9**	**+0.8**
ERBA				*i* S	**Sg**	**15 28 18.2**	**+1.1**
SVSK	**Karacayir**	**2.45**	**139**	*e*PN	**Pb**	**15 28 02.4**	**-1.9**
SVSK	**Karacayir**	**2.45**	**139**	*e*Pn	**Pb**	**15 28 02.4**	**-1.9**

*IDC **23** 15:28:35.1±2.9,30°.49S×177°.93W,h0km,mb3.7/3, mb1 3.9/4,mb1mx3.7/17,mbtmp3.7/4,ML3.2/1,Error ellipse: s-maj=68.6km s-min=41.9km az=124.0*

ISC 23 15:28:37.8±2.4,**30°.70S**±0°.09×**177°.6W**±0°.4,**h35**km,**n11, σ0s95/14, mb3.6/3, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**7.65**	**205**	PN	**Pn**	**15 30 28.5**	**+1.8**
PUZ	**Puketiti**	**8.12**	**204**	PN	**Pn**	**15 30 32.8**	**-0.4**
PUZ				SN	**Sn**	**15 32 04.8**	**+1.1**
MWZ	**Matawai**	**8.62**	**207**	*e*PN	**Pn**	**15 30 39.2**	**-0.8**
MWZ				SN	**Sn**	**15 32 15.5**	**-0.5**
URZ	**Urewera**	**8.72**	**209**	Pn	**Pn**	**15 30 41.2**	**-0.2**
	0.3nm,0.3s,baz=140,slow=18,SNR=7.4						
URZ				Sn	**Sn**	**15 32 18.0**	**-0.5**
	1.7nm,0.3s,baz=195,slow=21,SNR=11						
URZ	**Urewera**	**8.72**	**209**	*e*PN	**Pn**	**15 30 41.4**	**-0.1**
URZ				SN	**Sn**	**15 32 18.1**	**-0.5**
BKZ	**Black Stump Pm**	**9.75**	**208**	*e*PN	**Pn**	**15 30 54.7**	**-0.8**
MRZ	**Mangatainoka R**	**11.39**	**207**	SN	**Sn**	**15 33 17.0**	**-6.9**
STKA	**Stephens Creek**	**34.77**	**257**	P	**P**	**15 35 26.8**	**+1.8**
	1.6nm,0.8s,mb4.0,baz=99,slow=12,SNR=5.0						
ASAR	**Alice Springs**	**43.47**	**267**	P	**P**	**15 36 37.4**	**-0.3**
	0.2nm,0.4s,mb3.2,baz=105,slow=7.5,SNR=10						
WRA	**Warramunga Arr**	**44.48**	**272**	P	**P**	**15 36 45.0**	**-0.9**
	0.6nm,0.4s,mb3.6,baz=111,slow=7.9,SNR=5.2						
FINES	**FINESS Array B**	**145.56**	**340**	PKPbc	PKPbc	15 48 13.0	+1.3
	1.1nm,0.4s,baz=58,slow=4.1,SNR=13						

*NEIC **23** 15:33:31.9,40°.35S×174°.28E,h84km,ML4.0(WEL),After WEL.*

WEL 23 15:33:32.0±0.1,**40°.35S×174°.28E,h82**km±2km,**ML4.0**/19, **1C,Error ellipse: s-maj=1.0km s-min=0.4km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIW	**Kapiti Island**	**0.70**	**137**	PN	Pn	15 33 47.5	-0.3
KIW				SN	Sn	15 33 58.8	-0.7
KIW	**Kapiti Island**	**0.70**	**137**	P	Pn	15 33 47.5	-0.3
KIW				S	Sn	15 33 58.8	-0.7
WAZ	**Wanganui**	**0.80**	**42**	↑PN	Pn	15 33 49.1	+0.2
WAZ				SN	Sn	15 34 02.1	+0.7
WAZ	**Wanganui**	**0.80**	**42**	P	Pn	15 33 49.1	+0.2
OGWZ	**Otaki Gorge**	**0.82**	**125**	PN	Pn	15 33 48.9	-0.2
OGWZ				SN	Sn	15 34 01.5	-0.3
CAW	**Cannon Point**	**0.96**	**142**	PN	Pn	15 33 50.7	0.0
CAW				SN	Sn	15 34 04.3	-0.4
CAW	**Cannon Point**	**0.96**	**142**	P	Pn	15 33 50.7	0.0
CAW				S	Sn	15 34 05.2	+0.5
WEL	**Wellington**	**1.00**	**159**	PN	Pn	15 33 51.4	+0.2
WEL	**Wellington**	**1.00**	**159**	P	Pn	15 33 51.4	+0.2
SNZO	**South Karori**	**1.01**	**162**	PN	Pn	15 33 51.4	+0.1
SNZO				SN	Sn	15 34 04.9	-0.7
SNZO	**South Karori**	**1.01**	**162**	P	Pn	15 33 51.4	+0.2
DFE	**Dawson Falls**	**1.03**	**352**	PN	Pn	15 33 51.3	-0.2
DFE	**Dawson Falls**	**1.03**	**352**	P	Pn	15 33 51.3	-0.2
MRZ	**Mangatainoka R**	**1.04**	**108**	P	Pn	15 33 51.1	-0.4
RAEZ	**Rainy Point**	**1.06**	**5**	PN	Pn	15 33 52.1	+0.2
RAEZ	**Rainy Point**	**1.06**	**5**	P	Pn	15 33 52.1	+0.2
HOWZ	**Holdsworth Sta**	**1.09**	**121**	PN	Pn	15 33 51.9	-0.3
NEZ	**North Egmont**	**1.09**	**352**	PN	Pn	15 33 51.6	-0.6
NEZ	**North Egmont**	**1.09**	**352**	P	Pn	15 33 51.6	-0.6
NNZ	**Nelson**	**1.10**	**218**	PN	Pn	15 33 52.1	-0.3
NNZ				SN	Sn	15 34 07.3	-0.4
NNZ	**Nelson**	**1.10**	**218**	P	Pn	15 33 52.1	-0.3
TUWZ	**Tuamarina**	**1.11**	**193**	PN	Pn	15 33 52.0	-0.5
NWEZ	**Newall Road**	**1.12**	**343**	P	Pn	15 33 52.2	-0.4
POWZ	**Post Office Ro**	**1.14**	**93**	PN	Pn	15 33 52.6	-0.2
BHW	**Baring Head**	**1.15**	**157**	PN	Pn	15 33 52.9	+0.1
BHW	**Baring Head**	**1.15**	**157**	P	Pn	15 33 52.9	0.0
DREZ	**Durham Road**	**1.16**	**357**	PN	Pn	15 33 52.8	-0.3
PKE	**Pukeiti**	**1.18**	**349**	PN	Pn	15 33 52.9	-0.3
PKE	**Pukeiti**	**1.18**	**349**	P	Pn	15 33 52.9	-0.4
MTW	**Mount Morrison**	**1.23**	**131**	PN	Pn	15 33 53.8	0.0
MTW	**Mount Morrison**	**1.23**	**131**	P	Pn	15 33 53.8	-0.1
MHEZ	**Mangahewa**	**1.27**	**1**	PN	Pn	15 33 54.4	0.0
VRZ	**Vera Road**	**1.28**	**17**	PN	Pn	15 33 54.0	-0.5
VRZ				SN	Sn	15 34 11.5	0.0
VRZ	**Vera Road**	**1.28**	**17**	P	Pn	15 33 54.0	-0.5
MSWZ	**Moikau Station**	**1.29**	**146**	PN	Pn	15 33 54.7	0.0
TIWZ	**Tintock**	**1.29**	**110**	PN	Pn	15 33 54.7	0.0
TSZ	**Takapari Road**	**1.32**	**78**	PN	Pn	15 33 54.5	-0.5
TSZ				SN	Sn	15 34 11.9	-0.5
TSZ	**Takapari Road**	**1.32**	**78**	P	Pn	15 33 54.5	-0.5
MTVZ	**Mangateitei**	**1.33**	**44**	PN	Pn	15 33 55.2	0.0
PKVZ	**Pokaka**	**1.34**	**38**	PN	Pn	15 33 55.4	+0.2
PAWZ	**Paruwai Farm**	**1.35**	**140**	PN	Pn	15 33 55.3	-0.1
PAWZ	**Paruwai Farm**	**1.35**	**140**	P	Pn	15 33 55.3	-0.1
BSWZ	**Blackbirch Sta**	**1.40**	**193**	PN	Pn	15 33 56.3	+0.3
PLWZ	**Palliser**	**1.42**	**149**	PN	Pn	15 33 56.0	-0.4
TRVZ	**Turoa**	**1.43**	**43**	PN	Pn	15 33 56.7	+0.2
TMWZ	**Te Maipa**	**1.44**	**122**	PN	Pn	15 33 56.5	0.0
WNVZ	**Wahianoa**	**1.44**	**45**	PN	Pn	15 33 56.9	+0.3
DVHZ	**Dannevirke**	**1.44**	**89**	PN	Pn	15 33 56.7	+0.9
DRZ	**Dome Shelter**	**1.46**	**43**	PN	Pn	15 33 57.1	+0.3
DRZ	**Dome Shelter**	**1.46**	**43**	P	Pn	15 33 57.1	+0.3
FWVZ	**Far West T-bar**	**1.47**	**42**	PN	Pn	15 33 56.8	-0.1
MOVZ	**Moawhango**	**1.47**	**51**	PN	Pn	15 33 56.8	-0.2
MOVZ	**Moawhango**	**1.47**	**51**	P	Pn	15 33 56.8	-0.2
TRWZ	**Traveller**	**1.49**	**135**	PN	Pn	15 33 57.2	0.0
WPVZ	**Whakapapa**	**1.50**	**41**	PN	Pn	15 33 57.4	0.0
TUVZ	**Tukino**	**1.51**	**45**	PN	Pn	15 33 57.7	+0.3
TUVZ	**Tukino**	**1.51**	**45**	P	Pn	15 33 57.7	+0.2
PNHZ	**Pukenui**	**1.53**	**74**	PN	Pn	15 33 57.0	-0.8
NGZ	**Ngauruhoe**	**1.55**	**41**	PN	Pn	15 33 57.9	-0.1
NGZ	**Ngauruhoe**	**1.55**	**41**	P	Pn	15 33 57.9	-0.1
TWVZ	**Taurewa**	**1.56**	**35**	PN	Pn	15 33 58.0	-0.1
WTVZ	**West Tongariro**	**1.59**	**40**	PN	Pn	15 33 58.6	0.0
OTVZ	**Oturere**	**1.59**	**42**	PN	Pn	15 33 58.7	+0.1
BHHZ	**Black Hill Sta**	**1.62**	**58**	PN	Pn	15 33 58.3	-0.6
KRVZ	**Karewarewa**	**1.63**	**40**	PN	Pn	15 33 59.0	-0.1
WPHZ	**Waipukurau**	**1.68**	**81**	PN	Pn	15 33 58.9	-0.7
PRHZ	**Porangahau**	**1.80**	**88**	PN	Pn	15 34 00.5	-0.8
RATZ	**Rangitukua**	**1.88**	**38**	PN	Pn	15 34 03.2	+0.9
RATZ	**Rangitukua**	**1.88**	**38**	P	Pn	15 34 03.2	+0.9
HIZ	**Hauiti**	**1.89**	**14**	PN	Pn	15 34 01.8	-0.6
HIZ	**Hauiti**	**1.89**	**14**	P	Pn	15 34 01.8	-0.6
WATZ	**Wairara**	**1.99**	**35**	PN	Pn	15 34 04.1	+0.4
WATZ	**Wairara**	**1.99**	**35**	P	Pn	15 34 04.1	+0.4
PXZ	**Pawanui**	**2.00**	**82**	PN	Pn	15 34 02.7	-1.2
KAHZ	**Kahuranaki**	**2.07**	**75**	PN	Pn	15 34 03.8	-0.9
MCHZ	**McNeill Hill**	**2.07**	**65**	PN	Pn	15 34 03.5	-1.2
BKZ	**Black Stump Fm**	**2.07**	**56**	PN	Pn	15 34 03.8	-1.1
BKZ	**Black Stump Fm**	**2.07**	**56**	P	Pn	15 34 03.8	-1.1
KHZ	**Kahutara**	**2.14**	**195**	PN	Pn	15 34 05.5	-0.2
KHZ	**Kahutara**	**2.14**	**195**	P	Pn	15 34 05.5	-0.2
CKHZ	**Cape Kidnapper**	**2.26**	**73**	PN	Pn	15 34 06.1	-1.2
NMHZ	**Naumai**	**2.31**	**58**	PN	Pn	15 34 07.1	-1.0
DSZ	**Denniston Nort**	**2.34**	**233**	PN	Pn	15 34 07.6	-0.7
DSZ	**Denniston Nort**	**2.34**	**233**	P	Pn	15 34 07.6	-0.8
TOZ	**Tahuroa Road**	**2.78**	**20**	PN	Pn	15 34 14.0	-0.4
TOZ	**Tahuroa Road**	**2.78**	**20**	P	Pn	15 34 14.0	-0.4
LTZ	**Lake Taylor**	**2.86**	**211**	PN	Pn	15 34 14.4	-1.0
LTZ	**Lake Taylor**	**2.86**	**211**	P	Pn	15 34 14.4	-1.0
KNZ	**Kokohu**	**2.94**	**64**	PN	Pn	15 34 13.7	-2.8
KNZ	**Kokohu**	**2.94**	**64**	P	Pn	15 34 13.7	-2.7
URZ	**Urewera**	**3.03**	**47**	PN	Pn	15 34 14.9	-2.8
URZ	**Urewera**	**3.03**	**47**	P	Pn	15 34 14.9	-2.8
TGRZ	**Tauranga**	**3.04**	**31**	PN	Pn	15 34 17.7	-0.1
MHGZ	**Mahia Peninsul**	**3.04**	**68**	PN	Pn	15 34 15.5	-2.4
PRGZ	**Paritu Road**	**3.12**	**64**	PN	Pn	15 34 16.3	-2.7
MWZ	**Matawai**	**3.22**	**52**	PN	Pn	15 34 17.5	-2.8
MWZ	**Matawai**	**3.22**	**52**	P	Pn	15 34 17.5	-2.8
MKAZ	**Moumakai**	**3.31**	**12**	PN	Pn	15 34 21.0	-0.5
MKAZ	**Moumakai**	**3.31**	**12**	P	Pn	15 34 21.0	-0.5
WTAZ	**Waiatarua**	**3.42**	**4**	PN	Pn	15 34 22.8	-0.2
WTAZ	**Waiatarua**	**3.42**	**4**	P	Pn	15 34 22.8	-0.2
CRLZ	**Canterbury Las**	**3.45**	**200**	PN	Pn	15 34 21.0	-2.5
CRLZ	**Canterbury Las**	**3.45**	**200**	P	Pn	15 34 21.0	-2.4
MQZ	**McQueen's Vall**	**3.57**	**199**	PN	Pn	15 34 22.2	-2.8
MQZ	**McQueen's Vall**	**3.57**	**199**	P	Pn	15 34 22.2	-2.8
RVAZ	**Riverhead Bore**	**3.58**	**4**	PN	Pn	15 34 24.5	-0.7
KUZ	**Kuaotunu**	**3.77**	**18**	PN	Pn	15 34 26.9	-0.9
KUZ	**Kuaotunu**	**3.77**	**18**	P	Pn	15 34 26.9	-0.9
PUZ	**Puketiti**	**3.83**	**55**	PN	Pn	15 34 25.2	-3.5
PUZ	**Puketiti**	**3.83**	**55**	P	Pn	15 34 25.2	-3.4
RPZ	**Rata Peaks**	**4.13**	**215**	*e*Pn	Pn	15 34 31.3	-1.3
WCZ	**Waipu Caves**	**4.40**	**1**	PN	Pn	15 34 35.5	-0.9
WCZ	**Waipu Caves**	**4.40**	**1**	P	Pn	15 34 35.5	-0.9
FOZ	**Fox Glacier**	**4.69**	**225**	PN	Pn	15 34 37.2	-3.1
FOZ	**Fox Glacier**	**4.69**	**225**	P	Pn	15 34 37.2	-3.1
LBZ	**Lake Benmore**	**5.05**	**216**	PN	Pn	15 34 42.4	-2.7
LBZ	**Lake Benmore**	**5.05**	**216**	P	Pn	15 34 42.4	-2.7
ODZ	**Otahua Downs**	**5.40**	**209**	PN	Pn	15 34 47.1	-2.9
ODZ	**Otahua Downs**	**5.40**	**209**	P	Pn	15 34 47.1	-2.8
JCZ	**Jackson Bay**	**5.54**	**226**	PN	Pn	15 34 49.0	-2.7
JCZ	**Jackson Bay**	**5.54**	**226**	P	Pn	15 34 49.0	-2.8
TUZ	**Tuapeka**	**6.55**	**210**	PN	Pn	15 35 03.0	-2.6
TUZ	**Tuapeka**	**6.55**	**210**	P	Pn	15 35 03.0	-2.6
WHZ	**Wether Hill Ro**	**7.22**	**218**	PN	Pn	15 35 13.5	-1.2
WHZ	**Wether Hill Ro**	**7.22**	**218**	P	Pn	15 35 13.5	-1.2
APZ	**The Paps**	**7.92**	**213**	PN	Pn	15 35 21.8	-2.5

*IDC **23** 15:42:25.2±0.8,5°.91S×131°.04E,h0km,mb4.0/6, mb1 4.2/7,mb1mx4.0/14,mbtmp4.0/7,ML4.9/2,Error ellipse: s-maj=59.6km s-min=17.9km az=65.0*
*NEIC **23** 15:42:32.0±2.4,5°.95S×131°.10E,h59km±24km,mb4.3/10, Error ellipse: s-maj=23.8km s-min=14.9km az=61.0*
*ISCJB **23** 15:42:37.0±0.5,6°.31S±0°.04×130°.55E±0°.06,h114km±6km, mb4.1/12,Error ellipse: s-maj=10.2km s-min=5.5km az=149.2*
*DJA **23** 15:42:39,6°.29S×130°.59E,h81km,MLv4.4/5*

ISC 23 15:42:38.1±0.5,**6°.31S**±0°.04×**130°.56E**±0°.06,**h105**km±6km, **n41,σ1s13/47, mb4.1/12, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.89**	**340**	P	**Pn**	**15 43 09.4**	**-0.1**
BNDI				S	**Sn**	**15 43 33.5**	**0.0**
BNDI	**Bandanaira**	**1.89**	**340**	P	**Pn**	**15 43 10.2**	**+0.7**
	2μm,1.3s						
TLE	**Tual**	**2.27**	**73**	P	**Pn**	**15 43 14.6**	**+0.2**
TLE				S	**Sn**	**15 43 41.9**	**-0.3**
TLE	**Tual**	**2.27**	**73**	P	**Pn**	**15 43 14.8**	**+0.4**
	10μm566nm,0.6s						
NLAI	**Namlea**	**4.60**	**311**	P	**Pn**	**15 43 47.9**	**+2.4**
NLAI	**Namlea**	**4.60**	**311**	P	**Pn**	**15 43 46.2**	**+0.7**
	3μm218nm,0.7s						
KAKA	**Kakadu**	**6.63**	**164**	*e*P	**Pn**	**15 44 12.9**	**-0.1**
	299nm,0.5s						
KAKA				*e*S	**Sn**	**15 45 25.5**	**-1.6**
KAKA	**Kakadu**	**6.63**	**164**	*e*Pn	**Pn**	**15 44 12.8**	**-0.2**
	564nm,0.5s						
KAKA				*e*Sn	**Sn**	**15 45 24.3**	**-2.8**
KAKA	**Kakadu**	**6.63**	**164**	P	**Pn**	**15 44 13.1**	**+0.1**
TNTI	**Ternate**	**7.72**	**336**	P	**Pn**	**15 44 26.0**	**-1.9**
	0.3nm936nm75nm,0.7s						
TNTI	**Ternate**	**7.72**	**336**	P	**Pn**	**15 44 25.9**	**-2.0**
	936nm75nm,0.7s						
KMSI	**Cibinong**	**9.48**	**316**	P	**Pn**	**15 44 53.1**	**+1.3**
	105nm,1.0s						
KNA	**Kununurra**	**9.54**	**190**	*e*P	**Pn**	**15 44 52.2**	**-0.5**
	56nm,0.2s						
KNA				*e*S	**Sn**	**15 46 33.5**	**-4.6**
KNA	**Kununurra**	**9.54**	**190**	P	**Pn**	**15 44 52.5**	**-0.2**
	7μm289nm,0.7s						
MNI	**Manado**	**9.59**	**323**	P	**Pn**	**15 44 53.7**	**+0.5**
	73nm,0.5s						
MMPI	**Merauke**	**9.98**	**103**	P	**Pn**	**15 44 59.5**	**+0.9**
WRA	**Warramunga Arr**	**14.04**	**165**	Pn	**Pn**	**15 45 48.9**	**-3.5**
	6.9nm,0.3s,baz=348,slow=13,SNR=42						
WRA				Sn	**Sn**	**15 48 18.7**	**-8.5**
	6.5nm,0.3s,baz=338,slow=23,SNR=9.8						
COEN	**Coen**	**14.55**	**122**	*e*P	**Pn**	**15 45 58.5**	**-0.5**
COEN				*e*S	**Sn**	**15 48 25.1**	**-15**
PMG	**Port Moresby**	**16.73**	**102**	*e*Pn	**Pn**	**15 46 15.2**	**-11**
	35nm,1.0s						
ASAR	**Alice Springs**	**17.56**	**170**	P	**Pn**	**15 46 36.4**	**+0.1**
	3.9nm,0.3s,baz=347,slow=8.4,SNR=188						
ASAR				S	**S**	**15 49 45.1**	**-7.0**
	1.1nm,0.3s,baz=2.9,slow=28,SNR=6.7						
MTSU	**Mount Surprise**	**17.84**	**132**	*e*P	**Pn**	**15 46 42.3**	**+2.6**
	16nm,0.5s						
MBWA	**Marble Bar**	**18.11**	**214**	*e*P	**P**	**15 46 43.6**	**+1.8**
MBWA	**Marble Bar**	**18.11**	**214**	*e*P	**P**	**15 46 43.0**	**+1.1**
	17nm,1.1s						
KKM	**Kota Kinabalu**	**18.85**	**310**	*e*P	**P**	**15 46 49.3**	**-0.8**
	40nm,1.2s						
CTA	**Charters Tower**	**20.49**	**133**	P	**P**	**15 47 08.9**	**+1.1**
	5.9nm,0.8s,baz=295,slow=15,SNR=5.2						
CTAO	**Charters Tower**	**20.49**	**133**	*e*P	**P**	**15 47 08.2**	**+0.4**
	8.5nm,0.8s						
STKA	**Stephens Creek**	**27.45**	**159**	*e*P	**P**	**15 48 15.5**	**+1.3**
	1.4nm,0.3s,mb4.0						
STKA	**Stephens Creek**	**27.45**	**159**	P	**P**	**15 48 15.5**	**+1.3**
	1.6nm,0.3s,mb4.0,baz=345,slow=9.6,SNR=20						
CMAR	**Chiang Mai Arr**	**39.72**	**309**	P	**P**	**15 50 00.1**	**-0.4**
	2.1nm,0.7s,mb4.1,baz=134,slow=6.9,SNR=18						
CHTO	**Chiang Mai**	**39.93**	**309**	*e*P	**P**	**15 50 01.3**	**-0.9**
	2.9nm,0.7s,mb4.2						
ENH	**Enshi**	**41.61**	**332**	*e*P	**P**	**15 50 13.9**	**-1.9**
	5.3nm,0.7s,mb4.4						
ULN	**Ulaanbaatar**	**57.78**	**341**	P	**P**	**15 52 17.9**	**-0.3**
	1.0nm,0.6s,mb4.0						
SONM	**Songino Array**	**57.97**	**341**	P	**P**	**15 52 19.3**	**-0.1**
	0.3nm,0.4s,mb3.7,baz=143,slow=3.1,SNR=3.2						
MKAR	**Makanchi Array**	**67.96**	**326**	P	**P**	**15 53 25.7**	**0.0**
	1.8nm,0.4s,mb4.2,baz=117,slow=8.7,SNR=26						
ZALV	**Zalesovo Beam**	**71.21**	**333**	P	**P**	**15 53 46.6**	**+1.0**
	0.3nm,0.3s,mb3.5,baz=134,slow=4.2,SNR=2.2						
SBA	**Scott Base**	**73.94**	**173**	*e*P	**P**	**15 54 02.3**	**+1.0**
	1.1nm,0.5s,mb3.8						
UNV	**Unalaska Valle**	**79.63**	**32**	*e*P	**P**	**15 54 26.7**	**-7.0**
	45nm,1.3s,mb5.1						
QSPA	**South Pole Qui**	**83.66**	**180**	*e*P	**P**	**15 54 55.3**	**+0.8**
	2.6nm,1.0s,mb4.0						
ILAR	**Eielson Array**	**92.49**	**25**	P	**P**	**15 55 34.2**	**-2.8**
	0.2nm,0.6s,mb3.6,baz=268,slow=4.2,SNR=4.2						
CPUP	**Villa Florida**	**146.67**	**167**	PKPbc	PKPbc	16 02 08.2	-0.1
	0.5nm,0.4s,baz=166,slow=4.2,SNR=2.9						
LPAZ	**La Paz**	**150.91**	**141**	PKPbc	PKPbc	16 02 21.8	+2.3
	3.1nm,0.4s,baz=28,slow=2.6,SNR=25						

*IDC **23** 15:48:20.9±0.7,16°.54S×173°.76W,h0km,mb4.0/7, mb1 4.3/8,mb1mx4.0/20,mbtmp4.0/8,ML2.0/1,MS3.1/2, Ms1 3.1/2,ms1mx2.7/21,Error ellipse: s-maj=36.9km s-min=16.9km az=131.0*
*ISCJB **23** 15:48:22.5±5.0,16°.4S±0°.2×173°.9W±0°.2,h20km±35km, mb4.0/9,Error ellipse: s-maj=33.0km s-min=14.2km az=44.7*
*NEIC **23** 15:48:22.6±4.9,16°.49S×173°.79W,h11km±31km,mb4.8/3, Error ellipse: s-maj=20.0km s-min=8.7km az=133.0*

ISC 23 15:48:22.0±7.0,**16°.5S**±0°.1×**173°.8W**±0°.2,**h6**km±44km,**n20, σ0s63/18, mb4.0/9, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.22**	**38**	Pn	**Pn**	**15 49 13.1**	**0.0**
AFI				*e*Sn	**Sn**	**15 49 45.2**	**-6.5**
AFI				LR	LR	15 50 10.7	
AFI	**Afiamalu**	**3.22**	**38**	Pn	**Pn**	**15 49 13.1**	**0.0**
	9.3nm,0.3s,baz=20,slow=22,SNR=36						
AFI				Sn	**Sn**	**15 49 45.7**	**-6.0**
	51nm,0.3s,baz=45,slow=22,SNR=16						
AFI				LR	LR	15 50 10.7	
	comp=Z,150nm,19.3s,baz=283,slow=34						
DZM	**Mont Dzumac**	**19.44**	**250**	*e*LR	LR	15 58 22.2	
	125nm,27.7s						
URZ	**Urewera**	**23.13**	**198**	P	**P**	**15 53 28.6**	**-0.3**
	3.5nm,0.7s,mb3.9,baz=3.4,slow=17,SNR=3.2						
PPT	**Papeete**	**23.20**	**96**	*e*LR	LR	15 58 32.5	
	114nm,29.2s						
PPT	**Papeete**	**23.20**	**96**	LR	LR	15 59 39.8	
	comp=Z,86nm,21.5s,baz=52,slow=29						
CTAO	**Charters Tower**	**38.03**	**258**	*e*P	**P**	**15 55 42.2**	**+0.9**
	22nm,1.3s,mb4.7						
WRA	**Warramunga Arr**	**49.22**	**258**	P	**P**	**15 57 11.4**	**-0.2**
	0.4nm,0.4s,mb3.8,baz=96,slow=7.1,SNR=7.5						
ASAR	**Alice Springs**	**49.41**	**253**	P	**P**	**15 57 13.0**	**0.0**
	6.0nm,0.5s,mb4.8,baz=87,slow=8.9,SNR=42						
MAJO	**Matsushiro**	**69.50**	**320**	P	**P**	**15 59 27.4**	**-4.1**
UNV	**Unalaska Valle**	**70.31**	**5**	*e*P	**P**	**15 59 34.3**	**-1.7**
	80nm,1.5s						
QSPA	**South Pole Qui**	**73.58**	**180**	P	**P**	**15 59 55.3**	**-0.2**
QSPA	**South Pole Qui**	**73.58**	**180**	P	**P**	**15 59 55.3**	**-0.2**
YBH	**Yreka Blue Hor**	**74.69**	**37**	P	**P**	**16 00 03.1**	**+0.7**
NVAR	**Mina Array Bea**	**75.39**	**42**	P	**P**	**16 00 07.0**	**+0.5**
	1.1nm,0.9s,mb3.8,baz=231,slow=9.6,SNR=6.9						
TXAR	**Lajitas Array**	**81.53**	**56**	P	**P**	**16 00 40.6**	**-0.2**
	1.0nm,1.1s,mb3.7,baz=216,slow=6.2,SNR=4.9						
ANMO	**Alb

HHC			pmax	pmax		
	comp=Z,10.0nm,0.9s					
HHC			LR	LR		
	comp=N,80nm,4.2s					
HHC			LR	LR		
	comp=E,210nm,4.8s					
HHC			LR	LR		
	comp=Z,88nm,5.8s					
MKAR	**Makanchi Array**	**22.79 316**	P	**P**	**16 20 00.5**	**+1.1**
MKAR	**Makanchi Array**	**22.79 316**	P	**P**	**16 20 00.5**	**+1.2**
	comp=Z,0.2nm,0.3s,mb3.0,baz=108,slow=12,SNR=6.7					
ZALV	**Zalesovo Beam**	**26.04 332**	P	**P**	**16 20 29.8**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.3,baz=123,slow=7.1,SNR=3.0					
WRA	**Warramunga Arr**	**58.98 148**	P	**P**	**16 24 57.9**	**+1.4**
	comp=Z,1.2nm,0.6s,mb4.1,baz=340,slow=7.3,SNR=5.9					
ASAR	**Alice Springs**	**62.07 150**	P	**P**	**16 25 19.1**	**+1.5**
	comp=Z,0.5nm,0.6s,mb3.8,baz=333,slow=6.6,SNR=12					
PPLA	**Purkeypile**	**66.85 29**	*e*Pn	**P**	**16 25 48.6**	**+0.2**
	comp=Z,2.8nm,0.7s,mb4.4					

*ISCJB **23** 16:25:60.0±0.8,6.14N±0.08×126.2E±0.1,h135km±7km, mb3.4/5, Error ellipse: s-maj=18.3km s-min=13.0km az=168.6*

*IDC **23** 16:26:01.9±1.7,6.13N×126.09E,h135km±8km, mb3.2/5, mb1 3.3/5, mb1mx3.1/21, mbtmp3.2/5, MS3.8/1, Ms1 3.8/1, ms1mx2.5/16, Error ellipse: s-maj=190.0km s-min=16.2km az=65.0*

*MAN **23** 16:26:02, 6.39N×126.36E, h114km, mb4.8, ML3.8, MS3.8*

ISC 23 16:26:01.0±0.7,**6.15N**±0.08×**126.23E**±0.09,**h126**km±7km, **n14,**σ0**87**/19,**mb3.5**/5,**1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MATI	**Mati**	**0.79**	**2**	*e*P		**Pn**	**16 26 21.5**	**-0.3**
MATI				*e*S		**Sn**	**16 26 36.0**	**-1.4**
DAV	**Davao City (W)**	**1.11**	**325**	P		**Pn**	**16 26 25.2**	**+0.4**
	36nm,0.3s,baz=44,slow=9.0,SNR=3.8							
DAV				S		**Sn**	**16 26 44.4**	**+1.7**
	85nm,0.3s,baz=103,slow=23,SNR=13							
DMPH	**Davao City--Mi**	**1.17**	**322**	⇓*e*P		**Pn**	**16 26 25.7**	**+0.4**
DMPH				*e*S		**Sn**	**16 26 44.8**	**+1.1**
GSPH	**General Santos**	**1.27**	**267**	⇑*i*P		**Pn**	**16 26 25.2**	**-1.1**
GSPH				*i* S		**Sn**	**16 26 45.0**	**-0.6**
KCP	**Kidapawan**	**1.41**	**307**	⇓*i*P		**Pn**	**16 26 27.9**	**0.0**
KCP				*i* S		**Sn**	**16 26 48.9**	**+0.5**
BUKP	**Musuan**	**2.07**	**326**	*e*P		**Pn**	**16 26 35.9**	**+0.2**
BUKP				*e*S		**Sn**	**16 26 60.0**	**-2.2**
CGP	**Cagayan de Oro**	**2.75**	**327**	*e*P		**Pn**	**16 26 45.2**	**+1.0**
PAGZ	**Pagadian**	**3.29**	**301**	*e*P		**Pn**	**16 26 51.2**	**-0.1**
WRA	**Warramunga Arr**	**27.13**	**163**	P		**P**	**16 31 32.3**	**-0.1**
	0.3nm,0.4s,mb3.2,baz=343,slow=8.9,SNR=2.8							
PSI	**Prapat**	**27.42**	**264**	LR		LR	16 45 04.5	
	comp=Z,163nm,18.2s,baz=60,slow=42							
ASAR	**Alice Springs**	**30.57**	**166**	P		**P**	**16 32 03.0**	**+0.2**
	0.3nm,0.4s,mb3.4,baz=340,slow=7.2,SNR=23							
STKA	**Stephens Creek**	**40.56**	**160**	P		**P**	**16 33 28.8**	**+0.7**
	1.4nm,0.7s,mb3.9,baz=340,slow=15,SNR=3.4							
MKAR	**Makanchi Array**	**55.30**	**325**	P		**P**	**16 35 20.8**	**-0.5**
	0.2nm,0.4s,mb3.5,baz=120,slow=7.3,SNR=3.3							
KURK	**Kurchatov**	**59.44**	**327**	P		**P**	**16 35 50.1**	**-0.3**
	0.4nm,0.6s,mb3.6,baz=125,slow=6.5,SNR=4.7							

DJA 23 17:22:59,7.56S×108.53E,h66km,MLv3.3/10,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CMJI	**Cimerak**	**0.24**	**200**	P		Pn	17 23 10.6	+1.2
CMJI				S		Sn	17 23 19.7	+2.8
CISI	**Cisompet, Garu**	**0.71**	**270**	P		Pn	17 23 16.3	+2.6
CISI				S		Sn	17 23 28.2	+3.6
LEM	**Lembang**	**1.16**	**309**	P		Pn	17 23 18.8	-0.6
BJII	**Banjamegara**	**1.19**	**79**	P		Pn	17 23 21.1	+1.3
UGM	**Wanagama**	**2.01**	**100**	P		Pn	17 23 31.7	+1.0
UGM				S		Sn	17 23 56.5	+1.7
PCJI	**Pacitan**	**2.70**	**104**	P		Pn	17 23 40.6	+0.6
PCJI				S		Sn	17 24 12.7	+1.1
SJI	**Sawahan**	**3.21**	**93**	P		Pn	17 23 47.1	0.0
PWJI	**Pagerwojo**	**3.28**	**98**	P		Pn	17 23 48.8	+0.8
GMJI	**Gumukmas**	**4.92**	**99**	P		Pn	17 24 11.2	+0.8
MDSI	**Maura Dua**	**5.30**	**305**	P		Pn	17 24 07.1	-8.5
SRBI	**Singaraja**	**6.64**	**95**	P		Pn	17 24 34.0	0.0

CASC 23 17:35:34.4±1.6,**10.08N**×**85.57W,h13**km±7km,**MD3.8, 2C-4D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VCR	**Vista de Mar**	**0.07**	**307**	⇓*e*P		Pg	17 35 38.2	+1.1
JCR	**Jicaral**	**0.51**	**117**	⇓*e*P		Pg	17 35 44.3	-0.1
JCR				*e*S		Sg	17 35 51.1	0.0
JTS	**JuntasAbangare**	**0.64**	**71**	*i* P		Pg	17 35 46.3	-0.7
JTS				*e*S		Sg	17 35 56.2	+0.7
CGA2	**Cerro Gallo 2**	**1.09**	**93**	⇑*e*P		Pb	17 35 53.6	-1.5
CGA2				*e*S		Sb	17 36 08.7	-0.5
PRS1	**Puriscal**	**1.24**	**94**	⇓*e*P		Pn	17 35 55.6	-1.8
SSN	**San Juan del S**	**1.24**	**347**	*e*P		Pn	17 35 55.7	-1.8
SSN				*e*S		Sb	17 36 13.0	-0.7
LAJ	**Bijagual**	**1.44**	**98**	⇑*e*P		Pn	17 35 53.0	-7.2
CONN	**Concepcion**	**1.48**	**358**	*i* P		Pn	17 36 00.0	-0.7
QCR	**Quepos**	**1.53**	**115**	*e*P		Pn	17 36 01.4	0.0
URSC	**Urasca**	**1.78**	**98**	⇓*e*P		Pn	17 36 05.1	+0.2
BUS	**Buena Vista**	**1.86**	**106**	*e*P		Pn	17 36 06.7	+0.7
CSAN		**2.25**	**338**	*i* P		Pn	17 36 09.4	-1.9

*ISCJB **23** 17:39:05.4±5.2,25.6S±0.3×179.5E±0.2,h493km±60km, mb3.6/5, Error ellipse: s-maj=49.1km s-min=31.7km az=20.8*

*IDC **23** 17:39:06.8±5.4,25.48S×179.53E,h505km±57km, mb3.0/4, mb1 3.3/5, mb1mx3.0/17, mbtmp3.1/5, Error ellipse: s-maj=35.9km s-min=23.3km az=41.0*

*NEIC **23** 17:39:08.0±3.6,25.72S×179.49E,h527km±40km, mb4.0/2, Error ellipse: s-maj=36.1km s-min=30.1km az=203.0*

ISC 23 17:39:07.5±3.9,**25.7S**±0.3×**179.5E**±0.2,**h508**km±45km, **n11,**σ1**57**/8,**mb3.6**/5,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
URZ	**Urewera**	**12.67**	**188**	P		**P**	**17 41 52.8**	**-0.1**
	0.8nm,0.3s,baz=95,slow=22,SNR=5.3							
ASAR	**Alice Springs**	**41.28**	**263**	P		**P**	**17 46 08.8**	**+0.5**
	1.0nm,0.6s,mb3.4,baz=94,slow=7.3,SNR=32							
WRA	**Warramunga Arr**	**41.82**	**268**	P		**P**	**17 46 12.5**	**0.0**
WRA	**Warramunga Arr**	**41.82**	**268**	P		**P**	**17 46 12.5**	**0.0**
	1.2nm,0.6s,mb3.5,baz=104,slow=7.9,SNR=4.0							
CASY	**Casey**	**58.27**	**206**	P		**P**	**17 48 09.9**	**-2.7**
	15nm,1.4s,mb4.1							
QSPA	**South Pole Qui**	**64.38**	**180**	*e*P		**P**	**17 48 53.8**	**+1.4**
	2.3nm,0.7s,mb3.8							
QSPA				P			17 48 54.1	
QSPA	**South Pole Qui**	**64.38**	**180**	P		**P**	**17 48 54.1**	**+1.7**
	1.7nm,0.6s,mb3.8,baz=236,slow=1.2,SNR=19							
NVAR	**Mina Array Bea**	**86.39**	**44**	P		**P**	**17 50 55.3**	**-0.3**
	0.2nm,0.5s,mb3.0,baz=230,slow=8.2,SNR=2.7							
NOA	**NORSAR Array B**	**143.78**	**350**	PKP		PKPdf	17 57 41.1	-2.7
	1.6nm,0.7s,baz=21,slow=3.8,SNR=9.2							
AKASG	**Malin Array Be**	**146.20**	**325**	PKPbc		PKPbc	17 57 48.4	-2.0
	0.5nm,0.4s,baz=42,slow=3.2,SNR=3.9							
BRTR	**Keskin Array B**	**148.23**	**305**	PKPbc		PKPbc	17 57 54.8	-1.3
	0.4nm,0.5s,baz=123,slow=5.3,SNR=2.9							

*NEIC **23** 17:42:55.2, 15.53N×95.48W, h12km, MD3.8(MEX), After MEX.*

MEX 23 17:42:55.4±0.6,**15.55N**×**95.47W,h12**km±8km,**MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HUIG	**Huatulco**	**0.65**	**289**	*e*P		Pg	17 43 06.5	-1.6
HUIG				*i* S		Sg	17 43 15.2	-1.5
HUIG	**Huatulco**	**0.65**	**289**	*e*P		Pg	17 43 06.5	-1.6
HUIG				*i* S		Sg	17 43 15.2	-1.5
VHO	**Vista Hermosa**	**1.94**	**321**	*i* P		Pn	17 43 25.2	-3.0
VHO				*i* S		Sn	17 43 48.1	-4.3
VHO	**Vista Hermosa**	**1.94**	**321**	*i* P		Pn	17 43 25.2	-3.0
VHO				*i* S		Sn	17 43 48.1	-4.3
PCIG		**2.17**	**86**	*i* P		Pn	17 43 27.9	-3.5
PCIG				*i* S		Sn	17 43 54.4	-3.9
TGIG		**2.56**	**61**	*i* P		Pn	17 43 33.6	-3.1
TGIG				*i* S		Sn	17 44 04.2	-3.7
PNIG	**Pinotepa**	**2.69**	**288**	*i* P		Pn	17 43 35.5	-3.0
PNIG				*i* S		Sn	17 44 04.4	-6.5
PNIG	**Pinotepa**	**2.69**	**288**	*i* P		Pn	17 43 35.5	-3.0
PNIG				*i* S		Sn	17 44 04.4	-6.5
SCX	**San Cristobal**	**2.97**	**66**	*i* S		Sn	17 44 25.6	+7.7
SCX	**San Cristobal**	**2.97**	**66**	*e*P		Pn	17 43 39.9	-2.4
SCX				*i* S		Sn	17 44 14.4	-3.5
UTMO	**Huajuapan**	**3.18**	**316**	*e*P		Pn	17 43 43.4	-1.9
UTMO				*i* S		Sn	17 44 18.2	-4.9
TPIG	**Tehuac#an**	**3.38**	**328**	*i* S		Sn	17 44 23.9	-4.0

MEX 23 17:51:44.1±0.7,**17.25N**×**96.59W,h79**km±6km,**MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VHO	**Vista Hermosa**	**0.22**	**217**	*i* P		Pn	17 51 54.7	-1.2
VHO				*e*S		Sn	17 52 03.2	-1.4
UTMO	**Huajuapan**	**1.29**	**297**	*e*P		Pn	17 52 06.0	-0.7
UTMO				*e*S		Sn	17 52 22.1	-1.6
TPIG	**Tehuac#an**	**1.37**	**328**	*i* P		Pn	17 52 06.5	-1.2
TPIG				*i* S		Sn	17 52 24.2	-1.4
HUIG	**Huatulco**	**1.55**	**162**	*i* P		Pn	17 52 08.7	-1.3
HUIG				*i* S		Sn	17 52 28.1	-1.4
PNIG	**Pinotepa**	**1.70**	**240**	*i* P		Pn	17 52 09.6	-2.4
PNIG				*e*S		Sn	17 52 32.3	-0.8

*ISCJB **23** 17:56:51.7±0.4,39.98N±0.02×23.39E±0.04,h6km±5km, Error ellipse: s-maj=4.9km s-min=3.2km az=4.6*

*NEIC **23** 17:56:51.8,39.99N×23.35E,h24km, MD3.2(ATH), After ATH.*

*ATH **23** 17:56:51.8,39.99N×23.35E,h24km±1km, MD3.2/6*

*THE **23** 17:56:51.9,39.98N×23.40E,h0km±2km, ML1.9/4, Error ellipse: s-maj=2.5km s-min=0.6km az=249.0*

*CSEM **23** 17:56:51.9±0.3,39.98N×23.42E,h20km, ML1.9/4, Error ellipse: s-maj=9.0km s-min=5.0km az=97.0*

ISC 23 17:56:52.3±0.4,**39.98N**±0.02×**23.39E**±0.04,**h9**km±4km, **n31,**σ0**66**/60,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PAIG	**Paliouri**	**0.23**	**103**	P		**Pg**	**17 56 56.3**	**-0.6**
PAIG				S		**Sg**	**17 57 00.0**	**0.0**
PAIG	**Paliouri**	**0.23**	**103**	P		**Pg**	**17 56 56.3**	**-0.6**
PAIG				S		**Sg**	**17 57 00.0**	**0.0**
PLG	**Polygyros**	**0.40**	**6**	*e*Pb		**Pg**	**17 56 59.5**	**-0.6**
PLG				*e*Sb		**Sg**	**17 57 05.6**	**+0.3**
PLG	**Polygyros**	**0.40**	**6**	*e*PB		**Pg**	**17 56 59.5**	**-0.6**
PLG				*e*SB		**Sg**	**17 57 05.6**	**+0.3**
PLG	**Polygyros**	**0.40**	**6**	P		**Pg**	**17 56 59.4**	**-0.7**
PLG				S		**Sg**	**17 57 04.8**	**-0.5**
PLG	**Polygyros**	**0.40**	**6**	*e*Pb		**Pg**	**17 56 59.5**	**-0.6**
PLG				S		**Sg**	**17 57 04.8**	**-0.5**
PLG				*e*Sb		**Sg**	**17 57 05.6**	**+0.3**
OUR	**Ouranopolis**	**0.57**	**51**	P		**Pg**	**17 57 02.7**	**-0.7**
OUR				S		**Sg**	**17 57 11.4**	**+0.5**
OUR	**Ouranopolis**	**0.57**	**51**	P		**Pg**	**17 57 02.7**	**-0.7**
OUR				S		**Sg**	**17 57 11.4**	**+0.5**
XOR	**Xorichti**	**0.63**	**194**	P		**Pg**	**17 57 04.2**	**-0.2**
XOR				S		**Sg**	**17 57 14.1**	**+1.4**
XOR	**Xorichti**	**0.63**	**194**	P		**Pg**	**17 57 04.2**	**-0.2**
XOR				S		**Sg**	**17 57 14.1**	**+1.4**
HORT	**Hortiatis**	**0.66**	**340**	P		**Pg**	**17 57 04.4**	**-0.6**
HORT				S		**Sg**	**17 57 14.4**	**+0.8**
HORT	**Hortiatis**	**0.66**	**340**	P		**Pg**	**17 57 04.4**	**-0.6**
HORT				S		**Sg**	**17 57 14.4**	**+0.8**
NEO	**Neokhori**	**0.68**	**191**	*e*Pn		**Pg**	**17 57 05.2**	**-0.2**
NEO				*e*Sn		**Sg**	**17 57 15.5**	**+1.2**
NEO	**Neokhori**	**0.68**	**191**	*e*PN		**Pg**	**17 57 05.2**	**-0.2**
NEO				*e*SN		**Sg**	**17 57 15.5**	**+1.2**
NEO	**Neokhori**	**0.68**	**191**	*e*Pn		**Pg**	**17 57 05.2**	**-0.2**
NEO				*e*Sn		**Sg**	**17 57 15.5**	**+1.2**
LIT	**Litokhoron**	**0.70**	**280**	*e*Pn		**Pg**	**17 57 04.6**	**-1.3**
LIT				*e*Sn		**Sg**	**17 57 15.2**	**+0.2**
LIT	**Litokhoron**	**0.70**	**280**	*e*PN		**Pg**	**17 57 04.6**	**-1.3**
LIT				*e*SN		**Sg**	**17 57 15.2**	**+0.2**
SOH	**Sokhos**	**0.84**	**358**	*e*Pn		**Pg**	**17 57 08.4**	**-0.1**
SOH				*e*Sn		**Sg**	**17 57 20.0**	**+0.5**
SOH	**Sokhos**	**0.84**	**358**	*e*PN		**Pg**	**17 57 08.4**	**-0.1**
SOH				*e*SN		**Sg**	**17 57 20.0**	**+0.5**
AOS	**Alonnisos**	**0.89**	**155**	P		**Pg**	**17 57 08.6**	**-0.8**
AOS				S		**Sg**	**17 57 21.1**	**+0.2**
AOS	**Alonnisos**	**0.89**	**155**	P		**Pg**	**17 57 08.6**	**-0.8**
AOS				S		**Sg**	**17 57 21.1**	**+0.2**
KNT	**Kendrikon**	**1.24**	**342**	P		**Pn**	**17 57 15.1**	**-0.6**
KNT				S		**Sb**	**17 57 32.8**	**+0.9**
KNT	**Kendrikon**	**1.24**	**342**	P		**Pn**	**17 57 15.1**	**-0.6**
AGG	**Agios Georgios**	**1.26**	**221**	*e*Pn		**Pn**	**17 57 15.4**	**-0.6**
AGG				*e*Sn		**Sn**	**17 57 32.5**	**-0.5**
AGG	**Agios Georgios**	**1.26**	**221**	*e*PN		**Pn**	**17 57 15.4**	**-0.6**
AGG				*e*SN		**Sn**	**17 57 32.5**	**-0.5**
AGG	**Agios Georgios**	**1.26**	**221**	*e*Pn		**Pn**	**17 57 15.4**	**-0.6**
AGG				*e*Sn		**Sn**	**17 57 32.5**	**-0.5**
KAVA	**Kavala**	**1.33**	**40**	P		**Pn**	**17 57 17.4**	**+0.5**
KAVA	**Kavala**	**1.33**	**40**	P		**Pn**	**17 57 17.4**	**+0.5**
NVR	**Nevrokopi**	**1.42**	**14**	*e*Pn		**Pn**	**17 57 18.8**	**+0.7**
NVR				*e*Sn		**Sn**	**17 57 37.0**	**+0.1**
NVR	**Nevrokopi**	**1.42**	**14**	*e*PN		**Pn**	**17 57 18.8**	**+0.7**
NVR				*e*SN		**Sn**	**17 57 37.0**	**+0.1**
NVR	**Nevrokopi**	**1.42**	**14**	*e*Pn		**Pn**	**17 57 18.8**	**+0.7**
NVR				*e*Sn		**Sn**	**17 57 37.0**	**+0.1**

*ISCJB **23** 18:11:26.9±1.6,24.3S±0.1×67.5W±0.4,h184km±56km, Error ellipse: s-maj=54.1km s-min=16.0km az=10.2*

*IDC **23** 18:11:26.9±3.1,24.17S×66.99W,h168km±29km, mb1 3.2/4, mb1mx3.1/18, mbtmp3.0/4, Error ellipse: s-maj=43.2km s-min=26.8km az=74.0*

*NEIC **23** 18:11:27.5,24.07S×67.74W,h220km, MG4.1(GUC), After GUC.*

*GUC **23** 18:11:27.6±0.4,24.09S×67.60W,h200km, ML4.1*

ISC 23 18:11:27.5±1.7,**24.3S**±0.1×**67.5W**±0.4,**h168**km±63km,**n14,** σ1**28**/13,**2C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CEN1	**Los Morros**	**2.67**	**289**	*i* P		**Pn**	**18 12 12.4**	**+0.8**
CEN1				*i* S		**Sn**	**18 12 47.7**	**+2.0**
CEN1				AML	AML		18 12 52.5	
	comp=E,190nm,0.4s							
ANCH	**Antofagasta**	**2.77**	**282**	⇑*i*P		**Pn**	**18 12 10.6**	**-2.3**
ANCH				*i* S		**Sn**	**18 12 45.7**	**-2.2**
ANCH	**Antofagasta**	**2.77**	**282**	⇑*i*P		**Pn**	**18 12 10.5**	**-2.3**
ANCH				*i* S		**Sn**	**18 12 45.7**	**-2.2**
ANCH				AML	AML		18 12 47.9	
	comp=E,576nm,0.1s							
MACH	**Maria Elena**	**2.98**	**314**	*e*P		**Pn**	**18 12 16.3**	**+0.9**
MACH				*i* S		**Sn**	**18 12 53.3**	**+0.8**
TOCH	**Tocopilla**	**3.35**	**311**	*i* S		**Sn**	**18 12 60.0**	**-0.7**
TOCH				AML	AML		18 13 02.7	
	comp=E,426nm,0.1s							
LCO	**Las Campanas**	**5.51**	**211**	*e*Pn		Px	18 12 44.8	
LCO				*e*S		Sx	18 13 40.5	
LPAZ	**La Paz**	**8.00**	**355**	P		**Pn**	**18 13 20.3**	**-0.6**
	comp=E,0.9nm,0.3s,baz=163,slow=7.2,SNR=18							
CPUP	**Villa Florida**	**9.38**	**105**	P		Px	18 13 34.0	
	comp=E,0.1nm,0.3s,baz=305,slow=16,SNR=2.5							
SIV	**San Ignacio**	**10.21**	**37**	P		Px	18 13 43.4	
	comp=E,0.4nm,0.3s,baz=200,slow=17,SNR=2.7							
TRQA	**Tornquist**	**14.48**	**162**	*e*Pn		**Pn**	**18 14 44.1**	**-0.5**
PLCA	**Paso Flores**	**16.59**	**188**	P		**Pn**	**18 15 11.3**	**+1.0**
PLCA	**Paso Flores**	**16.59**	**188**	P		**Pn**	**18 15 11.3**	**+1.0**
	comp=E,0.2nm,0.3s,baz=0.2,slow=10,SNR=3.4							
WRA	**Warramunga Arr**	**131.17**	**208**	PKP		PKPdf	18 30 19.2	-1.0
	comp=E,0.7nm,1.1s,baz=158,slow=1.6,SNR=2.6							
MKAR	**Makanchi Array**	**147.02**	**39**	PKPbc		PKPbc	18 30 48.4	-2.0
	comp=E,0.1nm,0.6s,baz=298,slow=4.3,SNR=2.7							

*ISK **23** 18:29:25.6, 40.04N×28.03E, h16km, ML2.3*

*ISCJB **23** 18:29:26.5±0.7, 40.06N±0.05×28.00E±0.05, h18km±8km, Error ellipse: s-maj=9.4km s-min=6.3km az=17.4*

*CSEM **23** 18:29:26.3±0.2, 40.06N×28.02E, h16km±1km, ML2.3, Error ellipse: s-maj=4.0km s-min=3.2km az=6.0*

*DDA **23** 18:29:27.1, 40.02N×27.99E, h7km±1km, Md2.6*

ISC 23 18:29:26.4±0.7,**40.07N**±0.05×**28.01E**±0.05,**h16**km±6km,

n18,σ0**39**/26,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GONE	**Gonen-Balikesi**	**0.25**	**266**	PG		**Pg**	**18 29 31.8**	**-0.2**
GONE				*e*SG		**Sg**	**18 29 36.0**	**+0.2**
GONE	**Gonen-Balikesi**	**0.25**	**266**	*i* Pg		**Pg**	**18 29 31.8**	**-0.2**
GONE				*e*Sg		**Sg**	**18 29 36.1**	**+0.3**
BALY	**Balya**	**0.45**	**223**	*i* P		**Pg**	**18 29 35.4**	**0.0**
BALY				*i* S		**Sg**	**18 29 41.2**	**-0.2**
BALY	**Balya**	**0.45**	**223**	*i* P		**Pg**	**18 29 35.3**	**-0.1**
BALY				*i* S		**Sg**	**18 29 41.2**	**-0.2**
DURS	**Dursunbey**	**0.58**	**143**	*i* P		**Pg**	**18 29 38.2**	**+0.3**
DURS				*i* S		**Sg**	**18 29 46.1**	**+0.4**
DURS	**Dursunbey**	**0.58**	**143**	*i* P		**Pg**	**18 29 38.2**	**+0.3**
DURS				*i* S		**Sg**	**18 29 46.2**	**+0.5**
ARMT	**Armutlu**	**0.82**	**52**	*e*PG		**Pg**	**18 29 41.9**	**-0.5**
ARMT	**Armutlu**	**0.82**	**52**	*e*Pg		**Pg**	**18 29 41.9**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.23**	**286**	*e*PN		**Pg**	**18 29 49.0**	**+0.1**
GELI				*e*SN		**Sn**	**18 30 05.5**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.23**	**286**	*e*Pn		**Pg**	**18 29 49.0**	**+0.2**
GELI				*e*Sn		**Sn**	**18 30 05.5**	**+0.5**
CTKS	**Kestanelik-??a**	**1.23**	**18**	*e*PN		**Pn**	**18 29 49.2**	**+0.4**
CTKS	**Kestanelik-??a**	**1.23**	**18**	*e*Pn		**Pn**	**18 29 49.2**	**+0.3**
ERIK	**Erikli-Kesan**	**1.30**	**298**	*e*PN		**Pn**	**18 29 50.0**	**+0.2**
ERIK	**Erikli-Kesan**	**1.30**	**298**	*e*Pn		**Pn**	**18 29 50.0**	**+0.2**
GADA	**Gvkgeada**	**1.63**	**275**	*e*PN		**Pn**	**18 29 53.5**	**-0.8**
GADA	**Gvkgeada**	**1.63**	**275**	*e*Pn		**Pn**	**18 29 53.5**	**-0.8**
KULA	**Kula-Manisa**	**1.63**	**162**	*e*PN		**Pn**	**18 29 53.9**	**-0.4**
KULA	**Kula-Manisa**	**1.63**	**162**	*e*Pn		**Pn**	**18 29 53.9**	**-0.5**

*LJU **23** 18:35:20.7, 45.37N×14.49E, h15km, ML2.6*

*ISCJB **23** 18:35:20.8±0.4, 45.38N±0.02×14.50E±0.02, h4km±3km, Error ellipse: s-maj=3.7km s-min=2.1km az=19.3*

*CSEM **23** 18:35:21.1±0.2, 45.38N×14.49E, h5km, ML3.5/14, Error ellipse: s-maj=3.4km s-min=1.9km az=16.0*

*NEIC **23** 18:35:21.3±1.4, 45.40N×14.47E, h10km, ML2.7(LJU), Error ellipse: s-maj=13.4km s-min=4.3km az=190.0*

*PRU **23** 18:35:22.1, 45.43N×14.71E, h1km*

*VIE **23** 18:35:22.1±0.4, 45.43N×14.52E, h10km±1km, mb2.5/9, ML3.1/9, Error ellipse: s-maj=2.8km s-min=1.4km az=177.0 13 km NE of Rijeka*

ISC 23 18:35:21.5±0.4,**45.37N**±0.02×**14.51E**±0.02,**h8**km±2km, **n116,**σ0**88**/209,**25C-23D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KNDS	**Knezji Dol**	**0.18**	**330**	*i* Pg		**Pg**	**18 35 25.2**	**0.0**
KNDS				*i* Sg		**Sg**	**18 35 28.3**	**+0.5**
KNDS	**Knezji Dol**	**0.18**	**330**	*i* Pg		**Pg**	**18 35 25.2**	**0.0**
KNDS				*i* Sg		**Sg**	**18 35 28.3**	**+0.5**
KNDS								
	comp=Z,2μm,0.1s							
KNDS	**Knezji Dol**	**0.18**	**330**	Pg		**Pg**	**18 35 25.2**	**0.0**
KNDS				*i* Sg		**Sg**	**18 35 28.3**	**+0.5**
	comp=Z,2μm,0.1s							
CEY	**Cerknica**	**0.38**	**351**	⇓*i*Pg		**Pg**	**18 35 28.3**	**-0.5**
CEY				*i* Sg		**Sg**	**18 35 35.1**	**+1.3**
CEY	**Cerknica**	**0.38**	**351**	⇓*i*Pg		**Pg**	**18 35 28.3**	**-0.5**
CEY				*i* Sg		**Sg**	**18 35 35.1**	**+1.3**
CEY								
	comp=Z,238nm,0.1s							
CEY	**Cerknica**	**0.38**	**351**	⇓*i*Pg		**Pg**	**18 35 28.3**	**-0.5**
CEY				*i* Sg		**Sg**	**18 35 35.1**	**+1.4**
	comp=Z,238nm,0.1s							
SKDS	**Skadanscina**	**0.39**	**297**	⇑*i*Pg		**Pg**	**18 35 28.4**	**-0.7**
SKDS				*i* Sg		**Sg**	**18 35 34.4**	**+0.1**
SKDS								
	comp=Z,402nm,0.1s							
VISS	**Visnje**	**0.49**	**28**	⇓*i*Pg		**Pg**	**18 35 30.8**	**-0.2**
VISS								
	comp=Z,141nm,0.2s							
VISS	**Visnje**	**0.49**	**28**	⇓*i*Pg		**Pg**	**18 35 30.8**	**-0.2**
	comp=Z,141nm,0.2s							
BOJS	**Bojanci**	**0.54**	**75**	⇑*i*Pg		**Pg**

	comp=Z,107nm,0.2s									
DOBS	**Dobrina**	**1.03**	**40**	*i* Pg		**Pg**	**18 35 40.6**	**-0.6**
DOBS	**Dobrina**	**1.03**	**40**	*i* Pg		**Pg**	**18 35 40.7**	**-0.5**
COLI	**Coloredo**	**1.10**	**314**	⇓*e*Pg		**Pg**	**18 35 41.1**	**-1.5**
COLI				*e*Sg		**Sg**	**18 35 57.7**	**+0.8**
COLI	**Coloredo**	**1.10**	**314**	*e*Pg		**Pg**	**18 35 41.1**	**-1.5**
COLI				*e*Sg		**Sg**	**18 35 57.7**	**+0.8**
OBKA	**Obir**	**1.14**	**1**	*e*Pg		**Pg**	**18 35 43.0**	**-0.4**
	SNR=116							
OBKA				⇑*i*Sg		**Sg**	**18 35 58.7**	**+0.5**
	comp=Z,121nm,0.3s							
OBKA	**Obir**	**1.14**	**1**	Pg		**Pg**	**18 35 43.0**	**-0.4**
	SNR=116							
OBKA				Sg		**Sg**	**18 35 58.7**	**+0.5**
	comp=Z,121nm,0.3s							
VINO	**Villanova**	**1.24**	**316**	⇓*e*Pg		**Pg**	**18 35 44.0**	**-1.2**
VINO				*e*Sg		**Sg**	**18 36 02.7**	**+1.4**
VINO	**Villanova**	**1.24**	**316**	*e*Pg		**Pg**	**18 35 44.0**	**-1.2**
VINO				*e*Sg		**Sg**	**18 36 02.7**	**+1.5**
BAD	**Bernadia**	**1.24**	**315**	*e*Pg		**Pg**	**18 35 44.0**	**-1.2**
BAD				*e*Sg		**Sg**	**18 36 02.6**	**+1.2**
BAD	**Bernadia**	**1.24**	**315**	*e*Pg		**Pg**	**18 35 44.0**	**-1.3**
BAD				*e*Sg		**Sg**	**18 36 02.6**	**+1.2**
GROS	**Grobnik**	**1.29**	**32**	*i* Pg		**Pg**	**18 35 45.4**	**-0.9**
GROS	**Grobnik**	**1.29**	**32**	*i* Pg		**Pg**	**18 35 45.4**	**-0.9**
LSR	**Lussari**	**1.30**	**329**	⇓*e*Pg		**Pg**	**18 35 46.7**	**+0.2**
LSR				*e*Sg		**Sg**	**18 36 05.2**	**+1.9**
LSR	**Lussari**	**1.30**	**329**	*e*Pg		**Pg**	**18 35 46.7**	**+0.2**
LSR				*e*Sg		**Sg**	**18 36 05.2**	**+1.8**
SISC	**Sisak**	**1.31**	**85**	*e*Pg		**Pg**	**18 35 47.3**	**+0.6**
SISC				Sg		**Sg**	**18 36 05.7**	**+2.0**
SISC	**Sisak**	**1.31**	**85**	*e*Pg		**Pg**	**18 35 47.2**	**+0.5**
SISC				Sg		**Sg**	**18 36 05.6**	**+1.9**
PERS	**Pernice**	**1.34**	**18**	*i* Pg		**Pg**	**18 35 46.5**	**-0.6**
PERS	**Pernice**	**1.34**	**18**	*i* Pg		**Pg**	**18 35 46.5**	**-0.6**
BISS	**Bistriski jare**	**1.35**	**18**	*i* Pg		**Pg**	**18 35 46.8**	**-0.5**
BISS	**Bistriski jare**	**1.35**	**18**	*i* Pg		**Pg**	**18 35 46.8**	**-0.5**
SOKA	**Soboth**	**1.36**	**15**	⇓*i*Pn		**Pn**	**18 35 46.8**	**+0.1**
SOKA				⇓*i*Sn		**Sn**	**18 36 03.8**	**-1.2**
SOKA				⇓*i*Sg		**Sg**	**18 36 05.3**	**+0.2**
	comp=Z,36nm,0.3s							
SOKA	**Soboth**	**1.36**	**15**	Pn		**Pn**	**18 35 46.8**	**0.0**
SOKA				Sn		**Sn**	**18 36 03.8**	**-1.2**
SOKA				Sg		**Sg**	**18 36 05.3**	**+0.1**
	comp=Z,36nm,0.3s							
ACOM	**Acomizza, Ital**	**1.37**	**330**	⇑*e*Pg		**Pn**	**18 35 46.3**	**-0.7**
ACOM	**Acomizza, Ital**	**1.37**	**330**	*e*Pg		**Pn**	**18 35 46.3**	**-0.6**
MPRI	**Monte Prat**	**1.38**	**310**	⇓*e*Pg		**Pg**	**18 35 47.8**	**-0.1**
MPRI				*e*Sg		**Sg**	**18 36 07.0**	**+1.2**
MPRI	**Monte Prat**	**1.38**	**310**	*e*Pg		**Pg**	**18 35 47.8**	**-0.1**
MPRI				*e*Sg		**Sg**	**18 36 07.0**	**+1.3**
MYKA	**Terra Mystica**	**1.40**	**335**	⇑*i*Pn		**Pn**	**18 35 46.9**	**-0.4**
MYKA				⇑*i*Pg		**Pg**	**18 35 48.2**	**-0.1**
MYKA				⇓*i*Sg		**Sg**	**18 36 07.3**	**+0.9**
	comp=Z,40nm,0.2s							
MYKA	**Terra Mystica**	**1.40**	**335**	Pn		**Pn**	**18 35 46.9**	**-0.4**
FUSE	**Fusea**	**1.48**	**315**	⇓*e*Pg		**Pg**	**18 35 49.1**	**-0.8**
FUSE				*e*Sg		**Sg**	**18 36 10.1**	**+0.9**
FUSE	**Fusea**	**1.48**	**315**	*e*Pg		**Pg**	**18 35 49.1**	**-0.8**
FUSE				*e*Sg		**Sg**	**18 36 10.1**	**+0.9**
PLRO	**Paularo**	**1.52**	**322**	*e*Pg		**Pg**	**18 35 50.4**	**-0.1**
PLRO				*e*Sg		**Sg**	**18 36 11.9**	**+1.7**
PLRO	**Paularo**	**1.52**	**322**	*e*Pg		**Pg**	**18 35 50.4**	**-0.1**
PLRO				*e*Sg		**Sg**	**18 36 11.9**	**+1.7**
MLNI	**Malnisio**	**1.54**	**301**	⇓*e*Pg		**Pn**	**18 35 49.5**	**+0.2**
MLNI				*e*Sg		**Sg**	**18 36 11.4**	**+0.4**
MLNI	**Malnisio**	**1.54**	**301**	*e*Pg		**Pn**	**18 35 49.5**	**+0.2**
MLNI				*e*Sg		**Sg**	**18 36 11.4**	**+0.3**
CAE	**Caneva**	**1.59**	**294**	⇓*e*Pg		**Pn**	**18 35 50.1**	**+0.2**
CAE				*e*Sg		**Sg**	**18 36 11.8**	**-0.7**
CAE	**Caneva**	**1.59**	**294**	*e*Pg		**Pn**	**18 35 50.1**	**+0.2**
CAE				*e*Sg		**Sg**	**18 36 11.8**	**-0.7**
ZOU	**Zoufplan**	**1.60**	**318**	⇓*e*Pg		**Pg**	**18 35 51.5**	**-0.7**
ZOU				*e*Sg		**Sg**	**18 36 13.7**	**+0.8**
ZOU	**Zoufplan**	**1.60**	**318**	*e*Pg		**Pg**	**18 35 51.5**	**-0.7**
ZOU				*e*Sg		**Sg**	**18 36 13.7**	**+0.8**
CIMO	**Cimolais**	**1.73**	**304**	⇑*e*Pg		**Pn**	**18 35 51.5**	**-0.3**
CIMO				*e*Sg		**Sg**	**18 36 16.1**	**-0.9**
CIMO	**Cimolais**	**1.73**	**304**	*e*Pg		**Pn**	**18 35 51.5**	**-0.3**
CIMO				*e*Sg		**Sg**	**18 36 16.1**	**-0.9**
CSMI	**Casera Mimoias**	**1.73**	**312**	⇑*e*Pg		**Pn**	**18 35 52.6**	**+0.8**
CSMI				*e*Sg		**Sg**	**18 36 16.9**	**-0.1**
CSMI	**Casera Mimoias**	**1.73**	**312**	*e*Pg		**Pn**	**18 35 52.6**	**+0.7**
CSMI				*e*Sg		**Sg**	**18 36 16.9**	**-0.1**
CSO	**Casso**	**1.78**	**301**	⇓*e*Pg		**Pn**	**18 35 52.3**	**-0.2**
CSO				*e*Sg		**Sg**	**18 36 17.3**	**-1.3**
CSO	**Casso**	**1.78**	**301**	*e*Pg		**Pn**	**18 35 52.3**	**-0.2**
CSO				*e*Sg		**Sg**	**18 36 17.3**	**-1.3**
KBA	**Koelnbreinsper**	**1.89**	**335**	⇓*e*Pn		**Pn**	**18 35 54.3**	**+0.2**
	SNR=6.7							
KBA				⇓*i*Pg		**Pg**	**18 35 57.1**	**-0.7**
KBA				⇑*i*Sn		**Sn**	**18 36 18.5**	**+0.4**
KBA				⇑*i*Sg		**Sg**	**18 36 23.0**	**+0.7**
	comp=Z,35nm,0.4s							
KBA	**Koelnbreinsper**	**1.89**	**335**	Pn		**Pn**	**18 35 54.3**	**+0.2**
	SNR=6.7							
KBA	**Koelnbreinsper**	**1.89**	**335**	Pg		**Pg**	**18 35 57.1**	**-0.6**
KBA				Sn		**Sn**	**18 36 18.5**	**+0.4**
KBA				Sg		**Sg**	**18 36 23.0**	**+0.7**
	comp=Z,35nm,0.4s							
ABTA	**Abfaltersbach**	**1.96**	**315**	⇑*e*Pn		**Pn**	**18 35 55.2**	**+0.2**
	SNR=7.3							
ABTA				⇑*i*Sn		**Sn**	**18 36 20.5**	**+0.7**
ABTA				⇓*i*Sg		**Sg**	**18 36 24.8**	**+0.4**
	comp=Z,29nm,0.2s							
ABTA	**Abfaltersbach**	**1.96**	**315**	Pn		**Pn**	**18 35 55.2**	**+0.2**
	SNR=7.3							
ABTA				Sn		**Sn**	**18 36 20.5**	**+0.7**
ABTA				Sg		**Sg**	**18 36 24.8**	**+0.4**
	comp=Z,29nm,0.2s							
FAU	**Forcella Aurin**	**1.97**	**297**	⇑*i*Pn		**Pn**	**18 35 55.6**	**+0.4**
FAU	**Forcella Aurin**	**1.97**	**297**	*i* Pn		**Pn**	**18 35 55.6**	**+0.5**
ARSA	**Arzberg**	**2.01**	**20**	⇑*e*Pn		**Pn**	**18 35 55.6**	**-0.1**
	SNR=21							
ARSA				⇑*i*Pg		**Pg**	**18 35 59.0**	**-0.9**
ARSA	**Arzberg**	**2.01**	**20**	Pn		**Pn**	**18 35 55.6**	**-0.1**
	SNR=21							
CONA	**Conrad Observa**	**2.72**	**19**	⇑*i*Pn		**Pn**	**18 36 06.0**	**+0.5**
CONA				⇑*i*Sn		**Sn**	**18 36 38.4**	**-0.3**
CONA	**Conrad Observa**	**2.72**	**19**	Pn		**Pn**	**18 36 06.0**	**+0.5**
CONA				Sn		**Sn**	**18 36 38.4**	**-0.2**
WTTA	**Wattenberg**	**2.75**	**315**	⇓*i*Pn		**Pn**	**18 36 06.3**	**+0.4**
WTTA	**Wattenberg**	**2.75**	**315**	Pn		**Pn**	**18 36 06.3**	**+0.4**
PKSM	**Moragy**	**3.01**	**72**	⇑*e*Pn		**Pn**	**18 36 09.1**	**-0.3**
STON	**Ston**	**3.39**	**136**	*e*Pn		**Pn**	**18 36 16.9**	**+2.2**
STON				Sn		**Sn**	**18 36 59.3**	**+4.2**
STON	**Ston**	**3.39**	**136**	*e*Pn		**Pn**	**18 36 16.9**	**+2.2**
STON				Sn		**Sn**	**18 36 59.3**	**+4.2**
KHC	**Kasperske Hory**	**3.82**	**351**	*e*PN		**Pn**	**18 36 21.4**	**+0.9**
KHC				*e*SN		**Sn**	**18 37 06.3**	**+0.7**
KHC				*e*SG		**Sg**	**18 37 22.1**	**-1.9**
	comp=Z,7.9nm,0.6s							
KHC	**Kasperske Hory**	**3.82**	**351**	Pn		**Pn**	**18 36 21.4**	**+0.9**
KHC				Sn		**Sn**	**18 37 06.3**	**+0.7**
KHC				Sg		**Sg**	**18 37 22.1**	**-1.9**
	comp=Z,7.9nm,0.6s							
VYHS	**Vyhne**	**4.31**	**42**	*e*Pn		**Pn**	**18 36 29.4**	**+2.1**
VYHS				*e*Sn		**Sn**	**18 37 15.7**	**-2.0**
VYHS				*e*			18 37 47.1	
VYHS	**Vyhne**	**4.31**	**42**	*e*PN		**Pn**	**18 36 29.4**	**+2.1**
VYHS				*e*SN		**Sn**	**18 37 15.7**	**-2.0**
VYHS				*e*			18 37 47.1	
VYHS	**Vyhne**	**4.31**	**42**	*e*Pn		**Pn**	**18 36 29.4**	**+2.1**
VYHS				*e*Sn		**Sn**	**18 37 15.7**	**-2.0**
PRU	**Pruhonice**	**4.62**	**0**	*e*SN		**Sn**	**18 37 23.6**	**-1.8**
PRU	**Pruhonice**	**4.62**	**0**	Sn		**Sn**	**18 37 23.6**	**-1.8**
BRG	**Berggiesshubel**	**5.52**	**356**	SG		**Sg**	**18 38 20.4**	**+1.8**
	comp=Z,3.3nm,0.8s							

*BJI **23** 18:42:22.2, 31°.29N × 103°.69E, h11 km, ML3.8/18, Ms3.8/2, Ms7 3.7/2*
*IDC **23** 18:42:22.2 ± 0.9, 31°.08N × 103°.61E, h0 km, mb3.8/8, mb1 3.9/10, mb1mx3.7/25, mbtmp3.8/10, ML3.6/2, MS3.1/2, Ms1 3.1/2, ms1mx2.4/40, Error ellipse: s-maj=32.2km s-min=16.3km az=64.0*
*NEIC **23** 18:42:23.6 ± 0.6, 31°.16N × 103°.65E, h10 km, mb3.3/1, Error ellipse: s-maj=15.1km s-min=9.5km az=75.0*
*ISCJB **23** 18:42:24.3 ± 0.9, 31°.23N ± 0°.04 × 103°.72E ± 0°.08, h28 km ± 7 km, mb3.7/7, MS3.0/2, Error ellipse: s-maj=10.9km s-min=6.8km az=8.9*

ISC 23 18:42:24.9 ± 0.8, 31°.25N ± 0°.03 × 103°.67E ± 0°.07, h16 km ± 5 km, n19, σ1§12/27, mb3.7/7, MS3.0/2, 2C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.35**	**167**	⇑Pg	**Pg**	**18 42 31.5**	**-0.6**
CD2				Sg	**Sg**	**18 42 37.9**	**+1.0**
CD2				smax			
	comp=N,23µm,0.6s						
CD2				smax			
	comp=E,11µm,0.2s						
LZH	**Lanzhou**	**4.83**	**2**	Pg	**Pb**	**18 43 44.3**	**-4.7**
LZH				Sg	**Sg**	**18 44 58.4**	**-1.4**
LZH				smax			
	comp=N,53nm,0.8s						
LZH				smax			
	comp=E,58nm,0.7s						
LZH				LR	LR		
	comp=N,780nm,5.2s						
LZH				LR	LR		
	comp=E,650nm,5.6s						
LZH				LR	LR		
	comp=Z,890nm,6.4s						
ENH	**Enshi**	**5.10**	**100**	*e*Pn	**Pn**	**18 43 40.7**	**0.0**
	comp=Z,37nm,0.5s						
ENH				*e*Sn	**Sn**	**18 44 35.9**	**-3.4**
XAN	**Xi'an**	**5.23**	**57**	Pn	**Pn**	**18 43 42.1**	**-0.3**
XAN				Pg	**Pb**	**18 43 57.4**	**+1.4**
XAN				Sn	**Sn**	**18 44 44.8**	**+2.4**
XAN				Sg	**Sg**	**18 45 05.1**	**-7.7**
XAN				smax			
	comp=N,160nm,0.8s						
XAN				smax			
	comp=E,83nm,0.7s						
GYA	**Guiyang**	**5.45**	**150**	Pn	**Pn**	**18 43 46.3**	**+0.9**
GYA				Sn	**Sn**	**18 44 52.4**	**+4.6**
GYA				Sg	**Sg**	**18 45 14.0**	**-5.8**
GYA				smax			
	comp=N,110nm,1.0s						
GYA				smax			
	comp=E,130nm,1.0s						
KMI	**Kunming**	**6.16**	**188**	⇑Pn	**Pn**	**18 43 55.3**	**+0.1**
KMI				Sn	**Sn**	**18 45 05.9**	**+0.6**
KMI				smax			
	comp=N,26nm,1.1s						
KMI				smax			
	comp=E,20nm,1.9s						
KMI				LR	LR		
	comp=N,390nm,9.9s						
KMI				LR	LR		
	comp=E,300nm,8.6s						
KMI				LR	LR		
	comp=Z,340nm,9.9s						
WHN	**Wuhan**	**9.21**	**92**	*e*P	**Pn**	**18 44 36.8**	**-0.2**
CMAR	**Chiang Mai Arr**	**13.44**	**200**	Pn	**Pn**	**18 45 33.0**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=8.2,slow=12,SNR=4.2						
SONM	**Songino Array**	**16.70**	**6**	Pn	**Pn**	**18 46 18.2**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=179,slow=9.9,SNR=3.7						
ULN	**Ulaanbaatar**	**16.80**	**8**	*e*P	**Pn**	**18 46 18.6**	**-0.6**
	comp=Z,1.8nm,0.7s						
KSRS	**Korea Array**	**20.93**	**66**	P	**P**	**18 47 06.9**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=252,slow=10.0,SNR=6.0						
MKAR	**Makanchi Array**	**22.62**	**319**	P	**P**	**18 47 25.6**	**+0.8**
	comp=Z,2.3nm,0.9s,mb3.6,baz=121,slow=12,SNR=16						
ZALV	**Zalesovo Beam**	**26.43**	**335**	P	**P**	**18 48 02.4**	**+1.7**
	comp=Z,1.5nm,0.8s,mb3.6,baz=132,slow=8.8,SNR=8.5						
ZALV				LR	LR	18 58 53.0	
	comp=Z,22nm,18.3s,MS2.7,baz=78,slow=37						
KURK	**Kurchatov**	**26.91**	**324**	P	**P**	**18 48 04.6**	**-0.4**
	comp=Z,0.5nm,0.2s,mb3.6,baz=126,slow=9.8,SNR=5.3						
WRA	**Warramunga Arr**	**58.80**	**146**	P	**P**	**18 52 21.6**	**-0.9**
	comp=Z,1.8nm,0.6s,mb4.3,baz=322,slow=9.8,SNR=8.2						
ASAR	**Alice Springs**	**61.81**	**148**	P	**P**	**18 52 42.4**	**-0.6**
	comp=Z,0.3nm,0.3s,mb3.9,baz=338,slow=6.6,SNR=23						
ILAR	**Eielson Array**	**69.87**	**25**	P	**P**	**18 53 36.5**	**+2.0**
	comp=Z,0.2nm,0.6s,mb3.2,baz=329,slow=6.4,SNR=3.5						
DAVOX	**Davos/Dischmat**	**70.36**	**313**	LR	LR	19 27 24.2	
	comp=Z,17nm,18.3s,MS3.3,baz=92,slow=38						
STKA	**Stephens Creek**	**72.33**	**147**	P	**P**	**18 53 48.4**	**-1.4**
	comp=Z,2.0nm,1.1s,mb4.0,baz=321,slow=7.8,SNR=4.9						

*ISCJB **23** 19:03:36.0 ± 0.6, 23°.90S ± 0°.05 × 66°.70W ± 0°.08, h203 km ± 12 km, mb3.2/2, Error ellipse: s-maj=12.2km s-min=8.4km az=169.8*
*NEIC **23** 19:03:36.5 ± 0.8, 23°.89S × 66°.70W, h195 km ± 10 km, mb4.0/1, Error ellipse: s-maj=14.8km s-min=11.1km az=91.0*
*IDC **23** 19:03:37.2 ± 1.6, 23°.87S × 66°.59W, h196 km ± 15 km, mb3.1/2, mb1 3.4/7, mb1mx3.3/19, mbtmp3.2/7, Error ellipse: s-maj=22.4km s-min=14.9km az=80.0*
*GUC **23** 19:03:40.4 ± 0.4, 23°.47S × 67°.26W, h259 km ± 30 km, ML4.9*

ISC 23 19:03:36.8 ± 0.6, 23°.89S ± 0°.05 × 66°.66W ± 0°.08, h194 km ± 12 km, n23, σ1§27/28, mb3.2/2, 2C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**3.28**	**278**	⇓*i*P	**Pn**	**19 04 33.9**	**+4.4**
CEN1				*i* S	**Sn**	**19 05 12.8**	**+2.2**
CEN1				AML	AML	19 05 16.8	
	comp=N,642nm,0.3s						
MACH	**Maria Elena**	**3.31**	**300**	*i* S	**Sn**	**19 05 11.5**	**+0.2**
ANCH	**Antofagasta**	**3.44**	**273**	P	**Pn**	**19 04 29.3**	**-2.1**
ANCH				S	**Sn**	**19 05 09.8**	**-4.2**
ANCH	**Antofagasta**	**3.44**	**273**	⇑*i*P	**Pn**	**19 04 29.3**	**-2.1**
ANCH				*i* S	**Sn**	**19 05 10.1**	**-3.9**
ANCH				AML	AML	19 05 12.6	
	comp=E,1µm,0.1s						
MECH	**Mejillones**	**3.56**	**282**	⇑*i*P	**Pn**	**19 04 35.0**	**+2.1**
MECH				*i* S	**Sn**	**19 05 16.8**	**0.0**
MECH				AML	AML	19 05 21.2	
	comp=N,2µm,0.3s						
TOCH	**Tocopilla**	**3.71**	**298**	*e*P	**Pn**	**19 04 36.1**	**+1.2**
TOCH				*i* S	**Sn**	**19 05 18.5**	**-1.7**
TOCH				AML	AML	19 05 23.4	
	comp=E,1µm,0.3s						
HMBC	**Humberston**	**4.67**	**320**	*i* P	**Pn**	**19 04 47.5**	**+0.6**
HMBC				*i* S	**Sn**	**19 05 39.4**	**-2.6**
PSGC	**Pisagua**	**5.34**	**322**	⇓*i*P	**Pn**	**19 04 55.1**	**-0.5**
PSGC				*i* S	**Sn**	**19 05 52.9**	**-4.6**
LPAZ	**La Paz**	**7.68**	**349**	P	**Pn**	**19 05 28.2**	**+2.2**
LPAZ				S	**Sn**	**19 06 52.7**	**0.0**
LPAZ	**La Paz**	**7.68**	**349**	P	**Pn**	**19 05 28.2**	**+2.2**
	comp=E,1.2nm,0.3s,baz=165,slow=9.1,SNR=22						
LPAZ				S	**Sn**	**19 06 52.7**	**0.0**
	comp=E,0.4nm,0.3s,baz=22,slow=19,SNR=4.1						
CFAA	**Coronel Fontan**	**7.81**	**190**	P	**Pn**	**19 05 27.4**	**-0.1**
	comp=E,0.2nm,0.3s,baz=357,slow=8.6,SNR=23						
CFAA				S	**Sn**	**19 06 50.0**	**-5.6**
	comp=E,0.6nm,0.3s,baz=290,slow=21,SNR=19						
CPUP	**Villa Florida**	**8.80**	**108**	P	**Pn**	**19 05 41.3**	**+0.8**
	comp=E,1.0nm,0.3s,baz=271,slow=11,SNR=35						
SIV	**San Ignacio**	**9.45**	**35**	P	**Pn**	**19 05 48.2**	**-0.9**
	comp=E,0.7nm,0.3s,baz=224,slow=15,SNR=11						
TRQA	**Tornquist**	**14.68**	**165**	*e*P	**Pn**	**19 06 54.3**	**-1.0**
	comp=E,4.1nm,0.7s						
PLCA	**Paso Flores**	**17.11**	**190**	P	**Pn**	**19 07 24.4**	**-0.2**
PLCA	**Paso Flores**	**17.11**	**190**	P	**Pn**	**19 07 24.4**	**-0.2**
	comp=E,1.2nm,0.3s,baz=4.6,slow=9.2,SNR=9.8						
TXAR	**Lajitas Array**	**63.76**	**324**	P	**P**	**19 13 49.0**	**+0.9**
	comp=E,0.1nm,0.5s,mb2.7,baz=138,slow=9.7,SNR=2.9						
TORD	**Torodi Ar. Bea**	**76.24**	**69**	P	**P**	**19 15 03.7**	**-0.7**
	comp=E,1.1nm,0.6s,mb3.7,baz=256,slow=5.8,SNR=9.7						
ASAR	**Alice Springs**	**128.69**	**204**	PKP	PKPdf	19 22 21.4	-0.2
	comp=E,0.9nm,0.8s,baz=124,slow=1.8,SNR=10						
WRA	**Warramunga Arr**	**131.87**	**207**	PKP	PKPdf	19 22 27.6	-0.1
	comp=E,0.4nm,0.4s,baz=161,slow=1.8,SNR=5.2						
ZALV	**Zalesovo Beam**	**143.15**	**28**	PKP	PKPdf	19 22 45.1	-2.2
	comp=E,0.7nm,0.4s,baz=314,slow=4.9,SNR=5.1						
MKAR	**Makanchi Array**	**146.24**	**40**	PKPbc	PKPbc	19 22 53.8	-0.5
	comp=E,1.5nm,0.5s,baz=312,slow=2.3,SNR=15						
CMAR	**Chiang Mai Arr**	**165.53**	**109**	PKPab	PKPab	19 24 18.6	+0.1
	comp=E,0.6nm,0.8s,baz=254,slow=4.8,SNR=4.8						

*IDC **23** 19:03:43.8 ± 1.0, 50°.17N × 160°.04E, h0 km, mb3.6/8, mb1 3.8/9, mb1mx3.6/25, mbtmp3.6/9, ML3.2/1, Error ellipse: s-maj=28.7km s-min=20.8km az=174.0*
*KRSC **23** 19:03:45.7 ± 1.5, 50°.29N × 160°.25E, h46 km ± 45 km, ML4.2*
*ISCJB **23** 19:03:46.6 ± 1.2, 50°.26N ± 0°.06 × 160°.01E ± 0°.07, h33 km ± 10 km, mb3.8/11, Error ellipse: s-maj=11.1km s-min=7.1km az=159.0*
*MOS **23** 19:03:47.5 ± 1.2, 50°.36N × 159°.96E, h42 km, mb4.2/6, Error ellipse: s-maj=21.6km s-min=8.4km az=94.3*
*NEIC **23** 19:03:54.9 ± 1.7, 50°.84N × 159°.95E, h69 km ± 12 km, mb4.2/4, Error ellipse: s-maj=20.5km s-min=11.6km az=165.0*

ISC 23 19:03:48.5 ± 2.0, 50°.27N ± 0°.05 × 159°.96E ± 0°.07, h32 km ± 15 km, n38, σ1§21/50, mb3.8/11, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.49**	**281**	*e*PN	**Pn**	**19 04 26.0**	**-0.7**
SKR				*e*S	**Sn**	**19 04 54.7**	**-1.2**
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,120nm,0.5s						
SKR				smax			
	comp=N,730nm,0.4s						
SKR				smax			
	comp=E,1µm,0.4s						
SPN	**Mys Shipunski**	**2.83**	**1**	*e*P	**Pn**	**19 04 30.2**	**-1.2**
SPN				*i* S	**Sn**	**19 05 02.6**	**-1.8**
MIPR	**Malaya Ipel'ka**	**2.84**	**316**	*e*P	**Pn**	**19 04 31.9**	**+0.4**
MIPR				*i* S	**Sn**	**19 05 05.8**	**+1.2**
ALID	**Alaid**	**2.87**	**284**	*e*P	**Pn**	**19 04 31.5**	**-0.5**
ALID				*i* S	**Sn**	**19 05 05.0**	**-0.4**
PET	**Petropavlovsk**	**2.88**	**344**	*e*Pn	**Pn**	**19 04 29.9**	**-2.1**
PET				*e*Sn	**Sn**	**19 04 59.5**	**-5.9**
PET	**Petropavlovsk**	**2.88**	**344**	*e*P	**Pn**	**19 04 31.2**	**-0.8**
PET				*i* S	**Sn**	**19 05 04.2**	**-1.3**
PET	**Petropavlovsk**	**2.88**	**344**	*e*PN	**Pn**	**19 04 31.0**	**-1.0**
PET				*e*S	**Sn**	**19 05 04.2**	**-1.3**
PET				pmax	pmax		
	comp=Z,13nm,0.3s						
PET				smax			
	comp=N,153nm,0.4s						
AVH	**Avacha**	**3.10**	**346**	*e*P	**Pn**	**19 04 36.8**	**+1.8**
PETK	**Petropavlovsk-**	**3.17**	**335**	Pn	**Pn**	**19 04 36.6**	**+0.6**
	comp=N,2.3nm,0.3s,baz=138,slow=16,SNR=47						
PETK				Sn	**Sn**	**19 05 13.8**	**+1.1**
	comp=N,3.6nm,0.3s,baz=153,slow=19,SNR=4.9						
PETK	**Petropavlovsk-**	**3.17**	**335**	PN	**Pn**	**19 04 36.6**	**+0.5**
PETK						19 05 13.9	
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				smax			
	comp=N,4.0nm,0.3s						
GNL	**Ganaly**	**3.65**	**341**	*e*P	**Pn**	**19 04 43.1**	**+0.5**
GNL				*i* S	**Sn**	**19 05 25.6**	**+1.1**
MKZ	**Mys Kozlova**	**4.43**	**13**	*e*P	**Pn**	**19 04 51.5**	**-1.8**
MKZ				*i* S	**Sn**	**19 05 40.1**	**-3.6**
KPT	**Kopyto**	**5.71**	**1**	*e*P	**Pn**	**19 05 12.7**	**+1.8**
KOZ	**Kozyrevsk**	**5.80**	**360**	*e*P	**Pn**	**19 05 13.6**	**+1.5**
KOZR	**Kozyr**	**5.81**	**360**	PN	**Pn**	**19 05 13.6**	**+1.3**
KRSR	**Krestovskiy**	**5.97**	**3**	*e*P	**Pn**	**19 05 15.7**	**+1.2**
KLY	**Klyuchi**	**6.07**	**4**	*e*P	**Pn**	**19 05 16.4**	**+0.6**
BKI	**Bering**	**6.14**	**34**	*e*P	**Pn**	**19 05 14.8**	**-2.1**
BKI				*i* S	**Sn**	**19 06 20.1**	**-5.9**
KBTR	**Krutoberegovo**	**6.19**	**15**	*e*P	**Pn**	**19 05 16.3**	**-1.2**
KBTR				*i* S	**Sn**	**19 06 23.3**	**-3.8**
YSS	**Yuzh-Sakhalins**	**11.86**	**260**	*e*P	**Pn**	**19 06 42.3**	**+7.1**
YAK	**Yakutsk**	**20.34**	**317**	*e*P	**P**	**19 08 19.6**	**-2.1**
	comp=N,11nm,0.6s						
YAK	**Yakutsk**	**20.34**	**317**	*e*P	**P**	**19 08 19.2**	**-2.5**
YAK				pmax	pmax		
	comp=Z,13nm,0.7s						
ILAR	**Eielson Array**	**30.93**	**42**	P	**P**	**19 10 01.5**	**-0.3**
	comp=Z,0.4nm,0.5s,mb3.5,baz=255,sl

GUR				S	Sg	19 13 14.7	+1.2	
KALE	**Kalithea**	**0.83**	**51**	P	Pg	19 13 02.4	-0.8	
KALE				S	Sg	19 13 16.2	+2.2	
KALE	**Kalithea**	**0.83**	**51**	P	Pg	19 13 02.4	-0.8	
KALE				S	Sg	19 13 16.2	+2.2	
ITM	**Ithomi**	**0.84**	**144**	*e*Pb	Pg	19 13 03.5	+0.1	
ITM				*e*Sb	Sg	19 13 15.8	+1.5	
ITM	**Ithomi**	**0.84**	**144**	*e*PB	Pg	19 13 03.5	+0.1	
ITM				*e*SB	Sg	19 13 15.8	+1.5	
ITM	**Ithomi**	**0.84**	**144**	P	Pg	19 13 03.0	-0.4	
ITM	**Ithomi**	**0.84**	**144**	P	Pg	19 13 03.0	-0.4	
ITM	**Ithomi**	**0.84**	**144**	*e*Pb	Pg	19 13 03.5	+0.1	
ITM				*e*Sb	Sg	19 13 15.8	+1.5	
VLX	**Vlachokerasia**	**0.98**	**120**	*e*PG	Pg	19 13 05.3	-0.8	
VLX	**Vlachokerasia**	**0.98**	**120**	P	Pg	19 13 05.2	-0.9	
VLX				S	Sg	19 13 19.1	+0.3	
VLX	**Vlachokerasia**	**0.98**	**120**	*e*Pg	Pg	19 13 05.3	-0.8	
VLX				S	Sg	19 13 19.1	+0.3	
PYL	**PYLOS**	**1.03**	**160**	*e*PB	Pg	19 13 06.3	-0.7	
PYL				*e*SB	Sg	19 13 21.5	+1.2	
PYL	**PYLOS**	**1.03**	**160**	P	Pg	19 13 06.4	-0.6	
PYL	**PYLOS**	**1.03**	**160**	P	Pg	19 13 06.4	-0.6	
PYL				*e*Sb	Sg	19 13 21.5	+1.2	
LKD2	**Lefkada island**	**1.05**	**331**	P	Pg	19 13 06.6	-0.8	
LKD2	**Lefkada island**	**1.05**	**331**	P	Pg	19 13 06.6	-0.8	
DSF	**Desfina**	**1.10**	**60**	P	Pg	19 13 07.1	-1.2	
DSF				S	Sg	19 13 23.7	+1.1	
DSF	**Desfina**	**1.10**	**60**	P	Pg	19 13 07.1	-1.2	
DSF				S	Sg	19 13 23.7	+1.1	
EVR	**Evrytania**	**1.11**	**20**	*e*Pn	Pg	19 13 08.1	-0.5	
EVR				*e*Sb	Sg	19 13 22.1	-1.0	
EVR	**Evrytania**	**1.11**	**20**	*e*PN	Pg	19 13 08.1	-0.5	
EVR				*e*SB	Sg	19 13 22.1	-1.0	
EVR	**Evrytania**	**1.11**	**20**	*e*Pn	Pg	19 13 08.1	-0.5	
EVR				*e*Sb	Sg	19 13 22.1	-1.0	
LTK	**Loutraki**	**1.32**	**83**	*e*PG	Pn	19 13 11.0	-1.7	
LTK				*e*SB	Sb	19 13 29.4	-0.7	
LTK	**Loutraki**	**1.32**	**83**	P	Pn	19 13 11.1	-1.6	
LTK				S	Sg	19 13 30.1	+0.6	
LTK	**Loutraki**	**1.32**	**83**	P	Pn	19 13 11.1	-1.6	
LTK				*e*Sb	Sb	19 13 29.4	-0.7	
LTK				S	Sg	19 13 30.1	+0.6	
AGG	**Agios Georgios**	**1.40**	**34**	*e*Pb	Pn	19 13 12.9	-1.0	
AGG				*e*Sb	Sb	19 13 30.8	-1.7	
AGG	**Agios Georgios**	**1.40**	**34**	*e*PB	Pn	19 13 12.9	-1.0	
AGG				*e*SB	Sb	19 13 30.8	-1.7	
AGG	**Agios Georgios**	**1.40**	**34**	P	Pn	19 13 12.8	-1.1	
AGG	**Agios Georgios**	**1.40**	**34**	P	Pn	19 13 12.8	-1.1	
AGG				*e*Sb	Sb	19 13 30.8	-1.7	
LKR	**Lokris**	**1.54**	**59**	*e*Pg	Pn	19 13 14.8	-1.0	
LKR				*e*Sb	Sb	19 13 35.3	-1.2	
LKR	**Lokris**	**1.54**	**59**	*e*PG	Pn	19 13 14.8	-1.0	
LKR				*e*SB	Sb	19 13 35.3	-1.2	
LKR	**Lokris**	**1.54**	**59**	P	Pn	19 13 15.0	-0.8	
LKR	**Lokris**	**1.54**	**59**	P	Pn	19 13 15.0	-0.8	
LKR				*e*Sb	Sb	19 13 35.3	-1.2	
DID	**Didima**	**1.57**	**103**	*e*PG	Pg	19 13 15.7	-1.6	
DID				*e*SB	Sb	19 13 37.5	+0.1	
DID	**Didima**	**1.57**	**103**	P	Pn	19 13 15.9	-0.3	
DID				S	Sn	19 13 37.9	+0.8	
DID	**Didima**	**1.57**	**103**	P	Pn	19 13 15.9	-0.3	
DID				*e*Sb	Sb	19 13 37.5	+0.1	
DID				S	Sn	19 13 37.9	+0.8	
ATAL	**Atalanti**	**1.58**	**58**	P	Pn	19 13 15.5	-0.8	
ATAL				S	Sn	19 13 38.4	+1.1	
ATAL	**Atalanti**	**1.58**	**58**	P	Pn	19 13 15.5	-0.8	
ATAL				S	Sn	19 13 38.4	+1.1	
NAIG	**Nisos Aigina**	**1.73**	**93**	*e*Pg	Pb	19 13 18.9	-0.8	
NAIG	**Nisos Aigina**	**1.73**	**93**	*e*PG	Pb	19 13 18.9	-0.8	
NAIG	**Nisos Aigina**	**1.73**	**93**	*e*Pg	Pb	19 13 18.9	-0.8	
VLI	**Veliai**	**1.73**	**131**	*e*Pg	Pg	19 13 19.4	-1.0	
VLI				*e*Sn	Sg	19 13 42.3	-0.6	
VLI	**Veliai**	**1.73**	**131**	*e*PG	Pg	19 13 19.4	-1.0	
VLI				*e*SN	Sg	19 13 42.3	-0.6	
VLI	**Veliai**	**1.73**	**131**	*e*Pg	Pg	19 13 19.4	-1.0	
VLI				*e*Sn	Sg	19 13 42.3	-0.6	
JAN	**Janina**	**1.82**	**349**	*e*Pg	Pb	19 13 20.7	-0.6	
JAN				*e*Sn	Sn	19 13 43.1	-0.2	
JAN	**Janina**	**1.82**	**349**	*e*PG	Pb	19 13 20.7	-0.6	
JAN				*e*SN	Sn	19 13 43.1	-0.2	
JAN	**Janina**	**1.82**	**349**	*e*Pg	Pb	19 13 20.7	-0.6	
JAN				*e*Sn	Sn	19 13 43.1	-0.2	
IGT	**Igoumenitsa**	**1.83**	**336**	P	Pn	19 13 20.2	+0.4	
IGT	**Igoumenitsa**	**1.83**	**336**	P	Pn	19 13 20.0	+0.2	
IGT	**Igoumenitsa**	**1.83**	**336**	P	Pn	19 13 20.0	+0.2	
ATH	**Athens Observa**	**1.90**	**86**	*e*Pg	Pg	19 13 21.8	-1.9	
ATH				*e*Sn	Sn	19 13 46.2	+0.8	
ATH	**Athens Observa**	**1.90**	**86**	*e*PG	Pg	19 13 21.8	-1.9	
ATH				*e*SN	Sn	19 13 46.2	+0.8	
ATH	**Athens Observa**	**1.90**	**86**	*e*Pg	Pg	19 13 21.8	-1.9	
ATH				*e*Sn	Sn	19 13 46.2	+0.8	
ATHU	**Athens Univers**	**1.96**	**86**	P	Pn	19 13 21.7	+0.2	
ATHU	**Athens Univers**	**1.96**	**86**	P	Pn	19 13 21.7	+0.2	
VLY	**Voula,Athens**	**1.96**	**90**	*e*Pn	Pn	19 13 21.8	+0.2	
VLY				*e*Sn	Sn	19 13 48.1	+1.2	
VLY	**Voula,Athens**	**1.96**	**90**	*e*PN	Pn	19 13 21.8	+0.2	
VLY				*e*SN	Sn	19 13 48.1	+1.2	
VLY	**Voula,Athens**	**1.96**	**90**	*e*Pn	Pn	19 13 21.8	+0.2	
VLY				*e*Sn	Sn	19 13 48.1	+1.2	
PTL	**Penteli**	**2.02**	**84**	*e*Pn	Pn	19 13 22.2	-0.3	
PTL				*e*Sn	Sn	19 13 47.5	-0.9	
PTL	**Penteli**	**2.02**	**84**	*e*PN	Pn	19 13 22.2	-0.3	
PTL				*e*SN	Sn	19 13 47.5	-0.9	
PTL	**Penteli**	**2.02**	**84**	*e*Pn	Sn	19 13 22.2	-0.3	
PTL				*e*Sn	Sn	19 13 47.5	-0.9	
NEO	**Neokhori**	**2.07**	**46**	*e*Pn	Pn	19 13 22.7	-0.4	
NEO				*e*Sn	Sn	19 13 49.9	+0.3	
NEO	**Neokhori**	**2.07**	**46**	*e*PN	Pn	19 13 22.7	-0.4	
NEO				*e*SN	Sn	19 13 49.9	+0.3	
NEO	**Neokhori**	**2.07**	**46**	*e*Pn	Pn	19 13 22.7	-0.4	
NEO				*e*Sn	Sn	19 13 49.9	+0.3	
XOR	**Xorichti**	**2.10**	**44**	P	Pn	19 13 23.2	-0.3	
XOR	**Xorichti**	**2.10**	**44**	P	Pn	19 13 23.2	-0.3	
XOR	**Xorichti**	**2.10**	**44**	P	Pn	19 13 23.2	-0.3	
KYTH	**Kithira**	**2.10**	**138**	*e*Pg	Pg	19 13 26.0	-1.5	
KYTH	**Kithira**	**2.10**	**138**	*e*PG	Pg	19 13 26.0	-1.5	
KYTH	**Kithira**	**2.10**	**138**	*e*Pg	Pg	19 13 26.0	-1.5	
KEK	**Kerkira**	**2.19**	**328**	*e*Pb	Pb	19 13 25.0	-2.6	
KEK				*e*Sn	Sn	19 13 53.7	+1.3	
KEK	**Kerkira**	**2.19**	**328**	*e*PB	Pb	19 13 25.4	-2.6	
KEK				*e*SN	Sn	19 13 53.7	+1.3	
KEK	**Kerkira**	**2.19**	**328**	P	Pn	19 13 24.7	0.0	
KEK	**Kerkira**	**2.19**	**328**	P	Pn	19 13 24.7	0.0	
KEK				*e*Sn	Sn	19 13 53.7	+1.3	
SRN	**Sarande**	**2.25**	**333**	*e*PN	Pg	19 13 33.8	+3.4	
AOS	**Alonnisos**	**2.40**	**56**	P	Pn	19 13 27.6	0.0	
AOS	**Alonnisos**	**2.40**	**56**	P	Pn	19 13 26.6	-1.0	
AOS	**Alonnisos**	**2.40**	**56**	P	Pn	19 13 27.6	0.0	
LIT	**Litokhoron**	**2.41**	**22**	*e*Pb	Pb	19 13 27.7	-3.6	
LIT	**Litokhoron**	**2.41**	**22**	*e*PB	Pb	19 13 27.7	-3.6	
LIT	**Litokhoron**	**2.41**	**22**	P	Pn	19 13 28.0	+0.3	
LIT	**Litokhoron**	**2.41**	**22**	P	Pn	19 13 28.0	+0.3	
KZN	**Kozani**	**2.46**	**8**	*e*Pn	Pn	19 13 29.0	+0.6	
KZN	**Kozani**	**2.46**	**8**	*e*PN	Pn	19 13 29.0	+0.6	
KZN	**Kozani**	**2.46**	**8**	*e*Pn	Pn	19 13 29.0	+0.6	
PAIG	**Paliouri**	**2.76**	**41**	P	Pn	19 13 34.8	+2.2	
PAIG	**Paliouri**	**2.76**	**41**	P	Pn	19 13 34.8	+2.2	
KBN	**Korca**	**2.78**	**352**	*e*PN	Pg	19 13 50.2	+10	
FNA	**Florina**	**2.91**	**1**	P	Pn	19 13 35.5	+0.9	
FNA	**Florina**	**2.91**	**1**	P	Pn	19 13 35.5	+0.9	
PLG	**Polygyros**	**3.00**	**33**	*e*Pn	Pn	19 13 36.5	+0.6	
PLG	**Polygyros**	**3.00**	**33**	*e*PN	Pn	19 13 36.5	+0.6	
PLG	**Polygyros**	**3.00**	**33**	*e*Pn	Pn	19 13 36.5	+0.6	
HORT	**Hortiatis**	**3.06**	**26**	P	Pn	19 13 39.6	+3.0	
HORT	**Hortiatis**	**3.06**	**26**	P	Pn	19 13 39.6	+3.0	
GRG	**Griva**	**3.20**	**15**	P	Pn	19 13 40.3	+1.7	
GRG	**Griva**	**3.20**	**15**	P	Pn	19 13 40.3	+1.7	
SOH	**Sokhos**	**3.34**	**28**	*e*Pn	Pn	19 13 41.8	+1.2	
SOH	**Sokhos**	**3.34**	**28**	*e*PN	Pn	19 13 41.8	+1.2	
SOH	**Sokhos**	**3.34**	**28**	*e*Pn	Pn	19 13 41.8	+1.2	
VAM	**Vamos**	**3.38**	**136**	*e*Pn	Pn	19 13 42.1	+1.0	
VAM	**Vamos**	**3.38**	**136**	*e*PN	Pn	19 13 42.1	+1.0	
VAM	**Vamos**	**3.38**	**136**	*e*Pn	Pn	19 13 42.1	+1.0	
APE	**Apeiranthos**	**3.45**	**102**	*e*Pn	Pn	19 13 43.0	+0.9	
APE	**Apeiranthos**	**3.45**	**102**	*e*PN	Pn	19 13 43.0	+0.9	
APE	**Apeiranthos**	**3.45**	**102**	*e*Pn	Pn	19 13 43.0	+0.9	
VAY	**Valandovo**	**3.58**	**15**	*e*Pn	Pn	19 13 41.1	-2.7	
VAY				*e*Sg	Sn	19 14 24.8	-1.9	
SRS	**Serrai**	**3.69**	**28**	P	Pn	19 13 49.5	+4.1	
SRS	**Serrai**	**3.69**	**28**	P	Pn	19 13 49.5	+4.1	
CHOS	**Chios island**	**3.77**	**81**	*e*PN	Pn	19 13 46.6	+0.1	
CHOS	**Chios island**	**3.77**	**81**	*e*Pn	Pn	19 13 46.6	+0.1	
TIP	**Timpagrande**	**3.80**	**291**	*e*Pn	Pn	19 13 47.2	+0.3	
TIP	**Timpagrande**	**3.80**	**291**	*e*Pn	Pn	19 13 47.2	+0.3	
NVR	**Nevrokopi**	**3.99**	**29**	*e*Pn	Pn	19 13 50.8	+1.3	
NVR	**Nevrokopi**	**3.99**	**29**	*e*PN	Pn	19 13 50.8	+1.3	
NVR	**Nevrokopi**	**3.99**	**29**	*e*Pn	Pn	19 13 50.8	+1.3	
CEL	**Celeste**	**4.29**	**277**	P	Pn	19 13 56.7	+3.0	
CEL	**Celeste**	**4.29**	**277**	P	Pn	19 13 56.7	+3.0	
PUK	**Puka**	**4.31**	**346**	*e*PN	Sb	19 14 58.2	+2.0	
LAST	**Lasithi**	**4.31**	**128**	*e*Pn	Pn	19 13 54.5	+0.6	
LAST	**Lasithi**	**4.31**	**128**	*e*PN	Pn	19 13 54.5	+0.6	
LAST	**Lasithi**	**4.31**	**128**	*e*Pn	Pn	19 13 54.5	+0.6	
SMG	**Samos**	**4.38**	**90**	*e*Pn	Pn	19 13 56.0	+1.2	
SMG	**Samos**	**4.38**	**90**	*e*PN	Pn	19 13 56.0	+1.2	
SMG	**Samos**	**4.38**	**90**	*e*Pn	Pn	19 13 56.0	+1.2	
RDO	**Rodhopi**	**4.62**	**44**	*e*Pn	Pn	19 13 59.9	+1.7	
RDO	**Rodhopi**	**4.62**	**44**	*e*PN	Pn	19 13 59.9	+1.7	
RDO	**Rodhopi**	**4.62**	**44**	*e*Pn	Pn	19 13 59.9	+1.7	
ALN	**Alexandroupoli**	**4.75**	**49**	*e*Pn	Pn	19 14 00.4	+0.5	
ALN	**Alexandroupoli**	**4.75**	**49**	*e*PN	Pn	19 14 00.4	+0.5	
ALN	**Alexandroupoli**	**4.75**	**49**	*e*Pn	Pn	19 14 00.4	+0.5	
CUC	**Castrocucco**	**4.78**	**298**	*e*P	Pn	19 14 01.5	+1.1	
CUC	**Castrocucco**	**4.78**	**298**	*e*P	Pn	19 14 01.5	+1.1	
ZKR	**Zakros**	**4.81**	**123**	*e*Pn	Pn	19 14 02.6	+1.8	
ZKR	**Zakros**	**4.81**	**123**	*e*PN	Pn	19 14 02.6	+1.8	
ZKR	**Zakros**	**4.81**	**123**	*e*Pn	Pn	19 14 02.6	+1.8	
VTS	**Vitosha**	**4.93**	**17**	*i*P	Pn	19 14 07.5	+5.1	
BARS	**Barje**	**4.96**	**4**	*e*Pn	Pn	19 14 02.0	-0.7	
STON	**Ston**	**5.71**	**332**	*i*Pn	Pn	19 14 10.4	-2.6	
STON				*e*Sn	Sn	19 15 15.6	-3.6	
DIVS	**Divibare**	**6.30**	**351**	*i*P	Pn	19 14 19.7	-1.5	
VOIR		**8.06**	**19**	*i*P	Pn	19 14 42.9	-2.5	
VOIR		**8.06**	**19**	*i*P	Pn	19 14 42.9	-2.4	
MLR	**Muntele Rosu**	**8.36**	**23**	P	Pn	19 14 54.3	+4.8	
MLR	**Muntele Rosu**	**8.36**	**23**	Pn	Pn	19 14 54.7	+5.1	
0.5nm,0.3s,baz=202,slow=11,SNR=4.4								
MLR	**Muntele Rosu**	**8.36**	**23**	*i*P	Pn	19 14 54.3	+4.8	
PLOR	**Plostina**	**8.91**	**25**	*i*P	Pn	19 14 57.8	+0.8	
PLOR	**Plostina**	**8.91**	**25**	*i*P	Pn	19 14 57.8	+0.8	
VRI	**Vrincioaia**	**8.95**	**25**	*i*P	Pn	19 15 04.0	+6.4	
VRI	**Vrincioaia**	**8.95**	**25**	*i*P	Pn	19 15 04.0	+6.4	
BRTR	**Keskin Array B**	**9.80**	**75**	Pn	Pn	19 15 10.9	+1.7	
0.1nm,0.3s,baz=258,slow=11,SNR=4.2								
BRTR	**Keskin Array B**	**9.80**	**75**	Pn	Pn	19 15 10.9	+1.7	
HFS	**Hagfors**	**22.81**	**350**	P	P	19 17 49.6	-1.5	
1.3nm,0.6s,mb3.6,baz=166,slow=8.9,SNR=5.4								
HFS	**Hagfors**	**22.81**	**350**	P	P	19 17 49.6	-1.5	
FINES	**FINESS Array B**	**23.79**	**6**	P	P	19 17 59.9	-1.3	
0.6nm,0.4s,mb3.5,baz=194,slow=15,SNR=6.4								
FINES	**FINESS Array B**	**23.79**	**6**	P	P	19 17 59.9	-1.2	
NB2	**NORSAR Subarra**	**24.05**	**348**	P	P	19 18 01.7	-1.8	
2.7nm,1.0s,mb3.7,SNR=4.0								
NOA	**NORSAR Array B**	**24.05**	**348**	P	P	19 18 03.3	-0.2	
0.6nm,0.7s,mb3.2,baz=154,slow=9.2,SNR=4.2								
NOA	**NORSAR Array B**	**24.05**	**348**	P	P	19 18 03.3	-0.2	
MKAR	**Makanchi Array**	**44.93**	**58**	P	P	19 21 00.8	-2.7	
0.4nm,0.4s,mb3.7,baz=274,slow=7.3,SNR=4.0								
ZALV	**Zalesovo Beam**	**45.43**	**48**	P	P	19 21 05.0	-2.4	
ZALV	**Zalesovo Beam**	**45.43**	**48**	P	P	19 21 05.0	-2.4	
0.9nm,0.4s,mb4.0,baz=274,slow=9.3,SNR=5.6								
ZALV	**Zalesovo Beam**	**45.43**	**48**	P	P	19 21 05.0	-2.4	

NIED ***23*** *19:22:00,39.00N×140.90E,h5km,Mw3.5 Best double couple: M₀1.82000×10¹⁴ NP1:φ₅214.00000°,δ47.00000°, λ80.00000°. NP2:φ₅48.00000°,δ44.00000°,λ100.00000°.*
ISCJH ***23*** *19:22:09.1±0.5,38.99N±0.03×140.92E±0.04,h10km, mb3.7/2,Error ellipse: s-maj=4.4km s-min=3.8km az=35.4*
JMA ***23*** *19:22:09.4,38.99N×140.88E,h5km±1km,M3.5*
JMA Felt II J1.
IDC ***23*** *19:22:11.0±2.7,38.68N×141.08E,h0km,mb3.6/2, mb1 3.8/3,mb1mx3.4/23,mbtmp3.6/3,ML3.1/2,Error ellipse: s-maj=54.5km s-min=25.6km az=155.0*

ISC 23 19:22:09.5±0.5,38.99N±0.03×140.89E±0.04,h10km,n13, σ0s94/22,mb3.7/2,4C-3D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.26**	**98**	⇓P		**Pg**		**19 22 14.6**	**-0.1**
JMK				S		**Sg**		**19 22 18.4**	**+0.2**
JYK	**Kaneyama**	**0.42**	**261**	P		**Pg**		**19 22 17.6**	**-0.2**
JRG	**Rokugo**	**0.46**	**334**	⇓P		**Pg**		**19 22 18.1**	**-0.3**
JRG				*e*S		**Sg**		**19 22 24.9**	**+0.4**
JOM	**Ohasama**	**0.58**	**32**	⇑P		**Pg**		**19 22 20.2**	**-0.5**
JOM				*e*S		**Sg**		**19 22 28.2**	**-0.1**
JIO	**Ouri**	**0.64**	**146**	⇓P		**Pg**		**19 22 21.4**	**-0.5**
JIO				S		**Sg**		**19 22 30.0**	**-0.2**
JOU	**Okura**	**0.65**	**196**	⇑P		**Pg**		**19 22 21.8**	**-0.2**
JOU				S		**Sg**		**19 22 30.5**	**+0.1**
JYA	**Atsumi**	**1.00**	**247**	⇑P		**Pg**		**19 22 28.2**	**-0.6**
JYA				S		**Sg**		**19 22 41.3**	**-0.5**
JYS	**Shirataka**	**1.00**	**221**	⇑P		**Pg**		**19 22 28.2**	**-0.6**
JYS				S		**Sg**		**19 22 41.6**	**-0.2**
MAT	**Matsushiro**	**3.24**	**222**	P		**Pn**		**19 23 01.3**	**+1.0**
MAT				S		**Sn**		**19 23 41.9**	**+3.0**
MJAR	**Matsushiro Arr**	**3.24**	**222**	Pn		**Pn**		**19 23 01.7**	**+1.4**
1.0nm,0.3s,baz=44,slow=16,SNR=13									
MJAR				Pg		**Pg**		**19 23 08.8**	**-2.8**
1.8nm,0.3s,baz=21,slow=16,SNR=19									
MJAR				Lg				19 23 48.9	
1.2nm,0.3s,baz=28,slow=32,SNR=4.1									
KSRS	**Korea Array**	**10.32**	**266**	Pn		**Pn**		**19 24 42.1**	**+4.5**
0.4nm,0.3s,baz=83,slow=14,SNR=6.0									
WRA	**Warramunga Arr**	**58.94**	**187**	P		**P**		**19 32 08.4**	**-0.5**
0.6nm,0.6s,mb3.8,baz=4.4,slow=7.3,SNR=3.8									
ASAR	**Alice Springs**	**62.66**	**187**	P		**P**		**19 32 36.5**	**+2.3**
0.5nm,0.9s,mb3.6,baz=3.6,slow=4.5,SNR=5.4									

IDC 23 19:22:12.9±3.0,6.73S×129.13E,h0km,mb3.5/1, mb1 3.4/3,mb1mx3.3/16,mbtmp3.2/3,ML3.2/2,Error ellipse: s-maj=283.8km s-min=32.7km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.07**	**159**	Pn		Pn		19 25 32.6	-1.1
0.1nm,0.3s,baz=337,slow=14,SNR=2.7									
WRA				Sn		Sn		19 27 58.4	-12
0.3nm,0.3s,baz=45,slow=12,SNR=4.8									
ASAR	**Alice Springs**	**17.45**	**165**	P		Pn		19 26 18.9	+0.9
0.1nm,0.3s,baz=344,slow=9.8,SNR=7.5									
MKAR	**Makanchi Array**	**67.53**	**327**	P		P		19 33 11.1	+0.1
0.1nm,0.2s,baz=114,slow=7.8,SNR=4.0									

IDC ***23*** *19:39:54.9±11.0,25.40S×179.54W,h392km±102km, mb3.5/4,mb1 3.7/6,mb1mx3.3/18,mbtmp3.6/6,Error ellipse: s-maj=92.5km s-min=24.2km az=46.0*

ISC 23 19:40:01.1±4.8,25.75S±0.2×179.99W±0.4,h439km±46km, n10,σ0s71/11,mb3.9/7,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**12.78**	**191**	P		**P**		**19 42 48.0**	**-0.3**
4.0nm,0.3s,baz=308,slow=3.9,SNR=18									
URZ				S		**S**		**19 45 06.7**	**+0.2**
1.6nm,0.3s,baz=256,slow=22,SNR=14									
RPZ	**Rata Peaks**	**19.43**	**200**	P		**P**		**19 43 57.5**	**-0.2**
1.4nm,0.3s,baz=117,slow=18,SNR=7.1									
CTA	**Charters Tower**	**31.63**	**273**	*e*P		**P**		**19 45 47.7**	**+1.2**
4.0nm,0.4s,mb4.1									
STKA	**Stephens Creek**	**34.19**	**251**	*e*P		**P**		**19 46 08.9**	**+0.7**
3.6nm,0.5s,mb4.0									
STKA	**Stephens Creek**	**34.19**	**251**	P		**P**		**19 46 09.2**	**+1.1**
3.9nm,0.5s,mb4.0,baz=96,slow=10,SNR=34									
ASAR	**Alice Springs**	**41.87**	**263**	P		**P**		**19 47 11.7**	**+0.2**
2.9nm,0.5s,mb3.9,baz=93,slow=7.4,SNR=77									
WRA	**Warramunga Arr**	**42.42**	**268**	P		**P**		**19 47 14.8**	**-0.9**
4.1nm,0.7s,mb3.9,baz=104,slow=8.2,SNR=15									
FORT	**Forrest**	**45.81**	**251**	*e*P		**P**		**19 47 41.2**	**-0.9**
8.1nm,0.5s,mb4.3									
KLBR	**Kellerberrin**	**54.41**	**248**	*e*P		**P**		**19 48 44.8**	**-0.8**
6.2nm,0.7s,mb4.0									
QSPA	**South Pole Qui**	**64.39**	**180**	P		**P**		**19 49 52.5**	**+0.6**
1.1nm,1.0s,mb3.4,baz=51,slow=2.6,SNR=3.6									

IDC ***23*** *20:08:49.5±6.1,36.16N×70.79E,h158km±55km,mb3.2/6, mb1 3.3/9,mb1mx3.0/27,mbtmp3.1/9,Error ellipse:*

s-maj=45.0km s-min=24.8km az=31.0
NEIC ***23*** *20:08:54.2±3.5,36.43N×70.80E,h192km±33km,mb3.7/3, Error ellipse: s-maj=32.9km s-min=14.9km az=213.0*

ISC 23 20:08:52.2±2.6,36.4N±0.2×71.0E±0.1,h173km±22km,n17, σ1s11/24,mb3.5/6,1C-1D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.04**	**50**	⇓Pn		**Pn**		**20 10 04.5**	**-1.9**
KSH				Sn		**Sn**		**20 10 54.0**	**-11**
KSH				smax					
comp=N,58nm,0.8s									
KSH				smax					
comp=E,28nm,0.9s									
KK31	**Karatay Array**	**6.71**	**357**	P		**Pn**		**20 10 28.8**	**+0.5**
comp=E,3.0nm,0.4s,baz=177,slow=13,SNR=84									
KK31				⇑S		**Sn**		**20 11 38.4**	**-5.7**
comp=E,14nm,0.4s,baz=177,slow=22									
AAK	**Ala-Archa**	**6.80**	**23**	P		**Pn**		**20 10 30.4**	**+0.8**
AAK				*e*Pn		**Pn**		**20 10 30.7**	**+1.1**
AAK				*e*Sn		**Sn**		**20 11 42.9**	**-3.5**
AAK				S		**Sn**		**20 11 45.0**	**-1.4**
AAK	**Ala-Archa**	**6.80**	**23**	P		**Pn**		**20 10 30.4**	**+0.8**
comp=E,1.3nm,0.3s,baz=186,slow=6.3,SNR=4.1									
AAK				S		**Sn**		**20 11 45.0**	**-1.4**
comp=E,1.1nm,0.3s,baz=170,slow=11,SNR=12									
MKAR	**Makanchi Array**	**13.40**	**36**	P		**Pn**		**20 11 58.1**	**+2.7**
comp=E,0.1nm,0.3s,baz=225,slow=14,SNR=2.6									
ABKAR	**Akbulak array**	**15.16**	**331**	*e*Pn		**Pn**		**20 12 18.8**	**+1.5**
comp=E,0.7nm,0.3s									
ABKAR				*e*Sn		**Sn**		**20 14 56.8**	**-9.4**
KURK	**Kurchatov**	**15.34**	**19**	P		**Pn**		**20 12 19.9**	**+0.4**
baz=212,slow=8.7,SNR=2.1									
AKTK	**Aktyubinsk**	**16.86**	**330**	P		**Pn**		**20 12 37.8**	**-0.1**
AKTO	**Aktyubinsk**	**16.86**	**330**	P		**Pn**		**20 12 37.8**	**-0.1**
comp=E,0.5nm,0.3s,baz=142,slow=8.4,SNR=10									
LSA	**Lhasa**	**18.18**	**106**	*e*P		**P**		**20 12 56.5**	**+4.7**
comp=E,3.2nm,0.9s									
ZALV	**Zalesovo

Error ellipse: s-maj=3.0km s-min=2.5km az=30.0
*ATH **23** 20:41:24.0, 38°.54N×24°.04E, h20km, ML3.8*
*NEIC **23** 20:41:24.0, 38°.54N×24°.04E, h20km, ML3.8(ATH), After ATH.*
*CSEM **23** 20:41:24.1±0.1, 38°.54N×24°.03E, h2km, ML3.8, Error ellipse: s-maj=3.2km s-min=2.5km az=119.0*
*THE **23** 20:41:25.4, 38°.53N×24°.02E, h10km±1km, ML3.4/8, Error ellipse: s-maj=1.3km s-min=0.8km az=51.0*

ISC 23 20:41:24.9±0.4, 38°.53N±0°.02×24°.03E±0°.02, h7km±3km, n175, σ0.95/226, 2C-15D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTL	**Penteli**	**0.50**	**195**	*ePn*	**Pg**	**20 41 34.5**	**0.0**
PTL				*eSn*	**Sg**	**20 41 41.2**	**+0.2**
PTL	**Penteli**	**0.50**	**195**	*ePN*	**Pg**	**20 41 34.5**	**0.0**
PTL				*eSN*	**Sg**	**20 41 41.2**	**+0.2**
PTL	**Penteli**	**0.50**	**195**	*ePn*	**Pg**	**20 41 34.5**	**0.0**
ATHU	**Athens Univers**	**0.60**	**199**	P	**Pg**	**20 41 37.2**	**+0.8**
ATHU				S	**Sg**	**20 41 45.5**	**+1.4**
ATHU	**Athens Univers**	**0.60**	**199**	P	**Pg**	**20 41 37.2**	**+0.8**
ATHU				S	**Sg**	**20 41 45.5**	**+1.4**
ATH	**Athens Observa**	**0.61**	**204**	*ePn*	**Pg**	**20 41 36.5**	**-0.2**
ATH				*eSn*	**Sg**	**20 41 44.9**	**+0.3**
ATH	**Athens Observa**	**0.61**	**204**	*ePN*	**Pg**	**20 41 36.5**	**-0.2**
ATH				*eSN*	**Sg**	**20 41 44.9**	**+0.3**
ATH	**Athens Observa**	**0.61**	**204**	*ePn*	**Pg**	**20 41 36.5**	**-0.2**
AOS	**Alonnisos**	**0.65**	**350**	P	**Pg**	**20 41 36.9**	**-0.5**
AOS	**Alonnisos**	**0.65**	**350**	P	**Pg**	**20 41 37.1**	**-0.3**
AOS				S	**Sg**	**20 41 47.6**	**+1.7**
AOS	**Alonnisos**	**0.65**	**350**	P	**Pg**	**20 41 36.9**	**-0.5**
AOS				S	**Sg**	**20 41 47.6**	**+1.7**
VLY	**Voula,Athens**	**0.70**	**195**	*ePn*	**Pg**	**20 41 38.2**	**-0.2**
VLY				*eSn*	**Sg**	**20 41 47.6**	**0.0**
VLY	**Voula,Athens**	**0.70**	**195**	*ePN*	**Pg**	**20 41 38.2**	**-0.2**
VLY				*eSN*	**Sg**	**20 41 47.6**	**0.0**
VLY	**Voula,Athens**	**0.70**	**195**	*ePn*	**Pg**	**20 41 38.2**	**-0.2**
ATAL	**Atalanti**	**0.80**	**282**	P	**Pg**	**20 41 40.0**	**-0.4**
ATAL	**Atalanti**	**0.80**	**282**	P	**Pg**	**20 41 40.0**	**-0.4**
LKR	**Lokris**	**0.81**	**279**	*ePn*	**Pg**	**20 41 40.5**	**-0.1**
LKR	**Lokris**	**0.81**	**279**	*ePN*	**Pg**	**20 41 40.5**	**-0.1**
LKR	**Lokris**	**0.81**	**279**	P	**Pg**	**20 41 39.9**	**-0.7**
LKR				S	**Sg**	**20 41 52.1**	**+1.0**
LKR	**Lokris**	**0.81**	**279**	P	**Pg**	**20 41 39.9**	**-0.7**
LKR	**Lokris**	**0.81**	**279**	*ePn*	**Pg**	**20 41 40.5**	**-0.1**
LKR				S	**Sg**	**20 41 52.1**	**+1.0**
NAIG	**Nisos Aigina**	**0.88**	**209**	*ePn*	**Pg**	**20 41 41.2**	**-0.6**
NAIG	**Nisos Aigina**	**0.88**	**209**	*ePN*	**Pg**	**20 41 41.2**	**-0.6**
NAIG	**Nisos Aigina**	**0.88**	**209**	*ePn*	**Pg**	**20 41 41.2**	**-0.6**
LTK	**Loutraki**	**0.98**	**239**	*ePN*	**Pg**	**20 41 42.8**	**-0.9**
LTK				*eSN*	**Sg**	**20 41 56.5**	**+0.2**
LTK	**Loutraki**	**0.98**	**239**	P	**Pg**	**20 41 43.4**	**-0.3**
LTK				S	**Sg**	**20 41 57.3**	**+1.0**
LTK	**Loutraki**	**0.98**	**239**	*ePn*	**Pg**	**20 41 42.8**	**-0.9**
LTK	**Loutraki**	**0.98**	**239**	P	**Pg**	**20 41 43.4**	**-0.3**
LTK				S	**Sg**	**20 41 57.3**	**+1.0**
NEO	**Neokhori**	**1.00**	**321**	*ePn*	**Pg**	**20 41 43.7**	**-0.3**
NEO	**Neokhori**	**1.00**	**321**	*ePN*	**Pg**	**20 41 43.7**	**-0.3**
NEO	**Neokhori**	**1.00**	**321**	*ePn*	**Pg**	**20 41 43.7**	**-0.3**
XOR	**Xorichti**	**1.06**	**322**	P	**Pg**	**20 41 44.6**	**-0.6**
XOR	**Xorichti**	**1.06**	**322**	P	**Pg**	**20 41 45.0**	**-0.2**
XOR	**Xorichti**	**1.06**	**322**	P	**Pg**	**20 41 44.6**	**-0.6**
DSF	**Desfina**	**1.18**	**265**	P	**Pg**	**20 41 46.8**	**-0.8**
DSF				S	**Sg**	**20 42 03.2**	**+0.2**
DSF	**Desfina**	**1.18**	**265**	P	**Pg**	**20 41 46.8**	**-0.8**
DSF				S	**Sg**	**20 42 03.2**	**+0.2**
DID	**Didima**	**1.20**	**212**	*ePN*	**Pn**	**20 41 47.1**	**-1.0**
DID				*eSN*	**Sg**	**20 42 03.2**	**-0.3**
DID	**Didima**	**1.20**	**212**	P	**Pg**	**20 41 47.6**	**-0.3**
DID				S	**Sg**	**20 42 03.2**	**-0.3**
DID	**Didima**	**1.20**	**212**	*ePn*	**Pn**	**20 41 47.1**	**-1.0**
DID	**Didima**	**1.20**	**212**	P	**Pg**	**20 41 47.6**	**-0.3**
DID				S	**Sg**	**20 42 03.2**	**-0.3**
AGG	**Agios Georgios**	**1.41**	**291**	*ePn*	**Pn**	**20 41 50.6**	**-0.5**
AGG				*eSn*	**Sn**	**20 42 10.4**	**+0.5**
AGG	**Agios Georgios**	**1.41**	**291**	*ePN*	**Pn**	**20 41 50.6**	**-0.5**
AGG				*eSN*	**Sn**	**20 42 10.4**	**+0.5**
AGG	**Agios Georgios**	**1.41**	**291**	P	**Pn**	**20 41 50.8**	**-0.3**
AGG				S	**Sb**	**20 42 10.1**	**+0.3**
AGG	**Agios Georgios**	**1.41**	**291**	P	**Pn**	**20 41 50.8**	**-0.3**
AGG				S	**Sb**	**20 42 10.1**	**+0.3**
AGG				*eSn*	**Sn**	**20 42 10.4**	**+0.5**
PAIG	**Paliouri**	**1.42**	**349**	P	**Pn**	**20 41 49.8**	**-1.3**
PAIG	**Paliouri**	**1.42**	**349**	P	**Pn**	**20 41 50.3**	**-0.8**
PAIG	**Paliouri**	**1.42**	**349**	P	**Pn**	**20 41 50.3**	**-0.8**
GUR	**Goura**	**1.45**	**246**	*ePN*	**Pn**	**20 41 50.9**	**-0.7**
GUR				*eSN*	**Sn**	**20 42 11.0**	**+0.1**
GUR	**Goura**	**1.45**	**246**	P	**Pn**	**20 41 51.1**	**-0.5**
GUR				S	**Sn**	**20 42 09.3**	**-1.6**
GUR	**Goura**	**1.45**	**246**	P	**Pn**	**20 41 51.1**	**-0.5**
GUR				S	**Sn**	**20 42 09.3**	**-1.6**
GUR				*eSn*	**Sn**	**20 42 11.0**	**+0.1**
KALE	**Kalithea**	**1.49**	**265**	P	**Pn**	**20 41 51.9**	**-0.2**
KALE				S	**Sn**	**20 42 11.8**	**0.0**
KALE	**Kalithea**	**1.49**	**265**	P	**Pn**	**20 41 51.9**	**-0.2**
KALE				S	**Sn**	**20 42 11.8**	**0.0**
TRIZ	**Trizonia**	**1.54**	**264**	P	**Pn**	**20 41 52.6**	**-0.2**
TRIZ				S	**Sn**	**20 42 12.8**	**-0.3**
TRIZ	**Trizonia**	**1.54**	**264**	P	**Pn**	**20 41 52.6**	**-0.2**
TRIZ				S	**Sn**	**20 42 12.8**	**-0.3**
SIGR	**SIGRI**	**1.58**	**64**	P	**Pn**	**20 41 53.2**	**-0.2**
SIGR	**SIGRI**	**1.58**	**64**	P	**Pn**	**20 41 52.4**	**-1.0**
SIGR				S	**Pn**	**20 42 13.5**	**-0.5**
SIGR	**SIGRI**	**1.58**	**64**	P	**Pn**	**20 41 52.4**	**-1.0**
SIGR				S	**Sn**	**20 42 13.5**	**-0.5**
CHOS	**Chios island**	**1.60**	**95**	*ePN*	**Pn**	**20 41 53.1**	**-0.5**
CHOS				*eSN*	**Sn**	**20 42 14.5**	**0.0**
CHOS	**Chios island**	**1.60**	**95**	*ePn*	**Pn**	**20 41 53.1**	**-0.5**
CHOS				*eSn*	**Sn**	**20 42 14.5**	**0.0**
LAKA	**Lakka**	**1.64**	**260**	P	**Pn**	**20 41 54.1**	**0.0**
LAKA				S	**Sn**	**20 42 14.1**	**-1.3**
LAKA	**Lakka**	**1.64**	**260**	P	**Pn**	**20 41 54.1**	**0.0**
LAKA				S	**Sn**	**20 42 14.1**	**-1.3**
EFP	**Efpalio**	**1.67**	**267**	*ePN*	**Pn**	**20 41 54.4**	**-0.2**
EFP				*eSN*	**Sn**	**20 42 17.0**	**+0.8**
EFP	**Efpalio**	**1.67**	**267**	P	**Pn**	**20 41 54.4**	**-0.2**
EFP	**Efpalio**	**1.67**	**267**	P	**Pn**	**20 41 54.4**	**-0.2**
EFP				*eSn*	**Sn**	**20 42 17.0**	**+0.8**
VLX	**Vlachokerasia**	**1.74**	**229**	*ePN*	**Pn**	**20 41 55.8**	**+0.2**
VLX				*eSN*	**Sn**	**20 42 18.0**	**-0.1**
VLX	**Vlachokerasia**	**1.74**	**229**	P	**Pn**	**20 41 55.9**	**+0.3**
VLX				S	**Sn**	**20 42 18.2**	**+0.1**
VLX	**Vlachokerasia**	**1.74**	**229**	*ePn*	**Pn**	**20 41 55.8**	**+0.2**
VLX				S	**Sn**	**20 42 18.2**	**+0.1**
EVR	**Evrytania**	**1.78**	**283**	*ePn*	**Pn**	**20 41 56.4**	**+0.3**
EVR	**Evrytania**	**1.78**	**283**	*ePN*	**Pn**	**20 41 56.4**	**+0.3**
EVR	**Evrytania**	**1.78**	**283**	*ePn*	**Pn**	**20 41 56.4**	**+0.3**
UPR	**University Cam**	**1.78**	**263**	*ePN*	**Pn**	**20 41 56.8**	**+0.7**
UPR				*eSN*	**Sn**	**20 42 18.9**	**0.0**
UPR	**University Cam**	**1.78**	**263**	*ePn*	**Pn**	**20 41 56.8**	**+0.7**
UPR				*eSn*	**Sn**	**20 42 18.9**	**0.0**
OUR	**Ouranopolis**	**1.80**	**359**	P	**Pn**	**20 41 55.1**	**-1.3**
OUR	**Ouranopolis**	**1.80**	**359**	P	**Pn**	**20 41 55.5**	**-0.9**
OUR	**Ouranopolis**	**1.80**	**359**	P	**Pn**	**20 41 55.5**	**-0.9**
APE	**Apeiranthos**	**1.89**	**140**	*ePb*	**Pb**	**20 41 56.9**	**-2.7**
APE				*eSn*	**Sn**	**20 42 22.5**	**+1.0**
APE	**Apeiranthos**	**1.89**	**140**	*ePB*	**Pb**	**20 41 56.9**	**-2.7**
APE				*eSN*	**Sn**	**20 42 22.5**	**+1.0**
APE	**Apeiranthos**	**1.89**	**140**	P	**Pn**	**20 41 57.0**	**-0.5**
APE	**Apeiranthos**	**1.89**	**140**	⇓*iP*	**Pn**	**20 41 56.7**	**-0.8**
APE	**Apeiranthos**	**1.89**	**140**	P	**Pn**	**20 41 57.0**	**-0.5**
APE				*eSn*	**Sn**	**20 42 22.5**	**+1.0**
PRK	**Paraskevi**	**1.89**	**67**	P	**Pn**	**20 41 59.4**	**+1.8**
PRK	**Paraskevi**	**1.89**	**67**	P	**Pn**	**20 41 59.4**	**+1.8**
PLG	**Polygyros**	**1.89**	**346**	*ePn*	**Pn**	**20 41 57.0**	**-0.7**
PLG	**Polygyros**	**1.89**	**346**	*ePN*	**Pn**	**20 41 57.0**	**-0.7**
PLG	**Polygyros**	**1.89**	**346**	P	**Pn**	**20 41 57.2**	**-0.5**
PLG	**Polygyros**	**1.89**	**346**	P	**Pn**	**20 41 57.2**	**-0.5**
LIT	**Litokhoron**	**1.97**	**323**	*ePb*	**Pb**	**20 41 57.3**	**-3.8**
LIT	**Litokhoron**	**1.97**	**323**	*ePB*	**Pb**	**20 41 57.3**	**-3.8**
LIT	**Litokhoron**	**1.97**	**323**	P	**Pn**	**20 41 57.1**	**-1.6**
LIT	**Litokhoron**	**1.97**	**323**	P	**Pn**	**20 41 57.1**	**-1.6**
VLI	**Veliai**	**2.01**	**206**	*ePb*	**Pb**	**20 41 58.7**	**-3.0**
VLI				*eSn*	**Sn**	**20 42 25.3**	**+0.8**
VLI	**Veliai**	**2.01**	**206**	*ePB*	**Pb**	**20 41 58.7**	**-3.0**
VLI				*eSN*	**Sn**	**20 42 25.2**	**+0.7**
RLS	**Riolos of Patr**	**2.07**	**258**	*ePn*	**Pn**	**20 42 00.2**	**+0.1**
RLS	**Riolos of Patr**	**2.07**	**258**	*ePN*	**Pn**	**20 42 00.2**	**+0.1**
RLS	**Riolos of Patr**	**2.07**	**258**	*ePN*	**Pn**	**20 42 00.2**	**+0.1**
RLS	**Riolos of Patr**	**2.07**	**258**	*ePn*	**Pn**	**20 42 00.2**	**+0.1**
ITM	**Ithomi**	**2.14**	**232**	*ePn*	**Pn**	**20 42 01.7**	**+0.6**
ITM	**Ithomi**	**2.14**	**232**	*ePN*	**Pn**	**20 42 01.7**	**+0.6**
ITM	**Ithomi**	**2.14**	**232**	*ePn*	**Pn**	**20 42 01.7**	**+0.6**
HORT	**Hortiatis**	**2.18**	**341**	P	**Pn**	**20 42 01.1**	**-0.6**
HORT	**Hortiatis**	**2.18**	**341**	P	**Pn**	**20 42 01.1**	**-0.6**
THE	**Thessaloniki**	**2.25**	**339**	P	**Pn**	**20 42 02.3**	**-0.3**
THE	**Thessaloniki**	**2.25**	**339**	P	**Pn**	**20 42 02.3**	**-0.3**
SOH	**Sokhos**	**2.34**	**347**	*ePn*	**Pn**	**20 42 03.6**	**-0.3**
SOH	**Sokhos**	**2.34**	**347**	*ePN*	**Pn**	**20 42 03.6**	**-0.3**
SOH	**Sokhos**	**2.34**	**347**	*ePN*	**Pn**	**20 42 03.6**	**-0.3**
SOH	**Sokhos**	**2.34**	**347**	*ePn*	**Pn**	**20 42 03.6**	**-0.3**
SMG	**Samos**	**2.36**	**109**	*ePn*	**Pn**	**20 42 03.7**	**-0.4**
SMG	**Samos**	**2.36**	**109**	*ePN*	**Pn**	**20 42 03.7**	**-0.4**
SMG	**Samos**	**2.36**	**109**	*ePN*	**Pn**	**20 42 03.7**	**-0.4**
SMG	**Samos**	**2.36**	**109**	*ePn*	**Pn**	**20 42 03.7**	**-0.4**
KYTH	**Kithira**	**2.38**	**200**	*ePn*	**Pn**	**20 42 04.1**	**-0.3**
KYTH	**Kithira**	**2.38**	**200**	*ePN*	**Pn**	**20 42 04.1**	**-0.3**
KYTH	**Kithira**	**2.38**	**200**	*ePN*	**Pn**	**20 42 04.1**	**-0.3**
PYL	**PYLOS**	**2.44**	**229**	*ePB*	**Pb**	**20 42 06.3**	**-2.8**
PYL	**PYLOS**	**2.44**	**229**	P	**Pn**	**20 42 04.9**	**-0.3**
PYL	**PYLOS**	**2.44**	**229**	P	**Pn**	**20 42 04.9**	**-0.3**
KZN	**Kozani**	**2.49**	**316**	*ePb*	**Pb**	**20 42 06.2**	**-3.8**
KZN	**Kozani**	**2.49**	**316**	*ePB*	**Pb**	**20 42 06.2**	**-3.8**
SRS	**Serrai**	**2.60**	**353**	P	**Pn**	**20 42 06.9**	**-0.5**
SRS	**Serrai**	**2.60**	**353**	P	**Pn**	**20 42 06.9**	**-0.5**
JAN	**Janina**	**2.71**	**295**	*ePn*	**Pn**	**20 42 08.9**	**0.0**
JAN	**Janina**	**2.71**	**295**	*ePN*	**Pn**	**20 42 08.9**	**0.0**
JAN	**Janina**	**2.71**	**295**	*ePn*	**Pn**	**20 42 08.9**	**0.0**
VLS	**Valsamata**	**2.73**	**264**	*ePn*	**Pn**	**20 42 09.1**	**0.0**
VLS				P		20 42 13.5	
VLS	**Valsamata**	**2.73**	**264**	*ePN*	**Pn**	**20 42 09.1**	**0.0**
VLS	**Valsamata**	**2.73**	**264**	*ePn*	**Pn**	**20 42 09.1**	**0.0**
GRG	**Griva**	**2.73**	**333**	P	**Pn**	**20 42 08.7**	**-0.4**
GRG	**Griva**	**2.73**	**333**	P	**Pn**	**20 42 08.7**	**-0.4**
NVR	**Nevrokopi**	**2.82**	**357**	P	**Pn**	**20 42 09.7**	**-0.7**
NVR	**Nevrokopi**	**2.82**	**357**	P	**Pn**	**20 42 09.7**	**-0.7**
ALN	**Alexandroupoli**	**2.83**	**33**	*ePn*	**Pn**	**20 42 09.1**	**-1.4**
ALN	**Alexandroupoli**	**2.83**	**33**	*ePN*	**Pn**	**20 42 09.1**	**-1.4**
ALN	**Alexandroupoli**	**2.83**	**33**	*ePn*	**Pn**	**20 42 09.1**	**-1.4**
RDO	**Rodhopi**	**2.86**	**24**	P	**Pn**	**20 42 09.7**	**-1.2**
RDO	**Rodhopi**	**2.86**	**24**	P	**Pn**	**20 42 09.7**	**-1.2**
VAY	**Valandovo**	**3.00**	**339**	*ePn*	**Pn**	**20 42 12.5**	**-0.4**
FNA	**Florina**	**3.04**	**319**	P	**Pn**	**20 42 14.2**	**+0.8**
FNA	**Florina**	**3.04**	**319**	P	**Pn**	**20 42 14.2**	**+0.8**
IGT	**Igoumenitsa**	**3.05**	**290**	P	**Pn**	**20 42 17.2**	**+3.7**
IGT	**Igoumenitsa**	**3.05**	**290**	P	**Pn**	**20 42 17.2**	**+3.7**
VAM	**Vamos**	**3.12**	**177**	P	**Pn**	**20 42 18.4**	**+3.8**
VAM	**Vamos**	**3.12**	**177**	P	**Pn**	**20 42 18.4**	**+3.8**
IDI	**Anoyia**	**3.31**	**168**	P	**Pn**	**20 42 19.7**	**+2.6**
IDI	**Anoyia**	**3.31**	**168**	P	**Pn**	**20 42 19.7**	**+2.6**
KEK	**Kerkira**	**3.49**	**291**	*ePn*	**Pn**	**20 42 20.6**	**+0.9**
KEK	**Kerkira**	**3.49**	**291**	*ePN*	**Pn**	**20 42 20.6**	**+0.9**
KEK	**Kerkira**	**3.49**	**291**	*ePn*	**Pn**	**20 42 20.6**	**+0.9**
KRUS	**Krusevo**	**3.55**	**324**	*ePn*	**Pn**	**20 42 20.1**	**-0.3**
KARP	**Karpathos**	**3.89**	**139**	P	**Pn**	**20 42 25.6**	**+0.4**
KARP	**Karpathos**	**3.89**	**139**	P	**Pn**	**20 42 25.6**	**+0.4**
ARG	**Arkhangelos**	**4.00**	**124**	P	**Pn**	**20 42 30.1**	**+3.5**
ARG	**Arkhangelos**	**4.00**	**124**	P	**Pn**	**20 42 30.1**	**+3.5**
VTS	**Vitosha**	**4.10**	**352**	P	**Pn**	**20 42 28.8**	**+0.8**
VTS	**Vitosha**	**4.10**	**352**	⇓*iP*	**Pn**	**20 42 29.0**	**+1.0**
VTS	**Vitosha**	**4.10**	**352**	P	**Pn**	**20 42 28.8**	**+0.8**
BARS	**Barje**	**4.60**	**339**	*ePn*	**Pn**	**20 42 35.3**	**+0.5**
TIP	**Timpagrande**	**5.71**	**279**	P	**Pn**	**20 42 53.3**	**+3.2**
DIVS	**Divibare**	**6.34**	**333**	*ePn*	**Pn**	**20 42 59.2**	**+0.5**
CUC	**Castrocucco**	**6.54**	**285**	P	**Pn**	**20 43 05.0**	**+3.5**
VOIR		**6.94**	**6**	⇓P	**Pn**	**20 43 07.4**	**+0.4**
VOIR		**6.94**	**6**	⇓*iP*	**Pn**	**20 43 07.4**	**+0.4**
VOIR		**6.94**	**6**	⇓P	**Pn**	**20 43 07.4**	**+0.4**
MLR	**Muntele Rosu**	**7.10**	**11**	⇓P	**Pn**	**20 43 10.3**	**+1.1**
MLR	**Muntele Rosu**	**7.10**	**11**	⇓*iP*	**Pn**	**20 43 10.3**	**+1.1**
MLR	**Muntele Rosu**	**7.10**	**11**	⇓P	**Pn**	**20 43 10.3**	**+1.1**
PLOR	**Plostina**	**7.57**	**14**	⇓*iP*	**Pn**	**20 43 17.6**	**+2.0**
PLOR	**Plostina**	**7.57**	**14**	⇓*iP*	**Pn**	**20 43 17.6**	**+2.0**
VRI	**Vrincioaia**	**7.60**	**14**	⇓P	**Pn**	**20 43 18.6**	**+2.6**
VRI	**Vrincioaia**	**7.60**	**14**	⇓*iP*	**Pn**	**20 43 18.6**	**+2.6**
TESR		**8.21**	**13**	⇑P	**Pn**	**20 43 26.5**	**+2.2**
TESR		**8.21**	**13**	⇑*iP*	**Pn**	**20 43 26.5**	**+2.2**
BURAR	**Bucovina Array**	**9.12**	**5**	⇓P	**Pn**	**20 43 36.7**	**-0.1**
BURAR	**Bucovina Array**	**9.12**	**5**	⇓*iP*	**Pn**	**20 43 36.7**	**-0.2**
BURAR	**Bucovina Array**	**9.12**	**5**	⇓P	**Pn**	**20 43 36.7**	**-0.2**

*IDC **23** 20:44:48.8±0.8, 33°.66N×135°.17E, h0km, mb3.9/11, mb1 4.0/14, mb1mx3.8/27, mbtmp3.9/14, ML3.8/3, MS3.1/5, Ms1 3.1/5, ms1mx2.8/32, Error ellipse: s-maj=21.8km s-min=17.8km az=60.0*
*BJI **23** 20:44:53.9, 33°.60N×135°.30E, h46km, mB4.7/3, mb4.2/7*
*ISCJB **23** 20:44:53.5±0.4, 33°.64N±0°.04×135°.18E±0°.03, h48km±3km, mb4.0/15, MS3.0/3, Error ellipse: s-maj=6.1km s-min=4.1km az=168.6*
*JMA **23** 20:44:54.5, 33°.67N×135°.16E, h45km±1km, M4.3 Broadband fault plane solution: P waves. NP1: φs145.00000°, δ40.00000°, λ-122.00000°. NP2:φs4.00000°, δ57.00000°, λ-66.00000°. Principal axes: T Plg9.0000°, Azm77.0000°; N Plg20.0000°, Azm170.0000°; P Plg68.0000°, Azm324.0000°;*
JMA Felt III J1.
*NEIC **23** 20:44:55.0±1.0, 33°.63N×135°.26E, h46km±9km, mb4.3/6 Error ellipse: s-maj=11.5km s-min=8.3km az=152.0*
NEIC Recorded [3 JMA] in Wakayama and [1 JMA] in Nara. Recorded [2 JMA] in Tokushima and [1 JMA] in Kagawa, Shikoku.
*NIED **23** 20:45:00, 33°.70N×135°.20E, h38km, Mw4.2 Best double couple: Mo1.90000×10¹⁵ NP1:φs14.00000°, δ77.00000°, λ-56.00000°. NP2:φs122.00000°, δ36.00000°, λ-158.00000°.*

ISC 23 20:44:54.5±0.4, 33°.65N±0°.04×135°.15E±0°.03, h38km±4km, n38, σ0.73/52, mb4.0/15, MS3.0/3, 7C-4D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWM	**Minabe**	**0.26**	**40**	⇓P	**Pn**	**20 45 02.6**	**+0.5**
JWM				S	**Sn**	**20 45 08.1**	**+0.7**
JWZ	**Kozaga**	**0.48**	**104**	⇓P	**Pn**	**20 45 05.0**	**+0.1**
JWZ				S	**Sn**	**20 45 12.4**	**+0.2**
JAI	**Aioi**	**0.60**	**284**	⇑P	**Pn**	**20 45 06.9**	**+0.4**
JAI				S	**Sn**	**20 45 15.4**	**+0.3**
JWY	**Kouya**	**0.67**	**33**	⇑P	**Pn**	**20 45 07.6**	**+0.1**
JWY				S	**Sn**	**20 45 16.4**	**-0.4**
JAJ2	**Tsuna**	**0.80**	**344**	⇑P	**Pn**	**20 45 09.5**	**+0.3**
JAJ2				S	**Sn**	**20 45 19.9**	**0.0**
MRT2	**Murotomisaki 2**	**0.89**	**253**	⇑P	**Pn**	**20 45 10.1**	**-0.3**
MRT2				*eS*	**Sn**	**20 45 21.5**	**-0.5**
JMN	**Monobe**	**1.07**	**274**	⇑P	**Pn**	**20 45 13.0**	**+0.1**
JMN				S	**Sn**	**20 45 26.2**	**-0.3**
JHE	**Heguri**	**1.09**	**24**	P	**Pn**	**20 45 13.2**	**-0.1**
JHE				S	**Sn**	**20 45 26.9**	**-0.3**
JKN2	**Miekihoku**	**1.10**	**58**	⇑P	**Pn**	**20 45 13.0**	**-0.4**
JKN2				*eS*	**Sn**	**20 45 27.3**	**0.0**
JMIK	**Miki**	**1.16**	**356**	⇓P	**Pn**	**20 45 14.4**	**+0.3**
JMIK				*eS*	**Sn**	**20 45 29.4**	**+0.7**
JJS	**Sakaide**	**1.25**	**306**	⇑P	**Pn**	**20 45 15.3**	**-0.1**
JJS				S	**Sn**	**20 45 29.9**	**-1.0**
JKS	**Kasai**	**1.35**	**349**	⇓P	**Pn**	**20 45 16.9**	**+0.1**
JKS				*eS*	**Sn**	**20 45 32.8**	**-0.8**
JNU	**Nakatsue**	**3.62**	**263**	*i* Pn	**Pn**	**20 45 48.3**	**+0.4**
MAJO	**Matsushiro**	**3.82**	**40**	*ePn*	**Pn**	**20 45 51.2**	**+0.5**
MAT	**Matsushiro**	**3.82**	**40**	P	**Pn**	**20 45 51.3**	**+0.6**
MAT				*eS*	**Sn**	**20 45 36.2**	**+0.8**
MJAR	**Matsushiro Arr**	**3.82**	**40**	Pn	**Pn**	**20 45 50.3**	**-0.4**
	4.1nm,0.3s,baz=247,slow=14,SNR=62						
JHJ	**Hachijo jima 2**	**3.91**	**97**	Pn	**Pn**	**20 45 51.7**	**-0.3**
	88nm,0.3s,baz=220,slow=19,SNR=28						
JHJ				Sn	**Sn**	**20 46 34.8**	**-1.9**
	30nm,0.3s,baz=58,slow=22,SNR=7.0						
KSRS	**Korea Array**	**7.01**	**305**	Pn	**Pn**	**20 46 33.4**	**-1.1**
	0.4nm,0.3s,baz=122,slow=15,SNR=5.0						
KSRS				Sn	**Sn**	**20 47 50.4**	**-2.5**
	2.6nm,0.3s,baz=123,slow=24,SNR=16						
KSRS				LR	LR	20 49 18.5	
	comp=Z,139nm,19.1s,baz=148,slow=38						
CBIJ	**Chichi jima**	**8.92**	**135**	LR	LR	20 49 56.1	
	comp=Z,112nm,19.8s,baz=300,slow=34						
BJT	**Baijiatuan**	**16.46**	**298**	P	**Pn**	**20 48 45.0**	**+2.5**
	6.7nm,0.7s						
BJI	**Beijing**	**16.46**	**298**	P	**Pn**	**20 48 47.3**	**+4.8**
BJI				pmax	pmax		
	comp=Z,11nm,0.9s						
HIA	**Hailar**	**19.35**	**328**	*eP*	**Pn**	**20 49 18.5**	**+0.7**
	comp=Z,38nm,1.2s						
ENH	**Enshi**	**22.02**	**268**	*eP*	**P**	**20 49 47.6**	**+2.1**
	comp=Z,44nm,1.2s,mb4.8						
ENH				*e*		20 49 59.5	
ULN	**Ulaanbaatar**	**25.41**	**312**	*eP*	**P**	**20 50 18.3**	**0.0**
	comp=Z,2.9nm,0.8s,mb3.9						
SONM	**Songino Array**	**25.81**	**312**	P	**P**	**20 50 22.2**	**+0.3**
SONM				LR	LR	21 01 05.2	
SONM	**Songino Array**	**25.81**	**312**	P	**P**	**20 50 22.2**	**+0.3**
	comp=Z,2.8nm,0.6s,mb4.0,baz=129,slow=9.6,SNR=19						
SONM				LR	LR	21 01 05.2	
	comp=Z,52nm,19.9s,MS3.1,baz=295,slow=38						
CMAR	**Chiang Mai Arr**	**35.67**	**254**	P	**P**	**20 51 48.9**	**-0.3**
	comp=Z,0.3nm,0.7s,mb3.4,baz=46,slow=7.7,SNR=3.1						
ZALV	**Zalesovo Beam**	**40.57**	**316**	P	**P**	**20 52 30.6**	**+0.6**
	comp=Z,1.5nm,0.5s,mb3.9,baz=104,slow=7.6,SNR=8.2						
ZALV				PcP	PcP	20 54 31.1	-0.5
	comp=Z,0.2nm,0.3s,baz=108,slow=4.7,SNR=4.1						
ZALV				LR	LR	21 09 28.1	
	comp=Z,19nm,21.8s,MS2.9,baz=73,slow=36						
MKAR	**Makanchi Array**	**41.69**	**305**	P	**P**	**20 52 39.9**	**+0.6**
	comp=Z,2.3nm,0.6s,mb4.0,baz=91,slow=10,SNR=25						
MKAR				PP	PP	20 54 21.1	+5.1
	comp=Z,0.5nm,0.5s,baz=101,slow=9.5,SNR=4.2						
MKAR				LR	LR	21 10 59.4	
	comp=Z,28nm,20.7s,MS3.1,baz=232,slow=38						
KURK	**Kurchatov**	**44.10**	**310**	*eP*	**P**	**20 52 58.7**	**0.0**
	comp=Z,13nm,1.0s,mb4.6						
BRVK	**Borovoye**	**49.19**	**314**	*eP*	**P**	**20 53 38.7**	**+0.2**
	comp=Z,2.5nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	**53.30**	**181**	P	**P**	**20 54 09.5**

2.2nm,0.3s,baz=51,slow=23,SNR=18
URZ S **S** **21 25 13.3 +3.9**
12nm,0.3s,baz=85,slow=24,SNR=15
URZ Urewera 6.85 201 *e*PN **Pn** **21 23 49.0 -0.7**
URZ SN **S** **21 25 13.2 +3.8**
KNZ Kokohu 7.42 195 *e*P **Pn** **21 23 59.0 +2.2**
KNZ Kokohu 7.42 195 *e*PN **Pn** **21 23 59.0 +2.2**
KNZ SN **S** **21 25 20.9 -1.4**
NMHZ Naumai 7.71 200 PN **Pn** **21 24 00.5 0.0**
BKZ Black Stump Fm 7.87 202 *e*P **Pn** **21 24 01.0 -1.5**
BKZ Black Stump Fm 7.87 202 *e*PN **Pn** **21 24 01.0 -1.4**
FWVZ Far West T-bar 8.27 206 P **Pn** **21 24 11.5 +4.0**
FWVZ Far West T-bar 8.27 206 PN **Pn** **21 24 11.5 +4.0**
PXZ Pawanui 8.57 197 *e*PN **Pn** **21 24 08.5 -2.7**
PXZ SN **S** **21 25 48.7 +0.1**
DVHZ Dannevirke 9.01 200 *e*PN **Pn** **21 24 17.5 +0.8**
MRZ Mangatainoka R 9.52 202 P **Pn** **21 24 19.8 -3.3**
MRZ Mangatainoka R 9.52 202 PN **Pn** **21 24 19.8 -3.3**
MRZ SN **S** **21 26 06.0 -4.5**
HOWZ Holdsworth Sta 9.76 201 PN **Pn** **21 24 25.7 -0.3**
CAW Cannon Point 10.09 203 P **Pn** **21 24 26.7 -3.4**
CAW Cannon Point 10.09 203 PN **Pn** **21 24 26.7 -3.4**
TRWZ Traveller 10.17 200 PN **Pn** **21 24 31.9 +0.8**
MSWZ Moikau Station 10.31 201 PN **Pn** **21 24 34.0 +1.1**
SNZO South Karori 10.39 204 *e*Pn **Pn** **21 24 34.5 +0.6**
SNZO *e*S **S** **21 26 30.8 +0.3**
SNZO South Karori 10.39 204 PN **Pn** **21 24 30.9 -3.0**
SNZO SN **S** **21 26 31.0 +0.4**
TUWZ Tuamarina 10.77 206 PN **Pn** **21 24 38.2 -0.4**
NNZ Nelson 10.81 209 PN **Pn** **21 24 39.9 +0.8**
NNZ SN **S** **21 26 40.4 +0.3**
NNZ SN **S** **21 26 41.0 +0.9**
KHZ Kahutara 11.78 205 P **Pn** **21 24 50.7 -0.3**
KHZ Kahutara 11.78 205 PN **Pn** **21 24 50.7 -0.3**
KHZ SN **S** **21 27 02.3 0.0**
LTZ Lake Taylor 12.57 208 P **Pn** **21 24 59.9 -0.9**
LTZ Lake Taylor 12.57 208 PN **Pn** **21 24 59.9 -0.8**
MQZ McQueen's Vall 13.22 205 P **Pn** **21 25 07.9 -0.8**
MQZ McQueen's Vall 13.22 205 PN **Pn** **21 25 07.9 -0.8**
MQZ SN **S** **21 27 32.0 -3.1**
LBZ Lake Benmore 14.75 209 P **Pn** **21 25 27.8 +0.7**
LBZ Lake Benmore 14.75 209 PN **Pn** **21 25 27.8 +0.7**
ODZ Otahua Downs 15.11 207 PN **Pn** **21 25 33.2 +1.8**
ODZ SN **S** **21 28 15.8 -0.4**
CTA Charters Tower 32.56 283 LR LR 21 38 38.4
comp=Z,28nm,18.3s,baz=60,slow=30
STKA Stephens Creek 32.66 260 P **P** **21 28 19.8 +1.9**
10nm,0.7s,mb4.4,baz=103,slow=9.6,SNR=32
ASAR Alice Springs 41.52 269 P **P** **21 29 31.9 -0.3**
1.4nm,0.5s,mb3.4,baz=106,slow=7.4,SNR=29
WRA Warramunga Arr 42.64 275 P **P** **21 29 40.2 -1.0**
0.5nm,0.3s,mb3.2,baz=112,slow=7.9,SNR=8.1
QSPA South Pole Qui 58.23 180 *e*P **P** **21 31 40.6 +4.1**
9.3nm,0.5s,mb4.5
QSPA South Pole Qui 58.23 180 P **P** **21 31 40.7 +4.2**
17nm,0.7s,mb4.5,baz=14,slow=0.9,SNR=104
DAV Davao City (W) 64.87 297 LR LR 21 56 44.1
comp=Z,14nm,21.3s,baz=156,slow=32
PLCA Paso Flores 82.62 134 P **P** **21 34 04.3 +0.3**
1.5nm,0.7s,mb3.9,baz=219,slow=4.4,SNR=4.1
FINES FINESS Array B 145.97 338 PKPbc PKPbc 21 41 13.7 -4.3
3.8nm,0.7s,baz=47,slow=4.7,SNR=15
NOA NORSAR Array B 149.95 349 PKPbc PKPbc 21 41 23.7 -4.6
0.3nm,0.6s,baz=14,slow=4.1,SNR=2
BRTR Keskin Array B 151.89 296 PKPbc PKPbc 21 41 31.1 -2.4
0.2nm,0.4s,baz=110,slow=2.6,SNR=2.6
CLL Collm 158.41 338 *e*PKPab PKPab 21 42 07.0 -4.4
TORD Torodi Ar. Bea 161.31 185 PKPab PKPab 21 42 25.4 +0.7
0.8nm,0.5s,baz=163,slow=4.7,SNR=13

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*ISCJB **23** 21:25:28.7±0.8,21.04S±0.06×67.8W±0.1, h207km±12km, mb3.7/2, Error ellipse: s-maj=18.4km s-min=10.4km az=179.7*
*GUC **23** 21:25:28.7±0.3,21.04S×67.82W, h200km, ML4.0*
*IDC **23** 21:25:32.1±3.5,20.75S×67.28W, h213km±23km, mb3.7/2, mb1 3.6/4, mb1mx3.3/17, mbtmp3.4/4, Error ellipse: s-maj=59.1km s-min=23.0km az=52.0*
ISC 23 21:25:29.5±0.8,**21.03S**±0.06×**67.8W**±0.1, **h202**km±12km, **n11**,σ0°**74**/13, **mb3.7**/2, **3C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HMBC	**Humberston**	**2.14**	**290**	⇑*iP*		**Pn**	**21 26 09.3**	**-0.1**
HMBC				*i*S		**Sn**	**21 26 40.4**	**-0.2**
HMBC				AML		AML	21 26 43.1	
	comp=N,764nm,0.2s							
MACH	**Maria Elena**	**2.20**	**238**	*i*P		**Pn**	**21 26 10.4**	**+0.2**
MACH				*i*S		**Sn**	**21 26 42.2**	**+0.3**
MNMC	**Miæe Miæ**	**2.56**	**317**	⇑*iP*		**Pn**	**21 26 14.8**	**+0.6**
MNMC				*i*S		**Sn**	**21 26 49.9**	**+0.8**
MNMC				AML		AML	21 26 51.2	
	comp=E,500nm,0.5s							
PSGC	**Pisagua**	**2.64**	**302**	⇑*iP*		**Pn**	**21 26 14.3**	**-0.8**
PSGC				*i*S		**Sn**	**21 26 49.4**	**-1.2**
PSGC				AML		AML	21 26 50.8	
	comp=N,239nm,0.2s							
CEN1	**Los Morros**	**3.27**	**224**	AML		AML	21 27 09.6	
	comp=N,109nm,0.4s							
LPAZ	**La Paz**	**4.73**	**356**	P		**Pn**	**21 26 40.9**	**+0.3**
	comp=N,5.4nm,0.3s,baz=158,slow=6.1,SNR=139							
LPAZ				S		**Sn**	**21 27 36.5**	**0.0**
	baz=3.6,slow=16,SNR=1.7							
CPUP	**Villa Florida**	**10.91**	**121**	P		**Pn**	**21 28 00.4**	**+0.1**
	comp=N,0.6nm,0.3s,baz=285,slow=12,SNR=3.1							
TORD	**Torodi Ar. Bea**	**76.18**	**70**	P		**P**	**21 36 54.4**	**-1.5**
	comp=N,1.1nm,0.4s,mb3.9,baz=253,slow=5.8,SNR=30							
YKA	**Yellowknife Ar**	**91.11**	**340**	P		**P**	**21 38 11.9**	**+1.3**
	comp=N,0.6nm,0.7s,mb3.6,baz=136,slow=3.8,SNR=4.6							
ASAR	**Alice Springs**	**130.82**	**207**	PKP		PKPdf	21 44 18.4	+1.0
	comp=N,0.3nm,1.0s,baz=140,slow=1.5,SNR=3.6							
MKAR	**Makanchi Array**	**144.62**	**36**	PKP		PKPdf	21 44 42.0	+0.2
	comp=N,0.6nm,0.3s,baz=294,slow=3.4,SNR=8.5							

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*IDC **23** 21:27:51.1±1.1,52.30N×168.66W, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/26, mbtmp3.6/9, ML2.8/1, Error ellipse: s-maj=33.1km s-min=23.2km az=171.0*
*ISCJB **23** 21:27:53.7±2.2,52.20N±0.09×168.5W±0.1, h33km±14km, mb3.6/8, Error ellipse: s-maj=17.0km s-min=8.7km az=141.9*
*NEIC **23** 21:27:53.6,52.20N×168.40W, h20km, ML3.0(AEIC), ML3.0(PMR), After AEIC.*
ISC 23 21:27:54.8±2.0,**52.25N**±0.08×**168.5W**±0.1, **h25**km±13km, **n17**,σ0°**93**/20, **mb3.6**/8, **Fox Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.76**	**343**	*e*Pg		**Pb**	**21 28 08.2**	**-1.1**
NIKO				S		**Sb**	**21 28 21.3**	**+2.0**
OKFG	**Magazine Ridge**	**1.22**	**16**	P		**Pn**	**21 28 15.2**	**-0.9**
OKFG				S		**Sn**	**21 28 31.4**	**-0.4**
UNV	**Unalaska Valle**	**2.00**	**36**	*e*Pn		**Pn**	**21 28 26.9**	**0.0**
UNV				S		**Sn**	**21 28 51.8**	**+0.7**
AKUT	**Akutan**	**2.50**	**40**	*e*Pn		**Pn**	**21 28 33.3**	**-0.4**
AMKA	**Amchitka**	**7.62**	**268**	*e*P		**Pn**	**21 29 45.0**	**+0.9**
SMY	**Shemya**	**10.64**	**279**	*e*P		**Pn**	**21 30 24.5**	**-0.8**
	123nm,1.5s							
KDAK	**Kodiak Island**	**10.67**	**52**	Pn		**Pn**	**21 30 25.4**	**-0.4**
	0.4nm,0.3s,baz=216,slow=16,SNR=4.2							
ILAR	**Eielson Array**	**16.75**	**33**	Pn		**Pn**	**21 31 46.2**	**-1.2**
ILAR	**Eielson Array**	**16.75**	**33**	Pn		**Pn**	**21 31 46.2**	**-1.2**
	0.0nm,0.3s,baz=238,slow=11,SNR=4.2							
PDAR	**Pinedale Array**	**39.89**	**80**	P		**P**	**21 35 28.0**	**+1.8**
	0.7nm,0.7s,mb3.5,baz=321,slow=4.2,SNR=6.9							
TXAR	**Lajitas Array**	**52.20**	**90**	P		**P**	**21 37 04.3**	**+1.0**
	0.2nm,0.5s,mb3.3,baz=306,slow=3.9,SNR=4.2							
MKAR	**Makanchi Array**	**64.28**	**314**	P		**P**	**21 38 27.1**	**-0.4**
	0.2nm,0.2s,mb3.7,baz=42,slow=6.6,SNR=3.6							
FINES	**FINESS Array B**	**66.07**	**352**	P		**P**	**21 38 38.8**	**-0.1**
	2.3nm,0.8s,mb4.3,baz=16,slow=8.1,SNR=12							
NOA	**NORSAR Array B**	**67.06**	**0**	P		**P**	**21 38 44.5**	**-0.6**
	0.4nm,0.6s,mb3.6,baz=0.0,slow=6.4,SNR=2.8							
CMAR	**Chiang Mai Arr**	**77.17**	**283**	P		**P**	**21 39 47.5**	**+1.2**
	0.7nm,1.0s,mb3.5,baz=26,slow=5.0,SNR=3.2							
ESDC	**Sonseca Array**	**87.47**	**12**	P		**P**	**21 40 39.9**	**+0.1**
	0.1nm,0.3s,mb3.6,baz=351,slow=6.2,SNR=4.1							
ASAR	**Alice Springs**	**90.73**	**231**	P		**P**	**21 40 54.2**	**-0.9**
	0.3nm,0.7s,mb3.7,baz=41,slow=4.3,SNR=4.1							

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*PDA **23** 21:31:33.4,28.33N×21.36W, h11km, mb5.0*

*CSEM **23** 21:31:41.7±0.7,28.64N×21.09W, h10km, ML3.3, Error ellipse: s-maj=21.0km s-min=7.2km az=29.0*
*ISCJB **23** 21:31:44.1±0.7,29.34N±0.05×20.66W±0.04, h10km, Error ellipse: s-maj=8.7km s-min=3.8km az=29.5*
*NEIC **23** 21:31:45.7,28.45N×20.81W, h0km, MG4.1(MDD), After MDD.*
*INMG **23** 21:31:46.8±0.7,28.35N×21.26W, h10km, ML3.3, Error ellipse: s-maj=9.1km s-min=4.8km az=77.0*
ISC 23 21:31:46.8±0.7,**29.34N**±0.05×**20.59W**±0.04, **h10**km, **n35**, σ1°**42**/53, **Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CCAN	**Las Canadas**	**3.68**	**107**	P		**Pn**	**21 32 43.1**	**-0.7**
CCAN				S		**Sn**	**21 33 25.1**	**-2.0**
CCAN	**Las Canadas**	**3.68**	**107**	P		**Pn**	**21 32 43.1**	**-0.6**
EBAJ	**Bajamar**	**3.81**	**101**	P		**Pn**	**21 32 44.3**	**-1.3**
EBAJ				S		**Sn**	**21 33 30.1**	**-0.4**
EBAJ	**Bajamar**	**3.81**	**101**	P		**Pn**	**21 32 44.3**	**-1.3**
FUL	**Funchal**	**4.56**	**43**	*e*Pn		**Pb**	**21 33 05.5**	**-1.5**
FUL				*e*Sn		**Sb**	**21 34 03.8**	**+1.8**
FUL				A			21 34 07.6	
	62nm,0.2s							
EOSO	**Osorio**	**4.61**	**105**	P		**Pn**	**21 32 56.3**	**-0.2**
EOSO				S		**Sn**	**21 33 46.3**	**-3.8**
EOSO	**Osorio**	**4.61**	**105**	P		**Pn**	**21 32 56.3**	**-0.2**
PMAR	**Madeira**	**4.62**	**42**	*e*Pn		**Pb**	**21 33 05.9**	**-2.0**
PMAR				*e*Sn		**Sb**	**21 34 05.9**	**+2.3**
PMAR				A			21 34 19.2	
	51nm,0.3s							
PMAR	**Madeira**	**4.62**	**42**	*e*Pn		**Pb**	**21 33 05.9**	**-2.0**
PMAR				*e*Sn		**Sb**	**21 34 05.9**	**+2.3**
	51nm,0.3s							
PMPS	**Porto Santo**	**5.20**	**44**	*e*Pn		**Pb**	**21 33 13.7**	**-4.1**
PMPS				*e*Sn		**Sb**	**21 34 19.4**	**-0.9**
PMPS				A			21 34 26.3	
	22nm,0.2s							
PMPS	**Porto Santo**	**5.20**	**44**	*e*Pn		**Pb**	**21 33 13.7**	**-4.1**
PMPS				*e*Sn		**Sb**	**21 34 19.4**	**-0.9**
	22nm,0.2s							
CFTV	**Fuerteventura**	**5.78**	**98**	P		**Pn**	**21 33 13.8**	**+1.0**
CFTV				S		**Sn**	**21 34 18.5**	**-0.6**
CFTV	**Fuerteventura**	**5.78**	**98**	P		**Pn**	**21 33 13.8**	**+1.1**
EFAM	**Famara**	**6.18**	**90**	P		**Pn**	**21 33 20.5**	**+2.4**
EFAM				S		**Sn**	**21 34 30.6**	**+1.8**
EFAM	**Famara**	**6.18**	**90**	P		**Pn**	**21 33 20.5**	**+2.4**
PSMN	**Pico do Norte,**	**8.51**	**335**	*e*P		**Pn**	**21 33 51.5**	**+1.4**
PSMN				*e*S		**Sn**	**21 35 24.0**	**-2.1**
PSMN	**Pico do Norte,**	**8.51**	**335**	*e*P		**Pn**	**21 33 51.5**	**+1.4**
PSMA	**Santa Maria**	**8.52**	**335**	*e*P		**Pn**	**21 33 51.9**	**+1.6**
	69nm,1.0s							
PSMA				*e*S		**Sn**	**21 35 26.1**	**-0.4**
BART	**Pico Bartolome**	**9.23**	**337**	*e*P		**Pn**	**21 34 02.7**	**+2.7**
	44nm,1.0s							
BART				*e*S		**Sn**	**21 35 39.2**	**-4.8**
BART	**Pico Bartolome**	**9.23**	**337**	*e*P		**Pn**	**21 34 02.7**	**+2.7**
	44nm,1.0s							
GRON	**Grota Negra**	**9.36**	**335**	*e*P		**Pn**	**21 34 03.1**	**+1.4**
	31nm,1.5s							
GRON				*e*S		**Sn**	**21 35 44.0**	**-3.0**
PSET	**Sete Cidades**	**9.47**	**335**	*e*P		**Pn**	**21 34 04.5**	**+1.2**
	36nm,1.6s							
PSET				*e*S		**Sn**	**21 35 48.1**	**-1.8**
PSET	**Sete Cidades**	**9.47**	**335**	*e*P		**Pn**	**21 34 04.5**	**+1.2**
	36nm,1.6s							
PID	**Ribeirinha**	**11.02**	**327**	*e*P		**Pn**	**21 34 25.0**	**+0.6**
PMAN	**Manadas**	**11.15**	**328**	*e*P		**Pn**	**21 34 25.8**	**-0.5**
	46nm,1.0s							
PMAN				*e*S		**Sn**	**21 36 18.9**	**-12**
PMAN	**Manadas**	**11.15**	**328**	*e*P		**Pn**	**21 34 25.8**	**-0.5**
	46nm,1.0s							
PCAN	**Candelaria**	**11.21**	**326**	*e*P		**Pn**	**21 34 22.3**	**-4.7**
	42nm,1.1s							
PCAN				*e*S		**Sn**	**21 36 23.8**	**-8.6**
PICO	**Pico**	**11.21**	**327**	*e*P		**Pn**	**21 34 26.9**	**-0.2**
PICO	**Pico**	**11.21**	**327**	*e*P		**Pn**	**21 34 26.9**	**-0.2**
ROSA	**Rosais**	**11.29**	**328**	*e*P		**Pn**	**21 34 28.5**	**+0.3**
ROSA	**Rosais**	**11.29**	**328**	*e*P		**Pn**	**21 34 28.5**	**+0.3**
CALA	**Caldeira**	**11.40**	**326**	*e*P		**Pn**	**21 34 30.7**	**+0.9**
CALA	**Caldeira**	**11.40**	**326**	*e*P		**Pn**	**21 34 30.7**	**+0.9**
PCED	**Cedros**	**11.44**	**326**	*e*P		**Pn**	**21 34 29.6**	**-0.7**
	8.3nm,0.8s							
PCED				*e*S		**Sn**	**21 36 28.7**	**-9.4**
PCED	**Cedros**	**11.44**	**326**	*e*P		**Pn**	**21 34 29.6**	**-0.7**
	8.3nm,0.8s							

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*ROM **23** 21:36:06.4±0.2,44.15N×10.03E, h3km, Md2.8/34, Ml3.0/18, Error ellipse: s-maj=3.1km s-min=1.6km az=25.0*
*CSEM **23** 21:36:07.3±0.1,44.10N×9.98E, h2km, ML3.2/24, Error ellipse: s-maj=3.4km s-min=2.1km az=4.0*
*ISCJB **23** 21:36:07.1±0.3,44.13N±0.02×10.00E±0.02, h9km±2km, Error ellipse: s-maj=3.0km s-min=2.3km az=177.4*
*NEIC **23** 21:36:07.0,44.21N×10.08E, h7km, ML3.4(STR), ML2.9(ROM), ML3.2(LDG), After ROM.*
NEIC Felt at Bagnone and Fivizzano.
*LDG **23** 21:36:09.3±0.1,44.09N×10.18E, h10km, Md2.8/1, Ml3.2/28, Error ellipse: s-maj=2.6km s-min=1.9km az=14.0*
*STR **23** 21:36:09.1±0.7,43.88N×9.79E, h10km, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*VIE **23** 21:36:09.8±0.5,44.17N×10.23E, h9km±4km, mb2.7/8, ML3.1/10, Error ellipse: s-maj=6.9km s-min=3.2km az=1.0*
93 km WNW of Florence
*PRU **23** 21:36:12.0,44.33N×10.39E, h0km*
ISC 23 21:36:07.5±0.3,**44.12N**±0.02×**9.98E**±0.02, **h4**km±2km, **n192**,σ1°**20**/288, **13C-9D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.29**	**82**	*e*Pg		**Pg**	**21 36 12.1**	**-1.1**
VLC				*e*S		**Sg**	**21 36 15.5**	**-1.5**
VLC	**Villacollemand**	**0.29**	**82**	Pg		**Pg**	**21 36 12.1**	**-1.1**
VLC				Sg		**Sg**	**21 36 15.6**	**-1.4**
	1µm,0.7s							
VLC	**Villacollemand**	**0.29**	**82**	Pg		**Pg**	**21 36 12.1**	**-1.1**
VLC				Sg		**Sg**	**21 36 15.6**	**-1.4**
	1µm,0.7s							
MAIM	**Mastiano**	**0.42**	**119**	⇓*iPg*		**Pg**	**21 36 14.9**	**-0.7**
MAIM				Sg		**Sg**	**21 36 20.4**	**-0.6**
	980nm,0.6s							
MAIM	**Mastiano**	**0.42**	**119**	⇓*iPg*		**Pg**	**21 36 14.9**	**-0.7**
MAIM				Sg		**Sg**	**21 36 20.4**	**-0.6**
	980nm,0.6s							
SC2M	**Scurtabo**	**0.43**	**312**	Pg		**Pg**	**21 36 15.4**	**-0.4**
SC2M				Sg		**Sg**	**21 36 21.8**	**+0.5**
SC2M	**Scurtabo**	**0.43**	**312**	Pg		**Pg**	**21 36 15.4**	**-0.4**
SC2M				Sg		**Sg**	**21 36 21.8**	**+0.5**
ERBM	**Eremo**	**0.43**	**46**	⇑*iPg*		**Pg**	**21 36 14.2**	**-1.6**
ERBM				Sg		**Sg**	**21 36 19.2**	**-2.2**
ERBM	**Eremo**	**0.43**	**46**	⇑*iPg*		**Pg**	**21 36 14.2**	**-1.6**
ERBM				Sg		**Sg**	**21 36 19.2**	**-2.2**
BDI	**Bagni Di Lucca**	**0.45**	**97**	Pg		**Pg**	**21 36 15.6**	**-0.5**
BDI				Sg		**Sg**	**21 36 20.9**	**-1.0**
	571nm,0.4s							
BDI	**Bagni Di Lucca**	**0.45**	**97**	Pg		**Pg**	**21 36 15.6**	**-0.5**
BDI				Sg		**Sg**	**21 36 20.9**	**-1.0**
	571nm,0.4s							
GSCL	**Gusciola**	**0.49**	**62**	⇓*iPg*		**Pg**	**21 36 15.4**	**-1.6**
GSCL	**Gusciola**	**0.49**	**62**	⇓*iPg*		**Pg**	**21 36 15.4**	**-1.6**
PII	**Pisa**	**0.56**	**135**	⇑*iPg*		**Pg**	**21 36 18.9**	**+0.7**
PII	**Pisa**	**0.56**	**135**	⇑*iPg*		**Pg**	**21 36 18.9**	**+0.7**
PRMA	**PARMA**	**0.69**	**20**	Pg		**Pg**	**21 36 20.4**	**-0.3**
PRMA				Sg		**Sg**	**21 36 31.0**	**+1.4**
	1µm,0.6s							
PRMA	**PARMA**	**0.69**	**20**	Pg		**Pg**	**21 36 20.4**	**-0.3**
PRMA				Sg		**Sg**	**21 36 31.0**	**+1.4**
	1µm,0.6s							
BOB	**Bobbio (Coli)**	**0.75**	**330**	Pg		**Pg**	**21 36 21.6**	**-0.3**
BOB				Sg		**Sg**	**21 36 32.5**	**+0.8**
	404nm,0.2s							
BOB	**Bobbio (Coli)**	**0.75**	**330**	Pg		**Pg**	**21 36 21.6**	**-0.3**
BOB				Sg		**Sg**	**21 36 32.5**	**+0.8**
	404nm,0.2s							
ZCCA	**Zocca**	**0.75**	**72**	Pg		**Pg**	**21 36 21.6**	**-0.3**
	693nm,0.4s							
ZCCA	**Zocca**	**0.75**	**72**	Pg		**Pg**	**21 36 21.6**	**-0.3**
	693nm,0.4s							
CRMI	**Carmignano**	**0.79**	**114**	Pg		**Pg**	**21 36 22.8**	**+0.3**
CRMI				Sg		**Sg**	**21 36 34.3**	**+1.6**
	342nm,0.5s							
CRMI	**Carmignano**	**0.79**	**114**	Pg		**Pg**	**21 36 22.8**	**+0.3**
CRMI				Sg		**Sg**	**21 36 34.3**	**+1.6**
	342nm,0.5s							
FNVD	**Fontana Vidola**	**0.82**	**86**	Pg		**Pg**	**21 36 22.2**	**-1.1**
	492nm,0.7s							
FNVD	**Fontana Vidola**	**0.82**	**86**	Pg		**Pg**	**21 36 22.2**	**-1.1**
	492nm,0.7s							
SEI	**Scarperia**	**0.99**	**93**	Pg		**Pg**	**21 36 26.0**	**-0.5**
	316nm,0.3s							
SEI	**Scarperia**	**0.99**	**93**	Pg		**Pg**	**21 36 26.0**	**-0.5**
	316nm,0.3s							
RAVA	**Ravarino**	**1.03**	**52**	Pg		**Pg**	**21 36 28.0**	**+0.7**
	2µm,1.0s							
RAVA	**Ravarino**	**1.03**	**52**	Pg		**Pg**	**21 36 28.0**	**+0.7**
	2µm,1.0s							
MTRZ	**Monterenzio**	**1.10**	**76**	Pg		**Pg**	**21 36 29.4**	**+0.9**
MTRZ	**Monterenzio**	**1.10**	**76**	Pg		**Pg**	**21 36 29.4**	**+0.9**
PCP	**Piancastagn**	**1.11**	**293**	Pn		**Pn**	**21 36 28.4**	**-1.5**
PCP				Sn		**Sn**	**21 36 43.1**	**-2.6**
PCP	**Piancastagn**	**1.11**	**293**	Pn		**Pn**	**21 36 28.4**	**-1.5**
PCP				Sn		**Sn**	**21 36 43.1**	**-2.6**
VMG	**Vicchio**	**1.14**	**97**	Pg		**Pg**	**21 36 30.9**	**+1.6**
	34nm,0.2s							
VMG	**Vicchio**	**1.14**	**97**	Pg		**Pg**	**21 36 30.9**	**+1.6**
	34nm,0.2s							
CSNT	**Castellina Chi**	**1.15**	**124**	Pg		**Pg**	**21 36 29.7**	**+0.2**
	172nm,0.5s							
CSNT	**Castellina Chi**	**1.15**	**124**	Pg		**Pg**	**21 36 29.7**	**+0.2**
	172nm,0.5s							
QLNO	**Quiliano**	**1.19**	**280**	Pn		**Pn**	**21 36 29.7**	**-1.3**
QLNO	**Quiliano**	**1.19**	**280**	Pn		**Pn**	**21 36 29.7**	**-1.3**
FIU	**Minerbio Fiu**	**1.20**	**64**	Pn		**Pn**	**21 36 32.6**	**+1.5**
FIU	**Minerbio Fiu**	**1.20**	**64**	Pn		**Pn**	**21 36 32.6**	**+1.5**
SFI	**Santa Sofia**	**1.36**	**98**	Pn		**Pn**	**21 36 32.3**	**-1.0**
	267nm,1.1s							
SFI	**Santa Sofia**	**1.36**	**98**	Pn		**Pn**	**21 36 32.3**	**-1.0**
	267nm,1.1s							
SALO	**Salr**	**1.55**	**14**	Pn		**Pn**	**21 36 36.1**	**+0.2**
	564nm,0.6s							
SALO	**Salr**	**1.55**	**14**	Pn		**Pn**	**21 36 36.1**	**+0.2**
	564nm,0.6s							
CAFI	**Castiglion Fio**	**1.64**	**118**	Pn		**Pn**	**21 36 37.0**	**-0.1**
CAFI	**Castiglion Fio**	**1.64**	**118**	Pn		**Pn**	**21 36 37.0**	**-0.1**
MDI	**Monti di Nese**	**1.67**	**353**	Pn		**Pn**	**21 36 37.9**	**+0.4**
	247nm,0.5s							
MDI	**Monti di Nese**	**1.67**	**353**	Pn		**Pn**	**21 36 37.9**	**+0.4**
	247nm,0.5s							
BALD	**Monte Baldo**	**1.67**	**21**	*e*Pg		**Pn**	**21 36 37.7**	**+0.1**
BALD				*e*Sg		**Sg**	**21 36 59.1**	**-2.1**
BALD	**Monte Baldo**	**1.67**	**21**	*e*Pg		**Pn**	**21 36 37.7**	**+0.1**
BALD				*e*Sg		**Sg**	**21 36 59.1**	**-2.1**
PGF	**Pioggiola**	**1.73**	**205**	*e*Pn		**Pn**	**21 36 38.5**	**+0.2**
	SNR=1.0							
PGF				*e*Sn		**Sn**	**21 37 00.1**	**-0.6**
	38nm,0.3s,SNR=1.0							
PGF	**Pioggiola**	**1.73**	**205**	*e*Pn		**Pn**	**21 36 38.5**	**+0.2**
	SNR=1.0							
PGF				*e*Sn		**Sn**	**21 37 00.1**	**-0.6**
	19nm,0.3s,SNR=1.0							
TEOL	**Teolo**	**1.73**	**44**	⇑*ePg*		**Pn**	**21 36 37.1**	**-1.2**
TEOL	**Teolo**	**1.73**	**44**	*ePg*		**Pn**	**21 36 37.1**	**-1.2**
BADI	**Badiali**	**1.75**	**110**	Pn		**Pn**	**21 36 37.7**	**-0.9**
BADI	**Badiali**	**1.75**	**110**	Pn		**Pn**	**21 36 37.7**	**-0.9**
MONC	**Moncucco Torin**	**1.75**	**304**	Pn		**Pn**	**21 36 41.4**	**+2.8**
	172nm,0.4s							
MONC	**Moncucco Torin**	**1.75**	**304**	Pn		**Pn**	**21 36 41.4**	**+2.8**
	172nm,0.4s							
SAOF	**Saorge**	**1.75**	**267**	Pg		**Pn**	**21 36 39.5**	**+0.8**
SAOF				Sg		**Sg**	**21 37 02.2**	**-1.6**
SAOF	**Saorge**	**1.75**	**267**	Pg		**Pn**	**21 36 39.5**	**+0.8**
SAOF				Sg		**Sg**	**21 37 02.2**	**-1.6**
AUTN	**L'Aution**	**1.85**	**267**	Pg		**Pn**	**21 36 41.3**	**+1.4**
AUTN				Sg		**Sg**	**21 37 05.1**	**-1.7**
AUTN	**L'Aution**	**1.85**	**267**	Pg		**Pn**	**21 36 41.3**	**+1.4**
AUTN				Sg		**Sg**	**21 37 05.1**	**-1.7**
SBF	**Sospel**	**1.86**	**263**	*e*Pn		**Pn**	**21 36 40.7**	**+0.6**
	SNR=1.0							
SBF				*e*Sn		**Sn**	**21 37 04.6**	**+0.6**
	76nm,0.3s,SNR=1.0							
SBF	**Sospel**	**1.86**	**263**	*e*Pn		**Pn**	**21 36 40.7**	**+0.6**
	SNR=1.0							
SBF				*e*Sn		**Sn**	**21 37 04.6**	**+0.6**
	38nm,0.3s,SNR=1.0							
LUCF	**Luceram**	**1.92**	**264**	Pg		**Pn**	**21 36 42.4**	**+1.5**
LUCF	

FETA				⇓*i*Sn		**Sn**	**21 37 31.0**	**0.0**
FETA	**Feichten**	**2.95**	**10**	Pn		**Pn**	**21 36 56.1**	**+1.0**
FETA				Sn		**Sn**	**21 37 31.0**	**+0.1**
ORIF	**Oris-en-Rattie**	**3.04**	**287**	*e*Pn		**Pn**	**21 36 58.5**	**+2.1**
	SNR=1.0							
ORIF				*e*Sn		**Sn**	**21 37 33.4**	**+0.2**
	23nm,0.5s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**3.04**	**287**	*e*Pn		**Pn**	**21 36 58.5**	**+2.1**
	SNR=1.0							
ORIF				*e*Sn		**Sn**	**21 37 33.4**	**+0.2**
	12nm,0.5s,SNR=1.0							
SABO	**M.te Sabotino**	**3.17**	**53**	*e*Pg		**Pn**	**21 36 57.5**	**-0.6**
SABO				*e*Sg		**Sn**	**21 37 33.9**	**-2.5**
DAVA	**Damuels**	**3.17**	**359**	⇑*i*Pn		**Pn**	**21 36 60.0**	**+1.9**
	SNR=15							
DAVA				⇓*i*Sn		**Sn**	**21 37 37.8**	**+1.5**
DAVA	**Damuels**	**3.17**	**359**	Pn		**Pn**	**21 37 00.0**	**+1.9**
	SNR=15							
DAVA				Sn		**Sn**	**21 37 37.8**	**+1.4**
SMRF	**Simiane la Rot**	**3.18**	**269**	*e*Pn		**Pn**	**21 36 59.8**	**+1.5**
	SNR=1.0							
SMRF				*e*Sn		**Sn**	**21 37 36.5**	**-0.1**
SMRF				*e*Sg		**Sg**	**21 37 50.3**	**+0.7**
	20nm,0.4s,SNR=1.0							
SMRF	**Simiane la Rot**	**3.18**	**269**	*e*Pn		**Pn**	**21 36 59.8**	**+1.5**
	SNR=1.0							
SMRF				*e*Sn		**Sn**	**21 37 36.5**	**-0.1**
SMRF				*e*Sg		**Sg**	**21 37 50.3**	**+0.7**
	9.9nm,0.4s,SNR=1.0							
MOTA	**Moosalm**	**3.32**	**13**	⇑*i*Pn		**Pn**	**21 37 01.5**	**+1.3**
	SNR=35							
MOTA				⇓*i*Sn		**Sn**	**21 37 41.3**	**+1.2**
MOTA	**Moosalm**	**3.32**	**13**	Pn		**Pn**	**21 37 01.5**	**+1.3**
	SNR=35							
MOTA				Sn		**Sn**	**21 37 41.3**	**+1.2**
WTTA	**Wattenberg**	**3.35**	**20**	⇓*i*Pn		**Pn**	**21 37 01.2**	**+0.5**
	SNR=15							
WTTA				⇑*i*Sn		**Sn**	**21 37 41.2**	**+0.4**
WTTA	**Wattenberg**	**3.35**	**20**	Pn		**Pn**	**21 37 01.2**	**+0.6**
	SNR=15							
WTTA				Sn		**Sn**	**21 37 41.2**	**+0.3**
VOY	**Vojsko**	**3.37**	**54**	*e*Pn		**Pn**	**21 36 59.7**	**-1.1**
VOY				*e*Sn		**Sn**	**21 37 38.2**	**-3.0**
VOY	**Vojsko**	**3.37**	**54**	*e*Pn		**Pn**	**21 36 59.7**	**-1.1**
VOY				*e*Sn		**Sn**	**21 37 38.2**	**-3.0**
WATA	**Walderalm**	**3.41**	**19**	⇑*i*Pn		**Pn**	**21 37 02.0**	**+0.6**
	SNR=6.3							
WATA	**Walderalm**	**3.41**	**19**	Pn		**Pn**	**21 37 02.0**	**+0.6**
	SNR=6.3							
RETA	**Reutte**	**3.41**	**9**	⇓*i*Pn		**Pn**	**21 37 02.8**	**+1.3**
RETA				⇑*i*Sn		**Sn**	**21 37 43.2**	**+0.8**
RETA	**Reutte**	**3.41**	**9**	Pn		**Pn**	**21 37 02.8**	**+1.3**
RETA				Sn		**Sn**	**21 37 43.2**	**+0.8**
ACOM	**Acomizza, Ital**	**3.48**	**44**	*e*Pg		**Pn**	**21 37 02.6**	**+0.2**
NVLJ	**Novalja**	**3.54**	**81**	*e*Pn		**Pn**	**21 37 03.3**	**+0.2**
NVLJ				Sn		**Sn**	**21 37 42.3**	**-3.1**
NVLJ	**Novalja**	**3.54**	**81**	*e*Pn		**Pn**	**21 37 03.3**	**+0.1**
NVLJ				Sn		**Sn**	**21 37 42.3**	**-3.1**
CABF	**La Chapelle**	**3.71**	**314**	*e*Pn		**Pn**	**21 37 07.1**	**+1.6**
	SNR=1.0							
CABF				*e*Sn		**Sn**	**21 37 49.1**	**-0.5**
	15nm,0.5s							
CABF	**La Chapelle**	**3.71**	**314**	*e*Pn		**Pn**	**21 37 07.1**	**+1.6**
	SNR=1.0							
CABF				*e*Sn		**Sn**	**21 37 49.1**	**-0.5**
	7.3nm,0.5s							
BBS	**Basel-Blauen**	**3.77**	**334**	Pn		**Pn**	**21 37 08.3**	**+2.0**
BBS	**Basel-Blauen**	**3.77**	**334**	Pn		**Pn**	**21 37 08.3**	**+2.0**
VIVF	**Saint-Julien-I**	**3.87**	**283**	*e*Pn		**Pn**	**21 37 08.6**	**+0.8**
	SNR=1.0							
VIVF				*e*Sn		**Sn**	**21 37 52.7**	**-0.9**
	4.4nm,0.4s,SNR=1.0							
VIVF	**Saint-Julien-I**	**3.87**	**283**	*e*Pn		**Pn**	**21 37 08.6**	**+0.8**
	SNR=1.0							
LOMF	**Lomont**	**3.91**	**327**	Pn		**Pn**	**21 37 10.2**	**+1.8**
LOMF	**Lomont**	**3.91**	**327**	Pn		**Pn**	**21 37 10.2**	**+1.8**
FELD	**Feldberg im Sc**	**4.00**	**341**	Pn		**Pn**	**21 37 10.2**	**+0.6**
FELD	**Feldberg im Sc**	**4.00**	**341**	Pn		**Pn**	**21 37 10.2**	**+0.6**
SSB	**Saint Sauveur**	**4.05**	**289**	*e*Pn		**Pn**	**21 37 08.6**	**-1.6**
SSB	**Saint Sauveur**	**4.05**	**289**	*e*Pn		**Pn**	**21 37 08.6**	**-1.6**
SPAK	**Spaichingen-Ko**	**4.07**	**349**	Pn		**Pn**	**21 37 12.0**	**+1.5**
SPAK	**Spaichingen-Ko**	**4.07**	**349**	Pn		**Pn**	**21 37 12.0**	**+1.5**
MOF	**Molkenrain**	**4.23**	**333**	Pn		**Pn**	**21 37 14.0**	**+1.3**
MOF	**Molkenrain**	**4.23**	**333**	Pn		**Pn**	**21 37 14.0**	**+1.3**
HINF	**Hinteralfeld**	**4.29**	**331**	*e*Pn		**Pn**	**21 37 14.4**	**+0.8**
	SNR=1.0							
HINF				*e*Sn		**Sn**	**21 38 02.8**	**-1.3**
	23nm,0.4s							
HINF	**Hinteralfeld**	**4.29**	**331**	*e*Pn		**Pn**	**21 37 14.4**	**+0.8**
	SNR=1.0							
HINF				*e*Sn		**Sn**	**21 38 02.8**	**-1.3**
	11nm,0.4s							
BFO	**Black Forest**	**4.37**	**345**	*e*Pn		**Pn**	**21 37 14.6**	**+0.1**
BFO	**Black Forest**	**4.37**	**345**	*e*Pn		**Pn**	**21 37 14.6**	**0.0**
LASF	**Ste Croix**	**4.41**	**272**	*e*Pn		**Pn**	**21 37 15.7**	**+0.5**
LASF				*e*Sn		**Sn**	**21 38 05.7**	**-1.3**
	2.6nm,0.3s							
LASF	**Ste Croix**	**4.41**	**272**	*e*Pn		**Pn**	**21 37 15.7**	**+0.5**
LASF				*e*Sn		**Sn**	**21 38 05.7**	**-1.3**
	1.3nm,0.3s							
ECH	**Echery**	**4.54**	**335**	Pn		**Pn**	**21 37 17.8**	**+0.8**
ECH	**Echery**	**4.54**	**335**	*e*Pn		**Pn**	**21 37 17.4**	**+0.4**
ECH	**Echery**	**4.54**	**335**	*e*Pn		**Pn**	**21 37 17.4**	**+0.4**
HAU	**Haudompre**	**4.64**	**328**	*e*Pn		**Pn**	**21 37 19.0**	**+0.7**
	SNR=1.0							
HAU				*e*Sn		**Sn**	**21 38 11.1**	**-1.4**
	39nm,0.4s							
HAU	**Haudompre**	**4.64**	**328**	*e*Pn		**Pn**	**21 37 19.0**	**+0.7**
	SNR=1.0							
HAU				*e*Sn		**Sn**	**21 38 11.1**	**-1.4**
	20nm,0.4s							
CDF	**Champ du Feu**	**4.69**	**337**	*e*Pn		**Pn**	**21 37 19.4**	**+0.4**
	SNR=1.0							
CDF				*e*Sn		**Sn**	**21 38 11.7**	**-2.0**
	14nm,0.4s							
CDF	**Champ du Feu**	**4.69**	**337**	*e*Pn		**Pn**	**21 37 19.4**	**+0.4**
	SNR=1.0							
CDF				*e*Sn		**Sn**	**21 38 11.7**	**-2.0**
	7.0nm,0.4s							
MOA	**Molln**	**4.78**	**37**	⇑*i*Pn		**Pn**	**21 37 20.5**	**+0.2**
MOA				⇑*i*Sn		**Sn**	**21 38 14.6**	**-1.4**
MOA	**Molln**	**4.78**	**37**	Pn		**Pn**	**21 37 20.5**	**+0.3**
MOA				Sn		**Sn**	**21 38 14.6**	**-1.4**
THEF	**They Montfort**	**4.96**	**327**	Pn		**Pn**	**21 37 24.1**	**+1.4**
THEF	**They Montfort**	**4.96**	**327**	Pn		**Pn**	**21 37 24.1**	**+1.4**
SMF	**Signal de Mont**	**5.01**	**302**	*e*Pn		**Pn**	**21 37 24.0**	**+0.6**
	SNR=1.0							
SMF				*e*Sn		**Sn**	**21 38 21.1**	**-0.6**
	8.0nm,0.4s,SNR=1.0							
SMF	**Signal de Mont**	**5.01**	**302**	*e*Pn		**Pn**	**21 37 24.0**	**+0.6**
	SNR=1.0							
SMF				*e*Sn		**Sn**	**21 38 21.1**	**-0.6**
	4.0nm,0.4s,SNR=1.0							
LOR	**Lormes**	**5.32**	**308**	*e*Pn		**Pn**	**21 37 28.8**	**+1.1**
	baz=128,SNR=1.0							
LOR				*e*Sn		**Sn**	**21 38 27.6**	**-1.8**
	14nm,0.4s							
LOR	**Lormes**	**5.32**	**308**	*e*Pn		**Pn**	**21 37 28.8**	**+1.1**
	baz=128,SNR=1.0							
LOR				*e*Sn		**Sn**	**21 38 27.6**	**-1.8**
	7.2nm,0.4s							
SFTF	**Sexfontaines**	**5.34**	**322**	*e*Pn		**Pn**	**21 37 28.8**	**+0.9**
	baz=132							
SFTF				*e*Sn		**Sn**	**21 38 28.1**	**-1.7**
	4.8nm,0.3s							
SFTF	**Sexfontaines**	**5.34**	**322**	*e*Pn		**Pn**	**21 37 28.8**	**+0.9**
	baz=132							
AVF	**Avril sur Loir**	**5.37**	**302**	*e*Pn		**Pn**	**21 37 29.3**	**+0.9**
	SNR=1.0							
AVF				*e*Sn		**Sn**	**21 38 29.2**	**-1.5**
	4.2nm,0.5s							
AVF	**Avril sur Loir**	**5.37**	**302**	*e*Pn		**Pn**	**21 37 29.3**	**+0.9**
	SNR=1.0							
AVF				*e*Sn		**Sn**	**21 38 29.2**	**-1.5**
	2.1nm,0.5s							
SSF	**Saint Saulge**	**5.41**	**305**	*e*Pn		**Pn**	**21 37 28.9**	**-0.1**
	SNR=1.0							
SSF				*e*Sn		**Sn**	**21 38 29.6**	**-2.1**
	5.1nm,0.4s							
SSF	**Saint Saulge**	**5.41**	**305**	*e*Pn		**Pn**	**21 37 28.9**	**-0.1**
	SNR=1.0							
RFYF	**Reffroy**	**5.48**	**327**	*e*Pn		**Pn**	**21 37 30.9**	**+1.0**
	baz=141							
RFYF				*e*Sn		**Sn**	**21 38 31.0**	**-2.4**
	9.3nm,0.3s							
RFYF	**Reffroy**	**5.48**	**327**	*e*Pn		**Pn**	**21 37 30.9**	**+1.0**
	baz=141							
MEZF	**Maizieres J'vi**	**5.56**	**324**	*e*Pn		**Pn**	**21 37 32.4**	**+1.5**
	baz=134,SNR=1.0							
MEZF				*e*Sn		**Sn**	**21 38 32.7**	**-2.5**
	9.2nm,0.5s							
MEZF	**Maizieres J'vi**	**5.56**	**324**	*e*Pn		**Pn**	**21 37 32.4**	**+1.5**
	baz=134,SNR=1.0							
BGF	**Bois d'Agland**	**5.59**	**298**	*e*Pn		**Pn**	**21 37 32.5**	**+1.1**
	SNR=1.0							
BGF				*e*Sn		**Sn**	**21 38 34.2**	**-1.8**
	12nm,0.4s							
BGF	**Bois d'Agland**	**5.59**	**298**	*e*Pn		**Pn**	**21 37 32.5**	**+1.1**
	SNR=1.0							
KHC	**Kasperske Hory**	**5.59**	**25**	*e*Pn		**Pn**	**21 37 31.2**	**-0.2**
	2.2nm,0.4s							
KHC				*e*S		**Sn**	**21 38 31.4**	**-4.6**
KHC	**Kasperske Hory**	**5.59**	**25**	*e*PN		**Pn**	**21 37 30.8**	**-0.6**
KHC				*e*SN		**Sn**	**21 38 31.1**	**-4.9**
KHC	**Kasperske Hory**	**5.59**	**25**	*e*Pn		**Pn**	**21 37 31.2**	**-0.2**
	2.2nm,0.4s							
MTLF	**Montolieu**	**5.68**	**265**	*e*Pn		**Pn**	**21 37 33.1**	**+0.5**
	SNR=1.0							
MTLF				*e*Sn		**Sn**	**21 38 37.1**	**-1.2**
	2.6nm,0.4s,SNR=1.0							
MTLF	**Montolieu**	**5.68**	**265**	*e*Pn		**Pn**	**21 37 33.1**	**+0.5**
	SNR=1.0							
MTLF				*e*Sn		**Sn**	**21 38 37.1**	**-1.2**
	1.3nm,0.4s,SNR=1.0							
CAF	**Calviac**	**5.72**	**281**	*e*Pn		**Pn**	**21 37 33.9**	**+0.8**
	SNR=1.0							
CAF	**Calviac**	**5.72**	**281**	*e*Pn		**Pn**	**21 37 33.9**	**+0.8**
	SNR=1.0							
STON	**Ston**	**5.75**	**100**	*e*Pn		**Pn**	**21 37 33.2**	**-0.4**
STON				Sn		**Sn**	**21 38 37.2**	**-2.8**
STON	**Ston**	**5.75**	**100**	*e*Pn		**Pn**	**21 37 33.1**	**-0.5**
TCF	**Toulx Ste Croi**	**5.90**	**294**	*e*Pn		**Pn**	**21 37 37.3**	**+1.6**
	SNR=1.0							
TCF				*e*Sn		**Sn**	**21 38 42.1**	**-1.7**
	1.4nm,0.3s							
TCF	**Toulx Ste Croi**	**5.90**	**294**	*e*Pn		**Pn**	**21 37 37.3**	**+1.6**
	SNR=1.0							
TCF				*e*Sn		**Sn**	**21 38 42.1**	**-1.7**
	0.7nm,0.3s							
PRU	**Pruhonice**	**6.64**	**26**	*e*SN		**Sn**	**21 38 56.7**	**-5.3**
GIVF	**Givet**	**6.94**	**331**	*e*Pn		**Pn**	**21 37 49.9**	**0.0**
GIVF	**Givet**	**6.94**	**331**	*e*Pn		**Pn**	**21 37 49.9**	**0.0**
BAIF	**Baives**	**7.13**	**328**	*e*Pn		**Pn**	**21 37 53.3**	**+0.8**
	SNR=1.0							
BAIF				*e*Sn		**Sn**	**21 39 10.2**	**-3.7**
	3.1nm,0.6s,SNR=1.0							
BAIF	**Baives**	**7.13**	**328**	*e*Pn		**Pn**	**21 37 53.3**	**+0.8**
	SNR=1.0							
SGMF	**Saint Gilles**	**9.63**	**300**	*e*Pn		**Pn**	**21 38 27.6**	**+0.8**
SGMF	**Saint Gilles**	**9.63**	**300**	*e*Pn		**Pn**	**21 38 27.6**	**+0.8**

NEIC ***23*** *21:36:24.5, 13.98N×93.23W, h16km, MD4.3(MEX), After MEX.*

MEX 23 21:36:24.3±0.5, 13.98N×93.24W, h17km±23km, MD4.3, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
THIG		**1.32**	**46**	*i* P		Pn	21 36 44.6	-3.3
THIG				*i* S		Sn	21 36 59.8	-5.3
PCIG		**1.71**	**1**	*i* P		Pn	21 36 49.9	-3.4
PCIG				*i* S		Sn	21 37 09.9	-5.0
TGIG		**2.78**	**2**	*i* P		Pn	21 37 06.0	-2.0
TGIG				*i* S		Sn	21 37 38.0	-3.2
HUIG	**Huatulco**	**3.29**	**303**	*i* P		Pn	21 37 12.3	-2.7
HUIG				*i* S		Sn	21 37 49.1	-4.7
HUIG	**Huatulco**	**3.29**	**303**	*i* P		Pn	21 37 12.3	-2.7
HUIG				*i* S		Sn	21 37 49.4	-4.4
VHO	**Vista Hermosa**	**4.56**	**313**	*i* P		Pn	21 37 34.5	+2.0
VHO	**Vista Hermosa**	**4.56**	**313**	*i* P		Pn	21 37 30.6	-1.9
VHO				*i* S		Sn	21 38 22.1	-3.0
PNIG	**Pinotepa**	**5.29**	**298**	*i* P		Pn	21 37 42.3	-0.2
PNIG				*i* S		Sn	21 38 38.0	-5.2
PNIG	**Pinotepa**	**5.29**	**298**	*i* P		Pn	21 37 41.3	-1.2
PNIG				*i* S		Sn	21 38 40.3	-2.9
UTMO	**Huajuapan**	**5.82**	**312**	*i* P		Pn	21 37 50.2	+0.4
UTMO				*i* S		Sn	21 38 53.6	-2.7
TEIG	**Tepich**	**7.82**	**37**	*e*Pn		Pn	21 38 15.2	-2.1

ISCJB ***23*** *21:41:25.7±0.6, 36.96N±0.04×29.19E±0.03, h6km±6km, Error ellipse: s-maj=6.6km s-min=4.3km az=8.5*
CSEM ***23*** *21:41:25.7±0.2, 36.98N×29.23E, h10km, MD3.0, Error ellipse: s-maj=5.1km s-min=3.5km az=1.0*
ISK ***23*** *21:41:25.6, 37.03N×29.17E, h12km, MD3.0*
DDA ***23*** *21:41:26.1, 36.97N×29.19E, h7km±6km, Md3.1*

ISC 23 21:41:26.2±0.6, 36.96N±0.04×29.20E±0.03, h10km±5km, n34, σ1.906/50, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.31**	**51**	*e*PG		**Pg**	**21 41 31.3**	**-1.0**
GLHS				*e*SG		**Sg**	**21 41 37.0**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.31**	**51**	*e*Pg		**Pg**	**21 41 31.3**	**-1.0**
GLHS				*e*Sg		**Sg**	**21 41 37.0**	**+0.6**
GOLH	**Golhisar**	**0.40**	**46**	*i* P		**Pg**	**21 41 32.5**	**-1.5**
GOLH				*i* S		**Sg**	**21 41 40.1**	**+0.8**
GOLH	**Golhisar**	**0.40**	**46**	*i* P		**Pg**	**21 41 32.5**	**-1.5**
GOLH				*i* S		**Sg**	**21 41 40.1**	**+0.8**
ELL	**Elmali**	**0.61**	**110**	*e*PG		**Pg**	**21 41 37.7**	**-0.2**
ELL				*e*SG		**Sg**	**21 41 49.1**	**+3.2**
ELL	**Elmali**	**0.61**	**110**	*e*Pg		**Pg**	**21 41 37.7**	**-0.2**
DNZL	**Cakiroluk**	**0.74**	**351**	*i* P		**Pg**	**21 41 40.0**	**-0.4**
DNZL				*i* S		**Sg**	**21 41 51.5**	**+1.5**
DNZL	**Cakiroluk**	**0.74**	**351**	*i* P		**Pg**	**21 41 40.0**	**-0.4**
DNZL				*i* S		**Sg**	**21 41 51.5**	**+1.5**
YER	**Yerkesik**	**0.75**	**284**	*e*PG		**Pg**	**21 41 40.0**	**-0.7**
YER				*e*SG		**Sg**	**21 41 50.3**	**-0.2**
YER	**Yerkesik**	**0.75**	**284**	*e*Pg		**Pg**	**21 41 40.0**	**-0.7**
YER				*e*Sg		**Sg**	**21 41 50.3**	**-0.2**
AKAS	**Kas**	**0.80**	**156**	*i* P		**Pg**	**21 41 41.3**	**-0.2**
AKAS				*i* S		**Sg**	**21 41 58.0**	**+6.2**
AKAS	**Kas**	**0.80**	**156**	*i* P		**Pg**	**21 41 41.3**	**-0.2**
DENT	**Denizli**	**0.80**	**351**	*e*PG		**Pg**	**21 41 40.2**	**-1.4**
DENT	**Denizli**	**0.80**	**351**	*e*Pg		**Pg**	**21 41 40.2**	**-1.4**
KORT	**Korkueli**	**0.92**	**87**	*i* P		**Pg**	**21 41 43.9**	**0.0**
KORT				*i* S		**Sg**	**21 41 59.0**	**+3.1**
KORT	**Korkueli**	**0.92**	**87**	*i* P		**Pg**	**21 41 43.8**	**-0.1**
KORT				*i* S		**Sg**	**21 41 59.0**	**+3.1**
MLSB	**Milas**	**1.19**	**287**	*e*PN		**Pn**	**21 41 48.0**	**-0.8**
MLSB	**Milas**	**1.19**	**287**	*e*Pn		**Pn**	**21 41 48.0**	**-0.8**
BCK	**Bucak**	**1.22**	**65**	*e*PN		**Pn**	**21 41 48.4**	**-0.9**
BCK	**Bucak**	**1.22**	**65**	*e*Pn		**Pn**	**21 41 48.4**	**-0.9**
AYDN	**Tasoluk**	**1.26**	**304**	*i* P		**Pn**	**21 41 51.1**	**+1.2**
AYDN				*i* S		**Sb**	**21 42 08.5**	**+2.1**
AYDN	**Tasoluk**	**1.26**	**304**	*i* P		**Pn**	**21 41 51.1**	**+1.2**
AYDN				*i* S		**Sb**	**21 42 08.5**	**+2.1**
DAT	**Datca**	**1.32**	**260**	*e*PN		**Pn**	**21 41 50.3**	**-0.4**
DAT	**Datca**	**1.32**	**260**	*e*Pn		**Pn**	**21 41 50.3**	**-0.4**
KHL	**Karahalli**	**1.38**	**11**	*e*PN		**Pn**	**21 41 50.3**	**-1.3**
KHL	**Karahalli**	**1.38**	**11**	*e*Pn		**Pn**	**21 41 50.3**	**-1.3**
BDRM	**Kayabasi**	**1.41**	**275**	*i* P		**Pn**	**21 41 52.7**	**+0.8**
BDRM				*i* S		**Sn**	**21 42 11.6**	**+1.0**
BDRM	**Kayabasi**	**1.41**	**275**	*i* P		**Pn**	**21 41 52.7**	**+0.8**
BDRM				*i* S		**Sn**	**21 42 11.6**	**+1.1**
BODT	**Bodrum**	**1.52**	**274**	*e*PN		**Pn**	**21 41 53.4**	**0.0**
BODT	**Bodrum**	**1.52**	**274**	*e*Pn		**Pn**	**21 41 53.4**	**0.0**
SUTC	**Sutluce-Ispart**	**1.53**	**70**	*e*PN		**Pn**	**21 41 52.6**	**-0.9**
SUTC	**Sutluce-Ispart**	**1.53**	**70**	*e*Pn		**Pn**	**21 41 52.6**	**-0.9**
KULA	**Kula-Manisa**	**1.61**	**345**	*e*PN		**Pn**	**21 41 54.1**	**-0.5**
KULA	**Kula-Manisa**	**1.61**	**345**	*e*Pn		**Pn**	**21 41 54.1**	**-0.6**

ISCJB ***23*** *21:41:35.6±0.7, 13.43N±0.10×144.7E±0.2, h154km±7km, mb3.9/11, Error ellipse: s-maj=31.6km s-min=15.6km az=170.4*
IDC ***23*** *21:41:36.7±0.5, 13.45N×144.70E, h147km±5km, mb3.6/10, mb1 3.7/10, mb1mx3.6/23, mbtmp3.6/10, Error ellipse: s-maj=27.3km s-min=13.1km az=86.0*
NEIC ***23*** *21:41:37.1±0.7, 13.43N×144.65E, h151km±7km, mb4.3/1, Error ellipse: s-maj=20.1km s-min=10.5km az=80.0*

ISC 23 21:41:37.0±0.7, 13.43N±0.10×144.7E±0.2, h149km±7km, n15, σ0.953/16, mb3.9/11, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**0.25**	**51**	*e*Pn		**Pn**	**21 41 57.6**	**+0.4**
GUMO				*e*S		**Sn**	**21 42 12.2**	**-0.5**
GUMO	**Guam**	**0.25**	**51**	P		**Pn**	**21 41 57.7**	**+0.5**
	488nm,0.3s,baz=160,slow=0.3,SNR=935							
GUMO				S		**Sn**	**21 42 12.5**	**-0.2**
	1µm,0.3s,baz=150,slow=20,SNR=113							
MJAR	**Matsushiro Arr**	**23.73**	**347**	P		**P**	**21 46 35.8**	**+0.4**
	3.5nm,0.6s,mb4.1,baz=168,slow=8.4,SNR=9.3							
NACB	**Ninganchiao**	**24.28**	**299**	*e*P		**P**	**21 46 41.5**	**+1.0**
	96nm,0.2s							
SSLB	**Suanglung**	**24.68**	**298**	*e*P		**P**	**21 46 42.7**	**-1.5**
	5.9nm,0.6s,mb4.3							
KSRS	**Korea Array**	**28.21**	**331**	P		**P**	**21 47 15.8**	**+0.2**
	1.8nm,0.5s,mb4.0,baz=140,slow=9.9,SNR=9.0							
WRA	**Warramunga Arr**	**34.69**	**197**	P		**P**	**21 48 12.7**	**+0.2**
	0.8nm,0.5s,mb3.6,baz=9.5,slow=9.6,SNR=5.6							
ASAR	**Alice Springs**	**38.34**	**196**	P		**P**	**21 48 43.6**	**+0.2**
	0.3nm,0.6s,mb3.1,baz=16,slow=6.8,SNR=7.9							
CMAR	**Chiang Mai Arr**	**44.16**	**283**	P		**P**	**21 49 31.1**	**-0.1**
	2.4nm,0.6s,mb4.0,baz=83,slow=6.2,SNR=22							
STKA	**Stephens Creek**	**45.14**	**184**	P		**P**	**21 49 38.4**	**-0.2**
	1.3nm,0.4s,mb3.9,baz=330,slow=14,SNR=9.0							
SONM	**Songino Array**	**46.75**	**325**	P		**P**	**21 49 51.1**	**+0.1**
	0.8nm,0.6s,mb3.5,baz=146,slow=8.7,SNR=4.0							
MKAR	**Makanchi Array**	**61.47**	**316**	P		**P**	**21 51 37.9**	**+0.2**
	0.6nm,0.3s,mb3.9,baz=91,slow=9.0,SNR=12							
KURK	**Kurchatov**	**64.58**	**320**	P		**P**	**21 51 58.1**	**-0.1**
	2.6nm,0.4s,mb4.4,baz=104,slow=6.9,SNR=19							
ILAR	**Eielson Array**	**68.79**	**25**	P		**P**	**21 52 24.2**	**-0.4**
	0.4nm,0.4s,mb3.5,baz=252,slow=5.6,SNR=12							
TORD	**Torodi Ar. Bea**	**134.79**	**304**	PKP		PKPdf	22 00 39.8	+0.8
	0.3nm,0.5s,baz=49,slow=0.9,SNR=6.2							

FUNV 23 21:44:03.8, 10.21N×60.25W, h59km, MW3.2, Trinidad

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TBH	**Brigand Hill**	**0.85**	**289**	*e*P		Pn	21 44 20.7	+0.8
TBH				*e*S		Sn	21 44 32.4	+0.7
TOSP	**Speyside**	**1.12**	**345**	*e*P		Pn	21 44 27.7	+4.3
TOSP				*e*S		Sn	21 44 42.0	+4.0
GUIV	**Guiria**	**1.99**	**283**	*e*P		Pn	21 44 34.3	-0.8
GUIV				*e*S		Sn	21 44 56.8	-2.3
GUNV	**Guanoco**	**2.65**	**269**	*e*P		Pn	21 44 44.1	-0.1
GUNV				*e*S		Sn	21 45 12.9	-2.3
ITEV	**Isla Los Testi**	**3.06**	**292**	*e*P		Pn	21 44 48.3	-1.4
ITEV				*e*S		Sn	21 45 22.0	-3.1
PCRV	**Puerto La Cruz**	**4.32**	**270**	*e*P		Pn	21 45 05.0	-2.0
CUPV	**Cœpira**	**5.46**	**269**	*e*P		Pn	21 45 21.7	-0.9
CUPV				*e*S		Sn	21 46 18.6	-5.5
CAOV	**Caicara del Or**	**6.65**	**245**	*e*P		Pn	21 45 36.4	-2.5
BAUV	**El Baul**	**7.79**	**261**	*e*P		Pn	21 45 52.2	-2.4
BAUV				*e*S		Sn	21 47 11.9	-9.5

IDC 23 21:44:59.1±3.3, 3.02S×135.82E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.5/16, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=161.6km s-min=27.0km az=81.0, Irian Jaya region

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

GRCU eS Sn 21 54 13.7 -2.2
GRCU Cariacou 2.38 341 eP Pn 21 53 48.1 +0.1
GRCU eS Sn 21 54 13.7 -2.2
RIOV Rio Grande 2.41 208 i P Pn 21 53 46.7 -1.7
RIOV eS Sn 21 54 14.8 -1.8
CRUV Carupano 2.57 281 eP Pn 21 53 50.9 +0.3
CRUV eS Sn 21 54 23.3 +2.7
ITEV Isla Los Testi 2.68 295 eP Pn 21 53 52.6 +0.6
ITEV eS Sn 21 54 26.8 +3.5
ORIV Oritupano 2.93 248 eP Pn 21 53 56.8 +1.2
ORIV eS Sn 21 54 32.1 +2.5
SVB Belmont 3.10 349 eP Pn 21 53 58.2 +0.3
SVB eS Sn 21 54 30.2 -3.5
SVB Belmont 3.10 349 eP Pn 21 53 58.2 +0.3
SVB eS Sn 21 54 30.2 -3.5
BBGH Gun Hill 3.11 20 ePn Pn 21 53 58.4 +0.4
GURV El Guri 3.41 225 eP Pn 21 54 01.3 -0.9
MCLT Moule a Chique 3.49 356 eP Pn 21 54 02.7 -0.6
MCLT eS Sn 21 54 39.2 -4.1
MCLT Moule a Chique 3.49 356 eP Pn 21 54 02.7 -0.6
MCLT eS Sn 21 54 39.2 -4.1
PCRV Puerto La Cruz 3.91 270 Pn Pn 21 54 08.4 -0.6
30nm,0.3s,baz=93,slow=4.2,SNR=270
PCRV Sn Sn 21 54 54.6 +0.9
76nm,0.3s,baz=89,slow=10,SNR=5.6
PCRV Puerto La Cruz 3.91 270 eP Pn 21 54 09.3 +0.3
PCRV eS Sn 21 54 54.1 +0.4
IBAV Isla La Blanqu 4.16 293 eP Pn 21 54 12.9 +0.4
PRGV PARIAGUAN 4.18 250 eP Pn 21 54 12.7 0.0
PRGV eS Sn 21 55 01.6 +1.2
BIM Bigot 4.30 355 eP Pn 21 54 13.9 -0.5
MVM Montagne Vaucl 4.33 357 eP Pn 21 54 14.2 -0.6
FDF Fort de France 4.52 354 ePn Pn 21 54 16.8 -0.7
FDF eS Sn 21 55 06.4 -2.4
FDF Fort de France 4.52 354 eP Pn 21 54 18.4 +1.0
FDF eS Sn 21 55 08.8 0.0
CUPV Cœpira 5.05 269 eP Pn 21 54 25.1 +0.5
CUPV eS Sn 21 55 21.7 0.0
BIRV Birongo 5.52 273 eP Pn 21 54 32.1 +0.9
BIRV eS Sn 21 55 33.1 -0.3
MERV Las Mercedes 5.63 261 eP Pn 21 54 33.0 +0.3
MERV eS Sn 21 55 35.5 -0.6
ORCV Isla La Orchil 5.66 287 eP Pn 21 54 33.2 +0.2
ORCV eS Sn 21 55 35.9 -0.9
CAOV Caicara del Or 6.28 243 eP Pn 21 54 40.6 -1.0
CAOV eS Sn 21 55 49.9 -2.3
TURV Turiamo 7.06 273 eP Pn 21 54 51.5 -0.8
BAUV El Baul 7.38 261 eP Pn 21 54 55.5 -1.2
BAUV eS Sn 21 56 15.8 -3.4
ANWB Willy Bob 7.50 352 ePn Pn 21 54 58.3 0.0
TEPV Terepaima 8.40 269 eP Pn 21 55 09.6 -1.1
PAYV Puerto Ayacuch 8.40 236 eP Pn 21 55 09.3 -1.4
PAYV eS Sn 21 56 38.5 -5.9
CDVI St. Croix 8.49 333 ePn Pn 21 55 12.5 +0.6
SANV Sanarito 8.77 266 eP Pn 21 55 14.7 -1.1
STVI Saint Thomas 9.10 333 ePn Pn 21 55 21.2 +0.9
MTP Monte Pirata 9.16 329 ePn Pn 21 55 21.3 +0.2
98nm,0.6s
MTP eS Sn 21 57 01.3 -1.7
HUMP Col San Antoni 9.35 328 ePn Pn 21 55 23.8 +0.1
CBYP Canovanas 9.46 328 ePn Pn 21 55 25.7 +0.5
36nm,0.4s
SJG San Juan 9.49 327 ePn Pn 21 55 26.0 +0.4
SJG eS Sn 21 57 07.4 -3.6
SJG San Juan 9.49 327 Pn Pn 21 55 25.4 -0.1
6.0nm,0.3s,baz=137,slow=16,SNR=8.6
SJG Sn Sn 21 57 05.5 -5.5
1.9nm,0.3s,baz=232,slow=17,SNR=2.8
SDV Santo Domingo 9.92 263 ePn Pn 21 55 29.6 -1.9
SDV eSn Sn 21 57 17.5 -4.1
CRPR Cabo Rojo, PR 9.96 322 ePn Pn 21 55 27.9 -4.1
CRPR eS Sn 21 57 23.0 +0.5
AOPR Arecibo Observ 10.01 325 ePn Pn 21 55 35.0 +2.2
LRS Lares 10.02 324 ePn Pn 21 55 37.0 +4.1
AGPR Aguadilla, PR 10.31 323 ePn Pn 21 55 38.5 +1.6
VIGV El Vigia 10.64 264 eP Pn 21 55 40.5 -0.9
VIRV Villa del Rosa 11.55 273 eP Pn 21 55 52.0 -1.9
SDDR Presa de Saban 13.48 312 ePn Pn 21 56 22.5 +2.3
SDDR eS Sn 21 58 48.8 +0.1
ROSC El Rosal 14.55 250 Pn Pn 21 56 34.7 -0.1
4.5nm,0.3s,baz=95,slow=16,SNR=12
BCIP Isla Barro Col 18.93 269 ePn Pn 21 57 30.8 +0.8
43nm,0.8s
OTAV Otavalo 20.27 242 eP P 21 57 44.6 +0.8
28nm,0.6s
ATAH Atahualpa 24.67 226 P P 21 58 29.8 +1.1
61nm,0.7s,mb5.2,baz=60,slow=4.8,SNR=41
SIV San Ignacio 26.03 181 P P 21 58 39.6 -1.4
9.0nm,0.6s,mb4.5,baz=27,slow=9.5,SNR=30
TGUH Tegucigalpa,Un 26.29 281 eP P 21 58 43.4 0.0
NNA Nana 27.29 216 LR LR 22 10 47.1
comp=Z,487nm,18.4s,MS4.1,baz=32,slow=39
LPAZ La Paz 27.34 196 P P 21 58 52.3 -0.4
3.2nm,0.7s,mb4.0,baz=22,slow=7.5,SNR=14
MVL Millersville 32.78 337 eP P 21 59 41.6 +0.9
14nm,1.2s,mb4.8
LRAL Lakeview Retre 33.22 317 eP P 21 59 45.0 +0.4
LRAL e pP 21 59 57.0 +1.2
SWET Sewanee 33.90 321 eP P 21 59 48.9 -1.7
CMIG Matias Romero 33.91 285 P P 21 59 48.8 -2.1
1.5nm,0.6s,mb4.1,baz=101,slow=14,SNR=3.2
BINY Binghamton 34.59 340 eP P 21 59 57.6 +1.2
16nm,0.9s,mb4.9
NCB Newcomb 35.63 343 eP P 22 00 06.9 +1.5
7.6nm,0.9s,mb4.6
WVT Waverly 35.67 321 eP P 22 00 02.0 -3.8
6.8nm,0.7s,mb4.7
CPUP Villa Florida 36.46 175 P P 22 00 09.9 -2.7
0.5nm,0.4s,mb3.8,baz=349,slow=7.8,SNR=3.5
CPUP LR LR 22 15 42.8
comp=Z,160nm,18.1s,MS3.8,baz=343,slow=37
SIUC Southern Illin 37.54 322 eP P 22 00 20.9 -0.8
20nm,1.0s,mb4.8
SADO Sadowa 37.94 338 P P 22 00 24.8 -0.2
4.5nm,0.5s,mb4.5,baz=176,slow=7.6,SNR=5.0
SADO LR LR 22 16 27.9
comp=Z,165nm,18.3s,MS3.9,baz=176,slow=37
HKT Hockley 38.20 306 P P 22 00 26.7 -0.8
3.4nm,0.9s,mb4.1
FVM French Village 38.45 321 eP P 22 00 28.5 -0.9
8.6nm,0.6s,mb4.7
CCM Cathedral Cave 39.01 320 eP P 22 00 33.0 -1.1
6.1nm,0.6s,mb4.5
JCT Junction City 41.58 305 ⇓P P 22 00 55.2 -0.4
baz=42
JCT Junction City 41.58 305 eP P 22 00 55.2 -0.3
7.6nm,0.7s,mb4.4
JCT e pP 22 01 05.8 -1.1
CFAA Coronel Fontan 42.20 190 P P 22 00 57.0 -3.4
0.5nm,0.9s,baz=5.1,slow=6.7,SNR=5.0
WMOK Wichita Mounta 42.47 311 eP P 22 01 01.4 -1.2
1.3nm,0.7s,mb3.7
628A Black Gap, Mar 43.80 302 ⇑P P 22 01 13.2 -0.4
baz=44,SNR=11
528A Cox Ranch, San 43.92 303 ⇓P P 22 01 14.3 -0.1
baz=44,SNR=5.4
428A Kincaid Ranch, 44.01 304 ⇓P P 22 01 15.2 0.0
baz=44,SNR=12
627A Terlingua Ranc 44.20 302 ⇓P P 22 01 16.8 0.0
baz=44
TXAR Lajitas Array 44.40 302 P P 22 01 18.5 +0.1
1.8nm,0.8s,mb3.9,baz=116,slow=8.6,SNR=17
TXAR PcP PcP 22 03 03.4 +1.6
1.1nm,0.6s,baz=118,slow=5.5,SNR=5.1
427A Hayter Ranch, 44.63 304 ⇑P P 22 01 19.9 -0.3
baz=45,SNR=11
SCHQ Schefferville 44.78 355 P P 22 01 21.9 +1.0
4.3nm,0.6s,mb4.5,baz=178,slow=8.5,SNR=6.8
626A Big Bend Ranch 44.86 302 ⇑P P 22 01 21.5 -0.5
baz=45
526A Mary Lane Ranc 44.96 303 ⇓P P 22 01 22.5 -0.4
baz=45,SNR=8.1
426A McDonald Obser 45.09 303 ⇓P P 22 01 23.4 -0.4
baz=45,SNR=6.7
MSTX Muleshoe 45.18 308 ⇑P P 22 01 24.2 -0.3
baz=45
127A Arkansas Junct 45.19 306 ⇑P P 22 01 24.1 -0.5
baz=45,SNR=10.0
ECSD EROS Data Cent 45.66 323 eP P 22 01 27.0 -1.1
5.7nm,0.8s,mb4.5
W27A Bowe Ranch, En 45.81 310 ⇑P P 22 01 29.1 -0.3
baz=46,SNR=6.1
Z26A Caprock 45.88 307 ⇓P P 22 01 29.5 -0.6
baz=46,SNR=7.7

225A Deer Hill, Car 46.18 305 ⇑P P 22 01 32.3 -0.1
baz=46,SNR=18
125A Gardner Draw, 46.22 306 ⇓P P 22 01 32.4 -0.3
baz=46
Z25A Roswell 46.47 307 ⇑P P 22 01 34.6 -0.1
baz=47,SNR=7.7
MNTX Cornudas Mount 46.50 304 ⇓P P 22 01 34.7 -0.3
baz=47
MNTX Cornudas Mount 46.50 304 eP P 22 01 34.4 -0.6
2.7nm,0.9s,mb4.2
224A Cornudas Mount 46.73 305 ⇓P P 22 01 37.0 +0.2
baz=47
W25A X Bar L Ranch, 46.93 309 ⇑P P 22 01 38.0 -0.2
baz=47
Z24A Sheeppen Canyo 46.99 306 ⇓P P 22 01 39.2 +0.4
baz=47,SNR=9.9
V25A Rancho No Teng 47.28 310 ⇓P P 22 01 41.1 +0.1
baz=47,SNR=13
U25A Circle Dot Ran 47.33 311 ⇑P P 22 01 41.3 -0.1
baz=48,SNR=11
W24A Lazy 6 Ranch, 47.66 309 ⇓P P 22 01 44.4 +0.5
baz=48,SNR=7.2
Y23A Lovelace Mesa, 47.73 307 ⇓P P 22 01 44.4 -0.1
baz=48,SNR=8.2
S25A Robets Cordova 47.84 312 ⇓P P 22 01 45.0 -0.3
baz=48,SNR=5.6
TRQA Tornquist 48.02 181 P P 22 01 44.2 -2.4
AGMN Agassiz Nation 48.07 329 eP P 22 01 46.2 -0.7
14nm,1.1s,mb4.9
BNM Barren Site 48.25 307 eP P 22 01 49.3 +0.7
3.7nm,0.9s,mb4.4
ANMO Albuquerque 48.38 308 P P 22 01 48.8 -0.7
ANMO epP pP 22 02 05.2 +4.1
ANMO Albuquerque 48.38 308 P P 22 01 48.8 -0.7
2.5nm,0.6s,mb4.4,baz=121,slow=6.6,SNR=8.7
SDCO Great Sand Dun 48.65 312 ⇑P P 22 01 51.3 -0.3
baz=48,SNR=6.5
SDCO Great Sand Dun 48.65 312 eP P 22 01 51.1 -0.5
2.6nm,0.8s,mb4.3
LAZ Ladron 48.73 307 eP P 22 01 52.3 +0.1
2.4nm,0.9s,mb4.2
Z21A St. Cloud Mine 48.83 306 ⇓P P 22 01 53.3 +0.3
baz=49,SNR=6.1
Y21A Point of Rocks 49.03 306 ⇓P P 22 01 55.2 +0.6
baz=49,SNR=6.7
V22A San Miguel Ran 49.05 309 ⇑P P 22 01 54.7 0.0
baz=49
X21A Alamocita Cree 49.26 307 ⇓P P 22 01 56.6 +0.3
baz=49
ULM Lac du Bonnet 49.36 331 P P 22 01 55.5 -1.2
3.8nm,0.4s,mb4.8,baz=130,slow=7.4,SNR=4.2
ULM LR LR 22 25 01.5
comp=Z,119nm,18.1s,MS3.9,baz=71,slow=39
ISCO Idaho Springs 49.54 314 ⇑P P 22 01 58.1 -0.2
baz=50
ISCO Idaho Springs 49.54 314 eP P 22 01 58.1 -0.2
3.0nm,0.8s,mb4.4
U21A Nageezi 49.79 309 ⇓P P 22 02 00.2 -0.1
baz=50,SNR=6.2
O23A Lake Granby, G 49.92 315 ⇓P P 22 02 01.6 +0.4
baz=50
Y19A Nutrioso 50.28 306 ⇑P P 22 02 03.9 -0.1
baz=50,SNR=5.9
S20A Disappointment 50.79 311 ⇑P P 22 02 08.1 +0.2
baz=51,SNR=6.3
T19A Beclabito 50.96 309 ⇑P P 22 02 09.2 +0.1
baz=51,SNR=5.4
PV01 Paradox Valley 51.05 311 eP P 22 02 10.5 +0.7
565nm,0.9s
117A Oracle 51.12 304 ⇑P P 22 02 10.3 -0.1
baz=51
S19A Harvey Farm, M 51.34 311 ⇑P P 22 02 12.1 +0.2
baz=52
PLCA Paso Flores 51.50 190 P P 22 02 11.3 -1.6
2.9nm,0.6s,mb4.4,baz=14,slow=8.5,SNR=13
PLCA LR LR 22 23 14.4
comp=Z,184nm,19.8s,MS4.1,baz=340,slow=35
J22A Midwest 51.64 318 ⇑P P 22 02 12.9 -1.3
baz=52
T18A Mexican Hat 51.70 310 ⇓P P 22 02 14.1 -0.6
baz=52,SNR=6.2
N20A Spence Gulch, 51.80 315 ⇓P P 22 02 15.2 -0.2
baz=52
K21A Alcova 51.83 317 ⇓P P 22 02 15.6 +0.1
baz=52
V17A Tonalea, Kykot 51.96 307 ⇑P P 22 02 16.9 +0.3
baz=52
Y16A Circle Bar Ran 52.04 305 ⇓P P 22 02 17.0 -0.3
baz=52
R18A Canyonlands Na 52.12 311 ⇑P P 22 02 17.9 +0.2
baz=52
O19A Miners Draw (B 52.22 314 ⇑P P 22 02 18.1 -0.3
baz=52
J21A Lysite 52.25 318 ⇓P P 22 02 18.7 0.0
baz=52
L20A Wamsutter 52.31 316 ⇓P P 22 02 19.0 -0.1
baz=52
S17A Black Ridge (B 52.56 310 ⇑P P 22 02 20.0 -1.0
baz=53
K20A Yellowstone Ra 52.57 317 P P 22 02 20.8 -0.3
baz=53,SNR=8.6
J20A Shoshoni 52.68 318 ⇑P P 22 02 21.9 0.0
baz=53
P18A Preston Nutter 52.79 312 ⇓P P 22 02 22.2 -0.5
baz=53,SNR=6.0
SRU San Rafael 52.82 312 ⇓P P 22 02 23.1 +0.2
baz=53,SNR=6.0
SRU San Rafael 52.82 312 eP P 22 02 23.4 +0.5
4.8nm,0.7s,mb4.5
K19A Absolon Red Bu 52.98 317 P P 22 02 23.5 -0.6
baz=53,SNR=6.9
L19A Farson 53.05 316 ⇓P P 22 02 24.3 -0.2
baz=53,SNR=8.4
H20A Greybull 53.10 319 P P 22 02 24.2 -0.6
baz=53,SNR=6.5
J19A Crowheart 53.29 317 ⇓P P 22 02 26.2 -0.1
baz=54
O17A Robinson Place 53.34 313 ⇑P P 22 02 27.1 +0.4
baz=54,SNR=6.1
TMUT Trail Mountain 53.38 312 eP P 22 02 26.6 -0.4
80nm,0.5s
BW06 Boulder Array 53.44 316 ⇓P P 22 02 27.0 -0.4
baz=54,SNR=11
BW06 Boulder Array 53.44 316 eP P 22 02 26.7 -0.8
6.0nm,0.8s,mb4.6
PDAR Pinedale Array 53.44 316 P P 22 02 26.8 -0.6
5.8nm,0.7s,mb4.6,baz=116,slow=9.1,SNR=46
PDAR LR LR 22 28 04.9
comp=Z,147nm,20.3s,MS4.0,baz=119,slow=39
G20A Bridger 53.55 320 ⇑P P 22 02 27.6 -0.6
baz=54
T15A Red Dirt Ranch 53.58 309 ⇑P P 22 02 28.7 +0.1
baz=54,SNR=6.7
D21A La Casta Ranch 53.62 322 ⇑P P 22 02 29.5 +0.9
baz=54
N17A Moffit Pass 53.66 314 ⇑P P 22 02 29.3 +0.2
baz=54
F20A Billings 53.76 320 ⇑P P 22 02 30.1 +0.3
baz=54
I18A Diamond G Ranc 53.97 317 ⇓P P 22 02 31.5 +0.1
baz=54,SNR=12
E20A Meyer Farm, Mu 54.06 321 ⇑P P 22 02 32.0 +0.1
baz=54,SNR=11
RLMT Red Lodge 54.18 319 ⇑P P 22 02 33.1 +0.2
baz=54,SNR=7.8
RLMT Red Lodge 54.18 319 eP P 22 02 33.1 +0.2
6.4nm,0.8s,mb4.6
D20A Manuel Ranch, 54.32 322 ⇓P P 22 02 34.3 +0.4
baz=54,SNR=5.7
HWUT Hardware Ranch 54.41 314 eP P 22 02 33.5 -1.0
6.3nm,0.9s,mb4.5
E19A Rath Farm, Rou 54.45 321 ⇑P P 22 02 34.9 +0.2
baz=55,SNR=6.0
LOHW Long Hollow 54.47 317 eP P 22 02 34.5 -0.5
3.0nm,0.8s,mb4.3
REDW Red Top Meadow 54.54 317 eP P 22 02 35.6 +0.2
5.3nm,0.8s,mb4.6
F18A Big Timber 54.79 320 ⇑P P 22 02 37.4 +0.2
baz=55,SNR=11
IMW Indian Meadow 54.80 317 eP P 22 02 37.6 +0.2
3.3nm,0.8s,mb4.4
Q14A Sevier Lake (B 54.82 311 ⇑P P 22 02 37.7 +0.1
baz=55,SNR=5.9
DUG Dugway 54.84 312 ⇑P P 22 02 37.9 +0.2
baz=55,SNR=8.5
DUG Dugway 54.84 312 eP P 22 02 37.9 +0.2
4.9nm,0.8s,mb4.6
DUG epP pP 22 02 47.8 -1.6

DUG epP sP 22 02 52.3 -1.9
M15A Larsen Ranch, 54.98 314 ⇑P P 22 02 38.0 -0.7
baz=55,SNR=5.4
L15A Malad City 55.12 315 ⇑P P 22 02 39.3 -0.4
baz=55,SNR=12
I16A Newdale 55.16 317 ⇑P P 22 02 39.8 -0.1
baz=55,SNR=7.7
E18A Harlowton 55.20 320 ⇓P P 22 02 40.4 +0.2
baz=55
BGU Big Grassy Mou 55.23 313 eP P 22 02 40.4 -0.1
5.6nm,0.8s,mb4.7
DBIC Dimbokro 55.26 89 LR LR 22 21 23.2
comp=Z,76nm,20.6s,MS3.8,baz=261,slow=31
H16A Russell Place, 55.31 318 ⇓P P 22 02 41.8 +0.8
baz=56,SNR=6.4
HVU Hansel Valley 55.32 314 eP P 22 02 40.5 -0.6
9.2nm,1.3s,mb4.7
F17A Fitzpatrick Pl 55.40 319 ⇑P P 22 02 41.6 0.0
baz=56,SNR=6.3
P13A Bates Ranch, G 55.50 311 ⇓P P 22 02 42.5 0.0
baz=56,SNR=5.7
J15A Blackfoot 55.63 316 ⇓P P 22 02 43.5 +0.2
baz=56,SNR=6.0
L14A Malta 55.73 314 ⇓P P 22 02 43.6 -0.5
baz=56,SNR=5.1
K14A Jones Ranch, D 55.85 315 ⇑P P 22 02 44.7 -0.3
baz=56,SNR=10
G16A Moss Hill, Enn 55.87 318 ⇑P P 22 02 45.2 +0.2
baz=56
BOZ Bozeman (W) 55.92 319 ⇓P P 22 02 45.2 -0.1
baz=56,SNR=5.2
BOZ Bozeman (W) 55.92 319 P P 22 02 45.1 -0.3
3.3nm,0.7s,mb4.5
C17A Wharram Farm, 56.17 321 ⇑P P 22 02 47.4 +0.3
baz=56
H15A Lima 56.20 317 ⇑P P 22 02 48.0 +0.6
baz=56,SNR=7.5
G15A Dillon 56.30 318 ⇓P P 22 02 47.9 -0.2
baz=56
J14A Carey 56.35 316 ⇑P P 22 02 48.6 +0.1
baz=56
MCMT McKenzie Canyo 56.41 318 eP P 22 02 49.3 +0.3
1.8nm,0.8s,mb4.2
HRY Holter Researc 56.46 320 eP P 22 02 49.7 +0.5
I14A Mackay 56.51 316 ⇑P P 22 02 49.5 -0.1
baz=57
F15A Butte 56.55 319 ⇓P P 22 02 50.4 +0.5
baz=57
Q11A Duckwater 56.56 310 ⇓P P 22 02 49.6 -0.5
baz=57
H14A Leadore 56.69 317 ⇓P P 22 02 51.3 +0.5
baz=57,SNR=7.3
J13A Cove Ranch, Pi 56.82 316 ⇑P P 22 02 52.2 +0.4
baz=57
I13A Wildhorse Cree 56.95 316 ⇓P P 22 02 53.2 +0.5
baz=57,SNR=20
D15A Lincoln 57.02 320 ⇓P P 22 02 53.6 +0.3
baz=57,SNR=5.6
HLID Hailey 57.04 316 ⇑P P 22 02 53.6 +0.3
baz=57,SNR=18
HLID Hailey 57.04 316 eP P 22 02 52.9 -0.5
6.5nm,0.8s,mb4.7
S10A Tonopah Range, 57.05 309 ⇑P P 22 02 52.9 -0.6
baz=57,SNR=6.0
H13A Challis 57.26 317 ⇑P P 22 02 54.9 -0.1
baz=57
C15A Salmond Ranch, 57.37 321 ⇓P P 22 02 55.8 +0.2
baz=58
G13A Cobalt 57.43 317 ⇓P P 22 02 56.4 +0.3
baz=58
I12A Atlanta 57.61 316 ⇑P P 22 02 57.6 +0.2
baz=58,SNR=6.8
F13A Darby 57.73 318 ⇓P P 22 02 58.3 +0.1
baz=58,SNR=5.6
MFID Camas Ranch 57.97 315 ⇓P P 22 02 59.4 -0.6
baz=58
ESDC Sonseca Array 58.06 49 P P 22 03 01.1 +0.4
1.3nm,0.7s,mb4.0,baz=258,slow=7.8,SNR=8.2
D13A Huson 58.27 320 ⇓P P 22 03 02.1 +0.1
baz=58
F12A Elk City 58.33 318 ⇑P P 22 03 02.5 +0.1
baz=58,SNR=6.5
NVAR Mina Array Bea 58.48 309 P P 22 03 04.1 +0.5
NVAR Mina Array Bea 58.48 309 P P 22 03 04.1 +0.5
0.8nm,0.6s,mb4.0,baz=107,slow=6.3,SNR=7.9
E12A Beaver Dam Sad 58.76 319 ⇓P P 22 03 05.4 +0.1
baz=59
C11A Tepee Creek (N 59.68 320 ⇓P P 22 03 11.5 -0.2
baz=60
NEW Newport 60.37 320 ⇑P P 22 03 16.1 -0.3
baz=60
NEW Newport 60.37 320 eP P 22 03 15.9 -0.6
8.9nm,1.3s,mb4.6
LNOR Lincton Mounta 60.38 317 eP P 22 03 16.0 -0.6
LNOR e 22 03 30.8
G08A Pilot Rock 60.67 316 ⇑P P 22 03 18.3 -0.2
baz=61
I07A Izee 60.72 315 ⇑P P 22 03 18.9 0.0
baz=61,SNR=14
SJPF Ste Jean 60.90 46 eP P 22 03 22.4 +2.3
13nm,1.0s,mb4.7
SJPF Ste Jean 60.90 46 eP P 22 03 22.4 +2.3
6.5nm,1.3s,mb4.7
TORD Torodi Ar. Bea 61.01 81 P P 22 03 19.1 -2.3
1.3nm,0.7s,mb4.2,baz=285,slow=5.6,SNR=18
TORD LR LR 22 27 21.6
comp=Z,85nm,18.8s,MS3.9,baz=225,slow=34
ETSF Etsaut 61.32 47 eP P 22 03 25.5 +2.5
7.0nm,0.9s,mb4.5
ETSF Etsaut 61.32 47 eP P 22 03 25.5 +2.5
3.5nm,0.9s,mb4.5
EPF Esparros 61.99 47 eP P 22 03 29.7 +2.2
YBH Yreka Blue Hor 62.48 312 LR LR 22 33 09.6
comp=Z,102nm,20.1s,MS4.0,baz=121,slow=38
HOOD Mount Hood Mea 62.51 316 eP P 22 03 31.9 +0.9
8.8nm,0.8s,mb4.9
TCF Toulx Ste Croi 64.02 43 eP P 22 03 42.5 +1.6
NLWA Neilton Lookou 64.49 318 eP P 22 03 43.7 -0.3
NLWA e 22 03 58.7
YKA Yellowknife Ar 64.85 336 P P 22 03 45.5 -0.5
YKA LR LR 22 31 58.8
YKA Yellowknife Ar 64.85 336 P P 22 03 45.5 -0.5
3.9nm,0.6s,mb4.6,baz=107,slow=7.3,SNR=12
YKA LR LR 22 31 58.8
comp=Z,10nm,19.1s,MS3.0,baz=0.0,slow=36
SSF Saint Saulge 65.06 43 eP P 22 03 49.6 +1.9
BAIF Baives 66.17 40 eP P 22 03 56.9 +2.1
MEZF Maizieres J'vi 66.38 41 eP P 22 03 57.7 +1.5
20nm,1.0s,mb4.8
MEZF Maizieres J'vi 66.38 41 eP P 22 03 57.7 +1.5
20nm,1.0s,mb5.1
GIVF Givet 66.57 40 eP P 22 03 59.5 +2.1
RES Resolute Bay 67.29 351 LR LR 22 33 21.5
comp=Z,138nm,21.5s,MS4.1,baz=339,slow=36
CDF Champ du Feu 67.81 42 eP P 22 04 06.8 +1.5
8.9nm,1.0s,mb4.5
CDF Champ du Feu 67.81 42 eP P 22 04 06.8 +1.5
4.4nm,1.0s,mb4.4
KEST Kesra 67.91 56 P P 22 04 05.5 -0.6
0.7nm,0.6s,mb3.9,baz=271,slow=15,SNR=2.0
DAVOX Davos/Dischmat 69.32 44 P P 22 04 14.3 -0.4
2.2nm,0.7s,mb4.2,baz=292,slow=4.5,SNR=4.2
DLBC Dease Lake 70.60 329 LR LR 22 36 41.5
comp=Z,171nm,19.2s,MS4.3,baz=324,slow=37
NOA NORSAR Array B 72.37 29 P P 22 04 34.0 +1.0
0.9nm,0.8s,mb3.7,baz=258,slow=6.2,SNR=3.0
VRAC Vranov 74.03 42 ⇑i/P P 22 04 45.2 +2.2
INK Inuvik 74.26 338 eP P 22 04 44.2 +0.3
3.7nm,0.8s,mb4.4
INK Inuvik 74.26 338 LR LR 22 37 17.1
comp=Z,81nm,18.7s,MS4.0,baz=117,slow=36
DAWY Dawson 75.95 334 eP P 22 04 54.8 +1.0
EGAK Eagle 76.78 334 eP P 22 04 59.0 +0.5
7.8nm,1.2s,mb4.5
ARCES ARCESS Array B 79.17 21 P P 22 05 11.0 -0.7
1.2nm,1.1s,mb3.8,baz=266,slow=6.3,SNR=2.9
ILAR Eielson Array 79.23 334 P P 22 05 12.4 +0.3
1.1nm,0.6s,mb4.0,baz=89,slow=4.9,SNR=12
ILAR LR LR 22 43 15.7
comp=Z,110nm,18.8s,MS4.2,baz=100,slow=38
FINES FINESS Array B 79.56 29 P P 22 05 14.0 0.0
3.3nm,1.1s,mb4.2,baz=277,slow=11,SNR=2.6
BURAR Bucovina Array 79.78 43 ⇑i/P P 22 05 18.8 +3.4
MLR Muntele Rosu 80.44 45 ⇓i/P P 22 05 21.3 +2.2
TRF Thorofare Moun 80.78 333 eP P 22 05 21.7 +1.2
8.0nm,0.8s,mb4.7
AKASG Malin Array Be 82.12 40 P P 22 05 29.0 +1.2

	0.2nm,0.3s,mb3.5,baz=265,slow=6.4,SNR=4.2								
AKASG					LR	LR			
	comp=Z,42nm,21.3s,MS3.8,baz=275,slow=34								
BRTR	**Keskin Array B**	**86.84**	**50**		P	**P**	**22 05 50.8**	**-1.2**	
	0.4nm,0.8s,mb3.7,baz=270,slow=9.7,SNR=2.1								
BOSA	**Boshof**	**91.28**	**119**		P	**P**	**22 06 11.9**	**-1.1**	
	1.4nm,0.6s,mb4.5,baz=300,slow=9.1,SNR=5.9								
BOSA					LR	LR	22 42 56.4		
	comp=Z,64nm,18.8s,MS4.1,baz=167,slow=33								
PPT	**Papeete**	**92.00**	**253**		LR	LR	22 41 05.0		
	comp=Z,174nm,20.3s,MS4.5,baz=20,slow=31								
MKAR	**Makanchi Array**	**114.33**	**27**		PKKPbc	PKKPbc	22 22 23.9	-4.3	
	0.2nm,0.2s,baz=174,slow=2.9,SNR=2.8								
MKAR					PKKPab	PKKPab	22 22 31.1	-3.7	
	0.2nm,0.3s,baz=112,slow=9.3,SNR=3.9								
WMQ	**Urumqi**	**119.02**	**26**	*e*	PKP	PKPdf	22 11 55.8	-0.3	
WMQ					LR	LR			
	comp=N,56nm,26.0s								
WMQ					LR	LR			
	comp=Z,55nm,24.0s,MS4.1								
HHC	**Hu-ho-hao-te**	**128.70**	**8**	*e*	PKP	PKPdf	22 12 14.4	-0.3	
HHC					sPKP		22 12 29.8		
HHC					PP	PP	22 14 21.8	+2.3	
HHC					PKS		22 15 49.8		
HHC					SKS	SKSdf	22 19 20.3	-3.1	
HHC					SKKS	SKKSac	22 21 09.8	-5.2	
HHC					SS	SS	22 31 29.6	-3.7	
HHC					AMB	AMB			
	comp=Z,120nm,5.3s								
HHC					LR	LR			
	comp=N,200nm,16.6s,MS5.1								
HHC					LR	LR			
	comp=E,210nm,14.3s,MS5.1								
HHC					LR	LR			
	comp=Z,100nm,16.7s,MS4.6								
CD2	**Chengdu**	**136.47**	**20**		PKP	PKPdf	22 12 30.4	+0.8	
NJ2	**Nanjing**	**137.98**	**1**	*e*	PKP	PKPdf	22 12 34.5	+2.1	
KMI	**Kunming**	**141.34**	**24**		PKP	PKPdf	22 12 38.4	-0.3	
CMAR	**Chiang Mai Arr**	**145.13**	**35**		PKPbc	PKPbc	22 12 44.3	-0.7	
	comp=Z,1.1nm,0.7s,baz=310,slow=4.5,SNR=8.5								
STKA	**Stephens Creek**	**150.18**	**220**		PKP	PKPdf	22 12 53.1	-0.4	
	comp=Z,0.9nm,0.9s,baz=112,slow=9.8,SNR=2.0								
STKA					PKPbc	PKPbc	22 12 57.7	-0.9	
	comp=Z,1.9nm,1.0s,baz=140,slow=16,SNR=3.7								
ASAR	**Alice Springs**	**160.70**	**224**		PKP	PKPdf	22 13 06.9	-0.9	
	comp=Z,0.5nm,0.7s,baz=107,slow=1.5,SNR=6.4								
ASAR					PKPab	PKPab	22 13 48.8	-0.9	
	comp=Z,0.6nm,0.6s,baz=124,slow=4.3,SNR=8.7								

*ISCJB **23** 21:58:10.0±1.5, 38°.28N±0°.02×23°.54E±0°.04, h13km±12km, Error ellipse: s-maj=5.1km s-min=3.8km az=151.7*
*ATH **23** 21:58:10.2, 38°.27N×23°.52E, h19km±1km, MD2.8/10, ML2.2*
*THE **23** 21:58:10.4, 38°.28N×23°.53E, h17km±2km, ML1.3/3, Error ellipse: s-maj=2.4km s-min=1.0km az=294.0*
*CSEM **23** 21:58:10.1±0.1, 38°.28N×23°.53E, h15km, MD2.8, Error ellipse: s-maj=3.5km s-min=2.6km az=69.0*

ISC 23 21:58:10.3±0.5, 38°27N±0°.02×23°.54E±0°.04, h17km±4km, n34, σ0°57/60, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ATH	**Athens Observa**	**0.33**	**155**	*e*PB		**Pg**	**21 58 17.2**	**-0.1**
ATH				*e*SB		**Sg**	**21 58 22.5**	**+0.5**
ATH	**Athens Observa**	**0.33**	**155**	*e*Pb		**Pg**	**21 58 17.2**	**-0.1**
ATH				*e*Sb		**Sg**	**21 58 22.5**	**+0.5**
PTL	**Penteli**	**0.34**	**131**	*e*PB		**Pg**	**21 58 17.5**	**+0.1**
PTL				*e*SB		**Sg**	**21 58 22.4**	**+0.2**
PTL	**Penteli**	**0.34**	**131**	*e*Pb		**Pg**	**21 58 17.5**	**+0.1**
PTL				*e*Sb		**Sg**	**21 58 22.4**	**+0.2**
VLY	**Voula,Athens**	**0.47**	**154**	*e*PB		**Pb**	**21 58 19.7**	**-0.3**
VLY				*e*SB		**Sb**	**21 58 26.2**	**-0.4**
VLY	**Voula,Athens**	**0.47**	**154**	*e*Pb		**Pb**	**21 58 19.7**	**-0.3**
VLY				*e*Sb		**Sb**	**21 58 26.2**	**-0.4**
NAIG	**Nisos Aigina**	**0.52**	**184**	*e*PN		**Pg**	**21 58 20.4**	**-0.2**
NAIG	**Nisos Aigina**	**0.52**	**184**	*e*Pn		**Pg**	**21 58 20.4**	**-0.2**
LTK	**Loutraki**	**0.52**	**241**	*e*PB		**Pb**	**21 58 20.4**	**-0.4**
LTK				*e*SB		**Sb**	**21 58 27.5**	**-0.5**
LTK	**Loutraki**	**0.52**	**241**	P		**Pg**	**21 58 20.2**	**-0.4**
LTK				S		**Sg**	**21 58 28.4**	**+0.9**
LTK	**Loutraki**	**0.52**	**241**	*e*Pb		**Pb**	**21 58 20.4**	**-0.4**
LTK				*e*Sb		**Sb**	**21 58 27.5**	**-0.5**
LTK				S		**Sg**	**21 58 28.4**	**+0.9**
LKR	**Lokris**	**0.57**	**312**	*e*PN		**Pg**	**21 58 20.9**	**-0.6**
LKR				*e*SN		**Sg**	**21 58 29.1**	**-0.1**
LKR	**Lokris**	**0.57**	**312**	P		**Pg**	**21 58 22.3**	**+0.8**
LKR				S		**Sg**	**21 58 29.0**	**-0.2**
LKR	**Lokris**	**0.57**	**312**	*e*Pn		**Pg**	**21 58 20.9**	**-0.6**
LKR	**Lokris**	**0.57**	**312**	P		**Pg**	**21 58 22.3**	**+0.8**
LKR				*e*Sn		**Sg**	**21 58 29.1**	**-0.1**
ATAL	**Atalanti**	**0.58**	**316**	P		**Pg**	**21 58 20.9**	**-1.0**
ATAL	**Atalanti**	**0.58**	**316**	P		**Pg**	**21 58 20.9**	**-1.0**
DID	**Didima**	**0.80**	**197**	*e*PN		**Pb**	**21 58 25.4**	**-0.3**
DID				*e*SN		**Sb**	**21 58 36.7**	**+0.5**
DID	**Didima**	**0.80**	**197**	P		**Pb**	**21 58 25.4**	**-0.3**
DID				S		**Sb**	**21 58 36.7**	**+0.5**
DID	**Didima**	**0.80**	**197**	P		**Pb**	**21 58 25.4**	**-0.3**
DID				S		**Sb**	**21 58 36.7**	**+0.5**
DSF	**Desfina**	**0.81**	**280**	P		**Pb**	**21 58 24.9**	**-0.9**
DSF				S		**Sb**	**21 58 37.7**	**+1.2**
DSF	**Desfina**	**0.81**	**280**	P		**Pb**	**21 58 24.9**	**-0.9**
DSF				S		**Sb**	**21 58 37.7**	**+1.2**
AOS	**Alonnisos**	**0.94**	**16**	P		**Pb**	**21 58 27.6**	**-0.4**
AOS				S		**Sb**	**21 58 40.6**	**+0.5**
AOS	**Alonnisos**	**0.94**	**16**	P		**Pb**	**21 58 27.6**	**-0.4**
AOS				S		**Sb**	**21 58 40.6**	**+0.5**
GUR	**Goura**	**1.00**	**251**	*e*PN		**Pn**	**21 58 29.0**	**-0.5**
GUR				*e*SN		**Sn**	**21 58 42.5**	**-0.7**
GUR	**Goura**	**1.00**	**251**	P		**Pb**	**21 58 29.3**	**+0.2**
GUR				S		**Sb**	**21 58 42.1**	**+0.1**
GUR	**Goura**	**1.00**	**251**	*e*Pn		**Pn**	**21 58 29.0**	**-0.5**
GUR	**Goura**	**1.00**	**251**	P		**Pb**	**21 58 29.3**	**+0.2**
GUR				S		**Sb**	**21 58 42.1**	**+0.1**
GUR				*e*Sn		**Sn**	**21 58 42.5**	**-0.7**
NEO	**Neokhori**	**1.06**	**347**	*e*PN		**Pn**	**21 58 30.2**	**-0.1**
NEO				*e*SN		**Sn**	**21 58 45.2**	**+0.5**
NEO	**Neokhori**	**1.06**	**347**	*e*Pn		**Pn**	**21 58 30.2**	**-0.1**
NEO				*e*Sn		**Sn**	**21 58 45.2**	**+0.5**
AGG	**Agios Georgios**	**1.21**	**309**	*e*PN		**Pn**	**21 58 33.0**	**+0.7**
AGG	**Agios Georgios**	**1.21**	**309**	*e*Pn		**Pn**	**21 58 33.0**	**+0.7**
VLX	**Vlachokerasia**	**1.29**	**226**	*e*PN		**Pn**	**21 58 34.5**	**+1.1**
VLX	**Vlachokerasia**	**1.29**	**226**	*e*Pn		**Pn**	**21 58 34.5**	**+1.1**

*IDC **23** 22:21:36.1±0.9, 51°.28N×179°.90W, h0km, mb4.0/18, mb1 4.1/20, mb1mx4.0/29, mbtmp4.0/20, ML3.9/2, MS3.2/2, Ms1 3.2/2, ms1mx2.4/29, Error ellipse: s-maj=26.1km s-min=14.2km az=174.0*
*NEIC **23** 22:21:39.9±2.0, 51°.26N×179°.76W, h25km±12km, ML3.8(PMR), ML3.6(AEIC), Error ellipse: s-maj=21.6km s-min=9.6km az=172.0*
*ISCJB **23** 22:21:40.4±1.4, 51°.3N±0°.1×179°.8W±0°.1, h43km±11km, mb4.0/20, Error ellipse: s-maj=24.8km s-min=12.0km az=171.5*

ISC 23 22:21:40.6±1.6, 51°3N±0°.1×179°8W±0°.1, h30km±10km, n27, σ1°06/27, mb4.0/20, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AMKA	**Amchitka**	**0.57**	**279**	P		**Pb**	**22 21 51.7**	**-0.4**
AMKA				S		**Sb**	**22 22 00.4**	**+0.4**
SMY	**Shemya**	**4.03**	**293**	*e*Pn		**Pn**	**22 22 42.9**	**+2.6**
PETK	**Petropavlovsk-**	**13.91**	**286**	Pn		**Pn**	**22 24 54.7**	**-0.7**
	0.2nm,0.3s,baz=90,slow=14,SNR=2.9							
PETK				LR		LR	22 30 00.1	
	comp=Z,37nm,21.6s,baz=298,slow=36							
KDAK	**Kodiak Island**	**17.00**	**57**	Pn		**Pn**	**22 25 33.2**	**-2.6**
	1.5nm,0.3s,baz=252,slow=5.9,SNR=8.5							
ILAR	**Eielson Array**	**21.70**	**39**	P		**P**	**22 26 27.9**	**-0.8**
	0.8nm,0.5s,mb3.4,baz=229,slow=8.2,SNR=12							
MJAR	**Matsushiro Arr**	**33.15**	**260**	P		**P**	**22 28 12.5**	**-1.6**
	1.0nm,0.8s,mb3.8,baz=38,slow=5.6,SNR=2.8							
YKA	**Yellowknife Ar**	**35.74**	**46**	P		**P**	**22 28 36.8**	**+0.6**
	1.1nm,0.5s,mb4.1,baz=281,slow=7.3,SNR=12							
NVAR	**Mina Array Bea**	**44.19**	**82**	P		**P**	**22 29 48.9**	**+2.4**
NVAR	**Mina Array Bea**	**44.19**	**82**	P		**P**	**22 29 48.9**	**+2.4**
	0.7nm,0.6s,mb3.5,baz=297,slow=6.0,SNR=4.5							
SONM	**Songino Array**	**46.12**	**296**	P		**P**	**22 30 02.7**	**+0.9**
	0.9nm,0.8s,mb3.8,baz=68,slow=6.1,SNR=5.8							
PDAR	**Pinedale Array**	**46.93**	**72**	P		**P**	**22 30 09.4**	**+1.2**
	2.9nm,0.8s,mb4.2,baz=316,slow=3.7,SNR=12							
SPITS	**Spitsbergen Ar**	**50.41**	**356**	P		**P**	**22 30 34.7**	**+0.2**
	3.2nm,0.6s,mb4.5,baz=9.5,slow=5.9,SNR=20							
ZALV	**Zalesovo Beam**	**53.63**	**313**	P		**P**	**22 30 58.1**	**-0.6**
	0.6nm,0.5s,mb3.8,baz=47,slow=6.6,SNR=4.1							
ARCES	**ARCESS Array B**	**58.06**	**350**	P		**P**	**22 31 29.6**	**-0.6**
	1.4nm,0.6s,mb4.2,baz=27,slow=8.2,SNR=8.3							
KURK	**Kurchatov**	**58.62**	**313**	P		**P**	**22 31 36.0**	**+1.7**
	4.2nm,0.5s,mb4.7,baz=44,slow=6.6,SNR=21							
TXAR	**Lajitas Array**	**59.29**	**80**	P		**P**	**22 31 39.7**	**+0.4**
	0.4nm,0.5s,mb3.7,baz=313,slow=5.6,SNR=7.5							
MKAR	**Makanchi Array**	**59.59**	**308**	P		**P**	**22 31 41.2**	**0.0**
	2.0nm,0.7s,mb4.3,baz=52,slow=7.9,SNR=13							
MKAR				LR		LR	22 59 50.6	
	comp=Z,47nm,20.1s,baz=333,slow=38							
JOF	**Joensuu**	**63.51**	**345**	*ep*		**P**	**22 32 06.1**	**-1.3**
	1.2nm,0.4s,mb4.3							
KAF	**Kangasniemi**	**65.05**	**347**	*ep*		**P**	**22 32 16.8**	**-0.6**
	2.1nm,0.6s,mb4.3							
FINES	**FINESS Array B**	**65.72**	**347**	P		**P**	**22 32 21.4**	**-0.4**
FINES	**FINESS Array B**	**65.72**	**347**	P		**P**	**22 32 21.4**	**-0.4**
	2.0nm,0.6s,mb4.3,baz=30,slow=8.5,SNR=12							
NOA	**NORSAR Array B**	**67.67**	**354**	P		**P**	**22 32 34.9**	**+0.7**
	2.6nm,0.9s,mb4.3,baz=7.8,slow=6.2,SNR=9.3							
CMAR	**Chiang Mai Arr**	**70.39**	**275**	P		**P**	**22 32 51.8**	**+0.1**
	0.6nm,0.3s,mb3.9,baz=24,slow=6.6,SNR=4.8							
AKASG	**Malin Array Be**	**75.43**	**341**	P		**P**	**22 33 21.0**	**-0.1**
	0.4nm,0.4s,mb3.8,baz=21,slow=6.7,SNR=4.2							
BRTR	**Keskin Array B**	**84.76**	**335**	P		**P**	**22 34 11.9**	**+0.3**
	0.9nm,0.8s,mb3.9,baz=32,slow=4.0,SNR=5.1							
ASAR	**Alice Springs**	**85.00**	**222**	P		**P**	**22 34 11.7**	**-1.1**
	0.6nm,1.0s,mb3.7,baz=30,slow=5.8,SNR=3.9							
BOSA	**Boshof**	**150.56**	**311**	PKPbc		PKPbc	22 41 29.3	+0.2
	2.1nm,0.9s,baz=72,slow=6.4,SNR=5.6							

*TAP **23** 22:37:15.6, 24°.71N×122°.36E, h98km, ML3.4, C*
*ISCJB **23** 22:37:16.1±0.7, 24°.66N±0°.04×122°.40E±0°.02, h90km±6km, Error ellipse: s-maj=7.1km s-min=3.4km az=173.3*
*JMA **23** 22:37:16.3±0.1, 24°.66N×122°.42E, h93km, M2.1*

ISC 23 22:37:16.6±0.7, 24°66N±0°.04×122°40E±0°.02, h89km±6km, n32, σ0°68/60, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TWC	**Suao**	**0.51**	**265**	P		**Pn**	**22 37 31.0**	**-0.2**
	baz=254							
TWC				S		**Sn**	**22 37 41.8**	**-0.4**
	baz=254							
TWB1	**Santiao Chiao**	**0.51**	**313**	P		**Pn**	**22 37 31.1**	**-0.2**
	baz=304							
TWB1				S		**Sn**	**22 37 42.3**	**0.0**
	baz=304							
YOJ	**Yonaguni jima**	**0.59**	**109**	P		**Pn**	**22 37 32.0**	**0.0**
YOJ				*e*S		**Sn**	**22 37 44.0**	**+0.6**
ENA	**Nanau**	**0.64**	**249**	P		**Pn**	**22 37 32.8**	**+0.3**
	baz=240							
ENA				*e*S		**Sn**	**22 37 45.1**	**+0.8**
	baz=240							
TWE	**Neicheng**	**0.67**	**276**	↓*i* P		**Pn**	**22 37 32.7**	**0.0**
	baz=273							
TWE				S		**Sn**	**22 37 44.7**	**-0.1**
	baz=273							
NWF	**Wu-fen Shan**	**0.70**	**306**	*i* P		**Pn**	**22 37 32.9**	**-0.1**
	baz=298							
NWF				*e*S		**Sn**	**22 37 45.4**	**+0.2**
	baz=298							
ENTT	**Nioudou**	**0.76**	**269**	*i* P		**Pn**	**22 37 33.8**	**+0.2**
	baz=266							
ENTT				S		**Sn**	**22 37 47.3**	**+1.0**
	baz=266							
TWA	**Mucha**	**0.81**	**294**	*e*P		**Pn**	**22 37 33.5**	**-0.6**
	baz=284							
TWA				*e*S		**Sn**	**22 37 46.5**	**-0.7**
	baz=284							
TWD	**Chiawan**	**0.93**	**232**	*e*P		**Pn**	**22 37 36.3**	**+0.9**
	baz=223							
TWD				*e*S		**Sn**	**22 37 49.6**	**0.0**
	baz=223							
NSK	**Sanguang**	**0.95**	**271**	P		**Pn**	**22 37 35.6**	**0.0**
	baz=260							
NSK				S		**Sn**	**22 37 50.0**	**0.0**
	baz=260							
NNS	**Nan Shan**	**0.96**	**257**	*i* P		**Pn**	**22 37 36.0**	**+0.2**
	baz=248							
NNS				S		**Sn**	**22 37 50.5**	**+0.3**
	baz=248							
HWA	**Hwalien**	**0.99**	**227**	*e*P		**Pn**	**22 37 36.6**	**+0.4**
	baz=216							
TWS1	**Kuangyinshan**	**1.00**	**297**	P		**Pn**	**22 37 35.4**	**-0.7**
	baz=294							
TWS1				*e*S		**Sn**	**22 37 50.1**	**-0.7**
	baz=294							
WHF	**Hehuan Shan**	**1.16**	**244**	*i* P		**Pn**	**22 37 38.4**	**+0.4**
	baz=240							
WHF				*e*S		**Sn**	**22 37 54.3**	**+0.2**
	baz=240							
TWT	**Tachien**	**1.19**	**250**	*e*P		**Pn**	**22 37 39.2**	**+0.8**
	baz=247							
TWT				S		**Sn**	**22 37 55.2**	**+0.4**
	baz=247							
ESL	**Shilin**	**1.22**	**227**	P		**Pn**	**22 37 38.1**	**-0.7**
	baz=232							
ESL				*e*S		**Sn**	**22 37 54.4**	**-1.1**
	baz=232							
IRIF	**Iriomote-Funau**	**1.25**	**105**	P		**Pn**	**22 37 39.1**	**-0.1**
IRIF				*e*S		**Sn**	**22 37 55.9**	**-0.3**
NSTT	**Nanjuang**	**1.27**	**269**	P		**Pn**	**22 37 39.2**	**-0.3**
	baz=266							
NSTT				*e*S		**Sn**	**22 37 56.2**	**-0.6**
	baz=266							
HATJ	**Hateruma jima**	**1.41**	**115**	*e*S		**Sn**	**22 37 59.4**	**-0.4**
EHY	**Hungye**	**1.51**	**221**	*e*P		**Pn**	**22 37 41.2**	**-1.2**
	baz=226							
EHY				*e*S		**Sn**	**22 37 59.8**	**-2.2**
	baz=226							
TWQ1	**Liyutan**	**1.52**	**259**	*e*P		**Pn**	**22 37 42.6**	**+0.1**
	baz=256							
TWQ1				*e*S		**Sn**	**22 38 02.0**	**-0.1**
	baz=256							
JKRS	**Kuro-shima**	**1.52**	**106**	P		**Pn**	**22 37 42.9**	**+0.3**
JKRS				*e*S		**Sn**	**22 38 02.8**	**+0.5**
TYC	**Yuchr**	**1.60**	**242**	P		**Pn**	**22 37 44.4**	**+0.8**
	baz=236							
TYC				*e*S		**Sn**	**22 38 05.4**	**+1.4**
	baz=236							
JIJ	**Ishigaki jima**	**1.61**	**100**	P		**Pn**	**22 37 43.7**	**0.0**
JIJ				*e*S		**Sn**	**22 38 04.0**	**-0.3**
TWF1	**Yuli**	**1.65**	**218**	P		**Pn**	**22 37 43.1**	**-1.0**
	baz=223							
TWF1				*e*S		**Sn**	**22 38 03.4**	**-1.6**
	baz=223							
YUS	**Yu-Shan**	**1.76**	**229**	P		**Pn**	**22 37 46.4**	**+0.7**
	baz=220							
YUS				S		**Sn**	**22 38 08.2**	**+0.4**
	baz=220							
ALS	**Alishan**	**1.85**	**232**	P		**Pn**	**22 37 47.8**	**+1.0**
	baz=223							
ALS				S		**Sn**	**22 38 10.7**	**+0.9**
	baz=223							
ELDTW	**Lidau**	**1.93**	**221**	P		**Pn**	**22 37 47.6**	**-0.3**
	baz=216							
JTJ	**Tarama**	**2.09**	**90**	P		**Pn**	**22 37 50.2**	**+0.2**
JTJ				*e*S		**Sn**	**22 38 15.9**	**+0.4**
WTP	**Ta-pu**	**2.16**	**230**	P		**Pn**	**22 37 51.3**	**+0.5**
	baz=227							
WTP				*e*S		**Sn**	**22 38 17.7**	**+0.7**
	baz=227							
TWG	**Pinlang**	**2.20**	**214**	*e*P		**Pn**	**22 37 49.5**	**-1.8**
	baz=211							
CHN1	**Nanshi**	**2.26**	**230**	*e*P		**Pn**	**22 37 52.2**	**+0.1**
	baz=228							
CHN1				*e*S		**Sn**	**22 38 20.0**	**+0.6**
	baz=228							

BJI 23 22:43:11.8, 32°.21N×105°.09E, h12km, ML3.6/13, Ms3.4/2, Ms7 3.3/2, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CD2	**Chengdu**	**1.72**	**222**	Pn		Pn	22 43 41.8	+0.2
CD2				Pg		Pg	22 43 44.3	-0.6
CD2				Sn		Sn	22 44 05.5	+2.0
CD2				Sg		Sg	22 44 07.8	+0.5
CD2				smax				
	comp=N,2μm,0.4s							
CD2				smax				
	comp=E,5μm,0.6s							
XAN	**Xi'an**	**3.70**	**59**	Pg		Pg	22 44 17.3	-5.3
XAN				Sg		Sg	22 45 04.6	-5.9
XAN				smax				
	comp=N,230nm,0.8s							
XAN				smax				
	comp=E,79nm,0.8s							
LZH	**Lanzhou**	**4.00**	**345**	Pg		Pg	22 44 24.4	-4.1
LZH				Sn		Sn	22 45 02.8	+3.0
LZH				Sg		Sg	22 45 12.8	-7.5
LZH				smax				
	comp=N,200nm,0.6s							
LZH				smax				
	comp=E,240nm,0.6s							
LZH				LR		LR		
	comp=N,310nm,5.0s							
LZH				LR		LR		
	comp=E,400nm,4.9s							
LZH				LR		LR		
	comp=Z,380nm,5.5s							
GYA	**Guiyang**	**5.89**	**166**	Pn		Pn	22 44 41.9	+3.0
GYA				Sn		Sn	22 45 47.3	+0.9
GYA				Sg		Sg	22 46 12.3	-8.7
GYA				smax				
	comp=N,60nm,0.8s							
GYA				smax				
	comp=E,50nm,0.9s							
WHN	**Wuhan**	**8.09**	**99**	*e*P		Pn	22 45 09.0	-0.1
HHC	**Hu-ho-hao-te**	**10.07**	**29**	*e*P		Pn	22 45 32.8	-3.4
HHC				pP			22 45 36.0	
HHC				sP			22 45 38.9	
HHC				S		Sn	22 47 38.9	+10
HHC				sS			22 47 43.9	
HHC				pmax		pmax		
	comp=Z,16nm,0.8s							
HHC				LR		LR		
	comp=N,100nm,5.1s							
HHC				LR		LR		
	comp=E,130nm,4.5s							
HHC				LR		LR		
	comp=Z,140nm,6.0s							

KRSC 23 23:02:14.3±0.6, 53°.37N×160°.53E, h39km±38km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SPN	**Mys Shipunski**	**0.41**	**228**	*e*P		Pn	23 02 24.3	+0.5
SPN				*i* S		Sn	23 02 31.0	+0.6
NLC	**Nalytchevo**	**0.74**	**255**	*e*P		Pn	23 02 28.9	+0.7
NLC				*i* S		Sn	23 02 39.0	+0.8
KII	**Karymskiy**	**0.93**	**317**	*e*P		Pn	23 02 31.5	+0.7
KII				*i* S		Sn	23 02 44.0	+1.1
PET	**Petropavlovsk**	**1.18**	**254**	*e*P		Pn	23 02 35.0	+0.7
PET				*i* S		Sn	23 02 49.6	+0.5
MKZ	**Mys Kozlova**	**1.38**	**30**	*e*P		Pn	23 02 37.1	0.0
MKZ				*i* S		Sn	23 02 53.1	-1.0
GNL	**Ganaly**	**1.58**	**283**	*e*P		Pn	23 02 41.5	+1.8
GNL				*i* S		Sn	23 03 01.7	+2.8
KBTR	**Krutoberegovo**	**3.14**	**24**	*e*P		Pn	23 03 03.1	+2.0
KBTR				*i* S		Sn	23 03 39.3	+2.0

*ISCJB **23** 23:11:11.6±3.4, 8°.89N±0°.09×92°.24E±0°.06, h17km±25km, mb3.9/14, MS3.4/4, Error ellipse: s-maj=16.5km s-min=8.1km az=28.6*
*IDC **23** 23:11:11.6±0.8, 9°.00N×92°.21E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.8/23, mbtmp3.8/11, ML3.9/1, MS3.4/4, Ms1 3.4/4, ms1mx2.9/28, Error ellipse: s-maj=32.5km s-min=19.8km az=59.0*
*NEIC **23** 23:11:15.4±2.6, 8°.96N×92°.21E, h26km±19km, mb4.3/4, Error ellipse: s-maj=10.5km s-min=9.0km az=219.0*

ISC 23 23:11:16.6±1.1, 8°92N±0°.09×92°22E±0°.06, h37km±11km, n28, σ0°66/24, mb3.9/14, MS3.4/4, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KULM	**Kulim**	**9.10**	**113**	*e*Pn		**Pn**	**23 13 25.6**	**+0.1**
KULM				*e*S		**Sn**	**23 15 06.8**	**-0.1**
CMAR	**Chiang Mai Arr**	**11.51**	**34**	Pn		**Pn**	**23 13 58.3**	**-0.1**
	0.2nm,0.3s,baz=232,slow=15,SNR=4.4							
PALK	**Pallekele**	**11.52**	**263**	*e*Pn		**Pn**	**23 13 58.0**	**-0.6**
PALK				*e*S		Sx	23 15 44.2	
HYB	**Hyderabad**	**15.76**	**304**	*i* P		**Pn**	**23 15 01.0**	**+5.1**
HYB				*e*S		**Sn**	**23 17 50.0**	**+0.5**
LSA	**Lhasa**	**20.70**	**357**	*e*P		**P**	**23 15 55.1**	**+1.4**
	7.6nm,0.6s							
BJT	**Baijiuau**	**37.62**	**31**	*e*P		**P**	**23 18 27.4**	**-0.4**
	5.4nm,0.5s,mb4.5							
MKAR	**Makanchi Array**	**38.69**	**349**	P		**P**	**23 18 36.5**	**-0.2**
MKAR				PcP		PcP	23 20 49.2	+1.1
MKAR	**Makanchi Array**	**38.69**	**349**	P		**P**	**23 18 36.5**	**-0.2**
	1.9nm,0.7s,mb3.9,baz=170,slow=7.9,SNR=19							
MKAR				PcP		PcP	23 20 49.2	+1.1
	0.2nm,0.2s,baz=203,slow=2.6,SNR=1.9							
SONM	**Songino Array**	**40.60**	**15**	P		**P**	**23 18 52.9**	**+0.3**
	0.5nm,0.5s,mb3.4,baz=201,slow=7.9,SNR=4.5							
SONM				PcP		PcP	23 20 55.3	+1.1
	0.3nm,0.6s,baz=242,slow=3.1

YER	**Yerkesik**	**0.70**	**284**	*e*PG	**Pg**	**23**	**21**	**41.8 -0.8**
YER	**Yerkesik**	**0.70**	**284**	*e*Pg	**Pg**	**23**	**21**	**41.8 -0.8**
DNZL	**Cakiroluk**	**0.72**	**354**	*i* P	**Pg**	**23**	**21**	**41.9 -1.2**
DNZL				*i* S	**Sg**	**23**	**21**	**53.6 +1.1**
DNZL	**Cakiroluk**	**0.72**	**354**	*i* P	**Pg**	**23**	**21**	**41.8 -1.3**
DNZL				*i* S	**Sg**	**23**	**21**	**53.6 +1.1**
AKAS	**Kas**	**0.82**	**153**	*i* P	**Pg**	**23**	**21**	**45.1 +0.2**
AKAS				*i* S	**Sg**	**23**	**22**	**00.5 +4.9**
AKAS	**Kas**	**0.82**	**153**	*i* P	**Pg**	**23**	**21**	**45.1 +0.2**
MLSB	**Milas**	**1.14**	**287**	*e*PN	**Pg**	**23**	**21**	**50.1 -0.8**
MLSB	**Milas**	**1.14**	**287**	*e*Pn	**Pg**	**23**	**21**	**50.1 -0.8**
AYDN	**Tasoluk**	**1.22**	**305**	*i* P	**Pn**	**23**	**21**	**53.4 +0.7**
AYDN				*i* S	**Sb**	**23**	**22**	**11.0 +2.4**
AYDN	**Tasoluk**	**1.22**	**305**	*i* P	**Pn**	**23**	**21**	**53.4 +0.7**
AYDN				*i* S	**Sb**	**23**	**22**	**11.0 +2.4**
BDRM	**Kayabasi**	**1.36**	**275**	*i* P	**Pn**	**23**	**21**	**54.0 -0.7**
BDRM				*i* S	**Sb**	**23**	**22**	**13.2 +0.6**
BDRM	**Kayabasi**	**1.36**	**275**	*i* P	**Pn**	**23**	**21**	**54.0 -0.7**
BDRM				*i* S	**Sb**	**23**	**22**	**13.2 +0.6**
KHAL	**Karahalli**	**1.43**	**11**	*i* P	**Pn**	**23**	**21**	**56.7 +1.1**
KHAL				*i* S	**Sn**	**23**	**22**	**13.0 -1.8**
KHAL	**Karahalli**	**1.43**	**11**	*i* P	**Pn**	**23**	**21**	**56.7 +1.1**
KHAL				*i* S	**Sn**	**23**	**22**	**13.0 -1.8**
KULA	**Kula-Manisa**	**1.59**	**346**	*e*PN	**Pn**	**23**	**21**	**57.5 -0.3**
KULA	**Kula-Manisa**	**1.59**	**346**	*e*Pn	**Pn**	**23**	**21**	**57.5 -0.4**

*ISCJB **24** 00:08:27.7±0.8, 19°.32N±0°.06×103°.47W±0°.06, h110km±7km, mb2.9/3, Error ellipse: s-maj=11.4km s-min=6.2km az=42.8*
*NEIC **24** 00:08:30.3, 19°.32N×103°.47W, h101km, mb4.5/1, MD4.2(MEX), After MEX.*
*MEX **24** 00:08:30.5±0.5, 19°.31N×103°.46W, h100km±5km, MD4.2*
*IDC **24** 00:08:32.0±3.5, 19°.89N×102°.75W, h0km, mb2.9/3, mb1 3.6/5, mb1mx3.5/23, mbtmp3.3/5, ML4.0/2, Error ellipse: s-maj=89.1km s-min=25.6km az=38.0*
ISC 24 00:08:28.9±0.9, **19°.31N**±0°.06×**103°.48W**±0°.06, **h104**km±8km, **n22**, **σ0²86**/37, **mb2.9**/3, **Jalisco**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
EZ5V		**0.20**	**325**	*e*P		**Pn**	**00 08 43.7**	**+0.1**
EZ5V				*e*S		**Sn**	**00 08 54.1**	**-0.5**
R15V		**0.50**	**254**	*i* P		**Pn**	**00 08 45.4**	**+0.3**
R15V				*i* S		**Sn**	**00 08 57.4**	**+0.1**
MMIG	**Aquila**	**1.02**	**173**	*i* P		**Pn**	**00 08 49.7**	**-0.2**
MMIG				*i* S		**Sn**	**00 09 05.2**	**-0.5**
MOIG	**Morelia**	**2.19**	**80**	*i* P		**Pn**	**00 09 04.3**	**+0.2**
MOIG				*i* S		**Sn**	**00 09 31.4**	**+0.4**
MOIG	**Morelia**	**2.19**	**80**	*i* P		**Pn**	**00 09 04.3**	**+0.2**
MOIG				*i* S		**Sn**	**00 09 31.4**	**+0.4**
ZIIG	**Zihuatanejo**	**2.56**	**131**	*i* P		**Pn**	**00 09 08.8**	**0.0**
ZIIG				*e*S		**Sn**	**00 09 39.4**	**-0.2**
ZIIG	**Zihuatanejo**	**2.56**	**131**	*i* P		**Pn**	**00 09 08.8**	**0.0**
ZIIG				*e*S		**Sn**	**00 09 39.4**	**-0.2**
CAIG	**El Cayaco**	**3.79**	**126**	*e*P		**Pn**	**00 09 26.4**	**+1.1**
CAIG				*e*S		**Sn**	**00 10 08.8**	**-0.2**
CAIG	**El Cayaco**	**3.79**	**126**	*e*P		**Pn**	**00 09 26.4**	**+1.1**
CAIG				*e*S		**Sn**	**00 10 08.8**	**-0.2**
PLIG	**Platanillo**	**3.88**	**103**	*e*P		**Pn**	**00 09 27.5**	**+1.1**
PLIG				*e*S		**Sn**	**00 10 10.5**	**-0.6**
PLIG	**Platanillo**	**3.88**	**103**	*e*P		**Pn**	**00 09 27.5**	**+1.1**
PLIG				*e*S		**Sn**	**00 10 10.5**	**-0.6**
MEIG	**Mezcala**	**3.91**	**110**	*e*P		**Pn**	**00 09 27.8**	**+0.9**
MEIG				*i* S		**Sn**	**00 10 12.1**	**+0.2**
ACX	**Acapulco**	**4.21**	**125**	*i* P		**Pn**	**00 09 30.8**	**-0.3**
ACX				*i* S		**Sn**	**00 10 18.1**	**-1.1**
ACX	**Acapulco**	**4.21**	**125**	*i* P		**Pn**	**00 09 30.8**	**-0.3**
ACX				*i* S		**Sn**	**00 10 18.1**	**-1.1**
CMIG	**Matias Romero**	**8.46**	**104**	Pn		**Pn**	**00 10 29.5**	**+0.8**
	4.1nm,0.3s,baz=286,slow=12,SNR=27							
CMIG				Sn		**Sn**	**00 12 02.5**	**0.0**
	5.0nm,0.3s,baz=248,slow=11,SNR=15							
TXAR	**Lajitas Array**	**9.98**	**359**	Pn		**Pn**	**00 10 50.7**	**+1.5**
	0.2nm,0.3s,baz=172,slow=15,SNR=10							
JCT	**Junction City**	**11.61**	**16**	*e*Pn		**Pn**	**00 11 09.2**	**-2.0**
	10nm,1.2s							
HKT	**Hockley**	**12.66**	**32**	*e*Pn		**Pn**	**00 11 22.2**	**-3.0**
WMOK	**Wichita Mounta**	**15.92**	**14**	*e*Pn		**Pn**	**00 12 05.7**	**-1.2**
NVAR	**Mina Array Bea**	**23.00**	**329**	P		**P**	**00 13 39.2**	**+15**
	0.2nm,0.5s,mb2.8,baz=144,slow=11,SNR=2.6							
PDAR	**Pinedale Array**	**23.94**	**349**	P		**P**	**00 13 43.4**	**+10**
	0.2nm,0.4s,mb2.8,baz=162,slow=9.1,SNR=2.3							
ILAR	**Eielson Array**	**53.77**	**339**	P		**P**	**00 17 52.7**	**+13**
	0.2nm,0.8s,mb3.2,baz=126,slow=4.6,SNR=2.8							

*ISCJB **24** 00:16:19.0±1.1, 5°.15N±0°.07×125°.7E±0°.4, h33km, mb3.6/3, Error ellipse: s-maj=53.3km s-min=7.5km az=172.1*
*IDC **24** 00:16:22.2±4.2, 5°.03N×127°.85E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.6/21, mbtmp3.9/4, ML4.6/1, MS4.0/1, Ms1 4.0/1, ms1mx3.0/22, Error ellipse: s-maj=177.9km s-min=28.4km az=55.0*
*MAN **24** 00:16:28, 6°.44N×126°.35E, h142km, mb4.3, ML3.1, MS2.9*
ISC 24 00:16:21.0±1.0, **5°.21N**±0°.08×**125°.8E**±0°.4, **h35**km, **n8**, **σ0²95/8**, **mb3.6**/3, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
MATI	**Mati**	**1.79**	**16**	*e*P		**Pn**	**00 16 58.0**	**+0.6**
MATI				*e*S		Px	00 16 56.4	
DAV	**Davao City (W)**	**1.86**	**354**	Pn		**Sn**	**00 17 11.5**	**-1.0**
	74nm,0.3s,baz=49,slow=19,SNR=11							
DMPH	**Davao City--Mi**	**1.88**	**352**	*i* P		**Pn**	**00 16 52.7**	**+2.1**
DMPH				*i* S		**Sn**	**00 17 12.2**	**-0.9**
BUKP	**Musuan**	**2.74**	**345**	*e*P		**Pn**	**00 17 03.0**	**+0.4**
BUKP				*e*S		Px	00 17 14.4	
WRA	**Warramunga Arr**	**26.38**	**162**	P		**P**	**00 21 53.4**	**-0.7**
	0.5nm,0.3s,mb3.5,baz=347,slow=10,SNR=3.1							
ASAR	**Alice Springs**	**29.78**	**165**	P		**P**	**00 22 24.9**	**+0.4**
	0.8nm,0.5s,mb3.7,baz=346,slow=7.1,SNR=14							
STKA	**Stephens Creek**	**39.84**	**159**	P		**P**	**00 23 50.5**	**-0.6**
	0.5nm,0.4s,mb3.6,baz=333,slow=6.8,SNR=5.8							
AKASG	**Malin Array Be**	**90.15**	**321**	LR		LR	01 15 17.2	
	comp=Z,64nm,18.8s,baz=30,slow=39							

*NIED **24** 00:25:00, 30°.40N×131°.30E, h20km, Mw4.5 Best double couple: M0≤6.23000×10¹⁵ NP1:φ=245.00000°, δ=88.00000°, λ=-99.00000°. NP2:φ=141.00000°, δ=9.00000°, λ=-15.00000°.*
*IDC **24** 00:25:40.1±0.6, 30°.44N×130°.89E, h0km, mb4.3/18, mb1 4.4/19, mb1mx4.3/28, mbtmp4.3/19, ML4.0/1, MS3.8/13, Ms1 3.8/13, ms1mx3.4/36, Error ellipse: s-maj=21.6km s-min=13.4km az=67.0*
*JMA **24** 00:25:43.4±0.1, 30°.40N×131°.27E, h26km±1km, M4.5*
JMA Felt II J1.
*MOS **24** 00:25:43.1±1.2, 30°.45N×131°.05E, h33km, mb4.8/24, Error ellipse: s-maj=13.0km s-min=7.1km az=107.0*
*ISCJB **24** 00:25:44.1±0.7, 30°.41N±0°.05×131°.12E±0°.05, h44km±4km, mb4.4/36, MS3.9/17, Error ellipse: s-maj=8.2km s-min=7.3km az=140.0*
*NEIC **24** 00:25:45.5±0.3, 30°.46N×131°.01E, h35km, mb4.7/8, MW4.5(NIED), Error ellipse: s-maj=9.1km s-min=7.9km az=69.0*
NEIC Recorded [2 JMA] in Kagoshima. Recorded [1 JMA] on Tanega-shima.
*SZGRF **24** 00:25:45.5, 29°.97N×130°.85E, h33km, mb4.7, Ryukyu Islands, Japan*
*BJI **24** 00:25:46.4, 30°.50N×131°.00E, h35km, mB4.8/10, mb4.7/13, Ms4.3/6, Ms7 4.1/5*
ISC 24 00:25:45.6±0.6, **30°.44N**±0°.04×**131°.12E**±0°.05, **h38**km, 4km, **h22**km±6.0km: **pP-P**, **n102**, **σ1⁰04**/102, **mb4.4**/36, **MS3.9**/17, **9C-4D**, **Kyushu**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
JTN	**Tanegashima 3**	**0.25**	**330**	⇓P		**Pn**	**00 25 51.2**	**-1.9**
JTN				S		**Sn**	**00 25 57.0**	**-1.3**
JTSR	**Tashiro 2**	**0.74**	**347**	⇑P		**Pn**	**00 25 58.6**	**-1.0**
JTSR				*e*S		**Sn**	**00 26 10.2**	**+0.5**
JKC	**Kuchinoerabu**	**0.80**	**272**	P		**Pn**	**00 26 00.7**	**+0.4**
JKC				S		**Sn**	**00 26 13.2**	**+2.2**
JNAR	**Kushima--Naru**	**1.09**	**7**	⇑P		**Pn**	**00 26 04.0**	**-0.4**
JSU	**Suzuyama**	**1.21**	**332**	⇑P		**Pn**	**00 26 05.8**	**-0.1**
JSU				S		**Sn**	**00 26 22.6**	**+1.5**
JNN	**Nakanoshima**	**1.23**	**241**	P		**Pn**	**00 26 07.1**	**+0.8**
JTZ	**Takazaki**	**1.46**	**359**	⇑P		**Pn**	**00 26 09.5**	**+0.1**
JTZ				S		**Sn**	**00 26 28.6**	**+1.3**
JNU	**Nakatsue**	**2.68**	**356**	*e*Pn		**Pn**	**00 26 26.4**	**+0.2**
KSRS	**Korea Array**	**7.48**	**340**	Pn		**Pn**	**00 27 33.3**	**+1.1**
	1.8nm,0.3s,baz=157,slow=15,SNR=12							
KSRS				LR		LR	00 30 41.7	
	comp=Z,845nm,19.7s,baz=207,slow=41							
KSRS	**Korea Array**	**7.48**	**340**	P		**Pn**	**00 27 33.3**	**+1.1**
KSRS				pmax		pmax		
	comp=Z,2.0nm,0.3s							
KSRS				MLR		MLR		
	comp=Z,845nm,19.7s							
MAJO	**Matsushiro**	**8.49**	**42**	*e*Pn		**Pn**	**00 27 45.5**	**-0.4**
	comp=Z,8.6nm,0.4s							
MAJO	**Matsushiro**	**8.49**	**42**	*e*P		**Pn**	**00 27 45.5**	**-0.4**
MAJO				pmax		pmax		
	comp=Z,9.0nm,0.4s							
MAT	**Matsushiro**	**8.49**	**42**	P		**Pn**	**00 27 45.2**	**-0.7**
MJAR	**Matsushiro Arr**	**8.49**	**42**	Pn		**Pn**	**00 27 45.9**	**0.0**
	comp=Z,1.6nm,0.3s,baz=321,slow=24,SNR=14							
MJAR	**Matsushiro Arr**	**8.49**	**42**	P		**Pn**	**00 27 45.9**	**0.0**
MJAR				pmax		pmax		
	comp=Z,2.0nm,0.3s							
CBIJ	**Chichi jima**	**10.26**	**106**	LR		LR	00 31 40.6	
	comp=Z,209nm,19.8s,baz=299,slow=34							
NJ2	**Nanjing**	**10.62**	**282**	*e*P		**Pn**	**00 28 15.6**	**+0.4**
NJ2				S		**Sn**	**00 30 13.1**	**+0.2**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.8s							
NJ2				LR		LR		
	comp=N,640nm,16.5s							
NJ2				LR		LR		
	comp=E,500nm,15.3s							
NJ2				LR		LR		
	comp=Z,5μm,15.0s							
BJI	**Beijing**	**15.50**	**312**	P		**Pn**	**00 29 28.9**	**+7.6**
BJI				S		S	00 31 59.6	-27
BJI				pmax		pmax		
	comp=Z,16nm,0.6s							
BJI				pmax		pmax		
	comp=Z,140nm,5.3s							
BJI				LR		LR		
	comp=N,470nm,16.5s							
BJI				LR		LR		
	comp=E,630nm,12.1s							
BJI				LR		LR		
	comp=Z,390nm,16.0s							
ASAJ	**Asahikawa**	**16.40**	**30**	Pn		**Pn**	**00 29 36.6**	**+3.8**
	comp=Z,0.4nm,0.3s,baz=153,slow=19,SNR=4.2							
HABR	**Khabarovsk**	**18.26**	**8**	*e*P		pP	00 30 06.5	+1.2
HABR				MLR		MLR		
	comp=Z,247nm,17.0s							
KLR	**Kul'dur**	**18.77**	**1**	*e*P		**Pn**	**00 29 57.0**	**-5.1**
YSS	**Yuzh-Sakhalins**	**18.79**	**25**	*e*P		**Pn**	**00 30 03.0**	**+0.7**
GUMO	**Guam**	**21.03**	**140**	P		**P**	**00 30 26.9**	**+0.8**
	comp=Z,25nm,0.8s,mb4.6,baz=190,slow=7.2,SNR=4.1							
SONM	**Songino Array**	**25.70**	**319**	P		**P**	**00 31 11.5**	**-0.5**
	comp=Z,1.0nm,0.4s,mb3.7,baz=143,slow=10,SNR=6.0							
SONM				LR		LR	00 42 27.7	
	comp=Z,357nm,18.3s,MS3.9,baz=121,slow=39							
SONM	**Songino Array**	**25.70**	**319**	P		**P**	**00 31 11.5**	**-0.6**
SONM				pmax		pmax		
	comp=Z,1.0nm,0.4s							
SONM				MLR		MLR		
	comp=Z,357nm,18.3s							
GTA	**Gaotai**	**27.08**	**298**	*e*P		**P**	**00 31 33.0**	**+8.5**
GTA				pP		pP	00 31 37.8	+2.7
GTA				sP		sP	00 31 41.0	+1.3
GTA				pmax		pmax		
	comp=Z,3.0nm,1.0s,mb3.8							
ZAK	**Zakamensk**	**28.82**	**322**	*e*P		**P**	**00 31 39.5**	**-0.4**
ZAK				pmax		pmax		
	comp=Z,1.0nm,1.2s,mb3.4							
PETK	**Petropavlovsk-**	**29.79**	**33**	LR		LR	00 43 36.5	
	comp=Z,77nm,20.4s,MS3.3,baz=43,slow=36							
CMAR	**Chiang Mai Arr**	**31.52**	**255**	LR		LR	00 45 36.1	
	comp=Z,99nm,19.0s,MS3.5,baz=70,slow=38							
SEY	**Seymchan**	**35.27**	**17**	⇑*e*P		**P**	**00 32 37.1**	**+0.8**
ZALV	**Zalesovo Beam**	**40.60**	**319**	P		**P**	**00 33 20.7**	**-0.7**
ZALV				LR		LR	00 51 31.7	
ZALV	**Zalesovo Beam**	**40.60**	**319**	P		**P**	**00 33 20.7**	**-0.7**
	comp=Z,0.9nm,0.4s,mb3.8,baz=99,slow=9.2,SNR=7.0							
ZALV				LR		LR	00 51 31.7	
	comp=Z,161nm,18.6s,MS3.9,baz=252,slow=38							
ZALV	**Zalesovo Beam**	**40.60**	**319**	P		**P**	**00 33 20.7**	**-0.7**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.4s,mb3.8							
ZALV				MLR		MLR		
	comp=Z,161nm,18.6s,MS3.9							
MKAR	**Makanchi Array**	**40.81**	**308**	P		**P**	**00 33 22.8**	**-0.4**
	comp=Z,1.5nm,0.7s,mb3.7,baz=93,slow=11,SNR=12							
MKAR	**Makanchi Array**	**40.81**	**308**	P		**P**	**00 33 22.8**	**-0.4**
MKAR				pmax		pmax		
	comp=Z,2.0nm,0.7s							
PSI	**Prapat**	**41.02**	**234**	LR		LR	00 53 03.9	
	comp=Z,207nm,18.1s,MS4.0,baz=28,slow=40							
NVS	**Novosibirsk**	**41.74**	**320**	*e*P		**P**	**00 33 29.6**	**-1.1**
BILL	**Bilibino**	**42.89**	**19**	⇑*e*P		**P**	**00 33 41.3**	**+1.4**
BILL				*e*			00 35 20.0	
BILL				*e*S		**S**	**00 40 06.9**	**+5.2**
BILL				pmax		pmax		
	comp=Z,4.0nm,0.6s,mb4.3							
BILL				MLR		MLR		
	comp=Z,100nm,17.0s,MS3.8							
KURK	**Kurchatov**	**43.67**	**313**	P		**P**	**00 33 46.2**	**-0.3**
KURK	**Kurchatov**	**43.67**	**313**	P		**P**	**00 33 46.2**	**-0.3**
	comp=Z,1.0nm,0.3s,mb4.1,baz=102,slow=8.7,SNR=5.7							
KURK	**Kurchatov**	**43.67**	**313**	⇑*e*P		**P**	**00 33 46.6**	**+0.2**
KURK				pmax		pmax		
	comp=Z,6.0nm,1.2s,mb4.2							
KURK				MLR		MLR		
	comp=Z,280nm,17.0s,MS4.2							
KSH	**Kashi**	**45.47**	**297**	P		**P**	**00 34 05.3**	**+4.3**
KSH				*e*pP		pP	00 34 15.0	+3.0
KSH				*e*sP		sP	00 34 18.8	+2.3
KSH				*e*PcP		PcP	00 35 42.8	+3.3
KSH				*e*PP		PP	00 35 52.6	+4.8
KSH				*e*ScP		ScP	00 39 31.5	+2.1
KSH				*e*PcS		PcS	00 39 35.6	+2.1
KSH				*e*S		**S**	**00 40 46.1**	**+6.0**
KSH				*e*sS		sS	00 41 02.6	+4.4
KSH				*e*ScS		ScS	00 43 55.6	+1.2
KSH				*e*SS		SS	00 44 02.1	-2.0
KSH				pmax		pmax		
	comp=Z,3.0nm,0.3s,mb4.6							
KSH				pmax		pmax		
	comp=Z,78nm,5.8s							
KSH				LR		LR		
	comp=N,110nm,10.9s							
KSH				LR		LR		
	comp=E,340nm,17.7s							
KSH				LR		LR		
	comp=Z,160nm,5.2s							
HNR	**Honiara**	**48.36**	**140**	LR		LR	00 52 34.4	
	comp=Z,52nm,18.6s,MS3.5,baz=133,slow=33							
BRVK	**Borovoye**	**49.01**	**316**	*e*P		**P**	**00 34 27.6**	**-0.8**
	comp=Z,4.4nm,0.4s,mb4.8							
BRVK	**Borovoye**	**49.01**	**316**	*d* iP		**P**	**00 34 28.5**	**+0.2**
BRVK				pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.6							
BRVK				MLR		MLR		
	comp=Z,207nm,17.0s,MS4.2							
WRA	**Warramunga Arr**	**50.19**	**176**	P		**P**	**00 34 37.6**	**0.0**
	comp=Z,10nm,0.8s,mb4.9,baz=352,slow=8.4,SNR=33							
WRA	**Warramunga Arr**	**50.19**	**176**	P		**P**	**00 34 37.6**	**0.0**
WRA				pmax		pmax		
	comp=Z,10.0nm,0.8s							
CTA	**Charters Tower**	**52.30**	**162**	LR		LR	00 54 11.9	
	comp=Z,74nm,19.6s,MS3.7,baz=230,slow=33							
ASAR	**Alice Springs**	**53.86**	**177**	P		**P**	**00 35 05.5**	**+0.6**
	comp=Z,4.4nm,0.5s,mb4.6,baz=12,slow=13,SNR=93							
ASAR	**Alice Springs**	**53.86**	**177**	P		**P**	**00 35 05.5**	**+0.6**
ASAR				pmax		pmax		
	comp=Z,4.0nm,0.5s							
SVE	**Sverdlovsk**	**54.57**	**321**	*e*P		**P**	**00 35 10.1**	**+0.4**
ABKAR	**Akbulak array**	**55.71**	**311**	*e*P		**P**	**00 35 17.9**	**-0.2**
	comp=Z,3.1nm,0.4s,mb4.7							
ARU	**Arti**	**55.74**	**320**	*e*P		**P**	**00 35 17.2**	**-1.0**
	comp=Z,3.7nm,0.5s,mb4.7							
ARU	**Arti**	**55.74**	**320**	*d* iP		**P**	**00 35 17.6**	**-0.6**
ARU				*e*			00 37 21.0	
ARU				S		**S**	**00 43 02.9**	**+0.9**
ARU				SS		SS	00 46 41.7	-5.6
ARU				pmax		pmax		
	comp=Z,4.0nm,0.6s,mb4.6							
ARU				MLR		MLR		
	comp=Z,237nm,17.0s,MS4.3							
ILAR	**Eielson Array**	**59.53**	**29**	P		**P**	**00 35 45.9**	**+1.2**
	comp=Z,0.4nm,0.6s,mb3.6,baz=279,slow=7.2,SNR=4.1							
STKA	**Stephens Creek**	**62.77**	**170**	P		**P**	**00 36 07.2**	**+0.3**
STKA	**Stephens Creek**	**62.77**	**170**	P		**P**	**00 36 07.2**	**+0.3**
	comp=Z,9.3nm,0.7s,mb5.0,baz=341,slow=7.1,SNR=26							
INK	**Inuvik**	**64.03**	**24**	P		**P**	**00 36 17.3**	**+2.4**
	comp=Z,2.0nm,0.5s,mb4.4,baz=298,slow=3.6,SNR=5.6							
INK	**Inuvik**	**64.03**	**24**	P		**P**	**00 36 17.3**	**+2.4**
INK				pmax		pmax		
	comp=Z,2.0nm,0.5s							
KLMR	**Klimovskoe**	**64.68**	**327**	P		**P**	**00 36 17.0**	**-2.3**
KLMR				pmax		pmax		
	comp=Z,9.0nm,1.2s,mb4.7							
KEV	**Kevo**	**66.47**	**338**	*e*P		**P**	**00 36 31.8**	**+1.1**
KEV				pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.6							
KEV	**Kevo**	**66.47**	**338**	*e*p		**P**	**00 36 31.8**	**+1.1**
	comp=Z,3.7nm,0.7s,mb4.5							
ARCES	**ARCESS Array B**	**67.04**	**338**	P		**P**	**00 36 32.5**	**-1.8**
	comp=Z,1.8nm,0.7s,mb4.2,baz=41,slow=8.0,SNR=8.1							
ARCES	**ARCESS Array B**	**67.04**	**338**	P		**P**	**00 36 32.5**	**-1.8**
ARCES				pmax		pmax		
	comp=Z,2.0nm,0.7s							
JOF	**Joensuu**	**67.61**	**331**	*e*P		**P**	**00 36 36.4**	**-1.7**
JOF				pmax		pmax		
	comp=Z,6.0nm,0.6s,mb4.8							
JOF	**Joensuu**	**67.61**	**331**	*e*p		**P**	**00 36 36.4**	**-1.7**
	comp=Z,6.1nm,0.6s,mb4.8							
OBN	**Obninsk**	**68.09**	**322**	⇑*e*P		**P**	**00 36 41.0**	**-0.2**
OBN				*e*			00 39 14.9	
OBN				*e*S		S	00 45 33.8	-4.2
OBN				pmax		pmax		
	comp=Z,6.0nm,0.5s,mb4.9							
OBN				MLR		MLR		
	comp=Z,200nm,20.0s,MS4.3							
ZEI	**Tsey**	**68.17**	**308**	*e*P		**P**	**00 36 40.1**	**-1.8**
ZEI				pmax		pmax		
	comp=Z,7.0nm,0.5s,mb5.0							
KIV	**Kislovodsk**	**68.55**	**309**	*e*P		**P**	**00 36 44.1**	**-0.1**
	comp=Z,9.5nm,0.8s,mb4.8							
KIV	**Kislovodsk**	**68.55**	**309**	⇓*e*P		**P**	**00 36 44.8**	**+0.5**
KIV				*i* S		S	00 45 36.5	-7.4
KIV				pmax		pmax		
	comp=Z,13nm,1.0s,mb4.8							
KIV				MLR		MLR		
	comp=Z,100nm,19.0s,MS4.1							
GNI	**Garni**	**68.56**	**305**	P		**P**	**00 36 44.0**	**-0.4**
	comp=Z,2.3nm,0.6s,mb4.3,baz=333,slow=8.5,SNR=5.2							
GNI	**Garni**	**68.56**	**305**	⇑*e*P		**P**	**00 36 46.0**	**+1.6**
GNI				pmax		pmax		
	comp=Z,9.0nm,1.2s							
GNI				MLR		MLR		
	comp=Z,54nm,24.0s							
KAF	**Kangasniemi**	**70.06**	**331**	*e*P		**P**	**00 36 51.3**	**-2.0**
KAF				pmax		pmax		
	comp=Z,5.0nm,0.7s,mb4.5							
KAF	**Kangasniemi**	**70.06**	**331**	*e*p		**P**	**00 36 51.3**	**-2.0**
	comp=Z,4.8nm,0.7s,mb4.5							
FINES	**FINESS Array B**	**70.47**	**331**	P		**P**	**00 36 55.0**	**-0.8**
	comp=Z,4.8nm,0.5s,mb4.7,baz=71,slow=6.5,SNR=42							
FINES	**FINESS Array B**	**70.47**	**331**	P		**P**	**00 36 55.0**	**-0.8**
FINES				pmax		pmax		
	comp=Z,5.0nm,0.5s							
SOC	**Sochi**	**70.68**	**310**	*e*P		**P**	**00 36 57.0**	**-0.4**
SOC				*e*S		S	00 46 02.2	-6.7
SOC				*e*			00 47 00.5	
SOC				pmax		pmax		
	comp=Z,23nm,0.8s,mb5.2							
YKA	**Yellowknife Ar**	**73.64**	**26**	P		**P**	**00 37 14.8**	**0.0**
	comp=Z,0.7nm,0.6s,mb3.7,baz=305,slow=6.5,SNR=3.0							
YKA	**Yellowknife Ar**	**73.64**	**26**	P		**P**	**00 37 14.8**	**0.0**
YKA				pmax		pmax		
	comp=Z,1.0nm,0.6s							
MALT	**Malatya**	**73.78**	**305**	*e*P		**P**	**00 37 15.4**	**-0.7**
	comp=Z,2.6nm,0.8s,mb4.2							
MALT	**Malatya**	**73.78**	**305**	*e*P		**P**	**00 37 15.4**	**-0.7**
MALT				pmax		pmax		
	comp=Z,3.0nm,0.8s,mb4.3							
AKASG	**Malin Array Be**	**73.99**	**320**	P		**P**	**00 37 16.4**	**-0.6**
	comp=Z,1.3nm,0.4s,mb4.2,baz=57,slow=6.0,SNR=9.4							
AKASG	**Malin Array Be**	**73.99**	**320**	P		**P**	**00 37 16.4**	**-0.6**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.4s							
BRTR	**Keskin Array B**	**76.46**	**308**	P		**P**	**00 37 30.9**	**-0.6**
	comp=Z,4.6nm,0.8s,mb4.5,baz=100,slow=4.5,SNR=20							
BRTR				LR		LR	01 16 05.6	
	comp=Z,38nm,18.2s,MS3.8,baz=204,slow=40							
BRTR	**Keskin Array B**	**76.46**	**308**	P		**P**	**00 37 30.9**	**-0.6**
B

SNR=57
BANOM ⇓S Sn 00 37 55.9 -6.7
ASHO Ashiyiah 2.56 179 P Pn 00 38 05.9 +3.9
SNR=48
ASHO Ashiyiah 2.56 179 ⇑P Pn 00 38 05.9 +3.8
SNR=48
ASUD Al Ashush, Dub 2.69 193 P Pn 00 38 08.6 +4.8
SNR=16
ASUD Al Ashush, Dub 2.69 193 ⇓P Pn 00 38 08.6 +4.8
SNR=16
KRBR Kerman 2.79 13 *e*Pn Pn 00 38 07.0 +1.8
KRBR *e*Sg Sn 00 38 44.2 +5.9
KRBR AML AML 00 38 49.3
comp=E,712nm,0.6s
KRBR AML AML 00 38 50.1
comp=N,651nm,0.6s
ISRV Sarvestan 3.32 310 Pn Pn 00 38 13.8 +1.4
ISRV Sn Sn 00 38 51.6 +0.3
ISRV Sarvestan 3.32 310 *e*Pn Pn 00 38 13.5 +1.1
ISRV *e* 00 39 25.4
comp=Z,4μm,0.5s
ISRV Sarvestan 3.32 310 *e*Pn Pn 00 38 13.5 +1.1
ISRV Sn Sn 00 38 51.6 +0.3
IPAR Pars 3.67 315 Pn Pn 00 38 19.1 +1.9
IPAR Sn Sn 00 39 00.5 +0.7
IPAR Pars 3.67 315 *e*Pn Pn 00 38 19.1 +1.9
IPAR *e* 00 39 28.3
comp=Z,2μm,0.3s
IPAR Pars 3.67 315 *e*Pn Pn 00 38 19.1 +1.9
IPAR Sn Sn 00 39 00.5 +0.7
IMEH Mehriz 4.30 344 Pn Pn 00 38 26.9 +1.0
IMEH Sn Sn 00 39 16.6 +1.2
IMEH Mehriz 4.30 344 *e*Pn Pn 00 38 26.9 +1.0
IMEH *e* 00 38 30.7
comp=Z,821nm,0.2s
IMEH Mehriz 4.30 344 *e*Pn Pn 00 38 26.9 +1.0
IMEH Sn Sn 00 39 16.6 +1.2
IBAF Bafgh 4.34 355 Pn Pn 00 38 26.8 +0.4
IBAF Sn Sn 00 39 17.0 +0.6
IBAF Bafgh 4.34 355 *e*Pn Pn 00 38 26.8 +0.4
IBAF *e* 00 39 47.9
comp=Z,2μm,0.4s
IBAF Bafgh 4.34 355 *e*Pn Pn 00 38 26.8 +0.4
IBAF Sn Sn 00 39 17.0 +0.6
ZHSF Zahedan 4.80 60 *e*Pn Pn 00 38 35.4 +2.6
ISAD Sadrabad 5.07 337 Pn Pn 00 38 37.4 +1.0
ISAD Sn Sn 00 39 34.2 -0.1
ISAD Sadrabad 5.07 337 *e*Pn Pn 00 38 37.3 +0.9
ISAD *e* 00 40 15.9
comp=Z,953nm,0.4s
ISAD Sadrabad 5.07 337 *e*Pn Pn 00 38 37.3 +0.9
ISAD Sn Sn 00 39 34.2 -0.1
ICHK Chekchek 5.16 345 Pn Pn 00 38 38.4 +0.6
ICHK Chekchek 5.16 345 *e*Pn Pn 00 38 38.6 +0.8
ICHK *e* 00 40 22.4
comp=Z,576nm,0.3s
ICHK Chekchek 5.16 345 *e*Pn Pn 00 38 38.6 +0.8
SLWS 5.42 244 P Pn 00 38 44.0 +2.8
SLWS 5.42 244 P Pn 00 38 44.0 +2.7
SLWS S Sn 00 39 46.6 +3.6
BTHS 5.65 237 P Pn 00 38 45.2 +0.7
BTHS 5.65 237 P Pn 00 38 45.2 +0.7
BTHS S Sn 00 39 49.6 +0.7
IKOO Kooshah 5.77 26 *e*Pn Pn 00 38 46.6 +0.5
IKOO *e* 00 40 33.2
comp=Z,722nm,0.3s
IKOO Kooshah 5.77 26 *e*Pn Pn 00 38 46.6 +0.5
ITEG Tejag 6.10 22 *e*Pn Pn 00 38 51.4 +0.7
ITEG *e* 00 40 52.6
comp=Z,888nm,0.6s
ITEG Tejag 6.10 22 *e*Pn Pn 00 38 51.4 +0.7
IGAR Gharneh 6.18 327 *e*Pn Pn 00 38 52.3 +0.5
IGAR *e* 00 38 59.0
comp=Z,627nm,0.1s
NASN Na'in 6.18 334 *e*Pn Pn 00 38 52.1 +0.3
NASN AML AML 00 40 11.8
comp=E,13nm,0.5s
IDAH Dahanechah 6.41 31 *e*Pn Pn 00 39 01.1 +6.3
IDAH *e* 00 41 07.1
comp=Z,418nm,0.3s
IDAH Dahanechah 6.41 31 *e*Pn Pn 00 39 01.1 +6.3
IZEF Zefreh 6.46 331 Pn Pn 00 38 55.2 -0.4
IZEF Zefreh 6.46 331 *e*Pn Pn 00 38 55.2 -0.4
IZEF *e* 00 38 59.1
comp=Z,208nm,0.1s
IZEF Zefreh 6.46 331 *e*Pn Pn 00 38 55.2 -0.4
IPIR Pirpir 7.00 322 Pn Pn 00 39 03.8 +0.8
IPIR Pirpir 7.00 322 *e*Pn Pn 00 39 03.5 +0.5
IPIR *e* 00 40 25.1
comp=Z,371nm,0.4s
IPIR Pirpir 7.00 322 *e*Pn Pn 00 39 03.5 +0.5
IKLH Kolahrood 7.16 329 Pn Pn 00 39 05.4 +0.3
IKLH Kolahrood 7.16 329 *e* Pb 00 39 23.0 -2.2
comp=Z,212nm,0.2s
IKLH *e*Pn Pn 00 39 05.6 +0.5
HRDDS 7.34 235 P Pn 00 39 08.3 +0.6
RDF Al-Radifah 7.66 285 *e*P Pn 00 39 12.4 +0.3
ISFB Sefidab 7.78 336 Pn Pn 00 39 13.4 -0.3
ISFB Sefidab 7.78 336⇑*e*Pn Pn 00 39 13.8 +0.1
ISFB *e* 00 39 19.0
comp=Z,174nm,0.2s
ISFB Sefidab 7.78 336⇑*e*Pn Pn 00 39 13.8 +0.1
NAY Al-Naaiem 7.99 286 *e*P Pn 00 39 16.4 -0.2
NAY AML AML 00 40 47.2
comp=Z,6.5nm,0.6s
MIB Mutribah 8.04 290 *e*P Pn 00 39 17.3 -0.1
MIB AML AML 00 40 54.3
comp=Z,23nm,0.7s
IFIR Firoozkooh 8.81 342 Pn Pn 00 39 27.8 0.0
IFIR Firoozkooh 8.81 342 *e*Pn Pn 00 39 27.9 +0.1
IFIR *e* 00 39 32.9
comp=Z,73nm,0.2s
IFIR Firoozkooh 8.81 342 *e*Pn Pn 00 39 27.9 +0.1
IDMV Damavand 8.96 339 Pn Pn 00 39 31.6 +1.6
IDMV Damavand 8.96 339 *e*Pn Pn 00 39 30.5 +0.5
IDMV Damavand 8.96 339 *e*Pn Pn 00 39 30.5 +0.5
LYLS 9.52 239 P Pn 00 39 36.1 -1.5
IRAZ Razeghan 9.64 329 Pn Pn 00 39 38.4 -0.9
IRAZ Razeghan 9.64 329 *e*Pn Pn 00 39 38.5 -0.8
IRAZ *e* 00 39 55.6
comp=Z,122nm,0.3s
IRAZ Razeghan 9.64 329 *e*Pn Pn 00 39 38.5 -0.8
ASYS 10.38 274 S Sn 00 41 39.6 -5.5
ASYS 10.38 274 P Pn 00 39 48.6 -0.8
ASYS 10.38 274 P Pn 00 39 48.6 -0.8
GNI Garni 15.90 327 *e*Pn Pn 00 41 02.4 -1.8
GNI LR LR 00 47 03.5
GNI Garni 15.90 327 Pn Pn 00 41 06.5 +2.4
comp=Z,0.5nm,0.3s,baz=246,slow=2.2,SNR=9.1
GNI LR LR 00 47 03.5
comp=Z,57nm,21.8s,baz=327,slow=37
GNI Garni 15.90 327 *e*Pn Pn 00 41 02.3 -1.8
ASF Jabal al Asfar 17.31 291 P Pn 00 41 21.3 -0.8
comp=Z,0.2nm,0.3s,baz=338,slow=3.1,SNR=2.7
ASF LR LR 00 49 40.3
comp=Z,36nm,18.1s,baz=151,slow=43
ZEI Tsey 18.35 331 *e*P Pn 00 41 34.6 -0.3
ZEI pmax pmax
comp=Z,26nm,1.4s
ZEI Tsey 18.35 331 *e*P Pn 00 41 34.6 -0.3
comp=Z,26nm,1.4s
MALT Malatya 18.41 311 *e*Pn Pn 00 41 38.3 +2.6
EIL Elat 18.67 282 P Pn 00 41 38.7 -0.2
comp=Z,0.4nm,0.3s,baz=131,slow=7.5,SNR=3.8
EIL Elat 18.67 282 P Pn 00 41 38.7 -0.2
KIV Kislovodsk 19.83 331 *e*P Pn 00 41 49.5 -3.2
comp=Z,16nm,0.9s
KIV Kislovodsk 19.83 331⇓*e*P Pn 00 41 52.9 +0.2
KIV pmax pmax
comp=Z,12nm,0.8s
KIV Kislovodsk 19.83 331 *e*P Pn 00 41 49.5 -3.2
comp=Z,16nm,0.9s
AAK Ala-Archa 21.49 40 *e*P P 00 42 09.9 +0.9
AAK Ala-Archa 21.49 40 P P 00 42 08.5 -0.5
comp=Z,4.8nm,0.6s,mb4.0,baz=178,slow=5.4,SNR=8.9
AAK Ala-Archa 21.49 40 P P 00 42 08.5 -0.5
AAK pmax pmax
comp=Z,5.0nm,0.6s,mb4.0
AAK Ala-Archa 21.49 40 P P 00 42 08.5 -0.5
comp=Z,5.0nm,0.6s,mb4.0
ABKAR Akbulak array 22.18 7 *e*P P 00 42 15.4 -0.9
comp=Z,4.2nm,0.6s,mb4.0
ABKAR Akbulak array 22.18 7 *e*P P 00 42 15.4 -0.8
comp=Z,4.2nm,0.6s,mb4.0

BRTR Keskin Array B 22.36 309 P P 00 42 15.8 -2.4
comp=Z,2.4nm,0.8s,mb3.7,baz=135,slow=13,SNR=9.9
BRTR Keskin Array B 22.36 309 P P 00 42 15.8 -2.5
BRTR pmax pmax
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 22.36 309 P P 00 42 15.8 -2.5
comp=Z,2.0nm,0.8s,mb3.6
AKTK Aktyubinsk 23.20 3 P P 00 42 25.8 -1.2
AKTK LR LR 00 53 00.7
AKTK Aktyubinsk 23.20 3 P P 00 42 25.8 -1.3
comp=Z,85nm,19.9s
AKTO Aktyubinsk 23.20 3 P P 00 42 25.8 -1.2
comp=Z,2.6nm,0.8s,mb3.7,baz=204,slow=9.2,SNR=7.8
AKTO LR LR 00 53 00.7
comp=Z,85nm,19.9s,MS3.2,baz=20,slow=41
AKTO Aktyubinsk 23.20 3 P P 00 42 25.8 -1.3
AKTO pmax pmax
comp=Z,3.0nm,0.8s,mb3.8
AKTO MLR MLR
comp=Z,85nm,19.9s,MS3.2
BRVK Borovoye 27.88 19 *e*P P 00 43 10.1 +0.2
comp=Z,6.5nm,1.3s,mb4.1
BRVK Borovoye 27.88 19 *e*P P 00 43 10.1 +0.3
BRVK pmax pmax
comp=Z,6.0nm,1.3s,mb4.1
BRVK Borovoye 27.88 19 *e*P P 00 43 10.1 +0.3
comp=Z,6.0nm,1.3s,mb4.1
BVAR Borovoye Array 27.88 19 P P 00 43 09.6 -0.3
comp=Z,2.9nm,0.8s,mb4.0,baz=190,slow=7.4,SNR=18
BVAR PcP PcP 00 46 26.6 +1.4
comp=Z,0.6nm,0.4s,baz=219,slow=1.8,SNR=5.6
BVAR Borovoye Array 27.88 19 P P 00 43 09.6 -0.3
BVAR 00 46 26.6
BVAR pmax pmax
comp=Z,3.0nm,0.8s
BVAR pmax pmax
comp=Z,1.0nm,0.4s
BVAR Borovoye Array 27.88 19 P P 00 43 09.6 -0.3
comp=Z,3.0nm,0.8s,mb4.0
MKAR Makanchi Array 28.43 40 P P 00 43 14.6 -0.2
comp=Z,0.6nm,0.5s,mb3.5,baz=228,slow=7.6,SNR=8.1
MKAR PcP PcP 00 46 29.0 +2.3
comp=Z,0.3nm,0.6s,baz=229,slow=2.1,SNR=2.9
MKAR Makanchi Array 28.43 40 P P 00 43 14.6 -0.2
MKAR 00 46 29.0
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 28.43 40 P P 00 43 14.6 -0.2
comp=Z,1.0nm,0.5s,mb3.7
KURK Kurchatov 29.06 30 P P 00 43 19.8 -0.6
comp=Z,1.0nm,0.2s,mb4.1,baz=230,slow=8.8,SNR=2.4
KURK Kurchatov 29.06 30 P P 00 43 19.8 -0.6
KURK pmax pmax
comp=Z,1.0nm,0.2s,mb4.2
KURK Kurchatov 29.06 30 P P 00 43 19.8 -0.6
comp=Z,1.0nm,0.2s,mb4.2
AKASG Malin Array Be 31.03 326 P P 00 43 36.4 -1.4
comp=Z,0.6nm,0.4s,mb3.8,baz=134,slow=8.6,SNR=4.6
AKASG Malin Array Be 31.03 326 P P 00 43 36.4 -1.4
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 31.03 326 P P 00 43 36.4 -1.4
comp=Z,1.0nm,0.4s,mb4.0
UZH Uzhgorod 33.69 318 *e*P P 00 43 55.4 -5.8
UZH *i* pP 00 44 02.8 -4.7
ZALV Zalesovo Beam 34.05 31 P P 00 44 04.1 -0.2
comp=Z,2.2nm,0.7s,mb4.2,baz=245,slow=9.0,SNR=7.9
ZALV PcP PcP 00 46 41.9 +0.4
comp=Z,0.8nm,0.5s,baz=248,slow=7.2,SNR=3.6
ZALV Zalesovo Beam 34.05 31 P P 00 44 04.1 -0.1
ZALV 00 46 41.9
ZALV pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
JOF Joensuu 39.18 342 *e*P P 00 44 46.3 -1.5
JOF pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
JOF Joensuu 39.18 342 *ep* P 00 44 46.3 -1.5
comp=Z,1.2nm,0.6s,mb3.8
JOF Joensuu 39.18 342 *e*P P 00 44 46.3 -1.5
comp=Z,1.2nm,0.6s,mb3.8
FINES FINESS Array B 39.63 338 P P 00 44 51.0 -0.6
comp=Z,1.6nm,0.5s,mb4.0,baz=137,slow=9.3,SNR=17
FINES FINESS Array B 39.63 338 P P 00 44 51.0 -0.6
FINES pmax pmax
comp=Z,2.0nm,0.5s
FINES FINESS Array B 39.63 338 P P 00 44 51.0 -0.6
comp=Z,2.0nm,0.5s,mb4.1
KAF Kangasniemi 40.04 339 *e*P P 00 44 53.6 -1.4
KAF pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
KAF Kangasniemi 40.04 339 *ep* P 00 44 53.6 -1.4
comp=Z,0.8nm,0.5s,mb3.7
KAF Kangasniemi 40.04 339 *e*P P 00 44 53.6 -1.4
comp=Z,0.8nm,0.5s,mb3.7
SONM Songino Array 44.02 48 P P 00 45 28.9 +1.2
comp=Z,1.4nm,0.9s,mb3.7,baz=244,slow=9.4,SNR=8.0
SONM LR LR 01 05 08.8
comp=Z,59nm,20.8s,MS3.5,baz=95,slow=38
SONM Songino Array 44.02 48 P P 00 45 28.9 +1.2
SONM pmax pmax
comp=Z,1.0nm,0.9s
SONM MLR MLR
comp=Z,59nm,20.8s
SONM Songino Array 44.02 48 P P 00 45 28.9 +1.2
comp=Z,59nm,20.8s
NB2 NORSAR Subarra 45.14 331 P P 00 45 34.8 -1.6
comp=Z,1.4nm,0.6s,mb4.0,baz=118,slow=7.8,SNR=0.2
NOA NORSAR Array B 45.14 331 P P 00 45 34.4 -2.1
comp=Z,1.3nm,0.7s,mb3.9,baz=116,slow=7.8,SNR=9.2
NOA NORSAR Array B 45.14 331 P P 00 45 34.4 -2.0
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA NORSAR Array B 45.14 331 P P 00 45 34.3 -2.1
KEV Kevo 45.73 346 *e*P P 00 45 40.3 -0.7
KEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KEV Kevo 45.73 346 *ep* P 00 45 40.3 -0.7
comp=Z,2.7nm,0.6s,mb4.3
KEV Kevo 45.73 346 *e*P P 00 45 40.3 -0.7
comp=Z,2.7nm,0.6s,mb4.3
ARCES ARCESS Array B 45.88 346 P P 00 45 41.0 -1.2
comp=Z,1.5nm,0.7s,mb4.0,baz=140,slow=7.9,SNR=5.0
ARCES ARCESS Array B 45.88 346 P P 00 45 41.0 -1.2
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 45.88 346 P P 00 45 41.0 -1.2
comp=Z,2.0nm,0.7s,mb4.2
ESDC Sonseca Array 50.70 300 P P 00 46 19.5 -0.3
comp=Z,0.2nm,0.5s,mb3.3,baz=69,slow=6.6,SNR=4.3
ESDC Sonseca Array 50.70 300 P P 00 46 19.5 -0.3
TORD Torodi Ar. Bea 52.50 266 P P 00 46 32.0 -1.6
comp=Z,2.1nm,0.7s,mb4.2,baz=67,slow=6.8,SNR=12
TORD LR LR 01 11 24.2
comp=Z,44nm,19.5s,MS3.5,baz=190,slow=39
BOSA Boshof 62.90 210 LR LR 01 20 09.4
comp=Z,41nm,18.3s,MS3.6,baz=339,slow=41
ILAR Eielson Array 86.55 10 P P 00 50 02.8 -0.1
comp=Z,0.3nm,0.6s,mb3.7,baz=315,slow=3.3,SNR=4.9
WRA Warramunga Arr 89.14 113 P P 00 50 18.1 +2.1
comp=Z,0.4nm,0.3s,mb4.2,baz=315,slow=4.6,SNR=17

JMA 24 00:44:17.0±0.2, 25.40N×140.71E, h82km, M4.2, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**1.80**	**47**	P	Pn	00 44 46.6	+0.3
JHHJ				*e*S	Sn	00 45 09.0	+0.4
CBIJ	**Chichi jima**	**2.15**	**38**	P	Pn	00 44 51.6	+0.7
CBIJ				*e*S	Sn	00 45 17.2	+0.4
JHJ2	**Mitsune**	**7.72**	**354**	S	Sn	00 47 32.7	+0.1
BSO1	**Boso 1**	**9.22**	**1**	P	Pn	00 46 25.2	-2.0
BSO3	**Boso 3**	**9.37**	**359**	P	Pn	00 46 26.9	-2.3
BSO4	**Boso 4**	**9.56**	**358**	P	Pn	00 46 31.0	-0.8
JOD2	**Odawara 2**	**9.93**	**352**	P	Pn	00 46 36.6	-0.2
JHU	**Hanno**	**10.49**	**354**	P	Pn	00 46 42.3	-2.1
JRY	**Ryogami san**	**10.70**	**352**	P	Pn	00 46 45.6	-1.6
JAG	**Ashikaga**	**11.04**	**355**	P	Pn	00 46 47.7	-4.2
JHO	**Hitachi**	**11.18**	**359**	P	Pn	00 46 49.8	-3.9
JHO				*e*S	Sn	00 48 48.0	-8.8

*IDC **24** 01:00:50.7±1.1, 15.35S×175.89W, h0km, mb4.5/8, mb1 4.8/8, mb1mx4.5/17, mbtmp4.5/8, MS4.3/21, Ms1 4.3/21, ms1mx4.2/28, Error ellipse: s-maj=58.7km s-min=19.0km az=148.0*

*ISCJB **24** 01:00:55.5±0.4, 15.35S×175.95W±0.0, h33km, mb4.7/56, MS4.5/27, Error ellipse: s-maj=19.1km s-min=7.6km az=155.5*

*NEIC **24** 01:00:57.1±0.3, 15.35S×176.03W, h35km, mb4.8/43, MS4.8/2, Error ellipse: s-maj=18.9km s-min=7.1km az=149.0*

*GCMT **24** 01:00:58.1±0.2, 15.29S×175.63W, h22km±1km, MW5.1, Moment Tensor Solution. s36,c46; s84,c133; Moment tensor: Scale 10^16 Nm; Mrr-0.74±.19; Mθθ-0.95±.16; Mφφ1.69±.16; Mrθ0.44±.26; Mrφ5.69±.16; Mθφ0.66±.27; Best double couple: M0 5.90000×10^16 NP1:φs84.00000°, δ85.00000°, λ4.00000°. NP2:φs353.00000°, δ86.00000°, λ175.00000°. Principal axes: T 6.3000, Plg6.0000°, Azm308.0000°; N -0.8300, Plg84.0000°, Azm136.0000°; P -5.4700, Plg1.0000°, Azm39.0000°; Data Used: II IU IC CN G.*

*BJI **24** 01:01:00.2, 14.60S×175.90W, h30km, mB5.3/3, mb4.8/7, Ms4.8/5, Ms7 4.6/5*

ISC 24 01:00:57.5±0.4, 15.3S±0.1×175.93W±0.0, h35km, (h35km±2.0km; pP-P), n315, σ0 83/232, mb4.7/56, MS4.5/27, 75C-86D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.26**	**71**	*e*Pn	**Pn**	**01 01 44.8**	**-15**
AFI	**Afiamalu**	**4.26**	**71**	Pn	**Pn**	**01 01 49.7**	**-10**
	12nm,0.3s,baz=304,slow=13,SNR=8.8						
AFI				Sn	**Sn**	**01 02 34.3**	**-14**
	27nm,0.3s,baz=109,slow=22,SNR=6.1						
AFI				LR	LR	01 03 10.9	
	comp=Z,2μm,18.2s,baz=259,slow=33						
MSVF	**Nonsavu**	**6.25**	**247**	Pn	**Pn**	**01 02 29.0**	**+1.9**
RAR	**Rarotonga**	**16.41**	**113**	LR	LR	01 09 25.0	
	comp=Z,μm,18.8s,baz=238,slow=31						
DZM	**Mont Dzumac**	**17.98**	**246**	*e*LR	LR	01 09 27.1	
	2μm,26.1s						
URZ	**Urewera**	**23.64**	**194**	LR	LR	01 14 05.9	
	comp=Z,952nm,18.7s,MS4.3,baz=24,slow=34						
HNR	**Honiara**	**24.27**	**281**	LR	LR	01 14 12.9	
	comp=Z,3μm,21.1s,MS4.8,baz=127,slow=33						
PPT	**Papeete**	**25.36**	**99**	*e*LQ		01 11 20.8	
	3μm,25.8s						
PPT				*e*LR	LR	01 12 25.5	
	2μm,26.5s,baz=261						
PPT	**Papeete**	**25.36**	**99**	LR	LR	01 13 18.0	
	comp=Z,808nm,19.7s,MS4.2,baz=272,slow=30						
RPZ	**Rata Peaks**	**30.38**	**199**	LR	LR	01 16 59.5	
	comp=Z,802nm,18.7s,MS4.4,baz=31,slow=32						
TAOE	**Nuku Hiva Isla**	**35.54**	**84**	*e*LR	LR	01 17 22.4	
	423nm,23.0s						
CTAO	**Charters Tower**	**36.28**	**257**	P	**P**	**01 07 57.7**	**-0.1**
	12nm,1.0s,mb4.8						
RKT	**Rikitea**	**39.33**	**108**	*e*LR	LR	01 18 57.4	
	1μm,27.0s,baz=277						
STKA	**Stephens Creek**	**41.96**	**239**	P	**P**	**01 08 43.4**	**-1.8**
	2.5nm,0.7s,mb3.9,baz=78,slow=12,SNR=3.0						
STKA				LR	LR	01 24 19.6	
	comp=Z,480nm,18.4s,MS4.4,baz=48,slow=34						
WRA	**Warramunga Arr**	**47.48**	**257**	P	**P**	**01 09 28.3**	**-1.0**
	4.2nm,0.8s,mb4.4,baz=92,slow=7.4,SNR=9.6						
ASAR	**Alice Springs**	**47.81**	**252**	P	**P**	**01 09 30.6**	**-1.3**
	3.1nm,0.4s,mb4.7,baz=86,slow=8.2,SNR=41						
NWAO	**Narrogin (SRO)**	**62.52**	**241**	LR	LR	01 37 52.0	
	comp=Z,463nm,19.0s,MS4.7,baz=110,slow=36						
MJAR	**Matsushiro Arr**	**67.34**	**321**	LR	LR	01 34 50.5	
	comp=Z,231nm,21.9s,MS4.4,baz=140,slow=30						
PETK	**Petropavlovsk-**	**71.86**	**344**	P	**P**	**01 12 16.0**	**-0.5**
	6.7nm,0.8s,mb4.6,baz=136,slow=8.5,SNR=7.9						
PETK				LR	LR	01 37 60.0	
	comp=Z,105nm,21.6s,MS4.1,baz=36,slow=31						
ISA	**Isabella**	**74.33**	**45**	*e*P	**P**	**01 12 32.6**	**+1.0**
	87nm,2.5s,mb5.2						
MONP	**Monument Peak**	**74.35**	**49**	⇑P	**P**	**01 12 28.9**	**-2.9**
	baz=74						
CMB	**Columbia Colle**	**74.35**	**43**	*e*P	**P**	**01 12 30.8**	**-0.9**
	6.8nm,1.0s,mb4.5						
KSRS	**Korea Array**	**74.43**	**317**	LR	LR	01 41 45.4	
	comp=Z,154nm,18.9s,MS4.3,baz=129,slow=33						
QSPA	**South Pole Qui**	**74.70**	**180**	*e*P	**P**	**01 12 31.6**	**-1.4**
	2.0nm,0.8s,mb4.1						
SWSC	**Sam W. Stewart**	**74.83**	**49**	⇓P	**P**	**01 12 35.2**	**+0.6**
	baz=74						
YBH	**Yreka Blue Hor**	**75.05**	**38**	*e*P	**P**	**01 12 34.8**	**-0.8**
	6.7nm,0.8s,mb4.6						
MTUM	**Tungsten Hills**	**75.18**	**44**	*e*P	**P**	**01 12 37.6**	**+1.2**
BELC	**Belle Mtn. Jos**	**75.21**	**48**	⇓P	**P**	**01 12 34.6**	**-2.1**
	baz=75						
MPMC	**Manual Prospec**	**75.22**	**46**	⇑P	**P**	**01 12 36.5**	**-0.2**
	baz=75,SNR=5.9						
WAKR	**Walker**	**75.23**	**43**	*e*P	**P**	**01 12 37.1**	**+0.4**
HEC	**Hector,Ludlow**	**75.39**	**47**	⇑P	**P**	**01 12 36.1**	**-1.7**
	baz=75						
HUMO	**Hull Mountain**	**75.43**	**38**	*e*P	**P**	**01 12 39.0**	**+1.3**
	75nm,2.3s,mb5.2						
BC3	**Big Chuckawall**	**75.43**	**49**	⇑P	**P**	**01 12 38.9**	**+0.9**
	baz=75						
GLA	**Glamis**	**75.59**	**49**	⇓P	**P**	**01 12 39.3**	**+0.4**
	baz=75						
GLA	**Glamis**	**75.59**	**49**	*e*P	**P**	**01 12 40.2**	**+1.2**
	13nm,1.1s,mb4.8						
FURC	**Furnace Creek,**	**75.87**	**45**	⇓P	**P**	**01 12 39.8**	**-0.6**
	baz=76						
IRM	**Iron Mountain**	**75.90**	**48**	⇑P	**P**	**01 12 41.4**	**+0.7**
	baz=76,SNR=6.5						
PAHR	**Pah Rah Range**	**75.94**	**42**	*e*P	**P**	**01 12 41.9**	**+1.1**
	8.3nm,1.0s,mb4.6						
NVAR	**Mina Array Bea**	**75.94**	**43**	P	**P**	**01 12 39.9**	**-0.9**
	6.4nm,0.9s,mb4.6,baz=226,slow=8.3,SNR=33						
113A	**Mohawk Valley,**	**76.23**	**50**	⇑P	**P**	**01 12 43.2**	**+0.6**
	baz=76						
Z13A	**Yuma Proving G**	**76.52**	**50**	⇑P	**P**	**01 12 44.7**	**+0.5**
	baz=76,SNR=7.6						
214A	**Organ Pipe Nat**	**76.56**	**51**	⇓P	**P**	**01 12 43.9**	**-0.6**
	baz=76						
MOD	**Modoc**	**76.60**	**39**	*e*P	**P**	**01 12 44.0**	**-0.5**
	9.0nm,1.0s,mb4.7						
Y13A	**Salome**	**76.69**	**49**	⇑P	**P**	**01 12 44.9**	**-0.2**
	baz=76,SNR=6.1						
K05A	**Summer Lake**	**76.72**	**38**	P	**P**	**01 12 44.7**	**-0.4**
	baz=76,SNR=9.8						
S10A	**Tonopah Range,**	**76.81**	**44**	⇓P	**P**	**01 12 44.7**	**-1.0**
	baz=76,SNR=7.5						
SHPR	**Sheep Range**	**77.06**	**46**	*e*P	**P**	**01 12 48.4**	**+1.2**
X13A	**Yucca**	**77.06**	**48**	⇓P	**P**	**01 12 47.1**	**-0.2**
	baz=77						
Y14A	**Wickenburg**	**77.35**	**49**	⇑P	**P**	**01 12 48.0**	**-0.9**
	baz=77,SNR=9.7						
T11A	**Corn Creek, Al**	**77.39**	**45**	⇑P	**P**	**01 12 48.4**	**-0.6**
	baz=77,SNR=9.4						
MDJ	**Mudanjiang**	**77.51**	**323**	P	**P**	**01 12 51.0**	**+1.5**
MDJ				pP	pP	01 13 00.6	+0.1
MDJ				sP	sP	01 13 04.3	-0.2
MDJ				PP	PP	01 15 41.6	-3.2
MDJ				S	S	01 22 38.8	+0.7
MDJ				sS	sS	01 22 55.0	-1.2
MDJ				ScS	ScS	01 23 06.3	+1.2
MDJ				SS	SS	01 27 35.4	-2.8
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,340nm,5.0s						
MDJ				LR	LR		
	comp=N,120nm,34.9s,MS4.2						
MDJ				LR	LR		
	comp=E,170nm,31.8s,MS4.2						
MDJ				LR	LR		
	comp=Z,270nm,34.9s,MS4.3						
V13A	**Grand Canyon W**	**77.57**	**47**	⇓P	**P**	**01 12 49.7**	**-0.4**
	baz=77,SNR=6.3						
216A	**Three Points,**	**77.61**	**52**	⇑P	**P**	**01 12 50.7**	**+0.4**
	baz=77						
X14A	**Yava**	**77.69**	**49**	⇓P	**P**	**01 12 50.9**	**+0.2**
	baz=77,SNR=9.0						
R11A	**Troy Canyon, C**	**77.71**	**44**	⇑P	**P**	**01 12 50.4**	**-0.4**
	baz=77						
HOOD	**Mount Hood Mea**	**77.81**	**36**	*e*P	**P**	**01 12 52.0**	**+0.9**
	comp=Z,15nm,1.0s,mb4.9						
Y15A	**Casa Rosa Ranc**	**77.85**	**50**	⇑P	**P**	**01 12 52.2**	**+0.6**
	baz=78,SNR=9.8						
U13A	**Pakoon Wash**	**77.85**	**47**	P	**P**	**01 12 51.5**	**-0.2**
	baz=78,SNR=9.4						

W14A **Seligman** 77.90 48 ⇓P P 01 12 51.5 -0.4
baz=78,SNR=9.9
Q11A **Duckwater** 77.92 44 ⇑P P 01 12 51.4 -0.6
baz=78,SNR=6.7
WVOR **Wild Horse Val** 77.92 40 *e*P P 01 12 50.8 -1.1
comp=Z,5.7nm,1.0s,mb4.5
217A **Green Valley** 77.99 52 ⇑P P 01 12 53.0 +0.5
baz=78,SNR=5.7
V14A **Boquillas Ranc** 78.08 48 ⇑P P 01 12 52.9 0.0
baz=78,SNR=14
X15A **Humboldt** 78.17 49 ⇓P P 01 12 53.9 +0.5
baz=78,SNR=8.8
NJ2 **Nanjing** 78.20 308 *e*P P 01 12 55.8 +2.2
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
TUC **Tucson** 78.25 52 *e*P P 01 12 54.6 +0.7
comp=Z,7.1nm,0.9s,mb4.6
G06A **Carlson Farm,** 78.34 36 ⇑P P 01 12 53.4 -0.7
baz=78
R12A **Pony Springs,** 78.36 45 ⇓P P 01 12 53.8 -0.6
baz=78,SNR=6.4
117A **Oracle** 78.41 51 ⇓P P 01 12 55.2 +0.5
baz=78,SNR=8.7
U14A **Mt Trumbull** 78.41 47 ⇑P P 01 12 54.5 -0.1
baz=78,SNR=13
Q12A **Willow Creek R** 78.57 44 ⇓P P 01 12 54.0 -1.6
baz=78
218A **Dragoon** 78.67 52 ⇓P P 01 12 56.3 +0.1
baz=78,SNR=7.2
X16A **Lo Mia Camp, P** 78.72 50 ⇓P P 01 12 56.4 -0.1
baz=78,SNR=20
R13A **O'Grain Ranch,** 78.72 45 ⇓P P 01 12 56.7 +0.3
baz=78
P12A **McGill** 78.74 44 ⇓P P 01 12 56.2 -0.2
baz=78
CCUT **Cedar City** 78.83 46 *e*P P 01 12 57.6 +0.7
comp=Z,6.2nm,1.0s,mb4.5
V15A **Kaibab Nationa** 78.84 48 ⇑P P 01 12 57.2 +0.1
baz=78,SNR=6.1
ARUT **Antelope Range** 78.89 46 *e*P P 01 12 57.4 +0.1
comp=Z,7.1nm,0.9s,mb4.6
W16A **Flagstaff** 78.97 49 ⇓P P 01 12 58.6 +0.8
baz=79,SNR=5.7
319A **Douglas** 79.00 53 ⇓P P 01 12 59.0 +1.0
baz=79,SNR=9.8
118A **Homack Ranch,** 79.02 52 ⇓P P 01 12 58.8 +0.7
baz=79,SNR=10
U15A **North Rim** 79.04 47 ⇑P P 01 12 57.0 -1.2
baz=79
Q13A **Wheeler Ranch,** 79.07 44 ⇑P P 01 12 57.6 -0.6
baz=79,SNR=7.9
X17A **Forest Lakes** 79.15 50 ⇓P P 01 13 00.1 +1.3
baz=79,SNR=6.0
O12A **Currie** 79.25 43 ⇑P P 01 12 58.8 -0.4
baz=79,SNR=5.3
T15A **Red Dirt Ranch** 79.26 47 ⇓P P 01 12 59.3 0.0
baz=79,SNR=6.3
219A **White Tail Can** 79.28 53 ⇓P P 01 13 00.0 +0.4
baz=79,SNR=13
G08A **Pilot Rock** 79.34 37 P P 01 12 59.0 -0.6
baz=79,SNR=7.6
Y18A **Canyon Day Jun** 79.47 51 ⇓P P 01 13 01.6 +1.0
baz=79,SNR=6.4
TTA **Tatalina** 79.56 9 *e*P P 01 13 01.9 +1.5
320A **Kipp Ranch, An** 79.56 53 ⇓P P 01 13 02.1 +1.0
baz=79,SNR=9.4
119A **Ashpeak Ranch,** 79.58 52 P P 01 13 02.5 +1.3
baz=79,SNR=7.0
Q14A **Sevier Lake (B** 79.59 45 P P 01 13 01.3 +0.2
baz=79,SNR=7.7
HAWA **Hanford** 79.64 36 *e*P P 01 13 00.4 -0.8
comp=Z,10nm,1.1s,mb4.7
U16A **Tuba City** 79.74 48 ⇑P P 01 13 02.2 +0.2
baz=79,SNR=5.7
V17A **Tonalea, Kykot** 79.74 49 ⇓P P 01 13 02.7 +0.7
baz=79,SNR=9.4
220A **Playas Peak, P** 79.80 53 ⇑P P 01 13 03.3 +0.9
baz=80,SNR=7.9
ETW **Entiat** 79.90 35 *e*P P 01 13 03.0 +0.4
P14A **Drum Mountains** 80.03 44 ⇓P P 01 13 02.9 -0.6
baz=80,SNR=11
MSU **Marysvale** 80.11 46 *e*P P 01 13 05.1 +1.1
Y19A **Nutrioso** 80.13 51 ⇑P P 01 13 05.1 +0.9
baz=80,SNR=13
Z20A **Nine Sixteen R** 80.27 52 ⇑P P 01 13 05.6 +0.6
baz=80,SNR=11
X19A **St. Johns** 80.31 50 ⇑P P 01 13 05.3 +0.2
baz=80,SNR=9.3
V18A **Ganado** 80.41 49 ⇑P P 01 13 06.5 +0.9
baz=80,SNR=5.7
DUG **Dugway** 80.49 44 *e*P P 01 13 06.7 +0.7
comp=Z,17nm,1.9s,mb4.7
QIZ **Qiongzhong** 80.63 293 P P 01 13 11.9 +4.8
QIZ S S 01 23 13.8 +1.5
QIZ pmax pmax
comp=Z,20nm,2.3s,mb4.6
QIZ LR LR
comp=E,180nm,26.5s
QIZ LR LR
comp=Z,410nm,24.9s,MS4.7
121A **Cookes Peak, D** 80.64 53 ⇓P P 01 13 07.6 +0.7
baz=80,SNR=10.0
F10A **Beach Ranch, E** 80.73 37 ⇑P P 01 13 06.1 -1.0
baz=80
Y20A **Horse Springs,** 80.77 51 ⇑P P 01 13 09.0 +1.4
baz=80,SNR=12
I12A **Atlanta** 80.82 40 ⇓P P 01 13 07.3 -0.3
baz=80,SNR=7.9
B08A **Colville Reser** 80.89 34 P P 01 13 06.2 -1.6
baz=80,SNR=5.8
X20A **Quemado** 80.95 51 ⇓P P 01 13 09.4 +0.8
baz=81,SNR=6.4
TRF **Thorofare Moun** 81.03 11 *e*P P 01 13 06.8 -1.5
comp=Z,7μm,1.3s
Z21A **St. Cloud Mine** 81.05 52 P P 01 13 10.2 +1.1
baz=81,SNR=12
T18A **Mexican Hat** 81.09 48 ⇓P P 01 13 09.5 +0.3
baz=81,SNR=8.8
HLID **Hailey** 81.14 40 ⇓P P 01 13 08.3 -1.1
baz=81,SNR=15
HLID **Hailey** 81.14 40 *e*P P 01 13 08.9 -0.4
comp=Z,6.7nm,0.8s,mb4.6
TMUT **Trail Mountain** 81.15 45 *e*P P 01 13 10.5 +1.0
comp=Z,12nm,0.9s,mb4.8
W20A **Ramah** 81.20 50 ⇑P P 01 13 10.0 +0.1
baz=81,SNR=7.3
J13A **Cove Ranch, Pi** 81.21 41 ⇑P P 01 13 09.2 -0.5
baz=81,SNR=7.2
SPUT **South Promonto** 81.28 43 *e*P P 01 13 11.1 +1.0
comp=Z,38nm,2.0s,mb5.0
HVU **Hansel Valley** 81.30 42 *e*P P 01 13 11.1 +0.9
comp=Z,56nm,2.3s,mb5.1
Y21A **Point of Rocks** 81.34 51 ⇓P P 01 13 11.9 +1.2
baz=81,SNR=5.3
M15A **Larsen Ranch,** 81.35 43 ⇓P P 01 13 09.6 -0.9
baz=81,SNR=7.6
H12A **Diamond D Ranc** 81.38 39 ⇓P P 01 13 09.9 -0.7
baz=81
G12A **Big Creek, Yel** 81.40 39 ⇓P P 01 13 09.8 -0.9
baz=81
I13A **Wildhorse Cree** 81.51 40 ⇓P P 01 13 10.7 -0.6
baz=81,SNR=6.5
SRU **San Rafael** 81.53 46 ⇓P P 01 13 12.1 +0.6
baz=81
SRU **San Rafael** 81.53 46 *e*P P 01 13 12.5 +0.9
comp=Z,72nm,2.6s,mb5.1
MCK **McKinley** 81.54 12 *e*P P 01 13 10.1 -0.9
comp=Z,9.2nm,1.0s,mb4.7
Z22A **Elephant Butte** 81.57 52 ⇓P P 01 13 12.9 +1.1
baz=81
J14A **Carey** 81.59 41 ⇑P P 01 13 11.3 -0.4
baz=81,SNR=10
F12A **Elk City** 81.77 38 ⇑P P 01 13 11.2 -1.4
baz=81,SNR=14
Y22A **Socorro** 81.85 52 ⇑P P 01 13 13.9 +0.6
baz=82,SNR=7.4
O17A **Robinson Place** 81.89 45 ⇓P P 01 13 12.5 -0.8
baz=82,SNR=5.9
K15A **Arbon** 81.90 42 ⇓P P 01 13 12.2 -1.1
baz=82
LAZ **Ladron** 81.91 51 *e*P P 01 13 14.8 +1.1
comp=Z,22nm,1.9s,mb4.8
324A **Moseley Ranch,** 81.98 54 ⇑P P 01 13 14.4 +0.3
baz=82,SNR=7.5
G13A **Cobalt** 82.04 39 ⇓P P 01 13 13.0 -1.0
baz=82
425A **Indio Mountain** 82.11 55 ⇓P P 01 13 14.7 0.0
baz=82,SNR=14

MNTX **Cornudas Mount** 82.16 54 ⇓P P 01 13 14.2 -0.8
baz=82,SNR=6.3
BNM **Barren Site** 82.19 52 *e*P P 01 13 14.9 -0.2
comp=Z,7.2nm,0.9s,mb4.6
224A **Cornudas Mount** 82.20 54 ⇓P P 01 13 15.3 +0.1
baz=82
LPM **Los Pinos Moun** 82.25 51 *e*P P 01 13 16.3 +0.8
C11A **Tepee Creek (N** 82.31 36 ⇓P P 01 13 14.7 -0.7
baz=82
626A **Big Bend Ranch** 82.32 57 ⇓P P 01 13 15.6 -0.3
baz=82,SNR=9.2
H14A **Leadore** 82.33 40 ⇓P P 01 13 16.1 +0.6
baz=82
PV04 **Paradox Valley** 82.34 47 *e*P P 01 13 17.2 +1.4
F13A **Darby** 82.34 38 ⇑P P 01 13 15.4 -0.2
baz=82,SNR=6.1
325A **Bean Ranch, Si** 82.35 55 P P 01 13 16.0 0.0
baz=82,SNR=11
U21A **Nageezi** 82.38 49 ⇓P P 01 13 17.0 +0.9
baz=82,SNR=8.5
PV01 **Paradox Valley** 82.46 47 *e*P P 01 13 16.1 -0.3
comp=Z,1μm,1.6s
S20A **Disappointment** 82.48 48 ⇑P P 01 13 15.6 -0.9
baz=82
124A **Stringfield Ra** 82.50 53 ⇓P P 01 13 16.0 -0.8
baz=82
Y23A **Lovelace Mesa,** 82.53 52 ⇑P P 01 13 16.6 -0.3
baz=82
526A **Mary Lane Ranc** 82.55 56 ⇓P P 01 13 16.9 -0.2
baz=82,SNR=12
K16A **Soda Springs** 82.58 42 ⇓P P 01 13 16.8 -0.1
baz=82,SNR=6.8
TXAR **Lajitas Array** 82.62 57 P P 01 13 17.2 -0.2
comp=Z,3.4nm,0.9s,mb4.4,baz=224,slow=3.5,SNR=20
TXAR LR LR 01 41 39.0
comp=Z,189nm,21.4s,MS4.4,baz=20,slow=30
ANMO **Albuquerque** 82.64 51 *e*P P 01 13 17.7 +0.2
comp=Z,15nm,1.4s,mb4.8
MCMT **McKenzie Canyo** 82.76 40 *e*P P 01 13 17.9 +0.2
comp=Z,2.8nm,1.0s,mb4.2
225A **Deer Hill, Car** 82.76 54 ⇑P P 01 13 18.4 +0.2
baz=82,SNR=10
E13A **Victor** 82.76 38 ⇑P P 01 13 15.9 -1.9
baz=82
COLA **College** 82.78 12 *e*P P 01 13 15.5 -1.9
comp=Z,9.6nm,0.9s,mb4.8
S21A **Coal Bank Pass** 82.81 48 ⇓P P 01 13 18.4 +0.1
baz=82,SNR=8.1
Z24A **Sheeppen Canyo** 82.82 53 ⇑P P 01 13 19.1 +0.7
baz=82
426A **McDonald Obser** 82.83 56 ⇑P P 01 13 19.0 +0.4
baz=83,SNR=14
ILAR **Eielson Array** 82.88 12 P P 01 13 15.8 -2.2
comp=Z,2.8nm,1.1s,mb4.2,baz=237,slow=6.7,SNR=14
ILAR LR LR 01 43 37.5
comp=Z,146nm,20.2s,MS4.3,baz=200,slow=31
627A **Terlingua Ranc** 82.89 57 ⇓P P 01 13 19.4 +0.6
baz=83,SNR=7.1
W23A **Werner Place,** 82.96 51 ⇓P P 01 13 19.7 +0.6
baz=83
527A **Woodward Ranch** 82.97 56 ⇑P P 01 13 19.4 +0.2
baz=83,SNR=6.7
K17A **Gardner Place,** 82.97 42 ⇑P P 01 13 19.2 +0.3
baz=83
RRI2 **Red Ridge** 83.00 42 *e*P P 01 13 18.9 -0.2
comp=Z,10nm,0.8s,mb4.9
Y24A **Capitan** 83.00 52 P P 01 13 19.7 +0.3
baz=83,SNR=14
125A **Gardner Draw,** 83.10 54 ⇓P P 01 13 19.8 -0.1
baz=83
I16A **Newdale** 83.14 41 ⇓P P 01 13 19.5 -0.3
baz=83
G15A **Dillon** 83.14 40 ⇓P P 01 13 19.3 -0.5
baz=83,SNR=10
BSMT **Bassoo Peak** 83.15 36 *e*P P 01 13 19.6 -0.1
DLMT **Dillon** 83.18 39 *e*P P 01 13 19.6 -0.4
comp=Z,6.7nm,0.9s,mb4.7
P20A **De Beque** 83.19 46 ⇓P P 01 13 20.5 +0.4
baz=83,SNR=7.2
R21A **Cimarron** 83.29 47 P P 01 13 21.1 +0.5
baz=83,SNR=5.4
Z25A **Roswell** 83.30 53 ⇑P P 01 13 21.1 +0.2
baz=83,SNR=6.2
TPAW **Teton Pass** 83.30 42 *e*P P 01 13 20.4 -0.2
comp=Z,8.5nm,0.9s,mb4.8
REDW **Red Top Meadow** 83.30 42 *e*P P 01 13 21.4 +0.7
comp=Z,9.6nm,1.1s,mb4.7
628A **Black Gap, Mar** 83.30 57 ⇓P P 01 13 19.5 -1.5
baz=83,SNR=6.1
226A **Malaga, Loving** 83.31 54 P P 01 13 21.2 +0.3
baz=83,SNR=13
427A **Hayter Ranch,** 83.40 56 ⇓P P 01 13 21.2 -0.2
baz=83,SNR=7.5
U23A **El Rito** 83.41 50 ⇓P P 01 13 22.1 +0.7
baz=83,SNR=9.4
SNOW **Snow King Moun** 83.41 42 *e*P P 01 13 22.1 +0.9
comp=Z,10.0nm,0.8s,mb4.9
K18A **Toltan Ranch,** 83.49 43 ⇓P P 01 13 22.2 +0.5
baz=83,SNR=7.7
LRM **Limekiln Ridge** 83.49 39 *e*P P 01 13 21.2 -0.4
IMW **Indian Meadow** 83.50 41 *e*P P 01 13 21.9 +0.2
comp=Z,8.2nm,0.8s,mb4.8
S22A **4UR Ranch, Cre** 83.54 48 ⇑P P 01 13 22.5 +0.5
baz=83,SNR=11
W24A **Lazy 6 Ranch,** 83.54 51 ⇓P P 01 13 21.1 -1.0
baz=83,SNR=6.6
MOOW **Moose Ponds** 83.55 41 *e*P P 01 13 22.7 +0.8
comp=Z,7.7nm,1.3s,mb4.7
CHMT **Chamberlain Mo** 83.56 38 *e*P P 01 13 21.7 -0.2
O20A **White River Ci** 83.57 46 ⇑P P 01 13 22.8 +0.7
baz=83
Y25A **Mesa, Roswell** 83.57 52 ⇑P P 01 13 21.8 -0.4
baz=83,SNR=9.5
LOHW **Long Hollow** 83.58 42 *e*P P 01 13 21.9 -0.2
comp=Z,49nm,2.3s,mb5.2
126A **Clayton Basin,** 83.59 54 ⇓P P 01 13 21.9 -0.5
baz=83,SNR=5.1
528A **Cox Ranch, San** 83.63 57 ⇓P P 01 13 22.4 -0.3
baz=83,SNR=10.0
H16A **Russell Place,** 83.69 40 ⇑P P 01 13 21.6 -1.0
baz=83,SNR=12
FLWY **Flagg Ranch** 83.74 41 *e*P P 01 13 23.9 +1.1
comp=Z,7.0nm,0.8s,mb4.8
J18A **Kendall Valley** 83.77 42 ⇑P P 01 13 22.3 -0.8
baz=83,SNR=23
R22A **Saguache, Gunn** 83.79 48 ⇓P P 01 13 23.7 +0.4
baz=84,SNR=6.9
N20A **Spence Gulch,** 83.86 45 ⇓P P 01 13 23.2 -0.4
baz=84,SNR=6.3
BW06 **Boulder Array** 83.86 43 ⇑P P 01 13 22.3 -1.3
baz=84,SNR=11
BW06 **Boulder Array** 83.86 43 *e*P P 01 13 22.9 -0.7
comp=Z,7.1nm,0.8s,mb4.8
PDAR **Pinedale Array** 83.86 43 P P 01 13 22.4 -1.2
comp=Z,6.5nm,0.8s,mb4.8,baz=221,slow=3.0,SNR=50
PDAR LR LR 01 43 02.9
comp=Z,130nm,19.0s,MS4.3,baz=251,slow=30
Z26A **Caprock** 83.86 53 P P 01 13 23.6 -0.2
baz=84,SNR=17
BOZ **Bozeman (W)** 83.91 39 *e*P P 01 13 24.5 +0.8
comp=Z,19nm,2.0s,mb4.9
428A **Kincaid Ranch,** 83.92 56 ⇑P P 01 13 23.8 -0.4
baz=84
A13A **Flathead Natio** 83.93 36 ⇑P P 01 13 23.1 -0.6
baz=84
DAWY **Dawson** 83.99 15 *e*P P 01 13 23.5 -0.2
SMCO **Snowmass** 84.04 47 *e*P P 01 13 24.9 +0.3
comp=Z,11nm,1.1s,mb4.9
D15A **Lin Colo** 84.06 38 ⇑P P 01 13 23.6 -0.8
baz=84
328A **Wristen Ranch,** 84.07 55 ⇓P P 01 13 24.8 -0.1
baz=84,SNR=5.7
127A **Arkansas Junct** 84.12 54 ⇑P P 01 13 25.0 -0.1
baz=84
EGAK **Eagle** 84.14 14 *e*P P 01 13 25.7 +1.3
comp=Z,9.9nm,1.1s,mb4.8
W25A **X Bar L Ranch,** 84.25 51 ⇓P P 01 13 25.3 -0.4
baz=84
HRY **Holter Researc** 84.31 38 *e*P P 01 13 25.8 +0.1
L20A **Wamsutter** 84.33 44 ⇓P P 01 13 25.1 -0.8
baz=84,SNR=11
N21A **Black Mountain** 84.34 45 ⇑P P 01 13 26.6 +0.6
baz=84,SNR=5.7
K19A **Absolon Red Bu** 84.36 43 ⇓P P 01 13 25.2 -0.9
baz=84,SNR=5.1
C15A **Salmond Ranch,** 84.37 37 ⇓P P 01 13 25.0 -1.0
baz=84
COLD **Coldfoot** 84.48 10 *e*P P 01 13 25.3 -0.9

comp=Z,149nm,1.1s
SDCO **Great Sand Dun** 84.50 49 *e*P P 01 13 27.1 +0.3
comp=Z,53nm,2.8s,mb5.2
K20A **Yellowstone Ra** 84.61 43 ⇑P P 01 13 25.8 -1.6
baz=84,SNR=5.2
O22A **Kremmling** 84.75 46 ⇓P P 01 13 28.1 0.0
baz=84,SNR=6.3
M21A **Separation Pea** 84.81 45 ⇑P P 01 13 27.7 -0.7
baz=84
G18A **Lazy EL Ranch,** 85.03 40 ⇑P P 01 13 30.1 +0.7
baz=85
N22A **Wattenberg Ran** 85.09 46 ⇑P P 01 13 30.1 +0.4
baz=85,SNR=5.2
RLMT **Red Lodge** 85.13 41 *e*P P 01 13 30.7 +0.8
comp=Z,4.3nm,0.9s,mb4.6
D17A **Six Diamond Ra** 85.20 38 ⇑P P 01 13 30.0 -0.2
baz=85,SNR=5.7
E18A **Harlowton** 85.40 39 ⇓P P 01 13 32.0 +0.8
baz=85
F19A **Roth Farm, Mol** 85.67 40 ⇓P P 01 13 31.3 -1.3
baz=85
I21A **Big Trails, Te** 85.81 43 ⇓P P 01 13 32.7 -0.6
baz=86
E19A **Rath Farm, Rou** 86.04 40 ⇑P P 01 13 34.8 +0.4
baz=86,SNR=5.2
L23A **Garrett** 86.15 45 ⇑P P 01 13 34.5 -0.5
baz=86
JCT **Junction City** 86.16 57 *e*P P 01 13 35.2 -0.2
comp=Z,7.0nm,0.9s,mb4.9
E20A **Meyer Farm, Mu** 86.46 40 ⇑P P 01 13 37.3 +0.8
baz=86
D20A **Manuel Ranch,** 86.72 39 ⇑P P 01 13 38.1 +0.3
baz=86
MAW **Mawson** 87.06 199 LR LR 01 49 59.8
comp=Z,330nm,18.5s,MS4.8,baz=112,slow=34
HHC **Hu-ho-hao-te** 87.21 314 *e*P P 01 13 42.1 +1.8
HHC pP pP 01 13 52.5 +1.1
HHC sP sP 01 13 56.6 +1.2
HHC PP PP 01 17 07.6 +2.9
HHC SKS 01 24 04.0
HHC S S 01 24 16.8 -0.8
HHC SS SS 01 30 04.4 +1.9
HHC pmax pmax
comp=Z,24nm,0.8s,mb5.5
HHC pmax pmax
comp=Z,120nm,4.2s
HHC LR LR
comp=N,170nm,15.5s,MS4.7
HHC LR LR
comp=E,130nm,15.5s,MS4.7
HHC LR LR
comp=Z,130nm,15.5s,MS4.4
KMI **Kunming** 88.81 296 P P 01 13 50.6 +2.4
KMI pP pP 01 14 02.4 +3.0
KMI sP sP 01 14 06.3 +2.9
KMI PP PP 01 17 22.0 +4.1
KMI S S 01 24 32.6 -0.9
KMI sS sS 01 24 52.1 +0.1
KMI SS SS 01 30 28.4 +1.9
KMI pmax pmax
comp=Z,4.0nm,1.0s,mb4.7
KMI pmax pmax
comp=Z,31nm,3.1s
KMI LR LR
comp=N,130nm,21.4s,MS4.6
KMI LR LR
comp=E,200nm,23.8s,MS4.6
KMI LR LR
comp=Z,260nm,24.5s,MS4.6
CMAR **Chiang Mai Arr** 90.28 289 LR LR 01 50 00.9
comp=Z,152nm,19.0s,MS4.5,baz=109,slow=33
YKA **Yellowknife Ar** 91.03 24 LR LR 01 47 43.6
comp=Z,25nm,19.2s,MS3.7,baz=125,slow=31
PLCA **Paso Flores** 91.35 133 LR LR 01 45 30.9
comp=Z,284nm,20.9s,MS4.7,baz=282,slow=29
SONM **Songino Array** 93.19 319 LR LR 01 51 02.0
comp=Z,157nm,21.7s,MS4.4,baz=269,slow=32
ULM **Lac du Bonnet** 95.43 39 LR LR 01 52 00.4
comp=Z,296nm,19.0s,MS4.8,baz=286,slow=32
NNA **Nana** 95.44 104 LR LR 01 48 45.3
comp=Z,64nm,19.2s,MS4.1,baz=274,slow=30
BVAR **Borovoye Array** 116.34 322 PKP PKPdf 01 19 35.8 -1.4
comp=Z,0.7nm,0.7s,baz=96,slow=1.5,SNR=4.3
ARCES **ARCESS Array B** 124.19 351 PKP PKPdf 01 19 48.2 -3.6
comp=Z,4.0nm,0.8s,baz=354,slow=3.7,SNR=10
FINES **FINESS Array B** 131.33 346 PKP PKPdf 01 20 04.2 -1.4
comp=Z,1.5nm,0.8s,baz=79,slow=7.2,SNR=3.3
NOA **NORSAR Array B** 134.08 355 PKP PKPdf 01 20 11.0 +0.2
comp=Z,1.3nm,0.8s,baz=13,slow=4.1,SNR=5.0
VRI **Vrincioaia** 144.12 333 ⇑P PKPdf 01 20 33.6 +4.0
VRI **Vrincioaia** 144.12 333 ⇑/P PKPdf 01 20 33.6 +4.0
PLOR **Plostina** 144.16 333 ⇑/P PKPdf 01 20 32.4 +2.7
BRTR **Keskin Array B** 144.54 319 PKP PKPdf 01 20 29.1 -1.4
comp=Z,12nm,0.9s,baz=96,slow=2.9,SNR=44
MLR **Muntele Rosu** 144.76 333 ⇑P PKPdf 01 20 29.7 -1.0
MLR **Muntele Rosu** 144.76 333 ⇑/P PKPdf 01 20 29.7 -1.0
VYHS **Vyhne** 144.78 343 *e*P PKPdf 01 20 30.3 -0.3
VYHS **Vyhne** 144.78 343 *e*PKP PKPdf 01 20 30.3 -0.3
VOIR 145.19 334 ⇓P PKPbc 01 20 31.5 +0.5
VOIR 145.19 334 ⇓/P PKPbc 01 20 31.5 +0.4
SULR 145.25 332 ⇑P PKPbc 01 20 31.0 -0.2
SULR 145.25 332 ⇑/P PKPbc 01 20 31.0 -0.3
GIVF **Givet** 145.33 359 *e*PKP1 PKPbc 01 20 30.7 -0.6
DOU **Dourbes** 145.34 359 PKP PKPdf 01 20 32.5 +0.9
BAIF **Baives** 145.38 360 *e*PKP1 PKPbc 01 20 30.9 -0.6
comp=Z,67nm,1.4s
KHC **Kasperske Hory** 145.42 349 *e*PKPdf PKPdf 01 20 31.2 -0.5
KHC **Kasperske Hory** 145.42 349 *e*PKP PKPdf 01 20 31.4 -0.3
ZST **Bratislava** 145.52 345 *e*P PKPdf 01 20 34.5 +2.6
ZST **Bratislava** 145.52 345 *e*PKP PKPdf 01 20 34.5 +2.6
WLF **Walferdange** 145.73 358 PKP PKPdf 01 20 32.8 +0.6
WLF **Walferdange** 145.73 358 *e*PKPbc PKPbc 01 20 32.4 -0.2
GZR **Gura Zlata** 146.15 336 ⇑P PKPdf 01 20 33.1 0.0
GZR **Gura Zlata** 146.15 336 ⇑/P PKPdf 01 20 33.1 0.0
STU **Stuttgart** 146.40 354 *e*PKPbc PKPbc 01 20 34.9 +0.2
BZS **Buzias** 146.40 338 ⇓P PKPdf 01 20 34.0 +0.5
BZS **Buzias** 146.40 338 ⇓/P PKPdf 01 20 34.0 +0.5
FLN **La Foliniere** 146.46 5 *e*PKP1 PKPdf 01 20 32.7 -0.8
comp=Z,16nm,0.8s
FLN *e*MLR MLR
comp=Z,183nm,21.2s,MS4.5
FLN **La Foliniere** 146.46 5 *e*PKP PKPdf 01 20 32.7 -0.8
FLN LR LR
comp=Z,180nm,21.3s,MS4.8
ROSF **Rostrenen** 146.55 9 *e*PKP1 PKPbc 01 20 33.5 -1.6
comp=Z,56nm,1.3s
MMAI **Mount Meron Ar** 146.62 307 PKPbc PKPbc 01 20 35.9 0.0
comp=Z,6.7nm,0.8s,baz=61,slow=5.2,SNR=7.0
LDF **La Druitiere** 146.66 5 *e*PKP1 PKPbc 01 20 33.6 -1.9
comp=Z,7.6nm,1.0s
SGMF **Saint Gilles** 146.73 8 *e*PKP1 PKPbc 01 20 34.0 -1.7
GRR **Gorron** 146.80 6 *e*PKP1 PKPbc 01 20 35.1 -0.8
comp=Z,52nm,1.2s
PKSM **Moragy** 146.89 341 ⇓P PKPdf 01 20 33.8 -0.5
PKSM **Moragy** 146.89 341 ⇓/P PKPdf 01 20 33.8 -0.5
CDF **Champ du Feu** 146.92 356 *e*PKP1 PKPbc 01 20 35.1 -1.1
comp=Z,15nm,0.9s
BFO **Black Forest** 146.92 355 *e*PKPbc PKPbc 01 20 35.3 -0.9
MEZF **Maizieres J'vi** 146.93 359 *e*PKP1 PKPbc 01 20 36.2 0.0
QUIF **Quistinic** 146.97 9 *e*PKP1 PKPbc 01 20 35.4 -1.0
comp=Z,27nm,1.1s
SFTF **Sexfontaines** 147.22 359 *e*PKP1 PKPbc 01 20 36.1 -1.0
comp=Z,52nm,1.2s
HAU **Haudompre** 147.38 357 *e*PKP1 PKPbc 01 20 37.0 -0.5
comp=Z,9.7nm,0.8s
HAU *e*MLR MLR
comp=Z,151nm,22.5s,MS4.4
HAU **Haudompre** 147.38 357 *e*PKP PKPdf 01 20 37.0 +1.9
HAU LR LR
comp=Z,150nm,22.5s,MS4.7
LOR **Lormes** 148.17 0 *e*PKP1 PKPbc 01 20 38.5 -1.2
comp=Z,9.9nm,0.8s
LOR *e*MLR MLR
comp=Z,170nm,20.5s,MS4.5
LOR **Lormes** 148.17 0 *e*PKP PKPbc 01 20 38.5 -1.2
LOR LR LR
comp=Z,170nm,20.5s,MS4.8
VTS **Vitosha** 148.26 333 ⇓P PKPbc 01 20 39.1 -1.0
VTS **Vitosha** 148.26 333 ⇓/P PKPbc 01 20 39.1 -1.0
SSF **Saint Saulge** 148.37 1 *e*PKP1 PKPbc 01 20 39.2 -1.0
comp=Z,22nm,1.2s
MFF **Saint Martin d** 148.64 6 *e*PKP1 PKPbc 01 20 39.6 -1.3
comp=Z,129nm,1.9s
CABF **La Chapelle** 148.78 357 *e*PKP1 PKPbc 01 20 40.8 -0.5
comp=Z,40nm,1.1s
BGF **Bois d'Agland** 148.86 2 *e*PKP1 PKPbc 01 20 41.1 -0.4

	comp=Z,18nm,1.0s								
TCF	**Toulx Ste Croi**	**149.11**	**3**	*e*PKP1	PKPbc	01 20 40.8	-1.3
LPL	**La Plagne**	**149.84**	**356**	*e*PKP1	PKPbc	01 20 44.6	+0.7
	comp=Z,39nm,1.3s								
LPG	**La Plagne**	**149.85**	**356**	*e*PKP1	PKPbc	01 20 43.9	-0.1
	comp=Z,36nm,1.2s								
LFF	**La Frestale**	**150.36**	**5**	*e*PKP1	PKPbc	01 20 44.0	-1.2
CAF	**Calviac**	**150.46**	**3**	*e*PKP1	PKPbc	01 20 45.2	-0.3
	comp=Z,6.4nm,0.8s								
ORIF	**Oris-en-Rattie**	**150.48**	**357**	*e*PKP1	PKPbc	01 20 44.7	-0.8
ORIF				*e*MLR	MLR				
	comp=Z,186nm,21.5s,MS4.5								
VIVF	**Saint-Julien-l**	**150.58**	**359**	*e*PKP1	PKPbc	01 20 45.7	0.0
	comp=Z,47nm,1.4s								
MBDF	**Montbardon**	**150.62**	**356**	*e*PKP1	PKPbc	01 20 45.7	-0.2
SMRF	**Simiane la Rot**	**151.43**	**358**	*e*PKP1	PKPbc	01 20 47.4	-0.4
ETSF	**Etsaut**	**152.25**	**7**	*e*PKP1	PKPbc	01 20 48.1	-1.6
	comp=Z,6.2nm,0.9s								
ESDC	**Sonseca Array**	**154.76**	**15**	PKPbc	PKPbc	01 20 54.8	-0.4
	comp=Z,0.2nm,0.5s,baz=331,slow=2.3,SNR=3.4								
ESDC				PKPab	PKPab	01 21 08.4	-1.7
	comp=Z,0.3nm,0.7s,baz=323,slow=2.6,SNR=4.4								

*IDC **24** 01:12:13.8±3.7,7.°28S×107.°01E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/18, mbtmp3.8/4, Error ellipse: s-maj=215.8km s-min=24.9km az=51.0*
*ISCJB **24** 01:12:19.0±0.6,6.°8S±0.°1×106.°47E±0.°07, h115km±5km, mb3.7/4, Error ellipse: s-maj=20.3km s-min=6.1km az=31.7*
*DJA **24** 01:12:21, 6.°82S×106.°46E, h92km, MLv3.7/10*

ISC 24 01:12:20.1±0.6, 6.°8S±0.°1×106.°47E±0.°07, h109km±5km, n16, σ0.947/23, mb3.7/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.19**	**152**	P	**Pn**	**01 12 34.6**	**-0.8**
SKJI				S	**Sn**	**01 12 46.9**	**+0.1**
DBJI	**Dramaga**	**0.40**	**45**	P	**Pn**	**01 12 36.0**	**-0.2**
DBJI				S	**Sn**	**01 12 48.6**	**+0.3**
CBJI	**Citeko**	**0.56**	**43**	P	**Pn**	**01 12 36.6**	**-0.7**
CBJI				S	**Sn**	**01 12 49.8**	**-0.4**
SBJI	**Serang**	**0.79**	**335**	P	**Pn**	**01 12 38.8**	**-0.3**
SBJI				S	**Sn**	**01 12 53.4**	**0.0**
LEM	**Lembang**	**1.14**	**90**	P	**Pn**	**01 12 42.9**	**+0.2**
LEM				S	**Sn**	**01 13 00.4**	**+0.5**
RBSI	**Rajabasa**	**1.22**	**324**	P	**Pn**	**01 12 43.4**	**-0.2**
CISI	**Cisompet, Garu**	**1.52**	**118**	P	**Pn**	**01 12 46.9**	**-0.2**
CISI				S	**Sn**	**01 13 07.9**	**+0.3**
CMJI	**Cimerak**	**2.18**	**116**	P	**Pn**	**01 12 55.7**	**+0.4**
KASI	**Kota Agung**	**2.35**	**304**	P	**Pn**	**01 12 58.1**	**+0.5**
KASI				S	**Sn**	**01 13 26.9**	**+0.6**
KLSI		**2.74**	**321**	P	**Pn**	**01 13 03.2**	**+0.5**
MDSI	**Maura Dua**	**3.26**	**316**	P	**Pn**	**01 13 08.2**	**+0.5**
MNAI	**Manna**	**4.27**	**305**	P	**Pn**	**01 13 22.2**	**-0.9**
WRA	**Warramunga Arr**	**30.02**	**118**	P	**P**	**01 18 18.3**	**-0.5**
	0.4nm,0.4s,mb3.4,baz=290,slow=10.0,SNR=5.4						
ASAR	**Alice Springs**	**31.21**	**125**	P	**P**	**01 18 29.0**	**-0.4**
	0.4nm,0.4s,mb3.5,baz=293,slow=7.4,SNR=8.1						
STKA	**Stephens Creek**	**41.14**	**132**	P	**P**	**01 19 54.4**	**+0.6**
	4.6nm,0.5s,mb4.5,baz=297,slow=6.5,SNR=12						
MKAR	**Makanchi Array**	**57.55**	**341**	P	**P**	**01 22 09.3**	**+11**
	0.2nm,0.5s,mb3.4,baz=165,slow=6.0,SNR=2.8						

*ISCJB **24** 01:28:01.0±0.4, 38.°02N±0.°02×21.°56E±0.°03, h3km±5km, Error ellipse: s-maj=3.7km s-min=3.2km az=15.8*
*NEIC **24** 01:28:01.4, 38.°03N×21.°58E, h14km, MD2.9(ATH), After ATH.*
*ATH **24** 01:28:01.4, 38.°03N×21.°58E, h14km±1km, MD2.9/17*
*CSEM **24** 01:28:01.3±0.2, 38.°03N×21.°56E, h8km, MD2.9, Error ellipse: s-maj=3.3km s-min=3.0km az=107.0*
*THE **24** 01:28:01.3, 38.°04N×21.°55E, h0km±2km, ML2.2/5, Error ellipse: s-maj=2.4km s-min=0.8km az=266.0*

ISC 24 01:28:01.6±0.4, 38.°04N±0.°02×21.°56E±0.°03, h9km±4km, n66, σ0.998/118, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.07**	**288**	*e*Pg	**Pg**	**01 28 04.2**	**+0.4**
RLS				*e*Sg	**Sg**	**01 28 06.9**	**+1.6**
RLS	**Riolos of Patr**	**0.07**	**288**	*e*PG	**Pg**	**01 28 04.2**	**+0.4**
RLS				*e*SG	**Sg**	**01 28 06.9**	**+1.6**
RLS	**Riolos of Patr**	**0.07**	**288**	*e*Pg	**Pg**	**01 28 04.2**	**+0.4**
RLS				*e*Sg	**Sg**	**01 28 06.9**	**+1.6**
UPR	**University Cam**	**0.31**	**36**	*e*PB	**Pg**	**01 28 07.8**	**+0.1**
UPR				*e*SB	**Sg**	**01 28 13.1**	**+1.2**
UPR	**University Cam**	**0.31**	**36**	P	**Pg**	**01 28 08.0**	**+0.3**
UPR				S	**Sg**	**01 28 12.8**	**+0.9**
UPR	**University Cam**	**0.31**	**36**	*e*Pb	**Pg**	**01 28 07.8**	**+0.1**
UPR				S	**Sg**	**01 28 12.8**	**+0.9**
UPR				*e*Sb	**Sg**	**01 28 13.1**	**+1.2**
LAKA	**Lakka**	**0.39**	**58**	P	**Pg**	**01 28 09.1**	**-0.2**
LAKA				S	**Sg**	**01 28 15.3**	**+0.8**
LAKA	**Lakka**	**0.39**	**58**	P	**Pg**	**01 28 09.1**	**-0.2**
LAKA				S	**Sg**	**01 28 15.3**	**+0.8**
EFP	**Efpalio**	**0.48**	**35**	*e*PB	**Pg**	**01 28 10.6**	**-0.3**
EFP				*e*SB	**Sg**	**01 28 17.7**	**+0.5**
EFP	**Efpalio**	**0.48**	**35**	P	**Pg**	**01 28 10.6**	**-0.3**
EFP				S	**Sg**	**01 28 18.5**	**+1.3**
EFP	**Efpalio**	**0.48**	**35**	P	**Pg**	**01 28 10.6**	**-0.3**
EFP				*e*Sb	**Sg**	**01 28 17.7**	**+0.5**
EFP				S	**Sg**	**01 28 18.5**	**+1.3**
TRIZ	**Trizonia**	**0.52**	**51**	P	**Pg**	**01 28 11.2**	**-0.6**
TRIZ				S	**Sg**	**01 28 18.6**	**-0.1**
TRIZ	**Trizonia**	**0.52**	**51**	P	**Pg**	**01 28 11.2**	**-0.6**
TRIZ				S	**Sg**	**01 28 18.6**	**-0.1**
KALE	**Kalithea**	**0.58**	**52**	P	**Pg**	**01 28 12.3**	**-0.6**
KALE				S	**Sg**	**01 28 21.4**	**+0.9**
KALE	**Kalithea**	**0.58**	**52**	P	**Pg**	**01 28 12.3**	**-0.6**
KALE				S	**Sg**	**01 28 21.4**	**+0.9**
KFL	**Anninata**	**0.61**	**277**	P	**Pg**	**01 28 13.2**	**-0.3**
KFL	**Anninata**	**0.61**	**277**	P	**Pg**	**01 28 13.2**	**-0.3**
GUR	**Goura**	**0.63**	**99**	*e*PB	**Pg**	**01 28 13.2**	**-0.6**
GUR				*e*SB	**Sg**	**01 28 22.5**	**+0.5**
GUR	**Goura**	**0.63**	**99**	P	**Pg**	**01 28 13.2**	**-0.6**
GUR				S	**Sg**	**01 28 22.8**	**+0.8**
GUR	**Goura**	**0.63**	**99**	P	**Pg**	**01 28 13.2**	**-0.6**
GUR				*e*Sb	**Sg**	**01 28 22.5**	**+0.5**
GUR				S	**Sg**	**01 28 22.8**	**+0.8**
VLS	**Valsamata**	**0.78**	**281**	P	**Pg**	**01 28 15.3**	**-1.3**
VLS				S	**Sg**	**01 28 27.6**	**+0.9**
VLS	**Valsamata**	**0.78**	**281**	P	**Pg**	**01 28 15.3**	**-1.3**
VLS				S	**Sg**	**01 28 27.6**	**+0.9**
DSF	**Desfina**	**0.85**	**64**	P	**Pg**	**01 28 16.7**	**-1.3**
DSF				S	**Sg**	**01 28 29.4**	**+0.3**
DSF	**Desfina**	**0.85**	**64**	P	**Pg**	**01 28 16.7**	**-1.3**
DSF				S	**Sg**	**01 28 29.4**	**+0.3**
EVR	**Evrytania**	**0.90**	**13**	*e*Pb	**Pg**	**01 28 19.0**	**0.0**
EVR				*e*Sb	**Sg**	**01 28 31.1**	**+0.4**
EVR	**Evrytania**	**0.90**	**13**	*e*PB	**Pg**	**01 28 19.0**	**0.0**
EVR				*e*SB	**Sg**	**01 28 31.1**	**+0.4**
EVR	**Evrytania**	**0.90**	**13**	*e*Pb	**Pg**	**01 28 19.0**	**0.0**
EVR				*e*Sb	**Sg**	**01 28 31.1**	**+0.4**
ITM	**Ithomi**	**0.90**	**161**	*e*Pg	**Pg**	**01 28 18.0**	**-1.0**
ITM				*e*Sb	**Sg**	**01 28 31.3**	**+0.6**
ITM	**Ithomi**	**0.90**	**161**	*e*PG	**Pg**	**01 28 18.0**	**-1.0**
ITM				*e*SB	**Sg**	**01 28 31.3**	**+0.6**
ITM	**Ithomi**	**0.90**	**161**	*e*Pg	**Pg**	**01 28 18.0**	**-1.0**
ITM				*e*Sb	**Sg**	**01 28 31.3**	**+0.6**
VLX	**Vlachokerasia**	**0.93**	**135**	*e*PG	**Pg**	**01 28 18.6**	**-0.9**
VLX				*e*SB	**Sg**	**01 28 31.5**	**-0.1**
VLX	**Vlachokerasia**	**0.93**	**135**	P	**Pg**	**01 28 19.1**	**-0.4**
VLX				S	**Sg**	**01 28 33.5**	**+1.9**
VLX	**Vlachokerasia**	**0.93**	**135**	*e*Pg	**Pg**	**01 28 18.6**	**-0.9**
VLX	**Vlachokerasia**	**0.93**	**135**	P	**Pg**	**01 28 19.1**	**-0.4**
VLX				*e*Sb	**Sg**	**01 28 31.5**	**-0.1**
VLX				S	**Sg**	**01 28 33.5**	**+1.9**
LTK	**Loutraki**	**1.11**	**90**	*e*PG	**Pg**	**01 28 21.7**	**-1.3**
LTK	**Loutraki**	**1.11**	**90**	P	**Pg**	**01 28 21.9**	**-1.1**
LTK				S	**Sg**	**01 28 38.5**	**+1.0**
LTK	**Loutraki**	**1.11**	**90**	P	**Pg**	**01 28 21.9**	**-1.1**
LTK				S	**Sg**	**01 28 38.5**	**+1.0**
PYL	**PYLOS**	**1.15**	**173**	*e*PG	**Pg**	**01 28 22.8**	**-0.8**
PYL				*e*SB	**Sg**	**01 28 39.3**	**+0.8**
PYL	**PYLOS**	**1.15**	**173**	*e*Pg	**Pg**	**01 28 22.8**	**-0.8**
PYL				*e*Sb	**Sg**	**01 28 39.3**	**+0.8**
AGG	**Agios Georgios**	**1.16**	**31**	*e*Pg	**Pg**	**01 28 22.7**	**-1.2**
AGG				*e*Sb	**Sb**	**01 28 38.9**	**0.0**
AGG	**Agios Georgios**	**1.16**	**31**	*e*PG	**Pg**	**01 28 22.7**	**-1.2**
AGG				*e*SB	**Sb**	**01 28 38.9**	**0.0**
AGG	**Agios Georgios**	**1.16**	**31**	*e*Pg	**Pg**	**01 28 22.7**	**-1.2**
AGG				*e*Sb	**Sb**	**01 28 38.9**	**0.0**
AGG				S	**Sb**	**01 28 40.0**	**+1.1**
LKR	**Lokris**	**1.29**	**61**	*e*Pn	**Pn**	**01 28 24.9**	**-0.9**
LKR				*e*Sb	**Sb**	**01 28 42.9**	**+0.2**
LKR	**Lokris**	**1.29**	**61**	*e*PN	**Pn**	**01 28 24.9**	**-0.9**
LKR				*e*SB	**Sb**	**01 28 42.9**	**+0.2**
LKR	**Lokris**	**1.29**	**61**	P	**Pn**	**01 28 24.9**	**-0.9**
LKR	**Lokris**	**1.29**	**61**	P	**Pn**	**01 28 24.9**	**-0.9**
LKR				*e*Sb	**Sb**	**01 28 42.9**	**+0.2**
DID	**Didima**	**1.43**	**111**	*e*PB	**Pn**	**01 28 28.3**	**-0.1**
DID	**Didima**	**1.43**	**111**	P	**Pn**	**01 28 28.6**	**+0.9**
DID				S	**Sn**	**01 28 49.4**	**+2.8**
DID	**Didima**	**1.43**	**111**	*e*Pb	**Pb**	**01 28 28.3**	**-0.1**
DID	**Didima**	**1.43**	**111**	P	**Pn**	**01 28 28.6**	**+0.9**
DID				S	**Sn**	**01 28 49.4**	**+2.8**
NAIG	**Nisos Aigina**	**1.55**	**100**	*e*Pb	**Pb**	**01 28 30.2**	**-0.3**
NAIG	**Nisos Aigina**	**1.55**	**100**	*e*PB	**Pb**	**01 28 30.2**	**-0.3**
NAIG	**Nisos Aigina**	**1.55**	**100**	*e*Pb	**Pb**	**01 28 30.2**	**-0.3**
VLI	**Veliai**	**1.71**	**140**	*e*Pg	**Pg**	**01 28 33.2**	**-1.3**
VLI	**Veliai**	**1.71**	**140**	*e*PG	**Pg**	**01 28 33.2**	**-1.3**
VLI	**Veliai**	**1.71**	**140**	*e*Pg	**Pg**	**01 28 33.2**	**-1.3**
VLY	**Voula,Athens**	**1.78**	**95**	*e*Pn	**Pn**	**01 28 33.3**	**+0.8**
VLY				*e*Sg	**Sg**	**01 28 56.8**	**-2.0**
VLY	**Voula,Athens**	**1.78**	**95**	*e*PN	**Pn**	**01 28 33.3**	**+0.8**
VLY				*e*SG	**Sg**	**01 28 56.8**	**-2.0**
VLY	**Voula,Athens**	**1.78**	**95**	*e*Pn	**Pn**	**01 28 33.3**	**+0.8**
VLY				*e*Sg	**Sg**	**01 28 56.8**	**-2.0**
NEO	**Neokhori**	**1.82**	**45**	*e*Pg	**Pg**	**01 28 35.0**	**-1.5**
NEO	**Neokhori**	**1.82**	**45**	*e*PG	**Pg**	**01 28 35.0**	**-1.5**
NEO	**Neokhori**	**1.82**	**45**	*e*Pg	**Pg**	**01 28 35.0**	**-1.5**
KYTH	**Kithira**	**2.11**	**146**	*e*Pn	**Pn**	**01 28 39.4**	**+2.3**
KYTH	**Kithira**	**2.11**	**146**	*e*PN	**Pn**	**01 28 39.4**	**+2.3**
KYTH	**Kithira**	**2.11**	**146**	*e*Pn	**Pn**	**01 28 39.4**	**+2.3**

*TEH **24** 01:34:40.8, 31.°18N×47.°33E, h7km*
*KISR **24** 01:34:41.9±1.4, 31.°34N×47.°61E, h34km, MD3.2, ML2.6*
*ISCJB **24** 01:34:44.3±0.6, 31.°52N±0.°03×47.°62E±0.°09, h10km, Error ellipse: s-maj=10.8km s-min=5.0km az=1.1*

ISC 24 01:34:45.1±0.6, 31.°50N±0.°04×47.°62E±0.°09, h10km, n11, σ1.915/14, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIB	**Mutribah**	**1.71**	**188**	*e*P	**Pn**	**01 35 13.0**	**-1.8**
MIB				*e*S	**Sn**	**01 35 37.2**	**+0.5**
MIB				AML	AML	01 35 38.2	
	comp=Z,81nm,0.5s						
NAY	**Al-Naaiem**	**2.26**	**188**	*e*P	**Pn**	**01 35 22.0**	**-0.5**
NAY				*e*S	**Sn**	**01 35 52.9**	**+2.4**
IKOM	**Komasi**	**2.67**	**358**	*e*Pn	**Pn**	**01 35 28.5**	**+0.4**
IKOM				*e*		01 36 14.2	
	comp=Z,2μm,0.4s						
IGHG	**Ghaleghazi**	**2.96**	**343**	*e*Pn	**Pn**	**01 35 31.7**	**-0.4**
IGHG				*e*Sn	**Sn**	**01 36 09.0**	**+1.3**
IGHG				*e*		01 36 40.5	
	comp=Z,2μm,0.4s						
IPIR	**Pirpir**	**3.02**	**66**	*e*Pn	**Pn**	**01 35 34.1**	**+1.2**
IPIR				*e*		01 35 45.9	
	comp=Z,683nm,0.4s						
IVIS	**Veis**	**3.09**	**348**	*e*Pn	**Pn**	**01 35 33.1**	**-0.8**
IVIS				*e*		01 36 19.5	
	comp=Z,562nm,0.3s						
IDHR	**Dehrash**	**3.36**	**342**	*e*Pn	**Pn**	**01 35 36.4**	**-1.2**
IDHR				*e*		01 36 31.8	
	comp=Z,643nm,0.2s						
ILIN	**Lien**	**3.46**	**351**	*e*Pn	**Pn**	**01 35 39.0**	**+0.1**
ILIN				*e*		01 36 28.8	
	comp=N,602nm,0.1s						
IKLH	**Kolahrood**	**3.81**	**60**	*e*Pn	**Pn**	**01 35 44.6**	**+0.8**
IKLH				*e*		01 35 59.5	
	comp=Z,235nm,0.3s						
IZEF	**Zefreh**	**4.23**	**70**	*e*Pn	**Pn**	**01 35 49.8**	**+0.2**
IZEF				*e*		01 36 11.1	
	comp=Z,128nm,0.3s						
IPAR	**Pars**	**4.96**	**108**	*e*Pn	**Pn**	**01 35 57.3**	**-2.3**
IPAR				*e*		01 37 02.4	
	comp=Z,71nm,0.4s						

*THR **24** 01:46:23.2±0.3, 27.°26N×55.°84E, h1km±3km, ML3.6*
*ISCJB **24** 01:46:24.2±0.9, 27.°15N±0.°06×55.°92E±0.°05, h24km±6km, mb3.7/17, Error ellipse: s-maj=9.9km s-min=6.0km az=156.9*
*IDC **24** 01:46:24.2±1.8, 27.°48N×55.°78E, h0km, mb3.7/13, mb1 3.9/13, mb1mx3.8/27, mbtmp3.8/13, MS3.5/1, Ms1 3.5/1, ms1mx2.4/33, Error ellipse: s-maj=42.4km s-min=19.0km az=160.0*
*NEIC **24** 01:46:25.0, 27.°16N×55.°96E, h8km, mb3.9/1, ML3.9(THR), MN3.8(TEH), After TEH.*
*CSEM **24** 01:46:25.1±0.4, 27.°17N×56.°00E, h15km, mb3.8/5, Error ellipse: s-maj=12.3km s-min=7.6km az=159.0*
*TEH **24** 01:46:25.6, 27.°16N×55.°96E, h8km*
*SGS **24** 01:46:27.9, 27.°29N×55.°94E, h6km*

ISC 24 01:46:25.8±0.9, 27.°23N±0.°05×55.°96E±0.°04, h15km±6km, n97, σ1.922/106, mb3.7/17, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.25**	**47**	Pg	**Pg**	**01 46 30.0**	**-1.3**
BNDS	**Bandar-Abbas**	**0.25**	**47**	*e*Pg	**Pg**	**01 46 29.9**	**-1.4**
BNDS	**Bandar-Abbas**	**0.25**	**47**	Pg	**Pg**	**01 46 30.0**	**-1.3**
IBND	**Bandar-abas**	**0.56**	**66**	*e*Pg	**Pg**	**01 46 36.3**	**-0.5**
IBND				*e*Pg	**Pg**	**01 46 36.4**	**-0.4**
IBND				*e*Sg	**Sg**	**01 46 44.9**	**+0.6**
IBND				*e*		01 46 53.0	
	comp=Z,46μm,0.2s						
IBND				*e*		01 46 55.5	
	comp=Z,91μm,0.1s						
IBND	**Bandar-abas**	**0.56**	**66**	*e*Pg	**Pg**	**01 46 36.3**	**-0.5**
KRBR	**Kerman**	**2.84**	**14**	Pn	**Pn**	**01 47 11.0**	**+0.5**
KRBR				Sn	**Sn**	**01 47 47.0**	**+2.6**
KRBR	**Kerman**	**2.84**	**14**	*e*Pn	**Pn**	**01 47 11.9**	**+1.4**
KRBR				Sn	**Sn**	**01 47 47.3**	**+2.9**
KRBR				AML	AML	01 47 54.5	
	comp=E,444nm,0.9s						
KRBR				AML	AML	01 47 54.6	
	comp=N,359nm,0.8s						
KRBR	**Kerman**	**2.84**	**14**	Pn	**Pn**	**01 47 11.0**	**+0.5**
KRBR				Sn	**Sn**	**01 47 47.0**	**+2.6**
ISRV	**Sarvestan**	**3.31**	**311**	Pn	**Pn**	**01 47 18.2**	**+1.2**
ISRV	**Sarvestan**	**3.31**	**311**	*e*Pn	**Pn**	**01 47 18.2**	**+1.2**
ISRV				*e*		01 48 30.1	
	comp=Z,3μm,0.6s						
ISRV	**Sarvestan**	**3.31**	**311**	Pn	**Pn**	**01 47 18.2**	**+1.2**
IPAR	**Pars**	**3.66**	**316**	Pn	**Pn**	**01 47 22.9**	**+1.1**
IPAR	**Pars**	**3.66**	**316**	*e*Pn	**Pn**	**01 47 23.0**	**+1.2**
IPAR				*e*		01 48 28.6	
	comp=Z,1μm,0.4s						
IPAR	**Pars**	**3.66**	**316**	Pn	**Pn**	**01 47 22.9**	**+1.1**
IMEH	**Mehriz**	**4.32**	**344**	Pn	**Pn**	**01 47 32.0**	**+1.2**
IMEH	**Mehriz**	**4.32**	**344**	*e*Pn	**Pn**	**01 47 32.1**	**+1.3**
IMEH				*e*		01 47 35.8	
	comp=Z,752nm,0.3s						
IMEH	**Mehriz**	**4.32**	**344**	Pn	**Pn**	**01 47 32.0**	**+1.2**
IBAF	**Bafgh**	**4.36**	**356**	Pn	**Pn**	**01 47 31.8**	**+0.3**
IBAF				Sg	**Sg**	**01 48 43.5**	**-2.4**
IBAF	**Bafgh**	**4.36**	**356**	*e*Pn	**Pn**	**01 47 31.8**	**+0.3**
IBAF				*e*		01 47 33.6	
	comp=Z,622nm,0.2s						
IBAF				*e*Sg	**Sg**	**01 48 43.6**	**-2.3**
IBAF	**Bafgh**	**4.36**	**356**	Pn	**Pn**	**01 47 31.8**	**+0.3**
ZHSF	**Zahedan**	**4.86**	**60**	Pn	**Pn**	**01 47 40.0**	**+1.7**
ZHSF	**Zahedan**	**4.86**	**60**	*e*Pn	**Pn**	**01 47 40.8**	**+2.5**
ZHSF				AML	AML	01 49 14.4	
	comp=N,14nm,0.4s						
ZHSF	**Zahedan**	**4.86**	**60**	Pn	**Pn**	**01 47 40.0**	**+1.7**
ISAD	**Sadrabad**	**5.08**	**338**	Pn	**Pn**	**01 47 42.4**	**+1.1**
ISAD	**Sadrabad**	**5.08**	**338**	*e*Pn	**Pn**	**01 47 42.4**	**+1.1**
ISAD				*e*		01 47 54.1	
	comp=Z,509nm,0.3s						
ISAD	**Sadrabad**	**5.08**	**338**	Pn	**Pn**	**01 47 42.4**	**+1.1**
ICHK	**Chekchek**	**5.18**	**345**	Pn	**Pn**	**01 47 43.7**	**+0.9**
ICHK	**Chekchek**	**5.18**	**345**	*e*Pn	**Pn**	**01 47 43.8**	**+1.0**
ICHK				*e*		01 49 19.4	
	comp=Z,499nm,0.4s						
ICHK	**Chekchek**	**5.18**	**345**	Pn	**Pn**	**01 47 43.7**	**+0.9**
SLWS		**5.36**	**244**	P	**Pn**	**01 47 47.5**	**+2.3**
SLWS		**5.36**	**244**	P	**Pn**	**01 47 47.5**	**+2.3**
BTHS		**5.60**	**237**	P	**Pn**	**01 47 50.1**	**+1.6**
BTHS		**5.60**	**237**	P	**Pn**	**01 47 50.1**	**+1.6**
IKOO	**Kooshah**	**5.82**	**26**	*e*Pn	**Pn**	**01 47 52.5**	**+1.0**
IKOO				*e*		01 49 37.2	
	comp=Z,356nm,0.4s						
IKOO	**Kooshah**	**5.82**	**26**	*e*Pn	**Pn**	**01 47 52.5**	**+1.0**
IGAR	**Gharneh**	**6.18**	**328**	*e*Pn	**Pn**	**01 47 57.4**	**+0.9**
IGAR				*e*		01 48 00.5	
	comp=Z,616nm,0.1s						
NASN	**Na'in**	**6.19**	**335**	Pn	**Pn**	**01 47 57.0**	**+0.4**
NASN	**Na'in**	**6.19**	**335**	*e*Pn	**Pn**	**01 47 57.1**	**+0.5**
NASN	**Na'in**	**6.19**	**335**	Pn	**Pn**	**01 47 57.0**	**+0.4**
IZEF	**Zefreh**	**6.47**	**332**	Pn	**Pn**	**01 47 59.8**	**-0.6**
IZEF	**Zefreh**	**6.47**	**332**	*e*Pn	**Pn**	**01 47 59.8**	**-0.6**
IZEF				*e*		01 48 05.2	
	comp=Z,170nm,0.2s						
IZEF	**Zefreh**	**6.47**	**332**	Pn	**Pn**	**01 47 59.8**	**-0.6**
IPIR	**Pirpir**	**7.00**	**322**	Pn	**Pn**	**01 48 08.3**	**+0.6**
IPIR				Sn	**Sn**	**01 49 23.9**	**-3.1**
IPIR	**Pirpir**	**7.00**	**322**	*e*Pn	**Pn**	**01 48 08.4**	**+0.7**
IPIR				*e*Sn	**Sn**	**01 49 23.9**	**-3.1**
IPIR				*e*		01 49 27.3	
	comp=Z,292nm,0.4s						
IPIR	**Pirpir**	**7.00**	**322**	*e*Pn	**Pn**	**01 48 08.4**	**+0.7**
IKLH	**Kolahrood**	**7.16**	**329**	Pn	**Pn**	**01 48 11.1**	**+1.2**
IKLH	**Kolahrood**	**7.16**	**329**	*e*Pn	**Pn**	**01 48 11.2**	**+1.3**
IKLH				*e*		01 48 14.7	
	comp=Z,244nm,0.2s						
IKLH	**Kolahrood**	**7.16**	**329**	Pn	**Pn**	**01 48 11.1**	**+1.2**
HRDDS		**7.28**	**235**	P	**Pn**	**01 48 12.5**	**+0.9**
RDF	**Al-Radifah**	**7.62**	**285**	*e*P	**Pn**	**01 48 15.8**	**-0.5**
NAY	**Al-Naaiem**	**7.95**	**287**	*e*P	**Pn**	**01 48 20.5**	**-0.3**
NAY				AML	AML	01 49 48.2	
	comp=Z,4.1nm,0.6s						
MIB	**Mutribah**	**8.01**	**291**	*e*P	**Pn**	**01 48 21.4**	**-0.2**
MIB				AML	AML	01 49 52.0	
	comp=Z,7.7nm,0.6s						
LYLS		**9.46**	**239**	P	**Pn**	**01 48 40.7**	**-0.8**
LYLS		**9.46**	**239**	P	**Pn**	**01 48 40.7**	**-0.8**
ASYS		**10.34**	**274**	P	**Pn**	**01 48 51.8**	**-1.7**
ASYS		**10.34**	**274**	P	**Pn**	**01 48 51.8**	**-1.7**
IGHG	**Ghaleghazi**	**10.74**	**314**	Pn	**Pn**	**01 48 58.9**	**-0.1**
IGHG	**Ghaleghazi**	**10.74**	**314**	*e*Pn	**Pn**	**01 48 58.9**	**-0.1**
IGHG				*e*		01 49 02.5	
	comp=Z,139nm,0.1s						
IGHG	**Ghaleghazi**	**10.74**	**314**	Pn	**Pn**	**01 48 58.9**	**-0.1**
IDHR	**Dehrash**	**11.09**	**315**	Pn	**Pn**	**01 49 03.3**	**-0.5**
IDHR	**Dehrash**	**11.09**	**315**	*e*	**Pn**	**01 49 06.0**	**+2.2**
	comp=Z,209nm,0.2s						
IDHR				*e*Pn	**Pn**	**01 49 03.3**	**-0.5**
GNI	**Garni**	**15.90**	**327**	Pn	**Pn**	**01 50 12.2**	**+3.3**
	comp=Z,0.2nm,0.3s,baz=149,slow=5.9,SNR=2.9						
GNI	**Garni**	**15.90**	**327**	Pn	**Pn**	**01 50 12.2**	**+3.3**
AAK	**Ala-Archa**	**21.54**	**40**	P	**P**	**01 51 14.2**	**-0.2**
	comp=Z,2.0nm,0.3s,mb4.0,baz=246,slow=3.1,SNR=4.6						
AAK	**Ala-Archa**	**21.54**	**40**	P	**P**	**01 51 14.2**	**-0.2**
BR131	**Keskin Array S**	**22.34**	**310**	*e*P	**P**	**01 51 25.5**	**+2.5**
	comp=Z,4.8nm,1.0s,mb3.9						
BR131	**Keskin Array S**	**22.34**	**310**	*e*P	**P**	**01 51 25.5**	**+2.5**
	comp=Z,4.8nm,1.0s,mb3.9						
BRTR	**Keskin Array B**	**22.34**	**310**	P	**P**	**01 51 23.9**	**+1.0**
	comp=Z,2.9nm,0.9s,mb3.7,baz=130,slow=12,SNR=12						
BRTR	**Keskin Array B**	**22.34**	**310**	P	**P**	**01 51 24.0**	**+1.0**
BVAR	**Borovoye

ASAR Alice Springs 20.48 228 P **P** 02 08 21.3 +1.4
6.9nm,0.6s,baz=63,slow=11,SNR=114
CMSA Cobar Meteorol 21.52 191 *eP* **P** 02 08 32.0 +1.0
STKA Stephens Creek 22.89 199 *eP* **P** 02 08 44.7 -0.9
8.5nm,0.9s,mb4.2
STKA Stephens Creek 22.89 199 P **P** 02 08 45.1 -0.4
4.3nm,0.6s,mb4.1,baz=356,slow=9.5,SNR=6.8
GUMO Guam 24.37 347 LR LR 02 16 43.9
comp=Z,151nm,20.6s,MS3.5,baz=214,slow=32
URZ Urewera 36.76 144 LR LR 02 22 45.0
comp=Z,158nm,20.4s,MS3.8,baz=114,slow=31
MJAR Matsushiro Arr 48.00 347 P **P** 02 12 20.5 -0.2
0.3nm,0.3s,mb3.8,baz=128,slow=11,SNR=3.4
KSRS Korea Array 51.96 337 P **P** 02 12 51.4 +0.5
3.9nm,1.1s,mb4.3,baz=157,slow=8.6,SNR=5.9
KSRS LR LR 02 33 22.2
comp=Z,113nm,18.1s,MS3.9,baz=293,slow=34
CMAR Chiang Mai Arr 58.17 299 P **P** 02 13 37.8 +1.6
1.7nm,0.6s,mb4.2,baz=132,slow=4.8,SNR=9.9
CHTO Chiang Mai 58.32 300 *eP* **P** 02 13 38.0 +0.9
3.5nm,0.9s,mb4.4
CHTO *ep*P pP 02 13 47.0 +3.5
PPT Papeete 58.62 104 LR LR 02 33 17.7
comp=Z,115nm,19.4s,MS4.0,baz=304,slow=30
CASY Casey 62.02 197 *eP* **P** 02 14 01.1 -0.6
5.7nm,1.0s,mb4.7
PETK Petropavlovsk- 63.52 5 P **P** 02 14 12.3 +0.5
1.8nm,0.6s,mb4.3,baz=153,slow=6.7,SNR=3.8
PETK LR LR 02 36 20.5
comp=Z,55nm,21.4s,MS3.7,baz=98,slow=31
SHL Shillong 67.09 303 *ex* x 02 14 35.0
SONM Songino Array 69.75 330 P **P** 02 14 52.7 +0.9
2.4nm,0.7s,mb4.2,baz=141,slow=6.1,SNR=12
MAW Mawson 79.53 203 LR LR 02 48 15.6
comp=Z,53nm,18.2s,MS3.9,baz=115,slow=34
QSPA South Pole Qui 79.65 180 P **P** 02 15 48.9 +0.1
7.5nm,0.6s,mb4.8,baz=33,slow=4,SNR=39
MKAR Makanchi Array 82.89 320 P **P** 02 16 06.3 -0.1
MKAR Makanchi Array 82.89 320 P **P** 02 16 06.3 -0.1
0.7nm,0.3s,mb4.2,baz=94,slow=6.2,SNR=10
ZALV Zalesovo Beam 84.39 327 P **P** 02 16 12.6 -1.4
1.2nm,0.6s,mb4.2,baz=122,slow=5.4,SNR=6.3
COLA College 87.89 22 *eP* **P** 02 16 29.9 -1.1
5.2nm,0.9s,mb4.8
ILAR Eielson Array 88.20 22 P **P** 02 16 31.2 -1.3
2.8nm,0.9s,mb4.5,baz=259,slow=4.9,SNR=23
YBH Yreka Blue Hor 94.58 49 LR LR 02 49 49.1
comp=Z,72nm,20.9s,MS4.1,baz=357,slow=29
LPAZ La Paz 133.69 124 PKP PKPdf 02 22 58.6 -0.9
1.1nm,0.9s,baz=236,slow=3.6,SNR=3.0
TORD Torodi Ar. Bea 149.12 278 PKPbc PKPbc 02 23 30.9 -0.3
13nm,0.8s,baz=69,slow=2.3,SNR=46

IDC ***24*** *02:04:08.8±0.6, 56.06S×26.83W, h0km, mb4.4/10, mb1 4.4/10, mb1mx4.3/16, mbtmp4.4/10, MS3.5/2, Ms1 3.5/2, ms1mx3.2/16, Error ellipse: s-maj=22.9km s-min=18.6km az=76.0*
ISCJB ***24*** *02:04:09.3±0.5, 56.05S±0.10×26.78W±0.2, h10km, mb4.4/13, MS3.3/2, Error ellipse: s-maj=14.4km s-min=13.6km az=151.0*
NEIC ***24*** *02:04:24.5±4.3, 56.07S×26.83W, h130km±40km, mb4.5/5, Error ellipse: s-maj=14.8km s-min=13.5km az=175.0*
ISC 24 02:04:11.2±0.5, 56.08S±0.10×26.8W±0.2, h10km, n24, σ0.8s52/18, mb4.4/13, MS3.3/2, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMSA	**Palmer Station**	**20.03**	**229**	*eP*		**P**	**02 08 48.2**	**+4.4**
	17nm,0.6s							
PMSA				LR		LR	02 14 46.6	
PMSA	**Palmer Station**	**20.03**	**229**	P		**P**	**02 08 44.7**	**+0.9**
	18nm,0.6s,baz=74,slow=7.5,SNR=13							
PMSA				LR		LR	02 14 46.6	
	comp=Z,139nm,21.9s,MS3.3,baz=61,slow=32							
MAIT	**Maitri**	**22.10**	**147**	*eP*		**P**	**02 09 06.6**	**+0.5**
PLCA	**Paso Flores**	**32.20**	**280**	LR		LR	02 23 21.1	
	comp=Z,72nm,18.4s,MS3.4,baz=282,slow=36							
QSPA	**South Pole Qui**	**34.17**	**180**	P		**P**	**02 10 55.6**	**-0.2**
QSPA	**South Pole Qui**	**34.17**	**180**	P		**P**	**02 10 55.6**	**-0.2**
	6.1nm,0.6s,mb4.7,baz=197,slow=4.5,SNR=67							
CPUP	**Villa Florida**	**36.98**	**311**	P		**P**	**02 11 19.6**	**-0.9**
	0.9nm,0.6s,mb3.8,baz=132,slow=9.0,SNR=4.4							
MAW	**Mawson**	**40.01**	**143**	P		**P**	**02 11 44.6**	**-0.9**
	3.8nm,0.6s,mb4.3,baz=237,slow=9.5,SNR=11							
BOSA	**Boshof**	**45.78**	**75**	P		**P**	**02 12 32.8**	**0.0**
	2.0nm,0.9s,mb4.0,baz=257,slow=22,SNR=4.1							
LBTB	**Lobatse**	**48.83**	**73**	*eP*		**P**	**02 12 56.8**	**+0.3**
	5.7nm,0.8s,mb4.7							
TSUM	**Tsumeb**	**49.52**	**60**	*eP*		**P**	**02 13 02.4**	**+0.5**
	5.5nm,0.9s,mb4.6							
LPAZ	**La Paz**	**50.55**	**305**	P		**P**	**02 13 09.9**	**+0.2**
	2.6nm,0.4s,mb4.5,baz=162,slow=5.7,SNR=27							
LSZ	**Lusaka**	**58.20**	**69**	*eP*		**P**	**02 14 05.5**	**+0.1**
	5.6nm,0.9s,mb4.6							
DBIC	**Dimbokro**	**65.11**	**24**	P		**P**	**02 14 51.8**	**-0.1**
	4.6nm,1.0s,mb4.5,baz=151,slow=11,SNR=5.2							
OTAV	**Otavalo**	**69.84**	**303**	*eP*		**P**	**02 15 22.6**	**+0.8**
	5.1nm,1.1s,mb4.4							
TORD	**Torodi Ar. Bea**	**72.98**	**29**	P		**P**	**02 15 40.2**	**-0.6**
	1.7nm,0.5s,mb4.2,baz=200,slow=6.8,SNR=26							
STKA	**Stephens Creek**	**91.84**	**170**	P		**P**	**02 17 18.8**	**-0.5**
STKA	**Stephens Creek**	**91.84**	**170**	P		**P**	**02 17 18.8**	**-0.4**
	1.4nm,0.6s,mb4.5,baz=161,slow=19,SNR=5.4							
ASAR	**Alice Springs**	**98.90**	**162**	P		**P**	**02 17 51.6**	**+0.1**
	1.0nm,0.7s,mb4.5,baz=183,slow=4.0,SNR=8.2							
ARCES	**ARCESS Array B**	**130.90**	**22**	PKP		PKPdf	02 23 22.2	+1.2
	1.8nm,0.8s,baz=191,slow=1.2,SNR=4.4							
YKA	**Yellowknife Ar**	**136.32**	**318**	PKP		PKPdf	02 23 28.1	-3.3
	0.7nm,0.6s,baz=174,slow=1.9,SNR=3.4							
ZALV	**Zalesovo Beam**	**142.20**	**64**	PKP		PKPdf	02 23 43.5	+1.1
	0.8nm,0.6s,baz=224,slow=6.2,SNR=3.7							
ILAR	**Eielson Array**	**150.28**	**312**	PKPbc		PKPbc	02 23 58.1	-2.7
	1.4nm,0.6s,baz=141,slow=2.7,SNR=17							
SONM	**Songino Array**	**150.53**	**86**	PKPbc		PKPbc	02 23 59.4	-2.6
	0.4nm,0.4s,baz=80,slow=1.6,SNR=2.9							

THE ***24*** *02:23:52.2, 41.53N×19.78E, h22km±1km, ML2.7/3, Error ellipse: s-maj=3.5km s-min=1.4km az=318.0*
SKO ***24*** *02:23:53.4, 41.20N×19.88E, h12km*
BEO ***24*** *02:23:53.4±0.8, 41.19N×19.97E, h7km±3km, ML2.2/6*
ISCJB ***24*** *02:23:54.0±0.5, 41.25N±0.03×19.83E±0.04, h23km±4km, Error ellipse: s-maj=6.1km s-min=3.9km az=144.9*
CSEM ***24*** *02:23:53.7±0.3, 41.28N×19.81E, h20km, ML2.2, Error ellipse: s-maj=7.8km s-min=4.4km az=49.0*
TIR ***24*** *02:24:56.0, 41.42N×19.68E, h2km, ML2.9*
ISC 24 02:23:54.0±0.5, 41.26N±0.03×19.84E±0.04, h15km±3km, n52, σ1s41/83, 3C-2D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIR	**Tirane**	**0.09**	**14**	*e*PG		**Pg**	**02 23 56.9**	**-0.2**
TIR	**Tirane**	**0.09**	**14**	⇓*i*Pg		**Pg**	**02 23 57.4**	**+0.2**
TIR				*i* Sg		**Sg**	**02 24 00.8**	**+1.6**
TIR	**Tirane**	**0.09**	**14**	P		**Pg**	**02 23 57.3**	**+0.1**
TIR	**Tirane**	**0.09**	**14**	⇓*i*Pg		**Pg**	**02 23 57.4**	**+0.2**
TIR				*i* Sg		**Sg**	**02 24 00.8**	**+1.6**
PUK	**Puka**	**0.78**	**3**	*e*PG		**Pg**	**02 24 09.1**	**0.0**
PUK				*i* SG		**Sg**	**02 24 19.9**	**+0.5**
PUK	**Puka**	**0.78**	**3**	*e*Pg		**Pg**	**02 24 09.1**	**-0.1**
PUK				*i* Sg		**Sg**	**02 24 19.9**	**+0.5**
ULC	**Ulcinj**	**0.83**	**328**	*e*PG		**Pg**	**02 24 11.0**	**+1.0**
ULC	**Ulcinj**	**0.83**	**328**	*e*Pg		**Pg**	**02 24 11.0**	**+1.0**
KBN	**Korca**	**0.96**	**131**	*e*PG		**Pg**	**02 24 20.0**	**+7.3**
KBN				*i* SG		**Sg**	**02 24 34.4**	**+9.2**
KRUS	**Krusevo**	**1.07**	**84**	*i* Pg		**Pg**	**02 24 11.3**	**-3.3**
KRUS				*e*Sg		**Sg**	**02 24 26.9**	**-1.7**
BCI	**Bajram Curri**	**1.11**	**9**	*e*PG		**Pg**	**02 24 14.2**	**-1.4**
BCI				*i* SG		**Sg**	**02 24 29.9**	**-0.2**
BCI	**Bajram Curri**	**1.11**	**9**	*e*Pg		**Pg**	**02 24 14.1**	**-1.4**
BCI				*i* Sg		**Sg**	**02 24 29.9**	**-0.2**
BIA	**Bitola**	**1.15**	**102**	P		**Pg**	**02 24 13.2**	**-2.9**
BIA				S		**Sg**	**02 24 31.2**	**+0.1**
BIA	**Bitola**	**1.15**	**102**	*i* Pg		**Pg**	**02 24 12.9**	**-3.2**
BIA				*e*Sg		**Sg**	**02 24 28.6**	**-2.5**
BIA	**Bitola**	**1.15**	**102**	P		**Pg**	**02 24 13.2**	**-2.9**
BIA				S		**Sg**	**02 24 31.2**	**+0.1**
PDG	**Podgorica**	**1.24**	**340**	⇑*i*Pg		**Pg**	**02 24 16.6**	**-1.3**
PDG				*i* Sg		**Sg**	**02 24 35.8**	**+1.7**
PDG	**Podgorica**	**1.24**	**340**	⇑*i*Pg		**Pg**	**02 24 16.6**	**-1.3**
NEST	**Nestorio**	**1.25**	**132**	P		**Pn**	**02 24 16.8**	**-0.1**
NEST				S		**Sb**	**02 24 36.5**	**+3.4**
NEST	**Nestorio**	**1.25**	**132**	P		**Pn**	**02 24 16.8**	**-0.1**
NEST				S		**Sb**	**02 24 36.5**	**+3.4**
FNA	**Florina**	**1.26**	**112**	P		**Pn**	**02 24 16.0**	**-1.0**
FNA				S		**Sb**	**02 24 34.4**	**+1.0**
FNA	**Florina**	**1.26**	**112**	P		**Pn**	**02 24 16.0**	**-1.0**
FNA				S		**Sb**	**02 24 34.4**	**+1.0**
SKO	**Skopje**	**1.39**	**59**	*e*Pg		**Pn**	**02 24 18.8**	**0.0**
KEK	**Kerkira**	**1.55**	**181**	*e*P		**Pn**	**02 24 21.9**	**+0.9**
KEK	**Kerkira**	**1.55**	**181**	P		**Pn**	**02 24 22.0**	**+1.0**
KEK				S		**Sn**	**02 24 44.4**	**+3.6**
KEK	**Kerkira**	**1.55**	**181**	P		**Pn**	**02 24 22.0**	**+1.0**
KEK				S		**Sn**	**02 24 44.4**	**+3.6**
KZN	**Kozani**	**1.75**	**122**	*e*P		**Pn**	**02 24 23.5**	**-0.2**
KZN	**Kozani**	**1.75**	**122**	P		**Pn**	**02 24 24.0**	**+0.3**
KZN				S		**Sn**	**02 24 47.8**	**+2.0**
KZN	**Kozani**	**1.75**	**122**	P		**Pn**	**02 24 24.0**	**+0.3**
KZN				S		**Sn**	**02 24 47.8**	**+2.0**
JAN	**Janina**	**1.78**	**154**	*e*P		**Pn**	**02 24 26.0**	**+1.8**
GRG	**Griva**	**1.96**	**98**	P		**Pn**	**02 24 25.4**	**-1.2**
GRG	**Griva**	**1.96**	**98**	P		**Pn**	**02 24 25.4**	**-1.2**
VAY	**Valandovo**	**2.06**	**88**	*e*Pn		**Pn**	**02 24 26.3**	**-1.7**
VAY				*e*Sn		**Sn**	**02 24 51.8**	**-1.5**
VAY	**Valandovo**	**2.06**	**88**	*e*Pn		**Pn**	**02 24 26.3**	**-1.7**
VAY				*e*Sn		**Sn**	**02 24 51.8**	**-1.5**
BARS	**Barje**	**2.14**	**43**	*e*Pn		**Pn**	**02 24 30.1**	**+1.0**
BARS				*e*Sn		**Sn**	**02 24 57.0**	**+1.7**
STON	**Ston**	**2.26**	**316**	*e*Pn		**Pn**	**02 24 29.2**	**-1.5**
STON				Sn		**Sn**	**02 24 56.0**	**-2.4**
STON	**Ston**	**2.26**	**316**	*e*Pn		**Pn**	**02 24 29.2**	**-1.6**
STON				Sn		**Sn**	**02 24 55.9**	**-2.4**
LIT	**Litokhoron**	**2.33**	**119**	*e*P		**Pn**	**02 24 30.6**	**-1.1**
BBLS	**Lazići**	**2.62**	**353**	*e*Pn		**Pn**	**02 24 37.9**	**+2.2**
SOH	**Sokhos**	**2.70**	**98**	*e*P		**Pn**	**02 24 36.3**	**-0.4**
EVR	**Evrytania**	**2.79**	**147**	*e*P		**Pn**	**02 24 40.1**	**+2.1**
DIVS	**Divibare**	**2.83**	**2**	*e*Pn		**Pn**	**02 24 40.7**	**+2.1**
DIVS				*e*Sn		**Sn**	**02 25 14.9**	**+2.4**
VTS	**Vitosha**	**2.84**	**61**	*e*Pn		**Pn**	**02 24 38.5**	**-0.2**
VTS				*e*Sn		**Sn**	**02 25 12.0**	**-0.7**
VTS	**Vitosha**	**2.84**	**61**	*e*Pn		**Pn**	**02 24 38.5**	**-0.2**
VTS				*e*Sn		**Sn**	**02 25 12.0**	**-0.7**
PLG	**Polygyros**	**2.88**	**107**	*e*P		**Pn**	**02 24 38.2**	**-1.0**
PLG	**Polygyros**	**2.88**	**107**	P		**Pn**	**02 24 38.4**	**-0.8**
PLG	**Polygyros**	**2.88**	**107**	P		**Pn**	**02 24 38.4**	**-0.8**
ZAPS	**Zavoj**	**2.89**	**45**	⇑*i*Pn		**Pn**	**02 24 40.7**	**+1.3**
ZAPS				*e*Sn		**Sn**	**02 25 14.5**	**+0.7**
AGG	**Agios Georgios**	**2.94**	**139**	*e*P		**Pn**	**02 24 40.9**	**+0.8**
VLS	**Valsamata**	**3.14**	**169**	*e*P		**Pn**	**02 24 41.2**	**-1.6**
ALN	**Alexandroupoli**	**4.71**	**92**	*e*P		**Pn**	**02 25 03.7**	**-0.7**
NVLJ	**Novalja**	**4.92**	**314**	*e*Pn		**Pn**	**02 25 05.5**	**-1.8**
NVLJ				Sn		**Sn**	**02 26 01.5**	**-2.3**
NVLJ	**Novalja**	**4.92**	**314**	*e*Pn		**Pn**	**02 25 05.4**	**-1.8**
NVLJ				Sn		**Sn**	**02 26 01.5**	**-2.3**

GUC 24 02:27:53.6±0.5, 32.05S×71.77W, h15km, MD3.5, ML2.5, 1C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMCH	**Combarbala**	**1.09**	**37**	⇑*i*P		Pb	02 28 13.0	-1.2
CMCH				*i* S		Sb	02 28 27.5	-0.7
CMCH				AML		AML	02 28 29.9	
	comp=N,300nm,0.5s							
ROCH	**El Roble**	**1.12**	**145**	*e*P		Pb	02 28 13.7	-1.1
ROCH				*i* S		Sb	02 28 29.1	-0.1
ROCH				AML		AML	02 28 32.5	
	comp=E,122nm,0.5s							
PEL	**Peldehue**	**1.43**	**140**	⇓*i*P		Pn	02 28 18.5	-0.4
PEL				*i* S		Sn	02 28 37.1	-0.4
PEL				AML		AML	02 28 43.4	
	comp=N,108nm,0.3s							
CLCH	**Cerro Calan**	**1.70**	**143**	⇓*i*P		Pn	02 28 22.5	-0.2
CLCH				*i* S		Sn	02 28 44.7	+0.4
CLCH				AML		AML	02 28 50.3	
	comp=E,101nm,0.5s							

BJI ***24*** *02:46:27.6, 7.50S×128.30E, h123km, mB4.9/1, mb4.8/6*
IDC ***24*** *02:46:28.4±3.4, 7.38S×128.35E, h110km±30km, mb4.3/13, mb1 4.5/15, mb1mx4.4/21, mbtmp4.4/15, MS3.4/2, Ms1 3.4/2, ms1mx2.4/29, Error ellipse: s-maj=22.1km s-min=11.1km az=67.0*
NEIC ***24*** *02:46:29.7±1.5, 7.46S×128.30E, h124km±13km, mb4.7/10, Error ellipse: s-maj=11.3km s-min=6.7km az=59.0*
ISCJB ***24*** *02:46:33.0±0.5, 7.62S±0.03×128.24E±0.04, h174km±5km, mb4.6/30, Error ellipse: s-maj=7.3km s-min=5.3km az=171.7*
DJA ***24*** *02:46:32, 7.82S×128.39E, h149km, MLv5.5/9*
ISC 24 02:46:32.9±0.5, 7.55S±0.04×128.29E±0.04, h153km±6km, n84, σ1s11/66, mb4.6/30, 4C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BNDI	**Bandanaira**	**3.41**	**28**	P		**Pn**	**02 47 28.0**	**+2.4**
NLAI	**Namlea**	**4.44**	**344**	P		**Pn**	**02 47 43.1**	**+4.1**
TLE	**Tual**	**4.80**	**67**	P		**Pn**	**02 47 05.7**	**+1.9**
TLE				S		**Sn**	**02 48 36.8**	**-2.3**
MMRI	**Maumere**	**6.09**	**259**	P		**Pn**	**02 48 01.4**	**+0.5**
	0.9nm3µm307nm,0.9s							
MMRI				S		**Sn**	**02 49 08.4**	**-1.4**
	0.9nm3µm307nm,0.9s							
KAKA	**Kakadu**	**6.56**	**142**	*e*P		**Pn**	**02 48 07.1**	**0.0**
	110nm,0.2s							
KAKA				*e*S		**Sn**	**02 49 16.3**	**-4.6**
KAKA	**Kakadu**	**6.56**	**142**	P		**Pn**	**02 48 07.5**	**+0.4**
	13nm555nm,0.6s							
KDI	**Kendari**	**6.68**	**302**	P		**Pn**	**02 48 09.8**	**+1.1**
	0.1nm19nm,0.9s							
LBMI	**Labuha**	**6.91**	**353**	P		**Pn**	**02 48 15.3**	**+3.5**
	0.5nm2µm152nm,1.1s							
KNA	**Kununurra**	**8.17**	**177**	P		**Pn**	**02 48 27.9**	**-0.6**
	15nm4µm,0.7s							
WSI	**Waingapu**	**8.18**	**254**	P		**Pn**	**02 48 27.7**	**-1.1**
	6.7nm736nm,0.6s							
WSI				S		**Sn**	**02 49 55.4**	**-4.6**
	6.7nm736nm,0.6s							
TNTI	**Ternate**	**8.31**	**354**	P		**Pn**	**02 48 33.4**	**+2.9**
	10µm126nm,1.1s							
LUWI	**Luwuk**	**8.49**	**319**	S		**Sn**	**02 50 24.5**	**+17**
MNI	**Manado**	**9.57**	**339**	P		**Pn**	**02 48 51.2**	**+4.0**
BAKI	**Biak**	**10.03**	**51**	S		**Sn**	**02 50 42.5**	**-1.9**
WRA	**Warramunga Arr**	**13.65**	**155**	P		**Pn**	**02 49 37.2**	**-3.0**
	6.4nm,0.3s,baz=328,slow=14,SNR=141							
WRA				S		**Sn**	**02 52 00.1**	**-11**
	17nm,0.3s,baz=329,slow=22,SNR=13							
MBWA	**Marble Bar**	**15.86**	**211**	*e*Pn		**Pn**	**02 50 06.6**	**-1.3**
	22nm,0.6s							
MBWA				*e*Sn		**Sn**	**02 52 55.4**	**-9.3**
ASAR	**Alice Springs**	**16.91**	**162**	P		**Pn**	**02 50 19.9**	**-0.7**
	11nm,0.3s,baz=345,slow=9.4,SNR=374							
ASAR				S		**S**	**02 53 19.6**	**-8.9**
	5.7nm,0.3s,baz=323,slow=17,SNR=6.4							
CTA	**Charters Tower**	**21.41**	**127**	⇑*i*P		**P**	**02 51 10.6**	**+1.9**
	14nm,0.6s,mb4.5							
CTA	**Charters Tower**	**21.41**	**127**	P		**P**	**02 51 09.3**	**+0.5**
CTA				LR		LR	03 00 35.5	
CTA	**Charters Tower**	**21.41**	**127**	P		**P**	**02 51 09.3**	**+0.5**
	20nm,0.6s,mb4.6,baz=303,slow=12,SNR=25							
CTA				LR		LR	03 00 35.5	
	comp=Z,125nm,19.4s,baz=233,slow=40							
CTAO	**Charters Tower**	**21.41**	**127**	*e*P		**P**	**02 51 10.6**	**+1.9**
	27nm,1.0s,mb4.5							
FORT	**Forrest**	**23.11**	**181**	⇑*i*P		**P**	**02 51 26.3**	**+0.9**
	52nm,0.5s,mb5.2							
KLBR	**Kellerberrin**	**25.87**	**201**	*e*P		**P**	**02 51 50.8**	**+0.4**
	18nm,0.7s,mb4.8							
BBOO	**Buckleboo**	**26.15**	**165**	*e*P		**P**	**02 51 53.8**	**+0.9**
	12nm,0.5s,mb4.8							
STKA	**Stephens Creek**	**27.20**	**155**	⇑*i*P		**P**	**02 52 03.5**	**+1.2**
	14nm,0.4s,mb4.9							
STKA	**Stephens Creek**	**27.20**	**155**	P		**P**	**02 52 03.6**	**+1.3**
	17nm,0.5s,mb5.0,baz=324,slow=8.7,SNR=26							
STKA				LR		LR	03 02 51.0	
	comp=Z,79nm,20.9s,baz=213,slow=36							
NWAO	**Narrogin (SRO)**	**27.26**	**201**	P		**P**	**02 52 02.6**	**-0.2**
	15nm,0.6s,mb4.8,baz=26,slow=7.4,SNR=14							
PSI	**Prapat**	**31.05**	**288**	P		**P**	**02 52 36.4**	**-0.3**
	18nm,0.6s,mb5.0,baz=105,slow=5.6,SNR=17							
TOO	**Toolangi**	**33.72**	**155**	⇑*i*P		**P**	**02 53 02.6**	**+3.0**
CMAR	**Chiang Mai Arr**	**38.81**	**312**	P		**P**	**02 53 43.1**	**+0.1**
	3.5nm,0.7s,mb4.1,baz=145,slow=7.0,SNR=20							
CMAR				PcP		PcP	02 55 52.5	+1.2
	0.8nm,0.4s,baz=169,slow=4.5,SNR=5.8							
CHTO	**Chiang Mai**	**39.03**	**313**	*e*P		**P**	**02 53 45.5**	**+0.6**
	7.1nm,0.8s,mb4.3							
KSRS	**Korea Array**	**44.77**	**360**	P		**P**	**02 54 29.9**	**-1.2**
	1.3nm,0.3s,mb4.0,baz=178,slow=9.7,SNR=5.7							
MJAR	**Matsushiro Arr**	**44.83**	**11**	P		**P**	**02 54 28.4**	**-3.3**
	1.3nm,0.7s,mb3.7,baz=187,slow=8.6,SNR=4.1							
BJT	**Baijiatuan**	**48.63**	**348**	*e*P		**P**	**02 55 00.7**	**-0.5**
	8.7nm,0.5s,mb4.6							
LSA	**Lhasa**	**51.44**	**318**	*e*P		**P**	**02 55 23.8**	**+1.2**
	8.8nm,0.6s,mb4.6							
ODAN	**Odare**	**52.35**	**312**	*e*P		**P**	**02 55 28.8**	**-0.5**
	15nm,0.6s,mb4.8							
TAPN	**Taplejung**	**52.40**	**313**	*e*P		**P**	**02 55 29.0**	**-0.7**
RAMN	**Ramite**	**52.98**	**312**	*e*P		**P**	**02 55 34.0**	**0.0**
	51nm,0.7s,mb5.4							
GTA	**Gaotai**	**53.65**	**333**	*e*P		**P**	**02 55 38.9**	**+0.3**
GTA				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.2							
JIRN	**Jiri**	**53.68**	**312**	*e*P		**P**	**02 55 39.3**	**+0.2**
GUN	**Gumba**	**54.05**	**312**	*e*P		**P**	**02 55 41.8**	**0.0**
PKI	**Pulchoki**	**54.21**	**312**	*e*P		**P**	**02 55 42.4**	**-0.5**
	comp=Z,15nm,0.6s,mb4.9							
KKN	**Kakani**	**54.42**	**312**	*e*P		**P**	**02 55 44.0**	**-0.5**
DMN	**Daman**	**54.45**	**312**	*e*P		**P**	**02 55 44.4**	**-0.3**
GKN	**Gorkha**	**55.02**	**312**	*e*P		**P**	**02 55 48.4**	**-0.3**
	comp=Z,16nm,0.3s,mb5.3							
KOLN	**Koldanda**	**55.66**	**311**	*e*P		**P**	**02 55 53.1**	**-0.2**
	comp=Z,27nm,0.7s,mb5.2							
ULN	**Ulaanbaatar**	**56.28**	**343**	*e*P		**P**	**02 56 12.3**	**+1.0**
	comp=Z,9.4nm,0.9s,mb4.6							
SONM	**Songino Array**	**58.44**	**343**	P		**P**	**02 56 11.0**	**-1.4**
	comp=Z,6.8nm,1.1s,mb4.4,baz=161,slow=7.5,SNR=17							
CASY	**Casey**	**59.91**	**188**	*e*P		**P**	**02 56 22.9**	**+0.5**
	comp=Z,4.2nm,0.8s,mb4.3							
MKAR	**Makanchi Array**	**67.77**	**328**	P		**P**	**02 57 13.6**	**-0.4**
	comp=Z,1.6nm,0.3s,mb4.2,baz=122,slow=8.1,SNR=17							
YAK	**Yakutsk**	**69.38**	**1**	*e*P		**P**	**02 57 22.7**	**-0.9**
	comp=Z,21nm,0.7s,mb5.0							
AAK	**Ala-Archa**	**69.87**	**321**	P		**P**	**02 57 27.5**	**+0.4**
AAK	**Ala-Archa**	**69.87**	**321**	P		**P**	**02 57 27.5**	**+0.4**
	comp=Z,1.3nm,0.3s,mb4.1,baz=157,slow=4.2,SNR=4.4							
ZALV	**Zalesovo Beam**	**71.33**	**335**	P		**P**	**02 57 34.6**	**-1.1**
	comp=Z,14nm,0.8s,mb4.8,baz=123,slow=4.8,SNR=57							
KURK	**Kurchatov**	**72.11**	**329**	P		**P**	**02 57 40.2**	**-0.2**
KURK	**Kurchatov**	**72.11**	**329**	P		**P**	**02 57 40.2**	**-0.2**
	comp=Z,20nm,0.8s,mb4.9,baz=129,slow=4.9,SNR=23							
MAW	**Mawson**	**73.83**	**201**	P		**P**	**02 57 51.7**	**+1.4**
	comp=Z,3.2nm,0.5s,mb4.3,baz=80,slow=8.4,SNR=7.6							
QSPA	**South Pole Qui**	**82.43**	**180**	*e*P		**P**	**02 58 38.1**	**+0.6**
	comp=Z,7.4nm,0.8s,mb4.4							
LSZ	**Lusaka**	**97.69**	**253**	*e*P		**P**	**02 59 51.1**	**+0.1**
	comp=Z,2.4nm,0.9s,mb4.6							
HLID	**Hailey**	**114.84**	**45**	*e*PKP		PKiKP	03 04 56.5	+0.9
DUG	**Dugway**	**116.80**	**49**	*e*PKPdf		PKPdf	03 04 59.8	+0.3
HWUT	**Hardware Ranch**	**117.36**	**47**	*e*PKPdf		PKPdf	03 05 01.1	+0.6
BW06	**Boulder Array**	**118.47**	**45**	*e*PKPdf		PKPdf	03 05 03.0	+0.4
PDAR	**Pinedale Array**	**118.47**	**45**	PKP		PKPdf	03 05 03.2	+0.6
	comp=Z,1.1nm,0.7s,baz=307,slow=1.2,SNR=11							
RSSD	**Black Hills**	**121.80**	**42**	*e*PKPdf		PKPdf	03 05 08.8	-0.1
SDCO	**Great Sand Dun**	**122.94**	**50**	*e*PKPdf		PK

NNZ Nelson 10.28 212 *e*PN **Pn** **03 02 03.4 -4.0**
BSWZ Blackbirch Sta 10.47 209 *e*PN **Pn** **03 02 06.3 -3.8**
KHZ Kahutara 11.20 208 PN **Pn** **03 02 15.8 -4.2**
CTZ Chatham Island 11.26 169 *e*PN **Pn** **03 02 23.0 +2.4**
DSZ Denniston Nort 11.43 215 PN **Pn** **03 02 19.8 -3.2**
MQZ McQueen's Vall 12.64 207 *e*PN **Pn** **03 02 33.1 -6.1**
WVZ Waitaha Valley 12.95 214 PN **Pn** **03 02 40.4 -2.9**
RPZ Rata Peaks 13.30 211 P **Pn** **03 02 43.7 -4.3**
18nm,0.3s,baz=76,slow=0.9,SNR=105
RPZ S **Sn** **03 05 05.8 -8.4**
3.9nm,0.3s,baz=20,slow=22,SNR=8.4
RPZ LR LR 03 07 57.7
comp=Z,310nm,21.2s,baz=19,slow=37
RPZ Rata Peaks 13.30 211 *e*PN **Pn** **03 02 42.4 -5.6**
FOZ Fox Glacier 13.82 215 *e*PN **Pn** **03 02 48.7 -6.1**
LBZ Lake Benmore 14.22 212 *e*PN **Pn** **03 02 52.8 -7.1**
ODZ Otahua Downs 14.55 209 *e*PN **Pn** **03 02 58.4 -5.8**
WKZ Wanaka 15.09 213 PN **Pn** **03 03 05.0 -6.1**
EAZ Earnscleugh 15.27 212 PN **Pn** **03 03 08.2 -5.1**
TUZ Tuapeka 15.71 209 PN **Pn** **03 03 15.7 -3.0**
DZM Mont Dzumac 16.39 307 *e*P **Pn** **03 03 29.9 +2.5**
77nm,1.6s
DZM *e*LR LR 03 07 15.4
429nm,28.0s
APZ The Paps 17.09 211 *e*PN **Pn** **03 03 32.9 -3.1**
AFI Afiamalu 19.95 22 P **Pn** **03 04 06.5 -3.8**
2.8nm,0.3s,baz=209,slow=13,SNR=3.4
AFI S **S** **03 07 27.8 -19**
6.2nm,0.3s,baz=64,slow=14,SNR=4.8
RAR Rarotonga 20.88 62 P **P** **03 04 17.8 +0.1**
49nm,0.9s,baz=229,slow=9.4,SNR=4.1
TBI Tubuai 27.97 78 *e*T 03 34 00.5
20nm,0.3s
RMQ Roma 28.28 274 *e*P **P** **03 05 33.8 +6.2**
20nm,0.8s,mb4.7
CMSA Cobar Meteorol 29.49 263 *e*P **P** **03 05 43.0 +4.7**
HNR Honiara 29.97 316 LR LR 03 14 49.0
comp=Z,83nm,18.1s,baz=153,slow=30
PAE Paea 30.75 68 *e*T 03 37 35.1
5.1nm,0.2s
PPT Papeete 30.80 68 *e*LR LR 03 13 19.2
363nm,36.5s,baz=234
PPT *e*T 03 37 40.2
6.7nm,0.3s
PPT Papeete 30.80 68 P **P** **03 05 48.3 -1.7**
31nm,0.9s,mb5.0,baz=58,slow=17,SNR=3.6
PPT LR LR 03 14 09.1
comp=Z,179nm,21.9s,baz=129,slow=28
STKA Stephens Creek 32.84 261 *e*P **P** **03 06 11.8 +4.0**
3.8nm,0.6s,mb4.4
STKA Stephens Creek 32.84 261 P **P** **03 06 09.6 +1.8**
STKA LR LR 03 16 55.5
STKA Stephens Creek 32.84 261 P **P** **03 06 09.6 +1.8**
5.4nm,0.7s,mb4.5,baz=90,slow=9.5,SNR=12
STKA LR LR 03 16 55.5
comp=Z,96nm,21.7s,baz=50,slow=32
CTA Charters Tower 33.05 284 *e*P **P** **03 06 14.8 +5.1**
22nm,0.5s,mb5.2
CTA Charters Tower 33.05 284 P **P** **03 06 13.4 +3.7**
23nm,0.5s,mb5.3,baz=110,slow=10,SNR=4.1
CTAO Charters Tower 33.05 284 *e*P **P** **03 06 14.7 +5.0**
28nm,0.6s,mb5.3
PMOR Pomariorio Ree 33.61 66 *e*T 03 41 11.4
2.3nm,0.3s
MTSU Mount Surprise 35.61 285 *e*P **P** **03 06 36.3 +4.4**
17nm,0.5s,mb5.2
BBOO Buckleboo 37.23 257 *e*P **P** **03 06 46.4 +0.9**
7.5nm,0.8s,mb4.7
RKT Rikitea 40.18 88 *e*LR LR 03 17 51.2
261nm,36.0s
ASAR Alice Springs 41.83 270 P **P** **03 07 23.1 -0.7**
16nm,0.6s,mb4.9,baz=109,slow=7.8,SNR=91
ASAR S **S** **03 13 31.6 -3.2**
0.8nm,0.7s,baz=116,slow=16,SNR=5.5
WRA Warramunga Arr 43.03 275 P **P** **03 07 32.6 -1.0**
11nm,0.4s,mb4.9,baz=111,slow=8.1,SNR=46
WRA S **S** **03 13 42.9 -10**
0.3nm,0.3s,baz=162,slow=32,SNR=3.2
FORT Forrest 44.33 258 *e*P **P** **03 07 45.1 +1.3**
39nm,0.6s,mb5.3
SBA Scott Base 45.68 184 *e*P **P** **03 07 58.7 +4.7**
59nm,0.8s,mb5.4
KLBR Kellerberrin 52.49 253 *e*P **P** **03 08 46.2 -0.3**
10nm,0.5s,mb5.1
CASY Casey 52.56 209 *e*P **P** **03 08 46.5 0.0**
CASY Casey 52.56 209 *e*P **P** **03 08 46.4 -0.1**
17nm,0.8s,mb5.1
MEEK Meekatharra 53.52 259 *e*P **P** **03 08 54.6 +0.4**
MORW Morawa 54.74 255 *e*P **P** **03 09 01.2 -1.8**
MBWA Marble Bar 54.80 266 *e*P **P** **03 09 03.3 -0.2**
MBWA Marble Bar 54.80 266 *e*P **P** **03 09 03.1 -0.4**
17nm,0.7s,mb5.2
QSPA South Pole Qui 57.44 180 P **P** **03 09 25.1 +3.7**
149nm,0.9s,mb6.0,baz=28,slow=1.1,SNR=650
GIRL Giralia 58.77 262 *e*P **P** **03 09 32.8 +1.2**
116nm,0.6s
MAW Mawson 69.75 201 P **P** **03 10 42.9 +0.3**
7.7nm,0.6s,mb4.7,baz=121,slow=8.2,SNR=12
SYO Syowa Base 74.62 194‖ *e*P **P** **03 11 10.4 -1.2**
VNA1 Neumayer--Stat 76.77 177 *e* **P** **03 11 23.8 0.0**
PLCA Paso Flores 81.84 133 P **P** **03 11 54.6 +2.7**
3.0nm,0.9s,mb4.1,baz=247,slow=4.5,SNR=4.4
KSRS Korea Array 85.31 321 P **P** **03 12 09.8 +0.4**
3.0nm,0.8s,mb4.3,baz=141,slow=5.8,SNR=11
PETK Petropavlovsk- 87.72 346 P **P** **03 12 20.7 -0.1**
2.2nm,0.5s,mb4.4,baz=110,slow=6.1,SNR=9.5
NVAR Mina Array Bea 90.73 43 P **P** **03 12 36.1 +0.8**
2.2nm,0.8s,mb4.4,baz=220,slow=7.1,SNR=20
WVOR Wild Horse Val 93.25 40 *e*P **P** **03 12 47.2 +0.4**
3.7nm,1.1s,mb4.6
TXAR Lajitas Array 94.64 58 P **P** **03 12 54.2 +0.6**
1.3nm,1.0s,mb4.3,baz=207,slow=8.0,SNR=8.5
TXAR LR LR 03 44 28.2
comp=Z,44nm,21.5s,baz=0.0,slow=28
MNTX Cornudas Mount 94.79 55 *e*P **P** **03 12 54.4 +0.2**
0.8nm,0.8s,mb4.2
HLID Hailey 96.32 42 *e*P **P** **03 13 01.1 +0.2**
1.1nm,0.8s,mb4.3
CPUP Villa Florida 99.50 130 LR LR 03 49 24.4
comp=Z,48nm,19.1s,baz=352,slow=30
MKAR Makanchi Array 118.29 309 PKP PKPdf 03 18 17.1 -1.9
0.7nm,0.3s,baz=109,slow=1.0,SNR=6.4
ZALV Zalesovo Beam 118.91 318 PKP PKPdf 03 18 17.8 -2.2
ZALV Zalesovo Beam 118.91 318 PKP PKPdf 03 18 17.8 -2.2
1.3nm,0.5s,baz=135,slow=2.1,SNR=6.9
LSZ Lusaka 125.48 213 *e*PKPdf PKPdf 03 18 34.1 +0.2
ARCES ARCESS Array B 140.53 347 PKhKP PKPpre 03 18 53.2
1.2nm,0.5s,baz=74,slow=2.0,SNR=18
GNI Garni 143.98 295 *e*PKPdf PKPdf 03 19 05.6 -1.8
JOF Joensuu 144.05 337 epkp PKPdf 03 19 03.3 -3.5
MORS Moi Rana 145.46 350 *e*P PKPdf 03 19 08.0 -1.2
KAF Kangasniemi 146.25 338 epkp PKPdf 03 19 09.8 -0.8
FINES FINESS Array B 146.83 338 PKPbc PKPbc 03 19 11.8 -1.8
FINES FINESS Array B 146.83 338 PKPbc PKPbc 03 19 11.8 -1.8
20nm,0.5s,baz=50,slow=3.6,SNR=192
NSS Namsos 147.35 351 *e*P PKPdf 03 19 13.0 +0.6
NOA NORSAR Array B 150.79 349 PKPbc PKPbc 03 19 22.4 -1.3
NOA NORSAR Array B 150.79 349 PKPbc PKPbc 03 19 22.4 -1.3
3.8nm,0.6s,baz=16,slow=4.2,SNR=18
AKASG Malin Array Be 152.29 319 PKPbc PKPbc 03 19 25.9 -1.5
4.5nm,0.5s,baz=62,slow=2.6,SNR=28
KIEV Kiev 152.31 319 *e*PKPbc PKPbc 03 19 26.2 -1.3
BR131 Keskin Array S 152.51 294 *e*PKPbc PKPbc 03 19 27.1 -1.3
BRTR Keskin Array B 152.51 294 PKPbc PKPbc 03 19 27.1 -1.3
6.1nm,0.5s,baz=148,slow=3.8,SNR=52
BRTR PKPab PKPab 03 19 38.1 -1.0
3.3nm,0.9s,baz=57,slow=4.6,SNR=9.7
LIC Lamto 153.16 168 *e*P PKPbc 03 19 30.3 -0.3
91nm,1.2s
KIC Kosan Boka 153.35 168 *e*P PKPbc 03 19 31.6 +0.6
33nm,0.7s
TIC Toumodi 153.58 167 *e*P PKPbc 03 19 32.0 +0.5
10nm,0.4s
DBIC Dimbokro 153.63 168 PKPbc PKPbc 03 19 30.8 -0.8
2.3nm,0.5s,baz=193,slow=13,SNR=11
DBIC PKPab PKPab 03 19 45.8 +1.5
9.1nm,0.7s,baz=182,slow=5.9,SNR=10
TORD Torodi Ar. Bea 160.53 183 PKP PKPdf 03 19 32.4 0.0
TORD PKPab PKPab 03 20 14.5 +0.6
TORD Torodi Ar. Bea 160.53 183 PKP PKPdf 03 19 32.4 0.0
1.0nm,0.9s,baz=64,slow=0.9,SNR=8.4
TORD PKPab PKPab 03 20 14.5 +0.6
5.3nm,0.6s,baz=173,slow=4.0,SNR=29
ESDC Sonseca Array 172.12 26 PKPab PKPab 03 21 04.3 -0.2
0.1nm,0.4s,baz=325,slow=1.8,SNR=5.2

WEL 24 03:02:48.3±0.4, 41°20S×172°90E, h157km±4km, ML3.7/9, Error ellipse: s-maj=3.3km s-min=3.0km az=0.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNZ	**Nelson**	**0.36**	**93**	PN	Pn	03 03 09.7	-0.1
NNZ				SN	Sn	03 03 25.6	-0.6
TUWZ	**Tuamarina**	**0.81**	**107**	PN	Pn	03 03 12.8	+0.5
TUWZ				SN	Sn	03 03 29.8	-0.8
BSWZ	**Blackbirch Sta**	**0.89**	**125**	PN	Pn	03 03 13.4	+0.6
DSZ	**Denniston Nort**	**0.99**	**236**	PN	Pn	03 03 13.1	-0.5
KHZ	**Kahutara**	**1.30**	**159**	PN	Pn	03 03 16.6	+0.2
KHZ				SN	Sn	03 03 36.7	-1.3
SNZO	**South Karori**	**1.36**	**95**	PN	Pn	03 03 16.8	-0.2
WEL	**Wellington**	**1.41**	**94**	PN	Pn	03 03 17.4	0.0
BHW	**Baring Head**	**1.50**	**99**	PN	Pn	03 03 18.1	-0.2
BHW				SN	Sn	03 03 39.6	-1.7
KIW	**Kapiti Island**	**1.55**	**78**	PN	Pn	03 03 18.9	0.0
CAW	**Cannon Point**	**1.64**	**87**	PN	Pn	03 03 19.4	-0.4
LTZ	**Lake Taylor**	**1.65**	**196**	PN	Pn	03 03 19.8	0.0
OGWZ	**Otaki Gorge**	**1.76**	**78**	PN	Pn	03 03 21.1	0.0
MSWZ	**Moikau Station**	**1.78**	**98**	PN	Pn	03 03 21.1	-0.2
PLWZ	**Palliser**	**1.81**	**103**	PN	Pn	03 03 21.4	-0.2
PAWZ	**Paruwai Farm**	**1.91**	**96**	PN	Pn	03 03 22.5	-0.2
MTW	**Mount Morrison**	**1.96**	**90**	PN	Pn	03 03 23.0	-0.3
MTW				SN	Sn	03 03 48.9	-1.4
WVZ	**Waitaha Valley**	**2.47**	**220**	PN	Pn	03 03 28.2	-1.1
MQZ	**McQueen's Vall**	**2.51**	**184**	PN	Pn	03 03 28.7	-1.1
VRZ	**Vera Road**	**2.51**	**35**	PN	Pn	03 03 29.1	-0.8
RPZ	**Rata Peaks**	**2.86**	**208**	PN	Pn	03 03 32.9	-1.3
FOZ	**Fox Glacier**	**3.35**	**224**	PN	Pn	03 03 37.3	-3.0
LBZ	**Lake Benmore**	**3.76**	**211**	PN	Pn	03 03 43.5	-2.0
ODZ	**Otahua Downs**	**4.18**	**203**	PN	Pn	03 03 49.7	-1.3
WKZ	**Wanaka**	**4.61**	**217**	PN	Pn	03 03 54.2	-2.4
EAZ	**Earnscleugh**	**4.81**	**212**	PN	Pn	03 03 56.4	-2.8

*ISCJB **24** 03:16:43.9±0.3, 39°17N±0°02×26°84E±0°02, h5km±3km, Error ellipse: s-maj=3.4km s-min=2.8km az=37.3*
*ISK **24** 03:16:43.7, 39°19N×26°85E, h5km, MD3.2*
*NEIC **24** 03:16:43.0, 39°18N×26°85E, h5km, MD3.4(ATH), MD3.3(ISK), After ISK.*
*ATH **24** 03:16:43.0, 39°20N×26°88E, h18km±3km, MD3.4/6*
*DDA **24** 03:16:43.8, 39°16N×26°88E, h6km±6km, Md3.2*
*CSEM **24** 03:16:44.2±0.1, 39°16N×26°81E, h8km, ML2.6/3, Error ellipse: s-maj=2.9km s-min=2.8km az=6.0*
*THE **24** 03:16:44.1, 39°14N×26°84E, h9km±1km, ML2.6/3, Error ellipse: s-maj=1.6km s-min=0.5km az=253.0*

ISC 24 03:16:44.7±0.3, 39°18N±0°02×26°84E±0°02, h8km±3km, n83, σ0°88/121, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.18**	**319**	‖ *i*P	**Pg**	**03 16 48.4**	**+0.1**
AYVA				*i* S	**Sg**	**03 16 51.6**	**+0.8**
AYVA	**Ayvalik**	**0.18**	**319**	*i* P	**Pg**	**03 16 48.4**	**+0.1**
AYVA				*i* S	**Sg**	**03 16 51.6**	**+0.8**
PRK	**Paraskevi**	**0.45**	**279**	*e*Pb	**Pg**	**03 16 52.7**	**-0.6**
PRK				*e*Sb	**Sg**	**03 17 00.0**	**+0.8**
PRK	**Paraskevi**	**0.45**	**279**	*e*PB	**Pg**	**03 16 52.7**	**-0.6**
PRK				*e*SB	**Sg**	**03 17 00.0**	**+0.8**
PRK	**Paraskevi**	**0.45**	**279**	P	**Pg**	**03 16 53.0**	**-0.3**
PRK				S	**Sg**	**03 16 59.9**	**+0.7**
PRK	**Paraskevi**	**0.45**	**279**	*e*Pb	**Pg**	**03 16 52.7**	**-0.6**
PRK	**Paraskevi**	**0.45**	**279**	P	**Pg**	**03 16 53.0**	**-0.3**
PRK				*e*Sb	**Sg**	**03 17 00.0**	**+0.8**
EZN	**Ezine**	**0.76**	**329**	*e*PG	**Pg**	**03 16 59.0**	**-0.3**
EZN				*e*SG	**Sg**	**03 17 09.2**	**+0.0**
EZN	**Ezine**	**0.76**	**329**	*e*Pg	**Pg**	**03 16 59.0**	**-0.3**
EZN				*e*Sg	**Sg**	**03 17 09.2**	**-0.1**
SIGR	**SIGRI**	**0.77**	**273**	P	**Pg**	**03 16 58.5**	**-0.9**
SIGR				S	**Sg**	**03 17 10.1**	**+0.7**
SIGR	**SIGRI**	**0.77**	**273**	P	**Pg**	**03 16 58.5**	**-0.9**
SIGR				S	**Sg**	**03 17 10.1**	**+0.7**
AKS	**Akhisar**	**0.81**	**111**	*e*PG	**Pg**	**03 16 59.8**	**-0.5**
AKS				*e*SG	**Sg**	**03 17 10.8**	**0.0**
AKS	**Akhisar**	**0.81**	**111**	*e*Pg	**Pg**	**03 16 59.8**	**-0.5**
AKS				*e*Sg	**Sg**	**03 17 10.8**	**-0.1**
AKHS	**Akhisar**	**0.81**	**111**	*i* P	**Pg**	**03 16 59.9**	**-0.4**
AKHS				*i* S	**Sg**	**03 17 11.1**	**+0.3**
AKHS	**Akhisar**	**0.81**	**111**	*i* P	**Pg**	**03 16 59.9**	**-0.4**
AKHS				*i* S	**Sg**	**03 17 11.1**	**+0.2**
BALY	**Balya**	**0.83**	**47**	*i* P	**Pg**	**03 17 00.1**	**-0.5**
BALY				*i* S	**Sg**	**03 17 12.5**	**+1.2**
BALY	**Balya**	**0.83**	**47**	*i* P	**Pg**	**03 17 00.1**	**-0.5**
BALY				*i* S	**Sg**	**03 17 12.5**	**+1.2**
URLA	**Izmir**	**0.84**	**193**	*i* P	**Pg**	**03 16 58.2**	**-2.5**
URLA				*i* S	**Sg**	**03 17 13.0**	**+1.4**
URLA	**Izmir**	**0.84**	**193**	*i* P	**Pg**	**03 16 58.2**	**-2.5**
URLA				*i* S	**Sg**	**03 17 13.0**	**+1.4**
IZM	**Izmir**	**0.84**	**157**	*e*PG	**Pg**	**03 17 00.1**	**-0.8**
IZM				*e*SG	**Sg**	**03 17 13.2**	**+1.4**
IZM	**Izmir**	**0.84**	**157**	*e*Pg	**Pg**	**03 17 00.0**	**-0.9**
IZM				*e*Sg	**Sg**	**03 17 13.2**	**+1.4**
BOZC	**Bozcaada**	**0.90**	**318**	*i* P	**Pg**	**03 17 02.4**	**+0.4**
BOZC				*i* S	**Sg**	**03 17 15.5**	**+1.8**
BALB	**Balikesir**	**0.93**	**60**	*e*PG	**Pg**	**03 17 01.6**	**-0.9**
BALB	**Balikesir**	**0.93**	**60**	*e*Pg	**Pg**	**03 17 01.6**	**-0.9**
CHOS	**Chios island**	**1.00**	**218**	*e*PN	**Pg**	**03 17 02.3**	**-1.5**
CHOS				*e*SN	**Sg**	**03 17 17.1**	**+0.3**
CHOS	**Chios island**	**1.00**	**218**	P	**Pg**	**03 17 02.3**	**-1.5**
CHOS				S	**Sg**	**03 17 16.1**	**-0.7**
CHOS	**Chios island**	**1.00**	**218**	*e*Pn	**Pg**	**03 17 02.3**	**-1.5**
CHOS				S	**Sg**	**03 17 16.1**	**-0.7**
CHOS				*e*Sn	**Sg**	**03 17 17.1**	**+0.3**
GONE	**Gonen-Balikesi**	**1.09**	**37**	*e*PG	**Pg**	**03 17 04.4**	**-1.2**
GONE	**Gonen-Balikesi**	**1.09**	**37**	*e*Pg	**Pg**	**03 17 04.4**	**-1.2**
GADA	**Gvkgeada**	**1.25**	**325**	*e*PN	**Pn**	**03 17 07.8**	**-0.6**
GADA	**Gvkgeada**	**1.25**	**325**	*e*Pn	**Pn**	**03 17 07.8**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.25**	**347**	*e*PN	**Pn**	**03 17 07.8**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.25**	**347**	*e*Pn	**Pn**	**03 17 07.8**	**-0.6**
DURS	**Dursunbey**	**1.34**	**71**	*i* P	**Pn**	**03 17 08.6**	**-1.0**
DURS				*i* S	**Sb**	**03 17 26.9**	**-0.3**
DURS	**Dursunbey**	**1.34**	**71**	*i* P	**Pn**	**03 17 08.6**	**-1.0**
DURS				*i* S	**Sb**	**03 17 26.9**	**-0.3**
EDC	**Edincik**	**1.41**	**34**	*e*PN	**Pn**	**03 17 10.6**	**0.0**
EDC	**Edincik**	**1.41**	**34**	*e*Pn	**Pn**	**03 17 10.6**	**0.0**
SMG	**Samos**	**1.46**	**180**	*e*Pn	**Pn**	**03 17 10.5**	**-0.8**
SMG				*e*Sn	**Sn**	**03 17 32.0**	**+1.4**
SMG	**Samos**	**1.46**	**180**	*e*PN	**Pn**	**03 17 10.5**	**-0.8**
SMG				*e*SN	**Sn**	**03 17 32.0**	**+1.4**
SMG	**Samos**	**1.46**	**180**	*e*Pn	**Pn**	**03 17 10.5**	**-0.8**
SMG				*e*Sn	**Sn**	**03 17 32.0**	**+1.4**
DEMI	**Demirci**	**1.47**	**95**	*i* P	**Pn**	**03 17 10.7**	**-0.7**
DEMI				*i* S	**Sn**	**03 17 29.2**	**-1.5**
DEMI	**Demirci**	**1.47**	**95**	*i* P	**Pn**	**03 17 10.7**	**-0.6**
DEMI				*i* S	**Sn**	**03 17 29.2**	**-1.5**
ERIK	**Erikli-Kesan**	**1.52**	**351**	*e*PN	**Pn**	**03 17 11.7**	**-0.4**
ERIK	**Erikli-Kesan**	**1.52**	**351**	*e*Pn	**Pn**	**03 17 11.7**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.53**	**10**	*e*PN	**Pn**	**03 17 12.3**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.53**	**10**	*e*Pn	**Pn**	**03 17 12.3**	**0.0**
KULA	**Kula-Manisa**	**1.57**	**114**	*e*PN	**Pn**	**03 17 12.9**	**+0.2**
KULA	**Kula-Manisa**	**1.57**	**114**	*e*Pn	**Pn**	**03 17 13.0**	**+0.3**
ENEZ	**Enez**	**1.65**	**342**	*e*PN	**Pn**	**03 17 13.7**	**-0.1**
ENEZ	**Enez**	**1.65**	**342**	*e*Pn	**Pn**	**03 17 13.7**	**-0.1**
ALN	**Alexandroupoli**	**1.82**	**341**	*e*Pn	**Pn**	**03 17 15.7**	**-0.6**
ALN				*e*Sn	**Sn**	**03 17 38.7**	**-0.9**
ALN	**Alexandroupoli**	**1.82**	**341**	*e*PN	**Pn**	**03 17 15.7**	**-0.6**
ALN				*e*SN	**Sn**	**03 17 38.7**	**-0.9**
ALN	**Alexandroupoli**	**1.82**	**341**	P	**Pn**	**03 17 14.9**	**-1.4**
ALN				S	**Sn**	**03 17 38.8**	**-0.8**
ALN	**Alexandroupoli**	**1.82**	**341**	P	**Pn**	**03 17 14.9**	**-1.4**
ALN	**Alexandroupoli**	**1.82**	**341**	*e*Pn	**Pn**	**03 17 15.7**	**-0.6**
ALN				*e*Sn	**Sn**	**03 17 38.7**	**-0.9**
MDNY	**Mudanya-Bursa**	**1.98**	**52**	*e*PN	**Pn**	**03 17 18.5**	**+0.2**
MDNY	**Mudanya-Bursa**	**1.98**	**52**	*e*Pn	**Pn**	**03 17 18.5**	**+0.1**
GDZ	**Gediz**	**2.06**	**92**	*i* P	**Pn**	**03 17 20.6**	**+1.2**
GDZ				*i* S	**Sn**	**03 17 48.0**	**+2.8**
GDZ	**Gediz**	**2.06**	**92**	*i* P	**Pn**	**03 17 20.6**	**+1.1**
GDZ				*i* S	**Sn**	**03 17 48.0**	**+2.8**
ARMT	**Armutlu**	**2.08**	**48**	*e*PN	**Pn**	**03 17 19.6**	**-0.3**
ARMT	**Armutlu**	**2.08**	**48**	*e*Pn	**Pn**	**03 17 19.6**	**-0.3**
SLVT	**Silivri**	**2.31**	**27**	*e*PN	**Pn**	**03 17 23.2**	**+0.3**
SLVT	**Silivri**	**2.31**	**27**	*e*Pn	**Pn**	**03 17 23.2**	**+0.3**
APE	**Apeiranthos**	**2.34**	**207**	*e*PN	**Pn**	**03 17 24.0**	**+0.6**
APE	**Apeiranthos**	**2.34**	**207**	*e*PN	**Pn**	**03 17 24.0**	**+0.6**
APE	**Apeiranthos**	**2.34**	**207**	*e*Pn	**Pn**	**03 17 24.0**	**+0.6**
CTKS	**Kestanelik-??a**	**2.42**	**31**	*e*PN	**Pn**	**03 17 24.8**	**+0.3**
CTKS	**Kestanelik-??a**	**2.42**	**31**	*e*Pn	**Pn**	**03 17 24.8**	**+0.3**
BGKT	**Bogazkoy**	**2.49**	**36**	*e*PN	**Pn**	**03 17 26.1**	**+0.6**
BGKT	**Bogazkoy**	**2.49**	**36**	*e*Pn	**Pn**	**03 17 26.1**	**+0.6**
ISK	**Istanbul-Kandi**	**2.54**	**41**	*e*PN	**Pn**	**03 17 26.9**	**+0.8**
ISK	**Istanbul-Kandi**	**2.54**	**41**	*e*Pn	**Pn**	**03 17 26.9**	**+0.8**
ADVT	**Abdulvahap**	**2.56**	**60**	*e*PN	**Pn**	**03 17 27.0**	**+0.6**
ADVT	**Abdulvahap**	**2.56**	**60**	*e*Pn	**Pn**	**03 17 27.0**	**+0.6**
EDRB	**Edirne**	**2.67**	**358**	*e*PN	**Pn**	**03 17 28.8**	**+0.9**
EDRB	**Edirne**	**2.67**	**358**	*e*Pn	**Pn**	**03 17 28.8**	**+0.9**
HRT	**Hereke**	**2.72**	**52**	*e*PN	**Pn**	**03 17 29.4**	**+0.8**
HRT	**Hereke**	**2.72**	**52**	*e*Pn	**Pn**	**03 17 29.4**	**+0.7**
PLG	**Polygyros**	**2.88**	**296**	*e*Pn	**Pn**	**03 17 29.7**	**-1.1**
PLG	**Polygyros**	**2.88**	**296**	*e*PN	**Pn**	**03 17 29.7**	**-1.1**
PLG	**Polygyros**	**2.88**	**296**	*e*Pn	**Pn**	**03 17 29.7**	**-1.1**
GULT	**Gulveren**	**3.10**	**65**	*e*PN	**Pn**	**03 17 34.4**	**+0.6**
GULT	**Gulveren**	**3.10**	**65**	*e*Pn	**Pn**	**03 17 34.4**	**+0.6**

DJA 24 03:17:00, 8.69S×111.45E, h18km, MLv3.8/9, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.56**	**331**	P	Pg	03 17 11.1	-0.1
PCJI				S	Sg	03 17 18.0	-0.8
PWJI	**Pagerwojo**	**0.75**	**28**	P	Pb	03 17 14.4	-0.1
PWJI				S	Sb	03 17 23.9	-0.6
SJI	**Sawahan**	**1.00**	**18**	P	Pb	03 17 18.3	-0.5
SJI				S	Sb	03 17 31.6	0.0
KRKI	**Karangkates**	**1.12**	**62**	P	Pn	03 17 21.0	+0.2
KRKI				S	Sb	03 17 36.2	+1.0
UGM	**Wanagama**	**1.20**	**310**	P	Pn	03 17 21.6	-0.3
UGM				S	Sb	03 17 35.8	-1.6
NGJI	**Ngawi**	**1.31**	**0**	P	Pn	03 17 26.1	+2.6
BJII	**Banjamegara**	**2.19**	**308**	P	Pn	03 17 37.2	+1.7
JAGI	**Jajag, Banyuwa**	**2.68**	**86**	P	Pn	03 17 41.6	-0.7
JAGI				S	Sn	03 18 13.4	-0.9
CISI	**Cisompet, Garu**	**3.77**	**287**	P	Pn	03 17 56.4	-0.9

IDC 24 03:31:14.2±11.0, 7°83S×130°05E, h162km±88km, mb3.4/1, mb1 3.4/3, mb1mx3.0/16, mbtmp3.2/3, Error ellipse: s-maj=81.7km s-min=73.3km az=134.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.74**	**161**	P	Pn	03 34 08.2	-1.5
	0.7nm,0.3s,baz=344,slow=12,SNR=27						
WRA				S	Sn	03 36 31.6	+0.7
	0.8nm,0.3s,baz=330,slow=22,SNR=8.6						
ASAR	**Alice Springs**	**16.17**	**167**	P	Pn	03 34 52.8	+0.3
	0.4nm,0.3s,baz=343,slow=11,SNR=18						
ASAR				S	S	03 37 53.7	+1.2
	0.2nm,0.3s,baz=344,slow=22,SNR=5.4						
STKA	**Stephens Creek**	**26.23**	**157**	P	P	03 36 34.7	+0.5
	0.3nm,0.3s,baz=334,slow=12,SNR=3.3						

*ISCJB **24** 03:31:28.6±1.0, 10°13N±0°05×60°52W±0°06, h82km±12km, Error ellipse: s-maj=9.9km s-min=8.6km az=11.8*
*FUNV **24** 03:31:29.6, 10°13N×60°35W, h35km, MW3.4*
*TRN **24** 03:31:33.6, 10°36N×60°64W, h70km, MD3.5*

ISC 24 03:31:29.9±1.0, 10°13N±0°05×60°52W±0°06, h71km±14km, n16, σ0°99/27, 4C, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.64**	**303**	*e*P	**Pn**	**03 31 45.9**	**+1.6**
TBH				*e*S	**Sn**	**03 31 55.2**	**+0.4**
BOT	**Bacolet**	**1.04**	**349**	*e*P	**Pn**	**03 31 50.3**	**+1.3**
BOT				*e*S	**Sn**	**03 32 01.4**	**-1.9**
TPR	**Prospect**	**1.07**	**347**	*e*P	**Pn**	**03 31 50.0**	**+0.6**
TPR				*e*S	**Sn**	**03 32 02.6**	**-1.4**
TOSP	**Speyside**	**1.16**	**359**	*e*P	**Pn**	**03 31 51.3**	**+0.9**
TOSP				*e*S	**Sn**	**03 32 04.8**	**-1.0**
GUIV	**Guiria**	**1.75**	**287**‖	*e*P	**Pn**	**03 31 58.9**	**+0.7**
GUIV				*e*S	**Sn**	**03 32 20.6**	**+0.9**
GUNV	**Guanoco**	**2.38**	**271**‖	*i*P	**Pn**	**03 32 08.5**	**+1.7**
GUNV				*e*S	**Sn**	**03 32 36.0**	**+1.1**
RIOV	**Rio Grande**	**2.42**	**212**	*e*P	**Pn**	**03 32 07.1**	**-0.1**
RIOV				*e*S	**Sn**	**03 32 34.4**	**-1.4**
CRUV	**Carupano**	**2.72**	**282**‖	*e*P	**Pn**	**03 32 11.1**	**-0.3**
CRUV				*e*S	**Sn**	**03 32 42.4**	**-0.8**
ITEV	**Isla Los Testi**	**2.84**	**296**‖	*e*P	**Pn**	**03 32 12.8**	**-0.1**
ITEV				*e*S	**Sn**	**03 32 46.1**	**+0.1**
PCRV	**Puerto La Cruz**	**4.05**	**271**	*e*P	**Pn**	**03 32 28.9**	**-0.6**
LUEV	**Luepa**	**4

QSPA	**South Pole Qui**	**33.66**	**180**	P		**P**	**03 59 14.3**	**+1.1**
	0.8nm,0.7s,mb3.8,baz=263,slow=3.7,SNR=9.2							
CPUP	**Villa Florida**	**37.26**	**311**	P		**P**	**03 59 44.5**	**-0.1**
	0.5nm,0.5s,mb3.6,baz=149,slow=13,SNR=3.6							
MAW	**Mawson**	**39.64**	**143**	P		**P**	**04 00 04.1**	**-0.1**
	1.2nm,0.4s,mb4.0,baz=231,slow=23,SNR=6.4							
LPAZ	**La Paz**	**50.79**	**305**	*eP*		**P**	**04 01 34.2**	**+1.1**
	4.3nm,0.5s,mb4.6							
LPAZ	**La Paz**	**50.79**	**305**	*eP*		**P**	**04 01 34.0**	**+0.9**
	3.6nm,0.4s,mb4.7,baz=147,slow=5.7,SNR=46							
TOA0	**Torodi Ar. Sit**	**73.47**	**29**	*eP*		**P**	**04 04 04.5**	**-0.5**
TORD	**Torodi Ar. Bea**	**73.47**	**29**	P		**P**	**04 04 04.7**	**-0.4**
	0.5nm,0.4s,mb3.8,baz=201,slow=6.6,SNR=30							
FINES	**FINESS Array B**	**124.80**	**28**	PKP	PKPdf		04 11 27.0	-3.9
FINES	**FINESS Array B**	**124.80**	**28**	PKP	PKPdf		04 11 27.0	-3.9
	1.7nm,0.8s,baz=204,slow=3.0,SNR=5.8							
ARCES	**ARCESS Array B**	**131.40**	**22**	PKP	PKPdf		04 11 40.3	-3.0
	1.5nm,0.9s,baz=137,slow=3.3,SNR=6.8							
YKA	**Yellowknife Ar**	**136.65**	**317**	PKP	PKPdf		04 11 52.8	-0.4
	0.3nm,0.3s,baz=137,slow=2.3,SNR=6.1							
INK	**Inuvik**	**146.30**	**320**	PKPbc	PKPbc		04 12 09.7	-2.0
	1.0nm,0.4s,baz=354,slow=1.1,SNR=8.2							
ILAR	**Eielson Array**	**150.56**	**311**	PKPbc	PKPbc		04 12 19.6	-3.3
	0.7nm,0.7s,baz=127,slow=0.7,SNR=11							
SONM	**Songino Array**	**150.63**	**87**	PKPbc	PKPbc		04 12 21.2	-2.3
	1.2nm,0.5s,baz=218,slow=3.2,SNR=8.2							

IDC 24 04:00:51.0±3.4, 3°55S×151°58E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.3/16, mbtmp3.2/2, MS3.6/1, Ms1 3.6/1, ms1mx2.8/9, Error ellipse: s-maj=146.9km s-min=45.6km az=119.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.42**	**225**	P		P	04 06 02.1	+0.1
	0.5nm,0.4s,baz=51,slow=10.0,SNR=5.6							
ASAR	**Alice Springs**	**26.30**	**219**	P		P	04 06 29.1	+0.6
	0.1nm,0.5s,baz=56,slow=9.1,SNR=3.8							
AFI	**Afiamalu**	**37.59**	**108**	LR		LR	04 19 38.5	
	comp=Z,97nm,21.0s,baz=81,slow=30							
TORD	**Torodi Ar. Bea**	**148.75**	**290**	PKPbc		PKPbc	04 20 40.3	-1.2
	0.2nm,0.4s,baz=59,slow=3.0,SNR=4.3							

*BJI **24** 04:05:42.8, 1°.81N×96°.18E, h28km, mb4.5/4*
*IDC **24** 04:05:44.8±0.9, 2°.27N×96°.24E, h0km, mb4.2/9, mb1 4.2/11, mb1mx4.0/23, mbtmp4.1/11, ML3.9/2, MS3.3/2, Ms1 3.3/2, ms1mx2.4/32, Error ellipse: s-maj=29.5km s-min=16.0km az=47.0*
*ISCJB **24** 04:05:48.4±1.2, 2°.24N±0°.05×96°.20E±0°.07, h39km±11km, mb4.4/21, Error ellipse: s-maj=12.0km s-min=8.0km az=153.6*
*DJA **24** 04:05:48, 2°.33N×96°.14E, h27km, MLv4.5/8*
*NEIC **24** 04:05:49.9±0.5, 2°.30N×96°.28E, h35km, mb3.8/2, Error ellipse: s-maj=14.6km s-min=9.2km az=60.0*

ISC 24 04:05:49.2±2.2, 2°.27N±0°.05×96°.20E±0°.05, h27km±17km, h24km±4.1km:pP-P, n42, σ1°12/42, mb4.4/21, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TPTI		**1.38**	**45**	P		**Pn**	**04 06 11.3**	**-1.4**
TPTI				S		**Sn**	**04 06 31.0**	**+0.9**
TSI	**Tuntungan**	**2.65**	**63**	P		**Pn**	**04 06 31.0**	**+0.8**
TSI				S		**Sn**	**04 07 02.8**	**+1.3**
PSI	**Prapat**	**2.77**	**79**	Pn		**Pn**	**04 06 31.1**	**-0.7**
	14nm,0.3s,baz=270,slow=6.6,SNR=51							
PSI				Sn		**Sn**	**04 07 03.5**	**-0.8**
	19nm,0.3s,baz=205,slow=15,SNR=5.7							
PSI				LR		LR	04 07 51.3	
	comp=Z,328nm,18.1s,baz=238,slow=47							
BSI	**Banda Aceh**	**3.33**	**344**	P		**Pn**	**04 06 38.0**	**-1.5**
MNSI	**Mandailing Nat**	**3.68**	**113**	P		**Pn**	**04 06 43.8**	**-0.5**
SISI	**Saibi**	**4.59**	**141**	P		**Pn**	**04 06 58.3**	**+1.4**
BKNI	**Bangkinang**	**5.21**	**112**	P		**Pn**	**04 07 07.1**	**+1.8**
	0.7nm88nm,0.9s							
IPM	**Ipoh**	**5.29**	**65**	P		**Pn**	**04 07 06.5**	**+0.1**
	0.3nm848nm78nm,1.0s							
KULM	**Kulim**	**5.35**	**56**	P		**Pn**	**04 07 07.0**	**-0.3**
	0.7nm2μm192nm,0.8s							
SDSI	**Sungai Dareh**	**6.12**	**121**	P		**Pn**	**04 07 17.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**16.31**	**9**	Pn		**Pn**	**04 09 35.1**	**-1.3**
	0.2nm,0.3s,baz=193,slow=11,SNR=15							
CHTO	**Chiang Mai**	**16.66**	**9**	*eP*		**Pn**	**04 09 40.5**	**-0.4**
	1.8nm,0.4s							
SHL	**Shillong**	**23.53**	**350**	*ex*		**P**	**04 10 55.0**	**-2.4**
ODAN	**Odare**	**25.87**	**342**	*eP*		**P**	**04 11 18.3**	**-0.4**
GYA	**Guiyang**	**26.06**	**22**	P		**P**	**04 11 20.8**	**+0.3**
GYA				pmax		pmax		
	comp=Z,10.0nm,0.9s,mb4.3							
RAMN	**Ramite**	**26.21**	**340**	*eP*		**P**	**04 11 23.4**	**+1.6**
	comp=Z,23nm,0.7s,mb4.8							
JIRN	**Jiri**	**27.00**	**340**	*eP*		**P**	**04 11 30.5**	**+1.5**
	comp=Z,35nm,0.8s,mb5.0							
GUN	**Gumba**	**27.34**	**340**	*eP*		**P**	**04 11 33.2**	**+1.2**
	comp=Z,36nm,0.7s,mb5.0							
DMN	**Daman**	**27.34**	**338**	*eP*		**P**	**04 11 35.0**	**+3.0**
	comp=Z,12nm,0.7s,mb4.5							
KKN	**Kakani**	**27.44**	**339**	*eP*		**P**	**04 11 34.4**	**+1.5**
GKN	**Gorkha**	**27.87**	**338**	*eP*		**P**	**04 11 38.8**	**+2.0**
KOLN	**Koldanda**	**28.07**	**336**	*eP*		**P**	**04 11 40.4**	**+1.8**
	comp=Z,14nm,0.6s,mb4.8							
XAN	**Xi'an**	**33.76**	**19**	P		**P**	**04 12 27.4**	**-1.3**
XAN				pP		pP	04 12 36.4	-0.3
XAN				sP		sP	04 12 41.9	+1.9
XAN				pmax		pmax		
	comp=Z,5.0nm,0.8s,mb4.5							
LZH	**Lanzhou**	**34.38**	**11**	*eP*		**P**	**04 12 33.5**	**-0.5**
LZH				pP		pP	04 12 38.0	-4.0
LZH				pmax		pmax		
	comp=Z,18nm,1.3s,mb4.8							
GTA	**Gaotai**	**37.11**	**5**	*eP*		**P**	**04 12 57.3**	**-0.1**
GTA				pP		pP	04 13 04.3	-1.1
GTA				sP		sP	04 13 08.4	-0.3
GTA				pmax		pmax		
	comp=Z,10.0nm,1.1s,mb4.6							
WRA	**Warramunga Arr**	**43.45**	**122**	P		**P**	**04 13 48.9**	**-1.2**
WRA	**Warramunga Arr**	**43.45**	**122**	P		**P**	**04 13 48.9**	**-1.2**
	comp=Z,2.0nm,0.7s,mb3.9,baz=301,slow=9.2,SNR=9.2							
ASAR	**Alice Springs**	**44.83**	**127**	P		**P**	**04 14 00.5**	**-0.7**
	comp=Z,0.9nm,0.6s,mb3.8,baz=300,slow=8.2,SNR=12							
KSRS	**Korea Array**	**45.55**	**36**	LR		LR	04 35 24.0	
	comp=Z,56nm,18.1s,baz=215,slow=39							
MKAR	**Makanchi Array**	**45.97**	**347**	P		**P**	**04 14 09.9**	**+0.1**
	comp=Z,3.3nm,0.5s,mb4.5,baz=159,slow=8.3,SNR=40							
SONM	**Songino Array**	**46.23**	**10**	P		**P**	**04 14 11.6**	**-0.3**
	comp=Z,1.7nm,0.4s,mb4.3,baz=188,slow=8.4,SNR=16							
SONM				PcP		PcP	04 15 47.6	+0.3
	comp=Z,1.4nm,0.7s,baz=182,slow=3.1,SNR=5.2							
ULN	**Ulaanbaatar**	**46.38**	**10**	*eP*		**P**	**04 14 13.6**	**+0.5**
	comp=Z,1.9nm,0.6s,mb4.2							
ZAA0	**Zalesovo Array**	**52.35**	**352**	*eP*		**P**	**04 14 58.3**	**-0.3**
ZALV	**Zalesovo Beam**	**52.35**	**352**	P		**P**	**04 14 58.5**	**-0.1**
	comp=Z,6.4nm,0.4s,mb4.9,baz=168,slow=6.9,SNR=36							
STKA	**Stephens Creek**	**54.81**	**132**	P		**P**	**04 15 16.8**	**-0.2**
	comp=Z,1.7nm,0.9s,mb4.1,baz=309,slow=11,SNR=3.5							
BRTR	**Keskin Array B**	**67.66**	**312**	P		**P**	**04 16 43.5**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.8,baz=120,slow=7.3,SNR=3.9							
JOF	**Joensuu**	**76.76**	**335**	*ep*		**P**	**04 17 36.4**	**-1.5**
	comp=Z,1.0nm,0.7s,mb3.9							
FINES	**FINESS Array B**	**78.59**	**333**	P		**P**	**04 17 47.9**	**-0.3**
	comp=Z,1.0nm,0.5s,mb4.0,baz=87,slow=5.1,SNR=13							
KAF	**Kangasniemi**	**78.68**	**333**	*ep*		**P**	**04 17 46.1**	**-2.6**
	comp=Z,1.2nm,0.5s,mb4.1							
ARCES	**ARCESS Array B**	**81.20**	**340**	P		**P**	**04 18 02.4**	**+0.3**
	comp=Z,1.1nm,0.5s,mb4.1,baz=103,slow=6.0,SNR=28							
TXAR	**Lajitas Array**	**143.26**	**39**	PKP		PKPdf	04 25 19.3	-2.4
	comp=Z,0.3nm,0.6s,baz=243,slow=0.3,SNR=4.2							
CPUP	**Villa Florida**	**145.10**	**224**	PKPbc		PKPbc	04 25 25.2	+0.9
	comp=Z,0.7nm,0.6s,baz=233,slow=2.8,SNR=3.9							

*ISCJB **24** 04:05:49.7±0.7, 24°.23S±0°.05×67°.09W±0°.09, h173km±9km, mb3.4/5, Error ellipse: s-maj=13.3km s-min=7.1km az=164.5*
*IDC **24** 04:05:50.0±1.7, 24°.23S×67°.03W, h159km±16km, mb3.2/4, mb1 3.4/6, mb1mx3.3/16, mbtmp3.1/6, Error ellipse: s-maj=24.6km s-min=13.9km az=77.0*
*NEIC **24** 04:05:51.2±0.8, 24°.22S×66°.98W, h171km±8km, mb4.0/2, Error ellipse: s-maj=14.0km s-min=8.3km az=73.0*
*GUC **24** 04:05:52.9±0.3, 24°.11S×67°.51W, h200km, ML4.0*
ISC 24 04:05:50.5±0.7, 24°22S±0°.05×67°04W±0°.08, h163km±9km, n19, σ1°12/24, mb3.4/5, 2C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CEN1	**Los Morros**	**3.01**	**285**	*i*P	⇓	**Pn**	**04 06 39.9**	**+1.5**
CEN1				*i* S		**Sn**	**04 07 15.6**	**0.0**
CEN1				AML		AML	04 07 18.8	
	comp=E,214nm,0.4s							
ANCH	**Antofagasta**	**3.13**	**279**	*i*P	⇑	**Pn**	**04 06 37.4**	**-2.5**
ANCH				*i* S		**Sn**	**04 07 13.3**	**-4.9**
MACH	**Maria Elena**	**3.21**	**308**	*e*P		**Pn**	**04 06 42.6**	**+1.7**
MACH				*i* S		**Sn**	**04 07 20.0**	**0.0**
MECH	**Mejillones**	**3.31**	**289**	*i*P	⇑	**Pn**	**04 06 43.8**	**+1.5**
MECH				*i* S		**Sn**	**04 07 21.8**	**-0.6**
MECH				AML		AML	04 07 25.9	
	comp=N,380nm,0.5s							
MNMC	**Miæe Miæ**	**5.59**	**334**	*e*P		**Pn**	**04 07 11.8**	**-0.1**
MNMC				*e*S		**Sn**	**04 08 13.7**	**-1.9**
CFAA	**Coronel Fontan**	**7.44**	**188**	P		**Pn**	**04 07 37.2**	**+0.9**
CFAA				S		**Sn**	**04 08 56.9**	**-2.7**
CFAA	**Coronel Fontan**	**7.44**	**188**	P		**Pn**	**04 07 37.2**	**+0.9**
	comp=N,0.1nm,0.3s,baz=21,slow=8.9,SNR=11							
CFAA				S		**Sn**	**04 08 56.9**	**-2.7**
	comp=N,0.1nm,0.3s,baz=142,slow=17,SNR=4.6							
LPAZ	**La Paz**	**7.95**	**352**	P		**Pn**	**04 07 44.9**	**+1.6**
	comp=N,2.5nm,0.3s,baz=166,slow=13,SNR=95							
LPAZ				S		**Sn**	**04 09 11.4**	**-0.8**
	comp=N,0.1nm,0.3s,baz=336,slow=19,SNR=5.4							
CPUP	**Villa Florida**	**9.04**	**106**	P		**Pn**	**04 07 57.5**	**-0.1**
CPUP	**Villa Florida**	**9.04**	**106**	P		**Pn**	**04 07 57.5**	**-0.1**
	comp=N,0.1nm,0.3s,baz=262,slow=15,SNR=2.6							
TRQA	**Tornquist**	**14.46**	**164**	*e*P		**Pn**	**04 09 07.6**	**+0.1**
	comp=N,4.9nm,0.7s							
HKT	**Hockley**	**60.53**	**331**	*e*P		**P**	**04 15 43.3**	**-0.3**
	comp=N,1.7nm,0.8s,mb3.9							
TXAR	**Lajitas Array**	**63.83**	**325**	P		**P**	**04 16 05.7**	**+0.2**
	comp=N,0.1nm,0.4s,mb3.0,baz=132,slow=5.4,SNR=4.4							
TORD	**Torodi Ar. Bea**	**76.68**	**69**	P		**P**	**04 17 23.1**	**-0.8**
	comp=N,0.3nm,0.5s,mb3.2,baz=256,slow=5.8,SNR=8.2							
PDAR	**Pinedale Array**	**77.31**	**329**	P		**P**	**04 17 27.2**	**+0.3**
	comp=N,0.2nm,0.5s,mb3.0,baz=131,slow=9.7,SNR=2.3							
BOSA	**Boshof**	**80.67**	**117**	P		**P**	**04 17 45.8**	**+0.1**
	comp=N,1.3nm,0.5s,mb3.9,baz=254,slow=3.0,SNR=4.7							
WRA	**Warramunga Arr**	**131.42**	**207**	PKP		PKPdf	04 24 44.1	-0.1
	comp=N,0.6nm,1.0s,baz=161,slow=1.7,SNR=3.2							
MKAR	**Makanchi Array**	**146.71**	**40**	PKPbc		PKPbc	04 25 13.3	+0.2
MKAR	**Makanchi Array**	**146.71**	**40**	PKPbc		PKPbc	04 25 13.3	+0.2
	comp=N,0.3nm,0.2s,baz=335,slow=3.1,SNR=4.0							

IDC 24 04:06:60.0±30.0, 23°.16S×176°.14W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/18, mbtmp4.0/4, Error ellipse: s-maj=554.1km s-min=150.9km az=78.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTA	**Charters Tower**	**35.03**	**268**	P		P	04 13 56.6	+2.0
	3.0nm,0.4s,baz=117,slow=11,SNR=3.8							
STKA	**Stephens Creek**	**38.28**	**247**	P		P	04 14 21.1	-1.1
	0.5nm,0.4s,baz=84,slow=8.1,SNR=2.9							
ASAR	**Alice Springs**	**45.65**	**259**	P		P	04 15 21.9	-0.7
	0.4nm,0.3s,baz=98,slow=8.8,SNR=15							
WRA	**Warramunga Arr**	**46.00**	**264**	P		P	04 15 25.0	-0.4
	1.1nm,0.3s,baz=96,slow=9.1,SNR=24							

*DDA **24** 04:16:52.6, 36°.08N×28°.15E, h7km±1km, Md3.0*
*ISCJB **24** 04:16:54.4±0.7, 36°.05N±0°.04×27°.56E±0°.06, h6km±6km, Error ellipse: s-maj=9.3km s-min=4.0km az=40.0*
*ATH **24** 04:16:54.3, 36°.05N×27°.63E, h26km±2km, MD3.4/7*
*NEIC **24** 04:16:54.3, 36°.05N×27°.63E, h26km, MD3.4(ATH), After ATH.*
*CSEM **24** 04:16:54.0±0.4, 36°.02N×27°.58E, h2km, MD3.4, Error ellipse: s-maj=14.8km s-min=6.0km az=132.0*

ISC 24 04:16:54.7±0.8, 36°.08N±0°.05×27°.53E±0°.06, h2km±7km, n32, σ1°10/56, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARG	**Arkhangelos**	**0.50**	**74**	*e*Pb		**Pg**	**04 17 03.3**	**-0.9**
ARG				*e*Sb		**Sg**	**04 17 10.7**	**0.0**
ARG	**Arkhangelos**	**0.50**	**74**	*e*PB		**Pg**	**04 17 03.3**	**-0.9**
ARG				*e*SB		**Sg**	**04 17 10.7**	**0.0**
ARG	**Arkhangelos**	**0.50**	**74**	*e*Pb		**Pg**	**04 17 03.3**	**-0.9**
ARG				*e*Sb		**Sg**	**04 17 10.7**	**0.0**
KARP	**Karpathos**	**0.61**	**210**	*e*Pb		**Pg**	**04 17 06.4**	**0.0**
KARP				*e*Sn		**Sg**	**04 17 16.6**	**+2.3**
KARP	**Karpathos**	**0.61**	**210**	*e*PB		**Pg**	**04 17 06.4**	**0.0**
KARP				*e*SN		**Sg**	**04 17 16.6**	**+2.3**
KARP	**Karpathos**	**0.61**	**210**	*e*Pb		**Pg**	**04 17 06.4**	**0.0**
KARP				*e*Sn		**Sg**	**04 17 16.6**	**+2.3**
BDRM	**Kayabasi**	**0.98**	**356**	*i* P		**Pg**	**04 17 14.4**	**+0.8**
BDRM				*i* S		**Sg**	**04 17 30.7**	**+4.3**
BDRM	**Kayabasi**	**0.98**	**356**	*i* P		**Pg**	**04 17 14.4**	**+0.9**
BDRM				*i* S		**Sg**	**04 17 30.7**	**+4.4**
ZKR	**Zakros**	**1.44**	**228**	*e*Pn		**Pn**	**04 17 21.6**	**-0.2**
ZKR				*e*Sn		**Sn**	**04 17 41.2**	**-0.1**
ZKR	**Zakros**	**1.44**	**228**	*e*PN		**Pn**	**04 17 21.6**	**-0.2**
ZKR				*e*SN		**Sn**	**04 17 41.2**	**-0.1**
ZKR	**Zakros**	**1.44**	**228**	*e*Pn		**Pn**	**04 17 21.6**	**-0.2**
ZKR				*e*Sn		**Sn**	**04 17 41.2**	**-0.1**
AYDN	**Tasoluk**	**1.60**	**10**	*i* P		**Pn**	**04 17 22.7**	**-1.3**
AYDN				*i* S		**Sn**	**04 17 45.2**	**0.0**
AYDN	**Tasoluk**	**1.60**	**10**	*i* P		**Pn**	**04 17 22.7**	**-1.3**
AYDN				*i* S		**Sn**	**04 17 45.2**	**-0.1**
NPS	**Neapolis**	**1.76**	**243**	*e*Pb		**Pb**	**04 17 25.3**	**-2.4**
NPS				*e*Sn		**Sn**	**04 17 48.5**	**-0.8**
NPS	**Neapolis**	**1.76**	**243**	*e*PB		**Pb**	**04 17 25.3**	**-2.4**
NPS				*e*SN		**Sn**	**04 17 48.5**	**-0.8**
NPS	**Neapolis**	**1.76**	**243**	*e*Pb		**Pb**	**04 17 25.3**	**-2.4**
NPS				*e*Sn		**Sn**	**04 17 48.5**	**-0.8**
APE	**Apeiranthos**	**1.89**	**302**	*e*Pb		**Pb**	**04 17 28.2**	**-1.7**
APE	**Apeiranthos**	**1.89**	**302**	*e*PB		**Pb**	**04 17 28.2**	**-1.7**
APE	**Apeiranthos**	**1.89**	**302**	*e*Pb		**Pb**	**04 17 28.2**	**-1.7**
LAST	**Lasithi**	**1.91**	**242**	*e*Pb		**Pb**	**04 17 27.7**	**-2.5**
LAST	**Lasithi**	**1.91**	**242**	*e*PB		**Pb**	**04 17 27.7**	**-2.5**
LAST	**Lasithi**	**1.91**	**242**	*e*Pb		**Pb**	**04 17 27.7**	**-2.5**
DNZL	**Cakiroluk**	**2.01**	**37**	*i* P		**Pn**	**04 17 29.8**	**+0.2**
DNZL				*i* S		**Sn**	**04 17 56.7**	**+1.3**
DNZL	**Cakiroluk**	**2.01**	**37**	*i* P		**Pn**	**04 17 29.8**	**+0.1**
DNZL				*i* S		**Sn**	**04 17 56.7**	**+1.3**
IDI	**Anoyia**	**2.29**	**251**	*e*Pn		**Pn**	**04 17 33.7**	**+0.2**
IDI				*e*Sn		**Sn**	**04 18 03.4**	**+1.1**
IDI	**Anoyia**	**2.29**	**251**	*e*PN		**Pn**	**04 17 33.7**	**+0.2**
IDI				*e*SN		**Sn**	**04 18 03.4**	**+1.1**
IDI	**Anoyia**	**2.29**	**251**	*e*Pn		**Pn**	**04 17 33.7**	**+0.2**
IDI				*e*Sn		**Sn**	**04 18 03.4**	**+1.1**
SIVA	**Sivas**	**2.46**	**245**	*e*Pn		**Pn**	**04 17 36.4**	**+0.6**
SIVA				*e*Sn		**Sn**	**04 18 07.1**	**+0.6**
SIVA	**Sivas**	**2.46**	**245**	*e*PN		**Pn**	**04 17 36.4**	**+0.6**
SIVA				*e*SN		**Sn**	**04 18 07.1**	**+0.6**
SIVA	**Sivas**	**2.46**	**245**	*e*Pn		**Pn**	**04 17 36.4**	**+0.6**
SIVA				*e*Sn		**Sn**	**04 18 07.1**	**+0.6**
KARN	**Karanos**	**3.02**	**258**	*e*PN		**Pn**	**04 17 44.1**	**+0.6**
KARN	**Karanos**	**3.02**	**258**	*e*Pn		**Pn**	**04 17 44.1**	**+0.6**

IDC 24 04:18:28.3±7.3, 21°.62N×143°.68E, h234km±69km, mb3.1/7, mb1 3.3/7, mb1mx3.1/22, mbtmp3.1/7, Error ellipse: s-maj=47.3km s-min=16.4km az=81.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSRS	**Korea Array**	**20.85**	**323**	P		P	04 22 52.6	+0.3
	1.0nm,0.5s,baz=150,slow=9.0,SNR=7.0							
WRA	**Warramunga Arr**	**42.31**	**193**	P		P	04 25 59.2	-0.2
	0.3nm,0.3s,baz=10,slow=8.3,SNR=10							
ASAR	**Alice Springs**	**46.01**	**192**	P		P	04 26 28.5	-0.1
	0.3nm,0.6s,baz=13,slow=6.3,SNR=3.8							
ZALV	**Zalesovo Beam**	**54.56**	**322**	P		P	04 27 31.9	-0.3
	0.6nm,0.3s,baz=108,slow=7.0,SNR=3.8							
MKAR	**Makanchi Array**	**55.09**	**313**	P		P	04 27 37.1	+0.9
	0.3nm,0.2s,baz=86,slow=10,SNR=3.2							
NVAR	**Mina Array Bea**	**82.83**	**52**	P		P	04 30 26.6	-0.1
	0.4nm,0.7s,baz=290,slow=3.7,SNR=3.2							
FINES	**FINESS Array B**	**83.45**	**335**	P		P	04 30 28.6	-0.8
	0.3nm,0.3s,baz=55,slow=5.3,SNR=7.4							
TORD	**Torodi Ar. Bea**	**129.15**	**309**	PKP		PKPdf	04 37 08.1	-1.3
	0.8nm,1.1s,baz=338,slow=3.1,SNR=3.3							
LPAZ	**La Paz**	**149.48**	**86**	PKPbc		PKPbc	04 37 52.0	+1.4
	0.4nm,0.5s,baz=18,slow=3.5,SNR=5.0							

TRN 24 04:27:25.1, 14°.86N×60°.48W, h3km, MD3.6, M2.8(FDF), 2C-2D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MVM	**Montagne Vaucl**	**0.50**	**233**	*e*P	⇑	Pg	04 27 40.1	+5.3
MVM				*e*S	⇑	Sg	04 27 51.6	+10
FDF	**Fort de France**	**0.66**	**259**	*e*P	⇓	Pg	04 27 41.0	+3.1
FDF				*e*S	⇓	Sg	04 27 52.6	+6.2
BIM	**Bigot**	**0.66**	**239**	*e*P		Pg	04 27 42.1	+4.2
BIM				*e*S		Sg	04 27 54.7	+8.2
SLW	**Petit Monier**	**0.94**	**208**	*e*P		Pg	04 27 46.6	+3.3
SLW				*e*S		Sg	04 28 02.6	+7.1
SLB	**Belfond**	**1.16**	**208**	*e*P		Pg	04 27 51.0	+3.7
SLB				*e*S		Sg	04 28 09.6	+7.1

*TAP **24** 04:29:36.0, 24°.85N×122°.42E, h104km, ML3.3, C*
*JMA **24** 04:29:35.8±0.2, 24°.85N×122°.42E, h104km, M2.0*
*ISCJB **24** 04:29:36.4±1.0, 24°.79N±0°.06×122°.44E±0°.03, h102km±7km, Error ellipse: s-maj=9.9km s-min=4.0km az=178.6*

ISC 24 04:29:36.8±1.0, 24°.80N±0°.06×122°.44E±0°.03, h102km±7km, n24, σ0°70/40, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.46**	**297**	P		**Pn**	**04 29 52.1**	**-0.3**
	baz=292							
TWB1				*e*S		**Sn**	**04 30 04.0**	**-0.2**
	baz=292							
TWC	**Suao**	**0.57**	**251**	P		**Pn**	**04 29 52.8**	**-0.5**
	baz=239							
TWC				S		**Sn**	**04 30 04.7**	**-0.9**
	baz=239							
YOJ	**Yonaguni jima**	**0.62**	**123**	P		**Pn**	**04 29 53.3**	**-0.4**
YOJ				*e*S		**Sn**	**04 30 06.7**	**+0.4**
NWF	**Wu-fen Shan**	**0.66**	**294**	*e*P		**Pn**	**04 29 53.7**	**-0.2**
	baz=294							
NWF				*e*S		**Sn**	**04 30 06.9**	**0.0**
	baz=294							
TWE	**Neicheng**	**0.71**	**264**	P		**Pn**	**04 29 54.3**	**-0.1**
	baz=258							
TWE				*e*S		**Sn**	**04 30 07.5**	**-0.1**
	baz=258							
ENA	**Nanau**	**0.74**	**240**	P		**Pn**	**04 29 54.9**	**+0.2**
	baz=231							
ENA				S		**Sn**	**04 30 08.6**	**+0.5**
	baz=231							
TWA	**Mucha**	**0.80**	**283**	*e*S		**Sn**	**04 30 08.6**	**-0.6**
	baz=271							
ENTT	**Nioudou**	**0.81**	**259**	P		**Pn**	**04 29 55.4**	**0.0**
	baz=257							
ENTT				*e*S		**Sn**	**04 30 10.7**	**+1.3**
	baz=257							
NSK	**Sanguang**	**0.99**	**263**	P		**Pn**	**04 29 57.2**	**0.0**
	baz=265							
NSK				*e*S		**Sn**	**04 30 12.5**	**-0.1**
	baz=265							
NNS	**Nan Shan**	**1.04**	**250**	*e*P		**Pn**	**04 29 58.6**	**+0.9**
	baz=241							
TWD	**Chiawan**	**1.05**	**227**	*e*P		**Pn**	**04 29 57.4**	**-0.5**
	baz=218							
TWD				*e*S		**Sn**	**04 30 13.0**	**-0.8**
	baz=218							
WHF	**Hehuan Shan**	**1.25**	**239**	P		**Pn**	**04 30 00.5**	**+0.3

MKAR	**Makanchi Array**	**45.49**	**347**	P	**P**	**04 44 10.9**	**+0.3**
	comp=Z,1.7nm,0.4s,mb4.2,baz=158,slow=8.6,SNR=28						
MKAR				LR	LR	05 06 14.2	
	comp=Z,74nm,21.4s,MS3.6,baz=179,slow=40						
SONM	**Songino Array**	**45.75**	**10**	P	**P**	**04 44 12.5**	**-0.1**
	comp=Z,1.0nm,0.7s,mb3.9,baz=188,slow=8.6,SNR=6.7						
SONM				PcP	PcP	04 45 51.2	+1.4
	comp=Z,0.9nm,0.8s,baz=174,slow=2.8,SNR=2.8						
SONM				LR	LR	05 07 03.3	
	comp=Z,67nm,18.3s,MS3.6,baz=6.8,slow=41						
KURK	**Kurchatov**	**50.03**	**345**	*e*P	**P**	**04 44 48.3**	**+2.6**
	comp=Z,1.2nm,0.6s,mb4.1						
KURK	**Kurchatov**	**50.03**	**345**	P	**P**	**04 44 45.7**	**0.0**
	comp=Z,1.4nm,0.5s,mb4.2,baz=165,slow=6.7,SNR=6.4						
ZALV	**Zalesovo Beam**	**51.87**	**351**	P	**P**	**04 44 59.9**	**+0.5**
	comp=Z,0.9nm,0.4s,mb4.0,baz=178,slow=7.4,SNR=6.6						
BVAR	**Borovoye Array**	**54.45**	**341**	P	**P**	**04 45 17.9**	**-0.6**
	comp=Z,0.5nm,0.4s,mb3.8,baz=118,slow=8.3,SNR=3.3						
STKA	**Stephens Creek**	**55.13**	**132**	P	**P**	**04 45 22.9**	**-1.0**
	comp=Z,3.6nm,0.7s,mb4.5,baz=307,slow=8.3,SNR=9.3						
STKA				LR	LR	05 08 38.1	
	comp=Z,117nm,18.1s,MS4.0,baz=263,slow=36						
BRTR	**Keskin Array B**	**67.33**	**312**	P	**P**	**04 46 45.9**	**-0.5**
	comp=Z,0.5nm,0.8s,mb3.6,baz=140,slow=4.7,SNR=3.3						
PETK	**Petropavlovsk-**	**70.99**	**34**	LR	LR	05 16 54.2	
	comp=Z,25nm,21.8s,MS3.4,baz=40,slow=35						
FINES	**FINESS Array B**	**78.16**	**332**	P	**P**	**04 47 51.1**	**+1.0**
	comp=Z,1.5nm,0.9s,mb3.9,baz=115,slow=5.3,SNR=3.0						
ARCES	**ARCESS Array B**	**80.74**	**340**	P	**P**	**04 48 04.6**	**+0.6**
	comp=Z,2.1nm,1.0s,mb4.0,baz=94,slow=5.3,SNR=7.3						
CLL	**Collm**	**83.60**	**321**	*e*P	**P**	**04 48 19.0**	**-0.3**
TORD	**Torodi Ar. Bea**	**93.77**	**283**	LR	LR	05 31 09.7	
	comp=Z,90nm,20.7s,MS4.2,baz=85,slow=36						
NVAR	**Mina Array Bea**	**128.08**	**34**	PKP	PKPdf	04 54 56.2	-1.2
	comp=Z,0.2nm,0.4s,baz=259,slow=1.8,SNR=2.7						
TXAR	**Lajitas Array**	**142.83**	**29**	PKP	PKPdf	04 55 25.4	+0.3
	comp=Z,0.5nm,0.9s,baz=235,slow=3.2,SNR=3.3						
CPUP	**Villa Florida**	**145.45**	**225**	PKPbc	PKPbc	04 55 28.1	-1.6
	comp=Z,0.7nm,0.6s,baz=172,slow=7.1,SNR=2.4						

*ISCJB **24** 04:38:52.2±0.6,24.38N±0.04×122.50E±0.02,h66km±8km, Error ellipse: s-maj=6.1km s-min=2.9km az=176.4*
*TAP **24** 04:38:52.0,24.40N×122.42E,h79km,ML3.3,D*
*JMA **24** 04:38:52.2±0.2,24.60N×122.55E,h73km±1km,M2.3*
ISC 24 04:38:52.7±0.6,24.38N±0.04×122.50E±0.02,h64km±9km, n34,σ0.72/63,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.48**	**80**	P	**Pn**	**04 39 04.8**	**+0.1**
YOJ				*e*S	**Sn**	**04 39 14.0**	**+0.5**
TWC	**Suao**	**0.63**	**291**	P	**Pn**	**04 39 06.1**	**-0.3**
	baz=297						
TWC				*e*S	**Sn**	**04 39 16.4**	**0.0**
	baz=297						
ENA	**Nanau**	**0.69**	**274**	*e*P	**Pn**	**04 39 07.3**	**+0.2**
	baz=272						
ENA				*e*S	**Sn**	**04 39 18.4**	**+0.8**
	baz=272						
TWB1	**Santiao Chiao**	**0.78**	**324**	*e*P	**Pn**	**04 39 08.3**	**+0.2**
	baz=319						
TWB1				*e*S	**Sn**	**04 39 18.8**	**-0.6**
	baz=319						
TWE	**Neicheng**	**0.83**	**294**	P	**Pn**	**04 39 08.6**	**-0.1**
	baz=299						
TWE				*e*S	**Sn**	**04 39 21.9**	**+1.3**
	baz=299						
TWD	**Chiawan**	**0.87**	**250**	P	**Pn**	**04 39 08.8**	**-0.5**
	baz=242						
TWD				S	**Sn**	**04 39 20.9**	**-0.6**
	baz=242						
ENTT	**Nioudou**	**0.89**	**287**	P	**Pn**	**04 39 09.7**	**+0.3**
	baz=292						
ENTT				*e*S	**Sn**	**04 39 22.3**	**+0.5**
	baz=292						
HWA	**Hwalien**	**0.91**	**244**	*e*P	**Pn**	**04 39 08.6**	**-1.1**
	baz=234						
NWF	**Wu-fen Shan**	**0.95**	**317**	*e*P	**Pn**	**04 39 09.9**	**-0.3**
	baz=311						
NWF				*e*S	**Sn**	**04 39 22.8**	**-0.4**
	baz=311						
TWA	**Mucha**	**1.02**	**306**	*e*P	**Pn**	**04 39 13.2**	**+2.0**
	baz=307						
TWA				*e*S	**Sn**	**04 39 23.9**	**-1.0**
	baz=307						
NNS	**Nan Shan**	**1.02**	**274**	*e*P	**Pn**	**04 39 11.0**	**-0.2**
	baz=272						
NNS				*e*S	**Sn**	**04 39 24.8**	**-0.2**
	baz=272						
NSK	**Sanguang**	**1.08**	**286**	P	**Pn**	**04 39 11.9**	**+0.1**
	baz=286						
NSK				S	**Sn**	**04 39 26.0**	**-0.2**
	baz=286						
ESL	**Shilin**	**1.12**	**240**	*e*P	**Pn**	**04 39 11.9**	**-0.6**
	baz=237						
IRIF	**Iriomote-Funau**	**1.13**	**92**	P	**Pn**	**04 39 12.1**	**-0.4**
IRIF				*e*S	**Sn**	**04 39 27.5**	**+0.2**
WHF	**Hehuan Shan**	**1.15**	**259**	*e*P	**Pn**	**04 39 12.7**	**0.0**
	baz=256						
WHF				*e*S	**Sn**	**04 39 27.7**	**-0.1**
	baz=256						
TWY	**Chenhua**	**1.21**	**318**	*e*P	**Pn**	**04 39 12.8**	**-0.8**
	baz=319						
TWT	**Tachien**	**1.21**	**264**	*e*P	**Pn**	**04 39 13.7**	**+0.1**
	baz=259						
TWT				*e*S	**Sn**	**04 39 29.4**	**+0.1**
	baz=259						
TWS1	**Kuangyinshan**	**1.22**	**306**	*e*P	**Pn**	**04 39 13.0**	**-0.7**
	baz=307						
TWS1				*e*S	**Sn**	**04 39 28.9**	**-0.4**
	baz=307						
HATJ	**Hateruma jima**	**1.24**	**105**	P	**Pn**	**04 39 14.5**	**+0.5**
HATJ				*e*S	**Sn**	**04 39 31.0**	**+1.1**
EHY	**Hungye**	**1.38**	**231**	*e*P	**Pn**	**04 39 15.2**	**-0.7**
	baz=237						
NSTT	**Nanjuang**	**1.38**	**281**	*e*P	**Pn**	**04 39 16.1**	**+0.2**
	baz=280						
NSTT				*e*S	**Sn**	**04 39 33.5**	**+0.2**
	baz=280						
JKRS	**Kuro-shima**	**1.39**	**96**	P	**Pn**	**04 39 16.2**	**+0.2**
JKRS				*e*S	**Sn**	**04 39 34.2**	**+0.7**
TWF1	**Yuli**	**1.50**	**227**	P	**Pn**	**04 39 16.7**	**-0.8**
	baz=233						
TWF1				*e*S	**Sn**	**04 39 34.6**	**-1.5**
	baz=233						
JIJ	**Ishigaki jima**	**1.50**	**90**	P	**Pn**	**04 39 17.0**	**-0.5**
JIJ				*e*S	**Sn**	**04 39 35.2**	**-1.0**
TYC	**Yuchr**	**1.57**	**253**	*e*P	**Pn**	**04 39 18.8**	**+0.4**
	baz=246						
TYC				*e*S	**Sn**	**04 39 37.0**	**-0.8**
	baz=246						
TWQ1	**Liyutan**	**1.57**	**269**	*e*P	**Pn**	**04 39 18.9**	**+0.5**
	baz=279						
TWQ1				*e*S	**Sn**	**04 39 38.2**	**+0.4**
	baz=279						
CHKT	**Chengkung**	**1.64**	**219**	*e*P	**Pn**	**04 39 18.7**	**-0.7**
	baz=210						
CHKT				S	**Sn**	**04 39 37.5**	**-2.0**
	baz=210						
YUS	**Yu-Shan**	**1.67**	**238**	*e*P	**Pn**	**04 39 20.2**	**+0.5**
	baz=230						
YUS				*e*S	**Sn**	**04 39 39.5**	**-0.6**
	baz=230						
ALS	**Alishan**	**1.77**	**241**	P	**Pn**	**04 39 22.1**	**+0.9**
	baz=233						
ALS				S	**Sn**	**04 39 43.0**	**+0.4**
	baz=233						
STYT	**Tauyuan**	**2.00**	**233**	*e*P	**Pn**	**04 39 24.4**	**+0.2**
	baz=228						
STYT				*e*S	**Sn**	**04 39 48.6**	**+0.4**
	baz=228						
CHN4	**Tsaushan**	**2.02**	**240**	*e*P	**Pn**	**04 39 25.4**	**+1.0**
	baz=238						
CHN4				*e*S	**Sn**	**04 39 50.8**	**+2.1**
	baz=238						
JTJ	**Tarama**	**2.03**	**82**	P	**Pn**	**04 39 24.3**	**-0.3**
JTJ				*e*S	**Sn**	**04 39 48.5**	**-0.4**
WTP	**Ta-pu**	**2.06**	**237**	*e*P	**Pn**	**04 39 25.4**	**+0.3**
	baz=228						
CHN1	**Nanshi**	**2.16**	**237**	*e*P	**Pn**	**04 39 26.9**	**+0.5**
	baz=235						
CHN1				*e*S	**Sn**	**04 39 53.2**	**+1.1**
	baz=235						

*IDC **24** 04:56:29.3±2.0,31.05N×49.82E,h0km,mb3.5/9,*

mb1 3.6/9,mb1mx3.5/25,mbtmp3.5/9,Error ellipse: s-maj=48.8km s-min=21.5km az=163.0
*ISCJB **24** 04:56:31.7±0.4,30.93N±0.04×49.88E±0.04,h10km, mb3.5/10,Error ellipse: s-maj=6.4km s-min=3.7km az=136.3*
*CSEM **24** 04:56:31.1±0.5,30.80N×49.77E,h10km,ML3.5,Error ellipse: s-maj=13.2km s-min=8.8km az=16.0*
*TEH **24** 04:56:32.7,30.83N×49.83E,h11km*
*NEIC **24** 04:56:32.0,30.83N×49.83E,h11km,MN3.5(TEH),After TEH.*
ISC 24 04:56:32.8±0.3,30.91N±0.04×49.87E±0.04,h10km,n78, σ1.9/12/85,mb3.5/10,4C,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IPIR	**Pirpir**	**1.97**	**26**	Pn	**Pn**	**04 57 07.6**	**+1.3**
IPIR	**Pirpir**	**1.97**	**26**	*e*	**Sg**	**04 57 43.7**	**+7.5**
	comp=Z,4μm,0.3s						
IPIR				*e*Pn	**Pn**	**04 57 07.7**	**+1.4**
IGAR	**Gharneh**	**2.38**	**51**	*e*Pn	**Pn**	**04 57 13.1**	**+1.3**
IGAR				*e*		04 57 49.7	
	comp=Z,1μm,0.3s						
IGAR	**Gharneh**	**2.38**	**51**	*e*Pn	**Pn**	**04 57 13.1**	**+1.3**
MIB	**Mutribah**	**2.45**	**244**	*e*P	**Pn**	**04 57 12.7**	**-0.1**
KBD	**Kabd**	**2.56**	**228**	*e*P	**Pn**	**04 57 14.3**	**0.0**
KBD				AML	AML	04 57 50.3	
	comp=Z,122nm,0.4s						
QRN	**Al-Qurain**	**2.74**	**219**	*e*P	**Pn**	**04 57 16.5**	**-0.4**
QRN				*e*S	**Sn**	**04 57 51.1**	**+1.0**
QRN				AML	AML	04 57 53.4	
	comp=Z,163nm,0.2s						
IKLH	**Kolahrood**	**2.81**	**31**	Pn	**Pn**	**04 57 18.7**	**+1.0**
IKLH				Sg	**Sg**	**04 58 02.9**	**-0.1**
IKLH	**Kolahrood**	**2.81**	**31**	*e*Pn	**Pn**	**04 57 18.7**	**+1.0**
IKLH				*e*Sg	**Sg**	**04 58 03.0**	**0.0**
IKLH				*e*		04 58 12.0	
	comp=Z,2μm,0.4s						
IKLH	**Kolahrood**	**2.81**	**31**	*e*Pn	**Pn**	**04 57 18.7**	**+1.0**
IKLH				Sg	**Sg**	**04 58 02.9**	**-0.1**
NAY	**Al-Naaiem**	**2.81**	**235**	*e*P	**Pn**	**04 57 17.9**	**0.0**
NAY				*e*S	**Sn**	**04 57 53.5**	**+1.6**
NAY				AML	AML	04 57 56.4	
	comp=Z,49nm,0.4s						
RDF	**Al-Radifah**	**2.82**	**226**	*e*P	**Pn**	**04 57 18.5**	**+0.6**
IZEF	**Zefreh**	**2.88**	**46**	Pn	**Pn**	**04 57 19.6**	**+0.8**
IZEF	**Zefreh**	**2.88**	**46**	*e*Pn	**Pn**	**04 57 19.7**	**+0.9**
IZEF				*e*		04 57 26.1	
	comp=Z,557nm,0.2s						
IZEF	**Zefreh**	**2.88**	**46**	*e*Pn	**Pn**	**04 57 19.7**	**+0.9**
IPAR	**Pars**	**2.94**	**110**	Pn	**Pn**	**04 57 19.5**	**-0.2**
IPAR	**Pars**	**2.94**	**110**	*e*Pn	**Pn**	**04 57 19.6**	**-0.1**
IPAR				*e*		04 58 18.2	
	comp=Z,2μm,0.4s						
IPAR	**Pars**	**2.94**	**110**	*e*Pn	**Pn**	**04 57 19.6**	**-0.1**
ISRV	**Sarvestan**	**3.19**	**118**	Pn	**Pn**	**04 57 22.9**	**-0.2**
ISRV	**Sarvestan**	**3.19**	**118**	*e*Pn	**Pn**	**04 57 22.9**	**-0.2**
ISRV				*e*		04 58 31.5	
	comp=Z,2μm,0.3s						
ISRV	**Sarvestan**	**3.19**	**118**	*e*Pn	**Pn**	**04 57 22.9**	**-0.2**
ISAD	**Sadrabad**	**3.41**	**72**	Pn	**Pn**	**04 57 26.7**	**+0.6**
ISAD	**Sadrabad**	**3.41**	**72**	*e*Pn	**Pn**	**04 57 26.7**	**+0.6**
ISAD				*e*		04 58 22.7	
	comp=Z,2μm,0.3s						
ISAD	**Sadrabad**	**3.41**	**72**	*e*Pn	**Pn**	**04 57 26.7**	**+0.6**
IKOM	**Komasi**	**3.82**	**329**	Pn	**Pn**	**04 57 32.2**	**+0.6**
IKOM	**Komasi**	**3.82**	**329**	*e*Pn	**Pn**	**04 57 32.2**	**+0.6**
IKOM				*e*		04 58 58.0	
	comp=N,2μm,0.3s						
IKOM	**Komasi**	**3.82**	**329**	*e*Pn	**Pn**	**04 57 32.2**	**+0.6**
ISFB	**Sefidab**	**3.97**	**30**	Pn	**Pn**	**04 57 34.3**	**+0.5**
ISFB	**Sefidab**	**3.97**	**30**	*e*Pn	**Pn**	**04 57 34.4**	**+0.6**
ISFB				*e*		04 57 38.5	
	comp=Z,456nm,0.2s						
ISFB	**Sefidab**	**3.97**	**30**	*e*Pn	**Pn**	**04 57 34.4**	**+0.6**
ICHK	**Chekchek**	**4.09**	**70**	*e*Pn	**Pn**	**04 57 35.8**	**+0.3**
ICHK				*e*		04 57 36.1	
	comp=Z,548nm,0.2s						
ICHK	**Chekchek**	**4.09**	**70**	*e*Pn	**Pn**	**04 57 35.8**	**+0.3**
IMEH	**Mehriz**	**4.09**	**82**	Pn	**Pn**	**04 57 35.0**	**-0.5**
IMEH	**Mehriz**	**4.09**	**82**	*e*Pn	**Pn**	**04 57 35.1**	**-0.4**
IMEH				*e*		04 58 24.6	
	comp=Z,453nm,0.3s						
IMEH	**Mehriz**	**4.09**	**82**	*e*Pn	**Pn**	**04 57 35.1**	**-0.4**
IVRN	**Varamin**	**4.36**	**20**	Pn	**Pn**	**04 57 39.6**	**+0.4**
IVRN	**Varamin**	**4.36**	**20**	*e*Pn	**Pn**	**04 57 39.7**	**+0.5**
IVRN				*e*Pn	**Pn**	**04 57 39.8**	**+0.6**
IVRN				*e*		04 57 57.0	
	comp=Z,328nm,0.2s						
IVRN	**Varamin**	**4.36**	**20**	*e*Pn	**Pn**	**04 57 39.7**	**+0.5**
IRAZ	**Razeghan**	**4.48**	**1**	Pn	**Pn**	**04 57 41.5**	**+0.7**
IRAZ	**Razeghan**	**4.48**	**1**	*e*Pn	**Pn**	**04 57 41.5**	**+0.7**
IRAZ				*e*		04 59 05.5	
	comp=Z,584nm,0.4s						
IRAZ	**Razeghan**	**4.48**	**1**	*e*Pn	**Pn**	**04 57 41.5**	**+0.7**
ILIN	**Lien**	**4.69**	**329**	Pn	**Pn**	**04 57 43.8**	**+0.2**
ILIN	**Lien**	**4.69**	**329**	*e*Pn	**Pn**	**04 57 43.9**	**+0.3**
ILIN				*e*		04 58 40.6	
	comp=N,772nm,0.2s						
ILIN	**Lien**	**4.69**	**329**	*e*Pn	**Pn**	**04 57 43.9**	**+0.3**
IDHR	**Dehrash**	**4.78**	**323**	*e*Pn	**Pn**	**04 57 44.3**	**-0.6**
IDHR				*e*		04 58 42.4	
	comp=Z,597nm,0.1s						
IDHR	**Dehrash**	**4.78**	**323**	*e*Pn	**Pn**	**04 57 44.3**	**-0.6**
IBAF	**Bafgh**	**4.93**	**81**	Pn	**Pn**	**04 57 46.2**	**-0.7**
IBAF	**Bafgh**	**4.93**	**81**	*e*Pn	**Pn**	**04 57 46.2**	**-0.7**
IBAF				*e*		04 58 07.2	
	comp=Z,201nm,0.3s						
IBAF	**Bafgh**	**4.93**	**81**	*e*Pn	**Pn**	**04 57 46.2**	**-0.7**
IDMV	**Damavand**	**5.00**	**21**	Pn	**Pn**	**04 57 48.2**	**+0.4**
IDMV	**Damavand**	**5.00**	**21**	*e*Pn	**Pn**	**04 57 48.2**	**+0.4**
IDMV				*e*		04 58 17.5	
	comp=Z,181nm,0.3s						
IDMV	**Damavand**	**5.00**	**21**	*e*Pn	**Pn**	**04 57 48.2**	**+0.4**
IFIR	**Firoozkooh**	**5.30**	**26**	*e*Pn	**Pn**	**04 57 52.1**	**+0.1**
IFIR				*e*		04 57 54.0	
	comp=Z,162nm,0.1s						
IFIR	**Firoozkooh**	**5.30**	**26**	*e*Pn	**Pn**	**04 57 52.1**	**+0.1**
BRTR	**Keskin Array B**	**15.88**	**308**	Pn	**Pn**	**05 00 19.1**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=127,slow=14,SNR=10						
BRTR	**Keskin Array B**	**15.88**	**308**	Pn	**Pn**	**05 00 19.1**	**+2.7**
MLR	**Muntele Rosu**	**23.66**	**315**	P	**P**	**05 01 45.2**	**+0.8**
	comp=Z,2.0nm,0.6s,mb3.7,baz=190,slow=12,SNR=5.3						
MLR	**Muntele Rosu**	**23.66**	**315**	↑*i*P	**P**	**05 01 45.1**	**+0.6**
MLR	**Muntele Rosu**	**23.66**	**315**	P	**P**	**05 01 45.2**	**+0.7**
VOIR		**24.18**	**314**	↑*i*P	**P**	**05 01 49.1**	**-0.2**
AKASG	**Malin Array Be**	**25.05**	**328**	P	**P**	**05 01 54.0**	**-3.0**
	comp=Z,0.5nm,0.4s,mb3.4,baz=132,slow=8.9,SNR=4.9						
AKASG	**Malin Array Be**	**25.05**	**328**	P	**P**	**05 01 54.0**	**-3.1**
BURAR	**Bucovina Array**	**25.19**	**318**	↑*i*P	**P**	**05 01 58.3**	**-0.1**
DRGR		**26.26**	**315**	↑*i*P	**P**	**05 02 07.0**	**-1.1**
KURK	**Kurchatov**	**29.12**	**39**	P	**P**	**05 02 30.7**	**-2.9**
	comp=Z,0.2nm,0.3s,mb3.4,baz=241,slow=9.8,SNR=2.4						
KURK	**Kurchatov**	**29.12**	**39**	P	**P**	**05 02 30.7**	**-2.9**
MKAR	**Makanchi Array**	**29.55**	**48**	P	**P**	**05 02 36.2**	**-1.3**
	comp=Z,0.2nm,0.6s,mb3.0,baz=234,slow=8.8,SNR=3.6						
MKAR	**Makanchi Array**	**29.55**	**48**	P	**P**	**05 02 36.2**	**-1.4**
ZALV	**Zalesovo Beam**	**34.03**	**37**	P	**P**	**05 03 13.0**	**-3.8**
	comp=Z,0.3nm,0.3s,mb3.6,baz=226,slow=7.6,SNR=2.3						
FINES	**FINESS Array B**	**34.29**	**340**	P	**P**	**05 03 16.2**	**-2.8**
FINES	**FINESS Array B**	**34.29**	**340**	P	**P**	**05 03 16.2**	**-2.8**
	comp=Z,0.9nm,0.5s,mb4.0,baz=142,slow=7.5,SNR=8.7						
FINES	**FINESS Array B**	**34.29**	**340**	P	**P**	**05 03 16.2**	**-2.8**
NOA	**NORSAR Array B**	**39.36**	**331**	P	**P**	**05 03 58.6**	**-3.5**
	comp=Z,0.5nm,0.7s,mb3.3,baz=110,slow=9.9,SNR=3.0						
NOA	**NORSAR Array B**	**39.36**	**331**	P	**P**	**05 03 58.6**	**-3.5**
ESDC	**Sonseca Array**	**44.23**	**297**	P	**P**	**05 04 39.7**	**-2.6**
	comp=Z,0.3nm,0.6s,mb3.2,baz=72,slow=8.5,SNR=3.6						
ESDC	**Sonseca Array**	**44.23**	**297**	P	**P**	**05 04 39.7**	**-2.6**
TORD	**Torodi Ar. Bea**	**47.63**	**259**	P	**P**	**05 05 07.4**	**-2.0**
	comp=Z,0.4nm,0.6s,mb3.6,baz=58,slow=7.7,SNR=5.4						
ILAR	**Eielson Array**	**83.74**	**7**	P	**P**	**05 08 57.9**	**-3.7**
	comp=Z,0.2nm,0.7s,mb3.4,baz=331,slow=5.4,SNR=2.5						

*SZGRF **24** 04:59:27.9,30.03N×51.43E,h33km,mb4.6,Northern and central Iran*
*ISCJB **24** 04:59:36.6±0.2,30.81N±0.02×49.73E±0.02,h10km, mb4.4/80,MS3.4/8,Error ellipse: s-maj=3.2km s-min=2.7km az=43.5*
*IDC **24** 04:59:36.2±0.7,30.90N×49.84E,h0km,mb4.1/21, mb1 4.3/23,mb1mx4.2/30,mbtmp4.2/23,MS3.1/2, Ms1 3.1/2,ms1mx2.4/39,Error ellipse: s-maj=17.8km s-min=13.2km az=161.0*
*BJI **24** 04:59:36.3,30.80N×49.80E,h11km,mB4.6/4,mb4.5/7, Ms4.2/2,Ms7 4.0/2*
*MOS **24** 04:59:39.8±0.9,30.96N×49.84E,h33km,mb4.6/43,Error ellipse: s-maj=8.8km s-min=4.2km az=125.2*
*THR **24** 04:59:39.1±0.9,30.82N×49.91E,h15km,ML4.2*
*TEH **24** 04:59:40.3,30.82N×49.82E,h11km*
*NEIC **24** 04:59:40.3,30.82N×49.82E,h11km,mb4.5/38, ML4.2(THR),MN4.4(TEH),After TEH.*
*CSEM **24** 04:59:42.5±0.2,30.84N×49.86E,h50km±1km,mb4.5/74, Error ellipse: s-maj=4.1km s-min=3.6km az=25.0*
*SGS **24** 04:59:42.4,30.80N×49.93E,h16km*
*VIE **24** 04:59:49.0,31.08N×49.76E,h96km,mb3.8,ML3.8*
ISC 24 04:59:38.3±0.2,30.80N±0.02×49.72E±0.02,h10km,n480, σ1.9/15/493,mb4.4/80,MS3.4/8,68C-15D,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IPIR	**Pirpir**	**2.12**	**28**	Pn	**Pn**	**05 00 15.9**	**+2.1**
IPIR				Sg	**Sg**	**05 00 44.9**	**-1.7**
IPIR	**Pirpir**	**2.12**	**28**	*e*Pn	**Pn**	**05 00 15.9**	**+2.1**
IPIR				*e*Sg	**Sg**	**05 00 44.9**	**-1.7**
IPIR				*e*		05 00 48.4	
	comp=Z,41μm,0.2s						
IPIR	**Pirpir**	**2.12**	**28**	*e*Pn	**Pn**	**05 00 15.9**	**+2.1**
IPIR				*e*Sg	**Sg**	**05 00 44.9**	**-1.7**
MIB	**Mutribah**	**2.29**	**245**	*e*P	**Pg**	**05 00 20.8**	**-1.4**
KBD	**Kabd**	**2.40**	**228**	*e*P	**Pb**	**05 00 21.8**	**+0.3**
KBD				*e*S	**Sg**	**05 00 53.3**	**-2.0**
KBD				AML	AML	05 00 57.8	
	comp=Z,365nm,0.4s						
IGAR	**Gharneh**	**2.54**	**51**	*e*Pn	**Pn**	**05 00 20.8**	**+1.2**
IGAR				*e*		05 01 01.6	
	comp=Z,8μm,0.3s						
QRN	**Al-Qurain**	**2.58**	**218**	*e*P	**Pb**	**05 00 24.0**	**-0.8**
QRN				AML	AML	05 00 59.9	
	comp=Z,516nm,0.3s						
NAY	**Al-Naaiem**	**2.65**	**235**	*e*P	**Pb**	**05 00 26.0**	**+0.1**
NAY				*e*S	**Sg**	**05 00 59.6**	**-4.0**
NAY				AML	AML	05 01 06.9	
	comp=Z,235nm,0.5s						
RDF	**Al-Radifah**	**2.66**	**226**	*e*P	**Pb**	**05 00 26.1**	**+0.1**
IKLH	**Kolahrood**	**2.96**	**32**	Pn	**Pn**	**05 00 26.3**	**+0.9**
IKLH	**Kolahrood**	**2.96**	**32**	*e*Pn	**Pn**	**05 00 26.3**	**+0.9**
IKLH				*e*		05 01 15.9	
	comp=Z,14μm,0.3s						
IKLH	**Kolahrood**	**2.96**	**32**	*e*Pn	**Pn**	**05 00 26.3**	**+0.9**
IPAR	**Pars**	**3.03**	**108**	Pn	**Pn**	**05 00 26.7**	**+0.4**
IPAR	**Pars**	**3.03**	**108**	*e*Pn	**Pn**	**05 00 26.7**	**+0.4**
IPAR				*e*		05 01 25.5	
	comp=Z,9μm,0.4s						
IPAR	**Pars**	**3.03**	**108**	*e*Pn	**Pn**	**05 00 26.7**	**+0.4**
KFJS		**3.04**	**211**	P	**Pn**	**05 00 29.2**	**+2.8**
KFJS		**3.04**	**211**	P	**Pn**	**05 00 29.2**	**+2.8**
IZEF	**Zefreh**	**3.04**	**46**	Pn	**Pn**	**05 00 27.3**	**+0.8**
IZEF				Sg	**Sg**	**05 01 12.8**	**-3.3**
IZEF	**Zefreh**	**3.04**	**46**	*e*Pn	**Pn**	**05 00 27.4**	**+0.9**
IZEF				*e*Sg	**Sg**	**05 01 12.8**	**-3.3**
IZEF				*e*		05 01 21.4	
	comp=Z,4μm,0.2s						
IZEF	**Zefreh**	**3.04**	**46**	*e*Pn	**Pn**	**05 00 27.4**	**+0.9**
IZEF				*e*Sg	**Sg**	**05 01 12.8**	**-3.3**
ISRV	**Sarvestan**	**3.26**	**115**	Pn	**Pn**	**05 00 30.7**	**+1.2**
ISRV	**Sarvestan**	**3.26**	**115**	*e*Pn	**Pn**	**05 00 30.7**	**+1.2**
ISRV				*e*		05 01 44.2	
	comp=Z,7μm,0.4s						
ISRV	**Sarvestan**	**3.26**	**115**	*e*Pn	**Pn**	**05 00 30.7**	**+1.2**
NASN	**Na'in**	**3.29**	**52**	Pn	**Pn**	**05 00 30.0**	**0.0**
NASN	**Na'in**	**3.29**	**52**	*e*Pn	**Pn**	**05 00 30.9**	**+0.9**
NASN	**Na'in**	**3.29**	**52**	*e*Pn	**Pn**	**05 00 31.0**	**+1.0**
NASN				*e*Sg	**Sn**	**05 01 09.9**	**+0.7**
NASN	**Na'in**	**3.29**	**52**	Pn	**Pn**	**05 00 30.0**	**0.0**
ISAD	**Sadrabad**	**3.56**	**71**	Pn	**Pn**	**05 00 34.6**	**+0.9**
ISAD	**Sadrabad**	**3.56**	**71**	*e*Pn	**Pn**	**05 00 34.7**	**+1.0**
ISAD				*e*		05 01 30.5	
	comp=Z,10μm,0.3s						
ISAD	**Sadrabad**	**3.56**	**71**	*e*Pn	**Pn**	**05 00 34.7**	**+1.0**
ASAO	**Ashtian**	**3.74**	**4**	Pn	**Pn**	**05 00 38.0**	**+1.9**
ASAO	**Ashtian**	**3.74**	**4**	*e*Pn	**Pn**	**05 00 38.4**	**+2.3**
ASAO				AML	AML	05

IMHD **Mahdasht** 4.93 9 *e*Pn Pn **05 00 53.3 +0.8**
IBAF **Bafgh** 5.07 80 Pn Pn **05 00 54.0 -0.3**
IBAF **Bafgh** 5.07 80 *e*Pn Pn **05 00 54.1 -0.2**
IBAF *e* 05 01 13.7
comp=Z,1μm,0.3s
IBAF **Bafgh** 5.07 80 *e*Pn Pn **05 00 54.1 -0.2**
IDMV **Damavand** 5.14 22 Pn Pn **05 00 55.6 +0.3**
IDMV **Damavand** 5.14 22 *e*Pn Pn **05 00 55.6 +0.3**
IDMV *e* 05 01 56.8
comp=Z,2μm,0.2s
IDMV **Damavand** 5.14 22 *e*Pn Pn **05 00 55.6 +0.3**
BHD **Baghdad** 5.16 300 *ex* x 05 01 07.0
BHD *ex* x 05 01 26.8
BHD *ex* x 05 02 12.5
BHD *ex* x 05 02 28.5
BHD *i* x x 05 02 43.0
BHD Baghdad 5.16 300 *e*Pg Pg **05 01 26.8 +10**
DAMV Damavand 5.17 21 *e*Pn Pn **05 00 56.6 +0.9**
DAMV AML AML 05 02 28.5
comp=E,153nm,0.6s
THKV Tehran--Karaj 5.19 10 Pn Pn **05 00 58.0 +2.0**
THKV Tehran--Karaj 5.19 10 *e*Pn Pn **05 00 57.1 +1.1**
THKV AML AML 05 02 40.8
comp=E,105nm,0.6s
THKV Tehran--Karaj 5.19 10 *e*Pn Pn **05 00 57.5 +1.5**
THKV Tehran--Karaj 5.19 10 Pn Pn **05 00 58.0 +2.0**
IAFJ Afjeh 5.31 18 Pn Pn **05 00 58.1 +0.5**
IAFJ Afjeh 5.31 18 *e*Pn Pn **05 00 58.2 +0.6**
IAFJ Afjeh 5.31 18 *e*Pn Pn **05 00 58.2 +0.6**
IFIR Firoozkooh 5.45 27 Pn Pn **05 00 59.9 +0.3**
IFIR Firoozkooh 5.45 27 *e*Pn Pn **05 01 00.0 +0.4**
IFIR *e* 05 01 06.1
comp=Z,1μm,0.1s
IFIR Firoozkooh 5.45 27 *e*Pn Pn **05 01 00.0 +0.4**
ZNJK Zanjan 5.91 352 Pn Pn **05 01 09.0 +3.0**
ZNJK Zanjan 5.91 352 *e*Pn Pn **05 01 09.0 +3.1**
ZNJK Zanjan 5.91 352 *e*Pn Pn **05 01 09.7 +3.7**
ZNJK Zanjan 5.91 352 Pn Pn **05 01 09.0 +3.0**
SLWS 6.04 172 P Pn **05 01 09.4 +1.7**
SLWS 6.04 172 P Pn **05 01 09.4 +1.7**
SLWS S Sn **05 02 17.2 +0.3**
KRBR Kerman 6.13 96 Pn Pn **05 01 09.0 0.0**
KRBR Kerman 6.13 96 *e*Pn Pn **05 01 09.2 +0.2**
KRBR Kerman 6.13 96 Pn Pn **05 01 09.0 0.0**
BNDS Bandar-Abbas 6.58 119 Pn Pn **05 01 16.0 +0.8**
BNDS Bandar-Abbas 6.58 119 *e*Pn Pn **05 01 16.1 +1.0**
BNDS Bandar-Abbas 6.58 119 Pn Pn **05 01 16.0 +0.8**
BTHS 6.80 171 S Sn **05 02 33.5 -2.3**
BTHS 6.80 171 P Pn **05 01 19.2 +0.9**
BTHS 6.80 171 P Pn **05 01 19.2 +1.0**
HRDDS 7.85 182 S Sn **05 03 00.2 -1.3**
HRDDS 7.85 182 P Pn **05 01 34.5 +1.9**
MRVT Maraveh tapeh 8.63 36 *e*Pn Pn **05 01 43.9 +0.7**
LYLS 9.01 195 P Pn **05 01 49.3 +0.9**
LYLS 9.01 195 P Pn **05 01 49.3 +0.8**
BJRD Bojnurd 9.37 41 *e*Pn Pn **05 01 55.0 +1.7**
GNI Garni 10.17 338 Pn Pn **05 02 07.2 +2.9**
comp=Z,1.2nm,0.3s,baz=128,slow=12,SNR=2.4
GNI Lg 05 05 01.5
comp=Z,0.8nm,0.3s,baz=342,slow=20,SNR=1.6
GNI Garni 10.17 338 P Pn **05 02 07.2 +2.9**
ASF Jabal al Asfar 11.04 280 Pn Pn **05 02 16.5 +0.2**
comp=Z,1.3nm,0.3s,baz=265,slow=2.5,SNR=5.7
ASF Sn Sn **05 04 12.8 -6.9**
comp=Z,0.7nm,0.3s,baz=327,slow=18,SNR=2.8
ASF Lg 05 05 38.6
baz=168,slow=22,SNR=3.1
ASF Jabal al Asfar 11.04 280 P Pn **05 02 16.5 +0.3**
ASF pmax pmax
comp=Z,1.0nm,0.3s
MMAI Mount Meron Ar 12.37 284 Sn Sn **05 04 49.4 -2.9**
comp=Z,1.1nm,0.3s,baz=98,slow=28,SNR=3.3
MMAI Lg 05 06 27.1
baz=107,slow=34,SNR=2.1
ZEI Tsey 12.82 340 *e*P Pn **05 02 44.1 +3.6**
ZEI pmax pmax
comp=Z,9.0nm,0.4s
ZEI Tsey 12.82 340 *e*P Pn **05 02 44.1 +3.6**
comp=Z,9.0nm,0.4s
EIL Elat 12.82 269 Pn Pn **05 02 38.5 -2.3**
comp=Z,0.6nm,0.3s,baz=68,slow=9.6,SNR=3.0
EIL Sn Sn **05 05 05.3 +1.8**
comp=Z,0.7nm,0.3s,baz=0.0,slow=20,SNR=2.3
EIL Lg 05 06 38.6
comp=Z,0.9nm,0.3s,baz=138,slow=12,SNR=2.8
EIL Elat 12.82 269 Sn Sn **05 05 05.3 +1.7**
KIV Kislovodsk 14.26 339‖ *e*P Pn **05 03 03.7 +3.5**
KIV pmax pmax
comp=Z,19nm,1.0s
KIV MLR MLR
comp=Z,100nm,18.0s
SOC Sochi 15.03 331 *e*P Pn **05 03 11.1 +0.4**
SOC *e* 05 06 03.8
SOC pmax pmax
comp=Z,19nm,0.9s
SOC MLR MLR
comp=Z,124nm,13.0s
GOF Gofitskoye 15.17 342 *e*P Pn **05 03 08.8 -3.7**
BR131 Keskin Array S 15.85 309 *e*Pn Pn **05 03 24.6 +3.1**
comp=Z,11nm,0.8s
BR131 Keskin Array S 15.85 309 *e*Pn Pn **05 03 24.6 +3.1**
comp=Z,11nm,0.8s
BRTR Keskin Array B 15.85 309 Pn Pn **05 03 25.9 +4.5**
comp=Z,0.4nm,0.3s,baz=129,slow=11,SNR=52
BRTR Keskin Array B 15.85 309 P Pn **05 03 26.0 +4.5**
ATD Arta Tunnel 20.21 200 P P **05 04 22.6 +9.1**
comp=Z,4.1nm,0.4s,baz=61,slow=16,SNR=2.9
AKTK Aktyubinsk 20.57 15 P P **05 04 15.3 -1.8**
AKTK LR LR 05 14 19.0
AKTK Aktyubinsk 20.57 15 P P **05 04 15.3 -1.8**
comp=Z,75nm,20.5s
AKTO Aktyubinsk 20.57 15 P P **05 04 15.3 -1.8**
comp=Z,3.6nm,0.5s,baz=208,slow=11,SNR=9.1
AKTO LR LR 05 14 19.0
comp=Z,75nm,20.5s,MS3.0,baz=183,slow=43
AKTO Aktyubinsk 20.57 15 P P **05 04 15.3 -1.8**
AKTO pmax pmax
comp=Z,4.0nm,0.5s
AKTO MLR MLR
comp=Z,75nm,20.5s,MS3.0
VRHR Novokhopersk 21.15 346 *e*P P **05 04 23.1 -0.2**
VRHR pmax pmax
comp=Z,90nm,0.8s,mb5.2
VRHR pmax pmax
comp=N,120nm,0.9s
VRHR pmax pmax
comp=E,30nm,0.6s
VRHR Novokhopersk 21.15 346 *e*P P **05 04 23.1 -0.2**
comp=E,120nm,0.9s,mb5.2
VORD Divnogorie 21.59 342 *e*P P **05 04 26.1 -2.0**
VORD pmax pmax
comp=Z,30nm,0.6s,mb4.9
VORD pmax pmax
comp=N,110nm,1.0s
VORD pmax pmax
comp=E,30nm,0.9s
VORD Divnogorie 21.59 342 *e*P P **05 04 26.1 -2.0**
comp=E,110nm,1.0s,mb5.2
TLCR 21.77 317 ⇓P P **05 04 30.8 +0.7**
TLCR 21.77 317 ⇓*i*P P **05 04 30.8 +0.7**
TLCR 21.77 317 P P **05 04 30.8 +0.7**
VSR Storozhevoye 21.85 342 *e*P P **05 04 28.9 -2.0**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,6.0nm,0.5s
VSR Storozhevoye 21.85 342 *e*P P **05 04 28.9 -2.0**
comp=E,10.0nm,0.7s,mb4.3
CFR Carcaliu 22.16 316 ⇓P P **05 04 34.3 0.0**
CFR Carcaliu 22.16 316 ⇓*i*P P **05 04 34.3 0.0**
CFR Carcaliu 22.16 316 P P **05 04 34.3 0.0**
AAK Ala-Archa 23.01 52 P P **05 04 42.0 -1.3**
comp=E,0.9nm,0.3s,mb3.7,baz=209,slow=13,SNR=2.9
AAK Ala-Archa 23.01 52 P P **05 04 42.1 -1.2**
AAK pmax pmax
comp=Z,1.0nm,0.3s,mb3.7
AAK Ala-Archa 23.01 52 P P **05 04 42.0 -1.3**
KSH Kashi 23.09 61 P P **05 04 39.3 -4.9**
KSH ePcP PcP 05 08 30.8 -2.3
KSH *e*S S **05 08 36.1 -19**
KSH *e*SS 05 09 25.0
KSH pmax pmax
comp=Z,4.0nm,0.7s,mb4.0
KSH pmax pmax
comp=Z,55nm,4.0s
KSH LR LR
comp=N,210nm,14.3s
KSH LR LR
comp=E,150nm,7.7s
KSH LR LR
comp=Z,150nm,9.4s
VRI Vrincioaia 23.37 317 ⇑P P **05 04 47.4 +0.3**
VRI Vrincioaia 23.37 317 ⇑*i*P P **05 04 47.4 +0.3**
VRI Vrincioaia 23.37 317 P P **05 04 47.4 +0.3**
PLOR Plostina 23.41 316 ⇑P P **05 04 48.4 +0.9**
PLOR Plostina 23.41 316 ⇑*i*P P **05 04 48.4 +0.9**
PLOR Plostina 23.41 316 P P **05 04 48.4 +0.9**
MLR Muntele Rosu 23.64 315 ⇓P P **05 04 52.8 +3.0**
MLR Muntele Rosu 23.64 315 P P **05 04 52.2 +2.4**
comp=Z,11nm,0.6s,mb4.5,baz=342,slow=2.8,SNR=30
MLR Muntele Rosu 23.64 315 P P **05 04 52.2 +2.4**
MLR pmax pmax
comp=Z,11nm,0.6s
MLR Muntele Rosu 23.64 315 ⇓*i*P P **05 04 52.8 +3.0**
MLR Muntele Rosu 23.64 315 P P **05 04 52.2 +2.4**
comp=Z,11nm,0.6s,mb4.5
TESR 23.76 318 ⇑P P **05 04 51.1 +0.2**
TESR 23.76 318 ⇑*i*P P **05 04 51.1 +0.2**
TESR 23.76 318 ⇑P P **05 04 51.1 +0.2**
VOIR 24.17 314 ⇑P P **05 04 56.2 +1.6**
VOIR 24.17 314 ⇑*i*P P **05 04 56.2 +1.6**
VOIR 24.17 314 P P **05 04 56.2 +1.6**
VTS Vitosha 24.20 306 ⇑P P **05 04 56.5 +1.6**
VTS Vitosha 24.20 306 ⇑*i*P P **05 04 56.5 +1.6**
VTS Vitosha 24.20 306 P P **05 04 56.5 +1.6**
DOPR Dopca 24.22 316 ⇓*i*P P **05 04 56.6 +1.5**
DOPR Dopca 24.22 316 ⇓*i*P P **05 04 56.6 +1.5**
AKASG Malin Array Be 25.07 328 P P **05 05 01.8 -1.0**
AKASG Malin Array Be 25.07 328 P P **05 05 01.8 -1.0**
comp=Z,3.8nm,0.4s,mb4.3,baz=134,slow=9.3,SNR=36
AKASG Malin Array Be 25.07 328 P P **05 05 01.8 -1.0**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG Malin Array Be 25.07 328 P P **05 05 01.8 -1.0**
comp=Z,4.0nm,0.4s,mb4.3
BURAR Bucovina Array 25.19 319 ⇑P P **05 05 04.9 +1.0**
BURAR Bucovina Array 25.19 319 ⇑*i*P P **05 05 04.9 +1.1**
BURAR Bucovina Array 25.19 319 ⇑P P **05 05 04.9 +1.1**
BUR08 Bucovina Ar. S 25.21 319 *e*P P **05 05 04.6 +0.6**
BUR08 Bucovina Ar. S 25.21 319 *e*P P **05 05 04.6 +0.5**
GZR Gura Zlata 25.57 312 ⇑P P **05 05 09.6 +2.2**
GZR Gura Zlata 25.57 312 ⇑*i*P P **05 05 09.6 +2.2**
GZR Gura Zlata 25.57 312 P P **05 05 09.6 +2.2**
OBN Obninsk 26.05 343‖ *e*P P **05 05 11.2 -0.4**
OBN *e* 05 05 53.6
OBN *e*SS 05 10 49.9
OBN pmax pmax
comp=Z,14nm,0.5s,mb4.8
OBN MLR MLR
comp=Z,100nm,19.0s,MS3.4
OBN Obninsk 26.05 343 *e*P P **05 05 11.2 -0.4**
comp=Z,14nm,0.5s,mb4.8
DRGR 26.24 315 ⇓P P **05 05 14.6 +1.2**
DRGR 26.24 315 ⇓*i*P P **05 05 14.6 +1.2**
DRGR 26.24 315 P P **05 05 14.6 +1.2**
MOS Moscow 26.36 345 *e*P P **05 05 11.2 -3.1**
MOS *e* 05 05 16.6
MOS pmax pmax
comp=Z,76nm,0.8s,mb5.3
MOS Moscow 26.36 345 *e*P P **05 05 11.2 -3.1**
comp=Z,76nm,0.8s,mb5.3
ARU Arti 26.36 11 *e*P P **05 05 13.3 -1.1**
comp=Z,4.5nm,0.5s,mb4.2
ARU Arti 26.36 11 *c i*P P **05 05 12.9 -1.5**
ARU *e* 05 05 59.1
ARU S S **05 09 40.6 -6.7**
ARU SS 05 10 48.3
ARU pmax pmax
comp=Z,5.0nm,1.2s,mb3.9
ARU Arti 26.36 11 *i*P P **05 05 12.9 -1.5**
comp=Z,5.0nm,1.2s,mb3.9
ARU S S **05 09 40.6 -6.7**
BZS Buzias 26.41 312 ⇑P P **05 05 16.4 +1.4**
BZS Buzias 26.41 312 P P **05 05 16.4 +1.5**
BRVK Borovoye 26.81 28 *i*P P **05 05 16.5 -1.9**
BRVK MLR MLR
comp=Z,59nm,17.0s,MS3.2
BRVK Borovoye 26.81 28 *i*P P **05 05 16.5 -1.9**
comp=Z,59nm,17.0s
BVAR Borovoye Array 26.82 28 P P **05 05 17.3 -1.3**
comp=Z,2.7nm,0.5s,mb4.0,baz=227,slow=7.9,SNR=12
BVAR PcP PcP 05 08 39.8 -1.3
comp=Z,0.5nm,0.4s,baz=222,slow=1.9,SNR=2.7
BVAR Borovoye Array 26.82 28 P P **05 05 17.3 -1.3**
BVAR 05 08 39.8
BVAR pmax pmax
comp=Z,3.0nm,0.5s
BVAR Borovoye Array 26.82 28 P P **05 05 17.3 -1.3**
comp=Z,3.0nm,0.5s,mb4.1
BVAR Borovoye Array 26.82 28 PcP PcP 05 08 39.8 -1.3
TRPA Tarpa 26.99 318 ⇑*i*P P **05 05 26.6 +6.4**
CRVS Cervenica-Dubn 28.00 318 *e*P P **05 05 29.7 +0.5**
comp=Z,33nm,2.4s,mb4.5
CRVS Cervenica-Dubn 28.00 318 *e*P P **05 05 29.7 +0.5**
CRVS pmax pmax
comp=Z,33nm,2.4s,mb4.5
CRVS Cervenica-Dubn 28.00 318 *e*P P **05 05 29.7 +0.5**
CRVS Cervenica-Dubn 28.00 318 *e*P P **05 05 29.7 +0.5**
comp=Z,33nm,2.4s,mb4.5
TIP Timpagrande 28.15 296 *e*P P **05 05 31.1 +0.5**
comp=Z,5.3nm,0.7s,mb4.3
TIP Timpagrande 28.15 296 *e*P P **05 05 31.1 +0.4**
comp=Z,5.3nm,0.7s,mb4.3
PKSM Moragy 28.55 311 ⇓P P **05 05 35.1 +0.9**
PKSM Moragy 28.55 311 ⇓*i*P P **05 05 35.1 +0.9**
PKSM Moragy 28.55 311 P P **05 05 35.1 +0.9**
KURK Kurchatov 29.28 39 *e*P P **05 05 39.3 -1.3**
comp=Z,2.4nm,0.7s,mb4.0
KURK Kurchatov 29.28 39 P P **05 05 39.0 -1.5**
comp=Z,0.7nm,0.6s,mb3.6,baz=240,slow=9.5,SNR=6.7
KURK Kurchatov 29.28 39‖ *e*P P **05 05 40.3 -0.3**
KURK pmax pmax
comp=Z,3.0nm,1.4s,mb3.8
KURK MLR MLR
comp=Z,147nm,18.0s,MS3.6
KURK Kurchatov 29.28 39 *e*P P **05 05 39.3 -1.3**
comp=Z,2.4nm,0.7s,mb4.0
VYHS Vyhne 29.35 316 *e*P P **05 05 41.8 +0.6**
comp=Z,2.6nm,0.7s,mb4.1
VYHS Vyhne 29.35 316 *e*P P **05 05 41.8 +0.6**
VYHS pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
VYHS Vyhne 29.35 316 *e*P P **05 05 41.8 +0.6**
VYHS Vyhne 29.35 316 *e*P P **05 05 41.8 +0.6**
comp=Z,2.6nm,0.7s,mb4.1
OJC Ojcow 29.59 320 *e*P P **05 05 43.4 0.0**
OJC Ojcow 29.59 320 *e*P P **05 05 43.4 0.0**
MKAR Makanchi Array 29.72 48 P P **05 05 43.0 -1.5**
comp=Z,1.2nm,0.7s,mb3.8,baz=239,slow=8.7,SNR=11
MKAR LR LR 05 18 19.6
comp=Z,30nm,20.9s,MS2.9,baz=175,slow=38
MKAR Makanchi Array 29.72 48 P P **05 05 43.0 -1.5**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR MLR MLR
comp=Z,30nm,21.0s
MKAR Makanchi Array 29.72 48 P P **05 05 43.0 -1.5**
comp=Z,30nm,21.0s
MORC Moravsky Berou 30.67 317 *e*P P **05 05 52.8 -0.1**
comp=Z,3.8nm,0.6s,mb4.4
MORC Moravsky Berou 30.67 317 ⇓P P **05 05 53.1 +0.2**
MORC Moravsky Berou 30.67 317 ⇓*i*P P **05 05 53.1 +0.2**
MORC Moravsky Berou 30.67 317 *e*P P **05 05 53.1 +0.2**
KLMR Klimovskoe 30.81 350 *e*P P **05 05 51.5 -2.5**
KLMR pmax pmax
comp=Z,28nm,1.3s,mb4.9
KLMR Klimovskoe 30.81 350 *e*P P **05 05 51.5 -2.5**
comp=Z,28nm,1.3s,mb4.9
CONA Conrad Observa 30.95 313 ⇓*i*P P **05 05 55.8 +0.4**
comp=Z,9.9nm,1.4s,mb4.5
CONA Conrad Observa 30.95 313 P P **05 05 55.8 +0.4**
comp=Z,9.9nm,1.4s,mb4.5
VRAC Vranov 31.03 316 ⇑P P **05 05 56.8 +0.7**
VRAC Vranov 31.03 316 ⇑*i*P P **05 05 56.8 +0.7**
VRAC Vranov 31.03 316 ⇑*i*P P **05 05 56.8 +0.7**
DPC Dobruska-Polom 31.63 318 *e*P P **05 06 01.4 0.0**
DPC MLR MLR
comp=Z,100nm,19.5s,MS3.5
DPC Dobruska-Polom 31.63 318 *e*P P **05 06 01.4 0.0**
DPC AMS AMS 05 22 50.0
comp=Z,100nm,19.5s
DPC Dobruska-Polom 31.63 318 *e*P P **05 06 01.4 0.0**
comp=Z,100nm,19.5s
UPC Upice 31.88 318 *e*P P **05 06 03.7 +0.2**
UPC Upice 31.88 318 *e*P P **05 06 03.7 +0.2**
UPC Upice 31.88 318 *e*P P **05 06 03.7 +0.2**
MOA Molln 31.93 312 *i*P P **05 06 04.7 +0.7**
comp=Z,14nm,0.9s,mb4.8,SNR=14
MOA Molln 31.93 312 P P **05 06 04.7 +0.7**
comp=Z,14nm,0.9s,mb4.8,SNR=14
PRU Pruhonice 32.53 316 *e*P P **05 06 10.4 +1.2**
PRU MLR MLR
comp=Z,100nm,18.6s,MS3.5
PRU Pruhonice 32.53 316 *e*P P **05 06 10.4 +1.2**
PRU AMS AMS 05 22 20.0
comp=Z,100nm,18.6s
PRU Pruhonice 32.53 316 *e*P P **05 06 10.4 +1.2**
comp=Z,100nm,18.6s
PVCC Panska Ves 32.73 317 AMS AMS 05 23 00.0
KHC Kasperske Hory 32.80 314 *e*P P **05 06 12.3 +0.7**
KHC MLR MLR
comp=Z,100nm,6.8s
KHC Kasperske Hory 32.80 314 *e*P P **05 06 12.3 +0.7**
KHC AMS AMS 05 22 30.0
comp=Z,100nm,6.8s
KHC Kasperske Hory 32.80 314 *e*P P **05 06 12.3 +0.7**
comp=Z,100nm,6.8s
BRG Berggiesshubel 33.23 317 *e*(P) P **05 06 15.2 -0.1**
comp=Z,3.7nm,0.9s,mb4.3
BRG Berggiesshubel 33.23 317 *e*P P **05 06 15.2 -0.1**
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
BRG Berggiesshubel 33.23 317 *e*P P **05 06 15.2 -0.1**
comp=Z,2.0nm,0.9s,mb4.0
WTTA Wattenberg 33.45 310 ⇑*i*P P **05 06 17.6 +0.3**
comp=Z,8.2nm,0.5s,mb4.9
WTTA Wattenberg 33.45 310 P P **05 06 17.6 +0.2**
comp=Z,8.2nm,0.5s,mb4.9
WATA Walderalm 33.51 310 *i*P P **05 06 17.8 -0.1**
comp=Z,5.7nm,0.5s,mb4.8,SNR=7.8
WATA Walderalm 33.51 310 P P **05 06 17.8 -0.1**
comp=Z,5.7nm,0.5s,mb4.8,SNR=7.8
MOTA Moosalm 33.82 310 ⇑*i*P P **05 06 20.3 -0.3**
comp=Z,7.5nm,0.6s,mb4.8,SNR=5.7
MOTA Moosalm 33.82 310 P P **05 06 20.3 -0.3**
comp=Z,7.5nm,0.6s,mb4.8,SNR=5.7
NKC Novy Kostel 33.87 316 *e*P P **05 06 21.3 +0.3**
NKC Novy Kostel 33.87 316 *e*P P **05 06 21.3 +0.3**
NKC AMS AMS 05 24 30.0
NKC Novy Kostel 33.87 316 *e*P P **05 06 21.3 +0.3**
CLL Collm 33.94 318 *i*P P **05 06 21.0 -0.6**
CLL Collm 33.94 318 *i*P P **05 06 21.0 -0.6**
CLL Collm 33.94 318 *i*P P **05 06 21.0 -0.6**
FETA Feichten 33.99 310 ⇑*i*P P **05 06 22.2 +0.2**
comp=Z,6.4nm,0.6s,mb4.7,SNR=9.2
FETA Feichten 33.99 310 P P **05 06 22.2 +0.2**
comp=Z,6.4nm,0.6s,mb4.7,SNR=9.2
RETA Reutte 34.08 310 ⇑*i*P P **05 06 22.4 -0.4**
comp=Z,3.9nm,0.4s,mb4.7
RETA Reutte 34.08 310 P P **05 06 22.4 -0.4**
comp=Z,3.9nm,0.4s,mb4.7
ZALV Zalesovo Beam 34.19 37 P P **05 06 21.7 -2.0**
ZALV Zalesovo Beam 34.19 37 P P **05 06 21.7 -2.0**
comp=Z,1.2nm,0.6s,mb4.0,baz=248,slow=7.8,SNR=5.2
ZALV Zalesovo Beam 34.19 37 P P **05 06 21.7 -2.0**
ZALV pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
JOF Joensuu 34.24 345 *e*P P **05 06 21.5 -2.5**
JOF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
JOF Joensuu 34.24 345 *e*p P **05 06 21.5 -2.5**
comp=Z,7.4nm,0.7s,mb4.7
JOF Joensuu 34.24 345 *e*P P **05 06 21.5 -2.5**
comp=Z,7.4nm,0.7s,mb4.7
FINES FINESS Array B 34.35 340 P P **05 06 23.6 -1.4**
comp=Z,4.4nm,0.5s,mb4.7,baz=147,slow=9.3,SNR=57
FINES FINESS Array B 34.35 340 P P **05 06 23.6 -1.4**
FINES pmax pmax
comp=Z,4.0nm,0.5s
FINES FINESS Array B 34.35 340 P P **05 06 23.6 -1.4**
comp=Z,4.0nm,0.5s,mb4.6
PGF Pioggiola 34.39 301 *e*P P **05 06 26.0 +0.4**
PGF Pioggiola 34.39 301 *e*P P **05 06 26.0 +0.4**
GRA1 Grafenberg Arr 34.43 314 *e*P P **05 06 25.9 +0.1**
comp=Z,9.0nm,0.8s,mb4.8
GRA1 Grafenberg Arr 34.43 314 *e*P P **05 06 25.9 +0.1**
comp=Z,9.0nm,0.8s,mb4.8
GRF Grafenberg Arr 34.43 314 *e*P P **05 06 25.9 +0.1**
comp=Z,9.0nm,0.8s,mb4.8
GRF Grafenberg Arr 34.43 314 *e*P P **05 06 25.9 +0.1**
GRF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
GRF Grafenberg Arr 34.43 314 *e*P P **05 06 25.9 +0.1**
GRF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
GRF Grafenberg Arr 34.43 314 *e*P P **05 06 25.9 +0.1**
comp=Z,9.0nm,0.8s,mb4.8
DAVA Damuels 34.61 310 *i*P P **05 06 27.4 0.0**
comp=Z,19nm,0.5s,mb5.3,SNR=22
DAVA Damuels 34.61 310 P P **05 06 27.4 0.0**
comp=Z,19nm,0.5s,mb5.3,SNR=22
KAF Kangasniemi 34.82 341 *e*P P **05 06 26.7 -2.3**
KAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KAF Kangasniemi 34.82 341 *e*p P **05 06 26.7 -2.3**
comp=Z,2.8nm,0.6s,mb4.4
KAF Kangasniemi 34.82 341 *e*P P **05 06 26.7 -2.3**
comp=Z,2.8nm,0.6s,mb4.4
SBF Sospel 35.68 303 *e*P P **05 06 37.3 +0.6**
comp=Z,57nm,0.9s,mb5.2
SBF Sospel 35.68 303 *e*P P **05 06 37.3 +0.6**
comp=Z,28nm,0.9s,mb5.2
SBF Sospel 35.68 303 *e*P P **05 06 37.3 +0.6**
SBF pmax pmax
comp=Z,29nm,0.9s,mb5.2
SBF Sospel 35.68 303 *e*P P **05 06 37.3 +0.6**
comp=Z,28nm,0.9s,mb5.2
FRF La Foret Royal 36.22 303 *e*P P **05 06 41.2 -0.1**
FRF La Foret Royal 36.22 303 *e*P P **05 06 41.2 -0.1**
MBDF Montbardon 36.27 305 ⇑*i*P P **05 06 41.7 0.0**
comp=Z,18nm,0.7s,mb4.8
MBDF Montbardon 36.27 305 ⇑*i*P P **05 06 41.7 0.0**
comp=Z,8.9nm,0.7s,mb4.8
MBDF Montbardon 36.27 305 ⇑*i*P P **05 06 41.7 0.0**
MBDF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
MBDF Montbardon 36.27 305 ⇑*i*P P **05 06 41.7 0.0**
comp=Z,8.9nm,0.7s,mb4.8
LMR La Mourre 36.29 302 *e*P P **05 06 42.1 +0.2**
LMR La Mourre 36.29 302 *e*P P **05 06 42.1 +0.2**
LPG La Plagne 36.39 306 *e*P P **05 06 42.8 +0.1**
comp=Z,15nm,0.7s,mb4.7
LPG La Plagne 36.39 306 *e*P P **05 06 42.8 +0.1**
comp=Z,7.5nm,0.7s,mb4.7
LPG La Plagne 36.39 306 *e*P P **05 06 42.8 +0.1**
LPG pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
LPG La Plagne 36.39 306 *e*P P **05 06 42.8 +0.1**
comp=Z,7.5nm,0.7s,mb4.7
LPL La Plagne 36.40 306 *e*P P **05 06 42.8 -0.1**
comp=Z,14nm,0.7s,mb4.7
LPL La Plagne 36.40 306 *e*P P **05 06 42.8 -0.1**
comp=Z,7.2nm,0.7s,mb4.7
LPL La Plagne 36.40 306 *e*P P **05 06 42.8 -0.1**
LPL pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
LPL La Plagne 36.40 306 *e*P P **05 06 42.8 -0.1**
comp=Z,7.2nm,0.7s,mb4.7
CDF Champ du Feu 36.58 311 *e*P P **05 06 43.8 -0.5**
comp=Z,6.8nm,0.9s,mb4.2
CDF Champ du Feu 36.58 311 *e*P P **05 06 43.8 -0.5**
comp=Z,3.4nm,0.9s,mb4.2
CDF Champ du Feu 36.58 311 *e*P P **05 06 43.8 -0.5**
CDF pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
CDF Champ du Feu 36.58 311 *e*P P **05 06 43.8 -0.5**
comp=Z,3.4nm,0.9s,mb4.2
HINF Hinteralfeld 36.73 310 *e*P P **05 06 44.8 -0.8**
HINF Hinteralfeld 36.73 310 *e*P P **05 06 44.8 -0.8**
CABF La Chapelle 37.02 308 ⇑*i*P P **05 06 48.2 +0.1**
comp=Z,28nm,0.7s,mb4.9
CABF La Chapelle 37.02 308 ⇑*i*P P **05 06 48.2 +0.1**

comp=Z,14nm,0.7s,mb4.9
CABF La Chapelle 37.02 308⇑ *iP* **P 05 06 48.2 +0.1**
CABF pmax pmax
comp=Z,14nm,0.7s,mb4.9
CABF La Chapelle 37.02 308⇑ *iP* **P 05 06 48.2 +0.1**
comp=Z,14nm,0.7s,mb4.9
SMRF Simiane la Rot 37.03 303 *eP* **P 05 06 48.7 +0.5**
SMRF Simiane la Rot 37.03 303 *eP* **P 05 06 48.7 +0.5**
HAU Haudompre 37.10 310 *eP* **P 05 06 47.8 -1.0**
comp=Z,5.5nm,0.5s,mb4.3
HAU Haudompre 37.10 310 *eP* **P 05 06 47.8 -1.0**
comp=Z,2.8nm,0.5s,mb4.3
HAU Haudompre 37.10 310 *eP* **P 05 06 47.8 -1.0**
HAU pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
HAU Haudompre 37.10 310 *eP* **P 05 06 47.8 -1.0**
comp=Z,2.8nm,0.5s,mb4.3
PALK Pallekele 37.26 122 *i* P **P 05 06 51.7 +1.3**
WLF Walferdange 37.59 313 *eP* **P 05 06 52.6 -0.2**
comp=Z,8.4nm,0.8s,mb4.5
WLF Walferdange 37.59 313 *eP* **P 05 06 52.6 -0.3**
WLF pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
WLF Walferdange 37.59 313 *eP* **P 05 06 52.6 -0.3**
comp=Z,8.0nm,0.8s,mb4.5
VIVF Saint-Julien-l 37.76 305 *eP* **P 05 06 53.8 -0.6**
comp=Z,8.8nm,0.8s,mb4.3
VIVF Saint-Julien-l 37.76 305 *eP* **P 05 06 53.8 -0.6**
comp=Z,4.4nm,0.8s,mb4.2
VIVF Saint-Julien-l 37.76 305 *eP* **P 05 06 53.8 -0.6**
VIVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
VIVF Saint-Julien-l 37.76 305 *eP* **P 05 06 53.8 -0.6**
comp=Z,4.4nm,0.8s,mb4.3
SFTF Sexfontaines 38.00 310 *eP* **P 05 06 55.9 -0.5**
comp=Z,10nm,0.7s,mb4.4
SFTF Sexfontaines 38.00 310 *eP* **P 05 06 55.9 -0.5**
comp=Z,10nm,0.7s,mb4.7
SFTF Sexfontaines 38.00 310 *eP* **P 05 06 55.9 -0.5**
comp=Z,5.1nm,0.7s,mb4.4
MEZF Maizieres J'vi 38.05 311 *eP* **P 05 06 56.3 -0.5**
MEZF Maizieres J'vi 38.05 311 *eP* **P 05 06 56.3 -0.5**
LASF Ste Croix 38.27 303⇑ *iP* **P 05 06 58.4 -0.3**
comp=Z,11nm,0.8s,mb4.3
LASF Ste Croix 38.27 303⇑ *iP* **P 05 06 58.4 -0.3**
comp=Z,5.4nm,0.8s,mb4.3
GIVF Givet 38.53 313 *eP* **P 05 06 59.7 -1.1**
GIVF Givet 38.53 313 *eP* **P 05 06 59.7 -1.1**
SMF Signal de Mont 38.56 307⇑ *iP* **P 05 07 00.4 -0.7**
comp=Z,22nm,0.7s,mb4.7
SMF Signal de Mont 38.56 307⇑ *iP* **P 05 07 00.4 -0.7**
comp=Z,11nm,0.7s,mb4.7
SMF Signal de Mont 38.56 307⇑ *iP* **P 05 07 00.4 -0.7**
SMF pmax pmax
comp=Z,11nm,0.7s,mb4.7
SMF Signal de Mont 38.56 307⇑ *iP* **P 05 07 00.4 -0.7**
comp=Z,11nm,0.7s,mb4.7
LOR Lormes 38.63 308⇑ *iP* **P 05 07 00.8 -0.9**
comp=Z,7.9nm,0.7s,mb4.2
LOR Lormes 38.63 308⇑ *iP* **P 05 07 00.8 -0.9**
comp=Z,4.0nm,0.7s,mb4.3
LOR Lormes 38.63 308⇑ *iP* **P 05 07 00.8 -0.9**
LOR pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
LOR Lormes 38.63 308⇑ *iP* **P 05 07 00.8 -0.9**
comp=Z,4.0nm,0.7s,mb4.3
SSF Saint Saulge 38.84 308⇑ *iP* **P 05 07 02.8 -0.7**
comp=Z,6.3nm,0.6s,mb4.3
SSF Saint Saulge 38.84 308⇑ *iP* **P 05 07 02.8 -0.7**
comp=Z,3.2nm,0.6s,mb4.2
SSF Saint Saulge 38.84 308⇑ *iP* **P 05 07 02.8 -0.7**
SSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
SSF Saint Saulge 38.84 308⇑ *iP* **P 05 07 02.8 -0.7**
comp=Z,3.2nm,0.6s,mb4.3
BAIF Baives 38.90 313 *eP* **P 05 07 04.1 +0.2**
comp=Z,8.2nm,0.7s,mb4.3
BAIF Baives 38.90 313 *eP* **P 05 07 04.1 +0.2**
comp=Z,4.1nm,0.7s,mb4.3
BAIF Baives 38.90 313 *eP* **P 05 07 04.1 +0.2**
BAIF pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
BAIF Baives 38.90 313 *eP* **P 05 07 04.1 +0.2**
comp=Z,4.1nm,0.7s,mb4.3
AVF Avril sur Loir 38.91 308 *eP* **P 05 07 02.5 -1.5**
comp=Z,14nm,1.0s,mb4.3
AVF Avril sur Loir 38.91 308 *eP* **P 05 07 02.5 -1.5**
comp=Z,6.8nm,1.0s,mb4.3
AVF Avril sur Loir 38.91 308 *eP* **P 05 07 02.5 -1.5**
AVF pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
AVF Avril sur Loir 38.91 308 *eP* **P 05 07 02.5 -1.5**
comp=Z,6.8nm,1.0s,mb4.3
BGF Bois d'Agland 39.23 307 *eP* **P 05 07 06.1 -0.6**
BGF Bois d'Agland 39.23 307 *eP* **P 05 07 06.1 -0.6**
NB2 NORSAR Subarra 39.39 331 P **P 05 07 05.8 -2.1**
comp=Z,2.3nm,0.5s,mb4.2,baz=123,slow=8.2,SNR=3.3
NOA NORSAR Array B 39.39 331 P **P 05 07 06.2 -1.6**
comp=Z,2.2nm,0.5s,mb4.2,baz=122,slow=8.3,SNR=15
NOA NORSAR Array B 39.39 331 P **P 05 07 06.3 -1.6**
NOA pmax pmax
comp=Z,2.0nm,0.5s
NOA NORSAR Array B 39.39 331 P **P 05 07 06.2 -1.7**
MTLF Montolieu 39.42 302 *eP* **P 05 07 08.3 0.0**
MTLF Montolieu 39.42 302 *eP* **P 05 07 08.3 0.0**
CAF Calviac 39.62 305 *eP* **P 05 07 09.9 -0.1**
comp=Z,11nm,1.0s,mb4.2
CAF Calviac 39.62 305 *eP* **P 05 07 09.9 -0.1**
comp=Z,5.3nm,1.0s,mb4.2
CAF Calviac 39.62 305 *eP* **P 05 07 09.9 -0.1**
CAF pmax pmax
comp=Z,5.0nm,1.0s,mb4.2
CAF Calviac 39.62 305 *eP* **P 05 07 09.9 -0.1**
comp=Z,5.3nm,1.0s,mb4.2
TCF Toulx Ste Croi 39.63 307 *eP* **P 05 07 09.7 -0.4**
comp=Z,8.4nm,0.8s,mb4.2
TCF Toulx Ste Croi 39.63 307 *eP* **P 05 07 09.7 -0.4**
comp=Z,4.2nm,0.8s,mb4.2
TCF Toulx Ste Croi 39.63 307 *eP* **P 05 07 09.7 -0.4**
TCF pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
TCF Toulx Ste Croi 39.63 307 *eP* **P 05 07 09.7 -0.4**
comp=Z,4.2nm,0.8s,mb4.2
RJF Les Rejaudoux 40.03 305 *eP* **P 05 07 12.6 -0.8**
RJF Les Rejaudoux 40.03 305 *eP* **P 05 07 12.6 -0.8**
LFF La Frestale 40.56 304⇑ *iP* **P 05 07 17.7 -0.1**
comp=Z,9.9nm,0.6s,mb4.3
LFF La Frestale 40.56 304⇑ *iP* **P 05 07 17.7 -0.1**
comp=Z,4.9nm,0.6s,mb4.3
LFF La Frestale 40.56 304⇑ *iP* **P 05 07 17.7 -0.1**
LFF pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
LFF La Frestale 40.56 304⇑ *iP* **P 05 07 17.7 -0.1**
comp=Z,4.9nm,0.6s,mb4.3
EPF Esparros 40.78 302 *eP* **P 05 07 18.8 -0.9**
EPF Esparros 40.78 302 *eP* **P 05 07 18.8 -0.9**
KEV Kevo 41.06 348 *eP* **P 05 07 20.2 -1.4**
KEV pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
KEV Kevo 41.06 348 *ep* **P 05 07 20.2 -1.4**
comp=Z,3.4nm,0.7s,mb4.1
KEV Kevo 41.06 348 *eP* **P 05 07 20.2 -1.4**
comp=Z,3.4nm,0.7s,mb4.1
ARCES ARCESS Array B 41.15 347 P **P 05 07 21.1 -1.3**
comp=Z,0.7nm,0.5s,mb3.6,baz=139,slow=9.4,SNR=9.4
ARCES ARCESS Array B 41.15 347 P **P 05 07 21.1 -1.2**
ARCES pmax pmax
comp=Z,1.0nm,0.5s
ARCES ARCESS Array B 41.15 347 P **P 05 07 21.1 -1.2**
comp=Z,1.0nm,0.5s,mb3.7
MFF Saint Martin d 41.28 307 *eP* **P 05 07 22.9 -0.8**
comp=Z,44nm,1.4s,mb4.6
MFF Saint Martin d 41.28 307 *eP* **P 05 07 22.9 -0.8**
comp=Z,22nm,1.4s,mb4.6
MFF Saint Martin d 41.28 307 *eP* **P 05 07 22.9 -0.8**
MFF pmax pmax
comp=Z,22nm,1.4s,mb4.6
MFF Saint Martin d 41.28 307 *eP* **P 05 07 22.9 -0.8**
comp=Z,22nm,1.4s,mb4.6
GTA Gaotai 41.42 64 *eP* **P 05 07 24.8 -0.2**
GTA pP pP 05 07 28.9 +0.8
GTA sP sP 05 07 31.8 +2.5
GTA pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
ETSF Etsaut 41.44 301 *eP* **P 05 07 25.6 +0.5**
ETSF Etsaut 41.44 301 *eP* **P 05 07 25.6 +0.5**

LDF La Druitiere 41.46 310⇑ *iP* **P 05 07 23.9 -1.3**
comp=Z,5.1nm,0.4s,mb4.2
LDF La Druitiere 41.46 310⇑ *iP* **P 05 07 23.9 -1.3**
comp=Z,2.5nm,0.4s,mb4.2
LDF La Druitiere 41.46 310⇑ *iP* **P 05 07 23.9 -1.3**
LDF pmax pmax
comp=Z,3.0nm,0.4s,mb4.3
LDF La Druitiere 41.46 310⇑ *iP* **P 05 07 23.9 -1.3**
comp=Z,2.5nm,0.4s,mb4.2
FLN La Foliniere 41.72 310⇑ *iP* **P 05 07 26.2 -1.1**
comp=Z,10nm,0.6s,mb4.4
FLN La Foliniere 41.72 310⇑ *iP* **P 05 07 26.2 -1.1**
comp=Z,5.2nm,0.6s,mb4.3
FLN La Foliniere 41.72 310⇑ *iP* **P 05 07 26.2 -1.1**
FLN pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
FLN La Foliniere 41.72 310⇑ *iP* **P 05 07 26.2 -1.1**
comp=Z,5.2nm,0.6s,mb4.4
GRR Gorron 41.92 310 *eP* **P 05 07 28.1 -0.9**
comp=Z,10nm,0.7s,mb4.3
GRR Gorron 41.92 310 *eP* **P 05 07 28.1 -0.9**
comp=Z,5.2nm,0.7s,mb4.3
GRR Gorron 41.92 310 *eP* **P 05 07 28.1 -0.9**
GRR pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
GRR Gorron 41.92 310 *eP* **P 05 07 28.1 -0.9**
comp=Z,5.2nm,0.7s,mb4.3
SJPF Ste Jean 41.93 302⇑ *iP* **P 05 07 29.7 +0.6**
comp=Z,13nm,0.6s,mb4.5
SJPF Ste Jean 41.93 302⇑ *iP* **P 05 07 29.7 +0.6**
comp=Z,6.4nm,0.6s,mb4.4
SJPF Ste Jean 41.93 302⇑ *iP* **P 05 07 29.7 +0.6**
SJPF pmax pmax
comp=Z,6.0nm,0.6s,mb4.4
SJPF Ste Jean 41.93 302⇑ *iP* **P 05 07 29.7 +0.6**
comp=Z,6.4nm,0.6s,mb4.5
SGMF Saint Gilles 43.04 309 *eP* **P 05 07 36.9 -1.2**
SGMF Saint Gilles 43.04 309 *eP* **P 05 07 36.9 -1.2**
QUIF Quistinic 43.43 309 *eP* **P 05 07 40.2 -1.0**
QUIF Quistinic 43.43 309 *eP* **P 05 07 40.2 -1.0**
ROSF Rostrenen 43.52 309 *eP* **P 05 07 41.0 -1.0**
ROSF Rostrenen 43.52 309 *eP* **P 05 07 41.0 -1.0**
ZAK Zakamensk 44.05 48 *eP* **P 05 07 45.3 -0.9**
ZAK pmax pmax
comp=Z,1.0nm,0.9s,mb3.5
ZAK Zakamensk 44.05 48 *eP* **P 05 07 45.3 -0.9**
comp=Z,1.0nm,0.9s,mb3.5
ESDC Sonseca Array 44.17 297 P **P 05 07 47.4 +0.1**
comp=Z,1.1nm,0.6s,mb3.8,baz=75,slow=8.2,SNR=12
ESDC Sonseca Array 44.17 297 P **P 05 07 47.4 +0.1**
TLY Talaya 44.42 46 *eP* **P 05 07 55.9 +6.8**
TLY pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
TLY MLR MLR
comp=Z,57nm,15.0s,MS3.6
LZH Lanzhou 44.98 68 *eP* **P 05 07 53.5 -0.3**
LZH pP pP 05 07 58.5 +1.5
LZH sP sP 05 07 59.9 +1.7
LZH pmax pmax
comp=Z,14nm,1.0s,mb4.8
SONM Songino Array 45.97 52 P **P 05 08 00.8 -0.7**
comp=Z,1.3nm,0.8s,mb3.9,baz=269,slow=8.7,SNR=7.9
SONM Songino Array 45.97 52 P **P 05 08 00.8 -0.7**
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 45.97 52 P **P 05 08 00.8 -0.7**
comp=Z,1.0nm,0.8s,mb3.8
CMAR Chiang Mai Arr 46.07 94 P **P 05 08 01.3 -1.3**
comp=Z,0.9nm,0.6s,mb3.9,baz=284,slow=9.3,SNR=5.9
CMAR Chiang Mai Arr 46.07 94 P **P 05 08 01.3 -1.3**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
CMAR Chiang Mai Arr 46.07 94 P **P 05 08 01.3 -1.3**
comp=Z,1.0nm,0.6s,mb3.9
ULN Ulaanbaatar 46.41 51 *eP* **P 05 08 03.9 -1.0**
comp=Z,2.7nm,0.8s,mb4.2
ULN Ulaanbaatar 46.41 51 *eP* **P 05 08 03.9 -1.0**
ULN pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
ULN Ulaanbaatar 46.41 51 *eP* **P 05 08 03.9 -1.0**
comp=Z,3.0nm,0.8s,mb4.3
TORD Torodi Ar. Bea 47.49 259 P **P 05 08 14.7 +0.8**
TORD Torodi Ar. Bea 47.49 259 P **P 05 08 14.7 +0.9**
comp=Z,1.7nm,0.6s,mb4.2,baz=56,slow=8.4,SNR=30
DBIC Dimbokro 56.35 257 *eP* **P 05 09 20.7 +0.8**
comp=Z,6.4nm,0.7s,mb4.8
DBIC Dimbokro 56.35 257 P **P 05 09 20.3 +0.4**
comp=Z,3.1nm,0.6s,mb4.5,baz=74,slow=17,SNR=11
DBIC Dimbokro 56.35 257 P **P 05 09 20.3 +0.4**
DBIC pmax pmax
comp=Z,3.0nm,0.6s
DBIC Dimbokro 56.35 257 P **P 05 09 20.3 +0.4**
comp=Z,3.0nm,0.6s,mb4.5
KIC Kosan Boka 56.42 256 *eP* **P 05 09 21.6 +1.2**
comp=Z,44nm,1.3s,mb5.3
KIC Kosan Boka 56.42 256 *eP* **P 05 09 21.6 +1.2**
comp=Z,44nm,1.3s,mb5.3
TIC Toumodi 56.50 257 *eP* **P 05 09 21.5 +0.5**
comp=Z,121nm,1.9s,mb5.6
TIC Toumodi 56.50 257 *eP* **P 05 09 21.5 +0.5**
TIC pmax pmax
comp=Z,121nm,1.9s,mb5.6
TIC Toumodi 56.50 257 *eP* **P 05 09 21.5 +0.5**
comp=Z,121nm,1.9s,mb5.6
LIC Lamto 56.73 256 *eP* **P 05 09 23.2 +0.6**
comp=Z,90nm,1.9s,mb5.5
LIC Lamto 56.73 256 *eP* **P 05 09 23.3 +0.7**
comp=Z,8.2nm,0.5s,mb4.7
LIC Lamto 56.73 256 *eP* **P 05 09 23.3 +0.7**
comp=Z,4.1nm,0.5s,mb4.7
LIC Lamto 56.73 256 *eP* **P 05 09 23.3 +0.7**
comp=Z,4.1nm,0.5s,mb4.7
KSRS Korea Array 63.35 61 P **P 05 10 05.8 -2.0**
comp=Z,2.0nm,0.6s,mb4.4,baz=280,slow=6.5,SNR=7.0
KSRS Korea Array 63.35 61 P **P 05 10 05.8 -2.0**
KSRS pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
KSRS Korea Array 63.35 61 P **P 05 10 05.8 -2.0**
comp=Z,2.0nm,0.6s,mb4.4
BOSA Boshof 63.52 204 P **P 05 10 10.0 +1.2**
comp=Z,5.6nm,1.0s,mb4.6,baz=214,slow=2.4,SNR=4.6
BOSA Boshof 63.52 204 P **P 05 10 10.0 +1.2**
BOSA pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
BOSA Boshof 63.52 204 P **P 05 10 10.0 +1.2**
comp=Z,6.0nm,1.0s,mb4.6
SEY Seymchan 68.48 29⇑ *eP* **P 05 10 39.6 -0.7**
SEY Seymchan 68.48 29 *eP* **P 05 10 39.6 -0.7**
SCHQ Schefferville 78.87 328 P **P 05 11 40.5 -1.0**
comp=Z,2.4nm,0.5s,mb4.4,baz=80,slow=8.3,SNR=6.0
SCHQ Schefferville 78.87 328 P **P 05 11 40.5 -1.0**
COLA College 83.65 7 *eP* **P 05 12 06.0 -0.8**
comp=Z,1.7nm,0.6s,mb4.3
COLA College 83.65 7 *eP* **P 05 12 06.0 -0.7**
COLA pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
COLA College 83.65 7 *eP* **P 05 12 06.0 -0.7**
comp=Z,2.0nm,0.6s,mb4.4
ILAR Eielson Array 83.86 7 P **P 05 12 06.5 -1.2**
comp=Z,1.2nm,0.7s,mb4.2,baz=324,slow=4.2,SNR=14
ILAR Eielson Array 83.86 7 P **P 05 12 06.6 -1.2**
ILAR pmax pmax
comp=Z,1.0nm,0.7s
ILAR Eielson Array 83.86 7 P **P 05 12 06.6 -1.2**
comp=Z,1.0nm,0.7s,mb4.0
EGAK Eagle 84.36 5 *eP* **P 05 12 09.1 -1.2**
comp=Z,3.3nm,0.7s,mb4.6
EGAK Eagle 84.36 5 *eP* **P 05 12 09.1 -1.2**
comp=Z,3.3nm,0.7s,mb4.6
YKA Yellowknife Ar 86.18 353 P **P 05 12 18.1 -1.3**
comp=Z,3.4nm,0.9s,mb4.6,baz=11,slow=5.4,SNR=6.2
YKA Yellowknife Ar 86.18 353 P **P 05 12 18.1 -1.4**
YKA pmax pmax
comp=Z,3.0nm,0.9s
YKA Yellowknife Ar 86.18 353 P **P 05 12 18.1 -1.4**
comp=Z,3.0nm,0.9s,mb4.5
ASAR Alice Springs 97.09 113 P **P 05 13 08.4 -2.6**
comp=Z,0.2nm,0.7s,mb3.6,baz=302,slow=5.2,SNR=3.1
ASAR Alice Springs 97.09 113 P **P 05 13 08.4 -2.5**
LPAZ La Paz 121.88 269 PKP PKPdf 05 18 34.0 +0.6
comp=Z,0.3nm,0.6s,baz=11,slow=10,SNR=3.5

NEIC ***24*** *05:21:03.6, 32.81S×69.56W, h150km, MD3.2(GUC), After GUC.*
GUC 24 05:21:03.6±0.6, 32.81S×69.56W, h150km±6km, MD3.2,

ML3.5, 10C-8D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FCH	**Farellones**	**0.81**	**230**	⇑*iP*		Pn	05 21 23.6	-3.1
FCH				*i* S		Sn	05 21 42.2	-2.2
FCH					AML	AML	05 21 44.1	
	comp=E,504nm,0.2s							
JACH	**Jahuel**	**0.88**	**278**	⇑*iP*		Pn	05 21 27.7	+0.4
JACH				*i* S		Sn	05 21 46.3	+0.9
JACH	**Jahuel**	**0.88**	**278**	⇑*iP*		Pn	05 21 27.7	+0.4
JACH				*i* S		Sn	05 21 46.3	+0.9
PEL	**Peldehue**	**1.01**	**250**	⇓*iP*		Pn	05 21 28.6	+0.2
PEL				*i* S		Sn	05 21 47.2	0.0
PEL					AML	AML	05 21 48.5	
	comp=E,3μm,0.4s							
CLCH	**Cerro Calan**	**1.01**	**234**	⇑*iP*		Pn	05 21 28.5	+0.2
CLCH				*i* S		Sn	05 21 48.1	+0.8
CLCH					AML	AML	05 21 50.7	
	comp=E,752nm,0.3s							
CLCH					AML	AML	05 21 53.8	
	comp=E,979nm,0.8s							
SJCH	**San Jose de Ma**	**1.06**	**219**	*eP*		Pn	05 21 28.9	+0.1
SJCH					S	Sn	05 21 49.9	+1.7
SJCH	**San Jose de Ma**	**1.06**	**219**	*eP*		Pn	05 21 28.9	+0.1
SJCH					eS	Sn	05 21 49.9	+1.7
SJCH					AML	AML	05 21 50.6	
	comp=E,415nm,0.2s							
SAN	**Santiago**	**1.13**	**235**	⇓*iP*		Pn	05 21 30.0	+0.6
SAN				*i* S		Sn	05 21 49.6	+0.5
SAN	**Santiago**	**1.13**	**235**	⇓*iP*		Pn	05 21 30.0	+0.6
SAN				*i* S		Sn	05 21 49.6	+0.5
PCH	**Pirque**	**1.14**	**225**	⇑*iP*		Pn	05 21 30.0	+0.5
PCH				*i* S		Sn	05 21 49.9	+0.6
PCH	**Pirque**	**1.14**	**225**	⇑*iP*		Pn	05 21 30.0	+0.5
PCH				*i* S		Sn	05 21 49.9	+0.6
LMEL	**Las Melosas**	**1.17**	**207**	P		Pn	05 21 29.8	0.0
LMEL	**Las Melosas**	**1.17**	**207**	⇓*iP*		Pn	05 21 29.8	0.0
LMEL					AML	AML	05 21 59.0	
	comp=N,348nm,0.2s							
ANTU	**Antumapu**	**1.18**	**230**	*eP*		Pn	05 21 30.4	+0.5
ANTU				*i* S		Sn	05 21 50.3	+0.3
ANTU	**Antumapu**	**1.18**	**230**	*eP*		Pn	05 21 30.4	+0.5
ANTU				*i* S		Sn	05 21 50.3	+0.3
ANTU					AML	AML	05 21 51.2	
	comp=E,855nm,0.2s							
ROCH	**El Roble**	**1.23**	**262**	*eP*		Pn	05 21 30.9	+0.5
ROCH				*i* S		Sn	05 21 52.3	+1.4
ROCH	**El Roble**	**1.23**	**262**	*eP*		Pn	05 21 30.9	+0.5
ROCH				*eP*			05 21 30.9	
ROCH				*eS*		Sn	05 21 51.8	+0.9
ROCH				*i* S		Sn	05 21 52.3	+1.4
ROCH					AML	AML	05 21 53.9	
	comp=N,2μm,0.4s							
TACH	**Talagante**	**1.43**	**234**	⇓*iP*		Pn	05 21 32.8	+0.5
TACH				*i* S		Sn	05 21 54.9	+0.5
TACH	**Talagante**	**1.43**	**234**	⇓*iP*		Pn	05 21 32.8	+0.5
TACH				*i* S		Sn	05 21 54.9	+0.5
CHCH	**Chadas Angostu**	**1.45**	**219**	*eP*		Pn	05 21 32.8	+0.3
CHCH	**Chadas Angostu**	**1.45**	**219**	*eP*		Pn	05 21 32.8	+0.3
CACH	**El Canelo**	**1.57**	**213**	⇓*iP*		Pn	05 21 34.7	+0.9
CACH				*eS*		Sn	05 21 58.7	+1.7
CACH	**El Canelo**	**1.57**	**213**	⇓*iP*		Pn	05 21 34.7	+0.9
CACH				*eS*		Sn	05 21 58.7	+1.7
CHNG	**Los Chungos**	**1.89**	**299**	*eP*		Pn	05 21 35.7	-1.7
CHNG				*i* S		Sn	05 22 01.5	-1.8
CHNG					AML	AML	05 22 03.6	
	comp=E,122nm,0.4s							
LNV	**Longovilo**	**1.93**	**233**	⇑*iP*		Pn	05 21 38.0	+0.2
LNV				*i* S		Sn	05 22 04.6	+0.5
LNV	**Longovilo**	**1.93**	**233**	⇑*iP*		Pn	05 21 38.0	+0.2
LNV				*i* S		Sn	05 22 04.6	+0.5
CMCH	**Combarbala**	**2.04**	**323**	⇑*iP*		Pn	05 21 40.0	+0.8
CMCH				*i* S		Sn	05 22 07.2	+0.8
CMCH	**Combarbala**	**2.04**	**323**	⇑*iP*		Pn	05 21 40.0	+0.8
CMCH				*i* S		Sn	05 22 07.2	+0.8
CMCH					AML	AML	05 22 09.4	
	comp=N,1μm,0.2s							
PLCA	**Paso Flores**	**7.95**	**185**	*ePn*		Pn	05 22 56.5	+0.3
TRQA	**Tornquist**	**8.10**	**132**	*ePn*		Pn	05 22 55.9	-2.3

ISCJB ***24*** *05:23:41.2±1.6, 33.51S±0.04×179.29W±0.05, h23km±11km, mb5.2/65, MS4.8/36, Error ellipse: s-maj=7.3km s-min=5.9km az=44.5*
BJI ***24*** *05:23:42.3, 33.37S×178.75W, h46km, mB5.5/14, mb5.3/17, Ms5.3/16, Ms7 4.8/17*
MOS ***24*** *05:23:42.6±1.0, 33.17S×179.32W, h33km, mb5.6/16, MS4.9/15, Error ellipse: s-maj=14.2km s-min=12.0km az=77.0*
NEIC ***24*** *05:23:45.3±0.2, 33.29S×179.38W, mb5.4/29, Error ellipse: s-maj=9.6km s-min=7.4km az=138.0*
GCMT ***24*** *05:23:46.1±0.1, 33.30S×179.21W, h63km±2km, MW5.3, Moment Tensor Solution. s78,c138; s90,c150; Moment tensor: Scale 10^17 Nm; Mrr=0.29±.02; Mθθ=0.09±.02; Mφφ=0.21±.02; Mrθ=0.18±.01; Mrφ=-0.09±.02; Mθφ=1.16±.02; Best double couple: M0=1.20000×10^17 NP1:φs=328.00000°, δ7.00000°, λ-129.00000°. NP2:φs=187.00000°, δ84.00000°, λ-85.00000°. Principal axes: T 1.1700, Plg39.0000°, Azm273.0000°; N 0.1100, Plg5.0000°, Azm7.0000°; P -1.2800, Plg50.0000°, Azm102.0000°; Data Used: II IU IC G CN.*
IDC ***24*** *05:23:46.2±0.6, 33.17S×179.49W, h59km±4km, mb4.7/19, mb1 4.8/19, mb1mx4.8/20, mbtmp4.6/19, MS4.7/20, Ms1 4.7/20, ms1mx4.7/22 Error ellipse: s-maj=14.3km s-min=12.8km az=44.0*
ISC 24 05:23:43.2±1.6, 33.45S±0.04×179.30W±0.05, h26km±11km, h46km±1.9km:pP-P, n503, σ0s91/366, mb5.2/65, MS4.8/36, 70C-95D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.54**	**205**	*ePN*		**Pn**	**05 24 51.4**	**+1.2**
MXZ					SN	**Sn**	**05 25 47.5**	**+5.3**
PUZ	**Puketiti**	**5.02**	**203**	*ePN*		**Pn**	**05 24 58.0**	**+1.2**
PUZ					SN	**Sn**	**05 25 58.4**	**+4.4**
KUZ	**Kuaotunu**	**5.24**	**230**		PN	**Pn**	**05 25 05.3**	**+5.5**
CNGZ	**Carnagh Statio**	**5.41**	**201**		PN	**Pn**	**05 25 04.1**	**+2.0**
CNGZ					SN	**Sn**	**05 26 09.1**	**+5.5**
MWZ	**Matawai**	**5.51**	**207**		PN	**Pn**	**05 25 04.2**	**+0.6**
MWZ					SN	**Sn**	**05 26 11.5**	**+5.4**
OPRZ	**Ohinepanea**	**5.53**	**216**		PN	**Pn**	**05 25 07.3**	**+3.5**
MARZ	**Manawahe**	**5.58**	**215**		PN	**Pn**	**05 25 08.4**	**+3.8**
TGRZ	**Tauranga**	**5.59**	**219**		PN	**Pn**	**05 25 09.6**	**+4.9**
URZ	**Urewera**	**5.61**	**210**	P		**Pn**	**05 25 06.0**	**+1.0**
	62nm,0.3s,baz=18,slow=2.4,SNR=102							
URZ					S	**Sn**	**05 26 11.5**	**+2.9**
	246nm,0.3s,baz=233,slow=15,SNR=8.2							
URZ					LR	LR	05 27 34.4	
	comp=Z,4μm,20.8s,baz=28,slow=40							
URZ	**Urewera**	**5.61**	**210**		PN	**Pn**	**05 25 05.7**	**+0.8**
URZ					SN	**Sn**	**05 26 11.0**	**+2.4**
WCZ	**Waipu Caves**	**5.79**	**243**		PN	**Pn**	**05 25 12.6**	**+5.2**
MKAZ	**Moumakai**	**5.81**	**230**		PN	**Pn**	**05 25 13.5**	**+5.8**
PRGZ	**Paritu Road**	**5.92**	**202**		PN	**Pn**	**05 25 09.7**	**+0.6**
TOZ	**Tahuroa Road**	**6.01**	**223**		PN	**Pn**	**05 25 15.6**	**+5.2**
KNZ	**Kokohu**	**6.07**	**203**	*ePN*		**Pn**	**05 25 10.6**	**-0.6**
MHGZ	**Mahia Peninsul**	**6.12**	**201**	*ePN*		**Pn**	**05 25 11.9**	**0.0**
PRRZ	**Plateau Road**	**6.13**	**214**		PN	**Pn**	**05 25 14.7**	**+2.7**
OUZ	**Omahuta**	**6.14**	**251**		PN	**Pn**	**05 25 17.2**	**+5.1**
RAHZ	**Arahi**	**6.19**	**207**	*ePN*		**Pn**	**05 25 13.5**	**+0.7**
NMHZ	**Naumai**	**6.45**	**208**	*ePN*		**Pn**	**05 25 16.8**	**+0.3**
BKZ	**Black Stump Fm**	**6.64**	**210**		PN	**Pn**	**05 25 18.3**	**-0.7**
MCHZ	**McNeill Hill**	**6.79**	**207**	*ePN*		**Pn**	**05 25 21.9**	**+0.8**
CKHZ	**Cape Kidnapper**	**6.85**	**204**	*ePN*		**Pn**	**05 25 21.3**	**-0.5**
HIZ	**Hauiti**	**6.92**	**222**		PN	**Pn**	**05 25 28.1**	**+5.1**
OTVZ	**Oturere**	**7.00**	**214**	*ePN*		**Pn**	**05 25 25.9**	**+1.9**
KAHZ	**Kahuranaki**	**7.04**	**205**		PN	**Pn**	**05 25 23.6**	**-0.9**
NGZ	**Ngauruhoe**	**7.04**	**214**		PN	**Pn**	**05 25 27.3**	**+2.8**
BHHZ	**Black Hill Sta**	**7.09**	**210**		PN	**Pn**	**05 25 26.7**	**+1.5**
FWVZ	**Far West T-bar**	**7.13**	**214**		PN	**Pn**	**05 25 27.6**	**+1.9**
MOVZ	**Mo

HOWZ **Holdsworth Sta** 8.51 208 PN Pn 05 25 42.3 -2.3
OGWZ **Otaki Gorge** 8.57 209 *e*PN Pn 05 25 44.0 -1.5
KIW **Kapiti Island** 8.72 210 *e*PN Pn 05 25 44.9 -2.7
MTW **Mount Morrison** 8.73 207 *e*PN Pn 05 25 45.3 -2.4
CAW **Cannon Point** 8.86 209 *e*PN Pn 05 25 46.4 -3.1
SNZO **South Karori** 9.18 210 *e*PN Pn 05 25 50.1 -3.7
PLWZ **Palliser** 9.18 207 SN Sn 05 27 30.0 -6.4
BHW **Baring Head** 9.19 209 *e*PN Pn 05 25 51.2 -2.8
NNZ **Nelson** 9.70 215 PN Pn 05 25 59.1 -1.9
BSWZ **Blackbirch Sta** 9.86 211 *e*PN Pn 05 26 00.0 -3.2
CTZ **Chatham Island** 10.48 169 *e*PN Pn 05 26 11.6 -0.1
MQZ **McQueen's Vall** 12.01 209 *e*PN Pn 05 26 27.5 -5.1
RPZ **Rata Peaks** 12.72 214 P Pn 05 26 37.6 -4.6
4.3nm,0.3s,baz=31,slow=3.3,SNR=14
RPZ S Sn 05 28 53.2 -10
8.4nm,0.3s,baz=344,slow=19,SNR=7.9
RPZ **Rata Peaks** 12.72 214 *e*PN Pn 05 26 37.8 -4.4
FOZ **Fox Glacier** 13.27 217 *e*PN Pn 05 26 43.7 -6.0
LBZ **Lake Benmore** 13.63 214 *e*PN Pn 05 26 49.0 -5.7
ODZ **Otahua Downs** 13.94 211 PN Pn 05 26 53.5 -5.4
MSVF **Nonsavu** 15.83 351 Pn Pn 05 27 23.2 -1.2
514nm,0.9s,SNR=10
MSVF **Nonsavu** 15.83 351 *e*Pn Pn 05 27 21.8 -2.6
MSVF *e*Sn Sn 05 30 23.8 +4.6
DZM **Mont Dzumac** 16.94 308 *e*P Pn 05 27 41.3 +2.8
479nm,1.2s
DZM *e*LR LR 05 31 42.2
16µm,25.4s
DZM **Mont Dzumac** 16.94 308 *e*P Pn 05 27 39.7 +1.3
NOUC **Port Laguerre** 17.01 308 *e*P Pn 05 27 42.8 +3.4
AFI **Afiamalu** 20.62 21 P P 05 28 17.3 -3.4
30nm,0.6s,baz=180,slow=1.0,SNR=4.6
AFI S S 05 31 53.5 -16
31nm,0.6s,baz=82,slow=18,SNR=3.5
RAR **Rarotonga** 21.16 60 P P 05 28 25.3 -1.1
628nm,1.4s,mb5.8
RAR S S 05 32 07.4 -13
RAR LR LR 05 34 52.5
RAR **Rarotonga** 21.16 60 P P 05 28 22.2 -4.3
25nm,0.7s,mb4.6,baz=243,slow=6.8,SNR=2.9
RAR S S 05 32 07.4 -13
131nm,1.2s,baz=78,slow=20,SNR=3.4
RAR LR LR 05 34 52.6
comp=Z,1µm,18.7s,MS4.4,baz=239,slow=32
RAR **Rarotonga** 21.16 60 P P 05 28 25.3 -1.1
RAR S S 05 32 07.4 -13
RAR pmax pmax
comp=Z,628nm,1.4s
ARMA **Armidale** 24.82 269 *e*P P 05 29 08.5 +5.2
YNG **Young** 26.78 259 *e*P P 05 29 23.9 +2.9
comp=Z,13nm,0.9s,mb4.5
EIDS **Eidsvold** 26.96 280 *e*P P 05 29 24.5 +1.8
MOO **Moorlands** 27.76 241 *e*P P 05 29 31.7 +2.0
RMQ **Roma** 28.45 276 *e*P P 05 29 39.7 +3.7
comp=Z,30nm,0.8s,mb5.0
TOO **Toolangi** 28.85 252 *e*P P 05 29 43.1 +3.6
CMSA **Cobar Meteorol** 29.51 264 *e*P P 05 29 46.8 +1.4
HNR **Honiara** 30.61 317 *e*P P 05 29 54.9 -0.3
comp=Z,160nm,0.8s,mb5.9
HNR **Honiara** 30.61 317 P P 05 29 53.8 -1.3
comp=Z,209nm,0.9s,mb6.0,baz=186,slow=10,SNR=3.5
HNR **Honiara** 30.61 317 *e*P P 05 29 54.9 -0.3
HNR pmax pmax
comp=Z,160nm,0.8s,mb5.9
PPT **Papeete** 31.00 67 *e*LR LR 05 37 56.7
comp=Z,6µm,27.2s,baz=231
PPT **Papeete** 31.00 67 LR LR 05 38 52.0
comp=Z,2µm,21.5s,MS4.7,baz=244,slow=29
STKA **Stephens Creek** 32.83 262 P P 05 30 16.5 +1.8
STKA PcP PcP 05 32 56.3 -2.9
STKA ScP ScP 05 36 32.7 -8.8
STKA LR LR 05 42 31.4
STKA **Stephens Creek** 32.83 262 P P 05 30 16.5 +1.8
comp=Z,2.9nm,0.6s,mb4.4,baz=92,slow=8.9,SNR=8.7
STKA PcP PcP 05 32 56.3 -2.9
comp=Z,2.4nm,0.4s,baz=80,slow=4.8,SNR=4.0
STKA ScP ScP 05 36 32.7 -8.8
comp=Z,5.5nm,0.8s,baz=67,slow=2.8,SNR=6.9
STKA LR LR 05 42 31.4
comp=Z,4µm,19.3s,MS5.1,baz=91,slow=34
CTA **Charters Tower** 33.35 285 *e*P P 05 30 20.8 +1.5
comp=Z,31nm,0.6s,mb5.4
CTA **Charters Tower** 33.35 285 P P 05 30 20.8 +1.5
CTA LR LR 05 41 50.3
CTA **Charters Tower** 33.35 285 P P 05 30 20.8 +1.5
comp=Z,35nm,0.6s,mb5.5,baz=114,slow=9.4,SNR=38
CTA LR LR 05 41 50.3
comp=Z,2µm,21.4s,MS4.8,baz=102,slow=33
CTAO **Charters Tower** 33.35 285 *e*P P 05 30 20.7 +1.4
comp=Z,34nm,0.6s,mb5.5
CTAO **Charters Tower** 33.35 285 *e*P P 05 30 20.7 +1.4
CTAO pmax pmax
comp=Z,34nm,0.6s,mb5.5
MTSU **Mount Surprise** 35.93 286 *e*P P 05 30 42.9 +1.3
comp=Z,214nm,1.5s,mb5.8
BBOO **Buckleboo** 37.17 258 *e*P P 05 30 51.3 -0.8
RKT **Rikitea** 40.11 87 *e*LR LR 05 42 19.0
comp=Z,6µm,27.8s,baz=246
DRV **Dumont d'Urvil** 40.91 203 S S 05 37 32.0 -0.6
DRV L 05 40 00.0
DRV R 05 43 00.0
ASAR **Alice Springs** 41.95 271 P P 05 31 31.6 -0.4
comp=Z,27nm,0.5s,mb5.2,baz=109,slow=7.7,SNR=396
ASAR ScP ScP 05 37 07.3 -8.5
comp=Z,1.5nm,0.8s,baz=120,slow=4.1,SNR=4.9
ASAR S S 05 37 36.6 -12
comp=Z,1.7nm,0.9s,baz=105,slow=15,SNR=4.4
WRA **Warramunga Arr** 43.21 276 P P 05 31 41.5 -0.8
comp=Z,22nm,0.5s,mb5.2,baz=116,slow=8.0,SNR=199
WRA S S 05 38 00.8 -7.0
comp=Z,4.6nm,1.0s,baz=114,slow=14,SNR=5.4
WRA LR LR 05 49 26.1
comp=Z,644nm,18.0s,MS4.6,baz=115,slow=36
WRA **Warramunga Arr** 43.21 276 P P 05 31 41.5 -0.8
WRA S S 05 38 00.8 -7.0
TAOE **Nuku Hiva Isla** 43.56 65 *e*LR LR 05 43 31.7
comp=Z,4µm,30.1s,baz=229
FORT **Forrest** 44.28 259 *e*P P 05 31 49.5 -1.2
comp=Z,41nm,0.6s,mb5.7
SBA **Scott Base** 44.92 184 *e*P P 05 31 58.1 +2.8
comp=Z,24nm,0.8s,mb5.1
SBA *e*PcP PcP 05 33 36.2 0.0
SBA **Scott Base** 44.92 184 *e*P P 05 31 58.1 +2.9
SBA *e* 05 33 36.2
SBA pmax pmax
comp=Z,24nm,0.8s,mb5.1
KMBL **Kambalda** 49.12 255 *e*P P 05 32 27.3 -1.4
comp=Z,54nm,1.0s,mb5.5
KNA **Kununurra** 49.88 278 *e*P P 05 32 34.0 -0.6
comp=Z,16nm,0.5s,mb5.3
NWAO **Narrogin (SRO)** 52.34 252 LR LR 05 53 57.1
comp=Z,1µm,20.2s,MS4.9,baz=90,slow=35
KLBR **Kellerberrin** 52.37 254 *e*P P 05 32 51.1 -2.1
comp=Z,13nm,0.5s,mb5.1
MEEK **Meekatharra** 53.49 260 *e*P P 05 32 59.4 -2.1
MORW **Morawa** 54.66 256 *e*P P 05 33 07.5 -2.5
MBWA **Marble Bar** 54.86 266 *e*P P 05 33 09.2 -2.3
MBWA **Marble Bar** 54.86 266 *e*P P 05 33 09.3 -2.2
comp=Z,14nm,0.9s,mb5.0
QSPA **South Pole Qui** 56.67 180 *e*P P 05 33 25.8 +2.2
comp=Z,92nm,1.1s,mb5.7
QSPA **South Pole Qui** 56.67 180 P P 05 33 26.1 +2.5
comp=Z,29nm,0.6s,mb5.5,baz=33,slow=1.7,SNR=211
QSPA ScP ScP 05 38 14.3 -3.0
comp=Z,16nm,1.1s,baz=26,slow=2.2,SNR=8.1
GUMO **Guam** 57.93 318 LR LR 05 56 02.6
comp=Z,281nm,19.2s,MS4.4,baz=112,slow=34
KIP **Kipapa** 58.22 23 *e*P P 05 33 34.8 -0.5
comp=Z,152nm,1.3s,mb5.9
KIP **Kipapa** 58.22 23 *e*P P 05 33 34.8 -0.5
KIP pmax pmax
comp=Z,152nm,1.3s,mb5.9
MIR **Mirnyy** 58.91 208 *i*P P 05 33 39.0 -0.6
MIR *i* pP 05 33 45.0 -2.6
MIR pmax pmax
comp=Z,114nm,1.6s,mb5.7
MAW **Mawson** 69.07 201 *e*P P 05 34 46.2 -0.1
comp=Z,7.0nm,0.4s,mb4.9
MAW **Mawson** 69.07 201 P P 05 34 46.2 -0.1
comp=Z,8.1nm,0.4s,mb5.0,baz=128,slow=6.4,SNR=40
MAW LR LR 06 04 04.2
comp=Z,784nm,19.3s,MS5.0,baz=119,slow=35
CBIJ **Chichi jima** 70.45 324 LR LR 06 01 18.4
comp=Z,329nm,19.0s,MS4.6,baz=126,slow=32

SYO **Syowa Base** 73.90 194 *e*P P 05 35 13.0 -2.4
SYO **Syowa Base** 73.90 194 *i*pP pP 05 35 26.0 +2.4
USHA **Ushuaia** 74.02 146 P P 05 35 17.5 +1.1
comp=Z,8.2nm,0.9s,mb4.7,baz=180,slow=5.1,SNR=2.6
USHA pP pP 05 35 33.0 +8.5
comp=Z,13nm,0.9s,baz=240,slow=6.9,SNR=3.3
NVL **N'lazarevskaya** 75.77 184 *e*P P 05 35 23.7 -2.5
NVL *e*S S 05 45 04.3 -1.8
NVL pmax pmax
comp=Z,50nm,1.4s,mb5.2
NVL MLR MLR
comp=Z,407nm,20.0s,MS4.7
VNA1 **Neumayer--Stat** 76.00 177 *e*P P 05 35 25.7 -1.8
VNA1 *e* 05 35 41.0
MJAR **Matsushiro Arr** 80.14 326 P P 05 35 47.3 -3.5
comp=Z,2.7nm,0.8s,mb4.2,baz=163,slow=5.6,SNR=5.6
MJAR LR LR 06 08 11.8
comp=Z,164nm,20.7s,MS4.4,baz=150,slow=33
PLCA **Paso Flores** 81.23 133 P P 05 35 57.9 +1.0
comp=Z,24nm,0.7s,mb5.2,baz=228,slow=4.7,SNR=67
PLCA pP pP 05 36 14.4 +9.3
comp=Z,25nm,0.7s,baz=234,slow=5.8,SNR=14
PLCA LR LR 06 03 19.7
comp=Z,392nm,19.8s,MS4.8,baz=263,slow=29
PLCA **Paso Flores** 81.23 133 *e*P P 05 35 58.0 +1.1
PSI **Prapat** 84.68 277 LR LR 06 13 50.5
comp=Z,1µm,21.0s,MS5.2,baz=144,slow=36
QIZ **Qiongzhong** 85.32 296 P P 05 36 20.3 +2.1
QIZ pP pP 05 36 28.8 +2.3
QIZ sP sP 05 36 33.9 +4.4
QIZ S S 05 46 41.3 -6.1
QIZ pmax pmax
comp=Z,29nm,2.1s,mb5.0
QIZ pmax pmax
comp=Z,130nm,4.3s
QIZ LR LR
comp=Z,510nm,40.9s,MS4.6
KSRS **Korea Array** 85.97 321 P P 05 36 18.1 -2.9
comp=Z,4.3nm,0.9s,mb4.7,baz=140,slow=5.6,SNR=12
KSRS LR LR 06 11 45.9
comp=Z,242nm,20.2s,MS4.6,baz=152,slow=34
YSS **Yuzh-Sakhalins** 87.02 335 *e*P P 05 36 26.0 +0.1
YSS pmax pmax
comp=Z,30nm,0.9s,mb5.5
YSS MLR MLR
comp=Z,400nm,18.0s,MS4.9
SCI **San Clemente I** 87.36 47 ⇓P P 05 36 27.8 -0.1
baz=88
BSC **Santa Cruz Isl** 87.39 46 ⇑P P 05 36 27.9 -0.1
baz=88
NJ2 **Nanjing** 87.41 311 *e*P P 05 36 27.3 -0.8
NJ2 pmax pmax
comp=Z,20nm,1.1s,mb5.3
CIS **Catalina Islan** 87.74 47 ⇓P P 05 36 29.4 -0.2
baz=88
BLG **Laguna Peak** 87.81 46 ⇑P P 05 36 29.9 -0.2
baz=88
PKM **Peak Mountain** 87.91 45 ⇓P P 05 36 31.0 +0.6
baz=88,SNR=11
FMP **Fort Macarthur** 88.01 47 ⇑P P 05 36 30.9 -0.1
baz=88
TRQA **Tornquist** 88.06 135 *e*P P 05 36 31.4 0.0
comp=Z,23nm,1.0s,mb5.4
SMMC **Simmler** 88.08 45 ⇑P P 05 36 31.8 +0.6
baz=88,SNR=11
109C **Camp Elliot, M** 88.19 48 ⇓P P 05 36 31.8 0.0
baz=88
PET **Petropavlovsk** 88.23 347 *e*P P 05 36 33.6 +2.1
PET *e*S S 05 47 13.3 -0.8
PET *e*PS 05 48 11.2
PET pmax pmax
comp=Z,100nm,17.8s
SAO **San Andreas Ge** 88.26 43 *e*P P 05 36 31.7 -0.4
comp=Z,43nm,1.4s,mb5.5
SAO *e*pP pP 05 36 44.6 +4.1
SAO **San Andreas Ge** 88.26 43 *e*P P 05 36 31.7 -0.4
SAO *e**PP pP 05 36 44.6 +4.2
SAO pmax pmax
comp=Z,43nm,1.4s,mb5.5
DECC **Green Verdugo** 88.35 46 ⇓P P 05 36 32.5 -0.1
baz=88
OSI **Osito Adit** 88.37 46 ⇑P P 05 36 32.7 0.0
baz=88,SNR=5.4
PETK **Petropavlovsk-** 88.50 346 P P 05 36 30.5 -2.2
comp=Z,19nm,0.9s,mb5.3,baz=115,slow=6.9,SNR=14
PETK LR LR 06 10 08.6
comp=Z,285nm,21.5s,MS4.7,baz=75,slow=32
MURC **Murrieta** 88.61 48 ⇑P P 05 36 34.2 +0.4
baz=89,SNR=17
MONP **Monument Peak** 88.62 49 ⇓P P 05 36 34.5 +0.7
baz=89,SNR=20
ARVC **Arvin** 88.65 46 ⇑P P 05 36 34.1 +0.1
baz=89,SNR=14
DVTC **Desert V Tower** 88.66 49 P P 05 36 34.4 +0.3
baz=89,SNR=12
BFSC **Mount Baldy Ra** 88.75 47 ⇑P P 05 36 34.5 0.0
baz=89,SNR=24
EDW2 **Edwards Air Fo** 88.99 46 ⇓P P 05 36 35.6 +0.1
baz=89,SNR=32
VES **Vestal, Richgr** 88.99 45 ⇑P P 05 36 35.2 -0.3
baz=89,SNR=22
SWSC **Sam W. Stewart** 89.04 49 ⇑P P 05 36 36.1 +0.2
baz=89,SNR=15
PFO **Pinyon Flat Ob** 89.07 48 P P 05 36 36.0 0.0
comp=Z,161nm,1.2s,mb6.2,SNR=9.9
PFO **Pinyon Flat Ob** 89.07 48 ⇓P P 05 36 36.3 +0.3
baz=89,SNR=17
PFO **Pinyon Flat Ob** 89.07 48 *e*P P 05 36 34.3 -1.7
ISA **Isabella** 89.23 45 ⇓P P 05 36 36.9 +0.3
baz=89,SNR=35
WHN **Wuhan** 89.32 308 P P 05 36 34.5 -2.7
LRMC **Laurel Mountai** 89.57 46 ⇑P P 05 36 38.7 +0.4
baz=90,SNR=10
BELC **Belle Mtn. Jos** 89.62 48 ⇑P P 05 36 39.1 +0.6
baz=90,SNR=29
GLA **Glamis** 89.73 49 ⇓P P 05 36 39.9 +0.9
baz=90,SNR=14
BC3 **Big Chuckawall** 89.73 48 ⇓P P 05 36 39.9 +0.8
baz=90,SNR=35
CMB **Columbia Colle** 89.76 43 *e*P P 05 36 38.3 -0.8
comp=Z,32nm,1.0s,mb5.6
CMB **Columbia Colle** 89.76 43 *e*P P 05 36 38.3 -0.8
CMB pmax pmax
comp=Z,32nm,1.0s,mb5.6
KHMM **Horse Mountain** 89.95 39 *e*P P 05 36 39.8 -0.1
comp=Z,20nm,1.2s,mb5.3
HEC **Hector,Ludlow** 89.96 47 ⇑P P 05 36 40.6 +0.5
baz=90,SNR=5.0
GSC **Goldstone** 89.99 47 ⇓P P 05 36 40.6 +0.3
baz=90,SNR=21
CWC **Cottonwood Cre** 89.99 45 ⇓P P 05 36 40.2 0.0
baz=90,SNR=7.9
OHCM **Honcut** 90.06 41 *e*P P 05 36 40.1 -0.3
MPMC **Manual Prospec** 90.09 46 ⇑P P 05 36 40.9 +0.2
baz=90,SNR=19
113A **Mohawk Valley,** 90.22 50 ⇑P P 05 36 41.9 +0.6
baz=90
IRM **Iron Mountain** 90.25 48 ⇓P P 05 36 42.1 +0.7
baz=90,SNR=46
214A **Organ Pipe Nat** 90.31 51 ⇑P P 05 36 42.3 +0.5
baz=90,SNR=14
TIN **Tinemaha** 90.32 44 ⇑P P 05 36 42.2 +0.5
baz=90
MTUM **Tungsten Hills** 90.33 44 *e*P P 05 36 41.6 -0.1
GMRC **Granite Mounta** 90.34 48 P P 05 36 42.3 +0.5
baz=90,SNR=15
WDC **Whiskeytown Da** 90.37 40 *e*P P 05 36 40.9 -0.9
comp=Z,44nm,1.4s,mb5.6
WDC **Whiskeytown Da** 90.37 40 *e*P P 05 36 40.9 -1.0
WDC pmax pmax
comp=Z,44nm,1.4s,mb5.6
Y12C **Blythe** 90.37 49 ⇑P P 05 36 42.6 +0.5
baz=91,SNR=16
MDJ **Mudanjiang** 90.53 326 P P 05 36 42.9 +0.4
MDJ pP pP 05 36 55.1 +4.3
MDJ sP sP 05 37 00.0 +6.2
MDJ PP PP 05 40 16.0 -1.9
MDJ S S 05 47 28.0 -7.9
MDJ SS SS 05 53 32.8 -5.3
MDJ pmax pmax
comp=Z,13nm,2.2s,mb4.9
MDJ pmax pmax
comp=Z,250nm,4.5s
MDJ LR LR
comp=N,230nm,21.4s,MS4.7
MDJ LR LR
comp=E,150nm,22.1s,MS4.7
MDJ LR LR
comp=Z,370nm,22.1s,MS4.8
Z13A **Yuma Proving G** 90.57 50 ⇓P P 05 36 43.5 +0.5
baz=91,SNR=30
TUQ **Turquoise Moun** 90.61 47 ⇓P P 05 36 43.6 +0.5
baz=91,SNR=14
WAKR **Walker** 90.62 43 *e*P P 05 36 42.9 -0.2
SHOC **Shoshone** 90.71 46 ⇓P P 05 36 43.8 +0.2
baz=91,SNR=10
FURC **Furnace Creek,** 90.74 46 ⇑P P 05 36 43.6 -0.1
baz=91,SNR=7.9
114A **Black Gap (USA** 90.78 51 ⇑P P 05 36 44.5 +0.6
baz=91,SNR=8.8
GRAC **Grapevine Rang** 90.79 45 ⇓P P 05 36 44.1 +0.2
baz=91,SNR=32
Y13A **Salome** 90.86 49 ⇓P P 05 36 45.0 +0.7
baz=91,SNR=36
PDMCI **Parker Dam,Lak** 90.97 49 P P 05 36 45.4 +0.6
baz=91,SNR=13
WCN **Washoe City** 90.99 42 ⇓P P 05 36 44.7 -0.1
baz=91
U10A **Ash Meadows, A** 91.02 46 P P 05 36 45.5 +0.5
baz=91,SNR=18
YBH **Yreka Blue Hor** 91.10 39 *e*P P 05 36 44.7 -0.6
comp=Z,24nm,1.4s,mb5.3
YBH **Yreka Blue Hor** 91.10 39 P P 05 36 44.6 -0.6
comp=Z,10nm,1.1s,mb5.1,baz=137,slow=4.1,SNR=12
YBH **Yreka Blue Hor** 91.10 39 *e*P P 05 36 44.7 -0.5
YBH pmax pmax
comp=Z,23nm,1.4s
Z14A **Wintersburg** 91.13 50 ⇓P P 05 36 46.5 +0.9
baz=91,SNR=7.2
CHGN **Chignik** 91.15 11 *e*P P 05 36 53.2 +8.1
115A **Sonoran Desert** 91.17 51 ⇓P P 05 36 46.6 +0.8
baz=91
V11A **Goodsprings** 91.18 47 ⇓P P 05 36 46.1 +0.3
baz=91,SNR=7.6
NVAR **Mina Array Bea** 91.22 43 P P 05 36 45.4 -0.5
comp=Z,11nm,0.9s,mb5.2,baz=218,slow=7.2,SNR=60
NVAR pP pP 05 37 01.2 +7.0
comp=Z,9.2nm,0.9s,baz=219,slow=5.9,SNR=8.2
216A **Three Points,** 91.23 52 P P 05 36 47.0 +0.9
baz=91,SNR=10
116A **Eloy** 91.42 51 ⇓P P 05 36 47.5 +0.6
baz=92,SNR=11
Y14A **Wickenburg** 91.46 50 ⇑P P 05 36 47.4 +0.3
baz=92,SNR=21
V12A **Nelson** 91.46 47 ⇑P P 05 36 47.2 +0.2
baz=92,SNR=7.5
PAHR **Pah Rah Range** 91.48 42 *e*P P 05 36 49.6 +2.5
comp=Z,10.0nm,1.1s,mb5.1
217A **Green Valley** 91.51 52 P P 05 36 48.2 +0.8
baz=92,SNR=28
217A ⇓pP pP 05 37 00.3 +4.6
baz=92
Z15A **Gila River Ind** 91.59 51 ⇑P P 05 36 48.3 +0.6
baz=92,SNR=10
HUMO **Hull Mountain** 91.60 38 *e*P P 05 36 47.7 +0.2
comp=Z,50nm,1.5s,mb5.6
SHPR **Sheep Range** 91.78 46 *e*P P 05 36 49.2 +0.6
318A **Bisbee** 91.85 53 ⇑P P 05 36 49.8 +0.8
baz=92,SNR=12
S10A **Tonopah Range,** 91.87 45 P P 05 36 48.8 -0.1
baz=92,SNR=22
X14A **Yava** 91.87 49 P P 05 36 49.5 +0.5
baz=92,SNR=25
X14A ⇓pP pP 05 37 02.3 +5.0
baz=92
Y15A **Casa Rosa Ranc** 91.90 50 P P 05 36 49.5 +0.4
baz=92,SNR=26
CN2 **Changchun** 91.91 323 *e*P P 05 36 50.1 +1.1
CN2 *e*sP sP 05 37 08.8 +8.5
CN2 *e*S S 05 47 45.8 -2.8
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,400nm,16.0s,MS5.2
CN2 LR LR
comp=E,500nm,16.0s,MS5.2
CN2 LR LR
comp=Z,300nm,17.0s,MS4.8
117A **Oracle** 92.06 52 ⇑P P 05 36 50.5 +0.6
baz=92,SNR=18
V13A **Grand Canyon W** 92.08 48 P P 05 36 49.9 0.0
baz=92,SNR=12
Z16A **Peralta Trail,** 92.09 51 ⇓P P 05 36 50.5 +0.5
baz=92,SNR=16
U12A **Valley of Fire** 92.11 47 P P 05 36 50.6 +0.5
baz=92,SNR=18
GYA **Guiyang** 92.12 300 P P 05 36 50.0 -0.4
GYA pP pP 05 37 05.4 +6.7
GYA PP PP 05 40 32.6 +1.7
GYA SKS 05 47 18.3
GYA S S 05 47 46.0 -5.3
GYA SS SS 05 54 00.8 -0.9
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,150nm,5.8s
GYA LR LR
comp=N,670nm,21.2s,MS5.2
GYA LR LR
comp=E,520nm,22.5s,MS5.2
GYA LR LR
comp=Z,760nm,20.3s,MS5.1
218A **Dragoon** 92.14 53 ⇑P P 05 36 50.1 -0.2
baz=92,SNR=17
S11A **Rachel** 92.18 45 ⇓P P 05 36 50.5 +0.1
baz=92,SNR=9.2
W14A **Seligman** 92.23 49 ⇓P P 05 36 51.2 +0.5
baz=92,SNR=16
T11A **Corn Creek, Al** 92.23 46 P P 05 36 51.0 +0.4
baz=92,SNR=30
R10A **Warm Springs** 92.28 45 P P 05 36 51.0 +0.1
baz=92,SNR=11
319A **Douglas** 92.29 54 ⇑P P 05 36 51.4 +0.4
baz=92,SNR=6.7
X15A **Humboldt** 92.30 50 ⇓P P 05 36 51.5 +0.5
baz=92,SNR=18
Y16A **Circle Bar Ran** 92.40 50 P P 05 36 52.2 +0.7
baz=93,SNR=45
ENH **Enshi** 92.42 305 *e*P P 05 36 49.4 -2.2
U13A **Pakoon Wash** 92.45 47 P P 05 36 51.9 +0.2
baz=93,SNR=14
V14A **Boquillas Ranc** 92.48 48 P P 05 36 52.5 +0.7
baz=93,SNR=11
MOD **Modoc** 92.50 40 *e*P P 05 36 51.0 -0.7
comp=Z,19nm,1.1s,mb5.3
Q10A **Clear Creek Ra** 92.58 44 P P 05 36 52.9 +0.7
baz=93,SNR=7.9
118A **Homack Ranch,** 92.61 52 ⇓P P 05 36 53.1 +0.6
baz=93,SNR=23
219A **White Tail Can** 92.68 53 P P 05 36 53.3 +0.5
baz=93,SNR=8.9
Z17A **San Carlos Hig** 92.69 51 ⇓P P 05 36 53.4 +0.6
baz=93
Y17A **Roosevelt** 92.69 51 P P 05 36 53.5 +0.6
baz=93,SNR=14
S12A **Delamar Landin** 92.70 46 P P 05 36 53.4 +0.7
baz=93,SNR=14
R11A **Troy Canyon, C** 92.74 45 ⇓P P 05 36 52.5 -0.5
baz=93,SNR=7.4
K05A **Summer Lake** 92.76 39 ⇓P P 05 36 52.7 -0.2
baz=93
X16A **Lo Mia Camp, P** 92.76 50 P P 05 36 53.9 +0.7
baz=93,SNR=23
320A **Kipp Ranch, An** 92.77 54 ⇓P P 05 36 53.8 +0.6
baz=93,SNR=10
T13A **Saint George** 92.88 47 ⇓P P 05 36 53.8 +0.2
baz=93,SNR=6.7
U14A **Mt Trumbull** 92.94 48 P P 05 36 54.5 +0.7
baz=93,SNR=10
Q11A **Duckwater** 93.03 44 ⇑P P 05 36 54.1 -0.2
baz=93,SNR=6.9
220A **Playas Peak, P** 93.12 54 ⇓P P 05 36 55.1 +0.3
baz=93,SNR=10
X17A **Forest Lakes** 93.12 50 ⇑P P 05 36 55.8 +1.0
baz=93,SNR=13
V15A **Kaibab Nationa** 93.18 49 ⇓P P 05 36 55.4 +0.4
baz=93,SNR=7.2
BMN **Battle Mountai** 93.19 42 *e*P P 05 36 54.2 -0.8
comp=Z,34nm,1.4s,mb5.6
BMN *e*pP pP 05 37 07.9 +4.6
BMN **Battle Mountai** 93.19 42 *e*P P 05 36 54.2 -0.7
BMN *e**PP pP 05 37 07.9 +4.6

BMN pmax pmax
comp=Z,34nm,1.4s,mb5.6
Y18A Canyon Day Jun 93.27 51 P **P** 05 36 56.3 +0.8
baz=94,SNR=15
S13A Holt Ranch, En 93.27 46 P **P** 05 36 55.7 +0.3
baz=94,SNR=13
R12A Pony Springs, 93.31 45 P **P** 05 36 55.6 +0.1
baz=94,SNR=11
CMAR Chiang Mai Arr 93.38 290 P **P** 05 36 55.2 -1.1
comp=Z,0.5nm,0.4s,mb4.3,baz=164,slow=3.7,SNR=6.0
CMAR PP PP 05 40 43.5 +2.6
comp=Z,0.7nm,0.3s,baz=141,slow=5.4,SNR=4.9
CMAR LR LR 06 19 36.6
comp=Z,204nm,20.2s,MS4.6,baz=177,slow=36
CMAR Chiang Mai Arr 93.38 290 P **P** 05 36 55.3 -1.0
CMAR 05 40 43.5
T14A Hurricane 93.41 47 ⇓P **P** 05 36 56.3 +0.2
baz=94,SNR=7.2
P11A Circle Ranch, 93.44 44 ⇓P **P** 05 36 55.7 -0.4
baz=94
H04A Detroit Lake 93.48 37 ⇓P **P** 05 36 55.0 -1.1
baz=94
WUAZ Wupatki 93.50 49 *e*P **P** 05 36 56.7 +0.2
comp=Z,32nm,1.6s,mb5.5
U15A North Rim 93.50 48 ⇓P **P** 05 36 57.0 +0.6
baz=94,SNR=14
R13A O'Grain Ranch, 93.60 46 P **P** 05 36 57.3 +0.4
baz=94,SNR=6.1
Q12A Willow Creek R 93.64 45 ⇓P **P** 05 36 57.0 -0.1
baz=94,SNR=7.5
221A Mesquite Ranch 93.69 54 ⇑P **P** 05 36 57.1 -0.3
baz=94
WVOR Wild Horse Val 93.76 40 *e*P **P** 05 36 56.6 -0.9
comp=Z,17nm,1.3s,mb5.3
WVOR Wild Horse Val 93.76 40 *e*P **P** 05 36 56.6 -0.9
WVOR pmax pmax
comp=Z,17nm,1.3s,mb5.3
Z20A Nine Sixteen R 93.81 53 ⇑P **P** 05 36 58.5 +0.5
baz=94,SNR=8.8
T15A Red Dirt Ranch 93.82 48 ⇓P **P** 05 36 58.3 +0.4
baz=94,SNR=8.0
P12A McGill 93.88 44 P **P** 05 36 58.1 0.0
baz=94,SNR=7.8
Y19A Nutrioso 93.89 52 ⇑P **P** 05 36 59.2 +0.8
baz=94,SNR=14
V17A Tonalea, Kykot 93.93 49 P **P** 05 36 58.6 +0.2
baz=94,SNR=7.0
U16A Tuba City 94.04 49 ⇓P **P** 05 36 59.5 +0.5
baz=94,SNR=8.0
Q13A Wheeler Ranch, 94.07 45 ⇓P **P** 05 36 58.8 -0.2
baz=94,SNR=5.4
KMI Kunming 94.22 297 P **P** 05 37 00.9 +0.8
KMI pP pP 05 37 14.3 +5.9
KMI sP sP 05 37 19.0 +7.6
KMI PP PP 05 40 49.8 +2.4
KMI SKS 05 47 30.1
KMI S S 05 48 04.9 -5.0
KMI sS sS 05 48 27.3 +3.5
KMI SS SS 05 54 30.3 -1.5
KMI pmax pmax
comp=Z,8.0nm,0.5s,mb5.4
KMI pmax pmax
comp=Z,58nm,4.4s
KMI LR LR
comp=N,160nm,18.6s
KMI LR LR
comp=E,180nm,24.9s
KMI LR LR
comp=Z,440nm,34.2s
BJI Beijing 94.33 316 P **P** 05 37 00.3 +0.1
BJI S S 05 48 08.8 -1.4
BJI SS SS 05 54 32.6 -0.4
BJI pmax pmax
comp=Z,5.0nm,0.6s,mb5.1
BJI pmax pmax
comp=Z,83nm,4.3s
BJI LR LR
comp=N,170nm,25.4s,MS4.7
BJI LR LR
comp=E,280nm,25.0s,MS4.7
BJI LR LR
comp=Z,350nm,27.6s,MS4.7
P13A Bates Ranch, G 94.39 45 ⇓P **P** 05 36 59.9 -0.7
baz=95,SNR=7.8
I07A Izee 94.43 39 ⇓P **P** 05 37 00.1 -0.5
baz=95
Y20A Horse Springs, 94.44 52 ⇓P **P** 05 37 01.7 +0.8
baz=95,SNR=9.0
J08A Circle Bar Ran 94.48 40 ⇓P **P** 05 36 60.0 -0.8
baz=95
O12A Currie 94.50 44 ⇓P **P** 05 37 00.8 -0.2
baz=95,SNR=5.1
Q14A Sevier Lake (B 94.53 46 ⇑P **P** 05 37 01.2 0.0
baz=95,SNR=9.2
V18A Ganado 94.53 50 ⇑P **P** 05 37 01.4 +0.2
baz=95,SNR=6.1
Z21A St. Cloud Mine 94.54 53 ⇑P **P** 05 37 01.8 +0.4
baz=95,SNR=5.7
G06A Carlson Farm, 94.65 37 ⇓P **P** 05 37 00.9 -0.6
baz=95
CMIG Matias Romero 94.73 73 P **P** 05 37 02.5 -0.1
comp=Z,3.0nm,0.8s,mb4.8,baz=322,slow=0.5,SNR=5.6
X20A Quemado 94.74 51 ⇑P **P** 05 37 03.0 +0.7
baz=95,SNR=11
626A Big Bend Ranch 94.75 58 ⇑P **P** 05 37 02.4 0.0
baz=95,SNR=12
425A Indio Mountain 94.87 56 ⇓P **P** 05 37 02.6 -0.3
baz=95,SNR=8.4
324A Moseley Ranch, 94.91 55 ⇓P **P** 05 37 02.7 -0.4
baz=95
TXAR Lajitas Array 94.95 58 P **P** 05 37 03.0 -0.3
TXAR pP pP 05 37 18.5 +6.8
TXAR PKKP PKKPbc 05 53 58.0 -0.7
TXAR LR LR 06 16 40.0
TXAR Lajitas Array 94.95 58 P **P** 05 37 03.0 -0.3
comp=Z,4.5nm,1.0s,mb4.8,baz=208,slow=6.9,SNR=29
TXAR pP pP 05 37 18.5 +6.8
comp=Z,2.0nm,1.0s,baz=205,slow=8.3,SNR=4.8
TXAR PKKP PKKPbc 05 53 58.0 -0.7
comp=Z,0.3nm,0.7s,baz=26,slow=3.5,SNR=4.1
TXAR LR LR 06 16 40.0
comp=Z,301nm,18.1s,MS4.8,baz=220,slow=33
TXAR Lajitas Array 94.95 58 P **P** 05 37 03.0 -0.3
TXAR *PP pP 05 37 18.5 +6.8
Y21A Point of Rocks 94.96 52 ⇓P **P** 05 37 03.9 +0.7
baz=95,SNR=10
Z22A Elephant Butte 94.98 53 ⇓P **P** 05 37 03.3 -0.1
baz=95,SNR=10.0
U18A Rough Rock, Ch 95.01 49 ⇑P **P** 05 37 03.2 -0.3
baz=95
526A Mary Lane Ranc 95.07 57 P **P** 05 37 03.6 -0.2
baz=95,SNR=16
W20A Ramah 95.10 51 ⇓P **P** 05 37 04.2 +0.4
baz=95,SNR=8.6
MNTX Cornudas Mount 95.13 55 P **P** 05 37 03.7 -0.4
baz=95
X21A Alamocita Cree 95.15 52 ⇓P **P** 05 37 04.2 0.0
baz=95,SNR=10.0
627A Terlingua Ranc 95.21 58 ⇓P **P** 05 37 04.5 0.0
baz=95,SNR=20
325A Bean Ranch, Si 95.22 56 ⇑P **P** 05 37 03.9 -0.7
baz=95,SNR=7.5
224A Cornudas Mount 95.26 55 ⇓P **P** 05 37 04.4 -0.3
baz=95
U19A Dine' College, 95.36 50 ⇓P **P** 05 37 05.2 +0.2
baz=96
T18A Mexican Hat 95.45 49 ⇓P **P** 05 37 05.2 -0.2
baz=96
527A Woodward Ranch 95.46 57 ⇑P **P** 05 37 05.2 -0.5
baz=96,SNR=11
426A McDonald Obser 95.47 57 ⇑P **P** 05 37 05.5 -0.1
baz=96,SNR=12
628A Black Gap, Mar 95.59 58 ⇓P **P** 05 37 05.9 -0.3
baz=96,SNR=12
124A Stringfield Ra 95.67 54 ⇑P **P** 05 37 06.3 -0.3
baz=96
225A Deer Hill, Car 95.76 55 ⇓P **P** 05 37 06.7 -0.3
baz=96
MFID Camas Ranch 95.95 41 ⇓P **P** 05 37 06.8 -0.7
baz=96,SNR=6.5
HAWA Hanford 96.00 37 *e*P **P** 05 37 07.0 -0.6
comp=Z,8.2nm,1.2s,mb5.0
427A Hayter Ranch, 96.01 57 ⇑P **P** 05 37 07.8 -0.3
baz=96,SNR=14
528A Cox Ranch, San 96.05 58 ⇓P **P** 05 37 08.0 -0.3
baz=96,SNR=12
125A Gardner Draw, 96.19 55 ⇑P **P** 05 37 08.5 -0.4
baz=96
N15A Stansbury Isla 96.19 44 ⇓P **P** 05 37 08.4 -0.3
baz=96
R18A Canyonlands Na 96.21 48 ⇑P **P** 05 37 08.2 -0.7
baz=96
226A Malaga, Loving 96.23 56 ⇑P **P** 05 37 08.7 -0.4
baz=96
SRU San Rafael 96.27 47 ⇓P **P** 05 37 08.5 -0.5
baz=96
ANMO Albuquerque 96.33 52 P **P** 05 37 08.9 -0.6
comp=Z,2.1nm,1.0s,mb4.5,baz=206,slow=3.4,SNR=6.2
Y24A Capitan 96.41 53 ⇓P **P** 05 37 09.6 -0.3
baz=97,SNR=5.7
428A Kincaid Ranch, 96.44 57 ⇓P **P** 05 37 10.0 -0.1
baz=97,SNR=6.6
L14A Malta 96.50 43 ⇓P **P** 05 37 09.6 -0.5
baz=97,SNR=7.1
Z25A Roswell 96.51 54 ⇑P **P** 05 37 10.3 0.0
baz=97,SNR=5.3
I12A Atlanta 96.58 41 ⇓P **P** 05 37 09.9 -0.5
baz=97,SNR=10
M15A Larsen Ranch, 96.60 44 ⇓P **P** 05 37 10.0 -0.5
baz=97,SNR=6.2
CD2 Chengdu 96.78 303 P **P** 05 37 11.3 -0.3
CD2 pP pP 05 37 24.8 +4.8
CD2 sP sP 05 37 30.0 +7.0
CD2 PP PP 05 41 09.1 +1.9
CD2 SKS 05 47 43.1
CD2 S S 05 48 26.3 -5.6
CD2 sS sS 05 48 49.3 +3.5
CD2 SS SS 05 55 06.1 -2.0
CD2 pmax pmax
comp=Z,10.0nm,1.2s,mb5.1
CD2 pmax pmax
comp=Z,120nm,4.6s
CD2 LR LR
comp=N,750nm,15.6s
CD2 LR LR
comp=Z,850nm,14.7s,MS5.4
O17A Robinson Place 96.81 46 ⇑P **P** 05 37 11.5 -0.1
baz=97
HLID Hailey 96.82 42 ⇓P **P** 05 37 11.2 -0.3
baz=97
HLID Hailey 96.82 42 *e*P **P** 05 37 11.3 -0.2
comp=Z,4.6nm,1.0s,mb4.9
J13A Cove Ranch, Pi 96.85 42 ⇓P **P** 05 37 11.3 -0.3
baz=97,SNR=11
Y25A Mesa, Roswell 96.91 54 ⇓P **P** 05 37 11.6 -0.5
baz=97,SNR=6.9
L15A Malad City 96.97 44 ⇑P **P** 05 37 11.4 -0.8
baz=97,SNR=6.9
127A Arkansas Junct 97.09 56 ⇑P **P** 05 37 12.0 -1.0
baz=97
J14A Carey 97.17 42 ⇓P **P** 05 37 12.6 -0.4
baz=97,SNR=12
N17A Moffit Pass 97.22 45 ⇑P **P** 05 37 12.9 -0.5
baz=97
H12A Diamond D Ranc 97.22 41 ⇑P **P** 05 37 12.6 -0.6
baz=97,SNR=7.6
K15A Arbon 97.32 43 ⇑P **P** 05 37 13.3 -0.5
baz=98
G12A Big Creek, Yel 97.34 40 ⇑P **P** 05 37 13.2 -0.6
baz=98
L16A Fish Haven 97.53 44 ⇓P **P** 05 37 14.2 -0.6
baz=98
H13A Challis 97.56 41 ⇑P **P** 05 37 14.5 -0.3
baz=98,SNR=5.1
HHC Hu-ho-hao-te 97.56 314 *e*P **P** 05 37 15.8 +0.9
HHC pP pP 05 37 28.8 +5.5
HHC sP sP 05 37 34.3 +8.1
HHC PP PP 05 41 15.8 +2.8
HHC SKS 05 47 47.4
HHC *e*S S 05 48 33.8 -4.3
HHC sS sS 05 48 57.3 +5.3
HHC SS SS 05 55 18.5 -0.3
HHC pmax pmax
comp=Z,22nm,1.0s,mb5.6
HHC pmax pmax
comp=Z,92nm,6.9s
HHC LR LR
comp=N,140nm,15.5s,MS4.8
HHC LR LR
comp=E,230nm,19.0s,MS4.8
HHC LR LR
comp=Z,330nm,22.6s,MS4.8
I14A Mackay 97.59 42 ⇓P **P** 05 37 14.8 -0.1
baz=98,SNR=6.7
M17A Scullys Gap (B 97.65 45 ⇓P **P** 05 37 14.5 -0.7
baz=98
F12A Elk City 97.79 39 ⇑P **P** 05 37 15.2 -0.6
baz=98,SNR=8.3
W25A X Bar L Ranch, 97.81 53 ⇓P **P** 05 37 15.7 -0.4
baz=98
J15A Blackfoot 97.83 43 ⇑P **P** 05 37 16.2 +0.2
baz=98,SNR=5.4
LPAZ La Paz 97.88 115 *e*P **P** 05 37 18.0 +1.0
comp=Z,3.0nm,0.8s,mb4.9
LPAZ *e*pP pP 05 37 32.0 +6.6
LPAZ La Paz 97.88 115 P **P** 05 37 17.9 +0.9
comp=Z,1.9nm,0.6s,mb4.8,baz=225,slow=5.8,SNR=16
LPAZ PP PP 05 41 17.4 +2.2
comp=Z,1.7nm,1.0s,baz=231,slow=3.2,SNR=6.3
LPAZ LR LR 06 11 43.6
comp=Z,282nm,21.7s,MS4.7,baz=173,slow=29
LPAZ La Paz 97.88 115 *e*P **P** 05 37 18.0 +1.0
LPAZ *e**PP pP 05 37 32.0 +6.6
LPAZ pmax pmax
comp=Z,3.0nm,0.8s
G13A Cobalt 97.91 40 ⇓P **P** 05 37 16.1 -0.3
baz=98,SNR=5.2
Y27A Causey 97.92 55 ⇑P **P** 05 37 15.9 -0.8
baz=98
V25A Rancho No Teng 98.07 52 ⇓P **P** 05 37 17.1 -0.2
baz=98
H14A Leadore 98.08 41 ⇓P **P** 05 37 16.8 -0.3
baz=98,SNR=7.2
J16A Bone 98.22 43 ⇓P **P** 05 37 17.6 -0.2
baz=98
SMCO Snowmass 98.50 48 *e*P **P** 05 37 19.0 -0.2
comp=Z,17nm,1.9s,mb5.3
C11A Tepee Creek (N 98.64 37 ⇑Pdiff **P** 05 37 19.6 0.0
baz=99
W27A Bowe Ranch, En 98.66 54 ⇓Pdiff **P** 05 37 18.9 -1.1
baz=99
N20A Spence Gulch, 98.70 47 ⇓Pdiff **P** 05 37 19.8 -0.2
baz=99
REDW Red Top Meadow 98.71 43 *e*P **P** 05 37 19.5 -0.4
comp=Z,10nm,1.4s,mb5.2
TPAW Teton Pass 98.73 43 *e*P **P** 05 37 20.1 0.0
comp=Z,6.4nm,1.4s,mb5.0
K18A Toltan Ranch, 98.73 44 ⇓Pdiff **P** 05 37 19.8 -0.3
baz=99
G15A Dillon 98.91 41 ⇑Pdiff **P** 05 37 20.8 0.0
baz=99
CPUP Villa Florida 98.93 130 P **P** 05 37 21.1 -0.5
comp=Z,0.3nm,0.5s,mb4.1,baz=210,slow=8.5,SNR=3.1
CPUP LR LR 06 14 04.7
comp=Z,611nm,21.7s,MS5.1,baz=214,slow=30
IMW Indian Meadow 98.99 43 *e*P **P** 05 37 21.2 0.0
comp=Z,54nm,3.0s
LOHW Long Hollow 99.00 43 *e*P **P** 05 37 21.1 -0.2
comp=Z,10nm,1.5s,mb5.1
BW06 Boulder Array 99.09 44 Pdiff **P** 05 37 21.0 -0.7
baz=99
PDAR Pinedale Array 99.09 44 P **P** 05 37 20.6 -1.1
comp=Z,1.3nm,0.9s,mb4.5,baz=211,slow=1.9,SNR=10
PDAR LR LR 06 14 01.9
comp=Z,355nm,21.9s,MS4.8,baz=238,slow=30
J18A Kendall Valley 99.09 44 ⇑Pdiff **P** 05 37 21.3 -0.4
baz=99
N21A Black Mountain 99.11 47 ⇓Pdiff **P** 05 37 21.3 -0.5
baz=99
H16A Russell Place, 99.31 42 ⇓Pdiff **P** 05 37 22.7 +0.1
baz=100
G16A Moss Hill, Enn 99.33 41 ⇑Pdiff **P** 05 37 23.2 +0.5
baz=100
LZH Lanzhou 99.66 307 *e*P Pdif 05 37 32.5 +8.0
LZH pP pP 05 37 47.0 +14
LZH sP sP 05 37 52.1 +16
LZH pmax pmax
comp=Z,15nm,1.0s,mb5.4
BOZ Bozeman (W) 99.68 41 ⇑Pdiff Pdif 05 37 24.5 -0.1
baz=100
BOZ Bozeman (W) 99.68 41 *e*Pdif Pdif 05 37 24.5 -0.1
comp=Z,4.6nm,1.4s
BOZ Bozeman (W) 99.68 41 *e*P Pdif 05 37 24.5 -0.1
BOZ pmax pmax
comp=Z,5.0nm,1.4s,mb4.8
I21A Big Trails, Te 101.04 45 ⇑Pdiff Pdif 05 37 29.4 -1.2
baz=101
COLA College 101.05 13 *e*Pdif Pdif 05 37 28.3 -2.4
comp=Z,4.9nm,0.9s
COLA College 101.05 13 *e*P Pdif 05 37 28.3 -2.4
COLA pmax pmax
comp=Z,5.0nm,0.9s
ILAR Eielson Array 101.14 14 P Pdif 05 37 27.8 -3.3
comp=Z,1.7nm,0.7s,baz=225,slow=5.5,SNR=21
ILAR PKiKP PKiKP 05 41 52.7 -2.3
comp=Z,1.0nm,0.7s,baz=261,slow=2.4,SNR=11
ILAR PKKPbc PKKPbc 05 53 37.8 -5.0
comp=Z,0.6nm,0.7s,baz=352,slow=2.1,SNR=5.2
A15A Johnson Ranch, 101.17 38 ⇑Pdiff Pdif 05 37 30.3 -0.9
baz=101
SONM Songino Array 104.66 318 Pdiff Pdif 05 37 43.7 -3.0
comp=Z,0.3nm,0.6s,baz=141,slow=0.9,SNR=3.1
SONM PKKPbc PKKPbc 05 53 31.2 -0.5
comp=Z,0.6nm,0.5s,baz=318,slow=1.9,SNR=4.8
YKA Yellowknife Ar 108.66 26 PKPdf PKiKP 05 42 06.5 -2.4
YKA PKKPbc PKKPbc 05 53 18.9 -0.7
YKA Yellowknife Ar 108.66 26 PKiKP PKiKP 05 42 06.5 -2.4
comp=Z,1.4nm,0.6s,baz=247,slow=1.3,SNR=7.5
YKA PKKPbc PKKPbc 05 53 18.9 -0.7
comp=Z,1.2nm,0.6s,baz=39,slow=2.9,SNR=5.9
BOSA Boshof 114.03 204 PKiKP PKiKP 05 42 19.2 -1.1
comp=Z,2.4nm,0.6s,baz=96,slow=5.2,SNR=7.8
WMQ Urumqi 114.22 308 *e*PKP PKiKP 05 42 19.3 -0.7
WMQ PP PP 05 43 19.5 +3.5
WMQ SKKS SKKSac 05 50 01.8 -14
WMQ AMB AMB
comp=Z,140nm,6.0s
WMQ LR LR
comp=N,130nm,26.0s
WMQ LR LR
comp=Z,210nm,21.8s,MS4.7
MK31 Makanchi Array 118.86 309 *e*PKPdf PKPdf 05 42 25.5 -3.4
MKAR Makanchi Array 118.86 309 PKP PKPdf 05 42 25.4 -3.4
MKAR PKKPbc PKKPbc 05 52 43.7 -0.6
MKAR Makanchi Array 118.86 309 PKP PKPdf 05 42 25.4 -3.4
comp=Z,1.7nm,0.4s,baz=200,slow=0.9,SNR=24
MKAR PKKPbc PKKPbc 05 52 43.7 -0.6
comp=Z,0.9nm,0.7s,baz=273,slow=4.5,SNR=9.2
KSH Kashi 120.81 299 *e*PKP PKPdf 05 42 31.4 -1.4
KSH *es*PKP 05 42 45.8
KSH *e*PKS 05 46 06.0
KSH *e*SKS SKSdf 05 49 38.3 -4.7
KSH AMB AMB
comp=Z,100nm,4.7s
KSH LR LR
comp=N,120nm,9.2s
KSH LR LR
comp=E,100nm,5.3s
KSH LR LR
comp=Z,97nm,6.9s
ULHL Ulahol 121.50 303 P PKPdf 05 42 31.8 -2.3
SNR=8.2
KZA Kyzart 122.15 302 P PKPdf 05 42 33.6 -1.7
SNR=7.3
TKM2 Tokmak 2 122.16 303 P PKPdf 05 42 32.0 -3.3
SNR=5.9
KURK Kurchatov 122.33 313 *e*PKPdf PKPdf 05 42 32.0 -3.3
NCB Newcomb 122.45 56 *e*PKPdf PKPdf 05 42 34.4 -1.5
CHMS Chumysh 122.78 303 P PKPdf 05 42 33.9 -2.6
SNR=6.0
AAK Ala-Archa 122.85 302 PKKPbc PKKPbc 05 52 30.2 +1.0
comp=Z,1.2nm,0.4s,baz=222,slow=7.2,SNR=6.6
USP Ospenovka 123.03 303 P PKPdf 05 42 34.1 -2.9
SNR=5.9
AML Almayashu 123.27 302 P PKPdf 05 42 35.4 -2.0
SNR=14
EKS2 Erkin-Say 123.37 302 P PKPdf 05 42 35.2 -2.4
SNR=6.7
PKME Peaks-Kenny Pk 126.19 55 *e*PKPdf PKPdf 05 42 41.3 -1.6
BRVK Borovoye 127.84 314 *c i*PKIKP PKPdf 05 42 43.5 -2.3
SCHQ Schefferville 129.22 44 PKP PKPdf 05 42 47.0 -1.5
SCHQ SKPbc 05 46 02.7
SCHQ Schefferville 129.22 44 PKP PKPdf 05 42 47.0 -1.5
comp=Z,1.2nm,0.4s,baz=268,slow=16,SNR=4.3
SCHQ SKPbc 05 46 02.7
comp=Z,36nm,1.2s,baz=245,slow=1.9,SNR=8.6
KBS Kingsbay 134.18 357 AMS AMS 06 30 03.2
comp=Z,169nm,29.2s,MS4.6
KBS Kingsbay 134.18 357 *e*PKPdf PKPdf 05 42 55.5 -1.7
ARU Arti 134.69 319 *i* PKIKP PKPdf 05 42 57.2 -1.5
ARU 05 45 27.4
KEV Kevo 140.83 346 *e*PKHKP PKPpre 05 43 00.6
KEV Kevo 140.83 346 *e*pkp PKPpre 05 43 00.6
APA Apatity 140.95 341 ⇓ *i*PKIKP PKPdf 05 43 10.5 +0.6
APA MLR MLR
comp=Z,200nm,21.0s,MS4.8
ARCES ARCESS Array B 141.31 346 PKhKP PKPpre 05 43 01.7
comp=Z,3.1nm,0.6s,baz=28,slow=2.3,SNR=29
ARCES SKPbc SKPbc 05 46 41.0 -4.7
comp=Z,5.0nm,0.8s,baz=29,slow=2.8,SNR=7.3
KTK1 Kautokeino 142.19 347 *e*P PKPdf 05 43 06.7 -5.4
KTK1 *e*SS SS 06 04 43.7 -6.8
TRO Tromso 142.37 350 *e* PKPdf 05 43 05.7 -6.7
TRO *e*SS SS 06 04 49.8 -2.7
KLMR Klimovskoe 142.87 329 *e*PKHKP PKPpre 05 43 06.4
KLMR 05 46 19.1
KLMR pmax pmax
comp=Z,16nm,1.4s
GNI Garni 144.39 294 *i* PKIKP PKPdf 05 43 13.9 -3.0
GNI MLR MLR
comp=Z,301nm,26.0s
JOF Joensuu 144.80 336 *e*PKIKP PKPdf 05 43 13.0 -3.8
JOF Joensuu 144.80 336 *e*pkp PKPdf 05 43 13.0 -3.8
ZEI Tsey 145.09 298 *e*PKIKP PKPdf 05 43 14.4 -3.6
ZEI pmax pmax
comp=Z,24nm,1.3s
KIV Kislovodsk 145.93 300 *c i*PKIKP PKPdf 05 43 17.8 -1.6
KIV *e* 05 50 16.4
KIV pmax pmax
comp=Z,30μm,2.0s
MOS Moscow 146.15 322 *e*PKIKP PKPdf 05 43 16.5 -2.9
MOS *e* 05 43 26.8
MOS pmax pmax
comp=Z,68nm,0.9s
MOR8 Moi Rana 146.23 350 *e*P PKPdf 05 43 17.0 -2.2
OBN Obninsk 146.96 322 ⇓ *i*PKP2 PKPdf 05 43 21.1 +0.3
OBN *e* 05 50 25.4
OBN pmax pmax
comp=Z,114nm,2.1s
OBN MLR MLR
comp=Z,300nm,20.0s,MS5.1
KAF Kangasniemi 147.01 338 *e*PKIKP PKPdf 05 43 18.9 -1.7
KAF Kangasniemi 147.01 338 *e*pkp PKPdf 05 43 18.9 -1.7
FINES FINESS Array B 147.58 337 PKPbc PKPbc 05 43 20.9 -3.3
comp=Z,45nm,0.6s,baz=57,slow=2.9,SNR=210
SOC Sochi 148.10 300 *e*PKIKP PKPdf 05 43 20.5 -2.5
SOC *e* 05 46 53.5
SOC *e*PPP 05 50 14.3
NSS Namsos 148.13 351 *e*P PKPdf 05 43 21.2 -1.2
MALT Malatya 149.20 290 ⇓ *i*P PKPdf 05 43 26.5 +1.5
ANN Anapa 149.58 303 *e*PKIKP PKPdf 05 43 22.8 -2.6
ANN *e* 05 50 33.7
ANN pmax pmax
comp=Z,32nm,0.9s
NB2 NORSAR Subarra 151.57 349 PKP PKPdf 05 43 31.6 +3.7
baz=18,slow=2.6
NOA NORSAR Array B 151.57 349 PKP PKPdf 05 43 25.9 -2.0
comp=Z,0.9nm,0.8s,baz=22,slow=0.1,SNR=26
NOA PKPbc PKPbc 05 43 31.5 -2.7
comp=Z,12nm,0.7s,baz=22,slow=4.6,SNR=132
NOA PKPab PKPab 05 43 39.8 -2.9
comp=Z,8.2nm,0.6s,baz=15,slow=4.1,SNR=9.4
MICGM Minsk 151.58 326 *e* PKPdf 05 43 32.0 +3.8
MNK Minsk 151.60 326 *e*PKIKP PKPdf 05 43 32.0 +3.8
FOO Floro 151.70 356 *e*P PKPdf 05 43 30.1 +2.0
NAO01 NORSAR Array S 151.80 349 *e*PKPdf PKPdf 05 43 26.5 -1.8
NAO01 *e*PKPbc PKPbc 05 43 32.7 -2.0
SIM Simferopol' 151.87 304 *i* PKIKP PKPbc 05 43 33.6 -1.8
SIM *e* 05 43 43.4
SIM pmax pmax
comp=Z,22nm,0.7s
SIM MLR MLR
comp=Z,400nm,20.0s,MS5.2
LIC Lamto 152.39 168 *e*PKIKP PKPbc 05 43 36.4 -1.1
comp=Z,145nm,0.8s
LIC Lamto 152.39 168 *e*PKP1 PKPbc 05 43 36.1 -1.4
comp=Z,97nm,0.8s
LIC *e*MLR MLR
comp=Z,353nm,22.5s,MS4.8

KIC	**Kosan Boka**	**152.57**	**168**	*e*PKIKP	PKPbc	05 43 36.8	-1.1
	comp=Z,117nm,0.9s							
TIC	**Toumodi**	**152.80**	**167**	*e*PKIKP	PKPbc	05 43 37.1	-1.3
	comp=Z,81nm,0.8s							
DBIC	**Dimbokro**	**152.86**	**168**	PKP	PKPdf	05 43 30.5	-0.9
	comp=Z,3.9nm,0.7s,baz=172,slow=6.4,SNR=8.0							
DBIC				PKPbc	PKPbc	05 43 37.6	-0.9	
	comp=Z,14nm,0.5s,baz=171,slow=4.0,SNR=24							
DBIC				PKPab	PKPab	05 43 49.4	-0.1	
	comp=Z,19nm,0.7s,baz=164,slow=5.1,SNR=8.1							
DBIC	**Dimbokro**	**152.86**	**168**	*e*PKIKP	PKPdf	05 43 30.0	-1.4	
DBIC				*e*		05 43 37.7		
BER	**Bergen**	**152.89**	**355**	*e*P	PKPbc	05 43 34.6	-2.5	
BR131	**Keskin Array S**	**152.92**	**293**	*e*PKPbc	PKPbc	05 43 35.1	-2.8	
BRTR	**Keskin Array B**	**152.92**	**293**	PKPbc	PKPbc	05 43 34.8	-3.2	
	comp=Z,9.2nm,0.8s,baz=128,slow=3.4,SNR=38							
AKASG	**Malin Array Be**	**152.94**	**318**	PKP	PKPdf	05 43 28.6	-1.7	
AKASG				PKPbc	PKPbc	05 43 34.8	-2.8	
	comp=Z,2.8nm,0.5s,baz=65,slow=1.9,SNR=7.8							
KONO	**Kongsberg**	**153.14**	**350**	*e*P	PKPbc	05 43 35.4	-2.3	
PLOR	**Plostina**	**156.61**	**310**	*i*P	PKPab	05 43 58.3	-6.4	
BURAR	**Bucovina Array**	**156.73**	**315**	*i*P	PKPdf	05 43 36.5	+0.9	
CRVS	**Cervenica-Dubn**	**158.14**	**321**	*e*PKP	PKPab	05 44 10.6	-0.6	
OKC	**Ostrava-Krasne**	**159.16**	**327**	*e*PKIKP	PKPdf	05 43 36.3	-2.2	
OKC				MLR	MLR			
	comp=Z,300nm,21.0s,MS5.1							
OKC	**Ostrava-Krasne**	**159.16**	**327**	*e*PKPDF	PKPdf	05 43 36.3	-2.2	
OKC				AMS	AMS	06 54 50.0		
	comp=Z,300nm,21.0s							
DPC	**Dobruska-Polom**	**159.57**	**330**	*e*PKIKP	PKPdf	05 43 36.9	-2.1	
DPC				MLR	MLR			
	comp=Z,300nm,19.4s,MS5.2							
DPC	**Dobruska-Polom**	**159.57**	**330**	*e*PKPDF	PKPdf	05 43 36.9	-2.1	
DPC				AMS	AMS	06 54 50.0		
	comp=Z,300nm,19.4s							
VYHS	**Vyhne**	**159.75**	**323**	*e*PKP	PKPab	05 44 17.1	-1.1	
TORD	**Torodi Ar. Bea**	**159.77**	**183**	PKP	PKPdf	05 43 39.1	-1.2	
	comp=Z,4.0nm,0.8s,baz=128,slow=1.3,SNR=14							
TORD				pPKP	pPKPdf	05 43 55.3	+6.4	
	comp=Z,3.7nm,0.7s,baz=163,slow=4.6,SNR=6.4							
TORD				PKPab	PKPab	05 44 18.1	-0.9	
	comp=Z,28nm,0.8s,baz=172,slow=3.6,SNR=26							
CLL	**Collm**	**160.03**	**337**	*e*PKIKP	PKPdf	05 43 38.0	-1.5	
CLL				*e*		05 44 17.0		
CLL				pmax	pmax			
	comp=Z,16nm,1.3s							
CLL				MLR	MLR			
	comp=Z,300nm,21.8s							
CLL	**Collm**	**160.03**	**337**	*e*PKPdf	PKPdf	05 43 38.0	-1.5	
CLL				*e*PKPab	PKPab	05 44 17.0	-2.2	
	comp=Z,16nm,1.3s							
CLL				*e*pPKPab	pPKPab	05 44 36.0	+8.4	
CLL				LmV		07 04 00.0		
	comp=Z,300nm,21.8s							
PVCC	**Panska Ves**	**160.12**	**333**	*e*PKIKP	PKPdf	05 43 33.7	-5.9	
PVCC				MLR	MLR			
	comp=Z,400nm,25.7s							
PVCC	**Panska Ves**	**160.12**	**333**	*e*PKPDF	PKPdf	05 43 33.7	-5.9	
PVCC				AMS	AMS	06 54 40.0		
	comp=Z,400nm,25.7s							
PRU	**Pruhonice**	**160.57**	**332**	*e*PKIKP	PKPdf	05 43 31.3	-8.8	
PRU				MLR	MLR			
	comp=Z,500nm,29.6s							
PRU	**Pruhonice**	**160.57**	**332**	AMS	AMS	06 55 40.0		
	comp=Z,500nm,29.6s							
TREC	**Trest**	**160.73**	**330**	AMS	AMS	06 56 30.0		
	comp=Z,500nm,27.1s							
ZST	**Bratislava**	**160.80**	**325**	*e*PKP	PKPdf	05 43 38.7	-1.7	
ZST	**Bratislava**	**160.80**	**325**	*e*PKP	PKPdf	05 43 38.7	-1.7	
NKC	**Novy Kostel**	**161.13**	**336**	AMS	AMS	06 56 00.0		
	comp=Z,300nm,26.2s							
KHC	**Kasperske Hory**	**161.63**	**332**	*e*PKIKP	PKPdf	05 43 39.2	-2.1	
KHC				*e*		05 44 24.8		
KHC				MLR	MLR			
	comp=Z,400nm,22.6s							
KHC	**Kasperske Hory**	**161.63**	**332**	*e*PKPDF	PKPdf	05 43 39.2	-2.1	
KHC				*e*PKPAB	PKPab	05 44 24.8	-1.5	
KHC				AMS	AMS	06 58 40.0		
	comp=Z,400nm,22.6s							
GIVF	**Givet**	**163.09**	**351**	*e*PKIKP	PKPdf	05 43 40.7	-2.0	
FLN	**La Foliniere**	**164.68**	**3**	*e*PKIKP	PKPdf	05 43 41.8	-2.4	
FLN				*e*MLR	MLR			
	comp=Z,334nm,22.2s							
FLN	**La Foliniere**	**164.68**	**3**	*e*PKIKP	PKPdf	05 43 41.8	-2.4	
FLN				MLR	MLR			
	comp=Z,330nm,22.3s							
LDF	**La Druitiere**	**164.86**	**2**	*e*PKIKP	PKPdf	05 43 42.0	-2.4	
	comp=Z,10.0nm,1.0s							
SFTF	**Sexfontaines**	**164.91**	**349**	*e*PKIKP	PKPdf	05 43 41.8	-2.6	
LOR	**Lormes**	**165.99**	**351**	*e*PKIKP	PKPdf	05 43 43.6	-1.8	
LOR				*e*MLR	MLR			
	comp=Z,422nm,22.2s							
LOR	**Lormes**	**165.99**	**351**	*e*PKIKP	PKPdf	05 43 43.6	-1.8	
LOR				MLR	MLR			
	comp=Z,420nm,22.3s							
CABF	**La Chapelle**	**166.23**	**344**	*e*PKIKP	PKPdf	05 43 43.7	-1.9	
	comp=Z,37nm,1.4s							
SSF	**Saint Saulge**	**166.24**	**352**	*e*PKIKP	PKPdf	05 43 43.8	-1.8	
AVF	**Avril sur Loir**	**166.53**	**352**	*e*PKIKP	PKPdf	05 43 43.8	-2.0	
SMF	**Signal de Mont**	**166.61**	**351**	*e*PKIKP	PKPdf	05 43 43.9	-2.0	
BGF	**Bois d'Agland**	**166.81**	**354**	*e*PKIKP	PKPdf	05 43 44.2	-1.8	
	comp=Z,19nm,0.8s							
MFF	**Saint Martin d**	**166.85**	**3**	*e*PKIKP	PKPdf	05 43 44.4	-1.7	
LPL	**La Plagne**	**167.09**	**341**	*e*PKIKP	PKPdf	05 43 44.4	-1.9	
	comp=Z,8.0nm,0.9s							
LPG	**La Plagne**	**167.10**	**341**	*e*PKIKP	PKPdf	05 43 44.8	-1.5	
TCF	**Toulx Ste Croi**	**167.13**	**355**	*e*PKIKP	PKPdf	05 43 44.4	-1.9	
RJF	**Les Rejaudoux**	**168.15**	**357**	*e*PKIKP	PKPdf	05 43 45.4	-1.6	
	comp=Z,22nm,1.1s							
RJF				*e*MLR	MLR			
	comp=Z,476nm,22.8s							
RJF	**Les Rejaudoux**	**168.15**	**357**	*e*PKIKP	PKPdf	05 43 45.4	-1.6	
RJF				MLR	MLR			
	comp=Z,480nm,22.8s							
VIVF	**Saint-Julien-l**	**168.21**	**346**	*e*PKIKP	PKPdf	05 43 44.4	-2.7	
SBF	**Sospel**	**168.35**	**335**	*e*PKIKP	PKPdf	05 43 44.8	-2.4	
PGF	**Pioggiola**	**168.81**	**327**	*e*PKIKP	PKPdf	05 43 45.6	-2.0	
	comp=Z,84nm,1.2s							
FRF	**La Foret Royal**	**168.89**	**337**	*e*PKIKP	PKPdf	05 43 45.9	-1.7	
	comp=Z,207nm,1.9s							
PCAB	**Cabril**	**169.24**	**37**	*e*PKPdf	PKPdf	05 43 47.4	-0.5	
PBRG	**Braganca**	**169.79**	**33**	*e*PKPab	PKPab	05 45 01.9	-0.6	
PVIS	**Viseu**	**170.02**	**41**	*e*PKPdf	PKPdf	05 43 47.8	-0.6	
MVO	**Moncorvo**	**170.15**	**36**	*e*PKPdf	PKPdf	05 43 47.7	-0.7	
MVO				*e*SS	SS	06 09 58.1	+5.9	
MVO				*e*LR	LR	06 45 26.1		
	comp=Z,279nm,18.0s							
PMAFR	**Mafra**	**170.24**	**53**	*e*LR	LR	06 44 05.3		
	comp=Z,292nm,18.0s							
MTE	**Manteigas**	**170.43**	**41**	*e*PKPdf	PKPdf	05 43 47.8	-0.8	
MTE				*e*SS	SS	06 09 57.0	+1.7	
MTE				*e*LR	LR	06 43 43.0		
	comp=Z,272nm,20.0s							
PTOM	**Tomar**	**170.43**	**47**	*e*PKPdf	PKPdf	05 43 48.1	-0.5	
PTOM	**Tomar**	**170.43**	**47**	*e*PKPab	PKPab	05 45 03.5	-2.0	
EPF	**Esparros**	**170.43**	**2**	*e*PKIKP	PKPdf	05 43 47.0	-1.5	
	comp=Z,24nm,1.1s							
ETSF	**Etsaut**	**170.52**	**6**	*e*PKIKP	PKPdf	05 43 46.8	-1.8	
	comp=Z,24nm,1.2s							
PCBR	**Castelo Branco**	**170.85**	**44**	*e*PKPdf	PKPdf	05 43 48.5	-0.4	
PCBR	**Castelo Branco**	**170.85**	**44**	*e*PKPab	PKPab	05 45 05.3	-2.0	
PMRV	**Marv??o**	**171.17**	**45**	*e*PKPab	PKPab	05 45 06.2	-2.6	
PMRV				*e*LR	LR	06 43 42.7		
	comp=Z,259nm,18.0s							
EVO	**Evora**	**171.31**	**52**	*e*PKIKP	PKPdf	05 43 48.2	-0.9	
	comp=Z,75nm,1.3s							
EVO				*e*MLR	MLR			
	comp=Z,389nm,21.5s							
PFVI	**Vila Bisbo**	**171.39**	**62**	*e*LR	LR	06 43 55.8		
	comp=Z,220nm,22.0s							
PESTR	**Estremoz**	**171.39**	**49**	*e*PKPdf	PKPdf	05 43 48.3	-0.9	
PESTR				*e*SS	SS	06 10 08.9	+3.7	
PESTR				*e*LR	LR	06 43 24.5		
	comp=Z,203nm,22.0s							
MORF	**Marmelete**	**171.45**	**61**	*e*PKPdf	PKPdf	05 43 49.1	-0.2	
MORF				*e*LR	LR	06 49 01.1		
	comp=Z,277nm,18.0s							
PBEJ	**Beja**	**171.67**	**54**	*e*PKPdf	PKPdf	05 43 49.3	0.0	
PBDV	**Barranco-do-Ve**	**172.00**	**59**	*e*PKPdf	PKPdf	05 43 49.3	-0.2	
PBDV				*e*SS	SS	06 10 03.3	-8.5	
PBDV				*e*LR	LR	06 44 33.4		
	comp=Z,271nm,18.0s							
PVAQ	**Vaqueiros**	**172.08**	**58**	*e*PKPdf	PKPdf	05 43 49.1	-0.4	
PVAQ				*e*SS	SS	06 10 17.4	+4.9	
PVAQ				*e*LR	LR	06 44 26.8		
	comp=Z,282nm,20.0s							
PBAR	**Barrancos**	**172.14**	**51**	*e*PKPdf	PKPdf	05 43 49.0	-0.6	
PBAR				*e*SS	SS	06 10 14.8	+2.1	
PBAR				*e*LR	LR	06 44 58.9		
	comp=Z,353nm,20.0s							
KEST	**Kesra**	**172.52**	**290**	PKP	PKPdf	05 43 48.9	-0.9	
	comp=Z,1.8nm,0.9s,baz=276,slow=5.6,SNR=5.1							
PAB	**San Pablo**	**172.69**	**32**	*e*PKPdf	PKPdf	05 43 49.1	-0.6	
ESDC	**Sonseca Array**	**172.75**	**30**	PKP	PKPdf	05 43 48.9	-0.9	
ESDC				pPKP	pPKPdf	05 44 05.2	+6.8	
ESDC				PKPab	PKPab	05 45 13.8	-1.8	
ESDC				PP	PP	05 49 04.8	-2.0	
ESDC	**Sonseca Array**	**172.75**	**30**	PKP	PKPdf	05 43 48.9	-0.9	
	comp=Z,5.4nm,1.1s,baz=359,slow=2.1,SNR=18							
ESDC				pPKP	pPKPdf	05 44 05.2	+6.8	
	comp=Z,2.7nm,1.0s,baz=354,slow=1.9,SNR=5.5							
ESDC				PKPab	PKPab	05 45 13.8	-1.8	
	comp=Z,2.7nm,1.0s,baz=324,slow=4.1,SNR=5.9							
ESDC				PP	PP	05 49 04.8	-2.0	
	comp=Z,0.4nm,0.7s,baz=4.4,slow=6.2,SNR=4.1							

DJA 24 05:25:06.4 7.97N×97.02E, h13km, MLv3.9/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPTI		**1.71**	**175**	P	Pn	05 25 35.5	0.0
TPTI				S	Sn	05 25 57.8	+0.6
BSI	**Banda Aceh**	**1.79**	**287**	P	Pn	05 25 35.0	-1.7
BSI				S	Sn	05 26 01.8	+2.5
TSI	**Tuntungan**	**2.12**	**133**	P	Pn	05 25 42.1	+0.9
KULM	**Kulim**	**3.63**	**85**	P	Pn	05 26 02.4	+0.5
IPM	**Ipoh**	**4.02**	**97**	P	Pn	05 26 08.8	+1.5
MNSI	**Mandailing Nat**	**4.87**	**148**	P	Pn	05 26 19.8	+0.8

*DDA **24** 05:33:06.5, 39.39N×34.07E, h7km±2km, Md3.0*
*ISCJB **24** 05:33:07.1±0.4, 39.41N±0.03×34.05E±0.03, h10km, Error ellipse: s-maj=4.7km s-min=3.2km az=139.2*
*CSEM **24** 05:33:07.6±0.1, 39.41N×34.05E, h2km, MD3.0, Error ellipse: s-maj=2.8km s-min=2.2km az=152.0*
*ISK **24** 05:33:07.1, 39.43N×34.13E, h2km, ML2.7*
ISC 24 05:33:07.4±0.5, 39.41N±0.03×34.05E±0.04, h5km±6km, n27, σ0.89/42, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDAG	**Cicekdag**	**0.33**	**49**	*i* P	**Pg**	**05 33 13.7**	**-0.1**
CDAG				*i* S	**Sg**	**05 33 18.8**	**+0.7**
CDAG	**Cicekdag**	**0.33**	**49**	*i* P	**Pg**	**05 33 13.7**	**-0.1**
CDAG				*i* S	**Sg**	**05 33 18.8**	**+0.7**
BBAL	**Bala**	**0.73**	**281**	*i* P	**Pg**	**05 33 21.4**	**0.0**
BBAL				*i* S	**Sg**	**05 33 32.0**	**+1.1**
BBAL	**Bala**	**0.73**	**281**	*i* P	**Pg**	**05 33 21.4**	**0.0**
BBAL				*i* S	**Sg**	**05 33 32.0**	**+1.1**
CORM	**Corum**	**0.89**	**30**	*e*PG	**Pg**	**05 33 24.0**	**-0.5**
CORM				*e*SG	**Sg**	**05 33 36.8**	**+0.8**
CORM	**Corum**	**0.89**	**30**	*e*Pg	**Pg**	**05 33 24.0**	**-0.5**
CORM				*e*Sg	**Sg**	**05 33 36.8**	**+0.7**
YOZ	**Yozgat**	**1.01**	**76**	*e*PG	**Pg**	**05 33 26.0**	**-0.7**
YOZ				*e*SG	**Sg**	**05 33 39.9**	**0.0**
YOZ	**Yozgat**	**1.01**	**76**	*e*Pg	**Pg**	**05 33 26.0**	**-0.7**
YOZ				*e*Sg	**Sg**	**05 33 39.9**	**+0.1**
SULT	**Sultanhani-AKS**	**1.28**	**199**	*e*PN	**Pg**	**05 33 32.5**	**+0.7**
SULT				*e*SN	**Sg**	**05 33 52.1**	**+3.8**
SULT	**Sultanhani-AKS**	**1.28**	**199**	*e*Pn	**Pg**	**05 33 32.5**	**+0.7**
SULT				*e*Sn	**Sg**	**05 33 52.1**	**+3.7**
CTKT	**Corum**	**1.34**	**25**	*i* P	**Pn**	**05 33 31.6**	**-1.1**
CTKT				*i* S	**Sb**	**05 33 51.7**	**+1.3**
CTKT	**Corum**	**1.34**	**25**	*i* P	**Pn**	**05 33 31.6**	**-1.1**
CTKT				*i* S	**Sb**	**05 33 51.7**	**+1.3**
TOS	**Tosya**	**1.63**	**359**	*e*PN	**Pg**	**05 33 37.7**	**-0.9**
TOS	**Tosya**	**1.63**	**359**	*e*Pn	**Pg**	**05 33 37.7**	**-0.9**
ILGA	**Ilgaz**	**1.66**	**351**	*i* P	**Pb**	**05 33 37.8**	**-0.7**
ILGA				*i* S	**Sn**	**05 33 59.2**	**+0.4**
ILGA	**Ilgaz**	**1.66**	**351**	*i* P	**Pb**	**05 33 37.8**	**-0.7**
ILGA				*i* S	**Sn**	**05 33 59.2**	**+0.4**
KDHN	**Kadinhani**	**1.75**	**240**	*i* P	**Pg**	**05 33 39.3**	**-1.6**
KDHN				*i* S	**Sg**	**05 34 04.5**	**+1.1**
KDHN	**Kadinhani**	**1.75**	**240**	*i* P	**Pg**	**05 33 39.3**	**-0.6**
SAFT	**Safranbolu**	**2.11**	**331**	*e*PN	**Pb**	**05 33 45.0**	**-1.1**
SAFT	**Safranbolu**	**2.11**	**331**	*e*Pn	**Pb**	**05 33 45.0**	**-1.0**
SARI	**SarD1z-Kayseri**	**2.19**	**109**	*e*PN	**Pn**	**05 33 44.3**	**0.0**
SARI	**SarD1z-Kayseri**	**2.19**	**109**	*e*Pn	**Pn**	**05 33 44.3**	**0.0**
KARA	**Karaisali**	**2.28**	**159**	*e*PN	**Pb**	**05 33 47.7**	**-1.3**
KARA	**Karaisali**	**2.28**	**159**	*e*Pn	**Pb**	**05 33 47.7**	**-1.3**
SVSK	**Karacayir**	**2.33**	**76**	*e*PN	**Pn**	**05 33 47.0**	**+0.7**
SVSK	**Karacayir**	**2.33**	**76**	*e*Pn	**Pn**	**05 33 47.0**	**+0.7**
KOZT	**Kozan**	**2.38**	**143**	*e*PN	**Pn**	**05 33 48.2**	**+1.3**

*IDC **24** 05:37:31.3±3.0, 33.18S×179.06W, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.6/16, mbtmp3.6/3, ML3.8/1, Error ellipse: s-maj=69.7km s-min=45.7km az=117.0*
ISC 24 05:37:37.9±2.8, 33.3S±0.1×179.3W±0.4, h35km, n8, σ0.75/10, mb3.3/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**5.78**	**209**	Pn	**Pn**	**05 39 00.5**	**-0.6**
	2.4nm,0.3s,baz=82,slow=3.6,SNR=11						
URZ				Sn	**Sn**	**05 40 05.2**	**-0.9**
	2.8nm,0.3s,baz=85,slow=23,SNR=7.3						
URZ	**Urewera**	**5.78**	**209**	*e*PN	**Pn**	**05 38 59.8**	**-1.2**
URZ				SN	**Sn**	**05 40 04.9**	**-1.1**
KNZ	**Kokohu**	**6.25**	**202**	*e*PN	**Pn**	**05 39 07.3**	**-0.2**
NMHZ	**Naumai**	**6.62**	**207**	PN	**Pn**	**05 39 13.3**	**+0.7**
NMHZ				SN	**Sn**	**05 40 27.9**	**+1.2**
NNZ	**Nelson**	**9.85**	**214**	SN	**Sn**	**05 41 40.9**	**-5.3**
ASAR	**Alice Springs**	**41.94**	**271**	P	**P**	**05 45 25.6**	**+0.3**
	0.3nm,0.4s,mb3.3,baz=107,slow=7.3,SNR=6.2						
WRA	**Warramunga Arr**	**43.19**	**276**	P	**P**	**05 45 35.4**	**-0.1**
	0.2nm,0.3s,mb3.3,baz=117,slow=8.0,SNR=8.8						
FINES	**FINESS Array B**	**147.40**	**338**	PKPbc	PKPbc	05 57 15.6	-1.5
	1.7nm,0.8s,baz=45,slow=4.1,SNR=5.3						

*NEIC **24** 06:03:24.2, 14.29N×93.06W, h16km, mb3.9/1, MD4.2(MEX), After MEX.*
MEX 24 06:03:24.3±0.9, 14.35N×93.07W, h15km±19km, MD4.2, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.96**	**54**	*e*P	Pb	06 03 38.8	-3.8
THIG				*i* S	Sb	06 03 51.8	-3.4
PCIG		**1.36**	**354**	*e*P	Pn	06 03 45.7	-3.0
PCIG				*i* S	Sn	06 04 00.5	-5.9
TGIG		**2.42**	**359**	*e*P	Pn	06 04 00.9	-2.4
TGIG				*i* S	Sn	06 04 29.2	-3.4
CMIG	**Matias Romero**	**3.24**	**328**	*i* P	Pn	06 04 12.9	-1.7
CMIG				*i* S	Sn	06 04 49.3	-3.6
CMIG	**Matias Romero**	**3.24**	**328**	*i* P	Pn	06 04 12.9	-1.7
CMIG				*i* S	Sn	06 04 49.3	-3.6
HUIG	**Huatulco**	**3.26**	**296**	*i* P	Pn	06 04 20.2	+5.4
HUIG	**Huatulco**	**3.26**	**296**	*e*P	Pn	06 04 12.2	-2.6
HUIG				*i* S	Sn	06 04 49.5	-3.8
VHO	**Vista Hermosa**	**4.45**	**308**	*i* P	Pn	06 04 32.4	+1.2
VHO	**Vista Hermosa**	**4.45**	**308**	*i* P	Pn	06 04 29.4	-1.8
VHO				*i* S	Sn	06 05 20.2	-2.5
PNIG	**Pinotepa**	**5.29**	**293**	*e*P	Pn	06 04 40.2	-2.5
PNIG				*i* S	Sn	06 05 37.8	-5.7
PNIG	**Pinotepa**	**5.29**	**293**	*e*P	Pn	06 04 40.2	-2.5
PNIG				*i* S	Sn	06 05 39.6	-3.8
OTAV	**Otavalo**	**20.14**	**133**	*e*P	P	06 07 59.1	+1.0
	2.6nm,0.4s						

IDC 24 06:07:36.2±2.1, 5.95N×124.78E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/20, mbtmp3.9/3, Error ellipse: s-maj=209.9km s-min=24.2km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**27.39**	**160**	P	P	06 13 24.1	+0.6
	0.9nm,0.4s,baz=340,slow=10,SNR=14						
ASAR	**Alice Springs**	**30.75**	**163**	P	P	06 13 52.8	-0.6
	0.4nm,0.4s,baz=341,slow=6.9,SNR=6.6						
MKAR	**Makanchi Array**	**54.64**	**325**	P	P	06 17 06.7	0.0
	0.5nm,0.3s,baz=121,slow=7.3,SNR=17						

*ISCJB **24** 06:22:54.2±0.3, 39.39N±0.02×20.65E±0.03, h53km±6km, Error ellipse: s-maj=3.7km s-min=3.0km az=42.1*
*ATH **24** 06:22:54.2, 39.36N×20.76E, h38km±1km, MD3.7/19*
*NEIC **24** 06:22:54.2, 39.36N×20.76E, h38km, MD3.7(ATH), After ATH.*
*CSEM **24** 06:22:55.1±0.1, 39.39N×20.70E, h32km±2km, MD3.7, Error ellipse: s-maj=3.2km s-min=2.5km az=35.0*
*THE **24** 06:22:55.3, 39.39N×20.79E, h15km±3km, ML2.8/4, Error ellipse: s-maj=4.2km s-min=1.2km az=248.0*
ISC 24 06:22:55.4±0.3, 39.39N±0.02×20.67E±0.03, h40km±8km, n116, σ0.97/178, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGT	**Igoumenitsa**	**0.30**	**299**	P	**Pn**	**06 23 02.6**	**-1.0**
IGT	**Igoumenitsa**	**0.30**	**299**	P	**Pn**	**06 23 03.0**	**-0.6**
IGT				S	**Sn**	**06 23 10.1**	**+0.8**
IGT	**Igoumenitsa**	**0.30**	**299**	P	**Pn**	**06 23 03.0**	**-0.6**
IGT				S	**Sn**	**06 23 10.1**	**+0.8**
JAN	**Janina**	**0.30**	**27**	*e*Pb	**Pn**	**06 23 02.4**	**-1.2**
JAN				*e*Sb	**Sn**	**06 23 08.6**	**-0.8**
JAN	**Janina**	**0.30**	**27**	*e*PB	**Pn**	**06 23 02.4**	**-1.2**
JAN				*e*SB	**Sn**	**06 23 08.6**	**-0.8**
JAN	**Janina**	**0.30**	**27**	*e*Pb	**Pn**	**06 23 02.4**	**-1.2**
JAN				*e*Sb	**Sn**	**06 23 08.6**	**-0.8**
LKD2	**Lefkada island**	**0.60**	**181**	P	**Pn**	**06 23 06.6**	**-0.8**
LKD2				S	**Sn**	**06 23 16.2**	**+0.3**
LKD2	**Lefkada island**	**0.60**	**181**	P	**Pn**	**06 23 06.6**	**-0.8**
LKD2				S	**Sn**	**06 23 16.2**	**+0.3**
KEK	**Kerkira**	**0.75**	**296**	*e*Pn	**Pn**	**06 23 10.2**	**+0.7**
KEK				*e*Sn	**Sn**	**06 23 22.4**	**+2.8**
KEK	**Kerkira**	**0.75**	**296**	*e*PN	**Pn**	**06 23 10.2**	**+0.7**
KEK				*e*SN	**Sn**	**06 23 22.4**	**+2.8**
KEK	**Kerkira**	**0.75**	**296**	P	**Pn**	**06 23 10.5**	**+1.0**
KEK				S	**Sn**	**06 23 22.6**	**+3.0**
KEK	**Kerkira**	**0.75**	**296**	*e*Pn	**Pn**	**06 23 10.2**	**+0.7**
KEK	**Kerkira**	**0.75**	**296**	P	**Pn**	**06 23 10.5**	**+1.0**
KEK				P		06 23 22.4	+2.8
KEK				*e*Sn	**Sn**	**06 23 22.4**	**+2.8**
EVR	**Evrytania**	**1.00**	**118**	*e*Pn	**Pn**	**06 23 12.3**	**-0.6**
EVR				*e*Sn	**Sn**	**06 23 25.5**	**-0.3**
EVR	**Evrytania**	**1.00**	**118**	*e*PN	**Pn**	**06 23 12.3**	**-0.6**
EVR				*e*SN	**Sn**	**06 23 25.5**	**-0.3**
EVR	**Evrytania**	**1.00**	**118**	*e*Pn	**Pn**	**06 23 12.3**	**-0.6**
EVR				*e*Sn	**Sn**	**06 23 25.5**	**-0.3**
NEST	**Nestorio**	**1.07**	**16**	P	**Pn**	**06 23 14.7**	**+0.9**
NEST				S	**Sn**	**06 23 31.1**	**+3.7**
NEST	**Nestorio**	**1.07**	**16**	P	**Pn**	**06 23 14.7**	**+0.9**
NEST				S	**Sn**	**06 23 31.1**	**+3.7**
VLS	**Valsamata**	**1.21**	**183**	*e*Pn	**Pn**	**06 23 16.4**	**+0.6**
VLS				*e*Sn	**Sn**	**06 23 31.8**	**+0.9**
VLS	**Valsamata**	**1.21**	**183**	*e*PN	**Pn**	**06 23 16.4**	**+0.6**
VLS				*e*SN	**Sn**	**06 23 31.8**	**+0.9**
VLS	**Valsamata**	**1.21**	**183**	*e*Pn	**Pn**	**06 23 16.4**	**+0.6**
VLS				*e*Sn	**Sn**	**06 23 31.8**	**+0.9**
KZN	**Kozani**	**1.25**	**42**	*e*Pn	**Pn**	**06 23 17.1**	**+0.8**
KZN				*e*Sn	**Sn**	**06 23 33.3**	**+1.4**
KZN	**Kozani**	**1.25**	**42**	*e*PN	**Pn**	**06 23 17.1**	**+0.8**
KZN				*e*SN	**Sn**	**06 23 33.3**	**+1.4**
KZN	**Kozani**	**1.25**	**42**	P	**Pn**	**06 23 17.2**	**+0.9**
KZN	**Kozani**	**1.25**	**42**	*e*Pn	**Pn**	**06 23 17.1**	**+0.8**
KZN				*e*Sn	**Sn**	**06 23 33.3**	**+1.4**
AGG	**Agios Georgios**	**1.34**	**105**	*e*Pn	**Pn**	**06 23 17.

DID	**Didima**	**2.75**	**132**	P	**Pn**	**06 23 36.1**	**-0.9**
DID	**Didima**	**2.75**	**132**	P	**Pn**	**06 23 36.1**	**-0.9**
DID	**Didima**	**2.75**	**132**	*e*Pn	**Pn**	**06 23 36.6**	**-0.4**
SRS	**Serrai**	**2.83**	**51**	P	**Pn**	**06 23 39.3**	**+1.3**
SRS	**Serrai**	**2.83**	**51**	P	**Pn**	**06 23 39.3**	**+1.3**
PTL	**Penteli**	**2.83**	**117**	*e*Pn	**Pn**	**06 23 37.4**	**-0.7**
PTL	**Penteli**	**2.83**	**117**	*e*PN	**Pn**	**06 23 37.4**	**-0.7**
PTL	**Penteli**	**2.83**	**117**	*e*Pn	**Pn**	**06 23 37.4**	**-0.7**
TAR1	**Taranto**	**2.84**	**295**	*e*Pn	**Pn**	**06 23 37.2**	**-1.0**
TAR1				*e*Sn	**Sn**	**06 24 08.9**	**-2.2**
PE1	**Pezze di Greco**	**2.87**	**301**	*e*Pn	**Pn**	**06 23 39.5**	**+1.0**
PE1				*e*Sn	**Sn**	**06 24 11.2**	**-0.5**
VLY	**Voula,Athens**	**2.89**	**121**	*e*Pn	**Pn**	**06 23 38.8**	**0.0**
VLY	**Voula,Athens**	**2.89**	**121**	*e*PN	**Pn**	**06 23 38.8**	**0.0**
VLY	**Voula,Athens**	**2.89**	**121**	*e*Pn	**Pn**	**06 23 38.8**	**0.0**
TIP	**Timpagrande**	**3.04**	**267**	P	**Pn**	**06 23 41.4**	**+0.4**
TIP	**Timpagrande**	**3.04**	**267**	P	**Pn**	**06 23 41.4**	**+0.4**
VLI	**Veliai**	**3.21**	**145**	*e*Pn	**Pn**	**06 23 44.4**	**+1.1**
VLI	**Veliai**	**3.21**	**145**	*e*PN	**Pn**	**06 23 44.4**	**+1.1**
VLI	**Veliai**	**3.21**	**145**	*e*Pn	**Pn**	**06 23 44.4**	**+1.1**
SG1	**Sgolgore (BA)**	**3.39**	**297**	*e*Pn	**Pn**	**06 23 45.8**	**+0.1**
SG1				*e*Sn	**Sn**	**06 24 23.5**	**-1.1**
KYTH	**Kithira**	**3.62**	**148**	*e*Pn	**Pn**	**06 23 49.1**	**+0.1**
KYTH	**Kithira**	**3.62**	**148**	*e*PN	**Pn**	**06 23 49.1**	**+0.1**
KYTH	**Kithira**	**3.62**	**148**	*e*Pn	**Pn**	**06 23 49.1**	**+0.1**
CDT	**Castel del Mon**	**3.77**	**298**	*e*Pn	**Pn**	**06 23 51.1**	**+0.2**
CDT				*e*Sn	**Sn**	**06 24 32.4**	**-1.6**
CUC	**Castrocucco**	**3.79**	**281**	P	**Pn**	**06 23 53.2**	**+1.9**
CUC	**Castrocucco**	**3.79**	**281**	P	**Pn**	**06 23 53.2**	**+1.9**
STON	**Ston**	**4.14**	**328**	*e*Pn	**Pn**	**06 23 52.7**	**-3.3**
STON				Sn	**Sn**	**06 24 38.1**	**-5.1**
STON	**Ston**	**4.14**	**328**	*e*Pn	**Pn**	**06 23 52.7**	**-3.3**
NVLJ	**Novalja**	**6.74**	**322**	*e*Pn	**Pn**	**06 24 30.3**	**-1.4**
NVLJ				Sn	**Sn**	**06 25 41.7**	**-5.4**
NVLJ	**Novalja**	**6.74**	**322**	*e*Pn	**Pn**	**06 24 30.2**	**-1.5**

IDC ***24*** *06:26:49.9±4.1, 7°.57S×128°.39E, h104km±38km, mb4.0/11, mb1 4.1/13, mb1mx4.0/20, mbtmp4.1/13, Error ellipse: s-maj=28.6km s-min=13.4km az=67.0*

NEIC ***24*** *06:26:51.8±2.4, 7°.58S×128°.42E, h123km±23km, mb4.1/1, Error ellipse: s-maj=19.5km s-min=11.2km az=57.0*

ISCJB ***24*** *06:26:55.1±2.0, 7°.76S±0°.09×128°.4E±0°.1, h180km±22km, mb4.2/11, Error ellipse: s-maj=18.2km s-min=13.8km az=164.8*

ISC 24 06:26:54.5±1.8, 7°.67S±0°.08×128°.4E±0°.1, h151km±20km, n22, σ0°83/20, mb4.2/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.39**	**142**	*e*P	**Pn**	**06 28 27.6**	**+1.1**
	89nm,0.1s						
KAKA				*e*S	**Sn**	**06 29 37.9**	**-0.6**
WRA	**Warramunga Arr**	**13.49**	**155**	P	**Pn**	**06 29 58.6**	**-1.3**
	5.7nm,0.3s,baz=341,slow=10.0,SNR=91						
WRA				S	**Sn**	**06 32 24.1**	**-5.3**
	3.5nm,0.3s,baz=326,slow=25,SNR=6.5						
MBWA	**Marble Bar**	**15.82**	**211**	*e*Pn	**Pn**	**06 30 28.9**	**-0.1**
	8.2nm,0.8s						
MBWA				*e*Sn	**Sn**	**06 33 14.4**	**-11**
ASAR	**Alice Springs**	**16.76**	**162**	P	**Pn**	**06 30 41.2**	**+0.8**
	2.2nm,0.3s,baz=337,slow=9.7,SNR=83						
ASAR				S	**S**	**06 33 47.1**	**+0.2**
	0.9nm,0.3s,baz=351,slow=24,SNR=4.4						
CTA	**Charters Tower**	**21.24**	**127**	pP	pP	06 31 48.1	-7.6
	2.4nm,0.4s,baz=324,slow=8.7,SNR=1.9						
STKA	**Stephens Creek**	**27.04**	**155**	P	**P**	**06 32 21.5**	**-1.2**
	2.0nm,0.6s,mb3.9,baz=313,slow=17,SNR=2.4						
NWAO	**Narrogin (SRO)**	**27.19**	**201**	P	**P**	**06 32 25.7**	**+1.7**
	5.3nm,0.7s,mb4.3,baz=31,slow=5.9,SNR=4.7						
PSI	**Prapat**	**31.20**	**288**	P	**P**	**06 32 58.1**	**-1.7**
	4.6nm,0.4s,mb4.5,baz=142,slow=9.5,SNR=4.6						
CMAR	**Chiang Mai Arr**	**38.98**	**312**	P	**P**	**06 34 06.6**	**+0.4**
	1.0nm,0.4s,mb3.8,baz=146,slow=6.9,SNR=7.0						
KSRS	**Korea Array**	**44.88**	**359**	P	**P**	**06 34 54.1**	**+0.2**
	1.1nm,0.6s,mb3.7,baz=182,slow=9.9,SNR=6.3						
SONM	**Songino Array**	**58.59**	**343**	P	**P**	**06 36 36.2**	**+1.0**
	1.0nm,0.5s,mb3.9,baz=173,slow=6.6,SNR=7.0						
PETK	**Petropavlovsk-**	**65.45**	**19**	P	**P**	**06 37 21.1**	**+0.1**
	4.5nm,0.6s,mb4.5,baz=198,slow=4.4,SNR=5.4						
MK31	**Makanchi Array**	**67.93**	**328**	*e*P	**P**	**06 37 36.9**	**+0.1**
MKAR	**Makanchi Array**	**67.93**	**328**	P	**P**	**06 37 36.8**	**0.0**
	1.7nm,0.4s,mb4.1,baz=120,slow=8.2,SNR=50						
MKAR				pP	pP	06 38 01.2	-12
	0.8nm,0.6s,baz=124,slow=7.8,SNR=3.1						
ZALV	**Zalesovo Beam**	**71.49**	**335**	P	**P**	**06 37 57.8**	**-0.7**
	3.5nm,0.5s,mb4.4,baz=129,slow=5.2,SNR=17						
KURK	**Kurchatov**	**72.27**	**329**	P	**P**	**06 38 03.1**	**0.0**
	7.9nm,0.6s,mb4.6,baz=132,slow=5.0,SNR=25						
BVAR	**Borovoye Array**	**77.79**	**328**	P	**P**	**06 38 34.6**	**-0.1**
	2.2nm,0.6s,mb4.0,baz=106,slow=4.8,SNR=10						
TXAR	**Lajitas Array**	**126.62**	**59**	PKP	PKPdf	06 45 41.5	+1.0
	0.2nm,0.8s,baz=347,slow=3.2,SNR=2.6						
TORD	**Torodi Ar. Bea**	**127.39**	**281**	PKP	PKPdf	06 45 42.7	+0.4
TORD	**Torodi Ar. Bea**	**127.39**	**281**	PKP	PKPdf	06 45 42.7	+0.4
	0.5nm,0.6s,baz=115,slow=1.1,SNR=5.0						
CPUP	**Villa Florida**	**145.75**	**171**	PKPbc	PKPbc	06 46 17.1	+0.6
	1.2nm,0.6s,baz=157,slow=5.0,SNR=5.2						
LPAZ	**La Paz**	**151.11**	**146**	PKPbc	PKPbc	06 46 33.7	+3.0
	1.6nm,0.4s,baz=270,slow=1.0,SNR=24						

ISCJB ***24*** *06:29:58.5±0.4, 60°.41N±0°.03×151°.90W±0°.07, h93km±4km, mb3.8/14, Error ellipse: s-maj=5.8km s-min=5.0km az=178.8*

IDC ***24*** *06:29:58.8±1.2, 60°.48N×152°.09W, h72km±12km, mb3.6/14, mb1 3.7/19, mb1mx3.6/29, mbtmp3.6/19, Error ellipse: s-maj=17.4km s-min=9.3km az=109.0*

NEIC ***24*** *06:30:00.7, 60°.39N×151°.96W, h72km, MG3.6(AEIC), After AEIC.*

NEIC Felt on the Kenai Peninsula.

ISC 24 06:29:59.8±0.4, 60°.40N±0°.03×151°.93W±0°.07, h86km±4km, n59, σ0°75/65, mb3.8/14, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRLK	**Bradley Lake**	**0.82**	**140**	P	**Pn**	**06 30 17.0**	**-0.1**
BRLK				S	**Sn**	**06 30 30.6**	**+0.5**
SLKM	**Skilak Lake**	**0.85**	**82**	P	**Pn**	**06 30 17.2**	**-0.2**
FIB	**Fire Island**	**1.16**	**47**	P	**Pn**	**06 30 22.1**	**+1.1**
SEW	**Seward**	**1.27**	**102**	P	**Pn**	**06 30 22.0**	**-0.4**
SEW				S	**Sn**	**06 30 39.5**	**+0.1**
RC01	**Rabbit Creek A**	**1.28**	**56**	P	**Pn**	**06 30 22.6**	**+0.1**
RC01				S	**Sn**	**06 30 40.4**	**+0.8**
PMR	**Palmer**	**1.82**	**47**	P	**Pn**	**06 30 29.2**	**-0.1**
SVW2	**Sparrevohn**	**1.99**	**293**	*e*P	**Pn**	**06 30 29.3**	**-1.5**
SML	**Sawmill**	**2.25**	**49**	P	**Pn**	**06 30 35.1**	**0.0**
PPLA	**Purkeypile**	**2.51**	**357**	P	**Pn**	**06 30 39.1**	**+0.6**
KDAK	**Kodiak Island**	**2.64**	**188**	P	**Pn**	**06 30 39.5**	**-0.8**
KDAK	**Kodiak Island**	**2.64**	**188**	P	**Pn**	**06 30 39.3**	**-1.0**
	13nm,0.3s,baz=37,slow=8.3,SNR=59						
KDAK				S	**Sn**	**06 31 12.5**	**+1.0**
	31nm,0.3s,baz=151,slow=19,SNR=4.1						
EYAK	**Cordova Ski Ar**	**3.06**	**84**	P	**Pn**	**06 30 44.4**	**-1.5**
DIV	**Divide**	**3.11**	**74**	P	**Pn**	**06 30 46.0**	**-0.6**
TRF	**Thorofare Moun**	**3.16**	**13**	P	**Pn**	**06 30 47.2**	**-0.1**
TT01	**Tatalina**	**3.19**	**324**	P	**Pn**	**06 30 47.1**	**-0.4**
TTA	**Tatalina**	**3.20**	**324**	*e*P	**Pn**	**06 30 47.4**	**-0.4**
OHAK	**Old Harbor**	**3.26**	**193**	*e*P	**Pn**	**06 30 48.9**	**+0.3**
RND	**Reindeer**	**3.35**	**24**	P	**Pn**	**06 30 50.3**	**+0.5**
DHY	**Denali Highway**	**3.45**	**37**	P	**Pn**	**06 30 51.8**	**+0.6**
CHUM	**Lake Minchumin**	**3.50**	**357**	P	**Pn**	**06 30 52.0**	**+0.2**
RAGM	**Ragged Mountai**	**3.60**	**87**	P	**Pn**	**06 30 51.5**	**-1.7**
MCK	**McKinley**	**3.63**	**22**	P	**Pn**	**06 30 54.4**	**+0.8**
BMRM	**Bremner River**	**3.65**	**78**	P	**Pn**	**06 30 52.6**	**-1.2**
BPAW	**Bear Paw Mtn.**	**3.75**	**6**	P	**Pn**	**06 30 54.6**	**-0.5**
PAX	**Paxson**	**4.02**	**47**	P	**Pn**	**06 31 00.0**	**+1.2**
COLA	**College**	**4.87**	**21**	P	**Pn**	**06 31 10.8**	**+0.3**
MDM	**Murphy Dome**	**4.89**	**19**	P	**Pn**	**06 31 11.2**	**+0.6**
GCSA	**Galena City Sc**	**4.93**	**334**	P	**Pn**	**06 31 11.6**	**+0.4**
DOT	**Dot Lake**	**4.94**	**45**	P	**Pn**	**06 31 12.0**	**+0.7**
ILAR	**Eielson Array**	**4.97**	**26**	P	**Pn**	**06 31 11.7**	**-0.1**
	6.1nm,0.3s,baz=212,slow=13,SNR=277						
ILAR				S	**Sn**	**06 32 06.8**	**-1.0**
	5.1nm,0.3s,baz=190,slow=20,SNR=5.6						
BCA3	**Beaver Creek A**	**5.51**	**57**	P	**Pn**	**06 31 19.4**	**+0.3**
IM3	**Indian Mountai**	**5.67**	**352**	P	**Pn**	**06 31 20.9**	**-0.3**
PNL	**Peninsula**	**6.32**	**91**	P	**Pn**	**06 31 30.3**	**+0.1**
EGAK	**Eagle**	**6.63**	**44**	P	**Pn**	**06 31 34.4**	**0.0**
COLD	**Coldfoot**	**6.90**	**6**	P	**Pn**	**06 31 38.4**	**+0.3**
DAWY	**Dawson**	**6.91**	**52**	P	**Pn**	**06 31 38.2**	**0.0**
DHAK	**Deception Hill**	**7.05**	**95**	P	**Pn**	**06 31 39.3**	**-0.8**
BM3	**Burnt Mountain**	**7.75**	**21**	P	**Pn**	**06 31 49.0**	**-0.5**
SKAG	**Skagway**	**8.39**	**89**	*e*P	**Pn**	**06 31 58.7**	**+0.4**
INK	**Inuvik**	**11.20**	**37**	P	**Pn**	**06 32 36.0**	**-0.5**
	0.3nm,0.3s,baz=252,slow=18,SNR=9.3						
INK				S	**Sn**	**06 34 40.5**	**+0.9**
	0.2nm,0.3s,baz=308,slow=18,SNR=2.8						
DLBC	**Dease Lake**	**11.31**	**90**	P	**Pn**	**06 32 39.1**	**+0.9**
	0.5nm,0.3s,baz=291,slow=9.2,SNR=12						
DLBC				S	**Sn**	**06 34 41.4**	**-1.1**
	0.2nm,0.3s,baz=127,slow=20,SNR=3.8						
YKA	**Yellowknife Ar**	**17.80**	**67**	P	**Pn**	**06 34 01.7**	**+0.3**
	0.2nm,0.3s,baz=276,slow=9.8,SNR=8.1						
RES	**Resolute Bay**	**24.68**	**32**	P	**P**	**06 35 12.3**	**+0.3**
	5.2nm,1.0s,mb3.9,baz=301,slow=5.9,SNR=8.0						
SPITS	**Spitsbergen Ar**	**41.49**	**4**	P	**P**	**06 37 36.2**	**-1.3**
	0.8nm,0.3s,mb4.0,baz=58,slow=18,SNR=13						
SCHQ	**Schefferville**	**42.90**	**58**	P	**P**	**06 37 50.1**	**+0.9**
	2.0nm,0.6s,mb4.1,baz=324,slow=11,SNR=7.1						
TXAR	**Lajitas Array**	**44.63**	**112**	P	**P**	**06 38 04.4**	**+1.0**
TXAR				sP	sP	06 38 27.7	-6.0
TXAR				ScP	ScP	06 43 32.4	+3.8
TXAR	**Lajitas Array**	**44.63**	**112**	P	**P**	**06 38 04.4**	**+1.0**
	0.3nm,0.5s,mb3.3,baz=313,slow=6.7,SNR=6.0						
TXAR				sP	sP	06 38 27.7	-6.0
	0.1nm,0.5s,baz=317,slow=8.7,SNR=2.3						
TXAR				ScP	ScP	06 43 32.4	+3.8
	0.1nm,0.3s,baz=341,slow=6.8,SNR=5.6						
ARCES	**ARCESS Array B**	**50.35**	**1**	P	**P**	**06 38 45.9**	**-1.3**
	0.9nm,0.5s,mb4.0,baz=5.9,slow=7.2,SNR=16						
SONM	**Songino Array**	**54.99**	**306**	P	**P**	**06 39 22.8**	**+1.2**
	0.4nm,0.4s,mb3.8,baz=50,slow=7.2,SNR=3.2						
ZALV	**Zalesovo Beam**	**57.37**	**324**	P	**P**	**06 39 38.8**	**+0.4**
	0.7nm,0.4s,mb4.1,baz=14,slow=6.7,SNR=4.6						
NOA	**NORSAR Array B**	**58.20**	**10**	P	**P**	**06 39 44.1**	**0.0**
	0.3nm,0.7s,mb3.4,baz=326,slow=4.3,SNR=3.1						
FINES	**FINESS Array B**	**58.48**	**1**	P	**P**	**06 39 45.3**	**-0.8**
	1.4nm,0.7s,mb4.1,baz=5.7,slow=9.6,SNR=6.4						
MKAR	**Makanchi Array**	**64.45**	**322**	P	**P**	**06 40 25.3**	**-1.3**
	0.2nm,0.5s,mb3.2,baz=40,slow=9.9,SNR=3.9						
AKASG	**Malin Array Be**	**69.25**	**359**	P	**P**	**06 40 56.3**	**-0.6**
AKASG	**Malin Array Be**	**69.25**	**359**	P	**P**	**06 40 56.3**	**-0.6**
	0.9nm,0.3s,mb4.0,baz=359,slow=5.9,SNR=4.8						
ESDC	**Sonseca Array**	**76.88**	**25**	P	**P**	**06 41 42.5**	**+0.5**
	0.3nm,0.6s,mb3.2,baz=346,slow=5.4,SNR=3.5						
BRTR	**Keskin Array B**	**80.13**	**356**	P	**P**	**06 42 00.3**	**+0.4**
	0.3nm,0.5s,mb3.4,baz=341,slow=8.3,SNR=2.9						
CMAR	**Chiang Mai Arr**	**83.18**	**295**	P	**P**	**06 42 17.8**	**+1.5**
	1.1nm,0.4s,mb4.1,baz=80,slow=5.6,SNR=5.8						
BOSA	**Boshof**	**148.16**	**5**	PKPbc	PKPbc	06 49 34.6	-0.4
	1.0nm,0.5s,baz=358,slow=3.7,SNR=3.7						

JMA 24 06:32:47.6±0.1, 39°.34N×138°.53E, h42km±3km, M3.5, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTB	**Tobi-shima**	**0.81**	**100**	P	Pn	06 33 02.7	+0.1
JTB				*e*S	Sn	06 33 13.9	+0.5
JAW	**Awa shima**	**1.05**	**147**	P	Pn	06 33 05.8	0.0
JYA	**Atsumi**	**1.19**	**129**	P	Pn	06 33 07.9	+0.2
JYA				S	Sn	06 33 23.4	+0.8
JSD	**Sado**	**1.32**	**189**	P	Pn	06 33 10.0	+0.5
JSD				*e*S	Sn	06 33 26.2	+0.4
JYK	**Kaneyama**	**1.48**	**106**	P	Pn	06 33 12.4	+0.6
JYK				*e*S	Sn	06 33 31.3	+1.4
JNS	**Sasagawa**	**1.64**	**158**	P	Pn	06 33 14.4	+0.5
JNS				*e*S	Sn	06 33 34.9	+1.1
JSZ	**Suzu**	**2.10**	**206**	P	Pn	06 33 21.5	+1.3
JOM	**Ohasama**	**2.14**	**86**	P	Pn	06 33 22.6	+1.8
JOM				*e*S	Sn	06 33 48.3	+2.1
MAT	**Matsushiro**	**2.80**	**185**	P	Pn	06 33 31.6	+1.7
MAT				S	Sn	06 34 05.1	+2.6

IDC 24 06:37:25.6±2.2, 3°.03N×128°.02E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/20, mbtmp3.4/3, Error ellipse: s-maj=144.4km s-min=26.2km az=67.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.66**	**165**	P	P	06 42 38.8	-0.2
	0.7nm,0.4s,baz=345,slow=11,SNR=13						
ASAR	**Alice Springs**	**27.15**	**168**	P	P	06 43 10.8	+0.2
	0.3nm,0.7s,baz=354,slow=8.4,SNR=3.5						
MKAR	**Makanchi Array**	**58.86**	**325**	P	P	06 47 26.2	0.0
	0.3nm,0.5s,baz=120,slow=8.7,SNR=4.6						

ISCJB ***24*** *07:19:48.8±0.4, 30°.83N±0°.04×49°.86E±0°.05, h10km, Error ellipse: s-maj=7.3km s-min=4.3km az=41.9*

TEH ***24*** *07:19:48.3, 30°.71N×49°.75E, h4km*

CSEM ***24*** *07:19:48.3±0.3, 30°.78N×49°.81E, h2km, ML3.6, Error ellipse: s-maj=8.9km s-min=7.3km az=46.0*

SGS ***24*** *07:19:54.1, 30°.59N×49°.97E, h16km*

ISC 24 07:19:50.0±0.4, 30°.80N±0°.04×49°.89E±0°.04, h10km, n38, σ0°91/43, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPIR	**Pirpir**	**2.06**	**24**	*e*Pn	**Pn**	**07 20 26.2**	**+1.5**
IPIR				*e*		07 20 56.5	
	comp=Z,3μm,0.2s						
IPIR	**Pirpir**	**2.06**	**24**	*e*Pn	**Pn**	**07 20 26.2**	**+1.5**
MIB	**Mutribah**	**2.42**	**246**	*e*P	**Pn**	**07 20 30.1**	**+0.5**
IGAR	**Gharneh**	**2.43**	**48**	*e*Pn	**Pn**	**07 20 30.7**	**+0.9**
IGAR				*e*		07 21 10.3	
	comp=Z,733nm,0.1s						
KBD	**Kabd**	**2.50**	**230**	*e*P	**Pn**	**07 20 31.6**	**+0.9**
KBD				*e*S	**Sn**	**07 21 01.3**	**0.0**
KBD				AML	AML	07 21 09.7	
	comp=Z,29nm,0.3s						
QRN	**Al-Qurain**	**2.67**	**220**	*e*P	**Pn**	**07 20 33.8**	**+0.7**
QRN				*e*S	**Sn**	**07 21 05.9**	**+0.5**
QRN				AML	AML	07 21 15.7	
	comp=Z,56nm,0.4s						
NAY	**Al-Naaiem**	**2.77**	**237**	*e*P	**Pn**	**07 20 34.9**	**+0.5**
NAY				AML	AML	07 21 20.2	
	comp=Z,33nm,0.5s						
IKLH	**Kolahrood**	**2.89**	**29**	*e*Pn	**Pn**	**07 20 37.0**	**+0.9**
IKLH				*e*Pn	**Pn**	**07 20 37.1**	**+1.0**
IKLH				*e*		07 21 19.9	
	comp=E,1μm,0.2s						
IKLH	**Kolahrood**	**2.89**	**29**	*e*Pn	**Pn**	**07 20 37.0**	**+0.9**
IPAR	**Pars**	**2.89**	**108**	*e*Pn	**Pn**	**07 20 36.8**	**+0.7**
IPAR				*e*Sg	**Sg**	**07 21 21.3**	**-1.6**
IPAR				*e*		07 21 36.0	
	comp=Z,694nm,0.4s						
IPAR	**Pars**	**2.89**	**108**	*e*Pn	**Pn**	**07 20 36.8**	**+0.7**
IPAR				*e*Sg	**Sg**	**07 21 21.3**	**-1.6**
IZEF	**Zefreh**	**2.94**	**44**	*e*Pn	**Pn**	**07 20 37.9**	**+1.1**
IZEF				*e*		07 20 54.8	
	comp=Z,234nm,0.0s						
IZEF	**Zefreh**	**2.94**	**44**	*e*Pn	**Pn**	**07 20 37.9**	**+1.1**
KFJS		**3.11**	**214**	P	**Pn**	**07 20 39.0**	**-0.1**
KFJS		**3.11**	**214**	P	**Pn**	**07 20 39.0**	**-0.1**
ISRV	**Sarvestan**	**3.13**	**116**	*e*Pn	**Pn**	**07 20 39.4**	**+0.1**
ISRV				*e*		07 21 53.8	
	comp=Z,755nm,0.5s						
ISRV	**Sarvestan**	**3.13**	**116**	*e*Pn	**Pn**	**07 20 39.4**	**+0.1**
IKOM	**Komasi**	**3.92**	**330**	*e*Pn	**Pn**	**07 20 49.3**	**-0.9**
IKOM				*e*		07 22 05.6	
	comp=N,1μm,0.2s						
IKOM	**Komasi**	**3.92**	**330**	*e*Pn	**Pn**	**07 20 49.3**	**-0.9**
ISFB	**Sefidab**	**4.06**	**29**	*e*Pn	**Pn**	**07 20 52.4**	**+0.3**
ISFB				*e*		07 21 54.7	
	comp=Z,226nm,0.2s						
ISFB	**Sefidab**	**4.06**	**29**	*e*Pn	**Pn**	**07 20 52.4**	**+0.3**
IMEH	**Mehriz**	**4.09**	**81**	*e*Pn	**Pn**	**07 20 52.7**	**+0.1**
IMEH	**Mehriz**	**4.09**	**81**	*e*Pn	**Pn**	**07 20 52.7**	**+0.1**
ICHK	**Chekchek**	**4.12**	**68**	*e*Pn	**Pn**	**07 20 52.5**	**-0.4**
ICHK	**Chekchek**	**4.12**	**68**	*e*Pn	**Pn**	**07 20 52.5**	**-0.4**
IVRN	**Varamin**	**4.46**	**20**	*e*Pn	**Pn**	**07 20 57.9**	**+0.3**
IVIS	**Veis**	**4.51**	**326**	*e*Pn	**Pn**	**07 20 57.1**	**-1.3**
IVIS				*e*		07 22 13.3	
	comp=E,290nm,0.2s						
IVIS	**Veis**	**4.51**	**326**	*e*Pn	**Pn**	**07 20 57.1**	**-1.3**
ILIN	**Lien**	**4.79**	**330**	*e*Pn	**Pn**	**07 21 00.8**	**-1.4**
ILIN				*e*		07 21 59.8	
	comp=N,848nm,0.1s						
ILIN	**Lien**	**4.79**	**330**	*e*Pn	**Pn**	**07 21 00.8**	**-1.4**
IDHR	**Dehrash**	**4.88**	**324**	*e*Pn	**Pn**	**07 21 01.1**	**-2.3**
IDHR				*e*		07 21 59.7	
	comp=Z,697nm,0.1s						
IDHR	**Dehrash**	**4.88**	**324**	*e*Pn	**Pn**	**07 21 01.1**	**-2.3**
IANJ	**Anjilo**	**5.75**	**35**	*e*Pn	**Pn**	**07 21 15.4**	**+0.1**
IANJ	**Anjilo**	**5.75**	**35**	*e*Pn	**Pn**	**07 21 15.4**	**+0.1**
BTHS		**6.78**	**173**	P	**Pn**	**07 21 28.6**	**-1.0**
BTHS		**6.78**	**173**	P	**Pn**	**07 21 28.6**	**-1.0**
HRDDS		**7.85**	**183**	S	**Sn**	**07 23 05.4**	**-7.8**
HRDDS		**7.85**	**183**	P	**Pn**	**07 21 43.4**	**-0.9**

IDC ***24*** *07:32:46.0±1.0, 12°.20N×87°.73W, h0km, mb4.0/11, mb1 4.3/12, mb1mx4.0/25, mbtmp4.0/12, ML3.5/1, MS3.4/1, Ms1 3.3/1, ms1mx2.7/30, Error ellipse: s-maj=35.1km s-min=18.9km az=55.0*

CASC ***24*** *07:32:49.0±2.8, 11°.95N×88°.07W, h20km±17km, MD4.2, ML3.8, mb4.5(NEIC)*

ISCJB ***24*** *07:32:51.0±0.6, 12°.05N±0°.06×87°.93W±0°.05, h50km±5km, mb4.2/27, MS4.0/2, Error ellipse: s-maj=12.1km s-min=4.5km az=40.7*

NEIC ***24*** *07:32:51.8±0.6, 12°.07N×87°.98W, mb4.5/17, Error ellipse: s-maj=13.4km s-min=8.8km az=45.0*

BJI ***24*** *07:32:52.3, 12°.10N×88°.00W, h43km, mB5.1/2, Ms5.1/2, Ms7 4.7/2*

ISC 24 07:32:52.6±0.5, 12°.13N±0°.06×87°.89W±0°.05, h44km±5km, n123, σ0°92/117, mb4.2/27, MS4.0/2, 27C-22D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.99**	**55**	*e*P	**Pn**	**07 33 11.1**	**+1.1**
CRIN				*e*S	**Sn**	**07 33 30.6**	**+7.7**
CRIN				AML	AML	07 33 36.4	
	comp=E,3μm,0.7s						
LEON	**Leon**	**1.01**	**74**	*e*P	**Pn**	**07 33 10.1**	**-0.2**
CNCH	**Conchagua**	**1.14**	**2**	*e*P	**Pn**	**07 33 12.7**	**+0.6**
CNGN	**Cerro Negro**	**1.22**	**72**	*e*P	**Pn**	**07 33 13.2**	**+0.1**
CNGN				*e*S	**Sn**	**07 33 35.9**	**+7.5**
CNGN				AML	AML	07 33 53.4	
	comp=E,824nm,0.6s						
COPN	**Copaltepe**	**1.27**	**88**	*e*P	**Pn**	**07 33 13.5**	**-0.3**
COPN				*e*P		07 33 13.9	
MOMN	**Momotombo**	**1.34**	**78**	*e*Pn	**Pn**	**07 33 15.3**	**+0.4**
VSM	**San Miguel**	**1.35**	**344**	*e*P	**Pn**	**07 33 14.7**	**-0.2**
BLLM	**Bellamira**	**1.35**	**345**	*e*P	**Pn**	**07 33 14.7**	**-0.3**
CSAN		**1.43**	**88**	*e*P	**Pn**	**07 33 16.0**	**-0.1**
XAVN	**Gruta Xavier**	**1.52**	**89**	*e*P	**Pn**	**07 33 17.1**	**-0.3**
TISN	**Laguna Tiscapa**	**1.58**	**89**	*e*P	**Pn**	**07 33 17.6**	**-0.5**
MGAN	**Managua**	**1.60**	**89**	*e*P	**Pn**	**07 33 17.9**	**-0.5**
WILN	**Americas 2**	**1.66**	**89**	*e*P	**Pn**	**07 33 18.9**	**-0.3**
CAHU	**Cacacuatique**	**1.66**	**349**	*e*P	**Pn**	**07 33 20.0**	**+0.7**
APON	**Apoyo**	**1.79**	**97**	*e*P	**Pn**	**07 33 20.5**	**-0.5**
LFRS	**El Faro**	**1.88**	**322**	*e*P	**Pn**	**07 33 20.3**	**-1.9**
LFRS

baz=30
ECSD EROS Data Cent 32.38 348 *e*P P 07 39 16.0 -2.0
comp=E,5.9nm,0.8s,mb4.5
ECSD epP pP 07 39 27.5 -2.2
SADO Sadowa 33.38 11 P P 07 39 25.6 -1.1
comp=E,5.8nm,0.5s,mb4.7,baz=219,slow=9.3,SNR=6.3
PDAR Pinedale Array 35.85 332 P P 07 39 47.4 -0.8
comp=E,0.4nm,0.7s,mb3.5,baz=127,slow=10,SNR=3.6
PDAR PcP PcP 07 42 15.4 +0.6
comp=E,0.4nm,0.5s,baz=134,slow=6.5,SNR=4.0
L16A Fish Haven 36.16 330 ⇓P P 07 39 51.1 +0.3
baz=36
H21A Big Horn, Sher 36.31 337 ⇑P P 07 39 51.7 -0.3
baz=36
AGMN Agassiz Nation 36.67 351 *e*P P 07 39 53.6 -1.4
comp=E,25nm,1.4s,mb4.8
REDW Red Top Meadow 36.91 332 *e*P P 07 39 57.4 +0.2
comp=E,6.9nm,1.2s,mb4.4
SNOW Snow King Moun 36.95 332 *e*P P 07 39 58.3 +0.9
comp=E,4.1nm,0.8s,mb4.3
TPAW Teton Pass 37.06 332 *e*P P 07 39 59.4 +1.1
comp=E,16nm,1.8s,mb4.5
MOOW Moose Ponds 37.16 332 *e*P P 07 39 59.2 -0.1
comp=E,1.8nm,0.8s,mb4.0
H18A Shoshone NF, C 37.42 334 ⇑P P 07 40 01.2 -0.2
baz=38
K14A Jones Ranch, D 37.43 329 ⇑P P 07 40 00.3 -1.3
baz=38
NVAR Mina Array Bea 37.66 319 P P 07 40 04.5 +0.9
comp=E,0.3nm,0.6s,mb3.2,baz=115,slow=7.0,SNR=4.5
NVAR PcP PcP 07 42 21.5 +1.1
comp=E,0.4nm,0.6s,baz=134,slow=3.9,SNR=3.6
F19A Roth Farm, Mol 38.08 336 ⇓P P 07 40 06.3 -0.7
baz=38
H16A Russell Place, 38.13 333 ⇓P P 07 40 08.3 +0.9
baz=38
E20A Meyer Farm, Mu 38.30 337 ⇑P P 07 40 08.8 0.0
baz=38
G17A Pierce Place, 38.39 334 ⇑P P 07 40 11.6 +2.0
baz=38
F18A Big Timber 38.43 335 ⇓P P 07 40 09.8 -0.2
baz=38
SIV San Ignacio 38.53 136 P P 07 40 10.2 -0.9
comp=E,2.4nm,0.5s,mb4.2,baz=311,slow=10,SNR=18
ULM Lac du Bonnet 38.57 352 P P 07 40 08.9 -2.2
comp=E,9.3nm,0.6s,mb4.7,baz=165,slow=9.7,SNR=8.2
ULM LR LR 07 56 01.0
comp=E,51nm,19.3s,MS3.4,baz=128,slow=36
DGMT Dagmar 38.70 343 ⇑P P 07 40 12.2 +0.1
baz=39
H15A Lima 38.71 331 ⇓P P 07 40 13.9 +1.6
baz=39
D20A Manuel Ranch, 38.80 338 ⇑P P 07 40 13.6 +0.6
baz=39
F17A Fitzpatrick Pl 38.82 334 ⇑P P 07 40 14.0 +0.8
baz=39
BOZ Bozeman (W) 39.04 333 ⇓P P 07 40 14.9 -0.1
baz=39
BOZ Bozeman (W) 39.04 333 *e*P P 07 40 15.3 +0.3
comp=E,1.4nm,0.8s,mb3.7
H14A Leadore 39.05 331 ⇑P P 07 40 14.6 -0.6
baz=39
C17A Wharram Farm, 40.25 336 ⇓P P 07 40 24.4 -0.7
baz=40
C16A Fuhringer Ranc 40.78 335 ⇓P P 07 40 28.7 -0.8
baz=41
F12A Elk City 40.79 330 ⇓P P 07 40 28.5 -1.0
baz=41
A15A Johnson Ranch, 42.12 336 ⇑P P 07 40 40.4 0.0
baz=42
A14A Double T Ranch 42.40 335 ⇑P P 07 40 40.8 -1.9
baz=42
SCHQ Schefferville 45.71 17 P P 07 41 07.2 -1.9
comp=E,5.7nm,0.7s,mb4.6,baz=220,slow=8.2,SNR=5.4
YKA Yellowknife Ar 53.81 345 P P 07 42 08.5 -2.0
comp=E,0.5nm,0.5s,mb3.7,baz=144,slow=6.5,SNR=3.5
ILAR Eielson Array 66.14 336 P P 07 43 34.2 -0.9
comp=E,0.4nm,0.7s,mb3.6,baz=160,slow=4.3,SNR=9.1
CN2 Changchun 116.59 334 *e*PKP PKPdf 07 51 32.3 +0.2
BJI Beijing 123.49 338 PKP PKPdf 07 51 44.1 -1.4
WMQ Urumqi 124.18 4 *e*PKP PKPdf 07 51 46.3 -0.4
HHC Hu-ho-hao-te 124.30 342 *e*PKP PKPdf 07 51 46.8 -0.2
HHC sPKP 07 52 00.9
HHC PP PP 07 53 34.8 +3.4
HHC PKS 07 55 22.3
HHC SKS SKSdf 07 58 53.5 -2.1
HHC SKKS SKKSac 08 00 22.9 -4.8
HHC SS SS 08 10 18.9 -0.3
HHC AMB AMB
comp=Z,85nm,5.4s
HHC LR LR
comp=N,110nm,16.7s,MS4.8
HHC LR LR
comp=E,140nm,15.5s,MS4.8
HHC LR LR
comp=Z,100nm,16.7s,MS4.5
NJ2 Nanjing 129.15 330 *e*PKP PKPdf 07 51 56.8 +0.2
LZH Lanzhou 130.78 347 *e*PKP PKPdf 07 52 03.5 +4.0
LZH sPKP 07 52 19.0
ASAR Alice Springs 138.76 248 PKP PKPdf 07 52 13.0 -1.8
comp=Z,0.3nm,0.8s,baz=81,slow=2.9,SNR=2.7
WRA Warramunga Arr 138.77 254 PKP PKPdf 07 52 13.6 -1.2
comp=Z,0.3nm,0.7s,baz=89,slow=2.7,SNR=3.7
KMI Kunming 141.55 344 PKP PKPdf 07 52 19.0 -0.8
CMAR Chiang Mai Arr 148.87 347 PKPbc PKPbc 07 52 36.8 +0.4
comp=Z,1.7nm,0.7s,baz=12,slow=4.6,SNR=6.5

MOS ***24*** *07:35:08.9±1.3, 8.°08N×58.°86E, h10km, mb5.2/48, MS4.1/16, Error ellipse: s-maj=9.2km s-min=4.2km az=116.7*

ISCJB ***24*** *07:35:09.0±0.3, 8.°06N±0.°05×58.°97E±0.°04, h10km, mb4.9/88, MS4.1/40, Error ellipse: s-maj=7.3km s-min=6.0km az=171.7*

IDC ***24*** *07:35:09.3±0.5, 8.°08N×59.°18E, h0km, mb4.3/24, mb1 4.4/25, mb1mx4.4/27, mbtmp4.3/25, ML4.2/1, MS4.1/23, Ms1 4.1/23, ms1mx4.0/31, Error ellipse: s-maj=14.4km s-min=12.3km az=137.0*

GCMT ***24*** *07:35:10.9±0.2, 7.°99N×58.°92E, h12km, MW5.0, Moment Tensor Solution. s34,c47; s83,c144; Moment tensor: Scale 10¹⁶Nm; Mrr=3.80±.08; Mθθ=3.60±.07; Mϕϕ=0.20±.09; Mrθ=1.51±.22; Mθϕ=-0.90±.06; Mϕr=0.69±.29; Best double couple: M=4.20000×10¹⁶ NP1:ϕ=117.00000°, δ=37.00000°, λ=-68.00000°. NP2:ϕ=270.00000°, δ=56.00000°, λ=-106.00000°. Principal axes: T 4.0500, Plg10.0000°, Azm11.0000°; N 0.2100, Plg13.0000°, Azm279.0000°; P -4.2600, Plg74.0000°, Azm137.0000°; Data Used: II IU G IC CN.*

NEIC ***24*** *07:35:10.9±0.4, 8.°15N×59.°04E, h10km, mb5.2/39 Error ellipse: s-maj=9.1km s-min=9.0km az=61.0*

STR ***24*** *07:35:11.3±0.0, 8.°53N×59.°40E, Mb5.1, Error ellipse: s-maj=0.0km s-min=0.0km az=111.0*

CSEM ***24*** *07:35:11.2±0.2, 8.°13N×58.°97E, h10km, mb5.0/66, Ms3.7, Error ellipse: s-maj=10.7km s-min=9.2km az=122.0*

VIE ***24*** *07:35:19.6, 8.°14N×59.°06E, h75km, mb4.0*

SZGRF ***24*** *07:35:29.7, 12.°26N×60.°83E, h33km, mb4.8, Arabian Sea*

ISC 24 07:35:11.0±0.3, 8.°04N±0.°05×59.°01E±0.°04, h10km, (h22km±1.2km: pP-P), n448, σ1§28/437, mb4.9/88, MS4.1/40, 29C-12D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
JMDO	**Jabal Madar** SNR=17	**14.27**	**357**	P		**Pn**	**07 38 35.2**	**+2.0**
JMDO	**Jabal Madar** SNR=17	**14.27**	**357**	P		**Pn**	**07 38 35.2**	**+1.9**
LBOS		**14.69**	**294**	*e*P		**Pn**	**07 38 44.6**	**+5.5**
BSY	**Bisya** SNR=20	**14.72**	**353**	P		**Pn**	**07 38 47.9**	**+8.5**
SMDO	**Samad** SNR=14	**14.96**	**357**	P		**Pn**	**07 38 49.6**	**+7.0**
SMDO	**Samad** SNR=14	**14.96**	**357**	P		**Pn**	**07 38 49.6**	**+7.0**
ARQ	**Araqi** SNR=20	**15.39**	**351**	P		**Pn**	**07 38 50.3**	**+1.9**
ARQ	**Araqi** SNR=20	**15.39**	**351**	P		**Pn**	**07 38 50.3**	**+1.9**
HOQ	**Hoqain** SNR=16	**15.54**	**354**	P		**Pn**	**07 38 54.1**	**+3.8**
HOQ	**Hoqain** SNR=16	**15.54**	**354**	P		**Pn**	**07 38 54.1**	**+3.8**
ATD	**Arta Tunnel** 0.9nm,0.3s,baz=98,slow=19,SNR=3.1	**16.30**	**284**	Pn		**Pn**	**07 39 03.3**	**+3.1**
ATD					LR		07 44 13.2	
	comp=Z,345nm,21.5s,baz=210,slow=33							
KAD	**Karad**	**17.42**	**57**	*i* P		**Pn**	**07 39 14.5**	**+0.2**
HYB	**Hyderabad**	**21.20**	**62**	*i* P		**Pn**	**07 39 58.0**	**+1.0**
HYB					*e*S	**S**	**07 43 54.0**	**+1.2**
MDRS	**Chennai**	**21.46**	**75**	*ex*		x	07 40 18.2	
MDRS					*ex*	x	07 44 06.2	
MDRS					*ex*	x	07 45 26.2	
MDRS					*ex*	x	07 48 42.2	
QRN	**Al-Qurain**	**23.09**	**334**	*e*P		**P**	**07 40 18.9**	**+1.9**
KMBO	**Kilima Mbogo**	**23.53**	**248**	P		**P**	**07 40 24.2**	**+2.3**
KMBO					LR	LR	07 48 47.8	
KMBO	**Kilima Mbogo** 28nm,0.9s,mb4.7,baz=359,slow=24,SNR=14	**23.53**	**248**	P		**P**	**07 40 24.2**	**+2.3**
KMBO					LR	LR	07 48 47.8	
	comp=Z,425nm,21.6s,MS3.9,baz=90,slow=34							
KMBO	**Kilima Mbogo** SNR=13	**23.53**	**248**	P		**P**	**07 40 23.7**	**+1.9**
KMBO	**Kilima Mbogo** SNR=13	**23.53**	**248**	P		**P**	**07 40 23.7**	**+1.9**
KBD	**Kabd**	**23.56**	**335**	*e*P		**P**	**07 40 21.2**	**-0.8**
NAY	**Al-Naaiem**	**23.82**	**334**	*e*P		**P**	**07 40 24.8**	**+0.5**
DDI	**Dehra Dun**	**28.45**	**36**	*ex*		**P**	**07 41 06.5**	**+0.3**
GNI	**Garni** 90nm,1.8s,mb5.4	**34.42**	**340**	*e*P		**P**	**07 42 02.6**	**+4.0**
GNI	**Garni**	**34.42**	**340**	*ce*P		**P**	**07 42 00.8**	**+2.2**
GNI					pmax	pmax		
	comp=Z,44nm,1.7s							
GNI	**Garni** SNR=12	**34.42**	**340**	P		**P**	**07 42 03.2**	**+4.6**
KSH	**Kashi**	**34.84**	**23**	*e*P		**P**	**07 41 59.3**	**-2.9**
KSH					*e*PP	PP	07 43 17.4	-3.9
KSH					*e*PcP	PcP	07 44 32.3	-3.1
KSH					*e*S	**S**	**07 47 22.8**	**-10**
KSH					*e*PcS	PcS	07 48 18.3	-3.6
KSH					*e*SS	SS	07 49 38.3	-26
KSH					pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7							
KSH					pmax	pmax		
	comp=Z,96nm,6.0s							
KSH					LR	LR		
	comp=N,280nm,14.2s							
KSH					LR	LR		
	comp=E,650nm,21.8s							
KSH					LR	LR		
	comp=Z,800nm,20.6s							
SHL	**Shillong**	**35.82**	**57**	*ex*		**P**	**07 42 13.0**	**+2.1**
KK31	**Karatay Array**	**36.35**	**14**	*i* P		**P**	**07 42 16.5**	**+1.3**
KK31					pmax	pmax		
	comp=Z,52nm,1.2s,mb5.3							
KK31	**Karatay Array** comp=Z,52nm,1.2s,mb5.3	**36.35**	**14**	*i* P		**P**	**07 42 16.5**	**+1.3**
AAK	**Ala-Archa**	**37.05**	**19**	P		**P**	**07 42 23.3**	**+2.2**
	comp=Z,1.5nm,0.3s,mb4.2,baz=215,slow=5.4,SNR=11							
AAK	**Ala-Archa**	**37.05**	**19**	P		**P**	**07 42 23.3**	**+2.1**
AAK	**Ala-Archa** SNR=15	**37.05**	**19**	P		**P**	**07 42 23.8**	**+2.6**
ZEI	**Tsey**	**37.05**	**341**	*e*P		**P**	**07 42 23.1**	**+1.9**
ZEI					pmax	pmax		
	comp=Z,41nm,1.9s,mb4.9							
ZEI	**Tsey** comp=Z,41nm,1.9s,mb4.9	**37.05**	**341**	*e*P		**P**	**07 42 23.1**	**+1.9**
FRU	**Bishkek**	**37.27**	**19**	*e*P		**P**	**07 42 25.0**	**+2.0**
FRU					*i*		07 42 30.0	
FRU					pmax	pmax		
	comp=Z,64nm,1.8s,mb5.2							
FRU	**Bishkek** comp=Z,64nm,1.8s,mb5.2	**37.27**	**19**	*e*P		**P**	**07 42 25.0**	**+2.0**
LSZ	**Lusaka**	**38.34**	**233**	P		**P**	**07 42 33.9**	**+1.5**
	comp=Z,4.0nm,0.9s,mb4.1,baz=65,slow=7.2,SNR=5.5							
LSZ	**Lusaka**	**38.34**	**233**	P		**P**	**07 42 33.9**	**+1.5**
KIV	**Kislovodsk**	**38.51**	**341**	⇑*e*P		**P**	**07 42 35.0**	**+1.5**
KIV					*e*		07 44 08.5	
KIV					pmax	pmax		
	comp=Z,41nm,1.7s,mb4.9							
KIV					MLR	MLR		
	comp=Z,600nm,19.0s,MS4.4							
KIV	**Kislovodsk** comp=Z,41nm,1.7s,mb4.9	**38.51**	**341**	*e*P		**P**	**07 42 35.0**	**+1.5**
BR131	**Keskin Array S** comp=Z,10nm,0.9s,mb4.5	**38.87**	**328**	*e*P		**P**	**07 42 37.6**	**+1.0**
BR131	**Keskin Array S** comp=Z,10nm,0.9s,mb4.5	**38.87**	**328**	*e*P		**P**	**07 42 37.6**	**+1.0**
BRTR	**Keskin Array B** comp=Z,7.4nm,0.9s,mb4.4,baz=150,slow=8.6,SNR=28	**38.87**	**328**	P		**P**	**07 42 37.7**	**+1.1**
BRTR					LR	LR	08 00 52.5	
	comp=Z,126nm,19.2s,MS3.8,baz=126,slow=40							
BRTR	**Keskin Array B**	**38.87**	**328**	P		**P**	**07 42 37.7**	**+1.1**
SOC	**Sochi**	**39.22**	**338**	*e*P		**P**	**07 42 36.8**	**-2.7**
SOC					*e*S	**S**	**07 48 35.4**	**-4.4**
SOC					MLR	MLR		
	comp=Z,397nm,14.0s,MS4.4							
SOC	**Sochi**	**39.22**	**338**	*e*P		**P**	**07 42 36.8**	**-2.7**
PSI	**Prapat** comp=Z,134nm,18.1s,MS3.8,baz=23,slow=32	**40.06**	**95**	LR		LR	07 56 42.9	
CMAR	**Chiang Mai Arr** comp=Z,1.1nm,0.3s,mb4.0,baz=252,slow=8.3,SNR=8.0	**40.14**	**71**	P		**P**	**07 42 47.8**	**+0.3**
CMAR					PcP	PcP	07 44 51.5	-0.5
	comp=Z,0.7nm,0.3s,baz=257,slow=4.9,SNR=4.5							
CMAR					LR	LR	07 57 45.8	
	comp=Z,131nm,18.3s,MS3.8,baz=77,slow=34							
CMAR	**Chiang Mai Arr**	**40.14**	**71**	P		**P**	**07 42 47.8**	**+0.3**
CMAR							07 44 51.5	
CMAR	**Chiang Mai Arr**	**40.14**	**71**	P		**P**	**07 42 47.8**	**+0.3**
CMAR	**Chiang Mai Arr**	**40.14**	**71**	PcP		PcP	07 44 51.5	-0.5
CHTO	**Chiang Mai** comp=Z,17nm,1.3s,mb4.6	**40.20**	**70**	*e*P		**P**	**07 42 48.3**	**+0.3**
CHTO	**Chiang Mai**	**40.20**	**70**	*e*P		**P**	**07 42 48.3**	**+0.3**
CHTO					pmax	pmax		
	comp=Z,17nm,1.3s,mb4.6							
CHTO	**Chiang Mai** comp=Z,17nm,1.3s,mb4.6	**40.20**	**70**	*e*P		**P**	**07 42 48.3**	**+0.3**
ZKR	**Zakros**	**40.35**	**317**	*e*P		**P**	**07 42 51.1**	**+2.1**
XRY	**Khrisi**	**40.58**	**316**	*e*P		**P**	**07 42 53.4**	**+2.5**
NPS	**Neapolis**	**40.84**	**316**	*e*P		**P**	**07 42 56.0**	**+2.9**
LAST	**Lasithi**	**40.88**	**316**	*e*P		**P**	**07 42 55.6**	**+2.2**
AB31	**Akbulak array**	**41.08**	**1**	*i* P		**P**	**07 42 55.1**	**+0.3**
AB31					pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.4							
AB31	**Akbulak array** comp=Z,5.0nm,0.5s,mb4.4	**41.08**	**1**	*i* P		**P**	**07 42 55.1**	**+0.3**
ANN	**Anapa**	**41.13**	**337**	*e*P		**P**	**07 42 58.2**	**+2.9**
ANN					pmax	pmax		
	comp=Z,42nm,1.1s,mb5.0							
ANN					MLR	MLR		
	comp=Z,232nm,15.0s,MS4.2							
SIVA	**Sivas**	**41.26**	**316**	*e*P		**P**	**07 42 58.6**	**+2.1**
IDI	**Anoyia**	**41.35**	**316**	*e*P		**P**	**07 42 59.4**	**+2.1**
VAM	**Vamos**	**41.89**	**316**	*e*P		**P**	**07 43 03.8**	**+2.1**
APE	**Apeiranthos**	**41.92**	**319**	*e*P		**P**	**07 43 03.4**	**+1.5**
KARN	**Karanos**	**42.09**	**316**	*e*P		**P**	**07 43 05.7**	**+2.4**
AKTK	**Aktyubinsk**	**42.26**	**359**	P		**P**	**07 43 04.7**	**+0.2**
AKTK	**Aktyubinsk**	**42.26**	**359**	P		**P**	**07 43 04.7**	**+0.2**
AKTO	**Aktyubinsk**	**42.26**	**359**	P		**P**	**07 43 04.7**	**+0.2**
	comp=Z,6.6nm,0.9s,mb4.2,baz=194,slow=7.4,SNR=18							
CHOS	**Chios island**	**42.35**	**321**	*e*P		**P**	**07 43 07.1**	**+1.7**
MK31	**Makanchi Array**	**43.45**	**23**	*e*P		**P**	**07 43 14.9**	**+0.8**
MK31					*e*PcP	PcP	07 45 02.4	+0.1
MK31	**Makanchi Array**	**43.45**	**23**	*e*P		**P**	**07 43 14.9**	**+0.8**
MKAR	**Makanchi Array** comp=Z,0.4nm,0.3s,baz=211,slow=8.5,SNR=14	**43.45**	**23**	P		**P**	**07 43 14.2**	**+0.1**
MKAR					PcP	PcP	07 45 02.2	-0.1
	comp=Z,0.5nm,0.2s,baz=267,slow=2.4,SNR=4.5							
MKAR					LR	LR	08 02 33.0	
	comp=Z,243nm,21.1s,MS4.1,baz=192,slow=38							
MKAR	**Makanchi Array**	**43.45**	**23**	P		**P**	**07 43 14.2**	**+0.1**
MKAR							07 45 02.3	
VLI	**Veliai**	**43.45**	**317**	*e*P		**P**	**07 43 14.6**	**+0.2**
VLY	**Voula,Athens**	**43.50**	**318**	*e*P		**P**	**07 43 16.0**	**+1.3**
PTL	**Penteli**	**43.56**	**319**	*e*P		**P**	**07 43 14.0**	**-1.2**
DID	**Didima**	**43.68**	**318**	*e*P		**P**	**07 43 16.2**	**0.0**
DID	**Didima**	**43.68**	**318**	P		**P**	**07 43 16.6**	**+0.4**
ALN	**Alexandroupoli**	**43.90**	**324**	*e*P		**P**	**07 43 18.5**	**+0.6**
ALN	**Alexandroupoli**	**43.90**	**324**	P		**P**	**07 43 16.4**	**-1.5**
LTK	**Loutraki**	**44.14**	**318**	*e*P		**P**	**07 43 20.2**	**+0.3**
LTK	**Loutraki**	**44.14**	**318**	P		**P**	**07 43 20.1**	**+0.2**
VLX	**Vlachokerasia**	**44.18**	**317**	*e*P		**P**	**07 43 21.2**	**+1.0**
VLX	**Vlachokerasia**	**44.18**	**317**	P		**P**	**07 43 21.4**	**+1.2**
AOS	**Alonnisos**	**44.19**	**320**	P		**P**	**07 43 20.7**	**+0.5**
PYL	**PYLOS**	**44.37**	**316**	*e*P		**P**	**07 43 22.2**	**+0.5**
ITM	**Ithomi**	**44.38**	**316**	*e*P		**P**	**07 43 22.6**	**+0.7**
GUR	**Goura**	**44.51**	**318**	*e*P		**P**	**07 43 23.4**	**+0.6**
XOR	**Xorichti**	**44.74**	**320**	P		**P**	**07 43 25.2**	**+0.6**
EFP	**Efpalio**	**45.06**	**318**	*e*P		**P**	**07 43 28.3**	**+1.1**
AGG	**Agios Georgios**	**45.10**	**319**	*e*P		**P**	**07 43 27.1**	**-0.4**
AGG	**Agios Georgios**	**45.10**	**319**	P		**P**	**07 43 24.4**	**-3.1**
RLS	**Riolos of Patr**	**45.16**	**317**	*e*P		**P**	**07 43 29.6**	**+1.6**
EVR	**Evrytania**	**45.38**	**319**	*e*P		**P**	**07 43 36.3**	**+6.5**
ZRNK	**Zerenda**	**45.51**	**8**	P		**P**	**07 43 30.7**	**+0.2**
ZRNK					pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1							
ZRNK	**Zerenda** comp=Z,30nm,1.1s,mb5.1	**45.51**	**8**	P		**P**	**07 43 30.7**	**+0.2**
KURK	**Kurchatov**	**45.55**	**17**	*ce*P		**P**	**07 43 32.4**	**+1.5**
KURK					pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6							
KURK	**Kurchatov** comp=Z,9.0nm,1.2s,mb4.6	**45.55**	**17**	*e*P		**P**	**07 43 32.4**	**+1.5**
VOSK	**Vostochnaya**	**45.61**	**10**	P		**P**	**07 43 30.9**	**-0.4**
VOSK					pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2							
VOSK	**Vostochnaya** comp=Z,34nm,1.1s,mb5.2	**45.61**	**10**	P		**P**	**07 43 30.9**	**-0.4**
BRVK	**Borovoye**	**45.81**	**9**	*ce*P		**P**	**07 43 35.7**	**+2.8**
BRVK					pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8							
BRVK	**Borovoye** SNR=7.6	**45.81**	**9**	P		**P**	**07 43 40.0**	**+7.1**
BRVK	**Borovoye** SNR=7.6	**45.81**	**9**	P		**P**	**07 43 40.0**	**+7.1**
LBTB	**Lobatse** comp=Z,4.0nm,0.8s,mb4.4,baz=52,slow=12,SNR=5.3	**46.25**	**224**	P		**P**	**07 43 38.3**	**+1.6**
LBTB	**Lobatse**	**46.25**	**224**	P		**P**	**07 43 38.3**	**+1.5**
KIS	**Kishinev**	**46.59**	**332**	*e*P		**P**	**07 43 38.0**	**-1.1**
KIS					*e*		07 43 45.0	
KIS					MLR	MLR		
	comp=Z,400nm,15.0s,MS4.5							
KIS					MLR	MLR		
	comp=Z,300nm,16.0s							
KIS	**Kishinev**	**46.59**	**332**	*e*P		**P**	**07 43 38.0**	**-1.1**
VTS	**Vitosha**	**46.62**	**324**	⇑P		**P**	**07 43 40.3**	**+0.9**
VTS	**Vitosha**	**46.62**	**324**	*e*P		**P**	**07 43 40.5**	**+1.0**
VTS	**Vitosha**	**46.62**	**324**	⇑*i*P		**P**	**07 43 40.3**	**+0.8**
VTS	**Vitosha**	**46.62**	**324**	⇑*i*P		**P**	**07 43 40.3**	**+0.8**
VRI	**Vrincioaia**	**46.81**	**329**	⇑P		**P**	**07 43 41.7**	**+0.9**
VRI	**Vrincioaia**	**46.81**	**329**	⇑*i*P		**P**	**07 43 41.7**	**+0.8**
VRI	**Vrincioaia**	**46.81**	**329**	⇑*i*P		**P**	**07 43 41.7**	**+0.8**
PLOR	**Plostina**	**46.84**	**329**	⇑P		**P**	**07 43 42.7**	**+1.6**
PLOR	**Plostina**	**46.84**	**329**	⇑P		**P**	**07 43 42.7**	**+1.6**
PLOR	**Plostina**	**46.84**	**329**	⇑*i*P		**P**	**07 43 42.7**	**+1.6**
MLR	**Muntele Rosu**	**46.95**	**328**	⇓P		**P**	**07 43 43.3**	**+1.3**
MLR	**Muntele Rosu**	**46.95**	**328**	⇓*i*P		**P**	**07 43 43.3**	**+1.3**
MLR	**Muntele Rosu**	**46.95**	**328**	⇓*i*P		**P**	**07 43 43.3**	**+1.3**
TESR		**47.29**	**330**	⇑P		**P**	**07 43 44.6**	**0.0**
TESR		**47.29**	**330**	⇑*i*P		**P**	**07 43 44.6**	**-0.1**
TESR		**47.29**	**330**	⇑*i*P		**P**	**07 43 44.6**	**-0.1**
VOIR		**47.39**	**328**	⇑P		**P**	**07 43 45.7**	**+0.3**
VOIR		**47.39**	**328**	⇑*i*P		**P**	**07 43 45.7**	**+0.3**
VOIR		**47.39**	**328**	⇑*i*P		**P**	**07 43 45.7**	**+0.3**
GTA	**Gaotai**	**48.04**	**43**	*e*P		**P**	**07 43 52.1**	**+1.5**
GTA					pP	pP	07 43 56.3	+2.5
GTA					sP	sP	07 43 59.9	+4.9
GTA					pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4							
ARU	**Arti**	**48.26**	**360**	*e*P		**P**	**07 43 53.5**	**+1.5**
ARU							07 45 42.4	
ARU					S	**S**	**07 50 52.4**	**+0.9**
ARU					SS	SS	07 54 11.1	-10
ARU	**Arti**	**48.26**	**360**	*e*P		**P**	**07 43 53.5**	**+1.5**
ARU					S	**S**	**07 50 52.4**	**+0.9**
SVE	**Sverdlovsk**	**48.68**	**1**	*e*P		**P**	**07 43 55.6**	**+0.4**
SVE					*e*S	**S**	**07 50 53.7**	**-3.6**
SVE					pmax	pmax		
	comp=Z,24nm,1.3s,mb5.1							
SVE					MLR	MLR		
	comp=Z,446nm,20.0s,MS4.5							
SVE	**Sverdlovsk** comp=Z,446nm,20.0s	**48.68**	**1**	*e*P		**P**	**07 43 55.6**	**+0.4**
SVE					*e*S	**S**	**07 50 53.7**	**-3.6**
BURAR	**Bucovina Array**	**48.76**	**330**	⇓P		**P**	**07 43 56.2**	**+0.2**
BURAR	**Bucovina Array**	**48.76**	**330**	⇓*i*P		**P**	**07 43 56.2**	**+0.2**
BURAR	**Bucovina Array**	**48.76**	**330**	⇓*i*P		**P**	**07 43 56.2**	**+0.2**
BOSA	**Boshof** comp=Z,5.2nm,1.0s,mb4.5,baz=21,slow=8.6,SNR=2.9	**48.88**	**220**	P		**P**	**07 43 57.8**	**+0.6**
BOSA					LR	LR	08 02 02.3	
	comp=Z,537nm,18.0s,MS4.6,baz=50,slow=33							
BOSA	**Boshof**	**48.88**	**220**	P		**P**	**07 43 57.8**	**+0.7**
TSUM	**Tsumeb** comp=Z,7.2nm,1.1s,mb4.6,baz=36,slow=14,SNR=4.1	**48.98**	**236**	P		**P**	**07 44 00.2**	**+2.1**
TSUM	**Tsumeb**	**48.98**	**236**	P		**P**	**07 44 00.2**	**+2.1**
AKASG	**Malin Array Be** comp=Z,5.4nm,0.9s,mb4.6,baz=138,slow=6.9,SNR=15	**49.17**	**335**	P		**P**	**07 43 58.5**	**-0.5**
AKASG					PcP	PcP	07 45 21.9	-0.5
	comp=Z,0.3nm,0.3s,baz=136,slow=2.6,SNR=5.1							
AKASG					LR	LR	08 07 15.1	
	comp=Z,210nm,19.4s,MS4.1,baz=125,slow=39							
AKASG	**Malin Array Be**	**49.17**	**335**	P		**P**	**07 43 58.5**	**-0.6**
AKASG							07 45 21.9	
AKASG	**Malin Array Be**	**49.17**	**335**	P		**P**	**07 43 58.5**	**-0.6**
AKASG	**Malin Array Be**	**49.17**	**335**	PcP		PcP	07 45 21.9	-0.4
KIEV	**Kiev**	**49.17**	**335**	*e*P		**P**	**07 43 58.9**	**-0.2**
	comp=Z,87nm,1.8s,mb5.5							
KIEV	**Kiev**	**49.17**	**335**	*e*P		**P**	**07 43 58.9**	**-0.2**
KIEV					pmax	pmax		
	comp=Z,87nm,1.8s,mb5.5							
KIEV	**Kiev**	**49.17**	**335**	*e*P		**P**	**07 43 58.9**	**-0.2**
	comp=Z,87nm,1.8s,mb5.5							
BZS	**Buzias**	**49.37**	**326**	⇓P		**P**	**07 44 00.5**	**-0.2**
BZS	**Buzias**	**49.37**	**326**	⇓*i*P		**P**	**07 44 00.5**	**-0.2**
BZS	**Buzias**	**49.37**	**326**	⇓*i*P		**P**	**07 44 00.5**	**-0.2**
LZH	**Lanzhou**	**49.43**	**49**	*e*P		**P**	**07 44 02.5**	**+1.1**
LZH					pP	pP	07 44 07.0	+2.5
LZH					sP	sP	07 44 09.3

VYHS Vyhne 52.62 327 *e*P **P** **07 44 24.7 -0.4**
VYHS pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
VYHS Vyhne 52.62 327 *e*P **P** **07 44 24.7 -0.4**
VYHS epP pP 07 44 31.9 +3.6
VYHS Vyhne 52.62 327 *e*P **P** **07 44 24.7 -0.4**
comp=Z,10nm,1.2s,mb4.6
KOLL Kolacno 52.90 327 *e*P **P** **07 44 27.1 -0.1**
KOLL ePP pP 07 44 34.5 +4.1
KOLL Kolacno 52.90 327 *e*P **P** **07 44 27.1 -0.1**
KOLL epP pP 07 44 34.5 +4.1
KOLL Kolacno 52.90 327 *e*P **P** **07 44 27.1 -0.1**
KEST Kesra 52.96 309 P **P** **07 44 28.8 +0.9**
comp=Z,1.0nm,1.0s,baz=78,slow=8.0,SNR=2.0
KEST LR LR 08 08 39.1
comp=Z,72nm,18.9s,MS3.7,baz=328,slow=38
ZST Bratislava 53.38 326 *e*pP pP 07 44 37.4 +3.4
SOP Sopron 53.40 325⇑ *e*P **P** **07 44 31.1 +0.2**
OKC Ostrava-Krasne 53.78 328 *e*P **P** **07 44 34.8 +1.2**
OKC *e**PP pP 07 44 40.4 +3.6
OKC MLR MLR
comp=Z,200nm,19.1s,MS4.2
OKC Ostrava-Krasne 53.78 328 *e*P **P** **07 44 34.8 +1.2**
OKC epP pP 07 44 40.4 +3.6
OKC AMS AMS 08 09 30.0
comp=Z,200nm,19.1s
OKC Ostrava-Krasne 53.78 328 *e*P **P** **07 44 34.8 +1.2**
comp=Z,200nm,19.1s
CONA Conrad Observa 53.93 325⇑ *i*P **P** **07 44 34.9 +0.1**
comp=Z,34nm,1.7s,mb5.0
CONA Conrad Observa 53.93 325 P **P** **07 44 34.9 +0.1**
comp=Z,34nm,1.7s,mb5.0
MORC Moravsky Berou 54.06 328⇑ *i*P **P** **07 44 35.5 -0.1**
MORC Moravsky Berou 54.06 328⇑ *i*P **P** **07 44 35.5 -0.2**
MORC Moravsky Berou 54.06 328 P **P** **07 44 35.6 -0.1**
VRAC Vranov 54.29 327 *e*P **P** **07 44 37.1 -0.3**
KLMR Klimovskoe 54.67 348 *e*P **P** **07 44 38.5 -1.5**
KLMR pmax pmax
comp=Z,79nm,1.9s,mb5.4
KLMR Klimovskoe 54.67 348 *e*P **P** **07 44 38.5 -1.5**
comp=Z,79nm,1.9s,mb5.4
MOA Molln 54.79 325⇓ *i*P **P** **07 44 41.0 -0.1**
comp=Z,18nm,1.1s,mb5.0
MOA Molln 54.79 325 P **P** **07 44 41.0 -0.1**
comp=Z,18nm,1.1s,mb5.0
TREC Trest 54.89 327 AMS AMS 08 12 20.0
comp=Z,200nm,20.8s
DPC Dobruska-Polom 55.03 328 *e*P **P** **07 44 42.6 -0.2**
DPC *e**PP pP 07 44 49.4 +3.4
DPC MLR MLR
comp=Z,200nm,22.7s,MS4.1
DPC Dobruska-Polom 55.03 328 *e*P **P** **07 44 42.6 -0.2**
DPC epP pP 07 44 49.4 +3.4
DPC AMS AMS 08 10 20.0
comp=Z,200nm,22.7s
DPC Dobruska-Polom 55.03 328 *e*P **P** **07 44 42.6 -0.2**
comp=Z,200nm,22.7s
ABTA Abfaltersbach 55.27 323⇑ *i*P **P** **07 44 44.6 +0.1**
comp=Z,18nm,1.3s,mb4.9
ABTA Abfaltersbach 55.27 323 P **P** **07 44 44.6 +0.1**
comp=Z,18nm,1.3s,mb4.9
UPC Upice 55.29 328 *e*P **P** **07 44 44.3 -0.3**
UPC *e**PP pP 07 44 50.7 +2.9
UPC Upice 55.29 328 *e*P **P** **07 44 44.3 -0.3**
UPC epP pP 07 44 50.7 +2.9
UPC Upice 55.29 328 *e*P **P** **07 44 44.3 -0.3**
KSP Ksiaz 55.33 328 *e*P **P** **07 44 44.7 -0.2**
KSP Ksiaz 55.33 328 *e*P **P** **07 44 44.7 -0.2**
PGF Pioggiola 55.67 317 *e*P **P** **07 44 46.1 -1.4**
comp=Z,123nm,1.5s,mb5.4
PGF Pioggiola 55.67 317 *e*P **P** **07 44 46.1 -1.4**
comp=Z,61nm,1.5s,mb5.4
PGF Pioggiola 55.67 317 *e*P **P** **07 44 46.1 -1.4**
PGF pmax pmax
comp=Z,61nm,1.5s,mb5.4
PGF Pioggiola 55.67 317 *e*P **P** **07 44 46.1 -1.4**
comp=Z,61nm,1.5s,mb5.4
PRU Pruhonice 55.78 327 *e*P **P** **07 44 48.7 +0.6**
PRU *e**PP pP 07 44 55.0 +3.6
PRU MLR MLR
comp=Z,200nm,18.9s,MS4.2
PRU Pruhonice 55.78 327 *e*P **P** **07 44 48.7 +0.6**
PRU epP pP 07 44 55.0 +3.6
PRU AMS AMS 08 11 40.0
comp=Z,200nm,18.9s
PRU Pruhonice 55.78 327 *e*P **P** **07 44 48.7 +0.6**
comp=Z,200nm,18.9s
KHC Kasperske Hory 55.85 326 *e*P **P** **07 44 47.4 -1.3**
KHC *e**PP pP 07 44 54.4 +2.5
KHC MLR MLR
comp=Z,200nm,21.0s,MS4.2
KHC Kasperske Hory 55.85 326 *e*P **P** **07 44 47.4 -1.3**
KHC epP pP 07 44 54.4 +2.5
KHC AMS AMS 08 04 40.0
comp=Z,200nm,21.0s
KHC Kasperske Hory 55.85 326 *e*P **P** **07 44 47.4 -1.3**
comp=Z,200nm,21.0s
WTTA Wattenberg 56.04 323⇑ *i*P **P** **07 44 49.6 -0.5**
comp=Z,26nm,1.4s,mb5.1
WTTA Wattenberg 56.04 323 P **P** **07 44 49.6 -0.5**
comp=Z,26nm,1.4s,mb5.1
PVCC Panska Ves 56.06 327 *e*P **P** **07 44 49.8 -0.4**
PVCC *e**PP pP 07 44 56.6 +3.2
PVCC MLR MLR
comp=Z,200nm,15.5s,MS4.3
PVCC Panska Ves 56.06 327 *e*P **P** **07 44 49.8 -0.4**
PVCC epP pP 07 44 56.6 +3.2
PVCC AMS AMS 08 13 20.0
comp=Z,200nm,15.5s
PVCC Panska Ves 56.06 327 *e*P **P** **07 44 49.8 -0.4**
comp=Z,200nm,15.5s
SONM Songino Array 56.33 37 P **P** **07 44 52.2 +0.1**
comp=Z,2.7nm,1.1s,mb4.2,baz=226,slow=6.6,SNR=10
SONM LR LR 08 11 20.2
comp=Z,187nm,19.1s,MS4.2,baz=214,slow=39
SONM Songino Array 56.33 37 P **P** **07 44 52.2 +0.1**
MOTA Moosalm 56.40 323⇓ *i*P **P** **07 44 51.7 -0.9**
comp=Z,14nm,1.0s,mb5.0
MOTA Moosalm 56.40 323 P **P** **07 44 51.7 -0.9**
comp=Z,14nm,1.0s,mb5.0
TORD Torodi Ar. Bea 56.47 280 P **P** **07 44 54.6 +0.9**
comp=Z,5.5nm,1.0s,mb4.6,baz=85,slow=5.5,SNR=16
TORD LR LR 08 08 29.2
comp=Z,132nm,20.8s,MS4.0,baz=140,slow=35
TORD Torodi Ar. Bea 56.47 280 P **P** **07 44 54.6 +0.9**
BRG Berggiesshubel 56.58 327 *e*P **P** **07 44 53.4 -0.5**
comp=Z,5.8nm,1.0s,mb4.6
BRG *e* 07 44 59.9
comp=Z,7.0nm,0.9s
BRG Berggiesshubel 56.58 327 *e*P **P** **07 44 53.3 -0.6**
BRG *e* 07 44 59.9
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
BRG pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
BRG Berggiesshubel 56.58 327 *e*P **P** **07 44 53.3 -0.6**
comp=Z,4.0nm,1.0s,mb4.4
NKC Novy Kostel 57.05 326 *e*P **P** **07 44 57.6 +0.4**
NKC *e**PP pP 07 45 04.5 +4.1
NKC MLR MLR
comp=Z,200nm,21.8s,MS4.2
NKC Novy Kostel 57.05 326 *e*P **P** **07 44 57.6 +0.4**
NKC epP pP 07 45 04.5 +4.1
NKC AMS AMS 08 12 30.0
comp=Z,200nm,21.8s
NKC Novy Kostel 57.05 326 *e*P **P** **07 44 57.6 +0.4**
comp=Z,200nm,21.8s
SBF Sospel 57.23 318 *e*P **P** **07 44 56.5 -2.1**
SBF Sospel 57.23 318 *e*P **P** **07 44 56.5 -2.1**
CLL Collm 57.32 328 *i*P **P** **07 45 00.9 +1.8**
CLL *i* pP 07 45 05.0 +2.7
CLL Collm 57.32 328 *i*P **P** **07 45 00.9 +1.8**
CLL *i*sP sP 07 45 05.0 +1.5
comp=Z,55nm,2.0s
CLL Collm 57.32 328 *i*P **P** **07 45 00.9 +1.8**
GRA1 Grafenberg Arr 57.46 325 *e*P **P** **07 44 59.2 -0.9**
comp=Z,10.0nm,1.1s,mb4.8
GRA1 Grafenberg Arr 57.46 325 *e*P **P** **07 44 59.2 -0.9**
comp=Z,10.0nm,1.1s,mb4.8
GRF Grafenberg Arr 57.46 325 *e*P **P** **07 44 59.2 -0.9**
comp=Z,10.0nm,1.1s,mb4.8
GRF Grafenberg Arr 57.46 325 *e*P **P** **07 44 59.2 -0.9**
comp=Z,10.0nm,1.1s,mb4.8
GRF Grafenberg Arr 57.46 325 *e*P **P** **07 44 59.2 -0.9**
GRF pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
GRF Grafenberg Arr 57.46 325 *e*P **P** **07 44 59.2 -0.9**
comp=Z,10.0nm,1.1s,mb4.8
FRF La Foret Royal 57.65 317 *e*P **P** **07 45 00.2 -1.4**
comp=Z,168nm,1.7s,mb5.5
FRF La Foret Royal 57.65 317 *e*P **P** **07 45 00.2 -1.4**
comp=Z,84nm,1.7s,mb5.5
FRF La Foret Royal 57.65 317 *e*P **P** **07 45 00.2 -1.4**
FRF pmax pmax
comp=Z,84nm,1.7s,mb5.5
FRF La Foret Royal 57.65 317 *e*P **P** **07 45 00.2 -1.4**
comp=Z,84nm,1.7s,mb5.5
LMR La Mourre 57.66 317 *e*P **P** **07 44 59.4 -2.2**
LMR La Mourre 57.66 317 *e*P **P** **07 44 59.4 -2.2**
MBDF Montbardon 58.01 318 *e*P **P** **07 45 02.2 -1.9**
comp=Z,26nm,1.1s,mb4.9
MBDF Montbardon 58.01 318 *e*P **P** **07 45 02.2 -1.9**
comp=Z,13nm,1.1s,mb4.9
MBDF Montbardon 58.01 318 *e*P **P** **07 45 02.2 -1.9**
MBDF pmax pmax
comp=Z,13nm,1.1s,mb4.9
MBDF Montbardon 58.01 318 *e*P **P** **07 45 02.2 -1.9**
comp=Z,13nm,1.1s,mb4.9
LPG La Plagne 58.32 319 *e*P **P** **07 45 04.7 -1.5**
comp=Z,55nm,1.4s,mb5.1
LPG La Plagne 58.32 319 *e*P **P** **07 45 04.7 -1.5**
comp=Z,27nm,1.4s,mb5.1
LPG La Plagne 58.32 319 *e*P **P** **07 45 04.7 -1.5**
LPG pmax pmax
comp=Z,27nm,1.4s,mb5.1
LPG La Plagne 58.32 319 *e*P **P** **07 45 04.7 -1.5**
comp=Z,27nm,1.4s,mb5.1
JOF Joensuu 58.34 346 *e*P **P** **07 45 03.4 -2.6**
JOF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
JOF Joensuu 58.34 346 *ep* **P** **07 45 03.4 -2.6**
comp=Z,3.0nm,0.7s,mb4.4
JOF Joensuu 58.34 346 *e*P **P** **07 45 03.4 -2.6**
comp=Z,3.0nm,0.7s,mb4.4
LPL La Plagne 58.34 319 *e*P **P** **07 45 04.9 -1.5**
comp=Z,91nm,1.6s,mb5.2
LPL La Plagne 58.34 319 *e*P **P** **07 45 04.9 -1.5**
comp=Z,46nm,1.6s,mb5.3
LPL La Plagne 58.34 319 *e*P **P** **07 45 04.9 -1.5**
LPL pmax pmax
comp=Z,46nm,1.6s,mb5.3
LPL La Plagne 58.34 319 *e*P **P** **07 45 04.9 -1.5**
comp=Z,46nm,1.6s,mb5.2
FELD Feldberg im Sc 58.51 322 *e*P **P** **07 45 07.6 +0.1**
FELD Feldberg im Sc 58.51 322 *e*P **P** **07 45 07.6 +0.1**
SMRF Simiane la Rot 58.52 317 *e*P **P** **07 45 05.6 -2.1**
SMRF Simiane la Rot 58.52 317 *e*P **P** **07 45 05.6 -2.1**
FINES FINESS Array B 58.58 342 P **P** **07 45 07.1 -0.7**
FINES LR LR 08 13 06.2
FINES FINESS Array B 58.58 342 P **P** **07 45 07.1 -0.7**
comp=Z,5.6nm,0.9s,mb4.6,baz=116,slow=8.7,SNR=11
FINES LR LR 08 13 06.2
comp=Z,163nm,20.2s,MS4.1,baz=157,slow=39
FINES FINESS Array B 58.58 342 P **P** **07 45 07.1 -0.6**
ORIF Oris-en-Rattie 58.67 318 *e*P **P** **07 45 06.7 -2.0**
comp=Z,23nm,1.2s,mb4.8
ORIF *e*MLR MLR
comp=Z,140nm,21.5s,MS3.8
ORIF Oris-en-Rattie 58.67 318 *e*P **P** **07 45 06.7 -2.0**
comp=Z,11nm,1.2s,mb4.8
ORIF Oris-en-Rattie 58.67 318 *e*P **P** **07 45 06.7 -2.0**
ORIF pmax pmax
comp=Z,11nm,1.2s,mb4.8
ORIF Oris-en-Rattie 58.67 318 *e*P **P** **07 45 06.7 -2.0**
comp=Z,11nm,1.2s,mb4.8
LOMF Lomont 59.01 321 *e*P **P** **07 45 11.1 +0.1**
LOMF Lomont 59.01 321 *e*P **P** **07 45 11.1 +0.1**
MOF Molkenrain 59.03 322 *e*P **P** **07 45 09.4 -1.8**
MOF Molkenrain 59.03 322 *e*P **P** **07 45 09.4 -1.8**
KAF Kangasniemi 59.03 343 *e*P **P** **07 45 09.4 -1.5**
KAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KAF Kangasniemi 59.03 343 *ep* **P** **07 45 09.4 -1.5**
comp=Z,5.8nm,0.8s,mb4.7
KAF Kangasniemi 59.03 343 *e*P **P** **07 45 09.4 -1.5**
comp=Z,6.0nm,0.8s,mb4.7
ECH Echery 59.17 322 *e*P **P** **07 45 12.0 -0.1**
ECH Echery 59.17 322 *e*P **P** **07 45 12.0 -0.1**
CABF La Chapelle 59.18 320 *e*P **P** **07 45 11.5 -0.7**
comp=Z,193nm,1.1s,mb5.8
CABF La Chapelle 59.18 320 *e*P **P** **07 45 11.5 -0.7**
comp=Z,96nm,1.1s,mb5.7
CABF La Chapelle 59.18 320 *e*P **P** **07 45 11.5 -0.7**
CABF pmax pmax
comp=Z,96nm,1.1s,mb5.7
CABF La Chapelle 59.18 320 *e*P **P** **07 45 11.5 -0.7**
comp=Z,96nm,1.1s,mb5.8
CDF Champ du Feu 59.18 322 *e*P **P** **07 45 10.9 -1.3**
comp=Z,118nm,1.4s,mb5.4
CDF Champ du Feu 59.18 322 *e*P **P** **07 45 10.9 -1.3**
comp=Z,59nm,1.4s,mb5.4
CDF Champ du Feu 59.18 322 *e*P **P** **07 45 10.9 -1.3**
CDF pmax pmax
comp=Z,59nm,1.4s,mb5.4
CDF Champ du Feu 59.18 322 *e*P **P** **07 45 10.9 -1.3**
comp=Z,59nm,1.4s,mb5.4
HINF Hinteralfeld 59.19 322 *e*P **P** **07 45 10.6 -1.6**
comp=Z,43nm,1.3s,mb5.0
HINF Hinteralfeld 59.19 322 *e*P **P** **07 45 10.6 -1.6**
comp=Z,22nm,1.3s,mb5.0
HINF Hinteralfeld 59.19 322 *e*P **P** **07 45 10.6 -1.6**
HINF pmax pmax
comp=Z,22nm,1.3s,mb5.0
HINF Hinteralfeld 59.19 322 *e*P **P** **07 45 10.6 -1.6**
comp=Z,22nm,1.3s,mb5.0
VIVF Saint-Julien-l 59.44 318 *e*P **P** **07 45 12.4 -1.7**
VIVF Saint-Julien-l 59.44 318 *e*P **P** **07 45 12.4 -1.7**
VIVF Saint-Julien-l 59.44 318 *e*P **P** **07 45 12.4 -1.7**
VIVF Saint-Julien-l 59.44 318 *e*P **P** **07 45 12.4 -1.7**
HAU Haudompre 59.58 322 *e*P **P** **07 45 13.1 -1.8**
comp=Z,24nm,1.1s,mb4.8
HAU *e*MLR MLR
comp=Z,105nm,19.8s,MS3.7
HAU Haudompre 59.58 322 *e*P **P** **07 45 13.1 -1.8**
comp=Z,12nm,1.1s,mb4.8
HAU LR LR
comp=Z,110nm,19.8s,MS4.0
HAU Haudompre 59.58 322 *e*P **P** **07 45 13.1 -1.8**
HAU pmax pmax
comp=Z,12nm,1.1s,mb4.8
HAU MLR MLR
comp=Z,110nm,19.8s,MS4.0
HAU Haudompre 59.58 322 *e*P **P** **07 45 13.1 -1.8**
comp=Z,12nm,1.1s,mb4.8
LASF Ste Croix 59.72 317 *e*P **P** **07 45 14.3 -1.7**
LASF Ste Croix 59.72 317 *e*P **P** **07 45 14.3 -1.7**
LASF Ste Croix 59.72 317 *e*P **P** **07 45 14.3 -1.7**
RUP Ruppelstein 59.86 324 *e*P **P** **07 45 16.9 0.0**
RUP Ruppelstein 59.86 324 *e*P **P** **07 45 16.9 0.0**
THEF They Montfort 59.89 322 *e*P **P** **07 45 16.3 -0.8**
THEF They Montfort 59.89 322 *e*P **P** **07 45 16.3 -0.8**
WLF Walferdange 60.38 323 P **P** **07 45 20.7 +0.3**
SFTF Sexfontaines 60.46 322 *e*P **P** **07 45 19.6 -1.4**
comp=Z,82nm,1.3s,mb5.3
SFTF Sexfontaines 60.46 322 *e*P **P** **07 45 19.6 -1.4**
comp=Z,82nm,1.3s,mb5.6
SFTF Sexfontaines 60.46 322 *e*P **P** **07 45 19.6 -1.4**
comp=Z,41nm,1.3s,mb5.3
LBL Lubilhac 60.52 318 *e*P **P** **07 45 21.9 +0.4**
LBL Lubilhac 60.52 318 *e*P **P** **07 45 21.9 +0.4**
MEZF Maizieres J'vi 60.57 322 *e*P **P** **07 45 20.5 -1.2**
comp=Z,221nm,1.8s,mb5.7
MEZF Maizieres J'vi 60.57 322 *e*P **P** **07 45 20.5 -1.2**
comp=Z,221nm,1.8s,mb6.0
MEZF Maizieres J'vi 60.57 322 *e*P **P** **07 45 20.5 -1.2**
comp=Z,110nm,1.8s,mb5.7
MTLF Montolieu 60.61 316 *e*P **P** **07 45 20.6 -1.5**
MTLF Montolieu 60.61 316 *e*P **P** **07 45 20.6 -1.5**
SMF Signal de Mont 60.63 320 *e*P **P** **07 45 20.3 -1.9**
comp=Z,19nm,1.1s,mb4.8
SMF Signal de Mont 60.63 320 *e*P **P** **07 45 20.3 -1.9**
comp=Z,9.6nm,1.1s,mb4.8
SMF Signal de Mont 60.63 320 *e*P **P** **07 45 20.3 -1.9**
SMF pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
SMF Signal de Mont 60.63 320 *e*P **P** **07 45 20.3 -1.9**
comp=Z,9.6nm,1.1s,mb4.8
LOR Lormes 60.84 320 *e*P **P** **07 45 21.9 -1.7**
comp=Z,71nm,1.5s,mb5.3
LOR *e*MLR MLR
comp=Z,90nm,20.2s,MS3.6
LOR Lormes 60.84 320 *e*P **P** **07 45 21.9 -1.7**
comp=Z,35nm,1.5s,mb5.3
LOR LR LR
comp=Z,90nm,20.3s,MS3.9
LOR Lormes 60.84 320 *e*P **P** **07 45 21.9 -1.7**
LOR pmax pmax
comp=Z,35nm,1.5s,mb5.3
LOR MLR MLR
comp=Z,90nm,20.3s,MS3.9
LOR Lormes 60.84 320 *e*P **P** **07 45 21.9 -1.7**
comp=Z,35nm,1.5s,mb5.3
MEM Membach 60.87 324 P **P** **07 45 24.6 +0.9**
AGO Saint Agoulin 60.88 319 *e*P **P** **07 45 24.9 +1.0**
AGO Saint Agoulin 60.88 319 *e*P **P** **07 45 24.9 +1.0**
SSF Saint Saulge 60.99 320 *e*P **P** **07 45 22.9 -1.7**
comp=Z,20nm,1.2s,mb5.1
SSF Saint Saulge 60.99 320 *e*P **P** **07 45 22.9 -1.7**
comp=Z,20nm,1.2s,mb5.1
SSF Saint Saulge 60.99 320 *e*P **P** **07 45 22.9 -1.7**
SSF pmax pmax
comp=Z,20nm,1.2s,mb5.1
SSF Saint Saulge 60.99 320 *e*P **P** **07 45 22.9 -1.7**
comp=Z,20nm,1.2s,mb5.1
AVF Avril sur Loir 60.99 320 *e*P **P** **07 45 22.7 -2.0**
AVF Avril sur Loir 60.99 320 *e*P **P** **07 45 22.7 -2.0**
BCLA Clavier 61.19 324 P **P** **07 45 26.1 +0.2**
comp=Z,14nm,2.0s,mb4.8
CAF Calviac 61.21 317 *e*P **P** **07 45 24.9 -1.3**
CAF Calviac 61.21 317 *e*P **P** **07 45 24.9 -1.3**
BGF Bois d'Agland 61.24 319 *e*P **P** **07 45 25.0 -1.3**
comp=Z,35nm,0.8s,mb5.2
BGF Bois d'Agland 61.24 319 *e*P **P** **07 45 25.0 -1.3**
comp=Z,18nm,0.8s,mb5.2
BGF Bois d'Agland 61.24 319 *e*P **P** **07 45 25.0 -1.3**
BGF pmax pmax
comp=Z,18nm,0.8s,mb5.2
BGF Bois d'Agland 61.24 319 *e*P **P** **07 45 25.0 -1.3**
comp=Z,18nm,0.8s,mb5.2
GIVF Givet 61.34 323 *e*P **P** **07 45 25.7 -1.3**
comp=Z,58nm,1.2s,mb5.3
GIVF Givet 61.34 323 *e*P **P** **07 45 25.7 -1.3**
comp=Z,29nm,1.2s,mb5.3
GIVF Givet 61.34 323 *e*P **P** **07 45 25.7 -1.3**
GIVF pmax pmax
comp=Z,29nm,1.2s,mb5.3
GIVF Givet 61.34 323 *e*P **P** **07 45 25.7 -1.3**
comp=Z,29nm,1.2s,mb5.3
DOU Dourbes 61.48 323 P **P** **07 45 28.3 +0.5**
TCF Toulx Ste Croi 61.56 319 *e*P **P** **07 45 27.0 -1.5**
comp=Z,29nm,1.4s,mb4.9
TCF Toulx Ste Croi 61.56 319 *e*P **P** **07 45 27.0 -1.5**
comp=Z,14nm,1.4s,mb4.9
TCF Toulx Ste Croi 61.56 319 *e*P **P** **07 45 27.0 -1.5**
TCF pmax pmax
comp=Z,15nm,1.4s,mb4.9
TCF Toulx Ste Croi 61.56 319 *e*P **P** **07 45 27.0 -1.5**
comp=Z,14nm,1.4s,mb4.9
BAIF Baives 61.69 323 *e*P **P** **07 45 28.1 -1.2**
comp=Z,44nm,1.1s,mb5.2
BAIF Baives 61.69 323 *e*P **P** **07 45 28.1 -1.2**
comp=Z,22nm,1.1s,mb5.2
BAIF Baives 61.69 323 *e*P **P** **07 45 28.1 -1.2**
BAIF pmax pmax
comp=Z,22nm,1.1s,mb5.2
BAIF Baives 61.69 323 *e*P **P** **07 45 28.1 -1.2**
comp=Z,22nm,1.1s,mb5.2
RJF Les Rejaudoux 61.70 317 *e*P **P** **07 45 28.2 -1.3**
comp=Z,50nm,1.4s,mb5.2
RJF *e*MLR MLR
comp=Z,93nm,22.8s,MS3.6
RJF Les Rejaudoux 61.70 317 *e*P **P** **07 45 28.2 -1.3**
comp=Z,25nm,1.4s,mb5.2
RJF LR LR
comp=Z,90nm,22.8s,MS3.9
RJF Les Rejaudoux 61.70 317 *e*P **P** **07 45 28.2 -1.3**
RJF pmax pmax
comp=Z,25nm,1.4s,mb5.2
RJF MLR MLR
comp=Z,90nm,22.8s,MS3.9
RJF Les Rejaudoux 61.70 317 *e*P **P** **07 45 28.2 -1.3**
comp=Z,25nm,1.4s,mb5.2
SNF Seneffe 61.83 324 P **P** **07 45 30.3 +0.1**
comp=Z,13nm,2.3s,mb4.7
EPF Esparros 61.83 315 *e*P **P** **07 45 28.7 -1.7**
EPF Esparros 61.83 315 *e*P **P** **07 45 28.7 -1.7**
LFF La Frestale 62.11 317 *e*P **P** **07 45 31.2 -1.0**
LFF La Frestale 62.11 317 *e*P **P** **07 45 31.2 -1.0**
ETSF Etsaut 62.43 314 *e*P **P** **07 45 33.9 -0.5**
comp=Z,83nm,1.7s,mb5.3
ETSF Etsaut 62.43 314 *e*P **P** **07 45 33.9 -0.5**
comp=Z,42nm,1.7s,mb5.3
ETSF Etsaut 62.43 314 *e*P **P** **07 45 33.9 -0.5**
ETSF pmax pmax
comp=Z,42nm,1.7s,mb5.3
ETSF Etsaut 62.43 314 *e*P **P** **07 45 33.9 -0.5**
comp=Z,42nm,1.7s,mb5.3
SJPF Ste Jean 62.95 314 *e*P **P** **07 45 37.4 -0.5**
comp=Z,39nm,1.3s,mb5.1
SJPF Ste Jean 62.95 314 *e*P **P** **07 45 37.4 -0.5**
comp=Z,20nm,1.3s,mb5.1
SJPF Ste Jean 62.95 314 *e*P **P** **07 45 37.4 -0.5**
SJPF pmax pmax
comp=Z,19nm,1.3s,mb5.1
SJPF Ste Jean 62.95 314 *e*P **P** **07 45 37.4 -0.5**
comp=Z,20nm,1.3s,mb5.1
MFF Saint Martin d 63.21 318 *e*P **P** **07 45 37.9 -1.6**
comp=Z,51nm,1.5s,mb5.1
MFF Saint Martin d 63.21 318 *e*P **P** **07 45 37.9 -1.6**
comp=Z,26nm,1.5s,mb5.1
MFF Saint Martin d 63.21 318 *e*P **P** **07 45 37.9 -1.6**
MFF pmax pmax
comp=Z,25nm,1.5s,mb5.1
MFF Saint Martin d 63.21 318 *e*P **P** **07 45 37.9 -1.6**
comp=Z,26nm,1.5s,mb5.1
KIC Kosan Boka 63.22 273 *e*P **P** **07 45 41.5 +1.3**
comp=Z,58nm,1.3s,mb5.5
KIC Kosan Boka 63.22 273 *e*P **P** **07 45 41.5 +1.3**
comp=Z,58nm,1.3s,mb5.5
DBIC Dimbokro 63.30 273 P **P** **07 45 41.6 +0.9**
comp=Z,7.3nm,0.8s,mb4.8,baz=107,slow=2.8,SNR=6.8
DBIC LR LR 08 13 47.2
comp=Z,113nm,18.8s,MS4.1,baz=64,slow=36
DBIC Dimbokro 63.30 273 P **P** **07 45 41.7 +1.0**
TIC Toumodi 63.46 273 *e*P **P** **07 45 43.1 +1.3**
comp=Z,55nm,1.2s,mb5.5
TIC Toumodi 63.46 273 *e*P **P** **07 45 43.1 +1.3**
TIC pmax pmax
comp=Z,55nm,1.2s,mb5.6
TIC Toumodi 63.46 273 *e*P **P** **07 45 43.1 +1.3**
comp=Z,55nm,1.2s,mb5.6
LIC Lamto 63.51 273 *e*P **P** **07 45 43.3 +1.2**
comp=Z,40nm,1.0s,mb5.4
LIC Lamto 63.51 273 *e*P **P** **07 45 43.1 +1.0**
comp=Z,30nm,1.0s,mb5.0
LIC *e*MLR MLR
comp=Z,173nm,21.2s,MS3.9
LIC Lamto 63.51 273 *e*P **P** **07 45 43.1 +1.0**
comp=Z,15nm,1.0s,mb5.0
LIC LR LR
comp=Z,90nm,21.3s,MS3.9
LIC Lamto 63.51 273 *e*P **P** **07 45 43.1 +1.0**
comp=Z,15nm,1.0s,mb5.0
NB2 NORSAR Subarra 63.56 336 P **P** **07 45 40.3 -1.3**
comp=Z,29nm,1.7s,mb5.0,SNR=4.2
NOA NORSAR Array B 63.56 336 P **P** **07 45 40.6 -1.0**
comp=Z,3.9nm,1.0s,mb4.4,baz=119,slow=7.5,SNR=4.7
NOA LR LR 08 17 28.9
comp=Z,89nm,18.4s,MS4.0,baz=105,slow=40
NOA NORSAR Array B 63.56 336 P **P** **07 45 40.6 -1.0**
LDF La Druitiere 63.81 321 *e*P **P** **07 45 41.6 -1.9**
comp=Z,12nm,0.9s,mb4.6
LDF La Druitiere 63.81 321 *e*P **P** **07 45 41.6 -1.9**
comp=Z,5.9nm,0.9s,mb4.6
LDF La Druitiere 63.81 321 *e*P **P** **07 45 41.6 -1.9**
LDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
LDF La Druitiere 63.81 321 *e*P **P** **07 45 41.6 -1.9**
comp=Z,5.9nm,0.9s,mb4.6
FLN La Foliniere 64.09 321 *e*P **P** **07 45 43.4 -1.9**
FLN *e*MLR MLR
comp=Z,110nm,22.2s,MS3.7
FLN La Foliniere 64.09 321 *e*P **P** **07 45 43.4 -1.9**
FLN MLR MLR
comp=Z,110nm,22.3s,MS4.0

FLN	La Foliniere	64.09	321	eP		P	07 45 43.4	-1.9	
ESDC	Sonseca Array	64.17	310	P		P	07 45 46.0	0.0	
	comp=Z,4.3nm,0.8s,mb4.5,baz=86,slow=6.1,SNR=21								
ESDC	Sonseca Array	64.17	310	P		P	07 45 46.0	0.0	
GRR	Gorron	64.21	320	eP		P	07 45 43.3	-2.8	
	comp=Z,108nm,1.5s,mb5.3								
GRR	Gorron	64.21	320	eP		P	07 45 43.3	-2.8	
	comp=Z,54nm,1.5s,mb5.4								
GRR	Gorron	64.21	320	eP		P	07 45 43.3	-2.8	
GRR					pmax	pmax			
	comp=Z,54nm,1.5s,mb5.4								
GRR	Gorron	64.21	320	eP		P	07 45 43.3	-2.8	
	comp=Z,54nm,1.5s,mb5.3								
PAB	San Pablo	64.44	310	eP		P	07 45 47.9	+0.1	
	comp=Z,7.6nm,1.1s,mb4.6								
PAB	San Pablo	64.44	310	eP		P	07 45 47.9	+0.1	
PAB					pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.7								
PAB	San Pablo	64.44	310	eP		P	07 45 47.8	0.0	
	comp=Z,7.6nm,1.1s,mb4.6								
KEV	Kevo	65.00	348	eP		P	07 45 49.6	-1.2	
KEV					pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.6								
KEV	Kevo	65.00	348	ep		P	07 45 49.6	-1.2	
	comp=Z,4.7nm,0.8s,mb4.6								
KEV	Kevo	65.00	348	eP		P	07 45 49.6	-1.2	
	comp=Z,5.0nm,0.8s,mb4.6								
ARCES	ARCESS Array B	65.13	348	P		P	07 45 51.0	-0.7	
	comp=Z,4.6nm,0.8s,mb4.5,baz=116,slow=2.8,SNR=12								
ARCES					LR	LR	08 17 27.2		
	comp=Z,266nm,21.9s,MS4.4,baz=249,slow=39								
ARCES	ARCESS Array B	65.13	348	P		P	07 45 51.0	-0.7	
ROSF	Rostrenen	65.74	320	eP		P	07 45 54.0	-2.1	
	comp=Z,92nm,1.3s,mb5.3								
ROSF	Rostrenen	65.74	320	eP		P	07 45 54.0	-2.1	
	comp=Z,46nm,1.3s,mb5.3								
ROSF	Rostrenen	65.74	320	eP		P	07 45 54.0	-2.1	
ROSF					pmax	pmax			
	comp=Z,46nm,1.3s,mb5.3								
ROSF	Rostrenen	65.74	320	eP		P	07 45 54.0	-2.1	
	comp=Z,46nm,1.3s,mb5.3								
KSRS	Korea Array	68.43	53	P		P	07 46 11.5	-1.9	
	comp=Z,1.8nm,0.9s,mb4.1,baz=266,slow=5.3,SNR=3.6								
KSRS					LR	LR	08 17 41.0		
	comp=Z,173nm,20.5s,MS4.3,baz=280,slow=37								
NWAO	Narrogin (SRO)	68.69	130	LR		LR	08 11 23.3		
	comp=Z,144nm,19.4s,MS4.2,baz=255,slow=32								
MAW	Mawson	75.51	178	P		P	07 46 56.5	+1.4	
	comp=Z,2.5nm,0.8s,mb4.2,baz=354,slow=10,SNR=5.4								
MAW					LR	LR	08 12 04.7		
	comp=Z,121nm,20.1s,MS4.2,baz=170,slow=29								
MAW	Mawson	75.51	178	P		P	07 46 56.5	+1.4	
MJAR	Matsushiro Arr	76.59	54	LR		LR	08 24 06.7		
	comp=Z,72nm,19.1s,MS4.0,baz=270,slow=38								
WRA	Warramunga Arr	79.12	112	P		P	07 47 14.6	-1.9	
	comp=Z,2.1nm,1.0s,mb4.0,baz=295,slow=4.6,SNR=7.8								
WRA	Warramunga Arr	79.12	112	P		P	07 47 14.6	-1.8	
ASAR	Alice Springs	79.57	116	P		P	07 47 17.1	-1.6	
	comp=Z,1.7nm,1.0s,mb3.9,baz=288,slow=4.5,SNR=10.0								
ASAR	Alice Springs	79.57	116	P		P	07 47 17.1	-1.7	
ASAJ	Asahikawa	79.86	47	LR		LR	08 24 03.3		
	comp=Z,202nm,18.9s,MS4.5,baz=93,slow=37								
SEY	Seymchan	84.44	27	eP		P	07 47 41.3	-2.3	
SEY	Seymchan	84.44	27	eP		P	07 47 41.3	-2.3	
MAIT	Maitri	84.75	194	eP		P	07 47 46.3	+1.3	
STKA	Stephens Creek	87.96	122	P		P	07 48 00.1	-1.5	
	comp=Z,2.9nm,1.1s,mb4.4,baz=332,slow=8.3,SNR=3.5								
STKA					LR	LR	08 24 40.0		
	comp=Z,199nm,18.6s,MS4.6,baz=20,slow=34								
STKA	Stephens Creek	87.96	122	P		P	07 48 00.1	-1.5	
PETK	Petropavlovsk-	88.81	37	LR		LR	08 31 18.4		
	comp=Z,87nm,19.5s,MS4.2,baz=351,slow=38								
ILAR	Eielson Array	104.85	11	PP		PP	07 53 35.3	-1.6	
	comp=Z,0.7nm,1.1s,baz=342,slow=5.7,SNR=4.5								
PLCA	Paso Flores	124.72	225	PKP		PKPdf	07 54 10.4	-0.9	
	comp=Z,2.7nm,1.1s,baz=82,slow=3.0,SNR=2.8								
PLCA	Paso Flores	124.72	225	PKIKP		PKPdf	07 54 10.4	-0.9	
PDAR	Pinedale Array	128.37	349	PKP		PKPdf	07 54 17.9	-0.4	
	comp=Z,1.6nm,1.0s,baz=14,slow=3.1,SNR=10								
PDAR	Pinedale Array	128.37	349	PKIKP		PKPdf	07 54 18.0	-0.3	
NVAR	Mina Array Bea	133.70	357	PKP		PKPdf	07 54 29.9	+1.4	
NVAR	Mina Array Bea	133.70	357	PKP		PKPdf	07 54 29.9	+1.4	
	comp=Z,1.5nm,0.9s,baz=285,slow=0.5,SNR=6.5								
NVAR	Mina Array Bea	133.70	357	PKIKP		PKPdf	07 54 29.9	+1.4	
TXAR	Lajitas Array	139.26	337	PKhKP		PKPpre	07 54 29.9		
	comp=Z,0.3nm,0.8s,baz=69,slow=4.9,SNR=2.8								
TXAR					PKP	PKPdf	07 54 37.0	-2.1	
	comp=Z,1.1nm,1.1s,baz=123,slow=2.1,SNR=4.9								
TXAR	Lajitas Array	139.26	337	PKIKP		PKPdf	07 54 37.0	-2.1	

IDC 24 07:37:35.3±2.1, 2°.12N×127°.80E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/18, mbtmp3.5/3, Error ellipse: s-maj=152.6km s-min=25.3km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.85	164	P	P	07 42 39.3	-1.0
	0.4nm,0.4s,baz=344,slow=11,SNR=11						
ASAR	Alice Springs	26.31	167	P	P	07 43 13.7	+0.8
	0.3nm,0.3s,baz=346,slow=11,SNR=4.4						
MKAR	Makanchi Array	59.48	325	P	P	07 47 40.3	+0.2
	0.5nm,0.3s,baz=118,slow=8.6,SNR=7.5						

CSEM 24 07:49:59.3, 34°.19N×53°.24E, h12km, ML3.5, After TEH
TEH 24 07:49:59.3, 34°.19N×53°.24E, h12km, 1C-2D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISFB	Sefidab	0.85	281	⇓ePg	Pg	07 50 14.5	-1.2
ISFB				eSg	Sg	07 50 25.8	-0.9
ISFB				e		07 50 36.5	
	comp=Z,6μm,0.1s						
ISFB	Sefidab	0.85	281	⇓ePg	Pg	07 50 14.5	-1.2
ISFB				eSg	Sg	07 50 25.8	-0.9
ILAS	Lasjerd	1.21	349	ePg	Pg	07 50 21.2	-1.4
ILAS				eSg	Sg	07 50 38.8	+0.5
ILAS				e		07 50 41.7	
	comp=Z,5μm,0.1s						
ILAS	Lasjerd	1.21	349	ePg	Pg	07 50 21.2	-1.4
ILAS				eSg	Sg	07 50 38.8	+0.5
IANJ	Anjilo	1.39	23	ePn	Pn	07 50 23.2	-1.2
IANJ				eSg	Sg	07 50 42.8	-1.2
IANJ				e		07 50 45.4	
	comp=Z,7μm,0.1s						
IANJ	Anjilo	1.39	23	ePn	Pn	07 50 23.2	-1.2
IANJ				eSg	Sg	07 50 42.8	-1.2
IVRN	Varamin	1.49	303	ePn	Pn	07 50 25.7	-0.1
IVRN				⇑ePn	Pn	07 50 25.8	0.0
IVRN				eSg	Sg	07 50 46.0	-1.1
IVRN				e		07 50 49.6	
	comp=Z,9μm,0.0s						
IVRN	Varamin	1.49	303	ePn	Pn	07 50 25.7	-0.1
IFIR	Firoozkooh	1.50	345	ePn	Pn	07 50 25.8	-0.2
IFIR				eSg	Sg	07 50 46.0	-1.6
IFIR				e		07 50 47.6	
	comp=Z,8μm,0.1s						
IFIR	Firoozkooh	1.50	345	ePn	Pn	07 50 25.8	-0.2
IFIR				eSg	Sg	07 50 46.0	-1.6
IZEF	Zefreh	1.50	211	ePn	Pn	07 50 26.4	+0.4
IZEF				eSg	Sg	07 50 46.4	-1.2
IZEF				e		07 50 47.7	
	comp=Z,5μm,0.1s						
IZEF	Zefreh	1.50	211	ePn	Pn	07 50 26.4	+0.4
IZEF				eSg	Sg	07 50 46.4	-1.2
ISHM	Shahmirzad	1.61	1	ePn	Pn	07 50 27.4	-0.1
ISHM				e		07 50 51.5	
	comp=Z,7μm,0.1s						
ISHM	Shahmirzad	1.61	1	ePn	Pn	07 50 27.4	-0.1
IKLH	Kolahrood	1.64	238	ePn	Pn	07 50 28.6	+0.7
IKLH				e		07 50 52.9	
	comp=Z,10μm,0.1s						
IKLH	Kolahrood	1.64	238	ePn	Pn	07 50 28.6	+0.7
IDMV	Damavand	1.70	325	ePn	Pn	07 50 29.1	+0.3
IDMV				eSg	Sg	07 50 53.0	-1.1
IDMV				e		07 50 55.6	
	comp=Z,3μm,0.1s						
IDMV	Damavand	1.70	325	ePn	Pn	07 50 29.1	+0.3
IDMV				eSg	Sg	07 50 53.0	-1.1
IALA	Alasht	1.92	349	ePn	Pn	07 50 32.5	+0.7
IALA				e		07 51 07.3	
	comp=E,4μm,0.2s						
IALA	Alasht	1.92	349	ePn	Pn	07 50 32.5	+0.7
IKIA	Kiasar	2.04	10	ePn	Pn	07 50 34.0	+0.5
IKIA				e		07 51 11.8	
	comp=Z,733nm,0.3s						
IKIA	Kiasar	2.04	10	ePn	Pn	07 50 34.0	+0.5
IGAR	Gharneh	2.05	210	ePn	Pn	07 50 34.1	+0.6
IGAR				eSg	Sg	07 51 03.1	-2.0
IGAR				e		07 51 05.7	
	comp=Z,1μm,0.1s						
ICHK	Chekchek	2.17	153	ePn	Pn	07 50 35.6	+0.3
ICHK				e		07 51 10.0	
	comp=Z,1μm,0.1s						
ICHK	Chekchek	2.17	153	ePn	Pn	07 50 35.6	+0.3
IPRN	Peran	2.18	340	ePn	Pn	07 50 35.7	+0.4
IPRN				e		07 51 10.6	
	comp=Z,4μm,0.2s						
IPRN	Peran	2.18	340	ePn	Pn	07 50 35.7	+0.4
ISAD	Sadrabad	2.30	171	ePn	Pn	07 50 37.6	+0.6
ISAD				e		07 51 14.2	
	comp=Z,3μm,0.1s						
ISAD	Sadrabad	2.30	171	ePn	Pn	07 50 37.6	+0.6
IGLO	Ghaloghah	2.35	12	e	Pn	07 50 45.6	+7.9
	comp=Z,2μm,0.1s						
IPIR	Pirpir	2.48	233	ePn	Pn	07 50 41.7	+2.3
IPIR				eSg	Sg	07 51 17.3	-1.6
IPIR				e		07 51 19.3	
	comp=Z,1μm,0.1s						
IPIR	Pirpir	2.48	233	ePn	Pn	07 50 41.7	+2.3
IPIR				eSg	Sg	07 51 17.3	-1.6
IMHD	Mahdasht	2.59	306	ePn	Pn	07 50 40.9	-0.1
IMHD	Mahdasht	2.59	306	ePn	Pn	07 50 40.9	-0.1
IRAZ	Razeghan	2.98	295	ePn	Pn	07 50 46.8	+0.4
IRAZ	Razeghan	2.98	295	ePn	Pn	07 50 46.8	+0.4
IMEH	Mehriz	3.02	157	ePn	Pn	07 50 47.3	+0.4
IMEH	Mehriz	3.02	157	ePn	Pn	07 50 47.3	+0.4
IBAF	Bafgh	3.25	142	ePn	Pn	07 50 49.4	-0.6
IBAF				e		07 51 41.7	
	comp=Z,382nm,0.1s						
IBAF	Bafgh	3.25	142	ePn	Pn	07 50 49.4	-0.6

IDC 24 08:00:43.1±3.7, 5°.77N×124°.69E, h78km±34km, mb3.3/5, mb1 3.5/5, mb1mx3.3/20, mbtmp3.3/5, Error ellipse: s-maj=49.3km s-min=18.3km az=81.0
ISC 24 08:00:46.7±0.9, 6°.3N±0°.2×125°.9E±0°.3, h125km±10km, n9, σ0°.45/12, mb3.5/5, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	0.75	26	eP	Pn	08 01 07.2	+0.2
MATI				eS	Sn	08 01 15.9	-6.5
DAV	Davao City (W)	0.87	337	P	Pn	08 01 07.5	-0.5
	449nm,0.3s,baz=124,slow=5.7,SNR=13						
DAV				S	Sn	08 01 29.5	+5.3
	208nm,0.3s,baz=320,slow=21,SNR=4.4						
DMPH	Davao City--Mi	0.91	333	⇑eP	Pn	08 01 07.5	-0.8
DMPH				eS	Sn	08 01 25.5	+0.7
BUKP	Musuan	1.81	332	eP	Pn	08 01 18.3	+0.2
WRA	Warramunga Arr	27.33	163	P	P	08 06 20.1	+0.2
	0.4nm,0.4s,mb3.3,baz=342,slow=10.0,SNR=7.0						
ASAR	Alice Springs	30.75	166	P	P	08 06 50.3	+0.1
	0.3nm,0.4s,mb3.4,baz=338,slow=6.9,SNR=8.4						
MKAR	Makanchi Array	55.03	325	P	P	08 10 05.5	+0.3
	0.3nm,0.5s,mb3.5,baz=126,slow=7.3,SNR=3.2						
ZALV	Zalesovo Beam	57.98	333	P	P	08 10 25.6	-0.4
	0.4nm,0.4s,mb3.8,baz=134,slow=6.2,SNR=2.9						
ILAR	Eielson Array	83.18	26	P	P	08 13 05.2	+6.7
	0.4nm,0.6s,mb3.4,baz=242,slow=5.2,SNR=8.2						

IDC 24 08:01:03.1±1.2, 51°.35N×179°.91W, h0km, mb3.8/13, mb1 4.1/14, mb1mx3.9/26, mbtmp3.9/14, ML4.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/39, Error ellipse: s-maj=35.9km s-min=17.4km az=1.0
NEIC 24 08:01:04.9±1.0, 51°.20N×179°.82W, h10km, mb4.1/4, ML3.8(AEIC), ML3.8(PMR), Error ellipse: s-maj=29.3km s-min=8.0km az=179.0
ISCJB 24 08:01:07.9±1.0, 51°.3N±0°.2×179°.89W±0°.08, h46km±7km, mb3.9/17, Error ellipse: s-maj=31.9km s-min=8.5km az=176.7
ISC 24 08:01:09.3±1.1, 51°.3N±0°.2×179°.91W±0°.08, h42km±8km, n26, σ0°.91/26, mb3.9/17, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMKA	Amchitka	0.50	277	eP	Pn	08 01 17.6	-2.4
AMKA				S	Sn	08 01 27.3	-0.3
ATKA	Atka Island	3.66	74	P	Pn	08 02 04.5	+1.2
ATKA				S	Sn	08 02 49.6	+4.5
SMY	Shemya	3.96	293	P	Pn	08 02 08.6	+1.2
SDPT	Sand Point	12.29	63	eP	Pn	08 04 01.3	-0.1
	25nm,0.8s						
PETK	Petropavlovsk-	13.84	286	Pn	Pn	08 04 24.0	+1.5
	0.1nm,0.3s,baz=85,slow=16,SNR=2.9						
PETK				LR	LR	08 09 14.3	
	comp=Z,57nm,20.1s,baz=281,slow=36						
KDAK	Kodiak Island	17.04	57	P	Pn	08 05 02.4	-1.7
KDAK	Kodiak Island	17.04	57	P	Pn	08 05 02.4	-1.7
	1.0nm,0.3s,baz=252,slow=13,SNR=6.1						
COLA	College	21.39	38	eP	P	08 05 53.9	+1.0
	5.3nm,1.0s,mb3.8						
ILAR	Eielson Array	21.73	39	P	P	08 05 55.9	-0.6
	0.5nm,0.6s,mb3.2,baz=238,slow=9.0,SNR=8.6						
EGAK	Eagle	24.05	41	eP	P	08 06 20.0	-0.1
	6.2nm,1.0s,mb4.0						
YKA	Yellowknife Ar	35.78	46	P	P	08 08 03.2	-0.6
	0.7nm,0.4s,mb3.9,baz=281,slow=7.1,SNR=7.6						
BOZ	Bozeman (W)	44.13	69	eP	P	08 09 13.6	+0.4
	1.6nm,0.6s,mb3.9						
NVAR	Mina Array Bea	44.25	82	P	P	08 09 14.1	-0.3
	0.3nm,0.6s,mb3.2,baz=303,slow=8.3,SNR=2.6						
RLMT	Red Lodge	45.80	69	eP	P	08 09 27.6	+1.0
	4.7nm,0.8s,mb4.5						
SONM	Songino Array	46.05	296	P	P	08 09 29.7	+1.2
	0.8nm,0.7s,mb3.8,baz=64,slow=6.6,SNR=5.0						
PDAR	Pinedale Array	46.99	72	P	P	08 09 36.6	+0.7
	2.2nm,0.7s,mb4.2,baz=310,slow=4.6,SNR=16						
ARCES	ARCESS Array B	58.03	350	P	P	08 10 56.9	-0.4
	0.9nm,0.6s,mb4.0,baz=30,slow=9.4,SNR=8.1						
TXAR	Lajitas Array	59.35	80	P	P	08 11 06.0	-0.9
	0.1nm,0.4s,mb3.2,baz=310,slow=4.6,SNR=4.8						
MKAR	Makanchi Array	59.52	308	P	P	08 11 08.0	0.0
	0.8nm,0.5s,mb4.0,baz=49,slow=7.8,SNR=7.0						
FINES	FINESS Array B	65.69	347	P	P	08 11 47.8	-1.0
	3.5nm,1.0s,mb4.3,baz=8.9,slow=9.8,SNR=5.9						
NOA	NORSAR Array B	67.64	354	P	P	08 12 01.4	+0.2
	1.7nm,0.8s,mb4.1,baz=7.7,slow=6.3,SNR=6.9						
CMAR	Chiang Mai Arr	70.33	275	P	P	08 12 18.1	-0.5
	0.7nm,0.5s,mb3.8,baz=29,slow=6.6,SNR=5.4						
AKASG	Malin Array Be	75.39	341	P	P	08 12 47.3	-0.8
	0.8nm,0.5s,mb3.9,baz=19,slow=5.9,SNR=3.5						
BRTR	Keskin Array B	84.71	335	P	P	08 13 38.8	+0.3
	0.7nm,0.7s,mb3.9,baz=25,slow=4.8,SNR=3.7						
PLCA	Paso Flores	131.62	106	PKP	PKPdf	08 20 17.7	+1.0
	1.5nm,0.6s,baz=294,slow=3.8,SNR=5.8						
BOSA	Boshof	150.49	311	PKPbc	PKPbc	08 20 56.0	+0.1
	1.6nm,0.7s,baz=127,slow=5.1,SNR=2.9						

IDC 24 08:08:27.2±1.9, 6°.89S×128°.70E, h0km, mb4.0/2, mb1 3.8/4, mb1mx3.6/16, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=89.0km s-min=27.5km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.09	158	Pn	Pn	08 11 48.8	+0.7
	0.3nm,0.3s,baz=337,slow=12,SNR=7.0						
WRA				Sn	Sn	08 14 12.6	-13
	0.4nm,0.3s,baz=335,slow=23,SNR=6.3						
ASAR	Alice Springs	17.42	164	Pn	Pn	08 12 33.1	+1.4
	0.1nm,0.3s,baz=346,slow=11,SNR=6.4						
ASAR				Sn	Sn	08 15 35.2	-11
	0.2nm,0.3s,baz=354,slow=24,SNR=4.1						
MKAR	Makanchi Array	67.43	327	P	P	08 19 24.9	+0.3
	1.2nm,0.4s,baz=121,slow=7.9,SNR=15						
MAW	Mawson	74.58	201	P	P	08 20 07.3	-0.5
	0.7nm,0.6s,baz=45,slow=7.1,SNR=3.8						

ISCJB 24 08:13:30.1±0.7, 20°.66S±0°.05×69°.0W±0°.2, h117km±17km, Error ellipse: s-maj=27.0km s-min=8.5km az=179.4
NEIC 24 08:13:31.3, 20°.68S×69°.19W, h117km, MG3.7(GUC), After GUC.
GUC 24 08:13:31.3±0.3, 20°.68S×69°.19W, h117km±6km, ML3.7
IDC 24 08:13:32.5±8.0, 20°.53S×68°.65W, h107km±39km, mb3.5/1, mb1 3.3/3, mb1mx3.1/17, mbtmp3.2/3, MS3.9/2, Ms1 3.9/2, ms1mx2.9/19, Error ellipse: s-maj=140.2km s-min=36.7km az=60.0
ISC 24 08:13:31.1±0.7, 20°.67S±0°.05×68°.9W±0°.2, h109km±18km, n13, σ0°.70/14, 2C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HMBC	Humberston	0.97	293	⇑iP	Pn	08 13 51.4	-0.6
HMBC				i S	Sn	08 14 06.8	-0.8
HMBC				AML	AML	08 14 09.3	
	comp=N,3μm,0.3s						
PSGC	Pisagua	1.54	313	⇑iP	Pn	08 13 58.0	-0.4
PSGC				i S	Sn	08 14 18.4	-0.7
PSGC				AML	AML	08 14 24.2	
	comp=E,987nm,0.5s						
MNMC	Miæe Miæ	1.65	338	eP	Pn	08 14 00.6	+0.9
MNMC				i S	Sn	08 14 22.9	+1.5
MNMC				AML	AML	08 14 29.6	
	comp=N,1μm,0.2s						
MACH	Maria Elena	1.70	207	eP	Pn	08 14 01.0	+0.6
MACH				i S	Sn	08 14 23.1	+0.4
ANCH	Antofagasta	3.30	204	⇓iP	Pn	08 14 21.2	+0.1
ANCH	Antofagasta	3.30	204	⇓iP	Pn	08 14 21.2	+0.1
LPAZ	La Paz	4.42	10	P	Pn	08 14 35.8	-0.4
	comp=N,0.3nm,0.3s,baz=192,slow=7.3,SNR=19						
LCO	Las Campanas	8.46	191	Pn	Pn	08 15 36.4	+5.5
	comp=N,24nm,0.5s						
CPUP	Villa Florida	12.05	120	P	Pn	08 16 18.4	-0.8
	comp=N,0.3nm,0.3s,baz=308,slow=12,SNR=4.0						
USHA	Ushuaia	34.11	179	LR	LR	08 33 19.0	
	comp=N,340nm,18.9s,baz=105,slow=35						
TKL	Tuckaleechee C	57.75	346	LR	LR	08 47 55.1	
	comp=N,50nm,21.6s,baz=28,slow=36						
TORD	Torodi Ar. Bea	77.10	71	P	P	08 25 13.1	+0.1
	comp=N,0.4nm,0.5s,baz=248,slow=5.9,SNR=6.6						
MKAR	Makanchi Array	144.97	35	PKP	PKPdf	08 32 56.0	+0.6
	comp=N,0.3nm,0.2s,baz=326,slow=0.4,SNR=5.1						

ISCJB 24 08:19:06.8±1.5, 15°.19N±0°.09×95°.40W±0°.05, h16km±12km, mb3.5/4, Error ellipse: s-maj=16.1km s-min=5.8km az=17.9
MEX 24 08:19:08.7±0.6, 15°.04N×95°.50W, h26km±15km, MD4.2
NEIC 24 08:19:09.3, 15°.09N×95°.50W, h33km, mb3.4,MD4.2(MEX), After MEX.
IDC 24 08:19:14.3±2.1, 16°.50N×94°.54W, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.5/23, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=162.5km s-min=24.6km az=52.0
ISC 24 08:19:06.7±1.4, 15°.20N±0°.10×95°.40W±0°.05, h9km±9km, n17, σ1°.28/28, mb3.5/4, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.89	310	eP	Pg	08 19 23.2	-0.5
HUIG				i S	Sg	08 19 34.9	-0.4
HUIG	Huatulco	0.89	310	eP	Pg	08 19 23.2	-0.5
HUIG				i S	Sg	08 19 34.9	-0.4
PCIG		2.16	76	i P	Pn	08 19 43.1	+0.2
PCIG				i S	Sn	08 20 09.3	-0.6
VHO	Vista Hermosa	2.26	326	eP	Pn	08 19 44.5	+0.3
VHO				i S	Sn	08 20 10.8	-1.4
VHO	Vista Hermosa	2.26	326	eP	Pn	08 19 44.5	+0.3
VHO				i S	Sn	08 20 10.8	-1.4
TGIG		2.69	54	eP	Pn	08 19 51.1	+0.9
TGIG				i S	Sn	08 20 23.2	+0.2
PNIG	Pinotepa	2.88	295	i P	Pn	08 19 52.5	-0.3
PNIG				i S	Sn	08 20 22.1	-5.5
PNIG	Pinotepa	2.88	295	i P	Pn	08 19 50.5	-2.3
PNIG				i S	Sn	08 20 22.1	-5.5
THIG		3.04	95	i P	Pn	08 19 53.7	-1.3
THIG				i S	Sn	08 20 29.8	-1.8
SCX	San Cristobal	3.07	60	i P	Pn	08 19 50.4	-5.0
SCX	San Cristobal	3.07	60	eP	Pn	08 19 56.4	+1.0
SCX				i S	Sn	08 20 32.6	+0.4
TPIG	Tehuac#an	3.71	330	i P	Pn	08 20 07.0	+2.8
TPIG				i S	Sn	08 20 47.1	-1.0
TXAR	Lajitas Array	16.00	333	Pn	Pn	08 22 55.6	+3.6
	0.0nm,0.3s,baz=154,slow=15,SNR=5.0						
NVAR	Mina Array Bea	30.71	323	P	P	08 25 26.9	+4.9
	0.3nm,0.5s,mb3.4,baz=134,slow=7.8,SNR=2.7						
SIV	San Ignacio	45.93	131	P	P	08 27 41.1	+11
	0.4nm,0.6s,mb3.5,baz=297,slow=6.8,SNR=3.9						
INK	Inuvik	58.38	344	P	P	08 29 03.8	+1.7
	0.6nm,0.7s,mb3.7,baz=143,slow=7.1,SNR=3.2						
ILAR	Eielson Array	60.46	337	P	P	08 29 19.2	+2.8
	0.3nm,0.8s,mb3.4,baz=129,slow=4.7,SNR=4.2						

IDC 24 08:20:01.9±1.5, 34°.78N×134°.22E, h0km, mb3.6/2, mb1 3.6/3, mb1mx3.3/25, mbtmp3.5/3, ML3.2/1, Error ellipse: s-maj=43.2km s-min=36.3km az=101.0
ISCJB 24 08:20:13.7±0.7, 34°.13N±0°.04×135°.87E±0°.04, h60km±6km, mb3.6/2, Error ellipse: s-maj=6.8km s-min=5.5km az=146.7

comp=N,8µm,0.2s
JACH Jahuel 1.47 220 ⇓ iP Pn 08 28 14.6 +0.6
JACH Jahuel 1.47 220 ⇓ iP Pn 08 28 14.6 +0.6
CHNG Los Chungos 1.76 259 ⇑ iP Pn 08 28 13.9 -3.5
CHNG i S Sn 08 28 35.8 -4.5
CHNG AML AML 08 28 41.5
comp=N,1µm,0.7s
OVCH Ovalle 1.76 302 ⇑ iP Pn 08 28 17.0 -0.5
OVCH i S Sn 08 28 39.5 -0.9
OVCH Ovalle 1.76 302 ⇑ iP Pn 08 28 17.0 -0.5
OVCH i S Sn 08 28 39.5 -0.9
OVCH AML AML 08 28 40.3
comp=N,2µm,0.2s
TLL Tololo Astrono 1.80 320 ⇑ iP Pn 08 28 18.7 +0.7
TLL i S Sn 08 28 41.9 +0.6
TLL Tololo Astrono 1.80 320 ⇑ iP Pn 08 28 18.7 +0.7
TLL i S Sn 08 28 41.9 +0.6
TLL AML AML 08 28 47.6
comp=N,2µm,0.5s
PEL Peldehue 1.88 213 ⇓ iP Pn 08 28 18.9 -0.1
PEL i S Sn 08 28 42.7 -0.4
PEL AML AML 08 28 43.9
comp=N,3µm,0.3s
FCH Farellones 1.89 201 ⇓ iP Pn 08 28 19.8 +0.7
FCH i S Sn 08 28 44.5 +1.2
FCH AML AML 08 28 49.4
comp=E,2µm,0.3s
ROCH El Roble 1.92 222 eP Pn 08 28 18.8 -0.7
ROCH i S Sn 08 28 43.0 -0.9
ROCH El Roble 1.92 222 eP Pn 08 28 18.8 -0.7
ROCH eP 08 28 19.1
ROCH i S Sn 08 28 43.0 -0.9
ROCH i S Sn 08 28 43.6 -0.3
ROCH AML AML 08 28 45.7
comp=N,1µm,0.4s
CLCH Cerro Calan 2.04 206 ⇓ iP Pn 08 28 21.2 +0.3
CLCH i S Sn 08 28 47.0 +0.4
CLCH AML AML 08 28 50.3
comp=E,2µm,0.6s
CLCH AML AML 08 28 50.9
comp=E,2µm,0.6s
SAN Santiago 2.14 208 i S Sn 08 28 48.7 -0.1
SJCH San Jose de Ma 2.20 200 eP Pn 08 28 23.6 +0.6
SJCH San Jose de Ma 2.20 200 eP Pn 08 28 23.6 +0.6
SJCH AML AML 08 28 55.5
comp=N,438nm,0.3s
ANTU Antumapu 2.23 206 ⇓ iP Pn 08 28 23.3 -0.1
ANTU i S Sn 08 28 51.1 +0.2
ANTU Antumapu 2.23 206 ⇓ iP Pn 08 28 23.3 -0.1
ANTU i S Sn 08 28 51.1 +0.2
ANTU AML AML 08 28 52.9
comp=N,1µm,0.1s
PCH Pirque 2.23 203 ⇑ iP Pn 08 28 23.7 +0.2
PCH i S Sn 08 28 52.1 +1.1
PCH Pirque 2.23 203 ⇑ iP Pn 08 28 23.7 +0.2
PCH i S Sn 08 28 52.1 +1.1
LMEL Las Melosas 2.36 195 ⇓ iP Pn 08 28 25.7 +0.6
LMEL S Sn 08 28 57.4 +3.4
LMEL Las Melosas 2.36 195 ⇓ iP Pn 08 28 25.7 +0.6
LMEL i S Sn 08 28 57.4 +3.4
LMEL AML AML 08 29 02.3
comp=N,1µm,0.2s
TACH Talagante 2.42 210 ⇓ iP Pn 08 28 25.0 -0.9
TACH i S Sn 08 28 54.6 -0.8
TACH Talagante 2.42 210 ⇓ iP Pn 08 28 25.0 -0.9
TACH i S Sn 08 28 54.6 -0.8
CHCH Chadas Angostu 2.57 203 ⇓ iP Pn 08 28 27.5 -0.3
CHCH Chadas Angostu 2.57 203 ⇓ iP Pn 08 28 27.5 -0.3
CACH El Canelo 2.72 200 ⇑ iP Pn 08 28 30.0 +0.3
CACH S Sn 08 29 01.4 -0.9
CACH El Canelo 2.72 200 ⇑ iP Pn 08 28 30.0 +0.3
CACH i S Sn 08 29 01.4 -0.9
LCO Las Campanas 2.75 337 ⇓ iP Pn 08 28 30.4 +0.1
LCO S Sn 08 29 02.7 -0.5
LCO Las Campanas 2.75 337 ⇓ iP Pn 08 28 30.4 +0.1
LCO i S Sn 08 29 02.7 -0.5
LCO AML AML 08 29 06.0
comp=E,827nm,0.2s
TRQA Tornquist 8.94 139 ePn Pn 08 29 51.9 -1.7
comp=E,37nm,0.9s
PLCA Paso Flores 9.19 185 P Pn 08 29 53.4 -3.7
comp=E,0.2nm,0.3s,baz=5.2,slow=11,SNR=6.0
CPUP Villa Florida 11.84 67 P Pn 08 30 30.8 -1.9
comp=E,0.6nm,0.3s,baz=236,slow=12,SNR=6.8
LPAZ La Paz 15.25 5 P Pn 08 31 19.4 +2.5
comp=E,0.2nm,0.3s,baz=216,slow=17,SNR=9.1
SIV San Ignacio 17.29 28 P Pn 08 31 42.2 +0.2
comp=E,0.1nm,0.3s,baz=217,slow=14,SNR=4.2
TXAR Lajitas Array 68.73 328 P P 08 38 39.7 +0.4
comp=E,0.2nm,0.6s,mb3.1,baz=153,slow=6.1,SNR=3.2
TORD Torodi Ar. Bea 81.33 69 P P 08 39 51.8 -0.1
comp=E,1.1nm,0.8s,mb3.8,baz=240,slow=6.2,SNR=8.5
WRA Warramunga Arr 123.93 207 PKP PKPdf 08 46 31.7 -1.4
comp=E,0.5nm,0.7s,baz=159,slow=1.7,SNR=6.5
ZALV Zalesovo Beam 151.02 32 PKPbc PKPbc 08 47 26.9 +0.2
ZALV Zalesovo Beam 151.02 32 PKPbc PKPbc 08 47 26.9 +0.2
comp=E,2.8nm,0.4s,baz=311,slow=3.6,SNR=13
MKAR Makanchi Array 153.53 47 PKPbc PKPbc 08 47 32.6 -0.1
comp=E,0.3nm,0.2s,baz=298,slow=3.1,SNR=3.5

IDC 24 08:46:16.1±2.1, 6.87S×129.27E, h0km, mb3.8/1, mb1 3.7/3, mb1mx3.5/16, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=106.1km s-min=32.3km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.89**	**160**	Pn	Pn	08 49 33.6	-0.8
	0.4nm,0.3s,baz=338,slow=13,SNR=15						
WRA				Sn	Sn	08 51 54.2	-15
	0.6nm,0.3s,baz=337,slow=22,SNR=11						
ASAR	**Alice Springs**	**17.28**	**166**	Pn	Pn	08 50 19.7	+0.8
	0.2nm,0.3s,baz=346,slow=10,SNR=11						
ASAR				Sn	Sn	08 53 15.8	-16
	baz=346,slow=26,SNR=3.1						
MKAR	**Makanchi Array**	**67.72**	**327**	P	P	08 57 15.5	+0.1
	0.3nm,0.4s,baz=114,slow=7.8,SNR=5.8						

IDC 24 08:46:18.3±2.8, 18.72N×108.33W, h0km, mb3.3/5, mb1 3.7/7, mb1mx3.6/21, mbtmp3.4/7, ML3.4/2, Error ellipse: s-maj=81.7km s-min=24.2km az=110.0
NEIC 24 08:46:19.6±1.8, 18.67N×108.28W, h10km, mb3.8/1, Error ellipse: s-maj=44.9km s-min=16.7km az=117.0
ISCJB 24 08:46:20.3±1.6, 18.6N±0.2×108.1W±0.2, h33km, mb3.4/6, Error ellipse: s-maj=28.8km s-min=13.6km az=36.4

ISC 24 08:46:21.4±7.0, 18.6N±0.2×108.3W±0.2, h21km±49km, n26, σ0.977/26, mb3.4/6, 8C-5D, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**11.44**	**21**	Pn	Pn	08 49 02.4	-1.3
	0.1nm,0.3s,baz=213,slow=15,SNR=9.5						
626A	**Big Bend Ranch**	**11.50**	**18**	⇑P	Pn	08 49 04.2	-0.2
	baz=11						
627A	**Terlingua Ranc**	**11.65**	**22**	⇓P	Pn	08 49 06.1	-0.3
	baz=12						
628A	**Black Gap, Mar**	**11.86**	**23**	⇓P	Pn	08 49 10.0	+0.7
	baz=12						
425A	**Indio Mountain**	**12.45**	**13**	⇑P	Pn	08 49 17.1	-0.4
	baz=12,SNR=5.1						
426A	**McDonald Obser**	**12.58**	**17**	⇓P	Pn	08 49 19.1	0.0
	baz=12,SNR=8.0						
326A	**Caldwell Ranch**	**13.20**	**16**	⇓P	Pn	08 49 27.0	-0.7
	baz=13,SNR=6.7						
219A	**White Tail Can**	**13.33**	**356**	⇑P	Pn	08 49 29.2	-0.2
	baz=13,SNR=5.4						
Y22A	**Socorro**	**15.28**	**4**	⇑P	Pn	08 49 56.6	+0.8
	baz=15						
Y19A	**Nutrioso**	**15.28**	**357**	⇓P	Pn	08 49 55.8	-0.1
	baz=15						
Y23A	**Lovelace Mesa,**	**15.36**	**7**	⇑P	Pn	08 49 58.9	+2.1
	baz=15						
Y16A	**Circle Bar Ran**	**15.45**	**350**	⇑P	Pn	08 49 57.2	-0.8
	baz=15						
X21A	**Alamocita Cree**	**15.75**	**1**	⇑P	Pn	08 50 02.1	+0.2
	baz=16,SNR=5.5						
X15A	**Humboldt**	**16.17**	**348**	⇑P	Pn	08 50 07.1	-0.3
	baz=16,SNR=6.9						
ANMO	**Albuquerque**	**16.32**	**5**	Pn	Pn	08 50 10.0	+0.7
ANMO	**Albuquerque**	**16.32**	**5**	Pn	Pn	08 50 10.0	+0.7
	0.1nm,0.3s,baz=198,slow=9.6,SNR=6.4						
P14A	**Drum Mountains**	**21.29**	**350**	P	P	08 51 07.4	+0.9
	baz=21,SNR=6.4						
NVAR	**Mina Array Bea**	**21.57**	**338**	P	P	08 51 09.5	-0.1
	0.8nm,0.7s,mb3.2,baz=150,slow=11,SNR=6.3						
O17A	**Robinson Place**	**21.59**	**355**	P	P	08 51 10.4	+0.7
	baz=21,SNR=5.5						
DUG	**Dugway**	**21.84**	**351**	P	P	08 51 13.0	+0.6
	baz=22,SNR=5.9						
DUG	**Dugway**	**21.84**	**351**	eP	P	08 51 12.8	+0.4
	5.5nm,1.2s,mb3.9						
PDAR	**Pinedale Array**	**24.07**	**358**	P	P	08 51 35.1	-0.1
	0.5nm,0.8s,mb3.0,baz=172,slow=7.3,SNR=5.0						
YBH	**Yreka Blue Hor**	**26.11**	**335**	P	P	08 51 51.9	-1.9
	0.4nm,0.4s,mb3.3,baz=150,slow=8.1,SNR=3.4						
YKA	**Yellowknife Ar**	**44.03**	**356**	P	P	08 54 26.3	-0.9
	0.4nm,0.6s,mb3.3,baz=174,slow=7.4,SNR=2.6						
ILAR	**Eielson Array**	**52.80**	**340**	P	P	08 55 35.2	+0.4
	0.3nm,0.6s,mb3.4,baz=140,slow=8.1,SNR=7.6						
RAR	**Rarotonga**	**64.12**	**234**	P	P	08 56 54.8	+0.3
	28nm,0.9s,baz=50,slow=7.9,SNR=2.5						

IDC 24 08:59:51.7±1.1, 13.19N×87.80W, h0km, mb3.8/10, mb1 4.1/11, mb1mx3.9/23, mbtmp3.8/11, ML3.6/1, MS3.1/3, Ms1 3.2/3, ms1mx2.7/28, Error ellipse: s-maj=57.9km s-min=20.5km az=56.0
ISCJB 24 08:59:58.1±0.4, 12.69N±0.04×88.62W±0.03, h57km±3km, mb3.8/14, MS3.1/3, Error ellipse: s-maj=8.2km s-min=2.9km az=37.5
CASC 24 08:59:58.7±1.9, 12.71N×88.63W, h43km±90km, MD4.4, ML4.3, mb4.1(NEIC)
NEIC 24 09:00:01.3±1.2, 12.84N×88.46W, h79km±8km, mb4.1/4, MD4.2(SNET), Error ellipse: s-maj=14.3km s-min=11.3km az=190.0
NEIC Felt [II] at San Salvador.
MEX 24 09:00:06.2±2.1, 11.03N×92.08W, h20km±999km, MD4.6

ISC 24 08:59:59.6±0.4, 12.74N±0.04×88.59W±0.03, h51km±3km, n114, σ1.905/126, mb3.8/14, MS3.1/3, 17C-22D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.75**	**24**	eP	Pn	09 00 14.0	0.0
BLLM	**Bellamira**	**0.78**	**26**	eP	Pn	09 00 14.2	-0.1
SNVI	**San Vicente**	**0.90**	**344**	eP	Pn	09 00 15.4	-0.6
CNCH	**Conchagua**	**0.91**	**54**	eP	Pn	09 00 15.6	-0.5
CNCH				eS	Sn	09 00 28.7	+0.5
LFRS	**El Faro**	**0.99**	**332**	⇓ iP	Pn	09 00 16.2	-1.0
CAHU	**Cacacuatique**	**1.09**	**20**	eP	Pn	09 00 19.1	+0.5
CAHU				eS	Sn	09 00 34.5	+2.0
LBRS	**Las Brisas**	**1.09**	**336**	⇓ eP	Pn	09 00 18.0	-0.6
LFU	**La Fuente**	**1.13**	**333**	eP	Pn	09 00 18.6	-0.4
SNET	**Serv Nac Est T**	**1.13**	**326**	eP	Pn	09 00 17.8	-1.3
SNET				eS	Sn	09 00 32.7	-0.9
SNET				AML	AML	09 00 35.0	
	comp=Z,5µm,0.4s						
BOQS	**Boqueron**	**1.20**	**326**	eP	Pn	09 00 19.2	-0.8
BOQS				eS	Sn	09 00 35.0	-0.2
SBLS	**San Blas**	**1.49**	**317**	eP	Pn	09 00 23.4	-0.5
CRIN	**San Cristobal**	**1.50**	**91**	eS	Sn	09 00 43.8	+1.3
CRIN				AML	AML	09 00 46.5	
	comp=E,11µm,0.3s						
SNJE	**San Jose**	**1.50**	**319**	eP	Pn	09 00 23.5	-0.6
RTR	**El Retiro**	**1.54**	**318**	eP	Pn	09 00 24.3	-0.4
LEON	**Leon**	**1.68**	**101**	eP	Pn	09 00 25.2	-1.4
TELN	**Telica**	**1.72**	**94**	eP	Pn	09 00 26.9	-0.1
RBDL	**Robledal**	**1.73**	**322**	eP	Pn	09 00 27.1	-0.2
MTO2	**Montecristo 2**	**1.81**	**335**	eP	Pn	09 00 28.7	+0.3
TGUH	**Tegucigalpa,Un**	**1.83**	**44**	ePg	Pn	09 00 29.2	+0.7
CNGN	**Cerro Negro**	**1.86**	**97**	eP	Pn	09 00 27.8	-1.2
CNGN				eS	Sn	09 00 51.4	+0.1
CNGN				AML	AML	09 00 52.4	
	comp=E,2µm,0.2s						
MOMN	**Momotombo**	**2.02**	**99**	eP	Pn	09 00 31.0	-0.2
COPN	**Copaltepe**	**2.02**	**106**	eP	Pn	09 00 30.1	-1.1
CSAN		**2.18**	**104**	eP	Pn	09 00 32.9	-0.6
TISN	**Laguna Tiscapa**	**2.34**	**104**	eP	Pn	09 00 33.8	-1.7
MGAN	**Managua**	**2.36**	**104**	eP	Pn	09 00 35.0	-0.9
WILN	**Americas 2**	**2.41**	**104**	eP	Pn	09 00 35.9	-0.7
APON	**Apoyo**	**2.59**	**108**	eP	Pn	09 00 38.6	-0.4
BOAB	**BOADO BROADBAND**	**2.86**	**95**	eP	Pn	09 00 41.6	-1.2
SSN	**San Juan del S**	**3.03**	**118**	eP	Pn	09 00 44.6	-0.5
CONN	**Concepcion**	**3.12**	**112**	eP	Pn	09 00 46.8	+0.5
VCR	**Vista de Mar**	**3.89**	**132**	eP	Pn	09 00 56.8	-0.1
THIG		**4.17**	**302**	iP	Pn	09 01 02.3	+1.6
THIG				iS	Sn	09 01 46.2	-2.1
JCR	**Jicaral**	**4.46**	**130**	eP	Pn	09 01 05.2	+0.6
CGA2	**Cerro Gallo 2**	**4.86**	**123**	⇓ eP	Pn	09 01 12.0	+1.8
PRS1	**Puriscal**	**5.01**	**123**	eP	Pn	09 01 14.2	+2.0
LAJ	**Bijagual**	**5.23**	**123**	eP	Pn	09 01 12.7	-2.6
PCIG		**5.37**	**304**	iP	Pn	09 01 16.1	-1.1
PCIG				iS	Sn	09 02 09.5	-8.3
QCR	**Quepos**	**5.45**	**127**	⇑ eP	Pn	09 01 19.4	+1.2
QCR				eS	Sn	09 02 18.2	-1.5
URSC	**Urasca**	**5.53**	**121**	eP	Pn	09 01 21.9	+2.5
SCX	**San Cristobal**	**5.58**	**316**	iP	Pn	09 01 28.1	+8.0
BUS	**Buena Vista**	**5.70**	**123**	eP	Pn	09 01 23.9	+2.2
TGIG		**5.95**	**313**	iP	Pn	09 01 28.2	+3.1
TGIG				iS	Sn	09 02 33.6	+1.7
ACR	**Cerro Adams**	**6.70**	**127**	⇑ eP	Pn	09 01 37.1	+1.8
ACR				eS	Sn	09 02 50.8	+0.4
TEIG	**Tepich**	**7.45**	**2**	ePn	Pn	09 01 46.7	+1.0
	comp=E,9.7nm,0.6s						
CMIG	**Matias Romero**	**7.47**	**306**	iP	Pn	09 01 47.4	+1.5
CMIG				Sn	Sn	09 03 08.9	-0.4
CMIG				iS	Sn	09 03 10.7	+1.4
CMIG	**Matias Romero**	**7.47**	**306**	Pn	Pn	09 01 46.5	+0.6
	comp=E,0.9nm,0.3s,baz=116,slow=10,SNR=18						
CMIG				Sn	Sn	09 03 08.9	-0.4
	comp=E,0.6nm,0.3s,baz=52,slow=19,SNR=2.5						
CMIG	**Matias Romero**	**7.47**	**306**	iP	Pn	09 01 40.4	-5.5
CMIG				iS	Sn	09 02 53.7	-16
HUIG	**Huatulco**	**7.89**	**293**	iP	Pn	09 01 53.5	+1.8
HUIG	**Huatulco**	**7.89**	**293**	iP	Pn	09 01 34.0	-18
HUIG				iS	Sn	09 02 42.1	-38
VHO	**Vista Hermosa**	**8.97**	**300**	iP	Pn	09 02 09.2	+2.6
VHO				iS	Sn	09 03 46.6	+0.2
VHO	**Vista Hermosa**	**8.97**	**300**	iP	Pn	09 01 53.2	-13
VHO				iS	Sn	09 03 16.6	-30
VBMS	**Vicksburg**	**19.47**	**355**	eP	Pn	09 04 25.6	+1.9
	comp=E,30nm,0.8s						
628A	**Black Gap, Mar**	**21.31**	**324**	⇑P	P	09 04 42.6	+0.5
	baz=17,SNR=6.6						
627A	**Terlingua Ranc**	**21.58**	**323**	P	P	09 04 45.9	+0.9
	baz=17,SNR=11						
TXAR	**Lajitas Array**	**21.66**	**322**	P	P	09 04 46.4	+0.6
TXAR	**Lajitas Array**	**21.66**	**322**	P	P	09 04 46.4	+0.6
	comp=E,2.0nm,0.7s,mb3.7,baz=138,slow=10,SNR=24						
428A	**Kincaid Ranch,**	**22.14**	**326**	⇓P	P	09 04 51.3	+0.3
	baz=18						
MIAR	**Mount Ida**	**22.18**	**349**	eP	P	09 04 51.0	-0.3
	comp=E,8.5nm,0.9s,mb4.2						
527A	**Woodward Ranch**	**22.22**	**324**	⇑P	P	09 04 51.8	-0.1
	baz=18						
526A	**Mary Lane Ranc**	**22.43**	**323**	⇓P	P	09 04 54.4	+0.2
	baz=18						
328A	**Wristen Ranch,**	**22.71**	**327**	P	P	09 04 57.5	+0.5
	baz=18,SNR=14						
426A	**McDonald Obser**	**22.85**	**324**	⇓P	P	09 04 59.7	+1.2
	baz=18						
TKL	**Tuckaleechee C**	**23.23**	**10**	P	P	09 04 59.4	-3.0
	comp=E,4.5nm,1.0s,mb3.9,baz=189,slow=11,SNR=6.2						
TKL				LR	LR	09 13 45.1	
	comp=E,41nm,20.5s,MS2.9,baz=248,slow=37						
WMOK	**Wichita Mounta**	**23.77**	**339**	eP	P	09 05 06.4	-1.0
	comp=E,1.7nm,0.7s,mb3.6						
224A	**Cornudas Mount**	**24.74**	**324**	⇑P	P	09 05 17.7	+1.4
	baz=20						
MSTX	**Muleshoe**	**24.77**	**331**	⇑P	P	09 05 14.9	-1.6
	baz=20,SNR=6.2						
Z26A	**Caprock**	**24.81**	**328**	⇓P	P	09 05 16.2	-0.7
	baz=20						
Y27A	**Causey**	**24.89**	**330**	⇓P	P	09 05 16.6	-1.0
	baz=20,SNR=8.0						
Z24A	**Sheeppen Canyo**	**25.59**	**326**	⇑P	P	09 05 25.5	+1.5
	baz=21,SNR=5.7						
Y25A	**Mesa, Roswell**	**25.68**	**328**	⇓P	P	09 05 24.6	-0.3
	baz=21,SNR=5.6						
W27A	**Bowe Ranch, En**	**25.80**	**332**	P	P	09 05 25.7	-0.2
	baz=21,SNR=7.2						
V26A	**Tequesquite Ra**	**26.74**	**332**	P	P	09 05 34.5	+0.1
	baz=22,SNR=7.3						
V25A	**Rancho No Teng**	**27.16**	**331**	⇓P	P	09 05 38.5	+0.3
	baz=22,SNR=5.9						
ANMO	**Albuquerque**	**27.41**	**327**	P	P	09 05 41.0	+0.7
	comp=E,0.5nm,0.6s,mb3.2,baz=142,slow=12,SNR=4.6						
U23A	**El Rito**	**28.33**	**329**	P	P	09 05 50.0	+1.5
	baz=24,SNR=9.1						
S22A	**4UR Ranch, Cre**	**29.75**	**330**	P	P	09 06 02.5	+1.3
	baz=25,SNR=8.1						
J21A	**Lysite**	**34.57**	**335**	⇓P	P	09 06 44.0	+0.7
	baz=30						
PDAR	**Pinedale Array**	**35.00**	**333**	P	P	09 06 46.5	-0.6
	comp=E,0.7nm,0.8s,mb3.7,baz=142,slow=10,SNR=6.5						
J19A	**Crowheart**	**35.18**	**334**	⇑P	P	09 06 50.4	+1.8
	baz=30						
LPAZ	**La Paz**	**35.23**	**144**	P	P	09 06 49.0	-0.3
LPAZ				LR	LR	09 21 06.5	
LPAZ	**La Paz**	**35.23**	**144**	P	P	09 06 49.0	-0.3
	comp=E,0.8nm,0.8s,mb3.7,baz=320,slow=7.9,SNR=3.5						
LPAZ				LR	LR	09 21 06.5	
	comp=E,21nm,18.1s,MS2.9,baz=58,slow=36						
I20A	**Worland**	**35.35**	**335**	⇑P	P	09 06 49.6	-0.4
	baz=30						
H21A	**Big Horn, Sher**	**35.48**	**337**	⇑P	P	09 06 50.6	-0.6
	baz=30						
NVAR	**Mina Array Bea**	**36.76**	**319**	P	P	09 07 03.0	+0.8
	comp=E,0.4nm,0.8s,mb3.4,baz=116,slow=8.1,SNR=5.0						
RLMT	**Red Lodge**	**36.77**	**335**	⇓P	P	09 07 02.3	+0.1
	baz=32						
G18A	**Lazy EL Ranch,**	**37.05**	**335**	⇓P	P	09 07 04.3	-0.3
	baz=32						
F19A	**Roth Farm, Mol**	**37.25**	**336**	⇓P	P	09 07 05.5	-0.7
	baz=32						
E20A	**Meyer Farm, Mu**	**37.48**	**338**	P	P	09 07 08.2	0.0
	baz=32,SNR=6.5						
G17A	**Pierce Place,**	**37.55**	**334**	⇑P	P	09 07 10.2	+1.5
	baz=33						
F18A	**Big Timber**	**37.59**	**336**	⇓P	P	09 07 08.7	-0.4
	baz=32						
H15A	**Lima**	**37.85**	**332**	⇓P	P	09 07 12.6	+1.3
	baz=33						
ULM	**Lac du Bonnet**	**37.88**	**352**	P	P	09 07 07.6	-3.9
ULM				LR	LR	09 24 39.9	
ULM	**Lac du Bonnet**	**37.88**	**352**	P	P	09 07 07.6	-3.9
	comp=E,2.0nm,0.5s,mb4.2,baz=168,slow=8.8,SNR=2.4						
ULM				LR	LR	09 24 39.9	
	comp=E,54nm,18.7s,MS3.4,baz=188,slow=40						
D20A	**Manuel Ranch,**	**37.98**	**338**	⇑P	P	09 07 11.9	-0.4
	baz=33						
F17A	**Fitzpatrick Pl**	**37.98**	**335**	⇓P	P	09 07 12.8	+0.4
	baz=33						
BOZ	**Bozeman (W)**	**38.19**	**334**	⇑P	P	09 07 14.0	-0.2
	baz=33						
BOZ	**Bozeman (W)**	**38.19**	**334**	eP	P	09 07 13.8	-0.3
	comp=E,1.7nm,0.8s,mb3.8						
G15A	**Dillon**	**38.19**	**332**	⇑P	P	09 07 14.3	+0.1
	baz=33						
D18A	**Linhart Farms,**	**38.69**	**337**	⇑P	P	09 07 18.2	-0.1
	baz=34						
C19A	**Slack Wire Ran**	**38.85**	**338**	⇓P	P	09 07 19.6	-0.2
	baz=34						
E16A	**East Helena**	**38.91**	**334**	⇓P	P	09 07 19.9	-0.2
	baz=34						
D17A	**Six Diamond Ra**	**39.00**	**336**	⇓P	P	09 07 20.7	-0.2
	baz=34,SNR=5.1						
D16A	**Dana Ranch, Ca**	**39.25**	**335**	⇑P	P	09 07 23.2	+0.1
	baz=34						
C17A	**Wharram Farm,**	**39.42**	**336**	⇓P	P	09 07 24.1	-0.3
	baz=34						
A17A	**Triple J Farms**	**40.47**	**338**	P	P	09 07 32.7	-0.5
	baz=35,SNR=6.9						
A15A	**Johnson Ranch,**	**41.28**	**336**	⇑P	P	09 07 39.3	-0.5
	baz=36						
A14A	**Double T Ranch**	**41.56**	**335**	⇓P	P	09 07 41.8	-0.2
	baz=36						
YKA	**Yellowknife Ar**	**53.05**	**345**	P	P	09 09 09.1	-2.0
	comp=E,0.6nm,0.4s,mb3.9,baz=139,slow=7.9,SNR=9.8						
DLBC	**Dease Lake**	**55.17**	**335**	P	P	09 09 25.4	-1.4
	comp=E,2.0nm,0.7s,mb4.2,baz=135,slow=7.7,SNR=4.2						
INK	**Inuvik**	**62.60**	**343**	P	P	09 10 15.5	-2.6
	comp=E,0.9nm,0.8s,mb3.9,baz=149,slow=7.0,SNR=5.4						
ILAR	**Eielson Array**	**65.31**	**336**	P	P	09 10 33.4	-2.5
	comp=E,0.5nm,0.8s,mb3.6,baz=136,slow=5.7,SNR=6.4						
WRA	**Warramunga Arr**	**138.28**	**254**	PKP	PKPdf	09 19 19.8	-0.2
	comp=E,0.3nm,0.5s,baz=89,slow=2.5,SNR=6.6						
ASAR	**Alice Springs**	**138.34**	**249**	PKP	PKPdf	09 19 19.4	-0.6
	comp=E,0.3nm,1.0s,baz=104,slow=1.1,SNR=3.0						
CMAR	**Chiang Mai Arr**	**148.12**	**346**	PKPbc	PKPbc	09 19 38.0	-2.5
	comp=E,0.5nm,0.4s,baz=343,slow=2.8,SNR=3.4						

ISCJB 24 09:07:08.3±0.5, 36.65N±0.03×71.91E±0.06, h130km±6km, mb3.8/16, Error ellipse: s-maj=8.1km s-min=4.0km az=166.5
BJI 24 09:07:08.0, 36.83N×71.66E, h85km, mb4.0/3
NEIC 24 09:07:09.8±2.1, 36.74N×71.64E, h112km±18km, mb3.9/2, Error ellipse: s-maj=17.2km s-min=10.5km az=189.0
IDC 24 09:07:09.2±3.5, 36.70N×71.63E, h107km±30km, mb3.7/12, mb1 3.8/17, mb1mx3.7/27, mbtmp3.7/17, MS2.9/1, Ms1 2.9/1, ms1mx1.9/39, Error ellipse: s-maj=22.1km s-min=13.8km az=18.0
NNC 24 09:07:19.0±5.5, 37.38N×70.99E, h183km±42km, mb3.0, mpv4.4, Error ellipse: s-maj=45.8km s-min=36.0km az=24.0

ISC 24 09:07:09.7±0.4, 36.63N±0.03×71.96E±0.06, h127km±6km, n68, σ1.920/85, mb3.9/16, 6C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.80**	**181**	⇑P	Pn	09 07 54.4	+0.8
CEP				S	Sn	09 08 29.0	+1.5
CHCP	**Chirah Chowk**	**3.15**	**160**	P	Pn	09 08 01.0	+2.8
THW	**Thamme Wali**	**3.83**	**183**	P	Pn	09 08 07.1	0.0
KSH	**Kashi**	**4.28**	**46**	eP	Pn	09 08 10.3	-2.7
KSH				S	Sn	09 08 53.6	-8.6
KSH				smax			
	comp=N,230nm,0.4s						
KSH				smax			
	comp=E,220nm,0.2s						
JMU	**Jammu**	**4.59**	**147**	ePKP	Pn	09 08 18.5	+1.2
JMU				eS	Sn	09 09 09.5	-0.3
SARP	**Sargodha**	**4.74**	**173**	P	Pn	09 08 19.6	+0.4
AML	**Almayashu**	**5.65**	**13**	P	Pn	09 08 31.3	-0

SONA					AML	AML	09 11 07.4		
	comp=E,62nm,0.3s								
SONA					AML	AML	09 11 09.3		
	comp=N,36nm,0.3s								
PTH	**Pithoragarh**	**9.89**	**133**	*ex*		**Sn**	**09 11 15.6**	**-2.1**
AJM	**Ajmer**	**10.38**	**167**	*i*	P	**Pn**	**09 09 34.0**	**-1.1**
AJM				*i*	S	**Sn**	**09 11 23.0**	**-6.6**
AGRA	**Agra**	**10.66**	**150**	*e*	PKP	**Pn**	**09 09 38.7**	**-0.2**
AGRA				*eS*		**Sn**	**09 11 30.9**	**-5.5**
MKAR	**Makanchi Array**	**12.74**	**34**		P	**Pn**	**09 10 06.8**	**+0.7**
	comp=N,0.2nm,0.3s,baz=214,slow=13,SNR=5.1								
DANN	**Dangsing**	**12.93**	**126**	*e*	P	**Pn**	**09 10 08.6**	**-0.1**
	comp=N,26nm,0.2s								
KOLN	**Koldanda**	**13.22**	**129**	*e*	P	**Pn**	**09 10 12.8**	**+0.3**
	comp=N,35nm,0.4s								
GKN	**Gorkha**	**13.73**	**125**	*e*	P	**Pn**	**09 10 18.3**	**-0.8**
	comp=N,46nm,0.4s								
KKN	**Kakani**	**14.30**	**124**	*e*	P	**Pn**	**09 10 25.5**	**-0.8**
	comp=N,48nm,0.5s								
DMN	**Daman**	**14.30**	**125**	*e*	P	**Pn**	**09 10 26.2**	**-0.1**
	comp=N,20nm,0.3s								
PKIN	**Phulchoki**	**14.52**	**125**	*e*	P	**Pn**	**09 10 28.3**	**-0.7**
	comp=N,45nm,0.6s								
PKIN	**Phulchoki**	**14.52**	**125**	*e*	P	**Pn**	**09 10 28.5**	**-0.5**
	comp=N,28nm,0.3s								
PKI	**Pulchoki**	**14.53**	**125**	*e*	P	**Pn**	**09 10 28.7**	**-0.5**
	comp=N,33nm,0.4s								
GUN	**Gumba**	**14.62**	**123**	*e*	P	**Pn**	**09 10 30.1**	**-0.3**
	comp=N,92nm,0.4s								
KURK	**Kurchatov**	**14.87**	**17**		P	**Pn**	**09 10 34.8**	**+1.5**
	comp=N,0.3nm,0.3s,baz=206,slow=10,SNR=7.0								
JIRN	**Jiri**	**14.99**	**123**	*e*	P	**Pn**	**09 10 35.0**	**0.0**
	comp=N,90nm,0.4s								
AB31	**Akbulak array**	**15.36**	**329**	⇓	P	**Pn**	**09 10 34.8**	**-4.5**
	comp=N,1.0nm,0.3s,baz=178,slow=9.7,SNR=50								
AB31				⇑	S	S	09 13 09.9	-27	
	comp=N,7.3nm,0.5s								
RAMN	**Ramite**	**15.73**	**124**	*e*	P	**Pn**	**09 10 44.0**	**-0.2**
	comp=N,75nm,0.6s								
VOSK	**Vostochnaya**	**16.11**	**358**	⇓	P	**Pn**	**09 10 45.0**	**-3.6**
	comp=N,6.0nm,1.4s								
ODAN	**Odare**	**16.32**	**122**	*e*	P	**Pn**	**09 10 51.1**	**-0.4**
	comp=N,43nm,0.7s								
BVA0	**Borovoye Array**	**16.43**	**357**		P	**Pn**	**09 10 51.5**	**-1.0**
	comp=N,0.2nm,0.5s,baz=168,slow=11,SNR=7.5								
BVA0					S	**S**	**09 13 43.3**	**-12**	
	comp=N,0.2nm,0.8s,baz=162,slow=26,SNR=4.5								
BVAR	**Borovoye Array**	**16.43**	**357**		P	**Pn**	**09 10 50.8**	**-1.7**
	comp=N,0.5nm,0.3s,baz=170,slow=12,SNR=7.9								
BVAR					S	**S**	**09 13 41.4**	**-14**	
	comp=N,0.1nm,0.3s,baz=174,slow=16,SNR=4.2								
BVAR					LR	LR	09 18 45.5		
	comp=N,39nm,19.5s,baz=308,slow=43								
ZRNK	**Zerenda**	**16.45**	**354**	⇑	P	**Pn**	**09 10 48.8**	**-4.0**
	comp=N,1.8nm,0.5s								
AKTK	**Aktyubinsk**	**17.06**	**328**		P	**Pn**	**09 10 57.5**	**-2.7**
AKTO	**Aktyubinsk**	**17.06**	**328**	⇑	P	**Pn**	**09 10 56.6**	**-3.6**
	comp=N,1.5nm,0.5s								
AKTO				⇓	S	**S**	**09 13 50.9**	**-19**	
	comp=N,1.7nm,0.9s								
AKTO	**Aktyubinsk**	**17.06**	**328**		P	**Pn**	**09 10 57.5**	**-2.7**
	comp=N,3.1nm,0.3s,baz=142,slow=13,SNR=28								
ZAA0	**Zalesovo Array**	**19.48**	**23**	*e*	P	**P**	**09 11 27.8**	**+1.4**
ZALV	**Zalesovo Beam**	**19.48**	**23**		P	**P**	**09 11 27.6**	**+1.2**
	comp=N,1.3nm,0.3s,baz=219,slow=10.0,SNR=15								
ZALV					S	**S**	**09 14 54.9**	**-4.6**	
	comp=N,0.3nm,0.3s,baz=227,slow=19,SNR=2.8								
GTA	**Gaotai**	**22.08**	**74**	*e*	P	**P**	**09 12 00.9**	**+6.5**
GTA					pmax	pmax			
	comp=Z,3.0nm,1.0s,mb3.6								
SONM	**Songino Array**	**27.62**	**55**		P	**P**	**09 12 49.6**	**+4.6**
	comp=Z,0.5nm,0.5s,mb3.4,baz=252,slow=8.5,SNR=3.6								
CMAR	**Chiang Mai Arr**	**29.84**	**120**		P	**P**	**09 13 09.7**	**+4.7**
	comp=Z,0.7nm,0.3s,mb3.7,baz=319,slow=7.7,SNR=2.9								
BR131	**Keskin Array S**	**30.13**	**288**	*e*	P	**P**	**09 13 08.0**	**+0.7**
	comp=Z,1.2nm,0.7s,mb3.6								
BRTR	**Keskin Array B**	**30.13**	**288**		P	**P**	**09 13 07.6**	**+0.3**
	comp=Z,1.6nm,0.6s,mb3.8,baz=98,slow=8.8,SNR=11								
AKASG	**Malin Array Be**	**33.47**	**309**		P	**P**	**09 13 35.8**	**-0.5**
	comp=Z,1.8nm,0.4s,mb4.3,baz=82,slow=7.9,SNR=10								
JOF	**Joensuu**	**36.14**	**330**	*ep*		**P**	**09 13 59.0**	**-0.2**
	comp=Z,6.0nm,0.3s,mb5.0								
FINES	**FINESS Array B**	**37.81**	**326**		P	**P**	**09 14 13.7**	**+0.4**
	comp=Z,4.0nm,0.5s,mb4.5,baz=119,slow=8.6,SNR=36								
KAF	**Kangasniemi**	**37.94**	**327**	*ep*		**P**	**09 14 12.6**	**-1.7**
	comp=Z,1.1nm,0.5s,mb3.9								
KEV	**Kevo**	**40.97**	**338**	*ep*		**P**	**09 14 39.3**	**-0.1**
ARCES	**ARCESS Array B**	**41.32**	**337**		P	**P**	**09 14 43.0**	**+0.8**
	comp=Z,1.0nm,0.5s,mb3.9,baz=116,slow=8.2,SNR=26								
NOA	**NORSAR Array B**	**44.74**	**323**		P	**P**	**09 15 09.8**	**-0.1**
	comp=Z,2.6nm,0.6s,mb4.1,baz=96,slow=7.8,SNR=14								
ESDC	**Sonseca Array**	**58.08**	**298**		P	**P**	**09 16 49.9**	**+0.3**
	comp=Z,1.8nm,0.6s,mb4.3,baz=54,slow=8.0,SNR=14								
TORD	**Torodi Ar. Bea**	**66.50**	**269**		P	**P**	**09 17 44.3**	**-1.6**
	comp=Z,0.9nm,0.4s,mb4.0,baz=50,slow=6.4,SNR=16								
COLA	**College**	**74.13**	**17**	*e*	P	**P**	**09 18 33.6**	**+2.0**
	comp=Z,1.9nm,0.7s,mb3.9								
ILAR	**Eielson Array**	**74.44**	**16**		P	**P**	**09 18 34.4**	**+1.0**
	comp=Z,0.4nm,0.7s,mb3.3,baz=325,slow=5.5,SNR=6.4								
YKA	**Yellowknife Ar**	**81.08**	**3**		P	**P**	**09 19 11.1**	**+1.0**
	comp=Z,0.9nm,0.7s,mb3.7,baz=349,slow=5.4,SNR=3.9								
WRA	**Warramunga Arr**	**81.41**	**123**		P	**P**	**09 19 15.0**	**+2.5**
WRA	**Warramunga Arr**	**81.41**	**123**		P	**P**	**09 19 15.0**	**+2.5**
	comp=Z,0.5nm,0.8s,mb3.4,baz=329,slow=4.9,SNR=5.4								

NIED **24** *09:28:00, 32.˚40N× 139.˚50E, h240km, Mw4.5 Best double couple: M0 7.41000×10^15 NP1:φ=132.00000°, δ84.00000°, λ=-155.00000°. NP2:φ=39.00000°, δ65.00000°, λ=-6.00000°.*

BJI **24** *09:28:06.2, 31.˚98N× 140.˚00E, h226km, mB4.7/22, mb4.6/34*

MOS **24** *09:28:12.9± 1.0, 32.˚20N× 139.˚08E, h231km, mb4.3/24, Error ellipse: s-maj=12.2km s-min=6.4km az=89.5*

ISCJB **24** *09:28:13.6± 0.4, 32.˚16N± 0.˚04× 139.˚14E± 0.˚03, h234km± 2km, mb4.3/62, Error ellipse: s-maj=5.9km s-min=4.3km az=168.9*

IDC **24** *09:28:14.1± 0.5, 32.˚16N× 139.˚16E, h232km± 3km, mb3.9/18, mb1 4.1/22, mb1mx4.1/26, mbtmp4.0/22, Error ellipse: s-maj=11.3km s-min=7.8km az=87.0*

NEIC **24** *09:28:14.2± 0.7, 32.˚17N× 139.˚11E, h227km± 6km, mb4.2/26, Error ellipse: s-maj=6.4km s-min=4.6km az=134.0*

JMA **24** *09:28:15.9± 0.2, 32.˚39N× 139.˚47E, h247km± 2km, M4.8*

ISC 24 09:28:15.0± 0.4, 32.˚22N± 0.˚04× 139.˚15E± 0.˚03, h232km± 2km, h232km± 4.6km: pP-P, n252, c0.82/271, mb4.3/62, 57C-54D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**1.04**	**30**	P	**Pn**	**09 28 47.3**	**-1.0**
	84nm,0.3s,baz=166,slow=4.2,SNR=52						
JHJ				S	**S**	**09 29 14.6**	**0.0**
	501nm,0.3s,baz=75,slow=20,SNR=13						
JHJ2	**Mitsune**	**1.05**	**32**	P	**Pn**	**09 28 49.9**	**+1.5**
JMY	**Miyakejima3**	**1.87**	**9**	P	**Pn**	**09 28 55.7**	**+1.0**
JKO	**Kozu shima**	**1.96**	**360**	⇓P	**Pn**	**09 28 57.0**	**+1.4**
TK01	**Tokai 1**	**2.02**	**320**	S	**S**	**09 29 32.4**	**+3.8**
JIM2	**Oshima 3**	**2.50**	**5**	⇓P	**Pn**	**09 29 01.5**	**+0.6**
BSO3	**Boso 3**	**2.81**	**23**	P	**Pn**	**09 29 03.5**	**-0.8**
BSO3				S	**S**	**09 29 41.4**	**-1.8**
BSO1	**Boso 1**	**2.87**	**32**	⇑P	**Pn**	**09 29 03.7**	**-1.1**
BSO1				S	**S**	**09 29 41.6**	**-2.6**
HMMJ	**Hamamatsu 2**	**2.89**	**336**	⇓P	**Pn**	**09 29 06.9**	**+1.8**
HMMJ				S	**S**	**09 29 45.4**	**+0.7**
BSO4	**Boso 4**	**2.93**	**19**	P	**Pn**	**09 29 05.0**	**-0.6**
BSO4				S	**S**	**09 29 45.0**	**-0.6**
JOD2	**Odawara 2**	**3.04**	**359**	P	**Pn**	**09 29 07.1**	**+0.4**
JOD2				S	**S**	**09 29 49.4**	**+1.8**
MJAR	**Matsushiro Arr**	**4.38**	**350**	P	**Pn**	**09 29 22.1**	**-0.5**
	14nm,0.3s,baz=169,slow=11,SNR=149						
MJAR				S	**S**	**09 30 15.8**	**-0.3**
	6.5nm,0.3s,baz=256,slow=21,SNR=6.0						
MJAR	**Matsushiro Arr**	**4.38**	**350**	P	**Pn**	**09 29 22.1**	**-0.4**
MJAR				S	**S**	**09 30 15.8**	**-0.4**
MJAR				pmax	pmax		
	comp=Z,14nm,0.3s						
MJAR				smax			
	comp=N,7.0nm,0.3s						
MAJO	**Matsushiro**	**4.38**	**350**	*e*	Pn	**Pn**	**09 29 22.7**	**+0.2**
MAT	**Matsushiro**	**4.38**	**350**	P		**Pn**	**09 29 22.5**	**0.0**
MAT				S		**S**	**09 30 16.5**	**+0.3**
CBIJ	**Chichi jima**	**5.75**	**152**	P		**Pn**	**09 29 36.2**	**-3.4**
	comp=N,87nm,0.3s,baz=309,slow=13,SNR=29							
CBIJ				S		**S**	**09 30 39.0**	**-8.1**
	comp=N,75nm,0.3s,baz=261,slow=19,SNR=4.1							
ERM	**Erimo**	**10.28**	**17**	*e*	P	**Pn**	**09 30 35.3**	**-1.9**
KSRS	**Korea Array**	**10.60**	**303**		P	**Pn**	**09 30 43.9**	**+2.6**
	comp=N,1.1nm,0.3s,baz=115,slow=13,SNR=77								
KSRS	**Korea Array**	**10.60**	**303**		P	**Pn**	**09 30 43.9**	**+2.6**
KSRS					pmax	pmax			
	comp=Z,1.0nm,0.3s								
INCN	**Inchon**	**11.54**	**300**	*e*	Pn	**Pn**	**09 30 56.0**	**+2.8**
ASAJ	**Asahikawa**	**12.18**	**12**		P	**Pn**	**09 30 59.4**	**-1.7**
	comp=Z,9.2nm,0.3s,baz=221,slow=11,SNR=49								
ASAJ	**Asahikawa**	**12.18**	**12**		P	**Pn**	**09 30 59.4**	**-1.7**
ASAJ					pmax	pmax			
	comp=Z,9.0nm,0.3s								
MDJ	**Mudanjiang**	**14.45**	**332**		P	**Pn**	**09 31 28.8**	**-0.3**
MDJ					pmax	pmax			
	comp=Z,32nm,0.8s								
MDJ					pmax	pmax			
	comp=Z,270nm,4.6s								
MDJ	**Mudanjiang**	**14.45**	**332**	*e*	Pn	**Pn**	**09 31 28.6**	**-0.5**
	comp=Z,28nm,0.8s								
KUR	**Kuril'sk**	**14.65**	**25**	*e*	P	**Pn**	**09 31 32.0**	**+0.5**
KUR					S	**S**	**09 34 11.0**	**-2.5**
KUR					pmax	pmax			
	comp=Z,110nm,0.8s								
KUR					smax				
	comp=N,50nm,0.5s								
KUR					smax				
	comp=E,50nm,0.5s								
YSS	**Yuzh-Sakhalins**	**14.97**	**10**	*e*	P	**Pn**	**09 31 34.6**	**-0.7**
	comp=E,150nm,0.5s								
YSS	**Yuzh-Sakhalins**	**14.97**	**10**	*ei*	P	**Pn**	**09 31 34.2**	**-1.1**
YSS					pmax	pmax			
	comp=Z,40nm,0.7s								
CN2	**Changchun**	**15.80**	**321**	⇑	P	**Pn**	**09 31 47.3**	**+2.1**
CN2				*es*	P	sP	09 32 44.8	-5.9	
CN2				*eS*		**S**	**09 34 36.6**	**-1.9**
CN2					pmax	pmax			
	comp=Z,20nm,0.8s								
CN2					pmax	pmax			
	comp=Z,200nm,4.0s								
HABR	**Khabarovsk**	**16.53**	**350**	*e*	P	**Pn**	**09 31 51.6**	**-0.8**
HABR					S	**S**	**09 34 49.0**	**-4.1**
HABR					pmax	pmax			
	comp=N,23nm,1.0s								
HABR					pmax	pmax			
	comp=E,42nm,1.6s								
HABR					pmax	pmax			
	comp=Z,42nm,1.0s								
TATO	**Taipei**	**17.10**	**250**	*e*	P	**P**	**09 31 58.6**	**-0.3**
	comp=Z,427nm,2.1s								
GUMO	**Guam**	**19.27**	**163**		P	**P**	**09 32 22.3**	**-0.2**
	comp=Z,6.2nm,0.3s,baz=349,slow=5.2,SNR=5.4								
GUMO					S	**S**	**09 35 53.9**	**+5.9**
	comp=Z,2.0nm,0.3s,baz=0.0,slow=20,SNR=3.0								
BJT	**Baijiatuan**	**20.10**	**299**	*e*	P	**P**	**09 32 30.4**	**-0.7**
	comp=Z,25nm,0.5s								
BJT	**Baijiatuan**	**20.10**	**299**	*e*	P	**P**	**09 32 30.4**	**-0.7**
BJT					pmax	pmax			
	comp=Z,25nm,0.5s								
BJI	**Beijing**	**20.10**	**299**		P	**P**	**09 32 30.1**	**-1.0**
BJI					sP	sP	09 33 35.6	-2.7	
BJI					S	**S**	**09 36 04.3**	**+0.6**
BJI					PcP	PcP	09 36 36.1	+0.3	
BJI					pmax	pmax			
	comp=Z,37nm,0.6s								
BJI					pmax	pmax			
	comp=Z,98nm,3.8s								
BJI					LR	LR			
	comp=N,160nm,15.3s								
BJI					LR	LR			
	comp=E,140nm,15.4s								
BJI					LR	LR			
	comp=Z,32nm,18.8s								
WHN	**Wuhan**	**21.23**	**272**		P	**P**	**09 32 42.5**	**-0.7**
HHC	**Hu-ho-hao-te**	**23.71**	**299**	*e*	P	**P**	**09 33 07.8**	**+1.9**
HHC					PcP	PcP	09 36 44.3	+1.3	
HHC				*eS*		**S**	**09 37 02.4**	**-1.0**
HHC					ScS	ScS	09 43 43.0	-2.9	
HHC					pmax	pmax			
	comp=Z,15nm,0.7s,mb4.7								
HHC					pmax	pmax			
	comp=Z,120nm,4.8s								
ENH	**Enshi**	**25.40**	**274**	*e*	P	**P**	**09 33 20.8**	**-0.5**
	comp=Z,10nm,0.5s,mb4.7								
CLNS	**Chul'man**	**26.52**	**342**	*e*	P	**P**	**09 33 31.3**	**+0.4**
CLNS					pmax	pmax			
	comp=Z,24nm,0.6s,mb5.0								
CLNS					pmax	pmax			
	comp=N,15nm,0.7s								
CLNS					pmax	pmax			
	comp=E,8.0nm,0.6s								
GYA	**Guiyang**	**28.83**	**267**	*e*	P	**P**	**09 33 52.3**	**+0.5**
GYA					pP	pP	09 34 37.8	-0.3	
GYA					PP	PP	09 34 56.4	-5.5	
GYA					sP	sP	09 35 03.8	-1.3	
GYA					PcP	PcP	09 36 56.0	+0.7	
GYA					S	**S**	**09 38 24.3**	**-0.1**
GYA					ScP	ScP	09 40 13.5	-0.9	
GYA					PcS	PcS	09 40 38.0	-0.3	
GYA					ScS	ScS	09 44 07.6	-1.0	
GYA					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.5								
ULN	**Ulaanbaatar**	**28.86**	**312**	*e*	P	**P**	**09 33 52.7**	**+0.8**
	comp=Z,6.7nm,0.7s,mb4.4								
ULN	**Ulaanbaatar**	**28.86**	**312**	*e*	P	**P**	**09 33 52.7**	**+0.9**
ULN					pmax	pmax			
	comp=Z,7.0nm,0.7s,mb4.4								
SONM	**Songino Array**	**29.27**	**312**		P	**P**	**09 33 55.8**	**+0.4**
	comp=Z,4.4nm,0.7s,mb4.2,baz=114,slow=8.6,SNR=20								
SONM					ScP	ScP	09 40 13.2	-2.2	
	comp=Z,0.5nm,0.6s,baz=106,slow=3.6,SNR=3.5								
QIZ	**Qiongzhong**	**29.40**	**251**		P	**P**	**09 33 56.8**	**-0.2**
QIZ					pP	pP	09 34 46.9	+3.6	
QIZ					S	**S**	**09 38 32.3**	**-1.2**
QIZ					pmax	pmax			
	comp=Z,18nm,1.9s,mb4.4								
CD2	**Chengdu**	**30.11**	**277**		P	**P**	**09 34 04.5**	**+1.5**
CD2					pmax	pmax			
	comp=Z,20nm,0.4s,mb5.1								
CD2					pmax	pmax			
	comp=Z,180nm,4.8s								
YAK	**Yakutsk**	**30.45**	**351**	*e*	P	**P**	**09 34 04.7**	**-0.9**
	comp=Z,22nm,0.5s,mb5.0								
YAK	**Yakutsk**	**30.45**	**351**	*e*	P	**P**	**09 34 04.0**	**-1.6**
YAK				*e*			09 35 23.5		
YAK				*eS*		**S**	**09 38 48.2**	**-0.6**
YAK				*eS*		SS	09 40 10.0	-48	
YAK					pmax	pmax			
	comp=Z,31nm,0.9s,mb4.9								
YAK					pmax	pmax			
	comp=N,14nm,1.1s								
YAK					pmax	pmax			
	comp=E,4.0nm,1.0s								
YAK					pmax	pmax			
	comp=Z,12nm,0.6s,mb4.7								
YAK					pmax	pmax			
	comp=N,2.0nm,0.4s								
YAK					pmax	pmax			
	comp=E,2.0nm,0.3s								
YAK					smax				
	comp=N,52nm,2.7s								
YAK					smax				
	comp=E,35nm,3.2s								
SEY	**Seymchan**	**31.86**	**11**	*de*	P	**P**	**09 34 17.9**	**-0.1**
ZAK	**Zakamensk**	**32.08**	**315**	*e*	P	**P**	**09 34 19.5**	**-0.5**
ZAK					pmax	pmax			
	comp=Z,1.0nm,1.4s								
GTA	**Gaotai**	**32.50**	**294**	*e*	P	**P**	**09 34 22.8**	**-1.1**
GTA					pmax	pmax			
	comp=Z,5.0nm,1.1s,mb4.0								
KMI	**Kunming**	**32.61**	**267**		P	**P**	**09 34 27.0**	**+2.0**
KMI					pmax	pmax			
	comp=Z,9.0nm,0.9s,mb4.3								
CHTO	**Chiang Mai**	**38.44**	**260**	*e*	P	**P**	**09 35 14.1**	**-0.5**
	comp=Z,7.9nm,0.7s,mb4.3								
CHTO	**Chiang Mai**	**38.44**	**260**	*e*	P	**P**	**09 35 14.1**	**-0.5**
CHTO					pmax	pmax			
	comp=Z,8.0nm,0.7s,mb4.4								
CMAR	**Chiang Mai Arr**	**38.61**	**259**		P	**P**	**09 35 15.4**	**-0.5**
	comp=Z,4.0nm,0.7s,mb4.1,baz=59,slow=7.0,SNR=20								
BILL	**Bilibino**	**39.16**	**16**	*e*	P	**P**	**09 35 20.6**	**+0.8**
	comp=Z,11nm,0.5s,mb4.6								
BILL	**Bilibino**	**39.16**	**16**	⇑	*e*P	**P**	**09 35 20.0**	**+0.2**
BILL					*e*		09 36 53.7		
BILL					*eS*	**S**	**09 40 57.2**	**-4.5**
BILL					*e*SS	SS	09 43 55.3	-9.2	
BILL					pmax	pmax			
	comp=Z,12nm,0.7s,mb4.5								
WMQ	**Urumqi**	**41.55**	**301**	*e*	P	**P**	**09 35 41.6**	**+1.8**
WMQ					pP	pP	09 36 29.0	+0.6	
WMQ					sP	sP	09 36 54.0	-0.8	
WMQ					PP	PP	09 37 24.3	+3.5	
WMQ					pmax	pmax			
	comp=Z,14nm,1.0s,mb4.3								
WMQ					pmax	pmax			
	comp=Z,120nm,4.2s								
ZALV	**Zalesovo Beam**	**43.94**	**316**		P	**P**	**09 35 58.9**	**+0.1**
	comp=Z,1.6nm,0.3s,mb3.9,baz=100,slow=7.1,SNR=7.8								
ZALV					PcP	PcP	09 37 39.0	-1.1	
	comp=Z,1.4nm,0.8s,baz=90,slow=2.9,SNR=3.6								
ZALV					ScP	ScP	09 41 06.7	-2.8	
	comp=Z,0.7nm,0.5s,baz=101,slow=7.5,SNR=3.2								
TAPN	**Taplejung**	**44.57**	**278**	*e*	P	**P**	**09 36 03.7**	**-0.4**
	comp=Z,24nm,0.6s,mb4.7								
ODAN	**Odare**	**45.00**	**277**	*e*	P	**P**	**09 36 06.7**	**-0.8**
	comp=Z,51nm,0.6s,mb5.1								
MKAR	**Makanchi Array**	**45.26**	**306**		P	**P**	**09 36 09.0**	**-0.3**
	comp=Z,6.6nm,0.7s,mb4.1,baz=88,slow=10,SNR=53								
MKAR					ScP	ScP	09 41 12.6	-2.5	
	comp=Z,0.8nm,0.3s,baz=83,slow=3.0,SNR=10								
RAMN	**Ramite**	**45.63**	**278**	*e*	P	**P**	**09 36 11.8**	**-0.7**
	comp=Z,91nm,0.7s,mb5.2								
JIRN	**Jiri**	**45.74**	**279**	*e*	P	**P**	**09 36 13.3**	**-0.1**
	comp=Z,127nm,0.7s,mb5.4								
GUN	**Gumba**	**45.92**	**297**	*e*	P	**P**	**09 36 14.7**	**0.0**
PKI	**Pulchoki**	**46.43**	**279**	*e*	P	**P**	**09 36 17.5**	**-1.2**
	comp=Z,38nm,0.9s,mb4.7								
PKIN	**Phulchoki**	**46.44**	**279**	*e*	P	**P**	**09 36 18.0**	**-0.7**
	comp=Z,26nm,0.7s,mb4.7								
KKN	**Kakani**	**46.46**	**279**	*e*	P	**P**	**09 36 18.5**	**-0.4**
DMN	**Daman**	**46.67**	**279**	*e*	P	**P**	**09 36 19.7**	**-0.8**
GKN	**Gorkha**	**46.93**	**280**	*e*	P	**P**	**09 36 21.7**	**-0.9**
	comp=Z,57nm,0.8s,mb4.9								
DANN	**Dangsing**	**47.55**	**281**	*e*	P	**P**	**09 36 27.2**	**-0.1**
	comp=Z,30nm,0.4s,mb5.0								
KURK	**Kurchatov**	**47.57**	**311**	*de*	P	**P**	**09 36 26.9**	**-0.2**
KURK					pmax	pmax			
	comp=Z,12nm,0.7s,mb4.3								
KOLN	**Koldanda**	**47.87**	**280**	*e*	P	**P**	**09 36 29.3**	**-0.5**
	comp=Z,35nm,0.8s,mb4.7								
KSH	**Kashi**	**50.80**	**297**		P	**P**	**09 36 55.1**	**+3.4**
KSH				*ep*	P	pP	09 37 44.1	+1.8	
KSH				*es*	P	sP	09 38 08.3	+0.2	
KSH				*ePP*		PP	09 38 55.0	+4.8	
KSH				*e*ScP		ScP	09 41 41.9	+3.2	
KSH				*e*PcS		PcS	09 42 05.0	+2.2	
KSH				*eS*		**S**	**09 43 51.8**	**+2.6**
KSH				*e*ScS		ScS	09 46 19.1	+1.3	
KSH					pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.2								
KSH					pmax	pmax			
	comp=Z,54nm,3.6s								
KSH					LR	LR			
	comp=N,42nm,4.3s								
KSH					LR	LR			
	comp=E,38nm,4.2s								
KSH					LR	LR			
	comp=Z,58nm,6.4s								
RSO	**Redoubt South**	**51.86**	**36**	*e*	P	**P**	**09 36 60.0**	**+0.8**
KDAK	**Kodiak Island**	**51.96**	**39**		P	**P**	**09 36 59.6**	**-0.4**
	comp=Z,18nm,0.5s,mb4.8,baz=262,slow=6.8,SNR=21								
KDAK	**Kodiak Island**	**51.96**	**39**	*ce*	P	**P**	**09 36 59.4**	**-0.6**
WRA	**Warramunga Arr**	**52.07**	**186**		P	**P**	**09 36 59.2**	**-2.0**
	comp=Z,2.4nm,0.4s,mb4.0,baz=2.9,slow=7.8,SNR=71								
WRA					PcP	PcP	09 38 09.1	-0.8	
	comp=Z,1.0nm,0.5s,baz=2.5,slow=4.3,SNR=5.6								
WRA	**Warramunga Arr**	**52.07**	**186**		P	**P**	**09 36 59.3**	**-1.9**
WRA							09 38 09.1		
WRA					pmax	pmax			
	comp=Z,2.0nm,0.4s								
BRVK	**Borovoye**	**52.59**	**315**	*e*	P	**P**	**09 37 05.9**	**+1.2**
BRVK					pmax	pmax			
	comp=Z,4.0nm,1.2s,mb3.7								
PMR	**Palmer**	**53.62**	**34**	*e*	P	**P**	**09 37 11.7**	**-0.3**
	comp=Z,8.7nm,1.0s,mb4.2								
PMR	**Palmer**	**53.62**	**34**	*e*	P	**P**	**09 37 11.7**	**-0.3**
PMR					pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.2								
COLA	**College**

baz=77,SNR=5.8
WVOR Wild Horse Val 77.06 48 eP P 09 39 42.8 +0.4
comp=Z,9.6nm,1.6s,mb4.2
WVOR Wild Horse Val 77.06 48 eP P 09 39 42.8 +0.4
WVOR pmax pmax
comp=Z,10.0nm,1.6s,mb4.2
SWMT Swartz Lake 77.08 42 eP P 09 39 42.9 +0.5
F12A Elk City 77.33 44 P P 09 39 44.2 +0.3
baz=77,SNR=7.6
B15A Bradely Ranch, 77.44 40 ⇑P P 09 39 44.5 +0.1
baz=77,SNR=6.0
SLMT Seeley Lake 77.52 42 eP P 09 39 44.9 0.0
C15A Salmond Ranch, 77.72 41 ⇑P P 09 39 46.5 +0.5
baz=78,SNR=8.3
B16A M & M Farms, S 77.85 40 ⇓P P 09 39 46.1 -0.6
baz=78
NOA NORSAR Array B 77.88 337 P P 09 39 45.6 -1.1
comp=Z,2.6nm,0.6s,mb4.0,baz=44,slow=5.5,SNR=13
NOA NORSAR Array B 77.88 337 P P 09 39 45.6 -1.0
NOA pmax pmax
comp=Z,3.0nm,0.6s
E14A Clinton 77.98 42 ⇑P P 09 39 47.6 +0.1
baz=78
C16A Fuhringer Ranc 78.18 41 ⇓P P 09 39 48.8 +0.3
baz=78,SNR=5.1
CMB Columbia Colle 78.23 52 eP P 09 39 49.1 +0.2
comp=Z,2.8nm,0.6s,mb4.1
CMB Columbia Colle 78.23 52 eP P 09 39 49.1 +0.1
CMB pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
H12A Diamond D Ranc 78.23 45 ⇓P P 09 39 48.1 -0.7
baz=78,SNR=6.2
G13A Cobalt 78.30 44 ⇓P P 09 39 47.8 -1.4
baz=78
E15A Deer Lodge 78.46 42 ⇓P P 09 39 49.7 -0.4
baz=78
I12A Atlanta 78.48 45 ⇓P P 09 39 49.8 -0.5
baz=78
H13A Challis 78.58 44 ⇑P P 09 39 50.3 -0.5
baz=78,SNR=7.3
F15A Butte 78.88 43 ⇑P P 09 39 52.4 0.0
baz=79,SNR=13
B18A Beardsley Farm 78.90 39 ⇓P P 09 39 52.9 +0.5
baz=79
LRM Limekiln Ridge 78.92 43 eP P 09 39 53.4 +0.8
I13A Wildhorse Cree 79.02 45 ⇑P P 09 39 53.6 +0.4
baz=79
HLID Hailey 79.04 45 ⇓P P 09 39 53.4 +0.1
baz=79
HLID Hailey 79.04 45 eP P 09 39 54.0 +0.7
comp=Z,2.3nm,0.8s,mb3.9
EGMT Eagleton 79.13 40 ⇑P P 09 39 53.8 +0.1
baz=79
EGMT Eagleton 79.13 40 eP P 09 39 53.6 -0.1
comp=Z,11nm,1.0s,mb4.4
G15A Dillon 79.27 43 ⇓P P 09 39 54.6 +0.1
baz=79
J13A Cove Ranch, Pi 79.28 45 ⇑P P 09 39 55.1 +0.5
baz=79,SNR=5.0
NVAR Mina Array Bea 79.41 51 P P 09 39 55.9 +0.5
comp=Z,1.9nm,0.7s,mb3.9,baz=302,slow=5.2,SNR=24
F16A Kennard Place, 79.41 42 ⇓P P 09 39 54.7 -0.5
baz=79
I14A Mackay 79.41 45 ⇓P P 09 39 56.2 +0.9
baz=79,SNR=18
BOZ Bozeman (W) 79.49 42 ⇓P P 09 39 56.1 +0.5
baz=79
BOZ Bozeman (W) 79.49 42 eP P 09 39 56.1 +0.4
comp=Z,1.5nm,0.7s,mb3.7
BOZ Bozeman (W) 79.49 42 eP P 09 39 56.1 +0.4
BOZ pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
G16A Moss Hill, Enn 79.63 43 ⇑P P 09 39 56.5 +0.1
baz=79
C19A Slack Wire Ran 79.69 40 ⇑P P 09 39 56.6 -0.1
baz=80
J14A Carey 79.72 45 ⇓P P 09 39 57.4 +0.4
baz=80,SNR=6.0
F17A Fitzpatrick Pl 79.89 42 ⇑P P 09 39 57.7 -0.1
baz=80
E18A Harlowton 79.91 41 ⇑P P 09 39 58.4 +0.4
baz=80
VES Vestal, Richgr 80.28 54 ⇓P P 09 39 59.4 -0.7
baz=80
J15A Blackfoot 80.32 45 ⇑P P 09 40 00.7 +0.5
baz=80
K14A Jones Ranch, D 80.37 46 ⇓P P 09 40 00.9 +0.5
baz=80,SNR=5.9
F18A Big Timber 80.42 41 ⇑P P 09 40 00.2 -0.4
baz=80
D20A Manuel Ranch, 80.57 40 ⇑P P 09 40 01.4 0.0
baz=80
E19A Rath Farm, Rou 80.60 40 ⇑P P 09 40 01.4 -0.2
baz=80
I16A Newdale 80.60 44 ⇓P P 09 40 01.8 +0.2
baz=80,SNR=5.3
BRTR Keskin Array B 80.62 311 P P 09 40 01.6 -0.3
comp=Z,2.3nm,0.6s,mb4.0,baz=86,slow=4.3,SNR=15
BRTR Keskin Array B 80.62 311 P P 09 40 01.6 -0.3
BRTR pmax pmax
comp=Z,2.0nm,0.6s
O12A Currie 80.69 48 ⇓P P 09 40 02.8 +0.6
baz=80,SNR=9.6
ISA Isabella 80.79 54 ⇓P P 09 40 01.9 -1.0
baz=81
R10A Warm Springs 80.80 51 ⇑P P 09 40 02.3 -0.5
baz=81
S10A Tonopah Range, 80.81 51 ⇑P P 09 40 02.0 -0.9
baz=81
F19A Roth Farm, Mol 80.88 41 ⇑P P 09 40 01.1 -2.0
baz=81
Q11A Duckwater 80.91 50 ⇑P P 09 40 03.2 -0.2
baz=81
IMW Indian Meadow 80.91 44 eP P 09 40 04.9 +1.6
comp=Z,2.1nm,0.6s,mb3.9
E20A Meyer Farm, Mu 80.93 40 ⇑P P 09 40 03.4 +0.1
baz=81
RLMT Red Lodge 81.14 42 eP P 09 40 05.4 +0.9
comp=Z,3.5nm,0.7s,mb4.1
H18A Shoshone NF, C 81.18 42 ⇑P P 09 40 04.3 -0.4
baz=81
R11A Troy Canyon, C 81.23 50 ⇑P P 09 40 04.7 -0.4
baz=81,SNR=9.5
MPMC Manual Prospec 81.24 53 ⇑P P 09 40 05.1 -0.1
baz=81
FURC Furnace Creek, 81.44 52 ⇑P P 09 40 06.1 -0.1
baz=81
EDW2 Edwards Air Fo 81.55 54 ⇑P P 09 40 06.9 +0.1
baz=81
N15A Stansbury Isla 81.72 47 ⇑P P 09 40 08.2 +0.5
baz=82
LAO LASA Array 81.85 39 eP P 09 40 08.3 +0.2
comp=Z,4.5nm,0.8s,mb4.2
J18A Kendall Valley 81.86 44 ⇓P P 09 40 08.8 +0.5
baz=82,SNR=5.2
R12A Pony Springs, 81.88 50 ⇑P P 09 40 08.7 +0.2
baz=82,SNR=6.6
HWUT Hardware Ranch 81.89 46 eP P 09 40 09.1 +0.6
comp=Z,1.6nm,0.6s,mb3.8
Q13A Wheeler Ranch, 81.90 49 ⇓P P 09 40 08.8 +0.3
baz=82
DUG Dugway 81.95 47 ⇓P P 09 40 09.3 +0.5
baz=82,SNR=6.1
DUG Dugway 81.95 47 eP P 09 40 09.3 +0.5
comp=Z,4.7nm,0.9s,mb4.1
DUG Dugway 81.95 47 eP P 09 40 09.3 +0.5
DUG pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
P14A Drum Mountains 82.14 48 ⇓P P 09 40 09.7 0.0
baz=82,SNR=6.2
Q14A Sevier Lake (B 82.35 49 ⇓P P 09 40 11.4 +0.5
baz=82,SNR=7.5
J19A Crowheart 82.39 43 ⇑P P 09 40 11.6 +0.5
baz=82
PDAR Pinedale Array 82.39 44 P P 09 40 11.0 -0.1
comp=Z,0.9nm,0.7s,mb3.5,baz=297,slow=2.9,SNR=8.9
DAU Daniels Canyon 82.78 46 eP P 09 40 14.1 +1.0
S13A Holt Ranch, En 82.79 50 ⇑P P 09 40 13.2 0.0
baz=83,SNR=5.4
J20A Shoshoni 82.89 43 ⇓P P 09 40 13.5 -0.1
baz=83
O17A Robinson Place 83.23 46 ⇓P P 09 40 15.5 +0.1
baz=83,SNR=6.5
MSU Marysvale 83.33 48 eP P 09 40 17.2 +1.3
BELC Belle Mtn. Jos 83.40 54 ⇑P P 09 40 15.0 -1.4
baz=83
P17A Butcher Ranch, 83.66 47 ⇓P P 09 40 18.1 +0.5
baz=84,SNR=5.8
V13A Grand Canyon W 83.70 51 ⇓P P 09 40 18.0 +0.1
baz=84
MONP Monument Peak 83.74 55 ⇑P P 09 40 17.9 -0.2
baz=84
J22A Midwest 83.77 42 ⇑P P 09 40 17.5 -0.5
baz=84
P18A Preston Nutter 83.87 47 ⇑P P 09 40 18.6 0.0
baz=84,SNR=6.5
IRM Iron Mountain 83.89 53 ⇓P P 09 40 18.9 0.0
baz=84
R16A Teasdale 83.90 48 ⇑P P 09 40 19.2 +0.3
baz=84,SNR=6.3
SRU San Rafael 84.01 47 ⇓P P 09 40 19.7 +0.3
baz=84,SNR=10
SRU San Rafael 84.01 47 eP P 09 40 20.1 +0.7
T15A Red Dirt Ranch 84.08 50 ⇑P P 09 40 19.9 +0.2
baz=84,SNR=8.7
O19A Miners Draw (B 84.15 46 ⇑P P 09 40 19.8 -0.3
baz=84
R17A Hanksville Air 84.31 48 ⇓P P 09 40 19.8 -1.1
baz=84,SNR=6.5
N20A Spence Gulch, 84.34 45 ⇑P P 09 40 21.5 +0.5
baz=84
M21A Separation Pea 84.39 44 ⇑P P 09 40 20.9 -0.4
baz=84
V14A Boquillas Ranc 84.41 51 ⇓P P 09 40 21.9 +0.4
baz=84,SNR=6.9
U15A North Rim 84.48 50 ⇓P P 09 40 21.9 +0.1
baz=84,SNR=5.9
P19A Cripple Cowboy 84.64 46 P P 09 40 23.1 +0.6
baz=84,SNR=12
W14A Seligman 84.67 52 ⇑P P 09 40 23.0 +0.2
baz=84,SNR=5.7
RSSD Black Hills 84.68 40 eP P 09 40 23.8 +1.1
comp=Z,1.4nm,0.6s,mb3.9
RSSD Black Hills 84.68 40 eP P 09 40 23.8 +1.2
RSSD pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
S17A Black Ridge (B 84.72 49 ⇑P P 09 40 21.9 -1.1
baz=84
R18A Canyonlands Na 84.84 47 ⇓P P 09 40 23.2 -0.4
baz=85
V15A Kaibab Nationa 84.92 51 ⇓P P 09 40 24.6 +0.6
baz=85
Y13A Salome 84.99 53 ⇑P P 09 40 23.9 -0.4
baz=85
L23A Garrett 85.04 43 ⇓P P 09 40 24.4 -0.1
baz=85
R19A Curley Farm, L 85.29 47 ⇑P P 09 40 24.4 -1.4
baz=85
Z13A Yuma Proving G 85.46 53 ⇓P P 09 40 26.8 +0.1
baz=85,SNR=5.9
Q20A Ridgley Place, 85.48 46 ⇓P P 09 40 26.7 0.0
baz=85
T18A Mexican Hat 85.61 48 ⇓P P 09 40 26.9 -0.5
baz=85
X15A Humboldt 85.66 52 P P 09 40 28.4 +0.7
baz=86,SNR=5.5
R20A Redvale 85.90 47 ⇑P P 09 40 29.0 +0.2
baz=86
V17A Tonalea, Kykot 85.94 50 ⇓P P 09 40 29.6 +0.6
baz=86,SNR=7.7
P22A Eagle 86.01 45 ⇑P P 09 40 29.1 -0.2
baz=86
O23A Lake Granby, G 86.12 44 ⇓P P 09 40 30.1 +0.3
baz=86
SMCO Snowmass 86.15 45 eP P 09 40 31.1 +1.1
Q22A Crested Butte, 86.38 46 ⇓P P 09 40 31.3 +0.2
baz=86
ISCO Idaho Springs 86.56 44 eP P 09 40 32.5 +0.5
comp=Z,1.4nm,0.7s,mb3.8
ISCO Idaho Springs 86.56 44 eP P 09 40 32.5 +0.5
ISCO pmax pmax
comp=Z,1.0nm,0.7s,mb3.6
SDCO Great Sand Dun 87.95 46 eP P 09 40 39.1 +0.5
comp=Z,0.8nm,0.6s,mb3.7
AMTX Amarillo 92.15 46 ⇓P P 09 40 58.0 -0.2
baz=92
AMTX Amarillo 92.15 46 eP P 09 40 58.6 +0.4
comp=Z,6.7nm,0.6s,mb4.8
427A Hayter Ranch, 93.74 50 ⇑P P 09 41 05.3 -0.3
baz=94
328A Wristen Ranch, 93.77 49 ⇑P P 09 41 05.4 -0.4
baz=94
TXAR Lajitas Array 94.56 51 P P 09 41 09.8 +0.4
comp=Z,1.9nm,0.7s,mb4.3,baz=305,slow=3.2,SNR=22
TXAR Lajitas Array 94.56 51 P P 09 41 09.8 +0.4
TXAR pmax pmax
comp=Z,2.0nm,0.7s
627A Terlingua Ranc 94.66 51 ⇓P P 09 41 09.2 -0.7
baz=94
OLIL Olney 96.85 35 eP P 09 41 20.9 +1.2
TORD Torodi Ar. Bea 119.24 311 PKhKP PKPpre 09 46 32.0
comp=Z,0.2nm,0.7s,baz=241,slow=3.0,SNR=3.0
TORD PKP PKPdf 09 46 34.9 -2.1
comp=Z,0.5nm,0.9s,baz=39,slow=0.9,SNR=3.2
LPAZ La Paz 150.62 64 ePKPbc PKPbc 09 47 39.9 0.0
LPAZ La Paz 150.62 64 PKPbc PKPbc 09 47 39.4 -0.5
comp=Z,2.3nm,0.9s,baz=7.3,slow=6.0,SNR=8.8

*IDC **24** 10:04:33.5±0.8, 40°.22N×73°.11E, h0km, mb3.9/12, mb1 4.1/18, mb1mx4.0/29, mbtmp3.9/18, ML3.9/5, MS3.0/2, Ms1 3.0/2, ms1mx2.2/32, Error ellipse: s-maj=14.8km s-min=12.4km az=131.0*
*MOS **24** 10:04:37.5±1.8, 40°.36N×72°.97E, h33km, mb4.1/13, Error ellipse: s-maj=13.1km s-min=7.4km az=91.1*
*BJI **24** 10:04:39.4, 40°.59N×73°.11E, h43km, mB4.4/1, mb3.9/3, ML4.0/4*
*NEIC **24** 10:04:40.3±2.6, 40°.37N×73°.09E, h44km±21km, Error ellipse: s-maj=25.3km s-min=11.8km az=182.0*
*NNC **24** 10:04:44.4±2.5, 40°.92N×73°.10E, h22km±15km, mb4.1, mpv3.9, Error ellipse: s-maj=20.4km s-min=9.6km az=4.0*
ISC 24 10:04:33.0±1.5, 40°.06N±0°.03×72°.85E±0°.05, h2km±10km, n80, σ1°.24/86, mb3.8/16, 11C-12D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**2.17**	**17**	P	**Pn**	**10 05 10.5**	**+0.3**
	SNR=1091						
KSH	**Kashi**	**2.47**	**102**	P	**Pb**	**10 05 18.0**	**-0.1**
KSH				S	**Sb**	**10 05 49.1**	**+0.2**
KSH				smax			
	comp=N,3μm,0.7s						
KSH				smax			
	comp=E,940nm,0.4s						
UCH	**Uchtor**	**2.50**	**30**	P	**Pn**	**10 05 16.0**	**+1.2**
	SNR=35						
EKS2	**Erkin-Say**	**2.69**	**15**	P	**Pn**	**10 05 18.3**	**+0.9**
	SNR=199						
KZA	**Kyzart**	**2.71**	**41**	P	**Pn**	**10 05 18.9**	**+1.2**
	SNR=19						
AAK	**Ala-Archa**	**2.85**	**25**	Pn	**Pn**	**10 05 20.5**	**+0.9**
AAK				Lg		10 05 54.9	
AAK	**Ala-Archa**	**2.85**	**25**	Pn	**Pn**	**10 05 20.5**	**+0.9**
	baz=198,slow=7.9						
AAK				Lg		10 05 54.9	
	comp=E,124nm,0.3s,baz=44,slow=18,SNR=7.9						
KBK	**Karagaybulak**	**3.04**	**31**	P	**Pn**	**10 05 23.9**	**+1.7**
	SNR=71						
FRU	**Bishkek**	**3.07**	**25**	⇓*i*PN	**Pn**	**10 05 23.0**	**+0.4**
FRU				*e*S	**Sn**	**10 06 00.0**	**0.0**
FRU				pmax	pmax		
	comp=Z,290nm,1.6s						
FRU				smax			
	comp=N,1μm,1.6s						
CHMS	**Chumysh**	**3.27**	**25**	P	**Pn**	**10 05 26.4**	**+1.1**
	SNR=29						
ULHL	**Ulahol**	**3.37**	**48**	P	**Pn**	**10 05 27.4**	**+0.8**
	SNR=72						
USP	**Ospenovka**	**3.44**	**21**	P	**Pn**	**10 05 28.4**	**+0.8**
	SNR=9.8						
KK31	**Karatay Array**	**3.51**	**331**	⇓Pn	**Pn**	**10 05 30.7**	**+2.0**
	comp=N,6.3nm,0.3s,baz=134,slow=13,SNR=1018						
KK31				⇓Pg	**Pg**	**10 05 37.6**	**-2.8**
	comp=N,23nm,0.2s,baz=130,slow=16						
KK31				⇓Sn	**Sn**	**10 06 11.1**	**+0.3**
	comp=N,82nm,0.4s,baz=136,slow=27						
KK31				⇑Lg		10 06 19.6	
	comp=N,109nm,0.3s,baz=137,slow=29						
KK31	**Karatay Array**	**3.51**	**331**	PN	**Pb**	**10 05 37.8**	**+1.9**
KK31						10 06 11.2	
KK31						10 06 19.6	
KK31				pmax	pmax		
	comp=Z,85nm,0.2s						
KK31				smax			
	comp=Z,77nm,0.2s						
KK31				pmax	pmax		
	comp=Z,141nm,0.2s						
TKM2	**Tokmak 2**	**3.52**	**35**	P	**Pn**	**10 05 30.4**	**+1.6**
	SNR=6.6						
KNDC	**Almaty**	**4.41**	**43**	⇑Pn	**Pn**	**10 05 42.4**	**+1.4**
	comp=Z,9.4nm,0.3s						
KNDC				⇓Pg	**Pg**	**10 05 52.7**	**-4.9**
KNDC	comp=Z,60nm,0.5s			⇓Lg		10 06 44.2	
	comp=Z,607nm,0.7s						
AAA	**Alma-Ata**	**4.44**	**42**	*e*PN	**Pb**	**10 05 50.9**	**-0.8**
AAA				pmax	pmax		
	comp=Z,145nm,0.9s						
SDNR	**Sundarnagar**	**9.17**	**157**	*e*PKP	**Sn**	**10 08 30.5**	**+0.3**
MK31	**Makanchi Array**	**9.61**	**42**	⇑Pn	**Pn**	**10 06 53.0**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=0.0,slow=0.1,SNR=8.1						
MK31				⇓Lg		10 09 27.6	
	comp=Z,24nm,1.2s,baz=228,slow=28,SNR=4.0						
MKAR	**Makanchi Array**	**9.61**	**42**	Pn	**Pn**	**10 06 51.5**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=228,slow=15,SNR=4.4						
MKAR				Lg		10 09 26.8	
	comp=Z,0.5nm,0.3s,baz=225,slow=28,SNR=3.8						
DDI	**Dehra Dun**	**10.60**	**155**	*ex*	x	10 07 13.5	
KURBB	**Kurchatov Arra**	**11.29**	**19**	⇑Pn	**Pn**	**10 07 11.6**	**-3.7**
	comp=Z,0.4nm,0.5s						
KURBB				⇑Lg		10 10 16.2	
	comp=Z,12nm,1.0s						
KURK	**Kurchatov**	**11.40**	**19**	⇑Pn	**Pn**	**10 07 14.9**	**-1.9**
	comp=Z,3.6nm,1.0s						
KURK				⇓Lg		10 10 19.7	
	comp=Z,26nm,0.8s						
KURK	**Kurchatov**	**11.40**	**19**	Pn	**Pn**	**10 07 11.4**	**-5.3**
	comp=Z,0.2nm,0.3s,baz=209,slow=13,SNR=6.3						
KURK				Lg		10 10 21.0	
	comp=Z,0.3nm,0.3s,baz=208,slow=31,SNR=6.0						
KURK	**Kurchatov**	**11.40**	**19**	*e*P	**Pn**	**10 07 14.1**	**-2.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VOSK	**Vostochnaya**	**12.73**	**355**	⇑Pn	**Pn**	**10 07 31.9**	**-3.1**
	comp=Z,3.3nm,0.8s						
VOSK				⇓Lg		10 11 02.3	
	comp=Z,14nm,0.9s						
AB31	**Akbulak array**	**12.98**	**319**	⇓Pn	**Pn**	**10 07 37.6**	**-0.8**
	comp=Z,2.2nm,0.3s,baz=131,slow=14,SNR=143						
AB31				⇓Sn	**Sn**	**10 09 55.9**	**-7.5**
	comp=Z,2.1nm,0.5s,baz=230,slow=25,SNR=5.6						
AB31	**Akbulak array**	**12.98**	**319**	P	**Pn**	**10 07 37.7**	**-0.7**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.2s						
BVA0	**Borovoye Array**	**13.08**	**353**	Pn	**Pn**	**10 07 37.2**	**-2.5**
	comp=Z,0.8nm,0.6s,baz=165,slow=17,SNR=30						
BVAR	**Borovoye Array**	**13.08**	**353**	Pn	**Pn**	**10 07 37.2**	**-2.6**
	comp=Z,1.3nm,0.3s,baz=163,slow=12,SNR=28						
BVAR				Lg		10 11 18.7	
	comp=Z,0.4nm,0.3s,baz=164,slow=26,SNR=3.2						
BRVK	**Borovoye**	**13.12**	**353**	*c iP*	**Pn**	**10 07 37.9**	**-2.4**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ZRNK	**Zerenda**	**13.16**	**350**	⇑Pn	**Pn**	**10 07 38.0**	**-2.9**
	comp=Z,4.4nm,0.7s						
ZRNK				⇑Lg		10 11 15.0	
	comp=Z,11nm,0.8s						
AKTK	**Aktyubinsk**	**14.70**	**320**	Pn	**Pn**	**10 08 01.2**	**-0.6**
AKTK				LR	LR	10 14 06.8	
AKTO	**Aktyubinsk**	**14.70**	**320**	⇓Pn	**Pn**	**10 08 00.4**	**-1.4**
	comp=Z,1.3nm,0.5s						
AKTO	**Aktyubinsk**	**14.70**	**320**	Pn	**Pn**	**10 08 01.2**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=123,slow=16,SNR=11						
AKTO				LR	LR	10 14 06.8	
	comp=Z,107nm,19.6s,baz=104,slow=39						
AKTO	**Aktyubinsk**	**14.70**	**320**	P	**Pn**	**10 08 01.3**	**-0.5**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,107nm,19.6s						
DANN	**Dangsing**	**14.74**	**139**	*e*P	**Pn**	**10 08 02.1**	**-0.5**
	comp=Z,18nm,0.4s						
KOLN	**Koldanda**	**15.14**	**141**	*e*P	**Pn**	**10 08 08.0**	**-0.1**
GKN	**Gorkha**	**15.47**	**137**	*e*P	**Pn**	**10 08 12.3**	**-0.1**
	comp=Z,13nm,0.4s						
DMN	**Daman**	**16.04**	**137**	*e*P	**Pn**	**10 08 18.7**	**-1.0**
	comp=Z,8.4nm,0.4s						
ZAA0	**Zalesovo Array**	**16.08**	**26**	*e*P	**Pn**	**10 08 18.2**	**-1.9**
ZALV	**Zalesovo Beam**	**16.08**	**26**	Pn	**Pn**	**10 08 19.6**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=219,slow=13,SNR=10						
ZALV				LR	LR	10 14 45.1	
	comp=Z,35nm,20.0s,baz=13,slow=39						
ZALV	**Zalesovo Beam**	**16.08**	**26**	P	**Pn**	**10 08 19.6**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,35nm,20.0s						
PKIN	**Phulchoki**	**16.22**	**136**	*e*P	**Pn**	**10 08 21.1**	**-0.9**
PKI	**Pulchoki**	**16.23**	**136**	*e*P	**Pn**	**10 08 22.1**	**-0.1**
NVS	**Novosibirsk**	**16.34**	**22**	*e*P	**Pn**	**10 08 28.3**	**+4.9**
JIRN	**Jiri**	**16.58**	**134**	*e*P	**Pn**	**10 08 27.2**	**+0.5**
	comp=Z,20nm,0.4s						
RAMN	**Ramite**	**17.36**	**135**	*e*P	**Pn**	**10 08 35.0**	**-1.5**
ARU	**Arti**	**18.88**	**335**	*c iP*	**Pn**	**10 08 56.1**	**+1.2**
ARU				S	**Sn**	**10 12 24.5**	**-2.0**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA	**Gaotai**	**20.72**	**83**	*e*P	**P**	**10 09 15.8**	**+1.1**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GNI	**Garni**	**21.47**	**279**	P	**P**	**10 09 29.0**	**+6.3**
	comp=Z,2.6nm,0.3s,mb4.0,baz=90,slow=8.1,SNR=2.7						
ZAK	**Zakamensk**	**23.63**	**54**	*e*P	**P**	**10 09 43.6**	**-2.0**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s,mb3.0						
SONM	**Songino Array**	**25.22**	**61**	P	**P**	**10 09 59.5**	**-0.5**
	comp=Z,0.8nm,0.6s,mb3.4,baz=261,slow=8.6,SNR=4.9						
SONM	**Songino Array**	**25.22**	**61**	P	**P**	**10 09 59.5**	**-0.6**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**29.92**	**282**	P	**P**	**10 10 45.0**	**+2.7**
	comp=Z,0.6nm,0.6s,mb3.5,baz=77,slow=8.8,SNR=3.6						
BRTR	**Keskin Array B**	**29.92**	**282**	P	**P**	**10 10 45.0**	**+2.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**32.00**	**304**	P	**P**	**10 11 04.2**	**+3.7**
	comp=Z,1.1nm,0.4s,mb4.0,baz=83,slow=7.9,SNR=8.7						
AKASG	**Malin Array Be**	**32.00**	**304**	P	**P**	**10 11 04.2**	**+3.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
JOF	**Joensuu**	**33.60**	**327**	*e*P	**P**	**10 11 14.6**	**+0.2**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
JOF	**Joensuu**	**33.60**	**327**	*ep*	**P**	**10 11 14.6**	**+0.2**
	comp=Z,1.0nm,0.5s,mb4.0						
WHN	**Wuhan**	**34.91**	**93**	P	**P**	**10 11 18.0**	**-8.1**
FINES	**FINESS Array B**	**35.44**	**323**	P	**P**	**10 11 30.6**	**+0.3**
	comp=Z,1.0nm,0.4s,mb4.1,baz=108,slow=8.9,SNR=17						
FINES	**FINESS Array B**	**35.44**	**323**	P	**P**	**10 11 30.6**	**+0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	**38.47**	**335**	P	**P**	**10 11 56.7**	**+0.7**
	comp=Z,1.6nm,0.5s,mb4.0,baz=108,slow=8.7,SNR=38						
ARCES	**ARCESS Array B**	**38.47**	**335**	P	**P**	**10 11 56.7**	**+0.8**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NOA	**NORSAR Array B**	**42.48**	**321**	P	**P**	**10 12 29.7**	**+0.4**
	comp=Z,1.1nm,0.5s,mb3.7,baz=90,slow=7.9,SNR=7.1						
NOA	**NORSAR Array B**	**42.48**	**321**	P	**P**	**10 12 29.7**	**+0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MJAR	**Matsushiro Arr**	**50.38**	**72**	P	**P**	**10 13 30.3**	**-1.3**
	comp=Z,1.5nm,0.8s,mb4.1,baz=292,slow=11,SNR=3.9						
MJAR	**Matsushiro Arr**	**50.38**	**72**	P	**P**	**10 13 30.3**	**-1.3**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**50.80**	**314**	P	**P**	**10 13 35.1**	**+0.6**
	comp=Z,0.5nm,0.4s,mb3.8,baz=94,slow=7.9,SNR=3.7						
EKA	**Eskdalemuir Ar**	**50.80**	**314**	P	**P**	**10 13 35.1**	**+0.6**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TORD	**Torodi Ar. Bea**	**67.27**	**268**	P	**P**	**10 15 30.9**	**+1.4**
	comp=Z,1.3nm,0.7s,mb4.1,baz=51,slow=5.6,SNR=12						
ILAR	**Eielson Array**	**70.96**	**17**	P	**P**	**10 15 50.3**	**-1.3**
	comp=Z,0.5nm,0.8s,mb3.5,baz=329,slow=4.9,SNR=8.4						
ILAR	**Eielson Array**	**70.96**	**17**	P	**P**	**10 15 50.3**	**-1.3**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**77.62**	**4**	P	**P**	**10 16 29.8**	**-0.6**
	comp=Z,0.6nm,0.5s,mb3.8,baz=351,slow=6.1,SNR=4.5						
YKA	**Yellowknife Ar**	**77.62**	**4**	P	**P**	**10 16 29.8**	**-0.6**

YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**82.69**	**124**	P	**P**	**10 16 58.4**	**+0.1**
	comp=Z,1.2nm,0.7s,mb4.0,baz=320,slow=5.3,SNR=9.4						
WRA	**Warramunga Arr**	**82.69**	**124**	P	**P**	**10 16 58.4**	**+0.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**85.14**	**126**	P	**P**	**10 17 11.7**	**+0.9**
	comp=Z,0.8nm,0.7s,mb4.0,baz=316,slow=5.0,SNR=12						
ASAR	**Alice Springs**	**85.14**	**126**	P	**P**	**10 17 11.7**	**+0.9**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*ISCJB **24** 10:13:12.6±0.5,44°.2N±0'.1×28°.35W±0'.07,h10km, mb3.9/23,MS3.4/2,Error ellipse: s-maj=17.9km s-min=7.0km az=1.3*

*IDC **24** 10:13:12.7±0.7,44°.19N×28°.41W,h0km,mb3.7/13, mb1 3.9/15,mb1mx3.8/29,mbtmp3.7/15,ML3.8/2,MS3.5/2, Ms1 3.5/2,ms1mx3.2/9,Error ellipse: s-maj=23.7km s-min=15.5km az=178.0*

*NEIC **24** 10:13:14.3±0.5,44°.20N×28°.31W,h10km,mb4.3/9,Error ellipse: s-maj=16.2km s-min=6.0km az=180.0*

*CSEM **24** 10:13:14.3,44°.20N×28°.31W,h10km,mb4.3/9,After NEIC*

ISC 24 10:13:14.7±0.5,44°.3N±0'.1×28°.29W±0'.07,h10km,n77, σ0s80/75,mb3.9/23,MS3.4/2,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**18.64**	**96**	P	**Pn**	**10 17 33.1**	**+0.5**
	0.2nm,0.3s,baz=299,slow=12,SNR=5.4						
ESDC	**Sonseca Array**	**18.64**	**96**	P	**Pn**	**10 17 33.1**	**+0.4**
EKA	**Eskdalemuir Ar**	**19.52**	**47**	P	**Pn**	**10 17 43.8**	**+0.6**
	0.1nm,0.3s,baz=241,slow=8.8,SNR=4.1						
EKA	**Eskdalemuir Ar**	**19.52**	**47**	P	**Pn**	**10 17 43.8**	**+0.6**
ETSF	**Etsaut**	**20.10**	**84**	*eP*	**P**	**10 17 50.0**	**+1.6**
ETSF	**Etsaut**	**20.10**	**84**	*eP*	**P**	**10 17 50.0**	**+1.6**
LFF	**La Frestale**	**20.64**	**78**	*eP*	**P**	**10 17 53.6**	**-0.6**
LFF	**La Frestale**	**20.64**	**78**	*eP*	**P**	**10 17 53.6**	**-0.6**
TCF	**Toulx Ste Croi**	**21.50**	**74**	*eP*	**P**	**10 18 03.1**	**-0.3**
	36nm,1.3s,mb4.2						
TCF	**Toulx Ste Croi**	**21.50**	**74**	*eP*	**P**	**10 18 03.1**	**-0.3**
	18nm,1.3s,mb4.2						
TCF	**Toulx Ste Croi**	**21.50**	**74**	*eP*	**P**	**10 18 03.1**	**-0.3**
	18nm,1.3s,mb4.2						
MDT	**Midelt**	**21.68**	**114**	P	**P**	**10 18 09.4**	**+3.9**
	1.1nm,0.6s,mb3.5,baz=311,slow=11,SNR=2.6						
MDT	**Midelt**	**21.68**	**114**	P	**P**	**10 18 09.4**	**+3.9**
BGF	**Bois d'Agland**	**21.91**	**73**	*eP*	**P**	**10 18 08.6**	**+0.7**
BGF	**Bois d'Agland**	**21.91**	**73**	*eP*	**P**	**10 18 08.6**	**+0.7**
AVF	**Avril sur Loir**	**22.24**	**72**	*eP*	**P**	**10 18 08.8**	**-2.5**
AVF	**Avril sur Loir**	**22.24**	**72**	*eP*	**P**	**10 18 08.8**	**-2.5**
SSF	**Saint Saulge**	**22.32**	**72**	*eP*	**P**	**10 18 13.3**	**+1.1**
	28nm,1.0s,mb4.3						
SSF	**Saint Saulge**	**22.32**	**72**	*eP*	**P**	**10 18 13.3**	**+1.1**
	14nm,1.0s,mb4.3						
SSF	**Saint Saulge**	**22.32**	**72**	*eP*	**P**	**10 18 13.3**	**+1.1**
	14nm,1.0s,mb4.3						
LOR	**Lormes**	**22.54**	**71**	*eP*	**P**	**10 18 14.6**	**0.0**
	24nm,1.1s,mb4.2						
LOR	**Lormes**	**22.54**	**71**	*eP*	**P**	**10 18 14.6**	**0.0**
	12nm,1.1s,mb4.2						
LOR	**Lormes**	**22.54**	**71**	*eP*	**P**	**10 18 14.6**	**0.0**
	12nm,1.1s,mb4.2						
SMF	**Signal de Mont**	**22.58**	**73**	*eP*	**P**	**10 18 13.9**	**-1.1**
SMF	**Signal de Mont**	**22.58**	**73**	*eP*	**P**	**10 18 13.9**	**-1.1**
BAIF	**Baives**	**22.73**	**64**	*eP*	**P**	**10 18 15.7**	**-0.8**
BAIF	**Baives**	**22.73**	**64**	*eP*	**P**	**10 18 15.7**	**-0.8**
MEZF	**Maizieres J'vi**	**23.28**	**68**	*eP*	**P**	**10 18 22.3**	**0.0**
	16nm,0.6s,mb4.3						
MEZF	**Maizieres J'vi**	**23.28**	**68**	*eP*	**P**	**10 18 22.3**	**0.0**
	16nm,0.6s,mb4.6						
MEZF	**Maizieres J'vi**	**23.28**	**68**	*eP*	**P**	**10 18 22.3**	**0.0**
	16nm,0.6s,mb4.6						
SFTF	**Sexfontaines**	**23.28**	**68**	*eP*	**P**	**10 18 22.3**	**-0.1**
SFTF	**Sexfontaines**	**23.28**	**68**	*eP*	**P**	**10 18 22.3**	**-0.1**
CABF	**La Chapelle**	**24.13**	**72**	*eP*	**P**	**10 18 30.1**	**-0.4**
CABF	**La Chapelle**	**24.13**	**72**	*eP*	**P**	**10 18 30.1**	**-0.4**
HAU	**Haudompre**	**24.17**	**69**	*eP*	**P**	**10 18 29.3**	**-1.5**
HAU	**Haudompre**	**24.17**	**69**	*eP*	**P**	**10 18 29.3**	**-1.5**
HINF	**Hinteralfeld**	**24.52**	**69**	*eP*	**P**	**10 18 35.0**	**+0.9**
HINF	**Hinteralfeld**	**24.52**	**69**	*eP*	**P**	**10 18 35.0**	**+0.9**
CDF	**Champ du Feu**	**24.76**	**68**	*eP*	**P**	**10 18 35.7**	**-0.5**
CDF	**Champ du Feu**	**24.76**	**68**	*eP*	**P**	**10 18 35.7**	**-0.5**
DAVOX	**Davos/Dischmat**	**26.69**	**71**	LR	LR	10 28 11.8	
	comp=Z,257nm,21.3s,MS3.8,baz=259,slow=34						
KEST	**Kesra**	**29.85**	**94**	P	**P**	**10 19 22.2**	**+0.1**
	0.9nm,0.7s,mb3.6,baz=270,slow=7.4,SNR=4.0						
BUR08	**Bucovina Ar. S**	**36.73**	**65**	*eP*	**P**	**10 20 22.1**	**+0.2**
BUR08	**Bucovina Ar. S**	**36.73**	**65**	*eP*	**P**	**10 20 22.1**	**+0.3**
AKASG	**Malin Array Be**	**38.54**	**59**	P	**P**	**10 20 36.8**	**-0.3**
	0.6nm,0.5s,mb3.6,baz=275,slow=7.4,SNR=3.5						
AKASG	**Malin Array Be**	**38.54**	**59**	P	**P**	**10 20 36.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**40.23**	**131**	P	**P**	**10 20 51.5**	**-0.1**
	2.3nm,0.7s,mb4.0,baz=324,slow=10.0,SNR=11						
SJG	**San Juan**	**41.03**	**243**	LR	LR	10 32 01.5	
	comp=Z,23nm,20.4s,MS3.0,baz=272,slow=28						
BRTR	**Keskin Array B**	**45.29**	**73**	P	**P**	**10 21 33.9**	**+1.5**
	0.4nm,0.5s,mb3.5,baz=284,slow=8.2,SNR=3.3						
BRTR	**Keskin Array B**	**45.29**	**73**	P	**P**	**10 21 33.9**	**+1.5**
AKTK	**Aktyubinsk**	**55.64**	**51**	P	**P**	**10 22 50.8**	**+0.3**
AKTK	**Aktyubinsk**	**55.64**	**51**	P	**P**	**10 22 50.8**	**+0.3**
AKTO	**Aktyubinsk**	**55.64**	**51**	P	**P**	**10 22 50.8**	**+0.3**
	0.8nm,0.3s,mb4.2,baz=300,slow=6.9,SNR=6.0						
BOZ	**Bozeman (W)**	**56.35**	**303**	*eP*	**P**	**10 22 55.8**	**+0.1**
	1.0nm,0.7s,mb4.0						
BOZ	**Bozeman (W)**	**56.35**	**303**	*eP*	**P**	**10 22 55.8**	**+0.2**
	1.0nm,0.7s,mb4.0						
PDAR	**Pinedale Array**	**56.57**	**299**	P	**P**	**10 22 56.7**	**-0.6**
	0.5nm,0.9s,mb3.5,baz=60,slow=5.4,SNR=3.7						
PDAR	**Pinedale Array**	**56.57**	**299**	P	**P**	**10 22 56.7**	**-0.6**
SDCO	**Great Sand Dun**	**56.63**	**292**	*eP*	**P**	**10 22 58.3**	**+0.6**
	1.9nm,1.3s,mb4.0						
SDCO	**Great Sand Dun**	**56.63**	**292**	*eP*	**P**	**10 22 58.3**	**+0.5**
	1.9nm,1.3s,mb4.0						
NEW	**Newport**	**58.18**	**308**	*eP*	**P**	**10 23 08.2**	**-0.3**
	13nm,1.8s,mb4.7						
NEW	**Newport**	**58.18**	**308**	*eP*	**P**	**10 23 08.2**	**-0.3**
	13nm,1.8s,mb4.7						
HLID	**Hailey**	**59.14**	**302**	*eP*	**P**	**10 23 15.3**	**0.0**
	1.0nm,0.9s,mb3.9						
HLID	**Hailey**	**59.14**	**302**	*eP*	**P**	**10 23 15.4**	**+0.1**
	0.9nm,0.9s,mb3.8						
TXAR	**Lajitas Array**	**60.17**	**283**	P	**P**	**10 23 22.9**	**+0.2**
	1.1nm,0.9s,mb3.9,baz=57,slow=6.6,SNR=10						
TXAR	**Lajitas Array**	**60.17**	**283**	P	**P**	**10 23 22.9**	**+0.3**
ILAR	**Eielson Array**	**61.25**	**335**	P	**P**	**10 23 28.6**	**-0.8**
	0.3nm,0.8s,mb3.5,baz=46,slow=5.2,SNR=3.4						
ILAR	**Eielson Array**	**61.25**	**335**	P	**P**	**10 23 28.6**	**-0.8**
WVOR	**Wild Horse Val**	**62.33**	**303**	*eP*	**P**	**10 23 38.2**	**+1.1**
	13nm,1.6s,mb4.8						
WVOR	**Wild Horse Val**	**62.33**	**303**	*eP*	**P**	**10 23 38.2**	**+1.1**
	13nm,1.6s,mb4.8						
NVAR	**Mina Array Bea**	**64.51**	**300**	P	**P**	**10 23 51.8**	**+0.3**
	0.3nm,0.8s,mb3.4,baz=56,slow=4.8,SNR=4.8						
NVAR	**Mina Array Bea**	**64.51**	**300**	P	**P**	**10 23 51.8**	**+0.3**
ZALV	**Zalesovo Beam**	**66.78**	**36**	P	**P**	**10 24 06.0**	**+0.1**
	0.3nm,0.3s,mb3.8,baz=300,slow=5.8,SNR=2.5						
LPAZ	**La Paz**	**70.37**	**221**	P	**P**	**10 24 27.6**	**-1.2**
	0.6nm,0.7s,mb3.6,baz=40,slow=7.9,SNR=2.8						
LPAZ	**La Paz**	**70.37**	**221**	P	**P**	**10 24 27.6**	**-1.1**
MKAR	**Makanchi Array**	**70.62**	**43**	P	**P**	**10 24 29.3**	**-0.7**
	0.3nm,0.2s,mb3.8,baz=319,slow=4.2,SNR=4.1						
SONM	**Songino Array**	**80.00**	**29**	P	**P**	**10 25 24.5**	**+0.6**
	1.0nm,0.9s,mb3.7,baz=324,slow=7.1,SNR=3.6						
SONM	**Songino Array**	**80.00**	**29**	P	**P**	**10 25 24.5**	**+0.5**

*ISCJB **24** 10:13:39.7±0.3,44°.36N±0'.09×28°.25W±0'.03,h10km, mb4.5/58,Error ellipse: s-maj=12.5km s-min=3.5km az=0.4*

*IDC **24** 10:13:39.2±0.6,44°.33N×28°.37W,h0km,mb4.1/15, mb1 4.3/17,mb1mx4.1/30,mbtmp4.1/17,ML3.9/2,Error ellipse: s-maj=20.4km s-min=14.0km az=2.0*

*NEIC **24** 10:13:41.4±0.3,44°.31N×28°.18W,h10km,mb4.6/48,Error ellipse: s-maj=11.5km s-min=3.7km az=179.0*

*CSEM **24** 10:13:41.6±0.2,44°.41N×28°.21W,h10km,mb4.7/44,Ms4.8, Error ellipse: s-maj=13.0km s-min=4.4km az=2.0*

ISC 24 10:13:41.7±0.3,44°.37N±0'.09×28°.19W±0'.03,h10km,n275, σ0s88/258,mb4.5/58,30C-62D,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**15.12**	**104**	*eLR*	LR	10 20 20.3	
	466nm,22.0s						
MTE	**Manteigas**	**15.76**	**97**	*eLR*	LR	10 20 37.6	
	287nm,22.0s						
MVO	**Moncorvo**	**15.86**	**94**	*eLR*	LR	10 20 42.0	
	334nm,22.0s						
PBRG	**Braganca**	**15.88**	**92**	*eP*	**Pn**	**10 17 31.4**	**+6.3**
PBRG	**Braganca**	**15.88**	**92**	*eP*	**Pn**	**10 17 31.4**	**+6.3**
PCBR	**Castelo Branco**	**16.02**	**99**	*eP*	**Pn**	**10 17 31.2**	**+4.3**
	26nm,1.4s						
PCBR	**Castelo Branco**	**16.02**	**99**	*eP*	**Pn**	**10 17 31.2**	**+4.3**
	26nm,1.4s						
PMRV	**Marv??o**	**16.24**	**100**	*eP*	**Pn**	**10 17 34.3**	**+4.4**
	24nm,1.4s						
PMRV				*eLR*	LR	10 21 00.2	
	335nm,22.0s						
PMRV	**Marv??o**	**16.24**	**100**	*eP*	**Pn**	**10 17 34.3**	**+4.4**
	24nm,1.4s						
PFVI	**Vila Bisbo**	**16.34**	**110**	*eLR*	LR	10 21 03.0	
	387nm,20.0s						
PESTR	**Estremoz**	**16.34**	**103**	*eLR*	LR	10 21 04.6	
	303nm,22.0s						
MORF	**Marmelete**	**16.36**	**109**	*eLR*	LR	10 21 09.9	
	356nm,20.0s						
PBEJ	**Beja**	**16.54**	**106**	*eP*	**Pn**	**10 17 37.5**	**+3.8**
	34nm,1.8s						
PBEJ	**Beja**	**16.54**	**106**	*eP*	**Pn**	**10 17 37.5**	**+3.8**
	34nm,1.8s						
PCVE	**Castro Verde**	**16.61**	**107**	*eLR*	LR	10 21 20.2	
	414nm,22.0s						
PBDV	**Barranco-do-Ve**	**16.89**	**108**	*eLR*	LR	10 21 20.5	
	400nm,22.0s						
PVAQ	**Vaqueiros**	**16.95**	**107**	*eLR*	LR	10 21 25.4	
	374nm,22.0s						
PBAR	**Barrancos**	**17.04**	**104**	*eP*	**Pn**	**10 17 44.0**	**+4.0**
	29nm,1.7s						
PBAR				*eLR*	LR	10 21 22.4	
	394nm,20.0s						
PBAR	**Barrancos**	**17.04**	**104**	*eP*	**Pn**	**10 17 44.0**	**+4.0**
	29nm,1.7s						
ESDC	**Sonseca Array**	**18.58**	**96**	P	**Pn**	**10 17 59.3**	**+0.4**
	0.2nm,0.3s,baz=297,slow=11,SNR=8.8						
ESDC	**Sonseca Array**	**18.58**	**96**	P	**Pn**	**10 17 59.3**	**+0.3**
GRR	**Gorron**	**19.24**	**68**	*eP*	**Pn**	**10 18 01.8**	**-5.1**
	131nm,1.6s						
GRR	**Gorron**	**19.24**	**68**	*eP*	**Pn**	**10 18 01.8**	**-5.1**
	66nm,1.6s						
EKA	**Eskdalemuir Ar**	**19.40**	**47**	P	**Pn**	**10 18 08.5**	**-0.3**
	0.1nm,0.3s,baz=241,slow=11,SNR=6.1						
EKA	**Eskdalemuir Ar**	**19.40**	**47**	P	**Pn**	**10 18 08.5**	**-0.3**
SJPF	**Ste Jean**	**19.50**	**84**	*eP*	**Pn**	**10 18 07.1**	**-2.9**
SJPF	**Ste Jean**	**19.50**	**84**	*eP*	**Pn**	**10 18 07.1**	**-2.9**
MFF	**Saint Martin d**	**19.75**	**74**	*eP*	**Pn**	**10 18 09.1**	**-3.9**
	78nm,1.6s						
MFF	**Saint Martin d**	**19.75**	**74**	*eP*	**Pn**	**10 18 09.1**	**-3.9**
	39nm,1.6s						
ETSF	**Etsaut**	**20.02**	**85**	*eP*	**P**	**10 18 15.3**	**+0.8**
	19nm,1.1s						
ETSF	**Etsaut**	**20.02**	**85**	*eP*	**P**	**10 18 15.3**	**+0.8**
	9.6nm,1.1s						
ETSF	**Etsaut**	**20.02**	**85**	*eP*	**P**	**10 18 15.3**	**+0.8**
	9.6nm,1.1s						
LFF	**La Frestale**	**20.55**	**78**	*eP*	**P**	**10 18 18.8**	**-1.4**
	70nm,1.2s						
LFF	**La Frestale**	**20.55**	**78**	*eP*	**P**	**10 18 18.8**	**-1.4**
	35nm,1.2s						
LFF	**La Frestale**	**20.55**	**78**	*eP*	**P**	**10 18 18.8**	**-1.4**
	35nm,1.2s						
EPF	**Esparros**	**20.63**	**84**	*eP*	**P**	**10 18 21.6**	**+0.5**
	75nm,1.7s						
EPF	**Esparros**	**20.63**	**84**	*eP*	**P**	**10 18 21.6**	**+0.5**
	38nm,1.7s						
EPF	**Esparros**	**20.63**	**84**	*eP*	**P**	**10 18 21.6**	**+0.5**
	38nm,1.7s						
RJF	**Les Rejaudoux**	**21.04**	**77**	*eP*	**P**	**10 18 25.9**	**+0.4**
	38nm,1.3s,mb4.3						
RJF	**Les Rejaudoux**	**21.04**	**77**	*eP*	**P**	**10 18 25.9**	**+0.4**
	19nm,1.3s,mb4.3						
RJF	**Les Rejaudoux**	**21.04**	**77**	*eP*	**P**	**10 18 25.9**	**+0.4**
	19nm,1.3s,mb4.3						
TCF	**Toulx Ste Croi**	**21.40**	**74**	*eP*	**P**	**10 18 29.6**	**+0.2**
	51nm,1.0s,mb4.5						
TCF	**Toulx Ste Croi**	**21.40**	**74**	*eP*	**P**	**10 18 29.6**	**+0.2**
	25nm,1.0s,mb4.5						
TCF	**Toulx Ste Croi**	**21.40**	**74**	*eP*	**P**	**10 18 29.6**	**+0.2**
	25nm,1.0s,mb4.5						
MDT	**Midelt**	**21.66**	**114**	P	**P**	**10 18 33.9**	**+1.6**
	4.2nm,0.9s,mb3.9,baz=308,slow=11,SNR=5.5						
MDT	**Midelt**	**21.66**	**114**	P	**P**	**10 18 33.9**	**+1.6**
BGF	**Bois d'Agland**	**21.81**	**73**	*eP*	**P**	**10 18 33.7**	**-0.1**
	43nm,0.8s,mb4.6						
BGF	**Bois d'Agland**	**21.81**	**73**	*eP*	**P**	**10 18 33.7**	**-0.1**
	21nm,0.8s,mb4.6						
BGF	**Bois d'Agland**	**21.81**	**73**	*eP*	**P**	**10 18 33.7**	**-0.1**
	21nm,0.8s,mb4.6						
AVF	**Avril sur Loir**	**22.14**	**73**	*eP*	**P**	**10 18 37.0**	**-0.3**
	29nm,1.0s,mb4.4						
AVF	**Avril sur Loir**	**22.14**	**73**	*eP*	**P**	**10 18 37.0**	**-0.3**
	15nm,1.0s,mb4.4						
AVF	**Avril sur Loir**	**22.14**	**73**	*eP*	**P**	**10 18 37.0**	**-0.3**
	15nm,1.0s,mb4.4						
SSF	**Saint Saulge**	**22.22**	**72**	*eP*	**P**	**10 18 38.4**	**+0.3**
	70nm,1.2s,mb4.7						
SSF	**Saint Saulge**	**22.22**	**72**	*eP*	**P**	**10 18 38.4**	**+0.3**
	35nm,1.2s,mb4.7						
SSF	**Saint Saulge**	**22.22**	**72**	*eP*	**P**	**10 18 38.4**	**+0.3**
	35nm,1.2s,mb4.7						
LOR	**Lormes**	**22.44**	**71**	*eP*	**P**	**10 18 40.0**	**-0.5**
	47nm,1.0s,mb4.6						
LOR	**Lormes**	**22.44**	**71**	*eP*	**P**	**10 18 40.0**	**-0.5**
	24nm,1.0s,mb4.6						
LOR	**Lormes**	**22.44**	**71**	*eP*	**P**	**10 18 40.0**	**-0.5**
	24nm,1.0s,mb4.6						
SMF	**Signal de Mont**	**22.48**	**73**	*eP*	**P**	**10 18 40.4**	**-0.6**
	22nm,1.1s,mb4.2						
SMF	**Signal de Mont**	**22.48**	**73**	*eP*	**P**	**10 18 40.4**	**-0.6**
	11nm,1.1s,mb4.2						
SMF	**Signal de Mont**	**22.48**	**73**	*eP*	**P**	**10 18 40.4**	**-0.6**
	11nm,1.1s,mb4.2						
BAIF	**Baives**	**22.61**	**64**	*eP*	**P**	**10 18 42.0**	**-0.3**
	32nm,1.1s,mb4.4						
BAIF	**Baives**	**22.61**	**64**	*eP*	**P**	**10 18 42.0**	**-0.3**
	16nm,1.1s,mb4.4						
BAIF	**Baives**	**22.61**	**64**	*eP*	**P**	**10 18 42.0**	**-0.3**
	16nm,1.1s,mb4.4						
LASF	**Ste Croix**	**22.90**	**79**	*eP*	**P**	**10 18 46.5**	**+1.1**
	51nm,1.3s,mb4.5						
LASF	**Ste Croix**	**22.90**	**79**	*eP*	**P**	**10 18 46.5**	**+1.1**
	51nm,1.3s,mb4.8						
GIVF	**Givet**	**23.01**	**64**	*eP*	**P**	**10 18 47.0**	**+0.4**
	38nm,1.1s,mb4.4						
GIVF	**Givet**	**23.01**	**64**	*eP*	**P**	**10 18 47.0**	**+0.4**
	19nm,1.1s,mb4.4						
GIVF	**Givet**	**23.01**	**64**	*eP*	**P**	**10 18 47.0**	**+0.4**
	19nm,1.1s,mb4.4						
MEZF	**Maizieres J'vi**	**23.17**	**68**	*eP*	**P**	**10 18 48.5**	**+0.3**
	61nm,0.9s,mb4.7						
MEZF	**Maizieres J'vi**	**23.17**	**68**	*eP*	**P**	**10 18 48.5**	**+0.3**
	61nm,0.9s,mb5.0						
MEZF	**Maizieres J'vi**	**23.17**	**68**	*eP*	**P**	**10 18 48.5**	**+0.3**
	61nm,0.9s,mb5.0						
SFTF	**Sexfontaines**	**23.18**	**69**	*eP*	**P**	**10 18 48.4**	**+0.1**
	166nm,1.5s,mb4.9						
SFTF	**Sexfontaines**	**23.18**	**69**	*eP*	**P**	**10 18 48.4**	**+0.1**
	166nm,1.5s,mb5.2						
SFTF	**Sexfontaines**	**23.18**	**69**	*eP*	**P**	**10 18 48.4**	**+0.1**
	166nm,1.5s,mb5.2						
CABF	**La Chapelle**	**24.03**	**72**	*eP*	**P**	**10 18 57.1**	**+0.5**
	29nm,0.9s,mb4.4						
CABF	**La Chapelle**	**24.03**	**72**	*eP*	**P**	**10 18 57.1**	**+0.5**
	14nm,0.9s,mb4.4						
CABF	**La Chapelle**	**24.03**	**72**	*eP*	**P**	**10 18 57.1**	**+0.5**
	14nm,0.9s,mb4.4						
HAU	**Haudompre**	**24.06**	**69**	*eP*	**P**	**10 18 56.3**	**-0.6**
	42nm,1.1s,mb4.5						
HAU	**Haudompre**	**24.06**	**69**	*eP*	**P**	**10 18 56.3**	**-0.6**
	21nm,1.1s,mb4.5						
HAU	**Haudompre**	**24.06**	**69**	*eP*	**P**	**10 18 56.3**	**-0.6**
	21nm,1.1s,mb4.5						
HINF	**Hinteralfeld**	**24.42**	**69**	*eP*	**P**	**10 19 00.4**	**+0.3**
	16nm,1.0s,mb4.1						
HINF	**Hinteralfeld**	**24.42**	**69**	*eP*	**P**	**10 19 00.4**	**+0.3**
	8.2nm,1.0s,mb4.1						
HINF	**Hinteralfeld**	**24.42**	**69**	*eP*	**P**	**10 19 00.4**	**+0.3**
	8.2nm,1.0s,mb4.1						
CDF	**Champ du Feu**	**24.65**	**68**	*eP*	**P**	**10 19 02.9**	**+0.6**
	35nm,1.1s,mb4.5						
CDF	**Champ du Feu**	**24.65**	**68**	*eP*	**P**	**10 19 02.9**	**+0.6**
	18nm,1.1s,mb4.5						
CDF	**Champ du Feu**	**24.65**	**68**	*eP*	**P**	**10 19 02.9**	**+0.6**
	18nm,1.1s,mb4.5						
NKC	**Novy Kostel**	**27.91**	**63**	AMS	AMS	10 32 10.0	
	300nm,13.7s						
KHC	**Kasperske Hory**	**28.74**	**66**	AMS	AMS	10 28 40.0	
	300nm,16.2s						
PVCC	**Panska Ves**	**29.24**	**63**	AMS	AMS	10 31 30.0	
	300nm,16.6s						
PRU	**Pruhonice**	**29.27**	**64**	AMS	AMS	10 32 40.0	
	300nm,15.6s						
KEST	**Kesra**	**29.79**	**94**	P	**P**	**10 19 49.0**	**+0.5**
	2.2nm,0.8s,mb4.0,baz=283,slow=6.7,SNR=6.9						
TREC	**Trest**	**29.96**	**65**	AMS	AMS	10 30 00.0	
	300nm,22.4s						
DPC	**Dobruska-Polom**	**30.38**	**63**	AMS	AMS	10 32 50.0	
	300nm,16.8s						
OKC	**Ostrava-Krasne**	**31.61**	**63**	AMS	AMS	10 31 00.0	
	300nm,23.5s						
BUR08	**Bucovina Ar. S**	**36.62**	**66**	*eP*	**P**	**10 20 45.3**	**-2.6**
BUR08	**Bucovina Ar. S**	**36.62**	**66**	*eP*	**P**	**10 20 45.3**	**-2.6**
AKASG	**Malin Array Be**	**38.42**	**60**	P	**P**	**10 21 02.3**	**-0.8**
	1.0nm,0.6s,mb3.7,baz=280,slow=9.0,SNR=4.8						
AKASG	**Malin Array Be**	**38.42**	**60**	P	**P**	**10 21 02.3**	**-0.8**
TORD	**Torodi Ar. Bea**	**40.25**	**131**	P	**P**	**10 21 17.6**	**-1.2**
	7.7nm,0.9s,mb4.4,baz=326,slow=8.7,SNR=13						
SDDR	**Presa de Saban**	**43.87**	**249**	*eP*	**P**	**10 21 49.1**	**+0.8**
	20nm,1.0s,mb4.8						
SDDR	**Presa de Saban**	**43.87**	**249**	*eP*	**P**	**10 21 49.1**	**+0.8**
	20nm,1.0s,mb4.8						
BRTR	**Keskin Array B**	**45.19**	**73**	P	**P**	**10 21 59.5**	**+0.8**
	2.0nm,0.9s,mb4.0,baz=279,slow=6.2,SNR=7.9						
BRTR	**Keskin Array B**	**45.19**	**73**	P	**P**	**10 21 59.5**	**+0.8**
CCM	**Cathedral Cave**	**46.82**	**285**	*eP*	**P**	**10 22 11.1**	**-0.3**
	19nm,1.5s,mb4.8						
CCM	**Cathedral Cave**	**46.82**	**285**	*eP*	**P**	**10 22 11.1**	**-0.4**
	19nm,1.5s,mb4.8						
OXF	**Oxford**	**47.30**	**280**	*eP*	**P**	**10 22 14.8**	**-0.5**
	24nm,1.0s,mb5.1						
OXF	**Oxford**	**47.30**	**280**	*eP*	**P**	**10 22 14.8**	**-0.5**
	24nm,1.0s,mb5.1						
MIAR	**Mount Ida**	**50.21**	**282**	*eP*	**P**	**10 22 37.6**	**-0.1**
	12nm,1.1s,mb4.8						
MIAR	**Mount Ida**	**50.21**	**282**	*eP*	**P**	**10 22 37.6**	**-0.1**
	12nm,1.1s,mb4.8						
WMOK	**Wichita Mounta**	**53.73**	**286**	*eP*	**P**	**10 23 03.4**	**-0.5**
	4.5nm,1.0s,mb4.3						
WMOK	**Wichita Mounta**	**53.73**	**286**	*eP*	**P**	**10 23 03.4**	**-0.5**
	4.5nm,1.0s,mb4.3						
I21A	**Big Trails, Te**	**54.62**	**299**	⇓P	**P**	**10 23 08.2**	**-2.1**
	baz=54						
A16A	**West Butte Ran**	**54.67**	**307**	⇓P	**P**	**10 23 08.5**	**-2.0**
	baz=54						
H20A	**Greybull**	**54.73**	**300**	⇓P	**P**	**10 23 10.7**	**-0.3**
	baz=55						
N23A	**Red Feather La**	**55.26**	**296**	⇑P	**P**	**10 23 15.9**	**+1.0**
	baz=55						
J20A	**Shoshoni**	**55.35**	**299**	⇓P	**P**	**10 23 15.9**	**+0.3**
	baz=55						
AKTK	**Aktyubinsk**	**55.52**	**51**	P	**P**	**10 23 17.1**	**+0.4**
AKTK	**

HLID	Hailey baz=59	59.14	302	⇑P	P	10 23 40.9 -1.4
HLID	Hailey 3.2nm,1.1s,mb4.3	59.14	302	*eP*	P	10 23 40.8 -1.6
HLID	Hailey 3.2nm,1.1s,mb4.3	59.14	302	*eP*	P	10 23 40.8 -1.5
SPUT	South Promonto 6.4nm,1.1s,mb4.6	59.18	299	*eP*	P	10 23 43.4 +0.8
SPUT	South Promonto 6.4nm,1.1s,mb4.6	59.18	299	*eP*	P	10 23 43.4 +0.8
326A	Caldwell Ranch baz=59,SNR=5.7	59.26	285	⇓P	P	10 23 41.8 -1.5
I12A	Atlanta baz=59,SNR=6.1	59.45	303	⇓P	P	10 23 44.9 +0.4
124A	Stringfield Ra baz=59,SNR=8.9	59.47	287	⇓P	P	10 23 44.2 -0.5
TMUT	Trail Mountain 15nm,1.0s,mb5.0	59.52	297	*eP*	P	10 23 46.0 +1.0
TMUT	Trail Mountain 15nm,1.0s,mb5.0	59.52	297	*eP*	P	10 23 46.0 +1.0
628A	Black Gap, Mar baz=60	59.58	283	⇓P	P	10 23 45.0 -0.6
426A	McDonald Obser baz=60,SNR=7.5	59.68	285	⇑P	P	10 23 46.1 -0.1
527A	Woodward Ranch baz=60,SNR=6.0	59.70	284	⇓P	P	10 23 46.0 -0.3
Y22A	Socorro baz=60,SNR=6.2	59.78	289	⇓P	P	10 23 47.5 +0.6
U19A	Dine' College, baz=60,SNR=8.2	59.92	293	⇑P	P	10 23 48.4 +0.6
627A	Terlingua Ranc baz=60,SNR=7.2	59.95	283	⇓P	P	10 23 47.7 -0.4
DUG	Dugway baz=60,SNR=5.7	60.03	298	⇓P	P	10 23 48.2 -0.4
DUG	Dugway 10nm,1.1s,mb4.8	60.03	298	*eP*	P	10 23 49.2 +0.7
DUG	Dugway 10nm,1.1s,mb4.8	60.03	298	*eP*	P	10 23 49.2 +0.7
X21A	Alamocita Cree baz=60,SNR=6.2	60.04	290	⇓P	P	10 23 49.6 +0.9
Z22A	Elephant Butte baz=60,SNR=5.5	60.17	289	⇓P	P	10 23 50.3 +0.7
Y21A	Point of Rocks baz=60,SNR=5.7	60.22	290	⇑P	P	10 23 51.2 +1.4
TXAR	Lajitas Array 3.0nm,0.8s,mb4.3,baz=67,slow=5.0,SNR=19	60.22	283	P	P	10 23 49.4 -0.6
TXAR	Lajitas Array	60.22	283	P	P	10 23 49.3 -0.7
324A	Moseley Ranch, baz=60	60.23	286	⇑P	P	10 23 49.8 -0.1
626A	Big Bend Ranch baz=60	60.41	284	⇓P	P	10 23 51.4 +0.1
Q15A	Fillmore baz=60	60.44	297	⇑P	P	10 23 51.3 -0.1
X20A	Quemado baz=60,SNR=6.5	60.46	291	⇑P	P	10 23 52.7 +1.2
MSU	Marysvale	60.59	296	*eP*	P	10 23 53.6 +1.3
MSU	Marysvale	60.59	296	*eP*	P	10 23 53.6 +1.2
Z21A	St. Cloud Mine baz=60	60.62	289	⇑P	P	10 23 52.2 -0.5
S16A	Weppner Ranch, baz=60	60.67	295	⇓P	P	10 23 52.4 -0.5
U17A	Shonto baz=61	60.70	294	⇓P	P	10 23 52.6 -0.6
Y20A	Horse Springs, baz=61,SNR=6.0	60.75	290	⇑P	P	10 23 54.6 +1.1
Q14A	Sevier Lake (B baz=61,SNR=6.8	61.02	297	⇑P	P	10 23 56.0 +0.7
X19A	St. Johns baz=61	61.06	291	⇓P	P	10 23 56.6 +1.0
121A	Cookes Peak, D baz=61,SNR=5.3	61.16	288	⇓P	P	10 23 56.7 +0.4
ILAR	Eielson Array 0.9nm,1.0s,mb3.9,baz=39,slow=5.8,SNR=6.8	61.18	335	P	P	10 23 55.9 -0.1
ILAR				PcP	PcP	10 24 38.0 -0.6
ILAR	Eielson Array 0.8nm,0.9s,baz=28,slow=4.1,SNR=5.3	61.18	335	P	P	10 23 55.9 -0.1
ILAR	Eielson Array	61.18	335	PcP	PcP	10 24 38.0 -0.6
U16A	Tuba City baz=61,SNR=6.2	61.28	294	⇓P	P	10 23 58.0 +0.9
Y19A	Nutrioso baz=61,SNR=8.6	61.31	291	⇑P	P	10 23 58.6 +1.3
V17A	Tonalea, Kykot baz=61	61.36	293	⇑P	P	10 23 58.1 +0.5
Z20A	Nine Sixteen R baz=61,SNR=5.5	61.36	289	⇓P	P	10 23 58.3 +0.6
T15A	Red Dirt Ranch baz=61	61.58	295	⇓P	P	10 23 58.8 -0.4
S14A	Cedar City baz=62,SNR=5.5	61.66	296	⇓P	P	10 23 58.9 -0.7
J08A	Circle Bar Ran baz=62,SNR=7.0	61.70	304	⇓P	P	10 24 00.4 +0.6
WUAZ	Wupatki 5.2nm,1.0s,mb4.6	61.80	293	*eP*	P	10 24 01.4 +0.7
WUAZ	Wupatki 5.2nm,1.0s,mb4.6	61.80	293	*eP*	P	10 24 01.4 +0.8
CCUT	Cedar City 9.4nm,1.0s,mb4.9	61.91	296	*eP*	P	10 24 02.4 +1.1
CCUT	Cedar City 9.4nm,1.0s,mb4.9	61.91	296	*eP*	P	10 24 02.4 +1.1
Y18A	Canyon Day Jun baz=62,SNR=6.6	61.94	291	⇑P	P	10 24 02.8 +1.2
220A	Playas Peak, P baz=62,SNR=5.2	62.04	288	P	P	10 24 03.3 +1.0
X17A	Forest Lakes baz=62,SNR=5.3	62.12	292	⇑P	P	10 24 03.8 +1.0
S13A	Holt Ranch, En baz=62,SNR=6.7	62.21	296	P	P	10 24 04.0 +0.7
WVOR	Wild Horse Val 8.6nm,1.1s,mb4.8	62.33	303	*eP*	P	10 24 04.6 +0.5
WVOR	Wild Horse Val 8.6nm,1.1s,mb4.8	62.33	303	*eP*	P	10 24 04.6 +0.5
219A	White Tail Can baz=62,SNR=7.3	62.48	289	⇓P	P	10 24 06.0 +0.8
OTAV	Otavalo 5.1nm,1.2s,mb4.5	62.52	240	*eP*	P	10 24 04.5 -1.2
OTAV	Otavalo 5.1nm,1.2s,mb4.5	62.52	240	*eP*	P	10 24 04.5 -1.2
Y17A	Roosevelt baz=62,SNR=5.5	62.53	291	⇓P	P	10 24 04.1 -1.5
T13A	Saint George baz=62,SNR=5.6	62.57	296	⇓P	P	10 24 05.2 -0.6
R11A	Troy Canyon, C baz=63	62.86	298	⇑P	P	10 24 07.5 -0.2
X15A	Humboldt baz=63,SNR=6.1	62.98	293	⇓P	P	10 24 09.6 +1.0
218A	Dragoon baz=63,SNR=5.1	63.03	289	⇑P	P	10 24 06.9 -2.0
W14A	Seligman baz=63,SNR=6.8	63.11	294	⇑P	P	10 24 10.2 +0.8
117A	Oracle baz=63,SNR=5.5	63.13	290	⇓P	P	10 24 09.1 -0.5
V13A	Grand Canyon W baz=63,SNR=6.0	63.31	295	⇓P	P	10 24 11.0 +0.3
K05A	Summer Lake baz=63	63.50	305	⇑P	P	10 24 11.5 -0.3
MOD	Modoc 7.1nm,0.9s,mb4.7	63.64	304	*eP*	P	10 24 13.8 +1.0
MOD	Modoc 7.1nm,0.9s,mb4.7	63.64	304	*eP*	P	10 24 13.8 +1.0
S10A	Tonopah Range, baz=64,SNR=7.0	63.75	298	⇓P	P	10 24 13.7 +0.2
216A	Three Points, baz=64	63.96	290	⇓P	P	10 24 16.3 +1.2
X13A	Yucca baz=64,SNR=6.2	63.97	294	⇑P	P	10 24 15.8 +0.7
115A	Sonoran Desert baz=64	64.06	291	⇓P	P	10 24 16.5 +0.8
V11A	Goodsprings baz=64	64.26	296	⇓P	P	10 24 16.7 -0.3
U10A	Ash Meadows, A baz=64,SNR=5.5	64.49	297	⇓P	P	10 24 18.7 +0.3
LDFC	Landfair	64.51	295	*eP*	P	10 24 19.5 +0.9
LDFC	Landfair	64.51	295	*eP*	P	10 24 19.5 +0.9
NVAR	Mina Array Bea 1.2nm,0.9s,mb3.9,baz=64,slow=4.1,SNR=7.6	64.52	300	P	P	10 24 15.5 -3.1
Z13A	Yuma Proving G baz=65,SNR=7.8	64.70	292	⇓P	P	10 24 20.5 +0.6
WCN	Washoe City baz=65	64.89	301	⇓P	P	10 24 20.1 -0.9
214A	Organ Pipe Nat baz=65	64.90	291	⇓P	P	10 24 21.6 +0.4
GMRC	Granite Mounta baz=65	65.05	295	⇑P	P	10 24 22.7 +0.6
IRM	Iron Mountain baz=65	65.10	294	⇑P	P	10 24 23.0 +0.5
MPMC	Manual Prospec baz=65,SNR=6.9	65.45	297	⇓P	P	10 24 25.3 +0.6
GSC	Goldstone	65.47	296	⇓P	P	10 24 25.6 +0.7
	baz=65,SNR=5.4					
GSC	Goldstone 13nm,1.1s,mb4.9	65.47	296	*eP*	P	10 24 26.1 +1.2
GSC	Goldstone 13nm,1.1s,mb4.9	65.47	296	*eP*	P	10 24 26.1 +1.2
CMB	Columbia Colle 4.4nm,1.0s,mb4.4	66.05	300	*eP*	P	10 24 29.0 +0.4
CMB	Columbia Colle 4.4nm,1.0s,mb4.4	66.05	300	*eP*	P	10 24 29.0 +0.4
ISA	Isabella baz=66,SNR=5.8	66.32	297	⇑P	P	10 24 31.2 +0.9
ISA	Isabella 83nm,2.7s,mb5.3	66.32	297	*eP*	P	10 24 31.5 +1.1
ISA	Isabella 83nm,2.7s,mb5.3	66.32	297	*eP*	P	10 24 31.5 +1.2
EDW2	Edwards Air Fo baz=66	66.50	296	⇓P	P	10 24 30.4 -1.0
ZALV	Zalesovo Beam 0.6nm,0.5s,mb3.9,baz=306,slow=3.4,SNR=4.1	66.65	36	P	P	10 24 30.1 -2.0
MKAR	Makanchi Array 0.7nm,0.3s,mb4.1,baz=316,slow=6.0,SNR=5.8	70.49	43	P	P	10 24 55.9 -0.4
LPAZ	La Paz 2.3nm,1.0s,mb4.1,baz=18,slow=6.4,SNR=5.7	70.50	221	P	P	10 24 55.8 -0.7
LPAZ	La Paz	70.50	221	P	P	10 24 55.8 -0.7
CPUP	Villa Florida 1.7nm,0.8s,mb4.0,baz=16,slow=9.1,SNR=4.7	75.24	207	P	P	10 25 22.9 -1.6
CPUP	Villa Florida	75.24	207	P	P	10 25 22.9 -1.6
SONM	Songino Array 1.8nm,0.9s,mb4.0,baz=319,slow=4.7,SNR=6.0	79.88	29	P	P	10 25 50.5 +0.2
SONM	Songino Array	79.88	29	P	P	10 25 50.5 +0.2

IDC 24 10:22:12.6±2.2,6°77S×129°49E,h0km,mb3.9/1, mb1 3.7/3,mb1mx3.5/15,mbtmp3.6/3,ML3.6/2,Error ellipse: s-maj=147.2km s-min=32.2km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr 0.4nm,0.3s,baz=343,slow=13,SNR=16	13.91	161	Pn	Pn	10 25 30.1	-1.0
WRA				Sn	Sn	10 27 52.1	-14
	0.5nm,0.3s,baz=332,slow=24,SNR=8.9						
ASAR	Alice Springs 0.1nm,0.3s,baz=349,slow=9.4,SNR=11	17.32	166	Pn	Pn	10 26 17.0	+1.0
ASAR				Sn	Sn	10 29 15.2	-14
	0.1nm,0.3s,baz=350,slow=26,SNR=5.0						
MKAR	Makanchi Array 0.6nm,0.4s,baz=121,slow=7.7,SNR=6.3	67.76	327	P	P	10 33 12.2	+0.1

IDC 24 10:22:17.9±1.1,35°.01N×81°.04E,h0km,mb3.6/4, mb1 3.7/6,mb1mx3.5/24,mbtmp3.6/6,Error ellipse: s-maj=31.1km s-min=23.6km az=51.0
ISCJB 24 10:22:18.9±0.8,35°.13N±0°.08×81°.3E±0°.1,h10km,mb3.5/4, Error ellipse: s-maj=15.6km s-min=9.8km az=150.2
ISC 24 10:22:20.8±0.8,35°.13N±0°.08×81°.4E±0°.1,h10km,n8, σ1§13/9,mb3.5/4,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	Dehra Dun	5.56	211	*ex*	Pn	10 23 44.0	+0.4
KSH	Kashi	6.15	317	*e*Pn	Pn	10 23 57.8	+6.2
KSH				Sn	Sn	10 25 03.1	+1.1
KSH	comp=N,19nm,0.9s			smax			
KSH	comp=E,21nm,0.9s			smax			
ZALV	Zalesovo Beam comp=E,0.1nm,0.3s,baz=196,slow=13,SNR=4.2	18.97	6	P	Pn	10 26 41.7	-1.0
BVAR	Borovoye Array comp=E,0.2nm,0.3s,baz=141,slow=12,SNR=4.6	19.52	340	P	Pn	10 26 48.3	-1.0
SONM	Songino Array comp=E,0.6nm,0.7s,mb3.1,baz=264,slow=8.5,SNR=3.8	22.51	48	P	P	10 27 21.9	+1.5
CMAR	Chiang Mai Arr comp=E,1.4nm,0.7s,mb3.5,baz=310,slow=12,SNR=8.6	22.77	132	P	P	10 27 23.8	+0.4
TORD	Torodi Ar. Bea comp=E,1.3nm,0.6s,mb4.1,baz=46,slow=5.7,SNR=9.3	74.20	275	P	P	10 33 55.1	-3.0
WRA	Warramunga Arr comp=E,0.3nm,0.7s,mb3.3,baz=324,slow=5.5,SNR=3.1	74.31	129	P	P	10 33 58.3	-0.3

GUC 24 11:00:56.0±0.8,30°.78S×71°.70W,h35km±18km,MD3.6, ML2.5,2C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	Ovalle	0.47	68	*i*P	Pn	11 01 06.1	0.0
OVCH				*i* S	Sn	11 01 13.4	+0.2
OVCH				AML	AML	11 01 13.7	
	comp=N,1μm,0.3s						
CMCH	Combarbala	0.72	123	⇓*i*P	Pn	11 01 11.5	+1.9
CMCH				*i* S	Sn	11 01 22.2	+2.8
CMCH				AML	AML	11 01 22.6	
	comp=E,705nm,0.7s						
TLL	Tololo Astrono	0.99	52	⇓*i*P	Pn	11 01 14.7	+1.3
TLL				*i* S	Sn	11 01 28.0	+1.9
TLL				AML	AML	11 01 33.6	
	comp=N,154nm,0.5s						
CHNG	Los Chungos	1.11	171	⇑*i*P	Pn	11 01 15.3	+0.3
CHNG				*i* S	Sn	11 01 30.5	+1.4
CHNG				AML	AML	11 01 34.0	
	comp=E,120nm,0.5s						

FUNV 24 12:57:20.6,11°.34N×62°.10W,h130km,MW2.8
NEIC 24 12:57:22.8,11°.30N×61°.85W,h131km,MD3.3(TRN),After TRN.
TRN 24 12:57:22.8,11°.30N×61°.85W,h131km,MD3.3
ISC 24 12:57:20.2±0.9,11°.22N±0°.05×62°.18W±0°.04,h135km±7km, n23,σ1§13/42,9C,Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.57	184	⇓*e*P	Pn	12 57 40.5	+0.3
GUIV				*e*S	Sn	12 57 55.6	+0.3
TCE	Chacachacare	0.67	141	⇑*i*P	Pn	12 57 42.0	+1.2
TCE				*e*S	Sn	12 57 57.0	+0.6
TCE	Chacachacare	0.67	141	⇑*i*P	Pn	12 57 42.0	+1.2
TCE				*e*S	Sn	12 57 57.0	+0.6
ITEV	Isla Los Testi	0.94	278	*e*P	Pn	12 57 42.5	-0.4
ITEV				*e*S	Sn	12 57 59.0	-1.3
TRN	Trinidad (W)	0.95	126	⇑*i*P	Pn	12 57 44.1	+1.1
TRN				*e*S	Sn	12 58 00.3	-0.1
TRN	Trinidad (W)	0.95	126	⇑*i*P	Pn	12 57 44.1	+1.1
TRN				*e*S	Sn	12 58 00.3	-0.1
GRW	Mount Saint Ca	1.07	28	*e*P	Pn	12 57 44.0	-0.2
GRW				*e*S	Sn	12 58 01.6	-0.8
GRW	Mount Saint Ca	1.07	28	*e*P	Pn	12 57 44.0	-0.2
GRW				*e*S	Sn	12 58 01.6	-0.8
TPP	Pointe-a-Pierr	1.15	141	*e*P	Pn	12 57 46.8	+1.9
TPP				*e*S	Sn	12 58 02.7	-1.0
TPP	Pointe-a-Pierr	1.15	141	*e*P	Pn	12 57 46.8	+1.9
TPP				*e*S	Sn	12 58 02.7	-1.0
CRUV	Carupano	1.17	243	*e*P	Pn	12 57 46.6	+1.5
CRUV				*e*S	Sn	12 58 04.1	+0.1
GUNV	Guanoco	1.29	216	*e*P	Pn	12 57 48.2	+1.9
GUNV				*e*S	Sn	12 58 06.9	+0.6
TBH	Brigand Hill	1.31	124	⇑*i*P	Pn	12 57 47.8	+1.2
TBH				*e*S	Sn	12 58 04.6	-2.1
TBH	Brigand Hill	1.31	124	⇑*i*P	Pn	12 57 47.8	+1.2
TBH				*e*S	Sn	12 58 04.6	-2.1
TPR	Prospect	1.38	91	⇑*i*P	Pn	12 57 46.6	-0.6
TPR				*e*S	Sn	12 58 03.0	-4.9
TPR	Prospect	1.38	91	⇑*i*P	Pn	12 57 46.6	-0.6
TPR				*e*S	Sn	12 58 03.0	-4.9
BOT	Bacolet	1.44	92	*e*P	Pn	12 57 46.8	-1.1
BOT	Bacolet	1.44	92	*e*P	Pn	12 57 46.8	-1.1
PCRV	Puerto La Cruz	2.63	247	*e*P	Pn	12 58 03.4	+1.3
RIOV	Rio Grande	3.15	173	*e*P	Pn	12 58 09.7	+0.8
RIOV				*e*S	Sn	12 58 46.1	-0.5
MERV	Las Mercedes	4.50	245	*e*S	Sn	12 59 16.6	-1.7
LUEV	Luepa	5.39	172	*e*P	Pn	12 58 37.9	-0.7
LUEV				*e*S	Sn	12 59 36.1	-3.5
CAOV	Caicara del Or	5.63	227	*e*P	Pn	12 58 41.1	-0.7
CAOV				*e*S	Sn	12 59 42.2	-3.2

ISCJB 24 12:58:05.9±0.4,37°.97N±0°.03×21°.49E±0°.03,h25km±3km, Error ellipse: s-maj=4.6km s-min=3.7km az=168.9
NEIC 24 12:58:05.0,37°.98N×21°.51E,h24km,MD3.3(ATH),After ATH.
ATH 24 12:58:05.0,37°.98N×21°.51E,h24km±1km,MD3.3/10
THE 24 12:58:05.4,37°.91N×21°.52E,h16km±1km,ML1.9/2,Error ellipse: s-maj=2.1km s-min=0.8km az=352.0
CSEM 24 12:58:05.4±0.2,37°.97N×21°.48E,h20km,MD3.3,Error ellipse: s-maj=4.3km s-min=3.9km az=139.0
ISC 24 12:58:05.8±0.5,37°.96N±0°.03×21°.49E±0°.03,h21km±4km, n46,σ1§13/91,3C,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.10	350	⇑*i*Pb	Pb	12 58 09.8	-0.2
RLS				*e*Sb	Sb	12 58 13.3	+0.5
RLS	Riolos of Patr	0.10	350	⇑*i*PB	Pb	12 58 09.8	-0.2
RLS				*e*SB	Sb	12 58 13.3	+0.5
RLS	Riolos of Patr	0.10	350	⇑*i*Pb	Pb	12 58 09.8	-0.2
RLS				*e*Sb	Sb	12 58 13.3	+0.5
UPR	University Cam	0.40	35	*e*PB	Pb	12 58 12.9	-1.4
UPR				*e*SB	Sb	12 58 19.3	-0.7
UPR	University Cam	0.40	35	*e*Pb	Pb	12 58 12.9	-1.4
UPR				*e*Sb	Sb	12 58 19.3	-0.7
LAKA	Lakka	0.48	53	P	Pb	12 58 15.1	-0.4
LAKA				S	Sb	12 58 22.6	+0.4
LAKA	Lakka	0.48	53	P	Pb	12 58 15.1	-0.4
LAKA				S	Sb	12 58 22.6	+0.4
EFP	Efpalio	0.57	35	*e*PN	Pn	12 58 15.9	-2.8
EFP				*e*SN	Sb	12 58 24.8	-0.1
EFP	Efpalio	0.57	35	P	Pb	12 58 16.2	-1.0
EFP				S	Sb	12 58 25.7	+0.8
EFP	Efpalio	0.57	35	*e*Pn	Pn	12 58 15.9	-2.8
EFP	Efpalio	0.57	35	P	Pb	12 58 16.2	-1.0
EFP				S	Sb	12 58 25.7	+0.8
KFL	Anninata	0.58	286	P	Pb	12 58 16.9	-0.3
KFL				S	Sb	12 58 27.5	+2.6
KFL	Anninata	0.58	286	P	Pb	12 58 16.9	-0.3
KFL				S	Sb	12 58 27.5	+2.6
TRIZ	Trizonia	0.62	48	P	Pb	12 58 17.1	-0.8
TRIZ				S	Sb	12 58 26.8	+0.7
TRIZ	Trizonia	0.62	48	P	Pb	12 58 17.1	-0.8
TRIZ				S	Sb	12 58 26.8	+0.7
KALE	Kalithea	0.67	49	P	Pb	12 58 18.0	-0.8
KALE				S	Sb	12 58 28.9	+1.2
KALE	Kalithea	0.67	49	P	Pb	12 58 18.0	-0.8
KALE				S	Sb	12 58 28.9	+1.2
GUR	Goura	0.67	91	*e*PN	Pn	12 58 17.8	-2.2
GUR				*e*SN	Sn	12 58 27.2	-2.6
GUR	Goura	0.67	91	P	Pb	12 58 17.9	-0.9
GUR				S	Sb	12 58 28.2	+0.5
GUR	Goura	0.67	91	P	Pb	12 58 17.9	-0.9
GUR				*e*Sn	Sn	12 58 27.3	-2.6
GUR				S	Sb	12 58 28.2	+0.5
VLS	Valsamata	0.74	288	*e*Pn	Pn	12 58 19.4	-1.6
VLS				*e*Sn	Sn	12 58 31.5	-0.2
VLS	Valsamata	0.74	288	*e*PN	Pn	12 58 19.4	-1.6
VLS				*e*SN	Sn	12 58 31.5	-0.2
VLS	Valsamata	0.74	288	P	Pb	12 58 19.3	-0.7
VLS				S	Sb	12 58 31.6	+1.8
VLS	Valsamata	0.74	288	P	Pb	12 58 19.3	-0.7
VLS				*e*Sn	Sn	12 58 31.5	-0.2
ITM	Ithomi	0.85	156	*e*Pn	Pn	12 58 21.7	-0.7
ITM				*e*Sn	Sn	12 58 33.3	-0.9
ITM	Ithomi	0.85	156	*e*PN	Pn	12 58 21.7	-0.7
ITM				*e*SN	Sn	12 58 33.3	-0.9
ITM	Ithomi	0.85	156	*e*Pn	Pn	12 58 21.7	-0.7
ITM				*e*Sn	Sn	12 58 33.3	-0.9
VLX	Vlachokerasia	0.92	129	*e*PN	Pn	12 58 23.6	+0.2
VLX				*e*SN	Sn	12 58 35.9	0.0
VLX	Vlachokerasia	0.92	129	*e*Pn	Pn	12 58 23.6	+0.2
VLX				*e*Sn	Sn	12 58 35.9	0.0
DSF	Desfina	0.94	61	P	Pb	12 58 22.5	-0.8
DSF				S	Sb	12 58 36.9	+1.6
DSF	Desfina	0.94	61	P	Pb	12 58 22.5	-0.8
DSF				S	Sb	12 58 36.9	+1.6
EVR	Evrytania	0.99	15	*e*Pn	Pn	12 58 23.6	-0.8
EVR				*e*Sn	Sn	12 58 37.3	-0.5
EVR	Evrytania	0.99	15	*e*PN	Pn	12 58 23.6	-0.8
EVR				*e*SN	Sn	12 58 37.3	-0.5
EVR	Evrytania	0.99	15	*e*Pn	Pn	12 58 23.6	-0.8
EVR				*e*Sn	Sn	12 58 37.3	-0.5
PYL	PYLOS	1.08	169	*e*PN	Pn	12 58 26.7	+1.1
PYL				*e*SN	Sn	12 58 41.1	+1.3
PYL	PYLOS	1.08	169	*e*Pn	Pn	12 58 26.7	+1.1
PYL				*e*Sn	Sn	12 58 41.1	+1.3
LTK	Loutraki	1.17	86	*e*PN	Pn	12 58 26.8	-0.1
LTK				*e*SN	Sn	12 58 42.3	+0.2
LTK	Loutraki	1.17	86	*e*Pn	Pn	12 58 26.8	-0.1
LTK				*e*Sn	Sn	12 58 42.3	+0.2
AGG	Agios Georgios	1.25	31	*e*Pn	Pn	12 58 29.1	+1.1
AGG				*e*Sn	Sn	12 58 45.0	+0.8
AGG	Agios Georgios	1.25	31	*e*PN	Pn	12 58 29.1	+1.1
AGG				*e*SN	Sn	12 58 45.0	+0.8
AGG	Agios Georgios	1.25	31	*e*Pn	Pn	12 58 29.1	+1.1
AGG				*e*Sn	Sn	12 58 45.0	+0.8
LKR	Lokris	1.38	59	*e*Pn	Pn	12 58 30.0	+0.3
LKR				*e*Sn	Sn	12 58 49.2	+1.9
LKR	Lokris	1.38	59	*e*PN	Pn	12 58 30.0	+0.3
LKR				*e*SN	Sn	12 58 49.2	+1.9
LKR	Lokris	1.38	59	*e*Pn	Pn	12 58 30.0	+0.3
LKR				*e*Sn	Sn	12 58 49.2	+1.9
DID	Didima	1.46	107	*e*PN	Pn	12 58 31.6	+0.8
DID				*e*SN	Sn	12 58 51.8	+2.6
DID	Didima	1.46	107	*e*Pn	Pn	12 58 31.6	+0.8

IDC 24 13:02:56.7±4.9,15°.90S×176°.16W,h0km,mb4.1/3, mb1 4.2/3,mb1mx3.7/17,mbtmp4.1/3,Error ellipse: s-maj=166.2km s-min=98.3km az=155.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek 1.4nm,0.7s,baz=101,slow=9.9,SNR=4.5	41.49	240	P	P	13 10 45.5	-0.2
WRA	Warramunga Arr 0.3nm,0.2s,baz=91,slow=7.8,SNR=20	47.14	257	P	P	13 11 31.2	+0.1
ASAR	Alice Springs 3.1nm,0.4s,baz=89,slow=7.8,SNR=91	47.43	252	P	P	13 11 33.3	0.0
ASAR				PcP	PcP	13 13 03.7	-0.3
	0.3nm,0.5s,baz=105,slow=4.2,SNR=5.2						

ISCJB 24 13:11:49.9±0.7,38°.08N±0°.07×21°.68E±0°.04,h25km±6km, Error ellipse: s-maj=11.8km s-min=4.9km az=167.1
CSEM 24 13:11:49.7±0.3,38°.10N×21°.67E,h28km±2km,MD2.8, Error ellipse: s-maj=9.4km s-min=4.7km az=165.0
ATH 24 13:11:49.8,38°.12N×21°.61E,h26km±1km,MD2.8/4
THE 24 13:11:49.6,38°.22N×21°.73E,h56km±4km,ML1.8/1,Error ellipse: s-maj=4.1km s-min=0.9km az=43.0
ISC 24 13:11:50.1±0.7,38°.11N±0°.07×21°.67E±0°.04,h27km±6km, n16,σ0§94/31,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.17	251	*e*PB	Pb	13 11 55.0	-0.6
RLS				*e*SB	Sb	13 11 58.7	-0.6
RLS	Riolos of Patr	0.17	251	*e*Pb	Pb	13 11 55.0

VLS			*e*Sn		**Sn**	13 12 17.9	**+0.1**
VLS			S		**Sb**	13 12 19.0	**+1.7**

*ISCJB **24** 13:48:17.3±1.2,5.°20S±0.°05×79.°5W±0.°2,h115km±10km, mb3.6/4, Error ellipse: s-maj=33.9km s-min=5.8km az=169.7*
*NEIC **24** 13:48:17.8±1.2,5.°19S×79.°44W, h102km±12km, Error ellipse: s-maj=23.6km s-min=9.6km az=72.0*
*IDC **24** 13:48:18.5±2.5,5.°22S×79.°42W, h108km±23km, mb3.3/4, mb1 3.6/7, mb1mx3.4/18, mbtmp3.5/7, Error ellipse: s-maj=41.0km s-min=22.7km az=54.0*
*IGQ **24** 13:48:31.9, 4.°04S×79.°17W, h141km±15km, Mb4.6, Ms4.4, Error ellipse: s-maj=17.1km s-min=6.4km az=177.9*

ISC 24 13:48:18.7±1.1,5.°20S±0.°05×79.°4W±0.°2,h109km±9km,n45, σ0s62/44**,mb3.6/3,2D,Northern Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**2.19**	**152**	P	**Pn**	**13 48 54.9**	**+0.8**
	35nm,0.3s,baz=2.9,slow=8.1,SNR=219						
ATAH				S	**Sn**	**13 49 21.4**	**+0.3**
	38nm,0.3s,baz=16,slow=12,SNR=12						
MACE	**Macas**	**3.18**	**23**	P	**Pn**	**13 49 06.9**	**-0.2**
IGUA	**Igualata**	**3.77**	**12**	P	**Pn**	**13 49 15.0**	**0.0**
BMAS	**Trigal station**	**3.79**	**15**	S	**Sn**	**13 49 45.3**	**-14**
BMAS	**Trigal station**	**3.79**	**15**	P	**Pn**	**13 49 15.2**	**-0.1**
ARRY	**Arrayan**	**3.80**	**15**	⇓P	**Pn**	**13 49 14.7**	**-0.6**
PAT1	**Patacocha**	**3.80**	**15**	P	**Pn**	**13 49 15.3**	**-0.2**
PAT1	**Patacocha**	**3.80**	**15**	S	**Sn**	**13 49 47.2**	**-12**
BBIL	**Ulba Tungurahu**	**3.84**	**14**	P	**Pn**	**13 49 18.5**	**+2.5**
RETU	**Refugio**	**3.85**	**15**	P	**Pn**	**13 49 16.9**	**+0.8**
JUI6	**Juive**	**3.87**	**15**	P	**Pn**	**13 49 16.4**	**0.0**
BULB	**Ulba Tungurahu**	**3.88**	**15**	P	**Pn**	**13 49 16.5**	**+0.1**
BRUN	**Tungurahua Vol**	**3.89**	**15**	P	**Pn**	**13 49 16.8**	**+0.2**
RUN5	**Runtun**	**3.89**	**15**	P	**Pn**	**13 49 17.1**	**+0.4**
PISA	**Pisayambo**	**4.25**	**14**	P	**Pn**	**13 49 21.1**	**-0.3**
BMOR	**Cotopaxi Volca**	**4.54**	**12**	P	**Pn**	**13 49 25.6**	**+0.1**
MOV1	**Cotopaxi Vol s**	**4.57**	**13**	P	**Pn**	**13 49 25.3**	**-0.4**
TAMB	**Tambo**	**4.60**	**13**	P	**Pn**	**13 49 26.0**	**-0.2**
BREF	**Cotopaxi Volca**	**4.61**	**13**	P	**Pn**	**13 49 27.4**	**+1.1**
BTAM	**Cotopaxi Volca**	**4.61**	**13**	P	**Pn**	**13 49 26.3**	**-0.1**
NAS2	**Nasa**	**4.63**	**12**	P	**Pn**	**13 49 26.7**	**+0.2**
BVC2	**Cotopaxi Volca**	**4.63**	**13**	P	**Pn**	**13 49 26.4**	**-0.1**
COV1	**Cotopaxi Volc**	**4.64**	**14**	P	**Pn**	**13 49 27.4**	**+0.7**
VC1	**Cotopaxi 1**	**4.64**	**13**	P	**Pn**	**13 49 26.6**	**-0.2**
PITA	**Cotopaxi Volc**	**4.72**	**12**	⇓P	**Pn**	**13 49 27.6**	**-0.2**
ANTI	**Antisana**	**4.89**	**15**	P	**Pn**	**13 49 29.6**	**-0.5**
JUA2	**San Juan 2**	**5.02**	**10**	P	**Pn**	**13 49 31.4**	**-0.5**
TERV	**Terraza Guagua**	**5.06**	**10**	P	**Pn**	**13 49 32.5**	**+0.1**
GGP	**Refugio Guagua**	**5.06**	**10**	P	**Pn**	**13 49 32.0**	**-0.4**
YANA	**Yana**	**5.12**	**10**	P	**Pn**	**13 49 32.4**	**-0.8**
CAYR	**Refugio Cayamb**	**5.37**	**15**	P	**Pn**	**13 49 36.7**	**+0.1**
CAYA	**Cayambe**	**5.43**	**16**	P	**Pn**	**13 49 37.5**	**0.0**
OTAV	**Otavalo**	**5.49**	**10**	*e*P	**Pn**	**13 49 37.8**	**-0.4**
	39nm,0.8s						
COTA	**Cotacachi**	**5.61**	**11**	P	**Pn**	**13 49 39.5**	**-0.3**
NNA	**Nana**	**7.22**	**159**	P	**Pn**	**13 50 00.2**	**-1.4**
	2.6nm,0.3s,baz=336,slow=8.6,SNR=4.9						
NNA				S	**Sn**	**13 51 18.5**	**-3.6**
	7.9nm,0.3s,baz=214,slow=19,SNR=7.6						
LPAZ	**La Paz**	**15.64**	**136**	P	**Pn**	**13 51 53.4**	**+0.3**
LPAZ	**La Paz**	**15.64**	**136**	P	**Pn**	**13 51 53.4**	**+0.3**
	0.1nm,0.3s,baz=342,slow=6.7,SNR=3.4						
SIV	**San Ignacio**	**20.98**	**122**	P	**P**	**13 52 53.2**	**-0.2**
	1.0nm,0.4s,baz=305,slow=15,SNR=10						
PLCA	**Paso Flores**	**36.27**	**169**	P	**P**	**13 55 12.4**	**+1.0**
	1.1nm,0.7s,mb3.9,baz=329,slow=15,SNR=3.9						
PDAR	**Pinedale Array**	**55.01**	**333**	pP	pP	13 58 01.7	-3.3
	0.6nm,0.9s,baz=72,slow=4.8,SNR=2.9						
NVAR	**Mina Array Bea**	**56.40**	**324**	P	**P**	**13 57 48.9**	**0.0**
NVAR				pP	pP	13 58 12.8	-2.4
NVAR	**Mina Array Bea**	**56.40**	**324**	P	**P**	**13 57 48.9**	**0.0**
	0.2nm,0.6s,mb3.3,baz=119,slow=7.3,SNR=3.7						
NVAR				pP	pP	13 58 12.8	-2.4
	0.3nm,0.6s,baz=130,slow=6.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**82.58**	**76**	P	**P**	**14 00 30.0**	**-0.3**
	0.9nm,0.9s,mb3.6,baz=289,slow=5.4,SNR=3.2						
ASAR	**Alice Springs**	**136.63**	**227**	PKP	PKPdf	14 07 28.8	-0.2
	0.3nm,0.9s,baz=113,slow=1.9,SNR=5.8						
WRA	**Warramunga Arr**	**138.44**	**232**	PKP	PKPdf	14 07 32.4	0.0
	0.2nm,0.3s,baz=106,slow=3.1,SNR=15						

*IDC **24** 13:48:51.6±4.9, 12.°98N×90.°56W, h0km, mb3.4/2, mb1 3.9/3, mb1mx3.5/21, mbtmp3.5/3, ML3.5/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/19, Error ellipse: s-maj=362.9km s-min=53.9km az=42.0*
*NEIC **24** 13:48:56.5±2.6, 12.°86N×90.°86W, h35km, Error ellipse: s-maj=62.1km s-min=14.2km az=193.0*
*ISCJB **24** 13:48:59.1±0.7, 13.°46N±0.°06×90.°78W±0.°03, h33km, MS2.8/2, Error ellipse: s-maj=9.5km s-min=3.4km az=23.2*
*CASC **24** 13:49:01.3±2.4, 13.°62N×90.°63W, h26km±6km, MD3.6, ML3.5*
*MEX **24** 13:49:12.8±0.4, 13.°43N×92.°04W, h57km±72km, MD4.2*

ISC 24 13:49:00.9±0.7,13.°53N±0.°06×90.°73W±0.°03,h35km,n42, σ1s05/55**,MS2.8/2,2D,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.87**	**8**	⇓*e*P	**Pn**	**13 49 16.7**	**+0.1**
FUG	**Fuego 3**	**0.92**	**353**	*e*P	**Pn**	**13 49 17.2**	**-0.2**
FG6		**1.04**	**352**	*e*P	**Pn**	**13 49 18.9**	**-0.1**
RTR	**El Retiro**	**1.11**	**71**	*e*P	**Pn**	**13 49 19.5**	**-0.5**
RTR				*e*S	**Sn**	**13 49 32.7**	**-1.4**
NBG	**Las Nubes**	**1.11**	**19**	*e*P	**Pn**	**13 49 21.3**	**+1.2**
SBLS	**San Blas**	**1.11**	**74**	⇓*e*P	**Pn**	**13 49 19.3**	**-0.8**
SBLS				*e*P		13 49 19.3	
SNJE	**San Jose**	**1.14**	**73**	*e*P	**Pn**	**13 49 19.8**	**-0.6**
SNJE				*e*S	**Sn**	**13 49 33.8**	**-0.9**
RBDL	**Robledal**	**1.16**	**60**	*e*P	**Pn**	**13 49 20.5**	**-0.2**
JAT	**Jato**	**1.18**	**312**	*e*P	**Pn**	**13 49 20.9**	**0.0**
TP2	**Tecpan 2**	**1.28**	**347**	*e*P	**Pn**	**13 49 23.2**	**+0.9**
TP2				*e*S	**Sn**	**13 49 40.0**	**+1.8**
BQQS	**Boqueron**	**1.42**	**82**	*e*P	**Pn**	**13 49 24.1**	**-0.2**
BQQS				*e*S	**Sn**	**13 49 41.8**	**+0.1**
SNET	**Serv Nac Est T**	**1.46**	**84**	*e*P	**Pn**	**13 49 24.6**	**-0.2**
SNET				*e*S	**Sn**	**13 49 41.9**	**-0.8**
SNET				AML	AML	13 49 46.6	
	comp=Z,2μm,0.3s						
LFRS	**El Faro**	**1.62**	**86**	*e*P	**Pn**	**13 49 27.1**	**+0.1**
LBRS	**Las Brisas**	**1.65**	**83**	*e*P	**Pn**	**13 49 27.7**	**+0.3**
LBRS				*e*S	**Sn**	**13 49 46.6**	**-0.7**
MRL	**Marmol**	**1.83**	**33**	*e*P	**Pn**	**13 49 31.4**	**+1.6**
SNVI	**San Vicente**	**1.84**	**87**	*e*P	**Pn**	**13 49 30.3**	**+0.4**
SNVI				AML	AML	13 49 57.0	
	comp=Z,207nm,0.3s						
THIG		**2.03**	**313**	*i* P	**Pn**	**13 49 35.1**	**+2.5**
THIG				*i* S	**Sn**	**13 49 54.0**	**-2.7**
VSM	**San Miguel**	**2.39**	**92**	*e*P	**Pn**	**13 49 38.2**	**+0.6**
BLLM	**Bellamira**	**2.42**	**92**	*e*P	**Pn**	**13 49 38.7**	**+0.7**
CAHU	**Cacacuatique**	**2.46**	**84**	*e*P	**Pn**	**13 49 38.4**	**-0.1**
CNCH	**Conchagua**	**2.83**	**95**	*e*P	**Pn**	**13 49 43.7**	**+0.1**
CNCH				*e*S	**Sn**	**13 50 19.6**	**+3.2**
PCIG		**3.24**	**312**	*i* P	**Pn**	**13 49 50.2**	**+0.9**
PCIG				*i* S	**Sn**	**13 50 19.5**	**-7.1**
TGUH	**Tegucigalpa,Un**	**3.40**	**81**	*e*Pn	**Pn**	**13 49 50.6**	**-0.8**
TGUH	**Tegucigalpa,Un**	**3.40**	**81**	*e*P	**Pn**	**13 49 52.5**	**+1.1**
CRIN	**San Cristobal**	**3.67**	**103**	*e*P	**Pn**	**13 49 56.4**	**+1.2**
TGIG		**3.97**	**325**	*i* P	**Pn**	**13 50 04.0**	**+4.7**
TGIG				*i* S	**Sn**	**13 50 42.4**	**-2.3**
CNGN	**Cerro Negro**	**4.06**	**104**	*e*P	**Pn**	**13 49 59.3**	**-1.2**
CSAN		**4.41**	**107**	*e*P	**Pn**	**13 50 06.1**	**+0.8**
BOAB	**BOACO BROADBAN**	**5.05**	**102**	*e*P	**Pn**	**13 50 12.8**	**-1.3**
CMIG	**Matias Romero**	**5.35**	**312**	Pn	**Pn**	**13 50 19.1**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=116,slow=8.3,SNR=12						
CMIG				Sn	**Sn**	**13 51 18.4**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=79,slow=17,SNR=5.7						
HUIG	**Huatulco**	**5.67**	**294**	*i* P	**Pn**	**13 50 31.7**	**+9.1**
HUIG				*i* S	**Sn**	**13 51 21.0**	**-5.5**
HUIG	**Huatulco**	**5.67**	**294**	*i* P	**Pn**	**13 50 18.7**	**-3.9**
HUIG				*i* S	**Sn**	**13 51 11.0**	**-16**
VHO	**Vista Hermosa**	**6.78**	**302**	*i* P	**Pn**	**13 50 36.1**	**-1.8**
VHO				*i* S	**Sn**	**13 52 04.6**	**+11**
VHO	**Vista Hermosa**	**6.78**	**302**	*i* P	**Pn**	**13 50 36.1**	**-1.8**
VHO				*i* S	**Sn**	**13 51 40.6**	**-13**
TEIG	**Tepich**	**7.06**	**19**	*e*P	**Pn**	**13 50 42.6**	**+0.9**
	comp=Z,13nm,0.6s						
PNIG	**Pinotepa**	**7.70**	**293**	*i* P	**Pn**	**13 50 44.8**	**-5.7**
PNIG	**Pinotepa**	**7.70**	**293**	*i* P	**Pn**	**13 50 47.0**	**-3.6**
PNIG				*i* S	**Sn**	**13 52 00.2**	**-16**
TXAR	**Lajitas Array**	**19.78**	**325**	P	**Pn**	**13 53 29.1**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=146,slow=11,SNR=7.4						
TKL	**Tuckaleechee C**	**22.91**	**15**	LR	LR	14 03 57.8	
	comp=Z,44nm,19.6s,MS2.9,baz=340,slow=39						
SJG	**San Juan**	**24.07**	**76**	LR	LR	14 01 42.7	
	comp=Z,24nm,19.6s,MS2.7,baz=114,slow=32						
NVAR	**Mina Array Bea**	**34.82**	**320**	P	**P**	**13 55 49.6**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=133,slow=8.7,SNR=4.9						
CMAR	**Chiang Mai Arr**	**146.82**	**343**	PKPbc	PKPbc	14 08 37.4	-2.9
	comp=Z,0.6nm,0.4s,baz=343,slow=2.9,SNR=6.4						

*ISCJB **24** 13:49:08.0±0.4, 38.°87N±0.°02×21.°22E±0.°03, h6km±3km, Error ellipse: s-maj=4.1km s-min=3.2km az=33.4*
*THE **24** 13:49:08.7, 38.°82N×21.°22E, h12km±3km, ML2.3/3, Error ellipse: s-maj=4.3km s-min=1.0km az=193.0*
*ATH **24** 13:49:08.1, 38.°87N×21.°22E, h22km, MD3.4/15*
*NEIC **24** 13:49:08.1, 38.°87N×21.°22E, h22km, MD3.4(ATH), After ATH.*
*CSEM **24** 13:49:08.7±0.2, 38.°84N×21.°19E, h19km, ML2.3/3, Error ellipse: s-maj=5.5km s-min=4.3km az=21.0*

ISC 24 13:49:08.6±0.4,38.°87N±0.°02×21.°22E±0.°03,h8km±3km, n80,σ0s73/121**, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKD2	**Lefkada island**	**0.45**	**260**	P	**Pg**	**13 49 16.9**	**-0.4**
LKD2				S	**Sg**	**13 49 23.8**	**+0.7**
LKD2	**Lefkada island**	**0.45**	**260**	P	**Pg**	**13 49 16.9**	**-0.4**
LKD2				S	**Sg**	**13 49 23.8**	**+0.7**
EVR	**Evrytania**	**0.46**	**84**	*e*Pb	**Pg**	**13 49 17.5**	**0.0**
EVR				*e*Sb	**Sg**	**13 49 25.0**	**+1.4**
EVR	**Evrytania**	**0.46**	**84**	*e*PB	**Pg**	**13 49 17.5**	**0.0**
EVR				*e*SB	**Sg**	**13 49 25.0**	**+1.4**
EVR	**Evrytania**	**0.46**	**84**	*e*Pb	**Pg**	**13 49 17.5**	**0.0**
EVR				*e*Sb	**Sg**	**13 49 25.0**	**+1.4**
EFP	**Efpalio**	**0.70**	**129**	*e*PN	**Pg**	**13 49 21.8**	**-0.2**
EFP				*e*SN	**Sg**	**13 49 31.7**	**+0.7**
EFP	**Efpalio**	**0.70**	**129**	P	**Pg**	**13 49 21.2**	**-0.8**
EFP				S	**Sg**	**13 49 32.2**	**+1.2**
EFP	**Efpalio**	**0.70**	**129**	P	**Pg**	**13 49 21.2**	**-0.8**
EFP	**Efpalio**	**0.70**	**129**	*e*Pn	**Pg**	**13 49 21.8**	**-0.2**
EFP				*e*Sn	**Sg**	**13 49 31.7**	**+0.7**
EFP				S	**Sg**	**13 49 32.2**	**+1.2**
JAN	**Janina**	**0.83**	**340**	*e*Pn	**Pg**	**13 49 24.5**	**-0.2**
JAN				*e*Sn	**Sg**	**13 49 35.7**	**+0.2**
JAN	**Janina**	**0.83**	**340**	*e*PN	**Pg**	**13 49 24.5**	**-0.2**
JAN				*e*SN	**Sg**	**13 49 35.7**	**+0.2**
JAN	**Janina**	**0.83**	**340**	*e*Pn	**Pg**	**13 49 24.5**	**-0.2**
JAN				*e*Sn	**Sg**	**13 49 35.7**	**+0.2**
RLS	**Riolos of Patr**	**0.83**	**167**	*e*Pn	**Pg**	**13 49 24.4**	**-0.2**
RLS				*e*Sn	**Sg**	**13 49 36.1**	**+0.6**
RLS	**Riolos of Patr**	**0.83**	**167**	*e*PN	**Pg**	**13 49 24.4**	**-0.2**
RLS				*e*SN	**Sg**	**13 49 36.1**	**+0.6**
RLS	**Riolos of Patr**	**0.83**	**167**	*e*Pn	**Pg**	**13 49 24.4**	**-0.2**
RLS				*e*Sn	**Sg**	**13 49 36.1**	**+0.6**
TRIZ	**Trizonia**	**0.84**	**127**	P	**Pg**	**13 49 24.0**	**-0.7**
TRIZ	**Trizonia**	**0.84**	**127**	P	**Pg**	**13 49 24.0**	**-0.7**
VLS	**Valsamata**	**0.85**	**216**	*e*Pn	**Pg**	**13 49 25.1**	**+0.1**
VLS				*e*Sn	**Sg**	**13 49 36.6**	**+0.6**
VLS	**Valsamata**	**0.85**	**216**	*e*PN	**Pg**	**13 49 25.1**	**+0.1**
VLS				*e*SN	**Sg**	**13 49 36.6**	**+0.6**
VLS	**Valsamata**	**0.85**	**216**	P	**Pg**	**13 49 23.0**	**-2.0**
VLS				S	**Sg**	**13 49 36.5**	**+0.5**
VLS	**Valsamata**	**0.85**	**216**	P	**Pg**	**13 49 23.0**	**-2.0**
VLS	**Valsamata**	**0.85**	**216**	*e*Pn	**Pg**	**13 49 25.1**	**+0.1**
VLS				*e*Sn	**Sg**	**13 49 36.6**	**+0.6**
KALE	**Kalithea**	**0.86**	**123**	P	**Pg**	**13 49 24.6**	**-0.6**
KALE				S	**Sg**	**13 49 37.7**	**+1.3**
KALE	**Kalithea**	**0.86**	**123**	P	**Pg**	**13 49 24.6**	**-0.6**
KALE				S	**Sg**	**13 49 37.7**	**+1.3**
LAKA	**Lakka**	**0.87**	**136**	P	**Pg**	**13 49 24.1**	**-1.1**
LAKA	**Lakka**	**0.87**	**136**	P	**Pg**	**13 49 24.1**	**-1.1**
AGG	**Agios Georgios**	**0.88**	**80**	*e*Pn	**Pg**	**13 49 24.6**	**-0.9**
AGG				*e*Sn	**Sg**	**13 49 37.5**	**+0.6**
AGG	**Agios Georgios**	**0.88**	**80**	*e*PN	**Pg**	**13 49 24.6**	**-0.9**
AGG				*e*SN	**Sg**	**13 49 37.5**	**+0.6**
AGG	**Agios Georgios**	**0.88**	**80**	P	**Pg**	**13 49 24.6**	**-0.9**
AGG	**Agios Georgios**	**0.88**	**80**	P	**Pg**	**13 49 24.6**	**-0.9**
AGG				*e*Sn	**Sg**	**13 49 37.5**	**+0.6**
IGT	**Igoumenitsa**	**0.95**	**314**	P	**Pg**	**13 49 26.9**	**0.0**
IGT				S	**Sg**	**13 49 43.9**	**+3.9**
IGT	**Igoumenitsa**	**0.95**	**314**	P	**Pg**	**13 49 26.9**	**0.0**
DSF	**Desfina**	**1.12**	**114**	P	**Pg**	**13 49 28.3**	**-1.8**
DSF	**Desfina**	**1.12**	**114**	P	**Pg**	**13 49 28.3**	**-1.8**
GUR	**Goura**	**1.28**	**136**	*e*PN	**Pn**	**13 49 32.1**	**-0.7**
GUR				*e*SN	**Sn**	**13 49 49.5**	**-0.7**
GUR	**Goura**	**1.28**	**136**	S	**Pn**	**13 49 33.4**	**+0.6**
GUR	**Goura**	**1.28**	**136**	*e*Pn	**Pn**	**13 49 32.1**	**-0.7**
GUR				*e*Sn	**Sn**	**13 49 49.5**	**-0.7**
KEK	**Kerkira**	**1.39**	**308**	*e*Pn	**Pn**	**13 49 33.8**	**-0.5**
KEK				*e*Sn	**Sn**	**13 49 53.0**	**+0.2**
KEK	**Kerkira**	**1.39**	**308**	*e*PN	**Pn**	**13 49 33.8**	**-0.5**
KEK				*e*SN	**Sn**	**13 49 53.0**	**+0.2**
KEK	**Kerkira**	**1.39**	**308**	*e*Pn	**Pn**	**13 49 33.8**	**-0.5**
KEK				*e*Sn	**Sn**	**13 49 53.0**	**+0.2**
LKR	**Lokris**	**1.41**	**98**	*e*Pn	**Pn**	**13 49 34.0**	**-0.5**
LKR				*e*Sn	**Sn**	**13 49 53.2**	**-0.1**
LKR	**Lokris**	**1.41**	**98**	*e*PN	**Pn**	**13 49 34.0**	**-0.5**
LKR				*e*SN	**Sn**	**13 49 53.2**	**-0.1**
LKR	**Lokris**	**1.41**	**98**	P	**Pn**	**13 49 33.5**	**-1.0**
LKR	**Lokris**	**1.41**	**98**	P	**Pn**	**13 49 33.5**	**-1.0**
LKR	**Lokris**	**1.41**	**98**	*e*Pn	**Pn**	**13 49 34.0**	**-0.5**
LKR				*e*Sn	**Sn**	**13 49 53.2**	**-0.1**
KZN	**Kozani**	**1.50**	**16**	*e*Pn	**Pn**	**13 49 35.9**	**+0.1**
KZN				*e*Sn	**Sn**	**13 49 56.6**	**+1.1**
KZN	**Kozani**	**1.50**	**16**	*e*PN	**Pn**	**13 49 35.9**	**+0.1**
KZN				*e*SN	**Sn**	**13 49 56.6**	**+1.1**
KZN	**Kozani**	**1.50**	**16**	*e*Pn	**Pn**	**13 49 35.9**	**+0.1**
KZN				*e*Sn	**Sn**	**13 49 56.6**	**+1.1**
LTK	**Loutraki**	**1.61**	**121**	*e*PN	**Pn**	**13 49 37.7**	**+0.4**
LTK				*e*SN	**Sn**	**13 49 58.6**	**+0.3**
LTK	**Loutraki**	**1.61**	**121**	*e*Pn	**Pn**	**13 49 37.7**	**+0.4**
LTK				*e*Sn	**Sn**	**13 49 58.6**	**+0.3**
XOR	**Xorichti**	**1.61**	**72**	P	**Pn**	**13 49 36.8**	**-0.5**
XOR	**Xorichti**	**1.61**	**72**	P	**Pn**	**13 49 36.8**	**-0.5**
NEO	**Neokhori**	**1.62**	**74**	*e*Pn	**Pn**	**13 49 37.7**	**+0.3**
NEO				*e*Sn	**Sn**	**13 49 58.9**	**+0.4**
NEO	**Neokhori**	**1.62**	**74**	*e*PN	**Pn**	**13 49 37.7**	**+0.3**
NEO				*e*SN	**Sn**	**13 49 58.9**	**+0.4**
NEO	**Neokhori**	**1.62**	**74**	*e*Pn	**Pn**	**13 49 37.7**	**+0.3**
NEO				*e*Sn	**Sn**	**13 49 58.9**	**+0.4**
ITM	**Ithomi**	**1.78**	**162**	*e*Pn	**Pn**	**13 49 40.5**	**+0.9**
ITM	**Ithomi**	**1.78**	**162**	*e*PN	**Pn**	**13 49 40.5**	**+0.9**
ITM	**Ithomi**	**1.78**	**162**	*e*Pn	**Pn**	**13 49 40.5**	**+0.9**
PYL	**PYLOS**	**2.02**	**168**	*e*PN	**Pn**	**13 49 43.6**	**+0.7**
PYL	**PYLOS**	**2.02**	**168**	*e*Pn	**Pn**	**13 49 43.6**	**+0.7**
DID	**Didima**	**2.09**	**130**	*e*Pn	**Pn**	**13 49 44.1**	**+0.1**
DID	**Didima**	**2.09**	**130**	*e*Pn	**Pn**	**13 49 44.1**	**+0.1**
ATH	**Athens Observa**	**2.16**	**114**	*e*Pn	**Pn**	**13 49 44.3**	**-0.5**
ATH	**Athens Observa**	**2.16**	**114**	*e*PN	**Pn**	**13 49 44.3**	**-0.5**
ATH	**Athens Observa**	**2.16**	**114**	*e*Pn	**Pn**	**13 49 44.3**	**-0.5**
PTL	**Penteli**	**2.23**	**111**	*e*Pb	**Pn**	**13 49 46.0**	**+0.1**
PTL	**Penteli**	**2.23**	**111**	*e*PB	**Pn**	**13 49 46.0**	**+0.1**
PTL	**Penteli**	**2.23**	**111**	*e*Pb	**Pn**	**13 49 46.0**	**+0.1**
VLY	**Voula,Athens**	**2.26**	**116**	*e*Pn	**Pn**	**13 49 45.5**	**-0.8**
VLY	**Voula,Athens**	**2.26**	**116**	*e*PN	**Pn**	**13 49 45.5**	**-0.8**
VLY	**Voula,Athens**	**2.26**	**116**	*e*Pn	**Pn**	**13 49 45.5**	**-0.8**
PLG	**Polygyros**	**2.28**	**48**	*e*Pn	**Pn**	**13 49 45.5**	**-1.1**
PLG	**Polygyros**	**2.28**	**48**	*e*PN	**Pn**	**13 49 45.5**	**-1.1**
PLG	**Polygyros**	**2.28**	**48**	*e*Pn	**Pn**	**13 49 45.5**	**-1.1**
VLI	**Veliai**	**2.54**	**147**	*e*Pn	**Pn**	**13 49 50.7**	**+0.5**
VLI	**Veliai**	**2.54**	**147**	*e*PN	**Pn**	**13 49 50.7**	**+0.5**
VLI	**Veliai**	**2.54**	**147**	*e*Pn	**Pn**	**13 49 50.7**	**+0.5**
KYTH	**Kithira**	**2.96**	**150**	*e*Pn	**Pn**	**13 49 56.4**	**+0.5**
KYTH	**Kithira**	**2.96**	**150**	*e*PN	**Pn**	**13 49 56.4**	**+0.5**
KYTH	**Kithira**	**2.96**	**150**	*e*Pn	**Pn**	**13 49 56.4**	**+0.5**

*THE **24** 14:10:16.2, 36.°54N×21.°54E, h12km±1km, ML2.6/2, Error ellipse: s-maj=3.6km s-min=1.6km az=327.0*
*ATH **24** 14:10:17.3, 36.°76N×21.°43E, h29km, MD3.6/17*
*NEIC **24** 14:10:17.3, 36.°76N×21.°43E, h29km, MD3.6(ATH), After ATH.*
*ISCJB **24** 14:10:18.0±1.1, 36.°72N±0.°05×21.°42E±0.°06, h24km±6km, Error ellipse: s-maj=9.7km s-min=6.5km az=139.7*
*CSEM **24** 14:10:18.5±0.2, 36.°78N×21.°49E, h15km, MD3.6, Error ellipse: s-maj=4.6km s-min=2.6km az=49.0*

ISC 24 14:10:17.9±1.1,36.°73N±0.°05×21.°41E±0.°06,h17km±4km, n66,σ0s66/94**,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.32**	**58**	*e*PB	**Pg**	**14 10 24.4**	**-0.2**
PYL				*e*SB	**Sg**	**14 10 30.3**	**+1.2**
PYL	**PYLOS**	**0.32**	**58**	P	**Pg**	**14 10 24.4**	**-0.2**
PYL				S	**Sg**	**14 10 29.7**	**+0.6**
PYL	**PYLOS**	**0.32**	**58**	P	**Pg**	**14 10 24.4**	**-0.2**
PYL				S	**Sg**	**14 10 29.7**	**+0.6**
PYL				*e*Sb	**Sg**	**14 10 30.3**	**+1.2**
ITM	**Ithomi**	**0.61**	**43**	*e*Pn	**Pg**	**14 10 29.3**	**-0.7**
ITM				*e*Sn	**Sg**	**14 10 37.9**	**-0.3**
ITM	**Ithomi**	**0.61**	**43**	*e*PN	**Pg**	**14 10 29.3**	**-0.7**
ITM				*e*SN	**Sg**	**14 10 37.9**	**-0.3**
ITM	**Ithomi**	**0.61**	**43**	P	**Pg**	**14 10 29.3**	**-0.7**
ITM	**Ithomi**	**0.61**	**43**	P	**Pg**	**14 10 29.3**	**-0.7**
VLX	**Vlachokerasia**	**1.01**	**50**	*e*PN	**Pn**	**14 10 36.9**	**-0.4**
VLX				*e*SN	**Sn**	**14 10 50.7**	**-0.4**
VLX	**Vlachokerasia**	**1.01**	**50**	P	**Pb**	**14 10 36.5**	**-0.4**
VLX				S	**Sb**	**14 10 51.8**	**+1.9**
VLX	**Vlachokerasia**	**1.01**	**50**	P	**Pb**	**14 10 36.5**	**-0.4**
VLX	**Vlachokerasia**	**1.01**	**50**	*e*Pn	**Pn**	**14 10 36.9**	**-0.4**
VLX				*e*Sn	**Sn**	**14 10 50.7**	**-0.4**
VLX				S	**Sb**	**14 10 51.8**	**+1.9**
VLI	**Veliai**	**1.23**	**90**	*e*Pn	**Pn**	**14 10 40.5**	**+0.2**
VLI				*e*Sn	**Sn**	**14 10 56.5**	**0.0**
VLI	**Veliai**	**1.23**	**90**	*e*PN	**Pn**	**14 10 40.5**	**+0.2**
VLI				*e*SN	**Sn**	**14 10 56.5**	**0.0**
VLI	**Veliai**	**1.23**	**90**	*e*Pn	**Pn**	**14 10 40.5**	**+0.2**
VLI				*e*Sn	**Sn**	**14 10 56.5**	**0.0**
RLS	**Riolos of Patr**	**1.33**	**2**	*e*Pn	**Pn**	**14 10 41.7**	**0.0**
RLS				*e*Sn	**Sn**	**14 10 59.2**	**+0.2**
RLS	**Riolos of Patr**	**1.33**	**2**	*e*PN	**Pn**	**14 10 41.7**	**0.0**
RLS				*e*SN	**Sn**	**14 10 59.2**	**+0.2**
RLS	**Riolos of Patr**	**1.33**	**2**	*e*Pn	**Pn**	**14 10 41.7**	**0.0**
RLS				*e*Sn	**Sn**	**14 10 59.2**	**+0.2**
**KYT

OBKA Sg **Sg** **14 26 04.6 -1.2**
comp=Z,9.2nm,0.3s
CADS Cadrg 1.51 321 *i* Pg **Pn** **14 25 45.6 +0.9**
CADS *i* Sg **Sg** **14 26 07.1 +1.0**
CADS Cadrg 1.51 321 *i* Pg **Pn** **14 25 45.6 +0.9**
SOKA Soboth 1.62 358 ⇓*i* Pg **Pg** **14 25 48.2 -0.5**
SOKA ⇓*i* Sg **Sg** **14 26 08.7 -0.9**
comp=Z,2.6nm,0.4s
SOKA Soboth 1.62 358 Pg **Pg** **14 25 48.2 -0.5**
SOKA Sg **Sg** **14 26 08.7 -1.0**
comp=Z,2.6nm,0.4s
MYKA Terra Mystica 1.87 328 ⇓*i* Pg **Pn** **14 25 51.6 +1.9**
MYKA ⇓*i* Sg **Sg** **14 26 17.2 -0.5**
comp=Z,1.8nm,0.2s
MYKA Terra Mystica 1.87 328 Pg **Pn** **14 25 51.6 +1.9**
MYKA Sg **Sg** **14 26 17.2 -0.6**
comp=Z,1.8nm,0.2s
STON Ston 2.88 138 *i* Pn **Pn** **14 26 05.5 +2.0**
STON Sn **Sb** **14 26 44.0 -0.4**
STON Ston 2.88 138 *i* Pn **Pn** **14 26 05.4 +1.9**
STON Sn **Sb** **14 26 43.9 -0.5**

*ISCJB **24** 14:27:51.0±0.8,0.°25N±0.°10×121.°79E±0.°10, h209km±7km, mb3.9/3, Error ellipse: s-maj=18.3km s-min=12.6km az=44.1*
*DJA **24** 14:27:53,0.°30N×121.°82E, h190km, MLv4.0/4*
*IDC **24** 14:27:53.4±8.9,0.°34N×122.°16E, h219km±90km, mb3.4/3, mb1 3.6/3, mb1mx3.1/20, mbtmp3.4/3, Error ellipse: s-maj=172.1km s-min=20.9km az=61.0*
ISC 24 14:27:52.1±0.8,**0.°25N**±0.°10×**121.°81E**±0.°10,**h203**km±6km, **n9**,σ0s**68**/10,**mb3.9/3**,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.26**	**31**	P		**Pn**		**14 28 18.6**	**-0.2**
TOLI	**Toli-Toli**	**1.33**	**311**	P		**Pn**		**14 28 24.8**	**+0.2**
TOLI				S		**Sn**		**14 28 48.9**	**-0.9**
LUWI	**Luwuk**	**1.61**	**143**	S		**Sn**		**14 28 54.0**	**-0.2**
KMSI	**Cibinong**	**2.20**	**82**	P		**Pn**		**14 28 33.6**	**+0.7**
MNI	**Manado**	**3.26**	**69**	P		**Pn**		**14 28 45.1**	**+0.2**
TTSI	**Tana Toraja**	**3.83**	**211**	P		**Pn**		**14 28 53.1**	**+1.2**
WRA	**Warramunga Arr**	**23.53**	**149**	P		**P**		**14 32 43.2**	**-0.9**
	4.0nm,0.6s,mb4.2,baz=327,slow=11,SNR=44								
ASAR	**Alice Springs**	**26.52**	**155**	P		**P**		**14 33 10.4**	**-0.7**
	1.4nm,0.5s,mb3.9,baz=344,slow=14,SNR=36								
ASAR				PcP		PcP		14 36 29.4	-1.1
	0.2nm,0.3s,baz=351,slow=1.9,SNR=5.9								
MKAR	**Makanchi Array**	**57.78**	**329**	P		**P**		**14 37 22.6**	**+0.5**
	0.7nm,0.4s,mb3.6,baz=124,slow=8.5,SNR=10.0								

*THR **24** 14:52:47.5±0.3,33.°10N×56.°93E, h14km±8km, ML3.7*
*ISCJB **24** 14:52:48.1±0.3,32.°99N±0.°03×56.°91E±0.°03, h10km, Error ellipse: s-maj=4.8km s-min=3.5km az=167.4*
*TEH **24** 14:52:50.2,33.°01N×56.°92E, h14km*
*CSEM **24** 14:52:50.2,33.°01N×56.°92E, h14km, ML3.6, After TEH*
ISC 24 14:52:49.5±0.3,**32.°98N**±0.°03×**56.°92E**±0.°03,**h10**km,**n46**, σ0s**70**/58,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ITEG	**Tejag**	**1.54**	**93**	*e*Pn		**Pn**		**14 53 17.0**	**0.0**
ITEG				*e*Sg		**Sg**		**14 53 37.9**	**-1.1**
ITEG				*e*				14 53 41.4	
	comp=Z,17μm,0.1s								
ITEG	**Tejag**	**1.54**	**93**	*e*Pn		**Pn**		**14 53 17.0**	**0.0**
ITEG				*e*Sg		**Sg**		**14 53 37.9**	**-1.1**
IBAF	**Bafgh**	**1.80**	**220**	*e*Pn		**Pn**		**14 53 21.2**	**+0.6**
IBAF				*e*Sg		**Sg**		**14 53 47.0**	**-0.4**
IBAF				*e*				14 53 49.1	
	comp=Z,13μm,0.1s								
IBAF	**Bafgh**	**1.80**	**220**	*e*Pn		**Pn**		**14 53 21.2**	**+0.6**
IBAF				*e*Sg		**Sg**		**14 53 47.0**	**-0.4**
IKOO	**Kooshah**	**1.84**	**107**	*e*Pn		**Pn**		**14 53 21.4**	**+0.3**
IKOO				*e*Sg		**Sg**		**14 53 48.6**	**-0.1**
IKOO				*e*				14 53 53.8	
	comp=Z,15μm,0.1s								
IKOO	**Kooshah**	**1.84**	**107**	*e*Pn		**Pn**		**14 53 21.4**	**+0.3**
IKOO				*e*Sg		**Sg**		**14 53 48.6**	**-0.1**
ICHK	**Chekchek**	**2.25**	**252**	*e*Pn		**Pn**		**14 53 26.6**	**-0.1**
ICHK				*e*				14 54 01.2	
	comp=Z,10μm,0.2s								
ICHK	**Chekchek**	**2.25**	**252**	*e*Pn		**Pn**		**14 53 26.6**	**-0.1**
IDAH	**Dahanechah**	**2.49**	**95**	*e*Pn		**Pn**		**14 53 30.4**	**+0.3**
IDAH				*e*				14 53 42.4	
	comp=Z,1μm,0.2s								
IDAH	**Dahanechah**	**2.49**	**95**	*e*Pn		**Pn**		**14 53 30.4**	**+0.3**
IMEH	**Mehriz**	**2.52**	**232**	*e*Pn		**Pn**		**14 53 30.8**	**+0.3**
IMEH				*e*Sg		**Sg**		**14 54 09.5**	**-1.0**
IMEH				*e*				14 54 10.5	
	comp=Z,7μm,0.2s								
IMEH	**Mehriz**	**2.52**	**232**	*e*Pn		**Pn**		**14 53 30.8**	**+0.3**
IMEH				*e*Sg		**Sg**		**14 54 09.5**	**-1.0**
ISAD	**Sadrabad**	**2.94**	**250**	*e*Pn		**Pn**		**14 53 36.8**	**+0.6**
ISAD				*e*				14 54 30.4	
	comp=Z,3μm,0.2s								
ISAD	**Sadrabad**	**2.94**	**250**	*e*Pn		**Pn**		**14 53 36.8**	**+0.6**
KRBR	**Kerman**	**3.00**	**183**	*e*Pn		**Pn**		**14 53 38.5**	**+1.5**
KRBR				*e*Sg		**Sg**		**14 54 24.6**	**-1.1**
KRBR					AML	AML		14 54 29.8	
	comp=E,332nm,0.2s								
KRBR					AML	AML		14 54 35.8	
	comp=N,366nm,0.6s								
NASN	**Na'in**	**3.46**	**268**	*e*Pn		**Pn**		**14 53 43.5**	**+0.1**
NASN				*e*Sg		**Sg**		**14 54 36.0**	**-4.7**
IANJ	**Anjilo**	**3.51**	**316**	*e*Pn		**Pn**		**14 53 43.4**	**-0.7**
IANJ				*e*				14 54 39.0	
	comp=Z,699nm,0.2s								
IANJ	**Anjilo**	**3.51**	**316**	*e*Pn		**Pn**		**14 53 43.4**	**-0.7**
IMOG	**Moghan**	**3.70**	**32**	*e*Pn		**Pn**		**14 53 46.2**	**-0.5**
IMOG				*e*				14 53 58.1	
	comp=Z,529nm,0.1s								
IMOG	**Moghan**	**3.70**	**32**	*e*Pn		**Pn**		**14 53 46.2**	**-0.5**
IPAY	**Payeh**	**3.86**	**26**	*e*Pn		**Pn**		**14 53 49.1**	**+0.3**
IPAY				*e*				14 53 52.6	
	comp=Z,863nm,0.1s								
IPAY	**Payeh**	**3.86**	**26**	*e*Pn		**Pn**		**14 53 49.1**	**+0.3**
IZEF	**Zefreh**	**3.86**	**270**	*e*Pn		**Pn**		**14 53 48.9**	**0.0**
IZEF				*e*				14 53 50.6	
	comp=Z,487nm,0.2s								
IZEF	**Zefreh**	**3.86**	**270**	*e*Pn		**Pn**		**14 53 48.9**	**0.0**
IAKL	**Akhelmad**	**3.91**	**22**	*e*Pn		**Pn**		**14 53 49.2**	**-0.4**
IAKL				*e*				14 55 04.0	
	comp=Z,864nm,0.2s								
ISRO	**Mashad**	**3.93**	**32**	*e*Pn		**Pn**		**14 53 50.3**	**+0.5**
IKRD	**Kardeh**	**4.00**	**19**	*e*Pn		**Pn**		**14 53 55.2**	**+4.4**
ISHM	**Shahmirzad**	**4.11**	**314**	*e*Pn		**Pn**		**14 53 52.1**	**-0.3**
ISHM				*e*				14 54 59.5	
	comp=Z,1μm,0.2s								
ISHM	**Shahmirzad**	**4.11**	**314**	*e*Pn		**Pn**		**14 53 52.1**	**-0.3**
ISFR	**Sfrayin**	**4.16**	**12**	*e*Pn		**Pn**		**14 53 52.2**	**-0.7**
ISFR				*e*				14 55 11.9	
	comp=Z,780nm,0.4s								
IKIA	**Kiasar**	**4.18**	**321**	*e*Pn		**Pn**		**14 53 53.0**	**-0.3**
IKIA				*e*				14 55 04.9	
	comp=Z,354nm,0.2s								
IKIA	**Kiasar**	**4.18**	**321**	*e*Pn		**Pn**		**14 53 53.0**	**-0.3**
IMYA	**Miami**	**4.25**	**37**	*e*Pn		**Pn**		**14 53 55.1**	**+0.8**
IMYA				*e*				14 53 58.5	
	comp=Z,582nm,0.2s								
IMYA	**Miami**	**4.25**	**37**	*e*Pn		**Pn**		**14 53 55.1**	**+0.8**
IFIR	**Firoozkooh**	**4.35**	**309**	*e*Pn		**Pn**		**14 53 55.1**	**-0.5**
IFIR				*e*				14 55 12.5	
	comp=Z,352nm,0.2s								
IFIR	**Firoozkooh**	**4.35**	**309**	*e*Pn		**Pn**		**14 53 55.1**	**-0.5**
IKLH	**Kolahrood**	**4.49**	**276**	*e*Pn		**Pn**		**14 53 57.9**	**+0.3**
IKLH				*e*				14 53 59.0	
	comp=Z,424nm,0.1s								
IKLH	**Kolahrood**	**4.49**	**276**	*e*Pn		**Pn**		**14 53 57.9**	**+0.3**
ZHSF	**Zahedan**	**4.71**	**135**	*e*Pn		**Pn**		**14 54 01.4**	**+0.8**
IVRN	**Varamin**	**4.76**	**296**	*e*Pn		**Pn**		**14 54 00.6**	**-0.6**
IVRN				*e*Pn		**Pn**		**14 54 00.7**	**-0.5**
IVRN				*e*				14 54 01.4	
	comp=Z,302nm,0.2s								
IVRN	**Varamin**	**4.76**	**296**	*e*Pn		**Pn**		**14 54 00.6**	**-0.6**
IDMV	**Damavand**	**4.80**	**304**	*e*		**Pn**		**14 54 06.6**	**+4.8**
	comp=Z,526nm,0.1s								
IDMV				*e*Pn		**Pn**		**14 54 01.5**	**-0.3**
GHVR	**GHOM**	**4.92**	**289**	*e*Pn		**Pn**		**14 54 03.4**	**0.0**
GHVR					AML	AML		14 55 32.4	
	comp=N,23nm,0.6s								
GHVR					AML	AML		14 55 38.2	
	comp=E,37nm,0.6s								
IPIR	**Pirpir**	**5.08**	**268**	*e*Pn		**Pn**		**14 54 08.0**	**+2.3**
IPIR				*e*				14 55 40.6	
	comp=Z,226nm,0.4s								
IPIR	**Pirpir**	**5.08**	**268**	*e*Pn		**Pn**		**14 54 08.0**	**+2.3**
ASAO	**Ashtian**	**5.95**	**287**	*e*Pn		**Pn**		**14 54 17.3**	**-0.3**

*ATH **24** 14:53:34.7,41.°43N×21.°31E, h20km±1km, MD3.3/4*
*NEIC **24** 14:53:34.7,41.°43N×21.°31E, h20km, MD3.3(ATH), After ATH.*
*SKO **24** 14:53:36.1,41.°14N×20.°67E, h0km*
*ISCJB **24** 14:53:37.7±1.4,41.°19N±0.°07×20.°9E±0.°1, h20km±9km, Error ellipse: s-maj=14.3km s-min=11.1km az=154.0*
*CSEM **24** 14:53:37.8±1.0,41.°21N×20.°95E, h15km, ML2.5/2, Error ellipse: s-maj=18.4km s-min=14.7km az=171.0*
*THE **24** 14:53:37.6,41.°09N×20.°81E, h15km±1km, ML2.5/2, Error ellipse: s-maj=2.9km s-min=1.4km az=94.0*
ISC 24 14:53:38.0±1.4,**41.°18N**±0.°06×**20.°89E**±0.°10,**h16**km±5km, **n25**,σ1s**09**/45,**2C**,**Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRUS	**Krusevo**	**0.33**	**55**	⇑*i* Pg		**Pg**		**14 53 45.4**	**+0.4**
BIA	**Bitola**	**0.37**	**116**	P		**Pg**		**14 53 44.7**	**-0.9**
BIA				S		**Sg**		**14 53 51.8**	**+1.1**
BIA	**Bitola**	**0.37**	**116**	⇑*i* Pg		**Pg**		**14 53 44.7**	**-0.9**
BIA				*e*Sg		**Sg**		**14 53 52.1**	**+1.4**
BIA				*e*Lg				14 53 52.1	
	comp=N,91nm,0.2s								
BIA				*e*Lg				14 53 52.3	
	comp=E,132nm,0.2s								
BIA	**Bitola**	**0.37**	**116**	P		**Pg**		**14 53 44.7**	**-0.9**
BIA				S		**Sg**		**14 53 51.8**	**+1.1**
FNA	**Florina**	**0.54**	**137**	P		**Pg**		**14 53 47.7**	**-1.1**
FNA				S		**Sg**		**14 53 56.3**	**+0.3**
FNA	**Florina**	**0.54**	**137**	P		**Pg**		**14 53 47.7**	**-1.1**
FNA				S		**Sg**		**14 53 56.3**	**+0.3**
KZN	**Kozani**	**1.10**	**142**	*e*Pn		**Pn**		**14 53 57.4**	**-1.4**
KZN				*e*Sn		**Sn**		**14 54 13.5**	**-0.1**
KZN	**Kozani**	**1.10**	**142**	*e*PN		**Pn**		**14 53 57.4**	**-1.4**
KZN				*e*SN		**Sn**		**14 54 13.5**	**-0.1**
KZN	**Kozani**	**1.10**	**142**	P		**Pb**		**14 53 57.7**	**-1.0**
KZN				S		**Sb**		**14 54 12.2**	**-0.6**
KZN	**Kozani**	**1.10**	**142**	*e*Pn		**Pn**		**14 53 57.4**	**-1.4**
KZN	**Kozani**	**1.10**	**142**	P		**Pb**		**14 53 57.7**	**-1.0**
KZN				S		**Sb**		**14 54 12.2**	**-0.6**
KZN				*e*Sn		**Sn**		**14 54 13.5**	**-0.1**
GRG	**Griva**	**1.17**	**101**	P		**Pn**		**14 53 59.8**	**+0.1**
GRG				S		**Sb**		**14 54 15.9**	**+1.2**
GRG	**Griva**	**1.17**	**101**	P		**Pn**		**14 53 59.8**	**+0.1**
GRG				S		**Sb**		**14 54 15.9**	**+1.2**
JAN	**Janina**	**1.52**	**181**	*e*Pn		**Pn**		**14 54 06.4**	**+1.8**
JAN				*e*Sn		**Sn**		**14 54 30.4**	**+6.4**
JAN	**Janina**	**1.52**	**181**	*e*PN		**Pn**		**14 54 06.4**	**+1.8**
JAN				*e*SN		**Sn**		**14 54 30.4**	**+6.4**
JAN	**Janina**	**1.52**	**181**	*e*Pn		**Pn**		**14 54 06.4**	**+1.8**
LIT	**Litokhoron**	**1.63**	**131**	*e*Pn		**Pn**		**14 54 04.6**	**-1.4**
LIT				*e*Sn		**Sn**		**14 54 25.2**	**-1.5**
LIT	**Litokhoron**	**1.63**	**131**	*e*PN		**Pn**		**14 54 04.6**	**-1.4**
LIT				*e*SN		**Sn**		**14 54 25.2**	**-1.5**
LIT	**Litokhoron**	**1.63**	**131**	*e*Pn		**Pn**		**14 54 04.6**	**-1.4**
LIT				*e*Sn		**Sn**		**14 54 25.2**	**-1.5**
EVR	**Evrytania**	**2.37**	**162**	*e*Pn		**Pn**		**14 54 17.3**	**+1.1**
EVR	**Evrytania**	**2.37**	**162**	*e*PN		**Pn**		**14 54 17.3**	**+1.1**
EVR	**Evrytania**	**2.37**	**162**	*e*Pn		**Pn**		**14 54 17.3**	**+1.1**
AGG	**Agios Georgios**	**2.42**	**152**	*e*Pn		**Pn**		**14 54 17.2**	**+0.2**
AGG				*e*Sn		**Sn**		**14 54 48.2**	**+1.9**
AGG	**Agios Georgios**	**2.42**	**152**	*e*PN		**Pn**		**14 54 17.2**	**+0.2**
AGG				*e*SN		**Sn**		**14 54 48.2**	**+1.9**
AGG	**Agios Georgios**	**2.42**	**152**	*e*Pn		**Pn**		**14 54 17.2**	**+0.2**
AGG				*e*Sn		**Sn**		**14 54 48.2**	**+1.9**

*ISCJB **24** 14:58:04.5±3.1,8.°6S±0.°3×159.°2E±0.°3, h112km±40km, mb3.6/7, Error ellipse: s-maj=66.8km s-min=24.8km az=144.5*
*NEIC **24** 14:58:05.5±1.5,8.°69S×159.°47E, h115km±22km, Error ellipse: s-maj=48.9km s-min=16.6km az=141.0*
*IDC **24** 14:58:06.0±2.2,8.°54S×159.°32E, h113km±33km, mb3.5/7, mb1 3.7/7, mb1mx3.5/15, mbtmp3.5/7, Error ellipse: s-maj=56.9km s-min=21.2km az=140.0*
ISC 24 14:58:06.1±2.2,**8.°6S**±0.°3×**159.°4E**±0.°3,**h116**km±33km,**n11**, σ0s**78**/13,**mb3.6/7**,**Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.01**	**146**	*e*P		**Pn**		**14 58 25.9**	**-2.0**
HNR				S		**Sn**		**14 58 45.6**	**+1.2**
HNR	**Honiara**	**1.01**	**146**	P		**Pn**		**14 58 26.4**	**-1.5**
	171nm,0.3s,baz=220,slow=4.1,SNR=109								
HNR				S		**Sn**		**14 58 45.6**	**+1.2**
	398nm,0.3s,baz=158,slow=18,SNR=12								
WRA	**Warramunga Arr**	**26.71**	**242**	P		**P**		**15 03 34.7**	**-0.1**
WRA	**Warramunga Arr**	**26.71**	**242**	P		**P**		**15 03 34.7**	**-0.1**
	0.7nm,0.4s,mb3.6,baz=66,slow=9.3,SNR=13								
ASAR	**Alice Springs**	**28.61**	**235**	P		**P**		**15 03 51.5**	**-0.1**
	0.5nm,0.4s,mb3.5,baz=62,slow=9.8,SNR=15								
CMAR	**Chiang Mai Arr**	**65.39**	**295**	P		**P**		**15 08 36.7**	**0.0**
	0.4nm,0.7s,mb3.4,baz=124,slow=6.3,SNR=4.9								
SONM	**Songino Array**	**73.05**	**326**	P		**P**		**15 09 24.4**	**+1.1**
	1.0nm,1.0s,mb3.6,baz=134,slow=6.6,SNR=3.7								
ILAR	**Eielson Array**	**83.31**	**20**	P		**P**		**15 10 19.3**	**-0.3**
ILAR				pP		pP		15 10 33.0	-16
ILAR	**Eielson Array**	**83.31**	**20**	P		**P**		**15 10 19.3**	**-0.3**
	0.2nm,0.7s,mb3.1,baz=230,slow=5.6,SNR=3.5								
ILAR				pP		pP		15 10 33.0	-16
	0.2nm,0.4s,baz=239,slow=5.8,SNR=2.2								
MKAR	**Makanchi Array**	**87.48**	**318**	P		**P**		**15 10 40.7**	**0.0**
	0.3nm,0.3s,mb3.8,baz=98,slow=4.8,SNR=4.2								
YKA	**Yellowknife Ar**	**95.72**	**28**	P		**P**		**15 11 18.4**	**-0.2**
	1.2nm,0.8s,mb4.4,baz=277,slow=3.3,SNR=3.8								

IDC 24 15:10:28.1±4.6,**6.°82S**×**155.°03E**,**h0**km,**mb3.3**/3, **mb1 3.6**/3,**mb1mx3.4**/15,**mbtmp3.3**/3,**Error ellipse: s-maj=99.9km s-min=44.8km az=104.0**,**Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.94**	**235**	P		P		15 15 44.8	+0.6
	0.3nm,0.6s,baz=60,slow=9.6,SNR=5.1								
ASAR	**Alice Springs**	**26.31**	**228**	P		P		15 16 05.3	-0.4
	0.3nm,0.8s,baz=61,slow=9.6,SNR=6.0								
CMAR	**Chiang Mai Arr**	**60.74**	**295**	P		P		15 20 42.1	0.0
	0.5nm,0.8s,baz=112,slow=6.1,SNR=4.3								

*SZGRF **24** 15:34:39.9,22.°34S×176.°23W, h33km, South of Fiji Islands*
*ISCJB **24** 15:35:01.8±1.6,21.°31S±0.°05×176.°96W±0.°04, h192km±14km, mb4.7/64, Error ellipse: s-maj=9.2km s-min=5.5km az=154.1*
*MOS **24** 15:35:02.0±1.4,20.°91S×176.°99W, h163km, mb4.8/17, Error ellipse: s-maj=10.2km s-min=9.4km az=156.9*
*BJI **24** 15:35:03.7,21.°30S×176.°90W, h221km, mB5.1/12, mb4.7/22*
*IDC **24** 15:35:05.3±1.8,21.°27S×176.°84W, h218km±16km, mb4.4/20, mb1 4.5/22, mb1mx4.5/22, mbtmp4.4/22, Error ellipse: s-maj=10.8km s-min=10.6km az=10.0*
*NEIC **24** 15:35:07.7±1.6,21.°33S×176.°87W, h242km±15km, mb4.7/29, Error ellipse: s-maj=8.5km s-min=6.0km az=166.0*
*DJA **24** 15:35:14,21.°31S×177.°20W, h290km, mb5.1/10*
ISC 24 15:35:06.6±1.7,**21.°39S**±0.°06×**176.°95W**±0.°04, **h226**km±16km,**h232**km±6.3km:**pP-P**,**n497**,σ0s**66**/329, **mb4.7**/64,**106C-84D**,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.92**	**34**	P		**Pn**		**15 37 04.7**	**-7.1**
	3.1nm,0.3s,baz=230,slow=7.9,SNR=6.3								
AFI				S				15 38 34.2	-18
	13nm,0.3s,baz=150,slow=20,SNR=5.0								
AFI	**Afiamalu**	**8.92**	**34**	*e*P		**Pn**		**15 37 08.1**	**-3.7**
AFI				S		S		15 38 34.2	-18

DZM Mont Dzumac 15.45 264 *e*P **Pn** **15 38 38.4 +5.1**
DZM Mont Dzumac 15.45 264 *e*P **Pn** **15 38 37.1 +3.9**
NOUC Port Laguerre 15.58 264 *e*P **Pn** **15 38 38.7 +3.8**
RAR Rarotonga 16.01 92 *e*P **P** **15 38 37.5 -1.5**
79nm,0.9s
RAR Rarotonga 16.01 92 P **P** **15 38 35.7 -3.4**
2.0nm,0.3s,baz=253,slow=13,SNR=4.9
RAR Rarotonga 16.01 92 *e*P **P** **15 38 37.5 -1.5**
RAR pmax pmax
comp=Z,79nm,0.9s
PUZ Puketiti 17.13 193 PN **Pn** **15 38 50.1 -2.9**
PUZ SN **S** **15 41 46.0 -12**
MWZ Matawai 17.55 195 PN **Pn** **15 38 57.2 -0.6**
MWZ SN **S** **15 41 55.8 -10**
URZ Urewera 17.58 196 P **P** **15 38 55.7 -0.3**
comp=Z,6.0nm,0.3s,baz=354,slow=3.8,SNR=18
URZ S **S** **15 41 57.9 -8.8**
comp=Z,5.4nm,0.3s,baz=160,slow=23,SNR=15
URZ Urewera 17.58 196 PN **Pn** **15 38 56.5 -1.8**
KNZ Kokohu 18.17 194 SN **S** **15 42 10.9 -7.6**
NMHZ Naumai 18.45 196 PN **P** **15 39 05.9 +0.5**
BKZ Black Stump Fm 18.59 196 PN **P** **15 39 05.8 -1.2**
BKZ SN **S** **15 42 19.1 -7.7**
CAW Cannon Point 20.79 197 PN **P** **15 39 29.6 -0.8**
NNZ Nelson 21.40 200 PN **P** **15 39 36.9 0.0**
WVZ Waitaha Valley 23.95 203 *e*PN **P** **15 40 02.1 +1.9**
RPZ Rata Peaks 24.40 201 P **P** **15 40 05.7 +1.4**
comp=Z,13nm,0.5s,mb4.8,baz=22,slow=12,SNR=12
HNR Honiara 25.21 295 *e*P **P** **15 40 14.1 +2.1**
comp=Z,328nm,1.0s,mb5.9
HNR Honiara 25.21 295 P **P** **15 40 14.1 +2.1**
comp=Z,206nm,0.9s,mb5.8,baz=25,slow=1.5,SNR=7.1
HNR Honiara 25.21 295 *e*P **P** **15 40 14.1 +2.2**
HNR pmax pmax
comp=Z,328nm,1.0s,mb5.9
PPT Papeete 26.07 86 *e*P **P** **15 40 17.9 -1.7**
comp=Z,126nm,1.3s,mb5.4
PPT Papeete 26.07 86 P **P** **15 40 17.1 -2.5**
comp=Z,126nm,1.1s,mb5.4,baz=288,slow=6.6,SNR=4.8
TIAR Tiarei 26.28 86 *e*P **P** **15 40 19.5 -2.0**
comp=Z,103nm,0.9s,mb5.4
ARMA Armidale 29.58 246 *e*P **P** **15 40 52.9 +2.2**
ARMA *e*pP pP 15 41 42.6 +6.6
CNB Canberra Magne 32.56 237 *e*P **P** **15 41 18.0 +1.3**
CNB *e*pP pP 15 42 07.6 +5.3
CTA Charters Tower 34.39 265 *e*P **P** **15 41 33.9 +1.2**
comp=Z,18nm,0.8s,mb4.7
CTA *e*pP pP 15 42 25.5 +6.9
CTA Charters Tower 34.39 265 P **P** **15 41 33.7 +1.0**
comp=Z,21nm,0.7s,mb4.8,baz=93,slow=10,SNR=27
CTAO Charters Tower 34.39 265 *e*P **P** **15 41 33.8 +1.2**
comp=Z,18nm,0.7s,mb4.7
CTAO Charters Tower 34.39 265 *e*P **P** **15 41 33.8 +1.1**
CTAO pmax pmax
comp=Z,18nm,0.7s,mb4.7
CTAO Charters Tower 34.39 265 P **P** **15 41 33.4 +0.7**
comp=Z,38nm,1.2s,mb4.8
TOO Toolangi 36.18 235 *e*P **P** **15 41 48.3 +0.6**
PMG Port Moresby 36.51 283 *e*P **P** **15 41 51.6 +0.8**
comp=Z,165nm,0.9s,mb5.6
PMG Port Moresby 36.51 283 *d i*P **P** **15 41 51.1 +0.4**
PMG Port Moresby 36.51 283 P **P** **15 41 51.1 +0.4**
comp=Z,2μmcomp=Z,200nm,1.0s,mb5.6
STKA Stephens Creek 38.30 245 *e*P **P** **15 42 06.5 +0.9**
comp=Z,9.0nm,0.8s,mb4.3
STKA *e*pP pP 15 42 55.0 +2.7
STKA Stephens Creek 38.30 245 *e*P **P** **15 42 06.2 +0.7**
comp=Z,2.3nm,0.8s,mb3.8
STKA Stephens Creek 38.30 245 P **P** **15 42 06.0 +0.4**
comp=Z,11nm,0.7s,mb4.5,baz=85,slow=9.0,SNR=41
STKA Stephens Creek 38.30 245 *e*P **P** **15 42 06.3 +0.7**
STKA pmax pmax
comp=Z,2.0nm,0.8s
ASAR Alice Springs 45.28 257 P **P** **15 43 02.0 -0.1**
comp=Z,23nm,0.8s,mb4.6,baz=93,slow=9.0,SNR=180
ASAR PcP PcP 15 44 37.4 -0.6
comp=Z,4.7nm,0.5s,baz=106,slow=3.9,SNR=10
ASAR ScP ScP 15 48 09.3 +0.3
comp=Z,2.2nm,1.0s,baz=98,slow=5.5,SNR=5.1
ASAR S **S** **15 49 22.1 -3.2**
comp=Z,1.9nm,0.9s,baz=99,slow=16,SNR=7.7
ASAR Alice Springs 45.28 257 P **P** **15 43 02.1 0.0**
ASAR 15 44 37.4
WB2 Warramunga Arr 45.45 263 *e*P **P** **15 43 02.9 -0.6**
WRA Warramunga Arr 45.46 263 P **P** **15 43 02.9 -0.7**
comp=Z,17nm,0.7s,mb4.5,baz=97,slow=9.0,SNR=124
WRA S **S** **15 49 24.0 -3.9**
comp=Z,1.6nm,0.9s,baz=100,slow=14,SNR=5.7
KAKA Kakadu 48.98 272 *e*P **P** **15 43 30.2 -0.6**
comp=Z,16nm,0.4s,mb4.7
KAKA Kakadu 48.98 272 P **P** **15 43 30.5 -0.3**
comp=Z,570nmcomp=Z,50nm,0.7s,mb5.0
FORT Forrest 49.85 247 *e*P **P** **15 43 36.3 -0.9**
comp=Z,25nm,0.6s,mb4.7
GUMO Guam 51.13 309 *e*P **P** **15 43 47.0 +0.3**
comp=Z,443nm,1.0s,mb5.8
GUMO Guam 51.13 309 P **P** **15 43 47.3 +0.5**
comp=Z,213nm,0.6s,mb5.8,baz=169,slow=9.3,SNR=44
GUMO Guam 51.13 309 *e*P **P** **15 43 47.1 +0.3**
GUMO pmax pmax
comp=Z,443nm,1.0s,mb5.8
GUMO Guam 51.13 309 P **P** **15 43 46.1 -0.7**
comp=Z,5μmcomp=Z,452nm,1.1s,mb5.8
KNA Kununurra 51.56 267 P **P** **15 43 50.0 -0.1**
comp=Z,1μmcomp=Z,124nm,0.8s,mb5.4
SBA Scott Base 57.05 184 *e*P **P** **15 44 31.7 +3.0**
comp=Z,8.2nm,0.7s,mb4.5
SBA Scott Base 57.05 184 *e*P **P** **15 44 31.7 +3.1**
SBA pmax pmax
comp=Z,8.0nm,0.7s,mb4.5
**KLBR Kellerberrin 58.58 245

CMB pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
LRMC Laurel Mountai 79.67 45 P **P** 15 46 49.3 +0.1
baz=80,SNR=12
WDC Whiskeytown Da 79.73 39 *eP* **P** 15 46 49.0 -0.4
comp=Z,8.2nm,1.1s,mb4.3
WDC Whiskeytown Da 79.73 39 *eP* **P** 15 46 49.0 -0.4
WDC pmax pmax
comp=Z,8.0nm,1.1s,mb4.3
BELC Belle Mtn. Jos 79.97 48 P **P** 15 46 51.0 +0.1
baz=80,SNR=9.5
CWC Cottonwood Cre 79.97 45 ⇓P **P** 15 46 50.7 -0.1
baz=80
PMSA Palmer Station 80.08 156 P **P** 15 46 50.8 -0.1
comp=Z,10nm,0.8s,mb4.5,baz=271,slow=4.5,SNR=5.1
MPMC Manual Prospec 80.14 45 P **P** 15 46 51.9 +0.2
baz=80,SNR=8.5
BC3 Big Chuckawall 80.15 48 ⇑P **P** 15 46 51.9 +0.1
baz=80
GSC Goldstone 80.16 46 ⇓P **P** 15 46 51.5 -0.3
baz=80
HEC Hector,Ludlow 80.21 47 P **P** 15 46 51.9 -0.2
baz=80,SNR=16
YBH Yreka Blue Hor 80.37 38 *eP* **P** 15 46 52.9 +0.1
comp=Z,6.2nm,0.6s,mb4.4
YBH Yreka Blue Hor 80.37 38 *eP* **P** 15 46 52.9 +0.1
YBH pmax pmax
comp=Z,6.0nm,0.6s
WCN Washoe City 80.61 41 ⇑P **P** 15 46 54.2 +0.1
baz=81,SNR=6.5
GMRC Granite Mounta 80.64 47 P **P** 15 46 54.5 +0.2
baz=81,SNR=5.8
IRM Iron Mountain 80.64 48 P **P** 15 46 54.7 +0.3
baz=81,SNR=10
GRAC Grapevine Rang 80.76 44 ⇑P **P** 15 46 55.3 +0.3
baz=81,SNR=7.2
HUMO Hull Mountain 80.80 37 *eP* **P** 15 46 55.1 +0.2
comp=Z,7.9nm,1.0s,mb4.3
TUQ Turquoise Moun 80.83 46 ⇑P **P** 15 46 55.5 +0.2
baz=81,SNR=9.5
SHOC Shoshone 80.85 46 ⇓P **P** 15 46 55.4 0.0
baz=81
NVAR Mina Array Bea 81.00 43 P **P** 15 46 55.8 -0.4
comp=Z,4.1nm,0.6s,mb4.2,baz=223,slow=8.5,SNR=45
MAW Mawson 81.06 200 *eP* **P** 15 46 56.7 +0.6
comp=Z,3.8nm,0.6s,mb4.2
MAW Mawson 81.06 200 P **P** 15 46 56.8 +0.7
comp=Z,2.2nm,0.5s,mb4.0,baz=144,slow=7.5,SNR=14
U10A Ash Meadows, A 81.11 45 ⇑P **P** 15 46 56.9 +0.1
baz=81
Z13A Yuma Proving G 81.16 49 ⇓P **P** 15 46 57.2 +0.1
baz=81,SNR=7.8
Y13A Salome 81.37 49 P **P** 15 46 58.7 +0.5
baz=82,SNR=9.0
PDMCI Parker Dam,Lak 81.42 48 P **P** 15 46 58.7 +0.2
baz=82,SNR=5.8
KDAK Kodiak Island 81.45 13 *ceP* **P** 15 46 58.2 +0.1
HABR Khabarovsk 81.70 330 *eP* **P** 15 46 58.5 -1.1
HABR *PP pP 15 48 00.2 +6.4
HABR *e* 15 50 08.8
HABR S S 15 56 49.3 -3.6
HABR SS SS 16 02 13.8 -2.7
HABR pmax pmax
comp=Z,44nm,1.6s,mb4.8
HABR pmax pmax
comp=N,17nm,1.5s
HABR pmax pmax
comp=E,23nm,1.6s
HABR MLR MLR
comp=Z,32nm,17.0s
V12A Nelson 81.71 47 ⇑P **P** 15 46 60.0 0.0
baz=82
X13A Yucca 81.79 48 P **P** 15 47 00.7 +0.3
baz=82,SNR=8.0
S10A Tonopah Range, 81.80 44 P **P** 15 47 00.4 0.0
baz=82,SNR=19
MDJ Mudanjiang 81.81 325 P **P** 15 47 00.5 +0.2
MDJ PP PP 15 50 09.3 -1.9
MDJ S S 15 56 54.5 +0.4
MDJ sS sS 15 58 28.1 -1.1
MDJ pmax pmax
comp=Z,19nm,0.8s,mb4.8
MDJ pmax pmax
comp=Z,150nm,4.4s
MOD Modoc 81.88 39 *eP* **P** 15 47 00.6 -0.1
comp=Z,5.4nm,0.6s,mb4.3
Y14A Wickenburg 82.02 49 ⇑P **P** 15 47 01.6 0.0
baz=82,SNR=7.5
K05A Summer Lake 82.05 38 ⇑P **P** 15 47 01.7 +0.2
baz=82
R10A Warm Springs 82.20 44 P **P** 15 47 02.9 +0.5
baz=82,SNR=14
T11A Corn Creek, Al 82.31 45 P **P** 15 47 03.4 +0.3
baz=82,SNR=12
V13A Grand Canyon W 82.37 47 P **P** 15 47 03.6 +0.2
baz=82,SNR=8.0
X14A Yava 82.38 49 ⇑P **P** 15 47 03.8 +0.3
baz=82,SNR=7.3
Q10A Clear Creek Ra 82.44 43 ⇑P **P** 15 47 04.0 +0.3
baz=82,SNR=6.5
Y15A Casa Rosa Ranc 82.50 49 ⇑P **P** 15 47 04.1 0.0
baz=83,SNR=9.6
W14A Seligman 82.64 48 P **P** 15 47 05.7 +0.9
baz=83,SNR=11
U13A Pakoon Wash 82.69 46 P **P** 15 47 05.5 +0.5
baz=83,SNR=9.5
R11A Troy Canyon, C 82.69 44 ⇑P **P** 15 47 04.7 -0.3
baz=83,SNR=7.8
S12A Delamar Landin 82.76 45 ⇑P **P** 15 47 06.0 +0.6
baz=83
Z16A Peralta Trail, 82.82 50 ⇑P **P** 15 47 06.3 +0.5
baz=83,SNR=6.5
USHA Ushuaia 82.84 146 P **P** 15 47 05.2 -0.4
comp=Z,10nm,0.8s,mb4.6,baz=194,slow=3.6,SNR=4.2
X15A Humboldt 82.85 49 ⇑P **P** 15 47 06.1 +0.2
baz=83,SNR=17
V14A Boquillas Ranc 82.85 47 P **P** 15 47 06.5 +0.6
baz=83,SNR=13
Q11A Duckwater 82.93 44 P **P** 15 47 06.2 0.0
baz=83,SNR=8.4
T13A Saint George 83.06 46 P **P** 15 47 07.3 +0.4
baz=83,SNR=5.9
Y16A Circle Bar Ran 83.06 50 P **P** 15 47 07.6 +0.6
baz=83,SNR=17
WVOR Wild Horse Val 83.18 39 *eP* **P** 15 47 07.0 -0.4
comp=Z,8.6nm,1.0s,mb4.4
WVOR Wild Horse Val 83.18 39 *eP* **P** 15 47 07.0 -0.4
WVOR pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
U14A Mt Trumbull 83.22 47 ⇑P **P** 15 47 08.4 +0.7
baz=83,SNR=22
R12A Pony Springs, 83.32 45 ⇓P **P** 15 47 08.3 +0.2
baz=83,SNR=13
X16A Lo Mia Camp, P 83.37 49 ⇓P **P** 15 47 09.2 +0.7
baz=83,SNR=20
S13A Holt Ranch, En 83.40 45 P **P** 15 47 09.0 +0.4
baz=84,SNR=7.1
118A Homack Ranch, 83.52 51 P **P** 15 47 10.1 +0.7
baz=84,SNR=8.8
Q12A Willow Creek R 83.57 44 ⇑P **P** 15 47 09.6 +0.2
baz=84
V15A Kaibab Nationa 83.59 48 ⇑P **P** 15 47 10.4 +0.8
baz=84,SNR=12
CN2 Changchun 83.60 322 ⇑P **P** 15 47 11.4 +1.9
CN2 *eS* P sP 15 48 28.0 +0.3
CN2 *eS* S 15 57 13.9 +1.6
CN2 pmax pmax
comp=Z,20nm,0.8s,mb4.9
CN2 pmax pmax
comp=Z,200nm,4.0s
T14A Hurricane 83.64 46 P **P** 15 47 10.2 +0.4
baz=84,SNR=7.9
R13A O'Grain Ranch, 83.66 45 ⇓P **P** 15 47 10.2 +0.3
baz=84
W16A Flagstaff 83.66 49 ⇑P **P** 15 47 10.7 +0.7
baz=84
I07A Izee 83.68 38 ⇓P **P** 15 47 09.7 -0.2
baz=84
219A White Tail Can 83.72 52 ⇓P **P** 15 47 10.8 +0.4
baz=84,SNR=10
G06A Carlson Farm, 83.76 36 ⇓P **P** 15 47 10.4 +0.1
baz=84
X17A Forest Lakes 83.78 50 ⇑P **P** 15 47 10.8 +0.1
baz=84,SNR=6.3
J08A Circle Bar Ran 83.83 39 ⇑P **P** 15 47 10.3 -0.3
baz=84
U15A North Rim 83.83 47 P **P** 15 47 11.7 +0.8
baz=84,SNR=25

320A Kipp Ranch, An 83.93 53 ⇑P **P** 15 47 12.2 +0.7
baz=84
SVW2 Sparrevohn 83.99 10 *eP* **P** 15 47 10.1 -0.9
comp=Z,15nm,0.8s,mb4.8
WUAZ Wupatki 83.99 48 P **P** 15 47 12.5 +0.8
baz=84,SNR=5.9
Y18A Canyon Day Jun 84.05 50 ⇓P **P** 15 47 12.6 +0.6
baz=84,SNR=11
Q13A Wheeler Ranch, 84.05 44 ⇑P **P** 15 47 11.8 -0.1
baz=84,SNR=8.8
119A Ashpeak Ranch, 84.07 52 ⇑P **P** 15 47 12.0 -0.1
baz=84,SNR=7.4
T15A Red Dirt Ranch 84.09 47 ⇓P **P** 15 47 12.5 +0.4
baz=84,SNR=9.1
220A Playas Peak, P 84.21 53 ⇑P **P** 15 47 13.4 +0.5
baz=84,SNR=11
IPM Ipoh 84.22 277 P **P** 15 47 12.8 -0.6
comp=Z,32nm,0.8s,mb5.1
O12A Currie 84.31 43 P **P** 15 47 13.1 -0.1
baz=84,SNR=6.4
P13A Bates Ranch, G 84.33 44 P **P** 15 47 13.2 -0.1
baz=84,SNR=8.1
V17A Tonalea, Kykot 84.45 48 P **P** 15 47 14.2 +0.3
baz=84,SNR=9.2
120A U Bar Ranch, L 84.45 52 ⇓P **P** 15 47 14.6 +0.6
baz=84,SNR=5.9
U16A Tuba City 84.48 48 ⇑P **P** 15 47 14.4 +0.3
baz=85,SNR=7.4
Q14A Sevier Lake (B 84.55 45 P **P** 15 47 14.6 +0.2
baz=85,SNR=18
Y19A Nutrioso 84.69 51 ⇓P **P** 15 47 16.0 +0.8
baz=85,SNR=12
G08A Pilot Rock 84.73 37 ⇓P **P** 15 47 14.9 -0.2
baz=85
Z20A Nine Sixteen R 84.76 52 ⇓P **P** 15 47 16.1 +0.5
baz=85,SNR=11
221A Mesquite Ranch 84.82 53 ⇑P **P** 15 47 16.0 +0.1
baz=85,SNR=6.7
X19A St. Johns 84.91 50 P **P** 15 47 17.2 +0.9
baz=85,SNR=5.6
P14A Drum Mountains 85.01 44 ⇑P **P** 15 47 16.9 +0.3
baz=85,SNR=6.5
121A Cookes Peak, D 85.07 52 ⇓P **P** 15 47 17.7 +0.6
baz=85,SNR=5.7
V18A Ganado 85.10 49 ⇓P **P** 15 47 17.5 +0.3
baz=85,SNR=5.2
T17A Navajo Res., N 85.15 47 P **P** 15 47 18.3 +0.9
baz=85,SNR=5.5
Y20A Horse Springs, 85.31 51 ⇓P **P** 15 47 19.3 +1.0
baz=85,SNR=10
222A Williams Famil 85.37 53 ⇓P **P** 15 47 19.4 +0.7
baz=85,SNR=5.7
MFID Camas Ranch 85.43 40 ⇑P **P** 15 47 18.5 -0.1
baz=86
Z21A St. Cloud Mine 85.53 52 ⇑P **P** 15 47 20.2 +0.9
baz=86,SNR=12
X20A Quemado 85.53 50 ⇑P **P** 15 47 20.4 +1.0
baz=86,SNR=8.2
TTA Tatalina 85.65 9 *eP* **P** 15 47 18.9 -0.4
PMR Palmer 85.66 13 *eP* **P** 15 47 18.0 -1.3
comp=Z,15nm,0.5s,mb5.0
PMR Palmer 85.66 13 *eP* **P** 15 47 18.0 -1.3
PMR pmax pmax
comp=Z,15nm,0.5s,mb5.0
W20A Ramah 85.81 50 P **P** 15 47 21.3 +0.5
baz=86,SNR=9.4
223A Chaparral, Ant 85.82 53 ⇓P **P** 15 47 21.7 +0.9
baz=86
D08A Wollman Farm, 85.82 36 ⇓P **P** 15 47 20.7 +0.2
baz=86
T18A Mexican Hat 85.86 48 ⇓P **P** 15 47 21.0 +0.1
baz=86,SNR=9.4
Y21A Point of Rocks 85.86 51 P **P** 15 47 21.9 +0.9
baz=86,SNR=17
Q16A Castle Valley 85.90 45 ⇓P **P** 15 47 21.2 +0.1
baz=86
R17A Hanksville Air 85.95 46 ⇓P **P** 15 47 21.2 -0.1
baz=86,SNR=5.7
X21A Alamocita Cree 85.99 51 ⇑P **P** 15 47 21.8 +0.1
baz=86,SNR=8.4
Z22A Elephant Butte 86.02 52 P **P** 15 47 22.3 +0.5
baz=86,SNR=15
I12A Atlanta 86.06 40 ⇓P **P** 15 47 21.7 -0.1
baz=86
SYO Syowa Base 86.08 192 ⇓*eP* **P** 15 47 19.5 -2.0
F10A Beach Ranch, E 86.11 37 ⇓P **P** 15 47 21.6 -0.3
baz=86
324A Moseley Ranch, 86.27 54 ⇑P **P** 15 47 23.0 -0.1
baz=86,SNR=23
Y22A Socorro 86.34 52 ⇓P **P** 15 47 23.4 0.0
baz=86,SNR=6.2
425A Indio Mountain 86.35 55 ⇑P **P** 15 47 23.7 +0.2
baz=86,SNR=11
HLID Hailey 86.36 40 P **P** 15 47 23.3 +0.1
baz=86,SNR=5.2
HLID Hailey 86.36 40 *eP* **P** 15 47 23.0 -0.2
comp=Z,1.7nm,0.7s,mb3.9
B08A Colville Reser 86.40 34 ⇑P **P** 15 47 22.8 -0.5
baz=86
J13A Cove Ranch, Pi 86.41 40 ⇓P **P** 15 47 23.5 +0.1
baz=86
SRU San Rafael 86.43 46 P **P** 15 47 23.6 -0.1
baz=86,SNR=13
626A Big Bend Ranch 86.44 57 ⇑P **P** 15 47 23.7 -0.2
baz=86,SNR=7.8
MNTX Cornudas Mount 86.47 54 P **P** 15 47 24.0 0.0
baz=86,SNR=34
MNTX Cornudas Mount 86.47 54 *eP* **P** 15 47 23.6 -0.5
comp=Z,16nm,0.8s,mb4.8
R18A Canyonlands Na 86.48 46 ⇑P **P** 15 47 23.5 -0.4
baz=87,SNR=6.4
325A Bean Ranch, Si 86.63 55 ⇑P **P** 15 47 24.6 -0.2
baz=87,SNR=16
H12A Diamond D Ranc 86.65 39 ⇓P **P** 15 47 24.2 -0.4
baz=87,SNR=6.1
Q18A Rafter H Ranch 86.69 46 ⇑P **P** 15 47 24.4 -0.5
baz=87,SNR=5.4
G12A Big Creek, Yel 86.70 39 ⇑P **P** 15 47 24.6 -0.3
baz=87
526A Mary Lane Ranc 86.71 56 ⇓P **P** 15 47 25.1 -0.1
baz=87,SNR=20
TXAR Lajitas Array 86.71 57 P **P** 15 47 25.3 +0.1
comp=Z,14nm,0.9s,mb4.7,baz=215,slow=7.0,SNR=98
O17A Robinson Place 86.85 45 P **P** 15 47 26.0 +0.3
baz=87,SNR=13
R19A Curley Farm, L 86.86 47 P **P** 15 47 25.4 -0.4
baz=87,SNR=6.6
124A Stringfield Ra 86.88 53 P **P** 15 47 26.4 +0.5
baz=87,SNR=11
627A Terlingua Ranc 86.98 57 P **P** 15 47 26.6 +0.1
baz=87,SNR=20
Y23A Lovelace Mesa, 87.01 52 P **P** 15 47 26.4 -0.1
baz=87,SNR=5.8
426A McDonald Obser 87.03 56 P **P** 15 47 27.0 +0.3
baz=87,SNR=22
U21A Nageezi 87.05 49 P **P** 15 47 27.1 +0.4
baz=87,SNR=11
225A Deer Hill, Car 87.08 54 P **P** 15 47 27.4 +0.4
baz=87,SNR=17
F12A Elk City 87.10 38 P **P** 15 47 26.4 -0.4
baz=87,SNR=9.8
527A Woodward Ranch 87.11 56 ⇓P **P** 15 47 27.2 0.0
baz=87,SNR=11
ANMO Albuquerque 87.19 51 P **P** 15 47 27.1 -0.3
comp=Z,5.9nm,1.1s,mb4.2
ANMO Albuquerque 87.19 51 P **P** 15 47 27.1 -0.3
ANMO pmax pmax
comp=Z,6.0nm,1.1s
BJT Baijiatuau 87.21 315 *eP* **P** 15 47 26.8 -0.6
comp=Z,8.4nm,0.6s,mb4.7
BJT Baijiatuau 87.21 315 *eP* **P** 15 47 26.8 -0.6
BJT pmax pmax
comp=Z,8.0nm,0.6s
BJI Beijing 87.22 315 P **P** 15 47 27.3 -0.1
BJI S S 15 57 49.0 +1.3
BJI SS SS 16 03 39.9 +2.0
BJI pmax pmax
comp=Z,12nm,0.8s,mb4.7
BJI pmax pmax
comp=Z,110nm,5.2s
BJI LR LR
comp=N,170nm,24.1s
BJI LR LR
comp=E,95nm,25.7s
BJI LR LR
comp=Z,24nm,20.9s
Z24A Sheeppen Canyo 87.23 53 P **P** 15 47 27.7 +0.1
baz=87,SNR=7.6

E12A Beaver Dam Sad 87.30 37 P **P** 15 47 26.8 -0.8
baz=87,SNR=5.8
G13A Cobalt 87.32 39 P **P** 15 47 27.7 -0.1
baz=87,SNR=5.3
ENH Enshi 87.35 304 *eP* **P** 15 47 28.4 +0.1
comp=Z,15nm,0.9s,mb4.7
326A Caldwell Ranch 87.36 55 ⇑P **P** 15 47 27.3 -1.0
baz=87
628A Black Gap, Mar 87.39 57 ⇓P **P** 15 47 28.0 -0.4
baz=87,SNR=12
125A Gardner Draw, 87.45 54 ⇓P **P** 15 47 28.8 +0.1
baz=88
Y24A Capitan 87.46 52 ⇓P **P** 15 47 29.1 +0.3
baz=88,SNR=14
SEY Seymchan 87.46 346 *ceP* **P** 15 47 26.6 -1.4
J15A Blackfoot 87.47 41 ⇓P **P** 15 47 29.2 +0.6
baz=88,SNR=5.7
S21A Coal Bank Pass 87.56 48 ⇑P **P** 15 47 28.8 -0.3
baz=88,SNR=6.7
427A Hayter Ranch, 87.59 56 ⇑P **P** 15 47 29.5 +0.1
baz=88,SNR=21
226A Malaga, Loving 87.60 54 ⇓P **P** 15 47 29.2 -0.3
baz=88,SNR=10
F13A Darby 87.66 38 P **P** 15 47 28.8 -0.6
baz=88,SNR=9.8
Z25A Roswell 87.69 53 P **P** 15 47 30.2 +0.3
baz=88,SNR=6.1
C11A Tepee Creek (N 87.74 36 P **P** 15 47 29.7 0.0
baz=88,SNR=12
528A Cox Ranch, San 87.76 56 P **P** 15 47 30.5 +0.3
baz=88,SNR=7.3
D12A Red Ives Fores 87.79 37 ⇑P **P** 15 47 29.4 -0.5
baz=88
126A Clayton Basin, 87.93 54 ⇓P **P** 15 47 30.5 -0.5
baz=88
GYA Guiyang 87.94 299 P **P** 15 47 32.0 +0.8
GYA pP pP 15 48 25.4 -0.8
GYA sP sP 15 48 50.0 +0.1
GYA PP PP 15 51 03.3 +2.1
GYA SKS 15 57 36.5
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
PLCA Paso Flores 87.95 133 P **P** 15 47 31.6 +0.5
comp=Z,3.0nm,0.7s,mb4.2,baz=233,slow=3.0,SNR=5.8
H15A Lima 88.00 40 ⇓P **P** 15 47 31.1 +0.1
baz=88
Y25A Mesa, Roswell 88.01 52 ⇓P **P** 15 47 31.2 -0.1
baz=88
P20A De Beque 88.06 46 ⇑P **P** 15 47 30.9 -0.5
baz=88
R21A Cimarron 88.07 47 ⇓P **P** 15 47 31.6 +0.1
baz=88,SNR=5.7
428A Kincaid Ranch, 88.09 56 ⇓P **P** 15 47 32.1 +0.3
baz=88,SNR=5.5
C12B Naegeli Ranch, 88.10 36 ⇑P **P** 15 47 31.3 -0.1
baz=88,SNR=6.6
Z26A Caprock 88.24 53 P **P** 15 47 32.2 -0.2
baz=88,SNR=20
S22A 4UR Ranch, Cre 88.27 48 P **P** 15 47 32.6 +0.2
baz=88,SNR=7.7
D13A Huson 88.32 37 ⇑P **P** 15 47 31.8 -0.6
baz=88
G15A Dillon 88.39 40 ⇓P **P** 15 47 32.6 -0.3
baz=88,SNR=10
127A Arkansas Junct 88.44 54 ⇓P **P** 15 47 32.7 -0.6
baz=88
E14A Clinton 88.49 38 P **P** 15 47 33.0 -0.3
baz=89,SNR=5.3
R22A Saguache, Gunn 88.55 48 ⇑P **P** 15 47 34.0 +0.3
baz=89
Y26A Elida 88.65 53 ⇑P **P** 15 47 34.0 -0.3
baz=89,SNR=10
Q22A Crested Butte, 88.75 47 ⇑P **P** 15 47 34.7 0.0
baz=89,SNR=5.6
F15A Butte 88.76 39 ⇑P **P** 15 47 34.4 -0.1
baz=89
W25A X Bar L Ranch, 88.77 51 ⇓P **P** 15 47 34.5 -0.4
baz=89,SNR=8.2
D14A Greenough 88.85 38 ⇑P **P** 15 47 34.1 -0.8
baz=89
COLA College 88.86 12 *eP* **P** 15 47 32.4 -2.2
comp=Z,43nm,0.6s,mb5.5
COLA College 88.86 12 *eP* **P** 15 47 32.4 -2.2
COLA pmax pmax
comp=Z,43nm,0.6s,mb5.5
J18A Kendall Valley 88.87 42 ⇑P **P** 15 47 35.2 0.0
baz=89
H16A Russell Place, 88.89 41 ⇓P **P** 15 47 36.0 +0.8
baz=89
PDAR Pinedale Array 88.94 43 P **P** 15 47 34.5 -1.0
comp=Z,1.6nm,1.0s,mb3.8,baz=192,slow=1.3,SNR=10
ILAR Eielson Array 88.96 12 P **P** 15 47 33.4 -1.6
comp=Z,8.2nm,0.5s,mb4.8,baz=226,slow=6.1,SNR=179
ILAR PP PP 15 51 04.7 -3.8
comp=Z,0.8nm,0.8s,baz=225,slow=7.7,SNR=4.4
Y27A Causey 89.12 53 P **P** 15 47 36.4 -0.2
baz=89,SNR=7.0
BOZ Bozeman (W) 89.16 40 ⇑P **P** 15 47 36.3 -0.1
baz=89,SNR=9.9
BOZ Bozeman (W) 89.16 40 *eP* **P** 15 47 35.8 -0.6
comp=Z,4.4nm,0.7s,mb4.4
BOZ Bozeman (W) 89.16 40 *eP* **P** 15 47 35.8 -0.6
BOZ pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
SDCO Great Sand Dun 89.19 49 ⇓P **P** 15 47 36.5 -0.3
baz=89
F16A Kennard Place, 89.24 39 ⇓P **P** 15 47 36.8 0.0
baz=89
N21A Black Mountain 89.26 45 ⇓P **P** 15 47 37.1 +0.1
baz=89
U25A Circle Dot Ran 89.35 50 ⇓P **P** 15 47 37.0 -0.5
baz=89
D15A Lincoln 89.39 38 ⇑P **P** 15 47 37.4 -0.1
baz=90
MSTX Muleshoe 89.45 53 ⇓P **P** 15 47 37.9 -0.1
baz=90,SNR=6.9
XAN Xi'an 89.45 307 P **P** 15 47 38.8 +0.7
XAN pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
E16A East Helena 89.61 39 ⇑P **P** 15 47 38.3 -0.2
baz=90
O22A Kremmling 89.62 46 ⇓P **P** 15 47 38.5 -0.2
baz=90
B14A Marquette Ranc 89.69 37 P **P** 15 47 38.4 -0.4
baz=90,SNR=6.3
F17A Fitzpatrick Pl 89.88 40 ⇓P **P** 15 47 39.6 -0.1
baz=90,SNR=5.9
A14A Double T Ranch 89.94 36 ⇓P **P** 15 47 39.4 -0.5
baz=90
D16A Dana Ranch, Ca 89.95 38 ⇑P **P** 15 47 40.2 +0.2
baz=90
BILL Bilibino 90.02 354 ⇓*eP* **P** 15 47 38.9 -1.0
BILL *e*PP pP 15 48 15.9 -19
BILL *e* 15 51 14.9
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.2
EGAK Eagle 90.21 15 *eP* **P** 15 47 40.1 -0.7
comp=Z,33nm,0.9s,mb5.2
JCT Junction City 90.23 57 *eP* **P** 15 47 40.9 -0.9
comp=Z,6.4nm,0.6s,mb4.6
JCT Junction City 90.23 57 *eP* **P** 15 47 40.9 -0.9
JCT pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
G18A Lazy EL Ranch, 90.23 41 ⇓P **P** 15 47 40.9 -0.5
baz=90
A15A Johnson Ranch, 90.32 36 ⇓P **P** 15 47 41.1 -0.6
baz=90
I20A Worland 90.43 42 ⇑P **P** 15 47 41.9 -0.5
baz=90
F18A Big Timber 90.44 40 ⇑P **P** 15 47 42.8 +0.4
baz=90
D17A Six Diamond Ra 90.51 39 ⇓P **P** 15 47 42.5 -0.1
baz=91
KMI Kunming 90.63 297 P **P** 15 47 45.4 +1.6
KMI pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
AMTX Amarillo 90.66 53 ⇑P **P** 15 47 43.4 -0.3
baz=91
E18A Harlowton 90.66 39 ⇑P **P** 15 47 43.7 +0.3
baz=91
HHC Hu-ho-hao-te 90.68 314 *eP* **P** 15 47 43.9 +0.3
HHC pP pP 15 48 38.4 -0.4
HHC sP sP 15 49 02.4 0.0
HHC PP PP 15 51 25.3 +2.7
HHC SKS 15 57 51.9
HHC *eS* S 15 58 18.5 -1.4
HHC sS sS 15 59 54.4 -2.5

HHC SS SS 16 04 29.9 +1.9
HHC pmax pmax
comp=Z,17nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,89nm,4.6s
C17A Wharram Farm, 90.72 38 ⇓P **P 15 47 43.5 -0.1**
baz=91
F19A Roth Farm, Mol 90.88 40 ⇓P **P 15 47 44.2 -0.2**
baz=91
A16A West Butte Ran 90.94 37 P **P 15 47 44.5 -0.2**
baz=91,SNR=9.9
B17A L&G Farms, Che 91.04 38 ⇑P **P 15 47 45.0 -0.2**
baz=91
J22A Midwest 91.22 43 ⇑P **P 15 47 45.6 -0.5**
baz=91
E19A Rath Farm, Rou 91.28 40 ⇓P **P 15 47 46.3 0.0**
baz=91
CMAR Chiang Mai Arr 91.34 289 P **P 15 47 47.7 +0.5**
comp=Z,3.2nm,0.8s,mb4.3,baz=124,slow=3.0,SNR=29
CMAR PP PP 15 51 29.6 +1.4
comp=Z,0.6nm,1.0s,baz=127,slow=6.0,SNR=4.0
A17A Triple J Farms 91.44 37 ⇑P **P 15 47 46.8 -0.1**
baz=92
CHTO Chiang Mai 91.47 290 *e*P **P 15 47 47.7 -0.1**
comp=Z,3.8nm,1.0s,mb4.4
CHTO Chiang Mai 91.47 290 *e*P **P 15 47 47.7 -0.1**
CHTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
CHTO Chiang Mai 91.47 290 P **P 15 47 47.9 +0.1**
E20A Meyer Farm, Mu 91.69 40 ⇑P **P 15 47 48.4 +0.3**
baz=92
A18A Metzger Ranch, 91.91 37 ⇑P **P 15 47 48.6 -0.5**
baz=92
D20A Manuel Ranch, 91.98 40 ⇑P **P 15 47 49.6 +0.1**
baz=92
D21A La Casta Ranch 92.65 40 ⇓P **P 15 47 52.8 +0.2**
baz=93
LAO LASA Array 92.93 41 *e*P **P 15 47 54.0 +0.1**
RSSD Black Hills 93.11 44 *e*P **P 15 47 53.7 -1.1**
comp=Z,8.3nm,1.0s,mb4.7
RSSD Black Hills 93.11 44 *e*P **P 15 47 53.7 -1.1**
RSSD pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
YKA Yellowknife Ar 96.91 24 P **P 15 48 11.3 -0.3**
comp=Z,1.2nm,0.7s,mb4.2,baz=255,slow=4.9,SNR=4.3
SONM Songino Array 97.07 319 PP PP 15 52 10.7 -1.4
comp=Z,0.7nm,1.0s,baz=102,slow=6.8,SNR=4.5
GTA Gaotai 98.30 309 *e*P **P 15 48 18.4 0.0**
GTA pmax pmax
comp=Z,3.0nm,1.3s,mb4.5
LPAZ La Paz 100.81 112 P Pdif 15 48 32.4 +2.8
comp=Z,1.1nm,0.7s,baz=248,slow=2.4,SNR=6.3
ZAA0 Zalesovo Array 111.80 321 *e*PKiKP PKiKP 15 53 11.8 -2.4
ZALV Zalesovo Beam 111.80 321 PKiKP PKiKP 15 53 12.0 -2.2
comp=Z,2.8nm,0.6s,baz=163,slow=1.1,SNR=14
ZALV PP PP 15 54 03.5 +2.7
comp=Z,1.5nm,0.8s,baz=91,slow=7.6,SNR=4.0
MK31 Makanchi Array 112.52 313 *e*PKiKP PKiKP 15 53 14.3 -1.5
MKAR Makanchi Array 112.52 313 PKiKP PKiKP 15 53 13.8 -2.0
comp=Z,1.2nm,0.5s,baz=92,slow=0.4,SNR=10
KURK Kurchatov 115.31 317 PKP PKPdf 15 53 19.0 -2.0
comp=Z,2.0nm,0.6s,baz=94,slow=1.7,SNR=13
KURK PP PP 15 54 22.1 -3.5
comp=Z,2.4nm,1.0s,baz=97,slow=7.4,SNR=7.4
KURK Kurchatov 115.31 317*c* *i*PKIKP PKPdf 15 53 17.9 -3.1
KURK pmax pmax
comp=Z,3.0nm,1.2s
BRVK Borovoye 120.45 320*d* *i*PKIKP PKPdf 15 53 28.8 -2.0
BRVK pmax pmax
comp=Z,6.0nm,1.2s
KBS Kingsbay 122.26 358*c* *i*PKIKP PKPdf 15 53 33.4 -0.3
KBS pmax pmax
comp=Z,6.0nm,1.0s
SUMG Summit 123.78 14 *i*P PKPdf 15 53 36.5 -0.2
comp=Z,5.0nm,0.9s
SVE Sverdlovsk 125.28 325 *e*PKIKP PKPdf 15 53 38.8 -1.1
SVE pmax pmax
comp=Z,8.0nm,0.7s
BOSA Boshof 125.87 204 PKP PKPdf 15 53 42.2 +0.2
comp=Z,1.3nm,0.7s,baz=138,slow=8.6,SNR=3.7
ARU Arti 126.49 325 *i*PKIKP PKPdf 15 53 41.2 -1.1
ARU 15 55 39.4
SCO Scoresbysund 128.71 10 *i*PKHKP PKPpre 15 53 36.5
SCO pmax pmax
comp=Z,5.0nm,0.9s
ARCES ARCESS Array B 129.97 350 PKP PKPdf 15 53 46.7 -1.9
ARCES SKPbc SKPbc 15 56 49.0 -0.7
ARCES ARCESS Array B 129.97 350 PKP PKPdf 15 53 46.7 -1.9
comp=Z,4.3nm,0.7s,baz=52,slow=1.2,SNR=34
ARCES SKPbc SKPbc 15 56 49.0 -0.7
comp=Z,3.3nm,0.8s,baz=64,slow=5.5,SNR=6.7
ARE0 ARCESS Array S 129.97 350 *e*PKPdf PKPdf 15 53 47.4 -1.2
KLMR Klimovskoe 133.09 337 *e*PKIKP PKPdf 15 53 52.3 -2.4
KLMR pmax pmax
comp=Z,24nm,1.9s
FINES FINESS Array B 136.90 344 PKP PKPpre 15 53 48.5
FINES PKP PKPdf 15 54 01.2 -0.6
FINES SKPbc SKPbc 15 57 12.4 -0.7
FINES FINESS Array B 136.90 344 PKhKP PKPpre 15 53 48.5
comp=Z,1.4nm,0.7s,baz=51,slow=6.1,SNR=6.4
FINES PKP PKPdf 15 54 01.2 -0.6
comp=Z,6.1nm,1.0s,baz=90,slow=2.8,SNR=7.9
FINES SKPbc SKPbc 15 57 12.4 -0.7
comp=Z,3.9nm,0.6s,baz=46,slow=2.9,SNR=19
FINES FINESS Array B 136.90 344 PKHKP PKPpre 15 53 48.5
FINES 15 54 01.2
OBN Obninsk 138.01 332 ⇑*i*PKIKP PKPdf 15 54 01.6 -2.4
OBN *e* 15 56 53.3
OBN pmax pmax
comp=Z,25nm,1.4s
KMBO Kilima Mbogo 139.78 240 SKPbc SKPbc 15 57 24.2 +1.3
comp=Z,5.0nm,0.8s,baz=180,slow=24,SNR=4.0
NOA NORSAR Array B 139.97 354 PKhKP PKPpre 15 53 57.4
comp=Z,1.2nm,0.7s,baz=5.0,slow=2.3,SNR=5.8
NOA SKPbc SKPbc 15 57 21.6 -0.2
comp=Z,2.2nm,0.8s,baz=14,slow=4.4,SNR=5.1
KIEV Kiev 144.28 331 *e*PKPpre PKPpre 15 54 11.7
MUD Monsted U'grnd 144.69 354 *i*PKHKP PKPdf 15 54 14.1 -1.8
MUD pmax pmax
comp=Z,32nm,0.8s
MUD Monsted U'grnd 144.69 354 *i*P PKPdf 15 54 14.1 -1.8
comp=Z,32nm,0.8s
COP Copenhagen 145.04 351 *i*PKHKP PKPdf 15 54 14.5 -2.1
COP pmax pmax
comp=Z,15nm,0.8s
COP Copenhagen 145.04 351 *i*P PKPbc 15 54 14.5 -2.0
comp=Z,15nm,0.8s
BSD Bornholm Skovb 145.16 348 *i*PKHKP PKPdf 15 54 14.9 -1.9
BSD pmax pmax
comp=Z,24nm,0.9s
BSD Bornholm Skovb 145.16 348 *i*P PKPdf 15 54 14.9 -1.9
comp=Z,24nm,0.9s
MALT Malatya 145.25 307 ⇑P PKPdf 15 54 17.5 0.0
MALT Malatya 145.25 307 ⇑*i*P PKPdf 15 54 17.5 0.0
GKP Gorka Klasztor 146.37 345 *e*PKP PKPdf 15 54 20.1 +1.2
BSEG Bad Segeberg 147.04 352 *e*PKPbc PKPbc 15 54 21.7 -0.7
LVV L'vov 147.13 335 *e*PKHKP PKPdf 15 54 20.9 +0.6
KWP Kalwaria Pacla 147.80 336 *e*PKP PKPbc 15 54 23.5 -1.1
BRTR Keskin Array B 148.16 312 PKPbc PKPbc 15 54 24.6 -1.3
comp=Z,4.8nm,0.6s,baz=135,slow=4.3,SNR=20
BUR08 Bucovina Ar. S 148.30 331 *e*PKPbc PKPbc 15 54 25.4 -0.6
BURAR Bucovina Array 148.32 331 ⇑P PKPbc 15 54 25.4 -0.6
BURAR Bucovina Array 148.32 331 ⇑*i*P PKPbc 15 54 25.4 -0.6
OJC Ojcow 148.34 339 *e*PKPdf PKPdf 15 54 21.0 -1.3
OJC *e*PKPbc PKPbc 15 54 24.7 -1.3
OJC Ojcow 148.34 339 *e*PKIKP PKPbc 15 54 24.7 -1.3
TESR 148.44 328 ⇓P PKPbc 15 54 24.5 -1.9
TESR 148.44 328 ⇓*i*P PKPbc 15 54 24.5 -1.6
NRDL Niedersach Rie 148.48 352 *e*PKPbc PKPbc 15 54 24.6 -1.6
STHS Stebnicka Huta 148.52 337 *e*PKP PKPbc 15 54 26.2 -0.3
STHS *e* 15 54 31.0
STHS Stebnicka Huta 148.52 337 *e*PKP PKPbc 15 54 26.2 -0.3
STHS *e* 15 54 31.0
UZH Uzhgorod 148.77 335 *e*PKIKP PKPbc 15 54 25.9 -1.2
UZH *e* 15 54 33.5
KSP Ksiaz 148.82 344 *e*PKP PKPbc 15 54 26.8 -0.4
KSP Ksiaz 148.82 344 *i*PKP2 PKPbc 15 54 29.0 +1.8
VRI Vrincioaia 148.85 327 ⇑P PKPbc 15 54 26.6 -0.9
VRI Vrincioaia 148.85 327 ⇑*i*P PKPbc 15 54 26.5 -0.9
CRVS Cervenica-Dubn 148.87 336 *e*PKP PKPbc 15 54 27.1 -0.2
CRVS *e* 15 54 31.1
CRVS Cervenica-Dubn 148.87 336 *e*PKP PKPbc 15 54 27.1 -0.2
CRVS *e* 15 54 31.1
PLOR Plostina 148.90 327 ⇓PKIKP PKPbc 15 54 26.6 -0.9
PLOR Plostina 148.90 327 ⇓*i*P PKPbc 15 54 26.6 -0.9

IBBN Ibbenburen 148.93 354 *e*PKPbc PKPbc 15 54 26.8 -0.6
BMR Baia Mare 149.03 333 P PKPbc 15 54 27.3 -0.5
CLZ Clausthal 149.08 351 *e*PKPbc PKPbc 15 54 27.3 -0.5
CLL Collm 149.14 348 *e*PKPdf PKPdf 15 54 23.0 -0.5
CLL ⇓*i*PKPbc PKPbc 15 54 27.0 -1.0
comp=Z,57nm,0.9s
CLL *e*PKPab PKPab 15 54 31.0 -2.0
comp=Z,23nm,0.8s
CLL *e*pPKPab pPKPab 15 55 34.0 +4.9
OKC Ostrava-Krasne 149.20 341 *e*PKiKP PKPbc 15 54 27.2 -0.9
OKC Ostrava-Krasne 149.20 341⇑*e*PKP PKPbc 15 54 27.2 -0.9
UPC Upice 149.20 344 *e*PKIKP PKPbc 15 54 27.7 -0.4
UPC Upice 149.20 344⇑*e*PKP PKPbc 15 54 27.7 -0.4
DPC Dobruska-Polom 149.26 343 *e*PKIKP PKPbc 15 54 27.9 -0.4
DPC Dobruska-Polom 149.26 343⇑*e*PKP PKPbc 15 54 27.9 -0.4
BRG Berggiesshubel 149.36 346 *e*PKPbc PKPbc 15 54 27.8 -0.7
BRG Berggiesshubel 149.36 346 *e*PKP PKPdf 15 54 23.4 -0.5
comp=Z,7.0nm,1.1s
BRG Berggiesshubel 149.36 346 *i* PKP PKPbc 15 54 27.7 -0.8
comp=Z,21nm,0.8s
BRG Berggiesshubel 149.36 346 *i* PKP PKPbc 15 54 31.9 +3.4
comp=Z,7.5nm,0.7s
BRG *e*pPKP pPKPbc 15 55 31.2 +5.1
comp=Z,7.0nm,1.1s
BRG Berggiesshubel 149.36 346 *e*PKHKP PKPdf 15 54 23.4 -0.5
BRG *i* 15 54 27.7
BRG *i* 15 54 31.9
BRG *e* 15 55 31.2
BRG pmax pmax
comp=Z,4.0nm,1.1s
BRG pmax pmax
comp=Z,13nm,0.8s
BRG pmax pmax
comp=Z,5.0nm,0.7s
BRG pmax pmax
comp=Z,4.0nm,1.1s
MORC Moravsky Berou 149.44 341 ⇑P PKPbc 15 54 27.9 -0.9
MORC Moravsky Berou 149.44 341⇑*i*P PKPbc 15 54 27.9 -0.8
DOPR Dopca 149.44 329⇑*i*P PKPbc 15 54 28.8 -0.1
NEUB Neuenburg 149.47 349 *e*PKPbc PKPbc 15 54 28.1 -0.7
MLR Muntele Rosu 149.50 327 P PKPbc 15 54 28.5 -0.5
MLR Muntele Rosu 149.50 327 ⇓PKHKP PKPbc 15 54 27.4 -1.6
MLR Muntele Rosu 149.50 327 ⇓*i*P PKPbc 15 54 27.4 -1.6
PVCC Panska Ves 149.54 345 *e*PKHKP PKPbc 15 54 28.5 -0.5
PVCC Panska Ves 149.54 345⇑*e*PKP PKPbc 15 54 28.5 -0.5
KECS Kecovo 149.57 337 *e*PKP PKPbc 15 54 28.8 -0.3
KECS Kecovo 149.57 337 *e*PKP PKPbc 15 54 28.8 -0.3
BUG Bochum--Univer 149.83 355 *e*PKPbc PKPbc 15 54 28.8 -0.8
VOIR 149.99 328 ⇑P PKPbc 15 54 28.9 -1.3
VOIR 149.99 328 ⇑*i*P PKPbc 15 54 28.9 -1.3
MOX Moxa 150.04 349 *e*PKP PKPdf 15 54 24.2 -0.8
MOX *e* 15 54 29.4
comp=Z,33nm,1.1s
MOX Moxa 150.04 349 *e*PKPbc PKPbc 15 54 29.5 -0.6
PRU Pruhonice 150.05 345 *e*PKHKP PKPbc 15 54 30.2 0.0
PRU Pruhonice 150.05 345⇑*e*PKP PKPbc 15 54 30.2 0.0
DRGR 150.05 332 P PKPbc 15 54 29.9 -0.4
DRGR 150.05 332 ⇓PKHKP PKPbc 15 54 29.5 -0.8
DRGR 150.05 332 ⇓*i*P PKPbc 15 54 29.5 -0.8
WERD Werda 150.10 348 *e*PKPbc PKPbc 15 54 29.8 -0.5
VRAC Vranov 150.13 342 P PKPbc 15 54 30.5 0.0
VRAC Vranov 150.13 342 ⇑PKHKP PKPbc 15 54 29.5 -0.9
VRAC Vranov 150.13 342 ⇑*i*P PKPbc 15 54 29.5 -0.9
VYHS Vyhne 150.15 339 *e*PKP PKPbc 15 54 30.0 -0.5
VYHS Vyhne 150.15 339 *e*PKP PKPbc 15 54 30.0 -0.5
GUNZ Gunzen 150.18 348 *e*PKPbc PKPbc 15 54 30.0 -0.5
KOLL Kolacno 150.22 339 *e*PKP PKPbc 15 54 30.4 -0.3
KOLL Kolacno 150.22 339 *e*PKP PKPbc 15 54 30.4 -0.3
WERN Wernitzgruen 150.24 348 *e*PKPbc PKPbc 15 54 30.2 -0.4
PSZ Piszkesteto 150.26 337 ⇓*e*PKP PKPbc 15 54 29.8 -1.0
NKC Novy Kostel 150.28 348 *e*PKHKP PKPbc 15 54 30.2 -0.5
NKC Novy Kostel 150.28 348⇑*e*PKP PKPbc 15 54 30.2 -0.5
TREC Trest 150.45 343 *e*PKHKP PKPbc 15 54 30.7 -0.5
TREC Trest 150.45 343⇑*e*PKP PKPbc 15 54 30.7 -0.5
MEM Membach 150.75 356 PKPbc PKPbc 15 54 31.1 -0.7
ROTZ Rotzenmuhle 150.77 348 *e*PKPbc PKPbc 15 54 31.3 -0.6
TNS Taunus Mts 150.91 353 *e*PKPbc PKPbc 15 54 31.8 -0.4
SNF Seneffe 150.93 358 PKPbc PKPbc 15 54 31.6 -0.7
BUD Budapest 150.95 337 ⇓*e*PKP PKPbc 15 54 31.3 -1.1
ZST Bratislava 150.97 340 *e*PKP PKPbc 15 54 32.2 -0.2
ZST Bratislava 150.97 340 *e*PKP PKPbc 15 54 32.2 -0.2
BCLA Clavier 150.98 357 PKPbc PKPbc 15 54 31.3 -1.1
GRA1 Grafenberg Arr 151.03 349 *e*PKPbc PKPbc 15 54 31.8 -0.7
GRF Grafenberg Arr 151.03 349 *e*PKPbc PKPbc 15 54 31.8 -0.7
KHC Kasperske Hory 151.08 346 *e*PKIKP PKPbc 15 54 31.9 -0.7
KHC Kasperske Hory 151.08 346⇑*e*PKP PKPbc 15 54 31.9 -0.7
GZR Gura Zlata 151.10 331 P PKPbc 15 54 32.0 -0.8
GZR Gura Zlata 151.10 331 ⇑PKIKP PKPbc 15 54 30.2 -2.6
GZR Gura Zlata 151.10 331 ⇑*i*P PKPbc 15 54 30.1 -2.7
WET Wettzell 151.22 347 *e*PKPbc PKPbc 15 54 32.5 -0.5
GIVF Givet 151.31 358 *e*PKP1 PKPbc 15 54 32.3 -0.9
comp=Z,87nm,0.8s
GEC2 GERESS Array S 151.31 345 *e*PKPbc PKPbc 15 54 32.2 -1.0
DOU Dourbes 151.33 358 PKPbc PKPbc 15 54 32.6 -0.6
BAIF Baives 151.38 358 *e*PKP1 PKPbc 15 54 32.5 -0.8
comp=Z,66nm,0.8s
BZS Buzias 151.44 332 P PKPbc 15 54 32.5 -1.1
BZS Buzias 151.44 332 ⇑PKIKP PKPbc 15 54 32.2 -1.4
BZS Buzias 151.44 332 ⇑*i*P PKPbc 15 54 32.2 -1.4
CONA Conrad Observa 151.59 342 ⇑*i*PKPdf PKPdf 15 54 27.9 +0.5
comp=Z,18nm,1.3s,SNR=13
SOP Sopron 151.60 341 ⇓*e*PKP PKPbc 15 54 33.1 -0.8
WLF Walferdange 151.68 356 PKPbc PKPbc 15 54 33.9 -0.1
PKSM Moragy 152.16 336 ⇑P PKPbc 15 54 33.5 -1.7
PKSM Moragy 152.16 336 ⇑*i*P PKPbc 15 54 33.5 -1.7
FLN La Foliniere 152.54 5 *e*PKP1 PKPbc 15 54 34.6 -1.4
comp=Z,40nm,0.7s
ROSF Rostrenen 152.64 9 *e*PKP1 PKPbc 15 54 34.7 -1.5
LDF La Druitiere 152.74 5 *e*PKP1 PKPbc 15 54 35.0 -1.4
comp=Z,13nm,0.5s
BFO Black Forest 152.79 352 *e*PKPbc PKPbc 15 54 35.5 -1.0
SGMF Saint Gilles 152.82 8 *e*PKP1 PKPbc 15 54 35.2 -1.4
comp=Z,30nm,0.7s
CDF Champ du Feu 152.83 354 *e*PKP1 PKPbc 15 54 35.5 -1.1
comp=Z,25nm,1.0s
GRR Gorron 152.88 6 *e*PKP1 PKPbc 15 54 35.6 -1.1
comp=Z,54nm,0.8s
MEZF Maizieres J'vi 152.90 357 *e*PKP1 PKPbc 15 54 36.0 -0.8
comp=Z,48nm,0.9s
VTS Vitosha 152.94 326 ⇑P PKPbc 15 54 36.2 -0.9
VTS Vitosha 152.94 326 ⇑*i*P PKPbc 15 54 36.2 -0.9
PERS Pernice 152.97 342 *i* PKPbc PKPbc 15 54 35.5 -1.5
QUIF Quistinic 153.06 9 *e*PKP1 PKPbc 15 54 36.5 -0.6
SFTF Sexfontaines 153.20 357 *e*PKP1 PKPbc 15 54 36.6 -0.8
comp=Z,88nm,1.0s
HAU Haudompre 153.31 355 *e*PKP1 PKPbc 15 54 36.5 -1.2
comp=Z,10nm,0.6s
HINF Hinteralfeld 153.46 354 *e*PKP1 PKPbc 15 54 36.6 -1.4
comp=Z,12nm,0.8s
ABTA Abfaltersbach 153.56 345⇑*i*PKPdf PKPdf 15 54 29.1 -1.3
comp=Z,8.5nm,0.9s
FETA Feichten 153.68 348 ⇓*i*PKPdf PKPdf 15 54 30.0 -0.6
comp=Z,8.1nm,1.1s
VOJS Vojsko 153.88 343 *i* PKPbc PKPbc 15 54 37.5 -1.5
BOJS Bojanci 153.95 340 *i* PKPbc PKPbc 15 54 38.4 -0.7
CEY Cerknica 153.99 342 *i* PKPbc PKPbc 15 54 37.9 -1.3
LOR Lormes 154.18 359 *e*PKP1 PKPbc 15 54 38.6 -1.0
comp=Z,10nm,0.6s
SSF Saint Saulge 154.39 359 *e*PKP1 PKPbc 15 54 39.1 -0.9
comp=Z,20nm,1.0s
AVF Avril sur Loir 154.66 360 *e*PKP1 PKPbc 15 54 39.2 -1.4
MFF Saint Martin d 154.72 5 *e*PKP1 PKPbc 15 54 39.6 -1.1
comp=Z,15nm,0.9s
CABF La Chapelle 154.72 355 *e*PKP1 PKPbc 15 54 39.8 -0.9
SMF Signal de Mont 154.80 359 *e*PKP1 PKPbc 15 54 39.7 -1.2
BGF Bois d'Agland 154.90 0 *e*PKP1 PKPbc 15 54 40.0 -1.1
comp=Z,16nm,0.8s
TCF Toulx Ste Croi 155.16 1 *e*PKP1 PKPdf 15 54 40.5 +7.9
comp=Z,4.6nm,0.6s
LPL La Plagne 155.75 354 *e*PKP1 PKPdf 15 54 42.5 +9.1
LPG La Plagne 155.76 354 *e*PKP1 PKPdf 15 54 42.6 +9.2
CAF Calviac 156.51 2 *e*PKP1 PKPdf 15 54 42.8 +8.4
VIVF Saint-Julien-l 156.56 357 *e*PKP1 PKPdf 15 54 42.1 +7.6
ESDC Sonseca Array 160.81 17 PKPab PKPab 15 55 22.5 -0.6
comp=Z,0.9nm,0.5s,baz=345,slow=3.9,SNR=8.9
DBIC Dimbokro 163.49 151 PKP PKPdf 15 54 41.2 -1.9
comp=Z,3.1nm,0.7s,baz=249,slow=4.0,SNR=4.2
DBIC PKPab PKPab 15 55 34.9 -0.6
comp=Z,1.7nm,0.8s,baz=210,slow=6.2,SNR=4.2
TORD Torodi Ar. Bea 171.70 171 PKP PKPdf 15 54 47.4 -1.5
TORD PKPab PKPab 15 56 11.4 -0.2
TORD Torodi Ar. Bea 171.70 171 PKP PKPdf 15 54 47.4 -1.5
comp=Z,0.8nm,0.7s,baz=82,slow=1.2,SNR=3.6
TORD PKPab PKPab 15 56 11.4 -0.2
comp=Z,4.5nm,0.7s,baz=193,slow=4.2,SNR=18

KRSC 24 15:41:18.6±0.6, 55°59N×161°39E, h114km±34km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BZGR	**Bezymyannyi-Gr**	**0.53**	**312**	*i* P		Pn	15 41 37.1	+1.1
BZGR				*i* S		Sn	15 41 50.5	+1.4
ZLN	**Zelenaya**	**0.54**	**323**	*e*P		Pn	15 41 37.7	+1.6
ZLN				*e*S		Sn	15 41 51.1	+1.8
KPT	**Kopyto**	**0.76**	**300**	*i* P		Pn	15 41 38.3	+0.5
KPT				*i* S		Sn	15 41 52.5	+0.2
KRSR	**Krestovskiy**	**0.78**	**324**	*i* P		Pn	15 41 38.5	+0.5
KRSR				*e*S		Sn	15 41 53.1	+0.5
KLY	**Klyuchi**	**0.83**	**331**	*i* P		Pn	15 41 38.6	+0.1
KLY				*i* S		Sn	15 41 53.3	-0.2
KOZ	**Kozyrevsk**	**0.98**	**299**	*i* P		Pn	15 41 40.7	+0.9
KOZ				*e*S		Sn	15 41 56.8	+0.9
KBTR	**Krutoberegovo**	**1.02**	**52**	*i* P		Pn	15 41 41.3	+1.1
KBTR				*e*S		Sn	15 41 58.1	+1.5
MKZ	**Mys Kozlova**	**1.05**	**169**	*e*P		Pn	15 41 41.8	+1.2
MKZ				*e*S		Sn	15 41 59.2	+1.9
SRDR	**Sredinnyy**	**1.19**	**308**	*i* P		Pn	15 41 42.7	+0.7
SRDR				*e*S		Sn	15 42 00.5	+0.7
KII	**Karymskiy**	**1.92**	**217**	P		Pn	15 41 51.4	+0.7
KII				S		Sn	15 42 15.9	+0.7
SPN	**Mys Shipunski**	**2.62**	**198**	*e*S		Sn	15 42 30.9	-0.4
BKI	**Bering**	**2.64**	**97**	*e*P		Pn	15 42 01.2	+1.3
BKI				*i* S		Sn	15 42 31.5	-0.2
GNL	**Ganaly**	**2.76**	**228**	*i* P		Pn	15 42 03.9	+2.4
AVH	**Avacha**	**2.80**	**215**	P		Pn	15 42 04.6	+2.6
PET	**Petropavlovsk**	**3.03**	**213**	P		Pn	15 42 06.2	+1.2

*IDC **24** 15:46:41.1±5.9, 39°42N×110°54E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.2/24, mbtmp3.4/4, ML2.6/1, Error ellipse: s-maj=125.5km s-min=29.0km az=84.0*
ISC 24 15:46:41.5±2.3, 39°4N±0°1×110°8E±0°3, h10km, n6, σ0§55/6, mb3.2/3, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTO	**Baotou**	**1.32**	**333**	*e*P		Pn	15 47 06.5	+0.5
BTO				pmax	pmax		
comp=Z,26nm,0.8s							
LZH	**Lanzhou**	**6.44**	**241**	*e*P		Pg	15 48 45.0	+0.2
LZH				pP			15 48 50.0	
LZH				sP			15 48 55.0	
LZH				pmax	pmax		
comp=Z,18nm,1.3s							
SONM	**Songino Array**	**8.99**	**341**	Pn		Pn	15 48 51.3	0.0
comp=Z,0.1nm,0.3s,baz=153,slow=11,SNR=6.1							
MKAR	**Makanchi Array**	**22.00**	**299**	P		P	15 51 34.8	-0.8
comp=Z,0.4nm,0.3s,mb3.3,baz=94,slow=12,SNR=6.8							
CMAR	**Chiang Mai Arr**	**23.28**	**210**	P		P	15 51 49.5	0.0
comp=Z,1.3nm,0.7s,mb3.5,baz=9.7,slow=10,SNR=12							
KURK	**Kurchatov**	**25.18**	**307**	P		P	15 52 07.0	+0.1
comp=Z,0.1nm,0.3s,mb2.8,baz=104,slow=10,SNR=3.6							

*IDC **24** 16:09:58.1±5.7, 11°84S×166°81E, h48km±47km, mb3.9/8, mb1 4.1/9, mb1mx3.8/19, mbtmp3.9/9, ML4.7/1, MS3.2/1, Ms1 3.2/1, ms1mx2.7/22, Error ellipse: s-maj=40.7km s-min=25.2km az=104.0*
*NEIC **24** 16:09:59.6±4.1, 11°83S×166°76E, h60km±30km, mb4.1/2, Error ellipse: s-maj=36.4km s-min=18.6km az=108.0*
*ISCJB **24** 16:10:05.1±4.5, 11°8S±0°1×166°2E±0°2, h100km±34km, mb4.0/9, Error ellipse: s-maj=36.2km s-min=21.1km az=166.4*
ISC 24 16:10:03.7±3.8, 11°7S±0°1×166°4E±0°2, h84km±29km, n20, σ1§12/21, mb4.0/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.76**	**289**	P		Pn	16 11 41.3	+0.8
HNR				S		Sn	16 12 54.9	-1.2
HNR	**Honiara**	**6.76**	**289**	P		Pn	16 11 41.9	+1.5
13nm,0.3s,baz=168,slow=5.6,SNR=5.1							
HNR				S		Sn	16 12 54.9	-1.2
29nm,0.3s,baz=43,slow=20,SNR=6.8							
CTA	**Charters Tower**	**21.10**	**244**	*e*P		P	16 14 42.1	+0.5
9.4nm,0.8s,mb4.2							
CTA	**Charters Tower**	**21.10**	**244**	P		P	16 14 41.9	+0.3
13nm,0.8s,mb4.3,baz=50,slow=11,SNR=8.5							
CTA				LR		LR	16 21 05.7	
comp=Z,59nm,19.6s,baz=234,slow=31							
CTAO	**Charters Tower**	**21.10**	**244**	*e*P		P	16 14 42.3	+0.6
15nm,0.8s,mb4.4							
ARMA	**Armidale**	**23.13**	**214**	*e*P		P	16 15 03.6	+0.8
STKA	**Stephens Creek**	**30.43**	**225**	*e*P		P	16 16 08.5	+0.1
3.7nm,0.7s,mb4.1							
STKA	**Stephens Creek**	**30.43**	**225**	P		P	16 16 08.3	-0.1
STKA	**Stephens Creek**	**30.43**	**225**	P		P	16 16 08.3	-0.1
4.1nm,0.7s,mb4.2,baz=32,slow=9.5,SNR=16							
WRA	**Warramunga Arr**	**31.89**	**251**	P		P	16 16 20.6	-0.8
1.6nm,0.6s,mb3.9,baz=82,slow=9.3,SNR=11							
ASAR	**Alice Springs**	**33.10**	**245**	P		P	16 16 30.6	-1.3
1.5nm,0.8s,mb3.9,baz=70,slow=9.7,SNR=24							
ASAR				PcP		PcP	16 19 13.1	-0.5
0.2nm,0.7s,baz=100,slow=2.0,SNR=4.2							
KAKA	**Kakadu**	**33.22**	**265**	*e*P		P	16 16 32.9	-0.2
11nm,0.6s,mb4.8							
RKT	**Rikitea**	**56.73**	**110**	*e*LR		LR	16 20 45.3	
180nm,26.0s							
RKT				*e*T			16 46 40.4	
2.4nm,0.2s							
CM31	**Chiang Mai Arr**	**72.99**	**294**	*e*P		P	16 21 26.8	+1.9
1.0nm,0.6s,mb3.8							
CMAR	**Chiang Mai Arr**	**72.99**	**294**	P		P	16 21 26.5	+1.6
2.9nm,0.7s,mb4.2,baz=128,slow=4.8,SNR=28							
QSPA	**South Pole Qui**	**78.30**	**180**	*e*P		P	16 21 53.5	-0.6
QSPA	**South Pole Qui**	**78.30**	**180**	P		P	16 21 53.0	-1.2
1.3nm,1.1s,mb3.5,baz=113,slow=1.0,SNR=9.0							
ILAR	**Eielson Array**	**83.93**	**18**	P		P	16 22 21.4	-2.6
0.3nm,0.7s,mb3.2,baz=248,slow=4.8,SNR=3.3							
MK31	**Makanchi Array**	**94.47**	**317**	*e*P		P	16 23 14.7	+0.1
MKAR	**Makanchi Array**	**94.47**	**317**	P		P	16 23 15.0	+0.4
0.4nm,0.3s,mb4.3,baz=92,slow=6.8,SNR=8.5							

*ISCJB **24** 16:21:23.2±0.7, 18°0S±0°2×178°2W±0°1, h600km, mb4.0/15, Error ellipse: s-maj=26.6km s-min=11.8km az=149.6*
*IDC **24** 16:21:25.7±3.5, 17°99S×178°11W, h618km±40km, mb3.4/12, mb1 3.6/12, mb1mx3.5/19, mbtmp3.4/12, Error ellipse: s-maj=29.2km s-min=17.9km az=135.0*
*NEIC **24** 16:21:26.9±3.0, 17°98S×178°16W, h633km±34km, mb3.5/3, Error ellipse: s-maj=30.2km s-min=17.7km az=147.0*
ISC 24 16:21:24.5±0.7, 18°0S±0°2×178°1W±0°1, h600km, n34, σ0§69/21, mb4.0/15, 4C-2D, Fiji Islands region

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

GUMO	**Guam**	**48.14**	**308**	P		**P**	**16 29 12.4**	**+0.7**
	15nm,0.5s,mb4.8,baz=43,slow=18,SNR=3.9							
FORT	**Forrest**	**50.23**	**245**	*eP*		**P**	**16 29 25.8**	**-1.1**
	6.8nm,0.4s,mb4.4							
KLBR	**Kellerberrin**	**59.05**	**244**	*eP*		**P**	**16 30 27.3**	**-1.0**
	27nm,1.3s,mb4.2							
MJAR	**Matsushiro Arr**	**68.13**	**323**	P		**P**	**16 31 25.8**	**0.0**
	2.7nm,0.4s,mb4.0,baz=155,slow=5.9,SNR=18							
NVAR	**Mina Array Bea**	**79.28**	**44**	P		**P**	**16 32 28.6**	**-0.3**
	0.9nm,0.7s,mb3.2,baz=225,slow=8.8,SNR=8.2							
HLID	**Hailey**	**84.50**	**41**	*eP*		**P**	**16 32 55.7**	**+0.5**
	0.5nm,0.7s,mb3.1							
TXAR	**Lajitas Array**	**85.80**	**58**	P		**P**	**16 33 02.6**	**+0.9**
	1.4nm,0.8s,mb3.7,baz=214,slow=6.5,SNR=15							
ILAR	**Eielson Array**	**85.89**	**13**	P		**P**	**16 33 00.1**	**-1.3**
	0.2nm,0.4s,mb3.1,baz=224,slow=4.7,SNR=6.9							
PDAR	**Pinedale Array**	**87.21**	**43**	P		**P**	**16 33 07.8**	**-0.3**
	0.5nm,0.7s,mb3.3,baz=206,slow=3.5,SNR=4.5							
CMAR	**Chiang Mai Arr**	**89.17**	**290**	P		**P**	**16 33 18.6**	**+0.8**
	1.2nm,0.8s,mb3.8,baz=105,slow=2.7,SNR=10							
MKAR	**Makanchi Array**	**109.38**	**314**	PKiKP	PKiKP		16 38 45.4	-2.0
	0.2nm,0.5s,baz=79,slow=3.1,SNR=4.5							
ARCES	**ARCESS Array B**	**126.43**	**350**	PKP	PKPdf		16 39 18.1	-1.4
	0.8nm,0.7s,baz=48,slow=1.8,SNR=5.4							
FINES	**FINESS Array B**	**133.33**	**344**	PKP	PKPdf		16 39 31.2	-1.5
	4.9nm,1.1s,baz=82,slow=2.9,SNR=4.4							
BURAR	**Bucovina Array**	**144.81**	**332**	⇑*iP*	PKPdf		16 39 54.9	+1.0
TESR		**144.96**	**330**	⇑*iP*	PKPdf		16 39 54.7	+0.5
BRTR	**Keskin Array B**	**145.03**	**315**	PKPbc	PKPbc		16 39 55.0	-0.5
	1.5nm,0.5s,baz=130,slow=3.9,SNR=9.9							
CLL	**Collm**	**145.59**	**348**	*i* P	PKPdf		16 39 55.7	+0.5
CLL	**Collm**	**145.59**	**348**	*i* PKPbc	PKPbc		16 39 55.7	-1.1
	comp=Z,8.0nm,0.8s							
DRGR		**146.53**	**334**	⇑*iP*	PKPbc		16 39 59.2	-0.3
GZR	**Gura Zlata**	**147.59**	**332**	⇑*iP*	PKPdf		16 39 57.8	-0.9
VTS	**Vitosha**	**149.50**	**328**	⇓*iP*	PKPbc		16 40 06.4	-0.7
APE	**Apeiranthos**	**151.82**	**317**	⇓*iP*	PKPdf		16 40 05.4	-0.2

*ISCJB **24** 16:32:32.3±0.3, 41.80°N±0.03°×141.22°E±0.05, h109km±2km, mb3.9/17, Error ellipse: s-maj=6.3km s-min=4.9km az=28.3*
*IDC **24** 16:32:34.0±1.3, 41.82°N×141.17°E, h107km±12km, mb3.6/12, mb1 3.7/14, mb1mx3.6/25, mbtmp3.5/14, Error ellipse: s-maj=17.3km s-min=11.1km az=114.0*
*JMA **24** 16:32:33.9±0.1, 41.83°N×141.27°E, h96km± 1km, M3.4*
JMA Felt I J1.
*MOS **24** 16:32:34.0±1.1, 41.86°N×141.25°E, h130km, mb4.1/13, Error ellipse: s-maj=15.1km s-min=9.6km az=80.3*
*BJI **24** 16:32:34.8, 42.17°N×141.35°E, h129km, mB4.5/2, mb4.6/2*
*NEIC **24** 16:32:35.3±0.8, 41.86°N×141.13°E, h118km±7km, mb3.7/2, Error ellipse: s-maj=10.3km s-min=7.0km az=104.0*

ISC 24 16:32:33.4±0.3, 41.80°N±0.03°×141.23°E±0.05, h103km±2km, n59, σ0≋86/70, mb3.9/17, 1D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JKB	**Kayabe**	**0.17**	**300**	P		**Pn**	**16 32 47.5**	**-0.3**
JKB				*eS*		**Sn**	**16 32 57.8**	**-0.8**
JOT	**Ohata**	**0.44**	**198**	P		**Pn**	**16 32 49.0**	**0.0**
JSR	**Shiriuchi**	**0.67**	**246**	P		**Pn**	**16 32 50.8**	**+0.1**
JSR				*eS*		**Sn**	**16 33 03.6**	**-0.1**
JNB	**Noboribetsu**	**0.68**	**348**	P		**Pn**	**16 32 50.3**	**-0.6**
JNB				*eS*		**Sn**	**16 33 03.2**	**-0.8**
JYM2	**Yakumo 2**	**0.72**	**296**	P		**Pn**	**16 32 51.2**	**+0.1**
JTM	**Tenmabayashi**	**1.02**	**187**	P		**Pn**	**16 32 54.6**	**+0.4**
JEW	**Eniwo**	**1.05**	**9**	P		**Pn**	**16 32 54.5**	**0.0**
JEW				*eS*		**Sn**	**16 33 10.3**	**-0.2**
JSH	**Shimam**	**1.22**	**314**	P		**Pn**	**16 32 56.4**	**0.0**
JSH				*eS*		**Sn**	**16 33 13.9**	**+0.1**
JNBK	**Urakawa-nobuka**	**1.23**	**67**	P		**Pn**	**16 32 56.3**	**-0.2**
JOSM	**Okushiri--Mats**	**1.34**	**283**	P		**Pn**	**16 32 57.6**	**-0.2**
JOSM				*eS*		**Sn**	**16 33 15.8**	**-0.5**
JANG	**Nango**	**1.44**	**171**	P		**Pn**	**16 32 59.1**	**0.0**
JANG				*eS*		**Sn**	**16 33 17.8**	**-0.7**
JSK	**Shakotan**	**1.65**	**340**	P		**Pn**	**16 33 02.0**	**+0.4**
JSK				*eS*		**Sn**	**16 33 23.3**	**+0.3**
JFR	**Furan**	**1.69**	**36**	P		**Pn**	**16 33 02.4**	**+0.3**
JCH	**Churui**	**1.78**	**62**	P		**Pn**	**16 33 03.6**	**+0.4**
JCH				*eS*		**Sn**	**16 33 26.0**	**+0.1**
JHR	**Hokuryu**	**1.98**	**10**	P		**Pn**	**16 33 06.6**	**+0.9**
ASAJ	**Asahikawa**	**2.52**	**23**	P		**Pn**	**16 33 12.8**	**+0.1**
	3.5nm,0.3s,baz=225,slow=6.4,SNR=30							
ASAJ				S		**Sn**	**16 33 44.4**	**+1.3**
	6.1nm,0.3s,baz=71,slow=31,SNR=7.9							
YUK	**Yuzh-Kuril'sk**	**4.07**	**55**	⇓*iP*		**Pn**	**16 33 34.3**	**+0.9**
YUK				*i* S		**Sn**	**16 34 17.7**	**-2.3**
YUK				pmax	pmax			
	comp=Z,10.0nm,0.2s							
YUK				pmax	pmax			
	comp=Z,102nm,0.5s							
YUK				pmax	pmax			
	comp=N,41nm,0.5s							
YUK				pmax	pmax			
	comp=E,63nm,0.5s							
YUK				smax				
	comp=N,107nm,0.3s							
YUK				smax				
	comp=E,245nm,0.7s							
YUK				smax				
	comp=N,50nm,0.3s							
YUK				smax				
	comp=E,100nm,0.3s							
YSS	**Yuzh-Sakhalins**	**5.27**	**11**	*eP*		**Pn**	**16 33 50.8**	**+1.2**
MAJO	**Matsushiro**	**5.75**	**205**	*eP*		**Pn**	**16 33 59.5**	**+3.3**
MJAR	**Matsushiro Arr**	**5.75**	**205**	P		**Pn**	**16 33 58.1**	**+1.8**
	comp=E,1.1nm,0.3s,baz=48,slow=24,SNR=13							
MJAR	**Matsushiro Arr**	**5.75**	**205**	P		**Pn**	**16 33 58.1**	**+1.8**
MJAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
JHJ	**Hachijo jima 2**	**8.74**	**188**	P		**Pn**	**16 34 35.1**	**-1.9**
	comp=Z,7.8nm,0.3s,baz=245,slow=17,SNR=7.7							
MDJ	**Mudanjiang**	**8.95**	**292**	P		**Pn**	**16 34 40.4**	**+0.7**
KSRS	**Korea Array**	**11.14**	**251**	P		**Pn**	**16 35 11.1**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=73,slow=14,SNR=5.0							
YAK	**Yakutsk**	**21.41**	**345**	*eP*		**P**	**16 37 11.6**	**-1.0**
	comp=Z,6.6nm,0.5s,mb4.0							
YAK	**Yakutsk**	**21.41**	**345**	*eP*		**P**	**16 37 11.6**	**-1.0**
YAK				pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.0							
ULN	**Ulaanbaatar**	**24.84**	**296**	*eP*		**P**	**16 37 45.7**	**-0.3**
	comp=Z,1.0nm,0.6s,mb3.4							
ULN	**Ulaanbaatar**	**24.84**	**296**	*eP*		**P**	**16 37 45.7**	**-0.3**
ULN				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.4							
SONM	**Songino Array**	**25.29**	**296**	P		**P**	**16 37 50.6**	**+0.7**
	comp=Z,1.2nm,0.5s,mb3.6,baz=84,slow=8.8,SNR=9.1							
SONM	**Songino Array**	**25.29**	**296**	P		**P**	**16 37 50.6**	**+0.6**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ZAA0	**Zalesovo Array**	**38.73**	**308**	*eP*		**P**	**16 39 46.8**	**-0.4**
ZALV	**Zalesovo Beam**	**38.73**	**308**	P		**P**	**16 39 47.0**	**-0.1**
	comp=Z,3.8nm,0.4s,mb4.6,baz=91,slow=8.9,SNR=19							
ZALV	**Zalesovo Beam**	**38.73**	**308**	P		**P**	**16 39 47.0**	**-0.1**
ZALV				pmax	pmax			
	comp=Z,4.0nm,0.4s,mb4.6							
MK31	**Makanchi Array**	**41.62**	**298**	*eP*		**P**	**16 40 10.7**	**-0.5**
MKAR	**Makanchi Array**	**41.62**	**298**	P		**P**	**16 40 11.0**	**-0.2**
	comp=Z,2.3nm,0.6s,mb4.1,baz=86,slow=9.5,SNR=25							
MKAR	**Makanchi Array**	**41.62**	**298**	P		**P**	**16 40 11.0**	**-0.1**
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.6s							
CHTO	**Chiang Mai**	**42.54**	**251**	*eP*		**P**	**16 40 20.7**	**+1.8**
CMAR	**Chiang Mai Arr**	**42.78**	**250**	P		**P**	**16 40 19.8**	**-1.0**
	comp=Z,0.2nm,0.6s,mb3.0,baz=46,slow=7.4,SNR=4.6							
ILAR	**Eielson Array**	**45.60**	**35**	P		**P**	**16 40 43.5**	**+0.7**
	comp=Z,0.4nm,0.6s,mb3.4,baz=258,slow=5.7,SNR=8.5							
INK	**Inuvik**	**50.25**	**29**	P		**P**	**16 41 19.4**	**+0.9**
	comp=Z,1.3nm,0.3s,mb4.3,baz=280,slow=6.8,SNR=3.7							
INK	**Inuvik**	**50.25**	**29**	P		**P**	**16 41 19.4**	**+0.9**
INK				pmax	pmax			
	comp=Z,1.0nm,0.3s							
KEV	**Kevo**	**58.95**	**338**	*eP*		**P**	**16 42 19.5**	**-1.9**
KEV				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.3							
KEV	**Kevo**	**58.95**	**338**	*ep*		**P**	**16 42 19.5**	**-1.9**
	comp=Z,2.2nm,0.7s,mb4.3							
ARCES	**ARCESS Array B**	**59.50**	**338**	P		**P**	**16 42 25.1**	**-0.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=59,slow=5.8,SNR=6.6							
ARCES	**ARCESS Array B**	**59.50**	**338**	P		**P**	**16 42 25.1**	**0.0**
ARCES				pmax	pmax			
	comp=Z,1.0nm,0.7s							
JOF	**Joensuu**	**61.72**	**331**	*eP*		**P**	**16 42 39.0**	**-1.3**
JOF				pmax	pmax			
	comp=Z,1.0nm,0.3s,mb4.3							
JOF	**Joensuu**	**61.72**	**331**	*ep*		**P**	**16 42 39.0**	**-1.3**
	comp=Z,1.3nm,0.3s,mb4.4							
WRA	**Warramunga Arr**	**61.76**	**187**	P		**P**	**16 42 40.7**	**-0.3**
	comp=Z,1.4nm,0.5s,mb4.2,baz=5.3,slow=7.0,SNR=46							
WRA	**Warramunga Arr**	**61.76**	**187**	P		**P**	**16 42 40.7**	**-0.3**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.5s							
KAF	**Kangasniemi**	**64.03**	**332**	*eP*		**P**	**16 42 54.4**	**-1.2**
KAF				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.0							
KAF	**Kangasniemi**	**64.03**	**332**	*ep*		**P**	**16 42 54.4**	**-1.2**
	comp=Z,0.9nm,0.4s,mb4.0							
FINES	**FINESS Array B**	**64.56**	**331**	P		**P**	**16 42 58.5**	**-0.5**
	comp=Z,2.8nm,0.4s,mb4.4,baz=46,slow=6.9,SNR=37							
FINES	**FINESS Array B**	**64.56**	**331**	P		**P**	**16 42 58.5**	**-0.5**
FINES				pmax	pmax			
	comp=Z,3.0nm,0.4s							
ASAR	**Alice Springs**	**65.49**	**187**	P		**P**	**16 43 05.7**	**+0.2**
	comp=Z,0.2nm,0.4s,mb3.3,baz=3.3,slow=6.8,SNR=10							
NOA	**NORSAR Array B**	**69.75**	**337**	P		**P**	**16 43 31.1**	**-0.8**
	comp=Z,1.7nm,0.7s,mb4.0,baz=37,slow=6.2,SNR=7.9							
NOA	**NORSAR Array B**	**69.75**	**337**	P		**P**	**16 43 31.1**	**-0.7**
NOA				pmax	pmax			
	comp=Z,2.0nm,0.7s							
NVAR	**Mina Array Bea**	**72.28**	**54**	P		**P**	**16 43 48.9**	**+1.4**
NVAR	**Mina Array Bea**	**72.28**	**54**	P		**P**	**16 43 48.9**	**+1.4**
	comp=Z,0.2nm,0.5s,mb3.2,baz=289,slow=4.5,SNR=3.8							
CLL	**Collm**	**76.91**	**330**	*eP*		**P**	**16 44 14.0**	**0.0**

*IDC **24** 16:57:04.9±1.7, 0.46°N×122.00°E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.4/19, mbtmp3.5/3, Error ellipse: s-maj=212.0km s-min=26.5km az=61.0*
*ISCJB **24** 16:57:25.5±0.8, 0.27°N±0.10°×121.18°E±0.1, h207km±7km, mb3.3/3, Error ellipse: s-maj=18.7km s-min=13.2km az=138.0*
*DJA **24** 16:57:28, 0.32°N×121.80°E, h182km, MLv3.9/3*

ISC 24 16:57:26.7±0.8, 0.26°N±0.10°×121.79°E±0.10, h200km±6km, n9, σ0≋80/10, mb3.3/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MRSI	**Marisa**	**0.26**	**35**	P		**Pn**	**16 57 53.1**	**-0.1**
TOLI	**Toli-Toli**	**1.31**	**310**	P		**Sn**	**16 58 22.8**	**-1.0**
LUWI	**Luwuk**	**1.62**	**143**	P		**Pn**	**16 58 02.2**	**+0.6**
LUWI				S		**Sn**	**16 58 28.1**	**-0.6**
KMSI	**Cibinong**	**2.21**	**82**	P		**Pn**	**16 58 08.1**	**+0.7**
MNI	**Manado**	**3.26**	**69**	P		**Pn**	**16 58 19.8**	**+0.3**
TTSI	**Tana Toraja**	**3.83**	**211**	P		**Pn**	**16 58 27.9**	**+1.4**
WRA	**Warramunga Arr**	**23.55**	**149**	P		**P**	**17 02 17.8**	**-1.2**
	1.0nm,0.6s,mb3.7,baz=326,slow=11,SNR=17							
ASAR	**Alice Springs**	**26.54**	**154**	P		**P**	**17 02 45.4**	**-0.7**
	0.5nm,0.9s,mb3.1,baz=334,slow=9.5,SNR=5.0							
MKAR	**Makanchi Array**	**57.76**	**329**	P		**P**	**17 06 57.3**	**+0.5**
	0.2nm,0.3s,mb3.2,baz=129,slow=8.8,SNR=3.9							

IDC 24 17:39:26.8±2.9, 8.66°N×124.28°E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/19, mbtmp3.3/3, Error ellipse: s-maj=279.5km s-min=27.0km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**30.09**	**161**	P		P	17 45 38.3	+0.2
	0.4nm,1.0s,baz=339,slow=10,SNR=3.8							
ASAR	**Alice Springs**	**33.47**	**164**	P		P	17 46 07.8	-0.1
	0.1nm,0.4s,baz=350,slow=7.0,SNR=4.5							
MKAR	**Makanchi Array**	**52.15**	**324**	P		P	17 48 39.0	0.0
	0.4nm,0.6s,baz=119,slow=8.4,SNR=6.0							

GUC 24 18:05:56.2±0.7, 21.79S×68.77W, h120km±14km, ML3.5, 3C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MACH	**Maria Elena**	**1.00**	**246**	*eP*		Pn	18 06 19.4	+1.1
MACH				*i* S		Sn	18 06 36.5	+1.6
TOCH	**Tocopilla**	**1.37**	**257**	*eP*		Pn	18 06 22.2	+0.1
TOCH				*i* S		Sn	18 06 42.5	+0.7
TOCH				AML	AML		18 06 43.6	
	comp=N,502nm,0.2s							
HMBC	**Humberston**	**1.84**	**325**	⇑*iP*		Pn	18 06 28.5	+0.8
HMBC				*i* S		Sn	18 06 53.1	+1.5
HMBC				AML	AML		18 06 54.8	
	comp=N,686nm,0.2s							
CEN1	**Los Morros**	**2.07**	**220**	*eP*		Pn	18 06 34.7	+4.2
CEN1				*i* S		Sn	18 07 01.4	+4.6
PSGC	**Pisagua**	**2.53**	**330**	⇑*iP*		Pn	18 06 36.2	-0.2
PSGC				*i* S		Sn	18 07 07.7	+0.5
PSGC				AML	AML		18 07 09.6	
	comp=E,112nm,0.6s							
MNMC	**Miæe Miæ**	**2.76**	**343**	⇑*iP*		Pn	18 06 40.6	+1.2
MNMC				*i* S		Sn	18 07 15.2	+2.5
MNMC				AML	AML		18 07 17.1	
	comp=E,211nm,0.3s							

*ISCJB **24** 18:07:59.0±0.5, 16.80°S±0.10°×66.92°E±0.09, h10km, mb4.2/17, MS4.0/22, Error ellipse: s-maj=14.8km s-min=12.5km az=150.1*
*IDC **24** 18:07:59.0±0.6, 16.83S×66.84E, h0km, mb4.2/15, mb1 4.3/16, mb1mx4.1/27, mbtmp4.2/16, ML3.5/1, MS4.0/22, Ms1 4.0/22, ms1mx3.9/25, Error ellipse: s-maj=19.1km s-min=16.5km az=76.0*
*NEIC **24** 18:08:00.8±0.4, 16.78S×66.92E, h10km, mb3.9/2, Error ellipse: s-maj=12.0km s-min=10.5km az=146.0*
*GCMT **24** 18:08:05.2±0.3, 16.97S×66.86E, h17km±1km, MW4.9, Moment Tensor Solution. s17,c23; s65,c93; Moment tensor: Scale 10^16Nm; Mrr-1.23±.14; Mθθ-1.81±.09; Mϕϕ3.04±.12; Mrθ-1.51±.32; Mθϕ0.01±.09; Mrϕ-1.40±.28; Best double couple: M0:3.30000×10^16 NP1:ϕs141.00000°, δ46.00000°, λ-159.00000°. NP2:ϕs37.00000°, δ75.00000°, λ-46.00000°. Principal axes: T 3.5000, Plg18.0000°, Azm95.0000°; N -0.3100, Plg43.0000°, Azm203.0000°; P -3.1900, Plg42.0000°, Azm348.0000°; Data Used: II IC G IU CN.*

ISC 24 18:08:01.0±0.5, 16.82S±0.10°×66.89E±0.09, h10km, n41, σ0≋88/23, mb4.2/17, MS4.0/22, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**18.86**	**262**	P		**Pn**	**18 12 21.6**	**-0.3**
	0.1nm,0.3s,baz=238,slow=10,SNR=3.0							
KMBO	**Kilima Mbogo**	**33.08**	**295**	LR		LR	18 26 00.1	
	comp=Z,372nm,18.3s,MS4.1,baz=91,slow=33							
PSI	**Prapat**	**37.15**	**61**	LR		LR	18 27 15.2	
	comp=Z,495nm,19.2s,MS4.3,baz=215,slow=31							
LSZ	**Lusaka**	**37.19**	**267**	P		**P**	**18 15 14.2**	**+1.5**
	1.5nm,0.7s,mb3.9,baz=140,slow=4.7,SNR=3.8							
LBTB	**Lobatse**	**39.30**	**251**	*eP*		**P**	**18 15 29.8**	**-0.6**
	4.4nm,0.8s,mb4.2							
LBTB	**Lobatse**	**39.30**	**251**	P		**P**	**18 15 28.0**	**-2.4**
	4.2nm,0.8s,mb4.2,baz=93,slow=13,SNR=6.4							
BOSA	**Boshof**	**39.97**	**245**	LR		LR	18 28 14.4	
	comp=Z,250nm,21.7s,MS4.0,baz=88,slow=30							
SUR	**Sutherland**	**44.33**	**241**	LR		LR	18 31 08.1	
	comp=Z,164nm,19.5s,MS4.0,baz=75,slow=31							
TSUM	**Tsumeb**	**46.83**	**259**	LR		LR	18 34 16.5	
	comp=Z,265nm,18.1s,MS4.2,baz=96,slow=34							
CMAR	**Chiang Mai Arr**	**47.15**	**43**	P		**P**	**18 16 34.5**	**+0.7**
	2.7nm,0.9s,mb4.2,baz=235,slow=8.3,SNR=20							
CMAR				LR		LR	18 33 17.8	
	comp=Z,150nm,21.1s,MS3.9,baz=214,slow=32							
MAW	**Mawson**	**50.83**	**182**	P		**P**	**18 17 01.7**	**+0.4**
	3.3nm,0.9s,mb4.3,baz=16,slow=10,SNR=6.2							
MAW				LR		LR	18 33 20.2	
	comp=Z,178nm,18.8s,MS4.1,baz=351,slow=30							
AAK	**Ala-Archa**	**59.56**	**7**	P		**P**	**18 18 06.2**	**+1.6**
	1.1nm,0.3s,mb4.3,baz=218,slow=6.9,SNR=3.7							
ASAR	**Alice Springs**	**62.76**	**108**	P		**P**	**18 18 25.9**	**-1.0**
	2.9nm,0.7s,mb4.5,baz=271,slow=5.5,SNR=38							
WRA	**Warramunga Arr**	**63.70**	**104**	P		**P**	**18 18 33.0**	**-0.2**
	4.8nm,0.8s,mb4.6,baz=266,slow=6.0,SNR=26							
GTA	**Gaotai**	**63.83**	**28**	*eP*		**P**	**18 18 34.1**	**+0.6**
GTA				pP		pP	18 18 38.5	+1.8
GTA				sP		sP	18 18 42.1	+4.1
GTA				pmax	pmax			
	comp=Z,4.0nm,1.2s,mb4.3							
BRTR	**Keskin Array B**	**64.23**	**332**	P		**P**	**18 18 35.1**	**-1.1**
BRTR				LR		LR	18 45 39.0	
	comp=Z,3.5nm,1.2s,mb4.3,baz=150,slow=5.1,SNR=8.5							
BRTR				LR		LR	18 45 39.0	
	comp=Z,78nm,19.0s,MS3.9,baz=256,slow=35							
MKAR	**Makanchi Array**	**64.81**	**12**	LR		LR	18 45 59.0	
	comp=Z,53nm,20.5s,MS3.7,baz=181,slow=35							
KURK	**Kurchatov**	**68.02**	**8**	P		**P**	**18 18 59.2**	**-1.0**
KURK	**Kurchatov**	**68.02**	**8**	P		**P**	**18 18 59.2**	**-1.0**
	comp=Z,0.4nm,0.3s,mb3.9,baz=200,slow=6.4,SNR=4.2							
STKA	**Stephens Creek**	**68.53**	**118**	P		**P**	**18 19 03.5**	**-0.5**
	comp=Z,0.4nm,0.8s,mb3.4							
STKA				LR		LR	18 42 56.9	
STKA	**Stephens Creek**	**68.53**	**118**	P		**P**	**18 19 03.2**	**-0.8**
	comp=Z,2.2nm,0.8s,mb4.1,baz=282,slow=8.8,SNR=3.5							
STKA				LR		LR	18 42 56.9	
	comp=Z,227nm,21.7s,MS4.4,baz=211,slow=31							
BVAR	**Borovoye Array**	**69.61**	**2**	P		**P**	**18 19 09.8**	**-0.3**
	comp=Z,2.0nm,1.0s,mb4.0,baz=131,slow=8.8,SNR=7.2							
TORD	**Torodi Ar. Bea**	**70.95**	**291**	LR		LR	18 48 44.1	
	comp=Z,119nm,18.9s,MS4.2,baz=130,slow=34							
ZALV	**Zalesovo Beam**	**72.14**	**11**	P		**P**	**18 19 24.8**	**-0.6**
	comp=Z,1.0nm,0.6s,mb3.9,baz=209,slow=3.8,SNR=7.3							
ZALV				LR		LR	18 51 47.2	
	comp=Z,53nm,18.4s,MS3.9,baz=205,slow=36							
QSPA	**South Pole Qui**	**73.28**	**180**	P		**P**	**18 19 33.2**	**+1.2**
	comp=Z,7.8nm,1.1s,mb4.6,baz=282,slow=5.0,SNR=10							
SONM	**Songino Array**	**73.41**	**27**	P		**P**	**18 19 33.8**	**+0.6**
	comp=Z,1.1nm,0.9s,mb3.8,baz=210,slow=5.5,SNR=5.3							
SONM				LR		LR	18 49 44.1	
	comp=Z,85nm,21.4s,MS4.0,baz=252,slow=34							
DBIC	**Dimbokro**	**74.65**	**282**	LR		LR	18 50 49.5	
	comp=Z,145nm,20.0s,MS4.3,baz=94,slow=34							
KEST	**Kesra**	**75.46**	**315**	LR		LR	18 52 53.8	
	comp=Z,47nm,20.2s,MS3.8,baz=316,slow=36							
KSRS	**Korea Array**	**78.75**	**45**	LR		LR	18 52 28.5	
	comp=Z,37nm,19.1s,MS3.7,baz=63,slow=34							
FINES	**FINESS Array B**	**84.48**	**342**	LR		LR	18 58 45.6	
	comp=Z,37nm,21.2s,MS3.7,baz=132,slow=36							
MJAR	**Matsushiro Arr**	**85.60**	**50**	LR		LR	18 59 22.0	
	comp=Z,51nm,18.1s,MS4.0,baz=195,slow=36							
ESDC	**Sonseca Array**	**86.58**	**313**	P		**P**	**18 20 44.4**	**-0.2**
	comp=Z,0.1nm,0.3s,mb3.6,baz=126,slow=2.9,SNR=5.3							
ESDC				LR		LR	18 59 28.2	
	comp=Z,47nm,18.8s,MS3.9,baz=120,slow=36							
NOA	**NORSAR Array B**	**89.33**	**336**	LR		LR	19 02 19.0	
	comp=Z,28nm,18.7s,MS3.7,baz=95,slow=36							
HNR	**Honiara**	**90.20**	**100**	LR		LR	18 59 24.5	
	comp=Z,102nm,19.7s,MS4.3,baz=163,slow=34							
ARCES	**ARCESS Array B**	**90.94**	**347**	P		**P**	**18 21 04.6**	**0.0**
ARCES	**ARCESS Array B**	**90.94**	**347**	P		**P**	**18 21 04.6**	**+0.1**
	comp=Z,2.3nm,1.0s,mb4.5,baz=141,slow=7.8,SNR=3.9							
URZ	**Urewera**	**94.78**	**132**	LR		LR	18 58 07.8	
	comp=Z,189nm,18.2s,MS4.6,baz=50,slow=32							
ILAR	**Eielson Array**	**126.94**	**17**	PKP	PKPdf		18 27 04.8	+0.1
	comp=Z,0.2nm,0.9s,baz=312,slow=2.2,SNR=4.2							
NVAR	**Mina Array Bea**	**157.99**	**11**	PKPab	PKPab		18 28 31.9	+0.4
	comp=Z,0.8nm,0.8s,baz=252,slow=1.5,SNR=4.9							
TXAR	**Lajitas Array**	**164.82**	**327**	PKPab	PKPab		18 29 01.1	-0.5
	comp=Z,0.7nm,1.0s,baz=28,slow=5.7,SNR=4.0							

CASC 24 18:08:53.1±2.8, 7.38N×82.79W, h33km±241km, MD3.9, 3C, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**1.32**	**344**	*eP*		Pn	18 09 14.6	-0.6
BRU2	**Volcan**	**1.41**	**4**	*eP*		Pn	18 09 16.1	-0.3
BRU2				*eS*		Sn	18 09 37.0	+3.1
QCR	**Quepos**	**2.44**	**326**	⇑*eP*		Pn	18 09 30.7	0.0
QCR				*eS*		Sn	18 09 59.6	+0.2
URSC	**Urasca**	**2.63**	**338**	*eP*		Pn	18 09 33.5	+0.3
LAJ	**Bijagual**	**2.80**	**332**	⇑*eP*		Pn	18 09 37.5	+2.0
PRS1	**Puriscal**	**2.99**

KLY	**Klyuchi**	**0.97**	**313**	*i* P		**Pn**	**18 24 08.5**	**-0.6**
KLY				*e*S		**Sn**	**18 24 22.4**	**-1.3**
KPT	**Kopyto**	**1.01**	**289**	*i* P		**Pn**	**18 24 09.5**	**0.0**
KPT				*i* S		**Sn**	**18 24 24.0**	**-0.4**
SRKR	**Sorokina**	**1.08**	**338**	*i* P		**Pn**	**18 24 11.2**	**+0.8**
SRKR				*e*S		**Sn**	**18 24 26.6**	**+0.6**
MKZ	**Mys Kozlova**	**1.11**	**186**	*i* P		**Pn**	**18 24 09.7**	**-1.0**
MKZ				*i* S		**Sn**	**18 24 24.7**	**-1.8**
KOZR	**Kozyr**	**1.21**	**291**	PN		**Pn**	**18 24 12.4**	**+0.5**
KOZR				S		**Sn**	**18 24 29.0**	**+0.3**
KOZ	**Kozyrevsk**	**1.22**	**290**	*i* P		**Pn**	**18 24 12.4**	**+0.3**
KOZ				*e*S		**Sn**	**18 24 29.0**	**+0.1**
SRDR	**Sredinnyy**	**1.40**	**299**	*i* P		**Pn**	**18 24 14.5**	**+0.2**
SRDR				*e*S		**Sn**	**18 24 32.5**	**-0.3**
KII	**Karymskiy**	**2.16**	**222**	*i* P		**Pn**	**18 24 24.3**	**+0.2**
KII				S		**Sn**	**18 24 49.8**	**-0.5**
BKI	**Bering**	**2.35**	**99**	*i* P		**Pn**	**18 24 26.9**	**+0.3**
BKI				*i* S		**Sn**	**18 24 53.5**	**-1.3**
NLC	**Nalytchevo**	**2.91**	**212**	S		**Sn**	**18 25 06.8**	**-1.3**
AVH	**Avacha**	**3.03**	**219**	*i* P		**Pn**	**18 24 36.8**	**+1.2**
AVH				*e*S		**Sn**	**18 25 11.2**	**+0.2**
GNL	**Ganaly**	**3.03**	**231**	*i* P		**Pn**	**18 24 36.3**	**+0.6**
PET	**Petropavlovsk**	**3.26**	**217**	*e*P		**Pn**	**18 24 39.0**	**+0.3**
PET				*e*S		**Sn**	**18 25 17.0**	**+0.5**
PET	**Petropavlovsk**	**3.26**	**217**	P		**Pn**	**18 24 38.8**	**+0.1**
PET				*e*S		**Sn**	**18 25 15.0**	**-1.5**
PET	**Petropavlovsk**	**3.26**	**217**	*e*PN		**Pn**	**18 24 39.0**	**+0.3**
PET				*e*S		**Sn**	**18 25 15.9**	**-0.6**
PET				pmax	pmax			
	comp=Z,62nm,0.3s							
PET				smax				
	comp=E,190nm,0.4s							
PET				smax				
	comp=N,163nm,0.5s							
MIPR	**Malaya Ipel'ka**	**4.56**	**224**	P		**Pn**	**18 24 57.4**	**+1.2**
SKR	**Severo-Kuril's**	**6.08**	**217**	*e*PN		**Pn**	**18 25 18.6**	**+1.6**
SKR				*e*		18 26 24.5		
ALID	**Alaid**	**6.13**	**221**	P		**Pn**	**18 25 18.9**	**+1.2**
SEY	**Seymchan**	**8.77**	**330**	*e*PN		**Pn**	**18 25 50.9**	**-2.6**
BILL	**Bilibino**	**12.59**	**8**‖	*e*PN		**Pn**	**18 26 49.2**	**+4.1**
BILL				*e*S		**Sn**	**18 29 02.1**	**-1.1**
BILL				pmax	pmax			
	comp=Z,5.0nm,1.2s							
MJAR	**Matsushiro Arr**	**25.00**	**230**	P		**Pn**	**18 29 04.1**	**-0.7**
	comp=Z,3.8nm,0.8s,mb3.9,baz=28,slow=8.2,SNR=14							
MJAR	**Matsushiro Arr**	**25.00**	**230**	P		**P**	**18 29 04.1**	**-0.7**
MJAR				pmax	pmax			
	comp=Z,4.0nm,0.8s							
MKAR	**Makanchi Array**	**48.03**	**295**	P		**P**	**18 32 17.5**	**-1.8**
	comp=Z,0.6nm,0.4s,mb3.8,baz=51,slow=9.7,SNR=5.2							
MKAR	**Makanchi Array**	**48.03**	**295**	P		**P**	**18 32 17.5**	**-1.8**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.4s							
ARCES	**ARCESS Array B**	**51.18**	**342**	P		**P**	**18 32 42.4**	**-0.5**
	comp=Z,0.8nm,0.5s,mb4.0,baz=30,slow=9.8,SNR=6.5							
ARCES	**ARCESS Array B**	**51.18**	**342**	P		**P**	**18 32 42.4**	**-0.5**
ARCES				pmax	pmax			
	comp=Z,1.0nm,0.5s							
NVAR	**Mina Array Bea**	**53.92**	**73**	P		**P**	**18 33 04.4**	**+0.9**
	comp=Z,0.1nm,0.3s,mb3.3,baz=338,slow=12,SNR=3.3							
FINES	**FINESS Array B**	**58.19**	**337**	P		**P**	**18 33 33.5**	**0.0**
	comp=Z,1.3nm,0.4s,mb4.3,baz=34,slow=7.6,SNR=20							
FINES	**FINESS Array B**	**58.19**	**337**	P		**P**	**18 33 33.6**	**0.0**
FINES				pmax	pmax			
	comp=Z,1.0nm,0.4s							
CMAR	**Chiang Mai Arr**	**59.76**	**258**	PcP	PcP		18 34 31.2	+0.3
	comp=Z,0.8nm,0.7s,baz=12,slow=3.2,SNR=6.3							
NOA	**NORSAR Array B**	**61.37**	**344**	P		**P**	**18 33 55.3**	**0.0**
	comp=Z,2.8nm,0.6s,mb4.5,baz=19,slow=6.9,SNR=15							
NOA	**NORSAR Array B**	**61.37**	**344**	P		**P**	**18 33 55.3**	**-0.1**
NOA				pmax	pmax			
	comp=Z,3.0nm,0.6s							
TXAR	**Lajitas Array**	**68.69**	**69**	P		**P**	**18 34 45.9**	**+2.6**
	comp=Z,0.1nm,0.6s,mb2.8,baz=324,slow=4.5,SNR=3.3							
BRTR	**Keskin Array B**	**75.31**	**321**	P		**P**	**18 35 21.5**	**-1.1**
	comp=Z,0.4nm,0.7s,mb3.3,baz=325,slow=4.2,SNR=3.3							
WRA	**Warramunga Arr**	**78.86**	**206**	P		**P**	**18 35 42.0**	**-0.5**
	comp=Z,0.3nm,0.5s,mb3.4,baz=11,slow=5.9,SNR=8.4							
ASAR	**Alice Springs**	**82.54**	**206**	P		**P**	**18 36 02.9**	**+0.8**
	comp=Z,1.3nm,0.9s,mb3.8,baz=15,slow=4.6,SNR=9.1							
ASAR	**Alice Springs**	**82.54**	**206**	P		**P**	**18 36 02.9**	**+0.8**
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
ESDC	**Sonseca Array**	**84.28**	**349**	P		**P**	**18 36 11.4**	**+0.4**
	comp=Z,0.4nm,0.6s,mb3.4,baz=350,slow=5.6,SNR=5.0							
COCO	**West Island**	**86.53**	**243**	*i* P		**P**	**18 36 17.8**	**-4.6**

*IDC **24** 18:47:07.0±4.2, 22.12S×69.56W, h0km, mb3.9/1, mb1 3.9/2, mb1mx3.5/15, mbtmp3.8/2, ML3.6/1, Error ellipse: s-maj=136.0km s-min=59.6km az=84.0*
*ISCJB **24** 18:47:15.3±0.8, 21.33S±0.04×70.70W±0.2, h78km±9km, Error ellipse: s-maj=32.1km s-min=6.2km az=2.2*
*GUC **24** 18:47:16.3±0.7, 21.29S×69.79W, h42km±3km, ML3.6*
ISC 24 18:47:16.0±0.8, 21.32S±0.04×70.0W±0.2, h73km±10km, n9, σ0s65/13, 4C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
TOCH	**Tocopilla**	**0.80**	**196**	‖ *i*P		**Pn**	**18 47 32.4**	**+0.1**
TOCH				*i* S		**Sn**	**18 47 45.0**	**+0.7**
TOCH				AML		AML	18 47 47.5	
	comp=E,6μm,0.1s							
MACH	**Maria Elena**	**0.89**	**168**	‖ *i*P		**Pn**	**18 47 33.6**	**+0.3**
MACH				*i* S		**Sn**	**18 47 46.1**	**0.0**
HMBC	**Humberston**	**1.04**	**4**	‖ *i*P		**Pn**	**18 47 35.0**	**-0.2**
HMBC				*i* S		**Sn**	**18 47 48.9**	**-0.5**
HMBC				AML		AML	18 47 50.0	
	comp=N,3μm,0.3s							
PSGC	**Pisagua**	**1.72**	**355**	‖ *i*P		**Pn**	**18 47 43.8**	**-0.2**
PSGC				*i* S		**Sn**	**18 48 06.0**	**+0.7**
PSGC				AML		AML	18 48 09.8	
	comp=E,603nm,0.5s							
CEN1	**Los Morros**	**2.07**	**186**	*i* S		**Sn**	**18 48 22.0**	**+8.5**
ANCH	**Antofagasta**	**2.39**	**190**	‖ *i*P		**Pn**	**18 47 51.2**	**-1.7**
ANCH				*i* S		**Sn**	**18 48 21.3**	**+0.1**
LPAZ	**La Paz**	**5.30**	**19**	Pn		**Pn**	**18 48 37.2**	**+4.6**
	comp=E,0.9nm,0.3s,baz=195,slow=7.3,SNR=28							
TORD	**Torodi Ar. Bea**	**78.22**	**71**	P		**P**	**18 59 08.6**	**+0.5**
	comp=E,0.7nm,0.6s,baz=248,slow=5.1,SNR=5.3							
MKAR	**Makanchi Array**	**146.06**	**35**	PKPbc		PKPbc	19 06 49.5	+2.0
	comp=E,0.4nm,0.2s,baz=332,slow=4.5,SNR=6.5							

*ISK **24** 18:50:37.5, 37.57N×35.90E, h20km, ML2.7*
*ISCJB **24** 18:50:38.5±0.8, 37.46N±0.06×35.91E±0.05, h25km±7km, Error ellipse: s-maj=11.0km s-min=6.1km az=161.9*
*CSEM **24** 18:50:38.5±0.2, 37.44N×35.94E, h21km±1km, ML2.7, Error ellipse: s-maj=5.3km s-min=2.9km az=151.0*
*DDA **24** 18:50:38.2, 37.36N×35.92E, h7km±1km, Md3.0*
ISC 24 18:50:38.6±0.7, 37.46N±0.07×35.91E±0.05, h24km±6km, n15, σ0s54/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KOZT	**Kozan**	**0.07**	**293**	*e*PG		**Pb**	**18 50 42.7**	**-0.3**
KOZT				*e*SG		**Sb**	**18 50 45.5**	**-0.3**
KOZT	**Kozan**	**0.07**	**293**	*e*Pg		**Pb**	**18 50 42.7**	**-0.2**
KOZT				*e*Sg		**Sb**	**18 50 45.5**	**-0.3**
ANDN	**Andirin**	**0.37**	**70**	*i* P		**Pb**	**18 50 46.5**	**-0.2**
ANDN				*i* S		**Sb**	**18 50 52.6**	**+0.4**
ANDN	**Andirin**	**0.37**	**70**	*i* P		**Pb**	**18 50 46.5**	**-0.2**
ANDN				*i* S		**Sb**	**18 50 52.6**	**+0.4**
KARA	**Karaisali**	**0.70**	**254**	*e*PG		**Pb**	**18 50 51.5**	**-0.7**
KARA				*e*SG		**Sb**	**18 51 02.8**	**+1.3**
KARA	**Karaisali**	**0.70**	**254**	*e*Pg		**Pb**	**18 50 51.5**	**-0.7**
KARA				*e*Sg		**Sb**	**18 51 02.8**	**+1.3**
KMRS	**Kahramanmaras**	**0.79**	**86**	*e*PG		**Pb**	**18 50 53.5**	**-0.3**
KMRS				*e*SG		**Sb**	**18 51 04.5**	**+0.5**
KMRS	**Kahramanmaras**	**0.79**	**86**	*e*Pg		**Pb**	**18 50 53.5**	**-0.2**
KMRS				*e*Sg		**Sb**	**18 51 04.5**	**+0.4**
COBT	**Iskenderun**	**0.97**	**163**	*i* P		**Pn**	**18 50 56.0**	**-0.8**
COBT				*i* S		**Sb**	**18 51 09.4**	**+0.2**
COBT	**Iskenderun**	**0.97**	**163**	*i* P		**Pn**	**18 50 56.0**	**-0.8**
COBT				*i* S		**Sb**	**18 51 09.4**	**+0.2**
GAZ	**Gaziantep**	**1.08**	**105**	*e*PN		**Pn**	**18 50 58.5**	**+0.2**
GAZ	**Gaziantep**	**1.08**	**105**	*e*Pn		**Pn**	**18 50 58.5**	**+0.3**
SARI	**SarD1z-Kayseri**	**1.37**	**27**	*e*PG		**Pn**	**18 50 56.3**	**-6.0**
MALT	**Malatya**	**2.17**	**66**	*e*PN		**Pn**	**18 51 13.2**	**0.0**
MALT	**Malatya**	**2.17**	**66**	*e*Pn		**Pn**	**18 51 13.2**	**-0.1**

*ISCJB **24** 19:04:59.9±0.6, 36.41N±0.04×29.28E±0.04, h10km, Error ellipse: s-maj=5.4km s-min=4.6km az=19.0*
*CSEM **24** 19:04:59.6±0.2, 36.40N×29.29E, h8km, MD3.1, Error ellipse: s-maj=5.0km s-min=3.9km az=179.0*
*DDA **24** 19:04:59.4, 36.40N×29.21E, h7km±1km, Md3.1*
*ISK **24** 19:04:59.4, 36.43N×29.27E, h9km, MD3.0*
ISC 24 19:04:59.9±1.0, 36.40N±0.04×29.25E±0.06, h6km±9km, n24, σ0s75/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AKAS	**Kas**	**0.33**	**120**	*i* P		**Pg**	**19 05 05.6**	**-0.7**
AKAS				*i* S		**Sg**	**19 05 12.1**	**+1.5**
AKAS	**Kas**	**0.33**	**120**	*i* P		**Pg**	**19 05 05.6**	**-0.7**
AKAS				*i* S		**Sg**	**19 05 12.1**	**+1.4**
ELL	**Elmali**	**0.63**	**56**	*e*PG		**Pg**	**19 05 11.5**	**-0.6**
ELL				*e*SG		**Sg**	**19 05 20.8**	**+0.5**
ELL	**Elmali**	**0.63**	**56**	*e*Pg		**Pg**	**19 05 11.5**	**-0.6**
ELL				*e*Sg		**Sg**	**19 05 20.8**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.78**	**15**	*e*PG		**Pg**	**19 05 14.3**	**-0.7**
GLHS				*e*SG		**Sg**	**19 05 25.3**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.78**	**15**	*e*Pg		**Pg**	**19 05 14.3**	**-0.6**
GLHS				*e*Sg		**Sg**	**19 05 25.3**	**+0.2**
GOLH	**Golhisar**	**0.87**	**16**	*i* P		**Pg**	**19 05 15.6**	**-1.1**
GOLH				*i* S		**Sg**	**19 05 29.1**	**+1.1**
GOLH	**Golhisar**	**0.87**	**16**	*i* P		**Pg**	**19 05 15.6**	**-1.1**
GOLH				*i* S		**Sg**	**19 05 29.1**	**+1.1**
YER	**Yerkesik**	**1.07**	**314**	*e*PG		**Pg**	**19 05 20.1**	**-0.4**
YER	**Yerkesik**	**1.07**	**314**	*e*Pg		**Pg**	**19 05 20.1**	**-0.4**
DNZL	**Cakiroluk**	**1.30**	**353**	*i* P		**Pn**	**19 05 23.9**	**-0.6**
DNZL				*i* S		**Sg**	**19 05 42.1**	**+0.5**
DNZL	**Cakiroluk**	**1.30**	**353**	*i* P		**Pn**	**19 05 23.9**	**-0.7**
DNZL				*i* S		**Sg**	**19 05 42.2**	**+0.5**
DENT	**Denizli**	**1.36**	**353**	*e*PN		**Pn**	**19 05 24.5**	**-0.9**
DENT	**Denizli**	**1.36**	**353**	*e*Pn		**Pn**	**19 05 24.5**	**-0.9**
DAT	**Datca**	**1.39**	**284**	*e*PN		**Pn**	**19 05 25.8**	**0.0**
DAT	**Datca**	**1.39**	**284**	*e*Pn		**Pn**	**19 05 25.8**	**0.0**
MLSB	**Milas**	**1.48**	**307**	*e*PN		**Pn**	**19 05 27.2**	**+0.1**
MLSB	**Milas**	**1.48**	**307**	*e*Pn		**Pn**	**19 05 27.2**	**+0.1**
BDRM	**Kayabasi**	**1.60**	**295**	*i* P		**Pn**	**19 05 29.0**	**+0.4**
BDRM				*i* S		**Sn**	**19 05 51.1**	**+1.5**
BDRM	**Kayabasi**	**1.60**	**295**	*i* P		**Pn**	**19 05 29.0**	**+0.3**
BDRM				*i* S		**Sn**	**19 05 51.1**	**+1.5**
BODT	**Bodrum**	**1.69**	**294**	*e*PN		**Pn**	**19 05 29.8**	**-0.2**
BODT	**Bodrum**	**1.69**	**294**	*e*Pn		**Pn**	**19 05 29.8**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.76**	**52**	*e*PN		**Pn**	**19 05 30.5**	**-0.5**
SUTC	**Sutluce-Ispart**	**1.76**	**52**	*e*Pn		**Pn**	**19 05 30.5**	**-0.5**

*IDC **24** 19:38:06.1±0.7, 10.27N×125.41E, h0km, mb3.9/11, mb1 4.1/12, mb1mx4.0/20, mbtmp4.0/12, ML4.3/1, MS3.5/9, Ms1 3.5/9, ms1mx3.2/26, Error ellipse: s-maj=35.7km s-min=14.4km az=68.0*
*MAN **24** 19:38:07, 10.19N×125.20E, h2km, mb5.3, ML4.2, MS4.5*
*ISCJB **24** 19:38:09.6±0.4, 10.20N±0.04×125.32E±0.04, h33km, mb4.0/14, MS3.5/7, Error ellipse: s-maj=6.4km s-min=5.2km az=175.7*
*BJI **24** 19:38:10.2, 10.20N×125.30E, h25km, mB4.5/1, mb4.6/4*
*NEIC **24** 19:38:11.3±0.5, 10.18N×125.32E, h35km, mb4.3/2, Error ellipse: s-maj=24.2km s-min=8.7km az=68.0*
ISC 24 19:38:11.5±0.4, 10.17N±0.04×125.30E±0.05, h35km, n52, σ1s15/46, mb4.0/14, MS3.5/7, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
OCLP	**Ormoc**	**1.10**	**322**	*e*P		**Pn**	**19 38 27.8**	**-2.7**
BUTP	**Butuan**	**1.24**	**165**	*e*P		**Pn**	**19 38 31.7**	**-0.6**
LLP	**Lapu-Lapu**	**1.32**	**276**	*e*P		**Pn**	**19 38 30.3**	**-3.1**
LLP				*e*S		**Sn**	**19 38 47.9**	**-1.8**
BESP	**Borongan**	**1.43**	**6**	*e*P		**Pn**	**19 38 33.0**	**-1.8**
TBP	**Tagbilaran**	**1.49**	**251**	*e*P		**Pn**	**19 38 34.0**	**-1.8**
TBP				*e*S		**Sn**	**19 38 55.3**	**+1.2**
SNPH	**Sibulan**	**2.19**	**248**	‖ *e*P		**Pn**	**19 38 45.4**	**0.0**
SNPH				*i* S		Sx	19 39 30.6	
BUKP	**Musuan**	**2.29**	**186**	*e*P		**Pn**	**19 38 47.0**	**+0.2**
CNP	**Catarman**	**2.40**	**345**	*e*P		**Pn**	**19 38 48.6**	**+0.3**
GUIM	**Jordan**	**2.70**	**281**	*e*P		**Pn**	**19 38 51.7**	**-0.8**
PAGZ	**Pagadian**	**2.98**	**219**	*e*P		**Pn**	**19 38 58.7**	**+2.3**
DAV	**Davao City (W)**	**3.10**	**175**	*e*P		**Pn**	**19 38 56.8**	**-1.1**
DAV				LR		LR	19 40 36.5	
DAV	**Davao City (W)**	**3.10**	**175**			**Pn**	**19 39 04.7**	**+6.8**
	97nm,0.3s,baz=262,slow=7.1,SNR=4.3							
DAV				LR		LR	19 40 36.5	
	comp=Z,1μm,19.9s,baz=124,slow=47							
MATI	**Mati**	**3.34**	**163**	*e*P		**Pn**	**19 39 05.5**	**+4.3**
PVCP	**Virac**	**3.58**	**342**	*e*P		**Pn**	**19 39 05.2**	**+0.7**
IPIL	**Ipil**	**3.59**	**229**	*e*P		**Pn**	**19 39 05.1**	**+0.4**
OTRP	**Odiongan**	**3.88**	**304**	*e*P		**Pn**	**19 39 08.4**	**-0.2**
AUQP	**San Andres**	**4.05**	**321**	*e*P		**Pn**	**19 39 20.7**	**+10**
CUYO	**Cuyo Island**	**4.26**	**9**	*e*P		**Pn**	**19 39 14.1**	**+0.2**
BUSP	**Coron**	**5.32**	**290**	*e*P		**Pn**	**19 39 28.3**	**-0.2**
TGY	**Tagaytay City**	**5.78**	**313**	Pn		**Pn**	**19 39 35.6**	**+0.8**
	8.7nm,0.3s,baz=334,slow=7.1,SNR=4.8							
ENPP	**El Nido**	**5.86**	**281**	*e*P		**Pn**	**19 39 35.5**	**-0.4**
LUBP	**Lubang**	**6.08**	**306**	*e*P		**Pn**	**19 39 40.5**	**+1.7**
PALP	**Palanan**	**7.39**	**338**	*e*P		**Pn**	**19 39 57.0**	**+0.1**
CAUP	**Cauayan**	**7.53**	**334**	*e*P		**Pn**	**19 40 00.2**	**+1.4**
APYP	**Conner**	**8.60**	**333**	*e*P		**Pn**	**19 40 16.5**	**+3.1**
GUMO	**Guam**	**19.45**	**78**	LR		LR	19 47 58.4	
	comp=Z,79nm,19.1s,baz=255,slow=31							
CBIJ	**Chichi jima**	**23.18**	**41**	LR		LR	19 50 48.9	
	comp=Z,86nm,19.6s,MS3.2,baz=251,slow=33							
CMAR	**Chiang Mai Arr**	**26.80**	**291**	P		**P**	**19 43 48.9**	**+0.3**
	1.4nm,0.9s,mb3.5,baz=106,slow=7.3,SNR=11							
KSRS	**Korea Array**	**27.26**	**5**	P		**P**	**19 43 52.3**	**-0.2**
	1.1nm,0.8s,mb3.4,baz=190,slow=12,SNR=4.9							
KSRS				LR		LR	19 53 30.8	
	comp=Z,93nm,20.9s,MS3.3,baz=47,slow=34							
MJAR	**Matsushiro Arr**	**28.74**	**22**	LR		LR	19 53 43.6	
	comp=Z,90nm,21.2s,MS3.4,baz=170,slow=33							
WRA	**Warramunga Arr**	**31.22**	**163**	P		**P**	**19 44 27.0**	**-0.8**
	1.1nm,0.8s,mb3.7,baz=345,slow=9.1,SNR=5.2							
WRA				PcP		PcP	19 47 22.3	+0.3
	1.1nm,0.9s,baz=343,slow=2.7,SNR=4.7							
LZH	**Lanzhou**	**32.32**	**326**	*e*P		**P**	**19 44 42.5**	**+5.2**
LZH				pP		pP	19 44 47.0	-0.4
LZH				sP		sP	19 44 49.3	-2.3
LZH				pmax	pmax			
	comp=Z,18nm,1.5s,mb4.7							
ASAR	**Alice Springs**	**34.67**	**166**	P		**P**	**19 44 58.2**	**+0.4**
	comp=Z,1.0nm,0.7s,mb3.9,baz=351,slow=6.3,SNR=16							
ASAR				PcP		PcP	19 47 32.2	+0.7
	comp=Z,1.3nm,1.0s,baz=356,slow=9,SNR=5.1							
SHL	**Shillong**	**35.16**	**300**	*e*PKP		**P**	**19 45 03.0**	**+0.8**
GTA	**Gaotai**	**36.92**	**326**	*e*P		**P**	**19 45 19.3**	**+2.3**
GTA				pP		pP	19 45 23.4	-3.8
GTA				pmax	pmax			
	comp=Z,4.0nm,1.4s,mb4.1							
ASAJ	**Asahikawa**	**36.99**	**21**	LR		LR	19 58 07.8	
	comp=Z,90nm,21.7s,MS3.5,baz=293,slow=33							
HNR	**Honiara**	**39.60**	**118**	LR		LR	19 59 08.8	
	comp=Z,78nm,18.1s,MS3.6,baz=281,slow=32							
SONM	**Songino Array**	**40.78**	**340**	P		**P**	**19 45 49.5**	**+0.3**
	comp=Z,1.0nm,0.6s,mb3.6,baz=151,slow=6.8,SNR=5.5							
SONM				LR		LR	20 03 01.7	
	comp=Z,55nm,21.5s,MS3.4,baz=76,slow=37							
STKA	**Stephens Creek**	**44.63**	**160**	*e*P		**P**	**19 46 22.1**	**+1.5**
	comp=Z,1.5nm,1.2s,mb3.7							
STKA	**Stephens Creek**	**44.63**	**160**	P		**P**	**19 46 21.5**	**+0.9**
	comp=Z,2.8nm,0.8s,mb4.1,baz=331,slow=11,SNR=3.2							
MK31	**Makanchi Array**	**51.53**	**323**	P		**P**	**19 47 13.7**	**-0.1**
MKAR	**Makanchi Array**	**51.53**	**323**	P		**P**	**19 47 13.8**	**0.0**
MKAR	**Makanchi Array**	**51.53**	**323**	P		**P**	**19 47 13.8**	**0.0**
	comp=Z,0.8nm,0.6s,mb3.8,baz=122,slow=7.4,SNR=9.3							
YAK	**Yakutsk**	**51.86**	**3**	*e*P		**P**	**19 47 17.1**	**+1.0**
	comp=Z,7.3nm,0.6s,mb4.8							
ZALV	**Zalesovo Beam**	**54.25**	**332**	P		**P**	**19 47 33.2**	**-0.6**
	comp=Z,0.6nm,0.4s,mb3.9,baz=99,slow=9.2,SNR=4.4							
ILAR	**Eielson Array**	**79.94**	**26**	P		**P**	**19 50 15.9**	**-0.8**
	comp=Z,0.5nm,0.7s,mb3.5,baz=248,slow=5.8,SNR=6.2							
ARCES	**ARCESS Array B**	**83.95**	**340**	P		**P**	**19 50 35.7**	**-1.9**
ARCES	**ARCESS Array B**	**83.95**	**340**	P		**P**	**19 50 35.7**	**-1.9**
	comp=Z,2.3nm,1.0s,mb4.2,baz=81,slow=7.5,SNR=5.0							
FINES	**FINESS Array B**	**85.52**	**332**	P		**P**	**19 50 44.5**	**-1.2**
	comp=Z,4.2nm,1.0s,mb4.6,baz=47,slow=4.9,SNR=4.3							
NOA	**NORSAR Array B**	**92.42**	**334**	LR		LR	20 35 48.6	
	comp=Z,36nm,21.2s,MS3.8,baz=55,slow=38							
PLCA	**Paso Flores**	**146.49**	**158**	PKPbc		PKPbc	19 57 50.2	+0.9
PLCA	**Paso Flores**	**146.49**	**158**	PKPbc		PKPbc	19 57 50.2	+0.9
	comp=Z,3.3nm,0.9s,baz=204,slow=4.8,SNR=5.1							

KRSC 24 19:49:22.1±1.4, 55.94N×161.55E, h80km±50km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
ZLN	**Zelenaya**	**0.43**	**281**	*i* P		**Pn**	19 49 36.3	+1.1
ZLN				*e*S		Sn	19 49 46.9	+2.0
BZGR	**Bezymyannyi-Gr**	**0.48**	**270**	*e*P		Pn	19 49 36.3	+0.7
BZGR				*e*S		Sn	19 49 46.9	+1.3
KRSR	**Krestovskiy**	**0.62**	**297**	*e*P		Pn	19 49 37.1	+0.2
KRSR				*e*S		Sn	19 49 48.0	+0.2
KLY	**Klyuchi**	**0.63**	**307**	*i* P		Pn	19 49 36.3	-0.7
KLY				*i* S		Sn	19 49 46.8	-1.2
KPT	**Kopyto**	**0.75**	**273**	*i* P		Pn	19 49 38.8	+0.6
KPT				*i* S		Sn	19 49 50.8	+0.6
SRKR	**Sorokina**	**0.75**	**344**	*i* P		Pn	19 49 38.6	+0.4
SRKR				*e*S		Sn	19 49 50.5	+0.3
KBTR	**Krutoberegovo**	**0.76**	**69**	*i* P		Pn	19 49 39.3	+1.0
KBTR				*i* S		Sn	19 49 51.9	+1.5
KOZ	**Kozyrevsk**	**0.95**	**278**	*i* P		Pn	19 49 40.8	+0.3
KOZ				*i* S		Sn	19 49 54.7	+0.5
SRDR	**Sredinnyy**	**1.09**	**291**	*i* P		Pn	19 49 42.1	-0.1
SRDR				*i* S		Sn	19 49 56.7	-0.6
MKZ	**Mys Kozlova**	**1.39**	**176**	*e*P		Pn	19 49 46.8	+0.8
MKZ				*e*S		Sn	19 50 04.8	+0.9
BKI	**Bering**	**2.62**	**105**	*e*P		Pn	19 50 02.7	+0.5
BKI				*e*S		Sn	19 50 32.6	-0.4
SPN	**Mys Shipunski**	**2.98**	**198**	S		Sn	19 50 41.7	-0.1
GNL	**Ganaly**	**3.07**	**224**	*i* P		Pn	19 50 09.9	+1.6
AVH	**Avacha**	**3.14**	**213**	P		Pn	19 50 11.4	+2.1

*IDC **24** 20:08:38.6±1.3, 3.35S×137.78E, h0km, mb3.7/3, mb1 4.2/5, mb1mx3.8/13, mbtmp4.0/5, ML4.1/2, Error ellipse: s-maj=60.1km s-min=24.8km az=84.0*
NEIC 24 20:08:44.0±0.9, 3.37S×137.70E, h35km, mb3.9/1, Error ellipse: s-maj=31.0km s-min=14.5km az=87.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
WB2	**Warramunga Arr**	**16.79**	**191**	*e*P		Pn	20 12 37.9	+1.4
WRA	**Warramunga Arr**	**16.79**	**191**	Pn		Pn	20 12 36.0	-0.5
	0.8nm,0.3s,baz=12,slow=13,SNR=19							
CTA	**Charters Tower**	**18.59**	**154**	P		Pn	20 12 58.7	-0.1
CTA	**Charters Tower**	**18.59**	**154**	P		Pn	20 12 58.7	-0.1
	0.4nm,0.3s,baz=334,slow=12,SNR=5.5							
CTAO	**Charters Tower

XAN	**Xi'an**	**3.58**	**91**	Pn	**Pn**	**20 30 58.0**	**+0.5**
XAN				Pg	**Pg**	**20 31 09.4**	**-0.1**
XAN				Sn	**Sn**	**20 31 43.6**	**+3.2**
XAN				Sg	**Sg**	**20 31 56.1**	**+0.1**
XAN				smax			
	comp=N,170nm,0.6s						
XAN				smax			
	comp=E,93nm,0.7s						
ENH	**Enshi**	**5.70**	**132**	*e*P	**Pn**	**20 31 26.4**	**-0.1**
	comp=E,11nm,0.6s						
GTA	**Gaotai**	**6.47**	**325**	*e*Pn	**Pn**	**20 31 36.4**	**-0.7**
GTA				Sn	**Sn**	**20 32 52.4**	**+1.0**
GTA				LR	LR		
	comp=N,230nm,7.4s						
GTA				LR	LR		
	comp=E,120nm,7.4s						
GTA				LR	LR		
	comp=Z,160nm,7.4s						
BTO	**Baotou**	**7.71**	**32**	*e*P	**Sn**	**20 33 14.5**	**-7.5**
CMAR	**Chiang Mai Arr**	**16.47**	**199**	Pn	**Pn**	**20 33 55.0**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=5,4,slow=12,SNR=4.7						
KSRS	**Korea Array**	**19.18**	**74**	P	**Pn**	**20 34 26.4**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=280,slow=10,SNR=4.5						
MK31	**Makanchi Array**	**21.04**	**313**	*e*P	**P**	**20 34 48.8**	**+2.9**
MKAR	**Makanchi Array**	**21.04**	**313**	P	**P**	**20 34 45.6**	**-0.3**
	comp=Z,0.9nm,0.6s,mb3.2,baz=118,slow=9.7,SNR=8.1						
ZALV	**Zalesovo Beam**	**24.18**	**331**	P	**P**	**20 35 17.8**	**-0.6**
	comp=Z,0.2nm,0.3s,mb3.1,baz=133,slow=10.0,SNR=2.6						
AAK	**Ala-Archa**	**24.95**	**299**	LR	LR	20 45 30.3	
	comp=Z,34nm,21.4s,baz=180,slow=37						
KURK	**Kurchatov**	**25.11**	**319**	P	**P**	**20 35 26.2**	**-0.6**
	comp=Z,0.5nm,0.3s,mb3.7,baz=124,slow=9.8,SNR=7.8						
ARCES	**ARCESS Array B**	**54.63**	**335**	P	**P**	**20 39 29.6**	**-1.0**
	comp=Z,0.8nm,0.8s,mb3.8,baz=92,slow=9.7,SNR=4.1						
FINES	**FINESS Array B**	**55.26**	**325**	P	**P**	**20 39 34.9**	**-0.3**
FINES	**FINESS Array B**	**55.26**	**325**	P	**P**	**20 39 34.9**	**-0.3**
	comp=Z,1.6nm,0.8s,mb4.1,baz=97,slow=7.9,SNR=6.7						
BRTR	**Keskin Array B**	**55.62**	**298**	P	**P**	**20 39 37.6**	**-0.6**
	comp=Z,0.5nm,0.7s,mb3.6,baz=43,slow=6.5,SNR=2.3						
WRA	**Warramunga Arr**	**60.83**	**148**	P	**P**	**20 40 14.0**	**-0.8**
	comp=Z,1.0nm,0.5s,mb4.2,baz=344,slow=7.1,SNR=9.2						
ASAR	**Alice Springs**	**63.93**	**150**	P	**P**	**20 40 35.2**	**-0.2**
	comp=Z,0.4nm,0.4s,mb4.0,baz=331,slow=6.6,SNR=8.0						
ILAR	**Eielson Array**	**66.88**	**26**	P	**P**	**20 40 52.6**	**-1.4**
	comp=Z,0.4nm,0.9s,mb3.7,baz=293,slow=5.1,SNR=3.8						

IDC 24 20:30:20.7±2.5, 7°38S×128°18E, h0km, mb3.5/1, mb1 3.4/3, mb1mx3.3/15, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=288.5km s-min=32.6km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.84**	**155**	Pn	Pn	20 33 37.1	-1.2
	0.1nm,0.3s,baz=333,slow=14,SNR=13						
WRA				Sn	Sn	20 35 57.8	-15
	0.5nm,0.3s,baz=337,slow=22,SNR=12						
ASAR	**Alice Springs**	**17.10**	**162**	P	Pn	20 34 22.4	+1.2
	0.1nm,0.3s,baz=336,slow=9.7,SNR=5.5						
MKAR	**Makanchi Array**	**67.57**	**328**	P	P	20 41 19.1	+0.1
	0.3nm,0.5s,baz=122,slow=7.5,SNR=4.6						

*ISCJB **24** 20:30:25.4±2.1, 34°.15N±0°.08×104°.6E±0°.2, h1km±13km, mb3.8/10, Error ellipse: s-maj=29.2km s-min=11.5km az=162.0*
*IDC **24** 20:30:27.4±0.8, 34°.27N×104°.67E, h0km, mb3.6/10, mb1 3.8/10, mb1mx3.7/23, mbtmp3.7/10, Error ellipse: s-maj=48.3km s-min=15.9km az=55.0*
*NEIC **24** 20:30:28.9±0.6, 34°.26N×104°.65E, h10km, Error ellipse: s-maj=27.2km s-min=10.2km az=49.0*
*BJI **24** 20:30:30.8, 34°.18N×104°.55E, h21km, ML3.9/5*
ISC 24 20:30:28.0±2.2, 34°.19N±0°.09×104°.6E±0°.2, h4km±13km, n15, σ0°38/16, mb3.7/10, Gansu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LZH	**Lanzhou**	**1.99**	**343**	Pg	**Pg**	**20 31 05.8**	**-0.4**
LZH				Sg	**Sg**	**20 31 32.5**	**+0.5**
LZH				smax			
	comp=N,520nm,0.7s						
LZH				smax			
	comp=E,620nm,0.5s						
WHN	**Wuhan**	**9.03**	**111**	P	**Pn**	**20 32 46.0**	**+6.9**
KMI	**Kunming**	**9.17**	**191**	P	**Pn**	**20 32 40.8**	**-0.3**
MK31	**Makanchi Array**	**21.03**	**313**	P	**P**	**20 35 12.7**	**+0.1**
MKAR	**Makanchi Array**	**21.03**	**313**	P	**P**	**20 35 12.3**	**-0.4**
MKAR	**Makanchi Array**	**21.03**	**313**	P	**P**	**20 35 12.3**	**-0.3**
	comp=E,0.9nm,0.7s,mb3.2,baz=107,slow=14,SNR=3.0						
ZALV	**Zalesovo Beam**	**24.18**	**331**	P	**P**	**20 35 44.8**	**-0.4**
	comp=E,0.4nm,0.3s,mb3.3,baz=140,slow=9.4,SNR=4.4						
KURK	**Kurchatov**	**25.10**	**319**	P	**P**	**20 35 53.6**	**0.0**
	comp=E,0.7nm,0.4s,mb3.6,baz=126,slow=9.8,SNR=6.3						
ARCES	**ARCESS Array B**	**54.63**	**335**	P	**P**	**20 39 57.3**	**0.0**
	comp=E,0.9nm,0.7s,mb3.9,baz=86,slow=7.5,SNR=4.8						
FINES	**FINESS Array B**	**55.26**	**325**	P	**P**	**20 40 01.9**	**0.0**
	comp=E,1.1nm,0.5s,mb4.1,baz=96,slow=7.7,SNR=6.4						
BRTR	**Keskin Array B**	**55.61**	**298**	P	**P**	**20 40 05.3**	**+0.5**
	comp=E,0.3nm,0.5s,mb3.6,baz=97,slow=12,SNR=2.4						
WRA	**Warramunga Arr**	**60.83**	**148**	P	**P**	**20 40 41.4**	**-0.1**
	comp=E,1.8nm,0.6s,mb4.1,baz=344,slow=7.2,SNR=7.1						
ASAR	**Alice Springs**	**63.93**	**150**	P	**P**	**20 41 02.7**	**+0.5**
	comp=E,0.5nm,0.5s,mb3.8,baz=332,slow=6.9,SNR=6.0						
ILAR	**Eielson Array**	**66.90**	**26**	P	**P**	**20 41 20.3**	**-0.6**
	comp=E,0.5nm,0.9s,mb3.5,baz=287,slow=8.8,SNR=4.0						
STKA	**Stephens Creek**	**74.38**	**148**	P	**P**	**20 42 07.5**	**+0.6**
	comp=E,0.6nm,0.5s,mb3.8,baz=0.0,slow=5.1,SNR=2.5						

IDC 24 20:35:55.2±4.3, 8°33S×158°17E, h131km±63km, mb3.4/4, mb1 3.6/5, mb1mx3.3/16, mbtmp3.5/5, Error ellipse: s-maj=66.5km s-min=27.3km az=118.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.07**	**122**	P	Pn	20 36 31.2	+1.1
	359nm,0.3s,baz=210,slow=4.2,SNR=79						
HNR				S	Sn	20 36 57.1	+0.3
	190nm,0.3s,baz=20,slow=21,SNR=37						
WRA	**Warramunga Arr**	**25.79**	**241**	P	P	20 41 14.2	+0.1
	0.9nm,0.3s,baz=67,slow=9.3,SNR=27						
ASAR	**Alice Springs**	**27.80**	**234**	P	P	20 41 31.6	-0.6
	0.2nm,0.4s,baz=65,slow=9.3,SNR=4.1						
STKA	**Stephens Creek**	**28.05**	**211**	P	P	20 41 34.8	+0.6
	1.4nm,0.7s,baz=36,slow=12,SNR=3.7						
SONM	**Songino Array**	**72.17**	**326**	P	P	20 47 05.8	+0.2
	0.8nm,0.5s,baz=114,slow=5.2,SNR=3.2						

*IDC **24** 20:42:18.8±7.0, 30°.37N×105°.06E, h0km, mb3.5/2, mb1 3.6/3, mb1mx3.3/22, mbtmp3.4/3, Error ellipse: s-maj=167.8km s-min=36.1km az=128.0*
BJI 24 20:42:12.9, 31°.37N×103°.94E, h10km, ML3.1/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.48**	**199**	Pg	Pg	20 42 19.8	-2.5
CD2				Sg	Sg	20 42 27.3	-1.4
CD2				smax			
	comp=N,3μm,0.8s						
CD2				smax			
	comp=E,2μm,0.4s						
XAN	**Xi'an**	**4.97**	**56**	Pn	Pn	20 43 18.6	-9.0
XAN				Pg	Pg	20 43 42.3	-5.8
XAN				Sn	Sn	20 44 19.0	-6.1
XAN				Sg	Sg	20 44 42.5	-10
XAN				smax			
	comp=N,32nm,0.9s						
XAN				smax			
	comp=E,12nm,1.0s						
CMAR	**Chiang Mai Arr**	**13.63**	**201**	Pn	Pn	20 45 26.1	-0.2
	comp=E,0.1nm,0.3s,baz=10,slow=11,SNR=4.1						
KSRS	**Korea Array**	**20.67**	**66**	P	P	20 46 55.0	+2.1
	comp=E,1.0nm,0.8s,baz=257,slow=10,SNR=3.8						
WRA	**Warramunga Arr**	**58.77**	**146**	P	P	20 52 09.3	-2.0
	comp=E,0.8nm,0.5s,baz=339,slow=7.9,SNR=21						

*ISCJB **24** 20:52:42.9±0.3, 36°.54N±0°.02×1°.00E±0°.02, h10km, mb3.8/4, Error ellipse: s-maj=2.9km s-min=2.5km az=172.1*
*IDC **24** 20:52:42.5±1.2, 36°.36N×1°.02E, h0km, mb3.7/4, mb1 3.7/7, mb1mx3.5/29, mbtmp3.7/7, ML3.6/3, Error ellipse: s-maj=30.8km s-min=22.7km az=132.0*
*MDD **24** 20:52:44.8±0.3, 36°.48N×1°.05E, h0km, mbLg3.0/41, Error ellipse: s-maj=4.4km s-min=3.5km az=57.0, PRIMO*
*NEIC **24** 20:52:44.5±0.7, 36°.42N×1°.07E, h14km±7km, MG4.2(MDD), Error ellipse: s-maj=5.0km s-min=3.6km az=149.0*
*CSEM **24** 20:52:44.2±0.1, 36°.44N×1°.04E, h10km, ML4.2, Error ellipse: s-maj=3.6km s-min=3.2km az=6.0*
*CRAAG **24** 20:52:45.0, 36°.37N×1°.12E, Ml4.2*
*LDG **24** 20:52:46.6±0.3, 36°.32N×1°.14E, h30km, Ml3.2/5, Error ellipse: s-maj=5.8km s-min=2.5km az=152.0*
*INMG **24** 20:52:47.4±1.2, 36°.48N×1°.03E, h31km, ML2.7, Error ellipse: s-maj=7.1km s-min=3.0km az=136.0*
ISC 24 20:52:44.8±0.3, 36°.53N±0°.02×0°.98E±0°.02, h10km, n316, σ1s46/491, mb3.8/4, 6C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ECHF	**Ech Chlef**	**0.47**	**142**	P	**Pg**	**20 52 51.3**	**-2.7**
ECHF	**Ech Chlef**	**0.47**	**142**	P	**Pg**	**20 52 51.3**	**-2.7**
ECHF	**Ech Chlef**	**0.47**	**142**	P	**Pg**	**20 52 51.3**	**-2.7**
ECHF	**Ech Chlef**	**0.47**	**142**	P	**Pg**	**20 52 51.3**	**-2.7**
ECHA	**Ech Chlef**	**0.49**	**140**	P	**Pg**	**20 52 51.3**	**-3.0**
ECHA	**Ech Chlef**	**0.49**	**140**	P	**Pg**	**20 52 51.3**	**-3.0**
EBNR	**Beni Rached**	**0.50**	**118**	P	**Pg**	**20 52 52.8**	**-1.7**
EBNR	**Beni Rached**	**0.50**	**118**	P	**Pg**	**20 52 52.8**	**-1.7**
EANR	**'Ain N'Sour**	**0.58**	**171**	P	**Pg**	**20 52 53.9**	**-2.2**
EANR	**'Ain N'Sour**	**0.58**	**171**	P	**Pg**	**20 52 53.9**	**-2.2**
EANR	**'Ain N'Sour**	**0.58**	**171**	P	**Pg**	**20 52 53.9**	**-2.2**
EANR	**'Ain N'Sour**	**0.58**	**171**	P	**Pg**	**20 52 53.9**	**-2.2**
ETRT	**Tiaret**	**1.16**	**167**	P	**Pb**	**20 53 04.4**	**-2.6**
ETRT	**Tiaret**	**1.16**	**167**	P	**Pb**	**20 53 04.4**	**-2.6**
ETRT	**Tiaret**	**1.16**	**167**	P	**Pb**	**20 53 04.4**	**-2.6**
ETRT	**Tiaret**	**1.16**	**167**	P	**Pb**	**20 53 04.4**	**-2.6**
USTO	**Oran**	**1.47**	**238**	P	**Pn**	**20 53 15.0**	**+3.6**
USTO	**Oran**	**1.47**	**238**	P	**Pn**	**20 53 15.0**	**+3.6**
USTO	**Oran**	**1.47**	**238**	P	**Pn**	**20 53 15.0**	**+3.6**
EMHD	**Djebel Mahouad**	**1.62**	**101**	P	**Pn**	**20 53 13.5**	**+0.1**
EMHD	**Djebel Mahouad**	**1.62**	**101**	P	**Pn**	**20 53 13.5**	**+0.1**
EMHD	**Djebel Mahouad**	**1.62**	**101**	P	**Pn**	**20 53 13.5**	**+0.1**
EMHD	**Djebel Mahouad**	**1.62**	**101**	P	**Pn**	**20 53 13.5**	**+0.1**
ABA	**Alger-Bouzarea**	**1.67**	**80**	P	**Pn**	**20 53 14.8**	**+0.7**
ABA	**Alger-Bouzarea**	**1.67**	**80**	P	**Pn**	**20 53 14.8**	**+0.7**
ABA	**Alger-Bouzarea**	**1.67**	**80**	P	**Pn**	**20 53 14.8**	**+0.7**
ABA	**Alger-Bouzarea**	**1.67**	**80**	P	**Pn**	**20 53 14.8**	**+0.7**
EMUR	**La Murta**	**2.21**	**307**	⇑P	**Pn**	**20 53 21.1**	**-0.3**
EMUR				S	**Sn**	**20 53 47.3**	**-1.5**
EMUR	**La Murta**	**2.21**	**307**	⇑P	**Pn**	**20 53 21.1**	**-0.3**
	16nm,0.3s,SNR=18						
EMUR				S	**Sn**	**20 53 47.3**	**-1.5**
	57nm,0.4s,SNR=4.9						
EMUR				T		20 54 56.0	
	SNR=6.2						
EMUR	**La Murta**	**2.21**	**307**	⇑P	**Pn**	**20 53 21.1**	**-0.3**
	16nm,0.3s,SNR=18						
EMUR				S	**Sn**	**20 53 47.3**	**-1.5**
	57nm,0.4s,SNR=4.9						
EMUR				T		20 54 56.0	
	SNR=6.2						
EMUR	**La Murta**	**2.21**	**307**	P	**Pn**	**20 53 21.1**	**-0.4**
	16nm,0.3s,SNR=18						
EMUR				S	**Sn**	**20 53 47.3**	**-1.5**
	57nm,0.4s,SNR=4.9						
EBEN	**Beniarda**	**2.38**	**337**	P	**Pn**	**20 53 23.9**	**+0.1**
EBEN				S	**Sn**	**20 53 51.9**	**-1.0**
EBEN	**Beniarda**	**2.38**	**337**	P	**Pn**	**20 53 23.9**	**+0.1**
	1.8nm,0.2s,SNR=32						
EBEN				S	**Sn**	**20 53 51.9**	**-1.0**
	52nm,0.6s						
EBEN				T		20 55 09.3	
	SNR=6.0						
EBEN	**Beniarda**	**2.38**	**337**	P	**Pn**	**20 53 23.9**	**+0.1**
	1.8nm,0.2s,SNR=32						
EBEN				S	**Sn**	**20 53 51.9**	**-1.0**
	52nm,0.6s						
EBEN				T		20 55 09.3	
	SNR=6.0						
EBEN	**Beniarda**	**2.38**	**337**	P	**Pn**	**20 53 23.9**	**+0.1**
	1.8nm,0.2s,SNR=32						
EBEN				S	**Sn**	**20 53 51.9**	**-1.0**
	52nm,0.6s						
EIBI	**Ibiza**	**2.51**	**6**	⇑P	**Pn**	**20 53 25.7**	**+0.1**
EIBI				S	**Sn**	**20 53 53.6**	**-2.7**
EIBI	**Ibiza**	**2.51**	**6**	⇑P	**Pn**	**20 53 25.7**	**+0.1**
	15nm,0.2s,SNR=18						
EIBI				S	**Sn**	**20 53 53.6**	**-2.7**
	116nm,0.5s						
EIBI				T		20 55 13.3	
EIBI	**Ibiza**	**2.51**	**6**	⇑P	**Pn**	**20 53 25.7**	**+0.1**
	15nm,0.2s,SNR=18						
EIBI				S	**Sn**	**20 53 53.6**	**-2.7**
	116nm,0.5s						
EIBI				T		20 55 13.3	
EIBI	**Ibiza**	**2.51**	**6**	P	**Pn**	**20 53 25.7**	**0.0**
	15nm,0.2s,SNR=18						
EIBI				S	**Sn**	**20 53 53.6**	**-2.7**
	116nm,0.5s						
ENIJ	**Nijar**	**2.60**	**281**	P	**Pn**	**20 53 27.6**	**+0.7**
ENIJ				S	**Sn**	**20 53 55.8**	**-2.7**
ENIJ	**Nijar**	**2.60**	**281**	P	**Pn**	**20 53 27.6**	**+0.7**
	19nm,0.3s,SNR=13						
ENIJ				S	**Sn**	**20 53 55.8**	**-2.7**
	39nm,0.4s,SNR=6.6						
ENIJ				T		20 55 35.0	
ENIJ	**Nijar**	**2.60**	**281**	P	**Pn**	**20 53 27.6**	**+0.7**
	19nm,0.3s,SNR=13						
ENIJ				S	**Sn**	**20 53 55.8**	**-2.7**
	39nm,0.4s,SNR=6.6						
ETOB	**Tobarra**	**2.92**	**317**	P	**Pn**	**20 53 32.0**	**+0.8**
ETOB				S	**Sn**	**20 54 07.8**	**+1.5**
ETOB	**Tobarra**	**2.92**	**317**	P	**Pn**	**20 53 32.0**	**+0.8**
	24nm,0.4s,SNR=86						
ETOB				S	**Sn**	**20 54 07.8**	**+1.5**
	31nm,0.3s						
ETOB				T		20 55 10.8	
ETOB	**Tobarra**	**2.92**	**317**	P	**Pn**	**20 53 32.0**	**+0.8**
	24nm,0.4s,SNR=86						
ETOB				S	**Sn**	**20 54 07.8**	**+1.5**
	31nm,0.3s						
ETOB				T		20 55 10.8	
ETOB	**Tobarra**	**2.92**	**317**	P	**Pn**	**20 53 32.0**	**+0.8**
	24nm,0.4s,SNR=86						
ETOB				S	**Sn**	**20 54 07.8**	**+1.5**
	31nm,0.3s						
EHUE	**Huescar**	**3.13**	**295**	P	**Pn**	**20 53 36.4**	**+2.2**
EHUE				S	**Sn**	**20 54 15.9**	**+4.3**
EHUE	**Huescar**	**3.13**	**295**	P	**Pn**	**20 53 36.4**	**+2.2**
	3.6nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**20 54 15.9**	**+4.3**
	17nm,0.2s,SNR=7.9					

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ELUQ				S	Sn	20 54 41.3	+0.3
ELUQ	Luque	4.32	285	P	Pn	20 53 51.6	+1.1
	7.1nm,0.2s,SNR=7.9						
ELUQ				S	Sn	20 54 41.3	+0.3
	5.8nm,0.2s,SNR=7.9						
ELUQ	Luque	4.32	285	P	Pn	20 53 51.6	+1.1
	7.1nm,0.2s,SNR=7.9						
ELUQ				S	Sn	20 54 41.3	+0.3
	5.8nm,0.2s,SNR=7.9						
ELUQ	Luque	4.32	285	P	Pn	20 53 51.6	+1.0
	7.1nm,0.2s,SNR=7.9						
ELUQ				S	Sn	20 54 41.3	+0.3
	5.8nm,0.2s,SNR=7.9						
ERTA	Horta de San J	4.45	354	P	Pn	20 53 53.5	+1.1
ERTA				S	Sn	20 54 42.1	-2.1
ERTA	Horta de San J	4.45	354	P	Pn	20 53 53.4	+1.1
	1.6nm,0.1s,SNR=18						
ERTA				S	Sn	20 54 42.1	-2.1
	15nm,0.4s						
ERTA	Horta de San J	4.45	354	P	Pn	20 53 53.4	+1.1
	1.6nm,0.1s,SNR=18						
ERTA				S	Sn	20 54 42.1	-2.1
	15nm,0.4s						
ERTA	Horta de San J	4.45	354	P	Pn	20 53 53.4	+1.1
	1.6nm,0.1s,SNR=18						
ERTA				S	Sn	20 54 42.1	-2.1
	15nm,0.4s						
EMIJ	Mijas	4.63	272	P	Pn	20 53 53.4	-1.4
EMIJ				S	Sn	20 54 43.5	-5.2
EMIJ	Mijas	4.63	272	P	Pn	20 53 53.4	-1.4
	3.1nm,0.2s,SNR=18						
EMIJ				S	Sn	20 54 43.5	-5.2
	7.1nm,0.2s						
EMIJ	Mijas	4.63	272	P	Pn	20 53 53.4	-1.4
	3.1nm,0.2s,SNR=18						
EMIJ				S	Sn	20 54 43.5	-5.2
	7.1nm,0.2s						
EMIJ	Mijas	4.63	272	P	Pn	20 53 53.4	-1.4
	3.1nm,0.2s,SNR=18						
EADA	Adamuz	4.72	292	P	Pn	20 53 55.9	-0.1
EADA				S	Sn	20 54 49.2	-1.7
EADA	Adamuz	4.72	292	P	Pn	20 53 55.9	-0.1
	1.6nm,0.3s,SNR=11						
EADA				S	Sn	20 54 49.2	-1.7
	33nm,0.4s,SNR=5.6						
EADA	Adamuz	4.72	292	P	Pn	20 53 55.9	-0.1
	1.6nm,0.3s,SNR=11						
EADA				S	Sn	20 54 49.2	-1.7
	33nm,0.4s,SNR=5.6						
EADA	Adamuz	4.72	292	P	Pn	20 53 55.9	-0.1
	1.6nm,0.3s,SNR=11						
EADA				S	Sn	20 54 49.2	-1.6
	33nm,0.4s,SNR=5.6						
EPOB	Poblet	4.82	1	P	Pn	20 53 57.9	+0.5
EPOB				S	Sn	20 54 50.2	-3.0
EPOB	Poblet	4.82	1	P	Pn	20 53 57.9	+0.5
	4.3nm,0.2s,SNR=18						
EPOB				S	Sn	20 54 50.2	-3.0
	4.4nm,0.3s						
EPOB	Poblet	4.82	1	P	Pn	20 53 57.9	+0.5
	4.3nm,0.2s,SNR=18						
EPOB				S	Sn	20 54 50.2	-3.0
	4.4nm,0.3s						
EPOB	Poblet	4.82	1	P	Pn	20 53 57.9	+0.5
	4.3nm,0.2s,SNR=18						
EPOB				S	Sn	20 54 50.2	-3.0
	4.4nm,0.3s						
ESDC	Sonseca Array	5.01	310	Pn	Pn	20 54 00.2	+0.2
ESDC				Sn	Sn	20 54 55.9	-1.9
ESDC				Lg		20 55 10.9	
ESDC	Sonseca Array	5.01	310	Pn	Pn	20 54 00.2	+0.2
	2.3nm,0.3s,baz=124,slow=14,SNR=36						
ESDC				Sn	Sn	20 54 55.9	-1.9
	1.8nm,0.3s,baz=130,slow=24,SNR=7.9						
ESDC				Lg		20 55 10.9	
	3.9nm,0.3s,baz=125,slow=27,SNR=8.3						
ESDC	Sonseca Array	5.01	310	Pn	Pn	20 54 00.2	+0.2
ESDC				Sn	Sn	20 54 55.9	-2.0
PAB	San Pablo	5.17	307	*e*P	Pn	20 54 02.2	0.0
	2.6nm,0.4s						
PAB	San Pablo	5.17	307	*e*P	Pn	20 54 02.2	-0.1
	2.6nm,0.4s						
ESAC	San Caprasio	5.31	348	P	Pn	20 54 06.3	+2.3
ESAC				S	Sn	20 55 07.2	+2.0
ESAC	San Caprasio	5.31	348	P	Pn	20 54 06.3	+2.3
	11nm,0.3s,SNR=8.0						
ESAC				S	Sn	20 55 07.2	+2.0
	82nm,0.6s,SNR=5.3						
ESAC	San Caprasio	5.31	348	P	Pn	20 54 06.3	+2.3
	11nm,0.3s,SNR=8.0						
ESAC				S	Sn	20 55 07.2	+2.0
	82nm,0.6s,SNR=5.3						
ESAC	San Caprasio	5.31	348	P	Pn	20 54 06.3	+2.2
	11nm,0.3s,SNR=8.0						
ESAC				S	Sn	20 55 07.2	+1.9
	82nm,0.6s,SNR=5.3						
CFON	Fontmartina	5.35	12	P	Pn	20 54 04.9	+0.3
CFON				S	Sn	20 55 03.3	-3.0
CFON	Fontmartina	5.35	12	P	Pn	20 54 04.9	+0.3
	5.8nm,0.3s,SNR=14						
CFON				S	Sn	20 55 03.3	-3.0
	5.4nm,0.3s						
CFON	Fontmartina	5.35	12	P	Pn	20 54 04.9	+0.3
	5.8nm,0.3s,SNR=14						
CFON				S	Sn	20 55 03.3	-3.0
	5.4nm,0.3s						
CFON	Fontmartina	5.35	12	P	Pn	20 54 04.9	+0.3
	5.8nm,0.3s,SNR=14						
EMIR	Miracle	5.40	4	P	Pn	20 54 06.8	+1.5
EMIR				S	Sn	20 55 08.4	+0.9
EMIR	Miracle	5.40	4	P	Pn	20 54 06.8	+1.5
	7.5nm,0.3s,SNR=16						
EMIR				S	Sn	20 55 08.4	+0.9
	14nm,0.5s						
EMIR	Miracle	5.40	4	P	Pn	20 54 06.8	+1.5
	7.5nm,0.3s,SNR=16						
EMIR				S	Sn	20 55 08.4	+0.9
	14nm,0.5s						
EMIR	Miracle	5.40	4	P	Pn	20 54 06.8	+1.5
	7.5nm,0.3s,SNR=16						
EMIR				S	Sn	20 55 08.4	+1.0
	14nm,0.5s						
ESPR	Espera	5.51	276	P	Pn	20 54 09.8	+3.0
ESPR				S	Sn	20 55 10.5	+0.3
ESPR	Espera	5.51	276	P	Pn	20 54 09.8	+3.0
	1.1nm,0.3s,SNR=7.9						
ESPR				S	Sn	20 55 10.5	+0.3
	4.6nm,0.3s,SNR=7.9						
ESPR	Espera	5.51	276	P	Pn	20 54 09.8	+3.0
	1.1nm,0.3s,SNR=7.9						
ESPR				S	Sn	20 55 10.5	+0.3
	4.6nm,0.3s,SNR=7.9						
GUD	Guadarrama	5.75	317	P	Pn	20 54 11.1	+0.9
GUD				S	Sn	20 55 15.2	-1.0
GUD	Guadarrama	5.75	317	P	Pn	20 54 11.1	+0.9
	3.7nm,0.4s,SNR=7.9						
GUD				S	Sn	20 55 15.2	-1.0
	4.7nm,0.6s,SNR=4.0						
GUD	Guadarrama	5.75	317	P	Pn	20 54 11.1	+0.9
	3.7nm,0.4s,SNR=7.9						
GUD				S	Sn	20 55 15.2	-1.0
	4.7nm,0.6s,SNR=4.0						
GUD	Guadarrama	5.75	317	P	Pn	20 54 11.1	+0.9
	3.7nm,0.4s,SNR=7.9						
CSOR	Sort	5.84	1	P	Pn	20 54 12.6	+1.2
CSOR				S	Sn	20 55 15.5	-2.9
CSOR	Sort	5.84	1	P	Pn	20 54 12.6	+1.2
	3.8nm,0.2s,SNR=30						
CSOR				S	Sn	20 55 15.5	-2.9
	7.1nm,0.5s						
CSOR	Sort	5.84	1	P	Pn	20 54 12.6	+1.2
	3.8nm,0.2s,SNR=30						
CSOR				S	Sn	20 55 15.5	-2.9
	7.1nm,0.5s						
CSOR	Sort	5.84	1	P	Pn	20 54 12.6	+1.2
	3.8nm,0.2s,SNR=30						
MDT	Midelt	5.91	233	Pn	Pn	20 54 11.8	-0.6
	0.9nm,0.3s,baz=308,slow=1.6,SNR=34						
MDT				Lg		20 55 56.5	
	0.3nm,0.3s,baz=89,slow=23,SNR=3.6						
MDT	Midelt	5.91	233	Pn	Pn	20 54 11.8	-0.6
CLLI	Llivia	5.99	7	P	Pn	20 54 15.1	+1.6
CLLI				S	Sn	20 55 18.1	-4.0
CLLI	Llivia	5.99	7	P	Pn	20 54 15.1	+1.6
	1.1nm,0.1s,SNR=8.0						
CLLI				S	Sn	20 55 18.1	-4.0
	2.0nm,0.5s						
CLLI	Llivia	5.99	7	P	Pn	20 54 15.1	+1.6
	1.1nm,0.1s,SNR=8.0						
CLLI				S	Sn	20 55 18.1	-4.0
	2.0nm,0.5s						
CLLI	Llivia	5.99	7	P	Pn	20 54 15.1	+1.6
	1.1nm,0.1s,SNR=8.0						
EJON	La Jonquera	6.09	13	P	Pn	20 54 15.5	+0.6
EJON				S	Sn	20 55 22.0	-2.6
EJON	La Jonquera	6.09	13	P	Pn	20 54 15.5	+0.6
	0.5nm,0.2s,SNR=7.9						
EJON				S	Sn	20 55 22.0	-2.6
	0.7nm,0.2s,SNR=7.9						
EJON	La Jonquera	6.09	13	P	Pn	20 54 15.5	+0.6
	0.5nm,0.2s,SNR=7.9						
EJON				S	Sn	20 55 22.0	-2.6
	0.7nm,0.2s,SNR=7.9						
EJON	La Jonquera	6.09	13	P	Pn	20 54 15.5	+0.6
	0.5nm,0.2s,SNR=7.9						
EBIE	Bielsa	6.18	354	P	Pn	20 54 18.9	+2.8
EBIE	Bielsa	6.18	354	P	Pn	20 54 18.9	+2.8
	1.4nm,0.5s,SNR=5.9						
EBIE	Bielsa	6.18	354	P	Pn	20 54 18.9	+2.8
	1.4nm,0.5s,SNR=5.9						
EBIE	Bielsa	6.18	354	P	Pn	20 54 18.9	+2.8
	1.4nm,0.5s,SNR=5.9						
EMIN	Mina Concepcio	6.24	284	P	Pn	20 54 16.3	-0.6
EMIN				S	Sn	20 55 24.3	-3.9
EMIN	Mina Concepcio	6.24	284	P	Pn	20 54 16.3	-0.6
	2.7nm,0.3s,SNR=12						
EMIN				S	Sn	20 55 24.3	-3.9
	2.4nm,0.3s						
EMIN	Mina Concepcio	6.24	284	P	Pn	20 54 16.3	-0.6
	2.7nm,0.3s,SNR=12						
EMIN				S	Sn	20 55 24.3	-3.9
	2.4nm,0.3s						
EMIN	Mina Concepcio	6.24	284	P	Pn	20 54 16.3	-0.6
	2.7nm,0.3s,SNR=12						
ZFT	Errachidia	6.29	226	P	Pn	20 54 18.0	+0.4
ZFT	Errachidia	6.29	226	P	Pn	20 54 18.0	+0.4
ZFT	Errachidia	6.29	226	*i*P	Pn	20 54 18.0	+0.4
ETSF	Etsaut	6.47	350	*e*Pn	Pn	20 54 21.8	+1.7
ETSF				*e*Sn	Sn	20 55 31.9	-2.0
	3.5nm,0.6s						
ETSF	Etsaut	6.47	350	Pn	Pn	20 54 21.8	+1.7
ETSF				Sn	Sn	20 55 31.9	-2.0
	1.8nm,0.6s						
ETSF	Etsaut	6.47	350	Pn	Pn	20 54 21.8	+1.7
ETSF				Sn	Sn	20 55 31.9	-2.0
	1.8nm,0.6s						
ETSF	Etsaut	6.47	350	*e*Pn	Pn	20 54 21.8	+1.7
EPF	Esparros	6.51	356	*e*Pn	Pn	20 54 22.4	+1.8
EPF				*e*Sn	Sn	20 55 31.8	-3.2
	2.6nm,0.5s						
EPF	Esparros	6.51	356	Pn	Pn	20 54 22.4	+1.8
EPF				Sn	Sn	20 55 31.8	-3.2
	1.3nm,0.5s						
EPF	Esparros	6.51	356	Pn	Pn	20 54 22.4	+1.8
EPF				Sn	Sn	20 55 31.8	-3.2
	1.3nm,0.5s						
EPF	Esparros	6.51	356	*e*Pn	Pn	20 54 22.4	+1.8
PBAR	Barrancos	6.60	287	*e*Pn	Pn	20 54 22.6	+0.8
PBAR				*e*Sn	Sn	20 55 34.2	-2.9
PBAR				A		20 56 11.8	
	2.8nm,0.5s						
PBAR	Barrancos	6.60	287	Pn	Pn	20 54 22.6	+0.8
PBAR				Sn	Sn	20 55 34.2	-2.9
	2.8nm,0.5s						
PBAR	Barrancos	6.60	287	Pn	Pn	20 54 22.6	+0.8
PBAR				Sn	Sn	20 55 34.2	-2.9
	2.8nm,0.5s						
PBAR	Barrancos	6.60	287	*e*Pn	Pn	20 54 22.6	+0.8
EBAD	Badajoz	6.72	292	P	Pn	20 54 22.9	-0.6
EBAD				S	Sn	20 55 36.4	-3.7
EBAD	Badajoz	6.72	292	P	Pn	20 54 22.9	-0.6
	1.2nm,0.3s,SNR=5.7						
EBAD				S	Sn	20 55 36.4	-3.7
	3.5nm,0.3s,SNR=5.8						
EBAD	Badajoz	6.72	292	P	Pn	20 54 22.9	-0.6
	1.2nm,0.3s,SNR=5.7						
EBAD				S	Sn	20 55 36.4	-3.7
	3.5nm,0.3s,SNR=5.8						
EBAD	Badajoz	6.72	292	P	Pn	20 54 22.9	-0.6
	1.2nm,0.3s,SNR=5.7						
SJPF	Ste Jean	6.79	346	*e*Pn	Pn	20 54 26.2	+1.7
SJPF				*e*Sn	Sn	20 55 38.7	-3.1
	7.1nm,0.8s						
SJPF	Ste Jean	6.79	346	Pn	Pn	20 54 26.2	+1.7
SJPF				Sn	Sn	20 55 38.7	-3.1
	3.6nm,0.8s						
SJPF	Ste Jean	6.79	346	Pn	Pn	20 54 26.2	+1.7
SJPF				Sn	Sn	20 55 38.7	-3.1
	3.6nm,0.8s						
SJPF	Ste Jean	6.79	346	*e*Pn	Pn	20 54 26.2	+1.7
KEST	Kesra	6.81	94	*e*P	Pn	20 54 24.9	+0.1
KEST	Kesra	6.81	94	Pn	Pn	20 54 24.0	-0.8
	0.3nm,0.3s,baz=236,slow=3.2,SNR=16						
KEST	Kesra	6.81	94	*e*P	Pn	20 54 24.9	+0.1
EGRO	El Granado	6.85	281	P	Pn	20 54 24.7	-0.5
EGRO				S	Sn	20 55 38.5	-4.7
EGRO	El Granado	6.85	281	P	Pn	20 54 24.7	-0.5
	3.0nm,0.4s,SNR=7.9						
EGRO				S	Sn	20 55 38.5	-4.7
	2.1nm,0.3s,SNR=7.9						
EGRO	El Granado	6.85	281	P	Pn	20 54 24.7	-0.5
	3.0nm,0.4s,SNR=7.9						
EGRO				S	Sn	20 55 38.5	-4.7
	2.1nm,0.3s,SNR=7.9						
EGRO	El Granado	6.85	281	P	Pn	20 54 24.7	-0.5
	3.0nm,0.4s,SNR=7.9						
MTLF	Montolieu	6.87	8	*e*Pn	Pn	20 54 25.8	+0.3
MTLF	Montolieu	6.87	8	Pn	Pn	20 54 25.8	+0.3
MTLF	Montolieu	6.87	8	Pn	Pn	20 54 25.8	+0.3
MTLF	Montolieu	6.87	8	*e*Pn	Pn	20 54 25.8	+0.3
ELIZ	Elizondo	6.90	345	P	Pn	20 54 28.6	+2.6
ELIZ				S	Sn	20 55 43.2	-1.4
ELIZ	Elizondo	6.90	345	P	Pn	20 54 28.6	+2.6
	4.3nm,0.4s,SNR=7.9						
ELIZ				S	Sn	20 55 43.2	-1.4
	3.5nm,0.3s,SNR=7.9						
ELIZ	Elizondo	6.90	345	P	Pn	20 54 28.6	+2.6
	4.3nm,0.4s,SNR=7.9						
ELIZ				S	Sn	20 55 43.2	-1.4
	3.5nm,0.3s,SNR=7.9						
ELIZ	Elizondo	6.90	345	P	Pn	20 54 28.6	+2.6
	4.3nm,0.4s,SNR=7.9						
EALK	Alkurruntz	6.95	345	P	Pn	20 54 28.6	+2.0
EALK				S	Sn	20 55 43.1	-2.6
EALK	Alkurruntz	6.95	345	P	Pn	20 54 28.6	+2.0
	3.3nm,0.4s,SNR=6.3						
EALK				S	Sn	20 55 43.1	-2.6
	12nm,0.4s,SNR=4.7						
EALK	Alkurruntz	6.95	345	P	Pn	20 54 28.6	+2.0
	3.3nm,0.4s,SNR=6.3						
EALK				S	Sn	20 55 43.1	-2.6
	12nm,0.4s,SNR=4.7						
EALK	Alkurruntz	6.95	345	P	Pn	20 54 28.6	+2.0
	3.3nm,0.4s,SNR=6.3						
PVAQ	Vaqueiros	7.02	280	*e*Pn	Pn	20 54 28.2	+0.6
PVAQ				*e*Sn	Sn	20 55 43.8	-3.7
PVAQ				A		20 55 48.6	
	2.4nm,0.8s						
PVAQ	Vaqueiros	7.02	280	Pn	Pn	20 54 28.2	+0.6
PVAQ				Sn	Sn	20 55 43.8	-3.7
	2.4nm,0.8s						
PVAQ	Vaqueiros	7.02	280	Pn	Pn	20 54 28.2	+0.6
PVAQ				Sn	Sn	20 55 43.8	-3.7
	2.4nm,0.8s						
PVAQ	Vaqueiros	7.02	280	*e*Pn	Pn	20 54 28.2	+0.6
PESTR	Estremoz	7.19	292	*e*Sn	Sn	20 55 48.3	-3.2
PESTR				A		20 56 20.7	
	4.1nm,0.5s						
PESTR	Estremoz	7.19	292	Sn	Sn	20 55 48.3	-3.2
	4.1nm,0.5s						
PESTR	Estremoz	7.19	292	Sn	Sn	20 55 48.3	-3.2
	4.1nm,0.5s						
PBEJ	Beja	7.21	285	*e*Pn	Pn	20 54 30.5	+0.3
PBEJ	Beja	7.21	285	Pn	Pn	20 54 30.5	+0.3
PBEJ	Beja	7.21	285	Pn	Pn	20 54 30.5	+0.3
PBEJ	Beja	7.21	285	*e*Pn	Pn	20 54 30.5	+0.3
PMRV	Marv??o	7.22	296	*e*Pn	Pn	20 54 31.5	+1.2
PMRV				*e*Sn	Sn	20 55 50.6	-1.8
PMRV				A		20 56 30.7	
	5.6nm,0.6s						
PMRV	Marv??o	7.22	296	Pn	Pn	20 54 31.5	+1.2
PMRV				Sn	Sn	20 55 50.6	-1.8
	5.6nm,0.6s						
PMRV	Marv??o	7.22	296	Pn	Pn	20 54 31.5	+1.2
PMRV				Sn	Sn	20 55 50.6	-1.8
	5.6nm,0.6s						
PMRV	Marv??o	7.22	296	*e*Pn	Pn	20 54 31.5	+1.2
PCVE	Castro Verde	7.30	281	*e*Pn	Pn	20 54 32.8	+1.4
PCVE				*e*Sn	Sn	20 55 52.0	-2.2
PCVE				A		20 55 53.9	
	2.3nm,0.9s						
PCVE	Castro Verde	7.30	281	Pn	Pn	20 54 32.8	+1.4
PCVE				Sn	Sn	20 55 52.0	-2.2
	2.3nm,0.9s						
PCVE	Castro Verde	7.30	281	Pn	Pn	20 54 32.8	+1.4
PCVE				Sn	Sn	20 55 52.0	-2.2
	2.3nm,0.9s						
PCVE	Castro Verde	7.30	281	*e*Pn	Pn	20 54 32.8	+1.4
EVO	Evora	7.42	288	*e*Pn	Pn	20 54 35.0	+1.9
EVO				*e*Sn	Sn	20 55 56.0	-1.4
	4.5nm,0.4s						
ELAN	Lanestosa	7.51	334	P	Pn	20 54 36.4	+2.1
ELAN				S	Sn	20 55 57.2	-2.2
ELAN	Lanestosa	7.51	334	P	Pn	20 54 36.4	+2.1
	1.9nm,0.2s,SNR=19						
ELAN				S	Sn	20 55 57.2	-2.2
	6.7nm,0.6s,SNR=6.1						
ELAN	Lanestosa	7.51	334	P	Pn	20 54 36.4	+2.1
	1.9nm,0.2s,SNR=19						
ELAN				S	Sn	20 55 57.2	-2.2
	6.7nm,0.6s,SNR=6.1						
ELAN	Lanestosa	7.51	334	P	Pn	20 54 36.4	+2.1
	1.9nm,0.2s,SNR=19						
EVOP	Sao Brissos	7.51	288	*e*Pn	Pn	20 54 35.0	+0.7
MVO	Moncorvo	7.78	309	P	Pn	20 54 38.8	+0.8
MVO				S	Sn	20 56 03.1	-2.9
MVO	Moncorvo	7.78	309	P	Pn	20 54 38.8	+0.8
	1.7nm,0.3s,SNR=7.9						
MVO				S	Sn	20 56 03.1	-2.9
	1.0nm,0.4s,SNR=7.9						
MVO	Moncorvo	7.78	309	P	Pn	20 54 38.8	+0.8
	1.7nm,0.3s,SNR=7.9						
MVO				S	Sn	20 56 03.1	-2.9
	1.0nm,0.4s,SNR=7.9						
MVO	Moncorvo	7.78	309	P	Pn	20 54 38.8	+0.8
	1.7nm,0.3s,SNR=7.9						
LASF	Ste Croix	7.85	15	*e*Pn	Pn	20 54 38.6	-0.4
LASF	Ste Croix	7.85	15	Pn	Pn	20 54 38.6	-0.4
LASF	Ste Croix	7.85	15	Pn	Pn	20 54 38.6	-0.4
LASF	Ste Croix	7.85	15	*e*Pn	Pn	20 54 38.6	-0.4
LMR	La Mourre	8.01	30	*e*Pn	Pn	20 54 40.6	-0.6
LMR	La Mourre	8.01	30	Pn	Pn	20 54 40.6	-0.6
LMR	La Mourre	8.01	30	Pn	Pn	20 54 40.6	-0.6
LMR	La Mourre	8.01	30	*e*Pn	Pn	20 54 40.6	-0.6
ECAL	Calabor	8.07	314	P	Pn	20 54 42.1	+0.2
ECAL				S	Sn	20 56 11.1	-2.1
ECAL	Calabor	8.07	314	P	Pn	20 54 42.1	+0.2
	3.3nm,0.3s,SNR=9.7						
ECAL				S	Sn	20 56 11.1	-2.1
	2.5nm,0.5s,SNR=5.1						
ECAL	Calabor	8.07	314	P	Pn	20 54 42.1	+0.2
	3.3nm,0.3s,SNR=9.7						
ECAL				S	Sn	20 56 11.1	-2.1
	2.5nm,0.5s,SNR=5.1						
ECAL	Calabor	8.07	314	P	Pn	20 54 42.1	+0.2
	3.3nm,0.3s,SNR=9.7						
FRF	La Foret Royal	8.26	30	*e*Pn	Pn	20 54 43.8	-0.7
FRF	La Foret Royal	8.26	30	Pn	Pn	20 54 43.8	-0.7
FRF	La Foret Royal	8.26	30	Pn	Pn	20 54 43.8	-0.7
FRF	La Foret Royal	8.26	30	*e*Pn	Pn	20 54 43.8	-0.7
EARI	Arriondas	8.27	327	P	Pn	20 54 47.0	+2.3
EARI	Arriondas	8.27	327	P	Pn	20 54 47.0	+2.3
	0.4nm,0.3s,SNR=4.8						
EARI	Arriondas	8.27	327	P	Pn	20 54 47.0	+2.3
	0.4nm,0.3s,SNR=4.8						
EARI	Arriondas	8.27	327	P	Pn	20 54 47.0	+2.3
	0.4nm,0.3s,SNR=4.8						
LFF	La Frestale	8.40	359	*e*Pn	Pn	20 54 47.4	+0.8
LFF	La Frestale	8.40	359	Pn	Pn	20 54 47.4	+0.8
LFF	La Frestale	8.40	359	Pn	Pn	20 54 47.4	+0.8
LFF	La Frestale	8.40	359	*e*Pn	Pn	20 54 47.4	+0.8
CAF	Calviac	8.43	5	*e*Pn	Pn	20 54 47.9	+1.0
CAF	Calviac	8.43	5	Pn	Pn	20 54 47.9	+1.0
CAF	Calviac	8.43	5	Pn	Pn	20 54 47.9	+1.0
CAF	Calviac	8.43	5	*e*Pn	Pn	20 54 47.9	+1.0
PMAFR	Mafra	8.49	290	S	Sn	20 56 19.4	-4.1
	8.4nm,0.5s,SNR=4.0						
PMAFR	Mafra	8.49	290	S	Sn	20 56 19.4	-4.1
	8.4nm,0.5s,SNR=4.0						
PGF	Pioggiola	8.63	43	*e*Pn	Pn	20 54 48.1	-1.6
PGF				*e*Sn	Sn	20 56 19.4	-7.6
	1.1nm,0.3s						
PGF	Pioggiola	8.63	43	Pn	Pn	20 54 48.1	-1.6
PGF				Sn	Sn	20 56 19.4	-7.6
	0.6nm,0.3s						
PGF	Pioggiola	8.63	43	Pn	Pn	20 54 48.1	-1.6
PGF				Sn	Sn	20 56 19.4	-7.6
	0.6nm,0.3s						
PGF	Pioggiola	8.63	43	*e*Pn	Pn	20 54 48.1	-1.6
RJF	Les Rejaudoux	8.78	2	*e*Pn	Pn	20 54 53.0	+1.3
RJF	Les Rejaudoux	8.78	2	Pn	Pn	20 54 53.0	+1.3
RJF	Les Rejaudoux	8.78	2	Pn	Pn	20 54 53.0	+1.3
RJF	Les Rejaudoux	8.78	2	*e*Pn	Pn	20 54 53.0	+1.3
ELOB	Lobios	8.81	310	P	Pn	20 54 52.8	+0.6
ELOB				S	Sn	20 56 28.9	-2.6
ELOB	Lobios	8.81	310	P	Pn	20 54 52.8	+0.6
	1.3nm,0.3s,SNR=4.7						
ELOB				S	Sn	20 56 28.9	-2.6
	4.4nm,0.5s						
ELOB	Lobios	8.81	310	P	Pn	20 54 52.8	+0.6
	1.3nm,0.3s,SNR=4.7						
ELOB				S	Sn	20 56 28.9	-2.6
	4.4nm,0.5s						
ELOB	Lobios	8.81	310	P	Pn	20 54 52.8	+0.6
	1.3nm,0.3s,SNR=4.7						
EPON	Pontenova	9.22	320	P	Pn	20 54 58.7	+0.9
EPON	Pontenova	9.22	320	P	Pn	20 54 58.7	+0.9
	2.7nm,0.3s,SNR=7.9						
EPON	Pontenova	9.22	320	P	Pn	20 54 58.7	+0.9
	2.7nm,0.3s,SNR=7.9						
EPON	Pontenova	9.22	320	P	Pn	20 54 58.7	+0.9
	2.7nm,0.3s,SNR=7.9						
TCF	Toulx Ste Croi	9.79	5	*e*Pn	Pn	20 55 05.3	-0.3
TCF	Toulx Ste Croi	9.79	5	Pn	Pn	20 55 05.3	-0.3
TCF	Toulx Ste Croi	9.79	5	Pn	Pn	20 55 05.3	-0.3
TCF	Toulx Ste Croi	9.79	5	*e*Pn	Pn	20 55 05.3	-0.3
MFF	Saint Martin d	10.10	356	*e*Pn	Pn	20 55 09.6	-0.2
MFF	Saint Martin d	10.10	356	Pn	Pn	20 55 09.6	-0.2
MFF	Saint Martin d	10.10	356	Pn	Pn	20 55 09.6	-0.2
MFF	Saint Martin d	10.10	356	*e*Pn	Pn	20 55 09.6	-0.2
SMF	Signal de Mont	10.33	11	*e*Pn	Pn	20 55 13.6	+0.6
SMF	Signal de Mont	10.33	11	Pn	Pn	20 55 13.6	+0.6
SMF	Signal de Mont	10.33	11	Pn	Pn	20 55 13.6	+0.6
SMF	Signal de Mont	10.33	11	*e*Pn	Pn	20 55 13.6	+0.6
AVF	Avril sur Loir	10.41	9	*e*Pn	Pn	20 55 14.2	+0.2
AVF	Avril sur Loir	10.41	9	Pn	Pn	20 55 14.2	+0.2
AVF	Avril sur Loir	10.41	9	Pn	Pn	20 55 14.2	+0.2
AVF	Avril sur Loir	10.41	9	*e*Pn	Pn	20 55 14.2	+0.2
SSF	Saint Saulge	10.69	9	*e*Pn	Pn	20 55 17.6	-0.3
SSF	Saint Saulge	10.69	9	Pn	Pn	20 55 17.6	-0.3
SSF	Saint Saulge	10.69	9	Pn	Pn	20 55 17.6	-0.3
SSF	Saint Saulge	10.69	9	*e*Pn	Pn	20 55 17.6	-0.3
TORD	Torodi Ar. Bea	23.29	178	P	Pn	20 55 49.5	-3.3
	0.9nm,0.8s,mb3.3,baz=353,slow=12,SNR=3.5						
KURK	Kurchatov	55.45	49	P	P	21 02 19.2	-0.2
	1.4nm,0.7s,mb4.1,baz=291,slow=8.1,SNR=8.5						
KURK	Kurchatov	55.45	49	P	P	21 02 19.2	-0.2
ZALV	Zalesovo Beam	58.05	44	P	P	21 02 37.8	0.0
ZALV	Zalesovo Beam	58.05	44	P	P	21 02 37.8	0.0
	0.7nm,0.5s,mb3.9,baz=294,slow=4.6,SNR=3.5						
ZALV	Zalesovo Beam	58.05	44	P	P	21 02 37.8	0.0
MKAR	Makanchi Array	59.05	52	P	P	21 02 44.7	-0.2
MKAR	Makanchi Array	59.05	52	P	P	21 02 44.7	-0.1
	0.9nm,0.7s,mb3.9,baz=281,slow=6.3,SNR=6.3						

IDC ***24*** *20:54:11.9±2.4, 33.13N×91.71E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.5/22, mbtmp3.6/5, ML3.3/2, MS3.4/2, Ms1 3.4/2, ms1mx2.5/30, Error ellipse: s-maj=93.6km s-min=26.3km az=77.0*

ISC 24 20:54:15.5±6.0, **33.22N**±0.07×**92.1E**±0.2, **h14**km±41km, **n9**, σ**1.83**/8, **mb3.5**/3, **Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	7.63	181	*e*PKP	Pn	20 56 07.0	+0.8

SHL				*e*S		**Sn**	**20 57 33.0**	**+0.5**
MKAR	**Makanchi Array**	**15.48**	**334**	Pn		**Pn**	**20 57 53.8**	**+0.6**
	0.0nm,0.3s,baz=143,slow=14,SNR=2.7							
CMAR	**Chiang Mai Arr**	**15.94**	**156**	Pn		**Pn**	**20 57 56.5**	**-2.8**
	0.0nm,0.3s,baz=322,slow=13,SNR=8.0							
AAK	**Ala-Archa**	**16.74**	**309**	LR		LR	21 05 54.0	
	comp=Z,41nm,21.3s,baz=10,slow=42							
SONM	**Songino Array**	**18.16**	**32**	P		**Pn**	**20 58 28.5**	**+1.5**
	0.1nm,0.3s,baz=215,slow=12,SNR=4.4							
ZALV	**Zalesovo Beam**	**21.36**	**348**	P		**P**	**20 59 00.4**	**-1.7**
	0.4nm,0.4s,mb3.1,baz=155,slow=8.2,SNR=5.5							
WRA	**Warramunga Arr**	**66.49**	**136**	P		**P**	**21 05 03.6**	**-1.2**
	1.0nm,1.0s,mb3.8,baz=327,slow=6.9,SNR=5.0							
ASAR	**Alice Springs**	**69.20**	**139**	P		**P**	**21 05 22.7**	**+1.0**
	0.4nm,0.5s,mb3.6,baz=328,slow=6.6,SNR=6.2							
CTA	**Charters Tower**	**74.03**	**128**	LR		LR	21 38 01.5	
	comp=Z,61nm,18.8s,baz=231,slow=35							

IDC 24 20:59:29.8±10.0, **6°.99S**×**124°.66E**, **h493**km±144km, **mb3.0**/2, **mb1 3.1**/4, **mb1mx2.8**/17, **mbtmp3.0**/4, **Error ellipse: s-maj=337.0km s-min=39.8km az=63.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.94**	**145**	P	P	21 02 50.0	+0.1
	0.9nm,0.3s,baz=323,slow=11,SNR=74						
ASAR	**Alice Springs**	**18.81**	**153**	P	P	21 03 18.1	+0.1
	0.8nm,0.3s,baz=327,slow=8.7,SNR=40						
STKA	**Stephens Creek**	**29.38**	**150**	P	P	21 04 52.0	-0.1
	1.0nm,0.3s,baz=324,slow=9.3,SNR=18						
MKAR	**Makanchi Array**	**65.41**	**329**	P	P	21 09 23.1	+0.1
	0.5nm,0.6s,baz=124,slow=7.5,SNR=5.5						

*IDC **24** 21:07:04.7±1.4, 1°.08N×123°.64E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/19, mbtmp3.5/5, Error ellipse: s-maj=123.8km s-min=19.5km az=57.0*
*ISCJB **24** 21:07:10.7±4.7, 0°.4N±0°.2×122°.5E±0°.3, h47km±52km, mb3.5/7, Error ellipse: s-maj=47.4km s-min=14.0km az=152.0*
*NEIC **24** 21:07:11.7±0.5, 0°.29N×122°.49E, h35km, mb3.7/2, Error ellipse: s-maj=17.8km s-min=8.5km az=72.0*

ISC 24 21:07:12.8±3.3, **0°.3N**±0°.1×**122°.6E**±0°.2, **h49**km±40km, **n11, σ0°60/11, mb3.5/7, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**7.35**	**24**	Pn	**Pn**	**21 08 57.4**	**-0.2**
MBWA	**Marble Bar**	**21.53**	**187**	*e*P	**P**	**21 11 57.9**	**0.0**
	2.5nm,0.7s,mb3.8						
QIZ	**Qiongzhong**	**22.38**	**327**	*e*P	**P**	**21 12 07.3**	**+0.2**
WRA	**Warramunga Arr**	**23.22**	**151**	P	**P**	**21 12 15.6**	**-0.3**
WRA	**Warramunga Arr**	**23.22**	**151**	P	**P**	**21 12 15.6**	**-0.3**
	0.3nm,0.4s,mb3.1,baz=339,slow=10.0,SNR=20						
ASAR	**Alice Springs**	**26.27**	**156**	P	**P**	**21 12 45.0**	**+1.3**
	0.3nm,0.4s,mb3.1,baz=343,slow=15,SNR=9.7						
ASAR				PcP	PcP	21 16 07.2	-2.2
	0.3nm,0.3s,baz=345,slow=2.0,SNR=10.0						
CMAR	**Chiang Mai Arr**	**29.37**	**309**	P	**P**	**21 13 12.2**	**+0.8**
	0.3nm,0.6s,mb3.2,baz=142,slow=6.4,SNR=5.0						
CHTO	**Chiang Mai**	**29.57**	**310**	P	**P**	**21 13 12.6**	**-0.7**
	1.0nm,0.8s,mb3.6						
STKA	**Stephens Creek**	**36.75**	**152**	P	**P**	**21 14 15.5**	**-0.2**
	1.0nm,0.7s,mb3.8,baz=349,slow=6.6,SNR=3.5						
MKAR	**Makanchi Array**	**58.10**	**328**	P	**P**	**21 17 01.2**	**-0.1**
	0.3nm,0.4s,mb3.6,baz=126,slow=8.4,SNR=6.7						
CASY	**Casey**	**67.01**	**185**	*e*P	**P**	**21 17 59.5**	**-0.9**
	24nm,1.4s						

*ISCJB **24** 21:16:59.7±1.1, 24°.26S±0°.08×67°.7W±0°.1, h195km±19km, mb3.4/2, Error ellipse: s-maj=19.3km s-min=13.2km az=12.4*
*NEIC **24** 21:16:59.0±1.0, 24°.21S×67°.75W, h158km±12km, mb3.7/4, Error ellipse: s-maj=16.8km s-min=10.3km az=87.0*
*IDC **24** 21:17:06.1±2.4, 23°.82S×67°.07W, h208km±22km, mb3.0/1, mb1 3.1/5, mb1mx3.0/18, mbtmp2.9/5, Error ellipse: s-maj=35.0km s-min=22.6km az=93.0*

ISC 24 21:17:00.5±1.1, **24°.27S**±0°.08×**67°.7W**±0°.1, **h186**km±18km, **n13, σ1°18/12, mb3.4/2, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**5.44**	**209**	*e*Pn	**Pn**	**21 18 18.4**	**-1.9**
LCO				*e*Sn	**Sn**	**21 19 23.6**	**+0.6**
LPAZ	**La Paz**	**7.95**	**357**	*e*Pn	**Pn**	**21 18 51.8**	**-1.4**
LPAZ	**La Paz**	**7.95**	**357**	P	**Pn**	**21 18 54.7**	**+1.6**
	0.2nm,0.3s,baz=164,slow=7.4,SNR=4.7						
CPUP	**Villa Florida**	**9.59**	**105**	*e*Pn	**Pn**	**21 19 14.7**	**+0.1**
	3.1nm,0.7s						
CPUP	**Villa Florida**	**9.59**	**105**	P	**Pn**	**21 19 15.7**	**+1.1**
	0.5nm,0.3s,baz=260,slow=12,SNR=5.6						
SIV	**San Ignacio**	**10.31**	**38**	P	**Pn**	**21 19 19.0**	**-5.1**
	0.5nm,0.3s,baz=229,slow=15,SNR=7.1						
TRQA	**Tornquist**	**14.58**	**162**	*e*Pn	**Pn**	**21 20 18.1**	**0.0**
	2.6nm,1.0s						
PLCA	**Paso Flores**	**16.59**	**188**	*e*P	**Pn**	**21 20 44.2**	**+1.7**
	8.0nm,1.3s						
PLCA	**Paso Flores**	**16.59**	**188**	P	**Pn**	**21 20 51.4**	**+8.9**
	0.1nm,0.3s,baz=336,slow=11,SNR=3.7						
OTAV	**Otavalo**	**26.50**	**335**	*e*P	**P**	**21 22 21.8**	**+1.0**
	0.7nm,0.5s,mb3.5						
TORD	**Torodi Ar. Bea**	**77.25**	**69**	P	**P**	**21 28 33.3**	**-1.3**
	0.8nm,1.1s,mb3.3,baz=255,slow=4.8,SNR=5.0						
WRA	**Warramunga Arr**	**131.10**	**208**	PKP	PKPdf	21 35 52.8	+2.0
	0.4nm,0.8s,baz=149,slow=1.9,SNR=3.6						
MKAR	**Makanchi Array**	**147.13**	**39**	PKPbc	PKPbc	21 36 22.8	+1.4
	0.6nm,0.6s,baz=291,slow=4.0,SNR=6.6						

MAN 24 21:21:58, 10°.22N×125°.19E, h19km, **mb4.8, ML3.7, MS3.6, 1D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**1.01**	**325**	*e*P	Pb	21 22 16.7	-0.1
OCLP				*e*S	Sb	21 22 32.0	+2.2
LLP	**Lapu-Lapu**	**1.21**	**275**	||*e*P	Pn	21 22 19.7	-0.2
LLP				*i* S	Sb	21 22 36.4	+0.8
BESP	**Borongan**	**1.40**	**10**	*e*P	Pn	21 22 22.2	-0.3
TBP	**Tagbilaran**	**1.41**	**248**	*e*P	Pn	21 22 23.3	+0.6
TBP				*e*S	Sn	21 22 42.7	+1.9
SNPH	**Sibulan**	**2.12**	**246**	*e*P	Pn	21 22 36.6	+4.2
BUKP	**Musuan**	**2.33**	**183**	*e*P	Pn	21 22 36.3	+1.0
CNP	**Catarman**	**2.34**	**347**	*e*P	Pn	21 22 37.4	+2.0
GUIM	**Jordan**	**2.59**	**279**	*e*P	Pn	21 22 40.4	+1.4
PVCP	**Virac**	**3.51**	**343**	*e*P	Pn	21 22 55.7	+4.1

*ISCJB **24** 21:34:29.7±0.5, 37°.03N±0°.03×29°.25E±0°.05, h12km±7km, Error ellipse: s-maj=6.8km s-min=5.1km az=151.0*
*DDA **24** 21:34:29.4, 37°.02N×29°.24E, h7km±6km, Md2.9*
*ISK **24** 21:34:29.4, 37°.02N×29°.25E, h15km, MD2.9*
*CSEM **24** 21:34:29.6±0.2, 37°.03N×29°.26E, h12km, MD2.9, Error ellipse: s-maj=5.3km s-min=4.5km az=16.0*

ISC 24 21:34:30.2±0.5, **37°.04N**±0°.03×**29°.26E**±0°.05, **h15**km±6km, **n26, σ0°89/38, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.23**	**58**	*e*PG	**Pg**	**21 34 34.4**	**-0.8**
GLHS				*e*SG	**Sg**	**21 34 39.8**	**+1.1**
GLHS	**Glhisar (BURDU**	**0.23**	**58**	*e*Pg	**Pg**	**21 34 34.4**	**-0.8**
GLHS				*e*Sg	**Sg**	**21 34 39.8**	**+1.2**
GOLH	**Golhisar**	**0.31**	**50**	*i* P	**Pg**	**21 34 35.6**	**-1.1**
GOLH				*i* S	**Sg**	**21 34 41.9**	**+0.8**
GOLH	**Golhisar**	**0.31**	**50**	*i* P	**Pg**	**21 34 35.6**	**-1.1**
GOLH				*i* S	**Sg**	**21 34 41.9**	**+0.8**
ELL	**Elmali**	**0.59**	**119**	*e*PG	**Pg**	**21 34 41.7**	**-0.2**
ELL				*e*SG	**Sg**	**21 34 50.2**	**+0.5**
ELL	**Elmali**	**0.59**	**119**	*e*Pg	**Pg**	**21 34 41.7**	**-0.1**
ELL				*e*Sg	**Sg**	**21 34 50.2**	**+0.5**
DNZL	**Cakiroluk**	**0.67**	**346**	*i* P	**Pg**	**21 34 42.2**	**-1.2**
DNZL				*i* S	**Sg**	**21 34 53.4**	**+1.1**
DNZL	**Cakiroluk**	**0.67**	**346**	*i* P	**Pg**	**21 34 42.2**	**-1.2**
DNZL				*i* S	**Sg**	**21 34 53.4**	**+1.1**
DENT	**Denizli**	**0.74**	**346**	*e*PG	**Pg**	**21 34 44.3**	**-0.3**
DENT	**Denizli**	**0.74**	**346**	*e*Pg	**Pg**	**21 34 44.3**	**-0.3**
YER	**Yerkesik**	**0.79**	**277**	*e*PG	**Pg**	**21 34 45.2**	**-0.3**
YER	**Yerkesik**	**0.79**	**277**	*e*Pg	**Pg**	**21 34 45.2**	**-0.3**
AKAS	**Kas**	**0.85**	**161**	*i* P	**Pg**	**21 34 44.5**	**-2.1**
AKAS				*i* S	**Sg**	**21 34 59.1**	**+1.4**
AKAS	**Kas**	**0.85**	**161**	*i* P	**Pg**	**21 34 44.5**	**-2.1**
AKAS				*i* S	**Sg**	**21 34 59.1**	**+1.4**
BCK	**Bucak**	**1.14**	**68**	*e*PN	**Pg**	**21 34 52.1**	**-0.1**
BCK	**Bucak**	**1.14**	**68**	*e*Pn	**Pg**	**21 34 52.1**	**-0.1**
KHL	**Karahalli**	**1.30**	**9**	*e*PN	**Pn**	**21 34 53.7**	**-0.1**
KHL	**Karahalli**	**1.30**	**9**	*e*Pn	**Pn**	**21 34 53.7**	**-0.1**
DAT	**Datca**	**1.38**	**258**	*e*PN	**Pn**	**21 34 55.1**	**+0.2**
DAT	**Datca**	**1.38**	**258**	*e*Pn	**Pn**	**21 34 55.1**	**+0.2**
BDRM	**Kayabasi**	**1.45**	**272**	*i* P	**Pn**	**21 34 56.7**	**+0.8**
BDRM				*i* S	**Sn**	**21 35 15.7**	**+1.1**
BDRM	**Kayabasi**	**1.45**	**272**	*i* P	**Pn**	**21 34 56.7**	**+0.8**
BDRM				*i* S	**Sn**	**21 35 15.7**	**+1.1**
SUTC	**Sutluce-Ispart**	**1.46**	**72**	*e*PN	**Pn**	**21 34 55.7**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.46**	**72**	*e*Pn	**Pn**	**21 34 55.7**	**-0.2**
BODT	**Bodrum**	**1.56**	**272**	*e*PN	**Pn**	**21 34 56.4**	**-0.9**
BODT	**Bodrum**	**1.56**	**272**	*e*Pn	**Pn**	**21 34 56.4**	**-0.9**

BJI 24 21:49:58.8, 35°.53N×81°.81E, h9km, **mb4.1**/2, **ML4.0**/6, **Ms3.6**/2, **Ms7 3.5**/1, **Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**6.11**	**312**	Pn	Pn	21 51 34.0	+4.8
KSH				Sn	Sn	21 52 36.4	-2.9
KSH				smax			
	comp=N,350nm,1.2s						
KSH				smax			
	comp=E,310nm,0.9s						

*IDC **24** 21:56:15.4±1.0, 34°.19N×139°.19E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.6/23, mbtmp3.6/6, ML2.8/1, MS2.8/1, Ms1 2.8/1, ms1mx1.8/38, Error ellipse: s-maj=34.7km s-min=16.2km az=70.0*
*ISCJB **24** 21:56:16.5±0.4, 34°.26N±0°.03×139°.20E±0°.04, h21km±3km, mb3.8/10, Error ellipse: s-maj=6.1km s-min=5.0km az=150.6*
*JMA **24** 21:56:16.8, 34°.32N×139°.17E, h8km±1km, M3.0*
JMA Felt III J1.
*NEIC **24** 21:56:20.0±0.6, 34°.23N×139°.17E, h35km, mb4.1/7, Error ellipse: s-maj=12.8km s-min=8.5km az=100.0*

ISC 24 21:56:16.9±0.4, **34°.29N**±0°.03×**139°.19E**±0°.04, **h11**km±3km, **n32, σ1°15/40, mb3.8**/10, **3C, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKO	**Kozu shima**	**0.11**	**205**	⇑P	**Pg**	**21 56 20.0**	**+0.2**
JKO				*e*S	**Sg**	**21 56 22.7**	**+0.9**
JMY	**Miyakejima3**	**0.34**	**129**	P	**Pg**	**21 56 24.2**	**+0.5**
JMY				S	**Sg**	**21 56 29.7**	**+1.4**
JIM2	**Oshima 3**	**0.47**	**24**	P	**Pg**	**21 56 25.9**	**-0.3**
JIM2				*e*S	**Sg**	**21 56 32.6**	**+0.1**
JIZS	**Izushimoda**	**0.50**	**329**	⇑P	**Pg**	**21 56 26.0**	**-0.8**
JIZS				S	**Sg**	**21 56 32.7**	**-0.8**
KTJJ	**Kamata 2**	**0.65**	**351**	P	**Pg**	**21 56 28.5**	**-1.0**
JOD2	**Odawara 2**	**0.98**	**355**	P	**Pg**	**21 56 34.3**	**-1.5**
TK03	**Tokai 3**	**1.02**	**264**	*e*S	**Sb**	**21 56 51.7**	**+1.6**
TK04	**Tokai 4**	**1.09**	**276**	P	**Pb**	**21 56 37.0**	**-0.8**
TK04				*e*S	**Sb**	**21 56 53.0**	**+0.9**
SHZ3	**Shizuoka 3**	**1.12**	**314**	⇑P	**Pb**	**21 56 37.4**	**-0.9**
SHZ3				*e*S	**Sb**	**21 56 53.0**	**+0.1**
BSO4	**Boso 4**	**1.18**	**53**	P	**Pb**	**21 56 38.5**	**-0.7**
JHJ	**Hachijo jima 2**	**1.26**	**157**	Pn	**Pn**	**21 56 39.9**	**-0.5**
	94nm,0.3s,baz=19,slow=4.0,SNR=23						
MJAR	**Matsushiro Arr**	**2.39**	**341**	Pn	**Pn**	**21 56 56.5**	**+0.5**
	1.9nm,0.3s,baz=164,slow=13,SNR=59						
MJAR				Sn	**Sn**	**21 57 29.3**	**+4.1**
	1.7nm,0.3s,baz=299,slow=38,SNR=4.0						
MAJO	**Matsushiro**	**2.39**	**341**	*e*Pn	**Pn**	**21 56 58.2**	**+2.2**
MAJO				Sn	**Sn**	**21 57 28.7**	**+3.5**
MAT	**Matsushiro**	**2.39**	**341**	P	**Pn**	**21 56 58.6**	**+2.6**
MAT				S	**Sn**	**21 57 29.6**	**+4.4**
KSRS	**Korea Array**	**9.68**	**292**	LR	LR	22 02 28.7	
	comp=Z,55nm,18.6s,baz=355,slow=38						
MDJ	**Mudanjiang**	**12.70**	**327**	Pn	**Pn**	**21 59 17.8**	**+0.5**
YSS	**Yuzh-Sakhalins**	**12.94**	**11**	Pn	**Pn**	**21 59 20.1**	**-0.4**
TATO	**Taipei**	**17.95**	**244**	*e*Pn	**Pn**	**22 00 25.3**	**-1.1**
	8.8nm,0.5s						
HIA	**Hailar**	**20.75**	**322**	*e*P	**P**	**22 00 58.8**	**+1.3**
	5.1nm,0.3s						
PALP	**Palanan**	**22.80**	**225**	*e*P	**P**	**22 01 17.2**	**-2.4**
PET	**Petropavlovsk**	**23.30**	**31**	P	**P**	**22 01 25.6**	**+1.0**
BALP	**Baler**	**24.34**	**225**	*e*P	**P**	**22 01 31.6**	**-3.1**
ENH	**Enshi**	**25.39**	**269**	*e*P	**P**	**22 01 43.1**	**-1.2**
	2.0nm,0.3s,mb4.1						
ULN	**Ulaanbaatar**	**27.54**	**309**	*e*P	**P**	**22 01 59.8**	**-3.8**
	2.5nm,0.8s,mb3.9						
ULN				*e*PcP	PcP	22 05 20.6	-0.6
CHTO	**Chiang Mai**	**38.89**	**257**	*e*P	**P**	**22 03 43.0**	**+0.5**
	1.4nm,0.8s,mb3.7						
ZALV	**Zalesovo Beam**	**42.49**	**315**	P	**P**	**22 04 12.3**	**+0.5**
	0.3nm,0.4s,mb3.3,baz=80,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**44.10**	**304**	P	**P**	**22 04 26.2**	**+1.3**
	1.4nm,1.0s,mb3.7,baz=74,slow=9.4,SNR=3.3						
ILAR	**Eielson Array**	**52.78**	**31**	P	**P**	**22 05 32.8**	**+1.3**
	0.3nm,0.8s,mb3.3,baz=280,slow=6.0,SNR=3.4						
WRA	**Warramunga Arr**	**54.12**	**186**	P	**P**	**22 05 41.0**	**-0.8**
	0.9nm,0.9s,mb3.7,baz=2.4,slow=7.6,SNR=13						
STKA	**Stephens Creek**	**65.85**	**178**	*e*P	**P**	**22 07 01.2**	**-1.0**
	0.5nm,0.8s,mb3.6						
NWAO	**Narrogin (SRO)**	**69.97**	**200**	*e*P	**P**	**22 07 26.9**	**-1.3**
	9.6nm,0.9s,mb4.7						
TXAR	**Lajitas Array**	**93.24**	**51**	P	**P**	**22 09 31.6**	**-0.1**
	0.3nm,0.7s,mb3.9,baz=323,slow=3.3,SNR=4.2						

*IDC **24** 22:00:32.2±1.2, 19°.28N×121°.68E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/22, mbtmp3.7/7, MS3.7/1, Ms1 3.6/1, ms1mx2.1/42, Error ellipse: s-maj=56.7km s-min=18.7km az=61.0*
*ISCJB **24** 22:00:39.4±1.3, 19°.14N±0°.10×121°.26E±0°.08, h64km±14km, mb3.5/7, Error ellipse: s-maj=16.8km s-min=11.9km az=10.4*
*MAN **24** 22:00:39, 19°.02N×121°.21E, h15km, mb4.8, ML3.7, MS3.8*

ISC 24 22:00:40.3±1.4, **19°.1N**±0°.1×**121°.28E**±0°.08, **h55**km±16km, **n18, σ1°20/22, mb3.5/7, 3C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**1.15**	**141**	*e*P	**Pn**	**22 00 59.6**	**-0.6**
SGCP				*e*S	**Sn**	**22 01 16.3**	**+1.3**
APYP	**Conner**	**1.27**	**181**	*e*P	**Pn**	**22 01 00.2**	**-1.6**
APYP				*e*S	**Sn**	**22 01 18.1**	**+0.2**
SIPP	**Brgy, Tapao**	**1.44**	**213**	⇑*i* P	**Pn**	**22 01 02.9**	**-1.2**
SIPP				*i* S	**Sn**	**22 01 22.3**	**+0.4**
CVP	**Callao Caves**	**1.52**	**160**	⇑*i* P	**Pn**	**22 01 04.7**	**-0.5**
CVP				*i* S	**Sn**	**22 01 23.9**	**0.0**
ABRA	**Dolores**	**1.58**	**200**	*e*P	**Pn**	**22 01 04.1**	**-1.8**
CAUP	**Cauayan**	**2.25**	**167**	*e*P	**Pn**	**22 01 17.1**	**+2.0**
BCPH	**Baguio City Da**	**2.83**	**194**	⇑*i* P	**Pn**	**22 01 22.8**	**-0.2**
BCPH				*i* S	**Sn**	**22 02 02.2**	**+6.4**
BOLP	**Bolinao**	**3.04**	**206**	*e*P	**Pn**	**22 01 24.6**	**-1.3**
SCZP	**Santa Cruz**	**3.59**	**202**	*e*P	**Pn**	**22 01 35.8**	**+2.3**
LUBP	**Lubang**	**5.47**	**191**	*e*P	**Pn**	**22 02 00.7**	**+1.5**
CMAR	**Chiang Mai Arr**	**21.16**	**272**	P	**P**	**22 05 22.9**	**+1.9**
	0.7nm,0.8s,mb3.1,baz=64,slow=10,SNR=7.6						
WRA	**Warramunga Arr**	**40.90**	**161**	P	**P**	**22 08 16.0**	**-1.2**
	0.5nm,0.5s,mb3.4,baz=343,slow=9.5,SNR=6.9						
MKAR	**Makanchi Array**	**42.12**	**320**	P	**P**	**22 08 27.4**	**+0.4**
	0.8nm,0.7s,mb3.5,baz=112,slow=9.4,SNR=7.7						
ASAR	**Alice Springs**	**44.29**	**163**	P	**P**	**22 08 44.3**	**-0.5**
	0.3nm,0.3s,mb3.4,baz=343,slow=6.7,SNR=7.4						
ZALV	**Zalesovo Beam**	**44.57**	**330**	P	**P**	**22 08 45.5**	**-1.2**
	0.9nm,0.7s,mb3.7,baz=118,slow=6.2,SNR=4.9						
KURK	**Kurchatov**	**46.09**	**323**	P	**P**	**22 08 58.4**	**-0.3**
	0.7nm,0.2s,mb4.2,baz=122,slow=7.7,SNR=6.4						
BVAR	**Borovoye Array**	**51.68**	**323**	P	**P**	**22 09 42.8**	**+1.3**
	0.3nm,0.5s,mb3.5,baz=96,slow=8.8,SNR=3.6						
STKA	**Stephens Creek**	**54.34**	**159**	LR	LR	22 31 49.1	
	comp=Z,70nm,21.0s,baz=25,slow=34						

IDC 24 22:06:31.8±1.6, **7°.88S**×**127°.34E**, **h0**km, **mb3.7**/2, **mb1 3.8**/4, **mb1mx3.6**/15, **mbtmp3.5**/4, **ML3.7**/2, **Error ellipse: s-maj=105.9km s-min=31.6km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.77**	**151**	Pn	Pn	22 09 47.0	-1.5
	0.5nm,0.3s,baz=324,slow=14,SNR=22						
WRA				Sn	Sn	22 12 07.5	-15
	1.4nm,0.3s,baz=337,slow=21,SNR=15						
ASAR	**Alice Springs**	**16.91**	**159**	Pn	Pn	22 10 31.6	+1.7
	0.2nm,0.3s,baz=336,slow=8.8,SNR=8.1						
ASAR				Sn	Sn	22 13 29.2	-9.4
	0.2nm,0.3s,baz=340,slow=25,SNR=6.0						
MKAR	**Makanchi Array**	**67.55**	**328**	P	P	22 17 30.1	+0.2
	0.3nm,0.5s,baz=116,slow=7.7,SNR=8.0						
ILAR	**Eielson Array**	**95.27**	**25**	P	P	22 19 56.9	-0.4
	0.2nm,0.5s,baz=234,slow=8.6,SNR=4.1						

*ISCJB **24** 22:06:58.3±0.7, 35°.59N±0°.05×135°.12E±0°.05, h12km±4km, Error ellipse: s-maj=8.5km s-min=6.1km az=168.0*
*JMA **24** 22:06:59.1, 35°.58N×135°.10E, h9km, M3.2 Broadband fault plane solution: P waves. NP1:ϕ=7.00000°, δ=25.00000°, λ=-21.00000°. NP2:ϕ=115.00000°, δ=81.00000°, λ=-114.00000°. Principal axes: T Plg32.0000°, Azm225.0000°; N Plg24.0000°, Azm119.0000°; P Plg48.0000°, Azm0.0000°;*
JMA Felt III J1.
*NIED **24** 22:07:00, 35°.60N×135°.10E, h8km, Mw3.2 Best double couple: M0=7.69000×10^13 NP1:ϕ=260.00000°, δ=76.00000°, λ=89.00000°. NP2:ϕ=83.00000°, δ=14.00000°, λ=93.00000°.*

ISC 24 22:06:58.7±0.7, **35°.58N**±0°.04×**135°.10E**±0°.05, **h11**km±6km, **n6, σ0°60/12, 4C-1D, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKY	**Yasaka**	**0.04**	**360**	⇑P	**Pg**	**22 07 00.9**	**0.0**
JKY				S	**Sg**	**22 07 02.2**	**-0.2**
JKSM	**Kasumi**	**0.36**	**271**	⇑P	**Pg**	**22 07 06.3**	**+0.4**
JKSM				S	**Sg**	**22 07 11.1**	**+0.4**
JWT	**Wachi**	**0.39**	**141**	⇓P	**Pg**	**22 07 06.6**	**+0.2**
JWT				S	**Sg**	**22 07 11.6**	**+0.1**
JKS	**Kasai**	**0.64**	**200**	⇑P	**Pg**	**22 07 11.3**	**+0.2**
JKS				S	**Sg**	**22 07 19.5**	**+0.1**
JAD	**Aida**	**1.00**	**230**	⇑P	**Pg**	**22 07 17.6**	**-0.4**
JAD				S	**Sg**	**22 07 30.6**	**-0.4**
MAT	**Matsushiro**	**2.69**	**68**	P	**Pn**	**22 07 40.3**	**-1.6**
MAT				S	**Sn**	**22 08 15.5**	**+1.0**

IDC 24 22:08:26.8±1.0, **2°.30N**×**126°.56E**, **h0**km, **mb3.9**/7, **mb1 4.1**/7, **mb1mx3.8**/19, **mbtmp3.9**/7, **Error ellipse: s-maj=55.2km s-min=18.2km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.39**	**161**	P	P	22 13 37.0	-0.5
	1.4nm,0.4s,baz=343,slow=11,SNR=3.6						
CMAR	**Chiang Mai Arr**	**31.47**	**303**	P	P	22 14 50.9	+0.4
	1.7nm,0.9s,baz=116,slow=6.7,SNR=11						
KSRS	**Korea Array**	**35.01**	**2**	P	P	22 15 21.5	+0.5
	1.1nm,0.6s,baz=176,slow=11,SNR=4.5						
STKA	**Stephens Creek**	**36.87**	**158**	P	P	22 15 37.4	+0.3
	2.2nm,0.5s,baz=341,slow=9.3,SNR=8.5						
MKAR	**Makanchi Array**	**58.63**	**326**	P	P	22 18 25.1	-0.7
	0.5nm,0.6s,baz=111,slow=9.3,SNR=5.1						
KURK	**Kurchatov**	**62.85**	**328**	P	P	22 18 54.1	-0.3
	1.4nm,0.5s,baz=129,slow=6.2,SNR=11						
BVAR	**Borovoye Array**	**68.42**	**327**	P	P	22 19 30.7	+0.3
	0.5nm,0.5s,baz=152,slow=6.7,SNR=5.4						

*NEIC **24** 22:09:56.6±1.4, 2°.29N×127°.75E, h82km±13km, mb4.4/7, Error ellipse: s-maj=16.0km s-min=6.7km az=79.0*
*IDC **24** 22:09:56.9±0.7, 2°.28N×127°.77E, h83km±6km, mb4.0/10, mb1 4.1/11, mb1mx3.9/20, mbtmp4.1/11, Error ellipse: s-maj=32.5km s-min=12.7km az=80.0*
*ISCJB **24** 22:09:58.7±1.1, 2°.28N±0°.04×127°.84E±0°.08, h118km±10km, mb4.4/16, Error ellipse: s-maj=13.6km s-min=6.7km az=168.1*
*DJA **24** 22:10:06, 1°.97N×127°.47E, h106km, mb5.0/14*

ISC 24 22:09:58.6±1.1, **2°.27N**±0°.04×**127°.94E**±0°.09, **h100**km±10km, **n48, σ1°11/46, mb4.4**/16, **1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.60**	**201**	P	**Pn**	**22 10 30.6**	**+4.4**
LBMI	**Labuha**	**2.

KURK				sP	sP	22 20 48.4	-6.4
	3.9nm,0.6s,baz=129,slow=6.2,SNR=9.3						
BVAR	**Borovoye Array**	**69.19**	**327**	sP	sP	22 21 24.0	-6.6
	1.5nm,0.6s,baz=120,slow=8.8,SNR=4.6						
CASY	**Casey**	**69.53**	**187**	*eP*	**P**	**22 20 55.8**	**-0.4**
	2.7nm,0.6s,mb4.2						
KDAK	**Kodiak Island**	**82.47**	**32**	P	**P**	**22 22 11.2**	**+1.4**
	2.0nm,0.5s,mb4.2,baz=281,slow=5.2,SNR=4.3						
ILAR	**Eielson Array**	**85.89**	**25**	P	**P**	**22 22 28.6**	**+1.5**
	0.2nm,0.7s,baz=250,slow=5.0,SNR=3.6						
ILAR				sP	sP	22 22 58.1	-5.9
	0.4nm,0.8s,baz=242,slow=6.1,SNR=3.8						
QSPA	**South Pole Qui**	**92.19**	**180**	P	**P**	**22 22 56.7**	**+0.2**
	1.0nm,0.8s,mb4.1,baz=293,slow=3.5,SNR=5.9						
TORD	**Torodi Ar. Bea**	**124.51**	**288**	PKP	PKPdf	22 28 46.1	-1.1
	0.5nm,0.7s,baz=88,slow=3.1,SNR=5.7						

*CSEM **24** 22:24:02.4, 40.98N× 19.81E, h0km, ML3.6, After TIR*
*TIR **24** 22:24:02.4±4.7, 40.98N× 19.81E, h0km±999km, ML3.6*
*ISCJB **24** 22:24:08.4±1.0, 41.04N±0.04× 19.9E±0.1, h10km, Error ellipse: s-maj=11.9km s-min=5.6km az=170.4*

ISC 24 22:24:09.5±1.0, 41.05N±0.04× 19.9E±0.1, h10km, n10, σ0s58/16, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.77**	**34**	*e*PG	**Pg**	**22 24 23.6**	**-0.6**
PHP	**Peshkopia**	**0.77**	**34**	*e*Pg	**Pg**	**22 24 23.6**	**-0.7**
	SNR=91						
KBN	**Korca**	**0.82**	**121**	*e*PG	**Pg**	**22 24 24.6**	**-0.7**
KBN				*i* SG	**Sg**	**22 24 36.6**	**+0.6**
KBN	**Korca**	**0.82**	**121**	*e*Pg	**Pg**	**22 24 24.6**	**-0.7**
	SNR=91						
KBN				*i* Sg	**Sg**	**22 24 36.6**	**+0.6**
	SNR=91						
PUK	**Puka**	**0.99**	**1**	*e*PG	**Pg**	**22 24 28.6**	**+0.1**
PUK				*i* SG	**Sg**	**22 24 46.9**	**+5.5**
PUK	**Puka**	**0.99**	**1**	*e*Pg	**Pg**	**22 24 28.6**	**+0.1**
	SNR=90						
PUK				*i* Sg	**Sg**	**22 24 46.9**	**+5.5**
	SNR=90						
SRN	**Sarande**	**1.17**	**175**	*e*PG	**Pg**	**22 24 32.7**	**+0.7**
SRN				*i* SG	**Sg**	**22 24 46.6**	**-0.6**
SRN	**Sarande**	**1.17**	**175**	*e*Pg	**Pg**	**22 24 32.7**	**+0.7**
	SNR=90						
SRN				*i* Sg	**Sg**	**22 24 46.7**	**-0.5**
	SNR=90						
BCI	**Bajram Curri**	**1.32**	**7**	*e*PG	**Pg**	**22 24 35.4**	**+0.5**
BCI	**Bajram Curri**	**1.32**	**7**	*e*Pg	**Pg**	**22 24 35.3**	**+0.4**
	SNR=90						

NEIC 24 22:35:28.6, 63.44N× 147.41W, h4km, ML3.5(PMR), **ML3.2**(AEIC), **After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DHY	**Denali Highway**	**0.37**	**177**	P	Pg	22 35 35.4	-0.2
DHY				S	Sg	22 35 40.4	0.0
RND	**Reindeer**	**0.65**	**267**	P	Pg	22 35 40.8	-0.2
RND				S	Sg	22 35 49.8	+0.4
MCK	**McKinley**	**0.74**	**294**	P	Pg	22 35 42.8	+0.1
MCK				S	Sg	22 35 53.0	+0.7
PAX	**Paxson**	**1.00**	**118**	P	Pg	22 35 46.0	-1.7
TRF	**Thorofare Moun**	**1.29**	**272**	P	Pg	22 35 52.3	-1.0
TRF				S	Sg	22 36 10.0	-0.1
COLA	**College**	**1.45**	**353**	P	Pn	22 35 54.9	-0.6
COLA				S	Sb	22 36 14.8	0.0
DOT	**Dot Lake**	**1.51**	**81**	P	Pn	22 35 56.0	-0.4
MDM	**Murphy Dome**	**1.56**	**347**	P	Pn	22 35 56.5	-0.5
MDM				S	Sn	22 36 17.8	+0.2
SML	**Sawmill**	**1.70**	**195**	P	Pn	22 35 58.1	-0.7
BPAW	**Bear Paw Mtn.**	**1.72**	**294**	P	Pn	22 35 58.2	-0.9
PMR	**Palmer**	**2.02**	**204**	*e*P	Pn	22 36 03.4	+0.1
PMR				S	Sn	22 36 29.4	+0.4
CHUM	**Lake Minchumin**	**2.23**	**284**	P	Pn	22 36 06.0	-0.2
PPLA	**Purkeypile**	**2.24**	**258**	P	Pn	22 36 07.1	+0.8
DIV	**Divide**	**2.45**	**161**	P	Pn	22 36 09.9	+0.8
BCA3	**Beaver Creek A**	**2.57**	**96**	P	Pn	22 36 10.8	-0.1
RC01	**Rabbit Creek A**	**2.60**	**206**	P	Pn	22 36 12.3	+1.0
FIB	**Fire Island**	**2.63**	**211**	P	Pn	22 36 13.5	+1.9
BMRM	**Bremner River**	**2.81**	**151**	P	Pn	22 36 15.7	+1.6
EYAK	**Cordova Ski Ar**	**3.01**	**164**	P	Pn	22 36 18.9	+2.0
SLKM	**Skilak Lake**	**3.23**	**206**	P	Pn	22 36 21.7	+1.7
RAGM	**Ragged Mountai**	**3.33**	**156**	P	Pn	22 36 22.9	+1.6
SEW	**Seward**	**3.49**	**197**	P	Pn	22 36 26.0	+2.5
DAWY	**Dawson**	**3.62**	**76**	P	Pn	22 36 25.5	+0.3
IM3	**Indian Mountai**	**3.73**	**316**	P	Pn	22 36 26.6	-0.2
TT01	**Tatalina**	**3.94**	**266**	P	Pn	22 36 30.1	+0.4
COLD	**Coldfoot**	**3.98**	**344**	P	Pn	22 36 30.7	+0.5
BRLK	**Bradley Lake**	**4.05**	**206**	P	Pn	22 36 32.8	+1.6
BM3	**Burnt Mountain**	**4.16**	**15**	P	Pn	22 36 33.0	+0.3

*IDC **24** 22:48:28.8±1.1, 37.00N× 104.84W, h0km, mb3.6/1, mb1 3.7/5, mb1mx3.5/25, mbtmp3.4/5, ML3.6/4, MS2.8/1, Ms1 2.8/1, ms1mx1.8/29, Error ellipse: s-maj=24.9km s-min=10.8km az=73.0*
*ISCJB **24** 22:48:29.5±0.2, 36.93N±0.01× 104.88W±0.02, h10km, Error ellipse: s-maj=2.5km s-min=1.9km az=170.5*
*NEIC **24** 22:48:31.5±0.4, 37.10N× 104.87W, h5km, ML3.4, Error ellipse: s-maj=6.5km s-min=5.5km az=54.0*

ISC 24 22:48:29.8±0.2, 36.93N±0.01× 104.89W±0.02, h10km, n98, σ1s45/152, 32C-31D, New Mexico

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T25A	**Trinidad**	**0.44**	**61**	⇑P	**Pg**	**22 48 38.0**	**-0.4**
	baz=0.5						
T25A				⇓S	**Sg**	**22 48 43.8**	**-0.5**
	baz=0.5						
U24A	**Moreno Valley**	**0.60**	**211**	⇓P	**Pg**	**22 48 40.5**	**-1.0**
	baz=0.6,SNR=332						
U24A				⇑S	**Sg**	**22 48 48.1**	**-1.3**
	baz=0.6						
U25A	**Circle Dot Ran**	**0.66**	**143**	P	**Pg**	**22 48 40.9**	**-1.6**
	baz=0.6,SNR=1000						
U25A				⇑S	**Sg**	**22 48 49.0**	**-2.0**
	baz=0.6						
S24A	**Houchin Ranch,**	**0.76**	**340**	⇓P	**Pg**	**22 48 44.7**	**+0.3**
	baz=0.8						
S24A				⇑S	**Sg**	**22 48 55.2**	**+0.8**
	baz=0.8						
S25A	**Robets Cordova**	**0.82**	**26**	⇓P	**Pg**	**22 48 45.2**	**-0.4**
	baz=0.9						
S25A				⇓S	**Sg**	**22 48 55.9**	**-0.4**
	baz=0.9						
T23A	**Casias Ranch,**	**0.92**	**277**	⇑P	**Pg**	**22 48 47.4**	**-0.2**
	baz=0.9,SNR=185						
SDCO	**Great Sand Dun**	**0.95**	**330**	⇓P	**Pg**	**22 48 47.9**	**-0.3**
	baz=1.0						
SDCO				⇑S	**Sg**	**22 49 00.7**	**+0.2**
	baz=1.0						
SDCO	**Great Sand Dun**	**0.95**	**330**	*e*P	**Pg**	**22 48 47.8**	**-0.3**
SDCO				*e*S	**Sg**	**22 48 59.7**	**-0.8**
V25A	**Rancho No Teng**	**1.11**	**168**	P	**Pb**	**22 48 49.3**	**-1.8**
	baz=1.1,SNR=552						
V25A				⇑S	**Sg**	**22 49 02.7**	**-2.8**
	baz=1.1						
S23A	**Nye Farm, Mont**	**1.18**	**312**	⇓P	**Pb**	**22 48 52.5**	**+0.3**
	baz=1.2						
S23A				⇑S	**Sb**	**22 49 09.1**	**+1.6**
	baz=1.2						
U23A	**El Rito**	**1.20**	**241**	⇓P	**Pn**	**22 48 52.0**	**-0.7**
	baz=1.2,SNR=380						
U23A				⇑S	**Sb**	**22 49 07.4**	**-0.8**
	baz=1.2						
V24A	**Rampart Ranch,**	**1.24**	**194**	P	**Pn**	**22 48 51.6**	**-1.5**
	baz=1.2,SNR=124						
R24A	**Sanders Place,**	**1.31**	**353**	⇑P	**Pn**	**22 48 54.6**	**+0.4**
	baz=1.4						
V26A	**Tequesquite Ra**	**1.44**	**141**	⇓Pn	**Pn**	**22 48 54.9**	**-1.0**
	baz=1.4						
V23A	**Ortiz Mt. (NFS**	**1.57**	**222**	⇓Pg	**Pg**	**22 48 58.6**	**-1.4**
	baz=1.5,SNR=137						
T22A	**Edith**	**1.61**	**274**	⇑Pg	**Pg**	**22 48 59.7**	**-1.1**
	baz=1.6,SNR=167						
T22A				⇑Sn	**Sn**	**22 49 20.4**	**+1.3**
	baz=1.6						
U22A	**Llaves**	**1.67**	**251**	⇑Pg	**Pg**	**22 49 00.7**	**-1.1**
	baz=1.7,SNR=98						
W25A	**X Bar L Ranch,**	**1.74**	**168**	⇓Pb	**Pb**	**22 49 00.8**	**-1.1**
	baz=1.7,SNR=150						
W25A				⇓Sn	**Sn**	**22 49 22.6**	**+0.2**
	baz=1.7						
S22A	**4UR Ranch, Cre**	**1.75**	**299**	⇓Pg	**Pg**	**22 49 02.6**	**-0.7**
	baz=1.8,SNR=155						
W24A	**Lazy 6 Ranch,**	**1.76**	**194**	⇑Pb	**Pb**	**22 49 01.2**	**-1.0**
	baz=1.7,SNR=252						
V22A	**San Miguel Ran**	**1.91**	**239**	⇓Pb	**Pb**	**22 49 04.3**	**-0.5**
	baz=1.9						
R22A	**Saguache, Gunn**	**1.97**	**312**	⇓Pg	**Pg**	**22 49 06.6**	**-0.9**
	baz=2.0,SNR=64						
R22A				⇓Sb	**Sb**	**22 49 33.0**	**+2.6**
	baz=2.0						
W23A	**Werner Place,**	**2.04**	**210**	⇓Pb	**Pb**	**22 49 06.2**	**-0.7**
	baz=2.0						
W23A				⇓Sb	**Sb**	**22 49 32.4**	**+0.2**
	baz=2.0						
Q24A	**Divide**	**2.04**	**354**	⇑Pb	**Pb**	**22 49 07.6**	**+0.6**
	baz=2.1,SNR=99						
Q25A	**Bedland, Calha**	**2.05**	**14**	Pg	**Pg**	**22 49 08.1**	**-1.0**
	baz=2.1,SNR=78						
W26A	**Owens Ranch, T**	**2.05**	**153**	⇓Pb	**Pb**	**22 49 06.1**	**-1.0**
	baz=2.0,SNR=211						
W26A				⇑Sb	**Sb**	**22 49 32.4**	**-0.2**
	baz=2.0						
Q23A	**Hartsel**	**2.11**	**340**	Pb	**Pb**	**22 49 08.5**	**+0.4**
	baz=2.2,SNR=134						
Q23A				⇑Pg	**Pg**	**22 49 09.9**	**-0.3**
	baz=2.2						
T21A	**Navajo Lake**	**2.12**	**273**	⇑Pg	**Pg**	**22 49 09.4**	**-1.0**
	baz=2.1						
U21A	**Nageezi**	**2.28**	**258**	⇑Pb	**Pb**	**22 49 10.5**	**-0.5**
	baz=2.3						
ANMO	**Albuquerque**	**2.35**	**213**	*e*Pn	**Pn**	**22 49 10.1**	**+1.7**
ANMO				*e*Sn	**Sn**	**22 49 41.8**	**+4.5**
ANMO	**Albuquerque**	**2.35**	**213**	Pn	**Pn**	**22 49 10.4**	**+2.0**
	6.3nm,0.3s,baz=41,slow=13,SNR=80						
ANMO				Sn	**Sn**	**22 49 41.7**	**+4.4**
	26nm,0.3s,baz=325,slow=6.5,SNR=15						
W27A	**Bowe Ranch, En**	**2.38**	**141**	⇑Pb	**Pb**	**22 49 11.7**	**-1.0**
	baz=2.3,SNR=221						
W27A				⇓Sb	**Sb**	**22 49 42.5**	**+0.4**
	baz=2.3						
X24A	**Lazy VL Ranch,**	**2.40**	**191**	⇓P	**Pn**	**22 49 12.7**	**+3.6**
	baz=2.4						
X25A	**Clemmons Ranch**	**2.40**	**175**	⇓Pb	**Pb**	**22 49 12.3**	**-0.9**
	baz=2.4						
S21A	**Coal Bank Pass**	**2.42**	**288**	⇑P	**Pn**	**22 49 14.7**	**+5.2**
	baz=2.4						
V21A	**Milan**	**2.48**	**244**	P	**Pn**	**22 49 12.6**	**+2.4**
	baz=2.5,SNR=82						
Q22A	**Crested Butte,**	**2.50**	**321**	⇓P	**Pn**	**22 49 13.2**	**+2.6**
	baz=2.5						
X26A	**CR and CF Fran**	**2.53**	**159**	⇑P	**Pn**	**22 49 12.0**	**+1.1**
	baz=2.5,SNR=68						
X26A				⇓Pb	**Pb**	**22 49 14.7**	**-0.6**
	baz=2.5						
R21A	**Cimarron**	**2.55**	**305**	⇓Pb	**Pb**	**22 49 14.8**	**-0.9**
	baz=2.6,SNR=33						
P23A	**Jefferson**	**2.55**	**343**	⇑Pb	**Pb**	**22 49 15.1**	**-0.7**
	baz=2.6,SNR=8.4						
P23A				⇑Pb	**Pb**	**22 49 18.9**	**+3.2**
	baz=2.6						
X23A	**Hourglass Bar**	**2.57**	**205**	⇑Pb	**Pb**	**22 49 15.1**	**-0.9**
	baz=2.5						
P24A	**Kohler Place,**	**2.58**	**360**	Pb	**Pb**	**22 49 15.6**	**-0.7**
	baz=2.6,SNR=7.6						
P25A	**Willow Gulch B**	**2.64**	**12**	P	**Pn**	**22 49 16.1**	**+3.6**
	baz=2.7,SNR=42						
P25A				⇓Sb	**Sb**	**22 49 53.1**	**+3.4**
	baz=2.7						
MVCO	**Mesa Verde**	**2.90**	**277**	⇑Pg	**Pg**	**22 49 23.6**	**-1.8**
	baz=2.9						
MVCO	**Mesa Verde**	**2.90**	**277**	*e*Pn	**Pn**	**22 49 19.9**	**+3.9**
MVCO				*e*S	**Sn**	**22 50 00.8**	**+10**
S20A	**Disappointment**	**2.91**	**289**	⇓Pg	**Pg**	**22 49 24.0**	**-1.5**
	baz=2.9						
ISCO	**Idaho Springs**	**2.92**	**349**	⇑P	**Pn**	**22 49 19.7**	**+3.4**
	baz=3.0,SNR=26						
ISCO				⇑Sb	**Sb**	**22 50 01.3**	**+3.5**
	baz=3.0						
ISCO	**Idaho Springs**	**2.92**	**349**	Pn	**Pn**	**22 49 16.9**	**+0.6**
ISCO				*e*Sg	**Sg**	**22 50 01.3**	**-2.4**
LPM	**Los Pinos Moun**	**2.97**	**209**	*e*Pn	**Pn**	**22 49 23.0**	**+6.0**
Y24A	**Capitan**	**3.03**	**189**	⇓Sb	**Sb**	**22 50 02.0**	**+1.2**
	baz=3.0						
P22A	**Eagle**	**3.04**	**332**	⇑P	**Pn**	**22 49 21.5**	**+3.5**
	baz=3.1,SNR=9.3						
V20A	**Brimhall**	**3.10**	**250**	⇓P	**Pn**	**22 49 21.2**	**+2.5**
	baz=3.1,SNR=44						
Y26A	**Elida**	**3.12**	**163**	⇑Sb	**Sb**	**22 50 04.5**	**+1.0**
	baz=3.1						
Y23A	**Lovelace Mesa,**	**3.14**	**198**	P	**Pn**	**22 49 21.2**	**+1.9**
	baz=3.1,SNR=7.9						
O24A	**Longmont**	**3.19**	**358**	P	**Pn**	**22 49 23.6**	**+3.6**
	baz=3.2,SNR=8.3						
LENM	**Lemitar**	**3.23**	**212**	*e*Pn	**Pn**	**22 49 28.1**	**+7.4**
O25A	**Wiggins**	**3.24**	**11**	P	**Pn**	**22 49 24.1**	**+3.5**
	baz=3.3,SNR=17						
AMTX	**Amarillo**	**3.31**	**127**	*e*Pn	**Pn**	**22 49 26.7**	**+5.0**
AMTX				*e*Sn	**Sn**	**22 50 09.4**	**+8.4**
X21A	**Alamocita Cree**	**3.42**	**224**	P	**Pn**	**22 49 25.4**	**+2.2**
	baz=3.4,SNR=7.2						
W20A	**Ramah**	**3.43**	**239**	⇑Sb	**Sb**	**22 50 14.9**	**+2.5**
	baz=3.4						
S19A	**Harvey Farm, M**	**3.48**	**285**	⇓Pg	**Pg**	**22 49 34.3**	**-2.2**
	baz=3.5						
PV04	**Paradox Valley**	**3.50**	**296**	*e*Pn	**Pn**	**22 49 27.0**	**+2.7**
U19A	**Dine' College,**	**3.53**	**261**	⇑Pg	**Pg**	**22 49 34.7**	**-2.8**
	baz=3.5						
Y21A	**Point of Rocks**	**3.69**	**219**	P	**Pn**	**22 49 29.0**	**+2.1**
	baz=3.7,SNR=18						
Z26A	**Caprock**	**3.72**	**168**	⇓Sb	**Sb**	**22 50 22.3**	**+1.5**
	baz=3.7						
N24A	**Carr**	**3.89**	**0**	P	**Pn**	**22 49 33.3**	**+3.6**
	baz=3.9,SNR=6.3						
O20A	**White River Ci**	**4.14**	**322**	P	**Pn**	**22 49 37.2**	**+4.2**
	baz=4.2,SNR=10.0						
Z21A	**St. Cloud Mine**	**4.27**	**213**	P	**Pn**	**22 49 37.0**	**+2.2**
	baz=4.2,SNR=11						
PHWY	**Pilot Hill**	**4.39**	**354**	*e*Pn	**Pn**	**22 49 39.9**	**+3.4**
PHWY				*e*Pg	**Pg**	**22 49 49.5**	**-4.4**
PHWY				*e*Sg	**Sg**	**22 50 46.7**	**-4.1**
CBKS	**Cedar Bluff**	**4.49**	**64**	*e*Pn	**Pn**	**22 49 39.4**	**+1.5**
CBKS				*e*Pg	**Pg**	**22 49 51.4**	**-4.5**
CBKS				*e*Sg	**Sg**	**22 50 50.9**	**-3.2**
M24A	**Cheyenne**	**4.54**	**1**	P	**Pn**	**22 49 42.2**	**+3.7**
	baz=4.6,SNR=12						
OGNE	**Ogallala**	**4.59**	**28**	*e*Pn	**Pn**	**22 49 40.4**	**+1.2**
OGNE				*e*Pg	**Pg**	**22 49 54.0**	**-3.8**
OGNE				*e*Sg	**Sg**	**22 50 54.0**	**-3.2**
SRU	**San Rafael**	**4.95**	**298**	*e*Pn	**Pn**	**22 49 43.1**	**-1.2**
RWWY	**Rawlins**	**5.08**	**340**	*e*Pn	**Pn**	**22 49 46.3**	**+0.3**
MNTX	**Cornudas Mount**	**5.23**	**185**	*e*Pn	**Pn**	**22 49 53.4**	**+5.3**
MNTX				*e*Pg	**Pg**	**22 50 05.6**	**-4.4**
MNTX				*e*S	**Sb**	**22 51 10.3**	**+6.1**
WUAZ	**Wupatki**	**5.42**	**257**	*e*Pn	**Pn**	**22 49 52.5**	**+1.8**
WUAZ				*e*Pg	**Pg**	**22 50 11.6**	**-2.1**
WUAZ				*e*Sg	**Sg**	**22 51 25.6**	**+1.6**
WMOK	**Wichita Mounta**	**5.42**	**112**	*e*Pn	**Pn**	**22 49 52.7**	**+2.0**
WMOK				*e*Pg	**Pg**	**22 50 13.7**	**-0.1**
WMOK				*e*Sg	**Sg**	**22 51 17.2**	**-6.8**
MSU	**Marysvale**	**5.99**	**288**	*e*Pn	**Pn**	**22 50 05.2**	**+6.7**
DAU	**Daniels Canyon**	**6.07**	**307**	*e*Pn	**Pn**	**22 49 57.9**	**-1.7**
MPU	**Maple Canyon**	**6.12**	**302**	*e*Pn	**Pn**	**22 49 59.8**	**-0.4**
JLU	**Jordanelle**	**6.30**	**308**	*e*Pn	**Pn**	**22 50 07.0**	**+4.3**
NLU	**North Lily Min**	**6.39**	**300**	*e*Pn	**Pn**	**22 50 05.3**	**+1.2**
TUC	**Tucson**	**6.69**	**228**	*e*Pn	**Pn**	**22 50 13.5**	**+5.4**
	6.4nm,0.7s						
TUC				*e*Pg	**Pg**	**22 50 35.7**	**-2.3**
TUC				Sg	**Sg**	**22 51 59.4**	**-5.3**
CCUT	**Cedar City**	**6.79**	**278**	*e*Pg	**Pg**	**22 50 33.4**	**-6.3**
PDAR	**Pinedale Array**	**6.85**	**330**	Pn	**Pn**	**22 50 12.6**	**+2.4**
	0.2nm,0.3s,baz=136,slow=16,SNR=5.2						
PDAR				Lg		22 52 03.4	
	0.5nm,0.3s,baz=139,slow=30,SNR=6.5						
BW06	**Boulder Array**	**6.85**	**330**	*e*Pg	**Pg**	**22 50 39.1**	**-1.7**
BW06				*e*Sg	**Sg**	**22 52 07.8**	**-1.7**
KSU1	**Kansas State U**	**6.89**	**69**	*e*Pn	**Pn**	**22 50 11.0**	**+0.2**
KSU1				*e*Pg	**Pb**	**22 50 31.2**	**+1.6**
KSU1				*e*Sg	**Sg**	**22 52 06.0**	**-5.0**
HWUT	**Hardware Ranch**	**6.97**	**314**	Pn	**Pn**	**22 50 13.4**	**+1.4**
HWUT				*e*Pg	**Pg**	**22 50 41.8**	**-1.5**
HWUT				*e*Sg	**Sg**	**22 52 13.3**	**-0.2**
DUG	**Dugway**	**7.01**	**300**	*e*Pn	**Pn**	**22 50 14.6**	**+2.1**
DUG				*e*Pg	**Pg**	**22 50 41.8**	**-2.3**
DUG				*e*Sg	**Sg**	**22 52 15.1**	**+0.3**
RSSD	**Black Hills**	**7.22**	**5**	*e*Pn	**Pn**	**22 50 16.0**	**+0.7**
RSSD				*e*Pg	**Pg**	**22 50 46.5**	**-1.4**
RSSD				*e*Sg	**Sg**	**22 52 16.3**	**-5.0**
AHID	**Auburn Hatcher**	**7.53**	**323**	*e*Pn	**Pn**	**22 50 20.5**	**+0.8**
AHID				*e*Sg	**Sg**	**22 52 29.6**	**-1.9**
TXAR	**Lajitas Array**	**7.64**	**172**	Pn	**Pn**	**22 50 23.4**	**+2.2**
	0.2nm,0.3s,baz=0.8,slow=11,SNR=8.9						
TXAR				Lg		22 52 25.9	
	1.6nm,0.3s,baz=336,slow=31,SNR=6.0						
JCT	**Junction City**	**7.70**	**145**	*e*Pn	**Pn**	**22 50 26.1**	**+4.1**
JCT				*e*Pg	**Pg**	**22 50 50.8**	**-6.5**
JCT				Sn	**Sn**	**22 51 57.6**	**+8.2**
ECSD	**EROS Data Cent**	**9.28**	**40**	*e*Pn	**Pn**	**22 50 43.1**	**-0.5**
ECSD				*e*Sn	**Sn**	**22 52 33.6**	**+5.6**
MIAR	**Mount Ida**	**9.51**	**101**	*e*Pn	**Pn**	**22 50 46.8**	**0.0**
MIAR				*e*Sn	**Sn**	**22 52 36.7**	**+3.1**
CPCT	**Cooper Cave**	**16.52**	**89**	*e*P	**Pn**	**22 52 26.6**	**+5.0**
TKL	**Tuckaleechee C**	**17.07**	**88**	Pn	**Pn**	**22 52 27.3**	**-1.3**
	0.2nm,0.3s,baz=259,slow=5.2,SNR=4.8						
TKL				LR	LR	22 59 06.0	
	comp=Z,31nm,19.4s,baz=74,slow=37						
ILAR	**Eielson Array**	**37.27**	**332**	P	**P**	**22 55 42.1**	**+0.6**
	0.5nm,0.7s,baz=130,slow=6.6,SNR=5.5						

ISC 24 22:52:38.9±1.1, 37.3N±0.1× 39.21E±0.08, h10km, n8, σ1s21/9, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DIYA	**Diyarbakir**	**0.98**	**47**	*i* P	**Pg**	**22 52 58.3**	**+0.6**
MALT	**Malatya**	**1.22**	**330**	*e*P	**Pn**	**22 53 01.1**	**-0.9**
ELZG	**Elazig**	**1.25**	**352**	*i* P	**Pn**	**22 53 01.9**	**-0.5**
MARD	**Mardin**	**1.25**	**87**	*i* P	**Pn**	**22 53 00.6**	**-1.8**
AKCD	**Akcadag**	**1.45**	**316**	*i* P	**Pn**	**22 53 04.5**	**-0.7**
AKCD				*i* S	**Sn**	**22 53 24.6**	**+0.3**
BEST	**Besiri**	**1.75**	**68**	*i* P	**Pn**	**22 53 11.1**	**+1.8**
KUZU	**Kuzuini**	**1.78**	**255**	*i* P	**Pn**	**22 53 09.4**	**-0.3**
ANDN	**Andirin**	**2.31**	**279**	*i* P	**Pn**	**22 53 19.7**	**+2.8**

*ISK **24** 22:52:49.8, 36.98N× 29.19E, h5km, MD3.5*
*ISCJB **24** 22:52:50.9±0.5, 36.94N±0.02× 29.22E±0.02, h5km±3km, mb3.4/3, Error ellipse: s-maj=3.3km s-min=2.7km az=139.7*
*IDC **24** 22:52:50.8±1.2, 36.92N× 29.15E, h0km, mb3.7/3, mb1 3.7/8, mb1mx3.6/26, mbtmp3.6/8, ML3.7/5, Error ellipse: s-maj=22.0km s-min=19.5km az=57.0*
*DDA **24** 22:52:51.0, 36.98N× 29.19E, h7km±5km, Md3.5*
*NEIC **24** 22:52:51.0, 37.06N× 29.19E, h5km, ML4.0(THE), ML3.4(ISK), After ISK.*
*CSEM **24** 22:52:51.4±0.1, 36.96N× 29.21E, h2km, MD3.5, Error ellipse: s-maj=2.9km s-min=2.6km az=139.0*
*THE **24** 22:52:55.0, 37.04N× 29.17E, h8km±4km, ML4.0/1, Error ellipse: s-maj=4.5km s-min=1.3km az=143.0*
*HLW **24** 22:53:03.1, 36.26N× 29.34E, h36km±43km, Ml3.5*

ISC 24 22:52:51.5±0.4, 36.96N±0.02× 29.20E±0.02, h0km±3km, n163, σ1s00/198, mb3.5/3, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.31**	**50**	PG	**Pg**	**22 52 57.1**	**-0.4**
GLHS				*e*SG	**Sg**	**22 53 02.3**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.31**	**50**	*i* Pg	**Pg**	**22 52 57.1**	**-0.4**
GLHS				*e*Sg	**Sg**	**22 53 02.3**	**+0.8**
GOLH	**Golhisar**	**0.40**	**46**	*i* P	**Pg**	**22 52 58.1**	**-1.2**
GOLH				*i* S	**Sg**	**22 53 04.5**	**0.0**
GOLH	**Golhisar**	**0.40**	**46**	*i* P	**Pg**	**22 52 58.1**	**-1.1**
GOLH				*i* S	**Sg**	**22 53 04.5**	**0.0**
ELL	**Elmali**	**0.60**	**110**	*e*PG	**Pg**	**22 53 03.0**	**-0.1**
ELL	**Elmali**	**0.60**	**110**	*e*Pg	**Pg**	**22 53 03.0**	**-0.1**
DNZL	**Cakiroluk**	**0.74**	**351**	*i* P	**Pg**	**22 53 04.7**	**-1.1**
DNZL				*i* S	**Sg**	**22 53 15.9**	**+0.5**
DNZL	**Cakiroluk**	**0.74**	**351**	*i* P	**Pg**	**22 53 05.0**	**-0.8**
DNZL	**Cakiroluk**	**0.74**	**351**	*i* P	**Pg**	**22 53 04.7**	**-1.1**
DNZL				*i* S	**Sg**	**22 53 15.9**	**+0.5**
YER	**Yerkesik**	**0.76**	**284**	*

HDMB	**Hadim**	**2.63**	**89**	*e*Pn		**Pn**	**22 53 35.5**	**+0.3**
KONT	**Konya--Tatoy**	**2.70**	**68**	*e*PN		**Pn**	**22 53 36.4**	**+0.2**
KONT	**Konya--Tatoy**	**2.70**	**68**	*e*Pn		**Pn**	**22 53 36.4**	**+0.3**
KIZT	**Kizilcal**	**2.86**	**47**	*e*PN		**Pn**	**22 53 38.8**	**+0.5**
KIZT	**Kizilcal**	**2.86**	**47**	*e*Pn		**Pn**	**22 53 38.8**	**+0.5**
BALB	**Balikesir**	**2.88**	**339**	*e*PN		**Pn**	**22 53 38.4**	**-0.1**
BALB	**Balikesir**	**2.88**	**339**	*e*Pn		**Pn**	**22 53 38.4**	**-0.1**
APE	**Apeiranthos**	**2.94**	**273**	*e*PN		**Pn**	**22 53 38.7**	**-0.7**
APE	**Apeiranthos**	**2.94**	**273**	P		**Pn**	**22 53 40.7**	**+1.3**
APE	**Apeiranthos**	**2.94**	**273**	*e*Pn		**Pn**	**22 53 38.7**	**-0.7**
APE	**Apeiranthos**	**2.94**	**273**	P		**Pn**	**22 53 40.7**	**+1.3**
ZKR	**Zakros**	**3.04**	**234**	P		**Pn**	**22 53 43.0**	**+2.2**
ZKR				S		**Sn**	**22 54 18.9**	**+1.1**
ZKR	**Zakros**	**3.04**	**234**	P		**Pn**	**22 53 43.0**	**+2.2**
ZKR				S		**Sn**	**22 54 18.9**	**+1.1**
ZKR	**Zakros**	**3.04**	**234**	P		**Pn**	**22 53 43.0**	**+2.2**
ZKR				S		**Sn**	**22 54 18.9**	**+1.1**
BALY	**Balya**	**3.05**	**336**	*i* P		**Pn**	**22 53 40.7**	**-0.1**
BALY	**Balya**	**3.05**	**336**	*i* P		**Pn**	**22 53 40.7**	**-0.2**
BALY				*i* S		**Sn**	**22 54 16.9**	**-1.1**
BORA	**Eskisehir**	**3.08**	**18**	*i* P		**Pn**	**22 53 41.4**	**+0.1**
BORA	**Eskisehir**	**3.08**	**18**	*i* P		**Pn**	**22 53 41.4**	**0.0**
BORA				*i* S		**Sn**	**22 54 18.6**	**-0.3**
SVRH	**Sivrihisar-ESK**	**3.09**	**36**	*e*PN		**Pn**	**22 53 41.8**	**+0.4**
SVRH	**Sivrihisar-ESK**	**3.09**	**36**	*e*Pn		**Pn**	**22 53 41.8**	**+0.3**
PRK	**Paraskevi**	**3.25**	**316**	P		**Pn**	**22 53 44.1**	**+0.4**
PRK	**Paraskevi**	**3.25**	**316**	*e*P		**Pn**	**22 53 43.8**	**+0.1**
PRK	**Paraskevi**	**3.25**	**316**	P		**Pn**	**22 53 44.1**	**+0.4**
NPS	**Neapolis**	**3.36**	**241**	P		**Pn**	**22 53 47.6**	**+2.4**
NPS	**Neapolis**	**3.36**	**241**	*e*P		**Pn**	**22 53 46.6**	**+1.4**
NPS	**Neapolis**	**3.36**	**241**	P		**Pn**	**22 53 47.6**	**+2.4**
ADVT	**Abdulvahap**	**3.50**	**7**	*e*PN		**Pn**	**22 53 47.1**	**0.0**
ADVT	**Abdulvahap**	**3.50**	**7**	*e*Pn		**Pn**	**22 53 47.1**	**0.0**
LAST	**Lasithi**	**3.51**	**240**	P		**Pn**	**22 53 48.7**	**+1.5**
LAST	**Lasithi**	**3.51**	**240**	P		**Pn**	**22 53 48.7**	**+1.5**
LAST	**Lasithi**	**3.51**	**240**	P		**Pn**	**22 53 48.7**	**+1.5**
LEF	**Lefka**	**3.51**	**120**	*e*PN		**Pn**	**22 53 47.1**	**-0.1**
LEF	**Lefka**	**3.51**	**120**	*e*Pn		**Pn**	**22 53 47.1**	**-0.1**
BNT	**Bandirma**	**3.54**	**344**	*e*PN		**Pn**	**22 53 47.7**	**0.0**
BNT	**Bandirma**	**3.54**	**344**	*e*Pn		**Pn**	**22 53 47.7**	**0.0**
ARMT	**Armutlu**	**3.62**	**356**	*e*PN		**Pn**	**22 53 49.0**	**+0.3**
ARMT	**Armutlu**	**3.62**	**356**	*e*Pn		**Pn**	**22 53 49.0**	**+0.3**
GULT	**Gulveren**	**3.62**	**16**	*e*PN		**Pn**	**22 53 49.5**	**+0.7**
GULT	**Gulveren**	**3.62**	**16**	*e*Pn		**Pn**	**22 53 49.5**	**+0.7**
SULT	**Sultanhani-AKS**	**3.65**	**69**	*e*PN		**Pn**	**22 53 50.5**	**+1.4**
SULT	**Sultanhani-AKS**	**3.65**	**69**	*e*Pn		**Pn**	**22 53 50.5**	**+1.4**
IKL	**Isikli**	**3.68**	**100**	*e*PN		**Pn**	**22 53 49.9**	**+0.4**
IKL	**Isikli**	**3.68**	**100**	*e*Pn		**Pn**	**22 53 49.9**	**+0.3**
BOZC	**Bozcaada**	**3.80**	**320**	*i* P		**Pn**	**22 53 52.8**	**+1.6**
IDI	**Anoyia**	**3.87**	**246**	P		**Pn**	**22 53 54.0**	**+1.8**
IDI	**Anoyia**	**3.87**	**246**	P		**Pn**	**22 53 54.0**	**+1.8**
BBAL	**Bala**	**4.03**	**49**	*i* P		**Pn**	**22 53 55.6**	**+1.3**
BBAL	**Bala**	**4.03**	**49**	*i* P		**Pn**	**22 53 55.6**	**+1.3**
BBAL				*i* S		**Sn**	**22 54 41.0**	**-1.2**
VAM	**Vamos**	**4.33**	**251**	P		**Pn**	**22 54 03.7**	**+5.2**
VLY	**Voula,Athens**	**4.40**	**283**	P		**Pn**	**22 54 03.1**	**+3.6**
VLY	**Voula,Athens**	**4.40**	**283**	P		**Pn**	**22 54 03.1**	**+3.6**
BRTR	**Keskin Array B**	**4.45**	**50**	Pn		**Pn**	**22 54 01.1**	**+0.9**
	1.0nm,0.3s,baz=236,slow=15,SNR=22							
BRTR				Sn		**Sn**	**22 54 52.8**	**+0.1**
	1.0nm,0.3s,baz=224,slow=25,SNR=12							
BRTR	**Keskin Array B**	**4.45**	**50**	Pn		**Pn**	**22 54 01.1**	**+0.9**
BRTR				Sn		**Sn**	**22 54 52.8**	**+0.1**
ALN	**Alexandroupoli**	**4.64**	**329**	P		**Pn**	**22 54 03.1**	**+0.3**
ALN	**Alexandroupoli**	**4.64**	**329**	P		**Pn**	**22 54 03.1**	**+0.3**
VLI	**Veliai**	**5.03**	**269**	P		**Pn**	**22 54 12.4**	**+4.2**
VLI	**Veliai**	**5.03**	**269**	P		**Pn**	**22 54 12.4**	**+4.2**
NVR	**Nevrokopi**	**6.04**	**318**	P		**Pn**	**22 54 22.6**	**+0.6**
NVR	**Nevrokopi**	**6.04**	**318**	P		**Pn**	**22 54 22.6**	**+0.6**
HMAT	**Matruh**	**6.10**	**197**	P		**Pn**	**22 54 22.7**	**-0.2**
	baz=201							
HMAT				AMP			22 55 00.0	
	comp=E,40μm,0.6s,logA/T=4.8,baz=201							
HMAT	**Matruh**	**6.10**	**197**	P		**Pn**	**22 54 22.7**	**-0.2**
SLUM		**6.37**	**212**	P		**Pn**	**22 54 27.4**	**+0.8**
	baz=217							
SLUM				S		**Sn**	**22 55 31.7**	**-8.3**
	baz=217							
SLUM		**6.37**	**212**	P		**Pn**	**22 54 27.4**	**+0.8**
MMAI	**Mount Meron Ar**	**6.43**	**126**	Pn		**Pn**	**22 54 27.3**	**-0.1**
	comp=E,5.2nm,0.3s,baz=311,slow=12,SNR=36							
MMAI				Sn		**Sn**	**22 55 37.9**	**-3.6**
	comp=E,2.1nm,0.3s,baz=314,slow=27,SNR=5.4							
GRG	**Griva**	**6.63**	**309**	P		**Pn**	**22 54 33.4**	**+3.2**
AMAG	**Maghara**	**7.12**	**151**	P		**Pn**	**22 54 35.5**	**-1.4**
	baz=148							
AMAG	**Maghara**	**7.12**	**151**	P		**Pn**	**22 54 35.5**	**-1.4**
HNAT	**Natroun**	**7.40**	**170**	P		**Pn**	**22 54 39.6**	**-1.1**
	baz=170							
HNAT	**Natroun**	**7.40**	**170**	P		**Pn**	**22 54 39.6**	**-1.1**
GLL	**Jalalah**	**7.65**	**163**	P		**Pn**	**22 54 43.8**	**-0.4**
	baz=162							
GLL	**Jalalah**	**7.65**	**163**	P		**Pn**	**22 54 43.8**	**-0.4**
ASF	**Jabal al Asfar**	**7.94**	**125**	Pn		**Pn**	**22 54 48.6**	**+0.5**
	comp=E,0.1nm,0.3s,baz=221,slow=20,SNR=3.2							
SWA2		**8.31**	**203**	P		**Pn**	**22 54 53.6**	**+0.5**
	baz=207							
SWA2		**8.31**	**203**	P		**Pn**	**22 54 53.7**	**+0.5**
AWBH		**8.61**	**182**	P		**Pn**	**22 54 55.7**	**-1.7**
	baz=183							
AWBH		**8.61**	**182**	P		**Pn**	**22 54 55.7**	**-1.7**
EIL	**Elat**	**8.71**	**145**	Pn		**Pn**	**22 54 56.8**	**-2.0**
	comp=E,1.0nm,0.3s,baz=343,slow=16,SNR=8.8							
EIL	**Elat**	**8.71**	**145**	Pn		**Pn**	**22 54 56.8**	**-1.9**
MLR	**Muntele Rosu**	**8.87**	**345**	Pn		**Pn**	**22 55 01.9**	**+1.1**
MLR	**Muntele Rosu**	**8.87**	**345**	Pn		**Pn**	**22 55 01.9**	**+1.1**
	comp=E,0.4nm,0.3s,baz=126,slow=20,SNR=5.0							
MLR	**Muntele Rosu**	**8.87**	**345**	Pn		**Pn**	**22 55 01.9**	**+1.0**
HKAT	**Jabal Katrina**	**9.32**	**153**	P		**Pn**	**22 55 06.2**	**-0.9**
	baz=151							
HKAT	**Jabal Katrina**	**9.32**	**153**	P		**Pn**	**22 55 06.2**	**-0.9**
HDK1	**Dakhla**	**11.38**	**179**	P		**Pn**	**22 55 33.9**	**-1.4**
	baz=179							
HDK1	**Dakhla**	**11.38**	**179**	P		**Pn**	**22 55 33.9**	**-1.4**
FINES	**FINESS Array B**	**24.59**	**356**	P		**P**	**22 58 12.6**	**-0.2**
	comp=E,1.7nm,0.8s,mb3.8,baz=156,slow=11,SNR=4.7							
FINES	**FINESS Array B**	**24.59**	**356**	P		**P**	**22 58 12.6**	**-0.3**
ESDC	**Sonseca Array**	**26.08**	**286**	P		**P**	**22 58 26.2**	**-0.5**
	comp=E,0.1nm,0.4s,mb2.8,baz=69,slow=9.6,SNR=4.6							
ESDC	**Sonseca Array**	**26.08**	**286**	P		**P**	**22 58 26.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**34.17**	**233**	P		**P**	**22 59 37.2**	**-1.3**
	comp=E,0.6nm,0.5s,mb3.8,baz=35,slow=8.0,SNR=9.7							

*ISCJB **24** 23:14:26.6±0.8, 6°.86N±0°.08×126°.25E±0°.06, h17km±5km, mb3.7/6, Error ellipse: s-maj=15.4km s-min=8.6km az=28.6*

*IDC **24** 23:14:27.3±0.9, 6°.36N×125°.32E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.7/19, mbtmp3.8/5, Error ellipse: s-maj=28.6km s-min=9.4km az=103.0*

*MAN **24** 23:14:27, 6°.90N×126°.21E, h6km, mb4.4, ML3.2, MS3.0*

*NEIC **24** 23:14:30.6±1.6, 6°.76N×125°.87E, h32km±10km, mb3.8/2, Error ellipse: s-maj=28.9km s-min=11.5km az=67.0*

ISC 24 23:14:27.7±0.8, 6°.89N±0°.08×126°.25E±0°.05, h13km±4km, n18, σ1°19/22, mb3.7/6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
MATI	**Mati**	**0.06**	**6**	*e*P		**Pg**	**23 14 29.9**	**-0.3**
MATI				*e*S		**Sg**	**23 14 31.8**	**-0.2**
DAV	**Davao City (W)**	**0.69**	**285**	Pg		**Pg**	**23 14 40.1**	**-1.1**
DAV				*e*Pn		**Pn**	**23 14 41.1**	**-2.1**
DAV				*e*Sn		**Sg**	**23 14 51.4**	**+1.1**
DAV				Lg			23 14 53.7	
DAV	**Davao City (W)**	**0.69**	**285**	Pg		**Pg**	**23 14 40.1**	**-1.1**
	274nm,0.3s,baz=228,slow=5.8,SNR=19							
DAV				Lg			23 14 53.7	
	401nm,0.3s,baz=284,slow=19,SNR=57							
DMPH	**Davao City--Mi**	**0.76**	**285**	*e*P		**Pg**	**23 14 41.8**	**-0.7**
DMPH				*e*S		**Sg**	**23 14 54.8**	**+2.3**
BUKP	**Musuan**	**1.54**	**310**	*e*P		**Pn**	**23 14 54.5**	**-0.3**
BUKP				*e*S		**Sn**	**23 15 13.5**	**-1.1**
QIZ	**Qiongzhong**	**20.01**	**309**	*e*Pn		**P**	**23 18 59.4**	**-0.8**
WRA	**Warramunga Arr**	**27.83**	**164**	P		**P**	**23 20 16.6**	**-0.3**
	0.9nm,0.5s,mb3.6,baz=342,slow=8.1,SNR=8.7							
ENH	**Enshi**	**28.09**	**328**	*e*P		**P**	**23 20 19.6**	**+0.4**
	2.5nm,0.4s,mb4.2							
INCN	**Inchon**	**30.45**	**1**	*e*P		**P**	**23 20 40.3**	**+0.2**
	19nm,0.4s							
ASAR	**Alice Springs**	**31.28**	**166**	P		**P**	**23 20 48.5**	**+1.0**
	0.6nm,0.4s,mb3.8,baz=344,slow=6.8,SNR=11							
STKA	**Stephens Creek**	**41.24**	**160**	*e*P		**P**	**23 22 12.3**	**-0.3**
	0.3nm,0.5s,mb3.2							
STKA	**Stephens Creek**	**41.24**	**160**	P		**P**	**23 22 11.5**	**-1.0**
	2.3nm,0.8s,mb3.9,baz=322,slow=14,SNR=2.9							
PET	**Petropavlovsk**	**53.03**	**24**	*e*P		**P**	**23 23 47.0**	**+2.7**
	7.1nm,0.3s							
MKAR	**Makanchi Array**	**54.72**	**324**	P		**P**	**23 23 57.6**	**+0.9**
	0.2nm,0.4s,mb3.5,baz=105,slow=7.1,SNR=7.9							
MKAR				PcP		PcP	23 25 01.2	+1.9
	0.5nm,0.7s,baz=112,slow=5.2,SNR=2.9							
ZALV	**Zalesovo Beam**	**57.58**	**332**	P		**P**	**23 24 19.9**	**+2.9**
ZALV	**Zalesovo Beam**	**57.58**	**332**	P		**P**	**23 24 19.9**	**+2.9**
	0.5nm,0.5s,mb3.8,baz=141,slow=5.5,SNR=3.6							
KBL	**Kabul**	**59.26**	**306**	P		**P**	**23 24 28.0**	**-1.2**
TORD	**Torodi Ar. Bea**	**121.44**	**290**	PKP		PKPdf	23 33 20.5	-1.4
	0.6nm,1.0s,baz=89,slow=1.5,SNR=3.1							

*CSEM **24** 23:24:47.3±0.1, 42°.26N×25°.91E, h2km, ML2.8, Error ellipse: s-maj=3.8km s-min=3.0km az=79.0*

*ATH **24** 23:24:48.1, 42°.26N×25°.86E, h3km, MD3.3/3*

*NEIC **24** 23:24:48.1, 42°.26N×25°.86E, h3km, MD3.3(ATH), MD3.2(ISK), After ATH.*

*BUC **24** 23:24:48.2±3.4, 42°.41N×25°.68E, h1km±28km, MD3.4/3, Error ellipse: s-maj=44.5km s-min=10.8km az=329.0*

*THE **24** 23:24:49.0, 42°.29N×25°.78E, h9km±2km, ML2.1/1, Error ellipse: s-maj=4.0km s-min=1.2km az=222.0*

*ISK **24** 23:24:50.8, 42°.11N×26°.15E, h19km, ML2.8*

ISC 24 23:24:47.5±0.7, 42°.24N±0°.02×25°.94E±0°.03, h1km±5km, n101, σ1°16/138, 21C-5D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
EDRB	**Edirne**	**0.72**	**123**	*e*PG		**Pg**	**23 25 01.2**	**-0.1**
EDRB				*e*SG		**Sg**	**23 25 09.9**	**-0.8**
EDRB	**Edirne**	**0.72**	**123**	Pg		**Pg**	**23 25 01.4**	**+0.1**
EDRB	**Edirne**	**0.72**	**123**	Pg		**Pg**	**23 25 01.4**	**+0.1**
EDRB				*e*Sg		**Sg**	**23 25 09.9**	**-0.8**
PLD	**Plovdiv**	**0.93**	**262**	P		**Pg**	**23 25 04.2**	**-1.1**
PLD				S		**Sg**	**23 25 16.5**	**-0.8**
PLD	**Plovdiv**	**0.93**	**262**	P		**Pg**	**23 25 04.2**	**-1.1**
PLD				S		**Sg**	**23 25 16.5**	**-0.8**
RDO	**Rodhopi**	**1.14**	**195**	*e*Pb		**Pg**	**23 25 10.0**	**+0.7**
RDO				*e*Sb		**Sg**	**23 25 25.0**	**+1.0**
RDO	**Rodhopi**	**1.14**	**195**	*e*PB		**Pg**	**23 25 10.0**	**+0.7**
RDO				*e*SB		**Sg**	**23 25 25.0**	**+1.0**
RDO	**Rodhopi**	**1.14**	**195**	*e*Pb		**Pg**	**23 25 10.0**	**+0.7**
RDO				*e*Sb		**Sg**	**23 25 25.0**	**+1.0**
ALN	**Alexandroupoli**	**1.35**	**176**	*e*Pg		**Pg**	**23 25 13.4**	**+0.1**
ALN				*e*Sb		**Sb**	**23 25 33.2**	**+2.0**
ALN	**Alexandroupoli**	**1.35**	**176**	*e*PG		**Pg**	**23 25 13.4**	**+0.1**
ALN				*e*SB		**Sb**	**23 25 33.2**	**+2.0**
ALN	**Alexandroupoli**	**1.35**	**176**	P		**Pg**	**23 25 13.6**	**+0.3**
ALN				S		**Sg**	**23 25 33.6**	**+2.8**
ALN	**Alexandroupoli**	**1.35**	**176**	*e*Pg		**Pg**	**23 25 13.4**	**+0.1**
ALN	**Alexandroupoli**	**1.35**	**176**	P		**Pg**	**23 25 13.6**	**+0.3**
ALN				*e*Sb		**Sb**	**23 25 33.2**	**+2.0**
ALN				S		**Sg**	**23 25 33.6**	**+2.8**
ZIMR		**1.47**	**344**	⇑*i* P		**Pn**	**23 25 12.7**	**-2.5**
ZIMR		**1.47**	**344**	S		**Sb**	**23 25 29.8**	**-5.1**
ZIMR		**1.47**	**344**	⇑*i* P		**Pn**	**23 25 12.7**	**-2.5**
ZIMR				*i* S		**Sb**	**23 25 29.8**	**-5.1**
ENEZ	**Enez**	**1.52**	**174**	*e*PN		**Pn**	**23 25 16.1**	**+0.4**
ENEZ				*e*SN		**Sn**	**23 25 33.7**	**-2.3**
ENEZ	**Enez**	**1.52**	**174**	*e*Pn		**Pn**	**23 25 16.1**	**+0.4**
ERIK	**Erikli-Kesan**	**1.63**	**164**	*e*PN		**Pn**	**23 25 17.2**	**-0.1**
ERIK				*e*SN		**Sn**	**23 25 36.0**	**-2.9**
ERIK	**Erikli-Kesan**	**1.63**	**164**	*e*Pn		**Pn**	**23 25 17.2**	**-0.1**
KAVA	**Kavala**	**1.64**	**221**	P		**Pn**	**23 25 17.4**	**0.0**
KAVA	**Kavala**	**1.64**	**221**	P		**Pn**	**23 25 17.4**	**0.0**
NVR	**Nevrokopi**	**1.79**	**241**	*e*Pg		**Pg**	**23 25 20.6**	**-1.2**
NVR				*e*Sb		**Sb**	**23 25 44.8**	**+0.9**
NVR	**Nevrokopi**	**1.79**	**241**	*e*PG		**Pg**	**23 25 20.6**	**-1.2**
NVR				*e*SB		**Sb**	**23 25 44.8**	**+0.9**
NVR	**Nevrokopi**	**1.79**	**241**	*e*Pg		**Pg**	**23 25 20.6**	**-1.2**
NVR				*e*Sb		**Sb**	**23 25 44.8**	**+0.9**
RKY	**Sarkoy-Tekirda**	**1.81**	**149**	*e*PN		**Pn**	**23 25 19.2**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.81**	**149**	Pn		**Pn**	**23 25 20.2**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.81**	**149**	Pn		**Pn**	**23 25 20.2**	**+0.4**
GELI	**Tayfur-Gelibol**	**1.89**	**167**	*e*PN		**Pn**	**23 25 20.9**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.89**	**167**	*e*Pn		**Pn**	**23 25 20.9**	**+0.1**
SLVT	**Silivri**	**1.98**	**120**	*e*PN		**Pn**	**23 25 20.7**	**-1.4**
SLVT	**Silivri**	**1.98**	**120**	Pn		**Pn**	**23 25 21.9**	**-0.2**
SLVT	**Silivri**	**1.98**	**120**	Pn		**Pn**	**23 25 21.9**	**-0.2**
VTS	**Vitosha**	**2.05**	**281**	P		**Pn**	**23 25 21.8**	**-1.3**
VTS				S		**Sn**	**23 25 46.2**	**-3.0**
VTS	**Vitosha**	**2.05**	**281**	⇓*i* P		**Pn**	**23 25 21.8**	**-1.3**
VTS	**Vitosha**	**2.05**	**281**	S		**Sn**	**23 25 46.1**	**-3.1**
VTS	**Vitosha**	**2.05**	**281**	⇓*i* P		**Pn**	**23 25 21.8**	**-1.3**
VTS				*i* S		**Sn**	**23 25 46.1**	**-3.1**
VTS	**Vitosha**	**2.05**	**281**	P		**Pn**	**23 25 21.8**	**-1.3**
VTS				S		**Sn**	**23 25 46.2**	**-3.0**
GADA	**Gvkgeada**	**2.05**	**181**	*e*PN		**Pn**	**23 25 23.2**	**+0.1**
GADA	**Gvkgeada**	**2.05**	**181**	Pn		**Pn**	**23 25 24.5**	**+1.4**
GADA	**Gvkgeada**	**2.05**	**181**	*e*Pn		**Pn**	**23 25 23.2**	**+0.1**
BUC1	**Bucharest**	**2.10**	**2**	⇑*i* P		**Pn**	**23 25 22.8**	**-1.0**
BUC1	**Bucharest**	**2.10**	**2**	S		**Sn**	**23 25 49.5**	**-1.1**
BUC1	**Bucharest**	**2.10**	**2**	⇑*i* P		**Pn**	**23 25 22.8**	**-1.0**
BUC1				*i* S		**Sn**	**23 25 49.5**	**-1.1**
BUC1	**Bucharest**	**2.10**	**2**	⇑*i* P		**Pn**	**23 25 22.8**	**-1.0**
BUC1				*i* S		**Sn**	**23 25 49.5**	**-1.1**
ELBA	**Catalca**	**2.17**	**120**	*i* P		**Pn**	**23 25 22.5**	**-2.2**
ELBA	**Catalca**	**2.17**	**120**	*i* P		**Pn**	**23 25 22.5**	**-2.2**
ELBA				*i* S		**Sn**	**23 25 56.6**	**+4.5**
CTKS	**Kestanelik-??a**	**2.17**	**117**	*e*PN		**Pn**	**23 25 24.6**	**-0.1**
CTKS	**Kestanelik-??a**	**2.17**	**117**	*e*Pn		**Pn**	**23 25 24.6**	**-0.1**
BGKT	**Bogazkoy**	**2.38**	**116**	*e*PN		**Pn**	**23 25 27.5**	**-0.1**
BGKT	**Bogazkoy**	**2.38**	**116**	*e*Pn		**Pn**	**23 25 27.5**	**0.0**
SOH	**Sokhos**	**2.40**	**235**	*e*Pn		**Pn**	**23 25 30.4**	**+2.5**
SOH				*e*Sn		**Sn**	**23 26 00.5**	**+2.6**
SOH	**Sokhos**	**2.40**	**235**	*e*PN		**Pn**	**23 25 30.4**	**+2.5**
SOH				*e*SN		**Sn**	**23 26 00.5**	**+2.6**
SOH	**Sokhos**	**2.40**	**235**	*e*Pn		**Pn**	**23 25 30.4**	**+2.5**
SOH				*e*Sn		**Sn**	**23 26 00.5**	**+2.6**
EZN	**Ezine**	**2.43**	**173**	*e*PN		**Pn**	**23 25 29.5**	**+1.2**
EZN	**Ezine**	**2.43**	**173**	*e*Pn		**Pn**	**23 25 29.5**	**+1.2**
SULR		**2.45**	**5**	⇑*i* P		**Pn**	**23 25 28.4**	**-0.1**
SULR		**2.45**	**5**	S		**Sn**	**23 25 58.5**	**-0.5**
SULR		**2.45**	**5**	⇑*i* P		**Pn**	**23 25 28.4**	**-0.1**
SULR				*i* S		**Sn**	**23 25 58.5**	**-0.5**
KLYT	**Kilyos**	**2.53**	**112**	*e*PN		**Pn**	**23 25 29.6**	**0.0**
KLYT	**Kilyos**	**2.53**	**112**	*e*Pn		**Pn**	**23 25 29.6**	**0.0**
CVD	**Cernavoda**	**2.58**	**36**	⇑*i* P		**Pn**	**23 25 30.7**	**+0.4**
CVD	**Cernavoda**	**2.58**	**36**	S		**Sn**	**23 26 03.9**	**+1.7**
CVD	**Cernavoda**	**2.58**	**36**	⇑*i* P		**Pn**	**23 25 30.7**	**+0.4**
CVD				*i* S		**Sn**	**23 26 03.9**	**+1.7**
CVD	**Cernavoda**	**2.58**	**36**	⇑*i* P		**Pn**	**23 25 30.7**	**+0.4**
CVD				*i* S		**Sn**	**23 26 03.9**	**+1.7**
AMRR	**Amara**	**2.58**	**23**	S		**Sn**	**23 26 03.1**	**+0.9**
AMRR	**Amara**	**2.58**	**23**	*i* S		**Sn**	**23 26 03.1**	**+0.9**
AMRR	**Amara**	**2.58**	**23**	*i* S		**Sn**	**23 26 03.1**	**+0.9**
ZAPS	**Zavoj**	**2.64**	**294**	⇑*i* Pn		**Pn**	**23 25 35.4**	**+4.2**
BUY	**Buyukada**	**2.76**	**119**	*i* P		**Pn**	**23 25 32.0**	**-0.9**
ARMT	**Armutlu**	**2.77**	**126**	*e*PN		**Pn**	**23 25 31.7**	**-1.2**
ARMT	**Armutlu**	**2.77**	**126**	Pn		**Pn**	**23 25 33.6**	**+0.6**
ARMT	**Armutlu**	**2.77**	**126**	Pn		**Pn**	**23 25 33.6**	**+0.7**
PGOR	**Pogoanele**	**2.77**	**16**	S		**Sn**	**23 26 06.8**	**-0.2**
PGOR	**Pogoanele**	**2.77**	**16**	*i* S		**Sn**	**23 26 06.8**	**-0.2**
PGOR	**Pogoanele**	**2.77**	**16**	*i* S		**Sn**	**23 26 06.8**	**-0.2**
BALY	**Balya**	**2.81**	**152**	*i* P		**Pn**	**23 25 33.5**	**+0.1**
BALY	**Balya**	**2.81**	**152**	*i* P		**Pn**	**23 25 33.5**	**0.0**
BALY				*i* S		**Sn**	**23 26 07.8**	**-0.1**
TIRR	**Tirgusor**	**2.86**	**38**	⇑*i* P		**Pn**	**23 25 34.8**	**+0.6**
TIRR	**Tirgusor**	**2.86**	**38**	S		**Sn**	**23 26 10.2**	**+1.0**
TIRR	**Tirgusor**	**2.86**	**38**	⇑*i* P		**Pn**	**23 25 34.8**	**+0.6**
TIRR				*i* S		**Sn**	**23 26 10.2**	**+1.0**
TIRR	**Tirgusor**	**2.86**	**38**	⇑*i* P		**Pn**	**23 25 34.8**	**+0.6**
TIRR				*i* S		**Sn**	**23 26 10.2**	**+1.0**
BARS	**Barje**	**3.10**	**282**	*e*Pn		**Pn**	**23 25 38.5**	**+1.0**
BARS	**Barje**	**3.10**	**282**	*e*Pn		**Pn**	**23 25 38.5**	**+1.0**
MLR	**Muntele Rosu**	**3.25**	**0**	⇑*i* P		**Pn**	**23 25 39.3**	**-0.2**
MLR	**Muntele Rosu**	**3.25**	**0**	S		**Sn**	**23 26 25.8**	**+7.0**
MLR	**Muntele Rosu**	**3.25**	**0**	⇑*i* P		**Pn**	**23 25 39.3**	**-0.2**
MLR	**Muntele Rosu**	**3.25**	**0**	⇑*i* P		**Pn**	**23 25 39.3**	**-0.2**
VOIR		**3.26**	**349**	⇓*i* P		**Pn**	**23 25 38.6**	**-1.1**
VOIR		**3.26**	**349**	⇓*i* P		**Pn**	**23 25 38.6**	**-1.1**
VOIR		**3.26**	**349**	⇓*i* P		**Pn**	**23 25 38.6**	**-1.1**
DURS	**Dursunbey**	**3.27**	**143**	*e*P		**Pn**	**23 25 40.3**	**+0.5**
DURS	**Dursunbey**	**3.27**	**143**	*e*P		**Pn**	**23 25 40.3**	**+0.5**
DURS				*e*S		**Sn**	**23 26 17.9**	**-1.3**
CFR	**Carcaliu**	**3.34**	**28**	⇑*i* P		**Pn**	**23 25 41.5**	**+0.7**
CFR	**Carcaliu**	**3.34**	**28**	S		**Sn**	**23 26 21.9**	**+0.9**
CFR	**Carcaliu**	**3.34**	**28**	⇑*i* P		**Pn**	**23 25 41.5**	**+0.7**
CFR				*i* S		**Sn**	**23 26 21.9**	**+0.9**
CFR	**Carcaliu**	**3.34**	**28**	⇑*i* P		**Pn**	**23 25 41.5**	**+0.7**
CFR				*i* S		**Sn**	**23 26 21.9**	**+0.9**
TLCR		**3.61**	**34**	⇑*i* P		**Pn**	**23 25 51.0**	**+6.5**
TLCR		**3.61**	**34**	S		**Sn**	**23 26 29.6**	**+2.0**
KHAL	**Karahalli**	**4.73**	**144**	*i* P		**Pn**	**23 26 00.4**	**+0.5**
KHAL	**Karahalli**	**4.73**	**144**	*i* P		**Pn**	**23 26 00.4**	**+0.5**
KHAL				*i* S		**Sn**	**23 26 53.7**	**-1.6**

*IDC **24** 23:50:58.2±2.0, 4°.46S×132°.52E, h0km, mb4.0/3, mb1 4.1/5, mb1mx3.8/14, mbtmp3.9

*ISK **25** 00:50:23.9,36˚.99N×29˚.20E,h6km,MD3.2*
*ISCJB **25** 00:50:24.6±0.5,36˚.98N±0˚.03×29˚.22E±0˚.03,h10km,Error ellipse: s-maj=4.8km s-min=3.3km az=1.2*
*DDA **25** 00:50:24.8,37˚.03N×29˚.22E,h7km,6km,Md3.1*
*CSEM **25** 00:50:24.2±0.2,36˚.98N×29˚.20E,h5km,MD3.2,Error ellipse: s-maj=3.9km s-min=2.6km az=5.0*

ISC 25 00:50:24.4±0.6,36˚.96N±0˚.04×29˚.19E±0˚.03,h5km±5km, n41,σ0966/56,Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.31	52	*e*PG		Pg		00 50 29.9	-0.5
GLHS				*e*SG		Sg		00 50 34.6	0.0
GLHS	Glhisar (BURDU	0.31	52	*e*Pg		Pg		00 50 29.9	-0.5
GLHS				*e*Sg		Sg		00 50 34.6	+0.1
GOLH	Golhisar	0.40	47	*i* P		Pg		00 50 30.9	-1.2
GOLH				*i* S		Sg		00 50 37.4	-0.1
GOLH	Golhisar	0.40	47	*i* P		Pg		00 50 30.9	-1.3
GOLH				*i* S		Sg		00 50 37.4	0.0
ELL	Elmali	0.62	110	*e*PG		Pg		00 50 35.9	-0.2
ELL	Elmali	0.62	110	*e*Pg		Pg		00 50 35.9	-0.3
DNZL	Cakiroluk	0.73	351	*i* P		Pg		00 50 37.4	-1.0
DNZL				*i* S		Sg		00 50 49.0	+1.0
DNZL	Cakiroluk	0.73	351	*i* P		Pg		00 50 37.4	-1.1
DNZL				*i* S		Sg		00 50 49.0	+1.0
YER	Yerkesik	0.74	284	*e*PG		Pg		00 50 38.8	+0.2
YER	Yerkesik	0.74	284	*e*Pg		Pg		00 50 38.8	+0.1
DENT	Denizli	0.80	351	*e*PG		Pg		00 50 39.3	-0.4
DENT	Denizli	0.80	351	*e*Pg		Pg		00 50 39.3	-0.4
AKAS	Kas	0.80	155	*i* P		Pg		00 50 39.5	-0.2
AKAS				*i* S		Sg		00 50 55.0	+4.9
AKAS	Kas	0.80	155	*i* P		Pg		00 50 39.5	-0.2
KORT	Korkueli	0.93	87	*i* P		Pg		00 50 42.5	+0.2
KORT				*i* S		Sg		00 50 55.9	+1.6
KORT	Korkueli	0.93	87	*i* P		Pg		00 50 42.5	+0.3
KORT				*i* S		Sg		00 50 55.9	+1.6
MLSB	Milas	1.18	287	*e*PN		Pn		00 50 46.8	-0.7
MLSB	Milas	1.18	287	*e*Pn		Pn		00 50 46.8	-0.7
BCK	Bucak	1.22	66	*e*PN		Pn		00 50 47.4	-0.7
BCK	Bucak	1.22	66	*e*Pn		Pn		00 50 47.4	-0.7
AYDN	Tasoluk	1.26	304	*i* P		Pg		00 50 48.5	0.0
AYDN				*i* S		Sg		00 51 05.5	+0.8
AYDN	Tasoluk	1.26	304	*i* P		Pg		00 50 48.5	+0.1
AYDN				*i* S		Sg		00 51 05.5	+0.8
DAT	Datca	1.31	260	*e*PN		Pn		00 50 49.9	+0.5
DAT	Datca	1.31	260	*e*Pn		Pn		00 50 49.9	+0.5
ISP	Isparta	1.37	51	*e*PN		Pn		00 50 50.0	-0.1
ISP	Isparta	1.37	51	*e*Pn		Pn		00 50 50.0	-0.1
KHL	Karahalli	1.38	11	*e*PN		Pn		00 50 49.9	-0.5
KHL	Karahalli	1.38	11	*e*Pn		Pn		00 50 49.9	-0.5
BDRM	Kayabasi	1.40	275	*i* P		Pn		00 50 51.6	+1.0
BDRM				*i* S		Sb		00 51 09.2	0.0
BDRM	Kayabasi	1.40	275	*i* P		Pn		00 50 51.6	+1.0
BDRM				*i* S		Sb		00 51 09.2	0.0
KHAL	Karahalli	1.43	10	*i* P		Pn		00 50 50.6	-0.3
KHAL				*i* S		Sb		00 51 10.8	+0.9
KHAL	Karahalli	1.43	10	*i* P		Pn		00 50 50.6	-0.3
KHAL				*i* S		Sb		00 51 10.8	+0.9
BODT	Bodrum	1.51	274	*e*PN		Pn		00 50 51.6	-0.4
BODT	Bodrum	1.51	274	*e*Pn		Pn		00 50 51.6	-0.4
SUTC	Sutluce-Ispart	1.53	70	*e*PN		Pn		00 50 52.8	+0.4
SUTC	Sutluce-Ispart	1.53	70	*e*Pn		Pn		00 50 52.8	+0.4
KULA	Kula-Manisa	1.60	345	*e*PN		Pn		00 50 52.6	-0.8
KULA	Kula-Manisa	1.60	345	*e*Pn		Pn		00 50 52.6	-0.8
IZM	Izmir	2.10	314	*e*PN		Pn		00 51 00.1	0.0
HDMB	Hadim	2.64	89	*e*PN		Pn		00 51 08.3	+0.6
HDMB	Hadim	2.64	89	*e*Pn		Pn		00 51 08.3	+0.7

*DDA **25** 01:24:59.7,38˚.24N×24˚.70E,h11km,Md3.3*
*ISCJB **25** 01:25:02.3±0.5,38˚.31N±0˚.02×24˚.97E±0˚.02,h4km±4km, Error ellipse: s-maj=3.0km s-min=2.2km az=165.5*
*ISK **25** 01:25:02.0,38˚.25N×24˚.70E,h26km,MD3.5*
*CSEM **25** 01:25:02.7±0.1,38˚.32N×24˚.95E,h2km,ML3.6,Error ellipse: s-maj=2.9km s-min=2.3km az=161.0*
*ATH **25** 01:25:03.6,38˚.27N×24˚.98E,h42km±4km,ML3.6*
*NEIC **25** 01:25:03.6,38˚.27N×24˚.98E,h42km,MG3.6(ATH),After ATH.*
*THE **25** 01:25:03.1,38˚.36N×24˚.94E,h0km±1km,ML3.1/8,Error ellipse: s-maj=1.7km s-min=0.8km az=116.0*

ISC 25 01:25:02.6±0.4,38˚.31N±0˚.02×24˚.98E±0˚.02,h1km±3km, n194,σ1908/241,1D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHOS	Chios island	0.85	84	*e*P		Pg		01 25 20.3	+1.4
CHOS				*e*S		Sg		01 25 33.3	+3.3
CHOS	Chios island	0.85	84	P		Pg		01 25 20.5	+1.6
CHOS				S		Sg		01 25 33.1	+3.1
CHOS	Chios island	0.85	84	*e*P		Pg		01 25 20.3	+1.4
CHOS				S		Sg		01 25 33.1	+3.1
PTL	Penteli	0.91	254	*e*P		Pg		01 25 20.2	+0.1
PTL				*e*S		Sg		01 25 32.8	+0.9
PTL	Penteli	0.91	254	*e*P		Pg		01 25 20.2	+0.1
PTL				*e*S		Sg		01 25 32.8	+0.9
PTL	Penteli	0.91	254	*e*P		Pg		01 25 20.2	+0.1
PTL				*e*S		Sg		01 25 32.8	+0.9
ATHU	Athens Univers	1.00	250	P		Pg		01 25 22.6	+0.8
ATHU				S		Sg		01 25 36.8	+2.1
ATHU	Athens Univers	1.00	250	P		Pg		01 25 22.6	+0.8
VLY	Voula,Athens	1.04	244	*e*P		Pg		01 25 22.5	0.0
VLY				*e*S		Sg		01 25 36.8	+0.9
VLY	Voula,Athens	1.04	244	*e*P		Pg		01 25 22.5	0.0
VLY				*e*S		Sg		01 25 36.8	+0.9
VLY	Voula,Athens	1.04	244	*e*P		Pg		01 25 22.5	0.0
VLY				*e*S		Sg		01 25 36.8	+0.9
ATH	Athens Observa	1.05	252	*e*P		Pg		01 25 22.7	0.0
ATH				*e*S		Sg		01 25 36.5	+0.2
ATH	Athens Observa	1.05	252	*e*P		Pg		01 25 22.7	0.0
ATH				*e*S		Sg		01 25 36.5	+0.2
ATH	Athens Observa	1.05	252	*e*P		Pg		01 25 22.7	0.0
ATH				*e*S		Sg		01 25 36.5	+0.2
SIGR	SIGRI	1.13	37	P		Pg		01 25 24.2	-0.1
SIGR	SIGRI	1.13	37	P		Pg		01 25 24.2	-0.1
SIGR				S		Sg		01 25 40.2	+1.2
SIGR	SIGRI	1.13	37	P		Pg		01 25 24.2	-0.1
SIGR				S		Sg		01 25 40.2	+1.2
AOS	Alonnisos	1.22	315	P		Pg		01 25 26.4	+0.5
AOS	Alonnisos	1.22	315	P		Pg		01 25 24.8	-1.1
AOS				S		Sg		01 25 41.1	-0.5
AOS	Alonnisos	1.22	315	P		Pg		01 25 24.8	-1.1
AOS				S		Sg		01 25 41.1	-0.5
URLA	Izmir	1.27	87	*i* P		Pg		01 25 25.7	-1.3
URLA				*i* S		Sg		01 25 41.4	-2.1
URLA	Izmir	1.27	87	*i* P		Pg		01 25 25.7	-1.3
URLA				*i* S		Sg		01 25 41.4	-2.1
NAIG	Nisos Aigina	1.30	245	*e*P		Pg		01 25 26.3	-1.1
NAIG	Nisos Aigina	1.30	245	*e*P		Pg		01 25 26.3	-1.1
NAIG	Nisos Aigina	1.30	245	*e*P		Pg		01 25 26.3	-1.1
APE	Apeiranthos	1.31	160	*e*PN		Pn		01 25 26.0	-1.8
APE				*e*SN		Sn		01 25 42.8	-3.5
APE	Apeiranthos	1.31	160	*e*P		Pg		01 25 26.2	-1.6
APE				*e*S		Sg		01 25 42.5	-2.3
APE	Apeiranthos	1.31	160	*e*P		Pg		01 25 26.2	-1.6
APE				*e*S		Sg		01 25 42.5	-2.3
APE	Apeiranthos	1.31	160	P		Pg		01 25 26.3	-1.5
APE				S		Sg		01 25 45.5	+0.7
APE	Apeiranthos	1.31	160	P		Pg		01 25 26.3	-1.5
APE				*e*Sn		Sn		01 25 42.8	-3.4
APE				S		Sg		01 25 45.5	+0.7
PRK	Paraskevi	1.38	47	*e*P		Pn		01 25 27.6	-1.4
PRK	Paraskevi	1.38	47	*e*P		Pn		01 25 27.6	-1.4
PRK	Paraskevi	1.38	47	P		Pn		01 25 27.6	-1.4
PRK	Paraskevi	1.38	47	*e*P		Pn		01 25 27.6	-1.4
ATAL	Atalanti	1.58	285	P		Pn		01 25 30.4	-1.4
ATAL				S		Sn		01 25 51.7	-1.2
ATAL	Atalanti	1.58	285	P		Pn		01 25 30.4	-1.4
ATAL				S		Sn		01 25 51.7	-1.2
SMG	Samos	1.59	112	*e*P		Pn		01 25 30.6	-1.2
SMG				*e*S		Sn		01 25 50.0	-3.0
SMG	Samos	1.59	112	*e*P		Pn		01 25 30.6	-1.2
SMG				*e*S		Sn		01 25 50.0	-3.0
SMG	Samos	1.59	112	*e*P		Pn		01 25 30.6	-1.2
LKR	Lokris	1.59	283	*e*P		Pn		01 25 30.9	-1.0
LKR	Lokris	1.59	283	*e*P		Pn		01 25 30.9	-1.0
LKR	Lokris	1.59	283	P		Pn		01 25 31.2	-0.7
LKR	Lokris	1.59	283	P		Pn		01 25 31.2	-0.7
DID	Didima	1.59	240	*e*P		Pn		01 25 30.8	-1.1
DID	Didima	1.59	240	P		Pn		01 25 30.0	-1.9
DID				S		Sn		01 25 54.8	+1.7
DID	Didima	1.59	240	*e*P		Pn		01 25 30.8	-1.1
DID				S		Sn		01 25 54.8	+1.7
LTK	Loutraki	1.61	260	*e*P		Pn		01 25 31.5	-0.7
LTK	Loutraki	1.61	260	P		Pn		01 25 31.6	-0.6
LTK				S		Sn		01 25 54.2	+0.6
LTK	Loutraki	1.61	260	P		Pn		01 25 31.6	-0.6
LTK				S		Sn		01 25 54.2	+0.6
BLCB	Balcova	1.63	87	*e*PN		Pn		01 25 32.0	-0.4
BLCB				*e*SN		Sn		01 25 55.5	+1.6
BLCB	Balcova	1.63	87	P		Pn		01 25 31.8	-0.6
BLCB				S		Sn		01 25 56.1	+2.1
BLCB	Balcova	1.63	87	*e*Pn		Pn		01 25 32.0	-0.4
BLCB				*e*Sn		Sn		01 25 55.5	+1.5
BLCB				S		Sn		01 25 56.1	+2.1
AYVA	Ayvalik	1.67	53	*i* P		Pn		01 25 31.3	-1.7
AYVA				*i* S		Sn		01 25 59.0	+3.9
AYVA	Ayvalik	1.67	53	*i* P		Pn		01 25 31.3	-1.7
AYVA				*i* S		Sn		01 25 59.0	+3.9
NEO	Neokhori	1.69	307	P		Pn		01 25 32.9	-0.4
NEO	Neokhori	1.69	307	P		Pn		01 25 32.9	-0.4
BOZC	Bozcaada	1.75	28	*i* P		Pn		01 25 33.5	-0.5
BOZC				*i* S		Sn		01 25 56.4	-0.6
XOR	Xorichti	1.75	308	P		Pn		01 25 34.5	+0.4
XOR	Xorichti	1.75	308	P		Pn		01 25 33.4	-0.7
XOR	Xorichti	1.75	308	P		Pn		01 25 33.4	-0.7
IZM	Izmir	1.80	86	*e*PN		Pn		01 25 34.9	+0.1
EZN	Ezine	1.84	34	*e*PN		Pn		01 25 35.4	0.0
EZN	Ezine	1.84	34	*e*Pn		Pn		01 25 35.4	0.0
THR2	Thira island,	1.89	169	P		Pn		01 25 36.1	0.0
THR2	Thira island,	1.89	169	P		Pn		01 25 36.1	0.0
PAIG	Paliouri	1.91	328	P		Pn		01 25 35.5	-0.7
PAIG	Paliouri	1.91	328	P		Pn		01 25 35.3	-0.9
PAIG				S		Sn		01 26 01.7	+0.8
PAIG	Paliouri	1.91	328	P		Pn		01 25 35.5	-0.7
PAIG				S		Sn		01 26 01.7	+0.8
THR5	Thira Island,	1.91	171	P		Pn		01 25 36.8	+0.5
THR5	Thira Island,	1.91	171	P		Pn		01 25 36.8	+0.5
THR3	Thira Island,	1.93	170	P		Pn		01 25 36.9	+0.4
THR3	Thira Island,	1.93	170	P		Pn		01 25 36.9	+0.4
DSF	Desfina	1.93	274	P		Pn		01 25 36.0	-0.5
DSF	Desfina	1.93	274	P		Pn		01 25 36.0	-0.5
THR1	Thera Island	1.97	169	P		Pn		01 25 37.5	+0.4
THR1	Thera Island	1.97	169	P		Pn		01 25 37.5	+0.4
GADA	Gvkgeada	2.01	21	*e*PN		Pn		01 25 36.7	-1.0
GADA	Gvkgeada	2.01	21	*e*Pn		Pn		01 25 36.7	-1.0
GUR	Goura	2.11	261	*e*P		Pn		01 25 38.2	-0.8
GUR	Goura	2.11	261	P		Pn		01 25 38.2	-0.8
GUR				S		Sn		01 26 05.4	-0.5
GUR	Goura	2.11	261	*e*P		Pn		01 25 38.5	-0.5
GUR				S		Sn		01 26 05.4	-0.5
OUR	Ouranopolis	2.17	339	P		Pn		01 25 39.0	-0.8
OUR	Ouranopolis	2.17	339	P		Pn		01 25 39.0	-0.8
AGG	Agios Georgios	2.19	290	*e*P		Pn		01 25 40.2	0.0
AGG	Agios Georgios	2.19	290	*e*P		Pn		01 25 40.2	0.0
AGG	Agios Georgios	2.19	290	P		Pn		01 25 40.0	-0.2
AGG	Agios Georgios	2.19	290	P		Pn		01 25 40.0	-0.2
BODT	Bodrum	2.23	123	*e*PN		Pn		01 25 40.3	-0.4
BODT	Bodrum	2.23	123	*e*Pn		Pn		01 25 40.3	-0.4
KALE	Kalithea	2.23	273	P		Pn		01 25 40.2	-0.5
KALE	Kalithea	2.23	273	P		Pn		01 25 40.2	-0.5
VLX	Vlachokerasia	2.26	246	*e*P		Pn		01 25 40.5	-0.6
VLX	Vlachokerasia	2.26	246	P		Pn		01 25 40.5	-0.6
VLX				S		Sn		01 26 11.3	+1.7
VLX	Vlachokerasia	2.26	246	*e*P		Pn		01 25 40.5	-0.6
VLX				S		Sn		01 26 11.3	+1.7
VLI	Veliai	2.27	226	*e*P		Pn		01 25 39.3	-1.9
VLI	Veliai	2.27	226	*e*P		Pn		01 25 39.3	-1.9
VLI	Veliai	2.27	226	*e*P		Pn		01 25 39.3	-1.9
AKS	Akhisar	2.29	75	*e*PN		Pn		01 25 42.5	+0.9
AKS	Akhisar	2.29	75	*e*Pn		Pn		01 25 42.5	+0.9
LAKA	Lakka	2.36	269	P		Pn		01 25 42.6	+0.1
LAKA	Lakka	2.36	269	P		Pn		01 25 42.6	+0.1
PLG	Polygyros	2.38	331	*e*P		Pn		01 25 41.9	-0.9
PLG	Polygyros	2.38	331	*e*P		Pn		01 25 41.9	-0.9
PLG	Polygyros	2.38	331	P		Pn		01 25 42.0	-0.8
PLG	Polygyros	2.38	331	P		Pn		01 25 42.0	-0.8
GELI	Tayfur-Gelibol	2.39	29	*e*PN		Pn		01 25 42.6	-0.3
GELI	Tayfur-Gelibol	2.39	29	*e*Pn		Pn		01 25 42.6	-0.3
EFP	Efpalio	2.42	274	*e*P		Pn		01 25 43.3	0.0
EFP	Efpalio	2.42	274	P		Pn		01 25 43.3	0.0
EFP	Efpalio	2.42	274	*e*P		Pn		01 25 43.3	0.0
MLSB	Milas	2.44	114	*e*PN		Pn		01 25 42.9	-0.7
MLSB	Milas	2.44	114	*e*Pn		Pn		01 25 42.9	-0.6
BALY	Balya	2.51	54	*i* P		Pn		01 25 43.7	-0.8
BALY				*i* S		Sn		01 26 23.1	+7.4
BALY	Balya	2.51	54	*i* P		Pn		01 25 43.7	-0.8
KYTH	Kithira	2.55	218	*e*P		Pn		01 25 43.7	-1.4
KYTH	Kithira	2.55	218	*e*P		Pn		01 25 43.7	-1.4
KYTH	Kithira	2.55	218	*e*P		Pn		01 25 43.7	-1.4
EVR	Evrytania	2.56	285	P		Pn		01 25 46.5	+1.3
EVR	Evrytania	2.56	285	P		Pn		01 25 46.5	+1.3
ENEZ	Enez	2.59	20	*e*PN		Pn		01 25 45.3	-0.4
ENEZ	Enez	2.59	20	*e*Pn		Pn		01 25 45.3	-0.3
DAT	Datca	2.60	127	*e*PN		Pn		01 25 45.9	+0.1
DAT	Datca	2.60	127	*e*Pn		Pn		01 25 45.9	+0.1
BALB	Balikesir	2.62	59	*e*PN		Pn		01 25 47.2	+1.1
BALB	Balikesir	2.62	59	*e*Pn		Pn		01 25 47.2	+1.1
LIT	Litokhoron	2.63	314	*e*P		Pn		01 25 44.8	-1.4
LIT	Litokhoron	2.63	314	*e*P		Pn		01 25 44.8	-1.4
LIT	Litokhoron	2.63	314	P		Pn		01 25 44.6	-1.6
LIT	Litokhoron	2.63	314	*e*P		Pn		01 25 44.8	-1.4
ERIK	Erikli-Kesan	2.64	26	*e*PN		Pn		01 25 45.4	-0.9
ERIK	Erikli-Kesan	2.64	26	*e*Pn		Pn		01 25 45.4	-1.0
ITM	Ithomi	2.67	246	*e*P		Pn		01 25 46.5	-0.2
ITM	Ithomi	2.67	246	*e*P		Pn		01 25 46.5	-0.2
ITM	Ithomi	2.67	246	P		Pn		01 25 46.8	+0.1
ITM	Ithomi	2.67	246	*e*P		Pn		01 25 46.5	-0.2
HORT	Hortiatis	2.71	328	P		Pn		01 25 48.1	+0.8
HORT	Hortiatis	2.71	328	P		Pn		01 25 48.1	+0.8
ALN	Alexandroupoli	2.71	17	*e*P		Pn		01 25 46.3	-1.1
ALN	Alexandroupoli	2.71	17	*e*P		Pn		01 25 46.3	-1.1
ALN	Alexandroupoli	2.71	17	P		Pn		01 25 46.2	-1.1
ALN	Alexandroupoli	2.71	17	*e*P		Pn		01 25 46.3	-1.1
SOH	Sokhos	2.81	334	*e*P		Pn		01 25 48.5	-0.1
SOH	Sokhos	2.81	334	*e*P		Pn		01 25 48.5	-0.1
SOH	Sokhos	2.81	334	*e*P		Pn		01 25 48.5	-0.1
YER	Yerkesik	2.87	113	*e*PN		Pn		01 25 50.5	+1.0
YER	Yerkesik	2.87	113	*e*Pn		Pn		01 25 50.5	+1.0
KULA	Kula-Manisa	2.90	85	*e*PN		Pn		01 25 51.4	+1.4
KULA	Kula-Manisa	2.90	85	*e*Pn		Pn		01 25 51.4	+1.5
RKY	Sarkoy-Tekirda	2.92	35	*e*PN		Pn		01 25 51.0	+0.7
RKY	Sarkoy-Tekirda	2.92	35	*e*Pn		Pn		01 25 51.0	+0.8
VAM	Vamos	2.96	192	P		Pn		01 25 52.2	+1.4
VAM	Vamos	2.96	192	P		Pn		01 25 52.2	+1.4
SRS	Serrai	3.00	340	P		Pn		01 25 50.9	-0.4
SRS	Serrai	3.00	340	P		Pn		01 25 50.6	-0.7
SRS	Serrai	3.00	340	P		Pn		01 25 50.6	-0.7
IDI	Anoyia	3.02	181	P		Pn		01 25 50.2	-1.3
IDI	Anoyia	3.02	181	P		Pn		01 25 50.2	-1.3
KARN	Karanos	3.02	197	P		Pn		01 25 52.4	+0.8
KARN	Karanos	3.02	197	P		Pn		01 25 52.4	+0.8
EDC	Edincik	3.03	47	*e*PN		Pn		01 25 52.6	+1.0
EDC	Edincik	3.03	47	*e*Pn		Pn		01 25 52.6	+1.0
MFT	Murefte	3.05	35	*e*PN		Pn		01 25 52.9	+1.0
MFT	Murefte	3.05	35	*e*Pn		Pn		01 25 52.9	+0.9
BNT	Bandirma	3.06	47	*e*PN		Pn		01 25 52.9	+0.7
NPS	Neapolis	3.08	170	P		Pn		01 25 55.0	+2.6
NPS	Neapolis	3.08	170	P		Pn		01 25 55.0	+2.6
NVR	Nevrokopi	3.16	345	P		Pn		01 25 52.9	-0.5
NVR	Nevrokopi	3.16	345	P		Pn		01 25 52.9	-0.5
LAST	Lasithi	3.17	173	P		Pn		01 25 54.2	+0.6
LAST	Lasithi	3.17	173	P		Pn		01 25 54.2	+0.6
KARP	Karpathos	3.27	147	*e*P		Pn		01 25 54.3	-0.6
KARP	Karpathos	3.27	147	*e*P		Pn		01 25 54.2	-0.7
KARP	Karpathos	3.27	147	*e*P		Pn		01 25 54.3	-0.6
SIVA	Sivas	3.29	182	P		Pn		01 25 55.3	+0.1
SIVA	Sivas	3.29	182	P		Pn		01 25 55.3	+0.1
GRG	Griva	3.31	324	P		Pn		01 25 55.7	+0.2
GRG	Griva	3.31	324	P		Pn		01 25 55.9	+0.4
GRG	Griva	3.31	324	P		Pn		01 25 55.7	+0.2
KHL	Karahalli	3.58	88	*e*PN		Pn		01 26 01.1	+1.9
KHL	Karahalli	3.58	88	*e*Pn		Pn		01 26 01.1	+1.9
FNA	Florina	3.72	313	P		Pn		01 26 05.3	+4.1
FNA	Florina	3.72	313	P		Pn		01 26 05.3	+4.1
ARMT	Armutlu	3.76	52	*e*PN		Pn		01 26 03.3	+1.6
ARMT	Armutlu	3.76	52	*e*Pn		Pn		01 26 03.3	+1.6
EDRB	Edirne	3.79	20	*e*PN		Pn		01 26 02.4	+0.3
EDRB	Edirne	3.79	20	*e*Pn		Pn		01 26 02.4	+0.3
GEMT	Gemlik	3.89	56	*e*PN		Pn		01 26 05.3	+1.7
GEMT	Gemlik	3.89	56	*e*Pn		Pn		01 26 05.3	+1.7
YLV	Yalova	4.08	55	*e*PN		Pn		01 26 07.2	+1.0
YLV	Yalova	4.08	55	*e*Pn		Pn		01 26 07.2	+1.0
VTS	Vitosha	4.49	343	P		Pn		01 26 13.6	+1.9
VTS	Vitosha	4.49	343	P		Pn		01 26 13.6	+1.9
BARS	Barje	5.11	333	*i*P		Pn		01 26 20.3	+0.1
TIP	Timpagrande	6.48	280	P		Pn		01 26 41.5	+2.4

WEL 25 01:27:44.6±0.4,38˚.07S×176˚.33E,h153km±3km,ML3.8/18, 1C,Error ellipse: s-maj=2.7km s-min=2.2km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TARZ	Mount Tarawera	0.21	139		PN	Pn		01 28 05.7	+0.5
URZ	Urewera	0.65	107		PN	Pn		01 28 06.6	-0.4
URZ					SN	Sn		01 28 23.3	-0.9
WATZ	Wairara	0.79	216		PN	Pn		01 28 08.3	+0.3
RATZ	Rangitukua	0.91	209		PN	Pn		01 28 09.1	+0.2
MWZ	Matawai	0.98	106		PN	Pn		01 28 09.2	-0.2
MWZ					SN	Sn		01 28 27.8	-0.6
KATZ	Kakaramea	1.03	209		PN	Pn		01 28 10.0	+0.1
RAHZ	Arahi	1.03	145		PN	Pn		01 28 10.3	+0.5
RAHZ					SN	Sn		01 28 29.8	+0.5
NMHZ	Naumai	1.09	160		PN	Pn		01 28 11.1	+0.7
NMHZ					SN	Sn		01 28 31.4	+1.2
BKZ	Black Stump Fm	1.10	173		⇑PN	Pn		01 28 10.3	-0.2
BKZ					SN	Sn		01 28 29.6	-0.8
KRVZ	Karewarewa	1.15	208		PN	Pn		01 28 11.0	+0.1
WTVZ	West Tongariro	1.19	209		PN	Pn		01 28 11.4	+0.1
OTVZ	Oturere	1.21	205		PN	Pn		01 28 11.8	+0.4
TWVZ	Taurewa	1.22	215		PN	Pn		01 28 11.6	+0.1
HIZ	Hauiti	1.24	249		PN	Pn		01 28 11.9	+0.2
NGZ	Ngauruhoe	1.24	207		PN	Pn		01 28 11.9	+0.2
WPVZ	Whakapapa	1.28	208		PN	Pn		01 28 12.3	+0.2
TUVZ	Tukino	1.30	204		PN	Pn		01 28 12.5	+0.2
FWVZ	Far West T-bar	1.33	207		PN	Pn		01 28 12.5	-0.1
WNVZ	Wahianoa	1.38	204		PN	Pn		01 28 13.1	0.0
MCHZ	McNeill Hill	1.40	168		PN	Pn		01 28 13.7	+0.5
KNZ	Kokohu	1.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.92**	**325**	Pn	**Pn**	**02 03 26.4**	**-1.5**
	13nm,0.3s,baz=86,slow=20,SNR=4.1						
JHJ				Sn	**Sn**	**02 04 01.1**	**-0.7**
	20nm,0.3s,baz=250,slow=23,SNR=5.1						
CBIJ	**Chichi jima**	**3.64**	**174**	Pn	**Pn**	**02 03 35.9**	**-1.9**
	2.2nm,0.3s,baz=282,slow=22,SNR=2.7						
CBIJ				Sn	**Sn**	**02 04 20.3**	**+0.8**
	14nm,0.3s,baz=262,slow=20,SNR=3.9						
BSO1	**Boso 1**	**3.97**	**350**	P	**Pn**	**02 03 41.7**	**-0.7**
BSO1				*e*S	**Sn**	**02 04 26.4**	**-1.3**
BSO2	**Boso 2**	**4.10**	**348**	*e*S	**Sn**	**02 04 28.5**	**-2.4**
BSO3	**Boso 3**	**4.20**	**346**	P	**Pn**	**02 03 46.4**	**+0.9**
BSO3				*e*S	**Sn**	**02 04 34.4**	**+1.1**
BSO4	**Boso 4**	**4.42**	**344**	P	**Pn**	**02 03 50.5**	**+2.0**
BSO4				*e*S	**Sn**	**02 04 39.7**	**+1.0**
JHU	**Hanno**	**5.52**	**338**	P	**Pn**	**02 04 04.1**	**+0.5**
JHU				*e*S	**Sn**	**02 05 05.5**	**-0.3**
JRY	**Ryogami san**	**5.80**	**336**	P	**Pn**	**02 04 08.4**	**+1.0**
JRY				*e*S	**Sn**	**02 05 13.4**	**+0.8**
JHO	**Hitachi**	**5.95**	**351**	P	**Pn**	**02 04 08.6**	**-1.0**
JHO				*e*S	**Sn**	**02 05 12.7**	**-3.8**
MJAR	**Matsushiro Arr**	**6.52**	**334**	Pn	**Pn**	**02 04 17.5**	**+0.2**
MJAR				Sn	**Sn**	**02 05 31.3**	**+0.9**
MJAR	**Matsushiro Arr**	**6.52**	**334**	Pn	**Pn**	**02 04 17.5**	**+0.2**
	1.4nm,0.3s,baz=155,slow=9.9,SNR=8.6						
MJAR				Sn	**Sn**	**02 05 31.3**	**+0.9**
	0.6nm,0.3s,baz=178,slow=35,SNR=3.6						
MAJO	**Matsushiro**	**6.52**	**334**	*e*Pn	**Pn**	**02 04 18.7**	**+1.3**
MAT	**Matsushiro**	**6.52**	**334**	P	**Pn**	**02 04 18.5**	**+1.2**
MAT				S	**Sn**	**02 05 28.1**	**-2.3**
MKAR	**Makanchi Array**	**47.95**	**307**	P	**P**	**02 11 18.6**	**0.0**
	0.7nm,0.6s,mb3.9,baz=90,slow=9.4,SNR=6.4						
WRA	**Warramunga Arr**	**50.88**	**189**	P	**P**	**02 11 40.7**	**-0.5**
	1.0nm,0.5s,mb4.0,baz=6.6,slow=7.6,SNR=13						
ASAR	**Alice Springs**	**54.61**	**189**	P	**P**	**02 12 08.6**	**-0.1**
	0.5nm,0.5s,mb3.8,baz=2.7,slow=5.4,SNR=4.9						
FINES	**FINESS Array B**	**74.55**	**333**	P	**P**	**02 14 19.6**	**+1.1**
	0.6nm,0.4s,mb3.9,baz=65,slow=5.7,SNR=12						
BRTR	**Keskin Array B**	**83.29**	**312**	P	**P**	**02 15 06.3**	**-0.5**
	0.4nm,0.8s,mb3.5,baz=103,slow=3.2,SNR=3.6						

*ISCJB **25** 02:03:45.5±0.2,46°.18N±0°.01×6°.60E±0°.02, h6km±2km, Error ellipse: s-maj=2.6km s-min=2.0km az=15.6*
*CSEM **25** 02:03:46.7±0.1,46°.17N×6°.68E, h10km, ML2.2/23, Error ellipse: s-maj=1.9km s-min=1.5km az=102.0*
*LDG **25** 02:03:47.6±0.1,46°.17N×6°.73E, h3km, Md2.5/3, Ml2.2/21, Error ellipse: s-maj=1.2km s-min=0.9km az=100.0*
*ZUR **25** 02:03:47.5,46°.18N×6°.69E, h3km±2km, ML1.7/9*
*STR **25** 02:03:48.9±1.1,46°.21N×6°.83E, h5km, Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 25 02:03:46.8±0.2, 46°.17N±0°.01×6°.67E±0°.02, h12km±2km, n101, σ0°.77/166, 4C-9D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALAN	**Lac Salanfe**	**0.21**	**97**	⇓*i*Pg	**Pg**	**02 03 51.6**	**+0.3**
	125nm,0.2s						
SALAN				*i* Sg	**Sg**	**02 03 54.4**	**0.0**
	125nm,0.2s						
SALAN	**Lac Salanfe**	**0.21**	**97**	⇓*i*Pg	**Pg**	**02 03 51.6**	**+0.3**
	125nm,0.2s						
SALAN				*i* Sg	**Sg**	**02 03 54.4**	**0.0**
	125nm,0.2s						
AIGLE	**Aigle**	**0.26**	**49**	⇑*i*Pg	**Pg**	**02 03 52.3**	**+0.1**
	192nm,0.2s						
AIGLE				*e*Sg	**Sg**	**02 03 55.7**	**-0.1**
	192nm,0.2s						
AIGLE	**Aigle**	**0.26**	**49**	⇑*i*Pg	**Pg**	**02 03 52.3**	**+0.1**
	192nm,0.2s						
AIGLE				*e*Sg	**Sg**	**02 03 55.7**	**-0.1**
	192nm,0.2s						
GRYON	**Gryon**	**0.32**	**75**	⇓*i*Pg	**Pg**	**02 03 53.3**	**+0.1**
	125nm,0.2s						
GRYON				*e*Sg	**Sg**	**02 03 57.4**	**-0.1**
	125nm,0.2s						
GRYON	**Gryon**	**0.32**	**75**	⇓*i*Pg	**Pg**	**02 03 53.3**	**+0.1**
	125nm,0.2s						
GRYON				*e*Sg	**Sg**	**02 03 57.4**	**-0.1**
	125nm,0.2s						
GIMEL	**St. Georges /**	**0.46**	**323**	⇓*i*Pg	**Pg**	**02 03 56.3**	**+0.4**
	80nm,0.4s						
GIMEL	**St. Georges /**	**0.46**	**323**	⇓*i*Pg	**Pg**	**02 03 56.3**	**+0.4**
	80nm,0.4s						
SENIN	**Lac Senin/Sane**	**0.48**	**66**	*e*Sg	**Sg**	**02 03 56.9**	**-5.6**
	125nm,0.5s						
SENIN	**Lac Senin/Sane**	**0.48**	**66**	⇓*i*Pg	**Pg**	**02 04 02.6**	**+6.5**
	125nm,0.5s						
DIX	**Grande Dixence**	**0.52**	**100**	*i* Pg	**Pg**	**02 03 57.3**	**+0.3**
	67nm,0.2s						
DIX	**Grande Dixence**	**0.52**	**100**	*i* Pg	**Pg**	**02 03 57.3**	**+0.3**
	67nm,0.2s						
CABF	**La Chapelle**	**0.60**	**318**	*e*Pg	**Pg**	**02 03 59.3**	**+0.9**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**02 04 07.8**	**+1.5**
	12nm,0.2s,SNR=1.0						
CABF	**La Chapelle**	**0.60**	**318**	*e*Pg	**Pg**	**02 03 59.3**	**+0.9**
	SNR=1.0						
TORNY	**Torny/Romont**	**0.64**	**18**	*e*Pg	**Pg**	**02 03 59.7**	**+0.5**
	62nm,0.5s						
TORNY	**Torny/Romont**	**0.64**	**18**	*e*Pg	**Pg**	**02 03 59.7**	**+0.5**
	62nm,0.5s						
LPL	**La Plagne**	**0.66**	**176**	*e*Pg	**Pg**	**02 04 00.0**	**+0.5**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**02 04 08.6**	**+0.5**
	6.1nm,0.2s,SNR=1.0						
LPL	**La Plagne**	**0.66**	**176**	*e*Pg	**Pg**	**02 04 00.0**	**+0.5**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**02 04 08.6**	**+0.5**
	3.0nm,0.2s,SNR=1.0						
LPG	**La Plagne**	**0.68**	**175**	*e*Pg	**Pg**	**02 04 00.4**	**+0.5**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**02 04 09.3**	**+0.6**
	10nm,0.3s,SNR=1.0						
LPG	**La Plagne**	**0.68**	**175**	*e*Pg	**Pg**	**02 04 00.4**	**+0.5**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**02 04 09.3**	**+0.6**
	5.1nm,0.3s,SNR=1.0						
LKBD2	**Leukerbad 2**	**0.70**	**73**	⇑*i*Pg	**Pg**	**02 04 00.6**	**+0.1**
	12nm,0.2s						
LKBD2	**Leukerbad 2**	**0.70**	**73**	⇑*i*Pg	**Pg**	**02 04 00.6**	**+0.1**
	12nm,0.2s						
BRANT	**Les Verrieres**	**0.78**	**350**	⇓*i*P	**Pg**	**02 04 02.7**	**+0.8**
	65nm,0.4s						
BRANT	**Les Verrieres**	**0.78**	**350**	⇓*i*P	**Pg**	**02 04 02.7**	**+0.8**
	65nm,0.4s						
ORIF	**Oris-en-Rattie**	**1.37**	**204**	*e*Pn	**Pn**	**02 04 12.7**	**+1.0**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.37**	**204**	*e*Pg	**Pg**	**02 04 13.6**	**+0.5**
ORIF				*e*Sg	**Sg**	**02 04 30.9**	**0.0**
	8.5nm,0.2s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.37**	**204**	*e*Pn	**Pn**	**02 04 12.7**	**+1.0**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.37**	**204**	*e*Pg	**Pg**	**02 04 13.6**	**+0.5**
ORIF				*e*Sg	**Sg**	**02 04 30.9**	**0.0**
	4.2nm,0.2s,SNR=1.0						
BBS	**Basel-Blauen**	**1.42**	**24**	Pg	**Pg**	**02 04 14.5**	**+0.5**
BBS				Sg	**Sg**	**02 04 33.5**	**+1.1**
MBDF	**Montbardon**	**1.45**	**177**	*e*Pg	**Pg**	**02 04 14.4**	**-0.1**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**02 04 33.1**	**-0.2**
	2.6nm,0.3s						
MBDF	**Montbardon**	**1.45**	**177**	*e*Pg	**Pg**	**02 04 14.4**	**-0.1**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**02 04 33.1**	**-0.2**
	1.3nm,0.3s						
HINF	**Hinteralfeld**	**1.65**	**4**	*e*Pn	**Pn**	**02 04 15.5**	**-0.1**
HINF	**Hinteralfeld**	**1.65**	**4**	*e*Pg	**Pg**	**02 04 18.5**	**0.0**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**02 04 36.0**	**-0.8**
HINF				*e*Sg	**Sg**	**02 04 39.4**	**-0.5**
	4.5nm,0.2s,SNR=1.0						
HINF	**Hinteralfeld**	**1.65**	**4**	*e*Pn	**Pn**	**02 04 15.5**	**-0.1**
HINF	**Hinteralfeld**	**1.65**	**4**	*e*Pg	**Pg**	**02 04 18.5**	**0.0**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**02 04 36.0**	**-0.8**
HINF				*e*Sg	**Sg**	**02 04 39.4**	**-0.5**
	2.2nm,0.2s,SNR=1.0						
MOF	**Molkenrain**	**1.71**	**10**	Pg	**Pg**	**02 04 19.6**	**0.0**
MOF	**Molkenrain**	**1.71**	**10**	Pg	**Pg**	**02 04 19.6**	**0.0**
HAU	**Haudompre**	**1.85**	**353**	*e*Pn	**Pn**	**02 04 18.5**	**+0.2**
	SNR=1.0						
HAU	**Haudompre**	**1.85**	**353**	*e*Pg	**Pg**	**02 04 22.0**	**-0.3**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**02 04 41.0**	**-0.6**
HAU				*e*Sg	**Sg**	**02 04 45.8**	**-0.5**
	6.6nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**1.85**	**353**	*e*Pn	**Pn**	**02 04 18.5**	**+0.2**
	SNR=1.0						
HAU	**Haudompre**	**1.85**	**353**	*e*Pg	**Pg**	**02 04 22.0**	**-0.3**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**02 04 41.0**	**-0.6**
HAU				*e*Sg	**Sg**	**02 04 45.8**	**-0.5**
	3.3nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.92**	**228**	*e*Pn	**Pn**	**02 04 20.2**	**+0.9**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**1.92**	**228**	*e*Pg	**Pg**	**02 04 23.6**	**-0.1**
VIVF				*e*Sg	**Sg**	**02 04 48.7**	**+0.1**
	16nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.92**	**228**	*e*Pn	**Pn**	**02 04 20.2**	**+0.9**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**1.92**	**228**	*e*Pg	**Pg**	**02 04 23.6**	**-0.1**
VIVF				*e*Sg	**Sg**	**02 04 48.7**	**+0.1**
	7.8nm,0.3s,SNR=1.0						
FELD	**Feldberg im Sc**	**1.94**	**28**	Pn	**Pn**	**02 04 20.3**	**+0.8**
FELD	**Feldberg im Sc**	**1.94**	**28**	Pg	**Pg**	**02 04 23.3**	**-0.6**
FELD				Sg	**Sg**	**02 04 48.8**	**-0.2**
SMF	**Signal de Mont**	**2.02**	**285**	*e*Pn	**Pn**	**02 04 20.9**	**+0.3**
SMF	**Signal de Mont**	**2.02**	**285**	*e*Pg	**Pg**	**02 04 25.7**	**+0.3**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**02 04 45.1**	**-0.6**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**02 04 52.2**	**+0.7**
	3.2nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**2.02**	**285**	*e*Pn	**Pn**	**02 04 20.9**	**+0.3**
SMF	**Signal de Mont**	**2.02**	**285**	*e*Pg	**Pg**	**02 04 25.7**	**+0.3**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**02 04 52.2**	**+0.7**
	1.6nm,0.2s,SNR=1.0						
LOR	**Lormes**	**2.23**	**301**	*e*Pn	**Pn**	**02 04 24.5**	**+1.0**
	baz=125						
LOR	**Lormes**	**2.23**	**301**	*e*Pg	**Pg**	**02 04 29.7**	**+0.3**
	baz=121						
LOR				*e*Sg	**Sg**	**02 04 55.3**	**-3.0**
	4.6nm,0.3s,baz=138,SNR=1.0						
LOR	**Lormes**	**2.23**	**301**	*e*Pn	**Pn**	**02 04 24.5**	**+1.0**
	baz=125						
LOR	**Lormes**	**2.23**	**301**	*e*Pg	**Pg**	**02 04 29.7**	**+0.3**
	baz=121						
LOR				*e*Sg	**Sg**	**02 04 55.3**	**-3.0**
	2.3nm,0.3s,baz=138,SNR=1.0						
CDF	**Champ du Feu**	**2.28**	**10**	*e*Pn	**Pn**	**02 04 23.7**	**-0.6**
	SNR=1.0						
CDF	**Champ du Feu**	**2.28**	**10**	*e*Pg	**Pg**	**02 04 29.7**	**-0.8**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**02 04 51.0**	**-1.3**
CDF				*e*Sg	**Sg**	**02 04 59.1**	**-1.0**
	2.2nm,0.3s,SNR=1.0						
CDF	**Champ du Feu**	**2.28**	**10**	*e*Pn	**Pn**	**02 04 23.7**	**-0.6**
	SNR=1.0						
CDF	**Champ du Feu**	**2.28**	**10**	*e*Pg	**Pg**	**02 04 29.7**	**-0.8**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**02 04 51.0**	**-1.3**
CDF				*e*Sg	**Sg**	**02 04 59.1**	**-1.0**
	1.1nm,0.3s,SNR=1.0						
SFTF	**Sexfontaines**	**2.32**	**332**	*e*Pg	**Pg**	**02 04 31.1**	**-0.2**
	baz=133						
SFTF				*e*Sn	**Sn**	**02 04 52.2**	**-1.1**
SFTF				*e*Sg	**Sg**	**02 05 01.4**	**+0.1**
	2.6nm,0.2s						
SFTF	**Sexfontaines**	**2.32**	**332**	*e*Pg	**Pg**	**02 04 31.1**	**-0.2**
	baz=133						
SFTF				*e*Sn	**Sn**	**02 04 52.2**	**-1.1**
SFTF				*e*Sg	**Sg**	**02 05 01.4**	**+0.1**
	1.3nm,0.2s						
SMRF	**Simiane la Rot**	**2.33**	**200**	*e*Pg	**Pg**	**02 04 30.8**	**-0.6**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**02 05 01.3**	**-0.2**
	1.1nm,0.3s						
SMRF	**Simiane la Rot**	**2.33**	**200**	*e*Pg	**Pg**	**02 04 30.8**	**-0.6**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**02 05 01.3**	**-0.2**
	0.6nm,0.3s						
SSF	**Saint Saulge**	**2.36**	**293**	*e*Pn	**Pn**	**02 04 27.0**	**+1.7**
	SNR=1.0						
SSF	**Saint Saulge**	**2.36**	**293**	*e*Pg	**Pg**	**02 04 31.7**	**-0.3**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**02 04 52.8**	**-1.3**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**02 05 02.4**	**-0.1**
	2.3nm,0.2s,SNR=1.0						
SSF	**Saint Saulge**	**2.36**	**293**	*e*Pn	**Pn**	**02 04 27.0**	**+1.7**
	SNR=1.0						
SSF	**Saint Saulge**	**2.36**	**293**	*e*Pg	**Pg**	**02 04 31.7**	**-0.3**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**02 05 02.4**	**-0.1**
	1.1nm,0.2s,SNR=1.0						
SBF	**Sospel**	**2.37**	**167**	*e*Pg	**Pg**	**02 04 30.6**	**-1.6**
	SNR=1.0						
SBF	**Sospel**	**2.37**	**167**	*e*Pg	**Pg**	**02 04 30.6**	**-1.6**
	SNR=1.0						
AVF	**Avril sur Loir**	**2.38**	**286**	*e*Pn	**Pn**	**02 04 26.3**	**+0.7**
AVF	**Avril sur Loir**	**2.38**	**286**	*e*Pg	**Pg**	**02 04 32.3**	**0.0**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**02 05 03.2**	**+0.1**
	1.2nm,0.2s,SNR=1.0						
AVF	**Avril sur Loir**	**2.38**	**286**	*e*Pn	**Pn**	**02 04 26.3**	**+0.7**
AVF	**Avril sur Loir**	**2.38**	**286**	*e*Pg	**Pg**	**02 04 32.3**	**0.0**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**02 05 03.2**	**+0.1**
	0.6nm,0.2s,SNR=1.0						
MEZF	**Maizieres J'vi**	**2.58**	**335**	*e*Sg	**Sg**	**02 05 09.2**	**-0.4**
	3.7nm,0.3s						
MEZF	**Maizieres J'vi**	**2.58**	**335**	*e*Sg	**Sg**	**02 05 09.2**	**-0.4**
	1.9nm,0.3s						
FRF	**La Foret Royal**	**2.61**	**180**	*e*P	**Pn**	**02 04 31.1**	**+2.3**
FRF	**La Foret Royal**	**2.61**	**180**	*e*Pg	**Pg**	**02 04 35.5**	**-1.3**
FRF				*e*Sg	**Sg**	**02 05 09.1**	**-1.5**
	1.0nm,0.2s						
FRF	**La Foret Royal**	**2.61**	**180**	*e*Pn	**Pn**	**02 04 31.1**	**+2.3**
FRF	**La Foret Royal**	**2.61**	**180**	*e*Pg	**Pg**	**02 04 35.5**	**-1.3**
FRF				*e*Sg	**Sg**	**02 05 09.1**	**-1.5**
	0.5nm,0.2s						
BGF	**Bois d'Agland**	**2.68**	**280**	*e*Pn	**Pn**	**02 04 30.5**	**+0.8**
	SNR=1.0						
BGF	**Bois d'Agland**	**2.68**	**280**	*e*Pg	**Pg**	**02 04 37.0**	**-1.1**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**02 05 12.9**	**+0.2**
	2.7nm,0.3s,SNR=1.0						
BGF	**Bois d'Agland**	**2.68**	**280**	*e*Pn	**Pn**	**02 04 30.5**	**+0.8**
	SNR=1.0						
BGF	**Bois d'Agland**	**2.68**	**280**	*e*Pg	**Pg**	**02 04 37.0**	**-1.1**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**02 05 12.9**	**+0.2**
	1.4nm,0.3s,SNR=1.0						
LMR	**La Mourre**	**2.84**	**182**	*e*Pn	**Pn**	**02 04 31.7**	**-0.2**
LMR	**La Mourre**	**2.84**	**182**	*e*Pg	**Pg**	**02 04 40.0**	**-1.2**
LMR				*e*Sn	**Sn**	**02 05 05.7**	**-0.3**
	SNR=1.0						
LMR				*e*Sg	**Sg**	**02 05 16.7**	**-1.2**
	1.4nm,0.3s,SNR=1.0						
LMR	**La Mourre**	**2.84**	**182**	*e*Pn	**Pn**	**02 04 31.7**	**-0.2**
LMR	**La Mourre**	**2.84**	**182**	*e*Pg	**Pg**	**02 04 40.0**	**-1.2**
LMR				*e*Sn	**Sn**	**02 05 05.7**	**-0.3**
	SNR=1.0						
LMR				*e*Sg	**Sg**	**02 05 16.7**	**-1.2**
	0.7nm,0.3s,SNR=1.0						
LASF	**Ste Croix**	**2.89**	**225**	*e*Pn	**Pn**	**02 04 33.5**	**+0.9**
LASF	**Ste Croix**	**2.89**	**225**	*e*Pg	**Pg**	**02 04 42.2**	**0.0**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**02 05 06.7**	**-0.6**
	SNR=1.0						
LASF				*e*Sg	**Sg**	**02 05 19.0**	**-0.6**
	3.1nm,0.2s,SNR=1.0						
LASF	**Ste Croix**	**2.89**	**225**	*e*Pn	**Pn**	**02 04 33.5**	**+0.9**
LASF	**Ste Croix**	**2.89**	**225**	*e*Pg	**Pg**	**02 04 42.2**	**0.0**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**02 05 06.7**	**-0.6**
	SNR=1.0						
LASF				*e*Sg	**Sg**	**02 05 19.0**	**-0.6**
	1.5nm,0.2s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.10**	**274**	*e*Pn	**Pn**	**02 04 36.2**	**+0.7**
	SNR=1.0						
TCF				*e*Sn	**Sn**	**02 05 11.6**	**-0.8**
	SNR=1.0						
TCF				*e*Sg	**Sg**	**02 05 26.3**	**0.0**
	0.5nm,0.2s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.10**	**274**	*e*Pn	**Pn**	**02 04 36.2**	**+0.7**
	SNR=1.0						
TCF				*e*Sn	**Sn**	**02 05 11.6**	**-0.8**
	SNR=1.0						
TCF				*e*Sg	**Sg**	**02 05 26.3**	**0.0**
	0.2nm,0.2s,SNR=1.0						
CAF	**Calvac**	**3.47**	**251**	*e*Pn	**Pn**	**02 04 41.5**	**+0.9**
	SNR=1.0						
CAF	**Calvac**	**3.47**	**251**	*e*Pg	**Pg**	**02 04 52.9**	**-0.3**
	SNR=1.0						
CAF				*e*Sg	**Sg**	**02 05 37.3**	**-0.8**
	1.2nm,0.2s						
CAF	**Calvac**	**3.47**	**251**	*e*Pn	**Pn**	**02 04 41.5**	**+0.9**
	SNR=1.0						
CAF	**Calvac**	**3.47**	**251**	*e*Pg	**Pg**	**02 04 52.9**	**-0.3**
	SNR=1.0						
CAF				*e*Sg	**Sg**	**02 05 37.3**	**-0.8**
	0.6nm,0.2s						
MTLF	**Montolieu**	**4.25**	**230**	*e*Pn	**Pn**	**02 04 52.4**	**+1.1**
MTLF	**Montolieu**	**4.25**	**230**	*e*Pn	**Pn**	**02 04 52.4**	**+1.1**
MFF	**Saint Martin d**	**4.74**	**278**	*e*Pn	**Pn**	**02 04 59.4**	**+1.4**
MFF	**Saint Martin d**	**4.74**	**278**	*e*Pn	**Pn**	**02 04 59.4**	**+1.4**

*ISK **25** 02:04:45.2,37°.01N×29°.21E, h5km, MD2.9*
*ISCJB **25** 02:04:46.9±0.5,36°.99N±0°.03×29°.23E±0°.03, h10km, Error ellipse: s-maj=4.2km s-min=3.4km az=18.8*
*CSEM **25** 02:04:46.6±0.2,37°.00N×29°.22E, h5km, MD2.9, Error ellipse: s-maj=5.1km s-min=4.0km az=14.0*
*DDA **25** 02:04:46.6,36°.99N×29°.22E, h7km±6km, Md2.9*

ISC 25 02:04:47.0±0.5, 37°.00N±0°.03×29°.20E±0°.03, h5km±7km, n28, σ0°.92/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.28**	**56**	*e*PG	**Pg**	**02 04 51.7**	**-0.8**
GLHS				*e*SG	**Sg**	**02 04 57.0**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.28**	**56**	*e*Pg	**Pg**	**02 04 51.7**	**-0.8**
GLHS				*e*Sg	**Sg**	**02 04 57.0**	**+0.7**
GOLH	**Golhisar**	**0.37**	**50**	*i* P	**Pg**	**02 04 52.9**	**-1.3**
GOLH				*i* S	**Sg**	**02 04 59.1**	**0.0**
GOLH	**Golhisar**	**0.37**	**50**	*i* P	**Pg**	**02 04 52.9**	**-1.3**
GOLH				*i* S	**Sg**	**02 04 59.1**	**0.0**
ELL	**Elmali**	**0.62**	**114**	*e*PG	**Pg**	**02 04 58.4**	**-0.5**
ELL				*e*SG	**Sg**	**02 05 07.9**	**+0.9**
ELL	**Elmali**	**0.62**	**114**	*e*Pg	**Pg**	**02 04 58.4**	**-0.5**
ELL				*e*Sg	**Sg**	**02 05 07.9**	**+1.0**
DNZL	**Cakiroluk**	**0.70**	**350**	*i* P	**Pg**	**02 04 59.1**	**-1.4**
DNZL				*i* S	**Sg**	**02 05 10.0**	**+0.4**
DNZL	**Cakiroluk**	**0.70**	**350**	*i* P	**Pg**	**02 04 59.1**	**-1.4**
DNZL				*i* S	**Sg**	**02 05 10.0**	**+0.4**
YER	**Yerkesik**	**0.75**	**281**	*e*PG	**Pg**	**02 05 01.0**	**-0.4**
YER	**Yerkesik**	**0.75**	**281**	*e*Pg	**Pg**	**02 05 01.0**	**-0.3**
DENT	**Denizli**	**0.77**	**350**	*e*PG	**Pg**	**02 05 00.9**	**-0.8**
DENT	**Denizli**	**0.77**	**350**	*e*Pg	**Pg**	**02 05 00.9**	**-0.8**
AKAS	**Kas**	**0.83**	**157**	*i* P	**Pg**	**02 05 01.2**	**-1.7**
AKAS				*i* S	**Sg**	**02 05 14.3**	**+0.7**
AKAS	**Kas**	**0.83**	**157**	*i* P	**Pg**	**02 05 01.2**	**-1.7**
AKAS				*i* S	**Sg**	**02 05 14.3**	**+0.7**
KORT	**Korkueli**	**0.92**	**89**	*e*P	**Pg**	**02 05 05.6**	**+0.9**
KORT				*i* S	**Sg**	**02 05 19.8**	**+3.2**
KORT	**Korkueli**	**0.92**	**89**	*e*P	**Pg**	**02 05 05.6**	**+1.0**
KORT				*i* S	**Sg**	**02 05 19.8**	**+3.2**
BCK	**Bucak**	**1.20**	**67**	*e*PN	**Pn**	**02 05 09.0**	**-1.4**
BCK	**Bucak**	**1.20**	**67**	*e*Pn	**Pn**	**02 05 09.0**	**-1.4**
AYDN	**Tasoluk**	**1.24**	**303**	*i* P	**Pg**	**02 05 11.3**	**+0.5**
AYDN				*i* S	**Sg**	**02 05 28.5**	**+1.5**
AYDN	**Tasoluk**	**1.24**	**303**	*i* P	**Pg**	**02 05 11.3**	**+0.4**
AYDN				*i* S	**Sg**	**02 05 28.5**	**+1.5**
DAT	**Datca**	**1.33**	**259**	*e*PN	**Pn**	**02 05 12.3**	**+0.1**
DAT	**Datca**	**1.33**	**259**	*e*Pn	**Pn**	**02 05 12.3**	**+0.1**
KHAL	**Karahalli**	**1.39**	**9**	*i* P	**Pn**	**02 05 13.4**	**+0.4**
KHAL				*i* S	**Sb**	**02 05 31.9**	**+0.5**
KHAL	**Karahalli**	**1.39**	**9**	*i* P	**Pn**	**02 05 13.4**	**+0.4**
KHAL				*i* S	**Sb**	**02 05 31.9**	**+0.5**
BDRM	**Kayabasi**	**1.41**	**273**	*i* P	**Pn**	**02 05 13.7**	**+0.4**
BDRM				*i* S	**Sb**	**02 05 31.9**	**0.0**
BDRM

EGUA Guajares 2.52 289 P Pn 02 15 47.4 -0.1
EGUA S Sn 02 16 16.2 -2.0
EGUA Guajares 2.52 289 P Pn 02 15 47.4 -0.1
1.0nm,0.1s,SNR=7.9
EGUA S Sn 02 16 16.2 -2.0
12nm,0.3s,SNR=7.9
EGUA Guajares 2.52 289 P Pn 02 15 47.4 -0.1
1.0nm,0.1s,SNR=7.9
EGUA S Sn 02 16 16.2 -2.0
12nm,0.3s,SNR=7.9
EGUA Guajares 2.52 289 P Pn 02 15 47.4 -0.1
1.0nm,0.1s,SNR=7.9
EGUA S Sn 02 16 16.2 -2.0
12nm,0.3s,SNR=7.9
EQUE Quentar 2.57 298 P Pn 02 15 49.2 +1.1
0.9nm,0.2s,SNR=8.9
EQUE S Sn 02 16 19.0 -0.4
0.3nm,0.1s,SNR=7.9
EQUE Quentar 2.57 298 P Pn 02 15 49.2 +1.1
0.9nm,0.2s,SNR=8.9
EQUE S Sn 02 16 19.0 -0.4
0.3nm,0.1s,SNR=7.9
EQUE Quentar 2.57 298 P Pn 02 15 49.2 +1.1
0.4nm,0.1s,SNR=8.9
EQUE S Sn 02 16 19.0 -0.3
0.3nm,0.1s,SNR=7.9
EQES Quesada 2.65 313 P Pn 02 15 50.7 +1.4
EQES S Sn 02 16 23.9 +2.4
EQES Quesada 2.65 313 P Pn 02 15 50.7 +1.4
3.4nm,0.1s,SNR=78
EQES S Sn 02 16 23.9 +2.4
3.7nm,0.1s,SNR=7.9
EQES Quesada 2.65 313 P Pn 02 15 50.7 +1.4
3.4nm,0.1s,SNR=78
EQES S Sn 02 16 23.9 +2.4
3.7nm,0.1s,SNR=7.9
EQES Quesada 2.65 313 P Pn 02 15 50.7 +1.4
1.3nm,0.1s,SNR=78
EQES S Sn 02 16 23.9 +2.4
3.7nm,0.1s,SNR=7.9
EBEN Beniarda 2.69 6 P Pn 02 15 49.3 -0.4
EBEN S Sn 02 16 20.8 -1.5
EBEN Beniarda 2.69 6 P Pn 02 15 49.3 -0.4
2.9nm,0.2s,SNR=15
EBEN S Sn 02 16 20.8 -1.5
0.6nm,0.1s,SNR=4.0
EBEN Beniarda 2.69 6 P Pn 02 15 49.3 -0.4
2.9nm,0.2s,SNR=15
EBEN S Sn 02 16 20.8 -1.5
0.6nm,0.1s,SNR=4.0
EBEN Beniarda 2.69 6 P Pn 02 15 49.3 -0.4
0.3nm,0.1s,SNR=15
EBEN S Sn 02 16 20.8 -1.5
0.6nm,0.1s,SNR=4.0
ECOG Cogollos-Vega 2.69 298 P Pn 02 15 50.7 +0.9
ECOG S Sn 02 16 25.7 +3.3
ECOG Cogollos-Vega 2.69 298 P Pn 02 15 50.7 +0.9
1.1nm,0.2s,SNR=7.9
ECOG S Sn 02 16 25.7 +3.3
0.8nm,0.1s,SNR=7.9
ECOG Cogollos-Vega 2.69 298 P Pn 02 15 50.7 +0.9
1.1nm,0.2s,SNR=7.9
ECOG S Sn 02 16 25.7 +3.3
0.8nm,0.1s,SNR=7.9
ECOG Cogollos-Vega 2.69 298 P Pn 02 15 50.7 +0.9
0.3nm,0.1s,SNR=7.9
ECOG S Sn 02 16 25.7 +3.3
0.8nm,0.1s,SNR=7.9
ETOB Tobarra 2.72 344 P Pn 02 15 50.6 +0.5
ETOB S Sn 02 16 22.7 -0.4
ETOB Tobarra 2.72 344 P Pn 02 15 50.6 +0.5
2.7nm,0.1s,SNR=42
ETOB S Sn 02 16 22.7 -0.4
8.4nm,0.2s,SNR=8.4
ETOB Tobarra 2.72 344 P Pn 02 15 50.6 +0.5
2.7nm,0.1s,SNR=42
ETOB S Sn 02 16 22.7 -0.4
8.4nm,0.2s,SNR=8.4
ETOB Tobarra 2.72 344 P Pn 02 15 50.6 +0.5
1.9nm,0.1s,SNR=42
ETOB S Sn 02 16 22.7 -0.3
8.4nm,0.2s,SNR=8.4
EVIA Vianos 3.01 330 P Pn 02 15 54.7 +0.5
EVIA S Sn 02 16 31.3 +0.9
EVIA Vianos 3.01 330 P Pn 02 15 54.7 +0.5
2.4nm,0.1s,SNR=9.0
EVIA S Sn 02 16 31.3 +0.9
3.4nm,0.1s,SNR=9.9
EVIA Vianos 3.01 330 P Pn 02 15 54.7 +0.5
2.4nm,0.1s,SNR=9.0
EVIA S Sn 02 16 31.3 +0.9
3.4nm,0.1s,SNR=9.9
EVIA Vianos 3.01 330 P Pn 02 15 54.7 +0.5
1.2nm,0.1s,SNR=9.0
EVIA S Sn 02 16 31.3 +1.0
3.4nm,0.1s,SNR=9.9
EBAN Banos Encina 3.32 311 P Pn 02 16 00.5 +2.0
EBAN S Sn 02 16 40.1 +2.2
EBAN Banos Encina 3.32 311 P Pn 02 16 00.5 +2.0
0.4nm,0.1s,SNR=4.0
EBAN S Sn 02 16 40.1 +2.2
2.9nm,0.1s,SNR=7.9
EBAN Banos Encina 3.32 311 P Pn 02 16 00.5 +2.0
0.4nm,0.1s,SNR=4.0
EBAN S Sn 02 16 40.1 +2.2
2.9nm,0.1s,SNR=7.9
EBAN Banos Encina 3.32 311 P Pn 02 16 00.5 +2.1
0.4nm,0.1s,SNR=4.0
EBAN S Sn 02 16 40.1 +2.2
2.9nm,0.1s,SNR=7.9
EIBI Ibiza 3.37 27 P Pn 02 15 58.5 -0.6
EIBI S Sn 02 16 36.8 -2.3
EIBI Ibiza 3.37 27 P Pn 02 15 58.4 -0.7
2.3nm,0.1s,SNR=27
EIBI S Sn 02 16 36.8 -2.3
1.2nm,0.1s,SNR=7.9
EIBI Ibiza 3.37 27 P Pn 02 15 58.4 -0.7
2.3nm,0.1s,SNR=27
EIBI S Sn 02 16 36.8 -2.3
1.2nm,0.1s,SNR=7.9
EIBI Ibiza 3.37 27 P Pn 02 15 58.5 -0.6
EIBI S Sn 02 16 36.8 -2.3
1.2nm,0.1s,SNR=7.9
EMIJ Mijas 3.41 280 P Pn 02 15 57.9 -1.8
EMIJ S Sn 02 16 36.4 -3.8
EMIJ Mijas 3.41 280 P Pn 02 15 57.9 -1.8
0.2nm,0.1s,SNR=4.0
EMIJ S Sn 02 16 37.4 -2.7
0.9nm,0.1s,SNR=7.9
EMIJ Mijas 3.41 280 P Pn 02 15 57.9 -1.8
0.2nm,0.1s,SNR=4.0
EMIJ S Sn 02 16 37.4 -2.7
0.9nm,0.1s,SNR=7.9
EMIJ Mijas 3.41 280 P Pn 02 15 57.9 -1.8
0.3nm,0.1s,SNR=4.0
EMIJ S Sn 02 16 36.4 -3.8
0.9nm,0.1s,SNR=7.9
ECHE Chera 3.57 355 P Pn 02 16 04.1 +2.3
ECHE S Sn 02 16 43.9 -0.1
ECHE Chera 3.57 355 P Pn 02 16 04.1 +2.3
1.6nm,0.3s,SNR=7.9
ECHE S Sn 02 16 43.9 -0.1
0.4nm,0.2s,SNR=7.9
ECHE Chera 3.57 355 P Pn 02 16 04.1 +2.3
1.6nm,0.3s,SNR=7.9
ECHE S Sn 02 16 43.9 -0.1
0.4nm,0.2s,SNR=7.9
ECHE Chera 3.57 355 P Pn 02 16 04.1 +2.3
0.4nm,0.1s,SNR=7.9
ECHE S Sn 02 16 43.9 -0.1
0.4nm,0.2s,SNR=7.9
EADA Adamuz 3.83 305 P Pn 02 16 05.9 +0.5
EADA S Sn 02 16 50.0 -0.5
EADA Adamuz 3.83 305 P Pn 02 16 05.9 +0.5
0.2nm,0.2s,SNR=7.9
EADA S Sn 02 16 50.0 -0.5
0.6nm,0.1s,SNR=7.9
EADA Adamuz 3.83 305 P Pn 02 16 05.9 +0.5
0.2nm,0.2s,SNR=7.9
EADA S Sn 02 16 50.0 -0.5
0.6nm,0.1s,SNR=7.9
EADA Adamuz 3.83 305 P Pn 02 16 05.9 +0.5
0.1nm,0.1s,SNR=7.9
EADA S Sn 02 16 50.0 -0.5
0.6nm,0.1s,SNR=7.9
EMOS Mosqueruela 4.33 1 P Pn 02 16 12.9 +0.6
EMOS S Sn 02 17 02.3 -0.4
EMOS Mosqueruela 4.33 1 P Pn 02 16 12.9 +0.6
2.5nm,0.2s,SNR=4.0
EMOS S Sn 02 17 02.3 -0.4
0.4nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.33 1 P Pn 02 16 12.9 +0.6
2.5nm,0.2s,SNR=4.0
EMOS S Sn 02 17 02.3 -0.4
0.4nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.33 1 P Pn 02 16 12.9 +0.6
0.9nm,0.1s,SNR=4.0
EMOS S Sn 02 17 02.3 -0.5
0.4nm,0.2s,SNR=7.9
ESLA Sonseca Array 4.50 325 ePn Pn 02 16 16.4 +1.7
ESLA eS Sn 02 17 04.8 -2.3
ESLA Sonseca Array 4.50 325 ePn Pn 02 16 16.4 +1.7
ESLA eS Sn 02 17 04.8 -2.4
PAB San Pablo 4.59 321 ePn Pn 02 16 16.9 +0.9
PAB eS Sn 02 17 07.6 -1.8
PAB San Pablo 4.59 321 ePn Pn 02 16 16.9 +0.9
PAB eS Sn 02 17 07.6 -1.8
ERTA Horta de San J 4.97 8 P Pn 02 16 22.1 +0.9
ERTA S Sn 02 17 18.4 -0.3
ERTA Horta de San J 4.97 8 P Pn 02 16 22.1 +0.9
1.7nm,0.3s,SNR=6.3
ERTA S Sn 02 17 18.4 -0.3
0.2nm,0.2s,SNR=7.9
ERTA Horta de San J 4.97 8 P Pn 02 16 22.1 +0.9
1.7nm,0.3s,SNR=6.3
ERTA S Sn 02 17 18.4 -0.3
0.2nm,0.2s,SNR=7.9
ERTA Horta de San J 4.97 8 P Pn 02 16 22.1 +0.9
0.5nm,0.1s,SNR=6.3
ERTA S Sn 02 17 18.4 -0.3
0.2nm,0.2s,SNR=7.9
GUD Guadarrama 5.38 330 P Pn 02 16 27.9 +1.0
GUD Guadarrama 5.38 330 P Pn 02 16 27.9 +1.0
1.8nm,0.5s,SNR=7.9
GUD S Sn 02 17 28.5 -0.3
1.2nm,0.4s,SNR=7.9
GUD Guadarrama 5.38 330 P Pn 02 16 27.9 +1.0
1.8nm,0.5s,SNR=7.9
GUD S Sn 02 17 28.5 -0.3
1.2nm,0.4s,SNR=7.9
GUD Guadarrama 5.38 330 P Pn 02 16 27.9 +1.1
0.2nm,0.2s,SNR=7.9
EPOB Poblet 5.47 13 P Pn 02 16 28.2 +0.1
EPOB Poblet 5.47 13 P Pn 02 16 28.2 +0.1
0.9nm,0.3s,SNR=7.9
EPOB S Sn 02 17 27.0 -4.1
0.7nm,0.4s,SNR=7.9
EPOB Poblet 5.47 13 P Pn 02 16 28.2 +0.1
0.9nm,0.3s,SNR=7.9
EPOB S Sn 02 17 27.0 -4.1
0.7nm,0.4s,SNR=7.9
EPOB Poblet 5.47 13 P Pn 02 16 28.2 +0.2
0.3nm,0.1s,SNR=7.9
EMIR Miracle 6.10 15 P Pn 02 16 37.7 +1.0
EMIR Miracle 6.10 15 P Pn 02 16 37.7 +1.0
1.0nm,0.2s,SNR=7.9
EMIR Miracle 6.10 15 P Pn 02 16 37.7 +1.0
1.0nm,0.2s,SNR=7.9
EMIR Miracle 6.10 15 P Pn 02 16 37.7 +1.0
0.4nm,0.1s,SNR=7.9
CFON Fontmartina 6.19 22 P Pn 02 16 37.7 -0.2
CFON Fontmartina 6.19 22 P Pn 02 16 37.7 -0.2
1.3nm,0.3s,SNR=7.9
CFON Fontmartina 6.19 22 P Pn 02 16 37.7 -0.2
1.3nm,0.3s,SNR=7.9
CFON Fontmartina 6.19 22 P Pn 02 16 37.7 -0.2
0.4nm,0.1s,SNR=7.9
EARI Arriondas 8.08 335 P Pn 02 17 05.9 +2.0
EARI Arriondas 8.08 335 P Pn 02 17 05.0 +1.2
5.1nm,1.0s,SNR=5.6
EARI Arriondas 8.08 335 P Pn 02 17 05.0 +1.2
5.1nm,1.0s,SNR=5.6
EARI Arriondas 8.08 335 P Pn 02 17 05.9 +2.1
5.1nm,1.0s,SNR=5.6

*ATH **25** 02:15:48.0,36.74N×25.78E,h92km±4km*
*ISK **25** 02:15:49.7,36.76N×26.24E,h6km,ML2.1*
*ISCJB **25** 02:15:50.7±0.5,36.73N±0.04×26.26E±0.03,h3km±8km, Error ellipse: s-maj=6.9km s-min=3.3km az=158.5*
*THE **25** 02:15:51.7,36.76N×26.16E,h0km±2km,ML2.4/1,Error ellipse: s-maj=2.0km s-min=0.9km az=27.0*
*CSEM **25** 02:15:51.0±0.2,36.76N×26.24E,h10km,ML2.4/1,Error ellipse: s-maj=5.6km s-min=2.8km az=162.0*
*DDA **25** 02:15:51.7,36.78N×26.22E,h7km±6km,Md3.0*
ISC 25 02:15:51.4±0.5,36.74N±0.04×26.25E±0.03,h6km±7km, n32,σ1§11/55,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APE	Apeiranthos	0.67	300	ePG	Pg	02 16 02.8	-1.5
APE				eSG	Sg	02 16 11.8	-1.1
APE	Apeiranthos	0.67	300	eP	Pg	02 16 02.9	-1.4
APE				eS	Sg	02 16 13.4	+0.5
APE	Apeiranthos	0.67	300	P	Pg	02 16 02.9	-1.4
APE				S	Sg	02 16 13.3	+0.4
APE	Apeiranthos	0.67	300	P	Pg	02 16 02.9	-1.4
APE				eSg	Sg	02 16 11.8	-1.1
APE				S	Sg	02 16 13.3	+0.4
THR2	Thira island,	0.72	247	P	Pg	02 16 04.6	-0.6
THR2				S	Sg	02 16 15.6	+1.1
THR2	Thira island,	0.72	247	P	Pg	02 16 04.6	-0.6
THR2				S	Sg	02 16 15.6	+1.1
THR1	Thera Island 105nm,0.3s	0.74	241	P	Pg	02 16 05.2	-0.3
THR1				S	Sg	02 16 15.8	+0.7
THR1	Thera Island 105nm,0.3s	0.74	241	P	Pg	02 16 05.2	-0.3
THR1				S	Sg	02 16 15.8	+0.7
NIS1	Nisyros Isl.	0.76	100	P	Pg	02 16 07.3	+1.4
NIS1				S	Sg	02 16 21.6	+5.9
NIS1	Nisyros Isl.	0.76	100	P	Pg	02 16 07.3	+1.4
THR3	Thira Island,	0.76	245	P	Pg	02 16 05.3	-0.7
THR3				S	Sg	02 16 17.2	+1.3
THR3	Thira Island,	0.76	245	P	Pg	02 16 05.3	-0.7
THR3				S	Sg	02 16 17.2	+1.3
THR5	Thira Island,	0.80	247	P	Pg	02 16 06.1	-0.6
THR5				S	Sg	02 16 17.5	+0.5
THR5	Thira Island,	0.80	247	P	Pg	02 16 06.1	-0.6
THR5				S	Sg	02 16 17.5	+0.5
BODT	Bodrum	0.91	69	ePG	Pg	02 16 07.7	-1.2
BODT				eSG	Sg	02 16 20.6	0.0
BODT	Bodrum	0.91	69	ePg	Pg	02 16 07.7	-1.2
BODT				eSg	Sg	02 16 20.6	0.0
BDRM	Kayabasi	1.01	71	i P	Pg	02 16 10.7	-0.1
BDRM				i S	Sg	02 16 25.6	+1.7
BDRM	Kayabasi	1.01	71	i P	Pg	02 16 10.7	-0.1
BDRM				i S	Sg	02 16 25.6	+1.7
DAT	Datca	1.06	90	ePG	Pg	02 16 10.7	-1.2
DAT	Datca	1.06	90	ePg	Pg	02 16 10.7	-1.1
SMG	Samos	1.08	25	eP	Pg	02 16 11.9	-0.2
SMG				eS	Sg	02 16 29.7	+3.6
SMG	Samos	1.08	25	eP	Pg	02 16 11.9	-0.2
SMG				eS	Sg	02 16 29.7	+3.6
MLSB	Milas	1.34	65	ePN	Pn	02 16 15.3	-1.4
MLSB	Milas	1.34	65	ePn	Pn	02 16 15.3	-1.4
KARP	Karpathos	1.40	148	eP	Pn	02 16 16.6	-0.9
KARP	Karpathos	1.40	148	eP	Pn	02 16 16.6	-0.9
AYDN	Tasoluk	1.59	54	eP	Pn	02 16 22.6	+2.5
AYDN				i S	Sn	02 16 45.0	+3.9
AYDN	Tasoluk	1.59	54	eP	Pn	02 16 22.6	+2.4
URLA	Izmir	1.64	9	i P	Pn	02 16 19.6	-1.3
URLA				i S	Sn	02 16 43.8	+1.4
URLA	Izmir	1.64	9	i P	Pn	02 16 19.6	-1.3
URLA				i S	Sn	02 16 43.8	+1.4
BLCB	Balcova	1.76	21	ePN	Pn	02 16 22.1	-0.5
BLCB	Balcova	1.76	21	ePn	Pn	02 16 22.1	-0.4

*NIED **25** 02:39:00,21.10N×121.30E,h8km,Mw4.7 Best double couple: Mo1.06000×10^16 NP1:φs310.00000°,δ68.00000°, λ-55.00000°. NP2:φs69.00000°,δ41.00000°, λ-145.00000°.*
*IDC **25** 02:39:38.1±0.7,21.10N×121.23E,h0km,mb4.1/15, mb1 4.3/16,mb1mx4.2/22,mbtmp4.1/16,ML3.7/1,MS5.5/2, Ms1 5.5/2,ms1mx4.3/28,Error ellipse: s-maj=25.1km s-min=14.3km az=68.0*
*BJI **25** 02:39:40.5,21.16N×120.84E,h20km,mB4.5/7,mb4.2/12, ML3.8/3,Ms4.5/3,Ms7 4.4/3*
*ISCJB **25** 02:39:41.1±0.5,21.15N±0.07×121.3E±0.1,h33km, mb4.1/17,MS5.5/2,Error ellipse: s-maj=14.7km s-min=9.0km az=158.3*
*NEIC **25** 02:39:44.5±2.2,21.11N×121.22E,h46km±21km,mb4.4/2, Error ellipse: s-maj=18.9km s-min=12.6km az=70.0*
ISC 25 02:39:43.3±0.5,21.17N±0.07×121.3E±0.1,h35km,n26, σ1§36/27,mb4.1/17,MS5.5/2,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TATO	Taipei	3.79	3	ePn	Pn	02 40 42.3	+3.0
QZH	Quanzhou	4.49	327	Pn	Pn	02 40 47.4	-1.5
QZH				Sn	Sn	02 41 27.9	-12
QZH				smax			
QZH comp=N,160nm,0.8s				smax			
QZH comp=E,180nm,0.9s				LR	LR		
QZH comp=N,8μm,16.4s				LR	LR		
QZH comp=E,7μm,13.2s				LR	LR		
comp=Z,6μm,12.5s							
TIA	Tai'an	15.42	347	eP	Pn	02 43 22.0	+3.8
XAN	Xi'an	16.84	322	P	Pn	02 43 37.0	+0.7
XAN				pP	pP	02 43 44.4	-2.9
XAN				pmax	pmax		
XAN comp=Z,2.0nm,0.9s				pmax	pmax		
comp=Z,12nm,4.4s							
KSRS	Korea Array comp=Z,0.2nm,0.3s,baz=198,slow=12,SNR=15	17.23	18	P	Pn	02 43 40.4	-0.7
BJT	Baijiatuau comp=Z,21nm,0.9s	19.29	348	eP	Pn	02 44 04.6	-1.7
BJI	Beijing	19.31	348	P	Pn	02 44 04.4	-2.1
BJI				pmax	pmax		
BJI comp=Z,25nm,1.3s				pmax	pmax		
comp=Z,210nm,4.2s							
CMAR	Chiang Mai Arr comp=Z,1.1nm,0.4s,mb3.5,baz=80,slow=11,SNR=5.5	21.18	267	P	P	02 44 26.3	+0.5
MJAR	Matsushiro Arr comp=Z,5.0nm,0.8s,mb3.9,baz=240,slow=9.5,SNR=8.1	21.27	40	P	P	02 44 27.4	+0.7
LZH	Lanzhou	21.28	318	eP	P	02 44 29.0	+2.3
LZH				pP		02 44 36.8	
LZH				pmax	pmax		
comp=Z,15nm,1.0s,mb4.3							
SONM	Songino Array comp=Z,2.7nm,0.9s,mb4.0,baz=161,slow=11,SNR=11	29.18	339	P	P	02 45 41.0	-0.3
MKAR	Makanchi Array comp=Z,1.9nm,0.9s,mb3.7,baz=112,slow=9.7,SNR=12	40.59	318	P	P	02 47 19.0	-0.5
WRA	Warramunga Arr comp=Z,3.7nm,0.9s,mb4.1,baz=344,slow=8.8,SNR=11	42.81	162	P	P	02 47 36.4	-1.6
WRA comp=Z,6μm,18.1s,MS5.5,baz=355,slow=37				LR	LR	03 05 57.3	
ZAA0	Zalesovo Array	42.83	329	P	P	02 47 36.8	-0.9
ZALV	Zalesovo Beam	42.83	329	P	P	02 47 36.2	-1.6
ZALV	Zalesovo Beam comp=Z,5.2nm,0.7s,mb4.4,baz=111,slow=8.1,SNR=14	42.83	329	P	P	02 47 36.2	-1.6
ASAR	Alice Springs comp=Z,2.2nm,0.9s,mb4.1,baz=348,slow=9.1,SNR=7.5	46.23	164	P	P	02 48 04.5	-0.7
CTA	Charters Tower comp=Z,24nm,1.2s,mb5.1,baz=357,slow=4.3,SNR=3.3	47.73	148	P	P	02 48 17.9	+0.9
STKA	Stephens Creek comp=Z,4.0nm,0.8s,mb4.5,baz=41,slow=6.2,SNR=4.5	56.22	159	P	P	02 49 19.5	-0.5
STKA comp=Z,4μm,18.7s,MS5.5,baz=129,slow=35				LR	LR	03 12 46.1	
ILAR	Eielson Array comp=Z,0.7nm,0.6s,mb3.7,baz=292,slow=6.5,SNR=7.9	71.85	27	P	P	02 51 02.3	0.0
ARCES	ARCESS Array B comp=Z,2.1nm,0.8s,mb4.1,baz=64,slow=8.2,SNR=6.2	72.36	338	P	P	02 51 06.7	+1.4
FINES	FINESS Array B comp=Z,2.0nm,0.8s,mb4.1,baz=48,slow=2.8,SNR=4.2	74.08	330	P	P	02 51 17.8	+2.2
EGAK	Eagle comp=Z,4.8nm,1.0s,mb4.4	74.24	26	eP	P	02 51 15.5	-0.8
BRTR	Keskin Array B comp=Z,0.4nm,0.7s,mb3.4,baz=76,slow=12,SNR=3.0	75.03	307	P	P	02 51 21.1	-0.4
NOA	NORSAR Array B comp=Z,0.8nm,0.7s,mb3.7,baz=289,slow=19,SNR=2.3	80.92	332	P	P	02 51 56.1	+2.3
YKA	Yellowknife Ar comp=Z,1.3nm,0.6s,mb4.3,baz=214,slow=8.5,SNR=3.9	85.71	23	P	P	02 52 20.4	+2.0

*DJA **25** 02:43:04,10.75N×125.67E,h30km,mb5.5/10*
*MOS **25** 02:43:05.8±1.1,10.34N×125.23E,h33km,mb5.7/82, MS5.6/77,Error ellipse: s-maj=8.4km s-min=4.2km az=117.6*
*IDC **25** 02:43:05.7±2.0,10.36N×125.23E,h21km±12km,mb5.2/26, mb1 5.2/28,mb1mx5.2/29,mbtmp5.2/28,ML5.0/2,MS5.6/20, Ms1 5.6/20,ms1mx5.3/32,Error ellipse: s-maj=14.8km s-min=7.5km az=76.0*
*MAN **25** 02:43:05,10.24N×125.11E,h5km,mb6.1,ML5.1,MS5.7*
MAN INTENSITY VI - ST BERNARD S. LEYTE; INTENSITY V - HILONGOS; SOGOD S. LEYTE; INTENSITY IV - SURIGAO CITY.
*BJI **25** 02:43:06.0,10.22N×125.47E,h49km,mB5.7/49,mb5.5/68, Ms5.9/77,Ms7 5.6/66*
*ISCJB **25** 02:43:06.3±0.4,10.28N±0.02×125.32E±0.02,h40km±3km, mb5.5/168,MS5.7/222,Error ellipse: s-maj=4.2km s-min=3.0km az=161.0*
*NEIC **25** 02:43:06.4±0.2,10.31N×125.25E,h27km,mb5.5/59, MS5.7/139,MW5.8,MW5.8,Error ellipse: s-maj=6.7km s-min=4.6km az=60.0,Moment Tensor Solution. s26 Moment tensor: Scale 10^17Nm; Mrr0.74; Mθθ4.32; Mφφ-5.07; Mrθ0.44; Mθφ-3.07; Mφr-0.72; Best double couple: Mo5.70000×10^17 NP1:φs152.00000°,δ88.00000°, λ9.00000°. NP2:φs61.00000°,δ81.00000°,λ178.00000°. Principal axes: T 5.3200, Plg7.0000°, Azm16.0000°; N 0.7000, Plg80.0000°, Azm165.0000°; P -6.0300, Plg4.0000°, Azm286.0000°;*
NEIC Felt [V PIVS] at Hilongos and Sogod; [IV PIVS] at Saint Bernard; [III PIVS] at Maasin and Tacloban. Also felt [IV PIVS] at Surigao and [II PIVS] at Butuan, Mindanao. Felt [II PIVS] at Cebu City, Cebu and on Camiguin Island. Felt at Talisay, Negros.
*GCMT **25** 02:43:08.3±0.1,10.30N×125.27E,h12km,MW5.8, Moment Tensor Solution. s105,c201; s80,c111; Moment tensor: Scale 10^17Nm; Mrr-1.02±.05; Mθθ5.43±.05; Mφφ-4.41±.06; Mrθ0.07±.15; Mθφ-4.99±.05; Mφr-1.67±.15; Best double couple: Mo7.20000×10^17 NP1:φs68.00000°,δ76.00000°,λ-173.00000°. NP2: φs337.00000°,δ83.00000°,λ-14.00000°. Principal axes: T 7.5800, Plg5.0000°, Azm23.0000°; N -0.6900, Plg75.0000°, Azm131.0000°; P -6.8900, Plg15.0000°, Azm292.0000°; Data Used: II IU IC G CN. Surface waves: sta=119, comp=249, per= 50.*
*TEH **25** 02:43:09.0,10.25N×125.28E,h49km*
ISC 25 02:43:08.9±0.3,10.29N±0.02×125.30E±0.03,h48km±3km, h47km±1.5km:pP-P,n753,σ1§12/588,mb5.5/167,MS5.7/222, 64C-36D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.54	160	eP	Pn	02 43 13.2	-7.3
SCPH				eS	Sn	02 43 23.4	-5.4
OCLP	Ormoc	1.02	318	eP	Pn	02 43 24.0	-2.8
LLP	Lapu-Lapu	1.32	271	eP	Pn	02 43 26.8	-4.1
LLP				eS	Sn	02 43 43.8	-3.6
BUTP	Butuan	1.35	167	eP	Pn	02 43 30.6	-0.8
TBP	Tagbilaran	1.54	247	eP	Pn	02 43 30.1	-3.8
TBP				eS	Sn	02 43 50.0	-2.8
SNPH	Sibulan	2.25	245	⇑iP	Pn	02 43 41.4	-2.2
SNPH				i S	Sn	02 44 22.1	+12
CNP	Catarman	2.29	344	eP	Pn	02 43 44.5	+0.2
BUKP	Musuan	2.41	186	eP	Pn	02 43 43.2	-2.6
MMPH	Masbate	2.63	321	eP	Pn	02 43 47.8	-1.2
MMPH				eS	Px	02 44 02.9	
GUIM	Jordan	2.69	277	eP	Pn	02 43 48.5	-1.2
RCP	Roxas	2.81	297	⇓eP	Pn	02 43 49.9	-1.5
RCP				i S	Sn	02 44 26.2	+2.2
PAGZ	Pagadian	3.08	218	eP	Pn	02 43 52.8	-2.3
DAV	Davao City (W)	3.21	175	ePn	Pn	02 43 56.7	-0.2
DAV	Davao City (W) 318nm,0.3s,baz=303,slow=3.2,SNR=18	3.21	175	Pn	Pn	02 43 54.8	-2.1
DAV 338nm,0.3s,baz=252,slow=6.8,SNR=24				Pg	Pn	02 44 02.3	+5.4
DAV				Sn	Sn	02 44 36.6	+2.6

315nm,0.3s,baz=311,slow=23,SNR=3.9
DAV Lg 02 44 51.3
221nm,0.3s,baz=239,slow=21,SNR=5.9
DAV LR LR 02 45 33.8
comp=Z,194μm,20.1s,baz=132,slow=45
DAV Davao City (W) 3.21 175⇑ *e*P **Pn 02 43 55.5 -1.5**
DAV Davao City (W) 3.21 175 P **Pn 02 43 58.9 +2.0**
MATI Mati 3.46 164 *e*P **Pn 02 44 01.5 +1.2**
PVCP Virac 3.47 341 *e*P **Pn 02 44 01.6 +1.1**
IPIL Ipil 3.67 228 *e*P **Pn 02 44 01.3 -1.9**
OTRP Odiongan 3.82 303 *e*P **Pn 02 44 03.9 -1.3**
AUQP San Andres 3.96 320 *e*P **Pn 02 44 14.0 +6.8**
CUYO Cuyo Island 4.25 278 *e*P **Pn 02 44 10.4 -0.7**
ZMPH Zamboanga City 4.61 224⇑ *e*P **Pn 02 44 14.7 -1.5**
BUSP Coron 5.29 289 *e*P **Pn 02 44 24.7 -0.7**
POLP Polilio Island 5.50 324 *e*P **Pn 02 44 31.9 +3.7**
TGY Tagaytay City 5.71 312 Pn **Pn 02 44 31.6 +0.4**
56nm,0.3s,baz=223,slow=2.5,SNR=48
TGY Tagaytay City 5.71 312 P **Pn 02 44 31.6 +0.4**
TGY pmax pmax
comp=Z,56nm,0.3s
ENPP El Nido 5.85 279 *e*P **Pn 02 44 31.9 -1.2**
BALP Baler 6.52 327 *e*P **Pn 02 44 46.7 +4.4**
SGSI Sangihe 6.57 178 P **Pn 02 44 43.9 +0.9**
PALP Palanan 7.29 338 *e*P **Pn 02 44 54.3 +1.4**
CAUP Cauayan 7.43 333 *e*P **Pn 02 44 56.0 +1.3**
SCZP Santa Cruz 7.57 317 *e*P **Pn 02 44 59.2 +2.5**
BCPH Baguio City Da 7.60 323⇓ *e*P **Pn 02 44 57.0 -0.1**
BOLP Bolinao 8.01 320 *e*P **Pn 02 45 03.9 +1.1**
MYLDM Lahad Datu 8.44 234 P **Pn 02 45 08.5 -0.1**
MYLDM Lahad Datu 8.44 234 P **Pn 02 45 10.4 +1.7**
comp=Z,9μmcomp=Z,300nm,1.0s
MNI Manado 8.80 183 P **Pn 02 45 14.9 +1.3**
comp=Z,10μmcomp=Z,782nm,1.0s
KDM Kudat 9.02 249 P **Pn 02 45 17.5 +0.8**
SDKM Sandakan 9.26 241 P **Pn 02 45 20.3 +0.3**
TSM Tawau 9.48 232 P **Pn 02 45 22.9 0.0**
TNTI Ternate 9.68 168 P **Pn 02 45 26.7 +1.1**
KKM Kota Kinabalu 9.94 246 P **Pn 02 45 30.2 +1.0**
KKM Kota Kinabalu 9.94 246 P **Pn 02 45 31.4 +2.2**
comp=Z,3μmcomp=Z,178nm,0.9s
TOLI Toli-Toli 10.15 206 P **Pn 02 45 37.6 +5.4**
LBMI Labuha 11.08 168 P **Pn 02 45 44.4 -0.4**
LUWI Luwuk 11.54 193 P **Pn 02 45 54.5 +3.4**
NLAI Namlea 13.56 172 P **Pn 02 46 16.1 -2.6**
BTM Bintulu 14.03 241 P **Pn 02 46 25.5 +0.4**
TTSI Tana Toraja 14.33 203 P **Pn 02 46 30.5 +1.3**
KDI Kendari 14.40 191 P **Pn 02 46 35.8 +5.6**
comp=Z,7μmcomp=Z,141nm,3.0s
TATO Taipei 15.05 347 *e*Pn **Pn 02 46 40.9 +2.3**
comp=Z,498nm,1.4s
SBUM Sibu 15.15 240 P **Pn 02 46 39.6 -0.4**
SBUM Sibu 15.15 240 P **Pn 02 46 42.6 +2.7**
comp=Z,6μmcomp=Z,452nm,1.1s
BNDI Bandanaira 15.41 162 P **Pn 02 46 50.2 +6.9**
QZH Quanzhou 15.91 337⇓ *i*P **Pn 02 46 48.5 -1.1**
QZH S **S** **02 49 45.3 -12**
QZH pmax pmax
comp=Z,470nm,1.1s
QZH LR LR
comp=N,14μm,11.4s
QZH LR LR
comp=E,24μm,12.3s
QZH LR LR
comp=Z,43μm,15.9s
HKC Hong Kong Obse 16.01 320 *i*P **Pn 02 46 52.0 +1.1**
HKC S **S** **02 50 00.0 +0.7**
BKSI Bulukumba 16.35 199 P **Pn 02 46 58.9 +3.6**
STKI Sintang 17.10 234 P **Pn 02 47 08.6 +3.9**
GZH Guangzhou 17.10 320 P **Pn 02 47 09.3 +4.6**
GZH LR LR
comp=N,47μm,17.8s
GZH LR LR
comp=E,36μm,17.0s
GZH LR LR
comp=Z,31μm,13.3s
QIZ Qiongzhong 17.28 302 P **Pn 02 47 05.1 -1.8**
QIZ S **S** **02 50 20.0 -5.3**
QIZ sS sS 02 50 34.0 -9.0
QIZ pmax pmax
comp=Z,58nm,1.0s
QIZ pmax pmax
comp=Z,3μm,7.5s
QIZ LR LR
comp=N,18μm,17.3s
QIZ LR LR
comp=Z,32μm,15.2s
QIZ Qiongzhong 17.28 302 *e*Pn **Pn 02 47 06.7 -0.2**
comp=Z,289nm,1.4s
KSM Kuching 17.29 241 P **Pn 02 47 06.7 -0.4**
TLE Tual 17.47 155 P **Pn 02 47 09.6 +0.3**
comp=Z,246nm,1.1s
MMRI Maumere 19.05 189 P **Pn 02 47 28.8 +0.4**
GUMO Guam 19.42 78 *e*P **Pn 02 47 32.5 -0.4**
comp=Z,465nm,1.2s
GUMO Guam 19.42 78 P **Pn 02 47 32.5 -0.4**
comp=Z,2.5nm,0.3s,baz=191,slow=7.0,SNR=9.5
GUMO Guam 19.42 78 P **Pn 02 47 32.5 -0.4**
GUMO pmax pmax
comp=Z,3.0nm,0.3s
KMMI Kalianget 20.60 214 P **P** **02 47 47.7 +3.5**
SRBI Singaraja 20.84 209 P **P** **02 47 46.4 -0.4**
KHKI Kahang-Kahang 20.90 208 P **P** **02 47 47.6 +0.2**
comp=Z,4μmcomp=Z,187nm,1.6s
SSE Sheshan 21.05 350 P **P** **02 47 49.6 +0.7**
SSE pP 02 48 01.3
SSE S **S** **02 51 37.5 -3.2**
SSE sS sS 02 51 55.8 -3.1
SSE pmax pmax
comp=Z,280nm,1.0s,mb5.5
SSE pmax pmax
comp=Z,3μm,12.0s
SSE LR LR
comp=N,8μm,14.9s,MS5.5
SSE LR LR
comp=E,13μm,14.9s,MS5.5
SSE LR LR
comp=Z,15μm,22.6s
DNP Denpasar 21.36 208 P **P** **02 47 56.5 +4.2**
IGBI Denpasar 21.51 208 P **P** **02 47 56.8 +2.8**
comp=Z,9μmcomp=Z,615nm,1.3s,mb5.9
JAGI Jajag, Banyuwa 21.69 211 P **P** **02 47 58.3 +2.3**
TPI Tanjungpandan 21.84 235 P **P** **02 47 59.0 +1.5**
comp=Z,3μmcomp=Z,124nm,1.2s,mb5.2
GMJI Gumukmas 21.90 213 P **P** **02 47 57.4 -0.8**
NGJI Ngawi 22.31 219 P **P** **02 48 06.8 +4.3**
SJI Sawahan 22.41 217 P **P** **02 48 08.2 +4.6**
NJ2 Nanjing 22.46 346 *e*P **P** **02 48 04.8 +0.8**
NJ2 pP 02 48 15.0
NJ2 sP sP 02 48 18.5 -2.9
NJ2 PP 02 48 32.1
NJ2 S **S** **02 52 05.0 -2.9**
NJ2 sS sS 02 52 22.5 -4.2
NJ2 pmax pmax
comp=Z,420nm,1.2s,mb5.7
NJ2 pmax pmax
comp=Z,2μm,6.2s
NJ2 LR LR
comp=N,9μm,13.8s,MS5.4
NJ2 LR LR
comp=E,5μm,13.2s,MS5.4
NJ2 LR LR
comp=Z,9μm,13.9s,MS5.4
KTGM Kuala Trenggan 22.50 259 P **P** **02 48 04.5 -0.1**
WHN Wuhan 22.58 335⇑ P **P** **02 48 05.8 +0.5**
WHN sP sP 02 48 21.9 -0.8
WHN S **S** **02 52 14.1 +4.2**
WHN pmax pmax
comp=Z,410nm,1.1s,mb5.8
WHN LR LR
comp=N,37μm,14.4s,MS6.0
WHN LR LR
comp=E,6μm,10.4s,MS6.0
WHN LR LR
comp=Z,44μm,15.0s,MS6.0
MYKOM Kota Tinggi 22.93 250 P **P** **02 48 08.9 -0.2**
CBIJ Chichi jima 23.08 41 P **P** **02 48 09.6 -1.1**
comp=Z,158nm,0.8s,mb5.5,baz=48,slow=0.8,SNR=12
CBIJ LR LR 02 55 15.9
comp=Z,19μm,19.6s,MS5.6,baz=218,slow=32
KGM Kluang 23.34 251 P **P** **02 48 12.9 -0.4**
BJII Banjamegara 23.40 222 P **P** **02 48 15.2 +1.3**
GYA Guiyang 23.85 315⇓ *i*P **P** **02 48 19.3 +1.4**
GYA pP 02 48 31.3
GYA sP sP 02 48 37.9 +1.9
GYA PP 02 48 53.9
GYA PcP PcP 02 52 01.6 +1.5
GYA S **S** **02 52 27.3 -3.4**
GYA sS sS 02 52 50.0 -1.5
GYA SS 02 53 22.8
GYA ScP ScP 02 55 34.4 -0.4
GYA pmax pmax
comp=Z,120nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,2μm,6.6s
GYA LR LR
comp=N,30μm,19.9s,MS5.8
GYA LR LR
comp=E,16μm,20.5s,MS5.8
GYA LR LR
comp=Z,20μm,17.8s,MS5.6
KAKA Kakadu 23.93 163 *e*P **P** **02 48 17.2 -1.5**
comp=Z,531nm,0.9s,mb6.0
FRIM Kepong 24.52 255 P **P** **02 48 23.7 -0.4**
SNG Songkhla 24.59 265 P **P** **02 48 25.0 +0.2**
comp=Z,120nm,0.7s,mb5.5
ENH Enshi 24.75 326 *e*P **P** **02 48 26.6 +0.6**
comp=Z,334nm,1.1s,mb5.8
ENH LR LR
comp=Z,10μm,20.0s,MS5.3
IPM Ipoh 24.75 258 P **P** **02 48 25.9 -0.3**
KULM Kulim 24.92 260 P **P** **02 48 27.6 -0.2**
NST Nakhon Sawan 25.09 285 P **P** **02 48 29.0 -0.3**
KMI Kunming 26.00 308 P **P** **02 48 39.1 +1.6**
KMI pP pP 02 48 51.9 +2.0
KMI sP sP 02 48 57.5 +1.8
KMI PP 02 49 23.0
KMI S **S** **02 53 06.3 +1.2**
KMI sS sS 02 53 26.8 +0.7
KMI SS 02 54 13.8
KMI pmax pmax
comp=Z,89nm,1.0s,mb5.2
KMI pmax pmax
comp=Z,1μm,5.6s
KMI LR LR
comp=N,14μm,14.9s,MS5.7
KMI LR LR
comp=E,14μm,18.9s,MS5.7
KMI LR LR
comp=Z,13μm,15.4s,MS5.6
JHJ Hachijo jima 2 26.34 28 LR LR 02 57 17.8
comp=Z,15μm,21.1s,MS5.5,baz=172,slow=32
CHRT Chiangrai 26.38 294 ⇓P **P** **02 48 38.9 -2.1**
comp=Z,421nm,1.1s,mb5.9
CMAR Chiang Mai Arr 26.77 291 P **P** **02 48 44.4 -0.1**
comp=Z,57nm,1.1s,mb5.0,baz=108,slow=6.5,SNR=35
CMAR Chiang Mai Arr 26.77 291 P **P** **02 48 44.4 -0.1**
CMAR pmax pmax
comp=Z,57nm,1.1s
TIA Tai'an 26.85 345 *e*P **P** **02 48 44.3 -0.7**
TIA S **S** **02 53 22.0 +3.8**
TIA sS sS 02 53 38.4 -0.8
TIA pmax pmax
comp=Z,100nm,1.0s,mb5.3
TIA LR LR
comp=N,12μm,7.5s
TIA LR LR
comp=E,25μm,11.3s
TIA LR LR
comp=Z,12μm,7.5s
CHG Chiang Mai 26.85 291 ⇑P **P** **02 48 45.6 +0.3**
comp=Z,46nm,1.4s,mb4.8
CHTO Chiang Mai 26.85 291 *e*P **P** **02 48 45.0 -0.2**
comp=Z,83nm,1.4s,mb5.1
CHTO LR LR
comp=Z,6μm,20.0s,MS5.1
CHTO Chiang Mai 26.85 291 *e*P **P** **02 48 45.1 -0.2**
CHTO pmax pmax
comp=Z,83nm,1.4s,mb5.1
CHTO MLR MLR
comp=Z,6μm,20.0s,MS5.1
CHTO Chiang Mai 26.85 291 P **P** **02 48 45.2 0.0**
SNR=38
INCN Inchon 27.10 2 *e*P **P** **02 48 47.7 +0.5**
comp=Z,36nm,1.3s,mb4.7
INCN LR LR
comp=Z,17μm,22.0s,MS5.6
KSRS Korea Array 27.15 5 P **P** **02 48 47.7 0.0**
comp=Z,58nm,1.0s,mb5.1,baz=186,slow=9.5,SNR=58
KSRS PcP PcP 02 52 07.9 +0.5
comp=Z,12nm,1.1s,baz=184,slow=2.6,SNR=5.5
KSRS LR LR 02 58 28.3
comp=Z,16μm,21.9s,MS5.5,baz=196,slow=34
KSRS Korea Array 27.15 5 P **P** **02 48 47.7 0.0**
KSRS 02 52 07.9
KSRS pmax pmax
comp=Z,58nm,1.0s,mb5.1
KSRS MLR MLR
comp=Z,16μm,21.9s,MS5.5
PSI Prapat 27.22 256 P **P** **02 48 48.0 -0.7**
PSI Prapat 27.22 256 P **P** **02 48 48.0 -0.7**
comp=Z,58nm,0.9s,mb5.1,baz=59,slow=4.5,SNR=30
PSI Prapat 27.22 256 P **P** **02 48 48.0 -0.7**
PSI pmax pmax
comp=Z,59nm,1.0s,mb5.1
XAN Xi'an 28.00 330 P **P** **02 48 54.8 -0.6**
XAN pP pP 02 49 07.3 -0.6
XAN sP sP 02 49 12.0 -1.6
XAN PP PP 02 49 44.3 -15
XAN S **S** **02 53 32.0 -4.4**
XAN SS 02 54 56.9
XAN pmax pmax
comp=Z,37nm,1.0s,mb5.0
XAN pmax pmax
comp=Z,89nm,4.9s
XAN LR LR
comp=N,10μm,14.9s,MS5.6
XAN LR LR
comp=E,3μm,12.3s,MS5.6
XAN LR LR
comp=Z,5μm,13.7s,MS5.2
MAJO Matsushiro 28.63 22 *e*P **P** **02 48 59.5 -1.4**
comp=Z,40nm,1.0s,mb5.1
MAJO *e*PcP PcP 02 52 12.0 +1.0
MAJO LR LR
comp=Z,17μm,20.0s,MS5.7
MAJO Matsushiro 28.63 22 *e*P **P** **02 48 59.5 -1.4**
MAJO *e* 02 52 12.0
MAJO pmax pmax
comp=Z,40nm,1.0s,mb5.1
MAJO MLR MLR
comp=Z,17μm,20.0s,MS5.7
MAT Matsushiro 28.63 22 P **P** **02 48 59.2 -1.7**
MAT *e*S **S** **02 53 50.0 +3.8**
MJAR Matsushiro Arr 28.63 22 P **P** **02 48 58.9 -2.0**
comp=Z,26nm,1.0s,mb4.9,baz=200,slow=8.4,SNR=29
MJAR PcP PcP 02 52 12.0 +1.0
comp=Z,17nm,1.0s,baz=206,slow=2.8,SNR=9.1
MJAR ScP ScP 02 55 51.5 +3.0
comp=Z,0.6nm,0.3s,baz=241,slow=2.9,SNR=4.1
MJAR LR LR 02 58 40.3
comp=Z,17μm,20.7s,MS5.6,baz=210,slow=33
CD2 Chengdu 28.66 319⇓ *i*P **P** **02 49 02.0 +0.7**
CD2 pP pP 02 49 13.8 0.0
CD2 sP sP 02 49 19.3 -0.2
CD2 PP PP 02 49 55.6 -11
CD2 PcP PcP 02 52 12.0 +0.8
CD2 S **S** **02 53 46.3 -0.6**
CD2 sS sS 02 54 06.5 -1.4
CD2 SS SS 02 55 15.6 -34
CD2 PcS PcS 02 55 53.0 -0.8
CD2 pmax pmax
comp=Z,290nm,0.5s,mb6.3
CD2 pmax pmax
comp=Z,2μm,6.0s
CD2 LR LR
comp=N,17μm,12.0s,MS6.1
CD2 LR LR
comp=E,29μm,15.2s,MS6.1
CD2 LR LR
comp=Z,25μm,16.2s,MS5.9
DL2 Dalian 28.68 354 ⇑P **P** **02 49 01.0 -0.3**
DL2 sP sP 02 49 18.3 -1.3
DL2 PP PP 02 49 54.1 -13
DL2 S **S** **02 53 48.9 +1.9**
DL2 pmax pmax
comp=Z,70nm,0.9s,mb5.4
DL2 pmax pmax
comp=Z,590nm,5.2s
DL2 LR LR
comp=N,4μm,23.5s
DL2 LR LR
comp=E,4μm,17.9s
DL2 LR LR
comp=Z,6μm,21.2s,MS5.2
PMG Port Moresby 29.26 131 *e*P **P** **02 49 06.7 0.0**
comp=Z,172nm,1.3s,mb5.6
PMG LR LR
comp=Z,8μm,22.0s,MS5.3
PMG Port Moresby 29.26 131 *e*P **P** **02 49 06.5 -0.2**
PMG pmax pmax
comp=Z,154nm,1.2s
TIY Taiyuan 29.66 339 *e*P **P** **02 49 10.1 +0.1**
TIY pP pP 02 49 21.1 -1.4
TIY sP sP 02 49 26.3 -2.0
TIY S **S** **02 54 03.9 +1.5**
TIY sS sS 02 54 25.3 +1.9
TIY SS SS 02 55 44.3 -26
TIY pmax pmax
comp=Z,610nm,6.5s
TIY LR LR
comp=N,6μm,10.7s,MS5.6
TIY LR LR
comp=E,5μm,11.8s,MS5.6
TIY LR LR
comp=Z,10μm,17.1s
BJT Baijiatuao 30.70 346 *e*P **P** **02 49 18.8 -0.3**
comp=Z,179nm,1.2s,mb5.8
BJT LR LR
comp=Z,9μm,20.0s,MS5.4
BJT Baijiatuao 30.70 346 *e*P **P** **02 49 18.8 -0.4**
BJT pmax pmax
comp=Z,179nm,1.2s
BJT MLR MLR
comp=Z,9μm,20.0s
BJI Beijing 30.72 346 P **P** **02 49 18.6 -0.8**
BJI S **S** **02 54 18.3 -0.6**
BJI pmax pmax
comp=Z,110nm,1.2s,mb5.6
BJI pmax pmax
comp=Z,460nm,3.8s
BJI LR LR
comp=N,7μm,18.1s,MS5.6
BJI LR LR
comp=E,10μm,15.4s,MS5.6
BJI LR LR
comp=Z,7μm,22.2s
WRA Warramunga Arr 31.33 163 P **P** **02 49 23.8 -1.1**
WRA PcP PcP 02 52 20.3 +2.0
WRA S **S** **02 54 31.3 +2.4**
WRA Warramunga Arr 31.33 163 P **P** **02 49 23.8 -1.1**
comp=Z,33nm,1.0s,mb5.1,baz=343,slow=9.8,SNR=26
WRA PcP PcP 02 52 20.3 +2.0
comp=Z,26nm,0.8s,baz=342,slow=3.2,SNR=10
WRA S **S** **02 54 31.3 +2.4**
comp=Z,3.8nm,1.0s,baz=355,slow=17,SNR=3.2
WRA Warramunga Arr 31.33 163 P **P** **02 49 23.8 -1.2**
WRA 02 52 20.3
WRA S **S** **02 54 31.3 +2.4**
WRA pmax pmax
comp=Z,33nm,1.0s
WRA smax
comp=N,4.0nm,1.0s
SNY Shenyang 31.45 358 ⇑P **P** **02 49 26.1 +0.3**
SNY S **S** **02 54 31.5 +1.2**
SNY pmax pmax
comp=Z,180nm,0.9s,mb5.9
SNY LR LR
comp=N,4μm,12.0s,MS5.6
SNY LR LR
comp=E,7μm,14.1s,MS5.6
SNY LR LR
comp=Z,8μm,28.9s
MBWA Marble Bar 31.73 190 *e*P **P** **02 49 27.4 -1.1**
comp=Z,31nm,0.9s,mb5.1
MBWA *e*PcP PcP 02 52 19.4 +0.1
MBWA *e*ScP ScP 02 56 00.6 +1.7
MBWA LR LR
comp=Z,6μm,20.0s,MS5.3
LZH Lanzhou 32.22 326 ⇑P **P** **02 49 34.0 +1.3**
LZH pP pP 02 49 48.1 +2.9
LZH sP sP 02 49 54.0 +3.1
LZH PP PP 02 50 41.3 -4.9
LZH S **S** **02 54 43.0 +0.4**
LZH sS sS 02 55 03.0 -0.7
LZH SS SS 02 56 40.0 -22
LZH pmax pmax
comp=Z,900nm,1.7s,mb6.3
LZH pmax pmax
comp=Z,2μm,4.0s
LZH LR LR
comp=N,5μm,11.2s,MS5.5
LZH LR LR
comp=E,4μm,10.6s,MS5.5
LZH LR LR
comp=Z,7μm,16.6s
HHC Hu-ho-hao-te 32.77 341 *e*P **P** **02 49 38.0 +0.6**
HHC pP pP 02 49 50.5 +0.5
HHC sP sP 02 49 55.8 +0.1
HHC PP PP 02 50 49.9 -2.3
HHC S **S** **02 54 52.0 +1.1**
HHC PcS PcS 02 56 05.4 -1.6
HHC SS SS 02 56 54.8 -19
HHC pmax pmax
comp=Z,83nm,1.0s,mb5.6
HHC pmax pmax
comp=Z,800nm,5.0s
HHC LR LR
comp=N,8μm,19.9s,MS5.6
HHC LR LR
comp=E,10μm,18.2s,MS5.6
HHC LR LR
comp=Z,8μm,17.2s,MS5.5
BTO Baotou 33.09 338 *e*P **P** **02 49 39.6 -0.5**
CN2 Changchun 33.38 0 *e*P **P** **02 49 44.5 +1.8**
CN2 *e*S **S** **02 55 00.8 +0.4**
CN2 pmax pmax
comp=Z,20nm,0.6s,mb5.2
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,11μm,16.0s,MS5.7
CN2 LR LR
comp=E,6μm,16.0s,MS5.7
CN2 LR LR
comp=Z,9μm,18.0s,MS5.5
MDJ Mudanjiang 34.40 5 P **P** **02 49 52.6 +1.1**
MDJ pP pP 02 50 03.4 -0.7
MDJ sP sP 02 50 08.4 -1.4
MDJ PP PP 02 51 12.4 +2.2
MDJ S **S** **02 55 20.6 +4.5**
MDJ sS sS 02 55 41.1 +3.8
MDJ ScP ScP 02 56 04.8 -2.9
MDJ pmax pmax
comp=Z,55nm,1.5s,mb5.3
MDJ pmax pmax
comp=Z,480nm,7.0s
MDJ LR LR
comp=N,8μm,23.7s,MS5.4
MDJ LR LR
comp=E,5μm,27.6s,MS5.4
MDJ LR LR
comp=Z,10μm,23.7s,MS5.5
MDJ Mudanjiang 34.40 5 *e*P **P** **02 49 52.2 +0.7**
comp=Z,106nm,1.3s,mb5.6
MDJ *e*PcP PcP 02 52 27.9 +1.5
MDJ LR LR
comp=Z,8μm,20.0s,MS5.5
ASAR Alice Springs 34.78 166 P **P** **02 49 54.1 -0.9**
ASAR PcP PcP 02 52 29.0 +1.2
ASAR S **S** **02 55 28.2 +5.8**
ASAR ScP ScP 02 56 11.7 +2.3
ASAR ScS ScS 03 00 15.4 +2.5
ASAR Alice Springs 34.78 166 P **P** **02 49 54.1 -0.9**
comp=Z,27nm,0.7s,mb5.3,baz=347,slow=7.0,SNR=44
ASAR PcP PcP 02 52 29.0 +1.2
comp=Z,27nm,0.9s,baz=359,slow=1.9,SNR=7.4
ASAR S **S** **02 55 28.2 +5.8**
comp=Z,3.7nm,0.9s,baz=355,slow=20,SNR=3.9
ASAR ScP ScP 02 56 11.7 +2.3
comp=Z,9.4nm,1.2s,baz=340,slow=2.9,SNR=4.3
ASAR ScS ScS 03 00 15.4 +2.5
comp=Z,2.3nm,1.1s,baz=342,slow=7.9,SNR=4.4

ASAR Alice Springs 34.78 166 P **P** **02 49 54.2 -0.8**
ASAR 02 52 29.0
ASAR S **S** **02 55 28.2 +5.8**
ASAR 03 00 15.5
ASAR pmax pmax
comp=Z,27nm,0.7s
ASAR smax
comp=N,4.0nm,0.9s
SHL Shillong 35.11 300 ⇓*i*P **P** **02 49 58.0 +0.1**
SHL *ex* x 02 55 24.0
ERM Erimo 35.27 23 *e*P **P** **02 49 58.7 -0.4**
ERM pmax pmax
comp=Z,27nm,1.2s,mb5.0
CTA Charters Tower 36.56 146 *e*P **P** **02 50 09.9 -0.4**
comp=Z,22nm,0.8s,mb5.0
CTA *e*PCP PcP 02 52 38.8 +5.7
CTA Charters Tower 36.56 146 P **P** **02 50 10.5 +0.1**
CTA PcP PcP 02 52 36.0 +2.8
CTA Charters Tower 36.56 146 P **P** **02 50 10.5 +0.1**
comp=Z,26nm,0.8s,mb5.1,baz=335,slow=11,SNR=12
CTA PcP PcP 02 52 36.0 +2.8
comp=Z,37nm,0.9s,baz=307,slow=4.1,SNR=6.6
CTA Charters Tower 36.56 146 P **P** **02 50 10.5 +0.2**
CTA 02 52 36.0
CTA pmax pmax
comp=Z,26nm,0.8s
CTAO Charters Tower 36.56 146 *e*P **P** **02 50 10.5 +0.2**
comp=Z,67nm,1.2s,mb5.3
CTAO *e*PcP PcP 02 52 39.2 +6.1
CTAO LR LR
comp=Z,8μm,21.0s,MS5.5
CTAO Charters Tower 36.56 146 *e*P **P** **02 50 10.5 +0.2**
CTAO *e* 02 52 39.2
CTAO pmax pmax
comp=Z,67nm,1.2s,mb5.3
CTAO MLR MLR
comp=Z,8μm,21.0s,MS5.5
GTA Gaotai 36.83 326 P **P** **02 50 13.0 +0.6**
GTA pP pP 02 50 25.1 0.0
GTA sP sP 02 50 30.1 -0.7
GTA S **S** **02 55 59.6 +6.1**
GTA sS sS 02 56 11.8 -3.0
GTA pmax pmax
comp=Z,120nm,1.3s,mb5.6
GTA pmax pmax
comp=Z,500nm,5.6s
GTA LR LR
comp=N,22μm,22.3s,MS6.0
GTA LR LR
comp=E,15μm,22.0s,MS6.0
GTA LR LR
comp=Z,11μm,19.6s,MS5.6
ASAJ Asahikawa 36.88 21 P **P** **02 50 13.1 +0.3**
comp=Z,32nm,0.7s,mb5.3,baz=223,slow=16,SNR=13
ASAJ LR LR 03 05 57.0
comp=Z,4μm,19.4s,MS5.2,baz=205,slow=37
ASAJ Asahikawa 36.88 21 P **P** **02 50 13.1 +0.3**
ASAJ pmax pmax
comp=Z,32nm,0.7s
ASAJ MLR MLR
comp=Z,4μm,19.4s
LSA Lhasa 37.24 306 *e*P **P** **02 50 17.6 +1.4**
comp=Z,53nm,0.8s,mb5.4
LSA LR LR
comp=Z,8μm,22.0s,MS5.5
LSA Lhasa 37.24 306 *e*P **P** **02 50 17.6 +1.5**
LSA pmax pmax
comp=Z,53nm,0.8s,mb5.4
LSA MLR MLR
comp=Z,8μm,22.0s,MS5.5
CAL Calcutta 37.39 294 *e*PKP **P** **02 50 16.4 -1.0**
CAL *ex* x 02 56 12.3
YUK Yuzh-Kuril'sk 38.04 24*c i*P **P** **02 50 17.0 -5.6**
YUK *e*PPP 02 51 53.0
YUK pmax pmax
comp=N,270nm,5.7s
YUK pmax pmax
comp=E,90nm,5.7s
YUK pmax pmax
comp=Z,280nm,5.7s
HABR Khabarovsk 38.93 10 P **P** **02 50 29.4 -0.6**
HABR *e**PP pP 02 50 39.8 -3.0
HABR *e**SP sP 02 50 46.8 -1.6
HABR *e*S **S** **02 56 24.1 -0.9**
HABR *e*SSS 02 59 36.8
HABR *e* 03 00 33.1
HABR MLR MLR
comp=Z,6μm,20.0s,MS5.4
HIA Hailar 39.13 354 *e*P **P** **02 50 31.2 -0.4**
comp=Z,73nm,1.1s,mb5.3
HIA LR LR
comp=Z,10μm,20.0s,MS5.6
HIA Hailar 39.13 354 *e*P **P** **02 50 31.2 -0.5**
HIA pmax pmax
comp=Z,73nm,1.1s
HIA MLR MLR
comp=Z,10μm,20.0s
KLR Kul'dur 39.19 7 *e*P **P** **02 50 28.6 -3.5**
KLR pmax pmax
comp=Z,100nm,1.6s,mb5.3
KLR MLR MLR
comp=Z,9μm,14.0s,MS5.7
TAPN Taplejung 39.22 301 *e*P **P** **02 50 33.8 +1.0**
comp=Z,315nm,1.0s,mb6.0
BWNR Bhubaneshwar 39.28 289 *e*PKP **P** **02 50 33.0 -0.4**
ODAN Odare 39.34 300 *e*P **P** **02 50 34.7 +0.9**
comp=Z,430nm,0.8s,mb6.2
YSS Yuzh-Sakhalins 39.43 19 *e*P **P** **02 50 34.8 +0.6**
comp=Z,120nm,1.1s,mb5.5
YSS *e*PcP PcP 02 52 42.8 +1.3
YSS LR LR
comp=Z,2μm,22.0s,MS5.0
YSS Yuzh-Sakhalins 39.43 19*αe*P **P** **02 50 34.7 +0.5**
YSS *e* 02 52 05.0
YSS *e*S **S** **02 56 34.0 +1.4**
YSS pmax pmax
comp=N,90nm,1.2s
YSS pmax pmax
comp=Z,130nm,1.2s,mb5.5
YSS pmax pmax
comp=Z,900nm,6.0s
YSS MLR MLR
comp=Z,5μm,19.0s,MS5.3
YSS MLR MLR
comp=N,5μm,18.0s,MS5.5
YSS MLR MLR
comp=E,3μm,15.0s,MS5.5
HNR Honiara 39.65 118 PFAKE 02 50 50.0 +13
HNR LR LR
comp=Z,3μm,22.0s,MS5.1
RAMN Ramite 40.04 300 *e*P **P** **02 50 40.7 +1.1**
comp=Z,1μm,1.5s,mb6.3
ULN Ulaanbaatar 40.49 341 *e*P **P** **02 50 43.6 +0.6**
comp=Z,73nm,0.8s,mb5.5
ULN *e*PcP PcP 02 52 45.9 +1.0
ULN LR LR
comp=Z,6μm,19.0s,MS5.5
ULN Ulaanbaatar 40.49 341⇑*e*P **P** **02 50 43.4 +0.4**
ULN Ulaanbaatar 40.49 341 P **P** **02 50 43.6 +0.6**
SNR=49
JIRN Jiri 40.60 301 *e*P **P** **02 50 45.5 +1.2**
comp=Z,366nm,0.8s,mb6.0
SONM Songino Array 40.67 340 P **P** **02 50 45.0 +0.5**
comp=Z,58nm,1.1s,mb5.1,baz=158,slow=7.3,SNR=104
SONM PcP PcP 02 52 46.1 +0.6
comp=Z,17nm,1.0s,baz=97,slow=2.3,SNR=5.0
SONM LR LR 03 09 13.0
comp=Z,8μm,19.3s,MS5.6,baz=153,slow=39
SONM Songino Array 40.67 340 P **P** **02 50 45.0 +0.5**
SONM 02 52 46.1
SONM pmax pmax
comp=Z,59nm,1.1s
SONM MLR MLR
comp=Z,8μm,19.3s
FORT Forrest 40.92 176 *e*P **P** **02 50 46.5 -0.2**
comp=Z,269nm,0.7s,mb6.0
FORT *e*PCP PcP 02 52 47.1 +0.5
GUN Gumba 40.94 301 *e*P **P** **02 50 48.3 +1.3**
comp=Z,363nm,0.7s,mb6.1
PKI Pulchoki 41.24 300 *e*P **P** **02 50 49.9 +0.4**
comp=Z,148nm,0.7s,mb5.7
VIS Vishakhapatnam 41.32 285 *e*PKP **P** **02 50 49.5 -0.8**
VIS AMb AMB 02 50 57.2
comp=Z,132nm,1.1s,mb5.5
KKN Kakani 41.41 301 *e*P **P** **02 50 51.5 +0.6**
comp=Z,154nm,0.8s,mb5.7

DMN Daman 41.51 300 *e*P **P** **02 50 52.2 +0.5**
comp=Z,163nm,0.8s,mb5.7
GKN Gorkha 42.02 301 *e*P **P** **02 50 56.0 +0.1**
comp=Z,112nm,0.8s,mb5.5
KLBR Kellerberrin 42.27 190 *e*P **P** **02 50 56.1 -1.6**
comp=Z,113nm,1.3s,mb5.3
CIT Chita 42.70 349 *e*P **P** **02 51 02.2 +1.2**
CIT pmax pmax
comp=Z,233nm,1.9s,mb5.6
KOLN Koldanda 42.83 300 *e*P **P** **02 51 03.1 +0.6**
comp=Z,181nm,0.7s,mb5.9
DANN Dangsing 42.86 301 *e*P **P** **02 51 03.5 +0.8**
comp=Z,218nm,0.7s,mb6.0
NWAO Narrogin (SRO) 43.66 190 *e*P **P** **02 51 08.8 -0.2**
comp=Z,58nm,0.8s,mb5.4
NWAO LR LR
comp=Z,3μm,20.0s,MS5.2
NWAO Narrogin (SRO) 43.66 190 P **P** **02 51 08.6 -0.4**
comp=Z,126nm,1.0s,mb5.6,baz=13,slow=8.1,SNR=25
NWAO Narrogin (SRO) 43.66 190 *e*P **P** **02 51 08.8 -0.2**
NWAO pmax pmax
comp=Z,58nm,0.8s
NWAO MLR MLR
comp=Z,3μm,20.0s
ZAK Zakamensk 43.91 340⇑*i*P **P** **02 51 10.5 -0.3**
ZAK *e* 02 52 52.1
ZAK pmax pmax
comp=Z,20nm,1.0s,mb4.8
MDRS Chennai 44.17 278⇓*ex* sP 02 51 32.2 +0.2
MDRS *e*S **S** **02 57 43.2 -0.4**
STKA Stephens Creek 44.73 160 *e*P **P** **02 51 17.0 -0.6**
comp=Z,94nm,1.0s,mb5.6
STKA Stephens Creek 44.73 160 *e*P **P** **02 51 18.1 +0.4**
comp=Z,33nm,1.1s,mb5.1
STKA Stephens Creek 44.73 160 P **P** **02 51 18.1 +0.4**
comp=Z,133nm,1.0s,mb5.7,baz=338,slow=7.5,SNR=45
TLY Talaya 44.90 341*c i*P **P** **02 51 19.0 +0.3**
TLY *e* 02 57 53.8
TLY pmax pmax
comp=Z,112nm,1.0s,mb5.7
TLY MLR MLR
comp=Z,3μm,15.0s,MS5.4
TLY Talaya 44.90 341 P **P** **02 51 19.7 +1.0**
comp=Z,585nm,1.0s,mb6.4,SNR=22
TLY Talaya 44.90 341 P **P** **02 51 19.6 +0.9**
SNR=40
IRK Irkutsk 45.19 342 *e*P **P** **02 51 20.9 -0.1**
IRK pmax pmax
comp=Z,490nm,1.2s,mb6.2
MOY Mondy 45.78 339 *e*P **P** **02 51 26.5 +0.8**
MOY pmax pmax
comp=Z,189nm,2.2s,mb5.6
HYB Hyderabad 45.85 284 *i* P **P** **02 51 27.5 +0.8**
comp=Z,400nm,1.0s,mb6.3
HYB *e*S **S** **02 58 12.0 +4.2**
PTH Pithoragarh 46.17 301 *e*PKP **P** **02 51 30.0 +0.9**
PTH *ex* x 02 53 05.0
CLNS Chul'man 46.44 360 *e*P **P** **02 51 31.2 +0.5**
CLNS Chul'man 46.44 360 *e*P **P** **02 51 31.1 +0.4**
CLNS *e* 02 53 04.7
CLNS *e* 02 53 23.3
CLNS *e*PPP 02 54 05.7
CLNS *e*S **S** **02 58 20.9 +5.8**
CLNS pmax pmax
comp=Z,119nm,1.2s,mb5.7
CLNS pmax pmax
comp=N,73nm,1.5s
CLNS pmax pmax
comp=E,46nm,1.3s
CLNS pmax pmax
comp=N,36nm,1.4s
CLNS pmax pmax
comp=Z,43nm,1.4s,mb5.2
CLNS pmax pmax
comp=E,16nm,1.7s
CLNS smax
comp=E,644nm,11.8s
CLNS smax
comp=N,644nm,12.3s
CLNS MLR MLR
comp=E,5μm,19.0s,MS5.5
CLNS MLR MLR
comp=Z,3μm,18.0s,MS5.2
CLNS MLR MLR
comp=N,3μm,17.0s,MS5.5
WMQ Urumqi 46.62 323 P **P** **02 51 33.6 +1.2**
WMQ pP pP 02 51 46.0 +0.5
WMQ sP sP 02 51 51.3 +0.2
WMQ PcP PcP 02 53 07.5 +1.7
WMQ PP PP 02 53 23.3 +0.7
WMQ ScP ScP 02 56 55.9 +0.3
WMQ S **S** **02 58 18.5 +0.3**
WMQ sS sS 02 58 39.4 -0.6
WMQ ScS ScS 03 01 21.8 -1.4
WMQ SS SS 03 01 37.4 -7.4
WMQ pmax pmax
comp=Z,96nm,1.0s,mb5.7
WMQ pmax pmax
comp=Z,990nm,5.2s
WMQ LR LR
comp=N,29μm,20.2s,MS6.3
WMQ LR LR
comp=E,13μm,20.2s,MS6.3
WMQ LR LR
comp=Z,18μm,19.7s,MS6.0
BHPL Bhopal 47.41 292 *e*PKP **P** **02 51 38.5 -0.4**
BHPL AMb AMB 02 51 44.0
comp=Z,97nm,1.1s,mb5.6
AKL Akola 47.51 289 *e*PKP **P** **02 51 39.0 -0.8**
AKL *ex* x 02 51 45.1
comp=Z,287nm,1.3s
AKL *i* S **S** **02 58 32.5 +1.0**
SKR Severo-Kuril's 47.57 26 *e*P **P** **02 51 41.9 +2.2**
SKR *e* 02 53 17.0
SKR *e* 02 53 38.0
SKR *e*S **S** **02 58 32.0 +0.5**
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.1
SKR pmax pmax
comp=Z,2μm,6.0s
SKR smax
comp=N,6μm,16.0s
SKR smax
comp=E,5μm,16.0s
SKR MLR MLR
comp=N,3μm,18.0s,MS5.4
SKR MLR MLR
comp=Z,3μm,18.0s,MS5.3
SKR MLR MLR
comp=E,2μm,20.0s,MS5.4
ARMA Armidale 47.74 149 *e*P **P** **02 51 41.9 +0.6**
LATR Latur 47.79 285 *e*PKP **P** **02 51 42.5 +0.6**
DDI Dehra Dun 48.18 302 *e*PKP **P** **02 51 44.0 -0.8**
DDI *ex* x 02 54 03.5
SDNR Sundarnagar 49.37 303 *e*PKP **P** **02 51 55.5 +1.6**
KAD Karad 50.02 284 *e*PKP **P** **02 51 59.4 +0.3**
PET Petropavlovsk 50.35 26 *e*P **P** **02 52 02.0 +1.0**
comp=E,297nm,1.3s,mb6.2
PET *e*PcP PcP 02 53 20.1 +1.1
PET LR LR
comp=Z,5μm,21.0s,MS5.5
PET Petropavlovsk 50.35 26*α i*P **P** **02 52 01.9 +0.9**
PET *e* 02 53 19.9
PET *i* S **S** **02 59 15.0 +4.5**
PET pmax pmax
comp=Z,900nm,5.9s
PET pmax pmax
comp=Z,800nm,15.7s
PET pmax pmax
comp=Z,230nm,1.4s,mb6.0
POO Poona 50.36 286 *e*PKP **P** **02 52 00.3 -1.3**
POO AMb AMB 02 52 06.1
comp=Z,109nm,1.9s,mb5.6
AJM Ajmer 50.37 296 *e*PKP **P** **02 52 01.7 +0.1**
AJM AMb AMB 02 52 06.8
CNB Canberra Magne 50.75 154 *e*P **P** **02 52 05.5 +1.3**
TOO Toolangi 51.23 159 *e*P **P** **02 52 09.1 +1.3**
MK31 Makanchi Array 51.44 323⇑*e*P **P** **02 52 09.5 +0.3**
MKAR Makanchi Array 51.44 323 P **P** **02 52 09.5 +0.3**
MKAR PcP PcP 02 53 23.3 +0.2
MKAR P'P' 03 22 47.4
MKAR Makanchi Array 51.44 323 P **P** **02 52 09.5 +0.3**
comp=Z,56nm,0.9s,mb5.5,baz=122,slow=7.6,SNR=248
MKAR PcP PcP 02 53 23.3 +0.1
comp=Z,48nm,1.0s,baz=85,slow=3.6,SNR=5.2
MKAR PKPPKP 03 22 47.4
comp=Z,1.3nm,1.0s,baz=263,slow=4.8,SNR=3.7
MKAR Makanchi Array 51.44 323 P **P** **02 52 09.5 +0.3**
MKAR 02 53 23.3
MKAR pmax pmax
comp=Z,56nm,0.9s
MKAR pmax pmax
comp=Z,1.0nm,1.0s
DZM Mont Dzumac 51.60 129 *e*P **P** **02 52 11.9 +1.1**
comp=Z,271nm,24.2s
DZM *e*S **S** **02 59 30.1 +1.5**
comp=Z,7μm,27.1s
DZM *e*LR LR 03 06 56.9
comp=Z,7μm,26.2s
YAK Yakutsk 51.74 3 *e*P **P** **02 52 11.3 0.0**
YAK LR LR
comp=Z,6μm,20.0s,MS5.6
YAK Yakutsk 51.74 3 *e*P **P** **02 52 11.2 -0.1**
YAK *e* 02 53 24.0
YAK *e* 02 54 10.6
YAK *e*PPP 02 55 18.6
YAK *e*S **S** **02 59 29.9 +0.5**
YAK *e* 03 01 55.2
YAK pmax pmax
comp=Z,422nm,1.0s,mb6.3
YAK pmax pmax
comp=E,44nm,1.3s
YAK pmax pmax
comp=N,220nm,1.2s
YAK pmax pmax
comp=Z,390nm,4.4s
YAK pmax pmax
comp=E,71nm,3.6s
YAK pmax pmax
comp=N,197nm,4.0s
YAK smax
comp=E,644nm,3.8s
YAK smax
comp=N,369nm,5.2s
BHV Bhavnagar 52.12 290 *e*PKP **P** **02 52 15.2 +0.5**
KSH Kashi 52.51 312 ⇓P **P** **02 52 19.9 +2.5**
KSH *ep*P pP 02 52 32.4 +1.8
KSH *es*P sP 02 52 37.8 +1.6
KSH *e*PcP PcP 02 53 30.4 +3.0
KSH *e*PP PP 02 54 20.3 +3.6
KSH *e*ScP ScP 02 57 22.3 +1.4
KSH *e*PcS PcS 02 57 27.1 +1.3
KSH *e*S **S** **02 59 41.1 +0.4**
KSH *es*S sS 03 00 02.0 -0.8
KSH *e*ScS ScS 03 02 02.8 -0.5
KSH *e*SS SS 03 03 18.1 -1.2
KSH pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
KSH pmax pmax
comp=Z,380nm,3.9s
KSH LR LR
comp=N,2μm,11.3s,MS5.6
KSH LR LR
comp=E,2μm,14.0s,MS5.6
KSH LR LR
comp=Z,2μm,11.2s,MS5.3
ULHL Ulahol 53.29 316 P **P** **02 52 24.5 +1.4**
SNR=20
TKM2 Tokmak 2 53.99 316 P **P** **02 52 29.1 +0.9**
SNR=10.0
ZAA0 Zalesovo Array 54.15 332 *e*P **P** **02 52 28.2 -0.9**
ZALV Zalesovo Beam 54.15 332 P **P** **02 52 28.5 -0.7**
ZALV PcP PcP 02 53 32.6 -0.6
ZALV LR LR 03 16 15.2
ZALV ⇑*e* 03 23 06.0
ZALV Zalesovo Beam 54.15 332 P **P** **02 52 28.5 -0.7**
comp=Z,55nm,0.8s,mb5.5,baz=116,slow=6.8,SNR=62
ZALV PcP PcP 02 53 32.6 -0.6
comp=Z,26nm,1.0s,baz=108,slow=4.8,SNR=3.6
ZALV LR LR 03 16 15.2
comp=Z,5μm,21.1s,MS5.6,baz=130,slow=37
ZALV PKP2bc 03 23 06.0
comp=Z,0.7nm,0.5s,baz=289,slow=4.5,SNR=3.5
ZALV Zalesovo Beam 54.15 332 P **P** **02 52 28.5 -0.7**
ZALV 02 53 32.7
ZALV pmax pmax
comp=Z,55nm,0.8s,mb5.5
ZALV MLR MLR
comp=Z,5μm,21.1s,MS5.6
ZALV pmax pmax
comp=Z,1.0nm,0.5s
KBK Karagaybulak 54.34 316 P **P** **02 52 31.6 +0.9**
SNR=16
UCH Uchtor 54.48 315 P **P** **02 52 34.0 +2.2**
SNR=9.8
CHMS Chumysh 54.59 316 P **P** **02 52 33.0 +0.4**
SNR=9.1
FRU Bishkek 54.63 316 *e*P **P** **02 52 33.0 +0.2**
FRU *i* pP 02 52 43.0 -3.1
FRU pmax pmax
comp=Z,230nm,3.0s
AAK Ala-Archa 54.64 315 P **P** **02 52 33.2 +0.3**
comp=Z,1.7nm,0.3s,mb4.5,baz=144,slow=3.2,SNR=8.3
AAK PcP PcP 02 53 35.1 -0.3
comp=Z,5.2nm,0.6s,baz=136,slow=3.5,SNR=4.2
AAK Ala-Archa 54.64 315 P **P** **02 52 33.2 +0.3**
AAK 02 53 35.1
AAK pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
AAK Ala-Archa 54.64 315 P **P** **02 52 34.3 +1.4**
comp=Z,110nm,0.8s,mb5.9,SNR=7.8
AAK Ala-Archa 54.64 315 P **P** **02 52 34.5 +1.5**
SNR=16
USP Ospenovka 54.86 316 P **P** **02 52 35.0 +0.5**
SNR=25
AML Almayashu 55.02 315 P **P** **02 52 37.0 +1.3**
SNR=28
EKS2 Erkin-Say 55.15 315 P **P** **02 52 37.5 +0.9**
SNR=32
NVS Novosibirsk 55.43 332⇑*i*P **P** **02 52 37.6 -0.8**
NVS *e*S **S** **03 00 09.8 -10**
NVS pmax pmax
comp=Z,127nm,1.1s,mb5.9
NVS pmax pmax
comp=N,77nm,1.4s
NVS pmax pmax
comp=E,90nm,1.2s
NVS smax
comp=N,44nm,2.4s
NVS smax
comp=E,108nm,2.8s
KURK Kurchatov 55.51 326 P **P** **02 52 39.9 +0.8**
comp=E,739nm,0.8s,SNR=67
KURK Kurchatov 55.51 326*ce*P **P** **02 52 38.9 -0.2**
KURK pmax pmax
comp=Z,170nm,1.2s,mb6.0
KURK MLR MLR
comp=Z,5μm,19.0s,MS5.6
KURK Kurchatov 55.51 326 P **P** **02 52 39.2 +0.1**
SNR=74
SEY Seymchan 56.03 15⇑*e*P **P** **02 52 43.8 +1.2**
SEY Seymchan 56.03 15*ce*P **P** **02 52 43.7 +1.1**
MIDW Midway 56.47 63 PFAKE 02 53 00.0 +14
MIDW LR LR
comp=Z,3μm,19.0s,MS5.4
KBL Kabul 56.54 305 *e*P **P** **02 52 46.9 +0.2**
comp=Z,39nm,0.7s,mb5.5
KBL Kabul 56.54 305 *e*P **P** **02 52 46.9 +0.2**
KBL pmax pmax
comp=Z,39nm,0.7s,mb5.5
KK31 Karatay Array 57.56 315⇑*e*P **P** **02 52 53.3 -0.5**
QUE Quetta 57.60 299 *e*P **P** **02 52 56.0 +1.7**
QUE *e*S **S** **03 00 50.0 +0.9**
MSVF Nonsavu 59.07 118 P **P** **02 53 06.1 +1.4**
comp=Z,266nm,0.8s,mb6.3,SNR=6.8
BRVK Borovoye 61.18 326 P **P** **02 53 18.6 0.0**
comp=Z,290nm,0.9s,mb6.4,SNR=22
BRVK Borovoye 61.18 326*ce*P **P** **02 53 18.1 -0.5**
BRVK pmax pmax
comp=Z,56nm,1.0s,mb5.7
BRVK Borovoye 61.18 326 P **P** **02 53 18.0 -0.6**
SNR=39
TIXI Tiksi 61.35 1 *e*P **P** **02 53 19.0 -0.4**
comp=Z,181nm,1.0s,mb6.2
TIXI LR LR
comp=Z,8μm,20.0s,MS5.9
TIXI Tiksi 61.35 1 *e*P **P** **02 53 18.3 -1.1**
TIXI *e*S **S** **03 01 37.5 +1.3**
TIXI pmax pmax
comp=Z,219nm,1.1s,mb6.2
TIXI pmax pmax

comp=N,66nm,1.0s
TIXI pmax pmax
comp=E,40nm,1.0s
TIXI pmax pmax
comp=Z,175nm,6.0s
TIXI MLR MLR
comp=Z,7µm,18.0s,MS5.9
ADK Adak 62.46 36 P **P** **02 53 27.0 -0.2**
comp=Z,59nm,0.9s,mb5.7
ADK Adak 62.46 36 P **P** **02 53 27.0 -0.2**
ADK pmax pmax
comp=Z,59nm,0.9s,mb5.7
JOHN Johnston Islan 63.46 76 PFAKE 02 53 50.0 +16
JOHN LR LR
comp=Z,3µm,19.0s,MS5.5
BILL Bilibino 63.64 16⇑ *e*P **P** **02 53 34.8 +0.1**
BILL LR LR
comp=Z,5µm,21.0s,MS5.7
BILL Bilibino 63.64 16⇑ *i*P **P** **02 53 34.7 0.0**
BILL *i* 02 53 42.3
BILL *i* 02 54 11.3
BILL *e* 02 56 01.0
BILL *e*PPP 02 57 26.1
BILL *i* S **S** **03 02 00.5 -4.6**
BILL *i* SS SS 03 06 21.3 +8.2
BILL pmax pmax
comp=Z,58nm,1.2s,mb5.5
IDAH Dahanechah 63.87 301 *e*P **P** **02 53 38.7 +1.7**
IMYA Miami 64.02 305 *e*P **P** **02 53 37.9 0.0**
WBK Wadi Bani Khal 64.35 290 P **P** **02 53 44.2 +4.0**
SNR=6.2
IKOO Kooshah 64.58 301 *e*P **P** **02 53 42.5 +0.9**
IMOG Moghan 64.61 305 *e*P **P** **02 53 42.2 +0.5**
IPAY Payeh 64.92 305 *e*P **P** **02 53 43.6 -0.1**
JMDO Jabal Madar 65.15 290 P **P** **02 53 46.6 +1.1**
SNR=13
SMDO Samad 65.19 291 P **P** **02 53 47.1 +1.4**
SNR=13
IKRD Kardeh 65.34 306 *e*P **P** **02 53 41.9 -4.5**
ABKT Ailbek 65.77 307 P **P** **02 53 50.9 +1.7**
comp=Z,275nm,1.0s,mb6.2,SNR=17
VAN Vannovskaya 65.78 307 *e*P **P** **02 53 50.4 +1.1**
HOQ Hoqain 65.86 291 P **P** **02 53 49.9 -0.1**
SNR=23
BSY Bisya 65.98 290 P **P** **02 53 51.5 +0.7**
SNR=19
AB31 Akbulak array 66.24 319 P **P** **02 53 50.9 -1.1**
AB31 pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
ARQ Araqi 66.59 291 P **P** **02 53 55.7 +0.9**
SNR=13
AFI Afiamalu 66.88 110 PFAKE 02 54 10.0 +13
AFI LR LR
comp=Z,4µm,22.0s,MS5.6
AFI Afiamalu 66.88 110 LR LR 03 17 21.9
comp=Z,4µm,21.7s,MS5.6,baz=296,slow=31
HATD Hatta, Dubai 66.92 293 P **P** **02 53 57.9 +1.2**
SNR=11
ASHO Ashiyiah 66.98 292 P **P** **02 53 58.3 +1.1**
SNR=16
NAZ Nazwa, Dubai 67.34 293 P **P** **02 54 03.0 +3.5**
SNR=14
IBAF Bafgh 67.45 300 *e*P **P** **02 54 00.6 +0.5**
ASUD Al Ashush, Dub 67.65 292 P **P** **02 54 02.6 +1.2**
SNR=11
SVE Sverdlovsk 67.68 328⇑ *e*P **P** **02 54 00.9 -0.1**
SVE *e* 02 54 29.9
SVE *e*S S 03 02 57.1 +2.4
SVE pmax pmax
comp=Z,91nm,1.0s,mb5.8
SVE MLR MLR
comp=Z,4µm,22.0s,MS5.6
RPZ Rata Peaks 67.93 146 P **P** **02 54 03.7 +1.0**
comp=Z,49nm,0.8s,mb5.6,baz=141,slow=2.3,SNR=13
IMEH Mehriz 68.27 300 *e*P **P** **02 54 05.0 -0.2**
URZ Urewera 68.31 138 P **P** **02 54 07.1 +1.9**
comp=Z,19nm,0.8s,mb5.2,baz=282,slow=8.9,SNR=3.8
ICHK Chekchek 68.46 301 *e*P **P** **02 54 08.7 +2.3**
SNZO South Karori 68.55 142 PFAKE 02 54 20.0 +13
SNZO LR LR
comp=Z,4µm,20.0s,MS5.6
ARU Arti 68.69 327 *c i*P **P** **02 54 05.9 -1.4**
ARU *e* 02 54 30.4
ARU *e* 02 56 34.1
ARU *e*PPP 02 58 11.6
ARU S S 03 03 06.3 -0.4
ARU 03 04 03.9
ARU SS SS 03 07 28.3 -3.5
ARU pmax pmax
comp=Z,54nm,1.0s,mb5.4
ARU Arti 68.69 327 P **P** **02 54 06.1 -1.2**
comp=Z,329nm,0.7s,mb6.4,SNR=12
IANJ Anjilo 68.97 304 *e*P **P** **02 54 09.9 +0.4**
RBK Rabkut 69.07 285 P **P** **02 54 12.3 +1.9**
SNR=10
ILAS Lasjerd 69.74 304 *e*P **P** **02 54 14.6 +0.3**
IFIR Firoozkooh 69.92 304 *e*P **P** **02 54 17.9 +2.5**
ABTO Aybut 69.94 285 P **P** **02 54 17.3 +1.5**
SNR=13
IZEF Zefreh 70.22 301 *e*P **P** **02 54 17.4 +0.1**
ISFB Sefidab 70.31 303 *e*P **P** **02 54 18.3 +0.5**
SOKR Solikamsk 70.35 330 *c i*P **P** **02 54 16.2 -1.3**
SOKR S S 03 03 24.9 -1.3
SOKR pmax pmax
comp=Z,60nm,1.2s,mb5.4
SOKR MLR MLR
comp=Z,5µm,19.0s,MS5.8
IDMV Damavand 70.50 304 *e*P **P** **02 54 18.5 -0.4**
IKLH Kolahrood 70.85 302 *e*P **P** **02 54 22.5 +1.4**
IPIR Pirpir 71.43 301 *e*P **P** **02 54 25.4 +0.8**
IRAZ Razeghan 72.22 304 *e*P **P** **02 54 29.8 +0.5**
SDPT Sand Point 72.63 35 *e*P **P** **02 54 32.1 +0.8**
comp=Z,216nm,1.5s,mb5.9
KIP Kipapa 74.00 71 PFAKE 02 54 50.0 +10
KIP LR LR
comp=Z,1µm,19.0s,MS5.2
QRN Al-Qurain 74.12 297 *e*P **P** **02 54 39.9 -0.8**
QRN AMb AMB 02 54 47.2
comp=Z,163nm,1.3s,mb5.8
MAK Makhachkala 74.14 312 *e*P **P** **02 54 38.4 -2.1**
MAK *e* pP 02 54 52.4 -1.9
MAK *e* 02 57 25.1
MAK *e*S S 03 04 07.7 -2.6
MAK *e* 03 04 44.5
MAK *e*SS SS 03 08 53.6 -2.5
MAK pmax pmax
comp=Z,200nm,1.4s,mb5.8
MAK pmax pmax
comp=E,179nm,1.5s
MAK pmax pmax
comp=N,64nm,0.9s
MAK smax
comp=N,2µm,7.9s
MAK smax
comp=E,1µm,6.8s
KBD Kabd 74.29 297 *e*P **P** **02 54 41.2 -0.5**
KBD AMb AMB 02 54 48.5
comp=Z,130nm,1.3s,mb5.7
RDF Al-Radifah 74.43 297 *e*P **P** **02 54 42.0 -0.4**
RDF AMb AMB 02 54 45.5
comp=Z,165nm,1.0s,mb5.9
MIB Mutribah 74.57 298 *e*P **P** **02 54 42.1 -1.2**
MIB AMb AMB 02 54 49.8
comp=Z,173nm,1.0s,mb6.0
NAY Al-Naaiem 74.68 298 *e*P **P** **02 54 43.0 -0.9**
NAY AMb AMB 02 54 50.4
comp=Z,116nm,1.1s,mb5.7
DGRG David-gareji 75.73 310 P **P** **02 54 49.8 +0.1**
TTA Tatalina 75.75 28 *e*P **P** **02 54 52.2 +2.9**
SVW2 Sparrevohn 75.79 29 *e*P **P** **02 54 48.4 -1.2**
comp=Z,54nm,1.1s,mb5.4
MTA Mtatsminda 76.17 310 P **P** **02 54 52.0 -0.2**
TBLG Delisi 76.20 311 *e*P **P** **02 54 52.8 +0.4**
TBLG Delisi 76.20 311 P **P** **02 54 52.8 +0.4**
GNI Garni 76.25 309 *e*Pn **P** **02 54 54.1 +1.4**
comp=Z,96nm,1.4s,mb5.5
GNI *e*PP PP 02 57 42.4 -1.9
GNI LR LR
comp=Z,3µm,22.0s,MS5.5
GNI Garni 76.25 309 LR LR 03 34 03.8
comp=Z,2µm,20.3s,MS5.5,baz=243,slow=40
GNI Garni 76.25 309 *de*P **P** **02 54 54.0 +1.3**
GNI pmax pmax
comp=Z,58nm,1.2s
GNI Garni 76.25 309 P **P** **02 54 54.5 +1.8**
SNR=17
POHA Pohakuloa 76.47 72 PFAKE 02 55 10.0 +16
POHA LR LR
comp=Z,2µm,21.0s,MS5.4
ZEI Tsey 76.80 312 *e*P **P** **02 54 53.5 -2.2**
ZEI *e*S S 03 04 41.2 +1.6
ZEI pmax pmax
comp=Z,58nm,1.0s,mb5.5
ZEI MLR MLR
comp=Z,3µm,20.0s,MS5.5
XMAS Kiritimati 77.10 90 PFAKE 02 55 10.0 +12
XMAS LR LR
comp=Z,2µm,20.0s,MS5.5
CASY Casey 77.14 186 *e*P **P** **02 54 56.5 -0.5**
CASY Casey 77.14 186 *e*P **P** **02 54 56.6 -0.4**
comp=Z,20nm,0.7s,mb5.2
CASY LR LR
comp=Z,3µm,21.0s,MS5.5
KDAK Kodiak Island 77.16 33 P **P** **02 54 58.0 +0.6**
comp=Z,434nm,0.8s,mb6.4,SNR=10
KDAK Kodiak Island 77.16 33 *ce*P **P** **02 54 58.2 +0.8**
DRV Dumont d'Urvil 77.50 174 P pP 02 55 11.0 -1.9
DRV S SKSac 03 05 10.0 +2.1
DRV SS SS 03 09 44.0 -2.4
DRV R 03 21 00.0
KIV Kislovodsk 77.64 313⇓ *e*P **P** **02 55 00.8 +0.4**
KIV Kislovodsk 77.64 313⇓ *i*P **P** **02 55 00.7 +0.3**
KIV *i* 02 55 06.0
KIV *e* 02 57 55.2
KIV *i*S S 03 04 50.1 +1.4
KIV pmax pmax
comp=Z,72nm,1.0s,mb5.6
KIV Kislovodsk 77.64 313 P **P** **02 55 01.8 +1.4**
comp=Z,394nm,1.0s,mb6.3,SNR=6.8
KIV Kislovodsk 77.64 313 P **P** **02 55 01.2 +0.8**
SNR=13
VRHR Novokhopersk 78.11 320 *e*P **P** **02 55 01.2 -1.7**
VRHR pmax pmax
comp=Z,70nm,1.4s,mb5.4
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,40nm,0.8s
PMR Palmer 78.92 29 *e*P **P** **02 55 07.3 +0.2**
comp=E,83nm,1.2s,mb5.5
PMR Palmer 78.92 29 *e*P **P** **02 55 07.3 +0.2**
PMR pmax pmax
comp=Z,83nm,1.2s,mb5.5
KLMR Klimovskoe 79.04 330 *e*P **P** **02 55 05.7 -2.1**
KLMR *e* 02 58 07.4
KLMR *e*S S 03 05 04.7 +1.6
KLMR pmax pmax
comp=Z,98nm,1.0s,mb5.7
KLMR pmax pmax
comp=Z,245nm,7.7s
KLMR MLR MLR
comp=Z,7µm,21.0s,MS6.0
TRBA At Turbah 79.21 282 *e*P **P** **02 55 10.5 +0.9**
COLA College 79.42 26 *e*P **P** **02 55 09.4 -0.4**
comp=Z,40nm,1.0s,mb5.3
COLA LR LR
comp=Z,3µm,21.0s,MS5.5
COLA College 79.42 26 *e*P **P** **02 55 09.4 -0.4**
COLA pmax pmax
comp=Z,40nm,1.0s,mb5.3
COLA MLR MLR
comp=Z,3µm,21.0s,MS5.5
VORD Divnogorie 79.58 320 *e*P **P** **02 55 09.6 -1.4**
VORD pmax pmax
comp=Z,20nm,1.1s,mb5.0
VORD pmax pmax
comp=N,20nm,1.0s
VORD pmax pmax
comp=E,40nm,0.9s
VORD MLR MLR
comp=Z,2µm,19.0s,MS5.5
VORD MLR MLR
comp=N,3µm,20.0s,MS5.7
VORD MLR MLR
comp=E,2µm,25.0s,MS5.7
VSR Storozhevoye 79.65 320 *e*P **P** **02 55 09.6 -1.7**
VSR pmax pmax
comp=Z,30nm,1.3s,mb5.1
VSR pmax pmax
comp=N,7.0nm,0.6s
VSR pmax pmax
comp=E,20nm,0.8s
VSR MLR MLR
comp=Z,4µm,24.0s,MS5.7
VSR MLR MLR
comp=N,4µm,20.0s,MS5.8
VSR MLR MLR
comp=E,1µm,18.0s,MS5.8
SOC Sochi 79.81 313 *e*P **P** **02 55 11.7 -0.6**
SOC *e* 02 55 19.6
SOC *e**PP pP 02 55 24.1 -2.2
SOC *e* 02 58 11.5
SOC *e*PPP 03 00 05.4
SOC *e*S S 03 05 12.5 +0.6
SOC *e**SS sS 03 05 36.3 +1.0
SOC pmax pmax
comp=Z,44nm,1.0s,mb5.3
ILAR Eielson Array 79.83 26 P **P** **02 55 11.2 -0.8**
comp=Z,18nm,0.9s,mb5.0,baz=245,slow=4.7,SNR=74
ILAR PKPPKP 03 21 59.0
comp=Z,0.9nm,1.1s,baz=59,slow=0.9,SNR=4.7
ILAR LR LR 03 28 46.9
comp=Z,3µm,20.7s,MS5.6,baz=282,slow=34
MIR Mirnyy 80.20 193 *e*P **P** **02 55 13.0 -0.8**
MIR pmax pmax
comp=Z,49nm,1.0s,mb5.4
MOS Moscow 80.27 325 *e*P **P** **02 55 11.2 -3.4**
MOS *e* pP 02 55 27.0 -1.6
MOS *e*S S 03 05 10.7 -5.6
MOS *e* 03 05 28.7
MOS pmax pmax
comp=Z,73nm,0.9s,mb5.6
MOS pmax pmax
comp=Z,100nm,1.1s,mb5.7
MOS MLR MLR
comp=Z,5µm,20.0s,MS5.9
LVZ Lovozero 80.79 337⇑ *e*P **P** **02 55 16.4 -0.7**
LVZ Lovozero 80.79 337 *ce*P **P** **02 55 16.3 -0.8**
LVZ pmax pmax
comp=Z,38nm,1.0s,mb5.3
LVZ MLR MLR
comp=Z,4µm,17.0s,MS5.8
OBN Obninsk 80.92 324⇓ *e*P **P** **02 55 16.0 -2.1**
OBN LR LR
comp=Z,5µm,24.0s,MS5.8
OBN Obninsk 80.92 324⇓ *i*P **P** **02 55 16.9 -1.2**
OBN *e* 02 58 26.4
OBN *i*S S 03 05 20.6 -2.5
OBN pmax pmax
comp=Z,55nm,1.2s,mb5.4
OBN MLR MLR
comp=Z,4µm,19.0s,MS5.8
MALT Malatya 81.27 307⇑ *i*P **P** **02 55 20.5 +0.2**
APA Apatity 81.29 337⇑ *i*P **P** **02 55 19.6 -0.2**
APA *i*S S 03 05 23.0 -3.5
APA pmax pmax
comp=Z,60nm,1.0s,mb5.5
APA pmax pmax
comp=Z,300nm,3.6s
APA MLR MLR
comp=Z,5µm,17.0s,MS6.0
ANN Anapa 81.33 314 *i*P **P** **02 55 19.2 -1.3**
ANN Anapa 81.33 314 *e*P **P** **02 55 19.1 -1.4**
ANN *e**PP pP 02 55 33.1 -1.4
ANN *e*S S 03 05 27.3 -0.5
ANN pmax pmax
comp=Z,91nm,1.4s,mb5.5
ANN MLR MLR
comp=N,2µm,19.0s,MS5.6
ANN MLR MLR
comp=E,2µm,19.0s,MS5.6
ANN MLR MLR
comp=Z,3µm,19.0s,MS5.7
EGAK Eagle 82.28 26 *e*P **P** **02 55 25.2 +0.2**
comp=Z,44nm,1.0s,mb5.3
EGAK LR LR
comp=Z,3µm,21.0s,MS5.6
JOF Joensuu 82.73 333 *e*P **P** **02 55 25.7 -1.7**
JOF pmax pmax
comp=Z,23nm,0.6s,mb5.4
JOF Joensuu 82.73 333 *ep* **P** **02 55 25.7 -1.7**
comp=Z,23nm,0.6s,mb5.4
KEV Kevo 83.28 340 *e*P **P** **02 55 28.9 -1.3**
comp=Z,34nm,1.1s,mb5.3
KEV LR LR
comp=Z,3µm,20.0s,MS5.7
KEV Kevo 83.28 340 *e*P **P** **02 55 28.9 -1.3**
KEV pmax pmax
comp=Z,34nm,1.1s,mb5.3
KEV MLR MLR
comp=Z,3µm,20.0s,MS5.7
KEV Kevo 83.28 340 *ep* **P** **02 55 27.7 -2.5**
comp=Z,9.3nm,0.7s,mb4.9
SIM Simferopol' 83.66 314 *d i*P **P** **02 55 32.2 -0.4**
SIM *i* S S 03 05 53.2 +1.6
SIM *e*SS SS 03 11 24.0 +5.3
SIM pmax pmax
comp=Z,31nm,0.9s,mb5.4
SIM MLR MLR
comp=Z,6µm,21.6s,MS5.9
PUL Pulkovo 83.70 330 *e*P **P** **02 55 33.0 +0.5**
PUL pmax pmax
comp=Z,148nm,1.2s,mb6.0
PUL MLR MLR
comp=Z,6µm,24.0s,MS5.9
ARCES ARCESS Array B 83.84 340 P **P** **02 55 31.8 -1.3**
ARCES LR LR 03 35 28.5
ARCES ARCESS Array B 83.84 340 P **P** **02 55 31.8 -1.3**
comp=Z,61nm,1.1s,mb5.7,baz=85,slow=7.5,SNR=52
ARCES LR LR 03 35 28.5
comp=Z,3µm,19.6s,MS5.7,baz=257,slow=38
ARCES ARCESS Array B 83.84 340 P **P** **02 55 31.8 -1.2**
ARCES pmax pmax
comp=Z,61nm,1.1s
ARCES MLR MLR
comp=Z,3µm,19.6s
ARE0 ARCESS Array S 83.84 340 *e*P **P** **02 55 32.7 -0.4**
DESE Dese 83.86 280 *e*P **P** **02 55 38.4 +4.1**
DESE *e*S ScS 03 06 06.3 -1.0
KBS Kingsbay 84.33 350 *e*P **P** **02 55 37.6 +2.2**
KBS *e*SKS 03 05 56.3
KBS AMS AMS 03 38 50.5
comp=Z,5µm,19.9s,MS5.9
KBS Kingsbay 84.33 350 *ce*P **P** **02 55 34.5 -0.9**
KBS pmax pmax
comp=Z,63nm,1.0s,mb5.7
BJO Bjornoya 84.40 345 *e*SKS 03 05 59.0
BJO AMS AMS 03 40 24.2
comp=Z,4µm,20.6s,MS5.8
KTK1 Kautokeino 84.75 339 *e*P **P** **02 55 37.6 -0.1**
KTK1 *e*SKS 03 05 57.1
KTK1 AMS AMS 03 37 32.5
comp=Z,6µm,23.4s,MS5.9
BRTR Keskin Array B 84.78 309 P **P** **02 55 37.4 -1.1**
comp=Z,12nm,0.8s,mb5.1,baz=133,slow=4.2,SNR=48
BRTR LR LR 03 41 04.6
comp=Z,2µm,20.0s,MS5.4,baz=56,slow=41
AAE Adis Abeba 85.05 278 *e*P **P** **02 55 44.6 +4.3**
AAE *i* S S 03 06 12.1 +5.5
KAF Kangasniemi 85.17 332 *e*P **P** **02 55 37.6 -2.3**
KAF pmax pmax
comp=Z,29nm,0.8s,mb5.5
KAF Kangasniemi 85.17 332 *ep* **P** **02 55 37.6 -2.3**
comp=Z,29nm,0.8s,mb5.5
PHNC Paralimni 85.21 305 P **P** **02 55 43.2 +2.5**
comp=Z,2.4nm,1.2s
FINES FINESS Array B 85.42 332 P **P** **02 55 39.5 -1.7**
comp=Z,63nm,1.0s,mb5.7,baz=75,slow=3.9,SNR=56
FINES LR LR 03 37 36.3
comp=Z,3µm,18.3s,MS5.8,baz=82,slow=38
FINES FINESS Array B 85.42 332 P **P** **02 55 39.5 -1.6**
FINES pmax pmax
comp=Z,63nm,1.0s
FINES MLR MLR
comp=Z,3µm,18.3s
CSS Prodhromos 85.79 305 ⇓P **P** **02 55 43.9 +0.3**
comp=Z,2.2nm,1.2s,mb4.3
MAMC Mammari 85.85 305 P **P** **02 55 45.3 +1.5**
SKAG Skagway 85.94 30 *e*P **P** **02 55 45.2 +1.4**
comp=Z,84nm,1.4s,mb5.8
AKASG Malin Array Be 85.94 321 P **P** **02 55 42.5 -1.5**
AKASG LR LR 03 34 24.4
AKASG Malin Array Be 85.94 321 P **P** **02 55 42.5 -1.5**
comp=Z,77nm,1.1s,mb5.8,baz=68,slow=4.8,SNR=86
AKASG LR LR 03 34 24.4
comp=Z,3µm,20.7s,MS5.7,baz=85,slow=36
AKASG Malin Array Be 85.94 321 P **P** **02 55 42.5 -1.5**
AKASG pmax pmax
comp=Z,77nm,1.1s
AKASG MLR MLR
comp=Z,3µm,20.7s
KIEV Kiev 85.96 321 *e*P **P** **02 55 42.8 -1.2**
comp=Z,77nm,1.0s,mb5.9
KIEV LR LR
comp=Z,4µm,22.0s,MS5.7
KIEV Kiev 85.96 321 *e*P **P** **02 55 42.8 -1.2**
KIEV pmax pmax
comp=Z,77nm,1.0s,mb5.9
KIEV MLR MLR
comp=Z,4µm,22.0s,MS5.7
MICGM Minsk 85.98 325⇓ *e*P **P** **02 55 42.0 -2.1**
MNK Minsk 86.01 325⇓ *e*P **P** **02 55 42.0 -2.2**
MNK *e*S S 03 06 14.0 -0.6
MNK *e*SPP 03 07 38.0
MNK pmax pmax
comp=Z,210nm,1.1s,mb6.3
MNK MLR MLR
comp=Z,9µm,20.0s,MS6.2
MNK MLR MLR
comp=E,5µm,16.0s
TRO Tromso 86.04 340 *e*SKS 03 06 07.0
TRO AMS AMS 03 36 33.0
comp=Z,3µm,22.0s,MS5.7
ALFC Alevga 86.35 305 P **P** **02 55 46.6 +0.3**
comp=Z,1.9nm,1.0s,mb4.3
NACGM Naroch 86.52 325 *e*P **P** **02 55 45.0 -1.7**
PPCY Paphos 86.60 305 P **P** **02 55 48.3 +0.7**
KIS Kishinev 86.94 317 *e*PP PP 02 58 44.0 -28
KIS Kishinev 86.94 317 *e*P **P** **02 55 45.0 -4.0**
KIS *e* pP 02 55 58.0 -5.1
KIS *e*S S 03 06 24.0 +0.1
KIS *e*PS 03 07 20.0
KIS MLR MLR
comp=Z,4µm,21.0s,MS5.7
KIS MLR MLR
comp=N,2µm,20.0s,MS5.7
KIS MLR MLR
comp=E,2µm,20.0s,MS5.7
KIS MLR MLR
comp=Z,4µm,20.0s
ALE Alert 87.26 1 P **P** **02 55 50.0 +0.1**
comp=Z,217nm,1.3s,mb6.2,SNR=18
TLCR 87.31 315⇑ *i*P **P** **02 55 50.6 -0.2**
ISP Isparta 87.51 308 ⇓P **P** **02 55 50.9 -1.0**
TIRR Tirgusor 87.75 315 ⇑P **P** **02 55 51.3 -1.6**
TIRR Tirgusor 87.75 315⇑ *i*P **P** **02 55 51.5 -1.4**
CFR Carcaliu 87.79 315 ⇓P **P** **02 55 53.3 +0.3**
WRAK Wrangell Islan 88.25 33 *e*P **P** **02 55 58.0 +3.0**
comp=Z,23nm,1.2s,mb5.3
WRAK LR LR
comp=Z,3µm,22.0s,MS5.6
KMBO Kilima Mbogo 88.28 269 *e*P **P** **02 55 57.4 +1.4**
comp=Z,85nm,1.3s,mb5.8
KMBO LR LR
comp=Z,2µm,20.0s,MS5.5
KMBO Kilima Mbogo 88.28 269 P **P** **02 55 57.0 +0.9**
comp=Z,15nm,1.0s,mb5.2,baz=176,slow=23,SNR=12
KMBO LR LR 03 38 23.7
comp=Z,2µm,18.1s,MS5.7,baz=90,slow=38
KMBO Kilima Mbogo 88.28 269 *e*P **P** **02 55 57.4 +1.3**
KMBO pmax pmax
comp=Z,85nm,1.3s
KMBO MLR MLR
comp=Z,2µm,20.0s
KMBO Kilima Mbogo 88.28 269 P **P** **02 55 58.1 +2.1**
SNR=18
PPT Papeete 88.48 108 *e*S S 03 06 42.1 +2.5
comp=Z,3µm,29.2s
PPT *e*SS SS 03 12 32.4 +1.4
comp=Z,720nm,22.8s
PPT *e*LQ 03 20 01.4
comp=Z,3µm,30.0s
PPT *e*LR LR 03 23 58.0
comp=Z,2µm,23.2s
TESR 88.50 317⇑ P **P** **02 55 55.8 -0.7**
TESR 88.50 317⇓ *i*P **P** **02 55 56.1 -0.3**
VRI Vrincioaia 88.60 316 P **P** **02 55 58.0 +1.1**

VRI Vrincioaia 88.60 316 ⇑P P 02 55 57.0 +0.1
VRI Vrincioaia 88.60 316 ⇑*i*P P 02 55 57.6 +0.7
PLOR Plostina 88.66 316 ⇓P P 02 55 57.2 0.0
PLOR Plostina 88.66 316 ⇓*i*P P 02 55 58.4 +1.2
SUW Suwalki 88.78 325 *e*P P 02 55 57.2 -0.4
SUW LMZ 03 35 28.7
comp=Z,4μm,22.8s
BUR01 Bucovina Ar. S 89.19 318 P P 02 56 00.3 +0.6
BURAR Bucovina Array 89.19 318 ⇑P P 02 55 59.5 -0.1
BURAR Bucovina Array 89.19 318 ⇑*i*P P 02 55 59.0 -0.7
BUR08 Bucovina Ar. S 89.20 318 *e*P P 02 55 59.7 0.0
MLR Muntele Rosu 89.22 316 ⇓P P 02 55 59.7 -0.2
MLR Muntele Rosu 89.22 316 LR LR 03 39 42.5
comp=Z,4μm,21.8s,MS5.8,baz=66,slow=38
MLR Muntele Rosu 89.22 316 ⇑*i*P P 02 56 00.1 +0.3
LVV L'vov 89.39 321 *i* P P 02 55 59.6 -0.9
LVV L'vov 89.39 321 *e*P P 02 55 59.7 -0.8
LVV *e*S S 03 06 49.5 +2.5
LVV *e*PS PS 03 07 53.1 -4.8
LVV MLR MLR
comp=E,2μm,18.0s,MS5.6
LVV MLR MLR
comp=Z,2μm,18.0s,MS5.5
LVV MLR MLR
comp=N,300nm,14.0s,MS5.6
MAW Mawson 89.39 200 *e*P P 02 55 56.0 -4.0
comp=N,6.4nm,1.1s,mb4.9
MAW Mawson 89.39 200 P P 02 56 01.6 +1.5
comp=N,7.5nm,0.9s,mb5.0,baz=48,slow=4.2,SNR=10
MAW PKKP PKKPbc 03 13 36.7 -2.0
comp=N,2.5nm,0.8s,baz=292,slow=6.5,SNR=5.1
MAW Mawson 89.39 200 P P 02 56 01.6 +1.6
MAW pmax pmax
comp=Z,8.0nm,0.9s
MAW pmax pmax
comp=Z,3.0nm,0.8s
VOIR 89.84 316 ⇓P P 02 56 03.5 +0.8
VOIR 89.84 316 ⇓*i*P P 02 56 04.3 +1.5
KWP Kalwaria Pacla 90.27 321 *e*P P 02 56 04.9 +0.2
KWP LMZ 03 35 51.9
comp=Z,3μm,21.3s
KWP Kalwaria Pacla 90.27 321 ⇓P P 02 56 04.9 +0.3
KWP Kalwaria Pacla 90.27 321 ⇓*i*P P 02 56 04.7 +0.1
NSS Namsos 90.49 337 AMS AMS 03 42 56.1
comp=Z,3μm,19.1s,MS5.8
UZH Uzhgorod 90.81 320 ⇑*i*P P 02 56 07.1 -0.1
UZH *i* S S 03 06 58.5 -1.7
UZH *e* 03 08 17.7
UZH MLR MLR
comp=N,3μm,20.0s,MS5.8
UZH MLR MLR
comp=E,2μm,20.0s,MS5.8
UZH MLR MLR
comp=Z,700nm,20.0s,MS5.1
CHOS Chios island 90.83 309 P P 02 56 05.3 -2.2
SBA Scott Base 90.99 172 *e*P P 02 56 09.1 +1.8
comp=Z,80nm,1.3s,mb5.9
SBA LR LR
comp=Z,2μm,22.0s,MS5.5
SBA Scott Base 90.99 172 *e*P P 02 56 09.1 +1.8
SBA pmax pmax
comp=Z,80nm,1.3s,mb5.9
SBA MLR MLR
comp=Z,2μm,22.0s,MS5.5
DRGR 91.06 318 P P 02 56 08.5 +0.2
STHS Stebnicka Huta 91.24 321 *e*P P 02 56 09.9 +0.7
comp=Z,18nm,1.2s,mb5.3
STHS Stebnicka Huta 91.24 321 *e*P P 02 56 09.9 +0.7
STHS pmax pmax
comp=Z,18nm,1.2s,mb5.3
STHS Stebnicka Huta 91.24 321 *e*P P 02 56 09.9 +0.7
CRVS Cervenica-Dubn 91.26 320 *e*P P 02 56 09.4 +0.1
comp=Z,48nm,1.2s,mb5.7
CRVS *e*S S 03 07 06.2 +1.9
CRVS LR LR
comp=Z,1μm,23.6s,MS5.3
CRVS Cervenica-Dubn 91.26 320 *e*P P 02 56 09.4 +0.1
GZR Gura Zlata 91.40 317 P P 02 56 09.9 -0.1
GZR Gura Zlata 91.40 317 ⇑P P 02 56 10.5 +0.5
ZKR Zakros 91.48 306 P P 02 56 03.9 -6.7
APE Apeiranthos 91.55 308 ⇓P P 02 56 08.8 -2.1
APE Apeiranthos 91.55 308 P P 02 56 08.0 -2.9
HFS Hagfors 91.59 332 LR LR 03 41 13.2
comp=Z,4μm,18.5s,MS5.9,baz=75,slow=38
THR1 Thera Island 91.78 307 P P 02 56 10.5 -1.4
THR2 Thira island, 91.78 307 P P 02 56 10.4 -1.5
THR3 Thira Island, 91.81 307 P P 02 56 10.7 -1.4
NIE Niedzica 91.82 321 *e*P P 02 56 12.3 +0.4
THR5 Thira Island, 91.85 307 P P 02 56 10.9 -1.4
VTS Vitosha 91.87 314 ⇓P P 02 56 11.9 -0.3
VTS Vitosha 91.87 314 P P 02 56 11.4 -0.8
VTS Vitosha 91.87 314 ⇓*i*P P 02 56 12.9 +0.7
OJC Ojcow 91.89 322 *e*P P 02 56 11.3 -0.8
OJC *e*PP PP 02 59 49.2 -2.3
OJC *e*S S 03 07 11.9 +2.0
OJC *e*SS SS 03 13 19.1 +0.8
OJC L 03 42 09.8
comp=Z,3.2nm,20.8s
OJC Ojcow 91.89 322 *e*P P 02 56 11.3 -0.8
OJC *e* 02 59 49.2
OJC *e*S S 03 07 11.9 +2.0
OJC *e*SS SS 03 13 19.1 +0.8
KECS Kecovo 92.00 320 *e*P P 02 56 12.9 +0.2
comp=Z,14nm,1.1s,mb5.2
KECS Kecovo 92.00 320 *e*P P 02 56 12.9 +0.2
KECS pmax pmax
comp=Z,15nm,1.1s,mb5.2
KECS Kecovo 92.00 320 *e*P P 02 56 12.9 +0.2
LAST Lasithi 92.05 306 P P 02 56 12.3 -1.0
PAIG Paliouri 92.23 311 P P 02 56 10.9 -3.1
NOA NORSAR Array B 92.32 334 P P 02 56 12.2 -1.7
comp=Z,9.1nm,1.0s,mb5.1,baz=64,slow=4.6,SNR=11
NOA PP PP 02 59 57.2 +2.8
comp=Z,5.1nm,1.1s,baz=60,slow=8.0,SNR=3.9
NOA LR LR 03 40 35.2
comp=Z,5μm,21.7s,MS6.0,baz=55,slow=37
NOA NORSAR Array B 92.32 334 P P 02 56 12.2 -1.7
NOA 02 59 57.3
NOA pmax pmax
comp=Z,9.0nm,1.0s
NOA pmax pmax
comp=Z,5.0nm,1.1s
NOA MLR MLR
comp=Z,5μm,21.7s
KNT Kendrikon 92.48 312 P P 02 56 09.0 -6.1
PSZ Piszkesteto 92.55 320 P P 02 56 15.4 +0.2
PSZ Piszkesteto 92.55 320 ⇓*i*P P 02 56 13.9 -1.4
PSZ Piszkesteto 92.55 320 ⇓*e*P P 02 56 14.9 -0.4
SIVA Sivas 92.62 306 P P 02 56 15.3 -0.6
VAY Valandovo 92.67 313 P P 02 56 11.5 -4.5
VAY Valandovo 92.67 313 *e*P P 02 56 14.3 -1.6
LIKS Likavka 92.69 321 *e*P P 02 56 14.8 -1.1
comp=Z,19nm,0.7s,mb5.6
LIKS Likavka 92.69 321 *e*P P 02 56 14.8 -1.1
LIKS pmax pmax
comp=Z,19nm,0.7s,mb5.6
LIKS Likavka 92.69 321 *e*P P 02 56 14.8 -1.1
GRG Griva 92.90 312 P P 02 56 13.2 -3.8
BSD Bornholm Skovb 92.96 327 *i* P P 02 56 15.8 -1.2
BSD pmax pmax
comp=Z,24nm,1.0s,mb5.6
BSD MLR MLR
comp=Z,3μm,20.0s,MS5.8
BSD Bornholm Skovb 92.96 327 *i* P P 02 56 15.8 -1.2
comp=Z,24nm,1.0s,mb5.6
BSD
comp=Z,3μm,20.0s
OKC Ostrava-Krasne 93.02 322 *e*P P 02 56 17.3 -0.1
OKC *e*S S 03 07 22.0 +2.0
OKC MLR MLR
comp=Z,3μm,20.0s,MS5.7
OKC Ostrava-Krasne 93.02 322 *e*P P 02 56 17.3 -0.1
OKC *e*S S 03 07 22.0 +2.0
OKC AMS AMS 03 37 30.0
comp=Z,3μm,20.0s
VYHS Vyhne 93.04 320 *e*P P 02 56 17.7 +0.2
comp=Z,6.5nm,1.3s,mb4.9
VYHS *e*S S 03 07 23.6 +3.3
VYHS LR LR
comp=Z,2μm,23.8s,MS5.5
VYHS Vyhne 93.04 320 *e*P P 02 56 17.7 +0.2
ATAL Atalanti 93.06 310 P P 02 56 11.0 -6.8
MOL Molde 93.15 336 AMS AMS 03 42 23.8
comp=Z,7μm,14.6s,MS6.2

DID Didima 93.21 309 P P 02 56 14.6 -3.9
KARN Karanos 93.23 307 P P 02 56 18.0 -0.7
BUD Budapest 93.25 319 ⇑*e*P P 02 56 17.9 -0.6
KOLL Kolacno 93.28 320 *e*P P 02 56 19.1 +0.5
KOLL Kolacno 93.28 320 *e*P P 02 56 19.1 +0.5
SKO Skopje 93.30 314 *e*P P 02 56 17.5 -1.4
MORC Moravsky Berou 93.41 322 ⇓P P 02 56 19.1 -0.1
MORC Moravsky Berou 93.41 322 ⇑*i*P P 02 56 19.6 +0.4
AGG Agios Georgios 93.48 310 P P 02 56 16.1 -3.7
DSF Desfina 93.51 310 P P 02 56 18.3 -1.6
KONO Kongsberg 93.66 333 *e*SKS 03 06 55.3
KONO AMS AMS 03 40 36.4
comp=Z,5μm,20.5s,MS5.9
KONO Kongsberg 93.66 333 PFAKE 02 56 30.0 +10
KONO LR LR
comp=Z,6μm,22.0s,MS6.0
DIVS Divibare 93.68 316 P P 02 56 18.5 -2.0
GUR Gura 93.78 309 P P 02 56 18.0 -3.1
KSP Ksiaz 93.78 323 *e*P P 02 56 21.3 +0.4
KSP LMZ 03 37 58.2
comp=Z,6μm,25.9s
KSP Ksiaz 93.78 323 *e*P P 02 56 20.6 -0.3
KSP *e* 03 00 04.0
KSP *e*S S 03 07 25.3 -1.4
KSP MLR MLR
comp=Z,7μm,25.9s,MS6.0
VLX Vlachokerasia 93.90 309 P P 02 56 20.0 -1.7
PKSM Moragy 93.91 318 P P 02 56 21.4 -0.1
PKSM Moragy 93.91 318 ⇓P P 02 56 21.0 -0.6
PKSM Moragy 93.91 318 ⇑*i*P P 02 56 21.6 0.0
DPC Dobruska-Polom 93.94 323 *e*P P 02 56 21.9 +0.3
DPC *e*S S 03 07 30.5 +2.4
DPC MLR MLR
comp=Z,4μm,18.0s,MS5.9
DPC Dobruska-Polom 93.94 323 *e*P P 02 56 21.9 +0.3
DPC *e*S S 03 07 30.5 +2.4
DPC AMS AMS 03 43 00.0
comp=Z,4μm,18.0s
COP Copenhagen 94.03 328 *e*P P 02 56 18.4 -3.5
COP pmax pmax
comp=Z,11nm,0.8s,mb5.3
COP MLR MLR
comp=Z,2μm,21.0s,MS5.5
COP Copenhagen 94.03 328 *i* P P 02 56 18.4 -3.5
comp=Z,11nm,0.8s,mb5.3
COP
comp=Z,2μm,21.0s
MODS Modra-Piesok 94.06 321 *e*P P 02 56 22.5 +0.3
MODS Modra-Piesok 94.06 321 *e*P P 02 56 22.5 +0.3
UPC Upice 94.07 323 *e*P P 02 56 22.7 +0.5
UPC Upice 94.07 323 *e*P P 02 56 22.7 +0.5
YKA Yellowknife Ar 94.12 24 P P 02 56 21.9 -0.3
comp=Z,25nm,0.9s,mb5.7,baz=299,slow=4.7,SNR=23
YKA Yellowknife Ar 94.12 24 P P 02 56 21.9 -0.3
YKA pmax pmax
comp=Z,25nm,0.9s
VRAC Vranov 94.15 322 P P 02 56 22.9 +0.3
VRAC Vranov 94.15 322 LR LR 03 39 07.1
comp=Z,3μm,21.1s,MS5.8,baz=77,slow=36
VRAC Vranov 94.15 322 ⇑P P 02 56 22.3 -0.3
ZST Bratislava 94.23 320 *e*P P 02 56 23.3 +0.3
ZST *e*S S 03 07 45.8 +15
ZST LR LR
comp=Z,1μm,20.4s,MS5.3
ZST Bratislava 94.23 320 *e*P P 02 56 23.3 +0.3
PYL PYLOS 94.53 309 P P 02 56 21.0 -3.6
FOO Floro 94.66 336 AMS AMS 03 43 25.6
comp=Z,4μm,14.8s,MS6.0
SOP Sopron 94.75 320 ⇓*e*P P 02 56 25.0 -0.4
IGT Igoumenitsa 94.82 311 P P 02 56 18.4 -7.5
TREC Trest 94.83 322 *e*P P 02 56 25.7 0.0
TREC *e*S S 03 07 36.7 +0.8
TREC MLR MLR
comp=Z,4μm,21.6s,MS5.8
TREC Trest 94.83 322 *e*P P 02 56 25.7 0.0
TREC *e*S S 03 07 36.7 +0.8
TREC AMS AMS 03 38 50.0
comp=Z,4μm,21.6s
PVCC Panska Ves 94.92 323 *e*P P 02 56 24.0 -2.1
PVCC *e*S S 03 07 37.3 +0.7
PVCC MLR MLR
comp=Z,4μm,22.2s,MS5.8
PVCC Panska Ves 94.92 323 *e*P P 02 56 24.0 -2.1
PVCC *e*S S 03 07 37.3 +0.7
PVCC AMS AMS 03 40 40.0
comp=Z,4μm,22.2s
CONA Conrad Observa 95.10 320 ⇑*i*PcP P 02 56 26.5 -0.5
comp=Z,16nm,1.3s,mb5.3,SNR=9.4
PRU Pruhonice 95.14 323 *e*P P 02 56 28.2 +1.1
PRU *e*S S 03 07 43.8 +5.2
PRU MLR MLR
comp=Z,4μm,18.0s,MS5.9
PRU Pruhonice 95.14 323 *e*P P 02 56 28.2 +1.1
PRU *e*S S 03 07 43.8 +5.2
PRU AMS AMS 03 43 50.0
comp=Z,4μm,18.0s
BRG Berggiesshubel 95.15 324 *e*P P 02 56 26.8 -0.4
comp=Z,21nm,1.2s,mb5.4
BRG *e*PP PP 03 00 15.9 -1.0
comp=Z,4.5nm,1.2s
BRG S S 03 07 41.0 +2.4
BRG PS PS 03 09 00.0 -1.5
BRG *e*PKPPKP 03 21 24.2
comp=Z,4.3nm,1.5s
BRG
comp=N,4μm,24.5s
BRG
comp=E,3μm,24.3s
BRG
comp=Z,4μm,23.4s
BRG Berggiesshubel 95.15 324 *e*P P 02 56 26.8 -0.3
BRG *e* 03 00 15.9
BRG S S 03 07 41.0 +2.4
BRG PS PS 03 09 00.0 -1.5
BRG pmax pmax
comp=Z,12nm,1.2s,mb5.2
BRG pmax pmax
comp=Z,3.0nm,1.2s,mb4.6
BRG pmax pmax
comp=Z,3.0nm,1.5s,mb4.5
BRG MLR MLR
comp=N,3μm,24.5s,MS5.7
BRG MLR MLR
comp=E,2μm,24.3s,MS5.7
BRG MLR MLR
comp=Z,2μm,23.4s,MS5.5
BRG smax
comp=N,2.0nm,0.8s
BER Bergen 95.17 334 *e*SKS SKSac 03 07 07.0 +8.2
BER AMS AMS 03 42 06.7
comp=Z,3μm,20.3s,MS5.8
PRA Prague 95.17 323 AMS AMS 02 44 00.0
PRA P 02 56 28.0
MUD Monsted U'grnd 95.34 330 ⇑*i*P P 02 56 26.5 -1.4
MUD pmax pmax
comp=Z,19nm,1.1s,mb5.4
MUD MLR MLR
comp=Z,3μm,18.0s,MS5.8
MUD Monsted U'grnd 95.34 330 ⇑*i*P P 02 56 26.5 -1.4
comp=Z,19nm,1.1s,mb5.5
MUD
comp=Z,3μm,18.0s
KOGS Kog 95.39 319 *e*P P 02 56 27.4 -0.9
CLL Collm 95.52 324 *i* P P 02 56 27.6 -1.2
comp=Z,15nm,1.3s,mb5.3
CLL *e*S S 03 07 40.0 -1.8
CLL LR LR
comp=Z,4μm,20.2s,MS5.9
CLL Collm 95.52 324 *i* P P 02 56 27.6 -1.2
CLL *e*S S 03 07 40.0 -1.8
CLL pmax pmax
comp=Z,15nm,1.3s,mb5.3
CLL MLR MLR
comp=Z,4μm,20.2s,MS5.9
CLL Collm 95.52 324 *i* P P 02 56 27.6 -1.2
comp=Z,15nm,1.3s,mb5.3
CLL *i* 02 56 33.5
CLL *e*sP sP 02 56 43.0 -5.3
CLL *e*PP PP 03 00 20.0 +0.2
CLL *e*S S 03 07 40.0 -1.8
CLL *e*PS PS 03 09 12.0 +6.5
CLL *e* 03 09 24.0
CLL *e*PPS 03 09 42.0
CLL *e* 03 23 18.0

CLL LmV 03 40 00.0
comp=Z,4μm,20.2s
ARSA Arzberg 95.56 320 ⇑*i*PcP P 02 56 28.5 -0.6
comp=Z,13nm,1.3s,mb5.2
TAOE Nuku Hiva Isla 95.98 98 *e*S S 03 07 49.1 +1.9
comp=Z,589nm,26.2s
TAOE *e*LR LR 03 27 28.2
comp=Z,4μm,26.4s,baz=285
PERS Pernice 96.05 319 *e*P P 02 56 30.5 -0.9
KHC Kasperske Hory 96.05 322 ⇓*e*P P 02 56 31.2 -0.1
KHC Kasperske Hory 96.05 322 *e*P P 02 56 31.1 -0.2
KHC *e*S S 03 07 50.6 +4.1
KHC MLR MLR
comp=Z,4μm,21.2s,MS5.9
KHC Kasperske Hory 96.05 322 *e*P P 02 56 31.1 -0.2
KHC *e*S S 03 07 50.6 +4.1
KHC AMS AMS 03 39 50.0
comp=Z,4μm,21.2s
SOKA Soboth 96.09 319 ⇑*i*PcP P 02 56 31.4 -0.1
comp=Z,15nm,1.3s,mb5.3
MOA Molln 96.13 321 ⇑*i*PcP P 02 56 31.5 -0.2
comp=Z,60nm,1.3s,mb5.9,SNR=22
NLWA Neilton Lookou 96.17 40 PFAKE 02 56 40.0 +8.1
NLWA LR LR
comp=Z,4μm,21.0s,MS5.9
NKC Novy Kostel 96.28 323 *e*P P 02 56 32.9 +0.6
NKC *e*S S 03 07 53.9 +5.5
NKC MLR MLR
comp=Z,3μm,17.4s,MS5.9
NKC Novy Kostel 96.28 323 *e*P P 02 56 32.9 +0.6
NKC *e*S S 03 07 53.9 +5.5
NKC AMS AMS 03 44 20.0
comp=Z,3μm,17.4s
SCO Scoresbysund 96.37 349 *i* P P 02 56 31.8 -0.5
SCO pmax pmax
comp=Z,18nm,1.0s,mb5.5
SCO MLR MLR
comp=Z,2μm,26.0s,MS5.5
MOX Moxa 96.59 324 *e*P P 02 56 33.7 0.0
comp=Z,97nm,1.3s,mb6.1
MOX *e*S S 03 07 46.0 -5.1
MOX
comp=Z,3μm,20.0s
MOX Moxa 96.59 324 *e*P P 02 56 33.7 0.0
comp=Z,97nm,1.3s,mb6.1
MOX *e*S S 03 07 46.0 -5.1
MOX LR LR
comp=Z,3μm,20.0s,MS5.7
MOX Moxa 96.59 324 *e*P P 02 56 33.7 0.0
MOX *e*S S 03 07 46.0 -5.1
MOX pmax pmax
comp=Z,97nm,1.3s,mb6.1
MOX MLR MLR
comp=Z,3μm,20.0s,MS5.7
SUMG Summit 96.63 355 *i* P P 02 56 31.8 -1.6
comp=Z,18nm,1.0s,mb5.5
SUMG
comp=Z,2μm,26.0s
KBA Koelnbreinsper 97.00 320 ⇑*i*P P 02 56 34.5 -1.1
comp=Z,15nm,1.0s,mb5.4,SNR=7.0
CADS Cadrg 97.09 319 *e*P P 02 56 34.5 -1.5
GRA1 Grafenberg Arr 97.23 323 *e*P P 02 56 36.0 -0.6
comp=Z,24nm,1.1s,mb5.5
GRF Grafenberg Arr 97.23 323 *e*P P 02 56 36.0 -0.6
comp=Z,24nm,1.1s,mb5.5
GRF Grafenberg Arr 97.23 323 *e*P P 02 56 36.0 -0.6
GRF pmax pmax
comp=Z,24nm,1.1s,mb5.5
GRF Grafenberg Arr 97.23 323 *e*P P 02 56 36.0 -0.6
GRF pmax pmax
comp=Z,24nm,1.1s,mb5.5
COR Corvallis 97.61 42 PFAKE 02 56 50.0 +12
COR LR LR
comp=Z,3μm,22.0s,MS5.8
ABTA Abfaltersbach 97.66 320 ⇑*i*PcP P 02 56 37.8 -0.8
comp=Z,17nm,1.1s,mb5.5
WTTA Wattenberg 98.00 321 ⇑*i*PcP P 02 56 39.4 -0.7
comp=Z,28nm,1.0s,mb5.7,SNR=9.7
WATA Walderalm 98.00 321 ⇑*i*PcP P 02 56 39.5 -0.6
comp=Z,18nm,1.0s,mb5.5,SNR=7.0
MOTA Moosalm 98.29 321 ⇑*i*PcP P 02 56 40.6 -0.8
comp=Z,19nm,1.1s,mb5.5
HUMO Hull Mountain 98.59 44 *e*P P 02 56 44.0 +1.1
comp=Z,8.7nm,1.0s,mb5.2
HUMO LR LR
comp=Z,3μm,22.0s,MS5.7
FETA Feichten 98.66 321 ⇑*i*Pdiff P 02 56 42.8 -0.3
comp=Z,18nm,1.0s,mb5.5,SNR=9.6
YBH Yreka Blue Hor 99.09 45 PFAKE 02 57 00.0 +15
YBH LR LR
comp=Z,2μm,21.0s,MS5.6
HAWA Hanford 99.30 39 PFAKE 02 57 00.0 +14
HAWA LR LR
comp=Z,4μm,22.0s,MS5.8
LSZ Lusaka 99.45 256 PFAKE 02 57 00.0 +13
LSZ LR LR
comp=Z,2μm,20.0s,MS5.6
WDC Whiskeytown Da 99.65 46 PFAKE 02 57 00.0 +13
WDC LR LR
comp=Z,2μm,22.0s,MS5.7
MEM Membach 99.79 326 P Pdif 02 56 48.0 +0.1
comp=Z,13nm,1.3s
HOPS Hopland 99.87 47 PFAKE 02 57 00.0 +12
HOPS LR LR
comp=Z,3μm,22.0s,MS5.7
NEW Newport 99.92 37 PFAKE 02 57 00.0 +11
NEW LR LR
comp=Z,1μm,20.0s,MS5.5
CDF Champ du Feu 100.12 323 *e*P Pdif 02 56 48.9 -0.5
comp=Z,18nm,1.1s
CDF Champ du Feu 100.12 323 *e*P Pdif 02 56 48.9 -0.5
comp=Z,9.1nm,1.1s
CDF Champ du Feu 100.12 323 *e*P Pdif 02 56 48.9 -0.5
CDF pmax pmax
comp=Z,9.0nm,1.1s
QSPA South Pole Qui 100.16 180 P Pdif 02 56 50.1 +0.6
QSPA PP PP 03 00 55.9 +0.9
QSPA LR LR
comp=Z,3μm,20.0s,MS5.7
QSPA South Pole Qui 100.16 180 P Pdif 02 56 50.1 +0.6
comp=Z,8.5nm,0.8s,baz=216,slow=0.6,SNR=7.3
QSPA PP PP 03 00 55.9 +0.9
comp=Z,4.3nm,1.0s,baz=354,slow=8.4,SNR=3.8
WLF Walferdange 100.17 325 P Pdif 02 56 50.8 +1.2
comp=Z,25nm,1.4s
BCLA Clavier 100.27 326 P Pdif 02 56 49.1 -1.0
comp=Z,12nm,2.2s
MCCM Marconi Confer 100.32 48 PFAKE 02 57 00.0 +10
MCCM LR LR
comp=Z,3μm,21.0s,MS5.7
HINF Hinteralfeld 100.65 323 *e*P Pdif 02 56 51.0 -0.8
comp=Z,14nm,1.1s
HINF Hinteralfeld 100.65 323 *e*P Pdif 02 56 51.0 -0.8
comp=Z,6.8nm,1.1s
HINF Hinteralfeld 100.65 323 *e*P Pdif 02 56 51.0 -0.8
HINF pmax pmax
comp=Z,7.0nm,1.1s
MOD Modoc 100.68 44 PFAKE 02 57 00.0 +8.1
MOD LR LR
comp=Z,1μm,21.0s,MS5.5
GIVF Givet 100.70 326 *e*P Pdif 02 56 51.3 -0.7
DOU Dourbes 100.83 326 P Pdif 02 56 53.0 +0.5
BAIF Baives 101.06 326 *e*P Pdif 02 56 53.1 -0.5
comp=Z,24nm,1.2s
BAIF Baives 101.06 326 *e*P Pdif 02 56 53.1 -0.5
comp=Z,12nm,1.2s
BAIF Baives 101.06 326 *e*P Pdif 02 56 53.1 -0.5
BAIF pmax pmax
comp=Z,12nm,1.2s
MEZF Maizieres J'vi 101.37 324 *e*P Pdif 02 56 54.7 -0.3
SFTF Sexfontaines 101.53 324 *e*P Pdif 02 56 56.4 +0.7
WVOR Wild Horse Val 101.58 43 PFAKE 02 57 10.0 +14
WVOR LR LR
comp=Z,3μm,22.0s,MS5.8
CABF La Chapelle 101.69 322 *e*P Pdif 02 56 56.1 -0.3
PGF Pioggiola 101.69 317 *e*P Pdif 02 56 56.0 -0.4
comp=Z,74nm,1.3s
PGF Pioggiola 101.69 317 *e*P Pdif 02 56 56.0 -0.4
comp=Z,37nm,1.3s
PGF Pioggiola 101.69 317 *e*P Pdif 02 56 56.0 -0.4
PGF pmax pmax
comp=Z,37nm,1.3s
LPG La Plagne 101.81 321 *e*P Pdif 02 56 57.0 +0.1
comp=Z,21nm,1.1s
LPG La Plagne 101.81 321 *e*P Pdif 02 56 57.0 +0.1
comp=Z,10nm,1.1s

LPG La Plagne 101.81 321 *e*P Pdif 02 56 57.0 +0.1
LPG pmax pmax
comp=Z,11nm,1.1s
LPL La Plagne 101.81 321 *e*P Pdif 02 56 56.9 0.0
comp=Z,21nm,1.0s
LPL La Plagne 101.81 321 *e*P Pdif 02 56 56.9 0.0
comp=Z,10nm,1.0s
LPL La Plagne 101.81 321 *e*P Pdif 02 56 56.9 0.0
LPL pmax pmax
comp=Z,10.0nm,1.0s
SAO San Andreas Ge 101.90 49 PFAKE 02 57 10.0 +13
SAO LR LR
comp=Z,3μm,22.0s,MS5.7
SBF Sospel 102.13 319 *e*P Pdif 02 56 58.4 0.0
MBDF Montbardon 102.16 320 *e*P Pdif 02 56 59.0 +0.5
comp=Z,27nm,1.6s
MBDF Montbardon 102.16 320 *e*P Pdif 02 56 59.0 +0.5
comp=Z,14nm,1.6s
MBDF Montbardon 102.16 320 *e*P Pdif 02 56 59.0 +0.5
MBDF pmax pmax
comp=Z,14nm,1.6s
CMB Columbia Colle 102.18 47 PFAKE 02 57 10.0 +11
CMB LR LR
comp=Z,3μm,21.0s,MS5.8
MSO Missoula 102.50 37 PFAKE 02 57 10.0 +10
MSO LR LR
comp=Z,926nm,19.0s,MS5.3
ORIF Oris-en-Rattie 102.63 321 *e*P Pdif 02 57 00.3 -0.2
ORIF *e*MLR MLR
comp=Z,3μm,20.2s,MS5.6
LOR Lormes 102.69 323 *e*P Pdif 02 57 00.4 -0.4
LOR *e*MLR MLR
comp=Z,4μm,23.0s,MS5.6
LOR Lormes 102.69 323 *e*P Pdif 02 57 00.4 -0.4
LOR MLR MLR
comp=Z,4μm,23.0s,MS5.9
FRF La Foret Royal 102.78 319 *e*P Pdif 02 57 00.7 -0.5
RKT Rikitea 102.84 111 *e*SS SS 03 15 55.3 +0.5
comp=Z,452nm,25.2s
RKT *e*LQ 03 26 26.1
comp=Z,1μm,30.5s
RKT *e*LR LR 03 30 45.0
comp=Z,3μm,28.2s,baz=278
LMR La Mourre 102.97 319 *e*P Pdif 02 57 01.7 -0.4
comp=Z,41nm,1.5s
LMR La Mourre 102.97 319 *e*P Pdif 02 57 01.7 -0.4
comp=Z,21nm,1.5s
LMR La Mourre 102.97 319 *e*P Pdif 02 57 01.7 -0.4
LMR pmax pmax
comp=Z,21nm,1.5s
SSF Saint Saulge 103.00 323 *e*P Pdif 02 57 02.6 +0.4
comp=Z,19nm,1.4s
SSF Saint Saulge 103.00 323 *e*P Pdif 02 57 02.6 +0.4
comp=Z,9.4nm,1.4s
SSF Saint Saulge 103.00 323 *e*P Pdif 02 57 02.6 +0.4
SSF pmax pmax
comp=Z,9.0nm,1.4s
LBTB Lobatse 103.01 247 PFAKE 02 57 10.0 +7.7
LBTB LR LR
comp=Z,5μm,22.0s,MS6.0
SMF Signal de Mont 103.02 323 *e*P Pdif 02 57 02.6 +0.3
AVF Avril sur Loir 103.23 323 *e*P Pdif 02 57 03.3 +0.1
SMRF Simiane la Rot 103.27 320 *e*P Pdif 02 57 03.2 -0.2
comp=Z,21nm,1.2s
SMRF Simiane la Rot 103.27 320 *e*P Pdif 02 57 03.2 -0.2
comp=Z,21nm,1.2s
VIVF Saint-Julien-l 103.41 321 *e*P Pdif 02 57 03.6 -0.4
comp=Z,33nm,1.6s
VIVF Saint-Julien-l 103.41 321 *e*P Pdif 02 57 03.6 -0.4
comp=Z,16nm,1.6s
VIVF Saint-Julien-l 103.41 321 *e*P Pdif 02 57 03.6 -0.4
VIVF pmax pmax
comp=Z,17nm,1.6s
BMN Battle Mountai 103.41 44 PFAKE 02 57 20.0 +16
BMN LR LR
comp=Z,2μm,20.0s,MS5.6
NVAR Mina Array Bea 103.52 46 Pdiff Pdif 02 57 05.4 +0.9
comp=Z,0.9nm,0.7s,baz=259,slow=4.6,SNR=4.2
NVAR PP PP 03 01 20.9 -0.1
comp=Z,1.4nm,1.0s,baz=275,slow=10,SNR=4.1
NVAR PKKPbc PKKPbc 03 12 58.6 -0.2
comp=Z,0.4nm,0.6s,baz=139,slow=4.6,SNR=3.9
BOSA Boshof 103.62 243 PFAKE 02 57 20.0 +15
BOSA LR LR
comp=Z,2μm,20.0s,MS5.7
HLID Hailey 103.82 40 PFAKE 02 57 20.0 +14
HLID LR LR
comp=Z,2μm,21.0s,MS5.6
EGMT Eagleton 104.29 35 PFAKE 02 57 20.0 +12
EGMT LR LR
comp=Z,2μm,22.0s,MS5.5
LASF Ste Croix 104.30 321 *e*P Pdif 02 57 07.8 -0.2
comp=Z,33nm,1.5s
TPH Tonopah 104.44 46 PFAKE 02 57 20.0 +11
TPH LR LR
comp=Z,2μm,22.0s,MS5.6
BOZ Bozeman (W) 104.49 37 PFAKE 02 57 20.0 +11
BOZ LR LR
comp=Z,1μm,20.0s,MS5.5
DAC Darwin (Calif) 104.94 48 PFAKE 02 57 20.0 +9.2
DAC LR LR
comp=Z,3μm,21.0s,MS5.7
CAF Calviac 104.97 322 *e*P Pdif 02 57 11.0 0.0
comp=Z,19nm,1.4s
CAF Calviac 104.97 322 *e*P Pdif 02 57 11.0 0.0
comp=Z,9.5nm,1.4s
CAF Calviac 104.97 322 *e*P Pdif 02 57 11.0 0.0
CAF pmax pmax
comp=Z,10.0nm,1.4s
RJF Les Rejaudoux 105.10 323 *e*P Pdif 02 57 10.5 -1.0
RJF *e*MLR MLR
comp=Z,3μm,22.8s,MS5.5
RJF Les Rejaudoux 105.10 323 *e*P Pdif 02 57 10.5 -1.0
RJF MLR MLR
comp=Z,3μm,22.8s,MS5.8
MTLF Montolieu 105.70 321 *e*P Pdif 02 57 13.9 -0.3
comp=Z,47nm,1.9s
MTLF Montolieu 105.70 321 *e*P Pdif 02 57 13.9 -0.3
comp=Z,24nm,1.9s
MTLF Montolieu 105.70 321 *e*P Pdif 02 57 13.9 -0.3
MTLF pmax pmax
comp=Z,24nm,1.9s
SGMF Saint Gilles 105.76 327 *e*P Pdif 02 57 14.5 0.0
LKWY Lake 105.80 38 PFAKE 03 01 40.0 +12
LKWY LR LR
comp=Z,2μm,20.0s,MS5.7
RLMT Red Lodge 106.17 37 *e*PKPdf PKiKP 03 01 30.8 +2.6
RLMT LR LR
comp=Z,1μm,20.0s,MS5.5
QUIF Quistinic 106.29 327 *e*P Pdif 02 57 16.8 0.0
AHID Auburn Hatcher 106.32 40 PFAKE 03 01 40.0 +11
AHID LR LR
comp=Z,3μm,21.0s,MS5.8
DUG Dugway 106.50 43 PFAKE 03 01 40.0 +11
DUG LR LR
comp=Z,2μm,22.0s,MS5.7
HWUT Hardware Ranch 106.62 41 PFAKE 03 01 40.0 +11
HWUT LR LR
comp=Z,2μm,21.0s,MS5.6
LAO LASA Array 107.02 34 *e*PKPdf PKiKP 03 01 31.7 +2.0
LAO LR LR
comp=Z,2μm,22.0s,MS5.6
DGMT Dagmar 107.03 32 PFAKE 03 01 40.0 +10
DGMT LR LR
comp=Z,2μm,22.0s,MS5.6
BW06 Boulder Array 107.28 39 PFAKE 03 01 40.0 +10
BW06 LR LR
comp=Z,5μm,22.0s,MS6.0
PDAR Pinedale Array 107.28 39 PKiKP PKiKP 03 01 31.3 +1.0
comp=Z,1.7nm,1.1s,baz=2.9,slow=3.0,SNR=4.5
PDAR PP PP 03 01 47.5 -1.0
comp=Z,1.1nm,0.8s,baz=1.1,slow=7.6,SNR=4.7
PDAR PKKPbc PKKPbc 03 12 48.8 +1.3
comp=Z,0.5nm,0.9s,baz=134,slow=6.4,SNR=3.8
MVU Marysvale 107.74 44 PFAKE 03 01 40.0 +8.7
MVU LR LR
comp=Z,1μm,20.0s,MS5.5
SJPF Ste Jean 107.94 322 *e*P Pdif 02 57 24.4 +0.2
comp=Z,19nm,1.2s
SJPF Ste Jean 107.94 322 *e*P Pdif 02 57 24.4 +0.2
comp=Z,9.4nm,1.2s
SJPF Ste Jean 107.94 322 *e*P Pdif 02 57 24.4 +0.2
SJPF pmax pmax
comp=Z,9.0nm,1.2s
WUAZ Wupatki 109.78 46 *e*PKPdf PKiKP 03 01 34.5 -0.7
WUAZ *e*PP PP 03 02 07.3 +0.3
LR LR
comp=Z,2μm,22.0s,MS6.6
RSSD Black Hills 109.80 35 PFAKE 03 01 50.0 +15
RSSD LR LR
comp=Z,1μm,19.0s,MS5.5
TSUM Tsumeb 109.94 253 PFAKE 03 01 50.0 +14
TSUM LR LR
comp=Z,4μm,21.0s,MS6.0
MVCO Mesa Verde 110.92 44 *e*PKPdf PKiKP 03 01 38.5 +1.2
MVCO *e*PP PP 03 02 13.0 -2.2
MVCO LR LR
comp=Z,3μm,22.0s,MS5.8
AGMN Agassiz Nation 111.26 28 PFAKE 03 01 50.0 +12
AGMN LR LR
comp=Z,2μm,20.0s,MS5.7
ISCO Idaho Springs 111.40 40 *e*PKPdf PKiKP 03 01 41.0 +2.9
ISCO LR LR
comp=Z,3μm,22.0s,MS5.8
ESDC Sonseca Array 111.58 320 PP PP 03 02 08.3 -11
comp=Z,1.1nm,0.9s,baz=48,slow=5.9,SNR=4.3
ESDC PKKPbc PKKPbc 03 12 35.9 +2.2
comp=Z,1.2nm,0.9s,baz=272,slow=2.0,SNR=6.9
ESLA Sonseca Array 111.58 320 PFAKE 03 01 50.0 +12
ESLA LR LR
comp=Z,12μm,20.0s,MS6.5
PAB San Pablo 111.90 320 PFAKE 03 01 50.0 +11
PAB LR LR
comp=Z,2μm,21.0s,MS5.8
SDCO Great Sand Dun 112.63 42 *e*PKPdf PKiKP 03 01 42.1 +1.6
SDCO *e*PP PP 03 02 26.9 -0.4
SDCO LR LR
comp=Z,2μm,21.0s,MS5.6
OGNE Ogallala 112.91 37 PFAKE 03 01 50.0 +9.0
OGNE LR LR
comp=Z,1μm,19.0s,MS5.6
EYMN Ely 113.48 26 PFAKE 03 01 50.0 +8.2
EYMN LR LR
comp=Z,2μm,22.0s,MS5.6
ANMO Albuquerque 113.52 45 *e*PKPdf PKiKP 03 01 43.9 +1.5
ANMO LR LR
comp=Z,2μm,21.0s,MS5.6
ECSD EROS Data Cent 114.11 32 *e*PKPdf PKiKP 03 01 43.2 0.0
ECSD LR LR
comp=Z,1μm,21.0s,MS5.5
CBKS Cedar Bluff 115.62 38 PFAKE 03 02 00.0 +14
CBKS LR LR
comp=Z,3μm,21.0s,MS5.8
COWI Conover 115.93 26 PFAKE 03 02 00.0 +13
COWI LR LR
comp=Z,2μm,20.0s,MS5.8
MNTX Cornudas Mount 116.02 47 *e*PKPdf PKPdf 03 01 48.2 +0.9
MNTX *e*PP PP 03 02 45.4 -6.2
MNTX LR LR
comp=Z,901nm,20.0s,MS5.4
AMTX Amarillo 116.80 42 PFAKE 03 02 00.0 +11
AMTX LR LR
comp=Z,2μm,21.0s,MS5.8
SCIA State Center 117.17 32 PFAKE 03 02 00.0 +11
SCIA LR LR
comp=Z,2μm,22.0s,MS5.6
KSU1 Kansas State U 117.28 36 *e*PKPdf PKPdf 03 01 49.6 +0.2
KSU1 LR LR
comp=Z,2μm,22.0s,MS5.8
JFWS Jewell Farm 117.89 29 PFAKE 03 02 00.0 +10
JFWS LR LR
comp=Z,2μm,22.0s,MS5.6
TXAR Lajitas Array 118.53 49 PKP PKPdf 03 01 52.9 +0.8
comp=Z,8.6nm,0.9s,baz=253,slow=1.3,SNR=27
TXAR PKKPab PKKPab 03 12 12.8 0.0
comp=Z,1.0nm,1.0s,baz=117,slow=7.3,SNR=6.2
TXAR Lajitas Array 118.53 49 PKIKP PKPdf 03 01 52.9 +0.8
TXAR pmax pmax
comp=Z,9.0nm,0.9s
TXAR pmax pmax
comp=Z,1.0nm,1.0s
WMOK Wichita Mounta 118.78 41 *e*PKPdf PKPdf 03 01 52.7 +0.2
WMOK LR LR
comp=Z,2μm,22.0s,MS5.8
TOA0 Torodi Ar. Sit 119.37 291 *e*PKPdf PKPdf 03 01 53.1 -1.0
TORD Torodi Ar. Bea 119.37 291 PKP PKPdf 03 01 52.5 -1.6
comp=Z,4.0nm,0.9s,baz=59,slow=1.4,SNR=10
TORD PP PP 03 03 11.0 -4.7
comp=Z,7.8nm,1.1s,baz=63,slow=5.4,SNR=7.2
TORD PKKPab PKKPab 03 12 14.9 +6.1
comp=Z,4.3nm,1.2s,baz=258,slow=5.0,SNR=4.5
HDIL Hopedale 120.15 30 *e*PKPdf PKPdf 03 01 54.4 -0.5
HDIL LR LR
comp=Z,2μm,21.0s,MS5.7
JCT Junction City 120.67 45 *e*PKPdf PKPdf 03 01 56.8 +0.6
JCT LR LR
comp=Z,1μm,20.0s,MS5.5
CCM Cathedral Cave 121.01 33 *e*PKPdf PKPdf 03 01 56.5 -0.1
CCM LR LR
comp=Z,2μm,22.0s,MS5.6
AAM Ann Arbor 121.32 25 PFAKE 03 02 10.0 +13
AAM LR LR
comp=Z,1μm,19.0s,MS5.6
MIAR Mount Ida 122.16 38 *e*PKPdf PKPdf 03 01 59.4 +0.4
MIAR LR LR
comp=Z,2μm,22.0s,MS5.6
LONY Lake Ozonia 122.46 17 *e*PKPdf PKPdf 03 01 56.7 -2.5
LONY LR LR
comp=Z,3μm,22.0s,MS5.8
ERPA Erie 122.92 22 PFAKE 03 02 10.0 +10
ERPA LR LR
comp=Z,2μm,22.0s,MS5.8
NCB Newcomb 123.15 17 *e*PKPdf PKPdf 03 02 01.0 +0.4
NCB LR LR
comp=Z,2μm,22.0s,MS5.8
PKME Peaks-Kenny Pk 123.16 12 *e*PKPdf PKPdf 03 02 00.2 -0.3
PKME LR LR
comp=Z,3μm,21.0s,MS5.9
NATX Nacogdoches 123.34 41 PFAKE 03 02 10.0 +8.7
NATX LR LR
comp=Z,2μm,21.0s,MS5.7
WCI Wyandotte Cave 123.42 30 *e*PKPdf PKPdf 03 02 01.0 -0.3
WCI LR LR
comp=Z,2μm,22.0s,MS5.7
LBNH Lisbon 123.52 15 PFAKE 03 02 10.0 +8.7
LBNH LR LR
comp=Z,2μm,22.0s,MS5.8
HKT Hockley 123.72 43 *e*PKPdf PKPdf 03 02 03.2 +1.1
HKT LR LR
comp=Z,2μm,21.0s,MS5.6
BINY Binghamton 124.23 19 *e*PKPdf PKPdf 03 02 03.0 +0.3
BINY LR LR
comp=Z,2μm,22.0s,MS5.8
WVT Waverly 124.26 32 *e*PKPdf PKPdf 03 02 02.9 -0.1
WVT LR LR
comp=Z,2μm,22.0s,MS5.7
OXF Oxford 124.61 35 *e*PKPdf PKPdf 03 02 03.4 -0.2
OXF LR LR
comp=Z,2μm,22.0s,MS5.6
MCWV Mont Chateau 125.09 24 PFAKE 03 02 20.0 +16
MCWV LR LR
comp=Z,2μm,22.0s,MS5.8
PMSA Palmer Station 125.20 175 PFAKE 03 02 20.0 +16
PMSA LR LR
comp=Z,2μm,21.0s,MS5.8
VBMS Vicksburg 125.61 38 PFAKE 03 02 20.0 +14
VBMS LR LR
comp=Z,3μm,22.0s,MS5.8
TKL Tuckaleechee C 126.69 30 *e*PKPdf PKPdf 03 02 08.1 +0.5
BLA Blacksburg 126.94 26 *e*PKPdf PKPdf 03 02 07.5 -0.6
BLA LR LR
comp=Z,2μm,22.0s,MS5.8
LRAL Lakeview Retre 127.05 34 *e*PKPdf PKPdf 03 02 08.5 +0.2
LRAL LR LR
comp=Z,2μm,22.0s,MS5.7
CBN Corbin 127.31 22 *e*PKPdf PKPdf 03 02 09.0 +0.3
CBN LR LR
comp=Z,2μm,20.0s,MS5.9
KIC Kosan Boka 127.57 286 *e*PKP1 PKPdf 03 02 09.5 -0.4
comp=Z,39nm,1.1s
DBIC Dimbokro 127.59 287 *e*PKPdf PKPdf 03 02 09.5 -0.4
DBIC LR LR
comp=Z,2μm,21.0s,MS5.7
DBIC Dimbokro 127.59 287 PKP PKPdf 03 02 09.8 -0.1
comp=Z,13nm,1.1s,baz=12,slow=2.2,SNR=5.9
DBIC Dimbokro 127.59 287 PKIKP PKPdf 03 02 09.8 -0.1
DBIC pmax pmax
comp=Z,13nm,1.2s
TIC Toumodi 127.75 287 *e*PKP1 PKPdf 03 02 10.0 -0.2
comp=Z,43nm,1.3s
LIC Lamto 127.89 286 *e*PKP1 PKPdf 03 02 10.3 -0.2
comp=Z,62nm,1.2s
LIC Lamto 127.89 286 *e*PKIKP PKPdf 03 02 10.7 +0.2
comp=Z,58nm,1.2s
LIC *e*MLR MLR
comp=Z,2μm,22.2s,MS5.5
LIC Lamto 127.89 286 *e*PKPdf PKPdf 03 02 10.7 +0.2
LIC LR LR
comp=Z,1μm,22.3s,MS5.5
BRAL Brewton 128.52 36 PFAKE 03 02 20.0 +8.8
BRAL LR LR
comp=Z,2μm,20.0s,MS5.8
GOGA Godfrey 128.63 31 *e*PKPdf PKPdf 03 02 12.0 +0.6
GOGA LR LR
comp=Z,2μm,19.0s,MS5.8
CNNC Cliffs of the 129.68 25 *e*PKPdf PKPdf 03 02 13.3 0.0
CNNC LR LR
comp=Z,2μm,22.0s,MS5.8
NHSC New Hope 130.48 28 PFAKE 03 02 30.0 +15
NHSC LR LR
comp=Z,2μm,21.0s,MS5.8
DWPF Disney 133.88 33 PFAKE 03 02 30.0 +8.5
DWPF LR LR
comp=Z,15μm,22.0s,MS6.7
TEIG Tepich 135.15 47 PFAKE 03 02 40.0 +16
TEIG LR LR
comp=Z,958nm,19.0s,MS5.5
BBSR BB Station 136.51 12 PFAKE 03 02 40.0 +14
BBSR LR LR
comp=Z,1μm,21.0s,MS5.7
TGUH Tegucigalpa,Un 139.64 54 *e*PKPdf PKPdf 03 02 31.6 -0.8
TGUH LR LR
comp=Z,1μm,22.0s,MS5.6
PAYG Puerto Ayora 143.35 77 PFAKE 03 02 50.0 +11
PAYG LR LR
comp=Z,934nm,20.0s,MS5.5
MTDJ Mount Denham 143.79 39 PFAKE 03 02 50.0 +10
MTDJ LR LR
comp=Z,2μm,22.0s,MS5.8
GTBY Guantanamo Bay 143.87 34 *e*PKPdf PKPdf 03 02 40.0 +0.1
GTBY LR LR
comp=Z,2μm,22.0s,MS5.8
GRTK Grand Turk 144.51 27 *e*PKPdf PKPdf 03 02 41.1 +0.1
GRTK LR LR
comp=Z,3μm,22.0s,MS6.0
PLCA Paso Flores 146.59 158 *e*PKPbc PKPbc 03 02 47.0 +1.5
PLCA LR LR
comp=Z,2μm,20.0s,MS5.8
PLCA Paso Flores 146.59 158 PKPbc PKPbc 03 02 46.6 +1.1
comp=Z,71nm,1.1s,baz=204,slow=4.2,SNR=36
PLCA Paso Flores 146.59 158 PKP2 PKPab 03 02 46.6 0.0
PLCA pmax pmax
comp=Z,71nm,1.1s
SDDR Presa de Saban 146.63 29 *e*PKPbc PKPbc 03 02 47.1 +0.9
SDDR LR LR
comp=Z,2μm,22.0s,MS5.8
BCIP Isla Barro Col 148.38 53 *e*PKPdf PKPdf 03 02 47.6 -0.1
BCIP LR LR
comp=Z,920nm,21.0s,MS5.5
SJG San Juan 149.60 22 *e*PKPdf PKPdf 03 02 49.7 +0.2
SJG *e*PKPbc PKPbc 03 02 54.7 +0.6
SJG *e*PKPab PKPab 03 02 59.6 +0.5
SJG LR LR
comp=Z,899nm,20.0s,MS5.6
SJG San Juan 149.60 22 *e*PKHKP *e* PKPdf 03 02 49.7 +0.2 03 02 54.7
SJG MLR MLR
comp=Z,899nm,20.0s
ANWB Willy Bob 151.35 14 PFAKE 03 03 00.0 +7.7
ANWB LR LR
comp=Z,2μm,22.0s,MS5.8
TRQA Tornquist 151.59 168 *e*PKPbc PKPbc 03 02 59.2 +1.0
TRQA LR LR
comp=Z,2μm,21.0s,MS5.9
OTAV Otavalo 154.16 68 *e*PKPdf PKPdf 03 02 57.7 +1.1
OTAV LR LR
comp=Z,950nm,21.0s,MS5.6
SDV Santo Domingo 155.21 40 *e*PKPdf PKPdf 03 02 58.6 +0.6
SDV LR LR
comp=Z,588nm,22.0s,MS5.4
ROSC El Rosal 155.33 53 PKP PKPdf 03 03 00.0 +1.9
comp=Z,32nm,1.1s,baz=94,slow=18,SNR=9.1
LCO Las Campanas 156.10 143 *e*PKPdf PKPdf 03 03 02.5 +3.8
LCO LR LR
comp=Z,1μm,20.0s,MS5.8
BBGH Gun Hill 156.22 12 PFAKE 03 03 10.0 +11
BBGH LR LR
comp=Z,2μm,20.0s,MS6.0
GRGR Grenville 156.68 17 PFAKE 03 03 10.0 +10
GRGR LR LR
comp=Z,1μm,21.0s,MS5.7
RCBR Riachuelo 160.87 282 PFAKE 03 03 20.0 +15
RCBR LR LR
comp=Z,2μm,22.0s
CPUP Villa Florida 163.85 171 PKP PKPdf 03 03 07.5 -0.1
CPUP PKPab PKPab 03 04 01.4 +1.5
CPUP LR LR
comp=Z,213nm,21.0s
CPUP Villa Florida 163.85 171 PKP PKPdf 03 03 07.5 -0.1
comp=Z,12nm,1.1s,baz=357,slow=0.8,SNR=7.8
CPUP PKPab PKPab 03 04 01.4 +1.5
comp=Z,15nm,1.0s,baz=19,slow=2.3,SNR=3.5
CPUP Villa Florida 163.85 171 PKIKP PKPdf 03 03 07.5 0.0
CPUP pmax pmax
comp=Z,12nm,1.1s
CPUP pmax pmax
comp=Z,15nm,1.0s
LPAZ La Paz 165.63 116 PKP PKPdf 03 03 11.2 +1.9
comp=Z,12nm,1.0s,baz=35,slow=1.4,SNR=16
LPAZ PKPab PKPab 03 04 16.6 +8.3
comp=Z,13nm,1.1s,baz=255,slow=4.4,SNR=3.2
LPAZ La Paz 165.63 116 *e*PKIKP PKPdf 03 03 10.6 +1.3
LPAZ MLR MLR
comp=Z,2μm,21.0s

IDC ***25*** *02:45:21.7±0.8, 32°.94S×178°.95W, h0km, mb4.7/4, mb1 4.8/5, mb1mx4.4/17, mbtmp4.7/5, ML4.5/1, Error ellipse: s-maj=32.0km s-min=25.8km az=56.0*
NEIC ***25*** *02:45:26.5±0.8, 33°.09S×178°.92W, h35km, mb4.7/1, Error ellipse: s-maj=23.4km s-min=17.2km az=104.0*
ISC 25 02:45:24.2±1.7, 33°.33S±0°.08×178°.4W±0°.2, h35km, n41, s0 98/25, mb4.7/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
CNGZ	**Carnagh Statio**	**5.82**	**207**	*e*PN	**Pn**	**02 46 48.4**	**+0.5**
MWZ	**Matawai**	**5.97**	**212**	*e*PN	**Pn**	**02 46 50.0**	**0.0**
MWZ				SN	**Sn**	**02 47 56.9**	**-0.2**
URZ	**Urewera**	**6.10**	**215**	Pn	**Pn**	**02 46 53.2**	**+1.4**
	10nm,0.3s,baz=28,slow=1.9,SNR=41						
URZ				Sn	**Sn**	**02 47 58.8**	**-1.6**
	15nm,0.3s,baz=257,slow=16,SNR=8.4						
URZ	**Urewera**	**6.10**	**215**	*e*PN	**Pn**	**02 46 50.7**	**-1.1**
URZ				SN	**Sn**	**02 47 58.2**	**-2.2**
PRGZ	**Paritu Road**	**6.32**	**207**	*e*PN	**Pn**	**02 46 54.7**	**-0.1**
TARZ	**Mount Tarawera**	**6.39**	**219**	*e*PN	**Pn**	**02 46 57.1**	**+1.3**
KNZ	**Kokohu**	**6.49**	**208**	PN	**Pn**	**02 46 55.7**	**-1.4**
WCZ	**Waipu Caves**	**6.50**	**244**	PN	**Pn**	**02 46 58.7**	**+1.5**
MHGZ	**Mahia Peninsul**	**6.52**	**206**	PN	**Pn**	**02 46 57.1**	**-0.4**
NMHZ	**Naumai**	**6.92**	**212**	PN	**Pn**	**02 47 03.8**	**+0.8**
BKZ	**Black Stump Fm**	**7.12**	**214**	PN	**Pn**	**02 47 05.4**	**-0.3**
MCHZ	**McNeill Hill**	**7.25**	**211**	PN	**Pn**	**02 47 09.1**	**+1.6**
KAHZ	**Kahuranaki**	**7.47**	**209**	*e*PN	Px	02 47 08.6	
HIZ	**Hauiti**	**7.50**	**225**	PN	**Pn**	**02 47 12.7**	**+1.7**
OTVZ	**Oturere**	**7.52**	**218**	PN	**Pn**	**02 47 11.2**	**0.0**
BHHZ	**Black Hill Sta**	**7.58**	**214**	PN	**Pn**	**02 47 12.1**	**+0.1**
PXZ	**Pawanui**	**7.68**	**208**	PN	**Pn**	**02 47 13.4**	**0.0**
PRHZ	**Porangahau**	**7.97**	**208**	PN	**Pn**	**02 47 16.5**	**-0.9**
BFZ	**Birch Farm**	**8.48**	**209**	PN	Px	02 47 21.7	
MRZ	**Mangatainoka R**	**8.74**	**211**	PN	Px	02 47 24.8	
OGWZ	**Otaki Gorge**	**9.05**	**213**	*e*PN	Px	02 47 28.9	
KIW	**Kapiti Island**	**9.20**	**213**	PN	Px	02 47 30.2	
PLWZ	**Palliser**	**9.63**	**210**	PN	Px	02 47 36.6	
TUWZ	**Tuamarina**	**10.10**	**215**	PN	Px	02 47 42.1	
CTA	**Charters Tower**	**34.02**	**284**	P	**P**	**02 52 04.8**	**-0.1**
	8.5nm,0.6s,mb4.9,baz=114,slow=13,SNR=7.1						
ASAR	**Alice Springs**	**42.67**	**270**	P	**P**	**02 53 16.6**	**-1.0**
	3.9nm,0.5s,mb4.4,baz=110,slow=8.1,SNR=5.3						
WRA	**Warramunga Arr**	**43.92**	**275**	P	**P**	**02 53 26.4**	**-1.3**
	5.4nm,0.4s,mb4.6,baz=116,slow=8.0,SNR=10						
QSPA	**South Pole Qui**	**56.78**	**180**	*e*P	**P**	**02 55 10.0**	**+5.9**
	5.4nm,0.7s,mb4.7						
QSPA	**South Pole Qui**	**56.78**	**180**	P	**P**	**02 55 10.4**	**+6.2**
	5.9nm,0.6s,mb4.8,baz=50,slow=2.4,SNR=37						
MKAR	**Makanchi Array**	**119.35**	**309**	PKP	PKPdf	03 04 09.7	+0.4

0.3nm,0.4s,baz=228,slow=1.4,SNR=5.6
ZALV Zalesovo Beam 119.95 317 PKP PKPdf 03 04 10.9 +0.6
0.6nm,0.4s,baz=142,slow=3.4,SNR=2.3
ARCES ARCESS Array B 141.36 347 PKhKP PKPpre 03 04 46.9
0.9nm,0.8s,baz=64,slow=2.8,SNR=3.6
ARCES PKP PKPdf 03 04 54.9 +4.7
0.7nm,0.4s,baz=343,slow=2.8,SNR=6.8
JOF Joensuu 144.98 337 *ep* PKPdf 03 04 56.8 +0.1
2.5nm,0.5s
KAF Kangasniemi 147.16 339 *ep* PKPdf 03 05 03.1 +2.6
6.3nm,0.5s
FINES FINESS Array B 147.74 338 PKPbc PKPbc 03 05 05.8 +1.5
11nm,0.5s,baz=39,slow=4.0,SNR=82
EIL Elat 151.37 272 PKPbc PKPbc 03 05 15.6 +1.2
NOA NORSAR Array B 151.58 350 PKPbc PKPbc 03 05 16.1 +2.3
5.2nm,0.6s,baz=14,slow=4.1,SNR=24
MMAI Mount Meron Ar 151.74 279 PKPbc PKPbc 03 05 17.3 +2.2
baz=87,slow=7.4
DBIC Dimbokro 152.81 166 PKPbc PKPbc 03 05 24.7 +6.7
2.1nm,0.5s,baz=356,slow=1.2,SNR=8.3
DBIC PKPab PKPab 03 05 38.5 +10
1.5nm,0.5s,baz=168,slow=17,SNR=4.3
BRTR Keskin Array B 153.54 293 PKPbc PKPbc 03 05 20.4 +1.5
1.5nm,0.6s,baz=132,slow=3.2,SNR=12
TORD Torodi Ar. Bea 159.91 180 PKPab PKPab 03 06 03.2 +4.0
1.9nm,0.8s,baz=167,slow=4.4,SNR=8.5

IDC ***25*** *02:46:13.2±1.2,0°.13S×126°.31E,h0km,mb4.7/6, mb1 4.9/6,mb1mx4.4/19,mbtmp4.8/6,MS5.2/2,Ms1 5.2/2, ms1mx4.5/30,Error ellipse: s-maj=167.7km s-min=18.6km az=67.0*

ISCJB ***25*** *02:46:20.1±0.6,0°.06N±0°.07×126°.65E±0°.05,h70km±8km, mb4.7/6,Error ellipse: s-maj=12.2km s-min=7.7km az=24.9*

DJA ***25*** *02:46:20,0°.10N×126°.56E,h18km,MLv4.8/3*

ISC 25 02:46:21.0±0.6, 0°.05N±0°.07×126°.66E±0°.05, h60km±9km, n13,σ0°85/14, mb4.8/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.01**	**45**	P	**Pn**		**02 46 38.6**		**-0.6**
TNTI				S	**Sn**		**02 46 52.7**		**+0.1**
LBMI	**Labuha**	**1.09**	**129**	P	**Pn**		**02 46 40.2**		**0.0**
MNI	**Manado**	**2.28**	**307**	P	**Pn**		**02 46 56.0**		**-0.4**
MNI				S	**Sn**		**02 47 23.8**		**+0.4**
KMSI	**Cibinong**	**2.73**	**281**	P	**Pn**		**02 47 02.1**		**-0.3**
KMSI				S	**Sn**		**02 47 33.8**		**-0.4**
NLAI	**Namlea**	**3.30**	**172**	P	**Pn**		**02 47 12.1**		**+1.9**
WRA	**Warramunga Arr** 7.5nm,0.3s,mb4.5,baz=341,slow=11,SNR=40	**21.25**	**160**	P	**P**		**02 51 00.7**		**-1.5**
ASAR	**Alice Springs** 34nm,0.9s,mb4.9,baz=346,slow=10,SNR=13	**24.60**	**164**	P	**P**		**02 51 36.5**		**+0.8**
STKA	**Stephens Creek** 25nm,0.8s,mb5.2,baz=327,slow=9.6,SNR=18	**34.76**	**157**	P	**P**		**02 53 04.5**		**-1.2**
SONM	**Songino Array** 4.2nm,0.9s,mb4.4,baz=160,slow=9.1,SNR=4.0	**50.75**	**342**	P	**P**		**02 55 16.1**		**+1.3**
MKAR	**Makanchi Array** 3.2nm,0.4s,mb4.8,baz=121,slow=7.4,SNR=28	**60.54**	**327**	P	**P**		**02 56 25.1**		**+0.1**
QSPA	**South Pole Qui** 2.7nm,0.5s,mb4.8,baz=276,slow=3.5,SNR=6.4	**89.98**	**180**	P	**P**		**02 59 13.3**		**0.0**
QSPA				LR	LR		03 41 07.2		
	comp=Z,831nm,20.6s,baz=345,slow=37								
BOSA	**Boshof** comp=Z,2μm,18.2s,baz=88,slow=36	**100.03**	**241**	LR	LR		03 45 50.1		
CPUP	**Villa Florida** 1.9nm,0.6s,baz=108,slow=2.0,SNR=3.1	**153.59**	**172**	PKPbc	PKPbc		03 06 13.0		-0.7

IGQ 25 02:57:10.1,2°.50S×77°.00W,h107km±9km, Mb4.0,Ms3.8, 6C-14D, Error ellipse: s-maj=5.4km s-min=3.4km az=13.9, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MACE	**Macas**	**1.22**	**282**	⇑S	Sn		02 57 51.0		-0.1
MACE	**Macas**	**1.22**	**282**	⇑P	Pn		02 57 34.2		+0.8
PAT1	**Patacocha**	**1.74**	**305**	S	Sn		02 58 02.7		+0.5
PAT1	**Patacocha**	**1.74**	**305**	P	Pn		02 57 40.4		+0.7
ULBA	**Ulba**	**1.75**	**307**	⇓P	Pn		02 57 40.5		+0.7
ARRY	**Arrayan**	**1.76**	**304**	⇓P	Pn		02 57 40.1		+0.2
ARRY	**Arrayan**	**1.76**	**304**	⇓S	Sn		02 58 01.9		-0.7
BULB	**Ulba Tungurahu**	**1.76**	**307**	⇓S	Sn		02 58 02.4		-0.2
BULB	**Ulba Tungurahu**	**1.76**	**307**	⇓P	Pn		02 57 40.6		+0.6
BRUN	**Tungurahua Vol**	**1.77**	**307**	⇓S	Sn		02 58 03.1		+0.2
BRUN	**Tungurahua Vol**	**1.77**	**307**	⇓P	Pn		02 57 40.9		+0.8
BMAS	**Trigal station**	**1.78**	**304**	⇑P	Pn		02 57 40.9		+0.8
RETU	**Refugio**	**1.78**	**306**	S	Sn		02 58 04.3		+1.2
RETU	**Refugio**	**1.78**	**306**	P	Pn		02 57 40.9		+0.7
RUN5	**Runtun**	**1.79**	**307**	P	Pn		02 57 40.6		+0.4
RIOE	**Riobamba**	**1.79**	**295**	P	Pn		02 57 41.5		+1.2
BBIL	**Ulba Tungurahu**	**1.81**	**305**	P	Pn		02 57 41.9		+1.3
JUI6	**Juive**	**1.81**	**306**	P	Pn		02 57 41.0		+0.4
IGUA	**Igualata**	**1.92**	**302**	P	Pn		02 57 43.7		+1.8
PISA	**Pisayambo**	**1.99**	**310**	⇑P	Pn		02 57 43.6		+0.8
TAMB	**Tambo**	**2.26**	**323**	P	Pn		02 57 47.7		+1.5
COV1	**Cotopaxi Volc**	**2.27**	**324**	P	Pn		02 57 50.0		+3.6
BMOR	**Cotopaxi Volca**	**2.28**	**320**	⇓P	Pn		02 57 48.5		+1.8
MOV1	**Cotopaxi Vol s**	**2.29**	**321**	P	Pn		02 57 48.1		+1.5
BTAM	**Cotopaxi Volca**	**2.29**	**322**	⇓P	Pn		02 57 48.6		+1.9
BVC2	**Cotopaxi Volca**	**2.31**	**322**	⇓P	Pn		02 57 49.1		+2.1
VC1	**Cotopaxi 1**	**2.32**	**323**	⇓P	Pn		02 57 48.9		+1.8
ANTI	**Antisana**	**2.35**	**330**	⇓P	Pn		02 57 48.4		+1.0
CAMI	**Rancho Maria**	**2.35**	**320**	P	Pn		02 57 49.7		+2.1
PITA	**Cotopaxi Volc**	**2.40**	**323**	P	Pn		02 57 49.9		+1.7
CHAR	**Charly**	**2.49**	**344**	P	Pn		02 57 50.5		+1.2
CONE	**Cono NE Rev Vo**	**2.50**	**345**	⇑P	Pn		02 57 50.4		+1.0
CAYR	**Refugio Cayamb**	**2.69**	**338**	P	Pn		02 57 54.0		+2.0
CAYA	**Cayambe**	**2.74**	**339**	⇑P	Pn		02 57 54.5		+1.9
JUA2	**San Juan 2**	**2.78**	**325**	P	Pn		02 57 54.6		+1.5
GGP	**Refugio Guagua**	**2.81**	**325**	⇓P	Pn		02 57 54.9		+1.4
TERV	**Terraza Guagua**	**2.81**	**325**	P	Pn		02 57 55.1		+1.6
YANA	**Yana**	**2.84**	**325**	P	Pn		02 57 55.3		+1.4
OTAV	**Otavalo**	**3.08**	**332**	⇓P	Pn		02 57 58.3		+1.2
COTA	**Cotacachi**	**3.12**	**335**	P	Pn		02 58 00.1		+2.5

ISK ***25*** *02:57:17.8,37°.01N×29°.18E,h5km,MD3.7*

IDC ***25*** *02:57:18.0±1.5,36°.80N×29°.37E,h0km,mb3.8/3, mb1 3.8/4,mb1mx3.6/22,mbtmp3.7/4,ML3.0/1,Error ellipse: s-maj=69.0km s-min=17.4km az=141.0*

CSEM ***25*** *02:57:18.9±0.1,36°.96N×29°.23E,h2km,MD3.7,Error ellipse: s-maj=2.9km s-min=2.8km az=101.0*

ISCJB ***25*** *02:57:19.3±0.2,36°.97N±0°.02×29°.21E±0°.02,h10km, mb4.3/7,Error ellipse: s-maj=2.5km s-min=2.0km az=169.8*

NEIC ***25*** *02:57:19.0,37°.06N×29°.16E,h5km,ML3.7(ISK), ML3.6(ATH),After ISK.*

DDA ***25*** *02:57:19.2,37°.02N×29°.20E,h24km±2km,Md3.6*

THE ***25*** *02:57:21.8,37°.05N×29°.21E,h3km±1km,ML3.4/2,Error ellipse: s-maj=1.5km s-min=0.6km az=142.0*

HLW ***25*** *02:57:30.4,36°.28N×29°.27E,h35km±50km,Ml3.6*

ISC 25 02:57:20.2±0.2, 36°.98N±0°.02×29°.21E±0°.02, h10km, n180, σ1§26/224, mb4.3/7, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.29**	**52**	*e*PG	**Pg**		**02 57 24.6**		**-1.4**
GLHS				*e*SG	**Sg**		**02 57 29.9**		**-0.1**
GLHS	**Glhisar (BURDU**	**0.29**	**52**	*e*Pg	**Pg**		**02 57 24.6**		**-1.5**
GLHS				*e*Sg	**Sg**		**02 57 29.9**		**-0.1**
GOLH	**Golhisar**	**0.38**	**47**	*i* P	**Pg**		**02 57 25.6**		**-2.1**
GOLH				*i* S	**Sg**		**02 57 32.3**		**-0.5**
GOLH	**Golhisar**	**0.38**	**47**	*i* P	**Pg**		**02 57 25.6**		**-2.1**
GOLH				*i* S	**Sg**		**02 57 32.3**		**-0.5**
ELL	**Elmali**	**0.60**	**112**	*e*PG	**Pg**		**02 57 30.9**		**-1.0**
ELL				*e*SG	**Sg**		**02 57 41.3**		**+1.5**
ELL	**Elmali**	**0.60**	**112**	*e*Pg	**Pg**		**02 57 30.9**		**-1.0**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**		**02 57 32.1**		**-2.2**
DNZL				*i* S	**Sg**		**02 57 43.0**		**-0.7**
DNZL	**Cakiroluk**	**0.72**	**350**	*i* P	**Pg**		**02 57 32.1**		**-2.1**
DNZL				*i* S	**Sg**		**02 57 43.0**		**-0.7**
YER	**Yerkesik**	**0.76**	**282**	*e*PG	**Pg**		**02 57 33.2**		**-1.7**
YER	**Yerkesik**	**0.76**	**282**	*e*Pg	**Pg**		**02 57 33.2**		**-1.7**
DENT	**Denizli**	**0.79**	**350**	*e*PG	**Pg**		**02 57 33.1**		**-2.3**
DENT	**Denizli**	**0.79**	**350**	*e*Pg	**Pg**		**02 57 33.1**		**-2.4**
AKAS	**Kas**	**0.81**	**157**	*i* P	**Pg**		**02 57 33.5**		**-2.2**
AKAS				*i* S	**Sg**		**02 57 50.1**		**+3.9**
AKAS	**Kas**	**0.81**	**157**	*i* P	**Pg**		**02 57 33.5**		**-2.2**
KSL	**Kastellorizon**	**0.88**	**160**	*e*P	**Pg**		**02 57 36.3**		**-0.8**
KORT	**Korkueli**	**0.91**	**88**	*i* P	**Pg**		**02 57 36.5**		**-1.3**
KORT				*i* S	**Sg**		**02 57 52.7**		**+3.0**
KORT	**Korkueli**	**0.91**	**88**	*i* P	**Pg**		**02 57 36.5**		**-1.3**
KORT				*i* S	**Sg**		**02 57 52.7**		**+3.1**
ARG	**Arkhangelos**	**1.16**	**229**	P	**Pg**		**02 57 40.3**		**-2.1**
ARG	**Arkhangelos**	**1.16**	**229**	*e*P	**Pg**		**02 57 40.0**		**-2.4**
ARG	**Arkhangelos**	**1.16**	**229**	P	**Pg**		**02 57 40.5**		**-1.9**
ARG				S	**Sg**		**02 58 00.8**		**+3.4**
ARG	**Arkhangelos**	**1.16**	**229**	P	**Pg**		**02 57 40.5**		**-1.9**
ARG				S	**Sg**		**02 58 00.8**		**+3.4**
MLSB	**Milas**	**1.19**	**286**	*e*PN	**Pn**		**02 57 41.1**		**-1.8**
MLSB	**Milas**	**1.19**	**286**	*e*Pn	**Pn**		**02 57 41.1**		**-1.8**
BCK	**Bucak**	**1.20**	**66**	*e*PN	**Pn**		**02 57 42.0**		**-1.0**
BCK	**Bucak**	**1.20**	**66**	*e*Pn	**Pn**		**02 57 42.0**		**-1.1**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pn**		**02 57 42.7**		**-1.2**
AYDN				*i* S	**Sg**		**02 58 01.4**		**+0.5**
AYDN	**Tasoluk**	**1.26**	**303**	*i* P	**Pn**		**02 57 42.7**		**-1.2**
AYDN				*i* S	**Sg**		**02 58 01.4**		**+0.5**
DAT	**Datca**	**1.33**	**260**	*e*PN	**Pn**		**02 57 44.1**		**-0.7**
DAT	**Datca**	**1.33**	**260**	*e*Pn	**Pn**		**02 57 44.1**		**-0.8**
ISP	**Isparta**	**1.34**	**51**	*e*PN	**Pn**		**02 57 44.6**		**-0.4**
ISP	**Isparta**	**1.34**	**51**	P	**Pn**		**02 57 45.4**		**+0.4**
ISP	**Isparta**	**1.34**	**51**	P	**Pn**		**02 57 44.9**		**-0.1**
ISP				S	**Sb**		**02 58 03.4**		**+0.7**
ISP	**Isparta**	**1.34**	**51**	*e*Pn	**Pn**		**02 57 44.6**		**-0.4**
ISP	**Isparta**	**1.34**	**51**	P	**Pn**		**02 57 44.9**		**-0.1**
ISP				S	**Sb**		**02 58 03.4**		**+0.7**
KHL	**Karahalli**	**1.37**	**10**	*e*PN	**Pn**		**02 57 44.8**		**-0.5**
KHL	**Karahalli**	**1.37**	**10**	*e*Pn	**Pn**		**02 57 44.8**		**-0.5**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**		**02 57 45.2**		**-0.7**
KHAL				*i* S	**Sn**		**02 58 04.6**		**0.0**
KHAL	**Karahalli**	**1.41**	**9**	*i* P	**Pn**		**02 57 45.2**		**-0.7**
KHAL				*i* S	**Sn**		**02 58 04.6**		**0.0**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**		**02 57 45.9**		**-0.1**
BDRM				*i* S	**Sn**		**02 58 04.4**		**-0.3**
BDRM	**Kayabasi**	**1.42**	**274**	*i* P	**Pn**		**02 57 45.9**		**-0.1**
BDRM				*i* S	**Sn**		**02 58 04.4**		**-0.3**
BODT	**Bodrum**	**1.52**	**274**	*e*PN	**Pn**		**02 57 46.6**		**-0.8**
BODT	**Bodrum**	**1.52**	**274**	*e*Pn	**Pn**		**02 57 46.6**		**-0.9**
KULA	**Kula-Manisa**	**1.60**	**344**	*e*PN	**Pn**		**02 57 47.6**		**-0.9**
KULA	**Kula-Manisa**	**1.60**	**344**	*e*Pn	**Pn**		**02 57 47.6**		**-0.9**
NIS1	**Nisyros Isl.**	**1.67**	**258**	P	**Pb**		**02 57 50.6**		**-0.5**
NIS1				S	**Sb**		**02 58 12.9**		**+0.7**
NIS1	**Nisyros Isl.**	**1.67**	**258**	P	**Pb**		**02 57 50.6**		**-0.5**
NIS1				S	**Sb**		**02 58 12.9**		**+0.7**
GCAM	**G?zelcaml?**	**1.73**	**295**	*i* P	**Pn**		**02 57 50.0**		**-0.4**
GCAM				*i* S	**Sn**		**02 58 13.2**		**+0.7**
GCAM	**G?zelcaml?**	**1.73**	**295**	*i* P	**Pn**		**02 57 50.0**		**-0.4**
GCAM				*i* S	**Sn**		**02 58 13.2**		**+0.7**
SMG	**Samos**	**2.03**	**292**	*e*P	**Pn**		**02 57 54.3**		**-0.1**
IZM	**Izmir**	**2.10**	**313**	*e*PN	**Pn**		**02 57 54.4**		**-1.0**
DEMI	**Demirci**	**2.10**	**349**	*i* P	**Pn**		**02 57 55.0**		**-0.5**
DEMI				*i* S	**Sn**		**02 58 21.1**		**-0.5**
DEMI	**Demirci**	**2.10**	**349**	*i* P	**Pn**		**02 57 55.0**		**-0.4**
DEMI				*i* S	**Sn**		**02 58 21.1**		**-0.5**
KDAG	**Bornova**	**2.10**	**313**	*i* P	**Pn**		**02 57 53.8**		**-1.6**
KDAG				*i* S	**Sn**		**02 58 18.5**		**-3.0**
KDAG	**Bornova**	**2.10**	**313**	*i* P	**Pn**		**02 57 53.8**		**-1.6**
KDAG				*i* S	**Sn**		**02 58 18.5**		**-3.1**
GDZ	**Gediz**	**2.12**	**6**	*i* P	**Pn**		**02 57 54.5**		**-1.2**
GDZ	**Gediz**	**2.12**	**6**	*i* P	**Pn**		**02 57 54.5**		**-1.2**
KARP	**Karpathos**	**2.19**	**230**	P	**Pn**		**02 57 57.4**		**+0.8**
KARP	**Karpathos**	**2.19**	**230**	*e*P	**Pn**		**02 57 57.5**		**+0.9**
KARP	**Karpathos**	**2.19**	**230**	P	**Pn**		**02 57 57.4**		**+0.8**
ALT	**Altintas**	**2.19**	**19**	*e*PN	**Pn**		**02 57 56.4**		**-0.3**
ALT	**Altintas**	**2.19**	**19**	*e*Pn	**Pn**		**02 57 56.4**		**-0.3**
AKHS	**Akhisar**	**2.20**	**330**	*i* P	**Pn**		**02 57 56.0**		**-0.8**
AKHS				*i* S	**Sn**		**02 58 24.3**		**+0.3**
AKHS	**Akhisar**	**2.20**	**330**	*i* P	**Pn**		**02 57 56.0**		**-0.8**
AKHS				*i* S	**Sn**		**02 58 24.3**		**+0.3**
AKS	**Akhisar**	**2.20**	**330**	*e*PN	**Pn**		**02 57 56.0**		**-0.7**
AKS	**Akhisar**	**2.20**	**330**	*e*Pn	**Pn**		**02 57 56.1**		**-0.7**
BOLV	**Bolvadin**	**2.22**	**38**	*i* P	**Pn**		**02 57 57.0**		**0.0**
BOLV				*i* S	**Sn**		**02 58 25.7**		**+1.2**
BOLV	**Bolvadin**	**2.22**	**38**	*i* P	**Pn**		**02 57 57.0**		**0.0**
BOLV				*i* S	**Sn**		**02 58 25.7**		**+1.2**
BLCB	**Balcova**	**2.22**	**310**	*e*PN	**Pn**		**02 57 56.7**		**-0.4**
BLCB	**Balcova**	**2.22**	**310**	P	**Pn**		**02 57 56.8**		**-0.3**
BLCB	**Balcova**	**2.22**	**310**	P	**Pn**		**02 57 56.8**		**-0.3**
GAZI	**Gazipasa**	**2.60**	**106**	*i* P	**Pn**		**02 58 04.0**		**+1.7**
GAZI				*i* S	**Sn**		**02 58 38.6**		**+4.6**
GAZI	**Gazipasa**	**2.60**	**106**	*i* P	**Pn**		**02 58 04.0**		**+1.7**
HDMB	**Hadim**	**2.62**	**89**	*e*PN	**Pn**		**02 58 03.4**		**+0.8**
HDMB	**Hadim**	**2.62**	**89**	*e*Pn	**Pn**		**02 58 03.4**		**+0.8**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*PN	**Pn**		**02 58 03.9**		**+0.4**
KONT	**Konya--Tatoy**	**2.69**	**68**	*e*Pn	**Pn**		**02 58 03.9**		**+0.4**
KIZT	**Kizilcal**	**2.84**	**47**	*e*PN	**Pn**		**02 58 06.8**		**+1.2**
KIZT	**Kizilcal**	**2.84**	**47**	*e*Pn	**Pn**		**02 58 06.8**		**+1.2**
BALB	**Balikesir**	**2.86**	**339**	*e*PN	**Pn**		**02 58 06.1**		**+0.2**
BALB	**Balikesir**	**2.86**	**339**	*e*Pn	**Pn**		**02 58 06.1**		**+0.3**
CHOS	**Chios island**	**2.87**	**300**	*e*P	**Pn**		**02 58 06.6**		**+0.6**
CHOS	**Chios island**	**2.87**	**300**	P	**Pn**		**02 58 06.3**		**+0.3**
CHOS				S	**Sn**		**02 58 41.0**		**+0.4**
CHOS	**Chios island**	**2.87**	**300**	P	**Pn**		**02 58 06.3**		**+0.3**
CHOS				S	**Sn**		**02 58 41.0**		**+0.4**
APE	**Apeiranthos**	**2.95**	**273**	*e*PN	**Pn**		**02 58 07.9**		**+0.9**
APE	**Apeiranthos**	**2.95**	**273**	P	**Pn**		**02 58 07.6**		**+0.6**
APE	**Apeiranthos**	**2.95**	**273**	*e*P	**Pn**		**02 58 07.3**		**+0.3**
APE	**Apeiranthos**	**2.95**	**273**	P	**Pn**		**02 58 07.5**		**+0.5**
APE				S	**Sn**		**02 58 43.3**		**+0.8**
APE	**Apeiranthos**	**2.95**	**273**	P	**Pn**		**02 58 07.5**		**+0.5**
APE	**Apeiranthos**	**2.95**	**273**	*e*Pn	**Pn**		**02 58 07.9**		**+0.9**
APE				S	**Sn**		**02 58 43.3**		**+0.8**
ERMK	**Ermenek**	**2.99**	**95**	*i* P	**Pn**		**02 58 10.4**		**+3.2**
ERMK				*i* S	**Sn**		**02 58 50.5**		**+7.0**
ERMK	**Ermenek**	**2.99**	**95**	*i* P	**Pn**		**02 58 10.9**		**+3.3**
ZKR	**Zakros**	**3.06**	**233**	*e*P	**Pn**		**02 58 10.5**		**+2.0**
ZKR	**Zakros**	**3.06**	**233**	P	**Pn**		**02 58 09.9**		**+1.4**
ZKR	**Zakros**	**3.06**	**233**	P	**Pn**		**02 58 09.9**		**+1.4**
THR3	**Thira Island,**	**3.11**	**261**	P	**Pn**		**02 58 10.5**		**+1.2**
THR3	**Thira Island,**	**3.11**	**261**	P	**Pn**		**02 58 10.5**		**+1.2**
PRK	**Paraskevi**	**3.24**	**315**	P	**Pn**		**02 58 11.4**		**+0.3**
PRK	**Paraskevi**	**3.24**	**315**	*e*P	**Pn**		**02 58 11.1**		**0.0**
PRK	**Paraskevi**	**3.24**	**315**	P	**Pn**		**02 58 11.2**		**+0.1**
PRK				S	**Sn**		**02 58 50.2**		**+0.4**
PRK	**Paraskevi**	**3.24**	**315**	P	**Pn**		**02 58 11.2**		**+0.1**
PRK				S	**Sn**		**02 58 50.2**		**+0.4**
NPS	**Neapolis**	**3.38**	**241**	P	**Pn**		**02 58 14.1**		**+1.1**
NPS	**Neapolis**	**3.38**	**241**	*e*P	**Pn**		**02 58 13.7**		**+0.7**
NPS	**Neapolis**	**3.38**	**241**	P	**Pn**		**02 58 14.1**		**+1.1**
SIGR	**SIGRI**	**3.46**	**311**	P	**Pn**		**02 58 16.4**		**+2.5**
SIGR	**SIGRI**	**3.46**	**311**	P	**Pn**		**02 58 16.6**		**+2.5**
LEF	**Lefka**	**3.51**	**121**	*e*PN	**Pn**		**02 58 16.0**		**+1.2**
LEF	**Lefka**	**3.51**	**121**	*e*Pn	**Pn**		**02 58 16.0**		**+1.2**
LAST	**Lasithi**	**3.52**	**240**	*e*P	**Pn**		**02 58 15.7**		**+0.7**
LAST	**Lasithi**	**3.52**	**240**	P	**Pn**		**02 58 16.4**		**+1.4**
LAST				S	**Sn**		**02 58 58.8**		**+2.1**
LAST	**Lasithi**	**3.52**	**240**	P	**Pn**		**02 58 16.4**		**+1.4**
ARMT	**Armutlu**	**3.59**	**356**	*e*PN	**Pn**		**02 58 17.2**		**+1.2**
ARMT	**Armutlu**	**3.59**	**356**	*e*Pn	**Pn**		**02 58 17.2**		**+1.2**
GULT	**Gulveren**	**3.60**	**16**	*e*PN	**Pn**		**02 58 16.9**		**+0.9**
GULT	**Gulveren**	**3.60**	**16**	*e*Pn	**Pn**		**02 58 16.9**		**+0.9**
SULT	**Sultanhani-AKS**	**3.63**	**69**	*e*PN	**Pn**		**02 58 18.4**		**+2.0**
IKL	**Isikli**	**3.67**	**100**	*e*PN	**Pn**		**02 58 18.7**		**+1.6**
IDI	**Anoyia**	**3.88**	**246**	P	**Pn**		**02 58 21.6**		**+1.7**
IDI	**Anoyia**	**3.88**	**246**	*e*P	**Pn**		**02 58 21.6**		**+1.7**
IDI	**Anoyia**	**3.88**	**246**	P	**Pn**		**02 58 21.6**		**+1.7**
LFK	**Lefkose**	**3.89**	**115**	*e*PN	**Pn**		**02 58 21.8**		**+1.8**
GELI	**Tayfur-Gelibol**	**4.03**	**329**	*e*PN	**Pn**		**02 58 22.0**		**+0.1**
GELI	**Tayfur-Gelibol**	**4.03**	**329**	*e*Pn	**Pn**		**02 58 22.0**		**0.0**
SIVA	**Sivas**	**4.07**	**243**	*e*P	**Pn**		**02 58 24.8**		**+2.3**
SIVA	**Sivas**	**4.07**	**243**	P	**Pn**		**02 58 24.2**		**+1.7**
SIVA	**Sivas**	**4.07**	**243**	P	**Pn**		**02 58 24.2**		**+1.7**
GADA	**Gvkgeada**	**4.13**	**322**	*e*PN	**Pn**		**02 58 23.5**		**+0.2**
GADA	**Gvkgeada**	**4.13**	**322**	*e*Pn	**Pn**		**02 58 23.5**		**+0.2**
VLY	**Voula,Athens**	**4.40**	**283**	P	**Pn**		**02 58 31.2**		**+4.2**
VLY	**Voula,Athens**	**4.40**	**283**	P	**Pn**		**02 58 31.2**		**+4.2**
BRTR	**Keskin Array B** 0.7nm,0.3s,baz=231,slow=16,SNR=23	**4.43**	**50**	Pn	**Pn**		**02 58 28.6**		**+1.1**
BRTR				Pg	**Pg**		**02 58 38.7**		**-6.4**
	0.7nm,0.3s,baz=228,slow=15,SNR=8.6								
BRTR				Sn	**Sn**		**02 59 21.8**		**+2.6**
	0.5nm,0.3s,baz=229,slow=26,SNR=5.9								
BRTR				Lg			02 59 38.6		
	0.1nm,0.3s,baz=189,slow=22,SNR=2.7								
BRTR	**Keskin Array B**	**4.43**	**50**	Pn	**Pn**		**02 58 28.5**		**+1.0**
KARN	**Karanos**	**4.56**	**251**	*e*P	**Pn**		**02 58 31.0**		**+1.8**
KARN	**Karanos**	**4.56**	**251**	P	**Pn**		**02 58 30.9**		**+1.7**
KARN	**Karanos**	**4.56**	**251**	P	**Pn**		**02 58 30.9**		**+1.7**
KARA	**Karaisali**	**4.68**	**85**	*e*PN	**Pn**		**02 58 32.7**		**+1.8**
VLI	**Veliai**	**5.04**	**269**	P	**Pn**		**02 58 38.8**		**+3.0**
VLI	**Veliai**	**5.04**	**269**	*e*P	**Pn**		**02 58 38.0**		**+2.2**
VLI	**Veliai**	**5.04**	**269**	P	**Pn**		**02 58 38.8**		**+3.0**
NVR	**Nevrokopi**	**6.03**	**318**	P	**Pn**		**02 58 50.1**		**+0.7**
NVR	**Nevrokopi**	**6.03**	**318**	P	**Pn**		**02 58 50.1**		**+0.7**
HMAT	**Matruh** baz=200	**6.12**	**197**	P	**Pn**		**02 58 50.3**		**-0.4**
HMAT				AMP			03 00 00.0		
	comp=N,50μm,0.5s,logA/T=5.0,baz=200								
HMAT	**Matruh**	**6.12**	**197**	P	**Pn**		**02 58 50.3**		**-0.4**
SLUM	**Slum** baz=217	**6.39**	**212**	P	**Pn**		**02 58 54.2**		**-0.2**
SLUM	**Slum**	**6.39**	**212**	P	**Pn**		**02 58 54.2**		**-0.2**
HBRG	**Burj al 'Arab** baz=175	**6.41**	**175**	P	**Pn**		**02 58 53.1**		**-1.5**
HBRG	**Burj al 'Arab**	**6.41**	**175**	P	**Pn**		**02 58 53.1**		**-1.5**
GRG	**Griva**	**6.63**	**309**	P	**Pn**		**02 58 59.7**		**+2.1**
GRG	**Griva**	**6.63**	**309**	P	**Pn**		**02 58 59.7**		**+2.1**
KOT	**Kottamia** baz=160	**7.36**	**162**	P	**Pn**		**02 59 06.0**		**-1.7**
KOT	**Kottamia**	**7.36**	**162**	P	**Pn**		**02 59 06.0**		**-1.7**
HHAG	**Hagoal** baz=158	**7.41**	**160**	P	**Pn**		**02 59 07.0**		**-1.4**
HHAG	**Hagoal**	**7.41**	**160**	P	**Pn**		**02 59 07.0**		**-1.4**
HNAT	**Natroun** baz=169	**7.42**	**170**	P	**Pn**		**02 59

BERNI	**Berninapass**	0.59	2	*e*Pg		Pg	03 10 53.0	+0.1
	254nm,0.2s							
BERNI	**Berninapass**	0.59	2	⇓*i*Pg		Pg	03 10 53.0	+0.1
BERNI				*e*Sg		Sg	03 11 01.3	+0.8
BERNI	**Berninapass**	0.59	2	Pg		Pg	03 10 53.1	+0.2
BERNI				Sg		Sg	03 11 01.1	+0.6
BERNI	**Berninapass**	0.59	2	*e*Pg		Pg	03 10 53.0	+0.1
	254nm,0.2s							
BERNI				Sg		Sg	03 11 01.1	+0.6
BALD	**Monte Baldo**	0.60	103	⇑*e*Pg		Pg	03 10 52.3	-0.7
BALD				*e*Sg		Sg	03 11 00.4	-0.4
BALD	**Monte Baldo**	0.60	103	*e*Pg		Pg	03 10 52.3	-0.7
BALD				*e*Sg		Sg	03 11 00.4	-0.3
MUGIO	**Muggio**	0.67	279	*e*Pg		Pg	03 10 53.5	-0.8
	455nm,0.3s							
MUGIO	**Muggio**	0.67	279	⇑*e*P		Pg	03 10 53.3	-1.0
MUGIO	**Muggio**	0.67	279	*e*Pg		Pg	03 10 53.5	-0.8
	455nm,0.3s							
VDL	**Val di Lei**	0.76	331	*e*Pg		Pg	03 10 56.2	+0.1
	232nm,0.2s							
VDL	**Val di Lei**	0.76	331	*e*Pg		Pg	03 10 56.2	+0.1
	232nm,0.2s							
TUE	**Stuetta**	0.79	326	Pg		Pg	03 10 56.5	-0.1
TUE				Sg		Sg	03 11 06.6	-0.2
	67nm,0.2s							
TUE	**Stuetta**	0.79	326	Pg		Pg	03 10 56.5	-0.1
TUE				Sg		Sg	03 11 06.6	-0.2
	67nm,0.2s							
FUORN	**Ofenpass-Fuorn**	0.82	13	*e*Pg		Pg	03 10 57.1	-0.1
	219nm,0.4s							
FUORN	**Ofenpass-Fuorn**	0.82	13	*e*P		Pg	03 10 57.3	+0.1
FUORN	**Ofenpass-Fuorn**	0.82	13	Pg		Pg	03 10 57.4	+0.2
FUORN				Sg		Sg	03 11 08.8	+0.9
FUORN	**Ofenpass-Fuorn**	0.82	13	Pg		Pg	03 10 57.4	+0.2
FUORN				Sg		Sg	03 11 08.8	+0.9
DAVOX	**Davos/Dischmat**	0.96	356	*e*Pg		Pg	03 11 00.1	+0.2
	271nm,0.5s							
DAVOX	**Davos/Dischmat**	0.96	356	⇓*i*P		Pg	03 11 00.1	+0.2
DAVOX	**Davos/Dischmat**	0.96	356	Pg		Pg	03 11 00.2	+0.3
DAVOX				Sg		Sg	03 11 13.1	+0.7
DAVOX	**Davos/Dischmat**	0.96	356	*e*Pg		Pg	03 11 00.1	+0.2
	271nm,0.5s							
DAVOX				Sg		Sg	03 11 13.1	+0.7
APPI	**Appiano**	1.08	52	Pn		Pn	03 11 01.5	-1.6
APPI				Sn		Sn	03 11 15.8	-2.6
	180nm,0.3s							
APPI	**Appiano**	1.08	52	Pn		Pn	03 11 01.5	-1.6
FUSIO	**Fusio**	1.12	305	*e*Pg		Pg	03 11 02.2	-0.7
	388nm,0.4s							
FUSIO	**Fusio**	1.12	305	*e*P		Pg	03 11 02.3	-0.6
FUSIO	**Fusio**	1.12	305	*e*P		Pg	03 11 02.3	-0.6
BOB	**Bobbio (Coli)**	1.12	200	Pn		Pn	03 11 04.7	+1.0
	119nm,0.4s							
BOB	**Bobbio (Coli)**	1.12	200	Pn		Pn	03 11 04.7	+1.0
	119nm,0.4s							
CTI	**Castel Tesino**	1.18	78	Pn		Pn	03 11 03.4	-1.1
	67nm,2.8s							
CTI	**Castel Tesino**	1.18	78	Pn		Pn	03 11 03.4	-1.1
	67nm,2.8s							
TEOL	**Teolo**	1.27	111	⇑*e*Pg		Pg	03 11 05.3	-0.5
TEOL				*e*Sg		Sg	03 11 22.0	-0.2
TEOL	**Teolo**	1.27	111	*e*Pg		Pg	03 11 05.3	-0.5
TEOL				*e*Sg		Sg	03 11 22.0	-0.2
ORO	**Oropa**	1.42	263	Pn		Pn	03 11 06.8	-1.0
	51nm,0.2s							
ORO	**Oropa**	1.42	263	Pn		Pn	03 11 06.8	-1.0
	51nm,0.2s							
MMK	**Mattmark**	1.43	280	Pn		Pn	03 11 08.1	+0.2
MMK				Sn		Sn	03 11 26.8	-0.2
MMK	**Mattmark**	1.43	280	Pn		Pn	03 11 08.1	+0.2
MMK				Sn		Sn	03 11 26.8	-0.2
ERBM	**Eremo**	1.44	168	Pn		Pn	03 11 09.7	+1.7
ERBM	**Eremo**	1.44	168	Pn		Pn	03 11 09.7	+1.7
FAU	**Forcella Aurin**	1.45	73	⇓*e*Pg		Pg	03 11 08.4	-0.7
FAU	**Forcella Aurin**	1.45	73	*e*Pg		Pg	03 11 08.4	-0.8
SC2M	**Scurtabo**	1.46	193	Pn		Pn	03 11 08.2	-0.1
SC2M				Sn		Sn	03 11 27.8	+0.2
	82nm,0.3s							
SC2M	**Scurtabo**	1.46	193	Pn		Pn	03 11 08.2	-0.1
SC2M				Sn		Sn	03 11 27.8	+0.2
	82nm,0.3s							
DAVA	**Damuels**	1.47	357	⇑*e*Pg		Pg	03 11 09.8	+0.2
	SNR=22							
DAVA				⇓*i*Sn		Sn	03 11 27.5	-0.4
DAVA				⇓*i*Sg		Sg	03 11 29.3	+0.7
	52nm,0.5s							
DAVA	**Damuels**	1.47	357	Pg		Pg	03 11 09.8	+0.2
	SNR=22							
DAVA				Sn		Sn	03 11 27.5	-0.4
DAVA				Sg		Sg	03 11 29.3	+0.7
	52nm,0.5s							
VARN	**Col Varnada, M**	1.49	83	⇑*e*Pg		Pg	03 11 09.4	-0.6
VARN				*e*Sg		Sg	03 11 29.8	+0.5
VARN	**Col Varnada, M**	1.49	83	*e*Pg		Pg	03 11 09.4	-0.6
VARN				*e*Sg		Sg	03 11 29.8	+0.5
BNALP	**Bannalp**	1.51	315	⇓*i*P		Pn	03 11 10.0	+1.0
BNALP	**Bannalp**	1.51	315	⇓*i*P		Pn	03 11 10.0	+1.0
TRAV	**Traversella**	1.60	260	Pn		Pn	03 11 09.3	-1.0
TRAV				Sn		Sn	03 11 31.8	+0.5
	75nm,0.3s							
TRAV	**Traversella**	1.60	260	Pn		Pn	03 11 09.3	-1.0
TRAV				Sn		Sn	03 11 31.8	+0.5
	75nm,0.3s							
CSO	**Casso**	1.69	74	⇓*e*Pg		Pg	03 11 13.1	-0.8
CSO				*e*Sg		Sg	03 11 35.9	+0.2
CSO	**Casso**	1.69	74	*e*Pg		Pg	03 11 13.1	-0.7
CSO				*e*Sg		Sg	03 11 35.9	+0.2
MOTA	**Moosalm**	1.71	26	⇓*e*Pg		Pg	03 11 13.4	-0.7
	SNR=23							
MOTA				⇓*i*Sn		Sn	03 11 32.9	-0.9
MOTA				⇑*i*Sg		Sg	03 11 36.3	0.0
	11nm,0.4s							
MOTA	**Moosalm**	1.71	26	Pg		Pg	03 11 13.4	-0.8
	SNR=23							
MOTA				Sn		Sn	03 11 32.9	-0.9
MOTA				Sg		Sg	03 11 36.3	0.0
	11nm,0.4s							
CAE	**Caneva**	1.72	83	⇑*e*Pg		Pg	03 11 12.7	-1.7
CAE				*e*Sg		Sg	03 11 36.9	+0.2
CAE	**Caneva**	1.72	83	*e*Pg		Pg	03 11 12.7	-1.7
CAE				*e*Sg		Sg	03 11 36.9	+0.2
RETA	**Reutte**	1.75	17	⇓*e*Pg		Pg	03 11 15.3	+0.3
	SNR=7.5							
RETA				⇑*i*Sg		Sg	03 11 38.1	+0.5
	9.9nm,0.3s							
RETA	**Reutte**	1.75	17	Pg		Pg	03 11 15.3	+0.3
	SNR=7.5							
RETA				Sg		Sg	03 11 38.1	+0.5
	9.9nm,0.3s							
CIMO	**Cimolais**	1.77	73	⇑*e*Pg		Pg	03 11 14.3	-1.2
CIMO				*e*Sg		Sg	03 11 38.5	+0.1
CIMO	**Cimolais**	1.77	73	*e*Pg		Pg	03 11 14.3	-1.2
CIMO				*e*Sg		Sg	03 11 38.5	0.0
WTTA	**Wattenberg**	1.83	38	⇑*e*Pg		Pg	03 11 16.1	-0.6
	SNR=28							
WTTA				⇑*i*Sn		Sn	03 11 35.9	-1.1
WTTA				⇓*i*Sg		Sg	03 11 40.6	+0.2
	10.0nm,0.3s							
WTTA	**Wattenberg**	1.83	38	Pg		Pg	03 11 16.1	-0.6
	SNR=28							
WTTA				Sn		Sn	03 11 35.9	-1.1
WTTA				Sg		Sg	03 11 40.6	+0.2
	10.0nm,0.3s							
MLNI	**Malnisio**	1.86	79	*e*Pn		Pn	03 11 15.4	+1.6
MLNI				*e*Sn		Sn	03 11 40.1	+2.6
MLNI	**Malnisio**	1.86	79	*e*Pn		Pn	03 11 15.4	+1.6
MLNI				*e*Sn		Sn	03 11 40.1	+2.6
WATA	**Walderalm**	1.87	35	⇓*e*Pg		Pg	03 11 16.9	-0.4
	SNR=12							
WATA				⇓*i*Sg		Sg	03 11 41.9	+0.4
	9.3nm,0.4s							
WATA	**Walderalm**	1.87	35	Pg		Pg	03 11 16.9	-0.4
	SNR=12							
WATA				Sg		Sg	03 11 41.9	+0.4
	9.3nm,0.4s							
CSMI	**Casera Mimoias**	1.98	69	*e*Pn		Pn	03 11 16.9	+1.5
CSMI				*e*Sn		Sn	03 11 43.9	+3.5
CSMI	**Casera Mimoias**	1.98	69	*e*Pn		Pn	03 11 16.9	+1.5
CSMI				*e*Sn		Sn	03 11 43.9	+3.5
ABTA	**Abfaltersbach**	1.98	61	⇑*e*Pg		Pg	03 11 17.5	-1.9
	SNR=20							
ABTA				⇓*i*Sg		Sg	03 11 44.3	-0.8
	13nm,0.2s							
ABTA	**Abfaltersbach**	1.98	61	Pg		Pg	03 11 17.5	-1.9
	SNR=20							
ABTA				Sg		Sg	03 11 44.3	-0.7
	13nm,0.2s							
FVI	**Forni Avoltri**	2.09	67	Pg		Pg	03 11 20.3	-1.2
FVI	**Forni Avoltri**	2.09	67	Pg		Pg	03 11 20.3	-1.2
LPG	**La Plagne**	2.29	263	*e*Pg		Pg	03 11 26.2	+0.8
LPG				*e*Sn		Sn	03 11 47.5	-0.8
	SNR=1.0							
LPG				*e*Sg		Sg	03 11 56.4	+1.3
	15nm,0.4s,SNR=1.0							
LPG	**La Plagne**	2.29	263	*e*Pn		Pn	03 11 20.8	+1.0
LPG				*e*Pg		Pg	03 11 26.2	+0.8
LPG				*e*Sn		Sn	03 11 47.5	-0.8
LPG				*e*Sg		Sg	03 11 56.4	+1.3
LPG	**La Plagne**	2.29	263	*e*Pg		Pg	03 11 26.2	+0.8
LPG				*e*Sn		Sn	03 11 47.5	-0.8
	SNR=1.0							
LPG				*e*Sg		Sg	03 11 56.4	+1.3
	7.3nm,0.4s,SNR=1.0							
LPL	**La Plagne**	2.30	263	*e*Pn		Pn	03 11 21.3	+1.4
	SNR=1.0							
LPL				*e*Sn		Sn	03 11 48.7	+0.1
LPL				*e*Sg		Sg	03 11 56.3	+0.8
	11nm,0.4s,SNR=1.0							
VINO	**Villanova**	2.33	78	⇓*e*Pn		Pn	03 11 21.2	+0.9
VINO				*e*Sn		Sn	03 11 52.4	+3.1
VINO	**Villanova**	2.33	78	*e*Pn		Pn	03 11 21.2	+0.9
VINO				*e*Sn		Sn	03 11 52.3	+3.0
BBS	**Basel-Blauen**	2.37	315	Pn		Pn	03 11 23.4	+2.6
BBS				Sg		Sg	03 11 58.3	+0.7
BBS	**Basel-Blauen**	2.37	315	Pn		Pn	03 11 23.4	+2.6
BBS				Sg		Sg	03 11 58.3	+0.7
FELD	**Feldberg im Sc**	2.46	327	Pn		Pn	03 11 23.5	+1.4
FELD				Sg		Sg	03 12 00.7	+0.1
FELD	**Feldberg im Sc**	2.46	327	Pn		Pn	03 11 23.5	+1.4
FELD				Sg		Sg	03 12 00.7	+0.1
MBDF	**Montbardon**	2.52	245	*e*Pn		Pn	03 11 23.3	+0.4
MBDF				*e*Sn		Sn	03 11 53.5	-0.5
	4.8nm,0.3s,SNR=1.0							
MBDF	**Montbardon**	2.52	245	*e*Pn		Pn	03 11 23.3	+0.4
MBDF				*e*Sn		Sn	03 11 53.5	-0.5
	2.4nm,0.3s,SNR=1.0							
SAOF	**Saorge**	2.52	224	Pn		Pn	03 11 23.0	+0.1
SAOF	**Saorge**	2.52	224	Pn		Pn	03 11 23.0	+0.1
SBF	**Sospel**	2.67	224	*e*Pn		Pn	03 11 25.8	+0.8
	SNR=1.0							
SBF				*e*Sn		Sn	03 11 58.0	+0.3
	SNR=1.0							
SBF				*e*Sg		Sg	03 12 09.1	+1.8
	13nm,0.4s,SNR=1.0							
SBF	**Sospel**	2.67	224	*e*Pn		Pn	03 11 25.8	+0.8
	SNR=1.0							
SBF				*e*Sn		Sn	03 11 58.0	+0.3
	SNR=1.0							
SBF				*e*Sg		Sg	03 12 09.1	+1.8
	6.7nm,0.4s,SNR=1.0							
VOY	**Vojsko**	2.73	84	*e*Pn		Pn	03 11 32.9	+7.1
VOY				*e*Sg		Sg	03 12 06.5	-2.7
VOY	**Vojsko**	2.73	84	*e*Pn		Pn	03 11 26.5	+0.7
VOY				*e*Sn		Sg	03 12 06.5	-2.7
VOY	**Vojsko**	2.73	84	*e*Sg		Sg	03 12 06.5	-2.7
CABF	**La Chapelle**	2.82	288	*e*Pg		Pg	03 11 35.9	+0.4
	SNR=1.0							
CABF				*e*Sn		Sn	03 12 00.8	-0.5
CABF				*e*Sg		Sg	03 12 12.1	0.0
	11nm,0.6s							
CABF	**La Chapelle**	2.82	288	*e*Pn		Pn	03 11 27.1	+0.1
CABF				*e*Pg		Pg	03 11 35.9	+0.4
CABF				*e*Sn		Sn	03 12 00.8	-0.5
CABF				*e*Sg		Sg	03 12 12.1	0.0
CABF	**La Chapelle**	2.82	288	*e*Pn		Pn	03 11 27.1	+0.1
	SNR=1.0							
CABF	**La Chapelle**	2.82	288	*e*Pg		Pg	03 11 35.9	+0.4
	SNR=1.0							
CABF				*e*Sn		Sn	03 12 00.8	-0.5
CABF				*e*Sg		Sg	03 12 12.1	0.0
	5.5nm,0.6s							
MOF	**Molkenrain**	2.82	317	Pn		Pn	03 11 27.9	+0.9
MOF	**Molkenrain**	2.82	317	Pn		Pn	03 11 27.9	+0.9
HINF	**Hinteralfeld**	2.93	314	*e*Pn		Pn	03 11 29.4	+0.8
	SNR=1.0							
HINF				*e*Sn		Sn	03 12 01.5	-2.6
	SNR=1.0							
HINF				*e*Sg		Sg	03 12 15.1	-0.6
	6.0nm,0.3s,SNR=1.0							
ORIF	**Oris-en-Rattie**	3.03	254	*e*Pn		Pn	03 11 30.7	+0.7
	SNR=1.0							
ORIF				*e*Sn		Sn	03 12 06.1	-0.5
	8.5nm,0.4s							
ORIF	**Oris-en-Rattie**	3.03	254	*e*Pn		Pn	03 11 30.7	+0.7
	SNR=1.0							
ORIF				*e*Sn		Sn	03 12 06.1	-0.5
	4.2nm,0.4s							
ECH	**Echery**	3.08	322	Pn		Pn	03 11 31.8	+1.2
ECH	**Echery**	3.08	322	Pn		Pn	03 11 31.8	+1.2
CDF	**Champ du Feu**	3.18	325	*e*Pn		Pn	03 11 33.1	+1.1
	SNR=1.0							
CDF				*e*Sn		Sn	03 12 08.1	-2.2
CDF				*e*Sg		Sg	03 12 22.3	-1.4
	7.9nm,0.4s							
FRF	**La Foret Royal**	3.29	228	*e*Pn		Pn	03 11 33.9	+0.5
	SNR=1.0							
FRF				*e*Sn		Sn	03 12 12.6	-0.2
	3.5nm,0.4s,SNR=1.0							
FRF	**La Foret Royal**	3.29	228	*e*Pn		Pn	03 11 33.9	+0.5
	SNR=1.0							
FRF				*e*Sn		Sn	03 12 12.6	-0.2
	1.8nm,0.4s,SNR=1.0							
HAU	**Haudompre**	3.31	312	*e*Pn		Pn	03 11 34.4	+0.6
	SNR=1.0							
HAU				*e*Sn		Sn	03 12 15.4	+1.9
HAU				*e*Sg		Sg	03 12 26.5	-1.4
	8.4nm,0.3s,SNR=1.0							
PGF	**Pioggiola**	3.35	193	*e*Pn		Pn	03 11 35.2	+0.9
PGF				*e*Sn		Sn	03 12 12.1	-2.3
	3.6nm,0.4s							
PGF	**Pioggiola**	3.35	193	*e*Pn		Pn	03 11 35.2	+0.9
PGF				*e*Sn		Sn	03 12 12.1	-2.3
	1.8nm,0.4s							
LMR	**La Mourre**	3.52	226	*e*Pn		Pn	03 11 35.9	-0.7
	SNR=1.0							
LMR				*e*Sn		Sn	03 12 17.5	-1.0
	3.1nm,0.3s							
LMR	**La Mourre**	3.52	226	*e*Pn		Pn	03 11 35.9	-0.7
	SNR=1.0							
LMR				*e*Sn		Sn	03 12 17.5	-1.0
	1.5nm,0.3s							
SMRF	**Simiane la Rot**	3.64	241	*e*Pn		Pn	03 11 39.4	+1.1
	SNR=1.0							
SMRF				*e*Sn		Sn	03 12 20.5	-1.0
	2.9nm,0.4s							
SMRF	**Simiane la Rot**	3.64	241	*e*Pn		Pn	03 11 39.4	+1.1
	SNR=1.0							
SMRF				*e*Sn		Sn	03 12 20.5	-1.0
	1.5nm,0.4s							
THEF	**They Montfort**	3.64	313	Pn		Pn	03 11 39.3	+1.0
THEF	**They Montfort**	3.64	313	Pn		Pn	03 11 39.3	+1.0
VIVF	**Saint-Julien-l**	3.87	257	*e*Pn		Pn	03 11 41.7	+0.2
	SNR=1.0							
VIVF				*e*Sn		Sn	03 12 25.8	-1.4
	0.9nm,0.2s							
VIVF	**Saint-Julien-l**	3.87	257	*e*Pn		Pn	03 11 41.7	+0.2
	SNR=1.0							
VIVF				*e*Sn		Sn	03 12 25.8	-1.4
	0.4nm,0.2s							
KHC	**Kasperske Hory**	4.11	35	*e*PN		Pn	03 11 45.9	+1.2
KHC				*e*PG		Pg	03 11 58.6	-1.5
KHC				*e*SN		Sn	03 12 35.2	+2.2
KHC				*e*SG		Sg	03 12 52.7	-0.6
	comp=Z,6.2nm,0.8s							
KHC	**Kasperske Hory**	4.11	35	Pn		Pn	03 11 45.9	+1.2
SFTF	**Sexfontaines**	4.14	307	*e*Pn		Pn	03 11 45.6	+0.4
MEZF	**Maizieres J'vi**	4.30	310	*e*Pn		Pn	03 11 47.1	-0.3
SMF	**Signal de Mont**	4.34	283	*e*Pn		Pn	03 11 48.3	+0.3
	SNR=1.0							
SMF				*e*Sn		Sn	03 12 37.2	-1.7
	comp=Z,2.9nm,0.2s,SNR=1.0							
LOR	**Lormes**	4.47	291	*e*Pn		Pn	03 11 50.0	+0.3
	SNR=1.0							
LOR				*e*Sn		Sn	03 12 39.4	-2.6
	comp=Z,2.1nm,0.3s							
SSF	**Saint Saulge**	4.65	288	*e*Pn		Pn	03 11 52.9	+0.7
SSF	**Saint Saulge**	4.65	288	*e*Pn		Pn	03 11 52.9	+0.7
LASF	**Ste Croix**	4.69	250	*e*Pn		Pn	03 11 52.7	0.0
LASF				*e*Sn		Sn	03 12 45.3	-2.1
	comp=Z,0.9nm,0.3s							
LASF	**Ste Croix**	4.69	250	*e*Pn		Pn	03 11 52.7	0.0
LASF				*e*Sn		Sn	03 12 45.3	-2.1
	comp=Z,0.4nm,0.3s							
AVF	**Avril sur Loir**	4.70	284	*e*Pn		Pn	03 11 52.0	-0.9
	SNR=1.0							
MOX	**Moxa**	4.95	12	*e*SN		Sn	03 12 54.6	+0.9
MOX	**Moxa**	4.95	12	*e*Sn		Sn	03 12 54.6	+0.9
BGF	**Bois d'Agland**	5.01	281	*e*Pn		Pn	03 11 57.5	+0.3
	SNR=1.0							
BGF				*e*Sn		Sn	03 12 53.0	-2.4
	comp=Z,4.9nm,0.4s							
BGF	**Bois d'Agland**	5.01	281	*e*Pn		Pn	03 11 57.5	+0.3
	SNR=1.0							
BGF				*e*Sn		Sn	03 12 53.0	-2.4
	comp=Z,2.5nm,0.4s							
TCF	**Toulx Ste Croi**	5.43	278	*e*Pn		Pn	03 12 03.1	+0.1
TCF	**Toulx Ste Croi**	5.43	278	*e*Pn		Pn	03 12 03.1	+0.1
CAF	**Calviac**	5.66	264	*e*Pn		Pn	03 12 06.1	+0.1
CAF	**Calviac**	5.66	264	*e*Pn		Pn	03 12 06.1	+0.1
CLL	**Collm**	5.84	19	*e*Sg		Sg	03 13 51.0	+2.1
CLL	**Collm**	5.84	19	*e*Sg		Sg	03 13 51.0	+2.1
RJF	**Les Rejaudoux**	5.97	268	*e*Pn		Pn	03 12 10.6	+0.3
RJF	**Les Rejaudoux**	5.97	268	*e*Pn		Pn	03 12 10.6	+0.3
MTLF	**Montolieu**	6.08	249	*e*Pn		Pn	03 12 12.1	+0.3
MTLF	**Montolieu**	6.08	249	*e*Pn		Pn	03 12 12.1	+0.3
DPC	**Dobruska-Polom**	6.21	41	*e*SG		Sg	03 13 59.7	-0.9
DPC	**Dobruska-Polom**	6.21	41	Sg		Sg	03 13 59.7	-0.9
ETSF	**Etsaut**	8.10	253	*e*Pn		Pn	03 12 39.7	+0.1
	SNR=1.0							
ETSF	**Etsaut**	8.10	253	*e*Pn		Pn	03 12 39.7	+0.1
	SNR=1.0							
QUIF	**Quistinic**	9.25	288	*e*Pn		Pn	03 12 54.2	-1.1
	SNR=1.0							
QUIF	**Quistinic**	9.25	288	*e*Pn		Pn	03 12 54.2	-1.1
	SNR=1.0							

ISCJB ***25*** *03:19:02.7±0.4, 7.°99N±0.°06×59.°04E±0.°06, h10km, mb4.6/57, Error ellipse: s-maj=8.6km s-min=8.0km az=22.5*

IDC ***25*** *03:19:03.4±0.5, 8.°04N×59.°16E, h0km, mb4.3/22, mb1 4.4/23, mb1mx4.3/26, mbtmp4.3/23, Error ellipse: s-maj=15.3km s-min=12.8km az=138.0*

VIE ***25*** *03:19:04.0, 8.°05N×59.°09E, h0km, mb4.3*

NEIC ***25*** *03:19:05.0±0.3, 8.°08N×59.°09E, h10km, mb4.8/29, Error ellipse: s-maj=7.7km s-min=6.4km az=177.0*

CSEM ***25*** *03:19:07.1±0.2, 8.°14N×59.°07E, h21km, mb4.8/32, Error ellipse: s-maj=8.3km s-min=7.4km az=179.0*

ISC 25 03:19:04.8±0.4, 8.°01N±0.°05×59.°10E±0.°06, h10km, (h22km±1.6km: pP-P), n216, s0°99/208, mb4.6/57, 12C-18D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMDO	**Jabal Madar**	14.31	356	⇑P	Pn	03 22 29.9	+2.3
	SNR=11						
WBK	**Wadi Bani Khal**	14.52	360	⇓P	Pn	03 22 32.8	+2.3
	SNR=5.6						
SMDO	**Samad**	15.00	356	⇑P	Pn	03 22 41.2	+4.2
	SNR=11						
ARQ	**Araqi**	15.44	351	P	Pn	03 22 44.2	+1.4
	SNR=13						
HOQ	**Hoqain**	15.58	354	⇑P	Pn	03 22 46.8	+2.2
	SNR=13						
ATD	**Arta Tunnel**	16.39	284	Pn	Pn	03 22 57.4	+2.2
ATD	**Arta Tunnel**	16.39	284	Pn	Pn	03 22 57.4	+2.2
	baz=283,slow=22,SNR=2.5						
NAZ	**Nazwa, Dubai**	17.20	349	⇑P	Pn	03 23 05.4	+0.1
	SNR=5.2						
RDF	**Al-Radifah**	23.48	334	*e*P	P	03 24 13.8	-1.1
KMBO	**Kilima Mbogo**	23.60	248	P	P	03 24 18.0	+1.7
	22nm,0.9s,mb4.6,baz=180,slow=24,SNR=20						
KMBO	**Kilima Mbogo**	23.60	248	P	P	03 24 18.0	+1.7
NAY	**Al-Naaiem**	23.89	334	*e*P	P	03 24 17.6	-1.2
MIB	**Mutribah**	24.33	335	*e*P	P	03 24 22.0	-0.8
GNI	**Garni**	34.48	340	P	P	03 25 56.3	+3.4
	3.6nm,0.5s,mb4.5,baz=183,slow=10,SNR=3.0						
AAK	**Ala-Archa**	37.06	19	P	P	03 26 16.7	+1.7
	0.9nm,0.3s,mb4.1,baz=144,slow=4.2,SNR=7.3						
AAK	**Ala-Archa**	37.06	19	P	P	03 26 16.7	+1.7
LSZ	**Lusaka**	38.39	233	*e*P	P	03 26 23.7	-2.9
	16nm,1.4s,mb4.5						
LSZ	**Lusaka**	38.39	233	P	P	03 26 28.2	+1.6
	3.4nm,0.9s,mb4.1,baz=47,slow=11,SNR=5.7						
BRTR	**Keskin Array

VYHS				ePP		pP	03 28 26.3 +3.6
VYHS	**Vyhne**	**52.69**	**327**	*e*P		**P**	**03 28 19.3 -0.2**
VYHS				epP		pP	03 28 26.3 +3.6
VYHS	**Vyhne**	**52.69**	**327**	*e*P		**P**	**03 28 19.3 -0.2**
	comp=Z,4.7nm,1.1s,mb4.3						
KOLL	**Kolacno**	**52.98**	**327**	*e*P		**P**	**03 28 21.9 +0.3**
KOLL				ePP		pP	03 28 29.0 +4.3
KOLL	**Kolacno**	**52.98**	**327**	*e*P		**P**	**03 28 21.9 +0.3**
KOLL				epP		pP	03 28 29.0 +4.3
KOLL	**Kolacno**	**52.98**	**327**	*e*P		**P**	**03 28 21.9 +0.3**
CONA	**Conrad Observa**	**54.01**	**325**	⇑P		**P**	**03 28 29.3 +0.2**
	comp=Z,14nm,1.3s,mb4.7						
CONA	**Conrad Observa**	**54.01**	**325**	P		**P**	**03 28 29.3 +0.2**
	comp=Z,14nm,1.3s,mb4.7						
MORC	**Moravsky Berou**	**54.14**	**328**	⇑P		**P**	**03 28 30.1 +0.1**
MORC	**Moravsky Berou**	**54.14**	**328**	⇑*i*P		**P**	**03 28 30.1 0.0**
MORC	**Moravsky Berou**	**54.14**	**328**	⇑P		**P**	**03 28 30.1 0.0**
TREC	**Trest**	**54.96**	**327**	*e*P		**P**	**03 28 36.2 +0.1**
TREC				epP		pP	03 28 43.0 +3.7
TREC	**Trest**	**54.96**	**327**	P		**P**	**03 28 36.2 +0.1**
DPC	**Dobruska-Polom**	**55.11**	**328**	*e*P		**P**	**03 28 37.2 +0.1**
DPC				epP		pP	03 28 44.1 +3.8
DPC	**Dobruska-Polom**	**55.11**	**328**	P		**P**	**03 28 37.2 +0.1**
UPC	**Upice**	**55.36**	**328**	*e*P		**P**	**03 28 39.4 +0.5**
UPC				epP		pP	03 28 46.0 +3.9
UPC	**Upice**	**55.36**	**328**	P		**P**	**03 28 39.4 +0.5**
KSP	**Ksiaz**	**55.41**	**328**	*e*P		**P**	**03 28 39.6 +0.3**
KSP				epP		pP	03 28 45.9 +3.4
PGF	**Pioggiola**	**55.76**	**317**	*e*P		**P**	**03 28 41.2 -0.7**
PGF	**Pioggiola**	**55.76**	**317**	*e*P		**P**	**03 28 41.2 -0.7**
PRU	**Pruhonice**	**55.86**	**327**	*e*P		**P**	**03 28 42.9 +0.4**
PRU				epP		pP	03 28 49.6 +3.9
PRU	**Pruhonice**	**55.86**	**327**	P		**P**	**03 28 42.9 +0.4**
KHC	**Kasperske Hory**	**55.93**	**326**	*e*P		**P**	**03 28 42.4 -0.7**
KHC				epP		pP	03 28 49.1 +2.8
KHC	**Kasperske Hory**	**55.93**	**326**	P		**P**	**03 28 42.4 -0.7**
PVCC	**Panska Ves**	**56.14**	**327**	*e*P		**P**	**03 28 43.8 -0.7**
PVCC				epP		pP	03 28 51.5 +3.8
PVCC	**Panska Ves**	**56.14**	**327**	P		**P**	**03 28 43.8 -0.7**
SONM	**Songino Array**	**56.30**	**37**	P		**P**	**03 28 46.4 +0.7**
	comp=Z,2.5nm,1.0s,mb4.2,baz=228,slow=7.2,SNR=13						
SONM	**Songino Array**	**56.30**	**37**	P		**P**	**03 28 46.4 +0.7**
TOA0	**Torodi Ar. Sit**	**56.56**	**280**	*e*P		**P**	**03 28 48.7 +0.6**
TOA0	**Torodi Ar. Sit**	**56.56**	**280**	*e*P		**P**	**03 28 48.7 +0.5**
TORD	**Torodi Ar. Bea**	**56.56**	**280**	P		**P**	**03 28 49.1 +1.0**
	comp=Z,4.1nm,1.0s,mb4.4,baz=90,slow=5.2,SNR=12						
TORD	**Torodi Ar. Bea**	**56.56**	**280**	P		**P**	**03 28 49.1 +0.9**
NKC	**Novy Kostel**	**57.13**	**326**	*e*P		**P**	**03 28 52.2 +0.6**
NKC	**Novy Kostel**	**57.13**	**326**	P		**P**	**03 28 52.2 +0.6**
CLL	**Collm**	**57.40**	**328**	*e*P		**P**	**03 28 53.0 -0.4**
CLL				epP		pP	03 28 55.0 -1.6
CLL				*e*			03 29 00.0
MBDF	**Montbardon**	**58.09**	**318**	*e*P		**P**	**03 28 58.9 +0.4**
MBDF	**Montbardon**	**58.09**	**318**	*e*P		**P**	**03 28 58.9 +0.4**
JOF	**Joensuu**	**58.39**	**345**	*e*p		**P**	**03 28 58.8 -1.4**
	comp=Z,2.5nm,0.7s,mb4.3						
JOF	**Joensuu**	**58.39**	**345**	*e*P		**P**	**03 28 58.8 -1.4**
	comp=Z,2.5nm,0.7s,mb4.3						
LPG	**La Plagne**	**58.41**	**319**	*e*P		**P**	**03 28 59.8 -0.8**
	comp=Z,17nm,1.0s,mb4.7						
LPG	**La Plagne**	**58.41**	**319**	*e*P		**P**	**03 28 59.8 -0.8**
	comp=Z,8.5nm,1.0s,mb4.7						
LPG	**La Plagne**	**58.41**	**319**	*e*P		**P**	**03 28 59.8 -0.8**
	comp=Z,8.5nm,1.0s,mb4.7						
LPL	**La Plagne**	**58.42**	**319**	*e*P		**P**	**03 29 00.0 -0.8**
	comp=Z,27nm,1.3s,mb5.3						
LPL	**La Plagne**	**58.42**	**319**	*e*P		**P**	**03 29 00.0 -0.8**
	comp=Z,13nm,1.3s,mb4.8						
LPL	**La Plagne**	**58.42**	**319**	*e*P		**P**	**03 29 00.0 -0.8**
	comp=Z,13nm,1.3s,mb4.8						
FINES	**FINESS Array B**	**58.64**	**342**	P		**P**	**03 29 01.6 -0.4**
	comp=Z,5.3nm,0.9s,mb4.6,baz=148,slow=7.9,SNR=7.6						
FINES	**FINESS Array B**	**58.64**	**342**	P		**P**	**03 29 01.6 -0.4**
ORIF	**Oris-en-Rattie**	**58.75**	**318**	*e*P		**P**	**03 29 03.4 +0.3**
ORIF	**Oris-en-Rattie**	**58.75**	**318**	*e*P		**P**	**03 29 03.4 +0.3**
KAF	**Kangasniemi**	**59.09**	**343**	*e*p		**P**	**03 29 03.7 -1.4**
	comp=Z,3.4nm,0.8s,mb4.4						
KAF	**Kangasniemi**	**59.09**	**343**	*e*P		**P**	**03 29 03.7 -1.4**
	comp=Z,3.4nm,0.8s,mb4.4						
CDF	**Champ du Feu**	**59.26**	**322**	*e*P		**P**	**03 29 06.2 -0.3**
	comp=Z,45nm,1.2s,mb5.0						
CDF	**Champ du Feu**	**59.26**	**322**	*e*P		**P**	**03 29 06.2 -0.3**
	comp=Z,22nm,1.2s,mb5.1						
CDF	**Champ du Feu**	**59.26**	**322**	*e*P		**P**	**03 29 06.2 -0.3**
	comp=Z,22nm,1.2s,mb5.0						
CABF	**La Chapelle**	**59.27**	**320**	*e*P		**P**	**03 29 06.7 +0.1**
	comp=Z,83nm,1.0s,mb5.4						
CABF	**La Chapelle**	**59.27**	**320**	*e*P		**P**	**03 29 06.7 +0.1**
	comp=Z,41nm,1.0s,mb5.4						
CABF	**La Chapelle**	**59.27**	**320**	*e*P		**P**	**03 29 06.7 +0.1**
	comp=Z,41nm,1.0s,mb5.4						
HINF	**Hinteralfeld**	**59.27**	**322**	*e*P		**P**	**03 29 05.8 -0.8**
	comp=Z,21nm,1.2s,mb4.8						
HINF	**Hinteralfeld**	**59.27**	**322**	*e*P		**P**	**03 29 05.8 -0.8**
	comp=Z,10nm,1.2s,mb4.8						
HINF	**Hinteralfeld**	**59.27**	**322**	*e*P		**P**	**03 29 05.8 -0.8**
	comp=Z,10nm,1.2s,mb4.8						
VIVF	**Saint-Julien-l**	**59.53**	**318**	*e*P		**P**	**03 29 07.7 -0.8**
	comp=Z,14nm,1.2s,mb4.6						
VIVF	**Saint-Julien-l**	**59.53**	**318**	*e*P		**P**	**03 29 07.7 -0.8**
	comp=Z,7.1nm,1.2s,mb4.6						
VIVF	**Saint-Julien-l**	**59.53**	**318**	*e*P		**P**	**03 29 07.7 -0.8**
	comp=Z,7.1nm,1.2s,mb4.6						
HAU	**Haudompre**	**59.66**	**322**	*e*P		**P**	**03 29 08.4 -0.9**
HAU	**Haudompre**	**59.66**	**322**	*e*P		**P**	**03 29 08.4 -0.9**
LASF	**Ste Croix**	**59.81**	**317**	*e*P		**P**	**03 29 10.2 -0.2**
	comp=Z,52nm,1.6s,mb5.0						
LASF	**Ste Croix**	**59.81**	**317**	*e*P		**P**	**03 29 10.2 -0.2**
	comp=Z,26nm,1.6s,mb5.0						
SFTF	**Sexfontaines**	**60.55**	**322**	*e*P		**P**	**03 29 14.9 -0.5**
	comp=Z,35nm,1.0s,mb5.1						
SFTF	**Sexfontaines**	**60.55**	**322**	*e*P		**P**	**03 29 14.9 -0.5**
	comp=Z,35nm,1.0s,mb5.5						
SFTF	**Sexfontaines**	**60.55**	**322**	*e*P		**P**	**03 29 14.9 -0.5**
	comp=Z,18nm,1.0s,mb5.1						
MEZF	**Maizieres J'vi**	**60.65**	**322**	*e*P		**P**	**03 29 15.2 -0.9**
	comp=Z,45nm,1.2s,mb5.2						
MEZF	**Maizieres J'vi**	**60.65**	**322**	*e*P		**P**	**03 29 15.2 -0.9**
	comp=Z,45nm,1.2s,mb5.5						
MEZF	**Maizieres J'vi**	**60.65**	**322**	*e*P		**P**	**03 29 15.2 -0.9**
	comp=Z,22nm,1.2s,mb5.2						
SMF	**Signal de Mont**	**60.71**	**320**	*e*P		**P**	**03 29 15.6 -0.9**
	comp=Z,21nm,1.2s,mb4.8						
SMF	**Signal de Mont**	**60.71**	**320**	*e*P		**P**	**03 29 15.6 -0.9**
	comp=Z,10nm,1.2s,mb4.8						
SMF	**Signal de Mont**	**60.71**	**320**	*e*P		**P**	**03 29 15.6 -0.9**
	comp=Z,10nm,1.2s,mb4.8						
LOR	**Lormes**	**60.93**	**320**	*e*P		**P**	**03 29 17.2 -0.8**
	comp=Z,13nm,1.0s,mb4.7						
LOR	**Lormes**	**60.93**	**320**	*e*P		**P**	**03 29 17.2 -0.8**
	comp=Z,6.7nm,1.0s,mb4.7						
LOR	**Lormes**	**60.93**	**320**	*e*P		**P**	**03 29 17.2 -0.8**
	comp=Z,6.7nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**61.08**	**320**	*e*P		**P**	**03 29 18.1 -0.9**
	comp=Z,13nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**61.08**	**320**	*e*P		**P**	**03 29 18.1 -0.9**
	comp=Z,6.5nm,1.0s,mb4.7						
SSF	**Saint Saulge**	**61.08**	**320**	*e*P		**P**	**03 29 18.1 -0.9**
	comp=Z,6.5nm,1.0s,mb4.7						
AVF	**Avril sur Loir**	**61.08**	**320**	*e*P		**P**	**03 29 18.8 -0.2**
AVF	**Avril sur Loir**	**61.08**	**320**	*e*P		**P**	**03 29 18.8 -0.2**
CAF	**Calviac**	**61.30**	**317**	*e*P		**P**	**03 29 19.9 -0.6**
	comp=Z,12nm,1.2s,mb4.6						
CAF	**Calviac**	**61.30**	**317**	*e*P		**P**	**03 29 19.9 -0.6**
	comp=Z,6.1nm,1.2s,mb4.6						
CAF	**Calviac**	**61.30**	**317**	*e*P		**P**	**03 29 19.9 -0.6**
	comp=Z,6.1nm,1.2s,mb4.6						
BGF	**Bois d'Agland**	**61.32**	**319**	*e*P		**P**	**03 29 20.2 -0.5**
	comp=Z,29nm,0.9s,mb5.1						
BGF	**Bois d'Agland**	**61.32**	**319**	*e*P		**P**	**03 29 20.2 -0.5**
	comp=Z,14nm,0.9s,mb5.1						
BGF	**Bois d'Agland**	**61.32**	**319**	*e*P		**P**	**03 29 20.2 -0.5**
	comp=Z,14nm,0.9s,mb5.1						
GIVF	**Givet**	**61.43**	**323**	*e*P		**P**	**03 29 20.9 -0.4**
GIVF	**Givet**	**61.43**	**323**	*e*P		**P**	**03 29 20.9 -0.4**
TCF	**Toulx Ste Croi**	**61.65**	**319**	*e*P		**P**	**03 29 22.2 -0.7**
	comp=Z,20nm,1.4s,mb4.8						
TCF	**Toulx Ste Croi**	**61.65**	**319**	*e*P		**P**	**03 29 22.2 -0.7**
	comp=Z,10nm,1.4s,mb4.8						
TCF	**Toulx Ste Croi**	**61.65**	**319**	*e*P		**P**	**03 29 22.2 -0.7**
	comp=Z,10nm,1.4s,mb4.8						
BAIF	**Baives**	**61.77**	**323**	*e*P		**P**	**03 29 23.4 -0.3**
	comp=Z,24nm,1.0s,mb5.0						
BAIF	**Baives**	**61.77**	**323**	*e*P		**P**	**03 29 23.4 -0.3**
	comp=Z,12nm,1.0s,mb5.0						
BAIF	**Baives**	**61.77**	**323**	*e*P		**P**	**03 29 23.4 -0.3**
	comp=Z,12nm,1.0s,mb5.0						
RJF	**Les Rejaudoux**	**61.79**	**317**	*e*P		**P**	**03 29 23.4 -0.4**
RJF	**Les Rejaudoux**	**61.79**	**317**	*e*P		**P**	**03 29 23.4 -0.4**
EPF	**Esparros**	**61.92**	**315**	*e*P		**P**	**03 29 23.1 -1.7**
	comp=Z,12nm,1.2s,mb4.6						
EPF	**Esparros**	**61.92**	**315**	*e*P		**P**	**03 29 23.1 -1.7**
	comp=Z,6.2nm,1.2s,mb4.6						
EPF	**Esparros**	**61.92**	**315**	*e*P		**P**	**03 29 23.1 -1.7**
	comp=Z,6.2nm,1.2s,mb4.6						
LFF	**La Frestale**	**62.20**	**317**	*e*P		**P**	**03 29 25.6 -1.0**
	comp=Z,12nm,0.9s,mb4.7						
LFF	**La Frestale**	**62.20**	**317**	*e*P		**P**	**03 29 25.6 -1.0**
	comp=Z,5.9nm,0.9s,mb4.7						
LFF	**La Frestale**	**62.20**	**317**	*e*P		**P**	**03 29 25.6 -1.0**
	comp=Z,5.9nm,0.9s,mb4.7						
ETSF	**Etsaut**	**62.51**	**314**	*e*P		**P**	**03 29 28.1 -0.7**
	comp=Z,37nm,1.5s,mb5.0						
ETSF	**Etsaut**	**62.51**	**314**	*e*P		**P**	**03 29 28.1 -0.7**
	comp=Z,18nm,1.5s,mb5.0						
ETSF	**Etsaut**	**62.51**	**314**	*e*P		**P**	**03 29 28.1 -0.7**
	comp=Z,18nm,1.5s,mb5.0						
SJPF	**Ste Jean**	**63.04**	**314**	*e*P		**P**	**03 29 31.6 -0.7**
	comp=Z,19nm,1.1s,mb4.8						
SJPF	**Ste Jean**	**63.04**	**314**	*e*P		**P**	**03 29 31.6 -0.7**
	comp=Z,9.4nm,1.1s,mb4.8						
SJPF	**Ste Jean**	**63.04**	**314**	*e*P		**P**	**03 29 31.6 -0.7**
	comp=Z,9.4nm,1.1s,mb4.8						
KIC	**Kosan Boka**	**63.31**	**273**	*e*P		**P**	**03 29 35.5 +0.9**
	comp=Z,33nm,1.1s,mb5.4						
KIC	**Kosan Boka**	**63.31**	**273**	*e*P		**P**	**03 29 35.5 +0.9**
	comp=Z,33nm,1.1s,mb5.4						
DBIC	**Dimbokro**	**63.39**	**273**	P		**P**	**03 29 35.9 +0.8**
	comp=Z,4.3nm,0.9s,mb4.6,baz=33,slow=11,SNR=5.5						
DBIC	**Dimbokro**	**63.39**	**273**	P		**P**	**03 29 35.9 +0.8**
TIC	**Toumodi**	**63.55**	**273**	*e*P		**P**	**03 29 37.2 +1.0**
	comp=Z,49nm,1.4s,mb5.3						
TIC	**Toumodi**	**63.55**	**273**	*e*P		**P**	**03 29 37.2 +1.0**
	comp=Z,49nm,1.4s,mb5.3						
LIC	**Lamto**	**63.60**	**273**	*e*P		**P**	**03 29 37.5 +1.0**
	comp=Z,51nm,1.3s,mb5.4						
LIC	**Lamto**	**63.60**	**273**	*e*P		**P**	**03 29 37.2 +0.7**
	comp=Z,53nm,1.3s,mb5.1						
LIC	**Lamto**	**63.60**	**273**	*e*P		**P**	**03 29 37.2 +0.7**
	comp=Z,26nm,1.3s,mb5.1						
LIC	**Lamto**	**63.60**	**273**	*e*P		**P**	**03 29 37.2 +0.7**
	comp=Z,26nm,1.3s,mb5.1						
NOA	**NORSAR Array B**	**63.63**	**336**	P		**P**	**03 29 35.4 -0.5**
	comp=Z,0.6nm,0.7s,mb3.7,baz=332,slow=10,SNR=3.0						
NOA	**NORSAR Array B**	**63.63**	**336**	P		**P**	**03 29 35.3 -0.5**
LDF	**La Druitiere**	**63.90**	**321**	*e*P		**P**	**03 29 36.8 -1.0**
	comp=Z,6.6nm,0.8s,mb4.4						
LDF	**La Druitiere**	**63.90**	**321**	*e*P		**P**	**03 29 36.8 -1.0**
	comp=Z,3.3nm,0.8s,mb4.4						
LDF	**La Druitiere**	**63.90**	**321**	*e*P		**P**	**03 29 36.8 -1.0**
	comp=Z,3.3nm,0.8s,mb4.4						
ESDC	**Sonseca Array**	**64.26**	**310**	P		**P**	**03 29 40.4 0.0**
	comp=Z,3.1nm,0.8s,mb4.4,baz=89,slow=6.0,SNR=20						
ESDC	**Sonseca Array**	**64.26**	**310**	P		**P**	**03 29 40.4 0.0**
KEV	**Kevo**	**65.05**	**348**	*e*p		**P**	**03 29 43.0 -2.0**
	comp=Z,2.3nm,0.7s,mb4.3						
KEV	**Kevo**	**65.05**	**348**	*e*P		**P**	**03 29 43.0 -2.0**
	comp=Z,2.3nm,0.7s,mb4.3						
ARCES	**ARCESS Array B**	**65.18**	**348**	P		**P**	**03 29 44.6 -1.2**
	comp=Z,3.3nm,0.8s,mb4.4,baz=146,slow=5.4,SNR=12						
ARCES	**ARCESS Array B**	**65.18**	**348**	P		**P**	**03 29 44.7 -1.2**
SGMF	**Saint Gilles**	**65.34**	**320**	*e*P		**P**	**03 29 45.9 -1.4**
SGMF	**Saint Gilles**	**65.34**	**320**	*e*P		**P**	**03 29 45.9 -1.4**
KSRS	**Korea Array**	**68.38**	**53**	P		**P**	**03 30 05.2 -1.7**
	comp=Z,1.4nm,0.7s,mb4.1,baz=263,slow=7.4,SNR=6.8						
MAW	**Mawson**	**75.47**	**179**	P		**P**	**03 30 49.6 +0.8**
	comp=Z,3.6nm,1.0s,mb4.3,baz=311,slow=8.2,SNR=5.2						
MAW	**Mawson**	**75.47**	**179**	P		**P**	**03 30 49.6 +0.9**
WRA	**Warramunga Arr**	**79.02**	**112**	P		**P**	**03 31 09.4 -0.3**
	comp=Z,2.4nm,0.7s,mb4.2,baz=297,slow=4.3,SNR=9.7						
WRA	**Warramunga Arr**	**79.02**	**112**	P		**P**	**03 31 09.4 -0.3**
ASAR	**Alice Springs**	**79.47**	**116**	P		**P**	**03 31 11.6 -0.5**
	comp=Z,2.8nm,0.7s,mb4.3,baz=291,slow=5.0,SNR=16						
ASAR	**Alice Springs**	**79.47**	**116**	P		**P**	**03 31 11.6 -0.5**
PDAR	**Pinedale Array**	**128.42**	**349**	PKP	PKPdf		03 38 12.8 +0.6
	comp=Z,1.5nm,1.0s,baz=49,slow=2.7,SNR=9.6						
PDAR	**Pinedale Array**	**128.42**	**349**	PKIKP	PKPdf		03 38 12.8 +0.6
NVAR	**Mina Array Bea**	**133.74**	**357**	PKP	PKPdf		03 38 23.9 +1.5
	comp=Z,1.3nm,0.8s,baz=18,slow=0.9,SNR=6.6						
NVAR	**Mina Array Bea**	**133.74**	**357**	PKIKP	PKPdf		03 38 24.0 +1.6
TXAR	**Lajitas Array**	**139.33**	**337**	PKhKP	PKPpre		03 38 26.4
	comp=Z,0.7nm,0.9s,baz=204,slow=2.7,SNR=3.6						
TXAR				PKP	PKPdf		03 38 33.8 +0.7
	comp=Z,0.6nm,0.9s,baz=57,slow=4.8,SNR=5.6						
TXAR	**Lajitas Array**	**139.33**	**337**	PKIKP	PKPdf		03 38 33.8 +0.7

IDC ***25*** *03:19:39.9±6.5, 29.61S×179.19W, h299km±55km, mb3.5/4, mb1 3.6/5, mb1mx3.3/16, mbtmp3.5/5, Error ellipse: s-maj=51.5km s-min=23.6km az=41.0*

ISC 25 03:19:50.6±1.4, 30.31S±0.1×179.9E±0.3, h356km±19km, n24, σ1§02/28, mb3.5/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**7.86**	**190**	PN	**Pn**	**03 21 44.0**	**+1.0**
PUZ				SN	**S**	**03 23 14.0**	**-0.9**
MWZ	**Matawai**	**8.25**	**193**	PN	**Pn**	**03 21 48.8**	**+1.3**
MWZ				SN	**S**	**03 23 24.0**	**+0.9**
URZ	**Urewera**	**8.26**	**196**	P	**Pn**	**03 21 48.0**	**+0.2**
	1.8nm,0.3s,baz=62,slow=6.7,SNR=14						
URZ				S	**S**	**03 23 29.9**	**+6.4**
	4.5nm,0.3s,baz=122,slow=23,SNR=10						
URZ	**Urewera**	**8.26**	**196**	PN	**Pn**	**03 21 47.7**	**-0.1**
NMHZ	**Naumai**	**9.13**	**195**	PN	**Pn**	**03 21 58.9**	**+0.8**
BKZ	**Black Stump Fm**	**9.27**	**197**	PN	**Pn**	**03 21 58.2**	**-1.5**
BKZ				SN	**S**	**03 23 47.6**	**+2.0**
BHHZ	**Black Hill Sta**	**9.69**	**198**	PN	**Pn**	**03 22 04.5**	**-0.2**
KAHZ	**Kahuranaki**	**9.79**	**194**	PN	**Pn**	**03 22 06.3**	**+0.5**
PNHZ	**Pukenui**	**10.05**	**197**	PN	**Pn**	**03 22 08.3**	**-0.7**
PNHZ				SN	**S**	**03 24 03.6**	**+0.9**
WPHZ	**Waipukurau**	**10.14**	**195**	SN	**S**	**03 24 05.9**	**+1.3**
PRHZ	**Porangahau**	**10.29**	**194**	SN	**S**	**03 24 08.0**	**+0.2**
DVHZ	**Dannevirke**	**10.43**	**196**	SN	**S**	**03 24 10.3**	**-0.5**
BFZ	**Birch Farm**	**10.77**	**195**	PN	**Pn**	**03 22 17.0**	**-0.5**
BFZ				SN	**S**	**03 24 18.1**	**-0.3**
MRZ	**Mangatainoka R**	**10.92**	**198**	PN	**Pn**	**03 22 17.7**	**-1.6**
MRZ				SN	**S**	**03 24 19.6**	**-1.9**
OGWZ	**Otaki Gorge**	**11.17**	**199**	PN	**Pn**	**03 22 21.1**	**-1.2**
OGWZ				SN	**S**	**03 24 27.0**	**-0.2**
KIW	**Kapiti Island**	**11.29**	**200**	SN	**S**	**03 24 29.0**	**-0.7**
STKA	**Stephens Creek**	**32.75**	**257**	P	**P**	**03 25 54.7**	**+3.2**
	6.0nm,1.2s,mb3.7,baz=121,slow=12,SNR=2.9						
ASAR	**Alice Springs**	**41.32**	**268**	P	**P**	**03 27 03.0**	**0.0**
	0.9nm,0.6s,mb3.2,baz=101,slow=7.8,SNR=7.8						
WRA	**Warramunga Arr**	**42.30**	**273**	P	**P**	**03 27 10.6**	**-0.3**
	2.3nm,0.6s,mb3.5,baz=113,slow=7.0,SNR=28						
QSPA	**South Pole Qui**	**59.80**	**180**	P	**P**	**03 29 19.3**	**+0.5**
	0.7nm,0.2s,mb3.7,baz=165,slow=1.4,SNR=3.7						
FINES	**FINESS Array B**	**144.43**	**339**	PKP	PKPdf	03 38 37.6	-6.4
	1.4nm,0.3s,baz=46,slow=4.2,SNR=20						
HFS	**Hagfors**	**148.78**	**347**	PKPbc	PKPbc	03 38 49.9	-5.8
	0.6nm,0.5s,baz=15,slow=6.0,SNR=3.5						
BRTR	**Keskin Array B**	**150.98**	**298**	PKPbc	PKPbc	03 38 58.1	-3.6
	0.3nm,0.4s,baz=147,slow=4.9,SNR=4.1						
BRTR				PKPab	PKPab	03 39 07.9	-2.8
	0.5nm,0.5s,baz=165,slow=5.9,SNR=3.6						
TORD	**Torodi Ar. Bea**	**162.84**	**186**	PKPab	PKPab	03 40 00.0	-2.2
	0.2nm,0.4s,baz=180,slow=4.1,SNR=4.5						

ISCJB ***25*** *03:22:02.4±1.8, 15.05S±0.3×166.7E±0.4, h150km, mb4.3/5, Error ellipse: s-maj=64.0km s-min=22.4km az=42.6*

IDC ***25*** *03:22:44.4±12.0, 15.19S×165.49E, h572km±140km, mb3.3/4, mb1 3.5/5, mb1mx3.2/17, mbtmp3.3/5, Error ellipse: s-maj=79.6km s-min=59.7km az=96.0*

ISC 25 03:22:03.6±1.7, 15.0S±0.3×166.8E±0.3, h150km, n11, σ1§00/10, mb4.3/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EIDS	**Eidsvold**	**17.96**	**233**	*e*P	**Pn**	**03 26 05.1**	**+1.1**
CTA	**Charters Tower**	**20.21**	**253**	P	**P**	**03 26 28.9**	**+2.0**
	0.4nm,0.3s,baz=94,slow=8.8,SNR=4.4						
QLP	**Quilpie**	**23.98**	**238**	*e*P	**P**	**03 27 04.4**	**+0.1**
CMSA	**Cobar Meteorol**	**25.34**	**226**	*e*P	**P**	**03 27 16.1**	**-0.5**
STKA	**Stephens Creek**	**28.45**	**229**	*e*P	**P**	**03 27 44.5**	**0.0**
	8.4nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**28.45**	**229**	P	**P**	**03 27 44.7**	**+0.2**
	12nm,0.5s,mb4.9,baz=48,slow=8.3,SNR=35						
WRA	**Warramunga Arr**	**31.31**	**256**	P	**P**	**03 28 08.4**	**-1.4**
	1.8nm,0.5s,mb4.1,baz=84,slow=8.9,SNR=15						
ASAR	**Alice Springs**	**32.14**	**249**	P	**P**	**03 28 15.8**	**-1.3**
	6.7nm,0.5s,mb4.6,baz=81,slow=9.2,SNR=55						
BBOO	**Buckleboo**	**33.04**	**232**	*e*P	**P**	**03 28 24.4**	**-0.4**
	14nm,0.5s,mb4.9						
ILAR	**Eielson Array**	**86.94**	**18**	P	**P**	**03 34 31.7**	**+0.5**
	0.3nm,0.7s,mb3.2,baz=235,slow=6.2,SNR=4.1						
ARCES	**ARCESS Array B**	**120.41**	**345**	PKP	PKPdf	03 40 29.6	-6.9
	1.8nm,0.9s,baz=56,slow=2.2,SNR=4.3						

IDC ***25*** *03:26:00.2±1.0, 10.16N×125.25E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/19, mbtmp3.7/7, Error ellipse: s-maj=68.6km s-min=18.0km az=63.0*

MAN ***25*** *03:26:01, 10.16N×125.13E, h1km, mb4.8, ML3.7, MS3.7*

ISC 25 03:26:02.9±1.4, 10.17N±0.07×125.27E±0.09, h15km±10km, n18, σ0§85/17, mb3.6/7, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.44**	**150**	⇑*e*P	**Pg**	**03 26 11.5**	**-0.3**
OCLP	**Ormoc**	**1.09**	**324**	*e*P	**Pb**	**03 26 23.2**	**-0.3**
BUTP	**Butuan**	**1.24**	**164**	*e*P	**Pn**	**03 26 26.6**	**+0.8**
TBP	**Tagbilaran**	**1.46**	**251**	*e*P	**Pn**	**03 26 27.2**	**-1.7**
SNPH	**Sibulan**	**2.16**	**248**	⇓*e*P	**Pn**	**03 26 40.0**	**+1.5**
SNPH				*i* S	Sx	03 27 21.3	
BUKP	**Musuan**	**2.29**	**185**	*e*P	**Pn**	**03 26 40.8**	**+0.6**
CNP	**Catarman**	**2.40**	**346**	*e*P	**Pn**	**03 26 42.0**	**+0.3**
GUIM	**Jordan**	**2.67**	**280**	*e*P	**Pn**	**03 26 45.1**	**-0.4**
PVCP	**Virac**	**3.58**	**342**	*e*P	**Pn**	**03 27 01.6**	**+3.7**
OTRP	**Odiongan**	**3.86**	**305**	*e*P	**Pn**	**03 27 02.8**	**+1.0**
CMAR	**Chiang Mai Arr**	**26.78**	**291**	P	**P**	**03 31 42.4**	**-0.2**
	0.4nm,0.3s,mb3.4,baz=108,slow=5.9,S

GUC.

GUC 25 03:50:01.1±0.6, 34°.06S×70°.15W, h7km±1km, MD3.8, ML3.2, 15C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LMEL	**Las Melosas**	**0.21**	**349**	⇑	*i*	P	Pg	03 50 05.7	+0.3
LMEL					*i*	S	Sg	03 50 09.8	+1.5
LMEL	**Las Melosas**	**0.21**	**349**	⇑	*i*	P	Pg	03 50 05.7	+0.3
LMEL					*i*	S	Sg	03 50 09.8	+1.5
CACH	**El Canelo**	**0.38**	**261**	⇑	*i*	P	Pg	03 50 08.7	+0.3
CACH					*i*	S	Sg	03 50 14.8	+1.4
CACH	**El Canelo**	**0.38**	**261**	⇑	*i*	P	Pg	03 50 08.7	+0.3
CACH					*i*	S	Sg	03 50 14.8	+1.4
CHCH	**Chadas Angostu**	**0.43**	**286**	⇑	*i*	P	Pg	03 50 10.1	+0.6
CHCH					*i*	S	Sg	03 50 16.9	+1.7
CHCH	**Chadas Angostu**	**0.43**	**286**	⇑	*i*	P	Pg	03 50 10.1	+0.6
CHCH					*i*	S	Sg	03 50 16.9	+1.7
SJCH	**San Jose de Ma**	**0.45**	**338**	⇑	*i*	P	Pg	03 50 10.2	+0.5
SJCH					*i*	S	Sg	03 50 17.6	+2.0
SJCH	**San Jose de Ma**	**0.45**	**338**	⇑	*i*	P	Pg	03 50 10.2	+0.5
SJCH					*i*	S	Sg	03 50 17.6	+2.0
PCH	**Pirque**	**0.53**	**325**	⇓	*i*	P	Pg	03 50 11.8	+0.4
PCH					*i*	S	Sg	03 50 20.4	+2.2
PCH	**Pirque**	**0.53**	**325**	⇓	*i*	P	Pg	03 50 11.8	+0.4
PCH					*i*	S	Sg	03 50 20.4	+2.2
ANTU	**Antumapu**	**0.63**	**320**		*e*	P	Pg	03 50 13.4	+0.2
ANTU					*i*	S	Sg	03 50 23.2	+1.8
ANTU	**Antumapu**	**0.63**	**320**		*e*	P	Pg	03 50 13.4	+0.2
ANTU					*i*	S	Sg	03 50 23.2	+1.8
ANTU						AML	AML	03 50 24.0	
	comp=N,2μm,0.4s								
CLCH	**Cerro Calan**	**0.73**	**334**	⇑	*i*	P	Pg	03 50 15.3	+0.1
CLCH					*i*	S	Sg	03 50 26.3	+1.6
CLCH						AML	AML	03 50 28.4	
	comp=E,3μm,0.8s								
FCH	**Farellones**	**0.74**	**351**	⇑	*i*	P	Pg	03 50 13.5	-1.7
FCH					*i*	S	Sg	03 50 24.2	-0.6
SAN	**Santiago**	**0.74**	**325**		*e*	P	Pg	03 50 15.5	+0.2
SAN					*i*	S	Sg	03 50 26.5	+1.6
SAN	**Santiago**	**0.74**	**325**		*e*	P	Pg	03 50 15.5	+0.2
SAN					*i*	S	Sg	03 50 26.5	+1.6
SAN						AML	AML	03 50 27.3	
	comp=N,859nm,0.4s								
TACH	**Talagante**	**0.77**	**301**	⇑	*i*	P	Pg	03 50 16.0	+0.2
TACH					*i*	S	Sg	03 50 26.9	+1.1
TACH	**Talagante**	**0.77**	**301**	⇑	*i*	P	Pg	03 50 16.0	+0.2
TACH					*i*	S	Sg	03 50 26.9	+1.1
PEL	**Peldehue**	**1.01**	**334**	⇑	*i*	P	Pg	03 50 20.0	-0.5
PEL					*i*	S	Sg	03 50 34.7	+1.0
PEL						AML	AML	03 50 35.7	
	comp=N,3μm,0.3s								
LNV	**Longovilo**	**1.05**	**275**	⇑	*i*	P	Pg	03 50 20.7	-0.6
LNV					*i*	S	Sg	03 50 34.7	-0.2
LNV	**Longovilo**	**1.05**	**275**	⇑	*i*	P	Pg	03 50 20.7	-0.6
LNV					*i*	S	Sg	03 50 34.7	-0.2
ROCH	**El Roble**	**1.30**	**326**		*e*	P	Pn	03 50 24.8	-0.8
ROCH					*i*	S	Sb	03 50 43.2	+0.5
ROCH						AML	AML	03 50 44.7	
	comp=E,882nm,0.8s								
TALC	**Talca**	**1.81**	**222**		*e*	P	Pn	03 50 32.9	+0.2
TALC					*i*	S	Sn	03 50 56.4	+0.5
TALC	**Talca**	**1.81**	**222**		*e*	P	Pn	03 50 32.9	+0.2
TALC					*i*	S	Sn	03 50 56.4	+0.5
LCO	**Las Campanas**	**5.05**	**355**		*e*	Pn	Pn	03 51 14.2	-3.0
LCO						eS	Sn	03 52 14.4	-1.4
TRQA	**Tornquist**	**7.73**	**123**		*e*	Pn	Pn	03 51 54.5	+0.6
TRQA						eS	Sb	03 53 48.8	+1.2

*ISCJB **25** 03:59:22.7±0.7, 41°.7S±0°.1×88°.6E±0°.2, h10km, mb4.2/8, MS4.3/6, Error ellipse: s-maj=23.4km s-min=17.2km az=32.2*

*IDC **25** 03:59:23.4±0.8, 41°.68S×88°.67E, h0km, mb4.2/7, mb1 4.4/7, mb1mx4.1/17, mbtmp4.2/7, MS4.3/6, Ms1 4.3/6, ms1mx3.7/22, Error ellipse: s-maj=27.2km s-min=21.3km az=140.0*

*NEIC **25** 03:59:24.2±0.6, 41°.65S×88°.58E, h10km, mb4.3/1, Error ellipse: s-maj=19.5km s-min=14.4km az=128.0*

ISC 25 03:59:24.6±0.7, 41°.7S±0°.1×88°.7E±0°.2, h10km, n16, σ0s57/9, mb4.2/8, MS4.3/6, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**24.27**	**78**			LR	LR	04 11 56.1	
	comp=Z,491nm,18.6s,MS4.0,baz=122,slow=31								
MAW	**Mawson**	**29.50**	**200**			P	**P**	**04 05 28.3**	**-0.2**
	3.8nm,1.0s,mb4.1,baz=27,slow=11,SNR=5.0								
MAW						LR	LR	04 14 30.4	
	comp=Z,768nm,21.7s,MS4.3,baz=14,slow=31								
ASAR	**Alice Springs**	**41.58**	**79**			P	**P**	**04 07 12.8**	**+0.2**
	4.0nm,0.9s,mb4.1,baz=226,slow=8.1,SNR=19								
ASAR						PcP	PcP	04 09 10.4	+0.6
	2.2nm,0.8s,baz=203,slow=2.9,SNR=11								
STKA	**Stephens Creek**	**42.92**	**95**			PcP	PcP	04 09 14.6	+0.5
	2.0nm,0.8s,baz=296,slow=4.5,SNR=3.7								
STKA						LR	LR	04 21 41.5	
	comp=Z,298nm,21.1s,MS4.2,baz=109,slow=31								
WRA	**Warramunga Arr**	**44.20**	**75**			P	**P**	**04 07 33.5**	**-0.3**
	8.5nm,1.0s,mb4.4,baz=229,slow=8.5,SNR=23								
WRA						LR	LR	04 24 38.8	
	comp=Z,368nm,18.1s,MS4.3,baz=200,slow=34								
QSPA	**South Pole Qui**	**48.47**	**180**			P	**P**	**04 08 06.9**	**+0.2**
	6.6nm,1.1s,mb4.6,baz=306,slow=5.3,SNR=6.7								
BOSA	**Boshof**	**52.37**	**263**			LR	LR	04 26 19.3	
	comp=Z,430nm,18.4s,MS4.5,baz=16,slow=31								
LSZ	**Lusaka**	**58.01**	**278**			P	**P**	**04 09 16.9**	**-0.8**
	1.8nm,0.6s,mb4.3								
LSZ	**Lusaka**	**58.01**	**278**			P	**P**	**04 09 18.8**	**+1.1**
	2.5nm,0.7s,mb4.3,baz=138,slow=7.3,SNR=6.9								
CMAR	**Chiang Mai Arr**	**60.59**	**11**			P	**P**	**04 09 35.5**	**+0.2**
	0.9nm,0.5s,mb4.1,baz=206,slow=7.2,SNR=7.6								
CMAR						LR	LR	04 32 53.7	
	comp=Z,172nm,18.3s,MS4.2,baz=291,slow=33								
GTA	**Gaotai**	**81.35**	**9**			*e*P	**P**	**04 11 41.6**	**+0.7**
GTA						pP	pP	04 11 46.3	+2.1
GTA						sP	sP	04 11 49.4	+4.0
GTA						pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5								
MKAR	**Makanchi Array**	**88.27**	**356**			P	**P**	**04 12 14.6**	**-1.0**
	comp=Z,0.3nm,0.5s,mb3.7,baz=145,slow=4.4,SNR=3.6								
INK	**Inuvik**	**145.22**	**26**			PKPbc	PKPbc	04 19 01.1	+0.1
INK	**Inuvik**	**145.22**	**26**			PKPbc	PKPbc	04 19 01.1	+0.1
	comp=Z,2.0nm,0.8s,baz=262,slow=4.6,SNR=4.0								
NVAR	**Mina Array Bea**	**159.14**	**90**			PKPab	PKPab	04 20 01.7	+2.0
	comp=Z,1.1nm,0.8s,baz=245,slow=7.6,SNR=7.2								
PDAR	**Pinedale Array**	**166.45**	**79**			PKPab	PKPab	04 20 31.6	0.0
	comp=Z,0.6nm,0.8s,baz=242,slow=3.9,SNR=4.8								

*IDC **25** 04:05:21.1±1.2, 4°.68S×138°.71E, h0km, mb4.1/2, mb1 4.3/5, mb1mx4.0/12, mbtmp4.1/5, ML4.0/3, Error ellipse: s-maj=40.1km s-min=15.2km az=89.0*

*NEIC **25** 04:05:25.0±0.8, 4°.41S×139°.10E, h35km, mb4.2/1, Error ellipse: s-maj=27.6km s-min=16.8km az=74.0*

ISC 25 04:05:25.0±1.0, 4°.59S±0°.08×138°.9E±0°.2, h35km, n12, σ1s39/10, mb4.0/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.89**	**196**			Pn	**Pn**	**04 09 04.0**	**-2.1**
	1.0nm,0.3s,baz=22,slow=12,SNR=12								
WRA						Sn	**Sn**	**04 11 54.4**	**-6.9**
	0.1nm,0.3s,baz=5.1,slow=23,SNR=3.5								
WRA						Lg		04 13 49.2	
	0.4nm,0.3s,baz=8.7,slow=27,SNR=4.7								
CTA	**Charters Tower**	**17.00**	**156**			Pn	**Pn**	**04 09 21.4**	**+1.3**
	0.2nm,0.3s,baz=320,slow=14,SNR=3.0								
ASAR	**Alice Springs**	**19.57**	**194**			P	**Pn**	**04 09 51.2**	**-0.2**
	0.5nm,0.3s,baz=31,slow=7.7,SNR=3.5								
ASAR						S	**S**	**04 13 29.6**	**+0.4**
	0.1nm,0.3s,baz=16,slow=27,SNR=3.6								
MBWA	**Marble Bar**	**24.85**	**227**			*e*P	**P**	**04 10 47.9**	**+3.6**
	3.9nm,0.5s,mb4.2								
CMAR	**Chiang Mai Arr**	**45.54**	**301**			P	**P**	**04 13 41.6**	**-0.1**
	0.7nm,0.4s,mb4.0,baz=123,slow=6.5,SNR=5.9								
MKAR	**Makanchi Array**	**71.38**	**323**			P	**P**	**04 16 43.2**	**+1.7**
MKAR	**Makanchi Array**	**71.38**	**323**			P	**P**	**04 16 43.2**	**+1.7**
	2.3nm,0.8s,mb4.2,baz=119,slow=7.5,SNR=18								
ILAR	**Eielson Array**	**87.46**	**24**			P	**P**	**04 18 06.7**	**-1.9**
	0.4nm,0.8s,mb3.7,baz=263,slow=3.9,SNR=5.5								
DBIC	**Dimbokro**	**143.87**	**275**			PKhKP	PKPpre	04 24 56.3	
	1.8nm,0.4s,baz=234,slow=3.7,SNR=7.1								
DBIC						PKP	PKPdf	04 24 59.4	+1.7
	1.8nm,0.4s,baz=343,slow=1.2,SNR=12								
CPUP	**Villa Florida**	**145.48**	**154**			PKPbc	PKPbc	04 25 01.4	+1.2
CPUP	**Villa Florida**	**145.48**	**154**			PKPbc	PKPbc	04 25 01.4	+1.2
	1.8nm,0.9s,baz=10,slow=5.4,SNR=3.0								
LPAZ	**La Paz**	**146.17**	**128**			PKPbc	PKPbc	04 25 03.6	+1.1
	2.1nm,0.7s,baz=20,slow=1.0,SNR=12								

*BJI **25** 04:15:48.7, 46°.80N×150°.89E, h155km, mB4.8/18, mb4.8/32*

*SKHL **25** 04:15:50.7±1.4, 46°.57N×150°.72E, h181km±8km, mb6.1/1, msh5.1/2*

*ISCJB **25** 04:15:51.0±0.4, 46°.74N±0°.04×150°.52E±0°.03, h160km±4km, mb4.4/100, Error ellipse: s-maj=6.5km s-min=3.1km az=161.7*

*MOS **25** 04:15:52.1±1.0, 46°.82N×150°.49E, h171km, mb4.4/45, Error ellipse: s-maj=8.9km s-min=6.0km az=84.5*

*IDC **25** 04:15:55.0±0.9, 46°.89N×150°.45E, h182km±7km, mb3.9/22, mb1 4.1/24, mb1mx4.1/27, mbtmp3.9/24, Error ellipse: s-maj=13.4km s-min=8.3km az=153.0*

*JMA **25** 04:15:55.0±0.6, 45°.81N×150°.88E, h171km, M4.7*

*NEIC **25** 04:15:57.0±1.1, 46°.92N×150°.41E, h198km±11km, mb4.4/50, Error ellipse: s-maj=7.4km s-min=3.4km az=171.0*

ISC 25 04:15:52.5±0.4, 46°.80N±0°.04×150°.44E±0°.03, h157km±4km, h167km±6.3km; pP-P, n608, σ0s72/632, mb4.4/100, 172C-180D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.38**	**230**	⇑	*i*	P	**Pn**	**04 16 33.5**	**+1.1**
KUR						eS	**Sn**	**04 17 06.0**	**+2.8**
KUR						pmax	pmax		
	comp=Z,5μm,1.0s								
KUR						pmax	pmax		
	comp=Z,2410μm,1.0s								
KUR						pmax	pmax		
	comp=N,600nm,1.0s								
KUR						pmax	pmax		
	comp=E,660nm,1.0s								
KUR						smax			
	comp=N,6μm,2.0s								
KUR						smax			
	comp=N,950nm,0.6s								
KUR						smax			
	comp=E,760nm,0.6s								
KUR	**Kuril'sk**	**2.38**	**230**	⇑	*i*	P	**Pn**	**04 16 33.3**	**+0.9**
KUR						AMB	AMB	04 16 34.0	
	comp=E,5μm,1.0s								
KUR						AMB	AMB	04 16 34.5	
	comp=E,570nm,1.0s								
KUR						AMB	AMB	04 16 34.5	
	comp=E,680nm,1.0s								
KUR						AMB	AMB	04 16 34.5	
	comp=E,2μm,1.0s								
KUR						eS	**Sn**	**04 17 06.0**	**+2.8**
KUR						A		04 17 09.6	
	comp=E,6μm,2.0s								
KUR						A		04 17 09.6	
	comp=E,2μm,2.0s								
KUR						A		04 17 12.5	
	comp=E,990nm,0.6s								
KUR						A		04 17 12.5	
	comp=E,780nm,0.6s								
YUK	**Yuzh-Kuril'sk**	**4.25**	**231**	⇑	*i*	PN	**Pn**	**04 16 57.2**	**+1.1**
YUK					*i*	S	**Sn**	**04 17 47.0**	**+1.5**
YUK						pmax	pmax		
	comp=N,150nm,0.3s								
YUK						pmax	pmax		
	comp=Z,1μm,0.3s								
YUK						pmax	pmax		
	comp=E,200nm,0.1s								
YUK						pmax	pmax		
	comp=Z,290nm,0.7s								
YUK						smax			
	comp=N,770nm,0.4s								
YUK						smax			
	comp=E,1μm,0.4s								
YUK						smax			
	comp=E,770nm,0.7s								
YUK						smax			
	comp=N,170nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**4.25**	**231**	⇑	*i*	P	**Pn**	**04 16 57.2**	**+1.1**
YUK						AMB	AMB	04 16 57.8	
	comp=N,2μm,0.2s								
YUK					*i*	sP		04 17 33.0	
YUK						eS	**Sn**	**04 17 47.0**	**+1.5**
YUK						A		04 17 54.5	
	comp=N,370nm,0.5s								
YUK						A		04 17 54.5	
	comp=N,1μm,0.5s								
JRA	**Rausu**	**4.71**	**235**			P	**Pn**	**04 17 03.4**	**+1.2**
NEM2	**Nemuro 2**	**4.78**	**226**			P	**Pn**	**04 17 01.4**	**-1.6**
NEM2						eS	**Sn**	**04 17 53.5**	**-4.6**
JNK	**Nakash**	**5.17**	**234**			P	**Pn**	**04 17 08.7**	**+0.6**
YSS	**Yuzh-Sakhalins**	**5.27**	**274**	⇑	*i*	PN	**Pn**	**04 17 13.4**	**+3.9**
YSS						eS	**Sn**	**04 18 14.0**	**+4.3**
YSS						pmax	pmax		
	comp=Z,50nm,0.8s								
YSS						smax			
	comp=N,110nm,1.2s								
YSS	**Yuzh-Sakhalins**	**5.27**	**274**	⇑	*i*	P	**Pn**	**04 17 13.4**	**+3.9**
YSS						AMB	AMB	04 17 14.2	
	comp=N,50nm,0.8s								
YSS						eS	**Sn**	**04 18 14.0**	**+4.3**
YSS						A		04 18 19.8	
	comp=N,110nm,1.2s								
JTKR	**Abashiri--Toko**	**5.40**	**241**			P	**Pn**	**04 17 12.9**	**+1.7**
SKR	**Severo-Kuril's**	**5.40**	**42**			*e*PN	**Pn**	**04 17 11.7**	**+0.5**
SKR						eS	**Sn**	**04 18 13.3**	**+0.5**
SKR						pmax	pmax		
	comp=N,150nm,0.5s								
SKR						pmax	pmax		
	comp=E,150nm,0.5s								
SKR						pmax	pmax		
	comp=Z,220nm,0.5s								
SKR						smax			
	comp=N,200nm,0.5s								
SKR						smax			
	comp=E,150nm,0.5s								
SKR						smax			
	comp=Z,50nm,0.4s								
SKR	**Severo-Kuril's**	**5.40**	**42**			*e*P	**Pn**	**04 17 11.7**	**+0.5**
SKR						AMB	AMB	04 17 15.0	
	comp=Z,150nm,0.5s								
SKR						AMB	AMB	04 17 15.0	
	comp=Z,220nm,0.5s								
SKR						eS	**Sn**	**04 18 13.3**	**+0.5**
SKR						A		04 18 23.9	
	comp=Z,50nm,0.4s								
SKR						A		04 18 23.9	
	comp=Z,200nm,0.5s								
SKR						A		04 18 23.9	
	comp=Z,150nm,0.5s								
JAK	**Akkeshi**	**5.58**	**229**			P	**Pn**	**04 17 12.2**	**-1.4**
JAK						eS	**Sn**	**04 18 12.6**	**-4.3**
JMP	**Maruseppu**	**5.71**	**243**			P	**Pn**	**04 17 17.9**	**+2.5**
JAR	**Ashorobuto**	**5.88**	**236**			P	**Pn**	**04 17 18.6**	**+1.0**
UGL	**Uglegorsk**	**6.07**	**295**		*e*	P	**Pn**	**04 17 23.5**	**+3.4**
UGL						AMB	AMB	04 17 25.0	
	comp=Z,110nm,1.0s								
JOB	**Onbets**	**6.10**	**233**			P	**Pn**	**04 17 20.0**	**-0.5**
JOB						eS	**Sn**	**04 18 26.4**	**-3.0**
JWK2	**Keihoku**	**6.13**	**259**			P	**Pn**	**04 17 26.4**	**+5.6**
ASAJ	**Asahikawa**	**6.13**	**247**			P	**Pn**	**04 17 23.8**	**+2.9**
	comp=Z,6.4nm,0.3s,baz=75,slow=13,SNR=41								
ASAJ						S	**Sn**	**04 18 35.1**	**+4.9**
	comp=Z,1.5nm,0.3s,baz=213,slow=17,SNR=6.2								
ASAJ	**Asahikawa**	**6.13**	**247**			PN	**Pn**	**04 17 23.8**	**+2.9**
ASAJ						S	**Sn**	**04 18 35.2**	**+5.0**
ASAJ						pmax	pmax		
	comp=Z,6.0nm,0.3s								
ASAJ						smax			
	comp=N,2.0nm,0.3s								
ASAJ	**Asahikawa**	**6.13**	**247**			P	**Pn**	**04 17 24.5**	**+3.6**
JKK2	**Kamakawa 2**	**6.16**	**244**			P	**Pn**	**04 17 23.9**	**+2.6**
JCH	**Churui**	**6.55**	**233**			P	**Pn**	**04 17 25.3**	**-1.2**
JCH						eS	**Sn**	**04 18 35.8**	**-4.4**
TYV	**Tymovskoe**	**6.55**	**311**		*e*	P	**Pn**	**04 17 29.0**	**+2.6**
JFR	**Furan**	**6.65**	**240**			P	**Pn**	**04 17 29.7**	**+2.0**
JBT2	**Biratori 2**	**7.01**	**238**			P	**Pn**	**04 17 32.8**	**+0.2**
JEM	**Erimo**	**7.07**	**230**			P	**Pn**	**04 17 32.7**	**-0.7**
ERM	**Erimo**	**7.08**	**230**		*e*	PN	**Pn**	**04 17 32.9**	**-0.6**
JNBK	**Urakawa-nobuka**	**7.11**	**233**			P	**Pn**	**04 17 31.8**	**-2.1**
JNBK						eS	**Sn**	**04 18 46.3**	**-7.3**
JNB	**Noboribetsu**	**7.98**	**241**			P	**Pn**	**04 17 44.8**	**-0.7**
JNB						eS	**Sn**	**04 19 11.3**	**-3.2**
PET	**Petropavlovsk**	**8.18**	**37**		*e*	Pn	**Pn**	**04 17 46.1**	**-1.8**
PET						eS	**Sn**	**04 19 14.2**	**-4.8**
PET	**Petropavlovsk**	**8.18**	**37**		*e*	PN	**Pn**	**04 17 46.7**	**-1.3**
PET						pmax	pmax		
	comp=Z,46nm,0.7s								
JKB	**Kayabe**	**8.34**	**237**			P	**Pn**	**04 17 48.5**	**-1.7**
JKB						eS	**Sn**	**04 19 16.1**	**-7.0**
JYM2	**Yakumo 2**	**8.59**	**241**			P	**Pn**	**04 17 52.9**	**-0.7**
JSR	**Shiriuchi**	**8.92**	**237**			P	**Pn**	**04 17 56.4**	**-1.6**
JSR						eS	**Sn**	**04 19 30.9**	**-6.2**
JTM	**Tenmabayashi**	**9.05**	**232**			P	**Pn**	**04 17 56.2**	**-3.6**
JTM						eS	**Sn**	**04 19 29.7**	**-11**
JANG	**Nango**	**9.12**	**228**			P	**Pn**	**04 17 56.8**	**-3.8**
JANG						eS	**Sn**	**04 19 30.9**	**-11**
JOSM	**Okushiri--Mats**	**9.15**	**243**			P	**Pn**	**04 18 00.7**	**-0.3**
JTH	**Tanohata**	**9.27**	**225**			P	**Pn**	**04 17 57.6**	**-5.0**
JTH						eS	**Sn**	**04 19 33.5**	**-12**
OFUJ	**Ofunato**	**10.04**	**223**			P	**Pn**	**04 18 08.9**	**-3.9**
OFUJ						eS	**Sn**	**04 19 53.6**	**-10**
JRG	**Rokugo**	**10.30**	**228**			P	**Pn**	**04 18 13.4**	**-2.8**
JRG						eS	**Sn**	**04 20 02.3**	**-7.9**
JOG2	**Oga 2**	**10.36**	**232**			P	**Pn**	**04 18 14.5**	**-2.5**
HABR	**Khabarovsk**	**10.53**	**285**		*e*	PN	**Pn**	**04 18 22.8**	**+3.7**
HABR						pmax	pmax		
	comp=Z,55nm,1.0s								
HABR						pmax	pmax		
	comp=E,31nm,0.8s								
HABR						pmax	pmax		
	comp=N,24nm,1.2s								
HABR						MLR	MLR		
	comp=Z,197nm,15.0s								
JIO	**Ouri**	**10.69**	**222**			P	**Pn**	**04 18 17.1**	**-4.3**
JIO						eS	**Sn**	**04 20 08.9**	**-11**
KLR	**Kul'dur**	**12.75**	**288**		*e*	PN	**Pn**	**04 18 47.7**	**-0.3**
KLR						pmax	pmax		
	comp=E,50nm,1.6s								
KLR						pmax	pmax		
	comp=Z,45nm,1.6s								
MAT	**Matsushiro**	**13.72**	**226**			P	**Pn**	**04 18 58.7**	**-1.7**
MJAR	**Matsushiro Arr**	**13.72**	**226**			P	**Pn**	**04 18 58.8**	**-1.7**
	comp=Z,1.5nm,0.3s,baz=65,slow=26,SNR=6.3								
MJAR	**Matsushiro Arr**	**13.72**	**226**			P	**Pn**	**04 18 58.8**	**-1.6**
MJAR						pmax	pmax		
	comp=Z,2.0nm,0.3s								
MDJ	**Mudanjiang**	**14.73**	**269**			P	**Pn**	**04 19 15.6**	**+2.6**
MDJ						pmax	pmax		
	comp=Z,35nm,0.8s								
MDJ						pmax	pmax		
	comp=Z,200nm,13.4s								
MDJ	**Mudanjiang**	**14.73**	**269**		*e*	Pn	**Pn**	**04 19 14.4**	**+1.3**
	comp=Z,27nm,0.8s								
SEY	**Seymchan**	**16.21**	**3**		*ce*	P	**Pn**	**04 19 31.7**	**+0.7**
ZEA	**Zeya**	**16.33**	**304**		*e*	P	**Pn**	**04 19 31.7**	**-0.9**
ZEA						AMB	AMB	04 19 33.2	
	comp=Z,58nm,1.2s								
ZEA						AMB	AMB	04 19 33.2	
	comp=Z,47nm,1.0s								
ZEA						AMB	AMB	04 19 33.2	
	comp=Z,58nm,1.0s								
KSRS	**Korea Array**	**19.08**	**249**			P	**P**	**04 20 04.6**	**+1.8**
	comp=Z,2.0nm,0.3s,baz=52,slow=11,SNR=30								
KSRS	**Korea Array**	**19.08**	**249**			P	**P**	**04 20 04.6**	**+1.7**
KSRS						pmax	pmax		
	comp=Z,2.0nm,0.3s								
YAK	**Yakutsk**	**19.32**	**330**		*e*	P	**P**	**04 20 06.9**	**+1.7**
	comp=Z,67nm,0.8s								
YAK	**Yakutsk**	**19.32**	**330**		*e*	P	**P**	**04 20 06.8**	**+1.6**
YAK						pmax	pmax		
	comp=Z,60nm,0.9s								
YAK						pmax	pmax		
	comp=N,18nm,1.0s								
YAK						pmax	pmax		
	comp=E,15nm,1.0s								
INCN	**Inchon**	**19.89**	**251**		*e*	P	**P**	**04 20 13.6**	**+1.9**
	comp=E,34nm,0.6s								
BILL	**Bilibino**	**22.80**	**15**		*e*	P	**P**	**04 20 41.6**	**+0.4**
BILL						pmax	pmax		
	comp=Z,6.0nm,1.3s,mb3.9								
BJT	**Baijiatuan**	**25.66**	**267**		*e*	P	**P**	**04 21 10.1**	**+2.5**
	comp=Z,14nm,0.6s,mb4.8								
BJT	**Baijiatuan**	**25.66**	**267**		*e*	P	**P**	**04 21 10.1**	**+2.6**
BJT						pmax	pmax		
	comp=Z,15nm,0.6s								
NJ2	**Nanjing**	**28.27**	**250**		*e*	P	**P**	**04 21 30.4**	**-0.5**
NJ2						pmax	pmax		
	comp=Z,40nm,0.6s,mb5.3								
HHC	**Hu-ho-hao-te**	**28.46**	**272**		*e*	P	**P**	**04 21 33.6**	**+1.1**
HHC						pP	pP	04 22 07.6	+2.3
HHC						sP	sP	04 22 25.9	+2.6
HHC						PP	PP	04 22 32.1	-7.6
HHC						S	**S**	**04 26 06.3**	**-1.9**
HHC						sS	sS	04 27 05.8	-0.2
HHC						SS	SS	04 27 45.8	-29
HHC						pmax	pmax		
	comp=Z,35nm,0.6s,mb5.3								
HHC						pmax	pmax		
	comp=Z,190nm,5.0s								
HHC						LR	LR		
	comp=N,170nm,15.5s								
HHC						LR	LR	

ZALV PcP PcP 04 25 17.0 +0.2
ZALV Zalesovo Beam 41.09 305 P **P** **04 23 19.1 -1.3**
comp=Z,1.1nm,0.5s,mb3.7,baz=64,slow=6.6,SNR=3.3
ZALV pP pP 04 23 60.0 +5.4
comp=Z,0.5nm,0.4s,baz=76,slow=12,SNR=1.7
ZALV PcP PcP 04 25 17.0 +0.2
comp=Z,3.0nm,0.7s,baz=69,slow=3.2,SNR=8.4
ZALV Zalesovo Beam 41.09 305 P **P** **04 23 19.1 -1.3**
ZALV *PP pP 04 24 00.0 +5.4
ZALV 04 25 17.0
ZALV pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
ZALV pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
HYT Haines Junctio 42.51 44 *e*P **P** **04 23 33.1 +1.2**
INK Inuvik 42.59 32 P **P** **04 23 32.5 +0.1**
comp=Z,6.9nm,0.4s,mb4.6,baz=286,slow=6.4,SNR=73
INK Inuvik 42.59 32 P **P** **04 23 32.6 +0.2**
INK pmax pmax
comp=Z,7.0nm,0.4s
WMQ Urumqi 43.19 290 *e*P **P** **04 23 40.4 +2.8**
WMQ pP pP 04 24 13.9 +1.8
WMQ sP sP 04 24 31.0 +1.3
WMQ PP PP 04 25 25.1 +4.2
WMQ pmax pmax
comp=Z,14nm,0.6s,mb4.8
WMQ pmax pmax
comp=Z,190nm,6.0s
KMI Kunming 43.45 257 P **P** **04 23 41.0 +1.1**
KMI pmax pmax
comp=Z,16nm,1.2s,mb4.5
MK31 Makanchi Array 45.28 296 P **P** **04 23 53.6 -0.5**
MK31 pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
MKAR Makanchi Array 45.28 296 P **P** **04 23 53.4 -0.7**
comp=Z,4.0nm,0.6s,mb4.2,baz=69,slow=7.9,SNR=28
MKAR pP pP 04 24 33.4 +4.5
comp=Z,1.1nm,0.8s,baz=67,slow=8.0,SNR=1.8
MKAR PcP PcP 04 25 31.0 -0.1
comp=Z,1.6nm,0.6s,baz=70,slow=4.2,SNR=7.0
MKAR ScP ScP 04 29 07.9 -0.9
comp=Z,0.4nm,0.7s,baz=65,slow=3.5,SNR=4.2
MKAR Makanchi Array 45.28 296 P **P** **04 23 53.4 -0.7**
MKAR *PP pP 04 24 33.4 +4.5
MKAR 04 25 31.0
MKAR pmax pmax
comp=Z,4.0nm,0.6s
MKAR pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 45.80 303 P **P** **04 23 57.5 -0.7**
KURK pP pP 04 24 37.9 +4.9
KURK PcP PcP 04 25 33.0 +0.1
KURK Kurchatov 45.80 303 P **P** **04 23 57.5 -0.6**
comp=Z,5.6nm,0.5s,mb4.5,baz=72,slow=8.6,SNR=24
KURK pP pP 04 24 37.9 +4.9
comp=Z,4.0nm,0.7s,baz=70,slow=8.6,SNR=5.3
KURK PcP PcP 04 25 33.0 +0.1
comp=Z,1.6nm,0.7s,baz=63,slow=3.7,SNR=4.5
KURK Kurchatov 45.80 303 P **P** **04 23 57.5 -0.6**
KURK *PP pP 04 24 37.9 +4.9
KURK 04 25 33.0
KURK pmax pmax
comp=Z,6.0nm,0.5s,mb4.5
KURK pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
DLBC Dease Lake 46.87 45 *e*P **P** **04 24 07.8 +1.4**
LSA Lhasa 48.44 271 *e*P **P** **04 24 21.4 +2.6**
comp=Z,7.7nm,0.6s,mb4.5
LSA Lhasa 48.44 271 *e*P **P** **04 24 21.5 +2.7**
LSA pmax pmax
comp=Z,8.0nm,0.6s,mb4.5
VOSK Vostochnaya 49.22 308 P **P** **04 24 22.7 -1.7**
VOSK pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
BRVK Borovoye 49.44 308*ce*P **P** **04 24 25.8 -0.3**
BRVK pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
ZRNK Zerenda 50.18 309 P **P** **04 24 30.5 -1.2**
ZRNK pmax pmax
comp=Z,4.0nm,0.4s,mb4.4
CHTO Chiang Mai 50.35 254 *e*P **P** **04 24 34.9 +1.5**
comp=Z,16nm,0.6s,mb4.8
CHTO *e*pP pP 04 25 13.9 +5.0
CHTO Chiang Mai 50.35 254 *e*P **P** **04 24 34.9 +1.5**
CHTO *e**PP pP 04 25 13.9 +5.0
CHTO pmax pmax
comp=Z,16nm,0.6s,mb4.8
CMAR Chiang Mai Arr 50.61 254 P **P** **04 24 36.7 +1.3**
comp=Z,6.3nm,0.6s,mb4.4,baz=36,slow=7.2,SNR=39
CMAR ScP ScP 04 29 33.2 +1.4
comp=Z,0.5nm,0.3s,baz=19,slow=3.5,SNR=4.4
YKA Yellowknife Ar 51.97 36 P **P** **04 24 44.6 -0.3**
comp=Z,2.5nm,0.4s,mb4.2,baz=299,slow=6.8,SNR=17
YKA Yellowknife Ar 51.97 36 P **P** **04 24 44.6 -0.3**
YKA pmax pmax
comp=Z,3.0nm,0.4s
TAPN Taplejung 52.26 271 *e*P **P** **04 24 49.5 +1.9**
comp=Z,17nm,0.6s,mb4.9
ODAN Odare 52.79 271 *e*P **P** **04 24 53.2 +1.7**
KSH Kashi 52.93 291 P **P** **04 24 57.3 +5.0**
KSH *e*pP pP 04 25 33.8 +5.7
KSH *e*sP sP 04 25 51.1 +5.7
KSH *e*PcP PcP 04 26 01.9 +2.8
KSH *e*PP PP 04 27 01.1 +7.9
KSH *e*PcS PcS 04 29 59.6 +1.6
KSH *e*S **S** **04 32 14.5 +5.3**
KSH *e*sS sS 04 33 19.1 +7.8
KSH *e*ScS ScS 04 34 26.4 +0.6
KSH *e*SS SS 04 35 57.5 +7.7
KSH pmax pmax
comp=Z,5.0nm,0.3s,mb4.7
KSH pmax pmax
comp=Z,49nm,3.1s
KSH LR LR
comp=N,65nm,6.6s
KSH LR LR
comp=E,84nm,6.5s
KSH LR LR
comp=Z,140nm,9.1s
JIRN Jiri 53.11 273 *e*P **P** **04 24 55.2 +1.4**
comp=Z,34nm,0.3s,mb5.6
GUN Gumba 53.17 273 *e*P **P** **04 24 55.9 +1.7**
comp=Z,24nm,0.3s,mb5.4
RAMN Ramite 53.28 272 *e*P **P** **04 24 56.3 +1.2**
comp=Z,70nm,0.3s
KKN Kakani 53.65 273 *e*P **P** **04 24 58.9 +1.1**
PKI Pulchoki 53.70 273 *e*P **P** **04 24 59.3 +1.2**
PKIN Phulchoki 53.71 273 *e*P **P** **04 25 00.0 +1.8**
comp=Z,19nm,0.5s,mb5.1
ARU Arti 53.72 316*c i*P **P** **04 24 56.9 -0.9**
ARU 04 26 00.1
ARU *e* 04 27 01.0
ARU S **S** **04 32 20.2 +0.7**
ARU SS SS 04 35 57.2 -4.4
ARU pmax pmax
comp=Z,18nm,1.7s,mb4.5
DMN Daman 53.89 273 *e*P **P** **04 25 01.1 +1.6**
comp=Z,20nm,0.4s,mb5.2
GKN Gorkha 53.96 274 *e*P **P** **04 25 01.1 +1.1**
comp=Z,27nm,0.3s,mb5.5
DANN Dangsing 54.34 275 *e*P **P** **04 25 04.9 +2.1**
comp=Z,33nm,0.3s,mb5.5
KOLN Koldanda 54.82 275 *e*P **P** **04 25 08.0 +1.8**
comp=Z,12nm,0.3s,mb5.1
A05A Maple Falls 55.48 53 ⇑P **P** **04 25 10.0 -0.6**
baz=55
E03A Lebam 56.02 56 ⇑P **P** **04 25 14.1 -0.4**
baz=56
D05A Enumclaw 56.55 55 ⇓P **P** **04 25 18.0 -0.3**
baz=56
KEV Kevo 56.67 340 *e*P **P** **04 25 16.8 -2.0**
KEV pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
KEV Kevo 56.67 340 *ep* **P** **04 25 16.8 -2.0**
comp=Z,2.1nm,0.5s,mb4.2
AB31 Akbulak array 56.97 309 *i* P **P** **04 25 20.2 -1.0**
AB31 pmax pmax
comp=Z,3.0nm,0.3s,mb4.6
F04A Amboy 57.02 56 ⇑P **P** **04 25 21.6 0.0**
baz=57
ARCES ARCESS Array B 57.19 340 P **P** **04 25 21.9 -0.5**
comp=Z,0.7nm,0.4s,mb3.8,baz=39,slow=7.8,SNR=10.0
ARCES PcP PcP 04 26 15.2 +0.2
comp=Z,0.8nm,0.3s,baz=64,slow=5.2,SNR=8.6
ARCES ARCESS Array B 57.19 340 P **P** **04 25 21.9 -0.5**
ARCES 04 26 15.2
ARCES pmax pmax
comp=Z,1.0nm,0.4s
ETW Entiat 57.23 54 *e*P **P** **04 25 23.1 +0.1**
B08A Colville Reser 57.34 52 ⇓P **P** **04 25 23.5 -0.3**
baz=57,SNR=6.9
G04A Mulino 57.41 57 ⇓P **P** **04 25 24.0 -0.3**
baz=57
EDM Edmonton 57.59 45 *e*P **P** **04 25 25.0 -0.4**
H04A Detroit Lake 57.88 57 ⇓P **P** **04 25 27.6 -0.1**
baz=58
E07A Sunnyside 58.10 54 ⇓P **P** **04 25 29.1 -0.1**
baz=58
C09A Chrisman Ranch 58.25 52 ⇑P **P** **04 25 30.0 -0.1**
baz=58
OD2 Odessa Site #2 58.25 53 *e*P **P** **04 25 29.7 -0.4**
D08A Wollman Farm, 58.33 53 ⇓P **P** **04 25 30.3 -0.4**
baz=58
G06A Carlson Farm, 58.45 56 ⇓P **P** **04 25 31.7 +0.2**
baz=58
E08A Dider Farm, El 58.59 54 ⇑P **P** **04 25 32.2 -0.3**
baz=58
NEW Newport 58.59 51 ⇓P **P** **04 25 32.1 -0.4**
baz=58,SNR=7.2
NEW Newport 58.59 51 *e*P **P** **04 25 31.9 -0.6**
comp=Z,12nm,1.1s,mb4.6
NEW Newport 58.59 51 *e*P **P** **04 25 31.9 -0.6**
NEW pmax pmax
comp=Z,12nm,1.1s
HUMO Hull Mountain 58.66 60 *e*P **P** **04 25 33.8 +0.8**
comp=Z,1.0nm,0.6s,mb3.8
A12A Yaak River Ran 58.98 50 ⇓P **P** **04 25 34.7 -0.4**
baz=59
E09A Wood Farm, Sta 59.08 54 ⇓P **P** **04 25 35.5 -0.4**
baz=59
C11A Tepee Creek (N 59.31 51 ⇑P **P** **04 25 37.1 -0.4**
baz=59,SNR=16
G08A Pilot Rock 59.36 55 ⇑P **P** **04 25 37.4 -0.5**
baz=59
A13A Flathead Natio 59.63 50 ⇑P **P** **04 25 39.0 -0.6**
baz=59
I07A Izee 59.78 57 ⇑P **P** **04 25 40.8 +0.1**
baz=60
K05A Summer Lake 59.80 58 ⇓P **P** **04 25 41.1 +0.2**
baz=60
C12B Naegeli Ranch, 59.81 51 ⇑P **P** **04 25 40.6 -0.3**
baz=60
F10A Beach Ranch, E 59.92 54 ⇓P **P** **04 25 41.4 -0.2**
baz=60
B13A Whitefish 59.94 50 ⇑P **P** **04 25 41.8 +0.1**
baz=60,SNR=7.6
BSMT Bassoo Peak 60.09 51 *e*P **P** **04 25 43.2 +0.4**
A14A Double T Ranch 60.12 49 ⇓P **P** **04 25 42.6 -0.3**
baz=60,SNR=8.2
BLMT Blacktail Moun 60.22 50 *e*P **P** **04 25 44.1 +0.5**
D12A Red Ives Fores 60.28 52 ⇑P **P** **04 25 43.7 -0.4**
baz=60
C13A Hot Springs 60.31 51 ⇑P **P** **04 25 43.8 -0.4**
baz=60,SNR=7.3
JTMT Jette 60.42 51 *e*P **P** **04 25 45.6 +0.6**
JOF Joensuu 60.46 333 *e*P **P** **04 25 43.1 -1.9**
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.2
JOF Joensuu 60.46 333 *ep* **P** **04 25 43.1 -1.9**
comp=Z,2.0nm,0.5s,mb4.2
A15A Johnson Ranch, 60.47 49 ⇓P **P** **04 25 44.8 -0.6**
baz=60,SNR=9.1
YBMT Yellow Bay 60.50 50 *e*P **P** **04 25 46.0 +0.5**
E12A Beaver Dam Sad 60.55 52 ⇑P **P** **04 25 45.7 -0.3**
baz=60,SNR=16
B14A Marquette Ranc 60.58 50 ⇓P **P** **04 25 45.6 -0.5**
baz=60,SNR=11
MOD Modoc 60.65 59 *e*P **P** **04 25 46.8 +0.2**
comp=Z,5.9nm,0.6s,mb4.6
C14A Swan Lake 60.70 50 ⇑P **P** **04 25 46.8 -0.1**
baz=60,SNR=11
SWMT Swartz Lake 60.72 51 *e*P **P** **04 25 47.4 +0.4**
D13A Huson 60.73 51 ⇓P **P** **04 25 46.8 -0.3**
baz=60,SNR=5.6
J08A Circle Bar Ran 60.82 57 ⇑P **P** **04 25 47.6 -0.2**
baz=60
B15A Bradely Ranch, 60.98 49 ⇑P **P** **04 25 48.4 -0.3**
baz=61
A16A West Butte Ran 61.08 48 ⇑P **P** **04 25 48.6 -0.9**
baz=61,SNR=5.7
F12A Elk City 61.14 53 ⇓P **P** **04 25 50.0 +0.1**
baz=61,SNR=7.1
SLMT Seeley Lake 61.16 51 *e*P **P** **04 25 50.1 +0.1**
MSO Missoula 61.18 51 ⇑P **P** **04 25 49.8 -0.3**
baz=61,SNR=13
MSO Missoula 61.18 51 *e*P **P** **04 25 50.0 -0.1**
comp=Z,6.0nm,0.8s,mb4.5
D14A Greenough 61.25 51 ⇑P **P** **04 25 50.3 -0.3**
baz=61,SNR=24
E13A Victor 61.29 52 ⇑P **P** **04 25 51.0 +0.1**
baz=61,SNR=5.3
C15A Salmond Ranch, 61.29 50 ⇑P **P** **04 25 51.0 +0.2**
baz=61,SNR=21
B16A M & M Farms, S 61.36 49 ⇑P **P** **04 25 50.7 -0.6**
baz=61
G12A Big Creek, Yel 61.49 53 ⇑P **P** **04 25 52.0 -0.3**
baz=61
CHMT Chamberlain Mo 61.49 51 *e*P **P** **04 25 52.1 -0.2**
A17A Triple J Farms 61.54 48 ⇑P **P** **04 25 52.2 -0.3**
baz=61,SNR=9.8
F13A Darby 61.62 52 ⇑P **P** **04 25 52.8 -0.3**
baz=61,SNR=6.1
E14A Clinton 61.68 51 ⇓P **P** **04 25 53.3 -0.2**
baz=61,SNR=7.8
C16A Fuhringer Ranc 61.73 49 ⇓P **P** **04 25 53.6 -0.2**
baz=61,SNR=19
D15A Lincoln 61.80 50 ⇑P **P** **04 25 54.5 +0.2**
baz=62
A18A Metzger Ranch, 61.99 47 ⇓P **P** **04 25 54.9 -0.6**
baz=62
G13A Cobalt 62.11 53 ⇓P **P** **04 25 56.0 -0.4**
baz=62,SNR=9.2
H12A Diamond D Ranc 62.11 54 ⇓P **P** **04 25 55.9 -0.5**
baz=62
E15A Deer Lodge 62.13 51 ⇑P **P** **04 25 56.3 -0.2**
baz=62,SNR=5.7
MFID Camas Ranch 62.29 55 ⇑P **P** **04 25 57.5 -0.1**
baz=62
D16A Dana Ranch, Ca 62.32 50 ⇓P **P** **04 25 57.8 0.0**
baz=62,SNR=8.5
C17A Wharram Farm, 62.34 49 ⇑P **P** **04 25 57.4 -0.5**
baz=62
B18A Beardsley Farm 62.36 48 ⇓P **P** **04 25 58.2 +0.2**
baz=62,SNR=6.9
HRY Holter Researc 62.38 50 *e*P **P** **04 25 58.4 +0.3**
H13A Challis 62.44 53 ⇑P **P** **04 25 58.1 -0.5**
baz=62,SNR=11
I12A Atlanta 62.44 55 ⇑P **P** **04 25 58.2 -0.4**
baz=62,SNR=7.2
G14A Jackson 62.44 52 ⇓P **P** **04 25 58.3 -0.3**
baz=62
E16A East Helena 62.57 50 ⇑P **P** **04 25 59.1 -0.3**
baz=62,SNR=5.5
F15A Butte 62.58 51 ⇑P **P** **04 25 59.6 +0.1**
baz=62,SNR=6.8
WCN Washoe City 62.60 61 ⇓P **P** **04 25 59.8 0.0**
baz=62
EGMT Eagleton 62.61 48 ⇓P **P** **04 25 59.4 -0.3**
baz=62,SNR=7.3
EGMT Eagleton 62.61 48 *e*P **P** **04 25 59.5 -0.2**
comp=Z,15nm,1.0s,mb4.8
KAF Kangasniemi 62.61 334 *e*P **P** **04 25 57.5 -1.9**
KAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
KAF Kangasniemi 62.61 334 *ep* **P** **04 25 57.5 -1.9**
comp=Z,1.8nm,0.6s,mb4.1
LRM Limekiln Ridge 62.62 51 *e*P **P** **04 26 00.2 +0.4**
D17A Six Diamond Ra 62.69 49 ⇓P **P** **04 26 00.6 +0.3**
baz=62,SNR=6.5
DLMT Dillon 62.83 52 *e*P **P** **04 26 01.9 +0.8**
comp=Z,8.8nm,1.4s,mb4.4
H14A Leadore 62.89 53 ⇓P **P** **04 26 01.4 -0.2**
baz=63
I13A Wildhorse Cree 62.93 54 ⇓P **P** **04 26 02.0 +0.2**
baz=63
HLID Hailey 62.99 54 ⇓P **P** **04 26 02.4 +0.2**
baz=63
G15A Dillon 63.02 52 ⇑P **P** **04 26 02.1 -0.3**
baz=63,SNR=12
E17A Martinsdale 63.05 50 ⇓P **P** **04 26 03.0 +0.4**
baz=63,SNR=13
F16A Kennard Place, 63.08 51 ⇓P **P** **04 26 02.9 +0.1**
baz=63
D18A Linhart Farms, 63.12 49 ⇑P **P** **04 26 03.2 +0.1**
baz=63
C19A Slack Wire Ran 63.16 48 ⇓P **P** **04 26 03.4 +0.1**
baz=63
BOZ Bozeman (W) 63.17 51 ⇑P **P** **04 26 03.8 +0.4**
baz=63,SNR=16
BOZ Bozeman (W) 63.17 51 *e*P **P** **04 26 03.9 +0.5**
comp=Z,6.4nm,0.8s,mb4.5
BOZ Bozeman (W) 63.17 51 *e*P **P** **04 26 03.9 +0.5**
BOZ pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
FINES FINESS Array B 63.20 334 P **P** **04 26 01.5 -1.9**
comp=Z,2.5nm,0.4s,mb4.4,baz=28,slow=7.5,SNR=18
FINES PcP PcP 04 26 38.3 -1.0
comp=Z,1.5nm,0.4s,baz=44,slow=3.2,SNR=5.2
FINES FINESS Array B 63.20 334 P **P** **04 26 01.5 -1.8**
FINES pP 04 26 38.3 -2.0
FINES pmax pmax
comp=Z,3.0nm,0.4s
J13A Cove Ranch, Pi 63.23 54 ⇑P **P** **04 26 04.0 +0.2**
baz=63
H15A Lima 63.28 53 ⇑P **P** **04 26 04.1 -0.1**
baz=63
I14A Mackay 63.29 54 ⇓P **P** **04 26 04.6 +0.3**
baz=63,SNR=5.3
G16A Moss Hill, Enn 63.34 52 ⇓P **P** **04 26 05.3 +0.7**
baz=63,SNR=15
E18A Harlowton 63.48 49 ⇓P **P** **04 26 06.3 +0.9**
baz=63,SNR=5.1
F17A Fitzpatrick Pl 63.52 50 ⇑P **P** **04 26 06.0 +0.3**
baz=63
J14A Carey 63.64 54 ⇓P **P** **04 26 06.5 0.0**
baz=63
C20A Veseth Ranch, 63.71 48 ⇑P **P** **04 26 06.7 -0.1**
baz=63
G17A Pierce Place, 63.85 51 ⇑P **P** **04 26 08.9 +1.0**
baz=64,SNR=6.3
H16A Russell Place, 63.99 52 ⇑P **P** **04 26 09.5 +0.8**
baz=64,SNR=8.0
F18A Big Timber 64.02 50 ⇑P **P** **04 26 09.5 +0.5**
baz=64,SNR=10
NVAR Mina Array Bea 64.03 61 P **P** **04 26 09.0 -0.2**
comp=Z,4.8nm,0.6s,mb4.5,baz=294,slow=7.3,SNR=34
D20A Manuel Ranch, 64.05 48 ⇓P **P** **04 26 09.6 +0.4**
baz=64,SNR=12
E19A Rath Farm, Rou 64.13 49 ⇑P **P** **04 26 10.5 +0.8**
baz=64,SNR=5.7
J15A Blackfoot 64.19 53 ⇓P **P** **04 26 10.9 +0.7**
baz=64,SNR=5.8
K14A Jones Ranch, D 64.34 55 ⇑P **P** **04 26 11.7 +0.6**
baz=64,SNR=7.2
P10A Eureka 64.35 59 ⇑P **P** **04 26 11.4 +0.2**
baz=64
I16A Newdale 64.40 53 ⇓P **P** **04 26 11.9 +0.4**
baz=64
E20A Meyer Farm, Mu 64.44 49 ⇓P **P** **04 26 12.5 +0.8**
baz=64
F19A Roth Farm, Mol 64.45 50 ⇓P **P** **04 26 12.3 +0.5**
baz=64,SNR=8.0
G18A Lazy EL Ranch, 64.48 50 ⇑P **P** **04 26 11.6 -0.4**
baz=64
H17A Grant Village 64.55 52 ⇓P **P** **04 26 12.9 +0.4**
baz=64,SNR=5.4
K15A Arbon 64.61 54 ⇑P **P** **04 26 13.8 +0.9**
baz=64,SNR=8.4
L14A Malta 64.63 55 ⇓P **P** **04 26 13.6 +0.5**
baz=64,SNR=5.1
D21A La Casta Ranch 64.65 48 ⇑P **P** **04 26 12.9 -0.2**
baz=64
IMW Indian Meadow 64.68 52 *e*P **P** **04 26 14.6 +1.2**
comp=Z,4.9nm,1.1s,mb4.2
J16A Bone 64.73 53 ⇓P **P** **04 26 14.6 +0.9**
baz=64,SNR=7.0
RLMT Red Lodge 64.77 50 ⇓P **P** **04 26 14.8 +0.9**
baz=64,SNR=7.8
RLMT Red Lodge 64.77 50 *e*P **P** **04 26 14.2 +0.3**
comp=Z,8.3nm,1.2s,mb4.4
P11A Circle Ranch, 64.81 58 ⇑P **P** **04 26 14.7 +0.5**
baz=64
RRI2 Red Ridge 64.84 53 *e*P **P** **04 26 15.3 +1.0**
comp=Z,10nm,0.7s,mb4.8
H18A Shoshone NF, C 64.85 51 ⇓P **P** **04 26 14.4 0.0**
baz=64
I17A Pilgrim Ck. 64.86 52 ⇑P **P** **04 26 15.2 +0.7**
baz=65
MOOW Moose Ponds 64.89 52 *e*P **P** **04 26 15.4 +0.7**
comp=Z,6.1nm,1.2s,mb4.3
F20A Billings 64.90 49 ⇑P **P** **04 26 15.0 +0.3**
baz=65
Q10A Clear Creek Ra 64.91 59 ⇓P **P** **04 26 14.7 -0.2**
baz=65
O12A Currie 64.93 57 ⇑P **P** **04 26 15.2 +0.3**
baz=65,SNR=6.4
TPAW Teton Pass 64.95 53 *e*P **P** **04 26 16.4 +1.4**
comp=Z,7.3nm,0.8s,mb4.6
K16A Soda Springs 65.03 53 ⇓P **P** **04 26 16.0 +0.5**
baz=65,SNR=5.1
LOHW Long Hollow 65.05 52 *e*P **P** **04 26 16.4 +0.7**
comp=Z,11nm,1.4s,mb4.5
REDW Red Top Meadow 65.08 53 *e*P **P** **04 26 16.8 +0.8**
comp=Z,10nm,1.2s,mb4.5
DGMT Dagmar 65.09 45 ⇓P **P** **04 26 16.0 +0.2**
baz=65,SNR=5.6
L15A Malad City 65.13 55 ⇓P **P** **04 26 16.6 +0.3**
baz=65
J17A Brown Place, J 65.16 53 ⇓P **P** **04 26 17.3 +0.9**
baz=65,SNR=5.6
G20A Bridger 65.26 50 ⇑P **P** **04 26 16.8 -0.2**
baz=65
LAO LASA Array 65.29 48 ⇑P **P** **04 26 17.6 +0.4**
baz=65,SNR=5.8
LAO LASA Array 65.29 48 *e*P **P** **04 26 17.6 +0.4**
comp=Z,4.9nm,0.8s,mb4.4
R10A Warm Springs 65.31 60 ⇓P **P** **04 26 17.4 -0.1**
baz=65
Q11A Duckwater 65.33 59 ⇓P **P** **04 26 17.3 -0.3**
baz=65
P12A McGill 65.36 58 ⇓P **P** **04 26 17.8 0.0**
baz=65
S10A Tonopah Range, 65.38 60 ⇓P **P** **04 26 17.8 -0.1**
baz=65
I18A Diamond G Ranc 65.42 52 ⇓P **P** **04 26 18.1 0.0**
baz=65
M15A Larsen Ranch, 65.46 55 ⇑P **P** **04 26 18.8 +0.4**
baz=65,SNR=17
GRAC Grapevine Rang 65.52 62 ⇑P **P** **04 26 19.1 +0.3**
baz=65,SNR=6.7
SPUT South Promonto 65.56 55 *e*P **P** **04 26 19.5 +0.5**
comp=Z,3.1nm,0.7s,mb4.2
J18A Kendall Valley 65.64 52 ⇑P **P** **04 26 19.8 +0.3**
baz=65
I19A Meeteetse 65.64 51 ⇑P **P** **04 26 19.5 0.0**
baz=65
L16A Fish Haven 65.66 54 ⇓P **P** **04 26 19.6 -0.1**
baz=65
Q12A Willow Creek R 65.69 58 ⇑P **P** **04 26 19.8 -0.1**
baz=65
R11A Troy Canyon, C 65.70 59 ⇑P **P** **04 26 19.8 -0.1**
baz=65,SNR=7.6
ISA Isabella 65.72 63 ⇑P **P** **04 26 19.3 -0.8**
baz=66
G21A Lodge Grass 65.78 49 ⇑P **P** **04 26 20.0 -0.3**
baz=66
N15A Stansbury Isla 65.80 56 ⇓P **P** **04 26 21.0 +0.5**
baz=66,SNR=7.4
HWUT Hardware Ranch 65.86 54 *e*P **P** **04 26 21.2 +0.3**
comp=Z,3.7nm,0.6s,mb4.4
P13A Bates Ranch, G 65.89 58 ⇓P **P** **04 26 20.9 -0.2**
baz=66
L17A Cokeville 65.91 54 ⇓P **P** **04 26 21.0 -0.2**
baz=66
K18A Toltan Ranch, 66.01 53 ⇓P **P** **04 26 22.9 +1.0**
baz=66,SNR=9.0
MPMC Manual Prospec 66.06 62 ⇑P **P** **04 26 22.3 0.0**
baz=66
S11A Rachel 66.07 60 ⇓P **P** **04 26 22.7 +0.3**
baz=66
DUG Dugway 66.09 56 ⇑P **P** **04 26 23.0 +0.5**
baz=66,SNR=8.1
DUG Dugway 66.09 56 *e*P **P** **04 26 22.7 +0.3**
comp=Z,4.2nm,0.8s,mb4.3
DUG Dugway 66.09 56 *e*P **P** **04 26 22.7 +0.3**
DUG pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
J19A Crowheart 66.13 52 ⇑P **P** **04 26 22.3 -0.3**
baz=66
I20A Worland 66.16 51 ⇑P **P** **04 26 23.2 +0.4**
baz=66

FURC **Furnace Creek,** 66.17 62 ⇑P P 04 26 23.0 0.0
baz=66,SNR=12
BW06 **Boulder Array** 66.19 52 ⇑P P 04 26 22.9 -0.1
baz=66,SNR=14
PDAR **Pinedale Array** 66.19 52 P P 04 26 22.6 -0.4
comp=Z,5.7nm,0.5s,mb4.7,baz=302,slow=0.9,SNR=68
Q13A **Wheeler Ranch,** 66.22 58 ⇑P P 04 26 23.6 +0.4
baz=66
O15A **The Old Anders** 66.23 56 ⇑P P 04 26 23.7 +0.4
baz=66
H21A **Big Horn, Sher** 66.27 50 ⇑P P 04 26 23.7 +0.2
baz=66,SNR=10.0
R12A **Pony Springs,** 66.29 59 ⇑P P 04 26 23.6 -0.1
baz=66
P14A **Drum Mountains** 66.34 57 ⇓P P 04 26 24.1 0.0
baz=66
M17A **Scullys Gap (B** 66.45 54 ⇑P P 04 26 24.3 -0.4
baz=66
L18A **Fontenelle, Gr** 66.49 53 ⇓P P 04 26 25.1 +0.1
baz=66
U10A **Ash Meadows, A** 66.53 61 ⇓P P 04 26 25.5 +0.2
baz=66
EDW2 **Edwards Air Fo** 66.53 64 ⇓P P 04 26 24.6 -0.7
baz=66
K19A **Absolon Red Bu** 66.53 52 ⇓P P 04 26 25.2 0.0
baz=66
J20A **Shoshoni** 66.59 51 ⇑P P 04 26 25.3 -0.2
baz=66
S12A **Delamar Landin** 66.62 60 ⇑P P 04 26 26.0 +0.1
baz=66
Q14A **Sevier Lake (B** 66.63 58 ⇓P P 04 26 26.3 +0.5
baz=66,SNR=6.4
T11A **Corn Creek, Al** 66.65 60 ⇑P P 04 26 25.7 -0.3
baz=66
I21A **Big Trails, Te** 66.70 50 ⇓P P 04 26 26.2 0.0
baz=66,SNR=6.9
N17A **Moffit Pass** 66.71 55 ⇓P P 04 26 26.7 +0.3
baz=66,SNR=8.8
L19A **Farson** 66.75 53 ⇑P P 04 26 27.0 +0.4
baz=66
M18A **Lyman** 66.81 54 ⇑P P 04 26 27.4 +0.4
baz=66
P15A **Leamington** 66.81 57 ⇑P P 04 26 27.0 0.0
baz=66
O16A **Springville** 66.83 56 ⇑P P 04 26 27.2 +0.1
baz=66
SHOC **Shoshone** 66.90 62 ⇓P P 04 26 27.0 -0.7
baz=67
K20A **Yellowstone Ra** 66.92 52 ⇓P P 04 26 26.9 -0.8
baz=67,SNR=7.2
J21A **Lysite** 66.93 51 ⇓P P 04 26 27.2 -0.5
baz=67
GSC **Goldstone** 66.98 63 ⇓P P 04 26 27.7 -0.4
baz=67
GSC **Goldstone** 66.98 63 *eP* P 04 26 27.6 -0.6
comp=Z,9.7nm,1.4s,mb4.4
GSC **Goldstone** 66.98 63 *eP* P 04 26 27.6 -0.6
GSC pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
Q15A **Fillmore** 67.14 57 ⇓P P 04 26 29.1 0.0
baz=67
S13A **Holt Ranch, En** 67.23 59 ⇓P P 04 26 29.5 -0.2
baz=67
O17A **Robinson Place** 67.27 55 ⇑P P 04 26 30.3 +0.4
baz=67
N18A **Larsen Ranch,** 67.33 54 ⇑P P 04 26 30.1 -0.2
baz=67
L20A **Wamsutter** 67.37 52 ⇑P P 04 26 30.3 -0.2
baz=67
J22A **Midwest** 67.40 50 ⇓P P 04 26 30.4 -0.3
baz=67
TUQ **Turquoise Moun** 67.43 62 ⇓P P 04 26 30.8 -0.2
baz=67
V11A **Goodsprings** 67.46 61 ⇓P P 04 26 31.2 +0.1
baz=67
S14A **Cedar City** 67.51 58 ⇓P P 04 26 31.5 0.0
baz=67
K21A **Alcova** 67.53 51 ⇑P P 04 26 31.1 -0.4
baz=67
CCUT **Cedar City** 67.54 59 *eP* P 04 26 32.0 +0.3
comp=Z,33nm,2.6s,mb4.6
NOA **NORSAR Array B** 67.57 340 P P 04 26 30.0 -1.5
comp=Z,1.5nm,0.5s,mb4.0,baz=30,slow=6.4,SNR=21
NOA **NORSAR Array B** 67.57 340 P P 04 26 30.0 -1.4
NOA pmax pmax
comp=Z,2.0nm,0.5s
T13A **Saint George** 67.58 60 ⇓P P 04 26 32.1 +0.2
baz=67
HEC **Hector,Ludlow** 67.59 63 ⇓P P 04 26 31.8 -0.2
baz=67
U12A **Valley of Fire** 67.59 60 ⇑P P 04 26 32.1 +0.1
baz=67
BBRC **Big Bear Solar** 67.60 63 ⇑P P 04 26 32.0 -0.1
baz=67
O18A **Roosevelt** 67.63 55 ⇓P P 04 26 32.8 +0.6
baz=67,SNR=6.8
ULM **Lac du Bonnet** 67.67 39 P P 04 26 30.7 -1.5
comp=Z,3.1nm,0.6s,mb4.2,baz=317,slow=4.8,SNR=3.4
R15A **Junction** 67.73 58 ⇑P P 04 26 32.9 0.0
baz=68
P17A **Butcher Ranch,** 67.76 56 ⇓P P 04 26 33.2 +0.2
baz=68
V12A **Nelson** 67.88 61 ⇑P P 04 26 33.8 -0.1
baz=68
Q16A **Castle Valley** 67.89 56 ⇓P P 04 26 34.0 +0.2
baz=68
K22A **Casper** 67.90 51 ⇓P P 04 26 33.6 -0.3
baz=68
L21A **Rawlins** 67.92 52 ⇑P P 04 26 33.8 -0.1
baz=68
P18A **Preston Nutter** 67.93 55 ⇑P P 04 26 34.4 +0.4
baz=68
U13A **Pakoon Wash** 67.95 60 ⇓P P 04 26 34.5 +0.3
baz=68,SNR=7.3
WRA **Warramunga Arr** 68.00 196 P P 04 26 33.6 -0.9
comp=Z,1.6nm,0.9s,mb3.8,baz=13,slow=6.9,SNR=6.7
WRA **Warramunga Arr** 68.00 196 P P 04 26 33.6 -0.9
WRA pmax pmax
comp=Z,2.0nm,0.9s
GMRC **Granite Mounta** 68.03 62 ⇑P P 04 26 34.5 -0.2
baz=68
T14A **Hurricane** 68.03 59 ⇓P P 04 26 34.8 +0.1
baz=68
S15A **Panguitch** 68.04 58 ⇓P P 04 26 35.1 +0.3
baz=68
O19A **Miners Draw (B** 68.10 54 ⇑P P 04 26 35.1 0.0
baz=68
SRU **San Rafael** 68.12 56 ⇓P P 04 26 35.2 -0.1
baz=68,SNR=11
SRU **San Rafael** 68.12 56 *eP* P 04 26 35.5 +0.2
comp=Z,8.6nm,0.9s,mb4.5
SRU **San Rafael** 68.12 56 *eP* P 04 26 35.5 +0.2
SRU pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
R16A **Teasdale** 68.14 57 ⇑P P 04 26 36.0 +0.7
baz=68,SNR=5.4
W12A **Cal Nev Ari** 68.16 61 ⇑P P 04 26 35.5 0.0
baz=68
LDFC **Landfair** 68.16 62 *eP* P 04 26 35.5 -0.1
M21A **Separation Pea** 68.17 52 ⇑P P 04 26 35.4 -0.1
baz=68
RSSD **Black Hills** 68.18 48 *eP* P 04 26 35.0 -0.5
comp=Z,2.2nm,0.5s,mb4.1
RSSD **Black Hills** 68.18 48 *eP* P 04 26 35.0 -0.5
RSSD pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
N20A **Spence Gulch,** 68.21 53 ⇓P P 04 26 36.3 +0.5
baz=68,SNR=9.7
V13A **Grand Canyon W** 68.32 60 ⇓P P 04 26 36.4 -0.2
baz=68,SNR=6.2
BELC **Belle Mtn. Jos** 68.34 63 ⇓P P 04 26 36.2 -0.6
baz=68
Q18A **Rafter H Ranch** 68.35 56 ⇓P P 04 26 36.8 +0.1
baz=68
L22A **Ellis Ranch, M** 68.38 51 ⇑P P 04 26 37.0 +0.2
baz=68
U14A **Mt Trumbull** 68.41 60 ⇓P P 04 26 37.5 +0.3
baz=68,SNR=6.2
S16A **Weppner Ranch,** 68.45 58 ⇓P P 04 26 37.7 +0.3
baz=68
T15A **Red Dirt Ranch** 68.47 59 ⇓P P 04 26 37.4 -0.1
baz=68
R17A **Hanksville Air** 68.49 57 ⇓P P 04 26 37.1 -0.4
baz=68,SNR=5.8
P19A **Cripple Cowboy** 68.64 55 ⇓P P 04 26 38.3 -0.1
baz=68
N21A **Black Mountain** 68.67 53 ⇑P P 04 26 38.8 +0.1
baz=68
O20A **White River Ci** 68.70 54 ⇓P P 04 26 38.7 -0.1
baz=68
L23A **Garrett** 68.71 51 ⇑P P 04 26 38.4 -0.5
baz=68
M22A **Cedar Creek Ra** 68.73 52 ⇑P P 04 26 39.2 +0.2
baz=68
IRM **Iron Mountain** 68.76 63 ⇓P P 04 26 39.0 -0.3
baz=68
BC3 **Big Chuckawall** 68.91 63 ⇑P P 04 26 39.9 -0.3
baz=69
U15A **North Rim** 68.93 59 ⇓P P 04 26 40.8 +0.5
baz=69
Q19A **Hogan Spring (** 68.95 55 ⇓P P 04 26 40.2 -0.2
baz=69,SNR=15
S17A **Black Ridge (B** 68.97 57 ⇓P P 04 26 40.2 -0.4
baz=69,SNR=9.2
R18A **Canyonlands Na** 68.98 56 ⇑P P 04 26 40.1 -0.5
baz=69,SNR=5.4
V14A **Boquillas Ranc** 68.99 60 ⇓P P 04 26 41.2 +0.5
baz=69,SNR=8.6
P20A **De Beque** 69.06 54 ⇑P P 04 26 40.3 -0.8
baz=69
N22A **Wattenberg Ran** 69.22 52 ⇑P P 04 26 42.3 +0.2
baz=69
X13A **Yucca** 69.26 61 ⇓P P 04 26 42.2 -0.2
baz=69
PDMCI **Parker Dam,Lak** 69.28 62 ⇓P P 04 26 42.1 -0.3
baz=69
W14A **Seligman** 69.29 60 ⇑P P 04 26 42.6 +0.1
baz=69,SNR=6.5
S18A **Hurst Farm, Bl** 69.40 57 ⇓P P 04 26 42.8 -0.4
baz=69,SNR=7.8
R19A **Curley Farm, L** 69.41 56 ⇑P P 04 26 43.1 -0.1
baz=69,SNR=5.1
T17A **Navajo Res., N** 69.41 58 ⇓P P 04 26 42.9 -0.4
baz=69
V15A **Kaibab Nationa** 69.42 59 ⇓P P 04 26 43.5 +0.2
baz=69
Y12C **Blythe** 69.42 62 ⇑P P 04 26 43.0 -0.3
baz=69
N23A **Red Feather La** 69.44 52 ⇓P P 04 26 43.4 +0.1
baz=69
Q20A **Ridgley Place,** 69.49 55 ⇑P P 04 26 43.6 -0.2
baz=69
PV04 **Paradox Valley** 69.54 56 *eP* P 04 26 44.2 +0.2
P21A **Newcastle** 69.57 54 ⇑P P 04 26 44.5 +0.3
baz=69
O22A **Kremmling** 69.62 53 ⇑P P 04 26 44.7 +0.2
baz=69
M24A **Cheyenne** 69.63 51 ⇓P P 04 26 44.8 +0.2
baz=69
Y13A **Salome** 69.80 62 ⇓P P 04 26 45.3 -0.4
baz=70
U16A **Tuba City** 69.81 59 ⇓P P 04 26 46.3 +0.5
baz=70,SNR=6.0
T18A **Mexican Hat** 69.85 57 ⇑P P 04 26 45.4 -0.5
baz=70
S19A **Harvey Farm, M** 69.85 56 ⇓P P 04 26 46.0 0.0
baz=70,SNR=12
P22A **Eagle** 69.90 53 ⇑P P 04 26 46.3 +0.1
baz=70
X14A **Yava** 69.91 61 ⇑P P 04 26 46.8 +0.4
baz=70
O23A **Lake Granby, G** 69.93 52 ⇓P P 04 26 47.0 +0.6
baz=70
R20A **Redvale** 69.98 55 ⇑P P 04 26 46.8 +0.1
baz=70
Q21A **Lamborn Mesa,** 69.98 54 ⇓P P 04 26 46.9 +0.2
baz=70
SMCO **Snowmass** 70.07 54 *eP* P 04 26 47.3 0.0
comp=Z,3.3nm,0.7s,mb4.2
WUAZ **Wupatki** 70.09 59 ⇓P P 04 26 47.5 +0.1
baz=70
Y14A **Wickenburg** 70.21 61 ⇑P P 04 26 47.9 -0.3
baz=70,SNR=6.0
S20A **Disappointment** 70.24 56 ⇓P P 04 26 48.6 +0.3
baz=70
X15A **Humboldt** 70.29 60 ⇑P P 04 26 49.0 +0.3
baz=70
W16A **Flagstaff** 70.29 60 ⇑P P 04 26 49.1 +0.4
baz=70
R21A **Cimaron** 70.32 55 ⇑P P 04 26 49.3 +0.5
baz=70,SNR=7.2
Z13A **Yuma Proving G** 70.32 62 ⇓P P 04 26 48.8 -0.1
baz=70
Q22A **Crested Butte,** 70.33 54 ⇓P P 04 26 49.1 +0.2
baz=70
U18A **Rough Rock, Ch** 70.35 58 ⇑P P 04 26 49.0 -0.1
baz=70
V17A **Tonalea, Kykot** 70.36 59 ⇓P P 04 26 49.9 +0.8
baz=70,SNR=11
ISCO **Idaho Springs** 70.38 53 ⇑P P 04 26 49.5 +0.3
baz=70
O24A **Longmont** 70.45 52 ⇓P P 04 26 49.9 +0.3
baz=70
AKASG **Malin Array Be** 70.47 325 P P 04 26 47.7 -1.8
comp=Z,1.8nm,0.4s,mb4.2,baz=37,slow=6.3,SNR=9.6
AKASG **Malin Array Be** 70.47 325 P P 04 26 47.7 -1.8
AKASG pmax pmax
comp=Z,2.0nm,0.4s
113A **Mohawk Valley,** 70.55 63 ⇓P P 04 26 50.3 0.0
baz=70
T19A **Beclabito** 70.55 57 ⇓P P 04 26 50.3 +0.1
baz=70
P23A **Jefferson** 70.56 53 ⇑P P 04 26 50.7 +0.5
baz=70
MVCO **Mesa Verde** 70.59 56 ⇓P P 04 26 50.7 +0.2
baz=70
MVCO **Mesa Verde** 70.59 56 *eP* P 04 26 50.6 +0.2
comp=Z,4.3nm,0.6s,mb4.4
Y15A **Casa Rosa Ranc** 70.60 61 ⇓P P 04 26 50.6 0.0
baz=70
S21A **Coal Bank Pass** 70.68 55 ⇑P P 04 26 51.6 +0.6
baz=70,SNR=5.8
V18A **Ganado** 70.81 58 ⇑P P 04 26 52.1 +0.3
baz=70,SNR=5.0
X16A **Lo Mia Camp, P** 70.81 60 ⇑P P 04 26 52.0 +0.1
baz=71,SNR=5.2
U19A **Dine' College,** 70.82 57 ⇑P P 04 26 52.3 +0.4
baz=70,SNR=5.4
R22A **Saguache, Gunn** 70.86 54 ⇓P P 04 26 52.8 +0.8
baz=71,SNR=6.5
O25A **Wiggins** 70.97 51 ⇓P P 04 26 52.9 +0.2
baz=71
114A **Black Gap (USA** 71.10 62 ⇓P P 04 26 53.4 -0.2
baz=71
S22A **4UR Ranch, Cre** 71.16 55 ⇑P P 04 26 54.4 +0.5
baz=71,SNR=5.1
Y16A **Circle Bar Ran** 71.17 60 ⇓P P 04 26 54.0 0.0
baz=71
X17A **Forest Lakes** 71.25 60 ⇓P P 04 26 55.1 +0.6
baz=71
T21A **Navajo Lake** 71.29 56 ⇓P P 04 26 55.0 +0.3
baz=71
EYMN **Ely** 71.30 39 *eP* P 04 26 53.4 -1.1
comp=Z,5.1nm,0.7s,mb4.4
P25A **Willow Gulch B** 71.37 52 ⇓P P 04 26 55.1 0.0
baz=71
OGNE **Ogallala** 71.48 50 ⇑P P 04 26 55.6 -0.2
baz=71
W19A **Sanders** 71.54 58 ⇑P P 04 26 56.4 +0.2
baz=71
U21A **Nageezi** 71.62 56 ⇓P P 04 26 57.0 +0.3
baz=71
X18A **Snowflake** 71.62 59 ⇑P P 04 26 56.8 +0.1
baz=71
T22A **Edith** 71.63 55 ⇓P P 04 26 57.4 +0.7
baz=71,SNR=7.7
Y17A **Roosevelt** 71.67 60 ⇓P P 04 26 57.2 +0.2
baz=71
ASAR **Alice Springs** 71.71 196 P P 04 26 57.6 +0.5
comp=Z,1.8nm,0.8s,mb3.9,baz=7.7,slow=6.2,SNR=14
ASAR **Alice Springs** 71.71 196 P P 04 26 57.6 +0.5
ASAR pmax pmax
comp=Z,2.0nm,0.8s
R24A **Sanders Place,** 71.77 53 ⇓P P 04 26 57.6 +0.1
baz=72
SDCO **Great Sand Dun** 71.90 54 ⇑P P 04 26 58.4 +0.1
baz=72
116A **Eloy** 71.94 62 ⇓P P 04 26 59.1 +0.4
baz=72
W20A **Ramah** 72.05 58 ⇑P P 04 26 59.3 0.0
baz=72
X19A **St. Johns** 72.08 59 ⇓P P 04 26 59.7 +0.3
baz=72
Y18A **Canyon Day Jun** 72.10 60 ⇓P P 04 26 59.8 +0.3
baz=72
T23A **Casias Ranch,** 72.11 55 ⇑P P 04 26 59.7 +0.2
baz=72
U22A **Llaves** 72.11 56 ⇓P P 04 26 59.7 +0.1
baz=72
S24A **Houchin Ranch,** 72.14 54 ⇑P P 04 26 59.8 +0.1
baz=72
ECSD **EROS Data Cent** 72.16 45 *eP* P 04 26 58.6 -1.1
X20A **Quemado** 72.46 58 ⇑P P 04 27 02.4 +0.7
baz=72,SNR=6.0
216A **Three Points,** 72.48 62 ⇓P P 04 27 01.9 0.0
baz=72
U23A **El Rito** 72.52 55 ⇑P P 04 27 02.6 +0.5
baz=72,SNR=9.1
S25A **Robets Cordova** 72.55 53 ⇓P P 04 27 02.3 +0.1
baz=72
Z19A **T-Link Ranch,** 72.89 60 ⇓P P 04 27 04.2 -0.1
baz=73
118A **Homack Ranch,** 72.93 60 ⇑P P 04 27 04.5 0.0
baz=73
T25A **Trinidad** 72.94 54 ⇑P P 04 27 04.4 -0.1
baz=73
V23A **Ortiz Mt. (NFS** 72.94 56 ⇑P P 04 27 04.8 +0.3
baz=73
X21A **Alamocita Cree** 72.95 58 ⇓P P 04 27 05.1 +0.6
baz=73
U24A **Moreno Valley** 72.98 55 ⇑P P 04 27 05.2 +0.4
baz=73
Y20A **Horse Springs,** 72.98 59 ⇑P P 04 27 05.2 +0.4
baz=73
Y21A **Point of Rocks** 73.32 58 ⇑P P 04 27 07.2 +0.4
baz=73
ANMO **Albuquerque** 73.35 57 *eP* P 04 27 07.0 0.0
comp=Z,1.8nm,0.8s,mb3.9
ANMO **Albuquerque** 73.35 57 *eP* P 04 27 07.0 +0.1
ANMO pmax pmax
comp=Z,2.0nm,0.8s
W23A **Werner Place,** 73.38 56 ⇓P P 04 27 07.5 +0.4
baz=73
Z20A **Nine Sixteen R** 73.42 59 ⇓P P 04 27 07.6 +0.3
baz=73
U25A **Circle Dot Ran** 73.47 54 ⇑P P 04 27 07.2 -0.5
baz=73
V24A **Rampart Ranch,** 73.47 55 ⇓P P 04 27 07.9 +0.3
baz=73
COWI **Conover** 73.75 39 *eP* P 04 27 07.9 -1.1
comp=Z,3.5nm,0.4s,mb4.4
V25A **Rancho No Teng** 73.76 55 ⇑P P 04 27 09.2 -0.1
baz=74
318A **Bisbee** 73.77 61 ⇑P P 04 27 09.3 -0.1
baz=74
W24A **Lazy 6 Ranch,** 73.77 56 ⇓P P 04 27 09.4 0.0
baz=74
Y22A **Socorro** 73.78 58 ⇑P P 04 27 09.1 -0.4
baz=74
120A **U Bar Ranch, L** 73.80 60 ⇓P P 04 27 09.8 +0.3
baz=74
219A **White Tail Can** 73.81 61 ⇓P P 04 27 09.7 0.0
baz=74
Z21A **St. Cloud Mine** 73.82 59 ⇑P P 04 27 10.3 +0.6
baz=74
SCHQ **Schefferville** 73.96 21 P P 04 27 09.8 -0.3
comp=Z,1.6nm,0.5s,mb4.0,baz=318,slow=7.1,SNR=5.4
319A **Douglas** 74.24 61 ⇓P P 04 27 12.2 0.0
baz=74
V26A **Tequesquite Ra** 74.26 54 ⇑P P 04 27 12.0 -0.2
baz=74
W25A **X Bar L Ranch,** 74.30 55 ⇑P P 04 27 12.5 0.0
baz=74
121A **Cookes Peak, D** 74.31 59 ⇓P P 04 27 13.0 +0.5
baz=74
220A **Playas Peak, P** 74.31 60 ⇓P P 04 27 12.6 0.0
baz=74
Y23A **Lovelace Mesa,** 74.31 57 ⇓P P 04 27 12.7 +0.1
baz=74,SNR=6.2
BUR08 **Bucovina Ar. S** 74.50 325 *eP* P 04 27 12.8 -0.5
Y24A **Capitan** 74.68 57 ⇓P P 04 27 14.7 0.0
baz=74
Z23A **Rita Site, Whi** 74.69 58 ⇑P P 04 27 14.9 +0.1
baz=74
Y25A **Mesa, Roswell** 75.10 56 ⇑P P 04 27 16.5 -0.6
baz=75
Z24A **Sheeppen Canyo** 75.15 57 ⇓P P 04 27 17.5 +0.1
baz=75
X26A **CR and CF Fran** 75.15 55 ⇑P P 04 27 17.4 0.0
baz=75
W27A **Bowe Ranch, En** 75.19 54 ⇓P P 04 27 17.9 +0.3
baz=75
X27A **F and S Farms,** 75.48 55 ⇑P P 04 27 19.2 -0.1
baz=75
124A **Stringfield Ra** 75.55 58 ⇓P P 04 27 19.9 +0.3
baz=75
Y26A **Elida** 75.60 56 ⇑P P 04 27 19.9 0.0
baz=75
224A **Cornudas Mount** 75.96 58 ⇓P P 04 27 21.8 -0.3
baz=76
Z26A **Caprock** 75.98 56 ⇓P P 04 27 21.8 -0.3
baz=76
Y27A **Causey** 76.00 55 ⇓P P 04 27 21.8 -0.4
baz=76
125A **Gardner Draw,** 76.04 57 ⇑P P 04 27 22.5 0.0
baz=76
AMTX **Amarillo** 76.10 54 ⇓P P 04 27 22.5 -0.3
baz=76
AMTX **Amarillo** 76.10 54 *eP* P 04 27 22.3 -0.5
comp=Z,6.3nm,0.6s,mb4.4
MSTX **Muleshoe** 76.16 55 ⇓P P 04 27 23.0 -0.1
baz=76
MNTX **Cornudas Mount** 76.32 58 ⇑P P 04 27 23.7 -0.3
baz=76,SNR=6.2
225A **Deer Hill, Car** 76.34 58 ⇑P P 04 27 24.0 -0.1
baz=76
Z27A **Tatum** 76.39 56 ⇓P P 04 27 23.7 -0.7
baz=76
126A **Clayton Basin,** 76.42 57 ⇑P P 04 27 24.2 -0.4
baz=76
324A **Moseley Ranch,** 76.44 59 ⇓P P 04 27 24.2 -0.5
baz=76
325A **Bean Ranch, Si** 76.80 58 ⇓P P 04 27 26.2 -0.5
baz=76
226A **Malaga, Loving** 76.80 57 ⇓P P 04 27 26.5 -0.3
baz=76
BRTR **Keskin Array B** 77.08 315 P P 04 27 28.1 -0.1
comp=Z,0.6nm,0.5s,mb3.5,baz=80,slow=3.4,SNR=4.7
BRTR **Keskin Array B** 77.08 315 P P 04 27 28.1 -0.1
BRTR pmax pmax
comp=Z,1.0nm,0.5s
425A **Indio Mountain** 77.21 59 ⇓P P 04 27 28.7 -0.4
baz=77
326A **Caldwell Ranch** 77.41 58 ⇑P P 04 27 29.9 -0.3
baz=77
QRN **Al-Qurain** 77.48 299 *eP* P 04 27 30.6 0.0
QRN AMb AMB 04 27 32.2
comp=Z,35nm,0.4s,mb5.3
NAY **Al-Naaiem** 77.52 299 *eP* P 04 27 30.5 -0.3
NAY AMb AMB 04 27 31.8
comp=Z,5.7nm,0.8s,mb4.3
RDF **Al-Radifah** 77.57 299 *eP* P 04 27 31.6 +0.6
RDF AMb AMB 04 27 33.2
comp=Z,30nm,0.5s,mb5.2
426A **McDonald Obser** 77.86 58 ⇑P P 04 27 32.4 -0.3
baz=78
328A **Wristen Ranch,** 78.04 57 ⇑P P 04 27 33.3 -0.3
baz=78
427A **Hayter Ranch,** 78.09 58 ⇓P P 04 27 33.8 -0.2
baz=78
526A **Mary Lane Ranc** 78.27 59 ⇓P P 04 27 34.6 -0.3
baz=78
527A **Woodward Ranch** 78.49 58 ⇓P P 04 27 35.9 -0.2
baz=78
428A **Kincaid Ranch,** 78.60 57 ⇓P P 04 27 36.5 -0.2
baz=78
626A **Big Bend Ranch** 78.62 59 ⇓P P 04 27 36.5 -0.3
baz=78
528A **Cox Ranch, San** 78.96 58 ⇓P P 04 27 38.5 -0.2
baz=79
TXAR **Lajitas Array** 79.05 59 P P 04 27 38.7 -0.5
comp=Z,3.8nm,0.6s,mb4.2,baz=299,slow=4.2,SNR=71
TXAR **Lajitas Array** 79.05 59 P P 04 27 38.7 -0.5
TXAR pmax pmax
comp=Z,4.0nm,0.6s
627A **Terlingua Ranc** 79.13 59 ⇓P P 04 27 39.4 -0.2
baz=79
628A **Black Gap, Mar** 79.40 58 ⇑P P 04 27 40.8 -0.3
baz=79
CDF **Champ du Feu** 79.89 336 *eP* P 04 27 43.2 -0.2
JCT **Junction City** 80.43 55 ⇑P P 04 27 45.8 -0.8
baz=80
HAU **Haudompre** 80.52 336 *eP* P 04 27 46.3 -0.5
HINF **Hinteralfeld** 80.55 336 *eP* P 04 27 46.6 -0.3

SFTF	**Sexfontaines**	**80.69**	**337**	*e*P	**P**	**04 27 47.2 -0.5**
FLN	**La Foliniere**	**81.52**	**341**	*e*P	**P**	**04 27 51.6 -0.4**
LDF	**La Druitiere**	**81.60**	**341**	*e*P	**P**	**04 27 51.7 -0.7**
	comp=Z,4.0nm,0.4s,mb4.1					
LDF	**La Druitiere**	**81.60**	**341**	*e*P	**P**	**04 27 51.7 -0.7**
	comp=Z,2.0nm,0.4s,mb4.1					
LDF	**La Druitiere**	**81.60**	**341**	*e*P	**P**	**04 27 51.7 -0.7**
LDF				pmax	pmax	
	comp=Z,2.0nm,0.4s,mb4.1					
LOR	**Lormes**	**81.86**	**338**	*e*P	**P**	**04 27 52.6 -1.3**
CABF	**La Chapelle**	**81.87**	**336**	*e*P	**P**	**04 27 53.4 -0.5**
GRR	**Gorron**	**81.95**	**341**	*e*P	**P**	**04 27 53.7 -0.6**
	comp=Z,10.0nm,0.6s,mb4.3					
GRR	**Gorron**	**81.95**	**341**	*e*P	**P**	**04 27 53.7 -0.6**
	comp=Z,5.0nm,0.6s,mb4.3					
GRR	**Gorron**	**81.95**	**341**	*e*P	**P**	**04 27 53.7 -0.6**
GRR				pmax	pmax	
	comp=Z,5.0nm,0.6s,mb4.3					
SSF	**Saint Saulge**	**82.15**	**338**	*e*P	**P**	**04 27 54.5 -0.8**
AVF	**Avril sur Loir**	**82.44**	**338**	*e*P	**P**	**04 27 56.2 -0.7**
	comp=Z,3.2nm,0.5s,mb3.9					
AVF	**Avril sur Loir**	**82.44**	**338**	*e*P	**P**	**04 27 56.2 -0.7**
	comp=Z,1.6nm,0.5s,mb3.9					
AVF	**Avril sur Loir**	**82.44**	**338**	*e*P	**P**	**04 27 56.2 -0.7**
AVF				pmax	pmax	
	comp=Z,2.0nm,0.5s,mb4.0					
SMF	**Signal de Mont**	**82.44**	**338**	*e*P	**P**	**04 27 56.2 -0.7**
	comp=Z,3.2nm,0.4s,mb4.0					
SMF	**Signal de Mont**	**82.44**	**338**	*e*P	**P**	**04 27 56.2 -0.7**
	comp=Z,1.6nm,0.4s,mb4.0					
SMF	**Signal de Mont**	**82.44**	**338**	*e*P	**P**	**04 27 56.2 -0.7**
SMF				pmax	pmax	
	comp=Z,2.0nm,0.4s,mb4.1					
SGMF	**Saint Gilles**	**82.45**	**342**	*e*P	**P**	**04 27 56.5 -0.4**
	comp=Z,6.5nm,0.4s,mb4.3					
SGMF	**Saint Gilles**	**82.45**	**342**	*e*P	**P**	**04 27 56.5 -0.4**
	comp=Z,3.3nm,0.4s,mb4.3					
SGMF	**Saint Gilles**	**82.45**	**342**	*e*P	**P**	**04 27 56.5 -0.4**
SGMF				pmax	pmax	
	comp=Z,3.0nm,0.4s,mb4.3					
ROSF	**Rostrenen**	**82.52**	**343**	*e*P	**P**	**04 27 56.2 -1.1**
LPL	**La Plagne**	**82.68**	**335**	*e*P	**P**	**04 27 58.4 +0.2**
	comp=Z,6.0nm,0.6s,mb4.2					
LPL	**La Plagne**	**82.68**	**335**	*e*P	**P**	**04 27 58.4 +0.2**
	comp=Z,3.0nm,0.6s,mb4.2					
LPL	**La Plagne**	**82.68**	**335**	*e*P	**P**	**04 27 58.4 +0.2**
LPL				pmax	pmax	
	comp=Z,3.0nm,0.6s,mb4.2					
LPG	**La Plagne**	**82.69**	**335**	*e*P	**P**	**04 27 58.2 0.0**
BGF	**Bois d'Agland**	**82.78**	**338**	*e*P	**P**	**04 27 58.1 -0.6**
QUIF	**Quistinic**	**82.90**	**342**	*e*P	**P**	**04 27 58.1 -1.1**
TCF	**Toulx Ste Croi**	**83.19**	**338**	*e*P	**P**	**04 27 59.8 -1.0**
MBDF	**Montbardon**	**83.39**	**335**	*e*P	**P**	**04 28 01.7 -0.1**
MFF	**Saint Martin d**	**83.47**	**340**	*e*P	**P**	**04 28 01.7 -0.5**
	comp=Z,8.9nm,0.7s,mb4.3					
MFF	**Saint Martin d**	**83.47**	**340**	*e*P	**P**	**04 28 01.7 -0.5**
	comp=Z,4.4nm,0.7s,mb4.3					
MFF	**Saint Martin d**	**83.47**	**340**	*e*P	**P**	**04 28 01.7 -0.5**
MFF				pmax	pmax	
	comp=Z,4.0nm,0.7s,mb4.3					
ORIF	**Oris-en-Rattie**	**83.47**	**336**	*e*P	**P**	**04 28 02.1 -0.1**
	comp=Z,5.0nm,0.5s,mb4.2					
ORIF	**Oris-en-Rattie**	**83.47**	**336**	*e*P	**P**	**04 28 02.1 -0.1**
	comp=Z,2.5nm,0.5s,mb4.2					
ORIF	**Oris-en-Rattie**	**83.47**	**336**	*e*P	**P**	**04 28 02.1 -0.1**
ORIF				pmax	pmax	
	comp=Z,3.0nm,0.5s,mb4.3					
VIVF	**Saint-Julien-l**	**83.87**	**336**	*e*P	**P**	**04 28 04.1 -0.2**
	comp=Z,11nm,0.9s,mb4.3					
VIVF	**Saint-Julien-l**	**83.87**	**336**	*e*P	**P**	**04 28 04.1 -0.2**
	comp=Z,5.7nm,0.9s,mb4.3					
VIVF	**Saint-Julien-l**	**83.87**	**336**	*e*P	**P**	**04 28 04.1 -0.2**
VIVF				pmax	pmax	
	comp=Z,6.0nm,0.9s,mb4.3					
SBF	**Sospel**	**83.98**	**334**	*e*P	**P**	**04 28 04.4 -0.4**
RJF	**Les Rejaudoux**	**84.29**	**339**	*e*P	**P**	**04 28 05.7 -0.7**
SMRF	**Simiane la Rot**	**84.43**	**335**	*e*P	**P**	**04 28 06.6 -0.5**
FRF	**La Foret Royal**	**84.49**	**344**	*e*P	**P**	**04 28 06.8 -0.6**
CAF	**Calviac**	**84.50**	**338**	*e*P	**P**	**04 28 07.4 0.0**
	comp=Z,4.3nm,0.6s,mb4.1					
CAF	**Calviac**	**84.50**	**338**	*e*P	**P**	**04 28 07.4 0.0**
	comp=Z,2.2nm,0.6s,mb4.1					
CAF	**Calviac**	**84.50**	**338**	*e*P	**P**	**04 28 07.4 0.0**
CAF				pmax	pmax	
	comp=Z,2.0nm,0.6s,mb4.0					
PGF	**Pioggiola**	**84.69**	**332**	*e*P	**P**	**04 28 07.4 -1.0**
LMR	**La Mourre**	**84.74**	**334**	*e*P	**P**	**04 28 08.3 -0.4**
LFF	**La Frestale**	**84.82**	**339**	*e*P	**P**	**04 28 08.4 -0.6**
	comp=Z,8.0nm,0.6s,mb4.3					
LFF	**La Frestale**	**84.82**	**339**	*e*P	**P**	**04 28 08.4 -0.6**
	comp=Z,4.0nm,0.6s,mb4.3					
LFF	**La Frestale**	**84.82**	**339**	*e*P	**P**	**04 28 08.4 -0.6**
LFF				pmax	pmax	
	comp=Z,4.0nm,0.6s,mb4.3					
MTLF	**Montolieu**	**85.94**	**337**	*e*P	**P**	**04 28 14.1 -0.5**
	comp=Z,3.2nm,0.7s,mb3.9					
MTLF	**Montolieu**	**85.94**	**337**	*e*P	**P**	**04 28 14.1 -0.5**
	comp=Z,1.6nm,0.6s,mb3.9					
MTLF	**Montolieu**	**85.94**	**337**	*e*P	**P**	**04 28 14.1 -0.5**
MTLF				pmax	pmax	
	comp=Z,2.0nm,0.6s,mb4.0					
EPF	**Esparros**	**86.71**	**339**	*e*P	**P**	**04 28 17.4 -1.0**
	comp=Z,2.3nm,0.6s,mb3.9					
EPF	**Esparros**	**86.71**	**339**	*e*P	**P**	**04 28 17.4 -1.0**
	comp=Z,1.1nm,0.6s,mb3.9					
EPF	**Esparros**	**86.71**	**339**	*e*P	**P**	**04 28 17.4 -1.0**
EPF				pmax	pmax	
	comp=Z,1.0nm,0.6s,mb3.8					
SJPF	**Ste Jean**	**87.02**	**340**	*e*P	**P**	**04 28 19.4 -0.5**
ETSF	**Etsaut**	**87.06**	**339**	*e*P	**P**	**04 28 19.7 -0.4**
	comp=Z,4.3nm,0.5s,mb4.2					
ETSF	**Etsaut**	**87.06**	**339**	*e*P	**P**	**04 28 19.7 -0.4**
	comp=Z,2.2nm,0.5s,mb4.2					
ETSF	**Etsaut**	**87.06**	**339**	*e*P	**P**	**04 28 19.7 -0.4**
ETSF				pmax	pmax	
	comp=Z,2.0nm,0.5s,mb4.2					
KEST	**Kesra**	**90.72**	**329**	P	**P**	**04 28 37.1 -0.3**
	comp=Z,1.0nm,0.6s,mb4.0,baz=55,slow=1.8,SNR=4.3					
TORD	**Torodi Ar. Bea**	**114.07**	**326**	PKP	PKiKP	04 34 12.2 -1.1
	comp=Z,0.2nm,0.3s,baz=22,slow=2.3,SNR=9.3					
DBIC	**Dimbokro**	**122.42**	**331**	PKP	PKPdf	04 34 28.3 -1.0
	comp=Z,1.1nm,0.5s,baz=346,slow=4.2,SNR=4.4					
DBIC	**Dimbokro**	**122.42**	**331**	PKIKP	PKPdf	04 34 28.3 -1.0
DBIC				pmax	pmax	
	comp=Z,1.0nm,0.5s					
CPUP	**Villa Florida**	**150.01**	**57**	PKPbc	PKPbc	04 35 23.6 -0.7
	comp=Z,0.6nm,0.4s,baz=348,slow=2.0,SNR=5.1					
PLCA	**Paso Flores**	**150.04**	**93**	PKPbc	PKPbc	04 35 23.8 -0.1
	comp=Z,1.7nm,0.6s,baz=240,slow=6.7,SNR=6.1					

KRSC 25 04:30:17.9±1.1, 52°.61N×159°.61E, h25km±25km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.55**	**27**	*i* P	Pb	04 30 29.0	+0.1
SPN				*i* S	Sb	04 30 37.7	+1.3
NLC	**Nalytchevo**	**0.58**	**344**	*e*P	Pb	04 30 29.5	0.0
NLC				*i* S	Sb	04 30 38.6	+1.2
PET	**Petropavlovsk**	**0.71**	**306**	*i* P	Pb	04 30 31.4	-0.3
PET				*i* S	Sb	04 30 41.8	+0.7
AVH	**Avacha**	**0.84**	**322**	*i* P	Pb	04 30 34.0	+0.2
AVH				*e*S	Sb	04 30 46.5	+1.8
GRL	**Gorelyy**	**0.94**	**267**	P	Pn	04 30 34.4	-1.1
GRL				*i* S	Sb	04 30 47.2	-0.3
KII	**Karymskiy**	**1.43**	**356**	*e*P	Pn	04 30 43.6	+1.4
KII				*i* S	Sn	04 31 02.2	+2.0
GNL	**Ganaly**	**1.48**	**318**	*i* P	Pn	04 30 43.8	+0.9
GNL				*i* S	Sn	04 31 02.9	+1.5
MIPR	**Malaya Ipel'ka**	**1.78**	**260**	P	Pn	04 30 48.4	+1.4
ALID	**Alaid**	**3.07**	**237**	P	Pn	04 31 05.5	+0.8
KBTR	**Krutoberegovo**	**4.06**	**26**	P	Pn	04 31 19.5	+1.1

*BJI **25** 04:32:38.2, 55°.30N×159°.20W, h20km, mB5.1/4, mb4.6/9, Ms4.7/4, Ms7 4.5/3*
*ISCJB **25** 04:32:40.7±0.7, 55°.30N±0°.08×159°.07W±0°.09, h51km±6km, mb4.0/19, Error ellipse: s-maj=14.4km s-min=5.4km az=150.6*
*IDC **25** 04:32:41.4±0.8, 55°.35N×159°.27W, h40km±5km, mb3.6/15, mb1 3.9/18, mb1mx3.8/26, mbtmp3.7/18, ML4.3/3, MS3.4/1, Ms1 3.4/1, ms1mx2.9/30, Error ellipse: s-maj=25.4km s-min=12.1km az=13.0*

*NEIC **25** 04:32:42.3±0.7, 55°.29N×159°.18W, h51km±6km, ML4.5(PMR), ML4.4(AEIC), Error ellipse: s-maj=13.7km s-min=5.6km az=152.0*
NEIC Felt at Chignik.
ISC 25 04:32:42.2±0.7, 55°.29N±0°.07×159°.08W±0°.09, h46km±6km, h38km±4.8km: pP-P, n44, σ1°31/50, mb4.0/19, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDPT	**Sand Point**	**0.80**	**275**	*e*P	**Pn**	**04 32 56.1**	**-0.9**
CHGN	**Chignik**	**1.08**	**20**	P	**Pn**	**04 33 01.2**	**+0.4**
CHGN				S	**Sn**	**04 33 16.4**	**+1.7**
FALS	**False Pass**	**2.53**	**262**	P	**Pn**	**04 33 21.0**	**+0.3**
FALS				S	**Sn**	**04 33 52.0**	**+1.9**
OHAK	**Old Harbor**	**3.77**	**57**	*e*P	**Pn**	**04 33 36.4**	**-1.2**
AKUT	**Akutan**	**4.05**	**256**	*e*P	**Pn**	**04 33 41.5**	**0.0**
AKLV	**Akutan Long Va**	**4.14**	**257**	P	**Pn**	**04 33 41.5**	**-1.3**
AKGG	**Akutan Green G**	**4.15**	**258**	P	**Pn**	**04 33 42.0**	**-0.9**
KDAK	**Kodiak Island**	**4.38**	**53**	P	**Pn**	**04 33 45.1**	**-0.8**
KDAK	**Kodiak Island**	**4.38**	**53**	Pn	**Pn**	**04 33 44.6**	**-1.4**
	9.1nm,0.3s,baz=213,slow=7.9,SNR=118						
KDAK				Sn	**Sn**	**04 34 32.9**	**-2.7**
	10nm,0.3s,baz=160,slow=9.0,SNR=4.2						
KDAK				Lg		04 34 53.5	
	22nm,0.3s,baz=52,slow=22,SNR=8.9						
KDAK				LR	LR	04 35 50.4	
	comp=Z,435nm,18.6s,baz=351,slow=43						
UNV	**Unalaska Valle**	**4.55**	**254**	P	**Pn**	**04 33 47.7**	**-0.7**
SVW2	**Sparrevohn**	**6.11**	**16**	*e*P	**Pn**	**04 34 11.4**	**+1.7**
RSO	**Redoubt South**	**6.18**	**30**	*e*Pn	**Pn**	**04 34 14.1**	**+3.4**
TTA	**Tatalina**	**7.82**	**10**	*e*P	**Pn**	**04 34 35.8**	**+2.7**
PMR	**Palmer**	**8.19**	**35**	*e*P	**Pn**	**04 34 39.3**	**+1.2**
COLA	**College**	**11.10**	**26**	*e*Pn	**Pn**	**04 35 18.8**	**+0.8**
	15nm,0.8s						
COLA				*e*S	**Sn**	**04 37 19.2**	**-1.3**
ILAR	**Eielson Array**	**11.27**	**28**	Pn	**Pn**	**04 35 17.4**	**-2.8**
	1.5nm,0.3s,baz=217,slow=13,SNR=47						
ILAR				Sn	**Sn**	**04 37 22.3**	**-2.2**
	0.3nm,0.3s,baz=188,slow=7.6,SNR=4.1						
EGAK	**Eagle**	**13.01**	**36**	*e*Pn	**Pn**	**04 35 42.8**	**-1.1**
DAWY	**Dawson**	**13.21**	**40**	*e*Pn	**Pn**	**04 35 46.6**	**-0.2**
DLBC	**Dease Lake**	**16.13**	**67**	Pn	**Pn**	**04 36 28.4**	**+3.0**
	0.6nm,0.3s,baz=296,slow=9.9,SNR=6.7						
INK	**Inuvik**	**17.58**	**32**	Pn	**Pn**	**04 36 41.5**	**-1.9**
	1.2nm,0.3s,baz=247,slow=14,SNR=16						
INK				Sn	**Sn**	**04 39 59.9**	**+2.1**
	0.1nm,0.3s,baz=202,slow=19,SNR=3.7						
YKA	**Yellowknife Ar**	**23.65**	**54**	P	**P**	**04 37 48.5**	**-0.4**
	0.9nm,0.4s,mb3.6,baz=272,slow=9.4,SNR=12						
NVAR	**Mina Array Bea**	**32.02**	**105**	P	**P**	**04 39 05.3**	**+1.4**
	0.6nm,0.6s,mb3.6,baz=307,slow=8.3,SNR=4.8						
NVAR				pP	pP	04 39 15.8	-0.3
	0.9nm,0.7s,baz=306,slow=8.9,SNR=4.4						
PDAR	**Pinedale Array**	**34.07**	**91**	P	**P**	**04 39 22.6**	**+0.9**
	0.7nm,0.6s,mb3.8,baz=306,slow=4.1,SNR=9.2						
PDAR				pP	pP	04 39 34.5	+0.5
	0.8nm,0.6s,baz=315,slow=6.1,SNR=6.2						
MDJ	**Mudanjiang**	**45.17**	**287**	P	**P**	**04 40 56.1**	**+2.1**
MDJ				pmax	pmax		
	comp=Z,140nm,5.3s						
TXAR	**Lajitas Array**	**46.90**	**100**	P	**P**	**04 41 08.2**	**+0.5**
	comp=Z,0.5nm,0.7s,mb3.6,baz=302,slow=5.5,SNR=8.9						
TXAR				pP	pP	04 41 20.0	-0.4
	comp=Z,0.4nm,0.6s,baz=302,slow=5.2,SNR=5.3						
CN2	**Changchun**	**47.96**	**289**	*e*P	**P**	**04 41 18.8**	**+3.0**
KSRS	**Korea Array**	**50.96**	**282**	P	**P**	**04 41 38.4**	**-0.4**
	comp=Z,0.7nm,0.3s,mb4.0,baz=47,slow=6.3,SNR=5.9						
SONM	**Songino Array**	**54.85**	**305**	P	**P**	**04 42 06.7**	**-0.6**
	comp=Z,0.4nm,0.4s,mb3.8,baz=69,slow=6.7,SNR=5.2						
ARCES	**ARCESS Array B**	**55.44**	**358**	P	**P**	**04 42 10.6**	**-0.6**
ARCES	**ARCESS Array B**	**55.44**	**358**	P	**P**	**04 42 10.6**	**-0.6**
	comp=Z,0.5nm,0.3s,mb4.0,baz=35,slow=6.6,SNR=8.2						
ZALV	**Zalesovo Beam**	**59.14**	**322**	P	**P**	**04 42 37.2**	**-0.3**
ZALV	**Zalesovo Beam**	**59.14**	**322**	P	**P**	**04 42 37.2**	**-0.3**
	comp=Z,0.5nm,0.3s,mb4.0,baz=34,slow=6.3,SNR=7.0						
FINES	**FINESS Array B**	**63.54**	**357**	P	**P**	**04 43 06.5**	**-0.6**
	comp=Z,0.8nm,0.4s,mb4.1,baz=322,slow=5.8,SNR=2.8						
NOA	**NORSAR Array B**	**63.76**	**5**	P	**P**	**04 43 08.4**	**-0.2**
NOA	**NORSAR Array B**	**63.76**	**5**	P	**P**	**04 43 08.4**	**-0.2**
	comp=Z,1.1nm,0.9s,mb3.9,baz=333,slow=7.1,SNR=2.7						
LZH	**Lanzhou**	**64.92**	**297**	*e*P	**P**	**04 43 16.5**	**0.0**
LZH				pP	pP	04 43 22.5	-7.2
LZH				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
MKAR	**Makanchi Array**	**65.94**	**319**	P	**P**	**04 43 21.7**	**-1.3**
	comp=Z,0.4nm,0.4s,mb3.9,baz=52,slow=7.9,SNR=6.4						
MKAR				pP	pP	04 43 34.8	-1.4
	comp=Z,0.4nm,0.5s,baz=53,slow=7.5,SNR=2.7						
MKAR				sP	sP	04 43 39.2	-2.2
	comp=Z,0.3nm,0.5s,baz=33,slow=4.6,SNR=2.9						
GYA	**Guiyang**	**71.01**	**289**	*e*P	**P**	**04 43 48.0**	**-6.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
AKASG	**Malin Array Be**	**74.15**	**355**	P	**P**	**04 44 12.1**	**-1.1**
	comp=Z,0.6nm,0.3s,mb4.0,baz=2.4,slow=5.3,SNR=6.3						
KMI	**Kunming**	**74.18**	**291**	P	**P**	**04 44 18.4**	**+4.6**
KMI				pP	pP	04 44 21.8	-5.4
KMI				sP	sP	04 44 23.5	-8.9
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
KSH	**Kashi**	**74.55**	**319**	*e*P	**P**	**04 44 19.3**	**+3.6**
KSH				*e*pP	pP	04 44 23.8	-5.3
KSH				*e*PcP	PcP	04 44 34.3	+4.3
KSH				*e*PP	PP	04 47 06.9	+4.8
KSH				*e*S	S	04 53 52.3	+5.0
KSH				*e*SKS		04 54 21.6	
KSH				*e*ScS	ScS	04 54 26.0	+3.0
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
KSH				LR	LR		
	comp=N,52nm,3.9s						
KSH				LR	LR		
	comp=E,41nm,4.3s						
KSH				LR	LR		
	comp=Z,40nm,3.7s						
CMAR	**Chiang Mai Arr**	**81.64**	**290**	P	**P**	**04 44 54.6**	**-0.6**
	comp=Z,1.3nm,0.5s,mb4.1,baz=8.9,slow=5.9,SNR=13						
CMAR				pP	pP	04 45 05.3	-3.5
	comp=Z,1.5nm,0.7s,baz=15,slow=6.0,SNR=2.7						
ESDC	**Sonseca Array**	**83.04**	**19**	P	**P**	**04 45 03.1**	**+0.7**
	comp=Z,0.4nm,0.5s,mb3.7,baz=328,slow=4.6,SNR=4.2						
BRTR	**Keskin Array B**	**84.73**	**350**	P	**P**	**04 45 11.1**	**+0.2**
	comp=Z,0.4nm,0.6s,mb3.8,baz=4.6,slow=6.2,SNR=4.2						

*ISCJB **25** 04:55:25.8±0.8, 21°.51S±0°.05×68°.3W±0°.2, h129km±20km, Error ellipse: s-maj=24.5km s-min=8.6km az=4.4*
*NEIC **25** 04:55:26.8±1.2, 21°.65S×68°.03W, h110km±13km, Error ellipse: s-maj=30.5km s-min=12.5km az=100.0*
*IDC **25** 04:55:27.0±2.6, 21°.67S×67°.96W, h106km±23km, mb3.8/1, mb1 3.1/4, mb1mx3.0/17, mbtmp3.0/4, Error ellipse: s-maj=56.9km s-min=26.9km az=99.0*
*GUC **25** 04:55:27.8±0.5, 21°.44S×68°.64W, h140km, ML3.7*
ISC 25 04:55:26.8±0.8, 21°.51S±0°.05×68°.4W±0°.1, h127km±19km, n10, σ1°27/17, 1C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MACH	**Maria Elena**	**1.46**	**242**	*e*P	**Pn**	**04 55 55.6**	**+1.3**
MACH				*i* S	**Sn**	**04 56 16.2**	**+1.1**
HMBC	**Humberston**	**1.88**	**311**	↑*i* P	**Pn**	**04 55 59.1**	**-0.1**
HMBC				*i* S	**Sn**	**04 56 22.7**	**-1.2**
HMBC				AML	AML	04 56 24.8	
	comp=N,1μm,0.4s						
PSGC	**Pisagua**	**2.52**	**319**	*e*P	**Pn**	**04 56 06.3**	**-0.8**
PSGC				*i* S	**Sn**	**04 56 36.2**	**-2.0**
PSGC				AML	AML	04 56 37.6	
	comp=E,186nm,0.5s						
MNMC	**Miæe Miæ**	**2.64**	**334**	↓*i* P	**Pn**	**04 56 09.2**	**+0.5**
MNMC				*i* S	**Sn**	**04 56 41.3**	**+0.5**
MNMC				AML	AML	04 56 42.6	
	comp=N,418nm,0.2s						
LPAZ	**La Paz**	**5.20**	**2**	*e*Pn	**Pn**	**04 56 44.8**	**+2.2**
LPAZ				*e*S	**Sn**	**04 57 43.0**	**+1.3**
LPAZ	**La Paz**	**5.20**	**2**	P	**Pn**	**04 56 45.0**	**+2.4**
	comp=N,1.5nm,0.3s,baz=186,slow=4.5,SNR=64						
LPAZ				S	**Sn**	**04 57 42.4**	**+0.7**
	comp=N,0.4nm,0.3s,baz=274,slow=4.0,SNR=1.9						
SIV	**San Ignacio**	**8.82**	**53**	P	**Pn**	**04 57 29.5**	**-1.9**
	comp=N,0.3nm,0.3s,baz=255,slow=14,SNR=7.1						
SIV				S	**Sn**	**04 58 59.3**	**-10**
	comp=N,0.1nm,0.3s,baz=14,slow=24,SNR=1.5						
CFAA	**Coronel Fontan**	**10.05**	**179**	P	**Pn**	**04 57 46.3**	**-1.5**
	comp=N,0.0nm,0.3s,baz=359,slow=12,SNR=8.3						
CFAA				S	**Sn**	**04 59 31.9**	**-6.8**
	comp=N,0.0nm,0.3s,baz=246,slow=15,SNR=3.9						
TORD	**Torodi Ar. Bea**	**76.88**	**70**	P	**P**	**05 07 06.2**	**+0.8**
	comp=N,1.0nm,0.5s,baz=252,slow=5.4,SNR=20						
MKAR	**Makanchi Array**	**145.34**	**36**	PKPbc	PKPbc	05 14 51.7	+2.1
	comp=N,0.7nm,0.8s,baz=312,slow=4.2,SNR=6.7						

*ISCJB **25** 04:59:52.6±0.5, 38°.56N±0°.02×40°.68E±0°.03, h1km±5km, Error ellipse: s-maj=4.2km s-min=3.6km az=146.4*
*ISK **25** 04:59:52.8, 38°.56N×40°.62E, h4km, MD3.3*
*DDA **25** 04:59:52.7, 38°.55N×40°.72E, h7km±6km, Md3.4*
*CSEM **25** 04:59:53.3±0.1, 38°.58N×40°.71E, h2km, MD3.3, Error ellipse: s-maj=3.7km s-min=2.4km az=114.0*
ISC 25 04:59:53.2±0.5, 38°.56N±0°.02×40°.69E±0°.03, h2km±6km, n37, σ1°09/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BINT	**Bingol**	**0.35**	**334**	PG	**Pg**	**05 00 00.1**	**+0.1**
BINT				*e*SG	**Sg**	**05 00 05.5**	**+1.0**
BINT	**Bingol**	**0.35**	**334**	*i* Pg	**Pg**	**05 00 00.1**	**+0.1**
BINT				*e*Sg	**Sg**	**05 00 05.5**	**+0.9**
BNGL	**BINGOL**	**0.53**	**42**	*i* P	**Pg**	**05 00 02.4**	**-1.0**
BNGL				*i* S	**Sg**	**05 00 10.2**	**-0.1**
DIYA	**Diyarbakir**	**0.78**	**215**	*i* P	**Pg**	**05 00 08.6**	**+0.5**
DIYA				*i* S	**Sg**	**05 00 20.0**	**+1.9**
DIYA	**Diyarbakir**	**0.78**	**215**	*i* P	**Pg**	**05 00 08.6**	**+0.6**
DIYA				*i* S	**Sg**	**05 00 20.0**	**+1.9**
BEST	**Besiri**	**0.81**	**145**	*i* P	**Pg**	**05 00 09.2**	**+0.5**
BEST				*i* S	**Sg**	**05 00 20.9**	**+1.8**
PTK	**Pertek**	**1.07**	**289**	*e*PG	**Pg**	**05 00 11.9**	**-1.7**
PTK	**Pertek**	**1.07**	**289**	*e*Pg	**Pg**	**05 00 11.9**	**-1.7**
SVRC	**Sivrice-ELAZID**	**1.10**	**261**	*e*PG	**Pg**	**05 00 13.3**	**-1.0**
SVRC				*e*SG	**Sg**	**05 00 27.7**	**-0.8**
SVRC	**Sivrice-ELAZID**	**1.10**	**261**	*e*Pg	**Pg**	**05 00 13.3**	**-1.0**
SVRC				*e*Sg	**Sg**	**05 00 27.7**	**-0.8**
TATV	**Tatvan**	**1.24**	**92**	*i* P	**Pg**	**05 00 15.2**	**-1.7**
TATV				*i* S	**Sg**	**05 00 33.2**	**+0.2**
TATV	**Tatvan**	**1.24**	**92**	*i* P	**Pg**	**05 00 15.2**	**-1.7**
TATV				*i* S	**Sg**	**05 00 33.2**	**+0.2**
MARD	**Mardin**	**1.24**	**177**	*i* P	**Pg**	**05 00 15.1**	**-1.9**
MARD				*i* S	**Sg**	**05 00 32.5**	**-0.7**
ELZG	**Elazig**	**1.34**	**268**	*i* P	**Pn**	**05 00 17.9**	**-1.0**
ELZG				*i* S	**Sg**	**05 00 37.4**	**+1.2**
ELZG	**Elazig**	**1.34**	**268**	*i* P	**Pn**	**05 00 17.9**	**-0.9**
ELZG				*i* S	**Sg**	**05 00 37.4**	**+1.2**
EZM	**Erzurum**	**1.44**	**21**	*e*PN	**Pn**	**05 00 19.8**	**-0.5**
ERZM	**Erzurum**	**1.44**	**21**	*i* P	**Pn**	**05 00 19.1**	**-1.2**
ERZM				*i* S	**Sg**	**05 00 41.6**	**+2.0**
ERZM	**Erzurum**	**1.44**	**21**	*i* P	**Pn**	**05 00 19.1**	**-1.2**
ERZM				*i* S	**Sg**	**05 00 41.6**	**+2.0**
KOPT	**Kop Dagi**	**1.47**	**354**	*i* P	**Pn**	**05 00 20.8**	**+0.2**
KOPT	**Kop Dagi**	**1.47**	**354**	*i* P	**Pn**	**05 00 20.8**	**+0.2**
EZC	**Erzincan**	**1.58**	**319**	*e*PN	**Pn**	**05 00 22.2**	**0.0**
MALT	**Malatya**	**1.79**	**263**	*e*PN	**Pn**	**05 00 25.2**	**+0.1**
MALT	**Malatya**	**1.79**	**263**	*e*Pn	**Pn**	**05 00 25.2**	**+0.1**
MYA	**Malatya**	**1.79**	**263**	*e*PN	**Pn**	**05 00 24.5**	**-0.6**
MYA	**Malatya**	**1.79**	**263**	*e*Pn	**Pn**	**05 00 24.5**	**-0.6**
AGRB	**Hanur-Agry**	**2.06**	**60**	*e*PN	**Pn**	**05 00 29.7**	**+0.9**
AGRB	**Hanur-Agry**	**2.06**	**60**	*e*Pn	**Pn**	**05 00 29.7**	**+0.9**
GUMT	**Gumushane

BVAR	**Borovoye Array**	**66.15**	**320**	P		**P**		**05 51 29.3**	**-0.3**
	0.8nm,0.4s,mb3.9,baz=91,slow=9.1,SNR=3.7								
YKA	**Yellowknife Ar**	**77.65**	**28**	P		**P**		**05 52 38.3**	**+0.2**
	1.4nm,0.6s,mb3.9,baz=285,slow=5.4,SNR=3.1								
ARCES	**ARCESS Array B**	**82.11**	**342**	P		**P**		**05 53 00.6**	**-1.3**
	1.3nm,0.8s,mb3.8,baz=75,slow=6.4,SNR=6.2								
NVAR	**Mina Array Bea**	**82.92**	**52**	P		**P**		**05 53 08.4**	**+1.7**
	1.3nm,0.7s,mb3.9,baz=268,slow=6.2,SNR=11								
FINES	**FINESS Array B**	**86.52**	**335**	P		**P**		**05 53 22.4**	**-1.9**
	0.7nm,0.4s,mb4.0,baz=74,slow=8.1,SNR=6.5								
PDAR	**Pinedale Array**	**87.57**	**45**	P		**P**		**05 53 30.1**	**+0.3**
PDAR	**Pinedale Array**	**87.57**	**45**	P		**P**		**05 53 30.1**	**+0.3**
	0.3nm,0.6s,mb3.5,baz=348,slow=0.5,SNR=5.7								
LPAZ	**La Paz**	**147.71**	**90**	PKPbc		PKPbc		06 00 27.6	+1.1
	1.1nm,1.0s,baz=28,slow=3.6,SNR=3.9								

ISCJB ***25*** *05:41:08.3±0.5,24.79N×104.43E±0.05,h10km, mb3.5/4,Error ellipse: s-maj=6.2km s-min=5.9km az=27.6*
PLV ***25*** *05:41:13.1±0.7,24.61N×104.46E,h0km±22km,ML3.3*
BJI ***25*** *05:41:15.1,25.12N×104.44E,h27km,ML3.8/7,Ms3.3/2, Ms7 3.0/1*
IDC ***25*** *05:41:19.5±4.0,25.47N×103.12E,h0km,mb3.6/4, mb1 3.6/5,mb1mx3.4/24,mbtmp3.5/5,ML3.7/1,Error ellipse: s-maj=103.6km s-min=20.8km az=107.0*

ISC 25 05:41:10.0±0.5,24.82N±0.04×104.45E±0.04,h10km,n15, σ1s21/19,mb3.5/4,Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**1.58**	**281**	Pg		**Pg**		**05 41 39.4**	**-1.0**
KMI				Sg		**Sg**		**05 41 59.6**	**-1.3**
KMI				smax					
	comp=N,520nm,0.9s								
KMI				smax					
	comp=E,490nm,0.8s								
HGVB	**Ha Giang**	**2.04**	**166**	*e*Pn		**Pn**		**05 41 45.7**	**+1.3**
HGVB				AML		AML		05 42 20.7	
	comp=E,300nm,0.3s								
GYA	**Guiyang**	**2.58**	**50**	Pn		**Pn**		**05 41 53.8**	**+2.0**
GYA				Pg		**Pg**		**05 41 58.8**	**-0.6**
GYA				Sn		**Sn**		**05 42 23.3**	**+0.1**
GYA				Sg		**Sg**		**05 42 30.6**	**-2.2**
GYA				smax					
	comp=N,450nm,0.8s								
GYA				smax					
	comp=E,640nm,1.0s								
VTVB	**Vinh Tuy**	**2.59**	**171**	*e*Pg		**Pg**		**05 41 58.7**	**-1.0**
LCVN	**Lai Chau**	**3.02**	**204**	*e*Pn		**Pn**		**05 41 58.9**	**+1.1**
BCVB	**Bac Can**	**3.17**	**157**	*e*Pn		**Pn**		**05 41 55.0**	**-4.9**
DHV	**Doan Hung**	**3.25**	**168**	*e*Pg		**Pg**		**05 42 11.1**	**-1.3**
TTVN	**Tram Tau**	**3.34**	**182**	*e*Pg		**Pg**		**05 42 13.1**	**-0.9**
TGV	**Tuan Giao**	**3.36**	**197**	*e*Pn		**Pn**		**05 42 04.2**	**+1.7**
SLVN	**Son La**	**3.51**	**188**	*e*Pg		**Pg**		**05 42 16.8**	**-0.5**
CMAR	**Chiang Mai Arr**	**8.15**	**220**	Pn		**Pn**		**05 43 17.5**	**+9.1**
	comp=E,0.2nm,0.3s,baz=32,slow=12,SNR=4.2								
CMAR				Pg		Pn		05 43 44.9	+37
	comp=E,0.1nm,0.3s,baz=38,slow=16,SNR=4.7								
CMAR				Lg				05 45 31.9	
	comp=E,0.1nm,0.3s,baz=34,slow=29,SNR=4.1								
SONM	**Songino Array**	**23.02**	**3**	P		**P**		**05 46 21.1**	**+6.0**
	comp=E,0.5nm,0.4s,mb3.8,baz=181,slow=11,SNR=3.8								
MKAR	**Makanchi Array**	**28.17**	**327**	P		**P**		**05 47 03.9**	**+1.5**
	comp=E,0.2nm,0.6s,mb3.0,baz=121,slow=7.6,SNR=2.5								
ZALV	**Zalesovo Beam**	**32.58**	**338**	P		**P**		**05 47 41.7**	**+0.4**
	comp=E,0.5nm,0.3s,mb3.9,baz=148,slow=8.5,SNR=2.8								
KURK	**Kurchatov**	**32.62**	**329**	P		**P**		**05 47 42.5**	**+0.7**
	comp=E,1.2nm,0.6s,mb4.0,baz=133,slow=10,SNR=7.5								

IDC ***25*** *05:44:02.0±1.0,31.30N×104.00E,h0km,mb3.8/6, mb1 4.0/7,mb1mx3.7/23,mbtmp3.8/7,ML3.0/1,Error ellipse: s-maj=41.0km s-min=18.3km az=56.0*
NEIC ***25*** *05:44:04.1±0.6,31.43N×104.07E,h10km,Error ellipse: s-maj=16.1km s-min=10.6km az=66.0*
BJI ***25*** *05:44:04.3,31.36N×104.16E,h12km,ML3.7/13,Ms3.5/3, Ms7 3.4/3*

ISC 25 05:44:04.2±1.2,31.36N±0.03×103.99E±0.07,h11km±8km, n12,σ1s14/19,mb3.8/5,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**4.71**	**359**	Pg		**Pg**		**05 45 35.5**	**+1.0**
LZH				Sn		**Sb**		**05 46 20.3**	**-3.2**
LZH				Sg		**Sg**		**05 46 34.5**	**-1.0**
LZH				smax					
	comp=N,78nm,0.7s								
LZH				smax					
	comp=E,64nm,0.6s								
LZH				LR		LR			
	comp=N,260nm,7.1s								
LZH				LR		LR			
	comp=E,630nm,8.8s								
LZH				LR		LR			
	comp=Z,300nm,7.5s								
ENH	**Enshi**	**4.86**	**102**	*e*Pn		**Pn**		**05 45 17.6**	**+0.5**
XAN	**Xi'an**	**4.94**	**56**	Pn		**Pn**		**05 45 17.8**	**-0.6**
XAN				Pg		**Pb**		**05 45 32.4**	**+1.7**
XAN				Sn		**Sn**		**05 46 16.5**	**+1.0**
XAN				Sg		**Sg**		**05 46 35.9**	**-7.0**
XAN				smax					
	comp=N,170nm,0.7s								
XAN				smax					
	comp=E,84nm,0.8s								
XAN				LR		LR			
	comp=N,230nm,6.4s								
XAN				LR		LR			
	comp=E,98nm,7.0s								
XAN				LR		LR			
	comp=Z,86nm,10.6s								
GYA	**Guiyang**	**5.42**	**154**	Pn		**Pn**		**05 45 26.8**	**+1.8**
GYA				Sn		**Sn**		**05 46 26.4**	**-1.0**
GYA				Sg		**Sg**		**05 46 56.9**	**-1.4**
GYA				smax					
	comp=N,130nm,0.8s								
GYA				smax					
	comp=E,190nm,0.9s								
CMAR	**Chiang Mai Arr**	**13.64**	**201**	Pn		**Pn**		**05 47 19.7**	**+2.1**
	comp=E,0.2nm,0.3s,baz=18,slow=13,SNR=2.8								
SONM	**Songino Array**	**16.55**	**6**	Pn		**Pn**		**05 47 55.5**	**-0.7**
	comp=E,0.1nm,0.3s,baz=188,slow=9.7,SNR=2.9								
KSRS	**Korea Array**	**20.64**	**66**	P		**P**		**05 48 43.2**	**-0.5**
	comp=E,2.4nm,0.6s,baz=253,slow=9.8,SNR=9.9								
MKAR	**Makanchi Array**	**22.72**	**319**	P		**P**		**05 49 06.8**	**+0.9**
	comp=E,1.1nm,0.9s,mb3.3,baz=140,slow=7.8,SNR=5.8								
ZALV	**Zalesovo Beam**	**26.44**	**334**	P		**P**		**05 49 40.8**	**-0.1**
	comp=E,2.0nm,0.7s,mb3.8,baz=132,slow=10,SNR=5.4								
KURK	**Kurchatov**	**26.98**	**323**	P		**P**		**05 49 45.2**	**-0.5**
	comp=E,1.4nm,0.7s,mb3.6,baz=126,slow=10,SNR=5.8								
WRA	**Warramunga Arr**	**58.74**	**146**	P		**P**		**05 54 01.4**	**-0.9**
	comp=E,4.4nm,0.6s,mb4.7,baz=339,slow=7.9,SNR=26								
ASAR	**Alice Springs**	**61.76**	**149**	P		**P**		**05 54 22.1**	**-0.8**
	comp=E,0.4nm,0.4s,mb3.9,baz=335,slow=7.1,SNR=7.6								

MAN 25 05:44:55,10.15N×125.26E,h18km,mb4.5,ML3.4,MS3.2, 1D,Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.43**	**148**	*e*P		Pg		05 45 05.0	+1.1
SCPH				*e*S		Sg		05 45 14.4	+4.6
OCLP	**Ormoc**	**1.10**	**325**	*e*P		Pb		05 45 14.1	-1.4
LLP	**Lapu-Lapu**	**1.28**	**277**	*e*P		Pn		05 45 17.1	-1.0
LLP				*e*S		Sn		05 45 35.2	+0.4
TBP	**Tagbilaran**	**1.45**	**252**	*e*P		Pn		05 45 20.8	+0.5
BUKP	**Musuan**	**2.27**	**185**	*e*P		Pn		05 45 33.7	+2.1
CNP	**Catarman**	**2.42**	**346**	*e*P		Pn		05 45 35.1	+1.5
GUIM	**Jordan**	**2.67**	**280**	*e*P		Pn		05 45 37.8	+0.7

CASC 25 05:45:03.1±1.6,9.34N×82.72W,h17km±12km,MD3.5, 1C-2D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.54**	**177**	*e*P		Pg		05 45 14.1	+0.1
BRU2				*e*S		Sg		05 45 22.7	+1.5
ACR	**Cerro Adams**	**0.81**	**213**	*e*P		Pb		05 45 18.4	-0.3
ACR				*e*S		Sb		05 45 29.8	+0.4
URSC	**Urasca**	**1.15**	**295**	*e*P		Pn		05 45 22.8	-1.6
QCR	**Quepos**	**1.43**	**274**	*e*P		Pn		05 45 28.0	-0.2
QCR				*e*S		Sn		05 45 46.9	+0.3
LAJ	**Bijagual**	**1.47**	**291**	*e*P		Pn		05 45 35.0	+6.1
PRS1	**Puriscal**	**1.69**	**292**	*e*P		Pn		05 45 32.5	+0.6
PRS1				*e*S		Sn		05 45 53.9	+0.7
CGA2	**Cerro Gallo 2**	**1.84**	**292**	*e*P		Pn		05 45 34.6	+0.7
CGA2				*e*S		Sn		05 45 57.7	+0.7

IDC 25 05:53:42.0±4.2,14.85S×173.78W,h88km±82km,mb3.7/2, mb1 3.9/3,mb1mx3.4/17,mbtmp3.7/3,Error ellipse: s-maj=279.2km s-min=33.1km az=146.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.16**	**64**	P		Pn		05 54 18.0	+1.8
	22nm,0.3s,baz=43,slow=3.6,SNR=24								
AFI				S		Sn		05 54 42.7	+0.4
	88nm,0.3s,baz=95,slow=16,SNR=17								
WRA	**Warramunga Arr**	**49.61**	**256**	P		P		06 02 24.8	-0.1
	0.6nm,0.5s,baz=90,slow=7.1,SNR=16								
ASAR	**Alice Springs**	**49.93**	**251**	P		P		06 02 26.8	-0.5
	4.1nm,0.7s,baz=86,slow=8.1,SNR=38								
BRTR	**Keskin Array B**	**145.50**	**321**	PKPbc		PKPbc		06 13 10.3	-0.1
	0.4nm,0.5s,baz=309,slow=3.0,SNR=3.5								

MAN 25 06:15:13,10.17N×125.27E,h17km,mb4.7,ML3.6,MS3.5, 1D,Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.45**	**150**	*e*P		Pg		06 15 23.4	+1.4
SCPH				*e*S		Sg		06 15 32.8	+4.7
OCLP	**Ormoc**	**1.09**	**324**	*e*P		Pb		06 15 32.2	-1.1
LLP	**Lapu-Lapu**	**1.29**	**277**	*e*P		Pn		06 15 35.0	-1.2
LLP				*e*S		Sb		06 15 53.6	+0.6
TBP	**Tagbilaran**	**1.46**	**251**	*e*P		Pn		06 15 39.2	+0.6
BUKP	**Musuan**	**2.29**	**185**	*e*P		Pn		06 15 51.9	+1.9
CNP	**Catarman**	**2.40**	**346**	*e*P		Pn		06 15 53.0	+1.5
GUIM	**Jordan**	**2.67**	**280**	*e*P		Pn		06 15 56.6	+1.3

IDC 25 06:25:53.4±4.0,56.84S×26.38W,h0km,mb3.9/2, mb1 4.0/2,mb1mx3.7/14,mbtmp3.9/2,Error ellipse: s-maj=139.0km s-min=53.5km az=173.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**51.20**	**305**	P		P		06 34 59.0	+0.6
	1.1nm,0.8s,baz=135,slow=4.3,SNR=6.4								
TORD	**Torodi Ar. Bea**	**73.53**	**29**	P		P		06 37 27.9	+0.1
	1.0nm,0.8s,baz=207,slow=5.6,SNR=4.0								
ILAR	**Eielson Array**	**150.97**	**310**	PKPbc		PKPbc		06 45 46.2	-0.2
	0.3nm,0.8s,baz=126,slow=1.2,SNR=4.6								

MAN ***25*** *06:31:44,10.28N×125.11E,h16km,mb4.6,ML3.5,MS3.4*
ISCJB ***25*** *06:31:45.7±0.7,10.30N±0.05×125.13E±0.08,h54km±9km, mb3.7/5,Error ellipse: s-maj=14.2km s-min=7.1km az=153.0*
IDC ***25*** *06:31:53.0±3.6,10.41N×125.23E,h102km±38km,mb3.4/5, mb1 3.5/6,mb1mx3.3/21,mbtmp3.5/6,MS3.4/2,Ms1 3.4/2, ms1mx2.4/20,Error ellipse: s-maj=68.3km s-min=19.6km az=74.0*

ISC 25 06:31:46.7±0.8,10.30N±0.05×125.14E±0.08,h41km±11km, n16,σ1s23/18,mb3.7/5,1D,Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.62**	**146**	*e*P		**Pn**		**06 31 54.0**	**-5.0**
OCLP	**Ormoc**	**0.91**	**325**	*e*P		**Pn**		**06 32 00.7**	**-2.4**
OCLP				*e*S		**Sn**		**06 32 17.2**	**+2.2**
LLP	**Lapu-Lapu**	**1.16**	**271**	*e*P		**Pn**		**06 32 03.8**	**-2.6**
LLP				*e*S		**Sn**		**06 32 21.2**	**+0.2**
BUTP	**Butuan**	**1.40**	**160**	*e*P		**Pn**		**06 32 09.2**	**-0.6**
BUTP				*e*S		**Sn**		**06 32 27.3**	**+0.2**
CNP	**Catarman**	**2.25**	**348**	*e*P		**Pn**		**06 32 20.6**	**-0.7**
BUKP	**Musuan**	**2.41**	**182**	*e*P		**Pn**		**06 32 23.8**	**+0.2**
GUIM	**Jordan**	**2.53**	**278**	*e*P		**Pn**		**06 32 25.6**	**+0.3**
DAV	**Davao City (W)**	**3.24**	**172**	P		**Pn**		**06 32 43.2**	**+8.2**
	54nm,0.3s,baz=270,slow=11,SNR=1.8								
DAV				LR		LR		06 34 13.6	
	comp=Z,585nm,20.8s,baz=81,slow=42								
PVCP	**Virac**	**3.42**	**344**	*e*P		**Pn**		**06 32 39.2**	**+1.8**
ENPP	**El Nido**	**5.69**	**280**	*e*P		**Pn**		**06 33 09.0**	**+0.4**
KSRS	**Korea Array**	**27.15**	**5**	P		**P**		**06 37 25.9**	**-0.3**
	1.2nm,0.6s,mb3.6,baz=197,slow=10,SNR=5.8								
WRA	**Warramunga Arr**	**31.39**	**163**	P		**P**		**06 38 03.8**	**0.0**
	0.6nm,1.0s,mb3.4,baz=345,slow=9.3,SNR=3.3								
ASAR	**Alice Springs**	**34.83**	**166**	P		**P**		**06 38 36.0**	**+2.1**
	0.5nm,0.7s,mb3.6,baz=353,slow=8.8,SNR=4.7								
SONM	**Songino Array**	**40.61**	**341**	LR		LR		06 56 54.3	
	comp=Z,63nm,21.0s,baz=322,slow=37								
MKAR	**Makanchi Array**	**51.34**	**323**	P		**P**		**06 40 47.0**	**+0.1**
	0.9nm,0.8s,mb3.7,baz=125,slow=6.4,SNR=7.6								
ZALV	**Zalesovo Beam**	**54.07**	**332**	P		**P**		**06 41 05.5**	**-1.6**
	0.6nm,0.3s,mb4.0,baz=147,slow=8.8,SNR=3.7								

MAN 25 06:42:54,10.14N×125.21E,h20km,mb4.5,ML3.4,MS3.3, 1C,Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.45**	**142**	*e*P		Pb		06 43 05.2	+1.9
SCPH				*e*S		Sb		06 43 14.9	+5.3
OCLP	**Ormoc**	**1.08**	**327**	*e*P		Pb		06 43 13.5	-0.5
OCLP				*e*S		Sb		06 43 20.6	-7.0
LLP	**Lapu-Lapu**	**1.23**	**278**	*e*P		Pn		06 43 16.2	+0.1
LLP				*e*S		Sb		06 43 39.9	+7.8
TBP	**Tagbilaran**	**1.40**	**251**	*e*P		Pn		06 43 18.7	+0.4
CNP	**Catarman**	**2.41**	**347**	*e*P		Pn		06 43 34.1	+1.8
GUIM	**Jordan**	**2.62**	**281**	*e*P		Pn		06 43 38.2	+3.0

MAN 25 06:46:00,9.03N×125.46E,h32km,mb4.0,ML2.7,MS2.4, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.17**	**110**	*e*P		Pb		06 46 08.3	+2.2
BUTP				*e*S		Sb		06 46 13.6	+3.2
SCPH	**Surigao**	**0.75**	**2**	*e*P		Pn		06 46 15.3	+0.9
BUKP	**Musuan**	**1.21**	**199**	*e*P		Pn		06 46 21.4	+0.7
BUKP				*e*S		Sn		06 46 33.5	-2.4

IDC ***25*** *06:46:59.3±1.4,9.13N×92.84E,h0km,mb3.9/8,mb1 4.0/9, mb1mx3.8/26,mbtmp3.9/9,ML4.1/1,MS3.3/2,Ms1 3.3/2, ms1mx2.4/34,Error ellipse: s-maj=57.5km s-min=17.3km az=62.0*
NEIC ***25*** *06:47:03.9±1.0,9.08N×92.78E,h35km,Error ellipse: s-maj=27.7km s-min=14.8km az=64.0*

ISC 25 06:47:08.2±6.7,9.2N±0.3×93.0E±0.4,h68km±51km,n12, σ0s75/10,mb3.9/8,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**8.69**	**137**	LR		LR		06 53 20.6	
	comp=Z,94nm,18.5s,baz=105,slow=43								
CMAR	**Chiang Mai Arr**	**10.82**	**31**	Pn		**Pn**		**06 49 40.2**	**-0.1**
	0.4nm,0.3s,baz=210,slow=12,SNR=3.2								
AAK	**Ala-Archa**	**37.03**	**337**	P		**P**		**06 54 13.0**	**+1.7**
	1.2nm,0.3s,mb4.3,baz=225,slow=4.6,SNR=4.0								
MKAR	**Makanchi Array**	**38.53**	**348**	P		**P**		**06 54 23.4**	**-0.5**
	1.1nm,0.7s,mb3.8,baz=172,slow=8.2,SNR=12								
SONM	**Songino Array**	**40.10**	**14**	P		**P**		**06 54 37.9**	**+0.8**
	1.0nm,0.6s,mb3.8,baz=204,slow=9.5,SNR=2.7								
KSRS	**Korea Array**	**42.20**	**43**	LR		LR		07 16 15.6	
	comp=Z,73nm,19.0s,baz=168,slow=42								
KURK	**Kurchatov**	**43.03**	**347**	P		**P**		**06 55 00.3**	**-0.7**
	1.3nm,0.6s,mb3.9,baz=164,slow=7.1,SNR=8.7								
BVAR	**Borovoye Array**	**47.35**	**342**	P		**P**		**06 55 34.2**	**-0.9**
	0.4nm,0.4s,mb3.5,baz=139,slow=13,SNR=3.4								
WRA	**Warramunga Arr**	**49.96**	**126**	P		**P**		**06 55 55.7**	**+0.1**
WRA				PcP		PcP		06 57 16.5	+1.5
WRA	**Warramunga Arr**	**49.96**	**126**	P		**P**		**06 55 55.7**	**+0.1**
	0.9nm,0.4s,mb4.1,baz=302,slow=10.0,SNR=31								
WRA				PcP		PcP		06 57 16.5	+1.5
	0.2nm,0.4s,baz=317,slow=2.9,SNR=7.4								
ASAR	**Alice Springs**	**51.64**	**130**	P		**P**		**06 56 08.2**	**0.0**
	0.5nm,0.4s,mb3.9,baz=304,slow=7.9,SNR=8.1								
ASAR				PcP		PcP		06 57 22.9	+1.7
	0.3nm,0.6s,baz=314,slow=3.5,SNR=4.3								
ILAR	**Eielson Array**	**93.91**	**22**	P		**P**		**07 00 17.7**	**-0.3**
	0.3nm,0.7s,mb3.8,baz=298,slow=4.2,SNR=4.8								

MAN 25 06:48:51,7.40N×122.08E,h33km,mb4.1,ML2.9,MS2.7, 1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZMPH	**Zamboanga City**	**0.44**	**183**	*i*P		Pb		06 49 02.8	+2.0
ZMPH				*i* S		Sb		06 49 09.8	+2.4
IPIL	**Ipil**	**0.62**	**51**	*e*P		Pn		06 49 03.9	+0.4
IPIL				*e*S		Sb		06 49 07.2	-4.9
PAGZ	**Pagadian**	**1.36**	**71**	*e*P		Pn		06 49 14.8	+1.1
PAGZ				*e*S		Sn		06 49 22.1	-8.6
SCPH	**Surigao**	**4.12**	**55**	*e*P		Px		06 50 15.1	

IDC ***25*** *06:54:33.4±0.9,12.72N×145.20E,h0km,mb4.0/9, mb1 4.2/9,mb1mx4.0/22,mbtmp4.0/9,MS3.6/4,Ms1 3.6/4, ms1mx2.8/30,Error ellipse: s-maj=32.0km s-min=16.9km az=87.0*
ISCJB ***25*** *06:54:38.0±2.1,12.71N±0.09×145.2E±0.2,h49km±17km, mb3.9/11,MS3.6/4,Error ellipse: s-maj=39.8km s-min=15.3km az=0.6*
NEIC ***25*** *06:54:38.5±0.6,12.72N×145.21E,h35km,mb4.1/2,Error ellipse: s-maj=22.3km s-min=8.3km az=88.0*

ISC 25 06:54:38.6±2.3,12.73N±0.09×145.2E±0.2,h36km±20km, n23,σ0s46/13,mb3.9/11,MS3.6/4,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.93**	**338**	Pn		**Pn**		**06 54 55.0**	**-0.1**
	389nm,0.3s,baz=165,slow=10,SNR=140								
MJAR	**Matsushiro Arr**	**24.54**	**346**	P		**P**		**06 59 55.5**	**+0.7**
	2.4nm,0.7s,mb3.8,baz=166,slow=9.0,SNR=3.5								
MJAR				LR		LR		07 08 50.3	
	comp=Z,60nm,19.5s,MS3.1,baz=175,slow=35								
WRA	**Warramunga Arr**	**34.19**	**198**	P		**P**		**07 01 20.2**	**-0.5**
WRA	**Warramunga Arr**	**34.19**	**198**	P		**P**		**07 01 20.2**	**-0.4**
	1.6nm,0.8s,mb4.0,baz=223,slow=9.6,SNR=6.5								
ASAR	**Alice Springs**	**37.83**	**197**	P		**P**		**07 01 52.0**	**+0.3**
	0.3nm,0.6s,mb3.2,baz=12,slow=11,SNR=4.2								
MBWA	**Marble Bar**	**41.97**	**217**	*e*P		**P**		**07 02 26.3**	**0.0**
	3.0nm,0.6s,mb4.1								
STKA	**Stephens Creek**	**44.48**	**184**	*e*P		**P**		**07 02 46.6**	**+0.2**
	3.6nm,1.6s,mb3.9								
CMAR	**Chiang Mai Arr**	**44.85**	**283**	P		**P**		**07 02 49.7**	**+0.1**
	1.6nm,0.6s,mb4.0,baz=84,slow=5.8,SNR=9.1								
CMAR				LR		LR		07 20 49.4	
	comp=Z,34nm,19.8s,MS3.3,baz=100,slow=35								
MKAR	**Makanchi Array**	**62.35**	**316**	P		**P**		**07 04 57.1**	**-0.3**
	0.5nm,0.5s,mb4.0,baz=92,slow=8.7,SNR=4.2								
ZALV	**Zalesovo Beam**	**62.53**	**325**	PcP		PcP		07 05 37.1	-0.3
	1.4nm,0.5s,baz=101,slow=4.7,SNR=4.9								
KURK	**Kurchatov**	**65.47**	**320**	P		**P**		**07 05 17.2**	**-0.7**
	1.2nm,0.6s,mb4.1,baz=102,slow=6.6,SNR=5.1								
ILAR	**Eielson Array**	**69.20**	**25**	P		**P**		**07 05 40.6**	**-0.6**
	2.1nm,0.6s,mb4.2,baz=249,slow=6.1,SNR=46								
BVAR	**Borovoye Array**	**70.82**	**322**	P		**P**		**07 05 51.3**	**-0.1**
	0.9nm,0.5s,mb3.9,baz=84,slow=7.7,SNR=4.9								
PPT	**Papeete**	**71.05**	**114**	LR		LR		07 34 19.0	
	comp=Z,112nm,19.7s,MS4.1,baz=343,slow=34								
ARCES	**ARCESS Array B**	**88.01**	**342**	P		**P**		**07 07 25.5**	**+0.9**
	1.1nm,0.7s,mb4.2,baz=359,slow=6.1,SNR=4.6								
AKASG	**Malin Array Be**	**95.92**	**325**	LR		LR		07 54 19.5	
	comp=Z,35nm,18.4s,MS3.9,baz=120,slow=37								
EKA	**Eskdalemuir Ar**	**107.17**	**342**	PKiKP		PKiKP		07 13 01.6	+0.8
	0.8nm,0.6s,baz=180,slow=2.1,SNR=3.9								
TORD	**Torodi Ar. Bea**	**135.64**	**304**	PKP		PKPdf		07 13 58.2	+2.1
	0.8nm,0.8s,baz=50,slow=3.1,SNR=4.9								
DBIC	**Dimbokro**	**144.57**	**301**	PKP		PKPdf		07 14 11.3	-0.9
	3.3nm,0.5s,baz=31,slow=4.9,SNR=9.7								
KIC	**Kosan Boka**	**144.64**	**301**	*e*PKP1		PKPdf		07 14 11.5	-0.9
	8.3nm,0.6s								
TIC	**Toumodi**	**144.72**	**301**	*e*PKP1		PKPdf		07 14 11.6	-1.0
	4.4nm,0.2s								
LIC	**Lamto**	**144.95**	**301**	*e*PKP1		PKPdf		07 14 12.5	-0.5
	26nm,0.5s								
LPAZ	**La Paz**	**147.53**	**100**	PKPbc		PKPbc		07 14 22.9	+3.1
	2.5nm,1.1s,baz=332,slow=4.7,SNR=4.5								

IDC 25 06:54:42.1±1.9,6.49S×149.88E,h0km,mb3.6/4, mb1 3.9/4,mb1mx3.7/15,mbtmp3.7/4,MS3.1/1,Ms1 3.1/1, ms1mx2.4/24,Error ellipse: s-maj=86.0km s-min=27.6km az=122.0,New Britain region

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

BLCB	**Balcova**	**2.22**	**310**	*e*PN	**Pn**	**07 00 20.1**	**+0.2**
BLCB	**Balcova**	**2.22**	**310**	*e*Pn	**Pn**	**07 00 20.1**	**+0.2**
HDMB	**Hadim**	**2.62**	**90**	*e*PN	**Pn**	**07 00 25.1**	**-0.2**
HDMB	**Hadim**	**2.62**	**90**	*e*Pn	**Pn**	**07 00 25.1**	**-0.2**
KONT	**Konya--Tatoy**	**2.68**	**68**	*e*PN	**Pn**	**07 00 26.5**	**+0.3**
KONT	**Konya--Tatoy**	**2.68**	**68**	*e*Pn	**Pn**	**07 00 26.5**	**+0.4**
KIZT	**Kizilcal**	**2.83**	**47**	*e*PN	**Pn**	**07 00 29.2**	**+1.0**
KIZT	**Kizilcal**	**2.83**	**47**	*e*Pn	**Pn**	**07 00 29.3**	**+1.1**
CHOS	**Chios island**	**2.87**	**300**	*e*PN	**Pn**	**07 00 29.0**	**+0.2**
APE	**Apeiranthos**	**2.95**	**273**	*e*PN	**Pn**	**07 00 30.3**	**+0.4**
APE	**Apeiranthos**	**2.95**	**273**	*e*Pn	**Pn**	**07 00 30.3**	**+0.4**
ZKR	**Zakros**	**3.07**	**233**	*e*PN	**Pn**	**07 00 32.8**	**+1.3**
NPS	**Neapolis**	**3.39**	**241**	*e*PN	**Pn**	**07 00 36.5**	**+0.6**
LAST	**Lasithi**	**3.54**	**240**	*e*PN	**Pn**	**07 00 39.0**	**+1.1**
IDI	**Anoyia**	**3.89**	**245**	*e*PN	**Pn**	**07 00 44.6**	**+1.8**

ISCJB ***25*** *07:07:34.5±0.8, 67.°23S±0.°08×112.°4E±0.°2, h10km, mb4.5/5, MS3.9/8, Error ellipse: s-maj=14.3km s-min=7.9km az=139.9*

IDC ***25*** *07:07:35.2±1.1, 67.°23S×112.°48E, h0km, mb4.5/5, mb1 4.5/6, mb1mx4.3/13, mbtmp4.4/6, ML3.9/1, MS3.9/9, Ms1 3.9/9, ms1mx3.6/18, Error ellipse: s-maj=40.8km s-min=21.2km az=117.0*

NEIC ***25*** *07:07:36.3±0.6, 67.°23S×112.°28E, h10km, mb4.3/3, Error ellipse: s-maj=15.6km s-min=12.8km az=68.0*

ISC 25 07:07:35.1±3.6, 67.°3S±0.°1×112.°4E±0.°3, h4km±23km, n20, σ0°47/14, mb4.5/5, MS3.9/8, 1C, Antarctica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
CASY	**Casey**	**1.23**	**323**	⇑*e*Pg	**Pg**	**07 07 58.5**	**-0.2**
CASY				*e*Sg	**Sg**	**07 08 14.5**	**-0.1**
SBA	**Scott Base**	**18.48**	**147**	*e*P	**Pn**	**07 11 46.8**	**-4.8**
	22nm,1.2s						
MAW	**Mawson**	**18.60**	**246**	P	**Pn**	**07 11 53.4**	**+0.3**
	0.4nm,0.3s,baz=116,slow=14,SNR=8.5						
MAW				S	**Sn**	**07 15 03.9**	**-17**
	0.1nm,0.3s,baz=187,slow=18,SNR=2.4						
MAW				LR	LR	07 19 08.5	
	comp=Z,402nm,18.5s,baz=96,slow=37						
QSPA	**South Pole Qui**	**22.81**	**180**	*e*P	**P**	**07 12 38.3**	**0.0**
	56nm,1.0s,mb4.9						
QSPA				S	**S**	**07 16 47.1**	**-0.7**
QSPA				LR	LR	07 22 11.7	
QSPA	**South Pole Qui**	**22.81**	**180**	P	**P**	**07 12 38.9**	**+0.6**
	28nm,0.9s,mb4.7,baz=318,slow=5.7,SNR=18						
QSPA				S	**S**	**07 16 47.1**	**-0.7**
	2.3nm,0.8s,baz=343,slow=20,SNR=5.7						
QSPA				LR	LR	07 22 11.7	
	comp=Z,300nm,21.1s,MS3.7,baz=327,slow=38						
STKA	**Stephens Creek**	**39.39**	**41**	*e*P	**P**	**07 15 06.6**	**+1.1**
	3.0nm,1.3s,mb3.9						
STKA				LR	LR	07 27 34.8	
STKA	**Stephens Creek**	**39.39**	**41**	P	**P**	**07 15 06.2**	**+0.8**
	5.5nm,1.0s,mb4.2,baz=197,slow=8.3,SNR=7.0						
STKA				LR	LR	07 27 34.8	
	comp=Z,121nm,20.3s,MS3.7,baz=206,slow=30						
ASAR	**Alice Springs**	**45.63**	**28**	P	**P**	**07 15 56.2**	**0.0**
	4.5nm,0.9s,mb4.4,baz=194,slow=6.9,SNR=17						
URZ	**Urewera**	**45.67**	**84**	P	**P**	**07 15 55.9**	**-0.6**
	14nm,1.0s,mb4.8,baz=222,slow=14,SNR=2.8						
WRA	**Warramunga Arr**	**49.34**	**28**	P	**P**	**07 16 24.9**	**-0.3**
	4.8nm,1.0s,mb4.5,baz=192,slow=6.5,SNR=11						
WRA				LR	LR	07 35 37.7	
	comp=Z,144nm,20.8s,MS4.0,baz=135,slow=34						
CTA	**Charters Tower**	**51.84**	**42**	LR	LR	07 37 44.8	
	comp=Z,92nm,21.4s,MS3.8,baz=52,slow=35						
BOSA	**Boshof**	**62.87**	**261**	LR	LR	07 40 52.6	
	comp=Z,133nm,19.9s,MS4.1,baz=262,slow=32						
PLCA	**Paso Flores**	**72.31**	**178**	LR	LR	07 49 36.6	
	comp=Z,110nm,19.5s,MS4.1,baz=97,slow=35						
CPUP	**Villa Florida**	**86.37**	**189**	LR	LR	08 01 00.5	
	comp=Z,52nm,20.5s,MS3.9,baz=282,slow=37						
LPAZ	**La Paz**	**96.69**	**180**	LR	LR	08 07 44.7	
	comp=Z,44nm,21.0s,MS3.9,baz=141,slow=37						
NVAR	**Mina Array Bea**	**139.79**	**110**	PKP	PKPdf	07 27 05.2	+2.0
	0.3nm,0.8s,baz=193,slow=3.7,SNR=3.0						
ISCO	**Idaho Springs**	**145.43**	**123**	*e*PKPdf	PKPdf	07 27 14.5	+1.3
PDAR	**Pinedale Array**	**146.75**	**116**	PKPbc	PKPbc	07 27 19.6	+2.5
	1.2nm,0.9s,baz=195,slow=2.8,SNR=7.4						
ILAR	**Eielson Array**	**149.71**	**57**	PKPbc	PKPbc	07 27 24.5	+0.4
	2.3nm,1.0s,baz=263,slow=3.3,SNR=13						
RSSD	**Black Hills**	**149.82**	**122**	*e*PKPdf	PKPdf	07 27 18.9	-1.4
RSSD				*e*PKPbc	PKPbc	07 27 26.6	+1.5

IDC 25 07:09:41.4±2.0, 22.°70S×179.°69W, h0km, mb4.1/4, mb1 4.3/4, mb1mx4.0/15, mbtmp4.1/4, Error ellipse: s-maj=139.0km s-min=30.3km az=158.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**35.45**	**247**	P	P	07 16 39.1	-0.4
	1.8nm,0.7s,baz=93,slow=10,SNR=3.7						
ASAR	**Alice Springs**	**42.52**	**259**	P	P	07 17 38.9	0.0
	1.2nm,0.5s,baz=96,slow=7.3,SNR=12						
WRA	**Warramunga Arr**	**42.79**	**265**	P	P	07 17 41.5	+0.5
	4.2nm,0.6s,baz=102,slow=8.2,SNR=45						
TXAR	**Lajitas Array**	**89.55**	**58**	P	P	07 22 41.6	+0.6
	0.4nm,0.7s,baz=214,slow=6.1,SNR=5.8						
BRTR	**Keskin Array B**	**147.06**	**309**	PKPbc	PKPbc	07 29 24.9	-1.5
	0.7nm,0.6s,baz=88,slow=3.7,SNR=3.5						

CASC 25 07:14:48.6±2.6, 7.°59N×82.°51W, h3km±17km, MD3.9, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
BRU2	**Volcan**	**1.21**	**352**	*e*P	Pg	07 15 11.1	-0.7
BRU2				*e*S	Sg	07 15 30.9	+3.4
ACR	**Cerro Adams**	**1.24**	**328**	*e*P	Pg	07 15 11.8	-0.5
ACR				*e*S	Sg	07 15 27.0	-1.5
BUS	**Buena Vista**	**2.31**	**328**	*e*P	Pn	07 15 28.2	+0.6
BUS				*e*S	Sn	07 15 58.6	+2.1
PINA	**Piqa, Costa Ab**	**2.93**	**56**	*e*P	Pn	07 15 35.7	-0.5
PRS1	**Puriscal**	**2.97**	**323**	*e*P	Pn	07 15 36.5	-0.1
BCIP	**Isla Barro Col**	**3.08**	**59**	*e*P	Pn	07 15 38.0	-0.1
BCIP				*e*S	Sn	07 16 16.3	+0.8
CGA2	**Cerro Gallo 2**	**3.09**	**321**	*e*S	Sn	07 16 21.2	+5.5

MAN 25 07:48:06, 10.°14N×125.°21E, h21km, mb4.8, ML3.7, MS3.7, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.45**	**142**	⇓*e*P	Pb	07 48 16.2	+0.9
SCPH				*e*S	Sb	07 48 26.3	+4.6
OCLP	**Ormoc**	**1.08**	**327**	*e*P	Pn	07 48 26.6	+0.7
OCLP				*e*S	Sb	07 48 37.2	-2.4
LLP	**Lapu-Lapu**	**1.23**	**278**	*e*P	Pn	07 48 27.3	-0.7
LLP				*e*S	Sn	07 48 44.6	+0.5
TBP	**Tagbilaran**	**1.40**	**251**	*e*P	Pn	07 48 31.0	+0.7
BUKP	**Musuan**	**2.25**	**184**	*e*P	Pn	07 48 44.6	+2.5
CNP	**Catarman**	**2.41**	**347**	*e*P	Pn	07 48 45.0	+0.7
GUIM	**Jordan**	**2.62**	**281**	*e*P	Pn	07 48 48.2	+1.1

CSEM ***25*** *08:08:54.8±0.3, 38.°12N×21.°59E, h20km, MD2.8, Error ellipse: s-maj=6.7km s-min=5.0km az=161.0*

THE ***25*** *08:08:54.7, 38.°10N×21.°60E, h0km±2km, ML2.4/6, Error ellipse: s-maj=2.3km s-min=0.7km az=254.0*

ATH ***25*** *08:08:54.4, 38.°11N×21.°60E, h24km±3km, MD2.8/8*

NEIC ***25*** *08:08:54.4, 38.°11N×21.°60E, h24km, MD2.8(ATH), After ATH.*

ISCJB ***25*** *08:08:55.2±0.5, 38.°12N±0.°04×21.°59E±0.°03, h18km±6km, Error ellipse: s-maj=6.4km s-min=3.7km az=164.4*

ISC 25 08:08:54.8±0.5, 38.°10N±0.°03×21.°60E±0.°03, h19km±4km, n39, σ0°79/69, 5C, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.12**	**248**	⇑*i*Pb	**Pg**	**08 08 59.0**	**+0.3**
RLS				*e*Sb	**Sg**	**08 09 02.5**	**+1.1**
RLS	**Riolos of Patr**	**0.12**	**248**	⇑*i*PB	**Pg**	**08 08 59.0**	**+0.3**
RLS				*e*SB	**Sg**	**08 09 02.5**	**+1.1**
RLS	**Riolos of Patr**	**0.12**	**248**	⇑*i*Pb	**Pg**	**08 08 59.0**	**+0.3**
UPR	**University Cam**	**0.23**	**38**	*e*PB	**Pg**	**08 09 00.3**	**0.0**
UPR				*e*SB	**Sg**	**08 09 04.7**	**+0.7**
UPR	**University Cam**	**0.23**	**38**	P	**Pg**	**08 08 59.0**	**-1.3**
UPR				S	**Sg**	**08 09 04.6**	**+0.6**
UPR	**University Cam**	**0.23**	**38**	*e*Pb	**Pg**	**08 09 00.3**	**0.0**
UPR				S	**Sg**	**08 09 04.6**	**+0.6**
LAKA	**Lakka**	**0.33**	**65**	P	**Pg**	**08 09 01.3**	**-0.5**
LAKA				S	**Sg**	**08 09 06.7**	**+0.1**
LAKA	**Lakka**	**0.33**	**65**	P	**Pg**	**08 09 01.3**	**-0.5**
LAKA				S	**Sg**	**08 09 06.7**	**+0.1**
EFP	**Efpalio**	**0.40**	**36**	*e*PB	**Pg**	**08 09 02.4**	**-0.7**
EFP				*e*SB	**Sb**	**08 09 09.0**	**0.0**
EFP	**Efpalio**	**0.40**	**36**	P	**Pg**	**08 09 02.3**	**-0.8**
EFP				S	**Sg**	**08 09 08.7**	**-0.1**
EFP	**Efpalio**	**0.40**	**36**	*e*Pb	**Pg**	**08 09 02.4**	**-0.7**
EFP				S	**Sg**	**08 09 08.7**	**-0.1**
EFP				*e*Sb	**Sb**	**08 09 09.0**	**0.0**
TRIZ	**Trizonia**	**0.45**	**54**	P	**Pg**	**08 09 03.2**	**-0.8**
TRIZ				S	**Sg**	**08 09 10.1**	**-0.2**
KALE	**Kalithea**	**0.51**	**56**	P	**Pg**	**08 09 04.2**	**-0.9**
KALE				S	**Sg**	**08 09 12.3**	**+0.3**
GUR	**Goura**	**0.61**	**106**	*e*PB	**Pg**	**08 09 06.0**	**-0.8**
GUR				*e*SN	**Sg**	**08 09 15.9**	**+0.9**
GUR	**Goura**	**0.61**	**106**	P	**Pg**	**08 09 06.0**	**-0.8**
GUR				S	**Sg**	**08 09 15.6**	**+0.6**
GUR	**Goura**	**0.61**	**106**	P	**Pg**	**08 09 06.0**	**-0.8**
GUR				S	**Sg**	**08 09 15.6**	**+0.6**
KFL	**Anninata**	**0.64**	**271**	P	**Pg**	**08 09 07.0**	**-0.5**
DSF	**Desfina**	**0.79**	**67**	P	**Pg**	**08 09 09.5**	**-0.7**
DSF				S	**Sg**	**08 09 20.9**	**+0.2**
DSF	**Desfina**	**0.79**	**67**	P	**Pg**	**08 09 09.5**	**-0.7**
DSF				S	**Sg**	**08 09 20.9**	**+0.2**
VLS	**Valsamata**	**0.80**	**276**	⇑*i*Pn	**Pg**	**08 09 09.0**	**-1.5**
VLS				*e*Sn	**Sn**	**08 09 22.7**	**+0.2**
VLS	**Valsamata**	**0.80**	**276**	⇑PN	**Pg**	**08 09 09.0**	**-1.5**
VLS				*e*SN	**Sn**	**08 09 22.7**	**+0.2**
VLS	**Valsamata**	**0.80**	**276**	P	**Pg**	**08 09 09.1**	**-1.4**
VLS				S	**Sg**	**08 09 22.2**	**+1.0**
VLS	**Valsamata**	**0.80**	**276**	P	**Pg**	**08 09 09.1**	**-1.4**
VLS				S	**Sg**	**08 09 22.2**	**+1.0**
VLS				*e*Sn	**Sn**	**08 09 22.7**	**+0.2**
EVR	**Evrytania**	**0.83**	**11**	*e*Pn	**Pg**	**08 09 11.1**	**+0.1**
EVR				*e*Sn	**Sg**	**08 09 25.3**	**+3.3**
EVR	**Evrytania**	**0.83**	**11**	*e*PN	**Pg**	**08 09 11.1**	**+0.1**
EVR	**Evrytania**	**0.83**	**11**	*e*Pn	**Pg**	**08 09 11.1**	**+0.1**
EVR				*e*Sn	**Sg**	**08 09 25.3**	**+3.3**
ITM	**Ithomi**	**0.96**	**164**	P	**Pg**	**08 09 12.6**	**-0.8**
ITM	**Ithomi**	**0.96**	**164**	P	**Pg**	**08 09 12.6**	**-0.8**
LTK	**Loutraki**	**1.08**	**94**	*e*PN	**Pg**	**08 09 16.0**	**+0.3**
LTK	**Loutraki**	**1.08**	**94**	P	**Pg**	**08 09 15.6**	**-0.1**
LTK				S	**Sg**	**08 09 30.6**	**+0.7**
LTK	**Loutraki**	**1.08**	**94**	P	**Pg**	**08 09 15.6**	**-0.1**
LTK	**Loutraki**	**1.08**	**94**	*e*Pn	**Pg**	**08 09 16.0**	**+0.3**
LTK				S	**Sg**	**08 09 30.6**	**+0.7**
AGG	**Agios Georgios**	**1.08**	**32**	*e*Pn	**Pg**	**08 09 15.1**	**-0.6**
AGG	**Agios Georgios**	**1.08**	**32**	*e*PN	**Pg**	**08 09 15.1**	**-0.6**
AGG	**Agios Georgios**	**1.08**	**32**	P	**Pg**	**08 09 15.3**	**-0.4**
AGG				S	**Sg**	**08 09 30.6**	**+0.7**
AGG	**Agios Georgios**	**1.08**	**32**	P	**Pg**	**08 09 15.3**	**-0.4**
AGG				S	**Sg**	**08 09 30.6**	**+0.7**
DID	**Didima**	**1.42**	**114**	P	**Pn**	**08 09 21.2**	**+1.6**
DID				S	**Sn**	**08 09 42.0**	**+4.2**
DID	**Didima**	**1.42**	**114**	P	**Pn**	**08 09 21.2**	**+1.6**

NEIC ***25*** *08:21:41.0, 31.°59S×69.°81W, h145km, MD3.6(GUC), After GUC.*

GUC 25 08:21:41.0±0.7, 31.°59S×69.°81W, h145km±8km, MD3.6, ML3.7, 15C-5D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
CMCH	**Combarbala**	**1.10**	**292**	⇓*i*P		Pn	08 22 06.7	+0.5
CMCH				*i* S		Sn	08 22 26.1	+0.8
CMCH	**Combarbala**	**1.10**	**292**	⇓*i*P		Pn	08 22 06.7	+0.5
CMCH				*i* S		Sn	08 22 26.1	+0.8
CMCH				AML		AML	08 22 28.3	
	comp=E,3μm,0.5s							
JACH	**Jahuel**	**1.27**	**211**	*e*P		Pn	08 22 08.5	+0.7
JACH				*i* S		Sn	08 22 29.0	+0.7
JACH	**Jahuel**	**1.27**	**211**	*e*P		Pn	08 22 08.5	+0.7
JACH				*i* S		Sn	08 22 29.0	+0.7
CHNG	**Los Chungos**	**1.47**	**258**	⇑*i*P		Pn	08 22 08.2	-1.6
CHNG				*i* S		Sn	08 22 30.1	-1.7
CHNG				AML		AML	08 22 36.0	
	comp=E,329nm,0.6s							
OVCH	**Ovalle**	**1.54**	**309**	⇑*i*P		Pn	08 22 11.1	+0.5
OVCH				*i* S		Sn	08 22 33.5	+0.4
OVCH	**Ovalle**	**1.54**	**309**	⇑*i*P		Pn	08 22 11.1	+0.5
OVCH				*i* S		Sn	08 22 33.5	+0.4
TLL	**Tololo Astrono**	**1.65**	**329**	⇑*i*P		Pn	08 22 12.8	+1.0
TLL				*i* S		Sn	08 22 36.6	+1.2
TLL	**Tololo Astrono**	**1.65**	**329**	⇑*i*P		Pn	08 22 12.8	+1.0
TLL				*i* S		Sn	08 22 36.6	+1.2
TLL				AML		AML	08 22 38.5	
	comp=E,202nm,0.5s							
ROCH	**El Roble**	**1.71**	**216**	*e*P		Pn	08 22 13.2	+0.8
ROCH	**El Roble**	**1.71**	**216**	⇓*i*P		Pn	08 22 13.2	+0.7
ROCH				*e*P			08 22 13.2	
ROCH				*i* S		Sn	08 22 38.1	+1.4
ROCH				AML		AML	08 22 40.6	
	comp=N,695nm,0.4s							
PEL	**Peldehue**	**1.72**	**205**	⇑*i*P		Pn	08 22 13.0	+0.5
PEL				*i* S		Sn	08 22 37.1	+0.4
PEL				AML		AML	08 22 38.7	
	comp=E,2μm,0.5s							
FCH	**Farellones**	**1.78**	**193**	*i* P		Pn	08 22 13.9	+0.6
FCH				AML		AML	08 22 42.6	
	comp=E,804nm,0.3s							
CLCH	**Cerro Calan**	**1.90**	**199**	⇑*i*P		Pn	08 22 15.3	+0.6
CLCH				*i* S		Sn	08 22 41.2	+0.7
CLCH				AML		AML	08 22 43.5	
	comp=E,904nm,0.4s							
ANTU	**Antumapu**	**2.09**	**199**	⇑*i*P		Pn	08 22 17.5	+0.6
ANTU				*i* S		Sn	08 22 45.1	+0.6
ANTU	**Antumapu**	**2.09**	**199**	⇑*i*P		Pn	08 22 17.5	+0.6
ANTU				*i* S		Sn	08 22 45.1	+0.6
ANTU				AML		AML	08 22 48.0	
	comp=N,652nm,0.5s							
PCH	**Pirque**	**2.11**	**196**	⇑*i*P		Pn	08 22 17.8	+0.7
PCH				*i* S		Sn	08 22 45.8	+0.9
PCH	**Pirque**	**2.11**	**196**	⇑*i*P		Pn	08 22 17.8	+0.7
PCH				*i* S		Sn	08 22 45.8	+0.9
TACH	**Talagante**	**2.27**	**204**	⇓*i*P		Pn	08 22 19.3	+0.4
TACH				*i* S		Sn	08 22 48.6	+0.3
TACH	**Talagante**	**2.27**	**204**	⇓*i*P		Pn	08 22 19.3	+0.4
TACH				*i* S		Sn	08 22 48.6	+0.3
LMEL	**Las Melosas**	**2.28**	**188**	⇑*i*P		Pn	08 22 19.7	+0.6
LMEL				*i* S		Sn	08 22 49.8	+1.3
LMEL	**Las Melosas**	**2.28**	**188**	⇑*i*P		Pn	08 22 19.7	+0.6
LMEL				*i* S		Sn	08 22 49.8	+1.3
LMEL				AML		AML	08 22 54.8	
	comp=N,287nm,0.2s							
CHCH	**Chadas Angostu**	**2.44**	**197**	*e*P		Pn	08 22 21.8	+0.6
CHCH				*i* S		Sn	08 22 52.5	+0.4
CHCH	**Chadas Angostu**	**2.44**	**197**	*e*P		Pn	08 22 21.8	+0.6
CHCH				*i* S		Sn	08 22 52.5	+0.4
CACH	**El Canelo**	**2.61**	**194**	*e*P		Pn	08 22 24.0	+0.8
CACH				*i* S		Sn	08 22 57.5	+1.7
CACH	**El Canelo**	**2.61**	**194**	*e*P		Pn	08 22 24.0	+0.8
CACH				*i* S		Sn	08 22 57.5	+1.7
LCO	**Las Campanas**	**2.68**	**343**	⇑*i*P		Pn	08 22 24.3	+0.2
LCO				*i* S		Sn	08 22 57.5	+0.1
LCO	**Las Campanas**	**2.68**	**343**	⇑*i*P		Pn	08 22 24.3	+0.2
LCO				*i* S		Sn	08 22 57.5	+0.1
LCO				AML		AML	08 22 59.1	
	comp=E,142nm,0.3s							

ISCJB ***25*** *08:46:12.0±1.1, 26.°5N±0.°1×95.°94E±0.°09, h10km, mb3.5/3, Error ellipse: s-maj=17.2km s-min=11.2km az=179.4*

IDC ***25*** *08:46:12.2±1.6, 26.°49N×95.°95E, h0km, mb3.4/3, mb1 3.8/4, mb1mx3.5/25, mbtmp3.5/4, ML4.0/1, Error ellipse: s-maj=93.2km s-min=21.8km az=65.0*

ISC 25 08:46:13.9±1.1, 26.°6N±0.°1×95.°91E±0.°09, h10km, n6, σ0°90/7, mb3.5/3, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
IMP	**Imphal**	**2.50**	**226**	*i* S		**Pg**	**08 47 03.0**	**+1.2**
SHL	**Shillong**	**3.75**	**256**	*e*PN		**Pn**	**08 47 05.0**	**-6.8**
SHL				*i* SN		**Sn**	**08 47 55.0**	**-1.0**
CMAR	**Chiang Mai Arr**	**8.52**	**160**	Pn		**Pn**	**08 48 18.0**	**+0.6**
	0.5nm,0.3s,baz=330,slow=14,SNR=12							
CMAR				Lg			08 50 41.8	
	0.3nm,0.3s,baz=341,slow=30,SNR=4.1							
MKAR	**Makanchi Array**	**22.91**	**335**	P		**P**	**08 51 18.6**	**+0.9**
	0.2nm,0.4s,mb2.9,baz=145,slow=10,SNR=3.1							
WRA	**Warramunga Arr**	**59.37**	**137**	P		**P**	**08 56 15.9**	**-0.6**
	0.5nm,0.5s,mb3.6,baz=322,slow=7.5,SNR=7.8							
ASAR	**Alice Springs**	**61.98**	**140**	P		**P**	**08 56 33.2**	**-1.0**
	0.6nm,0.6s,mb3.9,baz=322,slow=6.6,SNR=11							

NEIC ***25*** *08:51:00.5, 40.°56N×15.°04W, h0km, MN3.2(MDD), After MDD.*

MDD ***25*** *08:51:00.1±1.8, 40.°56N×15.°09W, h0km, mb4.8/10, Error ellipse: s-maj=15.6km s-min=12.1km az=83.0, PRIMO*

INMG ***25*** *08:51:02.3±1.0, 40.°59N×15.°50W, h10km, ML3.1, Error ellipse: s-maj=5.8km s-min=3.5km az=86.0*

CSEM ***25*** *08:51:04.3±0.4, 40.°54N×14.°65W, h10km, ML3.9/17, Error ellipse: s-maj=7.3km s-min=5.3km az=83.0*

ISC 25 08:51:04.3±0.9, 40.°54N±0.°04×14.°66W±0.°06, h10km, n145, σ0°99/250, 3C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
PMAFR	**Mafra**	**4.43**	**109**	*e*Sn		**Sn**	**08 53 04.9**	**+1.6**
PMAFR				A			08 53 08.5	
	33nm,0.2s							
PMAFR	**Mafra**	**4.43**	**109**	P		**Pn**	**08 52 12.8**	**+1.2**
	5.4nm,0.1s,SNR=7.9							
PMAFR				S		**Sn**	**08 53 05.1**	**+1.8**
	6.3nm,0.1s,SNR=8.2							
PMAFR	**Mafra**	**4.43**	**109**	P		**Pn**	**08 52 12.8**	**+1.2**
	5.4nm,0.1s,SNR=7.9							
PMAFR				S		**Sn**	**08 53 05.1**	**+1.8**
	6.3nm,0.1s,SNR=8.2							
PMAFR	**Mafra**	**4.43**	**109**	P		**Pn**	**08 52 12.8**	**+1.2**
	5.4nm,0.1s,SNR=7.9							
PMAFR				*e*Sn		**Sn**	**08 53 04.9**	**+1.6**
	33nm,0.2s							
PTO	**Porto**	**4.63**	**81**	*e*Sn		**Sn**	**08 53 09.0**	**+0.9**
PTO	**Porto**	**4.63**	**81**	Sn		**Sn**	**08 53 09.0**	**+0.9**
PTO	**Porto**	**4.63**	**81**	Sn		**Sn**	**08 53 09.0**	**+0.9**
PTO	**Porto**	**4.63**	**81**	*e*Sn		**Sn**	**08 53 09.0**	**+0.9**
EZAM	**Zamans**	**4.77**	**68**	P		**Pn**	**08 52 15.9**	**-0.3**
EZAM				S		**Sn**	**08 53 11.0**	**-0.5**
EZAM	**Zamans**	**4.77**	**68**	P		**Pn**	**08 52 15.9**	**-0.3**
	12nm,0.1s,SNR=7.9							
EZAM				S		**Sn**	**08 53 11.0**	**-0.5**
	SNR=7.9						

16nm,0.5s
PCBR Castelo Branco 5.54 95 *e*Sn **Sn 08 53 31.5 +0.9**
PCBR A 08 53 33.8
9.8nm,0.2s
PCBR Castelo Branco 5.54 95 Sn **Sn 08 53 31.5 +0.9**
4.9nm,0.2s
PCBR Castelo Branco 5.54 95 Sn **Sn 08 53 31.5 +0.9**
4.9nm,0.2s
PCBR Castelo Branco 5.54 95 *e*Sn **Sn 08 53 31.5 +0.9**
9.8nm,0.2s
PFVI Vila Bisbo 5.68 125 *e*Pn **Pn 08 52 27.4 -1.4**
PFVI *e*Sn **Sn 08 53 32.5 -1.5**
PFVI A 08 53 37.6
10nm,0.6s
PFVI Vila Bisbo 5.68 125 P **Pn 08 52 27.4 -1.4**
PFVI S **Sn 08 53 32.0 -2.1**
PFVI Vila Bisbo 5.68 125 P **Pn 08 52 27.4 -1.4**
5.0nm,0.1s,SNR=12
PFVI S **Sn 08 53 30.8 -3.2**
2.7nm,0.1s,SNR=5.7
PFVI Vila Bisbo 5.68 125 P **Pn 08 52 27.4 -1.4**
5.0nm,0.1s,SNR=12
PFVI S **Sn 08 53 30.8 -3.2**
2.7nm,0.1s,SNR=5.7
PFVI Vila Bisbo 5.68 125 P **Pn 08 52 27.4 -1.4**
5.0nm,0.1s,SNR=12
PFVI S **Sn 08 53 32.0 -2.0**
PFVI *e*Sn **Sn 08 53 32.5 -1.5**
10nm,0.6s
MORF Marmelete 5.69 123 *e*Pn **Pn 08 52 28.3 -0.5**
MORF *e*Sn **Sn 08 53 32.8 -1.4**
MORF A 08 53 39.3
16nm,0.1s
MORF Marmelete 5.69 123 Pn **Pn 08 52 28.3 -0.5**
MORF Sn **Sn 08 53 32.8 -1.4**
16nm,0.1s
MORF Marmelete 5.69 123 Pn **Pn 08 52 28.3 -0.5**
MORF Sn **Sn 08 53 32.8 -1.4**
16nm,0.1s
MORF Marmelete 5.69 123 *e*Pn **Pn 08 52 28.3 -0.5**
MORF *e*Sn **Sn 08 53 32.8 -1.4**
16nm,0.1s
PMRV Marv??o 5.69 99 *e*Pn **Pn 08 52 29.5 +0.6**
PMRV *e*Sn **Sn 08 53 34.4 +0.2**
PMRV A 08 53 38.0
11nm,0.2s
PMRV Marv??o 5.69 99 Pn **Pn 08 52 29.5 +0.6**
PMRV Sn **Sn 08 53 34.4 +0.2**
11nm,0.2s
PMRV Marv??o 5.69 99 Pn **Pn 08 52 29.5 +0.6**
PMRV Sn **Sn 08 53 34.4 +0.2**
11nm,0.2s
PMRV Marv??o 5.69 99 *e*Pn **Pn 08 52 29.5 +0.6**
PMRV *e*Sn **Sn 08 53 34.4 +0.2**
11nm,0.2s
PESTR Estremoz 5.70 105 *e*Pn **Pn 08 52 29.4 +0.4**
PESTR *e*Sn **Sn 08 53 35.0 +0.5**
PESTR A 08 53 40.8
6.2nm,0.2s
PESTR Estremoz 5.70 105 Pn **Pn 08 52 29.4 +0.4**
PESTR Sn **Sn 08 53 35.0 +0.5**
6.2nm,0.2s
PESTR Estremoz 5.70 105 Pn **Pn 08 52 29.4 +0.4**
PESTR Sn **Sn 08 53 35.0 +0.5**
6.2nm,0.2s
PESTR Estremoz 5.70 105 *e*Pn **Pn 08 52 29.4 +0.4**
PESTR *e*Sn **Sn 08 53 35.0 +0.5**
6.2nm,0.2s
MVO Moncorvo 5.82 81 *e*Pn **Pn 08 52 31.1 +0.5**
MVO *e*Sn **Sn 08 53 37.4 0.0**
MVO A 08 53 44.6
8.8nm,0.2s
MVO Moncorvo 5.82 81 P **Pn 08 52 31.1 +0.5**
MVO S **Sn 08 53 37.4 +0.1**
MVO Moncorvo 5.82 81 P **Pn 08 52 31.1 +0.5**
0.5nm,0.1s,SNR=6.4
MVO S **Sn 08 53 37.4 +0.1**
5.4nm,0.1s,SNR=20
MVO Moncorvo 5.82 81 P **Pn 08 52 31.1 +0.5**
0.5nm,0.1s,SNR=6.4
MVO S **Sn 08 53 37.4 +0.1**
5.4nm,0.1s,SNR=20
MVO Moncorvo 5.82 81 P **Pn 08 52 31.1 +0.5**
0.5nm,0.1s,SNR=6.4
MVO S **Sn 08 53 37.4 0.0**
5.4nm,0.1s,SNR=20
PBEJ Beja 5.84 113 *e*Sn **Sn 08 53 39.0 +1.2**
PBEJ Beja 5.84 113 Sn **Sn 08 53 39.0 +1.2**
PBEJ Beja 5.84 113 Sn **Sn 08 53 39.0 +1.2**
PBEJ Beja 5.84 113 *e*Sn **Sn 08 53 39.0 +1.2**
PCVE Castro Verde 5.91 117 *e*Pn **Pn 08 52 32.0 +0.1**
PCVE *e*Sn **Sn 08 53 39.4 -0.3**
PCVE A 08 53 46.5
4.2nm,0.3s
PCVE Castro Verde 5.91 117 Pn **Pn 08 52 32.0 +0.1**
PCVE Sn **Sn 08 53 39.4 -0.3**
4.2nm,0.3s
PCVE Castro Verde 5.91 117 Pn **Pn 08 52 32.0 +0.1**
PCVE Sn **Sn 08 53 39.4 -0.3**
4.2nm,0.3s
PCVE Castro Verde 5.91 117 *e*Pn **Pn 08 52 32.0 +0.1**
PCVE *e*Sn **Sn 08 53 39.4 -0.3**
4.2nm,0.3s
PBRG Braganca 6.11 75 *e*Pn **Pn 08 52 35.3 +0.7**
PBRG *e*Sn **Sn 08 53 44.1 -0.3**
PBRG A 08 53 48.3
6.5nm,0.3s
PBRG Braganca 6.11 75 Pn **Pn 08 52 35.3 +0.7**
PBRG Sn **Sn 08 53 44.1 -0.3**
3.2nm,0.3s
PBRG Braganca 6.11 75 Pn **Pn 08 52 35.3 +0.7**
PBRG Sn **Sn 08 53 44.1 -0.3**
3.2nm,0.3s
PBRG Braganca 6.11 75 *e*Pn **Pn 08 52 35.3 +0.7**
PBRG *e*Sn **Sn 08 53 44.1 -0.3**
6.5nm,0.3s
ECAL Calabor 6.13 74 P **Pn 08 52 34.9 0.0**
ECAL S **Sn 08 53 44.5 -0.6**
ECAL Calabor 6.13 74 P **Pn 08 52 34.9 0.0**
0.7nm,0.1s,SNR=25
ECAL S **Sn 08 53 44.9 -0.2**
0.9nm,0.1s,SNR=6.6
ECAL Calabor 6.13 74 P **Pn 08 52 34.9 0.0**
0.7nm,0.1s,SNR=25
ECAL S **Sn 08 53 44.9 -0.2**
0.9nm,0.1s,SNR=6.6
ECAL Calabor 6.13 74 P **Pn 08 52 34.9 0.0**
0.7nm,0.1s,SNR=25
ECAL S **Sn 08 53 44.9 -0.2**
0.9nm,0.1s,SNR=6.6
EBAD Badajoz 6.16 104 P **Pn 08 52 34.1 -1.2**
EBAD S **Sn 08 53 46.0 +0.2**
EBAD Badajoz 6.16 104 P **Pn 08 52 34.1 -1.2**
0.5nm,0.1s,SNR=7.9
EBAD S **Sn 08 53 46.0 +0.2**
3.7nm,0.1s,SNR=7.9
EBAD Badajoz 6.16 104 P **Pn 08 52 34.1 -1.2**
0.5nm,0.1s,SNR=7.9
EBAD S **Sn 08 53 46.0 +0.2**
3.7nm,0.1s,SNR=7.9
EBAD Badajoz 6.16 104 P **Pn 08 52 34.1 -1.2**
0.5nm,0.1s,SNR=7.9
EBAD S **Sn 08 53 46.0 +0.1**
3.7nm,0.1s,SNR=7.9
PBDV Barranco-do-Ve 6.19 120 *e*Pn **Pn 08 52 35.9 +0.1**
PBDV *e*Sn **Sn 08 53 45.8 -0.8**
PBDV A 08 53 53.4
5.6nm,0.5s
PBDV Barranco-do-Ve 6.19 120 Pn **Pn 08 52 35.9 +0.1**
PBDV Sn **Sn 08 53 45.8 -0.8**
5.6nm,0.5s
PBDV Barranco-do-Ve 6.19 120 Pn **Pn 08 52 35.9 +0.1**
PBDV Sn **Sn 08 53 45.8 -0.8**
5.6nm,0.5s
PBDV Barranco-do-Ve 6.19 120 *e*Pn **Pn 08 52 35.9 +0.1**
PBDV *e*Sn **Sn 08 53 45.8 -0.8**
5.6nm,0.5s
PVAQ Vaqueiros 6.25 118 *e*Pn **Pn 08 52 36.8 +0.3**
PVAQ *e*Sn **Sn 08 53 47.4 -0.6**
PVAQ A 08 53 51.9
6.5nm,0.4s
PVAQ Vaqueiros 6.25 118 Pn **Pn 08 52 36.8 +0.3**
PVAQ Sn **Sn 08 53 47.4 -0.6**
6.5nm,0.4s
PVAQ Vaqueiros 6.25 118 Pn **Pn 08 52 36.8 +0.3**
PVAQ Sn **Sn 08 53 47.4 -0.6**
6.5nm,0.4s
PVAQ Vaqueiros 6.25 118 *e*Pn **Pn 08 52 36.8 +0.3**
PVAQ *e*Sn **Sn 08 53 47.4 -0.6**
6.5nm,0.4s
EPON Pontenova 6.25 61 P **Pn 08 52 35.8 -0.8**
EPON S **Sn 08 53 46.1 -2.0**
EPON Pontenova 6.25 61 P **Pn 08 52 35.8 -0.8**
2.0nm,0.1s,SNR=7.9
EPON S **Sn 08 53 46.1 -2.0**
0.4nm,0.1s,SNR=7.9
EPON Pontenova 6.25 61 P **Pn 08 52 35.8 -0.8**
2.0nm,0.1s,SNR=7.9
EPON S **Sn 08 53 46.1 -2.0**
0.4nm,0.1s,SNR=7.9
EPON Pontenova 6.25 61 P **Pn 08 52 35.8 -0.8**
2.0nm,0.1s,SNR=7.9
EPON S **Sn 08 53 46.1 -1.9**
0.4nm,0.1s,SNR=7.9
EGRO El Granado 6.34 116 S **Sn 08 53 48.5 -1.8**
4.5nm,0.2s,SNR=6.6
EGRO El Granado 6.34 116 S **Sn 08 53 48.5 -1.8**
4.5nm,0.2s,SNR=6.6
EGRO El Granado 6.34 116 S **Sn 08 53 48.5 -1.7**
4.5nm,0.2s,SNR=6.6
PBAR Barrancos 6.36 109 *e*Pn **Pn 08 52 39.6 +1.6**
PBAR *e*Sn **Sn 08 53 51.0 +0.3**
PBAR A 08 53 53.3
4.6nm,0.6s
PBAR Barrancos 6.36 109 Pn **Pn 08 52 39.6 +1.6**
PBAR Sn **Sn 08 53 51.0 +0.3**
4.6nm,0.6s
PBAR Barrancos 6.36 109 Pn **Pn 08 52 39.6 +1.6**
PBAR Sn **Sn 08 53 51.0 +0.3**
4.6nm,0.6s
PBAR Barrancos 6.36 109 *e*Pn **Pn 08 52 39.6 +1.6**
PBAR *e*Sn **Sn 08 53 51.0 +0.3**
4.6nm,0.6s
EPLA Plasencia 6.57 91 P **Pn 08 52 40.5 -0.5**
EPLA S **Sn 08 53 54.3 -1.7**
EPLA Plasencia 6.57 91 P **Pn 08 52 40.5 -0.5**
1.7nm,0.1s,SNR=7.1
EPLA S **Sn 08 53 54.3 -1.7**
0.4nm,0.1s,SNR=5.8
EPLA Plasencia 6.57 91 P **Pn 08 52 40.5 -0.5**
1.7nm,0.1s,SNR=7.1
EPLA S **Sn 08 53 54.3 -1.7**
0.4nm,0.1s,SNR=5.8
EPLA Plasencia 6.57 91 P **Pn 08 52 40.5 -0.5**
1.7nm,0.1s,SNR=7.1
EPLA S **Sn 08 53 54.3 -1.7**
0.4nm,0.1s,SNR=5.8
EMIN Mina Concepcio 6.79 111 P **Pn 08 52 44.6 +0.6**
EMIN S **Sn 08 54 01.1 -0.3**
EMIN Mina Concepcio 6.79 111 P **Pn 08 52 44.6 +0.6**
0.4nm,0.1s,SNR=7.9
EMIN S **Sn 08 54 01.1 -0.3**
0.4nm,0.1s,SNR=9.4
EMIN Mina Concepcio 6.79 111 P **Pn 08 52 44.6 +0.6**
0.4nm,0.1s,SNR=7.9
EMIN S **Sn 08 54 01.1 -0.3**
0.4nm,0.1s,SNR=9.4
EMIN Mina Concepcio 6.79 111 P **Pn 08 52 44.6 +0.6**
0.4nm,0.1s,SNR=7.9
EMIN S **Sn 08 54 01.1 -0.3**
0.4nm,0.1s,SNR=9.4
EARI Arriondas 7.57 66 P **Pn 08 52 55.5 +0.9**
EARI S **Sn 08 54 18.4 -2.0**
EARI Arriondas 7.57 66 P **Pn 08 52 55.5 +0.9**
1.7nm,0.2s,SNR=20
EARI S **Sn 08 54 18.4 -2.0**
0.1nm,0.1s
EARI Arriondas 7.57 66 P **Pn 08 52 55.5 +0.9**
1.7nm,0.2s,SNR=20
EARI S **Sn 08 54 18.4 -2.0**
0.1nm,0.1s
EARI Arriondas 7.57 66 P **Pn 08 52 55.5 +0.9**
1.7nm,0.2s,SNR=20
EARI S **Sn 08 54 18.4 -2.0**
0.1nm,0.1s
GUD Guadarrama 8.00 86 P **Pn 08 53 00.5 0.0**
GUD S **Sn 08 54 29.5 -1.4**
GUD Guadarrama 8.00 86 P **Pn 08 53 00.5 0.0**
0.1nm,0.1s,SNR=7.9
GUD S **Sn 08 54 29.5 -1.4**
0.2nm,0.1s,SNR=7.9
GUD Guadarrama 8.00 86 P **Pn 08 53 00.5 0.0**
0.1nm,0.1s,SNR=7.9
GUD S **Sn 08 54 29.5 -1.4**
0.2nm,0.1s,SNR=7.9
EADA Adamuz 8.16 104 P **Pn 08 53 02.7 -0.1**
EADA S **Sn 08 54 31.4 -3.7**
EADA Adamuz 8.16 104 P **Pn 08 53 02.7 -0.1**
0.3nm,0.1s,SNR=7.9
EADA S **Sn 08 54 31.4 -3.7**
0.3nm,0.1s,SNR=7.9
EADA Adamuz 8.16 104 P **Pn 08 53 02.7 -0.1**
0.3nm,0.1s,SNR=7.9
EADA S **Sn 08 54 31.4 -3.7**
0.3nm,0.1s,SNR=7.9
EADA Adamuz 8.16 104 P **Pn 08 53 02.7 -0.1**
0.3nm,0.1s,SNR=7.9
ESDC Sonseca Array 8.24 93 P **Pn 08 53 04.1 +0.2**
ESDC Sonseca Array 8.24 93 P **Pn 08 53 04.1 +0.2**
0.6nm,0.2s,baz=280,slow=14,SNR=5.9
ESDC Sonseca Array 8.24 93 P **Pn 08 53 04.1 +0.2**
0.6nm,0.2s,baz=280,slow=14,SNR=5.9
ESDC Sonseca Array 8.24 93 P **Pn 08 53 04.1 +0.2**
0.6nm,0.2s,baz=281,slow=13,SNR=5.9
ELAN Lanestosa 8.79 69 P **Pn 08 53 13.2 +1.7**
ELAN Lanestosa 8.79 69 P **Pn 08 53 12.9 +1.5**
1.1nm,0.1s,SNR=10.0
ELAN Lanestosa 8.79 69 P **Pn 08 53 12.9 +1.5**
1.1nm,0.1s,SNR=10.0
ELAN Lanestosa 8.79 69 P **Pn 08 53 12.9 +1.5**
1.1nm,0.1s,SNR=10.0

BJI ***25*** *08:52:58.8,36˚.11N×138˚.73E,h188km,mB4.9/6,mb4.6/20*
NIED ***25*** *08:53:00,36˚.40N×138˚.20E,h200km,Mw4.4 Best double couple: M₀4.40000×10¹⁵ NP1:ϕ₁=5.00000°, δ84.00000°,λ-39.00000°. NP2:ϕ₂=100.00000°,δ51.00000°, λ-173.00000°.*
MOS ***25*** *08:53:05.0±1.0,36˚.49N×138˚.07E,h190km,mb4.4/23, Error ellipse: s-maj=13.2km s-min=8.4km az=103.5*
NEIC ***25*** *08:53:06.5±0.5,36˚.39N×138˚.03E,h188km±4km,mb4.6/6, MW4.4(NIED),Error ellipse: s-maj=9.0km s-min=8.2km az=135.0*
IDC ***25*** *08:53:06.2±0.3,36˚.36N×138˚.01E,h184km±2km,mb3.8/19, mb1 4.0/20,mb1mx3.9/27,mbtmp3.9/20,Error ellipse: s-maj=10.8km s-min=8.0km az=78.0*
JMA ***25*** *08:53:06.7±0.1,36˚.35N×138˚.18E,h191km±1km,M4.3 Broadband fault plane solution: P waves. NP1: ϕ₁=99.00000°,δ47.00000°,λ-172.00000°. NP2:ϕ₂=3.00000°, δ84.00000°,λ-44.00000°. Principal axes: T Plg24.0000°, Azm59.0000°; N Plg46.0000°, Azm177.0000°; P Plg34.0000°, Azm311.0000°;*
ISCJB ***25*** *08:53:06.2±0.2,36˚.37N±0.0˚.03×137˚.95E±0.0˚.03, h190km±1km,mb4.4/56 Error ellipse: s-maj=5.0km s-min=3.7km az=164.1*

ISC 25 08:53:07.2±0.2,36˚.37N±0˚.03×137˚.99E±0˚.03,h186km±1km, h191km±5.2km:pP-P,n297,σ0.79/327,mb4.4/56,101C-82D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Time h m s	Res ISC
				Op ISC		
JNG	**Nsakai**	**0.10**	**67**	⇓P **Pn**	**08 53 32.0**	**+0.3**
JNG				*e*S **Sn**	**08 53 49.9**	**-0.7**
MAJO	**Matsushiro**	**0.25**	**46**	*e*Pn **Pn**	**08 53 31.4**	**-0.6**
MAJO				*e*Sn **Sn**	**08 53 51.1**	**0.0**
MAT	**Matsushiro**	**0.25**	**46**	P **Pn**	**08 53 31.9**	**0.0**
MAT				S **Sn**	**08 53 51.1**	**0.0**
MAT	**Matsushiro**	**0.25**	**46**	P **Pn**	**08 53 31.9**	**0.0**
MAT				S **Sn**	**08 53 50.8**	**-0.3**
MJAR	**Matsushiro Arr**	**0.25**	**46**	P **Pn**	**08 53 31.9**	**0.0**
226nm,0.3s,baz=215,slow=1.7,SNR=1519						
MJAR				S **Sn**	**08 53 50.8**	**-0.3**
44nm,0.3s,baz=301,slow=11,SNR=23						
MJAR	**Matsushiro Arr**	**0.25**	**46**	P **Pn**	**08 53 31.9**	**0.0**
MJAR				S **Sn**	**08 53 50.8**	**-0.3**
MJAR				pmax pmax		
comp=Z,226nm,0.3s						
MJAR				smax		
comp=N,44nm,0.3s						
JNT	**Takato**	**0.51**	**166**	⇓P **Pn**	**08 53 33.0**	**+0.2**
JNT				S **Sn**	**08 53 53.1**	**+0.7**
JGN	**Niukaw**	**0.56**	**255**	⇑P **Pn**	**08 53 33.8**	**+0.8**
JGN				S **Sn**	**08 53 54.7**	**+2.0**
JGK	**Kuni**	**0.56**	**70**	⇓P **Pn**	**08 53 32.7**	**-0.3**
JTT	**Ttatey**	**0.58**	**294**	⇑P **Pn**	**08 53 33.8**	**+0.8**
JTT				*e*S **Sn**	**08 53 54.5**	**+1.6**
JJN	**Nakama**	**0.75**	**11**	⇓P **Pn**	**08 53 34.3**	**+0.4**
JJN				S **Sn**	**08 53 55.6**	**+0.9**
JRY	**Ryogami san**	**0.82**	**115**	⇓P **Pn**	**08 53 33.7**	**-0.7**
JRY				*e*S **Sn**	**08 53 53.6**	**-1.6**
JYN	**Shimob**	**0.98**	**152**	⇓P **Pn**	**08 53 35.1**	**-0.3**
JYN				*e*S **Sn**	**08 53 57.7**	**+0.6**
JAG	**Ashikaga**	**1.19**	**87**	⇓P **Pn**	**08 53 35.7**	**-1.2**
JAG				*e*S **Sn**	**08 53 58.1**	**-1.8**
JSZ	**Suzu**	**1.19**	**335**	⇑P **Pn**	**08 53 37.3**	**+0.4**
JSZ				S **Sn**	**08 54 00.0**	**-0.1**
JGM	**Miyama**	**1.23**	**237**	⇑P **Pn**	**08 53 38.3**	**+1.0**
JGM				S **Sn**	**08 54 02.3**	**+1.9**
JKG	**Kaga**	**1.34**	**267**	⇑P **Pn**	**08 53 39.6**	**+1.4**
JKG				S **Sn**	**08 54 05.3**	**+3.2**
JOD2	**Odawara 2**	**1.42**	**141**	⇓P **Pn**	**08 53 38.4**	**-0.6**
JOD2				*e*S **Sn**	**08 54 02.7**	**-0.8**
JSD	**Sado**	**1.68**	**7**	⇓P **Pn**	**08 53 41.3**	**-0.1**
JSD				S **Sn**	**08 54 07.2**	**-0.8**
JHG	**Hegura jima**	**1.71**	**330**	P **Pn**	**08 53 42.2**	**+0.6**
JHG				S **Sn**	**08 54 09.2**	**+0.8**
JNS	**Sasagawa**	**1.80**	**36**	P **Pn**	**08 53 42.1**	**-0.5**
JNS				*e*S **Sn**	**08 54 08.7**	**-1.4**
JIE	**Ise**	**2.23**	**208**	⇑P **Pn**	**08 53 47.6**	**+0.3**
JIE				*e*S **Sn**	**08 54 17.8**	**-0.5**
JAW	**Awa shima**	**2.31**	**25**	⇑P **Pn**	**08 53 47.7**	**-0.4**
JAW				S **Sn**	**08 54 19.2**	**-0.8**
JWT	**Wachi**	**2.36**	**243**	⇑P **Pn**	**08 53 49.3**	**+0.6**
JWT				*e*S **Sn**	**08 54 22.1**	**+1.3**
JMM	**Marumori**	**2.70**	**55**	P **Pn**	**08 53 51.4**	**-1.1**
JMM				*e*S **Sn**	**08 54 24.6**	**-3.2**
JHJ	**Hachijo jima 2**	**3.56**	**155**	P **Pn**	**08 54 01.9**	**-1.2**
comp=N,98nm,0.3s,baz=27,slow=14,SNR=39						
JHJ				S **Sn**	**08 54 44.5**	**-2.2**
comp=N,58nm,0.3s,baz=279,slow=19,SNR=3.4						
KSRS	**Korea Array**	**8.13**	**281**	P **Pn**	**08 55 05.1**	**+2.9**
comp=N,0.4nm,0.3s,baz=100,slow=13,SNR=29						
ASAJ	**Asahikawa**	**8.50**	**23**	P **Pn**	**08 55 02.8**	**-4.1**
comp=N,16nm,0.3s,baz=234,slow=11,SNR=76						
ASAJ				S **Sn**	**08 56 32.8**	**-9.3**
comp=N,1.3nm,0.3s,baz=120,slow=20,SNR=3.9						
ASAJ	**Asahikawa**	**8.50**	**23**	P **Pn**	**08 55 02.8**	**-4.1**
ASAJ				S **Sn**	**08 56 32.8**	**-9.3**
ASAJ				pmax pmax		
comp=Z,16nm,0.3s						
ASAJ				smax		
comp=N,1.0nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**9.74**	**36**	⇑*i*P **Pn**	**08 55 18.0**	**-5.1**
YUK				*e*S **Sn**	**08 56 59.2**	**-12**
YUK				pmax pmax		
comp=N,80nm,0.5s						
YUK				pmax pmax		
comp=E,130nm,0.5s						
YUK				pmax pmax		
comp=Z,170nm,0.5s						
YUK				pmax pmax		
comp=Z,20nm,1.6s						
YUK				smax		
comp=N,419nm,0.6s						
YUK				smax		
comp=E,296nm,0.6s						
YUK				smax		
comp=N,330nm,0.7s						
YUK				smax		
comp=E,360nm,0.6s						
CBIJ	**Chichi jima**	**9.91**	**158**	P **Pn**	**08 55 18.4**	**-7.1**
comp=E,36nm,0.3s,baz=86,slow=23,SNR=14						
CBIJ				S **Sn**	**08 57 01.6**	**-14**
comp=E,30nm,0.3s,baz=292,slow=23,SNR=7.2						
MDJ	**Mudanjiang**	**10.42**	**325**	P **Pn**	**08 55 33.0**	**+1.0**
MDJ				pmax pmax		
comp=Z,40nm,1.2s						
MDJ				pmax pmax		
comp=Z,100nm,4.1s						
MDJ	**Mudanjiang**	**10.42**	**325**	*e*Pn **Pn**	**08 55 33.1**	**+1.2**
comp=Z,63nm,1.3s						
YSS	**Yuzh-Sakhalins**	**11.16**	**17**	*e*Pn **Pn**	**08 55 38.2**	**-3.3**
comp=Z,33nm,0.5s						
YSS	**Yuzh-Sakhalins**	**11.16**	**17**	*e*P **Pn**	**08 55 37.0**	**-4.5**
YSS				*e*	08 57 38.8	
YSS				pmax pmax		
comp=Z,40nm,0.8s						
DL2	**Dalian**	**13.21**	**286**	P **Pn**	**08 56 10.0**	**+2.3**
DL2				pmax pmax		
comp=Z,30nm,1.0s						
WHN	**Wuhan**	**20.54**	**260**	P **P**	**08 57 40.0**	**+8.8**
PETK	**Petropavlovsk-**	**21.70**	**33**	P **P**	**08 57 41.6**	**-1.7**
comp=Z,7.8nm,0.8s,mb4.2,baz=215,slow=6.8,SNR=16						
PETK	**Petropavlovsk-**	**21.70**	**33**	P **P**	**08 57 41.6**	**-1.7**
PETK				pmax pmax		
comp=Z,8.0nm,0.8s,mb4.2						
XAN	**Xi'an**	**23.82**	**273**	P **P**	**08 58 01.5**	**-1.7**
XAN				pmax pmax		
comp=Z,2.0nm,0.4s,mb4.0						
ENH	**Enshi**	**24.53**	**264**	*e*P **P**	**08 58 08.2**	**-1.3**
comp=Z,16nm,0.7s,mb4.7						
SONM	**Songino Array**	**25.91**	**306**	P **P**	**08 58 20.3**	**-1.6**
comp=Z,2.3nm,0.6s,mb4.0,baz=109,slow=7.8,SNR=3.1						
SONM	**Songino Array**	**25.91**	**306**	P **P**	**08 58 20.3**	**-1.6**
SONM				pmax pmax		
comp=Z,2.0nm,0.6s						
LZH	**Lanzhou**	**27.46**	**280**	*e*P **P**	**08 58 34.5**	**-1.4**
LZH				pmax pmax		
comp=Z,15nm,1.3s,mb4.5						
GTA	**Gaotai**	**30.13**	**287**	*e*P **P**	**08 58 58.0**	**-1.4**
GTA				pmax pmax		
comp=Z,2.0nm,0.8s,mb3.9						
QIZ	**Qiongzhong**	**30.16**	**243**	P **P**	**08 58 56.8**	**-3.1**
QIZ				pP pP	08 59 37.8	-0.4
QIZ				sP sP	08 59 59.8	+0.2
QIZ				S **S**	**09 03 41.5**	**-3.6**
QIZ				pmax pmax		
comp=Z,9.0nm,1.7s,mb4.2						
QIZ				LR LR		
comp=N,110nm,17.0s						
QIZ				LR LR		
comp=Z,91nm,6.4s						
CMAR	**Chiang Mai Arr**	**38.66**	**253**	P **P**	**09 00 12.6**	**-0.3**
comp=Z,1.0nm,0.5s,mb3.7,baz=47,slow=8.8,SNR=4.6						
CMAR				pP pP	09 00 50.9	-1.5
comp=Z,0.6nm,0.5s,baz=46,slow=6.3,SNR=1.6						
CMAR	**Chiang Mai Arr**	**38.66**	**253**	P **P**	**09 00 12.6**	**-0.3**
CMAR				*PP pP	09 00 50.9	-1.5
CMAR				pmax pmax		
comp=Z,1.0nm,0.5s						
CMAR				pmax pmax		
comp=Z,1.0nm,0.5s						
ZAA0	**Zalesovo Array**	**40.34**	**313**	*e*P **P**	**09 00 26.0**	**-0.3**
ZALV	**Zalesovo Beam**	**40.34**	**313**	P **P**	**09 00 25.8**	**-0.5**
comp=Z,9.9nm,0.5s,mb4.7,baz=91,slow=6.1,SNR=38						
ZALV				PcP PcP	09 02 24.6	-1.1
comp=Z,4.6nm,0.6s,baz=91,slow=3.1,SNR=8.4						
ZALV	**Zalesovo Beam**	**40.34**	**313**	P **P**	**09 00 25.8**	**-0.5**
ZALV					09 02 24.6	
ZALV				pmax pmax		
comp=Z,10.0nm,0.5s,mb4.7						
MK31	**Makanchi Array**	**42.14**	**302**	P **P**	**09 00 39.8**	**-1.2**
MK31				pmax pmax		
comp=Z,10.0nm,0.7s,mb4.5						
MKAR	**Makanchi Array**	**42.14**	**302**	P **P**	**09 00 40.4**	**-0.6**
comp=Z,9.1nm,0.6s,mb4.6,baz=90,slow=10,SNR=67						
MKAR				PcP PcP	09 02 30.9	-0.9
comp=Z,0.4nm,0.3s,baz=59,slow=4.7,SNR=3.1						
MKAR	**Makanchi Array**	**42.14**	**302**	P **P**	**09 00 40.4**	**-0.6**
MKAR					09 02 30.9	
MKAR				pmax pmax		
comp=Z,9.0nm,0.6s						
TAPN	**Taplejung**	**43.23**	**273**	*e*P **P**	**09 00 49.5**	**-0.6**
comp=Z,10nm,0.4s,mb4.8						
ODAN	**Odare**	**43.70**	**272**	*e*P **P**	**09 00 54.0**	**+0.2**
KURK	**Kurchatov**	**44.18**	**308**	P **P**	**09 00 57.0**	**-0.3**
comp=Z,34nm,0.5s,mb5.2,baz=85,slow=7.9,SNR=83						
KURK	**Kurchatov**	**44.18**	**308**	*d*iP **P**	**09 00 56.3**	**-1.0**
KURK				pmax pmax		

comp=Z,77nm,0.8s,mb5.4
RAMN Ramite 44.29 273 *e*P P 09 00 58.3 -0.3
comp=Z,47nm,0.9s,mb5.1
JIRN Jiri 44.32 274 *e*P P 09 00 58.7 -0.1
comp=Z,18nm,0.6s,mb4.8
GUN Gumba 44.47 274 *e*P P 09 01 00.2 +0.3
comp=Z,17nm,0.4s,mb5.0
PKI Pulchoki 44.99 274 *e*P P 09 01 03.6 -0.4
KKN Kakani 45.00 275 *e*P P 09 01 03.7 -0.4
DMN Daman 45.22 275 *e*P P 09 01 06.0 +0.2
GKN Gorkha 45.43 275 *e*P P 09 01 07.6 +0.1
DANN Dangsing 45.99 276 *e*P P 09 01 12.5 +0.6
KOLN Koldanda 46.36 276 *e*P P 09 01 14.9 +0.1
comp=Z,27nm,0.9s,mb4.9
TKM2 Tokmak 2 47.52 298 P P 09 01 24.3 +0.7
SNR=21
KZA Kyzart 47.98 297 P P 09 01 28.6 +1.5
SNR=22
KBK Karagaybulak 48.05 298 P P 09 01 28.1 +0.6
SNR=8.5
KSH Kashi 48.15 294 *e*P P 09 01 32.0 +3.5
KSH *e*PcP PcP 09 02 54.0 +1.1
KSH *e*PP PP 09 03 27.0 +4.7
KSH *e*PcS PcS 09 06 49.0 +0.1
KSH pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
KSH LR LR
comp=N,70nm,5.2s
KSH LR LR
comp=E,51nm,4.8s
KSH LR LR
comp=Z,100nm,5.9s
USP Ospenovka 48.21 299 P P 09 01 28.8 0.0
SNR=8.1
AAK Ala-Archa 48.38 298 P P 09 01 29.9 -0.2
comp=Z,4.4nm,0.5s,mb4.3,baz=115,slow=4.4,SNR=13
AAK Ala-Archa 48.38 298 P P 09 01 29.9 -0.2
AAK pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
EKS2 Erkin-Say 48.88 298 P P 09 01 33.3 -0.7
SNR=8.7
BVA0 Borovoye Array 48.98 312 P P 09 01 34.0 -0.5
BVA0 pmax pmax
comp=Z,1.0nm,0.2s,mb4.1
BRVK Borovoye 49.04 312 *c i*P P 09 01 34.6 -0.4
BRVK pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
AML Almayashu 49.08 298 P P 09 01 36.6 +1.2
SNR=11
KDAK Kodiak Island 49.43 41 P P 09 01 36.9 -1.0
comp=Z,3.7nm,0.4s,mb4.4,baz=261,slow=5.9,SNR=14
KDAK Kodiak Island 49.43 41 *i*P P 09 01 36.9 -0.9
ZRNK Zerenda 49.82 312 P P 09 01 39.8 -1.1
ZRNK pmax pmax
comp=Z,10.0nm,0.3s,mb4.9
KK31 Karatay Array 51.06 300 P P 09 01 49.6 -0.8
KK31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.2
ILAR Eielson Array 51.52 32 P P 09 01 52.5 -0.9
comp=Z,1.7nm,0.8s,mb3.7,baz=279,slow=6.5,SNR=24
ILAR Eielson Array 51.52 32 P P 09 01 52.6 -0.8
ILAR pmax pmax
comp=Z,2.0nm,0.8s
EGAK Eagle 53.96 32 *e*P P 09 02 11.0 -0.3
comp=Z,2.4nm,0.6s,mb4.1
ARU Arti 55.03 318 *d i*P P 09 02 18.1 -1.0
ARU *e* 09 04 20.9
ARU S S 09 10 06.5 +20
ARU pmax pmax
comp=Z,21nm,1.2s,mb4.7
WRA Warramunga Arr 56.11 184 P P 09 02 25.8 -1.4
WRA pP pP 09 03 09.4 0.0
WRA Warramunga Arr 56.11 184 P P 09 02 25.8 -1.4
comp=Z,2.2nm,0.4s,mb4.3,baz=360,slow=7.6,SNR=79
WRA pP pP 09 03 09.4 0.0
comp=Z,2.2nm,0.9s,baz=2.9,slow=7.5,SNR=3.0
WRA Warramunga Arr 56.11 184 P P 09 02 25.8 -1.3
WRA *PP pP 09 03 09.5 0.0
WRA pmax pmax
comp=Z,2.0nm,0.4s
WRA pmax pmax
comp=Z,2.0nm,0.9s
AB31 Akbulak array 56.25 310 *e*P P 09 02 26.9 -1.0
AB31 pmax pmax
comp=Z,6.0nm,0.4s,mb4.8
AKTO Aktyubinsk 57.06 311 P P 09 02 32.1 -1.5
AKTO pmax pmax
comp=Z,1.0nm,0.8s,mb3.7
ASAR Alice Springs 59.83 184 P P 09 02 52.4 -0.6
comp=Z,0.4nm,0.4s,mb3.6,baz=356,slow=5.4,SNR=12
ASAR pP pP 09 03 35.6 -0.2
comp=Z,0.7nm,0.8s,baz=12,slow=9.6,SNR=3.5
ASAR Alice Springs 59.83 184 P P 09 02 52.4 -0.5
ASAR *PP pP 09 03 35.7 -0.1
ASAR pmax pmax
comp=Z,1.0nm,0.8s
KEV Kevo 63.07 339 *e*P P 09 03 12.8 -1.3
KEV pmax pmax
comp=Z,1.0nm,0.3s,mb4.1
KEV Kevo 63.07 339 *e*p P 09 03 12.8 -1.3
comp=Z,0.5nm,0.3s,mb3.8
ARCES ARCESS Array B 63.63 339 P P 09 03 16.6 -1.3
comp=Z,2.7nm,0.6s,mb4.3,baz=58,slow=8.1,SNR=19
ARCES ARCESS Array B 63.63 339 P P 09 03 16.6 -1.2
ARCES pmax pmax
comp=Z,3.0nm,0.6s
JOF Joensuu 65.23 331 *e*P P 09 03 26.7 -1.6
JOF pmax pmax
comp=Z,3.0nm,0.4s,mb4.5
JOF Joensuu 65.23 331 *e*p P 09 03 26.7 -1.6
comp=Z,2.8nm,0.4s,mb4.5
KAF Kangasniemi 67.61 332 *e*P P 09 03 41.6 -1.8
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.4
KAF Kangasniemi 67.61 332 *e*p P 09 03 41.6 -1.8
comp=Z,2.9nm,0.4s,mb4.4
STKA Stephens Creek 67.97 177 P P 09 03 45.1 -0.7
comp=Z,1.5nm,0.9s,mb3.7,baz=8.9,slow=23,SNR=3.4
FINES FINESS Array B 68.10 331 P P 09 03 45.4 -1.0
comp=Z,2.5nm,0.3s,mb4.3,baz=67,slow=6.0,SNR=17
FINES FINESS Array B 68.10 331 P P 09 03 45.4 -1.0
FINES pmax pmax
comp=Z,3.0nm,0.4s
KIV Kislovodsk 69.24 310 ⇓ *i*P P 09 03 54.8 +1.0
KIV pmax pmax
comp=Z,14nm,0.9s,mb4.7
D05A Enumclaw 70.37 45 ⇑P P 09 04 00.8 +0.1
baz=70
B08A Colville Reser 71.23 43 ⇓P P 09 04 05.7 -0.1
baz=71
H04A Detroit Lake 71.61 48 ⇑P P 09 04 07.4 -0.7
baz=71
ANN Anapa 71.98 313 *e*P P 09 04 04.1 -6.2
ANN pmax pmax
comp=Z,36nm,1.4s,mb4.9
G06A Carlson Farm, 72.23 47 ⇑P P 09 04 11.3 -0.5
baz=72
NEW Newport 72.50 43 ⇓P P 09 04 12.9 -0.5
baz=72
E09A Wood Farm, Sta 72.94 45 ⇓P P 09 04 15.8 -0.2
baz=73
AKASG Malin Array Be 73.11 321 P P 09 04 15.4 -1.5
comp=Z,1.2nm,0.3s,mb4.0,baz=48,slow=5.9,SNR=9.4
AKASG Malin Array Be 73.11 321 P P 09 04 15.4 -1.5
AKASG pmax pmax
comp=Z,1.0nm,0.3s
G08A Pilot Rock 73.17 46 ⇓P P 09 04 16.9 -0.4
baz=73
C11A Tepee Creek (N 73.22 43 ⇑P P 09 04 18.1 +0.4
baz=73
K05A Summer Lake 73.48 49 ⇓P P 09 04 19.5 +0.3
baz=73
MIB Mutribah 73.50 295 *e*P P 09 04 18.3 -1.2
MIB AMb AMB 09 04 19.5
comp=Z,16nm,0.8s,mb4.8
MIB Mutribah 73.50 295 *e*P P 09 04 18.3 -1.2
MIB AMb AMB 09 04 19.5
comp=Z,17nm,0.8s,mb4.8
QRN Al-Qurain 73.64 294 *e*P P 09 04 19.6 -0.9
QRN AMb AMB 09 04 24.2
comp=Z,30nm,1.1s,mb5.0
QRN Al-Qurain 73.64 294 *e*P P 09 04 19.5 -0.9
QRN AMb AMB 09 04 24.2
comp=Z,32nm,0.9s,mb5.0
NOA NORSAR Array B 73.71 336 P P 09 04 19.2 -0.9
comp=Z,4.2nm,0.7s,mb4.3,baz=41,slow=5.9,SNR=13
NOA NORSAR Array B 73.71 336 P P 09 04 19.3 -0.9
NOA pmax pmax
comp=Z,4.0nm,0.7s
F10A Beach Ranch, E 73.77 45 ⇑P P 09 04 21.2 +0.4
baz=74
RDF Al-Radifah 73.82 294 *e*P P 09 04 20.8 -0.6
RDF AMb AMB 09 04 21.7
comp=Z,30nm,0.7s,mb5.2
RDF Al-Radifah 73.82 294 *e*P P 09 04 21.0 -0.5
RDF AMb AMB 09 04 21.7
comp=Z,30nm,0.7s,mb5.1
NAY Al-Naaiem 73.87 295 *e*P P 09 04 20.5 -1.3
NAY AMb AMB 09 04 21.6
comp=Z,10.0nm,0.7s,mb4.7
NAY Al-Naaiem 73.87 295 *e*P P 09 04 20.5 -1.2
NAY AMb AMB 09 04 21.6
comp=Z,8.5nm,0.8s,mb4.5
B13A Whitefish 73.88 41 ⇑P P 09 04 21.6 +0.2
baz=74
A14A Double T Ranch 74.07 41 ⇓P P 09 04 22.7 +0.2
baz=74
D12A Red Ives Fores 74.19 43 ⇑P P 09 04 23.3 +0.1
baz=74
C13A Hot Springs 74.23 42 ⇑P P 09 04 23.7 +0.2
baz=74
A15A Johnson Ranch, 74.42 40 ⇑P P 09 04 24.1 -0.4
baz=74
E12A Beaver Dam Sad 74.44 44 ⇑P P 09 04 25.1 +0.4
baz=74
B14A Marquette Ranc 74.52 41 ⇓P P 09 04 25.1 0.0
baz=74
J08A Circle Bar Ran 74.57 47 ⇑P P 09 04 25.7 +0.1
baz=74
C14A Swan Lake 74.63 42 ⇓P P 09 04 26.1 +0.4
baz=74
B15A Bradely Ranch, 74.92 41 ⇑P P 09 04 27.8 +0.3
baz=75,SNR=5.5
F12A Elk City 75.01 44 ⇑P P 09 04 28.1 +0.1
baz=75
A16A West Butte Ran 75.03 40 ⇑P P 09 04 27.8 -0.3
baz=75
MSO Missoula 75.09 42 ⇑P P 09 04 28.4 0.0
baz=75
D14A Greenough 75.17 42 ⇓P P 09 04 28.7 -0.2
baz=75
C15A Salmond Ranch, 75.23 41 ⇑P P 09 04 29.3 +0.1
baz=75
G12A Big Creek, Yel 75.35 44 ⇓P P 09 04 29.5 -0.4
baz=75
A17A Triple J Farms 75.50 39 ⇑P P 09 04 30.4 -0.3
baz=75
F13A Darby 75.51 44 ⇑P P 09 04 30.6 -0.2
baz=75
E14A Clinton 75.59 43 ⇑P P 09 04 30.7 -0.5
baz=75
C16A Fuhringer Ranc 75.67 41 ⇓P P 09 04 31.8 +0.1
baz=75
B17A L&G Farms, Che 75.86 40 ⇑P P 09 04 32.9 +0.1
baz=76
A18A Metzger Ranch, 75.95 39 ⇓P P 09 04 33.1 -0.2
baz=76
H12A Diamond D Ranc 75.97 45 ⇓P P 09 04 33.0 -0.4
baz=76
G13A Cobalt 75.99 44 ⇑P P 09 04 33.4 -0.2
baz=76
E15A Deer Lodge 76.05 42 ⇑P P 09 04 33.8 -0.1
baz=76
I12A Atlanta 76.27 46 ⇓P P 09 04 35.2 +0.1
baz=76
C17A Wharram Farm, 76.29 40 ⇓P P 09 04 35.1 -0.2
baz=76
H13A Challis 76.30 44 ⇑P P 09 04 35.1 -0.3
baz=76
B18A Beardsley Farm 76.32 39 ⇓P P 09 04 35.4 0.0
baz=76
F15A Butte 76.49 43 ⇓P P 09 04 36.5 +0.1
baz=76,SNR=5.4
E16A East Helena 76.50 42 ⇓P P 09 04 37.0 +0.5
baz=76
EGMT Eagleton 76.57 40 ⇓P P 09 04 36.9 +0.2
baz=76
D17A Six Diamond Ra 76.64 41 ⇑P P 09 04 37.2 0.0
baz=76
I13A Wildhorse Cree 76.78 45 ⇓P P 09 04 38.8 +0.7
baz=76
HLID Hailey 76.82 45 ⇑P P 09 04 38.4 +0.1
baz=76
G15A Dillon 76.91 43 ⇑P P 09 04 38.8 0.0
baz=77,SNR=5.9
E17A Martinsdale 76.98 41 ⇑P P 09 04 39.8 +0.7
baz=77
F16A Kennard Place, 77.00 42 ⇑P P 09 04 39.3 +0.1
baz=77
J13A Cove Ranch, Pi 77.06 45 ⇑P P 09 04 39.8 +0.2
baz=77
BOZ Bozeman (W) 77.08 42 ⇑P P 09 04 40.0 +0.3
baz=77
I14A Mackay 77.14 45 ⇓P P 09 04 40.9 +0.8
baz=77,SNR=5.8
BRTR Keskin Array B 77.20 310 P P 09 04 40.4 -0.1
comp=Z,3.1nm,0.7s,mb4.0,baz=106,slow=4.0,SNR=15
BRTR Keskin Array B 77.20 310 P P 09 04 40.4 -0.1
BRTR pmax pmax
comp=Z,3.0nm,0.7s
G16A Moss Hill, Enn 77.25 43 ⇓P P 09 04 40.8 +0.1
baz=77
E18A Harlowton 77.42 41 ⇓P P 09 04 42.2 +0.6
baz=77
F17A Fitzpatrick Pl 77.44 42 ⇓P P 09 04 42.1 +0.4
baz=77
NVAR Mina Array Bea 77.58 51 P P 09 04 42.9 +0.3
comp=Z,1.9nm,0.6s,mb3.9,baz=297,slow=5.2,SNR=18
G17A Piece Place, 77.77 42 ⇓P P 09 04 44.1 +0.5
baz=78
F18A Big Timber 77.95 41 ⇑P P 09 04 45.1 +0.6
baz=78
P10A Eureka 78.00 50 ⇑P P 09 04 45.3 +0.3
baz=78
D20A Manuel Ranch, 78.01 40 ⇑P P 09 04 45.2 +0.4
baz=78
OJC Ojcow 78.02 325 *e*P P 09 04 44.4 -0.4
E19A Rath Farm, Rou 78.08 40 ⇓P P 09 04 45.5 +0.3
baz=78
K14A Jones Ranch, D 78.16 46 ⇑P P 09 04 46.2 +0.4
baz=78
I16A Newdale 78.28 44 ⇓P P 09 04 47.8 +1.4
baz=78,SNR=6.1
F19A Roth Farm, Mol 78.39 41 ⇑P P 09 04 47.4 +0.4
baz=78
E20A Meyer Farm, Mu 78.39 40 ⇓P P 09 04 47.4 +0.4
baz=78
H17A Grant Village 78.46 43 ⇑P P 09 04 49.5 +2.2
baz=78
Q10A Clear Creek Ra 78.53 50 ⇓P P 09 04 47.6 -0.2
baz=78
RLMT Red Lodge 78.70 42 ⇓P P 09 04 49.2 +0.6
baz=78
H18A Shoshone NF, C 78.77 42 ⇑P P 09 04 49.1 +0.1
baz=78
K16A Soda Springs 78.89 45 ⇑P P 09 04 50.8 +1.1
baz=79
R10A Warm Springs 78.91 51 ⇑P P 09 04 50.3 +0.3
baz=79
S10A Tonopah Range, 78.95 51 ⇓P P 09 04 50.2 +0.1
baz=79
L15A Malad City 78.96 46 ⇑P P 09 04 50.4 +0.3
baz=79
Q11A Duckwater 78.97 50 ⇑P P 09 04 50.1 -0.2
baz=79
P12A McGill 79.05 49 ⇑P P 09 04 51.3 +0.6
baz=79
R11A Troy Canyon, C 79.32 50 ⇓P P 09 04 52.3 +0.2
baz=79
Q12A Willow Creek R 79.36 49 ⇑P P 09 04 52.6 +0.3
baz=79
L16A Fish Haven 79.50 45 ⇓P P 09 04 53.2 +0.2
baz=79
MPMC Manual Prospec 79.52 53 ⇓P P 09 04 53.0 -0.3
baz=79
P13A Bates Ranch, G 79.60 48 ⇑P P 09 04 53.6 -0.1
baz=79
TPNV Topopah Spring 79.77 52 ⇓P P 09 04 54.5 0.0
baz=80
DUG Dugway 79.85 47 ⇑P P 09 04 55.5 +0.6
baz=80
K18A Toltan Ranch, 79.89 44 ⇑P P 09 04 56.1 +1.0
baz=80
Q13A Wheeler Ranch, 79.91 49 ⇑P P 09 04 54.9 -0.3
baz=80
R12A Pony Springs, 79.94 50 ⇑P P 09 04 55.9 +0.4
baz=80
J19A Crowheart 80.03 43 ⇑P P 09 04 56.0 +0.2
baz=80
BW06 Boulder Array 80.07 44 ⇑P P 09 04 55.9 -0.2
baz=80
PDAR Pinedale Array 80.08 44 P P 09 04 55.9 -0.2
comp=Z,1.7nm,0.7s,mb3.8,baz=315,slow=2.1,SNR=18
P14A Drum Mountains 80.08 48 ⇑P P 09 04 56.5 +0.3
baz=80
T11A Corn Creek, Al 80.23 51 ⇑P P 09 04 57.1 0.0
baz=80
CLL Collm 80.26 329 *i*P P 09 04 55.7 -1.2
comp=Z,9.0nm,0.9s,mb4.4
CLL *e* 09 05 05.0
CLL Collm 80.26 329 *i*P P 09 04 55.7 -1.2
CLL pmax pmax
comp=Z,9.0nm,0.9s,mb4.4
CLL Collm 80.26 329 *i*P P 09 04 55.7 -1.2
comp=Z,9.0nm,0.9s,mb4.4
CLL *e* 09 05 05.0
Q14A Sevier Lake (B 80.34 48 ⇓P P 09 04 58.1 +0.5
baz=80
SHOC Shoshone 80.39 52 ⇓P P 09 04 58.4 +0.5
baz=80
GSC Goldstone 80.42 53 ⇓P P 09 04 58.1 0.0
baz=80
J20A Shoshoni 80.50 43 ⇓P P 09 04 58.3 -0.1
baz=80
N17A Moffit Pass 80.53 46 ⇓P P 09 04 58.4 -0.2
baz=80
L19A Farson 80.62 44 ⇑P P 09 04 59.1 0.0
baz=80
K20A Yellowstone Ra 80.82 43 ⇑P P 09 04 60.0 -0.1
baz=80
S13A Holt Ranch, En 80.87 50 ⇓P P 09 05 00.5 +0.1
baz=81
Q15A Fillmore 80.87 48 ⇓P P 09 05 00.9 +0.5
baz=81
TUQ Turquoise Moun 80.91 53 ⇑P P 09 05 01.0 +0.3
baz=81
T13A Saint George 81.19 50 ⇑P P 09 05 02.9 +0.7
baz=81
J22A Midwest 81.33 42 ⇓P P 09 05 02.3 -0.5
baz=81
R15A Junction 81.44 49 ⇓P P 09 05 03.6 +0.2
baz=81
K21A Alcova 81.44 43 ⇑P P 09 05 03.0 -0.3
baz=81
O18A Roosevelt 81.45 46 ⇑P P 09 05 04.5 +1.0
baz=81
GMRC Granite Mounta 81.48 53 ⇓P P 09 05 03.5 -0.2
baz=81
U13A Pakoon Wash 81.53 51 ⇓P P 09 05 04.5 +0.5
baz=81
S15A Panguitch 81.72 49 ⇓P P 09 05 06.3 +1.4
baz=81
P18A Preston Nutter 81.73 46 ⇑P P 09 05 06.3 +1.3
baz=81,SNR=5.7
R16A Teasdale 81.87 48 ⇑P P 09 05 06.8 +1.1
baz=82
V13A Grand Canyon W 81.88 51 ⇓P P 09 05 05.9 +0.1
baz=82
SRU San Rafael 81.90 47 ⇑P P 09 05 05.9 +0.1
baz=82,SNR=5.5
O19A Miners Draw (B 81.94 45 ⇑P P 09 05 05.9 -0.1
baz=82
U14A Mt Trumbull 82.02 50 ⇓P P 09 05 07.2 +0.7
baz=82
N20A Spence Gulch, 82.08 45 ⇑P P 09 05 07.4 +0.7
baz=82
T15A Red Dirt Ranch 82.13 50 ⇑P P 09 05 07.3 +0.3
baz=82
S16A Weppner Ranch, 82.16 49 ⇑P P 09 05 07.9 +0.7
baz=82
R17A Hanksville Air 82.24 48 ⇑P P 09 05 07.8 +0.2
baz=82
N21A Black Mountain 82.55 44 ⇑P P 09 05 09.7 +0.6
baz=82
U15A North Rim 82.57 50 ⇑P P 09 05 10.1 +0.8
baz=82
V14A Boquillas Ranc 82.57 51 ⇑P P 09 05 09.8 +0.5
baz=82
S17A Black Ridge (B 82.70 48 ⇑P P 09 05 10.0 0.0
baz=82
R18A Canyonlands Na 82.75 47 ⇓P P 09 05 10.1 -0.2
baz=82
W14A Seligman 82.85 51 ⇑P P 09 05 11.0 +0.2
baz=83
V15A Kaibab Nationa 83.03 50 ⇓P P 09 05 12.4 +0.7
baz=83
N22A Wattenberg Ran 83.11 44 ⇓P P 09 05 12.3 +0.3
baz=83
S18A Hurst Farm, Bl 83.14 48 ⇑P P 09 05 12.5 +0.2
baz=83
R19A Curley Farm, L 83.19 47 ⇑P P 09 05 12.6 +0.2
baz=83
Q20A Ridgley Place, 83.31 46 ⇓P P 09 05 13.3 +0.2
baz=83
N23A Red Feather La 83.33 43 ⇑P P 09 05 13.2 0.0
baz=83
W15A Williams 83.39 51 ⇑P P 09 05 13.6 +0.1
baz=83
X14A Yava 83.45 52 ⇓P P 09 05 13.8 -0.1
baz=83
U16A Tuba City 83.47 50 ⇑P P 09 05 14.6 +0.7
baz=83
O22A Kremmling 83.50 44 ⇑P P 09 05 14.9 +0.9
baz=83
T18A Mexican Hat 83.58 48 ⇑P P 09 05 14.6 0.0
baz=83
S19A Harvey Farm, M 83.62 47 ⇓P P 09 05 14.9 +0.2
baz=83
WUAZ Wupatki 83.72 50 ⇑P P 09 05 15.8 +0.6
baz=83
P22A Eagle 83.76 45 ⇓P P 09 05 16.3 +0.9
baz=84
R20A Redvale 83.77 47 ⇑P P 09 05 15.8 +0.3
baz=84,SNR=5.2
Q21A Lamborn Mesa, 83.81 46 ⇓P P 09 05 16.6 +0.9
baz=84
X15A Humboldt 83.85 51 ⇓P P 09 05 16.7 +0.7
baz=84
V17A Tonalea, Kykot 84.01 50 ⇑P P 09 05 17.3 +0.6
baz=84,SNR=5.4
S20A Disappointment 84.02 47 ⇓P P 09 05 16.8 0.0
baz=84
U18A Rough Rock, Ch 84.06 49 ⇓P P 09 05 17.7 +0.8
baz=84
Y15A Casa Rosa Ranc 84.13 52 ⇑P P 09 05 17.7 +0.3
baz=84
R21A Cimarron 84.14 46 ⇓P P 09 05 18.3 +1.0
baz=84
Q22A Crested Butte, 84.17 45 ⇑P P 09 05 18.5 +1.0
baz=84
T19A Beclabito 84.29 48 ⇓P P 09 05 18.3 +0.2
baz=84
MVCO Mesa Verde 84.35 47 ⇑P P 09 05 18.6 +0.2
baz=84
X16A Lo Mia Camp, P 84.39 51 ⇓P P 09 05 18.7 0.0
baz=84
S21A Coal Bank Pass 84.47 47 ⇓P P 09 05 19.9 +0.9
baz=84
V18A Ganado 84.48 49 ⇑P P 09 05 19.6 +0.5
baz=84
U19A Dine' College, 84.54 48 ⇑P P 09 05 20.3 +0.9
baz=84
R22A Saguache, Gunn 84.69 46 ⇓P P 09 05 20.7 +0.6
baz=84
CDF Champ du Feu 84.86 330 *e*P P 09 05 19.6 -1.2
comp=Z,8.5nm,0.8s,mb4.2
CDF Champ du Feu 84.86 330 *e*P P 09 05 19.6 -1.2
comp=Z,4.3nm,0.8s,mb4.2
CDF Champ du Feu 84.86 330 *e*P P 09 05 19.6 -1.2
CDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
S22A 4UR Ranch, Cre 84.97 46 ⇓P P 09 05 21.8 +0.3
baz=85
U21A Nageezi 85.38 47 ⇓P P 09 05 23.7 +0.2
baz=85
T22A Edith 85.43 47 ⇓P P 09 05 23.9 +0.1
baz=85
X19A St. Johns 85.73 50 ⇓P P 09 05 25.9 +0.5
baz=85
V21A Milan 85.81 48 ⇑P P 09 05 25.2 -0.5
baz=86
U22A Llaves 85.89 47 ⇑P P 09 05 26.1 0.0

	baz=86							
T23A	**Casias Ranch,**	**85.92**	**46**	⇓P		**P**	**09 05 26.6**	**+0.4**
	baz=86							
U23A	**El Rito**	**86.31**	**47**	⇑P		**P**	**09 05 29.0**	**+0.8**
	baz=86							
S25A	**Robets Cordova**	**86.41**	**45**	⇑P		**P**	**09 05 28.1**	**-0.5**
	baz=86							
V24A	**Rampart Ranch,**	**87.27**	**47**	⇑P		**P**	**09 05 34.0**	**+1.2**
	baz=87							
LPG	**La Plagne**	**87.39**	**328**	*e*P		**P**	**09 05 32.0**	**-1.2**
	comp=Z,5.4nm,0.6s,mb4.3							
SSF	**Saint Saulge**	**87.47**	**331**	*e*P		**P**	**09 05 31.9**	**-1.6**
	comp=Z,4.6nm,0.7s,mb4.1							
AVF	**Avril sur Loir**	**87.75**	**331**	*e*P		**P**	**09 05 33.2**	**-1.6**
	comp=Z,7.4nm,0.7s,mb4.3							
MBDF	**Montbardon**	**88.00**	**328**	*e*P		**P**	**09 05 34.1**	**-1.9**
	comp=Z,7.3nm,0.7s,mb4.3							
TCF	**Toulx Ste Croi**	**88.61**	**331**	*e*P		**P**	**09 05 36.5**	**-2.4**
	comp=Z,6.5nm,0.8s,mb4.3							
TXAR	**Lajitas Array**	**92.69**	**50**	P		**P**	**09 05 57.6**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.8,baz=287,slow=2.5,SNR=9.3							
TXAR	**Lajitas Array**	**92.69**	**50**	P		**P**	**09 05 57.6**	**-0.6**
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							

*IDC **25** 09:06:36.8±0.6, 7.°60S×77.°76W, h0km, mb4.1/13, mb1 4.2/15, mb1mx4.2/23, mbtmp4.1/15, ML4.1/2, MS3.5/15, Ms1 3.6/15, ms1mx3.5/21, Error ellipse: s-maj=21.2km s-min=8.3km az=40.0*

*NEIC **25** 09:06:43.3± 1.0, 7.°65S×77.°58W, h52km± 10km, mb4.3/4, Error ellipse: s-maj=15.5km s-min=6.4km az=72.0*

NEIC Felt [II] at Huamachuco and Santiago de Chuco.

ISC 25 09:06:43.1±1.1, 7.°66S±0.°06×77.°7W±0.°1, h45km±11km, n39, σ0s82/30, mb4.2/20, MS3.5/13, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**0.88**	**306**	Pg	**Pn**	**09 06 50.9**	**-8.3**
	115nm,0.3s,baz=131,slow=12,SNR=369						
ATAH				Lg		09 07 02.8	
	489nm,0.3s,baz=338,slow=19,SNR=23						
NNA	**Nana**	**4.38**	**169**	Pn	**Pn**	**09 07 47.5**	**+0.5**
	15nm,0.3s,baz=339,slow=12,SNR=49						
NNA				Lg		09 08 51.0	
	38nm,0.3s,baz=315,slow=19,SNR=4.9						
NNA				LR	LR	09 09 22.9	
	comp=Z,870nm,20.3s,baz=324,slow=37						
OTAV	**Otavalo**	**7.88**	**354**	*e*Pn	**Pn**	**09 08 35.6**	**+0.3**
	33nm,0.9s						
LPAZ	**La Paz**	**12.67**	**133**	Pn	**Pn**	**09 09 39.9**	**-0.9**
	0.4nm,0.3s,baz=329,slow=9.2,SNR=14						
LPAZ				Sn		09 12 23.4	+23
	0.2nm,0.3s,baz=130,slow=13,SNR=1.7						
ROSC	**El Rosal**	**12.88**	**15**	Pn	**Pn**	**09 09 44.3**	**+0.8**
	1.1nm,0.3s,baz=228,slow=12,SNR=5.8						
ROSC				LR	LR	09 15 28.7	
	comp=Z,566nm,18.4s,baz=202,slow=42						
SIV	**San Ignacio**	**18.23**	**119**	P	**Pn**	**09 10 49.9**	**-2.9**
	1.1nm,0.3s,baz=306,slow=12,SNR=48						
SIV				S	**S**	**09 14 09.7**	**-9.2**
	0.3nm,0.3s,baz=189,slow=18,SNR=2.3						
PCRV	**Puerto La Cruz**	**21.97**	**36**	P	**P**	**09 11 32.9**	**-0.3**
	11nm,0.7s,mb4.4,baz=216,slow=4.3,SNR=5.1						
CFAA	**Coronel Fontan**	**25.40**	**161**	P	**P**	**09 12 07.3**	**+1.0**
	0.2nm,0.7s,baz=334,slow=11,SNR=3.0						
CFAA				LR	LR	09 20 07.7	
	comp=Z,15nm,21.9s,MS2.5,baz=155,slow=32						
CPUP	**Villa Florida**	**26.82**	**136**	P	**P**	**09 12 18.6**	**-0.6**
	1.2nm,0.7s,mb3.5,baz=278,slow=9.3,SNR=3.3						
CPUP				LR	LR	09 25 23.7	
	comp=Z,358nm,18.7s,MS4.0,baz=304,slow=42						
SJG	**San Juan**	**28.02**	**24**	P	**P**	**09 12 30.5**	**+0.5**
SJG	**San Juan**	**28.02**	**24**	P	**P**	**09 12 30.5**	**+0.5**
	5.5nm,0.4s,mb4.6,baz=153,slow=11,SNR=3.1						
CMIG	**Matias Romero**	**29.91**	**325**	P	**P**	**09 12 46.4**	**-0.4**
	0.7nm,0.6s,mb3.5,baz=129,slow=6.5,SNR=2.4						
CMIG				LR	LR	09 22 45.1	
	comp=Z,77nm,20.4s,MS3.3,baz=146,slow=32						
PLCA	**Paso Flores**	**33.54**	**170**	P	**P**	**09 13 18.7**	**+0.2**
	4.2nm,1.0s,mb4.3,baz=333,slow=8.6,SNR=3.9						
LRAL	**Lakeview Retre**	**41.43**	**348**	*e*P	**P**	**09 14 25.0**	**-0.3**
	6.1nm,1.0s,mb4.2						
TXAR	**Lajitas Array**	**44.49**	**327**	P	**P**	**09 14 51.0**	**+0.8**
	0.5nm,0.7s,mb3.4,baz=142,slow=8.1,SNR=8.0						
TXAR				LR	LR	09 31 28.8	
	comp=Z,58nm,21.3s,MS3.5,baz=5.0,slow=34						
MIAR	**Mount Ida**	**44.59**	**341**	*e*P	**P**	**09 14 51.0**	**+0.2**
	4.8nm,1.0s,mb4.3						
ANMO	**Albuquerque**	**50.35**	**329**	P	**P**	**09 15 34.9**	**-0.7**
ANMO				LR	LR	09 35 46.6	
ANMO	**Albuquerque**	**50.35**	**329**	P	**P**	**09 15 34.9**	**-0.8**
	1.0nm,0.8s,mb3.9,baz=135,slow=11,SNR=4.4						
ANMO				LR	LR	09 35 46.6	
	comp=Z,36nm,21.1s,MS3.4,baz=73,slow=35						
SDCO	**Great Sand Dun**	**52.11**	**332**	*e*P	**P**	**09 15 48.9**	**+0.1**
	2.8nm,0.8s,mb4.2						
ECSD	**EROS Data Cent**	**53.96**	**343**	*e*P	**P**	**09 16 01.1**	**-1.2**
	4.2nm,0.9s,mb4.4						
PDAR	**Pinedale Array**	**57.98**	**333**	P	**P**	**09 16 30.8**	**-0.3**
	0.7nm,0.6s,mb3.9,baz=135,slow=7.6,SNR=7.2						
PDAR				PcP	PcP	09 17 24.8	+2.1
	0.6nm,0.7s,baz=148,slow=5.3,SNR=3.0						
PDAR				LR	LR	09 41 34.9	
	comp=Z,70nm,18.4s,MS3.8,baz=360,slow=36						
NVAR	**Mina Array Bea**	**59.41**	**324**	P	**P**	**09 16 41.9**	**+0.8**
	1.0nm,0.7s,mb4.0,baz=137,slow=5.6,SNR=11						
ULM	**Lac du Bonnet**	**59.80**	**347**	P	**P**	**09 16 42.1**	**-1.4**
	2.3nm,0.6s,mb4.4,baz=162,slow=7.8,SNR=2.5						
LIC	**Lamto**	**73.76**	**81**	*e*P	**P**	**09 18 18.7**	**+5.4**
	30nm,1.3s,mb5.0						
TIC	**Toumodi**	**73.84**	**81**	*e*P	**P**	**09 18 15.4**	**+1.7**
	5.1nm,0.2s,mb5.0						
DBIC	**Dimbokro**	**74.01**	**81**	P	**P**	**09 18 15.4**	**+0.7**
	2.2nm,0.6s,mb4.3,baz=302,slow=5.2,SNR=4.4						
DBIC				LR	LR	09 47 36.1	
	comp=Z,47nm,20.5s,MS3.8,baz=147,slow=33						
KIC	**Kosan Boka**	**74.07**	**81**	*e*P	**P**	**09 18 15.4**	**+0.4**
	27nm,1.3s,mb5.0						
YKA	**Yellowknife Ar**	**75.49**	**343**	LR	LR	09 55 41.7	
	comp=Z,3.5nm,19.3s,MS2.7,baz=330,slow=39						
TORD	**Torodi Ar. Bea**	**81.48**	**75**	P	**P**	**09 18 56.2**	**-0.1**
	1.5nm,0.6s,mb4.1,baz=264,slow=4.4,SNR=12						
TORD				LR	LR	09 57 20.4	
	comp=Z,49nm,18.8s,MS3.9,baz=125,slow=37						
ILAR	**Eielson Array**	**88.22**	**336**	P	**P**	**09 19 28.7**	**-0.3**
	0.8nm,0.8s,mb4.0,baz=164,slow=3.8,SNR=9.7						
ILAR				LR	LR	09 58 39.9	
	comp=Z,40nm,19.4s,MS3.8,baz=154,slow=35						
KEST	**Kesra**	**92.01**	**54**	LR	LR	09 56 37.6	
	comp=Z,23nm,20.0s,MS3.6,baz=219,slow=33						
NOA	**NORSAR Array B**	**96.11**	**29**	LR	LR	10 00 31.4	
	comp=Z,16nm,20.5s,MS3.5,baz=250,slow=34						
BOSA	**Boshof**	**97.58**	**120**	LR	LR	09 59 52.4	
	comp=Z,101nm,20.5s,MS4.3,baz=171,slow=33						
ZALV	**Zalesovo Beam**	**131.73**	**14**	PKP	PKPdf	09 25 50.4	-0.6
	0.7nm,0.6s,baz=316,slow=4.0,SNR=2.7						
KURK	**Kurchatov**	**132.78**	**20**	PKP	PKPdf	09 25 53.0	-0.1
	0.5nm,0.3s,baz=330,slow=3.2,SNR=2.2						
ASAR	**Alice Springs**	**136.17**	**224**	PKP	PKPdf	09 26 00.8	+0.5
	0.5nm,0.8s,baz=134,slow=1.9,SNR=4.0						
MKAR	**Makanchi Array**	**137.40**	**20**	PKP	PKPdf	09 26 01.5	-0.3
	0.3nm,0.6s,baz=48,slow=2.1,SNR=1.9						
WRA	**Warramunga Arr**	**138.22**	**228**	PKP	PKPdf	09 26 04.8	+0.6
	0.5nm,0.7s,baz=122,slow=1.9,SNR=5.0						
FITZ	**Fitzroy Crossi**	**145.57**	**222**	PKPbc	PKPbc	09 26 17.7	+0.2
	6.0nm,0.9s,baz=179,slow=5.9,SNR=10						

*DJA **25** 09:18:10, 1.°83N×127.°01E, h143km, MLv3.9/4*

*IDC **25** 09:18:11.2±1.1, 2.°03N×126.°33E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.8/20, mbtmp3.9/6, Error ellipse: s-maj=100.3km s-min=17.6km az=67.0*

*ISCJB **25** 09:18:14.1±0.8, 2.°10N±0.°07×127.°02E±0.°08, h33km, mb4.0/5, Error ellipse: s-maj=13.0km s-min=7.6km az=139.3*

ISC 25 09:18:15.9±0.8, 2.°10N±0.°07×126.°98E±0.°08, h35km, n10, σ1s35/12, mb4.0/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.38**	**164**	P	**Pn**	**09 18 36.1**	**-2.5**
SGSI	**Sangihe**	**2.14**	**317**	P	**Pn**	**09 18 49.9**	**+0.8**
SGSI				S	**Sn**	**09 19 15.3**	**+0.8**
MNI	**Manado**	**2.24**	**253**	P	**Pn**	**09 18 48.3**	**-2.2**
MNI				S	**Sn**	**09 19 17.5**	**+0.6**
LBMI	**Labuha**	**2.77**	**169**	P	**Pn**	**09 18 51.5**	**-6.3**
FITZ	**Fitzroy Crossi**	**20.12**	**184**	P	**P**	**09 22 47.7**	**+0.8**
	1.2nm,0.4s,baz=12,slow=9.9,SNR=11						
WRA	**Warramunga Arr**	**23.07**	**162**	P	**P**	**09 23 19.2**	**+0.7**
	4.5nm,0.7s,mb4.0,baz=336,slow=11,SNR=42						
WRA				PcP	PcP	09 27 07.9	+0.8
	0.2nm,0.4s,baz=344,slow=2.3,SNR=3.9						
ASAR	**Alice Springs**	**26.48**	**166**	P	**P**	**09 23 51.0**	**+1.0**
	0.7nm,0.3s,mb3.6,baz=345,slow=8.1,SNR=15						
ASAR				PcP	PcP	09 27 15.8	+1.2
	0.3nm,0.4s,baz=353,slow=2.2,SNR=5.8						
STKA	**Stephens Creek**	**36.53**	**159**	P	**P**	**09 25 20.2**	**+2.0**
	1.1nm,0.4s,mb4.0,baz=327,slow=10,SNR=11						
MKAR	**Makanchi Array**	**59.03**	**326**	P	**P**	**09 28 11.0**	**-1.3**
	0.5nm,0.3s,mb4.0,baz=120,slow=8.5,SNR=7.2						
KURK	**Kurchatov**	**63.24**	**328**	P	**P**	**09 28 39.4**	**-1.3**
	0.6nm,0.3s,mb4.2,baz=128,slow=5.9,SNR=3.6						

*ISCJB **25** 09:19:02.0±0.5, 6.°93N±0.°05×73.°00W±0.°05, h167km±5km, mb3.7/7, Error ellipse: s-maj=10.5km s-min=5.5km az=137.6*

*IDC **25** 09:19:02.4±1.2, 6.°86N×72.°97W, h156km±14km, mb3.4/6, mb1 3.7/8, mb1mx3.4/22, mbtmp3.5/8, Error ellipse: s-maj=25.7km s-min=14.1km az=138.0*

*NEIC **25** 09:19:02.8±0.7, 6.°98N×73.°16W, h146km±13km, mb4.0/1, Error ellipse: s-maj=18.8km s-min=9.1km az=148.0*

*FUNV **25** 09:19:02.4, 6.°81N×73.°14W, h169km, MW3.7*

ISC 25 09:19:03.0±0.5, 6.°90N±0.°05×72.°96W±0.°05, h162km±5km, n35, σ1s05/44, mb3.7/7, 1C-10D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.15**	**34**	⇓*i*P	**Pn**	**09 19 31.4**	**+1.1**
CAPV				*e*S	**Sn**	**09 19 52.2**	**+1.0**
ROSC	**El Rosal**	**2.44**	**214**	P	**Pn**	**09 19 43.8**	**-0.3**
	129nm,0.3s,baz=282,slow=23,SNR=460						
ROSC				S	**Sn**	**09 20 14.9**	**-1.0**
	80nm,0.3s,baz=90,slow=22,SNR=7.0						
VIGV	**El Vigia**	**2.49**	**39**	⇓*i*P	**Pn**	**09 19 45.9**	**+1.2**
VIGV				*e*S	**Sn**	**09 20 18.5**	**+1.6**
SOCV	**Socops**	**2.50**	**57**	⇓*i*P	**Pn**	**09 19 46.1**	**+1.4**
SOCV				*e*S	**Sn**	**09 20 17.5**	**+0.5**
SDV	**Santo Domingo**	**3.04**	**49**	Pn	**Pn**	**09 19 52.4**	**+1.0**
ELOV	**Elorza**	**3.46**	**88**	⇓*i*P	**Pn**	**09 19 57.8**	**+1.1**
VIRV	**Villa del Rosa**	**3.62**	**9**	⇑*i*P	**Pn**	**09 19 58.0**	**-0.7**
VIRV				*e*S	**Sn**	**09 20 39.4**	**-2.7**
QARV	**Quebrada Arrib**	**4.07**	**36**	⇓*i*P	**Pn**	**09 20 05.7**	**+1.1**
QARV				*e*S	**Sn**	**09 20 51.9**	**-0.7**
SANV	**Sanarito**	**4.26**	**52**	*e*P	**Pn**	**09 20 07.6**	**+0.6**
SANV				*e*S	**Sn**	**09 20 56.2**	**-0.7**
CURV	**Curarigua**	**4.29**	**44**	⇓*e*P	**Pn**	**09 20 08.0**	**+0.7**
CURV				*e*S	**Sn**	**09 20 55.6**	**-1.9**
TEPV	**Terepaima**	**4.81**	**51**	⇓*i*P	**Pn**	**09 20 14.9**	**+0.7**
SIQV	**Siquisique**	**4.86**	**40**	⇓*i*P	**Pn**	**09 20 15.1**	**+0.3**
SIQV				*e*S	**Sn**	**09 21 08.6**	**-2.2**
BAUV	**El Baul**	**5.28**	**67**	⇓*i*P	**Pn**	**09 20 19.7**	**-0.7**
BAUV				*e*S	**Sn**	**09 21 18.4**	**-2.4**
MAPV	**Macapo**	**5.32**	**57**	⇓*i*P	**Pn**	**09 20 21.4**	**+0.4**
IMOV	**Isla Los Monje**	**5.79**	**20**	*e*P	**Pn**	**09 20 27.0**	**-0.1**
MONV	**Montecano**	**5.82**	**30**	*e*P	**Pn**	**09 20 27.4**	**-0.2**
TURV	**Turiamo**	**6.17**	**55**	*e*P	**Pn**	**09 20 32.1**	**0.0**
CAOV	**Caicara del Or**	**6.60**	**86**	*e*P	**Pn**	**09 20 36.9**	**-1.0**
BCIP	**Isla Barro Col**	**7.17**	**289**	*e*Pn	**Pn**	**09 20 41.9**	**-3.5**
BIRV	**Birongo**	**7.51**	**61**	*e*P	**Pn**	**09 20 48.7**	**-1.2**
CUPV	**Cœpira**	**7.76**	**66**	*e*P	**Pn**	**09 20 52.7**	**-0.5**
OTAV	**Otavalo**	**8.59**	**220**	*e*Pn	**Pn**	**09 21 03.3**	**-1.0**
	2.3nm,0.6s						
PCRV	**Puerto La Cruz**	**8.85**	**68**	P	**Pn**	**09 21 09.2**	**+1.4**
	1.4nm,0.3s,baz=250,slow=5.2,SNR=11						
PCRV				S	**Sn**	**09 22 46.3**	**0.0**
	0.4nm,0.3s,baz=151,slow=19,SNR=2.4						
PCRV	**Puerto La Cruz**	**8.85**	**68**	*e*P	**Pn**	**09 21 07.9**	**+0.2**
TXAR	**Lajitas Array**	**36.53**	**311**	P	**P**	**09 25 53.4**	**+0.3**
TXAR				PcP	PcP	09 28 14.7	+1.4
TXAR	**Lajitas Array**	**36.53**	**311**	P	**P**	**09 25 53.4**	**+0.3**
	0.2nm,0.4s,mb3.1,baz=129,slow=9.9,SNR=9.7						
TXAR				PcP	PcP	09 28 14.7	+1.4
	0.1nm,0.6s,baz=141,slow=4.5,SNR=3.9						
SCHQ	**Schefferville**	**48.05**	**5**	P	**P**	**09 27 26.7**	**+0.9**
SCHQ	**Schefferville**	**48.05**	**5**	P	**P**	**09 27 26.7**	**+0.9**
	2.6nm,0.7s,mb4.0,baz=191,slow=5.2,SNR=3.4						
PDAR	**Pinedale Array**	**48.10**	**324**	P	**P**	**09 27 27.1**	**+0.7**
	0.3nm,0.5s,mb3.2,baz=128,slow=8.3,SNR=4.7						
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**	**09 29 12.8**	**-1.1**
	1.2nm,0.5s,mb4.0,baz=132,slow=6.2,SNR=6.8						
SUMG	**Summit**	**68.88**	**11**	*i* P	**P**	**09 29 51.0**	**+1.3**
	6.0nm,0.7s,mb4.4						
ILAR	**Eielson Array**	**76.96**	**335**	P	**P**	**09 30 37.7**	**+0.3**
	0.2nm,0.7s,mb2.9,baz=100,slow=5.0,SNR=3.7						
ARCES	**ARCESS Array B**	**86.54**	**20**	P	**P**	**09 31 27.0**	**-0.4**
	2.3nm,0.9s,mb4.0,baz=335,slow=4.0,SNR=4.3						
ASAR	**Alice Springs**	**149.28**	**234**	PKPbc	PKPbc	09 38 33.1	-0.3
	0.3nm,0.5s,baz=112,slow=4.1,SNR=4.3						
WRA	**Warramunga Arr**	**150.51**	**241**	PKP	PKPdf	09 38 30.4	-0.5
	0.2nm,0.3s,baz=105,slow=2.9,SNR=26						
WRA				PKPbc	PKPbc	09 38 36.1	-0.4
	0.4nm,0.3s,baz=106,slow=2.9,SNR=17						

*IDC **25** 09:21:08.2±0.8, 5.°76N×72.°49W, h0km, mb3.5/7, mb1 4.0/10, mb1mx3.8/24, mbtmp3.8/10, MS3.3/1, Ms1 3.3/1, ms1mx2.6/22, Error ellipse: s-maj=18.9km s-min=16.2km az=143.0*

*FUNV **25** 09:21:08.2, 5.°42N×72.°85W, h9km, MW4.2*

*ISCJB **25** 09:21:12.9±0.7, 5.°72N±0.°04×72.°53W±0.°05, h47km±9km, mb3.5/8, Error ellipse: s-maj=9.0km s-min=6.2km az=34.7*

*NEIC **25** 09:21:14.1±0.7, 5.°76N×72.°50W, h44km±10km, Error ellipse: s-maj=10.1km s-min=7.3km az=127.0*

ISC 25 09:21:14.6±0.6, 5.°70N±0.°04×72.°53W±0.°05, h44km±8km, n42, σ1s03/48, mb3.5/8, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**1.98**	**245**	Pn	**Pn**	**09 21 46.2**	**+0.5**
	181nm,0.3s,baz=91,slow=13,SNR=20						
ROSC				Lg		09 22 13.3	
	171nm,0.3s,baz=106,slow=20,SNR=3.6						
CAPV	**Capacho**	**2.16**	**6**	*e*P	**Pn**	**09 21 48.5**	**+0.4**
CAPV				*e*S	**Sn**	**09 22 18.5**	**+4.8**
SOCV	**Socops**	**3.06**	**33**	*e*P	**Pn**	**09 22 00.7**	**+0.2**
SOCV				*e*S	**Sn**	**09 22 41.1**	**+5.3**
ELOV	**Elorza**	**3.29**	**67**	*e*P	**Pn**	**09 22 03.9**	**+0.3**
VIGV	**El Vigia**	**3.33**	**20**	*e*P	**Pn**	**09 22 05.2**	**+1.0**
VIGV				*e*S	**Sn**	**09 22 45.1**	**+2.7**
SDV	**Santo Domingo**	**3.68**	**31**	*e*Pn	**Pn**	**09 22 09.1**	**+0.1**
VIRV	**Villa del Rosa**	**4.77**	**1**	*e*P	**Pn**	**09 22 22.2**	**-1.8**
VIRV				*e*S	**Sn**	**09 23 18.2**	**+0.1**
SANV	**Sanarito**	**4.80**	**38**	*e*P	**Pn**	**09 22 25.1**	**+0.7**
SANV				*e*S	**Sn**	**09 23 21.9**	**+3.1**
QARV	**Quebrada Arrib**	**4.90**	**24**	*e*P	**Pn**	**09 22 25.9**	**+0.1**
QARV				*e*S	**Sn**	**09 23 22.7**	**+1.5**
CURV	**Curarigua**	**4.98**	**31**	*e*P	**Pn**	**09 22 26.9**	**-0.1**
CURV				*e*S	**Sn**	**09 23 24.9**	**+1.7**
TEPV	**Terepaima**	**5.37**	**38**	*e*P	**Pn**	**09 22 33.0**	**+0.7**
BAUV	**El Baul**	**5.49**	**54**	*e*P	**Pn**	**09 22 34.5**	**+0.5**
DABV	**Dabajuro**	**5.51**	**20**	*e*P	**Pn**	**09 22 33.9**	**-0.4**
SIQV	**Siquisique**	**5.61**	**29**	*e*P	**Pn**	**09 22 36.3**	**+0.8**
MAPV	**Macapo**	**5.75**	**44**	*e*P	**Pn**	**09 22 37.5**	**0.0**
CAOV	**Caicara del Or**	**6.37**	**75**	*e*P	**Pn**	**09 22 45.3**	**-0.7**
JACV	**Jacura**	**6.48**	**34**	*e*P	**Pn**	**09 22 47.6**	**+0.1**
TURV	**Turiamo**	**6.62**	**44**	*e*P	**Pn**	**09 22 48.6**	**-0.8**
MONV	**Montecano**	**6.71**	**22**	*e*P	**Pn**	**09 22 49.0**	**-1.6**
IMOV	**Isla Los Monje**	**6.81**	**14**	*e*P	**Pn**	**09 22 50.0**	**-2.0**
MERV	**Las Mercedes**	**7.11**	**60**	*e*P	**Pn**	**09 22 56.3**	**+0.1**
BIRV	**Birongo**	**7.80**	**52**	*e*P	**Pn**	**09 23 05.0**	**-0.6**
CUPV	**Cœpira**	**7.96**	**57**	*e*P	**Pn**	**09 23 07.0**	**-0.8**
BCIP	**Isla Barro Col**	**8.03**	**296**	Pn	**Pn**	**09 23 08.7**	**0.0**
OTAV	**Otavalo**	**8.03**	**228**	*e*Pn	**Pn**	**09 23 09.2**	**+0.4**
	21nm,1.1s						
PCRV	**Puerto La Cruz**	**8.99**	**60**	Pn	**Pn**	**09 23 21.5**	**-0.4**
	5.2nm,0.3s,baz=220,slow=6.8,SNR=12						
PCRV				Sn	**Sn**	**09 24 59.8**	**-2.2**
	2.0nm,0.3s,baz=307,slow=20,SNR=1.8						
PCRV				Lg		09 25 52.3	
	2.8nm,0.3s,baz=216,slow=6.7,SNR=3.1						
PCRV	**Puerto La Cruz**	**8.99**	**60**	*e*P	**Pn**	**09 23 21.5**	**-0.4**
SDDR	**Presa de Saban**	**13.26**	**5**	*e*Pn	**Pn**	**09 24 18.3**	**-2.0**
	19nm,0.8s						
SJG	**San Juan**	**13.82**	**26**	Pn	**Pn**	**09 24 25.0**	**-2.9**
SJG	**San Juan**	**13.82**	**26**	Pn	**Pn**	**09 24 25.0**	**-2.9**
	2.6nm,0.3s,baz=236,slow=11,SNR=5.8						
ATAH	**Atahualpa**	**14.03**	**205**	Pn	**Pn**	**09 24 31.6**	**+0.8**
	0.4nm,0.3s,baz=27,slow=11,SNR=3.6						
ATAH				LR	LR	09 30 48.6	
	comp=Z,122nm,20.6s,baz=23,slow=41						
LPAZ	**La Paz**	**22.27**	**169**	P	**P**	**09 26 09.0**	**+0.9**
	2.6nm,0.6s,mb3.8,baz=328,slow=11,SNR=7.8						
SIV	**San Ignacio**	**24.35**	**152**	P	**P**	**09 26 28.2**	**-0.4**
	1.6nm,0.5s,mb3.7,baz=317,slow=9.9,SNR=10.0						
CCM	**Cathedral Cave**	**36.43**	**335**	*e*P	**P**	**09 28 14.5**	**-0.6**
TXAR	**Lajitas Array**	**37.65**	**312**	P	**P**	**09 28 25.1**	**-0.5**
	0.2nm,0.7s,mb3.0,baz=125,slow=7.9,SNR=6.0						
TXAR				PcP	PcP	09 30 43.8	+1.2
	0.1nm,0.6s,baz=94,slow=3.8,SNR=2.4						
PDAR	**Pinedale Array**	**49.33**	**324**	P	**P**	**09 29 58.8**	**-0.7**
	0.2nm,0.6s,mb3.4,baz=142,slow=10,SNR=2.9						
NVAR	**Mina Array Bea**	**52.69**	**315**	P	**P**	**09 30 25.2**	**+0.4**
	0.2nm,0.3s,mb3.5,baz=123,slow=7.6,SNR=2.7						
DBIC	**Dimbokro**	**67.24**	**85**	P	**P**	**09 32 09.4**	**+4.3**
	2.3nm,0.6s,mb4.4,baz=231,slow=6.4,SNR=5.7						
TORD	**Torodi Ar. Bea**	**73.39**	**78**	P	**P**	**09 32 44.1**	**+1.4**
	0.4nm,0.7s,mb3.5,baz=279,slow=6.8,SNR=3.2						
ILAR	**Eielson Array**	**78.22**	**335**	P	**P**	**09 33 09.6**	**+0.2**
	0.2nm,0.7s,mb3.2,baz=123,slow=4.9,SNR=4.3						
ASAR	**Alice Springs**	**148.92**	**232**	PKPbc	PKPbc	09 40 56.6	-2.0
	0.3nm,0.4s,baz=121,slow=3.1,SNR=5.2						
WRA	**Warramunga Arr**	**150.29**	**239**	PKPbc	PKPbc	09 41 00.5	-1.5
	0.8nm,0.4s,baz=107,slow=3.0,SNR=24						

*ISCJB **25** 09:55:19.0±0.7, 36.°95N±0.°04×29.°22E±0.°05, h1km±9km, Error ellipse: s-maj=6.3km s-min=6.0km az=162.7*

*ISK **25** 09:55:19.3, 36.°96N×29.°25E, h12km, MD2.8*

*CSEM **25** 09:55:19.2±0.3, 36.°96N×29.°26E, h10km, MD2.8, Error ellipse: s-maj=6.5km s-min=5.7km az=23.0*

*DDA **25** 09:55:20.4, 37.°07N×29.°21E, h7km±7km, Md2.9*

ISC 25 09:55:19.6±0.7, 36.°96N±0.°04×29.°24E±0.°05, h9km±7km, n22, σ0s89/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.29**	**47**	*e*PG	**Pg**	**09 55 25.1**	**-0.2**
GLHS				*e*SG	**Sg**	**09 55 29.8**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.29**	**47**	*e*Pg	**Pg**	**09 55 25.1**	**-0.2**
GLHS				*e*Sg	**Sg**	**09 55 29.8**	**+0.6**
GOLH	**Golhisar**	**0.38**	**43**	*i* P	**Pg**	**09 55 25.8**	**-1.3**
GOLH				*i* S	**Sg**	**09 55 32.5**	**+0.4**
GOLH	**Golhisar**	**0.38**	**43**	*i* P	**Pg**	**09 55 25.8**	**-1.3**
GOLH				*i* S	**Sg**	**09 55 32.5**	**+0.4**
ELL	**Elmali**	**0.58**	**111**	*e*PG	**Pg**	**09 55 30.0**	**-0.8**
ELL				*e*SG	**Sg**	**09 55 40.0**	**+1.6**
ELL	**Elmali**	**0.58**	**111**	*e*Pg	**Pg**

comp=Z,885nm,18.5s
GUMO Guam 15.18 171 Pn **Pn** **10 28 46.1 +2.6**
comp=Z,1.0nm,0.3s,baz=16,slow=19,SNR=3.9
GUMO LR LR 10 34 13.0
comp=Z,360nm,19.4s,baz=73,slow=36
GUMO Guam 15.18 171 P **Pn** **10 28 46.1 +2.6**
GUMO pmax pmax
comp=Z,1.0nm,0.3s
GUMO MLR MLR
comp=Z,360nm,19.4s
ASAJ Asahikawa 15.43 1 Pn **Pn** **10 28 42.9 -3.8**
comp=Z,1.3nm,0.3s,baz=234,slow=13,SNR=9.6
ASAJ Asahikawa 15.43 1 P **Pn** **10 28 42.9 -3.8**
ASAJ pmax pmax
comp=Z,1.0nm,0.3s
YUK Yuzh-Kuril'sk 15.59 9 *e*P **Pn** **10 28 57.0 +8.2**
YUK MLR MLR
comp=N,750nm,15.5s
YUK MLR MLR
comp=E,130nm,15.5s
YUK MLR MLR
comp=Z,270nm,15.5s
INCN Inchon 15.85 308 *e*Pn **Pn** **10 28 51.4 -0.8**
comp=Z,61nm,0.9s
YSS Yuzh-Sakhalins 18.26 1 *e*Pn **Pn** **10 29 22.4 -0.1**
comp=Z,78nm,1.5s
YSS Yuzh-Sakhalins 18.26 1⇑ *e*P **Pn** **10 29 22.0 -0.5**
YSS *e*S **Sn** **10 32 43.0 -3.0**
YSS pmax pmax
comp=Z,30nm,1.0s
YSS MLR MLR
comp=N,500nm,16.0s
YSS MLR MLR
comp=Z,500nm,16.0s
YSS MLR MLR
comp=E,500nm,13.0s
SSE Sheshan 18.54 283 P **Pn** **10 29 25.8 -0.2**
SSE S **Sn** **10 32 47.0 -5.9**
SSE pmax pmax
comp=Z,20nm,0.7s
SSE pmax pmax
comp=Z,370nm,3.5s
SSE LR LR
comp=N,300nm,22.2s
SSE LR LR
comp=E,360nm,22.2s
SSE LR LR
comp=Z,570nm,19.7s
MDJ Mudanjiang 18.91 331 P **Pn** **10 29 29.0 -1.3**
MDJ pP pP 10 29 32.0 -2.2
MDJ sP sP 10 29 33.5 -2.9
MDJ S **Sn** **10 33 02.8 +1.3**
MDJ SS 10 33 23.8
MDJ pmax pmax
comp=Z,54nm,1.3s
MDJ pmax pmax
comp=Z,240nm,8.9s
MDJ LR LR
comp=N,270nm,22.0s
MDJ LR LR
comp=E,290nm,21.3s
MDJ LR LR
comp=Z,330nm,17.8s
MDJ Mudanjiang 18.91 331 *e*P **Pn** **10 29 28.9 -1.3**
comp=Z,47nm,0.9s
TATO Taipei 19.00 264 *e*P **Pn** **10 29 31.2 -0.4**
comp=Z,145nm,0.9s
SNY Shenyang 20.15 316 ⇑P **P** **10 29 42.3 -1.0**
SNY S **S** **10 33 31.0 +2.0**
SNY pmax pmax
comp=Z,10.0nm,0.5s
SNY LR LR
comp=N,450nm,15.6s,MS4.0
SNY LR LR
comp=E,280nm,14.7s,MS4.0
SNY LR LR
comp=Z,440nm,20.1s
CN2 Changchun 20.31 323 *e*P **P** **10 29 45.8 +0.8**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,800nm,16.0s,MS4.3
CN2 LR LR
comp=E,600nm,16.0s,MS4.3
CN2 LR LR
comp=Z,700nm,17.0s,MS4.1
NJ2 Nanjing 20.57 285 *e*P **P** **10 29 48.3 +0.3**
NJ2 pP 10 29 56.5
NJ2 sP sP 10 30 01.0 +6.3
NJ2 PP 10 30 07.8
NJ2 S **S** **10 33 31.5 -6.1**
NJ2 pmax pmax
comp=Z,90nm,1.0s
NJ2 pmax pmax
comp=Z,260nm,4.2s
NJ2 LR LR
comp=N,410nm,13.7s,MS4.2
NJ2 LR LR
comp=E,650nm,15.2s,MS4.2
NJ2 LR LR
comp=Z,1μm,18.3s,MS4.3
HABR Khabarovsk 20.58 346 *ce*P **P** **10 29 48.1 +0.3**
HABR *SP sP 10 30 00.3 +5.7
HABR *e* 10 30 05.3
HABR *e*S **S** **10 33 38.6 +1.3**
HABR *e**SS sS 10 33 51.4 +6.8
HABR *e*SS 10 33 59.4
HABR *e* 10 41 12.7
HABR pmax pmax
comp=Z,102nm,1.5s
HABR pmax pmax
comp=N,67nm,1.7s
HABR pmax pmax
comp=E,61nm,1.8s
HABR MLR MLR
comp=Z,239nm,16.0s,MS3.6
QZH Quanzhou 21.55 266 P **P** **10 29 58.3 -0.2**
QZH S **S** **10 33 52.0 -4.8**
QZH LR LR
comp=N,860nm,16.2s,MS4.5
QZH LR LR
comp=E,1μm,16.7s,MS4.5
QZH LR LR
comp=Z,870nm,19.0s,MS4.2
KLR Kul'dur 22.10 341 *e*P **P** **10 30 01.8 -2.4**
KLR *e*S **S** **10 34 09.5 +2.3**
KLR pmax pmax
comp=E,40nm,1.6s
KLR pmax pmax
comp=Z,68nm,1.6s,mb4.8
KLR MLR MLR
comp=E,500nm,15.0s
BJT Baijiatuau 24.34 305 *e*P **P** **10 30 25.1 -1.8**
comp=E,18nm,0.6s,mb4.7
BJT Baijiatuau 24.34 305 *e*P **P** **10 30 25.1 -1.7**
BJT pmax pmax
comp=Z,18nm,0.6s
BJI Beijing 24.34 305 P **P** **10 30 24.8 -2.1**
BJI pmax pmax
comp=Z,20nm,1.2s,mb4.4
BJI pmax pmax
comp=Z,200nm,6.1s
BJI LR LR
comp=N,620nm,16.4s,MS4.5
BJI LR LR
comp=E,1μm,16.4s,MS4.5
BJI LR LR
comp=Z,640nm,18.8s,MS4.1
WHN Wuhan 24.42 281 ⇑P **P** **10 30 28.0 +0.3**
WHN S **S** **10 34 52.0 +5.0**
WHN pmax pmax
comp=Z,190nm,1.4s,mb5.3
WHN LR LR
comp=N,450nm,15.8s,MS4.3
WHN LR LR
comp=E,580nm,14.9s,MS4.3
WHN LR LR
comp=Z,560nm,16.6s,MS4.1
TGY Tagaytay City 24.61 238 P **P** **10 30 30.4 +0.9**
comp=Z,129nm,0.5s,mb5.7,baz=82,slow=7.1,SNR=7.6
TGY Tagaytay City 24.61 238 P **P** **10 30 30.4 +0.9**
TGY pmax pmax
comp=Z,129nm,0.5s
HIA Hailar 26.89 326 *e*P **P** **10 30 50.3 +0.4**
comp=Z,74nm,1.0s,mb5.2
HIA Hailar 26.89 326 *e*P **P** **10 30 50.3 +0.4**
HIA pmax pmax
comp=Z,74nm,1.0s
PETK Petropavlovsk- 26.91 21 P **P** **10 30 51.1 +1.1**
comp=Z,2.7nm,0.7s,mb3.9,baz=190,slow=4.2,SNR=5.4
PETK LR LR 10 40 47.9
comp=Z,98nm,19.0s,MS3.4,baz=201,slow=35
PETK Petropavlovsk- 26.91 21 P **P** **10 30 51.1 +1.1**
PETK pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
PETK MLR MLR
comp=Z,98nm,19.0s,MS3.4
PET Petropavlovsk 27.14 22 *e*P **P** **10 30 52.6 +0.5**
HHC Hu-ho-hao-te 27.94 304 *e*P **P** **10 30 58.5 -0.9**
HHC pP pP 10 31 03.0 -1.3
HHC sP sP 10 31 06.0 -0.4
HHC PP 10 31 47.5
HHC S **S** **10 35 39.0 -3.6**
HHC sS sS 10 35 47.0 -3.8
HHC SS 10 36 59.0
HHC PcS PcS 10 37 55.3 -1.2
HHC pmax pmax
comp=Z,28nm,0.7s,mb5.0
HHC pmax pmax
comp=Z,100nm,4.8s
HHC LR LR
comp=N,440nm,16.7s,MS4.5
HHC LR LR
comp=E,920nm,15.4s,MS4.5
HHC LR LR
comp=Z,1μm,15.1s,MS4.6
ENH Enshi 28.63 281 *e*P **P** **10 31 05.0 -0.6**
comp=Z,14nm,0.6s,mb4.9
XAN Xi'an 28.99 289 P **P** **10 31 07.5 -1.3**
XAN S **S** **10 35 54.5 -4.8**
XAN pmax pmax
comp=Z,2.0nm,0.4s,mb4.2
XAN pmax pmax
comp=Z,8.0nm,4.3s
XAN LR LR
comp=N,180nm,16.9s,MS4.0
XAN LR LR
comp=E,220nm,16.9s,MS4.0
XAN LR LR
comp=Z,200nm,16.5s,MS3.8
QIZ Qiongzhong 31.18 259 P **P** **10 31 28.3 0.0**
QIZ pP pP 10 31 31.0 -2.3
QIZ sP sP 10 31 32.3 -3.0
QIZ S **S** **10 36 32.0 -1.9**
QIZ pmax pmax
comp=Z,21nm,2.1s,mb4.6
QIZ LR LR
comp=N,210nm,14.6s,MS4.0
QIZ LR LR
comp=E,85nm,15.4s,MS4.0
QIZ LR LR
comp=Z,350nm,16.6s,MS4.1
GYA Guiyang 31.67 275⇑ *i*P **P** **10 31 32.5 -0.1**
GYA PP PP 10 32 39.0 -5.1
GYA PcP PcP 10 34 25.5 +1.1
GYA S **S** **10 36 41.3 -0.1**
GYA ScP ScP 10 38 10.0 +3.0
GYA SS SS 10 38 31.0 -26
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.0
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,1μm,15.9s,MS4.7
GYA LR LR
comp=E,540nm,16.5s,MS4.7
GYA LR LR
comp=Z,770nm,16.8s,MS4.5
LBMI Labuha 32.43 209 P **P** **10 31 39.7 +0.4**
comp=Z,76nm,0.9s,mb5.5
MYLDM Lahad Datu 32.53 229 P **P** **10 31 42.2 +2.0**
LZH Lanzhou 33.22 293 *e*P **P** **10 31 45.0 -1.0**
LZH pP pP 10 31 49.5 -1.5
LZH sP sP 10 31 51.5 -1.5
LZH pmax pmax
comp=Z,21nm,1.5s,mb4.8
LZH pmax pmax
comp=Z,86nm,5.4s
LZH LR LR
comp=N,710nm,16.6s,MS4.6
LZH LR LR
comp=E,870nm,17.7s,MS4.6
LZH LR LR
comp=Z,920nm,18.0s,MS4.5
ULN Ulaanbaatar 33.33 315 *e*P **P** **10 31 47.3 +0.4**
comp=Z,28nm,1.2s,mb5.1
ULN Ulaanbaatar 33.33 315 *e*P **P** **10 31 47.3 +0.5**
ULN pmax pmax
comp=Z,28nm,1.2s,mb5.1
ULN Ulaanbaatar 33.33 315 P **P** **10 31 48.0 +1.2**
comp=Z,22nm,1.2s,mb5.0
ULN Ulaanbaatar 33.33 315 P **P** **10 31 47.8 +1.0**
SNR=16
CD2 Chengdu 33.49 284 ⇓P **P** **10 31 47.8 -0.7**
CD2 pP pP 10 31 52.3 -1.1
CD2 sP sP 10 31 54.8 -0.7
CD2 PP PP 10 32 59.8 -4.4
CD2 PcP PcP 10 34 29.3 0.0
CD2 S **S** **10 37 07.5 -2.1**
CD2 sS sS 10 37 14.8 -3.0
CD2 PcS PcS 10 38 14.0 -1.1
CD2 SS SS 10 39 10.0 -24
CD2 ScS ScS 10 42 11.5 -2.8
CD2 pmax pmax
comp=Z,110nm,0.6s,mb6.0
CD2 pmax pmax
comp=Z,320nm,5.2s
CD2 LR LR
comp=N,1μm,14.4s,MS5.0
CD2 LR LR
comp=E,2μm,14.5s,MS5.0
CD2 LR LR
comp=Z,2μm,15.2s,MS4.8
SONM Songino Array 33.73 315 P **P** **10 31 50.6 +0.3**
comp=Z,5.8nm,0.5s,mb4.8,baz=120,slow=8.9,SNR=7.5
SONM PcP PcP 10 34 27.9 -1.8
comp=Z,1.8nm,0.6s,baz=117,slow=1.6,SNR=2.9
SONM LR LR 10 46 11.4
comp=Z,310nm,19.0s,MS4.0,baz=251,slow=37
SONM Songino Array 33.73 315 P **P** **10 31 50.6 +0.3**
SONM 10 34 27.9
SONM pmax pmax
comp=Z,6.0nm,0.5s
SONM MLR MLR
comp=Z,311nm,19.0s
MRSI Marisa 34.17 218 P **P** **10 31 55.4 +0.9**
comp=Z,848nmcomp=Z,83nm,1.0s,mb5.6
YAK Yakutsk 34.41 349 *e*P **P** **10 31 54.8 -1.3**
YAK pmax pmax
comp=Z,26nm,1.1s,mb5.1
YAK pmax pmax
comp=N,10.0nm,1.2s
SEY Seymchan 34.89 8⇓ *i*P **P** **10 32 00.6 +0.4**
KMI Kunming 35.42 274 P **P** **10 32 05.8 +0.5**
KMI pP pP 10 32 09.5 -0.8
KMI sP sP 10 32 11.0 -1.3
KMI PP PP 10 33 26.0 +0.3
KMI S **S** **10 37 40.5 +0.9**
KMI sS sS 10 37 45.5 -2.3
KMI SS SS 10 39 57.5 -16
KMI pmax pmax
comp=Z,20nm,1.4s,mb4.8
KMI pmax pmax
comp=Z,78nm,4.3s
KMI LR LR
comp=N,140nm,18.4s,MS4.3
KMI LR LR
comp=E,510nm,17.5s,MS4.3
KMI LR LR
comp=Z,470nm,16.5s,MS4.3
ZAK Zakamensk 36.57 317 *e*P **P** **10 32 14.9 +0.2**
ZAK *e* 10 34 38.8
ZAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
GTA Gaotai 36.57 298 *e*P **P** **10 32 13.3 -1.6**
GTA pP pP 10 32 17.8 -2.2
GTA sP sP 10 32 21.3 -0.7
GTA S **S** **10 37 55.3 -1.6**
GTA sS sS 10 38 03.3 -1.8
GTA SS SS 10 40 21.5 -15
GTA pmax pmax
comp=Z,7.0nm,1.5s,mb4.3
GTA pmax pmax
comp=Z,58nm,5.6s
GTA LR LR
comp=N,290nm,14.9s,MS4.3
GTA LR LR
comp=E,300nm,16.4s,MS4.3
GTA LR LR
comp=Z,390nm,15.2s,MS4.3
IRK Irkutsk 36.73 321 *e*P **P** **10 32 16.7 +0.6**
IRK *e* 10 32 34.8
IRK pmax pmax
comp=Z,55nm,1.7s,mb5.1
TLY Talaya 36.85 319 *e*P **P** **10 32 18.6 +1.4**
TLY *e* 10 34 42.7
TLY *e*S **S** **10 38 02.7 +1.8**
TLY *e*SS SS 10 40 19.0 -23
TLY *e*SSS 10 40 57.1
TLY pmax pmax
comp=Z,45nm,0.9s,mb5.3
TLY MLR MLR
comp=Z,586nm,17.0s,MS4.4
TLY Talaya 36.85 319 P **P** **10 32 19.1 +1.9**
SNR=19
MOY Mondy 38.38 318 *e*P **P** **10 32 31.3 +1.2**
MOY pmax pmax
comp=Z,33nm,1.6s,mb4.8
SBUM Sibu 38.79 233 P **P** **10 32 34.8 +0.8**
comp=Z,11nm,1.1s,mb4.5
SPSI Sidrap Palu 39.05 218 P **P** **10 32 36.0 -0.1**
comp=Z,33nm,1.2s,mb5.0
CHG Chiang Mai 40.77 266 PG **P** **10 32 48.5 -1.9**
comp=Z,35nm,0.9s,mb5.0
CHTO Chiang Mai 40.77 266 *e*P **P** **10 32 50.2 -0.1**
comp=Z,29nm,0.9s,mb4.9
CHTO Chiang Mai 40.77 266 *e*P **P** **10 32 50.3 -0.1**
CHTO pmax pmax
comp=Z,29nm,0.9s,mb4.9
CHTO Chiang Mai 40.77 266 P **P** **10 32 50.4 0.0**
comp=Z,39nm,0.9s,mb5.0
CHTO Chiang Mai 40.77 266 P **P** **10 32 50.4 0.0**
SNR=13
CMAR Chiang Mai Arr 40.90 265 P **P** **10 32 51.4 -0.1**
comp=Z,8.9nm,0.8s,mb4.4,baz=49,slow=9.0,SNR=66
CMAR PcP PcP 10 34 51.2 -0.8
comp=Z,3.4nm,1.0s,baz=67,slow=1.3,SNR=8.5
CMAR LR LR 10 49 45.4
comp=Z,285nm,19.6s,MS4.1,baz=244,slow=36
CMAR Chiang Mai Arr 40.90 265 P **P** **10 32 51.4 -0.1**
CMAR 10 34 51.2
CMAR pmax pmax
comp=Z,9.0nm,0.8s
CMAR MLR MLR
comp=Z,285nm,19.6s
NST Nakhon Sawan 41.00 261 P **P** **10 32 53.0 +0.7**
STKI Sintang 41.01 232 P **P** **10 32 53.0 +0.6**
comp=Z,65nm,0.8s,mb5.3
BDT Bhumibol Dam 41.33 264 P **P** **10 32 55.0 0.0**
comp=Z,16nm,1.0s,mb4.6
BILL Bilibino 41.90 13⇓ *e*P **P** **10 32 59.0 0.0**
BILL pmax pmax
comp=Z,6.0nm,0.7s,mb4.3
COEN Coen 42.37 179 *e*P **P** **10 33 03.1 -0.3**
SHL Shillong 44.79 278 *e*PKP **P** **10 33 23.0 0.0**
SHL *ex* x 10 35 05.5
WMQ Urumqi 45.82 305 P **P** **10 33 31.8 +0.9**
WMQ pP pP 10 33 36.3 +0.3
WMQ sP sP 10 33 38.8 +0.8
WMQ PcP PcP 10 35 09.3 +1.1
WMQ PP PP 10 35 19.8 +1.6
WMQ *e*S **S** **10 40 15.0 +0.9**
WMQ ScS ScS 10 43 24.8 -1.5
WMQ SS SS 10 43 31.0 -7.5
WMQ pmax pmax
comp=Z,33nm,1.2s,mb5.1
WMQ pmax pmax
comp=Z,130nm,4.2s
WMQ LR LR
comp=N,120nm,21.0s,MS4.0
WMQ LR LR
comp=E,120nm,18.0s,MS4.0
WMQ LR LR
comp=Z,180nm,18.0s,MS4.1
KULM Kulim 45.83 248 P **P** **10 33 32.0 +0.6**
comp=Z,24nm,1.4s,mb4.9
IPM Ipoh 46.00 246 P **P** **10 33 32.8 +0.1**
comp=Z,21nm,1.2s,mb4.9
PPBI Pangkal Pinang 46.34 235 P **P** **10 33 36.1 +0.8**
comp=Z,40nm,0.9s,mb5.3
ZAA0 Zalesovo Array 48.43 318 *e*P **P** **10 33 51.2 0.0**
ZALV Zalesovo Beam 48.43 318 P **P** **10 33 51.2 +0.1**
ZALV PcP PcP 10 35 17.2 -0.1
ZALV LR LR 10 54 54.1
ZALV Zalesovo Beam 48.43 318 P **P** **10 33 51.2 +0.1**
comp=Z,29nm,0.8s,mb5.4,baz=99,slow=7.7,SNR=79
ZALV PcP PcP 10 35 17.2 -0.1
comp=Z,6.4nm,0.6s,baz=109,slow=3.5,SNR=5.7
ZALV LR LR 10 54 54.1
comp=Z,223nm,18.9s,MS4.2,baz=134,slow=37
ZALV Zalesovo Beam 48.43 318 P **P** **10 33 51.2 +0.1**
ZALV 10 35 17.2
ZALV pmax pmax
comp=Z,29nm,0.8s,mb5.4
ZALV MLR MLR
comp=Z,223nm,18.9s,MS4.2
LEM Lembang 48.66 229 P **P** **10 33 53.4 +0.1**
comp=Z,142nm,0.9s,mb6.0
WRA Warramunga Arr 48.94 190 P **P** **10 33 54.2 -1.1**
WRA ScP ScP 10 39 17.0 +3.2
WRA S **S** **10 40 54.0 -4.7**
WRA LR LR 10 54 55.1
WRA Warramunga Arr 48.94 190 P **P** **10 33 54.2 -1.1**
comp=Z,31nm,0.8s,mb5.4,baz=12,slow=8.6,SNR=235
WRA ScP ScP 10 39 17.0 +3.2
comp=Z,0.8nm,0.8s,baz=5.0,slow=4.4,SNR=5.5
WRA S **S** **10 40 54.0 -4.7**
comp=Z,1.9nm,1.0s,baz=7.7,slow=13,SNR=5.1
WRA LR LR 10 54 55.2
comp=Z,146nm,19.2s,MS4.0,baz=270,slow=37
WRA Warramunga Arr 48.94 190 P **P** **10 33 54.2 -1.1**
WRA S **S** **10 40 54.0 -4.8**
WRA pmax pmax
comp=Z,31nm,0.8s
WRA smax
comp=N,2.0nm,1.0s
WRA MLR MLR
comp=Z,146nm,19.2s
QIS Mount Isa 49.00 183 *e*P **P** **10 33 55.8 0.0**
SDSI Sungai Dareh 49.01 240 P **P** **10 33 56.8 +0.7**
comp=Z,5μmcomp=Z,29nm,0.9s,mb5.3
KLSI 49.10 234 P **P** **10 33 56.4 -0.4**
comp=Z,1μmcomp=Z,127nm,1.0s,mb5.9
JIRN Jiri 49.15 283 *e*P **P** **10 33 57.7 +0.6**
comp=Z,126nm,0.9s,mb6.0
FITZ Fitzroy Crossi 49.23 201 *e*P **P** **10 33 56.5 -1.1**
comp=Z,13nm,0.9s,mb5.0
FITZ Fitzroy Crossi 49.23 201 P **P** **10 33 57.3 -0.3**
comp=Z,23nm,1.3s,mb5.1
MDSI Maura Dua 49.35 234 P **P** **10 33 58.4 -0.3**
comp=Z,1μmcomp=Z,156nm,1.0s,mb6.0
GUN Gumba 49.35 283 *e*P **P** **10 33 59.1 +0.5**
comp=Z,127nm,0.9s,mb6.0
MNSI Mandailing Nat 49.36 244 P **P** **10 33 59.0 +0.2**
comp=Z,4μmcomp=Z,38nm,0.8s,mb5.5
NVS Novosibirsk 49.47 319 *e*P **P** **10 33 58.4 -0.6**
NVS pmax pmax
comp=Z,57nm,1.5s,mb5.4
NVS pmax pmax
comp=N,9.0nm,1.0s
NVS pmax pmax
comp=E,36nm,1.5s
PPI Padang Panjang 49.50 242 P **P** **10 34 00.7 +0.8**
comp=E,25nm,1.0s,mb5.2
MK31 Makanchi Array 49.63 309 P **P** **10 34 00.0 -0.4**
MK31 pmax pmax
comp=Z,30nm,0.9s,mb5.3
MKAR Makanchi Array 49.63 309 P **P** **10 34 00.3 -0.1**
MKAR PcP PcP 10 35 21.7 -0.1
MKAR ScP ScP 10 39 19.1 +2.4
MKAR LR LR 10 55 59.7
MKAR Makanchi Array 49.63 309 P **P** **10 34 00.3 -0.1**
comp=Z,18nm,0.8s,mb5.2,baz=92,slow=9.4,SNR=154
MKAR PcP PcP 10 35 21.7 -0.1
comp=Z,6.4nm,1.0s,baz=76,slow=6.1,SNR=4.8

MKAR ScP ScP 10 39 19.1 +2.4
comp=Z,0.7nm,0.7s,baz=78,slow=5.8,SNR=4.2
MKAR LR LR 10 55 59.7
comp=Z,367nm,19.1s,MS4.4,baz=90,slow=37
PDSI Padang 49.74 241 P **P 10 34 02.0 +0.3**
comp=Z,40nm,0.9s,mb5.4
PKI Pulchoki 49.84 283 *e*P **P 10 34 02.0 -0.4**
comp=Z,78nm,1.1s,mb5.7
KKN Kakani 49.90 283 *e*P **P 10 34 02.7 -0.1**
comp=Z,95nm,1.0s,mb5.8
KSI Kapahiang 49.93 237 P **P 10 34 02.9 -0.2**
comp=Z,89nm,0.8s,mb5.8
DMN Daman 50.09 283 *e*P **P 10 34 03.9 -0.3**
comp=Z,54nm,0.9s,mb5.6
GKN Gorkha 50.39 284 *e*P **P 10 34 06.4 -0.1**
comp=Z,114nm,1.1s,mb5.8
DANN Dangsing 51.05 285 *e*P **P 10 34 12.0 +0.6**
comp=Z,164nm,0.9s,mb6.0
KOLN Koldanda 51.34 284 *e*P **P 10 34 13.8 +0.2**
comp=Z,81nm,0.8s,mb5.7
KURK Kurchatov 52.03 314 P **P 10 34 18.9 +0.5**
comp=Z,33nm,0.8s,mb5.3,baz=89,slow=7.2,SNR=75
KURK Kurchatov 52.03 314*c i*P **P 10 34 18.2 -0.2**
KURK pmax pmax
comp=Z,100nm,1.2s,mb5.6
KURK Kurchatov 52.03 314 P **P 10 34 18.8 +0.4**
SNR=31
ASAR Alice Springs 52.66 190 P **P 10 34 21.9 -1.5**
comp=Z,0.9nm,0.3s,mb4.2,baz=9.9,slow=5.2,SNR=30
ASAR Alice Springs 52.66 190 P **P 10 34 21.9 -1.4**
ASAR pmax pmax
comp=Z,1.0nm,0.3s
KDAK Kodiak Island 53.01 37 P **P 10 34 24.5 -1.1**
comp=Z,7.6nm,0.6s,mb4.8,baz=323,slow=5.1,SNR=11
KDAK LR LR 10 57 05.3
comp=Z,170nm,18.8s,MS4.1,baz=166,slow=36
KDAK Kodiak Island 53.01 37 P **P 10 34 24.5 -1.1**
KDAK pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
KDAK MLR MLR
comp=Z,171nm,18.8s,MS4.1
JOSI Joshimath 54.01 288 *e*PKP **P 10 34 33.0 -0.4**
ULHL Ulahol 54.30 303 P **P 10 34 35.7 +0.4**
SNR=9.2
TKM2 Tokmak 2 54.67 304 P **P 10 34 38.6 +0.6**
SNR=8.5
KLP Kalpa 54.85 290 *e*PKP **P 10 34 38.9 -0.6**
VIS Vishakhapatnam 54.90 272 *e*PKP **P 10 34 39.8 -0.2**
KSH Kashi 54.94 300 ⇓P **P 10 34 43.8 +3.8**
KSH *e*pP pP 10 34 48.8 +3.6
KSH *e*sP sP 10 34 50.3 +3.1
KSH *e*PcP PcP 10 35 43.3 +1.5
KSH *e*PP PP 10 36 48.5 +5.6
KSH *e*ScP ScP 10 39 40.0 +0.2
KSH *e*PcS PcS 10 39 42.5 +0.9
KSH *e*S **S 10 42 25.3 +4.2**
KSH *e*sS sS 10 42 33.3 +3.7
KSH *e*ScS ScS 10 44 28.3 -0.4
KSH *e*SS SS 10 46 10.3 +5.9
KSH pmax pmax
comp=Z,19nm,0.6s,mb5.3
KSH pmax pmax
comp=Z,43nm,3.9s
KSH LR LR
comp=N,410nm,12.4s,MS4.8
KSH LR LR
comp=E,270nm,11.6s,MS4.8
KSH LR LR
comp=Z,310nm,16.2s,MS4.5
PMR Palmer 55.03 33 *e*P **P 10 34 39.2 -1.1**
comp=Z,14nm,1.0s,mb5.0
PMR Palmer 55.03 33 *e*P **P 10 34 39.2 -1.1**
PMR pmax pmax
comp=Z,15nm,1.0s,mb5.0
KZA Kyzart 55.05 303 P **P 10 34 42.4 +1.6**
SNR=13
KBK Karagaybulak 55.19 304 P **P 10 34 42.4 +0.7**
SNR=18
USP Ospenovka 55.42 305 P **P 10 34 43.9 +0.5**
SNR=6.9
AAK Ala-Archa 55.52 304 P **P 10 34 44.2 0.0**
comp=Z,10.0nm,0.7s,mb5.0,baz=121,slow=5.3,SNR=23
AAK Ala-Archa 55.52 304 P **P 10 34 44.2 +0.1**
AAK pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
AAK Ala-Archa 55.52 304 P **P 10 34 44.7 +0.6**
AAK Ala-Archa 55.52 304 P **P 10 34 44.7 +0.6**
SNR=6.5
DZM Mont Dzumac 55.52 153 *e*LR LR 10 50 41.3
comp=Z,174nm,22.1s
EKS2 Erkin-Say 56.04 304 P **P 10 34 48.0 +0.2**
SNR=8.9
AML Almayashu 56.19 303 P **P 10 34 50.3 +1.4**
SNR=9.3
ILAR Eielson Array 56.26 29 P **P 10 34 47.8 -1.3**
comp=Z,8.2nm,1.1s,mb4.7,baz=260,slow=6.0,SNR=22
ILAR Eielson Array 56.26 29 P **P 10 34 47.8 -1.3**
ILAR pmax pmax
comp=Z,8.0nm,1.1s
AGRA Agra 56.30 285 *e*PKP **P 10 34 48.1 -1.9**
NDI New Delhi 56.49 287 *e*PKP **P 10 34 51.3 0.0**
AYAN Aya Nagar 56.62 287 *e*PKP **P 10 34 51.0 -1.3**
SONA Sohna 56.73 287 *e*PKP **P 10 34 51.9 -1.1**
BVA0 Borovoye Array 57.02 317 P **P 10 34 54.2 -0.5**
BVA0 pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
BVAR Borovoye Array 57.02 317 P **P 10 34 55.2 +0.5**
comp=Z,22nm,0.6s,mb5.3,baz=94,slow=8.1,SNR=66
BVAR Borovoye Array 57.02 317 P **P 10 34 55.2 +0.5**
BVAR pmax pmax
comp=Z,22nm,0.6s
BRVK Borovoye 57.08 317*c i*P **P 10 34 55.4 +0.3**
BRVK pmax pmax
comp=Z,33nm,0.8s,mb5.4
BRVK Borovoye 57.08 317 P **P 10 34 55.9 +0.9**
SNR=19
KUDL Kundal 57.26 287 *ex* **P 10 34 52.0 -4.7**
NGP Nagpur 57.36 278 *e*PKP **P 10 34 56.8 -0.8**
NGP AMb AMB 10 34 57.6
comp=Z,28nm,1.6s,mb5.1
KHET Khetri 57.85 287 *e*PKP **P 10 35 00.3 -0.6**
BHPL Bhopal 58.04 281 *e*PKP **P 10 35 01.6 -0.7**
KK31 Karatay Array 58.32 305 P **P 10 35 03.7 -0.3**
KK31 pmax pmax
comp=Z,18nm,0.5s,mb5.4
EGAK Eagle 58.72 29 *e*P **P 10 35 06.2 -0.1**
comp=Z,8.2nm,1.4s,mb4.6
AKL Akola 59.30 278 *e*PKP **P 10 35 11.3 +0.2**
AKL AMb AMB 10 35 11.8
comp=Z,30nm,1.7s,mb5.0
DAWY Dawson 59.51 30 *e*P **P 10 35 12.3 +0.4**
CMSA Cobar Meteorol 59.95 177 *e*P **P 10 35 13.1 -2.1**
STKA Stephens Creek 60.21 181 *e*P **P 10 35 16.3 -0.7**
comp=Z,20nm,2.5s,mb4.7
STKA Stephens Creek 60.21 181 P **P 10 35 15.9 -1.1**
comp=Z,4.6nm,0.6s,mb4.7,baz=16,slow=9.3,SNR=8.7
STKA LR LR 11 01 29.7
comp=Z,138nm,19.6s,MS4.1,baz=285,slow=36
LATR Latur 60.56 276 *e*PKP **P 10 35 19.7 -0.1**
FORT Forrest 60.67 194 *e*P **P 10 35 17.8 -2.3**
comp=Z,12nm,0.6s,mb5.2
HYT Haines Junctio 60.67 34 *e*P **P 10 35 21.2 +1.3**
BBOO Buckleboo 61.43 186 *e*P **P 10 35 24.0 -1.3**
comp=Z,6.3nm,0.9s,mb4.8
KBL Kabul 61.49 296 *e*P **P 10 35 25.6 -0.3**
comp=Z,16nm,0.9s,mb5.1
KBL Kabul 61.49 296 *e*P **P 10 35 25.6 -0.3**
KBL pmax pmax
comp=Z,16nm,0.9s,mb5.2
INK Inuvik 61.54 25 *e*P **P 10 35 25.7 0.0**
comp=Z,18nm,1.3s,mb5.0
INK Inuvik 61.54 25 *e*P **P 10 35 25.7 0.0**
INK pmax pmax
comp=Z,18nm,1.3s
SVE Sverdlovsk 62.10 322 ⇓*e*P **P 10 35 29.4 -0.2**
SVE pmax pmax
comp=Z,47nm,1.0s,mb5.6
POO Poona 62.88 277 *e*PKP **P 10 35 35.1 -0.4**
KAD Karad 63.07 276 *e*PKP **P 10 35 35.8 -0.9**
ARU Arti 63.30 322*d i*P **P 10 35 37.9 +0.3**
ARU 10 36 12.7
ARU *e* 10 37 51.5
ARU S **S 10 44 10.0 +1.1**
ARU SS SS 10 48 09.9 -5.0
ARU pmax pmax
comp=Z,52nm,1.0s,mb5.6

AB31 Akbulak array 64.14 314 *i*P **P 10 35 43.3 0.0**
AB31 pmax pmax
comp=Z,34nm,0.6s,mb5.5
DLBC Dease Lake 64.83 35 LR LR 11 03 36.6
comp=Z,103nm,18.0s,MS4.1,baz=287,slow=36
AKTK Aktyubinsk 65.04 315 P **P 10 35 49.3 +0.1**
AKTO Aktyubinsk 65.04 315 P **P 10 35 49.3 +0.1**
comp=Z,35nm,0.7s,mb5.5,baz=88,slow=7.8,SNR=84
AKTO Aktyubinsk 65.04 315 P **P 10 35 48.5 -0.7**
AKTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
TOO Toolangi 65.95 177 *e*P **P 10 35 54.9 -0.1**
BBB Bella Bella 67.62 42 LR LR 11 03 47.7
comp=Z,43nm,18.1s,MS3.7,baz=74,slow=34
IMYA Miami 67.86 300 *e*P **P 10 36 08.2 +0.7**
IMOG Moghan 68.52 300 *e*P **P 10 36 12.7 +1.1**
IAKL Akhelmad 68.79 301 *e*P **P 10 36 15.0 +1.7**
KBS Kingsbay 69.03 351 ⇑*i*P **P 10 36 15.6 +1.5**
KBS pmax pmax
comp=Z,29nm,2.5s,mb4.8
ISHV Shirvan 69.25 302 *e*P **P 10 36 17.4 +1.2**
IDAH Dahanechah 69.31 297 *e*P **P 10 36 17.7 +1.1**
APA Apatity 70.67 337 ⇑*i*P **P 10 36 22.0 -2.3**
APA *i* 10 36 31.0
APA pmax pmax
comp=Z,13nm,1.0s,mb4.8
APA MLR MLR
comp=Z,200nm,15.0s,MS4.5
YKA Yellowknife Ar 70.69 29 P **P 10 36 23.9 -0.6**
comp=Z,1.5nm,0.6s,mb4.1,baz=292,slow=6.1,SNR=3.2
YKA LR LR 11 10 10.4
comp=Z,5.3nm,19.0s,baz=85,slow=38
YKA Yellowknife Ar 70.69 29 P **P 10 36 23.9 -0.6**
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA MLR MLR
comp=Z,5.0nm,19.0s
KLMR Klimovskoe 71.32 330 P **P 10 36 26.8 -1.6**
KLMR pmax pmax
comp=Z,28nm,1.9s,mb4.9
KLMR MLR MLR
comp=Z,302nm,19.0s,MS4.6
KEV Kevo 71.57 341 *e*P **P 10 36 27.4 -2.3**
KEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
KEV Kevo 71.57 341 *ep* **P 10 36 27.4 -2.3**
comp=Z,4.0nm,0.6s,mb4.5
ARCES ARCESS Array B 72.13 341 P **P 10 36 33.1 0.0**
comp=Z,7.2nm,0.7s,mb4.7,baz=64,slow=8.2,SNR=20
ARCES ARCESS Array B 72.13 341 P **P 10 36 33.1 0.0**
ARCES pmax pmax
comp=Z,7.0nm,0.7s
IGLO Ghaloghah 72.51 302 *e*P **P 10 36 36.5 +0.5**
IANJ Anjilo 72.86 301 *e*P **P 10 36 38.7 +0.6**
IBAF Bafgh 73.12 297 *e*P **P 10 36 40.2 +0.5**
ISHM Shahmirzad 73.19 302 *e*P **P 10 36 41.5 +1.5**
IFIR Firoozkooh 73.65 302 *e*P **P 10 36 44.4 +1.6**
JOF Joensuu 73.76 334 *e*P **P 10 36 41.1 -1.8**
JOF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
JOF Joensuu 73.76 334 *ep* **P 10 36 41.1 -1.8**
comp=Z,7.4nm,0.8s,mb4.7
H04A Detroit Lake 74.03 48 ⇑P **P 10 36 44.7 -0.1**
baz=74
IDMV Damavand 74.22 302 *e*P **P 10 36 47.3 +1.2**
B08A Colville Reser 74.27 43 ⇑P **P 10 36 45.7 -0.5**
baz=74
G06A Carlson Farm, 74.80 47 ⇓P **P 10 36 49.2 -0.1**
baz=75
YBH Yreka Blue Hor 74.92 51 LR LR 11 03 45.2
comp=Z,149nm,20.5s,MS4.3,baz=302,slow=31
IR3 Iran Long-Peri 75.01 302 *e*P **P 10 36 51.0 +0.3**
C09A Chrisman Ranch 75.15 43 ⇓P **P 10 36 50.9 -0.3**
baz=75
IMHD Mahdasht 75.19 303 *e*P **P 10 36 52.7 +1.0**
E08A Dider Farm, El 75.25 45 ⇑P **P 10 36 51.7 -0.1**
baz=75
OBN Obninsk 75.35 325 ⇓*i*P **P 10 36 52.4 +0.2**
OBN pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
OBN MLR MLR
comp=Z,400nm,18.0s,MS4.8
EDM Edmonton 75.46 37 *e*P **P 10 36 52.8 -0.1**
IKLH Kolahrood 75.49 300 *e*P **P 10 36 54.7 +1.2**
NEW Newport 75.64 43 ⇑P **P 10 36 53.7 -0.3**
baz=75
K05A Summer Lake 75.72 49 ⇓P **P 10 36 54.9 +0.4**
baz=76
E09A Wood Farm, Sta 75.81 45 ⇑P **P 10 36 55.2 +0.1**
baz=76
IPAR Pars 75.81 296 *e*P **P 10 36 56.4 +1.0**
G08A Pilot Rock 75.84 46 ⇑P **P 10 36 55.5 +0.3**
baz=76
ISRV Sarvestan 75.95 296 *e*P **P 10 36 56.4 +0.2**
I07A Izee 76.03 47 ⇑P **P 10 36 56.0 -0.4**
baz=76
KAF Kangasniemi 76.14 334 *e*P **P 10 36 55.7 -1.0**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
KAF Kangasniemi 76.14 334 *ep* **P 10 36 55.7 -1.0**
comp=Z,3.6nm,0.6s,mb4.5
A12A Yaak River Ran 76.20 42 ⇓P **P 10 36 57.4 +0.2**
baz=76
ISRB Sarab 76.46 306 *e*P **P 10 36 59.5 +0.6**
MOD Modoc 76.47 50 *e*P **P 10 36 59.2 +0.3**
F10A Beach Ranch, E 76.62 45 ⇑P **P 10 36 59.9 +0.3**
baz=76
FINES FINESS Array B 76.63 334 P **P 10 36 58.7 -0.7**
FINES FINESS Array B 76.63 334 P **P 10 36 58.7 -0.7**
comp=Z,3.6nm,0.4s,mb4.6,baz=72,slow=6.2,SNR=20
FINES FINESS Array B 76.63 334 P **P 10 36 58.7 -0.7**
FINES pmax pmax
comp=Z,4.0nm,0.4s
IHRS Heris 76.69 306 *e*P **P 10 37 01.2 +1.0**
ZEI Tsey 76.86 312 *e*P **P 10 37 00.2 -0.9**
ZEI pmax pmax
comp=Z,13nm,0.5s,mb5.1
A13A Flathead Natio 76.92 41 ⇑P **P 10 37 01.2 -0.1**
baz=77
J08A Circle Bar Ran 77.02 48 ⇓P **P 10 37 02.0 0.0**
baz=77
KIV Kislovodsk 77.11 313*c i*P **P 10 37 03.3 +0.8**
KIV *i* pP 10 37 09.2 +1.4
KIV *i* 10 37 16.7
KIV pmax pmax
comp=Z,30nm,1.0s,mb5.2
KIV MLR MLR
comp=Z,100nm,17.0s,MS4.2
KIV Kislovodsk 77.11 313 P **P 10 37 03.8 +1.3**
SNR=8.0
B13A Whitefish 77.16 42 ⇑P **P 10 37 02.5 -0.1**
baz=77
D12A Red Ives Fores 77.26 43 ⇑P **P 10 37 03.0 -0.2**
baz=77
WVOR Wild Horse Val 77.34 49 *e*P **P 10 37 03.1 -0.7**
comp=Z,8.0nm,1.4s,mb4.5
WVOR Wild Horse Val 77.34 49 *e*P **P 10 37 03.1 -0.7**
WVOR pmax pmax
comp=Z,8.0nm,1.4s,mb4.5
C13A Hot Springs 77.43 42 ⇑P **P 10 37 04.1 -0.1**
baz=77
E12A Beaver Dam Sad 77.43 44 ⇓P **P 10 37 04.0 -0.2**
baz=77
IMRD Marand 77.45 307 *e*P **P 10 37 05.6 +1.1**
A14A Double T Ranch 77.47 41 ⇑P **P 10 37 04.6 +0.2**
baz=77
GNI Garni 77.47 309 *e*P **P 10 37 05.8 +1.2**
comp=Z,24nm,0.9s,mb5.1
GNI Garni 77.47 309*c i*P **P 10 37 05.9 +1.3**
GNI pmax pmax
comp=Z,43nm,1.7s
GNI Garni 77.47 309 P **P 10 37 07.1 +2.5**
SNR=5.5
JTMT Jette 77.57 42 *e*P **P 10 37 05.3 +0.4**
ISHB Shabestar 77.71 307 *e*P **P 10 37 07.3 +1.4**
IAZR Azarshahr 77.72 306 *e*P **P 10 37 07.2 +1.2**
D13A Huson 77.78 43 ⇑P **P 10 37 05.7 -0.5**
baz=78
SWMT Swartz Lake 77.85 42 *e*P **P 10 37 07.0 +0.4**
B14A Marquette Ranc 77.86 41 ⇓P **P 10 37 06.6 0.0**
baz=78
A15A Johnson Ranch, 77.87 41 ⇑P **P 10 37 06.5 -0.1**
baz=78
C14A Swan Lake 77.87 42 ⇑P **P 10 37 07.0 +0.4**
baz=78
F12A Elk City 77.94 44 ⇑P **P 10 37 07.3 +0.2**
baz=78
WCN Washoe City 78.01 52 ⇓P **P 10 37 08.0 +0.4**
baz=78
CMB Columbia Colle 78.15 53 *e*P **P 10 37 08.1 -0.3**
comp=Z,2.5nm,0.6s,mb4.3
CMB Columbia Colle 78.15 53 *e*P **P 10 37 08.1 -0.3**
CMB pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
MSO Missoula 78.22 43 ⇓P **P 10 37 08.5 -0.1**
baz=78
E13A Victor 78.26 43 ⇑P **P 10 37 08.1 -0.8**
baz=78
B15A Bradely Ranch, 78.30 41 ⇑P **P 10 37 08.8 -0.2**
baz=78
F13A Darby 78.49 44 ⇓P **P 10 37 09.1 -1.0**
baz=78
A16A West Butte Ran 78.53 40 ⇓P **P 10 37 10.0 -0.2**
baz=78
C15A Salmond Ranch, 78.54 42 ⇑P **P 10 37 10.3 0.0**
baz=78
MFID Camas Ranch 78.70 47 ⇑P **P 10 37 11.3 0.0**
baz=78
B16A M & M Farms, S 78.74 41 ⇑P **P 10 37 11.2 -0.2**
baz=78
H12A Diamond D Ranc 78.77 45 ⇓P **P 10 37 11.4 -0.3**
baz=79
G13A Cobalt 78.89 45 ⇓P **P 10 37 12.1 -0.3**
baz=79
D15A Lincoln 78.96 42 ⇓P **P 10 37 12.0 -0.6**
baz=79
I12A Atlanta 78.96 46 ⇑P **P 10 37 12.8 +0.1**
baz=79
C16A Fuhringer Ranc 79.03 41 ⇓P **P 10 37 12.7 -0.4**
baz=79
SUMG Summit 79.03 0 *i*P **P 10 37 13.1 +0.5**
comp=Z,11nm,0.7s,mb4.9
A17A Triple J Farms 79.04 40 ⇓P **P 10 37 12.7 -0.4**
baz=79
F14A Wisdom 79.06 44 ⇑P **P 10 37 12.8 -0.5**
baz=79
H13A Challis 79.14 45 ⇑P **P 10 37 13.4 -0.3**
baz=79
SOC Sochi 79.18 314 *e*P **P 10 37 13.7 -0.3**
SOC *e**PP pP 10 37 23.0 +3.7
SOC *e* 10 40 12.1
SOC *e*S S 10 47 22.1 +9.0
SOC pmax pmax
comp=Z,47nm,1.0s,mb5.4
SOC MLR MLR
comp=Z,78nm,8.0s
E15A Deer Lodge 79.19 43 ⇓P **P 10 37 13.6 -0.4**
baz=79
B17A L&G Farms, Che 79.32 41 ⇓P **P 10 37 14.4 -0.2**
baz=79
NVAR Mina Array Bea 79.42 52 P **P 10 37 15.2 -0.2**
comp=Z,1.9nm,0.6s,mb4.2,baz=292,slow=5.9,SNR=22
HLID Hailey 79.53 46 ⇑P **P 10 37 15.7 -0.2**
baz=79
HLID Hailey 79.53 46 *e*P **P 10 37 15.9 +0.1**
comp=Z,3.3nm,1.1s,mb4.2
HRY Holter Researc 79.53 42 *e*P **P 10 37 16.0 +0.2**
D16A Dana Ranch, Ca 79.53 42 ⇓P **P 10 37 15.3 -0.5**
baz=79
I13A Wildhorse Cree 79.54 46 ⇓P **P 10 37 15.9 0.0**
baz=79
F15A Butte 79.58 43 ⇑P **P 10 37 15.9 -0.1**
baz=79
LRM Limekiln Ridge 79.61 43 *e*P **P 10 37 16.6 +0.3**
H14A Leadore 79.66 45 ⇑P **P 10 37 16.1 -0.4**
baz=80
E16A East Helena 79.71 42 ⇓P **P 10 37 16.5 -0.3**
baz=80
J13A Cove Ranch, Pi 79.76 46 ⇑P **P 10 37 17.1 0.0**
baz=80
B18A Beardsley Farm 79.85 40 ⇑P **P 10 37 17.2 -0.3**
baz=80
G15A Dillon 79.92 44 ⇑P **P 10 37 18.3 +0.3**
baz=80
I14A Mackay 79.95 45 ⇓P **P 10 37 19.0 +0.8**
baz=80
D17A Six Diamond Ra 79.97 42 ⇓P **P 10 37 18.1 -0.1**
baz=80
ANN Anapa 80.00 316 *e*P **P 10 37 16.3 -2.1**
ANN *e*S S 10 47 18.5 -3.3
ANN pmax pmax
comp=Z,38nm,1.2s,mb5.2
ANN MLR MLR
comp=E,172nm,21.0s
ANN MLR MLR
comp=Z,290nm,21.0s,MS4.6
EGMT Eagleton 80.06 40 ⇓P **P 10 37 18.9 +0.2**
baz=80
VES Vestal, Richgr 80.08 55 ⇑P **P 10 37 18.6 -0.5**
baz=80
H15A Lima 80.11 44 ⇓P **P 10 37 19.2 +0.2**
baz=80
UMR Umm Al-Rimmam 80.11 298 *e*P **P 10 37 19.1 -0.2**
UMR AMb AMB 10 37 19.9
comp=Z,79nm,0.6s,mb5.8
F16A Kennard Place, 80.13 43 ⇓P **P 10 37 19.0 0.0**
baz=80
PPT Papeete 80.19 116 *e*LR LR 11 02 07.3
comp=Z,130nm,23.2s
BOZ Bozeman (W) 80.20 43 ⇑P **P 10 37 19.7 +0.2**
baz=80
BOZ Bozeman (W) 80.20 43 *e*P **P 10 37 19.4 -0.1**
comp=Z,1.6nm,0.7s,mb4.1
BOZ Bozeman (W) 80.20 43 *e*P **P 10 37 19.4 0.0**
BOZ pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
E17A Martinsdale 80.23 42 ⇓P **P 10 37 19.8 +0.2**
baz=80
MIB Mutribah 80.28 299 *e*P **P 10 37 20.1 -0.1**
MIB AMb AMB 10 37 21.7
comp=Z,148nm,0.9s,mb5.9
KBD Kabd 80.30 298 *e*P **P 10 37 20.2 -0.1**
KBD AMb AMB 10 37 21.6
comp=Z,52nm,0.7s,mb5.6
G16A Moss Hill, Enn 80.31 44 ⇓P **P 10 37 20.4 +0.3**
baz=80
QRN Al-Qurain 80.32 297 *e*P **P 10 37 20.1 -0.3**
QRN AMb AMB 10 37 21.4
comp=Z,74nm,1.0s,mb5.6
D18A Linhart Farms, 80.47 41 ⇑P **P 10 37 20.6 -0.3**
baz=80
SCO Scoresbysund 80.50 355 *i*P **P 10 37 13.1 -7.5**
SCO pmax pmax
comp=Z,11nm,0.7s,mb4.9
I15A Monteview 80.52 45 ⇓P **P 10 37 21.6 +0.4**
baz=80
Q10A Clear Creek Ra 80.54 51 ⇓P **P 10 37 21.2 -0.2**
baz=80
NAY Al-Naaiem 80.61 298 *e*P **P 10 37 21.8 -0.2**
NAY AMb AMB 10 37 23.0
comp=Z,98nm,1.2s,mb5.6
P11A Circle Ranch, 80.62 50 ⇓P **P 10 37 21.5 -0.3**
baz=80
F17A Fitzpatrick Pl 80.64 43 ⇑P **P 10 37 21.9 +0.1**
baz=80
E18A Harlowton 80.73 42 ⇑P **P 10 37 22.6 +0.3**
baz=80
GRAC Grapevine Rang 80.75 53 ⇑P **P 10 37 22.5 -0.1**
baz=81
K14A Jones Ranch, D 80.82 46 ⇓P **P 10 37 23.4 +0.6**
baz=81
S10A Tonopah Range, 80.84 52 ⇑P **P 10 37 22.9 -0.2**
baz=81,SNR=7.4
J15A Blackfoot 80.86 45 ⇑P **P 10 37 23.5 +0.4**
baz=81
R10A Warm Springs 80.87 51 ⇑P **P 10 37 23.3 +0.2**
baz=81
H16A Russell Place, 80.92 44 ⇑P **P 10 37 23.5 +0.2**
baz=81
Q12A Currie 80.94 49 ⇑P **P 10 37 23.4 -0.2**
baz=81
Q11A Duckwater 81.04 51 ⇑P **P 10 37 23.7 -0.3**
baz=81
L14A Malta 81.04 47 ⇓P **P 10 37 24.2 +0.2**
baz=81
MPMC Manual Prospec 81.12 54 ⇑P **P 10 37 24.4 -0.2**
baz=81
K15A Arbon 81.16 46 ⇓P **P 10 37 24.4 -0.3**
baz=81
I16A Newdale 81.20 45 ⇑P **P 10 37 25.3 +0.4**
baz=81
F18A Big Timber 81.20 42 ⇓P **P 10 37 25.0 +0.2**
baz=81
EDW2 Edwards Air Fo 81.33 55 ⇓P **P 10 37 25.6 -0.1**

baz=81
R11A **Troy Canyon, C** 81.33 51 ⇓P P 10 37 25.6 -0.1
baz=81,SNR=6.2
FURC **Furnace Creek,** 81.36 53 ⇓P P 10 37 26.0 +0.1
baz=81
J16A **Bone** 81.44 45 ⇓P P 10 37 26.8 +0.7
baz=81
E19A **Rath Farm, Rou** 81.45 41 ⇑P P 10 37 26.4 +0.3
baz=81
AKASG **Malin Array Be** 81.46 324 P P 10 37 25.5 -0.6
comp=Z,2.2nm,0.4s,mb4.4,baz=49,slow=5.5,SNR=18
AKASG LR LR 11 16 04.6
comp=Z,295nm,18.7s,MS4.7,baz=60,slow=38
AKASG **Malin Array Be** 81.46 324 P P 10 37 25.5 -0.6
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG MLR MLR
comp=Z,295nm,18.7s
KIEV **Kiev** 81.47 324 *e*P P 10 37 25.0 -1.2
comp=Z,7.0nm,0.6s,mb4.8
KIEV **Kiev** 81.47 324 *e*P P 10 37 25.0 -1.2
KIEV pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
D20A **Manuel Ranch,** 81.48 41 ⇓P P 10 37 26.4 +0.1
baz=81
H17A **Grant Village** 81.49 44 ⇓P P 10 37 28.2 +1.8
baz=81
IMW **Indian Meadow** 81.53 44 *e*P P 10 37 27.5 +0.9
S11A **Rachel** 81.56 52 ⇑P P 10 37 27.3 +0.4
baz=81
FLWY **Flagg Ranch** 81.58 44 *e*P P 10 37 30.1 +3.3
L15A **Malad City** 81.60 47 ⇑P P 10 37 27.4 +0.4
baz=81
K16A **Soda Springs** 81.68 46 ⇑P P 10 37 28.1 +0.7
baz=82
F19A **Roth Farm, Mol** 81.69 42 ⇑P P 10 37 27.7 +0.3
baz=82
MOOW **Moose Ponds** 81.72 44 *e*P P 10 37 28.3 +0.7
TPAW **Teton Pass** 81.73 45 *e*P P 10 37 28.7 +1.0
I17A **Pilgrim Ck.** 81.74 44 ⇑P P 10 37 28.4 +0.7
baz=82
U10A **Ash Meadows, A** 81.76 53 ⇓P P 10 37 27.9 -0.1
baz=82
E20A **Meyer Farm, Mu** 81.81 41 ⇑P P 10 37 28.2 +0.2
baz=82
P13A **Bates Ranch, G** 81.84 49 ⇓P P 10 37 28.6 +0.3
baz=82
REDW **Red Top Meadow** 81.86 45 *e*P P 10 37 29.9 +1.5
LOHW **Long Hollow** 81.88 45 *e*P P 10 37 28.7 +0.2
RLMT **Red Lodge** 81.89 43 ⇑P P 10 37 28.8 +0.3
baz=82
RLMT **Red Lodge** 81.89 43 *e*P P 10 37 29.3 +0.8
SIM **Simferopol'** 81.93 317 *e*P P 10 37 29.6 +0.9
SIM pmax pmax
comp=Z,25nm,0.7s,mb5.2
GSC **Goldstone** 81.97 54 ⇑P P 10 37 29.1 0.0
baz=82
R12A **Pony Springs,** 82.00 51 ⇓P P 10 37 29.1 -0.1
baz=82,SNR=5.7
N15A **Stansbury Isla** 82.09 48 ⇑P P 10 37 30.6 +1.0
baz=82
T11A **Corn Creek, Al** 82.13 52 ⇑P P 10 37 29.5 -0.4
baz=82
NOA **NORSAR Array B** 82.23 338 P P 10 37 29.2 -0.7
NOA LR LR 11 19 05.5
NOA **NORSAR Array B** 82.23 338 P P 10 37 29.2 -0.7
comp=Z,5.3nm,0.8s,mb4.5,baz=39,slow=5.1,SNR=11
NOA LR LR 11 19 05.5
comp=Z,74nm,18.8s,MS4.1,baz=35,slow=39
DUG **Dugway** 82.26 48 ⇑P P 10 37 30.5 0.0
baz=82
DUG **Dugway** 82.26 48 *e*P P 10 37 30.3 -0.2
comp=Z,6.6nm,1.1s,mb4.5
DUG **Dugway** 82.26 48 *e*P P 10 37 30.3 -0.2
DUG pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
HWUT **Hardware Ranch** 82.33 47 *e*P P 10 37 31.2 +0.3
comp=Z,3.9nm,0.9s,mb4.3
P14A **Drum Mountains** 82.40 49 ⇑P P 10 37 31.4 +0.1
baz=82,SNR=8.2
J18A **Kendall Valley** 82.46 45 ⇑P P 10 37 31.3 -0.2
baz=82
R13A **O'Grain Ranch,** 82.51 51 ⇑P P 10 37 31.8 -0.1
baz=82
L17A **Cokeville** 82.52 46 ⇑P P 10 37 32.0 +0.2
baz=82
TUQ **Turquoise Moun** 82.53 54 ⇓P P 10 37 31.8 -0.2
baz=82
Q14A **Sevier Lake (B** 82.57 50 ⇑P P 10 37 31.9 -0.2
baz=82,SNR=6.2
MALT **Malatya** 82.65 310 P P 10 37 34.2 +1.6
V11A **Goodsprings** 82.68 53 ⇓P P 10 37 32.8 0.0
baz=82
K18A **Toltan Ranch,** 82.75 45 ⇓P P 10 37 33.2 +0.2
baz=82
LAO **LASA Array** 82.80 40 ⇑P P 10 37 33.6 +0.4
baz=83
S13A **Holt Ranch, En** 82.89 51 ⇓P P 10 37 34.0 +0.1
baz=83
DGMT **Dagmar** 82.90 38 ⇓P P 10 37 32.4 -1.3
baz=83
M17A **Scullys Gap (B** 82.98 46 ⇑P P 10 37 33.9 -0.3
baz=83
BW06 **Boulder Array** 82.98 45 ⇑P P 10 37 34.1 -0.1
baz=83
PDAR **Pinedale Array** 82.98 45 P P 10 37 33.8 -0.5
comp=Z,0.9nm,0.7s,mb3.9,baz=276,slow=1.9,SNR=10
GMRC **Granite Mounta** 83.05 54 ⇑P P 10 37 34.5 -0.3
baz=83
PFO **Pinyon Flat Ob** 83.06 56 ⇓P P 10 37 34.5 -0.3
baz=83
L18A **Fontenelle, Gr** 83.14 46 ⇓P P 10 37 34.8 -0.2
baz=83
V12A **Nelson** 83.14 53 ⇓P P 10 37 35.2 0.0
baz=83
T13A **Saint George** 83.15 52 ⇓P P 10 37 35.2 0.0
baz=83
N17A **Moffit Pass** 83.15 47 ⇑P P 10 37 35.2 0.0
baz=83
DAU **Daniels Canyon** 83.16 48 *e*P P 10 37 35.5 +0.3
Q15A **Fillmore** 83.16 49 ⇑P P 10 37 35.1 -0.1
baz=83
BELC **Belle Mtn. Jos** 83.19 55 ⇑P P 10 37 34.9 -0.6
baz=83
I20A **Worland** 83.21 43 ⇓P P 10 37 35.5 +0.2
baz=83
CCUT **Cedar City** 83.25 51 *e*P P 10 37 36.2 +0.5
S14A **Cedar City** 83.27 51 ⇓P P 10 37 35.7 -0.1
baz=83
TAOE **Nuku Hiva Isla** 83.37 104 *e*LR LR 11 03 34.1
comp=Z,170nm,25.4s
M18A **Lyman** 83.38 46 ⇓P P 10 37 36.2 -0.1
baz=83
U13A **Pakoon Wash** 83.41 52 ⇓P P 10 37 36.5 -0.1
baz=83
MONP **Monument Peak** 83.44 56 ⇑P P 10 37 38.0 +1.2
baz=83
L19A **Farson** 83.47 45 ⇓P P 10 37 36.8 0.0
baz=83
H21A **Big Horn, Sher** 83.48 42 ⇓P P 10 37 36.7 -0.1
baz=83
O17A **Robinson Place** 83.61 48 ⇓P P 10 37 37.4 -0.1
baz=83
R15A **Junction** 83.64 50 ⇑P P 10 37 37.8 +0.1
baz=83
V13A **Grand Canyon W** 83.69 53 ⇑P P 10 37 37.8 -0.3
baz=84
T14A **Hurricane** 83.69 51 ⇓P P 10 37 38.0 0.0
baz=84
IRM **Iron Mountain** 83.72 55 ⇓P P 10 37 37.7 -0.5
baz=84
BC3 **Big Chuckawall** 83.76 55 ⇑P P 10 37 38.1 -0.3
baz=84
DVTC **Desert V Tower** 83.78 56 ⇑P P 10 37 38.6 0.0
baz=84
I21A **Big Trails, Te** 83.79 43 ⇑P P 10 37 38.1 -0.2
baz=84
P17A **Butcher Ranch,** 83.99 48 ⇓P P 10 37 39.3 -0.2
baz=84
Q16A **Castle Valley** 84.00 49 ⇑P P 10 37 39.3 -0.3
baz=84
R16A **Teasdale** 84.13 49 ⇓P P 10 37 40.9 +0.6
baz=84,SNR=6.7
T15A **Red Dirt Ranch** 84.19 51 ⇑P P 10 37 41.0 +0.5
baz=84
P18A **Preston Nutter** 84.23 48 ⇑P P 10 37 40.7 0.0
baz=84
SRU **San Rafael** 84.33 48 ⇑P P 10 37 41.0 -0.3
baz=84
SRU **San Rafael** 84.33 48 *e*P P 10 37 41.5 +0.3
S16A **Weppner Ranch,** 84.36 50 ⇑P P 10 37 41.2 -0.1
baz=84
V14A **Boquillas Ranc** 84.41 52 ⇑P P 10 37 42.2 +0.5
baz=84
X13A **Yucca** 84.44 54 ⇓P P 10 37 42.1 +0.2
baz=84
M20A **Sweetwater, Wa** 84.53 45 ⇓P P 10 37 42.4 +0.2
baz=84
U15A **North Rim** 84.56 51 ⇓P P 10 37 42.3 -0.1
baz=84
R17A **Hanksville Air** 84.58 49 ⇓P P 10 37 42.3 -0.1
baz=84
W14A **Seligman** 84.65 53 ⇑P P 10 37 42.9 0.0
baz=84
L21A **Rawlins** 84.78 45 ⇓P P 10 37 43.4 0.0
baz=85
T16A **Glen Canyon Da** 84.81 51 ⇓P P 10 37 43.3 -0.4
baz=85
N20A **Spence Gulch,** 84.85 46 ⇑P P 10 37 44.0 +0.2
baz=85,SNR=5.2
K22A **Casper** 84.91 44 ⇑P P 10 37 43.6 -0.5
baz=85
S17A **Black Ridge (B** 84.93 50 ⇑P P 10 37 43.7 -0.6
baz=85
V15A **Kaibab Nationa** 84.96 52 ⇑P P 10 37 44.7 +0.2
baz=85
M21A **Separation Pea** 84.98 45 ⇑P P 10 37 44.6 +0.1
baz=85
RWWY **Rawlins** 85.03 45 *e*P P 10 37 44.5 -0.2
P19A **Cripple Cowboy** 85.05 47 ⇓P P 10 37 44.6 -0.3
baz=85
BR131 **Keskin Array S** 85.07 313 *e*P P 10 37 45.3 +0.3
comp=Z,13nm,0.8s,mb5.1
BRTR **Keskin Array B** 85.07 313 P P 10 37 45.0 0.0
comp=Z,14nm,0.8s,mb5.1,baz=103,slow=4.1,SNR=57
BRTR LR LR 11 17 47.8
comp=Z,53nm,21.4s,MS3.9,baz=68,slow=37
BRTR **Keskin Array B** 85.07 313 P P 10 37 45.0 +0.1
BRTR pmax pmax
comp=Z,14nm,0.8s
BRTR MLR MLR
comp=Z,53nm,21.4s
R18A **Canyonlands Na** 85.13 49 ⇑P P 10 37 44.8 -0.5
baz=85
O20A **White River Ci** 85.25 47 ⇓P P 10 37 45.7 -0.1
baz=85
Z13A **Yuma Proving G** 85.28 55 ⇑P P 10 37 45.9 -0.3
baz=85
L22A **Ellis Ranch, M** 85.31 44 ⇑P P 10 37 46.5 +0.4
baz=85
N21A **Black Mountain** 85.36 46 ⇑P P 10 37 46.7 +0.4
baz=85,SNR=5.8
Y14A **Wickenburg** 85.36 54 ⇓P P 10 37 46.4 -0.2
baz=85
BUR08 **Bucovina Ar. S** 85.41 323 *e*P P 10 37 46.5 0.0
P20A **De Beque** 85.50 47 ⇑P P 10 37 47.1 0.0
baz=85
U16A **Tuba City** 85.51 51 ⇑P P 10 37 47.3 +0.1
baz=85
M22A **Cedar Creek Ra** 85.57 45 ⇓P P 10 37 47.3 -0.1
baz=85
X15A **Humboldt** 85.62 53 ⇑P P 10 37 47.6 -0.2
baz=85
WUAZ **Wupatki** 85.67 52 ⇑P P 10 37 48.0 0.0
baz=86
L23A **Garrett** 85.71 44 ⇑P P 10 37 47.8 -0.3
baz=86,SNR=5.3
PV04 **Paradox Valley** 85.78 48 *e*P P 10 37 49.4 +0.8
W16A **Flagstaff** 85.79 52 ⇓P P 10 37 48.5 -0.2
baz=86
T18A **Mexican Hat** 85.83 50 ⇑P P 10 37 47.9 -0.9
baz=86
Y15A **Casa Rosa Ranc** 85.83 54 ⇓P P 10 37 48.6 -0.3
baz=86
Q20A **Ridgley Place,** 85.87 48 ⇓P P 10 37 48.9 0.0
baz=86,SNR=7.0
S19A **Harvey Farm, M** 85.98 49 ⇓P P 10 37 49.1 -0.4
baz=86
N22A **Wattenberg Ran** 86.00 45 ⇓P P 10 37 49.9 +0.4
baz=86
V17A **Tonalea, Kykot** 86.02 51 ⇓P P 10 37 50.1 +0.3
baz=86
ULM **Lac du Bonnet** 86.04 33 LR LR 11 12 52.0
comp=Z,49nm,20.6s,MS3.9,baz=300,slow=33
114A **Black Gap (USA** 86.07 55 ⇓P P 10 37 50.4 +0.3
baz=86
X16A **Lo Mia Camp, P** 86.21 53 ⇑P P 10 37 50.7 0.0
baz=86
U18A **Rough Rock, Ch** 86.22 50 ⇑P P 10 37 51.1 +0.3
baz=86
R20A **Revale** 86.24 48 ⇓P P 10 37 50.4 -0.4
baz=86
N23A **Red Feather La** 86.27 45 ⇓P P 10 37 51.3 +0.5
baz=86,SNR=6.1
O22A **Kremmling** 86.31 46 ⇓P P 10 37 51.3 +0.2
baz=86
Q21A **Lamborn Mesa,** 86.40 47 ⇓P P 10 37 52.0 +0.5
baz=86
S20A **Disappointment** 86.45 49 ⇓P P 10 37 51.4 -0.4
baz=86
P22A **Eagle** 86.50 46 ⇓P P 10 37 52.5 +0.5
baz=86,SNR=5.7
214A **Organ Pipe Nat** 86.54 55 ⇑P P 10 37 52.2 -0.2
baz=86
V18A **Ganado** 86.56 51 ⇑P P 10 37 52.6 +0.2
baz=86
T19A **Beclabito** 86.56 50 ⇓P P 10 37 52.4 0.0
baz=86
SMCO **Snowmass** 86.59 47 *e*P P 10 37 53.1 +0.5
M24A **Cheyenne** 86.62 44 ⇑P P 10 37 52.8 +0.2
baz=86
O23A **Lake Granby, G** 86.67 45 ⇑P P 10 37 53.4 +0.5
baz=86
R21A **Cimarron** 86.68 48 ⇓P P 10 37 53.2 +0.2
baz=86
U19A **Dine' College,** 86.73 50 ⇓P P 10 37 53.1 -0.2
baz=86
Q22A **Crested Butte,** 86.81 47 ⇑P P 10 37 54.1 +0.5
baz=87,SNR=5.6
116A **Eloy** 87.01 54 ⇑P P 10 37 54.4 -0.3
baz=87
Y17A **Roosevelt** 87.02 53 ⇓P P 10 37 54.5 -0.2
baz=87
ISCO **Idaho Springs** 87.10 46 ⇑P P 10 37 55.2 +0.2
baz=87
P23A **Jefferson** 87.21 46 ⇓P P 10 37 56.0 +0.5
baz=87
O24A **Longmont** 87.25 45 ⇑P P 10 37 56.2 +0.5
baz=87
R22A **Saguache, Gunn** 87.27 47 ⇑P P 10 37 56.2 +0.3
baz=87
Y18A **Canyon Day Jun** 87.54 53 ⇓P P 10 37 57.3 +0.1
baz=87
R24A **Sanders Place,** 88.33 47 ⇑P P 10 38 01.3 +0.4
baz=88
SDCO **Great Sand Dun** 88.36 47 ⇓P P 10 38 01.2 +0.2
baz=88
X21A **Alamocita Cree** 88.72 51 ⇑P P 10 38 03.0 +0.2
baz=88
CLL **Collm** 88.77 331 *e*P P 10 38 04.0 +1.3
CLL **Collm** 88.77 331 *e*P P 10 38 04.0 +1.3
318A **Bisbee** 88.84 55 ⇓P P 10 38 03.6 +0.2
baz=89
U25A **Circle Dot Ran** 89.86 48 ⇑P P 10 38 08.4 +0.3
baz=90
Y23A **Lovelace Mesa,** 90.20 51 ⇓P P 10 38 09.5 -0.2
baz=90
MNTX **Cornudas Mount** 91.95 52 ⇑P P 10 38 17.8 -0.1
baz=92
Z26A **Caprock** 91.99 50 ⇑P P 10 38 17.6 -0.5
baz=92
325A **Bean Ranch, Si** 92.42 52 ⇓P P 10 38 19.9 -0.3
baz=92
AMTX **Amarillo** 92.54 48 ⇓P P 10 38 20.5 -0.1
baz=92
AMTX **Amarillo** 92.54 48 *e*P P 10 38 20.8 +0.2
comp=Z,3.7nm,0.7s,mb4.9
425A **Indio Mountain** 92.75 53 ⇓P P 10 38 21.1 -0.5
baz=93
426A **McDonald Obser** 93.49 52 ⇓P P 10 38 24.5 -0.5
baz=93
427A **Hayter Ranch,** 93.82 52 ⇓P P 10 38 26.1 -0.4
baz=94
328A **Wristen Ranch,** 93.91 51 ⇓P P 10 38 26.8 -0.2
baz=94
527A **Woodward Ranch** 94.09 52 ⇓P P 10 38 27.1 -0.7
baz=94
428A **Kincaid Ranch,** 94.38 52 ⇓P P 10 38 29.2 +0.1
baz=94
WMOK **Wichita Mounta** 94.50 46 *e*P P 10 38 29.1 -0.5
comp=Z,2.6nm,0.9s,mb4.7
WMOK **Wichita Mounta** 94.50 46 *e*P P 10 38 29.1 -0.5
WMOK pmax pmax
comp=Z,3.0nm,0.9s,mb4.7
TXAR **Lajitas Array** 94.53 53 P P 10 38 30.2 +0.3
TXAR LR LR 11 18 42.3
TXAR **Lajitas Array** 94.53 53 P P 10 38 30.2 +0.3
comp=Z,1.3nm,0.7s,mb4.4,baz=299,slow=2.7,SNR=18
TXAR LR LR 11 18 42.3
comp=Z,57nm,18.2s,MS4.1,baz=355,slow=34
528A **Cox Ranch, San** 94.65 52 ⇓P P 10 38 30.3 -0.1
baz=94
627A **Terlingua Ranc** 94.65 53 ⇓P P 10 38 30.2 -0.2
baz=94
RKT **Rikitea** 94.74 114 *e*LR LR 11 08 51.8
comp=Z,193nm,38.2s
LPL **La Plagne** 95.89 330 *e*P P 10 38 36.7 +1.0
comp=Z,4.0nm,0.8s,mb4.6
LPL **La Plagne** 95.89 330 *e*P P 10 38 36.7 +1.0
comp=Z,2.0nm,0.8s,mb4.6
LPL **La Plagne** 95.89 330 *e*P P 10 38 36.7 +1.0
LPL pmax pmax
comp=Z,2.0nm,0.8s,mb4.6
LPG **La Plagne** 95.89 330 *e*P P 10 38 36.2 +0.5
ORIF **Oris-en-Rattie** 96.73 330 *e*P P 10 38 41.5 +1.9
TOA0 **Torodi Ar. Sit** 123.68 312 *e*PKPdf PKPdf 10 44 06.7 -0.8
TORD **Torodi Ar. Bea** 123.68 312 PKP PKPdf 10 44 06.7 -0.8
comp=Z,1.7nm,0.6s,baz=45,slow=2.1,SNR=8.5
TORD PP PP 10 45 50.4 +1.4
comp=Z,2.0nm,1.0s,baz=45,slow=4.4,SNR=3.7
DBIC **Dimbokro** 132.77 313 PKP PKPdf 10 44 25.4 +0.5
comp=Z,3.1nm,0.8s,baz=334,slow=2.1,SNR=4.3
DBIC **Dimbokro** 132.77 313 PKIKP PKPdf 10 44 25.4 +0.6
DBIC pmax pmax
comp=Z,3.0nm,0.8s
TIC **Toumodi** 132.89 313 *e*PKIKP PKPdf 10 44 25.3 +0.2
comp=Z,3.0nm,0.2s
KIC **Kosan Boka** 132.93 313 *e*PKIKP PKPdf 10 44 25.3 +0.2
comp=Z,18nm,1.2s
LIC **Lamto** 133.22 313 *e*PKIKP PKPdf 10 44 25.6 -0.1
comp=Z,37nm,1.3s
LPAZ **La Paz** 149.33 73 PKPbc PKPbc 10 44 59.1 +0.6
comp=Z,4.5nm,0.7s,baz=328,slow=2.0,SNR=22
PLCA **Paso Flores** 150.54 123 PKPbc PKPbc 10 44 59.3 -1.5
comp=Z,1.2nm,0.6s,baz=264,slow=1.2,SNR=3.9

*IDC **25** 10:34:55.5±1.8,39°.11N×141°.61E,h0km,mb3.4/2, mb1 3.4/5,mb1mx3.3/25,mbtmp3.3/5,ML2.8/3,Error ellipse: s-maj=38.5km s-min=23.3km az=97.0*
*ISCJB **25** 10:34:59.8±0.5,39°.14N±0°.03×140°.95E±0°.04,h8km±5km, mb3.6/3,Error ellipse: s-maj=5.5km s-min=4.7km az=175.9*
*NEIC **25** 10:35:00.0,39°.15N×140°.93E,h10km,MG3.2(JMA),After JMA.*
*JMA **25** 10:35:00.0,39°.15N×140°.93E,h10km±1km,M3.2 JMA Felt I J1.*

ISC 25 10:35:00.3±0.6,39°.14N±0°.03×140°.94E±0°.04,h1km±6km, n14,σ0°78/22,mb3.6/3,1C-4D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.29**	**130**	⇓P	**Pg**	**10 35 05.8**	**0.0**
JMK				S	**Sg**	**10 35 10.0**	**+0.5**
JRG	**Rokugo**	**0.35**	**318**	⇓P	**Pg**	**10 35 06.9**	**0.0**
JRG				*e*S	**Sg**	**10 35 12.0**	**+0.5**
JOM	**Ohasama**	**0.43**	**39**	⇓P	**Pg**	**10 35 08.4**	**-0.2**
JOM				S	**Sg**	**10 35 14.3**	**+0.1**
JYK	**Kaneyama**	**0.50**	**244**	⇑P	**Pg**	**10 35 09.7**	**-0.1**
JYK				S	**Sg**	**10 35 16.5**	**+0.2**
JIO	**Ouri**	**0.76**	**155**	⇓P	**Pg**	**10 35 14.1**	**-0.6**
JIO				S	**Sg**	**10 35 24.6**	**+0.1**
JOU	**Okura**	**0.80**	**196**	P	**Pg**	**10 35 15.6**	**0.0**
JOU				S	**Sg**	**10 35 26.2**	**+0.2**
MJAR	**Matsushiro Arr**	**3.37**	**221**	Pn	**Pn**	**10 35 54.6**	**+0.6**
	0.8nm,0.3s,baz=34,slow=11,SNR=4.0						
MJAR				Pg	**Pg**	**10 36 01.4**	**-3.5**
	0.7nm,0.3s,baz=28,slow=14,SNR=7.3						
MJAR				Lg		10 36 48.2	
	0.5nm,0.3s,baz=18,slow=27,SNR=3.9						
MAJO	**Matsushiro**	**3.37**	**221**	*e*Pn	**Pn**	**10 35 54.9**	**+0.9**
ASAJ	**Asahikawa**	**5.13**	**14**	Pn	**Pn**	**10 36 12.1**	**-6.0**
	0.2nm,0.3s,baz=214,slow=15,SNR=1.7						
ASAJ				Sn	**Sn**	**10 37 19.4**	**+1.4**
	0.1nm,0.3s,baz=336,slow=20,SNR=2.1						
YSS	**Yuzh-Sakhalins**	**7.92**	**9**	Pn	**Pn**	**10 36 54.9**	**-1.6**
KSRS	**Korea Array**	**10.37**	**265**	Pn	**Pn**	**10 37 34.3**	**+4.3**
	0.3nm,0.3s,baz=80,slow=13,SNR=5.6						
MKAR	**Makanchi Array**	**42.71**	**300**	P	**P**	**10 42 57.5**	**-1.2**
	0.4nm,0.7s,mb3.3,baz=85,slow=7.8,SNR=3.3						
KURK	**Kurchatov**	**44.96**	**306**	P	**P**	**10 43 11.7**	**-0.2**
	0.8nm,0.2s,mb4.1,baz=89,slow=8.5,SNR=1.7						
WRA	**Warramunga Arr**	**59.09**	**187**	P	**P**	**10 44 58.0**	**-4.1**
	0.4nm,1.0s,mb3.4,baz=4.6,slow=7.0,SNR=3.2						

*ISCJB **25** 10:46:19.2±1.2,37°.59N±0°.04×21°.94E±0°.09,h60km±12km, Error ellipse: s-maj=12.4km s-min=6.7km az=168.9*
*ATH **25** 10:46:19.0,37°.60N×21°.94E,h54km±3km,MD2.9/7*
*THE **25** 10:46:19.9,37°.60N×21°.94E,h55km±2km,ML2.2/5,Error ellipse: s-maj=2.7km s-min=0.9km az=90.0*
*CSEM **25** 10:46:19.2±0.1,37°.58N×21°.95E,h60km,ML2.2/5,Error ellipse: s-maj=5.2km s-min=2.9km az=85.0*

ISC 25 10:46:19.4±1.2,37°.58N±0°.04×21°.93E±0°.10,h59km±12km, n27,σ0°44/44,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ITM	**Ithomi**	**0.40**	**180**	*e*P	**Pn**	**10 46 30.2**	**-0.1**
ITM	**Ithomi**	**0.40**	**180**	P	**Pn**	**10 46 30.2**	**-0.1**
ITM	**Ithomi**	**0.40**	**180**	P	**Pn**	**10 46 30.2**	**-0.1**
VLX	**Vlachokerasia**	**0.42**	**120**	*e*P	**Pn**	**10 46 30.4**	**0.0**
VLX				*e*S	**Sn**	**10 46 38.5**	**+0.1**
VLX	**Vlachokerasia**	**0.42**	**120**	P	**Pn**	**10 46 30.4**	**0.0**
VLX				S	**Sn**	**10 46 38.9**	**+0.5**
VLX	**Vlachokerasia**	**0.42**	**120**	P	**Pn**	**10 46 30.4**	**0.0**
VLX				*e*S	**Sn**	**10 46 38.5**	**+0.1**
GUR	**Goura**	**0.48**	**43**	*e*P	**Pn**	**10 46 30.3**	**-0.8**
GUR				*e*S	**Sn**	**10 46 38.9**	**-0.7**
GUR	**Goura**	**0.48**	**43**	P	**Pn**	**10 46 30.3**	**-0.8**
GUR				S	**Sn**	**10 46 38.9**	**-0.7**
GUR	**Goura**	**0.48**	**43**	P	**Pn**	**10 46 30.3**	**-0.8**
GUR				S	**Sn**	**10 46 38.9**	**-0.7**
LAKA	**Lakka**	**0.66**	**4**	P	**Pn**	**10 46 32.8**	**-0.3**
LAKA				S	**Sn**	**10 46 43.9**	**+0.8**
LAKA	**Lakka**	**0.66**	**4**	P	**Pn**	**10 46 32.8**	**-0.3**
LAKA				S	**Sn**	**10 46 43.9**	**+0.8**
PYL	**PYLOS**	**0.70**	**192**	*e*P	**Pn**	**10 46 33.8**	**+0.2**
PYL	**PYLOS**	**0.70**	**192**	*e*P	**Pn**	**10 46 33.8**	**+0.2**
TRIZ	**Trizonia**	**0.79**	**8**	P	**Pn**	**10 46 34.7**	**0.0**
TRIZ				S	**Sn**	**10 46 45.6**	**-0.3**
TRIZ	**Trizonia**	**0.79**	**8**	P	**Pn**	**10 46 34.7**	**0.0**
TRIZ				S	**Sn**	**10 46 45.6**	**-0.3**
KALE	**Kalithea**	**0.83**	**12**	P	**Pn**	**10 46 35.1**	**0.0**
KALE				S	**Sn**	**10 46 47.1**	**+0.4**
KALE	**Kalithea**	**0.83**	**12**	P	**Pn**	**10 46 35.1**	**0.0**
KALE				S	**Sn**	**10 46 47.1**	**+0.4**
EFP	**Efpalio**	**0.84**	**359**	*e*P	**Pn**	**10 46 35.6**	**+0.2**
EFP	**Efpalio**	**0.84**	**359**	P	**Pn**	**10 46 35.4**	**0.0**
EFP	**Efpalio**	**0.84**	**359**	P	**Pn**	**10 46 35.4**	**0.0**
LTK	**Loutraki**	**0.94**	**62**	*e*P	**Pn**	**10 46 35.8**	**-0.7**
LTK	**Loutraki**	**0.94**	**62**	*e*P	**Pn**	**10 46 35.8**	**-0.7**
DID	**Didima**	**1.04**	**94**	*e*P	**Pn**	**10 46 37.7**	**-0.2**
DID				*e*S	**Sn**	**10 46 52.6**	**+0.9**
DID	**Didima**	**1.04**	**94**	P	**Pn**	**10 46 37.8**	**-0.1**
DID				S	**Sn**	**10 46 52.4**	**+0.7**
DID	**Didima**	**1.04**	**94**	P	**Pn**	**10 46 37.8**	**-0.1**
DID				S	**Sn**	**10 46 52.4**	**+0.7**
AGG	**Agios Georgios**	**1.47**	**12**	P	**Pn**	**10 46 43.8**	**+0.2**
AGG				S	**Sn**	**10 47 02.2**	**+0.3**
AGG	**Agios Georgios**	**1.47**	**12**	P	**Pn**	**10 46 43.8**	**+0.2**
AGG				S	**Sn**	**10 47 02.2**	**+0.3**

*CSEM **25** 10:52:44.6±0.4,16°.16N×43°.72E,h2km,ML3.4,Error ellipse: s-maj=17.1km s-min=7.2km az=68.0*
*SGS **25** 10:52:44.8,15°.95N×43°.80E,h16km*

*ISCJB **25** 10:52:45.6±0.6, 16˚.14N±0˚.04×43˚.64E±0˚.07, h10km, Error ellipse: s-maj=10.3km s-min=3.8km az=158.9*
*DHMR **25** 10:52:47.3±1.3, 15˚.95N×43˚.87E, h8km±6km, ML3.6*
ISC 25 10:52:46.3±0.6, **16˚.15N**±0˚.04×**43˚.63E**±0˚.07, **h10**km, **n13**, σ1¶**03**/22, **5C, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HAJJ	**Hajjah**	**0.45**	**184**	⇑	*iP*	**Pg**	**10 52 53.5**	**-1.6**
HAJJ					*i* S	**Sg**	**10 53 00.2**	**-0.7**
HAJJ					AML	AML	10 53 02.1	
	comp=Z,5μm,0.3s							
HAJJ	**Hajjah**	**0.45**	**184**	⇑	*i*P	**Pg**	**10 52 53.5**	**-1.5**
	comp=Z,2μm,0.3s							
HAJJ					*i* S	**Sg**	**10 53 00.2**	**-0.8**
SANA	**San'a**	**0.94**	**144**		*i* P	**Pg**	**10 52 59.3**	**-5.0**
SANA					*i* S	**Sg**	**10 53 09.2**	**-7.3**
JAZS	**Jizan**	**1.15**	**323**		P	**Pg**	**10 53 07.9**	**-0.5**
JAZS	**Jizan**	**1.15**	**323**		P	**Pg**	**10 53 07.9**	**-0.4**
JAZS					S	**Sg**	**10 53 25.2**	**+2.0**
DJNS	**Zahran al Janu**	**1.55**	**357**		P	**Pn**	**10 53 12.8**	**-1.1**
DJNS	**Zahran al Janu**	**1.55**	**357**		P	**Sn**	**10 53 12.8**	**-1.2**
DJNS					S	**Sn**	**10 53 33.9**	**-0.2**
FRSS	**Farasan al Kab**	**1.57**	**292**		P	**Pn**	**10 53 13.4**	**-0.9**
FRSS	**Farasan al Kab**	**1.57**	**292**		P	**Pn**	**10 53 13.4**	**-0.9**
LBOS		**2.75**	**145**	⇑	*iP*	**Pn**	**10 53 30.9**	**+0.4**
LBOS					*i* S	**Sn**	**10 54 04.1**	**+0.4**
BDHA	**Al Bayda'**	**2.85**	**139**	⇑	*iP*	**Pn**	**10 53 31.7**	**-0.2**
BDHA					*i* S	**Sn**	**10 54 06.2**	**-0.2**
BDHA					AML	AML	10 54 10.1	
	comp=N,402nm,0.4s							
BDHA	**Al Bayda'**	**2.85**	**139**	⇑	*iP*	**Pn**	**10 53 31.7**	**-0.2**
BDHA					*i* S	**Sn**	**10 54 06.2**	**-0.2**
	comp=N,201nm,0.4s							
TRBA	**At Turbah**	**2.94**	**171**		*i* P	**Pn**	**10 53 34.3**	**+1.2**
TRBA					*i* S	**Sn**	**10 54 10.3**	**+1.9**

*ISCJB **25** 11:19:25.9±0.6, 40˚.49N±0˚.02×26˚.04E±0˚.06, h9km±4km, Error ellipse: s-maj=7.5km s-min=4.0km az=178.5*
*ATH **25** 11:19:25.2, 40˚.54N×26˚.26E, h26km±13km, MD3.1/4*
*ISK **25** 11:19:26.0, 40˚.45N×26˚.11E, h5km, MD2.7*
*CSEM **25** 11:19:26.0±0.2, 40˚.47N×26˚.04E, h8km, MD2.7, Error ellipse: s-maj=4.8km s-min=2.9km az=92.0*
*DDA **25** 11:19:28.9, 40˚.36N×26˚.29E, h7km±5km, Md2.8*
ISC 25 11:19:26.4±0.6, **40˚.48N**±0˚.02×**26˚.06E**±0˚.06, **h10**km±4km, **n33**, σ0¶**64/48**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ENEZ	**Enez**	**0.26**	**15**		*e*PG	**Pg**	**11 19 32.2**	**+0.5**
ENEZ					*e*SG	**Sg**	**11 19 36.7**	**+1.5**
ENEZ	**Enez**	**0.26**	**15**		*e*Pg	**Pg**	**11 19 32.2**	**+0.5**
ENEZ					*e*Sg	**Sg**	**11 19 36.7**	**+1.4**
GADA	**Gvkgeada**	**0.32**	**203**		*e*PG	**Pg**	**11 19 32.7**	**0.0**
GADA	**Gvkgeada**	**0.32**	**203**		*e*Pg	**Pg**	**11 19 32.7**	**0.0**
GELI	**Tayfur-Gelibol**	**0.33**	**105**		*e*PG	**Pg**	**11 19 32.2**	**-0.7**
GELI					*e*SG	**Sg**	**11 19 36.6**	**-0.6**
GELI	**Tayfur-Gelibol**	**0.33**	**105**		*e*Pg	**Pg**	**11 19 32.2**	**-0.6**
GELI					*e*Sg	**Sg**	**11 19 36.6**	**-0.6**
ERIK	**Erikli-Kesan**	**0.39**	**61**		*e*PG	**Pg**	**11 19 33.9**	**-0.2**
ERIK	**Erikli-Kesan**	**0.39**	**61**		*e*Pg	**Pg**	**11 19 33.9**	**-0.2**
ALN	**Alexandroupoli**	**0.41**	**358**		*e*PB	**Pg**	**11 19 34.1**	**-0.4**
ALN					*e*SB	**Sg**	**11 19 39.3**	**-0.7**
ALN	**Alexandroupoli**	**0.41**	**358**		*e*Pb	**Pg**	**11 19 34.1**	**-0.4**
ALN					*e*Sb	**Sg**	**11 19 39.3**	**-0.7**
BOZC	**Bozcaada**	**0.64**	**181**		*i* P	**Pg**	**11 19 39.2**	**+0.5**
BOZC					*i* S	**Sg**	**11 19 47.9**	**+0.7**
EZN	**Ezine**	**0.69**	**163**		*e*PG	**Pg**	**11 19 38.7**	**-1.0**
EZN	**Ezine**	**0.69**	**163**		*e*Pg	**Pg**	**11 19 38.7**	**-0.9**
RDO	**Rodhopi**	**0.77**	**329**		*e*PN	**Pn**	**11 19 41.7**	**-1.7**
RDO	**Rodhopi**	**0.77**	**329**		*e*Pn	**Pn**	**11 19 41.7**	**-1.7**
MFT	**Murefte**	**0.97**	**72**		*e*PG	**Pg**	**11 19 45.4**	**+0.3**
MFT	**Murefte**	**0.97**	**72**		*e*Pg	**Pg**	**11 19 45.8**	**+0.3**
TKR	**Tekirdag**	**1.23**	**65**		*e*PN	**Pn**	**11 19 49.5**	**-0.1**
TKR	**Tekirdag**	**1.23**	**65**		*e*Pn	**Pn**	**11 19 49.6**	**0.0**
PRK	**Paraskevi**	**1.25**	**173**		*e*PN	**Pn**	**11 19 49.9**	**+0.1**
PRK					*e*SN	**Sn**	**11 20 07.2**	**+0.5**
PRK	**Paraskevi**	**1.25**	**173**		*e*Pn	**Pn**	**11 19 49.9**	**+0.1**
PRK					*e*Sn	**Sn**	**11 20 07.2**	**+0.5**
AYVA	**Ayvalik**	**1.27**	**157**		*i* P	**Pn**	**11 19 49.7**	**-0.4**
AYVA					*i* S	**Sb**	**11 20 06.3**	**-0.4**
AYVA	**Ayvalik**	**1.27**	**157**		*i* P	**Pn**	**11 19 49.7**	**-0.5**
AYVA					*i* S	**Sb**	**11 20 06.3**	**-0.4**
GONE	**Gonen-Balikesi**	**1.32**	**109**		*e*PN	**Pn**	**11 19 50.7**	**-0.1**
GONE	**Gonen-Balikesi**	**1.32**	**109**		*e*Pn	**Pn**	**11 19 50.7**	**-0.1**
BALY	**Balya**	**1.41**	**121**		*i* P	**Pn**	**11 19 52.5**	**+0.5**
BALY					*i* S	**Sn**	**11 20 10.5**	**-0.2**
BALY	**Balya**	**1.41**	**121**		*i* P	**Pn**	**11 19 52.5**	**+0.5**
BALY					*i* S	**Sn**	**11 20 10.5**	**-0.1**
EDRB	**Edirne**	**1.46**	**20**		*e*PN	**Pn**	**11 19 53.7**	**+0.9**
EDRB	**Edirne**	**1.46**	**20**		*e*Pn	**Pn**	**11 19 53.7**	**+1.0**
BALB	**Balikesir**	**1.63**	**121**		*e*PN	**Pn**	**11 19 55.7**	**+0.6**
BALB	**Balikesir**	**1.63**	**121**		*e*Pn	**Pn**	**11 19 55.7**	**+0.6**
CHOS	**Chios island**	**2.09**	**180**		*e*PN	**Pn**	**11 20 01.2**	**-0.3**
CHOS					*e*SN	**Sn**	**11 20 28.0**	**+0.4**
CHOS	**Chios island**	**2.09**	**180**		*e*Pn	**Pn**	**11 20 01.2**	**-0.3**
CHOS					*e*Sn	**Sn**	**11 20 28.0**	**+0.4**

*BJI **25** 11:25:15.5, 39˚.62S×177˚.00E, h16km, mB5.6/19, mb5.6/18, Ms5.3/21, Ms7 5.0/20*
*IGIL **25** 11:25:18.0, 39˚.69S×176˚.45E, h10km, MS5.5*
*ISCJB **25** 11:25:19.6±0.2, 39˚.72S±0˚.02×176˚.56E±0˚.03, h40km±1km, mb5.5/89, MS5.0/155, Error ellipse: s-maj=3.8km s-min=3.0km az=14.1*
*MOS **25** 11:25:19.1±1.0, 39˚.59S×176˚.43E, h38km, mb5.6/26, MS5.1/23, Error ellipse: s-maj=16.1km s-min=11.4km az=119.4*
*NEIC **25** 11:25:19.3, 39˚.72S×176˚.85E, h32km, mb5.4/12, MS5.1/126, MW5.5, ML5.9(WEL), After WEL.*
NEIC Slight damage at Hastings and Napier. Felt [VI] at Hastings, Havelock North and Taradale. Felt in much of the North Island from Hamilton and Whakatane to Wellington. Also felt in parts of the South Island.
*WEL **25** 11:25:19.3±0.1, 39˚.72S×176˚.85E, h32km, ML5.9/67, Error ellipse: s-maj=1.1km s-min=0.5km az=90.0, 8.*
WEL Felt between Waikato, Southland and Gisborne, maximum reported intensity MM.
*IDC **25** 11:25:20.4±0.5, 39˚.47S×176˚.53E, h41km±3km, mb5.0/19, mb1 5.1/19, mb1mx5.1/20, mbtmp5.0/19, MS4.9/18, Ms1 4.9/18, ms1mx4.8/20, Error ellipse: s-maj=13.5km s-min=10.3km az=15.0*
*GCMT **25** 11:25:23.3±0.1, 39˚.67S×176˚.91E, h26km, MW5.4, Moment Tensor Solution. s77,c131; s89,c165; Moment tensor: Scale 10^{17}Nm; M_{rr}-1.27±.03; $M_{t\theta}$-0.07±.02; $M_{\theta\phi}$ 1.34±.02; $M_{r\theta}$0.28±.05; $M_{\theta\theta}$0.65±.02; $M_{\theta r}$-0.64±.05; Best double couple: $M_0$1.60000×10^{17} NP1:ϕ223.00000°, δ40.00000°, λ-56.00000°. NP2:ϕ1.00000°, δ58.00000°, λ-115.00000°. Principal axes: T 1.6800, Plg10.0000°, Azm109.0000°; N -0.1300, Plg21.0000°, Azm15.0000°; P -1.5500, Plg67.0000°, Azm222.0000°; Data Used: II IU IC G CN.*
*DJA **25** 11:25:33, 39˚.63S×176˚.89E, h168km, mb5.4/49*
ISC 25 11:25:19.8±0.3, **39˚.73S**±0˚.02×**176˚.53E**±0˚.03, **h28**km±2km, **h35**km±2.6km**:pP-P, n643,** σ1¶**41**/323, **mb5.5**/89, **MS5.0**/155, **64C-67D, North Island**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAHZ	**Kahuranaki**	**0.27**	**105**	⇓	*P**	**Pb**	**11 25 25.7**	**-0.9**
KAHZ					S*	**Sb**	**11 25 30.6**	**-0.7**
MCHZ	**McNeill Hill**	**0.31**	**24**	⇓	P*	**Pb**	**11 25 25.9**	**-1.1**
PNHZ	**Pukenui**	**0.32**	**233**	⇑	PN	**Pb**	**11 25 29.7**	**+2.4**
WPHZ	**Waipukurau**	**0.35**	**192**	⇓	P*	**Pb**	**11 25 29.8**	**+2.1**
PXZ	**Pawanui**	**0.40**	**141**	⇓	*eP**	**Pb**	**11 25 28.7**	**+0.3**
CKHZ	**Cape Kidnapper**	**0.42**	**81**	⇑	P*	**Pb**	**11 25 27.0**	**-1.9**
BHHZ	**Black Hill Sta**	**0.43**	**303**	⇑	PN	**Pb**	**11 25 30.4**	**+1.4**
PRHZ	**Porangahau**	**0.55**	**172**	⇓	PN	**Pn**	**11 25 31.9**	**+0.1**
TSZ	**Takapari Road**	**0.55**	**233**		PN	**Pn**	**11 25 33.2**	**+1.3**
BKZ	**Black Stump Fm**	**0.56**	**357**	⇑	*ePN*	**Pn**	**11 25 30.2**	**-1.6**
BKZ					SN	**Sn**	**11 25 38.9**	**-1.3**
DVHZ	**Dannevirke**	**0.64**	**206**	⇓	PN	**Pn**	**11 25 33.9**	**+0.9**
NMHZ	**Naumai**	**0.66**	**19**	⇑	PN	**Pn**	**11 25 31.4**	**-1.9**
MOVZ	**Moawhango**	**0.68**	**297**	⇑	PN	**Pn**	**11 25 34.6**	**+1.1**
TUVZ	**Tukino**	**0.82**	**303**	⇑	PN	**Pn**	**11 25 37.2**	**+1.7**
WNVZ	**Wahianoa**	**0.82**	**298**	⇑	PN	**Pn**	**11 25 37.4**	**+1.9**
TRVZ	**Turoa**	**0.87**	**299**	⇑	PN	**Pn**	**11 25 38.2**	**+2.0**
OTVZ	**Oturere**	**0.87**	**309**	⇑	PN	**Pn**	**11 25 37.9**	**+1.7**
MTVZ	**Mangateitei**	**0.89**	**292**		PN	**Pn**	**11 25 38.4**	**+2.0**
POWZ	**Post Office Ro**	**0.89**	**221**	⇓	PN	**Pn**	**11 25 37.7**	**+1.3**
FWVZ	**Far West T-bar**	**0.89**	**301**		PN	**Pn**	**11 25 38.2**	**+1.8**
HATZ	**Hinemaiaia**	**0.90**	**337**	⇑	PN	**Pn**	**11 25 36.6**	**+0.1**
NGZ	**Ngauruhoe**	**0.91**	**307**	⇓	PN	**Pn**	**11 25 38.4**	**+1.7**
RITZ	**Rihia Road**	**0.91**	**325**		PN	**Pn**	**11 25 38.0**	**+1.3**
RAHZ	**Arahi**	**0.91**	**28**	⇓	PN	**Pn**	**11 25 34.6**	**-2.2**
WPVZ	**Whakapapa**	**0.92**	**304**		PN	**Pn**	**11 25 38.6**	**+1.7**
KRVZ	**Karewarewa**	**0.93**	**312**		PN	**Pn**	**11 25 38.5**	**+1.5**
WTVZ	**West Tongariro**	**0.95**	**309**		PN	**Pn**	**11 25 38.8**	**+1.5**
BFZ	**Birch Farm**	**0.98**	**193**	⇓	PN	**Pn**	**11 25 37.8**	**+0.1**
KATZ	**Kakaramea**	**0.99**	**319**		PN	**Pn**	**11 25 39.0**	**+1.2**
PKVZ	**Pokaka**	**1.01**	**295**		PN	**Pn**	**11 25 39.9**	**+1.8**
RATZ	**Rangitukua**	**1.04**	**325**		PN	**Pn**	**11 25 39.2**	**+0.7**
TWVZ	**Taurewa**	**1.07**	**307**		PN	**Pn**	**11 25 40.2**	**+1.3**
KNZ	**Kokohu**	**1.13**	**52**		PN	**Pn**	**11 25 36.2**	**-3.6**
WHTZ	**Whakaora**	**1.15**	**337**	⇓	PN	**Pn**	**11 25 40.2**	**+0.3**
TIWZ	**Tintock**	**1.16**	**205**	⇓	PN	**Pn**	**11 25 40.6**	**+0.4**
ALRZ	**Allen Road**	**1.17**	**353**	⇓	PN	**Pn**	**11 25 39.5**	**-0.7**
MRZ	**Mangatainoka R**	**1.19**	**218**	⇓	PN	**Pn**	**11 25 41.2**	**+0.6**
WATZ	**Wairara**	**1.19**	**328**		PN	**Pn**	**11 25 40.7**	**+0.1**
WAZ	**Wanganui**	**1.19**	**268**		PN	**Pn**	**11 25 43.9**	**+3.3**
MHGZ	**Mahia Peninsul**	**1.21**	**62**	⇑	PN	**Pn**	**11 25 37.3**	**-3.5**
PRRZ	**Plateau Road**	**1.23**	**355**	⇓	*ePN*	**Pn**	**11 25 40.2**	**-0.9**
PRGZ	**Paritu Road**	**1.32**	**53**	⇑	PN	**Pn**	**11 25 38.6**	**-3.7**
HRRZ	**Handcock Road**	**1.34**	**352**		*ePN*	**Pn**	**11 25 41.8**	**-0.8**
RRRZ	**Republican Roa**	**1.38**	**359**		PN	**Pn**	**11 25 41.9**	**-1.3**
HOWZ	**Holdsworth Sta**	**1.41**	**213**	⇓	PN	**Pn**	**11 25 43.6**	**+0.1**
TMWZ	**Te Maipa**	**1.47**	**199**	⇓	PN	**Pn**	**11 25 44.0**	**-0.4**
TARZ	**Mount Tarawera**	**1.49**	**359**	⇓	PN	**Pn**	**11 25 43.7**	**-1.0**
VRZ	**Vera Road**	**1.50**	**293**		PN	**Pn**	**11 25 46.2**	**+1.4**
OGWZ	**Otaki Gorge**	**1.51**	**223**	⇓	PN	**Pn**	**11 25 45.4**	**+0.5**
URZ	**Urewera**	**1.53**	**17**		PN	**Pn**	**11 25 42.6**	**-2.6**
URZ	**Urewera**	**1.53**	**17**		P	**Pn**	**11 25 42.0**	**-3.2**
	924nm,0.3s,baz=224,slow=7.4,SNR=1474							
UTU	**Utuhina**	**1.57**	**350**		PN	**Pn**	**11 25 45.1**	**-0.7**
MKRZ	**Makatiti**	**1.58**	**358**		*ePN*	**Pn**	**11 25 45.1**	**-0.9**
MWZ	**Matawai**	**1.59**	**29**		*ePN*	**Pn**	**11 25 43.1**	**-2.9**
OMRZ	**Omania**	**1.62**	**355**	⇓	*ePN*	**Pn**	**11 25 45.2**	**-1.3**
EDRZ	**Edgecumbe**	**1.62**	**6**		*ePN*	**Pn**	**11 25 44.8**	**-1.7**
MTW	**Mount Morrison**	**1.64**	**208**	⇓	PN	**Pn**	**11 25 46.1**	**-0.6**
KIW	**Kapiti Island**	**1.68**	**227**	⇓	PN	**Pn**	**11 25 48.0**	**+0.7**
RAEZ	**Rainy Point**	**1.71**	**284**		*ePN*	**Pn**	**11 25 50.0**	**+2.3**
KARZ	**Kaharoa**	**1.71**	**352**	⇓	PN	**Pn**	**11 25 46.7**	**-1.1**
MARZ	**Manawahe**	**1.74**	**4**		PN	**Pn**	**11 25 46.2**	**-1.9**
CAW	**Cannon Point**	**1.78**	**219**	⇓	PN	**Pn**	**11 25 48.4**	**-0.2**
HIZ	**Hauiti**	**1.78**	**312**	⇓	PN	**Pn**	**11 25 49.4**	**+0.7**
TRWZ	**Traveller**	**1.79**	**201**	⇓	PN	**Pn**	**11 25 47.9**	**-0.9**
CNGZ	**Carnagh Statio**	**1.80**	**47**		PN	**Pn**	**11 25 45.0**	**-3.9**
MHEZ	**Mangahewa**	**1.83**	**290**		PN	**Pn**	**11 25 52.1**	**+2.7**
PAWZ	**Paruwai Farm**	**1.86**	**207**		PN	**Pn**	**11 25 48.9**	**-0.9**
OPRZ	**Ohinepanea**	**1.88**	**1**		PN	**Pn**	**11 25 47.8**	**-2.2**
DREZ	**Durham Road**	**1.88**	**286**		PN	**Pn**	**11 25 52.5**	**+2.4**
DFE	**Dawson Falls**	**1.92**	**281**		PN	**Pn**	**11 25 53.9**	**+3.3**
NEZ	**North Egmont**	**1.94**	**283**		PN	**Pn**	**11 25 53.7**	**+2.9**
MSWZ	**Moikau Station**	**1.95**	**210**		PN	**Pn**	**11 25 49.9**	**-1.1**
TGRZ	**Tauranga**	**2.00**	**354**		*ePN*	**Pn**	**11 25 50.3**	**-1.4**
PKE	**Pukeiti**	**2.04**	**284**		PN	**Pn**	**11 25 55.2**	**+2.9**
NRZ	**Ngariki Road**	**2.05**	**280**		PN	**Pn**	**11 25 54.4**	**+2.1**
PLWZ	**Palliser**	**2.08**	**207**		PN	**Pn**	**11 25 51.4**	**-1.4**
BHW	**Baring Head**	**2.11**	**216**		PN	**Pn**	**11 25 52.1**	**-1.1**
SNZO	**South Karori**	**2.11**	**221**		PN	**Pn**	**11 25 52.6**	**-0.7**
SNZO	**South Karori**	**2.11**	**221**		*ePn*	**Pn**	**11 25 52.5**	**-0.7**
NWEZ	**Newall Road**	**2.11**	**281**		PN	**Pn**	**11 25 56.2**	**+3.0**
PUZ	**Puketiti**	**2.13**	**40**	⇑	PN	**Pn**	**11 25 49.2**	**-4.3**
TOZ	**Tahuroa Road**	**2.15**	**338**		PN	**Pn**	**11 25 53.3**	**-0.5**
WIZ	**White Island**	**2.25**	**13**		PN	**Pn**	**11 25 52.3**	**-2.9**
TUWZ	**Tuamarina**	**2.61**	**228**		PN	**Pn**	**11 25 59.1**	**-0.9**
MKAZ	**Moumakai**	**2.82**	**337**		PN	**Pn**	**11 26 02.9**	**-0.1**
NNZ	**Nelson**	**2.83**	**237**		PN	**Pn**	**11 26 03.4**	**+0.3**
BSWZ	**Blackbirch Sta**	**2.83**	**225**		PN	**Pn**	**11 26 02.2**	**-1.0**
KUZ	**Kuaotunu**	**3.04**	**348**		PN	**Pn**	**11 26 05.3**	**-0.7**
WTAZ	**Waiatarua**	**3.18**	**330**		PN	**Pn**	**11 26 07.8**	**-0.2**
MTAZ	**Motutapu**	**3.20**	**336**		PN	**Pn**	**11 26 08.6**	**+0.4**
KAAZ	**Kauri Point**	**3.23**	**333**		PN	**Pn**	**11 26 09.0**	**+0.3**
RVAZ	**Riverhead Bore**	**3.33**	**332**		PN	**Pn**	**11 26 10.3**	**+0.3**
THZ	**Tophouse**	**3.43**	**232**		PN	**Pn**	**11 26 10.0**	**-1.3**
WCZ	**Waipu Caves**	**4.16**	**335**		PN	**Pn**	**11 26 21.9**	**+0.6**
LTZ	**Lake Taylor**	**4.43**	**225**		PN	**Pn**	**11 26 22.8**	**-2.4**
MQZ	**McQueen's Vall**	**4.93**	**215**		*ePN*	**Pn**	**11 26 28.1**	**-3.8**
OUZ	**Omahuta**	**5.07**	**332**		PN	**Pn**	**11 26 34.9**	**+1.1**
RPZ	**Rata Peaks**	**5.72**	**224**		*ePN*	**Pn**	**11 26 39.5**	**-3.3**
RPZ	**Rata Peaks**	**5.72**	**224**		P	**Pn**	**11 26 41.6**	**-1.2**
	15nm,0.3s,baz=348,slow=0.3,SNR=51							
RPZ					LR	LR	11 28 41.6	
	comp=Z,3μm,20.7s,baz=36,slow=34							
FOZ	**Fox Glacier**	**6.40**	**231**		*eP*N	**Pn**	**11 26 48.0**	**-4.2**
LBZ	**Lake Benmore**	**6.63**	**223**		*eP*N	**Pn**	**11 26 51.8**	**-3.6**
ODZ	**Otahua Downs**	**6.87**	**217**		*eP*N	**Pn**	**11 26 54.8**	**-3.9**
TUZ	**Tuapeka**	**8.03**	**217**		*eP*N	**Pn**	**11 27 11.1**	**-3.4**
SYZ	**Scrubby Hill**	**8.69**	**216**		*eP*N	**Pn**	**11 27 20.7**	**-2.9**
WHZ	**Wether Hill Ro**	**8.82**	**223**		*eP*N	**Pn**	**11 27 21.3**	**-4.0**
APZ	**The Paps**	**9.45**	**218**		*eP*N	**Pn**	**11 27 30.5**	**-3.4**
DZM	**Mont Dzumac**	**19.59**	**331**		*eP*	**Pn**	**11 29 46.7**	**-0.4**
	283nm,1.4s							
DZM					*e*LR	LR	11 35 23.8	
	15μm,22.8s							
NOUC	**Port Laguerre**	**19.61**	**331**		*eP*	**Pn**	**11 29 47.0**	**-0.5**
MSVF	**Nonsavu**	**21.95**	**4**		P	**P**	**11 30 09.1**	**-2.2**
	227nm,0.8s,mb5.7,SNR=5.7							
CNB	**Canberra Magne**	**21.96**	**273**		*eP*	**P**	**11 30 14.1**	**+2.8**
MOO	**Moorlands**	**22.24**	**253**		*eP*	**P**	**11 30 16.3**	**+2.2**
ARMA	**Armidale**	**22.34**	**287**		*eP*	**P**	**11 30 18.5**	**+3.2**
ARMA					*e*S	**S**	**11 34 28.6**	**+9.0**
TOO	**Toolangi**	**24.28**	**265**	⇓	*iP*	**P**	**11 30 35.9**	**+1.3**
RAR	**Rarotonga**	**27.39**	**55**		P	**P**	**11 31 01.4**	**-1.4**
	60nm,1.0s,mb5.1,baz=174,slow=1.7,SNR=4.7							
RAR					LR	LR	11 39 34.2	
	comp=Z,2μm,18.8s,MS4.7,baz=220,slow=31							
STKA	**Stephens Creek**	**29.26**	**275**		*eP*	**P**	**11 31 20.6**	**+1.1**
	56nm,0.7s,mb5.4							
STKA	**Stephens Creek**	**29.26**	**275**		*eP*	**P**	**11 31 20.6**	**+1.2**
	18nm,0.8s,mb4.8							
STKA	**Stephens Creek**	**29.26**	**275**		P	**P**	**11 31 19.8**	**+0.3**
	64nm,0.7s,mb5.4,baz=106,slow=9.4,SNR=125							
STKA					LR	LR	11 42 48.6	
	comp=Z,6μm,19.1s,MS5.2,baz=145,slow=36							
CTA	**Charters Tower**	**32.51**	**298**		*eP*	**P**	**11 31 49.3**	**+1.1**
	18nm,1.1s,mb4.9							
CTA	**Charters Tower**	**32.51**	**298**		P	**P**	**11 31 48.0**	**-0.2**
	17nm,0.8s,mb5.0,baz=155,slow=9.9,SNR=8.2							
CTA					pP	pP	11 31 57.8	+1.5
	14nm,0.8s,baz=120,slow=12,SNR=3.7							
CTA					LR	LR	11 44 13.1	
	comp=Z,3μm,20.4s,MS5.0,baz=139,slow=35							
CTA	**Charters Tower**	**32.51**	**298**		P	**P**	**11 31 48.0**	**-0.2**
CTA					*PP	pP	11 31 57.8	+1.5
CTA					pmax	pmax		
	comp=Z,17nm,0.9s							
CTA					pmax	pmax		
	comp=Z,14nm,0.8s							
CTA					MLR	MLR		
	comp=Z,3μm,20.4s							
CTAO	**Charters Tower**	**32.51**	**298**		*eP*	**P**	**11 31 48.7**	**+0.6**
	comp=Z,53nm,1.2s,mb5.3							
CTAO					LR	LR		
	comp=Z,3μm,20.0s,MS5.0							
CTAO	**Charters Tower**	**32.51**	**298**		*eP*	**P**	**11 31 48.7**	**+0.5**
CTAO					pmax	pmax		
	comp=Z,53nm,1.2s,mb5.3							
CTAO					MLR	MLR		
	comp=Z,3μm,20.0s,MS5.0							
CTAO	**Charters Tower**	**32.51**	**298**		P	**P**	**11 31 49.1**	**+0.9**
HNR	**Honiara**	**33.60**	**329**		P	**P**	**11 31 56.2**	**-1.5**
	comp=Z,235nm,0.9s,mb6.1,baz=151,slow=4.5,SNR=4.9							
HNR					LR	LR	11 43 50.3	
	comp=Z,4μm,21.2s,MS5.1,baz=154,slow=33							
DRV	**Dumont d'Urvil**	**33.82**	**205**		P	**P**	**11 32 04.0**	**+4.8**
DRV					R		11 41 00.0	
PPT	**Papeete**	**36.71**	**63**		*eS*	**S**	**11 38 13.5**	**+7.1**
	comp=Z,547nm,25.0s							
PPT					*e*LR	LR	11 42 31.3	
	comp=Z,4μm,25.0s,baz=223							
PPT	**Papeete**	**36.71**	**63**		LR	LR	11 43 34.7	
	comp=Z,1μm,20.6s,MS4.7,baz=242,slow=30							
SBA	**Scott Base**	**38.45**	**183**		*eP*	**P**	**11 32 39.5**	**+0.8**
	comp=Z,116nm,1.5s,mb5.4							
SBA					*e*PcP	PcP	11 34 52.0	+0.8
SBA					LR	LR		
	comp=Z,1μm,20.0s,MS4.7							
SBA	**Scott Base**	**38.45**	**183**		*eP*	**P**	**11 32 39.5**	**+0.8**
SBA					*e*		11 34 52.0	
SBA					pmax	pmax		
	comp=Z,116nm,1.5s,mb5.4							
SBA					MLR	MLR		
	comp=Z,1μm,20.0s,MS4.7							
COEN	**Coen**	**38.93**	**302**		P	**P**	**11 32 43.5**	**+0.2**
ASAR	**Alice Springs**	**39.25**	**281**		P	**P**	**11 32 45.5**	**-0.5**
	comp=Z,79nm,0.8s,mb5.5,baz=133,slow=9.7,SNR=832							
ASAR					pP	pP	11 32 54.8	+0.6
	comp=Z,59nm,0.9s,baz=127,slow=9.0,SNR=11							
ASAR					S	**S**	**11 38 41.4**	**-3.5**
	comp=Z,5.7nm,1.0s,baz=127,slow=16,SNR=8.3							
ASAR					PKPPKP		12 05 18.6	
	comp=Z,0.1nm,0.3s,baz=325,slow=3.5,SNR=4.1							
ASAR	**Alice Springs**	**39.25**	**281**		P	**P**	**11 32 45.5**	**-0.5**
ASAR					*PP	pP	11 32 54.8	+0.6
ASAR					S	**S**	**11 38 41.4**	**-3.5**
ASAR					pmax	pmax		
	comp=Z,79nm,0.8s							
ASAR					pmax	pmax		
	comp=Z,59nm,0.9s							
ASAR					smax			
	comp=N,6.0nm,1.0s							
PMG	**Port Moresby**	**39.96**	**311**		*eP*	**P**	**11 32 51.4**	**-0.5**
	comp=N,66nm,0.8s,mb5.4							
PMG					LR	LR		
	comp=Z,5μm,19.0s,MS5.4							
PMG	**Port Moresby**	**39.96**	**311**		*eP*	**P**	**11 32 51.4**	**-0.5**
PMG					pmax	pmax		
	comp=Z,66nm,0.8s							
PMG					MLR	MLR		
	comp=Z,5μm,19.0s							
PMG	**Port Moresby**	**39.96**	**311**		P	**P**	**11 32 52.5**	**+0.6**
	comp=Z,109nm,1.2s,mb5.5							
FORT	**Forrest**	**40.17**

DAV LR LR
comp=Z,955nm,20.0s,MS5.0
DAV Davao City (W) 66.15 303 P **P** **11 36 04.5 -0.4**
comp=Z,186nm,0.4s,mb6.5,baz=15,slow=6.0,SNR=9.6
DAV Davao City (W) 66.15 303 P **P** **11 36 04.6 -0.2**
SNR=6.6
NGJI Ngawi 66.20 281 P pP 11 36 18.0 +4.1
SYO Syowa Base 67.00 196⇓ *eP* **P** **11 36 07.4 -2.1**
SYO Syowa Base 67.00 196⇓ PcP PcP 11 36 36.4 -1.4
BJII Banjarnegara 67.56 279 P **P** **11 36 15.6 +1.7**
comp=Z,44nm,1.7s,mb5.2
MIDW Midway 67.83 6 PFAKE 11 36 30.0 +15
MIDW LR LR
comp=Z,868nm,19.0s,MS5.0
CISI Cisompet, Garu 68.86 278 P **P** **11 36 21.4 -0.7**
comp=Z,2µmcomp=Z,208nm,1.2s,mb6.0
VNA3 Neumayer Olymp 69.25 178 *eP* **P** **11 36 21.6 -2.0**
MAIT Maitri 69.26 185 *eP* **P** **11 36 24.0 +0.3**
NVL N'lazarevskaya 69.27 185 *eP* **P** **11 36 22.5 -1.2**
NVL pmax pmax
comp=Z,107nm,1.2s,mb5.7
NVL MLR MLR
comp=Z,759nm,18.0s,MS5.0
TSM Tawau 69.35 294 P **P** **11 36 24.8 -0.3**
LEM Lembang 69.47 278 P **P** **11 36 26.1 +0.2**
comp=Z,1µmcomp=Z,99nm,1.3s,mb5.6
MYLDM Lahad Datu 69.54 296 P **P** **11 36 25.7 -0.5**
MYLDM Lahad Datu 69.54 296 P **P** **11 36 26.4 +0.2**
comp=Z,73nm,1.3s,mb5.5
VNA1 Neumayer--Stat 69.88 178 *eP* **P** **11 36 25.9 -1.6**
SDKM Sandakan 70.78 295 P **P** **11 36 33.4 -0.4**
STKI Sintang 71.06 287 P **P** **11 36 35.2 -0.4**
comp=Z,57nm,1.2s,mb5.4
CGJI Cibinong 71.08 277 P **P** **11 36 34.8 -0.9**
comp=Z,1µmcomp=Z,107nm,1.1s,mb5.7
RBSI Rajabasa 71.53 278 P **P** **11 36 37.2 -1.2**
comp=Z,2µmcomp=Z,164nm,1.0s,mb5.9
KKM Kota Kinabalu 71.75 295 P **P** **11 36 39.4 -0.3**
KKM Kota Kinabalu 71.75 295 P **P** **11 36 38.3 -1.4**
comp=Z,630nmcomp=Z,65nm,1.2s,mb5.4
KDM Kudat 71.93 296 P **P** **11 36 40.2 -0.6**
BTM Bintulu 72.01 290 P **P** **11 36 40.5 -0.8**
TPI Tanjungpandan 72.06 282 P **P** **11 36 40.6 -1.0**
comp=Z,653nmcomp=Z,46nm,1.3s,mb5.2
SBUM Sibu 72.12 289 P **P** **11 36 41.2 -0.8**
SBUM Sibu 72.12 289 P **P** **11 36 41.1 -0.9**
comp=Z,32nm,1.2s,mb5.1
KSM Kuching 72.87 287 P **P** **11 36 45.5 -1.0**
KSM Kuching 72.87 287 P **P** **11 36 45.0 -1.4**
comp=Z,517nmcomp=Z,41nm,1.2s,mb5.2
KLSI 73.04 278 P **P** **11 36 46.0 -1.4**
comp=Z,2µmcomp=Z,122nm,1.4s,mb5.7
LWLI Liwa 73.34 277 P **P** **11 36 48.5 -0.7**
comp=Z,5µmcomp=Z,142nm,1.3s,mb5.8
MDSI Maura Dua 73.59 278 P **P** **11 36 49.3 -1.4**
comp=Z,715nmcomp=Z,89nm,1.3s,mb5.5
PPBI Pangkal Pinang 73.59 281 P **P** **11 36 49.9 -0.8**
comp=Z,4µmcomp=Z,77nm,1.2s,mb5.5
CBIJ Chichi jima 73.78 328 LR LR 12 06 48.4
comp=Z,578nm,20.0s,MS4.9,baz=272,slow=34
KSI Kapahiang 75.33 278 P **P** **11 37 00.0 -0.8**
comp=Z,163nm,1.0s,mb5.9
MYKOM Kota Tinggi 77.89 283 P **P** **11 37 14.3 -1.0**
MYKOM Kota Tinggi 77.89 283 P **P** **11 37 14.4 -0.9**
comp=Z,458nmcomp=Z,31nm,1.2s,mb5.1
SDSI Sungai Dareh 77.97 279 P **P** **11 37 12.9 -2.8**
comp=Z,37nm,1.0s,mb5.3
KGM Kluang 78.44 282 P **P** **11 37 17.4 -0.9**
PDSI Padang 78.72 278 P **P** **11 37 17.4 -2.5**
comp=Z,2µmcomp=Z,167nm,1.3s,mb5.8
PPI Padang Panjang 79.06 279 P **P** **11 37 19.5 -2.2**
comp=Z,3µmcomp=Z,39nm,1.3s,mb5.2
BKNI Bangkinang 79.07 280 P **P** **11 37 19.8 -2.0**
comp=Z,166nm,1.0s,mb5.9
PLCA Paso Flores 79.31 135 P **P** **11 37 23.7 +0.9**
PLCA LR LR 12 05 41.3
PLCA Paso Flores 79.31 135 P **P** **11 37 23.7 +0.9**
comp=Z,29nm,1.1s,mb5.1,baz=241,slow=4.9,SNR=21
PLCA LR LR 12 05 41.3
comp=Z,417nm,19.2s,MS4.8,baz=130,slow=30
SISI Saibi 79.50 277 P **P** **11 37 24.4 +0.2**
comp=Z,118nm,1.1s,mb5.7
MNSI Mandailing Nat 80.48 279 P **P** **11 37 27.2 -2.3**
comp=Z,90nm,0.9s,mb5.7
FRIM Kepong 80.52 282 P **P** **11 37 28.5 -1.1**
KTGM Kuala Trenggan 80.75 285 P **P** **11 37 29.5 -1.4**
IPM Ipoh 81.78 283 P **P** **11 37 35.3 -1.1**
IPM Ipoh 81.78 283 P **P** **11 37 34.5 -1.8**
comp=Z,537nmcomp=Z,53nm,1.0s,mb5.4
PSI Prapat 82.28 280 P **P** **11 37 35.6 -3.3**
comp=Z,45nm,0.8s,mb5.4,baz=167,slow=4.7,SNR=36
PSI Prapat 82.28 280 P **P** **11 37 35.7 -3.3**
PSI pmax pmax
comp=Z,45nm,0.8s,mb5.5
TATO Taipei 82.31 311 PFAKE 11 37 50.0 +11
TATO LR LR
comp=Z,1µm,20.0s,MS5.2
KULM Kulim 82.59 283 P **P** **11 37 39.2 -1.4**
KULM Kulim 82.59 283 P **P** **11 37 39.0 -1.6**
comp=Z,585nmcomp=Z,55nm,1.2s,mb5.5
TSI Tuntungan 83.00 280 P **P** **11 37 41.3 -1.4**
MJAR Matsushiro Arr 83.69 330 P **P** **11 37 42.6 -3.1**
comp=Z,21nm,1.0s,mb5.2,baz=164,slow=5.4,SNR=29
MJAR pP pP 11 37 55.3 +0.8
comp=Z,2.5nm,0.7s,baz=242,slow=13,SNR=3.6
MJAR PP PP 11 40 56.9 -2.3
comp=Z,1.1nm,0.3s,baz=168,slow=5.8,SNR=5.6
MJAR Matsushiro Arr 83.69 330 P **P** **11 37 42.6 -3.1**
MJAR *PP pP 11 37 55.3 +0.8
MJAR 11 40 56.9
MJAR pmax pmax
comp=Z,21nm,1.0s
MJAR pmax pmax
comp=Z,3.0nm,0.7s
MJAR pmax pmax
comp=Z,1.0nm,0.4s
MAJO Matsushiro 83.69 330 *eP* **P** **11 37 43.6 -2.0**
comp=Z,55nm,1.2s,mb5.6
MAJO LR LR
comp=Z,508nm,21.0s,MS4.9
MAJO Matsushiro 83.69 330 *eP* **P** **11 37 43.7 -2.0**
MAJO pmax pmax
comp=Z,55nm,1.2s,mb5.6
MAJO MLR MLR
comp=Z,508nm,21.0s,MS4.9
MAT Matsushiro 83.69 330 P **P** **11 37 43.1 -2.6**
MAT *eS* S 11 48 13.0 +6.7
TPTI 83.90 279 P **P** **11 37 45.5 -1.9**
comp=Z,51nm,0.8s,mb5.7
QIZ Qiongzhong 85.27 299 P **P** **11 37 55.5 +1.4**
QIZ pP pP 11 37 59.3 -3.7
QIZ S S 11 48 18.0 -4.8
QIZ sS sS 11 48 35.8 -1.7
QIZ pmax pmax
comp=Z,14nm,1.0s,mb5.0
QIZ pmax pmax
comp=Z,32nm,3.5s
QIZ LR LR
comp=N,270nm,19.7s,MS4.7
QIZ LR LR
comp=E,110nm,18.4s,MS4.7
QIZ LR LR
comp=Z,410nm,22.2s,MS4.8
QIZ Qiongzhong 85.27 299 PFAKE 11 38 10.0 +16
QIZ LR LR
comp=Z,442nm,21.0s,MS4.8
TRQA Tornquist 85.83 138 *eP* **P** **11 37 57.3 +0.6**
comp=Z,30nm,1.0s,mb5.5
TRQA LR LR
comp=Z,1µm,19.0s,MS5.3
LCO Las Campanas 87.38 126 *eP* **P** **11 38 05.4 +0.9**
comp=Z,9.3nm,1.0s,mb5.0
LCO LR LR
comp=Z,827nm,22.0s,MS5.1
YUK Yuzh-Kuril'sk 87.85 338 *d iP* **P** **11 38 11.0 +4.9**
YUK MLR MLR
comp=N,230nm,18.0s,MS4.7
YUK MLR MLR
comp=E,100nm,18.0s,MS4.7
YUK MLR MLR
comp=Z,350nm,18.0s,MS4.8
KSRS Korea Array 88.83 323 P **P** **11 38 09.8 -1.2**
comp=Z,24nm,0.9s,mb5.5,baz=142,slow=5.7,SNR=61
KSRS pP pP 11 38 21.9 +2.0
comp=Z,12nm,0.8s,baz=145,slow=5.8,SNR=9.2
KSRS LR LR 12 17 56.0
comp=Z,252nm,18.0s,MS4.7,baz=149,slow=36
KSRS Korea Array 88.83 323 P **P** **11 38 09.8 -1.1**
KSRS *PP pP 11 38 21.9 +2.1
KSRS pmax pmax
comp=Z,24nm,0.9s,mb5.5
KSRS pmax pmax
comp=Z,12nm,0.9s,mb5.2
KSRS MLR MLR
comp=Z,252nm,18.0s,MS4.7
NJ2 Nanjing 89.20 314 *eP* **P** **11 38 11.8 -1.0**
NJ2 pP pP 11 38 22.0 +0.3
NJ2 sP sP 11 38 25.5 +0.6
NJ2 PP PP 11 41 47.5 +3.7
NJ2 S S 11 49 03.0 +2.9
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb5.5
NJ2 pmax pmax
comp=Z,150nm,5.1s
NJ2 LR LR
comp=N,170nm,22.3s,MS4.7
NJ2 LR LR
comp=E,240nm,22.4s,MS4.7
NJ2 LR LR
comp=Z,170nm,25.3s,MS4.4
INCN Inchon 89.46 323 PFAKE 11 38 20.0 +6.2
INCN LR LR
comp=Z,532nm,20.0s,MS5.0
WHN Wuhan 90.65 310⇓ **P** **11 38 16.3 -3.3**
WHN pP pP 11 38 28.0 -0.5
WHN S S 11 49 14.5 +0.9
WHN pmax pmax
comp=Z,51nm,1.0s,mb5.8
WHN LR LR
comp=N,640nm,18.2s,MS5.3
WHN LR LR
comp=E,840nm,19.1s,MS5.3
WHN LR LR
comp=Z,1µm,22.6s,MS5.3
YSS Yuzh-Sakhalins 91.41 338 *eP* **P** **11 38 21.9 -0.7**
comp=Z,12nm,0.8s,mb5.3
YSS Yuzh-Sakhalins 91.41 338⇑ *eP* **P** **11 38 22.5 -0.2**
YSS *e* 11 38 34.0
YSS MLR MLR
comp=N,300nm,20.0s
YSS MLR MLR
comp=Z,400nm,20.0s,MS4.9
PAYG Puerto Ayora 92.03 93 PFAKE 11 38 40.0 +14
PAYG LR LR
comp=Z,430nm,19.0s,MS4.9
CMAR Chiang Mai Arr 92.46 292 P **P** **11 38 27.1 -1.2**
comp=Z,16nm,1.0s,mb5.3,baz=154,slow=3.4,SNR=58
CMAR PP PP 11 42 06.5 -3.3
comp=Z,2.9nm,1.0s,baz=149,slow=6.5,SNR=6.2
CMAR PKKP PKKPbc 11 55 40.8 +0.1
comp=Z,0.6nm,0.4s,baz=299,slow=4.4,SNR=6.2
CMAR LR LR 12 24 32.3
comp=Z,386nm,19.5s,MS4.9,baz=176,slow=38
CMAR Chiang Mai Arr 92.46 292 P **P** **11 38 27.1 -1.2**
CMAR 11 42 06.6
CMAR 11 55 40.8
CMAR pmax pmax
comp=Z,16nm,1.0s
CMAR pmax pmax
comp=Z,3.0nm,1.0s
CMAR pmax pmax
comp=Z,1.0nm,0.4s
GYA Guiyang 92.53 303 P **P** **11 38 31.0 +2.6**
GYA PP PP 11 42 15.8 +5.5
GYA SKS 11 49 03.3
GYA S S 11 49 33.5 +2.7
GYA SS SS 11 55 48.3 +4.8
GYA pmax pmax
comp=Z,50nm,1.0s,mb5.9
GYA pmax pmax
comp=Z,160nm,5.8s
GYA LR LR
comp=N,4µm,20.9s,MS5.9
GYA LR LR
comp=E,3µm,22.5s,MS5.9
GYA LR LR
comp=Z,5µm,20.8s,MS5.9
CHTO Chiang Mai 92.70 292 *eP* **P** **11 38 28.6 -0.7**
comp=Z,12nm,0.8s,mb5.4
CHTO LR LR
comp=Z,539nm,20.0s,MS5.0
CHTO Chiang Mai 92.70 292 *eP* **P** **11 38 28.6 -0.8**
CHTO pmax pmax
comp=Z,12nm,0.8s,mb5.4
CHTO MLR MLR
comp=Z,539nm,20.0s,MS5.0
CHTO Chiang Mai 92.70 292 P **P** **11 38 28.7 -0.7**
CHTO Chiang Mai 92.70 292 P **P** **11 38 28.8 -0.6**
SNR=9.0
ENH Enshi 93.39 307 P **P** **11 38 30.6 -1.7**
ENH LR LR
comp=Z,541nm,22.0s,MS5.0
PET Petropavlovsk 93.66 349 PFAKE 11 38 40.0 +7.1
PET LR LR
comp=Z,501nm,19.0s,MS5.0
PETK Petropavlovsk- 93.89 349 P **P** **11 38 30.9 -3.0**
PETK pP pP 11 38 43.4 +0.5
PETK LR LR 12 14 51.4
PETK Petropavlovsk- 93.89 349 P **P** **11 38 30.9 -3.0**
comp=Z,2.5nm,0.8s,mb4.7,baz=105,slow=5.2,SNR=5.2
PETK pP pP 11 38 43.4 +0.5
comp=Z,2.7nm,0.8s,baz=177,slow=5.8,SNR=3.5
PETK LR LR 12 14 51.4
comp=Z,423nm,21.2s,MS4.9,baz=162,slow=32
PETK Petropavlovsk- 93.89 349 P **P** **11 38 30.9 -3.1**
PETK *PP pP 11 38 43.4 +0.5
PETK pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
PETK pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
MDJ Mudanjiang 93.98 328 P **P** **11 38 37.3 +2.7**
MDJ pP pP 11 38 40.5 -3.1
MDJ S S 11 49 49.0 +6.2
MDJ pmax pmax
comp=Z,6.0nm,1.6s,mb4.8
MDJ pmax pmax
comp=Z,110nm,8.8s
MDJ LR LR
comp=N,320nm,23.9s,MS4.8
MDJ LR LR
comp=E,180nm,25.6s,MS4.8
MDJ LR LR
comp=Z,500nm,23.9s,MS4.9
MDJ Mudanjiang 93.98 328 PFAKE 11 38 50.0 +15
MDJ LR LR
comp=Z,466nm,21.0s,MS4.9
KMI Kunming 94.22 299 P **P** **11 38 36.3 0.0**
KMI pP pP 11 38 41.5 -3.7
KMI sP sP 11 38 44.0 -4.4
KMI PP PP 11 42 28.0 +4.4
KMI S S 11 49 48.0 +2.2
KMI SS SS 11 56 09.5 +1.7
KMI pmax pmax
comp=Z,8.0nm,0.9s,mb5.2
KMI pmax pmax
comp=Z,72nm,3.7s
KMI LR LR
comp=N,160nm,24.3s,MS4.7
KMI LR LR
comp=E,290nm,24.3s,MS4.7
KMI LR LR
comp=Z,510nm,23.2s,MS4.9
NNA Nana 94.85 110 LR LR 12 11 50.1
comp=Z,478nm,21.4s,MS4.9,baz=258,slow=29
CN2 Changchun 95.06 326 *eP* **P** **11 38 42.0 +2.4**
SAO San Andreas Ge 95.09 45 PFAKE 11 38 50.0 +10
SAO LR LR
comp=Z,741nm,20.0s,MS5.2
HABR Khabarovsk 95.20 334 P **P** **11 38 39.4 -0.7**
HABR *e* 11 42 32.0
HABR S SKSac 11 49 13.1 -0.4
HABR *e* 11 49 56.0
HABR SS SS 11 56 28.9 +7.9
HABR MLR MLR
comp=Z,147nm,16.0s,MS4.5
MONP Monument Peak 95.22 51⇑ **P** **11 38 42.2 +1.5**
baz=95
DVTC Desert V Tower 95.25 51⇓ **P** **11 38 42.6 +1.8**
baz=95
MURC Murrieta 95.25 50⇓ **P** **11 38 41.7 +1.0**
baz=95
MCCM Marconi Confer 95.33 44 PFAKE 11 38 50.0 +9.0
MCCM LR LR
comp=Z,731nm,19.0s,MS5.2
ARVC Arvin 95.38 48⇓ **P** **P** **11 38 43.0 +1.6**
baz=96
BFSC Mount Baldy Ra 95.43 49⇑ **P** **P** **11 38 43.2 +1.6**
baz=96
SWSC Sam W. Stewart 95.63 51⇓ **P** **P** **11 38 44.0 +1.5**
baz=96
EDW2 Edwards Air Fo 95.69 49⇑ **P** **P** **11 38 44.1 +1.4**
baz=96
PFO Pinyon Flat Ob 95.70 51⇓ **P** **P** **11 38 44.0 +1.2**
baz=96
VES Vestal, Richgr 95.75 47⇓ **P** **P** **11 38 44.1 +1.2**
baz=96
HOPS Hopland 95.85 43 PFAKE 11 38 50.0 +6.6
HOPS LR LR
comp=Z,948nm,20.0s,MS5.3
ISA Isabella 95.97 48⇓ **P** **P** **11 38 45.1 +1.1**
baz=96
ISA Isabella 95.97 48 *eP* **P** **11 38 45.3 +1.3**
BELC Belle Mtn. Jos 96.25 51⇑ **P** **P** **11 38 46.3 +1.0**
baz=96
LRMC Laurel Mountai 96.29 48⇓ **P** **P** **11 38 46.8 +1.4**
baz=96
GLA Glamis 96.29 52⇑ **P** **P** **11 38 47.4 +1.9**
baz=96
GLA Glamis 96.29 52 *eP* **P** **11 38 47.7 +2.2**
BC3 Big Chuckawall 96.33 51⇓ **P** **P** **11 38 47.4 +1.8**
baz=96
XAN Xi'an 96.36 309 P **P** **11 38 43.8 -2.0**
XAN pP pP 11 38 53.3 -1.4
XAN pmax pmax
comp=Z,12nm,4.0s
BJT Baijiatuan 96.59 318 PFAKE 11 39 00.0 +13
BJT LR LR
comp=Z,433nm,20.0s,MS4.9
CMB Columbia Colle 96.59 45 PFAKE 11 39 00.0 +13
CMB LR LR
comp=Z,498nm,22.0s,MS5.0
BJI Beijing 96.61 318 P **P** **11 38 49.0 +2.2**
BJI S S 11 50 10.8 +5.0
BJI SS SS 11 56 47.0 +5.7
BJI pmax pmax
comp=Z,7.0nm,0.5s,mb5.3
BJI pmax pmax
comp=Z,200nm,6.2s
BJI LR LR
comp=N,330nm,21.6s,MS4.9
BJI LR LR
comp=E,220nm,21.0s,MS4.9
BJI LR LR
comp=Z,300nm,23.3s,MS4.7
HEC Hector,Ludlow 96.63 50⇑ **P** **P** **11 38 48.3 +1.3**
baz=97
GSC Goldstone 96.68 49⇓ **P** **P** **11 38 48.0 +0.8**
baz=97
GSC Goldstone 96.68 49 *eP* **P** **11 38 48.3 +1.1**
214A Organ Pipe Nat 96.78 54⇓ **P** **P** **11 38 49.3 +1.5**
baz=97
IRM Iron Mountain 96.86 51⇑ **P** **P** **11 38 49.5 +1.4**
baz=97
DAC Darwin (Calif) 96.91 48 PFAKE 11 39 00.0 +12
DAC LR LR
comp=Z,517nm,21.0s,MS5.0
ATAH Atahualpa 96.92 105 LR LR 12 16 10.1
comp=Z,601nm,18.1s,MS5.1,baz=218,slow=31
Y12C Blythe 96.96 52⇑ **P** **P** **11 38 50.0 +1.5**
baz=97
GMRC Granite Mounta 96.99 50⇑ **P** **P** **11 38 50.4 +1.8**
baz=97
Z13A Yuma Proving G 97.11 52⇓ **P** **P** **11 38 50.8 +1.6**
baz=97
WDC Whiskeytown Da 97.30 42 PFAKE 11 39 00.0 +10
WDC LR LR
comp=Z,623nm,20.0s,MS5.1
CPUP Villa Florida 97.32 133 P **P** **11 38 49.6 -0.9**
comp=Z,1.0nm,0.6s,mb4.4,baz=8.7,slow=4.0,SNR=3.6
CPUP LR LR 12 18 33.8
comp=Z,456nm,19.4s,MS5.0,baz=202,slow=33
CD2 Chengdu 97.42 304⇑ **P** **P** **11 38 53.0 +2.3**
CD2 pP pP 11 38 57.8 -1.8
CD2 sP sP 11 39 00.0 -2.8
CD2 PP PP 11 42 53.3 +5.0
CD2 SKS 11 49 28.8
CD2 S S 11 50 14.0 +0.8
CD2 sS sS 11 50 22.3 -5.7
CD2 SS SS 11 56 57.5 +4.5
CD2 pmax pmax
comp=Z,40nm,0.7s,mb6.0
CD2 pmax pmax
comp=Z,520nm,6.2s
CD2 LR LR
comp=N,400nm,14.8s,MS5.1
CD2 LR LR
comp=E,290nm,15.0s,MS5.1
CD2 LR LR
comp=Z,500nm,15.5s,MS5.1
PDMCI Parker Dam,Lak 97.56 51⇑ **P** **P** **11 38 52.5 +1.2**
baz=98
U10A Ash Meadows, A 97.73 49⇓ **P** **P** **11 38 54.1 +2.2**
baz=98
WCN Washoe City 97.85 45⇓ **P** **P** **11 38 54.1 +1.7**
baz=98
X13A Yucca 97.95 51⇓ **P** **P** **11 38 54.4 +1.5**
baz=98
Y14A Wickenburg 98.01 52⇓ **P** **P** **11 38 54.3 +1.0**
baz=98
LPAZ La Paz 98.02 119 P **P** **11 38 53.2 -0.7**
LPAZ LR LR 12 14 58.9
LPAZ La Paz 98.02 119 P **P** **11 38 53.2 -0.7**
comp=Z,1.3nm,0.9s,mb4.5,baz=268,slow=3.3,SNR=3.0
LPAZ LR LR 12 14 58.9
comp=Z,461nm,19.0s,MS5.0,baz=239,slow=30
NVAR Mina Array Bea 98.02 46 P **P** **11 38 51.2 -2.0**
NVAR PKKP PKKPbc 11 55 25.6 -0.9
NVAR Mina Array Bea 98.02 46 P **P** **11 38 51.2 -2.0**
comp=Z,1.1nm,1.0s,mb4.4,baz=218,slow=8.2,SNR=7.4
NVAR PKKP PKKPbc 11 55 25.6 -0.9
comp=Z,1.0nm,1.0s,baz=82,slow=2.5,SNR=6.9
YBH Yreka Blue Hor 98.06 41 PFAKE 11 39 00.0 +6.7
YBH LR LR
comp=Z,620nm,21.0s,MS5.1
V12A Nelson 98.12 50⇑ **P** **P** **11 38 55.3 +1.6**
baz=98
318A Bisbee 98.22 56⇑ **P** **P** **11 38 55.8 +1.5**
baz=98
TPH Tonopah 98.38 47 PFAKE 11 39 00.0 +5.2
TPH LR LR
comp=Z,403nm,19.0s,MS4.9
Y15A Casa Rosa Ranc 98.43 53⇑ **P** **P** **11 38 56.4 +1.3**
baz=98
X14A Yava 98.44 52⇓ **P** **P** **11 38 56.8 +1.7**
baz=98
117A Oracle 98.49 55⇓ **P** **P** **11 38 57.3 +1.8**
baz=99
HUMO Hull Mountain 98.57 41 PFAKE 11 39 00.0 +4.4
HUMO LR LR
comp=Z,700nm,22.0s,MS5.1
S10A Tonopah Range, 98.63 47⇑ **P** **P** **11 38 57.6 +1.7**
baz=99
V13A Grand Canyon W 98.72 50⇑ **P** **P** **11 38 58.0 +1.6**
baz=99
U12A Valley of Fire 98.79 50⇑ **P** **P** **11 38 58.3 +1.6**
baz=99
W14A Seligman 98.82 51⇑ **P** **P** **11 38 58.4 +1.6**
baz=99
X15A Humboldt 98.85 52⇑ **P** **P** **11 38 58.5 +1.5**
baz=99
Y16A Circle Bar Ran 98.91 53⇑ **P** **P** **11 38 58.9 +1.6**
baz=99
T11A Corn Creek, Al 98.94 49⇑ **P** **P** **11 38 58.6 +1.3**
baz=99
118A Homack Ranch, 99.02 55⇑ **P** **P** **11 38 59.3 +1.4**
baz=99
R10A Warm Springs 99.05 47⇑ **P** **P** **11 38 59.5 +1.7**
baz=99
320A Kipp Ranch, An 99.09 57⇓ **P** **P** **11 38 59.8 +1.6**
baz=99
V14A Boquillas Ranc 99.09 51⇑ **P** **P** **11 38 59.9 +1.8**
baz=99
Y17A Roosevelt 99.17 54⇑ **P** **P** **11 38 59.7 +1.2**
baz=99
X16A Lo Mia Camp, P 99.29 53⇑ **P** **P** **11 39 00.6 +1.6**
baz=99
MOD Modoc 99.42 42 PFAKE 11 39 10.0 +11
MOD LR LR
comp=Z,790nm,21.0s,MS5.2

U14A Mt Trumbull 99.58 50 ⇓P **P** 11 39 01.8 +1.6
baz=100
HHC Hu-ho-hao-te 99.62 316 *e*P Pdif 11 39 02.5 +1.8
HHC pP pP 11 39 07.0 -2.2
HHC sP sP 11 39 09.8 -2.6
HHC PP PP 11 43 10.0 +5.0
HHC SKS 11 49 38.0
HHC *e*S S 11 50 32.0 +0.6
HHC sS sS 11 50 39.8 -6.5
HHC pmax pmax
comp=Z,11nm,0.9s,mb5.3
HHC pmax pmax
comp=Z,130nm,6.3s
HHC LR LR
comp=N,260nm,14.8s
HHC LR LR
comp=E,280nm,19.9s
HHC LR LR
comp=Z,390nm,17.1s,MS5.0
V15A Kaibab Nationa 99.78 51 ⇑P Pdif 11 39 02.7 +1.3
baz=100
COR Corvallis 99.85 39 PFAKE 11 39 10.0 +8.3
COR LR LR
comp=Z,991nm,21.0s,MS5.3
S13A Holt Ranch, En 99.97 49 ⇓P Pdif 11 39 03.2 +1.0
baz=100
BMN Battle Mountai 100.02 45 PFAKE 11 39 10.0 +7.6
BMN LR LR
comp=Z,480nm,21.0s,MS5.0
R12A Pony Springs, 100.04 48 ⇑P Pdif 11 39 04.0 +1.5
baz=100
WUAZ Wupatki 100.06 52 ⇑P Pdif 11 39 04.0 +1.4
baz=100
WUAZ Wupatki 100.06 52 PFAKE 11 39 10.0 +7.4
WUAZ LR LR
comp=Z,557nm,20.0s,MS5.1
U15A North Rim 100.11 51 ⇑P Pdif 11 39 04.1 +1.2
baz=100
CCUT Cedar City 100.24 49 *e*Pdif Pdif 11 39 05.4 +2.0
V17A Tonalea, Kykot 100.48 52 ⇓P Pdif 11 39 05.7 +1.2
baz=101
LZH Lanzhou 100.80 308 *e*P Pdif 11 39 09.0 +3.1
LZH pP 11 39 14.0
LZH sP 11 39 16.5
LZH pmax pmax
comp=Z,13nm,1.0s
LZH LR LR
comp=N,150nm,10.6s
LZH LR LR
comp=E,190nm,8.2s
LZH LR LR
comp=Z,380nm,14.0s,MS5.1
TXAR Lajitas Array 101.01 61 P Pdif 11 39 05.9 -1.0
comp=Z,0.2nm,0.8s,baz=226,slow=6.8,SNR=3.5
TXAR pP 11 39 17.9
comp=Z,0.5nm,1.0s,baz=200,slow=10,SNR=3.9
TXAR PP PP 11 43 10.8 -4.9
comp=Z,0.4nm,0.9s,baz=205,slow=5.5,SNR=3.7
TXAR PKKPbc PKKPbc 11 55 16.6 -1.0
comp=Z,1.7nm,1.0s,baz=101,slow=4.1,SNR=11
TXAR Lajitas Array 101.01 61 P Pdif 11 39 05.9 -0.9
TXAR 11 43 10.8
TXAR pmax pmax
comp=Z,1.0nm,1.0s
TXAR pmax pmax
comp=Z,2.0nm,1.0s
MNTX Cornudas Mount 101.37 58 PFAKE 11 39 20.0 +12
MNTX LR LR
comp=Z,490nm,21.0s,MS5.0
MVU Marysvale 101.55 49 PFAKE 11 39 20.0 +11
MVU LR LR
comp=Z,612nm,20.0s,MS5.1
NLWA Neilton Lookou 101.65 37 PFAKE 11 39 20.0 +10
NLWA LR LR
comp=Z,723nm,21.0s,MS5.2
OTAV Otavalo 101.68 100 PFAKE 11 39 20.0 +10
OTAV LR LR
comp=Z,488nm,20.0s,MS5.0
HIA Hailar 101.79 326 PFAKE 11 39 20.0 +10
HIA LR LR
comp=Z,664nm,21.0s,MS5.1
DUG Dugway 102.33 48 PFAKE 11 39 20.0 +7.3
DUG LR LR
comp=Z,356nm,21.0s,MS4.9
ANMO Albuquerque 102.74 55 PFAKE 11 39 20.0 +5.5
ANMO LR LR
comp=Z,532nm,21.0s,MS5.0
MVCO Mesa Verde 102.92 52 PFAKE 11 39 20.0 +4.7
MVCO LR LR
comp=Z,701nm,21.0s,MS5.2
HAWA Hanford 103.00 40 PFAKE 11 39 20.0 +4.3
HAWA LR LR
comp=Z,618nm,22.0s,MS5.1
TGUH Tegucigalpa,Un 103.56 83 PFAKE 11 39 30.0 +12
TGUH LR LR
comp=Z,396nm,20.0s,MS4.9
HLID Hailey 103.69 44 PFAKE 11 39 30.0 +11
HLID LR LR
comp=Z,341nm,19.0s,MS4.9
HWUT Hardware Ranch 103.97 47 PFAKE 11 39 30.0 +10
HWUT LR LR
comp=Z,447nm,21.0s,MS5.0
W25A X Bar L Ranch, 104.18 56 ⇓P Pdif 11 39 22.9 +2.0
baz=104
JCT Junction City 104.35 62 PFAKE 11 39 30.0 +8.3
JCT LR LR
comp=Z,845nm,21.0s,MS5.3
H13A Challis 104.45 44 ⇓P Pdif 11 39 23.2 +1.1
baz=104
AHID Auburn Hatcher 104.99 47 PFAKE 11 39 30.0 +5.5
AHID LR LR
comp=Z,444nm,21.0s,MS5.0
LSA Lhasa 105.06 296 PFAKE 11 43 50.0 +11
LSA LR LR
comp=Z,494nm,22.0s,MS5.0
WRAK Wrangell Islan 105.08 27 PFAKE 11 43 50.0 +12
WRAK LR LR
comp=Z,637nm,20.0s,MS5.2
SDCO Great Sand Dun 105.10 53 PFAKE 11 39 30.0 +5.0
SDCO LR LR
comp=Z,367nm,19.0s,MS4.9
NEW Newport 105.47 39 PFAKE 11 43 50.0 +11
NEW LR LR
comp=Z,839nm,21.0s,MS5.3
AMTX Amarillo 105.77 58 PFAKE 11 43 50.0 +10
AMTX LR LR
comp=Z,529nm,20.0s,MS5.1
BW06 Boulder Array 105.86 47 PFAKE 11 43 50.0 +10
BW06 LR LR
comp=Z,441nm,20.0s,MS5.0
PDAR Pinedale Array 105.86 47 Pdiff Pdif 11 39 30.0 +1.7
comp=Z,0.2nm,0.7s,baz=222,slow=2.0,SNR=3.0
PDAR PP PP 11 43 48.2 -3.5
comp=Z,0.4nm,1.0s,baz=231,slow=5.2,SNR=3.9
PDAR PKKPbc PKKPbc 11 55 03.5 -0.1
comp=Z,2.1nm,0.9s,baz=78,slow=6.6,SNR=18
PDAR PKKP PKKPbc 11 55 19.6 +16
comp=Z,2.4nm,1.1s,baz=90,slow=4.4,SNR=8.4
MSO Missoula 106.11 42 PFAKE 11 43 50.0 +9.3
MSO LR LR
comp=Z,598nm,22.0s,MS5.1
BCIP Isla Barro Col 106.27 92 PFAKE 11 43 50.0 +8.0
BCIP LR LR
comp=Z,366nm,22.0s,MS4.9
ISCO Idaho Springs 106.31 52 PFAKE 11 43 50.0 +8.7
ISCO LR LR
comp=Z,595nm,21.0s,MS5.1
TEIG Tepich 106.52 77 PFAKE 11 43 50.0 +7.7
TEIG LR LR
comp=Z,301nm,21.0s,MS4.8
LKWY Lake 106.53 46 PFAKE 11 43 50.0 +8.4
LKWY LR LR
comp=Z,611nm,20.0s,MS5.2
BOZ Bozeman (W) 106.56 44 PFAKE 11 43 50.0 +8.4
BOZ LR LR
comp=Z,419nm,21.0s,MS5.0
HKT Hockley 106.77 65 PFAKE 11 43 50.0 +7.5
HKT LR LR
comp=Z,530nm,19.0s,MS5.1
ULN Ulaanbaatar 106.77 319 PFAKE 11 43 50.0 +8.1
ULN LR LR
comp=Z,361nm,19.0s,MS5.0
RLMT Red Lodge 107.51 46 PFAKE 11 43 50.0 +6.6
RLMT LR LR
comp=Z,562nm,22.0s,MS5.1
WMOK Wichita Mounta 107.59 59 PFAKE 11 43 50.0 +6.1
WMOK LR LR
comp=Z,401nm,22.0s,MS4.9
BILL Bilibino 107.72 356 PFAKE 11 43 50.0 +7.0
BILL LR LR
comp=Z,526nm,22.0s,MS5.0
COLA College 107.93 15 PFAKE 11 43 50.0 +6.5
COLA LR LR
comp=Z,360nm,19.0s,MS5.0
ILAR Eielson Array 108.04 16 PKiKP PKiKP 11 43 41.8 -1.9
comp=Z,4.1nm,1.1s,baz=251,slow=2.4,SNR=16
ILAR PKKP PKKPbc 11 55 09.2 +12
comp=Z,2.5nm,1.0s,baz=9.0,slow=3.1,SNR=16
NATX Nacogdoches 108.65 64 PFAKE 11 44 00.0 +14
NATX LR LR
comp=Z,621nm,21.0s,MS5.2
EGMT Eagleton 109.06 43 PFAKE 11 44 00.0 +14
EGMT LR LR
comp=Z,541nm,20.0s,MS5.1
OGNE Ogallala 109.18 52 PFAKE 11 44 00.0 +13
OGNE LR LR
comp=Z,572nm,20.0s,MS5.1
EGAK Eagle 109.31 18 PFAKE 11 44 00.0 +14
EGAK LR LR
comp=Z,440nm,22.0s,MS5.0
CBKS Cedar Bluff 109.36 55 PFAKE 11 44 00.0 +13
CBKS LR LR
comp=Z,552nm,21.0s,MS5.1
RSSD Black Hills 109.86 49 PFAKE 11 44 00.0 +12
RSSD LR LR
comp=Z,555nm,20.0s,MS5.1
LAO LASA Array 110.15 46 PFAKE 11 44 00.0 +12
LAO LR LR
comp=Z,452nm,22.0s,MS5.0
MIAR Mount Ida 110.99 62 PFAKE 11 44 00.0 +10
MIAR LR LR
comp=Z,486nm,20.0s,MS5.1
KSU1 Kansas State U 111.53 57 PFAKE 11 44 00.0 +8.9
KSU1 LR LR
comp=Z,578nm,19.0s,MS5.2
VBMS Vicksburg 111.80 66 PFAKE 11 44 00.0 +8.1
VBMS LR LR
comp=Z,405nm,19.0s,MS5.0
DGMT Dagmar 112.31 45 PFAKE 11 44 00.0 +7.7
DGMT LR LR
comp=Z,335nm,21.0s,MS4.9
SDV Santo Domingo 113.17 98 PFAKE 11 44 10.0 +15
SDV LR LR
comp=Z,216nm,20.0s,MS4.7
MTDJ Mount Denham 113.52 85 PFAKE 11 44 10.0 +14
MTDJ LR LR
comp=Z,469nm,21.0s,MS5.1
BRAL Brewton 113.59 69 PFAKE 11 44 10.0 +15
BRAL LR LR
comp=Z,365nm,19.0s,MS5.0
OXF Oxford 113.83 64 PFAKE 11 44 10.0 +14
OXF LR LR
comp=Z,392nm,21.0s,MS5.0
ECSD EROS Data Cent 114.07 52 PFAKE 11 44 10.0 +14
ECSD LR LR
comp=Z,457nm,21.0s,MS5.0
CCM Cathedral Cave 114.48 60 PFAKE 11 44 10.0 +13
CCM LR LR
comp=Z,489nm,19.0s,MS5.1
LRAL Lakeview Retre 114.73 67 PFAKE 11 44 10.0 +13
LRAL LR LR
comp=Z,236nm,20.0s,MS4.8
SCIA State Center 115.22 56 PFAKE 11 44 10.0 +12
SCIA LR LR
comp=Z,574nm,21.0s,MS5.2
WMQ Urumqi 115.33 307 PKP PKPdf 11 43 59.0 +0.8
WMQ PP PP 11 45 04.5 +4.4
WMQ PKS 11 47 34.5
WMQ SKS SKSdf 11 51 10.0 +1.8
WMQ SKKS SKKSac 11 51 57.5 -1.1
WMQ SS SS 12 00 59.3 +2.8
WMQ AMB AMB
comp=Z,130nm,6.0s
WMQ LR LR
comp=N,190nm,20.0s,MS4.9
WMQ LR LR
comp=E,210nm,21.4s,MS4.9
WMQ LR LR
comp=Z,240nm,21.4s,MS4.8
YKA Yellowknife Ar 115.76 29 PKP PKPdf 11 43 55.6 -2.9
comp=Z,6.3nm,0.9s,baz=229,slow=1.7,SNR=8.9
YKA Yellowknife Ar 115.76 29 PKiKP PKPdf 11 43 55.6 -2.9
YKA pmax pmax
comp=Z,6.0nm,0.9s
TIXI Tiksi 116.06 345 PFAKE 11 44 10.0 +11
TIXI LR LR
comp=Z,308nm,21.0s,MS4.9
DWPF Disney 116.13 74 PFAKE 11 44 10.0 +10
DWPF LR LR
comp=Z,261nm,21.0s,MS4.8
GTBY Guantanamo Bay 116.37 85 PFAKE 11 44 10.0 +9.0
GTBY LR LR
comp=Z,422nm,20.0s,MS5.0
AGMN Agassiz Nation 116.89 48 PFAKE 11 44 10.0 +8.9
AGMN LR LR
comp=Z,390nm,20.0s,MS5.0
HDIL Hopedale 117.07 59 PFAKE 11 44 10.0 +8.3
HDIL LR LR
comp=Z,552nm,20.0s,MS5.2
GOGA Godfrey 117.44 68 PFAKE 11 44 10.0 +7.3
GOGA LR LR
comp=Z,241nm,20.0s,MS4.8
JFWS Jewell Farm 117.62 56 PFAKE 11 44 10.0 +7.3
JFWS LR LR
comp=Z,494nm,21.0s,MS5.1
LSZ Lusaka 117.83 215 PFAKE 11 44 10.0 +6.0
LSZ LR LR
comp=Z,805nm,20.0s,MS5.3
WCI Wyandotte Cave 117.91 62 PFAKE 11 44 10.0 +6.6
WCI LR LR
comp=Z,530nm,22.0s,MS5.1
TSUM Tsumeb 118.17 203 PFAKE 11 44 20.0 +15
TSUM LR LR
comp=Z,1μm,19.0s,MS5.5
SDDR Presa de Saban 118.77 89 PFAKE 11 44 20.0 +14
SDDR LR LR
comp=Z,298nm,19.0s,MS4.9
EYMN Ely 119.28 50 PFAKE 11 44 20.0 +14
EYMN LR LR
comp=Z,638nm,21.0s,MS5.2
NHSC New Hope 119.66 70 PFAKE 11 44 20.0 +13
NHSC LR LR
comp=Z,299nm,20.0s,MS4.9
MK31 Makanchi Array 120.11 308 *i* PKIKP PKPdf 11 44 04.1 -3.2
MK31 pmax pmax
comp=Z,16nm,1.2s
MKAR Makanchi Array 120.11 308 PKP PKPdf 11 44 03.5 -3.8
comp=Z,9.5nm,1.0s,baz=85,slow=2.6,SNR=31
MKAR PP PP 11 45 30.1 -3.2
comp=Z,1.1nm,0.8s,baz=128,slow=9.3,SNR=3.6
MKAR Makanchi Array 120.11 308 PKIKP PKPdf 11 44 03.5 -3.8
MKAR 11 45 30.1
MKAR pmax pmax
comp=Z,10.0nm,1.0s
MKAR pmax pmax
comp=Z,1.0nm,0.8s
GRTK Grand Turk 120.33 86 PFAKE 11 44 20.0 +11
GRTK LR LR
comp=Z,583nm,20.0s,MS5.2
KSH Kashi 120.85 298 *e*PKP PKPdf 11 44 07.0 -2.0
KSH *e*PKS 11 47 42.0
KSH *e*SKS SKSdf 11 51 14.3 -4.6
KSH AMB AMB
comp=Z,91nm,4.2s
KSH LR LR
comp=N,400nm,12.5s,MS5.4
KSH LR LR
comp=E,450nm,16.2s,MS5.4
KSH LR LR
comp=Z,98nm,5.4s
BLA Blacksburg 121.49 66 PFAKE 11 44 20.0 +10
BLA LR LR
comp=Z,523nm,22.0s,MS5.1
AAM Ann Arbor 121.62 59 PFAKE 11 44 20.0 +10
AAM LR LR
comp=Z,395nm,20.0s,MS5.1
ZALV Zalesovo Beam 121.81 316 PKP PKPdf 11 44 06.7 -3.6
ZALV Zalesovo Beam 121.81 316 PKP PKPdf 11 44 06.7 -3.6
comp=Z,1.3nm,0.4s,baz=113,slow=1.9,SNR=6.6
ZALV Zalesovo Beam 121.81 316 PKIKP PKPdf 11 44 06.7 -3.7
ZALV pmax pmax
comp=Z,1.0nm,0.4s
GRGR Grenville 122.04 101 PFAKE 11 44 20.0 +8.0
GRGR LR LR
comp=Z,328nm,19.0s,MS5.0
SJG San Juan 122.23 93 PFAKE 11 44 20.0 +7.7
SJG LR LR
comp=Z,328nm,20.0s,MS5.0
CNNC Cliffs of the 122.36 69 PFAKE 11 44 20.0 +8.0
CNNC LR LR
comp=Z,389nm,19.0s,MS5.1
MCWV Mont Chateau 123.01 63 PFAKE 11 44 20.0 +6.8
MCWV LR LR
comp=Z,571nm,19.0s,MS5.2
NVS Novosibirsk 123.02 316 *e*PKIKP PKPdf 11 44 09.3 -3.4
AAK Ala-Archa 123.25 300 *d i* PKIKP PKPdf 11 44 11.2 -2.3
AAK pmax pmax
comp=Z,3.0nm,1.2s
KBL Kabul 123.41 289 *e*PKPdf PKPdf 11 44 12.7 -1.4
KURK Kurchatov 123.98 311 *c i* PKIKP PKPdf 11 44 11.4 -3.2
KURK pmax pmax
comp=Z,17nm,1.0s
KURK Kurchatov 123.98 311 P PKPdf 11 44 11.8 -2.8
SNR=8.3
ERPA Erie 123.99 61 PFAKE 11 44 30.0 +15
ERPA LR LR
comp=Z,770nm,21.0s,MS5.3
CBN Corbin 124.09 66 PFAKE 11 44 30.0 +15
CBN LR LR
comp=Z,482nm,22.0s,MS5.1
KMBO Kilima Mbogo 124.89 233 *e*PKPdf PKPdf 11 44 17.8 +0.2
KMBO LR LR
comp=Z,366nm,20.0s,MS5.0
KMBO Kilima Mbogo 124.89 233 PKP PKPdf 11 44 18.4 +0.8
comp=Z,28nm,1.1s,baz=180,slow=23,SNR=20
KMBO Kilima Mbogo 124.89 233 PKIKP PKPdf 11 44 18.4 +0.8
KMBO pmax pmax
comp=Z,29nm,1.1s
KMBO Kilima Mbogo 124.89 233 P PKPdf 11 44 18.7 +1.1
SNR=9.9
ANWB Willy Bob 125.32 96 PFAKE 11 44 30.0 +12
ANWB LR LR
comp=Z,299nm,19.0s,MS5.0
RCBR Riachuelo 125.69 139 PFAKE 11 44 30.0 +11
RCBR LR LR
comp=Z,552nm,20.0s,MS5.2
KK31 Karatay Array 126.11 299 *i* PKIKP PKPdf 11 44 16.5 -2.5
KK31 pmax pmax
comp=Z,8.0nm,0.8s
BINY Binghamton 126.74 62 *e*PKPdf PKPdf 11 44 19.3 -0.9
BINY LR LR
comp=Z,755nm,20.0s,MS5.4
LONY Lake Ozonia 128.60 60 PFAKE 11 44 30.0 +6.3
LONY LR LR
comp=Z,461nm,19.0s,MS5.2
NCB Newcomb 128.60 61 *e*PKPdf PKPdf 11 44 22.7 -1.0
NCB LR LR
comp=Z,1μm,21.0s,MS5.6
MBAR Mbarara 129.14 226 ⇓ *i* PKIKP PKPdf 11 44 22.9 -2.9
BVA0 Borovoye Array 129.56 311 *i* PKIKP PKPdf 11 44 21.9 -3.3
BVA0 pmax pmax
comp=Z,1.0nm,0.8s
BRVK Borovoye 129.63 311 ⇓ *i* PKIKP PKPdf 11 44 22.5 -2.8
BRVK pmax pmax
comp=Z,18nm,1.7s
BRVK Borovoye 129.63 311 P PKPdf 11 44 23.7 -1.6
SNR=6.0
LBNH Lisbon 130.25 61 PFAKE 11 44 40.0 +13
LBNH LR LR
comp=Z,805nm,21.0s,MS5.4
ZRNK Zerenda 130.34 311 PKIKP PKPdf 11 44 24.0 -2.7
ZRNK pmax pmax
comp=Z,14nm,1.3s
BBSR BB Station 130.79 78 PFAKE 11 44 40.0 +12
BBSR LR LR
comp=Z,378nm,19.0s,MS5.1
PKME Peaks-Kenny Pk 132.35 61 PFAKE 11 44 40.0 +9.2
PKME LR LR
comp=Z,630nm,19.0s,MS5.3
AB31 Akbulak array 135.00 304 *i* PKIKP PKPdf 11 44 32.9 -2.7
AB31 pmax pmax
comp=Z,2.0nm,0.7s
KBS Kingsbay 140.20 355 PFAKE 11 45 00.0 +16
KBS LR LR
comp=Z,330nm,22.0s,MS5.0
KBS Kingsbay 140.20 355 *c i* PKIKP PKPdf 11 44 41.7 -2.7
KBS pmax pmax
comp=Z,17nm,1.7s
MAK Makhachkala 142.07 292 *e*PKIKP PKPdf 11 44 49.3 +0.5
MAK *e* 11 48 02.8
MAK *e*PPP 11 51 07.6
SUMG Summit 142.88 17 *i* P PKPdf 11 44 43.3 -6.0
comp=Z,15nm,0.9s
DGRG David-gareji 143.26 289 P PKPdf 11 44 45.2 -5.7
GNI Garni 143.40 287 PFAKE 11 45 00.0 +8.8
GNI LR LR
comp=Z,224nm,20.0s,MS4.9
GNI Garni 143.40 287 *i* PKIKP PKPdf 11 44 52.3 +1.1
MTA Mtatsminda 143.74 289 P PKPdf 11 44 47.7 -4.1
TBLG Delisi 143.79 289 PKIKP PKPdf 11 44 47.6 -4.3
TBLG Delisi 143.79 289 P PKPdf 11 44 47.6 -4.3
GOR Gori 144.30 289 P PKPdf 11 44 53.3 +0.5
ZEI Tsey 144.62 291 *i* PKHKP PKPpre 11 44 47.9
ZEI pmax pmax
comp=Z,47nm,1.0s
LVZ Lovozero 144.97 336 *de*PKIKP PKPdf 11 44 49.8 -3.3
APA Apatity 145.55 336 ⇑ *i* PKP2 PKPab 11 44 51.0 -3.6
APA pmax pmax
comp=Z,51nm,1.1s
APA MLR MLR
comp=Z,500nm,16.0s,MS5.4
GOF Gofitskoye 145.62 294 ⇑ *i* PKHKP PKPpre 11 44 47.3
GOF pmax pmax
comp=Z,153nm,1.2s
KIV Kislovodsk 145.70 292 *d i* PKIKP PKPdf 11 44 52.7 -2.4
KIV pmax pmax
comp=Z,58nm,1.6s
KIV Kislovodsk 145.70 292 P PKPdf 11 44 53.9 -1.2
SNR=11
KEV Kevo 145.91 342 *e*PKPdf PKPdf 11 44 52.0 -2.7
KEV LR LR
comp=Z,467nm,21.0s,MS5.2
KEV Kevo 145.91 342 *e*PKIKP PKPdf 11 44 51.2 -3.5
KEV Kevo 145.91 342 *e*pkp PKPdf 11 44 51.2 -3.5
KLMR Klimovskoe 146.23 323 *e*PKIKP PKPdf 11 44 53.5 -1.9
KLMR pmax pmax
comp=Z,110nm,1.5s
KLMR MLR MLR
comp=Z,534nm,20.0s,MS5.3
ARCES ARCESS Array B 146.43 342 PKPbc PKPbc 11 44 53.3 -3.6
comp=Z,19nm,0.7s,baz=20,slow=3.9,SNR=58
ARCES pPKPbc pPKPbc 11 45 06.8 +0.8
comp=Z,20nm,0.8s,baz=63,slow=4.2,SNR=9.6
ARCES ARCESS Array B 146.43 342 PKIKP PKPdf 11 44 53.3 -2.3
ARCES 11 45 06.8
ARCES pmax pmax
comp=Z,19nm,0.7s
ARCES pmax pmax
comp=Z,21nm,0.8s
ARE0 ARCESS Array S 146.43 342 *e*PKPdf PKPdf 11 44 54.4 -1.1
LIC Lamto 146.62 177 *e*PKIKP PKPdf 11 44 57.9 +0.3
comp=Z,453nm,1.0s
LIC Lamto 146.62 177 *e*PKIKP PKPdf 11 44 56.7 -0.9
comp=Z,350nm,1.0s
LIC *e*MLR MLR
comp=Z,626nm,18.8s,MS5.1
LIC Lamto 146.62 177 *e*PKPdf PKPdf 11 44 56.7 -0.9
LIC LR LR
comp=Z,310nm,18.8s,MS5.1
ASF Jabal al Asfar 146.69 270 PKPbc PKPbc 11 44 56.2 -2.7
comp=Z,21nm,1.0s,baz=351,slow=1.5,SNR=22
ASF pPKPbc pPKPbc 11 45 11.0 +3.0
comp=Z,15nm,0.9s,baz=18,slow=2.0,SNR=6.3
ASF Jabal al Asfar 146.69 270 PKP2 PKPbc 11 44 56.2 -2.7
ASF pmax pmax
comp=Z,21nm,1.0s
ASF pmax pmax
comp=Z,15nm,0.9s
KIC Kosan Boka 146.76 178 *e*PKIKP PKPdf 11 44 58.2 +0.3
comp=Z,493nm,1.1s
VRHR Novokhopersk 146.86 305 *e*PKP2 PKPbc 11 44 56.6 -2.1
VRHR pmax pmax
comp=Z,250nm,1.2s
VRHR pmax pmax
comp=N,40nm,0.9s
VRHR pmax pmax

	comp=E,110nm,1.2s							
TIC	**Toumodi**	**147.04 177**		*e*PKIKP	PKPdf	11 44 57.9	-0.4	
	comp=E,204nm,1.1s							
DBIC	**Dimbokro**	**147.07 177**		PKPbc	PKPbc	11 44 57.9	-2.6	
	comp=E,75nm,1.0s,baz=151,slow=3.0,SNR=28							
DBIC	**Dimbokro**	**147.07 177**		PKIKP	PKPdf	11 44 57.9	-0.5	
DBIC				pmax	pmax			
	comp=E,75nm,1.0s							
MALT	**Malatya**	**147.63 281**	⇓	*i*P	PKPdf	11 44 59.8	+1.2	
SOC	**Sochi**	**147.77 291**		*e*PKIKP	PKPdf	11 44 57.1	-1.5	
SOC				*e*		11 45 07.0		
SOC				pmax	pmax			
	comp=E,37nm,1.0s							
VORD	**Divnogorie**	**148.34 305**		*ce*PKP2	PKPdf	11 45 00.3	+1.0	
VORD				pmax	pmax			
	comp=Z,30nm,0.9s							
VORD				pmax	pmax			
	comp=N,30nm,0.8s							
VORD				pmax	pmax			
	comp=E,50nm,0.8s							
VSR	**Storozhevoye**	**148.40 306**		*c i*PKP2	PKPdf	11 45 00.4	+1.0	
VSR				pmax	pmax			
	comp=Z,60nm,1.1s							
VSR				pmax	pmax			
	comp=N,9.0nm,0.6s							
VSR				pmax	pmax			
	comp=E,30nm,1.2s							
MOS	**Moscow**	**148.62 314**		*e*PKIKP	PKPdf	11 44 57.8	-1.8	
MOS				*e*		11 45 08.9		
MOS				*e*		11 48 36.8		
MOS				pmax	pmax			
	comp=Z,63nm,1.3s							
JOF	**Joensuu**	**148.86 330**		*e*PKIKP	PKPdf	11 44 59.9	+0.1	
JOF	**Joensuu**	**148.86 330**		*e*pkp	PKPdf	11 44 59.9	+0.1	
OBN	**Obninsk**	**149.35 314**		*i* PKP2	PKPdf	11 45 03.2	+2.4	
OBN				pmax	pmax			
	comp=E,65nm,1.1s							
ANN	**Anapa**	**149.54 293**		*i* PKP2	PKPbc	11 45 08.1	+2.1	
ANN				pmax	pmax			
	comp=Z,92nm,1.0s							
KAF	**Kangasniemi**	**151.23 331**		*e*PKIKP	PKPdf	11 45 05.6	+2.1	
KAF	**Kangasniemi**	**151.23 331**		*e*pkp	PKPdf	11 45 05.6	+2.1	
BRTR	**Keskin Array B**	**151.59 282**		PKP	PKPdf	11 45 01.9	-2.9	
	comp=Z,2.0nm,0.9s,baz=145,slow=4.5,SNR=9.9							
BRTR				PKPbc	PKPbc	11 45 08.6	-2.4	
	comp=Z,34nm,1.0s,baz=151,slow=3.3,SNR=71							
BRTR				PKPab	PKPab	11 45 18.4	-1.3	
	comp=Z,29nm,0.9s,baz=126,slow=5.0,SNR=19							
BRTR	**Keskin Array B**	**151.59 282**		PKIKP	PKPdf	11 45 01.9	-2.9	
BRTR						11 45 08.6		
BRTR						11 45 18.5		
BRTR				pmax	pmax			
	comp=Z,2.0nm,1.0s							
BRTR				pmax	pmax			
	comp=Z,34nm,1.0s							
BRTR				pmax	pmax			
	comp=Z,29nm,0.9s							
FINES	**FINESS Array B**	**151.72 330**		PKPbc	PKPbc	11 45 08.1	-2.6	
	comp=Z,22nm,0.9s,baz=100,slow=4.5,SNR=25							
FINES				PKPab	PKPab	11 45 15.9	-3.6	
	comp=Z,10nm,0.7s,baz=88,slow=4.4,SNR=7.9							
FINES	**FINESS Array B**	**151.72 330**		PKIKP	PKPbc	11 45 08.1	-2.5	
FINES						11 45 16.0		
FINES				pmax	pmax			
	comp=Z,22nm,0.9s							
FINES				pmax	pmax			
	comp=Z,10.0nm,0.7s							
SIM	**Simferopol'**	**151.91 293**		*d i*PKIKP	PKPdf	11 45 09.8	+4.7	
SIM				*e*		11 45 19.0		
SIM				pmax	pmax			
	comp=Z,14nm,0.8s							
TOA0	**Torodi Ar. Sit**	**153.14 191**		*e*PKPdf	PKPdf	11 45 06.9	-1.0	
TOA0				*e*PKPbc	PKPbc	11 45 14.5	-0.8	
TORD	**Torodi Ar. Bea**	**153.14 191**		PKP	PKPdf	11 45 06.5	-1.3	
	comp=Z,13nm,1.1s,baz=231,slow=0.3,SNR=34							
TORD				PKPbc	PKPbc	11 45 14.2	-1.1	
	comp=Z,43nm,1.0s,baz=133,slow=2.2,SNR=49							
TORD				PKPab	PKPab	11 45 26.6	-0.1	
	comp=Z,98nm,1.1s,baz=171,slow=3.9,SNR=24							
MICGM	**Minsk**	**154.32 316**		*e*	PKPdf	11 45 13.0	+4.7	
MNK	**Minsk**	**154.35 316**		*e*PKIKP	PKPdf	11 45 13.0	+4.7	
AKASG	**Malin Array Be**	**154.69 307**		PKP	PKPdf	11 45 06.5	-2.4	
	comp=Z,0.7nm,0.4s,baz=64,slow=1.3,SNR=5.8							
AKASG				PKPbc	PKPbc	11 45 15.1	-2.4	
	comp=Z,11nm,1.0s,baz=53,slow=2.0,SNR=20							
AKASG				PKPab	PKPab	11 45 30.1	-2.4	
	comp=Z,7.2nm,0.7s,baz=68,slow=4.1,SNR=13							
AKASG	**Malin Array Be**	**154.69 307**		PKIKP	PKPdf	11 45 06.5	-2.4	
AKASG						11 45 15.1		
AKASG						11 45 30.1		
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
AKASG				pmax	pmax			
	comp=Z,11nm,1.0s							
AKASG				pmax	pmax			
	comp=Z,7.0nm,0.7s							
KIEV	**Kiev**	**154.70 307**		*e*PKPbc	PKPbc	11 45 15.4	-2.1	
KIEV				LR	LR			
	comp=Z,439nm,22.0s,MS5.2							
TLCR		**155.67 294**	⇑	*i*P	PKPab	11 45 35.2	-1.7	
TIRR	**Tirgusor**	**155.96 292**	⇑	*i*P	PKPab	11 45 36.2	-2.0	
NOA	**NORSAR Array B**	**156.81 342**		PKP	PKPdf	11 45 07.7	-3.7	
	comp=Z,1.5nm,0.8s,baz=21,slow=1.8,SNR=3.6							
NOA				PKPab	PKPab	11 45 38.0	-3.1	
	comp=Z,4.4nm,1.0s,baz=28,slow=3.4,SNR=5.9							
NOA	**NORSAR Array B**	**156.81 342**		PKIKP	PKPdf	11 45 07.7	-3.7	
NOA				pmax	pmax			
	comp=Z,2.0nm,0.8s							
NOA				pmax	pmax			
	comp=Z,4.0nm,1.0s							
TESR		**157.09 297**	⇑	*i*P	PKPab	11 45 41.3	-1.6	
VRI	**Vrincioaia**	**157.09 295**	⇓	*i*P	PKPab	11 45 41.9	-1.1	
PLOR	**Plostina**	**157.15 295**	⇓	*i*P	PKPab	11 45 41.9	-1.3	
MLR	**Muntele Rosu**	**157.67 295**	⇑	*i*P	PKPab	11 45 43.0	-2.5	
BURAR	**Bucovina Array**	**157.90 300**	⇑	*i*P	PKPab	11 45 44.9	-1.5	
KONO	**Kongsberg**	**158.42 342**		PFAKE		11 45 20.0	+6.5	
KONO				LR	LR			
	comp=Z,454nm,19.0s,MS5.3							
DRGR		**159.73 299**	⇑	*i*P	PKPab	11 45 53.4	-1.0	
CRVS	**Cervenica-Dubn**	**160.02 306**		*e*PKP	PKPab	11 45 53.9	-1.7	
KECS	**Kecovo**	**160.76 305**		*e*PKP	PKPab	11 45 57.1	-1.7	
OKC	**Ostrava-Krasne**	**161.69 311**		*e*PKIKP	PKPdf	11 45 15.7	-1.7	
OKC				MLR	MLR			
	comp=Z,300nm,17.3s							
OKC	**Ostrava-Krasne**	**161.69 311**		*e*PKPDF	PKPdf	11 45 15.7	-1.7	
OKC				*ex*	x	12 17 48.6		
OKC				AMS	AMS	13 04 10.0		
	comp=Z,300nm,17.3s							
VYHS	**Vyhne**	**161.79 306**		*e*PKP	PKPab	11 46 01.8	-1.5	
MORC	**Moravsky Berou**	**162.07 311**	⇑	P	PKPdf	11 45 17.0	-0.8	
MORC	**Moravsky Berou**	**162.07 311**	⇑	*i*P	PKPdf	11 45 17.0	-0.8	
KSP	**Ksiaz**	**162.26 315**		*e*PKIKP	PKPdf	11 45 15.9	-2.1	
KSP				*e*		11 49 48.0		
DPC	**Dobruska-Polom**	**162.49 314**		*e*PKIKP	PKPdf	11 45 16.4	-1.8	
DPC				*e*		11 46 04.3		
DPC				MLR	MLR			
	comp=Z,500nm,24.4s							
DPC	**Dobruska-Polom**	**162.49 314**		*e*PKPDF	PKPdf	11 45 16.4	-1.8	
DPC				*e*PKPAB	PKPab	11 46 04.3	-2.0	
DPC				AMS	AMS	13 02 30.0		
	comp=Z,500nm,24.4s							
UPC	**Upice**	**162.58 315**		*e*PKIKP	PKPdf	11 45 16.9	-1.4	
UPC	**Upice**	**162.58 315**		*e*PKPDF	PKPdf	11 45 16.9	-1.4	
VRAC	**Vranov**	**162.83 310**		PKP	PKPdf	11 45 16.7	-1.9	
	comp=Z,2.0nm,0.4s,baz=359,slow=20,SNR=5.5							
VRAC				PKPab	PKPab	11 46 06.4	-1.4	
	comp=Z,7.3nm,1.0s,baz=125,slow=3.6,SNR=7.2							
VRAC	**Vranov**	**162.83 310**		PKIKP	PKPdf	11 45 16.7	-1.9	
VRAC						11 46 06.4		
VRAC				pmax	pmax			
	comp=Z,2.0nm,0.4s							
VRAC				pmax	pmax			
	comp=Z,7.0nm,1.0s							
PVCC	**Panska Ves**	**163.35 316**		*e*PKIKP	PKPdf	11 45 17.5	-1.6	
PVCC				MLR	MLR			
	comp=Z,500nm,28.8s							
PVCC	**Panska Ves**	**163.35 316**		*e*PKPDF	PKPdf	11 45 17.5	-1.6	
PVCC				AMS	AMS	12 58 00.0		
	comp=Z,500nm,28.8s							
TREC	**Trest**	**163.48 312**		AMS	AMS	13 04 10.0		
	comp=Z,500nm,17.4s							
BRG	**Berggiesshubel**	**163.48 318**		*e*PKP	PKPdf	11 45 17.0	-2.2	
	comp=Z,37nm,1.6s							
BRG	**Berggiesshubel**	**163.48 318**		*e*PKP	PKPab	11 46 08.3	-2.3	
	comp=Z,11nm,1.5s							
BRG								
	comp=N,374nm,22.3s							
BRG								
	comp=E,152nm,18.0s							
BRG								
	comp=Z,508nm,18.5s							
BRG	**Berggiesshubel**	**163.48 318**		*e*PKIKP	PKPdf	11 45 17.0	-2.2	
BRG				*e*		11 46 08.3		
BRG				pmax	pmax			
	comp=Z,22nm,1.7s							
BRG				pmax	pmax			
	comp=Z,7.0nm,1.5s							
BRG				MLR	MLR			
	comp=N,224nm,22.3s							
BRG				MLR	MLR			
	comp=E,91nm,18.0s							
BRG				MLR	MLR			
	comp=Z,304nm,18.5s							
CLL	**Collm**	**163.69 321**		*e*PKIKP	PKPdf	11 45 17.0	-2.4	
CLL				*e*		11 46 09.0		
CLL				*e*		11 49 54.0		
CLL				pmax	pmax			
	comp=Z,28nm,1.6s							
CLL				MLR	MLR			
	comp=Z,400nm,20.7s							
CLL	**Collm**	**163.69 321**		*e*PKPdf	PKPdf	11 45 17.0	-2.4	
CLL				*e*PKPab	PKPab	11 46 09.0	-2.5	
	comp=Z,28nm,1.6s							
CLL				*e*		11 46 27.0		
CLL				*e*SKPdf	SKPdf	11 48 45.0	-4.1	
CLL				*e*PP	PP	11 49 54.0	-3.2	
CLL				*e*		11 55 17.0		
CLL				*e*PPPrev		11 57 25.0		
CLL				*e*PSKS		12 00 42.0		
CLL				*e*PPS		12 03 41.0		
CLL				*e*SS	SS	12 10 30.0	+6.9	
CLL				*e*PSS		12 11 24.0		
CLL				*e*(PSPS)		12 12 24.0		
CLL				*e*SSS		12 16 48.0		
CLL				*e*		12 17 42.0		
CLL				*e*(SSSS)		12 21 42.0		
CLL				Lm		13 01 00.0		
	comp=Z,400nm,20.7s							
CLL				LmH		13 07 00.0		
	comp=N,200nm,21.9s							
CLL				LmH		13 07 00.0		
	comp=E,300nm,20.4s							
CONA	**Conrad Observa**	**163.85 307**	⇓	*i*PKPdf	PKPdf	11 45 17.4	-2.2	
	comp=E,5.9nm,1.3s							
CONA	**Conrad Observa**	**163.85 307**		P	PKPab	11 46 11.1	-1.3	
	comp=E,16nm,1.3s							
NKC	**Novy Kostel**	**164.63 318**		*e*PKIKP	PKPdf	11 45 24.8	+4.6	
NKC				MLR	MLR			
	comp=Z,500nm,22.6s							
NKC	**Novy Kostel**	**164.63 318**		*e*PKPDF	PKPdf	11 45 24.8	+4.6	
NKC				*ex*	x	12 17 30.1		
NKC				AMS	AMS	13 03 20.0		
	comp=Z,500nm,22.6s							
KHC	**Kasperske Hory**	**164.65 313**		*e*PKIKP	PKPdf	11 45 18.0	-2.3	
KHC				*e*	PKPab	11 46 14.2	-1.6	
KHC				*e*SS		12 16 53.4		
KHC				MLR	MLR			
	comp=Z,400nm,16.1s							
KHC	**Kasperske Hory**	**164.65 313**		*e*PKPDF	PKPdf	11 45 18.0	-2.3	
KHC				*e*PKPAB	PKPab	11 46 14.2	-1.6	
KHC				*ex*	x	12 16 53.4		
KHC				AMS	AMS	13 01 40.0		
	comp=Z,400nm,16.1s							
GOLS	**Golise**	**164.67 300**		*e*PKPdf	PKPdf	11 45 18.2	-2.2	
LJU	**Ljubljana**	**165.39 301**		*e*PKPdf	PKPdf	11 45 18.8	-2.2	
VOJS	**Vojsko**	**165.81 302**		*e*PKPdf	PKPdf	11 45 18.9	-2.5	
VOJS				*e*PKPab	PKPab	11 46 18.6	-2.5	
VAE	**Valguarnera**	**165.84 267**		PKPab	PKPab	11 46 21.0	-0.5	
	comp=Z,10nm,0.5s,baz=72,slow=6.4,SNR=3.2							
CADS	**Cadrg**	**165.84 303**		*e*PKPdf	PKPdf	11 45 18.6	-2.8	
CADS				*e*PKPab	PKPab	11 46 18.8	-2.4	
ABTA	**Abfaltersbach**	**166.41 306**	⇑	*i*PKPdf	PKPdf	11 45 19.5	-2.3	
	comp=Z,10nm,1.1s							
ABTA	**Abfaltersbach**	**166.41 306**		P	PKPab	11 46 21.1	-2.6	
	comp=Z,13nm,1.0s							
WTTA	**Wattenberg**	**166.71 309**	⇓	*i*PKPdf	PKPdf	11 45 19.4	-2.7	
	comp=Z,30nm,1.5s							
MOTA	**Moosalm**	**166.98 311**	⇓	*i*PKPdf	PKPdf	11 45 20.8	-1.4	
	comp=Z,5.3nm,0.8s							
RETA	**Reutte**	**167.11 312**	⇑	*i*PKPdf	PKPdf	11 45 20.3	-2.0	
	comp=Z,9.8nm,1.1s							
MEM	**Membach**	**167.24 332**		PKPab	PKPab	11 46 27.0	-0.1	
FETA	**Feichten**	**167.37 310**	⇓	*i*PKPdf	PKPdf	11 45 20.0	-2.5	
	comp=Z,16nm,1.4s							
FETA	**Feichten**	**167.37 310**		P	PKPab	11 46 26.0	-1.9	
	comp=Z,13nm,1.1s							
BCLA	**Clavier**	**167.65 333**		PKPab	PKPab	11 46 29.5	+0.5	
DAVA	**Damuels**	**167.72 312**	⇑	*i*PKPdf	PKPdf	11 45 20.4	-2.4	
	comp=Z,14nm,1.2s							
WLF	**Walferdange**	**167.94 329**		PKPab	PKPab	11 46 29.7	-0.6	
DAVOX	**Davos/Dischmat**	**167.99 310**		PKP	PKPdf	11 45 20.9	-2.1	
	comp=Z,3.4nm,0.7s,baz=298,slow=8.8,SNR=7.8							
DAVOX				PKPab	PKPab	11 46 28.9	-1.8	
	comp=Z,5.5nm,0.8s,baz=16,slow=12,SNR=4.8							
GIVF	**Givet**	**168.09 333**		*e*PKIKP	PKPdf	11 45 20.0	-2.9	
BAIF	**Baives**	**168.33 335**		*e*PKIKP	PKPdf	11 45 20.0	-3.1	
CDF	**Champ du Feu**	**168.39 322**		*e*PKIKP	PKPdf	11 45 19.7	-3.5	
KEST	**Kesra**	**169.10 253**		PKPab	PKPab	11 46 34.8	-1.2	
	comp=Z,8.8nm,1.1s,baz=198,slow=2.3,SNR=8.6							
HAU	**Haudompre**	**169.11 323**		*e*PKIKP	PKPdf	11 45 20.6	-3.1	
HAU				*e*MLR	MLR			
	comp=Z,603nm,22.0s							
HAU	**Haudompre**	**169.11 323**		*e*PKIKP	PKPdf	11 45 20.6	-3.1	
HAU				MLR	MLR			
	comp=Z,600nm,22.0s							
MEZF	**Maizieres J'vi**	**169.31 328**		*e*PKIKP	PKPdf	11 45 21.2	-2.6	
SFTF	**Sexfontaines**	**169.54 327**		*e*PKIKP	PKPdf	11 45 21.1	-2.8	
PGF	**Pioggiola**	**170.18 291**		*e*PKIKP	PKPdf	11 45 21.8	-2.7	
	comp=Z,95nm,1.4s							
CABF	**La Chapelle**	**170.20 318**		*e*PKIKP	PKPdf	11 45 21.9	-2.5	
	comp=Z,66nm,1.5s							
LPG	**La Plagne**	**170.52 311**		*e*PKIKP	PKPdf	11 45 22.4	-2.2	
LPL	**La Plagne**	**170.52 311**		*e*PKIKP	PKPdf	11 45 22.4	-2.2	
FLN	**La Foliniere**	**170.72 348**		*e*PKIKP	PKPdf	11 45 22.7	-1.9	
	comp=Z,55nm,1.3s							
FLN				*e*MLR	MLR			
	comp=Z,472nm,18.5s							
FLN	**La Foliniere**	**170.72 348**		*e*PKIKP	PKPdf	11 45 22.7	-1.9	
FLN				MLR	MLR			
	comp=Z,470nm,18.5s							
LOR	**Lormes**	**170.77 327**		*e*PKIKP	PKPdf	11 45 21.9	-2.8	
	comp=Z,81nm,1.9s							
LOR				*e*MLR	MLR			
	comp=Z,716nm,21.2s							
LOR	**Lormes**	**170.77 327**		*e*PKIKP	PKPdf	11 45 21.9	-2.8	
LOR				MLR	MLR			
	comp=Z,720nm,21.3s							
LDF	**La Druitiere**	**170.81 346**		*e*PKIKP	PKPdf	11 45 21.5	-3.1	
SBF	**Sospel**	**170.87 300**		*e*PKIKP	PKPdf	11 45 22.1	-2.7	
	comp=Z,149nm,1.5s							
MBDF	**Montbardon**	**170.91 307**		*e*PKIKP	PKPdf	11 45 22.4	-2.4	
	comp=Z,85nm,1.7s							
SSF	**Saint Saulge**	**171.09 328**		*e*PKIKP	PKPdf	11 45 22.1	-2.7	
	comp=Z,48nm,1.5s							
GRR	**Gorron**	**171.14 349**		*e*PKIKP	PKPdf	11 45 22.1	-2.7	
SMF	**Signal de Mont**	**171.27 325**		*e*PKIKP	PKPdf	11 45 22.0	-2.9	
	comp=Z,55nm,1.6s							
ORIF	**Oris-en-Rattie**	**171.35 310**		*e*PKIKP	PKPdf	11 45 22.6	-2.4	
ORIF				*e*MLR	MLR			
	comp=Z,602nm,21.0s							
AVF	**Avril sur Loir**	**171.36 327**		*e*PKIKP	PKPdf	11 45 22.0	-3.0	
	comp=Z,35nm,1.5s							
SGMF	**Saint Gilles**	**171.45 356**		*e*PKIKP	PKPdf	11 45 22.8	-2.2	
	comp=Z,67nm,1.3s							
FRF	**La Foret Royal**	**171.51 300**		*e*PKIKP	PKPdf	11 45 22.7	-2.5	
	comp=Z,84nm,1.3s							
LMR	**La Mourre**	**171.69 299**		*e*PKIKP	PKPdf	11 45 22.7	-2.6	
	comp=Z,181nm,1.8s							
BGF	**Bois d'Agland**	**171.76 328**		*e*PKIKP	PKPdf	11 45 22.8	-2.4	
	comp=Z,62nm,1.3s							
SMRF	**Simiane la Rot**	**172.03 305**		*e*PKIKP	PKPdf	11 45 23.6	-1.8	
	comp=Z,33nm,1.2s							
VIVF	**Saint-Julien-l**	**172.08 313**		*e*PKIKP	PKPdf	11 45 23.0	-2.4	
	comp=Z,76nm,1.5s							
TCF	**Toulx Ste Croi**	**172.23 329**		*e*PKIKP	PKPdf	11 45 22.9	-2.5	
	comp=Z,59nm,1.5s							
MFF	**Saint Martin d**	**172.71 342**		*e*PKIKP	PKPdf	11 45 23.0	-2.6	
	comp=Z,43nm,1.4s							
LASF	**Ste Croix**	**173.02 311**		*e*PKIKP	PKPdf	11 45 23.6	-2.2	
	comp=Z,118nm,1.8s							
MDT	**Midelt**	**173.04 172**		PKP	PKPdf	11 45 25.1	-1.1	
	comp=Z,16nm,1.2s,baz=136,slow=0.6,SNR=8.3							
MDT				PKPab	PKPab	11 46 52.9	-0.3	
	comp=Z,8.4nm,1.1s,baz=205,slow=2.6,SNR=6.1							
RJF	**Les Rejaudoux**	**173.32 328**		*e*PKIKP	PKPdf	11 45 23.8	-2.1	
	comp=Z,53nm,1.4s							
RJF				*e*MLR	MLR			
	comp=Z,596nm,19.0s							
RJF	**Les Rejaudoux**	**173.32 328**		*e*PKIKP	PKPdf	11 45 23.8	-2.1	
RJF				MLR	MLR			
	comp=Z,600nm,19.0s							
CAF	**Calviac**	**173.38 324**		*e*PKIKP	PKPdf	11 45 23.8	-2.1	
LFF	**La Frestale**	**173.93 330**		*e*PKIKP	PKPdf	11 45 24.0	-2.1	
MTLF	**Montolieu**	**174.41 312**		*e*PKIKP	PKPdf	11 45 24.1	-2.3	
	comp=Z,28nm,1.5s							
PFVI	**Vila Bisbo**	**175.06 120**		*e*LR	LR	12 49 36.5		
	comp=Z,489nm,18.0s							
MORF	**Marmelete**	**175.27 119**		*e*PKPdf	PKPdf	11 45 26.9	+0.1	
MORF				*e*LR	LR	12 52 44.4		
	comp=Z,474nm,20.0s							
MORF	**Marmelete**	**175.27 119**		*e*PKIKP	PKPdf	11 45 26.8	0.0	
PMAFR	**Mafra**	**175.43 98**		*e*LR	LR	12 52 26.6		
	comp=Z,791nm,18.0s							
LIS	**Lisbon**	**175.47 101**		*e*P	PKPdf	11 45 28.8	+1.9	
LIS				*e*PP	PP	11 50 58.1	+0.7	
LIS				AMS	AMS	12 59 24.8		
	comp=E,1μm,21.8s							
EPF	**Esparros**	**175.63 320**		*e*PKIKP	PKPdf	11 45 25.0	-1.7	
	comp=E,90nm,1.5s							
PBDV	**Barranco-do-Ve**	**175.71 124**		*e*PKPdf	PKPdf	11 45 26.9	0.0	
PBDV				*e*LR	LR	12 52 58.4		
	comp=E,375nm,22.0s							
MESJ	**Messejana**	**175.84 115**		*e*P	PKPdf	11 45 28.2	+1.3	
MESJ				*e*PP	PP	11 50 59.3	+0.4	
MESJ				AMS	AMS	13 00 48.9		
	comp=Z,502nm,21.6s							
PCVE	**Castro Verde**	**175.86 119**		A		13 03 43.9		
	comp=Z,508nm,18.0s							
PVAQ	**Vaqueiros**	**175.94 123**		*e*PKPdf	PKPdf	11 45 26.7	-0.3	
PVAQ				*e*LR	LR	12 51 39.7		
	comp=Z,487nm,20.0s							
ETSF	**Etsaut**	**176.15 326**		*e*PKIKP	PKPdf	11 45 25.4	-1.4	
	comp=Z,40nm,1.3s							
EVOP	**Sao Brissos**	**176.19 107**		*e*P	PKPdf	11 45 28.2	+1.2	
EVOP				*e*PP	PP	11 51 01.9	+1.2	
EVOP				AMS	AMS	13 02 51.0		
	comp=Z,562nm,20.7s							
SJPF	**Ste Jean**	**176.22 334**		*e*PKIKP	PKPdf	11 45 25.5	-1.4	
	comp=Z,44nm,1.2s							
EVO	**Evora**	**176.27 107**		*e*PKIKP	PKPdf	11 45 23.5	-3.5	
	comp=Z,70nm,1.4s							
EVO				*e*MLR	MLR			
	comp=Z,935nm,21.2s							
PVIS	**Viseu**	**176.47 72**		*e*PKPdf	PKPdf	11 45 26.9	-0.1	
PESTR	**Estremoz**	**176.69 104**		*e*PKPdf	PKPdf	11 45 26.1	-1.0	
PESTR				*e*LR	LR	12 51 52.5		
	comp=Z,617nm,18.0s							
MTE	**Manteigas**	**176.80 77**		*e*LR	LR	12 52 09.8		
	comp=Z,564nm,22.0s							
PBAR	**Barrancos**	**176.81 118**		*e*PKPdf	PKPdf	11 45 26.7	-0.4	
PBAR				*e*LR	LR	12 50 05.6		
	comp=Z,704nm,18.0s							
MVO	**Moncorvo**	**176.93 61**		*e*PKPdf	PKPdf	11 45 26.1	-1.0	
MVO				*e*LR	LR	12 54 18.1		
	comp=Z,465nm,18.0s							
PMRV	**Marv??o**	**176.95 94**		*e*LR	LR	12 53 07.8		
	comp=Z,568nm,22.0s							
PAB	**San Pablo**	**179.30 104**		*e*PKPdf	PKPdf	11 45 27.3	-0.1	
PAB				LR	LR			
	comp=Z,554nm,20.8s							
ESDC	**Sonseca Array**	**179.61 97**		PKP	PKPdf	11 45 26.4	-1.0	
	comp=Z,0.5nm,0.4s,baz=340,slow=1.6,SNR=13							
ESDC				PKPab		11 47 21.0		
	comp=Z,9.9nm,1.0s,baz=222,slow=1.6,SNR=12							
ESLA	**Sonseca Array**	**179.61 97**		*e*PKPdf	PKPdf	11 45 26.9	-0.5	

WEL 25 11:29:22.0±0.6, 39.66S×176.83E, h28km±2km, ML3.8/9, 1D, Error ellipse: s-maj=5.1km s-min=1.9km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCHZ	**McNeill Hill**	**0.23**	**334**	⇓*P*	Pb	11 29 28.0	-0.4
MCHZ				*S*	Sb	11 29 33.2	+0.6
MCHZ				*S*	Sb	11 29 33.3	+0.7
BKZ	**Black Stump Fm**	**0.55**	**332**	*P*	Pb	11 29 32.1	-1.1
BKZ				*S*	Sb	11 29 40.4	-0.3
NMHZ	**Naumai**	**0.56**	**358**	*eP*	Pb	11 29 33.5	+0.3
RAHZ	**Arahi**	**0.76**	**15**	*e*PN	Pn	11 29 36.8	-0.1
KNZ	**Kokohu**	**0.91**	**46**

ILAR	**Eielson Array**	**90.75**	**25**	P	**P**		**11 42 39.0**	**+0.2**
	0.2nm,0.6s,mb3.6,baz=260,slow=4.6,SNR=4.6							
TORD	**Torodi Ar. Bea**	**127.98**	**283**	PKP	PKPdf		11 48 43.9	+0.9
	1.3nm,0.8s,baz=65,slow=2.1,SNR=4.4							
CPUP	**Villa Florida**	**149.05**	**168**	PKPbc	PKPbc		11 49 25.2	+0.2
CPUP	**Villa Florida**	**149.05**	**168**	PKPbc	PKPbc		11 49 25.2	+0.2
	2.7nm,0.6s,baz=166,slow=2.0,SNR=8.8							
LPAZ	**La Paz**	**153.14**	**139**	PKPbc	PKPbc		11 49 37.0	+2.2
LPAZ	**La Paz**	**153.14**	**139**	PKPbc	PKPbc		11 49 37.0	+2.2
	0.9nm,0.5s,baz=209,slow=2.2,SNR=5.1							

*ATH **25** 11:32:29.9, 40.46°N×26.01°E, h30km±11km, MD3.2/4*
*ISK **25** 11:32:29.7, 40.46°N×26.10°E, h10km, MD2.8*
*ISCJB **25** 11:32:30.0±0.5, 40.47°N±0.02×26.08°E±0.05, h10km±4km, Error ellipse: s-maj=6.4km s-min=3.9km az=8.9*
*CSEM **25** 11:32:30.2±0.3, 40.49°N×26.05E, h20km, MD2.8, Error ellipse: s-maj=7.6km s-min=4.7km az=95.0*
*DDA **25** 11:32:31.7, 40.41°N×26.24E, h7km±1km, Md3.0*
ISC 25 11:32:30.4±0.5, 40.47°N±0.02×26.09°E±0.05, h11km±4km, n37, σ0.958/54, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC		h m s		ISC
ENEZ	**Enez**	**0.27**	**10**	*e*PG	**Pg**		**11 32 36.1**		**+0.1**
ENEZ				*e*SG	**Sg**		**11 32 40.0**		**+0.2**
ENEZ	**Enez**	**0.27**	**10**	*e*Pg	**Pg**		**11 32 36.1**		**+0.1**
ENEZ				*e*Sg	**Sg**		**11 32 40.0**		**+0.2**
GELI	**Tayfur-Gelibol**	**0.30**	**103**	*e*PG	**Pg**		**11 32 36.1**		**-0.4**
GELI				*e*SG	**Sg**		**11 32 40.5**		**-0.1**
GELI	**Tayfur-Gelibol**	**0.30**	**103**	*e*Pg	**Pg**		**11 32 36.1**		**-0.4**
GELI				*e*Sg	**Sg**		**11 32 40.5**		**-0.1**
GADA	**Gvkgeada**	**0.31**	**208**	*e*PG	**Pg**		**11 32 36.3**		**-0.4**
GADA				*e*SG	**Sg**		**11 32 41.3**		**+0.4**
GADA	**Gvkgeada**	**0.31**	**208**	*e*Pg	**Pg**		**11 32 36.3**		**-0.4**
GADA				*e*Sg	**Sg**		**11 32 41.3**		**+0.4**
ERIK	**Erikli-Kesan**	**0.38**	**58**	*e*PG	**Pg**		**11 32 37.7**		**-0.2**
ERIK	**Erikli-Kesan**	**0.38**	**58**	*e*Pg	**Pg**		**11 32 37.7**		**-0.3**
ALN	**Alexandroupoli**	**0.43**	**356**	*e*PB	**Pg**		**11 32 38.7**		**-0.2**
ALN				*e*SB	**Sg**		**11 32 46.0**		**+1.3**
ALN	**Alexandroupoli**	**0.43**	**356**	*e*Pb	**Pg**		**11 32 38.7**		**-0.2**
ALN				*e*Sb	**Sg**		**11 32 46.0**		**+1.3**
BOZC	**Bozcaada**	**0.62**	**183**	*i* P	**Pg**		**11 32 42.9**		**+0.4**
BOZC				*i* S	**Sg**		**11 32 51.9**		**+1.2**
EZN	**Ezine**	**0.67**	**164**	*e*PG	**Pg**		**11 32 41.8**		**-1.5**
EZN	**Ezine**	**0.67**	**164**	*e*Pg	**Pg**		**11 32 41.8**		**-1.5**
RDO	**Rodhopi**	**0.80**	**328**	*e*PN	**Pg**		**11 32 45.0**		**-0.8**
RDO	**Rodhopi**	**0.80**	**328**	*e*Pn	**Pn**		**11 32 45.0**		**-0.8**
RKY	**Sarkoy-Tekirda**	**0.86**	**75**	*e*PG	**Pg**		**11 32 47.0**		**0.0**
RKY	**Sarkoy-Tekirda**	**0.86**	**75**	*e*Pg	**Pg**		**11 32 47.0**		**0.0**
MFT	**Murefte**	**0.96**	**70**	*e*PG	**Pg**		**11 32 48.9**		**0.0**
MFT	**Murefte**	**0.96**	**70**	*e*Pg	**Pg**		**11 32 48.9**		**0.0**
TKR	**Tekirdag**	**1.22**	**64**	*e*PN	**Pn**		**11 32 53.5**		**+0.1**
TKR	**Tekirdag**	**1.22**	**64**	*e*Pn	**Pn**		**11 32 53.5**		**+0.2**
PRK	**Paraskevi**	**1.23**	**173**	*e*PN	**Pn**		**11 32 53.3**		**-0.2**
PRK				*e*SN	**Sn**		**11 33 10.2**		**+0.2**
PRK	**Paraskevi**	**1.23**	**173**	*e*Pn	**Pn**		**11 32 53.3**		**-0.2**
PRK				*e*Sn	**Sn**		**11 33 10.2**		**+0.2**
AYVA	**Ayvalik**	**1.25**	**158**	*i* P	**Pn**		**11 32 53.4**		**-0.4**
AYVA				*i* S	**Sb**		**11 33 10.2**		**+0.2**
AYVA	**Ayvalik**	**1.25**	**158**	*i* P	**Pn**		**11 32 53.4**		**-0.3**
AYVA				*i* S	**Sb**		**11 33 10.1**		**+0.1**
GONE	**Gonen-Balikesi**	**1.29**	**108**	*e*PN	**Pn**		**11 32 54.2**		**-0.1**
GONE	**Gonen-Balikesi**	**1.29**	**108**	*e*Pn	**Pn**		**11 32 54.2**		**-0.2**
BALY	**Balya**	**1.38**	**121**	*i* P	**Pn**		**11 32 56.3**		**+0.7**
BALY				*i* S	**Sn**		**11 33 14.2**		**+0.4**
BALY	**Balya**	**1.38**	**121**	*i* P	**Pn**		**11 32 56.3**		**+0.7**
BALY				*i* S	**Sn**		**11 33 14.2**		**+0.4**
EDRB	**Edirne**	**1.46**	**20**	*e*PN	**Pn**		**11 32 56.3**		**-0.4**
EDRB	**Edirne**	**1.46**	**20**	*e*Pn	**Pn**		**11 32 56.3**		**-0.4**
BALB	**Balikesir**	**1.60**	**120**	*e*PN	**Pn**		**11 32 59.2**		**+0.5**
BALB	**Balikesir**	**1.60**	**120**	*e*Pn	**Pn**		**11 32 59.2**		**+0.6**
CHOS	**Chios island**	**2.08**	**181**	*e*PN	**Pn**		**11 33 05.0**		**-0.2**
CHOS	**Chios island**	**2.08**	**181**	*e*Pn	**Pn**		**11 33 05.0**		**-0.2**
URLA	**Izmir**	**2.14**	**169**	*i* P	**Pn**		**11 33 05.0**		**-1.0**
URLA				*i* S	**Sn**		**11 33 32.8**		**+0.3**
URLA	**Izmir**	**2.14**	**169**	*i* P	**Pn**		**11 33 05.0**		**-1.0**
URLA				*i* S	**Sn**		**11 33 32.8**		**+0.2**

*NIED **25** 11:57:00, 39.10°N×140.90E, h5km, Mw3.9 Best double couple: M0 8.21000×10^14 NP1:φ=209.00000°, δ=52.00000°, λ=98.00000°. NP2:φ=16.00000°, δ=38.00000°, λ=80.00000°.*
*ISCJB **25** 11:57:43.5±1.8, 39.16°N±0.03×140.95E±0.04, h15km±13km, mb3.8/10, Error ellipse: s-maj=5.4km s-min=4.8km az=3.4*
*NEIC **25** 11:57:43.4, 39.15°N×140.93E, h10km, MG3.9(JMA), After JMA.*
*JMA **25** 11:57:43.4, 39.15°N×140.93E, h10km±1km, M3.9*
JMA Felt II J1.
*IDC **25** 11:57:49.0±2.3, 39.12°N×140.80E, h50km±22km, mb3.5/9, mb1 3.8/12, mb1mx3.6/24, mbtmp3.6/12, ML3.5/3, Error ellipse: s-maj=21.0km s-min=16.2km az=109.0*
ISC 25 11:57:43.7±0.5, 39.14°N±0.03×140.95E±0.04, h7km±4km, n23, σ0.991/30, mb3.8/10, 1C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC		h m s		ISC
JMK	**Ichinoseki**	**0.28**	**132**	‖P	**Pg**		**11 57 49.2**		**0.0**
JMK				S	**Sg**		**11 57 53.5**		**+0.5**
JRG	**Rokugo**	**0.35**	**317**	‖P	**Pg**		**11 57 50.3**		**-0.3**
JRG				S	**Sg**		**11 57 55.6**		**+0.4**
JOM	**Ohasama**	**0.43**	**39**	‖P	**Pg**		**11 57 51.8**		**-0.2**
JOM				*e*S	**Sg**		**11 57 57.6**		**0.0**
JYK	**Kaneyama**	**0.51**	**244**	‖P	**Pg**		**11 57 53.1**		**-0.4**
JYK				S	**Sg**		**11 57 59.7**		**-0.5**
JIO	**Ouri**	**0.75**	**155**	‖P	**Pg**		**11 57 57.6**		**-0.6**
JIO				*e*S	**Sg**		**11 58 08.1**		**+0.1**
JOU	**Okura**	**0.81**	**196**	‖P	**Pg**		**11 57 58.7**		**-0.4**
JOU				*e*S	**Sg**		**11 58 09.7**		**+0.1**
MAJO	**Matsushiro**	**3.38**	**221**	*e*Pn	**Pn**		**11 58 37.6**		**+0.8**
MAT	**Matsushiro**	**3.38**	**221**	P	**Pn**		**11 58 37.7**		**+0.8**
MAT				*e*S	**Sn**		**11 59 26.9**		**+10**
MJAR	**Matsushiro Arr**	**3.38**	**221**	P	**Pn**		**11 58 37.9**		**+1.0**
	1.9nm,0.3s,baz=312,slow=31,SNR=16								
ASAJ	**Asahikawa**	**5.12**	**13**	P	**Pn**		**11 59 03.0**		**+2.2**
	1.6nm,0.3s,baz=243,slow=9.5,SNR=9.4								
YSS	**Yuzh-Sakhalins**	**7.92**	**9**	*e*Pn	**Pn**		**11 59 38.8**		**-0.3**
KSRS	**Korea Array**	**10.38**	**265**	P	**Pn**		**12 00 14.1**		**+1.2**
	0.7nm,0.3s,baz=77,slow=14,SNR=17								
KSRS				S	**Sn**		**12 02 12.8**		**+3.4**
	0.4nm,0.3s,baz=74,slow=24,SNR=12								
SONM	**Songino Array**	**26.35**	**301**	P	**P**		**12 03 12.5**		**-7.7**
	4.7nm,0.6s,mb4.2,baz=111,slow=8.1,SNR=3.9								
ZALV	**Zalesovo Beam**	**40.25**	**311**	P	**P**		**12 05 18.9**		**-1.9**
	0.7nm,0.5s,mb3.7,baz=95,slow=11,SNR=5.8								
MKAR	**Makanchi Array**	**42.72**	**300**	P	**P**		**12 05 40.6**		**-0.5**
	1.0nm,0.7s,mb3.7,baz=83,slow=9.9,SNR=8.6								
ILAR	**Eielson Array**	**47.93**	**33**	P	**P**		**12 06 22.4**		**+0.1**
	0.5nm,0.7s,mb3.6,baz=279,slow=6.7,SNR=8.7								
WRA	**Warramunga Arr**	**59.10**	**187**	P	**P**		**12 07 43.5**		**-1.2**
	1.2nm,0.9s,mb3.9,baz=4.9,slow=7.3,SNR=12								
ASAR	**Alice Springs**	**62.82**	**187**	P	**P**		**12 08 08.9**		**-1.0**
	0.5nm,0.7s,mb3.8,baz=3.4,slow=4.9,SNR=6.9								
FINES	**FINESS Array B**	**66.79**	**332**	P	**P**		**12 08 34.5**		**-0.9**
	2.0nm,0.8s,mb4.2,baz=58,slow=5.8,SNR=3.5								
NOA	**NORSAR Array B**	**72.11**	**337**	P	**P**		**12 09 06.8**		**-1.5**
	0.7nm,0.6s,mb3.7,baz=36,slow=6.1,SNR=3.1								
NVAR	**Mina Array Bea**	**74.03**	**53**	P	**P**		**12 09 21.4**		**+1.3**
	0.6nm,0.8s,mb3.6,baz=303,slow=3.0,SNR=5.7								
PDAR	**Pinedale Array**	**76.46**	**46**	P	**P**		**12 09 34.5**		**+0.4**
	0.4nm,0.7s,mb3.5,baz=305,slow=3.5,SNR=5.1								
LPAZ	**La Paz**	**145.89**	**56**	PKPbc	PKPbc		12 17 25.3		+1.1
	0.8nm,0.6s,baz=29,slow=4.6,SNR=4.1								

*ISCJB **25** 12:04:59.9±0.7, 13.02°N±0.06×91.15W±0.03, h33km, mb3.5/2, Error ellipse: s-maj=8.5km s-min=3.9km az=16.5*
*IDC **25** 12:04:59.8±4.5, 13.91°N×90.05W, h0km, mb3.5/2, mb1 3.9/4, mb1mx3.6/21, mbtmp3.4/4, ML3.8/2, Error ellipse: s-maj=180.7km s-min=52.1km az=31.0*
*CASC **25** 12:05:04.0±2.4, 13.21°N×90.84W, h30km±36km, MD3.8*
*MEX **25** 12:05:05.5±0.5, 13.02°N×91.42W, h20km±26km, MD4.5*
ISC 25 12:05:01.7±0.7, 13.07°N±0.06×91.08W±0.03, h35km, n30, σ1.913/43, mb3.5/2, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC		h m s		ISC
FUG	**Fuego 3**	**1.39**	**10**	*e*P	**Pn**		**12 05 24.5**		**-0.1**
PCG	**Pacaya**	**1.39**	**19**	*e*P	**Pn**		**12 05 24.7**		**+0.1**
FG6		**1.49**	**7**	*e*P	**Pn**		**12 05 26.1**		**+0.1**
FG6				*e*S	**Sn**		**12 05 46.0**		**+1.7**
SBLS	**San Blas**	**1.61**	**62**	*e*P	**Pn**		**12 05 26.9**		**-0.7**
SBLS				*e*S	**Sn**		**12 05 45.9**		**-1.3**
RTR	**El Retiro**	**1.62**	**59**	*e*P	**Pn**		**12 05 27.0**		**-0.7**
RTR				*e*S	**Sn**		**12 05 45.6**		**-1.8**
SNJE	**San Jose**	**1.64**	**61**	*e*P	**Pn**		**12 05 27.2**		**-0.8**
NBG	**Las Nubes**	**1.67**	**25**	*e*P	**Pn**		**12 05 29.1**		**+0.6**
TP2	**Tecpan 2**	**1.70**	**2**	*e*P	**Pn**		**12 05 29.4**		**+0.4**
TP2				*e*S	**Sn**		**12 05 50.7**		**+1.2**
RBDL	**Robledal**	**1.71**	**52**	*e*P	**Pn**		**12 05 28.5**		**-0.5**
BOQS	**Boqueron**	**1.87**	**69**	*e*P	**Pn**		**12 05 31.2**		**0.0**
LFRS	**El Faro**	**2.04**	**74**	*e*P	**Pn**		**12 05 33.6**		**+0.1**
LFRS				*e*S	**Sn**		**12 05 54.8**		**-3.0**
MTO2	**Montecristo 2**	**2.13**	**51**	*e*P	**Pn**		**12 05 35.5**		**+0.7**
THIG		**2.16**	**328**	*i* P	**Pn**		**12 05 35.8**		**+0.6**
THIG				*i* S	**Sn**		**12 06 00.2**		**-0.5**
SNVI	**San Vicente**	**2.25**	**76**	*e*P	**Pn**		**12 05 36.6**		**+0.2**
SNVI				*e*S	**Sn**		**12 06 08.4**		**+5.5**
MRL	**Marmol**	**2.40**	**34**	*e*P	**Pn**		**12 05 40.2**		**+1.7**
VSM	**San Miguel**	**2.76**	**82**	*e*P	**Pn**		**12 05 44.5**		**+1.1**
BLLM	**Bellamira**	**2.79**	**82**	*e*P	**Pn**		**12 05 43.2**		**-0.7**
BLLM				*e*S	**Sn**		**12 06 12.6**		**-3.8**
CAHU	**Cacacuatique**	**2.88**	**76**	*e*P	**Pn**		**12 05 45.9**		**+0.9**
CNCH	**Conchagua**	**3.17**	**86**	*e*P	**Pn**		**12 05 49.1**		**0.0**
PCIG		**3.34**	**322**	*e*P	**Pn**		**12 05 52.8**		**+1.4**
PCIG				*i* S	**Sn**		**12 06 27.9**		**-1.9**
TGIG		**4.18**	**332**	*i* P	**Pn**		**12 06 05.6**		**+2.6**
TGIG				*i* S	**Sn**		**12 06 50.2**		**-0.4**
CMIG	**Matias Romero**	**5.43**	**318**	Pn	**Pn**		**12 06 23.5**		**+3.3**
	1.4nm,0.3s,baz=110,slow=11,SNR=15								
HUIG	**Huatulco**	**5.56**	**299**	*i* P	**Pn**		**12 06 21.7**		**-0.3**
HUIG				*i* S	**Sn**		**12 07 21.8**		**-2.9**
VHO	**Vista Hermosa**	**6.75**	**307**	*i* P	**Pn**		**12 06 39.0**		**+0.7**
VHO				*i* S	**Sn**		**12 07 52.2**		**-2.0**
PNIG	**Pinotepa**	**7.57**	**297**	*i* P	**Pn**		**12 06 49.9**		**+0.2**
PNIG				*i* S	**Sn**		**12 08 12.4**		**-1.9**
UTMO	**Huajuapan**	**8.02**	**307**	*i* P	**Pn**		**12 06 57.0**		**+1.2**
UTMO				*i* S	**Sn**		**12 08 24.9**		**-0.5**
TXAR	**Lajitas Array**	**19.96**	**326**	P	**Pn**		**12 09 33.0**		**+0.2**
	0.1nm,0.3s,baz=142,slow=11,SNR=11								
NVAR	**Mina Array Bea**	**34.95**	**321**	P	**P**		**12 11 54.8**		**+4.4**
	0.7nm,0.6s,mb3.8,baz=134,slow=7.6,SNR=6.7								
ILAR	**Eielson Array**	**64.04**	**337**	P	**P**		**12 15 32.2**		**+0.6**
	0.2nm,0.7s,mb3.3,baz=111,slow=4.9,SNR=4.2								
CMAR	**Chiang Mai Arr**	**147.15**	**342**	PKPbc	PKPbc		12 24 43.4		+1.5
	1.1nm,0.7s,baz=342,slow=4.2,SNR=7.2								

*ISK **25** 12:05:32.5, 39.06°N×27.00E, h2km, MD2.9*
*ISCJB **25** 12:05:33.3±0.4, 39.03°N±0.02×27.00E±0.03, h6km±4km, Error ellipse: s-maj=3.6km s-min=3.2km az=24.0*
*CSEM **25** 12:05:33.4±0.2, 39.04°N×26.99E, h10km, MD2.9, Error ellipse: s-maj=4.5km s-min=4.0km az=90.0*
*DDA **25** 12:05:33.4, 39.08°N×27.02E, h7km±7km, Md3.0*
*ATH **25** 12:05:33.3, 39.00°N×27.03E, h13km±4km, MD3.1/4*
ISC 25 12:05:33.9±0.3, 39.04°N±0.02×27.01°E±0.03, h11km±4km, n49, σ0.987/74, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC		h m s		ISC
AYVA	**Ayvalik**	**0.37**	**318**	*i* P	**Pg**		**12 05 40.9**		**-0.3**
AYVA				*i* S	**Sg**		**12 05 46.3**		**+0.2**
AYVA	**Ayvalik**	**0.37**	**318**	*i* P	**Pg**		**12 05 40.9**		**-0.3**
AYVA				*i* S	**Sg**		**12 05 46.3**		**+0.2**
PRK	**Paraskevi**	**0.61**	**290**	*e*PB	**Pg**		**12 05 45.8**		**+0.1**
PRK				*e*SB	**Sg**		**12 05 54.5**		**+0.8**
PRK	**Paraskevi**	**0.61**	**290**	*e*Pb	**Pg**		**12 05 45.8**		**+0.1**
PRK				*e*Sb	**Sg**		**12 05 54.5**		**+0.8**
AKS	**Akhisar**	**0.65**	**104**	*e*PG	**Pg**		**12 05 46.3**		**-0.2**
AKS				*e*SG	**Sg**		**12 05 56.3**		**+1.3**
AKS	**Akhisar**	**0.65**	**104**	*e*Pg	**Pg**		**12 05 46.3**		**-0.2**
AKS				*e*Sg	**Sg**		**12 05 56.3**		**+1.3**
AKHS	**Akhisar**	**0.65**	**104**	*i* P	**Pg**		**12 05 46.5**		**0.0**
AKHS				*i* S	**Sg**		**12 05 55.9**		**+0.9**
AKHS	**Akhisar**	**0.65**	**104**	*i* P	**Pg**		**12 05 46.5**		**0.0**
AKHS				*i* S	**Sg**		**12 05 55.9**		**+0.9**
BLCB	**Balcova**	**0.65**	**177**	*e*PG	**Pg**		**12 05 46.2**		**-0.3**
BLCB				*e*SG	**Sg**		**12 05 56.3**		**+1.2**
BLCB	**Balcova**	**0.65**	**177**	*e*Pg	**Pg**		**12 05 46.2**		**-0.3**
BLCB				*e*Sg	**Sg**		**12 05 56.3**		**+1.3**
IZM	**Izmir**	**0.67**	**162**	*e*PG	**Pg**		**12 05 47.0**		**+0.2**
IZM	**Izmir**	**0.67**	**162**	*e*Pg	**Pg**		**12 05 47.1**		**+0.3**
URLA	**Izmir**	**0.75**	**206**	*i* P	**Pg**		**12 05 46.9**		**-1.4**
URLA				*i* S	**Sg**		**12 05 59.2**		**+1.1**
URLA	**Izmir**	**0.75**	**206**	*i* P	**Pg**		**12 05 46.9**		**-1.4**
URLA				*i* S	**Sg**		**12 05 59.2**		**+1.1**
BALY	**Balya**	**0.85**	**34**	*i* P	**Pg**		**12 05 49.4**		**-0.9**
BALY				*i* S	**Sg**		**12 06 02.5**		**+1.1**
BALY	**Balya**	**0.85**	**34**	*i* P	**Pg**		**12 05 49.4**		**-0.9**
BALY				*i* S	**Sg**		**12 06 02.5**		**+1.1**
BALB	**Balikesir**	**0.91**	**48**	*e*PG	**Pg**		**12 05 49.7**		**-1.7**
BALB	**Balikesir**	**0.91**	**48**	*e*Pg	**Pg**		**12 05 49.7**		**-1.7**
EZN	**Ezine**	**0.95**	**326**	*e*PG	**Pg**		**12 05 51.4**		**-0.8**
EZN	**Ezine**	**0.95**	**326**	*e*Pg	**Pg**		**12 05 51.4**		**-0.8**
CHOS	**Chios island**	**0.99**	**229**	*e*PB	**Pg**		**12 05 52.0**		**-0.9**
CHOS				*e*SB	**Sg**		**12 06 05.3**		**-0.4**
CHOS	**Chios island**	**0.99**	**229**	*e*Pb	**Pg**		**12 05 52.0**		**-0.9**
CHOS				*e*Sb	**Sg**		**12 06 05.3**		**-0.4**
BOZC	**Bozcaada**	**1.09**	**318**	*i* P	**Pg**		**12 05 54.7**		**-0.2**
BOZC				*i* S	**Sg**		**12 06 09.3**		**+0.2**
GONE	**Gonen-Balikesi**	**1.14**	**27**	*e*PN	**Pg**		**12 05 54.6**		**-1.3**
GONE	**Gonen-Balikesi**	**1.14**	**27**	*e*Pn	**Pg**		**12 05 54.6**		**-1.2**
DURS	**Dursunbey**	**1.27**	**63**	*i* P	**Pn**		**12 05 54.8**		**-2.8**
DURS				*i* S	**Sb**		**12 06 14.1**		**-0.2**
DURS	**Dursunbey**	**1.27**	**63**	*i* P	**Pn**		**12 05 54.8**		**-2.9**
DURS				*i* S	**Sb**		**12 06 14.1**		**-0.2**
SMG	**Samos**	**1.33**	**186**	*e*PG	**Pn**		**12 05 57.5**		**-1.0**
SMG				*e*SB	**Sn**		**12 06 16.0**		**-0.2**
SMG	**Samos**	**1.33**	**186**	*e*Pg	**Pn**		**12 05 57.5**		**-1.0**
SMG				*e*Sb	**Sn**		**12 06 16.0**		**-0.2**
DEMI	**Demirci**	**1.33**	**89**	*i* P	**Pn**		**12 05 58.4**		**-0.1**
DEMI				*i* S	**Sb**		**12 06 14.9**		**-1.2**
DEMI	**Demirci**	**1.33**	**89**	*i* P	**Pn**		**12 05 58.3**		**-0.2**
DEMI				*i* S	**Sb**		**12 06 14.9**		**-1.1**
KULA	**Kula-Manisa**	**1.40**	**111**	*e*PN	**Pn**		**12 06 00.1**		**+0.7**
KULA	**Kula-Manisa**	**1.40**	**111**	*e*Pn	**Pn**		**12 06 00.1**		**+0.7**
GELI	**Tayfur-Gelibol**	**1.42**	**343**	*e*PN	**Pn**		**12 05 59.1**		**-0.6**
GELI	**Tayfur-Gelibol**	**1.42**	**343**	*e*Pn	**Pn**		**12 05 59.1**		**-0.6**
EDC	**Edincik**	**1.47**	**27**	*e*PN	**Pn**		**12 06 01.0**		**+0.7**
EDC	**Edincik**	**1.47**	**27**	*e*Pn	**Pn**		**12 06 01.0**		**+0.6**
KCTX	**Karacabey (Bur**	**1.61**	**40**	*e*PN	**Pn**		**12 06 02.7**		**+0.4**
KCTX	**Karacabey (Bur**	**1.61**	**40**	*e*Pn	**Pn**		**12 06 02.7**		**+0.4**
RKY	**Sarkoy-Tekirda**	**1.66**	**5**	*e*PN	**Pn**		**12 06 02.8**		**-0.2**
RKY	**Sarkoy-Tekirda**	**1.66**	**5**	*e*Pn	**Pn**		**12 06 02.8**		**-0.1**
ERIK	**Erikli-Kesan**	**1.68**	**347**	*e*PN	**Pn**		**12 06 04.0**		**+0.8**
ERIK	**Erikli-Kesan**	**1.68**	**347**	*e*Pn	**Pn**		**12 06 04.0**		**+0.8**
ENEZ	**Enez**	**1.82**	**339**	*e*PN	**Pn**		**12 06 06.4**		**+1.2**
ENEZ	**Enez**	**1.82**	**339**	*e*Pn	**Pn**		**12 06 06.4**		**+1.2**
ALN	**Alexandroupoli**	**2.00**	**339**	*e*PB	**Pn**		**12 06 07.9**		**+0.2**
ALN				*e*SN	**Sb**		**12 06 36.1**		**+0.8**
ALN	**Alexandroupoli**	**2.00**	**339**	*e*Pb	**Pn**		**12 06 07.9**		**+0.2**
ALN				*e*Sn	**Sb**		**12 06 36.1**		**+0.8**
ARMT	**Armutlu**	**2.09**	**43**	*e*PN	**Pn**		**12 06 10.3**		**+1.3**
ARMT	**Armutlu**	**2.09**	**43**	*e*Pn	**Pn**		**12 06 10.3**		**+1.3**

*DDA **25** 12:16:02.8, 39.83°N×40.05E, h7km±4km, Md3.2*
*ISK **25** 12:16:03.2, 39.89°N×40.10E, h4km, MD3.3*
*ISCJB **25** 12:16:04.0±0.3, 39.90°N±0.02×40.09E±0.03, h10km, Error ellipse: s-maj=3.4km s-min=2.8km az=178.2*
*CSEM **25** 12:16:04.6±0.1, 39.88°N×40.11E, h5km, MD3.2, Error ellipse: s-maj=3.6km s-min=2.9km az=175.0*
ISC 25 12:16:04.2±0.5, 39.88°N±0.03×40.09E±0.03, h1km±6km, n42, σ0.990/57, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC		h m s		ISC
KOPT	**Kop Dagi**	**0.34**	**65**	*i* P	**Pg**		**12 16 10.8**		**+0.1**
KOPT				*i* S	**Sg**		**12 16 17.1**		**+1.9**
KOPT	**Kop Dagi**	**0.34**	**65**	*i* P	**Pg**		**12 16 10.8**		**0.0**
KOPT				*i* S	**Sg**		**12 16 17.1**		**+1.9**
EZC	**Erzincan**	**0.58**	**258**	*e*PG	**Pg**		**12 16 15.6**		**+0.1**
EZC				*e*SG	**Sg**		**12 16 25.1**		**+2.1**
KELT	**Kelkit**	**0.70**	**293**	*i* P	**Pg**		**12 16 16.8**		**-0.9**
KELT				*i* S	**Sg**		**12 16 27.6**		**+0.9**
KELT	**Kelkit**	**0.70**	**293**	*i* P	**Pg**		**12 16 16.8**		**-0.8**
KELT				*i* S	**Sg**		**12 16 27.6**		**+0.9**
GUMT	**Gumushane**	**0.75**	**321**	*e*PG	**Pg**		**12 16 18.1**		**-0.5**
GUMT				*e*SG	**Sg**		**12 16 29.0**		**+0.7**
EZM	**Erzurum**	**0.98**	**88**	*e*PG	**Pg**		**12 16 22.4**		**-0.5**
ERZM	**Erzurum**	**0.98**	**88**	*i* P	**Pg**		**12 16 21.6**		**-1.4**
ERZM				*i* S	**Sg**		**12 16 36.0**		**+0.3**
ERZM	**Erzurum**	**0.98**	**88**	*i* P	**Pg**		**12 16 21.6**		**-1.4**
ERZM				*i* S	**Sg**		**12 16 36.0**		**+0.3**
BINT	**Bingol**	**1.04**	**163**	*e*PG	**Pg**		**12 16 24.3**		**0.0**
BINT	**Bingol**	**1.04**	**163**	*e*Pg	**Pg**		**12 16 24.3**		**0.0**
MACK	**Trabzon**	**1.09**	**347**	*i* P	**Pg**		**12 16 24.6**		**-0.6**
MACK				*i* S	**Sg**		**12 16 39.1**		**-0.3**
MACK	**Trabzon**	**1.09**	**347**	*i* P	**Pg**		**12 16 24.6**		**-0.6**
MACK				*i* S	**Sg**		**12 16 39.1**		**-0.3**
PTK	**Pertek**	**1.12**	**209**	*e*PN	**Pg**		**12 16 24.8**		**-0.9**
PTK				*e*SN	**Sg**		**12 16 41.1**		**+0.7**
ESPY	**Espiye-Giresun**	**1.47**	**315**	*e*PN	**Pn**		**12 16 30.7**		**-1.1**
ESPY	**Espiye-Giresun**	**1.47**	**315**	*e*Pn	**Pn**		**12 16 30.7**		**-1.1**
SVRC	**Sivrice-ELAZID**	**1.62**	**203**	*e*PN	**Pb**		**12 16 33.6**		**-1.2**
SVRC	**Sivrice-ELAZID**	**1.62**	**203**	*e*Pn	**Pb**		**12 16 33.6**		**-1.2**
DDEM	**Demirkent**	**1.62**	**51**	*i* P	**Pn**		**12 16 34.2**		**+0.3**
DDEM				*i* S	**Sg**		**12 16 58.6**		**+2.2**
DDEM	**Demirkent**	**1.62**	**51**	*i* P	**Pn**		**12 16 34.2**		**+0.3**
GRSN	**GIRESUNGRSN**	**1.74**	**307**	*i* P	**Pn**

BRTR	**Keskin Array B**	**21.43**	**310**	P		**P**	**12 21 29.0**	**+0.2**
AKTK	**Aktyubinsk**	**22.94**	**5**	P		**P**	**12 21 44.3**	**-0.4**
AKTK	**Aktyubinsk**	**22.94**	**5**	P		**P**	**12 21 44.3**	**-0.4**
AKTO	**Aktyubinsk**	**22.94**	**5**	P		**P**	**12 21 44.3**	**-0.4**
	comp=Z,0.9nm,0.3s,mb3.7,baz=169,slow=16,SNR=3.0							
BVAR	**Borovoye Array**	**27.88**	**20**	P		**P**	**12 22 29.4**	**-1.0**
	comp=Z,1.0nm,0.4s,mb3.8,baz=191,slow=7.1,SNR=10							
BVAR	**Borovoye Array**	**27.88**	**20**	P		**P**	**12 22 29.4**	**-1.0**
MKAR	**Makanchi Array**	**28.78**	**41**	P		**P**	**12 22 37.0**	**-1.5**
	comp=Z,0.4nm,0.5s,mb3.4,baz=231,slow=8.9,SNR=5.9							
KURK	**Kurchatov**	**29.26**	**31**	P		**P**	**12 22 41.0**	**-1.7**
	comp=Z,0.4nm,0.5s,mb3.4,baz=233,slow=8.3,SNR=4.5							
KURK	**Kurchatov**	**29.26**	**31**	P		**P**	**12 22 41.0**	**-1.7**
ZALV	**Zalesovo Beam**	**34.25**	**32**	P		**P**	**12 23 24.7**	**-1.9**
	comp=Z,1.7nm,0.4s,mb4.3,baz=242,slow=8.9,SNR=8.0							
FINES	**FINESS Array B**	**38.98**	**338**	P		**P**	**12 24 04.3**	**-2.4**
	comp=Z,2.0nm,0.6s,mb4.1,baz=134,slow=11,SNR=5.4							
FINES	**FINESS Array B**	**38.98**	**338**	P		**P**	**12 24 04.3**	**-2.4**
NB2	**NORSAR Subarra**	**44.40**	**331**	P		**P**	**12 24 49.3**	**-1.8**
	comp=Z,1.2nm,0.6s,mb3.8,SNR=5.5							
NOA	**NORSAR Array B**	**44.40**	**331**	P		**P**	**12 24 49.5**	**-1.7**
NOA	**NORSAR Array B**	**44.40**	**331**	P		**P**	**12 24 49.5**	**-1.6**
	comp=Z,1.6nm,0.7s,mb3.9,baz=119,slow=8.0,SNR=5.4							
NOA	**NORSAR Array B**	**44.40**	**331**	P		**P**	**12 24 49.5**	**-1.6**
ARCES	**ARCESS Array B**	**45.33**	**346**	P		**P**	**12 24 57.0**	**-1.4**
	comp=Z,1.8nm,0.8s,mb3.9,baz=308,slow=12,SNR=5.1							
ARCES	**ARCESS Array B**	**45.33**	**346**	P		**P**	**12 24 57.0**	**-1.4**
ESDC	**Sonseca Array**	**49.72**	**300**	P		**P**	**12 25 32.5**	**-0.6**
	comp=Z,0.4nm,0.5s,mb3.7,baz=81,slow=8.5,SNR=3.9							
ESDC	**Sonseca Array**	**49.72**	**300**	P		**P**	**12 25 32.5**	**-0.5**
TORD	**Torodi Ar. Bea**	**51.59**	**265**	P		**P**	**12 25 47.0**	**-0.4**
	comp=Z,2.7nm,0.5s,mb4.4,baz=62,slow=7.5,SNR=32							
DBIC	**Dimbokro**	**60.24**	**262**	P		**P**	**12 26 48.5**	**-0.9**
	comp=Z,1.8nm,0.8s,mb4.2,baz=47,slow=14,SNR=3.9							
DBIC	**Dimbokro**	**60.24**	**262**	P		**P**	**12 26 48.5**	**-1.0**
KSRS	**Korea Array**	**60.93**	**61**	P		**P**	**12 26 51.6**	**-2.2**
	comp=Z,1.0nm,0.7s,mb4.0,baz=275,slow=6.6,SNR=4.0							
FITZ	**Fitzroy Crossi**	**82.12**	**115**	P		**P**	**12 29 00.3**	**-1.5**
	comp=Z,0.8nm,0.6s,mb3.8,baz=330,slow=8.1,SNR=2.8							
FITZ	**Fitzroy Crossi**	**82.12**	**115**	P		**P**	**12 29 00.3**	**-1.5**
ILAR	**Eielson Array**	**86.38**	**9**	P		**P**	**12 29 20.4**	**-2.4**
	comp=Z,0.2nm,0.6s,mb3.5,baz=320,slow=4.8,SNR=4.6							
ILAR	**Eielson Array**	**86.38**	**9**	P		**P**	**12 29 20.4**	**-2.4**
WRA	**Warramunga Arr**	**90.13**	**112**	P		**P**	**12 29 38.9**	**-2.5**
	comp=Z,0.4nm,0.7s,mb3.9,baz=317,slow=3.7,SNR=2.4							
WRA	**Warramunga Arr**	**90.13**	**112**	P		**P**	**12 29 38.9**	**-2.4**
ASAR	**Alice Springs**	**91.59**	**116**	P		**P**	**12 29 46.4**	**-1.6**
	comp=Z,0.3nm,0.6s,mb3.8,baz=310,slow=4.3,SNR=2.9							
ASAR	**Alice Springs**	**91.59**	**116**	P		**P**	**12 29 46.4**	**-1.7**

DJA 25 12:23:01,1˚.06N×125˚.52E,h56km,MLv4.3/7,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**0.78**	**299**	P	Pn	12 23 17.3	+1.3
MNI				S	Sn	12 23 29.3	+2.3
KMSI	**Cibinong**	**1.61**	**253**	P	Pn	12 23 26.9	-0.2
KMSI				S	Sn	12 23 46.6	-0.3
TNTI	**Ternate**	**1.87**	**99**	P	Pn	12 23 32.4	+1.8
LBMI	**Labuha**	**2.60**	**130**	P	Pn	12 23 41.1	+0.5
LBMI				S	Sn	12 24 11.1	0.0
SGSI	**Sangihe**	**2.61**	**0**	P	Pn	12 23 43.0	+2.2
SGSI				S	Sn	12 24 10.5	-0.8
LUWI	**Luwuk**	**3.45**	**233**	P	Pn	12 23 52.8	+0.5
LUWI				S	Sn	12 24 32.4	+0.4
MRSI	**Marisa**	**3.63**	**261**	P	Pn	12 23 54.0	-0.7
NLAI	**Namlea**	**4.55**	**160**	P	Pn	12 24 06.0	-1.4
NLAI				S	Sn	12 24 54.1	-5.0

*ISCJB **25** 12:36:11.2±0.6,32˚.74N±0˚.04×105˚.32E±0˚.05,h10km, mb3.5/3,Error ellipse: s-maj=7.4km s-min=4.9km az=135.3*

*IDC **25** 12:36:13.9±2.0,31˚.00N×103˚.03E,h0km,mb3.4/3, mb1 3.6/3,mb1mx3.3/22,mbtmp3.4/3,Error ellipse: s-maj=420.5km s-min=28.5km az=53.0*

*BJI **25** 12:36:14.0,32˚.78N×105˚.46E,h14km,mb3.7/1,ML3.5/12, Ms3.4/3,Ms7 3.1/3*

ISC 25 12:36:13.2±0.5,32˚.72N±0˚.04×105˚.40E±0˚.05,h10km,n7, σ0s.86/14,mb3.5/3,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.28**	**218**	Pg	**Pg**	**12 36 56.0**	**-1.0**
CD2				Sn	**Sn**	**12 37 23.3**	**+0.6**
CD2				Sg	**Sg**	**12 37 26.0**	**-0.5**
CD2				smax			
	comp=N,830nm,0.6s						
CD2				smax			
	comp=E,820nm,0.8s						
XAN	**Xi'an**	**3.23**	**65**	Pn	**Pn**	**12 37 04.3**	**+0.3**
XAN				Pg	**Pb**	**12 37 10.3**	**-0.3**
XAN				Sn	**Sn**	**12 37 42.3**	**-0.2**
XAN				Sg	**Sb**	**12 37 50.0**	**0.0**
XAN				smax			
	comp=N,180nm,0.5s						
XAN				smax			
	comp=E,110nm,0.7s						
LZH	**Lanzhou**	**3.60**	**339**	Pn	**Pn**	**12 37 12.3**	**+3.2**
LZH				Pg	**Pg**	**12 37 22.0**	**-0.2**
LZH				Sg	**Sg**	**12 38 07.3**	**-1.5**
LZH				smax			
	comp=N,180nm,0.5s						
LZH				smax			
	comp=E,260nm,0.6s						
LZH				LR	LR		
	comp=N,370nm,4.1s						
LZH				LR	LR		
	comp=E,320nm,5.4s						
LZH				LR	LR		
	comp=Z,540nm,5.7s						
GTA	**Gaotai**	**8.06**	**327**	*e*P	**Pn**	**12 38 11.5**	**+1.1**
GTA				pP		12 38 16.0	
GTA				sP		12 38 19.0	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**22.55**	**315**	P	**P**	**12 41 14.4**	**+1.2**
	comp=Z,0.5nm,0.5s,mb3.2,baz=111,slow=12,SNR=4.1						
WRA	**Warramunga Arr**	**59.23**	**148**	P	**P**	**12 46 14.4**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.7,baz=327,slow=9.2,SNR=12						
ASAR	**Alice Springs**	**62.32**	**150**	P	**P**	**12 46 35.8**	**0.0**
	comp=Z,0.2nm,0.3s,mb3.7,baz=334,slow=6.5,SNR=18						

*IDC **25** 12:52:06.3±10.0,6˚.11S×117˚.43E,h0km,mb3.9/3, mb1 4.2/3,mb1mx3.6/19,mbtmp4.0/3,Error ellipse: s-maj=228.2km s-min=142.4km az=28.0*

ISC 25 12:52:14.3±5.2,6˚.2S±0˚.5×117˚.8E±0˚.3,h35km,n7,σ0s.49/7, mb4.0/3,Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.11**	**148**	*e*P	**Pn**	**12 55 31.6**	**-0.2**
	7.3nm,0.6s						
FITZ				*e*S	Sx	12 57 34.5	
KNA	**Kununurra**	**14.35**	**132**	*e*P	**Pn**	**12 55 35.7**	**+0.6**
	2.3nm,0.3s						
KNA				*e*S	Sx	12 57 47.4	
KAKA	**Kakadu**	**15.81**	**115**	*e*P	**Pn**	**12 56 01.2**	**+6.7**
	5.6nm,0.6s						
KAKA				*e*S	Sx	12 58 22.5	
MEEK	**Meekatharra**	**20.38**	**178**	*e*P	**P**	**12 56 48.3**	**+0.2**
MEEK				*e*S	Sx	13 00 02.1	
WRA	**Warramunga Arr**	**21.10**	**132**	P	**P**	**12 56 56.0**	**0.0**
	1.8nm,0.3s,mb3.9,baz=303,slow=12,SNR=106						
ASAR	**Alice Springs**	**23.29**	**140**	P	**P**	**12 57 18.3**	**-0.9**
	3.2nm,0.3s,mb4.2,baz=316,slow=8.6,SNR=132						
STKA	**Stephens Creek**	**33.88**	**142**	P	**P**	**12 58 54.3**	**+0.4**
	0.7nm,0.4s,mb4.0,baz=322,slow=11,SNR=6.5						

*ISCJB **25** 13:17:15.5±0.8,16˚.58S±0˚.07×177˚.28W±0˚.08, h397km±11km,mb4.4/26,Error ellipse: s-maj=12.7km s-min=9.1km az=35.5*

*NEIC **25** 13:17:17.6±0.4,16˚.52S×177˚.26W,mb4.6/8,Error ellipse: s-maj=13.6km s-min=10.2km az=133.0*

*IDC **25** 13:17:17.7±0.7,16˚.61S×177˚.24W,h405km±7km,mb4.0/15, mb1 4.1/16,mb1mx4.1/22,mbtmp4.0/16,Error ellipse: s-maj=14.6km s-min=10.0km az=134.0*

ISC 25 13:17:16.2±0.8,16˚.60S±0˚.07×177˚.20W±0˚.08, h392km±11km,h405km±2.0km:pP-P,n54,σ1s01/56, mb4.4/26,1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.88**	**64**	*e*Pn	**Pn**	**13 18 47.9**	**+0.7**
AFI				*e*S	**S**	**13 20 00.1**	**-1.2**
AFI				S	**S**	**13 20 00.6**	**-0.7**
AFI	**Afiamalu**	**5.88**	**64**	P	**Pn**	**13 18 48.1**	**+0.8**
	28nm,0.3s,baz=226,slow=1.1,SNR=60						
AFI				S	**S**	**13 20 00.6**	**-0.6**
	19nm,0.3s,baz=24,slow=20,SNR=3.5						
PUZ	**Puketiti**	**21.77**	**190**	PN	**P**	**13 21 37.6**	**+0.4**
MWZ	**Matawai**	**22.15**	**191**	PN	**P**	**13 21 39.4**	**-1.3**
URZ	**Urewera**	**22.16**	**192**	P	**P**	**13 21 39.5**	**-1.3**
	53nm,0.8s,mb5.0,baz=6.7,slow=5.6,SNR=20						
HNR	**Honiara**	**23.36**	**285**	P	**P**	**13 21 52.9**	**+1.0**
	228nm,0.8s,baz=199,slow=3.4,SNR=8.3						
MRZ	**Mangatainoka R**	**24.79**	**193**	PN	**P**	**13 22 03.0**	**-1.4**
RPZ	**Rata Peaks**	**28.82**	**198**	P	**P**	**13 22 39.7**	**-0.3**
	16nm,0.7s,mb4.5,baz=43,slow=7.3,SNR=9.9						
ARMA	**Armidale**	**31.60**	**239**	*e*P	**P**	**13 23 06.3**	**+1.8**
CTA	**Charters Tower**	**34.82**	**259**	*e*P	**P**	**13 23 31.9**	**-0.3**
	4.0nm,0.5s,mb4.0,baz=87,slow=10,SNR=7.0						
CTAO	**Charters Tower**	**34.82**	**259**	*e*P	**P**	**13 23 32.1**	**-0.1**
	5.0nm,0.6s,mb4.0						
CMSA	**Cobar Meteorol**	**36.80**	**239**	*e*P	**P**	**13 23 49.7**	**+1.0**
QLP	**Quilpie**	**37.09**	**248**	*e*P	**P**	**13 23 51.0**	**-0.1**
TOO	**Toolangi**	**38.89**	**230**	*e*P	**P**	**13 24 07.3**	**+1.5**
STKA	**Stephens Creek**	**40.28**	**240**	*e*P	**P**	**13 24 17.9**	**+0.7**
	5.5nm,0.9s,mb3.9						
STKA	**Stephens Creek**	**40.28**	**240**	*e*P	**P**	**13 24 18.1**	**+0.9**
	1.2nm,0.8s,mb3.3						
STKA	**Stephens Creek**	**40.28**	**240**	P	**P**	**13 24 18.1**	**+0.9**
	6.5nm,0.8s,mb4.0,baz=106,slow=7.9,SNR=9.4						
BBOO	**Buckleboo**	**45.05**	**240**	*e*P	**P**	**13 24 55.0**	**-0.1**
	8.0nm,0.8s,mb4.1						
WRA	**Warramunga Arr**	**46.02**	**258**	P	**P**	**13 25 02.2**	**-0.6**
WRA				S	**S**	**13 31 16.8**	**-1.2**
WRA	**Warramunga Arr**	**46.02**	**258**	P	**P**	**13 25 02.2**	**-0.6**
	2.5nm,0.3s,mb4.1,baz=81,slow=7.6,SNR=94						
WRA				S	**S**	**13 31 16.8**	**-1.2**
	1.3nm,0.8s,baz=93,slow=14,SNR=5.4						
ASAR	**Alice Springs**	**46.27**	**253**	P	**P**	**13 25 04.7**	**+0.1**
	17nm,0.4s,mb4.7,baz=89,slow=7.7,SNR=884						
ASAR				S	**S**	**13 31 17.1**	**-4.3**
	1.9nm,1.0s,baz=86,slow=17,SNR=10						
GUMO	**Guam**	**48.00**	**306**	P	**P**	**13 25 18.2**	**+0.4**
	19nm,0.3s,mb4.9,baz=150,slow=8.4,SNR=4.9						
KAKA	**Kakadu**	**48.78**	**267**	*e*P	**P**	**13 25 23.9**	**+0.1**
	33nm,0.5s,mb4.9						
FORT	**Forrest**	**51.62**	**244**	*e*P	**P**	**13 25 44.1**	**-0.5**
	19nm,0.6s,mb4.5						
KNA	**Kununurra**	**51.77**	**263**	*e*P	**P**	**13 25 45.6**	**-0.3**
	16nm,0.7s,mb4.4						
FITZ	**Fitzroy Crossi**	**54.39**	**259**	*e*P	**P**	**13 26 04.6**	**-0.2**
	12nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**54.39**	**259**	P	**P**	**13 26 05.1**	**+0.3**
	6.4nm,0.5s,mb4.1,baz=138,slow=5.1,SNR=30						
MBWA	**Marble Bar**	**59.52**	**255**	*e*P	**P**	**13 26 39.9**	**-0.4**
MBWA	**Marble Bar**	**59.52**	**255**	*e*P	**P**	**13 26 39.8**	**-0.5**
	8.4nm,0.6s,mb4.3						
SBA	**Scott Base**	**61.80**	**184**	*e*P	**P**	**13 26 57.8**	**+3.3**
	32nm,0.9s,mb4.9						
MORW	**Morawa**	**62.07**	**246**	*e*P	**P**	**13 26 56.5**	**-0.6**
MJAR	**Matsuiro Arr**	**67.56**	**322**	P	**P**	**13 27 30.6**	**-1.3**
	7.4nm,0.9s,mb4.3,baz=157,slow=5.5,SNR=12						
MAJO	**Matsushiro**	**67.56**	**322**	*e*P	**P**	**13 27 31.4**	**-0.5**
	8.7nm,1.0s,mb4.3						
MAT	**Matsushiro**	**67.56**	**322**	P	**P**	**13 27 30.9**	**-1.0**
CASY	**Casey**	**67.81**	**205**	*e*P	**P**	**13 27 33.6**	**+0.6**
CASY	**Casey**	**67.81**	**205**	*e*P	**P**	**13 27 33.5**	**+0.6**
	20nm,0.9s,mb4.8						
PETK	**Petropavlovsk-**	**72.72**	**344**	P	**P**	**13 28 01.9**	**-0.6**
	3.4nm,0.6s,mb4.0,baz=121,slow=8.5,SNR=13						
YSS	**Yuzh-Sakhalins**	**72.78**	**333**	*e*P	**P**	**13 28 03.4**	**+0.4**
	28nm,1.1s,mb4.7						
QSPA	**South Pole Qui**	**73.45**	**180**	*e*P	**P**	**13 28 08.7**	**+2.3**
	63nm,0.9s,mb5.2						
KSRS	**Korea Array**	**74.50**	**318**	P	**P**	**13 28 13.7**	**+0.6**
	7.3nm,1.1s,mb4.2,baz=139,slow=6.7,SNR=17						
YBH	**Yreka Blue Hor**	**76.78**	**39**	pP	pP	13 29 59.5	+6.0
	3.3nm,1.0s,baz=220,slow=7.9,SNR=4.0						
NVAR	**Mina Array Bea**	**77.68**	**43**	P	**P**	**13 28 31.7**	**+0.9**
	1.2nm,0.8s,mb3.6,baz=229,slow=9.3,SNR=8.1						
NVAR				pP	pP	13 30 02.7	+3.9
	0.3nm,0.4s,baz=221,slow=8.0,SNR=3.2						
COLA	**College**	**84.25**	**12**	*e*P	**P**	**13 29 03.7**	**-0.8**
	3.1nm,0.8s,mb4.1						
TXAR	**Lajitas Array**	**84.32**	**57**	P	**P**	**13 29 07.5**	**+1.8**
	3.8nm,1.1s,mb4.0,baz=225,slow=5.0,SNR=20						
TXAR				pP	pP	13 30 39.0	+3.8
	1.1nm,1.1s,baz=245,slow=18,SNR=2.5						
ILAR	**Eielson Array**	**84.36**	**13**	P	**P**	**13 29 03.8**	**-1.2**
	3.0nm,0.8s,mb4.1,baz=228,slow=4.9,SNR=36						
ILAR				pP	pP	13 30 37.4	+2.8
	2.2nm,1.1s,baz=224,slow=6.0,SNR=6.2						
ANMO	**Albuquerque**	**84.38**	**51**	pP	pP	13 30 40.9	+5.5
	1.9nm,0.9s,baz=243,slow=7.5,SNR=3.1						
MAW	**Mawson**	**85.48**	**199**	*e*P	**P**	**13 29 11.8**	**+1.2**
	8.4nm,0.8s,mb4.5						
MAW	**Mawson**	**85.48**	**199**	P	**P**	**13 29 12.0**	**+1.3**
	10nm,0.8s,mb4.6,baz=119,slow=6.8,SNR=21						
PDAR	**Pinedale Array**	**85.61**	**43**	P	**P**	**13 29 13.2**	**+1.5**
	0.2nm,0.5s,baz=217,slow=10,SNR=3.3						
PDAR				pP	pP	13 30 45.3	+3.8
	0.6nm,0.8s,baz=213,slow=3.1,SNR=4.7						
SYO	**Syowa Base**	**90.68**	**192**	*e*P	**P**	**13 29 33.6**	**-1.5**
VNA3	**Neumayer Olymp**	**91.97**	**176**	*e*	**P**	**13 29 39.3**	**-1.7**
VNA1	**Neumayer--Stat**	**92.64**	**176**	*e*	**P**	**13 29 43.9**	**-0.2**
BRTR	**Keskin Array B**	**144.65**	**317**	PKP	PKPdf	13 36 07.0	-0.1
	14nm,1.1s,baz=64,slow=3.4,SNR=18						
MMAI	**Mount Meron Ar**	**146.37**	**305**	PKPbc	PKPbc	13 36 13.1	+0.8
	7.5nm,0.5s,baz=64,slow=7.5,SNR=7.5						

*BGS **25** 13:21:44.9±1.5,28˚.14N×83˚.43E,h12km,mb5.9,MS6.8*

*DMN **25** 13:21:50.1±0.6,31˚.97N×83˚.33E,h10km,Ml6.7/5,Error ellipse: s-maj=13.3km s-min=11.4km az=121.0*

*LDG **25** 13:21:55.9±0.1,31˚.09N×83˚.46E,h10km,Mb6.1/46, Ms6.3/10,Error ellipse: s-maj=6.3km s-min=4.5km az=113.0*

*BJI **25** 13:21:56.7,30˚.92N×83˚.57E,h13km,mB6.7/57,mb5.8/59, Ms6.9/79,Ms7 6.8/65*

*IDC **25** 13:21:56.8±0.3,30˚.87N×83˚.58E,h0km,mb5.7/36, mb1 5.8/39,mb1mx5.8/39,mbtmp5.7/39,ML4.3/3,MS6.5/36, Ms1 6.5/36,ms1mx6.4/42,Error ellipse: s-maj=12.5km s-min=7.2km az=40.0*

*NEIC **25** 13:21:58.8±0.2,30˚.90N×83˚.52E,h12km,mb6.2/164, ME6.2,MS6.5/144,MW6.7,MW6.6,Error ellipse: s-maj=6.2km s-min=3.3km az=198.0 Broadband fault plane solution: P waves. NP1:φs30.00000°,δ30.00000°, λ-60.00000°. NP2:φs176.00000°,δ64.00000°, λ-106.00000°. Principal axes: T Plg18.0000°, Azm278.0000°; N Plg0.0000°, Azm0.0000°; P Plg67.0000°, Azm57.0000°; Moment Tensor Solution. s57 Moment tensor: Scale 10¹⁸ Nm; Mrr=5.44; Mθθ=4.27; Mφφ 9.71; Mrθ=-1.37; Mrφ=0.08; Mθφ 0.68; Best double couple: M=8.60000×10¹⁸ NP1:φs29.00000°, δ51.00000°,λ-46.00000°. NP2:φs152.00000°,δ56.00000°, λ-131.00000°. Principal axes: T 9.7400, Plg2.0000°, Azm269.0000°; N -3.3800, Plg33.0000°, Azm177.0000°; P -6.3600, Plg56.0000°, Azm3.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC About 700 rooms damaged [VIII] in Zhongba County. Ten km of surface faulting with sandblows along 4.2 km of the fracture zone observed in the epicentral area. Felt strongly at Bahraich and Lucknow and [II] at Delhi, India. Felt in parts of Haryana, Himachal Pradesh, Uttar Pradesh and Uttarakhand. Also felt at Kathmandu, Nepalganj and in the Tarai region, Nepal.

*ISCJB **25** 13:21:59.6±0.5,31˚.07N±0˚.02×83˚.63E±0˚.01,h25km±3km, mb6.0/380,MS6.6/242 Error ellipse: s-maj=2.9km s-min=1.7km az=26.2*

*MOS **25** 13:21:59.9±1.1,30˚.91N×83˚.54E,h33km,mb6.2/128, MS6.5/87,Error ellipse: s-maj=6.1km s-min=2.9km az=128.8*

*SZGRF **25** 13:22:00.4,30˚.92N×83˚.93E,h33km,mb6.2,MS6.6, Xizang*

*DJA **25** 13:22:01,30˚.81N×83˚.59E,h8km,Mw6.8/82*

*NDI **25** 13:22:02.7±4.6,30˚.46N×83˚.50E,h10km,mb6.4, mb6.2(NEIC)*

*TEH **25** 13:22:03.0,30˚.90N×83˚.62E,h35km*

*GCMT **25** 13:22:08.5±0.1,30˚.61N×83˚.51E,h17km,MW6.7,Moment Tensor Solution. s109,c255; s99,c214; Moment tensor: Scale 10¹⁹Nm; Mrr=1.02±.01; Mθθ=0.38±.01; Mφφ 1.40±.01; Mrθ=0.56±.02; Mφφ 0.11±.01; Mrφ=0.20±.02; Best double couple: M=1.40000×10¹⁹ NP1:φs30.00000°,δ48.00000°, λ-48.00000°. NP2:φs157.00000°,δ56.00000°, λ-127.00000°. Principal axes: T 1.4200, Plg4.0000°, Azm272.0000°; N -0.0500, Plg30.0000°, Azm120.0000°; P -1.3600, Plg60.0000°, Azm9.0000°; Data Used: II IU G CN IC. LP body wave period 50 sec. Surface waves: sta=117, comp=266, per= 50.*

ISC 25 13:22:01.5±0.4,31˚.06N±0˚.02×83˚.65E±0˚.01,h26km±3km, h17km±2.0km:pP-P,n1812,σ1s20/1469,mb6.0/379, MS6.6/242,267C-279D,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.70**	**178**	*e*Pn	**Pn**	**13 22 43.6**	**+0.2**
DANN	**Dangsing**	**2.70**	**178**	*e*Pn	**Pn**	**13 22 44.8**	**+1.4**
DANN				*e*Sn	**Sb**	**13 23 25.1**	**+3.2**
	248μm,0.9s						
PYUN	**Piuthan**	**3.01**	**191**	*e*Pn	**Pn**	**13 22 48.6**	**+1.1**
PYUN				*e*Sn	**Sb**	**13 23 29.9**	**-0.8**
GKN	**Gorkha**	**3.17**	**164**	*e*Pn	**Pn**	**13 22 52.0**	**+2.3**
GKN				*e*Sn	**Sb**	**13 23 36.8**	**+1.6**
	152μm,1.0s						
KOLN	**Koldanda**	**3.28**	**181**	*e*Pn	**Pn**	**13 22 52.4**	**+1.1**
KOLN				*e*Sn	**Sb**	**13 23 38.6**	**+0.1**
KKN	**Kakani**	**3.56**	**156**	*e*Pn	**Pn**	**13 22 55.7**	**+0.6**
JOSI	**Joshimath**	**3.56**	**263**	*e*PKP	**Pn**	**13 22 57.4**	**+2.3**
JOSI				*ex*	x	13 23 56.1	
DMN	**Daman**	**3.67**	**159**	*e*Pn	**Pn**	**13 22 58.3**	**+1.7**
DMN				*e*Sn	**Sb**	**13 23 48.5**	**-1.2**
	120μm,1.2s						
GUN	**Gumba**	**3.69**	**148**	*e*Pn	**Pn**	**13 22 57.9**	**+1.0**
GUN	**Gumba**	**3.69**	**148**	*e*Pn	**Pn**	**13 22 59.0**	**+2.1**
PKI	**Pulchoki**	**3.80**	**156**	*e*Pn	**Pn**	**13 22 59.3**	**+0.8**
PKI	**Pulchoki**	**3.80**	**156**	*e*Pn	**Pn**	**13 23 00.4**	**+1.9**
PKI				*e*Sn	**Sb**	**13 23 52.3**	**-1.2**
JIRN	**Jiri**	**4.05**	**146**	*e*Pn	**Pn**	**13 23 02.5**	**+0.6**
JIRN				*e*Sn	**Sb**	**13 23 56.3**	**-4.3**
	42μm,1.2s						
KLP	**Kalpa**	**4.65**	**277**	*e*PKP	**Pn**	**13 23 12.6**	**+2.5**
KLP				*ex*	x	13 24 22.6	
RAMN	**Ramite**	**4.84**	**147**	*e*Pn	**Pn**	**13 23 12.7**	**-0.1**
RAMN	**Ramite**	**4.84**	**147**	*e*Pn	**Pn**	**13 23 14.5**	**+1.7**
RAMN				*e*Sn	**Sb**	**13 24 16.3**	**-7.2**
	40μm,1.2s						
DDI	**Dehra Dun**	**4.88**	**263**	↑ *i* x	**Pn**	**13 23 13.5**	**+0.3**
DDI				*ex*	x	13 30 36.5	
TAPN	**Taplejung**	**5.12**	**135**	*e*Pn	**Pn**	**13 23 17.2**	**+0.6**
ODAN	**Odare**	**5.31**	**141**	*e*Pn	**Pn**	**13 23 19.2**	**-0.1**
SMLA	**Simla**	**5.56**	**272**	*i* P	**Pn**	**13 23 22.5**	**-0.2**
SDNR	**Sundarnagar**	**5.74**	**276**	*ex*	**Pn**	**13 23 25.5**	**+0.4**
SDNR				*ex*	x	13 25 05.5	
ALBI	**Allahabad**	**5.96**	**196**	*e*PKP	**Pn**	**13 23 23.0**	**-5.1**
ALBI				*ex*	x	13 24 40.0	
KKR	**Kurukshetra**	**6.00**	**261**	*e*PKP	**Pn**	**13 23 28.1**	**-0.6**
NDI	**New Delhi**	**6.07**	**249**	*ex*	**Pn**	**13 23 30.5**	**+0.9**
BHK	**Bhakra**	**6.21**	**275**	*ex*	**Pn**	**13 23 28.8**	**-2.7**
BHK				*ex*	x	13 24 58.6	
AYAN	**Aya Nagar**	**6.23**	**247**	*e*PKP	**Pn**	**13 23 30.0**	**-1.8**
AYAN				AMb	AMB	13 23 41.4	
	comp=Z,2μm,1.0s						
AGRA	**Agra**	**6.28**	**234**	*e*PKP	**Pn**	**13 23 30.0**	**-2.6**
AGRA				*ex*	x	13 24 41.0	
SONA	**Sohna**	**6.37**	**246**	*e*PKP	**Pn**	**13 23 32.6**	**-1.1**
SONA				*ex*	x	13 24 56.4	
RTK	**Rohtak**	**6.59**	**254**	*e*PKP	**Pn**	**13 23 36.1**	**-0.7**
LSA	**Lhasa**	**6.62**	**100**	Pn	**Pn**	**13 23 41.3**	**+4.1**
LSA				Sn	**Sn**	**13 24 55.8**	**+4.0**
LSA				LR	LR		
	comp=N,300μm,13.0s						
LSA				LR	LR		
	comp=E,1000μm,11.0s						
LSA				LR	LR		
	comp=Z,1000μm,11.0s						
LSA	**Lhasa**	**6.62**	**100**	*e*P	**Pn**	**13 23 40.4**	**+3.2**
	comp=Z,5μm,1.3s						
LSA	**Lhasa**	**6.62**	**100**	*e*P	**Pn**	**13 23 40.4**	**+3.2**
LSA				pmax	pmax		
	comp=Z,5μm,1.3s						
DLH	**Dalhousie**	**6.71**	**285**	*

VIS Vishakhapatnam 13.29 181 *e*PKP **Pn** **13 25 02.6 -5.9**
VIS *i* x x 13 27 25.7
AAA Alma-Ata 13.30 338 *i* P **Pn** **13 25 11.5 +2.9**
AAA *i* S **Sn** **13 27 41.0 +5.4**
AAA pmax pmax
comp=Z,19µm,6.4s
AAA smax
comp=N,18µm,7.4s
AAA MLR MLR
comp=Z,409µm,8.0s
UCH Uchtor 13.33 329 P **Pn** **13 25 09.4 +0.4**
SNR=35
TKM2 Tokmak 2 13.46 334 P **Pn** **13 25 13.3 +2.4**
SNR=111
KBK Karagaybulak 13.50 331 P **Pn** **13 25 12.5 +1.2**
SNR=48
AML Almayashu 13.63 327 P **Pn** **13 25 13.9 +0.8**
SNR=83
AAK Ala-Archa 13.67 330 P **Pn** **13 25 12.1 -1.5**
SNR=28
AAK Ala-Archa 13.67 330 Pn **Pn** **13 25 14.5 +0.8**
comp=Z,0.8nm,0.3s,baz=160,slow=15,SNR=25
AAK Sn **Sn** **13 27 49.6 +5.0**
comp=Z,1.1nm,0.3s,baz=61,slow=19,SNR=1.9
AAK LR LR 13 31 28.8
comp=Z,186µm,21.5s,baz=129,slow=41
AAK Ala-Archa 13.67 330⇑ *i*P **Pn** **13 25 13.4 -0.3**
AAK pmax pmax
comp=Z,95nm,1.7s
AAK Ala-Archa 13.67 330 Pn **Pn** **13 25 14.2 +0.5**
comp=Z,2µm,1.1s,SNR=30
AAK Ala-Archa 13.67 330 P **Pn** **13 25 17.5 +3.8**
comp=Z,4µmcomp=Z,168nm,1.3s
AAK Ala-Archa 13.67 330 P **Pn** **13 25 13.2 -0.5**
SNR=232
FRU Bishkek 13.78 331⇓ *i*P **Pn** **13 25 14.0 -1.2**
FRU *e*S **Sn** **13 27 55.0 +7.7**
FRU pmax pmax
comp=Z,3µm,2.8s
FRU smax
comp=E,66µm,7.0s
BHV Bhavnagar 13.86 231 *e*PKP **Pn** **13 25 11.0 -5.4**
CHMS Chumysh 13.86 332 P **Pn** **13 25 16.8 +0.5**
SNR=30
EKS2 Erkin-Say 14.01 328 P **Pn** **13 25 19.1 +0.9**
SNR=41
LATR Latur 14.14 209 *e*x **Pn** **13 25 18.2 -1.9**
LATR *e*x x 13 29 10.4
USP Ospenovka 14.19 332 P **Pn** **13 25 20.6 -0.1**
SNR=18
HYB Hyderabad 14.35 200 *i* P **Pn** **13 25 16.5 -6.6**
comp=E,2µm,1.0s
HYB *e*S **Sn** **13 27 42.0 -20**
POO Poona 15.31 218 *e*PKP **Pn** **13 25 32.0 -4.0**
GTA Gaotai 15.60 53⇓ P **Pn** **13 25 39.0 -0.6**
GTA pP pP 13 25 46.5 -4.0
GTA sP sP 13 25 51.8 -2.0
GTA S **Sn** **13 28 29.5 -2.1**
GTA sS sS 13 28 40.5 -17
GTA SS 13 28 48.0
GTA pmax pmax
comp=Z,20µm,8.0s
GTA LR LR
comp=N,306µm,13.4s
GTA LR LR
comp=E,202µm,13.4s
GTA LR LR
comp=Z,232µm,11.9s
MK31 Makanchi Array 15.74 357 *i* P **Pn** **13 25 39.9 -1.6**
MK31 pmax pmax
comp=Z,370nm,0.7s
MKAR Makanchi Array 15.74 357 Pn **Pn** **13 25 41.1 -0.3**
comp=Z,1.7nm,0.3s,baz=178,slow=11,SNR=169
MKAR Sn **Sn** **13 28 34.1 -1.0**
comp=Z,0.5nm,0.3s,baz=164,slow=6.3,SNR=1.9
MKAR LR LR 13 32 50.8
comp=Z,103µm,19.6s,baz=178,slow=41
MKAR Makanchi Array 15.74 357 P **Pn** **13 25 41.1 -0.4**
MKAR 13 28 34.1
MKAR pmax pmax
comp=Z,2.0nm,0.3s
MKAR smax
comp=N,1.0nm,0.3s
MKAR MLR MLR
comp=Z,103µm,19.6s
KK31 Karatay Array 15.93 323 P **Pn** **13 25 40.7 -3.1**
KK31 pmax pmax
comp=Z,2µm,1.7s
KAD Karad 16.18 214 *e*PKP **Pn** **13 25 42.3 -4.8**
KAD *ex* x 13 28 25.5
CD2 Chengdu 17.25 85⇓ *i*P **Pn** **13 25 59.5 -1.1**
CD2 pP pP 13 26 07.3 -1.6
CD2 sP sP 13 26 11.8 -0.4
CD2 PP 13 26 14.0
CD2 S **Sn** **13 29 09.0 -2.7**
CD2 sS sS 13 29 21.5 -10
CD2 SS 13 29 30.5
CD2 LR LR
comp=N,99µm,12.5s
CD2 LR LR
comp=E,89µm,14.6s
CD2 LR LR
comp=Z,95µm,22.5s
LZH Lanzhou 17.55 68⇓ P **Pn** **13 26 03.5 -0.9**
LZH pP pP 13 26 14.0 +1.8
LZH sP sP 13 26 18.0 +2.5
LZH S **Sn** **13 29 16.5 -2.5**
LZH sS sS 13 29 28.5 -8.9
LZH SS 13 29 39.0
LZH LR LR
comp=N,334µm,12.6s
LZH LR LR
comp=E,589µm,10.7s
LZH LR LR
comp=Z,622µm,14.2s
KMI Kunming 17.84 105 P **Pn** **13 26 06.3 -1.7**
KMI pP pP 13 26 16.5 +1.0
KMI PP 13 26 25.3
KMI S **Sn** **13 29 22.8 -3.5**
KMI sS sS 13 29 35.5 -8.0
KMI SS 13 29 47.5
KMI pmax pmax
comp=Z,270nm,1.1s
KMI pmax pmax
comp=Z,26µm,7.6s
KMI LR LR
comp=N,446µm,19.5s
KMI LR LR
comp=E,109µm,18.8s
KMI LR LR
comp=Z,252µm,21.6s
GOA Goa 17.92 212⇑ *i*P **Pn** **13 26 04.2 -4.9**
GOA *i* x x 13 29 05.0
MDRS Chennai 18.18 191⇑ *i*P sP 13 26 26.2 +3.6
MDRS *e*S **Sn** **13 29 40.2 +5.7**
CHRT Chiangrai 18.31 124⇓ P **Pn** **13 26 14.8 +0.9**
comp=Z,7µm,1.3s
CHTO Chiang Mai 18.44 128 *e*P **Pn** **13 26 11.6 -3.8**
comp=Z,977nm,1.4s
CHTO Chiang Mai 18.44 128 *e*P **Pn** **13 26 11.6 -3.8**
CHTO pmax pmax
comp=Z,977nm,1.4s
CHTO Chiang Mai 18.44 128 P **Pn** **13 26 12.8 -2.6**
comp=Z,684nm,2.5s
CHTO Chiang Mai 18.44 128 P **Pn** **13 26 13.0 -2.4**
SNR=287
CMAR Chiang Mai Arr 18.69 129 P **Pn** **13 26 15.8 -2.6**
CMAR S **Sn** **13 29 47.9 +1.1**
CMAR PcP PcP 13 30 46.6 +0.9
CMAR LR LR 13 34 44.2
CMAR Chiang Mai Arr 18.69 129 P **Pn** **13 26 15.8 -2.6**
comp=Z,1.3nm,0.3s,baz=306,slow=13,SNR=66
CMAR S **Sn** **13 29 47.9 +1.1**
baz=293,slow=9.3,SNR=2.3
CMAR PcP PcP 13 30 46.6 +0.9
comp=Z,1.5nm,0.3s,baz=285,slow=1.9,SNR=9.1
CMAR LR LR 13 34 44.2
comp=Z,245µm,18.9s,baz=319,slow=41
CMAR P3KPbc 14 00 58.4
comp=Z,0.6nm,0.3s,baz=206,slow=1.0,SNR=12
CMAR Chiang Mai Arr 18.69 129 P **Pn** **13 26 15.8 -2.6**
CMAR S **Sn** **13 29 47.9 +1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR MLR MLR
comp=Z,245µm,18.9s
BDT Bhumibol Dam 19.60 131 P **Pn** **13 26 26.0 -3.4**
comp=Z,196nm,1.0s
KURK Kurchatov 19.99 351 P **Pn** **13 26 32.8 -1.0**
comp=Z,8µm,1.2s
KURK Kurchatov 19.99 351 P **Pn** **13 26 31.3 -2.4**
KURK S **Sn** **13 30 09.2 -8.5**
KURK LR LR 13 35 23.7
KURK Kurchatov 19.99 351 P **Pn** **13 26 31.3 -2.4**
comp=Z,679nm,1.0s,baz=171,slow=9.6,SNR=270
KURK S **Sn** **13 30 09.2 -8.5**
comp=Z,16nm,0.9s,baz=37,slow=42,SNR=2.0
KURK LR LR 13 35 23.7
comp=Z,123µm,19.3s,baz=160,slow=40
KURK P3KPbc 14 00 40.9
comp=Z,2.7nm,0.3s,baz=350,slow=4.0,SNR=6.0
KURK Kurchatov 19.99 351 P **Pn** **13 26 31.3 -2.5**
KURK S **Sn** **13 30 09.2 -8.5**
KURK pmax pmax
comp=Z,679nm,1.0s
KURK smax
comp=N,16nm,0.9s
KURK MLR MLR
comp=Z,123µm,19.3s
KURK Kurchatov 19.99 351 P **Pn** **13 26 32.5 -1.3**
SNR=1412
IDAH Dahanechah 20.26 281 *e*P **P** **13 26 34.6 -0.4**
GYA Guiyang 20.68 97⇓ *i*P **P** **13 26 38.5 -1.1**
GYA pP 13 26 50.5
GYA PP 13 27 03.3
GYA S **S** **13 30 26.0 -3.4**
GYA SS 13 30 56.3
GYA ScP ScP 13 34 22.0 -2.1
GYA pmax pmax
comp=Z,680nm,1.0s
GYA pmax pmax
comp=Z,26µm,8.1s
GYA LR LR
comp=N,211µm,16.1s
GYA LR LR
comp=E,64µm,11.0s
GYA LR LR
comp=Z,76µm,11.3s,MS6.3
IKOO Kooshah 21.00 280 *e*P **P** **13 26 43.7 +0.7**
ITEG Tejag 21.19 282 *e*P **P** **13 26 45.9 +0.7**
IAKL Akhelmad 21.38 292 *e*P **P** **13 26 47.7 +0.6**
NST Nakhon Sawan 21.49 132⇑ P **P** **13 26 46.8 -1.6**
comp=Z,902nm,0.8s,mb6.2
XAN Xi'an 21.49 75 P **P** **13 26 48.0 -0.3**
XAN pP 13 26 52.8
XAN PP 13 27 10.3
XAN S **S** **13 30 39.8 -5.6**
XAN pmax pmax
comp=Z,110nm,1.1s,mb5.1
XAN pmax pmax
comp=Z,5µm,9.7s
XAN LR LR
comp=N,143µm,12.0s,MS6.6
XAN LR LR
comp=E,40µm,13.1s,MS6.6
XAN LR LR
comp=Z,48µm,18.2s
IEMG Emamgholi 21.59 294 *e*P **P** **13 26 50.2 +0.9**
ISFR Sfrayin 22.04 293 *e*P **P** **13 26 55.4 +1.2**
ABKT Ailbek 22.09 295 P **P** **13 26 54.7 0.0**
comp=Z,3µm,1.7s,mb6.5
VAN Vannovskaya 22.10 295 *ce*P **P** **13 26 55.0 +0.1**
ENH Enshi 22.23 85 *e*P **P** **13 26 55.7 -0.5**
comp=Z,885nm,1.0s,mb6.2
ENH LR LR
comp=Z,92µm,20.0s,MS6.2
ISHV Shirvan 22.35 294 *e*P **P** **13 26 59.5 +2.0**
ZALV Zalesovo Beam 22.89 2 P **P** **13 27 03.4 +0.4**
ZALV LR LR 13 36 01.6
ZALV Zalesovo Beam 22.89 2 P **P** **13 27 03.4 +0.4**
comp=Z,289nm,0.8s,mb5.8,baz=185,slow=10.0,SNR=243
ZALV LR LR 13 36 01.6
comp=Z,14µm,18.3s,MS5.4,baz=187,slow=37
ZALV P3KPbc 14 00 36.4
comp=Z,5.6nm,1.0s,baz=347,slow=5.3,SNR=10
TRD Trivandrum 23.29 197⇓ *e*PKP Px 13 27 31.0
TRD *e*S **S** **13 31 32.0 +14**
BTO Baotou 23.33 59 *e*P **P** **13 27 07.8 0.0**
BTO S **S** **13 31 13.0 -5.6**
BTO LR LR
comp=N,43µm,13.7s,MS6.2
BTO LR LR
comp=E,32µm,12.1s,MS6.2
WBK Wadi Bani Khal 23.54 255 P **P** **13 27 11.8 +1.7**
SNR=110
VOSK Vostochnaya 23.54 340 P **P** **13 27 09.0 -0.8**
VOSK pmax pmax
comp=Z,27µm,8.0s
NVS Novosibirsk 23.77 359⇑ *i*P **P** **13 27 10.1 -1.7**
NVS pmax pmax
comp=N,1µm,2.0s
NVS pmax pmax
comp=Z,934nm,2.0s,mb5.9
NVS pmax pmax
comp=E,25nm,1.5s
PALK Pallekele 23.83 187 P **P** **13 27 13.2 +0.5**
comp=E,3µm,1.4s,mb6.5,SNR=32
PALK Pallekele 23.83 187 *i* P **P** **13 27 13.1 +0.4**
PALK Pallekele 23.83 187 P **P** **13 27 12.9 +0.2**
comp=E,392nm,2.0s,mb5.5
PALK Pallekele 23.83 187 P **P** **13 27 13.6 +0.9**
SNR=69
IBAF Bafgh 23.97 279 *e*P **P** **13 27 14.3 +0.3**
BVAR Borovoye Array 23.98 340 P **P** **13 27 15.1 +1.4**
BVAR S **S** **13 31 43.5 +15**
BVAR ScP ScP 13 34 35.1 +3.1
BVAR LR LR 13 37 08.1
BVAR Borovoye Array 23.98 340 P **P** **13 27 15.1 +1.4**
comp=E,56nm,0.8s,mb5.0,baz=152,slow=11,SNR=47
BVAR S **S** **13 31 43.5 +15**
comp=E,12nm,0.8s,baz=174,slow=28,SNR=2.5
BVAR ScP ScP 13 34 35.1 +3.1
comp=E,14nm,1.1s,baz=134,slow=4.2,SNR=2.2
BVAR LR LR 13 37 08.1
comp=E,1µm,18.4s,baz=218,slow=38
BVAR P3KPbc 14 00 30.9
comp=E,13nm,1.2s,baz=308,slow=3.6,SNR=17
BRVK Borovoye 24.04 340 P **P** **13 27 14.2 -0.1**
comp=E,1µm,0.7s,mb6.4,SNR=97
BRVK Borovoye 24.04 340 *d* *i*P **P** **13 27 14.4 +0.1**
BRVK pmax pmax
comp=Z,299nm,1.2s,mb5.6
BRVK MLR MLR
comp=Z,71nm,15.0s,MS6.3
BRVK Borovoye 24.04 340 P **P** **13 27 15.0 +0.7**
SNR=162
SMDO Samad 24.11 257 P **P** **13 27 16.9 +1.6**
SNR=156
SONM Songino Array 24.13 40 P **P** **13 27 17.3 +2.1**
comp=Z,80nm,0.7s,mb5.2,baz=227,slow=8.6,SNR=78
SONM PcP PcP 13 30 56.2 +0.4
comp=Z,31nm,1.1s,baz=230,slow=3.2,SNR=4.7
SONM ScP ScP 13 34 34.1 +1.5
comp=Z,13nm,1.0s,baz=222,slow=1.9,SNR=3.7
MOY Mondy 24.24 27 *e*P **P** **13 27 17.6 +1.5**
MOY pmax pmax
comp=Z,3µm,2.8s,mb6.2
ZRNK Zerenda 24.34 338 P **P** **13 27 17.1 +0.1**
ZRNK pmax pmax
comp=Z,16µm,4.0s
JMDO Jabal Madar 24.36 255 P **P** **13 27 19.0 +1.4**
SNR=82
ULN Ulaanbaatar 24.51 40 *e*P **P** **13 27 20.2 +1.5**
comp=Z,744nm,1.1s,mb6.1
ULN LR LR
comp=Z,78µm,20.0s,MS6.2
ULN Ulaanbaatar 24.51 40 P **P** **13 27 20.0 +1.3**
comp=Z,599nm,1.2s,mb6.0
ULN Ulaanbaatar 24.51 40 P **P** **13 27 20.6 +2.0**
SNR=334
HOQ Hoqain 24.52 259 P **P** **13 27 20.4 +1.4**
SNR=121
BANOM Banah 24.55 265 P **P** **13 27 22.4 +3.2**
SNR=32
TIY Taiyuan 24.60 67 *e*P **P** **13 27 20.0 +0.4**
TIY sP sP 13 27 33.0 +2.7
TIY PP 13 27 58.3
TIY S **S** **13 31 39.5 +0.2**
TIY pmax pmax
comp=Z,160nm,0.7s,mb5.7
TIY pmax pmax
comp=Z,30µm,6.4s
TIY LR LR
comp=N,66µm,10.6s,MS6.9
TIY LR LR
comp=E,202µm,10.9s,MS6.9
TIY LR LR
comp=Z,273µm,11.7s,MS7.0
MNCY Minicoy 24.75 206 *i* x **P** **13 27 21.0 -0.1**
MNCY *i* x x 13 32 01.0
IMEH Mehriz 24.81 278 *e*P **P** **13 27 21.9 +0.3**
ICHK Chekchek 24.89 280 *e*P **P** **13 27 23.4 +1.1**
BSY Bisya 24.96 257 P **P** **13 27 24.6 +1.7**
SNR=62
HATD Hatta, Dubai 25.06 262 P **P** **13 27 28.3 +4.4**
SNR=38
UBT Ubonrachathani 25.10 124⇓ P **P** **13 27 25.0 +0.7**
comp=Z,625nm,1.5s,mb5.9
ASHO Ashiyiah 25.17 262 P **P** **13 27 26.3 +1.4**
SNR=183
IANJ Anjilo 25.20 288 *e*P **P** **13 27 27.4 +2.3**
ARQ Araqi 25.28 259 P **P** **13 27 28.0 +2.1**
SNR=185
TLY Talaya 25.33 30 *d* *i*P **P** **13 27 28.3 +2.2**
TLY *e*S **S** **13 31 58.0 +7.4**
TLY *e*SS 13 32 47.7
TLY MLR MLR
comp=Z,50µm,17.0s,MS6.1
TLY Talaya 25.33 30 P **P** **13 27 28.6 +2.5**
comp=Z,818nm,1.0s,mb6.2,SNR=63
TLY Talaya 25.33 30 P **P** **13 27 28.6 +2.5**
SNR=109
NAZ Nazwa, Dubai 25.40 263 P **P** **13 27 29.0 +2.0**
SNR=70
AB31 Akbulak array 25.49 322 P **P** **13 27 28.7 +1.1**
AB31 pmax pmax
comp=Z,1µm,1.4s,mb6.2
ISAD Sadrabad 25.53 280 *e*P **P** **13 27 29.3 +1.1**
ISHM Shahmirzad 25.72 289 *e*P **P** **13 27 31.8 +2.0**
ASUD Al Ashush, Dub 25.81 263 P **P** **13 27 33.0 +2.3**
SNR=28
ILAS Lasjerd 25.98 288 *e*P **P** **13 27 33.3 +1.1**
IRK Irkutsk 26.01 30 *e*P **P** **13 27 34.8 +2.6**
IRK pmax pmax
comp=Z,1µm,1.5s,mb6.2
HMDM Hanimaadhoo 26.08 204 P **P** **13 27 37.2 +4.0**
comp=Z,1µm,1.6s,mb6.2
IFIR Firoozkooh 26.15 288 *e*P **P** **13 27 36.2 +2.5**
WHN Wuhan 26.34 83⇑ P **P** **13 27 35.5 +0.1**
WHN S **S** **13 32 06.5 -0.5**
WHN LR LR
comp=N,262µm,10.8s,MS7.1
WHN LR LR
comp=E,154µm,12.6s,MS7.1
WHN LR LR
comp=Z,212µm,10.0s,MS7.0
QIZ Qiongzhong 26.51 111 P **P** **13 27 36.8 -0.3**
QIZ pP pP 13 27 39.3 -5.3
QIZ sP sP 13 27 43.8 -3.9
QIZ S **S** **13 32 07.5 -2.3**
QIZ pmax pmax
comp=Z,10µm,9.0s
QIZ LR LR
comp=N,187µm,22.2s,MS6.6
QIZ LR LR
comp=E,57µm,21.5s,MS6.6
QIZ LR LR
comp=Z,120µm,17.1s,MS6.5
QIZ Qiongzhong 26.51 111 *e*P **P** **13 27 36.3 -0.8**
comp=Z,196nm,0.9s,mb5.6
QIZ LR LR
comp=Z,109µm,20.0s,MS6.4
ISFB Sefidab 26.58 285 *e*P **P** **13 27 39.0 +1.4**
IZEF Zefreh 26.59 282 *e*P **P** **13 27 39.0 +1.3**
IDMV Damavand 26.74 288 *e*P **P** **13 27 41.0 +2.0**
IGAR Gharneh 26.87 281 *e*P **P** **13 27 40.4 +0.1**
IVRN Varamin 26.99 287 *e*P **P** **13 27 40.6 -0.7**
IKLH Kolahrood 27.18 283 *e*P **P** **13 27 44.4 +1.4**
AKTK Aktyubinsk 27.19 323 P **P** **13 27 42.6 -0.4**
AKTK LR LR 13 39 55.1
AKTO Aktyubinsk 27.19 323 P **P** **13 27 42.6 -0.4**
comp=Z,49nm,0.9s,mb5.0,baz=118,slow=8.7,SNR=103
AKTO LR LR 13 39 55.1
comp=Z,110µm,18.1s,MS6.5,baz=292,slow=40
AKTO Aktyubinsk 27.19 323 P **P** **13 27 42.4 -0.5**
AKTO pmax pmax
comp=Z,80nm,1.5s,mb5.0
GZH Guangzhou 27.55 99 P **P** **13 27 46.0 -0.4**
GZH S **S** **13 32 23.5 -2.6**
GZH LR LR
comp=N,204µm,18.0s,MS6.8
GZH LR LR
comp=E,61µm,17.3s,MS6.8
BSI Banda Aceh 27.68 154 P **P** **13 27 48.3 +0.7**
comp=E,4µmcomp=E,94nm,1.3s,mb5.3
BJT Baijiatuan 27.80 62 *e*P **P** **13 27 49.7 +1.1**
comp=E,579nm,1.3s,mb6.0
BJT LR LR
comp=Z,60µm,19.0s,MS6.2
BJT Baijiatuan 27.80 62 *e*P **P** **13 27 49.7 +1.2**
BJT pmax pmax
comp=Z,579nm,1.3s
BJT MLR MLR
comp=Z,60µm,19.0s
IPIR Pirpir 27.81 282 *e*P **P** **13 27 50.5 +1.8**
BJI Beijing 27.81 62 P **P** **13 27 50.0 +1.4**
BJI S **S** **13 32 32.3 +2.2**
BJI pmax pmax
comp=Z,260nm,1.4s,mb5.7
BJI pmax pmax
comp=Z,11µm,7.0s
BJI LR LR
comp=N,116µm,14.9s,MS6.8
BJI LR LR
comp=E,100µm,12.2s,MS6.8
IMHD Mahdasht 27.85 288 *e*P **P** **13 27 49.5 +0.5**
TIA Tai'an 28.25 70 *e*P **P** **13 27 53.3 +0.7**
TIA sP sP 13 28 04.3 +1.0
TIA S **S** **13 32 41.0 +3.9**
TIA SS 13 34 03.0
TIA pmax pmax
comp=Z,230nm,1.3s,mb5.7
TIA LR LR
comp=N,251µm,9.5s
TIA LR LR
comp=E,79µm,8.6s
TIA LR LR
comp=Z,79µm,8.4s
IRAZ Razeghan 28.46 288 *e*P **P** **13 27 55.2 +0.8**
HKC Hong Kong Obse 28.56 100⇓ *i*P **P** **13 27 56.0 +0.5**
HKC *i* S **S** **13 32 42.0 -0.2**
SNG Songkhla 28.58 143 P **P** **13 27 55.0 -0.6**
comp=Z,180nm,1.0s,mb5.8
NJ2 Nanjing 29.93 79 *e*P **P** **13 28 09.3 +1.7**
NJ2 pP pP 13 28 18.0 +2.9
NJ2 sP sP 13 28 21.3 +3.0
NJ2 PP PP 13 29 07.5 -7.8
NJ2 S **S** **13 33 02.0 -1.6**
NJ2 sS sS 13 33 20.5 +4.4
NJ2 pmax pmax
comp=Z,450nm,0.6s,mb6.4
NJ2 pmax pmax
comp=Z,6µm,6.7s
NJ2 LR LR
comp=N,95µm,11.0s
NJ2 LR LR
comp=E,47µm,9.4s
NJ2 LR LR
comp=Z,80µm,9.7s
RBK Rabkut 29.94 250 P **P** **13 28 10.3 +2.6**
SNR=14
KULM Kulim 30.20 145 P **P** **13 28 09.9 -0.2**
KULM Kulim 30.20 145 P **P** **13 28 09.7 -0.4**
comp=Z,9µmcomp=Z,343nm,2.1s,mb5.7
ISRB Sarab 30.30 293 *e*P **P** **13 28 12.0 +1.3**
CIT Chita 30.30 38 *e*P **P** **13 28 12.6 +2.0**
CIT *e* 13 29 20.1
CIT *e* 13 31 11.0
CIT pmax pmax
comp=Z,577nm,5.4s
SVE Sverdlovsk 30.34 335⇑ *e*P **P** **13 28 11.4 +0.6**
SVE *e*S **S** **13 33 08.1 -1.2**
SVE pmax pmax
comp=Z,623nm,1.5s,mb6.1
SVE MLR MLR
comp=Z,172µm,15.0s,MS6.8

TPTI 30.46 153 P P 13 28 10.7 -1.6
comp=Z,3μmcomp=Z,83nm,1.4s,mb5.3
IKOM Komasi 30.50 286 eP P 13 28 14.2 +1.6
ABTO Aybut 30.75 251 P P 13 28 17.6 +2.7
SNR=9.0
IHRS Heris 30.81 294 eP P 13 28 15.9 +0.7
ARU Arti 30.84 333 d iP P 13 28 15.5 +0.3
ARU ePPP 13 29 28.2
ARU e 13 31 11.4
ARU S S 13 33 19.7 +2.5
ARU SS SS 13 34 57.0 -32
ARU SSS 13 35 16.7
ARU pmax pmax
comp=Z,289nm,1.2s,mb6.0
ARU pmax pmax
comp=Z,4μm,9.2s
ARU MLR MLR
comp=Z,112μm,23.0s,MS6.5
ARU Arti 30.84 333 P P 13 28 15.1 -0.1
comp=Z,1μm,0.7s,mb6.9,SNR=72
ILIN Lien 30.90 287 eP P 13 28 16.3 +0.2
UMR Umm Al-Rimmam 30.98 277 eP P 13 28 16.9 +0.1
UMR AMb AMB 13 28 29.9
comp=Z,1μm,1.4s,mb6.6
MAK Makhachkala 30.98 303 d iP P 13 28 18.3 +1.6
MAK e 13 29 12.4
MAK i S S 13 33 24.4 +4.6
MAK i SSS 13 35 17.0
MAK pmax pmax
comp=N,98nm,0.9s
MAK pmax pmax
comp=Z,413nm,1.5s,mb6.0
MAK pmax pmax
comp=E,84nm,0.5s
MAK pmax pmax
comp=Z,12μm,6.9s
MAK pmax pmax
comp=E,4μm,5.7s
MAK pmax pmax
comp=N,5μm,7.2s
MAK MLR MLR
comp=N,31μm,12.0s,MS6.6
MAK MLR MLR
comp=Z,87μm,11.0s,MS6.7
MAK MLR MLR
comp=E,91μm,14.0s,MS6.6
QRN Al-Qurain 30.98 275 eP P 13 28 16.5 -0.4
QRN AMb AMB 13 28 29.7
comp=Z,775nm,1.5s,mb6.3
IVIS Veis 31.02 286 eP P 13 28 17.0 -0.1
KBD Kabd 31.08 276 eP P 13 28 17.5 -0.2
KBD AMb AMB 13 28 30.7
comp=Z,519nm,1.6s,mb6.1
IPM Ipoh 31.09 145 P P 13 28 17.1 -0.7
IPM Ipoh 31.09 145 P P 13 28 16.6 -1.3
comp=Z,8μmcomp=Z,260nm,2.2s,mb5.7
MIB Mutribah 31.25 277 eP P 13 28 19.6 +0.4
MIB AMb AMB 13 28 28.9
comp=Z,1μm,1.8s,mb6.4
RDF Al-Radifah 31.26 275 eP P 13 28 19.2 -0.1
RDF AMb AMB 13 28 29.4
comp=Z,908nm,1.4s,mb6.4
IGHG Ghaleghazi 31.27 286 eP P 13 28 18.3 -1.0
QZH Quanzhou 31.36 92 ⇓iP P 13 28 18.8 -1.4
QZH S S 13 33 25.0 -1.0
QZH pmax pmax
comp=Z,720nm,1.9s,mb6.2
QZH pmax pmax
comp=Z,13μm,5.8s
QZH LR LR
comp=N,233μm,12.6s,MS7.1
QZH LR LR
comp=E,65μm,11.8s,MS7.1
QZH LR LR
comp=Z,336μm,15.8s,MS7.1
IDHR Dehrash 31.39 287 eP P 13 28 20.4 0.0
NAY Al-Naaiem 31.45 276 eP P 13 28 20.9 0.0
NAY AMb AMB 13 28 30.6
comp=Z,507nm,1.6s,mb6.1
KTGM Kuala Trenggan 31.47 140 P P 13 28 21.6 +0.4
ITBZ Tabriz 31.51 293 eP P 13 28 22.2 +0.8
PSI Prapat 31.59 150 LR LR 13 43 02.7
comp=Z,195μm,21.2s,MS6.8,baz=178,slow=40
IMRD Marand 31.88 294 eP P 13 28 27.0 +2.4
DL2 Dalian 31.91 65 ⇓iP P 13 28 25.8 +0.9
DL2 PP PP 13 29 34.0 -3.1
DL2 S S 13 33 37.0 +2.7
DL2 pmax pmax
comp=Z,220nm,0.9s,mb6.0
DL2 pmax pmax
comp=Z,5μm,7.8s
DL2 LR LR
comp=N,58μm,13.9s,MS6.8
DL2 LR LR
comp=E,122μm,12.7s,MS6.8
DL2 LR LR
comp=Z,167μm,13.1s,MS6.9
ISHB Shabestar 31.93 294 eP P 13 28 26.4 +1.3
SSE Sheshan 32.05 80 P P 13 28 26.0 -0.2
SSE S S 13 33 37.0 +0.3
SSE pmax pmax
comp=Z,57nm,1.3s,mb5.2
SSE pmax pmax
comp=Z,7μm,8.0s
SSE LR LR
comp=N,47μm,11.9s,MS6.6
SSE LR LR
comp=E,51μm,11.9s,MS6.6
SSE LR LR
comp=Z,59μm,11.7s,MS6.5
DGRG David-gareji 32.33 299 P P 13 28 29.9 +1.3
DGRG S S 13 34 16.4 +36
FRIM Kepong 32.46 145 P P 13 28 30.0 +0.1
HIA Hailar 32.63 46 eP P 13 28 32.4 +1.3
comp=Z,165nm,1.1s,mb5.9
HIA LR LR
comp=Z,14μm,22.0s,MS5.6
HIA Hailar 32.63 46 eP P 13 28 32.4 +1.3
HIA pmax pmax
comp=Z,165nm,1.1s
HIA MLR MLR
comp=Z,14μm,22.0s
GNI Garni 32.70 297 eP P 13 28 33.9 +2.1
GNI Garni 32.70 297 eP P 13 28 33.7 +1.9
GNI comp=Z,806nm,1.4s,mb6.5 LR LR
comp=Z,61μm,22.0s,MS6.3
GNI Garni 32.70 297 LR LR 13 44 16.3
comp=Z,53μm,18.4s,MS6.3,baz=265,slow=41
GNI Garni 32.70 297 d iP P 13 28 33.5 +1.7
GNI pmax pmax
comp=Z,852nm,1.5s
GNI MLR MLR
comp=Z,57μm,18.0s
GNI Garni 32.70 297 P P 13 28 33.9 +2.2
SNR=170
MTA Mtatsminda 32.79 300 P P 13 28 33.5 +1.0
MTA S S 13 33 51.4 +3.4
TBLG Delisi 32.83 300 P P 13 28 34.5 +1.5
TBLG Delisi 32.83 300 P P 13 28 34.5 +1.5
BHD Baghdad 33.19 284 ex x 13 28 34.3
BHD i x x 13 29 40.4
BHD i x x 13 30 51.0
BHD i x x 13 33 49.7
BHD i x x 13 36 16.0
BHD i x x 13 38 57.0
BHD i x x 13 39 53.0
BHD i x x 13 41 08.0
CLDR Caldiran 33.28 295 eP P 13 28 37.3 +0.3
GOR Gori 33.33 300 P P 13 28 40.5 +3.2
HKR Hakkari 33.41 292 eP P 13 28 40.9 +2.8
HAKT HAKKARI 33.44 292 iP P 13 28 38.9 +0.6
DYDN Diyadin 33.47 296 iP P 13 28 40.5 +1.9
CUKT Cukurca 33.52 292 eP P 13 28 40.0 +0.9
ZEI Tsey 33.57 302 eP P 13 28 39.0 -0.4
ZEI pmax pmax
comp=Z,1μm,5.7s
ZEI pmax pmax
comp=Z,677nm,1.4s,mb6.4
ZEI pmax pmax
comp=N,480nm,1.2s
ZEI pmax pmax
comp=E,589nm,1.0s
SNY Shenyang 33.60 60 ⇑P P 13 28 41.0 +1.4
SNY S S 13 33 58.5 -2.1
SNY pmax pmax
comp=Z,99nm,0.7s,mb5.8
SNY LR LR
comp=N,74μm,14.1s,MS6.7
SNY LR LR
comp=E,62μm,12.9s,MS6.7
SNY LR LR
comp=Z,59μm,10.8s,MS6.6
TVAN Van 33.67 294 iP P 13 28 43.2 +2.9
MNSI Mandailing Nat 33.67 150 P P 13 28 39.3 -1.2
comp=Z,418nm,2.1s,mb6.0
VANB Van 33.69 294 eP P 13 28 42.4 +1.9
SOKR Solikamsk 33.74 336 d iP P 13 28 41.4 +0.8
SOKR i 13 29 53.8
SOKR 13 31 19.5
SOKR S S 13 34 07.8 +5.5
SOKR pmax pmax
comp=Z,1μm,1.2s,mb6.8
SOKR MLR MLR
comp=Z,172μm,26.0s,MS6.7
DIGO Kars 33.76 297 iP P 13 28 41.8 +0.8
TATO Taipei 33.83 91 eP P 13 28 41.7 -0.2
comp=Z,138nm,1.0s,mb5.8
TATO LR LR
comp=Z,119μm,21.0s,MS6.6
KARS Kars 33.99 298 eP P 13 28 44.5 +1.4
AGRB Hanur-Agry 34.01 296 eP P 13 28 46.4 +3.1
KGM Kluang 34.36 143 P P 13 28 46.5 0.0
GOF Gofitskoye 34.53 306 ⇑iP P 13 28 43.2 -4.5
GOF pmax pmax
comp=Z,530nm,1.4s,mb6.3
TATV Tatvan 34.56 294 iP P 13 28 48.5 +0.4
KIV Kislovodsk 34.60 304 d iP P 13 28 48.7 +0.4
KIV i 13 29 58.2
KIV i 13 30 16.2
KIV i 13 31 24.0
KIV i S S 13 34 18.2 +2.1
KIV eSS SS 13 36 49.4 +3.0
KIV pmax pmax
comp=Z,430nm,1.3s,mb6.2
KIV MLR MLR
comp=Z,60μm,17.0s,MS6.4
KIV Kislovodsk 34.60 304 P P 13 28 49.7 +1.4
comp=Z,2μm,1.0s,mb6.9,SNR=55
KIV Kislovdsk 34.60 304 P P 13 28 49.2 +0.9
SNR=143
BKNI Bangkinang 34.73 148 P P 13 28 48.6 -1.1
comp=Z,1μm,1.3s,mb6.6
MYKOM Kota Tinggi 34.82 143 P P 13 28 50.6 +0.1
MYKOM Kota Tinggi 34.82 143 P P 13 28 50.2 -0.3
comp=Z,9μmcomp=Z,335nm,2.0s,mb5.9
HOMI Horasan 34.86 297 iP P 13 28 52.7 +2.0
DDEM Demirkent 35.01 298 iP P 13 28 53.6 +1.7
DBOC Borcka 35.10 299 iP P 13 28 54.0 +1.4
BCA Borcka 35.14 299 eP P 13 28 55.0 +2.0
PPI Padang Panjang 35.15 150 P P 13 28 52.0 -1.3
comp=Z,9μmcomp=Z,328nm,2.2s,mb5.9
CN2 Changchun 35.18 57 eP P 13 28 54.5 +1.2
CN2 eS S 13 34 28.8 +3.9
CN2 pmax pmax
comp=Z,40nm,1.0s,mb5.3
CN2 LR LR
comp=N,77μm,14.0s,MS7.0
CN2 LR LR
comp=E,152μm,14.0s,MS7.0
CN2 LR LR
comp=Z,130μm,16.0s,MS6.8
ERZM Erzurum 35.27 296 iP P 13 28 56.8 +2.6
EZM Erzurum 35.28 296 eP P 13 28 57.6 +3.4
BEST Besiri 35.36 293 iP P 13 28 56.9 +1.9
SISI Saibi 35.40 153 P P 13 28 55.4 0.0
comp=Z,761nm,1.9s,mb6.3
BNGL BINGOL 35.44 295 iP P 13 28 56.4 +0.8
PDSI Padang 35.58 150 P P 13 28 55.0 -2.0
comp=Z,1μm,1.6s,mb6.5
PZAR Pazar-Rize 35.67 299 eP P 13 29 00.9 +3.3
MUKL Al Mukalla 35.74 250 ⇑eP P 13 28 58.7 +0.2
MARD Mardin 35.78 292 iP P 13 28 58.4 -0.1
INCN Inchon 35.85 68 eP P 13 28 58.8 -0.4
comp=Z,622nm,1.0s,mb6.5
INCN LR LR
comp=Z,35μm,20.0s,MS6.1
INCN Inchon 35.85 68 P P 13 29 00.1 +0.9
SNR=40
RGRI Rengat 35.92 147 P P 13 29 02.9 +3.0
comp=Z,474nm,1.9s,mb6.1
KOPT Kop Dagi 35.94 297 iP P 13 29 01.6 +1.7
SDSI Sungai Dareh 36.02 149 P P 13 29 00.8 0.0
comp=Z,71nm,1.6s,mb5.3
BOLP Bolinao 36.09 105 eP P 13 29 03.9 +2.5
ABRA Dolores 36.13 103 eP P 13 29 04.9 +3.2
DIYA Diyarbakir 36.27 293 iP P 13 29 03.6 +0.8
SCZP Santa Cruz 36.40 106 eP P 13 29 07.7 +3.7
APYP Conner 36.47 102 eP P 13 29 06.7 +2.0
MACK Trabzon 36.52 298 iP P 13 29 06.4 +1.6
KTUT Trabzon 36.52 298 eP P 13 29 06.3 +1.5
BCPH Baguio City Da 36.64 105 ⇓eP P 13 29 05.8 -0.3
SOC Sochi 36.70 302 d iP P 13 29 06.4 +0.1
SOC e*PP pP 13 29 13.4 -0.6
SOC e 13 30 32.3
SOC eS S 13 34 46.4 -1.9
SOC eSSS 13 37 40.7
SOC pmax pmax
comp=Z,533nm,1.5s,mb6.2
SOC pmax pmax
comp=Z,5μm,3.8s
SOC MLR MLR
comp=Z,65μm,17.0s,MS6.5
GUMT Gumushane 36.73 297 eP P 13 29 10.0 +3.4
PTK Pertek 36.81 295 eP P 13 29 07.8 +0.5
EZC Erzincan 36.82 296 eP P 13 29 10.9 +3.4
VRHR Novokhopersk 36.83 315 eP P 13 29 07.6 +0.3
KSRS Korea Array 36.88 68 P P 13 29 08.2 +0.2
comp=Z,51nm,0.7s,mb5.4,baz=275,slow=9.1,SNR=112
KSRS PcP PcP 13 31 29.6 +0.3
comp=Z,24nm,1.1s,baz=283,slow=3.9,SNR=4.4
KSRS ScP ScP 13 35 14.8 +0.3
comp=Z,11nm,1.1s,baz=280,slow=2.9,SNR=6.9
KSRS LR LR 13 45 48.7
comp=Z,69μm,19.6s,MS6.5,baz=274,slow=39
KSRS P3KPbc 13 59 41.5
comp=Z,1.6nm,0.9s,baz=104,slow=5.4,SNR=6.0
KSRS Korea Array 36.88 68 P P 13 29 08.2 +0.2
KSRS 13 31 29.6
KSRS pmax pmax
comp=Z,51nm,0.7s,mb5.5
KSRS MLR MLR
comp=Z,69μm,19.6s,MS6.5
SVRC Sivrice-ELAZID 36.89 294 eP P 13 29 09.1 +1.0
KELT Kelkit 36.90 297 iP P 13 29 08.8 +0.8
ELZG Elazig 37.14 294 iP P 13 29 11.1 +0.9
ESPY Espiye-Giresun 37.30 298 eP P 13 29 12.7 +1.2
CAUP Cauayan 37.40 103 eP P 13 29 16.2 +3.7
KEMA Kemaliye 37.50 295 iP P 13 29 15.0 +1.8
MALT Malatya 37.59 294 eP P 13 29 14.9 +1.0
MALT Malatya 37.59 294 P P 13 29 16.5 +2.6
comp=Z,73nm,1.6s,mb5.7
MYA Malatya 37.59 294 eP P 13 29 16.4 +2.4
GRSN GIRESUNGRSN 37.65 298 iP P 13 29 14.9 +0.4
ATAB Bozova 37.74 292 iP P 13 29 14.9 -0.3
LUBP Lubang 37.75 109 eP P 13 29 17.4 +1.8
BALP Baler 37.79 105 eP P 13 29 16.8 +1.0
AKCD Akcadag 37.98 294 iP P 13 29 18.5 +1.2
TGY Tagaytay City 38.12 108 P P 13 29 18.5 -0.1
comp=Z,103nm,0.4s,mb6.0,baz=188,slow=12,SNR=5.7
TGY LR LR 13 47 01.1
comp=Z,133nm,18.6s,baz=299,slow=40
VORD Divnogorie 38.21 314 eP P 13 29 19.7 +0.6
VORD eS S 13 35 10.9 -0.1
VORD pmax pmax
comp=Z,160nm,1.0s,mb5.7
VORD smax
comp=N,6μm,5.6s
VORD smax
comp=Z,4μm,6.5s
VORD smax
comp=E,5μm,7.8s
MDJ Mudanjiang 38.23 56 P P 13 29 20.0 +0.7
MDJ sP sP 13 29 24.5 -5.6
MDJ PP PP 13 30 46.0 -0.8
MDJ S S 13 35 10.0 -1.4
MDJ pmax pmax
comp=Z,8μm,8.0s
MDJ LR LR
comp=N,83μm,34.4s
MDJ LR LR
comp=E,31μm,18.0s
MDJ LR LR
comp=Z,35μm,21.5s
MDJ Mudanjiang 38.23 56 eP P 13 29 19.9 +0.6
comp=Z,196nm,1.3s,mb5.7
MDJ LR LR
comp=Z,56μm,20.0s,MS6.4
GZT Gaziantep 38.33 292 iP P 13 29 20.4 +0.1
VSR Storozhevoye 38.35 315 eP P 13 29 20.3 +0.1
VSR eS S 13 35 15.0 +1.9
VSR pmax pmax
comp=Z,140nm,1.0s,mb5.7
VSR smax
comp=N,6μm,7.4s
VSR smax
comp=E,3μm,5.9s
VSR smax
comp=Z,4μm,5.9s
VSR MLR MLR
comp=N,289μm,17.0s
VSR MLR MLR
comp=E,131μm,23.0s
RSDY Resadiye-TOKAT 38.37 297 eP P 13 29 21.8 +1.3
CLNS Chul'man 38.41 36 eP P 13 29 21.7 +1.1
CLNS e 13 30 53.4
CLNS ePPP 13 31 10.5
CLNS e 13 31 33.5
CLNS eS S 13 35 16.4 +2.5
CLNS pmax pmax
comp=N,64nm,1.6s
CLNS pmax pmax
comp=E,96nm,1.5s
CLNS pmax pmax
comp=Z,166nm,1.4s,mb5.6
CLNS pmax pmax
comp=E,60nm,1.4s
CLNS pmax pmax
comp=Z,45nm,1.4s,mb5.0
CLNS pmax pmax
comp=N,54nm,1.5s
CLNS smax
comp=E,3μm,13.0s
CLNS smax
comp=N,5μm,12.6s
CLNS MLR MLR
comp=N,43μm,13.0s,MS6.7
CLNS MLR MLR
comp=Z,88μm,14.0s,MS6.7
CLNS MLR MLR
comp=E,60μm,13.0s,MS6.7
ANN Anapa 38.44 304 ⇓iP P 13 29 20.2 -0.9
ANN eS S 13 35 10.0 -4.6
ANN eSS SS 13 37 56.1 -7.9
ANN eSSS 13 38 24.1
ANN pmax pmax
comp=E,2μm,9.1s
ANN pmax pmax
comp=Z,6μm,9.1s
ANN pmax pmax
comp=Z,434nm,1.1s,mb6.1
ANN MLR MLR
comp=N,36μm,14.0s,MS6.8
ANN MLR MLR
comp=E,89μm,14.0s,MS6.8
ANN MLR MLR
comp=Z,80μm,14.0s,MS6.7
VOR Voronezh 38.46 316 ⇑iP P 13 29 21.0 -0.1
VOR pmax pmax
comp=Z,1μm,1.6s,mb6.3
ENPP El Nido 38.53 113 eP P 13 29 22.5 +0.3
SCER sogukcermik 38.53 296 iP P 13 29 23.4 +1.4
POLP Polillo Island 38.61 106 eP P 13 29 27.8 +5.0
GAZ Gaziantep 38.63 292 eP P 13 29 24.1 +1.4
SVSK Karacayir 38.63 296 eP P 13 29 24.5 +1.8
BUSP Coron 38.68 111 eP P 13 29 24.7 +1.3
BATP Bataraza 38.74 118 eP P 13 29 24.1 +0.2
KSM Kuching 38.76 134 P P 13 29 24.8 +0.7
KSM Kuching 38.76 134 P P 13 29 24.2 +0.2
comp=Z,469nm,2.1s,mb5.8
KUZU Kuzuini 38.77 291 iP P 13 29 24.6 +0.6
ERBA Erbaa 38.80 298 iP P 13 29 24.8 +0.6
BDHA Al Bayda' 38.84 253 ⇑eP P 13 29 25.3 +0.6
BDHA AMb AMB 13 29 27.0
comp=Z,2μm,1.8s,mb6.4
KMRS Kahramanmaras 38.84 293 eP P 13 29 27.3 +2.7
SARI SarD1z-Kayseri 38.92 294 eP P 13 29 27.7 +2.5
KSI Kapahiang 38.96 149 P P 13 29 23.7 -2.0
comp=Z,1μm,1.0s,mb6.6
TOKT Tokat 38.97 297 eP P 13 29 27.3 +1.7
TOKA Tokat 39.02 297 iP P 13 29 26.9 +0.9
LBOS 39.16 253 ⇓eP P 13 29 28.0 +0.7
LBOS AMb AMB 13 29 29.2
comp=Z,1μm,1.3s,mb6.5
SBUM Sibu 39.21 131 P P 13 29 28.6 +0.7
SBUM Sibu 39.21 131 P P 13 29 27.9 +0.1
comp=Z,9μmcomp=Z,213nm,2.3s,mb5.5
BTM Bintulu 39.22 129 P P 13 29 28.8 +0.9
KDM Kudat 39.24 121 P P 13 29 29.3 +1.2
ANDN Andirin 39.28 293 iP P 13 29 27.5 -0.7
KVT Kavak 39.33 298 eP P 13 29 30.0 +1.4
KKM Kota Kinabalu 39.38 122 P P 13 29 30.5 +1.3
KKM Kota Kinabalu 39.38 122 P P 13 29 30.2 +1.0
comp=Z,548nm,2.5s,mb5.8
DHBB Dhamar BB 39.49 254 ⇓eP P 13 29 30.9 +0.7
DHBB AMb AMB 13 29 33.8
comp=Z,2μm,1.8s,mb6.4
HAJJ Hajjah 39.58 257 ⇑eP P 13 29 31.6 +0.7
ASF Jabal al Asfar 39.59 284 LR LR 13 47 33.1
comp=Z,53μm,19.8s,MS6.4,baz=318,slow=39
YAYL Yayladag 39.63 290 iP P 13 29 31.6 +0.5
KOZT Kozan 39.70 293 eP P 13 29 33.6 +1.9
DGAR Diego Garcia 39.73 198 ⇑iP P 13 29 31.5 -0.6
MNAI Manna 39.75 149 P P 13 29 31.0 -1.3
comp=Z,10μmcomp=Z,664nm,1.8s,mb6.1
CEYT Ceyhan 39.81 292 eP P 13 29 35.4 +2.9
YOZ Yozgat 39.94 296 eP P 13 29 34.5 +0.9
CUYO Cuyo Island 40.00 112 eP P 13 29 34.6 +0.1
HWQ Hawqa 40.00 288 eP P 13 29 35.4 +1.1
KRTS Karatas 40.15 291 eP P 13 29 40.0 +4.5
UDYN Al 'Udayn 40.16 254 ⇑eP P 13 29 36.1 +0.4
BOYT Boyabat 40.19 299 iP P 13 29 36.5 +0.8
KLR Kul'dur 40.23 49 eP P 13 29 33.1 -2.9
KLR pmax pmax
comp=E,200nm,1.6s
KLR pmax pmax
comp=Z,260nm,1.6s,mb5.7
KLR pmax pmax
comp=N,3μm,8.5s
KLR pmax pmax
comp=E,6μm,8.5s
KLR pmax pmax
comp=Z,8μm,8.5s
RCY Rachaya 40.24 286 eP P 13 29 36.1 -0.1
BYBT Boyabat 40.29 299 eP P 13 29 37.2 +0.7
CTKT Corum 40.30 298 iP P 13 29 36.3 -0.3
BHL Bhannes 40.30 287 eP P 13 29 37.5 +0.8
KARA Karaisali 40.33 292 eP P 13 29 38.2 +1.2
AVNT Avonos 40.35 295 iP P 13 29 37.8 +0.7
SDKM Sandakan 40.36 122 P P 13 29 38.6 +1.2
MDSI Maura Dua 40.42 147 P P 13 29 33.8 -4.0
comp=Z,3μmcomp=Z,183nm,1.2s,mb5.7
TRBA At Turbah 40.43 253 ⇓eP P 13 29 38.5 +0.6
CORM Corum 40.44 297 eP P 13 29 39.1 +1.3
MOS Moscow 40.50 321 d iP P 13 29 38.5 +0.4
MOS e 13 31 12.0
MOS eS S 13 35 44.8 -0.5
MOS eSS SS 13 38 41.0 -4.0
MOS pmax pmax
comp=Z,5μm,2.2s,mb6.7
MOS pmax pmax
comp=E,577nm,1.5s
MOS pmax pmax
comp=Z,2μm,1.5s,mb6.4
MOS smax
comp=N,15μm,5.3s
MOS MLR MLR
comp=Z,122μm,16.0s,MS6.8
STKI Sintang 40.58 134 P P 13 29 39.9 +0.7
comp=Z,381nm,2.1s,mb5.7
TPI Tanjungpandan 40.66 141 P P 13 29 39.6 -0.3
comp=Z,9μmcomp=Z,367nm,1.6s,mb5.8
MMAI Mount Meron Ar 40.67 286 PcP PcP 13 31 43.2 +1.9
comp=Z,61nm,0.9s,baz=68,slow=5.4,SNR=5.0

MMAI LR LR 13 50 48.8
comp=Z,56µm,19.5s,MS6.4,baz=60,slow=43
CDAG Cicekdag 40.67 296 *i* P **P 13 29 39.7 0.0**
SIM Simferopol' 40.80 304 *i* P **P 13 29 40.9 +0.2**
SIM *i* 13 31 20.0
SIM *i* S **S 13 35 50.7 +0.6**
SIM pmax pmax
comp=Z,579nm,1.0s,mb6.2
SIM MLR MLR
comp=Z,104µm,23.2s,MS6.6
LWLI Liwa 40.83 148 P **P 13 29 38.9 -2.3**
comp=Z,6µmcomp=Z,758nm,0.8s,mb6.4
BZK Bozkurt 40.85 300 *e*P **P 13 29 41.8 +0.6**
KLSI 40.85 147 P **P 13 29 37.9 -3.5**
comp=Z,7µmcomp=Z,366nm,1.2s,mb5.9
TOS Tosya 40.86 298 *e*P **P 13 29 43.6 +2.3**
OBN Obninsk 40.89 320 *d* iP **P 13 29 41.0 -0.3**
OBN *i* 13 31 16.3
OBN *i* S **S 13 35 50.9 -0.2**
OBN *i* SS SS 13 38 53.3 +0.5
OBN pmax pmax
comp=Z,1µm,1.2s,mb6.4
OBN MLR MLR
comp=Z,58µm,17.0s,MS6.5
OBN Obninsk 40.89 320 P **P 13 29 41.5 +0.2**
comp=Z,4µm,1.0s,mb7.0,SNR=57
PVCP Virac 41.03 106 *e*P **P 13 29 45.6 +2.7**
KLI Kotabumi 41.06 147 P **P 13 29 43.7 +0.6**
comp=Z,7µmcomp=Z,188nm,1.1s,mb5.6
ILGA Ilgaz 41.09 298 *i* P **P 13 29 44.1 +0.9**
CANT Cankiri 41.19 298 *e*P **P 13 29 44.5 +0.6**
KAMT Kaman 41.20 296 *e*P **P 13 29 45.8 +1.8**
BRTR Keskin Array B 41.23 296 P **P 13 29 45.1 +0.9**
comp=Z,105nm,1.0s,mb5.4,baz=102,slow=5.2,SNR=56
BRTR PKPPKP 14 02 02.6
comp=Z,1.6nm,1.0s,baz=243,slow=2.2,SNR=4.2
BRTR Keskin Array B 41.23 296 *ce*P **P 13 29 45.2 +0.9**
BRTR pmax pmax
comp=Z,105nm,1.0s
EREN Erenkoy 41.26 290 *e*P **P 13 29 44.5 -0.1**
BALT Daday 41.33 299 *i* P **P 13 29 45.5 +0.4**
GUIM Jordan 41.39 111 *e*P **P 13 29 48.5 +2.7**
SULT Sultanhani-AKS 41.45 294 *e*P **P 13 29 47.2 +1.1**
KASI Kota Agung 41.48 148 P **P 13 29 42.1 -4.4**
KLMR Klimovskoe 41.48 329 *d* iP **P 13 29 46.6 +0.6**
KLMR *e* 13 31 24.6
KLMR *i* S **S 13 36 01.1 +1.4**
KLMR *i* SS SS 13 39 04.9 +0.6
KLMR pmax pmax
comp=Z,4µm,6.4s
KLMR pmax pmax
comp=Z,3µm,1.6s,mb6.7
KLMR MLR MLR
comp=Z,82µm,16.0s,MS6.7
IKL Isikli 41.55 291 *e*P **P 13 29 47.0 0.0**
MYLDM Lahad Datu 41.63 121 P **P 13 29 49.1 +1.3**
MYLDM Lahad Datu 41.63 121 P **P 13 29 49.0 +1.2**
comp=Z,493nm,1.8s,mb5.8
BBAL Bala 41.64 296 *i* P **P 13 29 47.5 -0.1**
TSM Tawau 41.77 123 P **P 13 29 50.2 +1.2**
LFK Lefkose 41.81 290 *e*P **P 13 29 50.0 +0.9**
SAFT Safranbolu 41.86 299 *e*P **P 13 29 51.3 +1.8**
LOD Lodumlu 41.89 297 *e*P **P 13 29 49.6 -0.1**
CSS Prodhromos 42.02 289 P **P 13 29 51.5 +0.6**
comp=Z,3.2nm,1.1s
MAMC Mammari 42.08 290 P **P 13 29 52.5 +1.2**
ERMK Ermenek 42.11 292 *i* P **P 13 29 50.3 -1.3**
HABR Khabarovsk 42.31 51 *i* P **P 13 29 53.7 +0.7**
HABR *e**PP pP 13 30 04.5 +3.7
HABR *e**SP sP 13 30 08.5 +4.6
HABR 13 31 34.4
HABR 13 31 47.5
HABR *e*PPP 13 32 05.2
HABR *e*S **S 13 36 13.2 +0.9**
HABR *e**SS sS 13 36 31.6 +6.6
HABR *e* 13 39 53.5
HABR *e*SSS 13 39 59.8
HABR pmax pmax
comp=Z,350nm,1.6s,mb5.7
HABR pmax pmax
comp=Z,13µm,9.6s
HABR pmax pmax
comp=N,88nm,1.4s
HABR pmax pmax
comp=E,309nm,1.8s
HABR MLR MLR
comp=N,37µm,11.0s,MS6.9
HABR MLR MLR
comp=Z,83µm,12.0s,MS6.8
HABR MLR MLR
comp=E,77µm,11.0s,MS6.9
LEF Lefka 42.35 290 *e*P **P 13 29 54.0 +0.4**
KONT Konya--Tatoy 42.38 294 *e*P **P 13 29 54.5 +0.7**
HDMB Hadim 42.41 292 *e*P **P 13 29 53.9 0.0**
ALFC Alevga 42.58 290 ⇓P **P 13 29 56.5 +1.1**
comp=E,8.6nm,0.9s,mb4.5
KIZT Kizilcal 42.66 295 *e*P **P 13 29 57.4 +1.4**
SBJI Serang 42.77 146 P **P 13 29 59.4 +2.3**
comp=E,281nm,1.7s,mb5.7
OCLP Ormoc 42.78 109 *e*P **P 13 30 02.1 +4.9**
KDZE Karadeniz Ereo 42.80 299 *e*P **P 13 29 59.1 +2.0**
YAK Yakutsk 42.81 30 *e*P **P 13 29 57.1 +0.3**
comp=E,455nm,0.9s,mb6.2
YAK LR LR
comp=Z,35µm,19.0s,MS6.3
YAK Yakutsk 42.81 30 *d* iP **P 13 29 57.1 +0.3**
YAK *e* 13 31 36.3
YAK *e* 13 31 44.4
YAK *e*PPP 13 32 17.4
YAK *e*S **S 13 36 17.5 -1.7**
YAK *e*SS SS 13 39 23.4 -7.0
YAK *e* 13 39 49.1
YAK pmax pmax
comp=Z,232nm,1.1s,mb5.8
YAK pmax pmax
comp=N,19nm,1.1s
YAK pmax pmax
comp=E,101nm,1.6s
YAK pmax pmax
comp=Z,1µm,5.6s
YAK pmax pmax
comp=N,137nm,1.8s
YAK pmax pmax
comp=E,328nm,1.5s
YAK smax
comp=N,3µm,7.7s
YAK smax
comp=E,3µm,8.3s
PPCY Paphos 42.83 289 P **P 13 29 58.4 +0.9**
SVRH Sivrihisar-ESK 42.88 296 *e*P **P 13 29 58.2 +0.4**
TBP Tagbilaran 42.95 111 *e*P **P 13 29 58.4 -0.2**
MDU Mudurnu 43.03 298 *e*P **P 13 29 59.2 +0.2**
DBJI Dramaga 43.44 145 P **P 13 29 58.6 -3.9**
comp=E,5µmcomp=E,478nm,1.2s,mb6.1
SUTC Sutluce-Ispart 43.51 293 *e*P **P 13 30 03.1 +0.2**
GULT Gulveren 43.56 298 *e*P **P 13 30 04.0 +0.7**
PAGZ Pagadian 43.66 113 *e*P **P 13 30 06.0 +1.7**
SPNC Sapanca-Adapaz 43.70 298 *e*P **P 13 30 07.2 +2.9**
SHUT Suhut-Afyon 43.73 295 *e*P **P 13 30 05.2 +0.5**
SKJI Sukabumi 43.74 146 P **P 13 29 58.4 -6.5**
BCK Bucak 43.84 293 *e*P **P 13 30 05.4 -0.1**
ISP Isparta 43.84 294 *e*P **P 13 30 05.2 -0.4**
ISP Isparta 43.84 294 P **P 13 30 06.3 +0.7**
ISP Isparta 43.84 294 ⇑P **P 13 30 05.3 -0.3**
ISP Isparta 43.84 294 P **P 13 30 04.8 -0.8**
ANTB Antalya 43.87 293 *e*P **P 13 30 07.2 +1.5**
ALT Altintas 44.01 296 *e*P **P 13 30 06.3 -0.6**
CAVI Cavuskoy 44.09 297 *e*P **P 13 30 08.2 +0.6**
LEM Lembang 44.10 145 P **P 13 30 12.4 +4.5**
comp=E,4µmcomp=E,153nm,1.6s,mb5.5
ADVT Abdulvahap 44.15 298 *e*P **P 13 30 08.2 +0.2**
SILT Sile 44.16 299 *e*P **P 13 30 08.2 +0.1**
HRT Hereke 44.17 298 *e*P **P 13 30 09.1 +0.9**
SCPH Surigao 44.20 109 ⇓*e*P **P 13 30 08.7 0.0**
YLV Yalova 44.42 298 *e*P **P 13 30 10.0 -0.2**
AKASG Malin Array Be 44.47 312 P **P 13 30 09.3 -1.0**
AKASG PcP PcP 13 31 52.9 -0.6
AKASG LR LR 13 52 19.4
AKASG P'P' 14 01 55.5
AKASG Malin Array Be 44.47 312 P **P 13 30 09.3 -1.0**
comp=E,58nm,0.6s,mb5.5,baz=84,slow=7.1,SNR=161
AKASG PcP PcP 13 31 52.9 -0.6
comp=E,184nm,1.3s,baz=75,slow=4.2,SNR=4.3
AKASG LR LR 13 52 19.4
comp=E,53µm,18.6s,MS6.5,baz=110,slow=41
AKASG PKPPKP 14 01 55.5
comp=E,0.5nm,0.5s,baz=273,slow=1.9,SNR=4.2
KIEV Kiev 44.48 312 *e*P **P 13 30 09.2 -1.2**
comp=E,160nm,0.8s,mb5.8
KIEV LR LR
comp=Z,58µm,20.0s,MS6.5
KIEV Kiev 44.48 312 *e*P **P 13 30 09.2 -1.2**
KIEV pmax pmax
comp=Z,160nm,0.8s,mb5.8
KIEV MLR MLR
comp=Z,58µm,20.0s,MS6.5
ELL Elmali 44.48 292 *e*P **P 13 30 11.8 +1.1**
KIS Kishinev 44.55 307 ⇑*i* P **P 13 30 09.0 -2.1**
comp=Z,1µm,1.5s,mb6.6
KIS Kishinev 44.55 307 *i* PP PP 13 31 59.0 +3.8
comp=Z,11µm,19.0s
KIS Kishinev 44.55 307 P **P 13 30 12.4 +1.2**
KIS Kishinev 44.55 307 ⇑P **P 13 30 09.0 -2.1**
KIS *i* 13 31 59.0
KIS *i* S **S 13 36 40.0 -5.2**
KIS *i* SS SS 13 39 52.0 -13
KIS pmax pmax
comp=Z,1µm,1.5s,mb6.6
KIS pmax pmax
comp=Z,8µm,16.0s
KIS pmax pmax
comp=Z,11µm,19.0s
KIS MLR MLR
comp=Z,45µm,15.0s,MS6.5
KIS MLR MLR
comp=N,38µm,20.0s,MS6.4
KIS MLR MLR
comp=E,3µm,16.0s,MS6.4
KIS MLR MLR
comp=Z,57µm,16.0s
TLCR 44.56 305 ⇑*i* P **P 13 30 11.8 +0.6**
MSEY Mahe Island 44.57 222 P **P 13 30 06.6 -5.0**
comp=Z,709nm,1.5s,mb6.3,SNR=5.3
GEMT Gemlik 44.57 298 *e*P **P 13 30 10.9 -0.5**
KLYT Kilyos 44.60 299 *e*P **P 13 30 11.8 +0.2**
ISK Istanbul-Kandi 44.61 299 *e*P **P 13 30 10.9 -0.8**
GLHS Glhisar (BURDU 44.74 293 *e*P **P 13 30 12.7 -0.1**
ARMT Armutlu 44.80 298 *e*P **P 13 30 11.8 -1.4**
MDNY Mudanya-Bursa 44.81 298 *e*P **P 13 30 12.7 -0.6**
BGKT Bogazkoy 44.81 299 *e*P **P 13 30 15.4 +2.1**
COCO West Island 44.83 162 *i* P **P 13 30 18.0 +4.4**
COCO West Island 44.83 162 P **P 13 30 19.8 +6.2**
COCO West Island 44.83 162 P **P 13 30 18.6 +5.0**
SNR=5.2
CISI Cisompet, Garu 44.83 145 P **P 13 30 10.4 -3.3**
comp=Z,3µmcomp=Z,118nm,1.5s,mb5.5
TIRR Tirgusor 44.87 303 P **P 13 30 15.0 +1.3**
TIRR Tirgusor 44.87 303 ⇓P **P 13 30 13.4 -0.3**
TIRR Tirgusor 44.87 303 ⇓*i* P **P 13 30 13.8 +0.1**
BUKP Musuan 44.97 112 *e*P **P 13 30 16.0 +1.2**
CTKS Kestanelik-??a 45.01 299 *e*P **P 13 30 15.4 +0.6**
CFR Carcaliu 45.04 305 P **P 13 30 15.9 +0.9**
CFR Carcaliu 45.04 305 ⇑P **P 13 30 15.2 +0.1**
MAJO Matsushiro 45.16 68 *e*P **P 13 30 15.5 -0.6**
comp=Z,162nm,1.3s,mb5.7
MAJO LR LR
comp=Z,33µm,19.0s,MS6.3
MAJO Matsushiro 45.16 68 *e*P **P 13 30 15.5 -0.6**
MAJO pmax pmax
comp=Z,162nm,1.3s,mb5.7
MAJO MLR MLR
comp=Z,33µm,19.0s,MS6.3
MAT Matsushiro 45.16 68 P **P 13 30 15.5 -0.6**
MAT S **S 13 36 49.0 -5.2**
MJAR Matsushiro Arr 45.16 68 P **P 13 30 16.7 +0.6**
comp=Z,46nm,1.0s,mb5.2,baz=288,slow=9.4,SNR=62
MJAR ScP ScP 13 35 48.2 +1.0
comp=Z,9.9nm,1.2s,baz=298,slow=4.3,SNR=4.1
MJAR LR LR 13 50 24.2
comp=Z,29µm,19.9s,MS6.2,baz=280,slow=38
KULA Kula-Manisa 45.20 295 *e*P **P 13 30 16.2 -0.3**
HARR Harsova 45.20 304 ⇓*i* P sP 13 30 29.7 +2.5
KCTX Karacabey (Bur 45.22 298 *e*P **P 13 30 17.2 +0.7**
SLVT Silivri 45.23 299 *e*P **P 13 30 18.2 +1.5**
DESE Dese 45.25 254 *e*P **P 13 30 18.3 +1.3**
DESE *e*S **S 13 37 04.7 +8.8**
PUL Pulkovo 45.40 325 ⇓*e*P **P 13 30 19.2 +1.5**
PUL pmax pmax
comp=Z,1µm,1.2s,mb6.6
PUL MLR MLR
comp=Z,97µm,17.0s,MS6.8
IAS Iasi 45.41 307 ⇑*i* P **P 13 30 22.4 +4.4**
EDC Edincik 45.59 298 *e*P **P 13 30 20.0 +0.5**
CRLT Corlu 45.60 299 *e*P **P 13 30 24.5 +5.0**
BJII Banjamegara 45.60 142 P **P 13 30 23.4 +3.6**
comp=Z,7µmcomp=Z,227nm,1.8s,mb5.8
AMRR Amara 45.63 304 P **P 13 30 22.3 +2.5**
AMRR Amara 45.63 304 ⇑*i* P **P 13 30 25.2 +5.5**
BALB Balikesir 45.66 297 *e*P **P 13 30 19.1 -0.9**
MICGM Minsk 45.69 318 *e*P **P 13 30 19.0 -1.0**
YER Yerkesik 45.71 293 *e*P **P 13 30 20.9 +0.5**
MNK Minsk 45.72 318 *d* iP **P 13 30 19.0 -1.2**
MNK *e* 13 32 04.0
MNK *e*S **S 13 37 00.0 -1.7**
MNK *e*PS 13 37 20.0
MNK *e*SS SS 13 40 14.0 -12
MNK *e*SSS 13 41 26.0
MNK pmax pmax
comp=Z,18µm,6.0s
MNK pmax pmax
comp=Z,290nm,1.5s,mb6.0
MNK pmax pmax
comp=E,380nm,1.5s
MNK pmax pmax
comp=Z,17µm,6.0s
MNK smax
comp=E,31µm,18.0s
MNK smax
comp=N,6µm,7.0s
MNK MLR MLR
comp=Z,189µm,16.0s,MS7.1
MNK MLR MLR
comp=E,196µm,16.0s
SMRI Semarang 45.75 141 P **P 13 30 23.2 +2.2**
comp=E,715nm,2.0s,mb6.2
GONE Gonen-Balikesi 45.76 297 *e*P **P 13 30 21.8 +1.0**
TKR Tekirdag 45.76 299 *e*P **P 13 30 23.6 +2.8**
AKS Akhisar 45.81 296 *e*P **P 13 30 21.7 +0.5**
GRER 45.85 305 ⇑*i* P **P 13 30 25.0 +3.5**
JOF Joensuu 45.86 330 *e*P **P 13 30 21.2 0.0**
JOF pmax pmax
comp=Z,473nm,0.7s,mb6.5
JOF Joensuu 45.86 330 *ep* **P 13 30 21.2 0.0**
comp=Z,472nm,0.7s,mb6.5
DAV Davao City (W) 45.86 112 P **P 13 30 21.8 -0.1**
comp=Z,1µm,1.3s,mb6.8
DAV LR LR
comp=Z,38µm,22.0s,MS6.3
DAV Davao City (W) 45.86 112 P **P 13 30 23.0 +1.1**
comp=Z,119nm,0.5s,mb6.1,baz=84,slow=14,SNR=9.9
DAV LR LR 13 51 18.8
comp=Z,36µm,21.5s,MS6.3,baz=299,slow=38
DAV Davao City (W) 45.86 112 ⇑*e*P **P 13 30 19.2 -2.7**
DAV Davao City (W) 45.86 112 P **P 13 30 26.0 +4.1**
comp=Z,1µm,1.7s,mb6.5
DAV Davao City (W) 45.86 112 P **P 13 30 24.6 +2.7**
SNR=26
MFT Murefte 45.98 298 *e*P **P 13 30 23.6 +1.0**
ARG Arkhangelos 45.99 292 P **P 13 30 21.6 -1.1**
VRI Vrincioaia 46.01 306 P **P 13 30 23.6 +0.9**
VRI Vrincioaia 46.01 306 ⇓P **P 13 30 23.3 +0.6**
VRI Vrincioaia 46.01 306 ⇓*i* P **P 13 30 23.9 +1.2**
TESR 46.05 306 ⇓*i* P **P 13 30 23.5 +0.5**
TOLI Toli-Toli 46.06 123 P **P 13 30 25.9 +2.4**
comp=Z,559nm,1.4s,mb6.3
PLOR Plostina 46.07 306 ⇓P **P 13 30 23.8 +0.7**
PLOR Plostina 46.07 306 ⇓*i* P **P 13 30 24.6 +1.5**
RKY Sarkoy-Tekirda 46.07 298 *e*P **P 13 30 22.7 -0.5**
MLSB Milas 46.08 294 *e*P **P 13 30 24.5 +1.1**
ISR Istrita 46.17 304 ⇓P **P 13 30 25.4 +1.4**
ISR Istrita 46.17 304 ⇓*i* P **P 13 30 26.5 +2.5**
EDRB Edirne 46.27 300 *e*P **P 13 30 23.6 -1.2**
IZM Izmir 46.31 295 *e*P **P 13 30 25.9 +0.8**
YOGI Yogyakarta 46.32 142 P **P 13 30 31.3 +5.9**
comp=Z,7µmcomp=Z,405nm,1.8s,mb6.1
JMB Yambol 46.33 301 P **P 13 30 26.0 +0.8**
DAT Datca 46.33 293 *e*P **P 13 30 24.5 -0.9**
NACGM Naroch 46.37 318 *e*P **P 13 30 24.0 -1.4**
SULR 46.40 304 P **P 13 30 27.4 +1.6**
SULR 46.40 304 ⇓*i* P **P 13 30 26.7 +0.9**
IDID Didziasalis 46.45 319 *e*P **P 13 30 26.5 +0.6**
IDID AMB AMB 13 30 31.1
comp=Z,134nm,1.3s,mb5.7
BLCB Balcova 46.48 295 *e*P **P 13 30 27.0 +0.5**
BLCB Balcova 46.48 295 P **P 13 30 25.8 -0.7**
BODT Bodrum 46.48 293 *e*P **P 13 30 25.4 -1.2**
LVZ Lovozero 46.51 337 *d* iP **P 13 30 26.0 -0.3**
LVZ pmax pmax
comp=Z,443nm,1.7s,mb6.1
LVZ MLR MLR
comp=Z,107µm,24.0s,MS6.7
LVZ Lovozero 46.51 337 P **P 13 30 27.2 +0.9**
comp=Z,3µm,1.1s,mb7.2,SNR=24
ERIK Erikli-Kesan 46.57 298 *e*P **P 13 30 27.8 +0.6**
NGJI Ngawi 46.57 140 P **P 13 30 29.9 +2.5**
comp=Z,10µmcomp=Z,243nm,2.2s,mb5.7
MLR Muntele Rosu 46.58 305 P **P 13 30 28.1 +0.9**
MLR Muntele Rosu 46.58 305 ⇓*i* P **P 13 30 29.0 +1.8**
GELI Tayfur-Gelibol 46.63 298 *e*P **P 13 30 28.1 +0.5**
NIS1 Nisyros Isl. 46.67 293 P **P 13 30 26.8 -1.2**
IIGN Ignalina 46.74 319 *e*P **P 13 30 29.0 +0.7**
IIGN AMB AMB 13 30 33.6
comp=Z,251nm,1.4s,mb6.0
IZAR Zarasai 46.78 319 *e*P **P 13 30 29.2 +0.6**
IZAR AMB AMB 13 30 33.9
comp=Z,263nm,1.2s,mb6.0
APA Apatity 46.79 336 *d* iP **P 13 30 28.0 -0.5**
APA *i* 13 32 04.6
APA *i* 13 32 18.0
APA *i* S **S 13 37 17.0 +0.2**
APA *i* SS SS 13 40 32.0 -11
APA pmax pmax
comp=Z,540nm,1.8s,mb6.2
APA pmax pmax
comp=N,2µm,6.0s
APA pmax pmax
comp=E,5µm,6.0s
APA pmax pmax
comp=Z,10µm,6.0s
APA MLR MLR
comp=Z,120µm,12.0s,MS7.1
EZN Ezine 46.82 297 *e*P **P 13 30 29.1 0.0**
ISAL Salakas 46.82 319 *e*P **P 13 30 29.5 +0.6**
ISAL AMB AMB 13 30 34.2
comp=Z,228nm,1.2s,mb6.0
ENEZ Enez 46.83 299 *e*P **P 13 30 30.9 +1.6**
ALN Alexandroupoli 46.90 299 P **P 13 30 29.5 -0.2**
DOPR Dopca 46.94 306 ⇑*i* P **P 13 30 32.1 +2.1**
PRK Paraskevi 46.95 296 P **P 13 30 29.2 -0.9**
BUR01 Bucovina Ar. S 47.00 308 P **P 13 30 31.0 +0.6**
BURAR Bucovina Array 47.00 308 P **P 13 30 31.6 +1.1**
BURAR Bucovina Array 47.00 308 ⇑P **P 13 30 30.3 -0.2**
BURAR Bucovina Array 47.00 308 ⇓*i* P **P 13 30 31.1 +0.6**
SJI Sawahan 47.04 140 P **P 13 30 31.6 +0.5**
comp=Z,5µmcomp=Z,170nm,2.2s,mb5.6
GADA Gvkgeada 47.10 298 *e*P **P 13 30 30.9 -0.4**
PCJI Pacitan 47.11 141 P **P 13 30 31.4 -0.2**
comp=Z,159nm,1.5s,mb5.7
AAE Adis Abeba 47.11 252 *e*P **P 13 30 33.7 +2.0**
AAE *e*S S 13 37 01.7 -21
VOIR 47.21 305 P **P 13 30 32.0 -0.1**
VOIR 47.21 305 ⇓P **P 13 30 31.8 -0.3**
VOIR 47.21 305 ⇓*i* P **P 13 30 32.8 +0.7**
CHOS Chios island 47.24 295 P **P 13 30 32.5 0.0**
FURI Furi 47.25 252 *e*P **P 13 30 34.6 +1.8**
SIGR SIGRI 47.27 296 P **P 13 30 32.0 -0.7**
TIXI Tiksi 47.28 18 *e*P **P 13 30 32.1 -0.1**
comp=Z,808nm,1.4s,mb6.5
TIXI LR LR
comp=Z,27µm,19.0s,MS6.2
TIXI Tiksi 47.28 18 *d* iP **P 13 30 32.0 -0.3**
TIXI *e* 13 32 22.1
TIXI *e*S **S 13 37 20.7 -3.0**
TIXI *e* 13 40 26.9
TIXI pmax pmax
comp=Z,5µm,7.9s
TIXI pmax pmax
comp=N,307nm,1.8s
TIXI pmax pmax
comp=Z,830nm,1.8s,mb6.4
TIXI pmax pmax
comp=E,220nm,1.4s
TIXI smax
comp=E,3µm,12.1s
TIXI smax
comp=N,3µm,10.3s
TIXI MLR MLR
comp=E,9µm,14.0s,MS6.5
TIXI MLR MLR
comp=N,34µm,14.0s,MS6.5
TIXI MLR MLR
comp=Z,40µm,14.0s,MS6.5
PWJI Pagerwojo 47.30 141 P **P 13 30 36.1 +3.0**
comp=Z,4µmcomp=Z,137nm,2.0s,mb5.5
YSS Yuzh-Sakhalins 47.48 53 *e*P **P 13 30 34.4 +0.2**
comp=Z,461nm,1.2s,mb6.3
YSS LR LR
comp=Z,16µm,19.0s,MS6.0
YSS Yuzh-Sakhalins 47.48 53 *ke*P **P 13 30 34.5 +0.3**
YSS *e**PP pP 13 30 45.0 +3.0
YSS *i* 13 32 28.0
YSS *e*S **S 13 37 24.0 -3.2**
YSS *e*SS SS 13 40 24.0 -31
YSS pmax pmax
comp=E,80nm,1.5s
YSS pmax pmax
comp=Z,560nm,1.5s,mb6.3
YSS pmax pmax
comp=E,7µm,6.0s
YSS pmax pmax
comp=Z,11µm,6.0s
YSS pmax pmax
comp=E,5µm,8.0s
YSS pmax pmax
comp=Z,6µm,8.0s
YSS smax
comp=E,6µm,12.0s
YSS MLR MLR
comp=Z,36µm,13.0s,MS6.5
YSS MLR MLR
comp=N,31µm,14.0s,MS6.6
YSS MLR MLR
comp=E,32µm,12.0s,MS6.6
MDB Medias 47.63 306 ⇑*i* P sP 13 30 46.3 0.0
KMMI Kalianget 47.73 137 P **P 13 30 39.3 +2.9**
comp=E,292nm,2.0s,mb6.0
ZKR Zakros 47.73 291 P **P 13 30 34.9 -1.4**
LVV L'vov 47.76 311 *e*P **P 13 30 36.9 +0.6**
LVV *e* 13 31 57.5
LVV *e* 13 32 30.7
LVV *e*S **S 13 37 30.5 -0.6**
LVV MLR MLR
comp=E,24µm,15.0s,MS6.4
LVV MLR MLR
comp=Z,26µm,15.0s,MS6.3
LVV MLR MLR
comp=N,13µm,12.0s,MS6.4
KRKI Karangkates 47.77 140 P **P 13 30 40.1 +3.3**
comp=N,318nm,1.6s,mb6.1
FINES FINESS Array B 47.83 327 P **P 13 30 37.1 +0.5**
comp=N,108nm,0.6s,mb6.0,baz=103,slow=8.6,SNR=159
FINES LR LR 13 51 26.0
comp=N,101µm,19.6s,MS6.8,baz=103,slow=37
FINES FINESS Array B 47.83 327 P **P 13 30 37.2 +0.5**
FINES pmax pmax
comp=Z,108nm,0.6s
FINES MLR MLR
comp=Z,101µm,19.6s
KAF Kangasniemi 47.87 328 *e*P **P 13 30 36.5 -0.5**
KAF pmax pmax
comp=Z,85nm,0.8s,mb5.8
KAF Kangasniemi 47.87 328 *ep* **P 13 30 36.5 -0.5**
comp=Z,85nm,0.8s,mb5.8
APE Apeiranthos 47.88 294 *e*P **P 13 30 36.2 -1.3**
APE Apeiranthos 47.88 294 P **P 13 30 38.2 +0.8**
APE Apeiranthos 47.88 294 ⇑P **P 13 30 36.4 -1.1**
APE Apeiranthos 47.88 294 P **P 13 30 36.5 -1.0**
SGSI Sangihe 47.90 116 P **P 13 30 40.5 +2.7**
comp=Z,519nm,2.1s,mb6.2
KAVA Kavala 48.03 299 P **P 13 30 38.1 -0.5**
THR1 Thera Island 48.07 293 P **P 13 30 37.4 -1.6**
THR2 Thira island, 48.08 293 P **P 13 30 37.3 -1.7**
THR3 Thira Island, 48.11 293 P **P 13 30 37.7 -1.6**

THR5 Thira Island, 48.15 293 P **P** **13 30 37.9 -1.7**
BMR Baia Mare 48.16 308 P **P** **13 30 41.2 +1.7**
BMR Baia Mare 48.16 308 ⇑*i*P **P** **13 30 41.5 +2.0**
ERM Erimo 48.17 60 P **P** **13 30 41.9 +2.3**
comp=Z,1μm,1.5s,mb6.7,SNR=25
LAST Lasithi 48.31 291 P **P** **13 30 40.4 -0.4**
TTSI Tana Toraja 48.34 128 P **P** **13 30 41.4 +0.2**
comp=Z,589nm,1.5s,mb6.4
SUW Suwalki 48.39 317 *e*P **P** **13 30 40.5 -0.6**
SUW *e*pP pP 13 30 44.5 -4.5
SUW *e*PP PP 13 32 35.4 +1.7
SUW *e*S **S** **13 37 50.1 +10**
SUW LMZ 13 50 45.0
comp=Z,165μm,26.2s
SUW Suwalki 48.39 317 *e*P **P** **13 30 40.5 -0.6**
SUW *e* 13 32 35.4
SUW *e*S **S** **13 37 50.1 +10**
GMJI Gumukmas 48.42 139 P **P** **13 30 42.9 +1.1**
comp=Z,5μmcomp=Z,133nm,1.5s,mb5.8
OUR Ouranopolis 48.53 298 P **P** **13 30 41.3 -1.1**
KWP Kalwaria Pacla 48.62 311 *e*P **P** **13 30 42.8 -0.2**
KWP *e*pP pP 13 30 47.1 -3.6
KWP *e*PP PP 13 32 42.4 +6.6
KWP *e*S **S** **13 37 45.4 +2.1**
KWP LMZ 13 50 42.0
comp=Z,112μm,28.8s
KWP Kalwaria Pacla 48.62 311 *e*P **P** **13 30 42.8 -0.2**
KWP *e* 13 32 42.4
KWP *e*S **S** **13 37 45.4 +2.1**
KWP Kalwaria Pacla 48.62 311 ⇓*i*P **P** **13 30 44.5 +1.5**
DEV Deva 48.68 306 ⇑*i*P **P** **13 30 49.1 +5.6**
SRS Serrai 48.71 299 P **P** **13 30 43.0 -0.8**
DRGR 48.74 307 P **P** **13 30 44.3 +0.3**
DRGR 48.74 307 ⇑P **P** **13 30 44.1 +0.1**
DRGR 48.74 307 ⇓*i*P **P** **13 30 44.7 +0.7**
KMSI Cibinong 48.76 121 P **P** **13 30 45.3 +0.9**
TRPA Tarpa 48.78 309 ⇑*i*P **P** **13 30 45.2 +0.9**
AOS Alonnisos 48.79 297 P **P** **13 30 43.4 -1.1**
VTS Vitosha 48.79 301 ⇓P **P** **13 30 44.4 0.0**
VTS Vitosha 48.79 301 P **P** **13 30 44.2 -0.2**
VTS Vitosha 48.79 301 ⇑*i*P **P** **13 30 45.7 +1.3**
GZR Gura Zlata 48.81 305 P **P** **13 30 45.5 +1.0**
GZR Gura Zlata 48.81 305 ⇑*i*P **P** **13 30 45.0 +0.5**
MNI Manado 48.82 119 P **P** **13 30 45.0 +0.1**
comp=Z,560nm,2.2s,mb6.2
PAIG Paliouri 48.82 298 P **P** **13 30 44.2 -0.5**
SIVA Sivas 48.88 291 P **P** **13 30 44.4 -0.8**
UZH Uzhgorod 48.93 309 *e*P **P** **13 30 44.9 -0.4**
UZH *e* 13 32 40.3
UZH *e*S **S** **13 37 46.7 -0.9**
UZH *e*SS SS 13 41 14.1 -4.1
UZH MLR MLR
comp=N,42μm,16.0s,MS6.7
UZH MLR MLR
comp=E,47μm,16.0s,MS6.7
UZH MLR MLR
comp=Z,24μm,16.0s,MS6.3
PLG Polygyros 48.93 298 P **P** **13 30 45.1 -0.4**
SOH Sokhos 48.93 299 P **P** **13 30 44.5 -1.0**
LUWI Luwuk 48.97 123 P **P** **13 30 49.5 +3.4**
comp=Z,435nm,1.5s,mb6.3
SPSI Sidrap Palu 48.98 129 P **P** **13 30 46.9 +0.8**
comp=Z,236nm,2.5s,mb5.8
ATHU Athens Univers 49.08 295 P **P** **13 30 46.4 -0.3**
HORT Hortiatis 49.15 299 P **P** **13 30 46.4 -0.8**
KNT Kendrikon 49.22 300 P **P** **13 30 46.9 -0.8**
THE Thessaloniki 49.25 299 P **P** **13 30 46.8 -1.1**
SRBI Singaraja 49.28 137 P **P** **13 30 51.1 +2.7**
comp=Z,411nm,2.1s,mb6.1
XOR Xorichti 49.28 297 P **P** **13 30 47.1 -1.1**
VAY Valandovo 49.44 300 P **P** **13 30 47.9 -1.5**
VAY Valandovo 49.44 300 *e*P **P** **13 30 48.9 -0.5**
comp=Z,3μm,3.0s
CRVS Cervenica-Dubn 49.46 310 *e*P **P** **13 30 47.7 -1.7**
comp=Z,231nm,2.1s,mb5.8
CRVS *e*PP PP 13 32 45.6 +2.1
CRVS *e*S **S** **13 37 51.2 -3.9**
CRVS *e*SS SS 13 41 21.3 -5.5
CRVS Cervenica-Dubn 49.46 310 *e*P **P** **13 30 47.7 -1.7**
CRVS *e* 13 32 45.6
CRVS *e*S **S** **13 37 51.2 -3.9**
CRVS *e*SS SS 13 41 21.3 -5.5
CRVS pmax pmax
comp=Z,231nm,2.1s,mb5.8
CRVS Cervenica-Dubn 49.46 310 *e*P **P** **13 30 47.7 -1.7**
CRVS *e*PP PP 13 32 45.6 +2.1
CRVS *e*S **S** **13 37 51.2 -3.9**
CRVS *e*SS SS 13 41 21.3 -5.5
KARN Karanos 49.50 292 P **P** **13 30 49.0 -0.9**
ATAL Atalanti 49.53 296 P **P** **13 30 48.8 -1.4**
LKR Lokris 49.56 296 P **P** **13 30 48.7 -1.6**
STHS Stebnicka Huta 49.58 311 *e*P **P** **13 30 50.9 +0.6**
comp=Z,74nm,1.5s,mb5.5
STHS *e*S **S** **13 38 11.9 +15**
STHS Stebnicka Huta 49.58 311 *e*P **P** **13 30 50.9 +0.6**
STHS *e*S **S** **13 38 11.9 +15**
STHS pmax pmax
comp=Z,74nm,1.5s,mb5.5
STHS Stebnicka Huta 49.58 311 *e*P **P** **13 30 50.9 +0.6**
STHS *e*S **S** **13 38 11.9 +15**
DID Didima 49.59 295 P **P** **13 30 47.5 -3.1**
BZS Buzias 49.60 306 P **P** **13 30 51.2 +0.7**
BZS Buzias 49.60 306 ⇓P **P** **13 30 50.0 -0.5**
BZS Buzias 49.60 306 ⇓*i*P **P** **13 30 50.5 0.0**
GRG Griva 49.62 299 P **P** **13 30 49.7 -1.1**
WAR Warsaw 49.65 314 *e*P **P** **13 30 49.9 -0.9**
WAR *e*PP PP 13 32 51.1 +6.0
WAR *e*S **S** **13 37 58.8 +1.1**
WAR LMZ 13 51 41.6
comp=Z,143μm,24.4s
WAR Warsaw 49.65 314 *e*P **P** **13 30 49.9 -0.9**
WAR *e* 13 32 51.1
WAR *e*S **S** **13 37 58.8 +1.2**
WAR MLR MLR
comp=Z,143μm,24.4s,MS6.9
LIT Litokhoron 49.69 298 P **P** **13 30 49.2 -2.1**
LTK Loutraki 49.70 295 P **P** **13 30 48.9 -2.5**
KHKI Kahang-Kahang 49.74 137 P **P** **13 30 54.4 +2.5**
comp=Z,5μmcomp=Z,214nm,1.9s,mb5.8
KEV Kevo 49.79 338 *e*P **P** **13 30 52.0 +0.4**
comp=Z,560nm,1.3s,mb6.4
KEV LR LR
comp=Z,85μm,22.0s,MS6.7
KEV Kevo 49.79 338 *e*P **P** **13 30 52.0 +0.4**
KEV pmax pmax
comp=Z,560nm,1.3s,mb6.4
KEV MLR MLR
comp=Z,85μm,22.0s,MS6.7
KEV Kevo 49.79 338 *ep* **P** **13 30 52.0 +0.4**
comp=Z,54nm,0.6s,mb5.8
YUK Yuzh-Kuril'sk 49.90 57*d* *i*P **P** **13 30 48.0 -4.8**
YUK *e*PPP 13 33 44.0
YUK *e*S **S** **13 37 58.0 -3.3**
YUK *e*SS SS 13 41 35.0 +1.1
YUK *e*SSS 13 43 08.0
YUK pmax pmax
comp=N,970nm,1.4s
YUK pmax pmax
comp=E,350nm,1.4s
YUK pmax pmax
comp=Z,3μm,1.4s,mb7.1
YUK pmax pmax
comp=Z,4μm,2.0s,mb7.0
YUK smax
comp=E,11μm,7.0s
YUK smax
comp=N,4μm,3.6s
YUK smax
comp=E,6μm,4.6s
YUK smax
comp=N,2μm,1.8s
YUK MLR MLR
comp=N,21μm,14.0s,MS6.7
YUK MLR MLR
comp=E,43μm,14.0s,MS6.7
YUK MLR MLR
comp=Z,31μm,14.0s,MS6.5
DSF Desfina 49.97 296 P **P** **13 30 50.6 -2.9**
AGG Agios Georgios 50.01 297 P **P** **13 30 52.2 -1.5**
KECS Kecovo 50.13 309 *e*P **P** **13 30 55.4 +0.9**
comp=Z,59nm,1.6s,mb5.4
KECS *e*PP PP 13 32 53.1 +3.5
KECS Kecovo 50.13 309 *e*P **P** **13 30 55.4 +0.9**
KECS *e* 13 32 53.1
KECS pmax pmax
comp=Z,59nm,1.6s,mb5.4
KECS Kecovo 50.13 309 *e*P **P** **13 30 55.4 +0.9**
KECS *e*PP PP 13 32 53.1 +3.5
SKO Skopje 50.18 301 P **P** **13 30 54.7 -0.3**
SKO Skopje 50.18 301 *e*P **P** **13 30 54.4 -0.6**
comp=Z,496nm,1.2s,mb6.4
NIE Niedzica 50.19 311 *e*P **P** **13 30 56.6 +1.7**
NIE *e* i 13 30 59.6
KZN Kozani 50.20 299 P **P** **13 30 54.2 -1.0**
GUR Goura 50.20 295 P **P** **13 30 52.8 -2.4**
ARCES ARCESS Array B 50.22 337 P **P** **13 30 55.9 +1.0**
comp=Z,48nm,0.7s,mb5.7,baz=103,slow=7.8,SNR=123
ARCES S **S** **13 38 13.9 +8.8**
comp=Z,12nm,1.1s,baz=144,slow=19,SNR=2.8
ARCES LR LR 13 52 57.4
comp=Z,74μm,20.5s,MS6.7,baz=292,slow=37
ARCES ARCESS Array B 50.22 337 P **P** **13 30 55.9 +1.0**
ARCES S **S** **13 38 13.9 +8.8**
ARCES pmax pmax
comp=Z,48nm,0.7s
ARCES smax
comp=N,12nm,1.1s
ARCES MLR MLR
comp=Z,74μm,20.5s
BKSI Bulukumba 50.22 130 P **P** **13 30 54.0 -1.6**
comp=Z,4μmcomp=Z,96nm,2.5s,mb5.4
KALE Kalithea 50.27 296 P **P** **13 30 53.6 -2.1**
VLX Vlachokerasia 50.29 295 P **P** **13 30 53.5 -2.4**
TRIZ Trizonia 50.33 296 P **P** **13 30 53.8 -2.4**
KRUS Krusevo 50.41 300 *e*P **P** **13 30 56.2 -0.6**
BIA Bitola 50.42 300 P **P** **13 30 55.5 -1.3**
BIA Bitola 50.42 300 *e*P **P** **13 30 56.1 -0.6**
FNA Florina 50.42 299 P **P** **13 30 55.5 -1.3**
LAKA Lakka 50.42 296 P **P** **13 30 54.8 -2.1**
EFP Efpalio 50.44 296 P **P** **13 30 54.9 -2.2**
OJC Ojcow 50.48 312 *e*P **P** **13 30 56.3 -0.8**
OJC *e* 13 32 07.6
OJC *e*PP PP 13 32 54.1 +1.4
OJC *e*S **S** **13 38 09.3 +0.1**
OJC *e*SS SS 13 41 44.5 +1.5
OJC L 13 54 42.3
comp=Z,34nm,19.9s
OJC Ojcow 50.48 312 *e*P **P** **13 30 56.3 -0.8**
OJC *e* 13 32 07.6
OJC *e* 13 32 54.1
OJC *e*S **S** **13 38 09.3 +0.1**
OJC *e*SS SS 13 41 44.5 +1.5
OJC MLR MLR
comp=Z,34μm,19.9s,MS6.4
UPR University Cam 50.56 296 P **P** **13 30 56.4 -1.6**
PSZ Piszkesteto 50.57 309 P **P** **13 30 59.0 +1.2**
PSZ Piszkesteto 50.57 309 ⇑P **P** **13 30 57.3 -0.6**
PSZ Piszkesteto 50.57 309 ⇓*i*P **P** **13 30 58.3 +0.4**
PSZ Piszkesteto 50.57 309 ⇓*e*P **P** **13 30 57.4 -0.5**
ITM Ithomi 50.68 295 P **P** **13 30 56.5 -2.4**
CBIJ Chichi jima 50.81 79 LR LR 13 54 08.8
comp=Z,18μm,19.4s,MS6.1,baz=269,slow=38
KTK1 Kautokeino 50.83 336 ⇓*i*P **P** **13 31 00.2 +0.7**
KTK1 AMB AMB 13 31 13.1
comp=Z,794nm,1.8s,mb6.3
KTK1 *e*S **S** **13 38 18.3 +4.6**
KTK1 AMS AMS 13 53 32.2
comp=Z,197μm,10.1s,MS7.4
KBN Korca 50.88 299 *e*PN **P** **13 30 59.7 -0.7**
PYL PYLOS 50.89 294 P **P** **13 30 57.8 -2.6**
KDI Kendari 50.92 126 P **P** **13 31 01.1 +0.2**
comp=Z,6μmcomp=Z,136nm,2.6s,mb5.4
DIVS Divibare 50.92 304 P **P** **13 30 59.9 -0.7**
PHP Peshkopia 50.96 301 *e*PN **P** **13 31 00.0 -0.9**
BCI Bajram Curri 51.12 302 *e*PN **P** **13 30 56.0 -6.1**
PVY Plav 51.16 302 ⇑*i*P **P** **13 31 02.4 0.0**
PVY Plav 51.16 302 ⇑*i*P **P** **13 31 02.4 +0.1**
TNTI Ternate 51.16 117 P **P** **13 31 03.9 +1.1**
comp=Z,463nm,2.1s,mb6.0
IVA Berane 51.17 302 ⇑*i*P **P** **13 31 03.2 +0.8**
IVA Berane 51.17 302 ⇑*i*P **P** **13 31 03.2 +0.8**
BUD Budapest 51.20 308 ⇓*e*P **P** **13 31 02.0 -0.6**
VYHS Vyhne 51.23 309 *e*P **P** **13 31 03.6 +0.8**
comp=Z,140nm,1.6s,mb5.6
VYHS *e*PP PP 13 33 01.5 +2.0
VYHS *e*S **S** **13 38 13.0 -6.7**
VYHS *e*SS SS 13 42 18.7 +24
VYHS Vyhne 51.23 309 *e*P **P** **13 31 03.6 +0.8**
VYHS *e* 13 33 01.5
VYHS *e*S **S** **13 38 13.0 -6.7**
VYHS pmax pmax
comp=Z,140nm,1.6s,mb5.6
VYHS Vyhne 51.23 309 *e*P **P** **13 31 03.6 +0.8**
VYHS *e*PP PP 13 33 01.5 +2.0
VYHS *e*S **S** **13 38 13.0 -6.7**
VYHS *e*SS SS 13 42 18.7 +24
PUK Puka 51.31 301 *e*PN **P** **13 30 55.3 -8.2**
LKD2 Lefkada island 51.33 297 P **P** **13 31 00.8 -2.9**
KFL Anninata 51.37 296 P **P** **13 31 02.4 -1.6**
IGT Igoumenitsa 51.43 298 P **P** **13 31 02.5 -2.0**
TIR Tirane 51.45 300 P **P** **13 31 01.9 -2.6**
PLE Pljevlja 51.46 303 ⇑*i*P **P** **13 31 05.7 +1.1**
PLE Pljevlja 51.46 303 ⇑*i*P **P** **13 31 05.8 +1.2**
KOLL Kolacno 51.51 310 *e*P **P** **13 31 05.7 +0.8**
KOLL *e*PP PP 13 33 07.8 +5.7
KOLL Kolacno 51.51 310 *e*P **P** **13 31 05.7 +0.8**
KOLL *e*PP PP 13 33 07.8 +5.7
VLS Valsamata 51.51 296 P **P** **13 31 02.6 -2.5**
RAC Raciborz 51.52 312 *e*P **P** **13 31 05.0 +0.1**
RAC *e*S **S** **13 38 22.1 -1.5**
OKC Ostrava-Krasne 51.56 311 *e*P **P** **13 31 05.6 +0.3**
OKC *e**PP pP 13 31 13.6 +0.4
OKC *e* 13 33 09.8
OKC *e*S **S** **13 38 27.1 +2.8**
OKC MLR MLR
comp=Z,40μm,20.6s,MS6.4
OKC Ostrava-Krasne 51.56 311 *e*P **P** **13 31 05.6 +0.3**
OKC *e*pP pP 13 31 09.6 -3.6
OKC *e*sP sP 13 31 13.6 -2.6
OKC *e*PP PP 13 33 09.8 +7.2
OKC *e*S **S** **13 38 27.1 +2.8**
OKC *ex* x 13 42 30.3
OKC AMS AMS 13 51 50.0
comp=Z,40μm,20.6s
PKSM Moragy 51.60 307 P **P** **13 31 06.4 +0.8**
PKSM Moragy 51.60 307 ⇓P **P** **13 31 04.7 -0.9**
PKSM Moragy 51.60 307 ⇓*i*P **P** **13 31 06.1 +0.5**
SRN Sarande 51.61 298 *e*PN **P** **13 31 03.8 -2.1**
TTG Podgorica 51.70 302 ⇑*i*P **P** **13 31 05.0 -1.5**
ULC Ulcinj 51.79 301 ⇑*i*P **P** **13 31 05.9 -1.2**
ULC Ulcinj 51.79 301 ⇑*i*P **P** **13 31 06.0 -1.1**
KEK Kerkira 51.80 298 P **P** **13 31 04.8 -2.4**
NKY Niksic 51.83 302 ⇑*i*P **P** **13 31 05.6 -1.8**
UPM Unac-Piva 51.83 303 ⇑*i*P **P** **13 31 07.0 -0.4**
UPM Unac-Piva 51.83 303 ⇑*i*P **P** **13 31 07.1 -0.3**
GKP Gorka Klasztor 51.92 316 *e*P **P** **13 31 07.6 -0.3**
GKP *e*pP pP 13 31 11.7 -4.1
GKP *e*PcP PcP 13 32 21.4 +1.1
GKP *e*S **S** **13 38 30.4 +1.2**
GKP LMZ 13 52 55.3
comp=Z,85μm,29.4s
GKP Gorka Klasztor 51.92 316 *e*P **P** **13 31 07.6 -0.3**
GKP *e* 13 32 21.4
GKP *e*S **S** **13 38 30.4 +1.3**
MORC Moravsky Berou 51.96 311 P **P** **13 31 08.3 +0.1**
MORC Moravsky Berou 51.96 311 ⇓P **P** **13 31 07.6 -0.6**
MORC Moravsky Berou 51.96 311 ⇓*i*P **P** **13 31 08.1 -0.1**
BBSI Bau Bau 51.98 127 P **P** **13 31 13.1 +4.3**
comp=Z,277nm,2.0s,mb5.8
BUM Brajici-Budva 51.99 302 ⇑*i*P **P** **13 31 07.2 -1.4**
BUM Brajici-Budva 51.99 302 ⇑*i*P **P** **13 31 07.2 -1.4**
BRY Bratogost 52.15 302 ⇑*i*P **P** **13 31 08.0 -1.8**
BRY Bratogost 52.15 302 ⇑*i*P **P** **13 31 08.1 -1.7**
LBMI Labuha 52.18 119 P **P** **13 31 11.5 +1.1**
comp=Z,802nm,2.3s,mb6.2
HCY Herceg Novi 52.26 302 ⇑*i*P **P** **13 31 10.6 0.0**
ZST Bratislava 52.41 309 *e*P **P** **13 31 14.7 +3.1**
comp=Z,35nm,1.2s,mb5.2
ZST *e*PP PP 13 33 18.4 +8.2
ZST *e*S **S** **13 38 45.2 +9.3**
ZST *e*SS SS 13 42 29.6 +16
ZST Bratislava 52.41 309 *e*P **P** **13 31 14.7 +3.1**
ZST *e* 13 33 18.4
ZST *e*S **S** **13 38 45.2 +9.3**
ZST pmax pmax
comp=Z,35nm,1.2s,mb5.2
ZST Bratislava 52.41 309 *e*P **P** **13 31 14.7 +3.1**
ZST *e*PP PP 13 33 18.4 +8.2
ZST *e*S **S** **13 38 45.2 +9.3**
ZST *e*SS SS 13 42 29.6 +16
TRO Tromso 52.47 336 ⇓*i*P **P** **13 31 12.1 +0.4**
TRO AMB AMB 13 31 17.7
comp=Z,447nm,2.5s,mb5.9
TRO *e*S **S** **13 38 39.8 +3.7**
TRO AMS AMS 13 54 26.1
comp=Z,87μm,14.1s,MS6.9
VRAC Vranov 52.62 311 P **P** **13 31 13.4 +0.3**
VRAC Vranov 52.62 311 ⇓P **P** **13 31 12.9 -0.3**
VRAC Vranov 52.62 311 ⇓*i*P **P** **13 31 13.9 +0.7**
KSP Ksiaz 52.66 313 *e*P **P** **13 31 13.2 -0.3**
KSP *e*pP pP 13 31 17.5 -3.9
KSP *e*S **S** **13 38 40.7 +1.3**
KSP LMZ 13 51 58.5
comp=Z,257μm,30.1s
KSP Ksiaz 52.66 313 ⇓*e*P **P** **13 31 13.0 -0.5**
KSP *e* 13 33 12.1
KSP *e*S **S** **13 38 40.5 +1.1**
KSP *e*SS SS 13 42 17.0 -0.6
DPC Dobruska-Polom 52.69 312 *e*P **P** **13 31 14.3 +0.6**
DPC *e**PP pP 13 31 21.5 -0.1
DPC *e* 13 33 17.4
DPC *e*S **S** **13 38 42.8 +3.1**
DPC MLR MLR
comp=Z,113μm,30.8s,MS6.7
DPC Dobruska-Polom 52.69 312 *e*P **P** **13 31 14.3 +0.6**
DPC *e*pP pP 13 31 18.3 -3.3
DPC *e*sP sP 13 31 21.5 -3.1
DPC *e*PP PP 13 33 17.4 +4.6
DPC *e*S **S** **13 38 42.8 +3.1**
DPC *e*SS SS 13 42 32.3 +14
DPC AMS AMS 13 51 40.0
comp=Z,113μm,30.8s
STON Ston 52.76 303 P **P** **13 31 11.8 -2.5**
SOP Sopron 52.83 309 ⇓*e*P **P** **13 31 14.0 -0.7**
UPC Upice 52.87 312 *e*P **P** **13 31 16.0 +1.0**
UPC *e**PP pP 13 31 23.0 +0.1
UPC Upice 52.87 312 *e*P **P** **13 31 16.0 +1.0**
UPC *e*pP pP 13 31 19.4 -3.5
UPC *e*sP sP 13 31 23.0 -3.0
BSD Bornholm Skovb 53.20 318 ⇓*i*P **P** **13 31 15.4 -1.9**
BSD *i* 13 32 27.3
BSD *i*S **S** **13 38 46.8 +0.3**
BSD pmax pmax
comp=Z,81nm,1.2s,mb5.5
BSD Bornholm Skovb 53.20 318 ⇓*i*P **P** **13 31 15.4 -1.9**
comp=Z,81nm,1.2s,mb5.5
BSD *i* 13 32 27.3
BSD *i*S **S** **13 38 46.8 +0.3**
SEY Seymchan 53.21 32*d* *i*P **P** **13 31 18.0 +0.7**
KOGS Kog 53.21 307 *e*P **P** **13 31 17.3 -0.3**
KOGS *e* 13 33 23.7
KOGS *i* 13 33 28.7
KOGS *e*S **S** **13 38 43.1 -3.8**
KOGS *e*SS SS 13 42 28.8 +2.5
CONA Conrad Observa 53.27 309 ⇓*i*P **P** **13 31 17.3 -0.7**
comp=Z,3μm,3.7s,SNR=127
SISC Sisak 53.27 306 P **P** **13 31 17.3 -0.8**
TREC Trest 53.34 311 *e*P **P** **13 31 19.4 +0.9**
TREC *e**PP pP 13 31 26.5 +0.1
TREC *e* 13 33 22.6
TREC *e*S **S** **13 38 52.1 +3.5**
TREC MLR MLR
comp=Z,84μm,24.7s,MS6.7
TREC Trest 53.34 311 *e*P **P** **13 31 19.4 +0.9**
TREC *e*pP pP 13 31 23.0 -3.4
TREC *e*sP sP 13 31 26.5 -2.9
TREC *e*PP PP 13 33 22.6 +3.9
TREC *e*S **S** **13 38 52.1 +3.5**
TREC *e*SS SS 13 42 56.7 +28
TREC AMS AMS 13 52 50.0
comp=Z,84μm,24.7s
BJO Bjornoya 53.56 342 ⇓*i*P **P** **13 31 19.4 -0.3**
BJO AMB AMB 13 31 33.1
comp=Z,553nm,2.3s,mb6.1
BJO *e*S **S** **13 38 54.0 +3.0**
BJO AMS AMS 13 57 31.2
comp=Z,26μm,13.0s,MS6.5
ARSA Arzberg 53.59 308 ⇓*i*P **P** **13 31 19.8 -0.5**
comp=Z,5μm,7.3s,SNR=31
NLAI Namlea 53.61 121 P **P** **13 31 23.7 +2.8**
comp=Z,7μmcomp=Z,222nm,1.0s,mb6.0
WSI Waingapu 53.62 133 P **P** **13 31 24.9 +4.0**
comp=Z,10μmcomp=Z,349nm,2.2s,mb5.9
MOR8 Moi Rana 53.64 332 *e*P **P** **13 31 20.0 -0.4**
MOR8 AMB AMB 13 31 25.3
comp=Z,308nm,1.8s,mb5.9
PVCC Panska Ves 53.79 312 *e*P **P** **13 31 22.1 +0.4**
PVCC *e**PP pP 13 31 29.3 -0.3
PVCC *e* 13 33 27.7
PVCC *e*S **S** **13 38 55.0 +0.4**
PVCC Panska Ves 53.79 312 *e*P **P** **13 31 22.1 +0.4**
PVCC *e*pP pP 13 31 26.0 -3.6
PVCC *e*sP sP 13 31 29.3 -3.4
PVCC *e*PP PP 13 33 27.7 +5.1
PVCC *e*S **S** **13 38 55.0 +0.4**
PVCC *ex* x 13 42 49.6
PVCC AMS AMS 13 52 10.0
comp=Z,154μm,31.9s
CRES Cresnjev 53.85 306 *e*P **P** **13 31 21.9 -0.4**
CRES *e*PcP PcP 13 32 31.8 +4.1
CRES *e* 13 37 44.8
PRU Pruhonice 53.87 312 *e*P **P** **13 31 24.2 +1.9**
PRU *e**PP pP 13 31 30.6 +0.4
PRU *e* 13 33 28.0
PRU *e*S **S** **13 38 59.1 +3.3**
PRU MLR MLR
comp=Z,98μm,31.2s,MS6.7
PRU Pruhonice 53.87 312 *e*P **P** **13 31 24.2 +1.9**
PRU *e*pP pP 13 31 26.9 -3.3
PRU *ex* x 13 31 30.6
PRU *e*PP PP 13 33 28.0 +4.6
PRU *e*S **S** **13 38 59.1 +3.3**
PRU *e*SS SS 13 43 06.4 +30
PRU AMS AMS 13 52 20.0
comp=Z,98μm,31.2s
PRA Prague 53.93 312 P **P** **13 31 24.0 +1.2**
PRA PP PP 13 33 28.0 +4.1
PRA S **S** **13 39 00.0 +3.4**
PRA AMS AMS 13 52 30.0
PERS Pernice 53.95 308 *e*P **P** **13 31 22.5 -0.5**
PERS *e* 13 34 34.1
PERS *e*S **S** **13 38 57.5 +0.5**
SOKA Soboth 54.00 308 ⇓*i*P **P** **13 31 22.7 -0.7**
comp=Z,3μm,3.6s
RUE Ruedersdorf 54.07 315 *e*P **P** **13 31 23.8 0.0**
comp=Z,506nm,1.5s,mb6.2
MMRI Maumere 54.08 130 P **P** **13 31 21.2 -3.0**
comp=Z,4μmcomp=Z,185nm,1.5s,mb5.8
BRG Berggiesshubel 54.14 313 *e*P **P** **13 31 24.7 +0.4**
comp=Z,353nm,1.3s,mb6.1
BRG *e*S **S** **13 39 01.4 +2.0**
BRG Berggiesshubel 54.14 313 *i* P **P** **13 31 24.5 +0.2**
comp=Z,44nm,0.9s,mb5.4
BRG *i* pP 13 31 30.8 -1.4
comp=Z,354nm,1.3s
BRG *i* PP PP 13 33 25.9 0.0
comp=Z,110nm,1.4s
BRG S **S** **13 39 05.0 +5.6**
BRG SS SS 13 42 46.0 +5.1
BRG *e*PKPPKP 14 01 39.3
comp=Z,2.3nm,1.9s
BRG
comp=N,438μm,25.5s
BRG
comp=E,121μm,27.0s
BRG
comp=Z,158μm,30.4s
BRG Berggiesshubel 54.14 313 *i* P **P** **13 31 24.5 +0.2**
BRG *i* pP 13 31 30.8 -1.4
BRG *i* 13 33 25.9
BRG S **S** **13 39 05.0 +5.6**
BRG SS SS 13 42 46.0 +5.1
BRG pmax pmax
comp=Z,27nm,0.9s,mb5.2
BRG pmax pmax
comp=Z,66nm,1.4s,mb5.4
BRG MLR MLR
comp=N,262μm,25.5s

RGN Rugen 54.16 317 *e*P **P 13 31 25.2 +0.8**
comp=Z,334nm,0.9s,mb6.3
LOF Lofoten 54.17 334 *e*P **P 13 31 24.1 -0.1**
LOF AMB AMB 13 31 29.5
comp=Z,384nm,1.9s,mb6.0
KONS Konsvik 54.20 332 *e*P **P 13 31 25.6 +1.1**
STOK Stokkvaagen 54.23 332 *e*S **S 13 39 03.2 +3.1**
MOA Molln 54.34 309⇑ *i*P **P 13 31 24.7 -1.1**
comp=Z,4μm,6.5s,SNR=42
OBKA Obir 54.36 307⇑ *i*P **P 13 31 25.4 -0.6**
comp=Z,7μm,6.7s,SNR=21
KMBO Kilima Mbogo 54.43 243 *e*P **P 13 31 25.9 -1.0**
comp=Z,332nm,1.1s,mb6.2
KMBO LR LR
comp=Z,47μm,19.0s,MS6.6
KMBO Kilima Mbogo 54.43 243 P **P 13 31 25.7 -1.2**
comp=Z,100nm,0.9s,mb5.8,baz=1.0,slow=23,SNR=34
KMBO LR LR 13 55 23.3
comp=Z,49μm,18.7s,MS6.6,baz=217,slow=37
KMBO Kilima Mbogo 54.43 243 *i*P **P 13 31 27.0 +0.1**
KMBO pmax pmax
comp=Z,101nm,0.9s
KMBO Kilima Mbogo 54.43 243 P **P 13 31 26.4 -0.5**
SNR=138
LJU Ljubljana 54.45 307 *i* P **P 13 31 26.2 -0.5**
LJU *e* 13 32 34.2
LJU *e*S **S 13 38 59.4 -4.4**
LJU *e*SS SS 13 42 39.8 -6.2
LJU Ljubljana 54.45 307 *i*P **P 13 31 26.2 -0.4**
LJU *e*PcP PcP 13 32 34.2 +4.2
LJU *e*S **S 13 38 59.4 -4.3**
LJU *e*SS SS 13 42 39.8 -6.2
LJU *e* 13 43 11.6
NVLJ Novalja 54.48 305 P **P 13 31 24.8 -2.0**
GEC2 GERESS Array S 54.56 310 *e*P **P 13 31 27.8 +0.4**
comp=Z,175nm,1.2s,mb6.0
GEC2 *e*S **S 13 39 08.7 +3.5**
GEC2 GERESS Array S 54.56 310 *e*P **P 13 31 27.8 +0.4**
GEC2 *e*S **S 13 39 08.7 +3.5**
GEC2 pmax pmax
comp=Z,175nm,1.2s,mb6.0
COP Copenhagen 54.58 319⇓ *i*P **P 13 31 27.6 +0.2**
COP *i* S **S 13 39 06.8 +1.7**
COP pmax pmax
comp=Z,110nm,1.0s,mb5.8
COP MLR MLR
comp=Z,40μm,15.0s,MS6.6
COP Copenhagen 54.58 319⇓ *i*P **P 13 31 27.6 +0.2**
comp=Z,110nm,1.0s,mb5.8
COP *i* S **S 13 39 06.8 +1.7**
COP
comp=Z,40μm,15.0s
NSS Namsos 54.58 330⇓ *i*P **P 13 31 25.4 -1.9**
NSS AMB AMB 13 31 31.3
comp=Z,232nm,2.6s,mb5.8
NSS *e*S **S 13 39 03.4 -1.5**
NSS AMS AMS 13 55 43.4
comp=Z,64μm,12.5s,MS6.9
KHC Kasperske Hory 54.60 311 *e*P **P 13 31 27.8 +0.1**
KHC *e**PP pP 13 31 35.0 -0.6
KHC *e* 13 33 34.3
KHC *e*S **S 13 39 06.3 +0.6**
KHC MLR MLR
comp=Z,78μm,24.8s,MS6.7
KHC Kasperske Hory 54.60 311 *e*P **P 13 31 27.8 +0.1**
KHC *e*pP pP 13 31 31.8 -3.8
KHC *e*sP sP 13 31 35.0 -3.7
KHC *e*PP PP 13 33 34.3 +4.3
KHC *e*S **S 13 39 06.3 +0.6**
KHC *ex* x 13 43 14.8
KHC AMS AMS 13 53 30.0
comp=Z,78μm,24.8s
CLL Collm 54.68 313 *e*P **P 13 31 28.2 0.0**
comp=Z,2μm,3.7s
CLL *e*S **S 13 39 08.4 +1.8**
CLL Collm 54.68 313⇓ *i*P **P 13 31 27.2 -1.0**
comp=Z,238nm,1.6s,mb6.0
CLL *i* 13 31 31.3
CLL *i* pP 13 31 35.0 -1.1
CLL *e*S **S 13 39 08.0 +1.4**
CLL *e*P'P' 14 01 37.0
CLL LR LR
comp=Z,70μm,19.1s,MS6.8
CLL Collm 54.68 313⇓ *i*P **P 13 31 27.2 -1.0**
CLL *i* pP 13 31 35.0 -1.1
CLL *e*S **S 13 39 08.0 +1.4**
CLL pmax pmax
comp=Z,238nm,1.6s,mb6.0
CLL MLR MLR
comp=Z,70μm,19.1s,MS6.8
CLL Collm 54.68 313⇓ *i*P **P 13 31 27.2 -1.0**
CLL ⇑*i*pP pP 13 31 31.3 -4.8
comp=Z,238nm,1.6s
CLL *i* pP 13 31 35.0 -1.1
CLL *e*PcP PcP 13 32 29.0 -1.8
CLL *i* sPcP 13 32 34.8
CLL *e*PP PP 13 33 33.0 +2.4
CLL *i* PPP 13 34 38.8
CLL *e*PPPP 13 35 01.0
CLL *e*S **S 13 39 08.0 +1.4**
comp=N,8μm,31.7s
CLL *e*S **S 13 39 08.0 +1.4**
comp=E,9μm,23.0s
CLL *e* 13 39 53.0
CLL *e*SS SS 13 42 52.0 +2.7
CLL *e* 13 43 37.0
CLL LmV 13 57 00.0
comp=Z,70μm,19.1s
CLL *e*PKPPKPdf 14 01 37.0
VOY Vojsko 54.89 307 *e*P **P 13 31 29.1 -0.7**
VOY *e* 13 31 32.8
VOY *e* 13 32 23.2
NOA NORSAR Array B 54.93 325 P **P 13 31 28.9 -0.9**
comp=Z,54nm,0.7s,mb5.7,baz=89,slow=7.4,SNR=169
NOA LR LR 13 57 33.9
comp=Z,55μm,20.1s,MS6.6,baz=90,slow=39
NOA NORSAR Array B 54.93 325 P **P 13 31 29.0 -0.9**
NOA pmax pmax
comp=Z,54nm,0.7s
NOA MLR MLR
comp=Z,55μm,20.1s
MYKA Terra Mystica 54.96 308⇓ *i*P **P 13 31 29.2 -1.1**
comp=Z,5μm,7.5s
CADS Cadrg 54.96 307 *e*P **P 13 31 29.0 -1.4**
WET Wettzell 55.06 311 *e*P **P 13 31 31.3 +0.3**
comp=Z,5μm,4.5s
WET *e*S **S 13 39 14.5 +2.7**
WET Wettzell 55.06 311 *e*P **P 13 31 31.3 +0.3**
WET *e*S **S 13 39 14.5 +2.7**
WET pmax pmax
comp=Z,5μm,4.5s
KBA Koelnbreinsper 55.08 308⇑ *i*P **P 13 31 29.9 -1.3**
comp=Z,4μm,6.5s,SNR=20
NKC Novy Kostel 55.17 312 *e*P **P 13 31 32.3 +0.5**
NKC *e**PP pP 13 31 39.6 -0.1
NKC *e* 13 33 38.2
NKC *e*S **S 13 39 17.6 +4.3**
NKC Novy Kostel 55.17 312 *e*P **P 13 31 32.3 +0.5**
NKC *e*pP pP 13 31 36.1 -3.6
NKC *e*sP sP 13 31 39.6 -3.2
NKC *e*PP PP 13 33 38.2 +3.1
NKC *e*S **S 13 39 17.6 +4.3**
NKC *ex* x 13 43 23.1
NKC AMS AMS 13 53 00.0
comp=Z,129μm,29.0s
WERN Wernitzgruen 55.21 312 *e*P **P 13 31 32.6 +0.5**
comp=Z,153nm,1.4s,mb5.8
OSL Oslo 55.22 324 *e*P **P 13 31 31.7 -0.3**
GUNZ Gunzen 55.23 312 *e*P **P 13 31 32.6 +0.4**
comp=Z,211nm,1.3s,mb6.0
WERD Werda 55.23 312 *e*P **P 13 31 32.5 +0.3**
comp=Z,199nm,1.4s,mb6.0
RJOB Jochberg 55.34 309 *e*P **P 13 31 32.8 -0.2**
ROTZ Rotzenmuhle 55.40 312 *e*P **P 13 31 34.3 +0.9**
comp=Z,236nm,1.3s,mb6.1
NEUB Neuenburg 55.46 313 *e*P **P 13 31 33.9 +0.1**
comp=Z,268nm,1.2s,mb6.2
MOX Moxa 55.64 313⇑ *i*P **P 13 31 35.6 +0.5**
comp=Z,166nm,1.3s,mb5.9
MOX *e*S **S 13 39 23.0 +3.5**
MOX *e*SS SS 13 43 15.0 +11
MOX
comp=Z,44μm,19.0s
MOX Moxa 55.64 313 *e*P **P 13 31 35.4 +0.3**
comp=Z,106nm,1.0s,mb5.8
MOX Moxa 55.64 313⇑ *i*P **P 13 31 35.6 +0.5**
MOX *e*S **S 13 39 23.0 +3.5**
MOX pmax pmax
comp=Z,166nm,1.3s,mb5.9
MOX MLR MLR
comp=Z,44μm,19.0s,MS6.6
ABTA Abfaltersbach 55.70 308⇓ *i*P **P 13 31 34.3 -1.4**
comp=Z,3μm,6.8s,SNR=19
KONO Kongsberg 55.81 324⇓ *i*P **P 13 31 35.8 -0.4**
KONO AMB AMB 13 31 41.1
comp=Z,397nm,1.1s,mb6.4
KONO *e*S **S 13 39 25.7 +4.3**
KONO AMS AMS 13 56 36.4
comp=Z,84μm,17.2s,MS6.9
KONO Kongsberg 55.81 324 *e*P **P 13 31 36.4 +0.2**
comp=Z,437nm,1.3s,mb6.3
KONO LR LR
comp=Z,112μm,20.0s,MS7.0
KONO Kongsberg 55.81 324 *e*P **P 13 31 36.4 +0.2**
KONO pmax pmax
comp=Z,437nm,1.3s,mb6.3
KONO MLR MLR
comp=Z,112μm,20.0s,MS7.0
SKR Severo-Kuril's 55.90 47 *e*P **P 13 31 35.0 -2.0**
SKR *e* 13 31 50.0
SKR *e* 13 32 36.0
SKR *e*S **S 13 39 18.0 -5.0**
SKR pmax pmax
comp=N,3μm,8.0s
SKR pmax pmax
comp=E,4μm,8.0s
SKR pmax pmax
comp=Z,5μm,8.0s
SKR pmax pmax
comp=Z,130nm,1.0s,mb5.9
SKR smax
comp=N,6μm,22.0s
SKR smax
comp=E,7μm,22.0s
SKR MLR MLR
comp=N,59μm,14.0s,MS6.9
SKR MLR MLR
comp=E,38μm,14.0s,MS6.9
SKR MLR MLR
comp=Z,73μm,14.0s,MS6.9
AQU L'Aquila 55.98 303 P **P 13 31 37.8 +0.1**
AQU L'Aquila 55.98 303 ⇓P **P 13 31 37.3 -0.4**
AQU L'Aquila 55.98 303 ⇓*i*P **P 13 31 39.0 +1.3**
GRA1 Grafenberg Arr 56.04 312 *e*P **P 13 31 38.9 +0.9**
comp=Z,672nm,1.7s,mb6.4
GRA1 *e*S **S 13 39 27.3 +2.4**
GRA1 LR LR
comp=Z,47μm,21.1s,MS6.5
GRF Grafenberg Arr 56.04 312 *e*P **P 13 31 38.9 +0.9**
comp=Z,672nm,1.7s,mb6.4
GRF *e*S **S 13 39 27.3 +2.4**
GRF *e*L 13 55 12.9
comp=Z,47μm,21.1s
GRF Grafenberg Arr 56.04 312 *e*P **P 13 31 38.9 +0.9**
GRF *e*S **S 13 39 27.3 +2.4**
GRF pmax pmax
comp=Z,672nm,1.7s,mb6.4
GRF MLR MLR
comp=Z,47μm,21.1s,MS6.5
GRF Grafenberg Arr 56.04 312 *e*P **P 13 31 38.9 +0.9**
GRF *e*S **S 13 39 27.3 +2.4**
GRF pmax pmax
comp=Z,672nm,1.7s,mb6.4
GRF MLR MLR
comp=Z,47μm,21.1s,MS6.5
WTTA Wattenberg 56.20 309⇓ *i*P **P 13 31 37.5 -1.6**
comp=Z,2μm,3.7s,SNR=18
WATA Walderalm 56.22 309⇓ *i*P **P 13 31 38.1 -1.3**
comp=Z,153nm,1.2s,mb5.9,SNR=12
CLZ Clausthal 56.23 314 *e*P **P 13 31 39.8 +0.4**
comp=Z,355nm,1.3s,mb6.2
CLZ Clausthal 56.23 314 *e*P **P 13 31 39.8 +0.4**
CLZ pmax pmax
comp=Z,355nm,1.3s,mb6.2
KBS Kingsbay 56.23 347⇓ *i*P **P 13 31 39.0 0.0**
KBS *e*S **S 13 39 32.5 +5.7**
KBS AMS AMS 13 59 59.0
comp=Z,32μm,20.7s,MS6.4
KBS Kingsbay 56.23 347 *e*P **P 13 31 39.5 +0.5**
comp=Z,88nm,0.8s,mb5.8
KBS LR LR
comp=Z,36μm,19.0s,MS6.5
KBS Kingsbay 56.23 347*d i*P **P 13 31 39.7 +0.7**
KBS pmax pmax
comp=Z,219nm,1.7s,mb5.9
FUR Furstenfeldbru 56.27 310 *e*P **P 13 31 40.0 +0.3**
comp=Z,331nm,1.1s,mb6.3
FUR Furstenfeldbru 56.27 310 *e*P **P 13 31 40.0 +0.3**
FUR pmax pmax
comp=Z,331nm,1.1s,mb6.3
NRDL Niedersach Rie 56.30 315 *e*P **P 13 31 39.5 -0.3**
comp=Z,571nm,1.4s,mb6.4
MUD Monsted U'grnd 56.32 320⇓ *i*P **P 13 31 40.4 +0.5**
MUD *i* S **S 13 39 30.7 +2.3**
MUD pmax pmax
comp=Z,130nm,1.2s,mb5.8
MUD Monsted U'grnd 56.32 320⇓ *i*P **P 13 31 40.4 +0.5**
comp=Z,126nm,1.2s,mb5.8
MUD *i* S **S 13 39 30.7 +2.3**
VAE Valguarnera 56.42 297 LR LR 14 00 41.9
comp=Z,32μm,19.4s,MS6.4,baz=15,slow=41
PETK Petropavlovsk- 56.51 44 P **P 13 31 41.8 +0.5**
comp=Z,21nm,0.7s,mb5.3,baz=225,slow=1.4,SNR=31
PETK LR LR 13 58 18.2
comp=Z,27μm,18.1s,MS6.4,baz=280,slow=38
PETK Petropavlovsk- 56.51 44 P **P 13 31 41.8 +0.5**
PETK pmax pmax
comp=Z,21nm,0.7s,mb5.3
PETK MLR MLR
comp=Z,27μm,18.1s,MS6.4
MOTA Moosalm 56.53 309⇑ *i*P **P 13 31 40.0 -1.6**
comp=Z,116nm,1.0s,mb5.8,SNR=15
MOL Molde 56.60 327 *e*P **P 13 31 40.8 -1.0**
MOL AMB AMB 13 31 46.4
comp=Z,329nm,1.1s,mb6.3
MOL *e*S **S 13 39 32.4 +0.5**
MOL AMS AMS 13 57 04.3
comp=Z,69μm,14.3s,MS6.9
UBBA Unterbreizbach 56.62 313 *e*P **P 13 31 42.2 0.0**
comp=Z,243nm,1.8s,mb5.9
RETA Reutte 56.73 309⇓ *i*P **P 13 31 41.8 -1.3**
comp=Z,3μm,5.1s,SNR=30
FETA Feichten 56.85 309⇓ *i*P **P 13 31 42.1 -1.7**
comp=Z,3μm,5.4s,SNR=43
PET Petropavlovsk 57.09 44 *e*P **P 13 31 44.9 -0.5**
comp=Z,221nm,1.1s,mb6.1
PET LR LR
comp=Z,22μm,19.0s,MS6.3
PET Petropavlovsk 57.09 44*k i*P **P 13 31 43.7 -1.8**
PET *e* 13 32 36.0
PET *e* 13 33 54.6
PET *e*S **S 13 39 36.7 -2.0**
PET pmax pmax
comp=Z,6μm,20.1s
PET pmax pmax
comp=Z,7μm,6.8s
PET pmax pmax
comp=Z,196nm,1.0s,mb6.1
PET pmax pmax
comp=Z,3μm,16.7s
PET smax
comp=N,2μm,11.7s
PET MLR MLR
comp=Z,78μm,14.0s,MS7.0
PET MLR MLR
comp=Z,83μm,14.0s
SNART Snartemo 57.16 322 *e*P **P 13 31 46.5 +0.7**
SNART AMB AMB 13 31 51.3
comp=Z,276nm,1.1s,mb6.2
HLG Helgoland 57.36 317 *e*P **P 13 31 47.9 +0.6**
HYA Hoyanger 57.36 326 *e*P **P 13 31 48.8 +1.5**
DAVA Damuels 57.36 309⇑ *i*P **P 13 31 46.0 -1.4**
comp=Z,2μm,3.4s,SNR=23
DAVOX Davos/Dischmat 57.47 308 LR LR 13 57 20.6
comp=Z,52μm,21.0s,MS6.6,baz=68,slow=37
STU Stuttgart 57.51 311 *e*P **P 13 31 48.5 0.0**
comp=Z,313nm,1.5s,mb6.1
STU *e*S **S 13 39 46.1 +1.7**
TNS Taunus Mts 57.71 313 *e*P **P 13 31 50.0 +0.2**
comp=Z,233nm,1.2s,mb6.1
TNS *e*S **S 13 39 48.3 +1.4**
TNS Taunus Mts 57.71 313 *e*P **P 13 31 50.0 +0.2**
TNS *e*S **S 13 39 48.3 +1.4**
TNS pmax pmax
comp=Z,233nm,1.2s,mb6.1
IBBN Ibbenburen 57.75 315 *e*P **P 13 31 50.4 +0.3**
comp=Z,338nm,1.3s,mb6.2
RUND Rundenannen 57.85 325 *e*P **P 13 31 50.1 -0.5**
FOO Floro 57.86 326 *e*P **P 13 31 49.3 -1.4**
FOO *e*S **S 13 39 53.0 +4.4**
FOO AMS AMS 13 57 56.6
comp=Z,69μm,16.9s,MS6.8
BER Bergen 57.87 325⇓ *i*P **P 13 31 50.9 +0.1**
BER AMB AMB 13 31 56.1
comp=Z,302nm,1.2s,mb6.2
BER *e*S **S 13 39 51.3 +2.6**
BER AMS AMS 13 57 42.9
comp=Z,64μm,14.2s,MS6.9
SPAK Spaichingen-Ko 57.92 310 *e*P **P 13 31 51.6 +0.3**
ASK Askoy 57.92 325 *e*P **P 13 31 50.5 -0.7**
BFO Black Forest 58.17 311 P **P 13 31 52.7 -0.4**
comp=Z,148nm,1.8s,mb5.7,SNR=7.5
BFO Black Forest 58.17 311 *e*P **P 13 31 52.5 -0.6**
BFO *e*S **S 13 39 54.6 +1.7**
BUG Bochum--Univer 58.21 314 *e*P **P 13 31 53.6 +0.3**
comp=Z,228nm,1.2s,mb6.1
LANF Langenberg 58.37 311 *e*P **P 13 31 55.1 +0.6**
FELD Feldberg im Sc 58.48 310 *e*P **P 13 31 55.3 0.0**
GUMO Guam 58.56 93 *e*P **P 13 31 57.3 +1.0**
comp=Z,368nm,1.1s,mb6.3
GUMO LR LR
comp=Z,18μm,21.0s,MS6.2
GUMO Guam 58.56 93 P **P 13 31 55.9 -0.4**
comp=Z,180nm,1.2s,mb6.0,baz=200,slow=3.3,SNR=10
GUMO LR LR 13 58 60.0
comp=Z,18μm,21.7s,MS6.2,baz=112,slow=38
GUMO Guam 58.56 93 *e*P **P 13 31 57.3 +1.0**
GUMO pmax pmax
comp=Z,368nm,1.1s,mb6.3
GUMO MLR MLR
comp=Z,18μm,21.0s,MS6.2
GUMO Guam 58.56 93 P **P 13 32 00.4 +4.1**
comp=Z,374nm,1.3s,mb6.3
RUP Ruppelstein 58.69 312 *e*P **P 13 31 57.4 +0.7**
CDF Champ du Feu 58.83 311 *e*P **P 13 31 56.0 -1.7**
comp=Z,423nm,1.5s,mb5.9
CDF Champ du Feu 58.83 311 *e*P **P 13 31 56.0 -1.7**
comp=Z,211nm,1.5s,mb6.0
CDF Champ du Feu 58.83 311 *e*P **P 13 31 56.0 -1.7**
CDF pmax pmax
comp=Z,211nm,1.5s,mb6.0
BILL Bilibino 58.86 26 *e*P **P 13 31 59.2 +1.6**
comp=Z,757nm,1.5s,mb6.5
BILL LR LR
comp=Z,25μm,20.0s,MS6.3
BILL Bilibino 58.86 26*d i*P **P 13 31 58.3 +0.7**
BILL *i* 13 32 08.1
BILL *i* 13 34 04.7
BILL *i* S **S 13 40 04.2 +2.8**
BILL *i* SS SS 13 43 52.9 -1.5
BILL pmax pmax
comp=Z,266nm,1.6s,mb6.0
BILL MLR MLR
comp=Z,33μm,18.0s,MS6.5
BBS Basel-Blauen 58.90 310 *e*P **P 13 31 57.8 -0.4**
ECH Echery 58.95 311 *e*P **P 13 31 58.5 -0.1**
MOF Molkenrain 59.05 310 *e*P **P 13 31 59.4 +0.1**
PGF Pioggiola 59.09 304 *e*P **P 13 31 57.5 -2.1**
comp=Z,183nm,0.9s,mb5.8
PGF Pioggiola 59.09 304 *e*P **P 13 31 57.5 -2.1**
comp=Z,91nm,0.9s,mb5.8
PGF Pioggiola 59.09 304 *e*P **P 13 31 57.5 -2.1**
PGF pmax pmax
comp=Z,91nm,0.9s,mb5.8
MEM Membach 59.16 314 P **P 13 32 00.5 +0.6**
comp=Z,74nm,1.8s,mb5.4
MEM AP pP 13 32 03.4 -4.6
BAKI Biak 59.19 113 P **P 13 32 01.7 +1.0**
comp=Z,540nm,0.9s,mb6.6
MBAR Mbarara 59.20 248 P **P 13 32 00.9 +0.2**
comp=Z,419nm,1.7s,mb6.2,SNR=16
MBAR Mbarara 59.20 248*d i*P **P 13 31 58.5 -2.2**
WLF Walferdange 59.27 312 P **P 13 32 01.3 +0.5**
comp=Z,126nm,1.8s,mb5.7
WLF AP pP 13 32 04.8 -4.0
WLF Walferdange 59.27 312 *e*P **P 13 32 01.3 +0.5**
comp=Z,277nm,1.4s,mb6.1
LOMF Lomont 59.37 310 *e*P **P 13 32 01.5 0.0**
HAU Haudompre 59.53 311 *e*P **P 13 32 00.7 -1.9**
comp=Z,606nm,1.5s,mb6.1
HAU *e*MLR MLR
comp=Z,42μm,22.8s,MS6.2
HAU Haudompre 59.53 311 *e*P **P 13 32 00.7 -1.9**
comp=Z,303nm,1.5s,mb6.1
HAU LR LR
comp=Z,42μm,22.8s,MS6.5
HAU Haudompre 59.53 311 *e*P **P 13 32 00.7 -1.9**
HAU pmax pmax
comp=Z,303nm,1.5s,mb6.1
HAU MLR MLR
comp=Z,42μm,22.8s,MS6.5
BCLA Clavier 59.64 313 P **P 13 32 03.8 +0.5**
comp=Z,105nm,2.2s,mb5.5
BCLA AP pP 13 32 06.9 -4.4
THEF They Montfort 59.71 311 *e*P **P 13 32 03.9 +0.1**
SAOF Saorge 59.73 306 *e*P **P 13 32 03.9 -0.1**
AUTN L'Aution 59.81 306 *e*P **P 13 32 05.2 +0.6**
SBF Sospel 59.84 306 *e*P **P 13 32 03.2 -1.6**
comp=Z,498nm,0.8s,mb6.3
SBF Sospel 59.84 306 *e*P **P 13 32 03.2 -1.6**
comp=Z,249nm,0.8s,mb6.3
SBF Sospel 59.84 306 *e*P **P 13 32 03.2 -1.6**
SBF pmax pmax
comp=Z,249nm,0.8s,mb6.3
LPG La Plagne 59.88 308 *e*P **P 13 32 04.0 -1.1**
comp=Z,572nm,1.1s,mb6.2
LPG La Plagne 59.88 308 *e*P **P 13 32 04.0 -1.1**
comp=Z,286nm,1.1s,mb6.2
LPG La Plagne 59.88 308 *e*P **P 13 32 04.0 -1.1**
LPG pmax pmax
comp=Z,286nm,1.1s,mb6.2
LPL La Plagne 59.89 308 *e*P **P 13 32 03.9 -1.2**
comp=Z,525nm,1.1s,mb6.2
LPL La Plagne 59.89 308 *e*P **P 13 32 03.9 -1.2**
comp=Z,263nm,1.1s,mb6.2
LPL La Plagne 59.89 308 *e*P **P 13 32 03.9 -1.2**
LPL pmax pmax
comp=Z,263nm,1.1s,mb6.2
LUCF Luceram 59.90 306 *e*P **P 13 32 05.4 +0.2**
REVF Revere 59.92 306 *e*P **P 13 32 04.9 -0.5**
TOUF Mont Tournerai 59.93 306 *e*P **P 13 32 05.9 +0.5**
GIVF Givet 60.01 313 *e*P **P 13 32 04.7 -1.1**
comp=Z,814nm,1.8s,mb6.2
GIVF Givet 60.01 313 *e*P **P 13 32 04.7 -1.1**
comp=Z,407nm,1.8s,mb6.2
GIVF Givet 60.01 313 *e*P **P 13 32 04.7 -1.1**
GIVF pmax pmax
comp=Z,407nm,1.8s,mb6.2
MVIF Mont Vial 60.03 306 *e*P **P 13 32 06.2 +0.1**
CABF La Chapelle 60.05 309 *e*P **P 13 32 04.5 -1.7**
comp=Z,530nm,1.6s,mb6.0
CABF La Chapelle 60.05 309 *e*P **P 13 32 04.5 -1.7**
comp=Z,265nm,1.6s,mb6.0
CABF La Chapelle 60.05 309 *e*P **P 13 32 04.5 -1.7**
CABF pmax pmax
comp=Z,265nm,1.6s,mb6.0
MBDF Montbardon 60.07 307 *e*P **P 13 32 04.1 -2.3**
comp=Z,178nm,0.9s,mb5.8
MBDF Montbardon 60.07 307 *e*P **P 13 32 04.1 -2.3**
comp=Z,89nm,0.9s,mb5.8
MBDF Montbardon 60.07 307 *e*P **P 13 32 04.1 -2.3**
MBDF pmax pmax
comp=Z,89nm,0.9s,mb5.8
SURF Saint Ours 60.11 306 *e*P **P 13 32 07.0 +0.4**
DOU Dourbes 60.16 313 P **P 13 32 07.3 +0.4**
DOU AP pP 13 32 10.3 -4.6
MEZF Maizieres J'vi 60.25 311 *e*P **P 13 32 06.0 -1.5**
comp=Z,606nm,1.4s,mb6.1
MEZF Maizieres J'vi 60.25 311 *e*P **P 13 32 06.0 -1.5**
comp=Z,606nm,1.4s,mb6.4
SNF Seneffe 60.25 314 P **P 13 32 07.9 +0.4**
comp=Z,100nm,2.0s,mb5.5
SNF AP pP 13 32 10.8 -4.7
CALN Calern 60.25 306 *e*P **P 13 32 07.6 0.0**
SFTF Sexfontaines 60.33 311 *e*P **P 13 32 06.3 -1.8**
comp=Z,428nm,1.3s,mb6.0

SFTF Sexfontaines 60.33 311 *e*P **P 13 32 06.3 -1.8**
comp=Z,428nm,1.3s,mb6.3
GDM Grand'Maison 60.39 307 *e*P **P 13 32 08.6 0.0**
BAIF Baives 60.41 313 *e*P **P 13 32 07.3 -1.3**
comp=Z,385nm,1.5s,mb5.9
BAIF Baives 60.41 313 *e*P **P 13 32 07.3 -1.3**
comp=Z,192nm,1.5s,mb5.9
BAIF Baives 60.41 313 *e*P **P 13 32 07.3 -1.3**
BAIF pmax pmax
comp=Z,192nm,1.5s,mb5.9
FRF La Foret Royal 60.47 306 *e*P **P 13 32 07.3 -1.8**
comp=Z,579nm,1.4s,mb6.1
FRF La Foret Royal 60.47 306 *e*P **P 13 32 07.3 -1.8**
comp=Z,289nm,1.4s,mb6.1
FRF La Foret Royal 60.47 306 *e*P **P 13 32 07.3 -1.8**
FRF pmax pmax
comp=Z,289nm,1.4s,mb6.1
ORIF Oris-en-Rattie 60.63 307 *e*P **P 13 32 08.1 -2.1**
comp=Z,342nm,1.4s,mb6.0
ORIF *e*MLR MLR
comp=Z,31µm,23.0s,MS6.1
ORIF Oris-en-Rattie 60.63 307 *e*P **P 13 32 08.1 -2.1**
comp=Z,171nm,1.4s,mb6.0
ORIF Oris-en-Rattie 60.63 307 *e*P **P 13 32 08.1 -2.1**
ORIF pmax pmax
comp=Z,171nm,1.4s,mb6.0
LMR La Mourre 60.63 305 *e*P **P 13 32 08.4 -1.8**
comp=Z,544nm,1.4s,mb6.2
LMR La Mourre 60.63 305 *e*P **P 13 32 08.4 -1.8**
comp=Z,272nm,1.4s,mb6.2
LMR La Mourre 60.63 305 *e*P **P 13 32 08.4 -1.8**
LMR pmax pmax
comp=Z,272nm,1.4s,mb6.2
KEST Kesra 60.83 296 P **P 13 32 11.1 -0.7**
comp=Z,148nm,1.0s,mb6.1,baz=320,slow=1.7,SNR=50
KEST PKP2bc 14 01 38.2
comp=Z,1.8nm,0.9s,baz=177,slow=5.7,SNR=4.3
KEST LR LR 14 04 09.2
comp=Z,13µm,19.9s,MS6.1,baz=140,slow=42
SMRF Simiane la Rot 61.10 306 *e*P **P 13 32 12.0 -1.4**
comp=Z,349nm,1.3s,mb6.0
SMRF Simiane la Rot 61.10 306 *e*P **P 13 32 12.0 -1.4**
comp=Z,349nm,1.3s,mb6.3
LRW Lerwick 61.11 325 *e*P **P 13 32 14.2 +1.1**
LRW AMB AMB 13 32 21.5
comp=Z,399nm,1.7s,mb6.3
LRW AMS AMS 14 00 56.4
comp=Z,50µm,14.2s,MS6.8
OG26 St.-Nazaire-De 61.12 307 *e*P **P 13 32 14.2 +0.7**
OCF Saint Nazaire 61.12 307 *e*P **P 13 32 14.2 +0.7**
WAL1 Walls 61.29 325 *e*P **P 13 32 15.1 +0.7**
LOR Lormes 61.35 310 *e*P **P 13 32 12.7 -2.3**
comp=Z,259nm,1.3s,mb5.9
LOR *e*MLR MLR
comp=Z,53µm,20.8s,MS6.4
LOR Lormes 61.35 310 *e*P **P 13 32 12.7 -2.3**
comp=Z,129nm,1.3s,mb5.9
LOR LR LR
comp=Z,53µm,20.8s,MS6.7
LOR Lormes 61.35 310 *e*P **P 13 32 12.7 -2.3**
LOR pmax pmax
comp=Z,129nm,1.3s,mb5.9
LOR MLR MLR
comp=Z,53µm,20.8s,MS6.7
SSB Saint Sauveur 61.44 308 *e*P **P 13 32 15.6 -0.1**
VIVF Saint-Julien-l 61.47 307 *e*P **P 13 32 14.2 -1.7**
comp=Z,613nm,1.7s,mb6.2
VIVF Saint-Julien-l 61.47 307 *e*P **P 13 32 14.2 -1.7**
comp=Z,307nm,1.7s,mb6.2
VIVF Saint-Julien-l 61.47 307 *e*P **P 13 32 14.2 -1.7**
VIVF pmax pmax
comp=Z,307nm,1.7s,mb6.2
SMF Signal de Mont 61.53 310 *e*P **P 13 32 14.2 -2.0**
comp=Z,700nm,1.5s,mb6.3
SMF Signal de Mont 61.53 310 *e*P **P 13 32 14.2 -2.0**
comp=Z,350nm,1.5s,mb6.3
SMF Signal de Mont 61.53 310 *e*P **P 13 32 14.2 -2.0**
SMF pmax pmax
comp=Z,350nm,1.5s,mb6.3
MENF Mencas 61.55 314 *e*P **P 13 32 15.4 -0.9**
SSF Saint Saulge 61.64 310 *e*P **P 13 32 14.9 -2.1**
comp=Z,410nm,1.3s,mb6.1
SSF Saint Saulge 61.64 310 *e*P **P 13 32 14.9 -2.1**
comp=Z,205nm,1.3s,mb6.1
SSF Saint Saulge 61.64 310 *e*P **P 13 32 14.9 -2.1**
SSF pmax pmax
comp=Z,205nm,1.3s,mb6.1
JMIC Jan Mayen 61.68 338 *e*P **P 13 32 17.3 +0.4**
JMIC *e*S S **13 40 43.6 +6.1**
JMIC AMS AMS 13 58 21.4
comp=Z,22µm,18.9s,MS6.3
AVF Avril sur Loir 61.81 310 *e*P **P 13 32 16.0 -2.1**
comp=Z,805nm,1.8s,mb6.2
AVF Avril sur Loir 61.81 310 *e*P **P 13 32 16.0 -2.1**
comp=Z,402nm,1.8s,mb6.2
AVF Avril sur Loir 61.81 310 *e*P **P 13 32 16.0 -2.1**
AVF pmax pmax
comp=Z,402nm,1.8s,mb6.2
PLDF La Plantade 61.87 309 *e*P **P 13 32 17.6 -0.9**
CMAH Djebel Manchou 62.02 298 P **P 13 32 19.3 -0.4**
ELSH Elham, Standar 62.02 315 *e*P **P 13 32 17.6 -1.9**
ELSH AMB AMB 13 32 23.6
comp=Z,401nm,1.4s,mb6.4
ABSA Djebel Ababsia 62.09 297 P **P 13 32 20.1 -0.1**
HYF Humbligny 62.15 310 *e*P **P 13 32 18.9 -1.5**
AGO Saint Agoulin 62.17 309 *e*P **P 13 32 20.2 -0.4**
BGF Bois d'Agland 62.21 310 *e*P **P 13 32 18.8 -2.0**
comp=Z,333nm,1.4s,mb6.0
BGF Bois d'Agland 62.21 310 *e*P **P 13 32 18.8 -2.0**
comp=Z,166nm,1.4s,mb6.0
BGF Bois d'Agland 62.21 310 *e*P **P 13 32 18.8 -2.0**
BGF pmax pmax
comp=Z,166nm,1.4s,mb6.0
LASF Ste Croix 62.26 307 *e*P **P 13 32 19.8 -1.4**
comp=Z,652nm,1.5s,mb6.2
LBL Lubilhac 62.33 308 *e*P **P 13 32 21.2 -0.5**
PYM Petit Puy Mans 62.34 309 *e*P **P 13 32 21.9 +0.2**
CAEH 'Ain El Ouahch 62.40 298 P **P 13 32 20.9 -1.3**
MBWA Marble Bar 62.41 142 *e*P **P 13 32 20.5 -1.8**
comp=Z,675nm,1.9s,mb6.5
MBWA LR LR
comp=Z,33µm,19.0s,MS6.5
MBWA Marble Bar 62.41 142 P **P 13 32 20.5 -1.9**
comp=Z,5µmcomp=Z,113nm,1.8s,mb5.7
MBWA Marble Bar 62.41 142 P **P 13 32 20.9 -1.4**
SNR=18
CKFL Kef-Lekhel 62.62 298 P **P 13 32 23.2 -0.6**
MME1 Meikle Cairn 62.70 322 *e*P **P 13 32 24.2 +0.4**
TCF Toulx Ste Croi 62.71 310 *e*P **P 13 32 22.6 -1.6**
comp=Z,754nm,1.4s,mb6.3
TCF Toulx Ste Croi 62.71 310 *e*P **P 13 32 22.6 -1.6**
comp=Z,377nm,1.4s,mb6.3
TCF Toulx Ste Croi 62.71 310 *e*P **P 13 32 22.6 -1.6**
TCF pmax pmax
comp=Z,377nm,1.4s,mb6.3
FRNF Fournols 62.75 308 *e*P **P 13 32 25.2 +0.8**
MCD Coleburn Disti 62.77 323⇑ *e*P **P 13 32 24.1 -0.3**
DAG Danmarks Havn 62.78 345ĸ *i*P **P 13 32 25.5 +1.4**
DAG pmax pmax
comp=Z,900nm,1.6s,mb6.7
DAG MLR MLR
comp=Z,32µm,19.0s,MS6.5
DAG MLR MLR
comp=E,21µm,22.0s
DAG Danmarks Havn 62.78 345ĸ *i*P **P 13 32 25.5 +1.4**
comp=E,899nm,1.6s,mb6.7
DAG
comp=Z,32µm,19.0s
ORE Reay 62.78 324⇑ *e*P **P 13 32 24.9 +0.5**
CASM Ain Smara 62.84 298 P **P 13 32 24.6 -0.6**
HPK Haverah Park 62.88 319 *e*P **P 13 32 24.6 -0.6**
HPK AMB AMB 13 32 30.2
comp=Z,300nm,1.7s,mb6.2
HPK *e* 13 40 53.0
HPK AMS AMS 14 02 29.8
comp=Z,31µm,18.2s,MS6.5
ESY Stoneypath 62.88 321 *e*P **P 13 32 24.4 -0.7**
XAL Allendale 62.96 320 *e*P **P 13 32 25.4 -0.2**
CTEI Djebel Teioual 62.97 297 P **P 13 32 25.8 -0.3**
CWF Charnwood Fore 63.04 317 *e*P **P 13 32 24.6 -1.7**
CWF AMB AMB 13 32 29.0
comp=Z,166nm,7.2s
CWF *e* 13 40 48.5
CWF AMS AMS 14 01 53.2
comp=Z,51µm,22.4s,MS6.6
LHO Holmfirth 63.12 318 *e*P **P 13 32 26.0 -0.8**

EBL Broad Law 63.16 321 *e*P **P 13 32 26.3 -0.7**
MVH1 Achvaich 63.16 323⇑ *e*P **P 13 32 26.5 -0.5**
EDI Edinburgh 63.19 321 *e*P **P 13 32 26.7 -0.5**
EDI AMb AMB 13 32 30.4
comp=Z,364nm,1.5s,mb6.3
EDI AMS AMS 14 04 38.2
comp=Z,65µm,15.8s,MS6.9
DFRA Djebel Bou Aff 63.21 298 P **P 13 32 27.2 -0.5**
CAF Calviac 63.22 308 *e*P **P 13 32 26.1 -1.5**
comp=Z,331nm,1.4s,mb6.0
CAF Calviac 63.22 308 *e*P **P 13 32 26.1 -1.5**
comp=Z,166nm,1.4s,mb6.0
CAF Calviac 63.22 308 *e*P **P 13 32 26.1 -1.5**
CAF pmax pmax
comp=Z,166nm,1.4s,mb6.0
EBH Black Hill 63.27 321 *e*P **P 13 32 27.9 +0.1**
SOFL Sornfelli, Far 63.35 328 AMS AMS 14 02 47.0
comp=Z,41µm,18.0s,MS6.7
EAU Auchinoon 63.36 321 *e*P **P 13 32 28.8 +0.5**
ECK Cauldkaine Hil 63.37 320 *e*P **P 13 32 28.0 -0.4**
ESK Eskdalemuir 63.38 320 P **P 13 32 28.0 -0.4**
comp=Z,1µm,1.2s,mb6.8,SNR=13
ESK Eskdalemuir 63.38 320 *e*P **P 13 32 27.3 -1.1**
ESK AMb AMB 13 32 31.6
comp=Z,270nm,1.4s,mb6.2
ESK AMS AMS 13 59 47.8
comp=Z,74µm,23.0s,MS6.8
ESK Eskdalemuir 63.38 320 *i* P **P 13 32 29.3 +0.9**
FITZ Fitzroy Crossi 63.38 135 *e*P **P 13 32 27.6 -1.3**
comp=Z,138nm,1.0s,mb6.0
FITZ *e*S **S 13 40 51.2 -8.8**
FITZ Fitzroy Crossi 63.38 135 P **P 13 32 27.8 -1.1**
FITZ S **S 13 40 54.5 -5.5**
FITZ LR LR 14 01 07.6
FITZ ⇑ *e* 14 01 32.3
FITZ Fitzroy Crossi 63.38 135 P **P 13 32 27.8 -1.1**
comp=Z,113nm,1.1s,mb5.9,baz=337,slow=5.7,SNR=32
FITZ S **S 13 40 54.5 -5.5**
comp=Z,3.3nm,0.8s,baz=28,slow=5.3,SNR=2.2
FITZ LR LR 14 01 07.6
comp=Z,27µm,21.6s,MS6.4,baz=321,slow=37
FITZ PKP2bc 14 01 32.3
comp=Z,15nm,1.0s,baz=173,slow=2.3,SNR=8.5
FITZ Fitzroy Crossi 63.38 135 P **P 13 32 28.0 -0.9**
comp=Z,10µmcomp=Z,310nm,2.4s,mb6.0
MDO Dochfour 63.39 323⇑ *e*P **P 13 32 28.5 0.0**
EJON La Jonquera 63.44 305 P **P 13 32 27.9 -1.2**
comp=Z,1µm,2.6s,mb6.6
STNC Stoke 63.46 318 AMS AMS 14 04 19.6
comp=Z,53µm,15.0s,MS6.8
RJF Les Rejaudoux 63.47 309 *e*P **P 13 32 27.9 -1.4**
comp=Z,872nm,1.7s,mb6.3
RJF *e*MLR MLR
comp=Z,33µm,22.2s,MS6.2
RJF Les Rejaudoux 63.47 309 *e*P **P 13 32 27.9 -1.4**
comp=Z,436nm,1.7s,mb6.3
RJF LR LR
comp=Z,33µm,22.3s,MS6.5
RJF Les Rejaudoux 63.47 309 *e*P **P 13 32 27.9 -1.4**
RJF pmax pmax
comp=Z,436nm,1.7s,mb6.3
RJF MLR MLR
comp=Z,33µm,22.3s,MS6.5
LRDF Laroque-de-Fa 63.52 306 *e*P **P 13 32 29.7 +0.1**
LDF La Druitiere 63.53 312 *e*P **P 13 32 27.5 -2.1**
comp=Z,132nm,0.7s,mb5.8
LDF La Druitiere 63.53 312 *e*P **P 13 32 27.5 -2.1**
comp=Z,66nm,0.7s,mb5.8
LDF La Druitiere 63.53 312 *e*P **P 13 32 27.5 -2.1**
LDF pmax pmax
comp=Z,66nm,0.7s,mb5.8
KNA Kununurra 63.60 130 P **P 13 32 29.3 -1.1**
comp=Z,6µmcomp=Z,774nm,1.1s,mb6.7
MTLF Montolieu 63.62 306 *e*P **P 13 32 28.6 -1.6**
comp=Z,407nm,1.4s,mb6.0
MTLF Montolieu 63.62 306 *e*P **P 13 32 28.6 -1.6**
comp=Z,203nm,1.4s,mb6.0
MTLF Montolieu 63.62 306 *e*P **P 13 32 28.6 -1.6**
MTLF pmax pmax
comp=Z,203nm,1.4s,mb6.0
FILF Fillols 63.63 305 *e*P **P 13 32 30.6 +0.2**
CKHR Kef el Ahmar 63.67 298 P **P 13 32 30.6 -0.1**
SWN1 Swindon 63.68 316 AMS AMS 14 04 37.3
comp=Z,61µm,15.0s,MS6.9
SET Setif 63.69 298 P **P 13 32 31.0 +0.1**
FLN La Foliniere 63.71 313 *e*P **P 13 32 28.7 -2.0**
comp=Z,442nm,1.5s,mb6.0
FLN *e*MLR MLR
comp=Z,65µm,21.5s,MS6.5
FLN La Foliniere 63.71 313 *e*P **P 13 32 28.7 -2.0**
comp=Z,221nm,1.5s,mb6.0
FLN LR LR
comp=Z,65µm,21.5s,MS6.8
FLN La Foliniere 63.71 313 *e*P **P 13 32 28.7 -2.0**
FLN pmax pmax
comp=Z,221nm,1.5s,mb6.0
FLN MLR MLR
comp=Z,65µm,21.5s,MS6.8
EAB Aberfoyle 63.74 321 *e*P **P 13 32 31.0 +0.2**
XDE Dent Fell 63.77 320 *e*P **P 13 32 31.1 +0.1**
KAC Achnashellach 63.85 323⇑ *e*P **P 13 32 31.1 -0.5**
CARF Carcanieres 63.90 306 *e*P **P 13 32 31.9 -0.2**
GCD Castle Douglas 63.91 320⇑ *e*P **P 13 32 32.0 +0.1**
PGBU Glenifferbraes 63.93 321 *e*P **P 13 32 31.6 -0.5**
PGBU AMB AMB 13 32 36.5
comp=Z,482nm,4.9s
PGBU AMS AMS 14 05 02.5
comp=Z,58µm,15.6s,MS6.9
KAKA Kakadu 63.93 125 *e*P **P 13 32 31.3 -1.3**
comp=Z,103nm,0.9s,mb5.9
KAKA Kakadu 63.93 125 P **P 13 32 31.6 -1.0**
comp=Z,2µmcomp=Z,156nm,1.1s,mb5.9
CFON Fontmartina 63.98 305 P **P 13 32 31.1 -1.6**
comp=Z,2µm,2.2s,mb6.6
KSB Sheil Bridge 64.01 323⇑ *e*P **P 13 32 31.9 -0.7**
GRR Gorron 64.06 312 *e*P **P 13 32 31.0 -2.1**
comp=Z,147nm,0.7s,mb5.8
GRR Gorron 64.06 312 *e*P **P 13 32 31.0 -2.1**
comp=Z,74nm,0.7s,mb5.8
GRR Gorron 64.06 312 *e*P **P 13 32 31.0 -2.1**
GRR pmax pmax
comp=Z,74nm,0.7s,mb5.8
VALF Valcebollere 64.06 305 *e*P **P 13 32 33.6 +0.4**
CLLI Llivia 64.07 306 P **P 13 32 31.7 -1.5**
KPL Plockton 64.09 323 *e*P **P 13 32 32.9 -0.2**
KPL AMB AMB 13 32 37.3
comp=Z,166nm,2.2s,mb5.7
KPL AMS AMS 14 00 31.1
comp=Z,72µm,23.6s,MS6.8
LFF La Frestale 64.11 308 *e*P **P 13 32 32.1 -1.4**
comp=Z,654nm,1.6s,mb6.1
LFF La Frestale 64.11 308 *e*P **P 13 32 32.1 -1.4**
comp=Z,327nm,1.6s,mb6.1
LFF La Frestale 64.11 308 *e*P **P 13 32 32.1 -1.4**
LFF pmax pmax
comp=Z,327nm,1.6s,mb6.1
MFF Saint Martin d 64.17 310 *e*P **P 13 32 31.7 -2.1**
comp=Z,541nm,1.6s,mb6.0
MFF Saint Martin d 64.17 310 *e*P **P 13 32 31.7 -2.1**
comp=Z,270nm,1.6s,mb6.0
MFF Saint Martin d 64.17 310 *e*P **P 13 32 31.7 -2.1**
MFF pmax pmax
comp=Z,270nm,1.6s,mb6.0
HGH Gray Hill 64.24 316⇑ *e*P **P 13 32 32.9 -1.3**
MCH1 Michaelchurch 64.25 317 *e*P **P 13 32 33.1 -1.1**
MCH1 AMb AMB 13 32 38.2
comp=Z,342nm,1.5s,mb6.2
MCH1 *e* 13 41 10.2
MCH1 AMS AMS 13 59 43.0
comp=Z,63µm,26.2s,MS6.7
KAR1 Arisaig 64.31 323⇑ *e*P **P 13 32 34.8 +0.3**
GAL1 Galloway 64.34 320 *e*P **P 13 32 34.4 -0.4**
GAL1 AMb AMB 13 32 39.1
comp=Z,204nm,1.4s,mb6.0
GAL1 AMS AMS 14 00 15.6
comp=Z,59µm,24.1s,MS6.7
GIM North Isle of 64.38 319 *e*P **P 13 32 34.0 -1.1**
ETOS Mallorca 64.38 302 P **P 13 32 34.4 -1.0**
comp=Z,979nm,1.5s,mb6.6
HTR Trewern Hill 64.38 317⇑ *e*P **P 13 32 34.3 -0.8**
MLS Moulis 64.52 306 *e*P **P 13 32 35.6 -0.6**
EMIR Miracle 64.57 305 P **P 13 32 36.3 -0.2**
comp=Z,1µm,1.8s,mb6.7
JSA Saint Aubin 64.63 314 *e*P **P 13 32 33.9 -2.9**
JSA AMB AMB 13 32 39.2
comp=Z,162nm,1.6s,mb5.8

JSA AMS AMS 14 00 34.3
comp=Z,48µm,22.0s,MS6.6
WLF1 Llynfaes 64.65 318 AMS AMS 14 04 47.9
comp=Z,165µm,15.3s,MS7.3
CSOR Sort 64.69 306 P **P 13 32 35.6 -1.7**
comp=Z,945nm,2.2s,mb6.4
EPF Esparros 65.02 307 *e*P **P 13 32 36.8 -2.6**
comp=Z,132nm,1.3s,mb5.5
EPF Esparros 65.02 307 *e*P **P 13 32 36.8 -2.6**
comp=Z,66nm,1.3s,mb5.5
EPF Esparros 65.02 307 *e*P **P 13 32 36.8 -2.6**
EPF pmax pmax
comp=Z,66nm,1.3s,mb5.5
EPOB Poblet 65.08 305 P **P 13 32 37.8 -2.0**
comp=Z,1µm,2.0s,mb6.5
RESF Ens 65.09 306 *e*P **P 13 32 40.2 +0.3**
SGMF Saint Gilles 65.18 313 *e*P **P 13 32 38.7 -1.7**
comp=Z,608nm,1.4s,mb6.1
SGMF Saint Gilles 65.18 313 *e*P **P 13 32 38.7 -1.7**
comp=Z,304nm,1.4s,mb6.1
SGMF Saint Gilles 65.18 313 *e*P **P 13 32 38.7 -1.7**
SGMF pmax pmax
comp=Z,304nm,1.4s,mb6.1
GMM Mts of Mourne 65.22 320 *e*P **P 13 32 40.0 -0.6**
ABA Alger-Bouzarea 65.26 299 P **P 13 32 34.5 -6.6**
EBIE Bielsa 65.27 306 P **P 13 32 39.8 -1.3**
comp=Z,1µm,2.4s,mb6.4
VIEF Viey 65.28 306 *e*P **P 13 32 41.5 +0.3**
ALE Alert 65.45 355 P **P 13 32 42.0 +0.4**
comp=Z,511nm,0.6s,mb6.7,SNR=38
HTL Hartland 65.45 316 *e*P **P 13 32 40.1 -2.0**
HTL AMB AMB 13 32 42.4
comp=Z,183nm,7.1s
HTL *e* 13 41 23.7
HTL AMS AMS 14 01 52.6
comp=Z,50µm,21.3s,MS6.7
REYF Montagne du Re 65.51 307 *e*P **P 13 32 43.0 +0.4**
EMHD Djebel Mahouad 65.54 299 P **P 13 32 42.4 -0.5**
ROSF Rostrenen 65.60 313 *e*P **P 13 32 41.4 -1.7**
comp=Z,609nm,1.4s,mb6.1
ROSF Rostrenen 65.60 313 *e*P **P 13 32 41.4 -1.7**
comp=Z,304nm,1.4s,mb6.1
ROSF Rostrenen 65.60 313 *e*P **P 13 32 41.4 -1.7**
ROSF pmax pmax
comp=Z,304nm,1.4s,mb6.1
QUIF Quistinic 65.67 313 *e*P **P 13 32 41.6 -2.0**
comp=Z,427nm,1.5s,mb6.0
QUIF Quistinic 65.67 313 *e*P **P 13 32 41.6 -2.0**
comp=Z,213nm,1.5s,mb6.0
QUIF Quistinic 65.67 313 *e*P **P 13 32 41.6 -2.0**
QUIF pmax pmax
comp=Z,213nm,1.5s,mb6.0
ETSF Etsaut 65.68 307 *e*P **P 13 32 42.3 -1.4**
comp=Z,185nm,1.0s,mb5.8
ETSF Etsaut 65.68 307 *e*P **P 13 32 42.3 -1.4**
comp=Z,92nm,1.0s,mb5.8
ETSF Etsaut 65.68 307 *e*P **P 13 32 42.3 -1.4**
ETSF pmax pmax
comp=Z,92nm,1.0s,mb5.8
EIBI Ibiza 65.71 302 P **P 13 32 43.1 -0.8**
comp=Z,2µm,2.6s,mb6.6
ERTA Horta de San J 65.74 304 P **P 13 32 43.0 -1.2**
comp=Z,1µm,2.1s,mb6.5
ORDF Ordiarp 65.83 307 *e*P **P 13 32 44.3 -0.4**
DLF Lyons Farm 65.86 319⇑ *i*P **P 13 32 48.0 +3.3**
LARF Larrau 65.93 307 *e*P **P 13 32 44.5 -0.8**
ESAC San Caprasio 66.03 305 P **P 13 32 45.1 -0.9**
comp=Z,1µm,1.9s,mb6.7
OSSF Osses 66.04 307 *e*P **P 13 32 45.2 -0.8**
SCO Scoresbysund 66.05 339 *e*P **P 13 32 48.2 +2.6**
SCO pmax pmax
comp=Z,67nm,0.9s,mb5.7
SCO MLR MLR
comp=Z,20µm,20.0s,MS6.3
SCO Scoresbysund 66.05 339 *i* P **P 13 32 48.2 +2.6**
comp=Z,67nm,0.9s,mb5.7
SCO
comp=Z,20µm,20.0s
SJPF Ste Jean 66.06 307 *e*P **P 13 32 44.8 -1.4**
comp=Z,233nm,1.1s,mb5.8
SJPF Ste Jean 66.06 307 *e*P **P 13 32 44.8 -1.4**
comp=Z,116nm,1.1s,mb5.8
SJPF Ste Jean 66.06 307 *e*P **P 13 32 44.8 -1.4**
SJPF pmax pmax
comp=Z,116nm,1.1s,mb5.8
BST Brest 66.11 313 *e*P **P 13 32 44.9 -1.5**
CCA1 Carnmenellis 66.17 315 *e*P **P 13 32 44.3 -2.5**
CCA1 AMB AMB 13 32 48.0
comp=Z,183nm,3.1s
CCA1 AMS AMS 14 06 22.3
comp=Z,66µm,14.4s,MS7.0
SMY Shemya 66.20 42 *e*P **P 13 32 47.8 +0.9**
comp=Z,927nm,2.2s,mb6.4
SMY Shemya 66.20 42 *e*P **P 13 32 47.8 +0.9**
SMY pmax pmax
comp=Z,927nm,2.2s,mb6.4
EALK Alkurruntz 66.22 307 P **P 13 32 45.4 -1.7**
comp=Z,1µm,2.8s,mb6.5
ELIZ Elizondo 66.25 307 P **P 13 32 46.5 -0.9**
comp=Z,248nm,1.4s,mb6.0
ELIZ Elizondo 66.25 307 P **P 13 32 46.5 -0.9**
ELIZ pmax pmax
comp=Z,248nm,1.4s,mb6.0
EMOS Mosqueruela 66.53 304 P **P 13 32 48.9 -0.3**
comp=Z,1µm,1.8s,mb6.6
EBNR Beni Rached 66.57 299 P **P 13 32 50.0 +0.4**
ECHA Ech Chlef 66.75 299 P **P 13 32 50.8 +0.1**
EBEN Beniarda 66.96 302 P **P 13 32 50.8 -1.3**
comp=Z,735nm,2.6s,mb6.2
EANR 'Ain N'Sour 67.03 299 P **P 13 32 51.8 -0.7**
ETRT Tiaret 67.09 298 P **P 13 32 52.5 -0.4**
ECHE Chera 67.17 303 P **P 13 32 53.7 +0.4**
comp=Z,95nm,0.8s,mb5.9
ECHE Chera 67.17 303 P **P 13 32 53.7 +0.4**
ECHE pmax pmax
comp=Z,95nm,0.8s,mb5.9
ELAN Lanestosa 67.53 308 P **P 13 32 54.2 -1.3**
comp=Z,2µm,2.7s,mb6.6
ETOB Tobarra 67.94 303 P **P 13 32 56.9 -1.3**
comp=Z,1µm,2.3s,mb6.6
EMUR La Murta 68.03 302 P **P 13 32 57.4 -1.4**
comp=Z,2µm,3.1s
VAL Valentia 68.46 318⇓ *i*P **P 13 33 03.5 +2.3**
VAL Valentia 68.46 318⇓ *i*S S 13 42 02.1 +0.8
EVIA Vianos 68.63 303 P **P 13 33 01.7 -0.8**
comp=Z,148nm,0.9s,mb5.9
EVIA Vianos 68.63 303 P **P 13 33 01.7 -0.8**
EVIA pmax pmax
comp=Z,149nm,0.9s,mb5.9
EARI Arriondas 68.70 308 P **P 13 33 02.6 -0.3**
comp=Z,996nm,1.9s,mb6.4
GUD Guadarrama 69.02 305 P **P 13 33 04.2 -0.7**
comp=Z,181nm,1.0s,mb6.0
GUD Guadarrama 69.02 305 P **P 13 33 04.2 -0.7**
GUD pmax pmax
comp=Z,181nm,1.0s,mb6.0
EHUE Huescar 69.03 302 P **P 13 33 04.4 -0.6**
comp=Z,274nm,1.1s,mb6.1
EHUE Huescar 69.03 302 P **P 13 33 04.4 -0.6**
EHUE pmax pmax
comp=Z,274nm,1.1s,mb6.1
ENIJ Nijar 69.08 301 P **P 13 33 05.1 -0.3**
comp=Z,368nm,1.0s,mb6.3
ENIJ Nijar 69.08 301 P **P 13 33 05.1 -0.3**
ENIJ pmax pmax
comp=Z,369nm,1.0s,mb6.3
ESDC Sonseca Array 69.27 304 P **P 13 33 05.4 -1.1**
comp=Z,88nm,1.5s,mb5.5
ESDC Sonseca Array 69.27 304 P **P 13 33 06.4 -0.1**
comp=Z,60nm,1.0s,mb5.5,baz=56,slow=6.7,SNR=51
ESDC S S 13 42 08.2 -3.1
comp=Z,0.2nm,0.3s,baz=55,slow=5.6,SNR=2.4
ESDC PKP2bc 14 01 14.8
comp=Z,2.7nm,0.8s,baz=286,slow=2.7,SNR=11
ESDC LR LR 14 09 05.0
comp=Z,21µm,18.3s,MS6.4,baz=40,slow=41
ESLA Sonseca Array 69.27 304 *e*P **P 13 33 05.2 -1.3**
comp=Z,100nm,1.4s,mb5.5
ESLA LR LR
comp=Z,134µm,20.0s,MS7.2
EQES Quesada 69.38 302 P **P 13 33 05.4 -1.8**
comp=Z,570nm,1.1s,mb6.4
SUMG Summit 69.38 344⇓ *i*P **P 13 33 08.6 +2.0**
comp=Z,417nm,1.0s,mb6.3
PAB San Pablo 69.59 304 *e*P **P 13 33 07.0 -1.5**
comp=Z,328nm,1.4s,mb6.1

PAB LR LR
comp=Z,20µm,21.0s,MS6.3
PAB San Pablo 69.59 304 *e*P **P** **13 33 07.0 -1.5**
PAB pmax pmax
comp=Z,328nm,1.4s,mb6.1
PAB MLR MLR
comp=Z,20µm,21.0s,MS6.3
EBER Berja 69.61 301 P **P** **13 33 06.7 -1.9**
comp=Z,2µm,2.8s,mb6.5
AMKA Amchitka 69.69 42 *e*P **P** **13 33 10.8 +2.0**
comp=Z,296nm,1.6s,mb6.0
EBAN Banos Encina 69.75 303 P **P** **13 33 09.1 -0.4**
comp=Z,108nm,0.8s,mb5.8
EBAN Banos Encina 69.75 303 P **P** **13 33 09.1 -0.4**
EBAN pmax pmax
comp=Z,108nm,0.8s,mb5.8
ECOG Cogollos-Vega 69.95 302 P **P** **13 33 08.9 -1.9**
comp=Z,39nm,0.8s,mb5.4
ECOG Cogollos-Vega 69.95 302 P **P** **13 33 08.9 -1.8**
ECOG pmax pmax
comp=Z,39nm,0.8s,mb5.4
EPON Pontenova 69.99 309 P **P** **13 33 09.2 -1.7**
comp=Z,2µm,3.1s
EALB Alboran 70.11 301 P **P** **13 33 11.0 -0.7**
comp=Z,510nm,1.2s,mb6.3
EGUA Guajares 70.13 302 P **P** **13 33 11.0 -0.9**
comp=Z,635nm,0.9s,mb6.5
EGUA Guajares 70.13 302 P **P** **13 33 11.0 -0.8**
EGUA pmax pmax
comp=Z,635nm,0.9s,mb6.5
KLBR Kellerberrin 70.20 149 *e*P **P** **13 33 09.0 -3.1**
comp=Z,111nm,1.1s,mb5.7
ERON Agron 70.23 302 P **P** **13 33 10.9 -1.6**
comp=Z,45nm,1.1s,mb5.3
ECAL Calabor 70.28 308 P **P** **13 33 11.5 -1.2**
comp=Z,2µm,3.6s
WRA Warramunga Arr 70.28 129 P **P** **13 33 11.2 -1.6**
WRA S S 13 42 24.3 +0.8
WRA ⇑*e* 14 01 12.9
WRA LR LR 14 09 54.5
WRA Warramunga Arr 70.28 129 P **P** **13 33 11.2 -1.6**
comp=Z,216nm,1.0s,mb6.0,baz=322,slow=6.3,SNR=230
WRA S S 13 42 24.3 +0.8
comp=Z,6.9nm,1.1s,baz=318,slow=12,SNR=4.3
WRA PKP2bc 14 01 12.9
comp=Z,22nm,1.0s,baz=140,slow=3.0,SNR=973
WRA LR LR 14 09 54.5
comp=Z,14µm,19.4s,MS6.2,baz=325,slow=41
EADA Adamuz 70.32 303 P **P** **13 33 11.0 -1.9**
comp=Z,2µm,3.6s
PBRG Braganca 70.33 307 *e*P **P** **13 33 13.1 +0.1**
comp=Z,153nm,1.8s,mb5.6
ELUQ Luque 70.34 303 P **P** **13 33 12.0 -1.1**
comp=Z,159nm,0.8s,mb6.0
ELUQ Luque 70.34 303 P **P** **13 33 12.0 -1.1**
ELUQ pmax pmax
comp=Z,159nm,0.8s,mb6.0
ERUA La Rua 70.36 308 P **P** **13 33 12.6 -0.6**
comp=Z,64nm,1.2s,mb5.4
ERUA La Rua 70.36 308 P **P** **13 33 12.6 -0.6**
ERUA pmax pmax
comp=Z,65nm,1.2s,mb5.4
LSZ Lusaka 70.42 238 *e*P **P** **13 33 12.7 -1.1**
comp=Z,107nm,0.9s,mb5.8
LSZ LR LR
comp=Z,47µm,22.0s,MS6.7
LSZ Lusaka 70.42 238 *e*P **P** **13 33 12.7 -1.1**
LSZ pmax pmax
comp=Z,107nm,0.9s,mb5.8
LSZ MLR MLR
comp=Z,47µm,22.0s,MS6.7
LSZ Lusaka 70.42 238 P **P** **13 33 13.4 -0.4**
SNR=25
ELOJ Sierra Loja 70.43 302 P **P** **13 33 11.8 -1.8**
comp=Z,34nm,0.8s,mb5.3
ELOJ Sierra Loja 70.43 302 P **P** **13 33 11.8 -1.9**
ELOJ pmax pmax
comp=Z,34nm,0.8s,mb5.3
EPLA Plasencia 70.60 306 P **P** **13 33 12.4 -2.2**
comp=Z,1µm,2.0s,mb6.5
EPLA Plasencia 70.60 306 P **P** **13 33 12.4 -2.2**
EPLA pmax pmax
comp=Z,1µm,2.0s,mb6.5
MVO Moncorvo 70.80 307 *i* P **P** **13 33 14.8 -1.0**
comp=Z,199nm,1.4s,mb5.8
MVO *e*S S 13 42 27.7 -1.4
MVO Moncorvo 70.80 307 P **P** **13 33 14.2 -1.7**
ECAB El Cabril 70.96 303 P **P** **13 33 15.2 -1.7**
comp=Z,490nm,1.2s,mb6.3
STS Santiago 71.10 309 P **P** **13 33 17.3 -0.4**
comp=Z,72nm,1.0s,mb5.6
STS Santiago 71.10 309 P **P** **13 33 17.3 -0.3**
STS pmax pmax
comp=Z,72nm,1.0s,mb5.6
NWAO Narrogin (SRO) 71.12 151 *e*P **P** **13 33 15.1 -2.6**
comp=Z,178nm,1.1s,mb5.9
NWAO LR LR
comp=Z,37µm,21.0s,MS6.6
NWAO Narrogin (SRO) 71.12 151 LR LR 14 05 17.4
comp=Z,46µm,20.9s,MS6.7,baz=328,slow=37
NWAO Narrogin (SRO) 71.12 151 *e*P **P** **13 33 15.1 -2.6**
NWAO pmax pmax
comp=Z,178nm,1.1s
NWAO MLR MLR
comp=Z,37µm,21.0s
NWAO Narrogin (SRO) 71.12 151 P **P** **13 33 15.9 -1.8**
SNR=11
EMIJ Mijas 71.12 302 P **P** **13 33 15.2 -2.7**
comp=Z,382nm,1.7s,mb6.0
ELOB Lobios 71.20 308 P **P** **13 33 16.7 -1.6**
comp=Z,833nm,1.9s,mb6.3
PVRL Vila Real 71.22 307 *e*P **P** **13 33 18.5 +0.1**
comp=Z,123nm,1.5s,mb5.6
PCAB Cabril 71.25 308 *e*P **P** **13 33 18.7 +0.2**
comp=Z,255nm,1.6s,mb5.9
EMAZ Mazaricos 71.36 309 P **P** **13 33 17.8 -1.4**
comp=Z,1µm,2.2s,mb6.4
MTE Manteigas 71.47 306 *i* P **P** **13 33 19.9 0.0**
comp=Z,300nm,1.5s,mb6.0
MTE *e*S S 13 42 37.3 +0.3
EZAM Zamans 71.51 308 P **P** **13 33 20.2 +0.1**
comp=Z,106nm,0.8s,mb5.8
EZAM Zamans 71.51 308 P **P** **13 33 20.2 +0.1**
EZAM pmax pmax
comp=Z,106nm,0.8s,mb5.8
PVIS Viseu 71.58 307 *e*P **P** **13 33 21.0 +0.4**
comp=Z,227nm,1.4s,mb5.9
PCBR Castelo Branco 71.67 306 *e*P **P** **13 33 21.5 +0.4**
comp=Z,140nm,1.6s,mb5.6
EJIF Jimena Fronter 71.68 302 P **P** **13 33 19.9 -1.4**
comp=Z,244nm,1.2s,mb6.0
EJIF Jimena Fronter 71.68 302 P **P** **13 33 19.9 -1.4**
EJIF pmax pmax
comp=Z,244nm,1.2s,mb6.0
PMRV Marv??o 71.78 305 *i* P **P** **13 33 21.0 -0.8**
comp=Z,184nm,1.5s,mb5.8
PMRV *e*S S 13 42 42.2 +1.6
ESPR Espera 71.78 302 P **P** **13 33 20.4 -1.5**
comp=Z,1µm,2.5s,mb6.5
EBAD Badajoz 71.80 305 P **P** **13 33 20.1 -1.8**
comp=Z,1µm,2.2s,mb6.4
PTO Porto 71.88 307 *e*P **P** **13 33 23.2 +0.8**
EMIN Mina Concepcio 71.98 304 P **P** **13 33 21.1 -1.9**
comp=Z,1µm,2.5s,mb6.4
PBAR Barrancos 72.07 304 *i* P **P** **13 33 22.8 -0.8**
comp=Z,358nm,1.7s,mb6.0
PBAR *e*S S 13 42 45.5 +1.5
PESTR Estremoz 72.16 305 *i* P **P** **13 33 23.1 -1.0**
comp=Z,136nm,1.8s,mb5.6
PESTR *e*S S 13 42 45.7 +0.7
PTOM Tomar 72.41 306 *e*P **P** **13 33 25.9 +0.3**
comp=Z,350nm,1.6s,mb6.0
COEN Coen 72.57 119 P **P** **13 33 26.7 -0.1**
comp=Z,400nm,2.4s,mb5.9
EVO Evora 72.61 305 *e*P **P** **13 33 27.3 +0.5**
comp=Z,353nm,1.4s,mb5.8
EVO *e*MLR MLR
comp=Z,20µm,19.0s,MS6.1
ASAR Alice Springs 72.65 132 P **P** **13 33 25.4 -1.7**
comp=Z,68nm,0.8s,mb5.7,baz=312,slow=5.6,SNR=177
ASAR PKPPKP 14 01 09.2
comp=Z,4.9nm,1.1s,baz=137,slow=4.0,SNR=7.5
EGRO El Granado 72.67 304 P **P** **13 33 25.2 -2.0**
comp=Z,500nm,1.2s,mb6.3
EVOP Sao Brissos 72.69 305 *e*P **P** **13 33 27.2 -0.1**
EVOP *e*S S 13 42 49.4 -1.6
EVOP *e*S S 13 42 49.4 -1.6
EVOP AMS AMS 14 04 33.0
comp=E,36µm,26.0s
EVOP Sao Brissos 72.69 305 *e*P **P** **13 33 27.1 -0.1**
EVOP *e*S S 13 42 49.3 -1.7
PBEJ Beja 72.72 304 *e*P **P** **13 33 27.7 +0.2**
comp=E,176nm,1.8s,mb5.7
PMG Port Moresby 72.88 112 *e*P **P** **13 33 28.4 -0.2**
comp=E,161nm,0.9s,mb6.0
PMG LR LR
comp=Z,11µm,22.0s,MS6.1
PMG Port Moresby 72.88 112 *d i*P **P** **13 33 28.3 -0.4**
PMG pmax pmax
comp=Z,227nm,1.0s
PMG Port Moresby 72.88 112 P **P** **13 33 28.6 -0.1**
comp=Z,7µmcomp=Z,271nm,2.1s,mb5.8
PVAQ Vaqueiros 72.89 304 *i* P **P** **13 33 27.7 -0.8**
comp=Z,342nm,1.7s,mb6.0
PVAQ *e*S S 13 42 54.5 +1.1
PCVE Castro Verde 73.02 304 *i* P **P** **13 33 28.7 -0.5**
comp=Z,166nm,1.7s,mb5.7
PCVE *e*S S 13 42 55.1 +0.3
MESJ Messejana 73.06 304 *e*P **P** **13 33 28.7 -0.7**
MESJ *e*S S 13 42 54.5 -0.7
MESJ *e*S S 13 42 54.7 -0.5
MESJ AMS AMS 14 04 57.0
comp=N,47µm,23.4s
MESJ Messejana 73.06 304 *e*P **P** **13 33 28.7 -0.8**
MESJ *e*S S 13 42 54.5 -0.7
PBDV Barranco-do-Ve 73.11 304 *i* P **P** **13 33 28.9 -0.9**
comp=N,406nm,1.6s,mb6.1
PBDV *e*S S 13 42 56.1 +0.2
PMAFR Mafra 73.31 306 *i* P **P** **13 33 29.9 -1.0**
comp=N,360nm,2.0s,mb6.0
PMAFR *e*S S 13 42 58.1 0.0
LIS Lisbon 73.32 305 *e*P **P** **13 33 30.6 -0.4**
LIS *e*S S 13 42 56.7 -1.5
LIS *e*S S 13 42 57.2 -1.1
LIS AMS AMS 14 07 28.9
comp=E,28µm,25.3s
LIS Lisbon 73.32 305 *e*P **P** **13 33 30.6 -0.4**
LIS *e*S S 13 42 56.7 -1.5
PTEO Sao Teotonio 73.55 304 *e*P **P** **13 33 32.7 +0.4**
comp=E,262nm,1.7s,mb5.9
MORF Marmelete 73.60 304 *i* P **P** **13 33 31.7 -1.0**
comp=E,228nm,2.1s,mb5.7
MORF *e*S S 13 43 01.3 -0.1
MORF Marmelete 73.60 304 *e*P **P** **13 33 31.8 -0.9**
MORF *e*S S 13 43 00.1 -1.3
PFVI Vila Bisbo 73.80 304 *i* P **P** **13 33 33.3 -0.6**
comp=E,312nm,1.6s,mb6.0
PFVI *e*S S 13 43 03.9 +0.2
PFVI Vila Bisbo 73.80 304 P **P** **13 33 33.6 -0.2**
RES Resolute Bay 74.52 360 P **P** **13 33 37.8 +0.5**
comp=E,30nm,0.8s,mb5.3,baz=5.0,slow=5.2,SNR=6.8
RES Resolute Bay 74.52 360 P **P** **13 33 37.8 +0.4**
RES pmax pmax
comp=Z,31nm,0.8s,mb5.3
FORT Forrest 74.56 141 *e*P **P** **13 33 36.7 -1.5**
comp=Z,118nm,1.6s,mb5.6
FORT *e*S S 13 43 10.2 -1.8
TTA Tatalina 75.04 24 *e*P **P** **13 33 42.3 +1.8**
COLA College 76.34 20 *e*P **P** **13 33 48.5 +0.6**
comp=Z,295nm,0.9s,mb6.2
COLA LR LR
comp=Z,23µm,20.0s,MS6.5
COLA College 76.34 20 *e*P **P** **13 33 48.5 +0.6**
COLA pmax pmax
comp=Z,295nm,0.9s,mb6.2
COLA MLR MLR
comp=Z,23µm,20.0s,MS6.5
SVW2 Sparrevohn 76.38 25 *e*P **P** **13 33 50.0 +1.7**
comp=Z,766nm,1.5s,mb6.4
TORD Torodi Ar. Bea 76.53 277 P **P** **13 33 48.1 -1.8**
comp=Z,94nm,1.0s,mb5.7,baz=52,slow=4.1,SNR=92
TORD LR LR 14 12 55.3
comp=Z,95µm,18.1s,MS7.2,baz=75,slow=40
ILAR Eielson Array 76.70 20 P **P** **13 33 49.5 -0.4**
comp=Z,98nm,0.8s,mb5.8,baz=313,slow=4.6,SNR=444
ILAR LR LR 14 12 04.2
comp=Z,24µm,19.4s,MS6.5,baz=225,slow=39
ILAR Eielson Array 76.70 20 P **P** **13 33 49.6 -0.4**
ILAR pmax pmax
comp=Z,98nm,0.8s
ILAR MLR MLR
comp=Z,24µm,19.4s
INK Inuvik 77.15 13 P **P** **13 33 53.0 +0.5**
comp=Z,72nm,0.5s,mb5.9,baz=338,slow=6.5,SNR=276
INK Inuvik 77.15 13 P **P** **13 33 53.0 +0.5**
INK pmax pmax
comp=Z,73nm,0.5s
EGAK Eagle 78.29 18 *e*P **P** **13 33 59.4 +0.5**
comp=Z,283nm,1.0s,mb6.2
EGAK LR LR
comp=Z,11µm,20.0s,MS6.2
PMR Palmer 78.31 23 *e*P **P** **13 33 59.3 +0.3**
comp=Z,1µm,1.8s,mb6.5
PMR Palmer 78.31 23 *e*P **P** **13 33 59.3 +0.3**
PMR pmax pmax
comp=Z,1µm,1.8s,mb6.5
CTA Charters Tower 78.70 122 *e*P **P** **13 34 01.0 -0.8**
comp=Z,92nm,0.9s,mb5.7
CTA *e*S S 13 44 01.0 +3.2
CTA Charters Tower 78.70 122 P **P** **13 34 01.6 -0.2**
comp=Z,123nm,0.9s,mb5.8,baz=305,slow=4.5,SNR=26
CTA S S 13 43 56.5 -1.3
comp=Z,6.3nm,0.9s,baz=14,slow=6.2,SNR=2.0
CTA Charters Tower 78.70 122 P **P** **13 34 01.7 -0.1**
CTA S S 13 43 56.5 -1.3
CTA pmax pmax
comp=Z,123nm,0.9s
CTA smax
comp=N,6.0nm,0.9s
CTAO Charters Tower 78.70 122 *e*P **P** **13 34 00.9 -0.9**
comp=N,406nm,1.4s,mb6.2
CTAO LR LR
comp=Z,16µm,19.0s,MS6.4
CTAO Charters Tower 78.70 122 *e*P **P** **13 34 00.9 -0.9**
CTAO pmax pmax
comp=Z,406nm,1.4s,mb6.2
CTAO MLR MLR
comp=Z,16µm,19.0s,MS6.4
CTAO Charters Tower 78.70 122 P **P** **13 34 01.5 -0.3**
comp=Z,8µmcomp=Z,258nm,2.1s,mb5.8
KDAK Kodiak Island 79.75 27 P **P** **13 34 08.0 +1.0**
comp=Z,3µm,1.7s,mb7.0
KDAK Kodiak Island 79.75 27 P **P** **13 34 08.5 +1.5**
comp=Z,190nm,0.5s,mb6.3,baz=294,slow=3.1,SNR=164
KDAK Kodiak Island 79.75 27 *i* P **P** **13 34 07.5 +0.5**
TSUM Tsumeb 80.73 241 *e*P **P** **13 34 12.3 -0.5**
comp=Z,425nm,1.6s,mb6.1
TSUM LR LR
comp=Z,41µm,19.0s,MS6.8
EFAM Famara 81.10 299 P **P** **13 34 16.3 +1.5**
comp=Z,1µm,1.8s,mb6.6
PMPS Porto Santo 81.16 303 *e*P **P** **13 34 18.2 +3.1**
BOSA Boshof 81.33 229 P **P** **13 34 14.5 -1.3**
comp=Z,146nm,0.9s,mb5.9,baz=49,slow=6.3,SNR=42
BOSA S S 13 44 18.4 -6.7
comp=Z,5.8nm,1.0s,baz=91,slow=14,SNR=2.3
BOSA LR LR 14 08 51.1
comp=Z,65µm,19.5s,MS7.0,baz=49,slow=35
BOSA Boshof 81.33 229 P **P** **13 34 14.5 -1.3**
BOSA S S 13 44 18.5 -6.6
BOSA pmax pmax
comp=Z,146nm,1.0s,mb5.9
BOSA smax
comp=N,6.0nm,1.0s
PMAR Madeira 81.75 303 *e*P **P** **13 34 22.4 +4.2**
FUL Funchal 81.78 303 *e*P **P** **13 34 21.9 +3.5**
CFTV Fuerteventura 81.88 298 P **P** **13 34 18.6 -0.3**
comp=N,150nm,1.2s,mb5.8
MIDW Midway 82.92 61 *e*P **P** **13 34 24.9 +0.5**
comp=N,242nm,1.3s,mb6.1
MIDW LR LR
comp=Z,7µm,20.0s,MS6.0
EOSO Osorio 83.16 299 P **P** **13 34 25.6 0.0**
comp=Z,1µm,2.0s,mb6.7
STKA Stephens Creek 83.24 133 *e*P **P** **13 34 23.7 -2.1**
comp=Z,76nm,0.8s,mb5.8
STKA *e*S S 13 44 40.4 -4.2
STKA Stephens Creek 83.24 133 *e*P **P** **13 34 23.8 -1.9**
comp=Z,262nm,2.0s,mb5.9
STKA Stephens Creek 83.24 133 P **P** **13 34 24.7 -1.0**
comp=Z,78nm,0.7s,mb5.8,baz=317,slow=5.4,SNR=103
STKA LR LR 14 16 27.3
comp=Z,39µm,21.9s,MS6.7,baz=299,slow=39
HNR Honiara 83.28 105 P **P** **13 34 26.0 -0.4**
comp=Z,297nm,1.1s,mb6.2
HNR LR LR
comp=Z,7µm,22.0s,MS6.0
HNR Honiara 83.28 105 P **P** **13 34 26.3 0.0**
comp=Z,160nm,1.0s,mb6.0,baz=137,slow=8.8,SNR=5.5
HNR LR LR 14 11 55.0
comp=Z,4µm,21.8s,MS5.8,baz=124,slow=36
HNR Honiara 83.28 105 P **P** **13 34 26.0 -0.4**
HNR pmax pmax
comp=Z,297nm,1.1s,mb6.2
HNR MLR MLR
comp=Z,7µm,22.0s,MS6.0
CCAN Las Canadas 83.88 299 P **P** **13 34 29.8 +0.5**
comp=Z,140nm,1.0s,mb6.0
BART Pico Bartolome 84.62 311 *e*P **P** **13 34 33.1 +0.2**
comp=Z,284nm,1.4s,mb6.2
CMLA Cha da Macela 84.86 311 *e*P **P** **13 34 33.3 -0.8**
comp=Z,456nm,1.3s,mb6.5
CMLA *e*LR LR 14 01 24.8
CMLA Cha da Macela 84.86 311 P **P** **13 34 38.1 +4.0**
comp=Z,692nm,1.3s,mb6.6,SNR=5.3
PSET Sete Cidades 84.95 311 *e*P **P** **13 34 35.7 +1.1**
comp=Z,49nm,1.1s,mb5.5
PDA Ponta Delgada 84.95 311 *e*P **P** **13 34 34.3 -0.3**
PSMA Santa Maria 85.04 310 *e*P **P** **13 34 34.9 -0.2**
comp=Z,424nm,1.8s,mb6.3
DBIC Dimbokro 85.33 275 P **P** **13 34 35.5 -1.4**
comp=Z,124nm,1.1s,mb6.0,baz=43,slow=5.9,SNR=56
DBIC S S 13 45 02.4 -4.0
comp=Z,1.8nm,0.8s,baz=180,slow=22,SNR=2.5
DBIC LR LR 14 17 15.9
comp=Z,42µm,19.8s,MS6.8,baz=45,slow=39
DBIC Dimbokro 85.33 275 P **P** **13 34 35.5 -1.4**
DBIC S S 13 45 02.4 -4.0
DBIC pmax pmax
comp=Z,124nm,1.1s
DBIC smax
comp=N,2.0nm,0.8s
KIC Kosan Boka 85.39 275 *e*P **P** **13 34 36.5 -0.7**
comp=N,295nm,0.9s,mb6.4
TIC Toumodi 85.48 275 *e*P **P** **13 34 36.7 -0.9**
comp=N,1µm,1.8s,mb6.7
TIC Toumodi 85.48 275 *e*P **P** **13 34 36.7 -0.9**
TIC pmax pmax
comp=Z,1µm,1.8s,mb6.7
YKA Yellowknife Ar 85.62 8 P **P** **13 34 37.0 -0.5**
YKA LR LR 14 16 45.2
YKA Yellowknife Ar 85.62 8 P **P** **13 34 37.0 -0.5**
comp=Z,70nm,0.7s,mb6.0,baz=337,slow=5.2,SNR=94
YKA LR LR 14 16 45.2
comp=Z,896nm,20.1s,MS5.2,baz=45,slow=38
YKA Yellowknife Ar 85.62 8 P **P** **13 34 37.0 -0.5**
YKA pmax pmax
comp=Z,70nm,0.7s
YKA MLR MLR
comp=Z,896nm,20.1s
LIC Lamto 85.70 275 *e*P **P** **13 34 37.9 -0.8**
comp=Z,867nm,1.8s,mb6.7
LIC Lamto 85.70 275 *e*P **P** **13 34 38.1 -0.6**
comp=Z,277nm,1.0s,mb6.1
LIC *e*MLR MLR
comp=Z,63µm,21.0s,MS6.7
LIC Lamto 85.70 275 *e*P **P** **13 34 38.1 -0.6**
comp=Z,138nm,1.0s,mb6.1
LIC LR LR
comp=Z,31µm,21.0s,MS6.7
PMAN Manadas 85.97 313 *e*P **P** **13 34 39.7 0.0**
comp=Z,305nm,1.5s,mb6.3
ROSA Rosais 86.02 313 *e*P **P** **13 34 40.4 +0.5**
PID Ribeirinha 86.11 313 *e*P **P** **13 34 42.0 +1.7**
PCAN Candelaria 86.32 313 *e*P **P** **13 34 45.7 +4.3**
comp=Z,308nm,1.4s,mb6.3
PCED Cedros 86.36 313 *e*P **P** **13 34 41.1 -0.5**
comp=Z,101nm,1.2s,mb5.9
CALA Caldeira 86.39 313 *e*P **P** **13 34 43.9 +2.2**
DLBC Dease Lake 86.50 17 P **P** **13 34 42.9 +1.0**
comp=Z,72nm,0.8s,mb5.9,baz=332,slow=5.9,SNR=67
DLBC PKKP PKKPbc 13 52 32.5 -6.1
comp=Z,6.4nm,1.0s,baz=11,slow=8.6,SNR=4.3
SUR Sutherland 86.69 229 P **P** **13 34 43.3 +0.2**
comp=Z,1µm,1.4s,mb6.9,SNR=14
SUR Sutherland 86.69 229 P **P** **13 34 44.4 +1.4**
SNR=11
WRAK Wrangell Islan 87.65 19 *e*P **P** **13 34 48.5 +1.0**
comp=Z,348nm,1.4s,mb6.4
WRAK LR LR
comp=Z,13µm,21.0s,MS6.3
ARMA Armidale 88.89 127 *e*P **P** **13 34 53.5 -0.2**
ARMA *e*PP PP 13 38 21.7 -1.9
ARMA *e*SKS 13 45 28.1
TOO Toolangi 89.42 136 *e*P **P** **13 34 55.5 -0.5**
TOO *e*PP PP 13 38 34.0 +6.3
TOO *e*SKS 13 45 24.2
CNB Canberra Magne 90.39 132 *e*P **P** **13 34 59.7 -0.9**
CNB *e*PP PP 13 38 41.3 +5.8
CNB *e*SKS 13 45 29.9
SCHQ Schefferville 90.76 343 P **P** **13 35 02.3 +0.1**
comp=Z,31nm,1.0s,mb5.6,baz=29,slow=5.2,SNR=16
SCHQ PKKPbc PKKPbc 13 52 26.2 -1.8
comp=Z,9.0nm,0.8s,baz=238,slow=3.9,SNR=11
SCHQ LR LR 14 16 29.2
comp=Z,25µm,21.7s,MS6.6,baz=31,slow=36
BBB Bella Bella 92.56 19 P **P** **13 35 10.3 -0.2**
BBB Bella Bella 92.56 19 P **P** **13 35 10.3 -0.2**
comp=Z,8.3nm,0.7s,mb5.3,baz=96,slow=4.3,SNR=3.5
MOO Moorlands 93.56 138 *e*P **P** **13 35 14.8 -0.3**
MOO *e*S SKSac 13 45 49.7 +2.0
FFC Flin Flon 94.43 3 P **P** **13 35 19.7 +0.6**
comp=Z,698nm,1.3s,mb6.9,SNR=33
JOHN Johnston Islan 95.22 67 PFAKE 13 35 30.0 +6.6
JOHN LR LR
comp=Z,6µm,21.0s,MS6.0
DZM Mont Dzumac 95.27 112 *e*P **P** **13 35 27.4 +4.0**
comp=Z,102nm,1.4s,mb6.0
DZM Mont Dzumac 95.27 112 *e*PP PP 13 39 14.9 +0.8
comp=Z,3µm,26.9s
DZM *e*SKSac SKSac 13 45 59.9 +2.0
comp=Z,5µm,25.1s
DZM *e*S S 13 46 39.9 +2.2
comp=Z,12µm,27.1s
DZM Mont Dzumac 95.27 112 *e*PS PS 13 47 59.5 +1.2
comp=Z,14µm,31.4s
DZM *e*SS SS 13 53 11.4 +6.0
comp=Z,16µm,28.4s
DZM *e*LR LR 14 05 56.1
comp=Z,42µm,40.1s
A05A Maple Falls 97.05 17 ⇑P **P** **13 35 31.4 +0.3**
baz=97
MIR Mirnyy 97.56 176 *e*P **P** **13 35 27.0 -5.7**
MIR *e*S SKSac 13 46 00.0 -7.7
MIR pmax pmax
comp=Z,980nm,10.0s
MIR pmax pmax
comp=N,700nm,5.0s
MIR pmax pmax
comp=Z,234nm,2.0s,mb6.4
MIR smax
comp=N,7µm,13.0s
MIR smax
comp=E,2µm,13.0s
B06A Marblemount 97.65 17 ⇓P **P** **13 35 33.7 -0.1**
baz=98
NLWA Neilton Lookou 98.07 18 *e*P **P** **13 35 37.1 +1.4**
comp=E,109nm,1.7s,mb6.1
NLWA LR LR
comp=Z,11µm,20.0s,MS6.3
B08A Colville Reser 98.30 15 ⇑P **P** **13 35 36.9 +0.1**
baz=98
A12A Yaak River Ran 98.52 13 ⇑P **P** **13 35 37.9 +0.2**
baz=98
D05A Enumclaw 98.76 17 ⇓P **P** **13 35 39.8 +0.9**
baz=99
NEW Newport 98.87 14 ⇓P **P** **13 35 39.1 -0.2**
baz=99
NEW Newport 98.87 14 *e*P **P** **13 35 39.7 +0.4**
comp=Z,10nm,0.9s,mb5.3
NEW LR LR
comp=Z,21µm,20.0s,MS6.6
NEW Newport 98.87 14 *e*P **P** **13 35 39.7 +0.4**
NEW pmax pmax
comp=Z,10.0nm,0.9s
NEW MLR MLR
comp=Z,21µm,20.0s
A14A Double T Ranch 98.88 11 ⇓P **P** **13 35 39.5 +0.2**
baz=99
E03A Lebam 98.93 19 ⇓P **P** **13 35 40.2 +0.6**

baz=99
B12A Libby 98.98 13 ⇑P P 13 35 39.7 -0.1
baz=99
A15A Johnson Ranch, 98.99 11 ⇓P P 13 35 39.4 -0.4
baz=99
ULM Lac du Bonnet 99.05 360 P P 13 35 40.0 0.0
comp=Z,16nm,0.9s,mb5.6,baz=350,slow=4.6,SNR=10
ULM PKKPbc PKKPbc 13 52 04.6 -1.6
comp=Z,3.8nm,0.7s,baz=245,slow=3.9,SNR=3.4
C09A Chrisman Ranch 99.06 15 ⇓P P 13 35 40.3 +0.1
baz=99
A16A West Butte Ran 99.19 10 ⇓P P 13 35 40.3 -0.4
baz=99,SNR=12
CASY Casey 99.20 169 P P 13 35 41.3 +1.3
comp=Z,33nm,1.4s,mb5.7
CASY LR LR
comp=Z,37µm,21.0s,MS6.9
B13A Whitefish 99.28 12 ⇑P P 13 35 41.1 -0.1
baz=99
A17A Triple J Farms 99.33 10 ⇓P P 13 35 41.0 -0.3
baz=99,SNR=45
F03A Seaside 99.50 19 ⇓P P 13 35 41.7 -0.4
baz=99
B14A Marquette Ranc 99.50 11 ⇑P P 13 35 42.0 -0.1
baz=99
MAW Mawson 99.60 188 *e*P Pdif 13 35 41.8 -0.8
comp=Z,29nm,1.2s
MAW LR
*e*SKS 13 46 18.5
MAW Mawson 99.60 188 *e*P Pdif 13 35 40.5 -2.1
comp=Z,23nm,1.4s
MAW LR LR
comp=Z,79µm,19.0s,MS7.2
MAW Mawson 99.60 188 P Pdif 13 35 40.4 -2.2
comp=Z,40nm,1.2s,baz=16,slow=8.3,SNR=27
MAW LR LR 14 15 40.1
comp=Z,51µm,19.1s,MS7.0,baz=3.7,slow=32
D08A Wollman Farm, 99.62 15 ⇑P Pdif 13 35 42.6 -0.1
baz=100
B15A Bradely Ranch, 99.66 11 ⇑P Pdif 13 35 42.1 -0.8
baz=100,SNR=23
B16A M & M Farms, S 99.70 10 ⇑P Pdif 13 35 42.8 -0.3
baz=100
C12B Naegeli Ranch, 99.73 13 ⇓P Pdif 13 35 43.6 +0.4
baz=100
F04A Amboy 99.81 18 ⇓P Pdif 13 35 43.6 0.0
baz=100
E07A Sunnyside 99.87 16 ⇑P Pdif 13 35 44.0 +0.1
baz=100
B17A L&G Farms, Che 99.95 10 ⇑P Pdif 13 35 43.7 -0.5
baz=100
B18A Beardsley Farm 100.00 9 ⇓P Pdif 13 35 43.7 -0.7
baz=100
HAWA Hanford 100.11 16 *e*Pdif Pdif 13 35 46.1 +1.3
comp=Z,29nm,1.6s
HAWA LR LR
comp=Z,16µm,21.0s,MS6.5
E08A Dider Farm, El 100.12 16 ⇑P Pdif 13 35 45.3 +0.4
baz=100
PKME Peaks-Kenny Pk 100.15 341 *e*Pdif Pdif 13 35 46.2 +1.1
comp=Z,62nm,1.4s
PKME LR LR
comp=Z,17µm,20.0s,MS6.6
C15A Salmond Ranch, 100.18 11 ⇑P Pdif 13 35 44.9 -0.3
baz=100,SNR=25
C16A Fuhringer Ranc 100.29 10 ⇑P Pdif 13 35 45.5 -0.2
baz=100
E09A Wood Farm, Sta 100.31 15 ⇑P Pdif 13 35 46.2 +0.4
baz=100
EGMT Eagleton 100.36 9 ⇓P Pdif 13 35 45.9 -0.2
baz=100,SNR=12
EGMT Eagleton 100.36 9 *e*Pdif Pdif 13 35 46.2 +0.2
comp=Z,126nm,1.7s
EGMT LR LR
comp=Z,15µm,20.0s,MS6.5
G04A Mulino 100.46 18 ⇑P Pdif 13 35 46.7 +0.3
baz=100
D13A Huson 100.51 12 ⇑P Pdif 13 35 46.2 -0.5
baz=100
DGMT Dagmar 100.52 5 ⇑P Pdif 13 35 46.7 -0.1
baz=100
DGMT Dagmar 100.52 5 *e*Pdif Pdif 13 35 47.3 +0.6
comp=Z,137nm,1.4s
DGMT LR LR
comp=Z,21µm,21.0s,MS6.6
D14A Greenough 100.69 12 ⇑P Pdif 13 35 47.1 -0.4
baz=100
COR Corvallis 100.80 19 PFAKE 13 36 00.0 +12
COR LR LR
comp=Z,8µm,20.0s,MS6.2
MSO Missoula 100.86 12 ⇑P Pdif 13 35 48.1 -0.2
baz=101
MSO Missoula 100.86 12 *e*Pdif Pdif 13 35 48.4 +0.2
comp=Z,12nm,1.2s
MSO LR LR
comp=Z,14µm,21.0s,MS6.4
D15A Lincoln 100.90 11 ⇓P Pdif 13 35 48.1 -0.3
baz=101
G06A Carlson Farm, 100.92 17 ⇑P Pdif 13 35 48.4 -0.1
baz=101
AGMN Agassiz Nation 101.00 360 *e*Pdif Pdif 13 35 48.8 -0.1
comp=Z,48nm,1.4s
AGMN LR LR
comp=Z,19µm,21.0s,MS6.6
H04A Detroit Lake 101.02 18 ⇑P Pdif 13 35 48.3 -0.6
baz=101
F10A Beach Ranch, E 101.03 15 ⇑P Pdif 13 35 49.0 0.0
baz=101
D16A Dana Ranch, Ca 101.07 11 ⇓P Pdif 13 35 49.0 -0.2
baz=101,SNR=6.0
D17A Six Diamond Ra 101.08 10 ⇑P Pdif 13 35 48.7 -0.5
baz=101,SNR=18
KIP Kipapa 101.13 57 PFAKE 13 36 00.0 +11
KIP LR LR
comp=Z,6µm,21.0s,MS6.1
D18A Linhart Farms, 101.17 9 ⇑P Pdif 13 35 49.2 -0.4
baz=101
E13A Victor 101.19 12 ⇓P Pdif 13 35 48.9 -0.8
baz=101
EYMN Ely 101.23 357 *e*Pdif Pdif 13 35 49.7 -0.2
comp=Z,29nm,1.0s
EYMN LR LR
comp=Z,19µm,20.0s,MS6.6
G08A Pilot Rock 101.28 16 ⇓P Pdif 13 35 50.0 -0.1
baz=101
E14A Clinton 101.34 12 ⇑P Pdif 13 35 50.0 -0.4
baz=101
E15A Deer Lodge 101.48 11 ⇑P Pdif 13 35 50.8 -0.2
baz=101,SNR=5.6
D20A Manuel Ranch, 101.49 8 ⇑P Pdif 13 35 50.6 -0.4
baz=101
E16A East Helena 101.53 11 ⇑P Pdif 13 35 51.8 +0.6
baz=101,SNR=8.9
F12A Elk City 101.64 13 ⇓P Pdif 13 35 51.2 -0.5
baz=102
E17A Martinsdale 101.73 10 ⇑P Pdif 13 35 52.6 +0.5
baz=102,SNR=12
E18A Harlowton 101.77 10 ⇑P Pdif 13 35 53.0 +0.7
baz=102,SNR=6.8
F13A Darby 101.79 13 ⇓P Pdif 13 35 51.7 -0.7
baz=102,SNR=15
LBNH Lisbon 101.81 342 PFAKE 13 36 00.0 +7.5
LBNH LR LR
comp=Z,18µm,21.0s,MS6.6
F14A Wisdom 101.95 12 ⇓P Pdif 13 35 52.5 -0.5
baz=102
E19A Rath Farm, Rou 102.02 9 ⇓P Pdif 13 35 53.2 -0.2
baz=102,SNR=17
E20A Meyer Farm, Mu 102.07 8 ⇑P Pdif 13 35 53.3 -0.3
baz=102
F15A Butte 102.07 11 ⇑P Pdif 13 35 53.9 +0.3
baz=102,SNR=12
LAO LASA Array 102.10 7 ⇑P Pdif 13 35 53.4 -0.3
baz=102
LAO LASA Array 102.10 7 *e*Pdif Pdif 13 35 54.8 +1.0
comp=Z,73nm,1.6s
LAO LR LR
comp=Z,18µm,20.0s,MS6.6
LONY Lake Ozonia 102.11 344 *e*Pdif Pdif 13 35 54.6 +0.8
comp=Z,82nm,1.4s
LONY LR LR
comp=Z,18µm,22.0s,MS6.6
E21A Keefer Ranch, 102.15 8 ⇑P Pdif 13 35 53.5 -0.4
baz=102
F16A Kennard Place, 102.27 11 ⇓P Pdif 13 35 54.0 -0.5
baz=102
I07A Izee 102.28 17 ⇓P Pdif 13 35 54.9 +0.4
baz=102
F17A Fitzpatrick Pl 102.30 10 ⇓P Pdif 13 35 55.0 +0.3
baz=102,SNR=8.3
BOZ Bozeman (W) 102.40 11 ⇑P Pdif 13 35 55.0 0.0
baz=102,SNR=19
BOZ Bozeman (W) 102.40 11 *e*Pdif Pdif 13 35 56.3 +1.2
comp=Z,36nm,1.6s
BOZ LR LR
comp=Z,12µm,21.0s,MS6.4
BOZ Bozeman (W) 102.40 11 *e*P Pdif 13 35 56.3 +1.2
BOZ pmax pmax
comp=Z,36nm,1.6s
BOZ MLR MLR
comp=Z,12µm,21.0s,MS6.4
F18A Big Timber 102.44 10 ⇑P Pdif 13 35 55.3 +0.1
baz=102
G14A Jackson 102.48 12 ⇑P Pdif 13 35 55.8 +0.3
baz=102
G13A Cobalt 102.48 13 ⇑P Pdif 13 35 55.5 +0.1
baz=102,SNR=8.5
F19A Roth Farm, Mol 102.60 9 ⇓P Pdif 13 35 56.5 +0.6
baz=102,SNR=9.4
NCB Newcomb 102.64 344 PFAKE 13 36 10.0 +14
NCB LR LR
comp=Z,15µm,22.0s,MS6.5
HUMO Hull Mountain 102.72 20 PFAKE 13 36 10.0 +14
HUMO LR LR
comp=Z,11µm,20.0s,MS6.4
G15A Dillon 102.73 12 ⇑P Pdif 13 35 57.0 +0.5
baz=103
F20A Billings 102.75 8 ⇑P Pdif 13 35 56.3 -0.3
baz=103
G16A Moss Hill, Enn 102.78 11 ⇑P Pdif 13 35 56.5 -0.3
baz=103
F21A Absaloka Mine, 102.86 8 ⇑P Pdif 13 35 57.0 -0.1
baz=103
G17A Pierce Place, 102.86 10 ⇓P Pdif 13 35 57.3 +0.2
baz=103
H12A Diamond D Ranc 102.88 13 ⇑P Pdif 13 35 56.9 -0.3
baz=103
COWI Conover 102.92 355 PFAKE 13 36 10.0 +13
COWI LR LR
comp=Z,28µm,20.0s,MS6.8
H13A Challis 102.98 13 ⇓P Pdif 13 35 57.0 -0.7
baz=103
G18A Lazy EL Ranch, 103.04 10 ⇑P Pdif 13 35 57.5 -0.4
baz=103
H14A Leadore 103.10 12 ⇑P Pdif 13 35 58.5 +0.3
baz=103,SNR=16
K05A Summer Lake 103.19 18 ⇓P Pdif 13 35 59.1 +0.5
baz=103
J08A Circle Bar Ran 103.22 16 ⇓P Pdif 13 35 58.9 +0.2
baz=103
H15A Lima 103.23 12 ⇓P Pdif 13 35 58.7 -0.1
baz=103
RLMT Red Lodge 103.27 9 ⇑P Pdif 13 35 58.8 -0.2
baz=103
RLMT Red Lodge 103.27 9 *e*Pdif Pdif 13 35 59.9 +0.9
comp=Z,35nm,1.7s
RLMT LR LR
comp=Z,15µm,20.0s,MS6.5
H16A Russell Place, 103.38 11 ⇓P Pdif 13 36 00.3 +0.8
baz=103
G21A Lodge Grass 103.44 8 ⇓P Pdif 13 35 59.6 -0.1
baz=103
I12A Atlanta 103.55 14 ⇑P Pdif 13 36 00.4 +0.2
baz=103,SNR=9.5
YBH Yreka Blue Hor 103.59 20 Pdiff Pdif 13 36 02.4 +2.0
comp=Z,1.0nm,0.6s,baz=155,slow=17,SNR=3.1
YBH Yreka Blue Hor 103.59 20 P Pdif 13 36 02.4 +2.0
YBH pmax pmax
comp=Z,1.0nm,0.6s
I13A Wildhorse Cree 103.64 13 ⇑P Pdif 13 36 01.0 +0.5
baz=104
LKWY Lake 103.65 10 *e*Pdif Pdif 13 36 02.6 +1.9
comp=Z,14nm,0.8s
LKWY LR LR
comp=Z,24µm,20.0s,MS6.7
LKWY Lake 103.65 10 *e*P Pdif 13 36 02.6 +2.0
LKWY pmax pmax
comp=Z,14nm,0.8s
LKWY MLR MLR
comp=Z,24µm,20.0s,MS6.7
I14A Mackay 103.75 13 ⇓P Pdif 13 36 01.3 +0.2
baz=104
MFID Camas Ranch 103.77 14 ⇓P Pdif 13 36 01.4 +0.2
baz=104
H17A Grant Village 103.79 10 ⇓P Pdif 13 36 01.9 +0.7
baz=104
I15A Monteview 103.86 12 ⇑P Pdif 13 36 01.6 +0.1
baz=104
HLID Hailey 103.92 13 ⇓P Pdif 13 36 02.9 +1.1
baz=104,SNR=8.2
HLID Hailey 103.92 13 *e*Pdif Pdif 13 36 02.6 +0.8
comp=Z,21nm,1.6s
HLID LR LR
comp=Z,10µm,19.0s,MS6.4
POHA Pohakuloa 103.98 56 PFAKE 13 36 10.0 +7.9
POHA LR LR
comp=Z,6µm,20.0s,MS6.1
H21A Big Horn, Sher 104.05 8 ⇑P Pdif 13 36 02.7 +0.3
baz=104
WVOR Wild Horse Val 104.05 17 *e*Pdif Pdif 13 36 02.9 +0.5
comp=Z,3.8nm,0.8s
WVOR LR LR
comp=Z,12µm,22.0s,MS6.4
WVOR Wild Horse Val 104.05 17 *e*P Pdif 13 36 02.9 +0.5
WVOR pmax pmax
comp=Z,4.0nm,0.8s
WVOR MLR MLR
comp=Z,12µm,22.0s,MS6.4
H20A Greybull 104.07 9 ⇑P Pdif 13 36 02.4 -0.1
baz=104
MOD Modoc 104.11 18 Pdif Pdif 13 36 04.5 +1.8
comp=Z,8.2nm,0.9s
MOD LR LR
comp=Z,9µm,22.0s,MS6.2
J13A Cove Ranch, Pi 104.12 13 ⇑P Pdif 13 36 03.1 +0.3
baz=104
I16A Newdale 104.15 11 ⇓P Pdif 13 36 03.0 +0.2
baz=104
I17A Pilgrim Ck. 104.25 11 ⇑P Pdif 13 36 03.6 +0.3
baz=104
J14A Carey 104.32 13 ⇓P Pdif 13 36 03.3 -0.3
baz=104
J15A Blackfoot 104.45 12 ⇑P Pdif 13 36 04.0 -0.2
baz=104
I20A Worland 104.58 9 ⇓P Pdif 13 36 05.7 +0.9
baz=104
I18A Diamond G Ranc 104.58 10 ⇑P Pdif 13 36 05.1 +0.3
baz=104
WDC Whiskeytown Da 104.70 20 PFAKE 13 36 20.0 +15
WDC LR LR
comp=Z,9µm,22.0s,MS6.3
J16A Bone 104.71 11 ⇑P Pdif 13 36 05.9 +0.6
baz=104
BINY Binghamton 104.73 344 PFAKE 13 36 20.0 +15
BINY LR LR
comp=Z,21µm,22.0s,MS6.6
J17A Brown Place, J 104.78 11 ⇓P Pdif 13 36 06.0 +0.3
baz=105
I21A Big Trails, Te 104.82 8 ⇓P Pdif 13 36 05.9 0.0
baz=105
RSSD Black Hills 104.85 6 *e*Pdif Pdif 13 36 05.8 -0.2
comp=Z,26nm,1.4s
RSSD LR LR
comp=Z,21µm,22.0s,MS6.6
RSSD Black Hills 104.85 6 *e*P Pdif 13 36 05.8 -0.2
RSSD pmax pmax
comp=Z,26nm,1.4s
RSSD MLR MLR
comp=Z,21µm,22.0s,MS6.6
SYO Syowa Base 104.88 195 ⇓ *e*Pdif Pdif 13 36 07.2 +1.1
J18A Kendall Valley 105.03 10 ⇑P Pdif 13 36 07.0 +0.2
baz=105
K15A Arbon 105.12 12 ⇑P Pdif 13 36 07.2 +0.1
baz=105
K14A Jones Ranch, D 105.14 13 ⇓P Pdif 13 36 07.4 +0.2
baz=105
K16A Soda Springs 105.15 12 ⇓P Pdif 13 36 07.6 +0.3
baz=105
AHID Auburn Hatcher 105.30 11 PFAKE 13 40 30.0 +8.1
AHID LR LR
comp=Z,12µm,20.0s,MS6.4
K17A Gardner Place, 105.34 11 ⇑P Pdif 13 36 06.6 -1.5
baz=105
BW06 Boulder Array 105.54 10 ⇑P Pdif 13 36 09.4 +0.3
baz=105
BW06 Boulder Array 105.54 10 PFAKE 13 40 30.0 +7.6
BW06 LR LR
comp=Z,19µm,21.0s,MS6.6
PDAR Pinedale Array 105.54 10 Pdiff Pdif 13 36 10.9 +1.9
comp=Z,0.4nm,0.5s,baz=40,slow=2.5,SNR=6.4
PDAR PKiKP PKiKP 13 40 20.3 -2.1
comp=Z,5.3nm,0.8s,baz=40,slow=1.5,SNR=11
PDAR PKKPbc PKKPbc 13 51 45.5 -1.7
comp=Z,1.5nm,0.7s,baz=174,slow=3.0,SNR=7.0
ECSD EROS Data Cent 105.57 0 *e*Pdif Pdif 13 36 09.3 +0.1
comp=Z,12nm,1.1s
ECSD LR LR
comp=Z,11µm,21.0s,MS6.4
K19A Absolon Red Bu 105.58 10 ⇑P Pdif 13 36 09.6 +0.3
baz=105
K18A Toltan Ranch, 105.59 10 ⇓P Pdif 13 36 10.1 +0.8
baz=105
L14A Malta 105.62 13 ⇑P Pdif 13 36 09.5 +0.1
baz=105
ERPA Erie 105.64 347 PFAKE 13 40 30.0 +7.4
ERPA LR LR
comp=Z,18µm,19.0s,MS6.6
L15A Malad City 105.81 12 ⇑P Pdif 13 36 10.8 +0.5
baz=106
K20A Yellowstone Ra 105.82 9 ⇑P Pdif 13 36 10.8 +0.5
baz=106
L17A Cokeville 105.98 11 ⇓P Pdif 13 36 11.2 +0.2
baz=106
HOPS Hopland 106.00 21 PFAKE 13 40 30.0 +6.7
HOPS LR LR
comp=Z,10µm,22.0s,MS6.3
AAM Ann Arbor 106.07 350 PFAKE 13 40 30.0 +6.6
AAM LR LR
comp=Z,22µm,22.0s,MS6.7
JFWS Jewell Farm 106.17 355 PFAKE 13 40 30.0 +6.5
JFWS LR LR
comp=Z,29µm,19.0s,MS6.8
L19A Farson 106.22 10 ⇓P Pdif 13 36 12.0 -0.1
baz=106
BMN Battle Mountai 106.28 16 PFAKE 13 40 40.0 +16
BMN LR LR
comp=Z,11µm,20.0s,MS6.4
L18A Fontenelle, Gr 106.29 11 ⇓P Pdif 13 36 12.5 +0.1
baz=106
M15A Larsen Ranch, 106.32 13 ⇑P Pdif 13 36 12.4 -0.1
baz=106
HWUT Hardware Ranch 106.34 12 Pdif Pdif 13 36 14.2 +1.6
comp=Z,18nm,1.2s
HWUT LR LR
comp=Z,14µm,22.0s,MS6.5
DRV Dumont d'Urvil 106.35 160 Pdif Pdif 13 36 09.0 -3.6
DRV Dumont d'Urvil 106.35 160 PP PP 13 40 37.0 0.0
DRV SKKS SKSac 13 46 48.0 -1.6
DRV SP SP 13 49 50.0 -1.4
DRV SS SS 13 55 38.0 +0.2
L20A Wamsutter 106.46 9 ⇓P Pdif 13 36 13.6 +0.4
baz=106
M17A Scullys Gap (B 106.63 11 ⇓P Pdif 13 36 14.4 +0.5
baz=106
L22A Ellis Ranch, M 106.68 8 ⇑P Pdif 13 36 15.5 +1.4
baz=106
L23A Garrett 106.68 7 ⇓P Pdif 13 36 14.0 -0.1
baz=106
WCN Washoe City 106.69 19 ⇑P Pdif 13 36 15.6 +1.5
baz=106
M18A Lyman 106.77 11 ⇑P Pdif 13 36 14.8 +0.3
baz=107
L24A Wheatland 106.83 7 ⇑P Pdif 13 36 15.2 +0.5
baz=107
MCCM Marconi Confer 106.83 22 PFAKE 13 40 40.0 +15
MCCM LR LR
comp=Z,7µm,20.0s,MS6.2
M19A Rock Springs 106.83 10 ⇑P Pdif 13 36 16.1 +1.3
baz=107
N15A Stansbury Isla 106.86 13 ⇑P Pdif 13 36 15.6 +0.6
baz=107
M21A Separation Pea 106.98 9 ⇑P Pdif 13 36 16.3 +0.8
baz=107
M20A Sweetwater, Wa 106.99 9 ⇑P Pdif 13 36 16.2 +0.7
baz=107
O12A Currie 107.01 15 ⇑P Pdif 13 36 16.3 +0.8
baz=107
N16A Rees Ranch, Co 107.06 12 ⇓P Pdif 13 36 16.9 +1.1
baz=107
N17A Moffit Pass 107.11 11 ⇓P Pdif 13 36 17.0 +1.0
baz=107
M22A Cedar Creek Ra 107.28 8 ⇓P Pdif 13 36 17.4 +0.7
baz=107
O13A Hicks Ranch, I 107.30 14 ⇑P Pdif 13 36 17.8 +0.9
baz=107
SCIA State Center 107.34 358 PFAKE 13 40 40.0 +14
SCIA LR LR
comp=Z,34µm,20.0s,MS6.9
M24A Cheyenne 107.41 7 ⇓P Pdif 13 36 17.9 +0.6
baz=107
N19A John Jarvie Ra 107.43 10 ⇓P Pdif 13 36 18.0 +0.5
baz=107
O15A The Old Anders 107.46 13 ⇑P Pdif 13 36 18.3 +0.7
baz=107
P11A Circle Ranch, 107.47 16 ⇑P Pdif 13 36 18.6 +1.0
baz=107
DUG Dugway 107.48 13 ⇑P Pdif 13 36 18.8 +1.2
baz=107
DUG Dugway 107.48 13 *e*PKiKP PKiKP 13 40 22.4 -3.7
DUG LR LR
comp=Z,13µm,20.0s,MS6.5
N20A Spence Gulch, 107.62 9 ⇑P Pdif 13 36 19.9 +1.7
baz=107
CMB Columbia Colle 107.69 20 PFAKE 13 40 40.0 +13
CMB LR LR
comp=Z,7µm,20.0s,MS6.2
O16A Springville 107.71 12 ⇓P Pdif 13 36 19.4 +0.7
baz=108
P12A McGill 107.73 15 ⇑P Pdif 13 36 19.4 +0.6
baz=108
N21A Black Mountain 107.80 9 ⇑P Pdif 13 36 19.5 +0.5
baz=108
N23A Red Feather La 107.86 8 ⇑P Pdif 13 36 20.0 +0.7
baz=108
O17A Robinson Place 107.86 12 ⇓P Pdif 13 36 20.0 +0.7
baz=108
N22A Wattenberg Ran 107.89 8 ⇑P Pdif 13 36 19.7 +0.2
baz=108
NVAR Mina Array Bea 107.90 18 Pdiff Pdif 13 36 23.7 +4.2
comp=Z,1.1nm,0.6s,baz=329,slow=4.3,SNR=7.5
NVAR PKiKP PKiKP 13 40 26.6 -0.3
comp=Z,4.3nm,0.8s,baz=301,slow=1.5,SNR=14
NVAR PKKPbc PKKPbc 13 51 39.6 -0.2
comp=Z,1.2nm,0.6s,baz=173,slow=5.2,SNR=7.0
NVAR PKKP PKKPbc 13 51 53.0 +13
comp=Z,3.4nm,0.9s,baz=184,slow=4.7,SNR=6.9
O18A Roosevelt 107.91 11 ⇑P Pdif 13 36 19.9 +0.3
baz=108
P13A Bates Ranch, G 107.95 14 ⇑P Pdif 13 36 20.4 +0.7
baz=108
MCWV Mont Chateau 107.99 347 PFAKE 13 40 40.0 +13
MCWV LR LR
comp=Z,30µm,20.0s,MS6.8
Q10A Clear Creek Ra 108.01 16 ⇑P Pdif 13 36 21.2 +1.2
baz=108
P14A Drum Mountains 108.01 14 ⇑P Pdif 13 36 20.7 +0.7
baz=108
O19A Miners Draw (B 108.02 10 ⇑P Pdif 13 36 20.8 +0.8
baz=108
N24A Carr 108.04 7 ⇓P Pdif 13 36 21.1 +0.9
baz=108
OGNE Ogallala 108.16 5 ⇓P Pdif 13 36 21.2 +0.5
baz=108
OGNE Ogallala 108.16 5 PFAKE 13 40 40.0 +13
OGNE LR LR
comp=Z,18µm,20.0s,MS6.6
Q11A Duckwater 108.16 16 ⇓P Pdif 13 36 21.5 +0.8
baz=108
Q12A Willow Creek R 108.17 15 ⇑P Pdif 13 36 21.7 +1.0
baz=108
P15A Leamington 108.19 13 ⇓P Pdif 13 36 20.9 +0.1
baz=108
P16A Fountain Green 108.26 12 ⇓P Pdif 13 36 22.1 +1.0
baz=108
O20A White River Ci 108.31 10 ⇓P Pdif 13 36 22.1 +0.8
baz=108
O21A Pagoda 108.34 9 ⇑P Pdif 13 36 22.4 +0.9
baz=108
Q13A Wheeler Ranch, 108.42 14 ⇑P Pdif 13 36 23.0 +1.1
baz=108
HDIL Hopedale 108.44 354 PFAKE 13 40 40.0 +12
HDIL LR LR
comp=Z,19µm,21.0s,MS6.6
P18A Preston Nutter 108.50 11 ⇓P Pdif 13 36 23.1 +0.9
baz=108

MLAC	Mammoth Lakes	108.50	19	⇓P		Pdif	13 36 23.5	+1.3	
	baz=108								
O22A	Kremmling	108.51	8	⇑P		Pdif	13 36 22.8	+0.6	
	baz=108								
TPH	Tonopah	108.51	17	PFAKE			13 40 40.0	+12	
TPH				LR	LR				
	comp=Z,11µm,20.0s,MS6.4								
O23A	Lake Granby, G	108.53	8	⇑P		Pdif	13 36 23.0	+0.7	
	baz=108								
R10A	Warm Springs	108.54	16	⇑P		Pdif	13 36 23.3	+0.9	
	baz=108								
SAO	San Andreas Ge	108.55	21	PFAKE			13 40 40.0	+12	
SAO				LR	LR				
	comp=Z,7µm,20.0s,MS6.2								
Q14A	Sevier Lake (B	108.55	14	⇓P		Pdif	13 36 23.8	+1.4	
	baz=108								
P17A	Butcher Ranch,	108.56	12	⇓P		Pdif	13 36 23.9	+1.5	
	baz=108								
R11A	Troy Canyon, C	108.65	16	⇑P		Pdif	13 36 23.5	+0.6	
	baz=108								
P19A	Cripple Cowboy	108.69	10	⇓P		Pdif	13 36 24.1	+1.0	
	baz=108								
O24A	Longmont	108.72	7	⇑P		Pdif	13 36 24.5	+1.3	
	baz=108								
Q15A	Fillmore	108.72	13	⇑P		Pdif	13 36 24.4	+1.2	
	baz=109								
S10A	Tonopah Range,	108.81	17	⇓P		Pdif	13 36 24.6	+1.0	
	baz=109								
O25A	Wiggins	108.82	6	⇓P		Pdif	13 36 24.3	+0.7	
	baz=109								
CBN	Corbin	108.85	344	PFAKE			13 40 40.0	+11	
CBN				LR	LR				
	comp=Z,20µm,22.0s,MS6.6								
R12A	Pony Springs,	108.90	15	⇓P		Pdif	13 36 24.5	+0.5	
	baz=109								
P20A	De Beque	108.91	10	⇓P		Pdif	13 36 25.2	+1.2	
	baz=109								
SRU	San Rafael	108.95	12	⇓P		Pdif	13 36 25.0	+0.8	
	baz=109								
ISCO	Idaho Springs	108.98	8	⇓P		Pdif	13 36 25.8	+1.5	
	baz=109								
ISCO	Idaho Springs	108.98	8	PFAKE			13 40 40.0	+11	
ISCO				LR	LR				
	comp=Z,21µm,22.0s,MS6.7								
RPZ	Rata Peaks	108.99	130	PKiKP	PKiKP		13 40 27.1	-1.4	
	comp=Z,7.5nm,0.5s,baz=0.0,slow=0.0,SNR=5.0								
Q16A	Castle Valley	109.02	12	⇓P		Pdif	13 36 25.4	+0.9	
	baz=109								
P22A	Eagle	109.04	8	⇑P		Pdif	13 36 25.8	+1.2	
	baz=109								
R13A	O'Grain Ranch,	109.18	15	⇑P		Pdif	13 36 26.2	+1.0	
	baz=109								
TIN	Tinemaha	109.21	18	⇓P		Pdif	13 36 25.1	-0.3	
	baz=109								
MVU	Marysvale	109.23	13	PFAKE			13 40 40.0	+11	
MVU				LR	LR				
	comp=Z,14µm,21.0s,MS6.5								
R14A	James Farms, M	109.27	14	⇓P		Pdif	13 36 26.8	+1.2	
	baz=109								
S11A	Rachel	109.29	16	⇑P		Pdif	13 36 26.4	+0.7	
	baz=109								
Q19A	Hogan Spring (	109.31	11	⇓P		Pdif	13 36 27.3	+1.5	
	baz=109								
P24A	Kohler Place,	109.33	7	⇑P		Pdif	13 36 27.4	+1.5	
	baz=109								
P23A	Jefferson	109.37	8	⇓P		Pdif	13 36 26.9	+0.9	
	baz=109								
AFI	Afiamalu	109.41	95	PFAKE			13 40 40.0	+10	
AFI				LR	LR				
	comp=Z,6µm,22.0s,MS6.1								
P25A	Willow Gulch B	109.41	6	⇑P		Pdif	13 36 27.8	+1.5	
	baz=109								
Q20A	Ridgley Place,	109.46	10	⇑P		Pdif	13 36 28.1	+1.6	
	baz=109								
GRAC	Grapevine Rang	109.49	18	⇑P		Pdif	13 36 28.3	+1.7	
	baz=109								
R15A	Junction	109.50	13	⇓P		Pdif	13 36 27.9	+1.3	
	baz=109								
S12A	Delamar Landin	109.53	16	⇓P		Pdif	13 36 28.1	+1.4	
	baz=109								
R16A	Teasdale	109.58	13	⇑P		Pdif	13 36 28.2	+1.2	
	baz=109								
R17A	Hanksville Air	109.59	12	⇓P		Pdif	13 36 27.9	+0.8	
	baz=109								
RCTC	Rector, Farmer	109.63	19	⇓P		Pdif	13 36 28.5	+1.3	
	baz=110								
Q21A	Lamborn Mesa,	109.68	9	⇑P		Pdif	13 36 28.9	+1.5	
	baz=110								
Q22A	Crested Butte,	109.74	9	⇑P		Pdif	13 36 29.6	+1.9	
	baz=110								
S14A	Cedar City	109.75	14	⇑P		Pdif	13 36 28.1	+0.3	
	baz=110								
R18A	Canyonlands Na	109.77	11	⇑P		Pdif	13 36 28.4	+0.6	
	baz=110								
S13A	Holt Ranch, En	109.78	15	⇓P		Pdif	13 36 29.1	+1.2	
	baz=110								
T11A	Corn Creek, Al	109.80	16	⇑P		Pdif	13 36 28.8	+0.8	
	baz=110								
CWC	Cottonwood Cre	109.83	19	⇑P		Pdif	13 36 29.2	+1.1	
	baz=110								
Q23A	Hartsel	109.83	8	⇓P		Pdif	13 36 28.8	+0.7	
	baz=110								
Q24A	Divide	109.85	7	⇑P		Pdif	13 36 29.3	+1.1	
	baz=110								
Q25A	Bedland, Calha	110.00	7	⇑P		Pdif	13 36 29.7	+0.9	
	baz=110								
S16A	Weppner Ranch,	110.11	13	⇓P		Pdif	13 36 30.3	+1.0	
	baz=110								
VES	Vestal, Richgr	110.11	20	⇓P		Pdif	13 36 30.2	+0.9	
	baz=110								
DAC	Darwin (Calif)	110.11	18	PFAKE			13 40 40.0	+8.9	
DAC				LR	LR				
	comp=Z,14µm,21.0s,MS6.5								
FURC	Furnace Creek,	110.12	18	⇑P		Pdif	13 36 30.6	+1.2	
	baz=110								
R21A	Cimarron	110.14	9	⇑P		Pdif	13 36 30.9	+1.4	
	baz=110								
BBSR	BB Station	110.16	332	PFAKE			13 40 40.0	+8.7	
BBSR				LR	LR				
	comp=Z,9µm,21.0s,MS6.3								
KSU1	Kansas State U	110.20	0	PFAKE			13 40 40.0	+8.8	
KSU1				LR	LR				
	comp=Z,12µm,20.0s,MS6.5								
R20A	Redvale	110.20	10	⇓P		Pdif	13 36 31.0	+1.2	
	baz=110								
T13A	Saint George	110.31	15	⇓P		Pdif	13 36 31.3	+1.1	
	baz=110								
U10A	Ash Meadows, A	110.31	17	⇑P		Pdif	13 36 31.8	+1.6	
	baz=110								
S17A	Black Ridge (B	110.34	12	⇑P		Pdif	13 36 32.0	+1.6	
	baz=110								
MPMC	Manual Prospec	110.34	18	⇑P		Pdif	13 36 32.0	+1.7	
	baz=110								
CBKS	Cedar Bluff	110.41	3	P		Pdif	13 36 31.9	+1.2	
	baz=110								
CBKS	Cedar Bluff	110.41	3	PFAKE			13 40 40.0	+8.4	
CBKS				LR	LR				
	comp=Z,17µm,20.0s,MS6.6								
WCI	Wyandotte Cave	110.43	352	PFAKE			13 40 40.0	+8.3	
WCI				LR	LR				
	comp=Z,16µm,21.0s,MS6.6								
T14A	Hurricane	110.44	14	⇓P		Pdif	13 36 32.0	+1.1	
	baz=110								
ISA	Isabella	110.45	19	⇑P		Pdif	13 36 32.0	+1.1	
	baz=110								
SNZO	South Karori	110.46	126	PFAKE			13 40 40.0	+8.6	
SNZO				LR	LR				
	comp=Z,20µm,22.0s,MS6.6								
BLA	Blacksburg	110.47	346	PFAKE			13 40 40.0	+8.2	
BLA				LR	LR				
	comp=Z,14µm,20.0s,MS6.5								
S19A	Harvey Farm, M	110.51	11	⇑P		Pdif	13 36 32.2	+1.1	
	baz=110								
S20A	Disappointment	110.55	10	⇑P		Pdif	13 36 32.5	+1.2	
	baz=110								
R24A	Sanders Place,	110.58	7	⇓P		Pdif	13 36 32.7	+1.3	
	baz=110								
T15A	Red Dirt Ranch	110.63	14	⇓P		Pdif	13 36 32.9	+1.3	
	baz=110								
U12A	Valley of Fire	110.73	16	⇓P		Pdif	13 36 33.4	+1.3	
	baz=111								
PKM	Peak Mountain	110.77	20	⇓P		Pdif	13 36 32.8	+0.5	
	baz=111								
S21A	Coal Bank Pass	110.80	10	⇓P		Pdif	13 36 33.0	+0.6	
	baz=111								
SHOC	Shoshone	110.81	17	⇓P		Pdif	13 36 33.3	+0.8	
	baz=111								
T16A	Glen Canyon Da	110.84	13	⇓P		Pdif	13 36 33.5	+0.9	
	baz=111								
LRMC	Laurel Mountai	110.84	19	⇓P		Pdif	13 36 34.0	+1.4	
	baz=111								
ARVC	Arvin	110.85	20	⇓P		Pdif	13 36 33.4	+0.7	
	baz=111								
S22A	4UR Ranch, Cre	110.85	9	⇓P		Pdif	13 36 33.5	+0.8	
	baz=111								
T17A	Navajo Res., N	110.96	12	⇓P		Pdif	13 36 34.3	+1.2	
	baz=111								
T18A	Mexican Hat	110.99	12	⇑P		Pdif	13 36 32.6	-0.6	
	baz=111								
SDCO	Great Sand Dun	111.02	8	⇑P		Pdif	13 36 33.5	+0.1	
	baz=111								
SDCO	Great Sand Dun	111.02	8	Pdif		Pdif	13 36 31.7	-1.7	
SDCO				LR	LR				
	comp=Z,18µm,20.0s,MS6.7								
U14A	Mt Trumbull	111.04	14	⇓P		Pdif	13 36 34.6	+1.1	
	baz=111								
CCM	Cathedral Cave	111.08	356	PFAKE			13 40 40.0	+7.1	
CCM				LR	LR				
	comp=Z,27µm,20.0s,MS6.8								
V11A	Goodsprings	111.08	17	⇑P		Pdif	13 36 35.0	+1.4	
	baz=111								
MVCO	Mesa Verde	111.14	10	⇓P		Pdif	13 36 35.1	+1.2	
	baz=111								
MVCO	Mesa Verde	111.14	10	PFAKE			13 40 40.0	+7.0	
MVCO				LR	LR				
	comp=Z,15µm,20.0s,MS6.6								
S24A	Houchin Ranch,	111.16	8	⇓P		Pdif	13 36 34.8	+0.8	
	baz=111								
S25A	Robets Cordova	111.22	7	⇓P		Pdif	13 36 35.2	+0.9	
	baz=111								
U15A	North Rim	111.22	14	⇓P		Pdif	13 36 32.6	-1.7	
	baz=111								
GSC	Goldstone	111.24	18	⇑P		Pdif	13 36 35.2	+0.8	
	baz=111								
EDW2	Edwards Air Fo	111.32	19	⇑P		Pdif	13 36 35.8	+1.0	
	baz=111								
V12A	Nelson	111.33	16	⇑P		Pdif	13 36 35.6	+0.9	
	baz=111								
TUQ	Turquoise Moun	111.34	17	⇓P		Pdif	13 36 36.0	+1.2	
	baz=111								
OSI	Osito Adit	111.36	20	⇓P		Pdif	13 36 34.7	-0.2	
	baz=111								
V13A	Grand Canyon W	111.41	15	⇑P		Pdif	13 36 36.9	+1.8	
	baz=111								
T22A	Edith	111.56	9	⇑P		Pdif	13 36 36.9	+1.1	
	baz=111								
T23A	Casias Ranch,	111.65	8	⇓P		Pdif	13 36 37.1	+0.9	
	baz=112								
U18A	Rough Rock, Ch	111.69	12	⇓P		Pdif	13 36 37.5	+1.2	
	baz=112								
U16A	Tuba City	111.72	13	⇓P		Pdif	13 36 37.6	+1.1	
	baz=112								
W12A	Cal New Ari	111.73	16	⇓P		Pdif	13 36 37.3	+0.7	
	baz=112								
T25A	Trinidad	111.74	7	⇓P		Pdif	13 36 37.3	+0.7	
	baz=112								
CNNC	Cliffs of the	111.80	344	PFAKE			13 40 50.0	+16	
CNNC				LR	LR				
	comp=Z,23µm,20.0s,MS6.8								
V14A	Boquillas Ranc	111.81	15	⇓P		Pdif	13 36 38.2	+1.2	
	baz=112								
V15A	Kaibab Nationa	111.83	14	⇑P		Pdif	13 36 38.5	+1.4	
	baz=112								
U19A	Dine' College,	111.92	11	⇓P		Pdif	13 36 38.9	+1.5	
	baz=112								
U20A	Newcomb	111.95	11	⇑P		Pdif	13 36 39.4	+1.9	
	baz=112								
BFSC	Mount Baldy Ra	112.01	19	⇑P		Pdif	13 36 39.7	+1.9	
	baz=112								
GMRC	Granite Mounta	112.03	17	⇑P		Pdif	13 36 39.5	+1.6	
	baz=112								
U21A	Nageezi	112.03	10	⇑P		Pdif	13 36 39.3	+1.4	
	baz=112								
BBRC	Big Bear Solar	112.19	18	⇓P		Pdif	13 36 39.9	+1.3	
	baz=112								
U22A	Llaves	112.20	9	⇓P		Pdif	13 36 40.0	+1.4	
	baz=112								
W14A	Seligman	112.22	15	⇑P		Pdif	13 36 39.8	+1.1	
	baz=112								
WUAZ	Wupatki	112.28	13	⇑P		Pdif	13 36 40.3	+1.3	
	baz=112								
WUAZ	Wupatki	112.28	13	PFAKE			13 40 50.0	+15	
WUAZ				LR	LR				
	comp=Z,14µm,20.0s,MS6.5								
V17A	Tonalea, Kykot	112.30	13	⇓P		Pdif	13 36 40.2	+1.1	
	baz=112								
TRIS	Tristan da Cun	112.30	239	PFAKE			13 40 50.0	+15	
TRIS				LR	LR				
	comp=Z,33µm,19.0s,MS7.0								
U23A	El Rito	112.33	9	⇓P		Pdif	13 36 39.5	+0.2	
	baz=112								
V18A	Gamado	112.36	12	⇓P		Pdif	13 36 40.3	+0.9	
	baz=112								
W15A	Williams	112.43	14	⇓P		Pdif	13 36 40.5	+0.8	
	baz=112								
U25A	Circle Dot Ran	112.47	7	⇑P		Pdif	13 36 39.7	-0.1	
	baz=112								
V19A	Window Rock	112.51	11	⇓P		Pdif	13 36 39.8	-0.2	
	baz=112								
V20A	Brimhall	112.53	11	⇑P		Pdif	13 36 39.8	-0.2	
	baz=112								
CIS	Catalina Islan	112.58	20	⇓P		Pdif	13 36 40.5	+0.2	
	baz=112								
V21A	Milan	112.65	10	⇑P		Pdif	13 36 40.9	+0.2	
	baz=112								
X13A	Yucca	112.65	16	⇑P		Pdif	13 36 40.6	0.0	
	baz=112								
W16A	Flagstaff	112.66	13	⇓P		Pdif	13 36 40.9	+0.2	
	baz=112								
BELC	Belle Mtn. Jos	112.68	18	⇑P		Pdif	13 36 41.7	+0.9	
	baz=112								
WVT	Waverly	112.69	353	ePKiKP	PKiKP		13 40 35.0	-1.0	
WVT				LR	LR				
	comp=Z,19µm,19.0s,MS6.7								
IRM	Iron Mountain	112.75	17	⇑P		Pdif	13 36 40.8	-0.3	
	baz=113								
W17A	Winslow	112.84	13	⇑P		Pdif	13 36 41.7	+0.3	
	baz=113								
PDMCI	Parker Dam,Lak	112.86	16	⇓P		Pdif	13 36 42.0	+0.5	
	baz=113								
V23A	Ortiz Mt. (NFS	112.91	9	⇑P		Pdif	13 36 42.9	+1.1	
	baz=113								
PFO	Pinyon Flat Ob	112.93	18	⇓P		Pdif	13 36 43.5	+1.6	
	baz=113								
SCI	San Clemente I	112.94	20	⇑P		Pdif	13 36 42.2	+0.2	
	baz=113								
W18A	Petrified Fore	112.98	12	⇑P		Pdif	13 36 42.9	+0.8	
	baz=113								
V25A	Rancho No Teng	113.00	7	⇓P		Pdif	13 36 43.4	+1.2	
	baz=113								
V24A	Rampart Ranch,	113.04	8	⇑P		Pdif	13 36 43.6	+1.2	
	baz=113								
W19A	Sanders	113.05	12	⇑P		Pdif	13 36 43.5	+1.1	
	baz=113								
X15A	Humboldt	113.11	14	⇑P		Pdif	13 36 43.6	+0.9	
	baz=113								
V26A	Tequesquite Ra	113.13	7	⇑P		Pdif	13 36 43.8	+1.0	
	baz=113								
BC3	Big Chuckawall	113.15	17	⇑P		Pdif	13 36 44.4	+1.5	
	baz=113								
W20A	Ramah	113.18	11	⇑P		Pdif	13 36 44.2	+1.2	
	baz=113								
Y12C	Blythe	113.29	16	⇓P		Pdif	13 36 44.4	+0.9	
	baz=113								
NVL	N'lazarevskaya	113.31	200	ePKIKP	PKiKP		13 40 37.8	+1.9	
NVL				eS	SKSac		13 47 15.1	-3.4	
NVL				pmax	pmax				
	comp=Z,20nm,0.9s								
W21A	San Fidel	113.32	10	⇑P		Pdif	13 36 44.3	+0.6	
	baz=113								
MAIT	Maitri	113.34	200	ePKPab	PP		13 41 31.4	+4.0	
MAIT				e			13 50 49.6		
XMAS	Kiritimati	113.35	72	PFAKE			13 40 50.0	+12	
XMAS				LR	LR				
	comp=Z,5µm,20.0s,MS6.1								
Y14A	Wickenburg	113.47	15	⇑P		Pdif	13 36 45.3	+1.0	
	baz=113								
X18A	Snowflake	113.51	12	⇓P		Pdif	13 36 45.0	+0.5	
	baz=113								
W24A	Lazy 6 Ranch,	113.53	8	⇑P		Pdif	13 36 44.3	-0.2	
	baz=113								
W25A	X Bar L Ranch,	113.63	7	⇓P		Pdif	13 36 46.3	+1.3	
	baz=114								
ANMO	Albuquerque	113.65	9	ePKiKP	PKiKP		13 40 40.5	+2.6	
ANMO				LR	LR				
	comp=Z,13µm,19.0s,MS6.6								
X20A	Quemado	113.75	11	⇓P		Pdif	13 36 47.6	+2.1	
	baz=114								
W26A	Owens Ranch, T	113.83	7	⇑P		Pdif	13 36 47.2	+1.3	
	baz=114								
Y16A	Circle Bar Ran	113.85	14	⇑P		Pdif	13 36 47.8	+1.8	
	baz=114								
GLA	Glamis	113.88	17	⇑P		Pdif	13 36 47.1	+1.0	
	baz=114								
W27A	Bowe Ranch, En	113.92	6	⇓P		Pdif	13 36 47.4	+1.1	
	baz=114								
X21A	Alamocita Cree	113.96	10	⇓P		Pdif	13 36 47.5	+1.0	
	baz=114								
Z13A	Yuma Proving G	114.03	16	⇑P		Pdif	13 36 48.4	+1.6	
	baz=114								
Z14A	Wintersburg	114.03	15	⇑P		Pdif	13 36 47.9	+1.1	
	baz=114								
Y17A	Roosevelt	114.15	13	⇓P		Pdif	13 36 47.9	+0.5	
	baz=114								
X24A	Lazy VL Ranch,	114.17	8	⇓P		Pdif	13 36 48.9	+1.5	
	baz=114								
Y19A	Nutrioso	114.19	12	⇓P		Pdif	13 36 49.2	+1.7	
	baz=114								
AMTX	Amarillo	114.22	5	⇓P		Pdif	13 36 49.3	+1.6	
	baz=114								
AMTX	Amarillo	114.22	5	PFAKE			13 40 50.0	+11	
AMTX				LR	LR				
	comp=Z,12µm,19.0s,MS6.5								
Y18A	Canyon Day Jun	114.23	12	⇑P		Pdif	13 36 48.5	+0.9	
	baz=114								
X25A	Clemmons Ranch	114.29	8	⇓P		Pdif	13 36 47.6	-0.3	
	baz=114								
X26A	CR and CF Fran	114.36	7	⇓P		Pdif	13 36 49.0	+0.8	
	baz=114								
NHSC	New Hope	114.37	345	PFAKE			13 40 50.0	+11	
NHSC				LR	LR				
	comp=Z,21µm,20.0s,MS6.7								
Y20A	Horse Springs,	114.39	11	⇓P		Pdif	13 36 49.3	+1.0	
	baz=114								
Y21A	Point of Rocks	114.40	10	⇓P		Pdif	13 36 50.1	+1.7	
	baz=114								
113A	Mohawk Valley,	114.41	16	⇑P		Pdif	13 36 49.1	+0.7	
	baz=114								
OXF	Oxford	114.45	354	ePKiKP	PKiKP		13 40 41.6	+2.2	
OXF				LR	LR				
	comp=Z,14µm,19.0s,MS6.6								
WMOK	Wichita Mounta	114.51	2	ePKiKP	PKiKP		13 40 38.2	-1.3	
WMOK				LR	LR				
	comp=Z,14µm,20.0s,MS6.6								
Y22A	Socorro	114.58	10	⇓P		Pdif	13 36 49.7	+0.5	
	baz=114								
Z17A	San Carlos Hig	114.61	13	⇓P		Pdif	13 36 50.0	+0.7	
	baz=114								
114A	Black Gap (USA	114.63	15	⇑P		Pdif	13 36 50.6	+1.1	
	baz=114								
MIAR	Mount Ida	114.69	357	ePKiKP	PKiKP		13 40 39.9	0.0	
MIAR				LR	LR				
	comp=Z,27µm,22.0s,MS6.8								
Y23A	Lovelace Mesa,	114.71	9	⇑P		Pdif	13 36 49.4	-0.4	
	baz=114								
GOGA	Godfrey	114.73	348	PFAKE			13 40 50.0	+10	
GOGA				LR	LR				
	comp=Z,15µm,22.0s,MS6.6								
Y24A	Capitan	114.80	8	⇑P		Pdif	13 36 50.9	+0.7	
	baz=115								
Z19A	T-Link Ranch,	114.84	12	⇑P		Pdif	13 36 51.0	+0.6	
	baz=115								
Y25A	Mesa, Roswell	114.89	8	⇑P		Pdif	13 36 51.8	+1.2	
	baz=115								
Y26A	Elida	114.98	7	⇓P		Pdif	13 36 51.2	+0.2	
	baz=115								
MSTX	Muleshoe	115.03	6	⇓P		Pdif	13 36 51.1	-0.2	
	baz=115								
116A	Eloy	115.08	14	⇑P		Pdif	13 36 52.5	+1.0	
	baz=115								
Y27A	Causey	115.08	6	⇓P		Pdif	13 36 52.0	+0.5	
	baz=115								
Z21A	St. Cloud Mine	115.09	10	⇑P		Pdif	13 36 52.5	+1.0	
	baz=115								
Z20A	Nine Sixteen R	115.13	11	⇓P		Pdif	13 36 52.3	+0.6	
	baz=115								
Z22A	Elephant Butte	115.25	10	⇑P		Pdif	13 36 53.3	+1.1	
	baz=115								
117A	Oracle	115.26	13	⇓P		Pdif	13 36 49.7	-2.5	
	baz=115								
118A	Homack Ranch,	115.35	13	⇓P		Pdif	13 36 54.3	+1.6	
	baz=115								
119A	Ashpeak Ranch,	115.35	12	⇓P		Pdif	13 36 53.8	+1.1	
	baz=115								
Z23A	Rita Site, Whi	115.35	9	⇓P		Pdif	13 36 53.2	+0.6	
	baz=115								
Z24A	Sheeppen Canyo	115.39	8	⇓P		Pdif	13 36 53.6	+0.7	
	baz=115								
214A	Organ Pipe Nat	115.41	15	⇓P		Pdif	13 36 54.9	+2.0	
	baz=115								
Z25A	Roswell	115.52	8	⇓P		Pdif	13 36 55.4	+2.0	
	baz=115								
LRAL	Lakeview Retre	115.64	351	PKPdf	PKPdf		13 40 43.2	+1.4	
LRAL				LR	LR				
	comp=Z,17µm,22.0s,MS6.6								
216A	Three Points,	115.67	14	⇓P		Pdif	13 36 56.1	+2.1	
	baz=116								
122A	Conniff Cattle	115.79	10	⇑P		Pdif	13 36 56.4	+1.8	
	baz=116								
121A	Cookes Peak, D	115.83	11	⇓P		Pdif	13 36 57.0	+2.2	
	baz=116								
123A	Bell Site, Whi	115.96	9	⇓P		Pdif	13 36 57.2	+1.9	
	baz=116								
218A	Dragoon	115.98	13	⇑P		Pdif	13 36 58.3	+2.9	
	baz=116								
124A	Stringfield Ra	116.00	9	⇓P		Pdif	13 36 57.3	+1.8	
	baz=116								
219A	White Tail Can	116.10	12	⇓P		Pdif	13 36 57.5	+1.5	
	baz=116								
126A	Clayton Basin,	116.22	7	⇑P		Pdif	13 36 54.7	-1.9	
	baz=116								
127A	Arkansas Junct	116.26	7	⇓P		Pdif	13 36 56.0	-0.7	
	baz=116								
220A	Playas Peak, P	116.32	12	⇑P		Pdif	13 36 58.7	+1.7	
	baz=116

527A	**Woodward Ranch** baz=119	**118.74**	**7**	⇑P		Pdif	13 37 07.7	0.0
526A	**Mary Lane Ranc** baz=119	**118.77**	**8**	⇓P		Pdif	13 37 07.8	-0.1
528A	**Cox Ranch, San** baz=119	**118.81**	**6**	⇑P		Pdif	13 37 10.9	+2.9
HKT	**Hockley**	**119.32**	**359**	*e*PKPdf	PKPdf		13 40 49.2	+0.3
HKT	comp=Z,25μm,22.0s,MS6.8			LR	LR			
627A	**Terlingua Ranc** baz=119	**119.45**	**7**	⇓P		Pdif	13 37 12.4	+1.6
TXAR	**Lajitas Array** comp=Z,0.1nm,0.6s,baz=108,slow=8.1,SNR=2.7	**119.54**	**7**	Pdiff		Pdif	13 37 13.9	+2.7
TXAR				PKP	PKPdf		13 40 49.2	-0.1
TXAR	comp=Z,16nm,0.9s,baz=160,slow=0.6,SNR=75			PKKPbc	PKKPbc		13 51 00.1	-0.2
TXAR	comp=Z,12nm,1.0s,baz=177,slow=6.1,SNR=16 **Lajitas Array**	**119.54**	**7**	P		Pdif	13 37 14.0	+2.7
TXAR				LR	LR		13 40 49.2	
VNA1	**Neumayer--Stat**	**119.58**	**203**	*e*PKPdf	PKPdf		13 40 45.3	-2.7
VNA3	**Neumayer Olymp**	**120.12**	**202**	*e*PKPdf	PKPdf		13 40 45.3	-3.7
QSPA	**South Pole Qui**	**120.86**	**180**	PKKPbc	PKKPbc		13 50 56.0	-0.2
ANWB	comp=Z,15nm,1.0s,baz=67,slow=1.9,SNR=9.1 **Willy Bob**	**121.26**	**321**	PFAKE			13 41 00.0	+7.1
ANWB				LR	LR			
GRTK	comp=Z,10μm,21.0s,MS6.4 **Grand Turk**	**122.40**	**332**	PFAKE			13 41 10.0	+15
GRTK				LR	LR			
RAR	comp=Z,12μm,20.0s,MS6.6 **Rarotonga**	**122.88**	**96**	PFAKE			13 41 10.0	+14
RAR				LR	LR			
SJG	comp=Z,5μm,21.0s,MS6.1 **San Juan**	**123.15**	**325**	PFAKE			13 41 10.0	+13
SJG				LR	LR			
BBGH	comp=Z,12μm,22.0s,MS6.5 **Gun Hill**	**123.61**	**316**	PFAKE			13 41 10.0	+13
BBGH				LR	LR			
MOAC	comp=Z,22μm,22.0s,MS6.8 **Moa**	**124.63**	**335**	*e*		PKPdf	13 40 52.9	-6.4
SDDR	**Presa de Saban**	**124.72**	**331**	*e*PKPdf		PKPdf	13 41 00.3	+0.8
SDDR	comp=Z,14μm,20.0s,MS6.6			LR	LR			
SOR	**Soroa**	**124.95**	**345**	*e*		PKPdf	13 40 59.3	-0.6
GTBY	**Guantanamo Bay**	**125.35**	**335**	PFAKE			13 41 10.0	+9.3
GTBY	comp=Z,8μm,20.0s,MS6.4			LR	LR			
RCC	**Rio Carpintero**	**125.50**	**336**	*e*		PKPdf	13 41 00.6	-0.4
GRGR	**Grenville**	**125.65**	**317**	PFAKE			13 41 10.0	+8.6
GRGR	comp=Z,8μm,21.0s,MS6.4			LR	LR			
LMGC	**Las Mercedes**	**125.88**	**337**	*e*		PKPdf	13 41 02.7	+1.0
MTDJ	**Mount Denham**	**127.77**	**337**	*e*PKPdf		PKPdf	13 41 04.8	-0.5
MTDJ	comp=Z,11μm,20.0s,MS6.5			LR	LR			
TEIG	**Tepich**	**128.42**	**350**	PFAKE			13 41 20.0	+13
TEIG	comp=Z,10μm,21.0s,MS6.5			LR	LR			
PPT	**Papeete**	**130.10**	**87**	*e*PKIKP		PKPdf	13 41 12.3	+2.6
PPT	comp=Z,172nm,1.4s **Papeete**	**130.10**	**87**	*e*PP		PP	13 43 25.6	+3.0
PPT	comp=Z,4μm,28.5s			*e*SP		SP	13 53 30.0	-1.1
PPT	comp=Z,2μm,25.5s			*e*SS		SS	14 00 48.2	+0.8
PPT	comp=Z,7μm,25.5s			*e*LR		LR	14 22 27.8	
PPT	comp=Z,42μm,34.2s **Papeete**	**130.10**	**87**	PKP		PKPdf	13 41 11.2	+1.5
PPT	comp=Z,94nm,1.1s,baz=189,slow=4.4,SNR=5.8 **Papeete**	**130.10**	**87**	PKIKP		PKPdf	13 41 11.2	+1.5
PPT	comp=Z,95nm,1.1s			pmax	pmax			
PAE	**Paea**	**130.13**	**87**	*e*PKIKP		PKPdf	13 41 12.3	+2.5
PAE	comp=Z,35nm,1.4s			*e*SS		SS	14 01 31.4	+0.7
TAOE	comp=Z,12μm,36.5s			*e*LR		LR	14 24 11.8	
TGUH	comp=Z,13μm,31.7s **Tegucigalpa,Un**	**134.30**	**348**	*e*PKPdf		PKPdf	13 41 18.6	+0.8
TGUH	comp=Z,9μm,21.0s,MS6.5			LR	LR			
ROSC	**El Rosal**	**138.55**	**326**	*e*PKPpre		PKPpre	13 41 19.0	
ROSC				PKP		PKPdf	13 41 25.9	+0.2
ROSC	**El Rosal**	**138.55**	**326**	PKhKP		PKPpre	13 41 19.1	
ROSC	comp=Z,43nm,1.0s,baz=138,slow=4.7,SNR=9.6			PKP		PKPdf	13 41 25.9	+0.2
PMSA	comp=Z,74nm,0.9s,baz=252,slow=1.2,SNR=12 **Palmer Station**	**140.78**	**201**	*e*PKPdf		PKPdf	13 41 28.7	+0.6
PMSA	comp=Z,29μm,20.0s,MS7.0			LR	LR			
SIV	**San Ignacio** comp=Z,77nm,0.9s,baz=83,slow=4.4,SNR=65	**144.53**	**287**	PKP		PKPdf	13 41 34.4	-1.9
OTAV	**Otavalo**	**144.54**	**328**	*e*PKPdf		PKPdf	13 41 36.3	-0.2
OTAV	comp=Z,14μm,22.0s,MS6.7			LR	LR			
RKT	**Rikitea**	**144.85**	**87**	*e*PKIKP		PKPdf	13 41 36.8	+0.1
RKT	comp=Z,310nm,1.0s **Rikitea**	**144.85**	**87**	*e*PP		PP	13 44 51.9	-2.8
RKT	comp=Z,4μm,28.5s			*e*SS		SS	14 03 43.1	+0.5
RKT	comp=Z,5μm,34.5s			*e*LR		LR	14 29 13.7	
RKT	comp=Z,23μm,36.5s **Rikitea**	**144.85**	**87**	*e*PKIKP		PKPdf	13 41 36.8	+0.1
RKT				*e*			13 44 51.9	
CPUP	**Villa Florida** comp=Z,126nm,0.9s,baz=56,slow=3.4,SNR=50	**145.57**	**268**	PKPbc		PKPbc	13 41 36.2	-1.8
CPUP	**Villa Florida**	**145.57**	**268**	PKIKP		PKPdf	13 41 36.2	-1.6
CPUP	comp=Z,126nm,0.9s			pmax	pmax			
LPA	**La Plata**	**147.68**	**253**	*d i* PKP		PKPdf	13 41 42.0	+0.9
LPA				PP		PP	13 45 11.0	-0.3
LPA				PKS			13 45 22.0	
LPA				SKIKS			13 48 52.0	
LPA				SKSP			13 55 26.0	
LPA				PPP			13 55 53.0	
LPA				PPS			13 57 59.0	
LPA				SSS			14 09 51.0	
LPA				SSS			14 23 40.0	
LPA	comp=Z,27μm,22.0s							
PAYG	**Puerto Ayora**	**149.24**	**348**	*e*PKPbc		PKPbc	13 41 49.4	+0.8
PAYG	comp=Z,11μm,19.0s,MS6.7			LR	LR			
PTCN	**Pitcairn Islan**	**149.71**	**87**	PFAKE			13 42 00.0	+15
PTCN	comp=Z,10μm,21.0s,MS6.6			LR	LR			
LPAZ	**La Paz**	**150.38**	**293**	PKP		PKPdf	13 41 46.2	+0.2
LPAZ	comp=Z,44nm,1.0s,baz=36,slow=4.9,SNR=29 **La Paz**	**150.38**	**293**	PKIKP		PKPdf	13 41 46.2	+0.2
LPAZ	comp=Z,44nm,1.0s			pmax	pmax			
ATAH	**Atahualpa**	**150.87**	**321**	PKP		PKPdf	13 41 47.7	+0.8
TRQA	comp=Z,38nm,1.1s,baz=300,slow=0.5,SNR=11 **Tornquist**	**150.97**	**247**	*e*PKPdf		PKPdf	13 41 46.1	-0.2
TRQA				*e*PKPbc		PKPbc	13 41 52.4	+0.4
TRQA	comp=Z,20μm,20.0s,MS6.9			LR	LR			
NNA	**Nana**	**153.82**	**312**	PKP		PKPdf	13 41 52.0	+0.9
CFAA	comp=Z,14nm,0.7s,baz=316,slow=2.1,SNR=7.9 **Coronel Fontan**	**156.00**	**261**	PKP		PKPdf	13 41 53.6	-0.1
PLCA	comp=Z,6.0nm,1.0s,baz=343,slow=1.2,SNR=17 **Paso Flores**	**157.05**	**238**	PKP		PKPdf	13 41 55.6	+0.9
PLCA	comp=Z,31nm,1.1s,baz=118,slow=1.5,SNR=9.3 **Paso Flores**	**157.05**	**238**	PKIKP		PKPdf	13 41 55.6	+0.8
PLCA	comp=Z,31nm,1.1s			pmax	pmax			
LCO	**Las Campanas**	**157.72**	**269**	*e*PKPdf		PKPdf	13 41 56.3	+0.4
LCO	comp=Z,22μm,20.0s,MS7.0			LR	LR			
TLL	**Tololo Astrono**	**158.01**	**266**	⇑*i*P		PKPdf	13 41 54.5	-1.8

*ISCJB **25** 13:26:01.8±0.4,37.°00N±0.°03×35.°62E±0.°03, h12km±4km, Error ellipse: s-maj=5.2km s-min=3.6km az=32.0*
*CSEM **25** 13:26:01.9±0.1,37.°02N×35.°66E, h15km, MD3.2, Error ellipse: s-maj=3.9km s-min=2.8km az=34.0*
*DDA **25** 13:26:01.6,36.°99N×35.°65E, h7km±5km, Md3.2*
*ISK **25** 13:26:01.4,37.°04N×35.°63E, h17km, MD3.2*
*NSSC **25** 13:26:07,36.°41N×37.°48E, h12km±5km*

ISC 25 13:26:02.1±0.4, 37.°00N±0.°03×35.°65E±0.°03, h15km±3km, n44, σ0°93/69, 6D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.08**	**82**	PG		**Pg**	**13 26 04.5**	**-0.7**
CEYT				*e*SG		**Sg**	**13 26 07.8**	**+0.5**
CEYT	**Ceyhan**	**0.08**	**82**	*i* Pg		**Pg**	**13 26 04.5**	**-0.7**
CEYT				*e*Sg		**Sg**	**13 26 07.9**	**+0.6**
KRTS	**Karatas**	**0.48**	**207**	*e*PG		**Pg**	**13 26 12.6**	**+0.9**
KRTS	**Karatas**	**0.48**	**207**	*e*Pg		**Pg**	**13 26 12.6**	**+1.0**
KOZT	**Kozan**	**0.50**	**17**	*e*PG		**Pg**	**13 26 11.5**	**-0.6**
KOZT				*e*SG		**Sg**	**13 26 18.8**	**-0.1**
KARA	**Karaisali**	**0.54**	**299**	*e*PG		**Pg**	**13 26 11.9**	**-0.9**
KARA				*e*SG		**Sg**	**13 26 19.6**	**-0.5**
KARA	**Karaisali**	**0.54**	**299**	*e*Pg		**Pg**	**13 26 11.9**	**-0.9**
KARA				*e*Sg		**Sg**	**13 26 19.6**	**-0.4**
COBT	**Iskenderun**	**0.69**	**134**	*i* P		**Pg**	**13 26 14.1**	**-1.4**
COBT				*i* S		**Sg**	**13 26 26.3**	**+1.7**
COBT	**Iskenderun**	**0.69**	**134**	*i* P		**Pg**	**13 26 14.1**	**-1.4**
COBT				*i* S		**Sg**	**13 26 26.3**	**+1.7**
GULE	**Gulek**	**0.75**	**293**	*i* P		**Pg**	**13 26 15.9**	**-0.8**
GULE				*i* S		**Sg**	**13 26 27.7**	**+1.0**
GULE	**Gulek**	**0.75**	**293**	*i* P		**Pg**	**13 26 15.9**	**-0.8**
GULE				*i* S		**Sg**	**13 26 27.7**	**+1.0**
ANDN	**Andirin**	**0.81**	**44**	*i* P		**Pb**	**13 26 16.9**	**-0.9**
ANDN				*i* S		**Sb**	**13 26 31.2**	**+2.7**
ANDN	**Andirin**	**0.81**	**44**	*i* P		**Pb**	**13 26 16.9**	**-0.9**
ANDN				*i* S		**Sb**	**13 26 31.2**	**+2.8**
DRWC	**Darouich**	**0.90**	**114**	⇓P		**Pb**	**13 26 19.0**	**-0.4**
DRWC				⇑S		**Sb**	**13 26 31.0**	**-0.2**
DRWC	**Darouich**	**0.90**	**114**	⇓*i*P		**Pb**	**13 26 20.0**	**+0.6**
DRWC				⇑*i*S		**Sb**	**13 26 31.4**	**+0.2**
HTY	**Hatay**	**0.96**	**155**	*e*PG		**Pg**	**13 26 21.0**	**+0.3**
HTY	**Hatay**	**0.96**	**155**	*e*Pg		**Pg**	**13 26 21.0**	**+0.3**
YAYL	**Yayladag**	**1.03**	**159**	*i* P		**Pb**	**13 26 20.8**	**-0.8**
YAYL				*i* S		**Sb**	**13 26 36.3**	**+1.4**
YAYL	**Yayladag**	**1.03**	**159**	*i* P		**Pb**	**13 26 20.8**	**-0.8**
YAYL				*i* S		**Sb**	**13 26 36.3**	**+1.4**
KMRS	**Kahramanmaras**	**1.12**	**63**	*e*PN		**Pn**	**13 26 22.7**	**-0.5**
KMRS	**Kahramanmaras**	**1.12**	**63**	*e*Pn		**Pn**	**13 26 22.7**	**-0.5**
BTCH	**Batrach**	**1.16**	**145**	⇑P		**Pn**	**13 26 23.0**	**-0.8**
BTCH				⇑S		**Sb**	**13 26 37.0**	**-1.7**
BTCH	**Batrach**	**1.16**	**145**	⇑*i*P		**Pn**	**13 26 23.9**	**+0.1**
BTCH				⇑*i*S		**Sb**	**13 26 37.9**	**-0.8**
KUZU	**Kuzuini**	**1.17**	**101**	*i* P		**Pn**	**13 26 23.6**	**-0.2**
KUZU				*i* S		**Sb**	**13 26 39.5**	**+0.6**
KUZU	**Kuzuini**	**1.17**	**101**	*i* P		**Pn**	**13 26 23.6**	**-0.2**
KUZU				*i* S		**Sb**	**13 26 39.5**	**+0.6**
GAZ	**Gaziantep**	**1.26**	**82**	*e*PN		**Pn**	**13 26 24.9**	**-0.3**
GAZ	**Gaziantep**	**1.26**	**82**	*e*Pn		**Pn**	**13 26 24.9**	**-0.3**
WRDH	**Warideh**	**1.61**	**157**	⇑P		**Pn**	**13 26 30.0**	**+0.1**
WRDH				⇑S		**Sn**	**13 26 47.0**	**-3.4**
WRDH	**Warideh**	**1.61**	**157**	⇑*i*P		**Pn**	**13 26 30.4**	**+0.5**
WRDH				⇑*i*S		**Sn**	**13 26 47.6**	**-2.8**
IKL	**Isikli**	**1.75**	**245**	*e*PN		**Pn**	**13 26 31.1**	**-0.7**
IKL	**Isikli**	**1.75**	**245**	*e*Pn		**Pn**	**13 26 31.2**	**-0.6**
SARI	**SarD1z-Kayseri**	**1.87**	**26**	*e*PN		**Pn**	**13 26 28.3**	**-5.2**
AVNT	**Avonos**	**1.88**	**341**	*i* P		**Pn**	**13 26 34.9**	**+1.2**
AVNT				*i* S		**Sn**	**13 27 02.7**	**+5.6**
AVNT	**Avonos**	**1.88**	**341**	*i* P		**Pn**	**13 26 34.9**	**+1.2**
EREN	**Erenkoy**	**1.89**	**220**	*e*PN		**Pn**	**13 26 34.4**	**+0.6**
EREN	**Erenkoy**	**1.89**	**220**	*e*Pn		**Pn**	**13 26 34.4**	**+0.6**
BIDA	**Albida**	**2.06**	**164**	⇓P		**Pn**	**13 26 36.0**	**0.0**
BIDA				⇓S		**Sn**	**13 26 57.0**	**-4.4**
BIDA	**Albida**	**2.06**	**164**	⇓*i*P		**Pn**	**13 26 36.5**	**+0.5**
BIDA				⇓*i*S		**Sn**	**13 26 57.9**	**-3.5**
ERMK	**Ermenek**	**2.22**	**262**	*i* P		**Pn**	**13 26 39.0**	**+0.7**
ERMK				*i* S		**Sn**	**13 27 16.1**	**+11**
ERMK	**Ermenek**	**2.22**	**262**	*i* P		**Pn**	**13 26 39.0**	**+0.7**
HDMB	**Hadim**	**2.53**	**270**	*e*PN		**Pn**	**13 26 43.2**	**+0.7**
HDMB	**Hadim**	**2.53**	**270**	*e*Pn		**Pn**	**13 26 43.2**	**+0.6**
KAMT	**Kaman**	**2.81**	**328**	*e*PN		**Pn**	**13 26 46.4**	**-0.1**
KAMT	**Kaman**	**2.81**	**328**	*e*Pn		**Pn**	**13 26 46.4**	**-0.1**

CASC 25 13:27:22.8±2.0, 12.°45N×88.°22W, h34km±92km, MD3.7, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.90**	**25**	*e*P		Pn	13 27 38.9	-0.1
CNCH				*e*S		Sn	13 27 50.7	-0.2
VSM	**San Miguel**	**0.97**	**357**	*e*P		Pn	13 27 40.6	+0.6
VSM				*e*S		Sn	13 27 55.8	+3.2
BLLM	**Bellamira**	**0.98**	**359**	*e*P		Pn	13 27 40.1	-0.1
CAHU	**Cacacuatique**	**1.31**	**1**	*e*P		Pn	13 27 45.5	+0.8
LFRS	**El Faro**	**1.42**	**325**	*e*P		Pn	13 27 46.4	+0.3
LFRS				*e*S		Sn	13 28 03.6	-0.1

*LDG **25** 13:29:21.9±0.2,31.°14N×83.°37E, h10km, Mb4.9/7, Error ellipse: s-maj=9.3km s-min=5.0km az=110.0*
*IDC **25** 13:29:21.1±0.5,30.°65N×83.°41E, h0km, mb4.7/27, mb1 4.8/30, mb1mx4.8/33, mbtmp4.7/30, ML3.4/2, MS6.4/1, Ms1 6.4/1, ms1mx4.7/46, Error ellipse: s-maj=14.3km s-min=12.3km az=25.0*
*NEIC **25** 13:29:22.7±0.3,30.°71N×83.°38E, h10km, mb5.0/8, Error ellipse: s-maj=7.9km s-min=6.1km az=201.0*
*ISCJB **25** 13:29:25.0±0.4,30.°78N±0.°07×83.°25E±0.°05, h33km, mb4.8/38, Error ellipse: s-maj=10.8km s-min=6.5km az=8.1*

ISC 25 13:29:26.8±0.3, 30.°74N±0.°07×83.°36E±0.°05, h35km, n89, σ0°88/82, mb4.8/38, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa** 201nm,0.6s	**6.82**	**97**	*e*P		**Pn**	**13 31 09.2**	**+4.8**
IMP	**Imphal**	**11.08**	**120**	*e*PKP		Px	13 32 17.0	
IMP				*e*S		**Sn**	**13 34 04.0**	**-1.6**
KBL	**Kabul**	**12.64**	**291**	*e*P		**Pn**	**13 32 25.0**	**+0.8**
AAK	**Ala-Archa** 0.6nm,0.3s,baz=164,slow=18,SNR=1.9	**13.82**	**332**	Pn		**Pn**	**13 32 38.1**	**-2.1**
MKAR	**Makanchi Array**	**16.05**	**357**	Pn		**Pn**	**13 33 07.4**	**-2.2**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=177,slow=11,SNR=3.3	**16.05**	**357**	Pn		**Pn**	**13 33 07.4**	**-2.2**
CMAR	**Chiang Mai Arr** baz=298,slow=10.0,SNR=3.1	**18.69**	**127**	P		**Pn**	**13 33 39.2**	**-3.5**
KURK	**Kurchatov** 24nm,0.8s,baz=171,slow=11,SNR=3.5	**20.26**	**351**	P		**P**	**13 33 57.1**	**-2.0**
XAN	**Xi'an**	**21.82**	**75**	P		**P**	**13 34 16.3**	**+0.3**
XAN	comp=Z,25nm,1.2s,mb4.5			pmax	pmax			
XAN	comp=Z,9μm,12.0s			pmax	pmax			
ENH	**Enshi**	**22.50**	**84**	*e*P		**P**	**13 34 26.1**	**+2.8**
ZALV	**Zalesovo Beam** comp=Z,11nm,0.8s,mb4.3,baz=181,slow=10.0,SNR=5.2	**23.21**	**2**	P		**P**	**13 34 30.6**	**+0.1**
BVAR	**Borovoye Array** comp=Z,8.8nm,0.8s,mb4.3,baz=144,slow=8.4,SNR=4.5	**24.19**	**341**	P		**P**	**13 34 40.3**	**+0.5**
SONM	**Songino Array** comp=Z,24nm,0.8s,mb4.8,baz=225,slow=5.6,SNR=11	**24.54**	**39**	P		**P**	**13 34 44.3**	**+1.3**
ULN	**Ulaanbaatar**	**24.91**	**40**	*e*P		**P**	**13 34 46.9**	**+0.5**
INCN	**Inchon** comp=Z,22nm,0.7s,mb5.2	**36.21**	**67**	*e*P		**P**	**13 36 28.3**	**+2.1**
KSRS	**Korea Array** comp=Z,4.9nm,0.8s,mb4.4,baz=273,slow=9.2,SNR=11	**37.23**	**67**	P		**P**	**13 36 35.4**	**+0.4**
BRTR	**Keskin Array B** comp=Z,10nm,1.1s,mb4.4,baz=108,slow=6.6,SNR=5.7	**41.14**	**297**	P		**P**	**13 37 09.3**	**+1.7**
EIL	**Elat** comp=Z,21nm,1.0s,mb4.7,baz=69,slow=6.2,SNR=4.2	**41.59**	**281**	P		**P**	**13 37 12.4**	**+1.0**
AKASG	**Malin Array Be** comp=Z,8.6nm,0.6s,mb4.6,baz=85,slow=6.9,SNR=9.9	**44.49**	**313**	P		**P**	**13 37 34.5**	**-0.1**
MAT	**Matsushiro**	**45.51**	**67**	P		**P**	**13 37 43.6**	**+0.7**
MJAR	**Matsushiro Arr** comp=Z,5.0nm,0.7s,mb4.6,baz=278,slow=9.4,SNR=9.1	**45.51**	**67**	P		**P**	**13 37 42.0**	**-0.9**
JOF	**Joensuu** comp=Z,30nm,0.6s,mb5.4	**46.00**	**330**	*e*p		**P**	**13 37 46.6**	**+0.2**
MLR	**Muntele Rosu** comp=Z,42μm,20.9s,baz=312,slow=36	**46.55**	**305**	LR		LR	13 57 45.8	
FINES	**FINESS Array B** comp=Z,16nm,0.8s,mb5.1,baz=105,slow=8.5,SNR=12	**47.96**	**327**	P		**P**	**13 38 02.1**	**+0.4**
KAF	**Kangasniemi** comp=Z,4.9nm,0.5s,mb4.8	**48.00**	**328**	*e*p		**P**	**13 38 03.1**	**+1.1**
KEV	**Kevo** comp=Z,13nm,0.7s,mb5.1	**49.99**	**338**	*e*p		**P**	**13 38 17.2**	**+0.1**
ARCES	**ARCESS Array B** comp=Z,18nm,0.7s,mb5.2,baz=96,slow=8.3,SNR=11	**50.41**	**337**	P		**P**	**13 38 21.8**	**+1.5**
KMBO	**Kilima Mbogo**	**54.06**	**243**	P		**P**	**13 38 48.9**	**+0.7**
KMBO	**Kilima Mbogo** comp=Z,13nm,1.0s,mb4.8,baz=82,slow=7.1,SNR=8.5	**54.06**	**243**	P		**P**	**13 38 48.9**	**+0.7**
NOA	**NORSAR Array B** comp=Z,6.2nm,0.7s,mb4.7,baz=88,slow=7.0,SNR=8.3	**55.05**	**326**	P		**P**	**13 38 54.4**	**-0.4**
PETK	**Petropavlovsk-**	**56.91**	**44**	P		**P**	**13 39 08.3**	**+0.2**
PETK	**Petropavlovsk-** comp=Z,4.6nm,0.7s,mb4.6,baz=295,slow=2.4,SNR=7.5	**56.91**	**44**	P		**P**	**13 39 08.3**	**+0.2**
CDF	**Champ du Feu**	**58.85**	**311**	*e*P		**P**	**13 39 21.6**	**-0.2**
PGF	**Pioggiola**	**59.05**	**304**	*e*P		**P**	**13 39 22.9**	**-0.4**
HAU	**Haudompre**	**59.55**	**311**	*e*P		**P**	**13 39 26.2**	**-0.4**
SBF	**Sospel** comp=Z,17nm,0.7s,mb4.9	**59.82**	**306**	*e*P		**P**	**13 39 28.8**	**+0.2**
SBF	**Sospel** comp=Z,8.6nm,0.7s,mb4.9	**59.82**	**306**	*e*P		**P**	**13 39 28.8**	**+0.2**
LPG	**La Plagne**	**59.88**	**308**	*e*P		**P**	**13 39 29.4**	**+0.4**
LPL	**La Plagne** comp=Z,17nm,0.6s,mb5.0	**59.89**	**308**	*e*P		**P**	**13 39 29.4**	**+0.4**
LPL	**La Plagne** comp=Z,8.4nm,0.6s,mb5.0	**59.89**	**308**	*e*P		**P**	**13 39 29.4**	**+0.4**
GIVF	**Givet**	**60.04**	**313**	*e*P		**P**	**13 39 30.1**	**+0.1**
MBDF	**Montbardon**	**60.06**	**307**	*e*P		**P**	**13 39 29.6**	**-0.6**
FRF	**La Foret Royal**	**60.45**	**306**	*e*P		**P**	**13 39 32.6**	**-0.3**
ORIF	**Oris-en-Rattie**	**60.62**	**307**	*e*P		**P**	**13 39 34.0**	**-0.1**
KEST	**Kesra**	**60.75**	**296**	*e*P		**P**	**13 39 35.7**	**+0.6**
KEST	**Kesra** comp=Z,9.6nm,1.1s,mb4.8,baz=58,slow=2.9,SNR=8.6	**60.75**	**296**	P		**P**	**13 39 35.9**	**+0.8**
LOR	**Lormes**	**61.36**	**310**	*e*P		**P**	**13 39 38.0**	**-1.0**
VIVF	**Saint-Julien-l**	**61.47**	**307**	*e*P		**P**	**13 39 39.7**	**-0.1**
SMF	**Signal de Mont**	**61.54**	**310**	*e*P		**P**	**13 39 39.6**	**-0.7**
SSF	**Saint Saulge** comp=Z,16nm,0.9s,mb4.9	**61.65**	**310**	*e*P		**P**	**13 39 40.2**	**-0.8**
SSF	**Saint Saulge** comp=Z,7.8nm,0.9s,mb4.8	**61.65**	**310**	*e*P		**P**	**13 39 40.2**	**-0.8**
AVF	**Avril sur Loir**	**61.82**	**310**	*e*P		**P**	**13 39 41.2**	**-1.0**
LASF	**Ste Croix**	**62.25**	**307**	*e*P		**P**	**13 39 45.1**	**0.0**
TCF	**Toulx Ste Croi**	**62.72**	**310**	*e*P		**P**	**13 39 48.1**	**-0.1**
RJF	**Les Rejaudoux**	**63.48**	**309**	*e*P		**P**	**13 39 53.4**	**+0.2**
LDF	**La Druitiere** comp=Z,11nm,0.8s,mb4.6	**63.56**	**313**	*e*P		**P**	**13 39 52.9**	**-0.8**
LDF	**La Druitiere** comp=Z,5.3nm,0.8s,mb4.6	**63.56**	**310**	*e*P		**P**	**13 39 52.9**	**-0.8**
MTLF	**Montolieu**	**63.60**	**306**	*e*P		**P**	**13 39 54.4**	**+0.3**
FLN	**La Foliniere**	**63.74**	**313**	*e*P		**P**	**13 39 54.1**	**-0.8**
SGMF	**Saint Gilles**	**65.21**	**313**	*e*P		**P**	**13 40 03.9**	**-0.6**
ROSF	**Rostrenen**	**65.63**	**313**	*e*P		**P**	**13 40 06.8**	**-0.4**
ETSF	**Etsaut**	**65.67**	**307**	*e*P		**P**	**13 40 07.6**	**0.0**
QUIF	**Quistinic**	**65.70**	**313**	*e*P		**P**	**13 40 07.3**	**-0.4**
ESDC	**Sonseca Array** comp=Z,2.3nm,0.7s,mb4.2,baz=61,slow=5.8,SNR=5.4	**69.24**	**304**	P		**P**	**13 40 30.1**	**-0.1**
SUMG	**Summit** comp=Z,23nm,0.7s,mb5.2	**69.62**	**344**	*i* P		**P**	**13 40 33.1**	**+1.1**
WRA	**Warramunga Arr**	**70.28**	**129**	P		**P**	**13 40 36.2**	**-0.5**
WRA	**Warramunga Arr** comp=Z,23nm,1.0s,mb5.1,baz=322,slow=6.4,SNR=18	**70.28**	**129**	P		**P**	**13 40 36.2**	**-0.5**
ASAR	**Alice Springs** comp=Z,7.3nm,0.9s,mb4.6,baz=320,slow=5.7,SNR=7.7	**72.62**	**132**	P		**P**	**13 40 50.8**	**0.0**
TORD	**Torodi Ar. Bea** comp=Z,4.4nm,0.6s,mb4.6,baz=56,slow=5.5,SNR=5.0	**76.32**	**277**	P		**P**	**13 41 12.3**	**-0.3**
COLA	**College** comp=Z,16nm,0.7s,mb5.1	**76.72**	**20**	*e*P		**P**	**13 41 13.7**	**-0.4**
ILAR	**Eielson Array** comp=Z,9.3nm,0.8s,mb4.8,baz=299,slow=4.3,SNR=12	**77.08**	**20**	P		**P**	**13 41 15.8**	**-0.2**
INK	**Inuvik** comp=Z,11nm,0.8s,mb4.8,baz=323,slow=6.6,SNR=9.6	**77.52**	**13**	P		**P**	**13 41 18.1**	**-0.3**
KDAK	**Kodiak Island** comp=Z,12nm,0.6s,mb5.0,baz=335,slow=5.0,SNR=12	**80.14**	**27**	P		**P**	**13 41 33.5**	**+0.5**
BOSA	**Boshof**	**80.93**	**229**	P		**P**	**13 41 37.4**	**-0.2**
BOSA	**Boshof** comp=Z,4.7nm,0.5s,mb4.7,baz=358,slow=3.7,SNR=9.4	**80.93**	**229**	P		**P**	**13 41 37.4**	**-0.2**
STKA	**Stephens Creek** comp=Z,1.6nm,0.7s,mb4.2	**83.21**	**133**	*e*P		**P**	**13 41 48.9**	**-0.6**
STKA	**Stephens Creek** comp=Z,9.2nm,0.8s,mb4.9,baz=318,slow=5.1,SNR=9.5	**83.21**	**133**	P		**P**	**13 41 48.4**	**-1.1**
DBIC	**Dimbokro** comp=Z,7.2nm,0.7s,mb4.9,baz=22,slow=5.1,SNR=7.2	**85.11**	**275**	P		**P**	**13 41 59.4**	**-0.3**
LIC	**Lamto** comp=Z,12nm,0.6s,mb4.9	**85.48**	**275**	*e*P		**P**	**13 42 03.4**	**+1.9**
LIC	**

DANN eSn Sb 13 41 01.6 +3.8
43µm,1.4s
GKN Gorkha 3.09 160 ePn Pn 13 40 30.6 +2.2
KOLN Koldanda 3.15 178 ePn Pn 13 40 30.7 +1.5
KOLN eSn Sb 13 41 14.7 +0.6
8µm,1.0s
JOSI Joshimath 3.38 265 ePKP Pn 13 40 35.0 +2.7
KKN Kakani 3.51 153 ePn Pn 13 40 36.3 +2.2
DMN Daman 3.61 156 ePn Pn 13 40 38.4 +2.9
DMN eSn Sb 13 41 27.9 +0.7
GUN Gumba 3.68 144 ePn Pn 13 40 39.6 +3.2
GUN eSn Sb 13 41 30.1 +0.9
6µm,1.2s
PKIN Phulchoki 3.75 153 ePn Pn 13 40 39.3 +2.0
PKI Pulchoki 3.76 153 ePn Pn 13 40 40.9 +3.4
PKI eSn Sb 13 41 31.3 -0.2
JIRN Jiri 4.04 143 ePn Pn 13 40 44.8 +3.4
KLP Kalpa 4.50 279 ePKP Pn 13 40 50.5 +2.7
RAMN Ramite 4.83 144 ePn Pn 13 40 54.1 +1.9
TAPN Taplejung 5.15 133 ePn Pn 13 40 58.6 +1.9
ODAN Odare 5.32 139 ePn Pn 13 41 00.5 +1.5
KKR Kurukshetra 5.81 262 ePKP Pn 13 41 07.0 +1.2
AYAN Aya Nagar 6.03 248 ePKP Pn 13 41 08.1 -0.6
AGRA Agra 6.08 234 ePKP Pn 13 41 08.4 -0.9
SONA Sohna 6.16 246 ePKP Pn 13 41 10.7 +0.1
RTK Rohtak 6.40 255 ePKP Pn 13 41 14.0 +0.2
KUDL Kundal 6.68 247 ePKP Pn 13 41 14.9 -2.8
KUDL AMb AMB 13 41 16.0
comp=Z,188nm,1.3s
LSA Lhasa 6.76 99 eP Pn 13 41 22.2 +3.5
comp=Z,523nm,1.1s
LSA Lhasa 6.76 99 eP Pn 13 41 22.3 +3.5
LSA pmax pmax
comp=Z,523nm,1.1s
KHET Khetri 7.25 249 ePKP Pn 13 41 24.9 -0.6
KHET AMb AMB 13 41 29.0
comp=Z,164nm,1.3s
BHPL Bhopal 9.36 217 ePKP Pn 13 41 51.4 -3.0
KSH Kashi 10.52 327 eP Pn 13 42 10.8 +0.5
KSH epP 13 42 17.5
KSH ePP 13 42 19.5
KSH esP 13 42 22.8
KSH eS Sn 13 44 05.5 -2.8
KSH esS 13 44 16.5
KSH eSS 13 44 18.5
KSH ePcP PcP 13 48 17.5 +2.8
KSH pmax pmax
comp=Z,17nm,0.6s
KSH LR LR
comp=N,15µm,8.8s
KSH LR LR
comp=E,9µm,10.5s
KSH LR LR
comp=Z,11µm,5.6s
KBL Kabul 12.66 290 eP Pn 13 42 38.8 -0.8
comp=Z,133nm,0.8s
KBL Kabul 12.66 290 eP Pn 13 42 38.8 -0.8
KBL pmax pmax
comp=Z,133nm,0.8s
VIS Vishakhapatnam 13.15 181 ePKP Pn 13 42 43.3 -3.1
WMQ Urumqi 13.30 13 eP Pn 13 42 51.5 +3.3
WMQ pP 13 42 55.0
WMQ sP 13 42 58.3
WMQ PP 13 43 02.5
WMQ pmax pmax
comp=Z,190nm,1.4s
WMQ pmax pmax
comp=Z,2µm,4.0s
AAK Ala-Archa 13.70 331 Pn Pn 13 42 56.1 +2.4
comp=Z,1.1nm,0.3s,baz=192,slow=2.3,SNR=11
AAK Ala-Archa 13.70 331 ⇑*i*P Pn 13 42 54.6 +0.9
AAK pmax pmax
comp=Z,21nm,1.2s
AAK Ala-Archa 13.70 331 P Pn 13 42 56.4 +2.7
comp=Z,20nm,1.2s
HYB Hyderabad 14.18 199 *i*P Pn 13 42 54.0 -6.4
HYB eS Sn 13 45 24.0 -14
POO Poona 15.11 217 ePKP Pn 13 43 08.8 -4.3
GTA Gaotai 15.81 53 eP Pn 13 43 24.5 +2.4
GTA pP pP 13 43 31.8 +3.0
GTA sP sP 13 43 37.3 +7.2
GTA S Sn 13 46 18.5 +1.2
GTA sS sS 13 46 31.0 -5.4
GTA SS 13 46 38.0
GTA LR LR
comp=N,29µm,17.6s
GTA LR LR
comp=E,21µm,10.7s
GTA LR LR
comp=Z,30µm,13.7s
MKAR Makanchi Array 15.87 357 Pn Pn 13 43 22.9 +0.1
comp=Z,2.4nm,0.3s,baz=177,slow=9.7,SNR=25
MKAR Makanchi Array 15.87 357 P Pn 13 43 22.9 +0.1
MKAR pmax pmax
comp=Z,2.0nm,0.3s
KAD Karad 15.98 214 ePKP Pn 13 43 20.4 -4.0
CD2 Chengdu 17.42 85 P Pn 13 43 43.0 +0.4
CD2 pP pP 13 43 46.5 -0.2
CD2 sP sP 13 43 50.0 +2.0
CD2 PP 13 43 57.5
CD2 S Sn 13 46 55.0 -1.6
CD2 sS sS 13 47 00.5 -9.0
CD2 SS 13 47 16.5
CD2 pmax pmax
comp=Z,170nm,0.6s
CD2 pmax pmax
comp=Z,1µm,5.2s
CD2 LR LR
comp=N,22µm,16.2s
CD2 LR LR
comp=E,20µm,17.8s
CD2 LR LR
comp=Z,26µm,18.8s
LZH Lanzhou 17.75 68 P Pn 13 43 48.3 +1.6
LZH pP pP 13 43 58.0 +7.7
LZH S Sn 13 47 03.3 -1.2
LZH sS sS 13 47 12.0 -4.1
LZH SS 13 47 22.5
LZH pmax pmax
comp=Z,96nm,1.1s
LZH pmax pmax
comp=Z,8µm,7.6s
LZH LR LR
comp=Z,23µm,11.1s
KMI Kunming 17.97 104 P Pn 13 43 48.3 -1.2
KMI pP pP 13 43 58.5 +5.7
KMI sP sP 13 44 03.0 +8.9
KMI PP 13 44 06.8
KMI S Sn 13 47 07.5 -2.4
KMI sS sS 13 47 19.3 -1.4
KMI SS 13 47 30.8
KMI pmax pmax
comp=Z,84nm,1.1s
KMI LR LR
comp=N,24µm,13.9s
KMI LR LR
comp=E,17µm,15.7s
KMI LR LR
comp=Z,23µm,15.7s
MDRS Chennai 18.02 190 *ex* x 13 43 41.5
MDRS *ex* x 13 44 34.9
CHTO Chiang Mai 18.49 127 eP Pn 13 43 53.7 -2.2
comp=Z,111nm,1.2s
CHTO Chiang Mai 18.49 127 eP Pn 13 43 53.7 -2.2
CHTO pmax pmax
comp=Z,111nm,1.2s
CHTO Chiang Mai 18.49 127 P Pn 13 43 55.6 -0.3
comp=Z,108nm,1.2s
CHTO Chiang Mai 18.49 127 P Pn 13 43 55.6 -0.3
SNR=9.2
CMAR Chiang Mai Arr 18.74 128 P Pn 13 43 56.3 -2.6
comp=Z,0.6nm,0.3s,baz=303,slow=11,SNR=45
CMAR PcP PcP 13 48 26.6 +0.3
baz=292,slow=2.9,SNR=6.8
CMAR Chiang Mai Arr 18.74 128 P Pn 13 43 56.3 -2.6
CMAR pmax pmax
comp=Z,1.0nm,0.3s
KURK Kurchatov 20.09 351 P P 13 44 13.3 +0.3
comp=Z,546nm,1.1s,SNR=6.6
KURK Kurchatov 20.09 351 P P 13 44 11.7 -1.4
comp=Z,20nm,0.5s,baz=170,slow=9.8,SNR=33
KURK Kurchatov 20.09 351 ⇑*i*P P 13 44 13.9 +0.9
KURK pmax pmax
comp=Z,257nm,1.7s

KURK Kurchatov 20.09 351 P P 13 44 14.4 +1.4
SNR=8.4
GYA Guiyang 20.83 97 ⇑*i*P P 13 44 21.0 -0.2
GYA pP 13 44 31.8
GYA PP 13 44 45.5
GYA S S 13 48 17.8 +4.2
GYA sS sS 13 48 22.3 +4.1
GYA SS 13 48 40.5
GYA ScP ScP 13 52 02.0 -4.7
GYA pmax pmax
comp=Z,100nm,1.0s
GYA pmax pmax
comp=Z,4µm,5.4s
GYA LR LR
comp=N,18µm,12.1s,MS5.7
GYA LR LR
comp=E,16µm,15.8s,MS5.7
GYA LR LR
comp=Z,14µm,13.6s,MS5.5
XAN Xi'an 21.68 75 P P 13 44 30.0 -0.4
XAN S S 13 48 26.8 -3.6
XAN pmax pmax
comp=Z,24nm,1.2s,mb4.5
XAN pmax pmax
comp=Z,1µm,8.3s
XAN LR LR
comp=N,12µm,13.2s,MS5.5
XAN LR LR
comp=E,7µm,12.6s,MS5.5
XAN LR LR
comp=Z,4µm,15.4s,MS4.9
ENH Enshi 22.40 85 eP P 13 44 38.0 -0.1
comp=Z,250nm,1.5s,mb5.4
ZALV Zalesovo Beam 23.02 2 P P 13 44 44.4 -0.1
comp=Z,10nm,0.6s,mb4.5,baz=200,slow=9.2,SNR=33
ZALV PcP PcP 13 48 32.0 -1.7
comp=Z,2.2nm,0.7s,baz=212,slow=5.1,SNR=3.9
ZALV Zalesovo Beam 23.02 2 P P 13 44 44.4 -0.1
ZALV 13 48 32.0
ZALV pmax pmax
comp=Z,10.0nm,0.6s,mb4.4
WBK Wadi Bani Khal 23.35 255 P P 13 44 50.1 +1.9
SNR=21
PALK Pallekele 23.68 187 P P 13 44 53.1 +1.6
NVS Novosibirsk 23.90 360 ⇑*i*P P 13 44 50.8 -2.4
NVS eS S 13 49 05.7 -3.5
NVS pmax pmax
comp=Z,55nm,1.9s,mb4.7
NVS pmax pmax
comp=N,139nm,2.2s
NVS pmax pmax
comp=E,39nm,2.2s
NVS smax
comp=E,60nm,2.2s
NVS smax
comp=N,46nm,1.9s
SMDO Samad 23.93 257 P P 13 44 55.4 +1.7
SNR=14
BVAR Borovoye Array 24.05 340 P P 13 44 55.0 +0.4
comp=N,20nm,0.6s,mb4.7,baz=150,slow=11,SNR=36
BVAR PcP PcP 13 48 35.4 -0.5
comp=N,2.2nm,0.6s,baz=150,slow=4.3,SNR=4.6
BVAR Borovoye Array 24.05 340 P P 13 44 55.0 +0.5
BVAR 13 48 35.4
BVAR pmax pmax
comp=Z,20nm,0.6s
BRVK Borovoye 24.11 340 P P 13 44 57.4 +2.3
comp=Z,200nm,0.6s,mb5.7,SNR=6.0
BRVK Borovoye 24.11 340 ⇓*i*P P 13 44 56.4 +1.3
BRVK pmax pmax
comp=Z,95nm,2.5s,mb4.8
JMDO Jabal Madar 24.17 255 P P 13 44 57.8 +1.8
SNR=15
HOQ Hoqain 24.34 259 P P 13 44 59.5 +2.0
SNR=14
SONM Songino Array 24.34 40 P P 13 44 59.2 +2.0
comp=Z,18nm,0.8s,mb4.6,baz=228,slow=10,SNR=16
SONM Songino Array 24.34 40 P P 13 44 59.2 +1.9
SONM pmax pmax
comp=Z,18nm,0.8s
ZAK Zakamensk 24.43 32 eP P 13 44 59.5 +1.4
ZAK pmax pmax
comp=Z,17nm,1.5s,mb4.2
ULN Ulaanbaatar 24.72 40 eP P 13 45 01.9 +1.2
ULN Ulaanbaatar 24.72 40 ‖eP P 13 45 02.4 +1.7
ULN Ulaanbaatar 24.72 40 P P 13 45 02.1 +1.4
comp=Z,108nm,1.2s,mb5.3
ULN Ulaanbaatar 24.72 40 P P 13 45 03.1 +2.4
SNR=7.1
HHC Hu-ho-hao-te 24.73 59 eP P 13 45 02.5 +1.5
HHC pP 13 45 11.5
HHC sP sP 13 45 13.8 +8.5
HHC PP 13 45 39.5
HHC S S 13 49 19.8 -3.2
HHC sS sS 13 49 35.5 +7.5
HHC SS 13 50 17.5
HHC PcS PcS 13 52 17.8 +0.1
HHC pmax pmax
comp=Z,46nm,1.1s,mb4.9
HHC LR LR
comp=N,7µm,10.3s,MS5.6
HHC LR LR
comp=E,6µm,10.4s,MS5.6
HHC LR LR
comp=Z,18µm,10.0s,MS5.9
BSY Bisya 24.77 257 P P 13 45 03.9 +2.4
SNR=11
ASHO Ashiyiah 24.99 262 P P 13 45 06.2 +2.8
SNR=24
ARQ Araqi 25.10 259 P P 13 45 06.7 +2.3
SNR=27
NAZ Nazwa, Dubai 25.22 263 P P 13 45 08.6 +3.0
SNR=6.5
TLY Talaya 25.52 30 eP P 13 45 10.5 +2.5
TLY pmax pmax
comp=Z,66nm,2.4s,mb4.7
WHN Wuhan 26.51 83 ⇑P P 13 45 17.8 +0.6
WHN S S 13 49 47.0 -4.4
QIZ Qiongzhong 26.62 110 P P 13 45 18.0 -0.2
QIZ pP pP 13 45 22.5 +1.2
QIZ sP sP 13 45 29.3 +6.8
QIZ S S 13 49 51.0 -2.2
QIZ sS sS 13 50 00.0 +1.8
QIZ LR LR
comp=N,18µm,16.1s,MS5.7
QIZ LR LR
comp=E,7µm,17.3s,MS5.7
QIZ LR LR
comp=Z,18µm,16.8s,MS5.7
QIZ Qiongzhong 26.62 110 eP P 13 45 17.9 -0.3
comp=Z,66nm,1.2s,mb5.0
AKTK Aktyubinsk 27.20 323 P P 13 45 23.9 +0.8
AKTO Aktyubinsk 27.20 323 P P 13 45 23.9 +0.8
comp=Z,13nm,0.7s,mb4.6,baz=119,slow=4.3,SNR=11
AKTO Aktyubinsk 27.20 323 P P 13 45 24.0 +0.8
AKTO pmax pmax
comp=Z,13nm,0.7s,mb4.6
BJT Baijiatuau 28.01 62 eP P 13 45 32.1 +1.6
comp=Z,131nm,1.6s,mb5.3
BJT Baijiatuau 28.01 62 eP P 13 45 32.1 +1.5
BJT pmax pmax
comp=Z,131nm,1.6s
BJI Beijing 28.02 62 P P 13 45 31.0 +0.4
BJI S S 13 50 14.5 -0.5
BJI pmax pmax
comp=Z,40nm,1.7s,mb4.8
BJI LR LR
comp=Z,11µm,16.9s,MS5.5
NJ2 Nanjing 30.12 79 eP P 13 45 43.5 -5.9
NJ2 pP pP 13 45 47.3 -5.2
NJ2 sP sP 13 45 50.5 -3.2
NJ2 PP PP 13 46 39.0 -18
NJ2 S S 13 50 36.5 -12
NJ2 sS sS 13 50 46.5 -6.8
NJ2 pmax pmax
comp=Z,220nm,0.7s,mb6.0
NJ2 pmax pmax
comp=Z,3µm,5.7s
NJ2 LR LR
comp=N,8µm,9.4s
NJ2 LR LR
comp=E,6µm,10.9s
NJ2 LR LR
comp=Z,6µm,10.8s,MS5.5
KULM Kulim 30.20 144 P P 13 45 49.8 -0.4
KULM Kulim 30.20 144 P P 13 45 49.3 -0.9
comp=Z,40nm,1.1s,mb5.0
SVE Sverdlovsk 30.38 335 eP P 13 45 52.8 +1.4
TSI Tuntungan 30.78 149 P ScP 13 52 23.9 -12
ARU Arti 30.88 333 *d*iP P 13 45 57.1 +1.3
ARU *e* 13 46 55.4
ARU S S 13 51 00.2 +0.7
ARU SS SS 13 52 36.2 -35
ARU pmax pmax
comp=Z,8.0nm,0.5s,mb4.8
IPM Ipoh 31.08 144 P P 13 45 57.6 -0.4
KTGM Kuala Trenggan 31.48 140 P P 13 46 01.8 +0.3
PSI Prapat 31.57 149 PcP PcP 13 48 54.3 -0.6
comp=Z,7.6nm,0.8s,baz=2.2,slow=12,SNR=4.2
DL2 Dalian 32.11 65 P P 13 46 08.0 +1.1
DL2 pmax pmax
comp=Z,20nm,0.8s,mb5.0
GNI Garni 32.61 297 P P 13 46 13.0 +1.8
comp=Z,47nm,1.1s,mb5.3
GNI Garni 32.61 297 P P 13 46 12.3 +1.1
comp=Z,3.6nm,0.4s,mb4.6,baz=144,slow=14,SNR=7.1
GNI Garni 32.61 297 ⇑*i*P P 13 46 12.9 +1.7
GNI pmax pmax
comp=Z,86nm,1.7s
BHD Baghdad 33.06 284 *ex* x 13 46 21.5
BHD *ex* x 13 51 33.0
ZEI Tsey 33.50 302 eP P 13 46 20.3 +1.3
ZEI pmax pmax
comp=Z,41nm,1.0s,mb5.3
SOKR Solikamsk 33.78 336 *c*iP P 13 46 23.1 +1.9
SOKR pmax pmax
comp=Z,1µm,6.0s
KGM Kluang 34.35 143 P P 13 46 26.4 -0.3
KIV Kislovodsk 34.54 304 ⇓*i*P P 13 46 29.5 +1.5
KIV *i* 13 47 41.5
KIV pmax pmax
comp=Z,47nm,0.8s,mb5.5
BKNI Bangkinang 34.71 148 P P 13 46 28.9 -0.8
comp=Z,192nm,1.1s,mb5.9
MYKOM Kota Tinggi 34.82 142 P P 13 46 30.4 -0.2
MYKOM Kota Tinggi 34.82 142 P P 13 46 30.3 -0.4
PPI Padang Panjang 35.12 150 P P 13 46 33.1 -0.1
comp=Z,50nm,1.2s,mb5.3
SISI Saibi 35.36 152 P P 13 46 35.8 +0.5
comp=Z,82nm,1.1s,mb5.5
CN2 Changchun 35.39 57 eP P 13 46 36.0 +0.7
CN2 eS S 13 52 09.8 0.0
CN2 pmax pmax
comp=Z,20nm,0.7s,mb5.2
CN2 LR LR
comp=N,27µm,14.0s,MS6.2
CN2 LR LR
comp=E,15µm,14.0s,MS6.2
CN2 LR LR
comp=Z,21µm,16.0s,MS6.0
PDSI Padang 35.55 150 P P 13 46 35.5 -1.5
comp=Z,134nm,1.2s,mb5.7
INCN Inchon 36.05 68 eP P 13 46 40.7 -0.5
comp=Z,126nm,1.2s,mb5.7
KSRS Korea Array 37.08 68 P P 13 46 49.5 -0.4
comp=Z,9.3nm,0.8s,mb4.7,baz=274,slow=9.3,SNR=33
KSRS PcP PcP 13 49 09.7 -0.7
comp=Z,3.1nm,0.9s,baz=278,slow=1.1,SNR=7.6
KSRS ScP ScP 13 52 56.7 -0.8
comp=Z,2.4nm,0.9s,baz=286,slow=3.9,SNR=5.4
MALT Malatya 37.49 294 P P 13 46 55.5 +2.2
TGY Tagaytay City 38.23 107 P P 13 46 60.0 +0.1
comp=Z,48nm,0.3s,mb5.7,baz=228,slow=20,SNR=6.0
TGY Tagaytay City 38.23 107 P P 13 47 00.0 +0.2
TGY pmax pmax
comp=Z,48nm,0.3s
ANN Anapa 38.38 304 eP P 13 46 57.8 -2.9
ANN pmax pmax
comp=Z,38nm,1.3s,mb5.0
MDJ Mudanjiang 38.44 56 P P 13 47 01.0 -0.2
MDJ Mudanjiang 38.44 56 eP P 13 47 01.9 +0.6
comp=Z,80nm,1.8s,mb5.2
KSM Kuching 38.79 134 P P 13 47 05.0 +0.5
KSM Kuching 38.79 134 P P 13 47 03.9 -0.6
comp=Z,32nm,5.0s
KSI Kapahiang 38.94 149 P P 13 47 05.2 -0.5
comp=Z,121nm,1.0s,mb5.6
SBUM Sibu 39.25 131 P P 13 47 08.8 +0.4
SBUM Sibu 39.25 131 P P 13 47 08.6 +0.2
comp=Z,36nm,1.2s,mb5.0
KDM Kudat 39.32 120 P P 13 47 09.9 +1.0
KKM Kota Kinabalu 39.45 122 P P 13 47 10.9 +0.9
KKM Kota Kinabalu 39.45 122 P P 13 47 10.4 +0.4
comp=Z,58nm,1.3s,mb5.1
ASF Jabal al Asfar 39.46 284 P P 13 47 10.8 +0.8
comp=Z,1.4nm,0.3s,mb4.1,baz=97,slow=4.8,SNR=3.8
ASF Jabal al Asfar 39.46 284 P P 13 47 10.8 +0.8
ASF pmax pmax
comp=Z,1.0nm,0.3s
MDSI Maura Dua 40.40 147 P P 13 47 13.8 -4.1
comp=Z,36nm,1.0s,mb5.1
MOS Moscow 40.50 321 eP P 13 47 21.2 +2.9
MOS *e* 13 48 54.1
MOS pmax pmax
comp=Z,118nm,1.3s,mb5.5
MMAI Mount Meron Ar 40.54 286 P P 13 47 20.4 +1.4
comp=Z,4.7nm,0.6s,mb4.3,baz=75,slow=9.7,SNR=6.1
STKI Sintang 40.61 134 P P 13 47 20.1 +0.4
comp=Z,46nm,1.1s,mb5.0
TPI Tanjungpandan 40.67 141 P P 13 47 19.8 -0.3
comp=Z,63nm,1.0s,mb5.2
SIM Simferopol' 40.74 304 eP P 13 47 21.4 +1.0
SIM pmax pmax
comp=Z,30nm,0.8s,mb5.0
LWLI Liwa 40.81 148 P P 13 47 20.6 -0.7
comp=Z,114nm,0.8s,mb5.5
KLSI 40.84 146 P P 13 47 19.8 -1.7
comp=Z,58nm,3.3s
OBN Obninsk 40.89 320 ⇑eP P 13 47 21.3 -0.2
OBN *i* 13 47 33.0
OBN *i* 13 49 00.0
OBN pmax pmax
comp=Z,88nm,1.0s,mb5.3
BRTR Keskin Array B 41.14 296 P P 13 47 25.0 +1.2
comp=Z,10nm,1.1s,mb4.4,baz=126,slow=5.3,SNR=17
BRTR ScP ScP 13 53 12.3 -0.7
comp=Z,1.2nm,0.8s,baz=144,slow=2.7,SNR=3.8
BRTR Keskin Array B 41.14 296 *ce*P P 13 47 25.0 +1.2
BRTR pmax pmax
comp=Z,11nm,1.1s
KLMR Klimovskoe 41.51 329 P P 13 47 25.5 -1.0
KLMR pmax pmax
comp=Z,71nm,0.8s,mb5.3
EIL Elat 41.64 281 P P 13 47 28.9 +0.8
comp=Z,22nm,1.0s,mb4.7,baz=46,slow=5.4,SNR=8.0
MYLDM Lahad Datu 41.70 121 P P 13 47 29.7 +1.0
MYLDM Lahad Datu 41.70 121 P P 13 47 30.5 +1.8
comp=Z,72nm,1.2s,mb5.2
ATD Arta Tunnel 42.19 252 P P 13 47 32.6 -0.1
comp=Z,33nm,1.1s,mb4.9,baz=119,slow=22,SNR=8.8
HABR Khabarovsk 42.52 50 eP P 13 47 33.5 -1.5
HABR *e**PP pP 13 47 43.2 +5.1
HABR *e*SS SS 13 57 06.6 +0.1
HABR *e* 13 57 32.4
HABR MLR MLR
comp=Z,10µm,17.0s,MS5.8
YAK Yakutsk 43.00 30 eP P 13 47 38.9 +0.2
comp=Z,44nm,0.8s,mb5.2
YAK Yakutsk 43.00 30 eP P 13 47 38.1 -0.6
YAK pmax pmax
comp=Z,37nm,0.8s,mb5.2
YAK pmax pmax
comp=E,14nm,1.4s
DBJI Dramaga 43.43 145 P P 13 47 41.0 -1.7
comp=E,62nm,0.9s,mb5.3
AKASG Malin Array Be 44.43 313 P P 13 47 49.9 -0.4
AKASG PcP PcP 13 49 32.4 -1.5
AKASG Malin Array Be 44.43 313 P P 13 47 49.9 -0.4
comp=E,13nm,0.7s,mb4.8,baz=82,slow=7.5,SNR=36
AKASG PcP PcP 13 49 32.4 -1.5
comp=E,1.7nm,0.6s,baz=71,slow=4.4,SNR=4.6
AKASG Malin Array Be 44.43 313 P P 13 47 49.9 -0.5
AKASG 13 49 32.4
AKASG pmax pmax
comp=Z,13nm,0.7s
KIEV Kiev 44.44 313 eP P 13 47 49.9 -0.6
MAJO Matsushiro 45.36 68 eP P 13 47 57.0 -1.0
comp=Z,8.4nm,0.8s,mb4.6
MAJO Matsushiro 45.36 68 eP P 13 47 57.0 -1.0
MAJO pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
MAT Matsushiro 45.36 68 P P 13 47 57.3 -0.7

MJAR Matsushiro Arr 45.36 68 P **P** 13 47 57.8 -0.2
comp=Z,4,8nm,0.7s,mb4.4,baz=283,slow=9.6,SNR=13
MJAR Matsushiro Arr 45.36 68 P **P** 13 47 57.8 -0.2
MJAR pmax pmax
comp=Z,5.0nm,0.7s
PUL Pulkovo 45.41 325⇑ *e*P **P** 13 47 59.2 +1.2
PUL pmax pmax
comp=Z,143nm,0.6s,mb6.0
JOF Joensuu 45.89 330 *e*P **P** 13 48 01.7 0.0
JOF pmax pmax
comp=Z,7.0nm,0.4s,mb4.9
JOF Joensuu 45.89 330 *e*p **P** 13 48 01.7 0.0
comp=Z,6.6nm,0.4s,mb4.9
VRI Vrincioaia 45.95 306⇑ *i*P **P** 13 48 04.0 +1.5
VRI Vrincioaia 45.95 306⇑ *i*P **P** 13 48 04.0 +1.5
TESR 45.99 307⇑ *i*P **P** 13 48 04.1 +1.3
PLOR Plostina 46.01 306⇑P **P** 13 48 04.4 +1.5
PLOR Plostina 46.01 306⇑ *i*P **P** 13 48 04.4 +1.5
NACGM Naroch 46.36 318 *e* **P** 13 48 04.0 -1.6
IDID Didziasalis 46.43 319 *e*P **P** 13 48 06.8 +0.7
MLR Muntele Rosu 46.52 305⇑P **P** 13 48 08.9 +2.0
MLR Muntele Rosu 46.52 305⇑ *i*P **P** 13 48 08.9 +2.0
LVZ Lovozero 46.56 337⇑ *e*P **P** 13 48 07.2 +0.2
LVZ pmax pmax
comp=Z,65nm,1.0s,mb5.5
IIGN Ignalina 46.73 319 *e*P **P** 13 48 09.1 +0.6
IZAR Zarasai 46.77 319 *e*P **P** 13 48 09.6 +0.9
ISAL Salakas 46.81 319 *e*P **P** 13 48 10.0 +0.9
APA Apatity 46.84 336⇑ *e*P **P** 13 48 11.8 +2.6
APA pmax pmax
comp=Z,11nm,0.7s,mb4.9
APA MLR MLR
comp=Z,13μm,21.0s,MS5.9
DOPR Dopca 46.88 306⇑ *i*P **P** 13 48 09.4 -0.4
BURAR Bucovina Array 46.95 308⇑P **P** 13 48 11.7 +1.4
BURAR Bucovina Array 46.95 308⇑ *i*P **P** 13 48 11.6 +1.3
VOIR 47.15 305⇓P **P** 13 48 12.3 +0.4
VOIR 47.15 305⇓ *i*P **P** 13 48 12.3 +0.4
MRSI Marisa 47.40 122 P **P** 13 48 14.4 +0.2
comp=Z,60nm,0.8s,mb5.6
YSS Yuzh-Sakhalins 47.69 53 *e*P **P** 13 48 16.7 +0.6
comp=Z,52nm,1.4s,mb5.4
YSS Yuzh-Sakhalins 47.69 53 *e*P **P** 13 48 16.7 +0.6
YSS pmax pmax
comp=Z,51nm,1.4s,mb5.4
APE Apeiranthos 47.78 294⇓P **P** 13 48 16.2 -0.8
APE Apeiranthos 47.78 294⇓ *i*P **P** 13 48 16.2 -0.8
FINES FINESS Array B 47.85 327 P **P** 13 48 17.4 +0.3
comp=Z,15nm,0.7s,mb5.2,baz=108,slow=8.1,SNR=35
FINES FINESS Array B 47.85 327 P **P** 13 48 17.4 +0.3
FINES pmax pmax
comp=Z,15nm,0.7s
KAF Kangasniemi 47.89 328 *e*P **P** 13 48 16.4 -1.0
KAF pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
KAF Kangasniemi 47.89 328 *e*p **P** 13 48 16.4 -1.0
comp=Z,9.4nm,0.9s,mb4.8
DRGR 48.69 307⇑P **P** 13 48 24.9 +1.1
DRGR 48.69 307⇑ *i*P **P** 13 48 24.9 +1.1
VTS Vitosha 48.72 301⇑P **P** 13 48 24.8 +0.7
VTS Vitosha 48.72 301⇑ *i*P **P** 13 48 24.8 +0.7
TRPA Tarpa 48.74 309⇓ *i*P **P** 13 48 26.0 +1.8
GZR Gura Zlata 48.75 305⇑P **P** 13 48 25.3 +1.0
GZR Gura Zlata 48.75 305⇑ *i*P **P** 13 48 25.3 +1.0
UZH Uzhgorod 48.88 310 *e*P **P** 13 48 27.0 +1.7
VAY Valandovo 49.36 300 *e*P **P** 13 48 27.8 -1.2
STHS Stebnicka Huta 49.54 311 *e*P **P** 13 48 31.5 +1.2
comp=Z,4.3nm,1.0s,mb4.4
STHS Stebnicka Huta 49.54 311 *e*P **P** 13 48 31.5 +1.2
STHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
STHS Stebnicka Huta 49.54 311 *e*P **P** 13 48 31.5 +1.2
KEV Kevo 49.85 338 *e*P **P** 13 48 33.0 +0.6
comp=Z,62nm,1.4s,mb5.5
KEV Kevo 49.85 338 *e*P **P** 13 48 32.0 -0.4
KEV pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
KEV Kevo 49.85 338 *e*p **P** 13 48 32.0 -0.4
comp=Z,9.7nm,0.6s,mb5.0
SKO Skopje 50.10 301 *e*P **P** 13 48 33.8 -0.9
ARCES ARCESS Array B 50.27 337 P **P** 13 48 35.2 -0.4
comp=Z,19nm,0.7s,mb5.2,baz=97,slow=8.5,SNR=48
ARCES ARCESS Array B 50.27 337 P **P** 13 48 35.2 -0.4
ARCES pmax pmax
comp=Z,19nm,0.7s
KRUS Krusevo 50.34 300 *e*P **P** 13 48 35.6 -0.9
TNTI Ternate 51.25 117 P **P** 13 48 44.1 +0.4
comp=Z,47nm,1.2s,mb5.3
OKC Ostrava-Krasne 51.53 311 *e*P **P** 13 48 48.7 +3.4
OKC Ostrava-Krasne 51.53 311 *e*P **P** 13 48 48.7 +3.4
MORC Moravsky Berou 51.92 311⇓P **P** 13 48 49.0 +0.8
MORC Moravsky Berou 51.92 311⇓ *i*P **P** 13 48 49.0 +0.8
DPC Dobruska-Polom 52.66 312 *e*P **P** 13 48 54.3 +0.6
DPC Dobruska-Polom 52.66 312 *e*P **P** 13 48 54.3 +0.6
UPC Upice 52.84 312 *e*P **P** 13 48 55.6 +0.6
UPC Upice 52.84 312 *e*P **P** 13 48 55.6 +0.6
SEY Seymchan 53.40 32*d i*P **P** 13 48 59.7 +0.7
PRU Pruhonice 53.83 312 *e*P **P** 13 49 03.2 +0.8
PRU Pruhonice 53.83 312 *e*P **P** 13 49 03.2 +0.8
KMBO Kilima Mbogo 54.23 243 *e*P **P** 13 49 04.8 -0.9
comp=Z,70nm,1.4s,mb5.4
KMBO Kilima Mbogo 54.23 243 P **P** 13 49 04.1 -1.6
comp=Z,18nm,0.9s,mb5.0,baz=360,slow=24,SNR=22
KMBO Kilima Mbogo 54.23 243 *e*P **P** 13 49 04.9 -0.8
KMBO pmax pmax
comp=Z,70nm,1.4s
KMBO Kilima Mbogo 54.23 243 P **P** 13 49 06.5 +0.8
SNR=13
KHC Kasperske Hory 54.56 311 *e*P **P** 13 49 07.5 -0.2
KHC Kasperske Hory 54.56 311 *e*P **P** 13 49 07.5 -0.2
NOA NORSAR Array B 54.95 326 P **P** 13 49 09.5 -0.8
comp=Z,22nm,1.0s,mb5.1,baz=88,slow=7.1,SNR=23
NOA NORSAR Array B 54.95 326 P **P** 13 49 09.5 -0.8
NOA pmax pmax
comp=Z,22nm,1.0s
PETK Petropavlovsk- 56.72 44 P **P** 13 49 22.2 -0.9
PETK Petropavlovsk- 56.72 44 P **P** 13 49 22.2 -0.9
comp=Z,6.9nm,0.7s,mb4.8,baz=275,slow=1.8,SNR=18
PETK Petropavlovsk- 56.72 44 P **P** 13 49 22.2 -0.9
PETK pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
PET Petropavlovsk 57.30 44 *e*P **P** 13 49 25.8 -1.4
PET pmax pmax
comp=Z,29nm,1.1s,mb5.2
CDF Champ du Feu 58.79 311 *e*P **P** 13 49 36.5 -1.3
MBAR Mbarara 59.00 248 P **P** 13 49 40.6 +0.9
comp=Z,86nm,1.2s,mb5.7,SNR=6.1
MBAR Mbarara 59.00 248⇓ *e*P **P** 13 49 38.8 -0.9
PGF Pioggiola 59.02 304 *e*P **P** 13 49 37.8 -1.7
comp=Z,27nm,1.1s,mb4.9
PGF Pioggiola 59.02 304 *e*P **P** 13 49 37.8 -1.7
comp=Z,14nm,1.1s,mb4.9
PGF Pioggiola 59.02 304 *e*P **P** 13 49 37.8 -1.7
PGF pmax pmax
comp=Z,14nm,1.1s,mb4.9
BILL Bilibino 59.05 26 *e*P **P** 13 49 40.0 +0.8
comp=Z,72nm,1.5s,mb5.5
BILL Bilibino 59.05 26*d i*P **P** 13 49 40.5 +1.3
BILL pmax pmax
comp=Z,58nm,1.9s,mb5.3
HAU Haudompre 59.49 311 *e*P **P** 13 49 41.3 -1.3
SBF Sospel 59.78 306 *e*P **P** 13 49 43.8 -0.9
comp=Z,46nm,0.8s,mb5.2
SBF Sospel 59.78 306 *e*P **P** 13 49 43.8 -0.9
comp=Z,23nm,0.8s,mb5.3
SBF Sospel 59.78 306 *e*P **P** 13 49 43.8 -0.9
SBF pmax pmax
comp=Z,23nm,0.8s,mb5.3
LPG La Plagne 59.83 308 *e*P **P** 13 49 44.4 -0.6
comp=Z,41nm,0.9s,mb5.2
LPG La Plagne 59.83 308 *e*P **P** 13 49 44.4 -0.6
comp=Z,21nm,0.9s,mb5.2
LPG La Plagne 59.83 308 *e*P **P** 13 49 44.4 -0.6
LPG pmax pmax
comp=Z,21nm,0.9s,mb5.2
LPL La Plagne 59.84 308 *e*P **P** 13 49 44.4 -0.7
comp=Z,35nm,0.8s,mb5.1
LPL La Plagne 59.84 308 *e*P **P** 13 49 44.4 -0.7
comp=Z,18nm,0.8s,mb5.1
LPL La Plagne 59.84 308 *e*P **P** 13 49 44.4 -0.7
LPL pmax pmax
comp=Z,18nm,0.8s,mb5.2
GIVF Givet 59.98 313 *e*P **P** 13 49 45.0 -1.0
CABF La Chapelle 60.00 309 *e*P **P** 13 49 45.1 -1.1

MBDF Montbardon 60.02 307 *e*P **P** 13 49 44.6 -1.7
comp=Z,10nm,0.7s,mb4.7
MBDF Montbardon 60.02 307 *e*P **P** 13 49 44.6 -1.7
comp=Z,5.1nm,0.7s,mb4.7
MBDF Montbardon 60.02 307 *e*P **P** 13 49 44.6 -1.7
MBDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
SFTF Sexfontaines 60.30 311 *e*P **P** 13 49 46.8 -1.4
BAIF Baives 60.37 313 *e*P **P** 13 49 47.6 -1.1
FRF La Foret Royal 60.41 306 *e*P **P** 13 49 47.7 -1.4
comp=Z,57nm,1.2s,mb5.2
FRF La Foret Royal 60.41 306 *e*P **P** 13 49 47.7 -1.4
comp=Z,28nm,1.2s,mb5.2
FRF La Foret Royal 60.41 306 *e*P **P** 13 49 47.7 -1.4
FRF pmax pmax
comp=Z,28nm,1.2s,mb5.2
LMR La Mourre 60.57 305 *e*P **P** 13 49 48.7 -1.5
comp=Z,18nm,0.8s,mb5.0
LMR La Mourre 60.57 305 *e*P **P** 13 49 48.7 -1.5
comp=Z,9.1nm,0.8s,mb5.0
LMR La Mourre 60.57 305 *e*P **P** 13 49 48.7 -1.5
LMR pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
ORIF Oris-en-Rattie 60.58 307 *e*P **P** 13 49 48.6 -1.6
KEST Kesra 60.74 296 P **P** 13 49 51.1 -0.4
comp=Z,14nm,1.0s,mb5.1,baz=3.0,slow=1.3,SNR=20
SMRF Simiane la Rot 61.05 306 *e*P **P** 13 49 52.4 -1.0
comp=Z,35nm,1.2s,mb5.1
SMRF Simiane la Rot 61.05 306 *e*P **P** 13 49 52.4 -1.0
comp=Z,35nm,1.2s,mb5.4
LOR Lormes 61.30 310 *e*P **P** 13 49 53.1 -1.9
VIVF Saint-Julien-l 61.42 307 *e*P **P** 13 49 54.5 -1.4
comp=Z,22nm,1.1s,mb4.9
VIVF Saint-Julien-l 61.42 307 *e*P **P** 13 49 54.5 -1.4
comp=Z,11nm,1.1s,mb4.9
VIVF Saint-Julien-l 61.42 307 *e*P **P** 13 49 54.5 -1.4
VIVF pmax pmax
comp=Z,11nm,1.1s,mb4.9
SMF Signal de Mont 61.48 310 *e*P **P** 13 49 54.7 -1.6
comp=Z,35nm,1.2s,mb5.0
SMF Signal de Mont 61.48 310 *e*P **P** 13 49 54.7 -1.6
comp=Z,18nm,1.2s,mb5.1
SMF Signal de Mont 61.48 310 *e*P **P** 13 49 54.7 -1.6
SMF pmax pmax
comp=Z,18nm,1.2s,mb5.1
SSF Saint Saulge 61.59 310 *e*P **P** 13 49 55.4 -1.6
comp=Z,6.4nm,0.6s,mb4.6
SSF Saint Saulge 61.59 310 *e*P **P** 13 49 55.4 -1.6
comp=Z,3.2nm,0.6s,mb4.6
SSF Saint Saulge 61.59 310 *e*P **P** 13 49 55.4 -1.6
SSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
AVF Avril sur Loir 61.77 310 *e*P **P** 13 49 56.5 -1.7
comp=Z,47nm,1.5s,mb5.1
AVF Avril sur Loir 61.77 310 *e*P **P** 13 49 56.5 -1.7
comp=Z,24nm,1.5s,mb5.1
AVF Avril sur Loir 61.77 310 *e*P **P** 13 49 56.5 -1.7
AVF pmax pmax
comp=Z,24nm,1.5s,mb5.1
LASF Ste Croix 62.20 307 *e*P **P** 13 50 00.2 -1.0
comp=Z,32nm,1.3s,mb5.0
MBWA Marble Bar 62.41 141 *e*P **P** 13 50 02.2 -0.5
MBWA Marble Bar 62.41 141 P **P** 13 50 02.4 -0.3
comp=Z,18nm,2.3s,mb4.8
TCF Toulx Ste Croi 62.67 310 *e*P **P** 13 50 03.0 -1.2
comp=Z,43nm,1.2s,mb5.1
TCF Toulx Ste Croi 62.67 310 *e*P **P** 13 50 03.0 -1.2
comp=Z,22nm,1.3s,mb5.1
TCF Toulx Ste Croi 62.67 310 *e*P **P** 13 50 03.0 -1.2
TCF pmax pmax
comp=Z,22nm,1.3s,mb5.1
FITZ Fitzroy Crossi 63.40 134 *e*P **P** 13 50 07.6 -1.8
comp=Z,20nm,0.9s,mb5.3
FITZ Fitzroy Crossi 63.40 134 P **P** 13 50 08.0 -1.3
comp=Z,12nm,0.9s,mb5.0,baz=316,slow=4.3,SNR=15
FITZ Fitzroy Crossi 63.40 134 P **P** 13 50 07.8 -1.6
comp=Z,33nm,1.0s,mb5.4
RJF Les Rejaudoux 63.43 309 *e*P **P** 13 50 08.4 -0.9
LDF La Druitiere 63.50 313 *e*P **P** 13 50 07.8 -1.9
comp=Z,14nm,0.8s,mb4.8
LDF La Druitiere 63.50 313 *e*P **P** 13 50 07.8 -1.9
comp=Z,6.9nm,0.8s,mb4.8
LDF La Druitiere 63.50 313 *e*P **P** 13 50 07.8 -1.9
LDF pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
MTLF Montolieu 63.56 306 *e*P **P** 13 50 09.2 -1.0
KNA Kununurra 63.64 130 *e*P **P** 13 50 09.4 -1.6
comp=Z,56nm,1.0s,mb5.5
KNA Kununurra 63.64 130 P **P** 13 50 09.7 -1.3
comp=Z,930nmcomp=Z,152nm,1.0s,mb6.0
FLN La Foliniere 63.67 313 *e*P **P** 13 50 09.0 -1.9
KAKA Kakadu 63.99 125 *e*P **P** 13 50 11.8 -1.5
comp=Z,23nm,0.9s,mb5.2
GRR Gorron 64.03 312 *e*P **P** 13 50 11.4 -1.8
comp=Z,15nm,0.7s,mb4.8
GRR Gorron 64.03 312 *e*P **P** 13 50 11.4 -1.8
comp=Z,7.6nm,0.7s,mb4.8
GRR Gorron 64.03 312 *e*P **P** 13 50 11.4 -1.8
GRR pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
MFF Saint Martin d 64.12 310 *e*P **P** 13 50 12.0 -1.9
SGMF Saint Gilles 65.14 313 *e*P **P** 13 50 19.1 -1.4
comp=Z,34nm,1.1s,mb5.0
SGMF Saint Gilles 65.14 313 *e*P **P** 13 50 19.1 -1.4
comp=Z,17nm,1.0s,mb5.0
SGMF Saint Gilles 65.14 313 *e*P **P** 13 50 19.1 -1.4
SGMF pmax pmax
comp=Z,17nm,1.0s,mb5.0
ALE Alert 65.56 355 P **P** 13 50 23.0 +0.3
comp=Z,72nm,0.7s,mb5.8,SNR=5.4
ROSF Rostrenen 65.57 313 *e*P **P** 13 50 21.8 -1.4
ETSF Etsaut 65.63 307 *e*P **P** 13 50 22.7 -1.0
QUIF Quistinic 65.64 313 *e*P **P** 13 50 21.7 -2.0
ESDC Sonseca Array 69.20 304 P **P** 13 50 45.1 -1.3
comp=Z,4.0nm,0.8s,mb4.4,baz=60,slow=6.4,SNR=13
SUMG Summit 69.46 344 *i* P **P** 13 50 48.4 +0.9
comp=Z,51nm,0.8s,mb5.5
SUMG
comp=Z,20μm,22.0s
PAB San Pablo 69.53 304 *e*P **P** 13 50 47.8 -0.6
comp=Z,17nm,1.3s,mb4.8
PAB San Pablo 69.53 304 *e*P **P** 13 50 47.8 -0.6
PAB pmax pmax
comp=Z,17nm,1.3s,mb4.8
KLBR Kellerberrin 70.17 149 *e*P **P** 13 50 49.7 -2.6
comp=Z,22nm,1.1s,mb5.0
LSZ Lusaka 70.21 237 *e*P **P** 13 50 51.3 -1.6
comp=Z,24nm,1.0s,mb5.1
LSZ Lusaka 70.21 237 *e*P **P** 13 50 51.3 -1.6
LSZ pmax pmax
comp=Z,24nm,1.0s,mb5.1
WRA Warramunga Arr 70.33 129 P **P** 13 50 52.2 -1.3
WRA Warramunga Arr 70.33 129 P **P** 13 50 52.2 -1.3
comp=Z,47nm,0.9s,mb5.4,baz=324,slow=6.3,SNR=106
WRA Warramunga Arr 70.33 129 P **P** 13 50 52.2 -1.3
WRA pmax pmax
comp=Z,47nm,0.9s
MVO Moncorvo 70.74 307 *e*P **P** 13 50 55.5 -0.4
comp=Z,19nm,1.5s,mb4.8
MTE Manteigas 71.42 306 *e*P **P** 13 51 00.3 +0.3
comp=Z,29nm,1.6s,mb5.0
PVIS Viseu 71.53 307 *e*P **P** 13 51 00.7 +0.1
PBAR Barrancos 72.01 304 *e*P **P** 13 51 02.8 -0.8
ASAR Alice Springs 72.69 132 P **P** 13 51 06.3 -1.4
comp=Z,9.7nm,1.0s,mb4.7,baz=322,slow=4.7,SNR=42
ASAR Alice Springs 72.69 132 P **P** 13 51 06.3 -1.4
ASAR pmax pmax
comp=Z,10.0nm,1.0s
PVAQ Vaqueiros 72.83 304 *e*P **P** 13 51 08.0 -0.5
TORD Torodi Ar. Bea 76.38 277 P **P** 13 51 28.3 -1.2
TORD Torodi Ar. Bea 76.38 277 P **P** 13 51 28.3 -1.2
comp=Z,9.6nm,0.8s,mb4.8,baz=51,slow=4.3,SNR=25
COLA College 76.52 20 *e*P **P** 13 51 29.6 +0.3
ILAR Eielson Array 76.87 20 P **P** 13 51 31.5 +0.1
comp=Z,24nm,0.8s,mb5.2,baz=302,slow=4.8,SNR=182
ILAR Eielson Array 76.87 20 P **P** 13 51 31.5 +0.1
ILAR pmax pmax
comp=Z,24nm,0.8s
EGAK Eagle 78.46 18 *e*P **P** 13 51 40.5 +0.3
comp=Z,24nm,0.8s,mb5.2
CTA Charters Tower 78.78 122 *e*P **P** 13 51 41.7 -0.9
comp=Z,21nm,0.9s,mb5.1
CTA Charters Tower 78.78 122 P **P** 13 51 41.8 -0.8
comp=Z,32nm,0.9s,mb5.2,baz=311,slow=7.5,SNR=11
CTA Charters Tower 78.78 122 P **P** 13 51 41.8 -0.8
CTA pmax pmax
comp=Z,32nm,1.0s
CTAO Charters Tower 78.78 122 *e*P **P** 13 51 41.8 -0.8
comp=Z,35nm,1.0s,mb5.2
CTAO Charters Tower 78.78 122 *e*P **P** 13 51 41.8 -0.8
CTAO pmax pmax
comp=Z,35nm,1.0s,mb5.2
CTAO Charters Tower 78.78 122 P **P** 13 51 41.7 -0.9
comp=Z,36nm,1.2s,mb5.2
KDAK Kodiak Island 79.94 27 P **P** 13 51 49.3 +0.9
comp=Z,326nm,1.5s,mb6.0,SNR=9.3
KDAK Kodiak Island 79.94 27 P **P** 13 51 49.0 +0.6
comp=Z,35nm,0.9s,mb5.3,baz=335,slow=3.7,SNR=22
KDAK Kodiak Island 79.94 27 *i* P **P** 13 51 48.9 +0.5
BOSA Boshof 81.12 229 P **P** 13 51 53.2 -1.9
comp=Z,19nm,0.7s,mb5.1,baz=42,slow=5.7,SNR=24
BOSA Boshof 81.12 229 P **P** 13 51 53.3 -1.8
BOSA pmax pmax
comp=Z,19nm,0.7s,mb5.1
STKA Stephens Creek 83.27 133 *e*P **P** 13 52 04.6 -1.7
comp=Z,13nm,0.9s,mb5.0
STKA Stephens Creek 83.27 133 *e*P **P** 13 52 04.7 -1.7
comp=Z,4.4nm,1.0s,mb4.4
STKA Stephens Creek 83.27 133 P **P** 13 52 04.8 -1.5
comp=Z,15nm,0.9s,mb5.0,baz=306,slow=5.2,SNR=20
RMQ Roma 84.55 125 *e*P **P** 13 52 12.8 -0.2
comp=Z,62nm,1.0s,mb5.7
DBIC Dimbokro 85.18 275 P **P** 13 52 15.2 -1.4
comp=Z,9.5nm,0.7s,mb5.0,baz=48,slow=5.6,SNR=16
DBIC Dimbokro 85.18 275 P **P** 13 52 15.2 -1.3
DBIC pmax pmax
comp=Z,10.0nm,0.7s
LIC Lamto 85.55 275 *e*P **P** 13 52 17.6 -0.8
comp=Z,43nm,1.1s,mb5.3
LIC Lamto 85.55 275 *e*P **P** 13 52 17.6 -0.8
comp=Z,22nm,1.1s,mb5.3
YKA Yellowknife Ar 85.78 8 P **P** 13 52 17.7 -0.9
YKA Yellowknife Ar 85.78 8 P **P** 13 52 17.7 -0.9
comp=Z,6.1nm,0.7s,mb4.9,baz=337,slow=5.1,SNR=11
YKA Yellowknife Ar 85.78 8 P **P** 13 52 17.7 -0.9
YKA pmax pmax
comp=Z,6.0nm,0.7s
DLBC Dease Lake 86.67 17 P **P** 13 52 24.0 +0.9
comp=Z,6.9nm,0.7s,mb5.0,baz=291,slow=5.7,SNR=14
ARMA Armidale 88.95 127 *e*P **P** 13 52 35.9 +1.5
TOO Toolangi 89.44 135 *e*P **P** 13 52 36.3 -0.2
MAW Mawson 99.45 188 *e*P **P** 13 53 22.2 +0.7
comp=Z,4.2nm,1.5s,mb4.8
MAW Mawson 99.45 188 *e*P **P** 13 53 22.3 +0.7
MAW pmax pmax
comp=Z,4.0nm,1.5s
SYO Syowa Base 104.71 195⇓ *e*Pdiff Pdif 13 53 48.8 +3.0
PDAR Pinedale Array 105.69 10 PKiKP PKiKP 13 58 02.5 -0.7
comp=Z,0.6nm,0.7s,baz=114,slow=1.8,SNR=4.5
NVAR Mina Array Bea 108.07 18 PKiKP PKiKP 13 58 07.0 -0.7
comp=Z,0.9nm,0.7s,baz=285,slow=1.1,SNR=7.3
NVAR PKKPbc PKKPbc 14 09 21.9 +2.2
comp=Z,0.5nm,0.8s,baz=193,slow=5.9,SNR=4.0
TXAR Lajitas Array 119.69 7 PKP PKPdf 13 58 28.8 -1.4
comp=Z,1.3nm,0.7s,baz=339,slow=0.8,SNR=12
TXAR PKKPbc PKKPbc 14 08 41.8 +1.5
comp=Z,1.6nm,0.9s,baz=168,slow=6.4,SNR=10
TXAR Lajitas Array 119.69 7 PKiKP PKPdf 13 58 28.8 -1.3
TXAR pmax pmax
comp=Z,1.0nm,0.7s
TXAR pmax pmax
comp=Z,2.0nm,1.0s
VNA3 Neumayer Olymp 119.94 202 *e*PKPdf PKPdf 13 58 24.8 -4.4
QSPA South Pole Qui 120.73 180 PKP PKPdf 13 58 28.6 -1.9
comp=Z,9.6nm,1.2s,baz=241,slow=4.0,SNR=10
TEIG Tepich 128.52 350 *e*PKPdf PKPdf 13 58 46.8 -0.5
SIV San Ignacio 144.40 287 PKP PKPdf 13 59 13.9 -2.6
comp=Z,4.1nm,0.9s,baz=97,slow=5.5,SNR=11
OTAV Otavalo 144.56 328 *e*PKP PKPdf 13 59 16.1 -0.9
CPUP Villa Florida 145.40 268 PKPbc PKPbc 13 59 15.7 -2.3
comp=Z,7.7nm,0.7s,baz=78,slow=2.4,SNR=13
LPAZ La Paz 150.28 293 PKPbc PKPbc 13 59 29.4 -2.1
comp=Z,4.2nm,1.0s,baz=14,slow=10.0,SNR=7.2
ATAH Atahualpa 150.86 321 PKPbc PKPbc 13 59 34.0 +1.0
comp=Z,16nm,0.8s,baz=204,slow=2.8,SNR=9.5
CFAA Coronel Fontan 155.82 261 PKP PKPdf 13 59 32.3 -1.6
comp=Z,0.4nm,0.7s,baz=221,slow=3.7,SNR=5.5
PLCA Paso Flores 156.84 238 PKPab PKPab 14 00 03.4 -1.4
comp=Z,3.6nm,0.8s,baz=152,slow=5.8,SNR=5.0
PLCA Paso Flores 156.84 238 PKP2 PKPab 14 00 03.4 -1.4
PLCA pmax pmax
comp=Z,4.0nm,0.8s

IDC ***25*** *13:47:21.3±1.0, 30.°35N×83.°19E, h0km, mb3.7/7, mb1 3.9/9, mb1mx3.7/28, mbtmp3.7/9, ML3.4/1, Error ellipse: s-maj=38.4km s-min=18.4km az=61.0*
NEIC ***25*** *13:47:23.1±0.8, 30.°46N×83.°30E, h10km, Error ellipse: s-maj=22.8km s-min=10.9km az=54.0*
ISCJB ***25*** *13:47:24.6±5.0, 30.°5N±0.°1×83.°5E±0.°1, h31km±36km, mb3.6/6, Error ellipse: s-maj=24.1km s-min=11.1km az=35.1*
ISC 25 13:47:26.1±5.1, 30.°5N±0.°1×83.°4E±0.°1, h29km±37km, n11, σ0s83/12, mb3.6/6, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LSA	**Lhasa**	**6.77**	**95**	Pn	**Pn**		**13 49 03.0**	**-0.5**
LSA				Sn	**Sn**		**13 50 19.3**	**-0.3**
LSA				smax				
	comp=N,40nm,1.0s							
LSA				smax				
	comp=E,50nm,1.0s							
LSA	**Lhasa**	**6.77**	**95**	*e*Pn	**Pn**		**13 49 03.2**	**-0.2**
MKAR	**Makanchi Array**	**16.28**	**357**	Pn	**Pn**		**13 51 11.8**	**-0.8**
	comp=E,0.1nm,0.3s,baz=184,slow=10,SNR=4.0							
CMAR	**Chiang Mai Arr**	**18.53**	**127**	P	**Pn**		**13 51 41.3**	**+0.7**
	baz=306,slow=11,SNR=3.5							
KURK	**Kurchatov**	**20.50**	**351**	P			**13 52 01.2**	**-0.5**
	comp=E,0.8nm,0.3s,baz=172,slow=9.4,SNR=1.3							
ZALV	**Zalesovo Beam**	**23.45**	**2**	P	**P**		**13 52 34.2**	**+1.2**
	comp=E,1.0nm,0.4s,mb3.6,baz=116,slow=6.6,SNR=2.2							
BVAR	**Borovoye Array**	**24.42**	**341**	P			**13 52 43.1**	**+1.2**
	comp=E,1.1nm,0.6s,mb3.4,baz=182,slow=9.5,SNR=2.9							
WRA	**Warramunga Arr**	**70.10**	**129**	P	**P**		**13 58 35.0**	**-0.9**
	comp=E,0.7nm,0.6s,mb3.8,baz=326,slow=6.4,SNR=9.8							
ASAR	**Alice Springs**	**72.44**	**132**	P	**P**		**13 58 51.1**	**+1.1**
	comp=E,0.9nm,1.1s,mb3.6,baz=320,slow=6.0,SNR=3.3							
TORD	**Torodi Ar. Bea**	**76.38**	**277**	P	**P**		**13 59 12.0**	**-1.1**
	comp=E,0.6nm,0.7s,mb3.6,baz=68,slow=3.8,SNR=3.6							
ILAR	**Eielson Array**	**77.29**	**20**	P	**P**		**13 59 17.2**	**-0.2**
	comp=E,0.5nm,0.6s,mb3.6,baz=316,slow=3.8,SNR=5.1							

IDC ***25*** *13:47:46.4±0.9, 30.°70N×83.°23E, h0km, mb3.9/10, mb1 4.1/12, mb1mx3.9/27, mbtmp3.9/12, ML3.3/2, Error ellipse: s-maj=30.5km s-min=16.8km az=56.0*
ISCJB ***25*** *13:47:48.3±4.1, 30.°7N±0.°1×83.°3E±0.°1, h24km±31km, mb3.9/9, Error ellipse: s-maj=22.0km s-min=12.2km az=36.0*
NEIC ***25*** *13:47:48.1±0.6, 30.°76N×83.°39E, h10km, Error ellipse: s-maj=17.1km s-min=10.9km az=48.0*
ISC 25 13:47:50.6±4.4, 30.°8N±0.°1×83.°4E±0.°1, h25km±32km, n17, σ0s97/17, mb3.9/9, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LSA	**Lhasa**	**6.83**	**97**	*e*P	**Pn**		**13 49 33.8**	**+4.6**
	43nm,0.8s							
KBL	**Kabul**	**12.62**	**291**	*e*P	**Pn**		**13 50 49.9**	**+1.3**
MKAR	**Makanchi Array**	**15.99**	**357**	Pn	**Pn**		**13 51 33.1**	**-0.6**
	0.1nm,0.3s,baz=179,slow=12,SNR=2.8							
KMI	**Kunming**	**18.02**	**104**	P	**Pn**		**13 51 59.5**	**+0.1**
KMI				pP	pP		13 52 07.3	+0.8
KMI				pmax	pmax			
	comp=Z,12nm,0.9s							
CMAR	**Chiang Mai Arr**	**18.73**	**127**	P	**Pn**		**13 52 05.2**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=295,slow=11,SNR=4.0							
KURK	**Kurchatov**	**20.20**	**351**	P	**P**		**13 52 22.2**	**-1.2**
	comp=Z,3.3nm,0.6s,baz=166,slow=11,SNR=4.6							
ZALV	**Zalesovo Beam**	**23.15**	**2**	P	**P**		**13 52 55.1**	**+0.2**
	comp=Z,1.3nm,0.3s,mb3.8,baz=200,slow=7.3,SNR=2.5							
SONM	**Songino Array**	**24.49**	**39**	P	**P**		**13 53 09.0**	**+1.3**
	comp=Z,0.9nm,0.3s,mb3.6,baz=72,slow=4.7,SNR=2.2							
AKASG	**Malin Array Be**	**44.45**	**313**	P	**P**		**13 55 59.2**	**-0.2**
AKASG	**Malin Array Be**	**44.45**	**313**	P	**P**		**13 55 59.2**	**-0.2**
	comp=Z,1.2nm,0.6s,mb3.8,baz=83,slow=7.6,SNR=5.8							
FINES	**FINESS Array B**	**47.91**	**327**	P	**P**		**13 56 25.4**	**-1.0**
	comp=Z,4.3nm,1.0s,mb4.5,baz=111,slow=11,SNR=2.7							
ARCES	**ARCESS Array B**	**50.35**	**337**	P	**P**		**13 56 46.0**	**+0.9**
	comp=Z,1.7nm,0.8s,mb4.1,baz=99,slow=7.9,SNR=4.1							

WRA	**Warramunga Arr**	**70.31**	**129**	P	**P**	**13 59 02.4 +0.2**
WRA	**Warramunga Arr**	**70.31**	**129**	P	**P**	**13 59 02.4 +0.2**
	comp=Z,2.0nm,0.8s,mb4.1,baz=323,slow=6.3,SNR=12					
ASAR	**Alice Springs**	**72.66**	**132**	P	**P**	**13 59 16.9 +0.5**
	comp=Z,0.6nm,0.6s,mb3.7,baz=320,slow=5.7,SNR=9.6					
TORD	**Torodi Ar. Bea**	**76.31**	**277**	P	**P**	**13 59 36.9 -1.0**
	comp=Z,1.3nm,0.8s,mb3.9,baz=46,slow=3.9,SNR=4.2					
ILAR	**Eielson Array**	**77.02**	**20**	P	**P**	**13 59 41.5 +0.5**
	comp=Z,1.3nm,0.9s,mb3.8,baz=315,slow=5.2,SNR=7.4					

*ATH **25** 13:50:42.7, 36°.64N×28°.73E, h44km, MD3.0/3*
*ISCJB **25** 13:50:45.0±0.8, 36°.72N±0°.04×28°.22E±0°.05, h2km±10km, Error ellipse: s-maj=8.0km s-min=6.0km az=150.3*
*ISK **25** 13:50:44.6, 36°.71N×28°.20E, h9km, ML2.9*
*CSEM **25** 13:50:45.4±0.3, 36°.74N×28°.21E, h10km, ML2.9, Error ellipse: s-maj=5.9km s-min=5.8km az=131.0*

ISC 25 13:50:45.5±0.8, 36°.72N±0°.05×28°.21E±0°.05, h7km±8km, **n20,σ0°78/31, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.42**	**8**	*e*PG	**Pg**	**13 50 53.8**	**+0.1**
YER				*e*SG	**Sg**	**13 51 00.3**	**+1.2**
YER	**Yerkesik**	**0.42**	**8**	*e*Pg	**Pg**	**13 50 53.8**	**+0.2**
YER				*e*Sg	**Sg**	**13 51 00.3**	**+1.2**
ARG	**Arkhangelos**	**0.51**	**188**	*e*P	**Pg**	**13 50 56.5**	**+1.2**
ARG				*e*S	**Sg**	**13 51 06.7**	**+4.8**
ARG	**Arkhangelos**	**0.51**	**188**	*e*P	**Pg**	**13 50 56.5**	**+1.2**
ARG				*e*S	**Sg**	**13 51 06.7**	**+4.8**
DAT	**Datca**	**0.51**	**271**	*e*PG	**Pg**	**13 50 55.2**	**-0.2**
DAT				*e*SG	**Sg**	**13 51 02.5**	**+0.4**
DAT	**Datca**	**0.51**	**271**	*e*Pg	**Pg**	**13 50 55.2**	**-0.2**
DAT				*e*Sg	**Sg**	**13 51 02.5**	**+0.5**
MLSB	**Milas**	**0.67**	**329**	*e*PG	**Pg**	**13 50 57.8**	**-0.6**
MLSB	**Milas**	**0.67**	**329**	*e*Pg	**Pg**	**13 50 57.8**	**-0.7**
BDRM	**Kayabasi**	**0.71**	**299**	*i* P	**Pg**	**13 50 58.6**	**-0.5**
BDRM				*i* S	**Sg**	**13 51 08.1**	**-0.2**
BDRM	**Kayabasi**	**0.71**	**299**	*i* P	**Pg**	**13 50 58.6**	**-0.5**
BDRM				*i* S	**Sg**	**13 51 08.1**	**-0.2**
BODT	**Bodrum**	**0.80**	**296**	*e*PG	**Pg**	**13 50 60.0**	**-0.9**
BODT	**Bodrum**	**0.80**	**296**	*e*Pg	**Pg**	**13 51 00.0**	**-0.9**
GLHS	**Glhisar (BURDU**	**1.12**	**67**	*e*PN	**Pg**	**13 51 06.1**	**-0.8**
GLHS	**Glhisar (BURDU**	**1.12**	**67**	*e*Pn	**Pg**	**13 51 06.1**	**-0.8**
ELL	**Elmali**	**1.36**	**88**	*e*PN	**Pn**	**13 51 10.7**	**-0.2**
ELL	**Elmali**	**1.36**	**88**	*e*Pn	**Pn**	**13 51 10.7**	**-0.2**
KARP	**Karpathos**	**1.45**	**216**	*e*P	**Pn**	**13 51 11.1**	**-1.0**
KARP				*e*S	**Sn**	**13 51 31.6**	**+0.3**
KARP	**Karpathos**	**1.45**	**216**	*e*P	**Pn**	**13 51 11.1**	**-1.0**
KARP				*e*S	**Sn**	**13 51 31.6**	**+0.3**
SMG	**Samos**	**1.48**	**312**	*e*P	**Pn**	**13 51 13.4**	**+0.9**
SMG				*e*S	**Sn**	**13 51 35.8**	**+3.7**
SMG	**Samos**	**1.48**	**312**	*e*P	**Pn**	**13 51 13.4**	**+0.9**

*ISCJB **25** 13:52:52.2±1.1, 30°.4N±0°.2×83°.3E±0°.2, h10km, mb3.6/6, Error ellipse: s-maj=31.1km s-min=12.3km az=139.8*
*IDC **25** 13:52:53.0±1.5, 30°.57N×83°.61E, h0km, mb3.7/7, mb1 3.9/9, mb1mx3.7/28, mbtmp3.8/9, ML3.8/2, Error ellipse: s-maj=77.0km s-min=17.4km az=60.0*
*NEIC **25** 13:52:54.5±1.2, 30°.64N×83°.77E, h10km, Error ellipse: s-maj=48.8km s-min=12.1km az=61.0*

ISC 25 13:52:54.1±1.1, 30°.5N±0°.2×83°.4E±0°.2, h10km, **n11, σ1s28/11, mb3.6/6, Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.77**	**95**	*e*P	**Pn**	**13 54 35.7**	**+2.2**
	16nm,0.9s						
MKAR	**Makanchi Array**	**16.27**	**357**	Pn	**Pn**	**13 56 42.3**	**-0.3**
	0.2nm,0.3s,baz=179,slow=10,SNR=7.5						
CMAR	**Chiang Mai Arr**	**18.54**	**127**	P	**Pn**	**13 57 08.0**	**-3.0**
	0.2nm,0.3s,baz=315,slow=10,SNR=2.5						
KURK	**Kurchatov**	**20.49**	**351**	P	**P**	**13 57 29.8**	**-2.1**
	1.8nm,0.2s,baz=168,slow=10,SNR=1.6						
ZALV	**Zalesovo Beam**	**23.44**	**2**	P	**P**	**13 58 03.7**	**+0.3**
	0.7nm,0.4s,mb3.4,baz=178,slow=14,SNR=2.0						
BVAR	**Borovoye Array**	**24.41**	**341**	P	**P**	**13 58 13.1**	**+0.6**
	0.5nm,0.4s,mb3.3,baz=146,slow=10,SNR=3.6						
FINES	**FINESS Array B**	**48.16**	**327**	P	**P**	**14 01 35.7**	**+1.6**
FINES	**FINESS Array B**	**48.16**	**327**	P	**P**	**14 01 35.7**	**+1.6**
	1.6nm,0.6s,mb4.2,baz=130,slow=8.0,SNR=3.9						
ARCES	**ARCESS Array B**	**50.63**	**337**	P	**P**	**14 01 52.2**	**-0.6**
	1.2nm,0.9s,mb3.8,baz=93,slow=7.6,SNR=3.7						
WRA	**Warramunga Arr**	**70.11**	**129**	P	**P**	**14 04 07.2**	**+0.5**
	0.7nm,0.6s,mb3.8,baz=323,slow=6.4,SNR=6.9						
ASAR	**Alice Springs**	**72.45**	**132**	P	**P**	**14 04 21.1**	**+0.2**
	0.3nm,0.7s,mb3.3,baz=321,slow=5.9,SNR=4.5						

*IDC **25** 13:53:51.1±2.5, 5°.73S×110°.63E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/20, mbtmp3.9/5, ML3.7/1, Error ellipse: s-maj=150.5km s-min=24.2km az=53.0*
*ISCJB **25** 13:54:05.1±0.6, 6°.36S±0°.09×110°.41E±0°.06, h130km±9km, mb3.7/4, Error ellipse: s-maj=15.2km s-min=7.8km az=23.2*
*DJA **25** 13:54:05, 6°.32S×110°.36E, h22km, MLv4.6/19*

ISC 25 13:54:06.3±0.6, 6°.37S±0°.09×110°.41E±0°.06, h121km±9km, **n26,σ1s03/26, mb3.7/4, Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMRI	**Semarang**	**0.68**	**178**	P	**Pn**	**13 57 17.9**	**-7.7**
BJII	**Banjamegara**	**1.18**	**216**	P	**Pn**	**13 54 25.5**	**-4.8**
NGJI	**Ngawi**	**1.44**	**134**	P	**Pn**	**13 54 30.6**	**-2.5**
YOGI	**Yogyakarta**	**1.44**	**185**	P	**Pn**	**13 54 32.3**	**-0.8**
UGM	**Wanagama**	**1.54**	**176**	P	**Pn**	**13 54 34.4**	**+0.2**
SJI	**Sawahan**	**1.91**	**135**	P	**Pn**	**13 54 31.6**	**-7.1**
PCJI	**Pacitan**	**1.96**	**157**	P	**Pn**	**13 54 39.6**	**+0.2**
JCJI	**Jatiwangi**	**2.13**	**267**	P	**Pn**	**13 54 44.0**	**+2.6**
PWJI	**Pagerwojo**	**2.14**	**140**	P	**Pn**	**13 54 43.0**	**+1.4**
CMJI	**Cimerak**	**2.40**	**234**	P	**Pn**	**13 54 40.1**	**-4.8**
KRKI	**Karangkates**	**2.69**	**131**	P	**Pn**	**13 54 48.7**	**+0.1**
LEM	**Lembang**	**2.81**	**261**	P	**Pn**	**13 54 50.3**	**+0.1**
CISI	**Cisompet, Garu**	**2.83**	**245**	P	**Pn**	**13 54 44.9**	**-5.6**
CBJI	**Citeko**	**3.54**	**269**	P	**Pn**	**13 54 58.8**	**-1.0**
KMMI	**Kalianget**	**3.59**	**101**	P	**Pn**	**13 55 00.6**	**+0.2**
DBJI	**Dramaga**	**3.65**	**267**	P	**Pn**	**13 55 00.5**	**-0.6**
TPI	**Tanjungpandan**	**4.52**	**322**	P	**Pn**	**13 55 09.3**	**-3.6**
NBBI	**Negara**	**4.62**	**116**	P	**Pn**	**13 55 15.2**	**+1.0**
RBSI	**Rajabasa**	**4.67**	**276**	P	**Pn**	**13 55 16.6**	**+1.7**
CGJI	**Cibinong**	**4.70**	**267**	P	**Pn**	**13 55 15.3**	**+0.1**
STKI	**Sintang**	**6.48**	**9**	P	**Pn**	**13 55 39.6**	**+0.3**
FITZ	**Fitzroy Crossi**	**18.88**	**129**	P	**P**	**13 58 16.4**	**-1.0**
	0.2nm,0.3s,baz=333,slow=8.7,SNR=7.9						
WRA	**Warramunga Arr**	**26.87**	**122**	P	**P**	**13 59 36.1**	**+0.2**
	1.6nm,0.7s,mb3.7,baz=298,slow=12,SNR=8.9						
CMAR	**Chiang Mai Arr**	**27.14**	**336**	P	**P**	**13 59 31.9**	**-6.3**
	0.9nm,0.6s,mb3.5,baz=162,slow=6.9,SNR=4.8						
ASAR	**Alice Springs**	**28.39**	**130**	P	**P**	**13 59 49.1**	**-0.3**
	0.6nm,0.6s,mb3.3,baz=307,slow=8.0,SNR=12						
STKA	**Stephens Creek**	**38.62**	**135**	P	**P**	**14 01 18.2**	**+0.3**
	2.2nm,0.6s,mb4.2,baz=331,slow=9.6,SNR=6.5						

IDC 25 14:03:23.6±2.2, 30°.77N×83°.18E, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.4/28, mbtmp3.4/7, ML3.5/2, Error ellipse: s-maj=109.0km s-min=20.0km az=63.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**16.02**	**358**	Pn	Pn	**14 07 07.5**	**-2.6**
	0.1nm,0.3s,baz=186,slow=10.0,SNR=2.6						
CMAR	**Chiang Mai Arr**	**18.83**	**127**	P	Pn	**14 07 44.5**	**-0.9**
	0.1nm,0.3s,baz=324,slow=10,SNR=3.1						
KURK	**Kurchatov**	**20.21**	**352**	P	P	**14 07 59.1**	**-0.8**
	2.0nm,0.3s,baz=169,slow=10,SNR=4.0						
BVAR	**Borovoye Array**	**24.12**	**341**	P	P	**14 08 40.2**	**-0.7**
	0.2nm,0.4s,baz=162,slow=11,SNR=2.2						
WRA	**Warramunga Arr**	**70.41**	**129**	P	P	**14 14 39.7**	**0.0**
	0.3nm,0.5s,baz=324,slow=6.3,SNR=8.5						
ASAR	**Alice Springs**	**72.75**	**132**	P	P	**14 14 53.9**	**+0.1**
	0.3nm,1.0s,baz=312,slow=5.5,SNR=4.0						
ILAR	**Eielson Array**	**77.11**	**20**	P	P	**14 15 19.1**	**+0.7**
	0.6nm,1.0s,baz=310,slow=5.6,SNR=4.3						
TXAR	**Lajitas Array**	**119.88**	**7**	PKP	PKPdf	**14 22 17.1**	**+0.8**
	0.2nm,0.7s,baz=90,slow=2.5,SNR=3.7						

IDC 25 14:03:36.0±1.5, 4°.05S×152°.79E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.7/17, mbtmp3.7/4, Error ellipse: s-maj=99.2km s-min=25.7km az=129.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.94**	**227**	P	P	**14 08 52.1**	**+0.1**
	1.4nm,0.3s,baz=53,slow=9.9,SNR=52						
WRA				PcP	PcP	**14 12 34.5**	**-0.3**
	0.4nm,0.9s,baz=48,slow=2.4,SNR=5.3						
ASAR	**Alice Springs**	**26.70**	**221**	P	P	**14 09 17.2**	**+0.2**
	0.3nm,0.3s,baz=53,slow=9.0,SNR=28						
ASAR				PcP	PcP	**14 12 41.0**	**0.0**
	0.2nm,0.6s,baz=60,slow=3.7,SNR=4.4						
FITZ	**Fitzroy Crossi**	**30.01**	**240**	P	P	**14 09 46.8**	**0.0**
	0.8nm,0.5s,baz=66,slow=8.4,SNR=9.4						
ILAR	**Eielson Array**	**81.47**	**22**	P	P	**14 15 54.9**	**0.0**
	0.4nm,0.8s,baz=232,slow=5.6,SNR=5.1						
TORD	**Torodi Ar. Bea**	**150.06**	**289**	PKPbc	PKPbc	**14 23 29.2**	**-0.5**
	0.6nm,0.4s,baz=74,slow=1.5,SNR=9.7						

*IDC **25** 14:05:01.6±0.8, 30°.78N×83°.28E, h0km, mb3.9/11, mb1 4.0/13, mb1mx3.8/28, mbtmp3.9/13, ML3.7/2, Error ellipse: s-maj=29.8km s-min=15.7km az=53.0*
*NEIC **25** 14:05:03.3±0.7, 30°.92N×83°.55E, h10km, Error ellipse: s-maj=21.6km s-min=9.8km az=51.0*
*ISCJB **25** 14:05:04.8±0.8, 30°.9N±0°.1×83°.3E±0°.2, h33km, mb3.9/11, Error ellipse: s-maj=24.4km s-min=11.2km az=144.8*

ISC 25 14:05:07.0±0.8, 30°.9N±0°.1×83°.4E±0°.2, h35km, **n17, σ0s69/17, mb3.9/11, Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.82**	**98**	P	**Pn**	**14 06 40.1**	**-4.4**
MKAR	**Makanchi Array**	**15.90**	**357**	Pn	**Pn**	**14 08 47.2**	**-0.7**
MKAR	**Makanchi Array**	**15.90**	**357**	Pn	**Pn**	**14 08 47.2**	**-0.7**
	0.1nm,0.3s,baz=178,slow=11,SNR=3.1						
CMAR	**Chiang Mai Arr**	**18.77**	**128**	P	**Pn**	**14 09 23.6**	**-0.3**
	0.2nm,0.3s,baz=306,slow=10,SNR=6.4						
KURK	**Kurchatov**	**20.11**	**351**	P	**P**	**14 09 37.1**	**-0.5**
	1.2nm,0.3s,baz=168,slow=9.9,SNR=4.8						
ZALV	**Zalesovo Beam**	**23.06**	**2**	P	**P**	**14 10 08.4**	**-0.8**
	0.8nm,0.3s,mb3.6,baz=182,slow=8.3,SNR=3.2						
BVAR	**Borovoye Array**	**24.05**	**341**	P	**P**	**14 10 19.2**	**+0.5**
	1.1nm,0.4s,mb3.7,baz=142,slow=10,SNR=7.8						
KSRS	**Korea Array**	**37.16**	**68**	P	**P**	**14 12 15.9**	**+1.4**
	0.5nm,0.6s,mb3.5,baz=274,slow=8.7,SNR=3.9						
JOF	**Joensuu**	**45.88**	**330**	*ep*	**P**	**14 13 25.0**	**-0.6**
	3.8nm,0.6s,mb4.5						
FINES	**FINESS Array B**	**47.84**	**327**	P	**P**	**14 13 41.9**	**+1.0**
	2.4nm,0.6s,mb4.4,baz=99,slow=9.8,SNR=8.4						
ARCES	**ARCESS Array B**	**50.28**	**337**	P	**P**	**14 14 00.5**	**+1.1**
ARCES	**ARCESS Array B**	**50.28**	**337**	P	**P**	**14 14 00.5**	**+1.1**
	2.8nm,1.0s,mb4.3,baz=88,slow=7.4,SNR=7.2						
NOA	**NORSAR Array B**	**54.94**	**326**	P	**P**	**14 14 33.6**	**-0.4**
	1.1nm,0.8s,mb3.9,baz=83,slow=7.2,SNR=4.0						
WRA	**Warramunga Arr**	**70.36**	**129**	P	**P**	**14 16 17.2**	**-0.2**
	1.4nm,0.6s,mb4.1,baz=325,slow=6.5,SNR=22						
ASAR	**Alice Springs**	**72.71**	**132**	P	**P**	**14 16 31.1**	**-0.4**
	0.5nm,0.7s,mb3.6,baz=322,slow=5.8,SNR=9.7						
TORD	**Torodi Ar. Bea**	**76.32**	**277**	P	**P**	**14 16 52.6**	**-0.1**
	0.5nm,0.8s,mb3.5,baz=55,slow=5.5,SNR=2.4						
ILAR	**Eielson Array**	**76.93**	**20**	P	**P**	**14 16 55.6**	**+0.2**
	1.3nm,0.8s,mb3.9,baz=306,slow=5.3,SNR=15						

IDC 25 14:07:22.4±1.0, 31°.06N×84°.03E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.5/26, mbtmp3.7/5, ML3.3/1, Error ellipse: s-maj=43.7km s-min=27.6km az=51.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**15.77**	**356**	Pn	Pn	**14 11 05.6**	**-0.1**
	0.1nm,0.3s,baz=184,slow=12,SNR=2.6						
WRA	**Warramunga Arr**	**70.03**	**130**	P	P	**14 18 36.6**	**+0.4**
	14nm,0.9s,baz=325,slow=6.3,SNR=12						
ASAR	**Alice Springs**	**72.41**	**133**	P	P	**14 18 50.5**	**-0.1**
	0.4nm,0.7s,baz=322,slow=6.0,SNR=6.9						
ILAR	**Eielson Array**	**76.59**	**20**	P	P	**14 19 14.2**	**-0.1**
	0.4nm,0.8s,baz=317,slow=4.9,SNR=3.5						
TORD	**Torodi Ar. Bea**	**76.85**	**278**	P	P	**14 19 16.6**	**-0.1**
	0.7nm,1.0s,baz=243,slow=0.6,SNR=3.7						

IDC 25 14:09:20.3±1.1, 30°.66N×83°.36E, h0km, mb3.5/7, mb1 3.7/8, mb1mx3.5/27, mbtmp3.5/8, ML3.4/1, Error ellipse: s-maj=44.8km s-min=21.9km az=66.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**16.13**	**357**	Pn	Pn	**14 13 06.9**	**-1.3**
	0.2nm,0.3s,baz=182,slow=12,SNR=2.2						
KURK	**Kurchatov**	**20.34**	**351**	P	P	**14 13 56.0**	**-2.0**
	1.6nm,0.6s,baz=168,slow=10,SNR=4.2						
ZALV	**Zalesovo Beam**	**23.29**	**2**	P	P	**14 14 29.0**	**-0.5**
	0.4nm,0.4s,baz=177,slow=11,SNR=3.3						
BVAR	**Borovoye Array**	**24.27**	**341**	P	P	**14 14 40.3**	**+1.4**
	1.2nm,0.8s,baz=152,slow=13,SNR=3.8						
WRA	**Warramunga Arr**	**70.22**	**129**	P	P	**14 20 35.3**	**0.0**
	0.6nm,0.6s,baz=324,slow=6.3,SNR=5.9						
ASAR	**Alice Springs**	**72.57**	**132**	P	P	**14 20 49.7**	**+0.3**
	0.3nm,0.7s,baz=323,slow=5.9,SNR=4.3						
TORD	**Torodi Ar. Bea**	**76.33**	**277**	P	P	**14 21 11.4**	**-0.2**
	0.5nm,0.7s,baz=52,slow=6.3,SNR=4.0						
ILAR	**Eielson Array**	**77.15**	**20**	P	P	**14 21 15.5**	**+0.1**
	0.5nm,0.6s,baz=313,slow=5.3,SNR=7.6						

*ISCJB **25** 14:14:41.0±3.8, 30°.61N±0°.07×83°.39E±0°.07, h11km±25km, mb4.0/16, Error ellipse: s-maj=13.7km s-min=8.7km az=34.1*
*IDC **25** 14:14:41.5±0.8, 30°.69N×83°.46E, h0km, mb4.0/14, mb1 4.1/16, mb1mx4.0/29, mbtmp3.9/16, ML3.7/2, Error ellipse: s-maj=26.4km s-min=15.2km az=48.0*
*NEIC **25** 14:14:46.0±4.7, 30°.75N×83°.36E, h28km±33km, mb4.3/4, Error ellipse: s-maj=21.9km s-min=9.6km az=52.0*

ISC 25 14:14:41.4±4.0, 30°.66N±0°.07×83°.39E±0°.07, h1km±26km, **n30,σ0s98/30, mb4.1/16, Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.79**	**96**	Pn	**Pn**	**14 16 22.3**	**+0.1**
LSA				Sn	**Sn**	**14 17 38.8**	**-1.3**
LSA	**Lhasa**	**6.79**	**96**	*e*P	**Pn**	**14 16 27.2**	**+5.1**
	24nm,0.8s						
HYB	**Hyderabad**	**13.90**	**200**	*i* P	**Pn**	**14 17 58.0**	**-1.6**
GTA	**Gaotai**	**16.02**	**53**	*e*P	**Pn**	**14 18 32.5**	**+4.5**
GTA				pP	pP	**14 18 37.0**	**+5.3**
GTA				sP	sP	**14 18 40.3**	**+8.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	**Makanchi Array**	**16.14**	**357**	Pn	**Pn**	**14 18 27.7**	**-1.7**
MKAR	**Makanchi Array**	**16.14**	**357**	Pn	**Pn**	**14 18 27.7**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=174,slow=12,SNR=4.6						
LZH	**Lanzhou**	**17.91**	**67**	*e*P	**Pn**	**14 18 54.3**	**+2.4**
LZH				pP	pP	**14 19 01.5**	**+8.8**
LZH				sP	sP	**14 19 04.0**	**+11**
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
KMI	**Kunming**	**17.97**	**103**	P	**Pn**	**14 18 53.0**	**+0.4**
KMI				pP	pP	**14 19 01.0**	**+7.6**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.4s						
CHTO	**Chiang Mai**	**18.38**	**126**	*e*P	**Pn**	**14 19 00.2**	**+2.6**
	comp=Z,6.8nm,1.1s						
CMAR	**Chiang Mai Arr**	**18.62**	**127**	P	**Pn**	**14 18 59.4**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=312,slow=11,SNR=3.4						
KURK	**Kurchatov**	**20.35**	**351**	P	**P**	**14 19 18.2**	**-0.9**
	comp=Z,4.8nm,0.7s,baz=166,slow=10,SNR=13						
ZALV	**Zalesovo Beam**	**23.30**	**2**	P	**P**	**14 19 50.5**	**-0.2**
	comp=Z,1.9nm,0.6s,mb3.8,baz=186,slow=12,SNR=9.3						
BVAR	**Borovoye Array**	**24.28**	**341**	P	**P**	**14 19 59.6**	**-0.5**
	comp=Z,2.0nm,0.6s,mb3.8,baz=153,slow=7.7,SNR=11						
ULN	**Ulaanbaatar**	**24.97**	**40**	*e*P	**P**	**14 20 06.8**	**+0.4**
	comp=Z,5.8nm,1.0s,mb4.3						
AKTK	**Aktyubinsk**	**27.38**	**323**	P	**P**	**14 20 28.1**	**0.0**
AKTO	**Aktyubinsk**	**27.38**	**323**	P	**P**	**14 20 28.1**	**0.0**
	comp=Z,1.8nm,0.5s,mb4.0,baz=127,slow=7.9,SNR=5.2						
KSRS	**Korea Array**	**37.24**	**67**	P	**P**	**14 21 54.1**	**-0.6**
	comp=Z,1.8nm,0.8s,mb3.9,baz=276,slow=10.0,SNR=7.0						
YAK	**Yakutsk**	**43.27**	**30**	P	**P**	**14 22 44.1**	**-0.1**
	comp=Z,11nm,0.6s,mb4.8						
AKASG	**Malin Array Be**	**44.57**	**313**	P	**P**	**14 22 55.6**	**+0.7**
	comp=Z,1.4nm,0.7s,mb4.0,baz=86,slow=7.3,SNR=6.7						
FINES	**FINESS Array B**	**48.04**	**327**	P	**P**	**14 23 23.0**	**+1.0**
	comp=Z,1.3nm,0.6s,mb4.3,baz=101,slow=9.9,SNR=4.4						
ARCES	**ARCESS Array B**	**50.50**	**337**	P	**P**	**14 23 42.2**	**+1.5**
ARCES	**ARCESS Array B**	**50.50**	**337**	P	**P**	**14 23 42.2**	**+1.5**
	comp=Z,1.7nm,0.7s,mb4.1,baz=99,slow=7.5,SNR=7.1						
PETK	**Petropavlovsk-**	**56.96**	**44**	P	**P**	**14 24 27.7**	**-0.5**
	comp=Z,2.4nm,0.8s,mb4.3,baz=232,slow=9.2,SNR=5.6						
WRA	**Warramunga Arr**	**70.20**	**129**	P	**P**	**14 25 56.8**	**+0.7**
	comp=Z,2.6nm,0.9s,mb4.4,baz=323,slow=6.2,SNR=16						
ASAR	**Alice Springs**	**72.55**	**132**	P	**P**	**14 26 10.6**	**+0.3**
	comp=Z,0.7nm,0.9s,mb3.8,baz=315,slow=6.6,SNR=6.2						
TORD	**Torodi Ar. Bea**	**76.35**	**277**	P	**P**	**14 26 32.8**	**0.0**
	comp=Z,0.8nm,0.7s,mb4.0,baz=47,slow=6.3,SNR=4.7						
COLA	**College**	**76.80**	**20**	*e*P	**P**	**14 26 34.4**	**+0.1**
	comp=Z,3.7nm,0.8s,mb4.6						
ILAR	**Eielson Array**	**77.15**	**20**	P	**P**	**14 26 36.4**	**-0.1**
	comp=Z,1.5nm,0.9s,mb4.1,baz=314,slow=5.1,SNR=17						
YKA	**Yellowknife Ar**	**86.06**	**8**	P	**P**	**14 27 22.8**	**-0.7**
	comp=Z,0.6nm,0.6s,mb3.9,baz=339,slow=4.8,SNR=4.1						
TXAR	**Lajitas Array**	**119.97**	**7**	PKP	PKPdf	**14 33 34.5**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=90,slow=3.6,SNR=3.4						

*DMN **25** 14:15:54.4±0.6, 31°.78N×83°.15E, h2km, Ml5.5/5, Error ellipse: s-maj=14.1km s-min=10.3km az=106.0*
*ISCJB **25** 14:16:00.2±0.8, 30°.81N±0°.02×83°.51E±0°.02, h4km±5km, mb5.1/167, MS5.0/11, Error ellipse: s-maj=3.9km s-min=2.6km az=29.8*
*LDG **25** 14:16:01.1±0.2, 31°.09N×83°.41E, h10km, Mb5.1/37, Error ellipse: s-maj=9.8km s-min=6.2km az=116.0*
*BJI **25** 14:16:01.3, 30°.87N×83°.55E, h11km, mB5.8/22, mb5.0/48, Ms5.2/37, Ms7 5.1/34*
*IDC **25** 14:16:01.4±0.4, 30°.89N×83°.73E, h0km, mb4.9/32, mb1 5.1/34, mb1mx5.0/37, mbtmp4.9/34, ML3.7/3, Error ellipse: s-maj=11.9km s-min=9.8km az=18.0*
*NEIC **25** 14:16:02.6±0.2, 30°.83N×83°.52E, h10km, mb5.2/62, Error ellipse: s-maj=6.3km s-min=4.3km az=197.0*
*MOS **25** 14:16:04.3±1.2, 30°.83N×83°.52E, h33km, mb5.2/77, Error ellipse: s-maj=6.9km s-min=3.7km az=123.1*
*DJA **25** 14:16:06, 30°.71N×83°.92E, h10km, mb5.3/18*

ISC 25 14:16:02.5±0.8, 30°.83N±0°.02×83°.56E±0°.02, h8km±5km, **h14**km±.8km**:pP-P, n521,σ1s14/522, mb5.1/167, MS5.0/11, 34C-22D, Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DANN	**Dangsing**	**2.47**	**176**	*e*Pn	**Pb**	**14 16 47.8**	**+0.5**
DANN				*e*Sn	**Sg**	**14 17 26.6**	**+4.6**
	8μm,0.8s						
GKN	**Gorkha**	**2.97**	**161**	*e*Pn	**Pb**	**14 16 55.0**	**-0.7**
GKN				*e*Sn	**Sg**	**14 17 38.4**	**+0.6**
	9μm,1.2s						
KOLN	**Koldanda**	**3.04**	**179**	*e*Pn	**Pb**	**14 16 55.5**	**-1.5**
KOLN				*e*Sn	**Sg**	**14 17 39.7**	**-0.7**
	6μm,1.0s						
KKN	**Kakani**	**3.38**	**153**	*e*Pn	**Pn**	**14 16 59.7**	**+4.1**
JOSI	**Joshimath**	**3.46**	**267**	*ex*	**Pn**	**14 17 00.2**	**+3.6**
DMN	**Daman**	**3.48**	**157**	*e*Pn	**Pb**	**14 17 01.6**	**-2.8**
DMN				*e*Sn	**Sg**	**14 17 52.2**	**-2.1**
	8μm,1.3s						
GUN	**Gumba**	**3.54**	**145**	*e*Pn	**Pb**	**14 17 02.4**	**-3.1**
GUN				*e*Sn	**Sg**	**14 17 52.9**	**-3.4**
	4μm,1.0s						
PKIN	**Phulchoki**	**3.61**	**153**	*e*Pn	**Pn**	**14 17 02.9**	**+4.0**
PKI

EKS2	**Erkin-Say**	**14.16**	**329**		P		**Pn**	**14 19 25.3**	**+1.9**
	SNR=12								
QUE	**Quetta**	**14.33**	**272**	*e*	P		**Pn**	**14 19 25.0**	**-0.8**
QUE				*e*	S		**Sn**	**14 22 05.0**	**-0.1**
GTA	**Gaotai**	**15.80**	**53**	*e*	P		**Pn**	**14 19 44.8**	**-0.6**
GTA					pP		pP	14 19 50.5	-1.0
GTA					sP		sP	14 19 53.5	+1.0
GTA					S		**Sn**	**14 22 37.3**	**-3.5**
GTA					sS		sS	14 22 48.0	-11
GTA					SS			14 22 55.3	
GTA					pmax		pmax		
	comp=Z,2μm,5.7s								
GTA					LR		LR		
	comp=N,3μm,13.4s								
GTA					LR		LR		
	comp=E,3μm,17.2s								
GTA					LR		LR		
	comp=Z,5μm,14.3s								
KAD	**Karad**	**15.94**	**215**	*e*	PKP		**Pn**	**14 19 47.9**	**+0.6**
KAD					AMb		AMB	14 19 49.4	
	comp=Z,60nm,0.8s								
MK31	**Makanchi Array**	**15.98**	**357**	*i*	P		**Pn**	**14 19 45.8**	**-1.8**
MK31					pmax		pmax		
	comp=Z,134nm,1.2s								
MKAR	**Makanchi Array**	**15.98**	**357**		Pn		**Pn**	**14 19 45.8**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=181,slow=13,SNR=13								
KK31	**Karatay Array**	**16.07**	**323**	*i*	P		**Pn**	**14 19 48.5**	**-0.3**
KK31					pmax		pmax		
	comp=Z,90nm,1.1s								
CD2	**Chengdu**	**17.35**	**85**		P		**Pn**	**14 20 07.0**	**+1.9**
CD2					pP		pP	14 20 10.5	+1.9
CD2					sP		sP	14 20 14.0	+4.4
CD2					PP			14 20 21.5	
CD2					S		**Sn**	**14 23 18.8**	**+0.5**
CD2					sS		sS	14 23 24.5	-6.0
CD2					SS			14 23 40.5	
CD2					pmax		pmax		
	comp=Z,230nm,0.6s								
CD2					pmax		pmax		
	comp=Z,1μm,5.4s								
CD2					LR		LR		
	comp=N,12μm,16.5s								
CD2					LR		LR		
	comp=E,10μm,14.8s								
CD2					LR		LR		
	comp=Z,12μm,18.2s								
LZH	**Lanzhou**	**17.71**	**67**	⇓	P		**Pn**	**14 20 11.3**	**+1.7**
LZH					pP		pP	14 20 20.5	+7.8
LZH					*e*S		**Sn**	**14 23 26.5**	**-0.7**
LZH					sS		sS	14 23 38.3	+0.3
LZH					SS			14 23 48.0	
LZH					pmax		pmax		
	comp=Z,200nm,1.3s								
LZH					pmax		pmax		
	comp=Z,2μm,7.1s								
LZH					LR		LR		
	comp=N,6μm,12.1s								
LZH					LR		LR		
	comp=E,9μm,10.9s								
LZH					LR		LR		
	comp=Z,7μm,13.5s								
KMI	**Kunming**	**17.86**	**104**		P		**Pn**	**14 20 11.0**	**-0.5**
KMI					pP		pP	14 20 20.3	+5.9
KMI					sP		sP	14 20 24.5	+9.1
KMI					PP			14 20 30.0	
KMI					S		**Sn**	**14 23 30.8**	**-0.1**
KMI					sS		sS	14 23 41.3	+0.2
KMI					SS			14 23 53.8	
KMI					pmax		pmax		
	comp=Z,52nm,0.9s								
KMI					LR		LR		
	comp=N,5μm,15.1s								
KMI					LR		LR		
	comp=E,3μm,16.4s								
KMI					LR		LR		
	comp=Z,5μm,17.8s								
CHG	**Chiang Mai**	**18.36**	**127**	⇓	P		**Pn**	**14 20 16.7**	**-1.0**
	comp=Z,42nm,1.3s								
CHTO	**Chiang Mai**	**18.36**	**127**	*e*	P		**Pn**	**14 20 16.5**	**-1.2**
	comp=Z,51nm,1.2s								
CHTO	**Chiang Mai**	**18.36**	**127**	*e*	P		**Pn**	**14 20 16.5**	**-1.2**
CHTO					pmax		pmax		
	comp=Z,51nm,1.2s								
CHTO	**Chiang Mai**	**18.36**	**127**		P		**Pn**	**14 20 17.1**	**-0.6**
CHTO	**Chiang Mai**	**18.36**	**127**		P		**Pn**	**14 20 17.2**	**-0.5**
	SNR=22								
CMAR	**Chiang Mai Arr**	**18.61**	**128**		P		**Pn**	**14 20 20.0**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=306,slow=10,SNR=40								
CMAR					PcP		PcP	14 24 49.0	-0.6
	comp=Z,0.3nm,0.3s,baz=298,slow=3.1,SNR=8.6								
BDT	**Bhumibol Dam**	**19.51**	**130**		P		**Pn**	**14 20 31.0**	**-0.6**
	comp=Z,11nm,0.9s								
KURK	**Kurchatov**	**20.21**	**351**		P		**P**	**14 20 37.7**	**0.0**
	comp=Z,1μm,1.1s,SNR=70								
KURK	**Kurchatov**	**20.21**	**351**		P		**P**	**14 20 36.7**	**-1.0**
KURK	**Kurchatov**	**20.21**	**351**		P		**P**	**14 20 36.7**	**-1.0**
	comp=Z,97nm,0.9s,baz=163,slow=10,SNR=103								
KURK	**Kurchatov**	**20.21**	**351**	*d*	*i*P		**P**	**14 20 37.5**	**-0.2**
KURK					pmax		pmax		
	comp=Z,343nm,1.7s								
KURK	**Kurchatov**	**20.21**	**351**		P		**P**	**14 20 37.9**	**+0.2**
	SNR=73								
GYA	**Guiyang**	**20.73**	**96**	⇓	*i*P		**P**	**14 20 43.8**	**+0.2**
GYA					pP			14 20 53.8	
GYA					PP			14 21 09.0	
GYA					S		**S**	**14 24 34.5**	**-0.9**
GYA					sS		sS	14 24 43.3	+4.5
GYA					SS			14 25 04.0	
GYA					pmax		pmax		
	comp=Z,80nm,1.0s								
GYA					LR		LR		
	comp=N,7μm,12.4s,MS5.3								
GYA					LR		LR		
	comp=E,6μm,15.0s,MS5.3								
GYA					LR		LR		
	comp=Z,5μm,13.8s,MS5.0								
NST	**Nakhon Sawan**	**21.39**	**131**		P		**P**	**14 20 52.4**	**+1.6**
	comp=Z,76nm,1.1s,mb4.9								
XAN	**Xi'an**	**21.63**	**75**		P		**P**	**14 20 52.5**	**-0.8**
XAN					pP			14 20 55.8	
XAN					S		**S**	**14 24 43.0**	**-10**
XAN					pmax		pmax		
	comp=Z,28nm,1.2s,mb4.6								
XAN					LR		LR		
	comp=N,1μm,15.2s,MS4.6								
XAN					LR		LR		
	comp=E,1μm,13.7s,MS4.6								
XAN					LR		LR		
	comp=Z,1μm,12.6s,MS4.5								
ABKT	**Ailbek**	**22.12**	**296**		P		**P**	**14 20 59.4**	**+0.9**
	comp=Z,311nm,1.1s,mb5.7,SNR=11								
ENH	**Enshi**	**22.33**	**85**	*e*	P		**P**	**14 21 00.9**	**+0.1**
	comp=Z,75nm,1.0s,mb5.1								
ZALV	**Zalesovo Beam**	**23.13**	**2**		P		**P**	**14 21 08.3**	**-0.7**
ZALV	**Zalesovo Beam**	**23.13**	**2**		P		**P**	**14 21 08.3**	**-0.7**
	comp=Z,54nm,0.9s,mb5.0,baz=193,slow=9.4,SNR=83								
ZALV	**Zalesovo Beam**	**23.13**	**2**		P		**P**	**14 21 08.3**	**-0.7**
ZALV					pmax		pmax		
	comp=Z,54nm,0.9s,mb5.0								
WBK	**Wadi Bani Khal**	**23.40**	**255**		P		**P**	**14 21 19.0**	**+6.8**
	SNR=12								
BTO	**Baotou**	**23.52**	**58**	*e*	P		**P**	**14 21 12.3**	**-1.0**
PALK	**Pallekele**	**23.58**	**187**	*i*	P		**P**	**14 21 16.9**	**+2.8**
SMDO	**Samad**	**23.98**	**257**		P		**P**	**14 21 24.5**	**+6.8**
	SNR=17								
NVS	**Novosibirsk**	**24.00**	**360**	⇑	*i*P		**P**	**14 21 16.0**	**-1.6**
NVS				*e*	S		**S**	**14 25 31.5**	**-3.1**
NVS					pmax		pmax		
	comp=Z,60nm,1.5s,mb4.8								
NVS					pmax		pmax		
	comp=N,70nm,1.9s								
NVS					pmax		pmax		
	comp=E,15nm,1.5s								
NVS					smax				
	comp=N,36nm,2.1s								
NVS					smax				
	comp=E,8.0nm,1.6s								
BVA0	**Borovoye Array**	**24.17**	**340**	*i*	P		**P**	**14 21 18.8**	**-0.3**
BVA0					pmax		pmax		
	comp=Z,8.0nm,1.1s,mb4.1								
BVAR	**Borovoye Array**	**24.17**	**340**		P		**P**	**14 21 19.2**	**+0.1**
	comp=Z,7.7nm,0.7s,mb4.2,baz=144,slow=11,SNR=19								
BVAR					PcP		PcP	14 24 59.5	-0.3
	comp=Z,1.9nm,0.7s,baz=149,slow=3.4,SNR=3.4								
BVAR	**Borovoye Array**	**24.17**	**340**		P		**P**	**14 21 19.2**	**+0.1**
BVAR					pmax		pmax	14 24 59.5	
BVAR					pmax		pmax		
	comp=Z,8.0nm,0.7s								
JMDO	**Jabal Madar**	**24.23**	**256**		P		**P**	**14 21 23.6**	**+3.6**
	SNR=21								
BRVK	**Borovoye**	**24.23**	**340**		P		**P**	**14 21 20.4**	**+0.7**
	comp=Z,134nm,0.8s,mb5.4,SNR=5.9								
BRVK	**Borovoye**	**24.23**	**340**	⇑	*i*P		**P**	**14 21 20.3**	**+0.6**
BRVK					pmax		pmax		
	comp=Z,50nm,2.5s,mb4.5								
BRVK	**Borovoye**	**24.23**	**340**		P		**P**	**14 21 20.2**	**+0.5**
	SNR=17								
SONM	**Songino Array**	**24.37**	**39**		P		**P**	**14 21 21.7**	**+0.7**
	comp=Z,19nm,0.8s,mb4.6,baz=232,slow=10,SNR=21								
SONM	**Songino Array**	**24.37**	**39**		P		**P**	**14 21 21.7**	**+0.7**
SONM					pmax		pmax		
	comp=Z,19nm,0.9s								
HOQ	**Hoqain**	**24.40**	**259**		P		**P**	**14 21 25.5**	**+4.0**
	SNR=13								
ZAK	**Zakamensk**	**24.48**	**31**	*e*	P		**P**	**14 21 22.3**	**+0.3**
ZAK				*e*				14 24 59.2	
ZAK					pmax		pmax		
	comp=Z,15nm,1.2s,mb4.3								
MOY	**Mondy**	**24.49**	**27**	*e*	P		**P**	**14 21 23.6**	**+1.6**
MOY				*e*				14 25 01.5	
MOY					pmax		pmax		
	comp=Z,85nm,4.5s								
ZRNK	**Zerenda**	**24.53**	**339**		P		**P**	**14 21 21.7**	**-0.7**
ZRNK					pmax		pmax		
	comp=Z,102nm,1.8s,mb5.0								
HHC	**Hu-ho-hao-te**	**24.72**	**58**	*e*	P		**P**	**14 21 25.5**	**+1.2**
HHC					pP			14 21 35.0	
HHC					PP			14 22 03.0	
HHC				*e*	S		**S**	**14 25 43.3**	**-3.1**
HHC					sS		sS	14 25 58.0	+7.8
HHC					SS			14 26 40.8	
HHC					pmax		pmax		
	comp=Z,69nm,1.2s,mb5.1								
HHC					pmax		pmax		
	comp=Z,7μm,4.8s								
HHC					LR		LR		
	comp=N,3μm,13.9s,MS5.2								
HHC					LR		LR		
	comp=E,5μm,14.1s,MS5.2								
HHC					LR		LR		
	comp=Z,4μm,12.6s,MS5.1								
ULN	**Ulaanbaatar**	**24.74**	**40**	*e*	P		**P**	**14 21 25.5**	**+1.1**
	comp=Z,55nm,1.0s,mb5.0								
ULN	**Ulaanbaatar**	**24.74**	**40**	*e*	P		**P**	**14 21 25.5**	**+1.1**
ULN					pmax		pmax		
	comp=Z,55nm,1.0s,mb5.0								
ULN	**Ulaanbaatar**	**24.74**	**40**		P		**P**	**14 21 25.6**	**+1.2**
ULN	**Ulaanbaatar**	**24.74**	**40**		P		**P**	**14 21 25.9**	**+1.5**
	SNR=28								
BSY	**Bisya**	**24.82**	**257**		P		**P**	**14 21 32.7**	**+7.3**
	SNR=12								
HATD	**Hatta, Dubai**	**24.94**	**263**		P		**P**	**14 21 34.3**	**+7.8**
	SNR=8.3								
ASHO	**Ashiyiah**	**25.06**	**263**		P		**P**	**14 21 31.6**	**+4.1**
	SNR=35								
ARQ	**Araqi**	**25.16**	**259**		P		**P**	**14 21 32.8**	**+4.4**
	SNR=24								
NAZ	**Nazwa, Dubai**	**25.29**	**264**		P		**P**	**14 21 36.8**	**+7.1**
	SNR=7.6								
TLY	**Talaya**	**25.58**	**30**	*e*	P		**P**	**14 21 33.1**	**+1.2**
TLY					pmax		pmax		
	comp=Z,22nm,1.2s,mb4.6								
TLY	**Talaya**	**25.58**	**30**		P		**P**	**14 21 34.1**	**+2.2**
	SNR=7.3								
AB31	**Akbulak array**	**25.63**	**323**	*e*	P		**P**	**14 21 33.0**	**+0.6**
AB31					pmax		pmax		
	comp=Z,17nm,0.6s,mb4.8								
IRK	**Irkutsk**	**26.25**	**29**	*e*	P		**P**	**14 21 34.8**	**-3.2**
IRK					pmax		pmax		
	comp=Z,43nm,1.0s,mb4.9								
WHN	**Wuhan**	**26.45**	**83**	⇑	P		**P**	**14 21 40.8**	**+0.8**
QIZ	**Qiongzhong**	**26.50**	**110**		P		**P**	**14 21 41.3**	**+0.7**
QIZ					pP		pP	14 21 43.8	+0.9
QIZ					sP		sP	14 21 45.3	+1.4
QIZ					S		**S**	**14 26 17.0**	**+1.9**
QIZ					sS		sS	14 26 21.5	+2.6
QIZ					pmax		pmax		
	comp=Z,17nm,1.1s,mb4.5								
QIZ					LR		LR		
	comp=N,2μm,15.5s								
QIZ					LR		LR		
	comp=Z,3μm,14.1s,MS5.0								
QIZ	**Qiongzhong**	**26.50**	**110**	*e*	P		**P**	**14 21 40.9**	**+0.3**
	comp=Z,26nm,1.0s,mb4.7								
AKTK	**Aktyubinsk**	**27.33**	**323**		P		**P**	**14 21 48.6**	**+0.8**
AKTO	**Aktyubinsk**	**27.33**	**323**		P		**P**	**14 21 48.6**	**+0.8**
	comp=Z,6.4nm,0.5s,mb4.4,baz=125,slow=9.2,SNR=13								
AKTO	**Aktyubinsk**	**27.33**	**323**		P		**P**	**14 21 46.8**	**-1.0**
AKTO					pmax		pmax		
	comp=Z,6.0nm,1.4s,mb3.9								
BJT	**Baijiatuao**	**27.99**	**62**	*e*	P		**P**	**14 21 54.7**	**+0.9**
	comp=Z,50nm,1.3s,mb5.0								
BJT	**Baijiatuao**	**27.99**	**62**	*e*	P		**P**	**14 21 54.7**	**+0.9**
BJT					pmax		pmax		
	comp=Z,50nm,1.3s								
BJI	**Beijing**	**28.00**	**62**		P		**P**	**14 21 54.8**	**+0.9**
BJI					S		**S**	**14 26 39.8**	**+1.5**
BJI					pmax		pmax		
	comp=Z,27nm,1.2s,mb4.8								
BJI					pmax		pmax		
	comp=Z,6μm,11.9s								
BJI					LR		LR		
	comp=N,3μm,21.1s,MS5.1								
BJI					LR		LR		
	comp=E,4μm,20.7s,MS5.1								
BJI					LR		LR		
	comp=Z,5μm,18.7s,MS5.2								
KULM	**Kulim**	**30.06**	**144**		P		**P**	**14 22 15.0**	**+2.6**
	comp=Z,22nm,0.9s,mb4.9								
SVE	**Sverdlovsk**	**30.52**	**335**	⇓	*e*P		**P**	**14 22 17.2**	**+1.2**
SVE					pmax		pmax		
	comp=Z,47nm,1.1s,mb5.2								
UMR	**Umm Al-Rimmam**	**30.93**	**277**	*e*	P		**P**	**14 22 21.5**	**+1.5**
UMR					AMb		AMB	14 22 26.1	
	comp=Z,166nm,0.8s,mb5.9								
IPM	**Ipoh**	**30.95**	**144**		P		**P**	**14 22 20.3**	**+0.1**
	comp=Z,13nm,1.8s,mb4.5								
ARU	**Arti**	**31.01**	**333**	*d*	*i*P		**P**	**14 22 21.2**	**+0.8**
ARU				*e*				14 25 11.4	
ARU					S		**S**	**14 27 25.6**	**+0.4**
ARU					SS		SS	14 29 11.4	-26
ARU					pmax		pmax		
	comp=Z,38nm,1.2s,mb5.1								
ARU	**Arti**	**31.01**	**333**		P		**P**	**14 22 21.5**	**+1.1**
	comp=Z,160nm,1.1s,mb5.8,SNR=7.7								
RDF	**Al-Radifah**	**31.20**	**276**	*e*	P		**P**	**14 22 23.3**	**+0.9**
RDF					AMb		AMB	14 22 30.6	
	comp=Z,89nm,1.2s,mb5.5								
MIB	**Mutribah**	**31.20**	**278**	*e*	P		**P**	**14 22 23.7**	**+1.3**
MIB					AMb		AMB	14 22 28.6	
	comp=Z,215nm,0.9s,mb6.0								
NAY	**Al-Naaiem**	**31.39**	**277**	*e*	P		**P**	**14 22 24.8**	**+0.7**
NAY					AMb		AMB	14 22 30.1	
	comp=Z,66nm,0.8s,mb5.5								
PSI	**Prapat**	**31.43**	**149**		PcP		PcP	14 25 17.9	-0.1
	comp=Z,3.9nm,0.3s,baz=303,slow=5.5,SNR=5.2								
DL2	**Dalian**	**32.08**	**65**		P		**P**	**14 22 30.5**	**+0.5**
DL2					pmax		pmax		
	comp=Z,20nm,1.1s,mb4.9								
DGRG	**David-gareji**	**32.38**	**300**		P		**P**	**14 22 36.6**	**+4.0**
GNI	**Garni**	**32.73**	**297**		P		**P**	**14 22 37.3**	**+1.6**
	comp=Z,27nm,0.8s,mb5.2								
GNI	**Garni**	**32.73**	**297**		P		**P**	**14 22 37.6**	**+1.9**
	comp=Z,3.2nm,0.3s,mb4.7,baz=136,slow=15,SNR=15								
GNI	**Garni**	**32.73**	**297**	*d*	*i*P		**P**	**14 22 39.2**	**+3.5**
GNI					pmax		pmax		
	comp=Z,75nm,1.7s								
GNI	**Garni**	**32.73**	**297**		P		**P**	**14 22 40.3**	**+4.6**
	SNR=12								
HIA	**Hailar**	**32.85**	**45**	*e*	P		**P**	**14 22 37.5**	**+0.8**
	comp=Z,20nm,1.2s,mb4.9								
HIA	**Hailar**	**32.85**	**45**	*e*	P		**P**	**14 22 37.5**	**+0.8**
HIA					pmax		pmax		
	comp=Z,20nm,1.2s								
TBLG	**Delisi**	**32.88**	**300**	*e*	P		**P**	**14 22 42.5**	**+5.5**
TBLG	**Delisi**	**32.88**	**300**		P		**P**	**14 22 42.5**	**+5.4**
BHD	**Baghdad**	**33.17**	**285**	*ex*			x	14 22 41.0	
BHD				*i*	x		x	14 27 58.0	
GOR	**Gori**	**33.38**	**301**		P		**P**	**14 22 41.9**	**+0.6**
MNSI	**Mandailing Nat**	**33.51**	**150**		P		**P**	**14 22 42.8**	**+0.1**
ZEI	**Tsey**	**33.63**	**302**	*e*	P		**P**	**14 22 44.2**	**+0.7**
ZEI					pmax		pmax		
	comp=Z,40nm,0.9s,mb5.3								
SNY	**Shenyang**	**33.79**	**60**	⇓	P		**P**	**14 22 45.3**	**+0.4**
SNY					S		**S**	**14 28 05.5**	**-3.4**
SNY					pmax		pmax		
	comp=Z,21nm,0.9s,mb5.1								
SNY					LR		LR		
	comp=N,2μm,15.3s,MS5.1								
SNY					LR		LR		
	comp=E,2μm,15.0s,MS5.1								
SNY					LR		LR		
	comp=Z,3μm,13.8s,MS5.2								
SOKR	**Solikamsk**	**33.92**	**336**	*c*	*i*P		**P**	**14 22 47.1**	**+1.3**
SOKR					pmax		pmax		
	comp=Z,120nm,1.4s,mb5.6								
GOF	**Gofitskoye**	**34.60**	**306**	*e*	P		**P**	**14 22 45.9**	**-6.0**
KIV	**Kislovodsk**	**34.67**	**304**	⇓	*e*P		**P**	**14 22 53.6**	**+1.1**
KIV					pmax		pmax		
	comp=Z,58nm,1.7s,mb5.2								
KIV	**Kislovodsk**	**34.67**	**304**		P		**P**	**14 22 56.3**	**+3.8**
	SNR=10								
MYKOM	**Kota Tinggi**	**34.69**	**142**		P		**P**	**14 22 54.2**	**+1.2**
	comp=Z,21nm,1.5s,mb4.8								
PPI	**Padang Panjang**	**34.98**	**150**		P		**P**	**14 22 55.6**	**+0.1**
	comp=Z,27nm,1.2s,mb5.0								
CN2	**Changchun**	**35.38**	**57**	*e*	P		**P**	**14 22 59.3**	**+0.6**
CN2				*e*	S		**S**	**14 28 30.5**	**-2.9**
CN2					pmax		pmax		
	comp=Z,30nm,1.0s,mb5.2								
CN2					pmax		pmax		
	comp=Z,200nm,4.0s								
CN2					LR		LR		
	comp=N,4μm,16.0s,MS5.5								
CN2					LR		LR		
	comp=E,5μm,16.0s,MS5.5								
CN2					LR		LR		
	comp=Z,4μm,17.0s,MS5.2								
PDSI	**Padang**	**35.42**	**150**		P		**P**	**14 22 58.8**	**-0.5**
INCN	**Inchon**	**36.02**	**68**	*e*	P		**P**	**14 23 04.4**	**+0.2**
	comp=Z,80nm,1.0s,mb5.6								
VRHR	**Novokhopersk**	**36.94**	**315**	*e*	P		**P**	**14 23 12.0**	**+0.1**
VRHR					pmax		pmax		
	comp=Z,20nm,0.5s,mb5.2								
VRHR					pmax		pmax		
	comp=N,10.0nm,0.6s								
VRHR					pmax		pmax		
	comp=E,40nm,1.0s								
KSRS	**Korea Array**	**37.05**	**67**		P		**P**	**14 23 11.7**	**-1.3**
	comp=E,11nm,1.0s,mb4.6,baz=271,slow=8.6,SNR=25								
KSRS					PcP		PcP	14 25 32.8	-1.0
	comp=E,3.0nm,1.0s,baz=260,slow=1.1,SNR=7.0								
KSRS	**Korea Array**	**37.05**	**67**		P		**P**	**14 23 11.7**	**-1.3**
KSRS								14 25 32.8	
KSRS					pmax		pmax		
	comp=Z,11nm,1.0s,mb4.6								
MALT	**Malatya**	**37.61**	**294**		P		**P**	**14 23 21.7**	**+3.9**
MDJ	**Mudanjiang**	**38.43**	**56**		P		**P**	**14 23 25.0**	**+0.4**
MDJ					sP		sP	14 23 29.0	+1.1
MDJ					S		**S**	**14 29 20.5**	**+0.7**
MDJ					pmax		pmax		
	comp=Z,12nm,1.0s,mb4.6								
MDJ					pmax		pmax		
	comp=Z,4μm,17.3s								
MDJ					LR		LR		
	comp=E,4μm,18.8s								
MDJ					LR		LR		
	comp=Z,4μm,19.7s,MS5.3								
MDJ	**Mudanjiang**	**38.43**	**56**	*e*	P		**P**	**14 23 25.0**	**+0.4**
	comp=Z,12nm,1.0s,mb4.6								
VSR	**Storozhevoye**	**38.46**	**315**	*e*	P		**P**	**14 23 24.6**	**-0.2**
VSR					pmax		pmax		
	comp=Z,20nm,1.0s,mb4.8								
VSR					pmax		pmax		
	comp=N,7.0nm,0.5s								
VSR					pmax		pmax		
	comp=E,30nm,1.0s								
ANN	**Anapa**	**38.51**	**304**	*e*	P		**P**	**14 23 28.7**	**+3.4**
ANN				*e*	S		**S**	**14 29 22.5**	**+1.5**
ANN					pmax		pmax		
	comp=Z,100nm,1.2s,mb5.4								
KSM	**Kuching**	**38.65**	**134**		P		**P**	**14 23 28.2**	**+1.4**
	comp=Z,24nm,1.6s,mb4.7								
KSI	**Kapahiang**	**38.80**	**149**		P		**P**	**14 23 27.7**	**-0.3**
	comp=Z,119nm,0.8s,mb5.7								
SBUM	**Sibu**	**39.12**	**131**		P		**P**	**14 23 32.1**	**+1.4**
	comp=Z,27nm,1.1s,mb4.9								
KKM	**Kota Kinabalu**	**39.32**	**122**		P		**P**	**14 23 34.1**	**+1.7**
	comp=Z,54nm,1.3s,mb5.1								
ASF	**Jabal al Asfar**	**39.57**	**284**		P		**P**	**14 23 35.8**	**+1.5**
	comp=Z,2.1nm,0.6s,mb4.1,baz=135,slow=2.9,SNR=2.1								
ASF	**Jabal al Asfar**	**39.57**	**284**		P		**P**	**14 23 35.8**	**+1.5**
ASF					pmax		pmax		
	comp=Z,2.0nm,0.6s								
MDSI	**Maura Dua**	**40.26**	**147**		P		**P**	**14 23 37.8**	**-2.4**
	comp=Z,19nm,1.0s,mb4.8								
KLR	**Kul'dur**	**40.45**	**49**	*e*	P		**P**	**14 23 38.2**	**-3.2**
KLR					pmax		pmax		
	comp=E,28nm,1.0s								
KLR					pmax		pmax		
	comp=Z,24nm,1.0s,mb4.9								
STKI	**Sintang**	**40.47**	**134**		P		**P**	**14 23 43.6**	**+1.6**
TPI	**Tanjungpandan**	**40.53**	**141**		P		**P**	**14 23 43.3**	**+0.8**
	comp=Z,38nm,1.2s,mb4.9								
MOS	**Moscow**	**40.63**	**321**	*e*	P		**P**	**14 23 40.6**	**-2.3**
MOS					pmax		pmax		
	comp=Z,128nm,1.4s,mb5.4								
MMAI	**Mount Meron Ar**	**40.65**	**286**		P		**P**	**14 23 45.0**	**+1.7**
	comp=Z,12nm,0.7s,mb4.6,baz=76,slow=11,SNR=14								
LWLI	**Liwa**	**40.67**	**148**		P		**P**	**14 23 46.7**	**+3.1**
KLSI		**40.70**	**146**		P		**P**	**14 23 41.7**	**-2.1**
SIM	**Simferopol'**	**40.87**	**304**	*i*	P		**P**	**14 23 49.8**	**+4.8**
SIM					pmax		pmax		
	comp=Z,59nm,0.9s,mb5.2								
OBN	**Obninsk**	**41.02**	**320**	⇓	*i*P		**P**	**14 23 45.8**	**-0.3**
OBN					pmax		pmax		
	comp=Z,164nm,1.5s,mb5.4								
BRTR	**Keskin Array B**	**41.26**	**297**		P		**P**	**14 23 49.7**	**+1.5

KIEV pmax pmax
comp=Z,16nm,0.8s,mb4.9
MAT Matsushiro 45.33 67 P **P** **14 24 20.3 -0.8**
MJAR Matsushiro Arr 45.33 67 P **P** **14 24 20.7 -0.5**
comp=Z,6.6nm,1.1s,mb4.4,baz=296,slow=9.6,SNR=10
MJAR PcP PcP 14 25 59.4 -1.4
comp=Z,3.3nm,1.0s,baz=281,slow=4.6,SNR=5.0
MJAR Matsushiro Arr 45.33 67 P **P** **14 24 20.7 -0.5**
MJAR 14 25 59.4
MJAR pmax pmax
comp=Z,7.0nm,1.1s
PUL Pulkovo 45.55 325⇑ *e*P **P** **14 24 23.2 +0.6**
PUL pmax pmax
comp=Z,100nm,0.6s,mb5.9
JOF Joensuu 46.02 330 *e*P **P** **14 24 25.4 -0.8**
JOF pmax pmax
comp=Z,30nm,0.7s,mb5.3
JOF Joensuu 46.02 330 *e*p **P** **14 24 25.4 -0.8**
comp=Z,30nm,0.7s,mb5.3
VRI Vrincioaia 46.08 306 P **P** **14 24 32.9 +5.9**
VRI Vrincioaia 46.08 306⇓ P **P** **14 24 28.9 +1.9**
VRI Vrincioaia 46.08 306⇓ *i*P **P** **14 24 28.9 +1.9**
TESR 46.12 307 P **P** **14 24 32.4 +5.1**
TESR 46.12 307⇑ *i*P **P** **14 24 26.3 -1.0**
PLOR Plostina 46.14 306⇓ P **P** **14 24 29.4 +2.0**
PLOR Plostina 46.14 306⇓ *i*P **P** **14 24 29.4 +2.0**
NACGM Naroch 46.49 318 *e* **P** **14 24 31.0 +0.9**
IDID Didziasalis 46.57 319 *e*P **P** **14 24 31.1 +0.4**
IDID AMB AMB 14 24 36.6
comp=Z,8.5nm,1.2s,mb4.5
MLR Muntele Rosu 46.64 305 P **P** **14 24 33.2 +1.8**
comp=Z,72nm,0.9s,mb5.6,baz=98,slow=3.1,SNR=19
MLR Muntele Rosu 46.64 305⇑ P **P** **14 24 33.4 +2.0**
MLR Muntele Rosu 46.64 305⇑ *i*P **P** **14 24 33.4 +2.0**
LVZ Lovozero 46.69 337⇑ *e*P **P** **14 24 31.2 -0.2**
LVZ pmax pmax
comp=Z,52nm,1.2s,mb5.3
IIGN Ignalina 46.87 319 *e*P **P** **14 24 33.5 +0.5**
IIGN AMB AMB 14 24 39.2
comp=Z,22nm,1.4s,mb4.9
IZAR Zarasai 46.90 319 *e*P **P** **14 24 33.8 +0.5**
IZAR AMB AMB 14 24 39.4
comp=Z,23nm,1.3s,mb5.0
ISAL Salakas 46.95 319 *e*P **P** **14 24 34.0 +0.4**
ISAL AMB AMB 14 24 39.7
comp=Z,20nm,1.1s,mb5.0
APA Apatity 46.97 336⇑ *i*P **P** **14 24 33.0 -0.6**
APA *i* 14 26 06.0
APA pmax pmax
comp=Z,13nm,1.0s,mb4.8
APA MLR MLR
comp=Z,3µm,16.0s,MS5.3
BUR01 Bucovina Ar. S 47.08 308 P **P** **14 24 40.2 +5.4**
BURAR Bucovina Array 47.08 308⇓ P **P** **14 24 35.7 +0.9**
BURAR Bucovina Array 47.08 308⇓ *i*P **P** **14 24 35.7 +0.9**
MRSI Marisa 47.27 122 P **P** **14 24 38.2 +1.5**
VOIR 47.28 305 P **P** **14 24 41.6 +5.3**
VOIR 47.28 305⇑ P **P** **14 24 37.8 +1.4**
VOIR 47.28 305⇑ *i*P **P** **14 24 37.8 +1.4**
TIXI Tiksi 47.53 18 *e*P **P** **14 24 38.0 +0.1**
comp=Z,26nm,0.9s,mb5.3
TIXI Tiksi 47.53 18 *e*P **P** **14 24 38.2 +0.3**
TIXI pmax pmax
comp=Z,31nm,0.8s,mb5.4
TIXI MLR MLR
comp=Z,184nm,14.0s,MS4.2
YSS Yuzh-Sakhalins 47.69 53 *e*P **P** **14 24 39.6 +0.1**
comp=Z,34nm,1.2s,mb5.3
YSS Yuzh-Sakhalins 47.69 53⇑ *e*P **P** **14 24 40.0 +0.5**
ZKR Zakros 47.73 291 P **P** **14 24 44.2 +4.1**
LVV L'vov 47.85 311 *e*P **P** **14 24 40.7 -0.1**
APE Apeiranthos 47.90 294⇑ P **P** **14 24 46.2 +4.8**
APE Apeiranthos 47.90 294⇑ *i*P **P** **14 24 46.2 +4.8**
FINES FINESS Array B 47.98 327 P **P** **14 24 41.5 -0.1**
comp=Z,18nm,0.6s,mb5.3,baz=101,slow=9.9,SNR=38
FINES FINESS Array B 47.98 327 P **P** **14 24 41.5 -0.1**
FINES pmax pmax
comp=Z,18nm,0.6s
KAF Kangasniemi 48.02 328 *e*P **P** **14 24 41.1 -0.8**
KAF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
KAF Kangasniemi 48.02 328 *e*p **P** **14 24 41.1 -0.8**
comp=Z,9.1nm,0.7s,mb4.9
BMR Baia Mare 48.24 308 P **P** **14 24 49.3 +5.5**
TTSI Tana Toraja 48.26 128 P **P** **14 24 45.6 +1.3**
comp=Z,61nm,1.2s,mb5.5
LAST Lasithi 48.32 291 P **P** **14 24 45.0 +0.4**
KMSI Cibinong 48.71 120 P **P** **14 24 57.0 +9.2**
KWP Kalwaria Pacla 48.71 311⇓ P **P** **14 24 48.2 +0.8**
KWP Kalwaria Pacla 48.71 311⇓ *i*P **P** **14 24 48.2 +0.8**
DRGR 48.82 307 P **P** **14 24 53.8 +5.5**
DRGR 48.82 307⇑ P **P** **14 24 49.3 +1.0**
DRGR 48.82 307⇑ *i*P **P** **14 24 49.3 +1.0**
VTS Vitosha 48.85 302⇑ P **P** **14 24 51.7 +3.1**
VTS Vitosha 48.85 302 P **P** **14 24 49.4 +0.8**
VTS Vitosha 48.85 302⇑ *i*P **P** **14 24 51.7 +3.1**
TRPA Tarpa 48.87 309⇑ *i*P **P** **14 24 49.5 +0.9**
SIVA Sivas 48.88 291 P **P** **14 24 53.2 +4.2**
PLG Polygyros 48.97 299 P **P** **14 24 49.9 +0.4**
UZH Uzhgorod 49.01 310 *e*P **P** **14 24 50.5 +0.8**
XOR Xorichti 49.32 297 P **P** **14 24 51.9 -0.3**
VAY Valandovo 49.48 300 *e*P **P** **14 24 53.5 +0.1**
KARN Karanos 49.51 292 P **P** **14 24 53.9 +0.1**
CRVS Cervenica-Dubn 49.55 310 *e*P **P** **14 24 56.3 +2.5**
comp=Z,4.8nm,1.2s,mb4.4
CRVS Cervenica-Dubn 49.55 310 *e*P **P** **14 24 56.3 +2.5**
CRVS pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
CRVS Cervenica-Dubn 49.55 310 *e*P **P** **14 24 56.3 +2.5**
ATAL Atalanti 49.57 296 P **P** **14 24 53.5 -0.6**
LKR Lokris 49.59 296 P **P** **14 24 53.0 -1.3**
GRG Griva 49.66 300 P **P** **14 24 54.2 -0.6**
BZS Buzias 49.67 306 P **P** **14 24 60.0 +5.2**
BZS Buzias 49.67 306⇑ P **P** **14 24 56.4 +1.6**
BZS Buzias 49.67 306⇑ *i*P **P** **14 24 56.4 +1.6**
STHS Stebnicka Huta 49.67 311 *e*P **P** **14 24 54.8 0.0**
comp=Z,5.4nm,1.4s,mb4.4
STHS Stebnicka Huta 49.67 311 *e*P **P** **14 24 54.8 0.0**
STHS pmax pmax
comp=Z,5.0nm,1.4s,mb4.3
STHS Stebnicka Huta 49.67 311 *e*P **P** **14 24 54.8 0.0**
LTK Loutraki 49.73 296 P **P** **14 24 53.7 -1.7**
LIT Litokhoron 49.73 298 P **P** **14 24 54.5 -0.9**
KEV Kevo 49.98 338 *e*P **P** **14 24 56.2 -0.6**
comp=Z,41nm,1.3s,mb5.3
KEV Kevo 49.98 338 *e*P **P** **14 24 56.1 -0.7**
KEV pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
KEV Kevo 49.98 338 *e*p **P** **14 24 56.1 -0.7**
comp=Z,7.4nm,0.6s,mb4.9
AGG Agios Georgios 50.04 297 P **P** **14 24 57.0 -0.7**
KECS Kecovo 50.22 309 *e*P **P** **14 25 01.6 +2.7**
comp=Z,3.4nm,0.9s,mb4.4
KECS Kecovo 50.22 309 *e*P **P** **14 25 01.6 +2.7**
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
KECS Kecovo 50.22 309 *e*P **P** **14 25 01.6 +2.7**
GUR Goura 50.23 296 P **P** **14 24 57.8 -1.4**
NIE Niedzica 50.28 311 *e*P **P** **14 25 00.4 +1.0**
KALE Kalithea 50.30 296 P **P** **14 24 58.8 -0.9**
VLX Vlachokerasia 50.31 295 P **P** **14 24 59.6 -0.2**
TRIZ Trizonia 50.36 296 P **P** **14 24 58.1 -2.0**
ARCES ARCESS Array B 50.40 337 P **P** **14 25 00.2 +0.2**
ARCES ARCESS Array B 50.40 337 P **P** **14 25 00.2 +0.2**
comp=Z,9.4nm,0.6s,mb5.0,baz=98,slow=6.2,SNR=21
ARCES ARCESS Array B 50.40 337 P **P** **14 25 00.2 +0.2**
ARCES pmax pmax
comp=Z,9.0nm,0.6s
LAKA Lakka 50.45 296 P **P** **14 24 58.7 -2.2**
KRUS Krusevo 50.46 300 *e*P **P** **14 25 00.9 0.0**
EFP Efpalio 50.48 296 P **P** **14 24 59.7 -1.3**
PYL PYLOS 50.91 294 P **P** **14 25 01.8 -2.6**
VYHS Vyhne 51.31 310 *e*P **P** **14 25 10.5 +3.3**
VYHS Vyhne 51.31 310 *e*P **P** **14 25 10.5 +3.3**
IGT Igoumenitsa 51.47 298 P **P** **14 25 06.3 -2.2**
OKC Ostrava-Krasne 51.66 311 *e*P **P** **14 25 10.2 +0.5**
OKC Ostrava-Krasne 51.66 311 *e*P **P** **14 25 10.2 +0.5**
OKC epP pP 14 25 14.5 +2.3
MORC Moravsky Berou 52.05 311⇓ P **P** **14 25 13.3 +0.6**
MORC Moravsky Berou 52.05 311⇓ *i*P **P** **14 25 13.3 +0.6**
ZST Bratislava 52.49 309 *e*P **P** **14 25 17.6 +1.6**
comp=Z,8.5nm,0.5s,mb4.9
ZST Bratislava 52.49 309 *e*P **P** **14 25 17.6 +1.6**
ZST pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
ZST Bratislava 52.49 309 *e*P **P** **14 25 17.6 +1.6**
KSP Ksiaz 52.77 313 *e*P **P** **14 25 18.8 +0.8**
DPC Dobruska-Polom 52.79 312 *e*P **P** **14 25 18.4 +0.3**
DPC Dobruska-Polom 52.79 312 *e*P **P** **14 25 18.4 +0.3**
DPC epP pP 14 25 22.9 +2.3
UPC Upice 52.97 312 *e*P **P** **14 25 20.2 +0.7**
UPC Upice 52.97 312 *e*P **P** **14 25 20.2 +0.7**
UPC epP pP 14 25 24.5 +2.6
CONA Conrad Observa 53.35 309⇑ *i*pP **P** **14 25 22.4 +0.1**
comp=Z,27nm,1.1s,mb5.1
TREC Trest 53.43 311 *e*P **P** **14 25 23.2 +0.3**
TREC Trest 53.43 311 *e*P **P** **14 25 23.2 +0.3**
TREC epP pP 14 25 27.4 +2.1
SEY Seymchan 53.45 32⇓ *e*P **P** **14 25 23.3 +0.5**
PVCC Panska Ves 53.89 312 *e*P **P** **14 25 25.7 -0.5**
PVCC *e**PP pP 14 25 30.9 +2.3
PVCC Panska Ves 53.89 312 *e*P **P** **14 25 25.7 -0.5**
PVCC epP pP 14 25 30.9 +2.3
PRU Pruhonice 53.97 312 *e*P **P** **14 25 27.2 +0.4**
PRU Pruhonice 53.97 312 *e*P **P** **14 25 27.2 +0.4**
PRU epP pP 14 25 31.9 +2.7
PERS Pernice 54.03 308 *e*P **P** **14 25 27.6 +0.2**
PERS *i* 14 25 31.9
SOKA Soboth 54.08 308⇑ *i*pP **P** **14 25 28.0 +0.3**
comp=Z,28nm,0.8s,mb5.2
BRG Berggiesshubel 54.24 313 *e*P **P** **14 25 28.8 0.0**
comp=Z,8.2nm,1.0s,mb4.6
BRG *i* pP 14 25 32.9 +1.7
comp=Z,16nm,0.8s
BRG *e*PCP PcP 14 26 32.8 -0.2
comp=Z,11nm,1.1s
BRG *e*PP PP 14 27 32.5 +2.2
comp=Z,3.8nm,0.9s
BRG *e*SCS ScS 14 35 22.3 +3.9
comp=Z,3.2nm,0.8s
BRG *e*PKPPKP 14 55 47.4
comp=Z,2.3nm,0.8s
BRG Berggiesshubel 54.24 313 *e*P **P** **14 25 28.8 0.0**
BRG *e* 14 26 32.8
BRG *e* 14 27 32.5
BRG pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BRG pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
BRG pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
BRG pmax pmax
comp=N,2.0nm,0.8s
BRG pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
KMBO Kilima Mbogo 54.25 243 *e*P **P** **14 25 29.5 +0.1**
comp=Z,55nm,0.9s,mb5.5
KMBO *e* 14 25 34.4
KMBO Kilima Mbogo 54.25 243 P **P** **14 25 30.9 +1.6**
comp=Z,49nm,0.9s,mb5.4,baz=0.5,slow=23,SNR=35
KMBO Kilima Mbogo 54.25 243 *e*P **P** **14 25 29.5 +0.1**
KMBO pmax pmax
comp=Z,55nm,0.9s
KMBO Kilima Mbogo 54.25 243 P **P** **14 25 35.2 +5.8**
SNR=11
MOA Molln 54.43 309⇑ *i*P **P** **14 25 30.0 -0.2**
comp=Z,11nm,0.7s,mb4.9
LJU Ljubljana 54.53 307 *e*P **P** **14 25 31.3 +0.4**
LJU *e* pP 14 25 35.4 +2.0
LJU *e* 14 26 39.9
KHC Kasperske Hory 54.70 311 *e*P **P** **14 25 32.1 0.0**
KHC Kasperske Hory 54.70 311 *e*P **P** **14 25 32.1 0.0**
KHC epP pP 14 25 36.4 +1.8
CLL Collm 54.78 314 *e*P **P** **14 25 34.0 +1.3**
comp=Z,10.0nm,1.3s,mb4.7
CLL Collm 54.78 314 *e*P **P** **14 25 34.0 +1.3**
CLL pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
CLL Collm 54.78 314 *e*P **P** **14 25 34.0 +1.3**
comp=Z,10.0nm,1.3s,mb4.7
VOY Vojsko 54.97 307 *e*P **P** **14 25 33.5 -0.6**
VOY *e* pP 14 25 35.7 -0.9
VOY *e* 14 26 13.3
CADS Cadrg 55.04 307 *e*P **P** **14 25 34.2 -0.4**
CADS *e* pP 14 25 38.2 +1.1
NOA NORSAR Array B 55.08 326 P **P** **14 25 34.2 -0.5**
comp=Z,14nm,0.7s,mb5.1,baz=88,slow=7.2,SNR=25
NOA PKPPKP 14 55 40.0
comp=Z,1.8nm,0.9s,baz=262,slow=6.2,SNR=3.7
NAO01 NORSAR Array S 55.25 325 *e*P **P** **14 25 35.1 -0.8**
comp=Z,15nm,0.8s,mb5.1
NKC Novy Kostel 55.27 312 *e*pP pP 14 25 41.3 +2.6
MOX Moxa 55.74 313 *e*P **P** **14 25 39.2 -0.4**
comp=Z,13nm,1.1s,mb4.9
MOX Moxa 55.74 313 *e*P **P** **14 25 39.2 -0.4**
MOX pmax pmax
comp=Z,13nm,1.1s,mb4.9
AQU L'Aquila 56.03 303⇑ P **P** **14 25 45.8 +3.9**
AQU L'Aquila 56.03 303⇑ *i*P **P** **14 25 45.8 +3.9**
KBS Kingsbay 56.45 347 *e*P **P** **14 25 44.9 +0.6**
KBS pmax pmax
comp=Z,19nm,1.7s,mb4.8
PETK Petropavlovsk- 56.74 44 P **P** **14 25 45.1 -1.6**
comp=Z,6.4nm,0.9s,mb4.6,baz=247,slow=3.6,SNR=8.0
PETK Petropavlovsk- 56.74 44 P **P** **14 25 45.1 -1.6**
PETK pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
FETA Feichten 56.93 309⇑ *i*P **P** **14 25 47.2 -1.0**
comp=Z,16nm,1.1s,mb5.0
CDF Champ du Feu 58.93 311 *e*P **P** **14 26 01.1 -1.1**
MBAR Mbarara 59.03 248 P **P** **14 26 07.2 +3.8**
comp=Z,146nm,0.8s,mb6.1,SNR=7.3
MBAR Mbarara 59.03 248⇑ *e*P **P** **14 26 03.6 +0.2**
BILL Bilibino 59.11 26⇑ *i*P **P** **14 26 04.7 +1.6**
BILL pmax pmax
comp=Z,25nm,1.3s,mb5.1
PGF Pioggiola 59.15 304 *e*P **P** **14 26 02.5 -1.3**
comp=Z,44nm,0.9s,mb5.2
PGF Pioggiola 59.15 304 *e*P **P** **14 26 02.5 -1.3**
comp=Z,22nm,0.9s,mb5.2
PGF Pioggiola 59.15 304 *e*P **P** **14 26 02.5 -1.3**
PGF pmax pmax
comp=Z,22nm,0.9s,mb5.2
MEM Membach 59.26 314 P **P** **14 26 04.5 0.0**
WLF Walferdange 59.37 313 P **P** **14 26 04.5 -0.8**
HAU Haudompre 59.62 311 *e*P **P** **14 26 05.8 -1.2**
comp=Z,31nm,0.8s,mb5.1
HAU Haudompre 59.62 311 *e*P **P** **14 26 05.8 -1.2**
comp=Z,16nm,0.8s,mb5.1
HAU Haudompre 59.62 311 *e*P **P** **14 26 05.8 -1.2**
HAU pmax pmax
comp=Z,16nm,0.8s,mb5.1
SBF Sospel 59.91 306 *e*P **P** **14 26 08.3 -0.8**
comp=Z,80nm,0.8s,mb5.5
SBF Sospel 59.91 306 *e*P **P** **14 26 08.3 -0.8**
comp=Z,40nm,0.8s,mb5.5
SBF Sospel 59.91 306 *e*P **P** **14 26 08.3 -0.8**
SBF pmax pmax
comp=Z,40nm,0.8s,mb5.5
LPG La Plagne 59.96 308 *e*P **P** **14 26 09.0 -0.4**
comp=Z,65nm,0.9s,mb5.4
LPG La Plagne 59.96 308 *e*P **P** **14 26 09.0 -0.4**
comp=Z,33nm,0.9s,mb5.4
LPG La Plagne 59.96 308 *e*P **P** **14 26 09.0 -0.4**
LPG pmax pmax
comp=Z,33nm,0.9s,mb5.4
LPL La Plagne 59.97 308 *e*P **P** **14 26 09.0 -0.5**
comp=Z,57nm,0.8s,mb5.3
LPL La Plagne 59.97 308 *e*P **P** **14 26 09.0 -0.5**
comp=Z,28nm,0.8s,mb5.3
LPL La Plagne 59.97 308 *e*P **P** **14 26 09.0 -0.5**
LPL pmax pmax
comp=Z,28nm,0.8s,mb5.3
GIVF Givet 60.11 313 *e*P **P** **14 26 09.7 -0.6**
comp=Z,26nm,0.9s,mb5.0
GIVF Givet 60.11 313 *e*P **P** **14 26 09.7 -0.6**
comp=Z,13nm,0.9s,mb5.0
GIVF Givet 60.11 313 *e*P **P** **14 26 09.7 -0.6**
GIVF pmax pmax
comp=Z,13nm,0.9s,mb5.0
CABF La Chapelle 60.13 309 *e*P **P** **14 26 09.4 -1.1**
comp=Z,23nm,1.1s,mb4.8
CABF La Chapelle 60.13 309 *e*P **P** **14 26 09.4 -1.1**
comp=Z,12nm,1.0s,mb4.9
CABF La Chapelle 60.13 309 *e*P **P** **14 26 09.4 -1.1**
CABF pmax pmax
comp=Z,12nm,1.0s,mb4.9
MBDF Montbardon 60.15 307 *e*P **P** **14 26 09.1 -1.6**
comp=Z,13nm,0.6s,mb4.8
MBDF Montbardon 60.15 307 *e*P **P** **14 26 09.1 -1.6**
comp=Z,6.4nm,0.6s,mb4.8
MBDF Montbardon 60.15 307 *e*P **P** **14 26 09.1 -1.6**
MBDF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
DOU Dourbes 60.26 313 P **P** **14 26 09.8 -1.5**
comp=Z,14nm,2.5s,mb4.5
OPO Ambohidratompo 60.29 220 P **P** **14 26 12.8 +1.0**
comp=Z,4.3nm,0.8s,mb4.5,baz=54,slow=8.6,SNR=6.9
MEZF Maizieres J'vi 60.35 311 *e*P **P** **14 26 11.0 -1.0**
SFTF Sexfontaines 60.43 311 *e*P **P** **14 26 11.3 -1.2**
comp=Z,22nm,0.8s,mb4.9
SFTF Sexfontaines 60.43 311 *e*P **P** **14 26 11.3 -1.2**
comp=Z,22nm,0.8s,mb5.2
BAIF Baives 60.51 313 *e*P **P** **14 26 12.4 -0.6**
FRF La Foret Royal 60.54 306 *e*P **P** **14 26 12.2 -1.2**
comp=Z,52nm,1.1s,mb5.3
FRF La Foret Royal 60.54 306 *e*P **P** **14 26 12.2 -1.2**
comp=Z,26nm,1.1s,mb5.3
FRF La Foret Royal 60.54 306 *e*P **P** **14 26 12.2 -1.2**
FRF pmax pmax
comp=Z,26nm,1.1s,mb5.3
LMR La Mourre 60.70 305 *e*P **P** **14 26 13.2 -1.3**
comp=Z,40nm,1.1s,mb5.2
LMR La Mourre 60.70 305 *e*P **P** **14 26 13.2 -1.3**
comp=Z,20nm,1.1s,mb5.2
LMR La Mourre 60.70 305 *e*P **P** **14 26 13.2 -1.3**
LMR pmax pmax
comp=Z,20nm,1.1s,mb5.2
ORIF Oris-en-Rattie 60.71 307 *e*P **P** **14 26 13.0 -1.5**
comp=Z,24nm,1.0s,mb5.0
ORIF Oris-en-Rattie 60.71 307 *e*P **P** **14 26 13.0 -1.5**
comp=Z,12nm,1.0s,mb5.0
ORIF Oris-en-Rattie 60.71 307 *e*P **P** **14 26 13.0 -1.5**
ORIF pmax pmax
comp=Z,12nm,1.0s,mb5.0
KEST Kesra 60.86 296 P **P** **14 26 15.9 +0.1**
comp=Z,28nm,1.0s,mb5.4,baz=74,slow=7.4,SNR=16
SMRF Simiane la Rot 61.18 306 *e*P **P** **14 26 17.1 -0.6**
comp=Z,31nm,1.2s,mb5.0
SMRF Simiane la Rot 61.18 306 *e*P **P** **14 26 17.1 -0.6**
comp=Z,31nm,1.3s,mb5.3
LOR Lormes 61.44 310 *e*P **P** **14 26 17.7 -1.7**
comp=Z,28nm,1.2s,mb5.0
LOR Lormes 61.44 310 *e*P **P** **14 26 17.7 -1.7**
comp=Z,14nm,1.2s,mb5.0
LOR Lormes 61.44 310 *e*P **P** **14 26 17.7 -1.7**
LOR pmax pmax
comp=Z,14nm,1.2s,mb5.0
VIVF Saint-Julien-l 61.55 307 *e*P **P** **14 26 19.2 -1.0**
comp=Z,30nm,1.0s,mb5.1
VIVF Saint-Julien-l 61.55 307 *e*P **P** **14 26 19.2 -1.0**
comp=Z,15nm,1.0s,mb5.1
VIVF Saint-Julien-l 61.55 307 *e*P **P** **14 26 19.2 -1.0**
VIVF pmax pmax
comp=Z,15nm,1.0s,mb5.1
SMF Signal de Mont 61.62 310 *e*P **P** **14 26 19.2 -1.4**
comp=Z,38nm,1.0s,mb5.2
SMF Signal de Mont 61.62 310 *e*P **P** **14 26 19.2 -1.4**
comp=Z,19nm,1.0s,mb5.2
SMF Signal de Mont 61.62 310 *e*P **P** **14 26 19.2 -1.4**
SMF pmax pmax
comp=Z,19nm,1.0s,mb5.2
SSF Saint Saulge 61.73 310 *e*P **P** **14 26 19.9 -1.5**
comp=Z,29nm,0.8s,mb5.2
SSF Saint Saulge 61.73 310 *e*P **P** **14 26 19.9 -1.5**
comp=Z,15nm,0.8s,mb5.2
SSF Saint Saulge 61.73 310 *e*P **P** **14 26 19.9 -1.5**
SSF pmax pmax
comp=Z,15nm,0.8s,mb5.2
AVF Avril sur Loir 61.90 310 *e*P **P** **14 26 21.0 -1.5**
comp=Z,31nm,0.9s,mb5.1
AVF Avril sur Loir 61.90 310 *e*P **P** **14 26 21.0 -1.5**
comp=Z,16nm,0.9s,mb5.1
AVF Avril sur Loir 61.90 310 *e*P **P** **14 26 21.0 -1.5**
AVF pmax pmax
comp=Z,16nm,0.9s,mb5.2
MBWA Marble Bar 62.28 142 *e*P **P** **14 26 23.9 -1.4**
comp=Z,17nm,1.4s,mb5.0
LASF Ste Croix 62.34 307 *e*P **P** **14 26 24.7 -0.8**
comp=Z,58nm,1.4s,mb5.2
TCF Toulx Ste Croi 62.80 310 *e*P **P** **14 26 27.6 -1.0**
comp=Z,46nm,1.0s,mb5.3
TCF Toulx Ste Croi 62.80 310 *e*P **P** **14 26 27.6 -1.0**
comp=Z,23nm,1.0s,mb5.3
TCF Toulx Ste Croi 62.80 310 *e*P **P** **14 26 27.6 -1.0**
TCF pmax pmax
comp=Z,23nm,1.0s,mb5.3
FITZ Fitzroy Crossi 63.27 134 *e*P **P** **14 26 31.6 -0.4**
comp=Z,13nm,1.0s,mb5.0
FITZ Fitzroy Crossi 63.27 134 P **P** **14 26 31.7 -0.3**
comp=Z,27nm,1.5s,mb5.2
CAF Calviac 63.30 308 *e*P **P** **14 26 31.2 -0.8**
KNA Kununurra 63.51 130 P **P** **14 26 33.2 -0.4**
comp=Z,663nmcomp=Z,84nm,1.0s,mb5.7
RJF Les Rejaudoux 63.56 309 *e*P **P** **14 26 33.0 -0.6**
comp=Z,28nm,0.9s,mb5.0
RJF Les Rejaudoux 63.56 309 *e*P **P** **14 26 33.0 -0.6**
comp=Z,14nm,0.9s,mb5.0
RJF Les Rejaudoux 63.56 309 *e*P **P** **14 26 33.0 -0.6**
RJF pmax pmax
comp=Z,14nm,0.9s,mb5.0
LDF La Druitiere 63.63 313 *e*P **P** **14 26 32.5 -1.5**
comp=Z,17nm,0.6s,mb4.9
LDF La Druitiere 63.63 313 *e*P **P** **14 26 32.5 -1.5**
comp=Z,8.3nm,0.6s,mb4.9
LDF La Druitiere 63.63 313 *e*P **P** **14 26 32.5 -1.5**
LDF pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
MTLF Montolieu 63.69 306 *e*P **P** **14 26 33.6 -0.9**
comp=Z,38nm,1.2s,mb5.0
MTLF Montolieu 63.69 306 *e*P **P** **14 26 33.6 -0.9**
comp=Z,19nm,1.2s,mb5.0
MTLF Montolieu 63.69 306 *e*P **P** **14 26 33.6 -0.9**
MTLF pmax pmax
comp=Z,19nm,1.2s,mb5.0
FLN La Foliniere 63.81 313 *e*P **P** **14 26 33.8 -1.4**
KAKA Kakadu 63.86 125 *e*P **P** **14 26 35.1 -0.9**
comp=Z,25nm,1.0s,mb5.2
KAKA Kakadu 63.86 125 P **P** **14 26 35.5 -0.5**
comp=Z,222nmcomp=Z,30nm,1.1s,mb5.2
GRR Gorron 64.16 313 *e*P **P** **14 26 35.9 -1.6**
comp=Z,20nm,0.8s,mb4.9
GRR Gorron 64.16 313 *e*P **P** **14 26 35.9 -1.6**
comp=Z,10nm,0.8s,mb4.9
GRR Gorron 64.16 313 *e*P **P** **14 26 35.9 -1.6**
GRR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
LFF La Frestale 64.19 308 *e*P **P** **14 26 37.0 -0.8**
comp=Z,27nm,0.7s,mb5.1
LFF La Frestale 64.19 308 *e*P **P** **14 26 37.0 -0.8**
comp=Z,14nm,0.7s,mb5.1
LFF La Frestale 64.19 308 *e*P **P** **14 26 37.0 -0.8**
LFF pmax pmax
comp=Z,14nm,0.7s,mb5.1
MFF Saint Martin d 64.26 310 *e*P **P** **14 26 36.6 -1.6**
comp=Z,14nm,0.8s,mb4.8
MFF Saint Martin d 64.26 310 *e*P **P** **14 26 36.6 -1.6**
comp=Z,7.3nm,0.8s,mb4.8
MFF Saint Martin d 64.26 310 *e*P **P** **14 26 36.6 -1.6**
MFF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
EPF Esparros 65.09 307 *e*P **P** **14 26 41.7 -2.0**
SGMF Saint Gilles 65.28 313 *e*P **P** **14 26 43.7 -1.1**
comp=Z,35nm,0.8s,mb5.1
SGMF Saint Gilles 65.28 313 *e*P **P** **14 26 43.7 -1.1**
comp=Z,18nm,0.8s,mb5.1
SGMF Saint Gilles 65.28 313 *e*P **P** **14 26 43.7 -1.1**
SGMF pmax pmax
comp=Z,18nm,0.8s,mb5.2
ROSF Rostrenen 65.70 313 *e*P **P** **14 26 46.4 -1.2**
comp=Z,49nm,0.9s,mb5.2
ROSF Rostrenen 65.70 313 *e*P **P** **14 26 46.4 -1.2**
comp=Z,24nm,0.9s,mb5.2
ROSF Rostrenen 65.70 313 *e*P **P** **14 26 46.4 -1.2**
ROSF pmax pmax
comp=Z,24nm,0.9s,mb5.2
ETSF Etsaut 65.76 307 *e*P **P** **14 26 47.3 -0.7**
comp=Z,12nm,0.7s,mb4.8
ETSF Etsaut 65.76 307 *e*P **P** **14 26 47.3 -0.7**
comp=Z,5.9nm,0.7s,mb4.7
ETSF Etsaut 65.76 307 *e*P **P** **14 26 47.3 -0.7**
ETSF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7

QUIF	**Quistinic**	**65.77**	**313**	*e*P		**P**		**14 26 46.4**	**-1.6**
SJPF	**Ste Jean**	**66.14**	**307**	*e*P		**P**		**14 26 49.8**	**-0.7**
MORW	**Morawa**	**67.12**	**149**	*e*P		**P**		**14 26 55.4**	**-1.3**
ESDC	**Sonseca Array**	**69.33**	**305**	P		**P**		**14 27 10.5**	**-0.2**
	comp=Z,11nm,0.9s,mb4.8,baz=62,slow=5.9,SNR=26								
SUMG	**Summit**	**69.59**	**344**	*i* P		**P**		**14 27 12.3**	**+0.6**
	comp=Z,40nm,0.9s,mb5.3								
PAB	**San Pablo**	**69.66**	**305**	*e*P		**P**		**14 27 11.9**	**-0.8**
	comp=Z,30nm,1.2s,mb5.1								
PAB	**San Pablo**	**69.66**	**305**	*e*P		**P**		**14 27 11.9**	**-0.8**
PAB					pmax	pmax			
	comp=Z,30nm,1.2s,mb5.1								
WRA	**Warramunga Arr**	**70.19**	**129**	P		**P**		**14 27 16.0**	**-0.2**
WRA				⇑*e*				14 55 15.0	
WRA	**Warramunga Arr**	**70.19**	**129**	P		**P**		**14 27 16.0**	**-0.2**
	comp=Z,19nm,0.8s,mb5.0,baz=325,slow=6.2,SNR=63								
WRA				PKP2bc				14 55 15.0	
	comp=Z,1.8nm,1.1s,baz=131,slow=2.6,SNR=5.2								
LSZ	**Lusaka**	**70.22**	**238**	*e*P		**P**		**14 27 16.6**	**+0.1**
	comp=Z,22nm,0.8s,mb5.1								
LSZ				*e*		pP		14 27 20.8	+1.9
LSZ	**Lusaka**	**70.22**	**238**	P		**P**		**14 27 18.6**	**+2.1**
	comp=Z,20nm,0.6s,mb5.2,baz=50,slow=6.0,SNR=39								
LSZ	**Lusaka**	**70.22**	**238**	*e*P		**P**		**14 27 16.6**	**+0.2**
LSZ					pmax	pmax			
	comp=Z,22nm,0.8s,mb5.1								
MVO	**Moncorvo**	**70.87**	**307**	*e*P		**P**		**14 27 20.5**	**+0.4**
	comp=Z,34nm,1.0s,mb5.2								
PVRL	**Vila Real**	**71.30**	**307**	*e*P		**P**		**14 27 26.4**	**+3.7**
MTE	**Manteigas**	**71.55**	**306**	*e*P		**P**		**14 27 28.6**	**+4.4**
	comp=Z,49nm,1.8s,mb5.1								
PVIS	**Viseu**	**71.66**	**307**	*e*P		**P**		**14 27 25.3**	**+0.4**
	comp=Z,28nm,1.1s,mb5.1								
PCBR	**Castelo Branco**	**71.74**	**306**	*e*P		**P**		**14 27 26.4**	**+1.0**
	comp=Z,19nm,1.3s,mb4.9								
PBAR	**Barrancos**	**72.14**	**304**	*e*P		**P**		**14 27 27.7**	**-0.1**
	comp=Z,32nm,1.8s,mb5.0								
ASAR	**Alice Springs**	**72.55**	**132**	P		**P**		**14 27 29.9**	**-0.4**
ASAR				⇑*e*				14 55 11.7	
ASAR	**Alice Springs**	**72.55**	**132**	P		**P**		**14 27 29.9**	**-0.4**
	comp=Z,6.3nm,0.8s,mb4.6,baz=319,slow=5.4,SNR=35								
ASAR				PKP2bc				14 55 11.7	
	comp=Z,0.3nm,0.7s,baz=160,slow=3.0,SNR=5.3								
EVO	**Evora**	**72.67**	**305**	*e*P		**P**		**14 27 32.5**	**+1.5**
	comp=Z,34nm,1.1s,mb4.9								
PBEJ	**Beja**	**72.79**	**304**	*e*P		**P**		**14 27 35.3**	**+3.6**
PVAQ	**Vaqueiros**	**72.95**	**304**	*e*P		**P**		**14 27 32.5**	**-0.2**
	comp=Z,37nm,1.0s,mb5.3								
PBDV	**Barranco-do-Ve**	**73.18**	**304**	*e*P		**P**		**14 27 35.8**	**+1.8**
	comp=Z,48nm,1.0s,mb5.4								
MORF	**Marmelete**	**73.66**	**304**	*e*P		**P**		**14 27 41.6**	**+4.7**
TTA	**Tatalina**	**75.28**	**24**	*e*P		**P**		**14 27 47.4**	**+1.6**
TORD	**Torodi Ar. Bea**	**76.48**	**277**	P		**P**		**14 27 53.2**	**-0.3**
	comp=Z,27nm,0.8s,mb5.2,baz=48,slow=3.9,SNR=47								
TORD				PP		PP		14 30 44.3	-0.9
	comp=Z,5.9nm,0.9s,baz=57,slow=7.1,SNR=7.5								
COLA	**College**	**76.59**	**20**	*e*P		**P**		**14 27 53.5**	**+0.3**
	comp=Z,77nm,0.9s,mb5.6								
COLA	**College**	**76.59**	**20**	*e*P		**P**		**14 27 53.5**	**+0.3**
COLA					pmax	pmax			
	comp=Z,77nm,0.9s,mb5.6								
SVW2	**Sparrevohn**	**76.63**	**25**	*e*P		**P**		**14 27 53.6**	**+0.1**
	comp=Z,61nm,1.1s,mb5.5								
ILAR	**Eielson Array**	**76.95**	**20**	P		**P**		**14 27 54.8**	**-0.5**
	comp=Z,35nm,0.9s,mb5.3,baz=304,slow=4.4,SNR=149								
ILAR				PP		PP		14 30 46.9	-0.9
	comp=Z,1.3nm,1.0s,baz=309,slow=6.0,SNR=4.1								
ILAR	**Eielson Array**	**76.95**	**20**	P		**P**		**14 27 54.8**	**-0.4**
ILAR								14 30 46.9	
ILAR					pmax	pmax			
	comp=Z,35nm,0.9s								
ILAR					pmax	pmax			
	comp=Z,1.0nm,1.0s								
EGAK	**Eagle**	**78.54**	**18**	*e*P		**P**		**14 28 04.2**	**+0.1**
	comp=Z,45nm,1.0s,mb5.3								
PMR	**Palmer**	**78.56**	**23**	*e*P		**P**		**14 28 04.6**	**+0.3**
	comp=Z,119nm,1.7s,mb5.5								
PMR	**Palmer**	**78.56**	**23**	*e*P		**P**		**14 28 04.6**	**+0.3**
PMR					pmax	pmax			
	comp=Z,119nm,1.7s,mb5.5								
CTA	**Charters Tower**	**78.65**	**122**	*e*P		**P**		**14 28 05.6**	**+0.2**
	comp=Z,19nm,1.0s,mb5.0								
CTA	**Charters Tower**	**78.65**	**122**	P		**P**		**14 28 05.9**	**+0.5**
	baz=340,slow=7.1								
CTAO	**Charters Tower**	**78.65**	**122**	*e*P		**P**		**14 28 05.5**	**+0.1**
	comp=Z,39nm,1.3s,mb5.2								
CTAO	**Charters Tower**	**78.65**	**122**	*e*P		**P**		**14 28 05.5**	**+0.1**
CTAO					pmax	pmax			
	comp=Z,39nm,1.3s,mb5.2								
CTAO	**Charters Tower**	**78.65**	**122**	P		**P**		**14 28 05.9**	**+0.5**
KDAK	**Kodiak Island**	**79.99**	**27**	P		**P**		**14 28 12.0**	**-0.2**
	comp=Z,317nm,0.8s,mb6.3,SNR=8.6								
KDAK	**Kodiak Island**	**79.99**	**27**	*i* P		**P**		**14 28 12.5**	**+0.3**
BOSA	**Boshof**	**81.11**	**229**	P		**P**		**14 28 18.6**	**+0.1**
	comp=Z,16nm,0.6s,mb5.1,baz=36,slow=5.8,SNR=24								
BOSA	**Boshof**	**81.11**	**229**	P		**P**		**14 28 18.6**	**+0.1**
BOSA					pmax	pmax			
	comp=Z,16nm,0.6s,mb5.1								
QLP	**Quilpie**	**81.35**	**128**	*e*P		**P**		**14 28 20.2**	**+0.3**
STKA	**Stephens Creek**	**83.14**	**133**	*e*P		**P**		**14 28 28.3**	**-0.8**
	comp=Z,12nm,1.1s,mb4.8								
STKA	**Stephens Creek**	**83.14**	**133**	P		**P**		**14 28 28.4**	**-0.7**
	comp=Z,12nm,0.9s,mb4.9,baz=320,slow=4.6,SNR=14								
SKAG	**Skagway**	**84.47**	**19**	*e*P		**P**		**14 28 37.1**	**+1.5**
	comp=Z,86nm,1.6s,mb5.6								
DBIC	**Dimbokro**	**85.27**	**275**	P		**P**		**14 28 40.5**	**0.0**
	comp=Z,37nm,0.7s,mb5.6,baz=41,slow=5.6,SNR=49								
DBIC	**Dimbokro**	**85.27**	**275**	P		**P**		**14 28 40.5**	**0.0**
DBIC					pmax	pmax			
	comp=Z,37nm,0.7s								
KIC	**Kosan Boka**	**85.33**	**275**	*e*P		**P**		**14 28 39.2**	**-1.6**
	comp=Z,91nm,0.7s,mb6.0								
TIC	**Toumodi**	**85.42**	**275**	*e*P		**P**		**14 28 40.6**	**-0.6**
	comp=Z,80nm,0.8s,mb5.9								
TIC	**Toumodi**	**85.42**	**275**	*e*P		**P**		**14 28 40.6**	**-0.6**
TIC					pmax	pmax			
	comp=Z,81nm,0.8s,mb5.9								
CMSA	**Cobar Meteorol**	**85.53**	**131**	*e*P		**P**		**14 28 40.8**	**-0.5**
LIC	**Lamto**	**85.64**	**275**	*e*P		**P**		**14 28 41.9**	**-0.4**
	comp=Z,93nm,0.8s,mb6.1								
LIC	**Lamto**	**85.64**	**275**	⇑*i* P		**P**		**14 28 46.4**	**+4.1**
	comp=Z,60nm,0.8s,mb5.6								
YKA	**Yellowknife Ar**	**85.87**	**8**	P		**P**		**14 28 41.9**	**-0.6**
YKA	**Yellowknife Ar**	**85.87**	**8**	P		**P**		**14 28 41.9**	**-0.6**
	comp=Z,12nm,0.9s,mb5.1,baz=339,slow=5.0,SNR=18								
YKA	**Yellowknife Ar**	**85.87**	**8**	P		**P**		**14 28 41.9**	**-0.7**
YKA					pmax	pmax			
	comp=Z,12nm,0.9s								
TOO	**Toolangi**	**89.31**	**135**	*e*P		**P**		**14 28 59.7**	**+0.3**
PDAR	**Pinedale Array**	**105.78**	**10**	PKiKP		PKiKP		14 34 26.7	-0.2
	comp=Z,0.6nm,0.7s,baz=46,slow=2.6,SNR=2.9								
PDAR				PKKPab		PKKPab		14 46 05.3	-5.0
	comp=Z,0.7nm,1.0s,baz=242,slow=3.2,SNR=4.2								
NVAR	**Mina Array Bea**	**108.15**	**18**	PKPdf		PKiKP		14 34 30.3	-1.1
NVAR	**Mina Array Bea**	**108.15**	**18**	PKiKP		PKiKP		14 34 30.3	-1.1
	comp=Z,0.7nm,0.8s,baz=270,slow=1.4,SNR=6.3								
TXAR	**Lajitas Array**	**119.78**	**7**	PKP		PKPdf		14 34 53.4	-0.4
TXAR				PKKPbc		PKKPbc		14 45 02.1	-1.3
TXAR	**Lajitas Array**	**119.78**	**7**	PKP		PKPdf		14 34 53.4	-0.4
	comp=Z,1.8nm,0.9s,baz=41,slow=0.4,SNR=15								
TXAR				PKKPbc		PKKPbc		14 45 02.1	-1.3
	comp=Z,0.7nm,0.9s,baz=187,slow=6.3,SNR=6.1								
TXAR	**Lajitas Array**	**119.78**	**7**	PKiKP		PKPdf		14 34 53.4	-0.4
TXAR					pmax	pmax			
	comp=Z,2.0nm,0.9s								
TXAR					pmax	pmax			
	comp=Z,1.0nm,0.9s								
VNA3	**Neumayer Olymp**	**119.88**	**202**	*e*PKPdf		PKPdf		14 34 49.0	-3.5
VNA3				*e*				14 34 54.0	
OTAV	**Otavalo**	**144.69**	**328**	*e*PKPdf		PKPdf		14 35 40.6	-0.2
CPUP	**Villa Florida**	**145.48**	**268**	PKPbc		PKPbc		14 35 41.1	-0.6
	comp=Z,23nm,1.0s,baz=37,slow=3.7,SNR=14								
CPUP	**Villa Florida**	**145.48**	**268**	PKiKP		PKPdf		14 35 41.1	-0.6
CPUP					pmax	pmax			
	comp=Z,23nm,1.0s								
LPAZ	**La Paz**	**150.39**	**293**	PKP		PKPdf		14 35 50.9	+0.9
	comp=Z,7.5nm,1.0s,baz=25,slow=7.1,SNR=4.7								
LPAZ				PKPbc		PKPbc		14 35 55.2	0.0
	comp=Z,11nm,0.9s,baz=16,slow=5.6,SNR=14								
LPAZ	**La Paz**	**150.39**	**293**	PKiKP		PKPdf		14 35 50.9	+0.9
LPAZ								14 35 55.2	
LPAZ					pmax	pmax			
	comp=Z,8.0nm,1.0s								
LPAZ					pmax	pmax			
	comp=Z,11nm,1.0s								
TRQA	**Tornquist**	**150.80**	**246**	*e*PKPbc		PKPbc		14 35 55.1	-0.5
TRQA				*e*				14 36 00.4	
PLCA	**Paso Flores**	**156.86**	**238**	PKPab		PKPab		14 36 31.2	+2.9
	comp=Z,7.8nm,0.9s,baz=86,slow=2.7,SNR=7.2								
PLCA	**Paso Flores**	**156.86**	**238**	PKP2		PKPab		14 36 31.2	+2.8
PLCA				pmax		pmax			
	comp=Z,8.0nm,0.9s								
LCO	**Las Campanas**	**157.63**	**268**	PKPdf		PKPdf		14 35 59.9	0.0

DMN ***25*** *14:22:39.2±0.5, 31°.75N×83°.02E, h60km, Ml4.6/4, Error ellipse: s-maj=12.5km s-min=8.5km az=111.0*
BJI ***25*** *14:22:41.8, 30°.61N×83°.16E, h13km, mB5.2/2, mb4.4/17, Ms4.9/6, Ms7 4.8/6*
IDC ***25*** *14:22:43.1±0.5, 30°.93N×83°.58E, h0km, mb4.4/23, mb1 4.5/26, mb1mx4.4/31, mbtmp4.3/26, ML3.5/3, Error ellipse: s-maj=16.4km s-min=12.4km az=46.0*
MOS ***25*** *14:22:46.6±1.1, 30°.98N×83°.48E, h33km, mb4.6/29, Error ellipse: s-maj=9.9km s-min=6.3km az=113.1*
ISCJB ***25*** *14:22:47.1±1.2, 31°.07N±0°.04×83°.50E±0°.05, h33km±10km, mb4.4/45, Error ellipse: s-maj=7.3km s-min=5.6km az=44.7*
NEIC ***25*** *14:22:47.2±2.2, 30°.98N×83°.51E, h26km±16km, mb4.6/9, Error ellipse: s-maj=9.2km s-min=5.9km az=213.0*

ISC 25 14:22:48.3±1.3, 31°.07N±0°.04×83°.53E±0°.05, h28km±10km, n126, σ1=9°.07/131, mb4.4/45, 5C-7D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.72**	**176**	*e*Pn		**Pn**		**14 23 30.4**	**+0.3**
DANN				*e*Sn		**Sb**		**14 24 08.5**	**-0.6**
	830nm,0.5s								
GKN	**Gorkha**	**3.21**	**162**	*e*Pn		**Pn**		**14 23 37.7**	**+0.9**
GKN				*e*Sn		**Sb**		**14 24 21.4**	**-1.7**
	280nm,0.3s								
KOLN	**Koldanda**	**3.29**	**179**	*e*Pn		**Pn**		**14 23 38.3**	**+0.4**
KOLN				*e*Sn		**Sn**		**14 24 21.1**	**+5.0**
	670nm,0.7s								
KKN	**Kakani**	**3.61**	**155**	*e*Pn		**Pn**		**14 23 43.2**	**+0.9**
DMN	**Daman**	**3.71**	**158**	*e*Pn		**Pn**		**14 23 44.9**	**+1.1**
GUN	**Gumba**	**3.76**	**146**	*e*Pn		**Pn**		**14 23 45.5**	**+1.2**
PKIN	**Phulchoki**	**3.84**	**154**	*e*Pn		**Pn**		**14 23 46.1**	**+0.6**
PKI	**Pulchoki**	**3.85**	**154**	*e*Pn		**Pn**		**14 23 46.4**	**+0.7**
PKI				*e*Sn		**Sb**		**14 24 37.4**	**-4.4**
	579nm,1.1s								
JIRN	**Jiri**	**4.12**	**145**	*e*Pn		**Pn**		**14 23 50.6**	**+1.3**
RAMN	**Ramite**	**4.91**	**146**	*e*Pn		**Pn**		**14 24 00.3**	**+0.1**
TAPN	**Taplejung**	**5.20**	**134**	*e*Pn		**Pn**		**14 24 05.0**	**+0.7**
ODAN	**Odare**	**5.39**	**140**	*e*Pn		**Pn**		**14 24 07.6**	**+0.8**
LSA	**Lhasa**	**6.72**	**100**	Pn		**Pn**		**14 24 15.5**	**-10**
LSA				Sn		**Sn**		**14 25 33.5**	**-7.3**
LSA				smax					
	comp=N,10.0nm,0.8s								
LSA				smax					
	comp=E,30nm,0.8s								
LSA	**Lhasa**	**6.72**	**100**	Pn		**Pn**		**14 24 27.8**	**+2.7**
LSA				Sn		**Sn**		**14 25 44.8**	**+4.0**
LSA	**Lhasa**	**6.72**	**100**	*e*P		**Pn**		**14 24 27.6**	**+2.4**
	comp=E,50nm,0.8s								
LSA	**Lhasa**	**6.72**	**100**	*e*P		**Pn**		**14 24 27.6**	**+2.5**
LSA				pmax	pmax				
	comp=Z,50nm,0.8s								
KSH	**Kashi**	**10.44**	**326**	*e*P		**Pn**		**14 25 15.0**	**-1.1**
KSH				*e*pP				14 25 22.0	
KSH				*e*sP				14 25 27.0	
KSH				pmax	pmax				
	comp=Z,6.0nm,0.7s								
KSH				pmax	pmax				
	comp=Z,140nm,3.1s								
KSH				LR	LR				
	comp=N,5μm,12.6s								
KSH				LR	LR				
	comp=E,1μm,8.9s								
KSH				LR	LR				
	comp=Z,5μm,11.7s								
KBL	**Kabul**	**12.67**	**290**	*e*P		**Pn**		**14 25 46.0**	**-0.6**
	comp=Z,37nm,0.8s								
KBL	**Kabul**	**12.67**	**290**	*e*P		**Pn**		**14 25 46.0**	**-0.5**
KBL				pmax	pmax				
	comp=Z,37nm,0.8s								
AAK	**Ala-Archa**	**13.61**	**330**	Pn		**Pn**		**14 25 59.2**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=198,slow=6.4,SNR=1.7								
MKAR	**Makanchi Array**	**15.73**	**357**	Pn		**Pn**		**14 26 26.2**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=184,slow=11,SNR=4.5								
LZH	**Lanzhou**	**17.64**	**68**	*e*P		**Pn**		**14 26 53.5**	**+1.5**
LZH				pP		pP		14 26 58.5	-1.9
LZH				sP		sP		14 27 00.0	-4.0
LZH				pmax	pmax				
	comp=Z,42nm,1.1s								
LZH				pmax	pmax				
	comp=Z,650nm,7.8s								
KMI	**Kunming**	**17.95**	**105**	P		**Pn**		**14 26 52.3**	**-3.5**
KMI				pP		pP		14 26 59.5	-4.3
KMI				sP		sP		14 27 03.0	-4.4
KMI				pmax	pmax				
	comp=Z,5.0nm,0.9s								
KMI				LR	LR				
	comp=N,980nm,49.8s								
KMI				LR	LR				
	comp=E,1μm,44.7s								
KMI				LR	LR				
	comp=Z,2μm,43.0s								
CHTO	**Chiang Mai**	**18.53**	**128**	*e*P		**Pn**		**14 27 00.2**	**-2.7**
	comp=Z,15nm,1.3s								
CHTO	**Chiang Mai**	**18.53**	**128**	*e*P		**Pn**		**14 27 00.2**	**-2.7**
CHTO				pmax	pmax				
	comp=Z,15nm,1.3s								
CMAR	**Chiang Mai Arr**	**18.78**	**128**	P		**Pn**		**14 27 02.9**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=312,slow=10,SNR=16								
KURK	**Kurchatov**	**19.96**	**351**	P		**Pn**		**14 27 17.2**	**-2.7**
	comp=Z,17nm,0.6s,baz=166,slow=10,SNR=21								
KURK	**Kurchatov**	**19.96**	**351**	⇑*e*P		**Pn**		**14 27 17.8**	**-2.1**
KURK				pmax	pmax				
	comp=Z,39nm,1.2s								
GYA	**Guiyang**	**20.78**	**97**	P		**P**		**14 27 26.3**	**-0.9**
GYA				pmax	pmax				
	comp=Z,10.0nm,0.8s								
XAN	**Xi'an**	**21.59**	**75**	P		**P**		**14 27 34.3**	**-1.5**
XAN				pmax	pmax				
	comp=Z,9.0nm,1.0s,mb4.2								
ENH	**Enshi**	**22.33**	**85**	*e*P		**P**		**14 27 42.1**	**-1.6**
	comp=Z,14nm,0.6s,mb4.6								
ZALV	**Zalesovo Beam**	**22.88**	**2**	P		**P**		**14 27 50.2**	**+0.8**
ZALV	**Zalesovo Beam**	**22.88**	**2**	P		**P**		**14 27 50.2**	**+0.8**
	comp=Z,3.9nm,0.5s,mb4.1,baz=179,slow=9.2,SNR=9.2								
ZALV	**Zalesovo Beam**	**22.88**	**2**	P		**P**		**14 27 50.2**	**+0.8**
ZALV				pmax	pmax				
	comp=Z,4.0nm,0.5s,mb4.1								
NVS	**Novosibirsk**	**23.76**	**360**	*e*P		**P**		**14 27 56.9**	**-1.2**
NVS				*e*S		**S**		**14 32 11.9**	**+0.4**
NVS				pmax	pmax				
	comp=Z,29nm,2.1s,mb4.3								
NVS				pmax	pmax				
	comp=N,11nm,1.6s								
NVS				pmax	pmax				
	comp=E,5.0nm,1.4s								
NVS				smax					
	comp=N,11nm,1.8s								
NVS				smax					
	comp=E,8.0nm,1.5s								
BVAR	**Borovoye Array**	**23.93**	**340**	P		**P**		**14 28 00.3**	**+0.6**
	comp=E,2.9nm,0.7s,mb3.8,baz=150,slow=10,SNR=7.5								
BVAR	**Borovoye Array**	**23.93**	**340**	P		**P**		**14 28 00.3**	**+0.5**
BVAR				pmax	pmax				
	comp=Z,3.0nm,0.7s								
BRVK	**Borovoye**	**24.00**	**340**	⇓*e*P		**P**		**14 28 04.1**	**+3.8**
BRVK				pmax	pmax				
	comp=Z,12nm,1.6s,mb4.1								
SONM	**Songino Array**	**24.19**	**40**	P		**P**		**14 28 02.9**	**+0.8**
	comp=Z,6.7nm,0.7s,mb4.2,baz=228,slow=11,SNR=7.2								
SONM	**Songino Array**	**24.19**	**40**	P		**P**		**14 28 02.9**	**+0.7**
SONM				pmax	pmax				
	comp=Z,7.0nm,0.7s								
ZAK	**Zakamensk**	**24.28**	**32**	*e*P		**P**		**14 28 03.0**	**0.0**
ZAK				pmax	pmax				
	comp=Z,4.0nm,1.4s,mb3.7								
ULN	**Ulaanbaatar**	**24.57**	**40**	*e*P		**P**		**14 28 06.4**	**+0.7**
	comp=Z,13nm,1.0s,mb4.4								
ULN	**Ulaanbaatar**	**24.57**	**40**	*e*P		**P**		**14 28 06.4**	**+0.8**
ULN				pmax	pmax				
	comp=Z,13nm,1.0s,mb4.4								
TLY	**Talaya**	**25.38**	**30**	*e*P		**P**		**14 28 14.6**	**+1.7**
TLY				pmax	pmax				
	comp=Z,8.0nm,1.2s,mb4.1								
IRK	**Irkutsk**	**26.05**	**30**	*e*P		**P**		**14 28 19.3**	**+0.3**
IRK				pmax	pmax				
	comp=Z,24nm,1.5s,mb4.5								
WHN	**Wuhan**	**26.44**	**83**	P		**P**		**14 28 23.0**	**+0.2**
AKTK	**Aktyubinsk**	**27.12**	**323**	P		**P**		**14 28 29.3**	**+0.6**
AKTO	**Aktyubinsk**	**27.12**	**323**	P		**P**		**14 28 29.3**	**+0.6**
	comp=Z,1.6nm,0.6s,mb3.7,baz=144,slow=12,SNR=3.1								
AKTO	**Aktyubinsk**	**27.12**	**323**	P		**P**		**14 28 29.3**	**+0.6**
AKTO				pmax	pmax				
	comp=Z,2.0nm,0.6s,mb3.8								
SVE	**Sverdlovsk**	**30.28**	**335**	*e*P		**P**		**14 28 58.2**	**+1.5**
ARU	**Arti**	**30.78**	**333**	*d i*P		**P**		**14 29 04.8**	**+3.7**
ARU				*e*				14 30 03.0	
ARU				S		**S**		**14 34 08.1**	**+5.7**
ARU				SS		SS		14 35 51.5	-23
ARU				pmax	pmax				
	comp=Z,11nm,1.7s,mb4.4								
GNI	**Garni**	**32.60**	**297**	⇑*e*P		**P**		**14 29 23.1**	**+5.8**
GNI				pmax	pmax				
	comp=Z,14nm,1.2s								
ZEI	**Tsey**	**33.48**	**302**	*e*P		**P**		**14 29 27.0**	**+2.0**
ZEI				pmax	pmax				
	comp=Z,32nm,1.3s,mb5.1								
KIV	**Kislovodsk**	**34.51**	**304**	⇑*e*P		**P**		**14 29 37.0**	**+3.1**
KIV				pmax	pmax				
	comp=Z,13nm,1.2s,mb4.7								
KSRS	**Korea Array**	**36.98**	**68**	P		**P**		**14 29 54.2**	**-0.9**
	comp=Z,1.7nm,0.8s,mb3.9,baz=272,slow=8.2,SNR=6.3								
KSRS	**Korea Array**	**36.98**	**68**	P		**P**		**14 29 54.3**	**-0.8**
KSRS				pmax	pmax				
	comp=Z,2.0nm,0.8s,mb4.0								
ANN	**Anapa**	**38.35**	**304**	*e*P		**P**		**14 30 06.4**	**-0.3**
ANN				*e*S		**S**		**14 35 57.4**	**-2.0**
ANN				pmax	pmax				
	comp=Z,32nm,1.0s,mb5.0								
OBN	**Obninsk**	**40.82**	**320**	⇑*i*P		**P**		**14 30 27.6**	**+0.5**
OBN				pmax	pmax				
	comp=Z,43nm,1.3s,mb4.9								
BRTR	**Keskin Array B**	**41.13**	**296**	P		**P**		**14 30 30.9**	**+1.0**
	comp=Z,4.3nm,1.1s,mb4.0,baz=106,slow=6.6,SNR=11								
BRTR	**Keskin Array B**	**41.13**	**296**	P		**P**		**14 30 30.9**	**+1.0**
BRTR				pmax	pmax				
	comp=Z,4.0nm,1.1s								
KLMR	**Klimovskoe**	**41.42**	**329**	P		**P**		**14 30 30.3**	**-1.6**
KLMR				pmax	pmax				
	comp=Z,50nm,1.4s,mb5.0								
AKASG	**Malin Array Be**	**44.38**	**312**	P		**P**		**14 30 55.5**	**-0.6**
AKASG	**Malin Array Be**	**44.38**	**312**	P		**P**		**14 30 55.5**	**-0.6**
	comp=Z,3.6nm,0.6s,mb4.2,baz=84,slow=7.3,SNR=12								
AKASG	**Malin Array Be**	**44.38**	**312**	P		**P**		**14 30 55.5**	**-0.6**
AKASG				pmax	pmax				
	comp=Z,4.0nm,0.6s								
KIEV	**Kiev**	**44.39**	**312**	*e*P		**P**		**14 30 55.8**	**-0.4**
	comp=Z,5.1nm,0.6s,mb4.4								
KIEV	**Kiev**	**44.39**	**312**	*e*P		**P**		**14 30 55.8**	**-0.3**
KIEV				pmax	pmax				
	comp=Z,5.0nm,0.6s,mb4.4								
JOF	**Joensuu**	**45.80**	**330**	*e*P		**P**		**14 31 07.0**	**-0.1**
JOF				pmax	pmax				
	comp=Z,3.0nm,0.4s,mb4.6								
JOF	**Joensuu**	**45.80**	**330**	*e*p		**P**		**14 31 07.0**	**-0.1**
	comp=Z,3.4nm,0.4s,mb4.6								
VRI	**Vrincioaia**	**45.92**	**306**	⇓*i*P		**P**		**14 31 13.0**	**+4.6**
PLOR	**Plostina**	**45.98**	**306**	⇓*i*P		**P**		**14 31 13.6**	**+4.8**
MLR	**Muntele Rosu**	**46.48**	**305**	⇑*i*P		**P**		**14 31 13.9**	**+1.1**
BURAR	**Bucovina Array**	**46.91**	**308**	⇓*i*P		**P**		**14 31 19.8**	**+3.7**
VOIR		**47.12**	**305**	⇓*i*P		**P**		**14 31 24.0**	**+6.2**
FINES	**FINESS Array B**	**47.76**	**327**	P		**P**		**14 31 22.9**	**+0.3**
	comp=Z,7.1nm,0.7s,mb4.8,baz=110,slow=7.9,SNR=22								
FINES	**FINESS Array B**	**47.76**	**327**	P		**P**		**14 31 22.9**	**+0.4**
FINES				pmax	pmax				
	comp=Z,7.0nm,0.7s								
KAF	**Kangasniemi**	**47.81**	**328**	*e*P	

DBIC	**Dimbokro**	**85.22**	**275**	P	**P**	**14 35 22.0**	**-0.7**		
DBIC				pmax	pmax				
	comp=Z,4.0nm,0.8s								
YKA	**Yellowknife Ar**	**85.63**	**8**	P	**P**	**14 35 23.3**	**-0.5**		
	comp=Z,4.0nm,0.7s,mb4.8,baz=336,slow=5.1,SNR=8.8								
YKA	**Yellowknife Ar**	**85.63**	**8**	P	**P**	**14 35 23.3**	**-0.5**		
YKA				pmax	pmax				
	comp=Z,4.0nm,0.7s								
TXAR	**Lajitas Array**	**119.54**	**7**	PKP	PKPdf	14 41 35.0	-0.7		
	comp=Z,0.3nm,0.5s,baz=167,slow=0.7,SNR=6.3								
SIV	**San Ignacio**	**144.42**	**287**	PKP	PKPdf	14 42 20.3	-2.1		
	baz=92,slow=9.4								
CPUP	**Villa Florida**	**145.47**	**268**	PKPbc	PKPbc	14 42 23.1	-1.0		
	comp=Z,3.1nm,0.8s,baz=30,slow=5.1,SNR=5.9								
LPAZ	**La Paz**	**150.28**	**293**	PKPbc	PKPbc	14 42 37.8	+0.4		
	comp=Z,4.7nm,1.1s,baz=28,slow=5.1,SNR=6.3								

IDC 25 14:26:58.4±11.0, 30.16N×83.66E, h0km, mb3.4/2, mb1 3.4/4, mb1mx3.2/27, mbtmp3.3/4, ML3.7/2, Error ellipse: s-maj=330.3km s-min=32.9km az=60.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**16.65**	**357**	Pn	Pn	14 30 52.4	-0.6
	0.1nm,0.3s,baz=178,slow=13,SNR=2.6						
CMAR	**Chiang Mai Arr**	**18.13**	**126**	P	Pn	14 31 11.8	+0.1
	0.2nm,0.3s,baz=315,slow=11,SNR=4.0						
KURK	**Kurchatov**	**20.88**	**351**	P	P	14 31 41.9	-0.1
	1.5nm,0.9s,baz=175,slow=11,SNR=4.2						
ZALV	**Zalesovo Beam**	**23.79**	**2**	P	P	14 32 11.7	-0.9
	0.4nm,0.3s,baz=187,slow=8.7,SNR=2.3						

*IDC **25** 14:32:15.5±1.0, 30.74N×83.45E, h0km, mb3.4/5, mb1 3.6/7, mb1mx3.4/27, mbtmp3.4/7, ML3.9/2, Error ellipse: s-maj=41.2km s-min=23.1km az=56.0*
*NEIC **25** 14:32:16.9±0.8, 30.86N×83.54E, h10km, Error ellipse: s-maj=30.7km s-min=13.0km az=62.0*

ISC 25 14:32:17.1±1.0, 30.9N±0.1×83.6E±0.2, h10km, n11, σ0.83 10, mb3.5/4, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.64**	**98**	*e*P	**Pb**	**14 34 05.3**	**-7.3**
	10nm,1.0s						
MKAR	**Makanchi Array**	**15.93**	**357**	Pn	**Pn**	**14 36 00.7**	**-0.5**
	0.2nm,0.3s,baz=179,slow=12,SNR=4.5						
CMAR	**Chiang Mai Arr**	**18.62**	**128**	P	**Pn**	**14 36 34.5**	**-0.5**
	0.3nm,0.3s,baz=304,slow=9.7,SNR=4.3						
KURK	**Kurchatov**	**20.16**	**351**	P	**P**	**14 36 50.4**	**-1.0**
KURK	**Kurchatov**	**20.16**	**351**	P	**P**	**14 36 50.4**	**-1.0**
	0.5nm,0.5s,baz=167,slow=10,SNR=5.2						
ARCES	**ARCESS Array B**	**50.37**	**337**	P	**P**	**14 41 14.6**	**+0.7**
	0.4nm,0.6s,mb3.6,baz=99,slow=5.6,SNR=2.8						
WRA	**Warramunga Arr**	**70.20**	**129**	P	**P**	**14 43 30.4**	**+0.1**
WRA	**Warramunga Arr**	**70.20**	**129**	P	**P**	**14 43 30.4**	**+0.1**
	0.3nm,0.5s,mb3.5,baz=325,slow=6.3,SNR=6.1						
TORD	**Torodi Ar. Bea**	**76.50**	**277**	P	**P**	**14 44 07.4**	**-0.3**
	0.4nm,0.6s,mb3.5,baz=45,slow=9.6,SNR=1.8						
ILAR	**Eielson Array**	**76.89**	**20**	P	**P**	**14 44 10.7**	**+1.7**
	0.3nm,0.7s,mb3.4,baz=310,slow=5.3,SNR=4.1						
TXAR	**Lajitas Array**	**119.73**	**7**	PKP	PKPdf	14 51 07.8	0.0
	0.1nm,0.7s,baz=248,slow=4.8,SNR=2.4						

IDC 25 14:34:36.9±2.2, 30.71N×83.24E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.4/28, mbtmp3.4/7, ML3.0/1, Error ellipse: s-maj=62.6km s-min=21.0km az=59.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**16.08**	**358**	Pn	Pn	14 38 21.8	-2.4
	0.1nm,0.3s,baz=183,slow=11,SNR=3.2						
CMAR	**Chiang Mai Arr**	**18.75**	**127**	P	Pn	14 38 57.8	0.0
	baz=307,slow=6.5,SNR=2.7						
KURK	**Kurchatov**	**20.28**	**352**	P	P	14 39 13.8	-0.1
	1.9nm,1.0s,baz=167,slow=9.6,SNR=12						
ZALV	**Zalesovo Beam**	**23.25**	**2**	P	P	14 39 45.5	-0.2
	0.5nm,0.5s,baz=170,slow=8.8,SNR=3.3						
BVAR	**Borovoye Array**	**24.19**	**341**	P	P	14 39 54.8	0.0
	0.4nm,0.5s,baz=146,slow=10,SNR=3.0						
KSRS	**Korea Array**	**37.34**	**67**	P	P	14 41 50.8	-0.2
	0.4nm,0.5s,baz=269,slow=9.4,SNR=2.9						
WRA	**Warramunga Arr**	**70.33**	**129**	P	P	14 45 52.4	-0.1
	0.6nm,1.0s,baz=325,slow=6.3,SNR=5.5						

*BJI **25** 14:36:25.2, 29.71N×82.74E, h8km, mB4.9/1, mb4.1/2, Ms4.7/3, Ms7 4.7/3*
*ISCJB **25** 14:36:33.4±0.6, 30.46N±0.07×83.2E±0.1, h10km, mb3.7/10, Error ellipse: s-maj=15.4km s-min=9.4km az=156.4*
*IDC **25** 14:36:34.0±1.2, 30.49N×83.24E, h0km, mb3.6/10, mb1 3.8/12, mb1mx3.6/28, mbtmp3.6/12, ML3.6/2, Error ellipse: s-maj=44.2km s-min=16.3km az=55.0*
*NEIC **25** 14:36:35.4±1.1, 30.51N×83.27E, h10km, mb4.6/1, Error ellipse: s-maj=27.7km s-min=11.7km az=53.0*

ISC 25 14:36:35.3±0.6, 30.51N±0.07×83.3E±0.1, h10km, n19, σ1§29/18, mb3.7/10, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDI	**Dehra Dun**	**4.50**	**269**	*ex*	x	14 37 50.0	
LSA	**Lhasa**	**6.88**	**95**	Pn	**Pn**	**14 38 13.8**	**-2.5**
LSA	**Lhasa**	**6.88**	**95**	*e*P	**Pn**	**14 38 18.0**	**+1.7**
	27nm,0.9s						
KSH	**Kashi**	**10.78**	**328**	*e*P	**Pn**	**14 39 08.5**	**-1.3**
KSH				*ep*P		14 39 15.5	
KSH				*e*PP		14 39 17.3	
KSH				*es*P		14 39 20.8	
KSH				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KSH				LR	LR		
	comp=N,1μm,11.8s						
KSH				LR	LR		
	comp=E,1μm,8.8s						
KSH				LR	LR		
	comp=Z,570nm,7.8s						
HYB	**Hyderabad**	**13.72**	**199**	*i* P	**Pn**	**14 39 50.0**	**0.0**
MK31	**Makanchi Array**	**16.28**	**358**	*e*P	**Pn**	**14 40 26.6**	**+2.7**
MKAR	**Makanchi Array**	**16.28**	**358**	Pn	**Pn**	**14 40 23.2**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=179,slow=12,SNR=3.8						
CMAR	**Chiang Mai Arr**	**18.62**	**127**	P	**Pn**	**14 40 51.6**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=311,slow=10,SNR=5.7						
KURK	**Kurchatov**	**20.48**	**352**	P	**P**	**14 41 11.1**	**-2.1**
	comp=Z,1.9nm,0.9s,baz=171,slow=10,SNR=10						
ZALV	**Zalesovo Beam**	**23.45**	**2**	P	**P**	**14 41 44.1**	**-0.7**
	comp=Z,0.5nm,0.4s,mb3.3,baz=187,slow=10,SNR=3.6						
BVAR	**Borovoye Array**	**24.38**	**341**	P	**P**	**14 41 55.0**	**+1.5**
	comp=Z,1.0nm,0.5s,mb3.5,baz=148,slow=11,SNR=3.1						
ULN	**Ulaanbaatar**	**25.15**	**40**	P	**P**	**14 42 00.4**	**-0.1**
	comp=Z,3.1nm,0.2s,mb4.5						
KSRS	**Korea Array**	**37.40**	**67**	P	**P**	**14 43 50.2**	**+1.7**
	comp=Z,1.1nm,0.6s,mb3.9,baz=273,slow=9.3,SNR=4.2						
FINES	**FINESS Array B**	**48.10**	**327**	P	**P**	**14 45 14.8**	**-0.2**
	comp=Z,1.8nm,0.8s,mb4.2,baz=108,slow=12,SNR=2.8						
ARCES	**ARCESS Array B**	**50.59**	**337**	P	**P**	**14 45 33.6**	**-0.3**
	comp=Z,2.0nm,0.9s,mb4.0,baz=92,slow=7.8,SNR=4.8						
NOA	**NORSAR Array B**	**55.20**	**326**	P	**P**	**14 46 09.9**	**+1.9**
	comp=Z,1.2nm,0.7s,mb4.0,baz=88,slow=7.0,SNR=3.7						
WRA	**Warramunga Arr**	**70.20**	**129**	P	**P**	**14 47 48.3**	**-0.3**
	comp=Z,0.3nm,0.5s,mb3.5,baz=325,slow=6.3,SNR=10						
ASAR	**Alice Springs**	**72.53**	**132**	P	**P**	**14 48 03.7**	**+1.1**
	comp=Z,0.3nm,1.0s,mb3.2,baz=313,slow=6.2,SNR=2.8						
ILAR	**Eielson Array**	**77.33**	**20**	P	**P**	**14 48 29.5**	**-0.3**
	comp=Z,0.4nm,1.0s,mb3.3,baz=316,slow=5.0,SNR=3.4						

IDC 25 14:44:30.2±9.9, 30.68N×83.28E, h0km, mb3.3/2, mb1 3.4/4, mb1mx3.2/27, mbtmp3.3/4, Error ellipse: s-maj=296.4km s-min=30.7km az=61.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**16.11**	**358**	Pn	Pn	14 48 17.2	-0.7
	baz=176,slow=11,SNR=2.3						
CMAR	**Chiang Mai Arr**	**18.71**	**127**	P	Pn	14 48 50.1	-0.4
	baz=321,slow=9.5,SNR=3.6						
KURK	**Kurchatov**	**20.32**	**351**	P	P	14 49 06.7	-0.9
	1.4nm,0.9s,baz=166,slow=9.5,SNR=8.3						
ZALV	**Zalesovo Beam**	**23.28**	**2**	P	P	14 49 39.0	-0.3
	0.3nm,0.3s,baz=188,slow=9.7,SNR=3.1						

*ISCJB **25** 14:47:04.4±0.4, 37.02N±0.03×35.65E±0.0, h9km±4km, Error ellipse: s-maj=4.8km s-min=4.1km az=23.5*
*CSEM **25** 14:47:04.9±0.2, 37.02N×35.67E, h10km, MD3.4, Error ellipse: s-maj=4.5km s-min=4.1km az=30.0*
*DDA **25** 14:47:04.3, 37.00N×35.64E, h12km±5km, Md2.9*
*ISK **25** 14:47:04.1, 37.10N×35.63E, h7km, MD3.4*

ISC 25 14:47:05.0±0.4, 37.03N±0.03×35.67E±0.03, h9km±4km, n46, σ0.98/61, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEYT	**Ceyhan**	**0.07**	**106**	PG	**Pg**	**14 47 07.5**	**+0.4**
CEYT				*e*Sg	**Sg**	**14 47 10.0**	**+1.5**
CEYT	**Ceyhan**	**0.07**	**106**	*i* Pg	**Pg**	**14 47 07.5**	**+0.5**
CEYT				*i* Sg	**Sg**	**14 47 10.0**	**+1.5**
KOZT	**Kozan**	**0.47**	**16**	*e*PG	**Pg**	**14 47 13.0**	**-1.2**
KRTS	**Karatas**	**0.51**	**207**	*e*PG	**Pg**	**14 47 15.1**	**+0.1**
KRTS				*e*SG	**Sg**	**14 47 24.0**	**+2.4**
KRTS	**Karatas**	**0.51**	**207**	*e*Pg	**Pg**	**14 47 15.1**	**+0.2**
KRTS				*e*Sg	**Sg**	**14 47 24.0**	**+2.4**
KARA	**Karaisali**	**0.54**	**296**	*e*PG	**Pg**	**14 47 14.0**	**-1.5**
KARA	**Karaisali**	**0.54**	**296**	*e*Pg	**Pg**	**14 47 14.0**	**-1.5**
COBT	**Iskenderun**	**0.69**	**137**	*e*P	**Pg**	**14 47 16.8**	**-1.7**
COBT				*e*S	**Sg**	**14 47 26.6**	**-0.9**
COBT	**Iskenderun**	**0.69**	**137**	*e*P	**Pg**	**14 47 16.8**	**-1.6**
COBT				*e*S	**Sg**	**14 47 26.5**	**-1.0**
GULE	**Gulek**	**0.75**	**290**	*i* P	**Pg**	**14 47 18.9**	**-0.6**
GULE				*i* S	**Sg**	**14 47 29.1**	**-0.3**
GULE	**Gulek**	**0.75**	**290**	*i* P	**Pg**	**14 47 18.9**	**-0.7**
GULE				*i* S	**Sg**	**14 47 29.1**	**-0.3**
ANDN	**Andirin**	**0.77**	**44**	*e*P	**Pg**	**14 47 19.8**	**-0.2**
ANDN				*e*S	**Sg**	**14 47 32.4**	**+2.4**
ANDN	**Andirin**	**0.77**	**44**	*e*P	**Pg**	**14 47 19.8**	**-0.1**
ANDN				*e*S	**Sg**	**14 47 32.4**	**+2.4**
HTY	**Hatay**	**0.98**	**157**	*e*PG	**Pg**	**14 47 23.8**	**-0.1**
HTY	**Hatay**	**0.98**	**157**	*e*Pg	**Pg**	**14 47 23.8**	**-0.1**
YAYL	**Yayladag**	**1.05**	**160**	*i* P	**Pg**	**14 47 24.6**	**-0.7**
YAYL				*i* S	**Sg**	**14 47 39.3**	**+0.3**
YAYL	**Yayladag**	**1.05**	**160**	*i* P	**Pg**	**14 47 24.6**	**-0.7**
YAYL				*i* S	**Sg**	**14 47 39.3**	**+0.3**
KMRS	**Kahramanmaras**	**1.09**	**64**	*e*PN	**Pg**	**14 47 25.1**	**-1.0**
KMRS	**Kahramanmaras**	**1.09**	**64**	*e*Pn	**Pg**	**14 47 25.1**	**-1.0**
KUZU	**Kuzuini**	**1.16**	**102**	*e*P	**Pb**	**14 47 26.3**	**-0.9**
KUZU				*e*S	**Sg**	**14 47 42.0**	**-0.3**
KUZU	**Kuzuini**	**1.16**	**102**	*e*P	**Pb**	**14 47 26.3**	**-0.9**
KUZU				*e*S	**Sg**	**14 47 42.0**	**-0.3**
GAZ	**Gaziantep**	**1.25**	**83**	*e*PN	**Pn**	**14 47 28.1**	**-0.5**
GAZ	**Gaziantep**	**1.25**	**83**	*e*Pn	**Pn**	**14 47 28.1**	**-0.5**
SARI	**SarD1z-Kayseri**	**1.84**	**26**	*e*PN	**Pn**	**14 47 31.2**	**-5.7**
AVNT	**Avonos**	**1.86**	**340**	*e*P	**Pn**	**14 47 39.3**	**+2.2**
AVNT				*e*S	**Sn**	**14 48 06.2**	**+5.4**
AVNT	**Avonos**	**1.86**	**340**	*e*P	**Pn**	**14 47 39.3**	**+2.2**
EREN	**Erenkoy**	**1.92**	**219**	*e*PN	**Pn**	**14 47 38.6**	**+0.7**
EREN	**Erenkoy**	**1.92**	**219**	*e*Pn	**Pn**	**14 47 38.6**	**+0.7**
SULT	**Sultanhani-AKS**	**2.07**	**305**	*e*PN	**Pn**	**14 47 39.3**	**-0.7**
SULT	**Sultanhani-AKS**	**2.07**	**305**	*e*Pn	**Pn**	**14 47 39.3**	**-0.7**
MALT	**Malatya**	**2.54**	**59**	*e*PN	**Pn**	**14 47 46.9**	**+0.5**
MALT	**Malatya**	**2.54**	**59**	*e*Pn	**Pn**	**14 47 46.9**	**+0.5**
MYA	**Malatya**	**2.54**	**59**	*e*PN	**Pn**	**14 47 46.5**	**0.0**
MYA	**Malatya**	**2.54**	**59**	*e*Pn	**Pn**	**14 47 46.5**	**0.0**
HDMB	**Hadim**	**2.55**	**270**	*e*PN	**Pn**	**14 47 46.6**	**+0.1**
HDMB	**Hadim**	**2.55**	**270**	*e*Pn	**Pn**	**14 47 46.6**	**+0.1**
YOZ	**Yozgat**	**2.62**	**354**	*e*PN	**Pn**	**14 47 47.7**	**+0.1**
YOZ	**Yozgat**	**2.62**	**354**	*e*Pn	**Pn**	**14 47 47.7**	**+0.1**
KAMT	**Kaman**	**2.80**	**327**	*e*PN	**Pn**	**14 47 49.8**	**-0.2**
KAMT	**Kaman**	**2.80**	**327**	*e*Pn	**Pn**	**14 47 49.8**	**-0.2**
SVSK	**Karacayir**	**3.07**	**20**	*e*PN	**Pn**	**14 47 53.7**	**0.0**
SVSK	**Karacayir**	**3.07**	**20**	*e*Pn	**Pn**	**14 47 53.7**	**0.0**
SVRC	**Sivrice-ELAZID**	**3.19**	**64**	*e*PN	**Pn**	**14 47 56.6**	**+1.3**
SVRC	**Sivrice-ELAZID**	**3.19**	**64**	*e*Pn	**Pn**	**14 47 56.6**	**+1.3**
SUTC	**Sutluce-Ispart**	**3.75**	**278**	*e*PN	**Pn**	**14 48 03.4**	**+0.4**
SUTC	**Sutluce-Ispart**	**3.75**	**278**	*e*Pn	**Pn**	**14 48 03.4**	**+0.3**

*ISCJB **25** 14:53:47.6±0.9, 30.6N±0.1×83.2E±0.2, h10km, mb3.6/8, Error ellipse: s-maj=23.2km s-min=11.3km az=140.7*
*IDC **25** 14:53:47.9±1.0, 30.67N×83.33E, h0km, mb3.7/9, mb1 3.8/11, mb1mx3.6/28, mbtmp3.6/11, ML3.2/2, Error ellipse: s-maj=36.5km s-min=19.0km az=57.0*
*NEIC **25** 14:53:49.5±0.9, 30.68N×83.17E, h10km, Error ellipse: s-maj=22.9km s-min=11.4km az=51.0*

ISC 25 14:53:49.5±0.9, 30.7N±0.1×83.3E±0.2, h10km, n13, σ1§01/13, mb3.6/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.90**	**96**	*e*P	**Pn**	**14 55 34.2**	**+3.5**
MK31	**Makanchi Array**	**16.09**	**358**	*e*P	**Pn**	**14 57 37.0**	**+1.2**
MKAR	**Makanchi Array**	**16.09**	**358**	Pn	**Pn**	**14 57 34.1**	**-1.7**
	0.1nm,0.3s,baz=178,slow=12,SNR=4.0						
CMAR	**Chiang Mai Arr**	**18.73**	**127**	P	**Pn**	**14 58 07.2**	**-1.6**
	0.0nm,0.3s,baz=307,slow=12,SNR=3.6						
KURK	**Kurchatov**	**20.30**	**351**	P	**P**	**14 58 24.2**	**-1.1**
	3.9nm,1.0s,baz=167,slow=10,SNR=26						
ZALV	**Zalesovo Beam**	**23.27**	**2**	P	**P**	**14 58 56.4**	**-0.7**
	1.1nm,0.6s,mb3.4,baz=188,slow=10,SNR=6.6						
BVAR	**Borovoye Array**	**24.21**	**341**	P	**P**	**14 59 07.2**	**+1.1**
	0.7nm,0.5s,mb3.4,baz=156,slow=8.1,SNR=5.6						
FINES	**FINESS Array B**	**47.95**	**327**	P	**P**	**15 02 28.0**	**+0.1**
	1.3nm,0.7s,mb4.1,baz=114,slow=13,SNR=2.8						
ARCES	**ARCESS Array B**	**50.42**	**337**	P	**P**	**15 02 47.6**	**+0.8**
	0.9nm,0.7s,mb3.9,baz=96,slow=8.3,SNR=4.9						
NOA	**NORSAR Array B**	**55.05**	**326**	P	**P**	**15 03 21.0**	**-0.1**
	0.9nm,0.8s,mb3.9,baz=76,slow=8.6,SNR=3.3						
WRA	**Warramunga Arr**	**70.31**	**129**	P	**P**	**15 05 03.3**	**-0.1**
	0.3nm,0.4s,mb3.5,baz=325,slow=6.3,SNR=11						
TORD	**Torodi Ar. Bea**	**76.24**	**277**	P	**P**	**15 05 39.0**	**+0.3**
	0.3nm,0.5s,mb3.4,baz=38,slow=6.8,SNR=2.7						
ILAR	**Eielson Array**	**77.16**	**20**	P	**P**	**15 05 43.1**	**+0.1**
	0.5nm,0.8s,mb3.5,baz=311,slow=4.5,SNR=7.3						

IDC 25 14:57:49.9±7.2, 30.70N×83.20E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.2/26, mbtmp3.2/4, ML3.3/1, Error ellipse: s-maj=318.5km s-min=30.4km az=69.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**16.09**	**358**	Pn	Pn	15 01 35.2	-2.1
	0.1nm,0.3s,baz=180,slow=13,SNR=3.3						
KURK	**Kurchatov**	**20.29**	**352**	P	P	15 02 25.7	-1.3
	0.7nm,0.7s,baz=169,slow=11,SNR=6.2						
WRA	**Warramunga Arr**	**70.35**	**129**	P	P	15 09 05.7	0.0
	0.5nm,0.9s,baz=323,slow=6.5,SNR=5.9						
ILAR	**Eielson Array**	**77.17**	**20**	P	P	15 09 45.5	+0.5
	0.9nm,1.2s,baz=322,slow=5.7,SNR=5.0						

*BJI **25** 14:59:48.2, 30.22N×83.00E, h17km, mB4.7/1, mb4.1/14, Ms4.6/4, Ms7 4.4/4*
*DMN **25** 14:59:50.2±0.9, 31.21N×83.16E, h2km, Ml4.8/2, Error ellipse: s-maj=21.3km s-min=12.1km az=124.0*
*IDC **25** 14:59:51.0±0.6, 30.66N×83.39E, h0km, mb4.1/18, mb1 4.2/21, mb1mx4.1/30, mbtmp4.1/21, ML3.5/2, Error ellipse: s-maj=19.6km s-min=13.7km az=44.0*
*ISCJB **25** 14:59:52.3±0.2, 30.93N±0.03×83.33E±0.05, h10km, mb4.2/33, Error ellipse: s-maj=7.1km s-min=3.4km az=153.6*
*MOS **25** 14:59:53.9±1.4, 30.65N×83.32E, h33km, mb4.5/26, Error ellipse: s-maj=11.2km s-min=6.4km az=115.8*
*NEIC **25** 14:59:54.2±2.8, 30.69N×83.33E, h22km±20km, mb4.5/9, Error ellipse: s-maj=11.1km s-min=6.9km az=216.0*

ISC 25 14:59:54.0±0.2, 30.91N±0.03×83.37E±0.05, h10km, n105, σ1§24/111, mb4.2/33, 8C-4D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DANN	**Dangsing**	**2.57**	**172**	*e*Pn	**Pn**	**15 00 35.6**	**-0.1**
DANN				*e*Sn	**Sn**	**15 01 08.3**	**+1.3**
GKN	**Gorkha**	**3.10**	**159**	*e*Pn	**Pn**	**15 00 43.7**	**+0.7**
GKN				*e*Sn	**Sn**	**15 01 22.7**	**+2.6**
	875nm,0.6s						
KOLN	**Koldanda**	**3.13**	**176**	*e*Pn	**Pn**	**15 00 43.7**	**+0.2**
KOLN				*e*Sn	**Sn**	**15 01 22.6**	**+1.7**
	1μm,0.6s						
KKN	**Kakani**	**3.53**	**151**	*e*Pn	**Pn**	**15 00 48.7**	**-0.2**
DMN	**Daman**	**3.62**	**155**	*e*Pn	**Pn**	**15 00 49.5**	**-0.7**
GUN	**Gumba**	**3.70**	**143**	*e*Pn	**Pn**	**15 00 51.7**	**+0.4**
PKIN	**Phulchoki**	**3.76**	**151**	*e*Pn	**Pn**	**15 00 52.0**	**-0.1**
PKI	**Pulchoki**	**3.77**	**151**	*e*Pn	**Pn**	**15 00 52.0**	**-0.3**

JIRN	**Jiri**	**4.07**	**142**	*e*Pn	**Pn**	**15 00 56.7**	**+0.4**
RAMN	**Ramite**	**4.86**	**144**	*e*Pn	**Pn**	**15 01 06.6**	**-0.5**
TAPN	**Taplejung**	**5.20**	**132**	*e*Pn	**Pn**	**15 01 12.2**	**+0.4**
SMLA	**Simla**	**5.33**	**274**	*i* P	**Pn**	**15 01 17.6**	**+4.0**
ODAN	**Odare**	**5.36**	**138**	*e*Pn	**Pn**	**15 01 13.9**	**-0.1**
SDNR	**Sundarnagar**	**5.51**	**278**	*e*PKP	**Pn**	**15 01 24.5**	**+8.3**
LSA	**Lhasa**	**6.84**	**98**	Pn	**Pn**	**15 01 32.5**	**-1.9**
LSA				Sn	**Sn**	**15 02 49.0**	**-3.2**
LSA	**Lhasa**	**6.84**	**98**	*e*P	**Pn**	**15 01 36.2**	**+1.9**
	30nm,0.6s						
LSA	**Lhasa**	**6.84**	**98**	*e*P	**Pn**	**15 01 36.2**	**+1.8**
LSA				pmax	pmax		
	comp=Z,30nm,0.6s						
KSH	**Kashi**	**10.50**	**327**	*e*P	**Pn**	**15 02 24.8**	**+0.2**
KSH				*ep*P		15 02 31.5	
KSH				*e*PP		15 02 32.8	
KSH				*es*P		15 02 36.5	
KSH				*e*S	**Sn**	**15 04 20.0**	**-2.3**
KSH				*e*SS		15 04 35.0	
KSH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSH				LR	LR		
	comp=N,510nm,11.8s						
KSH				LR	LR		
	comp=E,970nm,11.0s						
KSH				LR	LR		
	comp=Z,750nm,11.2s						
KBL	**Kabul**	**12.59**	**290**	*e*P	**Pn**	**15 02 53.2**	**0.0**
	comp=Z,13nm,0.8s						
KBL	**Kabul**	**12.59**	**290**	*e*P	**Pn**	**15 02 53.2**	**0.0**
KBL				pmax	pmax		
	comp=Z,13nm,0.8s						
AAK	**Ala-Archa**	**13.68**	**331**	Pn	**Pn**	**15 03 08.1**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=176,slow=14,SNR=2.2						
AAK	**Ala-Archa**	**13.68**	**331**	P	**Pn**	**15 03 08.1**	**0.0**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HYB	**Hyderabad**	**14.13**	**199**	*i* P	**Pn**	**15 03 07.5**	**-6.7**
HYB				*e*S	**Sn**	**15 05 36.0**	**-15**
MK31	**Makanchi Array**	**15.89**	**357**	P	**Pn**	**15 03 40.9**	**+3.3**
MKAR	**Makanchi Array**	**15.89**	**357**	Pn	**Pn**	**15 03 37.3**	**-0.3**
	baz=182,slow=12,SNR=2.9						
LZH	**Lanzhou**	**17.83**	**68**	*e*P	**Pn**	**15 04 04.5**	**+2.2**
LZH				pP	pP	15 04 09.5	+3.7
LZH				sP	sP	15 04 11.0	+3.9
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
KMI	**Kunming**	**18.04**	**104**	P	**Pn**	**15 04 01.0**	**-3.9**
KMI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHTO	**Chiang Mai**	**18.54**	**127**	*e*P	**Pn**	**15 04 05.6**	**-5.4**
	comp=Z,6.2nm,0.9s						
CHTO	**Chiang Mai**	**18.54**	**127**	*e*P	**Pn**	**15 04 05.6**	**-5.4**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**18.79**	**128**	P	**Pn**	**15 04 10.2**	**-3.8**
	comp=Z,0.1nm,0.3s,baz=306,slow=11,SNR=30						
KURK	**Kurchatov**	**20.10**	**351**	P	**P**	**15 04 28.0**	**+0.2**
	comp=Z,10.0nm,1.0s,baz=170,slow=10,SNR=12						
KURK	**Kurchatov**	**20.10**	**351**	*c i*P	**P**	**15 04 28.7**	**+1.0**
KURK				pmax	pmax		
	comp=Z,19nm,1.2s						
XAN	**Xi'an**	**21.77**	**75**	P	**P**	**15 04 44.5**	**-1.4**
XAN				pP		15 04 48.5	
XAN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
ENH	**Enshi**	**22.48**	**85**	P	**P**	**15 04 53.0**	**-0.6**
	comp=Z,7.2nm,0.8s,mb4.2						
ZAA0	**Zalesovo Array**	**23.05**	**2**	*e*P	**P**	**15 05 00.4**	**+1.0**
ZALV	**Zalesovo Beam**	**23.05**	**2**	P	**P**	**15 04 59.9**	**+0.5**
	comp=Z,2.4nm,0.7s,mb3.8,baz=188,slow=8.9,SNR=11						
ZALV	**Zalesovo Beam**	**23.05**	**2**	P	**P**	**

	comp=Z,2.0nm,0.8s,mb4.2						
LPG	**La Plagne**	**59.78**	**308**	*e*P	**P**	15 09 58.5	**-0.8**
	comp=Z,12nm,1.0s,mb4.6						
LPG	**La Plagne**	**59.78**	**308**	*e*P	**P**	15 09 58.5	**-0.8**
	comp=Z,5.9nm,1.0s,mb4.6						
LPG	**La Plagne**	**59.78**	**308**	*e*P	**P**	15 09 58.5	**-0.8**
LPG				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
LPL	**La Plagne**	**59.79**	**308**	*e*P	**P**	15 09 58.6	**-0.7**
	comp=Z,8.6nm,0.8s,mb4.5						
LPL	**La Plagne**	**59.79**	**308**	*e*P	**P**	15 09 58.6	**-0.7**
	comp=Z,4.3nm,0.8s,mb4.5						
LPL	**La Plagne**	**59.79**	**308**	*e*P	**P**	15 09 58.6	**-0.7**
LPL				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
KEST	**Kesra**	**60.68**	**296**	P	**P**	15 10 05.4	**-0.2**
	comp=Z,3.1nm,1.0s,mb4.4,baz=56,slow=3.6,SNR=5.0						
SMF	**Signal de Mont**	**61.44**	**310**	*e*P	**P**	15 10 08.7	**-1.8**
AVF	**Avril sur Loir**	**61.72**	**310**	*e*P	**P**	15 10 10.6	**-1.8**
TCF	**Toulx Ste Croi**	**62.62**	**309**	*e*P	**P**	15 10 17.1	**-1.4**
	comp=Z,6.3nm,0.8s,mb4.5						
TCF	**Toulx Ste Croi**	**62.62**	**309**	*e*P	**P**	15 10 17.1	**-1.4**
	comp=Z,3.2nm,0.8s,mb4.5						
TCF	**Toulx Ste Croi**	**62.62**	**309**	*e*P	**P**	15 10 17.1	**-1.4**
TCF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
LDF	**La Druitiere**	**63.45**	**312**	*e*P	**P**	15 10 22.1	**-1.9**
	comp=Z,4.1nm,0.6s,mb4.5						
LDF	**La Druitiere**	**63.45**	**312**	*e*P	**P**	15 10 22.1	**-1.9**
	comp=Z,2.0nm,0.6s,mb4.4						
LDF	**La Druitiere**	**63.45**	**312**	*e*P	**P**	15 10 22.1	**-1.9**
LDF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
GRR	**Gorron**	**63.98**	**312**	*e*P	**P**	15 10 25.6	**-1.9**
SUMG	**Summit**	**69.46**	**344**	*i* P	**P**	15 11 02.7	**+0.7**
	comp=Z,7.4nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**70.37**	**129**	P	**P**	15 11 06.0	**-2.4**
	comp=Z,3.4nm,0.6s,mb4.5,baz=324,slow=6.4,SNR=40						
WRA	**Warramunga Arr**	**70.37**	**129**	P	**P**	15 11 06.0	**-2.3**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ASAR	**Alice Springs**	**72.73**	**132**	P	**P**	15 11 20.1	**-2.4**
	comp=Z,0.8nm,0.7s,mb3.8,baz=318,slow=5.6,SNR=11						
ASAR	**Alice Springs**	**72.73**	**132**	P	**P**	15 11 20.1	**-2.4**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.30**	**277**	P	**P**	15 11 42.0	**-1.5**
	comp=Z,2.3nm,0.8s,mb4.2,baz=49,slow=5.1,SNR=12						
ILAR	**Eielson Array**	**76.92**	**20**	P	**P**	15 11 45.9	**-0.3**
	comp=Z,2.6nm,1.1s,mb4.1,baz=310,slow=5.0,SNR=18						
ILAR	**Eielson Array**	**76.92**	**20**	P	**P**	15 11 45.9	**-0.3**
ILAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BOSA	**Boshof**	**81.04**	**229**	P	**P**	15 12 07.0	**-2.2**
	comp=Z,5.1nm,0.9s,mb4.5,baz=67,slow=7.7,SNR=3.9						
BOSA	**Boshof**	**81.04**	**229**	P	**P**	15 12 07.0	**-2.3**
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
DBIC	**Dimbokro**	**85.10**	**275**	P	**P**	15 12 29.9	**-0.8**
	comp=Z,2.2nm,0.7s,mb4.4,baz=56,slow=4.3,SNR=5.6						
DBIC	**Dimbokro**	**85.10**	**275**	P	**P**	15 12 29.9	**-0.8**
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CPUP	**Villa Florida**	**145.32**	**268**	PKPbc	PKPbc	15 19 30.6	-1.6
	comp=Z,7.7nm,1.1s,baz=110,slow=2.2,SNR=8.8						

IDC 25 15:02:39.5±3.6, 20°17S×174°36E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.7/16, mbtmp3.7/4, Error ellipse: s-maj=147.8km s-min=33.4km az=144.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**31.55**	**242**	P	P	15 09 03.5	-0.2
	0.8nm,0.8s,baz=96,slow=9.2,SNR=2.9						
WRA	**Warramunga Arr**	**37.53**	**263**	P	P	15 09 56.0	+0.3
	0.3nm,0.3s,baz=96,slow=7.7,SNR=23						
ASAR	**Alice Springs**			P	P	15 09 56.0	-0.3
	1.0nm,0.7s,baz=87,slow=9.4,SNR=25						
ILAR	**Eielson Array**	**89.75**	**16**	P	P	15 15 39.3	0.0
	0.2nm,0.6s,baz=224,slow=3.8,SNR=2.9						

IDC 25 15:09:14.7±8.7, 31°14N×83°32E, h0km, mb3.2/1, mb1 3.2/4, mb1mx3.1/27, mbtmp3.1/4, ML3.1/2, Error ellipse: s-maj=261.3km s-min=30.4km az=62.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**15.65**	**357**	Pn	Pn	15 12 55.2	-1.3
	0.0nm,0.3s,baz=173,slow=13,SNR=2.4						
CMAR	**Chiang Mai Arr**	**18.96**	**128**	P	Pn	15 13 37.8	-0.4
	0.1nm,0.3s,baz=310,slow=12,SNR=5.2						
KURK	**Kurchatov**	**19.87**	**351**	P	Pn	15 13 46.1	-2.7
	0.0nm,0.3s,baz=178,slow=10,SNR=5.5						
ZALV	**Zalesovo Beam**	**22.82**	**2**	P	P	15 14 19.1	+0.1
	0.4nm,0.4s,baz=180,slow=5.8,SNR=2.1						

*ISCJB **25** 15:09:55.4±4.2, 30°82N×0°09×83°46E±0°.10, h2km±28km, mb3.7/9, Error ellipse: s-maj=17.3km s-min=10.7km az=42.8*
*BJI **25** 15:09:56.6, 30°66N×82°.96E, h8km, mb3.9/3, Ms4.1/1, Ms7 3.9/1*
*IDC **25** 15:09:56.5±0.9, 30°.69N×83°.29E, h0km, mb3.8/10, mb1 3.9/12, mb1mx3.7/29, mbtmp3.7/12, ML3.3/2, MS4.7/1, Ms1 4.7/1, ms1mx3.3/49, Error ellipse: s-maj=36.1km s-min=16.2km az=57.0*
*NEIC **25** 15:09:58.2±0.6, 30°.79N×83°.39E, h10km, Error ellipse: s-maj=16.4km s-min=7.6km az=53.0*
ISC 25 15:10:00.0±4.1, 30°.86N±0°.08×83°.44E±0°.10, h20km±27km, n22, σ0°87/22, mb3.7/9, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDI	**Dehra Dun**	**4.67**	**265**	*ex*	**Pn**	15 11 10.0	**+0.6**
LSA	**Lhasa**	**6.77**	**98**	P	**Pn**	15 11 38.5	**+0.2**
KSH	**Kashi**	**10.58**	**327**	*e*P	**Pn**	15 12 29.5	**-0.9**
KSH				*e*pP		15 12 36.5	
KSH				*e*PP		15 12 38.0	
KSH				*es*P		15 12 41.5	
KSH				*e*S	**Sn**	15 14 25.3	**-3.0**
KSH				*es*S		15 14 37.3	
KSH				*e*SS		15 14 41.0	
KSH				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KSH				LR	LR		
	comp=N,610nm,10.9s						
KSH				LR	LR		
	comp=E,530nm,11.6s						
KSH				LR	LR		
	comp=Z,510nm,8.4s						
MK31	**Makanchi Array**	**15.94**	**357**	*e*P	**Pn**	15 13 43.4	**+0.4**
MKAR	**Makanchi Array**	**15.94**	**357**	Pn	**Pn**	15 13 42.0	**-1.0**
	comp=Z,0.1nm,0.3s,baz=179,slow=11,SNR=3.8						
CMAR	**Chiang Mai Arr**	**18.71**	**128**	P	**Pn**	15 14 16.4	**-1.4**
	comp=Z,0.1nm,0.3s,baz=304,slow=11,SNR=8.7						
KURK	**Kurchatov**	**20.16**	**351**	P	**P**	15 14 32.7	**-0.3**
KURK	**Kurchatov**	**20.16**	**351**	P	**P**	15 14 32.7	**-0.3**
	comp=Z,4.4nm,1.0s,baz=167,slow=10,SNR=20						
ZALV	**Zalesovo Beam**	**23.10**	**2**	P	**P**	15 15 05.5	**+1.0**
	comp=Z,0.7nm,0.3s,mb3.5,baz=188,slow=9.0,SNR=6.4						
BVAR	**Borovoye Array**	**24.11**	**340**	P	**P**	15 15 14.7	**+0.5**
	comp=Z,1.1nm,0.4s,mb3.7,baz=140,slow=9.4,SNR=8.3						
AKTK	**Aktyubinsk**	**27.25**	**323**	P	**P**	15 15 43.2	**+0.6**
AKTO	**Aktyubinsk**	**27.25**	**323**	P	**P**	15 15 43.2	**+0.6**
	comp=Z,0.9nm,0.5s,mb3.5,baz=82,slow=5.2,SNR=4.7						
JOW	**Kunigami**	**39.28**	**84**	LR	LR	15 35 47.9	
	comp=Z,1μm,21.5s,baz=98,slow=39						
FINES	**FINESS Array B**	**47.90**	**327**	P	**P**	15 18 37.2	**+0.7**
FINES	**FINESS Array B**	**47.90**	**327**	P	**P**	15 18 37.2	**+0.7**
	comp=Z,1.7nm,0.8s,mb4.1,baz=94,slow=6.1,SNR=4.8						
ARCES	**ARCESS Array B**	**50.33**	**337**	P	**P**	15 18 55.7	**+0.7**
ARCES	**ARCESS Array B**	**50.33**	**257**	P	**P**	15 18 55.7	**+0.7**
	comp=Z,2.1nm,0.9s,mb4.2,baz=107,slow=8.2,SNR=4.6						
WRA	**Warramunga Arr**	**70.29**	**129**	P	**P**	15 21 12.0	**-0.2**
WRA	**Warramunga Arr**	**70.29**	**129**	P	**P**	15 21 12.0	**-0.2**
	comp=Z,0.7nm,0.5s,mb3.9,baz=325,slow=6.3,SNR=20						
ASAR	**Alice Springs**	**72.65**	**132**	P	**P**	15 21 26.6	**+0.2**
	comp=Z,0.2nm,0.6s,mb3.2,baz=307,slow=5.4,SNR=5.4						
TORD	**Torodi Ar. Bea**	**76.37**	**277**	P	**P**	15 21 47.0	**-1.3**
	comp=Z,0.5nm,0.6s,mb3.6,baz=62,slow=3.4,SNR=3.7						
ILAR	**Eielson Array**	**76.95**	**20**	P	**P**	15 21 51.4	**+0.6**
	comp=Z,0.7nm,0.7s,mb3.7,baz=307,slow=5.5,SNR=8.7						

*ISCJB **25** 15:25:50.7±0.3, 12°.47N±0°.02×61°.44W±0°.04, h128km±2km, mb3.8/10, Error ellipse: s-maj=6.0km s-min=2.7km az=16.2*
*FUNV **25** 15:25:51.8, 12°.51N×61°.20W, h45km, MW4.2*
*NEIC **25** 15:25:52.3, 12°.49N×61°.25W, h108km, MD4.0(TRN), After TRN.*
*IDC **25** 15:25:52.0±0.9, 12°.59N×61°.47W, h128km±7km, mb3.5/10, mb1 3.8/11, mb1mx3.6/25, mbtmp3.5/11, MS4.3/1, Ms1 4.3/1, ms1mx3.9/30, Error ellipse: s-maj=16.4km s-min=8.0km az=119.0*
*TRN **25** 15:25:52.1, 12°.48N×61°.29W, h111km, MD4.0*
ISC 25 15:25:51.7±0.3, 12°.47N±0°.02×61°.43W±0°.04, h123km±2km, n70, σ1°00/114, mb3.8/10, 16C-10D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRIC	**Isle de Caille**	**0.24**	**219**	⇓*e*P	**Pn**	15 26 09.5	**+0.7**
GRIC				*e*S	**Sn**	15 26 21.7	**+0.1**
GRSS	**Sisters**	**0.25**	**226**	⇑*e*P	**Pn**	15 26 09.5	**+0.7**
GRSS				*e*S	**Sn**	15 26 22.1	**+0.4**
GRSS	**Sisters**	**0.25**	**226**	⇑*i*P	**Pn**	15 26 09.5	**+0.7**
GRSS				*e*S	**Sn**	15 26 22.1	**+0.4**
GRHS	**Sauteurs**	**0.32**	**220**	⇓*e*P	**Pn**	15 26 09.6	**+0.5**
GRHS				*e*S	**Sn**	15 26 22.0	**-0.1**
GRHS	**Sauteurs**	**0.32**	**220**	⇓*e*P	**Pn**	15 26 09.6	**+0.5**
GRHS				*e*S	**Sn**	15 26 22.0	**-0.1**
GRW	**Mount Saint Ca**	**0.38**	**216**	⇑*i*P	**Pn**	15 26 10.2	**+0.8**
GRW				*e*S	**Sn**	15 26 18.5	**-4.1**
GRW	**Mount Saint Ca**	**0.38**	**216**	⇑*i*P	**Pn**	15 26 10.2	**+0.8**
GRW				*e*S	**Sn**	15 26 23.6	**+1.0**
GRGR	**Grenville**	**0.40**	**213**	*e*P	**Pn**	15 26 09.3	**-0.2**
GRGR				*e*S	**Sn**	15 26 22.4	**-0.4**
SVB	**Belmont**	**0.81**	**12**	⇓*i*P	**Pn**	15 26 11.7	**-0.6**
SVB				*e*S	**Sn**	15 26 26.8	**-1.1**
SVB	**Belmont**	**0.81**	**12**	⇓*i*P	**Pn**	15 26 11.7	**-0.6**
SVB				*e*S	**Sn**	15 26 26.8	**-1.1**
MCLT	**Moule a Chique**	**1.32**	**21**	*e*P	**Pn**	15 26 14.5	**-0.8**
MCLT				*e*S	**Sn**	15 26 34.5	**-2.3**
MCLT	**Moule a Chique**	**1.32**	**21**	*e*P	**Pn**	15 26 14.5	**-0.8**
MCLT				*e*S	**Sn**	15 26 34.5	**-2.3**
SLDE	**Delcer**	**1.37**	**15**	*e*P	**Pn**	15 26 18.7	**+0.8**
SLDE				*e*S	**Sn**	15 26 38.0	**+0.2**
SLPE	**Piton Saint Es**	**1.43**	**17**	*e*P	**Pn**	15 26 19.3	**+0.8**
SLPE				*e*S	**Sn**	15 26 38.2	**-0.7**
TPR	**Prospect**	**1.43**	**153**	*e*P	**Pn**	15 26 19.0	**+0.4**
TPR				*e*S	**Sn**	15 26 38.8	**-0.1**
TPR	**Prospect**	**1.43**	**153**	*e*P	**Pn**	15 26 19.0	**+0.4**
TPR				*e*S	**Sn**	15 26 38.8	**-0.1**
TOSP	**Speyside**	**1.46**	**143**	⇓*i*P	**Pn**	15 26 18.7	**-0.2**
TOSP				*e*S	**Sn**	15 26 38.0	**-1.6**
BOT	**Bacolet**	**1.47**	**152**	*e*P	**Pn**	15 26 18.7	**-0.3**
BOT	**Bacolet**	**1.47**	**152**	*e*P	**Pn**	15 26 18.7	**-0.3**
SLW	**Petit Monier**	**1.61**	**17**	*e*P	**Pn**	15 26 20.5	**-0.1**
SLW	**Petit Monier**	**1.61**	**17**	*e*P	**Pn**	15 26 21.5	**+0.9**
SLW				*e*S	**Sn**	15 26 41.6	**-1.0**
SLW				*e*S	**Sn**	15 26 41.8	**-0.9**
TCE	**Chacachacare**	**1.79**	**190**	⇑*e*P	**Pn**	15 26 24.3	**+1.5**
TCE				*e*S	**Sn**	15 26 47.2	**+0.7**
TCE	**Chacachacare**	**1.79**	**190**	⇑*e*P	**Pn**	15 26 24.3	**+1.5**
TCE				*e*S	**Sn**	15 26 47.2	**+0.7**
TRN	**Trinidad (W)**	**1.81**	**179**	*e*P	**Pn**	15 26 24.9	**+1.8**
TRN				*e*S	**Sn**	15 26 46.8	**-0.1**
TRN	**Trinidad (W)**	**1.81**	**179**	*e*P	**Pn**	15 26 24.9	**+1.8**
TRN				*e*S	**Sn**	15 26 46.8	**-0.1**
BBGH	**Gun Hill**	**1.94**	**70**	*e*P	**Pn**	15 26 25.2	**+0.6**
GUIV	**Guiria**	**1.97**	**203**	⇑*e*P	**Pn**	15 26 24.2	**-0.8**
GUIV				*e*S	**Sn**	15 26 47.7	**-2.8**
ITEV	**Isla Los Testi**	**2.00**	**236**	⇑*i*P	**Pn**	15 26 25.3	**0.0**
ITEV				*e*S	**Sn**	15 26 50.1	**-1.0**
TBH	**Brigand Hill**	**2.01**	**170**	⇑*e*P	**Pn**	15 26 26.9	**+1.5**
TBH				*e*S	**Sn**	15 26 50.5	**-0.7**
TBH	**Brigand Hill**	**2.01**	**170**	⇑*e*P	**Pn**	15 26 26.9	**+1.5**
TBH				*e*S	**Sn**	15 26 50.5	**-0.7**
BIM	**Bigot**	**2.06**	**10**	⇑*e*P	**Pn**	15 26 25.8	**-0.3**
MVM	**Montagne Vaucl**	**2.13**	**14**	⇓*e*P	**Pn**	15 26 27.0	**0.0**
MVM				⇓*e*S	**Sn**	15 26 54.8	**+0.8**
TPP	**Pointe-a-Pierr**	**2.14**	**181**	*e*P	**Pn**	15 26 28.8	**+1.7**
TPP				*e*S	**Sn**	15 26 54.1	**-0.1**
TPP	**Pointe-a-Pierr**	**2.14**	**181**	*e*P	**Pn**	15 26 28.8	**+1.7**
TPP				*e*S	**Sn**	15 26 54.1	**-0.1**
FDF	**Fort de France**	**2.26**	**7**	⇑*i*P	**Pn**	15 26 28.5	**-0.2**
FDF				⇑*e*S	**Sn**	15 26 55.4	**-1.6**
CRUV	**Carupano**	**2.52**	**225**	⇑*i*P	**Pn**	15 26 32.3	**+0.5**
CRUV				*e*S	**Sn**	15 27 02.0	**-0.6**
DSHT	**Scott's Head**	**2.73**	**1**	*e*P	**Pn**	15 26 36.3	**+1.7**
DSHT				*e*S	**Sn**	15 27 07.1	**-0.5**
DSHT	**Scott's Head**	**2.73**	**1**	*e*P	**Pn**	15 26 36.3	**+1.7**
DSHT				*e*S	**Sn**	15 27 07.1	**-0.5**
GUNV	**Guanoco**	**2.73**	**213**	*e*P	**Pn**	15 26 34.7	**+0.1**
GUNV				*e*S	**Sn**	15 27 06.2	**-1.5**
DFBT	**Forest Bistro**	**2.75**	**1**	*e*P	**Pn**	15 26 36.7	**+1.8**
DFBT				*e*S	**Sn**	15 27 07.7	**-0.4**
DFBT	**Forest Bistro**	**2.75**	**1**	*e*P	**Pn**	15 26 36.7	**+1.8**
DFBT				*e*S	**Sn**	15 27 07.7	**-0.4**
DSTT	**Stowe**	**2.76**	**3**	*e*P	**Pn**	15 26 36.8	**+1.8**
DSTT				*e*S	**Sn**	15 27 08.2	**-0.2**
DSTT	**Stowe**	**2.76**	**3**	*e*P	**Pn**	15 26 36.8	**+1.8**
DSTT				*e*S	**Sn**	15 27 08.2	**-0.2**
DLPL	**La Plaine**	**2.85**	**4**	*e*P	**Pn**	15 26 36.4	**+0.3**
IBAV	**Isla La Blanqu**	**3.14**	**258**	⇓*i*P	**Pn**	15 26 40.2	**+0.2**
PCRV	**Puerto La Cruz**	**3.88**	**234**	P	**Pn**	15 26 50.5	**+0.7**
	4.2nm,0.3s,baz=44,slow=2.6,SNR=14						
PCRV				S	**Sn**	15 27 36.4	**+1.6**
	9.5nm,0.3s,baz=354,slow=22,SNR=14						
PCRV				LR	LR	15 28 01.1	
	comp=Z,4μm,20.4s,baz=349,slow=33						
PCRV	**Puerto La Cruz**	**3.88**	**234**	*e*P	**Pn**	15 26 50.3	**+0.5**
PCRV				*e*S	**Sn**	15 27 33.7	**-1.1**
ORIV	**Oritupano**	**3.90**	**210**	*e*P	**Pn**	15 26 50.5	**+0.4**
ORIV				*e*S	**Sn**	15 27 33.5	**-1.7**
RIOV	**Rio Grande**	**4.39**	**185**	⇑*e*P	**Pn**	15 26 56.4	**-0.2**
RIOV				*e*S	**Sn**	15 27 42.9	**-4.1**
PRGV	**PARIAGUAN**	**4.86**	**221**	*e*P	**Pn**	15 27 03.1	**+0.3**
CUPV	**Cœpira**	**4.90**	**241**	*e*P	**Pn**	15 27 05.2	**+1.7**
CUPV				*e*S	**Sn**	15 27 57.7	**-1.5**
GURV	**El Guri**	**4.96**	**199**	⇑*e*P	**Pn**	15 27 03.0	**-1.2**
BIRV	**Birongo**	**5.14**	**248**	*e*P	**Pn**	15 27 07.7	**+1.0**
ANWB	**Willy Bob**	**5.18**	**356**	*e*P	**Pn**	15 27 07.2	**0.0**
MERV	**Las Mercedes**	**5.75**	**237**	*e*P	**Pn**	15 27 16.0	**+1.1**
LUEV	**Luepa**	**6.59**	**180**	⇓*i*P	**Pn**	15 27 24.0	**-2.2**
TURV	**Turiamo**	**6.60**	**253**	*e*P	**Pn**	15 27 27.1	**+0.9**
CAOV	**Caicara del Or**	**7.03**	**224**	*e*P	**Pn**	15 27 31.4	**-0.7**
MAPV	**Macapo**	**7.38**	**250**	*e*P	**Pn**	15 27 38.4	**+1.5**
BAUV	**El Baul**	**7.38**	**242**	*e*P	**Pn**	15 27 37.6	**+0.7**
SIV	**San Ignacio**	**28.28**	**179**	P	**P**	15 31 34.6	**+1.0**
	0.7nm,0.5s,mb3.5,baz=3.8,slow=15,SNR=4.5						
TKL	**Tuckaleechee C**	**30.66**	**323**	P	**P**	15 31 55.3	**+0.7**
	1.5nm,0.3s,mb4.3,baz=132,slow=12,SNR=5.7						
CPUP	**Villa Florida**	**38.77**	**174**	P	**P**	15 33 04.5	**+0.2**
	0.5nm,0.4s,mb3.7,baz=325,slow=13,SNR=2.6						
TXAR	**Lajitas Array**	**42.61**	**300**	P	**P**	15 33 35.3	**-0.6**
	0.4nm,0.5s,mb3.4,baz=123,slow=8.9,SNR=6.1						
TXAR				PcP	PcP	15 35 25.6	-0.5
	0.3nm,0.6s,baz=115,slow=4.1,SNR=3.9						
ULM	**Lac du Bonnet**	**47.03**	**330**	P	**P**	15 34 09.3	**-1.3**
	2.3nm,0.4s,mb4.3,baz=126,slow=8.7,SNR=3.6						
PDAR	**Pinedale Array**	**51.30**	**315**	P	**P**	15 34 42.6	**-0.6**
	1.0nm,0.5s,mb4.1,baz=117,slow=9.1,SNR=9.1						
NVAR	**Mina Array Bea**	**56.49**	**308**	P	**P**	15 35 18.8	**-2.3**
	0.7nm,0.3s,mb4.1,baz=135,slow=9.0,SNR=9.6						
TORD	**Torodi Ar. Bea**	**61.41**	**82**	P	**P**	15 35 56.0	**+0.6**
	0.3nm,0.4s,mb3.6,baz=292,slow=6.8,SNR=4.7						
YKA	**Yellowknife Ar**	**62.49**	**335**	P	**P**	15 36 00.4	**-1.4**
	1.1nm,0.6s,mb4.0,baz=111,slow=7.3,SNR=3.4						
ILAR	**Eielson Array**	**76.88**	**334**	P	**P**	15 37 29.4	**-0.6**
	0.4nm,0.5s,mb3.4,baz=103,slow=4.3,SNR=7.5						

IDC 25 15:26:45.7±2.9, 11°.23S×118°.81E, h0km, mb3.3/1, mb1 4.0/4, mb1mx3.7/17, mbtmp3.8/4, ML4.0/3, Error ellipse: s-maj=215.9km s-min=24.8km az=49.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**9.51**	**137**	Pn	Pn	15 29 02.3	-1.7
	1.9nm,0.3s,baz=322,slow=7.3,SNR=86						
FITZ				Sn	Sn	15 30 40.3	-11
	1.2nm,0.3s,baz=298,slow=17,SNR=8.9						
WRA	**Warramunga Arr**	**17.28**	**122**	P	Pn	15 30 48.3	-0.2
	0.3nm,0.3s,baz=296,slow=15,SNR=19						
WRA				S	Sn	15 33 48.9	-13
	0.1nm,0.3s,baz=298,slow=23,SNR=4.1						
ASAR	**Alice Springs**	**18.96**	**133**	P	Pn	15 31 10.1	+0.8
	0.6nm,0.3s,baz=309,slow=12,SNR=62						
ASAR				S	Sn	15 34 29.4	-13
	0.2nm,0.3s,baz=307,slow=22,SNR=5.7						
MKAR	**Makanchi Array**	**66.35**	**333**	P	P	15 37 36.2	0.0
	0.2nm,0.5s,baz=133,slow=6.1,SNR=3.4						

*IDC **25** 15:28:39.8±0.6, 13°.83N×145°.11E, h108km±4km, mb3.8/18, mb1 3.9/18, mb1mx3.9/28, mbtmp3.8/18, Error ellipse: s-maj=17.7km s-min=13.2km az=98.0*
*ISCJB **25** 15:28:40.0±0.6, 13°.82N±0°.08×144°.82E±0°.07, h115km±5km, mb4.1/19, Error ellipse: s-maj=13.8km s-min=10.8km az=0.6*
*NEIC **25** 15:28:40.4±0.9, 13°.77N×145°.13E, h120km±7km, mb4.3/2, Error ellipse: s-maj=14.7km s-min=10.6km az=92.0*
ISC 25 15:28:40.9±0.6, 13°.83N±0°.08×144°.91E±0°.07, h110km±5km, n102, σ0°68/99, mb4.1/19, 37C-35D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.24**	**190**	*e*P	**Pn**	15 28 57.0	**+0.5**
GUMO				*e*S	**Sn**	15 29 06.2	**-2.0**
GUMO				S	**Sn**	15 29 08.7	**+0.5**
GUMO	**Guam**	**0.24**	**190**	P	**Pn**	15 28 57.0	**+0.5**
	1μm,0.3s,baz=113,slow=1.7,SNR=2551						
GUMO				S	**Sn**	15 29 08.7	**+0.5**
	5μm,0.3s,baz=342,slow=20,SNR=224						
JOW	**Kunigami**	**20.23**	**312**	P	**P**	15 33 08.3	**+0.9**
	15nm,0.7s,baz=110,slow=9.3						
MJAR	**Matsushiro Arr**	**23.40**	**346**	P	**P**	15 33 39.4	**-0.5**
	2.0nm,0.7s,mb3.6,baz=162,slow=8.4,SNR=4.0						
MAJO	**Matsushiro**	**23.40**	**346**	P	**P**	15 33 39.1	**-0.8**
	3.3nm,0.5s,mb3.9						
KSRS	**Korea Array**	**27.98**	**330**	P	**P**	15 34 20.1	**-1.1**
	1.3nm,0.9s,mb3.5,baz=139,slow=8.9,SNR=3.6						
KSRS				PcP	PcP	15 37 33.6	-0.1
	1.4nm,0.8s,baz=168,slow=3.6,SNR=4.9						
WRA	**Warramunga Arr**	**35.14**	**197**	P	**P**	15 35 23.1	**-1.0**
	1.3nm,0.8s,mb3.8,baz=20,slow=9.4,SNR=6.5						
ENH	**Enshi**	**36.49**	**303**	*e*P	**P**	15 35 36.8	**+1.1**
	4.4nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**36.99**	**211**	P	**P**	15 35 39.5	**-0.4**
	0.7nm,0.3s,mb4.0,baz=49,slow=9.3,SNR=11						
FITZ				PcP	PcP	15 37 58.6	-0.3
	0.6nm,0.6s,baz=9.5,slow=6.1,SNR=3.6						
ASAR	**Alice Springs**	**38.79**	**196**	P	**P**	15 35 54.5	**-0.5**
	0.5nm,0.7s,mb3.4,baz=37,slow=11,SNR=4.4						
CMAR	**Chiang Mai Arr**	**44.31**	**282**	P	**P**	15 36 41.5	**+1.3**
	1.2nm,0.6s,mb3.8,baz=89,slow=5.9,SNR=11						
CMAR				pP	pP	15 37 12.0	+6.3
	0.7nm,0.8s,baz=87,slow=6.3,SNR=4.0						
CMAR				PcP	PcP	15 38 23.1	+0.4
	2.5nm,0.6s,baz=100,slow=1.9,SNR=21						
PSI	**Prapat**	**46.71**	**261**	P

B14A	Marquette Ranc baz=87	87.46	41	⇓P		P		15 41 15.6	-0.6
F13A	Darby baz=87,SNR=5.3	87.54	43	⇓P		P		15 41 15.9	-0.7
H12A	Diamond D Ranc baz=87	87.55	45	⇑P		P		15 41 16.6	-0.1
I12A	Atlanta baz=87,SNR=7.6	87.58	46	⇓P		P		15 41 16.8	0.0
A15A	Johnson Ranch, baz=87	87.61	40	⇑P		P		15 41 17.2	+0.3
P10A	Eureka baz=88	87.80	50	⇑P		P		15 41 18.3	+0.3
G13A	Cobalt baz=88,SNR=16	87.82	44	⇓P		P		15 41 17.3	-0.6
B15A	Bradely Ranch, baz=88	87.92	41	⇓P		P		15 41 17.9	-0.4
H13A	Challis baz=88,SNR=8.1	87.96	45	⇓P		P		15 41 18.7	+0.1
LRMC	Laurel Mountai baz=88	87.98	54	⇓P		P		15 41 18.5	-0.4
MPMC	Manual Prospec baz=88	87.99	53	⇑P		P		15 41 18.1	-0.8
HLID	Hailey baz=88,SNR=8.3	88.15	46	⇑P		P		15 41 19.4	-0.1
S10A	Tonopah Range, baz=88,SNR=5.7	88.17	51	⇓P		P		15 41 19.8	+0.1
I13A	Wildhorse Cree baz=88,SNR=7.4	88.25	45	⇑P		P		15 41 20.3	+0.3
P11A	Circle Ranch, baz=88	88.35	50	⇑P		P		15 41 20.9	+0.4
J13A	Cove Ranch, Pi baz=88	88.36	46	⇑P		P		15 41 20.9	+0.4
H14A	Leadore baz=88,SNR=6.4	88.55	44	⇑P		P		15 41 21.7	+0.3
I14A	Mackay baz=88	88.70	45	⇑P		P		15 41 22.6	+0.5
F15A	Butte baz=88	88.75	43	⇑P		P		15 41 22.2	-0.1
R11A	Troy Canyon, C baz=89	88.81	51	⇓P		P		15 41 23.0	+0.3
J14A	Carey baz=89,SNR=7.6	88.84	46	⇓P		P		15 41 23.6	+0.8
O12A	Currie baz=89,SNR=6.5	88.88	49	⇑P		P		15 41 23.1	0.0
P12A	McGill baz=89	89.00	50	⇓P		P		15 41 23.5	-0.1
H15A	Lima baz=89	89.04	44	⇓P		P		15 41 24.4	+0.7
B17A	L&G Farms, Che baz=89	89.04	40	⇑P		P		15 41 23.5	-0.1
E16A	East Helena baz=89	89.06	42	⇑P		P		15 41 24.6	+0.8
Q12A	Willow Creek R baz=89	89.18	50	⇑P		P		15 41 25.2	+0.7
K14A	Jones Ranch, D baz=89	89.32	46	⇓P		P		15 41 25.1	0.0
A18A	Metzger Ranch, baz=89	89.42	40	⇑P		P		15 41 25.3	-0.1
J15A	Blackfoot baz=89	89.57	45	⇑P		P		15 41 27.3	+1.1
P13A	Bates Ranch, G baz=89,SNR=5.9	89.66	49	⇓P		P		15 41 27.2	+0.4
GMRC	Granite Mounta baz=90	89.78	54	⇓P		P		15 41 27.5	+0.1
H16A	Russell Place, baz=90	89.95	44	⇑P		P		15 41 28.9	+1.0
L15A	Malad City baz=90	90.05	47	⇓P		P		15 41 28.9	+0.5
J16A	Bone baz=90	90.18	45	⇑P		P		15 41 30.1	+1.0
BC3	Big Chuckawall baz=90	90.26	55	⇑P		P		15 41 30.5	+0.8
DUG	Dugway baz=90	90.31	48	⇓P		P		15 41 30.3	+0.6
P14A	Drum Mountains baz=90	90.32	49	⇓P		P		15 41 30.1	+0.3
Q14A	Sevier Lake (B baz=90	90.35	50	⇓P		P		15 41 30.5	+0.5
IRM	Iron Mountain baz=90	90.36	55	⇓P		P		15 41 30.6	+0.5
F18A	Big Timber baz=90	90.56	42	⇓P		P		15 41 32.2	+1.4
U13A	Pakoon Wash baz=90	90.62	52	⇓P		P		15 41 31.4	+0.2
FINES	FINESS Array B 1.7nm,0.7s,mb4.3,baz=66,slow=5.3,SNR=7.7	90.96	335	P		P		15 41 30.1	-2.1
H18A	Shoshone NF, C baz=91	91.02	43	⇓P		P		15 41 32.6	-0.4
U14A	Mt Trumbull baz=91	91.22	52	⇑P		P		15 41 34.6	+0.5
V14A	Boquillas Ranc baz=91	91.52	53	⇑P		P		15 41 36.3	+0.9
J19A	Crowheart baz=92	91.94	45	⇑P		P		15 41 37.2	0.0
T17A	Navajo Res., N baz=93	92.84	51	⇑P		P		15 41 41.7	+0.1
O22A	Kremmling baz=95	94.83	47	⇑P		P		15 41 53.0	+2.4
TORD	Torodi Ar. Bea 0.8nm,0.6s,baz=70,slow=1.3,SNR=6.2	134.76	305	PKP		PKPdf		15 47 47.3	-0.4
DBIC	Dimbokro 3.9nm,0.4s,baz=13,slow=5.1,SNR=20	143.73	302	PKP		PKPdf		15 48 01.6	-2.5
KIC	Kosan Boka 14nm,0.5s	143.81	302	*e*PKP1		PKPdf		15 48 01.6	-2.6
TIC	Toumodi 8.7nm,0.2s	143.88	302	*e*PKP1		PKPdf		15 48 01.8	-2.5
LIC	Lamto 38nm,0.5s	144.12	302	*e*PKP1		PKPdf		15 48 02.6	-2.2
LPAZ	La Paz 1.1nm,0.5s,baz=328,slow=4.0,SNR=4.5	148.02	99	PKPbc		PKPbc		15 48 11.7	-2.7

DDA ***25*** *15:30:01.8,37˙40N×35˙92E,h7km±6km,Md3.0*
ISK ***25*** *15:30:01.4,37˙37N×35˙92E,h20km, MD3.4*
ISCJB ***25*** *15:30:02.2±0.4,37˙39N±0˙03×35˙90E±0˙03,h25km±3km, Error ellipse: s-maj=4.8km s-min=3.8km az=170.9*
CSEM ***25*** *15:30:02.3±0.1,37˙39N×35˙91E,h20km,MD3.4, Error ellipse: s-maj=3.8km s-min=3.2km az=160.0*
NSSC ***25*** *15:30:07,37˙27N×36˙25E,h47km±9km*

ISC 25 15:30:02.2±0.3, 37˙36N±0˙03×35˙91E±0˙03, h18km±3km, n53, σ0°86/75, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KOZT	Kozan	0.14	331	PG		Pg	15 30 06.3	0.0
KOZT				*e*SG		Sg	15 30 09.4	+0.4
CEYT	Ceyhan	0.37	200	PG		Pg	15 30 10.7	+0.8
CEYT	Ceyhan	0.37	200	*i* Pg		Pg	15 30 10.7	+0.8
ANDN	Andirin	0.41	57	*i* P		Pg	15 30 10.0	-0.6
ANDN				*i* S		Sg	15 30 16.3	0.0
ANDN	Andirin	0.41	57	*i* P		Pg	15 30 10.0	-0.6
ANDN				*i* S		Sg	15 30 16.3	0.0
KARA	Karaisali	0.69	262	*e*PG		Pg	15 30 15.1	-0.6
KARA				*e*SG		Sg	15 30 25.1	+0.2
KARA	Karaisali	0.69	262	*e*Pg		Pg	15 30 15.1	-0.6
KARA				*e*Sg		Sg	15 30 25.1	+0.2
KMRS	Kahramanmaras	0.80	79	*e*PG		Pg	15 30 16.6	-1.3
KMRS				*e*SG		Sg	15 30 29.0	+0.6
KMRS	Kahramanmaras	0.80	79	*e*Pg		Pg	15 30 16.6	-1.2
KMRS				*e*Sg		Sg	15 30 29.0	+0.5
COBT	Iskenderun	0.88	162	*i* P		Pg	15 30 19.1	-0.3
COBT				*i* S		Sg	15 30 33.2	+2.2
COBT	Iskenderun	0.88	162	*i* P		Pg	15 30 19.1	-0.3
COBT				*i* S		Sg	15 30 33.2	+2.2
KRTS	Karatas	0.89	209	*e*PG		Pg	15 30 19.1	-0.4
KRTS	Karatas	0.89	209	*e*Pg		Pg	15 30 19.1	-0.5
GULE	Gulek	0.91	266	*i* P		Pg	15 30 18.8	-1.0
GULE				*i* S		Sg	15 30 31.6	-0.2
GULE	Gulek	0.91	266	*i* P		Pg	15 30 18.8	-1.0
GULE				*i* S		Sg	15 30 31.6	-0.2
DRWC	Darouich	0.95	140	⇑P		Pg	15 30 21.0	+0.3
DRWC				⇑S		Sg	15 30 30.0	-3.3
DRWC	Darouich	0.95	140	⇑*i* P		Pg	15 30 21.6	+0.9
DRWC				⇑*i* S		Sg	15 30 30.8	-2.5
GAZ	Gaziantep	1.05	100	*e*PN		Pg	15 30 21.6	-1.0
GAZ	Gaziantep	1.05	100	*e*Pn		Pg	15 30 21.6	-1.0
KUZU	Kuzuini	1.10	122	*i* P		Pg	15 30 23.6	+0.1
KUZU				*i* S		Sg	15 30 38.4	+0.5
KUZU	Kuzuini	1.10	122	*i* P		Pg	15 30 23.6	+0.1
KUZU				*i* S		Sg	15 30 38.4	+0.5
HTY	Hatay	1.25	171	*e*PN		Pn	15 30 24.3	-0.4
HTY	Hatay	1.25	171	*e*Pn		Pn	15 30 24.3	-0.4
GZT	Gaziantep	1.32	90	*i* P		Pn	15 30 24.9	-0.7
GZT				*i* S		Sn	15 30 44.5	+1.7
YAYL	Yayladag	1.33	173	*i* P		Pn	15 30 26.4	+0.6
YAYL	Yayladag	1.33	173	*i* P		Pn	15 30 26.4	+0.6
BTCH	Batrach	1.39	161	⇑P		Pn	15 30 27.0	+0.4
BTCH				⇑S		Sn	15 30 42.0	-2.5
BTCH	Batrach	1.39	161	⇑*i* P		Pn	15 30 27.9	+1.3
BTCH				⇑*i* S		Sn	15 30 42.9	-1.6
SARI	SarD1z-Kayseri	1.46	25	*e*PN		Pn	15 30 20.6	-7.0
WRDH	Warideh	1.89	167	⇑P		Pn	15 30 34.0	+0.5
WRDH				⇑S		Sn	15 30 56.0	-0.9
WRDH	Warideh	1.89	167	⇑*i* P		Pn	15 30 34.7	+1.2
WRDH				⇑*i* S		Sn	15 30 56.2	-0.7
SULT	Sultanhani-AKS	2.07	295	*e*PN		Pn	15 30 36.0	-0.1
SULT	Sultanhani-AKS	2.07	295	*e*Pn		Pn	15 30 36.0	0.0
IKL	Isikli	2.11	239	*e*PN		Pn	15 30 36.9	+0.4
IKL	Isikli	2.11	239	*e*Pn		Pn	15 30 36.9	+0.4
MALT	Malatya	2.21	64	*e*PN		Pn	15 30 38.1	+0.2
MALT	Malatya	2.21	64	*e*Pn		Pn	15 30 38.1	+0.2
MYA	Malataya	2.21	63	*e*PN		Pn	15 30 38.3	+0.3
MYA	Malataya	2.21	63	*e*Pn		Pn	15 30 38.3	+0.3
EREN	Erenkoy	2.30	218	*e*PN		Pn	15 30 39.7	+0.5
EREN	Erenkoy	2.30	218	*e*Pn		Pn	15 30 39.7	+0.5
YOZ	Yozgat	2.32	349	*e*PN		Pn	15 30 39.7	+0.2
YOZ	Yozgat	2.32	349	*e*Pn		Pn	15 30 39.7	+0.2
BIDA	Albida	2.36	172	⇑P		Pn	15 30 41.0	+1.0
BIDA				⇑S		Sn	15 31 07.0	-1.6
BIDA	Albida	2.36	172	⇑*i* P		Pn	15 30 41.6	+1.6
BIDA				⇑*i* S		Sn	15 31 07.3	-1.3
SVSK	Karacayir	2.69	18	*e*PN		Pn	15 30 44.1	-0.4
SVSK	Karacayir	2.69	18	*e*Pn		Pn	15 30 44.1	-0.4
HDMB	Hadim	2.76	263	*e*PN		Pn	15 30 46.0	+0.5
HDMB	Hadim	2.76	263	*e*Pn		Pn	15 30 46.0	+0.5
LFK	Lefkose	2.83	223	*e*PN		Pn	15 30 46.6	+0.3
LFK	Lefkose	2.83	223	*e*Pn		Pn	15 30 46.6	+0.3
PTK	Pertek	3.14	60	*e*PN		Pn	15 30 50.4	-0.3
PTK	Pertek	3.14	60	*e*Pn		Pn	15 30 50.4	-0.3

DDA ***25*** *15:31:06.8,39˙40N×33˙08E,h6km±1km,Md2.7*
ISK ***25*** *15:31:06.9,39˙46N×33˙10E,h5km, MD3.0*
ISCJB ***25*** *15:31:07.3±0.6,39˙42N±0˙03×33˙08E±0˙04, h5km±6km, Error ellipse: s-maj=5.6km s-min=5.0km az=26.5*
CSEM ***25*** *15:31:07.4±0.1,39˙42N×33˙08E,h3km,MD2.7, Error ellipse: s-maj=1.8km s-min=1.7km az=2.0*

ISC 25 15:31:07.8±0.5, 39˙42N±0˙03×33˙07E±0˙04, h7km±5km, n35, σ0°57/47, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BBAL	Bala	0.13	17	*i* P		Pg	15 31 10.3	-0.2
BBAL				*i* S		Sg	15 31 12.8	+0.4
BBAL	Bala	0.13	17	*i* P		Pg	15 31 10.3	-0.2
BBAL				*i* S		Sg	15 31 12.8	+0.4
KAMT	Kaman	0.50	96	PG		Pg	15 31 16.7	-0.7
KAMT				*e*SG		Sg	15 31 24.0	+0.1
KAMT	Kaman	0.50	96	*i* Pg		Pg	15 31 16.7	-0.7
KAMT				*e*Sg		Sg	15 31 24.0	+0.1
LOD	Lodumlu	0.53	333	*e*PG		Pg	15 31 16.6	-1.3
LOD				*e*SG		Sg	15 31 24.7	-0.1
LOD	Lodumlu	0.53	333	*e*Pg		Pg	15 31 16.6	-1.3
LOD				*e*Sg		Sg	15 31 24.7	-0.1
CDAG	Cicekdag	1.02	78	*i* P		Pg	15 31 26.5	-0.9
CDAG				*i* S		Sg	15 31 41.1	+0.4
CDAG	Cicekdag	1.02	78	*i* P		Pg	15 31 26.5	-0.9
CDAG				*i* S		Sg	15 31 41.1	+0.4
KIZT	Kizilcal	1.07	240	*e*PN		Pg	15 31 28.9	+0.5
KIZT	Kizilcal	1.07	240	*e*Pn		Pg	15 31 28.9	+0.6
ELDT	Eldivan	1.10	14	*i* P		Pg	15 31 29.3	+0.4
ELDT				*i* S		Sg	15 31 44.5	+1.2
ELDT	Eldivan	1.10	14	*i* P		Pg	15 31 29.3	+0.4
ELDT				*i* S		Sg	15 31 44.5	+1.2
KDHN	Kadinhani	1.17	220	*i* P		Pg	15 31 30.0	-0.1
KDHN				*i* S		Sg	15 31 45.4	+0.2
KDHN	Kadinhani	1.17	220	*i* P		Pg	15 31 30.0	-0.1
KDHN				*i* S		Sg	15 31 45.4	+0.2
SVRH	Sivrihisar-ESK	1.20	272	*e*PN		Pn	15 31 30.1	-0.8
SVRH	Sivrihisar-ESK	1.20	272	*e*Pn		Pn	15 31 30.1	-0.8
CANT	Cankiri	1.26	19	*e*PN		Pn	15 31 31.0	-0.8
SULT	Sultanhani-AKS	1.27	164	*e*PN		Pn	15 31 32.3	+0.4
SULT	Sultanhani-AKS	1.27	164	*e*Pn		Pn	15 31 32.3	+0.5
SGKT	Sivrigoynuk	1.39	326	*i* P		Pn	15 31 33.3	-0.3
SGKT	Sivrigoynuk	1.39	326	*i* P		Pn	15 31 33.3	-0.3
CORM	Corum	1.42	57	*e*PN		Pn	15 31 33.5	-0.5
CORM	Corum	1.42	57	*e*Pn		Pn	15 31 33.5	-0.4
KONT	Konya--Tatoy	1.57	201	*e*PN		Pn	15 31 36.6	+0.6
KONT	Konya--Tatoy	1.57	201	*e*Pn		Pn	15 31 36.6	+0.5
YOZ	Yozgat	1.75	82	*e*PN		Pn	15 31 38.8	+0.3
YOZ	Yozgat	1.75	82	*e*Pn		Pn	15 31 38.8	+0.3
MDU	Mudurnu	1.77	307	*e*PN		Pn	15 31 39.0	+0.2
MDU	Mudurnu	1.77	307	*e*Pn		Pn	15 31 39.0	+0.2
TOS	Tosya	1.77	24	*e*PN		Pn	15 31 39.0	+0.2
TOS	Tosya	1.77	24	*e*Pn		Pn	15 31 39.0	+0.2
SAFT	Safranbolu	1.84	351	*e*PN		Pn	15 31 40.1	+0.3
SAFT	Safranbolu	1.84	351	*e*Pn		Pn	15 31 40.1	+0.3
GULT	Gulveren	2.21	298	*e*PN		Pn	15 31 45.4	+0.5
GULT	Gulveren	2.21	298	*e*Pn		Pn	15 31 45.4	+0.5

DJA 25 15:33:40,5˙81S×104˙09E,h2km, MLv4.1/11, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KASI	Kota Agung	0.49	55	P		Pg	15 33 49.7	+0.2
KASI				S		Sg	15 33 56.0	+0.1
LWLI	Liwa	0.79	358	P		Pg	15 33 54.1	-1.0
LWLI				S		Sg	15 34 07.2	+1.8
KLI	Kotabumi	1.21	39	P		Pg	15 34 03.3	0.0
BLSI	Bandar Lampung	1.23	69	P		Pg	15 34 01.0	-2.6
BLSI				S		Sg	15 34 20.9	+1.3
KLSI		1.28	30	P		Pg	15 34 03.3	-1.3
MDSI	Maura Dua	1.32	4	P		Pg	15 34 03.1	-2.2
MDSI				S		Sg	15 34 22.6	+0.2
RBSI	Rajabasa	1.64	91	P		Pn	15 34 07.2	-2.7
RBSI				S		Sn	15 34 31.7	0.8
CBG	Cibinong	1.78	117	P		Pn	15 34 07.0	-4.8
MNAI	Manna	1.83	322	P		Pn	15 34 12.4	-0.1
MNAI				S		Sn	15 34 35.0	-1.3
KSI	Kapahiang	2.61	325	P		Pn	15 34 23.2	-0.1
DBJI	Dramaga	2.75	106	P		Pn	15 34 25.4	+0.3

DMN ***25*** *15:34:27.3±0.4,31˙37N×82˙87E,h60km,Ml4.6/5, Error ellipse: s-maj=10.0km s-min=7.8km az=89.0*
BJI ***25*** *15:34:27.8,30˙43N×83˙06E,h13km,mB4.6/4, mb4.3/13, Ms4.1/5, Ms7.4,1/5*
IDC ***25*** *15:34:30.2±0.7,30˙62N×83˙44E,h0km, mb4.0/17, mb1 4.1/19, mb1mx4.1/29, mbtmp4.0/19, ML3.5/2, MS4.5/2, Ms1 4.6/2, ms1mx3.5/45, Error ellipse: s-maj=20.7km s-min=14.1km az=40.0*
ISCJB ***25*** *15:34:31.6±0.2,30˙83N±0˙02×83˙40E±0˙03, h10km, mb4.2/28, Error ellipse: s-maj=4.4km s-min=2.8km az=148.8*
NEIC ***25*** *15:34:31.8±0.5,30˙68N×83˙45E, h10km, mb4.2/2, Error ellipse: s-maj=13.0km s-min=8.2km az=220.0*
MOS ***25*** *15:34:33.4±1.5,30˙62N×83˙36E, h33km, mb4.4/18, Error ellipse: s-maj=12.7km s-min=7.5km az=115.3*

ISC 25 15:34:33.0±0.2, 30˙78N±0˙02×83˙40E±0˙03, h10km, n103, σ1°41/105, mb4.2/28, 7C-5D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DANN	Dangsing	2.44	173	*e*Pn		Pn	15 35 14.2	+1.4
DANN				*e*Sn		Sb	15 35 48.3	+1.3
GKN	Gorkha	2.96	158	*e*Pn		Pn	15 35 21.8	+1.7
GKN				*e*Sn		Sb	15 36 02.7	+0.5
	405nm,0.4s							
KOLN	Koldanda	3.00	177	*e*Pn		Pn	15 35 21.7	+1.1
KOLN				*e*Sn		Sb	15 36 01.5	-1.7
	1µm,0.6s							
PTH	Pithoragarh	3.02	247	*e*PKP		Pg	15 35 35.7	+4.8
PTH				*e*S		Sb	15 36 04.8	+1.1
JOSI	Joshimath	3.32	267	*ex*		Pn	15 35 26.7	+1.7
JOSI				*ex*		Sb	15 36 11.4	-1.0
JOSI				AML	AML		15 36 19.5	
	comp=E,879nm,0.8s							
JOSI				AML	AML		15 36 27.0	
	comp=N,925nm,0.8s							
KKN	Kakani	3.40	151	*e*Pn		Pn	15 35 27.6	+1.6
KKN				*e*Sn		Sb	15 36 13.3	-1.3
	comp=N,532nm,1.0s							
DMN	Daman	3.49	154	*e*Pn		Pn	15 35 29.0	+1.7
GUN	Gumba	3.58	142	*e*Pn		Pn	15 35 30.7	+2.1
GUN				*e*Sn		Sb	15 36 17.6	-2.3
	comp=N,653nm,0.8s							
PKIN	Phulchoki	3.63	151	*e*Pn		Pn	15 35 30.8	+1.5
PKIN				*e*Sn		Sb	15 36 18.3	-3.1
	comp=N,243nm,0.6s							
PKI	Pulchoki	3.64	151	*e*Pn		Pn	15 35 31.0	+1.6
JIRN	Jiri	3.94	141	*e*Pn		Pn	15 35 35.8	+2.2
KLP	Kalpa	4.48	281	*e*PKP		Pn	15 35 42.0	+1.1
DDI	Dehra Dun	4.64	266	*ex*		Pn	15 35 44.0	+0.9
RAMN	Ramite	4.73	143	*e*Pn		Pn	15 35 45.2	+0.8
TAPN	Taplejung	5.08	131	*e*Pn		Pn	15 35 51.2	+1.9
ODAN	Odare	5.24	137	*e*Pn		Pn	15 35 52.7	+1.3
SDNR	Sundarnagar	5.56	279	*ex*		Pn	15 36 00.5	+4.7
KKR	Kurukshetra	5.75	264	*ex*		x	15 36 18.0	
NDI	New Delhi	5.77	250	*e*PKP		Pn	15 35 57.0	-1.7
NDI				*ex*		x	15 37 10.0	
AYAN	Aya Nagar	5.92	249	*e*PKP		Pn	15 35 59.9	-0.8
AGRA	Agra	5.94	235	*ex*		x	15 36 14.5	
SONA	Sohna	6.06	247	*e*PKP		Pn	15 36 02.5	-0.1
KUDL	Kundal	6.57	248	*e*PKP		Pn	15 36 06.3	-3.4
LSA	Lhasa	6.79	97	*e*P		Pn	15 36 16.1	+3.4
	comp=N,88nm,1.3s							
LSA	Lhasa	6.79	97	*e*P		Pn	15 36 16.1	+3.4
LSA				pmax	pmax			
	comp=Z,88nm,1.3s							
KHET	Khetri	7.15	250	*e*PKP		Pn	15 36 16.5	-1.2
SHL	Shillong	9.10	123	*e*PKP		Pn	15 36 42.0	-2.5
SHL				*ex*		x	15 38 24.0	
BHPL	Bhopal	9.20	217	*e*PKP		Pn	15 36 43.1	-2.8
BHPL				*ex*		x	15 38 14.5	
KSH	Kashi	10.63	327	*e*P		Pn	15 37 04.0	-1.3
KSH				*e*pP			15 37 11.5	
KSH				*e*PP			15 37 12.5	
KSH				*e*sP			15 37 16.3	
KSH				pmax	pmax			
	comp=Z,40nm,2.0s							
KSH				LR	LR			
	comp=N,770nm,13.7s							
KSH				LR	LR			
	comp=E,420nm,10.7s							
KSH				LR	LR			
	comp=Z,770nm,13.6s							
KBL	Kabul	12.67	291	*e*P		Pn	15 37 33.5	+0.2
	comp=Z,15nm,0.8s							
KBL	Kabul	12.67	291	*e*P		Pn	15 37 33.5	+0.3
KBL				pmax	pmax			
	comp=Z,15nm,0.8s							
WMQ	Urumqi	13.46	13	*e*P		Pn	15 37 46.5	+2.5
WMQ				pP			15 37 54.3	
WMQ				sP			15 38 00.5	
WMQ				pmax	pmax			
	comp=Z,16nm,1.1s							
AAK	Ala-Archa	13.81	331	⇑*e*P		Pn	15 37 47.8	-1.0
AAK				pmax	pmax			
	comp=Z,2.0nm,1.2s							
HYB	Hyderabad	14.01	199	*i* P		Pn	15 37 46.0	-5.7
HYB				*e*S		Sn	15 40 19.0	-8.3
MK31	Makanchi Array	16.02	357	*e*P		Pn	15 38 17.1	-1.2
MKAR	Makanchi Array	16.02	357	Pn		Pn	15 38 15.9	-2.4
	comp=Z,0.1nm,0.3s,baz=180,slow=15,SNR=6.7							
LZH	Lanzhou	17.86	67	*e*P		Pn	15 38 46.5	+5.0
LZH				pP		pP	15 38 52.5	+7.5
LZH				sP		sP	15 38 55.0	+8.7
LZH				pmax	pmax			
	comp=Z,21nm,1.6s							
KMI	Kunming	17.98	104	P		Pn	15 38 39.5	-3.6
KMI				pmax	pmax			
	comp=Z,5.0nm,0.9s							
CHTO	Chiang Mai	18.44	127	*e*P		Pn	15 38 45.8	-3.0
CMAR	Chiang Mai Arr	18.68	127	P		Pn	15 38 48.2	-3.5
	comp=Z,0.1nm,0.3s,baz=310,slow=11,SNR=28							
CMAR				LR		LR	15 45 41.0	
	comp=Z,661nm,20.8s,baz=349,slow=36							
KURK	Kurchatov	20.24	351	P		P	15 39 08.5	+0.3
	comp=Z,8.9nm,1.0s,baz=165,slow=9.9,SNR=52							
KURK	Kurchatov	20.24	351	*ce*P		P	15 39 05.2	-3.0
KURK				pmax	pmax			
	comp=Z,35nm,1.7s							
XAN	Xi'an	21.77	75	P		P	15 39 24.0	-0.9
ENH	Enshi	22.46	85	P		P	15 39 32.7	+0.4
	comp=Z,24nm,2.1s,mb4.2							
ZALV	Zalesovo Beam	23.18	2	P		P	15 39 39.5	-0.2
	comp=Z,2.5nm,0.8s,mb3.7,baz=190,slow=10,SNR=14							
ZALV	Zalesovo Beam	23.18	2	P		P	15 39 39.5	-0.2
ZALV				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb3.8							
NVS	Novosibirsk	24.05	360	*e*P		P	15 39 47.3	-0.8
BVAR	Borovoye Array	24.18	341	P		P	15 39 50.1	+0.8
	comp=Z,2.6nm,0.8s,mb3.7,baz=141,slow=9.6,SNR=12							
BVAR	Borovoye Array	24.18	341	P		P	15 39 50.1	+0.8
BVAR				pmax	pmax			
	comp=Z,3.0nm,0.8s							
BRVK	Borovoye	24.24	340	⇑*e*P		P	15 39 49.2	-0.6
BRVK				pmax	pmax			
	comp=Z,5.0nm,1.2s,mb3.8							
SONM	Songino Array	24.49	39	P		P	15 39 52.6	+0.4
	comp=Z,4.8nm,0.7s,mb4.0,baz=226,slow=10,SNR=4.3							
SONM	Songino Array	24.49	39	P		P	15 39 52.6	+0.4
SONM				pmax	pmax			
	comp=Z,5.0nm,0.7s							
ULN	Ulaanbaatar	24.87	40	*e*P		P	15 39 55.9	+0.3
	comp=Z,5.0nm,0.9s,mb4.0							
ULN	Ulaanbaatar	24.87	40	*e*P		P	15 39 55.9	+0.3
ULN				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.0							
AKTK	Aktyubinsk	27.29	323	P		P	15 40 18.4	+0.9
AKTO

SEY	**Seymchan**	**53.56**	**32**	⇑*eP*		**P**		**15 43 55.3**	**+1.6**
NOA	**NORSAR Array B**	**55.05**	**326**	P		**P**		**15 44 03.2**	**-1.4**
	comp=Z,2.0nm,0.8s,mb4.2,baz=88,slow=7.1,SNR=4.9								
NOA	**NORSAR Array B**	**55.05**	**326**	P		**P**		**15 44 03.2**	**-1.4**
NOA				pmax		pmax			
	comp=Z,2.0nm,0.8s								
PETK	**Petropavlovsk-**	**56.86**	**44**	P		**P**		**15 44 16.5**	**-1.2**
	comp=Z,2.8nm,0.8s,mb4.4,baz=243,slow=4.8,SNR=6.9								
PETK	**Petropavlovsk-**	**56.86**	**44**	P		**P**		**15 44 16.5**	**-1.2**
PETK				pmax		pmax			
	comp=Z,3.0nm,0.8s,mb4.4								
GUMO	**Guam**	**58.76**	**92**	LR		LR		16 10 40.8	
	comp=Z,856nm,18.8s,baz=54,slow=37								
BILL	**Bilibino**	**59.21**	**26**	⇑*eP*		**P**		**15 44 36.3**	**+2.4**
BILL				pmax		pmax			
	comp=Z,43nm,2.5s,mb5.0								
LPG	**La Plagne**	**59.89**	**308**	*eP*		**P**		**15 44 39.0**	**0.0**
	comp=Z,8.5nm,0.8s,mb4.5								
LPL	**La Plagne**	**59.90**	**308**	*eP*		**P**		**15 44 39.0**	**0.0**
	comp=Z,7.3nm,0.9s,mb4.4								
ORIF	**Oris-en-Rattie**	**60.63**	**307**	*eP*		**P**		**15 44 43.1**	**-1.0**
KEST	**Kesra**	**60.77**	**296**	P		**P**		**15 44 44.5**	**-0.7**
	comp=Z,2.3nm,0.8s,mb4.3,baz=48,slow=6.7,SNR=5.0								
LASF	**Ste Croix**	**62.26**	**307**	*eP*		**P**		**15 44 52.1**	**-3.0**
SUMG	**Summit**	**69.60**	**344**	*i P*		**P**		**15 45 41.1**	**-0.7**
	comp=Z,5.1nm,0.9s,mb4.5								
WRA	**Warramunga Arr**	**70.27**	**129**	P		**P**		**15 45 44.9**	**-1.7**
	comp=Z,2.3nm,0.6s,mb4.3,baz=325,slow=6.3,SNR=53								
WRA	**Warramunga Arr**	**70.27**	**129**	P		**P**		**15 45 44.9**	**-1.7**
WRA				pmax		pmax			
	comp=Z,2.0nm,0.6s								
ASAR	**Alice Springs**	**72.62**	**132**	P		**P**		**15 45 59.1**	**-1.6**
	comp=Z,1.1nm,0.9s,mb3.8,baz=319,slow=4.5,SNR=9.4								
ASAR	**Alice Springs**	**72.62**	**132**	P		**P**		**15 45 59.2**	**-1.6**
ASAR				pmax		pmax			
	comp=Z,1.0nm,0.9s								
TORD	**Torodi Ar. Bea**	**76.35**	**277**	P		**P**		**15 46 20.9**	**-2.0**
	comp=Z,2.2nm,1.0s,mb4.1,baz=51,slow=4.7,SNR=8.1								
ILAR	**Eielson Array**	**77.04**	**20**	P		**P**		**15 46 25.2**	**-0.7**
	comp=Z,0.6nm,0.9s,mb4.2,baz=306,slow=4.1,SNR=15								
ILAR	**Eielson Array**	**77.04**	**20**	P		**P**		**15 46 25.2**	**-0.6**
ILAR				pmax		pmax			
	comp=Z,3.0nm,0.9s								
CPUP	**Villa Florida**	**145.35**	**267**	PKPbc		PKPbc		15 54 10.6	-0.8
CPUP	**Villa Florida**	**145.35**	**267**	PKPbc		PKPbc		15 54 10.6	-0.8
	comp=Z,0.9nm,0.4s,baz=118,slow=3.6,SNR=7.6								
LPAZ	**La Paz**	**150.29**	**293**	PKPbc		PKPbc		15 54 25.7	+0.6
LPAZ	**La Paz**	**150.29**	**293**	PKPbc		PKPbc		15 54 25.7	+0.6
	comp=Z,1.3nm,0.7s,baz=148,slow=1.9,SNR=4.0								

IDC 25 15:39:24.4±10.0, 19°48S×178°57E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.5/15, mbtmp3.4/2, Error ellipse: s-maj=304.5km s-min=63.6km az=133.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**41.55**	**262**	P	P	15 47 14.1	+0.2
	0.2nm,0.3s,baz=96,slow=7.5,SNR=13						
ASAR	**Alice Springs**	**41.62**	**256**	P	P	15 47 14.2	-0.3
	0.5nm,0.7s,baz=89,slow=9.0,SNR=9.5						
SONM	**Songino Array**	**92.89**	**320**	P	P	15 52 39.3	+0.2
	2.9nm,0.5s,baz=90,slow=7.2,SNR=3.7						

*ISCJB **25** 15:40:35.4±0.7, 30°.60N±0°.08×83°.2E±0°.2, h10km, mb3.4/6, Error ellipse: s-maj=21.6km s-min=11.0km az=167.8*
*IDC **25** 15:40:35.8±1.0, 30°.72N×83°.35E, h0km, mb3.5/7, mb1 3.6/9, mb1mx3.5/28, mbtmp3.4/9, ML3.5/2, Error ellipse: s-maj=38.5km s-min=18.6km az=61.0*
*NEIC **25** 15:40:37.3±0.8, 30°.66N×83°.25E, h10km, Error ellipse: s-maj=27.5km s-min=10.6km az=65.0*
ISC 25 15:40:37.2±0.7, 30°.63N±0°.08×83°.2E±0°.2, h10km, n14, σ0s69/14, mb3.4/6, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HYB	**Hyderabad**	**13.83**	**199**	*i P*	**Pn**	**15 43 53.0**	**-0.4**
MK31	**Makanchi Array**	**16.15**	**358**	*eP*	**Pn**	**15 44 25.6**	**+1.4**
MKAR	**Makanchi Array**	**16.15**	**358**	Pn	**Pn**	**15 44 19.9**	**-4.3**
	0.1nm,0.3s,baz=185,slow=12,SNR=3.1						
CMAR	**Chiang Mai Arr**	**18.71**	**127**	P	**Pn**	**15 44 56.5**	**+0.2**
	0.1nm,0.3s,baz=316,slow=10,SNR=3.8						
KURK	**Kurchatov**	**20.36**	**352**	P	**P**	**15 45 13.0**	**-0.6**
KURK	**Kurchatov**	**20.36**	**352**	P	**P**	**15 45 13.0**	**-0.6**
	1.3nm,0.6s,baz=165,slow=10,SNR=10						
ZALV	**Zalesovo Beam**	**23.33**	**2**	P	**P**	**15 45 44.7**	**-0.7**
ZALV	**Zalesovo Beam**	**23.33**	**2**	P	**P**	**15 45 44.7**	**-0.7**
	0.9nm,0.6s,mb3.4,baz=201,slow=7.9,SNR=3.6						
BVAR	**Borovoye Array**	**24.26**	**341**	P	**P**	**15 45 54.2**	**0.0**
	0.5nm,0.5s,mb3.2,baz=148,slow=12,SNR=4.1						
WRA	**Warramunga Arr**	**70.29**	**129**	P	**P**	**15 51 51.0**	**+0.1**
	0.6nm,0.5s,mb3.8,baz=324,slow=6.3,SNR=19						
ASAR	**Alice Springs**	**72.63**	**132**	P	**P**	**15 52 05.4**	**+0.4**
	0.3nm,0.9s,mb3.2,baz=317,slow=5.3,SNR=5.7						
TORD	**Torodi Ar. Bea**	**76.23**	**277**	P	**P**	**15 52 27.0**	**+0.7**
	0.4nm,1.0s,mb3.3,baz=54,slow=5.5,SNR=3.0						
ILAR	**Eielson Array**	**77.22**	**20**	P	**P**	**15 52 30.2**	**-0.9**
ILAR	**Eielson Array**	**77.22**	**20**	P	**P**	**15 52 30.2**	**-0.9**
	0.4nm,0.7s,mb3.5,baz=284,slow=4.5,SNR=4.0						

*IDC **25** 15:51:24.8±1.8, 37°.48N×35°.51E, h0km, mb3.7/3, mb1 3.6/6, mb1mx3.4/25, mbtmp3.6/6, ML3.3/3, MS3.1/1, Ms1 3.1/1, ms1mx2.7/41, Error ellipse: s-maj=47.4km s-min=18.4km az=80.0*
*ISK **25** 15:51:25.8, 37°.43N×35°.86E, h27km, MD3.6*
*ISCJB **25** 15:51:26.5±0.6, 37°.42N±0°.02×35°.87E±0°.03, h30km±5km, mb3.6/3, Error ellipse: s-maj=3.8km s-min=3.2km az=142.0*
*DDA **25** 15:51:26.1, 37°.40N×35°.92E, h7km±5km, Md3.4*
*CSEM **25** 15:51:26.4±0.1, 37°.43N×35°.88E, h20km, MD3.6, Error ellipse: s-maj=2.5km s-min=2.4km az=43.0*
*NSSC **25** 15:51:28, 37°.32N×35°.92E, h19km±3km*
*NEIC **25** 15:51:29.3±1.2, 37°.48N×35°.77E, h35km, MD3.6(ISK), Error ellipse: s-maj=40.1km s-min=12.2km az=74.0*
ISC 25 15:51:26.8±0.3, 37°.41N±0°.02×35°.89E±0°.03, h23km±3km, n95, σ0s75/124, mb3.6/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.08**	**325**	PG	**Pb**	**15 51 30.8**	**-0.2**
KOZT				*e*SG	**Sb**	**15 51 34.2**	**+0.4**
ANDN	**Andirin**	**0.40**	**65**	*i P*	**Pb**	**15 51 34.3**	**-1.0**
ANDN	**Andirin**	**0.40**	**65**	*i P*	**Pb**	**15 51 34.3**	**-1.0**
CEYT	**Ceyhan**	**0.42**	**195**	*e*PG	**Pb**	**15 51 35.5**	**-0.1**
CEYT	**Ceyhan**	**0.42**	**195**	*e*Pg	**Pb**	**15 51 35.5**	**-0.1**
KARA	**Karaisali**	**0.68**	**257**	*e*PG	**Pb**	**15 51 39.7**	**-0.3**
KARA				*e*SG	**Sb**	**15 51 49.6**	**+0.6**
KARA	**Karaisali**	**0.68**	**257**	*e*Pg	**Pb**	**15 51 39.7**	**-0.3**
KARA				*e*Sg	**Sb**	**15 51 49.6**	**+0.6**
KMRS	**Kahramanmaras**	**0.81**	**83**	*e*PG	**Pb**	**15 51 41.9**	**-0.4**
KMRS				*e*SG	**Sb**	**15 51 53.7**	**+0.9**
KMRS	**Kahramanmaras**	**0.81**	**83**	*e*Pg	**Pb**	**15 51 41.9**	**-0.3**
KMRS				*e*Sg	**Sb**	**15 51 53.7**	**+0.9**
GULE	**Gulek**	**0.89**	**262**	*i P*	**Pb**	**15 51 43.2**	**-0.5**
GULE				*i* S	**Sb**	**15 51 56.6**	**+1.5**
GULE	**Gulek**	**0.89**	**262**	*i P*	**Pb**	**15 51 43.2**	**-0.4**
GULE				*i* S	**Sb**	**15 51 56.6**	**+1.5**
KRTS	**Karatas**	**0.93**	**206**	*e*PG	**Pb**	**15 51 43.6**	**-0.7**
KRTS	**Karatas**	**0.93**	**206**	*e*Pg	**Pb**	**15 51 43.6**	**-0.7**
COBT	**Iskenderun**	**0.94**	**162**	*i P*	**Pb**	**15 51 42.8**	**-1.6**
COBT				*i* S	**Sb**	**15 51 56.5**	**+0.1**
COBT	**Iskenderun**	**0.94**	**162**	*i P*	**Pb**	**15 51 42.8**	**-1.6**
COBT				*i* S	**Sb**	**15 51 56.5**	**+0.1**
DRWC	**Darouich**	**1.01**	**141**	⇑*P*	**Pb**	**15 51 46.0**	**+0.4**
DRWC				*i* S	**Sb**	**15 51 58.0**	**-0.4**
DRWC	**Darouich**	**1.01**	**141**	⇑*i P*	**Pb**	**15 51 46.0**	**+0.4**
DRWC				⇑*i S*	**Sb**	**15 51 58.1**	**-0.3**
GAZ	**Gaziantep**	**1.08**	**102**	*e*PN	**Pn**	**15 51 46.1**	**-0.5**
GAZ	**Gaziantep**	**1.08**	**102**	*e*Pn	**Pn**	**15 51 46.1**	**-0.5**
KUZU	**Kuzuini**	**1.15**	**124**	*i P*	**Pn**	**15 51 47.9**	**+0.4**
KUZU				*i* S	**Sb**	**15 52 02.7**	**+0.4**
KUZU	**Kuzuini**	**1.15**	**124**	*i P*	**Pn**	**15 51 47.9**	**+0.4**
KUZU				*i* S	**Sb**	**15 52 02.7**	**+0.4**
NIG	**Nigde**	**1.23**	**305**	*e*PN	**Pn**	**15 51 47.2**	**-1.4**
NIG	**Nigde**	**1.23**	**305**	*e*Pn	**Pn**	**15 51 47.2**	**-1.4**
HTY	**Hatay**	**1.30**	**171**	*e*PN	**Pn**	**15 51 49.1**	**-0.6**
HTY	**Hatay**	**1.30**	**171**	*e*Pn	**Pn**	**15 51 49.1**	**-0.6**
GZT	**Gaziantep**	**1.34**	**92**	*i P*	**Pn**	**15 51 49.8**	**-0.3**
GZT				*i* S	**Sn**	**15 52 08.8**	**+1.6**
YAYL	**Yayladag**	**1.39**	**173**	*i P*	**Pn**	**15 51 50.6**	**-0.1**
YAYL				*i* S	**Sn**	**15 52 12.5**	**+4.1**
YAYL	**Yayladag**	**1.39**	**173**	*i P*	**Pn**	**15 51 50.6**	**-0.2**
YAYL				*i* S	**Sn**	**15 52 12.5**	**+4.1**
SARI	**SarD1z-Kayseri**	**1.42**	**27**	*e*PG	**Pn**	**15 51 45.1**	**-6.1**
BTCH	**Batrach**	**1.45**	**161**	⇑*P*	**Pn**	**15 51 51.0**	**-0.6**
BTCH				⇑*S*	**Sn**	**15 52 09.0**	**-0.9**
BTCH	**Batrach**	**1.45**	**161**	⇑*i P*	**Pn**	**15 51 51.9**	**+0.3**
BTCH				⇑*i S*	**Sn**	**15 52 09.7**	**-0.2**
AVNT	**Avonos**	**1.59**	**330**	*i P*	**Pn**	**15 51 53.6**	**0.0**
AVNT				*i* S	**Sn**	**15 52 14.9**	**+1.5**
AVNT	**Avonos**	**1.59**	**330**	*i P*	**Pn**	**15 51 53.6**	**0.0**
AVNT				*i* S	**Sn**	**15 52 14.9**	**+1.5**
WRDH	**Warideh**	**1.95**	**167**	⇑*P*	**Pn**	**15 51 59.0**	**+0.5**
WRDH				⇑*S*	**Sn**	**15 52 21.0**	**-1.2**
WRDH	**Warideh**	**1.95**	**167**	⇑*i P*	**Pn**	**15 51 59.1**	**+0.6**
WRDH				⇑*i S*	**Sn**	**15 52 21.7**	**-0.5**
SLMH	**Al Salmeh**	**2.03**	**126**	⇑*P*	**Pn**	**15 52 00.0**	**+0.4**
SLMH				⇑*S*	**Sn**	**15 52 24.0**	**-0.2**
SLMH	**Al Salmeh**	**2.03**	**126**	⇑*i P*	**Pn**	**15 52 00.3**	**+0.7**
SLMH				⇑*i S*	**Sn**	**15 52 24.4**	**+0.2**
SULT	**Sultanhani-AKS**	**2.04**	**293**	*e*PN	**Pn**	**15 51 58.9**	**-0.8**
SULT	**Sultanhani-AKS**	**2.04**	**293**	*e*Pn	**Pn**	**15 51 58.9**	**-0.8**
IKL	**Isikli**	**2.12**	**237**	*e*PN	**Pn**	**15 52 00.2**	**-0.6**
IKL	**Isikli**	**2.12**	**237**	*e*Pn	**Pn**	**15 52 00.2**	**-0.7**
MALT	**Malatya**	**2.20**	**65**	*e*PN	**Pn**	**15 52 01.9**	**-0.1**
MALT	**Malatya**	**2.20**	**65**	*e*Pn	**Pn**	**15 52 01.9**	**-0.1**
MYA	**Malataya**	**2.21**	**65**	*e*PN	**Pn**	**15 52 01.9**	**-0.2**
MYA	**Malataya**	**2.21**	**65**	*e*Pn	**Pn**	**15 52 01.9**	**-0.2**
YOZ	**Yozgat**	**2.27**	**349**	*e*PN	**Pn**	**15 52 02.4**	**-0.5**
YOZ	**Yozgat**	**2.27**	**349**	*e*Pn	**Pn**	**15 52 02.4**	**-0.5**
EREN	**Erenkoy**	**2.33**	**217**	*e*PN	**Pn**	**15 52 03.4**	**-0.4**
EREN	**Erenkoy**	**2.33**	**217**	*e*Pn	**Pn**	**15 52 03.4**	**-0.4**
BIDA	**Albida**	**2.42**	**172**	⇑*P*	**Pn**	**15 52 05.0**	**0.0**
BIDA				⇑*S*	**Sn**	**15 52 32.0**	**-1.9**
BIDA	**Albida**	**2.42**	**172**	⇑*i P*	**Pn**	**15 52 05.9**	**+0.9**
BIDA				⇑*i S*	**Sn**	**15 52 32.2**	**-1.7**
KAMT	**Kaman**	**2.59**	**319**	*e*PN	**Pn**	**15 52 06.9**	**-0.5**
KAMT	**Kaman**	**2.59**	**319**	*e*Pn	**Pn**	**15 52 06.9**	**-0.5**
SVSK	**Karacayir**	**2.65**	**19**	*e*PN	**Pn**	**15 52 07.8**	**-0.3**
SVSK	**Karacayir**	**2.65**	**19**	*e*Pn	**Pn**	**15 52 07.8**	**-0.3**
HDMB	**Hadim**	**2.75**	**262**	*e*PN	**Pn**	**15 52 09.8**	**+0.2**
HDMB	**Hadim**	**2.75**	**262**	*e*Pn	**Pn**	**15 52 09.8**	**+0.2**
KEMA	**Kemaliye**	**2.76**	**47**	*i P*	**Pn**	**15 52 09.8**	**+0.1**
KEMA	**Kemaliye**	**2.76**	**47**	*i P*	**Pn**	**15 52 09.8**	**+0.1**
KONT	**Konya--Tatoy**	**2.85**	**282**	*e*PN	**Pn**	**15 52 10.4**	**-0.4**
KONT	**Konya--Tatoy**	**2.85**	**282**	*e*Pn	**Pn**	**15 52 10.5**	**-0.4**
LFK	**Lefkose**	**2.85**	**222**	*e*PN	**Pn**	**15 52 10.9**	**0.0**
LFK	**Lefkose**	**2.85**	**222**	*e*Pn	**Pn**	**15 52 10.9**	**-0.1**
SVRC	**Sivrice-ELAZID**	**2.87**	**69**	*e*PN	**Pn**	**15 52 11.4**	**+0.2**
SVRC	**Sivrice-ELAZID**	**2.87**	**69**	*e*Pn	**Pn**	**15 52 11.4**	**+0.2**
BR131	**Keskin Array S**	**2.90**	**323**	*e*P	**Pn**	**15 52 13.3**	**+1.6**
BR131	**Keskin Array S**	**2.90**	**323**	*e*P	**Pn**	**15 52 13.3**	**+1.7**
BRTR	**Keskin Array B**	**2.90**	**323**	Pn	**Pn**	**15 52 11.5**	**-0.1**
	3.1nm,0.3s,baz=150,slow=14,SNR=97						
BRTR				Pg	**Pn**	**15 52 13.4**	**+1.8**
	3.1nm,0.3s,baz=150,slow=14,SNR=99						
BRTR				Lg		15 53 02.1	
	3.8nm,0.3s,baz=146,slow=30,SNR=4.9						
BRTR	**Keskin Array B**	**2.90**	**323**	Pn	**Pn**	**15 52 11.5**	**-0.1**
CORM	**Corum**	**2.93**	**341**	*e*PN	**Pn**	**15 52 11.7**	**-0.3**
CORM	**Corum**	**2.93**	**341**	*e*Pn	**Pn**	**15 52 11.7**	**-0.3**
HWA	**Hawqa**	**3.13**	**179**	*e*P	**Pn**	**15 52 16.0**	**+1.3**
HWQ	**Hawqa**	**3.13**	**179**	*e*P	**Pn**	**15 52 16.0**	**+1.3**
PTK	**Pertek**	**3.13**	**61**	*e*PN	**Pn**	**15 52 14.7**	**-0.1**
PTK	**Pertek**	**3.13**	**61**	*e*Pn	**Pn**	**15 52 14.7**	**-0.1**
RSDY	**Resadiye-TOKAT**	**3.19**	**20**	*e*PN	**Pn**	**15 52 15.4**	**-0.1**
RSDY	**Resadiye-TOKAT**	**3.19**	**20**	*e*Pn	**Pn**	**15 52 15.4**	**-0.1**
FKH	**Fakeheh**	**3.20**	**172**	*e*P	**Pn**	**15 52 17.4**	**+1.7**
FKH	**Fakeheh**	**3.20**	**172**	*e*P	**Pn**	**15 52 17.4**	**+1.7**
LEF	**Lefka**	**3.33**	**228**	*e*PN	**Pn**	**15 52 18.1**	**+0.5**
LEF	**Lefka**	**3.33**	**228**	*e*Pn	**Pn**	**15 52 18.1**	**+0.6**
LOD	**Lodumlu**	**3.48**	**316**	*e*PN	**Pn**	**15 52 19.5**	**0.0**
LOD	**Lodumlu**	**3.48**	**316**	*e*Pn	**Pn**	**15 52 19.5**	**0.0**
KIZT	**Kizilcal**	**3.48**	**296**	*e*PN	**Pn**	**15 52 19.5**	**-0.1**
KIZT	**Kizilcal**	**3.48**	**296**	*e*Pn	**Pn**	**15 52 19.5**	**-0.1**
EZC	**Erzincan**	**3.58**	**48**	*e*PN	**Pn**	**15 52 21.0**	**0.0**
MMAI	**Mount Meron Ar**	**4.41**	**185**	Pn	**Pn**	**15 52 33.0**	**+0.7**
	11nm,0.3s,baz=357,slow=12,SNR=36						
MMAI				Sn	**Sn**	**15 53 23.6**	**+0.7**
	5.8nm,0.3s,baz=348,slow=27,SNR=6.4						
ELL	**Elmali**	**4.83**	**264**	*e*PN	**Pn**	**15 52 38.6**	**+0.5**
ELL	**Elmali**	**4.83**	**264**	*e*Pn	**Pn**	**15 52 38.6**	**+0.5**
ASF	**Jabal al Asfar**	**5.29**	**171**	Pn	**Pn**	**15 52 47.8**	**+3.3**
	0.2nm,0.3s,baz=332,slow=17,SNR=2.1						
ASF				Sn	**Sn**	**15 53 57.3**	**+13**
	0.5nm,0.3s,baz=320,slow=16,SNR=1.9						
ASF				LR	LR	15 54 23.3	
	comp=Z,197nm,20.1s,baz=45,slow=33						
FINES	**FINESS Array B**	**24.83**	**349**	P	**P**	**15 56 46.5**	**-0.6**
	0.8nm,0.5s,mb3.5,baz=160,slow=12,SNR=5.1						
FINES	**FINESS Array B**	**24.83**	**349**	P	**P**	**15 56 46.5**	**-0.6**
HFS	**Hagfors**	**26.78**	**335**	P	**P**	**15 57 04.1**	**-0.6**
	2.0nm,0.8s,mb3.7,baz=120,slow=8.8,SNR=2.7						
HFS	**Hagfors**	**26.78**	**335**	P	**P**	**15 57 04.1**	**-0.6**
TORD	**Torodi Ar. Bea**	**38.89**	**241**	P	**P**	**15 58 50.5**	**-0.2**
	1.1nm,1.0s,mb3.5,baz=40,slow=7.5,SNR=3.6						

*ISCJB **25** 16:03:51.9±0.7, 30°.62N±0°.10×83°.15E±0°.09, h10km, mb3.4/7, Error ellipse: s-maj=15.0km s-min=10.2km az=27.8*
*IDC **25** 16:03:52.6±1.0, 30°.63N×83°.20E, h0km, mb3.5/8, mb1 3.6/10, mb1mx3.5/28, mbtmp3.5/10, ML3.4/2, Error ellipse: s-maj=31.8km s-min=17.5km az=56.0*
*NEIC **25** 16:03:54.2±0.7, 30°.72N×83°.27E, h10km, Error ellipse: s-maj=19.8km s-min=9.1km az=53.0*
ISC 25 16:03:54.0±0.8, 30°.7N±0°.1×83°.2E±0°.1, h10km, n12, σ0s75/12, mb3.4/7, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**4.45**	**267**	*ex*	**Pb**	**16 05 08.0**	**-4.3**
LSA	**Lhasa**	**6.96**	**96**	*eP*	**Pn**	**16 05 36.1**	**+0.1**
	20nm,1.1s						
MKAR	**Makanchi Array**	**16.10**	**358**	Pn	**Pn**	**16 07 39.9**	**-0.5**
	0.1nm,0.3s,baz=174,slow=16,SNR=3.6						
CMAR	**Chiang Mai Arr**	**18.77**	**127**	P	**Pn**	**16 08 13.3**	**-0.5**
	0.1nm,0.3s,baz=303,slow=12,SNR=7.4						
KURK	**Kurchatov**	**20.30**	**352**	P	**P**	**16 08 28.8**	**-1.1**
	1.0nm,0.7s,baz=168,slow=9.5,SNR=10						
ZALV	**Zalesovo Beam**	**23.28**	**2**	P	**P**	**16 09 01.2**	**-0.5**
	0.4nm,0.4s,mb3.2,baz=185,slow=6.7,SNR=2.7						
BVAR	**Borovoye Array**	**24.20**	**341**	P	**P**	**16 09 11.8**	**+1.3**
	0.2nm,0.4s,mb2.9,baz=132,slow=8.0,SNR=2.6						
KSRS	**Korea Array**	**37.39**	**67**	P	**P**	**16 11 07.5**	**+0.5**
	0.7nm,0.8s,mb3.5,baz=294,slow=9.2,SNR=4.0						
ARCES	**ARCESS Array B**	**50.41**	**337**	P	**P**	**16 12 52.1**	**+0.9**
	0.8nm,0.6s,mb3.9,baz=84,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**70.35**	**129**	P	**P**	**16 15 07.4**	**-0.8**
	1.2nm,0.8s,mb3.9,baz=323,slow=6.3,SNR=10						
ASAR	**Alice Springs**	**72.69**	**132**	P	**P**	**16 15 22.9**	**+0.6**
	0.3nm,1.0s,mb3.2,baz=318,slow=5.4,SNR=3.3						
TORD	**Torodi Ar. Bea**	**76.18**	**277**	P	**P**	**16 15 43.4**	**+0.5**
	0.4nm,0.9s,mb3.4,baz=42,slow=7.3,SNR=2.5						

*NEIC **25** 16:05:05.1±1.7, 30°.57N×82°.84E, h10km, Error ellipse: s-maj=40.0km s-min=12.4km az=57.0*
*IDC **25** 16:05:05.7±2.2, 30°.66N×83°.41E, h0km, mb3.5/6, mb1 3.7/8, mb1mx3.5/28, mbtmp3.5/8, ML4.1/1, Error ellipse: s-maj=67.5km s-min=21.0km az=61.0*
ISC 25 16:05:08.0±1.8, 30°.8N±0°.2×83°.6E±0°.4, h10km, n10, σ1s02/10, mb3.4/5, 1D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**6.67**	**98**	P	**Pn**	**16 06 51.7**	**+5.6**
	15nm,0.8s						
MKAR	**Makanchi Array**	**15.98**	**357**	Pn	**Pn**	**16 08 51.1**	**-1.6**
	baz=185,slow=12,SNR=2.5						
CMAR	**Chiang Mai Arr**	**18.61**	**128**	P	**Pn**	**16 09 26.2**	**+0.4**
	0.2nm,0.3s,baz=313,slow=11,SNR=3.5						
KURK	**Kurchatov**	**20.21**	**351**	P	**P**	**16 09 42.1**	**-0.7**
	2.3nm,0.9s,baz=167,slow=9.6,SNR=11						
ZALV	**Zalesovo Beam**	**23.13**	**2**	P	**P**	**16 10 15.5**	**+1.4**
	0.4nm,0.5s,mb3.1,baz=184,slow=11,SNR=3.1						
BVAR	**Borovoye Array**	**24.18**	**340**	P	**P**	**16 10 25.6**	**+1.4**
	0.2nm,0.3s,mb3.1,baz=133,slow=10,SNR=3.5						
KSRS	**Korea Array**	**37.05**	**67**	P	**P**	**16 12 18.5**	**+0.3**
	0.9nm,0.7s,mb3.7,baz=276,slow=9.0,SNR=4.2						
SCPH	**Surigao**	**44.21**	**109**	⇓*eP*	**P**	**16 13 11.7**	**-5.8**
WRA	**Warramunga Arr**	**70.20**	**129**	P	**P**	**16 16 20.1**	**-1.1**
	0.5nm,0.7s,mb3.6,baz=324,slow=6.3,SNR=7.4						
ILAR	**Eielson Array**	**76.95**	**20**	P	**P**	**16 17 00.2**	**-0.1**
	0.7nm,1.0s,mb3.6,baz=273,slow=4.5,SNR=4.9						

*LDG **25** 16:26:16.5±0.2, 45°.73N×7°.56E, h2km, Md2.5/2, Ml2.1/4, Error ellipse: s-maj=3.1km s-min=1.7km az=90.0*
*ISCJB **25** 16:26:22.4±0.8, 45°.52N±0°.03×7°.25E±0°.05, h10km, Error ellipse: s-maj=5.5km s-min=4.7km az=164.0*
*ROM **25** 16:26:22.0±0.2, 45°.50N×7°.19E, h5km, Md2.4/4, Ml1.1/3, Error ellipse: s-maj=3.3km s-min=1.6km az=82.0*
*CSEM **25** 16:26:22.7±0.4, 45°.50N×7°.19E, h5km, ML1.5/4, Error ellipse: s-maj=9.0km s-min=8.1km az=49.0*
ISC 25 16:26:22.7±0.8, 45°.54N±0°.03×7°.28E±0°.06, h10km, n20, σ1s45/36, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSD	**Lago del Serru**	**0.13**	**234**	Pg	**Pg**	**16 26 23.2**	**-2.5**
LSD				Sg	**Sg**	**16 26 25.2**	**-2.6**
LSD	**Lago del Serru**	**0.13**	**234**	Pg	**Pg**	**16 26 23.2**	**-2.5**
LSD				Sg	**Sg**	**16 26 25.2**	**-2.6**
MRGE	**Morge**	**0.28**	**327**	Pg	**Pg**	**16 26 29.0**	**+0.6**
MRGE				Sg	**Sg**	**16 26 32.5**	**+0.3**
	22nm,0.6s						
MRGE	**Morge**	**0.28**	**327**	Pg	**Pg**	**16 26 29.0**	**+0.6**
MRGE				Sg	**Sg**	**16 26 32.5**	**+0.3**
	22nm,0.6s						
TRAV	**Traversella**	**0.33**	**94**	Pg	**Pg**	**16 26 30.8**	**+1.6**
	26nm,0.3s						
TRAV	**Traversella**	**0.33**	**94**	Pg	**Pg**	**16 26 30.8**	**+1.6**
	26nm,0.3s						
LPG	**La Plagne**	**0.37**	**264**	*e*Pg	**Pg**	**16 26 27.5**	**-2.6**
LPG				*e*Sg	**Sg**	**16 26 37.0**	**+1.9**
	37nm,0.6s						
LPG	**La Plagne**	**0.37**	**264**	*e*Pg	**Pg**	**16 26 27.5**	**-2.6**
LPG				*e*Sg	**Sg**	**16 26 37.0**	**+1.9**
	18nm,0.6s						
LPL	**La Plagne**	**0.39**	**267**	*e*Pg	**Pg**	**16 26 28.6**	**-1.7**
LPL				*e*Sg	**Sg**	**16 26 36.1**	**+0.7**
	12nm,0.3s						
LPL	**La Plagne**	**0.39**	**267**

comp=Z,0.1nm,0.3s,baz=178,slow=13,SNR=9.2
CMAR Chiang Mai Arr 18.73 127 P **Pn 16 47 44.8 -0.8**
comp=Z,0.0nm,0.3s,baz=310,slow=9.4,SNR=6.7
KURK Kurchatov 20.29 351 P **P 16 48 00.6 -1.4**
comp=Z,1.8nm,0.5s,baz=170,slow=9.9,SNR=10
KURK ScP ScP 16 55 54.1 +2.5
comp=Z,0.7nm,0.8s,baz=173,slow=9.4,SNR=3.6
ZALV Zalesovo Beam 23.25 2 P **P 16 48 33.1 -0.6**
comp=Z,1.6nm,0.8s,mb3.5,baz=185,slow=10,SNR=8.7
BVAR Borovoye Array 24.20 341 P **P 16 48 43.3 +0.5**
comp=Z,0.5nm,0.4s,mb3.3,baz=150,slow=12,SNR=5.5
AKASG Malin Array Be 44.47 313 P **P 16 51 37.8 +0.4**
comp=Z,0.3nm,0.4s,mb3.4,baz=81,slow=7.9,SNR=4.3
FINES FINESS Array B 47.95 327 P **P 16 52 05.6 +0.9**
FINES FINESS Array B 47.95 327 P **P 16 52 05.6 +0.9**
comp=Z,2.0nm,0.7s,mb4.2,baz=86,slow=10,SNR=5.0
ARCES ARCESS Array B 50.41 337 P **P 16 52 24.2 +0.8**
comp=Z,1.2nm,0.8s,mb4.0,baz=98,slow=6.5,SNR=5.5
WRA Warramunga Arr 70.31 129 P **P 16 54 40.0 -0.1**
comp=Z,1.5nm,0.6s,mb4.1,baz=325,slow=6.3,SNR=25
ASAR Alice Springs 72.65 132 P **P 16 54 53.6 -0.6**
comp=Z,0.4nm,0.8s,mb3.4,baz=313,slow=6.1,SNR=7.8
TORD Torodi Ar. Bea 76.25 277 P **P 16 55 15.9 +0.4**
comp=Z,1.5nm,1.2s,mb3.8,baz=65,slow=4.7,SNR=3.5
ILAR Eielson Array 77.14 20 P **P 16 55 19.4 -0.3**
comp=Z,1.6nm,0.8s,mb4.0,baz=294,slow=4.7,SNR=15

ISCJB ***25*** *16:46:55.9±0.5,30°.60N×83°.06×83°.39E±0°.06, h10km, mb3.9/16, Error ellipse: s-maj=10.1km s-min=6.1km az=29.4*
BJI ***25*** *16:46:56.0,30°.75N×83°.36E, h11km, mB4.1/1, mb4.0/13, Ms4.0/4, Ms7 3.9/3*
IDC ***25*** *16:46:56.3±0.8,30°.73N×83°.63E, h0km, mb3.8/13, mb1 4.0/16, mb1mx3.9/30, mbtmp3.9/16, ML3.5/3, MS4.0/1, Ms1 4.0/1, ms1mx2.5/42, Error ellipse: s-maj=29.2km s-min=14.8km az=49.0*
NEIC ***25*** *16:46:58.1±0.7,30°.71N×83°.47E, h10km, mb4.2/2, Error ellipse: s-maj=17.4km s-min=10.0km az=215.0*
ISC 25 16:46:57.7±0.5, 30°.67N±0°.06×83°.44E±0°.07, h10km, n32, σ1ŝ24/35, mb3.9/16, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.75**	**96**	Pn	**Pn**	**16 48 41.3**	**+4.5**
LSA				Sn	**Sn**	**16 49 57.8**	**+4.1**
LSA	**Lhasa**	**6.75**	**96**	*e*P	**Pn**	**16 48 39.6**	**+2.8**
	41nm,0.9s						
SHL	**Shillong**	**9.02**	**122**	*e*PKP	**Pn**	**16 49 08.0**	**-0.1**
SHL				*e*S	**Sn**	**16 50 45.0**	**-4.8**
KSH	**Kashi**	**10.73**	**327**	*e*P	**Pn**	**16 49 29.0**	**-2.5**
KSH				*e*pP		16 49 36.5	
KSH				*e*PP		16 49 37.5	
KSH				*e*sP		16 49 41.8	
KSH				*e*S	**Sn**	**16 51 24.3**	**-7.3**
KSH				*e*sS		16 51 36.8	
KSH				*e*SS		16 51 41.5	
KSH				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KSH				LR	LR		
	comp=N,450nm,12.9s						
KSH				LR	LR		
	comp=E,510nm,8.5s						
KSH				LR	LR		
	comp=Z,560nm,7.4s						
KBL	**Kabul**	**12.73**	**291**	P	**Pn**	**16 49 57.4**	**-1.5**
	comp=Z,7.8nm,0.6s						
AAK	**Ala-Archa**	**13.92**	**332**	Pn	**Pn**	**16 50 14.7**	**-0.3**
AAK	**Ala-Archa**	**13.92**	**332**	Pn	**Pn**	**16 50 14.7**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=180,slow=10,SNR=3.1						
HYB	**Hyderabad**	**13.92**	**200**	*i* P	**Pn**	**16 50 14.5**	**-0.7**
HYB				*e*S	**Sn**	**16 52 44.0**	**-5.9**
MK31	**Makanchi Array**	**16.12**	**357**	*e*P	**Pn**	**16 50 45.5**	**+1.1**
MKAR	**Makanchi Array**	**16.12**	**357**	Pn	**Pn**	**16 50 43.4**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=188,slow=10.0,SNR=19						
LZH	**Lanzhou**	**17.87**	**67**	*e*P	**Pn**	**16 51 07.5**	**+1.1**
LZH				pP	pP	16 51 13.0	+3.1
LZH				sP	sP	16 51 14.5	+3.3
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
CMAR	**Chiang Mai Arr**	**18.59**	**127**	P	**Pn**	**16 51 14.5**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=314,slow=11,SNR=14						
KURK	**Kurchatov**	**20.35**	**351**	P	**P**	**16 51 32.0**	**-2.1**
	comp=Z,6.2nm,0.9s,baz=166,slow=10,SNR=26						
XAN	**Xi'an**	**21.77**	**74**	P	**P**	**16 51 49.0**	**-0.6**
XAN				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.7						
ENH	**Enshi**	**22.44**	**84**	*e*P	**P**	**16 51 56.7**	**-0.1**
	comp=Z,12nm,1.0s,mb4.3						
ZALV	**Zalesovo Beam**	**23.28**	**2**	P	**P**	**16 52 04.9**	**-0.6**
	comp=Z,2.2nm,0.8s,mb3.6,baz=185,slow=8.9,SNR=14						
BVAR	**Borovoye Array**	**24.28**	**341**	P	**P**	**16 52 15.2**	**+0.2**
	comp=Z,1.1nm,0.7s,mb3.4,baz=147,slow=8.9,SNR=6.5						
ULN	**Ulaanbaatar**	**24.93**	**40**	*e*P	**P**	**16 52 19.9**	**-1.0**
	comp=Z,3.5nm,0.8s,mb3.9						
AKTK	**Aktyubinsk**	**27.39**	**323**	P	**P**	**16 52 45.4**	**+2.2**
AKTO	**Aktyubinsk**	**27.39**	**323**	P	**P**	**16 52 45.4**	**+2.2**
	comp=Z,0.8nm,0.5s,mb3.5,baz=98,slow=8.6,SNR=3.6						
GNI	**Garni**	**32.71**	**298**	P	**P**	**16 53 33.4**	**+3.0**
	comp=Z,0.9nm,0.3s,mb4.2,baz=354,slow=22,SNR=3.1						
BRTR	**Keskin Array B**	**41.23**	**297**	P	**P**	**16 54 44.0**	**+1.1**
	comp=Z,2.0nm,1.1s,mb3.6,baz=108,slow=4.0,SNR=5.5						
AKASG	**Malin Array Be**	**44.59**	**313**	P	**P**	**16 55 11.2**	**+1.3**
	comp=Z,0.4nm,0.4s,mb3.6,baz=82,slow=7.6,SNR=3.6						
JHJ	**Hachijo jima 2**	**47.41**	**72**	LR	LR	17 16 19.4	
	comp=Z,203nm,21.7s,baz=119,slow=37						
FINES	**FINESS Array B**	**48.05**	**327**	P	**P**	**16 55 36.7**	**-0.3**
	comp=Z,2.1nm,0.8s,mb4.2,baz=101,slow=9.9,SNR=4.9						
ARCES	**ARCESS Array B**	**50.51**	**337**	P	**P**	**16 55 58.7**	**+3.1**
	comp=Z,4.9nm,0.9s,mb4.4,baz=5.0,slow=2.8,SNR=6.1						
NOA	**NORSAR Array B**	**55.15**	**326**	P	**P**	**16 56 30.4**	**+0.4**
	comp=Z,1.4nm,0.9s,mb4.0,baz=113,slow=3.7,SNR=2.6						
WRA	**Warramunga Arr**	**70.18**	**129**	P	**P**	**16 58 11.2**	**+0.3**
	comp=Z,4.0nm,1.0s,mb4.3,baz=325,slow=6.3,SNR=23						
ASAR	**Alice Springs**	**72.53**	**132**	P	**P**	**16 58 24.6**	**-0.4**
	comp=Z,1.1nm,1.0s,mb3.8,baz=323,slow=5.2,SNR=7.5						
TORD	**Torodi Ar. Bea**	**76.39**	**277**	P	**P**	**16 58 47.6**	**-0.2**
TORD	**Torodi Ar. Bea**	**76.39**	**277**	P	**P**	**16 58 47.6**	**-0.2**
	comp=Z,0.4nm,0.8s,mb3.4,baz=61,slow=6.9,SNR=3.2						
ILAR	**Eielson Array**	**77.13**	**20**	P	**P**	**16 58 50.1**	**-0.9**
	comp=Z,0.9nm,0.8s,mb3.8,baz=308,slow=4.4,SNR=8.2						

BJI ***25*** *16:47:21.6,43°.01S×83°.34W, h12km, mB5.0/5, Ms5.1/4, Ms7 4.8/4*
IDC ***25*** *16:47:21.6±0.5,42°.74S×83°.50W, h0km, mb4.6/14, mb1 4.6/16, mb1mx4.6/20, mbtmp4.5/16, MS4.3/9, Ms1 4.3/9, ms1mx4.1/22, Error ellipse: s-maj=21.1km s-min=14.4km az=96.0*
ISCJB ***25*** *16:47:22.3±0.2,42°.72S±0°.05×83°.30W±0°.08, h10km, mb4.8/35, MS4.5/6, Error ellipse: s-maj=9.3km s-min=6.4km az=146.1*
NEIC ***25*** *16:47:22.7±0.3,42°.67S×83°.54W, h10km, mb5.0/25, Error ellipse: s-maj=10.1km s-min=8.1km az=87.0*
MOS ***25*** *16:47:25.9±1.3,42°.65S×83°.22W, h33km, mb5.2/11, Error ellipse: s-maj=21.9km s-min=16.6km az=71.7*
ISC 25 16:47:23.8±0.2, 42.73S±0°.05×83°.35W±0°.08, h10km, n360, σ0ŝ51/312, mb4.8/35, MS4.5/6, 150C-111D, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**9.77**	**83**	Pn	**Pn**	**16 49 45.3**	**+1.0**
	0.1nm,0.3s,baz=239,slow=15,SNR=2.9						
PLCA				LR	LR	16 52 56.3	
	comp=Z,3μm,18.5s,baz=208,slow=34						
USHA	**Ushuaia**	**15.55**	**146**	Pn	**Pn**	**16 51 03.3**	**+0.3**
	0.2nm,0.3s,baz=287,slow=16,SNR=3.0						
USHA				LR	LR	16 56 02.6	
	comp=Z,680nm,20.2s,baz=310,slow=33						
CFAA	**Coronel Fontan**	**16.36**	**52**	Pn	**Pn**	**16 51 14.8**	**+1.3**
CFAA				LR	LR	16 56 32.3	
CFAA	**Coronel Fontan**	**16.36**	**52**	Pn	**Pn**	**16 51 14.8**	**+1.3**
	baz=231,slow=12,SNR=10						
CFAA				LR	LR	16 56 32.3	
	comp=Z,150nm,18.8s,baz=195,slow=34						
TRQA	**Tornquist**	**16.92**	**81**	P	**Pn**	**16 51 15.3**	**-5.3**
	40nm,1.3s						
LCO	**Las Campanas**	**17.07**	**41**	*e*P	**Pn**	**16 51 23.3**	**+0.7**
	99nm,1.4s						
PMSA	**Palmer Station**	**24.65**	**160**	*e*P	**P**	**16 52 45.0**	**+0.8**
	57nm,1.4s,mb4.9						
PMSA	**Palmer Station**	**24.65**	**160**	P	**P**	**16 52 45.0**	**+0.9**
	28nm,1.2s,mb4.7,baz=308,slow=6.9,SNR=4.6						
RPN	**Rapa Nui**	**26.25**	**298**	LR	LR	17 00 28.2	
	comp=Z,929nm,20.4s,MS4.3,baz=341,slow=30						
CPUP	**Villa Florida**	**26.81**	**61**	P	**P**	**16 53 04.8**	**+0.6**
	3.7nm,0.8s,mb4.0,baz=209,slow=11,SNR=7.1						
CPUP				LR	LR	17 03 32.7	
	comp=Z,1μm,18.2s,MS4.5,baz=176,slow=36						
CPUP	**Villa Florida**	**26.81**	**61**	P	**P**	**16 53 02.4**	**-1.8**
LPAZ	**La Paz**	**29.40**	**31**	P	**P**	**16 53 28.5**	**+1.2**
	3.5nm,0.8s,mb4.1,baz=184,slow=6.7,SNR=16						
SIV	**San Ignacio**	**32.77**	**42**	P	**P**	**16 53 56.4**	**-0.6**
	6.6nm,1.0s,mb4.5,baz=230,slow=11,SNR=16						
ATAH	**Atahualpa**	**35.72**	**8**	P	**P**	**16 54 24.2**	**+1.6**
	30nm,1.2s,mb5.1,baz=189,slow=6.3,SNR=13						
OTAV	**Otavalo**	**43.00**	**7**	*e*P	**P**	**16 55 23.8**	**+0.4**
	35nm,1.2s,mb5.0						
VNA1	**Neumayer--Stat**	**45.52**	**153**	*e*P	**P**	**16 55 41.3**	**-1.7**
VNA1				*e*		16 55 46.9	
QSPA	**South Pole Qui**	**47.51**	**180**	P	**P**	**16 55 59.6**	**+1.1**
QSPA				PcP	PcP	16 57 28.4	+0.1
QSPA	**South Pole Qui**	**47.51**	**180**	P	**P**	**16 55 59.6**	**+1.1**
	11nm,1.0s,mb4.8,baz=142,slow=4.3,SNR=17						
QSPA				PcP	PcP	16 57 28.4	+0.1
	13nm,1.1s,baz=68,slow=1.9,SNR=10						
ROSC	**El Rosal**	**48.07**	**12**	P	**P**	**16 56 01.9**	**-1.6**
ROSC				LR	LR	17 14 07.0	
ROSC	**El Rosal**	**48.07**	**12**	P	**P**	**16 56 05.0**	**+1.5**
	3.8nm,0.4s,mb4.8,baz=294,slow=22,SNR=9.7						
ROSC				LR	LR	17 14 07.0	
	comp=Z,308nm,19.7s,MS4.3,baz=206,slow=33						
MAIT	**Maitri**	**51.95**	**155**	*e*P	**P**	**16 56 33.1**	**+0.7**
SBA	**Scott Base**	**52.58**	**195**	*e*P	**P**	**16 56 37.3**	**+0.3**
	4.9nm,1.4s,mb4.2						
SBA	**Scott Base**	**52.58**	**195**	*e*P	**P**	**16 56 37.3**	**+0.3**
SBA				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2						
SDV	**Santo Domingo**	**52.66**	**16**	*e*P	**P**	**16 56 36.5**	**-1.8**
	comp=Z,28nm,1.2s,mb5.1						
MAW	**Mawson**	**67.06**	**167**	P	**P**	**16 58 15.7**	**-1.0**
	comp=Z,4.7nm,1.5s,mb4.3						
MAW	**Mawson**	**67.06**	**167**	P	**P**	**16 58 16.0**	**-0.6**
	comp=Z,3.7nm,0.8s,mb4.5,baz=188,slow=4.6,SNR=4.2						
MAW	**Mawson**	**67.06**	**167**	P	**P**	**16 58 15.7**	**-0.9**
MAW				pmax	pmax		
	comp=Z,5.0nm,1.5s						
CASY	**Casey**	**70.80**	**186**	*e*P	**P**	**16 58 39.9**	**0.0**
	comp=Z,15nm,1.1s,mb4.8						
TXAR	**Lajitas Array**	**74.11**	**342**	P	**P**	**16 58 59.0**	**-1.0**
	comp=Z,6.3nm,1.1s,mb4.5,baz=163,slow=8.9,SNR=22						
627A	**Terlingua Ranc**	**74.16**	**342**	⇑P	**P**	**16 58 59.8**	**-0.5**
	baz=74						
JCT	**Junction City**	**74.41**	**345**	⇓P	**P**	**16 59 01.3**	**-0.4**
	baz=75						
JCT	**Junction City**	**74.41**	**345**	*e*P	**P**	**16 58 57.4**	**-4.4**
	comp=Z,7.9nm,1.0s,mb4.6						
JCT	**Junction City**	**74.41**	**345**	*e*P	**P**	**16 58 57.4**	**-4.3**
JCT				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
626A	**Big Bend Ranch**	**74.43**	**341**	⇓P	**P**	**16 59 01.5**	**-0.4**
	baz=75,SNR=5.7						
528A	**Cox Ranch, San**	**74.71**	**343**	⇑P	**P**	**16 59 02.8**	**-0.6**
	baz=75						
527A	**Woodward Ranch**	**74.88**	**342**	⇑P	**P**	**16 59 03.8**	**-0.6**
	baz=75,SNR=8.6						
526A	**Mary Lane Ranc**	**74.91**	**341**	⇓P	**P**	**16 59 04.2**	**-0.4**
	baz=75,SNR=7.4						
428A	**Kincaid Ranch,**	**75.23**	**343**	⇓P	**P**	**16 59 05.8**	**-0.6**
	baz=76						
426A	**McDonald Obser**	**75.48**	**342**	⇑P	**P**	**16 59 07.5**	**-0.4**
	baz=76						
427A	**Hayter Ranch,**	**75.51**	**342**	⇑P	**P**	**16 59 07.4**	**-0.7**
	baz=76,SNR=6.4						
425A	**Indio Mountain**	**75.81**	**341**	⇑P	**P**	**16 59 09.0**	**-0.9**
	baz=76						
328A	**Wristen Ranch,**	**75.89**	**343**	⇑P	**P**	**16 59 09.4**	**-0.9**
	baz=76						
326A	**Caldwell Ranch**	**76.09**	**342**	⇑P	**P**	**16 59 10.6**	**-0.7**
	baz=76						
325A	**Bean Ranch, Si**	**76.37**	**341**	⇑P	**P**	**16 59 12.1**	**-0.9**
	baz=77						
MNTX	**Cornudas Mount**	**76.78**	**341**	⇓P	**P**	**16 59 14.0**	**-1.3**
	baz=77						
226A	**Malaga, Loving**	**76.83**	**342**	⇓P	**P**	**16 59 15.1**	**-0.5**
	baz=77						
225A	**Deer Hill, Car**	**77.04**	**341**	⇑P	**P**	**16 59 16.3**	**-0.5**
	baz=77						
224A	**Cornudas Mount**	**77.18**	**341**	⇓P	**P**	**16 59 17.2**	**-0.3**
	baz=77,SNR=10						
320A	**Kipp Ranch, An**	**77.25**	**338**	⇓P	**P**	**16 59 18.0**	**0.0**
	baz=78,SNR=5.4						
126A	**Clayton Basin,**	**77.37**	**342**	⇑P	**P**	**16 59 18.4**	**-0.2**
	baz=78						
221A	**Mesquite Ranch**	**77.69**	**339**	⇓P	**P**	**16 59 20.5**	**+0.2**
	baz=78						
124A	**Stringfield Ra**	**77.76**	**341**	⇑P	**P**	**16 59 20.5**	**-0.3**
	baz=78,SNR=18						
318A	**Bisbee**	**77.76**	**337**	⇑P	**P**	**16 59 20.9**	**+0.1**
	baz=78,SNR=7.4						
220A	**Playas Peak, P**	**77.79**	**338**	⇑P	**P**	**16 59 20.9**	**-0.1**
	baz=78,SNR=12						
Z26A	**Caprock**	**77.97**	**342**	⇓P	**P**	**16 59 20.8**	**-1.1**
	baz=78,SNR=5.3						
219A	**White Tail Can**	**78.08**	**338**	⇑P	**P**	**16 59 22.7**	**+0.2**
	baz=78,SNR=6.7						
121A	**Cookes Peak, D**	**78.18**	**339**	⇓P	**P**	**16 59 23.2**	**0.0**
	baz=78						
218A	**Dragoon**	**78.28**	**337**	⇓P	**P**	**16 59 23.4**	**-0.3**
	baz=78						
Z24A	**Sheeppen Canyo**	**78.34**	**341**	⇑P	**P**	**16 59 23.9**	**-0.1**
	baz=79						
Y27A	**Causey**	**78.38**	**343**	⇑P	**P**	**16 59 23.8**	**-0.4**
	baz=79						
MSTX	**Muleshoe**	**78.38**	**344**	⇑P	**P**	**16 59 23.3**	**-0.9**
	baz=79						
120A	**U Bar Ranch, L**	**78.42**	**338**	⇑P	**P**	**16 59 24.1**	**-0.3**
	baz=79						
Z23A	**Rita Site, Whi**	**78.48**	**341**	⇓P	**P**	**16 59 24.4**	**-0.3**
	baz=79						
Y26A	**Elida**	**78.56**	**343**	⇑P	**P**	**16 59 24.3**	**-0.9**
	baz=79						
Z22A	**Elephant Butte**	**78.66**	**340**	⇓P	**P**	**16 59 25.0**	**-0.7**
	baz=79						
216A	**Three Points,**	**78.72**	**336**	⇑P	**P**	**16 59 25.8**	**-0.3**
	baz=79						
Y25A	**Mesa, Roswell**	**78.75**	**342**	⇓P	**P**	**16 59 25.6**	**-0.6**
	baz=79						
119A	**Ashpeak Ranch,**	**78.81**	**338**	⇓P	**P**	**16 59 26.7**	**+0.1**
	baz=79,SNR=5.0						
118A	**Homack Ranch,**	**78.88**	**337**	⇑P	**P**	**16 59 26.9**	**-0.1**
	baz=79,SNR=9.2						
Y24A	**Capitan**	**78.93**	**341**	⇓P	**P**	**16 59 27.1**	**-0.1**
	baz=79,SNR=5.4						
Z20A	**Nine Sixteen R**	**78.95**	**339**	⇓P	**P**	**16 59 27.7**	**+0.4**
	baz=79,SNR=9.1						
117A	**Oracle**	**79.04**	**337**	⇓P	**P**	**16 59 27.3**	**-0.6**
	baz=79						
Y23A	**Lovelace Mesa,**	**79.08**	**341**	⇑P	**P**	**16 59 28.1**	**+0.1**
	baz=79,SNR=8.5						
214A	**Organ Pipe Nat**	**79.09**	**335**	⇓P	**P**	**16 59 28.3**	**+0.2**
	baz=79,SNR=5.4						
X26A	**CR and CF Fran**	**79.16**	**343**	⇓P	**P**	**16 59 28.1**	**-0.4**
	baz=79						
Y22A	**Socorro**	**79.31**	**340**	⇓P	**P**	**16 59 29.3**	**0.0**
	baz=80,SNR=5.2						
116A	**Eloy**	**79.32**	**336**	⇓P	**P**	**16 59 29.4**	**+0.1**
	baz=80						
Y22D	**IRIS PASSCAL I**	**79.43**	**340**	⇓P	**P**	**16 59 30.0**	**0.0**
	baz=80						
W27A	**Bowe Ranch, En**	**79.50**	**344**	⇑P	**P**	**16 59 29.9**	**-0.4**
	baz=80						
Y21A	**Point of Rocks**	**79.56**	**340**	⇓P	**P**	**16 59 31.1**	**+0.5**
	baz=80,SNR=12						
115A	**Sonoran Desert**	**79.61**	**336**	⇑P	**P**	**16 59 31.5**	**+0.5**
	baz=80,SNR=5.7						
Y20A	**Horse Springs,**	**79.64**	**339**	⇓P	**P**	**16 59 30.8**	**-0.3**
	baz=80						
W26A	**Owens Ranch, T**	**79.67**	**343**	⇓P	**P**	**16 59 30.9**	**-0.4**
	baz=80						
X23A	**Hourglass Bar**	**79.73**	**341**	⇓P	**P**	**16 59 31.5**	**-0.1**
	baz=80,SNR=7.5						
114A	**Black Gap (USA**	**79.85**	**335**	⇑P	**P**	**16 59 32.5**	**+0.2**
	baz=80						
Y19A	**Nutrioso**	**79.92**	**338**	⇓P	**P**	**16 59 33.2**	**+0.6**
	baz=80,SNR=13						
W25A	**X Bar L Ranch,**	**79.94**	**343**	⇓P	**P**	**16 59 32.3**	**-0.4**
	baz=80						
Z16A	**Peralta Trail,**	**79.96**	**336**	⇓P	**P**	**16 59 32.7**	**-0.2**
	baz=80						
Y18A	**Canyon Day Jun**	**79.97**	**338**	⇓P	**P**	**16 59 33.3**	**+0.4**
	baz=80						
X21A	**Alamocita Cree**	**80.00**	**340**	⇑P	**P**	**16 59 33.4**	**+0.4**
	baz=80,SNR=21						
Y17A	**Roosevelt**	**80.12**	**337**	⇓P	**P**	**16 59 33.9**	**+0.2**
	baz=80,SNR=7.8						
113A	**Mohawk Valley,**	**80.15**	**334**	⇑P	**P**	**16 59 34.2**	**+0.3**
	baz=80						
ANMO	**Albuquerque**	**80.15**	**341**	*e*P	**P**	**16 59 32.8**	**-1.1**
	comp=Z,21nm,1.2s,mb4.9						
ANMO	**Albuquerque**	**80.15**	**341**	*e*P	**P**	**16 59 32.8**	**-1.0**
ANMO				pmax	pmax		
	comp=Z,21nm,1.2s						
W24A	**Lazy 6 Ranch,**	**80.15**	**342**	⇑P	**P**	**16 59 33.7**	**-0.2**
	baz=80,SNR=13						
X20A	**Quemado**	**80.27**	**339**	⇓P	**P**	**16 59 34.6**	**+0.1**
	baz=80,SNR=7.2						
W23A	**Werner Place,**	**80.28**	**341**	⇓P	**P**	**16 59 34.8**	**+0.3**
	baz=80						
Z14A	**Wintersburg**	**80.44**	**335**	⇑P	**P**	**16 59 35.4**	**-0.1**
	baz=81						
Y16A	**Circle Bar Ran**	**80.48**	**337**	⇓P	**P**	**16 59 35.8**	**+0.2**
	baz=81,SNR=8.0						
Z13A	**Yuma Proving G**	**80.51**	**335**	⇑P	**P**	**16 59 35.8**	**0.0**
	baz=81,SNR=7.0						
V25A	**Rancho No Teng**	**80.57**	**343**	⇑P	**P**	**16 59 35.8**	**-0.2**
	baz=81						
V24A	**Rampart Ranch,**	**80.61**	**342**	⇑P	**P**	**16 59 35.8**	**-0.5**
	baz=81						
X18A	**Snowflake**	**80.65**	**338**	⇓P	**P**	**16 59 36.7**	**+0.2**
	baz=81						
X17A	**Forest Lakes**	**80.71**	**337**	⇑P	**P**	**16 59 37.4**	**+0.5**
	baz=81						
CCM	**Cathedral Cave**	**80.73**	**354**	*e*P	**P**	**16 59 32.9**	**-3.9**
	comp=Z,5.5nm,0.8s,mb4.5						
CCM	**Cathedral Cave**	**80.73**	**354**	*e*P	**P**	**16 59 32.9**	**-4.0**
CCM				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
GLA	**Glamis**	**80.75**	**334**	⇑P	**P**	**16 59 37.7**	**+0.5**
	baz=81						
Y15A	**Casa Rosa Ranc**	**80.80**	**336**	⇑P	**P**	**16 59 37.3**	**0.0**
	baz=81,SNR=6.0						
DVTC	**Desert V Tower**	**80.82**	**332**	⇑P	**P**	**16 59 37.8**	**+0.3**
	baz=81						
W20A	**Ramah**	**80.83**	**339**	⇑P	**P**	**16 59 37.6**	**+0.1**
	baz=81,SNR=7.7						
X16A	**Lo Mia Camp, P**	**80.97**	**337**	⇑P	**P**	**16 59 38.5**	**+0.2**
	baz=81,SNR=7.5						
Y14A	**Wickenburg**	**80.99**	**335**	⇓P	**P**	**16 59 38.5**	**+0.1**
	baz=81,SNR=5.4						
W19A	**Sanders**	**81.05**	**339**	⇑P	**P**	**16 59 38.6**	**-0.1**
	baz=81						
U25A	**Circle Dot Ran**	**81.07**	**343**	⇓P	**P**	**16 59 38.3**	**-0.4**
	baz=81,SNR=5.9						
MONP	**Monument Peak**	**81.14**	**332**	⇑P	**P**	**16 59 39.5**	**+0.3**
	baz=81						
W18A	**Petrified Fore**	**81.15**	**338**	⇓P	**P**	**16 59 39.2**	**0.0**
	baz=81						
X15A	**Humboldt**	**81.27**	**336**	⇓P	**P**	**16 59 40.2**	**+0.4**
	baz=82,SNR=7.2						
Y12C	**Blythe**	**81.30**	**334**	⇑P	**P**	**16 59 40.4**	**+0.4**
	baz=82						
X14A	**Yava**	**81.45**	**336**	⇑P	**P**	**16 59 40.3**	**-0.5**
	baz=82						
V20A	**Brimhall**	**81.46**	**340**	⇓P	**P**	**16 59 40.8**	**0.0**
	baz=82,SNR=6.4						
BC3	**Big Chuckawall**	**81.51**	**333**	⇑P	**P**	**16 59 41.3**	**+0.1**
	baz=82,SNR=5.9						
V19A	**Window Rock**	**81.53**	**339**	⇑P	**P**	**16 59 41.3**	**+0.2**
	baz=82						
U22A	**Llaves**	**81.60**	**341**	⇑P	**P**	**16 59 41.5**	**-0.1**
	baz=82						
W16A	**Flagstaff**	**81.63**	**337**	⇓P	**P**	**16 59 42.3**	**+0.5**
	baz=82						
PDMCI	**Parker Dam,Lak**	**81.68**	**335**	⇑P	**P**	**16 59 42.6**	**+0.6**
	baz=82						
V18A	**Ganado**	**81.76**	**338**	⇑P	**P**	**16 59 43.1**	**+0.7**
	baz=82						
T25A	**Trinidad**	**81.78**	**343**	⇑P	**P**	**16 59 42.8**	**+0.4**
	baz=82						
PFO	**Pinyon Flat Ob**	**81.81**	**333**	⇑P	**P**	**16 59 42.8**	**+0.1**
	baz=82,SNR=5.9						
U21A	**Nageezi**	**81.85**	**340**	⇓P	**P**	**16 59 42.8**	**0.0**
	baz=82,SNR=6.0						
X13A	**Yucca**	**81.85**	**335**	⇓P	**P**	**16 59 43.0**	**+0.1**
	baz=82,SNR=12						
IRM	**Iron Mountain**	**81.88**	**334**	⇑P	**P**	**16 59 43.1**	**0.0**
	baz=82,SNR=7.3						
**V

baz=84,SNR=6.9
R22A Saguache, Gunn 83.35 342 ⇓P P 16 59 51.0 +0.4
baz=84,SNR=5.9
S20A Disappointment 83.35 340 ⇑P P 16 59 51.2 +0.5
baz=84,SNR=6.9
BOSA Boshof 83.37 123 P P 16 59 50.6 -0.6
comp=Z,12nm,1.0s,mb4.9,baz=206,slow=6.3,SNR=6.1
T16A Glen Canyon Da 83.39 338 ⇑P P 16 59 51.0 +0.1
baz=84
S19A Harvey Farm, M 83.47 340 ⇑P P 16 59 51.2 0.0
baz=84,SNR=9.3
EDW2 Edwards Air Fo 83.48 332 ⇑P P 16 59 51.2 -0.2
baz=84,SNR=5.2
V11A Goodsprings 83.50 334 ⇓P P 16 59 51.8 +0.3
baz=84
S18A Hurst Farm, Bl 83.64 339 ⇓P P 16 59 52.7 +0.5
baz=84,SNR=27
R21A Cimarron 83.67 341 ⇓P P 16 59 52.3 0.0
baz=84
T15A Red Dirt Ranch 83.67 337 ⇑P P 16 59 52.9 +0.6
baz=84
Q24A Divide 83.69 343 ⇑P P 16 59 52.7 +0.4
baz=84
R20A Redvale 83.70 340 ⇑P P 16 59 53.0 +0.6
baz=84
U12A Valley of Fire 83.77 335 ⇑P P 16 59 53.0 +0.1
baz=84
S17A Black Ridge (B 83.80 338 ⇓P P 16 59 53.2 +0.3
baz=84
LRMC Laurel Mountai 83.92 332 ⇑P P 16 59 54.3 +0.6
baz=84
Q22A Crested Butte, 83.99 342 ⇑P P 16 59 54.1 +0.2
baz=84
P25A Willow Gulch B 84.01 344 ⇑P P 16 59 54.2 +0.2
baz=84
Q21A Lamborn Mesa, 84.12 341 ⇓P P 16 59 54.4 -0.1
baz=84
T13A Saint George 84.12 336 ⇓P P 16 59 55.0 +0.4
baz=84
PKM Peak Mountain 84.15 331 ⇓P P 16 59 54.9 +0.1
baz=84
P23A Jefferson 84.23 343 ⇓P P 16 59 55.4 +0.2
baz=84
R18A Canyonlands Na 84.27 339 ⇑P P 16 59 55.8 +0.5
baz=84
U10A Ash Meadows, A 84.33 334 ⇑P P 16 59 56.3 +0.6
baz=84,SNR=12
ISA Isabella 84.36 332 ⇑P P 16 59 56.1 +0.2
baz=85,SNR=9.4
MPMC Manual Prospec 84.38 333 ⇓P P 16 59 55.8 -0.1
baz=85
Q20A Ridgley Place, 84.40 341 ⇓P P 16 59 55.9 -0.1
baz=85
R17A Hanksville Air 84.51 339 ⇓P P 16 59 56.6 0.0
baz=85
FURC Furnace Creek, 84.55 333 ⇑P P 16 59 57.1 +0.3
baz=85,SNR=7.4
SMMC Simmler 84.58 331 ⇑P P 16 59 56.9 -0.1
baz=85
ISCO Idaho Springs 84.59 343 ⇓P P 16 59 56.9 0.0
baz=85
R16A Teasdale 84.60 338 ⇓P P 16 59 57.2 +0.3
baz=85
S13A Holt Ranch, En 84.62 336 ⇓P P 16 59 57.5 +0.4
baz=85,SNR=6.7
Q19A Hogan Spring (84.64 340 ⇓P P 16 59 57.1 -0.1
baz=85
T11A Corn Creek, Al 84.73 335 ⇑P P 16 59 58.2 +0.5
baz=85,SNR=12
VES Vestal, Richgr 84.73 332 ⇓P P 16 59 57.9 +0.1
baz=85
P20A De Beque 84.94 341 ⇑P P 16 59 58.6 -0.1
baz=85
S12A Delamar Landin 84.95 335 ⇓P P 16 59 59.0 +0.3
baz=85
Q18A Rafter H Ranch 85.00 339 ⇑P P 16 59 58.9 -0.1
baz=85
O23A Lake Granby, G 85.05 343 ⇑P P 16 59 59.2 0.0
baz=85
Q16A Castle Valley 85.11 339 ⇑P P 16 59 59.8 +0.2
baz=85
SRU San Rafael 85.11 339 ⇑P P 16 59 59.8 +0.2
baz=85
O22A Kremmling 85.14 342 ⇓P P 16 59 59.4 -0.3
baz=85
GRAC Grapevine Rang 85.20 333 ⇑P P 17 00 00.2 +0.1
baz=85,SNR=9.3
R13A O'Grain Ranch, 85.21 336 ⇓P P 17 00 00.5 +0.4
baz=85
P19A Cripple Cowboy 85.21 340 ⇑P P 17 00 00.3 +0.2
baz=86
S11A Rachel 85.26 335 ⇑P P 17 00 01.0 +0.7
baz=86,SNR=7.1
O20A White River Ci 85.51 341 ⇑P P 17 00 01.9 +0.4
baz=86
P17A Butcher Ranch, 85.51 339 ⇑P P 17 00 02.0 +0.5
baz=86
P18A Preston Nutter 85.53 339 ⇓P P 17 00 01.9 +0.2
baz=86
R12A Pony Springs, 85.54 336 ⇑P P 17 00 02.0 +0.2
baz=86
LIC Lamto 85.67 78 *e*P P 17 00 02.6 -0.4
comp=Z,60nm,1.1s,mb5.7
N23A Red Feather La 85.71 343 ⇑P P 17 00 02.7 +0.2
baz=86
Q14A Sevier Lake (B 85.76 337 ⇓P P 17 00 03.1 +0.4
baz=86,SNR=6.6
S10A Tonopah Range, 85.78 334 ⇓P P 17 00 03.1 +0.1
baz=86,SNR=6.8
R11A Troy Canyon, C 85.86 335 ⇓P P 17 00 03.6 +0.3
baz=86,SNR=21
TIC Toumodi 85.96 77 *e*P P 17 00 04.1 -0.4
comp=Z,48nm,1.1s,mb5.6
TIC Toumodi 85.96 77 *e*P P 17 00 04.1 -0.4
TIC pmax pmax
comp=Z,48nm,1.1s,mb5.6
KIC Kosan Boka 85.97 78 *e*P P 17 00 04.1 -0.4
comp=Z,52nm,1.2s,mb5.7
M24A Cheyenne 86.03 344 ⇓P P 17 00 04.3 +0.2
baz=86
O18A Roosevelt 86.07 340 ⇓P P 17 00 04.8 +0.5
baz=86
DBIC Dimbokro 86.10 77 P P 17 00 04.8 -0.4
comp=Z,8.0nm,1.0s,mb4.9,baz=193,slow=5.2,SNR=7.7
DBIC LR LR 17 35 11.4
comp=Z,222nm,18.9s,MS4.6,baz=142,slow=33
N20A Spence Gulch, 86.18 341 ⇑P P 17 00 05.1 +0.3
baz=86,SNR=5.3
Q12A Willow Creek R 86.26 336 ⇑P P 17 00 05.6 +0.4
baz=86
Q11A Duckwater 86.33 335 ⇑P P 17 00 06.0 +0.4
baz=87
P13A Bates Ranch, G 86.40 337 ⇓P P 17 00 06.2 +0.3
baz=87,SNR=10
N19A John Jarvie Ra 86.45 341 ⇑P P 17 00 06.0 -0.1
baz=87
Q10A Clear Creek Ra 86.55 335 ⇑P P 17 00 06.7 +0.1
baz=87,SNR=7.7
P12A McGill 86.68 336 ⇓P P 17 00 07.6 +0.3
baz=87,SNR=5.8
DUG Dugway 86.75 338 ⇑P P 17 00 07.5 -0.1
baz=87,SNR=9.6
DUG Dugway 86.75 338 *e*P P 17 00 06.1 -1.5
comp=Z,20nm,1.4s,mb5.2
DUG Dugway 86.75 338 *e*P P 17 00 06.1 -1.5
DUG pmax pmax
comp=Z,20nm,1.4s,mb5.2
M20A Sweetwater, Wa 86.78 342 ⇑P P 17 00 07.4 -0.4
baz=87
NVAR Mina Array Bea 86.80 333 P P 17 00 08.0 0.0
comp=Z,5.2nm,1.1s,mb4.7,baz=160,slow=5.9,SNR=21
L23A Garrett 86.83 344 ⇓P P 17 00 07.4 -0.6
baz=87,SNR=5.3
ECSD EROS Data Cent 86.90 350 P P 17 00 04.8 -3.5
comp=Z,27nm,1.8s,mb5.2
P10A Eureka 87.29 335 ⇑P P 17 00 10.7 +0.4
baz=88,SNR=7.3
O12A Currie 87.37 336 ⇑P P 17 00 10.4 -0.2
baz=88,SNR=14
M17A Scullys Gap (B 87.37 340 ⇑P P 17 00 10.0 -0.7
baz=88
K22A Casper 87.52 343 ⇓P P 17 00 10.7 -0.6
baz=88,SNR=7.3
HWUT Hardware Ranch 87.73 339 *e*P P 17 00 11.3 -1.0
comp=Z,24nm,1.3s,mb5.3
M15A Larsen Ranch, 87.83 339 ⇑P P 17 00 12.0 -0.8
baz=88,SNR=6.3
K20A Yellowstone Ra 87.93 342 ⇑P P 17 00 12.3 -0.9
baz=88
K19A Absolon Red Bu 88.20 342 ⇑P P 17 00 14.0 -0.6
baz=88
K18A Toltan Ranch, 88.31 341 ⇓P P 17 00 15.0 -0.1
baz=89
BW06 Boulder Array 88.32 341 ⇑P P 17 00 14.5 -0.6
baz=89,SNR=7.5
L15A Malad City 88.32 339 ⇑P P 17 00 14.2 -0.9
baz=89,SNR=6.6
PDAR Pinedale Array 88.32 341 P P 17 00 14.4 -0.7
comp=Z,1.4nm,1.0s,mb4.2,baz=174,slow=4.2,SNR=12
L14A Malta 88.58 338 ⇑P P 17 00 15.6 -0.7
baz=89,SNR=8.4
I21A Big Trails, Te 88.79 343 ⇓P P 17 00 16.6 -0.7
baz=89
J18A Kendall Valley 88.85 341 ⇑P P 17 00 17.7 +0.1
baz=89
K16A Soda Springs 88.88 340 ⇑P P 17 00 17.6 -0.2
baz=89,SNR=5.6
K15A Arbon 88.99 339 ⇑P P 17 00 18.5 +0.2
baz=89
K14A Jones Ranch, D 89.03 338 ⇓P P 17 00 18.7 +0.2
baz=89
I20A Worland 89.11 342 ⇓P P 17 00 19.0 +0.2
baz=90
I18A Diamond G Ranc 89.26 341 ⇓P P 17 00 19.6 +0.1
baz=90
J16A Bone 89.30 340 ⇓P P 17 00 19.3 -0.4
baz=90,SNR=6.3
J15A Blackfoot 89.63 339 ⇑P P 17 00 21.3 0.0
baz=90,SNR=6.4
J14A Carey 89.85 338 ⇓P P 17 00 22.5 +0.2
baz=90,SNR=9.2
J13A Cove Ranch, Pi 90.10 338 ⇑P P 17 00 23.8 +0.4
baz=90,SNR=7.2
HLID Hailey 90.32 338 ⇓P P 17 00 24.8 +0.4
baz=91,SNR=11
HLID Hailey 90.32 338 *e*P P 17 00 24.7 +0.3
comp=Z,10nm,1.2s,mb5.0
I14A Mackay 90.39 339 ⇑P P 17 00 25.7 +0.9
baz=91,SNR=11
RLMT Red Lodge 90.48 342 ⇑P P 17 00 25.2 +0.1
baz=91
RLMT Red Lodge 90.48 342 *e*P P 17 00 24.8 -0.4
comp=Z,15nm,1.4s,mb5.1
I13A Wildhorse Cree 90.56 338 ⇑P P 17 00 26.2 +0.6
baz=91,SNR=8.2
MFID Camas Ranch 90.58 337 ⇑P P 17 00 25.6 -0.1
baz=91
I12A Atlanta 90.73 338 ⇓P P 17 00 26.8 +0.4
baz=91,SNR=7.0
H15A Lima 90.82 340 ⇓P P 17 00 27.4 +0.6
baz=91,SNR=7.9
H14A Leadore 91.01 339 ⇑P P 17 00 27.2 -0.4
baz=91
F19A Roth Farm, Mol 91.10 342 ⇑P P 17 00 27.6 -0.4
baz=91
G16A Moss Hill, Enn 91.18 340 ⇓P P 17 00 28.5 +0.1
baz=91
H13A Challis 91.20 338 ⇑P P 17 00 29.4 +0.9
baz=91,SNR=6.5
YBH Yreka Blue Hor 91.26 332 *e*P P 17 00 28.2 -0.7
comp=Z,7.5nm,1.1s,mb4.9
YBH Yreka Blue Hor 91.26 332 *e*P P 17 00 28.2 -0.7
YBH pmax pmax
comp=Z,7.0nm,1.1s
G15A Dillon 91.30 340 ⇓P P 17 00 28.9 -0.1
baz=92
J08A Circle Bar Ran 91.32 335 ⇓P P 17 00 29.6 +0.4
baz=92
F18A Big Timber 91.32 342 ⇓P P 17 00 28.4 -0.7
baz=92
H12A Diamond D Ranc 91.35 338 ⇑P P 17 00 29.8 +0.6
baz=92
K05A Summer Lake 91.53 333 ⇑P P 17 00 31.1 +0.9
baz=92
BOZ Bozeman (W) 91.53 341 ⇑P P 17 00 30.1 +0.1
baz=92
BOZ Bozeman (W) 91.53 341 *e*P P 17 00 29.5 -0.6
comp=Z,0.7nm,0.8s,mb4.0
BOZ Bozeman (W) 91.53 341 *e*P P 17 00 29.5 -0.6
BOZ pmax pmax
comp=Z,1.0nm,0.8s,mb4.2
F17A Fitzpatrick Pl 91.54 341 ⇑P P 17 00 30.5 +0.4
baz=92
E19A Rath Farm, Rou 91.64 343 ⇓P P 17 00 30.5 -0.1
baz=92
G13A Cobalt 91.68 339 ⇑P P 17 00 31.7 +0.9
baz=92,SNR=5.5
F15A Butte 91.93 340 ⇑P P 17 00 32.1 +0.2
baz=92
G12A Big Creek, Yel 92.01 338 ⇓P P 17 00 33.2 +0.9
baz=92,SNR=6.6
D20A Manuel Ranch, 92.10 343 ⇑P P 17 00 32.3 -0.3
baz=92
I07A Izee 92.29 335 ⇓P P 17 00 33.5 -0.2
baz=92
F13A Darby 92.35 339 ⇓P P 17 00 33.9 +0.1
baz=93
E16A East Helena 92.37 341 ⇓P P 17 00 34.0 +0.1
baz=93
E15A Deer Lodge 92.51 340 ⇓P P 17 00 34.1 -0.4
baz=93
F12A Elk City 92.57 338 ⇓P P 17 00 34.7 -0.2
baz=93
E14A Clinton 92.72 340 ⇑P P 17 00 36.1 +0.6
baz=93
D17A Six Diamond Ra 92.72 342 ⇓P P 17 00 35.8 +0.3
baz=93
D15A Lincoln 93.05 340 ⇓P P 17 00 37.0 -0.1
baz=93
G08A Pilot Rock 93.21 336 ⇑P P 17 00 37.8 -0.1
baz=93
D14A Greenough 93.34 340 ⇓P P 17 00 38.4 +0.1
baz=94
C15A Salmond Ranch, 93.76 341 ⇑P P 17 00 40.5 +0.2
baz=94
B15A Bradely Ranch, 94.25 341 ⇓P P 17 00 41.8 -0.7
baz=94
A17A Triple J Farms 94.41 342 ⇑P P 17 00 42.5 -0.7
baz=95
STKA Stephens Creek 95.07 217 LR LR 17 39 58.2
comp=Z,245nm,18.0s,MS4.7,baz=203,slow=33
TORD Torodi Ar. Bea 95.21 77 P P 17 00 46.2 -1.5
comp=Z,2.2nm,1.1s,mb4.5,baz=250,slow=3.5,SNR=6.1
TORD LR LR 17 39 05.4
comp=Z,172nm,20.7s,MS4.5,baz=205,slow=33
ILAR Eielson Array 118.05 334 PKP PKPdf 17 06 06.9 -2.8
comp=Z,0.4nm,0.9s,baz=232,slow=1.1,SNR=4.6
CLL Collm 125.27 50 *e*PKP PKPdf 17 06 23.0 -0.9
CLL *i* 17 06 28.2
CLL Collm 125.27 50 *e*PKIKP PKPdf 17 06 23.0 -0.9
CLL *i* 17 06 28.2
CLL pmax pmax
comp=Z,6.0nm,1.0s
BRG Berggiesshubel 125.61 51 *e*P PKPdf 17 06 23.3 -1.3
comp=Z,6.3nm,1.4s
BRG Berggiesshubel 125.61 51 *e*PKIKP PKPdf 17 06 23.3 -1.3
BRG pmax pmax
comp=Z,4.0nm,1.4s
VYHS Vyhne 127.46 55 *e*PKP PKPdf 17 06 26.7 -1.5
VYHS Vyhne 127.46 55 *e*PKP PKPdf 17 06 26.7 -1.5
NOA NORSAR Array B 128.25 38 PKP PKPdf 17 06 29.0 -0.3
comp=Z,1.5nm,1.0s,baz=246,slow=7.6,SNR=2.5
BRTR Keskin Array B 133.49 71 PKP PKPdf 17 06 40.2 +0.2
comp=Z,0.7nm,0.7s,baz=219,slow=3.2,SNR=3.9
AKASG Malin Array Be 134.56 55 PKP PKPdf 17 06 40.6 -0.9
comp=Z,0.3nm,0.4s,baz=321,slow=1.9,SNR=4.4
OBN Obninsk 139.86 51 *i*PKIKP PKPdf 17 06 50.7 -0.5
OBN pmax pmax
comp=Z,23nm,1.3s
KIV Kislovodsk 141.32 69 *i*PKIKP PKPdf 17 06 53.2 -1.1
KIV pmax pmax
comp=Z,10.0nm,1.4s
GNI Garni 141.50 76 PKP PKPdf 17 06 55.3 +0.6
GNI Garni 141.50 76 PKP PKPdf 17 06 55.3 +0.6
comp=Z,1.7nm,0.4s,baz=357,slow=13,SNR=3.6
GNI Garni 141.50 76 *i*PKIKP PKPdf 17 06 55.5 +0.8
GNI pmax pmax
comp=Z,12nm,1.7s
KLMR Klimovskoe 141.75 42 PKHKP PKPpre 17 06 47.7
KLMR pmax pmax
comp=Z,20nm,1.3s
SEY Seymchan 142.28 322 *i*PKIKP PKPdf 17 06 55.1 -0.3
YSS Yuzh-Sakhalins 147.41 294 *e*PKPbc PKPbc 17 07 05.4 -1.8
YSS Yuzh-Sakhalins 147.41 294 *e*PKIKP PKPdf 17 07 05.0 +0.3
MJAR Matsushiro Arr 147.66 273 PKPbc PKPbc 17 07 06.0 -2.1
comp=Z,9.1nm,1.0s,baz=164,slow=2.6,SNR=18
MAJO Matsushiro 147.66 273 *e*PKPbc PKPbc 17 07 06.0 -2.3
MAT Matsushiro 147.66 273 PKP PKPdf 17 07 05.6 +0.1
SOKR Solikamsk 150.44 41 *c i*PKIKP PKPbc 17 07 13.7 -0.8
SOKR pmax pmax
comp=Z,30nm,1.2s
ARU Arti 152.17 47 PKIKP PKPbc 17 07 17.2 -1.4
YAK Yakutsk 152.56 326 *e*PKPbc PKPbc 17 07 16.7 -2.6
AKTK Aktyubinsk 152.60 60 PKPbc PKPbc 17 07 18.4 -1.3
AKTK PKPab PKPab 17 07 24.8 -5.7
AKTO Aktyubinsk 152.60 60 PKPbc PKPbc 17 07 18.4 -1.3
comp=Z,5.7nm,0.9s,baz=297,slow=2.6,SNR=12
AKTO PKPab PKPab 17 07 24.8 -5.7
comp=Z,5.1nm,0.7s,baz=346,slow=5.7,SNR=8.5
HABR Khabarovsk 152.74 296 *e*PKIKP PKPbc 17 07 18.5 -1.7
HABR *e* 17 07 32.3
HABR 17 11 05.5
HABR 17 14 20.6
HABR *e*SSS 17 36 27.0
HABR pmax pmax
comp=Z,90nm,2.5s
HABR pmax pmax
comp=E,38nm,2.0s
HABR pmax pmax
comp=N,42nm,2.9s
SVE Sverdlovsk 153.18 46 *e*PKIKP PKPbc 17 07 18.2 -2.6
SVE pmax pmax
comp=Z,12nm,1.5s
KSRS Korea Array 155.59 268 PKPab PKPab 17 07 42.6 -1.0
comp=Z,2.5nm,1.0s,baz=98,slow=3.6,SNR=6.2
CMAR Chiang Mai Arr 155.72 185 PKPab PKPab 17 07 43.6 -0.7
comp=Z,1.5nm,1.0s,baz=198,slow=2.6,SNR=4.7
MDJ Mudanjiang 156.19 286 PKP PKPdf 17 07 18.3 +0.3
MDJ AMB AMB
comp=Z,140nm,5.2s
CN2 Changchun 159.05 283 *e*PKP PKPdf 17 07 22.8 +1.2
NJ2 Nanjing 159.45 246 *e*PKP PKPdf 17 07 19.3 -3.1
KMI Kunming 161.73 198 PKP PKPdf 17 07 24.5 -0.7
KMI pPKP pPKPdf 17 07 27.0 -1.6
KMI sPKP 17 07 28.3
KMI LR LR
comp=N,140nm,26.8s
KMI LR LR
comp=E,79nm,26.8s
KMI LR LR
comp=Z,190nm,27.7s
GYA Guiyang 161.82 210 PKP PKPdf 17 07 24.0 -1.2
GYA PKPab PKPab 17 08 12.5 +1.8
GYA PKS 17 10 56.0
GYA PP PP 17 11 56.8 +3.0
GYA AMB AMB
comp=Z,120nm,8.0s
AAK Ala-Archa 163.71 83 PKP PKPdf 17 07 25.3 -1.2
comp=Z,0.9nm,0.3s,baz=120,slow=3.1,SNR=4.5
AAK Ala-Archa 163.71 83 ⇓*e*PKIKP PKPdf 17 07 24.6 -1.9
KSH Kashi 164.09 95 *e*PKPbc PKPdf 17 07 19.0 -8.0
KSH *e*pPKP pPKPdf 17 07 30.3 -0.1
KSH *es*PKP 17 07 33.5
KSH *e*PKPab PKPab 17 07 58.3 -22
KSH *e*PKS 17 10 51.8
KSH *e*PP PP 17 11 29.8 -37
KSH *e*SKS SKSdf 17 14 19.5 -12
KSH *e*SKKS SKKSac 17 18 13.3 -41
KSH *e*SS 17 31 16.3
KSH AMB AMB
comp=Z,120nm,8.0s
KSH LR LR
comp=N,77nm,5.4s
KSH LR LR
comp=E,87nm,6.1s
KSH LR LR
comp=Z,87nm,6.0s
BJI Beijing 165.10 266 PKP PKPdf 17 07 27.0 -0.8
ZALV Zalesovo Beam 166.32 31 PKP PKPdf 17 07 25.1 -3.2
comp=Z,0.5nm,0.3s,baz=225,slow=1.9,SNR=7.9
CD2 Chengdu 166.91 208 PKP PKPdf 17 07 29.5 -0.1
HHC Hu-ho-hao-te 168.71 265 *e*PKP PKPdf 17 07 26.3 -4.2
HHC sPKP 17 07 38.8
HHC PKPab PKPab 17 08 39.5 -1.4
HHC PKS 17 10 57.5
HHC PP PP 17 12 29.3 -1.5
HHC SKS SKSdf 17 14 24.3 -10
HHC SKKS SKKSac 17 19 11.5 -5.8
HHC SS SS 17 33 18.5 -5.6
HHC AMB AMB
comp=Z,120nm,6.9s
HHC LR LR
comp=N,190nm,15.7s
HHC LR LR
comp=E,140nm,15.7s
HHC LR LR
comp=Z,160nm,21.0s
MKAR Makanchi Array 169.01 63 PKP PKPdf 17 07 28.3 -2.2
comp=Z,0.7nm,0.9s,baz=0.0,slow=2.4,SNR=4.9
MKAR PKPab PKPab 17 08 40.5 -1.5
comp=Z,1.5nm,0.9s,baz=291,slow=3.8,SNR=6.0
MKAR PP PP 17 12 35.2 +3.2
comp=Z,1.0nm,1.0s,baz=193,slow=4.7,SNR=4.0
LZH Lanzhou 171.34 222 *e*PKP PKPdf 17 07 32.0 -0.2
LZH sPKP 17 07 39.3
WMQ Urumqi 173.37 78 *e*PKP PKPdf 17 07 31.3 -1.5
WMQ LR LR
comp=N,100nm,21.0s
WMQ LR LR
comp=Z,63nm,20.0s

IDC ***25*** *16:56:02.9±2.3, 30°.23N×82°.19E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.5/28, mbtmp3.5/8, ML3.1/2, Error ellipse: s-maj=72.5km s-min=21.2km az=65.0*
ISCJB ***25*** *16:56:06.8±1.7, 30°.9N±0°.2×83°.5E±0°.3, h10km, mb3.5/5, Error ellipse: s-maj=48.7km s-min=12.5km az=146.7*
NEIC ***25*** *16:56:06.9±1.5, 30°.66N×82°.97E, h10km, Error ellipse: s-maj=37.3km s-min=11.7km az=54.0*
ISC 25 16:56:08.2±1.7, 30°.8N±0°.2×83°.4E±0°.3, h10km, n11, σ1°.05/12, mb3.5/5, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.78**	**98**	Pn	**Pn**	**16 57 46.3**	**-1.4**
LSA				Sn	**Sn**	**16 58 54.0**	**-11**
LSA				smax			
	comp=N,30nm,0.8s						
LSA				smax			
	comp=E,50nm,0.9s						
LSA	**Lhasa**	**6.78**	**98**	P	**Pn**	**16 57 52.0**	**+4.3**
	comp=E,8.9nm,0.9s						
MKAR	**Makanchi Array**	**15.97**	**357**	Pn	**Pn**	**16 59 52.4**	**-0.4**
MKAR	**Makanchi Array**	**15.97**	**357**	Pn	**Pn**	**16 59 52.4**	**-0.4**
	comp=E,0.0nm,0.3s,baz=199,slow=22,SNR=3.6						
CMAR	**Chiang Mai Arr**	**18.70**	**128**	P	**Pn**	**17 00 27.9**	**+0.7**
	comp=E,0.0nm,0.3s,baz=309,slow=11,SNR=10						
KURK	**Kurchatov**	**20.19**	**351**	P	**P**	**17 00 42.4**	**-0.5**
	comp=E,2.5nm,1.0s,baz=173,slow=10,SNR=15						
ZALV	**Zalesovo Beam**	**23.13**	**2**	P	**P**	**17 01 15.0**	**+0.6**
	comp=E,0.5nm,0.4s,mb3.3,baz=242,slow=6.2,SNR=3.0						
BVAR	**Borovoye Array**	**24.14**	**341**	P	**P**	**17 01 23.5**	**-0.6**
	comp=E,0.4nm,0.5s,mb3.1,baz=172,slow=11,SNR=4.1						
SONM	**Songino Array**	**24.44**	**39**	P	**P**	**17 01 34.8**	**+7.9**
	comp=E,4.8nm,0.9s,mb3.9,baz=259,slow=6.9,SNR=3.5						
WRA	**Warramunga Arr**	**70.28**	**129**	P	**P**	**17 07 20.9**	**-1.0**
	comp=E,0.5nm,0.6s,mb3.6,baz=326,slow=6.3,SNR=5.0						
ILAR	**Eielson Array**	**76.99**	**20**	P	**P**	**17 08 03.1**	**+2.4**
	comp=E,0.2nm,0.6s,mb3.2,baz=308,slow=4.4,SNR=3.2						

IDC ***25*** *16:57:47.3±1.1, 30°.84N×83°.62E, h0km, mb3.6/8, mb1 3.8/10, mb1mx3.6/28, mbtmp3.6/10, ML3.3/2, Error ellipse: s-maj=36.3km s-min=18.3km az=65.0*
NEIC ***25*** *16:57:48.6±1.0, 30°.78N×83°.35E, h10km, Error ellipse: s-maj=25.9km s-min=12.4km az=58.0*
ISC 25 16:57:51.1±3.9, 30°.9N±0°.1×83°.5E±0°.2, h26km±29km, n14, σ0°.98/16, mb3.5/7, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.72**	**98**	P	**Pn**	**16 59 31.7**	**+3.7**
	18nm,1.0s						
SHL	**Shillong**	**9.08**	**123**	*e*PKP	**Pn**	**17 00 01.0**	**+0.6**
SHL				*e*S	**Sn**	**17 01 41.0**	**-0.8**
KSH	**Kashi**	**10.61**	**327**	*e*P	**Pn**	**17 00 19.3**	**-2.0**
KSH				*ep*P		17 00 26.0	
KSH				*e*PP		17 00 28.3	
KSH				*es*P		17 00 31.3	

KSH			*e*S	**Sn**	**17 02 14.0**	**-5.2**	
KSH			*es*S		17 02 26.8		
KSH			*e*SS		17 02 31.0		
KSH			*e*PcP	PcP	17 06 23.3	-0.4	
KSH			pmax	pmax			
	comp=Z,1.0nm,0.6s						
KSH			pmax	pmax			
	comp=Z,120nm,4.4s						
KSH			LR	LR			
	comp=N,320nm,9.1s						
KSH			LR	LR			
	comp=E,340nm,8.7s						
KSH			LR	LR			
	comp=Z,220nm,9.7s						
MK31	**Makanchi Array**	**15.95 357**	P	**Pn**	**17 01 36.4**	**+2.9**	
MKAR	**Makanchi Array**	**15.95 357**	Pn	**Pn**	**17 01 33.2**	**-0.3**	
	comp=Z,0.0nm,0.3s,baz=218,slow=27,SNR=3.6						
CMAR	**Chiang Mai Arr**	**18.66 128**	P	**Pn**	**17 02 07.2**	**-0.3**	
	comp=Z,0.1nm,0.3s,baz=304,slow=12,SNR=7.0						
KURK	**Kurchatov**	**20.18 351**	P	**P**	**17 02 22.9**	**-0.5**	
	comp=Z,5.9nm,1.2s,baz=172,slow=10,SNR=16						
ZALV	**Zalesovo Beam**	**23.10 2**	P	**P**	**17 02 54.9**	**+0.2**	
	comp=Z,0.4nm,0.3s,mb3.4,baz=179,slow=13,SNR=5.9						
BVAR	**Borovoye Array**	**24.13 340**	P	**P**	**17 03 05.0**	**+0.4**	
	comp=Z,1.3nm,0.9s,mb3.3,baz=145,slow=10,SNR=6.0						
SONM	**Songino Array**	**24.38 39**	P	**P**	**17 03 06.3**	**-0.6**	
	comp=Z,2.3nm,0.6s,mb3.8,baz=254,slow=10,SNR=2.8						
WRA	**Warramunga Arr**	**70.25 129**	P	**P**	**17 09 01.4**	**-0.8**	
	comp=Z,1.2nm,1.0s,mb3.8,baz=325,slow=6.3,SNR=8.8						
ASAR	**Alice Springs**	**72.61 132**	P	**P**	**17 09 16.7**	**+0.4**	
	comp=Z,0.2nm,0.8s,mb3.1,baz=318,slow=6.2,SNR=2.8						
TORD	**Torodi Ar. Bea**	**76.42 277**	P	**P**	**17 09 39.8**	**+1.1**	
	comp=Z,0.8nm,0.9s,mb3.6,baz=46,slow=4.3,SNR=3.5						
ILAR	**Eielson Array**	**76.94 20**	P	**P**	**17 09 40.9**	**+0.1**	
	comp=Z,1.0nm,1.0s,mb3.7,baz=307,slow=4.7,SNR=6.2						

BJI ***25*** *17:01:27.4, 30.52N×83.27E, h13km, mb4.2/5, Ms3.9/2, Ms7 3.5/2*

IDC ***25*** *17:01:29.0±0.9, 30.70N×83.33E, h0km, mb3.8/9, mb1 3.9/11, mb1mx3.7/28, mbtmp3.7/11, ML3.4/2, Error ellipse: s-maj=36.8km s-min=16.6km az=59.0*

ISCJB ***25*** *17:01:30.0±3.7, 30.7N±0.1×83.3E±0.1, h16km±26km, mb3.8/10, Error ellipse: s-maj=24.2km s-min=9.5km az=135.2*

NEIC ***25*** *17:01:30.6±0.7, 30.78N×83.29E, h10km, mb4.4/1, Error ellipse: s-maj=17.3km s-min=8.5km az=51.0*

MOS ***25*** *17:01:32.5±1.4, 30.71N×83.34E, h33km, mb4.3/4, Error ellipse: s-maj=17.9km s-min=8.8km az=107.1*

ISC 25 17:01:33.2±3.6, 30.8N±0.1×83.4E±0.1, h25km±26km, n27, σ1°06/28, mb3.8/10, 4C-2D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
LSA	**Lhasa**	**6.83**	**97**	Pn		**Pn**	**17 03 05.0**	**-6.8**
LSA	**Lhasa**	**6.83**	**97**	*e*P		**Pn**	**17 03 13.5**	**+1.7**
	14nm,0.8s							
LSA	**Lhasa**	**6.83**	**97**	*e*P		**Pn**	**17 03 13.5**	**+1.7**
LSA				pmax	pmax			
	comp=Z,14nm,0.8s							
KSH	**Kashi**	**10.63**	**327**	*e*P		**Pn**	**17 04 05.5**	**+1.7**
KSH				*ep*P			17 04 12.3	
KSH				*e*PP			17 04 14.3	
KSH				*e*S		**Sn**	**17 06 01.3**	**-0.7**
KSH				*es*S			17 06 13.5	
KSH				*e*SS			17 06 15.5	
KSH				pmax	pmax			
	comp=Z,2.0nm,0.3s							
KSH				LR	LR			
	comp=N,320nm,9.1s							
KSH				LR	LR			
	comp=E,340nm,8.7s							
KSH				LR	LR			
	comp=Z,230nm,10.2s							
AAK	**Ala-Archa**	**13.82**	**332**	‖*e*P		**Pn**	**17 04 47.0**	**-0.4**
MK31	**Makanchi Array**	**16.04**	**357**	*e*P		**Pn**	**17 05 15.6**	**-1.5**
MKAR	**Makanchi Array**	**16.04**	**357**	Pn		**Pn**	**17 05 14.1**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=174,slow=13,SNR=6.9							
MKAR	**Makanchi Array**	**16.04**	**357**	*c*e*c*P		**Pn**	**17 05 18.2**	**+1.2**
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**18.70**	**127**	P		**Pn**	**17 05 49.0**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=307,slow=12,SNR=10							
KURK	**Kurchatov**	**20.26**	**351**	P		**P**	**17 06 05.2**	**-1.4**
	comp=Z,4.6nm,1.0s,baz=168,slow=9.9,SNR=27							
KURK	**Kurchatov**	**20.26**	**351**	*c i*P		**P**	**17 06 06.3**	**-0.3**
KURK				pmax	pmax			
	comp=Z,19nm,1.7s							
ENH	**Enshi**	**22.51**	**84**	*e*P		**P**	**17 06 30.6**	**-0.4**
ZALV	**Zalesovo Beam**	**23.21**	**2**	P		**P**	**17 06 37.9**	**-0.3**
	comp=Z,2.0nm,0.8s,mb3.6,baz=193,slow=10,SNR=9.8							
BVAR	**Borovoye Array**	**24.19**	**341**	P		**P**	**17 06 48.4**	**+1.0**
	comp=Z,1.0nm,0.4s,mb3.6,baz=145,slow=10,SNR=6.2							
BRVK	**Borovoye**	**24.25**	**341**	‖*e*P		**P**	**17 06 49.4**	**+1.4**
BRVK				pmax	pmax			
	comp=Z,5.0nm,1.8s,mb3.6							
AB31	**Akbulak array**	**25.58**	**323**	*e*P		**P**	**17 07 01.1**	**+0.9**
YAK	**Yakutsk**	**43.21**	**30**	P		**P**	**17 09 31.1**	**-0.7**
	comp=Z,4.9nm,0.6s,mb4.4							
YAK	**Yakutsk**	**43.21**	**30**	P		**P**	**17 09 31.1**	**-0.7**
YAK				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.4							
YSS	**Yuzh-Sakhalins**	**47.87**	**53**	*e*P		**P**	**17 10 12.0**	**+3.0**
FINES	**FINESS Array B**	**47.95**	**327**	P		**P**	**17 10 08.4**	**-1.0**
	comp=Z,0.7nm,0.4s,mb4.0,baz=120,slow=11,SNR=4.5							
ARCES	**ARCESS Array B**	**50.41**	**337**	P		**P**	**17 10 27.7**	**-0.4**
	comp=Z,2.0nm,1.0s,mb4.1,baz=76,slow=5.1,SNR=4.7							
SEY	**Seymchan**	**53.61**	**32**	‖*e*P		**P**	**17 10 53.0**	**+1.0**
KMBO	**Kilima Mbogo**	**54.08**	**243**	*c*e*c*P		**P**	**17 11 04.5**	**+8.5**
KMBO				pmax	pmax			
	comp=Z,1.0nm,0.4s							
WRA	**Warramunga Arr**	**70.28**	**129**	P		**P**	**17 12 44.3**	**-0.3**
	comp=Z,0.6nm,0.5s,mb3.8,baz=324,slow=6.3,SNR=18							
ASAR	**Alice Springs**	**72.63**	**132**	P		**P**	**17 12 58.7**	**0.0**
	comp=Z,0.6nm,1.1s,mb3.5,baz=310,slow=5.9,SNR=7.8							
TORD	**Torodi Ar. Bea**	**76.31**	**277**	P		**P**	**17 13 20.3**	**-0.2**
	comp=Z,0.5nm,0.8s,mb3.5,baz=46,slow=4.2,SNR=3.1							
ILAR	**Eielson Array**	**77.08**	**20**	P		**P**	**17 13 24.0**	**+0.1**
	comp=Z,1.4nm,1.0s,mb3.9,baz=297,slow=4.7,SNR=9.1							

IDC ***25*** *17:02:45.7±1.3, 30.55N×83.12E, h0km, mb3.6/4, mb1 3.7/6, mb1mx3.5/27, mbtmp3.6/6, ML3.1/1, Error ellipse: s-maj=52.6km s-min=24.8km az=53.0*

ISCJB ***25*** *17:02:46.0±4.4, 30.64N±0.09×83.1E±0.1, h17km±35km, mb3.5/4, Error ellipse: s-maj=21.1km s-min=14.9km az=166.7*

NEIC ***25*** *17:02:47.0±0.8, 30.65N×83.13E, h10km, mb3.9/1, Error ellipse: s-maj=19.3km s-min=10.3km az=55.0*

ISC 25 17:02:49.0±4.2, 30.64N±0.09×83.1E±0.1, h24km±33km, n10, σ0°44/10, mb3.5/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
LSA	**Lhasa**	**7.00**	**96**	*e*P		**Pn**	**17 04 30.4**	**+0.4**
	18nm,1.0s							
HYB	**Hyderabad**	**13.81**	**199**	*i* P		**Pn**	**17 06 03.0**	**-0.4**
MKAR	**Makanchi Array**	**16.14**	**358**	Pn		**Pn**	**17 06 34.4**	**+0.1**
	baz=186,slow=12,SNR=1.8							
CMAR	**Chiang Mai Arr**	**18.78**	**127**	P		**Pn**	**17 07 07.2**	**+0.1**
	0.0nm,0.3s,baz=315,slow=11,SNR=7.1							
KURK	**Kurchatov**	**20.34**	**352**	P		**P**	**17 07 23.4**	**0.0**
KURK	**Kurchatov**	**20.34**	**352**	P		**P**	**17 07 23.4**	**0.0**
	0.7nm,0.6s,baz=172,slow=10,SNR=8.1							
YAK	**Yakutsk**	**43.39**	**30**	P		**P**	**17 10 48.3**	**-1.0**
	1.3nm,0.6s,mb3.8							
WRA	**Warramunga Arr**	**70.36**	**129**	P		**P**	**17 14 00.9**	**-0.2**
	0.6nm,0.7s,mb3.6,baz=324,slow=6.4,SNR=5.3							
ASAR	**Alice Springs**	**72.69**	**132**	P		**P**	**17 14 15.3**	**+0.2**
	0.2nm,0.8s,mb3.1,baz=355,slow=10,SNR=3.8							
TORD	**Torodi Ar. Bea**	**76.14**	**277**	P		**P**	**17 14 36.1**	**+0.6**
	0.6nm,0.9s,mb3.5,baz=64,slow=3.4,SNR=3.1							

IDC 25 17:04:05.3±1.7, 57.45S×25.88W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.9/14, mbtmp4.1/3, Error ellipse: s-maj=68.0km s-min=38.2km az=1.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CPUP	**Villa Florida**	**38.27**	**311**	P		P	17 11 26.9	-0.2
	0.3nm,0.4s,baz=126,slow=5.4,SNR=2.9							
LPAZ	**La Paz**	**51.77**	**305**	P		P	17 13 15.4	+0.9
	3.2nm,0.5s,baz=172,slow=5.8,SNR=15							
TORD	**Torodi Ar. Bea**	**73.94**	**28**	P		P	17 15 42.1	+0.1
	1.9nm,0.7s,baz=198,slow=6.2,SNR=14							
FINES	**FINESS Array B**	**125.29**	**28**	PKP		PKPdf	17 23 06.0	-0.3
	2.7nm,0.9s,baz=99,slow=25,SNR=4.6							
YKA	**Yellowknife Ar**	**137.69**	**316**	PKP		PKPdf	17 23 29.5	-0.2
	0.6nm,0.4s,baz=131,slow=2.1,SNR=4.5							
INK	**Inuvik**	**147.33**	**319**	PKPbc		PKPbc	17 23 49.1	+0.1
	2.7nm,0.4s,baz=152,slow=5.3,SNR=4.1							
ILAR	**Eielson Array**	**151.57**	**309**	PKPbc		PKPbc	17 23 59.4	-0.3
	3.3nm,0.7s,baz=148,slow=3.7,SNR=28							
ILAR				PKPab		PKPab	17 24 06.9	-1.5
	0.7nm,0.6s,baz=159,slow=2.6,SNR=4.8							
KDAK	**Kodiak Island**	**152.06**	**294**	PKPbc		PKPbc	17 24 01.0	0.0
	5.2nm,0.4s,baz=148,slow=2.1,SNR=9.7							

IDC 25 17:07:35.8±3.7, 30.49N×82.93E, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.5/26, mbtmp3.5/6, ML3.6/2, Error ellipse: s-maj=158.3km s-min=26.8km az=67.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**16.29**	**358**	Pn		Pn	17 11 22.9	-3.1
	0.1nm,0.3s,baz=178,slow=13,SNR=3.7							
CMAR	**Chiang Mai Arr**	**18.83**	**126**	P		Pn	17 11 57.9	+0.1
	0.1nm,0.3s,baz=309,slow=10,SNR=6.5							
WRA	**Warramunga Arr**	**70.40**	**129**	P		P	17 18 51.5	-0.4
	0.6nm,1.0s,baz=324,slow=6.5,SNR=5.5							
ASAR	**Alice Springs**	**72.73**	**132**	P		P	17 19 06.2	+0.3
	0.1nm,0.3s,baz=78,slow=40,SNR=3.1							
ILAR	**Eielson Array**	**77.45**	**20**	P		P	17 19 32.6	0.0
	0.4nm,0.7s,baz=243,slow=6.3,SNR=5.2							
YKA	**Yellowknife Ar**	**86.28**	**8**	P		P	17 20 19.7	+0.6
	2.9nm,1.0s,baz=328,slow=11,SNR=4.0							

IDC 25 17:14:29.1±7.0, 1.73S×122.03E, h0km, mb4.3/3, mb1 4.7/4, mb1mx3.9/20, mbtmp4.7/4, ML6.0/1, Error ellipse: s-maj=203.5km s-min=34.2km az=92.0, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
DAV	**Davao City (W)**	**9.43**	**22**	Pn		Pn	17 16 46.4	+0.1
	138nm,0.3s,baz=88,slow=6.7,SNR=5.6							
WRA	**Warramunga Arr**	**21.74**	**147**	P		P	17 19 22.7	+0.4
	3.5nm,0.5s,baz=324,slow=11,SNR=82							
ASAR	**Alice Springs**	**24.66**	**153**	P		P	17 19 51.5	-0.2
	4.0nm,0.6s,baz=330,slow=8.2,SNR=132							
STKA	**Stephens Creek**	**35.21**	**150**	P		P	17 21 25.2	0.0
	3.2nm,0.3s,baz=326,slow=8.4,SNR=42							

ISK ***25*** *17:15:32.7, 37.38N×35.85E, h28km, ML2.3*

ISCJB ***25*** *17:15:34.0±0.5, 37.42N±0.05×35.87E±0.04, h25km±5km, Error ellipse: s-maj=8.1km s-min=4.7km az=166.8*

CSEM ***25*** *17:15:33.6±0.3, 37.43N×35.87E, h23km±3km, ML2.3, Error ellipse: s-maj=11.3km s-min=5.7km az=168.0*

DDA ***25*** *17:15:34.4, 37.39N×35.91E, h7km±6km, Md2.9*

ISC 25 17:15:34.2±0.5, 37.41N±0.04×35.87E±0.03, h23km±5km, n28, σ0°96/42, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KOZT	**Kozan**	**0.08**	**333**	PG		**Pb**	**17 15 38.2**	**-0.2**
KOZT				*e*SG		**Sb**	**17 15 42.0**	**+0.6**
ANDN	**Andirin**	**0.41**	**66**	*i* P		**Pb**	**17 15 42.3**	**-0.6**
ANDN				*i* S		**Sb**	**17 15 48.8**	**0.0**
ANDN	**Andirin**	**0.41**	**66**	*i* P		**Pb**	**17 15 42.3**	**-0.6**
ANDN				*i* S		**Sb**	**17 15 48.8**	**0.0**
CEYT	**Ceyhan**	**0.41**	**194**	*e*PG		**Pb**	**17 15 41.6**	**-1.2**
CEYT	**Ceyhan**	**0.41**	**194**	*e*Pg		**Pb**	**17 15 41.6**	**-1.2**
KARA	**Karaisali**	**0.67**	**257**	*e*PG		**Pb**	**17 15 45.9**	**-1.3**
KARA				*e*SG		**Sb**	**17 15 56.4**	**+0.4**
KARA	**Karaisali**	**0.67**	**257**	*e*Pg		**Pb**	**17 15 45.9**	**-1.3**
KARA				*e*Sg		**Sb**	**17 15 56.4**	**+0.4**
KMRS	**Kahramanmaras**	**0.82**	**83**	*e*PG		**Pb**	**17 15 49.2**	**-0.6**
KMRS	**Kahramanmaras**	**0.82**	**83**	*e*Pg		**Pb**	**17 15 49.2**	**-0.6**
GULE	**Gulek**	**0.88**	**262**	*i* P		**Pb**	**17 15 52.1**	**+1.3**
GULE				*i* S		**Sb**	**17 16 03.8**	**+1.7**
GULE	**Gulek**	**0.88**	**262**	*i* P		**Pb**	**17 15 52.1**	**+1.3**
GULE				*i* S		**Sb**	**17 16 03.8**	**+1.6**
COBT	**Iskenderun**	**0.94**	**161**	*i* P		**Pb**	**17 15 51.6**	**-0.1**
COBT				*i* S		**Sb**	**17 16 03.0**	**-0.8**
COBT	**Iskenderun**	**0.94**	**161**	*i* P		**Pb**	**17 15 51.6**	**-0.2**
COBT				*i* S		**Sb**	**17 16 03.0**	**-0.8**
GAZ	**Gaziantep**	**1.09**	**102**	*e*PN		**Pn**	**17 15 52.7**	**-1.4**
GAZ	**Gaziantep**	**1.09**	**102**	*e*Pn		**Pn**	**17 15 52.7**	**-1.3**
KUZU	**Kuzuini**	**1.15**	**123**	*i* P		**Pn**	**17 15 55.3**	**+0.5**
KUZU				*i* S		**Pn**	**17 16 10.7**	**+0.8**
KUZU	**Kuzuini**	**1.15**	**123**	*i* P		**Pn**	**17 15 55.3**	**+0.4**
KUZU				*i* S		**Sb**	**17 16 10.7**	**+0.8**
GZT	**Gaziantep**	**1.35**	**92**	*i* P		**Pn**	**17 15 58.3**	**+0.7**
GZT				*i* S		**Sn**	**17 16 15.7**	**+1.0**
YAYL	**Yayladag**	**1.39**	**172**	*i* P		**Pn**	**17 15 59.5**	**+1.4**
YAYL				*i* S		**Sn**	**17 16 16.4**	**+0.8**
YAYL	**Yayladag**	**1.39**	**172**	*i* P		**Pn**	**17 15 59.5**	**+1.4**
YAYL				*i* S		**Sn**	**17 16 16.4**	**+0.8**
SARI	**SarD1z-Kayseri**	**1.42**	**27**	*e*PN		**Pn**	**17 15 52.7**	**-5.9**
SARI	**SarD1z-Kayseri**	**1.42**	**27**	*e*Pn		**Pn**	**17 15 52.7**	**-5.9**
IKL	**Isikli**	**2.11**	**237**	*e*PN		**Pn**	**17 16 06.4**	**-1.6**
IKL	**Isikli**	**2.11**	**237**	*e*Pn		**Pn**	**17 16 06.4**	**-1.6**
MALT	**Malatya**	**2.21**	**65**	*e*PN		**Pn**	**17 16 09.3**	**-0.2**
MALT	**Malatya**	**2.21**	**65**	*e*Pn		**Pn**	**17 16 09.3**	**-0.1**
HDMB	**Hadim**	**2.74**	**262**	*e*PN		**Pn**	**17 16 15.4**	**-1.3**
HDMB	**Hadim**	**2.74**	**262**	*e*Pn		**Pn**	**17 16 15.4**	**-1.3**

FUNV 25 17:29:10.4, 6.83N×73.00W, h163km, MW3.6, 4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CAPV	**Capacho**	**1.23**	**33**	‖*i*P		Pn	17 29 37.5	-0.9
CAPV				*e*S		Sn	17 29 58.6	-1.4
SOCV	**Socops**	**2.57**	**56**	*e*P		Pn	17 29 52.2	-0.7
SOCV				*e*S		Sn	17 30 22.9	-3.1
VIGV	**El Vigia**	**2.57**	**39**	‖*i*P		Pn	17 29 52.0	-1.1
VIGV				*e*S		Sn	17 30 22.0	-4.1
ELOV	**Elorza**	**3.49**	**87**	*e*P		Pn	17 30 03.9	-0.6
VIRV	**Villa del Rosa**	**3.69**	**9**	*e*P		Pn	17 30 04.9	-2.2
VIRV				*e*S		Sn	17 30 47.3	-4.0
QARV	**Quebrada Arrib**	**4.15**	**36**	‖*e*P		Pn	17 30 11.8	-1.2
SANV	**Sanarito**	**4.33**	**52**	*e*P		Pn	17 30 13.9	-1.4
CURV	**Curarigua**	**4.36**	**43**	*e*P		Pn	17 30 14.2	-1.5
DABV	**Dabajuro**	**4.69**	**30**	*e*P		Pn	17 30 18.8	-1.2
TEPV	**Terepaima**	**4.88**	**50**	*e*P		Pn	17 30 21.3	-1.2
SIQV	**Siquisique**	**4.93**	**39**	‖*e*P		Pn	17 30 21.4	-1.7
BAUV	**El Baul**	**5.34**	**67**	*e*P		Pn	17 30 25.9	-2.6
MAPV	**Macapo**	**5.39**	**56**	*e*P		Pn	17 30 27.0	-2.2
IMOV	**Isla Los Monje**	**5.87**	**20**	*e*P		Pn	17 30 33.7	-1.8
MONV	**Montecano**	**5.90**	**30**	*e*P		Pn	17 30 33.8	-2.2
CAOV	**Caicara del Or**	**6.64**	**85**	*e*P		Pn	17 30 43.2	-2.6
CUPV	**Cœpira**	**7.82**	**65**	*e*P		Pn	17 30 59.4	-2.0

IDC ***25*** *17:30:22.9±1.0, 30.55N×83.21E, h0km, mb3.6/7, mb1 3.7/9, mb1mx3.5/28, mbtmp3.5/9, ML3.3/2, Error ellipse: s-maj=38.4km s-min=18.7km az=62.0*

ISCJB ***25*** *17:30:24.6±7.3, 30.6N±0.2×83.2E±0.3, h22km±51km, mb3.4/6, Error ellipse: s-maj=46.4km s-min=12.7km az=145.9*

NEIC ***25*** *17:30:24.4±0.7, 30.54N×83.12E, h10km, Error ellipse: s-maj=19.3km s-min=8.9km az=57.0*

ISC 25 17:30:28.5±3.5, 30.6N±0.2×83.2E±0.3, h38km±31km, n14, σ0°75/15, mb3.4/6, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
LSA	**Lhasa**	**6.92**	**95**	Pn		**Pn**	**17 32 08.3**	**+0.9**
LSA				Sn		**Sn**	**17 33 14.5**	**-10**
LSA				smax				
	comp=N,10.0nm,0.8s							
LSA				smax				
	comp=E,10.0nm,0.9s							
LSA	**Lhasa**	**6.92**	**95**	*e*P		**Pn**	**17 32 08.0**	**+0.5**
	comp=E,10nm,0.7s							
MK31	**Makanchi Array**	**16.18**	**358**	P		**Pn**	**17 34 14.3**	**+1.3**
MKAR	**Makanchi Array**	**16.18**	**358**	Pn		**Pn**	**17 34 11.6**	**-1.4**
	comp=E,0.0nm,0.3s,baz=185,slow=14,SNR=2.9							
CMAR	**Chiang Mai Arr**	**18.70**	**127**	P		**Pn**	**17 34 43.2**	**-1.1**
CMAR	**Chiang Mai Arr**	**18.70**	**127**	P		**Pn**	**17 34 43.2**	**-1.1**
	comp=E,0.1nm,0.3s,baz=301,slow=12,SNR=6.8							
KURK	**Kurchatov**	**20.39**	**352**	P		**P**	**17 35 02.0**	**+0.2**
	comp=E,2.2nm,0.2s,baz=21,slow=39,SNR=2.8							
ZALV	**Zalesovo Beam**	**23.36**	**2**	P		**P**	**17 35 33.1**	**-0.4**
	comp=E,0.7nm,0.5s,mb3.3,baz=200,slow=11,SNR=3.3							
BVAR	**Borovoye Array**	**24.29**	**341**	P		**P**	**17 35 41.6**	**-0.5**
	comp=E,0.6nm,0.5s,mb3.3,baz=142,slow=7.5,SNR=4.3							
WRA	**Warramunga Arr**	**70.28**	**129**	P		**P**	**17 41 38.0**	**0.0**
	comp=E,0.8nm,0.8s,mb3.7,baz=324,slow=6.3,SNR=8.1							
ASAR	**Alice Springs**	**72.62**	**132**	P		**P**	**17 41 52.5**	**+0.4**
	comp=E,0.4nm,0.8s,mb3.4,baz=330,slow=4.8,SNR=3.9							
TORD	**Torodi Ar. Bea**	**76.22**	**277**	P		**P**	**17 42 13.8**	**+0.4**
	comp=E,0.4nm,0.6s,mb3.5,baz=50,slow=5.4,SNR=2.9							
ILAR	**Eielson Array**	**77.25**	**20**	P		**P**	**17 42 18.6**	**+0.2**
ILAR	**Eielson Array**	**77.25**	**20**	P		**P**	**17 42 18.6**	**+0.2**
	comp=E,0.5nm,1.0s,mb3.4,baz=302,slow=5.0,SNR=5.0							

IDC 25 17:35:20.3±6.5, 30.69N×83.54E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/26, mbtmp3.4/4, ML2.6/1, Error ellipse: s-maj=290.9km s-min=27.3km az=70.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**16.11**	**357**	Pn		Pn	17 39 07.5	-0.6
	0.0nm,0.3s,baz=229,slow=35,SNR=3.8							
KURK	**Kurchatov**	**20.34**	**351**	P		P	17 39 56.1	-2.0
	0.7nm,0.3s,baz=165,slow=9.9,SNR=2.9							
ZALV	**Zalesovo Beam**	**23.27**	**2**	P		P	17 40 29.8	+0.5
	0.3nm,0.4s,baz=193,slow=12,SNR=2.5							
WRA	**Warramunga Arr**	**70.12**	**129**	P		P	17 46 34.8	+0.1
	0.5nm,0.9s,baz=324,slow=6.4,SNR=5.6							

BJI 25 17:39:20.7, 42.11N×87.54E, h21km, ML3.0/8, 1C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
WMQ	**Urumqi**	**1.71**	**4**	‖*i*Pg		Pn	17 39 50.5	+1.2
WMQ				Sg		Sn	17 40 13.0	+2.4
WMQ				smax				
	comp=N,250nm,0.2s							
WMQ				smax				
	comp=E,370nm,0.2s							
MK31	**Makanchi Array**	**6.00**	**323**	‖Pn		Pn	17 40 48.2	0.0
	comp=E,0.3nm,0.3s,baz=137,slow=14,SNR=31							
MK31				‖Pg		Pn	17 41 01.0	+13
	comp=E,0.8nm,0.5s,baz=142,slow=14,SNR=13							
MK31				‖Lg			17 42 11.9	
	comp=E,2.0nm,0.5s,baz=139,slow=29,SNR=4.4							
KSH	**Kashi**	**9.14**	**257**	*e*P		Pn	17 41 45.0	+14
KSH				*ep*P			17 41 52.0	
KSH				*e*PP			17 41 53.3	

IDC 25 17:49:48.7±4.7, 30.40N×82.70E, h0km, mb3.3/4, mb1 3.5/6, mb1mx3.3/27, mbtmp3.3/6, ML3.5/2, Error ellipse: s-maj=170.7km s-min=23.7km az=66.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**16.38**	**359**	Pn		Pn	17 53 39.5	-0.4
	0.2nm,0.3s,baz=189,slow=14,SNR=6.5							
CMAR	**Chiang Mai Arr**	**18.95**	**125**	P		Pn	17 54 11.8	-0.2
	0.1nm,0.3s,baz=94,slow=8.9,SNR=3.8							
KURK	**Kurchatov**	**20.53**	**353**	P		P	17 54 26.7	-1.7
	1.5nm,1.0s,baz=168,slow=10,SNR=10							
ZALV	**Zalesovo Beam**	**23.59**	**3**	P		P	17 54 59.6	-1.5
	0.5nm,0.5s,baz=188,slow=15,SNR=3.8							
WRA	**Warramunga Arr**	**70.50**	**129**	P		P	18 01 04.9	-0.5
	0.2nm,0.8s,baz=324,slow=6.3,SNR=5.0							
ILAR	**Eielson Array**	**77.59**	**20**	P		P	18 01 47.5	+1.2
	0.3nm,0.9s,baz=317,slow=4.7,SNR=2.7							

**IDC 25 17:52:17.9±4.4, 30.27N×82.42E, h0km, mb3.2/2, mb1 3.5/4, mb1mx3.2/27, mbtmp3.2/4, ML2.6/2, Error ellipse: s-maj=166.8km s-min=28.

SHL	**Shillong**	**9.16 124**	*e*PKP	**Pn**	**18 00 54.0**	**-4.8**
SHL			*ex*	x	18 02 37.0	
KSH	**Kashi**	**10.52 327**	*e*P	**Pn**	**18 01 16.5**	**-0.8**
KSH			*ep*P		18 01 23.3	
KSH			*e*PP		18 01 24.8	
KSH			*es*P		18 01 28.5	
KSH			*e*S	**Sn**	**18 03 11.0**	**-4.5**
KSH			sS		18 03 23.0	
KSH			*e*SS		18 03 28.8	
KSH			pmax	pmax		
	comp=Z,2.0nm,0.3s					
KSH			pmax	pmax		
	comp=Z,40nm,3.0s					
KSH			LR	LR		
	comp=N,330nm,9.7s					
KSH			LR	LR		
	comp=E,720nm,13.5s					
KSH			LR	LR		
	comp=Z,320nm,12.9s					
AAK	**Ala-Archa**	**13.70 331**	Pn	**Pn**	**18 02 06.4**	**+5.7**
	comp=Z,0.4nm,0.3s,baz=236,slow=8.4,SNR=4.1					
AAK			LR	LR	18 07 53.0	
	comp=Z,284nm,19.5s,baz=123,slow=39					
HYB	**Hyderabad**	**14.16 199**	*i* P	**Pn**	**18 02 03.0**	**-4.2**
MKAR	**Makanchi Array**	**15.87 357**	Pn	**Pn**	**18 02 30.5**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=181,slow=10,SNR=16					
CHTO	**Chiang Mai**	**18.50 127**	*e*P	**Pn**	**18 02 59.8**	**-3.3**
	comp=Z,4.7nm,1.3s					
CMAR	**Chiang Mai Arr**	**18.75 128**	P	**Pn**	**18 03 02.0**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=312,slow=12,SNR=13					
CMAR			LR	LR	18 11 45.3	
	comp=Z,88nm,18.4s,baz=315,slow=42					
KURK	**Kurchatov**	**20.10 351**	P	**P**	**18 03 18.8**	**-1.4**
	comp=Z,7.5nm,0.9s,baz=165,slow=10,SNR=29					
ZAA0	**Zalesovo Array**	**23.04 2**	*e*P	**P**	**18 03 51.5**	**-0.2**
ZALV	**Zalesovo Beam**	**23.04 2**	P	**P**	**18 03 51.4**	**-0.4**
	comp=Z,2.9nm,0.9s,mb3.7,baz=175,slow=8.5,SNR=6.5					
BVAR	**Borovoye Array**	**24.05 340**	P	**P**	**18 04 03.2**	**+1.4**
	comp=Z,1.2nm,0.7s,mb3.5,baz=151,slow=9.5,SNR=9.8					
AKTK	**Aktyubinsk**	**27.19 323**	P	**P**	**18 04 32.5**	**+2.2**
AKTO	**Aktyubinsk**	**27.19 323**	P	**P**	**18 04 32.5**	**+2.2**
	comp=Z,0.7nm,0.6s,mb3.4,baz=76,slow=17,SNR=3.9					
AKASG	**Malin Array Be**	**44.42 313**	P	**P**	**18 06 57.2**	**-0.3**
	comp=Z,1.1nm,0.7s,mb3.7,baz=89,slow=6.7,SNR=6.0					
FINES	**FINESS Array B**	**47.84 327**	P	**P**	**18 07 23.9**	**-0.4**
	comp=Z,2.0nm,0.7s,mb4.3,baz=108,slow=6.2,SNR=4.5					
ARCES	**ARCESS Array B**	**50.27 337**	P	**P**	**18 07 42.0**	**-0.8**
	comp=Z,2.5nm,0.9s,mb4.3,baz=96,slow=8.7,SNR=5.2					
WRA	**Warramunga Arr**	**70.34 129**	P	**P**	**18 09 56.4**	**-4.5**
	comp=Z,2.7nm,0.8s,mb4.2,baz=322,slow=6.3,SNR=18					
ASAR	**Alice Springs**	**72.70 132**	P	**P**	**18 10 10.7**	**-4.3**
	comp=Z,0.9nm,0.8s,mb3.8,baz=335,slow=5.1,SNR=9.8					
TORD	**Torodi Ar. Bea**	**76.36 277**	P	**P**	**18 10 37.8**	**+1.2**
	comp=Z,0.4nm,0.5s,mb3.6,baz=46,slow=5.2,SNR=3.5					
ILAR	**Eielson Array**	**76.89 20**	P	**P**	**18 10 38.9**	**+0.2**
	comp=Z,1.5nm,0.9s,mb3.9,baz=290,slow=4.5,SNR=12					
BOSA	**Boshof**	**81.09 229**	P	**P**	**18 11 01.2**	**-1.1**
BOSA	**Boshof**	**81.09 229**	P	**P**	**18 11 01.2**	**-1.1**
	comp=Z,3.1nm,0.8s,mb4.3,baz=96,slow=13,SNR=3.6					
STKA	**Stephens Creek**	**83.28 133**	P	**P**	**18 11 11.0**	**-2.6**
STKA	**Stephens Creek**	**83.28 133**	P	**P**	**18 11 11.0**	**-2.6**
	comp=Z,1.1nm,0.6s,mb4.1,baz=149,slow=12,SNR=4.4					

*ISCJB **25** 18:02:29.2±1.1, 30.5°N±0.1°×83.0°E±0.2, h10km, mb3.5/4, Error ellipse: s-maj=26.1km s-min=13.4km az=140.9*
*IDC **25** 18:02:29.6±1.2, 30.50°N×83.15°E, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.5/27, mbtmp3.6/7, ML3.7/2, Error ellipse: s-maj=38.5km s-min=23.8km az=63.0*
*NEIC **25** 18:02:30.8±1.1, 30.56°N±0.1°×83.00°E±0.2, h10km, Error ellipse: s-maj=26.9km s-min=13.6km az=53.0*

ISC 25 18:02:30.9±1.1, 30.6°N±0.1°×83.0°E±0.2, h10km, n10, σ1°28/10, mb3.5/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**7.10**	**95**	*e*P		**Pn**	**Pn**	**18 04 16.5**	**+1.7**
	4.9nm,0.6s								
MKAR	**Makanchi Array**	**16.23**	**358**	Pn		**Pn**	**Pn**	**18 06 18.8**	**-0.1**
	0.1nm,0.3s,baz=175,slow=11,SNR=5.1								
CMAR	**Chiang Mai Arr**	**18.82**	**126**	P		**Pn**	**Pn**	**18 06 49.6**	**-1.6**
	0.2nm,0.3s,baz=301,slow=12,SNR=4.1								
KURK	**Kurchatov**	**20.41**	**352**	P		**P**	**P**	**18 07 06.5**	**-1.4**
KURK	**Kurchatov**	**20.41**	**352**	P		**P**	**P**	**18 07 06.5**	**-1.4**
	2.3nm,1.0s,baz=168,slow=10,SNR=6.1								
ZALV	**Zalesovo Beam**	**23.42**	**3**	P		**P**	**P**	**18 07 39.5**	**-0.6**
	0.4nm,0.4s,mb3.2,baz=186,slow=10,SNR=4.0								
WRA	**Warramunga Arr**	**70.39**	**129**	P		**P**	**P**	**18 13 44.4**	**-0.9**
WRA	**Warramunga Arr**	**70.39**	**129**	P		**P**	**P**	**18 13 44.4**	**-0.9**
	0.8nm,0.7s,mb3.8,baz=325,slow=6.4,SNR=6.0								
TORD	**Torodi Ar. Bea**	**76.04**	**277**	P		**P**	**P**	**18 14 20.2**	**+1.3**
	0.5nm,0.7s,mb3.5,baz=59,slow=4.9,SNR=3.1								
ILAR	**Eielson Array**	**77.36**	**20**	P		**P**	**P**	**18 14 27.3**	**+1.8**
	0.2nm,0.5s,mb3.3,baz=299,slow=4.0,SNR=3.0								

IDC 25 18:07:59.8±20.0, 23.27S×177.86W, h308km±179km, mb3.3/5, mb1 3.5/6, mb1mx3.2/19, mbtmp3.4/6, Error ellipse: s-maj=201.2km s-min=79.0km az=60.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.55**	**195**	P		P	P	18 11 22.3	0.0
	0.2nm,0.3s,baz=281,slow=3.6,SNR=3.2								
CTA	**Charters Tower**	**33.44**	**268**	*e*P		P	P	18 14 11.8	+1.2
	2.4nm,0.3s								
CTA	**Charters Tower**	**33.44**	**268**	P		P	P	18 14 11.6	+1.0
	3.0nm,0.4s,baz=92,slow=12,SNR=5.8								
STKA	**Stephens Creek**	**36.77**	**247**	*e*P		P	P	18 14 38.2	-0.5
	4.5nm,1.9s								
STKA	**Stephens Creek**	**36.77**	**247**	P		P	P	18 14 38.3	-0.5
	0.5nm,0.3s,baz=80,slow=8.8,SNR=8.6								
ASAR	**Alice Springs**	**44.07**	**259**	P		P	P	18 15 37.8	-0.5
	0.5nm,0.4s,baz=95,slow=7.3,SNR=42								
WRA	**Warramunga Arr**	**44.41**	**265**	P		P	P	18 15 40.5	-0.4
	0.9nm,0.3s,baz=97,slow=8.4,SNR=41								
FITZ	**Fitzroy Crossi**	**52.84**	**264**	*e*P		P	P	18 16 44.5	-0.2
	3.7nm,0.9s								
FITZ	**Fitzroy Crossi**	**52.84**	**264**	P		P	P	18 16 45.1	+0.4
	0.6nm,0.4s,baz=124,slow=6.9,SNR=8.0								

*ISCJB **25** 18:12:59.6±1.4, 30.7°N±0.2°×83.1°E±0.2, h10km, mb3.2/3, Error ellipse: s-maj=35.2km s-min=8.4km az=138.3*
*IDC **25** 18:12:59.5±3.0, 30.58°N×83.09°E, h0km, mb3.3/4, mb1 3.5/6, mb1mx3.3/28, mbtmp3.4/6, ML3.3/2, Error ellipse: s-maj=121.8km s-min=21.6km az=63.0*
*NEIC **25** 18:13:00.9±1.4, 30.64°N×83.02°E, h10km, Error ellipse: s-maj=34.9km s-min=10.9km az=54.0*

ISC 25 18:13:02.0±1.4, 30.7°N±0.2°×83.2°E±0.2, h10km, n9, σ1°23/10, mb3.2/3, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**6.93**	**96**	P		P	P	**18 14 45.9**	**+2.3**
KSH	**Kashi**	**10.64**	**328**	*e*P		**Pn**	**Pn**	**18 15 36.0**	**+1.6**
KSH				*ep*P				18 15 43.3	
KSH				*e*PP				18 15 43.8	
KSH				*es*P				18 15 47.3	
KSH				*e*S		**Sn**	**Sn**	**18 17 34.5**	**+1.0**
KSH				*es*S				18 17 42.3	
KSH				*e*SS				18 17 46.3	
KSH				pmax		pmax			
	comp=Z,31nm,4.0s								
KSH				AMB		AMB			
	comp=Z,2.0nm,0.4s								
KSH				LR		LR			
	comp=N,170nm,12.3s								
KSH				LR		LR			
	comp=E,180nm,6.8s								
KSH				LR		LR			
	comp=Z,160nm,5.0s								
MKAR	**Makanchi Array**	**16.12**	**358**	Pn		**Pn**	**Pn**	**18 16 46.6**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=196,slow=29,SNR=3.9								
CMAR	**Chiang Mai Arr**	**18.74**	**127**	P		**Pn**	**Pn**	**18 17 21.1**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=310,slow=12,SNR=4.4								
KURK	**Kurchatov**	**20.32**	**352**	P		**P**	**P**	**18 17 37.0**	**-1.1**
KURK	**Kurchatov**	**20.32**	**352**	P		**P**	**P**	**18 17 37.0**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=180,slow=13,SNR=5.2								
ZALV	**Zalesovo Beam**	**23.30**	**2**	P		**P**	**P**	**18 18 09.2**	**-0.6**
	comp=Z,0.3nm,0.3s,mb3.2,baz=186,slow=10.0,SNR=4.0								
BVAR	**Borovoye Array**	**24.23**	**341**	P		**P**	**P**	**18 18 18.5**	**-0.1**
	comp=Z,0.5nm,0.7s,mb3.1,baz=143,slow=8.6,SNR=4.1								
WRA	**Warramunga Arr**	**70.32**	**129**	P		**P**	**P**	**18 24 15.1**	**-0.8**
	comp=Z,0.3nm,0.7s,mb3.3,baz=323,slow=6.4,SNR=2.9								

*IDC **25** 18:14:38.3±2.0, 9.94S×150.10E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.9/15, mbtmp3.9/7, ML3.7/1, Error ellipse: s-maj=57.6km s-min=24.4km az=104.0*
*NEIC **25** 18:14:44.3±3.6, 10.18S×150.14E, h50km±27km, mb3.7/2, Error ellipse: s-maj=34.2km s-min=14.5km az=92.0*
*ISCJB **25** 18:14:45.1±1.9, 10.39S±0.09×149.8E±0.1, h63km±16km, mb4.0/6, Error ellipse: s-maj=18.9km s-min=14.3km az=14.2*

ISC 25 18:14:46.4±2.4, 10.36S±0.10×149.8E±0.1, h55km±20km, n19, σ1°38/19, mb4.0/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.78**	**290**	*e*P		**Pn**	**Pn**	**18 15 29.3**	**+0.8**
COEN	**Coen**	**7.41**	**240**	*e*P		**Pn**	**Pn**	**18 16 31.1**	**-0.9**
COEN				*e*S		**Sn**	**Sn**	**18 17 52.8**	**-2.0**
MTSU	**Mount Surprise**	**9.39**	**214**	*e*P		**Pn**	**Pn**	**18 16 58.7**	**-0.4**
	20nm,0.6s								
MTSU				*e*S		**Sn**	**Sn**	**18 18 36.7**	**-6.6**
QLP	**Quilpie**	**16.98**	**197**	*e*P		**Pn**	**Pn**	**18 18 40.9**	**+0.7**
WRA	**Warramunga Arr**	**17.71**	**236**	P		**Pn**	**Pn**	**18 18 51.0**	**+1.8**
	0.3nm,0.3s,baz=61,slow=13,SNR=15								
WRA				S		**S**	**S**	**18 22 00.7**	**-10**
	0.1nm,0.3s,baz=42,slow=23,SNR=4.9								
ARMA	**Armidale**	**20.04**	**175**	*e*P		**P**	**P**	**18 19 14.1**	**-0.8**
ASAR	**Alice Springs**	**20.14**	**227**	P		**P**	**P**	**18 19 18.6**	**+2.6**
	2.0nm,0.7s,baz=69,slow=11,SNR=36								
STKA	**Stephens Creek**	**22.73**	**198**	*e*P		**P**	**P**	**18 19 48.7**	**+5.0**
	3.8nm,0.9s,mb3.8								
STKA	**Stephens Creek**	**22.73**	**198**	*e*P		**P**	**P**	**18 19 46.2**	**+2.4**
	0.8nm,0.9s,mb3.1								
STKA	**Stephens Creek**	**22.73**	**198**	P		**P**	**P**	**18 19 48.9**	**+5.2**
	1.5nm,0.6s,mb3.6,baz=12,slow=12,SNR=5.7								
FITZ	**Fitzroy Crossi**	**24.65**	**249**	*e*P		**P**	**P**	**18 20 11.9**	**+10**
	7.6nm,0.8s,mb4.3								
FITZ	**Fitzroy Crossi**	**24.65**	**249**	P		**P**	**P**	**18 20 03.8**	**+1.8**
	1.5nm,0.7s,mb3.6,baz=121,slow=15,SNR=5.1								
CMAR	**Chiang Mai Arr**	**57.78**	**299**	P		**P**	**P**	**18 24 33.6**	**+1.3**
	0.7nm,0.8s,mb3.8,baz=129,slow=5.5,SNR=7.1								
SONM	**Songino Array**	**69.54**	**330**	P		**P**	**P**	**18 25 48.0**	**-1.3**
	2.3nm,0.5s,mb4.4,baz=116,slow=6.7,SNR=3.0								
QSPA	**South Pole Qui**	**79.64**	**180**	*e*P		**P**	**P**	**18 26 46.5**	**-0.9**
	5.2nm,1.2s,mb4.3								
MKAR	**Makanchi Array**	**82.61**	**320**	P		**P**	**P**	**18 27 02.0**	**-1.6**
	0.7nm,0.8s,mb3.6,baz=110,slow=9.3,SNR=5.1								
TORD	**Torodi Ar. Bea**	**148.68**	**278**	PKPbc		PKPbc	PKPbc	18 34 28.6	+0.1
	3.8nm,0.8s,baz=73,slow=2.2,SNR=19								
DBIC	**Dimbokro**	**154.69**	**264**	PKP		PKPdf	PKPdf	18 34 31.3	-2.6
DBIC	**Dimbokro**	**154.69**	**264**	PKP		PKPdf	PKPdf	18 34 31.3	-2.5
	2.9nm,0.9s,baz=67,slow=3.3,SNR=3.5								

*BJI **25** 18:15:18.0, 30.02°N×82.82E, h11km, mB4.3/4, mb4.3/6, Ms3.7/3, Ms7 3.5/3*
*ISCJB **25** 18:15:21.3±1.2, 30.70°N±0.05×83.34E±0.04, h4km±8km, mb3.9/17, Error ellipse: s-maj=7.8km s-min=5.6km az=1.3*
*IDC **25** 18:15:22.3±0.8, 30.73°N×83.42E, h0km, mb3.9/16, mb1 4.0/18, mb1mx4.0/29, mbtmp3.9/18, ML3.7/2, Error ellipse: s-maj=23.1km s-min=14.9km az=39.0*
*NEIC **25** 18:15:23.8±0.5, 30.73°N×83.38E, h10km, mb4.1/3, Error ellipse: s-maj=11.8km s-min=6.6km az=46.0*
*NDI **25** 18:15:25.2±7.9, 30.84°N×83.37E, h15km±70km, ML3.9, mb4.1(NEIC)*

ISC 25 18:15:24.2±1.2, 30.74N±0.05×83.35E±0.04, h11km±8km, n41, σ1°06/47, mb3.9/17, 2C-1D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**2.96**	**247**	*e*PKP		**Pg**	**Pg**	**18 16 19.2**	**-1.7**
PTH				*e*S		**Sg**	**Sg**	**18 16 59.1**	**-0.1**
JOSI	**Joshimath**	**3.27**	**268**	*e*PKP		**Pn**	**Pn**	**18 16 16.9**	**+1.5**
JOSI				*e*S		**Sn**	**Sn**	**18 16 54.2**	**-0.1**
JOSI				AML		AML	AML	18 17 19.4	
	comp=N,455nm,0.7s								
JOSI				AML		AML	AML	18 17 19.8	
	comp=E,520nm,0.8s								
KLP	**Kalpa**	**4.44**	**282**	*ex*		**Pg**	**Pg**	**18 16 50.0**	**+0.7**
KLP				*e*S		**Sn**	**Sn**	**18 17 21.0**	**-2.3**
AGRA	**Agra**	**5.88**	**235**	*ex*		**Pb**	**Pb**	**18 17 03.3**	**-3.5**
AGRA				*e*S		**Sn**	**Sn**	**18 17 54.2**	**-4.5**
LSA	**Lhasa**	**6.83**	**97**	Pn		**Pn**	**Pn**	**18 17 06.5**	**+2.1**
LSA	**Lhasa**	**6.83**	**97**	*e*P		**Pn**	**Pn**	**18 17 04.4**	**-0.1**
	comp=E,18nm,0.6s								
AJM	**Ajmer**	**8.74**	**243**	*e*PKP		**Pn**	**Pn**	**18 17 32.0**	**+1.4**
SHL	**Shillong**	**9.12**	**122**	*e*PKP		**Pn**	**Pn**	**18 17 36.0**	**+0.1**
SHL				*ex*		x	x	18 19 15.0	
BHPL	**Bhopal**	**9.14**	**217**	*e*PKP		**Pn**	**Pn**	**18 17 37.1**	**+1.0**
KSH	**Kashi**	**10.63**	**327**	*e*P		**Pn**	**Pn**	**18 17 57.3**	**+0.8**
KSH				*ep*P				18 18 04.0	
KSH				*e*PP				18 18 05.8	
KSH				*es*P				18 18 08.8	
KSH				*e*S		**Sn**	**Sn**	**18 19 52.0**	**-3.6**
KSH				*es*S				18 20 03.5	
KSH				*e*SS				18 20 08.8	
KSH				pmax		pmax			
	comp=Z,3.0nm,0.3s								
KSH				pmax		pmax			
	comp=Z,40nm,3.5s								
KSH				LR		LR			
	comp=N,170nm,12.3s								
KSH				LR		LR			
	comp=E,180nm,6.8s								
KSH				LR		LR			
	comp=Z,170nm,8.6s								
AKL	**Akola**	**11.50**	**211**	*e*PKP		**Pn**	**Pn**	**18 18 09.4**	**+1.0**
AKL				*e*S		**Sn**	**Sn**	**18 20 09.6**	**-7.3**
AKL				AML		AML	AML	18 21 31.8	
	comp=E,24nm,0.6s								
AKL				AML		AML	AML	18 21 35.5	
	comp=N,21nm,0.5s								
HYB	**Hyderabad**	**13.96**	**199**	*i* P		**Pn**	**Pn**	**18 18 41.0**	**-1.1**
MKAR	**Makanchi Array**	**16.06**	**357**	Pn		**Pn**	**Pn**	**18 19 09.3**	**-0.6**
	comp=N,0.2nm,0.3s,baz=174,slow=14,SNR=8.5								
KMI	**Kunming**	**18.02**	**103**	P		**Pn**	**Pn**	**18 19 35.5**	**+0.8**
KMI				pmax		pmax	pmax		
	comp=Z,5.0nm,1.3s								
CHTO	**Chiang Mai**	**18.45**	**126**	*e*P		**Pn**	**Pn**	**18 19 38.7**	**-1.3**
	comp=Z,2.3nm,0.8s								
CMAR	**Chiang Mai Arr**	**18.70**	**127**	P		**Pn**	**Pn**	**18 19 42.7**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=301,slow=11,SNR=12								
KURK	**Kurchatov**	**20.27**	**351**	P		**P**	**P**	**18 19 58.3**	**-1.4**
	comp=Z,7.6nm,0.9s,baz=167,slow=10,SNR=35								
ZAA0	**Zalesovo Array**	**23.22**	**2**	*e*P		**P**	**P**	**18 20 31.8**	**+0.6**
ZALV	**Zalesovo Beam**	**23.22**	**2**	P		**P**	**P**	**18 20 30.3**	**-0.9**
	comp=Z,2.4nm,0.6s,mb3.8,baz=186,slow=9.3,SNR=14								
BVAR	**Borovoye Array**	**24.20**	**341**	P		**P**	**P**	**18 20 40.0**	**-0.6**
	comp=Z,1.6nm,0.8s,mb3.5,baz=141,slow=9.6,SNR=6.9								
SONM	**Songino Array**	**24.55**	**39**	P		**P**	**P**	**18 20 42.8**	**-1.1**
	comp=Z,2.1nm,0.4s,mb4.0,baz=323,slow=17,SNR=3.2								
ULN	**Ulaanbaatar**	**24.93**	**40**	*e*P		**P**	**P**	**18 20 48.3**	**+1.0**
	comp=Z,8.2nm,1.3s,mb4.1								
AKTK	**Aktyubinsk**	**27.30**	**323**	P		**P**	**P**	**18 21 08.2**	**-0.4**
AKTO	**Aktyubinsk**	**27.30**	**323**	P		**P**	**P**	**18 21 08.2**	**-0.4**
	comp=Z,0.7nm,0.6s,mb3.4,baz=127,slow=9.2,SNR=4.4								
KSRS	**Korea Array**	**37.25**	**67**	P		**P**	**P**	**18 22 35.3**	**-0.6**
	comp=Z,2.1nm,0.5s,mb4.2,baz=276,slow=8.8,SNR=14								
BRTR	**Keskin Array B**	**41.13**	**297**	P		**P**	**P**	**18 23 09.9**	**+1.5**
	comp=Z,0.5nm,0.7s,mb3.3,baz=46,slow=4.2,SNR=3.0								
YAK	**Yakutsk**	**43.22**	**30**	*e*P		**P**	**P**	**18 23 25.1**	**0.0**
	comp=Z,5.4nm,0.6s,mb4.5								
AKASG	**Malin Array Be**	**44.49**	**313**	P		**P**	**P**	**18 23 35.1**	**-0.3**
	comp=Z,0.8nm,0.5s,mb3.7,baz=80,slow=7.3,SNR=5.2								
PLOR	**Plostina**	**46.04**	**306**	*i* P		**P**	**P**	**18 23 49.9**	**+2.0**
MLR	**Muntele Rosu**	**46.55**	**305**	*i* P		**P**	**P**	**18 23 54.2**	**+2.4**
VOIR		**47.18**	**305**	*i* P		**P**	**P**	**18 23 58.3**	**+1.5**
FINES	**FINESS Array B**	**47.96**	**327**	P		**P**	**P**	**18 24 03.2**	**+0.7**
	comp=Z,3.6nm,0.8s,mb4.4,baz=111,slow=11,SNR=7.5								
ARCES	**ARCESS Array B**	**50.41**	**337**	P		**P**	**P**	**18 24 22.0**	**+0.7**
ARCES	**ARCESS Array B**	**50.41**	**337**	P		**P**	**P**	**18 24 22.0**	**+0.7**
	comp=Z,1.1nm,0.5s,mb4.2,baz=96,slow=7.9,SNR=10								
NOA	**NORSAR Array B**	**55.05**	**326**	P		**P**	**P**	**18 24 55.2**	**-0.5**
	comp=Z,0.9nm,0.9s,mb3.8,baz=117,slow=7.4,SNR=3.6								
PETK	**Petropavlovsk-**	**56.93**	**44**	P		**P**	**P**	**18 25 09.0**	**-0.3**
PETK	**Petropavlovsk-**	**56.93**	**44**	P		**P**	**P**	**18 25 09.0**	**-0.3**
	comp=Z,1.7nm,0.7s,mb4.2,baz=225,slow=1.7,SNR=3.8								
WRA	**Warramunga Arr**	**70.28**	**129**	P		**P**	**P**	**18 26 37.3**	**-0.6**
	comp=Z,1.5nm,0.5s,mb4.1,baz=325,slow=6.3,SNR=24								
ASAR	**Alice Springs**	**72.63**	**132**	P		**P**	**P**	**18 26 51.2**	**-0.7**
	comp=Z,0.3nm,0.7s,mb3.4,baz=314,slow=6.4,SNR=4.6								
TORD	**Torodi Ar. Bea**	**76.31**	**277**	P		**P**	**P**	**18 27 13.2**	**-0.5**
	comp=Z,1.2nm,0.8s,mb3.9,baz=48,slow=4.9,SNR=6.3								
ILAR	**Eielson Array**	**77.09**	**20**	P		**P**	**P**	**18 27 16.8**	**-0.4**
	comp=Z,1.0nm,0.9s,mb3.7,baz=308,slow=4.9,SNR=7.8								

IDC 25 18:37:32.8±5.2, 30.25N×81.86E, h0km, mb3.3/2, mb1 3.4/4, mb1mx3.2/26, mbtmp3.2/4, ML3.1/2, Error ellipse: s-maj=179.7km s-min=28.6km az=69.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**16.52**	**1**	Pn		Pn	Pn	18 41 24.3	-1.5
	0.0nm,0.3s,baz=172,slow=31,SNR=2.7								
CMAR	**Chiang Mai Arr**	**19.47**	**123**	P		Pn	Pn	18 42 01.4	-0.9
	0.1nm,0.3s,baz=262,slow=7.1,SNR=4.8								
ZALV	**Zalesovo Beam**	**23.77**	**4**	P		P	P	18 42 46.5	-0.4
	0.4nm,0.4s,baz=171,slow=10,SNR=4.2								
WRA	**Warramunga Arr**	**70.99**	**128**	P		P	P	18 48 52.6	+0.1
	0.2nm,0.6s,baz=323,slow=5.9,SNR=4.0								

*IDC **25** 18:42:39.7±1.3, 10.44N×125.72E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/23, mbtmp3.8/8, MS3.3/1, Ms1 3.3/1, ms1mx2.6/27, Error ellipse: s-maj=68.4km s-min=16.4km az=66.0*
*NEIC **25** 18:42:40.8±0.9, 10.50N×125.92E, h10km, Error ellipse: s-maj=39.7km s-min=10.7km az=61.0*
NEIC Felt [II PIVS] at Labuan, San Juan and Saint Bernard.
*MAN **25** 18:42:43, 10.19N×125.24E, h13km, mb4.9, ML3.9, MS3.9*
MAN INTENSITY II - LIBAGON SAN JUAN AND ST BERNARD (SOUTHERN LEYTE.
*ISCJB **25** 18:42:44.6±0.5, 10.21N±0.04×125.27E±0.05, h44km±7km, mb3.7/8, Error ellipse: s-maj=9.8km s-min=6.0km az=148.8*

ISC 25 18:42:45.7±0.8, 10.19N±0.05×125.28E±0.06, h33km±8km, n32, σ1°26/34, mb3.7/8, 1C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.46**	**153**	*i*P		**Pb**	**Pb**	**18 42 53.4**	**-2.2**
SCPH				*e*S		**Sb**	**Sb**	**18 43 03.5**	**+1.0**
OCLP	**Ormoc**	**1.08**	**323**	*e*P		**Pn**	**Pn**	**18 43 01.9**	**-2.5**
BUTP	**Butuan**	**1.26**	**164**	*e*P		**Pn**	**Pn**	**18 43 06.5**	**-0.5**
LLP	**Lapu-Lapu**	**1.29**	**276**	*i*P		**Pn**	**Pn**	**18 43 05.2**	**-2.2**
LLP				*e*S		**Sn**	**Sn**	**18 43 22.5**	**-1.1**
BESP	**Borongan**	**1.41**	**6**	*e*P		**Pn**	**Pn**	**18 43 07.1**	**-1.9**
TBP	**Tagbilaran**	**1.48**	**250**	*e*P		**Pn**	**Pn**	**18 43 08.5**	**-1.4**
SNPH	**Sibulan**	**2.18**	**247**	*i*P		**Pn**	**Pn**	**18 43 19.3**	**-0.4**
SNPH				*i* S		**Sb**	**Sb**	**18 43 58.4**	**+7.3**
BUKP	**Musuan**	**2.31**	**185**	*e*P		**Pn**	**Pn**	**18 43 21.8**	**+0.4**
CNP	**Catarman**	**2.38**	**345**	*e*P		**Pn**	**Pn**	**18 43 22.8**	**+0.4**
GUIM	**Jordan**	**2.68**	**280**	*e*P		**Pn**	**Pn**	**18 43 26.4**	**-0.1**
PAGZ	**Pagadian**	**2.99**	**219**	*e*P		**Pn**	**Pn**	**18 43 33.7**	**+3.0**
DAV	**Davao City (W)**	**3.12**	**174**	LR		LR	LR	18 45 10.9	
	comp=Z,392nm,18.5s,baz=36,slow=45								
PVCP	**Virac**	**3.56**	**342**	*e*P		**Pn**	**Pn**	**18 43 39.6**	**+1.1**
IPIL	**Ipil**	**3.58

IDC ***25*** *19:13:51.1±0.4,30.˚64N×83.˚41E,h0km,mb4.6/26, mb1 4.7/28,mb1mx4.7/30,mbtmp4.6/28,ML4.1/2,MS4.2/25, Ms1 4.2/25,ms1mx4.1/30,Error ellipse: s-maj=14.8km s-min=8.6km az=37.0*

NEIC ***25*** *19:13:52.5±0.2,30.˚63N×83.˚29E,h10km,mb4.9/48,Error ellipse: s-maj=6.8km s-min=4.2km az=203.0*

ISCJB ***25*** *19:13:52.7±0.6,30.˚59N±0.˚03×83.˚35E±0.˚02,h25km±4km, mb4.8/116,MS4.3/57,Error ellipse: s-maj=4.5km s-min=2.9km az=22.0*

MOS ***25*** *19:13:54.0±1.2,30.˚61N×83.˚30E,h33km,mb5.0/71, MS4.3/34,Error ellipse: s-maj=7.5km s-min=3.7km az=124.6*

NDI ***25*** *19:13:55.2±3.5,30.˚51N×83.˚46E,h10km,mb5.0, mb4.9(NEIC)*

GCMT ***25*** *19:13:56.7±0.3,30.˚41N×83.˚48E,h19km,MW5.1,Moment Tensor Solution. s26,c28; s63,c120; Moment tensor: Scale 10¹⁶Nm; Mrr-4.95±.33; Mθθ-0.38±.18; Mϕϕ5.33±.21; Mrθ-1.27±.45; Mθϕ-0.69±.11; Mϕr-1.37±.32; Best double couple: Ms5.50000×10¹⁶ NP1:ϕs158.00000°,δ41.00000°, λ-114.00000°. NP2:ϕs8.00000°,δ54.00000°,λ-71.00000°. Principal axes: T 5.5600, Plg7.0000°, Azm85.0000°; N -0.0700, Plg15.0000°, Azm177.0000°; P -5.4900, Plg73.0000°, Azm332.0000°: Data Used: II G IU CN IC.*

SZGRF ***25*** *19:13:58.8,32.˚41N×83.˚96E,h33km,mb4.7,Xizang*

ISC 25 19:13:54.2±0.8,30.˚63N±0.˚02×83.˚36E±0.˚02,h20km±5km, n404,σt¹⁄₂17/426,mb4.8/116,MS4.3/57,15C-26D,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DANN	**Dangsing**	**2.30**	**171**	*e*Pn	**Pb**	**19 14 35.3**	**+0.4**
DANN				*e*Sn	**Sg**	**19 15 11.1**	**+3.0**
	5μm,0.5s						
PYUN	**Piuthan**	**2.54**	**187**	*e*Sn	**Sg**	**19 15 16.5**	**+0.6**
	6μm,0.7s						
GKN	**Gorkha**	**2.84**	**157**	*e*Pn	**Pb**	**19 14 42.4**	**-1.9**
GKN				*e*Sn	**Sg**	**19 15 24.7**	**-0.9**
	3μm,0.8s						
KOLN	**Koldanda**	**2.86**	**176**	*e*Pn	**Pb**	**19 14 42.6**	**-1.9**
KOLN				*e*Sn	**Sg**	**19 15 24.8**	**-1.2**
	1μm,0.7s						
KOLN				*e*Sn	**Sg**	**19 15 24.9**	**-1.1**
	3μm,0.7s						
PTH	**Pithoragarh**	**2.93**	**249**	*e*PKP	**Pb**	**19 14 43.8**	**-1.9**
PTH				*ex*	x	19 15 24.2	
KKN	**Kakani**	**3.29**	**149**	*e*Pn	**Pb**	**19 14 48.4**	**-3.4**
DMN	**Daman**	**3.38**	**153**	*e*Pn	**Pb**	**19 14 49.7**	**-3.6**
GUN	**Gumba**	**3.49**	**140**	*e*Pn	**Pb**	**19 14 51.4**	**-3.9**
GUN				*e*Sn	**Sg**	**19 15 40.2**	**-6.1**
	2μm,1.0s						
PKIN	**Phulchoki**	**3.52**	**149**	*e*Pn	**Pn**	**19 14 51.4**	**+3.6**
PKI	**Pulchoki**	**3.54**	**149**	*e*Pn	**Pn**	**19 14 51.6**	**+3.7**
JIRN	**Jiri**	**3.86**	**139**	*e*Pn	**Pn**	**19 14 56.2**	**+3.8**
DDI	**Dehra Dun**	**4.59**	**268**	*e*PKP	**Pn**	**19 15 06.0**	**+3.6**
RAMN	**Ramite**	**4.64**	**141**	*e*Pn	**Pn**	**19 15 05.7**	**+2.6**
TAPN	**Taplejung**	**5.02**	**130**	*e*Pn	**Pn**	**19 15 11.7**	**+3.3**
ODAN	**Odare**	**5.16**	**136**	*e*Pn	**Pn**	**19 15 13.5**	**+3.2**
SMLA	**Simla**	**5.35**	**277**	*i* P	**Pn**	**19 15 15.0**	**+2.2**
SDNR	**Sundarnagar**	**5.55**	**281**	*e*PKP	**Pn**	**19 15 20.5**	**+4.9**
SDNR				*ex*	x	19 16 57.5	
NDI	**New Delhi**	**5.69**	**252**	*e*PKP	**Pn**	**19 15 21.5**	**+4.0**
BHK	**Bhakra**	**6.01**	**279**	*ex*	**Pb**	**19 15 38.4**	**+0.2**
BHK				*ex*	x	19 17 22.2	
LSA	**Lhasa**	**6.81**	**96**	Pn	**Pn**	**19 15 37.0**	**+4.1**
LSA				LR	LR		
	comp=N,5μm,10.0s						
LSA				LR	LR		
	comp=E,9μm,11.0s						
LSA	**Lhasa**	**6.81**	**96**	*e*P	**Pn**	**19 15 36.0**	**+3.1**
	comp=E,364nm,1.4s						
LSA	**Lhasa**	**6.81**	**96**	*e*P	**Pn**	**19 15 36.0**	**+3.1**
LSA				pmax	pmax		
	comp=Z,364nm,1.4s						
AJM	**Ajmer**	**8.71**	**244**	*e*PKP	**Pn**	**19 15 59.4**	**+0.4**
AJM				AMb	AMB	19 16 11.2	
	comp=Z,49nm,0.9s						
AJM				*ex*	x	19 17 37.4	
SHL	**Shillong**	**9.06**	**122**	*e*PKP	**Pn**	**19 16 03.0**	**-0.8**
SHL				*ex*	x	19 17 42.0	
BHPL	**Bhopal**	**9.06**	**217**	*e*PKP	**Pn**	**19 16 03.7**	**-0.1**
BHPL				*ex*	x	19 17 40.6	
CHCP	**Chirah Chowk**	**9.07**	**292**	P	**Pn**	**19 16 04.9**	**+0.9**
CHCP				S	**Sn**	**19 17 49.0**	**+3.4**
CAL	**Calcutta**	**9.20**	**150**	*e*PKP	**Pn**	**19 16 05.3**	**-0.5**
CAL				*ex*	x	19 17 53.0	
THW	**Thamme Wali**	**10.13**	**285**	P	**Pn**	**19 16 18.9**	**+0.5**
NGP	**Nagpur**	**10.20**	**203**	*e*PKP	**Pn**	**19 16 19.8**	**+0.3**
NGP				*e*S	**Sn**	**19 18 06.3**	**-7.1**
CEP	**Cherat**	**10.21**	**291**	P	**Pn**	**19 16 20.4**	**+0.9**
BWNR	**Bhubaneshwar**	**10.52**	**167**	*e*PKP	**Pn**	**19 16 25.0**	**+1.1**
BWNR				*ex*	x	19 18 23.0	
KSH	**Kashi**	**10.73**	**328**	P	**Pn**	**19 16 25.3**	**-1.4**
KSH				*e*pP		19 16 32.0	
KSH				*e*PP		19 16 34.0	
KSH				*e*sP		19 16 37.3	
KSH				S	**Sn**	**19 18 21.5**	**-4.7**
KSH				*e*sS		19 18 32.8	
KSH				*e*SS		19 18 35.3	
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,87nm,5.1s						
KSH				LR	LR		
	comp=N,2μm,12.0s						
KSH				LR	LR		
	comp=E,3μm,5.1s						
KSH				LR	LR		
	comp=Z,2μm,7.4s						
IMP	**Imphal**	**11.03**	**119**	*e*PKP	**Pn**	**19 16 30.0**	**-0.8**
IMP				*ex*	x	19 18 34.0	
AKL	**Akola**	**11.41**	**212**	⇑*i*P	**Pn**	**19 16 36.1**	**0.0**
AKL				*i* x	x	19 18 38.1	
KBL	**Kabul**	**12.69**	**292**	*e*P	**Pn**	**19 16 54.0**	**+0.5**
	comp=Z,70nm,1.0s						
KBL				S	**Sn**	**19 19 10.5**	**-3.6**
KBL	**Kabul**	**12.69**	**292**	*e*P	**Pn**	**19 16 54.0**	**+0.6**
KBL				S	**Sn**	**19 19 10.5**	**-3.6**
KBL				pmax	pmax		
	comp=Z,70nm,1.0s						
VIS	**Vishakhapatnam**	**12.85**	**180**	*i* P	**Pn**	**19 16 55.5**	**-0.2**
VIS				*i* x	x	19 19 11.8	
UCH	**Uchtor**	**13.58**	**331**	*e*P	**Pn**	**19 17 05.9**	**+0.3**
	comp=Z,22nm,1.1s						
WMQ	**Urumqi**	**13.61**	**13**	*e*P	**Pn**	**19 17 07.0**	**+1.0**
WMQ				pP		19 17 10.5	
WMQ				sP		19 17 14.0	
WMQ				PP		19 17 18.0	
WMQ				S	**Sn**	**19 19 40.0**	**+3.4**
WMQ				SS		19 19 55.8	
WMQ				PcP	PcP	19 22 31.5	+0.4
WMQ				pmax	pmax		
	comp=Z,55nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,420nm,3.8s						
WMQ				LR	LR		
	comp=N,2μm,14.0s						
WMQ				LR	LR		
	comp=E,2μm,15.4s						
WMQ				LR	LR		
	comp=Z,1μm,12.6s						
LATR	**Latur**	**13.63**	**208**	*ex*	**Pn**	**19 17 03.9**	**-2.5**
LATR				AMb	AMB	19 17 05.5	
	comp=Z,25nm,0.8s						
TKM2	**Tokmak 2**	**13.75**	**335**	*e*P	**Pn**	**19 17 08.7**	**+0.9**
	comp=Z,9.0nm,0.9s						
TKM2	**Tokmak 2**	**13.75**	**335**	*e*P	**Pn**	**19 17 08.7**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AML	**Almayashu**	**13.86**	**329**	*e*P	**Pn**	**19 17 08.2**	**-1.2**
	comp=Z,24nm,1.0s						
HYB	**Hyderabad**	**13.86**	**199**	*i* P	**Pn**	**19 17 07.0**	**-2.6**
HYB				*e*S	**Sn**	**19 19 34.0**	**-9.0**
AAK	**Ala-Archa**	**13.92**	**332**	Pn	**Pn**	**19 17 15.0**	**+4.7**
	comp=Z,0.7nm,0.3s,baz=189,slow=8.1,SNR=10.0						
AAK				Sn	**Sn**	**19 19 46.4**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=22,slow=12,SNR=2.5						
AAK				LR	LR	19 23 13.9	
	comp=Z,921nm,20.8s,baz=135,slow=40						
AAK	**Ala-Archa**	**13.92**	**332**	*c i*P	**Pn**	**19 17 13.6**	**+3.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	**Ala-Archa**	**13.92**	**332**	P	**Pn**	**19 17 15.6**	**+5.3**
	SNR=18						
FRU	**Bishkek**	**14.04**	**333**	*e*P	**Pn**	**19 17 14.0**	**+2.1**
FRU				*e*		19 19 53.0	
FRU				pmax	pmax		
	comp=Z,200nm,2.5s						
QUE	**Quetta**	**14.17**	**272**	*e*P	**Pn**	**19 17 20.0**	**+6.3**
QUE				*e*S	**Sn**	**19 20 04.0**	**+14**
EKS2	**Erkin-Say**	**14.25**	**330**	*e*P	**Pn**	**19 17 15.2**	**+0.5**
	comp=Z,19nm,0.8s						
POO	**Poona**	**14.82**	**218**	*e*PKP	**Pn**	**19 17 23.6**	**+1.0**
POO				*ex*	x	19 19 50.1	
KAD	**Karad**	**15.68**	**214**	*ex*	**Pn**	**19 17 31.3**	**-2.6**
KAD				*i* x	x	19 20 18.3	
KK31	**Karatay Array**	**16.12**	**324**	*e*P	**Pn**	**19 17 37.1**	**-2.4**
KK31				pmax	pmax		
	comp=Z,11nm,0.7s						
MK31	**Makanchi Array**	**16.16**	**357**	*i* P	**Pn**	**19 17 43.0**	**+3.0**
MK31				pmax	pmax		
	comp=Z,22nm,0.8s						
MKAR	**Makanchi Array**	**16.16**	**357**	Pn	**Pn**	**19 17 38.4**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=179,slow=13,SNR=16						
MKAR				LR	LR	19 23 54.2	
	comp=Z,58nm,21.2s,baz=301,slow=37						
MDRS	**Chennai**	**17.71**	**190**	⇓*ex*		19 18 20.2	
MDRS				*e*S	**Sn**	**19 21 18.2**	**+1.6**
LZH	**Lanzhou**	**17.95**	**67**	*e*P	**Pn**	**19 18 03.5**	**+1.0**
LZH				pP	pP	19 18 10.0	+1.4
LZH				sP	sP	19 18 15.0	+3.8
LZH				*e*S	**Sn**	**19 21 18.0**	**-4.1**
LZH				sS	sS	19 21 28.0	-9.1
LZH				SS		19 21 41.0	
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
LZH				pmax	pmax		
	comp=Z,260nm,7.3s						
LZH				LR	LR		
	comp=N,3μm,14.5s						
LZH				LR	LR		
	comp=E,4μm,11.4s						
LZH				LR	LR		
	comp=Z,5μm,15.5s						
KMI	**Kunming**	**17.98**	**103**	P	**Pn**	**19 18 02.8**	**-0.2**
KMI				pP	pP	19 18 11.0	+1.9
KMI				sP	sP	19 18 15.8	+4.2
KMI				PP		19 18 19.5	
KMI				S	**Sn**	**19 21 25.5**	**+2.4**
KMI				SS		19 21 50.5	
KMI				pmax	pmax		
	comp=Z,18nm,1.1s						
KMI				pmax	pmax		
	comp=Z,280nm,7.4s						
KMI				LR	LR		
	comp=N,3μm,19.7s						
KMI				LR	LR		
	comp=E,1μm,18.8s						
KMI				LR	LR		
	comp=Z,4μm,20.0s						
CHRT	**Chiangrai**	**18.29**	**122**	⇑P	**Pn**	**19 18 05.5**	**-1.3**
	comp=Z,166nm,1.3s						
CHG	**Chiang Mai**	**18.38**	**126**	⇑P	**Pn**	**19 18 07.3**	**-0.6**
	comp=Z,27nm,1.1s						
CHTO	**Chiang Mai**	**18.38**	**126**	*e*P	**Pn**	**19 18 07.0**	**-1.0**
	comp=Z,36nm,1.3s						
CHTO	**Chiang Mai**	**18.38**	**126**	*e*P	**Pn**	**19 18 07.0**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,36nm,1.3s						
CHTO	**Chiang Mai**	**18.38**	**126**	P	**Pn**	**19 18 07.6**	**-0.4**
	SNR=12						
CMAR	**Chiang Mai Arr**	**18.62**	**127**	P	**Pn**	**19 18 09.9**	**-0.9**
CMAR				S	**Sn**	**19 21 38.8**	**+0.2**
CMAR				LR	LR	19 25 45.9	
CMAR	**Chiang Mai Arr**	**18.62**	**127**	P	**Pn**	**19 18 10.0**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=315,slow=12,SNR=55						
CMAR				S	**Sn**	**19 21 38.8**	**+0.2**
	baz=291,slow=15,SNR=2.2						
CMAR				LR	LR	19 25 45.9	
	comp=Z,393nm,19.5s,baz=322,slow=38						
BDT	**Bhumibol Dam**	**19.51**	**130**	P	**Pn**	**19 18 21.0**	**-0.6**
KURK	**Kurchatov**	**20.38**	**351**	P	**P**	**19 18 27.7**	**-1.7**
	comp=Z,26nm,0.9s,baz=168,slow=10,SNR=61						
KURK	**Kurchatov**	**20.38**	**351**	*d i*P	**P**	**19 18 28.5**	**-0.9**
KURK				pmax	pmax		
	comp=Z,109nm,1.7s						
KURK	**Kurchatov**	**20.38**	**351**	P	**P**	**19 18 29.3**	**-0.1**
	SNR=40						
GYA	**Guiyang**	**20.88**	**96**	⇑*i*P	**P**	**19 18 35.5**	**+0.4**
GYA				pP		19 18 44.8	
GYA				PP		19 18 58.3	
GYA				S	**S**	**19 22 20.5**	**-6.7**
GYA				sS	sS	19 22 34.0	-2.2
GYA				SS		19 22 52.5	
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,4.8s						
GYA				LR	LR		
	comp=N,9μm,12.8s						
GYA				LR	LR		
	comp=E,9μm,15.5s						
GYA				LR	LR		
	comp=Z,10μm,13.9s						
NST	**Nakhon Sawan**	**21.39**	**130**	P	**P**	**19 18 42.9**	**+2.2**
XAN	**Xi'an**	**21.85**	**74**	P	**P**	**19 18 44.5**	**-1.0**
XAN				pP		19 18 49.5	
XAN				S	**S**	**19 22 40.0**	**-6.1**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						
XAN				pmax	pmax		
	comp=Z,47nm,5.0s						
XAN				LR	LR		
	comp=N,760nm,9.8s						
XAN				LR	LR		
	comp=E,660nm,13.1s						
XAN				LR	LR		
	comp=Z,550nm,11.0s,MS4.2						
ENH	**Enshi**	**22.52**	**84**	P	**P**	**19 18 52.5**	**-0.2**
	comp=Z,19nm,0.9s,mb4.5						
ZAA0	**Zalesovo Array**	**23.33**	**2**	*e*P	**P**	**19 19 01.2**	**+0.3**
ZALV	**Zalesovo Beam**	**23.33**	**2**	P	**P**	**19 18 60.0**	**-1.0**
ZALV				LR	LR	19 28 51.3	
ZALV	**Zalesovo Beam**	**23.33**	**2**	P	**P**	**19 18 60.0**	**-1.0**
	comp=Z,6.6nm,0.7s,mb4.2,baz=187,slow=10,SNR=37						
ZALV				LR	LR	19 28 51.3	
	comp=Z,124nm,21.7s,MS3.3,baz=336,slow=39						
ZALV	**Zalesovo Beam**	**23.33**	**2**	P	**P**	**19 19 00.0**	**-1.0**
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.2						
ZALV				MLR	MLR		
	comp=Z,124nm,21.7s,MS3.3						
BTO	**Baotou**	**23.77**	**58**	*e*P	**P**	**19 19 04.3**	**-1.1**
VOSK	**Vostochnaya**	**23.87**	**341**	P	**P**	**19 19 03.5**	**-2.6**
VOSK				pmax	pmax		
	comp=Z,600nm,7.0s						
JMDO	**Jabal Madar**	**24.01**	**256**	P	**P**	**19 19 11.2**	**+3.4**
	SNR=5.2						
HOQ	**Hoqain**	**24.19**	**259**	P	**P**	**19 19 16.6**	**+7.2**
	SNR=6.7						
NVS	**Novosibirsk**	**24.20**	**360**	⇓*i*P	**P**	**19 19 07.5**	**-1.6**
NVS				*e*S	**S**	**19 23 26.6**	**+0.3**
NVS				pmax	pmax		
	comp=N,86nm,2.4s						
NVS				pmax	pmax		
	comp=E,16nm,2.4s						
NVS				pmax	pmax		
	comp=Z,81nm,2.4s,mb4.7						
NVS				smax			
	comp=N,19nm,2.2s						
NVS				smax			
	comp=E,16nm,2.2s						
BVA0	**Borovoye Array**	**24.30**	**341**	P	**P**	**19 19 09.4**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.0						
BVAR	**Borovoye Array**	**24.30**	**341**	P	**P**	**19 19 10.5**	**+0.5**
	comp=Z,4.1nm,0.7s,mb4.0,baz=141,slow=9.6,SNR=20						
BVAR	**Borovoye Array**	**24.30**	**341**	P	**P**	**19 19 10.5**	**+0.4**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRVK	**Borovoye**	**24.36**	**341**	*de*P	**P**	**19 19 10.5**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,40nm,2.5s,mb4.4						
BRVK	**Borovoye**	**24.36**	**341**	P	**P**	**19 19 11.1**	**+0.5**
	SNR=19						
SONM	**Songino Array**	**24.63**	**39**	P	**P**	**19 19 13.9**	**+0.8**
	comp=Z,14nm,0.8s,mb4.5,baz=231,slow=10,SNR=14						
SONM				LR	LR	19 29 43.7	
	comp=Z,1μm,20.3s,MS4.3,baz=236,slow=39						
SONM	**Songino Array**	**24.63**	**39**	P	**P**	**19 19 13.9**	**+0.8**
SONM				pmax	pmax		
	comp=Z,14nm,0.8s						
SONM				MLR	MLR		
	comp=Z,1μm,20.3s						
ZRNK	**Zerenda**	**24.65**	**339**	P	**P**	**19 19 11.7**	**-1.5**
ZRNK				pmax	pmax		
	comp=Z,300nm,4.0s						
ZAK	**Zakamensk**	**24.74**	**31**	*e*P	**P**	**19 19 15.0**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.0						
ASHO	**Ashiyiah**	**24.86**	**263**	P	**P**	**19 19 19.8**	**+4.3**
	SNR=20						
ULN	**Ulaanbaatar**	**25.00**	**40**	*e*P	**P**	**19 19 17.4**	**+0.9**
	comp=Z,27nm,1.1s,mb4.7						
ULN	**Ulaanbaatar**	**25.00**	**40**	*e*P	**P**	**19 19 17.4**	**+0.9**
ULN				pmax	pmax		
	comp=Z,27nm,1.1s,mb4.7						
ULN	**Ulaanbaatar**	**25.00**	**40**	P	**P**	**19 19 17.9**	**+1.3**
	SNR=16						
AB31	**Akbulak array**	**25.68**	**323**	P	**P**	**19 19 23.1**	**+0.4**
AB31				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.7						
ABKAR	**Akbulak array**	**25.68**	**323**	*e*P	**P**	**19 19 23.4**	**+0.7**
	comp=Z,10nm,0.6s,mb4.5						
TLY	**Talaya**	**25.83**	**30**	*e*P	**P**	**19 19 25.1**	**+1.1**
TLY				*e*S	**S**	**19 23 46.6**	**-5.8**
TLY				*e*SS		19 25 00.7	
TLY				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.3						
TLY				MLR	MLR		
	comp=Z,347nm,17.0s,MS4.0						
IRK	**Irkutsk**	**26.51**	**29**	*e*P	**P**	**19 19 30.9**	**+0.8**
IRK				pmax	pmax		
	comp=Z,31nm,2.3s,mb4.4						
QIZ	**Qiongzhong**	**26.60**	**110**	P	**P**	**19 19 32.0**	**+0.8**
QIZ				pP	pP	19 19 38.0	+0.7
QIZ				sP	sP	19 19 40.8	+1.0
QIZ				S	**S**	**19 24 08.0**	**+2.9**
QIZ				sS	sS	19 24 18.8	+3.7
QIZ				pmax	pmax		
	comp=Z,92nm,2.2s,mb4.9						
QIZ				LR	LR		
	comp=N,420nm,15.1s,MS4.2						
QIZ				LR	LR		
	comp=E,230nm,14.5s,MS4.2						
QIZ				LR	LR		
	comp=Z,670nm,14.4s,MS4.3						
WHN	**Wuhan**	**26.64**	**82**	P	**P**	**19 19 32.3**	**+0.7**
WHN				LR	LR		
	comp=N,2μm,11.7s,MS4.9						
WHN				LR	LR		
	comp=E,960nm,11.0s,MS4.9						
WHN				LR	LR		
	comp=Z,2μm,12.8s,MS4.9						
AKTK	**Aktyubinsk**	**27.39**	**323**	P	**P**	**19 19 38.5**	**+0.5**
AKTK				LR	LR	19 31 17.7	
AKTO	**Aktyubinsk**	**27.39**	**323**	P	**P**	**19 19 38.5**	**+0.5**
	comp=Z,5.8nm,0.9s,mb4.1,baz=128,slow=11,SNR=19						
AKTO				LR	LR	19 31 17.7	
	comp=Z,420nm,19.3s,MS4.0,baz=294,slow=38						
AKTO	**Aktyubinsk**	**27.39**	**323**	P	**P**	**19 19 38.5**	**+0.5**
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
AKTO				MLR	MLR		
	comp=Z,420nm,19.3s,MS4.0						
BJT	**Baijiatuao**	**28.23**	**62**	*e*P	**P**	**19 19 46.7**	**+1.0**
	comp=Z,17nm,0.8s,mb4.7						
BJT	**Baijiatuao**	**28.23**	**62**	*e*P	**P**	**19 19 46.7**	**+1.0**
BJT				pmax	pmax		
	comp=Z,17nm,0.8s						
BJI	**Beijing**	**28.24**	**62**	P	**P**	**19 19 44.3**	**-1.5**
BJI				S	**S**	**19 24 27.5**	**-3.2**
BJI				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.6						
BJI				pmax	pmax		
	comp=Z,130nm,3.6s						
BJI				LR	LR		
	comp=N,2μm,17.0s,MS4.7						
BJI				LR	LR		
	comp=E,990nm,20.0s,MS4.7						
BJI				LR	LR		
	comp=Z,1μm,23.0s,MS4.4						
SVE	**Sverdlovsk**	**30.62**	**335**	⇓*e*P	**P**	**19 20 08.1**	**+1.4**
SVE				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.0						
SVE				MLR	MLR		
	comp=Z,867nm,14.0s,MS4.6						
UMR	**Umm Al-Rimmam**	**30.78**	**277**	*e*P	**P**	**19 20 10.1**	**+1.7**
UMR				AMb	AMB	19 20 13.1	
	comp=Z,53nm,1.1s,mb5.3						
MIB	**Mutribah**	**31.06**	**278**	*e*P	**P**	**19 20 12.7**	**+1.8**
MIB				AMb	AMB	19 20 15.6	
	comp=Z,48nm,1.1s,mb5.2						
ARU	**Arti**	**31.11**	**333**	*d i*P	**P**	**19 20 11.4**	**+0.4**
ARU				*e*		19 21 11.1	
ARU				*e*PPP		19 21 22.0	
ARU				S	**S**	**19 25 15.3**	**0.0**
ARU				SS	SS	19 26 54.0	-34
ARU				pmax	pmax		
	comp=Z,38nm,2.5s,mb4.8						
NAY	**Al-Naaiem**	**31.25**	**277**	*e*P	**P**	**19 20 14.0**	**+1.5**
NAY				AMb	AMB	19 20 20.0	
	comp=Z,17nm,0.9s,mb4.9						
QZH	**Quanzhou**	**31.60**	**92**	*e*P	**P**	**19 20 19.0**	**+3.3**
QZH				*e*S	**S**	**19 25 24.3**	**+0.7**
QZH				LR	LR		
	comp=N,2μm,9.9s						
QZH				LR	LR		
	comp=E,630nm,10.8s						
QZH				LR	LR		
	comp=Z,4μm,19.0s						
DGRG	**David-gareji**	**32.33**	**300**	P	**P**	**19 20 24.0**	**+2.1**
SSE	**Sheshan**	**32.37**	**79**	P	**P**	**19 20 20.3**	**-2.2**
SSE				S	**S**	**19 25 33.3**	**-2.4**
SSE				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
SSE				pmax	pmax		
	comp=Z,190nm,3.9s						
SSE				LR	LR		
	comp=N,370nm,24.5s,MS4.0						
SSE				LR	LR		
	comp=E,170nm,24.4s,MS4.0						
SSE				LR	LR		
	comp=Z,430nm,25.1s,MS4.0						
GNI	**Garni**	**32.67**	**298**	*e*P	**P**	**19 20 28.3**	**+3.4**
	comp=Z,22nm,1.1s,mb5.0						
GNI	**Garni**	**32.67**	**298**	*ce*P	**P**	**19 20 27.6**	**+2.7**
GNI				pmax	pmax		
	comp=Z,21nm,1.7s						
MTA	**Mtatsminda**	**32.79**	**300**	P	**P**	**19 20 27.7**	**+1.7**
TBLG	**Delisi**	**32.83**	**300**	P	**P**	**19 20 26.4**	**+0.1**
TBLG	**Delisi**	**32.83**	**300**	P	**P**	**19 20 26.4**	**+0.1**
GOR	**Gori**	**33.33**	**301**	P	**P**	**19 20 33.7**	**+3.0**
ZEI	**Tsey**	**33.59**	**302**	*e*P	**P**	**19 20 34.7**	**+1.8**
ZEI				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
SOKR	**Solikamsk**	**34.02**	**336**	*c i*P	**P**	**19 20 38.1**	**+1.6**
SOKR				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.4						
SOKR				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.3						
SNY	**Shenyang**	**34.03**	**60**	⇓P	**P**	**19 20 37.0**	**+0.2**
SNY				S	**S**	**19 26 03.5**	**+2.3**
SNY				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
SNY				LR	LR		
	comp=N,390nm,20

comp=Z,200nm,3.0s
CN2 LR LR
comp=N,400nm,15.0s,MS4.8
CN2 LR LR
comp=E,1µm,15.0s,MS4.8
CN2 LR LR
comp=Z,1µm,16.0s,MS4.7
INCN Inchon 36.25 67 *e*P **P 19 20 55.8 -0.1**
comp=Z,34nm,0.9s,mb5.3
KSRS Korea Array 37.28 67 P **P 19 21 04.5 -0.2**
comp=Z,4.3nm,0.5s,mb4.5,baz=276,slow=9.1,SNR=19
KSRS LR LR 19 37 49.8
comp=Z,1µm,18.8s,MS4.7,baz=278,slow=39
KSRS Korea Array 37.28 67 P **P 19 21 04.5 -0.2**
KSRS pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
KSRS MLR MLR
comp=Z,1µm,18.8s,MS4.7
TGY Tagaytay City 38.23 107 P **P 19 21 14.6 +1.6**
comp=Z,41nm,0.3s,mb5.6,baz=113,slow=18,SNR=5.7
TGY Tagaytay City 38.23 107 P **P 19 21 14.6 +1.6**
TGY pmax pmax
comp=Z,41nm,0.3s
ANN Anapa 38.48 305 *e*P **P 19 21 14.1 -0.6**
ANN *e*S **S 19 27 09.1 0.0**
ANN pmax pmax
comp=Z,33nm,0.9s,mb5.1
ANN MLR MLR
comp=N,308nm,15.0s,MS4.5
ANN MLR MLR
comp=E,478nm,15.0s,MS4.5
ANN MLR MLR
comp=Z,366nm,15.0s,MS4.3
VSR Storozhevoye 38.48 315 *e*P **P 19 21 16.6 +1.9**
VSR pmax pmax
comp=Z,30nm,1.2s,mb4.9
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,20nm,0.9s
MDJ Mudanjiang 38.68 56 P **P 19 21 14.8 -1.6**
MDJ pP pP 19 21 21.8 -0.8
MDJ sP sP 19 21 26.3 +1.2
MDJ S **S 19 27 06.3 -5.8**
MDJ SS SS 19 29 59.0 -3.6
MDJ pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
MDJ pmax pmax
comp=Z,130nm,4.9s
MDJ LR LR
comp=N,640nm,16.6s,MS4.7
MDJ LR LR
comp=E,580nm,16.0s,MS4.7
MDJ LR LR
comp=Z,790nm,15.4s,MS4.7
MOS Moscow 40.68 322 *e*P **P 19 21 32.3 -0.6**
MOS pmax pmax
comp=Z,61nm,1.7s,mb5.0
KLR Kul'dur 40.71 49 *e*P **P 19 21 30.0 -3.3**
KLR MLR MLR
comp=Z,1µm,13.0s,MS4.9
SIM Simferopol' 40.84 305 *de*P **P 19 21 35.5 +1.1**
SIM pmax pmax
comp=Z,45nm,1.2s,mb5.0
SIM MLR MLR
comp=Z,500nm,18.0s,MS4.4
OBN Obninsk 41.06 320⇑ *i*P **P 19 21 36.0 -0.1**
OBN *e* 19 23 12.4
OBN pmax pmax
comp=Z,51nm,1.2s,mb5.0
OBN MLR MLR
comp=Z,500nm,22.0s,MS4.3
BR131 Keskin Array S 41.19 297 *e*P **P 19 21 38.5 +1.1**
BRTR Keskin Array B 41.19 297 P **P 19 21 38.1 +0.7**
comp=Z,7.4nm,1.1s,mb4.2,baz=130,slow=8.9,SNR=12
BRTR LR LR 19 41 42.4
comp=Z,298nm,19.6s,MS4.2,baz=226,slow=40
BRTR Keskin Array B 41.19 297 *ce*P **P 19 21 38.7 +1.3**
BRTR pmax pmax
comp=Z,7.0nm,1.1s
KLMR Klimovskoe 41.72 329 P **P 19 21 41.4 0.0**
KLMR pmax pmax
comp=Z,70nm,1.8s,mb5.0
KLMR MLR MLR
comp=Z,577nm,15.0s,MS4.6
YAK Yakutsk 43.31 30 *e*P **P 19 21 54.1 -0.2**
comp=Z,21nm,0.8s,mb4.9
YAK Yakutsk 43.31 30 *e*P **P 19 21 54.1 -0.2**
YAK *e* 19 23 34.8
YAK *e* 19 23 43.4
YAK *e*PPP 19 24 14.3
YAK eS **S 19 28 19.6 -0.9**
YAK *e*SS SS 19 31 34.4 +0.5
YAK *e* 19 31 54.4
YAK *e*SSS 19 32 11.7
YAK pmax pmax
comp=Z,17nm,0.9s,mb4.8
YAK pmax pmax
comp=Z,61nm,4.8s
YAK pmax pmax
comp=E,15nm,2.1s
YAK pmax pmax
comp=N,28nm,5.2s
YAK smax
comp=N,60nm,3.0s
YAK smax
comp=E,13nm,2.2s
YAK MLR MLR
comp=Z,133nm,15.0s,MS4.0
YAK MLR MLR
comp=N,159nm,13.0s,MS4.2
YAK MLR MLR
comp=E,129nm,13.0s,MS4.2
AKASG Malin Array Be 44.57 313 P **P 19 22 04.5 -0.1**
comp=E,6.6nm,0.8s,mb4.5,baz=84,slow=7.7,SNR=14
AKASG LR LR 19 43 54.6
comp=E,379nm,19.8s,MS4.3,baz=95,slow=40
AKASG Malin Array Be 44.57 313 P **P 19 22 04.5 -0.1**
AKASG pmax pmax
comp=Z,7.0nm,0.8s
AKASG MLR MLR
comp=Z,379nm,19.8s
KIEV Kiev 44.58 313 *e*P **P 19 22 04.5 -0.2**
comp=Z,6.8nm,0.8s,mb4.5
KIEV Kiev 44.58 313 *e*P **P 19 22 04.5 -0.2**
KIEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
KIS Kishinev 44.61 307 *e*P **P 19 22 06.0 +1.0**
KIS *e* 19 28 40.0
KIS MLR MLR
comp=Z,400nm,15.0s,MS4.5
KIS MLR MLR
comp=Z,500nm,16.0s
KIS smax
comp=N,300nm,1.0s
KIS smax
comp=E,400nm,1.0s
MAT Matsushiro 45.56 67 P **P 19 22 12.3 -0.4**
MAT S **S 19 28 50.0 -3.9**
MJAR Matsushiro Air 45.56 67 P **P 19 22 11.6 -1.1**
comp=E,3.9nm,1.0s,mb4.3,baz=296,slow=9.4,SNR=6.4
MJAR LR LR 19 42 35.6
comp=E,527nm,20.1s,MS4.5,baz=280,slow=38
MJAR Matsushiro Air 45.56 67 P **P 19 22 11.6 -1.1**
MJAR pmax pmax
comp=Z,4.0nm,1.0s
MJAR MLR MLR
comp=Z,527nm,20.1s
VRI Vrincioaia 46.06 306⇓P **P 19 22 18.1 +1.6**
VRI Vrincioaia 46.06 306⇓ *i*P **P 19 22 18.1 +1.6**
TESR 46.10 307⇓ *i*P **P 19 22 17.5 +0.7**
JOF Joensuu 46.10 330 *e*P **P 19 22 15.9 -0.7**
JOF pmax pmax
comp=Z,13nm,0.7s,mb5.0
JOF Joensuu 46.10 330 *ep* **P 19 22 15.9 -0.7**
comp=Z,13nm,0.7s,mb5.0
MLR Muntele Rosu 46.62 305⇓P **P 19 22 22.7 +1.8**
MLR Muntele Rosu 46.62 305⇓ *i*P **P 19 22 22.7 +1.8**
BURAR Bucovina Array 47.07 308⇑P **P 19 22 25.4 +1.0**
BURAR Bucovina Array 47.07 308⇑ *i*P **P 19 22 25.4 +1.0**
BUR08 Bucovina Ar. S 47.08 308 *e*P **P 19 22 24.7 +0.3**
APA Apatity 47.08 336⇑ *e*P **P 19 22 26.0 +1.8**
APA pmax pmax
comp=Z,56nm,1.7s,mb5.2
APA MLR MLR
comp=Z,500nm,23.0s,MS4.4

APA MLR MLR
comp=Z,600nm,17.0s
VOIR 47.25 305⇓P **P 19 22 26.5 +0.7**
VOIR 47.25 305⇓ *i*P **P 19 22 26.5 +0.7**
ZKR Zakros 47.65 291 P **P 19 22 29.0 -0.1**
APE Apeiranthos 47.83 294⇓P **P 19 22 30.9 +0.4**
APE Apeiranthos 47.83 294⇓ *i*P **P 19 22 30.9 +0.4**
YSS Yuzh-Sakhalins 47.94 53 *e*P **P 19 22 31.0 -0.2**
YSS *e*S **S 19 29 26.0 -1.7**
YSS MLR MLR
comp=Z,500nm,14.0s,MS4.6
YSS MLR MLR
comp=E,500nm,16.0s
FINES FINESS Array B 48.05 327 P **P 19 22 32.2 +0.4**
comp=E,8.0nm,0.7s,mb4.8,baz=103,slow=8.8,SNR=20
FINES LR LR 19 43 25.5
comp=E,298nm,19.6s,MS4.3,baz=241,slow=37
FINES FINESS Array B 48.05 327 P **P 19 22 32.2 +0.4**
FINES pmax pmax
comp=Z,8.0nm,0.7s
FINES MLR MLR
comp=Z,298nm,19.6s
KAF Kangasniemi 48.10 328 *e*P **P 19 22 31.4 -0.8**
KAF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
KAF Kangasniemi 48.10 328 *ep* **P 19 22 31.4 -0.8**
comp=Z,3.8nm,0.8s,mb4.5
LAST Lasithi 48.23 291 P **P 19 22 34.1 +0.5**
SRS Serrai 48.70 300 P **P 19 22 36.5 -0.6**
SIVA Sivas 48.80 291 P **P 19 22 38.2 +0.2**
PAIG Paliouri 48.80 298 P **P 19 22 38.3 +0.4**
VTS Vitosha 48.80 302⇓P **P 19 22 38.9 +1.0**
VTS Vitosha 48.80 302⇓ *i*P **P 19 22 38.9 +1.0**
PLG Polygyros 48.91 299 P **P 19 22 38.2 -0.6**
UZH Uzhgorod 49.01 310 *e*P **P 19 22 40.7 +1.3**
KNT Kendrikon 49.21 300 P **P 19 22 39.9 -1.2**
KARN Karanos 49.43 292 P **P 19 22 43.0 +0.2**
VAY Valandovo 49.44 300 *e*P **P 19 22 42.5 -0.2**
CRVS Cervenica-Dubn 49.55 310 *e*P **P 19 22 45.1 +1.6**
comp=Z,22nm,2.3s,mb4.8
CRVS Cervenica-Dubn 49.55 310 *e*P **P 19 22 45.1 +1.6**
CRVS pmax pmax
comp=Z,22nm,2.3s,mb4.8
CRVS Cervenica-Dubn 49.55 310 *e*P **P 19 22 45.1 +1.6**
DID Didima 49.55 295 P **P 19 22 40.5 -3.2**
GRG Griva 49.61 300 P **P 19 22 44.1 0.0**
LTK Loutraki 49.66 296 P **P 19 22 42.1 -2.4**
STHS Stebnicka Huta 49.67 311 *e*P **P 19 22 45.8 +1.4**
comp=Z,4.2nm,0.9s,mb4.5
STHS Stebnicka Huta 49.67 311 *e*P **P 19 22 45.8 +1.4**
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
STHS Stebnicka Huta 49.67 311 *e*P **P 19 22 45.8 +1.4**
LIT Litokhoron 49.67 298 P **P 19 22 43.3 -1.3**
AGG Agios Georgios 49.98 297 P **P 19 22 45.8 -1.1**
KEV Kevo 50.10 338 *e*P **P 19 22 45.9 -1.5**
KEV pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
KEV Kevo 50.10 338 *ep* **P 19 22 45.9 -1.5**
comp=Z,5.7nm,0.7s,mb4.7
GUR Goura 50.16 296 P **P 19 22 47.1 -1.2**
SKO Skopje 50.18 301 *e*P **P 19 22 48.1 -0.4**
VLX Vlachokerasia 50.24 295 P **P 19 22 47.7 -1.3**
NIE Niedzica 50.28 311 *e*P **P 19 22 50.4 +1.4**
YUK Yuzh-Kuril'sk 50.34 56 *e*P **P 19 22 46.8 -2.8**
YUK MLR MLR
comp=N,800nm,20.0s,MS4.8
YUK MLR MLR
comp=E,450nm,20.0s,MS4.8
YUK MLR MLR
comp=Z,630nm,20.0s,MS4.6
LAKA Lakka 50.39 296 P **P 19 22 49.1 -0.9**
BIA Bitola 50.41 300 *e*P **P 19 22 49.7 -0.5**
KRUS Krusevo 50.41 300 *e*P **P 19 22 50.1 -0.1**
ARCES ARCESS Array B 50.52 337 P **P 19 22 50.8 +0.2**
comp=Z,17nm,1.1s,mb4.9,baz=98,slow=7.5,SNR=17
ARCES LR LR 19 44 55.9
comp=Z,408nm,19.3s,MS4.5,baz=309,slow=37
ARCES ARCESS Array B 50.52 337 P **P 19 22 50.8 +0.3**
ARCES pmax pmax
comp=Z,17nm,1.1s
ARCES MLR MLR
comp=Z,408nm,19.3s
PYL PYLOS 50.84 295 P **P 19 22 51.6 -1.9**
VYHS Vyhne 51.31 310 *e*P **P 19 22 53.3 -3.5**
comp=Z,29nm,2.8s,mb4.7
VYHS Vyhne 51.31 310 *e*P **P 19 22 53.3 -3.5**
VYHS pmax pmax
comp=Z,29nm,2.8s,mb4.7
VYHS Vyhne 51.31 310 *e*P **P 19 22 53.3 -3.5**
PKSM Moragy 51.65 307⇓P **P 19 22 59.5 +0.1**
PKSM Moragy 51.65 307⇓ *i*P **P 19 22 59.5 +0.1**
OKC Ostrava-Krasne 51.66 311 *e*P **P 19 23 00.4 +1.0**
OKC MLR MLR
comp=Z,200nm,18.5s,MS4.2
OKC Ostrava-Krasne 51.66 311 *e*P **P 19 23 00.4 +1.0**
OKC AMS AMS 19 45 40.0
comp=Z,200nm,18.5s
MORC Moravsky Berou 52.05 311⇓P **P 19 23 02.2 -0.2**
MORC Moravsky Berou 52.05 311⇓ *i*P **P 19 23 02.2 -0.2**
DPC Dobruska-Polom 52.79 312 *e*P **P 19 23 08.5 +0.7**
DPC MLR MLR
comp=Z,300nm,16.5s,MS4.4
DPC Dobruska-Polom 52.79 312 *e*P **P 19 23 08.5 +0.7**
DPC AMS AMS 19 45 30.0
comp=Z,300nm,16.5s
UPC Upice 52.98 312 *e*P **P 19 23 10.2 +1.0**
UPC Upice 52.98 312 *e*P **P 19 23 10.2 +1.0**
CONA Conrad Observa 53.34 309⇓ *i*pP **P 19 23 12.3 +0.4**
comp=Z,12nm,1.3s,mb4.7
TREC Trest 53.43 311 AMS AMS 19 46 10.0
comp=Z,400nm,25.5s
SEY Seymchan 53.71 32*c i*P **P 19 23 15.5 +1.2**
PVCC Panska Ves 53.89 313 AMS AMS 19 44 20.0
comp=Z,600nm,27.3s
PRU Pruhonice 53.97 312 *e*P **P 19 23 17.9 +1.4**
PRU MLR MLR
comp=Z,400nm,15.2s,MS4.6
PRU Pruhonice 53.97 312 *e*P **P 19 23 17.9 +1.4**
PRU AMS AMS 19 49 10.0
comp=Z,400nm,15.2s
KMBO Kilima Mbogo 54.01 243 *e*P **P 19 23 19.2 +1.9**
KMBO Kilima Mbogo 54.01 243 P **P 19 23 19.0 +1.8**
comp=Z,12nm,1.1s,mb4.8,baz=182,slow=24,SNR=7.1
KMBO LR LR 19 45 55.4
comp=Z,206nm,19.6s,MS4.2,baz=84,slow=36
KMBO Kilima Mbogo 54.01 243 P **P 19 23 19.0 +1.7**
KMBO pmax pmax
comp=Z,12nm,1.1s
KMBO MLR MLR
comp=Z,206nm,19.6s
KMBO Kilima Mbogo 54.01 243 P **P 19 23 19.9 +2.6**
SNR=5.1
PERS Pernice 54.02 308 *e*P **P 19 23 17.2 +0.3**
SOKA Soboth 54.07 308⇓ *i*pP **P 19 23 17.8 +0.6**
comp=Z,13nm,1.1s,mb4.8
BRG Berggiesshubel 54.25 313 *e*P **P 19 23 18.7 +0.2**
comp=Z,4.8nm,0.9s,mb4.4
BRG *e* 19 24 24.0
comp=Z,7.5nm,1.2s
BRG
comp=N,543nm,15.8s
BRG
comp=E,428nm,17.8s
BRG
comp=Z,499nm,20.1s
BRG Berggiesshubel 54.25 313 *e*P **P 19 23 18.7 +0.2**
BRG *e* 19 24 24.0
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
BRG pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
BRG MLR MLR
comp=N,325nm,15.8s,MS4.6
BRG MLR MLR
comp=E,256nm,17.8s,MS4.6
BRG MLR MLR
comp=Z,299nm,20.1s,MS4.3
CRNS Crni Vrh 54.69 307 *e*P **P 19 23 22.1 +0.4**
KHC Kasperske Hory 54.70 311 *e*P **P 19 23 21.9 +0.1**
comp=Z,4.3nm,1.0s,mb4.4
KHC Kasperske Hory 54.70 311 *e*P **P 19 23 21.9 +0.1**
KHC pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
KHC Kasperske Hory 54.70 311 *e*P **P 19 23 22.2 +0.4**

KHC AMS AMS 19 46 20.0
comp=Z,500nm,28.6s
CLL Collm 54.79 314 *e*P **P 19 23 25.0 +2.5**
CADS Cadrg 55.02 307 *e*P **P 19 23 24.1 -0.1**
NOA NORSAR Array B 55.15 326 P **P 19 23 24.4 -0.4**
comp=Z,9.7nm,0.9s,mb4.8,baz=88,slow=7.2,SNR=15
NOA LR LR 19 49 09.6
comp=Z,285nm,19.2s,MS4.4,baz=100,slow=38
NOA NORSAR Array B 55.15 326 P **P 19 23 24.4 -0.4**
NOA pmax pmax
comp=Z,10.0nm,0.9s
NOA MLR MLR
comp=Z,285nm,19.3s
NKC Novy Kostel 55.28 312 AMS AMS 19 47 00.0
comp=Z,500nm,29.6s
MOX Moxa 55.75 313 *e*P **P 19 23 27.1 -2.2**
GRA1 Grafenberg Arr 56.14 312 *e*P **P 19 23 32.3 +0.1**
comp=Z,9.0nm,1.1s,mb4.7
GRF Grafenberg Arr 56.14 312 *e*P **P 19 23 32.3 +0.1**
comp=Z,9.0nm,1.1s,mb4.7
GRF Grafenberg Arr 56.14 312 *e*P **P 19 23 32.3 +0.1**
GRF pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
GRF Grafenberg Arr 56.14 312 *e*P **P 19 23 32.3 +0.1**
GRF pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
MOTA Moosalm 56.61 309⇑ *i*P **P 19 23 34.9 -0.7**
comp=Z,7.3nm,0.8s,mb4.8
PETK Petropavlovsk- 57.00 44 P **P 19 23 38.1 -0.1**
comp=Z,6.0nm,0.9s,mb4.6,baz=298,slow=3.2,SNR=6.9
PETK LR LR 19 49 04.2
comp=Z,182nm,20.2s,MS4.2,baz=277,slow=37
PETK Petropavlovsk- 57.00 44 P **P 19 23 38.1 -0.1**
PETK pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
PETK MLR MLR
comp=Z,182nm,20.2s,MS4.2
LANF Langenberg 58.46 312 *e*P **P 19 23 49.1 +0.5**
RUP Ruppelstein 58.80 312 *e*P **P 19 23 50.2 -0.7**
CDF Champ du Feu 58.92 311 *e*P **P 19 23 50.7 -1.1**
PGF Pioggiola 59.12 304 *e*P **P 19 23 52.1 -1.2**
comp=Z,20nm,1.2s,mb4.7
PGF Pioggiola 59.12 304 *e*P **P 19 23 52.1 -1.2**
comp=Z,10nm,1.2s,mb4.7
PGF Pioggiola 59.12 304 *e*P **P 19 23 52.1 -1.2**
PGF pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
MOF Molkenrain 59.14 310 *e*P **P 19 23 52.5 -0.8**
BILL Bilibino 59.36 26⇑ *i*P **P 19 23 55.7 +1.2**
BILL pmax pmax
comp=Z,31nm,1.6s,mb5.1
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.3
HAU Haudompre 59.62 311 *e*P **P 19 23 55.5 -1.1**
comp=Z,16nm,0.9s,mb4.8
HAU *e*MLR MLR
comp=Z,180nm,21.2s,MS3.9
HAU Haudompre 59.62 311 *e*P **P 19 23 55.5 -1.1**
comp=Z,8.1nm,0.9s,mb4.8
HAU LR LR
comp=Z,180nm,21.3s,MS4.2
HAU Haudompre 59.62 311 *e*P **P 19 23 55.5 -1.1**
HAU pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
HAU MLR MLR
comp=Z,180nm,21.3s,MS4.2
SAOF Saorge 59.77 306 *e*P **P 19 23 58.2 +0.4**
AUTN L'Aution 59.86 306 *e*P **P 19 23 54.9 -3.5**
SBF Sospel 59.89 306 *e*P **P 19 23 57.9 -0.7**
comp=Z,33nm,0.9s,mb5.1
SBF Sospel 59.89 306 *e*P **P 19 23 57.9 -0.7**
comp=Z,16nm,0.9s,mb5.1
SBF Sospel 59.89 306 *e*P **P 19 23 57.9 -0.7**
SBF pmax pmax
comp=Z,17nm,0.9s,mb5.1
LUCF Luceram 59.94 306 *e*P **P 19 23 58.4 -0.5**
LPG La Plagne 59.95 308 *e*P **P 19 23 58.7 -0.2**
comp=Z,30nm,1.1s,mb5.0
LPG La Plagne 59.95 308 *e*P **P 19 23 58.7 -0.2**
comp=Z,15nm,1.1s,mb4.9
LPG La Plagne 59.95 308 *e*P **P 19 23 58.7 -0.2**
LPG pmax pmax
comp=Z,15nm,1.1s,mb4.9
LPL La Plagne 59.96 308 *e*P **P 19 23 58.7 -0.3**
comp=Z,49nm,1.1s,mb5.2
LPL La Plagne 59.96 308 *e*P **P 19 23 58.7 -0.3**
comp=Z,24nm,1.1s,mb5.2
LPL La Plagne 59.96 308 *e*P **P 19 23 58.7 -0.3**
LPL pmax pmax
comp=Z,24nm,1.1s,mb5.1
TOUF Mont Tournerai 59.98 306 *e*P **P 19 23 59.7 +0.5**
MVIF Mont Vial 60.08 306 *e*P **P 19 23 58.0 -1.8**
CABF La Chapelle 60.12 309 *e*P **P 19 23 59.2 -0.9**
GIVF Givet 60.12 313 *e*P **P 19 23 59.4 -0.6**
MBDF Montbardon 60.13 307 *e*P **P 19 23 58.9 -1.3**
comp=Z,25nm,1.4s,mb4.8
MBDF Montbardon 60.13 307 *e*P **P 19 23 58.9 -1.3**
comp=Z,13nm,1.4s,mb4.8
MBDF Montbardon 60.13 307 *e*P **P 19 23 58.9 -1.3**
MBDF pmax pmax
comp=Z,13nm,1.4s,mb4.8
MEZF Maizieres J'vi 60.35 311 *e*P **P 19 24 00.7 -0.9**
SFTF Sexfontaines 60.43 311 *e*P **P 19 24 01.0 -1.2**
BAIF Baives 60.52 313 *e*P **P 19 24 01.9 -0.8**
comp=Z,55nm,1.3s,mb5.2
BAIF Baives 60.52 313 *e*P **P 19 24 01.9 -0.8**
comp=Z,27nm,1.3s,mb5.2
BAIF Baives 60.52 313 *e*P **P 19 24 01.9 -0.8**
BAIF pmax pmax
comp=Z,27nm,1.3s,mb5.2
FRF La Foret Royal 60.52 306 *e*P **P 19 24 01.8 -1.1**
comp=Z,49nm,1.5s,mb5.1
FRF La Foret Royal 60.52 306 *e*P **P 19 24 01.8 -1.1**
comp=Z,24nm,1.5s,mb5.1
FRF La Foret Royal 60.52 306 *e*P **P 19 24 01.8 -1.1**
FRF pmax pmax
comp=Z,24nm,1.5s,mb5.1
LMR La Mourre 60.68 305 *e*P **P 19 24 03.1 -0.9**
comp=Z,49nm,1.4s,mb5.2
LMR La Mourre 60.68 305 *e*P **P 19 24 03.1 -0.9**
comp=Z,24nm,1.4s,mb5.1
LMR La Mourre 60.68 305 *e*P **P 19 24 03.1 -0.9**
LMR pmax pmax
comp=Z,24nm,1.4s,mb5.1
ORIF Oris-en-Rattie 60.69 307 *e*P **P 19 24 02.7 -1.3**
comp=Z,12nm,1.0s,mb4.7
ORIF *e*MLR MLR
comp=Z,148nm,21.2s,MS3.8
ORIF Oris-en-Rattie 60.69 307 *e*P **P 19 24 02.7 -1.3**
comp=Z,5.9nm,1.0s,mb4.7
ORIF Oris-en-Rattie 60.69 307 *e*P **P 19 24 02.7 -1.3**
ORIF pmax pmax
comp=Z,6.0nm,1.0s,mb4.7
KEST Kesra 60.80 296 *e*P **P 19 24 05.7 +0.8**
KEST Kesra 60.80 296 P **P 19 24 05.5 +0.6**
comp=Z,11nm,1.0s,mb4.9,baz=312,slow=3.7,SNR=18
KEST LR LR 19 55 11.8
comp=Z,62nm,21.8s,MS3.7,baz=178,slow=41
SMRF Simiane la Rot 61.16 306 *e*P **P 19 24 06.9 -0.3**
comp=Z,42nm,1.4s,mb5.1
SMRF Simiane la Rot 61.16 306 *e*P **P 19 24 06.9 -0.3**
comp=Z,42nm,1.4s,mb5.4
LOR Lormes 61.43 310 *e*P **P 19 24 07.4 -1.6**
LOR *e*MLR MLR
comp=Z,229nm,20.5s,MS4.0
LOR Lormes 61.43 310 *e*P **P 19 24 07.4 -1.6**
LOR MLR MLR
comp=Z,230nm,20.5s,MS4.3
SMF Signal de Mont 61.61 310 *e*P **P 19 24 09.0 -1.2**
comp=Z,22nm,1.1s,mb4.9
SMF Signal de Mont 61.61 310 *e*P **P 19 24 09.0 -1.2**
comp=Z,11nm,1.1s,mb4.9
SMF Signal de Mont 61.61 310 *e*P **P 19 24 09.0 -1.2**
SMF pmax pmax
comp=Z,11nm,1.1s,mb4.9
SSF Saint Saulge 61.72 310 *e*P **P 19 24 09.6 -1.4**
comp=Z,19nm,1.1s,mb4.9
SSF Saint Saulge 61.72 310 *e*P **P 19 24 09.6 -1.4**
comp=Z,9.6nm,1.1s,mb4.8
SSF Saint Saulge 61.72 310 *e*P **P 19 24 09.6 -1.4**
SSF pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
AVF Avril sur Loir 61.89 310 *e*P **P 19 24 10.7 -1.4**
comp=Z,28nm,1.4s,mb4.9
AVF Avril sur Loir 61.89 310 *e*P **P 19 24 10.7 -1.4**
comp=Z,14nm,1.4s,mb4.9

AVF	**Avril sur Loir**	**61.89**	**310**	*eP*	**P**	**19 24 10.7**	**-1.4**
AVF				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.9						
BGF	**Bois d'Agland**	**62.29**	**310**	*eP*	**P**	**19 24 13.4**	**-1.4**
	comp=Z,8.6nm,0.8s,mb4.7						
BGF	**Bois d'Agland**	**62.29**	**310**	*eP*	**P**	**19 24 13.4**	**-1.4**
	comp=Z,4.3nm,0.8s,mb4.6						
BGF	**Bois d'Agland**	**62.29**	**310**	*eP*	**P**	**19 24 13.4**	**-1.4**
BGF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
LASF	**Ste Croix**	**62.31**	**307**	*eP*	**P**	**19 24 14.4**	**-0.6**
	comp=Z,47nm,1.4s,mb5.1						
LBL	**Lubilhac**	**62.40**	**308**	*eP*	**P**	**19 24 14.7**	**-0.9**
TCF	**Toulx Ste Croi**	**62.79**	**310**	*eP*	**P**	**19 24 17.3**	**-0.9**
	comp=Z,40nm,1.2s,mb5.1						
TCF	**Toulx Ste Croi**	**62.79**	**310**	*eP*	**P**	**19 24 17.3**	**-0.9**
	comp=Z,20nm,1.2s,mb5.1						
TCF	**Toulx Ste Croi**	**62.79**	**310**	*eP*	**P**	**19 24 17.3**	**-0.9**
TCF				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.1						
FITZ	**Fitzroy Crossi**	**63.26**	**134**	*eP*	**P**	**19 24 21.7**	**+0.2**
	comp=Z,6.1nm,1.0s,mb4.7						
FITZ	**Fitzroy Crossi**	**63.26**	**134**	LR	LR	19 52 19.4	
	comp=Z,98nm,21.0s,MS4.0,baz=60,slow=36						
CAF	**Calviac**	**63.29**	**308**	*eP*	**P**	**19 24 20.7**	**-0.8**
	comp=Z,28nm,1.3s,mb4.9						
CAF	**Calviac**	**63.29**	**308**	*eP*	**P**	**19 24 20.7**	**-0.8**
	comp=Z,14nm,1.3s,mb4.9						
CAF	**Calviac**	**63.29**	**308**	*eP*	**P**	**19 24 20.7**	**-0.8**
CAF				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.9						
RJF	**Les Rejaudoux**	**63.55**	**309**	*eP*	**P**	**19 24 22.7**	**-0.5**
RJF				*e*MLR	MLR		
	comp=Z,215nm,20.8s,MS4.0						
RJF	**Les Rejaudoux**	**63.55**	**309**	*eP*	**P**	**19 24 22.7**	**-0.5**
RJF				MLR	MLR		
	comp=Z,220nm,20.8s,MS4.3						
LDF	**La Druitiere**	**63.64**	**313**	*eP*	**P**	**19 24 22.3**	**-1.4**
	comp=Z,3.8nm,0.5s,mb4.4						
LDF	**La Druitiere**	**63.64**	**313**	*eP*	**P**	**19 24 22.3**	**-1.4**
	comp=Z,1.9nm,0.5s,mb4.4						
LDF	**La Druitiere**	**63.64**	**313**	*eP*	**P**	**19 24 22.3**	**-1.4**
LDF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
MTLF	**Montolieu**	**63.67**	**306**	*eP*	**P**	**19 24 23.1**	**-0.9**
	comp=Z,24nm,1.3s,mb4.8						
MTLF	**Montolieu**	**63.67**	**306**	*eP*	**P**	**19 24 23.1**	**-0.9**
	comp=Z,12nm,1.3s,mb4.8						
MTLF	**Montolieu**	**63.67**	**306**	*eP*	**P**	**19 24 23.1**	**-0.9**
MTLF				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.8						
FLN	**La Foliniere**	**63.81**	**313**	*eP*	**P**	**19 24 23.4**	**-1.5**
FLN				*e*MLR	MLR		
	comp=Z,194nm,18.8s,MS4.0						
FLN	**La Foliniere**	**63.81**	**313**	*eP*	**P**	**19 24 23.4**	**-1.5**
FLN				MLR	MLR		
	comp=Z,190nm,18.8s,MS4.3						
GRR	**Gorron**	**64.17**	**313**	*eP*	**P**	**19 24 25.5**	**-1.7**
	comp=Z,70nm,1.4s,mb5.2						
GRR	**Gorron**	**64.17**	**313**	*eP*	**P**	**19 24 25.5**	**-1.7**
	comp=Z,35nm,1.4s,mb5.2						
GRR	**Gorron**	**64.17**	**313**	*eP*	**P**	**19 24 25.5**	**-1.7**
GRR				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.2						
LFF	**La Frestale**	**64.18**	**309**	*eP*	**P**	**19 24 26.7**	**-0.7**
MFF	**Saint Martin d**	**64.25**	**310**	*eP*	**P**	**19 24 26.3**	**-1.5**
EPF	**Esparros**	**65.07**	**307**	*eP*	**P**	**19 24 31.4**	**-1.8**
	comp=Z,21nm,1.3s,mb4.7						
EPF	**Esparros**	**65.07**	**307**	*eP*	**P**	**19 24 31.4**	**-1.8**
	comp=Z,11nm,1.3s,mb4.7						
EPF	**Esparros**	**65.07**	**307**	*eP*	**P**	**19 24 31.4**	**-1.8**
EPF				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
SGMF	**Saint Gilles**	**65.28**	**313**	*eP*	**P**	**19 24 33.4**	**-1.1**
	comp=Z,43nm,1.1s,mb5.1						
SGMF	**Saint Gilles**	**65.28**	**313**	*eP*	**P**	**19 24 33.4**	**-1.1**
	comp=Z,22nm,1.1s,mb5.1						
SGMF	**Saint Gilles**	**65.28**	**313**	*eP*	**P**	**19 24 33.4**	**-1.1**
SGMF				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
ETSF	**Etsaut**	**65.74**	**307**	*eP*	**P**	**19 24 36.9**	**-0.6**
	comp=Z,11nm,0.9s,mb4.6						
ETSF	**Etsaut**	**65.74**	**307**	*eP*	**P**	**19 24 36.9**	**-0.6**
	comp=Z,5.3nm,0.9s,mb4.6						
ETSF	**Etsaut**	**65.74**	**307**	*eP*	**P**	**19 24 36.9**	**-0.6**
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
SJPF	**Ste Jean**	**66.12**	**307**	*eP*	**P**	**19 24 39.4**	**-0.6**
ESDC	**Sonseca Array**	**69.30**	**304**	P	**P**	**19 24 59.8**	**-0.3**
	comp=Z,3.4nm,0.8s,mb4.3,baz=58,slow=6.7,SNR=15						
ESDC				LR	LR	19 55 08.1	
	comp=Z,84nm,21.5s,MS3.9,baz=35,slow=36						
SUMG	**Summit**	**69.73**	**344**	*i* P	**P**	**19 25 04.0**	**+1.8**
	comp=Z,31nm,0.9s,mb5.2						
WRA	**Warramunga Arr**	**70.20**	**129**	P	**P**	**19 25 06.0**	**+0.2**
	comp=Z,12nm,1.0s,mb4.8,baz=324,slow=6.4,SNR=68						
WRA				LR	LR	19 58 15.7	
	comp=Z,76nm,21.5s,MS3.9,baz=270,slow=38						
WRA	**Warramunga Arr**	**70.20**	**129**	P	**P**	**19 25 06.1**	**+0.3**
WRA				pmax	pmax		
	comp=Z,12nm,1.0s						
WRA				MLR	MLR		
	comp=Z,76nm,21.5s						
WB2	**Warramunga Arr**	**70.21**	**129**	*eP*	**P**	**19 25 05.9**	**0.0**
MVO	**Moncorvo**	**70.85**	**307**	*eP*	**P**	**19 25 09.6**	**0.0**
	comp=Z,20nm,1.1s,mb5.0						
MTE	**Manteigas**	**71.53**	**306**	*eP*	**P**	**19 25 14.2**	**+0.5**
	comp=Z,16nm,2.4s,mb4.5						
PBAR	**Barrancos**	**72.10**	**304**	*eP*	**P**	**19 25 17.1**	**-0.1**
	comp=Z,20nm,1.9s,mb4.7						
ASAR	**Alice Springs**	**72.55**	**132**	P	**P**	**19 25 20.5**	**+0.6**
	comp=Z,2.4nm,0.9s,mb4.1,baz=317,slow=5.0,SNR=14						
ASAR	**Alice Springs**	**72.55**	**132**	P	**P**	**19 25 20.5**	**+0.6**
ASAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
EVO	**Evora**	**72.64**	**305**	*eP*	**P**	**19 25 19.3**	**-1.1**
	comp=Z,29nm,1.3s,mb4.8						
EVO				*e*MLR	MLR		
	comp=Z,104nm,18.2s,MS3.9						
COLD	**Coldfoot**	**74.48**	**19**	*eP*	**P**	**19 25 31.9**	**+1.2**
TOA0	**Torodi Ar. Sit**	**76.33**	**277**	*eP*	**P**	**19 25 42.2**	**0.0**
TORD	**Torodi Ar. Bea**	**76.33**	**277**	P	**P**	**19 25 42.2**	**0.0**
TORD				LR	LR	20 04 33.9	
TORD	**Torodi Ar. Bea**	**76.33**	**277**	P	**P**	**19 25 42.2**	**0.0**
	comp=Z,10.0nm,1.0s,mb4.7,baz=53,slow=4.7,SNR=28						
TORD				LR	LR	20 04 33.9	
	comp=Z,446nm,18.0s,MS4.8,baz=65,slow=40						
BPAW	**Bear Paw Mtn.**	**76.42**	**22**	*eP*	**P**	**19 25 42.6**	**+0.7**
	comp=Z,12nm,1.0s,mb4.8						
COLA	**College**	**76.83**	**20**	*eP*	**P**	**19 25 44.4**	**+0.2**
	comp=Z,17nm,1.0s,mb4.9						
COLA	**College**	**76.83**	**20**	*eP*	**P**	**19 25 44.4**	**+0.2**
COLA				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
PPLA	**Purkeypile**	**76.86**	**23**	*eP*	**P**	**19 25 45.6**	**+1.2**
	comp=Z,36nm,1.5s,mb5.1						
ILAR	**Eielson Array**	**77.19**	**20**	P	**P**	**19 25 46.2**	**0.0**
	comp=Z,6.5nm,0.9s,mb4.5,baz=301,slow=4.7,SNR=28						
ILAR				LR	LR	20 01 22.3	
	comp=Z,146nm,20.6s,MS4.3,baz=333,slow=37						
ILAR	**Eielson Array**	**77.19**	**20**	P	**P**	**19 25 46.3**	**+0.1**
ILAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ILAR				MLR	MLR		
	comp=Z,146nm,20.6s						
CTA	**Charters Tower**	**78.69**	**121**	*eP*	**P**	**19 25 55.8**	**+0.6**
	comp=Z,7.6nm,1.2s,mb4.5						
EGAK	**Eagle**	**78.78**	**18**	*eP*	**P**	**19 25 55.7**	**+0.6**
	comp=Z,32nm,1.6s,mb5.0						
SML	**Sawmill**	**78.91**	**22**	*eP*	**P**	**19 25 56.5**	**+0.7**
	comp=Z,7.2nm,1.1s,mb4.5						
SML	**Sawmill**	**78.91**	**22**	*eP*	**P**	**19 25 56.5**	**+0.7**
SML				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
KDAK	**Kodiak Island**	**80.25**	**27**	P	**P**	**19 26 03.1**	**0.0**
	comp=Z,5.8nm,0.8s,mb4.5,baz=8.9,slow=3.6,SNR=4.4						
KDAK	**Kodiak Island**	**80.25**	**27**	P	**P**	**19 26 03.1**	**0.0**
KDAK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
BOSA	**Boshof**	**80.85**	**229**	P	**P**	**19 26 07.4**	**+0.6**
	comp=Z,11nm,1.0s,mb4.7,baz=80,slow=8.3,SNR=5.4						
BOSA				LR	LR	19 57 52.1	
	comp=Z,341nm,20.9s,MS4.7,baz=33,slow=33						
BOSA	**Boshof**	**80.85**	**229**	*eP*	**P**	**19 26 07.2**	**+0.4**
STKA	**Stephens Creek**	**83.13**	**133**	*eP*	**P**	**19 26 18.4**	**-0.2**
	comp=Z,4.3nm,1.1s,mb4.4						
STKA	**Stephens Creek**	**83.13**	**133**	P	**P**	**19 26 18.6**	**0.0**
	comp=Z,4.5nm,1.0s,mb4.4,baz=356,slow=4.9,SNR=4.6						
DBIC	**Dimbokro**	**85.11**	**275**	*eP*	**P**	**19 26 29.0**	**-0.2**
	comp=Z,14nm,1.0s,mb5.0						
DBIC	**Dimbokro**	**85.11**	**275**	P	**P**	**19 26 29.8**	**+0.6**
	comp=Z,11nm,1.0s,mb5.0,baz=39,slow=7.4,SNR=10						
DBIC				LR	LR	20 08 24.6	
	comp=Z,337nm,19.0s,MS4.8,baz=46,slow=38						
DBIC	**Dimbokro**	**85.11**	**275**	*eP*	**P**	**19 26 29.0**	**-0.3**
DBIC				pmax	pmax		
	comp=Z,14nm,1.0s						
KIC	**Kosan Boka**	**85.17**	**274**	*eP*	**P**	**19 26 30.0**	**+0.4**
	comp=Z,33nm,1.1s,mb5.4						
TIC	**Toumodi**	**85.27**	**275**	*eP*	**P**	**19 26 30.2**	**+0.2**
	comp=Z,20nm,0.8s,mb5.3						
TIC	**Toumodi**	**85.27**	**275**	*eP*	**P**	**19 26 30.2**	**+0.2**
TIC				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.3						
LIC	**Lamto**	**85.48**	**275**	*eP*	**P**	**19 26 31.5**	**+0.4**
	comp=Z,13nm,0.5s,mb5.3						
LIC	**Lamto**	**85.48**	**275**	*eP*	**P**	**19 26 31.8**	**+0.7**
	comp=Z,14nm,0.8s,mb4.8						
LIC				*e*MLR	MLR		
	comp=Z,412nm,21.5s,MS4.5						
LIC	**Lamto**	**85.48**	**275**	*eP*	**P**	**19 26 31.8**	**+0.7**
	comp=Z,7.1nm,0.8s,mb4.8						
LIC				LR	LR		
	comp=Z,210nm,21.5s,MS4.5						
YKA	**Yellowknife Ar**	**86.09**	**8**	P	**P**	**19 26 32.9**	**-0.3**
	comp=Z,2.2nm,0.7s,mb4.5,baz=340,slow=5.2,SNR=5.4						
YKA	**Yellowknife Ar**	**86.09**	**8**	P	**P**	**19 26 32.9**	**-0.3**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DLBC	**Dease Lake**	**86.99**	**17**	LR	LR	20 05 54.3	
	comp=Z,123nm,21.6s,MS4.3,baz=212,slow=36						
ARMA	**Armidale**	**88.84**	**127**	*eP*	**P**	**19 26 47.4**	**+0.5**
SCHQ	**Schefferville**	**91.11**	**343**	P	**P**	**19 26 56.7**	**-0.5**
SCHQ				LR	LR	20 14 00.8	
SCHQ	**Schefferville**	**91.11**	**343**	P	**P**	**19 26 56.7**	**-0.5**
	comp=Z,6.7nm,0.9s,mb5.0,baz=22,slow=6.6,SNR=5.3						
SCHQ				LR	LR	20 14 00.8	
	comp=Z,90nm,18.5s,MS4.2,baz=83,slow=40						
MAW	**Mawson**	**99.14**	**188**	LR	LR	20 06 16.3	
	comp=Z,150nm,20.3s,MS4.5,baz=187,slow=32						
TXAR	**Lajitas Array**	**120.00**	**7**	PKP	PKPdf	19 32 43.6	-0.1
	comp=Z,0.6nm,0.8s,baz=169,slow=1.3,SNR=6.0						
TXAR	**Lajitas Array**	**120.00**	**7**	PKIKP	PKPdf	19 32 43.6	-0.1
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
OTAV	**Otavalo**	**144.77**	**327**	*e*PKPdf	PKPdf	19 33 30.5	+0.1
CPUP	**Villa Florida**	**145.30**	**267**	PKPbc	PKPbc	19 33 30.6	-0.1
	comp=Z,21nm,1.0s,baz=56,slow=3.3,SNR=20						
CPUP	**Villa Florida**	**145.30**	**267**	PKIKP	PKPbc	19 33 30.6	-0.1
CPUP				pmax	pmax		
	comp=Z,21nm,1.0s						
TRQA	**Tornquist**	**150.56**	**246**	*e*PKPdf	PKPdf	19 33 39.7	+0.6
TRQA				*e*PKPbc	PKPbc	19 33 45.6	+1.0

*ISCJB **25** 19:33:06.0±0.7, 30.6°N±0.1°×83.38°E±0.0°9, h10km, mb3.5/8, Error ellipse: s-maj=16.8km s-min=8.1km az=29.5*
*IDC **25** 19:33:06.2±0.9, 30.54°N×83.32°E, h0km, mb3.6/8, mb1 3.8/10, mb1mx3.6/28, mbtmp3.6/10, ML3.4/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/28, Error ellipse: s-maj=37.4km s-min=17.4km az=59.0*
*NEIC **25** 19:33:07.9±0.5, 30.59°N×83.24°E, h10km, mb3.6/1, Error ellipse: s-maj=14.1km s-min=7.6km az=221.0*

ISC 25 19:33:07.9±0.7, 30.6°N±0.1°×83.36°E±0.0°9, h10km, n16, σ0.9 66/16, mb3.5/8, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDI	**Dehra Dun**	**4.59**	**268**	*ex*	**Pn**	**19 34 22.0**	**+4.6**
LSA	**Lhasa**	**6.80**	**96**	Pn	**Pn**	**19 34 51.3**	**+3.5**
LSA				Sn	**Sn**	**19 36 04.5**	**-0.9**
LSA				smax			
	comp=N,40nm,0.8s						
LSA				smax			
	comp=N,40nm,0.9s						
LSA	**Lhasa**	**6.80**	**96**	*eP*	**Pn**	**19 34 50.9**	**+3.1**
	comp=N,20nm,1.0s						
KBL	**Kabul**	**12.69**	**292**	*eP*	**Pn**	**19 36 07.8**	**-0.7**
	comp=N,3.5nm,0.6s						
AAK	**Ala-Archa**	**13.94**	**332**	LR	LR	19 42 21.7	
	comp=N,92nm,19.5s,baz=273,slow=40						
MKAR	**Makanchi Array**	**16.18**	**357**	Pn	**Pn**	**19 36 54.9**	**-0.3**
	comp=N,0.0nm,0.3s,baz=163,slow=10,SNR=3.5						
CMAR	**Chiang Mai Arr**	**18.61**	**127**	P	**Pn**	**19 37 26.4**	**+0.5**
	comp=N,0.1nm,0.3s,baz=310,slow=11,SNR=14						
KURK	**Kurchatov**	**20.39**	**351**	P	**P**	**19 37 45.4**	**+0.7**
	comp=N,3.7nm,0.6s,baz=172,slow=11,SNR=13						
ZALV	**Zalesovo Beam**	**23.34**	**2**	P	**P**	**19 38 16.0**	**-0.3**
	comp=N,0.4nm,0.5s,mb3.1,baz=193,slow=11,SNR=3.6						
BVAR	**Borovoye Array**	**24.31**	**341**	P	**P**	**19 38 26.0**	**+0.6**
	comp=N,0.5nm,0.5s,mb3.2,baz=124,slow=12,SNR=3.5						
ABKAR	**Akbulak array**	**25.69**	**323**	*eP*	**P**	**19 38 38.0**	**0.0**
	comp=N,1.0nm,0.6s,mb3.5						
FINES	**FINESS Array B**	**48.06**	**327**	P	**P**	**19 41 47.6**	**+0.4**
	comp=N,2.1nm,0.9s,mb4.2,baz=108,slow=12,SNR=5.8						
WRA	**Warramunga Arr**	**70.19**	**129**	P	**P**	**19 44 20.9**	**-0.2**
	comp=N,0.9nm,0.7s,mb3.8,baz=324,slow=6.3,SNR=16						
ASAR	**Alice Springs**	**72.54**	**132**	P	**P**	**19 44 35.2**	**-0.1**
	comp=N,0.1nm,0.2s,mb3.3,baz=312,slow=5.6,SNR=5.7						
TORD	**Torodi Ar. Bea**	**76.34**	**277**	P	**P**	**19 44 57.3**	**-0.3**
	comp=N,0.2nm,0.7s,mb3.2,baz=43,slow=3.6,SNR=3.8						
ILAR	**Eielson Array**	**77.20**	**20**	P	**P**	**19 45 01.4**	**-0.3**
	comp=N,0.7nm,0.8s,mb3.6,baz=293,slow=4.2,SNR=8.9						

*ROM **25** 19:40:44.4±0.7, 43.32°N×15.55°E, h10km, Md2.8/6, Ml2.4/3, Error ellipse: s-maj=12.4km s-min=2.9km az=56.0*
*CSEM **25** 19:40:46.6±0.2, 43.14°N×15.35°E, h2km, MD2.8/6, Error ellipse: s-maj=6.9km s-min=5.6km az=61.0*
*ISCJB **25** 19:40:47.9±0.6, 43.15°N±0.04°×15.31°E±0.07, h10km, Error ellipse: s-maj=7.6km s-min=5.6km az=159.5*

ISC 25 19:40:48.1±0.6, 43.14°N±0.04°×15.30°E±0.07, h10km, n18, σ0.9 90/26, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPEL	**Lama dei Pelig**	**1.37**	**217**	Pn	**Pn**	**19 41 13.1**	**-0.2**
	26nm,0.3s						
LPEL	**Lama dei Pelig**	**1.37**	**217**	Pn	**Pn**	**19 41 13.1**	**-0.2**
	26nm,0.3s						
SGRT	**San Giovanni R**	**1.43**	**166**	Pn	**Pn**	**19 41 12.7**	**-1.4**
SGRT				Sn	**Sn**	**19 41 34.0**	**+1.1**
SGRT	**San Giovanni R**	**1.43**	**166**	Pn	**Pn**	**19 41 12.7**	**-1.4**
SGRT				Sn	**Sn**	**19 41 34.0**	**+1.1**
MELA	**Melanico ??? S**	**1.44**	**185**	Pn	**Pn**	**19 41 14.2**	**-0.1**
	39nm,0.3s						
MELA	**Melanico ??? S**	**1.44**	**185**	Pn	**Pn**	**19 41 14.2**	**-0.1**
	39nm,0.3s						
NVLJ	**Novalja**	**1.45**	**348**	*e*Pn	**Pn**	**19 41 14.2**	**-0.2**
NVLJ				Sn	**Sn**	**19 41 34.7**	**+1.2**
NVLJ	**Novalja**	**1.45**	**348**	*e*Pn	**Pn**	**19 41 14.1**	**-0.3**
NVLJ				Sn	**Sn**	**19 41 34.7**	**+1.2**
RGNG	**Rignano Grg**	**1.48**	**172**	Pn	**Pn**	**19 41 13.9**	**-0.9**
RGNG				Sn	**Sn**	**19 41 35.4**	**+1.1**
RGNG	**Rignano Grg**	**1.48**	**172**	Pn	**Pn**	**19 41 13.9**	**-0.9**
RGNG				Sn	**Sn**	**19 41 35.4**	**+1.1**
INTR	**Introdacqua**	**1.53**	**223**	Pn	**Pn**	**19 41 15.9**	**+0.4**
	37nm,0.5s						
INTR	**Introdacqua**	**1.53**	**223**	Pn	**Pn**	**19 41 15.9**	**+0.4**
	37nm,0.5s						
NRCA	**Norcia**	**1.63**	**260**	Pn	**Pn**	**19 41 16.5**	**-0.4**
	3.0nm,0.4s						
NRCA	**Norcia**	**1.63**	**260**	Pn	**Pn**	**19 41 16.5**	**-0.4**
	3.0nm,0.4s						
SNTG	**Esanatoglia**	**1.73**	**274**	Pn	**Pn**	**19 41 18.2**	**0.0**
	6.0nm,0.4s						
SNTG	**Esanatoglia**	**1.73**	**274**	Pn	**Pn**	**19 41 18.2**	**0.0**
	6.0nm,0.4s						
STON	**Ston**	**1.78**	**98**	*e*Pn	**Pn**	**19 41 17.3**	**-1.7**
STON				Sn	**Sn**	**19 41 42.5**	**+0.9**
STON	**Ston**	**1.78**	**98**	*e*Pn	**Pn**	**19 41 17.2**	**-1.8**
STON				Sn	**Sn**	**19 41 42.5**	**+0.8**

*ISCJB **25** 19:46:34.6±0.8, 31.0°N±0.1°×83.5°E±0.2, h10km, mb3.5/7, Error ellipse: s-maj=23.9km s-min=10.8km az=138.9*
*IDC **25** 19:46:34.7±1.0, 31.00°N×83.62°E, h0km, mb3.5/6, mb1 3.6/9, mb1mx3.5/27, mbtmp3.5/9, ML3.3/3, Error ellipse: s-maj=37.9km s-min=19.3km az=60.0*
*NEIC **25** 19:46:36.1±0.8, 31.03°N×83.44°E, h10km, mb3.3/2, Error ellipse: s-maj=24.3km s-min=10.7km az=48.0*

ISC 25 19:46:36.4±0.8, 31.0°N±0.1°×83.5°E±0.2, h10km, n12, σ0.9 91/12, mb3.5/7, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.74**	**99**	*eP*	**Pn**	**19 48 16.8**	**+1.4**
	5.2nm,0.8s						
MKAR	**Makanchi Array**	**15.78**	**357**	Pn	**Pn**	**19 50 18.3**	**-0.3**
	0.0nm,0.3s,baz=189,slow=13,SNR=3.0						
KKAR	**Karatay Array**	**15.88**	**323**	*eP*	**Pn**	**19 50 16.4**	**-3.5**
	1.2nm,0.7s						
CMAR	**Chiang Mai Arr**	**18.76**	**128**	P	**Pn**	**19 50 55.6**	**-0.5**
	0.1nm,0.3s,baz=295,slow=8.5,SNR=4.4						
KURK	**Kurchatov**	**20.01**	**351**	P	**P**	**19 51 08.2**	**-0.9**
	0.1nm,0.3s,baz=163,slow=11,SNR=14						
ZALV	**Zalesovo Beam**	**22.93**	**2**	P	**P**	**19 51 40.9**	**+0.5**
	0.7nm,0.5s,mb3.4,baz=173,slow=13,SNR=4.2						
ABKAR	**Akbulak array**	**25.44**	**322**	*eP*	**P**	**19 52 05.4**	**+1.1**
	0.5nm,0.5s,mb3.3						
FINES	**FINESS Array B**	**47.79**	**327**	P	**P**	**19 55 14.4**	**+0.8**
	2.4nm,0.9s,mb4.2,baz=97,slow=12,SNR=3.3						
WRA	**Warramunga Arr**	**70.35**	**129**	P	**P**	**19 57 50.1**	**-0.5**
	0.5nm,0.7s,mb3.5,baz=325,slow=6.2,SNR=6.4						
ASAR	**Alice Springs**	**72.72**	**132**	P	**P**	**19 58 04.1**	**-0.7**
	0.4nm,0.9s,mb3.3,baz=322,slow=5.4,SNR=4.8						
TORD	**Torodi Ar. Bea**	**76.41**	**277**	P	**P**	**19 58 27.2**	**+0.6**
	0.3nm,0.8s,mb3.3,baz=41,slow=4.8,SNR=4.8						
ILAR	**Eielson Array**	**76.78**	**20**	P	**P**	**19 58 26.9**	**-0.9**
	0.2nm,0.8s,mb3.1,baz=284,slow=4.5,SNR=5.1						

*MAN **25** 20:01:38, 14.88N×119.22E, h15km, mb4.6, ML3.4, MS3.3*
*ISCJB **25** 20:01:39.6±0.8, 14.89N±0.04×119.24E±0.08, h49km±10km, mb4.0/8, Error ellipse: s-maj=12.9km s-min=6.4km az=1.6*
*NEIC **25** 20:01:43.8±1.3, 15.06N×119.78E, h73km±13km, mb3.4/1, Error ellipse: s-maj=25.6km s-min=10.6km az=56.0*
*IDC **25** 20:01:44.5±1.9, 15.04N×119.64E, h78km±18km, mb3.7/9, mb1 3.9/9, mb1mx3.5/23, mbtmp3.7/9, MS3.0/2, Ms1 3.1/2, ms1mx2.7/31, Error ellipse: s-maj=34.5km s-min=13.1km az=58.0*

ISC 25 20:01:41.2±0.8, 14.90N±0.04×119.29E±0.08, h46km±10km, n33, σ1.9 05/32, mb4.0/8, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCZP	**Santa Cruz**	**1.06**	**34**	*eP*	**Pn**	**20 01 57.6**	**-2.0**
LUBP	**Lubang**	**1.48**	**141**	*eP*	**Pn**	**20 02 04.2**	**-1.2**
BOLP	**Bolinao**	**1.59**	**22**	*eP*	**Pn**	**20 02 05.6**	**-1.3**
TGY	**Tagaytay City**	**1.78**	**116**	P	**Pn**	**20 02 08.7**	**-0.8**
	208nm,0.3s,baz=288,slow=2.2,SNR=13						
TGY				S	**Sn**	**20 02 30.6**	**-0.2**
	524nm,0.3s,baz=160,slow=22,SNR=16						
BCPH	**Baguio City Da**	**1.93**	**40**	*eP*	**Pn**	**20 02 10.3**	**-1.3**
BCPH				*i* S	**Sn**	**20 02 34.5**	**-0.1**
PGP	**Puerto Galera**	**2.12**	**131**	*eP*	**Pn**	**20 02 04.6**	**-10**
BALP	**Baler**	**2.36**	**69**	*eP*	**Pn**	**20 02 17.0**	**-0.4**
POLP	**Polilio Island**	**2.56**	**93**	*eP*	**Pn**	**20 02 21.1**	**+0.9**
BOAC	**Boac**	**2.86**	**120**	*eP*	**Pn**	**20 02 24.4**	**+0.1**
BUSP	**Coron**	**3.01**	**163**	*eP*	**Pn**	**20 02 27.0**	**+0.6**
ABRA	**Dolores**	**3.06**	**26**	*eP*	**Pn**	**20 02 27.2**	**+0.2**
CAUP	**Cauayan**	**3.17**	**50**	*eP*	**Pn**	**20 02 29.9**	**+1.2**
APYP	**Conner**	**3.49**	**32**	*eP*	**Pn**	**20 02 33.8**	**+0.8**
AUQP	**San Andres**	**3.63**	**115**	*eP*	**Pn**	**20 02 37.5**	**+2.5**
ENPP	**El Nido**	**3.67**	**178**	*eP*	**Pn**	**20 02 35.3**	**-0.2**
PALP	**Palanan**	**3.70**	**54**	*eP*	**Pn**	**20 02 37.4**	**+1.5**
CUYO	**Cuyo Island**	**4.36**	**157**	*eP*	**Pn**	**20 02 43.8**	**-1.2**
PVCP	**Virac**	**4.89**	**105**	*eP*	**Pn**	**20 02 53.3**	**+1.1**

SZGRF ***25*** *20:40:31.6,29˙.74N×86˙.41E,h33km,mb4.8, Xizang*
DMN ***25*** *20:40:32.6±0.5,32˙.13N×83˙.14E,h2km,Ml5.5/5, Error ellipse: s-maj=11.3km s-min=8.5km az=93.0*
IDC ***25*** *20:40:41.5±0.5,30˙.91N×83˙.47E,h0km,mb4.4/22, mb1 4.5/24,mb1mx4.5/29,mbtmp4.4/24,ML4.0/2,MS4.1/16, Ms1 4.1/16,ms1mx4.0/27,Error ellipse: s-maj=16.1km s-min=11.6km az=44.0*
ISCJB ***25*** *20:40:41.4±0.8,30˙.91N±0˙.02×83˙.47E±0˙.02,h7km±5km, mb4.7/76,MS4.2/34, Error ellipse: s-maj=4.1km s-min=3.0km az=39.7*
LDG ***25*** *20:40:42.5±0.3,31˙.16N×83˙.15E,h10km,Mb4.8/7,Ms4.0/9, Error ellipse: s-maj=16.3km s-min=6.9km az=107.0*
BJI ***25*** *20:40:44.1,31˙.16N×83˙.76E,h10km,mB5.0/20,mb4.5/36, Ms4.8/35,Ms7 4.4/30*
NDI ***25*** *20:40:45.1±11.0,30˙.87N×83˙.54E,h15km±85km,mb4.9, mb4.7(NEIC)*
MOS ***25*** *20:40:45.0±1.7,30˙.82N×83˙.45E,h33km,mb4.8/47, MS4.2/25,Error ellipse: s-maj=8.0km s-min=4.3km az=121.7*
NEIC ***25*** *20:40:45.1±2.1,30˙.93N×83˙.47E,h21km±15km,mb4.7/35, MS4.4/2, Error ellipse: s-maj=9.4km s-min=5.6km az=205.0*
GCMT ***25*** *20:40:49.2±0.3,30˙.85N×83˙.72E,h24km±1km,MW5.0, Moment Tensor Solution. s17,c19; s71,c107; Moment tensor: Scale 10^16Nm; Mrr-1.11±.20; Mθθ-2.68±.13; Mφφ3.79±.15; Mrθ1.24±.22; Mrφ0.38±.10; Mθφ-0.34±.18; Best double couple: M0 3.60000×10^16 NP1:φ225.00000°, δ68.00000°,λ-19.00000°. NP2:φ322.00000°,δ72.00000°, λ-156.00000°. Principal axes: T 3.8300, Plg3.0000°, Azm93.0000°; N -0.4300, Plg61.0000°, Azm357.0000°; P -3.4000, Plg29.0000°, Azm185.0000°; Data Used: IU II IC G CN.*

ISC 25 20:40:43.3±0.8,30˙.92N±0˙.02×83˙.51E±0˙.02,h7km±5km, h16km±1.4km:pP-P,n302,σ1§40/312,mb4.7/76,MS4.2/34, 22C-16D,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.57**	**175**	*e*Pn	**Pb**	**20 41 30.7**	**+1.0**
DANN				*e*Sn	**Sg**	**20 42 13.0**	**+7.1**
	5μm,0.7s						
GKN	**Gorkha**	**3.07**	**161**	*e*Pn	**Pb**	**20 41 37.3**	**-0.9**
GKN				*e*Sn	**Sg**	**20 42 24.8**	**+3.0**
	9μm,1.4s						
KOLN	**Koldanda**	**3.14**	**179**	*e*Pn	**Pb**	**20 41 38.5**	**-0.9**
KOLN				*e*Sn	**Sg**	**20 42 26.8**	**+2.6**
	2μm,0.7s						
PTH	**Pithoragarh**	**3.16**	**245**	*ex*	**Pb**	**20 41 38.9**	**-0.9**
PTH				*ex*	**Sg**	**20 42 29.2**	**+4.3**
KKN	**Kakani**	**3.48**	**153**	*e*Pn	**Pn**	**20 41 42.5**	**+4.7**
DMN	**Daman**	**3.58**	**157**	*e*Pn	**Pb**	**20 41 44.1**	**-2.8**
DMN				*e*Sn	**Sg**	**20 42 37.4**	**-0.9**
	7μm,1.3s						
GUN	**Gumba**	**3.64**	**145**	*e*Pn	**Pb**	**20 41 44.4**	**-3.5**
GUN				*e*Sn	**Sg**	**20 42 38.0**	**-2.2**
GUN				*e*Sn	**Sg**	**20 42 38.1**	**-2.1**
	4μm,0.8s						
PKIN	**Phulchoki**	**3.71**	**153**	*e*Pn	**Pn**	**20 41 45.7**	**+4.7**
PKI	**Pulchoki**	**3.73**	**153**	*e*Pn	**Pn**	**20 41 45.9**	**+4.7**
JIRN	**Jiri**	**4.00**	**144**	*e*Pn	**Pn**	**20 41 49.6**	**+4.6**
DDI	**Dehra Dun**	**4.74**	**264**	*ex*	**Pn**	**20 41 59.0**	**+3.9**
RAMN	**Ramite**	**4.79**	**145**	*e*Pn	**Pn**	**20 41 59.1**	**+3.3**
TAPN	**Taplejung**	**5.11**	**133**	*e*Pn	**Pn**	**20 42 03.9**	**+3.7**
ODAN	**Odare**	**5.28**	**139**	*e*Pn	**Pn**	**20 42 06.2**	**+3.6**
SMLA	**Simla**	**5.45**	**274**	*i* P	**Pn**	**20 42 06.7**	**+1.8**
SDNR	**Sundarnagar**	**5.63**	**278**	*ex*	x	20 42 13.5	
SDNR				*ex*	x	20 43 21.5	
ALBI	**Allahabad**	**5.79**	**195**	*e*PKP	**Pn**	**20 42 09.5**	**0.0**
NDI	**New Delhi**	**5.91**	**249**	*ex*	**Pn**	**20 42 09.2**	**-2.0**
NDI				AMb	AMB	20 42 17.9	
	comp=Z,28nm,0.5s						
BHK	**Bhakra**	**6.10**	**276**	*e*PKP	**Pn**	**20 42 14.0**	**+0.2**
LSA	**Lhasa**	**6.71**	**98**	Pn	**Pn**	**20 42 24.0**	**+1.7**
LSA				Sn	**Sn**	**20 43 41.0**	**+2.0**
LSA				LR	LR		
	comp=N,1μm,7.0s						
LSA				LR	LR		
	comp=E,3μm,7.0s						
LSA	**Lhasa**	**6.71**	**98**	*e*P	**Pn**	**20 42 25.4**	**+3.1**
	comp=E,346nm,1.0s						
LSA	**Lhasa**	**6.71**	**98**	*e*P	**Pn**	**20 42 25.4**	**+3.1**
LSA				pmax	pmax		
	comp=Z,345nm,1.0s						
AJM	**Ajmer**	**8.96**	**243**	*e*PKP	**Pn**	**20 42 51.8**	**-1.3**
AJM				*ex*	x	20 44 36.9	
CHCP	**Chirah Chowk**	**9.10**	**290**	P	**Pn**	**20 42 56.1**	**+1.2**
SHL	**Shillong**	**9.10**	**124**	*e*PKP	**Pn**	**20 42 55.0**	**-0.1**
SHL				*e*S	**Sn**	**20 44 30.0**	**-7.8**
BHPL	**Bhopal**	**9.37**	**217**	*e*PKP	**Pn**	**20 42 58.0**	**-0.8**
BHPL				*ex*	x	20 44 41.6	
CAL	**Calcutta**	**9.39**	**152**	*e*PKP	**Pn**	**20 43 07.1**	**+8.1**
CAL				*e*S	**Sn**	**20 44 48.2**	**+3.3**
THW	**Thamme Wali**	**10.18**	**284**	P	**Pn**	**20 43 09.8**	**0.0**
CEP	**Cherat**	**10.23**	**289**	P	**Pn**	**20 43 11.2**	**+0.7**
NGP	**Nagpur**	**10.52**	**203**	*e*PKP	**Pn**	**20 43 14.8**	**+0.3**
NGP				*ex*	x	20 43 33.5	
NGP				*ex*	x	20 45 09.1	
KSH	**Kashi**	**10.56**	**326**	P	**Pn**	**20 43 13.3**	**-1.7**
KSH				*e*pP		20 43 20.0	
KSH				*e*PP		20 43 22.8	
KSH				*e*sP		20 43 25.5	
KSH				S	**Sn**	**20 45 06.0**	**-7.4**
KSH				pmax	pmax		
	comp=Z,87nm,1.5s						
KSH				LR	LR		
	comp=N,3μm,10.1s						
KSH				LR	LR		
	comp=E,5μm,14.2s						
KSH				LR	LR		
	comp=Z,1μm,7.0s						
BWNR	**Bhubaneshwar**	**10.78**	**168**	*e*PKP	**Pn**	**20 43 19.0**	**+1.0**
BWNR				*ex*	x	20 46 32.0	
AKL	**Akola**	**11.73**	**211**	*e*PKP	**Pn**	**20 43 30.8**	**-0.3**
AKL				*i* x	x	20 45 38.5	
KBL	**Kabul**	**12.71**	**290**	*e*P	**Pn**	**20 43 43.9**	**-0.4**
	comp=Z,53nm,0.9s						
KBL	**Kabul**	**12.71**	**290**	*e*P	**Pn**	**20 43 43.9**	**-0.5**
KBL				pmax	pmax		
	comp=Z,53nm,0.9s						
KZA	**Kyzart**	**12.96**	**332**	*e*P	**Pn**	**20 43 46.9**	**-0.9**
	comp=Z,23nm,0.9s						
VIS	**Vishakhapatnam**	**13.14**	**181**	*i* P	**Pn**	**20 43 50.7**	**+0.3**
VIS				*i* x	x	20 46 25.4	
WMQ	**Urumqi**	**13.30**	**13**	*e*P	**Pn**	**20 43 54.5**	**+2.1**
WMQ				pP		20 43 58.0	
WMQ				sP		20 44 01.5	
WMQ				PP		20 44 07.0	
WMQ				pmax	pmax		
	comp=Z,31nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,410nm,3.6s						
WMQ				LR	LR		
	comp=N,2μm,14.3s						
WMQ				LR	LR		
	comp=E,1μm,12.0s						
WMQ				LR	LR		
	comp=Z,2μm,13.4s						
UCH	**Uchtor**	**13.39**	**330**	*e*P	**Pn**	**20 43 54.1**	**+0.4**
	comp=Z,13nm,0.9s						
TKM2	**Tokmak 2**	**13.54**	**334**	*e*P	**Pn**	**20 43 55.0**	**-0.7**
	comp=Z,24nm,1.3s						
TKM2	**Tokmak 2**	**13.54**	**334**	*e*P	**Pn**	**20 43 55.0**	**-0.7**
TKM2				pmax	pmax		
	comp=Z,24nm,1.3s						
BHV	**Bhavnagar**	**13.68**	**231**	*e*S	**Sn**	**20 46 31.2**	**+1.4**
AML	**Almayashu**	**13.68**	**328**	*e*P	**Pn**	**20 43 56.1**	**-1.5**
	comp=Z,15nm,0.8s						
AAK	**Ala-Archa**	**13.73**	**331**	*e*P	**Pn**	**20 43 59.8**	**+1.4**
	comp=Z,57nm,1.4s						
AAK	**Ala-Archa**	**13.73**	**331**	Pn	**Pn**	**20 44 01.4**	**+3.1**
	comp=Z,0.5nm,0.3s,baz=163,slow=4.9,SNR=9.3						
AAK				Sn	**Sn**	**20 46 34.4**	**+3.3**
	comp=Z,0.4nm,0.3s,baz=24,slow=20,SNR=1.9						
AAK	**Ala-Archa**	**13.73**	**331**	P	**Pn**	**20 44 01.4**	**+3.1**
AAK						20 46 34.4	
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK	**Ala-Archa**	**13.73**	**331**	P	Px	20 44 10.1	
	SNR=11						
FRU	**Bishkek**	**13.85**	**332**	*e*P	**Pn**	**20 44 01.0**	**+1.1**
LATR	**Latur**	**13.95**	**208**	*e*PKP	**Pn**	**20 44 00.3**	**-1.1**
EKS2	**Erkin-Say**	**14.06**	**329**	*e*P	**Pn**	**20 44 03.0**	**+0.1**
	comp=Z,26nm,1.1s						
HYB	**Hyderabad**	**14.18**	**200**	*i* P	**Pn**	**20 44 02.5**	**-2.0**
HYB				*e*S	**Sn**	**20 46 35.0**	**-7.2**
POO	**Poona**	**15.13**	**218**	*e*PKP	**Pn**	**20 44 18.1**	**+0.7**
GTA	**Gaotai**	**15.78**	**53**	*e*P	**Pn**	**20 44 23.5**	**-2.4**
GTA				pP	pP	20 44 27.8	-4.1
GTA				sP	sP	20 44 31.5	-1.4
GTA				S	**Sn**	**20 47 16.3**	**-4.6**
GTA				sS	sS	20 47 27.0	-12
GTA				SS		20 47 34.0	
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,70nm,4.8s						
GTA				LR	LR		
	comp=N,3μm,14.3s						
GTA				LR	LR		
	comp=E,1μm,16.1s						
GTA				LR	LR		
	comp=Z,890nm,15.2s						
MK31	**Makanchi Array**	**15.88**	**357**	*e*P	**Pn**	**20 44 28.8**	**+1.7**
MK31	**Makanchi Array**	**15.88**	**357**	*ce*P	**Pn**	**20 44 28.8**	**+1.7**
MK31				pmax	pmax		
	comp=Z,31nm,1.0s						
MKAR	**Makanchi Array**	**15.88**	**357**	Pn	**Pn**	**20 44 26.6**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=174,slow=11,SNR=25						
MKAR				LR	LR	20 51 30.7	
	comp=Z,791nm,19.3s,baz=172,slow=41						
KK31	**Karatay Array**	**15.97**	**323**	*i* P	**Pn**	**20 44 25.3**	**-3.0**
KK31				pmax	pmax		
	comp=Z,35nm,1.1s						
KKAR	**Karatay Array**	**15.97**	**323**	*e*P	**Pn**	**20 44 25.1**	**-3.1**
	comp=Z,23nm,1.0s						
KKAR	**Karatay Array**	**15.97**	**323**	*e*P	**Pn**	**20 44 25.1**	**-3.2**
KKAR				pmax	pmax		
	comp=Z,23nm,1.0s						
KAD	**Karad**	**15.99**	**214**	*e*PKP	**Pn**	**20 44 27.5**	**-1.2**
KAD				AMb	AMB	20 44 38.2	
	comp=Z,35nm,1.2s						
LZH	**Lanzhou**	**17.71**	**68**	*e*P	**Pn**	**20 44 51.5**	**+1.1**
LZH				pP	pP	20 44 59.3	+5.9
LZH				sP	sP	20 45 02.5	+8.1
LZH				*e*S	**Sn**	**20 48 06.5**	**-1.4**
LZH				pmax	pmax		
	comp=Z,31nm,1.0s						
LZH				pmax	pmax		
	comp=Z,190nm,6.1s						
LZH				LR	LR		
	comp=N,4μm,12.9s						
LZH				LR	LR		
	comp=E,2μm,10.8s						
LZH				LR	LR		
	comp=Z,4μm,13.4s						
KMI	**Kunming**	**17.92**	**104**	P	**Pn**	**20 44 51.8**	**-1.2**
KMI				pP	pP	20 44 55.5	-0.3
KMI				sP	sP	20 44 57.3	+0.6
KMI				PP		20 45 07.0	
KMI				S	**Sn**	**20 48 12.5**	**-0.6**
KMI				sS	sS	20 48 18.8	-4.2
KMI				SS		20 48 36.5	
KMI				pmax	pmax		
	comp=Z,10.0nm,1.6s						
KMI				pmax	pmax		
	comp=Z,150nm,3.1s						
KMI				LR	LR		
	comp=N,800nm,20.4s						
KMI				LR	LR		
	comp=E,310nm,15.2s						
KMI				LR	LR		
	comp=Z,860nm,24.2s						
CHRT	**Chiangrai**	**18.34**	**123**	⇑P	**Pn**	**20 44 56.0**	**-2.1**
	comp=Z,168nm,1.1s						
CHG	**Chiang Mai**	**18.45**	**127**	⇓P	**Pn**	**20 44 58.9**	**-0.6**
	comp=Z,30nm,1.2s						
CHTO	**Chiang Mai**	**18.45**	**127**	*e*P	**Pn**	**20 44 58.1**	**-1.4**
	comp=Z,45nm,1.3s						
CHTO	**Chiang Mai**	**18.45**	**127**	*e*P	**Pn**	**20 44 58.1**	**-1.4**
CHTO				pmax	pmax		
	comp=Z,45nm,1.3s						
CHTO	**Chiang Mai**	**18.45**	**127**	P	**Pn**	**20 44 59.4**	**-0.2**
	SNR=18						
CMAR	**Chiang Mai Arr**	**18.69**	**128**	P	**Pn**	**20 45 00.8**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=315,slow=11,SNR=39						
CMAR				LR	LR	20 53 03.3	
	comp=Z,729nm,19.6s,baz=320,slow=40						
BDT	**Bhumibol Dam**	**19.60**	**130**	P	**Pn**	**20 45 14.0**	**+0.6**
KURK	**Kurchatov**	**20.11**	**351**	*e*P	**P**	**20 45 15.8**	**-1.7**
	comp=Z,59nm,1.0s						
KURK	**Kurchatov**	**20.11**	**351**	P	**P**	**20 45 15.1**	**-2.4**
	comp=Z,4.3nm,0.8s,baz=166,slow=11,SNR=35						
KURK	**Kurchatov**	**20.11**	**351**	*ce*P	**P**	**20 45 18.3**	**+0.9**
KURK				pmax	pmax		
	comp=Z,85nm,1.3s						
KURK	**Kurchatov**	**20.11**	**351**	P	**P**	**20 45 16.6**	**-0.8**
	SNR=48						
GYA	**Guiyang**	**20.78**	**97**	⇑*i*P	**P**	**20 45 23.5**	**-1.4**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
XAN	**Xi'an**	**21.64**	**75**	P	**P**	**20 45 32.3**	**-1.9**
XAN				pP		20 45 36.3	
XAN				S	**S**	**20 49 35.5**	**+1.4**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb3.9						
XAN				pmax	pmax		
	comp=Z,12nm,3.1s						
XAN				LR	LR		
	comp=N,630nm,11.5s						
XAN				LR	LR		
	comp=E,170nm,9.7s						
XAN				LR	LR		
	comp=Z,170nm,10.6s,MS3.7						
ENH	**Enshi**	**22.36**	**85**	*e*P	**P**	**20 45 39.2**	**-2.6**
	comp=Z,35nm,1.0s,mb4.7						
ZAA0	**Zalesovo Array**	**23.04**	**2**	*e*P	**P**	**20 45 48.3**	**-0.5**
ZALV	**Zalesovo Beam**	**23.04**	**2**	P	**P**	**20 45 48.6**	**-0.2**
	comp=Z,15nm,0.8s,mb4.5,baz=180,slow=11,SNR=39						
ZALV	**Zalesovo Beam**	**23.04**	**2**	P	**P**	**20 45 48.6**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.5						
BTO	**Baotou**	**23.51**	**58**	*e*P	**P**	**20 45 48.5**	**-5.4**
NVS	**Novosibirsk**	**23.91**	**360**	⇓*i*P	**P**	**20 45 58.5**	**+1.0**
NVS				*e*S	**S**	**20 50 16.6**	**+2.8**
NVS				pmax	pmax		
	comp=N,42nm,1.8s						
NVS				pmax	pmax		
	comp=E,11nm,1.8s						
NVS				pmax	pmax		
	comp=Z,38nm,1.8s,mb4.5						
NVS				smax			
	comp=N,9.0nm,1.7s						
NVS				smax			
	comp=E,13nm,1.7s						
BVAR	**Borovoye Array**	**24.07**	**340**	P	**P**	**20 45 58.0**	**-1.0**
	comp=E,2.3nm,0.7s,mb3.7,baz=144,slow=11,SNR=12						
BVAR	**Borovoye Array**	**24.07**	**340**	P	**P**	**20 45 58.0**	**-1.0**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	**Borovoye**	**24.13**	**340**	*e*P	**P**	**20 46 00.1**	**+0.6**
	comp=Z,14nm,0.8s,mb4.5						
BRVK	**Borovoye**	**24.13**	**340**	*c i*P	**P**	**20 46 00.1**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,27nm,2.4s,mb4.2						
BRVK	**Borovoye**	**24.13**	**340**	P	**P**	**20 46 02.2**	**+2.7**
	SNR=11						
JMDO	**Jabal Madar**	**24.21**	**256**	P	**P**	**20 46 06.4**	**+5.8**
	SNR=7.6						
SONM	**Songino Array**	**24.32**	**40**	P	**P**	**20 46 01.6**	**+0.3**
SONM				LR	LR	20 56 24.9	
SONM	**Songino Array**	**24.32**	**40**	P	**P**	**20 46 01.6**	**+0.3**
	comp=Z,16nm,0.9s,mb4.5,baz=234,slow=9.3,SNR=12						
SONM				LR	LR	20 56 25.0	
	comp=Z,517nm,20.6s,MS4.0,baz=68,slow=39						
SONM	**Songino Array**	**24.32**	**40**	P	**P**	**20 46 01.6**	**+0.3**
SONM				pmax	pmax		
	comp=Z,17nm,0.9s						
SONM				MLR	MLR		
	comp=Z,517nm,20.6s						
ZAK	**Zakamensk**	**24.42**	**32**	*e*P	**P**	**20 46 04.0**	**+1.8**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.9s,mb3.9						
MOY	**Mondy**	**24.42**	**27**	*e*P	**P**	**20 46 05.8**	**+3.6**
ZRNK	**Zerenda**	**24.43**	**338**	*i* P	**P**	**20 46 01.4**	**-0.8**
ZRNK				pmax	pmax		
	comp=Z,155nm,2.3s,mb5.0						
ULN	**Ulaanbaatar**	**24.70**	**40**	*e*P	**P**	**20 46 03.7**	**-1.0**
	comp=Z,37nm,1.1s,mb4.8						
ULN	**Ulaanbaatar**	**24.70**	**40**	*e*P	**P**	**20 46 03.7**	**-1.1**
ULN				pmax	pmax		
	comp=Z,37nm,1.1s,mb4.8						
ULN	**Ulaanbaatar**	**24.70**	**40**	P	**P**	**20 46 08.2**	**+3.5**
	SNR=24						
BSY	**Bisya**	**24.81**	**257**	P	**P**	**20 46 10.0**	**+4.0**
	SNR=5.4						
ASHO	**Ashiyiah**	**25.03**	**262**	P	**P**	**20 46 12.6**	**+4.5**
	SNR=17						
ARQ	**Araqi**	**25.14**	**259**	P	**P**	**20 46 14.8**	**+5.8**
	SNR=11						
TLY	**Talaya**	**25.51**	**30**	*e*P	**P**	**20 46 16.3**	**+4.2**
TLY				*e*S	**S**	**20 50 38.9**	**-0.7**
TLY				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.3						
TLY				MLR	MLR		
	comp=Z,286nm,14.0s,MS4.0						
AB31	**Akbulak array**	**25.53**	**323**	*i* P	**P**	**20 46 12.0**	**-0.3**
AB31				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.4						
ABKAR	**Akbulak array**	**25.53**	**323**	*e*P	**P**	**20 46 12.0**	**-0.3**
	comp=Z,8.6nm,0.8s,mb4.3						
WHN	**Wuhan**	**26.47**	**83**	P	**P**	**20 46 23.0**	**+1.9**
WHN				LR	LR		
	comp=N,2μm,4.6s						
WHN				LR	LR		
	comp=E,630nm,8.7s						
WHN				LR	LR		
	comp=Z,2μm,8.5s						
QIZ	**Qiongzhong**	**26.57**	**110**	P	**P**	**20 46 26.0**	**+4.0**
QIZ				S	**S**	**20 51 00.8**	**+3.9**
QIZ				pmax	pmax		
	comp=Z,130nm,10.0s						
QIZ				LR	LR		
	comp=N,620nm,21.1s,MS4.1						
QIZ				LR	LR		
	comp=E,200nm,22.2s,MS4.1						
QIZ				LR	LR		
	comp=Z,280nm,9.3s						
AKTK	**Aktyubinsk**	**27.23**	**323**	P	**P**	**20 46 26.5**	**-1.2**
AKTK				LR	LR	20 58 26.5	
AKTO	**Aktyubinsk**	**27.23**	**323**	P	**P**	**20 46 26.5**	**-1.2**
	comp=Z,6.1nm,0.9s,mb4.1,baz=145,slow=6.6,SNR=12						
AKTO				LR	LR	20 58 26.5	
	comp=Z,729nm,20.3s,MS4.2,baz=295,slow=39						
AKTO	**Aktyubinsk**	**27.23**	**323**	P	**P**	**20 46 26.5**	**-1.2**
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
AKTO				MLR	MLR		
	comp=Z,729nm,20.3s,MS4.2						
BJI	**Beijing**	**27.98**	**62**	P	**P**	**20 46 37.5**	**+2.9**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
BJI				LR	LR		
	comp=N,2μm,12.9s,MS4.9						
BJI				LR	LR		
	comp=E,480nm,13.8s,MS4.9						
BJI				LR	LR		
	comp=Z,270nm,16.8s,MS3.9						
NJ2	**Nanjing**	**30.08**	**79**	*e*P	**P**	**20 46 54.5**	**+1.2**
NJ2				pP	pP	20 47 05.3	+10
NJ2				PP	PP	20 47 54.0	-7.1
NJ2				S	**S**	**20 51 51.0**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.4						
NJ2				pmax	pmax		
	comp=Z,160nm,5.2s						
NJ2				LR	LR		
	comp=N,460nm,20.0s,MS4.2						
NJ2				LR	LR		
	comp=E,310nm,17.9s,MS4.2						
NJ2				LR	LR		
	comp=Z,300nm,23.4s						
SVE	**Sverdlovsk**	**30.41**	**335**	⇑*e*P	**P**	**20 46 59.0**	**+3.1**
SVE				*e*S	**S**	**20 51 56.1**	**-0.6**
SVE				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.5						
SVE				MLR	MLR		
	comp=Z,387nm,12.0s,MS4.3						
ARU	**Arti**	**30.91**	**333**	*e*P	**P**	**20 47 01.6**	**+1.3**
	comp=Z,4.3nm,0.8s,mb4.3						
ARU	**Arti**	**30.91**	**333**	*c i*P	**P**	**20 47 02.6**	**+2.3**
ARU				*e*		20 47 59.9	
ARU				S	**S**	**20 52 05.8**	**+1.4**
ARU				SS	SS	20 53 46.9	-29
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
MAK	**Makhachkala**	**30.96**	**303**	*e*P	**P**	**20 47 01.9**	**+1.0**
MAK				*e*S	**S**	**20 52 05.1**	**-0.5**
MAK				*e*SS	SS	20 53 44.0	-34
MAK				pmax	pmax		
	comp=Z,185nm,2.0s,mb5.6						
MAK				MLR	MLR		
	comp=Z,408nm,11.0s,MS4.3						
MIB	**Mutribah**	**31.15**	**277**	*e*P	**P**	**20 47 03.6**	**+0.8**
MIB				AMb	AMB	20 47 13.3	
	comp=Z,40nm,0.8s,mb5.3						
DGRG	**David-gareji**	**32.30**	**300**	P	**P**	**20 47 13.1**	**+0.4**
GNI	**Garni**	**32.65**	**297**	*e*P	**P**	**20 47 18.2**	**+2.4**
	comp=Z,20nm,0.9s,mb5.0						
GNI	**Garni**	**32.65**	**297**	*ce*P	**P**	**20 47 17.7**	**+1.9**
GNI				pmax	pmax		
	comp=Z,21nm,1.6s						
MTA	**Mtatsminda**	**32.76**	**300**	P	**P**	**20 47 16.9**	**+0.2**
TBLG	**Delisi**	**32.80**	**300**	P	**P**	**20 47 21.0**	**+3.9**
TBLG	**Delisi**	**32.80**	**300**	P	**P**	**20 47 21.0**	**+3.9**
GOR	**Gori**	**33.30**	**300**	P	**P**	**20 47 23.6**	**+2.2**
ZEI	**Tsey**	**33.55**	**302**	*e*P	**P**	**20 47 23.7**	**+0.1**
ZEI				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
SOKR	**Solikamsk**	**33.81**	**336**	*d i*P	**P**	**20 47 29.3**	**+3.6**
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
SOKR				MLR	MLR		
	comp=Z,310nm,21.0s,MS4.0						
TWG	**Pinlang**	**34.34**	**94**	*e*P	**P**	**20 47 32.5**	**+1.8**
	comp=Z,21nm,0.9s,mb5.1						
KIV	**Kislovodsk**	**34.58**	**304**	*e*P	**P**	**20 47 33.6**	**+1.0**
	comp=Z,9.1nm,0.8s,mb4.8						
KIV	**Kislovodsk**	**34.58**	**304**	*de*P	**P**	**20 47 33.3**	**+0.7**
KIV				pmax	pmax		
	comp=Z,21nm,1.7s,mb4.8						
KIV				MLR	MLR		
	comp=Z,300nm,21.0s,MS4.0						
INCN	**Inchon**	**36.02**	**68**	*e*P	**P**	**20 47 46.5**	**+1.4**
VRHR	**Novokhopersk**	**36.84**	**315**	*e*P	**P**	**20 47 54.5**	**+2.6**
VRHR				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
VRHR				pmax	pmax		
	comp=N,20nm,0.6s						
VRHR				pmax	pmax		
	comp=E,30nm,0.7s						
KSRS	**Korea Array**	**37.05**	**68**	P	**P**	**20 47 53.9**	**+0.1**
	comp=E,0.9nm,0.5s,mb3.8,baz=268,slow=9.8,SNR=4.1						
KSRS				LR	LR	21 03 44.0	
	comp=E,200nm,21.1s,MS3.9,baz=92,slow=37						
KSRS	**Korea Array**	**37.05**	**68**	P	**P**	**20 47 53.9**	**+0.1**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
KSRS				MLR	MLR		
	comp=Z,200nm,21.1s,MS3

MOS *e* 20 48 26.7
MOS pmax pmax
comp=Z,55nm,1.4s,mb5.0
SIM Simferopol' 40.78 304 *e*P **P** **20 48 26.2 +1.2**
SIM pmax pmax
comp=Z,24nm,0.9s,mb4.8
OBN Obninsk 40.92 320⇑ *i*P **P** **20 48 28.4 +2.4**
OBN pmax pmax
comp=Z,43nm,1.1s,mb5.0
OBN MLR MLR
comp=Z,400nm,23.0s,MS4.2
BR131 Keskin Array S 41.18 296 *e*P **P** **20 48 29.0 +0.6**
comp=Z,8.6nm,1.1s,mb4.3
BRTR Keskin Array B 41.18 296 P **P** **20 48 29.3 +0.9**
comp=Z,3.3nm,0.9s,mb4.0,baz=100,slow=6.6,SNR=14
BRTR Keskin Array B 41.18 296 P **P** **20 48 29.3 +0.9**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
KLMR Klimovskoe 41.54 329 *e*P **P** **20 48 30.2 -0.8**
KLMR pmax pmax
comp=Z,57nm,1.4s,mb5.0
KLMR MLR MLR
comp=Z,515nm,21.0s,MS4.4
YAK Yakutsk 42.99 30 *e*P **P** **20 48 43.5 +0.7**
comp=Z,14nm,0.6s,mb4.9
YAK Yakutsk 42.99 30 *e*P **P** **20 48 44.2 +1.4**
YAK pmax pmax
comp=Z,13nm,0.9s,mb4.7
AKASG Malin Array B 44.47 313 P **P** **20 48 53.9 -1.0**
AKASG LR LR 21 10 34.0
AKASG Malin Array Be 44.47 313 P **P** **20 48 53.9 -1.0**
comp=Z,7.1nm,0.7s,mb4.5,baz=84,slow=7.7,SNR=20
AKASG LR LR 21 10 34.0
comp=Z,285nm,19.2s,MS4.2,baz=155,slow=40
AKASG Malin Array Be 44.47 313 P **P** **20 48 53.9 -1.0**
AKASG pmax pmax
comp=Z,7.0nm,0.7s
AKASG MLR MLR
comp=Z,285nm,19.2s
KIEV Kiev 44.48 313 *e*P **P** **20 48 54.5 -0.5**
comp=Z,7.5nm,0.8s,mb4.5
KIEV Kiev 44.48 313 *e*P **P** **20 48 54.5 -0.5**
KIEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
MJAR Matsushiro Arr 45.33 68 P **P** **20 49 02.9 +1.0**
comp=Z,0.7nm,0.4s,mb3.9,baz=305,slow=11,SNR=3.9
MJAR LR LR 21 09 00.8
comp=Z,126nm,18.5s,MS3.9,baz=305,slow=37
MJAR Matsushiro Arr 45.33 68 P **P** **20 49 02.9 +1.0**
MJAR pmax pmax
comp=Z,1.0nm,0.4s
MJAR MLR MLR
comp=Z,126nm,18.5s
JOF Joensuu 45.92 330 *e*P **P** **20 49 05.2 -1.0**
JOF pmax pmax
comp=Z,25nm,0.7s,mb5.2
JOF Joensuu 45.92 330 *e*p **P** **20 49 05.2 -1.0**
comp=Z,25nm,0.7s,mb5.2
VRI Vrincioaia 46.00 306⇑ *i*P **P** **20 49 10.6 +3.5**
TESR 46.04 307⇑ *i*P **P** **20 49 09.2 +1.8**
PLOR Plostina 46.05 306⇓ *i*P **P** **20 49 08.7 +1.2**
PLOR Plostina 46.05 306⇓ *i*P **P** **20 49 08.6 +1.1**
NACGM Naroch 46.40 318 *e* **P** **20 49 10.0 -0.1**
MLR Muntele Rosu 46.56 305⇑ P **P** **20 49 14.6 +3.1**
MLR Muntele Rosu 46.56 305⇑ *i*P **P** **20 49 14.6 +3.1**
LVZ Lovozero 46.59 337 *ce*P **P** **20 49 14.7 +3.3**
LVZ pmax pmax
comp=Z,24nm,0.9s,mb5.1
BURAR Bucovina Array 46.99 308⇑ P **P** **20 49 17.8 +2.9**
BURAR Bucovina Array 46.99 308⇑ *i*P **P** **20 49 17.8 +2.9**
BUR08 Bucovina Ar. S 47.01 308 *e*P **P** **20 49 14.7 -0.3**
VOIR 47.19 305⇓ P **P** **20 49 16.7 +0.2**
VOIR 47.19 305⇓ *i*P **P** **20 49 16.7 +0.2**
LVV L'vov 47.76 311 *e*P **P** **20 49 25.9 +5.1**
APE Apeiranthos 47.83 294⇑ P **P** **20 49 18.4 -3.2**
APE Apeiranthos 47.83 294⇑ *i*P **P** **20 49 18.4 -3.2**
FINES FINESS Array B 47.88 327 P **P** **20 49 20.5 -1.1**
comp=Z,15nm,0.8s,mb5.1,baz=106,slow=8.8,SNR=16
FINES FINESS Array B 47.88 327 P **P** **20 49 20.5 -1.1**
FINES pmax pmax
comp=Z,15nm,0.8s
KAF Kangasniemi 47.93 328 *e*P **P** **20 49 20.5 -1.4**
KAF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
KAF Kangasniemi 47.93 328 *e*p **P** **20 49 20.5 -1.4**
comp=Z,6.8nm,0.9s,mb4.7
KWP Kalwaria Pacla 48.62 311 *e*P **P** **20 49 28.4 +0.9**
comp=Z,21nm,1.0s,mb5.1
KWP Kalwaria Pacla 48.62 311⇓ P **P** **20 49 31.7 +4.2**
KWP Kalwaria Pacla 48.62 311⇓ *i*P **P** **20 49 31.7 +4.2**
IDI Anoyia 48.69 292 *e*P **P** **20 49 27.2 -1.1**
comp=Z,11nm,0.8s,mb5.0
VTS Vitosha 48.77 301⇓ P **P** **20 49 29.3 +0.6**
VTS Vitosha 48.77 301⇓ *i*P **P** **20 49 29.3 +0.6**
KEV Kevo 49.88 338 *e*P **P** **20 49 36.0 -0.8**
KEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
KEV Kevo 49.88 338 *e*p **P** **20 49 36.0 -0.8**
comp=Z,3.9nm,0.6s
NIE Niedzica 50.19 311 *e*P **P** **20 49 43.7 +4.2**
ARCES ARCESS Array B 50.30 337 P **P** **20 49 39.7 -0.3**
ARCES ARCESS Array B 50.30 337 P **P** **20 49 39.7 -0.3**
comp=Z,4.4nm,0.8s,mb4.5,baz=62,slow=5.9,SNR=11
ARCES ARCESS Array B 50.30 337 P **P** **20 49 39.7 -0.3**
ARCES pmax pmax
comp=Z,4.0nm,0.8s
OKC Ostrava-Krasne 51.57 311 *e*P **P** **20 49 52.8 +3.0**
OKC MLR MLR
comp=Z,300nm,24.5s,MS4.2
OKC Ostrava-Krasne 51.57 311 *e*P **P** **20 49 52.8 +3.0**
OKC *ep*P pP 20 49 57.7 +5.5
OKC AMS AMS 21 10 30.0
comp=Z,300nm,24.5s
PKSM Moragy 51.59 307⇑ P **P** **20 49 52.7 +2.7**
PKSM Moragy 51.59 307⇑ *i*P **P** **20 49 52.7 +2.7**
MORC Moravsky Berou 51.96 311⇓ P **P** **20 49 56.4 +3.6**
MORC Moravsky Berou 51.96 311⇓ *i*P **P** **20 49 56.4 +3.6**
DPC Dobruska-Polom 52.70 312 *e*P **P** **20 50 02.7 +4.5**
DPC MLR MLR
comp=Z,400nm,16.3s,MS4.5
DPC Dobruska-Polom 52.70 312 *e*P **P** **20 50 02.7 +4.5**
DPC *ep*P pP 20 50 06.9 +6.3
DPC AMS AMS 21 15 10.0
comp=Z,400nm,16.3s
UPC Upice 52.88 312 *e*P **P** **20 50 04.4 +4.8**
UPC Upice 52.88 312 *e*P **P** **20 50 04.4 +4.8**
UPC *ep*P pP 20 50 08.0 +6.0
CONA Conrad Observa 53.26 309⇓ *i*pP pP 20 50 05.7 +0.9
comp=Z,12nm,1.2s
TREC Trest 53.34 311 AMS AMS 21 11 40.0
comp=Z,400nm,18.1s
SEY Seymchan 53.39 32⇓ *e*P **P** **20 50 04.2 +1.1**
PVCC Panska Ves 53.80 312 AMS AMS 21 12 50.0
comp=Z,500nm,20.4s
PRU Pruhonice 53.87 312 *e*P **P** **20 50 07.8 +0.9**
PRU *e**PP pP 20 50 12.8 +3.5
PRU MLR MLR
comp=Z,400nm,15.8s,MS4.6
PRU Pruhonice 53.87 312 *e*P **P** **20 50 07.8 +0.9**
PRU *ep*P pP 20 50 12.8 +3.5
PRU AMS AMS 21 15 10.0
comp=Z,400nm,15.8s
SOKA Soboth 54.00 308⇑ *i*P **P** **20 50 08.0 +0.2**
comp=Z,6.8nm,0.9s,mb4.6
BRG Berggiesshubel 54.15 313 *e*P **P** **20 50 08.8 -0.1**
comp=Z,2.2nm,0.7s,mb4.2
BRG *e* pP 20 50 12.4 +1.1
comp=Z,7.3nm,1.0s
BRG Berggiesshubel 54.15 313 *e*P **P** **20 50 08.9 0.0**
BRG pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
TIP Timpagrande 54.17 298 *e*P **P** **20 50 08.7 -0.6**
KMBO Kilima Mbogo 54.26 243 *e*P **P** **20 50 12.2 +2.0**
comp=Z,7.9nm,1.0s,mb4.6
KMBO Kilima Mbogo 54.26 243 P **P** **20 50 09.8 -0.4**
comp=Z,5.3nm,1.0s,mb4.4,baz=181,slow=24,SNR=4.8
KMBO Kilima Mbogo 54.26 243 P **P** **20 50 09.8 -0.4**
KMBO pmax pmax
comp=Z,5.0nm,1.0s
KHC Kasperske Hory 54.61 311 *e*P **P** **20 50 11.9 -0.4**
comp=Z,6.1nm,1.1s,mb4.5
KHC Kasperske Hory 54.61 311 *e*P **P** **20 50 11.9 -0.3**
KHC pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
KHC Kasperske Hory 54.61 311 *e*P **P** **20 50 14.9 +2.6**
KHC *ep*P pP 20 50 20.1 +5.5
KHC AMS AMS 21 12 20.0
comp=Z,300nm,7.5s
CLL Collm 54.69 314 *e*P **P** **20 50 15.0 +2.2**
CLL Collm 54.69 314 *e*P **P** **20 50 15.0 +2.2**
CLL *e*(SS) 21 02 06.0
CLL LmV 21 15 00.0
comp=Z,200nm,21.3s
CUC Castrocucco 54.70 299 *e*P **P** **20 50 15.1 +2.0**
comp=Z,6.9nm,0.9s,mb4.7
NOA NORSAR Array B 54.98 326 P **P** **20 50 13.7 -1.1**
comp=Z,7.7nm,0.9s,mb4.7,baz=88,slow=7.1,SNR=12
NOA LR LR 21 15 26.9
comp=Z,296nm,18.9s,MS4.4,baz=85,slow=38
NOA NORSAR Array B 54.98 326 P **P** **20 50 13.7 -1.1**
NOA pmax pmax
comp=Z,8.0nm,0.9s
NOA MLR MLR
comp=Z,296nm,18.9s
CEL Celeste 55.05 297 *e*P **P** **20 50 14.9 -0.7**
comp=Z,29nm,0.9s,mb5.3
NKC Novy Kostel 55.18 312 AMS AMS 21 13 30.0
comp=Z,500nm,21.5s
MOX Moxa 55.65 313 *e*P **P** **20 50 24.8 +5.1**
comp=Z,28nm,2.0s,mb5.0
MOX
comp=Z,400nm,23.0s
MOX Moxa 55.65 313 *e*P **P** **20 50 24.8 +5.1**
MOX pmax pmax
comp=Z,28nm,2.0s,mb5.0
MOX MLR MLR
comp=Z,400nm,23.0s,MS4.4
GRA1 Grafenberg Arr 56.04 312 *e*P **P** **20 50 25.3 +2.7**
comp=Z,17nm,1.7s,mb4.8
GRF Grafenberg Arr 56.04 312 *e*P **P** **20 50 25.3 +2.7**
comp=Z,17nm,1.7s
GRF Grafenberg Arr 56.04 312 *e*P **P** **20 50 25.3 +2.7**
comp=Z,17nm,1.7s,mb4.8
GRF Grafenberg Arr 56.04 312 *e*P **P** **20 50 25.3 +2.7**
GRF pmax pmax
comp=Z,17nm,1.7s,mb4.8
GRF Grafenberg Arr 56.04 312 *e*P **P** **20 50 25.3 +2.7**
GRF pmax pmax
comp=Z,17nm,1.7s,mb4.8
GUMO Guam 58.67 93 LR LR 21 15 35.9
comp=Z,72nm,19.8s,MS3.8,baz=80,slow=36
CDF Champ du Feu 58.84 311 *e*P **P** **20 50 40.9 -1.4**
MBAR Mbarara 59.03 248⇑ *e*P **P** **20 50 44.5 +0.3**
HAU Haudompre 59.53 311 *e*P **P** **20 50 45.7 -1.5**
HAU *e*MLR MLR
comp=Z,281nm,19.0s,MS4.1
HAU Haudompre 59.53 311 *e*P **P** **20 50 45.7 -1.5**
HAU MLR MLR
comp=Z,280nm,19.0s,MS4.4
SBF Sospel 59.83 306 *e*P **P** **20 50 48.1 -1.2**
comp=Z,19nm,0.8s,mb4.9
SBF Sospel 59.83 306 *e*P **P** **20 50 48.1 -1.2**
comp=Z,9.6nm,0.8s,mb4.9
SBF Sospel 59.83 306 *e*P **P** **20 50 48.1 -1.2**
SBF pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
LPG La Plagne 59.88 308 *e*P **P** **20 50 49.0 -0.6**
comp=Z,13nm,0.9s,mb4.7
LPG La Plagne 59.88 308 *e*P **P** **20 50 49.0 -0.6**
comp=Z,6.4nm,0.9s,mb4.7
LPG La Plagne 59.88 308 *e*P **P** **20 50 49.0 -0.6**
LPG pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
LPL La Plagne 59.88 308 *e*P **P** **20 50 48.9 -0.7**
comp=Z,11nm,0.7s,mb4.7
LPL La Plagne 59.88 308 *e*P **P** **20 50 48.9 -0.7**
comp=Z,5.3nm,0.7s,mb4.7
LPL La Plagne 59.88 308 *e*P **P** **20 50 48.9 -0.7**
LPL pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
CABF La Chapelle 60.04 309 *e*P **P** **20 50 49.3 -1.4**
MBDF Montbardon 60.06 307 *e*P **P** **20 50 49.1 -1.8**
MEZF Maizieres J'vi 60.26 311 *e*P **P** **20 50 51.0 -1.1**
FRF La Foret Royal 60.46 306 *e*P **P** **20 50 52.3 -1.3**
LMR La Mourre 60.62 305 *e*P **P** **20 50 53.2 -1.5**
ORIF Oris-en-Rattie 60.62 307 *e*P **P** **20 50 53.1 -1.6**
ORIF *e*MLR MLR
comp=Z,302nm,22.0s,MS4.1
KEST Kesra 60.79 296 *e*P **P** **20 50 58.5 +2.6**
KEST Kesra 60.79 296 LR LR 21 21 26.9
comp=Z,57nm,20.8s,MS3.7,baz=359,slow=40
LOR Lormes 61.35 310 *e*P **P** **20 50 57.5 -2.1**
LOR *e*MLR MLR
comp=Z,249nm,21.5s,MS4.0
LOR Lormes 61.35 310 *e*P **P** **20 50 57.5 -2.1**
LOR MLR MLR
comp=Z,250nm,21.5s,MS4.3
VIVF Saint-Julien-l 61.46 307 *e*P **P** **20 50 59.2 -1.2**
SMF Signal de Mont 61.53 310 *e*P **P** **20 50 59.0 -1.8**
SSF Saint Saulge 61.63 310 *e*P **P** **20 50 59.8 -1.7**
AVF Avril sur Loir 61.81 310 *e*P **P** **20 51 01.1 -1.6**
LASF Ste Croix 62.25 307 *e*P **P** **20 51 05.0 -0.7**
TCF Toulx Ste Croi 62.71 310 *e*P **P** **20 51 07.6 -1.2**
CAF Calviac 63.22 308 *e*P **P** **20 51 10.9 -1.2**
FITZ Fitzroy Crossi 63.36 134 P **P** **20 51 12.2 -1.2**
comp=Z,3.4nm,0.9s,mb4.5,baz=340,slow=12,SNR=3.6
RJF Les Rejaudoux 63.47 309 *e*P **P** **20 51 12.9 -0.9**
RJF *e*MLR MLR
comp=Z,142nm,22.8s,MS3.8
RJF Les Rejaudoux 63.47 309 *e*P **P** **20 51 12.9 -0.9**
RJF MLR MLR
comp=Z,140nm,22.8s,MS4.1
LDF La Druitiere 63.54 313 *e*P **P** **20 51 12.5 -1.7**
comp=Z,10nm,1.0s,mb4.5
LDF La Druitiere 63.54 313 *e*P **P** **20 51 12.5 -1.7**
comp=Z,5.1nm,1.0s,mb4.5
LDF La Druitiere 63.54 313 *e*P **P** **20 51 12.5 -1.7**
LDF pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
SGMF Saint Gilles 65.19 313 *e*P **P** **20 51 23.7 -1.3**
ESDC Sonseca Array 69.25 304 P **P** **20 51 48.8 -2.2**
comp=Z,0.2nm,0.6s,baz=249,slow=28,SNR=3.4
SUMG Summit 69.49 344 *e*P **P** **20 51 52.7 +0.9**
comp=Z,22nm,1.0s,mb5.0
SUMG Summit 69.49 344 *i* P **P** **20 51 53.1 +1.3**
comp=Z,18nm,1.0s,mb5.0
LSZ Lusaka 70.24 237 *e*P **P** **20 51 58.3 +1.0**
comp=Z,3.1nm,0.7s,mb4.3
LSZ Lusaka 70.24 237 *e*P **P** **20 51 58.3 +1.0**
LSZ pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
WRA Warramunga Arr 70.28 129 P **P** **20 51 56.9 -0.6**
comp=Z,7.5nm,0.6s,mb4.8,baz=326,slow=6.4,SNR=117
WRA Warramunga Arr 70.28 129 P **P** **20 51 56.9 -0.6**
WRA pmax pmax
comp=Z,8.0nm,0.6s
ASAR Alice Springs 72.64 132 P **P** **20 52 11.1 -0.6**
comp=Z,3.2nm,0.7s,mb4.4,baz=317,slow=5.7,SNR=50
ASAR Alice Springs 72.64 132 P **P** **20 52 11.1 -0.6**
ASAR pmax pmax
comp=Z,3.0nm,0.7s
TTA Tatalina 75.21 24 *e*P **P** **20 52 30.2 +4.0**
BPAW Bear Paw Mtn. 76.11 22 *e*P **P** **20 52 30.9 -0.3**
comp=Z,7.0nm,1.0s,mb4.5
TORD Torodi Ar. Bea 76.43 277 P **P** **20 52 33.8 -0.2**
comp=Z,2.5nm,1.0s,mb4.1,baz=52,slow=4.9,SNR=7.7
COLA College 76.51 20 *e*P **P** **20 52 35.5 +1.9**
comp=Z,8.7nm,0.8s,mb4.7
COLA College 76.51 20 *e*P **P** **20 52 35.5 +1.9**
COLA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
PPLA Purkeypile 76.55 23 *e*P **P** **20 52 33.1 -0.7**
SVW2 Sparrevohn 76.56 25 *e*P **P** **20 52 37.1 +3.2**
comp=Z,27nm,1.8s,mb4.9
ILAR Eielson Array 76.87 20 P **P** **20 52 35.1 -0.4**
comp=Z,4.2nm,0.9s,mb4.3,baz=299,slow=4.7,SNR=19
ILAR PP PP 20 55 29.4 +1.5
comp=Z,0.7nm,0.8s,baz=309,slow=7.3,SNR=4.1
ILAR LR LR 21 28 02.3
comp=Z,100nm,22.0s,MS4.1,baz=337,slow=37
ILAR Eielson Array 76.87 20 P **P** **20 52 35.2 -0.4**
ILAR 20 55 29.4
ILAR pmax pmax
comp=Z,4.0nm,0.9s
ILAR pmax pmax
comp=Z,1.0nm,0.8s
ILAR MLR MLR
comp=Z,100nm,22.0s
PMR Palmer 78.48 23 *e*P **P** **20 52 43.7 -1.0**
comp=Z,9.7nm,0.8s,mb4.8
PMR Palmer 78.48 23 *e*P **P** **20 52 43.7 -1.0**
PMR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SML Sawmill 78.59 22 *e*P **P** **20 52 44.6 -0.6**
comp=Z,4.9nm,0.8s,mb4.5
SML Sawmill 78.59 22 *e*P **P** **20 52 44.6 -0.6**
SML pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SLKM Skilak Lake 78.89 24 *e*P **P** **20 52 48.4 +1.5**
DAWY Dawson 79.49 18 *e*P **P** **20 52 49.0 -1.2**
KDAK Kodiak Island 79.93 27 *i* P **P** **20 52 52.7 +0.1**
BMRM Bremner River 80.42 22 *e*P **P** **20 52 57.1 +1.9**
comp=Z,9.8nm,1.1s,mb4.7
BOSA Boshof 81.14 229 P **P** **20 52 59.8 +0.3**
comp=Z,8.0nm,0.9s,mb4.6,baz=359,slow=5.2,SNR=6.2
BOSA LR LR 21 24 54.8
comp=Z,141nm,19.7s,MS4.3,baz=300,slow=33
BOSA Boshof 81.14 229 P **P** **20 52 59.8 +0.3**
BOSA pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
BOSA MLR MLR
comp=Z,141nm,19.7s,MS4.3
STKA Stephens Creek 83.23 133 P **P** **20 53 10.3 -0.1**
STKA LR LR 21 37 45.9
STKA Stephens Creek 83.23 133 P **P** **20 53 10.3 -0.1**
comp=Z,2.8nm,0.5s,mb4.5,baz=329,slow=4.3,SNR=7.7
STKA LR LR 21 37 45.9
comp=Z,127nm,18.4s,MS4.3,baz=24,slow=41
DBIC Dimbokro 85.22 275 P **P** **20 53 20.1 -0.9**
comp=Z,3.7nm,0.9s,mb4.5,baz=70,slow=4.8,SNR=5.4
DBIC LR LR 21 35 01.5
comp=Z,178nm,19.3s,MS4.5,baz=44,slow=38
DBIC Dimbokro 85.22 275 P **P** **20 53 20.1 -0.9**
DBIC pmax pmax
comp=Z,4.0nm,0.9s
DBIC MLR MLR
comp=Z,178nm,19.3s
YKA Yellowknife Ar 85.78 8 P **P** **20 53 21.5 -1.4**
comp=Z,2.2nm,0.6s,mb4.5,baz=338,slow=5.2,SNR=10.0
YKA Yellowknife Ar 85.78 8 P **P** **20 53 21.5 -1.4**
YKA pmax pmax
comp=Z,2.0nm,0.6s
SCHQ Schefferville 90.86 343 LR LR 21 36 02.3
comp=Z,79nm,20.3s,MS4.1,baz=116,slow=36
MAW Mawson 99.44 188 LR LR 21 31 52.0
comp=Z,112nm,21.4s,MS4.3,baz=195,slow=31
TXAR Lajitas Array 119.69 7 PKP PKPdf 20 59 33.4 -1.0
comp=Z,0.3nm,0.6s,baz=31,slow=2.9,SNR=3.8
OTAV Otavalo 144.59 328 *e*PKPdf PKPdf 21 00 21.2 -0.1
CPUP Villa Florida 145.45 268 PKPbc PKPbc 21 00 21.5 -0.9
comp=Z,3.9nm,0.8s,baz=57,slow=6.0,SNR=8.6
LPAZ La Paz 150.32 293 PKPbc PKPbc 21 00 36.1 +0.3
comp=Z,2.5nm,0.9s,baz=26,slow=3.5,SNR=6.7

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*ISCJB **25** 20:46:14.9±0.5, 40.07N±0.02×19.86E±0.02, h6km±3km, Error ellipse: s-maj=3.2km s-min=2.4km az=10.5*
*SKO **25** 20:46:14.5, 39.91N×19.89E, h4km*
*NEIC **25** 20:46:15.4, 40.03N×19.92E, h16km, MD3.3(ATH), After ATH.*
*ATH **25** 20:46:15.4, 40.03N×19.92E, h16km±1km, MD3.3/7*
*THE **25** 20:46:15.8, 40.05N×19.92E, h1km±2km, ML2.4/10, Error ellipse: s-maj=3.0km s-min=0.9km az=281.0*
*CSEM **25** 20:46:15.1±0.1, 40.08N×19.87E, h2km, MD3.3, Error ellipse: s-maj=3.2km s-min=2.3km az=11.0*
*ROM **25** 20:46:16.6±0.8, 40.08N×19.88E, h21km±6km, Md3.0/5, Ml3.3/1, Error ellipse: s-maj=11.8km s-min=10.5km az=85.0*

ISC 25 20:46:15.5±0.5, 40.07N±0.02×19.86E±0.02, h5km±3km, n108, σ1°00/197, Albania

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.36**	**187**	*e*Pb		**Pg**	**20 46 22.0**	**-0.5**
KEK				*e*Sb		**Sg**	**20 46 27.5**	**+0.3**
KEK	**Kerkira**	**0.36**	**187**	*e*PB		**Pg**	**20 46 22.0**	**-0.5**
KEK				*e*SB		**Sg**	**20 46 27.5**	**+0.3**
KEK	**Kerkira**	**0.36**	**187**	P		**Pg**	**20 46 22.1**	**-0.4**
KEK				S		**Sg**	**20 46 27.4**	**+0.2**
KEK	**Kerkira**	**0.36**	**187**	P		**Pg**	**20 46 22.1**	**-0.4**
KEK				S		**Sg**	**20 46 27.4**	**+0.2**
IGT	**Igoumenitsa**	**0.65**	**146**	P		**Pg**	**20 46 26.9**	**-1.1**
IGT	**Igoumenitsa**	**0.65**	**146**	P		**Pg**	**20 46 26.9**	**-1.1**
IGT				S		**Sg**	**20 46 37.0**	**+0.5**
IGT	**Igoumenitsa**	**0.65**	**146**	P		**Pg**	**20 46 26.9**	**-1.1**
IGT				S		**Sg**	**20 46 37.0**	**+0.5**
JAN	**Janina**	**0.87**	**118**	*e*Pn		**Pg**	**20 46 31.1**	**-1.1**
JAN				*e*Sn		**Sg**	**20 46 42.7**	**-0.8**
JAN	**Janina**	**0.87**	**118**	*e*PN		**Pg**	**20 46 31.1**	**-1.1**
JAN				*e*SN		**Sg**	**20 46 42.7**	**-0.8**
NEST	**Nestorio**	**0.97**	**69**	P		**Pg**	**20 46 32.1**	**-2.1**
NEST				S		**Sg**	**20 46 46.1**	**-0.7**
NEST	**Nestorio**	**0.97**	**69**	P		**Pg**	**20 46 32.1**	**-2.1**
NEST				S		**Sg**	**20 46 46.1**	**-0.7**
SCTE	**Santa Cesarea**	**1.07**	**270**	Pn		**Pg**	**20 46 35.6**	**-0.3**
SCTE				Sn		**Sg**	**20 46 51.8**	**+2.1**
SCTE	**Santa Cesarea**	**1.07**	**270**	Pn		**Pg**	**20 46 35.6**	**-0.3**
SCTE				Sn		**Sg**	**20 46 51.8**	**+2.1**
TIR	**Tirane**	**1.27**	**0**	*e*Pn		**Pn**	**20 46 40.0**	**+0.1**
TIR				*e*Sn		**Sn**	**20 46 58.4**	**+1.0**
TIR	**Tirane**	**1.27**	**0**	*e*PN		**Pn**	**20 46 40.0**	**+0.1**
TIR				*e*SN		**Sn**	**20 46 58.4**	**+1.0**
TIR	**Tirane**	**1.27**	**0**	P		**Pn**	**20 46 40.2**	**+0.3**
TIR				S		**Sg**	**20 46 59.5**	**+3.1**
TIR	**Tirane**	**1.27**	**0**	*e*Pn		**Pn**	**20 46 40.0**	**+0.1**
TIR				*e*Sn		**Sn**	**20 46 58.4**	**+1.0**
TIR				S		**Sg**	**20 46 59.5**	**+3.1**
FNA	**Florina**	**1.36**	**58**	P		**Pn**	**20 46 39.5**	**-1.6**
FNA				S		**Sb**	**20 47 00.4**	**+1.3**
FNA	**Florina**	**1.36**	**58**	P		**Pn**	**20 46 39.5**	**-1.6**
FNA				S		**Sb**	**20 47 00.4**	**+1.3**
LKD2	**Lefkada island**	**1.42**	**154**	P		**Pn**	**20 46 42.0**	**0.0**
LKD2				S		**Sb**	**20 47 01.3**	**+0.4**
LKD2	**Lefkada island**	**1.42**	**154**	P		**Pn**	**20 46 42.0**	**0.0**
LKD2				S		**Sb**	**20 47 01.3**	**+0.4**
BIA	**Bitola**	**1.46**	**49**	P		**Pn**	**20 46 41.3**	**-1.2**
BIA				S		**Sn**	**20 47 02.8**	**+0.8**
BIA	**Bitola**	**1.46**	**49**	*e*Pn		**Pn**	**20 46 41.5**	**-1.0**
BIA				*e*Sg		**Sg**	**20 47 03.2**	**+0.7**
BIA	**Bitola**	**1.46**	**49**	P		**Pn**	**20 46 41.3**	**-1.2**
BIA				S		**Sn**	**20 47 02.8**	**+0.8**
KZN	**Kozani**	**1.48**	**80**	*e*Pn		**Pn**	**20 46 42.3**	**-0.5**
KZN				*e*Sn		**Sn**	**20 47 02.5**	**0.0**
KZN	**Kozani**	**1.48**	**80**	*e*PN		**Pn**	**20 46 42.3**	**-0.5**
KZN				*e*SN		**Sn**	**20 47 02.5**	**0.0**
KZN	**Kozani**	**1.48**	**80**	P		**Pn**	**20 46 42.9**	**+0.1**
KZN				S		**Sn**	**20 47 03.2**	**+0.7**
KZN	**Kozani**	**1.48**	**80**	*e*Pn		**Pn**	**20 46 42.3**	**-0.5**
KZN	**Kozani**	**1.48**	**80**	P		**Pn**	**20 46 42.9**	**+0.1**
KZN				*e*Sn		**Sn**	**20 47 02.5**	**0.0**
KZN				S		**Sn**	**20 47 03.2**	**+0.7**
KRUS	**Krusevo**	**1.67**	**39**	*e*Pn		**Pn**	**20 46 45.4**	**+0.1**
EVR	**Evrytania**	**1.90**	**127**	*e*Pn		**Pn**	**20 46 49.2**	**+0.7**
EVR				*e*Sn		**Sn**	**20 47 12.8**	**0.0**
EVR	**Evrytania**	**1.90**	**127**	*e*PN		**Pn**	**20 46 49.2**	**+0.7**
EVR				*e*SN		**Sn**	**20 47 12.8**	**0.0**
EVR	**Evrytania**	**1.90**	**127**	*e*Pn		**Pn**	**20 46 49.2**	**+0.7**
EVR				*e*Sn		**Sn**	**20 47 12.8**	**0.0**
VLS	**Valsamata**	**1.98**	**163**	*e*Pn		**Pn**	**20 46 49.3**	**-0.3**
VLS				*e*Sn		**Sn**	**20 47 16.0**	**+1.3**
VLS	**Valsamata**	**1.98**	**163**	*e*PN		**Pn**	**20 46 49.3**	**-0.3**
VLS				*e*SN		**Sn**	**20 47 16.0**	**+1.3**
VLS	**Valsamata**	**1.98**	**163**	P		**Pn**	**20 46 48.6**	**-1.0**
VLS				S		**Sn**	**20 47 13.9**	**-0.8**
VLS	**Valsamata**	**1.98**	**163**	P		**Pn**	**20 46 48.6**	**-1.0**
VLS	**Valsamata**	**1.98**	**163**	*e*Pn		**Pn**	**20 46 49.3**	**-0.3**
VLS				S		**Sn**	**20 47 13.9**	**-0.8**
VLS				*e*Sn		**Sn**	**20 47 16.0**	**+1.3**
PE1	**Pezze di Greco**	**2.00**	**292**	*e*Pn		**Pn**	**20 46 53.0**	**+3.2**
TAR1	**Taranto**	**2.02**	**284**	*e*Pn		**Pn**	**20 46 52.3**	**+2.2**
LIT	**Litokhoron**	**2.02**	**88**	*e*Pb		**Pb**	**20 46 49.7**	**-2.9**
LIT				*e*Sn		**Sn**	**20 47 16.2**	**+0.4**
LIT	**Litokhoron**	**2.02**	**88**	*e*PB		**Pb**	**20 46 49.7**	**-2.9**
LIT				*e*SN		**Sn**	**20 47 16.2**	**+0.4**
LIT	**Litokhoron**	**2.02**	**88**	P		**Pn**	**20 46 49.4**	**-0.8**
LIT				S		**Sn**	**20 47 15.4**	**-0.4**
LIT	**Litokhoron**	**2.02**	**88**	P		**Pn**	**20 46 49.4**	**-0.8**
LIT				S		**Sn**	**20 47 15.4**	**-0.4**
LIT				*e*Sn		**Sn**	**20 47 16.2**	**+0.4**
GRG	**Griva**	**2.13**	**65**	P		**Pn**	**20 46 53.1**	**+1.4**

GRG	**Griva**	**2.13 65**	P		**Pn**	**20 46 51.6**	**-0.1**
GRG			S		**Sn**	**20 47 19.3**	**+0.8**
GRG	**Griva**	**2.13 65**	P		**Pn**	**20 46 51.6**	**-0.1**
GRG			S		**Sn**	**20 47 19.3**	**+0.8**
AGG	**Agios Georgios**	**2.18 118**	*e*Pn		**Pn**	**20 46 52.9**	**+0.5**
AGG			*e*Sn		**Sn**	**20 47 19.8**	**+0.1**
AGG	**Agios Georgios**	**2.18 118**	*e*PN		**Pn**	**20 46 52.9**	**+0.5**
AGG			*e*SN		**Sn**	**20 47 19.8**	**+0.1**
AGG	**Agios Georgios**	**2.18 118**	P		**Pn**	**20 46 52.6**	**+0.2**
AGG			S		**Sn**	**20 47 20.9**	**+1.2**
AGG	**Agios Georgios**	**2.18 118**	P		**Pn**	**20 46 52.6**	**+0.2**
AGG	**Agios Georgios**	**2.18 118**	*e*Pn		**Pn**	**20 46 52.9**	**+0.5**
AGG			*e*Sn		**Sn**	**20 47 19.8**	**+0.1**
AGG			S		**Sn**	**20 47 20.9**	**+1.2**
NOCI	**Noci**	**2.25 289**	Pn		**Pn**	**20 46 53.8**	**+0.5**
NOCI			Sn		**Sn**	**20 47 20.1**	**-1.3**
NOCI	**Noci**	**2.25 289**	Pn		**Pn**	**20 46 53.8**	**+0.5**
NOCI			Sn		**Sn**	**20 47 20.1**	**-1.3**
EFP	**Efpalio**	**2.29 135**	*e*PN		**Pn**	**20 46 54.5**	**+0.7**
EFP			*e*SN		**Sn**	**20 47 22.7**	**+0.4**
EFP	**Efpalio**	**2.29 135**	P		**Pn**	**20 46 54.3**	**+0.5**
EFP			S		**Sn**	**20 47 22.5**	**+0.2**
EFP	**Efpalio**	**2.29 135**	P		**Pn**	**20 46 54.3**	**+0.5**
EFP			*e*Sn		**Sn**	**20 47 22.7**	**+0.4**
VAY	**Valandovo**	**2.41 58**	*e*Pn		**Pn**	**20 46 54.8**	**-0.8**
TRIZ	**Trizonia**	**2.42 134**	P		**Pn**	**20 46 56.4**	**+0.7**
TRIZ			S		**Sn**	**20 47 26.7**	**+1.0**
TRIZ	**Trizonia**	**2.42 134**	P		**Pn**	**20 46 56.4**	**+0.7**
TRIZ			S		**Sn**	**20 47 26.7**	**+1.0**
HORT	**Hortiatis**	**2.53 77**	P		**Pn**	**20 46 57.7**	**+0.5**
HORT	**Hortiatis**	**2.53 77**	P		**Pn**	**20 46 57.7**	**+0.5**
SG1	**Sgolgore (BA)**	**2.54 289**	*e*Pn		**Pn**	**20 46 59.3**	**+2.0**
TIP	**Timpagrande**	**2.55 251**	P		**Pn**	**20 46 57.0**	**-0.5**
TIP	**Timpagrande**	**2.55 251**	P		**Pn**	**20 46 57.0**	**-0.5**
AMUR	**Altamura**	**2.62 290**	Pn		**Pn**	**20 46 58.6**	**+0.2**
AMUR			Sn		**Sn**	**20 47 29.2**	**-1.3**
AMUR	**Altamura**	**2.62 290**	Pn		**Pn**	**20 46 58.6**	**+0.2**
AMUR			Sn		**Sn**	**20 47 29.2**	**-1.3**
DSF	**Desfina**	**2.66 128**	P		**Pn**	**20 46 59.0**	**+0.1**
DSF			S		**Sn**	**20 47 30.7**	**-0.7**
DSF	**Desfina**	**2.66 128**	P		**Pn**	**20 46 59.0**	**+0.1**
DSF			S		**Sn**	**20 47 30.7**	**-0.7**
SERS	**Sersale**	**2.66 248**	Pn		**Pn**	**20 46 58.7**	**-0.2**
SERS			Sn		**Sn**	**20 47 30.5**	**-1.0**
SERS	**Sersale**	**2.66 248**	Pn		**Pn**	**20 46 58.7**	**-0.2**
SERS			Sn		**Sn**	**20 47 30.5**	**-1.0**
MIGL	**Miglionico**	**2.66 283**	Pn		**Pn**	**20 47 00.3**	**+1.3**
MIGL			Sn		**Sn**	**20 47 30.0**	**-1.6**
	195nm,1.1s						
MIGL	**Miglionico**	**2.66 283**	Pn		**Pn**	**20 47 00.3**	**+1.3**
MIGL			Sn		**Sn**	**20 47 30.0**	**-1.6**
	195nm,1.1s						
NEO	**Neokhori**	**2.71 105**	*e*Pb		**Pn**	**20 47 00.6**	**+1.0**
NEO			*e*Sn		**Sn**	**20 47 32.7**	**0.0**
NEO	**Neokhori**	**2.71 105**	*e*PB		**Pn**	**20 47 00.6**	**+1.0**
NEO			*e*SN		**Sn**	**20 47 32.7**	**0.0**
PLG	**Polygyros**	**2.76 83**	*e*Pn		**Pn**	**20 46 59.9**	**-0.5**
PLG			*e*Sn		**Sn**	**20 47 33.5**	**-0.6**
PLG	**Polygyros**	**2.76 83**	*e*PN		**Pn**	**20 46 59.9**	**-0.5**
PLG			*e*SN		**Sn**	**20 47 33.5**	**-0.6**
PLG	**Polygyros**	**2.76 83**	*e*Pn		**Pn**	**20 46 59.9**	**-0.5**
PLG			*e*Sn		**Sn**	**20 47 33.5**	**-0.6**
SOH	**Sokhos**	**2.77 73**	*e*Pn		**Pn**	**20 47 00.2**	**-0.3**
SOH			*e*Sn		**Sn**	**20 47 34.6**	**+0.3**
SOH	**Sokhos**	**2.77 73**	*e*PN		**Pn**	**20 47 00.2**	**-0.3**
SOH			*e*SN		**Sn**	**20 47 34.6**	**+0.3**
SOH	**Sokhos**	**2.77 73**	*e*Pn		**Pn**	**20 47 00.2**	**-0.3**
SOH			*e*Sn		**Sn**	**20 47 34.6**	**+0.3**
LKR	**Lokris**	**2.82 119**	*e*Pn		**Pn**	**20 47 01.5**	**+0.4**
LKR			*e*Sn		**Sn**	**20 47 35.4**	**-0.1**
LKR	**Lokris**	**2.82 119**	*e*PN		**Pn**	**20 47 01.5**	**+0.4**
LKR			*e*SN		**Sn**	**20 47 35.4**	**-0.1**
LKR	**Lokris**	**2.82 119**	*e*Pn		**Pn**	**20 47 01.5**	**+0.4**
LKR			*e*Sn		**Sn**	**20 47 35.4**	**-0.1**
GUR	**Goura**	**2.88 137**	*e*PN		**Pn**	**20 47 02.0**	**0.0**
GUR			*e*SN		**Sn**	**20 47 36.3**	**-0.7**
GUR	**Goura**	**2.88 137**	P		**Pn**	**20 47 02.2**	**+0.2**
GUR			S		**Sn**	**20 47 36.2**	**-0.8**
GUR	**Goura**	**2.88 137**	P		**Pn**	**20 47 02.2**	**+0.2**
GUR			*e*Sn		**Sn**	**20 47 36.3**	**-0.7**
CDT	**Castel del Mon**	**2.91 291**	*e*Pn		**Pn**	**20 47 03.9**	**+1.5**
PAIG	**Paliouri**	**2.94 92**	P		**Pn**	**20 47 03.1**	**+0.3**
PAIG	**Paliouri**	**2.94 92**	P		**Pn**	**20 47 03.1**	**+0.3**
ACER	**Acerenza**	**3.07 285**	Pn		**Pn**	**20 47 05.8**	**+1.2**
ACER			Sn		**Sn**	**20 47 40.1**	**-1.6**
ACER	**Acerenza**	**3.07 285**	Pn		**Pn**	**20 47 05.8**	**+1.2**
ACER			Sn		**Sn**	**20 47 40.1**	**-1.6**
STON	**Ston**	**3.23 331**	*e*Pn		**Pn**	**20 47 03.8**	**-3.1**
STON			Sn		**Sn**	**20 47 41.9**	**-3.7**
STON	**Ston**	**3.23 331**	*e*Pn		**Pn**	**20 47 03.7**	**-3.1**
STON			Sn		**Sn**	**20 47 41.9**	**-3.8**
NVR	**Nevrokopi**	**3.30 66**	*e*Pn		**Pn**	**20 47 08.0**	**+0.2**
NVR			*e*Sn		**Sn**	**20 47 47.0**	**-0.3**
NVR	**Nevrokopi**	**3.30 66**	*e*PN		**Pn**	**20 47 08.0**	**+0.2**
NVR			*e*SN		**Sn**	**20 47 47.0**	**-0.3**
NVR	**Nevrokopi**	**3.30 66**	*e*Pn		**Pn**	**20 47 08.0**	**+0.2**
NVR			*e*Sn		**Sn**	**20 47 47.0**	**-0.3**
ITM	**Ithomi**	**3.31 150**	*e*Pn		**Pn**	**20 47 08.5**	**+0.6**
ITM			*e*Sn		**Sn**	**20 47 47.7**	**+0.1**
ITM	**Ithomi**	**3.31 150**	*e*PN		**Pn**	**20 47 08.5**	**+0.6**
ITM			*e*SN		**Sn**	**20 47 47.7**	**+0.1**
ITM	**Ithomi**	**3.31 150**	*e*Pn		**Pn**	**20 47 08.5**	**+0.6**
ITM			*e*Sn		**Sn**	**20 47 47.7**	**+0.1**
CEL	**Celeste**	**3.57 241**	P		**Pn**	**20 47 11.8**	**+0.3**
CEL	**Celeste**	**3.57 241**	P		**Pn**	**20 47 11.8**	**+0.3**
DID	**Didima**	**3.68 133**	*e*PN		**Pn**	**20 47 12.8**	**-0.2**
DID	**Didima**	**3.68 133**	P		**Pn**	**20 47 12.3**	**-0.7**
DID	**Didima**	**3.68 133**	P		**Pn**	**20 47 12.3**	**-0.7**
DID	**Didima**	**3.68 133**	*e*Pn		**Pn**	**20 47 12.8**	**-0.2**
NVLJ	**Novalja**	**5.81 322**	*e*Pn		**Pn**	**20 47 40.6**	**-1.7**
NVLJ			Sn		**Sn**	**20 48 45.7**	**-3.5**
NVLJ	**Novalja**	**5.81 322**	*e*Pn		**Pn**	**20 47 40.5**	**-1.8**

IDC 25 20:51:37.8±4.6,30°.50N×82°.97E,h0km,mb3.6/3, mb1 3.7/5,mb1mx3.4/27,mbtmp3.5/5,ML3.2/2,MS3.8/1, Ms1 3.8/1,ms1mx2.8/35,Error ellipse: s-maj=179.4km s-min=25.6km az=66.0,Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**16.28**	**358**	Pn	Pn	20 55 27.5	-0.3
	0.0nm,0.3s,baz=174,slow=9.9,SNR=3.0						
CMAR	**Chiang Mai Arr**	**18.81**	**126**	P	Pn	20 55 59.5	+0.1
	0.1nm,0.3s,baz=303,slow=9.6,SNR=4.7						
KURK	**Kurchatov**	**20.46**	**352**	P	P	20 56 15.9	-0.9
	1.9nm,0.2s,baz=172,slow=11,SNR=7.4						
DAVOX	**Davos/Dischmat**	**57.36**	**309**	LR	LR	21 29 15.4	
	comp=Z,86nm,18.7s,baz=348,slow=39						
WRA	**Warramunga Arr**	**70.38**	**129**	P	P	21 02 53.9	+0.1
	0.2nm,0.5s,baz=323,slow=6.5,SNR=7.3						
ILAR	**Eielson Array**	**77.43**	**20**	P	P	21 03 34.2	-0.2
	0.3nm,0.8s,baz=303,slow=5.0,SNR=2.8						

*DMN **25** 21:32:51.0±0.5,32°.00N×83°.23E,h10km,Ml4.7/3,Error ellipse: s-maj=11.3km s-min=9.0km az=126.0*
*BJI **25** 21:32:58.4,30°.83N×83°.53E,h25km,mB4.5/5,mb4.3/12, Ms3.9/5,Ms7 3.6/5*
*IDC **25** 21:32:58.6±0.7,31°.19N×84°.08E,h0km,mb3.9/16, mb1 4.1/18,mb1mx4.0/29,mbtmp3.9/18,ML3.9/2,MS3.3/7,*
Ms1 3.4/7,ms1mx3.0/34,Error ellipse: s-maj=24.9km s-min=14.7km az=44.0
*NEIC **25** 21:32:59.8±3.7,31°.00N×83°.57E,h13km±24km,mb4.0/5, Error ellipse: s-maj=14.3km s-min=7.0km az=219.0*
*NDI **25** 21:33:01.1±2.7,31°.17N×83°.57E,h10km,ML3.9, mb4.0(NEIC)*
*MOS **25** 21:33:02.3±1.9,31°.04N×83°.85E,h33km,mb4.3/17,Error ellipse: s-maj=13.5km s-min=6.7km az=114.9*
*ISCJB **25** 21:33:02.4±0.7,31°.12N±0°.04×83°.66E±0°.04,h34km±8km, mb4.0/28,MS3.1/4,Error ellipse: s-maj=7.7km s-min=5.3km az=27.6*
ISC 25 21:33:02.5±1.0,31°.12N±0°.03×83°.62E±0°.03,h22km±9km, n117,σ1§22/124,mb4.0/28,MS3.1/4,5C-13D,Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DANN	**Dangsing**	**2.77**	**177**	*e*Pn	**Pn**	**21 33 46.3**	**+0.8**
DANN				*e*Sn	**Sb**	**21 34 24.9**	**+0.1**
	955nm,0.7s						
GKN	**Gorkha**	**3.23**	**164**	*e*Pn	**Pn**	**21 33 52.9**	**+1.0**
GKN				*e*Sn	**Sb**	**21 34 38.1**	**-0.1**
	540nm,0.8s						
PTH	**Pithoragarh**	**3.33**	**243**	*e*PKP	**Pn**	**21 33 53.9**	**+0.6**
PTH				*ex*	**Sb**	**21 34 45.2**	**+4.1**
KOLN	**Koldanda**	**3.34**	**180**	*e*Pn	**Pn**	**21 33 54.0**	**+0.6**
KOLN				*e*Sn	**Sb**	**21 34 41.1**	**-0.2**
KKN	**Kakani**	**3.62**	**156**	*e*Pn	**Pn**	**21 33 58.1**	**+0.8**
DMN	**Daman**	**3.74**	**159**	*e*Pn	**Pn**	**21 33 59.7**	**+0.9**
GUN	**Gumba**	**3.76**	**148**	*e*Pn	**Pn**	**21 34 00.0**	**+0.9**
GUN				*e*Sn	**Sb**	**21 34 51.5**	**-1.8**
	819nm,0.9s						
PKIN	**Phulchoki**	**3.86**	**156**	*e*Pn	**Pn**	**21 34 01.3**	**+0.8**
PKI	**Pulchoki**	**3.87**	**156**	*e*Pn	**Pn**	**21 34 01.4**	**+0.7**
JIRN	**Jiri**	**4.12**	**146**	*e*Pn	**Pn**	**21 34 05.1**	**+1.0**
DDI	**Dehra Dun**	**4.86**	**262**	*ex*	**Pn**	**21 34 14.0**	**-0.2**
RAMN	**Ramite**	**4.91**	**147**	*e*Pn	**Pn**	**21 34 14.7**	**-0.3**
TAPN	**Taplejung**	**5.19**	**135**	*e*Pn	**Pn**	**21 34 19.4**	**+0.6**
ODAN	**Odare**	**5.38**	**141**	*e*Pn	**Pn**	**21 34 21.5**	**+0.1**
SDNR	**Sundarnagar**	**5.70**	**275**	*ex*	Px	21 34 50.5	
LSA	**Lhasa**	**6.66**	**100**	Pn	**Pn**	**21 34 41.3**	**+2.3**
LSA				Sn	**Pb**	**21 34 58.3**	**+0.7**
LSA				LR	LR		
	comp=N,400nm,11.0s						
LSA				LR	LR		
	comp=E,280nm,10.0s						
LSA	**Lhasa**	**6.66**	**100**	*e*Pn	**Pn**	**21 34 40.3**	**+1.4**
	comp=E,67nm,0.9s						
LSA				Sn	**Sn**	**21 35 53.2**	**-0.9**
LSA	**Lhasa**	**6.66**	**100**	*e*P	**Pn**	**21 34 40.3**	**+1.3**
LSA						21 35 53.2	
LSA				pmax	pmax		
	comp=Z,67nm,0.9s						
CHCP	**Chirah Chowk**	**9.11**	**289**	P	**Pn**	**21 35 11.9**	**-0.8**
AJM	**Ajmer**	**9.13**	**242**	*e*PKP	**Pn**	**21 35 12.5**	**-0.4**
AJM				*eS*	**Sn**	**21 36 48.0**	**-7.0**
SHL	**Shillong**	**9.14**	**125**	*e*PKP	**Pn**	**21 35 13.0**	**-0.1**
SHL				*eS*	**Sn**	**21 36 50.0**	**-5.4**
BHPL	**Bhopal**	**9.59**	**217**	*e*PKP	**Pn**	**21 35 17.5**	**-1.8**
BHPL				*eS*	**Sn**	**21 36 59.5**	**-6.9**
BHPL				AML	AML	21 37 59.0	
	comp=N,32nm,0.7s						
BHPL				AML	AML	21 37 59.4	
	comp=E,52nm,0.9s						
THW	**Thamme Wali**	**10.23**	**282**	P	**Pn**	**21 35 28.3**	**+0.4**
CEP	**Cherat**	**10.25**	**288**	P	**Pn**	**21 35 27.2**	**-1.0**
KSH	**Kashi**	**10.44**	**325**	*e*P	**Pn**	**21 35 29.3**	**-1.5**
KSH				*ep*P		21 35 36.3	
KSH				*e*PP		21 35 37.8	
KSH				*es*P		21 35 41.0	
KSH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,58nm,3.1s						
KSH				LR	LR		
	comp=N,470nm,9.7s						
KSH				LR	LR		
	comp=E,620nm,10.5s						
KSH				LR	LR		
	comp=Z,180nm,5.2s						
KBL	**Kabul**	**12.72**	**289**	*e*Pn	**Pn**	**21 35 59.5**	**-2.6**
	comp=Z,14nm,0.6s						
KBL				*eSn*	**Sn**	**21 38 22.0**	**-1.0**
KBL	**Kabul**	**12.72**	**289**	*eP*	**Pn**	**21 35 59.5**	**-2.6**
KBL				*e*		21 38 22.0	
KBL				pmax	pmax		
	comp=Z,14nm,0.6s						
AML	**Almayashu**	**13.56**	**327**	*e*Pn	**Pn**	**21 36 14.1**	**+0.7**
	comp=Z,3.7nm,0.6s						
AAK	**Ala-Archa**	**13.60**	**330**	Pn	**Pn**	**21 36 20.4**	**+6.5**
AAK				LR	LR	21 42 03.9	
AAK	**Ala-Archa**	**13.60**	**330**	Pn	**Pn**	**21 36 20.5**	**+6.5**
	comp=Z,0.4nm,0.3s,baz=180,slow=1.0,SNR=2.9						
AAK				LR	LR	21 42 03.9	
	comp=Z,258nm,18.2s,baz=311,slow=40						
AAK	**Ala-Archa**	**13.60**	**330**	*eP*	**Pn**	**21 36 18.1**	**+4.1**
AAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
EKS2	**Erkin-Say**	**13.94**	**328**	*e*Pn	**Pn**	**21 36 18.7**	**+0.1**
	comp=Z,3.6nm,0.8s						
HYB	**Hyderabad**	**14.40**	**200**	*i* P	**Pn**	**21 36 18.0**	**-7.1**
POO	**Poona**	**15.35**	**217**	*e*PKP	**Pn**	**21 36 37.1**	**-0.6**
MK31	**Makanchi Array**	**15.68**	**357**	*e*Pn	**Pn**	**21 36 42.5**	**+0.6**
MKAR	**Makanchi Array**	**15.68**	**357**	Pn	**Pn**	**21 36 41.4**	**-0.5**
MKAR				LR	LR	21 43 45.3	
MKAR	**Makanchi Array**	**15.68**	**357**	Pn	**Pn**	**21 36 41.4**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=180,slow=10,SNR=20						
MKAR				LR	LR	21 43 45.3	
	comp=Z,145nm,18.4s,baz=179,slow=41						
MKAR	**Makanchi Array**	**15.68**	**357**	*ceP*	**Pn**	**21 36 44.7**	**+2.8**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKAR	**Karatay Array**	**15.86**	**323**	*e*Pn	**Pn**	**21 36 41.4**	**-2.8**
	comp=Z,2.4nm,0.6s						
KKAR				*eSn*	**Sn**	**21 39 40.5**	**+1.1**
KKAR	**Karatay Array**	**15.86**	**323**	*eP*	**Pn**	**21 36 41.4**	**-2.8**
KKAR				*e*		21 39 40.5	
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KAD	**Karad**	**16.21**	**214**	*e*PKP	**Pn**	**21 36 48.7**	**-0.2**
LZH	**Lanzhou**	**17.55**	**68**	*eP*	**Pn**	**21 37 06.5**	**+0.8**
LZH				pP	pP	21 37 11.0	-1.9
LZH				sP	sP	21 37 14.0	-1.8
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
KMI	**Kunming**	**17.89**	**105**	P	**Pn**	**21 37 11.0**	**+1.1**
KMI				pP	pP	21 37 17.5	+0.9
KMI				sP	sP	21 37 21.0	+1.5
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI				LR	LR		
	comp=N,190nm,18.0s						
KMI				LR	LR		
	comp=E,83nm,20.2s						
KMI				LR	LR		
	comp=Z,83nm,21.4s						
CHTO	**Chiang Mai**	**18.50**	**128**	*e*P	**Pn**	**21 37 15.2**	**-2.2**
	comp=Z,7.3nm,1.2s						
CHTO				*e*PcP	PcP	21 41 45.9	-0.9
CHTO	**Chiang Mai**	**18.50**	**128**	*eP*	**Pn**	**21 37 15.2**	**-2.2**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**18.75**	**129**	P	**Pn**	**21 37 16.6**	**-3.9**
	comp=Z,0.1nm,0.3s,baz=316,slow=11,SNR=18						
CMAR				LR	LR	21 44 18.8	
	comp=Z,122nm,20.9s,baz=315,slow=37						
KURK	**Kurchatov**	**19.92**	**351**	P	**Pn**	**21 37 31.1**	**-3.1**
	comp=Z,0.2nm,0.3s,baz=165,slow=10,SNR=23						
KURK	**Kurchatov**	**19.92**	**351**	*ceP*	**Pn**	**21 37 34.3**	**0.0**
KURK				pmax	pmax		
	comp=Z,17nm,0.9s						
XAN	**Xi'an**	**21.50**	**76**	P	**P**	**21 37 48.0**	**-1.8**
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
XAN				pmax	pmax		
	comp=Z,12nm,4.9s						
ENH	**Enshi**	**22.25**	**85**	*e*Pn	**P**	**21 37 56.5**	**-1.3**
	comp=Z,7.3nm,0.9s,mb4.1						
ZAA0	**Zalesovo Array**	**22.83**	**2**	*e*Pn	**P**	**21 38 03.9**	**+0.2**
ZALV	**Zalesovo Beam**	**22.83**	**2**	P	**P**	**21 38 03.8**	**+0.1**
	comp=Z,3.4nm,0.7s,mb3.9,baz=192,slow=10,SNR=14						
ZALV				LR	LR	21 47 22.6	
	comp=Z,21nm,21.6s,MS2.5,baz=174,slow=38						
ZALV	**Zalesovo Beam**	**22.83**	**2**	P	**P**	**21 38 03.8**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
ZALV				MLR	MLR		
	comp=Z,21nm,21.6s,MS2.5						
NVS	**Novosibirsk**	**23.71**	**359**	*eP*	**P**	**21 38 14.4**	**+1.8**
BVAR	**Borovoye Array**	**23.91**	**340**	P	**P**	**21 38 14.6**	**+0.1**
	comp=Z,0.3nm,0.4s,mb3.0,baz=189,slow=7.3,SNR=3.9						
BRVK	**Borovoye**	**23.97**	**340**	*ep*	**P**	**21 38 17.8**	**+2.7**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
SONM	**Songino Array**	**24.10**	**40**	P	**P**	**21 38 11.6**	**-4.8**
	comp=Z,5.1nm,0.6s,mb4.1,baz=250,slow=22,SNR=4.4						
SONM	**Songino Array**	**24.10**	**40**	P	**P**	**21 38 11.6**	**-4.7**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZAK	**Zakamensk**	**24.20**	**32**	*eP*	**P**	**21 38 17.4**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.4						
ULN	**Ulaanbaatar**	**24.48**	**40**	*eP*	**P**	**21 38 19.9**	**+0.1**
	comp=Z,4.8nm,0.8s,mb4.0						
ULN	**Ulaanbaatar**	**24.48**	**40**	*eP*	**P**	**21 38 19.9**	**+0.1**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
ABKAR	**Akbulak array**	**25.42**	**322**	*eP*	**P**	**21 38 28.1**	**-0.2**
	comp=Z,2.5nm,0.8s,mb3.8						
ABKAR				*e*PcP	PcP	21 42 00.1	+0.1
AKTK	**Aktyubinsk**	**27.13**	**323**	P	**P**	**21 38 42.6**	**-1.1**
AKTK				LR	LR	21 50 32.3	
AKTO	**Aktyubinsk**	**27.13**	**323**	P	**P**	**21 38 42.6**	**-1.1**
	comp=Z,1.1nm,0.5s,mb3.7,baz=172,slow=17,SNR=4.5						
AKTO				LR	LR	21 50 32.3	
	comp=Z,133nm,18.8s,MS3.5,baz=296,slow=39						
AKTO	**Aktyubinsk**	**27.13**	**323**	P	**P**	**21 38 42.6**	**-1.1**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
AKTO				MLR	MLR		
	comp=Z,133nm,18.8s,MS3.5						
GNI	**Garni**	**32.64**	**297**	*eP*	Px	21 39 42.9	
GNI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KSRS	**Korea Array**	**36.88**	**68**	LR	LR	21 58 40.2	
	comp=Z,24nm,21.4s,MS3.0,baz=266,slow=42						
OBN	**Obninsk**	**40.83**	**320**	*eP*	**P**	**21 40 46.5**	**+4.3**
OBN				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.5						
BRTR	**Keskin Array B**	**41.17**	**296**	P	**P**	**21 40 47.3**	**+2.1**
	comp=Z,0.4nm,0.6s,mb3.2,baz=78,slow=14,SNR=3.4						
AKASG	**Malin Array Be**	**44.40**	**312**	P	**P**	**21 41 11.6**	**+0.3**
	comp=Z,1.8nm,0.6s,mb4.0,baz=86,slow=7.2,SNR=7.0						
AKASG	**Malin Array Be**	**44.40**	**312**	P	**P**	**21 41 11.6**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MJAR	**Matsushiro Arr**	**45.16**	**68**	LR	LR	22 01 33.0	
	comp=Z,46nm,18.1s,MS3.5,baz=195,slow=38						
JOF	**Joensuu**	**45.79**	**330**	*eP*	**P**	**21 41 21.4**	**-0.7**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
JOF	**Joensuu**	**45.79**	**330**	*ep*	**P**	**21 41 21.4**	**-0.7**
	comp=Z,7.3nm,0.6s,mb4.8						
VRI	**Vrincioaia**	**45.95**	**305**	⇓P	**P**	**21 41 28.9**	**+5.3**
VRI	**Vrincioaia**	**45.95**	**305**	⇓*i*P	**P**	**21 41 28.9**	**+5.3**
PLOR	**Plostina**	**46.01**	**305**	⇓P	**P**	**21 41 27.8**	**+3.7**
PLOR	**Plostina**	**46.01**	**305**	⇓*i*P	**P**	**21 41 27.8**	**+3.7**
MLR	**Muntele Rosu**	**46.52**	**305**	P	**P**	**21 41 30.9**	**+2.8**
MLR	**Muntele Rosu**	**46.52**	**305**	P	**P**	**21 41 30.9**	**+2.8**
	comp=Z,3.7nm,0.9s,mb4.3,baz=105,slow=8.1,SNR=6.7						
MLR	**Muntele Rosu**	**46.52**	**305**	⇓P	**P**	**21 41 32.2**	**+4.1**
MLR	**Muntele Rosu**	**46.52**	**305**	⇓*i*P	**P**	**21 41 32.2**	**+4.1**
BURAR	**Bucovina Array**	**46.94**	**308**	⇓P	**P**	**21 41 33.9**	**+2.5**
BURAR	**Bucovina Array**	**46.94**	**308**	⇓*i*P	**P**	**21 41 33.9**	**+2.5**
FINES	**FINESS Array B**	**47.76**	**327**	P	**P**	**21 41 36.8**	**-0.7**
	comp=Z,2.9nm,0.6s,mb4.5,baz=114,slow=8.8,SNR=13						
FINES	**FINESS Array B**	**47.76**	**327**	P	**P**	**21 41 36.8**	**-0.7**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KAF	**Kangasniemi**	**47.80**	**328**	*eP*	**P**	**21 41 34.9**	**-3.0**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
KAF	**Kangasniemi**	**47.80**	**328**	*ep*	**P**	**21 41 34.9**	**-3.0**
	comp=Z,2.6nm,0.8s,mb4.3						
APE	**Apeiranthos**	**47.83**	**294**	⇓P	**P**	**21 41 39.4**	**+0.9**
APE	**Apeiranthos**	**47.83**	**294**	⇓*i*P	**P**	**21 41 39.3**	**+0.8**
KWP	**Kalwaria Pacla**	**48.56**	**311**	⇓P	**P**	**21 41 43.8**	**-0.1**
KWP	**Kalwaria Pacla**	**48.56**	**311**	⇓*i*P	**P**	**21 41 43.8**	**-0.1**
KEV	**Kevo**	**49.73**	**338**	*eP*	**P**	**21 41 56.6**	**+4.1**
KEV	**Kevo**	**49.73**	**338**	*ep*	**P**	**21 41 56.6**	**+4.1**
ARCES	**ARCESS Array B**	**50.15**	**337**	P	**P**	**21 41 55.4**	**-0.3**
	comp=Z,2.2nm,0.8s,mb4.3,baz=94,slow=12,SNR=3.8						
ARCES	**ARCESS Array B**	**50.15**	**337**	P	**P**	**21 41 55.4**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VRAC	**Vranov**	**52.56**	**311**	P	**P**	**21 42 15.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.12**	**259**	P	**Pn**	**22 08 43.0**	**+0.6**
JHJ2				S	**Sn**	**22 08 56.7**	**+0.2**
JHJ	**Hachijo jima 2**	**1.14**	**259**	Pn	**Pn**	**22 08 43.1**	**+0.4**
	809nm,0.3s,baz=73,slow=24,SNR=539						
JHJ				Sn	**Sn**	**22 08 56.0**	**-1.1**
	512nm,0.3s,baz=233,slow=23,SNR=40						
BSO1	**Boso 1**	**1.32**	**355**	P	**Pn**	**22 08 45.3**	**+0.1**
BSO1				eS	**Sn**	**22 09 03.0**	**+1.5**
JMY	**Miyakejima3**	**1.53**	**299**	P	**Pn**	**22 08 47.9**	**-0.1**
BSO3	**Boso 3**	**1.55**	**341**	P	**Pn**	**22 08 48.1**	**-0.2**
BSO3				S	**Sn**	**22 09 07.2**	**0.0**
BSO4	**Boso 4**	**1.77**	**339**	P	**Pn**	**22 08 52.6**	**+1.2**
JKO	**Kozu shima**	**1.86**	**298**	P	**Pn**	**22 08 52.6**	**0.0**
JKO				eS	**Sn**	**22 09 15.2**	**+0.4**
JIM2	**Oshima 3**	**1.97**	**315**	P	**Pn**	**22 08 53.5**	**-0.6**
JIM2				eS	**Sn**	**22 09 16.8**	**-0.7**
JIZS	**Izushimoda**	**2.32**	**307**	P	**Pn**	**22 08 59.1**	**+0.2**
JIZS				eS	**Sn**	**22 09 24.6**	**-1.5**
KTJJ	**Kamata 2**	**2.33**	**313**	P	**Pn**	**22 08 58.6**	**-0.4**
KTJJ				eS	**Sn**	**22 09 24.2**	**-2.2**
JOD2	**Odawara 2**	**2.56**	**319**	P	**Pn**	**22 09 01.9**	**-0.3**
MJAR	**Matsushiro Arr**	**3.99**	**324**	Pn	**Pn**	**22 09 22.7**	**+0.7**
MJAR				Sn	**Sn**	**22 10 07.2**	**-0.3**
MJAR	**Matsushiro Arr**	**3.99**	**324**	Pn	**Pn**	**22 09 22.7**	**+0.8**
	4.4nm,0.3s,baz=147,slow=12,SNR=32						
MJAR				Sn	**Sn**	**22 10 07.2**	**-0.3**
	2.4nm,0.3s,baz=222,slow=29,SNR=7.9						
MAJO	**Matsushiro**	**4.00**	**324**	*e*Pn	**Pn**	**22 09 23.1**	**+1.2**
MAJO				*e*Sn	**Sn**	**22 10 07.8**	**+0.3**
MAT	**Matsushiro**	**4.00**	**324**	P	**Pn**	**22 09 23.2**	**+1.3**
MAT				S	**Sn**	**22 10 06.9**	**-0.6**
MDJ	**Mudanjiang**	**14.38**	**325**	*e*Pn	**Pn**	**22 11 44.3**	**+0.1**
GUMO	**Guam**	**19.95**	**169**	*e*P	**Pn**	**22 12 52.4**	**-1.8**
	7.8nm,0.3s						
TPUB	**Ta-pu**	**20.59**	**246**	P	**P**	**22 12 59.7**	**+0.5**
HIA	**Hailar**	**22.49**	**321**	*e*P	**P**	**22 13 19.9**	**+0.6**
PET	**Petropavlovsk**	**23.35**	**27**	*e*P	**P**	**22 13 27.2**	**-1.2**
	18nm,0.2s,mb5.2						
KKM	**Kota Kinabalu**	**35.67**	**226**	P	**P**	**22 15 18.5**	**+0.3**
CM31	**Chiang Mai Arr**	**40.45**	**259**	*e*P	**P**	**22 15 58.5**	**+0.1**
LSA	**Lhasa**	**42.43**	**279**	*e*P	**P**	**22 16 15.4**	**+0.8**
KSM	**Kuching**	**42.88**	**229**	P	**P**	**22 16 18.9**	**+0.6**
PMG	**Port Moresby**	**42.89**	**171**	*e*P	**P**	**22 16 17.4**	**-0.9**
MKAR	**Makanchi Array**	**45.96**	**305**	P	**P**	**22 16 42.4**	**-0.2**
	0.6nm,0.9s,mb3.5,baz=90,slow=10,SNR=3.5						
KULM	**Kulim**	**46.82**	**242**	*e*P	**P**	**22 16 49.9**	**+0.2**
KURK	**Kurchatov**	**48.09**	**311**	*e*P	**P**	**22 16 58.8**	**-0.3**
	1.0nm,0.7s,mb4.0						
TKM2	**Tokmak 2**	**51.25**	**301**	*e*P	**P**	**22 17 22.4**	**-0.9**
	1.3nm,0.8s,mb3.9						
PMR	**Palmer**	**51.76**	**35**	P	**P**	**22 17 25.8**	**-1.0**
MCK	**McKinley**	**51.86**	**32**	*e*P	**P**	**22 17 25.4**	**-2.2**
AAK	**Ala-Archa**	**52.11**	**301**	P	**P**	**22 17 30.2**	**+0.5**
UCH	**Uchtor**	**52.19**	**300**	*e*P	**P**	**22 17 31.9**	**+1.6**
EKS2	**Erkin-Say**	**52.62**	**301**	*e*P	**P**	**22 17 33.7**	**+0.2**
AML	**Almayashu**	**52.80**	**300**	*e*P	**P**	**22 17 36.1**	**+1.2**
	0.7nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	**53.37**	**188**	P	**P**	**22 17 39.4**	**+0.2**
	2.3nm,0.3s,mb4.5,baz=3.2,slow=7.4,SNR=101						
ASAR	**Alice Springs**	**57.10**	**188**	P	**P**	**22 18 06.5**	**+0.5**
	1.6nm,0.4s,mb4.4,baz=3.0,slow=6.7,SNR=42						

IDC ***25*** *22:24:51.6±1.3,48˚.73N×129˚.07W,h0km,mb3.8/9, mb1 4.1/14,mb1mx4.0/26,mbtmp3.9/14,ML3.7/3,MS4.1/24, Ms1 4.2/24,ms1mx4.1/31,Error ellipse: s-maj=30.2km s-min=15.1km az=59.0*

PGC ***25*** *22:24:51.4±5.0,48˚.71N×129˚.03W,h10km,ML3.5/9, Mw5.0,232km west of Tofino, Bc Vancouver Island Region*

ISCJB ***25*** *22:24:53.3±0.9,48˚.95N±0˚.03×128˚.56W±0˚.04,h1km±7km, mb4.2/19,MS4.1/18, Error ellipse: s-maj=5.5km s-min=3.2km az=141.1*

GCMT ***25*** *22:24:56.8±0.2,48˚.70N×129˚.12W,h23km±1km,MW5.1, Moment Tensor Solution. s43,c52; s92,c144; Moment tensor: Scale 10^16Nm; Mrr=0.84±.20; Mθθ=5.36±.16; Mφφ=6.20±.18; Mrθ=0.46±.28; Mθφ=0.89±.15; Mφr=0.14±.24; Best double couple: M0=5.90000×10^16 NP1:φ=41.00000°, δ=85.00000°,λ=-3.00000° NP2:φ=131.00000°,δ=87.00000°, λ=-175.00000°. Principal axes: T 6.2700, Plg1.0000°, Azm266.0000°; N -0.8000, Plg84.0000°, Azm162.0000°; P -5.4700, Plg6.0000°, Azm356.0000°; Data Used: II IU CN IC G.*

NEIC ***25*** *22:24:56.9±0.3,49˚.02N×128˚.49W,h10km,mb4.3/27, MW5.0(PGC) Error ellipse: s-maj=8.2km s-min=3.2km az=48.0*

ISC 25 22:24:55.5±1.0,**49˚.02N**±0˚.03×**128˚.51W**±0˚.04,**h1**km±7km, **n155**,σ=**1$17**/159,**mb4.2**/19,**MS4.1**/18,**11D**,**Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPBC	**Brooks Peninsu**	**1.23**	**23**	⇑Pn	**Pn**	**22 25 18.6**	**-1.3**
EDB	**Eliza Dome**	**1.25**	**46**	⇓Pn	**Pn**	**22 25 18.9**	**-1.2**
EDB				⇓Sn	**Sn**	**22 25 37.5**	**0.0**
ETB	**Estevan Point**	**1.34**	**74**	⇑Pn	**Pn**	**22 25 20.2**	**-1.2**
ETB				⇓Sn	**Sn**	**22 25 40.4**	**+0.5**
MAYB	**Maynard**	**1.63**	**32**	⇑Pn	**Pn**	**22 25 25.0**	**-0.4**
MAYB				⇑Sn	**Sn**	**22 25 49.1**	**+2.0**
HOLB	**Holberg**	**1.64**	**9**	⇑Pn	**Pn**	**22 25 23.4**	**-2.0**
WOSB	**Woss**	**1.70**	**47**	⇑Pn	**Pn**	**22 25 26.1**	**-0.2**
WOSB				⇑Sn	**Sn**	**22 25 51.0**	**+2.3**
GDR	**Gold River**	**1.79**	**64**	⇓Pn	**Pn**	**22 25 26.6**	**-1.0**
GDR				⇓Sn	**Sn**	**22 25 52.4**	**+1.5**
PHC	**Port Hardy**	**1.83**	**22**	⇓Pn	**Pn**	**22 25 27.2**	**-0.8**
PHC				⇑Sn	**Sn**	**22 25 52.2**	**+0.4**
OZB	**Mount Ozzard**	**1.99**	**91**	⇓Pn	**Pn**	**22 25 27.6**	**-2.7**
OZB				⇓Sn	**Sn**	**22 25 55.6**	**-0.3**
BTB	**Buttle Lake**	**2.01**	**76**	⇓Pn	**Pn**	**22 25 29.9**	**-0.7**
BTB				⇑Sn	**Sn**	**22 25 58.5**	**+2.2**
BMSB	**Bamfield Mari**	**2.23**	**94**	⇓Pn	**Pn**	**22 25 32.4**	**-1.3**
BMSB				⇓Sn	**Sn**	**22 26 01.6**	**-0.3**
BBB	**Bella Bella**	**3.18**	**4**	Pn	**Pn**	**22 25 46.1**	**-0.5**
	165nm,0.3s,baz=20,slow=8.8,SNR=1246						
BBB				Sn	**Sn**	**22 26 24.9**	**-0.1**
	108nm,0.3s,baz=273,slow=22,SNR=13						
BBB				LR	LR	22 27 13.2	
	comp=Z,4μm,18.4s,baz=6.6,slow=40						
PGC	**Sidney**	**3.37**	**94**	*e*Sn	**Sn**	**22 26 30.1**	**+0.4**
NLWA	**Neilton Lookou**	**3.51**	**116**	*e*Pn	**Pn**	**22 25 48.3**	**-2.8**
NLWA				*e*Sn	**Sn**	**22 26 31.4**	**-1.8**
JCW	**Jim Creek**	**4.45**	**98**	*e*Pn	**Pn**	**22 26 02.7**	**-1.3**
JCW				*e*Pg	**Pg**	**22 26 20.5**	**-0.1**
JCW				*e*Sn	**Sn**	**22 26 57.1**	**+0.7**
RPW	**Rockport**	**4.67**	**94**	*e*Pn	**Pn**	**22 26 06.3**	**-0.8**
RPW				*e*Sn	**Sn**	**22 27 03.2**	**+1.4**
LON	**Longmire**	**5.05**	**114**	*e*Pn	**Pn**	**22 26 11.0**	**-1.4**
LON				*e*Sn	**Sn**	**22 27 10.1**	**-1.2**
ETW	**Entiat**	**5.64**	**101**	*e*Pn	**Pn**	**22 26 20.2**	**-0.2**
ETW				*e*Sn	**Sn**	**22 27 24.9**	**-0.9**
HOOD	**Mount Hood Mea**	**5.96**	**126**	*e*Pn	**Pn**	**22 26 25.8**	**+0.9**
HAWA	**Hanford**	**6.61**	**110**	*e*Pn	**Pn**	**22 26 33.5**	**-0.1**
HAWA				Sn	**Sn**	**22 27 47.3**	**-2.3**
OD2	**Odessa Site #2**	**6.75**	**100**	*e*Pn	**Pn**	**22 26 34.4**	**-1.3**
OD2				*e*Sn	**Sn**	**22 27 52.0**	**-1.1**
HUMO	**Hull Mountain**	**7.50**	**147**	*e*Pn	**Pn**	**22 26 45.6**	**-0.3**
LNOR	**Lincton Mounta**	**7.62**	**111**	*e*Pn	**Pn**	**22 26 47.9**	**+0.3**
YBH	**Yreka Blue Hor**	**8.35**	**149**	*e*Pn	**Pn**	**22 26 58.0**	**+0.3**
YBH	**Yreka Blue Hor**	**8.35**	**149**	Pn	**Pn**	**22 26 57.9**	**+0.2**
	0.3nm,0.3s,baz=332,slow=12,SNR=25						
YBH				LR	LR	22 29 51.0	
	comp=Z,2μm,18.6s,baz=329,slow=36						
MOD	**Modoc**	**9.16**	**138**	*e*Pn	**Pn**	**22 27 09.7**	**+1.0**
WDC	**Whiskeytown Da**	**9.45**	**151**	*e*Pn	**Pn**	**22 27 13.7**	**+1.1**
DLBC	**Dease Lake**	**9.48**	**355**	*e*Pn	**Pn**	**22 27 15.8**	**+2.8**
DLBC	**Dease Lake**	**9.48**	**355**	Pn	**Pn**	**22 27 16.6**	**+3.7**
	0.8nm,0.3s,baz=181,slow=11,SNR=15						
DLBC				LR	LR	22 30 47.6	
	comp=Z,2μm,20.0s,baz=107,slow=36						
WVOR	**Wild Horse Val**	**9.54**	**130**	*e*Pn	**Pn**	**22 27 14.3**	**+0.3**
	32nm,1.4s						
EDM	**Edmonton**	**10.41**	**60**	*e*Pn	**Pn**	**22 27 27.1**	**+1.3**
HOPS	**Hopland**	**10.76**	**157**	*e*Pn	**Pn**	**22 27 30.1**	**-0.6**
PAHR	**Pah Rah Range**	**11.37**	**142**	*e*Pn	**Pn**	**22 27 40.8**	**+1.9**
WCN	**Washoe City**	**11.57**	**144**	*e*Pn	**Pn**	**22 27 42.5**	**+0.8**
	24nm,1.4s						
HYT	**Haines Junctio**	**12.89**	**340**	*e*Pn	**Pn**	**22 28 02.3**	**+2.7**
IMW	**Indian Meadow**	**13.15**	**106**	*e*Pn	**Pn**	**22 28 02.5**	**-0.8**
MOOW	**Moose Ponds**	**13.34**	**107**	*e*Pn	**Pn**	**22 28 05.5**	**-0.4**
TPAW	**Teton Pass**	**13.34**	**108**	*e*Pn	**Pn**	**22 28 05.6**	**-0.3**
LOHW	**Long Hollow**	**13.50**	**107**	*e*Pn	**Pn**	**22 28 08.2**	**+0.1**
BGU	**Big Grassy Mou**	**13.61**	**121**	*e*Pn	**Pn**	**22 28 10.5**	**+1.0**
	12nm,1.3s						
RLMT	**Red Lodge**	**13.68**	**99**	*e*Pn	**Pn**	**22 28 11.9**	**+1.4**
SPUT	**South Promonto**	**13.69**	**118**	*e*Pn	**Pn**	**22 28 10.6**	**-0.1**
DUG	**Dugway**	**14.22**	**122**	*e*Pn	**Pn**	**22 28 19.1**	**+1.1**
	24nm,1.4s						
PDAR	**Pinedale Array**	**14.59**	**108**	Pn	**Pn**	**22 28 24.6**	**+1.7**
	baz=320,slow=14,SNR=4.5						
PDAR				LR	LR	22 34 21.7	
	comp=Z,1μm,19.9s,baz=303,slow=38						
JLU	**Jordanelle**	**14.72**	**118**	*e*Pn	**Pn**	**22 28 28.7**	**+4.0**
NLU	**North Lily Min**	**14.80**	**122**	*e*Pn	**Pn**	**22 28 27.4**	**+1.6**
	20nm,1.2s						
DAU	**Daniels Canyon**	**14.96**	**119**	*e*Pn	**Pn**	**22 28 28.9**	**+0.9**
YKA	**Yellowknife Ar**	**15.55**	**25**	Pn	**Pn**	**22 28 35.0**	**-0.6**
YKA				LR	LR	22 35 18.8	
YKA	**Yellowknife Ar**	**15.55**	**25**	Pn	**Pn**	**22 28 35.0**	**-0.6**
	0.3nm,0.3s,baz=216,slow=12,SNR=7.5						
YKA				LR	LR	22 35 18.8	
	comp=Z,67nm,18.1s,baz=90,slow=39						
DIV	**Divide**	**15.58**	**328**	Pn	**Pn**	**22 28 36.9**	**+0.9**
ARUT	**Antelope Range**	**15.65**	**130**	*e*Pn	**Pn**	**22 28 36.9**	**-0.3**
	8.8nm,1.0s						
MSU	**Marysvale**	**15.77**	**126**	*e*Pn	**Pn**	**22 28 38.4**	**-0.2**
SHPR	**Sheep Range**	**15.86**	**137**	*e*Pn	**Pn**	**22 28 40.5**	**+0.6**
CCUT	**Cedar City**	**15.88**	**131**	*e*Pn	**Pn**	**22 28 40.1**	**0.0**
	29nm,1.8s						
DAWY	**Dawson**	**16.19**	**343**	*e*Pn	**Pn**	**22 28 44.9**	**+0.9**
GSC	**Goldstone**	**16.20**	**143**	*e*Pn	**Pn**	**22 28 45.6**	**+1.3**
	11nm,1.3s						
SRU	**San Rafael**	**16.25**	**121**	*e*Pn	**Pn**	**22 28 45.9**	**+1.0**
	10nm,0.9s						
KDAK	**Kodiak Island**	**16.74**	**311**	Pn	**Pn**	**22 28 50.4**	**-0.6**
KDAK				LR	LR	22 33 40.2	
KDAK	**Kodiak Island**	**16.74**	**311**	Pn	**Pn**	**22 28 50.4**	**-0.6**
	0.2nm,0.3s,baz=126,slow=16,SNR=3.8						
KDAK				LR	LR	22 33 40.2	
	comp=Z,512nm,18.5s,baz=121,slow=32						
EGAK	**Eagle**	**17.18**	**341**	*e*Pn	**Pn**	**22 28 57.3**	**+0.8**
	37nm,1.7s						
RSSD	**Black Hills**	**17.50**	**97**	*e*Pn	**Pn**	**22 28 58.5**	**-2.1**
	13nm,0.6s						
PV04	**Paradox Valley**	**17.66**	**120**	*e*Pn	**Pn**	**22 29 03.3**	**+0.6**
PHWY	**Pilot Hill**	**17.95**	**107**	*e*Pn	**Pn**	**22 29 07.3**	**+1.0**
	12nm,0.9s						
RSO	**Redoubt South**	**17.96**	**319**	*e*Pn	**Pn**	**22 29 07.7**	**+1.5**
PV01	**Paradox Valley**	**18.03**	**120**	*e*Pn	**Pn**	**22 29 06.8**	**-0.5**
	3μm,1.3s						
SMCO	**Snowmass**	**18.28**	**115**	*e*P	**Pn**	**22 29 13.1**	**+2.8**
	6.9nm,1.0s						
MCK	**McKinley**	**18.44**	**331**	*e*P	**Pn**	**22 29 13.1**	**+1.0**
	120nm,2.2s						
ILAR	**Eielson Array**	**18.58**	**335**	P	**Pn**	**22 29 13.0**	**-0.8**
	0.1nm,0.3s,baz=153,slow=8.3,SNR=25						
TRF	**Thorofare Moun**	**18.70**	**329**	*e*P	**Pn**	**22 29 15.5**	**+0.3**
	13nm,1.1s						
ISCO	**Idaho Springs**	**18.72**	**111**	*e*Pn	**Pn**	**22 29 16.4**	**+0.8**
	13nm,1.6s						
MVCO	**Mesa Verde**	**18.72**	**122**	*e*Pn	**Pn**	**22 29 16.4**	**+0.8**
	68nm,2.0s						
COLA	**College**	**18.93**	**334**	*e*P	**Pn**	**22 29 17.8**	**-0.3**
	28nm,1.3s						
BPAW	**Bear Paw Mtn.**	**19.36**	**330**	*e*P	**Pn**	**22 29 20.5**	**-2.7**
	15nm,1.1s						
INK	**Inuvik**	**19.50**	**354**	*e*Pn	**Pn**	**22 29 25.0**	**+0.1**
	21nm,1.3s						
INK	**Inuvik**	**19.50**	**354**	P	**Pn**	**22 29 23.4**	**-1.5**
	0.4nm,0.3s,baz=181,slow=6.4,SNR=4.4						
INK				LR	LR	22 36 28.5	
	comp=Z,920nm,21.6s,baz=100,slow=35						
SDCO	**Great Sand Dun**	**20.09**	**116**	*e*P	**P**	**22 29 31.0**	**+0.7**
	65nm,3.0s						
TTA	**Tatalina**	**20.53**	**323**	*e*P	**P**	**22 29 33.7**	**-1.2**
ULM	**Lac du Bonnet**	**21.09**	**74**	P	**P**	**22 29 40.4**	**-0.7**
	7.4nm,0.7s,mb4.1,baz=290,slow=6.9,SNR=5.2						
ULM				LR	LR	22 38 11.6	
	comp=Z,2μm,19.0s,MS4.4,baz=65,slow=37						
COLD	**Coldfoot**	**21.33**	**337**	*e*P	**P**	**22 29 45.7**	**+2.1**
	21nm,1.4s,mb4.3						
ANMO	**Albuquerque**	**21.49**	**123**	*e*P	**P**	**22 29 46.0**	**+0.5**
	25nm,1.8s,mb4.2						
ANMO	**Albuquerque**	**21.49**	**123**	P	**P**	**22 29 45.7**	**+0.1**
	2.5nm,0.8s,mb3.6,baz=335,slow=9.4,SNR=7.9						
ANMO				LR	LR	22 38 33.9	
	comp=Z,194nm,19.1s,MS3.5,baz=140,slow=38						
AGMN	**Agassiz Nation**	**21.49**	**79**	*e*P	**P**	**22 29 46.0**	**+0.5**
	19nm,0.9s,mb4.4						
LAZ	**Ladron**	**21.53**	**125**	*e*P	**P**	**22 29 45.8**	**-0.2**
	20nm,1.9s,mb4.2						
LPM	**Los Pinos Moun**	**21.87**	**124**	*e*P	**P**	**22 29 49.5**	**-0.2**
ECSD	**EROS Data Cent**	**22.53**	**91**	*e*P	**P**	**22 29 56.1**	**-0.5**
	66nm,2.3s,mb4.8						
EYMN	**Ely**	**24.41**	**78**	*e*P	**P**	**22 30 16.2**	**+1.0**
	15nm,0.8s,mb4.6						
WMOK	**Wichita Mounta**	**26.14**	**112**	*e*P	**P**	**22 30 31.6**	**+0.6**
	11nm,1.5s,mb4.3						
JFWS	**Jewell Farm**	**27.07**	**88**	*e*P	**P**	**22 30 39.1**	**-0.3**
	9.9nm,0.8s,mb4.6						
TXAR	**Lajitas Array**	**27.32**	**127**	P	**P**	**22 30 40.6**	**-1.0**
	0.4nm,1.0s,mb3.1,baz=321,slow=8.4,SNR=2.9						
TXAR				LR	LR	22 41 38.6	
	comp=Z,324nm,18.9s,MS3.9,baz=65,slow=37						
CCM	**Cathedral Cave**	**28.88**	**98**	*e*P	**P**	**22 30 52.4**	**-3.2**
	50nm,1.9s,mb5.0						
RES	**Resolute Bay**	**29.38**	**17**	LR	LR	22 41 40.4	
	comp=Z,182nm,19.6s,MS3.7,baz=255,slow=34						
TKL	**Tuckaleechee C**	**35.15**	**95**	LR	LR	22 46 52.4	
	comp=Z,796nm,18.8s,MS4.5,baz=281,slow=37						
SCHQ	**Schefferville**	**37.38**	**57**	P	**P**	**22 32 10.6**	**+1.1**
SCHQ				LR	LR	22 48 07.1	
SCHQ	**Schefferville**	**37.38**	**57**	P	**P**	**22 32 10.6**	**+1.2**
	3.9nm,0.9s,mb4.1,baz=285,slow=12,SNR=2.3						
SCHQ				LR	LR	22 48 07.1	
	comp=Z,1μm,18.4s,MS4.8,baz=298,slow=37						
PETK	**Petropavlovsk-**	**44.65**	**305**	LR	LR	22 48 38.1	
	comp=Z,151nm,21.9s,MS3.9,baz=76,slow=32						
TAOE	**Nuku Hiva Isla**	**58.53**	**194**	*e*LR	LR	22 51 55.3	
	460nm,24.4s						
ROSC	**El Rosal**	**63.44**	**115**	LR	LR	23 06 05.1	
	comp=Z,54nm,18.6s,MS3.8,baz=198,slow=39						
NOA	**NORSAR Array B**	**65.60**	**20**	P	**P**	**22 35 39.6**	**-0.9**
	1.3nm,0.8s,mb4.2,baz=331,slow=6.5,SNR=2.6						
NOA				LR	LR	23 02 41.1	
	comp=Z,132nm,19.7s,MS4.1,baz=325,slow=34						
PMOR	**Pomariorio Ree**	**66.02**	**201**	*e*T		23 46 53.0	
	7.2nm,0.2s						
FINES	**FINESS Array B**	**68.01**	**13**	LR	LR	23 06 37.4	
	comp=Z,258nm,18.4s,MS4.5,baz=175,slow=37						
PPT	**Papeete**	**68.89**	**202**	*e*LR	LR	22 56 42.2	
	209nm,25.0s						
RKT	**Rikitea**	**72.04**	**186**	*e*LR	LR	22 58 11.3	
	339nm,28.5s						
RKT				*e*T		23 54 31.4	
	2.2nm,0.3s						
ZALV	**Zalesovo Beam**	**73.62**	**340**	P	**P**	**22 36 26.3**	**-3.8**
	0.9nm,0.7s,mb3.9,baz=26,slow=5.6,SNR=4.7						
ZALV				LR	LR	23 14 06.3	
	comp=Z,90nm,18.4s,MS4.1,baz=257,slow=40						
ARU	**Arti**	**74.75**	**356**	*e*P	**P**	**22 36 40.0**	**+3.3**
OBN	**Obninsk**	**75.48**	**9**	Pn	**P**	**22 36 40.5**	**-0.4**
GUMO	**Guam**	**77.67**	**276**	LR	LR	23 07 26.5	
	comp=Z,90nm,18.3s,MS4.1,baz=82,slow=33						
AKASG	**Malin Array Be**	**78.84**	**14**	LR	LR	23 12 30.6	
	comp=Z,167nm,19.0s,MS4.4,baz=355,slow=36						
ESDC	**Sonseca Array**	**79.02**	**40**	P	**P**	**22 36 59.1**	**-1.9**
	0.1nm,0.4s,mb3.2,baz=320,slow=3.9,SNR=3.3						
ESDC				LR	LR	23 10 04.3	
	comp=Z,142nm,18.4s,MS4.3,baz=170,slow=34						
AKTO	**Aktyubinsk**	**80.77**	**356**	LR	LR	23 14 13.1	
	comp=Z,96nm,20.1s,MS4.2,baz=4.5,slow=36						
MKAR	**Makanchi Array**	**80.88**	**339**	P	**P**	**22 37 08.1**	**-2.9**
	1.2nm,0.8s,mb4.0,baz=18,slow=4.3,SNR=5.6						
ABKAR	**Akbulak array**	**81.83**	**354**	*e*P	**P**	**22 37 14.3**	**-1.6**
	1.6nm,0.9s,mb4.2						
LPAZ	**La Paz**	**84.11**	**123**	P	**P**	**22 37 24.6**	**-3.5**
	0.4nm,0.5s,mb3.9,baz=354,slow=6.3,SNR=2.9						
LPAZ				LR	LR	23 21 52.6	
	comp=Z,51nm,18.6s,MS3.9,baz=223,slow=41						
TKM2	**Tokmak 2**	**86.02**	**342**	*e*P	**P**	**22 37 31.5**	**-6.0**
	5.0nm,0.8s,mb4.7						
BRTR	**Keskin Array B**	**90.23**	**14**	LR	LR	23 21 08.6	
	comp=Z,57nm,18.8s,MS4.0,baz=145,slow=37						
CPUP	**Villa Florida**	**98.14**	**121**	LR	LR	23 23 28.2	
	comp=Z,74nm,19.9s,MS4.2,baz=329,slow=36						

IDC 25 22:28:26.6±2.1,**6˚.16S×152˚.03E,h0km,mb3.6/4, mb1 3.9/4,mb1mx3.6/16,mbtmp3.6/4,MS3.7/2,Ms1 3.7/2, ms1mx2.8/21,Error ellipse: s-maj=127.7km s-min=26.5km az=130.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**8.49**	**113**	LR	LR	22 33 14.9	
	comp=Z,102nm,18.4s,baz=288,slow=34						
WRA	**Warramunga Arr**	**21.98**	**230**	P	P	22 33 22.5	+0.1
	0.7nm,0.8s,baz=54,slow=10,SNR=4.3						
ASAR	**Alice Springs**	**24.63**	**223**	P	P	22 33 48.6	-0.4
	0.8nm,0.6s,baz=57,slow=8.7,SNR=9.0						
FITZ	**Fitzroy Crossi**	**28.35**	**243**	P	P	22 34 22.8	+0.3
	1.6nm,0.8s,baz=59,slow=11,SNR=4.2						
SONM	**Songino Array**	**67.07**	**328**	LR	LR	23 07 18.4	
	comp=Z,256nm,21.6s,baz=58,slow=35						
ILAR	**Eielson Array**	**83.70**	**22**	P	P	22 40 56.9	-0.1
	0.3nm,0.7s,baz=232,slow=5.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	**149.96**	**286**	PKPbc	PKPbc	22 48 20.1	0.0
	0.3nm,0.7s,baz=51,slow=4.4,SNR=3.1						

IDC ***25*** *22:28:56.1±0.7,0˚.36N×98˚.54E,h0km,mb4.3/11, mb1 4.3/13,mb1mx4.1/24,mbtmp4.3/13,ML4.0/2,MS3.9/10, Ms1 3.9/10,ms1mx3.5/29, Error ellipse: s-maj=26.1km s-min=12.1km az=71.0*

ISCJB ***25*** *22:29:00.4±0.7,0˚.41N±0˚.03×98˚.38E±0˚.05,h39km±6km, mb4.4/27,MS4.0/11,Error ellipse: s-maj=8.4km s-min=4.5km az=156.7*

BJI ***25*** *22:29:01.5,0˚.66N×98˚.83E,h22km,mB5.0/8,mb4.7/14, Ms4.5/8,Ms7 4.2/8*

DJA ***25*** *22:29:01,0˚.36N×98˚.33E,h38km,MLv5.1/16*

NEIC ***25*** *22:29:02.1±2.2,0˚.37N×98˚.63E,h44km±17km,mb4.4/11, Error ellipse: s-maj=24.3km s-min=8.5km az=56.0*

ISC 25 22:29:02.1±0.6,**0˚.39N**±0˚.03×**98˚.39E**±0˚.05,**h38**km±6km, **h16**km±8.6km:**pP-P**,**n72**,σ1$**13**/75,**mb4.4**/27,**MS4.0**/11, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.25**	**71**	P	**Pn**	**22 29 22.4**	**-0.7**
MNSI				S	**Sn**	**22 29 40.3**	**+1.6**
SISI	**Saibi**	**1.84**	**158**	P	**Pn**	**22 29 31.0**	**-0.2**
SISI				S	**Sn**	**22 29 52.5**	**-0.8**
PPI	**Padang Panjang**	**2.17**	**113**	P	**Pn**	**22 29 35.5**	**-0.3**
PPI				S	**Sn**	**22 30 03.3**	**+1.8**
PDSI	**Padang**	**2.44**	**122**	P	**Pn**	**22 29 37.8**	**-1.6**
PDSI				S	**Sn**	**22 30 08.7**	**+0.6**
PSI	**Prapat**	**2.45**	**12**	Pn	**Pn**	**22 29 37.5**	**-2.1**
	11nm,0.3s,baz=260,slow=6.2,SNR=48						
PSI				Lg		22 30 09.4	
	79nm,0.3s,baz=133,slow=6.3,SNR=8.8						
PSI				LR	LR	22 30 23.7	
	comp=Z,565nm,19.6s,baz=1.1,slow

KSH				*es*P	sP			22 37 21.5	+0.2
KSH				*e*PP	PP			22 38 53.0	+4.1
KSH				*e*ScP	ScP			22 42 40.0	-0.1
KSH				*e*PcS	PcS			22 42 44.0	0.0
KSH				*es*	**S**			**22 43 38.8**	**+3.5**
KSH				*es*S	sS			22 43 56.3	+2.8
KSH				pmax	pmax				
	comp=Z,24nm,2.0s,mb4.6								
KSH				LR	LR				
	comp=N,110nm,10.6s								
KSH				LR	LR				
	comp=E,150nm,17.2s								
KSH				LR	LR				
	comp=Z,120nm,5.5s								
KSRS	**Korea Array**	**45.85**	**33**	P	**P**			**22 37 19.9**	**-0.7**
	comp=Z,5.2nm,0.8s,mb4.5,baz=223,slow=8.4,SNR=17								
AML	**Almayashu**	**47.13**	**335**	*e*P	**P**			**22 37 31.9**	**+1.3**
	comp=Z,9.1nm,1.1s,mb4.6								
AAK	**Ala-Archa**	**47.22**	**336**	LR	LR			23 00 09.0	
	comp=Z,129nm,18.8s,MS3.9,baz=159,slow=40								
EKS2	**Erkin-Say**	**47.53**	**335**	*e*P	**P**			**22 37 34.5**	**+0.9**
	comp=Z,2.2nm,0.7s,mb4.3								
ULN	**Ulaanbaatar**	**47.88**	**8**	*e*P	**P**			**22 37 36.6**	**+0.3**
	comp=Z,3.3nm,0.8s,mb4.4								
ULN				*e*PcP	PcP			22 39 04.8	+0.4
MK31	**Makanchi Array**	**48.32**	**345**	*e*P	**P**			**22 37 40.0**	**+0.4**
MKAR	**Makanchi Array**	**48.32**	**345**	P	**P**			**22 37 40.5**	**+0.9**
	comp=Z,8.5nm,0.5s,mb5.0,baz=160,slow=8.6,SNR=54								
KKAR	**Karatay Array**	**49.31**	**333**	*e*P	**P**			**22 37 46.4**	**-0.9**
	comp=Z,1.2nm,0.6s,mb4.1								
STKA	**Stephens Creek**	**51.93**	**132**	P	**P**			**22 38 05.5**	**-1.9**
	comp=Z,2.0nm,0.7s,mb4.2,baz=317,slow=16,SNR=5.1								
STKA				LR	LR			22 59 25.6	
	comp=Z,170nm,20.8s,MS4.1,baz=207,slow=35								
KURK	**Kurchatov**	**52.88**	**344**	*e*P	**P**			**22 38 16.3**	**+2.3**
	comp=Z,9.1nm,1.0s,mb4.7								
ZAA0	**Zalesovo Array**	**54.55**	**350**	*e*P	**P**			**22 38 26.2**	**+0.1**
ZALV	**Zalesovo Beam**	**54.55**	**350**	P	**P**			**22 38 26.1**	**0.0**
	comp=Z,3.6nm,0.3s,mb4.8,baz=165,slow=6.2,SNR=22								
ABKAR	**Akbulak array**	**58.79**	**332**	*e*P	**P**			**22 38 57.6**	**+1.2**
	comp=Z,1.4nm,0.5s,mb4.2								
BRTR	**Keskin Array B**	**70.53**	**312**	P	**P**			**22 40 12.8**	**-0.5**
	comp=Z,0.8nm,0.6s,mb3.8,baz=124,slow=7.9,SNR=5.6								
PETK	**Petropavlovsk-**	**71.75**	**33**	P	**P**			**22 40 17.5**	**-2.9**
	comp=Z,2.0nm,0.7s,mb4.2,baz=191,slow=3.8,SNR=3.0								
RPZ	**Rata Peaks**	**77.79**	**135**	P	**P**			**22 40 56.1**	**+0.6**
	comp=Z,6.2nm,0.6s,mb4.7,baz=225,slow=7.1,SNR=3.6								
RPZ				LR	LR			23 14 54.8	
	comp=Z,189nm,22.0s,MS4.4,baz=13,slow=36								
BUR08	**Bucovina Ar. S**	**78.43**	**319**	*e*P	**P**			**22 40 59.4**	**+0.4**
JOF	**Joensuu**	**79.38**	**335**	*e*p	**P**			**22 41 03.4**	**-0.4**
FINES	**FINESS Array B**	**81.26**	**332**	P	**P**			**22 41 14.7**	**+0.7**
	comp=Z,2.7nm,0.8s,mb4.2,baz=98,slow=5.0,SNR=13								
KAF	**Kangasniemi**	**81.34**	**333**	*e*p	**P**			**22 41 15.5**	**+1.1**
	comp=Z,2.4nm,0.6s,mb4.3								
ARCES	**ARCESS Array B**	**83.69**	**340**	P	**P**			**22 41 26.6**	**+0.1**
	comp=Z,2.1nm,0.8s,mb4.3,baz=90,slow=6.1,SNR=6.1								
NOA	**NORSAR Array B**	**88.29**	**331**	LR	LR			23 28 32.8	
	comp=Z,26nm,18.1s,MS3.7,baz=0,slow=40								
TORD	**Torodi Ar. Bea**	**96.44**	**283**	LR	LR			23 22 42.0	
	comp=Z,194nm,18.2s,MS4.6,baz=310,slow=33								
TXAR	**Lajitas Array**	**143.70**	**34**	PKP	PKPdf			22 48 31.6	-2.2
	comp=Z,0.3nm,0.5s,baz=183,slow=0.3,SNR=7.6								
CPUP	**Villa Florida**	**145.19**	**220**	PKPbc	PKPbc			22 48 35.6	-0.4
	comp=Z,0.3nm,0.3s,baz=101,slow=6.5,SNR=2.9								

IDC ***25*** *22:29:01.2±1.1, 10°.03S×160°.70E, h0km, mb4.0/8, mb1 4.2/9, mb1mx4.1/19, mbtmp4.0/9, ML4.1/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/25, Error ellipse: s-maj=27.9km s-min=20.7km az=88.0*

NEIC ***25*** *22:29:06.9±0.5, 10°.00S×160°.58E, h35km, mb4.3/6, Error ellipse: s-maj=11.9km s-min=7.8km az=120.0*

ISC 25 22:29:05.2±2.2, 9°.99S±0°.07×160°.61E±0°.10, h22km±13km, n28, σ0°65/27, mb4.1/12, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.85**	**310**	*e*P	**Pb**	**22 29 21.3**	**0.0**
HNR				*es*	**Sb**	**22 29 32.1**	**-0.3**
HNR	**Honiara**	**0.85**	**310**	Pn	**Pn**	**22 29 22.0**	**+0.1**
	134nm,0.3s,baz=209,slow=2.8,SNR=16						
HNR				Sn	**Sn**	**22 29 33.7**	**0.0**
	994nm,0.3s,baz=144,slow=19,SNR=46						
PMG	**Port Moresby**	**13.27**	**271**	Pn	**Pn**	**22 32 13.5**	**+1.1**
CTA	**Charters Tower**	**17.10**	**232**	P	**Pn**	**22 33 02.9**	**0.0**
	0.4nm,0.3s,baz=69,slow=15,SNR=6.5						
CTA				LR	LR	22 39 00.3	
	comp=Z,133nm,18.7s,baz=227,slow=35						
CTAO	**Charters Tower**	**17.10**	**232**	*e*Pn	**Pn**	**22 33 02.9**	**-0.1**
	8.5nm,0.6s						
WRA	**Warramunga Arr**	**27.20**	**246**	P	**P**	**22 34 46.9**	**-0.6**
	0.9nm,0.3s,mb3.7,baz=74,slow=9.9,SNR=10.0						
AFI	**Afiamalu**	**27.29**	**101**	LR	LR	22 43 04.2	
	comp=Z,91nm,20.1s,baz=56,slow=31						
STKA	**Stephens Creek**	**28.00**	**216**	*e*P	**P**	**22 34 53.7**	**-0.9**
	0.7nm,0.9s,mb3.3						
STKA	**Stephens Creek**	**28.00**	**216**	P	**P**	**22 34 54.3**	**-0.3**
	1.9nm,0.6s,mb3.9,baz=354,slow=9.3,SNR=2.9						
ASAR	**Alice Springs**	**28.88**	**239**	P	**P**	**22 35 03.3**	**+0.8**
	0.3nm,0.3s,mb3.5,baz=60,slow=10,SNR=4.6						
MAJO	**Matsushiro**	**50.86**	**337**	P	**P**	**22 38 03.8**	**-0.5**
KSRS	**Korea Array**	**56.26**	**329**	P	**P**	**22 38 44.5**	**+0.5**
	1.7nm,0.8s,mb4.1,baz=145,slow=6.3,SNR=4.5						
BJT	**Baijiatuan**	**64.55**	**323**	P	**P**	**22 39 40.0**	**-0.6**
CASY	**Casey**	**65.58**	**200**	*e*P	**P**	**22 39 46.4**	**-0.5**
	3.2nm,0.8s,mb4.4						
CMAR	**Chiang Mai Arr**	**67.07**	**295**	P	**P**	**22 39 57.4**	**+0.1**
	1.5nm,0.6s,mb4.2,baz=122,slow=5.1,SNR=8.5						
ULN	**Ulaanbaatar**	**74.54**	**326**	*e*P	**P**	**22 40 41.2**	**-1.0**
	1.9nm,1.0s,mb4.0						
LSA	**Lhasa**	**77.54**	**303**	P	**P**	**22 41 01.5**	**+1.8**
TLY	**Talaya**	**78.49**	**328**	*e*P	**P**	**22 41 03.8**	**-0.7**
QSPA	**South Pole Qui**	**80.01**	**180**	*e*P	**P**	**22 41 12.3**	**0.0**
QSPA	**South Pole Qui**	**80.01**	**180**	P	**P**	**22 41 12.3**	**0.0**
	1.4nm,0.7s,mb4.0,baz=264,slow=1.1,SNR=8.8						
PMR	**Palmer**	**81.39**	**22**	*e*P	**P**	**22 41 20.6**	**+0.7**
PALK	**Pallekele**	**81.39**	**279**	*e*P	**P**	**22 41 20.5**	**-0.5**
MCK	**McKinley**	**82.84**	**20**	*e*P	**P**	**22 41 27.3**	**-0.2**
	11nm,1.0s,mb4.8						
ILAR	**Eielson Array**	**84.19**	**20**	P	**P**	**22 41 34.3**	**-0.1**
	1.4nm,0.6s,mb4.3,baz=250,slow=5.0,SNR=16						
EGAK	**Eagle**	**86.19**	**21**	P	**P**	**22 41 45.3**	**+0.9**
	3.6nm,0.9s,mb4.6						
MKAR	**Makanchi Array**	**89.32**	**318**	P	**P**	**22 41 59.6**	**-0.3**
	0.4nm,0.7s,mb3.8,baz=74,slow=6.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	**159.11**	**281**	PKPab	PKPab	22 49 38.7	-0.8
	0.9nm,1.0s,baz=72,slow=3.4,SNR=4.1						
DBIC	**Dimbokro**	**165.24**	**258**	PKPab	PKPab	22 50 05.6	-0.8
	3.4nm,1.0s,baz=151,slow=5.7,SNR=3.2						

NEIC ***25*** *22:43:56.7, 32°.23S×71°.85W, h11km, ML3.0(GUC), After GUC.*

GUC 25 22:43:56.7±0.8, 32°.23S×71°.85W, h11km±6km, MD3.6, ML3.0,7C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.45**	**41**	↑*i*P	Pg	22 44 04.6	-1.0
CHNG				*i* S	Sg	22 44 12.3	+0.6
ROCH	**El Roble**	**1.02**	**137**	*i* S	Sg	22 44 29.8	0.0
JACH	**Jahuel**	**1.15**	**113**	↑*i*P	Pb	22 44 17.6	-1.1
JACH				*i* S	Sb	22 44 33.1	-0.5
JACH	**Jahuel**	**1.15**	**113**	↑*i*P	Pb	22 44 17.6	-1.1
JACH				*i* S	Sb	22 44 33.1	-0.5
CMCH	**Combarbala**	**1.28**	**35**	*e*P	Pn	22 44 19.0	-1.4
CMCH				*es*	Sb	22 44 36.7	-0.5
CMCH	**Combarbala**	**1.28**	**35**	*e*P	Pn	22 44 19.0	-1.4
CMCH				*es*	Sb	22 44 36.7	-0.5
CMCH				AML	AML	22 44 45.1	
	comp=E,745nm,0.6s						
PEL	**Peldehue**	**1.34**	**133**	↑*i*P	Pn	22 44 20.4	-1.0
PEL				*i* S	Sb	22 44 38.6	-0.4
PEL				AML	AML	22 44 40.1	
	comp=E,831nm,0.4s						
CLCH	**Cerro Calan**	**1.61**	**137**	*e*P	Pn	22 44 24.6	-0.4
CLCH				*i* S	Sn	22 44 45.8	+0.1
CLCH				AML	AML	22 44 51.7	
	comp=N,176nm,0.5s						
TACH	**Talagante**	**1.61**	**152**	↑*i*P	Pn	22 44 24.6	-0.5
TACH				*i* S	Sn	22 44 45.8	-0.2
TACH	**Talagante**	**1.61**	**152**	↑*i*P	Pn	22 44 24.6	-0.5
TACH				*i* S	Sn	22 44 45.8	-0.2
FCH	**Farellones**	**1.71**	**130**	↑*i*P	Pn	22 44 28.3	+1.8
FCH				*i* S	Sn	22 44 51.5	+3.2
FCH				AML	AML	22 44 53.5	
	comp=E,190nm,0.5s						
LNV	**Longovilo**	**1.76**	**168**	*e*P	Pn	22 44 27.1	-0.1
LNV				*i* S	Sn	22 44 50.0	+0.4
LNV	**Longovilo**	**1.76**	**168**	*e*P	Pn	22 44 27.1	-0.1
LNV				*i* S	Sn	22 44 50.0	+0.4
PCH	**Pirque**	**1.79**	**141**	*e*P	Pn	22 44 27.6	+0.1
PCH	**Pirque**	**1.79**	**141**	*e*P	Pn	22 44 27.6	+0.1
LMEL	**Las Melosas**	**2.13**	**140**	*e*P	Pn	22 44 32.4	+0.2
LMEL				*i* S	Sn	22 44 59.5	+0.9
LMEL	**Las Melosas**	**2.13**	**140**	*e*P	Pn	22 44 59.5	+0.9
LMEL				*i* S	Sn	22 44 59.5	+0.9
CACH	**El Canelo**	**2.15**	**151**	*e*P	Pn	22 44 34.6	+2.1
CACH	**El Canelo**	**2.15**	**151**	*e*P	Pn	22 44 34.6	+2.1

ISCJB ***25*** *22:46:45.5±0.7, 30°.66N±0°.09×83°.31E±0°.1, h10km, mb3.6/2, Error ellipse: s-maj=17.9km s-min=9.6km az=143.1*

IDC ***25*** *22:46:46.8±4.6, 30°.53N×83°.09E, h0km, mb3.9/2, mb1 3.7/4, mb1mx3.4/27, mbtmp3.5/4, ML2.5/1, Error ellipse: s-maj=184.9km s-min=27.4km az=65.0*

NEIC ***25*** *22:46:47.1±0.6, 30°.64N×83°.04E, h10km, mb3.8/2, Error ellipse: s-maj=14.4km s-min=7.8km az=55.0*

ISC 25 22:46:47.2±0.7, 30°.62N±0°.09×83°.03E±0°.1, h10km, n12, σ0°85/12, mb3.6/2, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**7.08**	**95**	*e*Pn	**Pn**	**22 48 31.6**	**+0.7**
	9.7nm,1.0s						
AAK	**Ala-Archa**	**13.80**	**333**	*e*Pn	**Pn**	**22 50 02.9**	**0.0**
EKS2	**Erkin-Say**	**14.12**	**331**	*e*Pn	**Pn**	**22 50 07.7**	**+0.5**
	1.3nm,0.8s						
MKAR	**Makanchi Array**	**16.16**	**358**	Pn	**Pn**	**22 50 33.4**	**-0.9**
	0.0nm,0.3s,baz=180,slow=12,SNR=3.3						
CMAR	**Chiang Mai Arr**	**18.84**	**126**	P	**Pn**	**22 51 06.8**	**-1.1**
	baz=301,slow=11,SNR=3.0						
KURK	**Kurchatov**	**20.34**	**352**	*e*P	**P**	**22 51 23.8**	**+0.3**
	1.7nm,0.4s						
KURK	**Kurchatov**	**20.34**	**352**	P	**P**	**22 51 24.9**	**+1.4**
	2.4nm,0.2s,baz=174,slow=10.0,SNR=3.3						
PALK	**Pallekele**	**23.33**	**186**	P	**P**	**22 51 55.5**	**-0.3**
BRVK	**Borovoye**	**24.28**	**341**	*e*P	**P**	**22 52 02.6**	**-1.8**
	1.1nm,0.4s,mb3.6						
ULN	**Ulaanbaatar**	**25.19**	**40**	P	**P**	**22 52 13.0**	**+0.3**
MALT	**Malatya**	**37.28**	**294**	P	**P**	**22 54 00.0**	**+0.7**
WRA	**Warramunga Arr**	**70.41**	**129**	P	**P**	**22 58 02.7**	**+0.9**
	0.6nm,0.8s,mb3.5,baz=322,slow=6.5,SNR=2.5						

ISCJB ***25*** *22:52:20.3±0.5, 30°.78N±0°.06×83°.25E±0°.09, h10km, mb3.7/10, Error ellipse: s-maj=11.8km s-min=8.2km az=149.1*

IDC ***25*** *22:52:20.2±1.0, 30°.64N×83°.13E, h0km, mb3.8/10, mb1 3.9/13, mb1mx3.7/29, mbtmp3.8/13, ML3.4/3, Error ellipse: s-maj=39.1km s-min=16.8km az=57.0*

NEIC ***25*** *22:52:21.9±0.4, 30°.74N×83°.22E, h10km, mb3.6/3, Error ellipse: s-maj=12.8km s-min=6.2km az=64.0*

ISC 25 22:52:22.1±0.5, 30°.78N±0°.06×83°.32E±0°.09, h10km, n29, σ0°72/30, mb3.7/10, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDI	**Dehra Dun**	**4.56**	**266**	*ex*	**Pg**	**22 53 50.5**	**+1.0**
KSH	**Kashi**	**10.58**	**327**	Pn	**Pn**	**22 54 53.5**	**-0.2**
KSH				Sn	**Sn**	**22 56 48.5**	**-3.8**
KSH				smax			
	comp=N,7.0nm,0.9s						
KSH				smax			
	comp=E,7.0nm,0.8s						
UCH	**Uchtor**	**13.43**	**331**	*e*Pn	**Pn**	**22 55 32.7**	**+0.1**
AAK	**Ala-Archa**	**13.77**	**332**	*e*Pn	**Pn**	**22 55 37.4**	**0.0**
	comp=E,5.4nm,1.1s						
AAK	**Ala-Archa**	**13.77**	**332**	Pn	**Pn**	**22 55 37.8**	**+0.4**
	comp=E,0.3nm,0.3s,baz=170,slow=6.1,SNR=2.0						
EKS2	**Erkin-Say**	**14.10**	**330**	*e*Pn	**Pn**	**22 55 42.3**	**+0.5**
	comp=E,4.1nm,1.1s						
KKAR	**Karatay Array**	**15.98**	**324**	*e*Pn	**Pn**	**22 56 06.4**	**-0.4**
	comp=E,1.2nm,0.6s						
MK31	**Makanchi Array**	**16.01**	**357**	*e*Pn	**Pn**	**22 56 07.2**	**-0.1**
MKAR	**Makanchi Array**	**16.01**	**357**	Pn	**Pn**	**22 56 06.5**	**-0.8**
MKAR	**Makanchi Array**	**16.01**	**357**	Pn	**Pn**	**22 56 06.5**	**-0.8**
	comp=E,0.1nm,0.3s,baz=179,slow=11,SNR=2.5						
CMAR	**Chiang Mai Arr**	**18.75**	**127**	P	**Pn**	**22 56 42.7**	**+1.1**
	comp=E,0.3nm,0.3s,baz=306,slow=11,SNR=6.5						
KURK	**Kurchatov**	**20.22**	**351**	*e*P	**P**	**22 56 57.0**	**0.0**
	comp=E,5.4nm,1.0s						
KURK	**Kurchatov**	**20.22**	**351**	P	**P**	**22 56 56.3**	**-0.8**
	comp=E,2.2nm,0.9s,baz=168,slow=10,SNR=9.1						
ZALV	**Zalesovo Beam**	**23.18**	**2**	P	**P**	**22 57 29.9**	**+1.1**
	comp=E,1.0nm,0.6s,mb3.5,baz=188,slow=9.0,SNR=5.9						
PALK	**Pallekele**	**23.52**	**187**	*e*P	**P**	**22 57 31.5**	**-1.1**
BVAR	**Borovoye Array**	**24.14**	**341**	P	**P**	**22 57 38.7**	**+0.6**
	comp=E,0.6nm,0.4s,mb3.4,baz=148,slow=11,SNR=6.7						
ABKAR	**Akbulak array**	**25.54**	**323**	*e*P	**P**	**22 57 51.4**	**+0.6**
	comp=E,0.9nm,0.6s,mb3.5						
TLY	**Talaya**	**25.72**	**30**	*e*Pn	**P**	**22 57 51.9**	**-0.5**
ARU	**Arti**	**30.95**	**333**	*e*P	**P**	**22 58 38.3**	**-0.8**
FINES	**FINESS Array B**	**47.90**	**327**	P	**P**	**23 01 00.9**	**+0.7**
	comp=E,1.5nm,0.6s,mb4.2,baz=104,slow=8.0,SNR=8.0						
ARCES	**ARCESS Array B**	**50.36**	**337**	P	**P**	**23 01 19.5**	**+0.6**
	comp=E,3.8nm,0.9s,mb4.4,baz=97,slow=7.7,SNR=4.0						
NOA	**NORSAR Array B**	**55.00**	**326**	P	**P**	**23 01 53.2**	**-0.1**
NOA	**NORSAR Array B**	**55.00**	**326**	P	**P**	**23 01 53.2**	**-0.1**
	comp=E,1.1nm,0.8s,mb4.0,baz=90,slow=7.0,SNR=3.4						
STU	**Stuttgart**	**57.48**	**311**	*e*P	**P**	**23 02 10.7**	**-0.5**
	comp=E,9.9nm,0.4s						
WRA	**Warramunga Arr**	**70.33**	**129**	P	**P**	**23 03 36.0**	**-0.1**
	comp=E,1.4nm,0.7s,mb4.0,baz=322,slow=6.3,SNR=5.9						
ASAR	**Alice Springs**	**72.68**	**132**	P	**P**	**23 03 50.1**	**-0.1**
	comp=E,0.2nm,0.5s,mb3.3,baz=311,slow=6.1,SNR=4.8						
TORD	**Torodi Ar. Bea**	**76.28**	**277**	P	**P**	**23 04 10.0**	**-1.5**
	comp=E,0.3nm,0.8s,mb3.3,baz=48,slow=5.9,SNR=4.2						
ILAR	**Eielson Array**	**77.06**	**20**	P	**P**	**23 04 15.3**	**+0.3**
ILAR	**Eielson Array**	**77.06**	**20**	P	**P**	**23 04 15.3**	**+0.3**
	comp=E,0.9nm,0.7s,mb3.8,baz=309,slow=5.2,SNR=1.1						

BUC 25 22:54:45.6±2.7, 44°.62N×29°.21E, h0km, MD3.2/9, 17C-13D, Error ellipse: s-maj=21.1km s-min=8.2km az=109.0, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIRR	**Tirgusor**	**0.59**	**254**	↓*i*P	Pg	22 54 57.5	+0.6
TIRR	**Tirgusor**	**0.59**	**254**	S	Sg	22 55 06.4	+1.8
TIRR	**Tirgusor**	**0.59**	**254**	↓*i*P	Pg	22 54 57.5	+0.6
TIRR				*i* S	Sg	22 55 06.4	+1.8
TLCR		**0.63**	**334**	↑*i*P	Pg	22 54 57.9	+0.3
TLCR		**0.63**	**334**	S	Sg	22 55 07.5	+1.7
TLCR		**0.63**	**334**	↑*i*P	Pg	22 54 57.9	+0.3
TLCR				*i* S	Sg	22 55 07.5	+1.7
CVD	**Cernavoda**	**0.90**	**250**	↓*i*P	Pg	22 55 03.1	+0.4
CVD	**Cernavoda**	**0.90**	**250**	S	Sg	22 55 17.1	+2.8
CVD	**Cernavoda**	**0.90**	**250**	↓*i*P	Pg	22 55 03.1	+0.4
CVD				*i* S	Sg	22 55 17.1	+2.8
CFR	**Carcaliu**	**0.94**	**306**	↓*i*P	Pg	22 55 03.8	+0.2
CFR	**Carcaliu**	**0.94**	**306**	S	Sg	22 55 18.3	+2.5
CFR	**Carcaliu**	**0.94**	**306**	↓*i*P	Pg	22 55 03.8	+0.2
CFR				*i* S	Sg	22 55 18.3	+2.5
AMRR	**Amara**	**1.34**	**270**	↑*i*P	Pg	22 55 11.9	+0.7
AMRR	**Amara**	**1.34**	**270**	S	Sg	22 55 31.3	+2.8
AMRR	**Amara**	**1.34**	**270**	↑*i*P	Pg	22 55 11.9	+0.7
AMRR				*i* S	Sg	22 55 31.3	+2.8
PGOR	**Pogoanele**	**1.61**	**281**	S	Sg	22 55 39.9	+2.7
PGOR	**Pogoanele**	**1.61**	**281**	*i* S	Sg	22 55 39.9	+2.7
GRER		**1.75**	**296**	↓*i*P	Pg	22 55 20.0	+0.8
GRER		**1.75**	**296**	S	Sg	22 55 46.8	+4.9
PETR		**1.78**	**309**	S	Sg	22 55 48.0	+5.3
SULR		**2.11**	**273**	↑*i*P	Pn	22 55 22.2	+0.1
SULR		**2.11**	**273**	S	Sg	22 55 51.8	-1.5
SULR		**2.11**	**273**	↑*i*P	Pn	22 55 22.2	+0.1
SULR				*i* S	Sg	22 55 51.8	-1.5
VRI	**Vrincioaia**	**2.15**	**306**	↓*i*P	Pn	22 55 24.5	+1.9
VRI	**Vrincioaia**	**2.15**	**306**	S	Sg	22 55 58.2	+3.6
VRI	**Vrincioaia**	**2.15**	**306**	↓*i*P	Pn	22 55 24.5	+1.9
PLOR	**Plostina**	**2.18**	**305**	↑*i*P	Pn	22 55 25.2	+2.1
PLOR	**Plostina**	**2.18**	**305**	S	Sg	22 55 58.3	+2.6
PLOR	**Plostina**	**2.18**	**305**	↑*i*P	Pn	22 55 25.2	+2.1
KIS	**Kishinev**	**2.39**	**354**	↑*i*P	Pn	22 55 28.8	+2.8
KIS	**Kishinev**	**2.39**	**354**	S	Sn	22 55 59.0	+3.1
KIS	**Kishinev**	**2.39**	**354**	↑*i*P	Pn	22 55 28.8	+2.8
MLR	**Muntele Rosu**	**2.47**	**292**	↑*i*P	Pn	22 55 29.5	+2.5
MLR	**Muntele Rosu**	**2.47**	**292**	S	Sn	22 55 59.2	+1.3
MLR	**Muntele Rosu**	**2.47**	**292**	↑*i*P	Pn	22 55 29.5	+2.5
TESR		**2.61**	**317**	↑*i*P	Pn	22 55 30.2	+1.3
TESR		**2.61**	**317**	S	Sg	22 56 08.4	-0.9
TESR		**2.61**	**317**	↑*i*P	Pn	22 55 30.2	+1.3
IAS	**Iasi**	**2.81**	**337**	↑*i*P	Pn	22 55 36.8	+5.0
IAS	**Iasi**	**2.81**	**337**	S	Sn	22 56 13.6	+7.2
VOIR		**3.06**	**287**	↓*i*P	Pn	22 55 37.4	+2.3
VOIR		**3.06**	**287**	S	Sn	22 56 15.3	+2.9
VOIR		**3.06**	**287**	↓*i*P	Pn	22 55 37.4	+2.3
VOIR				*i* S	Sn	22 56 15.3	+2.9
ELBA	**Catalca**	**3.52**	**190**	*i* P	Pn	22 55 38.6	-2.9
BURAR	**Bucovina Array**	**4.08**	**319**	↑*i*P	Pn	22 55 51.7	+2.5
BURAR	**Bucovina Array**	**4.08**	**319**	S	Sg	22 56 58.4	+1.8
BURAR	**Bucovina Array**	**4.08**	**319**	↑*i*P	Pn	22 55 51.7	+2.5
GZR	**Gura Zlata**	**4.62**	**282**	↓*i*P	Pn	22 55 58.3	+1.6
GZR	**Gura Zlata**	**4.62**	**282**	S	Sn	22 56 52.7	+1.7
GZR	**Gura Zlata**	**4.62**	**282**	↓*i*P	Pn	22 55 58.3	+1.6
BORA	**Eskisehir**	**4.83**	**169**	*i* P	Pn	22 55 56.5	-3.0
DURS	**Dursunbey**	**5.05**	**186**	*i* P	Pn	22 56 01.0	-1.5

IDC ***25*** *23:02:14.9±2.0, 33°.14S×178°.97W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.8/16, mbtmp3.8/3, ML3.6/1, Error ellipse: s-maj=47.9km s-min=43.4km az=61.0*

ISC 25 23:02:21.9±2.6, 33°.3S±0°.1×179°.3W±0°.4, h35km, n10, σ0°70/10, mb3.6/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGZ	**Carnagh Statio**	**5.53**	**201**	*e*PN	**Pn**	**23 03 42.4**	**+0.8**
MWZ	**Matawai**	**5.62**	**207**	*e*PN	**Pn**	**23 03 41.9**	**-1.1**
URZ	**Urewera**	**5.72**	**210**	Pn	**Pn**	**23 03 44.7**	**+0.4**
	1.6nm,0.3s,baz=92,slow=3.7,SNR=13						
URZ				Sn	**Sn**	**23 04 49.1**	**+0.4**
	8.2nm,0.3s,baz=297,slow=22,SNR=8.1						
URZ	**Urewera**	**5.72**	**210**	*e*PN	**Pn**	**23 03 42.7**	**-1.6**
URZ				SN	**Sn**	**23 04 48.8**	**+0.1**
KNZ	**Kokohu**	**6.18**	**203**	*e*PN	**Pn**	**23 03 51.4**	**+0.7**
BKZ	**Black Stump Fm**	**6.74**	**209**	*e*PN	**Pn**	**23 03 58.0**	**-0.4**
ASAR	**Alice Springs**	**41.96**	**271**	P	**P**	**23 10 09.9**	**+0.3**
	0.8nm,0.6s,mb3.5,baz=110,slow=7.8,SNR=8.4						
WRA	**Warramunga Arr**	**43.21**	**276**	P	**P**	**23 10 19.7**	**-0.1**
	0.5nm,0.3s,mb3.6,baz=116,slow=7.6,SNR=5.0						
FINES	**FINESS Array B**	**147.48**	**337**	PKPbc	PKPbc	23 21 58.8	-2.6
	0.9nm,0.5s,baz=38,slow=3.4,SNR=4.6						
TORD	**Torodi Ar. Bea**	**159.88**	**183**	PKPab	PKPab	23 22 56.1	-0.7
	0.3nm,0.5s,baz=175,

PVAQ A 23 35 20.1
2.4nm,0.7s
PVAQ Vaqueiros 5.74 39 ⇓Pn **Pn** 23 34 10.5 +2.6
PVAQ Sn **Sn** 23 35 13.3 -0.5
2.4nm,0.7s
PVAQ Vaqueiros 5.74 39 ⇓Pn **Pn** 23 34 10.5 +2.6
PVAQ Sn **Sn** 23 35 13.3 -0.5
2.4nm,0.7s
PCVE Castro Verde 5.75 36 *e*Pn **Pn** 23 34 12.0 +3.9
PCVE *e*Sn **Sn** 23 35 14.2 +0.1
PCVE A 23 35 19.5
2.6nm,0.8s
PCVE Castro Verde 5.75 36 Pn **Pn** 23 34 12.0 +3.9
PCVE Sn **Sn** 23 35 14.2 +0.1
2.6nm,0.8s
PCVE Castro Verde 5.75 36 Pn **Pn** 23 34 12.0 +3.9
PCVE Sn **Sn** 23 35 14.2 +0.1
2.6nm,0.8s
PCVE Castro Verde 5.75 36 *e*Pn **Pn** 23 34 12.0 +3.9
PCVE *e*Sn **Sn** 23 35 14.2 +0.1
2.6nm,0.8s
EGRO El Granado 5.96 40 P **Pn** 23 34 13.7 +2.7
0.4nm,0.1s,SNR=7.9
EGRO S **Sn** 23 35 18.7 -0.6
0.7nm,0.1s,SNR=7.9
EGRO El Granado 5.96 40 P **Pn** 23 34 13.7 +2.7
0.4nm,0.1s,SNR=7.9
EGRO S **Sn** 23 35 18.7 -0.6
0.7nm,0.1s,SNR=7.9
EGRO El Granado 5.96 40 P **Pn** 23 34 13.7 +2.7
0.4nm,0.1s,SNR=7.9
EGRO S **Sn** 23 35 18.7 -0.6
0.7nm,0.1s,SNR=7.9
PBEJ Beja 6.14 35 *e*Sn **Sn** 23 35 23.6 -0.2
PBEJ A 23 35 25.7
1.7nm,1.1s
PBEJ Beja 6.14 35 Sn **Sn** 23 35 23.6 -0.2
0.9nm,1.1s
PBEJ Beja 6.14 35 Sn **Sn** 23 35 23.6 -0.2
0.9nm,1.1s
PBEJ Beja 6.14 35 *e*Sn **Sn** 23 35 23.6 -0.2
1.7nm,1.1s
EMIN Mina Concepcio 6.58 43 P **Pn** 23 34 22.0 +2.5
0.2nm,0.1s,SNR=7.9
EMIN S **Sn** 23 35 33.2 -1.3
0.1nm,0.1s,SNR=7.9
EMIN Mina Concepcio 6.58 43 P **Pn** 23 34 22.0 +2.5
0.2nm,0.1s,SNR=7.9
EMIN S **Sn** 23 35 33.2 -1.3
0.1nm,0.1s,SNR=7.9
EMIN Mina Concepcio 6.58 43 P **Pn** 23 34 22.0 +2.5
0.2nm,0.1s,SNR=7.9
EMIN S **Sn** 23 35 33.2 -1.3
0.1nm,0.1s,SNR=7.9
PBAR Barrancos 6.67 38 *e*Pn **Pn** 23 34 24.4 +3.7
PBAR *e*Sn **Sn** 23 35 36.6 -0.2
PBAR Barrancos 6.67 38 Pn **Pn** 23 34 24.4 +3.7
PBAR Sn **Sn** 23 35 36.6 -0.2
PBAR Barrancos 6.67 38 Pn **Pn** 23 34 24.4 +3.7
PBAR Sn **Sn** 23 35 36.6 -0.2
PBAR Barrancos 6.67 38 *e*Pn **Pn** 23 34 24.4 +3.7
PBAR *e*Sn **Sn** 23 35 36.6 -0.2
EBAD Badajoz 7.13 35 P **Pn** 23 34 29.6 +2.6
1.0nm,0.1s,SNR=7.9
EBAD S **Sn** 23 35 47.2 -0.9
0.5nm,0.1s,SNR=7.9
EBAD Badajoz 7.13 35 P **Pn** 23 34 29.6 +2.6
1.0nm,0.1s,SNR=7.9
EBAD S **Sn** 23 35 47.2 -0.9
0.5nm,0.1s,SNR=7.9
PMRV Marv??o 7.50 30 *e*Sn **Sn** 23 35 54.9 -2.3
PMRV Marv??o 7.50 30 Sn **Sn** 23 35 54.9 -2.3
PMRV Marv??o 7.50 30 Sn **Sn** 23 35 54.9 -2.3
PMRV Marv??o 7.50 30 *e*Sn **Sn** 23 35 54.9 -2.3
EADA Adamuz 8.10 49 P **Pn** 23 34 42.9 +2.5
0.3nm,0.2s,SNR=7.9
EADA S **Sn** 23 36 10.9 -1.0
1.1nm,0.2s,SNR=7.9
EADA Adamuz 8.10 49 P **Pn** 23 34 42.9 +2.5
0.3nm,0.2s,SNR=7.9
EADA S **Sn** 23 36 10.9 -1.0
1.1nm,0.2s,SNR=7.9
EADA Adamuz 8.10 49 P **Pn** 23 34 42.9 +2.6
0.2nm,0.1s,SNR=7.9
EADA S **Sn** 23 36 10.9 -1.0
1.1nm,0.2s,SNR=7.9

ISCJB 25 23:35:46.4±0.3, 36°.69N±0°.02×28°.30E±0°.02, h80km±4km, Error ellipse: s-maj=3.0km s-min=2.7km az=17.2
CSEM 25 23:35:47.7±0.1, 36°.69N×28°.31E, h70km±3km, MD3.2, Error ellipse: s-maj=2.6km s-min=2.4km az=101.0
DDA 25 23:35:47.5, 36°.76N×28°.30E, h52km±6km, Md3.2
ATH 25 23:35:47.0, 36°.70N×28°.26E, h72km±1km
ISK 25 23:35:47.5, 36°.72N×28°.25E, h62km, MD3.2
NEIC 25 23:35:48.0, 36°.69N×28°.28E, h31km, MD3.0(ISK), After ISK.
THE 25 23:35:50.0, 36°.74N×28°.23E, h49km±3km, ML3.2/3, Error ellipse: s-maj=3.2km s-min=0.7km az=117.0
HLW 25 23:35:51.8, 36°.26N×28°.35E, h36km±39km, Ml2.9
ISC 25 23:35:47.8±0.3, 36°.70N±0°.02×28°.30E±0°.02, h68km±5km, n129, σ0§83/211, Dodecanese Islands

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
YER Yerkesik 0.43 358 PG **Pn** 23 35 59.7 0.0
YER *e*SG **Sn** 23 36 07.7 -0.8
YER Yerkesik 0.43 358 *i* Pg **Pn** 23 35 59.7 -0.1
YER *e*Sg **Sn** 23 36 07.7 -0.8
ARG Arkhangelos 0.51 196 *e*P **Pn** 23 36 01.0 +0.5
ARG *e*S **Sn** 23 36 10.5 +0.8
ARG Arkhangelos 0.51 196 *e*P **Pn** 23 36 01.0 +0.5
ARG *e*S **Sn** 23 36 10.5 +0.8
ARG Arkhangelos 0.51 196 P **Pn** 23 36 00.9 +0.4
ARG S **Sn** 23 36 09.9 +0.2
ARG Arkhangelos 0.51 196 *e*P **Pn** 23 36 01.0 +0.5
ARG *e*S **Sn** 23 36 10.5 +0.8
DAT Datca 0.58 273 *e*PG **Pn** 23 36 00.8 -0.4
DAT *e*SG **Sn** 23 36 10.1 -1.0
DAT Datca 0.58 273 *e*Pg **Pn** 23 36 00.8 -0.4
DAT *e*Sg **Sn** 23 36 10.1 -1.0
MLSB Milas 0.73 325 *e*PG **Pn** 23 36 02.8 0.0
MLSB *e*SG **Sn** 23 36 13.1 -0.8
MLSB Milas 0.73 325 *e*Pg **Pn** 23 36 02.8 0.0
BDRM Kayabasi 0.78 298 *i* P **Pn** 23 36 03.6 +0.2
BDRM *i* S **Sn** 23 36 14.8 -0.1
BDRM Kayabasi 0.78 298 *i* P **Pn** 23 36 03.6 +0.2
BDRM *i* S **Sn** 23 36 14.9 0.0
BODT Bodrum 0.87 295 *e*PG **Pn** 23 36 03.6 -1.0
NIS1 Nisyros Isl. 0.91 264 P **Pn** 23 36 05.2 +0.2
NIS1 S **Sn** 23 36 17.3 -0.5
NIS1 Nisyros Isl. 0.91 264 P **Pn** 23 36 05.2 +0.2
NIS1 S **Sn** 23 36 17.3 -0.5
AYDN Tasoluk 1.01 341 *i* P **Pn** 23 36 07.2 +0.9
AYDN *i* S **Sn** 23 36 20.6 +0.4
AYDN Tasoluk 1.01 341 *i* P **Pn** 23 36 07.2 +0.9
AYDN *i* S **Sn** 23 36 20.6 +0.5
GLHS Glhisar (BURDU 1.06 64 *e*PN **Pn** 23 36 07.3 +0.4
GLHS Glhisar (BURDU 1.06 64 *e*Pn **Pn** 23 36 07.3 +0.4
GOLH Golhisar 1.14 62 *i* P **Pn** 23 36 08.4 +0.5
GOLH *i* S **Sn** 23 36 22.9 -0.1
GOLH Golhisar 1.14 62 *i* P **Pn** 23 36 08.4 +0.5
GOLH *i* S **Sn** 23 36 22.9 -0.1
AKAS Kas 1.15 114 *i* P **Pn** 23 36 07.8 -0.3
AKAS *i* S **Sn** 23 36 24.6 +1.4
AKAS Kas 1.15 114 *i* P **Pn** 23 36 07.8 -0.3
AKAS *i* S **Sn** 23 36 24.6 +1.4
DNZL Cakiroluk 1.15 31 *i* P **Pn** 23 36 08.6 +0.5
DNZL *i* S **Sn** 23 36 23.7 +0.5
DNZL Cakiroluk 1.15 31 *i* P **Pn** 23 36 08.6 +0.5
DNZL *i* S **Sn** 23 36 23.7 +0.5
KSL Kastellorizon 1.17 118 *e*P **Pn** 23 36 09.1 +0.8
KSL Kastellorizon 1.17 118 *e*P **Pn** 23 36 09.1 +0.8
DENT Denizli 1.20 29 *e*PN **Pn** 23 36 09.4 +0.7
DENT Denizli 1.20 29 *e*Pn **Pn** 23 36 09.4 +0.7
ELL Elmali 1.29 88 *e*PN **Pn** 23 36 10.8 +0.9
ELL Elmali 1.29 88 *e*Pn **Pn** 23 36 10.8 +0.9
KARP Karpathos 1.48 219 *e*P **Pn** 23 36 12.9 +0.5
KARP *e*S **Sn** 23 36 30.8 -0.1
KARP Karpathos 1.48 219 *e*P **Pn** 23 36 12.9 +0.5
KARP *e*S **Sn** 23 36 30.8 -0.1
KARP Karpathos 1.48 219 *e*P **Pn** 23 36 12.9 +0.5
KARP *e*S **Sn** 23 36 30.8 -0.1
SMG Samos 1.54 311 *e*P **Pn** 23 36 13.4 +0.2
SMG *e*S **Sn** 23 36 32.0 -0.4
SMG Samos 1.54 311 *e*P **Pn** 23 36 13.4 +0.2
SMG *e*S **Sn** 23 36 32.0 -0.4
SMG Samos 1.54 311 *e*P **Pn** 23 36 13.4 +0.2
SMG *e*S **Sn** 23 36 32.0 -0.4
KORT Korkueli 1.67 79 *i* P **Pn** 23 36 16.9 +2.0
KORT Korkueli 1.67 79 *i* P **Pn** 23 36 16.9 +2.0
KULA Kula-Manisa 1.83 9 *e*PN **Pn** 23 36 17.8 +0.7
KULA Kula-Manisa 1.83 9 *e*Pn **Pn** 23 36 17.8 +0.7
IZM Izmir 1.88 334 *e*PN **Pn** 23 36 17.9 +0.1
IZM Izmir 1.88 334 *e*Pn **Pn** 23 36 17.9 +0.1
KDAG Bornova 1.89 334 *i* P **Pn** 23 36 17.1 -0.8
KDAG *i* S **Sn** 23 36 33.2 -7.4
KDAG Bornova 1.89 334 *i* P **Pn** 23 36 17.1 -0.7
KHL Karahalli 1.89 31 *e*PN **Pn** 23 36 18.4 +0.5
KHL Karahalli 1.89 31 *e*Pn **Pn** 23 36 18.4 +0.6
KHAL Karahalli 1.92 29 *i* P **Pn** 23 36 18.8 +0.6
KHAL *i* S **Sn** 23 36 39.8 -1.6
KHAL Karahalli 1.92 29 *i* P **Pn** 23 36 18.8 +0.6
KHAL *i* S **Sn** 23 36 39.8 -1.5
BLCB Balcova 1.96 330 *e*PN **Pn** 23 36 19.2 +0.4
BLCB Balcova 1.96 330 P **Pn** 23 36 19.2 +0.4
BLCB S **Sn** 23 36 42.1 -0.2
BLCB Balcova 1.96 330 P **Pn** 23 36 19.2 +0.4
BLCB S **Sn** 23 36 42.1 -0.2
URLA Izmir 2.14 321 *i* P **Pn** 23 36 20.9 -0.4
URLA *i* S **Sn** 23 36 44.9 -1.9
URLA Izmir 2.14 321 *i* P **Pn** 23 36 20.9 -0.4
URLA *i* S **Sn** 23 36 44.9 -1.9
AKHS Akhisar 2.21 350 *i* P **Pn** 23 36 22.5 +0.4
AKHS *i* S **Sn** 23 36 47.8 -0.6
AKHS Akhisar 2.21 350 *i* P **Pn** 23 36 22.5 +0.3
AKHS *i* S **Sn** 23 36 47.8 -0.6
APE Apeiranthos 2.25 280 *e*P **Pn** 23 36 23.7 +0.9
APE *e*S **Sn** 23 36 49.0 -0.5
APE Apeiranthos 2.25 280 *e*P **Pn** 23 36 23.7 +0.9
APE *e*S **Sn** 23 36 49.0 -0.5
APE Apeiranthos 2.25 280 P **Pn** 23 36 23.5 +0.7
APE S **Sn** 23 36 49.2 -0.3
APE Apeiranthos 2.25 280 P **Pn** 23 36 23.5 +0.7
APE S **Sn** 23 36 49.2 -0.3
ZKR Zakros 2.32 228 *e*P **Pn** 23 36 24.3 +0.6
ZKR *e*S **Sn** 23 36 50.7 -0.4
ZKR Zakros 2.32 228 *e*P **Pn** 23 36 24.2 +0.5
ZKR *e*S **Sn** 23 36 50.7 -0.4
ZKR Zakros 2.32 228 P **Pn** 23 36 24.7 +1.0
ZKR S **Sn** 23 36 52.5 +1.4
ZKR Zakros 2.32 228 *e*P **Pn** 23 36 24.3 +0.6
ZKR *e*S **Sn** 23 36 50.7 -0.4
DEMI Demirci 2.36 8 *i* P **Pn** 23 36 24.7 +0.4
DEMI *i* S **Sn** 23 36 51.6 -0.5
CHOS Chios island 2.45 314 *e*P **Pn** 23 36 26.5 +1.0
CHOS *e*S **Sn** 23 36 55.0 +0.6
CHOS Chios island 2.45 314 P **Pn** 23 36 26.4 +0.9
CHOS S **Sn** 23 36 53.9 -0.5
CHOS Chios island 2.45 314 P **Pn** 23 36 26.4 +0.9
CHOS *e*S **Sn** 23 36 55.0 +0.6
GDZ Gediz 2.56 21 *i* P **Pn** 23 36 26.6 -0.3
GDZ *i* S **Sn** 23 36 55.4 -1.5
GDZ Gediz 2.56 21 *i* P **Pn** 23 36 26.6 -0.3
GDZ *i* S **Sn** 23 36 55.4 -1.5
NPS Neapolis 2.61 237 *e*P **Pn** 23 36 28.2 +0.5
NPS *e*S **Sn** 23 36 58.3 0.0
NPS Neapolis 2.61 237 *e*P **Pn** 23 36 28.2 +0.5
NPS *e*S **Sn** 23 36 58.3 0.0
NPS Neapolis 2.61 237 *e*P **Pn** 23 36 28.2 +0.5
NPS *e*S **Sn** 23 36 58.3 0.0
LAST Lasithi 2.76 237 *e*P **Pn** 23 36 30.6 +0.9
LAST *e*S **Sn** 23 37 02.0 +0.1
LAST Lasithi 2.76 237 *e*P **Pn** 23 36 30.6 +0.9
LAST *e*S **Sn** 23 37 02.0 +0.1
LAST Lasithi 2.76 237 P **Pn** 23 36 30.5 +0.8
LAST S **Sn** 23 37 02.3 +0.4
LAST Lasithi 2.76 237 P **Pn** 23 36 30.5 +0.8
LAST *e*S **Sn** 23 37 02.0 +0.1
DURS Dursunbey 2.90 3 *i* P **Pn** 23 36 31.9 +0.3
DURS *i* S **Sn** 23 37 03.8 -1.4
DURS Dursunbey 2.90 3 *i* P **Pn** 23 36 31.9 +0.4
DURS *i* S **Sn** 23 37 03.8 -1.4
PRK Paraskevi 3.00 328 *e*P **Pn** 23 36 33.8 +0.8
PRK *e*S **Sn** 23 37 07.9 +0.1
PRK Paraskevi 3.00 328 *e*P **Pn** 23 36 33.8 +0.8
PRK *e*S **Sn** 23 37 07.9 +0.1
PRK Paraskevi 3.00 328 P **Pn** 23 36 33.7 +0.7
PRK S **Sn** 23 37 07.8 0.0
PRK Paraskevi 3.00 328 P **Pn** 23 36 33.7 +0.7
PRK *e*S **Sn** 23 37 07.9 +0.1
BALY Balya 3.08 350 *i* P **Pn** 23 36 34.6 +0.6
BALY *i* S **Sn** 23 37 09.7 0.0
BALY Balya 3.08 350 *i* P **Pn** 23 36 34.6 +0.6
BALY *i* S **Sn** 23 37 09.7 0.0
IDI Anoyia 3.11 244 *e*P **Pn** 23 36 34.9 +0.5
IDI *e*S **Sn** 23 37 09.9 -0.4
IDI Anoyia 3.11 244 *e*P **Pn** 23 36 34.9 +0.5
IDI *e*S **Sn** 23 37 09.9 -0.4
IDI Anoyia 3.11 244 *e*P **Pn** 23 36 34.9 +0.5
IDI *e*S **Sn** 23 37 09.9 -0.4
GAZI Gazipasa 3.27 97 *i* P **Pn** 23 36 36.7 +0.1
GAZI *i* S **Sn** 23 37 13.3 -1.0
GAZI Gazipasa 3.27 97 *i* P **Pn** 23 36 36.7 +0.1
GAZI *i* S **Sn** 23 37 13.3 -1.0
SIVA Sivas 3.30 240 *e*P **Pn** 23 36 38.1 +1.1
SIVA Sivas 3.30 240 *e*P **Pn** 23 36 38.1 +1.1
SIVA Sivas 3.30 240 P **Pn** 23 36 37.5 +0.5
SIVA S **Sn** 23 37 15.3 +0.3
SIVA Sivas 3.30 240 P **Pn** 23 36 37.5 +0.5
SIVA S **Sn** 23 37 15.3 +0.3
ERMK Ermenek 3.71 90 *i* P **Pn** 23 36 44.0 +1.4
ERMK *i* S **Sn** 23 37 29.6 +4.5
ERMK Ermenek 3.71 90 *i* P **Pn** 23 36 44.0 +1.4
KARN Karanos 3.78 251 *e*P **Pn** 23 36 45.8 +2.2
KARN Karanos 3.78 251 P **Pn** 23 36 45.0 +1.4
KARN S **Sn** 23 37 27.9 +1.0
KARN Karanos 3.78 251 P **Pn** 23 36 45.0 +1.4
KARN S **Sn** 23 37 27.9 +1.0
LIA Limnos Island 4.02 323 P **Pn** 23 36 48.6 +1.7
LIA S **Sn** 23 37 31.9 -0.9
LIA Limnos Island 4.02 323 P **Pn** 23 36 48.6 +1.7
ALN Alexandroupoli 4.54 338 *e*P **Pn** 23 36 55.1 +1.1
ALN *e*S **Sn** 23 37 45.0 -0.5
ALN Alexandroupoli 4.54 338 *e*P **Pn** 23 36 55.1 +1.1
ALN *e*S **Sn** 23 37 45.0 -0.5
ALN Alexandroupoli 4.54 338 P **Pn** 23 36 54.6 +0.6
ALN S **Sn** 23 37 44.7 -0.8
ALN Alexandroupoli 4.54 338 P **Pn** 23 36 54.6 +0.6
ALN *e*S **Sn** 23 37 45.0 -0.5
HMAT Matruh 5.68 191 P **Pn** 23 37 07.8 -1.9
baz=192
HMAT AMP 23 38 00.0
comp=E,10μm,1.1s,logA/T=4.0,baz=192
HMAT Matruh 5.68 191 P **Pn** 23 37 07.8 -1.8
SLUM 5.79 207 P **Pn** 23 37 10.1 -1.0
baz=210
SLUM S **Sn** 23 38 09.4 -6.8
baz=210
SLUM 5.79 207 P **Pn** 23 37 10.1 -1.1
KNT Kendrikon 6.13 318 P **Pn** 23 37 16.9 +1.2
KNT Kendrikon 6.13 318 P **Pn** 23 37 16.9 +1.2
HRSH Kfar Ka'horesh 7.00 123 P **Pn** 23 37 31.2 +3.6
baz=138
RSH 7.29 140 P **Pn** 23 37 31.2 -0.4
AMAG Maghara 7.30 145 P **Pn** 23 37 30.5 -1.2
baz=142
AMAG Maghara 7.30 145 P **Pn** 23 37 30.5 -1.2
KOT Kottamia 7.37 155 P **Pn** 23 37 32.5 -0.3
baz=154
HHAG Hagoal 7.44 154 P **Pn** 23 37 33.1 -0.6
baz=152
HSAF As Saff 7.57 158 P **Pn** 23 37 34.3 -1.2
baz=156
HSAF As Saff 7.57 158 P **Pn** 23 37 34.3 -1.2
SWA2 7.81 199 P **Pn** 23 37 37.8 -0.9
baz=200
SWA2 S **Sn** 23 38 58.1 -7.6
baz=200
SWA2 7.81 199 P **Pn** 23 37 37.8 -1.0
SUZ 7.82 150 P **Pn** 23 37 38.3 -0.6
baz=148
AWBH 8.37 176 P **Pn** 23 37 45.2 -1.2
baz=176
AWBH 8.37 176 P **Pn** 23 37 45.2 -1.2
HBST Basata 9.21 142 P **Pn** 23 37 56.9 -1.0
baz=140
HKAT Jabal Katrina 9.46 148 P **Pn** 23 38 00.5 -0.8
baz=146
HKAT Jabal Katrina 9.46 148 P **Pn** 23 38 00.5 -0.8
HFRF Wahat Farafira 9.53 180 P **Pn** 23 38 00.7 -1.5
baz=181
HFRF Wahat Farafira 9.53 180 P **Pn** 23 38 00.7 -1.5

NIED 25 23:39:00, 35°.70N×140°.10E, h89km, Mw3.7 Best double couple: Mo4.22000×10^14 NP1: φs2.00000°, δ73.00000°, λ102.00000°. NP2: φs146.00000°, δ21.00000°, λ56.00000°.
ISCJB 25 23:39:37.0±0.4, 35°.56N±0°.04×140°.06E±0°.05, h80km±3km, mb3.9/14, Error ellipse: s-maj=8.1km s-min=4.4km az=143.1
JMA 25 23:39:37.6±0.2, 35°.64N×140°.06E, h71km±2km, M3.9
JMA Felt I J1.
NEIC 25 23:39:38.3±1.1, 35°.58N×140°.07E, h76km±9km, mb4.3/6, Error ellipse: s-maj=12.3km s-min=8.4km az=90.0
IDC 25 23:39:39.0±1.8, 35°.55N×140°.04E, h80km±16km, mb3.3/8, mb1 3.6/11, mb1mx3.4/26, mbtmp3.5/11, MS2.4/1, Ms1 2.4/1, ms1mx1.9/15, Error ellipse: s-maj=25.5km s-min=11.7km az=64.0
ISC 25 23:39:38.1±0.4, 35°.57N±0°.04×140°.05E±0°.05, h73km±3km, n35, σ0§81/49, mb3.9/14, 2C-5D, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
JCN Nagara 0.19 140 ⇑P **Pn** 23 39 49.1 +0.1
JCN S **Sn** 23 39 58.2 +1.3
TOK Tokyo 0.27 297 P **Pn** 23 39 49.3 -0.1
TOK *e*S **Sn** 23 39 57.9 +0.3
JOD2 Odawara 2 0.84 249 ⇓P **Pn** 23 39 54.6 -0.2
JOD2 S **Sn** 23 40 06.5 -0.7
BSO3 Boso 3 0.85 153 ⇑P **Pn** 23 39 54.5 -0.4
BSO3 *e*S **Sn** 23 40 07.9 +0.5
JAG Ashikaga 0.98 331 ⇓P **Pn** 23 39 55.6 -0.9
JAG *e*S **Sn** 23 40 08.4 -1.9
JIM2 Oshima 3 0.99 211 P **Pn** 23 39 56.1 -0.5
JIM2 *e*S **Sn** 23 40 09.9 -0.4
JRY Ryogami san 1.03 296 ⇓P **Pn** 23 39 57.2 0.0
JRY *e*S **Sn** 23 40 11.8 +0.4
BSO1 Boso 1 1.19 140 P **Pn** 23 39 58.1 -1.0
BSO1 S **Sn** 23 40 14.2 -0.6
JYN Shimob 1.23 267 ⇓P **Pn** 23 39 59.7 +0.1
JYN *e*S **Sn** 23 40 16.0 +0.3
JIZS Izushimoda 1.28 229 ⇓P **Pn** 23 40 00.3 0.0
MJAR Matsushiro Arr 1.78 304 P **Pn** 23 40 06.8 -0.1
22nm,0.3s,baz=146,slow=15,SNR=75
MJAR S **Sn** 23 40 29.4 +0.7
23nm,0.3s,baz=126,slow=14,SNR=8.5
MAJO Matsushiro 1.78 304 *e*Pn **Pn** 23 40 07.4 +0.5
MAJO Sn **Sn** 23 40 26.1 -2.6
MAT Matsushiro 1.78 304 P **Pn** 23 40 07.0 +0.1
MAT S **Sn** 23 40 29.7 +1.0
JHJ Hachijo jima 2 2.45 185 P **Pn** 23 40 16.5 +0.6
29nm,0.3s,baz=82,slow=18,SNR=5.2
JHJ S **Sn** 23 40 44.1 -0.7
108nm,0.3s,baz=100,slow=21,SNR=9.6
CBIJ Chichi jima 8.64 167 P **Pn** 23 41 42.4 +2.0
7.2nm,0.3s,baz=286,slow=22,SNR=4.8
CBIJ S **Sn** 23 43 09.2 -7.0
4.4nm,0.3s,baz=288,slow=20,SNR=2.5
KSRS Korea Array 9.94 284 P **Pn** 23 42 01.1 +3.0
0.3nm,0.3s,baz=95,slow=15,SNR=3.9
KSRS LR LR 23 45 41.4
comp=Z,25nm,20.6s,baz=220,slow=36
MDJ Mudanjiang 12.07 322 *e*Pn **Pn** 23 42 28.0 +1.0
TATO Taipei 19.16 242 *e*P **Pn** 23 43 55.8 -1.5
ZALV Zalesovo Beam 42.11 314 P **P** 23 47 22.9 +0.2
0.5nm,0.3s,mb3.7,baz=103,slow=6.5,SNR=4.1
MKAR Makanchi Array 43.98 303 P **P** 23 47 38.5 +0.5
0.7nm,0.5s,mb3.6,baz=86,slow=9.2,SNR=9.7
KURK Kurchatov 45.98 309 *e*P **P** 23 47 53.5 -0.4
2.6nm,0.6s,mb4.1
TKM2 Tokmak 2 49.37 299 *e*P **P** 23 48 20.0 -0.2
1.4nm,0.5s,mb4.2
AML Almayashu 50.93 299 *e*P **P** 23 48 32.1 +0.2
1.7nm,0.6s,mb4.2
ILAR Eielson Array 51.32 32 P **P** 23 48 35.0 +0.5
0.3nm,0.7s,mb3.4,baz=250,slow=6.6,SNR=3.8
FITZ Fitzroy Crossi 55.09 197 *e*P **P** 23 49 03.7 +1.0
2.0nm,0.9s,mb4.2
WRA Warramunga Arr 55.47 187 P **P** 23 49 04.9 -0.5
0.3nm,0.3s,mb3.8,baz=1.6,slow=7.6,SNR=5.5
ARU Arti 56.73 319 *e*P **P** 23 49 13.7 -0.4
1.8nm,0.4s,mb4.5
ASAR Alice Springs 59.20 187 P **P** 23 49 31.5 0.0
0.2nm,0.4s,mb3.5,baz=13,slow=8.6,SNR=4.1
DLBC Dease Lake 60.46 37 P **P** 23 49 38.4 -1.5
ARCES ARCESS Array B 64.98 339 P **P** 23 50 10.1 +0.3
ARCES ARCESS Array B 64.98 339 P **P** 23 50 10.1 +0.3
1.4nm,0.9s,mb3.8,baz=41,slow=8.0,SNR=3.9
STKA Stephens Creek 67.10 179 P **P** 23 50 23.7 0.0
FINES FINESS Array B 69.59 332 P **P** 23 50 39.0 -0.1
1.5nm,0.6s,mb4.0,baz=57,slow=7.0,SNR=7.2
KIV Kislovodsk 71.03 311 *e*P **P** 23 50 48.4 +0.2
1.7nm,0.4s,mb4.2
PDAR Pinedale Array 79.48 45 P **P** 23 51 37.1 +0.4
0.2nm,0.5s,mb3.2,baz=318,slow=1.2,SNR=2.5

IDC 25 23:57:10.3±3.4, 5°.34S×153°.95E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.4/16, mbtmp3.4/4, Error ellipse: s-maj=121.0km s-min=30.4km az=112.0, New Ireland region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
WRA Warramunga Arr 23.97 231 P P 00 02 27.1 +0.5
0.3nm,0.6s,baz=55,slow=10,SNR=2.9
ASAR Alice Springs 26.55 225 P P 00 02 50.7 +0.7
0.2nm,0.4s,baz=56,slow=9.4,SNR=3.8
MKAR Makanchi Array 81.48 319 P P 00 09 30.4 +0.8
0.2nm,0.5s,baz=89,slow=7.3,SNR=4.9
ZALV Zalesovo Beam 82.24 326 P P 00 09 34.0 +0.7
0.3nm,0.3s,baz=116,slow=6.7,SNR=2.5
TORD Torodi Ar. Bea 151.56 288 PKPbc PKPbc 00 17 05.3 -2.3
0.2nm,0.4s,baz=58,slow=1.9,SNR=7.2

ISCJB 26 00:17:13.4±1.0, 36°.68N±0°.06×70°.3E±0°.2, h128km±37km, Error ellipse: s-maj=23.4km s-min=10.5km az=2.1
NNC 26 00:17:16.6±1.6, 36°.81N×70°.28E, h139km±24km, mb2.9, mpv3.6, Error ellipse: s-maj=13.2km s-min=6.3km az=15.0
ISC 26 00:17:14.4±1.0, 36°.65N±0°.05×70°.2E±0°.2, h130km±30km, n8, σ0§90/11, 3C-1D, Hindu Kush region

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
CEP Cherat 3.14 154 P **Pn** 00 18 03.7 +0.9
CEP S **Sn** 00 18 41.0 +0.8
CHCP Chirah Chowk 3.88 139 P **Pn** 00 18 12.6 0.0
THW Thamme Wali 4.05 162 ⇑P **Pn** 00 18 13.9 -0.8
SARP Sargodha 5.13 156 P **Pn** 00 18 26.7 -2.6
KK31 Karatay Array 6.45 2 P **Pn** 00 18 47.8 +1.0
0.6nm,0.2s,baz=182,slow=13,SNR=35
KK31 ⇑S **Sn** 00 19 58.3 -0.6
3.1nm,0.7s,baz=182,slow=22,SNR=6.1
TKM2 Tokmak 2 7.50 32 ⇑P **Pn** 00 19 01.3 +0.4
3.2nm,0.5s
TKM2 ⇓S **Sn** 00 20 23.8 -0.5
2.5nm,0.7s
MK31 Makanchi Array 13.54 38 P **Pn** 00 20 21.5 +0.5
0.3nm,0.3s,baz=204,slow=8.9,SNR=8.0
AB31 Akbulak array 14.66 332 P **Pn** 00 20 35.3 +0.1
0.4nm,0.3s,baz=166,slow=13,SNR=32

ISCJB 26 00:17:14.2±0.5, 29°.87N±0°.06×139°.3E±0°.1, h428km±7km, mb3.5/15, Error ellipse: s-maj=20.4km s-min=7.2km az=164.5
JMA 26 00:17:14.8±0.2, 29°.90N×139°.49E, h436km, M3.7
IDC 26 00:17:14.5±0.9, 29°.83N×139°.05E, h405km±16km, mb3.1/8, mb1 3.2/12, mb1mx3.0/27, mbtmp3.1/12, Error ellipse: s-maj=47.4km s-min=9.2km az=72.0

*NEIC **26** 00:17:15.1±0.9, 29.85N × 138.90E, h407km±12km, mb3.7/7, Error ellipse: s-maj=29.4km s-min=8.7km az=74.0*

ISC 26 00:17:15.1±0.5, **29.87N**±0.06 × **139.3E**±0.2, **h418**km±8km, **n32**, σ**1**°**18**/**39**, **mb3.5**/15, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JHJ2	**Mitsune**	**3.26**	**8**	P		**P**	**00 18 23.8**	**+2.1**
JHJ2				*e*S		**S**	**00 19 14.6**	**-1.2**
JHJ	**Hachijo jima 2**	**3.27**	**7**	P		**P**	**00 18 22.3**	**+0.6**
	49nm,0.3s,baz=217,slow=12,SNR=8.6							
JHJ				S		**S**	**00 19 14.4**	**-1.4**
	18nm,0.3s,baz=127,slow=20,SNR=3.9							
CBIJ	**Chichi jima**	**3.76**	**137**	P		**P**	**00 18 25.2**	**-0.9**
	5.6nm,0.3s,baz=288,slow=20,SNR=6.4							
CBIJ				S		**S**	**00 19 22.9**	**-0.8**
	31nm,0.3s,baz=294,slow=19,SNR=12							
CBIJ	**Chichi jima**	**3.76**	**137**	P		**P**	**00 18 26.7**	**+0.5**
CBIJ				*e*S		**S**	**00 19 22.1**	**-1.7**
BSO1	**Boso 1**	**4.98**	**16**	P		**P**	**00 18 37.9**	**+0.3**
BSO1				*e*S		**S**	**00 19 44.3**	**-0.6**
JIE	**Ise**	**5.01**	**335**	P		**P**	**00 18 40.2**	**+2.2**
JOD2	**Odawara 2**	**5.38**	**358**	P		**P**	**00 18 44.8**	**+3.1**
JRY	**Ryogami san**	**6.14**	**357**	P		**P**	**00 18 50.5**	**+0.8**
JRY				*e*S		**S**	**00 20 04.8**	**-2.1**
MJAR	**Matsushiro Arr**	**6.71**	**353**	P		**P**	**00 18 56.1**	**+0.2**
	1.0nm,0.3s,baz=192,slow=7.7,SNR=5.5							
MJAR				S		**S**	**00 20 19.8**	**+1.5**
	0.8nm,0.3s,baz=168,slow=16,SNR=4.1							
MAJO	**Matsushiro**	**6.72**	**353**	*e*P		**P**	**00 18 54.9**	**-1.0**
MAT	**Matsushiro**	**6.72**	**353**	P		**P**	**00 18 56.9**	**+1.0**
JHS	**Saijyo**	**7.31**	**316**	P		**P**	**00 19 03.6**	**+1.2**
JMK	**Ichinoseki**	**9.20**	**9**	P		**P**	**00 19 25.2**	**+1.9**
JMK				*e*S		**S**	**00 21 04.5**	**-4.2**
KSRS	**Korea Array**	**12.11**	**312**	P		**P**	**00 19 55.9**	**+0.4**
	0.2nm,0.3s,baz=129,slow=10,SNR=8.1							
SSE	**Sheshan**	**15.66**	**279**	pPKP			00 20 49.3	
SSE				PP			00 23 59.3	
SSE				SS			00 43 19.3	
SSE				AMB	AMB			
	comp=Z,2μm,10.4s							
SSE				LR	LR			
	comp=N,1μm,29.8s							
SSE				LR	LR			
	comp=E,2μm,29.9s							
SSE				LR	LR			
	comp=Z,1μm,20.9s							
MDJ	**Mudanjiang**	**16.60**	**335**	P		**P**	**00 20 42.6**	**-1.3**
BJT	**Baijiatuan**	**21.43**	**304**	*e*P		**P**	**00 21 30.5**	**-0.9**
	comp=Z,5.9nm,0.3s,mb4.5							
HIA	**Hailar**	**24.41**	**328**	*e*P		**P**	**00 21 56.8**	**-1.2**
	comp=Z,6.6nm,0.4s,mb4.4							
KURK	**Kurchatov**	**49.23**	**313**	P		**P**	**00 25 21.3**	**-2.0**
	comp=Z,0.4nm,0.8s,mb2.8,baz=86,slow=11,SNR=3.3							
FITZ	**Fitzroy Crossi**	**49.48**	**197**	*e*P		**P**	**00 25 26.0**	**+0.6**
	comp=Z,0.9nm,0.5s,mb3.4							
WRA	**Warramunga Arr**	**49.75**	**186**	P		**P**	**00 25 27.9**	**+0.5**
	comp=Z,1.1nm,0.5s,mb3.4,baz=4.7,slow=7.9,SNR=8.1							
TKM2	**Tokmak 2**	**51.76**	**303**	*e*P		**P**	**00 25 41.0**	**-1.0**
	comp=Z,1.7nm,0.8s,mb3.3							
UCH	**Uchtor**	**52.65**	**302**	*e*P		**P**	**00 25 48.2**	**-0.3**
	comp=Z,2.2nm,0.5s,mb3.6							
ASAR	**Alice Springs**	**53.48**	**186**	P		**P**	**00 25 54.7**	**+0.1**
	comp=Z,0.4nm,0.3s,mb3.1,baz=3.2,slow=6.6,SNR=5.3							
MBWA	**Marble Bar**	**54.12**	**203**	*e*P		**P**	**00 25 58.5**	**-0.7**
	comp=Z,1.4nm,0.4s,mb3.5							
BVAR	**Borovoye Array**	**54.28**	**316**	P		**P**	**00 26 00.1**	**+0.1**
	comp=Z,0.5nm,0.4s,mb3.1,baz=100,slow=7.2,SNR=5.8							
BRVK	**Borovoye**	**54.35**	**316**	*e*P		**P**	**00 25 58.7**	**-1.8**
	comp=Z,1.6nm,0.6s,mb3.4							
STKA	**Stephens Creek**	**61.45**	**178**	P		**P**	**00 26 50.2**	**+0.9**
STKA	**Stephens Creek**	**61.45**	**178**	P		**P**	**00 26 50.2**	**+0.9**
	comp=Z,1.1nm,0.4s,mb3.6,baz=354,slow=9.2,SNR=4.2							
ARCES	**ARCESS Array B**	**70.08**	**340**	P		**P**	**00 27 44.2**	**+1.1**
	comp=Z,1.2nm,0.8s,mb3.5,baz=61,slow=9.4,SNR=3.5							
FINES	**FINESS Array B**	**74.33**	**333**	P		**P**	**00 28 08.2**	**+0.1**
	comp=Z,4.5nm,1.0s,mb4.1,baz=76,slow=7.3,SNR=2.9							
NOA	**NORSAR Array B**	**80.09**	**337**	P		**P**	**00 28 40.3**	**+0.7**
	comp=Z,1.1nm,1.0s,mb3.4,baz=44,slow=4.8,SNR=3.3							

*ISCJB **26** 00:20:18.0±1.3, 20.41S × 0.05 × 68.8W × 0.1, h111km±13km, mb4.4/7, Error ellipse: s-maj=21.9km s-min=8.5km az=0.3*

*IDC **26** 00:20:20.5±2.6, 20.43S × 68.80W, h118km±21km, mb4.2/5, mb1 4.1/8, mb1mx3.7/18, mbtmp4.0/8, Error ellipse: s-maj=33.8km s-min=20.2km az=85.0*

*NEIC **26** 00:20:21.2±1.0, 20.40S × 68.69W, h124km±10km, mb4.5/8, Error ellipse: s-maj=16.2km s-min=7.5km az=92.0*

NEIC Felt at Iquique, Chile.

ISC 26 00:20:20.6±1.1, **20.38S**±0.05 × **68.7W**±0.1, **h118**km±10km, **n25**, σ**0**°**83**/**26**, **mb4.4**/7, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LPAZ	**La Paz**	**4.11**	**8**	*e*Pn		**Pn**	**00 21 24.5**	**+2.9**
LPAZ				Sn		**Sn**	**00 22 08.8**	**-0.1**
LPAZ	**La Paz**	**4.11**	**8**	P		**Pn**	**00 21 24.4**	**+2.8**
	6.1nm,0.3s,baz=202,slow=6.3,SNR=193							
SIV	**San Ignacio**	**8.48**	**60**	P		**Pn**	**00 22 20.8**	**+0.1**
	3.0nm,0.3s,baz=254,slow=12,SNR=145							
LCO	**Las Campanas**	**8.78**	**191**	*e*Pn		**Pn**	**00 22 25.0**	**+0.3**
	11nm,0.3s							
LCO				*e*Sn		**Sn**	**00 23 52.3**	**-9.5**
CFAA	**Coronel Fontan**	**11.19**	**178**	P		**Pn**	**00 22 52.8**	**-4.3**
	0.1nm,0.3s,baz=344,slow=15,SNR=4.4							
CFAA				S		**Sn**	**00 24 48.6**	**-12**
	0.1nm,0.3s,baz=237,slow=17,SNR=5.1							
CPUP	**Villa Florida**	**12.03**	**122**	*e*Pn		**Pn**	**00 23 07.3**	**-0.9**
CPUP	**Villa Florida**	**12.03**	**122**	P		**Pn**	**00 23 07.7**	**-0.5**
	0.4nm,0.3s,baz=280,slow=11,SNR=9.5							
TRQA	**Tornquist**	**18.56**	**163**	*e*P		**P**	**00 24 28.4**	**+0.1**
	7.0nm,0.6s							
PLCA	**Paso Flores**	**20.35**	**184**	*e*P		**P**	**00 24 47.4**	**-0.2**
	9.2nm,0.9s							
PLCA	**Paso Flores**	**20.35**	**184**	P		**P**	**00 24 46.8**	**-0.7**
	12nm,1.0s,baz=10.0,slow=14,SNR=12							
CELP	**Cerrillos**	**38.27**	**3**	*e*P		**P**	**00 27 29.1**	**-0.5**
SJG	**San Juan**	**38.34**	**4**	*e*P		**P**	**00 27 29.0**	**-1.1**
	13nm,0.7s,mb4.9							
SJG	**San Juan**	**38.34**	**4**	P		**P**	**00 27 28.8**	**-1.3**
	9.6nm,0.6s,mb4.8,baz=180,slow=3.3,SNR=4.7							
MTP	**Monte Pirata**	**38.36**	**5**	*e*P		**P**	**00 27 29.8**	**-0.6**
	8.8nm,0.6s,mb4.8							
CBYP	**Canovanas**	**38.51**	**4**	*e*P		**P**	**00 27 31.5**	**-0.1**
	14nm,0.8s,mb4.9							
DBIC	**Dimbokro**	**68.26**	**74**	*e*P		**P**	**00 31 10.2**	**+0.9**
	5.5nm,0.7s,mb4.5							
DBIC	**Dimbokro**	**68.26**	**74**	P		**P**	**00 31 09.6**	**+0.4**
	5.5nm,0.7s,mb4.5,baz=231,slow=7.5,SNR=9.9							
QSPA	**South Pole Qui**	**69.81**	**180**	*e*P		**P**	**00 31 19.4**	**+1.7**
	1.1nm,0.7s,mb3.8							
HWUT	**Hardware Ranch**	**73.33**	**328**	P		**P**	**00 31 39.4**	**+0.1**
SCHQ	**Schefferville**	**74.92**	**1**	P		**P**	**00 31 48.4**	**+0.2**
	2.8nm,0.8s,mb4.1,baz=167,slow=8.2,SNR=2.3							
TORD	**Torodi Ar. Bea**	**76.82**	**70**	P		**P**	**00 32 00.7**	**+0.7**
TORD				pP		pP	00 32 28.5	-1.2
TORD	**Torodi Ar. Bea**	**76.82**	**70**	P		**P**	**00 32 00.7**	**+0.7**
	2.1nm,0.4s,mb4.2,baz=252,slow=5.8,SNR=93							
TORD				pP		pP	00 32 28.5	-1.2
	1.9nm,0.7s,baz=250,slow=5.9,SNR=5.0							
MAW	**Mawson**	**85.35**	**163**	*e*P		**P**	**00 32 43.8**	**-0.4**
YKA	**Yellowknife Ar**	**90.19**	**341**	pP		pP	00 33 38.1	+0.3
	1.6nm,0.7s,baz=136,slow=4.4,SNR=5.5							
MKAR	**Makanchi Array**	**144.63**	**35**	PKP		PKPdf	00 39 44.2	+1.0
	0.5nm,0.7s,baz=297,slow=4.7,SNR=3.0							
MKAR				pPKP		pPKPdf	00 40 14.4	-0.8
	0.3nm,0.5s,baz=276,slow=3.5,SNR=1.9							

*BJI **26** 00:21:32.4, 30.60N × 83.24E, h10km, mB4.7/12, mb4.3/19, Ms4.0/13, MS7 3.9/13*

*IDC **26** 00:21:32.7±0.9, 30.65N × 83.34E, h0km, mb4.1/12, mb1 4.2/15, mb1mx4.0/30, mbtmp4.0/15, ML3.4/3, MS3.7/11, Ms1 3.7/11, ms1mx3.4/35, Error ellipse: s-maj=26.1km s-min=16.9km az=47.0*

*ISCJB **26** 00:21:34.3±1.6, 30.61N±0.05 × 83.22E±0.04, h23km±12km, mb4.2/31, MS3.7/14, Error ellipse: s-maj=8.7km s-min=5.0km az=31.0*

*NEIC **26** 00:21:34.3±0.3, 30.64N × 83.27E, h10km, mb4.3/15, Error ellipse: s-maj=7.4km s-min=4.5km az=218.0*

*MOS **26** 00:21:35.6±1.1, 30.55N × 83.21E, h36km, mb4.6/17, Error ellipse: s-maj=10.3km s-min=6.1km az=116.7*

ISC 26 00:21:35.8±1.2, **30.61N**±0.04 × **83.27E**±0.04, **h20**km±8km, **n105**, σ**1**°**05**/107, **mb4.2**/31, **MS3.7**/14, **4C-6D, Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PTH	**Pithoragarh**	**2.85**	**249**	*e*PKP		**Pg**	**00 22 28.9**	**-1.5**
PTH				*e*S		**Sg**	**00 23 07.0**	**-0.4**
LSA	**Lhasa**	**6.88**	**96**	Pg		**Pn**	**00 23 19.0**	**+3.4**
LSA				Sg		**Sn**	**00 24 39.3**	**+5.9**
LSA				smax				
	comp=N,10.0nm,0.8s							
LSA				smax				
	comp=E,20nm,0.9s							
LSA	**Lhasa**	**6.88**	**96**	*e*Pn		**Pn**	**00 23 16.9**	**+1.3**
	comp=Z,72nm,1.1s							
LSA	**Lhasa**	**6.88**	**96**	*e*P		**Pn**	**00 23 16.9**	**+1.3**
LSA				pmax	pmax			
	comp=Z,72nm,1.1s							
KSH	**Kashi**	**10.70**	**328**	*e*P		**Pn**	**00 24 08.5**	**+0.5**
KSH				*ep*P			00 24 15.3	
KSH				*e*PP			00 24 17.0	
KSH				*es*P			00 24 20.5	
KSH				S		**Sn**	**00 26 05.0**	**-2.2**
KSH				sS			00 26 16.0	
KSH				*e*SS			00 26 18.5	
KSH				pmax	pmax			
	comp=Z,4.0nm,0.7s							
KSH				pmax	pmax			
	comp=Z,19nm,3.2s							
KSH				LR	LR			
	comp=N,670nm,13.9s							
KSH				LR	LR			
	comp=E,830nm,7.2s							
KSH				LR	LR			
	comp=Z,320nm,6.5s							
KBL	**Kabul**	**12.62**	**292**	*e*Pn		**Pn**	**00 24 35.7**	**+1.5**
	comp=Z,7.3nm,0.6s							
KBL	**Kabul**	**12.62**	**292**	*e*P		**Pn**	**00 24 35.7**	**+1.5**
KBL				pmax	pmax			
	comp=Z,7.0nm,0.6s							
UCH	**Uchtor**	**13.56**	**331**	*e*Pn		**Pn**	**00 24 47.3**	**+0.3**
WMQ	**Urumqi**	**13.65**	**14**	*e*P		**Pn**	**00 24 49.0**	**+0.9**
WMQ				pP			00 24 56.0	
WMQ				sP			00 25 01.0	
WMQ				pmax	pmax			
	comp=Z,23nm,1.1s							
WMQ				pmax	pmax			
	comp=Z,200nm,4.5s							
WMQ				LR	LR			
	comp=N,450nm,14.6s							
WMQ				LR	LR			
	comp=E,220nm,13.6s							
WMQ				LR	LR			
	comp=Z,360nm,13.5s							
HYB	**Hyderabad**	**13.82**	**199**	*i* P		**Pn**	**00 24 50.0**	**-0.6**
AML	**Almayashu**	**13.83**	**329**	*e*Pn		**Pn**	**00 24 50.8**	**+0.1**
AAK	**Ala-Archa**	**13.90**	**332**	*e*Pn		**Pn**	**00 24 51.0**	**-0.7**
AAK				Sn		**Sn**	**00 27 24.6**	**-0.8**
AAK				LR		LR	00 30 22.6	
AAK	**Ala-Archa**	**13.90**	**332**	Pn		**Pn**	**00 24 50.9**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=225,slow=7.1,SNR=2.0							
AAK				Sn		**Sn**	**00 27 24.6**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=311,slow=9.3,SNR=2.9							
AAK				LR		LR	00 30 22.6	
	comp=Z,232nm,19.4s,baz=307,slow=38							
AAK	**Ala-Archa**	**13.90**	**332**	*ce*P		**Pn**	**00 24 50.7**	**-1.0**
AAK				pmax	pmax			
	comp=Z,2.0nm,1.5s							
EKS2	**Erkin-Say**	**14.22**	**330**	*e*Pn		**Pn**	**00 24 56.5**	**+0.4**
	comp=Z,1.2nm,0.7s							
KKAR	**Karatay Array**	**16.09**	**324**	*e*Pn		**Pn**	**00 25 20.9**	**+0.1**
	comp=Z,4.4nm,0.8s							
KKAR	**Karatay Array**	**16.09**	**324**	*e*P		**Pn**	**00 25 20.9**	**+0.1**
KKAR				pmax	pmax			
	comp=Z,4.0nm,0.8s							
GTA	**Gaotai**	**16.13**	**53**	P		**Pn**	**00 25 24.8**	**+3.4**
GTA				pP	pP		00 25 29.0	-1.0
GTA				sP	sP		00 25 32.5	-0.1
GTA				pmax	pmax			
	comp=Z,19nm,1.0s							
GTA				pmax	pmax			
	comp=Z,70nm,6.0s							
GTA				LR	LR			
	comp=N,84nm,8.3s							
GTA				LR	LR			
	comp=E,110nm,6.8s							
GTA				LR	LR			
	comp=Z,85nm,8.0s							
MK31	**Makanchi Array**	**16.18**	**358**	*e*Pn		**Pn**	**00 25 22.9**	**+1.1**
MKAR	**Makanchi Array**	**16.18**	**358**	Pn		**Pn**	**00 25 20.8**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=172,slow=13,SNR=8.1							
LZH	**Lanzhou**	**18.03**	**67**	*e*P		**Pn**	**00 25 45.3**	**+0.2**
LZH				pP		pP	00 25 52.0	+1.0
LZH				sP		sP	00 25 54.3	+0.7
LZH				pmax	pmax			
	comp=Z,20nm,1.3s							
KMI	**Kunming**	**18.06**	**103**	P		**Pn**	**00 25 44.5**	**-1.1**
KMI				pP		pP	00 25 49.5	-1.9
KMI				sP		sP	00 25 51.5	-2.5
KMI				PP			00 25 59.5	
KMI				S		**Sn**	**00 29 06.0**	**-0.5**
KMI				sS		sS	00 29 18.3	-2.6
KMI				SS			00 29 30.0	
KMI				pmax	pmax			
	comp=Z,8.0nm,1.1s							
KMI				pmax	pmax			
	comp=Z,100nm,3.8s							
KMI				LR	LR			
	comp=N,170nm,17.8s							
KMI				LR	LR			
	comp=E,440nm,16.5s							
KMI				LR	LR			
	comp=Z,640nm,19.2s							
CHTO	**Chiang Mai**	**18.43**	**126**	*e*P		**Pn**	**00 25 49.4**	**-0.8**
	comp=Z,1.9nm,0.6s							
CHTO	**Chiang Mai**	**18.43**	**126**	*e*P		**Pn**	**00 25 49.4**	**-0.8**
CHTO				pmax	pmax			
	comp=Z,2.0nm,0.6s							
CM31	**Chiang Mai Arr**	**18.67**	**127**	*e*P		**Pn**	**00 25 53.9**	**+0.8**
	comp=Z,6.6nm,1.0s							
CMAR	**Chiang Mai Arr**	**18.67**	**127**	P		**Pn**	**00 25 53.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=313,slow=11,SNR=13							
CMAR				LR		LR	00 34 36.0	
	comp=Z,104nm,19.5s,baz=300,slow=42							
KURK	**Kurchatov**	**20.38**	**351**	*e*P		**P**	**00 26 11.0**	**-0.2**
KURK	**Kurchatov**	**20.38**	**351**	P		**P**	**00 26 09.3**	**-1.8**
	comp=Z,16nm,1.0s,baz=168,slow=9.6,SNR=33							
KURK	**Kurchatov**	**20.38**	**351**	*ie*P		**P**	**00 26 10.8**	**-0.4**
KURK				pmax	pmax			
	comp=Z,47nm,1.5s							
XAN	**Xi'an**	**21.93**	**74**	P		**P**	**00 26 26.5**	**-1.5**
XAN				pP			00 26 35.3	
XAN				sP		sP	00 26 39.8	+3.7
XAN				PP			00 26 49.0	
XAN				pmax	pmax			
	comp=Z,4.0nm,1.1s,mb3.8							
XAN				pmax	pmax			
	comp=Z,28nm,6.1s							
XAN				LR	LR			
	comp=N,160nm,20.8s,MS3.4							
XAN				LR	LR			
	comp=E,30nm,22.2s,MS3.4							
XAN				LR	LR			
	comp=Z,69nm,15.3s							
ENH	**Enshi**	**22.59**	**84**	P		**P**	**00 26 35.0**	**-0.1**
PALK	**Pallekele**	**23.34**	**186**	*e*P		**P**	**00 26 45.0**	**+1.9**
ZAA0	**Zalesovo Array**	**23.35**	**2**	*e*P		**P**	**00 26 41.8**	**-1.1**
ZALV	**Zalesovo Beam**	**23.35**	**2**	P		**P**	**00 26 41.9**	**-0.9**
	comp=Z,1.8nm,0.5s,mb3.8,baz=191,slow=9.6,SNR=21							
BVAR	**Borovoye Array**	**24.29**	**341**	P		**P**	**00 26 51.6**	**0.0**
	comp=Z,1.8nm,0.6s,mb3.7,baz=150,slow=6.8,SNR=12							
BRVK	**Borovoye**	**24.35**	**341**	*e*P		**P**	**00 26 45.9**	**-6.3**
	comp=Z,3.1nm,0.6s,mb3.9							
BRVK	**Borovoye**	**24.35**	**341**	*ie*P		**P**	**00 26 53.3**	**+1.1**
BRVK				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb3.9							
SONM	**Songino Array**	**24.69**	**39**	P		**P**	**00 26 55.0**	**-0.3**
	comp=Z,6.2nm,0.8s,mb4.2,baz=238,slow=9.9,SNR=6.8							
ZAK	**Zakamensk**	**24.79**	**32**	*e*P		**P**	**00 26 56.9**	**+0.7**
ZAK				pmax	pmax			
	comp=Z,3.0nm,1.0s,mb3.8							
ULN	**Ulaanbaatar**	**25.07**	**40**	*e*P		**P**	**00 26 59.0**	**+0.2**
	comp=Z,12nm,1.0s,mb4.4							
ULN	**Ulaanbaatar**	**25.07**	**40**	*e*P		**P**	**00 26 59.0**	**+0.2**
ULN				pmax	pmax			
	comp=Z,12nm,1.0s,mb4.4							
ABKAR	**Akbulak array**	**25.65**	**323**	*e*P		**P**	**00 27 04.0**	**0.0**
	comp=Z,3.0nm,0.7s,mb3.9							
TLY	**Talaya**	**25.89**	**30**	P		**P**	**00 27 06.7**	**+0.6**
TLY	**Talaya**	**25.89**	**30**	*e*P		**P**	**00 27 08.0**	**+1.9**
TLY				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.0							
TLY				MLR	MLR			
	comp=Z,35nm,14.0s,MS3.0							
AKTK	**Aktyubinsk**	**27.36**	**324**	P		**P**	**00 27 19.9**	**+0.5**
AKTK				LR		LR	00 39 30.9	
AKTO	**Aktyubinsk**	**27.36**	**324**	P		**P**	**00 27 19.9**	**+0.5**
	comp=Z,1.1nm,0.7s,mb3.5,baz=102,slow=13,SNR=5.3							
AKTO				LR		LR	00 39 30.9	
	comp=Z,184nm,18.4s,MS3.7,baz=295,slow=39							
BJT	**Baijiatuan**	**28.31**	**62**	*e*P		**P**	**00 27 26.8**	**-1.3**
	comp=Z,6.7nm,0.4s,mb4.6							
BJT	**Baijiatuan**	**28.31**	**62**	*e*P		**P**	**00 27 26.8**	**-1.3**
BJT				pmax	pmax			
	comp=Z,7.0nm,0.4s							
SVE	**Sverdlovsk**	**30.61**	**335**	*ie*P		**P**	**00 27 49.9**	**+1.7**
SVE				pmax	pmax			
	comp=Z,11nm,1.0s,mb4.6							
ARU	**Arti**	**31.09**	**333**	*e*P		**P**	**00 27 53.9**	**+1.4**
	comp=Z,3.4nm,0.8s,mb4.2							
ARU	**Arti**	**31.09**	**333**	*e*P		**P**	**00 27 53.9**	**+1.4**
ARU				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.2							
GNI	**Garni**	**32.61**	**298**	LR		LR	00 44 19.4	
	comp=Z,68nm,20.2s,MS3.3,baz=263,slow=42							
ZEI	**Tsey**	**33.53**	**302**	*e*P		**P**	**00 28 19.1**	**+5.0**
ZEI				pmax	pmax			
	comp=Z,7.0nm,0.4s,mb4.9							
SOKR	**Solikamsk**	**34.01**	**336**	*ci*P		**P**	**00 28 20.1**	**+2.1**
SOKR				pmax	pmax			
	comp=Z,20nm,1.1s,mb5.0							
NACB	**Ninganchiao**	**34.51**	**91**	*e*P		**P**	**00 28 21.6**	**-1.2**
KIV	**Kislovodsk**	**34.58**	**304**	P		**P**	**00 28 28.0**	**+4.8**
KIV				*e*		pP	00 28 35.0	+5.8
KIV				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.3							
KIV				MLR	MLR			
	comp=Z,100nm,16.0s,MS3.6							
CN2	**Changchun**	**35.70**	**56**	*e*P		**P**	**00 28 37.0**	**+4.1**
CN2				*e*S		**S**	**00 34 07.0**	**-1.6**
CN2				LR	LR			
	comp=N,400nm,16.0s,MS4.3							
CN2				LR	LR			
	comp=E,200nm,16.0s,MS4.3							
CN2				LR	LR			
	comp=Z,300nm,16.0s,MS4.2							
KSRS	**Korea Array**	**37.36**	**67**	P		**P**	**00 28 45.8**	**-1.3**
	comp=Z,2.9nm,0.8s,mb4.2,baz=277,slow=9.8,SNR=7.5							
KSRS				LR		LR	00 45 30.6	
	comp=Z,104nm,19.0s,MS3.6,baz=95,slow=39							
KSRS	**Korea Array**	**37.36**	**67**	P		**P**	**00 28 45.8**	**-1.3**
KSRS				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.2							
KSRS				MLR	MLR			
	comp=Z,104nm,19.0s,MS3.6							
MALT	**Malatya**	**37.47**	**294**	*e*P		**P**	**00 28 47.8**	**-0.2**
VLA	**Vladivostok**	**40.33**	**58**	*i* P		**P**	**00 29 14.3**	**+2.4**
VLA				pmax	pmax			
OBN	**Obninsk**	**41.03**	**320**	*e*P		**P**	**00 29 17.1**	**-0.4**
OBN	**Obninsk**	**41.03**	**320**	*ie*P		**P**	**00 29 16.8**	**-0.7**
OBN				*e*			00 29 32.5	
OBN				S		**S**	**00 35 35.0**	**+6.3**
OBN				pmax	pmax			
	comp=Z,13nm,1.2s,mb4.4							
OBN				MLR	MLR			
	comp=Z,100nm,19.0s,MS3.7							
AKASG	**Malin Array Be**	**44.53**	**313**	LR		LR	00 51 45.2	
	comp=Z,93nm,18.7s,MS3.7,baz=75,slow=41							
VRI	**Vrincioaia**	**46.01**	**306**	*ie*P		**P**	**00 30 00.3**	**+2.6**
PLOR	**Plostina**	**46.06**	**306**	*ie*P		**P**	**00 30 00.8**	**+2.6**
MLR	**Muntele Rosu**	**46.56**	**305**	*ie*P		**P**	**00 30 04.5**	**+2.4**
FINES	**FINESS Array B**	**48.03**	**327**	P		**P**	**00 30 13.2**	**0.0**
	comp=Z,3.4nm,0.9s,mb4.4,baz=86,slow=10,SNR=4.3							
FINES				LR		LR	00 51 42.3	
	comp=Z,72nm,21.1s,MS3.6,baz=32,slow=38							
CRVS	**Cervenica-Dubn**	**49.50**	**310**	*e*P		**P**	**00 30 23.8**	**-1.0**
CRVS	**Cervenica-Dubn**	**49.50**	**310**	*e*P		**P**	**00 30 23.8**	**-1.0**
ARCES	**ARCESS Array B**	**50.50**	**337**	P		**P**	**00 30 32.4**	**+0.3**
	comp=Z,2.5nm,0.7s,mb4.2,baz=92,slow=6.6,SNR=7.0							
SEY	**Seymchan**	**53.76**	**32**	*ie*P		**P**	**00 30 57.2**	**+0.8**
TIP	**Timpagrande**	**54.13**	**298**	*e*P		**P**	**00 31 00.5**	**+1.0**
	comp=Z,4.3nm,0.9s,mb4.4							
NOA	**NORSAR Array B**	**55.12**	**326**	P		**P**	**00 31 05.9**	**-0.4**
	comp=Z,2.4nm,0.9s,mb4.2,baz=89,slow=7.0,SNR=4.5							
NOA				LR		LR	00 56 27.4	
	comp=Z,31nm,18.9s,MS3.4,baz=90,slow=38							
AQU	**L'Aquila**	**55.94**	**303**	P		**

BRTR Keskin Array B 149.52 311 PKPbc PKPbc 00 41 43.5 +0.6
0.6nm,0.8s,baz=70,slow=4.7,SNR=2.8

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*ISCJB **26** 00:35:23.5±0.5,37°.02N±0°.04×35°.60E±0°.04, h11km±7km, Error ellipse: s-maj=8.1km s-min=4.4km az=34.0*
*CSEM **26** 00:35:23.7±0.2,37°.00N×35°.60E, h10km, ML1.9, Error ellipse: s-maj=5.3km s-min=3.9km az=39.0*
*ISK **26** 00:35:23.0,37°.03N×35°.58E, h7km, ML1.9*
*DDA **26** 00:35:24.0,36°.97N×35°.58E, h7km×3km, Md2.7*
ISC 26 00:35:23.7±0.6,**37°.02N**±0°.04×**35°.62E**±0°.05,**h14**km±7km, **n15**,σ0**70**/26,**1D**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.11**	**96**	*e*PG	**Pg**	**00 35 26.0**	**-0.9**
CEYT				*e*SG	**Sg**	**00 35 29.1**	**-0.1**
CEYT	**Ceyhan**	**0.11**	**96**	*e*Pg	**Pg**	**00 35 26.0**	**-0.9**
CEYT				*e*Sg	**Sg**	**00 35 29.1**	**-0.1**
KRTS	**Karatas**	**0.49**	**203**	*e*PG	**Pg**	**00 35 33.4**	**+0.1**
KRTS	**Karatas**	**0.49**	**203**	*e*Pg	**Pg**	**00 35 33.4**	**+0.1**
KOZT	**Kozan**	**0.49**	**20**	*e*PG	**Pg**	**00 35 32.8**	**-0.6**
KOZT				*e*SG	**Sg**	**00 35 40.6**	**+0.7**
KARA	**Karaisali**	**0.51**	**298**	*e*PG	**Pg**	**00 35 32.4**	**-1.3**
KARA				*e*SG	**Sg**	**00 35 40.4**	**-0.1**
KARA	**Karaisali**	**0.51**	**298**	*e*Pg	**Pg**	**00 35 32.4**	**-1.3**
KARA				*e*Sg	**Sg**	**00 35 40.4**	**-0.1**
COBT	**Iskenderun**	**0.72**	**134**	*e*P	**Pg**	**00 35 38.2**	**+0.6**
COBT				*e*S	**Sg**	**00 35 48.2**	**+1.1**
COBT	**Iskenderun**	**0.72**	**134**	*e*P	**Pg**	**00 35 38.2**	**+0.6**
COBT				*e*S	**Sg**	**00 35 48.2**	**+1.1**
GULE	**Gulek**	**0.72**	**292**	↓*i*P	**Pg**	**00 35 38.0**	**+0.4**
GULE				*i* S	**Sg**	**00 35 47.9**	**+0.7**
GULE	**Gulek**	**0.72**	**292**	*i* P	**Pg**	**00 35 38.0**	**+0.3**
GULE				*i* S	**Sg**	**00 35 47.9**	**+0.7**
YAYL	**Yayladag**	**1.06**	**158**	*e*P	**Pb**	**00 35 43.1**	**-0.7**
YAYL				*e*S	**Sb**	**00 35 56.8**	**-0.7**
YAYL	**Yayladag**	**1.06**	**158**	*e*P	**Pb**	**00 35 43.1**	**-0.6**
YAYL				*e*S	**Sb**	**00 35 56.8**	**-0.7**
IKL	**Isikli**	**1.74**	**244**	*e*PN	**Pn**	**00 35 54.0**	**+0.6**
IKL	**Isikli**	**1.74**	**244**	*e*Pn	**Pn**	**00 35 54.0**	**+0.7**

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*ISCJB **26** 00:46:49.0±1.7,56°.05N±0°.05×153°.08W±0°.09, h15km±15km, mb3.7/5, MS3.0/3, Error ellipse: s-maj=10.4km s-min=6.1km az=43.1*
*IDC **26** 00:46:49.1±1.2,55°.64N×153°.69W, h0km, mb3.6/6, mb1 3.9/7, mb1mx3.7/25, mbtmp3.6/7, ML3.7/1, MS3.1/4, Ms1 3.1/4, ms1mx2.7/34, Error ellipse: s-maj=28.6km s-min=23.0km az=12.0*
*NEIC **26** 00:46:51.4,55°.90N×152°.99W, h25km, ML3.5(AEIC), After AEIC.*
ISC 26 00:46:50.6±1.6,**56°.05N**±0°.05×**153°.16W**±0°.09,**h9**km±11km, **n27**,σ1**§13**/38,**mb3.7**/5,**MS3.0**/3,**Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.18**	**357**	P	**Pb**	**00 47 12.9**	**-0.1**
OHAK				S	**Sb**	**00 47 29.6**	**+1.3**
KDAK	**Kodiak Island**	**1.76**	**10**	P	**Pn**	**00 47 21.2**	**0.0**
KDAK				S	**Sn**	**00 47 43.5**	**-0.3**
KDAK	**Kodiak Island**	**1.76**	**10**	Pn	**Pn**	**00 47 20.8**	**-0.5**
KDAK	11nm,0.3s,baz=208,slow=7.4,SNR=210			Sn	**Sn**	**00 47 43.0**	**-0.8**
CHGN	**Chignik**	**2.95**	**277**	*e*Pn	**Pn**	**00 47 36.0**	**-1.5**
CHGN	22nm,0.3s,baz=264,slow=19,SNR=18			*e*Sn	**Sn**	**00 48 14.0**	**+1.0**
BRLK	**Bradley Lake**	**3.92**	**17**	P	**Pn**	**00 47 50.6**	**-0.2**
SDPT	**Sand Point**	**4.20**	**263**	P	**Pn**	**00 47 52.7**	**-2.0**
RSO	**Redoubt South**	**4.43**	**3**	*e*Pn	**Pn**	**00 47 58.7**	**+0.9**
RSO				*e*Sn	**Sn**	**00 48 15.1**	**+1.7**
SEW	**Seward**	**4.52**	**24**	P	**Pn**	**00 47 59.4**	**+0.3**
SEW				S	**Sn**	**00 48 51.2**	**-0.3**
SLKM	**Skilak Lake**	**4.73**	**18**	*e*Pn	**Pn**	**00 48 02.1**	**+0.1**
SLKM				Sn	**Sn**	**00 48 57.9**	**+1.0**
RC01	**Rabbit Creek A**	**5.36**	**18**	P	**Pn**	**00 48 10.0**	**-0.6**
RC01				S	**Sn**	**00 49 10.5**	**-1.8**
SML	**Sawmill** 5.9nm,1.1s	**6.29**	**21**	*e*Pn	**Pn**	**00 48 23.5**	**+0.1**
SML				*e*Sn	**Sn**	**00 49 33.2**	**-2.0**
BMRM	**Bremner River** 11nm,0.7s	**6.66**	**39**	*e*Pn	**Pn**	**00 48 28.8**	**+0.3**
BMRM				Sn	**Sn**	**00 49 44.2**	**-0.1**
PPLA	**Purkeypile** 9.7nm,0.8s	**6.88**	**4**	*e*Pn	**Pn**	**00 48 32.5**	**+0.9**
PPLA				Sn	**Sn**	**00 49 49.3**	**-0.6**
TTA	**Tatalina** 8.3nm,0.8s	**7.05**	**349**	*e*Pn	**Pn**	**00 48 34.7**	**+0.9**
TTA				Sn	**Sn**	**00 50 09.3**	**+15**
TRF	**Thorofare Moun**	**7.56**	**10**	P	**Pn**	**00 48 39.9**	**-0.9**
BPAW	**Bear Paw Mtn.**	**8.15**	**7**	P	**Pn**	**00 48 48.6**	**-0.2**
BPAW				*e*Sn	**Sn**	**00 50 22.2**	**+1.3**
PNL	**Peninsula**	**8.18**	**58**	P	**Pn**	**00 48 47.3**	**-2.0**
ILAR	**Eielson Array** 0.3nm,0.3s,baz=204,slow=13,SNR=20	**9.28**	**17**	Pn	**Pn**	**00 49 05.5**	**+1.3**
ILAR	0.3nm,0.3s,baz=206,slow=22,SNR=6.1			Sn	**Sn**	**00 50 45.7**	**-2.9**
DLBC	**Dease Lake** comp=Z,80nm,18.7s,baz=116,slow=35	**12.74**	**70**	LR	LR	00 54 25.7	
YKA	**Yellowknife Ar** 1.0nm,0.7s,baz=270,slow=11,SNR=2.5	**20.47**	**56**	P	**P**	**00 51 31.6**	**+3.4**
PETK	**Petropavlovsk-** comp=Z,44nm,19.1s,MS3.1,baz=263,slow=33	**28.15**	**285**	LR	LR	01 02 14.9	
NVAR	**Mina Array Bea** 0.2nm,0.2s,mb3.4,baz=272,slow=6.0,SNR=2.6	**29.08**	**113**	P	**P**	**00 52 53.0**	**+1.9**
ULM	**Lac du Bonnet** comp=Z,23nm,18.7s,MS2.9,baz=320,slow=37	**33.97**	**75**	LR	LR	01 07 53.1	
TXAR	**Lajitas Array** 0.6nm,0.8s,mb3.4,baz=305,slow=4.4,SNR=3.7	**43.81**	**106**	P	**P**	**00 54 57.9**	**+1.3**
KSRS	**Korea Array** 0.4nm,0.4s,mb3.7,baz=44,slow=6.6,SNR=4.3	**54.05**	**285**	P	**P**	**00 56 14.2**	**-0.8**
KSRS	comp=Z,18nm,19.8s,MS3.1,baz=115,slow=34			LR	LR	01 17 41.7	
ZALV	**Zalesovo Beam** 0.4nm,0.5s,mb3.8,baz=12,slow=7.9,SNR=2.9	**60.54**	**325**	P	**P**	**00 57 00.9**	**+0.3**
CMAR	**Chiang Mai Arr** 0.7nm,0.3s,mb4.2,baz=19,slow=4.6,SNR=5.6	**84.44**	**295**	P	**P**	**00 59 23.1**	**-0.3**

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*ISK **26** 00:53:57.4,37°.01N×29°.17E, h8km, MD2.8*
*ISCJB **26** 00:53:58.0±0.6,37°.01N±0°.04×29°.17E±0°.03, h10km, Error ellipse: s-maj=6.1km s-min=4.0km az=2.8*
*CSEM **26** 00:53:58.0±0.1,37°.01N×29°.16E, h5km, MD2.8, Error ellipse: s-maj=3.9km s-min=2.3km az=3.0*
*DDA **26** 00:53:58.8,37°.02N×29°.22E, h7km×5km, Md2.8*
ISC 26 00:53:58.4±0.6,**37°.00N**±0°.04×**29°.17E**±0°.04,**h9**km±11km, **n18**,σ0**§57**/31,**1C**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**60**	*e*PG	**Pg**	**00 54 03.8**	**-0.7**
GLHS				*e*SG	**Sg**	**00 54 08.8**	**+0.2**
GLHS	**Glhisar (BURDU**	**0.31**	**60**	*e*Pg	**Pg**	**00 54 03.8**	**-0.7**
GLHS				*e*Sg	**Sg**	**00 54 08.8**	**+0.2**
GOLH	**Golhisar**	**0.39**	**54**	↑*i*P	**Pg**	**00 54 04.9**	**-1.2**
GOLH				*i* S	**Sg**	**00 54 11.7**	**+0.3**
GOLH	**Golhisar**	**0.39**	**54**	*i* P	**Pg**	**00 54 04.9**	**-1.2**
GOLH				*i* S	**Sg**	**00 54 11.6**	**+0.3**
ELL	**Elmali**	**0.65**	**113**	*e*PG	**Pg**	**00 54 10.3**	**-0.6**
ELL				*e*SG	**Sg**	**00 54 19.9**	**+0.6**
ELL	**Elmali**	**0.65**	**113**	*e*Pg	**Pg**	**00 54 10.3**	**-0.6**
ELL				*e*Sg	**Sg**	**00 54 19.9**	**+0.5**
DNZL	**Cakiroluk**	**0.69**	**352**	*e*P	**Pg**	**00 54 12.5**	**+0.7**
DNZL				*e*S	**Sg**	**00 54 20.9**	**+0.1**
DNZL	**Cakiroluk**	**0.69**	**352**	*e*P	**Pg**	**00 54 12.5**	**+0.8**
DNZL				*e*S	**Sg**	**00 54 20.9**	**+0.1**
YER	**Yerkesik**	**0.72**	**281**	*e*PG	**Pg**	**00 54 11.6**	**-0.6**
YER				*e*SG	**Sg**	**00 54 22.0**	**+0.4**
YER	**Yerkesik**	**0.72**	**281**	*e*Pg	**Pg**	**00 54 11.6**	**-0.6**
YER				*e*Sg	**Sg**	**00 54 22.0**	**+0.4**
AKAS	**Kas**	**0.85**	**155**	*e*P	**Pg**	**00 54 14.9**	**+0.3**
AKAS				*e*S	**Sg**	**00 54 31.4**	**+5.7**
AKAS	**Kas**	**0.85**	**155**	*e*P	**Pg**	**00 54 14.9**	**+0.2**
KORT	**Korkueli**	**0.95**	**90**	*e*P	**Pg**	**00 54 16.9**	**+0.3**
KORT				*e*S	**Sg**	**00 54 33.0**	**+4.0**
KORT	**Korkueli**	**0.95**	**90**	*e*P	**Pg**	**00 54 16.9**	**+0.3**
KORT				*e*S	**Sg**	**00 54 33.0**	**+4.0**
DAT	**Datca**	**1.30**	**258**	*e*PN	**Pn**	**00 54 22.9**	**+0.1**
DAT	**Datca**	**1.30**	**258**	*e*Pn	**Pn**	**00 54 22.9**	**+0.2**
BODT	**Bodrum**	**1.48**	**273**	*e*PN	**Pn**	**00 54 25.1**	**-0.1**
BODT	**Bodrum**	**1.48**	**273**	*e*Pn	**Pn**	**00 54 25.1**	**-0.1**

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*NEIC **26** 01:11:52.6±2.1,35°.66N×0°.56W, h10km, MG3.8(MDD), Error ellipse: s-maj=25.3km s-min=7.3km az=158.0*
*ISCJB **26** 01:11:54.8±0.4,35°.99N±0°.03×0°.70W±0°.03, h10km, Error ellipse: s-maj=4.6km s-min=2.9km az=16.2*
*CRAAG **26** 01:11:54.7,35°.81N×0°.63W, Ml3.4*
*MDD **26** 01:11:57.1±0.6,36°.00N×0°.79W, h0km, mbLg2.3/20, Error ellipse: s-maj=7.6km s-min=4.6km az=7.0, PRIMO*
*CSEM **26** 01:11:58.4±0.3,36°.12N×0°.74W, h10km, ML3.4, Error ellipse: s-maj=8.7km s-min=4.7km az=20.0*
ISC 26 01:11:55.9±0.5,**35°.98N**±0°.03×**0°.75W**±0°.02,**h10**km,**n128**, σ1**§42**/201,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	**Oran**	**0.30**	**147**	P	**Pg**	**01 11 58.0**	**-3.9**
OJBR	**Djebel Berber**	**0.97**	**114**	P	**Sg**	**01 12 24.0**	**-3.4**
OJGS	**Djebel Guires**	**1.31**	**111**	P	**Pn**	**01 12 25.0**	**+4.7**
OJGS	**Djebel Guires**	**1.31**	**111**	P	**Pn**	**01 12 25.0**	**+4.7**
EANR	**'Ain N'Sour**	**1.50**	**91**	P	**Pg**	**01 12 24.0**	**-0.8**
EANR	**'Ain N'Sour**	**1.50**	**91**	P	**Pg**	**01 12 24.0**	**-0.8**
EANR	**'Ain N'Sour**	**1.50**	**91**	P	**Pn**	**01 12 24.0**	**-0.8**
ENIJ	**Nijar**	**1.54**	**311**	P	**Pn**	**01 12 23.8**	**+0.4**
ENIJ				S	**Sn**	**01 12 42.3**	**-1.1**
ENIJ	**Nijar** 4.4nm,0.1s,SNR=10	**1.54**	**311**	P	**Pn**	**01 12 23.0**	**-0.3**
ENIJ	22nm,0.3s,SNR=12			S	**Sn**	**01 12 42.3**	**-1.1**
ENIJ	**Nijar** 4.4nm,0.1s,SNR=10	**1.54**	**311**	P	**Pn**	**01 12 23.0**	**-0.3**
ENIJ	22nm,0.3s,SNR=12			S	**Sn**	**01 12 42.3**	**-1.1**
ENIJ	**Nijar** 4.4nm,0.1s,SNR=10	**1.54**	**311**	P	**Pn**	**01 12 23.8**	**+0.4**
ENIJ	7.2nm,0.1s,SNR=12			S	**Sn**	**01 12 42.3**	**-1.1**
ECHF	**Ech Chlef**	**1.70**	**84**	P	**Pg**	**01 12 29.5**	**+0.9**
ECHF	**Ech Chlef**	**1.70**	**84**	P	**Pg**	**01 12 29.5**	**+0.9**
ECHA	**Ech Chlef**	**1.72**	**84**	P	**Pg**	**01 12 29.5**	**+0.5**
ECHA	**Ech Chlef**	**1.72**	**84**	P	**Pg**	**01 12 29.5**	**+0.5**
ETRT	**Tiaret**	**1.77**	**109**	P	**Pg**	**01 12 28.5**	**-1.4**
ETRT	**Tiaret**	**1.77**	**109**	P	**Pg**	**01 12 28.5**	**-1.4**
ETRT	**Tiaret**	**1.77**	**109**	P	**Pg**	**01 12 28.5**	**-1.4**
ETRT	**Tiaret**	**1.77**	**109**	P	**Pg**	**01 12 28.5**	**-1.4**
EALB	**Alboran**	**1.85**	**269**	P	**Pn**	**01 12 26.4**	**-1.3**
EALB				S	**Sn**	**01 12 49.9**	**-1.3**
EALB	**Alboran** 3.2nm,0.1s,SNR=7.9	**1.85**	**269**	P	**Pn**	**01 12 26.4**	**-1.4**
EALB	18nm,0.4s,SNR=7.9			S	**Sn**	**01 12 49.9**	**-1.3**
EALB	**Alboran** 3.2nm,0.1s,SNR=7.9	**1.85**	**269**	P	**Pn**	**01 12 26.4**	**-1.4**
EALB	18nm,0.4s,SNR=7.9			S	**Sn**	**01 12 49.9**	**-1.3**
EBNR	**Beni Rached**	**1.87**	**80**	P	**Pg**	**01 12 31.0**	**-0.8**
EBNR	**Beni Rached**	**1.87**	**80**	P	**Pg**	**01 12 31.0**	**-0.8**
EMUR	**La Murta**	**1.90**	**348**	P	**Pn**	**01 12 28.2**	**-0.2**
EMUR				S	**Sn**	**01 12 51.0**	**-1.4**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMUR	**La Murta** 0.8nm,0.1s,SNR=17	**1.90**	**348**	P	**Pn**	**01 12 28.2**	**-0.2**
EMUR	8.6nm,0.2s,SNR=6.9			S	**Sn**	**01 12 51.0**	**-1.4**
EMUR	SNR=7.9			T		01 14 11.8	
EMUR	**La Murta** 0.8nm,0.1s,SNR=17	**1.90**	**348**	P	**Pn**	**01 12 28.2**	**-0.2**
EMUR	8.6nm,0.2s,SNR=6.9			S	**Sn**	**01 12 51.0**	**-1.4**
EMUR	SNR=7.9			T		01 14 11.8	
EMUR	**La Murta** 0.8nm,0.1s,SNR=17	**1.90**	**348**	P	**Pn**	**01 12 28.2**	**-0.2**
EMUR	7.6nm,0.2s,SNR=6.9			S	**Sn**	**01 12 51.0**	**-1.4**
EBER	**Berja**	**1.95**	**299**	P	**Pn**	**01 12 28.8**	**-0.3**
EBER				S	**Sn**	**01 12 54.7**	**+1.0**
EBER	**Berja** 1.1nm,0.1s,SNR=12	**1.95**	**299**	P	**Pn**	**01 12 28.8**	**-0.3**
EBER	20nm,0.4s,SNR=8.2			S	**Sn**	**01 12 54.7**	**+1.0**
EBER	**Berja** 1.1nm,0.1s,SNR=12	**1.95**	**299**	P	**Pn**	**01 12 28.8**	**-0.3**
EBER	20nm,0.4s,SNR=8.2			S	**Sn**	**01 12 54.7**	**+1.0**
EBER	**Berja** 1.1nm,0.1s,SNR=12	**1.95**	**299**	P	**Pn**	**01 12 28.8**	**-0.3**
EBER	5.7nm,0.1s,SNR=8.2			S	**Sn**	**01 12 54.7**	**+1.0**
EHUE	**Huescar**	**2.35**	**322**	P	**Pn**	**01 12 36.9**	**+2.3**
EHUE				S	**Sn**	**01 13 05.2**	**+1.7**
EHUE	**Huescar** 0.9nm,0.1s,SNR=4.0	**2.35**	**322**	P	**Pn**	**01 12 36.9**	**+2.3**
EHUE	1.8nm,0.2s,SNR=7.9			S	**Sn**	**01 13 05.2**	**+1.7**
EHUE	**Huescar** 0.9nm,0.1s,SNR=4.0	**2.35**	**322**	P	**Pn**	**01 12 36.9**	**+2.3**
EHUE	1.8nm,0.2s,SNR=7.9			S	**Sn**	**01 13 05.2**	**+1.7**
EHUE	**Huescar** 0.9nm,0.1s,SNR=4.0	**2.35**	**322**	P	**Pn**	**01 12 36.9**	**+2.3**
EHUE	0.6nm,0.1s,SNR=7.9			S	**Sn**	**01 13 05.2**	**+1.7**
EGUA	**Guajares** 9.0nm,0.3s,SNR=7.9	**2.42**	**291**	P	**Pn**	**01 12 36.2**	**+0.6**
EGUA	8.8nm,0.2s,SNR=7.9			S	**Sn**	**01 13 03.8**	**-1.6**
EGUA	**Guajares** 9.0nm,0.3s,SNR=7.9	**2.42**	**291**	P	**Pn**	**01 12 36.2**	**+0.6**
EGUA	8.8nm,0.2s,SNR=7.9			S	**Sn**	**01 13 03.8**	**-1.6**
EQUE	**Quentar** 0.8nm,0.2s,SNR=10	**2.48**	**300**	P	**Pn**	**01 12 37.7**	**+1.2**
EQUE	3.0nm,0.3s,SNR=7.9			S	**Sn**	**01 13 06.5**	**-0.3**
EQUE	**Quentar** 0.8nm,0.2s,SNR=10	**2.48**	**300**	P	**Pn**	**01 12 37.7**	**+1.2**
EQUE	3.0nm,0.3s,SNR=7.9			S	**Sn**	**01 13 06.5**	**-0.3**
EQUE	**Quentar** 0.8nm,0.2s,SNR=10	**2.48**	**300**	P	**Pn**	**01 12 37.7**	**+1.3**
EQUE	0.6nm,0.1s,SNR=7.9			S	**Sn**	**01 13 06.5**	**-0.3**
EQES	**Quesada**	**2.60**	**315**	P	**Pn**	**01 12 40.2**	**+2.1**
EQES				S	**Sn**	**01 13 11.8**	**+2.1**
EQES	**Quesada** 1.2nm,0.1s,SNR=49	**2.60**	**315**	P	**Pn**	**01 12 40.2**	**+2.1**
EQES	9.9nm,0.3s,SNR=7.9			S	**Sn**	**01 13 11.8**	**+2.1**
EQES	**Quesada** 1.2nm,0.1s,SNR=49	**2.60**	**315**	P	**Pn**	**01 12 40.2**	**+2.1**
EQES	9.9nm,0.3s,SNR=7.9			S	**Sn**	**01 13 11.8**	**+2.1**
EQES	**Quesada** 1.2nm,0.1s,SNR=49	**2.60**	**315**	P	**Pn**	**01 12 40.2**	**+2.2**
EQES	1.0nm,0.1s,SNR=7.9			S	**Sn**	**01 13 11.8**	**+2.1**
ECOG	**Cogollos-Vega**	**2.61**	**301**	P	**Pn**	**01 12 40.8**	**+2.6**
ECOG	**Cogollos-Vega** 0.5nm,0.1s,SNR=7.9	**2.61**	**301**	P	**Pn**	**01 12 40.7**	**+2.6**
ECOG	**Cogollos-Vega** 0.5nm,0.1s,SNR=7.9	**2.61**	**301**	P	**Pn**	**01 12 40.7**	**+2.6**
ECOG	**Cogollos-Vega** 0.5nm,0.1s,SNR=7.9	**2.61**	**301**	P	**Pn**	**01 12 40.7**	**+2.6**
ETOB	**Tobarra**	**2.73**	**347**	P	**Pn**	**01 12 41.1**	**+1.2**
ETOB				S	**Sn**	**01 13 12.9**	**-0.1**
ETOB	**Tobarra** 1.4nm,0.1s,SNR=35	**2.73**	**347**	P	**Pn**	**01 12 41.1**	**+1.2**
ETOB	7.2nm,0.2s,SNR=7.9			S	**Sn**	**01 13 12.9**	**-0.1**
ETOB	**Tobarra** 1.4nm,0.1s,SNR=35	**2.73**	**347**	P	**Pn**	**01 12 41.1**	**+1.2**
ETOB	7.2nm,0.2s,SNR=7.9			S	**Sn**	**01 13 12.9**	**-0.1**
ETOB	**Tobarra** 1.4nm,0.1s,SNR=35	**2.73**	**347**	P	**Pn**	**01 12 41.1**	**+1.2**
ETOB	1.0nm,0.1s,SNR=7.9			S	**Sn**	**01 13 12.9**	**-0.1**
EBEN	**Beniarda**	**2.75**	**9**	P	**Pn**	**01 12 39.9**	**-0.2**
EBEN				S	**Sn**	**01 13 12.3**	**-1.1**
EBEN	**Beniarda** 0.4nm,0.1s,SNR=21	**2.75**	**9**	P	**Pn**	**01 12 39.9**	**-0.2**
EBEN	3.4nm,0.2s,SNR=7.9			S	**Sn**	**01 13 12.3**	**-1.1**
EBEN	**Beniarda** 0.4nm,0.1s,SNR=21	**2.75**	**9**	P	**Pn**	**01 12 39.9**	**-0.2**
EBEN	3.4nm,0.2s,SNR=7.9			S	**Sn**	**01 13 12.3**	**-1.1**
EBEN	**Beniarda** 0.4nm,0.1s,SNR=21	**2.75**	**9**	P	**Pn**	**01 12 39.9**	**-0.2**
EBEN	0.8nm,0.1s,SNR=7.9			S	**Sn**	**01 13 12.3**	**-1.0**
EVIA	**Vianos**	**3.00**	**333**	P	**Pn**	**01 12 44.9**	**+1.4**
EVIA				S	**Sn**	**01 13 21.5**	**+2.0**
EVIA	**Vianos** 1.2nm,0.1s,SNR=7.9	**3.00**	**333**	P	**Pn**	**01 12 44.9**	**+1.4**
EVIA	4.0nm,0.2s,SNR=7.9			S	**Sn**	**01 13 21.5**	**+2.0**
EVIA	**Vianos** 1.2nm,0.1s,SNR=7.9	**3.00**	**333**	P	**Pn**	**01 12 44.9**	**+1.4**
EVIA	4.0nm,0.2s,SNR=7.9			S	**Sn**	**01 13 21.5**	**+2.0**
EVIA	**Vianos** 1.2nm,0.1s,SNR=7.9	**3.00**	**333**	P	**Pn**	**01 12 44.9**	**+1.4**
EVIA	1.5nm,0.2s,SNR=7.9			S	**Sn**	**01 13 21.5**	**+2.0**
EMHD	**Djebel Mahouad**	**3.01**	**85**	P	**Pn**	**01 12 44.0**	**+0.4**
EMHD	**Djebel Mahouad**	**3.01**	**85**	P	**Pn**	**01 12 44.0**	**+0.4**
EMHD	**Djebel Mahouad**	**3.01**	**85**	P	**Pn**	**01 12 44.0**	**+0.4**
EMHD	**Djebel Mahouad**	**3.01**	**85**	P	**Pn**	**01 12 44.0**	**+0.4**
EBAN	**Banos Encina**	**3.26**	**313**	P	**Pn**	**01 12 49.5**	**+2.4**
EBAN	0.5nm,0.2s,SNR=7.9			S	**Sn**	**01 13 25.8**	**-0.2**
EBAN	**Banos Encina** 1.5nm,0.2s,SNR=7.9	**3.26**	**313**	P	**Pn**	**01 12 49.5**	**+2.4**
EBAN	0.5nm,0.2s,SNR=7.9			S	**Sn**	**01 13 25.8**	**-0.2**
EBAN	**Banos Encina** 1.5nm,0.2s,SNR=7.9	**3.26**	**313**	P	**Pn**	**01 12 49.5**	**+2.4**
EBAN	0.5nm,0.2s,SNR=7.9			S	**Sn**	**01 13 25.8**	**-0.2**
EBAN	**Banos Encina** 1.5nm,0.2s,SNR=7.9	**3.26**	**313**	P	**Pn**	**01 12 49.5**	**+2.4**
EBAN	0.5nm,0.2s,SNR=7.9			S	**Sn**	**01 13 25.8**	**-0.2**
EMIJ	**Mijas**	**3.30**	**281**	P	**Pn**	**01 12 47.1**	**-0.6**
EMIJ				S	**Sn**	**01 13 23.7**	**-3.3**
EMIJ	**Mijas** 0.2nm,0.1s,SNR=7.9	**3.30**	**281**	P	**Pn**	**01 12 47.1**	**-0.6**
EMIJ	2.1nm,0.2s,SNR=7.9			S	**Sn**	**01 13 23.7**	**-3.3**
EMIJ	**Mijas** 0.2nm,0.1s,SNR=7.9	**3.30**	**281**	P	**Pn**	**01 12 47.1**	**-0.6**
EMIJ	2.1nm,0.2s,SNR=7.9			S	**Sn**	**01 13 23.7**	**-3.3**
EMIJ	**Mijas** 0.2nm,0.1s,SNR=7.9	**3.30**	**281**	P	**Pn**	**01 12 47.1**	**-0.6**
EMIJ	0.5nm,0.1s,SNR=7.9			S	**Sn**	**01 13 23.7**	**-3.3**
EIBI	**Ibiza**	**3.47**	**28**	P	**Pn**	**01 12 49.6**	**-0.4**
EIBI				S	**Sn**	**01 13 28.2**	**-2.8**
EIBI	**Ibiza** 7.9nm,0.1s,SNR=9.8	**3.47**	**28**	P	**Pn**	**01 12 49.6**	**-0.4**
EIBI	4.5nm,0.2s,SNR=7.9			S	**Sn**	**01 13 28.2**	**-2.8**
EIBI	**Ibiza** 7.9nm,0.1s,SNR=9.8	**3.47**	**28**	P	**Pn**	**01 12 49.6**	**-0.4**

EIBI					S		Sn	01 13 28.2	-2.8
	4.5nm,0.2s,SNR=7.9								
EIBI	**Ibiza**	**3.47**	**28**	P		**Pn**		01 12 49.6	-0.3
	7.9nm,0.1s,SNR=9.8								
EIBI					S		Sn	01 13 28.2	-2.8
	3.1nm,0.2s,SNR=7.9								
ECHE	**Chera**	**3.61**	**357**	P		**Pn**		01 12 53.6	+1.8
	1.4nm,0.3s,SNR=7.9								
ECHE					S		Sn	01 13 33.7	-0.8
	1.8nm,0.3s,SNR=7.9								
ECHE	**Chera**	**3.61**	**357**	P		**Pn**		01 12 53.6	+1.8
	1.4nm,0.3s,SNR=7.9								
ECHE					S		Sn	01 13 33.7	-0.8
	1.8nm,0.3s,SNR=7.9								
EADA	**Adamuz**	**3.76**	**307**	S		**Sn**		01 13 36.8	-1.4
	1.0nm,0.2s,SNR=7.9								
EADA	**Adamuz**	**3.76**	**307**	S		**Sn**		01 13 36.8	-1.4
	1.0nm,0.2s,SNR=7.9								
EADA	**Adamuz**	**3.76**	**307**	S		**Sn**		01 13 36.8	-1.4
	0.4nm,0.1s,SNR=7.9								
EMOS	**Mosqueruela**	**4.38**	**3**	P		**Pn**		01 13 04.1	+1.6
EMOS					S		Sn	01 13 53.0	-0.5
EMOS	**Mosqueruela**	**4.38**	**3**	P		**Pn**		01 13 04.1	+1.6
	1.0nm,0.1s,SNR=4.0								
EMOS					S		Sn	01 13 53.0	-0.5
	1.1nm,0.2s,SNR=7.9								
EMOS	**Mosqueruela**	**4.38**	**3**	P		**Pn**		01 13 04.1	+1.6
	1.0nm,0.1s,SNR=4.0								
EMOS					S		Sn	01 13 53.0	-0.5
	1.1nm,0.2s,SNR=7.9								
EMOS	**Mosqueruela**	**4.38**	**3**	P		**Pn**		01 13 04.1	+1.6
	1.0nm,0.1s,SNR=4.0								
EMOS					S		Sn	01 13 53.0	-0.6
	0.4nm,0.1s,SNR=7.9								
ESDC	**Sonseca Array**	**4.48**	**326**	P		**Pn**		01 13 06.1	+2.2
ESDC	**Sonseca Array**	**4.48**	**326**	P		**Pn**		01 13 06.1	+2.2
	0.1nm,0.2s,baz=143,slow=14,SNR=8.5								
ESDC	**Sonseca Array**	**4.48**	**326**	P		**Pn**		01 13 06.1	+2.2
	0.1nm,0.2s,baz=143,slow=14,SNR=8.5								
ESDC	**Sonseca Array**	**4.48**	**326**	P		**Pn**		01 13 06.1	+2.3
	0.1nm,0.2s,baz=143,SNR=8.5								
ESLA	**Sonseca Array**	**4.48**	**326**	*e*Pn		**Pn**		01 13 05.5	+1.7
ESLA				*e*S		**Sn**		01 13 53.2	-2.7
ESLA	**Sonseca Array**	**4.48**	**326**	*e*Pn		**Pn**		01 13 05.5	+1.7
ESLA				*e*S		**Sn**		01 13 53.2	-2.8
PAB	**San Pablo**	**4.56**	**322**	*e*P		**Pn**		01 13 06.9	+1.9
PAB	**San Pablo**	**4.56**	**322**	*e*P		**Pn**		01 13 06.9	+1.9
ETOS	**Mallorca**	**4.72**	**36**	P		**Pn**		01 13 07.0	-0.1
ETOS	**Mallorca**	**4.72**	**36**	P		**Pn**		01 13 07.0	-0.1
	0.5nm,0.1s,SNR=7.6								
ETOS					S		Sn	01 14 00.4	-1.4
	1.3nm,0.2s,SNR=7.9								
ETOS	**Mallorca**	**4.72**	**36**	P		**Pn**		01 13 07.0	-0.1
	0.5nm,0.1s,SNR=7.6								
ETOS					S		Sn	01 14 00.4	-1.4
	1.3nm,0.2s,SNR=7.9								
ETOS	**Mallorca**	**4.72**	**36**	P		**Pn**		01 13 07.0	-0.1
	0.5nm,0.1s,SNR=7.6								
ERTA	**Horta de San J**	**5.04**	**9**	P		**Pn**		01 13 12.8	+1.3
ERTA	**Horta de San J**	**5.04**	**9**	P		**Pn**		01 13 12.9	+1.3
	1.2nm,0.1s,SNR=14								
ERTA					S		Sn	01 14 09.1	-0.8
	1.1nm,0.2s,SNR=7.9								
ERTA	**Horta de San J**	**5.04**	**9**	P		**Pn**		01 13 12.9	+1.3
	1.2nm,0.1s,SNR=14								
ERTA					S		Sn	01 14 09.1	-0.8
	1.1nm,0.2s,SNR=7.9								
ERTA	**Horta de San J**	**5.04**	**9**	P		**Pn**		01 13 12.9	+1.3
	1.2nm,0.1s,SNR=14								
PBAR	**Barrancos**	**5.48**	**295**	*e*Pn		**Pn**		01 13 19.4	+1.7
PBAR				*e*Sn		**Sn**		01 14 19.7	-1.1
PBAR	**Barrancos**	**5.48**	**295**	Pn		**Pn**		01 13 19.4	+1.7
PBAR				Sn		**Sn**		01 14 19.7	-1.1
PBAR	**Barrancos**	**5.48**	**295**	Pn		**Pn**		01 13 19.4	+1.7
PBAR				Sn		**Sn**		01 14 19.7	-1.1
PBAR	**Barrancos**	**5.48**	**295**	*e*Pn		**Pn**		01 13 19.4	+1.7
PBAR				*e*Sn		**Sn**		01 14 19.7	-1.1
EPOB	**Poblet**	**5.55**	**14**	P		**Pn**		01 13 19.2	+0.6
EPOB	**Poblet**	**5.55**	**14**	P		**Pn**		01 13 19.2	+0.6
	0.6nm,0.1s,SNR=7.9								
EPOB					S		Sn	01 14 19.2	-3.2
	1.6nm,0.5s,SNR=7.9								
EPOB	**Poblet**	**5.55**	**14**	P		**Pn**		01 13 19.2	+0.6
	0.6nm,0.1s,SNR=7.9								
EPOB					S		Sn	01 14 19.2	-3.2
	1.6nm,0.5s,SNR=7.9								
EPOB	**Poblet**	**5.55**	**14**	P		**Pn**		01 13 19.2	+0.6
	0.6nm,0.1s,SNR=7.9								
EBAD	**Badajoz**	**5.71**	**301**	S		**Sn**		01 14 24.8	-1.4
	1.8nm,0.2s,SNR=7.9								
EBAD	**Badajoz**	**5.71**	**301**	S		**Sn**		01 14 24.8	-1.4
	1.8nm,0.2s,SNR=7.9								
PVAQ	**Vaqueiros**	**5.78**	**286**	*e*Pn		**Pn**		01 13 21.9	+0.2
PVAQ				*e*Sn		**Sn**		01 14 25.5	-2.5
PVAQ				A				01 14 36.4	
	2.4nm,0.7s								
PVAQ	**Vaqueiros**	**5.78**	**286**	Pn		**Pn**		01 13 21.9	+0.2
PVAQ				Sn		**Sn**		01 14 25.5	-2.5
	2.4nm,0.7s								
PVAQ	**Vaqueiros**	**5.78**	**286**	Pn		**Pn**		01 13 21.9	+0.2
PVAQ				Sn		**Sn**		01 14 25.5	-2.5
	2.4nm,0.7s								
PVAQ	**Vaqueiros**	**5.78**	**286**	*e*Pn		**Pn**		01 13 21.9	+0.2
PESTR	**Estremoz**	**6.16**	**300**	*e*Sn		**Sn**		01 14 35.0	-2.4
PESTR	**Estremoz**	**6.16**	**300**	Sn		**Sn**		01 14 35.0	-2.4
PESTR	**Estremoz**	**6.16**	**300**	Sn		**Sn**		01 14 35.0	-2.4
PESTR	**Estremoz**	**6.16**	**300**	*e*Sn		**Sn**		01 14 35.0	-2.4
CFON	**Fontmartina**	**6.28**	**22**	P		**Pn**		01 13 28.9	+0.3
CFON	**Fontmartina**	**6.28**	**22**	P		**Pn**		01 13 28.9	+0.3
	0.9nm,0.1s,SNR=8.0								
CFON	**Fontmartina**	**6.28**	**22**	P		**Pn**		01 13 28.9	+0.3
	0.9nm,0.1s,SNR=8.0								
CFON	**Fontmartina**	**6.28**	**22**	P		**Pn**		01 13 28.9	+0.3
	0.9nm,0.1s,SNR=8.0								
PMRV	**Marv??o**	**6.29**	**305**	*e*Sn		**Sn**		01 14 38.3	-2.3
PMRV	**Marv??o**	**6.29**	**305**	Sn		**Sn**		01 14 38.3	-2.3
PMRV	**Marv??o**	**6.29**	**305**	Sn		**Sn**		01 14 38.3	-2.3
PMRV	**Marv??o**	**6.29**	**305**	*e*Sn		**Sn**		01 14 38.3	-2.3

*ISK **26** 01:23:53.5,36.°12N×40.°96E,h13km,ML3.9*
*ISCJB **26** 01:23:54.4±1.0,36.°23N±0.°05×40.°99E±0.°04,h5km±6km, Error ellipse: s-maj=8.7km s-min=3.9km az=157.9*
*CSEM **26** 01:23:56.0±0.3,36.°23N×40.°98E,h10km,Mc3.4, Error ellipse: s-maj=9.7km s-min=4.0km az=156.0*
*NSSC **26** 01:23:57,36.°30N×40.°86E,h7km±8km*
ISC 26 01:23:55.9±1.0,36°24'N±0.°05×40°98E±0.°04,h7km±7km,
n72,σ0s98/85,1C-11D,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFNV	**Sufian**	**0.72**	**284**	⇓P	**Pg**	**01 24 09.0**	**-0.8**
SFNV				⇓S	**Sg**	**01 24 20.0**	**+0.8**
SFNV	**Sufian**	**0.72**	**284**	⇓*i*P	**Pg**	**01 24 09.4**	**-0.4**
SFNV				⇓*i*S	**Sg**	**01 24 20.2**	**+1.0**
DRBT	**Darb Altahta**	**1.12**	**303**	⇑P	Px	01 24 31.0	
DRBT				⇓S	Sx	01 24 56.0	
MNKR	**ALMNKUR**	**1.42**	**258**	⇓P	**Pn**	**01 24 22.0**	**0.0**
MNKR				⇑S	**Sb**	**01 24 41.0**	**+0.1**
MNKR	**ALMNKUR**	**1.42**	**258**	⇓*i*P	**Pn**	**01 24 22.8**	**+0.8**
MNKR				⇑*i*S	**Sb**	**01 24 41.3**	**+0.4**
BEST	**Besiri**	**1.66**	**8**	⇓*i*P	**Pn**	**01 24 23.9**	**-1.5**
DIYA	**Diyarbakir**	**1.81**	**338**	⇓*i*P	**Pn**	**01 24 26.1**	**-1.3**
DIYA	**Diyarbakir**	**1.81**	**338**	*i* P	**Pn**	**01 24 26.1**	**-1.4**
DIYA				*i* S	**Sn**	**01 24 49.2**	**-1.5**
JHLN	**Al Jahlan**	**2.14**	**255**	⇑P	**Pn**	**01 24 33.0**	**+1.1**
JHLN				⇑S	**Sn**	**01 24 59.0**	**+0.3**
JHLN	**Al Jahlan**	**2.14**	**255**	⇑*i*P	**Pn**	**01 24 33.5**	**+1.6**
JHLN				⇑*i*S	**Sn**	**01 24 59.5**	**+0.8**
SLMH	**Al Salmeh**	**2.47**	**270**	⇓P	**Pn**	**01 24 36.0**	**-0.5**
SLMH				⇑S	**Sn**	**01 25 08.0**	**+1.1**
SLMH	**Al Salmeh**	**2.47**	**270**	⇓*i*P	**Pn**	**01 24 36.7**	**+0.2**
SLMH				⇑*i*S	**Sn**	**01 25 08.0**	**+1.1**
SVRC	**Sivrice-ELAZID**	**2.51**	**328**	*e*PN	**Pn**	**01 24 37.4**	**+0.3**
SVRC				*e*SN	**Sn**	**01 25 08.2**	**+0.2**
SVRC	**Sivrice-ELAZID**	**2.51**	**328**	*e*Pn	**Pn**	**01 24 37.4**	**+0.3**
SVRC				*e*Sn	**Sn**	**01 25 08.2**	**+0.2**
HAKT	**HAKKARI**	**2.55**	**58**	⇑*i*P	**Pn**	**01 24 36.4**	**-1.2**
HAKT	**HAKKARI**	**2.55**	**58**	*i* P	**Pn**	**01 24 36.4**	**-1.2**
HAKT				*i* S	**Sn**	**01 25 09.6**	**+0.7**
HKR	**Hakkari**	**2.58**	**58**	PN	**Pn**	**01 24 37.5**	**-0.6**
HKR				*e*SN	**Sn**	**01 25 09.5**	**-0.2**
HKR	**Hakkari**	**2.58**	**58**	*i* Pn	**Pn**	**01 24 37.5**	**-0.6**
HKR				*e*Sn	**Sn**	**01 25 09.5**	**-0.2**

BINT	**Bingol**	**2.66**	**352**	*e*PN		**Pn**		01 24 38.5	-0.6
BINT	**Bingol**	**2.66**	**352**	*e*Pn		**Pn**		01 24 38.5	-0.6
BNGL	**BINGOL**	**2.71**	**3**	*e*Pn		**Pn**		01 24 39.8	0.0
VANT	**Van**	**2.83**	**39**	*e*PN		**Pn**		01 24 42.2	+0.6
MALT	**Malatya**	**2.90**	**316**	*e*PN		**Pn**		01 24 42.3	-0.2
MALT	**Malatya**	**2.90**	**316**	*e*Pn		**Pn**		01 24 42.3	-0.1
MYA	**Malataya**	**2.91**	**316**	*e*PN		**Pn**		01 24 42.0	-0.6
MYA	**Malataya**	**2.91**	**316**	*e*Pn		**Pn**		01 24 42.0	-0.6
PTK	**Pertek**	**2.93**	**335**	*e*PN		**Pn**		01 24 42.4	-0.4
PTK	**Pertek**	**2.93**	**335**	*e*Pn		**Pn**		01 24 42.4	-0.4
VANB	**Van**	**3.03**	**39**	*e*PN		**Pn**		01 24 44.2	0.0
VANB	**Van**	**3.03**	**39**	*e*Pn		**Pn**		01 24 44.2	0.0
GAZ	**Gaziantep**	**3.17**	**288**	*e*PN		**Pn**		01 24 45.2	-0.9
GAZ	**Gaziantep**	**3.17**	**288**	*e*Pn		**Pn**		01 24 45.2	-0.9
KMRS	**Kahramanmaras**	**3.51**	**292**	*e*PN		**Pn**		01 24 49.4	-1.4
KMRS	**Kahramanmaras**	**3.51**	**292**	*e*Pn		**Pn**		01 24 49.4	-1.4
EZM	**Erzurum**	**3.67**	**5**	*e*PN		**Pn**		01 24 53.5	+0.6
EZM	**Erzurum**	**3.67**	**5**	*e*Pn		**Pn**		01 24 53.6	+0.6
AGRB	**Hanur-Agry**	**3.69**	**25**	*e*PN		**Pn**		01 24 53.8	+0.6
AGRB	**Hanur-Agry**	**3.69**	**25**	*e*Pn		**Pn**		01 24 53.8	+0.6
CLDR	**Caldiran**	**3.71**	**38**	*e*PN		**Pn**		01 24 53.4	-0.2
CLDR	**Caldiran**	**3.71**	**38**	*e*Pn		**Pn**		01 24 53.4	-0.2
EZC	**Erzincan**	**3.73**	**340**	*e*PN		**Pn**		01 24 54.7	+0.8
HTY	**Hatay**	**3.92**	**270**	*e*PN		**Pn**		01 24 54.7	-1.8
HTY	**Hatay**	**3.92**	**270**	*e*Pn		**Pn**		01 24 54.7	-1.7
SARI	**SarD1z-Kayseri**	**4.18**	**307**	*e*PN		**Pn**		01 25 01.3	+1.2
SARI	**SarD1z-Kayseri**	**4.18**	**307**	*e*Pn		**Pn**		01 25 01.3	+1.2
CEYT	**Ceyhan**	**4.28**	**282**	*e*PN		**Pn**		01 25 01.3	0.0
CEYT	**Ceyhan**	**4.28**	**282**	*e*Pn		**Pn**		01 25 01.3	-0.1
KOZT	**Kozan**	**4.31**	**288**	*e*PN		**Pn**		01 25 00.7	-1.2
KOZT	**Kozan**	**4.31**	**288**	*e*Pn		**Pn**		01 25 00.7	-1.2
GUMT	**Gumushane**	**4.37**	**345**	*e*PN		**Pn**		01 25 03.8	+1.1
GUMT	**Gumushane**	**4.37**	**345**	*e*Pn		**Pn**		01 25 03.8	+1.2
KRTS	**Karatas**	**4.53**	**276**	*e*PN		**Pn**		01 25 03.1	-1.7
KRTS	**Karatas**	**4.53**	**276**	*e*Pn		**Pn**		01 25 03.1	-1.8
HWQ	**Hawqa**	**4.56**	**246**	*e*Pn		**Pg**		01 25 21.7	-1.6
KARS	**Kars**	**4.68**	**20**	*e*PN		**Pn**		01 25 08.0	+1.1
SVSK	**Karacayir**	**4.83**	**321**	*e*PN		**Pn**		01 25 08.9	-0.1
SVSK	**Karacayir**	**4.83**	**321**	*e*Pn		**Pn**		01 25 08.9	0.0
KARA	**Karaisali**	**4.87**	**284**	*e*PN		**Pn**		01 25 10.0	+0.5
KARA	**Karaisali**	**4.87**	**284**	*e*Pn		**Pn**		01 25 10.0	+0.6
GNI	**Garni**	**4.90**	**36**	*e*PN		**Pn**		01 25 11.3	+1.5
GNI	**Garni**	**4.90**	**36**	*e*Pn		**Pn**		01 25 11.3	+1.4
BHL	**Bhannes**	**4.95**	**243**	*e*Pn		**Pg**		01 25 33.4	+2.6
RSDY	**Resadiye-TOKAT**	**5.04**	**326**	*e*PN		**Pn**		01 25 13.2	+1.3
RSDY	**Resadiye-TOKAT**	**5.04**	**326**	*e*Pn		**Pn**		01 25 13.2	+1.3
EREN	**Erenkoy**	**5.58**	**265**	*e*PN		**Pn**		01 25 18.2	-1.0
EREN	**Erenkoy**	**5.58**	**265**	*e*Pn		**Pn**		01 25 18.3	-0.9
IKL	**Isikli**	**5.90**	**272**	*e*PN		**Pn**		01 25 23.7	+0.1
IKL	**Isikli**	**5.90**	**272**	*e*Pn		**Pn**		01 25 23.7	+0.1
LFK	**Lefkose**	**6.13**	**263**	*e*PN		**Pn**		01 25 26.7	-0.1
LFK	**Lefkose**	**6.13**	**263**	*e*Pn		**Pn**		01 25 26.7	-0.2
KAMT	**Kaman**	**6.54**	**301**	*e*PN		**Pn**		01 25 34.1	+1.6
KAMT	**Kaman**	**6.54**	**301**	*e*Pn		**Pn**		01 25 34.1	+1.6

*IDC **26** 01:34:51.4±2.2,51.°35N×179.°36W,h0km,mb3.8/9, mb1 4.0/10,mb1mx3.8/26,mbtmp3.9/10,ML4.0/1,MS3.5/1, Ms1 3.5/1,ms1mx2.5/41,Error ellipse: s-maj=60.1km s-min=21.4km az=4.0*
*NEIC **26** 01:34:53.7,50.°95N×179.°31W,h5km,mb3.6/2, ML3.5(AEIC),After AEIC.*
ISC 26 01:34:57.8±1.5,51°3N±0.°2×179°36W±0.°08,h50km±8km,
n18,σ1s05/20,mb3.9/9,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.85**	**278**	P	**Pn**	**01 35 11.8**	**-1.6**
AMKA				S	**Sn**	**01 35 25.7**	**+0.9**
ADK	**Adak**	**1.78**	**69**	*e*Pn	**Pn**	**01 35 25.6**	**-0.4**
ADK				*e*S	**Sn**	**01 35 49.1**	**+1.6**
ATKA	**Atka Island**	**3.34**	**72**	P	**Pn**	**01 35 47.7**	**+0.2**
ATKA				S	**Sn**	**01 36 30.8**	**+4.9**
SVW2	**Sparrevohn**	**16.39**	**44**	*e*P	**Pn**	**01 38 48.3**	**+4.2**
	6.1nm,1.1s						
KDAK	**Kodiak Island**	**16.78**	**57**	Pn	**Pn**	**01 38 47.3**	**-1.6**
	0.5nm,0.3s,baz=249,slow=11,SNR=8.5						
BPAW	**Bear Paw Mtn.**	**19.65**	**38**	*e*P	**Pn**	**01 39 23.9**	**+0.1**
	2.6nm,0.7s						
ILAR	**Eielson Array**	**21.55**	**39**	P	**P**	**01 39 40.5**	**-2.0**
	0.6nm,0.8s,mb3.1,baz=235,slow=8.0,SNR=8.3						
YKA	**Yellowknife Ar**	**35.56**	**46**	P	**P**	**01 41 48.9**	**-0.7**
YKA	**Yellowknife Ar**	**35.56**	**46**	P	**P**	**01 41 48.9**	**-0.7**
	1.0nm,0.6s,mb3.9,baz=282,slow=7.8,SNR=4.4						
YBH	**Yreka Blue Hor**	**39.24**	**81**	LR	LR	01 54 40.1	
	comp=Z,56nm,19.1s,baz=283,slow=30						
PDAR	**Pinedale Array**	**46.68**	**72**	P	**P**	**01 43 22.2**	**+1.1**
	0.5nm,0.4s,mb3.8,baz=323,slow=6.1,SNR=5.9						
KURK	**Kurchatov**	**58.84**	**313**	P	**P**	**01 44 52.1**	**+1.3**
	0.8nm,0.3s,mb4.2,baz=42,slow=7.0,SNR=4.7						
TXAR	**Lajitas Array**	**59.02**	**81**	P	**P**	**01 44 52.0**	**-0.3**
	0.1nm,0.5s,mb3.1,baz=330,slow=5.2,SNR=3.6						
MKAR	**Makanchi Array**	**59.83**	**308**	P	**P**	**01 44 58.0**	**+0.4**
	0.8nm,0.5s,mb4.0,baz=49,slow=6.1,SNR=7.7						
FINES	**FINESS Array B**	**65.81**	**347**	P	**P**	**01 45 36.3**	**-0.8**
	3.3nm,0.9s,mb4.4,baz=342,slow=8.7,SNR=4.5						
NOA	**NORSAR Array B**	**67.72**	**354**	P	**P**	**01 45 50.0**	**+0.7**
NOA	**NORSAR Array B**	**67.72**	**354**	P	**P**	**01 45 50.0**	**+0.7**
	0.8nm,0.7s,mb3.8,baz=344,slow=3.2,SNR=3.4						
AKASG	**Malin Array Be**	**75.54**	**342**	P	**P**	**01 46 37.0**	**+0.5**
	2.3nm,0.4s,mb4.5,baz=20,slow=6.7,SNR=6.8						

*ISCJB **26** 01:38:10.2±0.6,30.°66N±0.°06×83.°3E±0.°1,h10km,mb3.9/8, Error ellipse: s-maj=16.2km s-min=8.1km az=162.0*
*NEIC **26** 01:38:12.9±1.2,30.°74N×83.°24E,h10km,mb4.3/2,Error ellipse: s-maj=34.1km s-min=11.6km az=48.0*
*IDC **26** 01:38:12.3±1.3,30.°88N×83.°65E,h0km,mb3.8/7, mb1 3.9/9,mb1mx3.7/27,mbtmp3.7/9,ML4.1/2,MS2.5/1, Ms1 2.5/1,ms1mx2.1/37,Error ellipse: s-maj=42.9km s-min=19.6km az=58.0*
ISC 26 01:38:12.2±0.6,30°69N±0.°06×83°4E±0.°1,h10km,**n22,**
σ1s01/22,mb3.9/8,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**4.58**	**267**	*ex*	**Pn**	**01 39 27.0**	**+5.5**
LSA	**Lhasa**	**6.83**	**96**	*e*Pn	**Pn**	**01 39 57.2**	**+4.9**
	15nm,0.8s						
KSH	**Kashi**	**10.67**	**328**	Pn	**Pn**	**01 40 44.0**	**-1.1**
KSH				Sn	**Sn**	**01 42 30.0**	**-15**
KSH				smax			
	comp=N,9.0nm,0.7s						
KSH				smax			
	comp=E,22nm,1.1s						
KSH	**Kashi**	**10.67**	**328**	*e*P	**Pn**	**01 40 45.5**	**+0.5**
KSH				*ep*P		01 40 52.5	
KSH				*e*PP		01 40 54.3	
KSH				*es*P		01 40 56.8	
KSH				*e*S	**Sn**	**01 42 41.3**	**-3.3**
KSH				*es*S		01 42 51.3	
KSH				*e*SS		01 42 55.3	
KSH				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,37nm,3.3s						
KSH				LR	LR		
	comp=N,140nm,5.5s						
KSH				LR	LR		
	comp=E,170nm,8.0s						
KSH				LR	LR		
	comp=Z,120nm,7.6s						
AML	**Almayashu**	**13.80**	**328**	*e*Pn	**Pn**	**01 41 28.1**	**+0.3**
AAK	**Ala-Archa**	**13.87**	**332**	LR	LR	01 46 33.5	
	comp=Z,20nm,21.0s,baz=357,slow=36						
HYB	**Hyderabad**	**13.92**	**199**	*i* P	**Pn**	**01 41 29.0**	**-0.5**
MK31	**Makanchi Array**	**16.10**	**357**	*e*Pn	**Pn**	**01 41 54.9**	**-3.6**
MK31				*e*S	**Sn**	**01 44 58.3**	**+1.3**
MKAR	**Makanchi Array**	**16.10**	**357**	Pn	**Pn**	**01 41 56.7**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=178,slow=13,SNR=7.4						
CMAR	**Chiang Mai Arr**	**18.67**	**127**	P	**Pn**	**01 42 30.6**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=300,slow=12,SNR=5.8						
KURK	**Kurchatov**	**20.31**	**351**	*e*P	**P**	**01 42 48.2**	**+0.1**
KURK	**Kurchatov**	**20.31**	**351**	P	**P**	**01 42 46.9**	**-1.3**
	comp=Z,2.9nm,0.7s,baz=167,slow=10,SNR=21						
ZALV	**Zalesovo Beam**	**23.27**	**2**	P	**P**	**01 43 19.4**	**-0.3**
	comp=Z,0.4nm,0.3s,mb3.3,baz=201,slow=11,SNR=2.2						
BVAR	**Borovoye Array**	**24.24**	**341**	P	**P**	**01 43 29.4**	**+0.4**
	comp=Z,1.0nm,0.6s,mb3.4,baz=149,slow=12,SNR=8.3						
ABKAR	**Akbulak array**	**25.62**	**323**	*e*P	**P**	**01 43 43.1**	**+1.5**
	comp=Z,3.3nm,0.7s,mb4.0						
KSRS	**Korea Array**	**37.26**	**67**	P	**P**	**01 45 23.3**	**-0.8**
	comp=Z,1.0nm,0.5s,mb4.0,baz=275,slow=9.8,SNR=5.0						
KWP	**Kalwaria Pacla**	**48.66**	**311**	*e*P	**P**	**01 46 50.3**	**-5.9**
	comp=Z,2.6nm,0.5s,mb4.5						
ARCES	**ARCESS Array B**	**50.46**	**337**	P	**P**	**01 47 10.5**	**+0.9**
	comp=Z,2.2nm,0.8s,mb4.2,baz=97,slow=7.4,SNR=4.4						
WRA	**Warramunga Arr**	**70.25**	**129**	P	**P**	**01 49 26.6**	**+0.9**
	comp=Z,0.8nm,0.5s,mb3.9,baz=326,slow=6.6,SNR=9.2						
ILAR	**Eielson Array**	**77.13**	**20**	P	**P**	**01 50 06.2**	**+0.7**
	comp=Z,0.5nm,0.7s,mb3.6,baz=308,slow=4.2,SNR=6.3						
CPUP	**Villa Florida**	**145.29**	**267**	PKPbc	PKPbc	01 57 53.4	+3.1
CPUP	**Villa Florida**	**145.29**	**267**	PKPbc	PKPbc	01 57 53.4	+3.1
	comp=Z,0.3nm,0.3s,baz=120,slow=2.4,SNR=3.3						

*NEIC **26** 01:48:07.1,14.°27N×93.°97W,h15km,MD4.2(MEX),After MEX.*
MEX 26 01:48:07.4±0.4,14°27N×93°95W,h20km±8km,**MD4.2,**
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.59**	**26**	*i* P	Pn	01 48 31.2	-3.3
PCIG				*i* S	Sn	01 48 50.1	-4.3
THIG		**1.75**	**69**	*i* P	Pn	01 48 33.6	-3.0
THIG				*i* S	Sn	01 48 54.9	-3.5
HUIG	**Huatulco**	**2.56**	**306**	*i* P	Pn	01 48 45.3	-2.5
HUIG				*i* S	Sn	01 49 15.6	-2.7
HUIG	**Huatulco**	**2.56**	**306**	*i* P	Pn	01 48 45.3	-2.5
HUIG				*i* S	Sn	01 49 15.6	-2.7
TGIG		**2.62**	**18**	*i* P	Pn	01 48 46.7	-1.9
TGIG				*i* S	Sn	01 49 16.7	-3.0
SCX	**San Cristobal**	**2.76**	**27**	*i* P	Pn	01 48 48.3	-2.2
SCX				*i* S	Sn	01 49 22.4	-0.9
SCX	**San Cristobal**	**2.76**	**27**	*i* P	Pn	01 48 48.3	-2.2
SCX				*i* S	Sn	01 49 20.4	-2.9
VHO	**Vista Hermosa**	**3.86**	**316**	*i* P	Pn	01 49 01.7	-4.0
VHO				*i* S	Sn	01 49 46.8	-3.8
VHO	**Vista Hermosa**	**3.86**	**316**	*e*P	Pn	01 49 05.5	-0.2
VHO				*i* S	Sn	01 49 46.8	-3.8
PNIG	**Pinotepa**	**4.55**	**298**	*i* P	Pn	01 49 13.0	-2.1
PNIG	**Pinotepa**	**4.55**	**298**	*i* P	Pn	01 49 13.0	-2

comp=Z,3.0nm,0.3s
TTA **Tatalina** 17.17 38 *e*P Pn 02 01 31.7 +1.5
RSO **Redoubt South** 17.46 48 *e*P Pn 02 01 35.4 +1.6
BILL **Bilibino** 18.32 343 *e*P Pn 02 01 46.6 +2.5
comp=Z,55nm,1.1s
BILL **Bilibino** 18.32 343 *be*P Pn 02 01 46.5 +2.3
BILL pmax pmax
comp=Z,64nm,1.2s
BILL MLR MLR
comp=Z,200nm,16.0s
SLKM **Skilak Lake** 18.66 49 *e*P Pn 02 01 48.1 -0.4
PPLA **Purkeypile** 18.68 41 *e*P Pn 02 01 48.7 +0.1
comp=Z,58nm,0.8s
SEW **Seward** 18.92 50 *e*P Pn 02 01 49.7 -1.9
comp=Z,9.6nm,0.5s
RC01 **Rabbit Creek A** 19.07 47 *e*P Pn 02 01 53.2 -0.1
SEY **Seymchan** 19.17 319 *e*P Pn 02 01 56.5 +2.0
PMR **Palmer** 19.50 46 *e*P Pn 02 01 57.5 -1.0
comp=Z,11nm,0.6s
PMR **Palmer** 19.50 46 *e*P Pn 02 01 57.5 -0.9
PMR pmax pmax
comp=Z,11nm,0.6s
TRF **Thorofare Moun** 19.69 40 *e*P Pn 02 01 59.1 -1.6
comp=Z,54nm,0.9s
BPAW **Bear Paw Mtn.** 19.70 38 *e*P Pn 02 01 59.5 -1.3
comp=Z,49nm,0.8s
SML **Sawmill** 19.93 46 *e*P Pn 02 02 00.5 -3.0
comp=Z,8.3nm,0.8s
SML *e*S S 02 05 28.7 -14
SML **Sawmill** 19.93 46 *e*P Pn 02 02 00.5 -3.0
SML pmax pmax
comp=Z,8.0nm,0.8s
MCK **McKinley** 20.36 40 *e*P P 02 02 05.6 -0.6
comp=Z,16nm,0.7s
MCK **McKinley** 20.36 40 *e*P P 02 02 05.6 -0.5
MCK pmax pmax
comp=Z,16nm,0.7s
DIV **Divide** 20.93 49 *e*P P 02 02 12.5 +0.2
comp=Z,18nm,0.6s
COLA **College** 21.27 38 *e*P P 02 02 15.9 +0.1
comp=Z,24nm,0.8s,mb4.6
COLA **College** 21.27 38 *e*P P 02 02 15.9 0.0
COLA pmax pmax
comp=Z,24nm,0.8s,mb4.6
BMRM **Bremner River** 21.45 49 *e*P P 02 02 18.4 +0.5
comp=Z,43nm,0.9s,mb4.8
PAX **Paxson** 21.56 44 *e*P P 02 02 18.0 -1.0
comp=Z,27nm,0.7s,mb4.8
PAX **Paxson** 21.56 44 *e*P P 02 02 18.0 -1.0
PAX pmax pmax
comp=Z,27nm,0.7s,mb4.8
COLD **Coldfoot** 21.59 31 *e*P P 02 02 19.7 +0.4
comp=Z,31nm,1.2s,mb4.6
ILAR **Eielson Array** 21.60 39 P P 02 02 16.5 -2.9
comp=Z,3.0nm,0.4s,mb4.0,baz=235,slow=8.0,SNR=42
ILAR ScP ScP 02 09 55.1 +3.3
comp=Z,0.4nm,0.7s,baz=290,slow=3.5,SNR=4.2
MENT **Mentasta** 22.31 45 *e*P P 02 02 26.1 -0.9
DOT **Dot Lake** 22.36 43 *e*P P 02 02 26.4 -1.2
comp=Z,124nm,0.8s,mb5.4
PNL **Peninsula** 23.86 54 *e*P P 02 02 41.5 -1.0
EGAK **Eagle** 23.91 41 *e*P P 02 02 41.9 -1.0
comp=Z,49nm,1.0s,mb4.9
DAWY **Dawson** 24.47 43 *e*P P 02 02 47.1 -1.0
HYT **Haines Junctio** 24.87 51 *e*P P 02 02 50.9 -0.8
YSS **Yuzh-Sakhalins** 25.01 275 *e*P P 02 02 53.6 +0.5
comp=Z,39nm,1.1s,mb4.8
YSS **Yuzh-Sakhalins** 25.01 275 *e*P P 02 02 53.0 -0.1
YSS *e* 02 02 57.7
ASAJ **Asahikawa** 26.38 269 P P 02 03 03.0 -2.4
comp=Z,3.7nm,0.3s,mb4.3,baz=125,slow=16,SNR=3.1
ASAJ LR LR 02 13 30.8
comp=Z,145nm,20.6s,MS3.5,baz=326,slow=36
ASAJ **Asahikawa** 26.38 269 P P 02 03 03.1 -2.4
ASAJ pmax pmax
comp=Z,4.0nm,0.3s
ASAJ MLR MLR
comp=Z,145nm,20.6s
INK **Inuvik** 27.81 35 P P 02 03 16.2 -1.9
comp=Z,6.2nm,0.7s,mb4.3,baz=241,slow=9.8,SNR=3.5
KLR **Kul'dur** 30.92 286 *e*P P 02 03 41.8 -4.0
KLR pmax pmax
comp=E,40nm,1.6s
KLR pmax pmax
comp=Z,68nm,1.6s,mb5.2
MJAR **Matsushiro Arr** 33.43 261 P P 02 04 07.2 -0.8
MJAR **Matsushiro Arr** 33.43 261 P P 02 04 07.2 -0.8
comp=Z,1.5nm,0.5s,mb4.2,baz=49,slow=10.0,SNR=4.3
MJAR **Matsushiro Arr** 33.43 261 P P 02 04 07.2 -0.8
MJAR pmax pmax
comp=Z,2.0nm,0.5s
MDJ **Mudanjiang** 34.28 279 P P 02 04 14.8 -0.5
MDJ pP pP 02 04 27.3 -1.1
MDJ PP PP 02 05 33.8 +0.4
MDJ S S 02 09 38.5 -0.1
MDJ PcS PcS 02 10 34.5 -2.2
MDJ ScS ScS 02 14 33.0 -0.4
MDJ pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
MDJ pmax pmax
comp=Z,35nm,2.7s,mb4.8
MDJ LR LR
comp=N,740nm,32.4s,MS4.6
MDJ LR LR
comp=E,1μm,29.1s,MS4.6
MDJ LR LR
comp=Z,530nm,32.4s,MS4.1
YKA **Yellowknife Ar** 35.60 46 P P 02 04 25.8 -0.7
comp=Z,9.6nm,0.7s,mb4.8,baz=282,slow=7.8,SNR=39
NLWA **Neilton Lookou** 35.64 74 *e*P P 02 04 28.7 +1.7
comp=Z,26nm,1.3s,mb5.0
A05A **Maple Falls** 35.99 70 ⇓P P 02 04 29.6 -0.4
baz=36
E03A **Lebam** 36.22 75 ⇓P P 02 04 32.8 +0.8
baz=36
JCW **Jim Creek** 36.44 72 *e*P P 02 04 34.5 +0.7
F03A **Seaside** 36.52 76 ⇑P P 02 04 34.9 +0.5
baz=36
D05A **Enumclaw** 36.87 73 ⇓P P 02 04 38.5 +1.0
baz=37
LON **Longmire** 37.19 74 *e*P P 02 04 41.2 +1.1
comp=Z,7.3nm,0.8s,mb4.6
LON **Longmire** 37.19 74 *e*P P 02 04 41.2 +1.1
LON pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
F04A **Amboy** 37.21 75 ⇑P P 02 04 41.0 +0.7
baz=37
G04A **Mulino** 37.54 76 ⇑P P 02 04 44.1 +0.9
baz=37
ETW **Entiat** 37.67 72 *e*P P 02 04 45.2 +1.0
B08A **Colville Reser** 37.91 70 ⇑P P 02 04 46.5 +0.3
baz=38,SNR=9.9
H04A **Detroit Lake** 37.98 77 ⇓P P 02 04 47.3 +0.4
baz=38
E07A **Sunnyside** 38.46 73 ⇑P P 02 04 50.9 0.0
baz=38
G06A **Carlson Farm,** 38.65 75 ⇓P P 02 04 53.1 +0.6
baz=38
RSW **Rattlesnake Hi** 38.70 73 *e*P P 02 04 53.7 +0.8
HAWA **Hanford** 38.73 73 *e*P P 02 04 54.0 +0.9
comp=Z,12nm,0.9s,mb4.6
OD2 **Odessa Site #2** 38.74 71 *e*P P 02 04 53.5 +0.3
D08A **Wollman Farm,** 38.77 72 ⇑P P 02 04 53.2 -0.3
baz=39
C09A **Chrisman Ranch** 38.80 70 ⇑P P 02 04 53.4 -0.3
baz=39
EDM **Edmonton** 39.19 60 *e*P P 02 04 56.5 -0.5
YBH **Yreka Blue Hor** 39.23 81 P P 02 04 59.1 +1.7
comp=Z,5.1nm,0.8s,mb4.3
YBH **Yreka Blue Hor** 39.23 81 P P 02 04 58.5 +1.1
comp=Z,3.6nm,0.9s,mb4.1,baz=256,slow=4.2,SNR=3.2
YBH **Yreka Blue Hor** 39.23 81 P P 02 04 58.5 +1.1
YBH pmax pmax
comp=Z,4.0nm,0.9s
NEW **Newport** 39.26 69 ⇓P P 02 04 57.5 0.0
baz=39,SNR=14
NEW **Newport** 39.26 69 *e*P P 02 04 57.5 -0.1
comp=Z,24nm,1.3s,mb4.8
NEW **Newport** 39.26 69 *e*P P 02 04 57.5 0.0
NEW pmax pmax
comp=Z,24nm,1.3s
KSRS **Korea Array** 39.31 271 P P 02 04 58.8 +0.6
comp=Z,5.6nm,0.8s,mb4.3,baz=56,slow=7.9,SNR=15
KSRS **Korea Array** 39.31 271 P P 02 04 58.8 +0.7
KSRS pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
E09A **Wood Farm, Sta** 39.51 72 ⇓P P 02 04 59.2 -0.4
baz=39
G08A **Pilot Rock** 39.63 74 ⇓P P 02 05 00.9 +0.2
baz=40
A12A **Yaak River Ran** 39.80 67 ⇑P P 02 05 02.3 +0.3
baz=40
K05A **Summer Lake** 39.81 79 ⇑P P 02 05 02.8 +0.6
baz=40
I07A **Izee** 39.94 76 ⇓P P 02 05 03.6 +0.4
baz=40
C11A **Tepee Creek (N** 39.97 69 ⇓P P 02 05 03.1 -0.3
baz=40
F10A **Beach Ranch, E** 40.33 72 ⇑P P 02 05 06.1 -0.3
baz=40
C12B **Naegeli Ranch,** 40.50 69 ⇑P P 02 05 07.8 0.0
baz=40,SNR=6.0
MOD **Modoc** 40.63 79 *e*P P 02 05 10.4 +1.4
comp=Z,5.6nm,0.8s,mb4.2
WALA **Waterton Lakes** 40.75 66 *e*P P 02 05 10.0 +0.1
comp=Z,0.7nm,1.1s
B13A **Whitefish** 40.76 68 ⇓P P 02 05 10.0 0.0
baz=41
BSMT **Bassoo Peak** 40.83 68 *e*P P 02 05 10.8 +0.3
D12A **Red Ives Fores** 40.90 70 ⇓P P 02 05 10.9 -0.2
baz=41
J08A **Circle Bar Ran** 40.95 76 ⇑P P 02 05 11.8 +0.1
baz=41
BLMT **Blacktail Moun** 41.00 68 *e*P P 02 05 12.5 +0.5
C13A **Hot Springs** 41.04 69 ⇑P P 02 05 12.7 +0.4
baz=41
A14A **Double T Ranch** 41.07 66 ⇑P P 02 05 12.4 -0.1
baz=41,SNR=5.9
E12A **Beaver Dam Sad** 41.09 71 ⇑P P 02 05 12.5 -0.2
baz=41,SNR=12
D13A **Huson** 41.40 69 ⇓P P 02 05 14.4 -0.9
baz=41
B14A **Marquette Ranc** 41.46 67 ⇑P P 02 05 15.2 -0.5
baz=41
SWMT **Swartz Lake** 41.46 68 *e*P P 02 05 16.8 +1.1
A15A **Johnson Ranch,** 41.47 66 ⇓P P 02 05 14.9 -0.9
baz=41
F12A **Elk City** 41.62 71 ⇓P P 02 05 17.1 +0.1
baz=42,SNR=18
MSO **Missoula** 41.84 69 ⇓P P 02 05 18.6 -0.3
baz=42,SNR=9.2
MSO **Missoula** 41.84 69 *e*P P 02 05 18.9 0.0
comp=Z,10nm,1.1s,mb4.4
SLMT **Seeley Lake** 41.89 69 *e*P P 02 05 18.8 -0.5
B15A **Bradely Ranch,** 41.90 67 ⇓P P 02 05 18.8 -0.5
baz=42,SNR=9.6
G12A **Big Creek, Yel** 41.91 72 ⇓P P 02 05 19.4 -0.1
baz=42
D14A **Greenough** 41.97 69 ⇓P P 02 05 19.5 -0.4
baz=42,SNR=10
A16A **West Butte Ran** 42.13 65 ⇑P P 02 05 20.2 -1.0
baz=42
C15A **Salmond Ranch,** 42.14 67 ⇑P P 02 05 21.4 +0.1
baz=42,SNR=28
F13A **Darby** 42.15 71 ⇑P P 02 05 21.3 -0.1
baz=42,SNR=6.8
CHMT **Chamberlain Mo** 42.20 69 *e*P P 02 05 21.8 0.0
E14A **Clinton** 42.32 70 ⇓P P 02 05 22.4 -0.4
baz=42
H12A **Diamond D Ranc** 42.50 73 ⇓P P 02 05 23.8 -0.4
baz=42
D15A **Linn** 42.57 68 ⇑P P 02 05 24.5 -0.2
baz=42,SNR=10
G13A **Cobalt** 42.58 72 ⇑P P 02 05 24.8 -0.1
baz=42,SNR=9.8
C16A **Fuhringer Ranc** 42.63 67 ⇓P P 02 05 25.0 -0.3
baz=42,SNR=22
A17A **Triple J Farms** 42.65 65 ⇑P P 02 05 24.7 -0.7
baz=42,SNR=10
F14A **Wisdom** 42.71 70 ⇓P P 02 05 25.7 -0.2
baz=43
I12A **Atlanta** 42.75 74 ⇓P P 02 05 26.4 +0.1
baz=43,SNR=20
E15A **Deer Lodge** 42.82 69 ⇓P P 02 05 26.5 -0.3
baz=43,SNR=8.6
H13A **Challis** 42.85 72 ⇑P P 02 05 26.8 -0.3
baz=43
B17A **L&G Farms, Che** 42.92 66 ⇓P P 02 05 27.1 -0.5
baz=43,SNR=15
G14A **Jackson** 42.96 71 ⇑P P 02 05 27.5 -0.5
baz=43
D16A **Dana Ranch, Ca** 43.14 68 ⇑P P 02 05 29.1 -0.3
baz=43,SNR=8.6
HRY **Holter Researc** 43.14 68 *e*P P 02 05 29.0 -0.4
A18A **Metzger Ranch,** 43.15 65 ⇓P P 02 05 28.4 -1.1
baz=43
WAKR **Walker** 43.15 83 *e*P P 02 05 30.9 +1.3
comp=Z,2.5nm,0.6s,mb4.1
F15A **Butte** 43.22 70 ⇓P P 02 05 29.4 -0.6
baz=43
C17A **Wharram Farm,** 43.28 67 ⇓P P 02 05 30.0 -0.6
baz=43,SNR=12
I13A **Wildhorse Cree** 43.29 73 ⇓P P 02 05 30.8 +0.1
baz=43,SNR=21
HLID **Hailey** 43.31 74 ⇑P P 02 05 30.8 0.0
baz=43,SNR=26
HLID **Hailey** 43.31 74 *e*P P 02 05 31.1 +0.2
comp=Z,12nm,0.9s,mb4.6
E16A **East Helena** 43.33 69 ⇑P P 02 05 30.8 -0.2
baz=43,SNR=13
H14A **Leadore** 43.36 72 ⇑P P 02 05 31.2 0.0
baz=43,SNR=12
BMN **Battle Mountai** 43.38 79 *e*P P 02 05 32.5 +1.1
comp=Z,8.0nm,1.0s,mb4.4
BMN **Battle Mountai** 43.38 79 *e*P P 02 05 32.5 +1.1
BMN pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
DLMT **Dillon** 43.41 70 *e*P P 02 05 30.0 -1.6
comp=Z,78nm,2.8s,mb4.9
B18A **Beardsley Farm** 43.45 65 ⇓P P 02 05 31.4 -0.5
baz=43,SNR=8.8
J13A **Cove Ranch, Pi** 43.55 74 ⇑P P 02 05 32.9 +0.2
baz=43,SNR=23
MCMT **McKenzie Canyo** 43.55 71 *e*P P 02 05 32.7 -0.1
comp=Z,5.3nm,0.7s,mb4.4
D17A **Six Diamond Ra** 43.58 67 ⇓P P 02 05 32.7 -0.2
baz=44,SNR=11
G15A **Dillon** 43.58 71 ⇓P P 02 05 32.7 -0.3
baz=44,SNR=10
EGMT **Eagleton** 43.66 66 ⇓P P 02 05 33.1 -0.4
baz=44,SNR=19
EGMT **Eagleton** 43.66 66 *e*P P 02 05 32.9 -0.7
comp=Z,20nm,0.8s,mb4.9
I14A **Mackay** 43.69 73 ⇑P P 02 05 34.2 +0.4
baz=44,SNR=15
F16A **Kennard Place,** 43.76 69 ⇓P P 02 05 34.1 -0.3
baz=44
H15A **Lima** 43.79 71 P P 02 05 32.3 -2.3
baz=44
BOZ **Bozeman (W)** 43.83 70 ⇓P P 02 05 35.1 +0.1
baz=44,SNR=6.6
BOZ **Bozeman (W)** 43.83 70 *e*P P 02 05 35.2 +0.2
comp=Z,9.1nm,0.6s,mb4.7
BOZ **Bozeman (W)** 43.83 70 *e*P P 02 05 35.2 +0.2
BOZ pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
E17A **Martinsdale** 43.84 68 ⇑P P 02 05 35.3 +0.3
baz=44,SNR=9.3
NVAR **Mina Array Bea** 43.90 82 P P 02 05 36.0 +0.3
comp=Z,2.2nm,0.8s,mb4.0,baz=302,slow=7.4,SNR=7.8
G16A **Moss Hill, Enn** 43.95 70 ⇓P P 02 05 35.6 -0.3
baz=44,SNR=12
J14A **Carey** 43.98 73 ⇓P P 02 05 36.7 +0.4
baz=44,SNR=13
D18A **Linhart Farms,** 44.07 67 ⇓P P 02 05 37.2 +0.3
baz=44
C19A **Slack Wire Ran** 44.22 66 ⇓P P 02 05 38.2 +0.2
baz=44,SNR=36
F17A **Fitzpatrick Pl** 44.26 69 ⇑P P 02 05 38.3 -0.1
baz=44,SNR=11
E18A **Harlowton** 44.34 68 ⇑P P 02 05 39.1 +0.1
baz=44
G17A **Pierce Place,** 44.53 69 ⇓P P 02 05 40.7 +0.1
baz=44
H16A **Russell Place,** 44.57 70 ⇑P P 02 05 40.8 -0.1
baz=44,SNR=9.9
J15A **Blackfoot** 44.59 73 ⇑P P 02 05 41.0 -0.1
baz=44
F18A **Big Timber** 44.81 68 ⇓P P 02 05 42.5 -0.3
baz=45,SNR=9.3
L14A **Malta** 44.89 75 ⇑P P 02 05 43.5 +0.1
baz=45,SNR=8.3
I16A **Newdale** 44.89 72 ⇓P P 02 05 43.7 +0.3
baz=45
GCMT **Greycliff** 44.90 68 *e*P P 02 05 44.5 +1.0
comp=Z,5.5nm,0.7s,mb4.5
YNR **Norris Junctio** 44.90 70 *e*P P 02 05 43.8 +0.3
comp=Z,11nm,0.8s,mb4.7
K15A **Arbon** 44.94 74 ⇓P P 02 05 44.1 +0.2
baz=45,SNR=9.7
YFT **Old Faithful** 44.96 71 *e*P P 02 05 46.1 +2.1
comp=Z,13nm,0.7s,mb4.9
O12A **Currie** 45.01 78 ⇓P P 02 05 44.4 -0.1
baz=45,SNR=14
E19A **Rath Farm, Rou** 45.05 67 ⇑P P 02 05 44.5 -0.2
baz=45,SNR=14
D20A **Manuel Ranch,** 45.08 66 ⇓P P 02 05 45.0 +0.1
baz=45,SNR=8.8
BJI **Beijing** 45.09 282 P P 02 05 44.8 -0.3
BJI PP PP 02 07 27.8 -3.2
BJI S S 02 12 18.5 -1.9
BJI pmax pmax
comp=Z,17nm,0.8s,mb4.9
BJI pmax pmax
comp=Z,120nm,4.4s
BJI LR LR
comp=N,710nm,21.3s,MS4.7
BJI LR LR
comp=E,470nm,18.0s,MS4.7
BJI LR LR
comp=Z,520nm,26.4s
H17A **Grant Village** 45.14 70 ⇑P P 02 05 46.2 +0.7
baz=45
J16A **Bone** 45.16 72 ⇑P P 02 05 45.9 +0.3
baz=45,SNR=7.4
IMW **Indian Meadow** 45.21 71 *e*P P 02 05 46.4 +0.4
comp=Z,4.7nm,0.7s,mb4.4
G18A **Lazy EL Ranch,** 45.23 69 ⇓P P 02 05 46.1 0.0
baz=45
FLWY **Flagg Ranch** 45.25 71 *e*P P 02 05 47.4 +1.2
comp=Z,14nm,0.9s,mb4.8
S10A **Tonopah Range,** 45.28 82 ⇑P P 02 05 46.6 0.0
baz=45
F19A **Roth Farm, Mol** 45.29 68 ⇑P P 02 05 46.4 -0.2
baz=45,SNR=7.1
RRI2 **Red Ridge** 45.29 72 *e*P P 02 05 47.0 +0.4
comp=Z,7.4nm,0.7s,mb4.6
Q11A **Duckwater** 45.30 80 ⇑P P 02 05 47.1 +0.3
baz=45
P12A **McGill** 45.38 79 ⇑P P 02 05 47.6 +0.2
baz=45
E20A **Meyer Farm, Mu** 45.41 67 ⇓P P 02 05 47.3 -0.2
baz=45
MOOW **Moose Ponds** 45.41 71 *e*P P 02 05 47.1 -0.4
comp=Z,53nm,3.0s
L15A **Malad City** 45.42 74 ⇓P P 02 05 47.8 +0.1
baz=45,SNR=5.4
K16A **Soda Springs** 45.43 73 ⇑P P 02 05 48.0 +0.3
baz=45,SNR=10
TPAW **Teton Pass** 45.43 72 *e*P P 02 05 49.7 +1.9
comp=Z,3.6nm,0.7s,mb4.3
RLMT **Red Lodge** 45.51 69 ⇑P P 02 05 48.3 0.0
baz=45,SNR=17
RLMT **Red Lodge** 45.51 69 *e*P P 02 05 48.9 +0.5
comp=Z,14nm,0.6s,mb5.1
ISA **Isabella** 45.52 85 *e*P P 02 05 48.0 -0.6
REDW **Red Top Meadow** 45.56 72 *e*P P 02 05 49.8 +1.0
comp=Z,4.6nm,0.9s,mb4.4
LOHW **Long Hollow** 45.57 71 *e*P P 02 05 49.4 +0.6
comp=Z,3.6nm,0.8s,mb4.3
R11A **Troy Canyon, C** 45.64 80 ⇓P P 02 05 49.6 +0.1
baz=46
J17A **Brown Place, J** 45.65 72 ⇓P P 02 05 49.7 +0.3
baz=46
BGU **Big Grassy Mou** 45.67 76 *e*P P 02 05 50.4 +0.7
comp=Z,5.9nm,0.9s,mb4.5
M15A **Larsen Ranch,** 45.70 75 ⇑P P 02 05 50.1 +0.2
baz=46
D21A **La Casta Ranch** 45.75 65 ⇑P P 02 05 50.0 -0.3
baz=46,SNR=14
F20A **Billings** 45.78 68 ⇓P P 02 05 50.2 -0.3
baz=46
SPUT **South Promonto** 45.79 75 *e*P P 02 05 51.2 +0.6
comp=Z,5.8nm,1.0s,mb4.5
MPMC **Manual Prospec** 45.88 84 ⇑P P 02 05 51.3 -0.1
baz=46
TLY **Talaya** 45.89 302 *e*P P 02 05 51.7 +0.5
TLY pmax pmax
comp=Z,20nm,1.1s,mb5.0
TLY MLR MLR
comp=Z,302nm,21.0s,MS4.2
I18A **Diamond G Ranc** 45.99 71 ⇑P P 02 05 52.4 +0.3
baz=46
L16A **Fish Haven** 45.99 74 ⇑P P 02 05 52.4 +0.1
baz=46,SNR=15
N15A **Stansbury Isla** 46.00 76 ⇑P P 02 05 52.3 +0.1
baz=46,SNR=7.6
FURC **Furnace Creek,** 46.02 83 ⇓P P 02 05 52.9 +0.4
baz=46
ULN **Ulaanbaatar** 46.05 296 *e*P P 02 05 53.2 +0.6
comp=Z,7.5nm,0.8s,mb4.7
ULN **Ulaanbaatar** 46.05 296 *e*P P 02 05 53.2 +0.6
ULN pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
G20A **Bridger** 46.07 68 ⇓P P 02 05 52.5 -0.3
baz=46,SNR=24
J18A **Kendall Valley** 46.15 72 ⇓P P 02 05 53.3 -0.1
baz=46
HWUT **Hardware Ranch** 46.15 74 *e*P P 02 05 54.1 +0.6
comp=Z,9.1nm,1.2s,mb4.6
DUG **Dugway** 46.23 77 ⇓P P 02 05 54.1 0.0
baz=46
DUG **Dugway** 46.23 77 *e*P P 02 05 54.1 0.0
comp=Z,13nm,0.9s,mb4.8
DUG **Dugway** 46.23 77 *e*P P 02 05 54.1 0.0
DUG pmax pmax
comp=Z,13nm,0.9s,mb4.9
EDW2 **Edwards Air Fo** 46.32 86 ⇑P P 02 05 54.7 -0.2
baz=46
F21A **Absaloka Mine,** 46.37 67 ⇓P P 02 05 54.6 -0.4
baz=46
U10A **Ash Meadows, A** 46.38 83 ⇑P P 02 05 54.8 -0.5
baz=46
LAO **LASA Array** 46.40 65 ⇓P P 02 05 55.4 +0.1
baz=46,SNR=13
LAO **LASA Array** 46.40 65 *e*P P 02 05 55.8 +0.4
comp=Z,27nm,1.0s,mb5.1
SONM **Songino Array** 46.44 296 P P 02 05 56.7 +1.1
comp=Z,6.0nm,0.7s,mb4.6,baz=57,slow=10,SNR=12
SONM PcP PcP 02 07 27.5 -2.0
comp=Z,0.9nm,0.5s,baz=64,slow=3.4,SNR=3.6
K18A **Toltan Ranch,** 46.47 72 ⇑P P 02 05 56.6 +0.6
baz=46,SNR=9.5
S12A **Delamar Landin** 46.56 81 ⇑P P 02 05 56.7 0.0
baz=46
H20A **Greybull** 46.61 69 ⇓P P 02 05 56.6 -0.4
baz=46
G21A **Lodge Grass** 46.66 68 ⇓P P 02 05 56.9 -0.4
baz=46
Q14A **Sevier Lake (B** 46.68 78 ⇑P P 02 05 57.8 +0.1
baz=47,SNR=15
BW06 **Boulder Array** 46.68 72 ⇑P P 02 05 57.5 -0.1
baz=47,SNR=25
BW06 **Boulder Array** 46.68 72 *e*P P 02 05 57.6 0.0
comp=Z,14nm,0.9s,mb4.9
PDAR **Pinedale Array** 46.68 72 P P 02 05 57.5 0.0
comp=Z,11nm,0.8s,mb4.8,baz=316,slow=4.1,SNR=85
SHOC **Shoshone** 46.74 84 ⇓P P 02 05 58.0 -0.2
baz=47
ZAK **Zakamensk** 46.77 301 *e*P P 02 05 58.5 +0.3
ZAK pmax pmax
comp=Z,12nm,1.2s,mb4.7
M17A **Scullys Gap (B** 46.78 74 ⇑P P 02 05 58.0 -0.3
baz=47
GSC **Goldstone** 46.79 85 ⇑P P 02 05 58.5 -0.1
baz=47
GSC **Goldstone** 46.79 85 *e*P P 02 05 58.2 -0.4
comp=Z,6.1nm,0.8s,mb4.6
GSC **Goldstone** 46.79 85 *e*P P 02 05 58.2 -0.4
GSC pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
JLU **Jordanelle** 46.82 75 *e*P P 02 05 59.9 +1.2
comp=Z,8.0nm,0.9s,mb4.7
NLU **North Lily Min** 46.83 76 *e*P P 02 05 58.8 0.0
comp=Z,6.4nm,0.9s,mb4.5
I20A **Worland** 46.84 70 ⇑P P 02 05 58.7 -0.2
baz=47,SNR=8.9
L18A **Fontenelle, Gr** 46.89 73 ⇑P P 02 05 59.4 +0.2
baz=47
P15A **Leamington** 46.94 77 ⇑P P 02 06 00.0 +0.4
baz=47
BFSC **Mount Baldy Ra** 46.95 86 ⇑P P 02 05 59.6 -0.1

N17A **Moffit Pass** 46.99 75 ⇓P P 02 05 59.9 -0.2
baz=47
O16A **Springville** 47.03 76 ⇑P P 02 06 00.6 +0.2
baz=47
DAU **Daniels Canyon** 47.05 75 *eP* P 02 06 02.2 +1.7
SHPR **Sheep Range** 47.06 82 *eP* P 02 06 02.5 +1.9
comp=Z,4.1nm,1.0s,mb4.3
K19A **Absolon Red Bu** 47.07 71 ⇓P P 02 06 00.2 -0.5
baz=47,SNR=16
H21A **Big Horn, Sher** 47.09 68 ⇑P P 02 06 00.3 -0.4
baz=47,SNR=7.0
M18A **Lyman** 47.17 74 ⇓P P 02 06 01.6 +0.2
baz=47
Q15A **Fillmore** 47.23 78 ⇑P P 02 06 02.1 +0.3
baz=47
MOY **Mondy** 47.30 304 *eP* P 02 06 02.8 +0.5
MOY pmax pmax
comp=Z,21nm,1.2s,mb4.9
V11A **Goodsprings** 47.31 83 ⇓P P 02 06 02.5 -0.1
baz=47
I21A **Big Trails, Te** 47.42 69 ⇑P P 02 06 02.7 -0.6
baz=47,SNR=14
K20A **Yellowstone Ra** 47.47 71 ⇑P P 02 06 03.0 -0.7
baz=47,SNR=9.4
U12A **Valley of Fire** 47.49 82 ⇑P P 02 06 04.0 0.0
baz=47
O17A **Robinson Place** 47.50 75 ⇓P P 02 06 04.2 +0.2
baz=47
T13A **Saint George** 47.51 81 ⇓P P 02 06 04.0 -0.2
baz=47,SNR=9.1
CCUT **Cedar City** 47.52 80 *eP* P 02 06 04.1 -0.1
comp=Z,3.6nm,0.9s,mb4.4
MSU **Marysvale** 47.65 78 *eP* P 02 06 06.0 +0.8
SSE **Sheshan** 47.66 269 P P 02 06 00.0 -5.4
SSE S S 02 12 56.3 -1.2
SSE pmax pmax
comp=Z,37nm,0.6s,mb5.6
SSE pmax pmax
comp=Z,280nm,3.9s
SSE LR LR
comp=N,840nm,32.3s,MS4.6
SSE LR LR
comp=E,790nm,32.4s,MS4.6
SSE LR LR
comp=Z,1μm,24.5s
M19A **Rock Springs** 47.67 73 ⇑P P 02 06 05.3 0.0
baz=48
N18A **Larsen Ranch,** 47.67 74 ⇑P P 02 06 05.3 -0.1
baz=48
V12A **Nelson** 47.74 83 ⇓P P 02 06 06.3 +0.4
baz=48
TMUT **Trail Mountain** 47.76 77 *eP* P 02 06 07.1 +1.1
comp=Z,25nm,0.9s,mb5.2
U13A **Pakoon Wash** 47.86 81 ⇑P P 02 06 06.7 -0.1
baz=48
L20A **Wamsutter** 47.86 72 ⇓P P 02 06 06.6 -0.1
baz=48
P17A **Butcher Ranch,** 47.94 76 ⇑P P 02 06 07.4 0.0
baz=48
T14A **Hurricane** 48.00 80 ⇑P P 02 06 08.2 +0.3
baz=48
LDFC **Landfair** 48.00 84 *eP* P 02 06 07.5 -0.4
comp=Z,9.0nm,1.1s,mb4.7
N19A **John Jarvie Ra** 48.02 74 ⇑P P 02 06 07.5 -0.5
baz=48,SNR=6.6
S15A **Panguitch** 48.06 79 ⇓P P 02 06 08.4 +0.1
baz=48
K21A **Alcova** 48.13 71 ⇑P P 02 06 08.3 -0.5
baz=48,SNR=7.8
P18A **Preston Nutter** 48.15 76 ⇑P P 02 06 09.2 +0.2
baz=48
V13A **Grand Canyon W** 48.20 82 ⇑P P 02 06 09.6 +0.1
baz=48
R16A **Teasdale** 48.22 78 ⇑P P 02 06 09.9 +0.3
baz=48,SNR=5.1
M20A **Sweetwater, Wa** 48.26 72 ⇑P P 02 06 09.9 0.0
baz=48
SRU **San Rafael** 48.30 76 ⇑P P 02 06 10.0 -0.1
baz=48,SNR=14
SRU **San Rafael** 48.30 76 *eP* P 02 06 11.2 +1.0
comp=Z,13nm,0.9s,mb5.0
SRU **San Rafael** 48.30 76 *eP* P 02 06 11.2 +1.0
SRU pmax pmax
comp=Z,13nm,0.9s,mb5.0
U14A **Mt Trumbull** 48.34 81 ⇓P P 02 06 10.5 0.0
baz=48
O19A **Miners Draw (B** 48.42 74 ⇑P P 02 06 10.8 -0.3
baz=48,SNR=14
T15A **Red Dirt Ranch** 48.46 80 ⇑P P 02 06 11.5 +0.1
baz=48
L21A **Rawlins** 48.46 71 ⇑P P 02 06 11.3 -0.1
baz=48
NJ2 **Nanjing** 48.49 272 *eP* P 02 06 15.3 +3.6
NJ2 PP PP 02 08 08.3 +3.7
NJ2 S S 02 13 11.0 +1.9
NJ2 pmax pmax
comp=Z,120nm,1.0s,mb5.9
NJ2 pmax pmax
comp=Z,250nm,3.8s
NJ2 LR LR
comp=N,1μm,26.5s
NJ2 LR LR
comp=E,1μm,14.7s
NJ2 LR LR
comp=Z,2μm,17.8s
S16A **Weppner Ranch,** 48.50 78 ⇑P P 02 06 12.1 +0.3
baz=48
Q18A **Rafter H Ranch** 48.54 76 ⇑P P 02 06 11.9 -0.2
baz=48,SNR=6.6
K22A **Casper** 48.55 70 ⇑P P 02 06 11.6 -0.5
baz=48,SNR=7.1
IRM **Iron Mountain** 48.57 85 ⇑P P 02 06 11.8 -0.5
baz=48
N20A **Spence Gulch,** 48.61 73 ⇓P P 02 06 12.8 +0.3
baz=48,SNR=7.6
U15A **North Rim** 48.89 80 ⇑P P 02 06 15.0 +0.3
baz=49,SNR=12
V14A **Boquillas Ranc** 48.89 82 ⇓P P 02 06 14.8 0.0
baz=49
P19A **Cripple Cowboy** 48.91 75 ⇑P P 02 06 15.4 +0.5
baz=49
DVTC **Desert V Tower** 48.96 87 ⇓P P 02 06 15.0 -0.4
baz=49
L22A **Ellis Ranch, M** 48.98 71 ⇓P P 02 06 15.1 -0.3
baz=49
S17A **Black Ridge (B** 49.05 78 ⇓P P 02 06 15.5 -0.5
baz=49
O20A **White River Ci** 49.05 74 ⇑P P 02 06 15.7 -0.3
baz=49,SNR=12
N21A **Black Mountain** 49.10 73 ⇓P P 02 06 16.2 -0.2
baz=49,SNR=9.0
R18A **Canyonlands Na** 49.13 77 ⇑P P 02 06 16.5 -0.1
baz=49,SNR=8.7
RSSD **Black Hills** 49.14 67 *eP* P 02 06 16.5 -0.1
comp=Z,8.0nm,1.1s,mb4.7
RSSD **Black Hills** 49.14 67 *eP* P 02 06 16.5 -0.1
RSSD pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
Q19A **Hogan Spring (** 49.16 76 ⇑P P 02 06 16.7 -0.1
baz=49
W14A **Seligman** 49.18 82 ⇑P P 02 06 16.9 -0.1
baz=49
Y12C **Blythe** 49.23 85 ⇑P P 02 06 17.5 +0.1
baz=49
M22A **Cedar Creek Ra** 49.26 71 ⇓P P 02 06 17.4 -0.1
baz=49
P20A **De Beque** 49.35 75 ⇑P P 02 06 18.2 0.0
baz=49
V15A **Kaibab Nationa** 49.35 81 ⇓P P 02 06 18.3 0.0
baz=49,SNR=7.6
L23A **Garrett** 49.36 70 ⇑P P 02 06 18.0 -0.3
baz=49,SNR=8.5
T17A **Navajo Res., N** 49.45 79 ⇑P P 02 06 18.7 -0.3
baz=49
O21A **Pagoda** 49.47 73 ⇓P P 02 06 18.9 -0.2
baz=49
S18A **Hurst Farm, Bl** 49.51 77 ⇑P P 02 06 19.1 -0.3
baz=49,SNR=15
Y13A **Salome** 49.62 84 ⇑P P 02 06 20.6 +0.2
baz=50
N22A **Wattenberg Ran** 49.72 72 ⇑P P 02 06 20.9 -0.1
baz=50
PV04 **Paradox Valley** 49.73 76 *eP* P 02 06 21.4 +0.2
Q20A **Ridgley Place,** 49.75 75 ⇓P P 02 06 21.1 -0.2
baz=50
X14A **Yava** 49.78 83 ⇓P P 02 06 21.3 -0.3
baz=50,SNR=5.3
U16A **Tuba City** 49.79 80 ⇓P P 02 06 22.0 +0.3
baz=50
P21A **Newcastle** 49.91 74 ⇓P P 02 06 22.3 -0.2
baz=50
T18A **Mexican Hat** 49.93 78 ⇓P P 02 06 22.3 -0.4
baz=50,SNR=10
N23A **Red Feather La** 49.97 72 ⇓P P 02 06 22.5 -0.4
baz=50
KBS **Kingsbay** 49.97 357 *eP* P 02 06 22.8 +0.3
comp=Z,109nm,2.2s,mb5.5
KBS **Kingsbay** 49.97 357 *eP* P 02 06 22.8 +0.3
KBS pmax pmax
comp=Z,109nm,2.2s,mb5.5
S19A **Harvey Farm, M** 50.00 77 ⇑P P 02 06 23.2 0.0
baz=50,SNR=18
PHWY **Pilot Hill** 50.00 71 *eP* P 02 06 25.3 +2.1
WUAZ **Wupatki** 50.05 81 ⇓P P 02 06 23.5 -0.1
baz=50,SNR=6.7
WUAZ **Wupatki** 50.05 81 *eP* P 02 06 24.0 +0.4
comp=Z,5.1nm,0.8s,mb4.6
O22A **Kremmling** 50.06 73 ⇓P P 02 06 23.9 +0.3
baz=50,SNR=6.2
X15A **Humboldt** 50.18 82 ⇓P P 02 06 24.5 -0.1
baz=50
Q21A **Lamborn Mesa,** 50.26 75 ⇑P P 02 06 24.8 -0.4
baz=50
P22A **Eagle** 50.28 73 ⇑P P 02 06 25.0 -0.3
baz=50
V17A **Tonalea, Kykot** 50.34 80 ⇓P P 02 06 25.9 +0.1
baz=50,SNR=5.2
U18A **Rough Rock, Ch** 50.39 79 ⇑P P 02 06 26.5 +0.3
baz=50
O23A **Lake Granby, G** 50.40 72 ⇑P P 02 06 26.5 +0.3
baz=50,SNR=12
SMCO **Snowmass** 50.41 74 *eP* P 02 06 26.8 +0.5
comp=Z,3.5nm,0.8s,mb4.4
Y15A **Casa Rosa Ranc** 50.47 83 ⇑P P 02 06 26.5 -0.3
baz=50
R21A **Cimarron** 50.57 75 ⇑P P 02 06 28.0 +0.5
baz=50
N24A **Carr** 50.64 71 ⇑P P 02 06 28.5 +0.5
baz=50
Q22A **Crested Butte,** 50.65 74 ⇑P P 02 06 28.3 +0.2
baz=50
T19A **Beclabito** 50.65 78 ⇑P P 02 06 28.2 +0.1
baz=50,SNR=15
X16A **Lo Mia Camp, P** 50.72 82 ⇓P P 02 06 29.1 +0.4
baz=51
MVCO **Mesa Verde** 50.73 77 ⇓P P 02 06 28.9 +0.1
baz=51,SNR=7.5
MVCO **Mesa Verde** 50.73 77 *eP* P 02 06 29.2 +0.4
comp=Z,21nm,1.1s,mb5.0
ISCO **Idaho Springs** 50.84 72 ⇓P P 02 06 29.6 +0.1
baz=51,SNR=9.5
ISCO **Idaho Springs** 50.84 72 *eP* P 02 06 30.3 +0.7
comp=Z,6.6nm,1.0s,mb4.5
ISCO **Idaho Springs** 50.84 72 *eP* P 02 06 30.3 +0.8
ISCO pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
S21A **Coal Bank Pass** 50.87 76 ⇑P P 02 06 30.1 +0.3
baz=51,SNR=9.1
114A **Black Gap (USA** 50.92 84 ⇑P P 02 06 29.9 -0.3
baz=51
AGMN **Agassiz Nation** 51.22 58 *eP* P 02 06 31.2 -1.1
comp=Z,87nm,2.7s,mb5.2
Q23A **Hartsel** 51.27 74 ⇑P P 02 06 33.3 +0.6
baz=51
V19A **Window Rock** 51.36 79 ⇑P P 02 06 33.3 -0.2
baz=51
S22A **4UR Ranch, Cre** 51.41 75 ⇑P P 02 06 34.1 +0.3
baz=51,SNR=7.9
Y17A **Roosevelt** 51.57 82 ⇓P P 02 06 34.8 -0.2
baz=52
U21A **Nageezi** 51.75 77 ⇓P P 02 06 36.5 +0.2
baz=52
T22A **Edith** 51.83 76 ⇑P P 02 06 37.5 +0.5
baz=52
P25A **Willow Gulch B** 51.89 72 ⇑P P 02 06 37.8 +0.4
baz=52
Y18A **Canyon Day Jun** 52.02 81 ⇑P P 02 06 38.4 0.0
baz=52
X19A **St. Johns** 52.05 80 ⇓P P 02 06 38.7 +0.1
baz=52
W20A **Ramah** 52.08 79 ⇓P P 02 06 39.0 +0.2
baz=52
R24A **Sanders Place,** 52.14 74 ⇑P P 02 06 39.1 -0.2
baz=52
SDCO **Great Sand Dun** 52.21 74 ⇓P P 02 06 39.9 +0.1
baz=52
Q25A **Bedland, Calha** 52.22 73 ⇑P P 02 06 40.3 +0.4
baz=52
OGNE **Ogallala** 52.25 69 ⇓P P 02 06 40.1 +0.1
baz=52
WHN **Wuhan** 52.34 274 P P 02 06 40.0 -0.8
WHN LR LR
comp=N,1μm,13.4s,MS5.4
WHN LR LR
comp=E,2μm,10.6s,MS5.4
WHN LR LR
comp=Z,4μm,20.1s
117A **Oracle** 52.38 83 ⇓P P 02 06 41.6 +0.4
baz=52
Y19A **Nutrioso** 52.38 81 ⇓P P 02 06 41.6 +0.5
baz=52
S24A **Houchin Ranch,** 52.46 74 ⇓P P 02 06 42.2 +0.6
baz=52
X20A **Quemado** 52.47 80 ⇓P P 02 06 41.9 +0.2
baz=52,SNR=7.3
TUC **Tucson** 52.53 83 *eP* P 02 06 42.1 -0.1
comp=Z,7.5nm,1.1s,mb4.5
TUC **Tucson** 52.53 83 *eP* P 02 06 42.1 -0.1
TUC pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
R25A **Fountain Ranch** 52.69 73 ⇓P P 02 06 43.3 0.0
baz=53,SNR=7.5
118A **Homack Ranch,** 52.82 82 ⇓P P 02 06 44.1 -0.2
baz=53
S25A **Robets Cordova** 52.91 74 ⇑P P 02 06 45.3 +0.3
baz=53
Y20A **Horse Springs,** 52.96 80 ⇓P P 02 06 45.7 +0.4
baz=53
SSLB **Suanglung** 52.96 262 *eP* P 02 06 44.9 -0.6
comp=Z,15nm,0.9s,mb4.9
V23A **Ortiz Mt. (NFS** 53.10 77 ⇑P P 02 06 46.4 +0.1
baz=53,SNR=10
119A **Ashpeak Ranch,** 53.15 82 ⇑P P 02 06 46.8 0.0
baz=53
218A **Dragoon** 53.22 83 ⇓P P 02 06 47.5 +0.2
baz=53
T25A **Trinidad** 53.27 74 ⇑P P 02 06 47.9 +0.3
baz=53
Y21A **Point of Rocks** 53.33 79 ⇑P P 02 06 48.1 0.0
baz=53
Z20A **Nine Sixteen R** 53.36 81 ⇓P P 02 06 48.2 -0.1
baz=53
LAZ **Ladron** 53.40 79 *eP* P 02 06 48.8 +0.2
comp=Z,2.7nm,1.0s,mb4.1
X22A **Bernardo** 53.41 79 ⇓P P 02 06 48.5 -0.2
baz=53
ANMO **Albuquerque** 53.45 78 *eP* P 02 06 52.6 +3.6
comp=Z,4.0nm,1.1s,mb4.3
ANMO **Albuquerque** 53.45 78 LR LR 02 28 54.0
comp=Z,93nm,18.8s,MS3.9,baz=257,slow=35
ANMO **Albuquerque** 53.45 78 *eP* P 02 06 52.6 +3.6
ANMO pmax pmax
comp=Z,4.0nm,1.1s
SUMG **Summit** 53.56 14 *eP* P 02 06 49.3 0.0
comp=Z,338nm,3.0s
SUMG **Summit** 53.56 14 *i* P P 02 06 48.4 -0.9
comp=Z,9.9nm,1.0s,mb4.7
QZH **Quanzhou** 53.60 265 *eP* P 02 06 53.0 +2.8
QZH S S 02 14 19.5 -0.4
QZH LR LR
comp=N,1μm,9.3s
QZH LR LR
comp=E,2μm,9.3s
QZH LR LR
comp=Z,2μm,11.3s,MS5.4
ECSD **EROS Data Cent** 53.61 63 *eP* P 02 06 48.4 -1.6
comp=Z,6.4nm,0.8s,mb4.6
318A **Bisbee** 53.62 83 ⇑P P 02 06 49.8 -0.4
baz=54
V24A **Rampart Ranch,** 53.67 76 ⇓P P 02 06 51.1 +0.5
baz=54
120A **U Bar Ranch, L** 53.71 81 ⇑P P 02 06 51.3 +0.4
baz=54
EYMN **Ely** 53.75 56 *eP* P 02 06 50.2 -0.7
comp=Z,10nm,1.0s,mb4.7
U25A **Circle Dot Ran** 53.75 75 ⇓P P 02 06 51.5 +0.4
baz=54
Z21A **St. Cloud Mine** 53.80 80 ⇓P P 02 06 51.7 +0.1
baz=54
Y22A **Socorro** 53.81 79 ⇑P P 02 06 51.9 +0.2
baz=54
ZALV **Zalesovo Beam** 53.92 313 P P 02 06 51.9 -0.2
comp=Z,1.9nm,0.7s,mb4.1,baz=46,slow=8.1,SNR=8.1
ZALV PcP PcP 02 07 58.2 +1.3
comp=Z,3.4nm,0.8s,baz=35,slow=3.4,SNR=7.4
W24A **Lazy 6 Ranch,** 53.93 77 ⇑P P 02 06 52.2 -0.2
baz=54,SNR=10
V25A **Rancho No Teng** 53.99 76 ⇑P P 02 06 53.1 +0.1
baz=54
NVS **Novosibirsk** 54.07 315 *eP* P 02 06 52.5 -0.7
NVS pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
NVS pmax pmax
comp=N,3.0nm,0.6s
NVS pmax pmax
comp=E,3.0nm,0.6s
319A **Douglas** 54.10 83 ⇓P P 02 06 54.0 +0.2
baz=54
220A **Playas Peak, P** 54.21 82 ⇓P P 02 06 54.5 -0.1
baz=54
121A **Cookes Peak, D** 54.25 81 ⇑P P 02 06 54.7 -0.1
baz=54
Y23A **Lovelace Mesa,** 54.38 78 ⇑P P 02 06 56.1 +0.3
baz=54
W25A **X Bar L Ranch,** 54.50 76 ⇓P P 02 06 56.6 0.0
baz=54,SNR=6.4
V26A **Tequesquite Ra** 54.53 75 ⇓P P 02 06 56.8 0.0
baz=54
320A **Kipp Ranch, An** 54.60 82 ⇑P P 02 06 57.6 +0.2
baz=54
122A **Conniff Cattle** 54.62 80 ⇓P P 02 06 57.8 +0.3
baz=54
Y24A **Capitan** 54.77 78 ⇓P P 02 06 58.5 -0.1
baz=55,SNR=13
CBKS **Cedar Bluff** 54.97 70 ⇑P P 02 06 59.7 -0.2
baz=55
CBKS **Cedar Bluff** 54.97 70 *eP* P 02 06 58.9 -1.1
comp=E,14nm,0.7s,mb5.1
CBKS **Cedar Bluff** 54.97 70 *eP* P 02 06 58.9 -1.1
CBKS pmax pmax
comp=Z,14nm,0.7s,mb5.1
LZH **Lanzhou** 55.12 286 *eP* P 02 07 05.0 +3.9
LZH *eS* S 02 14 43.0 +2.9
LZH pmax pmax
comp=Z,23nm,1.3s,mb5.0
LZH pmax pmax
comp=Z,130nm,5.6s
LZH LR LR
comp=N,640nm,17.0s,MS4.9
LZH LR LR
comp=E,550nm,18.0s,MS4.9
LZH LR LR
comp=Z,740nm,19.2s,MS4.8
Z24A **Sheeppen Canyo** 55.21 78 ⇑P P 02 07 01.9 +0.1
baz=55
Y25A **Mesa, Roswell** 55.22 77 ⇑P P 02 07 01.7 -0.2
baz=55,SNR=9.6
GTA **Gaotai** 55.33 292 *eP* P 02 07 03.0 +0.4
GTA pP pP 02 07 15.3 -1.1
GTA S S 02 14 41.5 -1.3
GTA pmax pmax
comp=Z,13nm,1.2s,mb4.8
GTA pmax pmax
comp=Z,220nm,5.1s
GTA LR LR
comp=N,250nm,12.5s,MS4.5
GTA LR LR
comp=E,140nm,12.5s,MS4.5
GTA LR LR
comp=Z,240nm,16.6s,MS4.3
X26A **CR and CF Fran** 55.34 76 ⇑P P 02 07 02.9 +0.2
baz=55
124A **Stringfield Ra** 55.58 79 ⇓P P 02 07 04.6 +0.1
baz=56
224A **Cornudas Mount** 55.96 80 ⇑P P 02 07 07.1 -0.1
baz=56
COWI **Conover** 56.17 57 *eP* P 02 07 07.6 -0.9
comp=Z,6.1nm,0.9s,mb4.6
Y27A **Causey** 56.19 76 ⇓P P 02 07 08.5 -0.3
baz=56,SNR=11
MNTX **Cornudas Mount** 56.31 80 ⇑P P 02 07 09.4 -0.2
baz=56,SNR=14
MNTX **Cornudas Mount** 56.31 80 *eP* P 02 07 09.1 -0.6
comp=Z,4.9nm,0.9s,mb4.5
MSTX **Muleshoe** 56.37 76 ⇓P P 02 07 10.0 -0.1
baz=56
225A **Deer Hill, Car** 56.37 79 ⇑P P 02 07 10.1 0.0
baz=56
AMTX **Amarillo** 56.42 75 ⇑P P 02 07 10.4 0.0
baz=56
AMTX **Amarillo** 56.42 75 *eP* P 02 07 12.9 +2.5
comp=Z,5.7nm,0.6s,mb4.8
KSU1 **Kansas State U** 56.62 68 *eP* P 02 07 11.2 -0.5
comp=Z,16nm,0.8s,mb5.1
SCIA **State Center** 56.70 63 *eP* P 02 07 12.2 -0.1
comp=Z,17nm,0.8s,mb5.1
325A **Bean Ranch, Si** 56.79 80 ⇓P P 02 07 12.6 -0.5
baz=57,SNR=8.8
226A **Malaga, Loving** 56.85 79 ⇓P P 02 07 13.4 -0.1
baz=57
425A **Indio Mountain** 57.18 80 ⇑P P 02 07 15.8 -0.1
baz=57
KEV **Kevo** 57.85 349 *eP* P 02 07 19.8 -0.2
KEV pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
KEV **Kevo** 57.85 349 *ep* P 02 07 19.8 -0.2
comp=Z,2.0nm,0.5s,mb4.4
426A **McDonald Obser** 57.85 80 ⇑P P 02 07 19.9 -0.7
baz=58
328A **Wristen Ranch,** 58.12 78 ⇑P P 02 07 21.7 -0.7
baz=58
427A **Hayter Ranch,** 58.12 79 ⇑P P 02 07 22.1 -0.3
baz=58
ARCES **ARCESS Array B** 58.22 350 P P 02 07 22.2 -0.4
comp=Z,5.1nm,0.6s,mb4.7,baz=28,slow=7.6,SNR=20
ARE0 **ARCESS Array S** 58.22 350 *eP* P 02 07 22.1 -0.5
526A **Mary Lane Ranc** 58.24 80 ⇑P P 02 07 22.9 -0.4
baz=58
WMOK **Wichita Mounta** 58.27 73 *eP* P 02 07 23.4 0.0
comp=Z,4.2nm,0.8s,mb4.5
WMOK **Wichita Mounta** 58.27 73 *eP* P 02 07 23.4 0.0
WMOK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
527A **Woodward Ranch** 58.48 80 ⇑P P 02 07 24.5 -0.4
baz=58
LVZ **Lovozero** 58.55 346 *de*P P 02 07 24.2 -0.7
LVZ pmax pmax
comp=Z,40nm,1.7s,mb5.2
626A **Big Bend Ranch** 58.57 81 ⇓P P 02 07 24.9 -0.7
baz=58,SNR=8.0
428A **Kincaid Ranch,** 58.65 79 ⇓P P 02 07 25.6 -0.6
baz=58,SNR=8.1
CD2 **Chengdu** 58.69 282 P P 02 07 27.0 +0.6
CD2 pP pP 02 07 39.8 -0.6
CD2 PP PP 02 09 38.5 +2.1
CD2 S S 02 15 26.0 -1.3
CD2 ScS ScS 02 17 09.3 -2.5
CD2 SS SS 02 19 20.8 +0.4
CD2 pmax pmax
comp=Z,20nm,0.6s,mb5.3
CD2 pmax pmax
comp=Z,130nm,4.9s
CD2 LR LR
comp=N,1μm,19.0s,MS5.2
CD2 LR LR
comp=E,1μm,19.0s,MS5.2
CD2 LR LR
comp=Z,1μm,21.2s,MS5.0
KURK **Kurchatov** 58.91 313 *eP* P 02 07 27.5 -0.2
comp=Z,20nm,0.8s,mb5.2
KURK *e*PcP PcP 02 08 17.3 +0.9
KURK **Kurchatov** 58.91 313 P P 02 07 28.1 +0.4
comp=Z,19nm,0.6s,mb5.3,baz=42,slow=6.5,SNR=54
KURK **Kurchatov** 58.91 313 *de*P P 02 07 27.8 +0.1
KURK pmax pmax
comp=Z,21nm,0.8s,mb5.2
528A **Cox Ranch, San** 58.98 79 ⇑P P 02 07 27.9 -0.5
baz=59,SNR=8.4
TXAR **Lajitas Array** 59.01 81 P P 02 07 27.9 -0.7
comp=Z,1.4nm,0.5s,mb4.2,baz=307,slow=5.1,SNR=39
627A **Terlingua Ranc** 59.10 80 ⇑P P 02 07 28.6 -0.6
baz=59

WMQ Urumqi 59.17 303 P **P** 02 07 31.0 +1.4
WMQ PcP PcP 02 08 19.0 +1.4
WMQ PP PP 02 09 43.5 +3.2
WMQ S **S** **02 15 33.0 -0.1**
WMQ ScS ScS 02 17 13.3 -1.6
WMQ pmax pmax
comp=Z,24nm,0.8s,mb5.3
WMQ pmax pmax
comp=Z,180nm,4.8s
WMQ LR LR
comp=N,520nm,23.8s,MS4.7
WMQ LR LR
comp=E,410nm,20.3s,MS4.7
WMQ LR LR
comp=Z,450nm,20.2s,MS4.6
628A Black Gap, Mar 59.39 80 ⇑P **P** **02 07 30.4 -0.9**
baz=59
HDIL Hopedale 59.80 62 *e*P **P** **02 07 33.4 -0.5**
comp=Z,28nm,0.6s,mb5.5
MK31 Makanchi Array 59.89 308 *e*P **P** **02 07 34.5 0.0**
MK31 Makanchi Array 59.89 308 *i* P **P** **02 07 33.5 -1.0**
MK31 pmax pmax
comp=Z,13nm,0.7s,mb5.1
MKAR Makanchi Array 59.89 308 P **P** **02 07 34.2 -0.3**
comp=Z,13nm,0.7s,mb5.0,baz=52,slow=6.8,SNR=84
GYA Guiyang 60.02 276 P **P** **02 07 37.0 +1.4**
GYA PP PP 02 09 52.3 +4.1
GYA ScP ScP 02 12 18.0 +0.2
GYA S **S** **02 15 44.0 -0.5**
GYA SS SS 02 19 41.0 -0.3
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,110nm,5.2s
GYA LR LR
comp=N,420nm,18.7s,MS4.7
GYA LR LR
comp=E,310nm,19.7s,MS4.7
GYA LR LR
comp=Z,350nm,18.3s,MS4.5
SCHQ Schefferville 60.36 38 P **P** **02 07 36.6 -0.9**
comp=Z,9.2nm,0.9s,mb4.8,baz=335,slow=6.9,SNR=7.7
CCM Cathedral Cave 60.42 65 *e*P **P** **02 07 36.4 -1.8**
comp=Z,11nm,1.3s,mb4.7
CCM Cathedral Cave 60.42 65 *e*P **P** **02 07 36.4 -1.8**
CCM pmax pmax
comp=Z,11nm,1.3s,mb4.7
JCT Junction City 60.59 77 ⇓P **P** **02 07 38.8 -0.7**
baz=60
JCT Junction City 60.59 77 *e*P **P** **02 07 40.6 +1.1**
comp=Z,12nm,1.1s,mb4.9
JCT Junction City 60.59 77 *e*P **P** **02 07 40.7 +1.2**
JCT pmax pmax
comp=Z,12nm,1.1s,mb4.9
VOSK Vostochnaya 60.80 319 P **P** **02 07 40.4 -0.2**
VOSK pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
BVAR Borovoye Array 60.82 320 P **P** **02 07 40.5 -0.2**
comp=Z,6.2nm,0.8s,mb4.8,baz=46,slow=6.4,SNR=28
BVAR PcP PcP 02 08 24.6 +0.6
comp=Z,4.6nm,0.6s,baz=67,slow=2.7,SNR=7.0
BRVK Borovoye 60.84 320 *e*P **P** **02 07 40.8 0.0**
comp=Z,10nm,1.0s,mb4.9
BRVK Borovoye 60.84 320 *ce*P **P** **02 07 41.8 +0.9**
BRVK pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
ZRNK Zerenda 61.44 320 P **P** **02 07 44.0 -0.9**
ZRNK pmax pmax
comp=Z,15nm,1.3s,mb5.0
MIAR Mount Ida 61.50 70 *e*P **P** **02 07 45.4 -0.2**
comp=Z,10nm,1.0s,mb4.9
MIAR Mount Ida 61.50 70 *e*P **P** **02 07 45.4 -0.2**
MIAR pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
OLIL Olney 61.72 63 *e*P **P** **02 07 46.7 -0.3**
comp=Z,20nm,0.6s,mb5.4
BLO Bloomington 62.29 61 *e*P **P** **02 07 50.7 -0.1**
comp=Z,23nm,0.9s,mb5.3
BLO Bloomington 62.29 61 *e*P **P** **02 07 50.7 -0.2**
BLO pmax pmax
comp=Z,23nm,0.9s,mb5.3
USIN University of 62.51 63 *e*P **P** **02 07 52.0 -0.3**
comp=Z,18nm,0.6s,mb5.4
ARU Arti 62.59 328 *e*P **P** **02 07 52.1 -0.4**
comp=Z,6.7nm,1.0s,mb4.7
ARU Arti 62.59 328 *d i*P **P** **02 07 52.3 -0.3**
ARU *e**PP pP 02 08 05.8 -0.9
ARU *e* 02 08 30.8
ARU *e* 02 10 08.3
ARU S **S** **02 16 19.6 +3.3**
ARU SS SS 02 20 18.1 -2.1
ARU pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
WCI Wyandotte Cave 63.08 62 *e*P **P** **02 07 55.6 -0.5**
comp=Z,19nm,0.8s,mb5.3
WCI Wyandotte Cave 63.08 62 *e*P **P** **02 07 55.6 -0.5**
WCI pmax pmax
comp=Z,19nm,0.8s,mb5.3
KMI Kunming 63.42 278 P **P** **02 07 58.5 -0.1**
KMI pP pP 02 08 12.8 +0.1
KMI PP PP 02 10 22.3 +4.0
KMI S **S** **02 16 25.0 -2.6**
KMI SS SS 02 20 35.5 +0.8
KMI pmax pmax
comp=Z,10.0nm,0.8s,mb5.0
KMI pmax pmax
comp=Z,89nm,3.6s
KMI LR LR
comp=N,350nm,23.5s,MS4.5
KMI LR LR
comp=E,190nm,23.5s,MS4.5
KMI LR LR
comp=Z,260nm,19.4s,MS4.4
QIZ Qiongzhong 63.43 268 P **P** **02 07 57.5 -1.1**
QIZ PP PP 02 10 20.5 +2.1
QIZ S **S** **02 16 25.3 -2.4**
QIZ pmax pmax
comp=Z,19nm,1.5s,mb5.0
QIZ pmax pmax
comp=Z,97nm,3.2s
QIZ LR LR
comp=N,760nm,19.1s
QIZ LR LR
comp=Z,2μm,22.7s,MS5.2
JOF Joensuu 63.70 345 *e*P **P** **02 07 58.5 -1.3**
JOF pmax pmax
comp=Z,13nm,0.6s,mb5.1
JOF Joensuu 63.70 345 *ep* **P** **02 07 58.5 -1.3**
comp=Z,13nm,0.6s,mb5.1
WVT Waverly 63.71 65 *e*P **P** **02 07 60.0 -0.4**
comp=Z,10nm,0.9s,mb4.9
WVT Waverly 63.71 65 *e*P **P** **02 08 00.0 -0.3**
WVT pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
OXF Oxford 63.96 67 *e*P **P** **02 08 00.9 -1.0**
comp=Z,27nm,0.9s,mb5.3
OXF Oxford 63.96 67 *e*P **P** **02 08 00.9 -1.1**
OXF pmax pmax
comp=Z,27nm,0.9s,mb5.3
KLMR Klimovskoe 64.04 340 P **P** **02 07 59.2 -2.9**
KLMR pmax pmax
comp=Z,22nm,1.0s,mb5.1
AFI Afiamalu 65.15 172 LR LR 02 30 25.5
comp=Z,948nm,21.4s,MS5.0,baz=318,slow=30
KAF Kangasniemi 65.22 347 *e*P **P** **02 08 08.1 -1.7**
KAF pmax pmax
comp=Z,14nm,0.8s,mb5.0
KAF Kangasniemi 65.22 347 *ep* **P** **02 08 08.1 -1.7**
comp=Z,14nm,0.8s,mb5.0
SWET Sewanee 65.44 64 *e*P **P** **02 08 10.8 -0.9**
BINY Binghamton 65.66 53 *e*P **P** **02 08 12.3 -0.6**
comp=Z,4.8nm,0.6s,mb4.7
FINES FINESS Array B 65.90 347 P **P** **02 08 13.5 -0.7**
comp=Z,16nm,0.7s,mb5.2,baz=7.5,slow=6.1,SNR=36
TKM2 Tokmak 2 65.98 309 P **P** **02 08 16.4 +1.4**
SNR=12
TKM2 Tokmak 2 65.98 309 *e*P **P** **02 08 16.2 +1.2**
comp=Z,14nm,1.1s,mb4.9
TKM2 Tokmak 2 65.98 309 *e*P **P** **02 08 16.2 +1.2**
TKM2 pmax pmax
comp=Z,14nm,1.1s,mb4.9
CPCT Cooper Cave 66.07 63 *e*P **P** **02 08 15.4 -0.2**
ULHL Ulahol 66.17 308 P **P** **02 08 17.6 +1.5**
SNR=6.1
USP Ospenovka 66.25 310 P **P** **02 08 17.8 +1.1**
SNR=20

TKL Tuckaleechee C 66.33 62 *e*P **P** **02 08 16.4 -1.0**
LRAL Lakeview Retre 66.41 66 *e*P **P** **02 08 16.6 -1.3**
comp=Z,4.6nm,0.7s,mb4.6
FRU Bishkek 66.52 310 ⇓ *i*P **P** **02 08 20.0 +1.5**
FRU *e* pP 02 08 33.0 +0.4
FRU pmax pmax
comp=Z,50nm,2.0s,mb5.2
AAK Ala-Archa 66.73 310 P **P** **02 08 21.5 +1.7**
SNR=6.5
AAK Ala-Archa 66.73 310 *e*P **P** **02 08 20.8 +1.0**
comp=Z,11nm,0.8s,mb4.9
AAK Ala-Archa 66.73 310 P **P** **02 08 19.6 -0.2**
comp=Z,7.2nm,0.6s,mb4.9,baz=136,slow=3.2,SNR=23
AAK Ala-Archa 66.73 310 *d i*P **P** **02 08 21.2 +1.4**
AAK pmax pmax
comp=Z,15nm,1.7s,mb4.8
EKS2 Erkin-Say 67.06 310 P **P** **02 08 23.0 +1.2**
SNR=19
EKS2 Erkin-Say 67.06 310 *e*P **P** **02 08 22.6 +0.8**
comp=Z,22nm,0.9s,mb5.2
AML Almayashu 67.50 310 P **P** **02 08 27.1 +2.4**
SNR=23
AML Almayashu 67.50 310 *e*P **P** **02 08 26.0 +1.3**
comp=Z,21nm,0.9s,mb5.2
AKTK Aktyubinsk 67.65 324 P **P** **02 08 24.8 -0.7**
AKTO Aktyubinsk 67.65 324 P **P** **02 08 24.8 -0.7**
comp=Z,3.7nm,0.6s,mb4.6,baz=56,slow=7.9,SNR=17
AKTO Aktyubinsk 67.65 324 P **P** **02 08 24.2 -1.3**
AKTO pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
NOA NORSAR Array B 67.81 354 P **P** **02 08 25.9 -0.3**
comp=Z,4.9nm,0.8s,mb4.6,baz=7.9,slow=6.5,SNR=20
AB31 Akbulak array 67.89 323 P **P** **02 08 26.4 -0.6**
AB31 pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
ABKAR Akbulak array 67.89 323 *e*P **P** **02 08 26.3 -0.7**
comp=Z,1.2nm,0.3s,mb4.4
ABKAR *e*PP PP 02 11 01.0 +4.4
JSRW J. Sargeant Re 68.03 57 *e*P **P** **02 08 27.9 -0.2**
GOGA Godfrey 68.15 64 *e*P **P** **02 08 27.9 -1.0**
comp=Z,11nm,0.8s,mb5.0
GOGA Godfrey 68.15 64 *e*P **P** **02 08 27.9 -1.0**
GOGA pmax pmax
comp=Z,11nm,0.8s,mb4.9
KK31 Karatay Array 68.27 312 *i* P **P** **02 08 29.9 +0.4**
KK31 pmax pmax
comp=Z,11nm,0.7s,mb5.0
KKAR Karatay Array 68.27 312 *e*P **P** **02 08 29.9 +0.4**
comp=Z,10nm,0.7s,mb5.0
KKAR Karatay Array 68.27 312 *e*P **P** **02 08 29.9 +0.4**
KKAR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
KSH Kashi 68.35 306 ⇑ *i*P **P** **02 08 34.5 +4.5**
KSH *e*PcP PcP 02 08 59.3 +4.0
KSH *e*PP PP 02 11 08.0 +7.2
KSH *e*ScP 02 12 56.0
KSH *e*PcS 02 13 03.3
KSH S S 02 17 29.5 +2.3
KSH ScS ScS 02 18 24.5 -0.6
KSH pmax pmax
comp=Z,31nm,0.8s,mb5.4
KSH pmax pmax
comp=Z,110nm,6.5s
KSH LR LR
comp=N,79nm,4.7s
KSH LR LR
comp=E,62nm,4.6s
KSH LR LR
comp=Z,88nm,4.3s
OBN Obninsk 69.93 339 *e*P **P** **02 08 39.6 0.0**
comp=Z,24nm,0.8s,mb5.2
OBN Obninsk 69.93 339 *ce*P **P** **02 08 39.2 -0.4**
OBN *PP pP 02 08 53.0 -0.8
OBN pmax pmax
comp=Z,64nm,1.7s,mb5.3
OBN MLR MLR
comp=Z,200nm,17.0s,MS4.4
NHSC New Hope 70.22 62 *e*P **P** **02 08 42.1 +0.5**
comp=Z,26nm,1.0s,mb5.1
CMAR Chiang Mai Arr 70.70 276 P **P** **02 08 44.0 -0.8**
comp=Z,1.1nm,0.4s,mb4.2,baz=24,slow=7.3,SNR=14
TAPN Taplejung 70.96 290 *e*P **P** **02 08 47.4 +1.1**
comp=Z,44nm,0.8s,mb5.4
ODAN Odare 71.52 290 *e*P **P** **02 08 49.5 -0.2**
comp=Z,20nm,0.5s,mb5.3
GUN Gumba 71.62 292 *e*P **P** **02 08 51.5 +1.2**
comp=Z,87nm,0.6s,mb5.9
RAMN Ramite 71.92 291 *e*P **P** **02 08 52.7 +0.6**
comp=Z,51nm,0.6s,mb5.6
KKN Kakani 72.06 292 *e*P **P** **02 08 53.7 +0.8**
comp=Z,27nm,0.6s,mb5.3
PKI Pulchoki 72.15 292 *e*P **P** **02 08 53.9 +0.4**
comp=Z,21nm,0.6s,mb5.3
GKN Gorkha 72.28 293 *e*P **P** **02 08 54.7 +0.5**
comp=Z,62nm,1.0s,mb5.5
VRHR Novokhopersk 72.34 334 *e*P **P** **02 08 52.6 -1.6**
VRHR pmax pmax
comp=N,5.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
VRHR pmax pmax
comp=E,3.0nm,0.3s
DANN Dangsing 72.52 293 *e*P **P** **02 08 56.7 +1.0**
comp=E,55nm,0.7s,mb5.6
VSR Storozhevoye 72.88 336 *e*P **P** **02 08 55.7 -1.7**
VSR pmax pmax
comp=N,9.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VSR pmax pmax
comp=E,3.0nm,0.4s
KOLN Koldanda 73.05 293 *e*P **P** **02 08 59.4 +0.6**
comp=E,20nm,0.9s,mb5.0
SUW Suwalki 73.49 346 *e*P **P** **02 09 00.1 -0.8**
SUW Suwalki 73.49 346 *e*P **P** **02 09 00.4 -0.6**
AKASG Malin Array Be 75.63 342 P **P** **02 09 13.0 -0.4**
AKASG Malin Array Be 75.63 342 P **P** **02 09 13.0 -0.4**
comp=E,26nm,0.4s,mb5.5,baz=21,slow=6.2,SNR=44
KIEV Kiev 75.64 342 *e*P **P** **02 09 13.0 -0.5**
comp=E,34nm,0.6s,mb5.5
KIEV Kiev 75.64 342 *e*P **P** **02 09 13.0 -0.5**
KIEV pmax pmax
comp=Z,34nm,0.6s,mb5.5
KBL Kabul 75.69 308 *e*P **P** **02 09 14.3 +0.2**
comp=Z,25nm,0.9s,mb5.1
KBL Kabul 75.69 308 *e*P **P** **02 09 14.3 +0.2**
KBL pmax pmax
comp=Z,25nm,0.9s,mb5.1
WTSB Winterswijk 77.09 356 *e*P **P** **02 09 21.5 -0.1**
comp=Z,15nm,0.7s,mb5.1
CLL Collm 77.35 352 *i* P **P** **02 09 22.8 -0.3**
comp=Z,7.0nm,0.7s,mb4.7
CLL Collm 77.35 352 *i* P **P** **02 09 22.8 -0.3**
CLL pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
LVV L'vov 77.42 345 *e*P **P** **02 09 22.9 -0.6**
OJC Ojcow 77.67 348 *e*P **P** **02 09 24.7 -0.2**
BRG Berggiesshubel 77.69 351 *e*P **P** **02 09 24.8 -0.2**
comp=Z,7.5nm,0.7s,mb4.7
BRG *e* pP 02 09 35.2 -4.3
comp=Z,5.0nm,1.2s
BRG *e* pP 02 09 40.0 +0.5
comp=Z,4.0nm,0.9s
BRG
comp=N,209nm,10.1s
BRG
comp=E,412nm,16.0s
BRG
comp=Z,554nm,16.9s
BRG Berggiesshubel 77.69 351 *e*P **P** **02 09 24.8 -0.2**
BRG *e* pP 02 09 35.2 -4.3
BRG *e* pP 02 09 40.0 +0.5
BRG pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
BRG pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
BRG pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
BRG MLR MLR
comp=N,125nm,10.1s
BRG MLR MLR
comp=E,247nm,16.0s
BRG MLR MLR
comp=Z,332nm,16.9s
KWP Kalwaria Pacla 77.81 346 *e*P **P** **02 09 26.3 +0.6**
KWP Kalwaria Pacla 77.81 346 *e*P **P** **02 09 26.2 +0.4**
comp=Z,68nm,0.6s,mb5.8
KWP Kalwaria Pacla 77.81 346 *e*P **P** **02 09 26.2 +0.5**
KWP pmax pmax
comp=Z,67nm,0.6s,mb5.8
KWP Kalwaria Pacla 77.81 346 ⇑ *i*P **P** **02 09 26.3 +0.6**
UPC Upice 77.85 350 *e*P **P** **02 09 26.1 +0.2**
UPC Upice 77.85 350 *e*P **P** **02 09 26.1 +0.2**
DPC Dobruska-Polom 77.97 350 *e*P **P** **02 09 26.8 +0.2**
DPC MLR MLR
comp=Z,700nm,20.6s,MS5.0
DPC Dobruska-Polom 77.97 350 *e*P **P** **02 09 26.8 +0.2**
DPC *ex* x 02 43 43.0
DPC AMS AMS 03 16 30.0
comp=Z,700nm,20.6s
PVCC Panska Ves 77.97 351 *e*P **P** **02 09 26.8 +0.2**
PVCC MLR MLR
comp=Z,600nm,17.6s,MS5.0
PVCC Panska Ves 77.97 351 *e*P **P** **02 09 26.8 +0.2**
PVCC AMS AMS 03 17 40.0
comp=Z,600nm,17.6s
MOX Moxa 78.12 353 *e*P **P** **02 09 27.3 -0.1**
comp=Z,14nm,1.0s,mb4.8
MOX Moxa 78.12 353 *e*P **P** **02 09 27.3 -0.1**
MOX pmax pmax
comp=Z,14nm,1.0s,mb4.8
STHS Stebnicka Huta 78.25 346 *e*P **P** **02 09 29.2 +1.1**
comp=Z,11nm,0.7s,mb4.9
STHS Stebnicka Huta 78.25 346 *e*P **P** **02 09 29.2 +1.1**
STHS pmax pmax
comp=Z,11nm,0.7s,mb4.9
STHS Stebnicka Huta 78.25 346 *e*P **P** **02 09 29.2 +1.1**
OKC Ostrava-Krasne 78.26 349 *e*P **P** **02 09 28.5 +0.3**
OKC MLR MLR
comp=Z,500nm,20.9s,MS4.8
OKC Ostrava-Krasne 78.26 349 *e*P **P** **02 09 28.5 +0.3**
OKC AMS AMS 03 14 00.0
comp=Z,500nm,20.9s
HGN Heimansgroeve 78.33 357 *e*P **P** **02 09 28.6 +0.1**
comp=Z,15nm,0.9s,mb4.9
NIE Niedzica 78.38 347 *e*P **P** **02 09 29.7 +0.8**
MORC Moravsky Berou 78.39 349 ⇑P **P** **02 09 28.9 0.0**
MORC Moravsky Berou 78.39 349 ⇑ *i*P **P** **02 09 28.9 0.0**
NKC Novy Kostel 78.46 352 *e*P **P** **02 09 29.3 0.0**
NKC Novy Kostel 78.46 352 *e*P **P** **02 09 29.3 0.0**
NKC AMS AMS 03 16 20.0
KIV Kislovodsk 78.47 330 *e*P **P** **02 09 30.7 +1.2**
KIV Kislovodsk 78.47 330 *ke*P **P** **02 09 30.2 +0.7**
KIV 02 09 38.0
KIV *PP pP 02 09 44.0 0.0
KIV pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
KIV MLR MLR
comp=Z,100nm,18.0s,MS4.2
MEM Membach 78.48 357 P **P** **02 09 29.8 +0.4**
comp=Z,11nm,1.1s,mb4.7
PRU Pruhonice 78.51 351 *e*P **P** **02 09 30.3 +0.7**
PRU MLR MLR
comp=Z,600nm,21.1s,MS4.9
PRU Pruhonice 78.51 351 *e*P **P** **02 09 30.3 +0.7**
PRU *ex* x 02 43 51.8
PRU AMS AMS 03 17 20.0
comp=Z,600nm,21.1s
SNF Seneffe 78.64 358 P **P** **02 09 30.4 +0.1**
BCLA Clavier 78.69 357 P **P** **02 09 30.7 +0.1**
CRVS Cervenica-Dubn 78.72 346 *e*P **P** **02 09 31.0 +0.3**
comp=Z,11nm,0.9s,mb4.8
CRVS Cervenica-Dubn 78.72 346 *e*P **P** **02 09 31.0 +0.3**
CRVS pmax pmax
comp=Z,11nm,0.9s,mb4.8
CRVS Cervenica-Dubn 78.72 346 *e*P **P** **02 09 31.0 +0.3**
UZH Uzhgorod 78.85 346 ⇓ *i*P **P** **02 09 31.5 0.0**
UZH *e* 02 09 40.0
VRAC Vranov 78.96 349 ⇑P **P** **02 09 32.3 +0.2**
VRAC Vranov 78.96 349 ⇑ *i*P **P** **02 09 32.3 +0.2**
GIVF Givet 79.03 357 *e*P **P** **02 09 32.1 -0.3**
DOU Dourbes 79.04 357 P **P** **02 09 32.6 +0.1**
BAIF Baives 79.09 358 ⇑ *i*P **P** **02 09 32.8 +0.1**
comp=Z,32nm,0.9s,mb5.0
BAIF Baives 79.09 358 ⇑ *i*P **P** **02 09 32.8 +0.1**
comp=Z,16nm,0.9s,mb4.9
BAIF Baives 79.09 358 ⇑ *i*P **P** **02 09 32.8 +0.1**
BAIF pmax pmax
comp=Z,16nm,0.9s,mb5.0
GRA1 Grafenberg Arr 79.10 353 *e*P **P** **02 09 33.4 +0.6**
comp=Z,15nm,0.9s,mb4.9
GRF Grafenberg Arr 79.10 353 *e*P **P** **02 09 33.4 +0.6**
comp=Z,15nm,0.9s,mb4.9
GRF Grafenberg Arr 79.10 353 *e*P **P** **02 09 33.4 +0.6**
comp=Z,15nm,0.9s,mb4.9
GRF Grafenberg Arr 79.10 353 *e*P **P** **02 09 33.4 +0.6**
GRF pmax pmax
comp=Z,15nm,0.9s,mb4.9
GRF Grafenberg Arr 79.10 353 *e*P **P** **02 09 33.4 +0.6**
GRF pmax pmax
comp=Z,15nm,0.9s,mb4.9
GRFO Grafenberg 79.10 353 *e*P **P** **02 09 33.4 +0.6**
comp=Z,14nm,0.9s,mb4.9
GRFO Grafenberg 79.10 353 *e*P **P** **02 09 33.4 +0.6**
GRFO pmax pmax
comp=Z,14nm,0.9s,mb4.9
TREC Trest 79.10 350 *e*P **P** **02 09 33.0 +0.2**
TREC MLR MLR
comp=Z,600nm,22.4s,MS4.9
TREC Trest 79.10 350 *e*P **P** **02 09 33.0 +0.2**
TREC AMS AMS 03 16 50.0
comp=Z,600nm,22.4s
ZEI Tsey 79.16 329 *e*P **P** **02 09 32.6 -0.7**
ZEI pmax pmax
comp=Z,17nm,1.0s,mb4.9
ANN Anapa 79.24 334 *e*P **P** **02 09 29.0 -4.7**
ANN pmax pmax
comp=Z,42nm,1.2s,mb5.2
KECS Kecovo 79.27 347 *e*P **P** **02 09 34.3 +0.5**
comp=Z,10nm,1.0s,mb4.7
KECS Kecovo 79.27 347 *e*P **P** **02 09 34.3 +0.5**
KECS pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
KECS Kecovo 79.27 347 *e*P **P** **02 09 34.3 +0.5**
TRPA Tarpa 79.30 345 ⇑ *i*P **P** **02 09 34.6 +0.7**
IAS Iasi 79.31 342 P **P** **02 09 34.3 +0.3**
BUR08 Bucovina Ar. S 79.32 343 *e*P **P** **02 09 34.7 +0.6**
BUR01 Bucovina Ar. S 79.34 343 P **P** **02 09 35.1 +0.9**
BURAR Bucovina Array 79.34 343 ⇑P **P** **02 09 34.8 +0.6**
BURAR Bucovina Array 79.34 343 ⇑ *i*P **P** **02 09 34.8 +0.6**
KHC Kasperske Hory 79.45 351 *e*P **P** **02 09 35.0 +0.3**
comp=Z,2.5nm,0.4s,mb4.5
KHC Kasperske Hory 79.45 351 *e*P **P** **02 09 34.9 +0.1**
KHC MLR MLR
comp=Z,700nm,24.5s,MS4.9
KHC Kasperske Hory 79.45 351 *e*P **P** **02 09 34.9 +0.1**
KHC *ex* x 02 44 06.1
KHC AMS AMS 03 17 40.0
comp=Z,700nm,24.5s
KOLL Kolacno 79.46 348 *e*P **P** **02 09 35.1 +0.3**
KOLL Kolacno 79.46 348 *e*P **P** **02 09 35.1 +0.3**
VYHS Vyhne 79.49 348 *e*P **P** **02 09 35.3 +0.3**
comp=Z,7.4nm,1.2s,mb4.5
VYHS Vyhne 79.49 348 *e*P **P** **02 09 35.3 +0.3**
VYHS pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
VYHS Vyhne 79.49 348 *e*P **P** **02 09 35.3 +0.3**
BMR Baia Mare 79.59 345 ⇓P **P** **02 09 36.2 +0.7**
BMR Baia Mare 79.59 345 ⇓ *i*P **P** **02 09 36.3 +0.8**
PSZ Piszkesteto 79.91 347 ⇓P **P** **02 09 37.9 +0.6**
PSZ Piszkesteto 79.91 347 ⇓ *i*P **P** **02 09 37.9 +0.7**
ZST Bratislava 80.00 349 *e*P **P** **02 09 38.3 +0.6**
comp=Z,18nm,1.4s,mb4.8
ZST Bratislava 80.00 349 *e*P **P** **02 09 38.3 +0.6**
ZST pmax pmax
comp=Z,18nm,1.4s,mb4.8
ZST Bratislava 80.00 349 *e*P **P** **02 09 38.3 +0.6**
TESR 80.14 342 ⇓P **P** **02 09 38.6 +0.1**
TESR 80.14 342 ⇓ *i*P **P** **02 09 38.6 +0.1**
CONA Conrad Observa 80.41 350 ⇑ *i*P **P** **02 09 40.6 +0.7**
comp=Z,8.2nm,0.7s,mb4.8,SNR=6.3
FLN La Foliniere 80.42 1 ⇑ *i*P **P** **02 09 39.4 -0.6**
comp=Z,29nm,1.0s,mb4.9
FLN La Foliniere 80.42 1 ⇑ *i*P **P** **02 09 39.4 -0.6**
comp=Z,15nm,1.0s,mb4.9
FLN La Foliniere 80.42 1 ⇑ *i*P **P** **02 09 39.4 -0.6**
FLN pmax pmax
comp=Z,15nm,1.0s,mb4.9
DRGR 80.57 345 ⇑P **P** **02 09 41.4 +0.6**
DRGR 80.57 345 ⇑ *i*P **P** **02 09 41.4 +0.6**

LDF	La Druitiere	80.60	1	⇑	iP	P	02 09 40.2	-0.7
	comp=Z,17nm,0.5s,mb4.9							
LDF	La Druitiere	80.60	1	⇑	iP	P	02 09 40.2	-0.7
	comp=Z,8.4nm,0.5s,mb4.9							
LDF	La Druitiere	80.60	1	⇑	iP	P	02 09 40.2	-0.7
LDF					pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9							
CDF	Champ du Feu	80.62	356	⇑	iP	P	02 09 40.7	-0.4
	comp=Z,9.8nm,0.8s,mb4.5							
CDF	Champ du Feu	80.62	356	⇑	iP	P	02 09 40.7	-0.4
	comp=Z,4.9nm,0.8s,mb4.5							
CDF	Champ du Feu	80.62	356	⇑	iP	P	02 09 40.7	-0.4
CDF					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5							
MEZF	Maizieres J'vi	80.62	357	⇑	iP	P	02 09 41.0	-0.1
	comp=Z,53nm,1.3s,mb5.0							
MEZF	Maizieres J'vi	80.62	357	⇑	iP	P	02 09 41.0	-0.1
	comp=Z,53nm,1.3s,mb5.3							
MOA	Molln	80.66	351	⇓	iP	P	02 09 41.3	+0.1
	comp=Z,2.1nm,0.7s,mb4.2							
VRI	Vrincioaia	80.74	342	⇑	P	P	02 09 42.2	+0.4
VRI	Vrincioaia	80.74	342	⇑	iP	P	02 09 42.2	+0.4
GRR	Gorron	80.80	1	⇑	iP	P	02 09 41.7	-0.3
	comp=Z,30nm,0.8s,mb5.0							
GRR	Gorron	80.80	1	⇑	iP	P	02 09 41.7	-0.3
	comp=Z,15nm,0.8s,mb5.0							
GRR	Gorron	80.80	1	⇑	iP	P	02 09 41.7	-0.3
GRR					pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0							
ROSF	Rostrenen	80.80	3		eP	P	02 09 41.8	-0.2
	comp=Z,11nm,0.6s,mb4.6							
ROSF	Rostrenen	80.80	3		eP	P	02 09 41.8	-0.2
	comp=Z,5.3nm,0.6s,mb4.7							
ROSF	Rostrenen	80.80	3		eP	P	02 09 41.8	-0.2
ROSF					pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6							
SGMF	Saint Gilles	80.90	2		eP	P	02 09 42.3	-0.3
	comp=Z,30nm,0.7s,mb5.0							
SGMF	Saint Gilles	80.90	2		eP	P	02 09 42.3	-0.3
	comp=Z,15nm,0.7s,mb5.0							
SGMF	Saint Gilles	80.90	2		eP	P	02 09 42.3	-0.3
SGMF					pmax	pmax		
	comp=Z,15nm,0.7s,mb5.0							
SFTF	Sexfontaines	80.92	357	⇑	iP	P	02 09 42.5	-0.2
	comp=Z,39nm,0.9s,mb5.0							
SFTF	Sexfontaines	80.92	357	⇑	iP	P	02 09 42.5	-0.2
	comp=Z,39nm,0.9s,mb5.3							
HAU	Haudompre	81.07	356	⇑	iP	P	02 09 43.1	-0.4
	comp=Z,17nm,1.0s,mb4.6							
HAU	Haudompre	81.07	356	⇑	iP	P	02 09 43.1	-0.4
	comp=Z,8.4nm,1.0s,mb4.6							
HAU	Haudompre	81.07	356	⇑	iP	P	02 09 43.1	-0.4
HAU					pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6							
ARSA	Arzberg	81.11	350	⇑	iP	P	02 09 44.2	+0.5
	comp=Z,6.8nm,0.7s,mb4.7,SNR=5,8							
QUIF	Quistinic	81.22	3	⇑	iP	P	02 09 43.9	-0.4
	comp=Z,56nm,1.3s,mb5.0							
QUIF	Quistinic	81.22	3	⇑	iP	P	02 09 43.9	-0.4
	comp=Z,28nm,1.3s,mb5.0							
QUIF	Quistinic	81.22	3	⇑	iP	P	02 09 43.9	-0.4
QUIF					pmax	pmax		
	comp=Z,28nm,1.3s,mb5.0							
GNI	Garni	81.23	327	⇑	eP	P	02 09 44.8	+0.3
GNI					pmax	pmax		
	comp=Z,3.0nm,0.8s							
MLR	Muntele Rosu	81.25	342	⇑	P	P	02 09 45.4	+0.9
MLR	Muntele Rosu	81.25	342	⇑	iP	P	02 09 45.4	+0.9
WATA	Walderalm	81.41	353	⇑	iP	P	02 09 45.4	+0.1
	comp=Z,8.2nm,0.7s,mb4.7							
VOIR		81.47	343	⇓	P	P	02 09 46.7	+1.0
VOIR		81.47	343	⇓	iP	P	02 09 46.7	+1.0
WTTA	Wattenberg	81.48	352	⇑	iP	P	02 09 46.1	+0.4
	comp=Z,13nm,0.7s,mb5.0							
KBA	Koelnbreinsper	81.51	351		iP	P	02 09 46.9	+1.1
	comp=Z,37nm,0.7s,mb5.4,SNR=26							
WRA	Warramunga Arr	81.65	223		P	P	02 09 44.7	-2.0
	comp=Z,0.9nm,0.5s,mb4.0,baz=33,slow=6.0,SNR=8.6							
SOKA	Soboth	81.73	350	⇑	iP	P	02 09 47.5	+0.5
	comp=Z,25nm,1.1s,mb5.0							
PKSM	Moragy	81.75	348	⇑	P	P	02 09 46.9	-0.2
PKSM	Moragy	81.75	348	⇑	iP	P	02 09 46.9	-0.2
FETA	Feichten	81.79	353	⇑	iP	P	02 09 47.8	+0.5
	comp=Z,12nm,1.1s,mb4.8							
LOR	Lormes	81.89	358	⇑	iP	P	02 09 47.5	-0.3
	comp=Z,14nm,1.0s,mb4.6							
LOR	Lormes	81.89	358	⇑	iP	P	02 09 47.5	-0.3
	comp=Z,7.2nm,1.0s,mb4.6							
LOR	Lormes	81.89	358	⇑	iP	P	02 09 47.5	-0.3
LOR					pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5							
BZS	Buzias	81.89	345	⇓	P	P	02 09 48.0	+0.1
BZS	Buzias	81.89	345	⇓	iP	P	02 09 48.0	+0.1
HYF	Humbligny	81.91	359		eP	P	02 09 47.9	0.0
ABTA	Abfaltersbach	81.91	352	⇑	iP	P	02 09 48.1	+0.1
	comp=Z,15nm,1.1s,mb4.8,SNR=9.2							
GZR	Gura Zlata	81.92	344	⇓	P	P	02 09 48.8	+0.7
GZR	Gura Zlata	81.92	344	⇓	iP	P	02 09 48.8	+0.8
OBKA	Obir	81.95	350	⇑	iP	P	02 09 48.4	+0.3
	comp=Z,15nm,0.8s,mb5.0,SNR=13							
SSF	Saint Saulge	82.10	358	⇑	iP	P	02 09 48.7	-0.2
	comp=Z,14nm,0.9s,mb4.6							
SSF	Saint Saulge	82.10	358	⇑	iP	P	02 09 48.7	-0.2
	comp=Z,7.1nm,0.9s,mb4.6							
SSF	Saint Saulge	82.10	358	⇑	iP	P	02 09 48.7	-0.2
SSF					pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6							
AVF	Avril sur Loir	82.38	358	⇑	iP	P	02 09 50.0	-0.4
	comp=Z,20nm,1.0s,mb4.7							
AVF	Avril sur Loir	82.38	358	⇑	iP	P	02 09 50.0	-0.4
	comp=Z,10nm,1.0s,mb4.7							
AVF	Avril sur Loir	82.38	358	⇑	iP	P	02 09 50.0	-0.4
AVF					pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7							
TUE	Stuetta	82.44	354		eP	P	02 09 50.6	-0.1
	comp=Z,6.4nm,0.8s,mb4.6							
CABF	La Chapelle	82.47	356	⇑	iP	P	02 09 50.9	0.0
	comp=Z,32nm,1.2s,mb4.8							
CABF	La Chapelle	82.47	356	⇑	iP	P	02 09 50.9	0.0
	comp=Z,16nm,1.2s,mb4.8							
CABF	La Chapelle	82.47	356	⇑	iP	P	02 09 50.9	0.0
CABF					pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8							
SMF	Signal de Mont	82.51	358	⇑	iP	P	02 09 50.7	-0.4
	comp=Z,33nm,1.0s,mb5.0							
SMF	Signal de Mont	82.51	358	⇑	iP	P	02 09 50.7	-0.4
	comp=Z,17nm,1.0s,mb5.0							
SMF	Signal de Mont	82.51	358	⇑	iP	P	02 09 50.7	-0.4
SMF					pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0							
MFF	Saint Martin d	82.59	1	⇑	iP	P	02 09 51.3	-0.2
	comp=Z,17nm,0.9s,mb4.8							
MFF	Saint Martin d	82.59	1	⇑	iP	P	02 09 51.3	-0.2
	comp=Z,8.4nm,0.9s,mb4.8							
MFF	Saint Martin d	82.59	1	⇑	iP	P	02 09 51.3	-0.2
MFF					pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8							
BGF	Bois d'Agland	82.62	358		eP	P	02 09 51.3	-0.3
	comp=Z,12nm,0.9s,mb4.6							
BGF	Bois d'Agland	82.62	358		eP	P	02 09 51.3	-0.3
	comp=Z,6.0nm,0.9s,mb4.6							
BGF	Bois d'Agland	82.62	358		eP	P	02 09 51.3	-0.3
BGF					pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6							
PSI	Prapat	82.65	265		P	P	02 09 51.4	-0.9
	comp=Z,4.2nm,0.5s,mb4.8,baz=32,slow=7.3,SNR=5.5							
TCF	Toulx Ste Croi	82.90	359	⇑	iP	P	02 09 52.8	-0.3
	comp=Z,8.6nm,0.8s,mb4.5							
TCF	Toulx Ste Croi	82.90	359	⇑	iP	P	02 09 52.8	-0.3
	comp=Z,4.3nm,0.8s,mb4.5							
TCF	Toulx Ste Croi	82.90	359	⇑	iP	P	02 09 52.8	-0.3
TCF					pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5							
LPL	La Plagne	83.54	356		eP	P	02 09 57.2	+0.8
LPG	La Plagne	83.55	356		eP	P	02 09 56.7	+0.2
RJF	Les Rejaudoux	83.89	359		eP	P	02 09 57.8	-0.4
	comp=Z,32nm,1.3s,mb5.0							
RJF	Les Rejaudoux	83.89	359		eP	P	02 09 57.8	-0.4
	comp=Z,16nm,1.3s,mb5.0							
RJF	Les Rejaudoux	83.89	359		eP	P	02 09 57.8	-0.4
RJF					pmax	pmax		
	comp=Z,16nm,1.3s,mb5.0							
HYB	Hyderabad	83.97	290		iP	P	02 09 58.5	-0.6
FITZ	Fitzroy Crossi	84.09	232		eP	P	02 09 58.5	-0.9
	comp=Z,11nm,0.6s,mb5.2							
FITZ	Fitzroy Crossi	84.09	232		P	P	02 09 58.3	-1.1
	comp=Z,6.9nm,0.7s,mb4.9,baz=73,slow=4.9,SNR=23							
ORIF	Oris-en-Rattie	84.17	356	⇑	iP	P	02 10 00.3	+0.7
	comp=Z,9.1nm,0.8s,mb4.7							
ORIF	Oris-en-Rattie	84.17	356	⇑	iP	P	02 10 00.3	+0.7
	comp=Z,4.6nm,0.8s,mb4.7							
ORIF	Oris-en-Rattie	84.17	356	⇑	iP	P	02 10 00.3	+0.7
ORIF					pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7							
LFF	La Frestale	84.25	360	⇑	iP	P	02 10 00.0	-0.1
	comp=Z,28nm,0.9s,mb5.1							
LFF	La Frestale	84.25	360	⇑	iP	P	02 10 00.0	-0.1
	comp=Z,14nm,0.9s,mb5.1							
LFF	La Frestale	84.25	360	⇑	iP	P	02 10 00.0	-0.1
LFF					pmax	pmax		
	comp=Z,14nm,0.9s,mb5.1							
CAF	Calviac	84.26	359		eP	P	02 10 00.2	+0.1
	comp=Z,14nm,0.9s,mb4.8							
CAF	Calviac	84.26	359		eP	P	02 10 00.2	+0.1
	comp=Z,7.3nm,0.9s,mb4.8							
CAF	Calviac	84.26	359		eP	P	02 10 00.2	+0.1
CAF					pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8							
VIVF	Saint-Julien-l	84.28	357	⇑	iP	P	02 10 00.3	+0.1
	comp=Z,8.2nm,0.8s,mb4.6							
VIVF	Saint-Julien-l	84.28	357	⇑	iP	P	02 10 00.3	+0.1
	comp=Z,4.1nm,0.8s,mb4.6							
VIVF	Saint-Julien-l	84.28	357	⇑	iP	P	02 10 00.3	+0.1
VIVF					pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6							
MBDF	Montbardon	84.32	356	⇑	iP	P	02 10 01.0	+0.6
	comp=Z,12nm,0.7s,mb4.8							
MBDF	Montbardon	84.32	356	⇑	iP	P	02 10 01.0	+0.6
	comp=Z,6.2nm,0.7s,mb4.8							
MBDF	Montbardon	84.32	356	⇑	iP	P	02 10 01.0	+0.6
MBDF					pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8							
VTS	Vitosha	84.56	343	⇓	P	P	02 10 02.1	+0.5
VTS	Vitosha	84.56	343	⇓	iP	P	02 10 02.1	+0.4
MALT	Malatya	84.93	331		eP	P	02 10 04.2	+0.5
	comp=Z,9.6nm,1.1s,mb4.8							
MALT	Malatya	84.93	331	⇑	P	P	02 10 04.1	+0.5
MALT	Malatya	84.93	331	⇑	iP	P	02 10 04.1	+0.5
BRTR	Keskin Array B	84.98	335		P	P	02 10 04.2	+0.3
	comp=Z,6.9nm,0.8s,mb4.9,baz=49,slow=3.1,SNR=21							
BRTR	Keskin Array B	84.98	335		ceP	P	02 10 04.1	+0.2
BRTR					pmax	pmax		
	comp=Z,7.0nm,0.8s							
LASF	Ste Croix	85.08	358		eP	P	02 10 04.4	+0.2
ASAR	Alice Springs	85.12	222		P	P	02 10 03.2	-1.3
	comp=Z,1.3nm,0.8s,mb4.1,baz=36,slow=5.1,SNR=10							
SMRF	Simiane la Rot	85.12	356		eP	P	02 10 05.1	+0.6
	comp=Z,26nm,1.0s,mb5.0							
SMRF	Simiane la Rot	85.12	356		eP	P	02 10 05.1	+0.6
	comp=Z,26nm,1.0s,mb5.3							
SBF	Sospel	85.15	355		eP	P	02 10 04.3	-0.3
	comp=Z,27nm,0.8s,mb5.1							
SBF	Sospel	85.15	355		eP	P	02 10 04.3	-0.3
	comp=Z,14nm,0.8s,mb5.1							
SBF	Sospel	85.15	355		eP	P	02 10 04.3	-0.3
SBF					pmax	pmax		
	comp=Z,14nm,0.8s,mb5.1							
FRF	La Foret Royal	85.49	356		eP	P	02 10 06.0	-0.3
	comp=Z,11nm,0.7s,mb4.8							
FRF	La Foret Royal	85.49	356		eP	P	02 10 06.0	-0.3
	comp=Z,5.3nm,0.7s,mb4.8							
FRF	La Foret Royal	85.49	356		eP	P	02 10 06.0	-0.3
FRF					pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8							
LMR	La Mourre	85.72	356	⇑	iP	P	02 10 07.3	-0.2
	comp=Z,19nm,0.9s,mb5.0							
LMR	La Mourre	85.72	356	⇑	iP	P	02 10 07.3	-0.2
	comp=Z,9.6nm,0.9s,mb5.0							
LMR	La Mourre	85.72	356	⇑	iP	P	02 10 07.3	-0.2
LMR					pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0							
MTLF	Montolieu	85.84	359		eP	P	02 10 08.2	+0.1
	comp=Z,16nm,1.2s,mb4.8							
MTLF	Montolieu	85.84	359		eP	P	02 10 08.2	+0.1
	comp=Z,8.1nm,1.2s,mb4.8							
MTLF	Montolieu	85.84	359		eP	P	02 10 08.2	+0.1
MTLF					pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.8							
SJPF	Ste Jean	86.07	1		eP	P	02 10 09.5	+0.3
	comp=Z,12nm,0.8s,mb4.9							
SJPF	Ste Jean	86.07	1		eP	P	02 10 09.5	+0.3
	comp=Z,5.8nm,0.8s,mb4.9							
SJPF	Ste Jean	86.07	1		eP	P	02 10 09.5	+0.3
SJPF					pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9							
EPF	Esparros	86.16	0		eP	P	02 10 08.9	-0.8
	comp=Z,7.2nm,0.9s,mb4.6							
EPF	Esparros	86.16	0		eP	P	02 10 08.9	-0.8
	comp=Z,3.6nm,0.9s,mb4.6							
EPF	Esparros	86.16	0		eP	P	02 10 08.9	-0.8
EPF					pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.7							
AQU	L'Aquila	86.18	351		eP	P	02 10 10.1	+0.4
ETSF	Etsaut	86.29	1	⇑	iP	P	02 10 10.6	+0.3
	comp=Z,7.1nm,0.6s,mb4.8							
ETSF	Etsaut	86.29	1	⇑	iP	P	02 10 10.6	+0.3
	comp=Z,3.5nm,0.6s,mb4.8							
ETSF	Etsaut	86.29	1	⇑	iP	P	02 10 10.6	+0.3
ETSF					pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.8							
PGF	Pioggiola	86.36	354		eP	P	02 10 10.5	-0.1
	comp=Z,38nm,1.0s,mb5.3							
PGF	Pioggiola	86.36	354		eP	P	02 10 10.5	-0.1
	comp=Z,19nm,1.0s,mb5.3							
PGF	Pioggiola	86.36	354		eP	P	02 10 10.5	-0.1
PGF					pmax	pmax		
	comp=Z,19nm,1.0s,mb5.3							
ESDC	Sonseca Array	89.42	4		P	P	02 10 24.2	-1.2
	comp=Z,0.8nm,0.6s,mb4.2,baz=353,slow=3.6,SNR=8.2							
STKA	Stephens Creek	89.59	212		P	P	02 10 25.0	-0.8
STKA	Stephens Creek	89.59	212		P	P	02 10 25.0	-0.8
	comp=Z,2.2nm,0.9s,mb4.5,baz=309,slow=14,SNR=3.5							
DBIC	Dimbokro	122.18	6		PKP	PKPdf	02 16 22.6	-1.0
	comp=Z,1.3nm,0.5s,baz=25,slow=3.9,SNR=8.0							
CPUP	Villa Florida	129.95	83		PKP	PKPdf	02 16 37.4	-0.5
	comp=Z,0.3nm,0.4s,baz=270,slow=1.0,SNR=3.1							
PLCA	Paso Flores	131.23	107		PKP	PKPdf	02 16 39.8	0.0
	comp=Z,9.2nm,1.4s,baz=206,slow=3.9,SNR=2.8							
TSUM	Tsumeb	145.40	331		ePKPbc	PKPbc	02 17 07.2	+0.8
MAW	Mawson	146.13	217		PKPbc	PKPbc	02 17 05.7	-1.5
	comp=Z,2.8nm,0.6s,baz=63,slow=4.3,SNR=8.5							
BOSA	Boshof	150.86	311		PKPbc	PKPbc	02 17 20.6	-0.2
	comp=Z,6.2nm,0.8s,baz=68,slow=3.6,SNR=11							

IDC 26 01:57:56.0±9.0, 3.°18S×148.°19E, h0km, mb4.0/4, mb1 4.3/4, mb1mx3.9/16, mbtmp4.1/4, Error ellipse: s-maj=194.9km s-min=38.2km az=86.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.46	218	P		P	02 02 45.1	-1.1
	6.4nm,1.1s,baz=42,slow=10,SNR=4.7							
ASAR	Alice Springs	24.61	213	P		P	02 03 18.6	+0.5
	3.4nm,1.1s,baz=48,slow=8.9,SNR=5.4							
FITZ	Fitzroy Crossi	26.61	235	P		P	02 03 37.0	+0.5
	3.4nm,0.8s,baz=79,slow=5.2,SNR=2.3							
CMAR	Chiang Mai Arr	53.03	296	P		P	02 07 15.1	-0.2
	0.5nm,0.4s,baz=93,slow=3.6,SNR=3.4							

IDC 26 02:06:20.8±0.9,2.°96S×147.°67E,h0km,mb4.1/14, mb1 4.3/15,mb1mx4.3/17,mbtmp4.1/15,ML3.5/1,MS4.6/13, Ms1 4.6/13,ms1mx4.4/25,Error ellipse: s-maj=32.0km s-min=15.8km az=107.0

ISCJB 26 02:06:25.5±0.4,2.°97S×0.°05×147.°69E±0.°10,h33km, mb4.3/29,MS4.6/18,Error ellipse: s-maj=14.4km s-min=7.7km az=8.6

NEIC 26 02:06:27.9±2.4,2.°92S×147.°43E,h42km±23km,mb4.7/9, Error ellipse: s-maj=17.9km s-min=14.5km az=88.0

GCMT 26 02:06:30.6±0.1,2.°87S×147.°53E,h12km,MW5.4,Moment Tensor Solution. s73,c123; s99,c195; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.02±.02; $M_{\theta\theta}$0.24±.02; $M_{\phi\phi}$-0.22±.02; $M_{r\theta}$1.04±.11; $M_{\theta\phi}$1.20±.02; $M_{\phi r}$-0.36±.06; Best double couple: $M_0$1.60000×10^{17} NP1:ϕ_s9.00000°,δ49.00000°, λ-176.00000°. NP2:ϕ_s276.00000°,δ87.00000°, λ-41.00000°. Principal axes: T 1.5100, Plg25.0000°, Azm330.0000°; N 0.2500, Plg49.0000°, Azm93.0000°; P -1.7500, Plg30.0000°, Azm224.0000°; Data Used: II IU IC G CN. Surface waves from 104 sta.

DJA 26 02:06:48,4.°00S×146.°69E,h86km,mb4.8/12

ISC 26 02:06:27.4±0.4,2.°97S±0.°06×147.°70E±0.°10,h35km, (h13km±5.6km:pP-P),n68,σ1.°60/47,mb4.3/29,MS4.6/18, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.42	185		ePn	Pn	02 08 01.6	+2.1
	48nm,0.9s							
PMG	Port Moresby	6.42	185	P		Pn	02 08 06.6	+7.1
	0.8nm60nm,1.1s							
COEN	Coen	11.80	202		ePn	Pn	02 09 11.4	-1.9
	1μm,1.8s							
COEN	Coen	11.80	202	P		Pn	02 09 12.3	-1.0
	168nm,2.3s							
CTA	Charters Tower	17.08	185		eP	Pn	02 10 27.9	+4.4
	19nm,1.6s							
CTA	Charters Tower	17.08	185	P		Pn	02 10 19.7	-3.8
	0.1nm,0.3s,baz=339,slow=12,SNR=2.2							
CTAO	Charters Tower	17.08	185		ePn	Pn	02 10 25.4	+1.9
	178nm,1.8s							
CTAO	Charters Tower	17.08	185	P		Pn	02 10 28.7	+5.2
	53nm,2.6s							
KAKA	Kakadu	17.94	237		eP	Pn	02 10 34.2	0.0
	83nm,1.1s							
KAKA	Kakadu	17.94	237		ePn	Pn	02 10 32.0	-2.2
	285nm,1.1s							
KAKA	Kakadu	17.94	237	P		Pn	02 10 34.8	+0.6
	824nm116nm,1.0s							
LBMI	Labuha	20.32	276	P		pP	02 11 13.2	+3.3
TNTI	Ternate	20.66	280	P		pP	02 11 13.6	0.0
	6μm213nm,1.7s							
WRA	Warramunga Arr	21.33	217	P		P	02 11 09.8	-1.6
WRA				S		Sx	02 15 18.9	
WRA				LR		LR	02 20 12.9	
WRA	Warramunga Arr	21.33	217	P		P	02 11 09.8	-1.6
	8.1nm,0.5s,mb4.3,baz=43,slow=11,SNR=38							
WRA				S		Sx	02 15 18.9	
	1.6nm,1.1s,baz=41,slow=17,SNR=7.2							
WRA				LR		LR	02 20 13.0	
	comp=Z,5μm,18.6s,MS4.9,baz=45,slow=39							
EIDS	Eidsvold	22.51	172		eP	P	02 11 24.3	+0.3
	52nm,1.4s,mb4.8							
KNA	Kununurra	22.56	235	P		P	02 11 26.4	+1.7
	1μm77nm,1.1s,mb5.1							
ASAR	Alice Springs	24.53	212	P		P	02 11 42.3	-1.4
	6.7nm,0.7s,mb4.3,baz=43,slow=7.5,SNR=35							
ASAR				S		Sx	02 16 18.4	
	0.7nm,1.0s,baz=31,slow=22,SNR=4.2							
LUWI	Luwuk	24.99	274	P		pP	02 11 56.4	-1.6
	4μm209nm,1.6s							
BBSI	Bau Bau	25.18	263	P		Px	02 12 08.2	
MRSI	Marisa	25.98	277	P		Px	02 12 03.5	
DZM	Mont Dzumac	26.31	138		eLR	LR	02 18 57.7	
	7μm,25.0s							
FITZ	Fitzroy Crossi	26.34	234	P		P	02 11 58.3	-2.0
	8.1nm,0.8s,mb4.3,baz=83,slow=8.2,SNR=9.1							
FITZ	Fitzroy Crossi	26.34	234	P		P	02 12 03.1	+2.8
ARMA	Armidale	27.56	173		eP	P	02 12 12.2	+1.1
SPSI	Sidrap Palu	27.90	267	P		pP	02 12 22.9	-1.5
STKA	Stephens Creek	29.33	191	P		P	02 12 25.9	-0.9
	2.5nm,1.6s,mb3.7							
STKA	Stephens Creek	29.33	191	P		P	02 12 25.6	-1.3
	1.9nm,0.7s,mb4.0,baz=355,slow=13,SNR=2.8							
CBIJ	Chichi jima	30.36	350	LR		LR	02 22 51.1	
	comp=Z,542nm,21.2s,MS4.2,baz=30,slow=33							
SBUM	Sibu	35.87	278	P		pP	02 13 33.6	-0.9
	828nm21nm,2.4s							
NACB	Ninganchiao	37.05	318		eP	P	02 13 33.6	-0.6
	7.8nm,0.7s,mb4.7							
KSM	Kuching	37.64	276		eP	P	02 13 44.9	+5.5
	7.3nm,0.8s,mb4.5							
KSM	Kuching	37.64	276	P		pP	02 13 48.0	-1.6
	647nm24nm,1.6s							
MJAR	Matsushiro Arr	40.29	348	P		P	02 14 00.2	-1.0
	0.6nm,0.3s,mb3.8,baz=289,slow=41,SNR=2.5							
MDSI	Maura Dua	43.45	267	P		pP	02 14 34.0	-3.8
	994nm37nm,2.0s							
KSRS	Korea Array	44.21	337	P		P	02 14 31.9	-1.3
	0.5nm,0.3s,mb3.7,baz=236,slow=26,SNR=3.1	

	comp=Z,435nm,23.0s								
PPT	**Papeete**	**63.13**	**108**		LR	LR	02 40 44.3		
	comp=Z,296nm,18.6s,MS4.5,baz=277,slow=33								
TAOE	**Nuku Hiva Isla**	**71.92**	**98**	*e*LR		LR	02 40 01.8		
	comp=Z,648nm,25.7s								
MKAR	**Makanchi Array**	**75.63**	**320**	P		P	**02 18 08.0**	**-0.8**	
	comp=Z,0.7nm,0.9s,mb3.6,baz=96,slow=5.8,SNR=3.1								
MKAR				LR		LR	02 52 02.9		
	comp=Z,572nm,18.7s,MS4.9,baz=105,slow=36								
ZALV	**Zalesovo Beam**	**76.84**	**327**	P		P	**02 18 14.7**	**-0.9**	
	comp=Z,0.3nm,0.4s,mb3.6,baz=170,slow=0.9,SNR=2.4								
ZALV				LR		LR	02 51 09.8		
	comp=Z,585nm,20.5s,MS4.9,baz=84,slow=35								
RKT	**Rikitea**	**77.19**	**113**	*e*LQ			02 39 18.0		
	comp=Z,527nm,45.2s								
RKT				*e*LR		LR	02 42 35.7		
	comp=Z,649nm,31.2s								
TTA	**Tatalina**	**78.00**	**23**	*e*P		P	**02 18 19.6**	**-2.3**	
PMR	**Palmer**	**80.19**	**26**	*e*P		P	**02 18 34.4**	**+0.6**	
	comp=Z,14nm,1.2s,mb4.8								
AML	**Almayashu**	**80.19**	**313**	*e*P		P	**02 18 37.2**	**+2.8**	
	comp=Z,14nm,1.4s,mb4.7								
EKS2	**Erkin-Say**	**80.25**	**314**	*e*P		P	**02 18 36.9**	**+2.3**	
	comp=Z,1.5nm,0.8s,mb4.0								
MCK	**McKinley**	**81.19**	**24**	*e*P		P	**02 18 40.5**	**+1.4**	
	comp=Z,2.1nm,0.4s,mb4.4								
ILAR	**Eielson Array**	**82.43**	**23**	P		P	**02 18 43.8**	**-2.0**	
	comp=Z,0.9nm,0.8s,mb3.8,baz=251,slow=4.4,SNR=6.6								
ILAR				LR		LR	02 53 22.4		
	comp=Z,416nm,20.0s,MS4.8,baz=268,slow=34								
DAWY	**Dawson**	**85.24**	**25**	*e*P		P	**02 19 01.9**	**+1.8**	
NVAR	**Mina Array Bea**	**94.96**	**52**	P		P	**02 19 47.1**	**+0.6**	
	comp=Z,0.2nm,0.3s,mb4.1,baz=268,slow=8.0,SNR=2.6								
NEW	**Newport**	**95.65**	**42**	P		P	**02 19 52.7**	**+3.3**	
	comp=Z,2.2nm,0.9s,mb4.6								
YKA	**Yellowknife Ar**	**96.18**	**28**	P		P	**02 19 50.4**	**-1.1**	
	comp=Z,1.2nm,0.8s,mb4.3,baz=269,slow=5.2,SNR=2.7								
YKA				LR		LR	03 00 01.8		
	comp=Z,50nm,20.2s,MS4.0,baz=35,slow=34								
LPAZ	**La Paz**	**139.75**	**120**	PKP		PKPdf	02 25 53.6	+1.0	
	comp=Z,0.9nm,0.9s,baz=45,slow=1.4,SNR=3.6								
SDV	**Santo Domingo**	**141.44**	**80**	PKPdf		PKPdf	02 25 57.0	+1.2	
STVI	**Saint Thomas**	**144.56**	**62**	*e*PKPdf		PKPdf	02 26 05.7	+4.5	

IDC 26 02:19:01.3±2.0, 3°35S×148°00E, *h*0km, mb3.7/4, mb1 4.0/4, mb1mx3.7/16, mbtmp3.7/4, MS4.2/1, Ms1 4.2/1, ms1mx3.4/21, Error ellipse: s-maj=133.7km s-min=28.4km az=125.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.21**	**218**	P	P	02 23 48.1	-0.6
	3.5nm,0.6s,baz=42,slow=10,SNR=18						
ASAR	**Alice Springs**	**24.36**	**213**	P	P	02 24 21.0	-0.2
	1.1nm,0.5s,baz=34,slow=7.7,SNR=18						
FITZ	**Fitzroy Crossi**	**26.36**	**235**	P	P	02 24 40.3	+0.9
	1.4nm,0.6s,baz=66,slow=7.4,SNR=7.9						
FITZ				LR	LR	02 34 17.3	
	comp=Z,463nm,18.8s,baz=41,slow=35						
ILAR	**Eielson Array**	**82.67**	**23**	P	P	02 31 26.4	0.0
	0.7nm,1.1s,baz=248,slow=4.6,SNR=4.4						

*IDC **26** 02:28:23.3±0.4, 52°.53S×12°.46E, h0km, mb4.7/21, mb1 4.7/21, mb1mx4.7/23, mbtmp4.6/21, MS4.3/7, Ms1 4.3/7, ms1mx4.1/26, Error ellipse: s-maj=16.4km s-min=12.3km az=113.0*

*ISCJB **26** 02:28:24.4±0.3, 52°.49S±0°.06×12°.1E±0°.1, h10km, mb5.0/44, MS4.3/7, Error ellipse: s-maj=10.2km s-min=8.1km az=9.8*

*NEIC **26** 02:28:24.8±0.2, 52°.51S×12°.39E, h10km, mb4.7/19, Error ellipse: s-maj=11.7km s-min=8.9km az=118.0*

*GCMT **26** 02:28:27.7±0.3, 52°.65S×12°.29E, h12km, MW5.2, Moment Tensor Solution. s25,c30; s73,c98; Moment tensor: Scale 10^{16}Nm; M_{rr}=5.85±.21; $M_{\theta\theta}$=5.48±.16; $M_{\phi\phi}$=0.37±.22; $M_{r\theta}$=0.08±.62; $M_{r\phi}$=0.04±.19; $M_{\theta\phi}$=4.12±.94; Best double couple: M_0=6.70000×10^{16} NP1:ϕ_s=113.00000°, δ=50.00000°, λ=-54.00000°. NP2:ϕ_s=245.00000°, δ=51.00000°, λ=-125.00000°. Principal axes: T 5.4800, Plg1.0000°, Azm359.0000°; N 2.4200, Plg26.0000°, Azm269.0000°; P -7.9000, Plg64.0000°, Azm91.0000°; Data Used: II G IU CN IC.*

ISC 26 02:28:26.0±0.3, 52°.51S±0°.05×12°.2E±0°.1, h10km, n127, σ1§12/71, mb5.0/44, MS4.3/7, 2C-2D, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAIT	**Maitri**	**18.33**	**180**	*e*P	**Pn**	**02 32 37.9**	**-2.1**
MAIT				*e*S	**Sn**	**02 35 44.3**	**-20**
SYO	**Syowa Base**	**20.95**	**152**	*e*P	**P**	**02 33 06.0**	**-2.7**
SYO	**Syowa Base**	**20.95**	**152**	*i* P	**P**	**02 33 09.8**	**+1.1**
SUR	**Sutherland**	**21.07**	**21**	P	**P**	**02 33 08.6**	**-1.6**
SUR				S	**S**	**02 36 55.0**	**-9.5**
SUR				LR	LR	02 39 10.4	
SUR	**Sutherland**	**21.07**	**21**	P	**P**	**02 33 08.6**	**-1.6**
	54nm,0.9s,mb4.9,baz=183,slow=7.3,SNR=15						
SUR				S	**S**	**02 36 55.0**	**-9.5**
	5.6nm,0.7s,baz=24,slow=20,SNR=4.2						
SUR				LR	LR	02 39 10.4	
	comp=Z,1μm,19.4s,MS4.4,baz=263,slow=31						
BOSA	**Boshof**	**25.77**	**27**	*e*P	**P**	**02 33 56.3**	**-0.4**
	3.6nm,0.6s,mb4.1						
BOSA				LR	LR	02 42 07.4	
BOSA	**Boshof**	**25.77**	**27**	P	**P**	**02 33 56.5**	**-0.3**
	9.0nm,0.9s,mb4.3,baz=199,slow=9.3,SNR=12						
BOSA				LR	LR	02 42 07.4	
	comp=Z,1μm,20.3s,MS4.3,baz=207,slow=32						
MAW	**Mawson**	**28.41**	**141**	*e*P	**P**	**02 34 18.7**	**-1.5**
	1.5nm,0.9s						
MAW				PcP	PcP	02 37 31.5	-0.5
MAW				LR	LR	02 43 03.2	
MAW	**Mawson**	**28.41**	**141**	P	**P**	**02 34 18.5**	**-1.7**
	12nm,0.9s,mb4.5,baz=287,slow=11,SNR=20						
MAW				PcP	PcP	02 37 31.5	-0.5
	9.7nm,0.9s,baz=282,slow=5.3,SNR=8.9						
MAW				LR	LR	02 43 03.2	
	comp=Z,836nm,21.7s,MS4.3,baz=329,slow=31						
LBTB	**Lobatse**	**29.27**	**25**	P	**P**	**02 34 27.6**	**-0.6**
	5.3nm,0.6s,mb4.4,baz=217,slow=7.1,SNR=10						
LBTB				LR	LR	02 44 31.0	
	comp=Z,721nm,18.9s,MS4.3,baz=209,slow=33						
TSUM	**Tsumeb**	**33.51**	**9**	*e*P	**P**	**02 35 04.4**	**-1.1**
	9.1nm,1.1s,mb4.6						
TSUM	**Tsumeb**	**33.51**	**9**	P	**P**	**02 35 05.2**	**-0.3**
	5.2nm,0.8s,mb4.5,baz=165,slow=12,SNR=7.4						
QSPA	**South Pole Qui**	**37.73**	**180**	*e*P	**P**	**02 35 41.0**	**-0.2**
	14nm,1.0s,mb4.7						
QSPA				*e*PcP	PcP	02 37 56.1	-1.7
QSPA	**South Pole Qui**	**37.73**	**180**	P	**P**	**02 35 41.3**	**+0.2**
	17nm,1.0s,mb4.7,baz=232,slow=5.6,SNR=32						
QSPA				PcP	PcP	02 37 56.7	-1.1
	11nm,1.0s,baz=293,slow=3.3,SNR=4.1						
PMSA	**Palmer Station**	**38.98**	**221**	*e*P	**P**	**02 35 52.9**	**+1.0**
	18nm,1.0s,mb4.8						
PMSA				PcP	PcP	02 38 01.0	-0.9
PMSA	**Palmer Station**	**38.98**	**221**	P	**P**	**02 35 52.3**	**+0.4**
	15nm,0.9s,mb4.7,baz=118,slow=6.1,SNR=8.5						
PMSA				PcP	PcP	02 38 01.0	-0.9
	5.6nm,0.7s,baz=43,slow=11,SNR=4.6						
LSZ	**Lusaka**	**39.26**	**25**	*e*P	**P**	**02 35 53.8**	**-0.9**
	13nm,1.3s,mb4.5						
LSZ	**Lusaka**	**39.26**	**25**	P	**P**	**02 35 53.6**	**-1.0**
	12nm,1.2s,mb4.5,baz=208,slow=8.5,SNR=8.9						
ABPO	**Ambohimpanom**	**43.12**	**53**	*e*P	**P**	**02 36 25.3**	**-1.1**
	16nm,1.2s,mb4.6						
OPO	**Ambohidratopo**	**43.48**	**52**	P	**P**	**02 36 27.6**	**-1.7**
	2.9nm,0.8s,mb4.0,baz=208,slow=5.2,SNR=4.8						
USHA	**Ushuaia**	**45.33**	**233**	P	**P**	**02 36 43.9**	**+0.2**
	17nm,0.9s,mb4.9,baz=93,slow=4.8,SNR=7.5						
SBA	**Scott Base**	**48.96**	**173**	*e*P	**P**	**02 37 11.5**	**-0.2**
	15nm,0.9s,mb5.0						
TRQA	**Tornquist**	**51.88**	**255**	*e*P	**P**	**02 37 34.5**	**+0.1**
	15nm,1.1s,mb4.8						
PLCA	**Paso Flores**	**55.04**	**247**	*e*P	**P**	**02 37 57.3**	**-0.2**
	3.0nm,0.7s,mb4.4						
PLCA	**Paso Flores**	**55.04**	**247**	P	**P**	**02 37 57.1**	**-0.5**
	3.0nm,0.8s,mb4.4,baz=183,slow=7.5,SNR=4.2						
KMBO	**Kilima Mbogo**	**55.31**	**31**	LR	LR	03 00 43.8	
	comp=Z,477nm,18.6s,MS4.6,baz=90,slow=35						
CPUP	**Villa Florida**	**57.25**	**269**	P	**P**	**02 38 13.3**	**-0.2**
	9.1nm,0.8s,mb4.8,baz=119,slow=6.5,SNR=21						
DBIC	**Dimbokro**	**60.72**	**340**	*e*P	**P**	**02 38 36.1**	**-1.4**
	4.0nm,0.6s,mb4.7						
DBIC				LR	LR	03 00 10.0	
DBIC	**Dimbokro**	**60.72**	**340**	P	**P**	**02 38 36.5**	**-1.1**
	3.8nm,0.6s,mb4.7,baz=143,slow=8.8,SNR=10						
DBIC				LR	LR	03 00 10.0	
	comp=Z,318nm,19.2s,MS4.5,baz=328,slow=31						
SIV	**San Ignacio**	**67.31**	**273**	LR	LR	03 03 19.6	
	comp=Z,28nm,21.3s,MS3.5,baz=333,slow=31						
LPAZ	**La Paz**	**71.39**	**267**	*e*P	**P**	**02 39 47.4**	**+1.1**
	18nm,1.0s,mb4.9						
LPAZ	**La Paz**	**71.39**	**267**	P	**P**	**02 39 47.2**	**+1.0**
	14nm,0.9s,mb4.9,baz=109,slow=5.3,SNR=54						
NWAO	**Narrogin (SRO)**	**72.85**	**122**	*e*P	**P**	**02 39 53.9**	**-0.9**
	53nm,1.4s,mb5.3						
KLBR	**Kellerberrin**	**74.17**	**121**	*e*P	**P**	**02 40 01.4**	**-1.2**
	20nm,0.9s,mb5.0						
TAM	**Tamanrasset**	**75.20**	**354**	*e*P	**P**	**02 40 08.5**	**0.0**
	2.8nm,1.0s,mb4.2						
FORT	**Forrest**	**80.00**	**128**	*e*P	**P**	**02 40 35.0**	**-0.4**
	20nm,0.9s,mb5.0						
MBWA	**Marble Bar**	**83.56**	**116**	*e*P	**P**	**02 40 52.8**	**-1.5**
	6.3nm,0.7s,mb4.8						
CAN	**Canberra**	**84.76**	**146**	*e*P	**P**	**02 40 59.4**	**-0.9**
	41nm,1.0s,mb5.5						
STKA	**Stephens Creek**	**85.07**	**139**	*e*P	**P**	**02 41 00.9**	**-0.9**
	11nm,0.8s,mb5.0						
STKA	**Stephens Creek**	**85.07**	**139**	*e*P	**P**	**02 41 01.0**	**-0.8**
	3.3nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**85.07**	**139**	P	**P**	**02 41 00.7**	**-1.1**
	16nm,0.8s,mb5.2,baz=182,slow=3.1,SNR=23						
CGJI	**Cibinong**	**86.92**	**97**	P	**P**	**02 41 12.1**	**+0.9**
	59nm,1.1s,mb5.7						
KASI	**Kota Agung**	**87.05**	**95**	P	**P**	**02 41 13.4**	**+1.5**
CISI	**Cisompet, Garu**	**87.47**	**99**	P	**P**	**02 41 14.6**	**+0.7**
	56nm,1.4s,mb5.6						
MDSI	**Maura Dua**	**87.68**	**94**	P	**P**	**02 41 15.3**	**+0.4**
	38nm,1.0s,mb5.6						
CBJI	**Cikio**	**87.78**	**98**	P	**P**	**02 41 16.6**	**+1.2**
	349nm,0.9s						
KLSI		**87.85**	**95**	P	**P**	**02 41 16.9**	**+1.2**
	51nm,1.4s,mb5.5						
KEST	**Kesra**	**87.91**	**358**	P	**P**	**02 41 15.9**	**+0.6**
	1.9nm,0.8s,mb4.4,baz=204,slow=6.4,SNR=6.5						
LEM	**Lembang**	**87.92**	**98**	P	**P**	**02 41 18.2**	**+2.1**
	123nm,1.3s,mb6.0						
IDI	**Anoyia**	**88.13**	**10**	*e*P	**P**	**02 41 17.3**	**+1.0**
	14nm,0.3s,mb5.7						
ASAR	**Alice Springs**	**88.77**	**129**	P	**P**	**02 41 18.9**	**-1.0**
	9.0nm,0.9s,mb5.1,baz=198,slow=5.0,SNR=60						
SDSI	**Sungai Dareh**	**88.79**	**90**	P	**P**	**02 41 20.5**	**+0.4**
	28nm,1.2s,mb5.5						
PCJI	**Pacitan**	**88.98**	**102**	P	**P**	**02 41 23.7**	**+2.6**
MNSI	**Mandailing Nat**	**89.02**	**87**	P	**P**	**02 41 21.9**	**+0.7**
	26nm,0.2s						
FITZ	**Fitzroy Crossi**	**89.24**	**119**	P	**P**	**02 41 19.0**	**-3.2**
	4.9nm,1.1s,mb4.8,baz=205,slow=5.3,SNR=5.1						
SMRI	**Semang**	**89.45**	**101**	P	**P**	**02 41 25.1**	**+1.9**
	74nm,1.1s,mb5.9						
PWJI	**Pagerwojo**	**89.49**	**102**	P	**P**	**02 41 24.5**	**+1.0**
	67nm,1.1s,mb5.9						
SJI	**Sawahan**	**89.70**	**102**	P	**P**	**02 41 25.6**	**+1.2**
	3μm32nm,1.5s,mb5.4						
KRKI	**Karangkates**	**89.77**	**103**	P	**P**	**02 41 25.9**	**+1.1**
	168nm,0.6s						
NGJI	**Ngawi**	**89.81**	**102**	P	**P**	**02 41 27.0**	**+2.1**
	5μm70nm,1.5s,mb5.8						
GMJI	**Gumukmas**	**90.27**	**104**	P	**P**	**02 41 28.3**	**+1.2**
	55nm,1.4s,mb5.7						
TIP	**Timpagrande**	**91.40**	**4**	*e*P	**P**	**02 41 31.6**	**+0.1**
	12nm,1.1s,mb5.2						
WRA	**Warramunga Arr**	**92.15**	**127**	P	**P**	**02 41 32.4**	**-3.3**
WRA	**Warramunga Arr**	**92.15**	**127**	P	**P**	**02 41 32.4**	**-3.3**
	2.8nm,0.8s,mb4.7,baz=206,slow=3.6,SNR=9.4						
MYKOM	**Kota Tinggi**	**92.41**	**90**	P	**P**	**02 41 37.3**	**+0.3**
	24nm,1.1s,mb5.4						
KNA	**Kunumura**	**92.84**	**120**	P	**P**	**02 41 38.1**	**-0.9**
ESDC	**Sonseca Array**	**92.88**	**348**	P	**P**	**02 41 38.1**	**-0.3**
	0.7nm,0.7s,mb4.2,baz=169,slow=5.1,SNR=6.6						
BRTR	**Keskin Array B**	**93.73**	**16**	P	**P**	**02 41 42.0**	**-0.4**
	0.7nm,0.8s,mb4.2,baz=211,slow=4.3,SNR=4.1						
VOIR		**98.19**	**9**	*i* P	**P**	**02 42 02.5**	**0.0**
MLR	**Muntele Rosu**	**98.33**	**10**	*i* P	**P**	**02 42 03.8**	**+0.7**
MKAR	**Makanchi Array**	**115.59**	**46**	PKP	PKPdf	02 47 04.4	-2.9
	1.2nm,0.9s,baz=255,slow=2.4,SNR=4.6						
ZALV	**Zalesovo Beam**	**122.03**	**42**	PKP	PKPdf	02 47 16.8	-2.6
	0.7nm,0.4s,baz=245,slow=3.1,SNR=6.1						
WCI	**Wyandotte Cave**	**123.98**	**290**	*e*PKPdf	PKPdf	02 47 22.9	-0.8
SADO	**Sadowa**	**124.45**	**300**	PKP	PKPdf	02 47 23.2	-1.2
	2.6nm,0.7s,baz=256,slow=4.2,SNR=2.6						
SCHQ	**Schefferville**	**125.33**	**316**	PKP	PKPdf	02 47 23.4	-2.4
	3.4nm,0.6s,baz=94,slow=5.8,SNR=7.8						
MIAR	**Mount Ida**	**125.73**	**282**	*e*PKPdf	PKPdf	02 47 26.3	-0.9
CCM	**Cathedral Cave**	**126.73**	**287**	*e*PKPdf	PKPdf	02 47 27.8	-1.2
SONM	**Songino Array**	**127.95**	**58**	PKP	PKPdf	02 47 28.3	-2.7
	1.0nm,0.6s,baz=48,slow=2.2,SNR=4.4						
TXAR	**Lajitas Array**	**128.22**	**270**	PKP	PKPdf	02 47 31.2	-0.9
	4.0nm,1.0s,baz=150,slow=4.6,SNR=28						
WMOK	**Wichita Mounta**	**129.00**	**278**	*e*PKPdf	PKPdf	02 47 32.3	-1.1
JFWS	**Jewell Farm**	**129.33**	**292**	*e*PKPdf	PKPdf	02 47 33.3	-0.5
COWI	**Conover**	**130.70**	**296**	*e*PKPdf	PKPdf	02 47 34.4	-1.9
KSRS	**Korea Array**	**133.66**	**82**	PKP	PKPdf	02 47 40.8	-1.4
	0.5nm,0.3s,baz=154,slow=5.9,SNR=4.7						
ANMO	**Albuquerque**	**133.81**	**273**	*e*PKPdf	PKPdf	02 47 42.5	-0.1
CBIJ	**Chichi jima**	**135.12**	**104**	PKP	PKPdf	02 47 42.6	-2.6
	29nm,0.5s,baz=292,slow=19,SNR=2.8						
AGMN	**Agassiz Nation**	**135.71**	**295**	*e*PKPdf	PKPdf	02 47 44.6	-1.0
ULM	**Lac du Bonnet**	**136.77**	**297**	PKP	PKPdf	02 47 44.8	-2.8
	4.3nm,0.8s,baz=181,slow=4.1,SNR=3.2						
WUAZ	**Wupatki**	**137.19**	**270**	*e*PKPdf	PKPdf	02 47 48.8	-0.1
RSSD	**Black Hills**	**138.05**	**285**	*e*PKPdf	PKPdf	02 47 49.0	-1.2
SRU	**San Rafael**	**138.97**	**274**	*e*PKPdf	PKPdf	02 47 51.8	-0.2
MJAR	**Matsushiro Arr**	**139.33**	**91**	PKP	PKPdf	02 47 52.6	-0.2
	0.7nm,0.3s,baz=225,slow=1.5,SNR=3.4						
MSU	**Marysvale**	**139.61**	**273**	*e*PKPdf	PKPdf	02 47 54.1	+0.9
DAU	**Daniels Canyon**	**140.21**	**276**	*e*PKPdf	PKPdf	02 47 55.2	+0.9
PDAR	**Pinedale Array**	**140.57**	**280**	PKhKP	PKPpre	02 47 45.3	
	1.2nm,0.8s,baz=110,slow=4.3,SNR=9.7						
PDAR				PKP	PKPdf	02 47 53.9	-0.9
	2.9nm,0.9s,baz=114,slow=3.0,SNR=12						
ISA	**Isabella**	**141.61**	**264**	*e*PKPdf	PKPdf	02 47 57.8	+0.8
TPAW	**Teton Pass**	**141.82**	**280**	*e*PKPdf	PKPdf	02 47 56.8	-0.2
MOOW	**Moose Ponds**	**141.84**	**280**	*e*PKPdf	PKPdf	02 47 54.2	-2.8
IMW	**Indian Meadow**	**142.04**	**280**	*e*PKPdf	PKPdf	02 47 53.8	-3.6
NVAR	**Mina Array Bea**	**143.30**	**268**	PKhKP	PKPpre	02 47 56.3	
	3.1nm,0.8s,baz=130,slow=4.9,SNR=4.8						
NVAR				PKP	PKPdf	02 48 00.7	+0.8
	3.1nm,0.8s,baz=133,slow=3.8,SNR=17						
EGMT	**Eagleton**	**143.50**	**287**	*e*PKPdf	PKPdf	02 47 56.9	-2.9
MCMT	**McKenzie Canyo**	**143.70**	**280**	*e*PKPdf	PKPdf	02 47 58.1	-2.2
DLMT	**Dillon**	**143.83**	**281**	*e*PKPdf	PKPdf	02 47 58.4	-2.1
HLID	**Hailey**	**143.96**	**277**	*e*PKPdf	PKPdf	02 47 59.1	-1.7
LRM	**Limekiln Ridge**	**143.98**	**282**	*e*PKPdf	PKPdf	02 47 59.1	-1.6
CHMT	**Chamberlain Mo**	**145.01**	**283**	*e*PKPdf	PKPdf	02 48 02.0	-0.5
SLMT	**Seeley Lake**	**145.32**	**283**	*e*PKPdf	PKPdf	02 48 02.6	-0.4
MSO	**Missoula**	**145.38**	**283**	*e*PKPdf	PKPdf	02 48 02.0	-1.1
MSO				*e*PKPbc	PKPbc	02 48 03.0	-0.2
SWMT	**Swartz Lake**	**145.75**	**284**	*e*PKPdf	PKPdf	02 48 03.7	0.0
WALA	**Waterton Lakes**	**146.42**	**286**	*e*PKPdf	PKPdf	02 48 03.5	-1.4
WALA				*e*PKPbc	PKPbc	02 48 06.1	-0.1
MOD	**Modoc**	**146.61**	**271**	*e*PKPdf	PKPdf	02 48 04.0	-1.5
MOD				*e*PKPbc	PKPbc	02 48 07.2	+0.2
WDC	**Whiskeytown Da**	**147.20**	**267**	*e*PKPdf	PKPdf	02 48 05.7	-0.8
WDC				*e*PKPbc	PKPbc	02 48 08.2	-0.5
YBH	**Yreka Blue Hor**	**147.98**	**269**	*e*P	PKPdf	02 48 09.1	+1.4
KHMM	**Horse Mountain**	**148.10**	**266**	*e*PKPdf	PKPdf	02 48 06.6	-1.4
KHMM				*e*PKPbc	PKPbc	02 48 11.9	+0.8
VIPM	**Ingram Point**	**148.24**	**275**	P	PKPbc	02 48 12.2	+0.8
HUMO	**Hull Mountain**	**148.63**	**270**	*e*PKPbc	PKPbc	02 48 13.0	+0.5
TDH	**Tom, Dick, Har**	**149.35**	**275**	P	PKPbc	02 48 14.5	+0.3
WPW	**White Pass**	**149.90**	**278**	P	PKPbc	02 48 15.5	0.0
MTMW	**Mount Mitchell**	**149.97**	**276**	P	PKPbc	02 48 15.7	0.0
LON	**Longmire**	**150.08**	**278**	*e*PKPdf	PKPdf	02 48 08.7	-2.2
LON				*e*PKPbc	PKPbc	02 48 15.4	-0.5
RVW	**Rose Valley**	**150.36**	**276**	P	PKPbc	02 48 16.9	+0.3
YKA	**Yellowknife Ar**	**150.58**	**311**	PKP	PKPdf	02 48 08.0	-3.1
	7.9nm,1.2s,baz=101,slow=1.8,SNR=4.3						
YKA				PKPbc	PKPbc	02 48 15.6	-1.0
	30nm,0.8s,baz=91,slow=2.5,SNR=72						
JCW	**Jim Creek**	**150.81**	**280**	*e*PKPdf	PKPdf	02 48 11.2	-0.8
JCW				*e*PKPbc	PKPbc	02 48 16.7	-0.9
HDW	**Hoodsport**	**151.25**	**278**	P	PKPbc	02 48 19.2	+0.5
NLWA	**Neilton Lookou**	**151.62**	**277**	*e*PKPbc	PKPbc	02 48 19.9	+0.4
OSD	**Olympics--Snow**	**151.71**	**278**	P	PKPbc	02 48 20.6	+0.9
PETK	**Petropavlovsk-**	**159.25**	**75**	PKPab	PKPab	02 48 59.0	-1.7
	1.5nm,0.7s,baz=318,slow=1.9,SNR=3.3						
ILAR	**Eielson Array**	**163.70**	**327**	PKP	PKPdf	02 48 23.8	-3.8
	0.9nm,1.1s,baz=232,slow=1.0,SNR=5.5						
ILAR				PKPab	PKPab	02 49 18.8	-1.1
	1.9nm,1.0s,baz=39,slow=4.4,SNR=12						

IDC 26 02:36:15.9±3.4, 4.76N×96°.22E, h120km±29km, mb3.4/5, mb1 3.6/6, mb1mx3.3/22, mbtmp3.4/6, MS3.4/1, Ms1 3.4/1, ms1mx3.2/27, Error ellipse: s-maj=83.7km s-min=17.4km az=48.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.33**	**126**	P	Pn	02 37 07.8	+1.2
	2.1nm,0.3s,baz=322,slow=19,SNR=10						
PSI				S	Sn	02 37 42.9	-2.8
	0.8nm,0.3s,baz=310,slow=11,SNR=10						
PSI				LR	LR	02 38 28.5	
	comp=Z,547nm,18.9s,baz=139,slow=39						
FITZ	**Fitzroy Crossi**	**36.85**	**129**	P	P	02 43 11.7	-1.1
	1.4nm,0.7s,baz=304,slow=7.3,SNR=3.0						
MKAR	**Makanchi Array**	**43.57**	**346**	P	P	02 44 07.8	0.0
	0.3nm,0.3s,baz=162,slow=8.5,SNR=6.5						
WRA	**Warramunga Arr**	**44.80**	**124**	P	P	02 44 17.6	-0.4
	1.5nm,0.6s,baz=304,slow=9.2,SNR=14						
WRA				PcP	PcP	02 45 58.7	+0.6
	0.4nm,1.0s,baz=320,slow=2.8,SNR=4.1						
ASAR	**Alice Springs**	**46.35**	**129**	P	P	02 44 30.6	+0.3
	1.0nm,0.4s,baz=303,slow=8.0,SNR=15						
BRTR	**Keskin Array B**	**66.02**	**311**	P	P	02 46 49.8	0.0
	0.4nm,0.6s,baz=118,slow=7.5,SNR=3.2						

*CSEM **26** 02:56:48.5±0.3, 42°.11N×48°.59E, h30km, mb4.5, Error ellipse: s-maj=6.8km s-min=4.4km az=54.0*

MOS 26 02:56:52.1±1.5, 41°.89N×48°.24E, h27km, mb4.5/1, 2C-5D, Error ellipse: s-maj=14.3km s-min=7.0km az=128.0, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRN	**Derbent**	**0.16**	**26**	*e*PG	Pb	02 56 58.8	+1.3
DRN				pmax	pmax		
	comp=Z,436nm,0.2s						
DRN	**Derbent**	**0.16**	**26**	*e*Pg	Pb	02 56 58.8	+1.3
	comp=Z,436nm,0.2s						
AKT	**Akhty**	**0.56**	**223**	*i* PG	Pb	02 57 06.0	+2.7
AKT				*e*S	Sb	02 57 18.0	+7.1
AKT				pmax	pmax		
	comp=Z,360nm,0.3s						
AKT	**Akhty**	**0.56**	**223**	*i* Pg	Pb	02 57 06.0	+2.7
	comp=Z,360nm,0.3s						
AKT

ANN					pmax	pmax			
	comp=Z,67nm,1.7s								
ANN	**Anapa**	**8.39**	**294**	*e*P		Pn	02 58 48.8	-3.1	
	comp=Z,67nm,1.7s								
AKTO	**Aktyubinsk**	**10.90**	**35**	⇓Pn		Pn	02 59 16.8	-9.4	
	comp=Z,0.3nm,0.7s								
AKTO				⇓Sn		Sn	03 01 08.9	-18	
	comp=Z,0.6nm,0.4s								
AKTO	**Aktyubinsk**	**10.90**	**35**	Pn		Pn	02 59 16.8	-9.4	
	comp=Z,0.3nm,0.7s								
AKTO				Sn		Sn	03 01 08.9	-18	
	comp=Z,0.6nm,0.4s								
AB31	**Akbulak array**	**11.02**	**44**	⇑Pn		Pn	02 59 18.4	-9.4	
	comp=Z,0.5nm,0.5s,baz=232,slow=15,SNR=14								
AB31				⇓Sn		Sn	03 01 11.9	-18	
	comp=Z,1.0nm,0.3s,baz=231,slow=23,SNR=6.2								
AB31	**Akbulak array**	**11.02**	**44**	Pn		Pn	02 59 18.4	-9.4	
	comp=Z,0.5nm,0.5s,baz=232,SNR=14								
AB31				Sn		Sn	03 01 11.9	-18	
	comp=Z,1.0nm,0.3s,SNR=6.2								

NEIC ***26*** *03:07:29.5±1.4,6.34S×104.47E,h22km±9km, mb5.7/95, MS5.4/174, MW5.7, MW5.6, Error ellipse: s-maj=4.9km s-min=3.2km az=220.0, Moment Tensor Solution. s44 Moment tensor: Scale 10¹⁷Nm; Mrr=2.04; Mθθ 0.27; Mφφ 1.77; Mrθ 1.83; Mθφ -1.15; Mφr 1.37; Best double couple: M=3.20000×10¹⁷ NP1:φs 184.00000°,δ60.00000°, λ-50.00000°. NP2:φs 305.00000°,δ48.00000°, λ-138.00000°. Principal axes: T 2.4400, Plg7.0000°, Azm247.0000°; N 1.1900, Plg33.0000°, Azm342.0000°; P -3.6200, Plg55.0000°, Azm146.0000°;*

NEIC Felt [IV] at Kotaagung and Tanjungkarang-Telukbetung, Sumatra. Felt [III] at Jakarta and [II] at Tasikmalaya, Java. Also felt at Bogor, Java.

MOS ***26*** *03:07:30.3±1.1,6.11S×104.52E,h33km, mb5.9/67, MS5.3/73 Error ellipse: s-maj=8.9km s-min=4.3km az=121.1*

IDC ***26*** *03:07:31.2±1.3,6.21S×104.58E,h33km±9km, mb5.3/37, mb1 5.3/38, mb1mx5.3/38, mbtmp5.3/38, ML4.7/1, MS5.2/28, Ms1 5.2/28, ms1mx5.0/36, Error ellipse: s-maj=11.5km s-min=7.5km az=45.0*

DJA ***26*** *03:07:31,6.56S×104.28E,h26km, Mw6.2/67*

ISCJB ***26*** *03:07:31.2±0.1,6.35S±0.02×104.42E±0.02,h47km, mb5.7/207, MS5.3/228, Error ellipse: s-maj=3.4km s-min=2.0km az=26.0*

GCMT ***26*** *03:07:34.7±0.1,6.57S×104.49E,h38km, MW5.7, Moment Tensor Solution. s99,c182; s21,c21; Moment tensor: Scale 10¹⁷Nm; Mrr=1.65±.05; Mθθ=1.33±.04; Mφφ 2.98±.04; Mrθ 2.12±.06; Mθφ=1.38±.03; Mφr 2.00±.07; Best double couple: M=4.10000×10¹⁷ NP1:φs 310.00000°,δ45.00000°, λ-155.00000°. NP2:φs 202.00000°,δ73.00000°, λ-48.00000°. Principal axes: T 3.8000, Plg17.0000°, Azm262.0000°; N 0.6000, Plg40.0000°, Azm7.0000°; P -4.4000, Plg45.0000°, Azm154.0000°; Data Used: II IU IC G CN. Surface waves: sta=102, comp=208, per= 50.*

SZGRF ***26*** *03:07:50.7,2.86S×101.94E,h33km, mb5.5, Southern Sumatera, Indonesia*

ISC 26 03:07:33.1±0.1,6.35S±0.02×104.42E±0.02,h49km, h49km±2.4km:pP-P,n1384,σ1906/919,mb5.7/207, MS5.3/228,194C-159D,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.83**	**5**	P	**Pn**	**03 07 48.2**	**-0.3**
KASI				S	**Sn**	**03 08 03.0**	**+3.3**
BLSI	**Bandar Lampung**	**1.28**	**40**	P	**Pn**	**03 07 55.2**	**+0.6**
BLSI				S	**Sn**	**03 08 18.1**	**+7.5**
LWLI	**Liwa**	**1.37**	**345**	P	**Pn**	**03 07 56.5**	**+0.6**
LWLI				S	**Sn**	**03 08 18.5**	**+5.5**
RBSI	**Rajabasa**	**1.41**	**69**	P	**Pn**	**03 07 56.1**	**-0.3**
RBSI				S	**Sn**	**03 08 19.9**	**+6.1**
KLI	**Kotabumi**	**1.54**	**16**	P	**Pn**	**03 08 00.0**	**+1.8**
KLI				S	**Sn**	**03 08 25.8**	**+8.7**
KLSI		**1.68**	**11**	P	**Pn**	**03 08 01.5**	**+1.4**
SBJI	**Serang**	**1.71**	**82**	P	**Pn**	**03 08 00.3**	**-0.3**
SBJI				S	**Sn**	**03 08 27.2**	**+5.9**
MDSI	**Maura Dua**	**1.87**	**353**	P	**Pn**	**03 08 03.9**	**+1.2**
MDSI				S	**Sn**	**03 08 30.8**	**+5.7**
SKJI	**Sukabumi**	**2.22**	**107**	P	**Pn**	**03 08 06.8**	**-0.7**
TNG	**Tangerang**	**2.22**	**86**	P	**Pn**	**03 08 08.1**	**+0.6**
TNG	**Tangerang**	**2.22**	**86**	P	**Pn**	**03 08 08.1**	**+0.6**
TNG				S	**Sn**	**03 08 38.9**	**+5.2**
CBJI	**Citeko**	**2.42**	**92**	P	**Pn**	**03 08 12.0**	**+1.8**
MNAI	**Manna**	**2.46**	**324**	P	**Pn**	**03 08 11.8**	**+1.0**
LEM	**Lembang**	**3.21**	**99**	P	**Pn**	**03 08 22.6**	**+1.5**
KSI	**Kapahiang**	**3.24**	**326**	P	**Pn**	**03 08 22.9**	**+1.4**
CISI	**Cisompet, Garu**	**3.58**	**110**	P	**Pn**	**03 08 24.7**	**-1.4**
JCJI	**Jatiwangi**	**3.83**	**92**	P	**Pn**	**03 08 31.3**	**+1.7**
PPBI	**Pangkal Pinang**	**4.50**	**22**	P	**Pn**	**03 08 41.6**	**+2.8**
CLJI	**Cilicap**	**4.76**	**107**	P	**Pn**	**03 08 44.1**	**+1.7**
TPI	**Tanjunggpandan** 8.5nm654nm,0.9s	**4.81**	**42**	P	**Pn**	**03 08 44.4**	**+1.3**
KRJI	**Kerinci**	**5.16**	**325**	P	**Pn**	**03 08 51.7**	**+3.8**
BJII	**Banjamegara** 9.3nm1μm,1.4s	**5.34**	**101**	P	**Pn**	**03 08 51.6**	**+1.2**
YOGI	**Yogyakarta** 28nm4μm,1.3s	**6.01**	**104**	P	**Pn**	**03 09 02.5**	**+3.0**
SMRI	**Semarang** 23nm1μm,1.1s	**6.02**	**97**	P	**Pn**	**03 09 03.0**	**+3.3**
SDSI	**Sungai Dareh** 6.1nm855nm,0.9s	**6.16**	**331**	P	**Pn**	**03 09 01.4**	**-0.1**
UGM	**Wanagama** 13nm4μm,0.9s	**6.25**	**105**	P	**Pn**	**03 09 03.9**	**+1.0**
RGRI	**Rengat** 7.2nm2μm,0.9s	**6.32**	**341**	P	**Pn**	**03 09 09.9**	**+6.2**
PDSI	**Padang** 13nm2μm,0.9s	**6.69**	**324**	P	**Pn**	**03 09 07.9**	**-1.0**
PCJI	**Pacitan** 8.9nm2μm,1.2s	**6.95**	**106**	P	**Pn**	**03 09 12.7**	**+0.3**
NGJI	**Ngawi** 6.5nm1μm,1.0s	**7.06**	**99**	P	**Pn**	**03 09 18.0**	**+4.0**
PPI	**Padang Panjang** 8.1nm650nm,1.0s	**7.10**	**325**	P	**Pn**	**03 09 13.5**	**-1.0**
SISI	**Saibi** 13nm1μm,1.0s	**7.29**	**313**	P	**Pn**	**03 09 15.9**	**-1.3**
SJI	**Sawahan** 6.6nm2μm,0.9s	**7.42**	**101**	P	**Pn**	**03 09 20.0**	**+1.1**
BKNI	**Bangkinang** 7.2nm2μm,1.2s	**7.44**	**333**	P	**Pn**	**03 09 19.4**	**+0.2**
PWJI	**Pagerwojo** 14nm4μm,0.8s	**7.51**	**103**	P	**Pn**	**03 09 20.7**	**+0.6**
MYKOM	**Kota Tinggi**	**8.11**	**356**	P	**Pn**	**03 09 31.2**	**+2.9**
MYKOM	**Kota Tinggi** 2.2nm7μm695nm,1.3s	**8.11**	**356**	P	**Pn**	**03 09 31.7**	**+3.4**
KRKI	**Karangkates** 16nm3μm,0.7s	**8.17**	**103**	P	**Pn**	**03 09 30.4**	**+1.3**
KGM	**Kluang**	**8.38**	**352**	P	**Pn**	**03 09 34.4**	**+2.3**
MNSI	**Mandailing Nat** 2.4nm6μm332nm,0.8s	**8.59**	**326**	P	**Pn**	**03 09 33.4**	**-1.5**
GMJI	**Gumukmas** 3μm,0.9s	**9.15**	**103**	P	**Pn**	**03 09 42.5**	**-0.1**
COCO	**West Island** 19μm,0.7s,SNR=37	**9.47**	**232**	Pn	**Pn**	**03 09 43.1**	**-3.9**
COCO	**West Island**	**9.47**	**232**	*e*Pn	**Pn**	**03 09 43.5**	**-3.4**
COCO				*e*S	**Sn**	**03 11 16.8**	**-15**
COCO	**West Island** 4μm,1.1s	**9.47**	**232**	P	**Pn**	**03 09 43.6**	**-3.4**
COCO	**West Island** SNR=41	**9.47**	**232**	P	**Pn**	**03 09 44.0**	**-3.0**
STKI	**Sintang** 475nm,1.3s	**9.50**	**48**	P	**Pn**	**03 09 51.6**	**+4.2**
KMMI	**Kalianget** 1μm,1.2s	**9.51**	**95**	P	**Pn**	**03 09 49.9**	**+2.4**
KSM	**Kuching**	**9.74**	**37**	*e*Pn	**Pn**	**03 09 53.4**	**+2.6**
KSM	**Kuching**	**9.74**	**37**	P	**Pn**	**03 09 54.4**	**+3.7**
KSM	**Kuching** 2μm198nm,1.5s	**9.74**	**37**	P	**Pn**	**03 09 54.5**	**+3.7**
JAGI	**Jajag, Banyuwa** 6μm,1.1s	**9.88**	**103**	P	**Pn**	**03 09 52.1**	**-0.5**
BYJI	**Banyuwangi** 5μm,1.2s	**10.03**	**101**	P	**Pn**	**03 09 56.1**	**+1.5**
NBBI	**Negara** 4μm,1.1s	**10.31**	**102**	P	**Pn**	**03 09 59.1**	**+0.6**
PSI	**Prapat** 5.4nm,0.3s,baz=174,slow=8.4,SNR=18	**10.62**	**329**	Pn	**Pn**	**03 09 59.5**	**-3.2**
PSI				LR	LR	03 15 01.7	
	comp=Z,15μm,20.6s,baz=140,slow=43						
SRBI	**Singaraja** 2μm,1.1s	**10.85**	**100**	P	**Pn**	**03 10 05.5**	**-0.3**
IGBI	**Denpasar**	**10.91**	**104**	P	**Pn**	**03 10 04.9**	**-1.8**
DNP	**Denpasar** 6μm,1.3s	**10.94**	**103**	P	**Pn**	**03 10 06.5**	**-0.7**
KHKI	**Kahang-Kahang** 3μm,1.1s	**11.28**	**101**	P	**Pn**	**03 10 10.0**	**-1.7**
IPM	**Ipoh** 114nm,0.9s	**11.28**	**342**	*e*Pn	**Pn**	**03 10 12.6**	**+0.8**
IPM	**Ipoh**	**11.28**	**342**	P	**Pn**	**03 10 13.1**	**+1.3**
IPM	**Ipoh** 3μm116nm,1.6s	**11.28**	**342**	P	**Pn**	**03 10 14.9**	**+3.1**
KTGM	**Kuala Trenggan**	**11.67**	**354**	P	**Pn**	**03 10 19.1**	**+1.9**
SBUM	**Sibu**	**11.71**	**42**	P	**Pn**	**03 10 21.3**	**+3.7**
SBUM	**Sibu** 2μm213nm,1.5s	**11.71**	**42**	P	**Pn**	**03 10 22.5**	**+4.9**
TPTI	1μm82nm,0.7s	**11.97**	**323**	P	**Pn**	**03 10 18.8**	**-2.5**
KBKI	**Kotabaru** 4μm416nm,0.9s	**12.09**	**76**	P	**Pn**	**03 10 26.1**	**+3.3**
KULM	**Kulim** 264nm,1.4s	**12.16**	**342**	*e*Pn	**Pn**	**03 10 23.4**	**-0.4**
KULM	**Kulim** 2μm106nm,1.5s	**12.16**	**342**	P	**Pn**	**03 10 25.5**	**+1.7**
BTM	**Bintulu**	**12.84**	**43**	P	**Pn**	**03 10 37.4**	**+4.3**
BSI	**Banda Aceh** 3μm369nm,1.1s	**14.88**	**322**	P	**Pn**	**03 10 56.3**	**-4.3**
SPSI	**Sidrap Palu** 5μm320nm,1.2s	**15.47**	**82**	P	**Pn**	**03 11 08.5**	**+0.3**
BKSI	**Bulukumba** 3μm,1.0s	**15.65**	**87**	P	**Pn**	**03 11 10.7**	**+0.1**
WSI	**Waingapu** 2μm,0.8s	**16.06**	**103**	P	**Pn**	**03 11 14.3**	**-1.5**
KKM	**Kota Kinabalu** 436nm,1.4s	**17.03**	**44**	*e*Pn	**Pn**	**03 11 28.6**	**+0.6**
KKM	**Kota Kinabalu**	**17.03**	**44**	P	**Pn**	**03 11 30.1**	**+2.1**
KKM	**Kota Kinabalu** 3μm193nm,2.0s	**17.03**	**44**	P	**Pn**	**03 11 29.7**	**+1.7**
TSM	**Tawau**	**17.09**	**52**	P	**Pn**	**03 11 31.5**	**+2.8**
SDKM	**Sandakan**	**17.45**	**47**	P	**Pn**	**03 11 35.5**	**+2.3**
MMRI	**Maumere** 2μm,1.1s	**17.81**	**98**	P	**Pn**	**03 11 32.9**	**-4.7**
TOLI	**Toli-Toli** 9μm1μm,1.1s	**17.95**	**66**	P	**Pn**	**03 11 41.4**	**+2.1**
BBSI	**Bau Bau** 1μm,1.1s	**18.07**	**88**	P	**Pn**	**03 11 40.5**	**-0.3**
KDM	**Kudat**	**18.09**	**43**	P	**Pn**	**03 11 42.5**	**+1.5**
MYLDM	**Lahad Datu**	**18.13**	**51**	P	**Pn**	**03 11 44.2**	**+2.7**
MYLDM	**Lahad Datu** 1μm,1.3s	**18.13**	**51**	P	**Pn**	**03 11 44.7**	**+3.2**
KDI	**Kendari** 4μm298nm,1.0s	**18.28**	**83**	P	**Pn**	**03 11 42.6**	**-0.7**
MRSI	**Marisa** 5μm696nm,1.2s	**18.76**	**69**	P	**Pn**	**03 11 48.5**	**-0.6**
LUWI	**Luwuk** 2μm,1.4s	**19.05**	**75**	P	**Pn**	**03 11 52.5**	**-0.1**
KMSI	**Cibinong** 1μm,1.5s	**20.70**	**71**	P	**P**	**03 12 17.9**	**+8.5**
MBWA	**Marble Bar**	**20.89**	**136**	*e*P	**P**	**03 12 09.5**	**-1.9**
MBWA				*e*S	**S**	**03 15 47.7**	**-14**
MBWA	**Marble Bar** 842nm,1.0s	**20.89**	**136**	*e*P	**P**	**03 12 10.8**	**-0.6**
MBWA				LR	LR		
	comp=Z,10μm,22.0s,MS5.2						
MBWA	**Marble Bar**	**20.89**	**136**	P	**P**	**03 12 10.3**	**-1.1**
	comp=Z,983nm,1.1s						
MBWA	**Marble Bar** SNR=122	**20.89**	**136**	P	**P**	**03 12 10.9**	**-0.5**
MNI	**Manado**	**21.81**	**70**	P	**P**	**03 12 22.6**	**+1.3**
	comp=Z,8μmcomp=Z,287nm,1.5s,mb5.5						
NST	**Nakhon Sawan**	**22.29**	**349**	P	**P**	**03 12 22.7**	**-3.7**
	comp=Z,46nm,0.5s,mb5.2						
NLAI	**Namlea**	**22.81**	**83**	P	**P**	**03 12 31.3**	**-0.7**
	comp=Z,4μmcomp=Z,384nm,1.1s,mb5.8						
LBMI	**Labuha**	**23.72**	**77**	P	**P**	**03 12 40.7**	**-0.2**
	comp=Z,1μm,1.1s,mb6.3						
FITZ	**Fitzroy Crossi**	**23.77**	**121**	*e*P	**P**	**03 12 39.6**	**-1.7**
	comp=Z,930nm,0.8s,mb6.3						
FITZ				*e*S	**S**	**03 16 59.2**	**+5.8**
FITZ	**Fitzroy Crossi**	**23.77**	**121**	*e*P	**P**	**03 12 40.0**	**-1.3**
	comp=Z,604nm,0.9s,mb6.0						
FITZ	**Fitzroy Crossi**	**23.77**	**121**	P	**P**	**03 12 39.8**	**-1.5**
	comp=Z,441nm,0.8s,mb6.0,baz=302,slow=9.3,SNR=370						
FITZ				S	**S**	**03 16 53.3**	**-0.1**
	comp=Z,29nm,1.0s,baz=266,slow=14,SNR=1.8						
FITZ				LR	LR	03 21 50.2	
	comp=Z,7μm,21.9s,MS5.1,baz=298,slow=36						
FITZ	**Fitzroy Crossi**	**23.77**	**121**	P	**P**	**03 12 39.7**	**-1.6**
	comp=Z,2μm,1.4s,mb6.3						
TNTI	**Ternate**	**23.97**	**74**	P	**P**	**03 12 42.1**	**-1.1**
	comp=Z,1μm,1.1s,mb6.2						
BDT	**Bhumibol Dam**	**24.05**	**347**	P	**P**	**03 12 41.0**	**-2.8**
	comp=Z,33nm,0.8s,mb4.8						
DAV	**Davao City (W)**	**24.97**	**58**	*e*P	**P**	**03 12 53.7**	**+1.4**
DAV				LR	LR	03 23 09.2	
DAV	**Davao City (W)**	**24.97**	**58**	P	**P**	**03 12 50.6**	**-1.7**
	comp=Z,195nm,0.5s,mb5.9,baz=348,slow=2.6,SNR=24						
DAV				LR	LR	03 23 09.2	
	comp=Z,4μm,20.2s,MS4.9,baz=302,slow=38						
DAV	**Davao City (W)**	**24.97**	**58**	*e*P	**P**	**03 12 51.9**	**-0.4**
DAV	**Davao City (W)**	**24.97**	**58**	P	**P**	**03 12 56.0**	**+3.7**
	comp=Z,1μm,1.5s,mb6.1						
DAV	**Davao City (W)** SNR=38	**24.97**	**58**	P	**P**	**03 12 54.0**	**+1.7**
CMAR	**Chiang Mai Arr**	**25.24**	**348**	P	**P**	**03 12 52.5**	**-2.1**
	comp=Z,24nm,0.6s,mb4.9,baz=182,slow=8.8,SNR=67						
CMAR				ScP	ScP	03 20 02.8	+0.3
	comp=Z,2.5nm,0.8s,baz=199,slow=1.6,SNR=3.6						
CMAR				LR	LR	03 23 43.1	
	comp=Z,8μm,19.7s,MS5.2,baz=179,slow=39						
CHTO	**Chiang Mai**	**25.58**	**348**	*e*P	**P**	**03 12 55.5**	**-2.3**
	comp=Z,54nm,0.9s,mb5.1						
CHTO				LR	LR		
	comp=Z,7μm,21.0s,MS5.2						
CHTO	**Chiang Mai**	**25.58**	**348**	*e*P	**P**	**03 12 55.5**	**-2.3**
CHTO				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.1						
CHTO				MLR	MLR		
	comp=Z,7μm,21.0s,MS5.2						
CHTO	**Chiang Mai**	**25.58**	**348**	P	**P**	**03 12 56.8**	**-1.0**
	comp=Z,1μmcomp=Z,76nm,0.9s,mb5.2						
CHTO	**Chiang Mai** SNR=23	**25.58**	**348**	P	**P**	**03 12 57.6**	**-0.2**
KNA	**Kununurra**	**25.63**	**113**	P	**P**	**03 12 56.6**	**-1.7**
	comp=Z,4μm,1.0s,mb6.9						
QIZ	**Qiongzhong**	**25.78**	**12**	P	**P**	**03 13 01.3**	**+1.8**
QIZ				sP	sP	03 13 09.0	-9.2
QIZ				S	**S**	**03 17 28.5**	**+3.0**
QIZ				sS	sS	03 17 42.0	-5.0
QIZ				pmax	pmax		
	comp=Z,38nm,1.0s,mb4.9						
QIZ				pmax	pmax		
	comp=Z,380nm,5.9s						
QIZ				LR	LR		
	comp=N,11μm,18.6s						
QIZ				LR	LR		
	comp=Z,14μm,18.1s,MS5.5						
QIZ	**Qiongzhong** SNR=23	**25.78**	**12**	*e*P	**P**	**03 12 59.7**	**+0.2**
	comp=Z,38nm,1.0s,mb4.9						
QIZ				LR	LR		
	comp=Z,15μm,19.0s,MS5.5						
CHRT	**Chiangrai**	**26.45**	**350**	⇓P	**P**	**03 13 03.5**	**-2.1**
	comp=Z,197nm,0.9s,mb5.6						
PALK	**Pallekele**	**27.26**	**299**	*e*P	**P**	**03 13 14.3**	**+1.3**
	comp=Z,134nm,1.6s,mb5.2						
PALK	**Pallekele**	**27.26**	**299**	*e*P	**P**	**03 13 14.3**	**+1.3**
PALK				pmax	pmax		
	comp=Z,134nm,1.6s,mb5.2						
KLBR	**Kellerberrin**	**28.04**	**155**	*e*P	**P**	**03 13 18.0**	**-1.8**
	comp=Z,208nm,1.2s,mb5.6						
KLBR				*e*S	S	03 18 38.8	+38
TLE	**Tual**	**28.17**	**90**	P	**P**	**03 13 22.6**	**+1.4**
	comp=Z,254nm,0.9s,mb5.8						
KAKA	**Kakadu**	**28.33**	**105**	⇓*i* P	**P**	**03 13 20.6**	**-2.0**
	comp=Z,322nm,0.6s,mb6.1						
KAKA				*e*S	**S**	**03 18 18.5**	**+13**
KAKA	**Kakadu**	**28.33**	**105**	*e*P	**P**	**03 13 20.3**	**-2.3**
	comp=Z,828nm,0.7s,mb6.5						
KAKA	**Kakadu**	**28.33**	**105**	P	**P**	**03 13 20.7**	**-1.9**
	comp=Z,5μmcomp=Z,706nm,0.7s,mb6.4						
NWAO	**Narrogin (SRO)**	**29.01**	**157**	*e*P	**P**	**03 13 27.2**	**-1.1**
	comp=Z,526nm,2.1s,mb5.9						
NWAO				LR	LR		
	comp=Z,9μm,21.0s,MS5.3						
NWAO	**Narrogin (SRO)**	**29.01**	**157**	P	**P**	**03 13 27.0**	**-1.4**
	comp=Z,40nm,0.9s,mb5.1,baz=333,slow=9.5,SNR=13						
NWAO				LR	LR	03 23 34.9	
	comp=Z,11μm,21.9s,MS5.4,baz=330,slow=33						
NWAO	**Narrogin (SRO)**	**29.01**	**157**	*e*P	**P**	**03 13 27.2**	**-1.2**
NWAO				pmax	pmax		
	comp=Z,526nm,2.1s						
NWAO				MLR	MLR		
	comp=Z,9μm,21.0s						
TRD	**Trivandrum**	**31.11**	**298**	⇑*e*PKP	**P**	**03 13 57.0**	**+10**
TRD				*e*S	S	03 19 14.0	+24
KMI	**Kunming**	**31.33**	**357**	P	**P**	**03 13 50.0**	**+1.1**
KMI				pP	pP	03 13 57.5	-4.3
KMI				sP	sP	03 14 00.5	-7.1
KMI				PP	PP	03 14 54.0	-6.5
KMI				S	**S**	**03 18 54.8**	**+2.1**
KMI				sS	sS	03 19 07.5	-6.8
KMI				SS	SS	03 20 42.5	-26
KMI				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.4						
KMI				pmax	pmax		
	comp=Z,86nm,3.1s						
KMI				LR	LR		
	comp=N,15μm,16.2s,MS5.8						
KMI				LR	LR		
	comp=E,5μm,18.7s,MS5.8						
KMI				LR	LR		
	comp=Z,17μm,16.5s,MS5.8						
VIS	**Vishakhapatnam**	**31.72**	**319**	*e*PKP	**P**	**03 13 52.2**	**-0.2**
VIS				*i* S	**S**	**03 19 00.3**	**+1.3**
DGAR	**Diego Garcia**	**31.75**	**266**	PFAKE		03 14 00.0	+7.1
DGAR				LR	LR		
	comp=Z,5μm,22.0s,MS5.2						
WRA	**Warramunga Arr**	**32.04**	**118**	P	**P**	**03 13 53.3**	**-2.0**
	comp=Z,276nm,0.9s,mb6.1,baz=291,slow=10,SNR=718						
WRA				PcP	PcP	03 16 44.5	+0.3
	comp=Z,28nm,0.9s,baz=294,slow=2.2,SNR=5.5						
WRA				S	**S**	**03 19 01.8**	**-2.2**
	comp=Z,3.2nm,0.8s,baz=281,slow=21,SNR=4.5						
BWNR	**Bhubaneshwar**	**32.19**	**326**	*e*PKP	**P**	**03 13 54.0**	**-2.6**
IMP	**Imphal**	**32.59**	**342**	*e*PKP	**P**	**03 13 59.0**	**-1.0**
GYA	**Guiyang**	**32.69**	**4**	⇑*i* P	**P**	**03 14 01.5**	**+0.7**
GYA				pP	pP	03 14 12.0	-1.7
GYA				PP	PP	03 15 12.5	-3.1
GYA				PcP	PcP	03 16 48.5	+2.6
GYA				S	**S**	**03 19 07.0**	**-6.8**
GYA				ScP	ScP	03 20 32.0	+6.1
GYA				ScS	ScS	03 24 24.5	-1.3
GYA				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
GYA				pmax	pmax		
	comp=Z,170nm,8.1s						
GYA				LR	LR		
	comp=N,5μm,17.4s,MS5.5						
GYA				LR	LR		
	comp=E,6μm,16.5s,MS5.5						
GYA				LR	LR		
	comp=Z,6μm,17.4s,MS5.3						
FORT	**Forrest**	**32.90**	**141**	*e*P	**P**	**03 14 01.9**	**-0.8**
	comp=Z,179nm,1.1s,mb5.9						
FORT				*e*S	PcS	03 20 30.8	-1.1
ASAR	**Alice Springs**	**33.16**	**124**	P	**P**	**03 14 04.2**	**-0.9**
ASAR				PcP	PcP	03 16 47.0	-0.3
ASAR				*e*		03 45 41.8	
ASAR	**Alice Springs**	**33.16**	**124**	P	**P**	**03 14 04.2**	**-0.9**
	comp=Z,55nm,1.0s,mb5.5,baz=296,slow=6.8,SNR=249						
ASAR				PcP	PcP	03 16 47.0	-0.3
	comp=Z,36nm,1.0s,baz=304,slow=2.1,SNR=7.4						
ASAR				P3KPbc		03 45 41.8	
	comp=Z,0.6nm,0.9s,baz=106,slow=5.5,SNR=5.6						
ASAR	**Alice Springs**	**33.16**	**124**	P	**P**	**03 14 04.2**	**-0.9**
ASAR						03 16 47.0	
TPUB	**Ta-pu**	**33.46**	**28**	*e*P	**P**	**03 14 07.3**	**-0.3**
	comp=Z,49nm,0.9s,mb5.4						
YULB	**Yu-li**	**33.85**	**29**	*e*P	**P**	**03 14 10.1**	**-1.0**
	comp=Z,41nm,0.9s,mb5.4						
SHL	**Shillong**	**33.99**	**339**	*e*PKP	**P**	**03 14 10.5**	**-1.7**
SHL				*ex*	x	03 19 30.0	
SSLB	**Suanglung**	**34.03**	**28**	*e*P	**P**	**03 14 12.6**	**0.0**
	comp=Z,81nm,1.3s,mb5.5						
SSLB				*e*PcP	PcP	03 16 51.7	+2.0
QZH	**Quanzhou**	**34.03**	**23**	P	**P**	**03 14 14.0**	**+1.4**
QZH				PP	PP	03 15 29.5	-0.9
QZH				S	**S**	**03 19 36.3**	**+1.6**
QZH				LR	LR		
	comp=N,5μm,17.6s,MS5.4						
QZH				LR	LR		
	comp=E,3μm,15.8s,MS5.4						
QZH				LR	LR		
	comp=Z,7μm,18.0s,MS5.4						
NACB	**Ninganchiao**	**34.66**	**28**	*e*P	**P**	**03 14 17.0**	**-1.0**
	comp=Z,15nm,0.6s,mb5.1						
HYB	**Hyderabad**	**34.80**	**313**	*i* P	**P**	**03 14 19.5**	**+0.2**
HYB				*e*S	**S**	**03 19 47.0**	**+0.2**
TATO	**Taipei**	**35.29**	**27**	PFAKE		03 14 30.0	+6.5
TATO				LR	LR		
	comp=Z,2μm,20.0s,MS4.9						
ENH	**Enshi**	**36.74**	**7**	*e*P	**P**	**03 14 35.0**	**-0.8**
	comp=Z,25nm,0.6s,mb5.2						
LATR	**Latur**	**36.89**	**312**	*e*PKP	**P**	**03 14 37.6**	**+0.3**
LATR				*ex*	x	03 15 50.1	
ODAN	**Odare**	**36.91**	**334**	*e*P	**P**	**03 14 36.2**	**-1.1**
	comp=Z,146nm,0.5s,mb6.0						
NGP	**Nagpur**	**36.97**	**318**	*e*PKP	**P**	**03 14 38.0**	**0.0**
NGP				*ex*	x	03 14 56.2	
	comp=Z,226nm,1.3s						
NGP				*e*S	**S**	**03 20 22.5**	**+2.5**
CD2	**Chengdu**	**37.05**	**359**	P	**P**	**03 14 41.5**	**+3.0**
CD2				PP	PP	03 16 09.8	+6.0
CD2				PcP	PcP	03 17 00.5	+2.0
CD2				S	**S**	**03 20 25.5**	**+4.5**
CD2				ScS	ScS	03 24 49.3	+0.2
CD2				pmax	pmax		
	comp=Z,110nm,0.6s,mb5.9						
CD2				pmax	pmax		
	comp=Z,1μm,5.1s						
CD2				LR	LR		
	comp=N,6μm,18.0s,MS5.6						
CD2				LR	LR		
	comp=E,7μm,18.0s,MS5.6						
CD2				LR	LR		
	comp=Z,7μm,15.7s,MS5.5						
TAPN	**

comp=Z,203nm,0.9s,mb5.8
COEN Coen 38.84 104 *e*P **P 03 14 52.5 -1.3**
comp=Z,1μm,0.8s,mb6.7
COEN *e*PcP PcP 03 17 05.0 +0.6
COEN Coen 38.84 104 P **P 03 14 52.5 -1.3**
comp=Z,900nm,1.5s,mb6.3
POO Poona 38.99 310 *e*PKP **P 03 14 54.3 -0.7**
POO AMb AMB 03 14 57.4
comp=Z,82nm,0.8s,mb5.5
GKN Gorkha 39.13 332 *e*P **P 03 14 55.1 -0.9**
comp=Z,63nm,0.3s,mb5.8
KOLN Koldanda 39.44 330 *e*P **P 03 14 57.9 -0.7**
comp=Z,226nm,0.6s,mb6.0
BBOO Buckleboo 39.48 136 *e*P **P 03 14 57.4 -1.5**
comp=Z,497nm,1.2s,mb6.1
BBOO *e*PP PP 03 16 23.7 -6.6
BHPL Bhopal 39.51 319 *e*PKP **P 03 14 59.2 -0.1**
BHPL AMb AMB 03 15 02.9
comp=Z,121nm,0.9s,mb5.6
DANN Dangsing 39.84 331 *e*P **P 03 15 01.6 -0.3**
comp=Z,155nm,0.5s,mb6.0
JOW Kunigami 40.28 34 LR LR 03 32 01.9
comp=Z,3μm,18.1s,MS5.2,baz=130,slow=37
XAN Xi'an 40.40 6 P **P 03 15 06.0 -0.4**
XAN pP pP 03 15 18.8 -0.8
XAN sP sP 03 15 24.0 -1.4
XAN PP PP 03 16 44.0 +3.7
XAN S **S 03 21 08.5 -2.7**
XAN SS SS 03 24 06.0 -6.0
XAN ScS ScS 03 25 07.5 -0.8
XAN pmax pmax
comp=Z,19nm,1.3s,mb4.7
XAN pmax pmax
comp=Z,70nm,13.2s
XAN LR LR
comp=N,2μm,20.3s,MS5.0
XAN LR LR
comp=E,820nm,20.6s,MS5.0
XAN LR LR
comp=Z,1μm,15.0s
SSE Sheshan 40.54 22 P **P 03 15 09.0 +1.3**
SSE S **S 03 21 17.8 +4.3**
SSE pmax pmax
comp=Z,60nm,0.7s,mb5.3
SSE pmax pmax
comp=Z,400nm,3.6s
SSE LR LR
comp=N,1μm,18.4s,MS5.1
SSE LR LR
comp=E,2μm,18.3s,MS5.1
SSE LR LR
comp=Z,2μm,17.2s,MS5.0
NJ2 Nanjing 40.59 19 *e*P **P 03 15 08.8 +0.7**
NJ2 pP pP 03 15 16.3 -4.9
NJ2 sP sP 03 15 19.5 -7.5
NJ2 PP PP 03 16 46.5 +4.1
NJ2 S **S 03 21 12.0 -2.2**
NJ2 sS sS 03 21 30.0 -6.3
NJ2 pmax pmax
comp=Z,30nm,0.7s,mb5.0
NJ2 pmax pmax
comp=Z,40nm,4.8s
NJ2 LR LR
comp=N,3μm,15.8s
NJ2 LR LR
comp=E,8μm,23.9s
NJ2 LR LR
comp=Z,4μm,20.3s,MS5.3
LZH Lanzhou 42.22 359 ⇓P **P 03 15 22.0 +0.7**
LZH pP pP 03 15 29.5 -5.0
LZH PP PP 03 17 03.3 +3.3
LZH S **S 03 21 37.5 -0.7**
LZH sS sS 03 21 52.0 -8.3
LZH pmax pmax
comp=Z,160nm,1.4s,mb5.5
LZH pmax pmax
comp=Z,470nm,5.0s
LZH LR LR
comp=N,5μm,18.6s
LZH LR LR
comp=E,4μm,13.4s
LZH LR LR
comp=Z,6μm,18.0s,MS5.5
PMG Port Moresby 42.42 97 *e*P **P 03 15 22.9 -0.5**
comp=Z,2μm,1.1s,mb6.6
PMG LR LR
comp=Z,4μm,19.0s,MS5.3
PMG Port Moresby 42.42 97 *d i*P **P 03 15 22.0 -1.4**
PMG pmax pmax
comp=Z,2μm,1.2s
PMG Port Moresby 42.42 97 P **P 03 15 22.7 -0.7**
comp=Z,1μm,1.1s,mb6.5
PTH Pithoragarh 42.61 328 *e*PKP **P 03 15 24.9 +0.3**
PTH *ex* x 03 21 42.9
CTA Charters Tower 42.81 113 *e*P **P 03 15 25.9 -0.6**
comp=Z,152nm,1.0s,mb5.7
CTA *e*S **S 03 21 48.3 +0.8**
CTA Charters Tower 42.81 113 P **P 03 15 25.3 -1.2**
comp=Z,276nm,1.1s,mb5.9,baz=282,slow=9.9,SNR=78
CTA S **S 03 21 48.3 +0.7**
comp=Z,15nm,1.1s,baz=127,slow=17,SNR=4.1
CTA LR LR 03 34 03.0
comp=Z,5μm,21.4s,MS5.4,baz=282,slow=37
CTA Charters Tower 42.81 113 P **P 03 15 25.3 -1.2**
CTA S **S 03 21 48.3 +0.8**
CTAO Charters Tower 42.81 113 *e*P **P 03 15 26.5 0.0**
comp=Z,290nm,1.1s,mb5.9
CTAO *e*PP PP 03 17 03.4 -3.2
CTAO LR LR
comp=Z,6μm,22.0s,MS5.4
CTAO Charters Tower 42.81 113 *e*P **P 03 15 26.5 0.0**
CTAO *e* 03 17 03.4
CTAO pmax pmax
comp=Z,290nm,1.1s,mb5.9
CTAO MLR MLR
comp=Z,6μm,22.0s,MS5.4
CTAO Charters Tower 42.81 113 P **P 03 15 26.5 0.0**
comp=Z,4μmcomp=Z,294nm,1.5s,mb5.8
STKA Stephens Creek 42.98 131 *e*P **P 03 15 27.2 -0.5**
comp=Z,447nm,1.2s,mb6.1
STKA *e*S PKiKP 03 24 25.6 +4.3
STKA Stephens Creek 42.98 131 *e*P **P 03 15 27.4 -0.3**
comp=Z,201nm,1.3s,mb5.7
STKA Stephens Creek 42.98 131 P **P 03 15 27.4 -0.3**
comp=Z,494nm,1.1s,mb6.2,baz=300,slow=8.2,SNR=233
STKA LR LR 03 33 52.6
comp=Z,6μm,21.1s,MS5.5,baz=295,slow=37
SONA Sohna 43.35 324 *e*PKP **P 03 15 29.9 -0.7**
SONA AMb AMB 03 15 34.2
comp=Z,395nm,1.1s,mb6.0
AJM Ajmer 43.57 320 *e*PKP **P 03 15 32.5 0.0**
AJM AMb AMB 03 15 35.7
comp=Z,82nm,0.6s,mb5.6
NDI New Delhi 43.59 324 *e*PKP **P 03 15 31.0 -1.6**
NDI *ex* x 03 21 56.0
KUDL Kundal 43.62 323 *ex* **P 03 15 28.2 -4.6**
JOSI Joshimath 43.75 328 *e*PKP **P 03 15 33.3 -0.5**
KHET Khetri 43.98 322 *e*PKP **P 03 15 35.1 -0.6**
KHET AMb AMB 03 15 39.1
comp=Z,221nm,1.1s,mb5.8
RTK Rohtak 44.32 324 *e*PKP **P 03 15 37.0 -1.5**
DDI Dehra Dun 44.37 327 *ex* **P 03 15 36.5 -2.3**
DDI *ex* x 03 21 09.0
TIY Taiyuan 44.47 9 *e*P **P 03 15 35.0 -4.5**
TIY pP pP 03 15 42.5 -10
TIY sP sP 03 15 46.0 -13
TIY S **S 03 22 03.5 -7.6**
TIY pmax pmax
comp=Z,310nm,3.5s
TIY LR LR
comp=N,3μm,11.9s,MS5.5
TIY LR LR
comp=E,3μm,16.6s,MS5.5
TIY LR LR
comp=Z,6μm,20.0s,MS5.5
GUMO Guam 44.78 64 PFAKE 03 15 50.0 +7.7
GUMO LR LR
comp=Z,2μm,21.0s,MS4.9
KKR Kurukshetra 44.78 325 *e*PKP **P 03 15 41.3 -0.8**
KLP Kalpa 45.21 328 *e*PKP **P 03 15 44.7 -0.7**
KLP AMb AMB 03 15 51.8
comp=Z,136nm,1.0s,mb5.7
SMLA Simla 45.48 327 *i* P **P 03 15 46.3 -1.3**
GTA Gaotai 45.73 355 *e*P **P 03 15 49.5 0.0**
GTA pP pP 03 16 02.0 -0.8
GTA sP sP 03 16 06.5 -2.0
GTA PcP PcP 03 17 28.3 +1.6
GTA S **S 03 22 23.5 -5.8**
GTA sS sS 03 22 44.0 -7.6
GTA pmax pmax
comp=Z,19nm,1.2s,mb4.9
GTA pmax pmax
comp=Z,260nm,6.8s
GTA LR LR
comp=N,4μm,21.7s,MS5.5
GTA LR LR
comp=E,4μm,20.5s,MS5.5
GTA LR LR
comp=Z,7μm,17.5s,MS5.7
BHK Bhakra 46.11 326 *ex* **P 03 15 48.2 -4.4**
JNU Nakatsue 46.61 31 *e*P **P 03 15 55.9 -0.6**
comp=Z,56nm,1.1s,mb5.4
BTO Baotou 47.01 6 *e*P **P 03 15 58.5 -1.0**
BJT Baijiatuau 47.39 12 *e*P **P 03 16 02.0 -0.5**
comp=Z,63nm,0.6s,mb5.7
BJT *e*PcP PcP 03 17 33.2 +0.7
BJT LR LR
comp=Z,4μm,20.0s,MS5.3
BJT Baijiatuau 47.39 12 *e*P **P 03 16 02.0 -0.5**
BJT *e* 03 17 33.2
BJT pmax pmax
comp=Z,63nm,0.6s
BJT MLR MLR
comp=Z,4μm,20.0s
BJI Beijing 47.42 12 P **P 03 16 02.0 -0.7**
BJI PP PP 03 17 53.8 -0.6
BJI S **S 03 22 51.3 -2.1**
BJI pmax pmax
comp=Z,120nm,1.1s,mb5.7
BJI pmax pmax
comp=Z,300nm,3.5s
BJI LR LR
comp=N,3μm,16.2s,MS5.6
BJI LR LR
comp=E,5μm,17.1s,MS5.6
BJI LR LR
comp=Z,3μm,23.6s
DL2 Dalian 47.77 18 P **P 03 16 05.3 -0.2**
DL2 pP pP 03 16 18.5 -0.4
DL2 S **S 03 22 56.5 -2.0**
DL2 pmax pmax
comp=Z,20nm,1.0s,mb5.1
DL2 LR LR
comp=N,1μm,17.5s,MS5.0
DL2 LR LR
comp=E,570nm,16.1s,MS5.0
DL2 LR LR
comp=Z,1μm,18.7s,MS5.0
INCN Inchon 48.28 24 PFAKE 03 16 20.0 +11
INCN LR LR
comp=Z,1μm,21.0s,MS4.9
EIDS Eidsvold 48.40 118 *e*P **P 03 16 10.5 -0.1**
comp=Z,278nm,1.2s,mb6.2
TOO Toolangi 48.54 136 *e*P **P 03 16 12.8 +1.3**
MSEY Mahe Island 48.73 269 PFAKE 03 16 30.0 +17
MSEY LR LR
comp=Z,5μm,22.0s,MS5.5
KSRS Korea Array 48.79 25 P **P 03 16 12.8 -0.5**
comp=Z,36nm,0.9s,mb5.4,baz=210,slow=7.5,SNR=74
KSRS ScP ScP 03 21 28.8 +0.2
comp=Z,3.2nm,1.0s,baz=221,slow=4.7,SNR=3.1
KSRS LR LR 03 38 21.4
comp=Z,809nm,19.2s,MS4.7,baz=217,slow=38
RER Riviere de l'E 49.30 248 PFAKE 03 16 30.0 +12
RER LR LR
comp=Z,5μm,20.0s,MS5.5
CBIJ Chichi jima 49.41 46 P **P 03 16 14.8 -3.5**
comp=Z,129nm,0.8s,mb6.0,baz=307,slow=22,SNR=6.7
NIL Nilore 49.55 325 PFAKE 03 16 30.0 +11
NIL LR LR
comp=Z,88nm,19.0s,MS3.8
CAN Canberra 50.04 132 *e*P **P 03 16 23.8 +0.8**
comp=Z,985nm,1.2s,mb6.7
CAN LR LR
comp=Z,9μm,22.0s,MS5.7
CAN Canberra 50.04 132 *e*P **P 03 16 23.8 +0.8**
CAN pmax pmax
comp=Z,985nm,1.2s,mb6.7
CAN MLR MLR
comp=Z,9μm,22.0s,MS5.7
ARMA Armidale 50.31 125 *e*P **P 03 16 26.0 +0.9**
ARMA Armidale 50.31 125 *e*P **P 03 16 26.3 +1.2**
comp=Z,296nm,1.1s,mb6.2
ARMA *e*PP PP 03 18 21.8 +0.9
CNB Canberra Magne 50.31 131 *e*P **P 03 16 25.5 +0.5**
SNY Shenyang 51.05 18 ⇓P **P 03 16 29.0 -1.4**
SNY S **S 03 23 36.3 -7.9**
SNY pmax pmax
comp=Z,41nm,1.4s,mb5.2
SNY pmax pmax
comp=Z,420nm,3.1s
SNY LR LR
comp=N,2μm,17.4s,MS5.3
SNY LR LR
comp=E,2μm,18.6s,MS5.3
SNY LR LR
comp=Z,2μm,18.9s,MS5.2
QUE Quetta 51.09 317 *e*P **P 03 16 35.0 +4.0**
QUE *e*S **S 03 23 48.0 +2.7**
RIV Riverview 51.10 129 *e*P **P 03 16 32.1 +1.1**
MOO Moorlands 52.12 140 *e*P **P 03 16 39.7 +1.2**
WMQ Urumqi 52.18 345 P **P 03 16 38.8 0.0**
WMQ pP pP 03 16 54.5 +2.2
WMQ PcP PcP 03 17 50.5 +0.6
WMQ S **S 03 23 57.5 -2.3**
WMQ SS SS 03 27 33.8 -4.2
WMQ pmax pmax
comp=Z,190nm,1.3s,mb5.9
WMQ pmax pmax
comp=Z,670nm,4.1s
WMQ LR LR
comp=N,2μm,23.0s,MS5.2
WMQ LR LR
comp=E,2μm,24.0s,MS5.2
WMQ LR LR
comp=Z,2μm,24.0s,MS5.1
KBL Kabul 52.63 323 *e*P **P 03 16 41.1 -1.2**
comp=Z,86nm,1.0s,mb5.6
KBL *e*S **S 03 24 04.4 -1.9**
KBL Kabul 52.63 323 *e*P **P 03 16 41.1 -1.2**
KBL *e*S **S 03 24 04.4 -1.9**
KBL pmax pmax
comp=Z,86nm,1.0s,mb5.6
KSH Kashi 52.67 332 ⇑*i*P **P 03 16 40.5 -2.0**
KSH *e*pP pP 03 16 53.5 -2.6
KSH *e*sP sP 03 16 58.3 -3.5
KSH *e*PcP PcP 03 17 53.0 +1.1
KSH *e*PP PP 03 18 40.0 -2.2
KSH *e*ScP ScP 03 21 44.0 -1.3
KSH *e*PcS PcS 03 21 49.0 -1.4
KSH S **S 03 24 00.0 -6.7**
KSH sS sS 03 24 20.5 -8.9
KSH pmax pmax
comp=Z,18nm,0.5s,mb5.3
KSH LR LR
comp=N,890nm,16.8s,MS5.2
KSH LR LR
comp=E,2μm,17.6s,MS5.2
KSH LR LR
comp=Z,3μm,18.6s,MS5.3
WBK Wadi Bani Khal 52.96 304 P **P 03 16 46.5 +1.5**
SNR=16
MAJO Matsushiro 53.12 34 *e*P **P 03 16 43.1 -2.8**
comp=Z,90nm,1.4s,mb5.5
MAJO *e*ScP ScP 03 21 45.9 -1.5
MAJO LR LR
comp=Z,949nm,20.0s,MS4.8
MAJO Matsushiro 53.12 34 *e*P **P 03 16 43.1 -2.8**
MAJO pmax pmax
comp=Z,90nm,1.4s,mb5.5
MAJO MLR MLR
comp=Z,949nm,20.0s,MS4.8
MAT Matsushiro 53.12 34 P **P 03 16 43.0 -2.9**
MAT S **S 03 24 09.0 -3.9**
MJAR Matsushiro Arr 53.12 34 P **P 03 16 43.6 -2.3**
comp=Z,30nm,1.0s,mb5.2,baz=215,slow=7.9,SNR=48
MJAR PcP PcP 03 17 54.6 +0.9
comp=Z,28nm,1.2s,baz=198,slow=5.1,SNR=5.5
MJAR ScP ScP 03 21 47.5 +0.2
comp=Z,7.9nm,1.1s,baz=218,slow=4.2,SNR=8.0
MJAR LR LR 03 38 00.3
comp=Z,878nm,21.9s,MS4.8,baz=180,slow=35
MJAR Matsushiro Arr 53.12 34 P **P 03 16 43.7 -2.2**
MJAR 03 17 54.6
CN2 Changchun 53.42 19 ⇑P **P 03 16 47.3 -0.6**
CN2 *e*pP pP 03 17 03.0 +1.5
CN2 *e*S **S 03 24 14.3 -2.4**
CN2 pmax pmax
comp=Z,60nm,1.0s,mb5.5
CN2 LR LR
comp=N,2μm,17.0s,MS5.4
CN2 LR LR
comp=E,2μm,17.0s,MS5.4
JMDO Jabal Madar 53.57 304 P **P 03 16 51.7 +2.3**
SNR=13
SMDO Samad 53.92 304 P **P 03 16 53.9 +1.9**
SNR=24
SONM Songino Array 53.98 2 P **P 03 16 51.7 -0.3**
comp=E,28nm,0.8s,mb5.2,baz=182,slow=6.1,SNR=65
SONM PcP PcP 03 17 56.7 +0.1
comp=E,36nm,0.7s,baz=184,slow=3.8,SNR=11
SONM ScP ScP 03 21 49.8 -1.0
comp=E,2.1nm,0.7s,baz=196,slow=4.1,SNR=2.6
SONM Songino Array 53.98 2 P **P 03 16 51.7 -0.3**
SONM 03 17 56.7
ULN Ulaanbaatar 54.03 2 *e*P **P 03 16 52.3 -0.1**
comp=E,89nm,1.4s,mb5.5
ULN LR LR
comp=Z,7μm,19.0s,MS5.7
ULN Ulaanbaatar 54.03 2 ⇑*i*P **P 03 16 51.9 -0.4**
ULN Ulaanbaatar 54.03 2 P **P 03 16 52.3 0.0**
comp=Z,725nmcomp=Z,49nm,1.6s,mb5.2
ULN Ulaanbaatar 54.03 2 P **P 03 16 52.9 +0.5**
SNR=33
BSY Bisya 54.48 304 P **P 03 16 58.0 +1.9**
SNR=38
ULHL Ulahol 54.76 335 P **P 03 16 57.6 -0.2**
SNR=24
HOQ Hoqain 54.77 305 P **P 03 16 59.8 +1.7**
SNR=35
RBK Rabkut 54.96 296 P **P 03 17 01.1 +1.4**
SNR=9.0
HNR Honiara 55.04 97 P **P 03 16 58.2 -2.2**
comp=Z,498nm,0.8s,mb6.6,baz=178,slow=1.9,SNR=6.8
HNR LR LR 03 42 02.0
comp=Z,836nm,20.2s,MS4.8,baz=129,slow=38
KZA Kyzart 55.06 334 P **P 03 17 00.1 +0.2**
SNR=17
VLA Vladivostok 55.19 24 ⇓*e*P **P 03 17 00.1 -0.7**
VLA 03 17 57.5
VLA pmax pmax
comp=Z,119nm,1.4s,mb5.7
ARQ Araqi 55.30 304 P **P 03 17 03.3 +1.2**
SNR=15
AAA Alma-Ata 55.31 336 *e*S **S 03 24 39.9 -2.4**
AAA pmax pmax
comp=Z,900nm,6.0s
AAA smax
comp=E,2μm,7.1s
UCH Uchtor 55.50 333 P **P 03 17 04.5 +1.4**
SNR=8.1
UCH Uchtor 55.50 333 *e*P **P 03 17 03.0 -0.1**
comp=E,35nm,1.2s,mb5.3
UCH LR LR
comp=Z,1μm,21.0s,MS5.0
MDJ Mudanjiang 55.56 22 P **P 03 17 02.5 -1.0**
MDJ pP pP 03 17 08.5 -8.6
MDJ PcP PcP 03 18 02.5 -0.3
MDJ ScP ScP 03 22 00.5 +2.7
MDJ PcS PcS 03 22 02.5 -0.3
MDJ S **S 03 24 42.0 -3.5**
MDJ ScS ScS 03 26 51.0 +2.6
MDJ SS SS 03 28 33.0 +1.7
MDJ pmax pmax
comp=Z,26nm,1.6s,mb5.0
MDJ pmax pmax
comp=Z,270nm,7.5s
MDJ LR LR
comp=N,1μm,16.7s,MS5.2
MDJ LR LR
comp=E,1μm,17.4s,MS5.2
MDJ LR LR
comp=Z,2μm,17.4s,MS5.2
MDJ Mudanjiang 55.56 22 *e*P **P 03 17 02.2 -1.2**
comp=Z,48nm,1.1s,mb5.4
MDJ LR LR
comp=Z,1μm,20.0s,MS5.0
TKM2 Tokmak 2 55.59 335 P **P 03 17 03.2 -0.5**
SNR=118
TKM2 Tokmak 2 55.59 335 *e*P **P 03 17 03.1 -0.7**
comp=Z,84nm,0.6s,mb6.0
TKM2 LR LR
comp=Z,2μm,20.0s,MS5.3
TKM2 Tokmak 2 55.59 335 *e*P **P 03 17 03.1 -0.6**
TKM2 pmax pmax
comp=Z,84nm,0.6s,mb6.0
TKM2 MLR MLR
comp=Z,2μm,20.0s,MS5.3
KBK Karagaybulak 55.66 334 P **P 03 17 04.3 +0.1**
SNR=38
ABTO Aybut 55.72 296 P **P 03 17 07.0 +1.9**
SNR=8.4
AML Almayashu 55.80 333 P **P 03 17 05.7 +0.5**
SNR=15
AML Almayashu 55.80 333 *e*P **P 03 17 04.9 -0.3**
comp=Z,73nm,0.7s,mb5.8
AML *e*S **S 03 24 49.8 +1.0**
AML LR LR
comp=Z,2μm,20.0s,MS5.2
AAK Ala-Archa 55.84 334 P **P 03 17 05.7 +0.2**
SNR=11
AAK Ala-Archa 55.84 334 *e*P **P 03 17 05.3 -0.2**
comp=Z,94nm,1.4s,mb5.6
AAK *e*S **S 03 25 04.3 +15**
AAK LR LR
comp=Z,2μm,20.0s,MS5.3
AAK Ala-Archa 55.84 334 P **P 03 17 04.8 -0.7**
comp=Z,6.2nm,0.5s,mb4.9,baz=139,slow=6.4,SNR=6.0
AAK LR LR 03 45 48.2
comp=Z,3μm,20.8s,MS5.3,baz=138,slow=41
AAK Ala-Archa 55.84 334 *c i*P **P 03 17 05.0 -0.5**
AAK pmax pmax
comp=Z,29nm,1.2s,mb5.2
AAK Ala-Archa 55.84 334 P **P 03 17 05.8 +0.3**
comp=Z,210nm,1.5s,mb6.0,SNR=11
AAK Ala-Archa 55.84 334 P **P 03 17 05.2 -0.3**
comp=Z,252nmcomp=Z,13nm,2.2s,mb4.6
AAK Ala-Archa 55.84 334 P **P 03 17 05.1 -0.4**
SNR=26
FRU Bishkek 55.94 334 *i* P **P 03 17 16.0 +10**
FRU *i* 03 17 22.0
FRU *i* pP 03 17 34.0 +14
FRU *i* S **S 03 24 49.0 -1.6**
FRU pmax pmax
comp=Z,180nm,1.8s,mb5.8
FRU MLR MLR
comp=Z,2μm,20.0s,MS5.1
CHMS Chumysh 56.02 334 P **P 03 17 06.2 -0.6**
SNR=13
EKS2 Erkin-Say 56.18 333 P **P 03 17 08.3 +0.3**
SNR=42
EKS2 Erkin-Say 56.18 333 *e*P **P 03 17 07.6 -0.4**
comp=Z,85nm,0.8s,mb5.8
EKS2 *e*S **S 03 24 55.0 +1.2**
EKS2 LR LR
comp=Z,2μm,20.0s,MS5.2
ASHO Ashiyiah 56.28 305 P **P 03 17 09.9 +0.9**
SNR=28
HATD Hatta, Dubai 56.28 305 P **P 03 17 10.5 +1.4**
SNR=32
USP Ospenovka 56.34 334 P **P 03 17 08.1 -1.0**
SNR=30
MK31 Makanchi Array 56.44 342 *e*P **P 03 17 09.0 -0.7**
MKAR Makanchi Array 56.44 342 P **P 03 17 08.7 -1.1**
comp=Z,72nm,0.6s,mb5.8,baz=145,slow=7.8,SNR=360
MKAR S **S 03 24 56.9 -0.2**
comp=Z,1.2nm,0.8s,baz=152,slow=16,SNR=4.2
MKAR LR LR 03 45 01.7
comp=Z,2μm,21.8s,MS5.2,baz=153,slow=40
MKAR PKPPKP 03 46 58.0
comp=Z,1.5nm,1.0s,baz=356,slow=3.6,SNR=5.7
MKAR Makanchi Array 56.44 342 P **P 03 17 08.7 -1.0**
MKAR S **S 03 24 56.9 -0.2**
ZAK Zakamensk 56.51 359 ⇑*i*P **P 03 17 09.7 -0.4**
ZAK pmax pmax
comp=Z,18nm,1.3s,mb4.9
BANOM Banah 56.65 307 P **P 03 17 14.0 +2.4**

SNR=6.9
NAZ Nazwa, Dubai 56.74 305 P P 03 17 13.1 +0.8
SNR=34
ASUD Al Ashush, Dub 56.85 305 P P 03 17 15.1 +2.0
SNR=18
ABPO Ambohimpanom 56.97 252 *e*P **P 03 17 15.0 +0.9**
comp=Z,292nm,2.1s,mb5.9
ABPO LR LR
comp=Z,2µm,22.0s,MS5.2
ABPO Ambohimpanom 56.97 252 *e*P **P 03 17 15.0 +0.9**
ABPO pmax pmax
comp=Z,292nm,2.1s,mb5.9
ABPO MLR MLR
comp=Z,2µm,22.0s,MS5.2
HIA Hailar 56.98 12 *e*P **P 03 17 11.9 -1.6**
comp=Z,81nm,1.2s,mb5.6
HIA LR LR
comp=Z,3µm,22.0s,MS5.3
HIA Hailar 56.98 12 *e*P **P 03 17 11.9 -1.6**
HIA pmax pmax
comp=Z,81nm,1.2s
HIA MLR MLR
comp=Z,3µm,22.0s
IDAH Dahanechah 57.47 315 *e*P **P 03 17 18.1 +0.8**
TLY Talaya 57.80 359 *e*P **P 03 17 19.4 +0.1**
comp=Z,48nm,1.0s,mb5.5
TLY LR LR
comp=Z,5µm,20.0s,MS5.6
TLY Talaya 57.80 359 *e*P **P 03 17 18.7 -0.6**
TLY *e*S **S 03 25 16.9 +2.0**
TLY *e* 03 27 03.8
TLY pmax pmax
comp=Z,85nm,1.3s,mb5.6
TLY MLR MLR
comp=Z,4µm,17.0s,MS5.6
TLY Talaya 57.80 359 P **P 03 17 19.8 +0.5**
comp=Z,275nm,1.3s,mb6.1,SNR=9.1
TLY Talaya 57.80 359 P **P 03 17 20.1 +0.9**
SNR=16
MOY Mondy 57.86 357 *e*P **P 03 17 19.5 -0.2**
MOY pmax pmax
comp=Z,118nm,2.5s,mb5.5
IKOO Kooshah 57.90 315 *e*P **P 03 17 21.1 +0.8**
KK31 Karatay Array 58.04 331‖ *e*P **P 03 17 20.1 -1.0**
KK31 Karatay Array 58.04 331 *i* P **P 03 17 20.1 -1.0**
KK31 pmax pmax
comp=Z,12nm,0.5s,mb5.2
KKAR Karatay Array 58.04 331 *e*P **P 03 17 19.9 -1.2**
comp=Z,14nm,0.6s,mb5.2
KKAR Karatay Array 58.04 331 *e*P **P 03 17 19.9 -1.2**
KKAR pmax pmax
comp=Z,14nm,0.6s,mb5.2
ITEG Tejag 58.34 315 *e*P **P 03 17 23.8 +0.4**
IRK Irkutsk 58.37 360 *e*P **P 03 17 22.4 -0.8**
IRK pmax pmax
comp=Z,107nm,2.0s,mb5.5
CIT Chita 58.67 7 *e*P **P 03 17 21.3 -4.0**
CIT *e* 03 18 16.2
CIT pmax pmax
comp=Z,140nm,1.8s,mb5.7
IMYA Miami 59.38 319 *e*P **P 03 17 29.7 -0.9**
ERM Erimo 59.70 33 PFAKE 03 17 40.0 +7.3
ERM LR LR
comp=Z,2µm,22.0s,MS5.2
IMOG Moghan 59.74 318 *e*P **P 03 17 32.2 -0.9**
ISRO Mashad 59.77 319 *e*P **P 03 17 32.3 -1.0**
IBAF Bafgh 59.94 312 *e*P **P 03 17 34.7 +0.2**
CASY Casey 59.98 177‖ *i*P **P 03 17 33.9 -0.3**
CASY Casey 59.98 177 *e*P **P 03 17 33.9 -0.3**
comp=Z,727nm,1.8s,mb6.4
CASY LR LR
comp=Z,3µm,19.0s,MS5.4
IPAY Payeh 60.17 319 *e*P **P 03 17 35.6 -0.4**
KLR Kul'dur 60.27 20 *e*P **P 03 17 31.7 -4.7**
KLR *e*S **S 03 25 39.5 -7.4**
KLR *e*SS SS 03 29 48.5 +3.2
KLR pmax pmax
comp=E,62nm,1.6s
KLR pmax pmax
comp=Z,200nm,1.6s,mb5.9
IAKL Akhelmad 60.41 319 *e*P **P 03 17 36.5 -1.2**
IMEH Mehriz 60.55 311 *e*P **P 03 17 38.5 -0.2**
IKRD Kardeh 60.67 319 *e*P **P 03 17 34.8 -4.6**
ISRV Sarvestan 60.75 309 *e*P **P 03 17 41.9 +1.8**
HABR Khabarovsk 60.85 23 *e*P **P 03 17 36.8 -3.5**
HABR *e* 03 18 20.7
HABR *e**SS sS 03 26 13.6 -3.9
HABR *e* 03 27 22.2
HABR *e*SS SS 03 29 49.9 -4.4
HABR pmax pmax
comp=Z,217nm,2.2s,mb5.9
HABR pmax pmax
comp=E,147nm,2.5s
HABR pmax pmax
comp=N,71nm,2.5s
HABR MLR MLR
comp=Z,930nm,21.0s,MS4.9
ASAJ Asahikawa 60.89 31 *e*P **P 03 17 40.0 -0.7**
comp=Z,54nm,1.4s,mb5.5
ASAJ Asahikawa 60.89 31 P **P 03 17 39.6 -1.1**
comp=Z,31nm,0.7s,mb5.5,baz=239,slow=11,SNR=14
ASAJ LR LR 03 42 53.2
comp=Z,474nm,21.5s,MS4.6,baz=91,slow=35
IEMG Emamgholi 60.95 319 *e*P **P 03 17 41.5 +0.2**
IPAR Pars 61.01 309 *e*P **P 03 17 43.3 +1.5**
KURK Kurchatov 61.05 342 P **P 03 17 40.8 -0.9**
comp=Z,570nm,1.0s,mb6.7,SNR=64
KURK Kurchatov 61.05 342 *e*P **P 03 17 40.9 -0.8**
comp=Z,135nm,1.1s,mb6.0
KURK LR LR
comp=Z,4µm,20.0s,MS5.5
KURK Kurchatov 61.05 342 S **S 03 25 54.6 -2.1**
comp=Z,1.0nm,0.7s,baz=154,slow=13,SNR=3.7
KURK PKPPKP 03 46 49.6
comp=Z,0.5nm,0.2s,baz=354,slow=2.9,SNR=5.0
KURK Kurchatov 61.05 342*c i*P **P 03 17 40.6 -1.1**
KURK pmax pmax
comp=Z,172nm,1.2s,mb6.1
KURK Kurchatov 61.05 342 P **P 03 17 41.0 -0.7**
SNR=66
ICHK Chekchek 61.12 312 *e*P **P 03 17 42.5 -0.1**
ISFR Sfrayin 61.17 319 *e*P **P 03 17 42.8 0.0**
ABKT Ailbek 61.59 319 P **P 03 17 45.5 -0.1**
comp=Z,469nm,1.1s,mb6.5,SNR=22
NOUC Port Laguerre 61.61 112 *e*P **P 03 17 45.6 -0.4**
DZM Mont Dzumac 61.73 112 *e*LR LR 03 36 05.5
comp=Z,6µm,23.8s
DZM Mont Dzumac 61.73 112 *e*P **P 03 17 46.6 -0.4**
DZM Mont Dzumac 61.73 112 *e*P **P 03 17 46.6 -0.4**
comp=Z,186nm,1.4s,mb6.0
ZALV Zalesovo Beam 62.30 347 P **P 03 17 48.6 -1.4**
comp=Z,88nm,0.4s,mb6.2,baz=148,slow=6.1,SNR=173
ZALV S **S 03 26 09.1 -3.4**
comp=Z,9.0nm,1.0s,baz=161,slow=10,SNR=8.2
ZALV PKPPKP 03 46 52.9
comp=Z,8.5nm,1.1s,baz=304,slow=3.4,SNR=11
ZALV LR LR 03 47 39.1
comp=Z,2µm,19.4s,MS5.3,baz=151,slow=39
ZALV Zalesovo Beam 62.30 347 P **P 03 17 48.7 -1.3**
ZALV S **S 03 26 09.1 -3.4**
YUK Yuzh-Kuril'sk 62.53 33 *i* PP 03 20 16.6 +6.7
YUK *e*S **S 03 26 23.3 +7.5**
YSS Yuzh-Sakhalins 63.00 28 *e*P **P 03 17 54.4 -0.4**
comp=Z,343nm,1.3s,mb6.3
YSS LR LR
comp=Z,291nm,20.0s,MS4.5
YSS Yuzh-Sakhalins 63.00 28 *e*P **P 03 17 53.0 -1.8**
YSS *e*S **S 03 26 17.0 -4.5**
YSS *e*PS 03 26 30.0
YSS MLR MLR
comp=Z,700nm,17.0s,MS4.9
YSS MLR MLR
comp=E,800nm,18.0s
IKIA Kiasar 63.63 316 *e*P **P 03 18 00.4 +1.1**
IGLO Ghaloghah 63.68 316 *e*P **P 03 18 00.3 +0.7**
ATD Arta Tunnel 63.77 286 P **P 03 18 00.8 +0.1**
comp=E,4.3nm,0.3s,mb4.9,baz=190,slow=20,SNR=7.9
IFIR Firoozkooh 64.00 315 *e*P **P 03 18 02.3 +0.6**
IALA Alasht 64.18 315 *e*P **P 03 18 03.2 +0.3**
IDMV Damavand 64.48 314 *e*P **P 03 18 05.8 +1.0**
QRN Al-Qurain 64.59 306 *e*P **P 03 18 05.7 0.0**
MCQ Macquarie Isla 64.81 148 *e*P **P 03 18 07.9 +1.2**
MCQ Macquarie Isla 64.81 148 *e*P **P 03 18 06.5 -0.2**
comp=E,54µm,1.4s
MCQ Macquarie Isla 64.81 148 *e*P **P 03 18 06.5 -0.2**
MCQ pmax pmax
comp=Z,10µm,1.4s
KBD Kabd 64.94 306 *e*P **P 03 18 08.1 +0.2**
RDF Al-Radifah 64.95 306 *e*P **P 03 18 08.5 +0.4**
RDF AMb AMB 03 18 10.7
comp=Z,453nm,1.3s,mb6.4
DRV Dumont d'Urvil 64.99 165 P **P 03 18 08.0 +0.4**
DRV S **S 03 26 57.0 +11**
UMR Umm Al-Rimmam 65.07 307 *e*P **P 03 18 08.8 0.0**
UMR AMb AMB 03 18 11.0
comp=Z,411nm,0.5s,mb6.7
IR3 Iran Long-Peri 65.15 314 *e*P **P 03 18 09.8 +0.6**
CLNS Chul'man 65.17 12 *e*P **P 03 18 08.9 +0.1**
CLNS *e**PP pP 03 18 19.4 -3.4
CLNS *e* 03 18 40.5
CLNS *e* 03 20 32.2
CLNS *e*PPP 03 22 04.1
CLNS *e*S S 03 26 51.1 +3.1
CLNS pmax pmax
comp=Z,51nm,1.2s,mb5.4
CLNS pmax pmax
comp=N,45nm,1.3s
CLNS pmax pmax
comp=E,15nm,1.0s
CLNS pmax pmax
comp=N,9.0nm,0.9s
CLNS pmax pmax
comp=E,14nm,1.0s
CLNS pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
CLNS smax
comp=N,122nm,16.7s
CLNS smax
comp=E,217nm,13.8s
CLNS MLR MLR
comp=E,1µm,14.0s,MS5.4
CLNS MLR MLR
comp=Z,2µm,13.0s,MS5.4
CLNS MLR MLR
comp=N,976nm,13.0s,MS5.4
NAY Al-Naaiem 65.33 306 *e*P **P 03 18 10.2 -0.3**
NAY AMb AMB 03 18 12.6
comp=Z,169nm,1.1s,mb6.0
VOSK Vostochnaya 65.34 338 P **P 03 18 08.0 -2.0**
VOSK pmax pmax
comp=Z,124nm,1.6s,mb5.7
MIB Mutribah 65.47 307 *e*P **P 03 18 11.4 0.0**
MIB AMb AMB 03 18 13.8
comp=Z,353nm,1.0s,mb6.3
BVA0 Borovoye Array 65.80 338 P **P 03 18 11.7 -1.3**
BVA0 pmax pmax
comp=Z,17nm,1.1s,mb5.0
BVAR Borovoye Array 65.80 338 P **P 03 18 12.0 -1.0**
comp=Z,20nm,0.5s,mb5.4,baz=143,slow=8.9,SNR=16
BVAR S S 03 26 51.6 -4.2
comp=Z,1.6nm,0.8s,baz=116,slow=9.8,SNR=3.1
BRVK Borovoye 65.86 338 P **P 03 18 12.2 -1.2**
comp=Z,316nm,1.0s,mb6.3,SNR=24
BRVK Borovoye 65.86 338 *e*P **P 03 18 12.3 -1.1**
comp=Z,176nm,1.5s,mb5.9
BRVK LR LR
comp=Z,3µm,20.0s,MS5.4
BRVK Borovoye 65.86 338*c i*P **P 03 18 12.0 -1.4**
BRVK pmax pmax
comp=Z,100nm,1.2s,mb5.7
BRVK Borovoye 65.86 338 P **P 03 18 12.7 -0.7**
SNR=38
IRAZ Razeghan 65.91 313 *e*P **P 03 18 14.8 +0.7**
KMBO Kilima Mbogo 67.19 271 *e*P **P 03 18 23.4 +0.7**
comp=Z,27nm,1.0s,mb5.2
KMBO LR LR
comp=Z,3µm,22.0s,MS5.5
KMBO Kilima Mbogo 67.19 271 P **P 03 18 24.1 +1.3**
comp=Z,18nm,1.1s,mb5.0,baz=1.2,slow=24,SNR=17
KMBO LR LR 03 42 24.2
comp=Z,3µm,21.5s,MS5.5,baz=90,slow=31
KMBO Kilima Mbogo 67.19 271 *e*P **P 03 18 23.4 +0.7**
KMBO pmax pmax
comp=Z,27nm,1.0s
KMBO MLR MLR
comp=Z,3µm,22.0s
KMBO Kilima Mbogo 67.19 271 P **P 03 18 24.3 +1.6**
SNR=13
AAE Adis Abeba 67.19 283 *e*P **P 03 18 25.3 +2.6**
AAE *e*S S 03 26 45.2 -29
MAW Mawson 67.26 196 *e*P **P 03 18 22.2 0.0**
comp=Z,64nm,1.0s,mb5.6
MAW Mawson 67.26 196 *e*P **P 03 18 22.4 +0.2**
comp=Z,26nm,1.1s,mb5.2
MAW LR LR
comp=Z,6µm,22.0s,MS5.8
MAW Mawson 67.26 196 P **P 03 18 22.4 +0.3**
comp=Z,74nm,1.0s,mb5.7,baz=36,slow=6.7,SNR=89
MAW LR LR 03 42 51.5
comp=Z,3µm,19.6s,MS5.5,baz=32,slow=31
MAW PKP2bc 03 46 48.0
comp=Z,13nm,1.1s,baz=251,slow=8.0,SNR=12
MAW Mawson 67.26 196 *e*P **P 03 18 22.4 +0.2**
MAW pmax pmax
comp=Z,26nm,1.1s
MAW MLR MLR
comp=Z,6µm,22.0s
AB31 Akbulak array 67.56 330‖ *e*P **P 03 18 23.5 -0.8**
AB31 Akbulak array 67.56 330 *i* P **P 03 18 23.5 -0.8**
AB31 pmax pmax
comp=Z,91nm,0.5s,mb6.1
ABKAR Akbulak array 67.56 330 *e*P **P 03 18 23.7 -0.7**
comp=Z,74nm,0.5s,mb6.0
TUZ Tuapeka 68.32 137 PN **P 03 18 29.1 -0.2**
ISRB Sarab 68.63 315 *e*P **P 03 18 31.3 0.0**
ODZ Otahua Downs 68.80 136 *e*P **P 03 18 32.0 -0.3**
comp=Z,362nm,1.3s,mb6.1
RPZ Rata Peaks 68.81 134 *e*P **P 03 18 32.5 +0.2**
comp=Z,631nm,1.3s,mb6.4
RPZ Rata Peaks 68.81 134 LR LR 03 49 54.0
comp=Z,2µm,18.4s,MS5.4,baz=285,slow=37
AKTK Aktyubinsk 69.28 330 P **P 03 18 34.2 -0.8**
AKTK S S 03 27 35.1 -2.6
AKTK P'P' 03 46 44.7
AKTO Aktyubinsk 69.28 330 P **P 03 18 34.2 -0.8**
comp=Z,21nm,0.4s,mb5.5,baz=124,slow=4.6,SNR=98
AKTO S S 03 27 35.1 -2.6
comp=Z,1.6nm,0.8s,baz=285,slow=22,SNR=9.4
AKTO PKPPKP 03 46 44.7
comp=Z,0.7nm,0.3s,baz=42,slow=7.7,SNR=12
AKTO Aktyubinsk 69.28 330 P **P 03 18 34.2 -0.8**
AKTO S S 03 27 35.1 -2.6
IHRS Heris 69.29 315 *e*P **P 03 18 35.2 -0.2**
IAZR Azarshahr 69.76 314 *e*P **P 03 18 38.5 +0.2**
THZ Tophouse 69.78 132 PN **P 03 18 37.9 -0.5**
ISHB Shabestar 70.28 314 *e*P **P 03 18 41.8 +0.3**
KHZ Kahutara 70.36 133 *e*P **P 03 18 41.1 -0.8**
comp=Z,231nm,1.2s,mb6.0
KHZ *e* pP 03 18 53.5 -2.5
IMRD Marand 70.41 315 *e*P **P 03 18 42.9 +0.6**
YAK Yakutsk 70.92 12 *e*P **P 03 18 43.5 -1.4**
comp=Z,250nm,1.0s,mb6.1
YAK LR LR
comp=Z,2µm,21.0s,MS5.4
YAK Yakutsk 70.92 12 *e*P **P 03 18 43.1 -1.8**
YAK *e**PP pP 03 18 53.6 -5.3
YAK *e* 03 19 05.6
YAK *e*S S 03 27 50.3 -6.2
YAK *e* 03 28 37.2
YAK pmax pmax
comp=Z,172nm,1.1s,mb5.9
YAK pmax pmax
comp=E,42nm,1.1s
YAK pmax pmax
comp=N,81nm,1.3s
YAK smax
comp=N,257nm,3.3s
YAK smax
comp=E,41nm,1.7s
YAK MLR MLR
comp=Z,2µm,18.0s,MS5.4
YAK MLR MLR
comp=E,1µm,19.0s,MS5.4
YAK MLR MLR
comp=N,1µm,18.0s,MS5.4
SNZO South Karori 71.04 131 *e*P **P 03 18 45.3 -0.9**
comp=N,293nm,1.3s,mb6.0
SNZO LR LR
comp=Z,5µm,21.0s,MS5.7
MAK Makhachkala 71.11 319 *e*P **P 03 18 47.3 +0.8**
MAK *e* pP 03 19 02.8 +2.2
MAK *e* 03 21 21.5
MAK *e*S S 03 27 57.7 -1.8
MAK *e* 03 28 43.4
MAK pmax pmax
comp=Z,250nm,1.5s,mb5.9
HAKT HAKKARI 71.36 313 *i* P **P 03 18 47.1 -0.9**
GNI Garni 71.70 316 *e*P **P 03 18 51.2 +1.2**
GNI Garni 71.70 316 *e*P **P 03 18 50.6 +0.6**
comp=Z,158nm,1.4s,mb5.8
GNI *e*S S 03 28 09.7 +3.3
GNI LR LR
comp=Z,1µm,21.0s,MS5.1
GNI Garni 71.70 316 P **P 03 18 50.9 +0.9**
comp=Z,30nm,0.8s,mb5.2,baz=135,slow=1.9,SNR=38
GNI LR LR 03 51 42.8
comp=Z,1µm,20.3s,MS5.1,baz=122,slow=37
GNI Garni 71.70 316*c i*P **P 03 18 50.2 +0.2**
GNI pmax pmax
comp=Z,168nm,1.7s
GNI Garni 71.70 316 P **P 03 18 51.3 +1.3**
SNR=24
CLDR Calditan 71.85 315 *e*P **P 03 18 49.0 -1.9**
VANB Van 72.00 314 *e*P **P 03 18 52.7 +0.8**
SKR Severo-Kuril's 72.11 32 *e*P **P 03 18 52.5 +0.2**
SKR *e* 03 28 09.0
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.0
SKR pmax pmax
comp=Z,2µm,4.0s
BFZ Birch Farm 72.11 131 PN **P 03 18 52.7 +0.1**
DYDN Diyadin 72.18 315 *i* P **P 03 18 53.8 +0.9**
SVE Sverdlovsk 72.38 336‖ *e*P **P 03 18 53.7 0.0**
SVE *e* pP 03 19 12.0 +4.1
SVE *e*S S 03 28 12.3 -1.2
SVE *e* 03 28 58.0
SVE pmax pmax
comp=Z,216nm,1.3s,mb5.9
URZ Urewera 72.51 128 *e*P **P 03 18 53.9 -1.1**
comp=Z,330nm,1.8s,mb6.0
URZ Urewera 72.51 128 LR LR 03 49 52.7
comp=Z,3µm,22.0s,MS5.5,baz=286,slow=35
MSVF Nonsavu 72.53 107 P **P 03 18 56.0 +0.5**
comp=Z,637nm,1.0s,mb6.5,SNR=16
MSVF Nonsavu 72.53 107 *e*P **P 03 18 54.8 -0.7**
comp=Z,200nm,1.4s,mb5.9
MSVF LR LR
comp=Z,1µm,20.0s,MS5.2
MSVF Nonsavu 72.53 107 P **P 03 18 54.1 -1.4**
comp=Z,467nm,1.0s,mb6.4,SNR=16
AGRB Hanur-Agry 72.68 315 *e*P **P 03 18 53.4 -2.5**
DIGO Kars 72.76 316 *i* P **P 03 18 55.6 -0.7**
ARU Arti 72.95 335 *e*P **P 03 18 56.8 -0.4**
comp=Z,107nm,1.0s,mb5.7
ARU LR LR
comp=Z,2µm,22.0s,MS5.4
ARU Arti 72.95 335*c i*P **P 03 18 56.6 -0.5**
ARU pP 03 19 12.6 +1.3
ARU 03 21 37.0
ARU PPP 03 23 22.1
ARU S S 03 28 19.0 -1.0
ARU 03 28 56.3
ARU pmax pmax
comp=Z,197nm,1.7s,mb5.8
ARU MLR MLR
comp=Z,2µm,24.0s,MS5.4
ARU Arti 72.95 335 P **P 03 18 56.2 -0.9**
comp=Z,490nm,1.1s,mb6.3,SNR=10
KARS Kars 73.05 316 *e*P **P 03 18 59.2 +1.1**
BEST Besiri 73.26 313 *i* P **P 03 18 59.8 +0.4**
ZEI Tsey 73.39 318 *e*P **P 03 18 57.9 -2.2**
ZEI *e*S S 03 28 26.3 +0.7
ZEI pmax pmax
comp=Z,109nm,1.5s,mb5.6
MARD Mardin 73.41 312 *i* P **P 03 18 59.8 -0.6**
HOMI Horasan 73.64 315 *i* P **P 03 19 02.2 +0.6**
MBAR Mbarara 73.72 271 PFAKE 03 19 10.0 +7.4
MBAR LR LR
comp=Z,791nm,22.0s,MS5.0
MBAR Mbarara 73.72 271*ce* P **P 03 19 02.0 -0.6**
BNGL BINGOL 73.75 313 *i* P **P 03 19 02.1 -0.2**
EZM Erzurum 73.97 314 *e*P **P 03 19 02.9 -0.6**
FUNA Funafuti 74.08 97 *e*P **P 03 19 05.8 +1.0**
comp=Z,54nm,0.5s,mb5.7
FUNA LR LR
comp=Z,11µm,19.0s,MS6.2
DDEM Demirkent 74.08 316 *i* P **P 03 19 04.4 +0.3**
DIYA Diyarbakir 74.12 312 *i* P **P 03 19 05.2 +0.7**
BINT Bingol 74.20 313 *e*P **P 03 19 03.6 -1.3**
PEA0B Petropavlovsk- 74.30 30 *e*P **P 03 19 04.2 -0.9**
PETK Petropavlovsk- 74.30 30 P **P 03 19 04.2 -0.9**
comp=Z,32nm,0.8s,mb5.3,baz=214,slow=4.0,SNR=44
DBOC Borcka 74.32 316 *i* P **P 03 19 05.6 +0.1**
BCA Borcka 74.39 316 *e*P **P 03 19 06.9 +0.9**
KOPT Kop Dagi 74.62 314 *i* P **P 03 19 08.5 +1.1**
ASF Jabal al Asfar 74.69 306 P **P 03 19 09.3 +1.4**
comp=Z,67nm,1.0s,mb5.5,baz=352,slow=2.1,SNR=101
KIV Kislovodsk 74.70 319 *e*P **P 03 19 08.3 +0.6**
comp=Z,146nm,1.3s,mb5.8
KIV LR LR
comp=Z,952nm,21.0s,MS5.1
KIV Kislovodsk 74.70 319*c i*P **P 03 19 07.7 0.0**
KIV *e**PP pP 03 19 16.4 -5.4
KIV *i* pP 03 19 21.8 0.0
KIV *i* S S 03 28 40.0 -0.2
KIV *i* 03 29 01.5
KIV *e*PS 03 29 18.2
KIV pmax pmax
comp=Z,181nm,1.7s,mb5.7
KIV MLR MLR
comp=Z,700nm,22.0s,MS4.9
KIV Kislovodsk 74.70 319 P **P 03 19 08.2 +0.5**
comp=Z,471nm,1.1s,mb6.3,SNR=12
KIV Kislovodsk 74.70 319 P **P 03 19 08.6 +0.9**
SNR=33
PET Petropavlovsk 74.73 31 *e*P **P 03 19 06.6 -1.1**
comp=Z,286nm,1.1s,mb6.1
PET LR LR
comp=Z,703nm,19.0s,MS5.0
PET Petropavlovsk 74.73 31 *e*P **P 03 19 06.6 -1.0**
PET pmax pmax
comp=Z,286nm,1.1s,mb6.1
PET MLR MLR
comp=Z,703nm,19.0s,MS5.0
SVRC Sivrice-ELAZID 74.88 312 *e*P **P 03 19 09.4 +0.5**
GOF Gofitskoye 74.94 320 *e*P **P 03 19 05.7 -3.3**
GOF pmax pmax
comp=Z,150nm,1.3s,mb5.8
PTK Pertek 75.00 313 *e*P **P 03 19 09.1 -0.4**
LSZ Lusaka 75.10 256 *e*P **P 03 19 10.6 0.0**
comp=Z,55nm,1.1s,mb5.4
LSZ LR LR
comp=Z,3µm,22.0s,MS5.6
LSZ Lusaka 75.10 256 *e*P **P 03 19 10.6 0.0**
LSZ pmax pmax
comp=Z,55nm,1.1s,mb5.4
LSZ MLR MLR
comp=Z,3µm,22.0s,MS5.6
LSZ Lusaka 75.10 256 P **P 03 19 11.4 +0.8**
SNR=7.6
ELZG Elazig 75.16 312 *i* P **P 03 19 11.4 +0.9**
SYO Syowa Base 75.24 200‖ *i*P **P 03 19 09.0 -1.3**
ATAB Bozova 75.31 311 *i* P **P 03 19 11.1 -0.3**
EZC Erzincan 75.34 314 *e*P **P 03 19 12.5 +1.1**
MACK Trabzon 75.49 315 *i* P **P 03 19 11.6 -0.7**
KTUT Trabzon 75.50 315 *e*P **P 03 19 10.8 -1.5**
MALT Malatya 75.51 312 *e*P **P 03 19 14.1 +1.6**
MALT Malatya 75.51 312 Pn **P 03 19 11.8 -0.7**
MALT Malatya 75.51 312‖ *i*P **P 03 19 13.0 +0.5**
MALT Malatya 75.51 312 P **P 03 19 13.0 +0.5**
comp=Z,969nmcomp=Z,78nm,1.5s,mb5.4
GUMT Gumushane 75.51 314 *e*P **P 03 19 10.8 -1.6**
MYA Malataya 75.51 312 *e*P **P 03 19 12.3 -0.2**
KELT Kelkit 75.56 314 *i* P **P 03 19 12.5 -0.2**
EIL Elat 75.57 303 Pn **P 03 19 12.7 -0.3**
EIL Elat 75.57 303 P **P 03 19 13.7 +0.7**
comp=Z,75nm,0.9s,mb5.6,baz=109,slow=2.2,SNR=59
HRFI Mount Harif 75.60 303 Pn **P 03 19 13.9 +0.8**
ZFRI Zfri 75.62 304 Pn **P 03 19 14.0 +0.7**
MZDA Masada 75.69 304 Pn **P 03 19 14.6 +1.0**
SOKR Solikamsk 75.73 337*c i*P **P 03 19 13.3 0.0**
SOKR S S 03 28 50.8 -0.3
SOKR SS SS 03 33 40.7 -3.1
SOKR pmax pmax
comp=Z,150nm,1.1s,mb5.8

SOKR MLR MLR
comp=Z,3μm,26.0s,MS5.5
KEMA Kemaliye 75.79 313 *i* P **P 03 19 14.7 +0.6**
GZT Gaziantep 75.82 311 *i* P **P 03 19 14.1 -0.1**
HMDT Nahal Hemdat 75.82 305 Pn **P 03 19 15.1 +0.7**
AKCD Akcadag 75.87 312 *i* P **P 03 19 15.2 +0.6**
KRMI Paran Flat 75.88 303 Pn **P 03 19 14.7 -0.1**
MMLI Mount Malkishu 75.96 306 Pn **P 03 19 16.2 +1.0**
KSDI Kefar Szold 75.99 306 Pn **P 03 19 15.8 +0.5**
KUZU Kuzuini 76.00 310 *i* P **P 03 19 16.0 +0.7**
GAZ Gaziantep 76.03 311 *eP* **P 03 19 13.0 -2.4**
MMAI Mount Meron Ar 76.15 306 P **P 03 19 17.7 +1.5**
comp=Z,32nm,0.7s,mb5.4,baz=96,slow=8.5,SNR=60
RTMI Retamim 76.17 304 Pn **P 03 19 17.6 +1.2**
ESPY Espiye-Giresun 76.21 315 *eP* **P 03 19 16.7 +0.3**
KZIT Kziot 76.37 304 Pn **P 03 19 17.5 0.0**
KMRS Kahramanmaras 76.37 311 *eP* **P 03 19 17.9 +0.5**
YAYL Yayladag 76.51 309 *i* P **P 03 19 18.9 +0.7**
HTY Hatay 76.51 309 *eP* **P 03 19 15.9 -2.3**
SOC Sochi 76.52 317 *eP* **P 03 19 15.7 -2.4**
SOC *e**PP pP 03 19 29.8 -2.5
SOC *e* 03 22 15.1
SOC *eS* S 03 28 56.1 -4.3
SOC *e**SS sS 03 29 21.1 -3.1
SOC pmax pmax
comp=Z,187nm,1.2s,mb5.9
SOC pmax pmax
comp=Z,293nm,1.6s,mb6.0
SOC MLR MLR
comp=Z,2μm,24.0s,MS5.3
GRSN GIRESUNGRSN 76.54 315 *i* P **P 03 19 17.1 -1.2**
COBT Iskenderun 76.54 310 *i* P **P 03 19 18.1 -0.3**
ANDN Andirin 76.81 311 *i* P **P 03 19 20.5 +0.6**
SARI SarD1z-Kayseri 76.91 312 *eP* **P 03 19 16.7 -3.7**
SCER sogukcermik 76.99 313 *i* P **P 03 19 21.2 +0.4**
RSDY Resadiye-TOKAT 77.03 314 *eP* **P 03 19 21.6 +0.6**
SVSK Karacayir 77.10 313 *eP* **P 03 19 23.1 +1.6**
KOZT Kozan 77.17 311 *eP* **P 03 19 20.3 -1.6**
LBTB Lobatse 77.23 246 *eP* **P 03 19 22.3 -0.3**
comp=Z,21nm,0.8s,mb5.1
LBTB LR LR
comp=Z,2μm,21.0s,MS5.5
LBTB Lobatse 77.23 246 *eP* **P 03 19 22.3 -0.3**
LBTB pmax pmax
comp=Z,21nm,0.8s,mb5.1
LBTB MLR MLR
comp=Z,2μm,21.0s,MS5.5
BOSA Boshof 77.49 242 P **P 03 19 24.0 +0.1**
BOSA LR LR 03 48 41.3
BOSA Boshof 77.49 242 P **P 03 19 24.0 +0.1**
comp=Z,27nm,0.9s,mb5.2,baz=95,slow=6.5,SNR=15
BOSA LR LR 03 48 41.3
comp=Z,2μm,19.1s,MS5.4,baz=90,slow=32
ERBA Erbaa 77.53 314 *i* P **P 03 19 24.0 +0.2**
TOKT Tokat 77.56 314 *eP* **P 03 19 23.2 -0.8**
TOKA Tokat 77.61 313 *i* P **P 03 19 24.8 +0.5**
KARA Karaisali 77.69 310 *eP* **P 03 19 21.0 -3.8**
PHNC Paralimni 77.81 308 P **P 03 19 29.2 +3.6**
comp=Z,0.2nm,1.2s
EREN Erenkoy 77.86 308 *eP* **P 03 19 27.1 +1.3**
GULE Gulek 77.91 310 *i* P **P 03 19 26.7 +0.7**
SEY Seymchan 78.07 20 *i* P **P 03 19 26.0 -0.3**
SEY Seymchan 78.07 20 *i* P **P 03 19 26.0 -0.3**
SBA Scott Base 78.16 169 *eP* **P 03 19 27.1 +0.4**
comp=Z,95nm,1.0s,mb5.7
SBA LR LR
comp=Z,2μm,21.0s,MS5.4
SBA Scott Base 78.16 169 *eP* **P 03 19 27.1 +0.4**
SBA pmax pmax
comp=Z,95nm,1.0s,mb5.7
SBA MLR MLR
comp=Z,2μm,21.0s,MS5.4
KVT Kavak 78.17 314 *eP* **P 03 19 25.4 -2.0**
LFK Lefkose 78.28 308 *eP* **P 03 19 26.1 -2.0**
AVNT Avonos 78.31 312 *i* P **P 03 19 28.4 +0.2**
CSS Prodhromos 78.35 308 P **P 03 19 29.1 +0.5**
comp=Z,3.3nm,1.3s
VRHR Novokhopersk 78.39 325 *eP* **P 03 19 27.7 -0.7**
VRHR *eS* S 03 29 16.9 -3.4
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,140nm,0.6s,mb6.1
VRHR smax
comp=N,110nm,1.6s
VRHR smax
comp=E,360nm,1.6s
VRHR smax
comp=Z,40nm,1.6s
IKL Isikli 78.44 309 *eP* **P 03 19 26.8 -2.1**
ANN Anapa 78.49 318 *eP* **P 03 19 28.2 -0.9**
ANN *e**PP pP 03 19 41.8 -1.6
ANN *eS* S 03 29 20.8 -0.9
ANN pmax pmax
comp=Z,61nm,1.3s,mb5.4
ANN MLR MLR
comp=N,1μm,23.0s,MS5.3
ANN MLR MLR
comp=E,1μm,23.0s,MS5.3
ANN MLR MLR
comp=Z,1μm,23.0s,MS5.2
MAMC Mammari 78.50 308 P **P 03 19 30.7 +1.3**
LEF Lefka 78.74 308 *eP* **P 03 19 31.0 +0.3**
CORM Corum 78.90 313 *eP* **P 03 19 30.5 -1.0**
CDAG Cicekdag 78.92 312 *i* P **P 03 19 31.6 +0.1**
CTKT Corum 78.93 313 *i* P **P 03 19 30.9 -0.7**
ALFC Alevga 78.98 308 P **P 03 19 32.1 +0.1**
comp=Z,0.7nm,0.7s
BOYT Boyabat 79.10 314 *i* P **P 03 19 32.1 -0.4**
PPCY Paphos 79.11 307 P **P 03 19 33.3 +0.6**
SULT Sultanhani-AKS 79.13 311 *eP* **P 03 19 34.8 +2.1**
ERMK Ermenek 79.15 309 *i* P **P 03 19 32.0 -0.9**
BYBT Boyabat 79.21 314 *eP* **P 03 19 31.9 -1.2**
KAMT Kaman 79.33 312 *eP* **P 03 19 32.7 -1.2**
BR131 Keskin Array S 79.49 312 *eP* **P 03 19 34.5 -0.2**
comp=Z,31nm,0.7s,mb5.3
BR131 LR LR
comp=Z,2μm,20.0s,MS5.4
BRTR Keskin Array B 79.49 312 P **P 03 19 34.4 -0.3**
comp=Z,34nm,0.5s,mb5.5,baz=138,slow=6.1,SNR=137
BRTR LR LR 03 56 20.5
comp=Z,2μm,20.5s,MS5.4,baz=115,slow=37
TIXI Tiksi 79.49 8 *eP* **P 03 19 33.8 -0.2**
comp=Z,22nm,0.7s,mb5.2
TIXI LR LR
comp=Z,2μm,19.0s,MS5.5
TIXI Tiksi 79.49 8 *eP* **P 03 19 31.7 -2.3**
TIXI *eS* S 03 29 24.4 -6.9
TIXI pmax pmax
comp=Z,104nm,1.9s,mb5.4
TIXI MLR MLR
comp=Z,2μm,19.0s,MS5.5
GAZI Gazipasa 79.50 309 *i* P **P 03 19 34.6 -0.2**
HDMB Hadim 79.57 309 *eP* **P 03 19 35.6 +0.5**
TOS Tosya 79.61 314 *eP* **P 03 19 35.4 +0.2**
VORD Divnogorie 79.67 324 *eP* **P 03 19 34.9 -0.5**
VORD *eS* S 03 29 29.5 -4.5
VORD pmax pmax
comp=N,60nm,1.0s
VORD pmax pmax
comp=Z,70nm,1.0s,mb5.5
VORD pmax pmax
comp=E,20nm,0.5s
VORD smax
comp=N,700nm,3.9s
VORD smax
comp=Z,240nm,3.9s
VORD smax
comp=E,80nm,0.8s
CANT Cankiri 79.77 313 *eP* **P 03 19 37.6 +1.4**
BBAL Bala 79.82 312 *i* P **P 03 19 36.6 +0.1**
ILGA Ilgaz 79.83 314 *i* P **P 03 19 37.0 +0.5**
VSR Storozhevoye 79.85 325*c* *i* P **P 03 19 35.5 -0.8**
VSR *e**PP pP 03 19 50.0 -0.7
VSR *eS* S 03 29 30.3 -5.5
VSR pmax pmax
comp=N,7.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,70nm,0.6s,mb5.8
VSR smax
comp=E,330nm,3.4s
VSR smax
comp=Z,240nm,3.4s
VSR smax
comp=N,150nm,1.7s
ELDT Eldivan 79.87 313 *i* P **P 03 19 37.0 +0.2**
BZK Bozkurt 79.91 314 *eP* **P 03 19 32.7 -4.2**
KONT Konya--Tatoy 79.94 310 *eP* **P 03 19 34.8 -2.3**
VOR Voronezh 80.03 325 *eP* **P 03 19 37.0 -0.3**
VOR pmax pmax
comp=Z,450nm,2.0s,mb6.0
LOD Lodumlu 80.18 312 *eP* **P 03 19 34.1 -4.3**
BALT Daday 80.22 314 *i* P **P 03 19 38.1 -0.4**
KDHN Kadinhani 80.28 311 *i* P **P 03 19 38.0 -0.9**
KIZT Kizilcal 80.56 311 *eP* **P 03 19 40.6 +0.2**
SAFT Safranbolu 80.63 313 *eP* **P 03 19 41.1 +0.3**
SIM Simferopol' 80.76 317*c* *i* P **P 03 19 41.7 +0.3**
SIM *eS* S 03 29 43.0 -2.7
SIM *e* 03 29 55.0
SIM *e*PS 03 30 26.0
SIM pmax pmax
comp=Z,139nm,1.0s,mb5.8
SIM MLR MLR
comp=Z,948nm,21.2s,MS5.1
SGKT Sivrigoynuk 80.90 313 *i* P **P 03 19 40.5 -1.7**
SVRH Sivrihisar-ESK 80.98 311 *eP* **P 03 19 42.1 -0.6**
BCK Bucak 81.16 309 *eP* **P 03 19 42.8 -0.9**
BOLV Bolvadin 81.21 311 *i* P **P 03 19 44.0 0.0**
KORT Korkueli 81.22 309 *i* P **P 03 19 43.8 -0.3**
SUR Sutherland 81.25 238 *eP* **P 03 19 45.2 +0.9**
comp=Z,79nm,1.1s,mb5.6
SUR LR LR
comp=Z,3μm,20.0s,MS5.7
SUR Sutherland 81.25 238 LR LR 03 50 02.8
comp=Z,2μm,18.3s,MS5.6,baz=310,slow=31
ISP Isparta 81.30 310 PFAKE 03 20 00.0 +16
ISP LR LR
comp=Z,2μm,22.0s,MS5.5
SHUT Suhut-Afyon 81.47 310 *eP* **P 03 19 45.5 +0.1**
MDU Mudurnu 81.48 312 *eP* **P 03 19 44.8 -0.5**
ELL Elmali 81.50 308 *eP* **P 03 19 46.7 +1.1**
AKAS Kas 81.61 308 *i* P **P 03 19 44.2 -2.0**
HENT Hendek 81.81 313 *i* P **P 03 19 45.9 -1.2**
GOLH Golhisar 81.89 309 *i* P **P 03 19 46.5 -1.1**
GLHS Gihisar (BURDU 81.92 309 *eP* **P 03 19 42.1 -5.6**
ALT Altintas 81.93 311 *eP* **P 03 19 48.3 +0.5**
GULT Gulveren 81.99 312 *eP* **P 03 19 42.1 -5.9**
GPA Golpazari 82.10 312 *eP* **P 03 19 46.5 -2.2**
SPNC Sapanca-Adapaz 82.21 312 *eP* **P 03 19 46.5 -2.7**
KHAL Karahalli 82.23 310 *i* P **P 03 19 47.9 -1.4**
DNZL Cakiroluk 82.40 309 *i* P **P 03 19 49.7 -0.6**
GDZ Gediz 82.42 311 *i* P **P 03 19 49.3 -1.0**
CAVI Cavuskoy 82.43 312 *eP* **P 03 19 49.4 -0.9**
MOS Moscow 82.48 328 *eP* **P 03 19 48.9 -1.3**
MOS *e**PP pP 03 20 03.8 -0.8
MOS *i* S S 03 30 00.9 -2.1
MOS pmax pmax
comp=Z,290nm,1.3s,mb6.0
MOS pmax pmax
comp=Z,500nm,1.6s,mb6.2
MOS MLR MLR
comp=E,3μm,21.0s
MOS MLR MLR
comp=Z,2μm,21.0s,MS5.5
AFI Afiamalu 82.50 103 *eP* **P 03 19 52.6 +1.4**
comp=Z,499nm,1.4s,mb6.3
AFI LR LR
comp=Z,904nm,19.0s,MS5.2
AFI Afiamalu 82.50 103 P **P 03 19 50.8 -0.5**
comp=Z,265nm,1.0s,mb6.2,baz=264,slow=7.1,SNR=14
AFI Afiamalu 82.50 103 *eP* **P 03 19 52.6 +1.3**
AFI pmax pmax
comp=Z,499nm,1.4s,mb6.3
AFI MLR MLR
comp=Z,904nm,19.0s,MS5.2
ADVT Abdulvahap 82.56 312 *eP* **P 03 19 44.3 -6.7**
MIDW Midway 82.67 61 PFAKE 03 20 00.0 +8.1
MIDW LR LR
comp=Z,833nm,21.0s,MS5.1
HRT Hereke 82.71 312 *eP* **P 03 19 53.7 +1.9**
ARG Arkhangelos 82.77 308 P **P 03 19 53.1 +0.9**
ARG Arkhangelos 82.77 308 *eP* **P 03 19 52.7 +0.5**
ARG Arkhangelos 82.77 308 P **P 03 19 53.1 +0.9**
OBN Obninsk 82.80 328 *eP* **P 03 19 51.8 -0.1**
comp=Z,326nm,1.4s,mb6.2
OBN LR LR
comp=Z,1μm,19.0s,MS5.4
OBN Obninsk 82.80 328α *i* P **P 03 19 51.8 -0.1**
OBN *i* 03 19 57.5
OBN *i* pP 03 20 06.1 -0.2
OBN *i* S S 03 30 04.9 -1.3
OBN *e*PS 03 31 12.5
OBN pmax pmax
comp=Z,364nm,1.7s,mb6.1
OBN MLR MLR
comp=Z,1μm,22.0s,MS5.2
OBN Obninsk 82.80 328 P **P 03 19 52.9 +1.0**
comp=Z,854nm,1.2s,mb6.7,SNR=11
YLV Yalova 82.87 312 *eP* **P 03 19 52.2 -0.4**
KULA Kula-Manisa 82.90 310 *eP* **P 03 19 49.4 -3.4**
ULDT Uludag 82.94 312 *i* P **P 03 19 52.3 -0.7**
GEMT Gemlik 82.97 312 *eP* **P 03 19 50.8 -2.3**
DEMI Demirci 82.98 311 *i* P **P 03 19 53.5 +0.3**
ISK Istanbul-Kandi 83.22 313 *eP* **P 03 19 52.3 -2.1**
ARMT Armutlu 83.24 312 *eP* **P 03 19 53.0 -1.5**
AYDN Tasoluk 83.30 309 *i* P **P 03 19 55.8 +0.9**
DURS Dursunbey 83.30 311 *i* P **P 03 19 54.8 0.0**
KARP Karpathos 83.39 307 *eP* **P 03 19 56.0 +0.6**
BDRM Kayabasi 83.50 308 *i* P **P 03 19 55.9 0.0**
BODT Bodrum 83.60 308 *eP* **P 03 19 47.9 -8.5**
AKHS Akhisar 83.63 310 *i* P **P 03 19 57.2 +0.7**
QSPA South Pole Qui 83.64 180 *eP* **P 03 19 55.8 -0.1**
comp=Z,244nm,1.2s,mb6.2
QSPA LR LR
comp=Z,2μm,20.0s,MS5.6
KLMR Klimovskoe 83.65 334 *eP* **P 03 19 54.9 -1.3**
KLMR *i* S S 03 30 13.8 -0.8
KLMR pmax pmax
comp=Z,269nm,1.4s,mb6.2
KLMR pmax pmax
comp=Z,323nm,10.6s
BALB Balikesir 83.75 311 *eP* **P 03 19 58.4 +1.3**
BNT Bandirma 83.89 312 *eP* **P 03 19 55.9 -1.9**
KDAG Bornova 83.94 310 *i* P **P 03 19 57.9 -0.2**
IZM Izmir 83.94 310 *eP* **P 03 19 58.8 +0.7**
BALY Balya 83.97 311 *i* P **P 03 19 58.6 +0.3**
GONE Gonen-Balikesi 83.99 311 *eP* **P 03 19 56.6 -1.7**
BLCB Balcova 84.10 310 P **P 03 20 00.4 +1.4**
BLCB Balcova 84.10 310 P **P 03 20 00.4 +1.4**
SMG Samos 84.11 309 *eP* **P 03 19 59.8 +0.7**
URLA Izmir 84.44 309 *i* P **P 03 20 00.5 -0.2**
TIRR Tirgusor 84.53 316 *eP* **P 03 20 01.2 +0.2**
comp=Z,85nm,1.1s,mb5.8
TIRR Tirgusor 84.53 316 ⇑P **P 03 20 01.1 +0.1**
TIRR Tirgusor 84.53 316 ⇑*i*P **P 03 20 01.1 +0.1**
NPS Neapolis 84.56 306 *eP* **P 03 20 00.6 -0.8**
AYVA Ayvalik 84.58 310 *i* P **P 03 20 00.8 -0.6**
LAST Lasithi 84.65 306 P **P 03 20 02.8 +0.9**
LAST Lasithi 84.65 306 *eP* **P 03 20 02.4 +0.5**
LAST Lasithi 84.65 306 P **P 03 20 02.8 +0.9**
CHOS Chios island 84.86 309 P **P 03 20 04.1 +1.3**
PRK Paraskevi 84.88 310 *eP* **P 03 20 03.1 +0.2**
KIS Kishinev 84.89 318 ⇓*i*P **P 03 20 02.0 -0.8**
comp=Z,400nm,2.0s,mb6.2
KIS *e*pP pP 03 20 18.0 +0.8
KIS *i* S S 03 30 18.0 -10
comp=Z,1μm,10.0s
KIS Kishinev 84.89 318 P **P 03 20 03.0 +0.2**
KIS Kishinev 84.89 318 ⇓*i*P **P 03 20 02.0 -0.8**
KIS *e**PP pP 03 20 18.0 +0.8
KIS *i* S S 03 30 18.0 -10
KIS pmax pmax
comp=Z,500nm,1.5s,mb6.4
KIS pmax pmax
comp=E,300nm,2.0s
KIS pmax pmax
comp=E,400nm,2.0s
KIS pmax pmax
comp=Z,400nm,2.0s,mb6.2
KIS smax
comp=E,14μm,10.0s
KIS MLR MLR
comp=E,500nm,20.0s
KIS MLR MLR
comp=Z,600nm,20.0s,MS5.0
KIS MLR MLR
comp=Z,700nm,20.0s
CFR Carcaliu 84.89 316 ⇓P **P 03 20 03.4 +0.6**
CFR Carcaliu 84.89 316 ⇓*i*P **P 03 20 03.4 +0.6**
NVL N'lazarevskaya 84.91 199 ⇓*i*P **P 03 20 02.8 +0.4**
MAIT Maitri 84.94 199 *eP* **P 03 20 04.1 +1.5**
TSUM Tsumeb 84.97 251 *eP* **P 03 20 03.7 0.0**
comp=Z,8.9nm,0.9s,mb4.9
TSUM LR LR
comp=Z,4μm,21.0s,MS5.8
APE Apeiranthos 85.00 308 ⇓P **P 03 20 03.2 -0.3**
APE Apeiranthos 85.00 308 *eP* **P 03 20 03.6 +0.1**
APE Apeiranthos 85.00 308 ⇓*i*P **P 03 20 03.2 -0.3**
EDRB Edirne 85.10 313 *eP* **P 03 20 02.5 -1.5**
IDI Anoyia 85.15 306 *eP* **P 03 20 05.0 +0.7**
comp=Z,54nm,0.9s,mb5.7
IDI Anoyia 85.15 306 *eP* **P 03 20 05.4 +1.0**
SIVA Sivas 85.16 306 P **P 03 20 05.3 +0.9**
SIVA Sivas 85.16 306 *eP* **P 03 20 05.0 +0.6**
SIVA Sivas 85.16 306 P **P 03 20 05.3 +0.9**
AMRR Amara 85.31 316 P **P 03 20 07.1 +2.2**
JMB Yambol 85.35 313 P **P 03 20 06.3 +1.1**
JMB Yambol 85.35 313 P **P 03 20 06.3 +1.1**
ALN Alexandroupoli 85.40 312 P **P 03 20 05.5 0.0**
ALN Alexandroupoli 85.40 312 P **P 03 20 05.5 0.0**
AKASG Malin Array Be 85.60 322 P **P 03 20 05.7 -0.5**
comp=Z,6.9nm,0.4s,mb5.2,baz=91,slow=4.5,SNR=102
AKASG LR LR 04 04 49.2
comp=Z,838nm,21.3s,MS5.1,baz=115,slow=40
KIEV Kiev 85.61 322 *eP* **P 03 20 05.3 -0.9**
comp=Z,66nm,1.1s,mb5.8
KIEV LR LR
comp=Z,980nm,22.0s,MS5.2
KIEV Kiev 85.61 322 *eP* **P 03 20 05.4 -0.9**
KIEV pmax pmax
comp=Z,66nm,1.1s,mb5.8
KIEV MLR MLR
comp=Z,980nm,22.0s,MS5.2
BILL Bilibino 85.72 19 *i* P **P 03 20 05.4 -1.1**
BILL LR LR
comp=Z,2μm,20.0s,MS5.4
BILL Bilibino 85.72 19*d* *i* P **P 03 20 05.9 -0.6**
BILL 03 23 32.0
BILL *e* 03 30 26.6
BILL *e* 03 31 25.4
BILL PS 03 31 56.0
BILL SS SS 03 36 14.0 +1.5
BILL pmax pmax
comp=Z,42nm,1.2s,mb5.5
BILL MLR MLR
comp=Z,1μm,18.0s,MS5.3
VAM Vamos 85.73 306 *eP* **P 03 20 08.3 +1.1**
GRER 85.74 316 P **P 03 20 09.6 +2.6**
IAS Iasi 85.77 318 P **P 03 20 08.2 +1.0**
KARN Karanos 85.95 306 *eP* **P 03 20 09.4 +1.1**
KARN Karanos 85.95 306 P **P 03 20 09.3 +1.0**
VRI Vrincioaia 86.02 317 ⇓P **P 03 20 09.4 +1.0**
VRI Vrincioaia 86.02 317 ⇓*i*P **P 03 20 09.4 +1.0**
PLOR Plostina 86.07 317 ⇓P **P 03 20 09.9 +1.2**
PLOR Plostina 86.07 317 ⇓*i*P **P 03 20 09.9 +1.2**
SULR 86.08 316 P **P 03 20 10.0 +1.3**
TESR 86.22 317 ⇓P **P 03 20 10.1 +0.7**
TESR 86.22 317 ⇓*i*P **P 03 20 10.1 +0.7**
MLR Muntele Rosu 86.47 316 P **P 03 20 11.5 +0.9**
comp=Z,155nm,1.1s,mb6.2,baz=70,slow=1.1,SNR=109
MLR PP PP 03 23 33.3 +0.6
comp=Z,18nm,1.0s,baz=64,slow=3.1,SNR=3.5
MLR Muntele Rosu 86.47 316 ⇑P **P 03 20 11.5 +0.9**
MLR Muntele Rosu 86.47 316 ⇑*i*P **P 03 20 11.5 +0.9**
PTL Penteli 86.48 309 *eP* **P 03 20 11.1 +0.2**
VLY Voula,Athens 86.50 309 *eP* **P 03 20 11.2 +0.2**
KAVA Kavala 86.56 312 P **P 03 20 12.3 +0.9**
PLD Plovdiv 86.64 313 P **P 03 20 12.1 +0.5**
PLD Plovdiv 86.64 313 P **P 03 20 12.1 +0.5**
DID Didima 86.87 308 *eP* **P 03 20 11.6 -1.2**
DID Didima 86.87 308 P **P 03 20 12.0 -0.8**
DOPR Dopca 86.95 317 ⇑*i*P **P 03 20 14.2 +1.2**
VLI Velíai 86.97 307 *eP* **P 03 20 13.1 -0.2**
VOIR 87.07 316 ⇑P **P 03 20 13.6 0.0**
VOIR 87.07 316 ⇑*i*P **P 03 20 13.6 0.0**
LTK Loutraki 87.18 309 *eP* **P 03 20 13.3 -1.0**
LTK Loutraki 87.18 309 P **P 03 20 13.6 -0.7**
PLG Polygyros 87.24 311 *eP* **P 03 20 13.7 -0.8**
ATAL Atalanti 87.25 309 P **P 03 20 14.3 -0.3**
LKR Lokris 87.26 309 P **P 03 20 14.2 -0.5**
LKR Lokris 87.26 309 *eP* **P 03 20 14.0 -0.7**
LKR Lokris 87.26 309 P **P 03 20 14.2 -0.5**
SRS Serrai 87.27 312 P **P 03 20 14.5 -0.1**
SRS Serrai 87.27 312 P **P 03 20 14.5 -0.1**
MICGM Minsk 87.38 325 ⇓*i*P **P 03 20 15.0 +0.1**
SOH Sokhos 87.39 311 P **P 03 20 15.2 0.0**
SOH Sokhos 87.39 311 P **P 03 20 15.2 0.0**
MNK Minsk 87.41 325 ⇓*i*P **P 03 20 15.0 0.0**
MNK *e**PP pP 03 20 30.0 +0.5
MNK *e* 03 23 44.0
MNK *e*PPP 03 25 32.0
MNK *eS* S 03 30 50.0 -1.8
MNK *e*PS 03 31 50.0
MNK pmax pmax
comp=E,340nm,1.4s
MNK pmax pmax
comp=Z,440nm,1.4s,mb6.5
BUR01 Bucovina Ar. S 87.42 318 P **P 03 20 16.7 +1.5**
BURAR Bucovina Array 87.42 318 ⇑P **P 03 20 16.5 +1.3**
BURAR Bucovina Array 87.42 318 ⇑*i*P **P 03 20 16.5 +1.3**
BUR08 Bucovina Ar. S 87.44 318 *eP* **P 03 20 16.6 +1.3**
VLX Vlachokerasia 87.52 308 *eP* **P 03 20 16.3 +0.3**
VLX Vlachokerasia 87.52 308 P **P 03 20 16.1 +0.1**
DSF Desfina 87.59 309 P **P 03 20 15.8 -0.4**
GUR Goura 87.65 308 *eP* **P 03 20 16.7 +0.1**
GUR Goura 87.65 308 P **P 03 20 16.6 0.0**
KNT Kendrikon 87.79 312 P **P 03 20 17.0 -0.1**
KNT Kendrikon 87.79 312 P **P 03 20 17.0 -0.1**
VTS Vitosha 87.82 313 P **P 03 20 17.4 +0.1**
VTS Vitosha 87.82 313 ⇑P **P 03 20 17.5 +0.2**
VTS Vitosha 87.82 313 P **P 03 20 17.4 +0.1**
VTS Vitosha 87.82 313 ⇑*i*P **P 03 20 17.5 +0.2**
AGG Agios Georgios 87.84 309 P **P 03 20 16.9 -0.6**
AGG Agios Georgios 87.84 309 P **P 03 20 16.9 -0.6**
ITM Ithomi 87.85 308 P **P 03 20 17.5 0.0**
ITM Ithomi 87.85 308 *eP* **P 03 20 16.9 -0.6**
ITM Ithomi 87.85 308 P **P 03 20 17.5 0.0**
KALE Kalithea 87.88 309 P **P 03 20 17.4 -0.3**
LIT Litokhoron 87.91 311 P **P 03 20 16.5 -1.2**
LIT Litokhoron 87.91 311 P **P 03 20 16.5 -1.2**
TRIZ Trizonia 87.93 309 P **P 03 20 18.0 +0.1**
PYL PYLOS 87.94 307 P **P 03 20 17.6 -0.4**
LAKA Lakka 87.98 309 P **P 03 20 18.1 0.0**
JOF Joensuu 88.02 334 *eP* **P 03 20 16.8 -0.9**
JOF pmax pmax
comp=Z,27nm,0.6s,mb5.7
JOF Joensuu 88.02 334 *ep* **P 03 20 16.8 -0.9**
comp=Z,27nm,0.6s,mb5.7
JOHN Johnston Islan 88.04 73 PFAKE 03 20 30.0 +11
JOHN LR LR
comp=Z,1μm,19.0s,MS5.2
VAY Valandovo 88.06 312 P **P 03 20 17.8 -0.6**
VAY Valandovo 88.06 312 P **P 03 20 17.8 -0.6**
VAY Valandovo 88.06 312 *i* P **P 03 20 18.6 +0.2**
NACGM Naroch 88.10 326 *eP* **P 03 20 17.0 -1.3**
GRG Griva 88.12 311 P **P 03 20 18.7 0.0**
GRG Griva 88.12 311 P **P 03 20 18.7 0.0**
ADK Adak 88.14 37 PFAKE 03 20 30.0 +11
ADK LR LR
comp=Z,647nm,21.0s,MS5.0
EVR Evrytania 88.23 309 *eP* **P 03 20 20.0 +0.7**
RLS Riolos of Patr 88.35 308 *eP* **P 03 20 20.6 +0.7**
LVZ Lovozero 88.38 339 *i* P **P 03 20 18.7 -0.6**
LVZ LR LR
comp=Z,2μm,20.0s,MS5.5
LVZ Lovozero 88.38 339*d* *i* P **P 03 20 18.6 -0.7**
LVZ pmax pmax
comp=Z,55nm,1.0s,mb5.7
LVZ Lovozero 88.38 339 P **P 03 20 19.3 0.0**
comp=Z,280nm,0.7s,mb6.6,SNR=6.3
BMR Baia Mare 88.57 318 ⇓P **P 03 20 22.0 +1.3**
BMR Baia Mare 88.57 318 ⇓*i*P **P 03 20 22.0 +1.3**
GZR Gura Zlata 88.64 316 ⇓P **P 03 20 21.9 +0.9**
GZR Gura Zlata 88.64 316 ⇓*i*P **P 03 20 21.9 +0.9**
DEV Deva 88.64 316 ⇓P **P 03 20 22.5 +1.5**

DEV	Deva	88.64 316	⇓	*iP*		P	03 20 22.5	+1.5
LVV	L'vov	88.64 320	⇓	*iP*		P	03 20 21.1	+0.2
LVV				*e*			03 30 44.9	
LVV				*eS*		S	03 31 02.1	-1.7
LVV				*eSS*		SS	03 36 57.5	+1.6
APA	Apatity	88.70 339	⇑	*iP*		P	03 20 21.0	+0.1
APA				*i*		pP	03 20 32.0	-3.4
APA				*i S*		S	03 30 59.0	-4.7
APA				*i* SP			03 32 08.0	
APA				pmax	pmax			
	comp=Z,400nm,3.8s							
APA				pmax	pmax			
	comp=Z,81nm,1.4s,mb5.9							
APA				MLR	MLR			
	comp=Z,600nm,20.0s,MS5.0							
FNA	Florina	88.86 311		P		P	03 20 21.8	-0.4
FNA	Florina	88.86 311		P		P	03 20 21.8	-0.4
DRGR		88.93 317	⇑	*iP*		P	03 20 23.5	+1.1
DRGR		88.93 317	⇑	*iP*		P	03 20 23.5	+1.1
BIA	Bitola	88.94 311		*i* P		P	03 20 23.0	+0.4
SKO	Skopje	89.00 312		*eP*		P	03 20 22.6	-0.3
NEST	Nestorio	89.05 311		P		P	03 20 22.9	-0.2
KRUS	Krusevo	89.05 312		*i* P		P	03 20 23.1	0.0
VLS	Valsamata	89.05 308		*eP*		P	03 20 23.1	-0.1
JAN	Janina	89.08 310		*eP*		P	03 20 24.1	+0.8
LKD2	Lefkada island	89.09 309		P		P	03 20 24.2	+0.8
KBN	Korca	89.28 311		*e*PN		P	03 20 24.6	+0.4
TRPA	Tarpa	89.29 318	⇓	*iP*		P	03 20 24.8	+0.8
KWP	Kalwaria Pacla	89.45 320		*eP*		P	03 20 25.7	+0.9
KWP				*eS*		S	03 31 12.6	+1.3
KWP				LMZ			04 01 33.8	
	comp=Z,1µm,26.6s							
KWP	Kalwaria Pacla	89.45 320		*eP*		P	03 20 25.0	+0.3
	comp=Z,197nm,1.4s,mb6.2							
KWP				LR	LR			
	comp=Z,1µm,19.0s,MS5.3							
KWP	Kalwaria Pacla	89.45 320	⇓	*iP*		P	03 20 24.5	-0.2
IGT	Igoumenitsa	89.45 310		P		P	03 20 25.2	+0.2
IGT	Igoumenitsa	89.45 310		P		P	03 20 25.2	+0.2
BZS	Buzias	89.48 316	⇑	*iP*		P	03 20 25.3	+0.3
BZS	Buzias	89.48 316	⇑	*iP*		P	03 20 25.3	+0.3
UZH	Uzhgorod	89.54 319	⇓	*iP*		P	03 20 25.2	0.0
UZH				*e*			03 20 31.2	
UZH				*e*			03 24 00.8	
UZH				*e*			03 30 47.5	
UZH				*eS*		S	03 31 06.4	-5.8
SRN	Sarande	89.76 310		*e*PN		P	03 20 26.7	+0.2
TIM	Timisoara	89.77 316		P		P	03 20 28.5	+2.2
KEK	Kerkira	89.89 310		P		P	03 20 28.0	+0.9
KEK	Kerkira	89.89 310		*eP*		P	03 20 26.3	-0.8
KEK	Kerkira	89.89 310		P		P	03 20 28.0	+0.9
SUW	Suwalki	89.96 324		*eP*		P	03 20 27.2	+0.2
SUW				*eS*		S	03 31 15.9	0.0
SUW				LMZ			04 00 46.9	
	comp=Z,1µm,26.1s							
SUW	Suwalki	89.96 324		*eP*		P	03 20 26.4	-0.6
	comp=Z,146nm,1.0s,mb6.3							
FINES	FINESS Array B	89.99 332		P		P	03 20 27.0	-0.1
	comp=Z,14nm,0.5s,mb5.6,baz=106,slow=4.4,SNR=34							
FINES				LR	LR		04 07 36.8	
	comp=Z,1µm,18.7s,MS5.3,baz=358,slow=40							
KAF	Kangasniemi	90.04 333		*eP*		P	03 20 26.8	-0.4
KAF				pmax	pmax			
	comp=Z,28nm,0.8s,mb5.6							
KAF	Kangasniemi	90.04 333		*ep*		P	03 20 26.8	-0.4
	comp=Z,28nm,0.8s,mb5.6							
BCI	Bajram Curri	90.07 312		*e*PN		P	03 20 28.2	+0.3
TIR	Tirane	90.08 311		*eP*		P	03 20 28.6	+0.7
	comp=Z,47nm,0.8s,mb5.9							
TIR				LR	LR			
	comp=Z,1µm,21.0s,MS5.4							
TIR	Tirane	90.08 311		*eP*		P	03 20 28.6	+0.7
TIR				pmax	pmax			
	comp=Z,47nm,0.8s,mb5.9							
TIR				MLR	MLR			
	comp=Z,1µm,21.0s,MS5.4							
TIR	Tirane	90.08 311		*eP*		P	03 20 29.6	+1.7
CRVS	Cervenica-Dubn	90.12 319		*eP*		P	03 20 28.4	+0.5
	comp=Z,18nm,1.5s,mb5.2							
CRVS	Cervenica-Dubn	90.12 319		*eP*		P	03 20 28.4	+0.5
CRVS				pmax	pmax			
	comp=Z,18nm,1.5s,mb5.2							
CRVS	Cervenica-Dubn	90.12 319		*eP*		P	03 20 28.4	+0.5
PUK	Puka	90.16 312		*e*PN		P	03 20 27.7	-0.6
PVY	Plav	90.18 313	⇑	*iP*		P	03 20 28.4	+0.1
PVY	Plav	90.18 313	⇑	*iP*		P	03 20 28.5	+0.2
IVA	Berane	90.27 313	⇑	*iP*		P	03 20 29.3	+0.5
IVA	Berane	90.27 313	⇑	*iP*		P	03 20 29.3	+0.5
STHS	Stebnicka Huta	90.35 320		*eP*		P	03 20 29.5	+0.5
	comp=Z,29nm,1.2s,mb5.5							
STHS	Stebnicka Huta	90.35 320		*eP*		P	03 20 29.5	+0.5
STHS				pmax	pmax			
	comp=Z,29nm,1.2s,mb5.5							
STHS	Stebnicka Huta	90.35 320		*eP*		P	03 20 29.5	+0.5
DIVS	Divibare	90.38 314		P		P	03 20 30.8	+1.5
ULC	Ulcinj	90.62 312	⇑	*iP*		P	03 20 30.8	+0.4
TTG	Podgorica	90.67 312	⇑	*iP*		P	03 20 30.6	-0.1
TTG	Podgorica	90.67 312	⇑	*iP*		P	03 20 30.7	0.0
KECS	Kecovo	90.70 319		*eP*		P	03 20 30.9	+0.3
	comp=Z,9.4nm,1.0s,mb5.1							
KECS	Kecovo	90.70 319		*eP*		P	03 20 30.9	+0.3
KECS				pmax	pmax			
	comp=Z,9.0nm,1.0s,mb5.0							
KECS	Kecovo	90.70 319		*eP*		P	03 20 30.9	+0.3
PLE	Pljevlja	90.70 313	⇑	*iP*		P	03 20 32.2	+1.4
PLE	Pljevlja	90.70 313	⇑	*iP*		P	03 20 32.3	+1.5
NKY	Niksic	90.92 313	⇑	*iP*		P	03 20 31.8	0.0
NKY	Niksic	90.92 313	⇑	*iP*		P	03 20 31.9	+0.1
BUM	Brajici-Budva	90.92 312	⇑	*iP*		P	03 20 32.0	+0.2
BUM	Brajici-Budva	90.92 312	⇑	*iP*		P	03 20 32.1	+0.3
NIE	Niedzica	90.95 319		*eP*		P	03 20 32.4	+0.6
NIE				*e*PP		PP	03 24 08.6	+0.1
PSZ	Piszkesteto	91.00 318		*eP*		P	03 20 32.8	+0.7
	comp=Z,45nm,1.4s,mb5.6							
PSZ				*e*PP		PP	03 24 09.2	+0.2
PSZ				LR	LR			
	comp=Z,892nm,19.0s,MS5.2							
PSZ	Piszkesteto	91.00 318		*eP*		P	03 20 32.8	+0.7
PSZ				*e*			03 24 09.2	
PSZ				pmax	pmax			
	comp=Z,45nm,1.4s,mb5.6							
PSZ				MLR	MLR			
	comp=Z,892nm,19.0s,MS5.2							
PSZ	Piszkesteto	91.00 318	⇑	*iP*		P	03 20 33.1	+1.0
PSZ	Piszkesteto	91.00 318	⇓	*i*PcP		PcP	03 20 32.8	-0.2
UPM	Unac-Piva	91.03 313	⇑	*iP*		P	03 20 32.3	0.0
HCY	Herceg Novi	91.24 312	⇑	*iP*		P	03 20 33.0	-0.3
HCY	Herceg Novi	91.24 312	⇑	*iP*		P	03 20 33.1	-0.2
BRY	Bratogost	91.26 313	⇑	*iP*		P	03 20 33.0	-0.4
BRY	Bratogost	91.26 313	⇑	*iP*		P	03 20 33.1	-0.3
VNA1	Neumayer--Stat	91.38 198		*eP*		P	03 20 33.1	-0.3
VNA1				*e*			03 20 38.0	
OJC	Ojcow	91.40 320		*eP*		P	03 20 34.0	+0.2
BUD	Budapest	91.53 317	⇓	*i*PcP		PcP	03 20 35.6	+0.2
KEV	Kevo	91.58 340		*eP*		P	03 20 33.3	-1.0
	comp=Z,31nm,1.3s,mb5.5							
KEV				LR	LR			
	comp=Z,2µm,20.0s,MS5.5							
KEV	Kevo	91.58 340		*eP*		P	03 20 33.3	-1.0
KEV				pmax	pmax			
	comp=Z,31nm,1.3s,mb5.5							
KEV				MLR	MLR			
	comp=Z,2µm,20.0s,MS5.5							
KEV	Kevo	91.58 340		*ep*		P	03 20 32.3	-2.0
	comp=Z,6.9nm,0.6s,mb5.2							
PKSM	Moragy	91.62 316	⇑	*iP*		P	03 20 35.0	+0.1
PKSM	Moragy	91.62 316	⇑	*iP*		P	03 20 35.0	0.0
VYHS	Vyhne	91.78 318		*eP*		P	03 20 36.3	+0.6
	comp=Z,19nm,1.4s,mb5.2							
VYHS	Vyhne	91.78 318		*eP*		P	03 20 36.3	+0.6
VYHS				pmax	pmax			
	comp=Z,19nm,1.4s,mb5.2							
VYHS	Vyhne	91.78 318		*eP*		P	03 20 36.3	+0.6
ARCES	ARCESS Array B	92.04 340		P		P	03 20 35.7	-0.7
ARCES				LR	LR		04 08 00.2	
ARCES	ARCESS Array B	92.04 340		P		P	03 20 35.7	-0.7
	comp=Z,13nm,0.7s,mb5.4,baz=95,slow=7.4,SNR=54							
ARCES				LR	LR		04 08 00.2	
	comp=Z,1µm,19.5s,MS5.3,baz=288,slow=40							
ARE0	ARCESS Array S	92.04 340		*eP*		P	03 20 36.0	-0.4
KOLL	Kolacno	92.08 318		*eP*		P	03 20 37.3	+0.3
KOLL	Kolacno	92.08 318		*eP*		P	03 20 37.3	+0.3
TIP	Timpagrande	92.16 309		*eP*		P	03 20 39.2	+1.6
	comp=Z,13nm,0.9s,mb5.2							
TIP				LR	LR			
	comp=Z,781nm,21.0s,MS5.1							
OKC	Ostrava-Krasne	92.40 320		*eP*		P	03 20 40.0	+1.5
OKC				*e*			03 24 20.3	
OKC				*eS*		SKSac	03 31 07.4	-0.4
OKC				MLR	MLR			
	comp=Z,600nm,17.9s,MS5.1							
OKC	Ostrava-Krasne	92.40 320		*eP*		P	03 20 40.0	+1.5
OKC				*e*PP		PP	03 24 20.3	+0.4
OKC				*ex*		x	03 24 35.1	
OKC				*e*SKS			03 31 07.4	
OKC				AMS	AMS		04 07 30.0	
	comp=Z,600nm,17.9s							
CEL	Celeste	92.73 308		*eP*		P	03 20 40.9	+0.6
	comp=Z,77nm,1.2s,mb6.0							
CEL				LR	LR			
	comp=Z,564nm,21.0s,MS5.0							
MORC	Moravsky Berou	92.78 320		*eP*		P	03 20 40.8	+0.5
	comp=Z,38nm,1.4s,mb5.6							
MORC				*e*PP		PP	03 24 22.7	-0.2
MORC	Moravsky Berou	92.78 320		*eP*		P	03 20 40.8	+0.5
MORC				*e*			03 24 22.7	
MORC				pmax	pmax			
	comp=Z,38nm,1.4s,mb5.6							
MORC	Moravsky Berou	92.78 320	⇓	*iP*		P	03 20 40.8	+0.5
ZST	Bratislava	92.90 318		*eP*		P	03 20 41.4	+0.6
	comp=Z,28nm,1.3s,mb5.5							
ZST	Bratislava	92.90 318		*eP*		P	03 20 41.4	+0.6
ZST				pmax	pmax			
	comp=Z,28nm,1.3s,mb5.5							
ZST	Bratislava	92.90 318		*eP*		P	03 20 41.4	+0.6
CUC	Castrocucco	92.97 310		PFAKE			03 20 50.0	+8.7
CUC				LR	LR			
	comp=Z,881nm,22.0s,MS5.2							
SOP	Sopron	93.21 317	⇓	*i*PcP		PcP	03 20 42.7	-0.1
VRAC	Vranov	93.35 319		P		P	03 20 43.7	+0.8
	comp=Z,1.6nm,0.4s,mb4.8,baz=246,slow=7.0,SNR=7.8							
WDD	Wield Dalam	93.59 306		PFAKE			03 21 00.0	+16
WDD				LR	LR			
	comp=Z,939nm,22.0s,MS5.2							
DPC	Dobruska-Polom	93.63 320		*eP*		P	03 20 45.1	+1.0
DPC				*e*			03 24 29.8	
DPC				*eS*		SKSac	03 31 14.7	+0.1
DPC				MLR	MLR			
	comp=Z,900nm,20.7s,MS5.2							
DPC	Dobruska-Polom	93.63 320		*eP*		P	03 20 45.1	+1.0
DPC				*e*PP		PP	03 24 29.8	+0.3
DPC				*e*SKS			03 31 14.7	
DPC				AMS	AMS		04 08 30.0	
	comp=Z,900nm,20.7s							
KSP	Ksiaz	93.69 321		*eP*		P	03 20 45.3	+0.9
KSP				LMZ			04 07 37.3	
	comp=Z,3µm,24.1s							
KSP	Ksiaz	93.69 321		*eP*		P	03 20 45.0	+0.6
KSP				*e*			03 24 29.0	
KSP				*e*			03 31 11.0	
KSP				*eSS*		SS	03 38 09.0	+0.4
CSNA	Conrad Observa	93.70 318	⇑	*iP*		P	03 20 44.6	+0.1
	comp=Z,11nm,1.3s,mb5.1							
UPC	Upice	93.84 320		*eP*		P	03 20 46.4	+1.3
UPC				*e*			03 24 31.7	
UPC	Upice	93.84 320		*eP*		P	03 20 46.4	+1.3
UPC				*e*PP		PP	03 24 31.7	+0.5
UPC				*ex*		x	03 24 49.4	
ARSA	Arzberg	93.86 317	⇓	*i*PcP		PcP	03 20 45.9	+0.2
	comp=Z,23nm,1.2s,SNR=10							
BOJS	Bojanci	93.90 315		*i* P		P	03 20 45.6	+0.2
TREC	Trest	94.07 319		*eP*		P	03 20 46.1	-0.1
TREC				*e*			03 24 32.5	
TREC				*eS*		SKSac	03 31 17.3	+0.3
TREC				MLR	MLR			
	comp=Z,1µm,22.0s,MS5.3							
TREC	Trest	94.07 319		*eP*		P	03 20 46.1	-0.1
TREC				*e*PP		PP	03 24 32.5	-0.5
TREC				*e*SKS			03 31 17.3	
TREC				AMS	AMS		04 04 20.0	
	comp=Z,1µm,22.0s							
PERS	Pernice	94.09 316		*i* P		P	03 20 47.0	+0.6
SOKA	Soboth	94.15 316	⇑	*i*PcP		PcP	03 20 47.0	-0.1
	comp=Z,36nm,1.2s							
VISS	Visnje	94.21 315		*i* P		P	03 20 47.3	+0.3
LJU	Ljubljana	94.45 316		*i* P		P	03 20 48.4	+0.4
OBKA	Obir	94.47 316	⇑	*iP*		P	03 20 48.1	+0.1
	comp=Z,22nm,1.4s,mb5.4							
UNV	Unalaska Valle	94.53 36		*eP*		P	03 20 47.7	-0.5
	comp=Z,22nm,1.1s,mb5.5							
PRU	Pruhonice	94.74 320		*eP*		P	03 20 51.1	+1.9
PRU				*e*			03 24 39.6	
PRU				*eS*		SKSac	03 31 19.6	-1.0
PRU				MLR	MLR			
	comp=Z,800nm,22.1s,MS5.1							
PRU	Pruhonice	94.74 320		*eP*		P	03 20 51.1	+1.9
PRU				*e*PP		PP	03 24 39.6	+1.4
PRU				*ex*		x	03 24 53.6	
PRU				*e*SKS			03 31 19.6	
PRU				AMS	AMS		04 05 30.0	
	comp=Z,800nm,22.1s							
PVCC	Panska Ves	94.76 320		*eP*		P	03 20 49.7	+0.4
PVCC				*eS*		SKSac	03 31 20.8	+0.1
PVCC				MLR	MLR			
	comp=Z,1µm,22.7s,MS5.3							
PVCC	Panska Ves	94.76 320		*eP*		P	03 20 49.7	+0.4
PVCC				*ex*		x	03 24 54.2	
PVCC				*e*SKS			03 31 20.8	
PVCC				AMS	AMS		04 08 00.0	
	comp=Z,1µm,22.7s							
MOA	Molln	94.76 317		*i* PcP		PcP	03 20 49.8	0.0
	comp=Z,9.5nm,1.1s,SNR=6.9							
PRA	Prague	94.81 320		P		P	03 20 52.0	+2.4
PRA				PP	PP		03 24 40.0	+1.2
PRA				SKS			03 31 18.0	
PRA				AMS	AMS		04 05 00.0	
VOY	Vojsko	94.89 316		*eP*		P	03 20 50.6	+0.6
VOY				*e*		pP	03 21 00.4	-4.2
TRI	Trieste	94.95 315		PFAKE			03 21 00.0	+10
TRI				LR	LR			
	comp=Z,1µm,21.0s,MS5.3							
AQU	L'Aquila	94.98 312		*eP*		P	03 20 51.0	+0.4
	comp=Z,39nm,1.4s,mb5.7							
AQU				LR	LR			
	comp=Z,1µm,22.0s,MS5.3							
AQU	L'Aquila	94.98 312		*eP*		P	03 20 51.0	+0.5
AQU				pmax	pmax			
	comp=Z,39nm,1.4s,mb5.6							
AQU				MLR	MLR			
	comp=Z,1µm,22.0s,MS5.3							
MYKA	Terra Mystica	95.10 316	⇑	*i*PcP		PcP	03 20 51.9	+0.6
	comp=Z,18nm,1.7s							
BRG	Berggiesshubel	95.18 320		*eP*		P	03 20 51.3	+0.1
	comp=Z,23nm,1.3s,mb5.4							
BRG				*e*		pP	03 21 09.3	+3.5
	comp=Z,21nm,1.3s							
BRG				*e*PP		PP	03 24 42.0	+0.4
	comp=Z,12nm,1.4s							
BRG				SKS			03 31 27.0	
BRG				S	S		03 32 02.0	-0.6
BRG				PS	PS		03 33 18.0	-8.1
BRG				SS	SS		03 38 24.0	-5.8
BRG								
	comp=N,508nm,19.3s							
BRG								
	comp=E,1µm,20.5s							
BRG								
	comp=Z,2µm,21.4s							
BRG	Berggiesshubel	95.18 320		*eP*		P	03 20 51.3	+0.1
BRG				*e*		pP	03 21 09.3	+3.5
BRG				*e*			03 24 42.0	
BRG							03 31 27.0	
BRG				S	S		03 32 02.0	-0.6
BRG				PS	PS		03 33 18.0	-8.1
BRG				SS	SS		03 38 24.0	-5.8
BRG				pmax	pmax			
	comp=Z,14nm,1.3s,mb5.2							
BRG				pmax	pmax			
	comp=Z,8.0nm,1.4s,mb5.0							
BRG				MLR	MLR			
	comp=N,304nm,19.3s,MS5.2							
BRG				MLR	MLR			
	comp=E,802nm,20.5s,MS5.2							
BRG				MLR	MLR			
	comp=Z,874nm,21.4s,MS5.2							
KHC	Kasperske Hory	95.31 319		*eP*		P	03 20 51.5	-0.3
	comp=Z,16nm,1.4s,mb5.3							
KHC	Kasperske Hory	95.31 319		*eP*		P	03 20 52.6	+0.8
KHC				*eS*		SKSac	03 31 19.5	-4.2
KHC				MLR	MLR			
	comp=Z,1µm,19.0s,MS5.4							
KHC	Kasperske Hory	95.31 319		*eP*		P	03 20 52.6	+0.8
KHC				*e*PP		PP	03 24 34.5	-8.1
KHC				*ex*		x	03 24 51.4	
KHC				*e*SKS			03 31 19.5	
KHC				AMS	AMS		04 09 10.0	
	comp=Z,1µm,19.0s							
RUE	Ruedersdorf	95.38 322		*eP*		P	03 20 52.8	+0.7
	comp=Z,48nm,1.8s,mb5.6							
CLL	Collm	95.80 321		*eP*		P	03 20 54.0	0.0
	comp=Z,16nm,1.4s,mb5.3							
CLL				*i* pP		pP	03 21 05.8	-2.8
CLL				*i* sP		sP	03 21 11.6	-2.5
CLL				*e*SKS			03 31 18.0	
CLL	Collm	95.80 321		*eP*		P	03 20 54.0	0.0
CLL				*i* *PP		pP	03 21 05.8	-2.8
CLL				*i* *SP		sP	03 21 11.6	-2.5
CLL				pmax	pmax			
	comp=Z,16nm,1.4s,mb5.3							
CLL	Collm	95.80 321		*eP*		P	03 20 54.0	0.0
	comp=Z,16nm,1.4s,mb5.3							
CLL				*i* pP		pP	03 21 05.8	-2.8
CLL				*i* sP		sP	03 21 11.6	-2.5
CLL				*e*PP		PP	03 24 57.0	+11
CLL				*e*SKSac		SKSac	03 31 18.0	-8.2
CLL				*eS*		S	03 32 00.0	-8.0
CLL				*e*PS		PS	03 33 24.0	-8.9
CLL				*e*PPS			03 34 08.0	
CLL				*eSS*		SS	03 38 30.0	-8.5
CLL				*e*			03 40 18.0	
CLL				*e*SSS			03 42 30.0	
CLL				*e*SSSS			03 45 30.0	
HFS	Hagfors	95.82 330		P		P	03 20 52.9	-1.0
	comp=Z,32nm,1.2s,mb5.6,baz=145,slow=5.4,SNR=11							
HFS				PP		PP	03 24 43.7	-2.5
	comp=Z,3.9nm,0.7s,baz=100,slow=8.3,SNR=4.2							
ABTA	Abfaltersbach	95.89 316	⇑	*i*PcP		PcP	03 20 54.8	+0.1
	comp=Z,12nm,1.5s							
NKC	Novy Kostel	96.10 320		*eP*		P	03 20 56.6	+1.2
NKC				*e*			03 24 52.6	
NKC				*eS*		SKSac	03 31 27.7	-0.1
NKC				MLR	MLR			
	comp=Z,1µm,24.8s,MS5.2							
NKC	Novy Kostel	96.10 320		*eP*		P	03 20 56.6	+1.2
NKC				*e*PP		PP	03 24 52.6	+3.9
NKC				*e*SKS			03 31 27.7	
NKC				AMS	AMS		04 09 50.0	
	comp=Z,1µm,24.8s							
WTTA	Wattenberg	96.51 317	⇓	*i*PcP		PcP	03 20 57.6	+0.1
	comp=Z,14nm,1.4s							
MOX	Moxa	96.64 320		*eP*		P	03 20 58.8	+0.9
	comp=Z,26nm,1.6s,mb5.4							
MOX				*e*PP		PP	03 24 52.0	-0.9
MOX								
	comp=Z,700nm,22.0s							
MOX	Moxa	96.64 320		*eP*		P	03 20 58.8	+0.9
MOX				*e*			03 24 52.0	
MOX				pmax	pmax			
	comp=Z,26nm,1.6s,mb5.4							
MOX				MLR	MLR			
	comp=Z,700nm,22.0s,MS5.1							
KBS	Kingsbay	96.67 349		*i* P		P	03 20 56.2	-1.3
KBS				LR	LR			
	comp=Z,2µm,20.0s,MS5.6							
KBS	Kingsbay	96.67 349	*d*	*iP*		P	03 20 56.1	-1.4
KBS				pmax	pmax			
	comp=Z,16nm,1.0s,mb5.4							
GRA1	Grafenberg Arr	96.87 319		*eP*		P	03 20 59.4	+0.5
	comp=Z,30nm,1.4s,mb5.5							
GRF	Grafenberg Arr	96.87 319		*eP*		P	03 20 59.4	+0.5
	comp=Z,30nm,1.4s,mb5.5							
GRF	Grafenberg Arr	96.87 319		*eP*		P	03 20 59.4	+0.5
	comp=Z,30nm,1.4s,mb5.5							
GRF	Grafenberg Arr	96.87 319		*eP*		P	03 20 59.4	+0.5
GRF				pmax	pmax			
	comp=Z,30nm,1.4s,mb5.5							
GRF	Grafenberg Arr	96.87 319		*eP*		P	03 20 59.4	+0.5
GRF				pmax	pmax			
	comp=Z,30nm,1.4s,mb5.5							
MOTA	Moosalm	96.87 317	⇑	*i*PcP		PcP	03 20 59.5	+0.4
	comp=Z,6.3nm,0.9s							
NOA	NORSAR Array B	97.07 331		P		P	03 20 58.3	-1.3
	comp=Z,3.8nm,1.0s,mb4.8,baz=90,slow=4.5,SNR=4.0							
NOA				PP	PP		03 24 56.3	+0.4
	comp=Z,2.8nm,0.9s,baz=96,slow=7.6,SNR=4.1							
NOA				LR	LR		04 09 26.0	
	comp=Z,1µm,21.5s,MS5.3,baz=100,slow=38							
NOA	NORSAR Array B	97.07 331		P		P	03 20 58.3	-1.3
NOA							03 24 56.3	
RETA	Reutte	97.11 317	⇑	*iP*		P	03 21 00.0	0.0
	comp=Z,12nm,1.2s,mb5.2,SNR=6.7							
FETA	Feichten	97.12 317	⇑	*i*PcP		PcP	03 21 01.0	+0.8
	comp=Z,8.7nm,1.3s							
VLC	Villacollemand	97.27 314		PFAKE			03 21 10.0	+9.1
VLC				LR	LR			
	comp=Z,2µm,22.0s,MS5.4							
DAVOX	Davos/Dischmat	97.69 316		P		P	03 21 02.7	0.0
	comp=Z,2.9nm,0.5s,mb5.1,baz=34,slow=6.9,SNR=8.1							
DAVA	Damuels	97.70 317	⇑	*i*PcP		PcP	03 21 03.4	+0.6
	comp=Z,14nm,1.1s							
KEST	Kesra	97.78 305		*eP*		P	03 21 04.6	+1.1
KEST	Kesra	97.78 305		P		P	03 21 04.4	+1.0
	comp=Z,2.6nm,1.1s,mb4.7,baz=130,slow=3.1,SNR=4.5							
KEST				LR	LR		04 03 59.9	
	comp=Z,444nm,22.0s,MS4.9,baz=170,slow=35							
KONO	Kongsberg	97.88 329		PFAKE			03 21 10.0	+6.7
KONO				LR	LR			
	comp=Z,1µm,21.0s,MS5.4							
VSL	Villasalto	97.89 309		PFAKE			03 21 20.0	+16
VSL				LR	LR			
	comp=Z,391nm,20.0s,MS4.9							
TUE	Stuetta	98.06 316		PFAKE			03 21 20.0	+16
TUE				L

ILAR **Eielson Array 103.64 25** Pdiff Pdif 03 21 27.3 -1.8
comp=Z,0.2nm,0.6s,baz=282,slow=4.5,SNR=5.0
ILAR PKKPbc PKKPbc 03 37 21.8 -1.8
comp=Z,5.5nm,1.1s,baz=121,slow=1.9,SNR=21
EKA Eskdalemuir Ar 105.17 326 PKiKP PKiKP 03 25 46.2 -3.8
comp=Z,1.7nm,0.9s,baz=72,slow=2.3,SNR=4.3
EKA PP PP 03 25 57.8 +0.7
comp=Z,2.7nm,0.8s,baz=88,slow=7.5,SNR=4.9
ESK Eskdalemuir 105.20 326 PFAKE 03 26 00.0 +10
ESK LR LR
comp=Z,1μm,22.0s,MS5.5
EGAK Eagle 105.98 24 PFAKE 03 26 00.0 +8.8
EGAK LR LR
comp=Z,951nm,20.0s,MS5.3
SHEL Horse Pasture 107.43 251 PFAKE 03 26 10.0 +15
SHEL LR LR
comp=Z,2μm,19.0s,MS5.7
ESDC Sonseca Array 108.17 310 PKPdf PKiKP 03 25 55.7 -0.3
ESDC PP PP 03 26 23.3 +3.6
ESDC PKKPbc PKKPbc 03 37 09.3 +0.5
ESDC PKKP PKKPbc 03 37 20.4 +12
ESDC Sonseca Array 108.17 310 PKiKP PKiKP 03 25 55.7 -0.3
comp=Z,0.4nm,0.5s,baz=38,slow=2.3,SNR=6.0
ESDC PP PP 03 26 23.3 +3.6
comp=Z,1.6nm,0.7s,baz=75,slow=6.5,SNR=5.8
ESDC PKKPbc PKKPbc 03 37 09.3 +0.5
comp=Z,1.0nm,0.8s,baz=318,slow=3.5,SNR=6.1
ESDC PKKP PKKPbc 03 37 20.4 +12
comp=Z,2.6nm,0.9s,baz=276,slow=4.7,SNR=9.9
ESLA Sonseca Array 108.17 310 PFAKE 03 26 10.0 +14
ESLA LR LR
comp=Z,3μm,22.0s,MS5.8
PAB San Pablo 108.48 309 PFAKE 03 26 10.0 +13
PAB LR LR
comp=Z,535nm,20.0s,MS5.1
PMSA Palmer Station 108.55 185 PFAKE 03 26 10.0 +14
PMSA LR LR
comp=Z,2μm,19.0s,MS5.7
DBIC Dimbokro 109.79 275 PKPdf PKiKP 03 25 59.6 -0.2
DBIC LR LR
comp=Z,855nm,19.0s,MS5.3
DBIC Dimbokro 109.79 275 PKiKP PKiKP 03 25 59.6 -0.2
comp=Z,4.2nm,1.0s,baz=240,slow=1.8,SNR=3.7
SFS San Fernando 110.32 306 PFAKE 03 26 10.0 +10
SFS LR LR
comp=Z,1μm,20.0s,MS5.4
MTE Manteigas 110.78 311 PFAKE 03 26 10.0 +9.1
MTE LR LR
comp=Z,799nm,21.0s,MS5.3
WRAK Wrangell Islan 113.21 30 PFAKE 03 26 20.0 +15
WRAK LR LR
comp=Z,639nm,19.0s,MS5.2
RKT Rikitea 115.02 119 *e*PS PS 03 36 48.8 -0.7
comp=Z,784nm,30.0s
RKT *e*SS SS 03 43 05.4 +3.2
comp=Z,930nm,33.5s
RKT *e*LR LR 04 00 51.6
comp=Z,3μm,26.2s
YKA Yellowknife Ar 117.12 19 PKP PKPdf 03 26 11.7 -0.7
YKA PKKPbc PKKPbc 03 36 37.7 -1.9
YKA PKKP PKKPdf 03 37 06.0 -0.5
YKA Yellowknife Ar 117.12 19 PKP PKPdf 03 26 11.7 -0.7
comp=Z,2.4nm,0.8s,baz=316,slow=2.2,SNR=6.8
YKA PKKPbc PKKPbc 03 36 37.7 -1.9
comp=Z,5.4nm,0.9s,baz=124,slow=3.6,SNR=11
YKA PKKP PKKPdf 03 37 05.9 -0.5
comp=Z,1.5nm,0.7s,baz=126,slow=4.3,SNR=3.8
PTCN Pitcairn Islan 118.48 123 PFAKE 03 26 30.0 +14
PTCN LR LR
comp=Z,3μm,22.0s,MS5.9
USHA Ushuaia 118.75 185 PKP PKPdf 03 26 17.3 +1.4
comp=Z,33nm,1.0s,baz=162,slow=1.9,SNR=12
NLWA Neilton Lookou 122.00 37 PFAKE 03 26 30.0 +7.8
NLWA LR LR
comp=Z,526nm,20.0s,MS5.2
E03A Lebam 122.60 37 ⇑PKiKP PKiKP 03 26 23.1 -0.5
baz=122
JCW Jim Creek 122.73 35 *e*PKPdf PKPdf 03 26 25.0 +1.4
D05A Enumclaw 123.22 36 ⇑PKiKP PKiKP 03 26 25.3 +0.5
baz=123
F04A Amboy 123.59 38 ⇑PKiKP PKiKP 03 26 25.8 +0.2
baz=124
COR Corvallis 123.69 39 PFAKE 03 26 40.0 +14
COR LR LR
comp=Z,577nm,20.0s,MS5.2
ETW Entiat 123.96 35 *e*PKPdf PKPdf 03 26 26.6 +0.6
EDM Edmonton 124.07 26 *e*PKPdf PKPdf 03 26 25.6 -0.5
B08A Colville Reser 124.11 34 ⇑PKiKP PKiKP 03 26 26.3 -0.2
baz=124
H04A Detroit Lake 124.34 39 ⇓PKiKP PKiKP 03 26 27.1 -0.1
baz=124
HUMO Hull Mountain 124.82 41 *e*PKPdf PKPdf 03 26 27.8 -0.1
HUMO LR LR
comp=Z,571nm,20.0s,MS5.2
CMLA Cha da Macela 124.94 312 PFAKE 03 26 40.0 +12
CMLA LR LR
comp=Z,751nm,20.0s,MS5.4
OD2 Odessa Site #2 124.99 35 *e*PKPdf PKPdf 03 26 28.1 +0.1
G06A Carlson Farm, 125.02 38 ⇑PKiKP PKiKP 03 26 28.8 +0.4
baz=125
RSW Rattlesnake Hi 125.03 36 *e*PKPdf PKPdf 03 26 28.9 +0.8
D08A Wollman Farm, 125.06 35 ⇑PKiKP PKiKP 03 26 28.8 +0.4
baz=125
HAWA Hanford 125.07 36 *e*PKPdf PKPdf 03 26 28.8 +0.7
HAWA LR LR
comp=Z,501nm,20.0s,MS5.2
E08A Dider Farm, El 125.29 36 ⇑PKiKP PKiKP 03 26 29.4 +0.4
baz=125
NEW Newport 125.37 33 PFAKE 03 26 40.0 +11
NEW LR LR
comp=Z,668nm,22.0s,MS5.3
YBH Yreka Blue Hor 125.38 42 PFAKE 03 26 40.0 +11
YBH LR LR
comp=Z,474nm,22.0s,MS5.1
A12A Yaak River Ran 125.75 32 ⇓PKiKP PKiKP 03 26 30.2 +0.4
baz=126
E09A Wood Farm, Sta 125.81 35 ⇑PKiKP PKiKP 03 26 29.9 0.0
baz=126
G08A Pilot Rock 126.00 37 ⇓PKiKP PKiKP 03 26 30.6 +0.2
baz=126
WDC Whiskeytown Da 126.01 43 PFAKE 03 26 40.0 +10
WDC LR LR
comp=Z,605nm,22.0s,MS5.2
LNOR Lincton Mounta 126.08 36 *e*PKPdf PKPdf 03 26 30.6 +0.5
C11A Tepee Creek (N 126.09 33 ⇑PKiKP PKiKP 03 26 30.5 0.0
baz=126
K05A Summer Lake 126.11 40 ⇑PKiKP PKiKP 03 26 30.8 +0.1
baz=126
I07A Izee 126.31 38 ⇑PKiKP PKiKP 03 26 31.3 +0.3
baz=126
HOPS Hopland 126.31 45 PFAKE 03 26 40.0 +9.2
HOPS LR LR
comp=Z,812nm,22.0s,MS5.4
A13A Flathead Natio 126.38 31 ⇑PKiKP PKiKP 03 26 31.3 +0.2
baz=126
WALA Waterton Lakes 126.56 31 *e*PKPdf PKPdf 03 26 30.2 -0.7
C12B Naegeli Ranch, 126.59 33 ⇓PKiKP PKiKP 03 26 30.9 -0.5
baz=126
F10A Beach Ranch, E 126.64 35 ⇑PKiKP PKiKP 03 26 31.4 -0.2
baz=126
B13A Whitefish 126.71 31 ⇑PKiKP PKiKP 03 26 31.7 0.0
baz=127
MCCM Marconi Confer 126.80 46 PFAKE 03 26 40.0 +8.3
MCCM LR LR
comp=Z,685nm,20.0s,MS5.3
BSMT Bassoo Peak 126.87 32 *e*PKPdf PKPdf 03 26 31.4 -0.1
MOD Modoc 126.89 41 *e*PKPdf PKPdf 03 26 32.4 +0.6
MOD LR LR
comp=Z,473nm,20.0s,MS5.2
D12A Red Ives Fores 127.05 33 ⇑PKiKP PKiKP 03 26 31.8 -0.7
baz=127
C13A Hot Springs 127.09 32 ⇓PKiKP PKiKP 03 26 31.8 -0.7
baz=127
A15A Johnson Ranch, 127.20 30 ⇑PKiKP PKiKP 03 26 32.1 -0.6
baz=127
J08A Circle Bar Ran 127.32 39 ⇓PKiKP PKiKP 03 26 33.5 +0.4
baz=127
SWMT Swartz Lake 127.50 32 *e*PKPdf PKPdf 03 26 32.5 -0.3
D13A Huson 127.51 33 ⇓PKiKP PKiKP 03 26 32.7 -0.7
baz=127
WVOR Wild Horse Val 127.70 40 PFAKE 03 26 50.0 +17
WVOR LR LR
comp=Z,546nm,20.0s,MS5.2
B15A Bradely Ranch, 127.72 31 ⇓PKiKP PKiKP 03 26 32.9 -0.8
baz=128

A16A West Butte Ran 127.78 29 ⇑PKiKP PKiKP 03 26 33.4 -0.5
baz=128
F12A Elk City 127.88 34 ⇓PKiKP PKiKP 03 26 33.5 -0.7
baz=128
SLMT Seeley Lake 127.93 32 *e*PKPdf PKPdf 03 26 34.1 +0.5
MSO Missoula 127.95 33 ⇓PKiKP PKiKP 03 26 33.9 -0.4
baz=128
MSO Missoula 127.95 33 *e*PKPdf PKPdf 03 26 33.5 -0.1
MSO LR LR
comp=Z,452nm,20.0s,MS5.2
D14A Greenough 128.03 32 ⇑PKiKP PKiKP 03 26 33.8 -0.6
baz=128
C15A Salmond Ranch, 128.05 31 ⇓PKiKP PKiKP 03 26 34.1 -0.3
baz=128
E13A Victor 128.06 33 ⇑PKiKP PKiKP 03 26 33.8 -0.6
baz=128
G12A Big Creek, Yel 128.22 35 ⇑PKiKP PKiKP 03 26 34.2 -0.6
baz=128
CHMT Chamberlain Mo 128.27 32 *e*PKPdf PKPdf 03 26 34.7 +0.4
F13A Darby 128.38 34 ⇓PKiKP PKiKP 03 26 34.5 -0.7
baz=128
SAO San Andreas Ge 128.41 47 PFAKE 03 26 50.0 +15
SAO LR LR
comp=Z,588nm,22.0s,MS5.2
WCN Washoe City 128.49 44 *e*PKPdf PKPdf 03 26 31.0 -4.0
PAHR Pah Rah Range 128.56 43 *e*PKPdf PKPdf 03 26 36.2 +1.1
D15A Lincoln 128.57 32 ⇓PKiKP PKiKP 03 26 35.2 -0.3
baz=128
CMB Columbia Colle 128.63 45 *e*PKPdf PKPdf 03 26 35.8 +0.5
CMB *e*PP PP 03 28 35.1 -6.0
CMB LR LR
comp=Z,475nm,21.0s,MS5.2
A18A Metzger Ranch, 128.64 28 ⇓PKiKP PKiKP 03 26 35.1 -0.4
baz=128
H12A Diamond D Ranc 128.83 36 ⇓PKiKP PKiKP 03 26 36.2 +0.2
baz=129
G13A Cobalt 128.86 35 ⇓PKiKP PKiKP 03 26 35.5 -0.6
baz=129
F14A Wisdom 128.90 33 ⇑PKiKP PKiKP 03 26 36.3 +0.1
baz=129
MFID Camas Ranch 128.91 37 ⇑PKiKP PKiKP 03 26 36.7 +0.5
baz=129
B18A Beardsley Farm 129.04 29 ⇓PKiKP PKiKP 03 26 36.1 -0.3
baz=129
C17A Wharram Farm, 129.08 30 ⇑PKiKP PKiKP 03 26 36.0 -0.5
baz=129
D16A Dana Ranch, Ca 129.08 31 ⇓PKiKP PKiKP 03 26 36.3 -0.2
baz=129
WAKR Walker 129.08 44 *e*PKPdf PKPdf 03 26 36.9 +0.9
I12A Atlanta 129.10 36 ⇑PKiKP PKiKP 03 26 37.1 +0.5
baz=129
H13A Challis 129.16 35 ⇑PKiKP PKiKP 03 26 36.8 +0.1
baz=129
EGMT Eagleton 129.31 29 ⇑PKiKP PKiKP 03 26 36.7 -0.2
baz=129
EGMT Eagleton 129.31 29 *e*PKPdf PKPdf 03 26 36.7 +0.5
EGMT LR LR
comp=Z,648nm,20.0s,MS5.3
F15A Butte 129.35 33 ⇓PKiKP PKiKP 03 26 36.8 -0.3
baz=129
LRM Limekiln Ridge 129.39 33 *e*PKPdf PKPdf 03 26 37.4 +0.9
D17A Six Diamond Ra 129.44 31 ⇑PKiKP PKiKP 03 26 36.9 -0.3
baz=129
DLMT Dillon 129.60 33 *e*PKPdf PKPdf 03 26 36.5 -0.3
I13A Wildhorse Cree 129.63 36 ⇑PKiKP PKiKP 03 26 38.1 +0.4
baz=130
H14A Leadore 129.64 35 ⇓PKiKP PKiKP 03 26 38.0 +0.3
baz=130
BMN Battle Mountai 129.64 41 PFAKE 03 26 50.0 +13
BMN LR LR
comp=Z,467nm,19.0s,MS5.2
HLID Hailey 129.66 36 ⇑PKiKP PKiKP 03 26 38.5 +0.7
baz=130
HLID Hailey 129.66 36 *e*PKPdf PKPdf 03 26 38.4 +1.3
HLID LR LR
comp=Z,640nm,22.0s,MS5.3
G15A Dillon 129.78 34 ⇑PKiKP PKiKP 03 26 38.2 +0.2
baz=130
MCMT McKenzie Canyo 129.80 34 *e*PKPdf PKPdf 03 26 38.8 +1.5
E17A Martinsdale 129.81 31 ⇑PKiKP PKiKP 03 26 37.7 -0.3
baz=130
C19A Slack Wire Ran 129.85 29 ⇑PKiKP PKiKP 03 26 37.9 -0.2
baz=130
D18A Linhart Farms, 129.85 30 ⇑PKiKP PKiKP 03 26 37.6 -0.5
baz=130
J13A Cove Ranch, Pi 129.90 36 ⇓PKiKP PKiKP 03 26 38.7 +0.5
baz=130
NVAR Mina Array Bea 129.90 44 PKP PKPdf 03 26 38.3 +0.7
comp=Z,14nm,1.1s,baz=276,slow=1.7,SNR=23
NVAR SKPbc 03 29 57.4
comp=Z,6.5nm,1.0s,baz=277,slow=3.6,SNR=6.7
BOZ Bozeman (W) 129.94 33 ⇑PKiKP PKiKP 03 26 38.3 0.0
baz=130
BOZ Bozeman (W) 129.94 33 *e*PKIKP PKPdf 03 26 38.4 +0.9
BOZ MLR MLR
comp=Z,573nm,20.0s,MS5.3
I14A Mackay 130.01 35 ⇓PKiKP PKiKP 03 26 38.5 +0.1
baz=130
G16A Moss Hill, Enn 130.12 33 ⇓PKiKP PKiKP 03 26 38.8 +0.2
baz=130
E18A Harlowton 130.23 31 ⇑PKiKP PKiKP 03 26 38.7 -0.1
baz=130
F17A Fitzpatrick Pl 130.29 32 ⇓PKiKP PKiKP 03 26 39.2 +0.2
baz=130
J14A Carey 130.33 36 ⇑PKiKP PKiKP 03 26 39.6 +0.4
baz=130
I15A Monteview 130.51 35 ⇑PKiKP PKiKP 03 26 39.5 0.0
baz=130
VES Vestal, Richgr 130.53 47 ⇑PKiKP PKiKP 03 26 38.9 -0.9
baz=130
G17A Pierce Place, 130.63 32 ⇑PKiKP PKiKP 03 26 40.0 +0.3
baz=130
D20A Manuel Ranch, 130.74 29 ⇓PKiKP PKiKP 03 26 39.8 0.0
baz=131
H16A Russell Place, 130.76 33 ⇑PKiKP PKiKP 03 26 40.7 +0.7
baz=131
F18A Big Timber 130.78 31 ⇓PKiKP PKiKP 03 26 40.0 +0.1
baz=131
TPH Tonopah 130.82 44 PFAKE 03 26 50.0 +11
TPH LR LR
comp=Z,510nm,22.0s,MS5.2
E19A Rath Farm, Rou 130.87 30 ⇑PKiKP PKiKP 03 26 39.7 -0.4
baz=131
GCMT Greycliff 130.88 31 *e*PKPdf PKPdf 03 26 40.6 +1.4
J15A Blackfoot 130.91 35 ⇑PKiKP PKiKP 03 26 40.8 +0.5
baz=131
YMR Madison River 130.94 33 *e*PKPdf PKPdf 03 26 40.4 +1.0
K14A Jones Ranch, D 131.00 37 ⇑PKiKP PKiKP 03 26 40.9 +0.4
baz=131
ISA Isabella 131.05 47 ⇑PKiKP PKiKP 03 26 40.9 +0.1
baz=131
P11A Circle Ranch, 131.06 41 ⇑PKiKP PKiKP 03 26 40.9 +0.2
baz=131
YFT Old Faithful 131.15 33 *e*PKPdf PKPdf 03 26 40.9 +1.1
SCHQ Schefferville 131.15 353 PKP PKPdf 03 26 39.0 -0.5
SCHQ Schefferville 131.15 353 PKP PKPdf 03 26 39.0 -0.5
comp=Z,5.6nm,1.0s,baz=36,slow=8.7,SNR=3.4
I16A Newdale 131.16 34 ⇑PKiKP PKiKP 03 26 41.0 +0.2
baz=131
F19A Roth Farm, Mol 131.21 31 ⇑PKiKP PKiKP 03 26 40.5 -0.3
baz=131
L14A Malta 131.26 37 ⇓PKiKP PKiKP 03 26 41.3 +0.3
baz=131
K15A Arbon 131.29 36 ⇓PKiKP PKiKP 03 26 41.6 +0.5
baz=131
D21A La Casta Ranch 131.31 28 ⇑PKiKP PKiKP 03 26 41.0 0.0
baz=131
LKWY Lake 131.31 33 PFAKE 03 26 50.0 +10
LKWY LR LR
comp=Z,1μm,20.0s,MS5.6
S10A Tonopah Range, 131.33 44 ⇑PKiKP PKiKP 03 26 41.5 +0.2
baz=131
O12A Currie 131.33 40 ⇓PKiKP PKiKP 03 26 41.6 +0.4
baz=131
DAC Darwin (Calif) 131.41 46 PFAKE 03 26 50.0 +9.4
DAC LR LR
comp=Z,566nm,22.0s,MS5.2
IMW Indian Meadow 131.45 34 *e*PKPdf PKPdf 03 26 41.9 +1.5
FLWY Flagg Ranch 131.46 34 *e*PKPdf PKPdf 03 26 41.8 +1.3
J16A Bone 131.46 35 ⇓PKiKP PKiKP 03 26 41.5 +0.1
baz=131
Q11A Duckwater 131.50 42 ⇑PKiKP PKiKP 03 26 41.9 +0.2
baz=131
DGMT Dagmar 131.51 25 ⇓PKiKP PKiKP 03 26 41.3 -0.1
baz=131
DGMT Dagmar 131.51 25 *e*PKPdf PKPdf 03 26 41.4 +1.0
DGMT LR LR

comp=Z,763nm,22.0s,MS5.4
RLMT Red Lodge 131.54 32 ⇑PKiKP PKiKP 03 26 41.9 +0.4
baz=131
RLMT Red Lodge 131.54 32 PFAKE 03 26 50.0 +9.5
RLMT LR LR
comp=Z,712nm,19.0s,MS5.4
RRI2 Red Ridge 131.58 35 *e*PKPdf PKPdf 03 26 42.3 +1.6
MPMC Manual Prospec 131.59 46 ⇓PKiKP PKiKP 03 26 42.3 +0.4
baz=132
E21A Keefer Ranch, 131.65 29 ⇓PKiKP PKiKP 03 26 41.7 0.0
baz=132
MOOW Moose Ponds 131.65 34 *e*PKPdf PKPdf 03 26 41.6 +0.8
P12A McGill 131.66 41 ⇑PKiKP PKiKP 03 26 42.3 +0.3
baz=132
HVU Hansel Valley 131.69 37 *e*PKPdf PKPdf 03 26 42.6 +1.7
TPAW Teton Pass 131.70 34 *e*PKPdf PKPdf 03 26 42.2 +1.3
EDW2 Edwards Air Fo 131.75 48 ⇓PKiKP PKiKP 03 26 42.4 +0.1
baz=132
K16A Soda Springs 131.75 35 ⇓PKiKP PKiKP 03 26 42.1 +0.1
baz=132
L15A Malad City 131.79 37 ⇑PKiKP PKiKP 03 26 42.0 -0.1
baz=132
R11A Troy Canyon, C 131.80 43 ⇓PKiKP PKiKP 03 26 42.6 +0.4
baz=132
LOHW Long Hollow 131.81 34 *e*PKPdf PKPdf 03 26 42.0 +0.9
LOHW *e*PP PP 03 28 59.5 -1.9
SNOW Snow King Moun 131.83 34 *e*PKPdf PKPdf 03 26 42.8 +1.7
REDW Red Top Meadow 131.84 34 *e*PKPdf PKPdf 03 26 42.0 +0.8
FURC Furnace Creek, 131.84 46 ⇓PKiKP PKiKP 03 26 42.4 0.0
baz=132
O13A Hicks Ranch, I 131.89 40 ⇓PKiKP PKiKP 03 26 42.7 +0.3
baz=132
J17A Brown Place, J 131.91 34 ⇑PKiKP PKiKP 03 26 42.5 +0.2
baz=132
LAO LASA Array 131.94 28 ⇓PKiKP PKiKP 03 26 42.4 +0.1
baz=132
LAO LASA Array 131.94 28 *e*PKPdf PKPdf 03 26 42.8 +1.6
LAO LR LR
comp=Z,738nm,22.0s,MS5.3
MWC Mount Wilson 131.99 49 *e*PKPdf PKPdf 03 26 42.9 +1.2
G20A Bridger 132.01 31 ⇓PKiKP PKiKP 03 26 42.3 -0.2
baz=132
BGU Big Grassy Mou 132.04 38 *e*PKPdf PKPdf 03 26 42.7 +1.1
AHID Auburn Hatcher 132.07 35 PFAKE 03 26 50.0 +8.4
AHID LR LR
comp=Z,749nm,21.0s,MS5.4
M15A Larsen Ranch, 132.08 37 ⇓PKiKP PKiKP 03 26 42.3 -0.4
baz=132
SPUT South Promonto 132.17 38 *e*PKPdf PKPdf 03 26 43.2 +1.3
U10A Ash Meadows, A 132.25 45 ⇓PKiKP PKiKP 03 26 43.7 +0.5
baz=132
P13A Bates Ranch, G 132.25 41 ⇑PKiKP PKiKP 03 26 43.3 +0.2
baz=132
L16A Fish Haven 132.35 36 ⇓PKiKP PKiKP 03 26 43.2 -0.1
baz=132
J18A Kendall Valley 132.40 34 ⇓PKiKP PKiKP 03 26 43.2 -0.1
baz=132
GSC Goldstone 132.43 47 ⇓PKiKP PKiKP 03 26 44.0 +0.4
baz=132
GSC Goldstone 132.43 47 *e*PKIKP PKPdf 03 26 44.0 +1.5
HWUT Hardware Ranch 132.52 37 *e*PKPdf PKPdf 03 26 42.4 -0.1
HWUT LR LR
comp=Z,708nm,21.0s,MS5.3
SHOC Shoshone 132.53 46 ⇑PKiKP PKiKP 03 26 43.9 +0.1
baz=132
DUG Dugway 132.59 39 ⇓PKiKP PKiKP 03 26 44.0 +0.2
baz=132
DUG Dugway 132.59 39 *e*PKIKP PKPdf 03 26 43.4 +0.7
DUG MLR MLR
comp=Z,507nm,22.0s,MS5.2
S12A Delamar Landin 132.68 43 ⇓PKiKP PKiKP 03 26 44.5 +0.5
baz=133
K18A Toltan Ranch, 132.76 35 ⇑PKiKP PKiKP 03 26 44.1 +0.1
baz=133
P14A Drum Mountains 132.78 40 ⇓PKiKP PKiKP 03 26 44.4 +0.2
baz=133
PLCA Paso Flores 132.92 185 PKP PKPdf 03 26 44.0 +0.6
PLCA PP PP 03 29 07.0 -0.6
PLCA SKPbc SKPbc 03 30 09.3 +2.3
PLCA LR LR
comp=Z,1μm,21.0s,MS5.7
PLCA Paso Flores 132.92 185 PKP PKPdf 03 26 44.0 +0.6
comp=Z,11nm,1.0s,baz=200,slow=2.3,SNR=6.3
PLCA PP PP 03 29 07.0 -0.6
comp=Z,18nm,1.2s,baz=176,slow=6.3,SNR=4.8
PLCA SKPbc SKPbc 03 30 09.3 +2.3
comp=Z,7.6nm,1.1s,baz=182,slow=4.7,SNR=3.5
I20A Worland 132.93 32 ⇓PKiKP PKiKP 03 26 43.9 -0.5
baz=133
BW06 Boulder Array 132.95 34 ⇑PKiKP PKiKP 03 26 43.8 -0.6
baz=133
BW06 Boulder Array 132.95 34 PFAKE 03 27 00.0 +17
BW06 LR LR
comp=Z,649nm,20.0s,MS5.3
PDAR Pinedale Array 132.95 34 PKP PKPdf 03 26 42.5 -0.8
comp=Z,1.8nm,0.5s,baz=107,slow=1.5,SNR=18
PDAR SKPbc SKPbc 03 30 08.9 +2.0
comp=Z,9.0nm,0.9s,baz=318,slow=0.9,SNR=8.2
Q14A Sevier Lake (B 132.98 41 ⇓PKiKP PKiKP 03 26 44.6 0.0
baz=133
TUQ Turquoise Moun 133.00 46 ⇑PKiKP PKiKP 03 26 44.9 +0.1
baz=133
SHPR Sheep Range 133.03 45 *e*PKPdf PKPdf 03 26 44.9 +1.3
ULM Lac du Bonnet 133.06 18 PKP PKPdf 03 26 42.6 -0.7
comp=Z,6.8nm,0.8s,baz=327,slow=1.5,SNR=5.9
ULM SKPbc SKPbc 03 30 08.7 +1.6
comp=Z,16nm,1.0s,baz=356,slow=4.9,SNR=5.8
M17A Scullys Gap (B 133.13 36 ⇑PKiKP PKiKP 03 26 44.3 -0.5
baz=133
V11A Goodsprings 133.16 46 ⇑PKiKP PKiKP 03 26 45.2 +0.1
baz=133
NLU North Lily Min 133.19 39 *e*PKPdf PKPdf 03 26 44.7 +0.9
JLU Jordanelle 133.20 38 *e*PKPdf PKPdf 03 26 44.5 +0.7
L18A Fontenelle, Gr 133.22 35 ⇑PKiKP PKiKP 03 26 44.7 -0.3
baz=133
P15A Leamington 133.29 39 ⇓PKiKP PKiKP 03 26 45.0 -0.2
baz=133
K19A Absolon Red Bu 133.30 34 ⇑PKiKP PKiKP 03 26 44.3 -0.9
baz=133
N17A Moffit Pass 133.36 37 ⇑PKiKP PKiKP 03 26 45.3 -0.1
baz=133
S13A Holt Ranch, En 133.36 43 ⇓PKiKP PKiKP 03 26 45.9 +0.5
baz=133
DAU Daniels Canyon 133.43 38 *e*PKPdf PKPdf 03 26 46.0 +1.7
MPU Maple Canyon 133.43 38 *e*PKPdf PKPdf 03 26 46.0 +1.8
PFO Pinyon Flat Ob 133.45 49 ⇓PKiKP PKiKP 03 26 45.8 +0.1
baz=133
PFO Pinyon Flat Ob 133.45 49 *e*PKIKP PKPdf 03 26 46.2 +1.7
PFO MLR MLR
comp=Z,618nm,21.0s,MS5.3
U12A Valley of Fire 133.49 44 ⇑PKiKP PKiKP 03 26 45.9 +0.1
baz=133
GMRC Granite Mounta 133.50 47 ⇓PKiKP PKiKP 03 26 45.9 +0.1
baz=133
ARUT Antelope Range 133.53 42 *e*PKPdf PKPdf 03 26 36.0 -8.5
Q15A Fillmore 133.55 40 ⇓PKiKP PKiKP 03 26 45.7 0.0
baz=133
BELC Belle Mtn. Jos 133.62 48 ⇓PKiKP PKiKP 03 26 46.1 0.0
baz=134
T13A Saint George 133.63 43 ⇓PKiKP PKiKP 03 26 46.1 +0.1
baz=134
V12A Nelson 133.63 45 ⇓PKiKP PKiKP 03 26 46.4 +0.3
baz=134
K20A Yellowstone Ra 133.69 34 ⇑PKiKP PKiKP 03 26 45.0 -1.0
baz=134
CCUT Cedar City 133.71 42 *e*PKPdf PKPdf 03 26 46.7 +1.8
CCUT *e*PP PP 03 29 12.8 -1.1
S14A Cedar City 133.73 42 ⇑PKiKP PKiKP 03 26 46.4 +0.2
baz=134
LDFC Landfair 133.76 46 *e*PKPdf PKPdf 03 26 46.8 +1.7
MONP Monument Peak 133.79 50 ⇑PKiKP PKiKP 03 26 46.7 +0.3
baz=134
O17A Robinson Place 133.88 38 ⇓PKiKP PKiKP 03 26 46.7 +0.3
baz=134
MSU Marysvale 133.96 41 *e*PKPdf PKPdf 03 26 47.4 +2.0
MSU *e*PP PP 03 29 14.1 -1.2
TRQA Tornquist 134.04 195 *e*PKPdf PKPdf 03 26 45.9 +0.4
TRQA LR LR
comp=Z,1μm,19.0s,MS5.6
R15A Junction 134.07 41 ⇑PKiKP PKiKP 03 26 47.4 +0.5
baz=134
T14A Hurricane 134.16 43 ⇑PKiKP PKiKP 03 26 47.2 +0.1
baz=134
IRM Iron Mountain 134.17 47 ⇑PKiKP PKiKP 03 26 47.1 -0.1
baz=134
V13A Grand Canyon W 134.18 45 ⇓PKiKP PKiKP 03 26 47.2 +0.1
baz=134

BC3 Big Chuckawall 134.18 48 ⇑PKiKP PKiKP 03 26 47.2 0.0
baz=134
O18A Roosevelt 134.27 37 ⇑PKiKP PKiKP 03 26 47.1 -0.1
baz=134
P17A Butcher Ranch, 134.31 39 ⇑PKiKP PKiKP 03 26 47.1 -0.2
baz=134
N19A John Jarvie Ra 134.37 36 ⇓PKiKP PKiKP 03 26 46.3 -1.0
baz=134
U14A Mt Trumbull 134.44 44 ⇑PKiKP PKiKP 03 26 47.6 -0.1
baz=134
P18A Preston Nutter 134.52 38 ⇓PKiKP PKiKP 03 26 47.6 -0.1
baz=134
R16A Teasdale 134.54 40 ⇑PKiKP PKiKP 03 26 47.6 -0.2
baz=134
SRU San Rafael 134.66 39 ⇓PKiKP PKiKP 03 26 47.5 -0.5
baz=135
SRU San Rafael 134.66 39 ePKiKP PKPdf 03 26 47.2 +0.6
K22A Casper 134.68 32 ⇓PKiKP PKiKP 03 26 46.9 -1.1
baz=135
L21A Rawlins 134.69 34 ⇑PKiKP PKiKP 03 26 47.0 -1.0
baz=135
AGMN Agassiz Nation 134.78 19 ePKPdf PKPdf 03 26 47.9 +1.4
AGMN LR LR
comp=Z,823nm,21.0s,MS5.4
O19A Miners Draw (B 134.78 37 ⇑PKiKP PKiKP 03 26 47.4 -0.8
baz=135
S16A Weppner Ranch, 134.79 41 ⇓PKiKP PKiKP 03 26 47.9 -0.5
baz=135
RSSD Black Hills 134.88 29 ePKPpre PKPpre 03 26 40.2
RSSD ePKPdf PKPdf 03 26 46.9 0.0
RSSD LR LR
comp=Z,921nm,22.0s,MS5.5
V14A Boquillas Ranc 134.90 44 ⇑PKiKP PKiKP 03 26 48.5 -0.1
baz=135
Q18A Rafter H Ranch 134.91 39 ⇑PKiKP PKiKP 03 26 47.9 -0.6
baz=135
X13A Yucca 134.91 46 ⇑PKiKP PKiKP 03 26 48.5 -0.2
baz=135
N20A Spence Gulch, 134.94 35 ⇑PKiKP PKiKP 03 26 48.2 -0.3
baz=135
R17A Hanksville Air 134.95 40 ⇑PKiKP PKiKP 03 26 48.3 -0.4
baz=135
RWWY Rawlins 134.97 34 ePKPdf PKPdf 03 26 47.1 0.0
U15A North Rim 135.04 43 ⇓PKiKP PKiKP 03 26 49.3 +0.5
baz=135
W14A Seligman 135.13 45 ⇓PKiKP PKiKP 03 26 49.4 +0.3
baz=135
P19A Cripple Cowboy 135.28 37 ⇓PKiKP PKiKP 03 26 48.8 -0.5
baz=135
O20A White River Ci 135.40 36 ⇓PKiKP PKiKP 03 26 48.8 -0.7
baz=135
N21A Black Mountain 135.41 35 ⇓PKiKP PKiKP 03 26 48.8 -0.7
baz=135
V15A Kaibab Nationa 135.45 44 ⇓PKiKP PKiKP 03 26 49.8 0.0
baz=135
L23A Garrett 135.49 32 ⇓PKiKP PKiKP 03 26 48.2 -1.4
baz=135
R18A Canyonlands Na 135.49 39 ⇓PKiKP PKiKP 03 26 49.2 -0.6
baz=135
Q19A Hogan Spring (135.53 38 ⇑PKiKP PKiKP 03 26 49.3 -0.5
baz=135
X14A Yava 135.65 46 ⇑PKiKP PKiKP 03 26 50.3 +0.1
baz=136
T17A Navajo Res., N 135.72 41 ⇑PKiKP PKiKP 03 26 50.2 0.0
baz=136
Z13A Yuma Proving G 135.72 48 ⇓PKiKP PKiKP 03 26 49.8 -0.6
baz=136
P20A De Beque 135.72 37 ⇓PKiKP PKiKP 03 26 49.6 -0.5
baz=136
W15A Williams 135.72 45 ⇑PKiKP PKiKP 03 26 50.4 +0.1
baz=136
Y14A Wickenburg 135.83 46 ⇑PKiKP PKiKP 03 26 50.2 -0.4
baz=136
S18A Hurst Farm, Bl 135.84 40 ⇓PKiKP PKiKP 03 26 50.0 -0.5
baz=136
R19A Curley Farm, L 135.94 39 ⇑PKiKP PKiKP 03 26 49.9 -0.7
baz=136
U16A Tuba City 135.98 43 ⇓PKiKP PKiKP 03 26 50.9 +0.1
baz=136
N22A Wattenberg Ran 135.98 34 ⇓PKiKP PKiKP 03 26 50.1 -0.6
baz=136
PV04 Paradox Valley 136.10 39 ePKPdf PKPdf 03 26 49.7 +0.4
PV04 e 03 29 28.7
PV04 e 03 30 18.6
Q20A Ridgley Place, 136.12 37 ⇑PKiKP PKiKP 03 26 50.5 -0.5
baz=136
WUAZ Wupatki 136.16 44 ⇓PKiKP PKiKP 03 26 51.0 -0.2
baz=136
WUAZ Wupatki 136.16 44 ePKPdf PKPdf 03 26 50.2 +0.7
WUAZ LR LR
comp=Z,563nm,21.0s,MS5.3
PHWY Pilot Hill 136.19 33 ePKPdf PKPdf 03 26 50.0 +0.6
PHWY e 03 30 19.1
T18A Mexican Hat 136.24 41 ⇑PKiKP PKiKP 03 26 50.9 -0.4
baz=136
Y15A Casa Rosa Ranc 136.31 46 ⇓PKiKP PKiKP 03 26 51.2 -0.3
baz=136
S19A Harvey Farm, M 136.35 39 ⇑PKiKP PKiKP 03 26 51.1 -0.4
baz=136
EYMN Ely 136.38 16 ePKPdf PKPdf 03 26 49.7 +0.2
EYMN ePP PP 03 29 24.3 -5.4
EYMN e 03 30 19.3
EYMN LR LR
comp=Z,935nm,22.0s,MS5.5
M24A Cheyenne 136.41 32 ⇑PKiKP PKiKP 03 26 50.6 -0.9
baz=136
PV01 Paradox Valley 136.47 39 ePKPdf PKPdf 03 26 51.4 +1.4
PV01 e 03 30 20.5
V17A Tonalea, Kykot 136.50 43 ⇓PKiKP PKiKP 03 26 51.7 -0.2
baz=136
114A Black Gap (USA 136.50 48 ⇓PKiKP PKiKP 03 26 51.3 -0.7
baz=136
R20A Redvale 136.55 38 ⇓PKiKP PKiKP 03 26 51.6 -0.3
baz=136
U18A Rough Rock, Ch 136.66 41 ⇓PKiKP PKiKP 03 26 51.9 -0.3
baz=137
O23A Lake Granby, G 136.69 34 ⇑PKiKP PKiKP 03 26 51.4 -0.7
baz=137
X16A Lo Mia Camp, P 136.70 45 ⇑PKiKP PKiKP 03 26 52.4 0.0
baz=137
SMCO Snowmass 136.77 36 ePKPdf PKPdf 03 26 48.5 -2.0
SMCO e 03 30 20.9
N24A Carr 136.83 33 ⇓PKiKP PKiKP 03 26 51.2 -1.2
baz=137
R21A Cimarron 136.95 38 ⇓PKiKP PKiKP 03 26 52.3 -0.4
baz=137
Q22A Crested Butte, 137.01 37 ⇑PKiKP PKiKP 03 26 52.4 -0.4
baz=137
V18A Ganado 137.03 42 ⇑PKiKP PKiKP 03 26 52.8 -0.1
baz=137
MVCO Mesa Verde 137.08 40 ⇓PKiKP PKiKP 03 26 52.6 -0.4
baz=137
MVCO Mesa Verde 137.08 40 ePKPdf PKPdf 03 26 51.7 +0.5
MVCO LR LR
comp=Z,723nm,21.0s,MS5.4
ISCO Idaho Springs 137.14 35 ePKPdf PKPdf 03 26 51.0 -0.2
ISCO ePP PP 03 29 27.7 -7.4
ISCO LR LR
comp=Z,514nm,19.0s,MS5.3
U19A Dine' College, 137.17 41 ⇑PKiKP PKiKP 03 26 52.7 -0.5
baz=137
X17A Forest Lakes 137.19 45 ⇓PKiKP PKiKP 03 26 53.0 -0.3
baz=137
S21A Coal Bank Pass 137.24 39 ⇑PKiKP PKiKP 03 26 53.2 -0.1
baz=137
Y17A Roosevelt 137.50 45 ⇓PKiKP PKiKP 03 26 53.4 -0.6
baz=137
V19A Window Rock 137.62 42 ⇑PKiKP PKiKP 03 26 54.1 -0.1
baz=138
X18A Snowflake 137.68 44 ⇑PKiKP PKiKP 03 26 53.7 -0.6
baz=138
S22A 4UR Ranch, Cre 137.78 38 ⇑PKiKP PKiKP 03 26 54.1 -0.4
baz=138
216A Three Points, 137.92 48 ⇓PKiKP PKiKP 03 26 53.9 -0.9
baz=138
Y18A Canyon Day Jun 138.03 45 ⇓PKiKP PKiKP 03 26 54.6 -0.4
baz=138
U21A Nageezi 138.09 40 ⇓PKiKP PKiKP 03 26 54.6 -0.5
baz=138
P25A Willow Gulch B 138.14 34 ⇓PKiKP PKiKP 03 26 53.9 -1.2
baz=138
X19A St. Johns 138.19 43 ⇓PKiKP PKiKP 03 26 54.6 -0.7
baz=138
T22A Edith 138.20 39 ⇓PKiKP PKiKP 03 26 54.8 -0.5
baz=138
OGNE Ogallala 138.23 30 PFAKE 03 27 10.0 +17
OGNE LR LR
comp=Z,744nm,21.0s,MS5.4
TUC Tucson 138.26 47 PFAKE 03 27 10.0 +17
TUC LR LR
comp=Z,538nm,20.0s,MS5.3
W20A Ramah 138.32 42 ⇓PKiKP PKiKP 03 26 54.7 -0.9
baz=138
ECSD EROS Data Cent 138.43 23 ePKPdf PKPdf 03 26 51.8 -1.6
ECSD e 03 30 24.6
ECSD LR LR
comp=Z,1μm,20.0s,MS5.6
Y19A Nutrioso 138.47 44 ⇑PKiKP PKiKP 03 26 55.5 -0.5
baz=138
Q25A Bedland, Calha 138.51 34 ⇓PKiKP PKiKP 03 26 54.3 -1.5
baz=138
SDCO Great Sand Dun 138.58 37 ⇑PKiKP PKiKP 03 26 55.0 -1.1
baz=138
SDCO Great Sand Dun 138.58 37 ePKPdf PKPdf 03 26 54.7 +0.7
SDCO ePP PP 03 29 38.8 -5.4
SDCO LR LR
comp=Z,1μm,22.0s,MS5.5
RCBR Riachuelo 138.59 254 PFAKE 03 27 10.0 +15
RCBR LR LR
comp=Z,2μm,22.0s,MS5.7
U22A Llaves 138.63 39 ⇓PKiKP PKiKP 03 26 56.0 -0.2
baz=138
COWI Conover 138.70 14 ePKPdf PKPdf 03 26 50.7 -3.2
COWI LR LR
comp=Z,1μm,22.0s,MS5.5
T23A Casias Ranch, 138.72 38 ⇓PKiKP PKiKP 03 26 55.8 -0.5
baz=139
V22A San Miguel Ran 138.88 40 ⇑PKiKP PKiKP 03 26 56.2 -0.5
baz=139
R25A Fountain Ranch 139.02 35 ⇓PKiKP PKiKP 03 26 55.3 -1.7
baz=139
119A Ashpeak Ranch, 139.09 46 ⇑PKiKP PKiKP 03 26 56.4 -0.9
baz=139
X21A Alamocita Cree 139.19 42 ⇓PKiKP PKiKP 03 26 56.8 -0.6
baz=139
V23A Ortiz Mt. (NFS 139.45 40 ⇑PKiKP PKiKP 03 26 57.7 -0.2
baz=139
SPB Sao Paulo 139.49 222 PFAKE 03 27 10.0 +14
SPB LR LR
comp=Z,937nm,20.0s,MS5.5
LAZ Ladron 139.65 42 ePKPdf PKPdf 03 26 58.5 +2.5
ANMO Albuquerque 139.76 41 ePKPpre PKPpre 03 26 49.5
ANMO ePKPdf PKPdf 03 26 57.5 +1.3
ANMO LR LR
comp=Z,666nm,22.0s,MS5.3
LENM Lemitar 139.90 42 ePKPdf PKPdf 03 26 57.4 +1.0
V24A Rampart Ranch, 140.04 39 ⇑PKiKP PKiKP 03 26 58.3 -0.8
baz=140
LPM Los Pinos Moun 140.04 42 ePKPdf PKPdf 03 26 56.0 -0.7
LPM e 03 30 28.8
220A Playas Peak, P 140.10 46 ⇑PKiKP PKiKP 03 26 58.4 -0.9
baz=140
U25A Circle Dot Ran 140.13 37 ⇑PKiKP PKiKP 03 26 58.1 -1.2
baz=140
BNM Barren Site 140.14 42 ePKPdf PKPdf 03 26 58.1 +1.3
BNM e 03 30 30.7
W24A Lazy 6 Ranch, 140.28 40 ⇑PKiKP PKiKP 03 26 58.3 -1.3
baz=140
V25A Rancho No Teng 140.37 38 ⇑PKiKP PKiKP 03 26 58.5 -1.3
baz=140
PKME Peaks-Kenny Pk 140.85 353 PFAKE 03 27 10.0 +12
PKME LR LR
comp=Z,907nm,22.0s,MS5.5
CBKS Cedar Bluff 141.00 31 PFAKE 03 27 10.0 +12
CBKS LR LR
comp=Z,1μm,21.0s,MS5.6
222A Williams Famil 141.00 45 ⇓PKiKP PKiKP 03 26 59.9 -1.3
baz=141
Y24A Capitan 141.06 41 ⇑PKiKP PKiKP 03 26 59.8 -1.5
baz=141
SCIA State Center 141.28 21 ePKPdf PKPdf 03 26 58.8 +0.1
SCIA LR LR
comp=Z,1μm,22.0s,MS5.5
JFWS Jewell Farm 141.35 17 ePKPpre PKPpre 03 26 51.9
JFWS ePKPdf PKPdf 03 26 58.9 +0.1
JFWS LR LR
comp=Z,1μm,21.0s,MS5.6
Z24A Sheeppen Canyo 141.47 42 ⇑PKiKP PKiKP 03 27 00.5 -1.6
baz=141
Y25A Mesa, Roswell 141.55 41 ⇓PKiKP PKiKP 03 27 00.4 -1.9
baz=141
CFAA Coronel Fontan 141.61 190 PKhKP PKPpre 03 26 53.6
comp=Z,1.6nm,0.6s,baz=192,slow=2.8,SNR=23
CFAA PP PP 03 30 02.8 +0.9
comp=Z,0.8nm,1.1s,baz=166,slow=4.9,SNR=3.9
LONY Lake Ozonia 141.87 359 ePKPdf PKPdf 03 26 54.6 -5.1
LONY LR LR
comp=Z,1μm,20.0s,MS5.6
Z25A Roswell 141.93 41 ⇓PKiKP PKiKP 03 27 01.3 -1.8
baz=142
224A Cornudas Mount 142.12 44 ⇓PKiKP PKiKP 03 27 01.7 -1.7
baz=142
LBNH Lisbon 142.13 356 PFAKE 03 27 10.0 +10
LBNH LR LR
comp=Z,1μm,20.0s,MS5.6
KSU1 Kansas State U 142.27 27 ePKPdf PKPdf 03 26 55.0 -5.5
KSU1 LR LR
comp=Z,771nm,20.0s,MS5.5
MNTX Cornudas Mount 142.43 44 ⇑PKiKP PKiKP 03 27 02.1 -2.0
baz=142
MNTX Cornudas Mount 142.43 44 ePKPdf PKPdf 03 26 58.5 -2.5
MNTX e 03 30 36.7
MNTX LR LR
comp=Z,594nm,22.0s,MS5.3
MDV Middlebury 142.44 357 ePKPdf PKPdf 03 26 56.7 -4.0
NCB Newcomb 142.51 358 ePKPdf PKPdf 03 26 56.1 -4.7
NCB LR LR
comp=Z,1μm,21.0s,MS5.7
324A Moseley Ranch, 142.51 44 ⇑PKiKP PKiKP 03 27 02.1 -2.2
baz=142
Y27A Causey 142.55 39 ⇓PKiKP PKiKP 03 27 02.0 -2.3
baz=142
225A Deer Hill, Car 142.57 43 ⇑PKiKP PKiKP 03 27 02.6 -1.8
baz=142
MSTX Muleshoe 142.74 39 ⇓PKPdf PKPdf 03 26 58.2 -3.4
baz=143
AMTX Amarillo 142.78 37 ePKPdf PKPdf 03 26 58.4 -3.2
AMTX LR LR
comp=Z,778nm,22.0s,MS5.4
Z27A Tatum 142.88 40 ⇑PKPdf PKPdf 03 26 58.5 -3.3
baz=143
325A Bean Ranch, Si 142.91 44 ⇑PKPdf PKPdf 03 26 58.6 -3.4
baz=143
CPUP Villa Florida 143.00 208 PKhKP PKPpre 03 26 58.1
comp=Z,5.2nm,0.6s,baz=105,slow=2.6,SNR=23
226A Malaga, Loving 143.09 42 ⇓PKPdf PKPdf 03 26 59.5 -2.7
baz=143
425A Indio Mountain 143.24 45 ⇑PKPdf PKPdf 03 26 59.8 -2.8
baz=143
TLL Tololo Astrono 143.40 187 eP PKPdf 03 27 00.6 -2.2
TLL Tololo Astrono 143.40 187 eP PKPdf 03 27 00.6 -2.2
AAM Ann Arbor 143.49 10 ePKPdf PKPdf 03 26 59.6 -3.0
AAM LR LR
comp=Z,1μm,20.0s,MS5.7
326A Caldwell Ranch 143.62 43 ⇓PKPdf PKPdf 03 27 00.5 -2.7
baz=144
HDIL Hopedale 143.79 18 ePKPdf PKPdf 03 27 00.0 -3.2
HDIL LR LR
comp=Z,717nm,22.0s,MS5.4
426A McDonald Obser 143.97 44 ⇑PKPdf PKPdf 03 27 02.1 -1.7
baz=144
QUA2 Belchertown 144.11 356 ePKPdf PKPdf 03 27 01.3 -2.4
ERPA Erie 144.17 6 ePKPdf PKPdf 03 27 01.1 -2.7
ERPA LR LR
comp=Z,1μm,22.0s,MS5.6
526A Mary Lane Ranc 144.29 45 ⇑PKPdf PKPdf 03 27 03.4 -1.0
baz=144
427A Hayter Ranch, 144.30 43 ⇓PKPdf PKPdf 03 27 03.2 -1.2
baz=144
BINY Binghamton 144.30 1 ePKPdf PKPdf 03 27 01.6 -2.5
BINY LR LR
comp=Z,2μm,21.0s,MS5.7
328A Wristen Ranch, 144.37 42 ⇓PKPdf PKPdf 03 27 03.4 -1.1
baz=144
LCO Las Campanas 144.53 187 ePKPdf PKPdf 03 27 04.1 -0.7
LCO LR LR
comp=Z,2μm,19.0s,MS5.8
LCO Las Campanas 144.53 187 ⇓iP PKPdf 03 27 03.8 -1.1
626A Big Bend Ranch 144.55 46 ⇑PKPdf PKPdf 03 27 04.5 -0.4
baz=144
WMOK Wichita Mounta 144.56 34 ePKPdf PKPdf 03 27 02.5 -2.2
WMOK LR LR
comp=Z,739nm,20.0s,MS5.5
527A Woodward Ranch 144.57 45 ⇑PKPdf PKPdf 03 27 04.0 -0.9
baz=144
ALLY Allegheny Colle 144.62 6 ePKPdf PKPdf 03 27 02.4 -2.2
428A Kincaid Ranch, 144.86 43 ⇓PKPdf PKPdf 03 27 05.7 +0.3
baz=145
TXAR Lajitas Array 145.01 46 PKP PKPdf 03 27 05.4 -0.3
comp=Z,64nm,0.8s,baz=278,slow=1.7,SNR=331
528A Cox Ranch, San 145.14 44 ⇓PKPdf PKPdf 03 27 06.3 +0.5
baz=145
627A Terlingua Ranc 145.14 45 ⇑PKPdf PKPdf 03 27 06.3 +0.4
baz=145
SLM Saint Louis 145.23 20 ePKPdf PKPdf 03 27 04.3 -1.4
CCM Cathedral Cave 145.38 22 ePKPdf PKPdf 03 27 04.7 -1.3
CCM LR LR
comp=Z,878nm,20.0s,MS5.5
PAL Palisades 145.46 358 ePKPdf PKPdf 03 27 05.3 -0.8
628A Black Gap, Mar 145.47 45 ⇑PKPdf PKPdf 03 27 07.2 +0.8
baz=145
ACSO Alum Creek Sta 145.62 10 ePKPdf PKPdf 03 27 05.6 -0.8
ACSO LR LR
comp=Z,1μm,21.0s,MS5.7
CPNY Central Park 145.68 358 ePKPdf PKPdf 03 27 06.5 0.0
FVM French Village 145.74 21 ePKPdf PKPdf 03 27 05.9 -0.8
SSPA Standing Stone 145.80 3 ePKPdf PKPdf 03 27 06.4 -0.3
OLIL Olney 145.83 18 ePKPdf PKPdf 03 27 06.8 +0.1
BLO Bloomington 145.86 15 ePKPdf PKPdf 03 27 06.8 0.0
BLO ePKPbc PKPbc 03 27 07.7 +0.2
MAIG Mazatlaan 145.92 57 iP PKPdf 03 27 08.3 +0.9
SIUC Southern Illin 146.41 20 ePKPdf PKPdf 03 27 08.3 +0.6
SIUC ePKPbc PKPbc 03 27 09.6 +0.5
MCWV Mont Chateau 146.62 6 ePKPdf PKPdf 03 27 08.7 +0.6
MCWV ePKPdf PKPab 03 27 10.0 -0.7
MCWV LR LR
comp=Z,1μm,21.0s,MS5.6
USIN University of 146.67 18 ePKPdf PKPdf 03 27 09.3 +1.1
WCI Wyandotte Cave 146.81 16 ePKPdf PKPdf 03 27 08.7 +0.3
WCI ePKPbc PKPbc 03 27 10.4 +0.2
WCI LR LR
comp=Z,902nm,22.0s,MS5.5
JCT Junction City 146.93 40 ⇓PKPdf PKPdf 03 27 09.8 +0.9
baz=147
JCT Junction City 146.93 40 ePKPdf PKPdf 03 27 09.4 +0.5
JCT ePKPbc PKPbc 03 27 11.7 +0.8
JCT LR LR
comp=Z,659nm,21.0s,MS5.4
JCT Junction City 146.93 40 ePKP2 PKPdf 03 27 09.4 +0.5
JCT MLR MLR
comp=Z,659nm,21.0s,MS5.4
SDMD Soldier's Deli 147.07 2 ePKPdf PKPdf 03 27 09.9 +1.1
SDMD ePKPbc PKPbc 03 27 10.9 0.0
PARMO Parma 147.16 21 ePKPdf PKPdf 03 27 08.6 -0.5
PARMO ePKPbc PKPbc 03 27 11.6 +0.3
MIAR Mount Ida 147.39 28 ePKPdf PKPdf 03 27 10.0 +0.5
MIAR ePKPbc PKPbc 03 27 12.4 +0.4
MIAR LR LR
comp=Z,870nm,19.0s,MS5.6
GLAT Glass 147.68 21 ePKPdf PKPdf 03 27 10.5 +0.5
GLAT ePKPbc PKPbc 03 27 13.3 +0.6
GNAR Gosnell 147.69 22 ePKPdf PKPdf 03 27 10.5 +0.5
GNAR ePKPbc PKPbc 03 27 13.1 +0.3
UALR University of 147.76 26 ePKPdf PKPdf 03 27 10.7 +0.6
UALR ePKPbc PKPbc 03 27 13.1 +0.1
UTMT University of 147.76 20 ePKPbc PKPbc 03 27 12.7 -0.3
HBAR Harrisburg 147.80 23 ePKPdf PKPdf 03 27 09.3 -0.9
HBAR ePKPbc PKPbc 03 27 13.9 +0.8
HALT Halls 147.98 21 ePKPdf PKPdf 03 27 10.8 +0.4
HALT ePKPbc PKPbc 03 27 13.9 +0.3
CBN Corbin 148.25 3 ePKPdf PKPdf 03 27 11.7 +0.8
CBN ePKPbc PKPbc 03 27 14.5 +0.3
CBN LR LR
comp=Z,1μm,20.0s,MS5.6
WVT Waverly 148.31 19 ePKPdf PKPdf 03 27 11.1 +0.1
WVT ePKPbc PKPbc 03 27 14.9 +0.5
WVT LR LR
comp=Z,1μm,22.0s,MS5.6
JSRW J. Sargeant Re 148.73 4 ePKPdf PKPdf 03 27 12.2 +0.6
JSRW ePKPbc PKPbc 03 27 15.7 +0.3
BLA Blacksburg 148.97 8 ePKPdf PKPdf 03 27 12.4 +0.3
BLA ePKPbc PKPbc 03 27 15.9 -0.1
BLA ePKPab PKPab 03 27 20.2 +0.1
BLA LR LR
comp=Z,1μm,22.0s,MS5.7
VWCC Virginia Weste 148.99 7 ePKPdf PKPdf 03 27 11.1 -1.0
VWCC ePKPbc PKPbc 03 27 15.8 -0.3
NATX Nacogdoches 149.06 33 ePKPdf PKPdf 03 27 13.1 +0.8
NATX ePKPbc PKPbc 03 27 17.7 +1.2
OXF Oxford 149.20 23 ePKPbc PKPbc 03 27 16.9 +0.1
OXF LR LR
comp=Z,807nm,20.0s,MS5.5
SWET Sewanee 149.73 17 ePKPdf PKPdf 03 27 12.6 -0.7
SWET ePKPbc PKPbc 03 27 17.8 -0.3
HKT Hockley 149.76 37 ePKPdf PKPdf 03 27 14.8 +1.3
HKT ePKPbc PKPbc 03 27 19.7 +1.5
HKT LR LR
comp=Z,894nm,19.0s,MS5.6
TKL Tuckaleechee C 149.88 13 ePKPdf PKPdf 03 27 14.1 +0.5
TKL ePKPbc PKPbc 03 27 18.8 +0.4
CPCT Cooper Cave 149.90 15 ePKPdf PKPdf 03 27 14.1 +0.6
CPCT ePKPbc PKPbc 03 27 19.2 +0.7
KVTX Kingsville 150.11 43 ePKPdf PKPdf 03 27 15.6 +1.4
KVTX ePKPbc PKPbc 03 27 22.0 +2.8
MECH Mejillones 150.30 190 eP PKPbc 03 27 21.4 +1.6
VBMS Vicksburg 150.73 27 ePKPdf PKPdf 03 27 15.9 +0.9
VBMS ePKPbc PKPbc 03 27 21.5 +1.0
VBMS LR LR
comp=Z,931nm,22.0s,MS5.5
CNNC Cliffs of the 151.17 4 ePKPdf PKPdf 03 27 16.4 +0.8
CNNC ePKPbc PKPbc 03 27 22.2 +0.7
CNNC LR LR
comp=Z,1μm,21.0s,MS5.7
LRAL Lakeview Retre 151.41 20 ePKPdf PKPdf 03 27 16.1 +0.1
LRAL ePKPbc PKPbc 03 27 22.2 +0.1
LRAL LR LR
comp=Z,1μm,21.0s,MS5.7
JSC Jenkinsville 151.71 10 ePKPdf PKPdf 03 27 17.4 +0.9
JSC ePKPbc PKPbc 03 27 23.4 +0.7
GOGA Godfrey 152.10 14 ePKPdf PKPdf 03 27 17.8 +0.7
GOGA ePKPbc PKPbc 03 27 24.1 +0.5
GOGA LR LR
comp=Z,1μm,20.0s,MS5.8
BBSR BB Station 152.19 340 ePKPdf PKPdf 03 27 17.8 +0.6
BBSR ePKPbc PKPbc 03 27 24.7 +0.8
BBSR LR LR
comp=Z,570nm,19.0s,MS5.4
NHSC New Hope 153.04 9 ePKPdf PKPdf 03 27 19.3 +0.9
NHSC ePKPbc PKPbc 03 27 26.2 +0.5
BRAL Brewton 153.21 22 PFAKE 03 27 30.0 +11
BRAL LR LR
comp=Z,1μm,22.0s,MS5.7
SIV San Ignacio 153.56 213 PKP PKPdf 03 27 20.5 +0.9
comp=Z,10nm,1.1s,baz=146,slow=2.3,SNR=31
SIV PKPbc PKPbc 03 27 27.9 +0.5
comp=Z,29nm,1.0s,baz=137,slow=2.3,SNR=32
SIV PKPab PKPab 03 27 40.7 +1.0
comp=Z,30nm,0.8s,baz=137,slow=5.1,SNR=20
LPAZ La Paz 156.33 198 PKP PKPdf 03 27 24.8 +1.4
comp=Z,26nm,1.1s,baz=67,slow=1.6,SNR=56
LPAZ PKPab PKPab 03 27 53.5 +2.0
comp=Z,26nm,0.9s,baz=124,slow=4.6,SNR=9.4
LPAZ PP PP 03 31 26.1 -1.5
comp=Z,7.8nm,1.2s,baz=185,slow=5.3,SNR=3.9
LPAZ La Paz 156.33 198 ePKIKP PKPdf 03 27 24.4 +1.0
LPAZ MLR MLR
comp=Z,877nm,20.0s
DWPF Disney 157.66 14 PFAKE 03 27 40.0 +15
DWPF LR LR
comp=Z,1μm,19.0s,MS5.7
TEIG Tepich 161.50 41 ePKPdf PKPdf 03 27 29.8 +0.4
TEIG ePKPab PKPab 03 28 14.6 +0.7
NNA Nana 161.74 176 ePKPdf PKPdf 03 27 29.1 -0.7
NNA ePKPab PKPab 03 28 15.4 +0.5
NNA Nana 161.74 176 PKP PKPdf 03 27 30.2 +0.4
comp=Z,41nm,1.0s,baz=320,slow=3.3,SNR=11
NNA PKPab PKPab 03 28 13.8 -1.1
comp=Z,38nm,1.1s,baz=243,slow=4.0,SNR=5.3
NNA PP PP 03 31 56.8 -0.1
comp=Z,5.4nm,0.6s,baz=245,slow=2.9,SNR=4.3
SOR Soroa 162.15 23 e PKPdf 03 27 27.1 -2.9
ANWB Willy Bob 162.45 311 PFAKE 03 27 40.0 +10
ANWB LR LR
comp=Z,701nm,21.0s
BBGH Gun Hill 162.84 294 PFAKE 03 27 40.0 +9.1
BBGH LR LR

comp=Z,2µm,20.0s
FDF Fort de France 163.56 302 *e*PKPdf PKPdf 03 27 32.2 +0.6
FDF LR LR
comp=Z,964nm,21.0s
PAYG Puerto Ayora 163.75 115 *e*PKPdf PKPdf 03 27 33.1 +1.2
MGV Manicaragua 163.77 15 *e* PKPdf 03 27 31.5 -0.1
GRTK Grand Turk 164.33 344 PFAKE 03 27 40.0 +7.9
GRTK LR LR
comp=Z,1µm,21.0s
GRGR Grenville 165.11 294 PFAKE 03 27 40.0 +7.0
GRGR LR LR
comp=Z,598nm,20.0s
SJG San Juan 165.12 323 PFAKE 03 27 40.0 +7.1
SJG LR LR
comp=Z,881nm,22.0s
OBIP Obispado Ponce 165.45 324 *e*PKPdf PKPdf 03 27 33.2 +0.1
TGUH Tegucigalpa,Un 166.18 55 *e*PKPdf PKPdf 03 27 34.4 +0.5
TGUH *e*PKPab PKPab 03 28 35.7 +1.0
TGUH LR LR
comp=Z,804nm,20.0s
LMGC Las Mercedes 166.30 6 *e* PKPdf 03 27 35.0 +1.2
ATAH Atahualpa 166.31 168 PKP PKPdf 03 27 35.9 +1.9
comp=Z,58nm,1.2s
ATAH PKPab PKPab 03 28 37.6 +2.5
comp=Z,28nm,1.0s,baz=210,slow=4.5,SNR=5.0
GTBY Guantanamo Bay 166.50 358 PFAKE 03 27 40.0 +6.0
GTBY LR LR
comp=Z,1µm,21.0s
SDDR Presa de Saban 166.77 342 PFAKE 03 27 50.0 +16
SDDR LR LR
comp=Z,1µm,21.0s
MTDJ Mount Denham 168.04 9 PFAKE 03 27 50.0 +15
MTDJ LR LR
comp=Z,1µm,22.0s
JTS JuntasAbangare 169.93 66 PFAKE 03 27 50.0 +14
JTS LR LR
comp=Z,1µm,22.0s
OTAV Otavalo 173.28 155 *e*PKPdf PKPdf 03 27 38.9 +0.8
OTAV *e*PKPab PKPab 03 29 08.2 +2.2
OTAV LR LR
comp=Z,850nm,22.0s
SDV Santo Domingo 174.49 297 *e*PKPdf PKPdf 03 27 37.8 -0.7
SDV *e*PP PP 03 33 04.5 +0.6
SDV LR LR
comp=Z,669nm,22.0s
BCIP Isla Barro Col 174.94 56 *e*PKPdf PKPdf 03 27 37.2 -1.5
BCIP *e*PKPab PKPab 03 29 11.2 -2.4
ROSC El Rosal 178.06 220 *e*PKPdf PKPdf 03 27 39.8 +0.5
ROSC El Rosal 178.06 220 PKP PKPdf 03 27 39.6 +0.3
comp=Z,17nm,1.0s,baz=127,slow=2.7,SNR=30
ROSC PKPab pPKPab 03 29 42.1 +0.1
comp=Z,18nm,1.1s,baz=182,slow=15,SNR=5.9

*NEIC **26** 03:09:05.6, 19.88N×70.60W, h96km, MD4.0(RSPR), After RSPR.*

RSPR 26 03:09:05.6, 19.88N×70.60W, h96km±8km, MD4.0/6, 4C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDDR	**Presa de Saban**	**1.10**	**216**	⇓*e*P	Pn	03 09 25.6	-1.3
SDDR	**Presa de Saban**	**1.10**	**216**	*e*S	Sn	03 09 42.9	0.0
SDDR	**Presa de Saban**	**1.10**	**216**	*e*Pn	Pn	03 09 25.5	-1.4
SDDR				*e*S	Sn	03 09 41.2	-1.7
SMN1	**Samana, DR**	**1.43**	**118**	⇑*e*P	Pn	03 09 28.8	-2.0
SMN1				*e*S	Sn	03 09 49.6	-0.3
GRTK	**Grand Turk**	**1.70**	**343**	⇑*e*P	Pn	03 09 31.7	-2.5
GRTK	**Grand Turk**	**1.70**	**343**	*e*S	Sn	03 09 53.9	-2.0
GRTK	**Grand Turk**	**1.70**	**343**	*e*Pn	Pn	03 09 31.9	-2.3
GRTK				*e*S	Sn	03 09 55.4	-0.5
LRS	**Lares**	**3.89**	**113**	*e*Pn	Pn	03 10 08.9	+5.7
GTBY	**Guantanamo Bay**	**4.24**	**271**	*e*S	Sn	03 10 59.1	+2.7
SJG	**San Juan**	**4.57**	**112**	Pn	Pn	03 10 14.8	+2.4
SJG				*e*S	Sn	03 11 02.5	-1.9
CBYP	**Canovanas**	**4.76**	**109**	⇓*e*P	Pn	03 10 15.7	+0.6
CBYP	**Canovanas**	**4.76**	**109**	*e*S	Sn	03 11 11.7	+2.5
CBYP	**Canovanas**	**4.76**	**109**	*e*Pn	Pn	03 10 14.8	-0.4
CBYP				*e*S	Sn	03 11 06.7	-2.5
HUMP	**Col San Antoni**	**4.82**	**110**	⇑*e*P	Pn	03 10 16.1	+0.3
HUMP				*e*S	Sn	03 11 12.4	+2.0
MTP	**Monte Pirata**	**5.10**	**109**	⇑*e*P	Pn	03 10 20.1	+0.4
MTP	**Monte Pirata**	**5.10**	**109**	*e*S	Sn	03 11 19.1	+1.8
MTP	**Monte Pirata**	**5.10**	**109**	*e*Pn	Pn	03 10 20.4	+0.8
MTP				*e*S	Sn	03 11 16.4	-0.8

IDC 26 03:12:47.5±2.3, 11.98N×143.60E, h0km, mb4.2/5, mb1 4.4/6, mb1mx4.1/24, mbtmp4.2/6, Error ellipse: s-maj=63.1km s-min=29.5km az=157.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.02**	**38**	Pn	Pn	03 13 23.2	+0.4
	56nm,0.3s,baz=182,slow=5.7,SNR=17						
GUMO				Sn	Sn	03 13 49.1	+0.2
	192nm,0.3s,baz=9.4,slow=23,SNR=8.5						
ZALV	**Zalesovo Beam**	**62.21**	**325**	P	P	03 23 10.6	-0.3
	1.3nm,0.6s,baz=102,slow=4.7,SNR=2.5						
BVAR	**Borovoye Array**	**70.42**	**322**	P	P	03 24 04.0	+0.5
	1.6nm,0.4s,baz=104,slow=7.5,SNR=7.9						
YKA	**Yellowknife Ar**	**84.85**	**27**	P	P	03 25 24.7	+0.9
	0.7nm,0.5s,baz=286,slow=5.1,SNR=4.4						
ARCES	**ARCESS Array B**	**88.22**	**342**	P	P	03 25 39.7	-0.5
	1.7nm,0.8s,baz=64,slow=8.1,SNR=3.5						
NVAR	**Mina Array Bea**	**88.89**	**51**	P	P	03 25 44.0	-0.1
	1.3nm,0.7s,baz=263,slow=5.3,SNR=8.2						

DJA 26 03:17:39, 6.54S×104.38E, h10km, MLv3.5/4, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**1.02**	**7**	P	Pg	03 17 56.2	-2.4
KASI				S	Sg	03 18 12.2	+0.4
CGJI	**Cibinong**	**1.31**	**93**	P	Pn	03 18 02.2	-1.1
KLSI		**1.87**	**11**	P	Pn	03 18 11.8	+0.7
KLSI				S	Sn	03 18 35.6	+0.8
MDSI	**Maura Dua**	**2.05**	**354**	P	Pn	03 18 14.4	+0.8

*NEIC **26** 03:34:56.1±1.0, 7.31S×156.05E, h35km, Error ellipse: s-maj=33.5km s-min=17.3km az=115.0*

IDC 26 03:34:50.6±1.2, 7.29S×156.10E, h0km, mb4.1/12, mb1 4.2/12, mb1mx4.1/20, mbtmp4.1/12, Error ellipse: s-maj=38.1km s-min=21.6km az=110.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.56**	**237**	P	P	03 40 11.9	-0.5
	1.0nm,0.7s,baz=60,slow=9.5,SNR=6.3						
ASAR	**Alice Springs**	**26.81**	**230**	P	P	03 40 31.6	-1.2
	0.2nm,0.4s,baz=64,slow=9.7,SNR=5.0						
FITZ	**Fitzroy Crossi**	**31.54**	**247**	P	P	03 41 16.6	+1.6
	0.6nm,0.5s,baz=52,slow=10.0,SNR=4.6						
KSRS	**Korea Array**	**51.72**	**31**	P	P	03 44 00.2	+0.4
	0.5nm,0.4s,baz=143,slow=41,SNR=3.3						
CMAR	**Chiang Mai Arr**	**61.90**	**295**	P	P	03 45 12.2	-0.3
	1.1nm,0.5s,baz=97,slow=4.6,SNR=2.5						
SONM	**Songino Array**	**70.18**	**327**	P	P	03 46 06.5	+1.3
	2.1nm,0.7s,baz=126,slow=7.7,SNR=5.9						
QSPA	**South Pole Qui**	**82.68**	**180**	P	P	03 47 16.7	+1.0
QSPA	**South Pole Qui**	**82.68**	**180**	P	P	03 47 16.7	+1.0
	2.2nm,0.9s,baz=337,slow=0.4,SNR=8.1						
ILAR	**Eielson Array**	**83.25**	**21**	P	P	03 47 18.8	0.0
	0.2nm,0.8s,baz=267,slow=1.6,SNR=2.8						
MK31	**Makanchi Array**	**84.35**	**318**	*e*P	P	03 47 25.1	+0.3
MKAR	**Makanchi Array**	**84.35**	**318**	P	P	03 47 25.4	+0.7
	3.5nm,0.7s,baz=96,slow=7.5,SNR=15						
ZALV	**Zalesovo Beam**	**85.04**	**326**	P	P	03 47 26.1	-1.9
	2.5nm,0.4s,baz=98,slow=4.9,SNR=4.0						
KURK	**Kurchatov**	**87.74**	**322**	P	P	03 47 41.3	-0.2
	0.9nm,0.4s,baz=102,slow=4.8,SNR=1.7						
BVAR	**Borovoye Array**	**93.19**	**323**	P	P	03 48 06.0	-0.8
	1.6nm,0.6s,baz=111,slow=5.1,SNR=4.0						

*ISCJB **26** 03:50:42.7±0.3, 46.39N±0.01×12.54E±0.02, h14km±3km, Error ellipse: s-maj=2.5km s-min=1.8km az=2.3*
*ROM **26** 03:50:43.6±0.4, 46.43N×12.57E, h10km±5km, Md2.5/6, Ml1.9/5, Error ellipse: s-maj=7.1km s-min=2.4km az=4.0*

*VIE **26** 03:50:43.1±0.2, 46.40N×12.55E, h11km±3km, mb1.7/11, ML2.4/13, Error ellipse: s-maj=1.6km s-min=0.9km az=12.0 15 km E of Perarolo*
*CSEM **26** 03:50:43.3±0.1, 46.38N×12.56E, h10km, ML2.8/17, Error ellipse: s-maj=1.8km s-min=1.3km az=177.0*
*ZUR **26** 03:50:45.4, 46.42N×12.43E, h8km±4km, ML2.0/1*

ISC 26 03:50:43.8±0.2, 46.39N±0.01×12.54E±0.02, h9km±4km, n86, σ0.79/160, 22C-25D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CIMO	**Cimolais**	**0.11**	**223**	⇑*e*Pg	Pg	03 50 46.0	-0.3
CIMO				*e*Sg	Sg	03 50 48.0	-0.1
CIMO	**Cimolais**	**0.11**	**223**	*e*Pg	Pg	03 50 46.0	-0.3
CIMO				*e*Sg	Sg	03 50 48.0	0.0
CSMI	**Casera Mimoias**	**0.14**	**31**	⇑*i*Pg	Pg	03 50 46.9	0.0
CSMI				*i* Sg	Sg	03 50 49.6	+0.5
CSMI	**Casera Mimoias**	**0.14**	**31**	*i* Pg	Pg	03 50 46.9	0.0
CSMI				*i* Sg	Sg	03 50 49.6	+0.5
CSO	**Casso**	**0.19**	**233**	⇑*e*Pg	Pg	03 50 47.5	-0.2
CSO				*e*Sg	Sg	03 50 50.6	+0.2
CSO	**Casso**	**0.19**	**233**	*e*Pg	Pg	03 50 47.5	-0.2
CSO				*e*Sg	Sg	03 50 50.6	+0.2
MLNI	**Malnisio**	**0.24**	**169**	⇓*e*Pg	Pg	03 50 48.1	-0.6
MLNI				*e*Sg	Sg	03 50 51.8	-0.1
MLNI	**Malnisio**	**0.24**	**169**	*e*Pg	Pg	03 50 48.1	-0.5
MLNI				*e*Sg	Sg	03 50 51.8	-0.1
FVI	**Forni Avoltri**	**0.27**	**38**	Pg	Pg	03 50 48.8	-0.3
FVI				Sg	Sg	03 50 52.9	+0.2
	380nm,0.2s						
FVI	**Forni Avoltri**	**0.27**	**38**	Pg	Pg	03 50 48.8	-0.3
FVI				Sg	Sg	03 50 52.9	+0.2
	380nm,0.2s						
FUSE	**Fusea**	**0.32**	**85**	⇓*e*Pg	Pg	03 50 49.6	-0.4
FUSE				*e*Sg	Sg	03 50 54.5	+0.2
FUSE	**Fusea**	**0.32**	**85**	*e*Pg	Pg	03 50 49.6	-0.4
FUSE				*e*Sg	Sg	03 50 54.5	+0.2
MPRI	**Monte Prat**	**0.34**	**115**	⇓*e*Pg	Pg	03 50 49.8	-0.7
MPRI				*e*Sg	Sg	03 50 55.2	+0.2
MPRI	**Monte Prat**	**0.34**	**115**	*e*Pg	Pg	03 50 49.8	-0.7
MPRI				*e*Sg	Sg	03 50 55.2	+0.2
ZOU	**Zoufplan**	**0.34**	**60**	⇑*e*Pg	Pg	03 50 50.2	-0.3
ZOU				*e*Sg	Sg	03 50 55.4	+0.4
ZOU	**Zoufplan**	**0.34**	**60**	*e*Pg	Pg	03 50 50.2	-0.3
ZOU				*e*Sg	Sg	03 50 55.4	+0.4
ABTA	**Abfaltersbach**	**0.36**	**357**	⇑*e*Pg	Pg	03 50 51.1	+0.2
	SNR=42						
ABTA				⇓*i*Sg	Sg	03 50 56.1	+0.5
	50nm,0.1s						
ABTA	**Abfaltersbach**	**0.36**	**357**	Pg	Pg	03 50 51.1	+0.3
	SNR=42						
ABTA				Sg	Sg	03 50 56.1	+0.5
	50nm,0.1s						
CAE	**Caneva**	**0.39**	**191**	⇓*e*Pg	Pg	03 50 50.5	-0.9
CAE				*e*Sg	Sg	03 50 56.3	-0.1
CAE	**Caneva**	**0.39**	**191**	*e*Pg	Pg	03 50 50.5	-0.8
CAE				*e*Sg	Sg	03 50 56.3	-0.2
FAU	**Forcella Aurin**	**0.42**	**248**	⇓*i*Pg	Pg	03 50 51.7	-0.3
FAU	**Forcella Aurin**	**0.42**	**248**	*i* Pg	Pg	03 50 51.7	-0.3
PLRO	**Paularo**	**0.45**	**69**	⇑*i*Pg	Pg	03 50 52.2	-0.3
PLRO				*i* Sg	Sg	03 50 58.8	+0.4
PLRO	**Paularo**	**0.45**	**69**	*i* Pg	Pg	03 50 52.2	-0.3
PLRO				*i* Sg	Sg	03 50 58.8	+0.4
GMNA	**Gemona**	**0.49**	**103**	⇓*i*Pg	Pg	03 50 51.6	-1.7
GMNA				Sg	Sg	03 50 58.4	-1.4
	176nm,0.2s						
GMNA	**Gemona**	**0.49**	**103**	⇓*i*Pg	Pg	03 50 51.6	-1.7
GMNA				Sg	Sg	03 50 58.4	-1.4
	176nm,0.2s						
VARN	**Col Varnada, M**	**0.50**	**218**	⇑*e*Pg	Pg	03 50 52.5	-0.9
VARN				*e*Sg	Sg	03 51 00.6	+0.6
VARN	**Col Varnada, M**	**0.50**	**218**	*e*Pg	Pg	03 50 52.5	-0.9
VARN				*e*Sg	Sg	03 51 00.6	+0.6
BAD	**Bernadia**	**0.51**	**107**	⇓*e*Pg	Pg	03 50 52.8	-0.8
BAD				*e*Sg	Sg	03 51 00.6	+0.3
BAD	**Bernadia**	**0.51**	**107**	*e*Pg	Pg	03 50 52.8	-0.8
BAD				*e*Sg	Sg	03 51 00.6	+0.3
VINO	**Villanova**	**0.53**	**104**	⇑*e*Pg	Pg	03 50 53.0	-1.0
VINO				*e*Sg	Sg	03 51 01.1	+0.3
VINO	**Villanova**	**0.53**	**104**	*e*Pg	Pg	03 50 53.0	-1.0
VINO				*e*Sg	Sg	03 51 01.2	+0.3
PTCC	**Patocco-Chiusa**	**0.56**	**88**	⇓*i*Pg	Pg	03 50 53.9	-0.7
PTCC				Sg	Sg	03 51 03.3	+1.4
	32nm,0.2s						
PTCC	**Patocco-Chiusa**	**0.56**	**88**	⇓*i*Pg	Pg	03 50 53.9	-0.7
PTCC				Sg	Sg	03 51 03.3	+1.4
	32nm,0.2s						
COLI	**Coloredo**	**0.63**	**113**	⇑*e*Pg	Pg	03 50 55.2	-0.7
COLI				*e*Sg	Sg	03 51 05.2	+1.0
COLI	**Coloredo**	**0.63**	**113**	*e*Pg	Pg	03 50 55.2	-0.8
COLI				*e*Sg	Sg	03 51 05.2	+1.0
LSR	**Lussari**	**0.69**	**82**	⇓*i*Pg	Pg	03 50 56.4	-0.6
LSR				*i* Sg	Sg	03 51 06.4	+0.5
LSR	**Lussari**	**0.69**	**82**	*i* Pg	Pg	03 50 56.4	-0.6
LSR				*i* Sg	Sg	03 51 06.4	+0.5
ACOM	**Acomizza, Ital**	**0.69**	**76**	⇓*e*Pg	Pg	03 50 56.6	-0.5
ACOM				*e*Sg	Sg	03 51 06.8	+0.8
ACOM	**Acomizza, Ital**	**0.69**	**76**	*e*Pg	Pg	03 50 56.6	-0.4
ACOM				*e*Sg	Sg	03 51 06.8	+0.8
CTI	**Castel Tesino**	**0.71**	**242**	⇓*i*Pg	Pg	03 50 57.5	+0.1
	29nm,1.8s						
CTI	**Castel Tesino**	**0.71**	**242**	⇓*i*Pg	Pg	03 50 57.5	+0.1
	29nm,1.8s						
DRE	**Drenchia**	**0.79**	**105**	⇓*e*Pg	Pg	03 50 57.9	-1.2
DRE				*e*Sg	Sg	03 51 10.1	+0.8
DRE	**Drenchia**	**0.79**	**105**	*e*Pg	Pg	03 50 57.8	-1.2
DRE				*e*Sg	Sg	03 51 10.1	+0.8
MYKA	**Terra Mystica**	**0.80**	**72**	⇑*i*Pg	Pg	03 50 58.2	-0.9
MYKA				⇑*i*Sg	Sg	03 51 10.0	+0.6
	5.3nm,0.2s						
MYKA	**Terra Mystica**	**0.80**	**72**	Pg	Pg	03 50 58.2	-0.9
MYKA				Sg	Sg	03 51 10.0	+0.6
	5.3nm,0.2s						
KBA	**Koelnbreinsper**	**0.88**	**38**	⇓*e*Pg	Pg	03 51 00.5	-0.2
	SNR=8.5						
KBA				⇑*i*Sg	Sg	03 51 11.9	-0.4
	4.1nm,0.1s						
KBA	**Koelnbreinsper**	**0.88**	**38**	Pg	Pg	03 51 00.5	-0.3
	SNR=8.5						
KBA				Sg	Sg	03 51 11.9	-0.4
	4.1nm,0.1s						
APPI	**Appiano**	**0.92**	**276**	Pg	Pg	03 51 01.5	+0.2
APPI				Sg	Sg	03 51 13.4	+0.2
	35nm,0.6s						
APPI	**Appiano**	**0.92**	**276**	Pg	Pg	03 51 01.5	+0.2
APPI				Sg	Sg	03 51 13.4	+0.2
	35nm,0.6s						
VOJS	**Vojsko**	**1.00**	**110**	*i* Pg	Pg	03 51 01.6	-1.3
VOJS				*i*		03 51 04.5	
VOJS				*i* Sg	Sg	03 51 17.2	+1.4
VOJS							
	comp=Z,17nm,0.2s						
VOJS	**Vojsko**	**1.00**	**110**	Pg	Pg	03 51 01.6	-1.3
VOJS				*i* Sg	Sg	03 51 17.2	+1.4
	comp=Z,17nm,0.2s						
GORS	**Gorjuse**	**1.01**	**94**	*i* Pg	Pg	03 51 02.3	-0.8
GORS				*i* Sg	Sg	03 51 17.7	+1.5
GORS							
	comp=Z,6.0nm,0.1s						
GORS	**Gorjuse**	**1.01**	**94**	*i* Pg	Pg	03 51 02.3	-0.8
GORS				*i* Sg	Sg	03 51 17.7	+1.5
	comp=Z,6.0nm,0.1s						
WTTA	**Wattenberg**	**1.07**	**325**	⇓*e*Pg	Pg	03 51 04.6	+0.2
	SNR=14						
WTTA				⇑*i*Sg	Sg	03 51 18.8	+0.4
	comp=Z,10nm,0.2s						
WTTA	**Wattenberg**	**1.07**	**325**	Pg	Pg	03 51 04.6	+0.2
	SNR=14						
WTTA				Sg	Sg	03 51 18.8	+0.4
	comp=Z,10nm,0.2s						
TRI	**Trieste**	**1.09**	**128**	⇑*i*Pg	Pg	03 51 04.8	+0.2
TRI				*i* Sg	Sg	03 51 19.5	+0.7
TRI	**Trieste**	**1.09**	**128**	Pg	Pg	03 51 04.7	+0.1
TRI				Sg	Sg	03 51 19.5	+0.7
	comp=Z,35nm,0.4s						
TRI	**Trieste**	**1.09**	**128**	Pg	Pg	03 51 04.7	+0.1
TRI				Sg	Sg	03 51 19.5	+0.7
	comp=Z,35nm,0.4s						
WATA	**Walderalm**	**1.16**	**325**	⇑*i*Pg	Pg	03 51 05.6	-0.4
WATA				⇓*i*Sg	Sg	03 51 21.4	+0.4
	comp=Z,12nm,0.2s						
WATA	**Walderalm**	**1.16**	**325**	Pg	Pg	03 51 05.6	-0.4
WATA				Sg	Sg	03 51 21.4	+0.4
	comp=Z,12nm,0.2s						
TEOL	**Teolo**	**1.20**	**211**	⇑*e*Pg	Pg	03 51 06.5	-0.2
TEOL				*e*Sg	Sg	03 51 23.5	+1.3
TEOL	**Teolo**	**1.20**	**211**	*e*Pg	Pg	03 51 06.5	-0.2
TEOL				*e*Sg	Sg	03 51 23.5	+1.3
CRNS	**Crni Vrh**	**1.23**	**104**	*i* Pg	Pg	03 51 06.8	-0.5
CRNS				*i* Sg	Sg	03 51 25.0	+1.7
CRNS							
	comp=Z,6.0nm,0.1s						
SKDS	**Skadanscina**	**1.33**	**129**	*i* Pg	Pg	03 51 08.5	-0.7
SKDS				*i* Sg	Sg	03 51 27.2	+0.8
SKDS							
	comp=Z,23nm,0.2s						
OBKA	**Obir**	**1.39**	**84**	⇑*i*Pg	Pg	03 51 09.6	-0.8
OBKA	**Obir**	**1.39**	**84**	Pg	Pg	03 51 09.6	-0.9
BALD	**Monte Baldo**	**1.39**	**240**	⇓*e*Pg	Pg	03 51 10.2	-0.3
BALD				*e*Sg	Sg	03 51 30.2	+1.6
BALD	**Monte Baldo**	**1.39**	**240**	*e*Pg	Pg	03 51 10.2	-0.3
BALD				*e*Sg	Sg	03 51 30.2	+1.6
FETA	**Feichten**	**1.40**	**298**	⇓*e*Pg	Pg	03 51 10.4	-0.3
	SNR=14						
FETA				⇑*i*Sg	Sg	03 51 28.4	-0.4
	comp=Z,5.6nm,0.3s						
FETA	**Feichten**	**1.40**	**298**	Pg	Pg	03 51 10.4	-0.2
	SNR=14						
FETA				Sg	Sg	03 51 28.4	-0.4
	comp=Z,5.6nm,0.3s						
LJU	**Ljubljana**	**1.42**	**103**	*i* Pg	Pg	03 51 10.6	-0.4
LJU				*i* Sg	Sg	03 51 30.9	+1.5
LJU							
	comp=Z,9.0nm,0.1s						
LJU	**Ljubljana**	**1.42**	**103**	*i* Pg	Pg	03 51 10.6	-0.4
LJU				*i* Sg	Sg	03 51 30.9	+1.5
	comp=Z,9.0nm,0.1s						
MABI	**Malga Bissina**	**1.45**	**257**	Pg	Pg	03 51 11.2	-0.3
	comp=Z,18nm,0.6s						
MABI	**Malga Bissina**	**1.45**	**257**	Pg	Pg	03 51 11.2	-0.3
	comp=Z,18nm,0.6s						
CEY	**Cerknica**	**1.46**	**116**	*i* Pg	Pg	03 51 10.7	-1.1
CEY				*i* Sg	Sg	03 51 31.4	+0.7
CEY							
	comp=Z,12nm,0.2s						
CEY	**Cerknica**	**1.46**	**116**	*i* Pg	Pg	03 51 10.7	-1.1
CEY				*i* Sg	Sg	03 51 31.4	+0.6
	comp=Z,12nm,0.2s						
FUORN	**Ofenpass-Fuorn**	**1.59**	**279**	⇑*i*P	Pn	03 51 13.5	+1.4
	comp=Z,49nm,0.5s						
FUORN	**Ofenpass-Fuorn**	**1.59**	**279**	⇑*i*P	Pn	03 51 13.5	+1.4
	comp=Z,49nm,0.5s						
RETA	**Reutte**	**1.64**	**313**	⇑*i*Pg	Pg	03 51 16.1	+0.8
RETA	**Reutte**	**1.64**	**313**	Pg	Pg	03 51 16.1	+0.8
MOA	**Molln**	**1.88**	**38**	⇑*e*Pn	Pn	03 51 15.1	-0.9
	SNR=8.1						
MOA				⇓*i*Pg	Pg	03 51 18.5	-1.3
MOA				⇓*i*Sg	Sg	03 51 44.6	+0.5
	comp=Z,4.6nm,0.3s						
MOA	**Molln**	**1.88**	**38**	Pn	Pn	03 51 15.1	-0.9
	SNR=8.1						
DAVA	**Damuels**	**2.04**	**297**	⇓*i*Pg	Pg	03 51 22.5	-0.3
DAVA				⇓*i*Sg	Sg	03 51 50.8	+1.5
	comp=Z,9.1nm,0.3s						
DAVA	**Damuels**	**2.04**	**297**	Pg	Pg	03 51 22.5	-0.3
DAVA				Sg	Sg	03 51 50.8	+1.6
	comp=Z,9.1nm,0.3s						
NVLJ	**Novalja**	**2.45**	**137**	*e*Pn	Pn	03 51 22.4	-1.6
NVLJ				Sn	Sn	03 51 55.4	+1.4

*IDC **26** 03:51:28.7±1.1, 0.29S×96.89E, h0km, mb3.9/8, mb1 4.0/10, mb1mx3.8/21, mbtmp3.9/10, ML4.0/2, Error ellipse: s-maj=41.3km s-min=18.5km az=56.0*
*ISCJB **26** 03:51:32.3±0.8, 0.12S±0.10×97.1E±0.1, h33km, mb3.9/9, Error ellipse: s-maj=16.9km s-min=12.2km az=146.3*
*NEIC **26** 03:51:34.3±0.6, 0.16S×97.07E, h35km, mb4.1/1, Error ellipse: s-maj=13.3km s-min=9.7km az=53.0*

ISC 26 03:51:34.6±0.8, 0.12S±0.10×97.1E±0.1, h35km, n16, σ0.78/15, mb3.9/9, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**3.42**	**32**	Pn	Pn	03 52 24.6	-0.9
	2.0nm,0.3s,baz=1.9,slow=6.7,SNR=4.1						
KULM	**Kulim**	**6.43**	**33**	*e*Pn	Pn	03 53 06.2	-0.7
KSM	**Kuching**	**13.29**	**83**	Pn	Pn	03 54 41.8	+0.8
CMAR	**Chiang Mai Arr**	**18.55**	**5**	P	Pn	03 55 48.8	0.0
	0.6nm,0.3s,baz=194,slow=12,SNR=10						
WRA	**Warramunga Arr**	**41.43**	**121**	P	P	03 59 17.4	-0.7
	0.4nm,0.8s,mb3.1,baz=302,slow=9.2,SNR=3.8						
ASAR	**Alice Springs**	**42.69**	**126**	P	P	03 59 29.2	+0.9
	0.2nm,0.5s,mb3.1,baz=296,slow=8.3,SNR=6.3						
SONM	**Songino Array**	**48.44**	**8**	P	P	04 00 14.0	+0.6
	0.5nm,0.5s,mb3.9,baz=186,slow=1.4,SNR=2.9						
MK31	**Makanchi Array**	**48.49**	**346**	*e*P	P	04 00 14.9	+1.1
MKAR	**Makanchi Array**	**48.49**	**346**	P	P	04 00 14.9	+1.1
	5.9nm,0.5s,mb4.6,baz=162,slow=9.3,SNR=76						
STKA	**Stephens Creek**	**52.55**	**131**	P	P	04 00 44.1	-0.7
	1.8nm,1.0s,mb4.0,baz=292,slow=11,SNR=2.0						
ZALV	**Zalesovo Beam**	**54.84**	**351**	P	P	04 01 01.7	+0.6
	4.6nm,0.6s,mb4.7,baz=176,slow=6.6,SNR=14						
ABKAR	**Akbulak array**	**58.63**	**332**	*e*P	P	04 01 27.6	-0.5
	1.5nm,0.9s,mb4.0						
BRTR	**Keskin Array B**	**69.93**	**313**	P	P	04 02 41.2	-1.2
	0.3nm,0.5

IM3	**Indian Mountai**	**3.07**	**334**	P	**Pn**	**03 55 24.9**	**-0.1**
SEW	**Seward**	**3.22**	**171**	P	**Pn**	**03 55 26.5**	**-0.6**
SVW2	**Sparrevohn**	**3.26**	**230**	*e*P	**Pn**	**03 55 27.7**	**+0.1**
BMRM	**Bremner River**	**3.59**	**128**	*e*Pn	**Pn**	**03 55 31.5**	**-0.4**
BCA3	**Beaver Creek A**	**3.92**	**89**	P	**Pn**	**03 55 35.9**	**-0.5**
COLD	**Coldfoot**	**3.97**	**1**	*e*Pn	**Pn**	**03 55 36.7**	**-0.2**
COLD				*e*S	**Sn**	**03 56 21.8**	**-0.9**
RAGM	**Ragged Mountai**	**3.98**	**134**	P	**Pn**	**03 55 36.8**	**-0.4**
EGAK	**Eagle**	**4.35**	**66**	*e*Pn	**Pn**	**03 55 42.4**	**+0.4**
EGAK				*e*S	**Sn**	**03 56 30.1**	**-1.7**
BM3	**Burnt Mountain**	**4.82**	**28**	P	**Pn**	**03 55 48.5**	**+0.2**
DAWY	**Dawson**	**4.98**	**76**	P	**Pn**	**03 55 50.3**	**-0.1**
KDAK	**Kodiak Island**	**5.62**	**192**	P	**Pn**	**03 55 57.6**	**-1.4**
	0.4nm,0.3s,baz=56,slow=6.9,SNR=16						
KDAK				S	**Sn**	**03 56 56.5**	**-5.8**
	1.9nm,0.3s,baz=263,slow=18,SNR=18						
OHAK	**Old Harbor**	**6.24**	**194**	*e*P	**Pn**	**03 56 06.6**	**-0.9**
YKA	**Yellowknife Ar**	**16.22**	**77**	P	**Pn**	**03 58 19.7**	**+1.4**
	0.1nm,0.3s,baz=286,slow=9.4,SNR=3.1						
PDAR	**Pinedale Array**	**31.22**	**112**	P	**P**	**04 00 46.6**	**+1.4**
	0.2nm,0.5s,mb3.1,baz=324,slow=5.6,SNR=2.7						
TXAR	**Lajitas Array**	**45.16**	**116**	P	**P**	**04 02 43.6**	**+1.7**
	0.2nm,0.6s,mb3.1,baz=331,slow=7.3,SNR=4.8						

NIED ***26*** *04:08:00,24.˚10N×122.˚50E,h44km,Mw4.1 Best double couple: M0 1.75000×10^15 NP1:φ=269.00000°,δ74.00000°, λ-60.00000°. NP2:φ=24.00000°,δ33.00000°, λ-150.00000°.*

IDC ***26*** *04:08:25.4±0.9,24.˚01N×122.˚42E,h0km,mb3.9/7, mb1 4.0/8,mb1mx3.8/24,mbtmp3.9/8,ML3.5/1,Error ellipse: s-maj=42.3km s-min=17.3km az=64.0*

ISCJB ***26*** *04:08:30.8±0.2,23.˚98N±0.˚02×122.˚60E±0.˚02,h50km±5km, mb3.8/7,Error ellipse: s-maj=3.3km s-min=2.3km az=158.3*

TAP ***26*** *04:08:30.9,24.˚02N×122.˚58E,h44km,ML4.5,C*

JMA ***26*** *04:08:30.3±0.2,24.˚05N×122.˚52E,h48km,M3.7*

NEIC ***26*** *04:08:31.4±0.8,24.˚04N×122.˚54E,h47km±8km, MG4.1(JMA),Error ellipse: s-maj=9.8km s-min=8.9km az=104.0*

ISC 26 04:08:31.6±0.2,23.˚99N±0.˚02×122.˚60E±0.˚02,h43km±6km, n84,σ1 8.05/145,mb3.8/7,6C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
YOJ	**Yonaguni jima**	**0.60**	**39**	P		**Pn**	**04 08 42.7**	**-1.1**
YOJ				S		**Sn**	**04 08 51.7**	**-0.9**
ENA	**Nanau**	**0.89**	**299**	P		**Pn**	**04 08 47.0**	**-0.7**
	baz=299							
ENA				*e*S		**Sn**	**04 08 59.6**	**+0.1**
	baz=299							
HWA	**Hwalien**	**0.91**	**269**	*e*P		**Pn**	**04 08 47.2**	**-0.6**
	baz=268							
HWA				S		**Sn**	**04 08 58.7**	**-1.1**
	baz=268							
TWD	**Chiawan**	**0.92**	**276**	P		**Pn**	**04 08 46.7**	**-1.4**
	baz=274							
TWD				*e*S		**Sn**	**04 08 58.5**	**-1.5**
	baz=274							
TWC	**Suao**	**0.92**	**312**	*i* P		**Pn**	**04 08 47.1**	**-1.0**
	baz=312							
TWC				S		**Sn**	**04 08 59.5**	**-0.6**
	baz=312							
NACB	**Ninganchiao**	**0.93**	**282**	*e*Pn		**Pn**	**04 08 47.0**	**-1.2**
NACB				*e*S		**Sn**	**04 08 57.4**	**-3.0**
ESL	**Shilin**	**1.08**	**261**	P		**Pn**	**04 08 48.8**	**-1.4**
	baz=250							
ESL				*e*S		**Sn**	**04 09 02.0**	**-2.0**
	baz=250							
IRIF	**Iriomote-Funau**	**1.09**	**71**	P		**Pn**	**04 08 50.4**	**0.0**
IRIF				*e*S		**Sn**	**04 09 05.4**	**+1.1**
ILA	**Ilan**	**1.09**	**315**	P		**Pn**	**04 08 50.5**	**+0.1**
	baz=315							
HATJ	**Hateruma jima**	**1.11**	**86**	P		**Pn**	**04 08 50.5**	**-0.1**
HATJ				S		**Sn**	**04 09 05.2**	**+0.5**
TWE	**Neicheng**	**1.12**	**311**	*e*P		**Pn**	**04 08 50.3**	**-0.4**
	baz=302							
TWE				*e*S		**Sn**	**04 09 04.9**	**-0.1**
	baz=302							
ENTT	**Nioudou**	**1.14**	**305**	P		**Pn**	**04 08 50.8**	**-0.3**
	baz=304							
ENTT				S		**Sn**	**04 09 05.7**	**+0.1**
	baz=304							
TWB1	**Santiao Chiao**	**1.16**	**332**	*i* P		**Pn**	**04 08 50.7**	**-0.6**
	baz=344							
TWB1				*e*S		**Sn**	**04 09 05.3**	**-0.6**
	baz=344							
NNS	**Nan Shan**	**1.20**	**292**	*e*P		**Pn**	**04 08 51.7**	**-0.2**
	baz=291							
NNS				*e*S		**Sn**	**04 09 06.7**	**-0.4**
	baz=291							
WHF	**Hehuan Shan**	**1.23**	**278**	*e*P		**Pn**	**04 08 51.7**	**-0.6**
	baz=276							
WHF				*e*S		**Sn**	**04 09 06.8**	**-0.8**
	baz=276							
EHY	**Hungye**	**1.26**	**248**	*i*P		**Pn**	**04 08 52.0**	**-0.8**
	baz=246							
EHY				*e*S		**Sn**	**04 09 07.4**	**-1.1**
	baz=246							
NWF	**Wu-fen Shan**	**1.31**	**326**	*i* P		**Pn**	**04 08 53.1**	**-0.3**
	baz=325							
NWF				*e*S		**Sn**	**04 09 09.7**	**0.0**
	baz=325							
JKRS	**Kuro-shima**	**1.32**	**79**	P		**Pn**	**04 08 53.7**	**+0.2**
JKRS				S		**Sn**	**04 09 10.1**	**+0.3**
NSK	**Sanguang**	**1.32**	**301**	*i* P		**Pn**	**04 08 53.2**	**-0.3**
	baz=288							
NSK				*e*S		**Sn**	**04 09 09.4**	**-0.5**
	baz=288							
TWT	**Tachien**	**1.32**	**282**	*e*P		**Pn**	**04 08 53.9**	**+0.3**
	baz=271							
TWT				*e*S		**Sn**	**04 09 09.1**	**-0.9**
	baz=271							
YULB	**Yu-li**	**1.33**	**244**	*e*Pn		**Pn**	**04 08 52.8**	**-0.9**
YULB				*e*S		**Sn**	**04 09 09.4**	**-0.8**
TWF1	**Yuli**	**1.35**	**242**	*i* P		**Pn**	**04 08 53.2**	**-0.7**
	baz=241							
TWF1				*e*S		**Sn**	**04 09 09.9**	**-0.7**
	baz=241							
TWA	**Mucha**	**1.35**	**317**	*e*P		**Pn**	**04 08 53.9**	**-0.1**
	baz=331							
TWA				S		**Sn**	**04 09 12.0**	**+1.3**
	baz=331							
TATO	**Taipei**	**1.41**	**314**	*e*Pn		**Pn**	**04 08 54.4**	**-0.4**
TATO				*e*S		**Sn**	**04 09 11.5**	**-0.6**
TAP1	**Taipei**	**1.43**	**317**	*e*P		**Pn**	**04 08 54.9**	**-0.1**
	baz=329							
TAP1				*e*S		**Sn**	**04 09 12.7**	**0.0**
	baz=329							
CHKT	**Chengkung**	**1.44**	**232**	P		**Pn**	**04 08 53.6**	**-1.5**
	baz=223							
CHKT				*e*S		**Sn**	**04 09 10.4**	**-2.3**
	baz=223							
JIJ	**Ishigaki jima**	**1.46**	**75**	P		**Pn**	**04 08 55.0**	**-0.5**
JIJ				S		**Sn**	**04 09 12.9**	**-0.5**
SSLB	**Suanglung**	**1.52**	**263**	*e*Pn		**Pn**	**04 08 55.7**	**-0.5**
SSLB				*e*S		**Sn**	**04 09 11.1**	**-3.6**
TWS1	**Kuangyinshan**	**1.54**	**316**	*e*P		**Pn**	**04 08 56.3**	**-0.3**
	baz=329							
TWS1				*e*S		**Sn**	**04 09 16.5**	**+1.1**
	baz=329							
SMLT	**Sun Moon Lake**	**1.56**	**266**	*i*P		**Pn**	**04 08 56.9**	**+0.2**
	baz=256							
TWY	**Chenhua**	**1.57**	**325**	*e*P		**Pn**	**04 08 56.5**	**-0.5**
	baz=325							
TWY				*e*S		**Sn**	**04 09 16.2**	**+0.2**
	baz=325							
YUS	**Yu-Shan**	**1.59**	**252**	*e*P		**Pn**	**04 08 57.6**	**+0.4**
	baz=251							
YUS				*e*S		**Sn**	**04 09 16.2**	**-0.3**
	baz=251							
NSTT	**Nanjuang**	**1.59**	**294**	P		**Pn**	**04 08 58.1**	**+0.9**
	baz=293							
NSTT				S		**Sn**	**04 09 17.3**	**+0.8**
	baz=293							
TYC	**Yuchr**	**1.59**	**267**	P		**Pn**	**04 08 57.1**	**-0.2**
	baz=266							
TYC				*e*S		**Sn**	**04 09 15.6**	**-1.0**
	baz=266							
ELDTW	**Lidau**	**1.65**	**241**	*i* P		**Pn**	**04 08 57.3**	**-0.8**
	baz=240							
ELDTW				*e*S		**Sn**	**04 09 16.7**	**-1.5**
	baz=240							
HSN	**Hsinchu**	**1.69**	**299**	*e*S		**Sn**	**04 09 20.1**	**+1.1**
	baz=300							
TWQ1	**Liyutan**	**1.70**	**282**	P		**Pn**	**04 08 60.0**	**+1.2**
	baz=282							
TWQ1				*e*S		**Sn**	**04 09 19.6**	**+0.3**
	baz=282							
ALS	**Alishan**	**1.71**	**254**	*i*P		**Pn**	**04 08 59.7**	**+0.8**
	baz=253							
ALS				*e*S		**Sn**	**04 09 20.2**	**+0.8**
	baz=253							
NSY	**Sanyi**	**1.73**	**285**	P		**Pn**	**04 09 00.5**	**+1.4**
	baz=284							
NSY				*e*S		**Sn**	**04 09 21.9**	**+1.9**
	baz=284							
WNT	**Mingjian**	**1.75**	**267**	*e*P		**Pn**	**04 09 00.9**	**+1.4**
	baz=265							
TCU	**Taichung**	**1.76**	**276**	P		**Pn**	**04 09 00.9**	**+1.3**
	baz=275							
TCU				*e*S		**Sn**	**04 09 22.8**	**+2.0**
	baz=275							
CHN5	**Tsauling**	**1.80**	**258**	*i*P		**Pn**	**04 09 01.1**	**+1.0**
	baz=257							
CHN5				*e*S		**Sn**	**04 09 21.9**	**+0.2**
	baz=257							
TTN	**Taitung**	**1.81**	**228**	*e*P		**Pn**	**04 08 59.5**	**-0.8**
	baz=220							
TTN				*e*S		**Sn**	**04 09 22.0**	**-0.1**
	baz=220							
TWG	**Pinlang**	**1.82**	**231**	*e*Pn		**Pn**	**04 08 59.1**	**-1.2**
TWG				*e*S		**Sn**	**04 09 20.4**	**-1.9**
TWG	**Pinlang**	**1.82**	**231**	P		**Pn**	**04 08 59.4**	**-1.0**
	baz=241							
TWG				*e*S		**Sn**	**04 09 21.6**	**-0.7**
	baz=241							
STYT	**Tauyuan**	**1.88**	**244**	*i*P		**Pn**	**04 09 01.5**	**+0.4**
	baz=243							
STYT				*e*S		**Sn**	**04 09 22.9**	**-0.8**
	baz=243							
WGK	**Gukeng**	**1.89**	**261**	*e*P		**Pn**	**04 09 02.9**	**+1.6**
	baz=260							
WGK				*e*S		**Sn**	**04 09 27.5**	**+3.6**
	baz=260							
TPUB	**Ta-pu**	**1.93**	**250**	*e*Pn		**Pn**	**04 09 02.7**	**+0.8**
TPUB				*e*S		**Sn**	**04 09 26.2**	**+1.3**
CHN4	**Tsaushan**	**1.94**	**251**	P		**Pn**	**04 09 03.3**	**+1.2**
	baz=250							
CHN4				*e*S		**Sn**	**04 09 26.8**	**+1.5**
	baz=250							
WTP	**Ta-pu**	**1.96**	**248**	*i*P		**Pn**	**04 09 03.5**	**+1.1**
	baz=238							
JTJ	**Tarama**	**2.03**	**71**	P		**Pn**	**04 09 03.4**	**+0.1**
JTJ				S		**Sn**	**04 09 28.1**	**+0.7**
CHY	**Chiayi**	**2.05**	**257**	P		**Pn**	**04 09 04.6**	**+1.0**
	baz=256							
CHY				*e*S		**Sn**	**04 09 29.5**	**+1.6**
	baz=256							
ECL	**Taimali**	**2.05**	**228**	*e*P		**Pn**	**04 09 02.3**	**-1.3**
	baz=235							
CHN1	**Nanshi**	**2.06**	**248**	P		**Pn**	**04 09 05.1**	**+1.4**
	baz=247							
CHN1				S		**Sn**	**04 09 30.3**	**+2.2**
	baz=247							
WTCT	**Ta-ch'eng**	**2.12**	**267**	*e*P		**Pn**	**04 09 06.2**	**+1.6**
	baz=279							
WTCT				*e*S		**Sn**	**04 09 31.2**	**+1.5**
	baz=279							
LAY	**Lan-yu**	**2.17**	**207**	*e*P		**Pn**	**04 09 04.2**	**-1.0**
	baz=205							
SSD	**Sandimen**	**2.19**	**236**	P		**Pn**	**04 09 05.7**	**+0.2**
	baz=231							
SSD				*e*S		**Sn**	**04 09 29.2**	**-2.1**
	baz=231							
CHN3	**Shinhua**	**2.24**	**246**	*e*P		**Pn**	**04 09 08.7**	**+2.5**
	baz=257							
CHN3				*e*S		**Sn**	**04 09 36.8**	**+4.2**
	baz=257							
TAW	**Tawu**	**2.25**	**224**	*e*P		**Pn**	**04 09 10.7**	**+4.3**
	baz=231							
EAST	**Anshuo**	**2.27**	**225**	P		**Pn**	**04 09 05.7**	**-0.8**
	baz=225							
EAST				*e*S		**Sn**	**04 09 32.1**	**-1.1**
	baz=225							
CHN8	**Yiju**	**2.28**	**254**	*e*P		**Pn**	**04 09 07.9**	**+1.2**
	baz=254							
CHN8				*e*S		**Sn**	**04 09 35.2**	**+1.7**
	baz=254							
TWM1	**Shoushan**	**2.31**	**240**	*e*P		**Pn**	**04 09 10.0**	**+2.9**
	baz=240							
TWM1				*e*S		**Sn**	**04 09 40.4**	**+6.1**
	baz=240							
TAI1	**Yung-k'ang**	**2.37**	**247**	P		**Pn**	**04 09 10.0**	**+2.1**
	baz=259							
TAI1				*e*S		**Sn**	**04 09 38.7**	**+2.9**
	baz=259							
SCZT	**Fangliau**	**2.43**	**229**	*e*P		**Pn**	**04 09 08.9**	**+0.1**
	baz=221							
JMJ	**Miyako jima 2**	**2.59**	**71**	*e*S		**Sn**	**04 09 42.5**	**+1.2**
TSEB	**Hengchuen, Pin**	**2.60**	**217**	*e*P		**Pn**	**04 09 10.9**	**-0.2**
	baz=217							
TSEB				*e*S		**Sn**	**04 09 41.4**	**-0.1**
	baz=217							
HEN	**Hengchun**	**2.61**	**221**	*e*P		**Pn**	**04 09 11.3**	**+0.1**
	baz=221							
HEN				*e*S		**Sn**	**04 09 41.9**	**+0.1**
	baz=221							
TWK1	**Hengchun**	**2.62**	**219**	*e*P		**Pn**	**04 09 11.2**	**-0.2**
	baz=212							
TWK1				*e*S		**Sn**	**04 09 42.3**	**+0.3**
	baz=212							
TWP	**Hsiaoliuchiu**	**2.63**	**232**	*e*P		**Pn**	**04 09 13.8**	**+2.4**
	baz=244							
PNG	**Penghu**	**2.82**	**262**	*e*P		**Pn**	**04 09 14.4**	**+0.3**
	baz=262							
PNG				*e*S		**Sn**	**04 09 46.8**	**0.0**
	baz=262							
QZH	**Quanzhou**	**3.77**	**285**	Pn		**Pn**	**04 09 25.5**	**-1.7**
QZH				Sn		**Sn**	**04 10 01.3**	**-9.0**
QZH				smax				
	comp=N,360nm,0.3s							
QZH				smax				
	comp=E,310nm,0.4s							
KNM	**Kinmen**	**3.82**	**277**	*e*P		**Pn**	**04 09 29.2**	**+1.3**
	baz=276							
KNM				*e*S		**Sn**	**04 10 11.3**	**-0.4**
	baz=276							
JOW	**Kunigami**	**5.86**	**60**	Pn		**Pn**	**04 09 56.0**	**0.0**
JOW	**Kunigami**	**5.86**	**60**	Pn		**Pn**	**04 09 56.0**	**0.0**
	comp=E,2.5nm,0.3s,baz=251,slow=18,SNR=4.5							
KSRS	**Korea Array**	**14.18**	**18**	Pn		**Pn**	**04 11 54.2**	**+4.5**
	comp=E,0.5nm,0.3s,baz=199,slow=12,SNR=9.6							
SONM	**Songino Array**	**27.06**	**336**	P		**P**	**04 14 08.3**	**-1.6**
	comp=E,0.6nm,0.4s,mb3.5,baz=128,slow=9.3,SNR=3.2							
MKAR	**Makanchi Array**	**39.38**	**316**	P		**P**	**04 15 56.2**	**-0.7**
MKAR	**Makanchi Array**	**39.38**	**316**	P		**P**	**04 15 56.2**	**-0.7**
	comp=E,1.0nm,0.9s,mb3.6,baz=96,slow=11,SNR=6.0							
ZALV	**Zalesovo Beam**	**41.11**	**327**	P		**P**	**04 16 09.2**	**-1.9**
	comp=E,1.5nm,0.3s,mb4.1,baz=110,slow=8.3,SNR=3.4							
KURK	**Kurchatov**	**43.07**	**320**	P		**P**	**04 16 26.4**	**-0.7**
	comp=E,0.3nm,0.2s,mb3.6,baz=105,slow=13,SNR=3.5							
WRA	**Warramunga Arr**	**45.14**	**164**	P		**P**	**04 16 44.2**	**+0.2**
WRA	**Warramunga Arr**	**45.14**	**164**	P		**P**	**04 16 44.2**	**+0.2**
	comp=E,2.1nm,0.7s,mb4.1,baz=346,slow=8.9,SNR=19							
ASAR	**Alice Springs**	**48.63**	**166**	P		**P**	**04 17 12.1**	**+0.9**
	comp=E,1.1nm,0.6s,mb4.1,baz=348,slow=8.5,SNR=11							
STKA	**Stephens Creek**	**58.45**	**161**	P		**P**	**04 18 22.6**	**-0.4**
	comp=E,0.8nm,0.6s,mb3.9,baz=319,slow=7.6,SNR=2.8							

DJA 26 04:14:37,6.˚54S×104.˚41E,h10km,MLv3.6/8,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
KASI	**Kota Agung**	**1.01**	**5**	P		Pg	04 14 56.4	-0.1
KASI				S		Sg	04 15 08.6	-1.1
BLSI	**Bandar Lampung**	**1.43**	**36**	P		Pn	04 15 02.1	-0.9
RBSI	**Rajabasa**	**1.49**	**63**	P		Pn	04 15 04.3	+0.4
LWLI	**Liwa**	**1.55**	**347**	P		Pn	04 15 05.6	+0.9
KLI	**Kotabumi**	**1.72**	**15**	P		Pn	04 15 05.5	-1.6
KLSI		**1.86**	**10**	P		Pn	04 15 10.1	+1.1
KLSI				S		Sn	04 15 35.9	+3.3
MDSI	**Maura Dua**	**2.05**	**354**	P		Pn	04 15 11.9	+0.3
DBJI	**Dramaga**	**2.33**	**90**	P		Pn	04 15 15.7	+0.4
MNAI	**Manna**	**2.60**	**326**	P		Pn	04 15 19.2	0.0

CASC 26 04:40:58.3±1.4,12.˚55N×90.˚04W,h22km,MD4.0,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
SBLS	**San Blas**	**1.35**	**17**	*e*P		Pn	04 41 21.3	-0.5
SBLS				*e*S		Sn	04 41 40.8	+1.7
SNET	**Serv Nac Est T**	**1.38**	**35**	*e*P		Pn	04 41 20.9	-1.3
SNET				*e*S		Sn	04 41 41.2	+1.4
SNJE	**San Jose**	**1.38**	**18**	*e*P		Pn	04 41 21.6	-0.6
BOQS	**Boqueron**	**1.39**	**32**	*e*P		Pn	04 41 21.9	-0.5
BOQS				*e*S		Sn	04 41 41.8	+1.7
RTR	**El Retiro**	**1.40**	**16**	*e*P		Pn	04 41 22.1	-0.4
LFRS	**El Faro**	**1.43**	**42**	*e*P		Pn	04 41 22.6	-0.3
LBRS	**Las Brisas**	**1.53**	**39**	*e*P		Pn	04 41 24.1	-0.2
SNVI	**San Vicente**	**1.58**	**48**	*e*P		Pn	04 41 24.9	-0.1
RBDL	**Robledal**	**1.59**	**12**	*e*P		Pn	04 41 25.2	0.0
VSM	**San Miguel**	**1.93**	**63**	*e*P		Pn	04 41 30.5	+0.7
BLLM	**Bellamira**	**1.97**	**63**	*e*P		Pn	04 41 30.8	+0.5
FUG	**Fuego 3**	**2.04**	**338**	*e*P		Pn	04 41 32.0	+0.6
NBG	**Las Nubes**	**2.05**	**352**	*e*P		Pn	04 41 32.9	+1.4
CAHU	**Cacacuatique**	**2.16**	**55**	*e*P		Pn	04 41 33.4	+0.5
FG6		**2.16**	**338**	*e*P		Pn	04 41 33.6	+0.6
CNCH	**Conchagua**	**2.27**	**71**	*e*P		Pn	04 41 35.5	+1.0
TP2	**Tecpan 2**	**2.42**	**337**	*e*P		Pn	04 41 38.0	+1.5
MRL	**Marmol**	**2.53**	**8**	*e*P		Pn	04 41 41.3	+3.3

IDC 26 04:45:24.3±2.1,7.˚06S×150.˚75E,h0km,mb3.7/4, mb1 4.1/4,mb1mx3.7/16,mbtmp3.8/4,Error ellipse: s-maj=104.0km s-min=28.3km az=131.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
WRA	**Warramunga Arr**	**20.43**	**230**	P		P	04 50 03.4	0.0
	2.6nm,0.6s,baz=55,slow=11,SNR=47							
ASAR	**Alice Springs**	**23.12**	**223**	P		P	04 50 31.9	-0.2
	1.4nm,0.7s,baz=56,slow=9.2,SNR=18							
FITZ	**Fitzroy Crossi**	**26.81**	**243**	P		P	04 51 06.5	0.0
	0.9nm,0.3s,baz=70,slow=11,SNR=10.0							
ILAR	**Eielson Array**	**85.00**	**22**	P		P	04 58 01.6	+0.3
	0.6nm,0.9s,baz=244,slow=5.1,SNR=5.4							

IDC ***26*** *04:54:33.0±5.0,30.˚47N×83.˚07E,h0km,mb3.5/5, mb1 3.6/6,mb1mx3.4/26,mbtmp3.5/6,ML2.8/1,MS3.8/2, Ms1 3.8/2,ms1mx2.8/36,Error ellipse: s-maj=94.9km s-min=50.0km az=32.0*

ISCJB ***26*** *04:54:38.5±1.6,31.˚1N±0.˚2×83.˚4E±0.˚2,h10km,mb3.3/4, MS3.8/2,Error ellipse: s-maj=34.8km s-min=9.0km az=136.3*

ISC 26 04:54:39.4±1.6,31.˚0N±0.˚2×83.˚5E±0.˚2,h10km,n10, σ0 9.4/9,mb3.3/4,MS3.8/2,Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
PTH	**Pithoragarh**	**3.18**	**243**	*e*PKP		**Pn**	**04 55 28.9**	**-0.6**
PTH				*e*S		**Sn**	**04 56 08.2**	**+0.7**
NDI	**New Delhi**	**5.92**	**248**	*e*PKP		**Pn**	**04 56 02.5**	**-4.6**
MKAR	**Makanchi Array**	**15.78**	**357**	Pn		**Pn**	**04 58 22.7**	**+1.1**
	0.0nm,0.3s,baz=180,slow=11,SNR=2.7							
KURK	**Kurchatov**	**20.00**	**351**	P		**P**	**04 59 11.1**	**-1.0**
	0.5nm,0.3s,baz=171,slow=10,SNR=4.4							
ZALV	**Zalesovo Beam**	**22.93**	**2**	P		**P**	**04 59 44.3**	**+0.8**
	0.6nm,0.5s,mb3.3,baz=198,slow=9.1,SNR=3.2							
BVAR	**Borovoye Array**	**23.96**	**340**	P		**P**	**04 59 52.6**	**-1.1**
	0.4nm,0.4s,mb3.2,baz=159,slow=12,SNR=3.2							
SONM	**Songino Array**	**24.26**	**40**	P		**P**	**04 59 57.5**	**+1.0**
	0.8nm,0.7s,mb3.3,baz=232,slow=8.9,SNR=3.2							
GNI	**Garni**	**32.58**	**297**	LR		LR	05 18 14.1	
	comp=Z,78nm,19.1s,MS3.4,baz=73,slow=44							
ILAR	**Eielson Array**	**76.78**	**20**	P		**P**	**05 06 29.9**	**-0.9**
	0.5nm,1.1s,mb3.4,baz=316,slow=5.0,SNR=3.6							
LBTB	**Lobatse**	**78.55**	**232**	LR		LR	05 38 23.0	
	comp=Z,119nm,21.5s,MS4.2,baz=290,slow=34							

IDC 26 04:56:26.8±2.9,30.˚70N×83.˚43E,h0km,mb3.4/5, mb1 3.6/6,mb1mx3.4/26,mbtmp3.4/6,ML2.8/1,Error ellipse: s-maj=126.9km s-min=25.0km az=66.0,Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
MKAR	**Makanchi Array**	**16.09**	**357**	Pn		Pn	05 00 13.9	-0.4
	0.0nm,0.3s,baz=168,slow=7.4,SNR=2.1							
KURK	**Kurchatov**	**20.31**	**351**	P		P	05 01 04.8	+0.6
	1.1nm,0.7s,baz=169,slow=9.9,SNR=6.8							
ZALV	**Zalesovo Beam**	**23.25**	**2**	P		P	05 01 35.2	-0.4
	0.5nm,0.3s,baz=186,slow=12,SNR=3.6							
BVAR	**Borovoye Array**	**24.25**	**341**	P		P	05 01 44.3	-0.9
	0.2nm,0.4s,baz=149,slow=9.6,SNR=2.3							
WRA	**Warramunga Arr**	**70.20**	**129**	P		P	05 07 41.8	+0.1
	0.5nm,0.6s,baz=326,slow=6.3,SNR=7.2							
ILAR	**Eielson Array**	**77.10**	**20**	P		P	05 08 21.8	+0.2
	0.4nm,0.7s,baz=316,slow=5.1,SNR=3.5							

IDC ***26*** *04:59:13.4±1.2,10.˚11S×160.˚63E,h0km,mb3.8/7, mb1 4.1/8,mb1mx3.9/20,mbtmp3.9/8,ML4.0/1,Error ellipse: s-maj=28.2km s-min=21.4km az=94.0*

NEIC ***26*** *04:59:18.4±1.0,10.˚06S×160.˚59E,h35km,mb4.4/1,Error ellipse: s-maj=21.9km s-min=13.0km az=122.0*

ISC 26 04:59:18.7±6.4,10.˚05S±0.˚09×160.˚6E±0.˚1,h34km±44km, n11,σ0 9.59/13,mb3.8/8,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
HNR	**Honiara**	**0.85**	**316**	*e*Pg		**Pn**	**04 59 34.3**	**0.0**
HNR				Sn		**Sn**	**04 59 45.7**	**0.0**
HNR	**Honiara**	**0.85**	**316**	Pn		**Pn**	**04 59 34.4**	**0.0**
	101nm,0.3s,baz=182,slow=5.0,SNR=15							
HNR				Sn		**Sn**	**04 59 45.7**	**0.0**
	702nm,0.3s,baz=144,slow=19,SNR=19							

*ISCJB **26** 05:02:09.6±1.3,30°.73N±0°.05×83°.34E±0°.05,h1km±8km, mb3.7/10,Error ellipse: s-maj=9.8km s-min=6.3km az=151.6*
*IDC **26** 05:02:10.7±1.1,30°.70N×83°.29E,h0km,mb3.8/10, mb1 3.9/12,mb1mx3.8/28,mbtmp3.8/12,ML3.7/2,MS2.8/1, Ms1 3.0/1,ms1mx2.5/41,Error ellipse: s-maj=43.2km s-min=16.1km az=58.0*
*BJI **26** 05:02:11.2,30°.64N×83°.08E,h18km,mB4.3/1,mb4.2/3*
*NEIC **26** 05:02:14.1±3.6,30°.74N×83°.21E,h20km±26km,mb3.8/3, Error ellipse: s-maj=20.8km s-min=7.8km az=45.0*
*NDI **26** 05:02:22.6±1.7,30°.14N×83°.38E,h10km,ML3.7, mb3.8(NEIC)*

ISC 26 05:02:12.2±1.4,30°.76N±0°.05×83°.35E±0°.05,h6km±9km, n29,σ1°09/33,mb3.7/10,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**2.97**	**247**	*e*PKP		**Pg**		**05 03 07.1**	**-2.0**
PTH				*ex*		**Sg**		**05 03 47.1**	**-0.6**
JOSI	**Joshimath**	**3.27**	**267**	*e*PKP		**Pg**		**05 03 16.0**	**+1.0**
JOSI				*ex*		**Sg**		**05 04 03.3**	**+5.9**
JOSI					AML	AML		05 04 04.9	
	comp=E,680nm,0.5s								
JOSI					AML	AML		05 04 05.2	
	comp=N,169nm,0.5s								
KLP	**Kalpa**	**4.44**	**281**	*e*PKP		**Pb**		**05 03 32.7**	**+2.1**
KLP				*e*S		**Sb**		**05 04 23.9**	**-0.4**
DDI	**Dehra Dun**	**4.59**	**266**	*ex*		**Pn**		**05 03 25.5**	**+3.4**
NDI	**New Delhi**	**5.72**	**250**	*ex*		**Pn**		**05 03 39.0**	**+1.3**
NDI				*e*S		**Sn**		**05 04 45.5**	**+1.8**
AGRA	**Agra**	**5.90**	**235**	*e*S		**Sn**		**05 04 46.4**	**-1.7**
AGRA					AML	AML		05 05 02.2	
	comp=E,85nm,0.1s								
AGRA					AML	AML		05 05 02.5	
	comp=N,198nm,0.1s								
LSA	**Lhasa**	**6.83**	**97**	Pn		**Pn**		**05 03 57.5**	**+4.6**
LSA	**Lhasa**	**6.83**	**97**	*e*Pn		**Pn**		**05 03 56.2**	**+3.3**
	comp=N,20nm,1.0s								
KSH	**Kashi**	**10.62**	**327**	P		**Pn**		**05 04 43.8**	**-1.0**
EKS2	**Erkin-Say**	**14.13**	**330**	*e*Pn		**Pn**		**05 05 32.8**	**-0.1**
	comp=N,3.4nm,0.8s								
KKAR	**Karatay Array**	**16.01**	**324**	*e*P		**Pn**		**05 05 56.5**	**-1.4**
	comp=N,1.4nm,0.6s								
MK31	**Makanchi Array**	**16.03**	**357**	*e*P		**Pn**		**05 05 59.7**	**+1.5**
MKAR	**Makanchi Array**	**16.03**	**357**	Pn		**Pn**		**05 05 56.4**	**-1.8**
	comp=N,0.1nm,0.3s,baz=178,slow=14,SNR=4.2								
CMAR	**Chiang Mai Arr**	**18.71**	**127**	P		**Pn**		**05 06 32.0**	**+0.2**
	comp=N,0.3nm,0.3s,baz=302,slow=10,SNR=6.4								
CMAR					LR	LR		05 13 41.0	
	comp=N,31nm,20.7s,baz=215,slow=37								
KURK	**Kurchatov**	**20.25**	**351**	*e*P		**P**		**05 06 47.4**	**-0.6**
	comp=N,12nm,1.2s								
KURK	**Kurchatov**	**20.25**	**351**	P		**P**		**05 06 46.7**	**-1.3**
	comp=N,3.8nm,0.8s,baz=171,slow=10,SNR=21								
ZAA0	**Zalesovo Array**	**23.20**	**2**	*e*P		**P**		**05 07 20.2**	**+0.6**
ZALV	**Zalesovo Beam**	**23.20**	**2**	P		**P**		**05 07 19.7**	**+0.1**
	comp=N,1.3nm,0.6s,mb3.5,baz=187,slow=12,SNR=7.4								
BVAR	**Borovoye Array**	**24.17**	**341**	P		**P**		**05 07 29.0**	**-0.1**
	comp=N,1.7nm,0.7s,mb3.6,baz=153,slow=10.0,SNR=8.5								
SONM	**Songino Array**	**24.53**	**39**	P		**P**		**05 07 33.4**	**+1.0**
	comp=N,1.7nm,0.7s,mb3.7,baz=226,slow=8.0,SNR=5.0								
ABKAR	**Akbulak array**	**25.57**	**323**	*e*P		**P**		**05 07 42.4**	**+0.6**
	comp=N,1.7nm,0.6s,mb3.8								
AKTK	**Aktyubinsk**	**27.28**	**323**	P		**P**		**05 07 57.2**	**0.0**
AKTO	**Aktyubinsk**	**27.28**	**323**	P		**P**		**05 07 57.2**	**0.0**
	comp=N,0.6nm,0.3s,mb3.6,baz=162,slow=13,SNR=3.5								
FINES	**FINESS Array B**	**47.94**	**327**	P		**P**		**05 10 50.8**	**-0.4**
	comp=N,1.4nm,0.6s,mb4.2,baz=90,slow=9.7,SNR=3.8								
ARCES	**ARCESS Array B**	**50.39**	**337**	P		**P**		**05 11 10.1**	**+0.2**
	comp=N,1.4nm,0.8s,mb4.0,baz=84,slow=8.3,SNR=4.3								
WRA	**Warramunga Arr**	**70.29**	**129**	P		**P**		**05 13 26.2**	**-0.5**
WRA	**Warramunga Arr**	**70.29**	**129**	P		**P**		**05 13 26.2**	**-0.5**
	comp=N,1.1nm,0.7s,mb3.9,baz=324,slow=6.3,SNR=12								
ASAR	**Alice Springs**	**72.64**	**132**	P		**P**		**05 13 40.2**	**-0.6**
	comp=N,0.3nm,0.8s,mb3.3,baz=331,slow=5.6,SNR=3.5								
ILAR	**Eielson Array**	**77.07**	**20**	P		**P**		**05 14 05.2**	**-0.6**
	comp=N,1.6nm,1.0s,mb3.9,baz=298,slow=4.2,SNR=12								

DJA 26 05:04:28,6°.37S×104°.60E,h7km,MLv3.0/5,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.85**	**353**	P		Pg		05 04 42.9	-1.4
KASI				S		Sg		05 04 55.1	-0.2
CGJI	**Cibinong**	**1.11**	**103**	P		Pg		05 04 47.3	-2.1
CGJI				S		Sg		05 05 04.2	+0.4
KLI	**Kotabumi**	**1.52**	**10**	P		Pn		05 04 55.7	+0.1
KLI				S		Sn		05 05 16.7	+1.1
KLSI		**1.67**	**4**	P		Pn		05 04 57.3	-0.4
MDSI	**Maura Dua**	**1.92**	**347**	P		Pn		05 05 00.7	-0.4
SDSI	**Sungai Dareh**	**6.26**	**330**	P		Pn		05 06 01.6	+0.8

IDC 26 05:12:15.8±2.9,30°.48N×82°.88E,h0km,mb3.4/4, mb1 3.7/6,mb1mx3.5/26,mbtmp3.5/6,MS3.0/1,Ms1 3.0/1, ms1mx2.5/25,Error ellipse: s-maj=83.1km s-min=26.0km az=68.0,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**13.87**	**333**	LR		LR		05 21 45.3	
	comp=Z,72nm,20.9s,baz=14,slow=41								
MKAR	**Makanchi Array**	**16.30**	**359**	Pn		Pn		05 16 05.5	-0.4
	baz=177,slow=13,SNR=2.1								
CMAR	**Chiang Mai Arr**	**18.87**	**126**	P		Pn		05 16 38.5	+0.5
	0.6nm,0.3s,baz=322,slow=12,SNR=5.8								
KURK	**Kurchatov**	**20.47**	**352**	P		P		05 16 54.0	-0.9
	1.8nm,0.9s,baz=167,slow=10,SNR=8.2								
SONM	**Songino Array**	**25.01**	**39**	P		P		05 17 41.3	+0.1
	0.8nm,0.7s,baz=221,slow=11,SNR=2.9								
WRA	**Warramunga Arr**	**70.43**	**129**	P		P		05 23 31.9	-0.2
	0.4nm,0.8s,baz=323,slow=6.5,SNR=4.1								
ILAR	**Eielson Array**	**77.47**	**20**	P		P		05 24 12.6	-0.1
	0.3nm,0.9s,baz=308,slow=4.4,SNR=2.8								

*ISCJB **26** 05:23:45.4±0.8,30°.81N±0°.1×83°.8E±0°.1,h10km,mb3.4/3, Error ellipse: s-maj=19.6km s-min=14.0km az=138.1*
*IDC **26** 05:23:45.4±3.8,30°.81N×83°.79E,h0km,mb3.5/4, mb1 3.7/6,mb1mx3.5/26,mbtmp3.5/6,ML3.6/2,MS3.0/1, Ms1 3.0/1,ms1mx2.4/24,Error ellipse: s-maj=166.4km s-min=22.4km az=68.0*

ISC 26 05:23:47.0±0.8,30°.9N±0°.1×83°.8E±0°.1,h10km,n8,σ0°.76/7, mb3.4/3,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**5.02**	**265**	*ex*		**Pn**		**05 25 02.5**	**+0.1**
AAK	**Ala-Archa**	**13.92**	**330**	LR		LR		05 33 06.5	
	comp=Z,66nm,20.6s,baz=94,slow=40								
MKAR	**Makanchi Array**	**15.95**	**356**	Pn		**Pn**		**05 27 31.9**	**+0.5**
	0.0nm,0.3s,baz=196,slow=13,SNR=2.8								
CMAR	**Chiang Mai Arr**	**18.44**	**129**	P		**Pn**		**05 28 02.7**	**-0.1**
	0.3nm,0.3s,baz=312,slow=9.5,SNR=3.0								
KURK	**Kurchatov**	**20.21**	**350**	P		**P**		**05 28 20.1**	**-1.7**
	0.7nm,0.6s,baz=168,slow=11,SNR=6.8								
ZALV	**Zalesovo Beam**	**23.08**	**1**	P		**P**		**05 28 53.5**	**+0.9**
	0.3nm,0.3s,mb3.2,baz=203,slow=10,SNR=2.8								
WRA	**Warramunga Arr**	**70.03**	**129**	P		**P**		**05 34 59.2**	**0.0**
	1.2nm,0.7s,mb4.0,baz=324,slow=6.4,SNR=16								
ASAR	**Alice Springs**	**72.40**	**132**	P		**P**		**05 35 13.7**	**+0.1**
	0.1nm,0.4s,mb3.1,baz=324,slow=6.2,SNR=4.1								

*ISCJB **26** 05:29:38.4±1.2,38°.41N±0°.08×39°.03E±0°.06,h20km±10km, Error ellipse: s-maj=13.9km s-min=7.7km az=175.5*
*ISK **26** 05:29:38.0,38°.48N×39°.00E,h5km,MD2.5*
*CSEM **26** 05:29:38.4±0.2,38°.43N×39°.03E,h15km,MD2.5,Error ellipse: s-maj=8.4km s-min=4.8km az=167.0*

ISC 26 05:29:38.5±1.2,38°.41N±0°.08×39°.03E±0°.06,h19km±8km, n12,σ0°.54/17,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.09**	**339**	*i* P		**Pg**		**05 29 42.5**	**+0.3**
ELZG	**Elazig**	**0.09**	**339**	*i* P		**Pg**		**05 29 42.5**	**+0.3**
ELZG				*i* S		**Sg**		**05 29 44.8**	**+0.1**
SVRC	**Sivrice-ELAZID**	**0.22**	**98**	*e*PG		**Pg**		**05 29 43.7**	**-0.1**
SVRC				*e*SG		**Sg**		**05 29 47.9**	**+0.5**
SVRC	**Sivrice-ELAZID**	**0.22**	**98**	*e*Pg		**Pg**		**05 29 43.7**	**-0.1**
SVRC				*e*Sg		**Sg**		**05 29 47.9**	**+0.5**
MALT	**Malatya**	**0.48**	**258**	*e*PG		**Pg**		**05 29 47.9**	**-0.3**
MALT				*e*SG		**Sg**		**05 29 54.9**	**+0.2**
MALT	**Malatya**	**0.48**	**258**	*e*Pg		**Pg**		**05 29 47.9**	**-0.3**
MALT				*e*Sg		**Sg**		**05 29 54.9**	**+0.1**
MYA	**Malataya**	**0.48**	**260**	*e*PG		**Pg**		**05 29 47.8**	**-0.4**
MYA	**Malataya**	**0.48**	**260**	*e*Pg		**Pg**		**05 29 47.8**	**-0.4**
PTK	**Pertek**	**0.56**	**31**	*e*PG		**Pg**		**05 29 48.5**	**-1.2**
PTK	**Pertek**	**0.56**	**31**	*e*Pg		**Pg**		**05 29 48.5**	**-1.1**
KEMA	**Kemaliye**	**0.95**	**334**	*i* P		**Pb**		**05 29 57.2**	**+0.9**
KEMA	**Kemaliye**	**0.95**	**334**	*i* P		**Pb**		**05 29 57.2**	**+0.8**

IDC 26 05:29:38.5±1.4,34°.76S×54°.54E,h0km,mb3.7/4, mb1 3.9/5,mb1mx3.7/21,mbtmp3.7/5,ML4.5/1,Error ellipse: s-maj=45.7km s-min=29.8km az=86.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**17.40**	**336**	P		P		05 33 42.8	+0.1
	1.7nm,0.3s,baz=146,slow=15,SNR=3.0								
QSPA	**South Pole Qui**	**55.42**	**180**	P		P		05 39 14.7	+0.7
	0.6nm,0.7s,baz=262,slow=5.8,SNR=3.5								
CMAR	**Chiang Mai Arr**	**67.68**	**46**	P		P		05 40 38.2	+0.6
	0.6nm,0.3s,baz=238,slow=5.2,SNR=3.7								
ASAR	**Alice Springs**	**68.54**	**104**	P		P		05 40 42.8	-0.4
	0.3nm,0.6s,baz=232,slow=6.0,SNR=6.4								
WRA	**Warramunga Arr**	**70.75**	**101**	P		P		05 40 57.0	+0.1
	0.5nm,0.8s,baz=234,slow=5.1,SNR=6.1								
ILAR	**Eielson Array**	**147.27**	**17**	PKPbc		PKPbc		05 49 21.7	-1.2
	0.6nm,1.1s,baz=301,slow=2.3,SNR=3.5								

IDC 26 05:39:15.1±2.0,1°.20S×138°.06E,h0km,mb3.9/5, mb1 4.2/6,mb1mx3.9/17,mbtmp4.0/6,ML4.2/1,Error ellipse: s-maj=55.4km s-min=21.4km az=83.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.98**	**191**	P		P		05 43 37.0	-1.8
	0.9nm,0.3s,baz=9.6,slow=13,SNR=40								
WRA				S		Sn		05 47 00.8	-11
	0.0nm,0.3s,baz=12,slow=24,SNR=3.5								
FITZ	**Fitzroy Crossi**	**20.76**	**215**	P		P		05 43 58.3	+0.6
	1.1nm,0.6s,baz=46,slow=10,SNR=5.2								
FITZ				S		S		05 47 41.0	-9.4
	1.2nm,0.6s,baz=190,slow=10,SNR=3.2								
ASAR	**Alice Springs**	**22.69**	**190**	P		P		05 44 19.4	+1.0
	3.2nm,0.8s,baz=24,slow=12,SNR=35								
ASAR				S		S		05 48 23.2	-5.1
	1.0nm,0.9s,baz=11,slow=26,SNR=3.0								
PSI	**Prapat**	**39.33**	**276**	P		P		05 46 46.4	-0.1
	1.3nm,0.3s,baz=79,slow=5.2,SNR=6.2								
CMAR	**Chiang Mai Arr**	**43.14**	**299**	P		P		05 47 18.7	+0.9
	0.4nm,0.4s,baz=116,slow=7.3,SNR=8.6								
MKAR	**Makanchi Array**	**68.21**	**322**	P		P		05 50 17.6	+0.1
	0.5nm,0.5s,baz=112,slow=7.3,SNR=5.8								
BVAR	**Borovoye Array**	**77.71**	**325**	P		P		05 51 13.0	-0.8
	baz=98,slow=7.7,SNR=4.0								

DJA 26 05:46:40,0°.67N×98°.50E,h15km,MLv3.5/4,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.09**	**83**	P		Pb		05 46 56.1	-4.4
MNSI				S		Sb		05 47 13.6	-0.9
SISI	**Saibi**	**2.07**	**163**	P		Pn		05 47 14.7	+0.5
PPI	**Padang Panjang**	**2.20**	**121**	P		Pn		05 47 16.9	+0.8
PDSI	**Padang**	**2.51**	**129**	P		Pn		05 47 21.8	+1.5

*IDC **26** 05:56:14.6±6.7,6°.60S×104°.16E,h0km,mb3.4/2, mb1 3.6/2,mb1mx3.3/19,mbtmp3.4/2,Error ellipse: s-maj=307.6km s-min=34.3km az=48.0*
*ISCJB **26** 05:56:19.5±1.6,6°.7S±0°.1×104°.4E±0°.1,h50km±18km, mb3.4/2,Error ellipse: s-maj=17.2km s-min=16.5km az=40.1*
*DJA **26** 05:56:21,6°.54S×104°.42E,h15km,MLv3.5/6*

ISC 26 05:56:20.7±1.8,6°.7S±0°.1×104°.4E±0°.1,h41km±21km,n11, σ1°11/13,mb3.4/2,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.15**	**6**	P		**Pn**		**05 56 38.6**	**-1.7**
KASI				S		**Sn**		**05 56 51.5**	**-3.2**
BLSI	**Bandar Lampung**	**1.56**	**34**	P		**Pn**		**05 56 45.9**	**0.0**
BLSI				S		**Sn**		**05 57 04.0**	**-0.9**
RBSI	**Rajabasa**	**1.59**	**59**	P		**Pn**		**05 56 45.9**	**-0.5**
LWLI	**Liwa**	**1.67**	**349**	P		**Pn**		**05 56 47.7**	**+0.2**
KLI	**Kotabumi**	**1.86**	**15**	S		**Sn**		**05 57 14.2**	**+1.9**
KLSI		**2.00**	**10**	P		**Pn**		**05 56 52.2**	**+0.2**
KLSI				S		**Sn**		**05 57 16.9**	**+1.1**
MDSI	**Maura Dua**	**2.18**	**355**	P		**Pn**		**05 56 55.1**	**+0.7**
MNAI	**Manna**	**2.69**	**328**	P		**Pn**		**05 57 01.9**	**+0.4**
WRA	**Warramunga Arr**	**31.93**	**117**	P		**P**		**06 02 44.0**	**+1.2**
	0.4nm,0.9s,mb3.3,baz=289,slow=11,SNR=3.7								
MKAR	**Makanchi Array**	**56.73**	**342**	P		**P**		**06 05 58.9**	**-1.4**
	0.4nm,0.6s,mb3.6,baz=142,slow=7.2,SNR=4.2								
TXAR	**Lajitas Array**	**145.26**	**46**	PKPbc		PKPbc		06 15 55.0	+0.6
	0.2nm,0.7s,baz=298,slow=1.9,SNR=4.8								

*IDC **26** 05:59:56.6±2.1,28°.24N×56°.08E,h0km,mb3.7/5, mb1 3.8/5,mb1mx3.6/25,mbtmp3.7/5,Error ellipse: s-maj=43.2km s-min=33.5km az=31.0*
*SGS **26** 05:59:58.2,28°.40N×55°.95E,h16km*
*ISCJB **26** 05:59:59.1±0.5,28°.09N±0°.05×55°.66E±0°.04,h10km, mb3.6/5,Error ellipse: s-maj=7.6km s-min=4.8km az=31.3*
*KISR **26** 05:59:59.4±1.0,28°.74N×55°.49E,h34km±999km,ML3.3*
*TEH **26** 06:00:02.7,28°.29N×56°.10E,h23km*

ISC 26 06:00:01.0±0.6,28°.14N±0°.05×55°.76E±0°.05,h10km,n22, σ1°20/30,mb3.6/5,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**0.98**	**135**	*e*Pg		**Pg**		**06 00 19.4**	**-0.4**
IBND				*e*Pg		**Pg**		**06 00 19.8**	**0.0**
IBND				*e*Sg		**Sg**		**06 00 32.7**	**+0.2**
IBND				*e*Sg		**Sg**		**06 00 33.0**	**+0.5**
ISRV	**Sarvestan**	**2.63**	**299**	*e*Pn		**Pn**		**06 00 46.8**	**+3.2**
ISRV				*e*				06 01 38.1	
	comp=Z,827nm,0.2s								
IPAR	**Pars**	**2.92**	**306**	*e*Pn		**Pn**		**06 00 50.0**	**+2.5**
IPAR				*e*Sg		**Sg**		**06 01 39.4**	**+4.6**
IPAR				*e*				06 01 58.4	
	comp=Z,768nm,0.4s								
IMEH	**Mehriz**	**3.39**	**343**	*e*Pn		**Pn**		**06 00 53.5**	**-0.4**
IMEH				*e*				06 01 08.2	
	comp=Z,668nm,0.2s								
IBAF	**Bafgh**	**3.44**	**357**	*e*Pn		**Pn**		**06 00 52.9**	**-1.8**
IBAF				*e*				06 00 54.2	
	comp=Z,1μm,0.1s								
ICHK	**Chekchek**	**4.25**	**344**	*e*		**Pg**		**06 01 27.8**	**+5.3**
	comp=Z,357nm,0.2s								
ICHK				*e*Pn		**Pn**		**06 01 05.0**	**-0.8**
IGAR	**Gharneh**	**5.33**	**324**	*e*Pn		**Pn**		**06 01 21.3**	**+0.7**
BTHS		**6.01**	**228**	P		**Pn**		**06 01 31.8**	**+1.7**
IPIR	**Pirpir**	**6.18**	**318**	*e*Pn		**Pn**		**06 01 33.3**	**+1.0**
IPIR				*e*				06 01 34.5	
	comp=Z,151nm,0.1s								
IKLH	**Kolahrood**	**6.29**	**326**	*e*Pn		**Pn**		**06 01 34.1**	**+0.3**
IKLH				*e*				06 01 37.1	
	comp=Z,102nm,0.1s								
RDF	**Al-Radifah**	**7.27**	**278**	*e*P		**Pn**		**06 01 48.8**	**+1.5**
RDF				*e*S		**Sn**		**06 01 10.3**	**+0.5**
RDF					AML	AML		06 03 12.1	
	comp=Z,3.8nm,0.4s								
MIB	**Mutribah**	**7.56**	**285**	*e*P		**Pn**		**06 01 51.7**	**+0.4**
MIB				*e*S		**Sn**		**06 03 16.1**	**-1.0**
MIB					AML	AML		06 03 17.3	
	comp=Z,7.7nm,0.7s								
NAY	**Al-Naaiem**	**7.56**	**280**	*e*P		**Pn**		**06 01 51.8**	**+0.5**
NAY				*e*S		**Sn**		**06 03 16.5**	**-0.6**
NAY					AML	AML		06 03 18.2	
	comp=Z,4.3nm,0.7s								
LYLS		**9.82**	**234**	S		**Sn**		**06 04 10.0**	**-2.8**
LYLS		**9.82**	**234**	P		**Pn**		**06 02 21.9**	**-0.4**
ASYS		**10.13**	**269**	S		**Sn**		**06 04 15.1**	**-5.2**
ASYS		**10.13**	**269**	P		**Pn**		**06 02 25.1**	**-1.4**
BRTR	**Keskin Array B**	**21.63**	**308**	P		**P**		**06 04 50.5**	**-0.8**
	comp=Z,1.7nm,0.7s,mb3.6,baz=128,slow=14,SNR=9.1								
AKTO	**Aktyubinsk**	**22.33**	**4**	P		**P**		**06 04 54.1**	**-4.6**
	comp=Z,2.2nm,0.5s,mb3.9,baz=195,slow=11,SNR=9.5								
MKAR	**Makanchi Array**	**27.90**	**41**	P		**P**		**06 05 46.2**	**-4.8**
	comp=Z,0.1nm,0.4s,mb2.8,baz=225,slow=11,SNR=3.5								
ZALV	**Zalesovo Beam**	**33.41**	**31**	P		**P**		**06 06 34.6**	**-5.0**
	comp=Z,1.5nm,0.4s,mb4.2,baz=240,slow=10,SNR=7.9								
WRA	**Warramunga Arr**	**89.69**	**113**	P		**P**		**06 12 55.8**	**-3.9**
	comp=Z,0.2nm,0.6s,mb3.6,baz=314,slow=4.1,SNR=5.5								

IDC 26 06:03:29.5±3.1,30°.97N×83°.55E,h0km,mb3.4/4, mb1 3.7/6,mb1mx3.4/26,mbtmp3.4/6,ML4.0/1,Error ellipse: s-maj=121.9km s-min=22.8km az=63.0,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**15.83**	**357**	Pn		**Pn**		**06 07 15.7**	**+2.1**
	0.2nm,0.3s,baz=179,slow=12,SNR=8.0								
CMAR	**Chiang Mai Arr**	**18.70**	**128**	P		**Pn**		**06 07 50.8**	**+0.9**
	0.2nm,0.3s,baz=306,slow=10,SNR=4.2								
KURK	**Kurchatov**	**20.06**	**351**	P		P		06 08 04.0	-0.1
	0.0nm,0.3s,baz=161,slow=10,SNR=7.4								
ZALV	**Zalesovo Beam**	**22.98**	**2**	P		P		06 08 35.5	0.0
	0.5nm,0.3s,baz=186,slow=11,SNR=2.5								
BVAR	**Borovoye Array**	**24.03**	**340**	P		P		06 08 46.0	+0.1
	0.7nm,0.6s,baz=153,slow=12,SNR=3.6								
WRA	**Warramunga Arr**	**70.29**	**129**	P		P		06 14 44.6	-0.4
	0.2nm,0.5s,baz=325,slow=6.3,SNR=5.2								
ILAR	**Eielson Array**	**76.81**	**20**	P		P		06 15 22.6	0.0
	0.3nm,0.7s,baz=304,slow=4.9,SNR=3.7								

*NEIC **26** 06:12:01.8,15°.81N×96°.50W,h34km,MD3.7(MEX),After MEX.*

MEX 26 06:12:01.8±0.6,15°.81N×96°.50W,h34km±12km,MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.38**	**96**	*e*P		**Pb**		**06 12 09.0**	**-1.7**
HUIG				*i* S		Sb		06 12 14.7	-2.0
HUIG	**Huatulco**	**0.38**	**96**	*e*P		**Pb**		**06 12 09.0**	**-1.7**
HUIG				*i* S		Sb		06 12 14.7	-2.0
VHO	**Vista Hermosa**	**1.28**	**350**	*i* P		Pn		06 12 21.9	-1.3
VHO				*i* S		Sn		06 12 37.3	-1.9
VHO	**Vista Hermosa**	**1.28**	**350**	*i* P		Pn		06 12 21.9	-1.3
VHO				*i* S		Sn		06 12 37.3	-1.9
PNIG	**Pinotepa**	**1.67**	**291**	*i* P		Pn		06 12 27.2	-1.4
PNIG				*i* S		Sn		06 12 45.5	-3.4
PNIG	**Pinotepa**	**1.67**	**291**	*i* P		Pn		06 12 27.2	-1.4
PNIG				*i* S		Sn		06 12 45.5	-3.4
CMIG	**Matias Romero**	**2.01**	**50**	*e*P		Pn		06 12 31.2	-2.1
CMIG				*i* S		Sn		06 12 54.9	-2.3
CMIG	**Matias Romero**	**2.01**	**50**	*e*P		Pn		06 12 31.2	-2.1
CMIG				*i* S		Sn		06 12 54.9	-2.3
UTMO	**Huajuapan**	**2.37**	**328**	*i* P		Pn		06 12 37.9	-0.3
UTMO				*i* S		Sn		06 13 03.4	-2.7
TPIG	**Tehuac#an**	**2.73**	**342**	*i* S		Sn		06 13 15.1	+0.2
TGIG		**3.38**	**73**	*i* S		Sn		06 13 31.6	+0.5

*NIED **26** 06:16:00,37°.00N×140°.50E,h89km,Mw4.0 Best double couple: M0 1.19000×10^15 NP1:φs223.00000°,δ84.00000°, λ-93.00000°. NP2:φs70.00000°,δ6.00000°,λ-63.00000°.*
*ISCJB **26** 06:16:04.9±0.3,36°.98N±0°.03×140°.49E±0°.05, h120km±2km,mb4.2/36,Error ellipse: s-maj=6.8km s-min=4.7km az=34.2*
*BJI **26** 06:16:04.6,37°.00N×140°.50E,h108km,mB4.6/2,mb4.5/10*
*MOS **26** 06:16:05.0±0.9,37°.20N×140°.43E,h112km,mb4.4/12, Error ellipse: s-maj=11.5km s-min=7.9km az=106.3*
*NEIC **26** 06:16:06.7,36°.98N×140°.48E,h109km,mb4.7/9, MW4.0(NIED),After JMA.*
NEIC Recorded [2 JMA] in Fukushima, Ibaraki, Miyagi, Saitama and Tochigi.
*JMA **26** 06:16:06.6±0.1,36°.98N×140°.48E,h109km±1km,M4.1 Broadband fault plane solution: P waves. NP1: φs88.00000°,δ15.00000°,λ-52.00000°. NP2:φs229.00000°, δ78.00000°,λ-100.00000°. Principal axes: T Plg32.0000°, Azm327.0000°; N Plg9.0000°, Azm231.0000°; P Plg56.0000°, Azm127.0000°;*
JMA Felt II J1.
*IDC **26** 06:16:06.2±0.6,37°.01N×140°.43E,h113km±4km,mb3.8/20, mb1 3.9/22,mb1mx3.9/30,mbtmp3.8/22,MS2.7/1, Ms1 2.7

ULN	**Ulaanbaatar**	**26.77**	**305**	*e*P		**P**		**06 21 35.9**	**+0.8**
ULN					pmax	pmax			
	comp=Z,4.0nm,0.6s,mb4.1								
SEY	**Seymchan**	**26.99**	**12**	*ce*P		**P**		**06 21 40.6**	**+3.7**
SONM	**Songino Array**	**27.20**	**304**	P		**P**		**06 21 38.2**	**-0.8**
	comp=Z,8.2nm,0.7s,mb4.4,baz=113,slow=8.9,SNR=35								
ZAK	**Zakamensk**	**29.72**	**309**	*e*P		**P**		**06 22 00.6**	**-0.7**
GTA	**Gaotai**	**31.87**	**287**	*e*P		**P**		**06 22 20.8**	**+0.4**
GTA					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.4								
ZALV	**Zalesovo Beam**	**41.40**	**312**	P		**P**		**06 23 40.8**	**-0.2**
	comp=Z,7.1nm,0.5s,mb4.7,baz=92,slow=6.7,SNR=24								
MK31	**Makanchi Array**	**43.52**	**302**	*e*P		**P**		**06 23 57.7**	**-0.5**
MK31	**Makanchi Array**	**43.52**	**302**	*i* P		**P**		**06 23 58.1**	**-0.1**
MK31					pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.1								
MKAR	**Makanchi Array**	**43.52**	**302**	P		**P**		**06 23 58.1**	**-0.1**
	comp=Z,2.9nm,0.6s,mb4.2,baz=86,slow=10,SNR=29								
MKAR	**Makanchi Array**	**43.52**	**302**	*ce*P		**P**		**06 23 58.0**	**-0.2**
MKAR					pmax	pmax			
	comp=Z,3.0nm,0.6s								
KURK	**Kurchatov**	**45.38**	**308**	*e*P		**P**		**06 24 12.3**	**-0.6**
	comp=Z,20nm,0.8s,mb4.9								
KURK	**Kurchatov**	**45.38**	**308**	P		**P**		**06 24 13.0**	**+0.1**
	comp=Z,10nm,0.5s,mb4.8,baz=84,slow=9.1,SNR=28								
KURK	**Kurchatov**	**45.38**	**308**	P		**P**		**06 24 13.0**	**+0.1**
KURK					pmax	pmax			
	comp=Z,10.0nm,0.5s,mb4.8								
KDAK	**Kodiak Island**	**47.63**	**42**	P		**P**		**06 24 31.4**	**+1.0**
	comp=Z,2.0nm,0.6s,mb4.1,baz=206,slow=15,SNR=2.7								
KSH	**Kashi**	**49.75**	**294**	*e*P		**P**		**06 24 53.0**	**+6.1**
KSH				*e*PP		PP		06 26 47.3	+5.0
KSH				*e*S		**S**		**06 31 55.3**	**+7.9**
KSH					pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.4								
KSH					pmax	pmax			
	comp=Z,77nm,5.8s								
KSH					LR	LR			
	comp=N,140nm,7.9s								
KSH					LR	LR			
	comp=E,96nm,9.3s								
KSH					LR	LR			
	comp=Z,130nm,6.5s								
ILAR	**Eielson Array**	**49.93**	**32**	P		**P**		**06 24 48.2**	**+0.3**
	comp=Z,0.6nm,0.9s,mb3.5,baz=245,slow=6.1,SNR=6.1								
ILAR					pP	pP		06 25 14.2	-0.1
	comp=Z,0.6nm,0.6s,baz=264,slow=5.9,SNR=4.4								
ILAR					sP	sP		06 25 26.4	-0.6
	comp=Z,0.8nm,0.7s,baz=270,slow=6.2,SNR=4.9								
BVAR	**Borovoye Array**	**50.06**	**312**	P		**P**		**06 24 48.8**	**-0.2**
	comp=Z,1.1nm,0.5s,mb4.3,baz=60,slow=8.8,SNR=6.5								
BRVK	**Borovoye**	**50.11**	**312**	*ce*P		**P**		**06 24 49.6**	**+0.2**
BRVK					pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.3								
AML	**Almayashu**	**50.58**	**298**	*e*P		**P**		**06 24 54.1**	**+1.1**
	comp=Z,5.0nm,0.6s,mb4.7								
KK31	**Karatay Array**	**52.51**	**300**	P		**P**		**06 25 06.8**	**-0.6**
KK31					pmax	pmax			
	comp=Z,1.0nm,0.3s,mb4.3								
KKAR	**Karatay Array**	**52.51**	**300**	*e*P		**P**		**06 25 07.9**	**+0.5**
	comp=Z,2.0nm,0.5s,mb4.4								
KKAR	**Karatay Array**	**52.51**	**300**	*e*P		**P**		**06 25 07.9**	**+0.5**
KKAR					pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.4								
SVE	**Sverdlovsk**	**54.70**	**318**	*e*P		**P**		**06 25 23.3**	**+0.1**
INK	**Inuvik**	**54.77**	**27**	P		**P**		**06 25 23.7**	**+0.2**
	comp=Z,2.2nm,0.8s,mb4.2,baz=316,slow=4.8,SNR=5.2								
ARU	**Arti**	**55.91**	**318**	*e*P		**P**		**06 25 31.8**	**-0.1**
	comp=Z,7.7nm,0.6s,mb4.9								
ARU	**Arti**	**55.91**	**318**	*d i*P		**P**		**06 25 31.7**	**-0.1**
ARU								06 26 24.5	
ARU								06 27 33.4	
ARU					S		**S**	**06 33 12.1**	**+1.6**
ARU					SS		SS	06 36 56.9	-0.4
ARU					pmax	pmax			
	comp=Z,11nm,0.8s,mb4.9								
WRA	**Warramunga Arr**	**56.91**	**187**	P		**P**		**06 25 39.1**	**-0.2**
	comp=Z,2.7nm,0.3s,mb4.7,baz=4.4,slow=7.3,SNR=114								
WRA					pP	pP		06 26 07.1	+0.6
	comp=Z,1.1nm,0.6s,baz=2.2,slow=7.6,SNR=3.1								
AB31	**Akbulak array**	**57.41**	**310**	P		**P**		**06 25 41.1**	**-1.5**
AB31					pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.7								
ABKAR	**Akbulak array**	**57.41**	**310**	*e*P		**P**		**06 25 41.7**	**-0.8**
	comp=Z,4.2nm,0.5s,mb4.7								
AKTK	**Aktyubinsk**	**58.16**	**312**	P		**P**		**06 25 47.5**	**-0.3**
AKTO	**Aktyubinsk**	**58.16**	**312**	P		**P**		**06 25 47.5**	**-0.3**
	comp=Z,0.8nm,0.3s,mb4.2,baz=67,slow=11,SNR=4.5								
ASAR	**Alice Springs**	**60.64**	**187**	P		**P**		**06 26 05.3**	**+0.3**
	comp=Z,1.5nm,0.8s,mb4.1,baz=12,slow=5.7,SNR=12								
MBWA	**Marble Bar**	**61.06**	**202**	*e*P		**P**		**06 26 08.2**	**+0.3**
	comp=Z,4.6nm,0.6s,mb4.7								
KEV	**Kevo**	**63.23**	**339**	*e*P		**P**		**06 26 21.3**	**-0.5**
KEV					pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.2								
KEV	**Kevo**	**63.23**	**339**	*ep*		**P**		**06 26 21.3**	**-0.5**
	comp=Z,2.0nm,0.7s,mb4.2								
ARCES	**ARCESS Array B**	**63.78**	**339**	P		**P**		**06 26 25.4**	**-0.1**
	comp=Z,0.9nm,0.4s,mb3.9,baz=61,slow=6.8,SNR=6.7								
JOF	**Joensuu**	**65.66**	**332**	*e*P		**P**		**06 26 36.6**	**-1.2**
JOF					pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.3								
JOF	**Joensuu**	**65.66**	**332**	*ep*		**P**		**06 26 36.6**	**-1.2**
	comp=Z,1.9nm,0.4s,mb4.3								
OBN	**Obninsk**	**67.69**	**323**	P		**P**		**06 26 41.0**	**-10**
KAF	**Kangasniemi**	**68.01**	**332**	*e*P		**P**		**06 26 51.5**	**-1.2**
KAF					pmax	pmax			
	comp=Z,4.0nm,0.6s,mb4.4								
KAF	**Kangasniemi**	**68.01**	**332**	*ep*		**P**		**06 26 51.5**	**-1.2**
	comp=Z,4.1nm,0.6s,mb4.4								
STKA	**Stephens Creek**	**68.51**	**179**	P		**P**		**06 26 55.9**	**-0.2**
	comp=Z,1.4nm,0.7s,mb3.9,baz=304,slow=7.3,SNR=3.2								
FINES	**FINESS Array B**	**68.51**	**332**	P		**P**		**06 26 55.5**	**-0.3**
	comp=Z,3.6nm,0.7s,mb4.3,baz=106,slow=6.9,SNR=5.7								
KIV	**Kislovodsk**	**70.38**	**311**	P		**P**		**06 27 09.0**	**+1.4**
KIV					pmax	pmax			
	comp=Z,11nm,1.2s,mb4.6								
AKASG	**Malin Array Be**	**73.88**	**322**	P		**P**		**06 27 27.6**	**-0.8**
	comp=Z,1.9nm,0.5s,mb4.1,baz=46,slow=6.1,SNR=8.4								
AKASG					pP	pP		06 27 55.9	-0.8
	comp=Z,1.4nm,0.5s,baz=46,slow=6.7,SNR=2.7								
NOA	**NORSAR Array B**	**73.94**	**337**	P		**P**		**06 27 28.4**	**-0.2**
	comp=Z,1.4nm,0.7s,mb3.8,baz=38,slow=5.8,SNR=5.5								
NVAR	**Mina Array Bea**	**75.61**	**53**	P		**P**		**06 27 40.3**	**+1.7**
	comp=Z,1.0nm,0.7s,mb3.7,baz=293,slow=5.6,SNR=8.1								
PDAR	**Pinedale Array**	**78.23**	**45**	P		**P**		**06 27 54.2**	**+1.1**
	comp=Z,0.5nm,0.6s,mb3.4,baz=288,slow=3.5,SNR=5.7								
BRTR	**Keskin Array B**	**78.33**	**311**	P		**P**		**06 27 53.8**	**0.0**
	comp=Z,0.6nm,0.7s,mb3.5,baz=86,slow=5.9,SNR=3.0								
TXAR	**Lajitas Array**	**90.74**	**52**	P		**P**		**06 28 57.2**	**+0.7**
	comp=Z,0.3nm,0.6s,mb3.6,baz=292,slow=2.8,SNR=6.4								
LPAZ	**La Paz**	**147.35**	**59**	PKPbc		PKPbc		06 35 36.8	-0.2
	comp=Z,0.5nm,0.5s,baz=299,slow=1.9,SNR=6.1								
LPAZ					pPKPbc	pPKPbc		06 36 07.8	+0.6
	comp=Z,0.8nm,0.6s,baz=17,slow=9.1,SNR=3.4								

*DDA **26** 06:20:20.7,35°.99N×37°.84E,h17km±3km,Md3.3*
*ISCJB **26** 06:20:23.4±0.4,36°.02N±0°.03×37°.77E±0°.03,h20km±4km, Error ellipse: s-maj=4.5km s-min=3.5km az=173.6*
*CSEM **26** 06:20:23.3±0.2,36°.02N×37°.75E,h15km,Mc2.3,Error ellipse: s-maj=4.7km s-min=3.5km az=177.0*
*ISK **26** 06:20:23.0,35°.91N×37°.73E,h28km,MD3.4*
*NSSC **26** 06:20:24,36°.06N×37°.79E,h21km±3km*

ISC 26 06:20:23.4±0.6,36°.02N±0°.03×37°.76E±0°.03,h16km±4km, n61,σ0s92/93,8D,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SLMH	**Al Salmeh**	**0.24**	**35**	⇓P		**Pg**	**06 20 29.0**	**+0.2**
SLMH				⇓S		**Sg**	**06 20 32.0**	**-0.4**
SLMH	**Al Salmeh**	**0.24**	**35**	⇓*i*P		**Pg**	**06 20 29.3**	**+0.5**
SLMH				⇓*i*S		**Sg**	**06 20 32.0**	**-0.4**
JHLN	**Al Jahlan**	**0.65**	**122**	⇑P		**Pg**	**06 20 36.0**	**-0.2**
JHLN				⇑S		**Sg**	**06 20 45.0**	**+0.1**
JHLN	**Al Jahlan**	**0.65**	**122**	⇑*i*P		**Pg**	**06 20 36.8**	**+0.6**
JHLN				⇑*i*S		**Sg**	**06 20 45.1**	**+0.2**
KUZU	**Kuzuini**	**0.93**	**324**	*i* P		**Pb**	**06 20 40.8**	**-0.4**
KUZU				*i* S		**Sb**	**06 20 53.4**	**+0.1**
KUZU	**Kuzuini**	**0.93**	**324**	*i* P		**Pb**	**06 20 40.8**	**-0.4**
KUZU				*i* S		**Sb**	**06 20 53.4**	**+0.1**
BTCH	**Batrach**	**1.06**	**271**	⇓P		**Pb**	**06 20 43.0**	**-0.2**
BTCH				⇓S		**Sb**	**06 20 57.0**	**+0.2**
BTCH	**Batrach**	**1.06**	**271**	⇓*i*P		**Pb**	**06 20 43.3**	**+0.1**
BTCH				⇓*i*S		**Sb**	**06 20 57.7**	**+0.9**
DRWC	**Darouich**	**1.07**	**305**	⇑P		**Pb**	**06 20 43.0**	**-0.5**
DRWC				⇑S		**Sb**	**06 20 56.0**	**-1.2**
DRWC	**Darouich**	**1.07**	**305**	⇑*i*P		**Pb**	**06 20 43.0**	**-0.5**
DRWC				⇑*i*S		**Sb**	**06 20 56.3**	**-0.9**
WRDH	**Warideh**	**1.21**	**245**	⇑P		**Pn**	**06 20 45.0**	**-0.6**
WRDH				⇑S		**Sb**	**06 21 01.0**	**-0.2**
WRDH	**Warideh**	**1.21**	**245**	⇑*i*P		**Pn**	**06 20 46.0**	**+0.4**
WRDH				⇑*i*S		**Sb**	**06 21 01.4**	**+0.2**
MNKR	**ALMNKUR**	**1.23**	**93**	⇑P		**Pn**	**06 20 46.0**	**+0.2**
MNKR				⇑S		**Sb**	**06 21 00.0**	**-1.7**
MNKR	**ALMNKUR**	**1.23**	**93**	⇑*i*P		**Pn**	**06 20 46.2**	**+0.4**
MNKR				⇑*i*S		**Sb**	**06 21 00.9**	**-0.8**
GAZ	**Gaziantep**	**1.23**	**339**	*e*PN		**Pn**	**06 20 45.7**	**-0.2**
GAZ				*e*SN		**Sn**	**06 21 02.1**	**-0.1**
GAZ	**Gaziantep**	**1.23**	**339**	*e*Pn		**Pn**	**06 20 45.7**	**-0.2**
GAZ				*e*Sn		**Sn**	**06 21 02.1**	**-0.1**
COBT	**Iskenderun**	**1.31**	**293**	*i* P		**Pn**	**06 20 46.2**	**-0.9**
COBT				*i* S		**Sn**	**06 21 02.6**	**-1.6**
COBT	**Iskenderun**	**1.31**	**293**	*i* P		**Pn**	**06 20 46.2**	**-0.8**
COBT				*i* S		**Sn**	**06 21 02.6**	**-1.6**
HTY	**Hatay**	**1.32**	**275**	*e*PN		**Pn**	**06 20 45.3**	**-1.8**
HTY	**Hatay**	**1.32**	**275**	*e*Pn		**Pn**	**06 20 45.3**	**-1.8**
YAYL	**Yayladag**	**1.34**	**271**	*i* P		**Pn**	**06 20 47.2**	**-0.2**
YAYL				*i* S		**Sn**	**06 21 05.5**	**+0.7**
YAYL	**Yayladag**	**1.34**	**271**	*i* P		**Pn**	**06 20 47.2**	**-0.2**
YAYL				*i* S		**Sn**	**06 21 05.5**	**+0.7**
GZT	**Gaziantep**	**1.34**	**353**	*i* P		**Pn**	**06 20 46.5**	**-0.9**
GZT				*i* S		**Sn**	**06 21 04.6**	**-0.3**
ATAB	**Bozova**	**1.51**	**16**	*i* P		**Pn**	**06 20 48.8**	**-1.0**
ATAB				*i* S		**Sn**	**06 21 08.7**	**-0.3**
ATAB	**Bozova**	**1.51**	**16**	*i* P		**Pn**	**06 20 48.8**	**-0.9**
ATAB				*i* S		**Sn**	**06 21 08.7**	**-0.3**
BIDA	**Albida**	**1.54**	**230**	⇑P		**Pn**	**06 20 51.0**	**+0.8**
BIDA				⇑S		**Sn**	**06 21 10.0**	**+0.1**
BIDA	**Albida**	**1.54**	**230**	⇑*i*P		**Pn**	**06 20 51.9**	**+1.7**
BIDA				⇑*i*S		**Sn**	**06 21 10.6**	**+0.7**
KMRS	**Kahramanmaras**	**1.64**	**335**	*e*PN		**Pn**	**06 20 52.5**	**+1.0**
KMRS				*e*SN		**Sn**	**06 21 13.6**	**+1.4**
KMRS	**Kahramanmaras**	**1.64**	**335**	*e*Pn		**Pn**	**06 20 52.5**	**+1.0**
KMRS				*e*Sn		**Sn**	**06 21 13.6**	**+1.4**
BSHR	**Al Beshri**	**1.71**	**101**	⇑P		**Pn**	**06 20 51.0**	**-1.4**
BSHR				⇑S		**Sn**	**06 21 07.0**	**-6.9**
BSHR	**Al Beshri**	**1.71**	**101**	⇑*i*P		**Pn**	**06 20 51.2**	**-1.2**
CEYT	**Ceyhan**	**1.90**	**302**	*e*PN		**Pn**	**06 20 54.5**	**-0.6**
CEYT	**Ceyhan**	**1.90**	**302**	*e*Pn		**Pn**	**06 20 54.5**	**-0.6**
ANDN	**Andirin**	**1.93**	**324**	*i* P		**Pn**	**06 20 58.5**	**+3.0**
ANDN				*i* S		**Sn**	**06 21 23.2**	**+3.8**
ANDN	**Andirin**	**1.93**	**324**	*i* P		**Pn**	**06 20 58.5**	**+3.0**
ANDN				*i* S		**Sn**	**06 21 23.2**	**+3.8**
KRTS	**Karatas**	**2.00**	**287**	*e*PN		**Pn**	**06 20 56.6**	**0.0**
KRTS	**Karatas**	**2.00**	**287**	*e*Pn		**Pn**	**06 20 56.6**	**+0.1**
FKH	**Fakeheh**	**2.10**	**212**	*e*P		**Pn**	**06 21 01.9**	**+4.1**
FKH	**Fakeheh**	**2.10**	**212**	*e*P		**Pn**	**06 21 01.9**	**+4.1**
KOZT	**Kozan**	**2.13**	**314**	*e*PN		**Pn**	**06 20 59.0**	**+0.8**
AKCD	**Akcadag**	**2.28**	**3**	*i* P		**Pn**	**06 21 01.1**	**+0.8**
AKCD				*i* S		**Sn**	**06 21 24.3**	**-3.7**
AKCD	**Akcadag**	**2.28**	**3**	*i* P		**Pn**	**06 21 01.1**	**+0.8**
AKCD				*i* S		**Sn**	**06 21 24.3**	**-3.6**
HWQ	**Hawqa**	**2.29**	**221**	*e*P		**Pn**	**06 21 05.4**	**+5.0**
HWQ	**Hawqa**	**2.29**	**221**	*e*P		**Pn**	**06 21 05.4**	**+5.0**
MALT	**Malatya**	**2.35**	**13**	*e*PN		**Pn**	**06 21 01.5**	**+0.2**
MALT	**Malatya**	**2.35**	**13**	*e*Pn		**Pn**	**06 21 01.5**	**+0.2**
MYA	**Malatya**	**2.36**	**13**	*e*PN		**Pn**	**06 21 02.4**	**+0.9**
MYA	**Malatya**	**2.36**	**13**	*e*Pn		**Pn**	**06 21 02.4**	**+0.9**
SVRC	**Sivrice-ELAZID**	**2.66**	**27**	*e*PN		**Pn**	**06 21 06.8**	**+1.3**
SVRC	**Sivrice-ELAZID**	**2.66**	**27**	*e*Pn		**Pn**	**06 21 06.8**	**+1.3**
ELZG	**Elazig**	**2.66**	**21**	P		**Pn**	**06 21 05.8**	**+0.3**
ELZG	**Elazig**	**2.66**	**21**	P		**Pn**	**06 21 05.8**	**+0.3**
BHL	**Bhannes**	**2.73**	**220**	*e*P		**Pn**	**06 21 13.5**	**+7.0**
SARI	**SarD1z-Kayseri**	**2.79**	**343**	*e*PN		**Pn**	**06 21 06.6**	**-0.7**
SARI	**SarD1z-Kayseri**	**2.79**	**343**	*e*Pn		**Pn**	**06 21 06.6**	**-0.7**
PTK	**Pertek**	**3.15**	**24**	*e*PN		**Pn**	**06 21 13.9**	**+1.7**
PTK	**Pertek**	**3.15**	**24**	*e*Pn		**Pn**	**06 21 13.9**	**+1.7**
IKL	**Isikli**	**3.31**	**275**	*e*PN		**Pn**	**06 21 13.4**	**-1.0**
IKL	**Isikli**	**3.31**	**275**	*e*Pn		**Pn**	**06 21 13.4**	**-1.0**
HDMB	**Hadim**	**4.35**	**284**	*e*PN		**Pn**	**06 21 29.7**	**+0.9**
HDMB	**Hadim**	**4.35**	**284**	*e*Pn		**Pn**	**06 21 29.7**	**+0.9**

IDC 26 06:35:52.9±1.7,3°.92N×126°.91E,h0km,mb3.7/6, mb1 3.8/6,mb1mx3.6/21,mbtmp3.7/6,Error ellipse: s-maj=81.6km s-min=19.9km az=62.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.91**	**183**	P		P	06 40 47.8	-0.1
	0.5nm,0.6s,baz=11,slow=6.0,SNR=1.8							
WRA	**Warramunga Arr**	**24.81**	**163**	P		P	06 41 16.7	-0.2
	0.6nm,0.3s,baz=343,slow=10,SNR=17							
ASAR	**Alice Springs**	**28.25**	**166**	P		P	06 41 48.8	+0.9
	0.2nm,0.4s,baz=352,slow=7.4,SNR=5.6							
CMAR	**Chiang Mai Arr**	**30.93**	**300**	P		P	06 42 11.6	-0.2
	1.1nm,0.3s,baz=108,slow=8.9,SNR=3.4							
STKA	**Stephens Creek**	**38.24**	**160**	P		P	06 43 14.3	-0.5
	0.8nm,0.4s,baz=330,slow=8.1,SNR=4.5							
MKAR	**Makanchi Array**	**57.50**	**325**	P		P	06 45 44.1	+0.2
	0.5nm,0.5s,baz=118,slow=7.6,SNR=7.3							

*ISK **26** 06:42:25.4,38°.86N×27°.23E,h6km,MD2.9*
*ISCJB **26** 06:42:26.1±0.5,38°.86N±0°.02×27°.23E±0°.03,h4km±4km, Error ellipse: s-maj=4.0km s-min=3.5km az=6.8*
*DDA **26** 06:42:26.2,38°.85N×27°.25E,h7km±3km,Md2.8*
*CSEM **26** 06:42:26.3±0.2,38°.85N×27°.23E,h5km,MD2.8,Error ellipse: s-maj=4.5km s-min=3.6km az=100.0*

ISC 26 06:42:26.6±0.4,38°.85N±0°.02×27°.23E±0°.03,h8km±4km, n50,σ1s04/77,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
IZM	**Izmir**	**0.45**	**177**	*e*PG		**Pg**	**06 42 34.9**	**-0.5**
IZM				*e*SG		**Sg**	**06 42 41.6**	**+0.3**
IZM	**Izmir**	**0.45**	**177**	*e*Pg		**Pg**	**06 42 34.9**	**-0.5**
IZM				*e*Sg		**Sg**	**06 42 41.6**	**+0.3**
AKS	**Akhisar**	**0.46**	**86**	*e*PG		**Pg**	**06 42 35.3**	**-0.2**
AKS				*e*SG		**Sg**	**06 42 41.6**	**+0.1**
AKS	**Akhisar**	**0.46**	**86**	*e*Pg		**Pg**	**06 42 35.3**	**-0.2**
AKS				*e*Sg		**Sg**	**06 42 41.6**	**+0.1**
AKHS	**Akhisar**	**0.46**	**86**	*i* P		**Pg**	**06 42 35.6**	**+0.1**
AKHS				*i* S		**Sg**	**06 42 42.1**	**+0.6**
AKHS	**Akhisar**	**0.46**	**86**	*i* P		**Pg**	**06 42 35.6**	**+0.1**
AKHS				*i* S		**Sg**	**06 42 42.1**	**+0.6**
BLCB	**Balcova**	**0.48**	**198**	*e*PG		**Pg**	**06 42 35.7**	**-0.3**
BLCB				*e*SG		**Sg**	**06 42 42.4**	**0.0**
BLCB	**Balcova**	**0.48**	**198**	*e*Pg		**Pg**	**06 42 35.7**	**-0.3**
BLCB				*e*Sg		**Sg**	**06 42 42.4**	**0.0**
AYVA	**Ayvalik**	**0.62**	**318**	*i* P		**Pg**	**06 42 38.3**	**-0.4**
AYVA				*i* S		**Sg**	**06 42 48.2**	**+1.4**
AYVA	**Ayvalik**	**0.62**	**318**	*i* P		**Pg**	**06 42 38.3**	**-0.4**
AYVA				*i* S		**Sg**	**06 42 48.2**	**+1.4**
URLA	**Izmir**	**0.70**	**226**	*i* P		**Pg**	**06 42 39.3**	**-0.8**
URLA				*i* S		**Sg**	**06 42 50.3**	**+1.2**
URLA	**Izmir**	**0.70**	**226**	*i* P		**Pg**	**06 42 39.3**	**-0.7**
URLA				*i* S		**Sg**	**06 42 50.3**	**+1.2**
BALB	**Balikesir**	**0.94**	**32**	*e*PG		**Pg**	**06 42 44.4**	**-0.3**
BALB	**Balikesir**	**0.94**	**32**	*e*Pg		**Pg**	**06 42 44.4**	**-0.3**
BALY	**Balya**	**0.94**	**19**	*i* P		**Pg**	**06 42 44.2**	**-0.5**
BALY				*i* S		**Sg**	**06 42 59.0**	**+2.1**
BALY	**Balya**	**0.94**	**19**	*i* P		**Pg**	**06 42 44.2**	**-0.5**
BALY				*i* S		**Sg**	**06 42 59.0**	**+2.0**
KULA	**Kula-Manisa**	**1.17**	**106**	*e*PN		**Pn**	**06 42 47.7**	**-1.5**
KULA	**Kula-Manisa**	**1.17**	**106**	*e*Pn		**Pn**	**06 42 47.7**	**-1.5**
DEMI	**Demirci**	**1.18**	**80**	*i* P		**Pg**	**06 42 48.2**	**-1.0**
DEMI				*i* S		**Sg**	**06 43 03.9**	**-0.6**
DEMI	**Demirci**	**1.18**	**80**	*i* P		**Pg**	**06 42 48.2**	**-1.0**
DEMI				*i* S		**Sg**	**06 43 03.9**	**-0.5**
DURS	**Dursunbey**	**1.23**	**52**	*i* P		**Pb**	**06 42 48.9**	**-1.1**
DURS				*i* S		**Sb**	**06 43 05.7**	**-0.2**
DURS	**Dursunbey**	**1.23**	**52**	*i* P		**Pb**	**06 42 48.9**	**-1.1**
DURS				*i* S		**Sb**	**06 43 05.7**	**-0.3**
GONE	**Gonen-Balikesi**	**1.25**	**16**	*e*PN		**Pn**	**06 42 49.0**	**-1.3**
GONE				*e*SN		**Sn**	**06 43 06.2**	**-1.1**
GONE	**Gonen-Balikesi**	**1.25**	**16**	*e*Pn		**Pn**	**06 42 49.0**	**-1.4**
GONE				*e*Sn		**Sn**	**06 43 06.2**	**-1.1**
AYDN	**Tasoluk**	**1.29**	**156**	*i* P		**Pn**	**06 42 48.6**	**-2.3**
AYDN				*i* S		**Sb**	**06 43 06.5**	**-1.3**
AYDN	**Tasoluk**	**1.29**	**156**	*i* P		**Pn**	**06 42 48.6**	**-2.3**
AYDN				*i* S		**Sb**	**06 43 06.5**	**-1.3**
LPK	**Lapseki**	**1.57**	**347**	*e*PN		**Pn**	**06 42 54.7**	**0.0**
LPK	**Lapseki**	**1.57**	**347**	*e*Pn		**Pn**	**06 42 54.7**	**0.0**
EDC	**Edincik**	**1.57**	**18**	*e*PN		**Pn**	**06 42 53.9**	**-0.9**
EDC	**Edincik**	**1.57**	**18**	*e*Pn		**Pn**	**06 42 53.9**	**-1.0**
GELI	**Tayfur-Gelibol**	**1.66**	**340**	*e*PN		**Pn**	**06 42 55.8**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.66**	**340**	*e*Pn		**Pn**	**06 42 55.8**	**-0.1**
KCTX	**Karacabey (Bur**	**1.66**	**31**	*e*PN		**Pn**	**06 42 56.0**	**0.0**
KCTX	**Karacabey (Bur**	**1.66**	**31**	*e*Pn		**Pn**	**06 42 56.0**	**-0.1**
GADA	**Gvkgeada**	**1.69**	**323**	*e*PN		**Pn**	**06 42 56.4**	**-0.1**
GADA	**Gvkgeada**	**1.69**	**323**	*e*Pn		**Pn**	**06 42 56.4**	**0.0**
GDZ	**Gediz**	**1.77**	**81**	*i* P		**Pn**	**06 42 58.4**	**+0.9**
GDZ				*i* S		**Sn**	**06 43 21.8**	**+1.6**
GDZ	**Gediz**	**1.77**	**81**	*i* P		**Pn**	**06 42 58.4**	**+0.9**
GDZ				*i* S		**Sn**	**06 43 21.8**	**+1.6**
BODT	**Bodrum**	**1.78**	**178**	*e*PN		**Pn**	**06 42 57.4**	**-0.3**
BODT	**Bodrum**	**1.78**	**178**	*e*Pn		**Pn**	**06 42 57.4**	**-0.3**
BDRM	**Kayabasi**	**1.79**	**175**	*i* P		**Pn**	**06 43 00.4**	**+2.7**
BDRM				*i* S		**Sn**	**06 43 24.5**	**+3.9**
BDRM	**Kayabasi**	**1.79**	**175**	*i* P		**Pn**	**06 43 00.4**	**+2.6**
KHAL	**Karahalli**	**1.83**	**104**	*i* P		**Pn**	**06 43 00.7**	**+2.3**
KHAL				*i* S		**Sn**	**06 43 23.9**	**+2.1**
KHAL	**Karahalli**	**1.83**	**104**	*i* P		**Pn**	**06 43 00.7**	**+2.3**
KHAL				*i* S		**Sn**	**06 43 23.9**	**+2.1**
RKY	**Sarkoy-Tekirda**	**1.84**	**359**	*e*PN		**Pn**	**06 42 58.3**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.84**	**359**	*e*Pn		**Pn**	**06 42 58.3**	**-0.2**
ERIK	**Erikli-Kesan**	**1.90**	**343**	*e*PN		**Pn**	**06 42 59.7**	**+0.3**
ERIK	**Er

2.7nm,0.9s,mb4.3
SBA Scott Base 55.09 185 *e*P P **07 14 58.2 +3.2**
3.7nm,1.0s,mb4.4
QSPA South Pole Qui 66.61 180 *e*P P **07 16 15.2 +2.0**
2.9nm,0.8s,mb4.4
MAW Mawson 79.58 199 P P **07 17 31.0 +1.0**
4.0nm,0.9s,mb4.3,baz=104,slow=5.4,SNR=7.2
PETK Petropavlovsk- 79.77 344 P P **07 17 31.9 +0.9**
1.7nm,0.7s,mb4.1,baz=133,slow=11,SNR=5.3
TXAR Lajitas Array 86.65 56 P P **07 18 10.8 +3.6**
0.7nm,0.8s,mb4.0,baz=216,slow=8.0,SNR=9.4
TXAR LR LR 07 52 24.0
comp=Z,48nm,18.2s,MS3.9,baz=0.0,slow=32
ILAR Eielson Array 90.69 12 P P **07 18 27.4 +1.9**
0.7nm,1.1s,mb3.9,baz=223,slow=3.6,SNR=4.1
CMAR Chiang Mai Arr 93.37 289 P P **07 18 40.9 +1.9**
1.2nm,0.3s,mb4.8,baz=125,slow=2.6,SNR=9.5
MKAR Makanchi Array 114.99 312 PKP PKiKP 07 24 04.7 +0.6
0.4nm,0.8s,baz=93,slow=3.2,SNR=3.5
BVAR Borovoye Array 122.90 319 PKP PKPdf 07 24 19.9 +0.8
0.3nm,0.5s,baz=94,slow=2.0,SNR=4.6
AKASG Malin Array Be 146.78 331 PKPbc PKPbc 07 25 05.7 +0.6
2.6nm,0.6s,baz=41,slow=3.8,SNR=12
BRTR Keskin Array B 150.61 310 PKPbc PKPbc 07 25 15.9 +0.6
1.9nm,0.8s,baz=67,slow=3.2,SNR=7.4

IDC 26 07:08:39.5±5.7, 39°37N×110°70E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.3/23, mbtmp3.4/3, ML3.0/1, Error ellipse: s-maj=119.0km s-min=25.2km az=84.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.02**	**341**	Pn		Pn	07 10 50.5	-0.3
	0.2nm,0.3s,baz=154,slow=12,SNR=8.0							
SONM				Lg			07 13 27.5	
	0.2nm,0.3s,baz=163,slow=25,SNR=2.7							
MKAR	**Makanchi Array**	**21.95**	**299**	P		P	07 13 34.5	-0.1
	1.1nm,0.8s,baz=103,slow=12,SNR=8.1							
CMAR	**Chiang Mai Arr**	**23.20**	**209**	P		P	07 13 48.1	+0.2
	1.1nm,0.7s,baz=16,slow=9.5,SNR=8.0							

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*NEIC **26** 07:29:17.0, 15°.84N×96°.01W, h20km, MD4.0(MEX), After MEX.*

MEX 26 07:29:16.8±1.2, 15°.85N×96°.01W, h22km±19km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.13**	**229**	*i* P		Pb	07 29 20.0	-1.2
HUIG				*i* S		Sb	07 29 23.6	-0.6
HUIG	**Huatulco**	**0.13**	**229**	*i* P		Pb	07 29 20.0	-1.2
HUIG				*i* S		Sb	07 29 23.6	-0.6
VHO	**Vista Hermosa**	**1.40**	**330**	*e*P		Pn	07 29 37.7	-3.3
VHO				*i* S		Sn	07 29 55.2	-3.6
VHO	**Vista Hermosa**	**1.40**	**330**	*e*P		Pn	07 29 37.7	-3.3
VHO				*i* S		Sn	07 29 55.2	-3.6
OXX	**Oaxaca**	**1.40**	**331**	*i* P		Pn	07 29 37.8	-3.3
OXX				*i* S		Sn	07 29 55.3	-3.7
OXX	**Oaxaca**	**1.40**	**331**	*i* P		Pn	07 29 37.8	-3.3
OXX				*i* S		Sn	07 29 55.3	-3.7
PNIG	**Pinotepa**	**2.11**	**285**	*i* P		Pn	07 29 47.5	-3.2
PNIG				*i* S		Sn	07 30 12.3	-4.0
PNIG	**Pinotepa**	**2.11**	**285**	*i* P		Pn	07 29 47.5	-3.2
PNIG				*i* S		Sn	07 30 12.3	-4.0
UTMO	**Huajuapan**	**2.61**	**319**	*e*P		Pn	07 29 57.5	-0.2
UTMO				*i* S		Sn	07 30 26.9	-1.9
PCIG		**2.69**	**93**	*i* P		Pn	07 29 56.8	-2.0
PCIG				*i* S		Sn	07 30 27.6	-3.1
TPIG	**Tehuac#an**	**2.86**	**333**	*i* P		Pn	07 29 59.5	-1.7
TPIG				*i* S		Sn	07 30 31.6	-3.4
TGIG		**2.92**	**71**	*i* P		Pn	07 30 03.5	+1.5
TGIG				*i* S		Sn	07 30 35.2	-1.2

BJI 26 07:38:53.9, 35°.76N×115°.38E, h14km, mb4.2/2, ML4.0/13, 1D, Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TIA	**Tai'an**	**1.48**	**72**	Pg		Pg	07 39 19.3	-3.1
TIA				Sg		Sg	07 39 40.0	-1.7
TIA				smax				
	comp=N,840nm,0.6s							
TIA				smax				
	comp=E,980nm,0.5s							
BJI	**Beijing**	**4.32**	**8**	Pg		Pg	07 40 11.5	-5.1
BJI				Sg		Sg	07 41 05.0	-7.6
BJI				smax				
	comp=N,120nm,0.9s							
BJI				smax				
	comp=E,120nm,0.8s							
NJ2	**Nanjing**	**4.69**	**141**	*e*Pg		Pg	07 40 19.0	-4.8
NJ2				Sg		Sg	07 41 18.3	-6.3
NJ2				smax				
	comp=N,120nm,0.8s							
NJ2				smax				
	comp=E,100nm,0.6s							
WHN	**Wuhan**	**5.27**	**190**	⇓Pg		Pg	07 40 30.5	-4.4
WHN				Sg		Sg	07 41 34.8	-8.4
WHN				smax				
	comp=N,130nm,0.7s							
WHN				smax				
	comp=E,220nm,0.7s							
XAN	**Xi'an**	**5.58**	**254**	Pn		Pn	07 40 17.3	+0.9
XAN				Sn		Sn	07 41 20.5	+0.2
XAN				Sg		Sg	07 41 51.8	-1.1
XAN				smax				
	comp=N,54nm,0.8s							
XAN				smax				
	comp=E,29nm,0.7s							
GTA	**Gaotai**	**12.87**	**291**	*e*P		Pn	07 41 58.0	+1.6
GTA				pP			07 42 02.3	
GTA				sP			07 42 05.5	
GTA				pmax	pmax			
	comp=Z,5.0nm,1.2s							

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*ISCJB **26** 07:44:16.5±0.8, 32°.58N±0°.06×105°.59E±0°.08, h10km, mb3.4/4, Error ellipse: s-maj=9.4km s-min=8.6km az=157.3*

*IDC **26** 07:44:17.0±1.4, 32°.28N×105°.18E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/22, mbtmp3.4/4, Error ellipse: s-maj=200.0km s-min=23.6km az=56.0*

*BJI **26** 07:44:19.7, 32°.56N×105°.40E, h16km, ML3.5/11, Ms3.8/1, Ms7 3.6/1*

ISC 26 07:44:18.5±0.8, 32°.63N±0°.06×105°.59E±0°.06, h10km, n8, σ1§33/17, mb3.4/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**3.12**	**62**	Pn		**Pn**	**07 45 10.8**	**+3.0**
XAN				Pg		**Pg**	**07 45 20.0**	**+1.6**
XAN				Sn		**Sn**	**07 45 45.0**	**-0.2**
XAN				Sg		**Sg**	**07 45 57.5**	**-1.4**
XAN				smax				
	comp=N,230nm,0.7s							
XAN				smax				
	comp=E,89nm,0.8s							
LZH	**Lanzhou**	**3.74**	**338**	Pn		**Pn**	**07 45 20.3**	**+4.1**
LZH				Pg		**Pg**	**07 45 27.5**	**-2.6**
LZH				Sn		**Sn**	**07 46 00.3**	**0.0**
LZH				Sg		**Sg**	**07 46 14.0**	**-4.6**
LZH				smax				
	comp=N,210nm,0.9s							
LZH				smax				
	comp=E,610nm,0.8s							
LZH				LR		LR		
	comp=N,390nm,4.5s							
LZH				LR		LR		
	comp=E,550nm,4.1s							
LZH				LR		LR		
	comp=Z,570nm,6.8s							
GYA	**Guiyang**	**6.22**	**171**	Pn		**Pn**	**07 45 50.3**	**-0.1**
GYA				Pg		**Pg**	**07 46 13.3**	**-4.3**
GYA				Sn		**Sn**	**07 47 09.0**	**+7.5**
GYA				Sg		**Sg**	**07 47 32.3**	**-5.9**
GYA				smax				
	comp=N,30nm,0.6s							
GYA				smax				
	comp=E,30nm,0.9s							
SONM	**Songino Array**	**15.20**	**2**	Pn		**Pn**	**07 48 02.8**	**+10**
	comp=E,0.1nm,0.3s,baz=173,slow=13,SNR=2.0							
MKAR	**Makanchi Array**	**22.72**	**315**	P		**P**	**07 49 20.0**	**-0.4**
	comp=E,0.5nm,0.7s,mb3.1,baz=112,slow=11,SNR=2.9							
ZALV	**Zalesovo Beam**	**25.95**	**331**	P		**P**	**07 49 52.6**	**+1.8**
	comp=E,0.4nm,0.3s,mb3.4,baz=135,slow=14,SNR=2.6							
WRA	**Warramunga Arr**	**59.07**	**148**	P		**P**	**07 54 18.3**	**-0.7**
	comp=E,0.7nm,0.9s,mb3.7,baz=340,slow=7.5,SNR=9.0							
ASAR	**Alice Springs**	**62.16**	**151**	P		**P**	**07 54 39.3**	**-0.7**
	comp=E,0.5nm,0.9s,mb3.6,baz=336,slow=6.8,SNR=3.6							

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*IDC **26** 07:46:52.3±0.6, 31°.67N×91°.37E, h0km, mb4.3/17, mb1 4.5/20, mb1mx4.4/25, mbtmp4.3/20, ML3.8/3, MS3.9/23, Ms1 3.9/23, ms1mx3.8/38, Error ellipse: s-maj=20.1km s-min=12.9km az=48.0*

*ISCJB **26** 07:46:54.4±0.9, 31°.65N±0°.02×91°.40E±0°.02, h15km±5km, mb4.6/72, MS4.1/38, Error ellipse: s-maj=3.9km s-min=3.1km az=137.9*

*BJI **26** 07:46:54.6, 31°.70N×91°.48E, h14km, mB4.8/20, mb4.8/38, Ms4.8/42, Ms7 4.4/36*

*NEIC **26** 07:46:56.0±2.9, 31°.65N×91°.41E, h13km±18km, mb4.8/47, MS4.3/3, Error ellipse: s-maj=9.0km s-min=6.3km az=46.0*

*MOS **26** 07:46:57.0±1.4, 31°.71N×91°.47E, h33km, mb4.9/37, MS4.3/11, Error ellipse: s-maj=9.6km s-min=4.9km az=119.5*

*GCMT **26** 07:46:58.8±0.4, 31°.69N×91°.51E, h21km±1km, MW4.9, Moment Tensor Solution. s16,c17; s63,c92; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.10±.13; $M_{\theta\theta}$-2.13±.10; $M_{\phi\phi}$2.23±.11; $M_{r\theta}$-0.33±.19; $M_{\theta\phi}$1.28±.08; $M_{\phi r}$-0.14±.18; Best double couple: $M_0$2.60000×10^{16} NP1:ϕ_s150.00000°, δ82.00000°, λ-179.00000°. NP2:ϕ_s60.00000°, δ89.00000°, λ-8.00000°. Principal axes: T 2.6000, Plg5.0000°, Azm105.0000°; N -0.0800, Plg82.0000°, Azm231.0000°; P -2.5100, Plg7.0000°, Azm15.0000°; Data Used: II IU G IC CN.*

ISC 26 07:46:55.9±1.0, 31°.68N±0°.02×91°.43E±0°.02, h12km±6km, n255, σ1§30/263, mb4.6/72, MS4.1/38, 14C-11D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**1.98**	**187**	Pg		**Pn**	**07 47 30.5**	**+1.2**
LSA				Sg		**Sg**	**07 47 59.5**	**-0.2**
LSA	**Lhasa**	**1.98**	**187**	*e*Pn		**Pn**	**07 47 30.5**	**+1.2**
LSA				*e*Sn		**Sn**	**07 47 56.2**	**+2.0**
TAPN	**Taplejung**	**5.39**	**218**	*e*Pn		**Pn**	**07 48 17.4**	**+1.2**
ODAN	**Odare**	**5.95**	**217**	*e*Pn		**Pn**	**07 48 24.8**	**+0.9**
JIRN	**Jiri**	**6.06**	**230**	*e*Pn		**Pn**	**07 48 26.7**	**+1.3**
	72nm,0.3s							
SHL	**Shillong**	**6.10**	**176**	*e*PKP		**Pn**	**07 48 26.5**	**+0.5**
SHL				*ex*		x	07 49 46.0	
GUN	**Gumba**	**6.11**	**234**	*e*Pn		**Pn**	**07 48 27.1**	**+1.1**
	253nm,0.6s							
GUN				*e*Sn		**Sn**	**07 49 36.0**	**+0.1**
	428nm,0.8s							
RAMN	**Ramite**	**6.32**	**223**	*e*Pn		**Pn**	**07 48 28.6**	**-0.3**
	209nm,0.4s							
KKN	**Kakani**	**6.60**	**236**	*e*Pn		**Pn**	**07 48 33.1**	**+0.3**
	102nm,0.5s							
KKN				*e*Sn		**Sn**	**07 49 46.4**	**-1.6**
	325nm,1.1s							
PKI	**Pulchoki**	**6.64**	**234**	*e*Pn		**Pn**	**07 48 34.0**	**+0.6**
	165nm,0.6s							
PKI				*e*Sn		**Sn**	**07 49 48.8**	**-0.3**
	150nm,0.7s							
PKIN	**Phulchoki**	**6.65**	**234**	*e*Pn		**Pn**	**07 48 34.3**	**+0.8**
	151nm,0.6s							
PKIN				*e*Sn		**Sn**	**07 49 48.5**	**-0.7**
	338nm,0.9s							
DMN	**Daman**	**6.83**	**235**	*e*Pn		**Pn**	**07 48 36.6**	**+0.6**
	140nm,0.6s							
DMN				*e*Sn		**Sn**	**07 49 52.9**	**-0.8**
	347nm,1.1s							
GKN	**Gorkha**	**6.94**	**240**	*e*Pn		**Pn**	**07 48 38.6**	**+1.1**
	94nm,0.4s							
GKN				*e*Sn		**Sn**	**07 49 55.0**	**-1.4**
	220nm,0.9s							
IMP	**Imphal**	**7.21**	**162**	*e*PKP		**Pn**	**07 48 41.0**	**-0.3**
IMP				*e*S		**Sn**	**07 49 57.0**	**-6.2**
DANN	**Dangsing**	**7.43**	**245**	*e*Pn		**Pn**	**07 48 43.8**	**-0.4**
	249nm,0.6s							
KOLN	**Koldanda**	**7.84**	**242**	*e*Pn		**Pn**	**07 48 50.5**	**+0.7**
	76nm,0.6s							
CAL	**Calcutta**	**9.51**	**198**	*ex*		**Sn**	**07 51 00.4**	**+0.8**
GTA	**Gaotai**	**10.30**	**39**	*e*P		**Pn**	**07 49 23.8**	**+0.2**
GTA				pP			07 49 27.5	
GTA				sP			07 49 30.3	
GTA				S		**Sn**	**07 51 19.3**	**+0.3**
GTA				SS			07 51 32.5	
GTA				pmax	pmax			
	comp=Z,10.0nm,1.2s							
GTA				pmax	pmax			
	comp=Z,190nm,4.2s							
GTA				LR	LR			
	comp=N,3μm,16.4s							
GTA				LR	LR			
	comp=E,3μm,15.5s							
GTA				LR	LR			
	comp=Z,1μm,15.2s							
CD2	**Chengdu**	**10.58**	**91**	P		**Pn**	**07 49 32.0**	**+4.6**
CD2				pP			07 49 35.3	
CD2				sP			07 49 38.0	
CD2				PP			07 49 40.5	
CD2				S		**Sn**	**07 51 33.0**	**+7.2**
CD2				sS			07 51 37.8	
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
CD2				pmax	pmax			
	comp=Z,80nm,5.0s							
CD2				LR	LR			
	comp=N,7μm,14.6s							
CD2				LR	LR			
	comp=Z,9μm,18.2s							
LZH	**Lanzhou**	**11.22**	**64**	*e*P		**Pn**	**07 49 43.0**	**+6.9**
LZH				pP			07 49 45.3	
LZH				sP			07 49 49.5	
LZH				*e*S		**Sn**	**07 51 50.0**	**+8.6**
LZH				sS			07 51 54.8	
LZH				SS			07 52 04.3	
LZH				pmax	pmax			
	comp=Z,29nm,1.0s							
LZH				pmax	pmax			
	comp=Z,140nm,4.1s							
LZH				LR	LR			
	comp=N,4μm,12.0s							
LZH				LR	LR			
	comp=E,2μm,13.2s							
LZH				LR	LR			
	comp=Z,5μm,13.7s							
KLP	**Kalpa**	**11.24**	**273**	*e*PKP		**Pn**	**07 49 34.2**	**-2.2**
KLP				AMb		AMB	07 49 42.6	
	comp=Z,27nm,0.9s							
KMI	**Kunming**	**11.90**	**120**	P		**Pn**	**07 49 46.3**	**+0.8**
KMI				pP			07 49 51.0	
KMI				sP			07 49 54.3	
KMI				PP			07 49 55.8	
KMI				S		**Sn**	**07 52 02.8**	**+4.5**
KMI				sS			07 52 10.3	
KMI				SS			07 52 17.5	
KMI				pmax	pmax			
	comp=Z,27nm,0.9s							
KMI				pmax	pmax			
	comp=Z,48nm,3.1s							
KMI				LR	LR			
	comp=N,3μm,10.8s							
KMI				LR	LR			
	comp=E,2μm,11.0s							
KMI				LR	LR			
	comp=Z,1μm,8.2s							
WMQ	**Urumqi**	**12.48**	**347**	*e*P		**Pn**	**07 49 58.0**	**+4.7**
WMQ				pP			07 50 01.3	
WMQ				sP			07 50 04.5	
WMQ				PP			07 50 08.3	
WMQ				*e*S		**Sn**	**07 52 18.3**	**+6.1**
WMQ				SS			07 52 32.8	
WMQ				pmax	pmax			
	comp=Z,18nm,0.9s							
WMQ				pmax	pmax			
	comp=Z,110nm,4.5s							
WMQ				LR	LR			
	comp=N,2μm,14.0s							
WMQ				LR	LR			
	comp=E,5μm,15.0s							
WMQ				LR	LR			
	comp=Z,1μm,11.0s							
NDI	**New Delhi**	**12.65**	**260**	*e*PKP		**Pn**	**07 49 50.5**	**-5.2**
SONA	**Sohna**	**12.89**	**258**	*e*PKP		**Pn**	**07 49 55.8**	**-3.3**
SONA				AMb		AMB	07 49 56.5	
	comp=Z,14nm,0.3s							
KHET	**Khetri**	**14.02**	**259**	*e*PKP		**Pn**	**07 50 11.6**	**-2.8**
KHET				AMb		AMB	07 50 14.3	
	comp=Z,9.9nm,0.8s							
GYA	**Guiyang**	**14.30**	**107**	⇑*i*P		**Pn**	**07 50 15.8**	**-2.5**
GYA				S		**Sn**	**07 52 56.0**	**-0.9**
GYA				pmax	pmax			
	comp=Z,90nm,0.9s							
GYA				pmax	pmax			
	comp=Z,100nm,7.0s							
GYA				LR	LR			
	comp=N,2μm,8.7s							
GYA				LR	LR			
	comp=E,1μm,9.7s							
GYA				LR	LR			
	comp=Z,1μm,9.3s							
CHTO	**Chiang Mai**	**14.49**	**150**	*e*Pn		**Pn**	**07 50 21.5**	**+0.5**
KSH	**Kashi**	**14.79**	**306**	⇓*i*P		**Pn**	**07 50 29.0**	**+4.1**
KSH				*e*pP		pP	07 50 32.3	-1.9
KSH				*e*sP		sP	07 50 36.0	+0.3
KSH				*e*PP			07 50 40.8	
KSH				*e*S		**Sn**	**07 53 14.8**	**+6.0**
KSH				*e*sS		sS	07 53 21.0	-11
KSH				*e*SS			07 53 33.0	
KSH				*e*PcP		PcP	07 55 37.8	+1.8
KSH				pmax	pmax			
	comp=Z,3.0nm,0.7s							
KSH				pmax	pmax			
	comp=Z,59nm,5.5s							
KSH				LR	LR			
	comp=N,1μm,12.5s							
KSH				LR	LR			
	comp=E,920nm,10.7s							
KSH				LR	LR			
	comp=Z,1μm,8.1s							
CMAR	**Chiang Mai Arr**	**14.81**	**151**	Pn		**Pn**	**07 50 23.9**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=329,slow=14,SNR=13							
CMAR				LR		LR	07 55 50.5	
	comp=Z,121nm,21.2s,baz=345,slow=36							
XAN	**Xi'an**	**14.89**	**76**	P		**Pn**	**07 50 23.0**	**-3.3**
XAN				PP			07 50 33.5	
XAN				S		**Sn**	**07 53 07.0**	**-4.3**
XAN				SS			07 53 25.3	
XAN				pmax	pmax			
	comp=Z,10.0nm,1.1s							
XAN				LR	LR			
	comp=N,2μm,17.8s							
XAN				LR	LR			
	comp=E,390nm,13.7s							
XAN				LR	LR			
	comp=Z,240nm,13.8s							
BHPL	**Bhopal**	**14.99**	**239**	*e*PKP		**Pn**	**07 50 24.0**	**-3.7**
BHPL				AMb		AMB	07 50 25.0	
	comp=Z,41nm,0.8s							
NGP	**Nagpur**	**15.24**	**230**	*e*PKP		**Pn**	**07 50 31.0**	**0.0**
NGP				*ex*		x	07 50 37.4	
	comp=Z,32nm,1.2s							
NGP				*ex*		x	07 53 09.8	
ENH	**Enshi**	**15.56**	**90**	*e*P		**Pn**	**07 50 39.3**	**+4.2**
	comp=Z,86nm,0.8s							
KZA	**Kyzart**	**16.56**	**313**	P		**Pn**	**07 50 51.3**	**+3.3**
	SNR=6.1							
KZA	**Kyzart**	**16.56**	**313**	*e*P		**Pn**	**07 50 50.4**	**+2.3**
	comp=Z,100nm,1.5s							
MK31	**Makanchi Array**	**16.65**	**338**	*e*P		**Pn**	**07 50 46.6**	**-2.5**
MK31	**Makanchi Array**	**16.65**	**338**	P		**Pn**	**07 50 45.4**	**-3.7**
MK31				pmax	pmax			
	comp=Z,7.0nm,0.7s							
MKAR	**Makanchi Array**	**16.65**	**338**	Pn		**Pn**	**07 50 46.0**	**-3.1**
	comp=Z,0.2nm,0.3s,baz=142,slow=12,SNR=16							
TKM2	**Tokmak 2**	**16.84**	**316**	P		**Pn**	**07 50 54.0**	**+2.5**
	SNR=14							
TKM2	**Tokmak 2**	**16.84**	**316**	*e*P		**Pn**	**07 50 53.2**	**+1.7**
	comp=Z,20nm,0.8s							
TKM2	**Tokmak 2**	**16.84**	**316**	*e*P		**Pn**	**07 50 53.2**	**+1.7**
TKM2				pmax	pmax			
	comp=Z,20nm,0.8s							
UCH	**Uchtor**	**17.11**	**313**	*e*P		**Pn**	**07 50 57.2**	**+2.4**
	comp=Z,17nm,1.2s							
AAK	**Ala-Archa**	**17.34**	**314**	P		**Pn**	**07 51 00.0**	**+2.3**
	SNR=7.3							
AAK	**Ala-Archa**	**17.34**	**314**	*e*P		**Pn**	**07 50 59.4**	**+1.7**
	comp=Z,18nm,1.0s							
AAK	**Ala-Archa**	**17.34**	**314**	P		**Pn**	**07 50 59.3**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=115,slow=8.7,SNR=12							
AAK				LR		LR	07 58 37.7	
	comp=Z,399nm,19.9s,baz=288,slow=41							
AAK	**Ala-Archa**	**17.34**	**314**	*c i*P		**Pn**	**07 50 59.5**	**+1.8**
AAK				pmax	pmax			
	comp=Z,16nm,1.5s							
AAK	**Ala-Archa**	**17.34**	**314**	P		**Pn**	**07 51 00.2**	**+2.5**
	SNR=10							
FRU	**Bishkek**	**17.38**	**315**	⇓*i*P		**Pn**	**07 51 04.0**	**+5.8**
FRU				pmax	pmax			
	comp=Z,50nm,2.0s							
AML	**Almayashu**	**17.57**	**311**	*e*P		**Pn**	**07 51 01.6**	**+0.9**
	comp=Z,8.1nm,0.5s							
USP	**Ospenovka**	**17.69**	**316**	P		**Pn**	**07 51 03.1**	**+1.0**
	SNR=9.5							
EKS2	**Erkin-Say**	**17.80**	**313**	P		**Pn**	**07 51 04.1**	**+0.7**
	SNR=17							
EKS2	**Erkin-Say**	**17.80**	**313**	*e*P		**Pn**	**07 51 03.8**	**+0.3**
	comp=Z,15nm,1.0s							
HYB	**Hyderabad**	**18.38**	**222**	*i* P		**Pn**	**07 51 04.0**	**-6.7**
HYB				*e*S		**Sn**	**07 54 18.0**	**-18**
HYB				*e*S		**Sn**	**07 54 18.0**	**-18**
HHC	**Hu-ho-hao-te**	**18.61**	**55**	*e*P		**Pn**	**07 51 12.8**	**-0.6**
HHC				pP		pP	07 51 16.3	-0.1
HHC				sP		sP	07 51 20.3	+2.4
HHC				PP			07 51 28.8	
HHC				*e*S		**Sn**	**07 54 37.8**	**-3.5**
HHC				sS		sS	07 54 43.5	-6.8
HHC				SS			07 55 00.8	
HHC				PcP		PcP	07 55 42.5	+0.7
HHC				pmax	pmax			
	comp=Z,94nm,2.4s							
HHC				pmax	pmax			
	comp=Z,100nm,5.7s							
HHC				LR	LR			
	comp=N,3μm,15.5s							
HHC				LR	LR			
	comp=E,2μm,13.7s							
HHC				LR	LR			
	comp=Z,1μm,14.3s							
KBL	**Kabul**	**18.96**	**285**	*e*P		**Pn**	**07 51 13.3**	**-4.5**
	comp=Z,98nm,1.1s							
KBL	**Kabul**	**18.96**	**285**	*e*P		**Pn**	**07 51 13.3**	**-4.4**
KBL				pmax	pmax			
	comp=Z,98nm,1.1s							
WHN	**Wuhan**	**19.66**	**87**	⇓P		**Pn**	**07 51 24.5**	**-1.6**
WHN				S		**Sn**	**07 55 08.3**	**+1.4**
WHN				pmax	pmax			
	comp=Z,130nm,1.0s							
WHN				pmax	pmax			
	comp=Z,790nm,4.0s							
WHN				LR	LR			
	comp=N,4μm,10.4s							
WHN				LR	LR			
	comp=E,4μm,15.8s							
WHN				LR	LR			
	comp=Z,2μm,19.4s							
SONM	**Songino Array**	**19.76**	**31**	P		**Pn**	**07 51 25.6**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=212,slow=13,SNR=19							
ULN	**Ulaanbaatar**	**20.08**	**32**	*e*P		**P**	**07 51 28.8**	**-0.3**
	comp=Z,29nm,1.1s							
ULN	**Ulaanbaatar**	**20.08**	**32**	*e*P		**P**	**07 51 28.8**	**-0.4**
ULN				pmax	pmax			
	comp=Z,29nm,1.1s							
ULN	**Ulaanbaatar**	**20.08**	**32**	P		**P**	**07 51 27.3**	**-1.8**
	SNR=25							
KK31	**Karatay Array**	**20.10**	**310**	*i* P		**P**	**07 51 27.8**	**-1.6**
KK31				pmax	pmax			
	comp=Z,77nm,1.6s							
KKAR	**Karatay Array**	**20.10**	**310**	*e*P		**P**	**07 51 29.1**	**-0.3**
	comp=Z,41nm,1.3s							
KKAR	**Karatay Array**	**20.10**	**310**	*e*P		**P**	**07 51 29.2**	**-0.2**
KKAR				pmax	pmax			
	comp=Z,41nm,1.3s							
POO	**Poona**	**20.57**	**235**	*e*PKP		**P**	**07 51 33.7**	**-1.0**
POO				AMb		AMB	07 51 41.6	
	comp=Z,24nm,0.8s							

ZAK	**Zakamensk**	**20.67**	**22**	*e*P		**P**	**07 51 35.6**	**+0.1**
ZAK				pmax	pmax			
	comp=Z,10.0nm,0.9s							
QIZ	**Qiongzhong**	**20.83**	**123**	P		**P**	**07 51 37.0**	**-0.5**
QIZ				S		**S**	**07 55 27.8**	**-2.1**
QIZ				sS		sS	07 55 38.8	+3.7
QIZ				pmax	pmax			
	comp=Z,12nm,1.0s							
QIZ				pmax	pmax			
	comp=Z,120nm,2.6s							
QIZ				LR	LR			
	comp=N,730nm,11.3s							
QIZ				LR	LR			
	comp=Z,670nm,14.1s,MS4.2							
MOY	**Mondy**	**21.18**	**17**	*e*P		**P**	**07 51 41.8**	**+0.8**
MOY				pmax	pmax			
	comp=Z,33nm,1.9s,mb4.3							
KAD	**Karad**	**21.19**	**232**	*e*PKP		**P**	**07 51 40.1**	**-1.4**
KAD				AMb		AMB	07 51 43.3	
	comp=Z,8.3nm,0.8s,mb4.1							
GZH	**Guangzhou**	**21.23**	**108**	P		**P**	**07 51 41.5**	**-0.4**
GZH				S		**S**	**07 55 31.5**	**-6.3**
GZH				LR	LR			
	comp=N,1μm,10.5s,MS4.7							
GZH				LR	LR			
	comp=E,570nm,11.3s,MS4.7							
KURK	**Kurchatov**	**21.27**	**337**	*e*P		**P**	**07 51 40.9**	**-1.0**
	comp=E,26nm,1.0s,mb4.5							
KURK	**Kurchatov**	**21.27**	**337**	P		**P**	**07 51 39.9**	**-2.0**
	comp=E,19nm,0.9s,mb4.4,baz=144,slow=11,SNR=14							
KURK	**Kurchatov**	**21.27**	**337**	⇓*i*P		**P**	**07 51 40.6**	**-1.4**
KURK				pmax	pmax			
	comp=Z,35nm,1.2s,mb4.6							
KURK	**Kurchatov**	**21.27**	**337**	P		**P**	**07 51 41.4**	**-0.6**
	SNR=14							
BJT	**Baijiatuau**	**21.67**	**61**	*e*P		**P**	**07 51 47.4**	**+1.0**
	comp=Z,34nm,0.9s,mb4.8							
BJT	**Baijiatuau**	**21.67**	**61**	*e*P		**P**	**07 51 47.4**	**+1.0**
BJT				pmax	pmax			
	comp=Z,34nm,0.9s							
BJI	**Beijing**	**21.68**	**60**	P		**P**	**07 51 46.3**	**-0.2**
BJI				pmax	pmax			
	comp=Z,20nm,1.3s,mb4.4							
BJI				pmax	pmax			
	comp=Z,130nm,4.4s							
BJI				LR	LR			
	comp=N,3μm,16.1s,MS4.8							
BJI				LR	LR			
	comp=E,1μm,16.1s,MS4.8							
BJI				LR	LR			
	comp=Z,400nm,20.6s,MS3.8							
TLY	**Talaya**	**21.92**	**21**	*e*P		**P**	**07 51 51.1**	**+2.2**
	comp=Z,7.7nm,0.9s,mb4.1							
TLY	**Talaya**	**21.92**	**21**	*e*P		**P**	**07 51 52.3**	**+3.4**
TLY				pmax	pmax			
	comp=Z,20nm,1.8s,mb4.2							
TLY				MLR	MLR			
	comp=Z,260nm,18.0s,MS3.7							
TLY	**Talaya**	**21.92**	**21**	P		**P**	**07 51 52.2**	**+3.3**
	SNR=6.0							
IRK	**Irkutsk**	**22.60**	**21**	*e*P		**P**	**07 51 56.0**	**-0.2**
IRK				pmax	pmax			
	comp=Z,57nm,1.4s,mb4.8							
ZAA0	**Zalesovo Array**	**22.76**	**350**	*e*P		**P**	**07 51 56.6**	**-1.3**
ZALV	**Zalesovo Beam**	**22.76**	**350**	P		**P**	**07 51 55.9**	**-2.0**
	comp=Z,5.6nm,0.6s,mb4.2,baz=173,slow=12,SNR=16							
SSE	**Sheshan**	**25.38**	**83**	P		**P**	**07 52 24.3**	**+1.1**
SSE				S		**S**	**07 56 46.8**	**-2.7**
SSE				pmax	pmax			
	comp=Z,39nm,0.7s,mb5.0							
SSE				pmax	pmax			
	comp=Z,220nm,4.2s							
SSE				LR	LR			
	comp=N,1μm,13.5s,MS4.6							
SSE				LR	LR			
	comp=E,470nm,13.6s,MS4.6							
SSE				LR	LR			
	comp=Z,720nm,15.8s,MS4.3							
VOSK	**Vostochnaya**	**25.75**	**331**	P		**P**	**07 52 24.1**	**-2.1**
VOSK				pmax	pmax			
	comp=Z,16nm,0.8s,mb4.6							
BVA0	**Borovoye Array**	**26.21**	**331**	*i* P		**P**	**07 52 27.0**	**-3.5**
BVA0				pmax	pmax			
	comp=Z,1.0nm,0.8s							
BVAR	**Borovoye Array**	**26.21**	**331**	P		**P**	**07 52 28.4**	**-2.0**
	comp=Z,1.7nm,0.6s,mb3.8,baz=126,slow=14,SNR=12							
BRVK	**Borovoye**	**26.28**	**331**	*e*P		**P**	**07 52 29.9**	**-1.2**
	comp=Z,7.7nm,0.8s,mb4.3							
BRVK	**Borovoye**	**26.28**	**331**	⇑*i*P		**P**	**07 52 31.5**	**+0.4**
BRVK				pmax	pmax			
	comp=Z,15nm,1.3s,mb4.4							
BRVK	**Borovoye**	**26.28**	**331**	P		**P**	**07 52 33.2**	**+2.1**
	SNR=8.5							
CN2	**Changchun**	**29.30**	**56**	*e*P		**P**	**07 53 01.8**	**+3.6**
CN2				*e*S		**S**	**07 57 54.0**	**+2.9**
CN2				LR	LR			
	comp=N,2μm,14.0s,MS5.0							
CN2				LR	LR			
	comp=E,700nm,14.0s,MS5.0							
CN2				LR	LR			
	comp=Z,200nm,11.0s,MS4.0							
AB31	**Akbulak array**	**29.41**	**316**	*e*P		**P**	**07 52 56.8**	**-2.3**
AB31				pmax	pmax			
	comp=Z,1.0nm,0.2s,mb4.2							
ABKAR	**Akbulak array**	**29.41**	**316**	*e*P		**P**	**07 52 56.6**	**-2.5**
	comp=Z,3.4nm,0.9s,mb4.1							
PSI	**Prapat**	**29.58**	**165**	LR		LR	08 06 55.0	
	comp=Z,245nm,20.5s,MS3.8,baz=139,slow=40							
KSRS	**Korea Array**	**30.47**	**69**	P		**P**	**07 53 06.6**	**-2.0**
	comp=Z,4.5nm,0.8s,mb4.2,baz=273,slow=9.0,SNR=12							
KSRS				LR		LR	08 05 43.7	
	comp=Z,349nm,18.6s,MS4.0,baz=269,slow=37							
KSRS	**Korea Array**	**30.47**	**69**	P		**P**	**07 53 06.6**	**-2.0**
KSRS				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.2							
KSRS				MLR	MLR			
	comp=Z,349nm,18.6s,MS4.0							
AKTO	**Aktyubinsk**	**31.03**	**317**	LR		LR	08 07 17.9	
	comp=Z,430nm,20.8s,MS4.1,baz=117,slow=40							
AKTO	**Aktyubinsk**	**31.03**	**317**	P		**P**	**07 53 11.4**	**-2.0**
AKTO				pmax	pmax			
	comp=Z,1.0nm,1.1s,mb3.6							
ASHO	**Ashiyiah**	**31.84**	**266**	P		**P**	**07 53 23.1**	**+2.2**
	SNR=5.4							
ARU	**Arti**	**33.66**	**327**	*d i*P		**P**	**07 53 36.7**	**+0.3**
ARU							07 54 48.8	
ARU				S		**S**	**07 59 00.2**	**+1.3**
ARU				SS		SS	08 01 05.4	-19
ARU				pmax	pmax			
	comp=Z,22nm,1.7s,mb4.8							
ARU				MLR	MLR			
	comp=Z,281nm,14.0s,MS4.1							
KKM	**Kota Kinabalu**	**34.47**	**133**	*e*P		**P**	**07 53 44.2**	**+0.4**
	comp=Z,12nm,0.8s,mb4.9							
GNI	**Garni**	**38.38**	**296**	LR		LR	08 13 00.3	
	comp=Z,137nm,18.2s,MS3.8,baz=229,slow=41							
GNI	**Garni**	**38.38**	**296**	*c i*P		**P**	**07 54 18.8**	**+1.8**
GNI				pmax	pmax			
	comp=Z,29nm,1.8s							
MJAR	**Matsushiro Arr**	**38.74**	**70**	P		**P**	**07 54 18.4**	**-1.7**
	comp=Z,2.9nm,0.8s,mb4.0,baz=262,slow=11,SNR=5.3							
MJAR				LR		LR	08 10 03.0	
	comp=Z,270nm,20.3s,MS4.1,baz=285,slow=36							
ASAJ	**Asahikawa**	**41.62**	**58**	LR		LR	08 15 06.6	
	comp=Z,64nm,18.7s,MS3.5,baz=283,slow=41							
MALT	**Malatya**	**43.42**	**294**	*e*P		**P**	**07 54 58.8**	**+0.1**
	comp=Z,9.9nm,1.4s,mb4.3							
MALT	**Malatya**	**43.42**	**294**	*e*P		**P**	**07 54 58.8**	**+0.2**
MALT				pmax	pmax			
	comp=Z,10.0nm,1.4s,mb4.3							
CBIJ	**Chichi jima**	**44.15**	**82**	LR		LR	08 15 55.1	
	comp=Z,172nm,19.4s,MS4.0,baz=76,slow=39							
MOS	**Moscow**	**44.30**	**319**	*e*P		**P**	**07 55 03.7**	**-1.7**
KLMR	**Klimovskoe**	**44.51**	**327**	P		**P**	**07 55 04.3**	**-2.7**
KLMR				pmax	pmax			
	comp=Z,29nm,1.3s,mb5.0							
KLMR				MLR	MLR			
	comp=Z,391nm,14.0s,MS4.5							
OBN	**Obninsk**	**44.79**	**318**	⇓*e*P		**P**	**07 55 10.4**	**+1.1**
OBN				*e*			07 55 26.2	
OBN				pmax	pmax			
	comp=Z,42nm,1.7s,mb5.0							
OBN				MLR	MLR			
	comp=Z,300nm,17.0s,MS4.3							
BR131	**Keskin Array S**	**46.91**	**297**	*e*P		**P**	**07 55 25.2**	**-1.1**
BRTR	**Keskin Array B**	**46.91**	**297**	P		**P**	**07 55 24.1**	**-2.2**
	comp=Z,2.0nm,0.8s,mb4.1,baz=107,slow=8.2,SNR=8.9							
BRTR				LR		LR	08 18 51.0	
	comp=Z,79nm,19.3s,MS3.7,baz=200,slow=41							
BRTR	**Keskin Array B**	**46.91**	**297**	*ce*P		**P**	**07 55 27.1**	**+0.8**
BRTR				pmax	pmax			
	comp=Z,2.0nm,0.8s							
AKASG	**Malin Array Be**	**48.99**	**312**	P		**P**	**07 55 39.5**	**-2.8**
	comp=Z,12nm,0.7s,mb5.0,baz=81,slow=7.2,SNR=20							
KIEV	**Kiev**	**49.00**	**312**	*e*P		**P**	**07 55 40.7**	**-1.6**
	comp=Z,17nm,0.9s,mb5.1							
KIEV	**Kiev**	**49.00**	**312**	*e*P		**P**	**07 55 40.7**	**-1.7**
KIEV				pmax	pmax			
	comp=Z,17nm,0.9s,mb5.1							
APA	**Apatity**	**49.02**	**334**	⇑*e*P		**P**	**07 55 50.4**	**+8.2**
APA				MLR	MLR			
	comp=Z,400nm,19.0s,MS4.4							
SEY	**Seymchan**	**49.16**	**32**	⇓*e*P		**P**	**07 55 44.3**	**+1.0**
KAF	**Kangasniemi**	**50.96**	**327**	*ep*		**P**	**07 56 03.2**	**+6.2**
	comp=Z,2.8nm,0.7s,mb4.3							
FINES	**FINESS Array B**	**51.01**	**326**	P		**P**	**07 55 55.4**	**-2.0**
	comp=Z,6.5nm,0.6s,mb4.7,baz=100,slow=8.7,SNR=12							
PLOR	**Plostina**	**51.12**	**306**	⇓*i*P		**P**	**07 55 57.2**	**-1.3**
PETK	**Petropavlovsk-**	**51.41**	**45**	LR		LR	08 20 52.1	
	comp=Z,100nm,18.3s,MS3.9,baz=100,slow=40							
MLR	**Muntele Rosu**	**51.66**	**305**	LR		LR	08 20 12.2	
	comp=Z,166nm,21.2s,MS4.0,baz=241,slow=39							
MLR	**Muntele Rosu**	**51.66**	**305**	⇓*i*P		**P**	**07 56 01.4**	**-1.2**
BUR08	**Bucovina Ar. S**	**51.87**	**308**	*e*P		**P**	**07 56 05.2**	**+1.0**
GUMO	**Guam**	**51.99**	**98**	LR		LR	08 19 06.7	
	comp=Z,96nm,20.4s,MS3.8,baz=285,slow=37							
VOIR		**52.29**	**305**	⇓*i*P		**P**	**07 56 07.5**	**+0.2**
ARCES	**ARCESS Array B**	**52.30**	**336**	P		**P**	**07 56 04.8**	**-2.1**
	comp=Z,1.6nm,0.6s,mb4.1,baz=96,slow=8.1,SNR=11							
LVV	**L'vov**	**52.38**	**311**	*e*P		**P**	**07 56 04.3**	**-3.6**
LVV				*e*			07 58 03.7	
KWP	**Kalwaria Pacla**	**53.26**	**311**	*e*P		**P**	**07 56 15.3**	**+0.9**
	comp=Z,52nm,1.1s,mb5.4							
KWP	**Kalwaria Pacla**	**53.26**	**311**	*e*P		**P**	**07 56 15.3**	**+1.0**
KWP				pmax	pmax			
	comp=Z,52nm,1.1s,mb5.4							
KWP	**Kalwaria Pacla**	**53.26**	**311**	⇑*i*P		**P**	**07 56 15.4**	**+1.1**
TRPA	**Tarpa**	**53.58**	**309**	⇑*i*P		**P**	**07 56 17.1**	**+0.4**
UZH	**Uzhgorod**	**53.67**	**310**	⇑*i*P		**P**	**07 56 17.8**	**+0.5**
UZH				*e*			07 56 23.8	
DRGR		**53.68**	**307**	⇓*i*P		**P**	**07 56 16.0**	**-1.5**
CRVS	**Cervenica-Dubn**	**54.17**	**310**	*e*P		**P**	**07 56 21.4**	**+0.4**
	comp=Z,22nm,2.0s,mb4.8							
CRVS	**Cervenica-Dubn**	**54.17**	**310**	*e*P		**P**	**07 56 21.4**	**+0.4**
CRVS				pmax	pmax			
	comp=Z,22nm,2.0s,mb4.7							
CRVS	**Cervenica-Dubn**	**54.17**	**310**	*e*P		**P**	**07 56 21.4**	**+0.4**
STHS	**Stebnicka Huta**	**54.23**	**311**	*e*P		**P**	**07 56 22.8**	**+1.3**
	comp=Z,7.6nm,0.9s,mb4.6							
STHS	**Stebnicka Huta**	**54.23**	**311**	*e*P		**P**	**07 56 22.8**	**+1.3**
STHS				pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.7							
STHS	**Stebnicka Huta**	**54.23**	**311**	*e*P		**P**	**07 56 22.8**	**+1.3**
KECS	**Kecovo**	**54.88**	**310**	*e*P		**P**	**07 56 26.2**	**0.0**
	comp=Z,4.5nm,0.9s,mb4.5							
KECS	**Kecovo**	**54.88**	**310**	*e*P		**P**	**07 56 26.2**	**0.0**
KECS				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.5							
KECS	**Kecovo**	**54.88**	**310**	*e*P		**P**	**07 56 26.2**	**0.0**
OJC	**Ojcow**	**55.03**	**312**	*e*P		**P**	**07 56 25.7**	**-1.6**
VYHS	**Vyhne**	**55.95**	**310**	*e*P		**P**	**07 56 33.3**	**-0.6**
	comp=Z,20nm,1.9s,mb4.8							
VYHS	**Vyhne**	**55.95**	**310**	*e*P		**P**	**07 56 33.3**	**-0.6**
VYHS				pmax	pmax			
	comp=Z,20nm,1.9s,mb4.8							
VYHS	**Vyhne**	**55.95**	**310**	*e*P		**P**	**07 56 33.3**	**-0.6**
OKC	**Ostrava-Krasne**	**56.15**	**312**	*e*P		**P**	**07 56 36.3**	**+1.0**
OKC				MLR	MLR			
	comp=Z,200nm,15.4s,MS4.3							
OKC	**Ostrava-Krasne**	**56.15**	**312**	*e*P		**P**	**07 56 36.3**	**+1.0**
OKC				AMS	AMS		08 20 50.0	
	comp=Z,200nm,15.4s							
MORC	**Moravsky Berou**	**56.54**	**312**	*e*P		**P**	**07 56 37.9**	**-0.2**
	comp=Z,14nm,1.0s,mb4.9							
MORC	**Moravsky Berou**	**56.54**	**312**	*e*P		**P**	**07 56 37.9**	**-0.2**
MORC				pmax	pmax			
	comp=Z,14nm,1.0s,mb5.0							
MORC	**Moravsky Berou**	**56.54**	**312**	⇑*i*P		**P**	**07 56 37.5**	**-0.6**
DPC	**Dobruska-Polom**	**57.20**	**313**	*e*P		**P**	**07 56 42.9**	**+0.1**
DPC				MLR	MLR			
	comp=Z,300nm,20.6s,MS4.4							
DPC	**Dobruska-Polom**	**57.20**	**313**	*e*P		**P**	**07 56 42.9**	**+0.1**
DPC				AMS	AMS		08 19 40.0	
	comp=Z,300nm,20.6s							
UPC	**Upice**	**57.37**	**313**	*e*P		**P**	**07 56 44.0**	**+0.1**
UPC	**Upice**	**57.37**	**313**	*e*P		**P**	**07 56 44.0**	**+0.1**
TREC	**Trest**	**57.95**	**311**	AMS		AMS	08 23 40.0	
	comp=Z,300nm,19.6s							
CONA	**Conrad Observa**	**58.02**	**310**	⇑*i*P		**P**	**07 56 47.0**	**-1.5**
	comp=Z,16nm,0.9s,mb5.0							
NOA	**NORSAR Array B**	**58.19**	**326**	P		**P**	**07 56 47.1**	**-2.4**
	comp=Z,6.1nm,0.6s,mb4.8,baz=82,slow=7.1,SNR=24							
NOA				LR		LR	08 21 18.5	
	comp=Z,133nm,20.0s,MS4.0,baz=60,slow=36							
PVCC	**Panska Ves**	**58.26**	**313**	*e*P		**P**	**07 56 51.5**	**+1.3**
PVCC				MLR	MLR			
	comp=Z,400nm,7.1s							
PVCC	**Panska Ves**	**58.26**	**313**	*e*P		**P**	**07 56 51.5**	**+1.3**
PVCC				AMS	AMS		08 23 40.0	
	comp=Z,400nm,7.1s							
PRU	**Pruhonice**	**58.40**	**312**	*e*P		**P**	**07 56 53.4**	**+2.2**
PRU				MLR	MLR			
	comp=Z,300nm,16.5s,MS4.5							
PRU	**Pruhonice**	**58.40**	**312**	*e*P		**P**	**07 56 53.4**	**+2.2**
PRU				AMS	AMS		08 23 20.0	
	comp=Z,300nm,16.5s							
BRG	**Berggiesshubel**	**58.58**	**314**	*e*P		**P**	**07 56 53.4**	**+1.0**
	comp=Z,10.0nm,1.0s,mb4.8							
BRG				*e*PP		PP	07 59 02.5	+0.7
	comp=Z,4.5nm,0.7s							
BRG	**Berggiesshubel**	**58.58**	**314**	*e*P		**P**	**07 56 53.4**	**+1.0**
BRG				*e*			07 59 02.5	
BRG				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.6							
BRG				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.4							
SOKA	**Soboth**	**58.86**	**309**	⇑*i*P		**P**	**07 56 53.8**	**-0.7**
	comp=Z,12nm,1.1s,mb4.8							
CLL	**Collm**	**59.06**	**314**	*e*P		**P**	**07 56 54.0**	**-1.7**
	comp=Z,10.0nm,1.2s,mb4.7							
CLL				LR		LR		
	comp=Z,200nm,19.0s,MS4.3							
CLL	**Collm**	**59.06**	**314**	*e*P		**P**	**07 56 54.0**	**-1.7**
CLL				pmax	pmax			
	comp=Z,10.0nm,1.2s,mb4.7							
CLL				MLR	MLR			
	comp=Z,200nm,19.0s,MS4.3							
CLL	**Collm**	**59.06**	**314**	*e*P		**P**	**07 56 54.0**	**-1.7**
	comp=Z,10.0nm,1.2s,mb4.7							
CLL				LmV			08 24 00.0	
	comp=Z,200nm,19.0s							
MBWA	**Marble Bar**	**59.13**	**149**	*e*P		**P**	**07 56 59.4**	**+2.9**
	comp=Z,9.5nm,0.9s,mb4.8							
KHC	**Kasperske Hory**	**59.21**	**312**	*e*P		**P**	**07 56 57.4**	**+0.6**
	comp=Z,24nm,1.5s,mb5.0							
KHC	**Kasperske Hory**	**59.21**	**312**	*e*P		**P**	**07 56 57.4**	**+0.6**
KHC				pmax	pmax			
	comp=Z,23nm,1.5s,mb5.0							
KHC	**Kasperske Hory**	**59.21**	**312**	*e*P		**P**	**07 56 57.4**	**+0.6**
KHC				AMS	AMS		08 25 30.0	
	comp=Z,400nm,6.8s							
NKC	**Novy Kostel**	**59.65**	**313**	AMS		AMS	08 23 00.0	
WTTA	**Wattenberg**	**60.95**	**310**	⇑*i*P		**P**	**07 57 08.5**	**-0.4**
	comp=Z,13nm,0.9s,mb5.0							
FETA	**Feichten**	**61.61**	**310**	⇑*i*pP		**P**	**07 57 14.3**	**+1.0**
	comp=Z,6.9nm,1.0s,mb4.7							
DAVOX	**Davos/Dischmat**	**62.24**	**310**	LR		LR	08 27 01.9	
	comp=Z,183nm,19.3s,MS4.2,baz=248,slow=39							
CDF	**Champ du Feu**	**63.41**	**312**	*e*P		**P**	**07 57 25.9**	**+0.6**
	comp=Z,23nm,1.2s,mb4.9							
CDF	**Champ du Feu**	**63.41**	**312**	*e*P		**P**	**07 57 25.9**	**+0.6**
	comp=Z,11nm,1.2s,mb4.9							
CDF	**Champ du Feu**	**63.41**	**312**	*e*P		**P**	**07 57 25.9**	**+0.6**
CDF				pmax	pmax			
	comp=Z,11nm,1.2s,mb4.9							
GIVF	**Givet**	**64.39**	**315**	*e*P		**P**	**07 57 31.4**	**-0.3**
LPL	**La Plagne**	**64.72**	**309**	*e*P		**P**	**07 57 34.4**	**+0.4**
CABF	**La Chapelle**	**64.77**	**311**	*e*P		**P**	**07 57 34.7**	**+0.5**
	comp=Z,16nm,1.1s,mb4.7							
CABF	**La Chapelle**	**64.77**	**311**	*e*P		**P**	**07 57 34.7**	**+0.5**
	comp=Z,7.8nm,1.0s,mb4.7							
CABF	**La Chapelle**	**64.77**	**311**	*e*P		**P**	**07 57 34.7**	**+0.5**
CABF				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.7							
SFTF	**Sexfontaines**	**64.89**	**312**	*e*P		**P**	**07 57 35.5**	**+0.5**
ORIF	**Oris-en-Rattie**	**65.50**	**309**	*e*P		**P**	**07 57 39.1**	**+0.1**
ORIF				*e*MLR	MLR			
	comp=Z,191nm,18.5s,MS4.0							
WRA	**Warramunga Arr**	**65.78**	**135**	P		**P**	**07 57 39.1**	**-1.9**
	comp=Z,1.7nm,0.7s,mb4.2,baz=328,slow=6.8,SNR=17							
LOR	**Lormes**	**65.97**	**312**	*e*P		**P**	**07 57 42.1**	**+0.1**
LOR				*e*MLR	MLR			
	comp=Z,235nm,22.0s,MS4.0							
LOR	**Lormes**	**65.97**	**312**	*e*P		**P**	**07 57 42.1**	**+0.1**
LOR				MLR	MLR			
	comp=Z,240nm,22.0s,MS4.4							
SMF	**Signal de Mont**	**66.20**	**311**	*e*P		**P**	**07 57 43.8**	**+0.3**
SSF	**Saint Saulge**	**66.26**	**312**	*e*P		**P**	**07 57 44.2**	**+0.3**
	comp=Z,25nm,1.1s,mb4.9							
SSF	**Saint Saulge**	**66.26**	**312**	*e*P		**P**	**07 57 44.2**	**+0.3**
	comp=Z,13nm,1.1s,mb4.9							
SSF	**Saint Saulge**	**66.26**	**312**	*e*P		**P**	**07 57 44.2**	**+0.3**
SSF				pmax	pmax			
	comp=Z,13nm,1.1s,mb4.9							
VIVF	**Saint-Julien-l**	**66.32**	**309**	*e*P		**P**	**07 57 44.9**	**+0.6**
KEST	**Kesra**	**66.46**	**298**	LR		LR	08 31 18.2	
	comp=Z,39nm,20.0s,MS3.6,baz=277,slow=40							
AVF	**Avril sur Loir**	**66.46**	**311**	*e*P		**P**	**07 57 45.5**	**+0.3**
LASF	**Ste Croix**	**67.15**	**309**	*e*P		**P**	**07 57 50.4**	**+0.8**
	comp=Z,28nm,1.2s,mb4.9							
TCF	**Toulx Ste Croi**	**67.38**	**311**	*e*P		**P**	**07 57 51.8**	**+0.7**
	comp=Z,23nm,1.1s,mb4.8							
TCF	**Toulx Ste Croi**	**67.38**	**311**	*e*P		**P**	**07 57 51.8**	**+0.7**
	comp=Z,11nm,1.1s,mb4.8							
TCF	**Toulx Ste Croi**	**67.38**	**311**	*e*P		**P**	**07 57 51.8**	**+0.7**
TCF				pmax	pmax			
	comp=Z,11nm,1.1s,mb4.8							
LDF	**La Druitiere**	**67.94**	**314**	*e*P		**P**	**07 57 54.6**	**0.0**
	comp=Z,7.5nm,0.7s,mb4.5							
LDF	**La Druitiere**	**67.94**	**314**	*e*P		**P**	**07 57 54.6**	**0.0**
	comp=Z,3.8nm,0.7s,mb4.5							
LDF	**La Druitiere**	**67.94**	**314**	*e*P		**P**	**07 57 54.6**	**0.0**
LDF				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.6							
CAF	**Calviac**	**68.00**	**310**	*e*P		**P**	**07 57 55.8**	**+0.8**
RJF	**Les Rejaudoux**	**68.21**	**311**	*e*P		**P**	**07 57 57.4**	**+1.1**
RJF				*e*MLR	MLR			
	comp=Z,145nm,20.8s,MS3.9							
RJF	**Les Rejaudoux**	**68.21**	**311**	*e*P		**P**	**07 57 57.4**	**+1.1**
RJF				MLR	MLR			
	comp=Z,150nm,20.8s,MS4.2							
ASAR	**Alice Springs**	**68.41**	**138**	P		**P**	**07 57 56.5**	**-1.2**
	comp=Z,2.6nm,0.7s,mb4.4,baz=327,slow=6.6,SNR=24							
MFF	**Saint Martin d**	**68.75**	**312**	*e*P		**P**	**07 57 59.9**	**+0.2**
LFF	**La Frestale**	**68.86**	**310**	*e*P		**P**	**07 58 01.2**	**+0.8**
ETSF	**Etsaut**	**70.57**	**309**	*e*P		**P**	**07 58 11.8**	**+0.9**
	comp=Z,14nm,0.8s,mb4.6							
ETSF	**Etsaut**	**70.57**	**309**	*e*P		**P**	**07 58 11.8**	**+0.9**
	comp=Z,7.1nm,0.8s,mb4.7							
ETSF	**Etsaut**	**70.57**	**309**	*e*P		**P**	**07 58 11.8**	**+0.9**
ETSF				pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.6							
SJPF	**Ste Jean**	**70.91**	**309**	*e*P		**P**	**07 58 14.2**	**+1.2**
COLD	**Coldfoot**	**71.12**	**21**	*e*P		**P**	**07 58 15.4**	**+1.5**
	comp=Z,8.6nm,0.9s,mb4.7							
BPAW	**Bear Paw Mtn.**	**72.78**	**24**	*e*P		**P**	**07 58 25.0**	**+1.2**
	comp=Z,11nm,1.2s,mb4.7							
PPLA	**Purkeypile**	**73.08**	**25**	*e*P		**P**	**07 58 25.3**	**-0.4**
	comp=Z,26nm,1.2s,mb5.0							
COLA	**College**	**73.35**	**23**	*e*P		**P**	**07 58 28.4**	**+1.1**
	comp=Z,13nm,0.8s,mb4.9							
COLA	**College**	**73.35**	**23**	*e*P		**P**	**07 58 28.4**	**+1.2**
COLA				pmax	pmax			
	comp=Z,13nm,0.8s,mb4.9							
TRF	**Thorofare Moun**	**73.43**	**24**	*e*P		**P**	**07 58 28.4**	**+0.7**
	comp=Z,3.0nm,0.7s,mb4.3							
MCK	**McKinley**	**73.72**	**24**	*e*P		**P**	**07 58 31.1**	**+1.7**
	comp=Z,4.2nm,0.8s,mb4.4							
MCK	**McKinley**	**73.72**	**24**	*e*P		**P**	**07 58 31.1**	**+1.7**
MCK				pmax	pmax			

M_{θ}0.28±.36; M_{Φ}0.61±.07; M_{Ψ}0.47±.32; Best double couple: M_{o}2.80000×10^16 NP1:ϕ278.00000°, δ41.00000°, λ-101.00000°. NP2:ϕ112.00000°, δ50.00000°, λ-81.00000°. Principal axes: T 2.6800, Plg4.0000°, Azm195.0000°; N 0.2200, Plg7.0000°, Azm286.0000°; P -2.8900, Plg82.0000°, Azm75.0000°; Data Used: II IU IC G CN.

ISC 26 08:07:08.5±0.3,**52°56S**±0.06×**26°4E**±0.1,**h10**km,**n149,** σ0§67/40,**mb4.8**/25,**MS4.3**/21,**25C-28D,South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SYO	**Syowa Base**	**17.64**	**164**	*e*Pn	**Pn**	**08 11 12.8**	**-1.2**
SYO	**Syowa Base**	**17.64**	**164**	⇓*i*P	**Pn**	**08 11 14.0**	**0.0**
MAIT	**Maitri**	**19.44**	**195**	*e*P	**Pn**	**08 11 36.0**	**+0.1**
SUR	**Sutherland**	**20.57**	**346**	P	**P**	**08 11 48.5**	**+1.2**
	16nm,0.9s,baz=154,slow=11,SNR=8.1						
SUR				LR	LR	08 17 54.1	
	comp=Z,1μm,21.3s,MS4.3,baz=253,slow=32						
MAW	**Mawson**	**23.12**	**145**	P	**P**	**08 12 15.1**	**+0.8**
	22nm,0.8s,mb4.6,baz=291,slow=12,SNR=45						
MAW				LR	LR	08 19 56.1	
	comp=Z,384nm,19.2s,MS3.9,baz=289,slow=33						
VNA1	**Neumayer--Stat**	**23.92**	**208**	*e*P	**P**	**08 12 21.8**	**-0.3**
VNA1				*e*		08 12 26.0	
VNA1				*e*		08 12 53.3	
BOSA	**Boshof**	**23.94**	**358**	*e*P	**P**	**08 12 21.9**	**-0.7**
	12nm,0.7s,mb4.4						
BOSA	**Boshof**	**23.94**	**358**	P	**P**	**08 12 22.2**	**-0.4**
	12nm,0.7s,mb4.5,baz=177,slow=10.0,SNR=20						
BOSA				LR	LR	08 20 07.1	
	comp=Z,1μm,19.6s,MS4.3,baz=175,slow=33						
LBTB	**Lobatse**	**27.52**	**358**	*e*P	**P**	**08 12 54.1**	**-0.9**
	79nm,2.0s,mb5.0						
LBTB	**Lobatse**	**27.52**	**358**	P	**P**	**08 12 54.1**	**-0.9**
	7.0nm,0.9s,mb4.3,baz=186,slow=11,SNR=6.8						
LBTB				LR	LR	08 22 23.3	
	comp=Z,981nm,18.7s,MS4.4,baz=205,slow=33						
TSUM	**Tsumeb**	**34.00**	**345**	*e*P	**P**	**08 13 52.6**	**+0.4**
	20nm,0.7s,mb5.2						
LSZ	**Lusaka**	**37.23**	**3**	*e*P	**P**	**08 14 20.2**	**+0.2**
	2.3nm,0.7s,mb4.1						
QSPA	**South Pole Qui**	**37.66**	**180**	P	**P**	**08 14 23.3**	**+0.2**
	18nm,0.8s,mb4.8,baz=247,slow=3.8,SNR=77						
QSPA				LR	LR	08 28 52.9	
	comp=Z,776nm,20.2s,MS4.5,baz=66,slow=35						
SBA	**Scott Base**	**47.59**	**169**	*e*P	**P**	**08 15 44.9**	**+1.2**
	67nm,2.1s,mb5.3						
USHA	**Ushuaia**	**51.95**	**227**	LR	LR	08 32 50.2	
	comp=Z,537nm,21.2s,MS4.5,baz=111,slow=30						
TRQA	**Tornquist**	**60.00**	**246**	*e*P	**P**	**08 17 15.1**	**0.0**
	33nm,1.3s,mb5.2						
PLCA	**Paso Flores**	**62.69**	**238**	*e*P	**P**	**08 17 33.7**	**+0.5**
	7.6nm,1.0s,mb4.8						
PLCA	**Paso Flores**	**62.69**	**238**	P	**P**	**08 17 32.3**	**-0.8**
	8.4nm,1.2s,mb4.8,baz=158,slow=8.0,SNR=5.0						
PLCA				LR	LR	08 39 06.4	
	comp=Z,150nm,20.9s,MS4.1,baz=336,slow=31						
DBIC	**Dimbokro**	**64.72**	**325**	P	**P**	**08 17 46.4**	**-0.4**
	7.5nm,0.8s,mb4.8,baz=156,slow=9.8,SNR=9.3						
DBIC				LR	LR	08 42 27.2	
	comp=Z,155nm,18.6s,MS4.2,baz=77,slow=33						
NWAO	**Narrogin (SRO)**	**65.11**	**112**	LR	LR	08 38 11.5	
	comp=Z,135nm,21.5s,MS4.1,baz=66,slow=29						
CPUP	**Villa Florida**	**65.83**	**258**	*e*P	**P**	**08 17 53.5**	**-0.4**
	33nm,0.6s,mb5.5						
CPUP	**Villa Florida**	**65.83**	**258**	P	**P**	**08 17 53.6**	**-0.4**
	5.6nm,0.6s,mb4.8,baz=112,slow=5.8,SNR=22						
CPUP				LR	LR	08 41 33.9	
	comp=Z,116nm,18.5s,MS4.1,baz=153,slow=31						
KLBR	**Kellerberrin**	**66.39**	**111**	*e*P	**P**	**08 17 56.5**	**-1.0**
	9.7nm,0.8s,mb4.9						
CFAA	**Coronel Fontan**	**68.22**	**246**	LR	LR	08 43 15.2	
	comp=Z,14nm,20.9s,baz=139,slow=32						
LCO	**Las Campanas**	**71.57**	**246**	*e*P	**P**	**08 18 29.2**	**-0.5**
	14nm,1.0s,mb4.8						
FORT	**Forrest**	**72.72**	**118**	*e*P	**P**	**08 18 36.5**	**-0.1**
	15nm,0.8s,mb5.0						
FORT	**Forrest**	**72.72**	**118**	*e*P	**P**	**08 18 36.6**	**0.0**
	16nm,0.7s,mb5.0						
BBOO	**Buckleboo**	**75.28**	**125**	*e*P	**P**	**08 18 51.2**	**-0.3**
	9.2nm,0.6s,mb4.9						
BBOO	**Buckleboo**	**75.28**	**125**	*e*P	**P**	**08 18 51.5**	**-0.1**
	348nm,2.1s,mb5.9						
MBWA	**Marble Bar**	**75.47**	**106**	*e*P	**P**	**08 18 51.4**	**-1.4**
	7.1nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**78.75**	**128**	⇑*i*P	**P**	**08 19 10.8**	**-0.3**
	10nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**78.75**	**128**	*e*P	**P**	**08 19 11.0**	**-0.1**
	2.5nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**78.75**	**128**	P	**P**	**08 19 11.0**	**-0.1**
	12nm,0.8s,mb4.9,baz=227,slow=4.7,SNR=23						
RPZ	**Rata Peaks**	**79.38**	**155**	LR	LR	08 56 20.4	
	comp=Z,191nm,19.1s,MS4.5,baz=13,slow=37						
YNG	**Young**	**79.84**	**135**	*e*P	**P**	**08 19 18.0**	**+1.0**
	5.9nm,0.7s,mb4.6						
LPAZ	**La Paz**	**79.94**	**256**	LR	LR	08 49 39.0	
	comp=Z,134nm,21.4s,MS4.3,baz=275,slow=32						
CMSA	**Cobar Meteorol**	**80.96**	**131**	*e*P	**P**	**08 19 23.1**	**0.0**
FITZ	**Fitzroy Crossi**	**81.30**	**108**	⇑*i*P	**P**	**08 19 24.5**	**-0.5**
	12nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**81.30**	**108**	*e*P	**P**	**08 19 24.3**	**-0.8**
	7.1nm,0.8s,mb4.7						
FITZ	**Fitzroy Crossi**	**81.30**	**108**	LR	LR	08 49 51.3	
	comp=Z,62nm,19.3s,MS4.0,baz=7.0,slow=32						
ASAR	**Alice Springs**	**81.51**	**118**	P	**P**	**08 19 25.8**	**-0.3**
	16nm,0.7s,mb5.0,baz=210,slow=4.7,SNR=112						
PSI	**Prapat**	**81.69**	**74**	P	**P**	**08 19 27.7**	**+0.6**
	2.6nm,0.4s,mb4.6,baz=177,slow=17,SNR=4.6						
ARMA	**Armidale**	**84.57**	**135**	*e*P	**P**	**08 19 42.8**	**+1.0**
	16nm,1.3s,mb5.0						
WRA	**Warramunga Arr**	**84.75**	**116**	P	**P**	**08 19 42.4**	**-0.5**
	13nm,0.8s,mb5.1,baz=211,slow=3.9,SNR=85						
URZ	**Urewera**	**86.03**	**157**	LR	LR	08 54 39.8	
	comp=Z,294nm,19.2s,MS4.7,baz=115,slow=33						
KEST	**Kesra**	**89.17**	**346**	LR	LR	09 01 45.9	
	comp=Z,143nm,19.0s,MS4.4,baz=155,slow=37						
BRTR	**Keskin Array B**	**92.13**	**6**	P	**P**	**08 20 18.2**	**+0.8**
	0.6nm,0.8s,mb4.0,baz=143,slow=0.6,SNR=3.9						
BRTR				LR	LR	09 05 24.4	
	comp=Z,79nm,18.5s,MS4.2,baz=360,slow=38						
CMAR	**Chiang Mai Arr**	**94.33**	**65**	P	**P**	**08 20 28.4**	**+0.2**
	0.5nm,0.4s,mb4.3,baz=221,slow=5.9,SNR=5.3						
CMAR				LR	LR	08 54 47.3	
	comp=Z,57nm,21.4s,MS4.0,baz=200,slow=30						
KIS	**Kishinev**	**99.20**	**2**	LRM		08 19 40.0	
	300nm,20.0s						
KMI	**Kunming**	**101.76**	**64**	P	Pdif	08 21 04.3	+2.6
KMI				PP	PP	08 25 18.3	+5.8
KMI				S	Sdif	08 32 43.0	-0.3
KMI				sS		08 32 48.3	
KMI				SS	SS	08 39 50.5	+4.2
KMI				pmax	pmax		
	comp=Z,59nm,7.7s						
KMI				LR	LR		
	comp=N,150nm,17.4s,MS4.7						
KMI				LR	LR		
	comp=E,100nm,13.2s,MS4.7						
KMI				LR	LR		
	comp=Z,68nm,17.8s,MS4.2						
RKT	**Rikitea**	**102.90**	**198**	*e*Sdif	Sdif	08 32 54.8	+2.0
	comp=Z,398nm,37.2s						
RKT				*e*LR	LR	08 54 51.7	
	comp=Z,296nm,30.5s						
GYA	**Guiyang**	**104.99**	**66**	*e*Pdif	Pdif	08 21 17.8	+1.8
GYA				PKP	PKiKP	08 25 30.0	-0.5
GYA				PP	PP	08 25 42.5	+5.9
GYA				SS	SS	08 40 34.3	+3.6
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
GYA				LR	LR		
	comp=N,150nm,20.4s,MS4.6						
GYA				LR	LR		
	comp=E,130nm,22.5s,MS4.6						
GYA				LR	LR		
	comp=Z,170nm,21.4s,MS4.6						
PPT	**Papeete**	**110.08**	**184**	*e*SP	SP	08 35 31.6	-9.2
	comp=Z,91nm,22.2s						
PPT				*e*LR	LR	08 58 06.6	
	comp=Z,275nm,22.8s						
LZH	**Lanzhou**	**110.92**	**58**	*e*PKP	PKiKP	08 25 42.0	+0.7
LZH				sPKP		08 25 46.5	
LZH				LR	LR		
	comp=E,160nm,18.2s						
LZH				LR	LR		
	comp=Z,200nm,20.3s,MS4.7						
NJ2	**Nanjing**	**116.14**	**71**	*e*PKP	PKPdf	08 25 48.5	-2.9
HHC	**Hu-ho-hao-te**	**118.50**	**59**	*e*PKP	PKPdf	08 25 53.5	-2.1
HHC				PP	PP	08 27 16.8	+3.5
HHC				PKS		08 29 28.5	
HHC				SKKS	SKKSac	08 34 04.8	-7.9
HHC				SS	SS	08 43 29.8	-0.7
HHC				AMB	AMB		
	comp=E,61nm,7.1s						
HHC				LR	LR		
	comp=N,120nm,14.3s,MS4.8						
HHC				LR	LR		
	comp=E,93nm,14.3s,MS4.8						
HHC				LR	LR		
	comp=Z,94nm,13.3s,MS4.6						
BJI	**Beijing**	**120.39**	**63**	PKP	PKPdf	08 26 00.0	+0.7
BJI				SS	SS	08 43 58.8	+3.9
BJI				LR	LR		
	comp=N,820nm,11.1s						
BJI				LR	LR		
	comp=E,890nm,10.9s						
BJI				LR	LR		
	comp=Z,140nm,21.8s						
SONM	**Songino Array**	**120.93**	**51**	PKP	PKPdf	08 25 59.0	-1.0
	comp=Z,0.7nm,0.7s,baz=213,slow=3.1,SNR=4.3						
ARCES	**ARCESS Array B**	**121.79**	**360**	PKP	PKPdf	08 26 00.6	-0.5
	comp=Z,1.9nm,0.8s,baz=202,slow=2.6,SNR=4.7						
SCHQ	**Schefferville**	**131.75**	**309**	PKP	PKPdf	08 26 20.6	+0.1
	comp=Z,1.7nm,0.8s,baz=37,slow=5.2,SNR=3.2						
TXAR	**Lajitas Array**	**136.81**	**258**	PKhKP	PKPpre	08 26 26.4	
	comp=Z,0.3nm,0.7s,baz=158,slow=1.0,SNR=3.0						
TXAR				PKP	PKPdf	08 26 31.1	+0.3
	comp=Z,0.8nm,0.9s,baz=142,slow=4.5,SNR=8.3						
Y17A	**Roosevelt**	**144.19**	**255**	⇓PKPdf	PKPdf	08 26 43.2	-0.8
	baz=144						
X18A	**Snowflake**	**144.24**	**257**	⇓PKPdf	PKPdf	08 26 43.3	-0.8
	baz=144						
W19A	**Sanders**	**144.31**	**259**	⇓PKPdf	PKPdf	08 26 43.0	-1.1
	baz=144						
O25A	**Wiggins**	**144.33**	**270**	⇑PKPdf	PKPdf	08 26 43.1	-0.9
	baz=144						
P24A	**Kohler Place,**	**144.44**	**268**	⇓PKPdf	PKPdf	08 26 42.8	-1.5
	baz=145						
S22A	**4UR Ranch, Cre**	**144.50**	**264**	⇑PKPdf	PKPdf	08 26 43.7	-0.7
	baz=145						
V19A	**Window Rock**	**144.51**	**260**	⇑PKPdf	PKPdf	08 26 43.5	-1.0
	baz=145						
Q23A	**Hartsel**	**144.63**	**267**	⇓PKPdf	PKPdf	08 26 43.8	-0.9
	baz=145						
U20A	**Newcomb**	**144.63**	**261**	⇓PKPdf	PKPdf	08 26 43.7	-1.0
	baz=145						
114A	**Black Gap (USA**	**144.71**	**252**	⇓PKPdf	PKPdf	08 26 43.9	-1.1
	baz=145						
R22A	**Saguache, Gunn**	**144.77**	**265**	⇓PKPdf	PKPdf	08 26 44.7	-0.1
	baz=145						
O24A	**Longmont**	**144.92**	**269**	⇓PKPdf	PKPdf	08 26 45.1	0.0
	baz=145						
U19A	**Dine' College,**	**144.99**	**260**	⇑PKPdf	PKPdf	08 26 44.9	-0.5
	baz=145						
S21A	**Coal Bank Pass**	**145.03**	**263**	⇑PKPdf	PKPdf	08 26 45.7	+0.3
	baz=145						
V18A	**Ganado**	**145.04**	**259**	⇓PKPdf	PKPdf	08 26 45.4	0.0
	baz=145						
X16A	**Lo Mia Camp, P**	**145.05**	**256**	⇓PKPdf	PKPdf	08 26 45.5	0.0
	baz=145						
ISCO	**Idaho Springs**	**145.05**	**268**	*e*PKPdf	PKPdf	08 26 45.0	-0.4
W17A	**Winslow**	**145.07**	**257**	⇓PKPdf	PKPdf	08 26 45.5	0.0
	baz=145						
MVCO	**Mesa Verde**	**145.17**	**262**	*e*PKPdf	PKPdf	08 26 45.0	-0.6
Z14A	**Wintersburg**	**145.19**	**253**	⇑PKPdf	PKPdf	08 26 45.6	-0.1
	baz=145						
N24A	**Carr**	**145.22**	**270**	⇓PKPdf	PKPdf	08 26 45.8	+0.3
	baz=145						
113A	**Mohawk Valley,**	**145.24**	**251**	⇑PKPdf	PKPdf	08 26 45.9	0.0
	baz=145						
T19A	**Beclabito**	**145.24**	**261**	⇓PKPdf	PKPdf	08 26 45.9	+0.1
	baz=145						
Y15A	**Casa Rosa Ranc**	**145.25**	**254**	⇑PKPdf	PKPdf	08 26 46.0	+0.2
	baz=145						
Q22A	**Crested Butte,**	**145.26**	**266**	⇓PKPdf	PKPdf	08 26 46.4	+0.7
	baz=145						
R21A	**Cimarron**	**145.34**	**264**	⇓PKPdf	PKPdf	08 26 46.3	+0.5
	baz=146						
U18A	**Rough Rock, Ch**	**145.48**	**260**	⇓PKPdf	PKPdf	08 26 46.7	+0.5
	baz=146						
O23A	**Lake Granby, G**	**145.49**	**268**	⇓PKPdf	PKPdf	08 26 46.7	+0.7
	baz=146						
Z13A	**Yuma Proving G**	**145.49**	**252**	⇑PKPdf	PKPdf	08 26 46.7	+0.4
	baz=146						
V17A	**Tonalea, Kykot**	**145.49**	**258**	⇓PKPdf	PKPdf	08 26 46.9	+0.7
	baz=146						
SMCO	**Snowmass**	**145.50**	**266**	*e*PKPdf	PKPdf	08 26 46.6	+0.5
112A	**Yuma**	**145.54**	**250**	⇑PKPdf	PKPdf	08 26 46.6	+0.2
	baz=146						
M24A	**Cheyenne**	**145.56**	**271**	⇑PKPdf	PKPdf	08 26 47.0	+0.9
	baz=146						
W16A	**Flagstaff**	**145.57**	**256**	⇓PKPdf	PKPdf	08 26 47.4	+1.0
	baz=146						
P22A	**Eagle**	**145.62**	**267**	⇑PKPdf	PKPdf	08 26 47.3	+1.0
	baz=146						
Q21A	**Lamborn Mesa,**	**145.65**	**265**	⇓PKPdf	PKPdf	08 26 47.3	+1.0
	baz=146						
R20A	**Redvale**	**145.73**	**264**	⇓PKPdf	PKPdf	08 26 47.5	+1.0
	baz=146						
WUAZ	**Wupatki**	**145.77**	**257**	*e*PKPdf	PKPdf	08 26 47.9	+1.2
PV01	**Paradox Valley**	**145.81**	**263**	*e*PKPdf	PKPdf	08 26 48.3	+1.7
O22A	**Kremmling**	**145.84**	**268**	⇓PKPdf	PKPdf	08 26 47.6	+0.9
	baz=146						
PHWY	**Pilot Hill**	**145.85**	**270**	*e*PKPdf	PKPdf	08 26 48.2	+1.6
S19A	**Harvey Farm, M**	**145.90**	**262**	⇓PKPdf	PKPdf	08 26 47.6	+0.7
	baz=146						
N23A	**Red Feather La**	**145.91**	**269**	⇑PKPdf	PKPdf	08 26 48.0	+1.2
	baz=146						
X14A	**Yava**	**145.94**	**254**	⇑PKPdf	PKPdf	08 26 48.1	+1.1
	baz=146						
T18A	**Mexican Hat**	**145.95**	**261**	⇑PKPdf	PKPdf	08 26 47.8	+0.8
	baz=146						
L24A	**Wheatland**	**145.96**	**272**	⇑PKPdf	PKPdf	08 26 48.3	+1.5
	baz=146						
P21A	**Newcastle**	**146.00**	**266**	⇑PKPdf	PKPdf	08 26 48.6	+1.6
	baz=146						
Y13A	**Salome**	**146.03**	**252**	⇑PKPdf	PKPdf	08 26 48.0	+0.9
	baz=146						
U16A	**Tuba City**	**146.05**	**258**	⇑PKPdf	PKPdf	08 26 48.1	+1.0
	baz=146						
GLA	**Glamis**	**146.05**	**250**	⇑PKPdf	PKPdf	08 26 48.1	+0.8
	baz=146						
W15A	**Williams**	**146.06**	**256**	⇓PKPdf	PKPdf	08 26 48.1	+0.9
	baz=146						
Q20A	**Ridgley Place,**	**146.16**	**265**	⇓PKPdf	PKPdf	08 26 48.6	+1.4
	baz=146						
N22A	**Wattenberg Ran**	**146.17**	**269**	⇑PKPdf	PKPdf	08 26 48.5	+1.3
	baz=146						
PV04	**Paradox Valley**	**146.18**	**263**	*e*PKPdf	PKPdf	08 26 49.1	+1.8
PV10	**Paradox Valley**	**146.25**	**263**	*e*PKPdf	PKPdf	08 26 48.6	+1.2
R19A	**Curley Farm, L**	**146.33**	**263**	⇑PKPdf	PKPdf	08 26 48.8	+1.3
	baz=146						
Y12C	**Blythe**	**146.38**	**252**	⇓PKPdf	PKPdf	08 26 49.1	+1.3
	baz=146						
RSSD	**Black Hills**	**146.57**	**276**	*e*PKPdf	PKPdf	08 26 48.8	+1.0
SRU	**San Rafael**	**147.61**	**263**	*e*PKPdf	PKPdf	08 26 50.6	+0.9
TMUT	**Trail Mountain**	**148.14**	**263**	*e*PKPbc	PKPbc	08 26 53.6	-0.2
MSU	**Marysvale**	**148.23**	**260**	*e*PKPbc	PKPbc	08 26 54.4	+0.3
CCUT	**Cedar City**	**148.32**	**258**	*e*PKPdf	PKPdf	08 26 52.5	+1.6
ARUT	**Antelope Range**	**148.52**	**258**	*e*PKPbc	PKPbc	08 26 56.0	+1.2
SHPR	**Sheep Range**	**148.68**	**255**	*e*PKPbc	PKPbc	08 26 55.0	-0.3
GSC	**Goldstone**	**148.81**	**251**	*e*PKPdf	PKPdf	08 26 53.5	+1.8
MPU	**Maple Canyon**	**148.84**	**263**	*e*PKPdf	PKPdf	08 26 52.4	+0.8
DAU	**Daniels Canyon**	**148.86**	**264**	*e*PKPbc	PKPbc	08 26 56.0	+0.4
NLU	**North Lily Min**	**149.08**	**263**	*e*PKPdf	PKPdf	08 26 53.9	+1.8
JLU	**Jordanelle**	**149.09**	**264**	*e*PKPbc	PKPbc	08 26 56.0	-0.2
PDAR	**Pinedale Array**	**149.19**	**269**	PKP	PKPdf	08 26 50.9	-1.3
	comp=Z,1.8nm,0.8s,baz=162,slow=3.6						
PDAR				PKPbc	PKPbc	08 26 55.3	-1.1
	comp=Z,1.9nm,0.8s,baz=122,slow=3.2,SNR=7.9						
LAO	**LASA Array**	**149.20**	**278**	*e*PKPbc	PKPbc	08 26 56.6	+0.3
DUG	**Dugway**	**149.67**	**262**	*e*PKPdf	PKPdf	08 26 54.3	+1.4
HWUT	**Hardware Ranch**	**149.76**	**266**	*e*PKPbc	PKPbc	08 26 56.7	-1.1
ISA	**Isabella**	**150.02**	**250**	*e*PKPbc	PKPbc	08 26 58.8	+0.1
RLMT	**Red Lodge**	**150.28**	**273**	*e*PKPdf	PKPdf	08 26 55.2	+1.5
LOHW	**Long Hollow**	**150.30**	**270**	*e*PKPdf	PKPdf	08 26 54.2	+0.3
LOHW				*e*PKPbc	PKPbc	08 27 00.1	+1.0
SNOW	**Snow King Moun**	**150.31**	**270**	*e*PKPdf	PKPdf	08 26 54.8	+0.9
SNOW				*e*PKPbc	PKPbc	08 27 00.1	+1.1
TPAW	**Teton Pass**	**150.44**	**269**	*e*PKPbc	PKPbc	08 26 58.6	-0.8
MOOW	**Moose Ponds**	**150.46**	**270**	*e*PKPdf	PKPdf	08 26 53.6	-0.5
MOOW				*e*PKPbc	PKPbc	08 27 00.1	+0.7
DCID1	**Drake Creek**	**150.64**	**269**	*e*PKPbc	PKPbc	08 26 60.0	+0.1
IMW	**Indian Meadow**	**150.66**	**270**	*e*PKPbc	PKPbc	08 27 00.7	+0.8
GCMT	**Greycliff**	**150.85**	**274**	*e*PKPbc	PKPbc	08 26 59.7	-0.6
PETK	**Petropavlovsk-**	**151.03**	**69**	PKPbc	PKPbc	08 27 01.0	+0.5
	comp=Z,1.9nm,0.7s,baz=188,slow=9.0,SNR=4.1						
NVAR	**Mina Array Bea**	**151.82**	**254**	PKP	PKPdf	08 26 57.3	+1.0
NVAR				PKPbc	PKPbc	08 27 02.9	+0.1
NVAR	**Mina Array Bea**	**151.82**	**254**	PKP	PKPdf	08 26 57.3	+1.0
	comp=Z,2.7nm,0.8s,baz=153,slow=2.9,SNR=19						
NVAR				PKPbc	PKPbc	08 27 02.9	+0.1
	comp=Z,3.5nm,0.7s,baz=154,slow=3.6,SNR=16						
DLMT	**Dillon**	**152.43**	**271**	*e*PKPbc	PKPbc	08 27 04.9	+1.0
LRM	**Limekiln Ridge**	**152.57**	**272**	*e*PKPbc	PKPbc	08 27 05.0	+0.8
ILAR	**Eielson Array**	**167.28**	**347**	PKP	PKPdf	08 27 10.3	-2.8
	comp=Z,0.3nm,1.0s,baz=299,slow=1.9,SNR=3.0						
ILAR				PKPab	PKPab	08 28 18.9	+0.9
	comp=Z,0.7nm,0.9s,baz=353,slow=4.6,SNR=6.7						

*IDC **26** 08:09:44.3±1.4,54°.41N×86°.83E,h0km,mb3.1/1, mb1 3.6/4,mb1mx3.4/27,mbtmp3.6/4,ML3.7/3,Error ellipse: s-maj=18.2km s-min=13.3km az=144.0*
*NNC **26** 08:09:49.5±3.3,54°.27N×86°.36E,h0km,mb4.2,mpv3.8, Error ellipse: s-maj=26.2km s-min=19.7km az=52.0*
ISC 26 08:09:46.0±1.7,**54°43N**±0°.07×**86°67E**±0°.10,**h3**km±11km, **n10,**σ1§15/14,**4C-5D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**1.19**	**247**	Pg	**Pg**	**08 10 07.4**	**-1.4**
	12nm,0.3s,baz=69,slow=17,SNR=156						
ZALV				Lg		08 10 26.2	
	6.7nm,0.3s,baz=68,slow=16,SNR=7.7						
KURK	**Kurchatov**	**6.16**	**236**	⇑Pn	**Pn**	**08 11 18.7**	**+1.0**
	8.5nm,0.7s						
KURK				⇓Sn	**Sn**	**08 12 27.7**	**-0.8**
	5.9nm,0.7s						
KURK				⇑Lg		08 12 56.8	
	36nm,1.0s						
KURK	**Kurchatov**	**6.16**	**236**	Pn	**Pn**	**08 11 18.7**	**+1.0**
	1.1nm,0.3s,baz=55,slow=15,SNR=61						
KURK				Lg		08 13 08.7	
	0.2nm,0.3s,baz=138,slow=18,SNR=7.2						
MK31	**Makanchi Array**	**8.13**	**202**	⇓Pn	**Pn**	**08 11 44.9**	**0.0**
	1.8nm,0.5s,baz=27,slow=13,SNR=61						
MK31				⇑Sn	**Sn**	**08 13 18.5**	**+1.4**
	2.9nm,0.8s,baz=30,slow=27,SNR=6.2						
MK31				⇑Lg		08 14 00.6	
	12nm,0.8s,baz=25,slow=32,SNR=5.1						
MKAR	**Makanchi Array**	**8.13**	**202**	Pn	**Pn**	**08 11 45.0**	**+0.2**
	1.7nm,0.3s,baz=25,slow=13,SNR=66						
MKAR				Sn	**Sn**	**08 13 16.0**	**-1.2**
	0.4nm,0.3s,baz=31,slow=28,SNR=7.1						
MKAR				Lg		08 14 02.2	
	0.1nm,0.3s,baz=27,slow=30,SNR=5.6						
VOSK	**Vostochnaya**	**9.49**	**266**	⇓Pn	**Pn**	**08 12 05.4**	**+2.0**
	3.8nm,0.5s						
VOSK				⇓Sn	**Sn**	**08 13 50.4**	**-0.1**
	8.9nm,0.7s						
BVAR	**Borovoye Array**	**9.76**	**268**	Pn	**Pn**	**08 12 09.2**	**+2.2**
	1.2nm,0.3s,baz=70,slow=15,SNR=12						
BVAR				Sn	**Sn**	**08 13 55.8**	**-1.2**
	0.7nm,0.3s,baz=73,slow=20,SNR=6.5						
SONM	**Songino Array**	**14.00**	**110**	Pn	**Pn**	**08 13 04.7**	**-0.4**
	0.1nm,0.3s,baz=312,slow=8.7,SNR=2.2						
SONM				Lg		08 17 05.5	
	0.1nm,0.3s,baz=289,slow=28,SNR=7.4						
AB31	**Akbulak array**	**17.25**	**264**	⇓Lg		08 26 04.7	
	2.0nm,0.8s,baz=3.9,slow=27						
ILAR	**Eielson Array**	**54.24**	**25**	P	**P**	**08 19 11.2**	**-1.1**
	0.2nm,0.6s,baz=331,slow=6.5,SNR=4.4						

*BJI **26** 08:23:01.1,25°.32S×179°.65E,h476km,

4.9nm,0.6s,mb4.0,baz=131,slow=7.4,SNR=20
QSPA South Pole Qui 64.65 180 P **P** **08 32 53.8 +1.9**
QSPA PcP PcP 08 33 21.3 +0.5
QSPA South Pole Qui 64.65 180 P **P** **08 32 53.8 +1.9**
7.0nm,0.6s,mb4.5,baz=6.8,slow=1.1,SNR=85
QSPA PcP PcP 08 33 21.3 +0.5
4.1nm,1.1s,baz=17,slow=3.8,SNR=4.9
MJAR Matsushiro Arr 72.93 326 P **P** **08 33 41.5 -1.1**
1.7nm,0.6s,mb3.7,baz=163,slow=7.4,SNR=4.8
MAW Mawson 76.16 201 P **P** **08 34 01.0 +0.6**
4.3nm,0.5s,mb4.2,baz=133,slow=6.5,SNR=7.2
KSRS Korea Array 79.15 321 P **P** **08 34 16.4 -0.7**
1.4nm,0.6s,mb3.6,baz=134,slow=6.1,SNR=5.2
PETK Petropavlovsk- 80.49 347 P **P** **08 34 22.6 -1.2**
3.4nm,0.7s,mb4.0,baz=123,slow=11,SNR=5.2
NJ2 Nanjing 81.35 312 *eP* **P** **08 34 28.5 -0.2**
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb4.9
SYO Syowa Base 81.42 194 *eP* **P** **08 34 26.0 -2.5**
VNA1 Neumayer--Stat 84.02 177 *eP* **P** **08 34 40.6 -1.0**
VNA1 *e* 08 37 10.9
MURC Murrieta 84.03 49 ⇑P **P** **08 34 41.8 -0.3**
baz=84
BFSC Mount Baldy Ra 84.09 48 ⇓P **P** **08 34 42.2 -0.3**
baz=84
VES Vestal, Richgr 84.10 46 ⇑P **P** **08 34 42.3 -0.3**
baz=84
MONP Monument Peak 84.15 50 ⇓P **P** **08 34 43.2 +0.4**
baz=84
DVTC Desert V Tower 84.24 50 ⇑P **P** **08 34 43.6 +0.3**
baz=84
EDW2 Edwards Air Fo 84.25 47 ⇑P **P** **08 34 42.9 -0.3**
baz=84,SNR=5.0
ISA Isabella 84.39 46 ⇑P **P** **08 34 43.8 -0.2**
baz=84,SNR=7.5
ISA Isabella 84.39 46 *eP* **P** **08 34 43.5 -0.4**
comp=Z,12nm,0.9s,mb4.4
PFO Pinyon Flat Ob 84.54 49 ⇓P **P** **08 34 44.7 0.0**
baz=85
BBRC Big Bear Solar 84.60 48 ⇓P **P** **08 34 44.8 -0.2**
baz=85
CMB Columbia Colle 84.61 43 *eP* **P** **08 34 44.6 -0.3**
comp=Z,2.5nm,0.8s,mb3.9
LRMC Laurel Mountai 84.80 47 ⇓P **P** **08 34 46.0 0.0**
baz=85
BELC Belle Mtn. Jos 85.07 49 ⇓P **P** **08 34 47.2 -0.1**
baz=85,SNR=7.4
BC3 Big Chuckawall 85.25 49 ⇑P **P** **08 34 48.3 +0.1**
baz=85
MPMC Manual Prospec 85.27 46 ⇓P **P** **08 34 48.0 -0.3**
baz=85
GSC Goldstone 85.28 47 ⇑P **P** **08 34 48.0 -0.3**
baz=85,SNR=6.2
GSC Goldstone 85.28 47 *eP* **P** **08 34 48.2 -0.1**
comp=Z,12nm,1.3s,mb4.3
HEC Hector,Ludlow 85.33 48 ⇓P **P** **08 34 48.2 -0.3**
baz=85,SNR=8.5
GLA Glamis 85.34 50 ⇓P **P** **08 34 48.9 +0.2**
baz=85
IRM Iron Mountain 85.74 49 ⇓P **P** **08 34 50.7 +0.2**
baz=86
GMRC Granite Mounta 85.75 48 ⇓P **P** **08 34 50.6 0.0**
baz=86
WCN Washoe City 85.78 43 ⇑P **P** **08 34 50.7 +0.1**
baz=86
GRAC Grapevine Rang 85.90 46 ⇓P **P** **08 34 51.6 +0.3**
baz=86
113A Mohawk Valley, 85.92 51 ⇑P **P** **08 34 51.6 +0.1**
baz=86
Y12C Blythe 85.94 50 ⇑P **P** **08 34 51.6 0.0**
baz=86
214A Organ Pipe Nat 86.15 52 ⇑P **P** **08 34 52.5 0.0**
baz=86
NVAR Mina Array Bea 86.15 44 P **P** **08 34 51.9 -0.5**
comp=Z,4.1nm,0.8s,mb4.1,baz=222,slow=8.3,SNR=29
Z13A Yuma Proving G 86.24 51 ⇑P **P** **08 34 52.9 -0.1**
baz=86
U10A Ash Meadows, A 86.24 47 ⇓P **P** **08 34 52.9 0.0**
baz=86
NEE2 Needles Airpor 86.45 49 ⇓P **P** **08 34 53.9 0.0**
baz=86
Y13A Salome 86.46 50 ⇓P **P** **08 34 54.1 +0.1**
baz=86
V11A Goodsprings 86.51 48 ⇓P **P** **08 34 54.3 +0.1**
baz=87
114A Black Gap (USA 86.54 51 ⇑P **P** **08 34 54.3 -0.1**
baz=87
Z14A Wintersburg 86.83 51 ⇑P **P** **08 34 55.9 +0.2**
baz=87
V12A Nelson 86.83 48 ⇑P **P** **08 34 55.7 0.0**
baz=87
S10A Tonopah Range, 86.94 45 ⇓P **P** **08 34 56.1 -0.1**
baz=87
SHPR Sheep Range 87.06 47 *eP* **P** **08 34 57.0 +0.2**
comp=Z,0.9nm,1.0s,mb3.5
216A Three Points, 87.15 53 ⇑P **P** **08 34 58.0 +0.7**
baz=87,SNR=5.1
GYA Guiyang 87.16 301 *eP* **P** **08 34 58.5 +1.0**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
K05A Summer Lake 87.22 40 ⇑P **P** **08 34 57.8 +0.4**
baz=87
116A Eloy 87.27 52 ⇑P **P** **08 34 58.3 +0.4**
baz=87
S11A Rachel 87.33 46 ⇓P **P** **08 34 57.8 -0.2**
baz=87
R10A Warm Springs 87.34 45 ⇓P **P** **08 34 58.1 0.0**
baz=87
U12A Valley of Fire 87.44 47 ⇓P **P** **08 34 58.8 +0.3**
baz=88
X14A Yava 87.47 50 ⇑P **P** **08 34 59.0 +0.3**
baz=88
V13A Grand Canyon W 87.48 48 ⇑P **P** **08 34 59.1 +0.4**
baz=88
217A Green Valley 87.49 53 ⇓P **P** **08 34 59.4 +0.6**
baz=88,SNR=8.1
PLCA Paso Flores 87.50 134 P **P** **08 34 58.0 -0.9**
comp=Z,3.0nm,1.0s,mb4.0,baz=170,slow=6.3,SNR=2.9
Y15A Casa Rosa Ranc 87.58 51 ⇑P **P** **08 34 59.4 +0.1**
baz=88,SNR=5.2
H04A Detroit Lake 87.73 37 ⇑P **P** **08 34 59.3 -0.3**
baz=88
W14A Seligman 87.74 49 ⇑P **P** **08 35 00.4 +0.4**
baz=88
TUC Tucson 87.79 53 *eP* **P** **08 35 00.9 +0.6**
comp=Z,7.0nm,0.9s,mb4.4
U13A Pakoon Wash 87.81 48 ⇓P **P** **08 35 00.9 +0.7**
baz=88
R11A Troy Canyon, C 87.84 45 ⇑P **P** **08 35 00.2 -0.2**
baz=88
BJI Beijing 87.85 317 P **P** **08 35 01.0 +0.6**
BJI S S 08 45 04.5 +2.6
BJI SS SS 08 51 06.8 +2.9
BJI pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
S12A Delamar Landin 87.89 46 ⇑P **P** **08 35 01.1 +0.4**
baz=88
G04A Mulino 87.90 37 ⇑P **P** **08 35 01.1 +0.6**
baz=88
318A Bisbee 87.91 54 ⇓P **P** **08 35 01.6 +0.8**
baz=88,SNR=10
V14A Boquillas Ranc 87.96 49 ⇑P **P** **08 35 01.4 +0.4**
baz=88,SNR=7.8
117A Oracle 87.96 52 ⇑P **P** **08 35 01.6 +0.5**
baz=88,SNR=5.7
Q11A Duckwater 88.08 45 ⇑P **P** **08 35 01.6 +0.1**
baz=88
218A Dragoon 88.15 53 ⇓P **P** **08 35 02.8 +0.8**
baz=88,SNR=11
T13A Saint George 88.19 47 ⇓P **P** **08 35 02.1 +0.1**
baz=88
E03A Lebam 88.19 35 ⇓P **P** **08 35 02.1 +0.3**
baz=88
U14A Mt Trumbull 88.34 48 ⇑P **P** **08 35 03.2 +0.4**
baz=88,SNR=9.6
WVOR Wild Horse Val 88.36 41 *eP* **P** **08 35 02.4 -0.3**
comp=Z,8.6nm,1.0s,mb4.4
319A Douglas 88.40 54 ⇑P **P** **08 35 03.9 +0.7**
baz=88,SNR=6.9
F04A Amboy 88.40 36 ⇑P **P** **08 35 02.8 0.0**
baz=88
X16A Lo Mia Camp, P 88.45 51 ⇑P **P** **08 35 03.5 +0.2**
baz=88,SNR=10
R12A Pony Springs, 88.46 46 ⇓P **P** **08 35 03.7 +0.5**
baz=88
Y17A Roosevelt 88.48 51 ⇑P **P** **08 35 03.9 +0.4**
baz=88
S13A Holt Ranch, En 88.53 47 ⇑P **P** **08 35 03.5 -0.1**
baz=89,SNR=6.0
118A Homack Ranch, 88.55 53 ⇓P **P** **08 35 04.4 +0.6**
baz=89,SNR=5.5
V15A Kaibab Nationa 88.69 49 ⇑P **P** **08 35 05.0 +0.5**
baz=89,SNR=5.6
Q12A Willow Creek R 88.72 45 ⇓P **P** **08 35 04.4 -0.1**
baz=89
219A White Tail Can 88.73 54 ⇓P **P** **08 35 05.3 +0.5**
baz=89
W16A Flagstaff 88.75 50 ⇓P **P** **08 35 04.8 +0.1**
baz=89,SNR=5.2
T14A Hurricane 88.76 48 ⇑P **P** **08 35 05.0 +0.3**
baz=89
R13A O'Grain Ranch, 88.79 46 ⇓P **P** **08 35 05.1 +0.3**
baz=89
X17A Forest Lakes 88.85 51 ⇓P **P** **08 35 05.6 +0.5**
baz=89
I07A Izee 88.85 39 ⇑P **P** **08 35 04.8 -0.1**
baz=89,SNR=11
P12A McGill 88.91 45 ⇓P **P** **08 35 05.5 +0.1**
baz=89
320A Kipp Ranch, An 88.93 54 ⇑P **P** **08 35 06.4 +0.7**
baz=89,SNR=8.5
G06A Carlson Farm, 88.93 38 ⇑P **P** **08 35 05.1 -0.2**
baz=89,SNR=5.8
U15A North Rim 88.94 48 ⇑P **P** **08 35 05.9 +0.4**
baz=89,SNR=14
J08A Circle Bar Ran 89.01 40 ⇓P **P** **08 35 05.3 -0.4**
baz=89,SNR=9.7
WUAZ Wupatki 89.08 50 ⇓P **P** **08 35 06.5 +0.2**
baz=89
S14A Cedar City 89.08 47 ⇓P **P** **08 35 06.6 +0.4**
baz=89
119A Ashpeak Ranch, 89.10 53 ⇓P **P** **08 35 06.6 +0.2**
baz=89
Y18A Canyon Day Jun 89.10 52 ⇑P **P** **08 35 06.9 +0.5**
baz=89,SNR=14
T15A Red Dirt Ranch 89.20 48 ⇑P **P** **08 35 06.9 +0.1**
baz=89,SNR=8.5
220A Playas Peak, P 89.22 54 ⇑P **P** **08 35 07.2 +0.3**
baz=89
LON Longmire 89.25 36 *eP* **P** **08 35 05.9 -0.8**
comp=Z,2.8nm,0.7s,mb4.2
D05A Enumclaw 89.43 36 ⇓P **P** **08 35 08.3 +0.7**
baz=90
O12A Currie 89.47 44 ⇓P **P** **08 35 08.0 +0.1**
baz=90
120A U Bar Ranch, L 89.47 53 ⇓P **P** **08 35 08.2 +0.1**
baz=90
P13A Bates Ranch, G 89.47 45 ⇓P **P** **08 35 08.1 +0.1**
baz=90,SNR=8.0
V17A Tonalea, Kykot 89.54 50 ⇑P **P** **08 35 08.3 0.0**
baz=90,SNR=6.7
X18A Snowflake 89.55 51 ⇓P **P** **08 35 08.6 +0.2**
baz=90
S15A Panguitch 89.57 47 ⇑P **P** **08 35 08.9 +0.5**
baz=90,SNR=5.7
U16A Tuba City 89.58 49 ⇓P **P** **08 35 08.6 +0.1**
baz=90,SNR=7.6
KMI Kunming 89.60 298 P **P** **08 35 09.0 +0.1**
KMI pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
Q14A Sevier Lake (B 89.69 46 ⇓P **P** **08 35 08.9 -0.1**
baz=90,SNR=12
Y19A Nutrioso 89.75 52 ⇑P **P** **08 35 09.7 +0.3**
baz=90,SNR=9.1
T16A Glen Canyon Da 89.78 48 ⇓P **P** **08 35 09.6 +0.2**
baz=90
Z20A Nine Sixteen R 89.79 53 ⇑P **P** **08 35 10.1 +0.6**
baz=90
221A Mesquite Ranch 89.82 54 ⇓P **P** **08 35 10.1 +0.3**
baz=90
O13A Hicks Ranch, I 89.87 45 ⇓P **P** **08 35 10.1 +0.3**
baz=90
G08A Pilot Rock 89.90 38 ⇑P **P** **08 35 10.5 +0.7**
baz=90,SNR=7.2
R15A Junction 89.92 47 ⇓P **P** **08 35 10.4 +0.3**
baz=90
X19A St. Johns 89.96 51 ⇓P **P** **08 35 10.4 +0.1**
baz=90
121A Cookes Peak, D 90.08 54 ⇑P **P** **08 35 10.7 -0.2**
baz=90
S16A Weppner Ranch, 90.11 48 ⇓P **P** **08 35 10.9 -0.1**
baz=90
E07A Sunnyside 90.18 37 ⇑P **P** **08 35 11.3 +0.3**
baz=90
W19A Sanders 90.25 51 ⇓P **P** **08 35 11.9 +0.3**
baz=90
T17A Navajo Res., N 90.26 49 ⇓P **P** **08 35 12.2 +0.5**
baz=90
Q15A Fillmore 90.28 46 ⇑P **P** **08 35 11.8 +0.1**
baz=90
Y20A Horse Springs, 90.35 52 ⇑P **P** **08 35 12.7 +0.6**
baz=90,SNR=7.4
R16A Teasdale 90.49 47 ⇑P **P** **08 35 12.9 +0.2**
baz=90,SNR=6.4
X20A Quemado 90.58 52 ⇑P **P** **08 35 13.4 +0.2**
baz=91,SNR=7.2
U18A Rough Rock, Ch 90.59 50 ⇓P **P** **08 35 12.7 -0.5**
baz=91
S17A Black Ridge (B 90.60 48 ⇓P **P** **08 35 13.3 +0.1**
baz=91
MFID Camas Ranch 90.60 41 ⇓P **P** **08 35 12.9 -0.2**
baz=91
DUG Dugway 90.65 45 ⇓P **P** **08 35 13.4 0.0**
baz=91
V19A Window Rock 90.80 50 ⇓P **P** **08 35 14.6 +0.4**
baz=91
W20A Ramah 90.88 51 ⇑P **P** **08 35 14.7 +0.1**
baz=91,SNR=5.8
Y21A Point of Rocks 90.90 53 ⇓P **P** **08 35 15.2 +0.5**
baz=91
O15A The Old Anders 90.92 45 ⇑P **P** **08 35 14.9 +0.3**
baz=91
T18A Mexican Hat 90.96 49 ⇑P **P** **08 35 15.0 +0.1**
baz=91,SNR=7.7
U19A Dine' College, 90.98 50 ⇑P **P** **08 35 15.0 0.0**
baz=91,SNR=5.0
D08A Wollman Farm, 90.99 37 ⇑P **P** **08 35 14.9 +0.1**
baz=91
Q16A Castle Valley 91.03 47 ⇓P **P** **08 35 15.4 +0.2**
baz=91,SNR=5.5
Z22A Elephant Butte 91.04 53 ⇓P **P** **08 35 15.5 +0.2**
baz=91,SNR=5.1
X21A Alamocita Cree 91.04 52 ⇓P **P** **08 35 15.7 +0.3**
baz=91
R17A Hanksville Air 91.07 47 ⇑P **P** **08 35 15.3 -0.1**
baz=91
HHC Hu-ho-hao-te 91.20 315 *eP* **P** **08 35 15.8 -0.1**
HHC pP pP 08 37 03.8 -0.9
HHC sP sP 08 37 50.8 -3.1
HHC SKS 08 45 00.5
HHC S S 08 45 31.0 -1.3
HHC sS sS 08 48 41.8 -5.1
HHC SS SS 08 51 53.0 +1.0
HHC pmax pmax
comp=Z,21nm,0.8s,mb5.1
HHC pmax pmax
comp=Z,130nm,6.3s
TMUT Trail Mountain 91.21 47 *eP* **P** **08 35 16.5 +0.5**
comp=Z,11nm,0.6s,mb5.0
I12A Atlanta 91.23 41 ⇑P **P** **08 35 16.1 +0.2**
baz=91
324A Moseley Ranch, 91.24 56 ⇑P **P** **08 35 16.2 -0.1**
baz=91
F10A Beach Ranch, E 91.28 39 ⇓P **P** **08 35 15.3 -0.9**
baz=91
626A Big Bend Ranch 91.35 58 ⇑P **P** **08 35 16.8 -0.1**
baz=91,SNR=6.9
Y22A Socorro 91.38 53 ⇓P **P** **08 35 17.0 +0.1**
baz=91
MNTX Cornudas Mount 91.44 55 ⇑P **P** **08 35 16.8 -0.4**
baz=92,SNR=6.1
O16A Springville 91.50 46 ⇓P **P** **08 35 17.2 -0.1**
baz=92,SNR=6.3
224A Cornudas Mount 91.52 55 ⇑P **P** **08 35 17.8 +0.2**
baz=92
HLID Hailey 91.53 42 ⇓P **P** **08 35 17.4 0.0**
baz=92
SRU San Rafael 91.56 47 P **P** **08 35 17.3 -0.3**
baz=92,SNR=9.6
SRU San Rafael 91.56 47 *eP* **P** **08 35 17.5 -0.1**
comp=Z,13nm,1.2s,mb4.8
M15A Larsen Ranch, 91.58 44 ⇓P **P** **08 35 17.6 -0.1**
baz=92
J13A Cove Ranch, Pi 91.58 42 ⇓P **P** **08 35 17.8 +0.2**
baz=92
325A Bean Ranch, Si 91.59 56 ⇓P **P** **08 35 17.6 -0.4**
baz=92
R18A Canyonlands Na 91.60 48 ⇓P **P** **08 35 17.4 -0.5**
baz=92
TXAR Lajitas Array 91.61 58 P **P** **08 35 18.4 +0.3**
comp=Z,3.3nm,0.8s,mb4.3,baz=213,slow=6.6,SNR=44
P17A Butcher Ranch, 91.61 47 ⇓P **P** **08 35 18.2 +0.3**
baz=92
526A Mary Lane Ranc 91.63 57 ⇓P **P** **08 35 18.0 -0.2**
baz=92,SNR=5.7
K14A Jones Ranch, D 91.72 43 ⇑P **P** **08 35 18.3 +0.1**
baz=92
S19A Harvey Farm, M 91.78 49 ⇓P **P** **08 35 18.6 0.0**
baz=92
Q18A Rafter H Ranch 91.82 47 ⇓P **P** **08 35 18.5 -0.3**
baz=92
H12A Diamond D Ranc 91.82 41 ⇓P **P** **08 35 18.1 -0.6**
baz=92,SNR=7.9
124A Stringfield Ra 91.87 55 ⇓P **P** **08 35 18.9 -0.3**
baz=92
627A Terlingua Ranc 91.88 58 ⇓P **P** **08 35 19.3 -0.1**
baz=92,SNR=6.9
L15A Malad City 91.91 44 ⇑P **P** **08 35 19.2 +0.1**
baz=92
J14A Carey 91.94 42 ⇑P **P** **08 35 19.4 +0.2**
baz=92
426A McDonald Obser 91.96 57 ⇓P **P** **08 35 19.4 -0.2**
baz=92
R19A Curley Farm, L 91.98 48 ⇑P **P** **08 35 19.4 -0.1**
baz=92
O17A Robinson Place 91.99 46 ⇑P **P** **08 35 19.7 +0.1**
baz=92,SNR=21
P18A Preston Nutter 92.02 47 ⇑P **P** **08 35 20.0 +0.3**
baz=92
527A Woodward Ranch 92.03 58 ⇑P **P** **08 35 19.8 -0.3**
baz=92
225A Deer Hill, Car 92.05 55 ⇑P **P** **08 35 20.2 +0.1**
baz=92
U21A Nageezi 92.13 50 ⇑P **P** **08 35 20.6 +0.3**
baz=92
H13A Challis 92.19 41 ⇓P **P** **08 35 20.4 +0.1**
baz=92
K15A Arbon 92.19 43 ⇓P **P** **08 35 20.4 0.0**
baz=92
HWUT Hardware Ranch 92.21 44 *eP* **P** **08 35 19.4 -1.2**
comp=Z,1.2nm,0.7s,mb3.9
ANMO Albuquerque 92.24 52 *eP* **P** **08 35 20.6 -0.3**
comp=Z,2.3nm,0.9s,mb4.1
628A Black Gap, Mar 92.28 58 ⇑P **P** **08 35 20.9 -0.3**
baz=92
F12A Elk City 92.28 40 ⇑P **P** **08 35 20.3 -0.5**
baz=92
326A Caldwell Ranch 92.31 56 ⇑P **P** **08 35 21.0 -0.2**
baz=92
I14A Mackay 92.31 42 ⇓P **P** **08 35 21.2 +0.2**
baz=92
Q19A Hogan Spring (92.32 48 ⇑P **P** **08 35 20.8 -0.3**
baz=92
N17A Moffit Pass 92.33 45 ⇓P **P** **08 35 20.8 -0.3**
baz=92
PV01 Paradox Valley 92.36 49 *eP* **P** **08 35 20.9 -0.4**
Y24A Capitan 92.48 54 ⇓P **P** **08 35 21.8 -0.2**
baz=92
G13A Cobalt 92.50 40 ⇑P **P** **08 35 21.1 -0.7**
baz=93
427A Hayter Ranch, 92.52 57 ⇑P **P** **08 35 22.2 -0.1**
baz=92,SNR=6.9
J15A Blackfoot 92.64 43 ⇓P **P** **08 35 22.7 +0.3**
baz=93
S21A Coal Bank Pass 92.66 49 ⇑P **P** **08 35 22.5 -0.2**
baz=93
528A Cox Ranch, San 92.67 58 ⇓P **P** **08 35 22.8 -0.1**
baz=93
Z25A Roswell 92.69 54 ⇓P **P** **08 35 23.1 +0.1**
baz=93
V23A Ortiz Mt. (NFS 92.83 52 ⇓P **P** **08 35 23.9 +0.4**
baz=93
F13A Darby 92.83 40 ⇓P **P** **08 35 22.3 -0.9**
baz=93
P19A Cripple Cowboy 92.85 47 ⇑P **P** **08 35 23.2 -0.4**
baz=93
D12A Red Ives Fores 92.96 38 ⇓P **P** **08 35 23.3 -0.5**
baz=93
428A Kincaid Ranch, 93.01 57 ⇓P **P** **08 35 23.9 -0.6**
baz=93
M18A Lyman 93.07 45 ⇑P **P** **08 35 24.3 -0.2**
baz=93
J16A Bone 93.08 43 ⇑P **P** **08 35 24.6 +0.1**
baz=93
N18A Larsen Ranch, 93.09 46 ⇑P **P** **08 35 24.4 -0.2**
baz=93
O19A Miners Draw (B 93.10 47 ⇓P **P** **08 35 24.5 -0.2**
baz=93
U23A El Rito 93.11 51 ⇓P **P** **08 35 24.7 -0.1**
baz=93
R21A Cimarron 93.17 49 ⇓P **P** **08 35 24.9 -0.1**
baz=93
P20A De Beque 93.18 48 ⇓P **P** **08 35 24.7 -0.4**
baz=93
328A Wristen Ranch, 93.22 57 ⇓P **P** **08 35 25.1 -0.3**
baz=93
K17A Gardner Place, 93.23 44 ⇓P **P** **08 35 25.3 +0.1**
baz=93
Z26A Caprock 93.23 55 ⇓P **P** **08 35 24.8 -0.6**
baz=93
S22A 4UR Ranch, Cre 93.36 50 ⇑P **P** **08 35 25.8 -0.1**
baz=93
V24A Rampart Ranch, 93.47 52 ⇑P **P** **08 35 26.4 -0.1**
baz=94
T23A Casias Ranch, 93.56 51 ⇓P **P** **08 35 26.7 -0.1**
baz=94
G15A Dillon 93.57 41 ⇓P **P** **08 35 26.6 -0.1**
baz=94
O20A White River Ci 93.60 47 ⇑P **P** **08 35 26.8 -0.2**
baz=94
ILAR Eielson Array 93.62 14 P **P** **08 35 24.1 -2.4**
comp=Z,0.6nm,0.6s,mb3.8,baz=225,slow=5.0,SNR=14
R22A Saguache, Gunn 93.65 49 ⇓P **P** **08 35 27.4 +0.2**
baz=94
K18A Toltan Ranch, 93.72 44 ⇑P **P** **08 35 27.2 -0.2**
baz=94
W25A X Bar L Ranch, 93.80 53 ⇓P **P** **08 35 27.3 -0.7**
baz=94
Q22A Crested Butte, 93.86 49 ⇓P **P** **08 35 28.3 +0.1**
baz=94
N20A Spence Gulch, 93.94 46 ⇑P **P** **08 35 27.9 -0.6**
baz=94
SMCO Snowmass 93.97 48 *eP* **P** **08 35 28.1 -0.6**
comp=Z,3.1nm,1.0s,mb4.3
V25A Rancho No Teng 93.99 52 ⇑P **P** **08 35 28.7 -0.1**
baz=94
J18A Kendall Valley 94.03 44 ⇑P **P** **08 35 28.6 -0.3**
baz=94
H16A Russell Place, 94.06 42 ⇓P **P** **08 35 29.2 +0.2**
baz=94
PDAR Pinedale Array 94.09 44 P **P** **08 35 28.2 -0.9**
comp=Z,0.6nm,0.7s,mb3.7,baz=210,slow=2.6,SNR=4.5
SDCO Great Sand Dun 94.28 50 ⇑P **P** **08 35 29.6 -0.5**
baz=94
SDCO Great Sand Dun 94.28 50 *eP* **P** **08 35 29.7 -0.4**
comp=Z,1.1nm,0.7s,mb4.0
U25A Circle Dot Ran 94.40 52 ⇓P **P** **08 35 30.5 -0.2**
baz=94
S24A Houchin Ranch, 94.43 50 ⇓P **P** **08 35 30.9 +0.1**
baz=94
L20A Wamsutter 94.48 45 ⇑P **P** **08 35 31.1 +0.2**
baz=94
O22A Kremmling 94.74 48 ⇓P **P** **08 35 31.8 -0.3**
baz=95
R24A Sanders Place, 94.78 50 ⇓P **P** **08 35 32.2 -0.2**
baz=95
P23A Jefferson 94.83 49 ⇑P **P** **08 35 32.9 +0.3**
baz=95
S25A Robets Cordova 94.98 51 ⇑P **P** **08 35 32.8 -0.5**
baz=95
N22A Wattenberg Ran 95.11 47 ⇓P **P** **08 35 33.7 -0.2**
baz=95
ISCO Idaho Springs 95.19 48 ⇓P **P** **08 35 33.5 -0.7**
baz=95
RLMT Red Lodge 95.48 42 ⇓P **P** **08 35 35.0 -0.4**
baz=96
K21A Alcova 95.49 45 ⇑P **P** **08 35 34.8 -0.7**
baz=96
C17A Wharram Farm, 95.89 40 ⇑P **P** **08 35 36.2 -0.9**
baz=96
P25A Willow Gulch B 96.04 49 ⇓P **P** **08 35 37.5 -0.5**
baz=96
MKAR Makanchi Array 112.87 312 PKiKP PKiKP 08 40 42.3 -2.0
comp=Z,0.3nm,0.4s,baz=61,slow=1.5,SNR=3.3

MKAR				PKKPbc	PKKPbc	08 51 33.1	-0.8		
	comp=Z,0.6nm,0.6s,baz=241,slow=2.9,SNR=4.8								
KURK	**Kurchatov**	**116.01**	**316**	PKP	PKPdf	08 40 48.1	-2.1		
	comp=Z,1.1nm,0.5s,baz=104,slow=2.3,SNR=5.7								
KBL	**Kabul**	**120.15**	**297**	*e*PKPdf	PKPdf	08 40 58.0	-0.7		
BOSA	**Boshof**	**120.84**	**206**	PKP	PKPdf	08 40 59.8	-0.5		
	comp=Z,1.9nm,0.8s,baz=57,slow=4.5,SNR=3.9								
BVAR	**Borovoye Array**	**121.30**	**318**	PKP	PKPdf	08 40 58.5	-1.9		
	comp=Z,2.9nm,0.4s,baz=101,slow=1.5,SNR=11								
SPITS	**Spitsbergen Ar**	**126.62**	**356**	PKP	PKPdf	08 41 08.7	-1.2		
	comp=Z,5.2nm,0.7s,baz=278,slow=18,SNR=8.8								
AKTO	**Aktyubinsk**	**129.10**	**315**	PKP	PKPdf	08 41 13.1	-2.2		
	comp=Z,1.6nm,0.6s,baz=104,slow=5.8,SNR=7.1								
KEV	**Kevo**	**132.82**	**347**	*e*pkp	PKPdf	08 41 18.9	-2.9		
ARCES	**ARCESS Array B**	**133.30**	**348**	PKhKP	PKPpre	08 41 13.8			
	comp=Z,0.4nm,0.4s,baz=8.3,slow=0.9,SNR=5.3								
ARCES				PKP	PKPdf	08 41 19.7	-3.0		
	comp=Z,3.8nm,0.6s,baz=48,slow=1.8,SNR=13								
ARCES				SKPbc	SKPbc	08 44 03.1	-2.1		
	comp=Z,2.0nm,0.5s,baz=40,slow=3.3,SNR=18								
KAF	**Kangasniemi**	**139.16**	**341**	*e*pkp	PKPpre	08 41 24.7			
	comp=Z,2.7nm,0.5s								
FINES	**FINESS Array B**	**139.76**	**341**	PKhKP	PKPpre	08 41 25.5			
	comp=Z,2.2nm,0.7s,baz=111,slow=10,SNR=12								
FINES				PKP	PKPdf	08 41 32.8	-2.1		
	comp=Z,1.7nm,0.4s,baz=62,slow=4.5,SNR=8.2								
FINES				SKPbc	SKPbc	08 44 21.5	-3.0		
	comp=Z,4.7nm,0.7s,baz=50,slow=4.2,SNR=7.6								
NOA	**NORSAR Array B**	**143.53**	**350**	PKP	PKPdf	08 41 38.3	-3.3		
	comp=Z,13nm,0.8s,baz=22,slow=3.9,SNR=42								
IZAR	**Zarasai**	**144.00**	**334**	*e*P	PKPdf	08 41 40.7	-1.8		
IZAR				AMB	AMB	08 41 42.0			
	comp=Z,6.8nm,1.2s								
IDID	**Didziasalis**	**144.12**	**334**	*e*P	PKPdf	08 41 41.1	-1.6		
IDID				AMB	AMB	08 41 42.0			
	comp=Z,6.1nm,0.7s								
ISAL	**Salakas**	**144.18**	**334**	*e*P	PKPdf	08 41 41.4	-1.5		
ISAL				AMB	AMB	08 41 42.6			
	comp=Z,7.8nm,1.1s								
IIGN	**Ignalina**	**144.30**	**334**	*e*P	PKPdf	08 41 41.7	-1.4		
IIGN				AMB	AMB	08 41 42.7			
	comp=Z,12nm,0.6s								
KONO	**Kongsberg**	**145.10**	**351**	*e*PKPdf	PKPdf	08 41 43.3	-1.0		
AKASG	**Malin Array Be**	**146.01**	**326**	PKPbc	PKPbc	08 41 46.2	-1.8		
	comp=Z,2.4nm,0.4s,baz=42,slow=3.9,SNR=15								
KAC	**Achnashellach**	**147.78**	**5**	*e*P	PKPdf	08 41 51.0	+2.1		
MCD	**Coleburn Disti**	**147.82**	**3**	*e*P	PKPdf	08 41 50.3	+1.3		
MDO	**Dochfour**	**147.91**	**4**	*e*P	PKPdf	08 41 50.8	+1.7		
KPL	**Plockton**	**147.91**	**5**	*e*P	PKPdf	08 41 51.0	+1.9		
BR131	**Keskin Array S**	**148.13**	**305**	*e*PKPbc	PKPbc	08 41 53.2	-0.8		
BR131				*e*PKPab	PKPab	08 41 58.0	-0.7		
BRTR	**Keskin Array B**	**148.13**	**305**	PKPbc	PKPbc	08 41 52.8	-1.3		
	comp=Z,2.3nm,0.7s,baz=128,slow=3.3,SNR=10								
BRTR				PKPab	PKPab	08 41 57.8	-0.9		
	comp=Z,2.4nm,0.5s,baz=114,slow=3.8,SNR=10								
BSD	**Bornholm Skovb**	**148.27**	**343**	*i* P	PKPdf	08 41 49.7	-0.1		
	comp=Z,12nm,0.9s								
EBH	**Black Hill**	**149.14**	**3**	*e*P	PKPbc	08 41 54.1	-1.8		
EAB	**Aberfoyle**	**149.15**	**4**	*e*P	PKPbc	08 41 54.4	-1.6		
ESY	**Stoneypath**	**149.51**	**2**	*e*P	PKPbc	08 41 54.8	-2.0		
EAU	**Auchinoon**	**149.55**	**3**	*e*P	PKPbc	08 41 55.5	-1.5		
EBL	**Broad Law**	**149.64**	**3**	*e*P	PKPbc	08 41 55.4	-1.8		
BUR08	**Bucovina Ar. S**	**149.97**	**324**	*e*PKPbc	PKPbc	08 41 58.0	-0.2		
ESK	**Eskdalemuir**	**150.09**	**3**	*e*P	PKPdf	08 41 54.4	+1.8		
ECK	**Cauldkaine Hil**	**150.23**	**3**	*e*P	PKPbc	08 41 56.6	-2.0		
GAL1	**Galloway**	**150.44**	**5**	*e*P	PKPbc	08 41 56.8	-2.3		
XAL	**Allendale**	**150.58**	**2**	*e*P	PKPbc	08 41 57.7	-1.7		
CLL	**Collm**	**152.19**	**342**	⇑*i*PKPbc	PKPbc	08 42 02.0	-1.1		
	comp=Z,14nm,0.7s								
CLL				*i* PKPab	PKPab	08 42 13.7	-1.4		
BRG	**Berggiesshubel**	**152.30**	**340**	*e*P	PKPbc	08 42 02.2	-1.2		
	comp=Z,5.7nm,0.6s								
ESDC	**Sonseca Array**	**165.51**	**11**	PKPab	PKPab	08 43 11.8	-1.6		
	comp=Z,0.2nm,0.3s,baz=326,slow=4.2,SNR=6.0								

SKHL 26 08:25:29.1±0.9, 51°.85N×132°.87E, h9^{km}±1^{km}, mb4.8/6, 3C, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EKMR	**Ekimchan**	**1.22**	**2**	⇑*i* Pg	Pg	08 25 52.0	-0.6
EKMR				AMB	AMB	08 25 52.9	
	240nm,0.3s						
EKMR				AMB	AMB	08 25 52.9	
	310nm,0.3s						
EKMR				AMB	AMB	08 25 52.9	
	500nm,0.3s						
EKMR				sPg		08 25 56.5	
EKMR				*i* Sg	Sg	08 26 08.5	+0.1
EKMR				A		08 26 14.2	
	620nm,0.5s						
EKMR				A		08 26 14.2	
	570nm,0.5s						
EKMR				A		08 26 14.2	
	530nm,0.5s						
GRNR	**Gornyy**	**2.48**	**115**	*e*Pg	Pg	08 26 14.4	-2.2
GRNR				AMB	AMB	08 26 15.2	
	190nm,0.4s						
GRNR				*e*Sn	Sn	08 26 39.6	-0.3
GRNR				*e*Sg	Sg	08 26 45.9	-2.7
GRNR				A		08 26 46.0	
	580nm,0.4s						
GRNR				A		08 26 46.0	
	820nm,0.4s						
GRNR				A		08 26 46.0	
	470nm,0.4s						
KLR	**Kul'dur**	**2.72**	**196**	*e*rx	rx	08 26 15.2	
KLR				*e*Pg	Pg	08 26 16.7	-4.5
KLR				*e*Sg	Sg	08 26 51.0	-5.4
KHBR	**Khabarovsk**	**3.66**	**157**	*e*Sg	Sg	08 27 25.0	-1.6
BMKR	**Bomnak**	**3.75**	**321**	⇑*i* Pn	Pn	08 26 27.4	+0.4
BMKR				*e*Pg	Pg	08 26 35.8	-5.1
BMKR				AMB	AMB	08 26 38.2	
	111nm,0.5s						
BMKR				AMB	AMB	08 26 38.2	
	204nm,0.5s						
BMKR				*e*Sg	Sg	08 27 25.4	-4.0
BMKR				A		08 27 26.1	
	354nm,0.5s						
BMKR				A		08 27 26.1	
	241nm,0.5s						
ZEA	**Zeya**	**3.90**	**301**	*e*Pn	Pn	08 26 30.1	+1.0
ZEA				*e*Pg	Pg	08 26 39.1	-4.7
ZEA				AMB	AMB	08 26 42.1	
	34nm,0.2s						
ZEA				*i* Sn	Sn	08 27 12.2	-2.8
ZEA				*e*Sg	Sg	08 27 29.2	-5.0
ZEA				A		08 27 30.2	
	340nm,0.6s						
ZEA				A		08 27 30.2	
	210nm,0.6s						
ZEA				A		08 27 30.2	
	190nm,0.6s						
ZEA				A		08 27 32.0	
	900nm,1.3s						
ZEA				A		08 27 32.0	
	300nm,1.3s						
ZEA				A		08 27 32.0	
	600nm,1.3s						
KROS	**Kirovskiy**	**4.39**	**308**	⇑*i* Pn	Pn	08 26 36.5	+0.6
KROS				AMB	AMB	08 26 37.0	
	19nm,0.4s						
KROS				AMB	AMB	08 26 37.0	
	30nm,0.4s						
KROS				AMB	AMB	08 26 37.0	
	49nm,0.4s						
KROS				pPn		08 26 41.0	
KROS				*i* Sn	Sn	08 27 25.6	-1.5
KROS				*e*Sg	Sg	08 27 45.6	-4.5
KROS				A		08 27 50.5	
	280nm,0.7s						
KROS				A		08 27 50.5	
	410nm,0.7s						
KROS				A		08 27 50.5	
	18nm,0.7s						
NKL	**Nikolayevsk**	**4.95**	**72**	*e*Pn	Pn	08 26 42.7	-0.8
NKL				*e*Pg	Pg	08 26 57.2	-6.6
NKL				AMB	AMB	08 27 01.7	
	80nm,0.3s						
NKL				sPg		08 27 02.3	
NKL				*e*Sg	Sg	08 28 02.0	-5.8
NKL				A		08 28 14.0	
	160nm,0.7s						
CLNS	**Chul'man**	**6.83**	**320**	*e*Sg	Sg	08 29 03.7	-4.5
TEY	**Ternei**	**7.26**	**159**	*e*Sg	Sg	08 29 17.5	-4.3

IDC 26 08:33:10.0±1.6, 12°.16N×143°.27E, h0^{km}, mb3.5/4, mb1 3.9/5, mb1mx3.6/23, mbtmp3.5/5, ML3.8/1, Error ellipse: s-maj=91.4km s-min=19.3km az=122.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.10**	**47**	Pn	Pn	08 33 46.6	+0.1
	35nm,0.3s,baz=184,slow=4.1,SNR=23						
GUMO				Sn	Sn	08 34 12.5	-0.9
	86nm,0.3s,baz=34,slow=22,SNR=29						
WRA	**Warramunga Arr**	**33.09**	**196**	P	P	08 39 46.5	-1.2
	0.5nm,0.5s,baz=19,slow=9.6,SNR=8.1						
ASAR	**Alice Springs**	**36.77**	**194**	P	P	08 40 20.4	+0.9
	0.2nm,0.7s,baz=16,slow=12,SNR=4.1						
ILAR	**Eielson Array**	**70.51**	**25**	P	P	08 44 25.6	-0.7
	0.3nm,0.8s,baz=264,slow=4.8,SNR=4.5						
NVAR	**Mina Array Bea**	**89.02**	**51**	P	P	08 46 09.1	+1.9
	0.7nm,0.7s,baz=262,slow=5.0,SNR=5.0						

*IDC **26** 08:40:49.3±1.6, 53°.86N×90°.91E, h0^{km}, mb3.3/1, mb1 3.6/4, mb1mx3.4/26, mbtmp3.5/4, ML3.5/3, Error ellipse: s-maj=22.2km s-min=15.1km az=143.0*
*NNC **26** 08:40:59.4±3.3, 53°.36N×90°.19E, h11^{km}±18^{km}, mb4.1, mpv3.9, Error ellipse: s-maj=22.9km s-min=19.7km az=72.0*

ISC 26 08:40:52.2±2.2, 53°.76N±0°.10×90°.9E±0°.2, h10^{km}, n11, σ1^{s}14/18, 5C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**3.58**	**276**	Pn	**Pn**	**08 41 47.5**	**-0.2**
	2.0nm,0.3s,baz=92,slow=12,SNR=32						
ZALV				Pg	**Pb**	**08 41 53.1**	**-2.4**
	3.1nm,0.3s,baz=91,slow=15,SNR=49						
ZALV				Sn	**Sn**	**08 42 29.8**	**-0.2**
	2.5nm,0.3s,baz=94,slow=16,SNR=5.1						
ZALV				Lg		08 42 41.2	
	7.2nm,0.3s,baz=91,slow=28,SNR=12						
KURK	**Kurchatov**	**8.11**	**253**	⇑Pn	**Pn**	**08 42 49.0**	**-0.8**
	5.6nm,0.7s						
KURK				⇑Sn	**Sn**	**08 44 16.7**	**-4.7**
	22nm,0.9s						
KURK				⇑Lg		08 45 01.5	
	113nm,1.0s						
KURK	**Kurchatov**	**8.11**	**253**	Pn	**Pn**	**08 42 50.7**	**+0.9**
	0.4nm,0.3s,baz=66,slow=15,SNR=20						
KURK				Sn	**Sn**	**08 44 23.0**	**+1.6**
	0.2nm,0.3s,baz=65,slow=26,SNR=9.0						
KURK				Lg		08 45 06.2	
	0.2nm,0.3s,baz=216,slow=26,SNR=7.7						
KUR02	**Kurchatov Arra**	**8.15**	**253**	Pn	**Pn**	**08 42 49.6**	**-0.8**
KUR02				Lg		08 45 03.3	
MK31	**Makanchi Array**	**8.86**	**222**	Pn	**Pn**	**08 43 00.5**	**+0.3**
	4.0nm,0.8s,baz=43,slow=14,SNR=19						
MK31				⇓Sn	**Sn**	**08 44 34.6**	**-5.4**
	8.9nm,0.8s,baz=45,slow=22,SNR=4.6						
MK31				⇓Lg		08 45 23.2	
	35nm,1.0s,baz=35,slow=28,SNR=4.4						
MKAR	**Makanchi Array**	**8.86**	**222**	Pn	**Pn**	**08 43 00.5**	**+0.3**
	0.4nm,0.3s,baz=34,slow=15,SNR=20						
MKAR				Sn	**Sn**	**08 44 39.5**	**-0.5**
	0.4nm,0.3s,baz=44,slow=22,SNR=6.0						
MKAR				Lg		08 45 29.3	
	0.3nm,0.3s,baz=35,slow=26,SNR=4.2						
SONM	**Songino Array**	**11.47**	**115**	Pg	Pn	08 44 09.7	+34
	0.1nm,0.3s,baz=299,slow=15,SNR=4.2						
SONM				Sn	**Sn**	**08 45 52.9**	**+9.0**
	0.2nm,0.3s,baz=316,slow=20,SNR=2.9						
SONM				Lg		08 46 46.2	
	0.2nm,0.3s,baz=306,slow=28,SNR=12						
VOSK	**Vostochnaya**	**11.95**	**273**	⇑Pn	**Pn**	**08 43 45.9**	**+3.5**
	1.9nm,0.8s						
VOSK				⇑Sn	**Sn**	**08 45 56.2**	**+0.5**
	5.5nm,0.9s						
BVAR	**Borovoye Array**	**12.24**	**275**	Pn	**Pn**	**08 43 46.7**	**+0.4**
	0.3nm,0.3s,baz=103,slow=3.1,SNR=3.8						
BVAR				Sn	**Sn**	**08 46 10.5**	**+7.9**
	0.2nm,0.3s,baz=71,slow=20,SNR=3.8						
AAK	**Ala-Archa**	**15.54**	**231**	Lg		08 48 58.5	
	0.4nm,0.3s,baz=319,slow=20,SNR=3.1						
ILAR	**Eielson Array**	**53.76**	**27**	P	**P**	**08 50 11.3**	**-2.6**
	1.2nm,1.0s,baz=313,slow=4.6,SNR=4.5						

IDC 26 08:41:59.0±1.5, 4°.61S×137°.39E, h0^{km}, mb4.0/4, mb1 4.2/5, mb1mx3.9/12, mbtmp4.0/5, ML3.8/1, MS3.2/1, Ms1 3.2/1, ms1mx2.3/25, Error ellipse: s-maj=53.0km s-min=33.1km az=85.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.53**	**191**	Pn	Pn	08 45 36.0	-3.4
	0.1nm,0.3s,baz=8.0,slow=13,SNR=8.4						
WRA				Sn	Sn	08 48 31.9	-0.3
	0.1nm,0.3s,baz=18,slow=22,SNR=4.6						
CTA	**Charters Tower**	**17.64**	**151**	LR	LR	08 52 54.2	
	comp=Z,84nm,19.5s,baz=126,slow=37						
ASAR	**Alice Springs**	**19.24**	**190**	P	Pn	08 46 24.9	-1.0
	0.3nm,0.3s,baz=15,slow=9.5,SNR=23						
CMAR	**Chiang Mai Arr**	**44.28**	**302**	P	P	08 50 11.2	+0.4
	1.1nm,0.3s,baz=112,slow=6.9,SNR=4.1						
MKAR	**Makanchi Array**	**70.50**	**323**	P	P	08 53 15.8	+0.3
	0.8nm,0.6s,baz=113,slow=7.4,SNR=8.3						
ZALV	**Zalesovo Beam**	**72.92**	**331**	P	P	08 53 29.3	-0.6
	0.5nm,0.5s,baz=116,slow=6.6,SNR=2.8						
ILAR	**Eielson Array**	**88.09**	**25**	P	P	08 54 51.5	+0.4
	1.2nm,0.8s,baz=263,slow=4.2,SNR=14						

*DDA **26** 08:46:33.9, 36°.22N×29°.46E, h52^{km}±3^{km}, Md3.5*
*ATH **26** 08:46:33.5, 36°.59N×29°.42E, h39^{km}±12^{km}, MD3.3/5*
*ISCJB **26** 08:46:34.9±0.4, 36°.29N±0°.03×29°.50E±0°.03, h56^{km}±6^{km}, Error ellipse: s-maj=5.8km s-min=3.4km az=158.4*
*NEIC **26** 08:46:35.0, 36°.27N×29°.49E, h30^{km}, MD3.3(ATH), MD3.3(ISK), After ISK.*
*ISK **26** 08:46:35.7, 36°.35N×29°.48E, h29^{km}, MD3.4*
*CSEM **26** 08:46:36.1±0.1, 36°.35N×29°.47E, h33^{km}±2^{km}, MD3.5, Error ellipse: s-maj=4.1km s-min=2.6km az=154.0*

ISC 26 08:46:36.1±0.4, 36°.31N±0°.03×29°.50E±0°.03, h47^{km}±7^{km}, n77, σ0^{s}86/116, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKAS	**Kas**	**0.11**	**129**	*i* P	**Pn**	**08 46 42.7**	**-0.9**
AKAS				*i* S	**Sn**	**08 46 49.0**	**+0.1**
AKAS	**Kas**	**0.11**	**129**	*i* P	**Pn**	**08 46 42.7**	**-0.9**
AKAS				*i* S	**Sn**	**08 46 49.0**	**+0.1**
KSL	**Kastellorizon**	**0.17**	**156**	*e*Pb	**Pn**	**08 46 44.2**	**+0.3**
KSL	**Kastellorizon**	**0.17**	**156**	*e*PB	**Pn**	**08 46 44.2**	**+0.3**
ELL	**Elmali**	**0.55**	**37**	*e*PG	**Pn**	**08 46 47.5**	**-0.3**
ELL				*e*SG	**Sn**	**08 46 56.0**	**-0.2**
ELL	**Elmali**	**0.55**	**37**	*e*Pg	**Pn**	**08 46 47.5**	**-0.3**
ELL				*e*Sg	**Sn**	**08 46 56.0**	**-0.2**
GLHS	**Glhisar (BURDU**	**0.85**	**0**	*e*PG	**Pn**	**08 46 51.0**	**-0.7**
GLHS				*e*SG	**Sn**	**08 47 03.0**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.85**	**0**	*e*Pg	**Pn**	**08 46 51.0**	**-0.7**
GLHS				*e*Sg	**Sn**	**08 47 03.0**	**-0.1**
TURN	**Turunc**	**0.92**	**308**	*i* P	**Pn**	**08 46 55.6**	**+3.0**
TURN				*i* S	**Sn**	**08 47 09.1**	**+4.4**
GOLH	**Golhisar**	**0.93**	**3**	*i* P	**Pn**	**08 46 52.2**	**-0.6**
GOLH				*i* S	**Sn**	**08 47 05.4**	**+0.3**
GOLH	**Golhisar**	**0.93**	**3**	*i* P	**Pn**	**08 46 52.2**	**-0.6**
GOLH				*i* S	**Sn**	**08 47 05.4**	**+0.3**
KORT	**Korkueli**	**0.98**	**44**	*i* P	**Pn**	**08 46 54.4**	**+1.0**
KORT				*i* S	**Sn**	**08 47 09.1**	**+2.9**
KORT	**Korkueli**	**0.98**	**44**	*i* P	**Pn**	**08 46 54.4**	**+1.0**
ANTB	**Antalya**	**1.10**	**57**	*e*PN	**Pn**	**08 46 55.7**	**+0.5**
ANTB	**Antalya**	**1.10**	**57**	*e*Pn	**Pn**	**08 46 55.7**	**+0.6**
ARG	**Arkhangelos**	**1.11**	**266**	*e*Pn	**Pn**	**08 46 54.5**	**-0.7**
ARG				*e*Sn	**Sn**	**08 47 09.4**	**0.0**
ARG	**Arkhangelos**	**1.11**	**266**	*e*PN	**Pn**	**08 46 54.5**	**-0.7**
ARG				*e*SN	**Sn**	**08 47 09.4**	**0.0**
ARG	**Arkhangelos**	**1.11**	**266**	*e*Pn	**Pn**	**08 46 54.5**	**-0.7**
ARG				*e*Sn	**Sn**	**08 47 09.4**	**0.0**
YER	**Yerkesik**	**1.28**	**311**	*e*PN	**Pn**	**08 46 57.7**	**+0.2**
YER	**Yerkesik**	**1.28**	**311**	*e*Pn	**Pn**	**08 46 57.7**	**+0.2**
DNZL	**Cakiroluk**	**1.43**	**345**	*i* P	**Pn**	**08 46 59.2**	**-0.4**
DNZL				*i* S	**Sn**	**08 47 16.8**	**-0.3**
DNZL	**Cakiroluk**	**1.43**	**345**	*i* P	**Pn**	**08 46 59.2**	**-0.4**
DNZL				*i* S	**Sn**	**08 47 16.8**	**-0.4**
BCK	**Bucak**	**1.45**	**37**	*e*PN	**Pn**	**08 47 00.3**	**+0.5**
BCK	**Bucak**	**1.45**	**37**	*e*Pn	**Pn**	**08 47 00.3**	**+0.5**
DENT	**Denizli**	**1.49**	**346**	*e*PN	**Pn**	**08 47 00.4**	**0.0**
DENT	**Denizli**	**1.49**	**346**	*e*Pn	**Pn**	**08 47 00.4**	**0.0**
DAT	**Datca**	**1.60**	**286**	*e*PN	**Pn**	**08 47 02.5**	**+0.6**
DAT	**Datca**	**1.60**	**286**	*e*Pn	**Pn**	**08 47 02.5**	**+0.6**
SUTC	**Sutluce-Ispart**	**1.68**	**45**	*e*PN	**Pn**	**08 47 03.7**	**+0.7**
SUTC	**Sutluce-Ispart**	**1.68**	**45**	*e*Pn	**Pn**	**08 47 03.7**	**+0.7**
MLSB	**Milas**	**1.70**	**306**	*e*PN	**Pn**	**08 47 03.7**	**+0.5**
MLSB	**Milas**	**1.70**	**306**	*e*Pn	**Pn**	**08 47 03.7**	**+0.5**
BDRM	**Kayabasi**	**1.82**	**295**	*i* P	**Pn**	**08 47 04.9**	**0.0**
BDRM				*i* S	**Sn**	**08 47 25.9**	**-0.7**
BDRM	**Kayabasi**	**1.82**	**295**	*i* P	**Pn**	**08 47 04.9**	**0.0**
BDRM				*i* S	**Sn**	**08 47 25.9**	**-0.8**
BODT	**Bodrum**	**1.91**	**294**	*e*PN	**Pn**	**08 47 06.2**	**0.0**
BODT	**Bodrum**	**1.91**	**294**	*e*Pn	**Pn**	**08 47 06.2**	**0.0**
KHL	**Karahalli**	**2.02**	**1**	*e*PN	**Pn**	**08 47 07.3**	**-0.3**
KHL	**Karahalli**	**2.02**	**1**	*e*Pn	**Pn**	**08 47 07.3**	**-0.3**
KARP	**Karpathos**	**2.04**	**249**	*e*Pn	**Pn**	**08 47 08.7**	**+0.8**
KARP				*e*Sn	**Sn**	**08 47 33.7**	**+1.5**
KARP	**Karpathos**	**2.04**	**249**	*e*PN	**Pn**	**08 47 08.7**	**+0.8**
KARP				*e*SN	**Sn**	**08 47 33.7**	**+1.5**
KARP	**Karpathos**	**2.04**	**249**	*e*Pn	**Pn**	**08 47 08.7**	**+0.8**
KARP				*e*Sn	**Sn**	**08 47 33.7**	**+1.5**
KHAL	**Karahalli**	**2.06**	**360**	*i* P	**Pn**	**08 47 06.9**	**-1.3**
KHAL				*i* S	**Sn**	**08 47 32.7**	**0.0**
KHAL	**Karahalli**	**2.06**	**360**	*i* P	**Pn**	**08 47 06.9**	**-1.3**
KHAL				*i* S	**Sn**	**08 47 32.7**	**0.0**
GAZI	**Gazipasa**	**2.28**	**91**	*i* P	**Pn**	**08 47 10.8**	**-0.4**
GAZI				*i* S	**Sn**	**08 47 36.5**	**-1.5**
GAZI	**Gazipasa**	**2.28**	**91**	*i* P	**Pn**	**08 47 10.8**	**-0.4**
KULA	**Kula-Manisa**	**2.30**	**343**	*e*PN	**Pn**	**08 47 11.3**	**-0.3**
KULA	**Kula-Manisa**	**2.30**	**343**	*e*Pn	**Pn**	**08 47 11.3**	**-0.2**
SHUT	**Suhut-Afyon**	**2.40**	**20**	*e*PN	**Pn**	**08 47 12.6**	**-0.2**
SHUT	**Suhut-Afyon**	**2.40**	**20**	*e*Pn	**Pn**	**08 47 12.6**	**-0.2**
HDMB	**Hadim**	**2.49**	**74**	*e*PN	**Pn**	**08 47 15.3**	**+1.2**
HDMB	**Hadim**	**2.49**	**74**	*e*Pn	**Pn**	**08 47 15.3**	**+1.2**
SMG	**Samos**	**2.55**	**304**	*e*Pn	**Pn**	**08 47 11.2**	**-3.7**
SMG				*e*Sn	**Sn**	**08 47 40.0**	**-4.7**
SMG	**Samos**	**2.55**	**304**	*e*PN	**Pn**	**08 47 11.2**	**-3.7**
SMG				*e*SN	**Sn**	**08 47 40.0**	**-4.7**
SMG	**Samos**	**2.55**	**304**	*e*Pn	**Pn**	**08 47 11.2**	**-3.7**
SMG				*e*Sn	**Sn**	**08 47 40.0**	**-4.7**
ERMK	**Ermenek**	**2.77**	**82**	*i* P	**Pn**	**08 47 18.3**	**+0.4**
ERMK				*i* S	**Sn**	**08 47 48.0**	**-2.2**
ERMK	**Ermenek**	**2.77**	**82**	*i* P	**Pn**	**08 47 18.3**	**+0.3**
KONT	**Konya--Tatoy**	**2.81**	**54**	*e*PN	**Pn**	**08 47 19.8**	**+1.3**
KONT	**Konya--Tatoy**	**2.81**	**54**	*e*Pn	**Pn**	**08 47 19.8**	**+1.3**
BLCB	**Balcova**	**2.85**	**317**	*e*PN	**Pn**	**08 47 20.3**	**+1.2**
BLCB	**Balcova**	**2.85**	**317**	*e*Pn	**Pn**	**08 47 20.3**	**+1.2**
KDHN	**Kadinhani**	**3.04**	**43**	*i* P	**Pn**	**08 47 21.7**	**+0.1**
KDHN				*i* S	**Sn**	**08 47 56.3**	**-0.4**
KDHN	**Kadinhani**	**3.04**	**43**	*i* P	**Pn**	**08 47 21.7**	**+0.1**
KDHN				*i* S	**Sn**	**08 47 56.3**	**-0.5**
KIZT	**Kizilcal**	**3.19**	**36**	*e*PN	**Pn**	**08 47 24.0**	**+0.3**
KIZT	**Kizilcal**	**3.19**	**36**	*e*Pn	**Pn**	**08 47 24.0**	**+0.3**
NPS	**Neapolis**	**3.33**	**253**	*e*Pn	**Pn**	**08 47 25.8**	**+0.2**
NPS				*e*Sn	**Sn**	**08 48 03.0**	**-0.8**
NPS	**Neapolis**	**3.33**	**253**	*e*PN	**Pn**	**08 47 25.8**	**+0.2**
NPS				*e*SN	**Sn**	**08 48 03.0**	**-0.8**
NPS	**Neapolis**	**3.33**	**253**	*e*Pn	**Pn**	**08 47 25.8**	**+0.2**
NPS				*e*Sn	**Sn**	**08 48 03.0**	**-0.8**
IKL	**Isikli**	**3.38**	**90**	*e*PN	**Pn**	**08 47 26.8**	**+0.4**
IKL	**Isikli**	**3.38**	**90**	*e*Pn	**Pn**	**08 47 26.8**	**+0.4**
CHOS	**Chios island**	**3.44**	**308**	*e*PN	**Pn**	**08 47 24.0**	**-3.1**
CHOS				*e*SN	**Sn**	**08 48 00.3**	**

KAB pmax pmax
comp=Z,291nm,0.4s
KAB smax
comp=N,270nm,2.0s
KRAR Krasnoyarsk 5.51 328 *i* PN **Pb 09 02 02.1 -1.2**
KRAR pmax pmax
comp=Z,665nm,0.4s
OGRR Ongureny 6.21 66 *e*PN **Pn 09 01 58.5 -0.3**
OGRR *e* 09 02 17.3
OGRR *e* 09 03 36.1
OGRR pmax pmax
comp=Z,148nm,0.1s
OGRR smax
comp=N,2μm,1.1s
SONM Songino Array 6.51 121 Pn **Pn 09 02 01.5 -1.4**
SONM Pg **Pb 09 02 20.2 -0.2**
SONM Lg 09 03 49.6
SONM LR LR 09 04 49.6
SONM Songino Array 6.51 121 Pn **Pn 09 02 01.5 -1.4**
comp=N,0.5nm,0.3s,baz=306,slow=15,SNR=5.4
SONM Pg **Pb 09 02 20.2 -0.2**
comp=N,12nm,0.3s,baz=303,slow=18,SNR=67
SONM Lg 09 03 49.6
comp=N,23nm,0.3s,baz=304,slow=28,SNR=15
SONM LR LR 09 04 49.6
comp=N,332nm,21.7s,baz=305,slow=41
AKAR Aktash 6.71 264 *e*PN **Pb 09 02 25.9 +2.1**
AKAR *e* 09 03 47.2
AKAR Aktash 6.71 264 *e*Pg **Pb 09 02 25.9 +2.1**
AKAR *e*Sg **Sb 09 03 47.2 +3.4**
ULN Ulaanbaatar 6.85 118 *e*Pn **Pn 09 02 10.1 +2.5**
comp=N,5.3nm,0.7s
ULN *e*Sn **Sn 09 03 20.0 -5.5**
ULN Ulaanbaatar 6.85 118 *e*PN **Pn 09 02 10.1 +2.5**
ULN pmax pmax
comp=Z,5.0nm,0.7s
ELT Yel'tsovka 7.46 289 *e*Pg **Pb 09 02 38.4 +1.7**
ELT *e*Sg **Sb 09 04 12.4 +6.8**
NIZ Nizh Angarsk 8.08 53 *e*P **Pn 09 02 25.3 +0.9**
NIZ pmax pmax
comp=Z,108nm,0.9s
UKR Ust'-Kan 8.37 272 *e*P **Pn 09 02 27.9 -0.5**
UKR Ust'-Kan 8.37 272 *e*Pn **Pn 09 02 27.9 -0.5**
UKR *e*Pg **Pb 09 02 55.0 +3.0**
ZAA0 Zalesovo Array 8.42 292 *e*Pn **Pn 09 02 29.6 +0.4**
ZAA0 *e*Sn **Sn 09 04 02.1 -2.1**
ZALV Zalesovo Beam 8.42 292 Pn **Pn 09 02 29.3 +0.2**
comp=Z,0.7nm,0.3s,baz=97,slow=11,SNR=18
ZALV Pg Pn 09 02 56.1 +27
comp=Z,2.8nm,0.3s,baz=100,slow=17,SNR=9.0
ZALV Lg 09 04 42.6
comp=Z,6.7nm,0.3s,baz=113,slow=24,SNR=14
ZALV LR LR 09 05 48.7
comp=Z,245nm,20.4s,baz=102,slow=38
YLYR Ulyunkhan 8.58 61 *e*P **Pn 09 02 33.1 +1.8**
YLYR pmax pmax
comp=Z,45nm,1.1s
KMO Kumora 8.97 55 *e*P **Pn 09 02 36.9 +0.3**
MK31 Makanchi Array 11.33 252 ⇑Pn **Pn 09 03 07.4 -1.7**
comp=Z,1.6nm,0.5s,baz=68,slow=16,SNR=8.4
MK31 ⇓Pg Pn 09 03 48.6 +40
comp=Z,4.9nm,0.7s,baz=71,slow=14,SNR=6.0
MK31 ⇓Lg 09 06 14.3
comp=Z,54nm,0.8s,baz=58,slow=35,SNR=6.1
MK31 Makanchi Array 11.33 252 *e*Pn **Pn 09 03 08.8 -0.2**
MK31 *e*Sn **Sn 09 05 15.6 0.0**
MKAR Makanchi Array 11.33 252 Pn **Pn 09 03 08.6 -0.5**
comp=Z,0.2nm,0.3s,baz=70,slow=14,SNR=6.5
MKAR Pg Pn 09 03 51.3 +42
comp=Z,0.4nm,0.3s,baz=68,slow=13,SNR=9.2
MKAR Sn **Sn 09 05 13.7 -1.9**
comp=Z,0.5nm,0.3s,baz=62,slow=16,SNR=3.8
MKAR Lg 09 06 20.4
comp=Z,0.8nm,0.3s,baz=62,slow=32,SNR=7.7
MKAR Makanchi Array 11.33 252 P **Pn 09 03 08.6 -0.4**
MKAR 09 05 13.7
GTA Gaotai 12.11 174 *e*P **Pn 09 03 19.5 -0.1**
GTA pP 09 03 23.8
GTA sP 09 03 27.0
GTA S **Sn 09 05 21.3 -13**
GTA pmax pmax
comp=Z,4.0nm,0.9s
GTA pmax pmax
comp=Z,67nm,5.7s
GTA LR LR
comp=N,460nm,8.3s
GTA LR LR
comp=E,2μm,10.4s
GTA LR LR
comp=Z,740nm,9.2s
KURK Kurchatov 12.25 274 ⇑Pn **Pn 09 03 19.2 -2.4**
comp=Z,5.7nm,0.9s
KURK ⇑Lg 09 06 43.3
comp=Z,222nm,1.2s
KURK Kurchatov 12.25 274 Pn **Pn 09 03 21.9 +0.3**
comp=Z,0.1nm,0.3s,baz=88,slow=15,SNR=7.0
KURK Lg 09 06 51.7
comp=Z,0.7nm,0.3s,baz=321,slow=25,SNR=4.3
KURK Kurchatov 12.25 274*ce*P **Pn 09 03 20.6 -0.9**
KURK pmax pmax
comp=Z,4.0nm,1.2s
LZH Lanzhou 15.91 163 *e*P **Pn 09 04 07.5 -3.5**
LZH pP pP 09 04 10.8 -6.7
LZH sP sP 09 04 14.5 -4.3
LZH pmax pmax
comp=Z,21nm,1.5s
LZH pmax pmax
comp=Z,63nm,5.2s
LZH LR LR
comp=N,190nm,10.3s
LZH LR LR
comp=Z,240nm,12.5s
CLNS Chul'man 16.55 61 *e*P **Pn 09 04 20.1 +1.0**
CLNS pmax pmax
comp=Z,19nm,0.8s
CLNS pmax pmax
comp=E,18nm,1.2s
CLNS pmax pmax
comp=N,11nm,1.0s
CLNS MLR MLR
comp=N,164nm,12.0s
CLNS MLR MLR
comp=E,266nm,16.0s
CLNS MLR MLR
comp=Z,112nm,14.0s
BVAR Borovoye Array 16.98 286 P **Pn 09 04 25.1 +0.5**
comp=Z,0.3nm,0.3s,baz=90,slow=11,SNR=18
BRVK Borovoye 17.05 286*ce*P **Pn 09 04 24.6 -0.8**
BRVK pmax pmax
comp=Z,10.0nm,1.0s
TKM2 Tokmak 2 17.44 249 *e*Pn **Pn 09 04 31.6 +1.3**
comp=Z,11nm,1.0s
TKM2 Tokmak 2 17.44 249 *e*P **Pn 09 04 31.6 +1.2**
TKM2 pmax pmax
comp=Z,11nm,1.0s
KZA Kyzart 18.16 248 *e*Pn **Pn 09 04 41.8 +2.6**
comp=Z,18nm,1.1s
AAK Ala-Archa 18.26 250 P **Pn 09 04 40.4 -0.1**
comp=Z,0.3nm,0.3s,baz=94,slow=4.8,SNR=4.8
AAK Ala-Archa 18.26 250*ce*P **Pn 09 04 40.1 -0.4**
AAK pmax pmax
comp=Z,4.0nm,1.2s
UCH Uchtor 18.50 249 *e*P **Pn 09 04 46.5 +3.1**
comp=Z,6.9nm,0.9s
EKS2 Erkin-Say 18.67 251 *e*P **Pn 09 04 44.9 -0.6**
comp=Z,19nm,0.9s
AML Almayashu 19.04 250 *e*P **Pn 09 04 51.6 +1.7**
comp=Z,7.1nm,0.9s
KSH Kashi 19.47 241 *e*P **Pn 09 05 01.0 +5.9**
KSH *ep*P pP 09 05 05.0 +8.3
KSH *es*P sP 09 05 08.3 +10
KSH *e*PP 09 05 20.3
KSH *e*S **Sn 09 08 40.3 +6.9**
KSH *es*S sS 09 08 46.3 +8.1
KSH *e*PcP PcP 09 09 17.0 +2.5
KSH pmax pmax
comp=Z,3.0nm,0.7s
KSH pmax pmax
comp=Z,74nm,3.2s
KSH LR LR
comp=N,680nm,15.1s
KSH LR LR
comp=E,320nm,9.2s
KSH LR LR
comp=Z,190nm,6.9s
CN2 Changchun 19.90 102 *e*P **Pn 09 05 08.0 +7.8**
CN2 *e*S **Sn 09 08 43.5 -0.2**
CN2 LR LR
comp=N,900nm,13.0s
CN2 LR LR
comp=E,900nm,13.0s
KKAR Karatay Array 20.38 257 *e*P **P 09 05 03.4 -0.4**
comp=E,1.8nm,0.6s
AB31 Akbulak array 24.24 280 *i* P **P 09 05 44.3 +0.4**
ABKAR Akbulak array 24.24 280 *e*P **P 09 05 44.5 +0.6**
comp=E,1.3nm,0.6s,mb3.5
TIXI Tiksi 24.48 23 *e*P **P 09 05 45.2 -0.7**
TIXI pmax pmax
comp=Z,24nm,1.1s,mb4.5
TIXI MLR MLR
comp=Z,174nm,8.0s
AKTK Aktyubinsk 25.04 284 P **P 09 05 50.3 -0.9**
AKTK LR LR 09 15 58.9
AKTO Aktyubinsk 25.04 284 P **P 09 05 50.3 -0.9**
comp=Z,5.2nm,0.6s,mb4.2,baz=84,slow=10,SNR=17
AKTO LR LR 09 15 58.9
comp=Z,76nm,21.1s,MS3.2,baz=251,slow=37
KSRS Korea Array 25.28 112 LR LR 09 16 20.5
comp=Z,73nm,18.5s,MS3.2,baz=149,slow=38
CMAR Chiang Mai Arr 32.93 178 P **P 09 07 02.2 +0.5**
comp=Z,0.8nm,0.3s,mb4.1,baz=354,slow=6.4,SNR=4.3
PETK Petropavlovsk- 35.61 63 LR LR 09 22 49.2
comp=Z,54nm,18.5s,MS3.3,baz=290,slow=38
ARCES ARCESS Array B 37.23 326 P **P 09 07 38.4 +0.1**
comp=Z,1.8nm,0.7s,mb4.0,baz=70,slow=10,SNR=5.4
FINES FINESS Array B 39.01 313 P **P 09 07 52.6 -0.7**
FINES LR LR 09 25 45.5
FINES FINESS Array B 39.01 313 P **P 09 07 52.6 -0.7**
comp=Z,2.5nm,0.8s,mb4.0,baz=81,slow=12,SNR=5.1
FINES LR LR 09 25 45.5
comp=Z,132nm,18.1s,MS3.8,baz=214,slow=39
BRTR Keskin Array B 45.18 281 P **P 09 08 43.9 -0.1**
comp=Z,1.4nm,0.9s,mb3.8,baz=63,slow=5.7,SNR=5.3
BRTR Keskin Array B 45.18 281 *i* P **P 09 08 46.5 +2.6**
NOA NORSAR Array B 45.72 317 P **P 09 08 47.2 -0.7**
comp=Z,4.6nm,1.0s,mb4.4,baz=60,slow=7.9,SNR=7.3
NOA LR LR 09 29 03.5
comp=Z,59nm,18.6s,MS3.6,baz=75,slow=38
ILAR Eielson Array 53.76 29 P **P 09 09 48.8 -0.2**
comp=Z,1.2nm,0.9s,mb3.8,baz=310,slow=3.9,SNR=13
WRA Warramunga Arr 77.87 145 P **P 09 12 22.6 -2.2**
comp=Z,1.0nm,0.7s,mb3.9,baz=344,slow=6.2,SNR=12
ASAR Alice Springs 81.16 147 P **P 09 12 41.1 -1.5**
comp=Z,0.4nm,0.6s,mb3.5,baz=347,slow=6.2,SNR=5.8
ASAR Alice Springs 81.10 147 P **P 09 20 14.6 +0.3**
comp=Z,0.5nm,0.9s,mb3.5,baz=353,slow=6.6,SNR=4.2

ASRS ***26*** *09:07:54.4±4.3,51.°50N×98.°15E,h15km,Ms3.6/4*
MOS ***26*** *09:07:56.6±2.0,51.°33N×98.°05E,h10km,mb4.3/1, Error ellipse: s-maj=13.5km s-min=9.6km az=158.7*
ISCJB ***26*** *09:07:57.9±0.4,51.°42N±0.°08×98.°13E±0.°05,h10km, mb3.6/6, Error ellipse: s-maj=11.0km s-min=4.2km az=4.9*
IDC ***26*** *09:07:57.1±0.9,51.°39N×98.°26E,h0km,mb3.7/6, mb1 3.8/10,mb1mx3.7/28,mbtmp3.6/10,ML3.3/4, Error ellipse: s-maj=27.1km s-min=14.2km az=18.0*
NEIC ***26*** *09:07:58.4±0.6,51.°43N×98.°25E,h10km, Error ellipse: s-maj=21.1km s-min=9.6km az=200.0*
ISC 26 09:07:59.2±0.4,51.°41N±0.°07×98.°14E±0.°05,h10km,n29, σ1s02/30,mb3.6/6,1D,Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ORL	**Orlik**	**1.53**	**42**	*e*PN		**Pn**	**09 08 25.7**	**-0.9**
ORL				*e*			09 08 47.9	
ORL				pmax	pmax			
	comp=Z,685nm,0.6s							
ORL				smax				
	comp=N,2μm,8.9s							
MOY	**Mondy**	**1.80**	**81**	⇓*i*PN		**Pn**	**09 08 30.5**	**+0.2**
MOY				*e*S		**Sn**	**09 08 56.0**	**+2.9**
MOY				pmax	pmax			
	comp=Z,634nm,0.6s							
MOY				smax				
	comp=N,5μm,0.6s							
ARS	**Arshan**	**2.72**	**78**	*e*PN		**Pn**	**09 08 43.6**	**+0.8**
ARS				*e*			09 08 47.2	
ARS				*e*			09 09 24.7	
ARS				pmax	pmax			
	comp=Z,294nm,0.4s							
ARS				smax				
	comp=E,6μm,0.8s							
ZAK	**Zakamensk**	**3.42**	**106**	*e*PN		**Pn**	**09 08 52.9**	**+0.5**
ZAK				*e*			09 08 58.1	
ZAK				*e*			09 09 44.4	
ZAK				pmax	pmax			
	comp=Z,92nm,0.4s							
ZAK				smax				
	comp=N,1μm,0.8s							
TLY	**Talaya**	**3.45**	**83**	*e*PN		**Pb**	**09 08 58.3**	**-2.0**
TLY				*e*			09 09 45.0	
TLY				pmax	pmax			
	comp=Z,87nm,0.5s							
TLY				smax				
	comp=E,467nm,0.4s							
IRK	**Irkutsk**	**3.90**	**75**	*e*PN		**Pb**	**09 09 06.4**	**-1.5**
IRK				*e*			09 09 58.8	
IRK				pmax	pmax			
	comp=Z,281nm,0.1s							
IRK				smax				
	comp=N,4μm,0.9s							
CERR	**Cheremushki**	**4.39**	**292**	*i* PN		**Pb**	**09 09 13.7**	**-2.6**
CERR				*i*			09 10 09.9	
CERR	**Cheremushki**	**4.39**	**292**	*i* Pg		**Pb**	**09 09 13.7**	**-2.6**
CERR				*i* Sg		**Sb**	**09 10 09.9**	**+0.7**
TRG	**Tyrgan**	**5.24**	**72**	*e*PN		**Pb**	**09 09 31.5**	**+0.7**
TRG				*e*			09 10 39.9	
TRG				pmax	pmax			
	comp=Z,106nm,0.7s							
TRG				smax				
	comp=N,573nm,0.5s							
OGRR	**Ongureny**	**6.19**	**65**	*e*PN		**Pn**	**09 09 31.2**	**+0.7**
OGRR				*e*			09 09 49.6	
SONM	**Songino Array**	**6.45**	**120**	Pn		**Pn**	**09 09 32.8**	**-1.3**
	comp=N,0.3nm,0.3s,baz=5.2,slow=15,SNR=3.6							
SONM				Pg		**Pb**	**09 09 51.5**	**+0.1**
	comp=N,6.3nm,0.3s,baz=297,slow=17,SNR=33							
SONM				Lg			09 11 18.3	
	comp=N,15nm,0.3s,baz=300,slow=27,SNR=13							
SONM	**Songino Array**	**6.45**	**120**	PN		**Pn**	**09 09 32.8**	**-1.3**
SONM							09 09 51.5	
AKAR	**Aktash**	**6.75**	**265**	*e*Sg		**Sb**	**09 11 22.0**	**+5.0**
ELT	**Yel'tsovka**	**7.52**	**289**	*e*Pg		**Pb**	**09 10 09.3**	**-0.3**
NIZ	**Nizh Angarsk**	**8.07**	**53**	*e*P		**Pn**	**09 09 56.9**	**+0.6**
NIZ				pmax	pmax			
	comp=Z,38nm,1.0s							
UKR	**Ust'-Kan**	**8.41**	**272**	*e*Pg		Px	09 10 28.4	
UKR				*e*Sg		Sx	09 12 19.3	
ZALV	**Zalesovo Beam**	**8.48**	**293**	Pn		**Pn**	**09 10 01.9**	**0.0**
	comp=Z,0.2nm,0.3s,baz=96,slow=13,SNR=3.8							
ZALV				Pg		Pn	09 10 28.7	+27
	comp=Z,1.1nm,0.3s,baz=104,slow=14,SNR=6.2							
ZALV				Lg			09 12 18.9	
	comp=Z,1.8nm,0.3s,baz=113,slow=23,SNR=12							
KMO	**Kumora**	**8.96**	**55**	*e*P		**Pn**	**09 10 08.8**	**+0.4**
KMO				pmax	pmax			
	comp=Z,22nm,0.4s							
MKAR	**Makanchi Array**	**11.36**	**252**	Pn		**Pn**	**09 10 41.6**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=72,slow=14,SNR=4.5							
MKAR				Pg		Pn	09 11 23.9	+42
	comp=Z,0.3nm,0.3s,baz=80,slow=16,SNR=4.3							
MKAR				Lg			09 13 48.8	
	comp=Z,0.3nm,0.3s,baz=69,slow=27,SNR=4.3							
KURK	**Kurchatov**	**12.30**	**274**	Lg			09 14 22.6	
	comp=Z,0.1nm,0.3s,baz=79,slow=35,SNR=4.9							
BVAR	**Borovoye Array**	**17.04**	**286**	P		**Pn**	**09 11 57.0**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=97,slow=12,SNR=4.9							
AKTK	**Aktyubinsk**	**25.09**	**284**	P		**P**	**09 13 24.3**	**+0.6**
AKTO	**Aktyubinsk**	**25.09**	**284**	P		**P**	**09 13 24.3**	**+0.6**
	comp=Z,2.4nm,0.7s,mb3.8,baz=72,slow=7.9,SNR=4.6							
BRTR	**Keskin Array B**	**45.23**	**281**	P		**P**	**09 16 17.2**	**+0.9**
	comp=Z,0.2nm,0.3s,mb3.4,baz=34,slow=5.4,SNR=2.3							
NOA	**NORSAR Array B**	**45.78**	**317**	P		**P**	**09 16 19.4**	**-1.0**
	comp=Z,1.5nm,0.8s,mb4.0,baz=62,slow=7.8,SNR=3.9							
ILAR	**Eielson Array**	**53.77**	**29**	P		**P**	**09 17 20.8**	**-0.4**
	comp=Z,0.8nm,1.0s,mb3.6,baz=294,slow=4.7,SNR=5.2							
KMBO	**Kilima Mbogo**	**77.17**	**246**	*i* P		**P**	**09 19 33.2**	**+3.1**
KMBO				pmax	pmax			
	comp=Z,1.0nm,0.3s							
WRA	**Warramunga Arr**	**77.81**	**145**	P		**P**	**09 19 55.8**	**-0.7**
	comp=Z,0.4nm,0.6s,mb3.5,baz=344,slow=6.3,SNR=7.6							

CSEM ***26*** *09:09:31.8,36.°58N×6.°33E,h0km,ML3.5,After ALG*
CRAAG 26 09:09:31.8,36.°58N×6.°33E,Ml3.5,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CASM	**Ain Smara**	**0.34**	**158**	P		Pg	09 09 40.1	+1.8
CASM	**Ain Smara**	**0.34**	**158**	P		Pg	09 09 40.1	+1.8
CKFL	**Kef-Lekhel**	**0.36**	**119**	P		Pg	09 09 41.0	+2.3
CKFL	**Kef-Lekhel**	**0.36**	**119**	P		Pg	09 09 41.0	+2.3
DFRA	**Djebel Bou Aff**	**0.37**	**265**	P		Pg	09 09 40.9	+2.1
DFRA	**Djebel Bou Aff**	**0.37**	**265**	P		Pg	09 09 40.9	+2.1
CAEH	**'Ain El Ouahch**	**0.46**	**64**	P		Pg	09 09 43.1	+2.4
CAEH	**'Ain El Ouahch**	**0.46**	**64**	P		Pg	09 09 43.1	+2.4
CTEI	**Djebel Teioual**	**0.51**	**173**	P		Pg	09 09 44.0	+2.4
CTEI	**Djebel Teioual**	**0.51**	**173**	P		Pg	09 09 44.0	+2.4
SET	**Setif**	**0.84**	**244**	P		Pg	09 09 51.0	+3.1
SET	**Setif**	**0.84**	**244**	P		Pg	09 09 51.0	+3.1
CKHR	**Kef el Ahmar**	**0.87**	**230**	P		Pg	09 09 52.1	+3.7
CKHR	**Kef el Ahmar**	**0.87**	**230**	P		Pg	09 09 52.1	+3.7
CMAH	**Djebel Manchou**	**0.88**	**86**	P		Pg	09 09 51.5	+2.9
CMAH	**Djebel Manchou**	**0.88**	**86**	P		Pg	09 09 51.5	+2.9
ABSA	**Djebel Ababsia**	**0.97**	**108**	P		Pg	09 09 52.9	+2.5
ABSA	**Djebel Ababsia**	**0.97**	**108**	P		Pg	09 09 52.9	+2.5

ISCJB ***26*** *09:22:06.6±0.7,43.°06N±0.°04×74.°92E±0.°04,h7km±6km, Error ellipse: s-maj=7.3km s-min=5.0km az=11.6*
KNET ***26*** *09:22:06.5±0.4,43.°03N×74.°87E,h12km±2km,ml1.9, Error ellipse: s-maj=3.2km s-min=1.9km az=59.0*
ISC 26 09:22:06.8±0.8,43.°06N±0.°04×74.°91E±0.°04,h10km±6km, n11,σ0s52/19,13C-4D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CHMS	**Chumysh**	**0.13**	**243**	⇑P		**Pg**	**09 22 09.4**	**-0.4**
	284nm,0.2s,SNR=292							
CHMS				⇓S		**Sg**	**09 22 11.3**	**-0.6**
	291nm,0.2s							
USP	**Ospenovka**	**0.37**	**305**	⇑P		**Pg**	**09 22 14.2**	**+0.2**
	89nm,0.1s,SNR=71							
USP				⇓S		**Sg**	**09 22 19.6**	**+0.7**
	90nm,0.2s							
KBK	**Karagaybulak**	**0.40**	**176**	⇑P		**Pg**	**09 22 14.9**	**+0.2**
	161nm,0.1s,SNR=36							
KBK				⇑S		**Sg**	**09 22 20.9**	**+0.9**
	401nm,0.3s							
TKM2	**Tokmak 2**	**0.52**	**105**	⇓P		**Pg**	**09 22 16.6**	**-0.3**
	16nm,0.6s							
TKM2				⇑S		**Sg**	**09 22 24.1**	**+0.3**
	17nm,0.2s							
AAK	**Ala-Archa**	**0.53**	**216**	⇑P		**Pg**	**09 22 16.8**	**-0.2**
	27nm,0.2s,SNR=22							
AAK				⇑S		**Sg**	**09 22 24.0**	**+0.1**
	96nm,0.2s							
UCH	**Uchtor**	**0.88**	**200**	⇑P		**Pg**	**09 22 23.3**	**-0.4**
	3.3nm,0.1s,SNR=6.4							
EKS2	**Erkin-Say**	**0.93**	**245**	⇑P		**Pg**	**09 22 24.4**	**-0.1**
	16nm,0.1s,SNR=15							
EKS2				⇓S		**Sg**	**09 22 37.4**	**+0.8**
	14nm,0.2s							
KZA	**Kyzart**	**1.01**	**166**	⇑P		**Pg**	**09 22 26.0**	**-0.2**
	9.1nm,0.2s,SNR=9.5							
ULHL	**Ulahol**	**1.27**	**129**	⇑P		**Pn**	**09 22 30.3**	**-0.3**
	5.9nm,0.2s,SNR=19							
AML	**Almayashu**	**1.29**	**225**	⇑P		**Pn**	**09 22 30.9**	**+0.1**
	7.1nm,0.2s,SNR=21							
AML				⇑S		**Sb**	**09 22 47.8**	**0.0**
	26nm,0.2s							
KK31	**Karatay Array**	**3.22**	**272**	Pn		**Pg**	**09 23 03.7**	**-4.8**
	0.4nm,0.2s,baz=95,slow=15,SNR=25							
KK31				Sn		**Sg**	**09 23 46.6**	**-3.7**
	2.3nm,0.3s,baz=85,slow=29,SNR=5.4							

IDC ***26*** *09:33:17.9±1.9,53.°51N×87.°68E,h0km,mb1 3.7/4, mb1mx3.4/28,mbtmp3.7/4,ML3.6/4, Error ellipse: s-maj=18.6km s-min=12.0km az=40.0*
NNC ***26*** *09:33:23.8±3.1,53.°52N×87.°23E,h24km±21km,mb3.8, mpv3.8, Error ellipse: s-maj=22.6km s-min=13.9km az=63.0*
ISC 26 09:33:19.7±1.9,53.°62N±0.°08×87.°5E±0.°1,h16km±15km,n9, σ1s32/16,3C-7D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**1.64**	**283**	Pg		**Pg**	**09 33 48.1**	**-3.0**
	16nm,0.3s,baz=102,slow=15,SNR=209							
ZALV				Lg			09 34 12.0	
	21nm,0.3s,baz=112,slow=27,SNR=20							
KURK	**Kurchatov**	**6.20**	**246**	⇓Pn		**Pn**	**09 34 51.3**	**+0.8**
	6.7nm,0.6s							
KURK				⇑Sn		**Sn**	**09 36 00.3**	**-0.7**
	6.1nm,0.6s							
KURK				⇑Lg			09 36 33.9	
	23nm,0.8s							
KURK	**Kurchatov**	**6.20**	**246**	Pn		**Pn**	**09 34 52.7**	**+2.2**
	0.9nm,0.3s,baz=64,slow=15,SNR=43							
KURK				Sn		**Sn**	**09 36 04.8**	**+3.8**
	0.2nm,0.3s,baz=243,slow=30,SNR=6.2							
KURK				Lg			09 36 40.3	
	0.3nm,0.3s,baz=60,slow=30,SNR=11							
MK31	**Makanchi Array**	**7.61**	**208**	⇓Pn		**Pn**	**09 35 10.1**	**+0.3**
	2.5nm,0.6s,baz=29,slow=13,SNR=35							
MK31				⇓Sn		**Sn**	**09 36 35.0**	**-0.6**
	3.0nm,0.7s,baz=28,slow=28,SNR=3.5							
MK31				⇓Lg			09 37 18.9	
	9.1nm,0.8s,baz=38,slow=29,SNR=5.7							
MKAR	**Makanchi Array**	**7.61**	**208**	Pn		**Pn**	**09 35 10.4**	**+0.6**
	1.0nm,0.3s,baz=29,slow=13,SNR=44							
MKAR				Sn		**Sn**	**09 36 35.6**	**-0.1**
	0.4nm,0.3s,baz=27,slow=28,SNR=6.1							
MKAR				Lg			09 37 17.3	
	0.6nm,0.3s,baz=35,slow=28,SNR=6.7							
VOSK	**Vostochnaya**	**9.98**	**272**	⇑Pn		**Pn**	**09 35 42.7**	**+0.5**
	1.9nm,0.7s							
VOSK				⇓Sn		**Sn**	**09 37 32.7**	**-1.0**
	5.6nm,0.6s							
BVA0	**Borovoye Array**	**10.27**	**274**	⇓Pn		**Pn**	**09 35 48.3**	**+2.1**
	0.3nm,0.5s,baz=75,slow=14,SNR=5.5							
BVA0				⇓Sn		**Sn**	**09 37 38.1**	**-2.8**
	0.7nm,0.6s,baz=232,slow=36,SNR=6.9							
BVAR	**Borovoye Array**	**10.27**	**274**	Pn		**Pn**	**09 35 47.7**	**+1.5**
	0.6nm,0.3s,baz=74,slow=16,SNR=6.4							
BVAR				Sn		**Sn**	**09 37 41.3**	**+0.4**
	0.8nm,0.3s,baz=80,slow=25,SNR=7.5							
SONM	**Songino Array**	**13.26**	**108**	Pn		**Pn**	**09 36 25.6**	**-1.5**
	0.1nm,0.3s,baz=297,slow=13,SNR=2.7							
SONM				Lg			09 40 14.5	
	0.1nm,0.3s,baz=294,slow=29,SNR=5.7							

BJI ***26*** *09:46:21.1,35.°66N×21.°51E,h25km,mB4.9/8,mb4.7/12, Ms4.5/6,Ms7 4.3/6*
MOS ***26*** *09:46:23.7±1.3,36.°10N×21.°76E,h24km,mb4.6/20, Error ellipse: s-maj=4.8km s-min=2.5km az=98.0*
PDG ***26*** *09:46:24.6±0.1,36.°00N×20.°60E,h19km±11km,MD5.1/1, ML5.0/9, Error ellipse: s-maj=149.0km s-min=29.6km az=90.0*
ATH ***26*** *09:46:25.0,36.°13N×21.°87E,h25km±1km,ML4.4*
NEIC ***26*** *09:46:25.0,36.°13N×21.°87E,h25km,mb4.3/25, ML4.4(ATH), After ATH.*
BEO ***26*** *09:46:25.9±0.8,36.°21N×21.°37E,h0km,ML4.9/5*
THE ***26*** *09:46:26.0,36.°16N×21.°88E,h5km±2km,ML4.4/4, Error ellipse: s-maj=3.3km s-min=1.1km az=236.0*
CSEM ***26*** *09:46:26.9±0.1,36.°08N×21.°78E,h40km,mb4.5/22,Ms3.1, Error ellipse: s-maj=3.5km s-min=2.5km az=41.0*
IDC ***26*** *09:46:26.4±4.1,36.°15N×21.°92E,h28km±29km,mb4.1/22, mb1 4.2/33,mb1mx4.1/42,mbtmp4.1/33,ML3.9/8, MS3.6/8, Ms1 3.6/8,ms1mx3.1/43, Error ellipse: s-maj=14.3km s-min=11.1km az=177.0*
ISCJB ***26*** *09:46:26.3±0.3,36.°17N±0.°02×21.°75E±0.°02,h50km±3km, mb4.4/44,MS3.5/8, Error ellipse: s-maj=3.6km s-min=2.4km az=31.3*
HLW ***26*** *09:46:28.0,36.°08N×22.°44E,h34km±41km,Ml4.2*
ISC 26 09:46:27.3±0.2,36.°12N±0.°02×21.°77E±0.°02,h39km±3km, h38km±2.0km:pP-P,n684,σ1s30/781,mb4.4/44,MS3.5/8, 47C-42D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.77**	**359**	*e*PN	**Pn**	**09 46 39.5**	**-2.2**
PYL				*e*SN	**Sn**	**09 46 51.4**	**-0.7**
PYL	**PYLOS**	**0.77**	**359**	P	**Pn**	**09 46 39.4**	**-2.3**
PYL	**PYLOS**	**0.77**	**359**	*e*Pn	**Pn**	**09 46 39.5**	**-2.2**
PYL				*e*Sn	**Sn**	**09 46 51.4**	**-0.7**
KYTH	**Kithira**	**1.04**	**81**	*e*Pn	**Pn**	**09 46 43.7**	**-1.6**
KYTH	**Kithira**	**1.04**	**81**	*e*PN	**Pn**	**09 46 43.7**	**-1.6**
KYTH	**Kithira**	**1.04**	**81**	*e*Pn	**Pn**	**09 46 43.7**	**-1.6**
ITM	**Ithomi**	**1.06**	**7**	*e*Pn	**Pn**	**09 46 45.1**	**-0.6**
ITM				*e*Sn	**Sn**	**09 47 00.3**	**+1.0**
ITM	**Ithomi**	**1.06**	**7**	*e*PN	**Pn**	**09 46 45.1**	**-0.6**
ITM				*e*SN	**Sn**	**09 47 00.3**	**+1.0**
ITM	**Ithomi**	**1.06**	**7**	P	**Pn**	**09 46 44.7**	**-1.0**
ITM	**Ithomi**	**1.06**	**7**	P	**Pn**	**09 46 44.7**	**-1.0**
ITM	**Ithomi**	**1.06**	**7**	*e*Pn	**Pn**	**09 46 45.1**	**-0.6**
ITM				*e*Sn	**Sn**	**09 47 00.3**	**+1.0**
VLI	**Veliai**	**1.12**	**57**	*e*Pn	**Pn**	**09 46 44.8**	**-1.6**
VLI				*e*Sn	**Sn**	**09 47 00.3**	**-0.2**
VLI	**Veliai**	**1.12**	**57**	*e*PN	**Pn**	**09 46 44.8**	**-1.6**
VLI				*e*SN	**Sn**	**09 47 00.3**	**-0.2**
VLI	**Veliai**	**1.12**	**57**	*e*Pn	**Pn**	**09 46 44.8**	**-1.6**
VLI				*e*Sn	**Sn**	**09 47 00.3**	**-0.2**
VLX	**Vlachokerasia**	**1.34**	**21**	*e*PN	**Pn**	**09 46 49.3**	**-0.2**
VLX				*e*SN	**Sn**	**09 47 07.9**	**+1.8**
VLX	**Vlachokerasia**	**1.34**	**21**	P	**Pn**	**09 46 49.1**	**-0.4**
VLX				S	**Sn**	**09 47 08.0**	**+1.9**
VLX	**Vlachokerasia**	**1.34**	**21**	*e*Pn	**Pn**	**09 46 49.3**	**-0.2**
VLX				*e*Sn	**Sn**	**09 47 07.9**	**+1.8**
DID	**Didima**	**1.82**	**40**	*e*PN	**Pn**	**09 46 56.2**	**+0.2**
DID				*e*SN	**Sn**	**09 47 17.4**	**-0.4**
DID	**Didima**	**1.82**	**40**	P	**Pn**	**09 46 56.4**	**+0.4**
DID				S	**Sn**	**09 47 20.1**	**+2.3**
DID	**Didima**	**1.82**	**40**	*e*Pn	**Pn**	**09 46 56.2**	**+0.2**
DID				*e*Sn	**Sn**	**09 47 17.4**	**-0.4**
DID				S	**Sn**	**09 47 20.1**	**+2.3**
GUR	**Goura**	**1.87**	**14**	*e*PN	**Pn**	**09 46 57.8**	**+1.1**
GUR				*e*SN	**Sn**	**09 47 19.8**	**+0.7**
GUR	**Goura**	**1.87**	**14**	P	**Pn**	**09 46 57.9**	**+1.2**
GUR	**Goura**	**1.87**	**14**	*e*Pn	**Pn**	**09 46 57.8**	**+1.1**
GUR				*e*Sn	**Sn**	**09 47 19.8**	**+0.7**
KARN	**Karanos**	**1.89**	**112**	*e*PN	**Pn**	**09 46 57.1**	**+0.1**
KARN				*e*SN	**Sn**	**09 47 20.6**	**+1.0**
KARN	**Karanos**	**1.89**	**112**	P	**Pn**	**09 46 57.0**	**0.0**
KARN				S	**Sn**	**09 47 20.8**	**+1.2**
KARN	**Karanos**	**1.89**	**112**	P	**Pn**	**09 46 57.0**	**0.0**
KARN				*e*Sn	**Sn**	**09 47 20.6**	**+1.0**
VAM	**Vamos**	**2.10**	**109**	*e*Pn	**Pn**	**09 47 00.0**	**+0.1**
VAM				*e*Sn	**Sn**	**09 47 25.9**	**+1.1**
VAM	**Vamos**	**2.10**	**109**	*e*PN	**Pn**	**09 47 00.0**	**+0.1**
VAM				*e*SN	**Sn**	**09 47 25.9**	**+1.1**
VAM	**Vamos**	**2.10**	**109**	*e*Pn	**Pn**	**09 47 00.0**	**+0.1**
VAM				*e*Sn	**Sn**	**09 47 25.9**	**+1.1**
LAKA	**Lakka**	**2.12**	**4**	P	**Pn**	**09 47 02.4**	**+2.2**
LAKA				S	**Sn**	**09 47 27.7**	**+2.4**
LAKA	**Lakka**	**2.12**	**4**	P	**Pn**	**09 47 02.4**	**+2.2**
LAKA				S	**Sn**	**09 47 27.7**	**+2.4**
LTK	**Loutraki**	**2.13**	**26**	*e*PB	**Pn**	**09 47 01.3**	**+1.0**
LTK	**Loutraki**	**2.13**	**26**	P	**Pn**	**09 47 01.3**	**+1.0**
LTK	**Loutraki**	**2.13**	**26**	P	**Pn**	**09 47 01.3**	**+1.0**
KFL	**Anninata**	**2.13**	**339**	P	**Pn**	**09 47 01.4**	**+1.0**
KFL	**Anninata**	**2.13**	**339**	P	**Pn**	**09 47 01.4**	**+1.0**
NAIG	**Nisos Aigina**	**2.14**	**40**	*e*Pb	**Pn**	**09 47 01.1**	**+0.7**
NAIG	**Nisos Aigina**	**2.14**	**40**	*e*PB	**Pn**	**09 47 01.1**	**+0.7**
NAIG	**Nisos Aigina**	**2.14**	**40**	*e*Pb	**Pn**	**09 47 01.1**	**+0.7**
UPR	**University Cam**	**2.16**	**0**	*e*PN	**Pn**	**09 47 01.4**	**+0.7**
UPR	**University Cam**	**2.16**	**0**	*e*Pn	**Pn**	**09 47 01.4**	**+0.7**
TRIZ	**Trizonia**	**2.25**	**6**	P	**Pn**	**09 47 03.7**	**+1.7**
TRIZ	**Trizonia**	**2.25**	**6**	P	**Pn**	**09 47 03.7**	**+1.7**
VLS	**Valsamata**	**2.26**	**336**	P	**Pn**	**09 47 02.9**	**+0.8**
VLS	**Valsamata**	**2.26**	**336**	P	**Pn**	**09 47 03.1**	**+1.0**
VLS	**Valsamata**	**2.26**	**336**	P	**Pn**	**09 47 02.9**	**+0.8**
KALE	**Kalithea**	**2.29**	**7**	P	**Pn**	**09 47 04.3**	**+1.8**
KALE				S	**Sn**	**09 47 31.3**	**+1.9**
KALE	**Kalithea**	**2.29**	**7**	P	**Pn**	**09 47 04.3**	**+1.8**
KALE				S	**Sn**	**09 47 31.3**	**+1.9**
EFP	**Efpalio**	**2.31**	**3**	*e*PB	**Pn**	**09 47 04.3**	**+1.6**
EFP	**Efpalio**	**2.31**	**3**	P	**Pn**	**09 47 04.5**	**+1.8**
EFP	**Efpalio**	**2.31**	**3**	P	**Pn**	**09 47 04.5**	**+1.8**
DSF	**Desfina**	**2.37**	**15**	P	**Pn**	**09 47 04.2**	**+0.6**
DSF	**Desfina**	**2.37**	**15**	P	**Pn**	**09 47 04.2**	**+0.6**
VLY	**Voula,Athens**	**2.37**	**43**	*e*Pn	**Pn**	**09 47 03.5**	**-0.1**
VLY	**Voula,Athens**	**2.37**	**43**	*e*PN	**Pn**	**09 47 03.5**	**-0.1**
VLY	**Voula,Athens**	**2.37**	**43**	*e*Pn	**Pn**	**09 47 03.5**	**-0.1**
ATH	**Athens Observa**	**2.42**	**40**	*e*Pn	**Pn**	**09 47 08.1**	**-0.2**
ATH				P		09 47 08.0	
ATH	**Athens Observa**	**2.42**	**40**	*e*PN	**Pn**	**09 47 04.1**	**-0.2**
ATH	**Athens Observa**	**2.42**	**40**	*e*Pn	**Pn**	**09 47 04.1**	**-0.2**
ATHU	**Athens Univers**	**2.45**	**41**	P	**Pn**	**09 47 05.7**	**+1.0**
ATHU				S	**Sn**	**09 47 34.0**	**+0.6**
ATHU	**Athens Univers**	**2.45**	**41**	P	**Pn**	**09 47 05.7**	**+1.0**
ATHU				S	**Sn**	**09 47 34.0**	**+0.6**
PTL	**Penteli**	**2.55**	**40**	*e*Pn	**Pn**	**09 47 06.0**	**-0.1**
PTL	**Penteli**	**2.55**	**40**	*e*PN	**Pn**	**09 47 06.0**	**-0.1**
PTL	**Penteli**	**2.55**	**40**	*e*Pn	**Pn**	**09 47 06.0**	**-0.1**
IDI	**Anoyia**	**2.67**	**107**	*e*Pn	**Pn**	**09 47 07.8**	**0.0**
IDI	**Anoyia**	**2.67**	**107**	*e*PN	**Pn**	**09 47 07.8**	**0.0**
IDI	**Anoyia**	**2.67**	**107**	*e*PN	**Pn**	**09 47 07.8**	**0.0**
LKR	**Lokris**	**2.71**	**21**	P	**Pn**	**09 47 08.3**	**0.0**
LKR	**Lokris**	**2.71**	**21**	P	**Pn**	**09 47 08.6**	**+0.3**
LKR	**Lokris**	**2.71**	**21**	P	**Pn**	**09 47 08.6**	**+0.3**
SIVA	**Sivas**	**2.71**	**113**	*e*Pn	**Pn**	**09 47 07.8**	**-0.5**
SIVA	**Sivas**	**2.71**	**113**	*e*PN	**Pn**	**09 47 07.8**	**-0.5**
SIVA	**Sivas**	**2.71**	**113**	P	**Pn**	**09 47 08.5**	**+0.2**
SIVA				S	**Sn**	**09 47 43.2**	**+3.3**
SIVA	**Sivas**	**2.71**	**113**	*e*Pn	**Pn**	**09 47 07.8**	**-0.5**
SIVA	**Sivas**	**2.71**	**113**	P	**Pn**	**09 47 08.5**	**+0.2**
ATAL	**Atalanti**	**2.75**	**21**	P	**Pn**	**09 47 09.2**	**+0.3**
ATAL	**Atalanti**	**2.75**	**21**	P	**Pn**	**09 47 09.2**	**+0.3**
EVR	**Evrytania**	**2.79**	**1**	*e*Pb	**Pn**	**09 47 11.7**	**+2.3**
EVR	**Evrytania**	**2.79**	**1**	*e*PB	**Pn**	**09 47 11.7**	**+2.3**
LKD2	**Lefkada island**	**2.81**	**342**	P	**Pn**	**09 47 11.8**	**+2.2**
LKD2				S	**Sn**	**09 47 45.8**	**+3.6**
LKD2	**Lefkada island**	**2.81**	**342**	P	**Pn**	**09 47 11.8**	**+2.2**
AGG	**Agios Georgios**	**2.93**	**9**	*e*Pb	**Pn**	**09 47 13.6**	**+2.3**
AGG	**Agios Georgios**	**2.93**	**9**	*e*PB	**Pn**	**09 47 13.6**	**+2.3**
AGG	**Agios Georgios**	**2.93**	**9**	P	**Pn**	**09 47 12.5**	**+1.2**
AGG	**Agios Georgios**	**2.93**	**9**	P	**Pn**	**09 47 12.5**	**+1.2**
LAST	**Lasithi**	**3.17**	**106**	*e*Pn	**Pn**	**09 47 14.5**	**-0.1**
LAST	**Lasithi**	**3.17**	**106**	*e*PN	**Pn**	**09 47 14.5**	**-0.1**
LAST	**Lasithi**	**3.17**	**106**	P	**Pn**	**09 47 14.8**	**+0.2**
LAST	**Lasithi**	**3.17**	**106**	*e*Pn	**Pn**	**09 47 14.5**	**-0.1**
LAST	**Lasithi**	**3.17**	**106**	P	**Pn**	**09 47 14.8**	**+0.2**
APE	**Apeiranthos**	**3.17**	**72**	*e*Pn	**Pn**	**09 47 14.1**	**-0.5**
APE				P		09 47 17.4	
APE	**Apeiranthos**	**3.17**	**72**	*e*PN	**Pn**	**09 47 14.1**	**-0.5**
APE	**Apeiranthos**	**3.17**	**72**	P	**Pn**	**09 47 14.4**	**-0.2**
APE	**Apeiranthos**	**3.17**	**72**	*e*Pn	**Pn**	**09 47 14.1**	**-0.5**
APE	**Apeiranthos**	**3.17**	**72**	P	**Pn**	**09 47 14.4**	**-0.2**
NEO	**Neokhori**	**3.38**	**20**	P	**Pn**	**09 47 17.8**	**+0.3**
NEO	**Neokhori**	**3.38**	**20**	P	**Pn**	**09 47 17.8**	**+0.3**
XOR	**Xorichti**	**3.43**	**19**	P	**Pn**	**09 47 18.5**	**+0.3**
XOR	**Xorichti**	**3.43**	**19**	P	**Pn**	**09 47 18.3**	**+0.1**
XOR	**Xorichti**	**3.43**	**19**	P	**Pn**	**09 47 18.5**	**+0.3**
THL	**Klokotos Trika**	**3.44**	**3**	*e*PN	**Pn**	**09 47 20.1**	**+1.7**
THL	**Klokotos Trika**	**3.44**	**3**	*e*Pn	**Pn**	**09 47 20.1**	**+1.7**
AOS	**Alonnisos**	**3.48**	**28**	P	**Pn**	**09 47 18.8**	**0.0**
AOS	**Alonnisos**	**3.48**	**28**	P	**Pn**	**09 47 18.6**	**-0.2**
AOS	**Alonnisos**	**3.48**	**28**	P	**Pn**	**09 47 18.8**	**0.0**
IGT	**Igoumenitsa**	**3.59**	**342**	P	**Pn**	**09 47 21.2**	**+0.8**
IGT	**Igoumenitsa**	**3.59**	**342**	P	**Pn**	**09 47 21.6**	**+1.2**
IGT	**Igoumenitsa**	**3.59**	**342**	P	**Pn**	**09 47 21.2**	**+0.8**
JAN	**Janina**	**3.60**	**349**	*e*Pn	**Pn**	**09 47 22.8**	**+2.2**
JAN	**Janina**	**3.60**	**349**	*e*PN	**Pn**	**09 47 22.8**	**+2.2**
JAN	**Janina**	**3.60**	**349**	*e*Pn	**Pn**	**09 47 22.8**	**+2.2**
ZKR	**Zakros**	**3.76**	**104**	*e*Pn	**Pn**	**09 47 22.1**	**-0.6**
ZKR	**Zakros**	**3.76**	**104**	*e*PN	**Pn**	**09 47 22.1**	**-0.6**
ZKR	**Zakros**	**3.76**	**104**	*e*Pn	**Pn**	**09 47 22.1**	**-0.6**
KEK	**Kerkira**	**3.91**	**337**	*e*Pn	**Pn**	**09 47 25.5**	**+0.7**
KEK				*e*Sn	**Sn**	**09 48 11.8**	**+2.4**
KEK	**Kerkira**	**3.91**	**337**	*e*PN	**Pn**	**09 47 25.5**	**+0.7**
KEK				*e*SN	**Sn**	**09 48 11.8**	**+2.4**
KEK	**Kerkira**	**3.91**	**337**	P	**Pn**	**09 47 25.5**	**+0.7**
KEK	**Kerkira**	**3.91**	**337**	P	**Pn**	**09 47 25.5**	**+0.7**
KEK				*e*Sn	**Sn**	**09 48 11.8**	**+2.4**
SRN	**Sarande**	**4.00**	**340**	*i* PN	**Pn**	**09 47 26.9**	**+0.8**
SRN				*i* Sn	**Sn**	**09 48 14.1**	**+2.4**
SRN	**Sarande**	**4.00**	**340**	*i* Pn	**Pn**	**09 47 26.9**	**+0.8**
SRN				*i* Sn	**Sn**	**09 48 14.1**	**+2.4**
LIT	**Litokhoron**	**4.01**	**8**	*e*Pn	**Pn**	**09 47 26.6**	**+0.4**
LIT	**Litokhoron**	**4.01**	**8**	*e*PN	**Pn**	**09 47 26.6**	**+0.4**
LIT	**Litokhoron**	**4.01**	**8**	P	**Pn**	**09 47 27.0**	**+0.8**
LIT	**Litokhoron**	**4.01**	**8**	*e*Pn	**Pn**	**09 47 26.6**	**+0.4**
LIT	**Litokhoron**	**4.01**	**8**	P	**Pn**	**09 47 27.0**	**+0.8**
PAIG	**Paliouri**	**4.09**	**21**	P	**Pn**	**09 47 27.9**	**+0.7**
PAIG	**Paliouri**	**4.09**	**21**	P	**Pn**	**09 47 27.8**	**+0.6**
PAIG	**Paliouri**	**4.09**	**21**	P	**Pn**	**09 47 27.8**	**+0.6**
CHOS	**Chios island**	**4.10**	**55**	*e*PN	**Pn**	**09 47 27.2**	**-0.2**
CHOS	**Chios island**	**4.10**	**55**	P	**Pn**	**09 47 27.4**	**0.0**
CHOS	**Chios island**	**4.10**	**55**	P	**Pn**	**09 47 27.4**	**0.0**
KZN	**Kozani**	**4.18**	**0**	P	**Pn**	**09 47 30.4**	**+1.9**
KZN	**Kozani**	**4.18**	**0**	P	**Pn**	**09 47 30.7**	**+2.2**
KZN	**Kozani**	**4.18**	**0**	P	**Pn**	**09 47 30.4**	**+1.9**
NEST	**Nestorio**	**4.33**	**353**	P	**Pn**	**09 47 32.9**	**+2.4**
NEST	**Nestorio**	**4.33**	**353**	P	**Pn**	**09 47 32.9**	**+2.4**
SMG	**Samos**	**4.36**	**67**	*e*Pn	**Pn**	**09 47 31.3**	**+0.3**
SMG	**Samos**	**4.36**	**67**	*e*PN	**Pn**	**09 47 31.3**	**+0.3**
SMG	**Samos**	**4.36**	**67**	*e*Pn	**Pn**	**09 47 31.3**	**+0.3**
KARP	**Karpathos**	**4.42**	**96**	P	**Pn**	**09 47 31.2**	**-0.6**
KARP	**Karpathos**	**4.42**	**96**	P	**Pn**	**09 47 31.2**	**-0.6**
LTBQ	**Tobruq**	**4.43**	**156**	*i* P	**Pn**	**09 47 32.7**	**+0.7**
LTBQ	175nm,0.7s,SNR=76						
LTBQ	SNR=76			*e*S	**Sn**	**09 48 22.1**	**-0.2**
PLG	**Polygyros**	**4.45**	**17**	P	**Pn**	**09 47 34.0**	**+1.9**
PLG	**Polygyros**	**4.45**	**17**	P	**Pn**	**09 47 33.6**	**+1.5**
PLG	**Polygyros**	**4.45**	**17**	P	**Pn**	**09 47 33.6**	**+1.5**
URLA	**Izmir**	**4.45**	**58**	*i* P	**Pn**	**09 47 30.8**	**-1.5**
URLA	**Izmir**	**4.45**	**58**	*i* P	**Pn**	**09 47 30.8**	**-1.4**
SIGR	**SIGRI**	**4.48**	**45**	P	**Pn**	**09 47 36.2**	**+3.7**
SIGR	**SIGRI**	**4.48**	**45**	P	**Pn**	**09 47 36.2**	**+3.7**
OUR	**Ouranopolis**	**4.55**	**22**	P	**Pn**	**09 47 37.8**	**+4.2**
OUR	**Ouranopolis**	**4.55**	**22**	P	**Pn**	**09 47 37.8**	**+4.2**
KBN	**Korca**	**4.56**	**351**	*i* PN	**Pn**	**09 47 35.3**	**+1.6**
KBN				*i* SN	**Sn**	**09 48 29.1**	**+3.7**
KBN	**Korca**	**4.56**	**351**	*i* Pn	**Pn**	**09 47 35.3**	**+1.6**
KBN				*i* Sn	**Sn**	**09 48 29.1**	**+3.7**
HORT	**Hortiatis**	**4.59**	**13**	P	**Pn**	**09 47 35.0**	**+0.9**
HORT	**Hortiatis**	**4.59**	**13**	P	**Pn**	**09 47 35.1**	**+1.0**
HORT	**Hortiatis**	**4.59**	**13**	P	**Pn**	**09 47 35.0**	**+0.9**
THE	**Thessaloniki**	**4.60**	**11**	P	**Pn**	**09 47 35.9**	**+1.6**
THE	**Thessaloniki**	**4.60**	**11**	P	**Pn**	**09 47 35.9**	**+1.6**
FNA	**Florina**	**4.67**	**356**	P	**Pn**	**09 47 36.0**	**+0.8**
FNA	**Florina**	**4.67**	**356**	P	**Pn**	**09 47 36.4**	**+1.2**
FNA	**Florina**	**4.67**	**356**	P	**Pn**	**09 47 36.0**	**+0.8**
SCTE	**Santa Cesarea**	**4.73**	**328**	*e*PN	**Pn**	**09 47 36.3**	**+0.3**
SCTE	**Santa Cesarea**	**4.73**	**328**	*e*Pn	**Pn**	**09 47 36.3**	**+0.3**
GRG	**Griva**	**4.85**	**6**	P	**Pn**	**09 47 38.3**	**+0.6**
GRG	**Griva**	**4.85**	**6**	P	**Pn**	**09 47 38.6**	**+0.9**
GRG	**Griva**	**4.85**	**6**	P	**Pn**	**09 47 38.6**	**+0.9**
SOH	**Sokhos**	**4.86**	**14**	*e*Pn	**Pn**	**09 47 39.3**	**+1.5**
SOH	**Sokhos**	**4.86**	**14**	*e*PN	**Pn**	**09 47 39.3**	**+1.5**
SOH	**Sokhos**	**4.86**	**14**	P	**Pn**	**09 47 39.8**	**+2.0**
SOH	**Sokhos**	**4.86**	**14**	*e*Pn	**Pn**	**09 47 39.3**	**+1.5**
SOH	**Sokhos**	**4.86**	**14**	P	**Pn**	**09 47 39.8**	**+2.0**
BIA	**Bitola**	**4.90**	**356**	P	**Pn**	**09 47 39.5**	**+1.1**
BIA	**Bitola**	**4.90**	**356**	*e*Pn	**Pn**	**09 47 39.2**	**+0.8**
BIA	**Bitola**	**4.90**	**356**	P	**Pn**	**09 47 39.5**	**+1.1**
TIP	**Timpagrande**	**5.01**	**309**	*e*Pn	**Pn**	**09 47 40.9**	**+1.0**
TIP				*e*Sn	**Sn**	**09 48 35.0**	**-1.5**
TIP	**Timpagrande**	**5.01**	**309**	*e*Pn	**Pn**	**09 47 40.9**	**+1.0**
KNT	**Kendrikon**	**5.11**	**10**	P	**Pn**	**09 47 42.6**	**+1.3**
KNT	**Kendrikon**	**5.11**	**10**	P	**Pn**	**09 47 42.6**	**+1.3**
AYDN	**Tasoluk**	**5.13**	**71**	*i* P	**Pn**	**09 47 41.2**	**-0.4**
AYDN	**Tasoluk**	**5.13**	**71**	*i* P	**Pn**	**09 47 41.2**	**-0.4**
ARG	**Arkhangelos**	**5.14**	**87**	*e*Pn	**Pn**	**09 47 40.6**	**-1.1**
ARG	**Arkhangelos**	**5.14**	**87**	*e*PN	**Pn**	**09 47 40.6**	**-1.1**
ARG	**Arkhangelos**	**5.14**	**87**	*e*Pn	**Pn**	**09 47 40.6**	**-1.1**
CEL	**Celeste**	**5.15**	**296**	*e*Pn	**Pn**	**09 47 42.4**	**+0.6**
CEL	157nm,0.8s						
CEL	**Celeste**	**5.15**	**296**	*e*Pn	**Pn**	**09 47 42.4**	**+0.6**
CEL	157nm,0.8s						
SRS	**Serrai**	**5.19**	**15**	P	**Pn**	**09 47 43.1**	**+0.8**
SRS	**Serrai**	**5.19**	**15**	P	**Pn**	**09 47 42.9**	**+0.6**
SRS	**Serrai**	**5.19**	**15**	P	**Pn**	**09 47 42.9**	**+0.6**
VAY	**Valandovo**	**5.23**	**7**	P	**Pn**	**09 47 43.9**	**+1.0**
VAY	**Valandovo**	**5.23**	**7**	*e*Pn	**Pn**	**09 47 43.2**	**+0.3**
VAY				*e*Sg	**Sn**	**09 48 41.9**	**0.0**
VAY				*e*Lg		09 48 43.1	
VAY	comp=E,155nm,0.8s			*e*Lg		09 48 44.0	
VAY	comp=N,108nm,0.8s						
VAY	**Valandovo**	**5.23**	**7**	P	**Pn**	**09 47 43.9**	**+1.0**
KRUS	**Krusevo**	**5.26**	**356**	*e*Pn	**Pn**	**09 47 43.4**	**+0.2**
LJBD	**Adjabya**	**5.36**	**195**	*i* P	**Pn**	**09 47 43.8**	**-0.9**
TIR	**Tirane**	**5.43**	**345**	*e*Pn	**Pn**	**09 47 46.5**	**+0.9**
TIR	**Tirane**	**5.43**	**345**	*e*P		**09 47 46.8**	**+1.2**
TIR	**Tirane**	**5.43**	**345**	*e*PN	**Pn**	**09 47 46.8**	**+1.2**
TIR	**Tirane**	**5.43**	**345**	P	**Pn**	**09 47 46.8**	**+1.2**
TIR	**Tirane**	**5.43**	**345**	*e*Pn	**Pn**	**09 47 46.5**	**+0.9**
TIR	**Tirane**	**5.43**	**345**	P	**Pn**	**09 47 46.8**	**+1.2**
SLUM		**5.43**	**147**	P	**Pn**	**09 47 41.8**	**-4.0**
SLUM	baz=152			S	**Sn**	**09 48 39.0**	**-8.0**
SLUM	baz=152						
SLUM		**5.43**	**147**	P	**Pn**	**09 47 41.8**	**-3.9**
NVR	**Nevrokopi**	**5.47**	**17**	P	**Pn**	**09 47 48.3**	**+2.1**
NVR	**Nevrokopi**	**5.47**	**17**	P	**Pn**	**09 47 48.3**	**+2.1**
TAR1	**Taranto**	**5.64**	**323**	*i* Pn	**Pn**	**09 47 47.9**	**-0.6**
PE1	**Pezze di Greco**	**5.79**	**325**	*e*Pn	**Pn**	**09 47 50.4**	**-0.1**
ALN	**Alexandroupoli**	**5.83**	**34**	*e*Pn	**Pn**	**09 47 53.2**	**+2.1**
ALN	**Alexandroupoli**	**5.83**	**34**	*e*PN	**Pn**	**09 47 53.2**	**+2.1**
ALN	**Alexandroupoli**	**5.83**	**34**	*e*Pn	**Pn**	**09 47 53.2**	**+2.1**
SKO	**Skopje**	**5.85**	**358**	⇑*i*Pn	**Pn**	**09 47 52.5**	**+1.1**
SKO				*e*Sn	**Sn**	**09 48 56.3**	**-0.8**
SKO	**Skopje**	**5.85**	**358**	*e*Pn	**Pn**	**09 47 52.3**	**+0.9**
SKO				*e*Sg	**Sn**	**09 48 55.8**	**-1.4**
SKO	comp=E,432nm,0.6s			*e*Lg		09 48 57.7	
SKO				*e*Lg		09 49 00.1	
SKO	**Skopje**	**5.85**	**358**	⇑*i*Pn	**Pn**	**09 47 52.5**	**+1.1**
SKO				*e*Sn	**Sn**	**09 48 56.3**	**-0.8**
BALY	**Balya**	**5.87**	**50**	*i* P	**Pn**	**09 47 50.4**	**-1.3**
BALY	**Balya**	**5.87**	**50**	*i* P	**Pn**	**09 47 50.4**	**-1.3**
WDD	**Wield Dalam**	**5.88**	**270**	*e*Pn	**Pn**	**09 47 51.8**	**-0.1**
WDD	comp=E,118nm,0.6s						
WDD	**Wield Dalam**	**5.88**	**270**	*e*Pn	**Pn**	**09 47 51.8**	**0.0**
WDD	comp=E,118nm,0.6s						
VAE	**Valguarnera**	**6.06**	**285**	Pn	**Pn**	**09 47 57.9**	**+3.7**
VAE				Sn	**Sn**	**09 49 07.9**	**+5.7**
VAE	**Valguarnera**	**6.06**	**285**	Pn	**Pn**	**09 47 57.9**	**+3.7**
VAE	baz=237,slow=5.7,SNR=8.0			Sn	**Sn**	**09 49 07.9**	**+5.7**
VAE	comp=E,23nm,0.3s,baz=330,slow=10,SNR=3.7						
CUC	**Castrocucco**	**6.08**	**311**	P	**Pn**	**09 47 56.5**	**+1.9**
CUC	**Castrocucco**	**6.08**	**311**	P	**Pn**	**09 47 56.5**	**+1.9**
ULC	**Ulcinj**	**6.15**	**342**	⇓*i*Pn	**Pn**	**09 47 55.0**	**-0.6**
ULC				*e*Sn	**Sn**	**09 49 01.9**	**-2.8**
ULC	**Ulcinj**	**6.15**	**342**	⇓*i*Pn	**Pn**	**09 47 55.0**	**-0.6**
ULC				*e*Sn	**Sn**	**09 49 01.9**	**-2.8**
SG1	**Sgolgore (BA)**	**6.17**	**321**	*i* Pn	**Pn**	**09 47 55.9**	**0.0**
BAI	**Bari**	**6.28**	**324**	*i* Pn	**Pn**	**09 47 57.4**	**+0.1**
AKAS	**Kas**	**6.34**	**87**	*i* P	**Pn**	**09 47 56.0**	**-2.2**
AKAS	**Kas**	**6.34**	**87**	*i* P	**Pn**	**09 47 56.0**	**-2.2**
GOLH	**Golhisar**	**6.36**	**78**	*i* P	**Pn**	**09 47 59.0**	**+0.6**
GOLH	**Golhisar**	**6.36**	**78**	*i* P	**Pn**	**09 47 59.0**	**+0.6**
BCI	**Bajram Curri**	**6.38**	**349**	*i* PN	**Pn**	**09 47 59.5**	**+0.9**
BCI				*i* SN	**Sn**	**09 49 10.8**	**+0.7**
BCI	**Bajram Curri**	**6.38**	**349**	*i* Pn	**Pn**	**09 47 59.5**	**+0.9**
BCI				*i* Sn	**Sn**	**09 49 10.8**	**+0.7**
VTS	**Vitosha**	**6.56**	**9**	⇓*i*Pn	**Pn**	**09 48 02.5**	**+1.4**
VTS	**Vitosha**	**6.56**	**9**	P	**Pn**	**09 48 03.3**	**+2.2**
VTS	**Vitosha**	**6.56**	**9**	⇓P	**Pn**	**09 48 02.0**	**+0.9**
VTS	**Vitosha**	**6.56**	**9**	P	**Pn**	**09 48 02.0**	**+0.9**
VTS	**Vitosha**	**6.56**	**9**	⇓*i*P	**Pn**	**09 48 02.0**	**+0.9**
VTS	**Vitosha**	**6.56**	**9**	P	**Pn**	**09 48 02.0**	**+0.9**
VTS	**Vitosha**	**6.56**	**9**	⇓*i*Pn	**Pn**	**09 48 02.5**	**+1.4**
CDT	**Castel del Mon**	**6.56**	**321**	*e*Pn	**Pn**	**09 48 01.2**	**+0.1**
BUM	**Brajici-Budva**	**6.56**	**341**	⇓*i*Pn	**Pn**	**09 48 00.3**	**-0.9**
BUM				*e*Sn	**Sn**	**09 49 11.6**	**-3.1**
BUM	**Brajici-Budva**	**6.56**	**341**	⇓*i*Pn	**Pn**	**09 48 00.3**	**-0.9**
BUM				*e*Sn	**Sn**	**09 49 11.6**	**-3.1**
PDG	**Podgorica**	**6.59**	**344**	⇑*i*Pn	**Pn**	**09 48 01.1**	**-0.5**
PDG				*i* Sn	**Sn**	**09 49 13.9**	**-1.6**
PDG	**Podgorica**	**6.59**	**344**	⇓*i*Pn	**Pn**	**09 48 00.9**	**-0.7**
PDG				*e*Sn	**Sn**	**09 49 13.4**	**-2.1**
TTG	**Podgorica**	**6.59**	**344**	⇓*i*Pn	**Pn**	**09 48 00.9**	**-0.7**
TTG				*e*Sn	**Sn**	**09 49 13.4**	**-2.1**
PVY	**Plav**	**6.61**	**348**	⇓*i*Pn	**Pn**	**09 48 02.5**	**+0.6**
PVY				*e*Sn	**Sn**	**09 49 15.4**	**-0.5**
PVY	**Plav**	**6.61**	**348**	⇓*i*Pn	**Pn**	**09 48 02.5**	**+0.6**
PVY				*e*Sn	**Sn**	**09 49 15.4**	**-0.5**
BARS	**Barje**	**6.69**	**0**	⇑*i*Pn	**Pn**	**09 48 03.2**	**+0.3**
BARS				*i* Sn	**Sn**	**09 49 17.0**	**-0.8**
BARS	**Barje**	**6.69**	**0**	⇑*i*Pn	**Pn**

HNKL Nakhl 11.96 118 P Pn 09 49 10.2 -4.9
baz=119
TRPA Tarpa 12.02 2⇑eP Pn 09 49 16.3 +0.5
ARSA Arzberg 12.05 339 ePn Pn 09 49 13.9 -2.5
ARSA Arzberg 12.05 339⇓iPn Pn 09 49 14.4 -1.9
ARSA ⇓iSn Sn 09 51 21.5 -7.9
MYKA Terra Mystica 12.14 332⇑iPn Pn 09 49 15.7 -1.8
MYKA ⇓iSn Sn 09 51 22.5 -8.9
SOP Sopron 12.18 343 eP Pn 09 49 14.8 -3.3
KECS Kecovo 12.39 356 ePn Pn 09 49 20.5 -0.4
KECS e 09 49 28.0
KECS e 09 51 33.4
KECS Kecovo 12.39 356 ePN Pn 09 49 20.5 -0.4
KECS e 09 49 28.0
KECS Kecovo 12.39 356 eSN Sn 09 51 33.4 -4.2
KECS Kecovo 12.39 356 eP Pn 09 49 20.5 -0.4
VYHS Vyhne 12.55 351 ePn Pn 09 49 21.3 -1.9
VYHS e 09 51 36.2
VYHS Vyhne 12.55 351 ePN Pn 09 49 21.3 -1.9
VYHS Vyhne 12.55 351 eSN Sn 09 51 36.2 -5.3
CONA Conrad Observa 12.58 341⇓iPn Pn 09 49 21.5 -2.1
CONA ⇑iSn Sn 09 51 34.3 -8.0
KBA Koelnbreinsper 12.62 333⇓iPn Pn 09 49 22.3 -1.8
KBA ⇓iSn Sn 09 51 35.4 -7.9
ABTA Abfaltersbach 12.68 330⇑iPn Pn 09 49 23.7 -1.1
ABTA ⇓iSn Sn 09 51 37.0 -7.6
ABTA Abfaltersbach 12.68 330 Pn Pn 09 49 23.7 -1.1
KOLL Kolacno 12.69 350 ePn Pn 09 49 23.0 -2.1
KOLL e 09 51 40.0
KOLL Kolacno 12.69 350 ePN Pn 09 49 23.0 -2.1
KOLL Kolacno 12.69 350 eSN Sn 09 51 40.0 -5.0
CRVS Cervenica-Dubn 12.78 359 ePn Pn 09 49 25.0 -1.2
CRVS e 09 51 45.1
CRVS Cervenica-Dubn 12.78 359 ePN Pn 09 49 25.0 -1.2
CRVS Cervenica-Dubn 12.78 359 eSN Sn 09 51 45.1 -1.9
CRVS Cervenica-Dubn 12.78 359 eP Pn 09 49 25.0 -1.2
EIL Elat 12.80 116 Pn Pn 09 49 24.2 -2.5
EIL Sn Sn 09 51 42.0 -5.9
EIL Elat 12.80 116 Pn Pn 09 49 24.2 -2.5
comp=Z,1.0nm,0.3s,baz=294,slow=3.9,SNR=7.1
EIL Sn Sn 09 51 42.0 -5.9
comp=Z,1.3nm,0.3s,baz=352,slow=18,SNR=3.6
EIL Elat 12.80 116 Pn Pn 09 49 24.2 -2.5
MOA Molln 12.97 337⇑iPn Pn 09 49 27.6 -1.3
MOA ⇑iSn Sn 09 51 44.4 -7.3
MOA Molln 12.97 337 Pn Pn 09 49 27.6 -1.3
GTR Jabal at Tayr 12.99 142 P Pn 09 49 27.2 -2.0
baz=144
GTR Jabal at Tayr 12.99 142 P Pn 09 49 27.2 -2.1
ASF Jabal al Asfar 13.13 103 Pn Pn 09 49 29.4 -1.8
comp=Z,0.3nm,0.3s,baz=168,slow=3.1,SNR=4.7
ASF Sn Sn 09 51 51.0 -4.9
comp=Z,1.6nm,0.3s,baz=228,slow=22,SNR=9.0
STHS Stebnicka Huta 13.29 359 eP Px 09 49 45.5
STHS Stebnicka Huta 13.29 359 e Px 09 49 45.5
SBF Sospel 13.42 310 eP Pn 09 49 35.3 +0.2
comp=Z,41nm,1.0s
SBF Sospel 13.42 310 eP Pn 09 49 35.3 +0.2
comp=Z,20nm,1.0s
SBF Sospel 13.42 310 eP Pn 09 49 35.3 +0.2
SBF pmax pmax
comp=Z,21nm,1.0s
SBF Sospel 13.42 310 eP Pn 09 49 35.3 +0.2
comp=Z,20nm,1.0s
WTTA Wattenberg 13.45 329⇑iPn Pn 09 49 34.0 -1.4
WTTA ⇑iSn Sn 09 51 56.3 -7.1
WTTA Wattenberg 13.45 329 Pn Pn 09 49 34.0 -1.4
MALT Malatya 13.46 76 ePn Pn 09 49 37.8 +2.2
MALT Malatya 13.46 76⇓iP Pn 09 49 38.1 +2.5
MALT Malatya 13.46 76⇓iP Pn 09 49 38.1 +2.5
VRAC Vranov 13.71 346 Pn Pn 09 49 37.3 -1.7
VRAC ⇑P 09 49 40.4
VRAC Vranov 13.71 346 Pn Pn 09 49 37.3 -1.7
baz=186,slow=17,SNR=4.3
VRAC Vranov 13.71 346⇑iP Pn 09 49 40.4 +1.4
VRAC Vranov 13.71 346 Pn Pn 09 49 37.3 -1.7
LMR La Mourre 13.77 306 eP Pn 09 49 39.9 +0.2
comp=Z,25nm,1.0s
LMR La Mourre 13.77 306 eP Pn 09 49 39.9 +0.2
comp=Z,13nm,1.0s
LMR La Mourre 13.77 306 eP Pn 09 49 39.9 +0.2
LMR pmax pmax
comp=Z,13nm,1.0s
FRF La Foret Royal 13.78 307 eP Pn 09 49 40.0 +0.1
LVV L'vov 13.79 6 eP Pn 09 49 40.7 +0.7
LVV MLR MLR
comp=N,200nm,13.0s
LVV MLR MLR
comp=Z,200nm,13.0s
LVV MLR MLR
comp=E,100nm,11.0s
DAVOX Davos/Dischmat 13.87 324 Pn Pn 09 49 43.5 +2.4
comp=E,0.7nm,0.3s,baz=154,slow=21,SNR=5.0
DAVOX Sn Sn 09 52 09.2 -4.5
comp=E,0.9nm,0.3s,baz=329,slow=21,SNR=6.5
DAVOX LR LR 09 55 48.5
comp=E,111nm,19.7s,baz=81,slow=40
DAVOX Davos/Dischmat 13.87 324 P Pn 09 49 43.5 +2.3
DAVOX 09 52 09.2
DAVOX Davos/Dischmat 13.87 324 Pn Pn 09 49 43.5 +2.3
TUE Stuetta 13.91 322 ePn Pn 09 49 42.6 +0.8
comp=E,16nm,0.9s
TUE Stuetta 13.91 322 ePn Pn 09 49 42.6 +0.9
comp=E,16nm,0.9s
TREC Trest 13.95 343 AMS AMS 09 55 50.0
comp=E,800nm,11.8s
OKC Ostrava-Krasne 13.96 350 eP Pn 09 49 49.6 +7.2
OKC MLR MLR
comp=Z,500nm,14.9s
OKC Ostrava-Krasne 13.96 350 eP Pn 09 49 49.6 +7.2
OKC AMS AMS 09 56 30.0
comp=Z,500nm,14.9s
OKC Ostrava-Krasne 13.96 350 eP Pn 09 49 49.6 +7.2
comp=Z,500nm,14.9s
MORC Moravsky Berou 13.99 349 ePn Pn 09 49 43.2 +0.4
MORC Moravsky Berou 13.99 349⇓iP Pn 09 49 43.1 +0.3
MORC Moravsky Berou 13.99 349⇓iP Pn 09 49 43.1 +0.3
MORC Moravsky Berou 13.99 349 ePn Pn 09 49 43.2 +0.4
MBDF Montbardon 14.28 312 eP Pn 09 49 47.2 +0.5
comp=Z,16nm,0.7s
MBDF Montbardon 14.28 312 eP Pn 09 49 47.2 +0.5
comp=Z,7.8nm,0.7s
MBDF Montbardon 14.28 312 eP Pn 09 49 47.2 +0.5
MBDF pmax pmax
comp=Z,8.0nm,0.7s
KHC Kasperske Hory 14.32 338 ePn Pn 09 49 44.4 -2.8
comp=Z,8.5nm,0.8s
KHC Kasperske Hory 14.32 338 eP Pn 09 49 44.4 -2.8
KHC pmax pmax
comp=Z,9.0nm,0.8s
KHC Kasperske Hory 14.32 338 eP Pn 09 49 44.3 -2.9
KHC AMS AMS 09 56 10.0
comp=Z,1μm,14.0s
LPG La Plagne 14.71 314 eP Pn 09 49 52.9 +0.3
ANN Anapa 14.72 49 eP Pn 09 49 55.7 +3.0
ANN eS Sn 09 52 44.4 +10
ANN pmax pmax
comp=Z,52nm,1.2s
LPL La Plagne 14.73 314 eP Pn 09 49 53.2 +0.4
comp=Z,8.6nm,0.7s
LPL La Plagne 14.73 314 eP Pn 09 49 53.2 +0.4
comp=Z,4.3nm,0.7s
LPL La Plagne 14.73 314 eP Pn 09 49 53.2 +0.4
LPL pmax pmax
comp=Z,4.0nm,0.7s
DPC Dobruska-Polom 14.76 346 eP Pn 09 49 52.5 -0.7
DPC MLR MLR
comp=Z,600nm,16.3s
DPC Dobruska-Polom 14.76 346 eP Pn 09 49 52.5 -0.7
DPC AMS AMS 09 57 10.0
comp=Z,600nm,16.3s
PRU Pruhonice 14.82 341 eP Pn 09 49 53.6 -0.4
PRU MLR MLR
comp=Z,800nm,11.4s
PRU Pruhonice 14.82 341 eP Pn 09 49 53.6 -0.4
PRU AMS AMS 09 56 20.0
comp=Z,800nm,11.4s
ORIF Oris-en-Rattie 14.92 311 eP Pn 09 49 56.0 +0.7
comp=Z,14nm,0.9s
ORIF eMLR MLR
comp=Z,254nm,21.5s
ORIF Oris-en-Rattie 14.92 311 eP Pn 09 49 56.0 +0.7
comp=Z,7.1nm,0.9s
ORIF Oris-en-Rattie 14.92 311 eP Pn 09 49 56.0 +0.7
ORIF pmax pmax
comp=Z,7.0nm,0.9s
UPC Upice 14.97 346 eP Pn 09 50 00.4 +4.5
UPC Upice 14.97 346 eP Pn 09 50 00.4 +4.5
UPC Upice 14.97 346 eP Pn 09 50 00.4 +4.5
KSP Ksiaz 15.24 347 eP Pn 09 50 04.5 +5.1
PVCC Panska Ves 15.31 342 eP Pn 09 50 00.5 +0.1
PVCC MLR MLR
comp=Z,800nm,11.6s
PVCC Panska Ves 15.31 342 eP Pn 09 50 00.5 +0.1
PVCC AMS AMS 09 56 40.0
comp=Z,800nm,11.6s
KIEV Kiev 15.53 18 ePn Pn 09 50 00.2 -3.0
comp=Z,9.6nm,0.8s
KIEV Kiev 15.53 18 eP Pn 09 50 00.2 -3.0
KIEV pmax pmax
comp=Z,10.0nm,0.8s
AKASG Malin Array Be 15.54 18 Pn Pn 09 50 00.2 -3.1
AKASG Malin Array Be 15.54 18 Pn Pn 09 50 00.2 -3.1
comp=Z,1.7nm,0.3s,baz=208,slow=12,SNR=6.8
FELD Feldberg im Sc 15.55 323 eP Pn 09 50 06.1 +2.6
NKC Novy Kostel 15.64 337 eP Pn 09 49 56.9 -7.7
NKC MLR MLR
comp=Z,1μm,10.9s
NKC Novy Kostel 15.64 337 AMS AMS 09 57 00.0
comp=Z,1μm,10.9s
VIVF Saint-Julien-l 15.64 309 eP Pn 09 50 04.2 -0.5
BFO Black Forest 15.72 325 ePn Pn 09 50 06.8 +1.2
comp=Z,6.5nm,0.8s
BFO Black Forest 15.72 325 eP Pn 09 50 06.8 +1.2
BFO pmax pmax
comp=Z,6.0nm,0.8s
BFO Black Forest 15.72 325 ePn Pn 09 50 06.8 +1.2
comp=Z,6.5nm,0.8s
CABF La Chapelle 15.73 317 eP Pn 09 50 04.6 -1.3
BRG Berggiesshubel 15.79 342 eP Pn 09 50 06.5 0.0
comp=Z,4.7nm,1.1s
BRG Berggiesshubel 15.79 342 eP Pn 09 50 06.5 0.0
BRG pmax pmax
comp=Z,3.0nm,1.1s
LOMF Lomont 15.79 320 eP Pn 09 50 06.7 +0.1
MOF Molkenrain 15.96 322 eP Pn 09 50 09.0 +0.2
HINF Hinteralfeld 16.08 321 eP Pn 09 50 10.6 +0.3
ECH Echery 16.19 323 eP Pn 09 50 12.2 +0.4
ECH Echery 16.19 323 ePn Pn 09 50 11.1 -0.7
comp=Z,24nm,1.3s
ECH Echery 16.19 323 eP Pn 09 50 11.1 -0.7
ECH pmax pmax
comp=Z,23nm,1.3s
ECH Echery 16.19 323 ePn Pn 09 50 11.1 -0.7
comp=Z,24nm,1.3s
MOX Moxa 16.26 336 eP Pn 09 50 13.0 +0.4
MOX
comp=Z,700nm,18.0s
CDF Champ du Feu 16.27 323 eP Pn 09 50 13.2 +0.5
comp=Z,33nm,0.9s
CDF Champ du Feu 16.27 323 eP Pn 09 50 13.2 +0.5
comp=Z,17nm,0.9s
CDF Champ du Feu 16.27 323 eP Pn 09 50 13.2 +0.5
CDF pmax pmax
comp=Z,17nm,0.9s
LANF Langenberg 16.43 326 eP Pn 09 50 19.3 +4.6
LANF Langenberg 16.43 326 eP Pn 09 50 19.3 +4.6
CLL Collm 16.43 340 P Pn 09 50 15.0 +0.3
CLL e 09 50 19.0
CLL Collm 16.43 340 eP Pn 09 50 15.0 +0.3
CLL Collm 16.43 340 eP Pn 09 50 15.0 +0.3
CLL epP pP 09 50 19.0 -7.8
CLL esP sP 09 50 22.0 -10
CLL eSS 09 53 36.0
CLL Lm 09 57 00.0
comp=N,400nm,19.0s
CLL Lm 09 57 00.0
comp=E,200nm,19.9s
HAU Haudompre 16.46 321 eP Pn 09 50 14.6 -0.5
comp=E,35nm,0.9s
HAU eMLR MLR
comp=Z,341nm,17.5s
HAU Haudompre 16.46 321 eP Pn 09 50 14.6 -0.5
comp=Z,17nm,0.9s
HAU Haudompre 16.46 321 eP Pn 09 50 14.6 -0.5
HAU pmax pmax
comp=Z,17nm,0.9s
THEF They Montfort 16.79 321 eP Pn 09 50 20.4 +1.1
THEF They Montfort 16.79 321 eP Pn 09 50 20.4 +1.1
SMF Signal de Mont 17.04 314 eP Pn 09 50 23.7 +1.3
comp=Z,9.9nm,0.7s
SMF Signal de Mont 17.04 314 eP Pn 09 50 23.7 +1.3
comp=Z,4.9nm,0.7s
SMF Signal de Mont 17.04 314 eP Pn 09 50 23.7 +1.3
SMF pmax pmax
comp=Z,5.0nm,0.7s
SMF Signal de Mont 17.04 314 eP Pn 09 50 23.7 +1.3
comp=Z,4.9nm,0.7s
SFTF Sexfontaines 17.26 320 eP Pn 09 50 26.9 +1.7
SFTF Sexfontaines 17.26 320 eP Pn 09 50 26.9 +1.7
RUP Ruppelstein 17.29 326 eP Pn 09 50 28.0 +2.6
LOR Lormes 17.36 315 eP Pn 09 50 26.1 -0.3
comp=Z,9.9nm,0.7s
LOR eMLR MLR
comp=Z,136nm,21.5s
LOR Lormes 17.36 315 eP Pn 09 50 26.1 -0.3
comp=Z,4.9nm,0.7s
LOR Lormes 17.36 315 eP Pn 09 50 26.1 -0.3
LOR pmax pmax
comp=Z,5.0nm,0.7s
LOR Lormes 17.36 315 eP Pn 09 50 26.1 -0.3
comp=Z,4.9nm,0.7s
AVF Avril sur Loir 17.40 313 eP Pn 09 50 26.5 -0.4
comp=Z,9.7nm,0.8s
AVF Avril sur Loir 17.40 313 eP Pn 09 50 26.5 -0.4
comp=Z,4.8nm,0.8s
AVF Avril sur Loir 17.40 313 eP Pn 09 50 26.5 -0.4
AVF pmax pmax
comp=Z,5.0nm,0.8s
AVF Avril sur Loir 17.40 313 eP Pn 09 50 26.5 -0.4
comp=Z,4.8nm,0.8s
MEZF Maizieres J'vi 17.44 320 eP Pn 09 50 28.3 +0.9
MEZF Maizieres J'vi 17.44 320 eP Pn 09 50 28.3 +0.9
SSF Saint Saulge 17.45 314 eP Pn 09 50 26.7 -0.8
comp=Z,8.5nm,0.7s
SSF Saint Saulge 17.45 314 eP Pn 09 50 26.7 -0.8
comp=Z,4.3nm,0.7s
SSF Saint Saulge 17.45 314 eP Pn 09 50 26.7 -0.8
SSF pmax pmax
comp=Z,4.0nm,0.7s
SSF Saint Saulge 17.45 314 eP Pn 09 50 26.7 -0.8
comp=Z,4.2nm,0.7s
BGF Bois d'Agland 17.58 312 eP Pn 09 50 29.3 +0.2
BGF Bois d'Agland 17.58 312 eP Pn 09 50 29.3 +0.2
WLF Walferdange 17.67 325 P Pn 09 50 33.1 +2.8
comp=Z,12nm,1.4s
WLF Walferdange 17.67 325 ePn Pn 09 50 31.7 +1.5
comp=Z,27nm,1.2s
WLF Walferdange 17.67 325 eP Pn 09 50 31.7 +1.5
WLF pmax pmax
comp=Z,27nm,1.2s
WLF Walferdange 17.67 325 eP Pn 09 50 31.7 +1.5
comp=Z,27nm,1.2s
KIV Kislovodsk 17.80 58⇓iP Pn 09 50 35.4 +3.6
KIV pmax pmax
comp=Z,13nm,1.1s
KIV MLR MLR
comp=Z,100nm,18.0s
TCF Toulx Ste Croi 17.84 311 eP Pn 09 50 32.2 -0.1
TCF Toulx Ste Croi 17.84 311 eP Pn 09 50 32.2 -0.1
RJF Les Rejaudoux 17.85 307 eP Pn 09 50 32.0 -0.4
RJF eMLR MLR
comp=Z,180nm,17.0s
RJF Les Rejaudoux 17.85 307 eP Pn 09 50 32.0 -0.4
SUW Suwalki 17.92 3 ePn Pn 09 50 33.8 +0.6
comp=Z,243nm,1.2s
SUW Suwalki 17.92 3 eP Pn 09 50 33.8 +0.6
SUW pmax pmax
comp=Z,243nm,1.2s
SUW Suwalki 17.92 3 eP Pn 09 50 33.8 +0.6
comp=Z,243nm,1.2s
LFF La Frestale 18.21 305 eP Pn 09 50 35.2 -1.7
LFF La Frestale 18.21 305 eP Pn 09 50 35.2 -1.7
ZEI Tsey 18.31 62 eP Pn 09 50 40.7 +2.6
ZEI pmax pmax
comp=Z,12nm,0.5s
ETSF Etsaut 18.48 298 eP Pn 09 50 38.5 -1.7
comp=Z,15nm,0.8s
ETSF Etsaut 18.48 298 eP Pn 09 50 38.5 -1.7
comp=Z,7.5nm,0.8s
ETSF Etsaut 18.48 298 eP Pn 09 50 38.5 -1.7
ETSF pmax pmax
comp=Z,8.0nm,0.8s
ETSF Etsaut 18.48 298 eP Pn 09 50 38.5 -1.7
comp=Z,7.5nm,0.8s
GNI Garni 18.50 71 P Pn 09 50 40.4 0.0
comp=Z,1.0nm,0.3s,baz=12,slow=18,SNR=4.9
GNI S S 09 53 58.8 -10
comp=Z,0.9nm,0.3s,baz=152,slow=10,SNR=1.7
GNI LR LR 09 59 20.0
comp=Z,87nm,18.9s,baz=291,slow=42
GNI Garni 18.50 71⇑iP Pn 09 50 41.1 +0.6
GNI pmax pmax
comp=Z,25nm,1.8s
GNI MLR MLR
comp=Z,108nm,16.0s
GNI Garni 18.50 71 P Pn 09 50 40.5 0.0
HGN Heimansgroeve 18.55 327 eP Pn 09 50 43.8 +2.9
comp=Z,20nm,1.1s
BCLA Clavier 18.59 325 P Pn 09 50 44.1 +2.6
GIVF Givet 18.60 324 eP Pn 09 50 42.3 +0.7
comp=Z,71nm,1.1s
GIVF Givet 18.60 324 eP Pn 09 50 42.3 +0.7
comp=Z,35nm,1.1s
GIVF Givet 18.60 324 eP Pn 09 50 42.3 +0.7
GIVF pmax pmax
comp=Z,35nm,1.1s
GIVF Givet 18.60 324 eP Pn 09 50 42.3 +0.7
comp=Z,35nm,1.1s
DOU Dourbes 18.70 324 P Pn 09 50 44.7 +1.9
DOU Dourbes 18.70 324 P Pn 09 50 44.6 +1.8
BAIF Baives 18.87 323 eP Pn 09 50 44.3 -0.5
BAIF Baives 18.87 323 eP Pn 09 50 44.3 -0.5
NACGM Naroch 19.10 9 e Pn 09 50 42.0 -5.5
VORD Divnogorie 19.46 35 eP Pn 09 50 50.6 -1.3
VORD pmax pmax
comp=N,110nm,0.6s
VORD pmax pmax
comp=E,70nm,0.6s
VORD pmax pmax
comp=Z,20nm,0.6s
VORD Divnogorie 19.46 35 eP Pn 09 50 50.6 -1.3
IIGN Ignalina 19.47 8 eP Pn 09 50 49.7 -2.3
IIGN AMB AMB 09 50 50.9
comp=Z,16nm,0.8s
IIGN Ignalina 19.47 8 eP Pn 09 50 49.7 -2.3
comp=Z,16nm,0.8s,SNR=35
IDID Didziasalis 19.50 9 eP Pn 09 50 49.9 -2.4
IDID AMB AMB 09 50 50.9
comp=Z,15nm,0.9s
IDID Didziasalis 19.50 9 eP Pn 09 50 49.9 -2.4
comp=Z,15nm,0.9s,SNR=35
BSD Bornholm Skovb 19.57 348 iP Pn 09 50 52.1 -1.1
BSD Bornholm Skovb 19.57 348 iP Pn 09 50 52.1 -1.1
BSD Bornholm Skovb 19.57 348 iP Pn 09 50 52.1 -1.1
VSR Storozhevoye 19.57 34 eP Pn 09 50 51.7 -1.5
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR pmax pmax
comp=E,4.0nm,0.3s
VSR Storozhevoye 19.57 34 eP Pn 09 50 51.7 -1.5
ISAL Salakas 19.68 7 eP Pn 09 50 52.0 -2.5
ISAL AMB AMB 09 50 53.1
comp=Z,14nm,1.0s
ISAL Salakas 19.68 7 eP Pn 09 50 52.0 -2.4
comp=Z,14nm,1.0s,SNR=35
IZAR Zarasai 19.87 7 eP Pn 09 50 54.0 -2.7
IZAR AMB AMB 09 50 55.1
comp=Z,21nm,0.8s
IZAR Zarasai 19.87 7 eP Pn 09 50 54.0 -2.7
comp=Z,21nm,0.8s,SNR=35
LDF La Druitiere 20.34 315 eP P 09 51 01.3 +1.3
comp=Z,9.6nm,0.5s
LDF La Druitiere 20.34 315 eP P 09 51 01.3 +1.3
comp=Z,4.8nm,0.5s
LDF La Druitiere 20.34 315 eP P 09 51 01.3 +1.3
LDF pmax pmax
comp=Z,5.0nm,0.5s
LDF La Druitiere 20.34 315 eP P 09 51 01.3 +1.3
comp=Z,4.8nm,0.5s
ESDC Sonseca Array 20.59 288 P P 09 51 02.6 -0.2
comp=Z,0.8nm,0.3s,baz=76,slow=11,SNR=7.1
ESDC Sonseca Array 20.59 288 P P 09 51 02.6 -0.2
ESLA Sonseca Array 20.59 288 eP P 09 51 03.2 +0.4
comp=Z,0.8nm,0.6s
ESLA Sonseca Array 20.59 288 eP P 09 51 03.2 +0.4
comp=Z,0.8nm,0.6s
FLN La Foliniere 20.63 315 eP P 09 51 02.0 -1.1
comp=Z,37nm,0.9s
FLN eMLR MLR
comp=Z,122nm,21.2s,MS2.9
FLN La Foliniere 20.63 315 eP P 09 51 02.0 -1.1
comp=Z,18nm,0.9s
FLN LR LR
comp=Z,120nm,21.3s,MS3.2
FLN La Foliniere 20.63 315 eP P 09 51 02.0 -1.1
FLN pmax pmax
comp=Z,18nm,0.9s
FLN MLR MLR
comp=Z,120nm,21.3s,MS3.2
FLN La Foliniere 20.63 315 eP P 09 51 02.0 -1.1
comp=Z,18nm,0.9s
VRHR Novokhopersk 20.66 37 eP P 09 51 04.4 +1.0
VRHR pmax pmax
comp=Z,40nm,0.7s
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,30nm,0.7s
VRHR Novokhopersk 20.66 37 eP P 09 51 04.4 +1.0
comp=E,10.0nm,0.4s
PAB San Pablo 20.88 287 eP P 09 51 08.5 +2.5
comp=E,27nm,1.4s
PAB San Pablo 20.88 287 eP P 09 51 08.5 +2.5
PAB pmax pmax
comp=Z,27nm,1.4s
PAB San Pablo 20.88 287 eP P 09 51 08.5 +2.5
comp=Z,27nm,1.4s
OBN Obninsk 21.55 24 eP P 09 51 12.2 -0.7
comp=Z,118nm,1.3s,mb5.2
OBN Obninsk 21.55 24⇑eP P 09 51 11.6 -1.4
OBN eS S 09 55 07.9 -1.5
OBN e 09 55 16.8
OBN pmax pmax
comp=Z,96nm,1.3s,mb5.1
OBN MLR MLR
comp=Z,200nm,18.0s,MS3.6
OBN Obninsk 21.55 24 eP P 09 51 12.2 -0.8
comp=Z,118nm,1.3s,mb5.2
SGMF Saint Gilles 21.62 312 eP P 09 51 12.5 -1.3
SGMF Saint Gilles 21.62 312 eP P 09 51 12.5 -1.3
QUIF Quistinic 21.85 310 eP P 09 51 13.2 -3.1
MDT Midelt 21.98 269 P P 09 51 20.6 +2.9
comp=Z,4.3nm,0.8s,mb3.9,baz=100,slow=11,SNR=7.7
MUD Monsted U'grnd 22.05 341 iP P 09 51 20.4 +2.0
MUD Monsted U'grnd 22.05 341 iP P 09 51 20.4 +2.0
MUD Monsted U'grnd 22.05 341 iP P 09 51 20.4 +2.0
MOS Moscow 22.41 24 eP P 09 51 19.5 -2.6
MOS pmax pmax
comp=Z,71nm,0.7s,mb5.2
HFS Hagfors 24.59 350 P P 09 51 42.8 -0.6
comp=Z,9.3nm,0.6s,mb4.5,baz=163,slow=10,SNR=29
HFS LR LR 10 03 07.3
comp=Z,102nm,19.7s,MS3.3,baz=168,slow=41
HFS Hagfors 24.59 350 P P 09 51 42.8 -0.5
FINES FINESS Array B 25.49 5 P P 09 51 51.2 -0.3
comp=Z,4.0nm,0.6s,mb4.2,baz=165,slow=11,SNR=13
FINES FINESS Array B 25.49 5 P P 09 51 51.3 -0.2
EKA Eskdalemuir Ar 25.68 326 P P 09 51 53.9 +0.5
comp=Z,4.4nm,0.7s,mb4.1,baz=127,slow=9.3,SNR=18
EKA Eskdalemuir Ar 25.68 326 P P 09 51 53.8 +0.5
NB2 NORSAR Subarra 25.83 348 P P 09 51 54.2 -0.4
comp=Z,6.2nm,0.8s,mb4.2,SNR=4.7
NOA NORSAR Array B 25.83 348 P P 09 51 54.6 0.0
comp=Z,4.4nm,0.7s,mb4.1,baz=156,slow=8.9,SNR=15
NOA LR LR 10 03 22.2
comp=Z,47nm,18.2s,MS3.1,baz=175,slow=39
NOA NORSAR Array B 25.83 348 P P 09 51 54.6 0.0
KAF Kangasniemi 26.17 5 eP P 09 51 55.9 -1.8
KAF pmax pmax
comp=Z,10.0nm,0.8s,mb4.4
KAF Kangasniemi 26.17 5 ep P 09 51 55.9 -1.8
comp=Z,9.9nm,0.8s,mb4.4

KAF	**Kangasniemi**	**26.17**	**5**	*e*P		**P**	**09 51 55.9**	**-1.8**
	comp=Z,10.0nm,0.8s,mb4.4							
KLMR	**Klimovskoe**	**27.22**	**19**	*e*P		**P**	**09 52 07.4**	**+0.3**
KLMR				pmax	pmax			
	comp=Z,33nm,1.5s,mb4.6							
KLMR	**Klimovskoe**	**27.22**	**19**	*e*P		**P**	**09 52 07.4**	**+0.3**
	comp=Z,33nm,1.5s,mb4.6							
AKTK	**Aktyubinsk**	**29.68**	**50**	P		**P**	**09 52 28.0**	**-1.2**
AKTK	**Aktyubinsk**	**29.68**	**50**	P		**P**	**09 52 28.0**	**-1.2**
AKTO	**Aktyubinsk**	**29.68**	**50**	P		**P**	**09 52 28.0**	**-1.2**
	comp=Z,1.2nm,0.3s,mb4.0,baz=279,slow=7.5,SNR=5.8							
AB31	**Akbulak array**	**30.64**	**53**	*i* P		**P**	**09 52 36.7**	**-0.9**
AB31				pmax	pmax			
	comp=Z,1.0nm,0.3s,mb4.1							
AB31	**Akbulak array**	**30.64**	**53**	*i* P		**P**	**09 52 36.7**	**-0.9**
	comp=Z,1.0nm,0.3s,mb4.1							
ABKAR	**Akbulak array**	**30.64**	**53**	*e*P		**P**	**09 52 37.1**	**-0.5**
	comp=Z,2.1nm,0.6s,mb4.1							
ABKAR	**Akbulak array**	**30.64**	**53**	*e*P		**P**	**09 52 37.1**	**-0.5**
	comp=Z,2.1nm,0.6s,mb4.1							
ARU	**Arti**	**31.98**	**39**	*d i*P		**P**	**09 52 48.1**	**-1.3**
ARU							09 53 57.6	
ARU				S		**S**	**09 57 59.7**	**+1.7**
ARU				SS		SS	09 59 47.9	-28
ARU				pmax	pmax			
	comp=Z,11nm,1.2s,mb4.6							
ARU	**Arti**	**31.98**	**39**	*i* P		**P**	**09 52 48.1**	**-1.3**
	comp=Z,11nm,1.2s,mb4.6							
ARU				S		**S**	**09 57 59.7**	**+1.7**
SOKR	**Solikamsk**	**32.58**	**33**	*d i*P		**P**	**09 52 54.5**	**0.0**
SOKR				pmax	pmax			
	comp=Z,20nm,1.1s,mb5.0							
SOKR	**Solikamsk**	**32.58**	**33**	*i* P		**P**	**09 52 54.5**	**0.0**
	comp=Z,20nm,1.1s,mb5.0							
SVE	**Sverdlovsk**	**33.20**	**39**	‖ *e*P		**P**	**09 52 59.5**	**-0.5**
SVE				pmax	pmax			
	comp=Z,21nm,1.0s,mb5.0							
SVE	**Sverdlovsk**	**33.20**	**39**	*e*P		**P**	**09 52 59.5**	**-0.5**
	comp=Z,21nm,1.0s,mb5.0							
ARCES	**ARCESS Array B**	**33.53**	**2**	P		**P**	**09 53 02.6**	**-0.2**
	comp=Z,10nm,0.7s,mb4.8,baz=185,slow=8.5,SNR=31							
ARCES	**ARCESS Array B**	**33.53**	**2**	P		**P**	**09 53 02.6**	**-0.2**
ARE0	**ARCESS Array S**	**33.53**	**2**	*e*P		**P**	**09 53 03.1**	**+0.3**
ARE0	**ARCESS Array S**	**33.53**	**2**	*e*P		**P**	**09 53 03.1**	**+0.3**
KEV	**Kevo**	**33.81**	**3**	*e*P		**P**	**09 53 04.8**	**-0.4**
KEV				pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.7							
KEV	**Kevo**	**33.81**	**3**	*e*p		**P**	**09 53 04.8**	**-0.4**
	comp=Z,5.6nm,0.6s,mb4.7							
KEV	**Kevo**	**33.81**	**3**	*e*P		**P**	**09 53 04.8**	**-0.4**
	comp=Z,6.0nm,0.6s,mb4.7							
ZRNK	**Zerenda**	**36.88**	**48**	P		**P**	**09 53 31.2**	**-0.6**
ZRNK	**Zerenda**	**36.88**	**48**	P		**P**	**09 53 31.2**	**-0.6**
BRVK	**Borovoye**	**37.66**	**48**	*e*P		**P**	**09 53 41.9**	**+3.5**
	comp=Z,5.0nm,0.9s,mb4.2							
BRVK	**Borovoye**	**37.66**	**48**	‖ *i*P		**P**	**09 53 38.5**	**+0.1**
BRVK	**Borovoye**	**37.66**	**48**	*i* P		**P**	**09 53 38.5**	**+0.1**
BVA0	**Borovoye Array**	**37.72**	**48**	P		**P**	**09 53 36.3**	**-2.6**
BVA0				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.8							
BVAR	**Borovoye Array**	**37.72**	**48**	P		**P**	**09 53 38.7**	**-0.1**
	comp=Z,2.1nm,0.6s,mb4.0,baz=259,slow=7.3,SNR=9.9							
BVAR	**Borovoye Array**	**37.72**	**48**	P		**P**	**09 53 38.7**	**-0.2**
KK31	**Karatay Array**	**37.76**	**64**	*e*P		**P**	**09 53 38.4**	**-0.9**
KK31				pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.4							
KK31	**Karatay Array**	**37.76**	**64**	*e*P		**P**	**09 53 38.4**	**-0.9**
	comp=Z,4.0nm,0.5s,mb4.4							
KKAR	**Karatay Array**	**37.76**	**64**	*e*P		**P**	**09 53 39.1**	**-0.2**
	comp=Z,3.5nm,0.4s,mb4.4							
KKAR	**Karatay Array**	**37.76**	**64**	*e*P		**P**	**09 53 39.2**	**-0.1**
KKAR				pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.4							
VOSK	**Vostochnaya**	**38.04**	**48**	P		**P**	**09 53 40.6**	**-1.0**
VOSK				pmax	pmax			
	comp=Z,6.0nm,1.5s,mb4.1							
VOSK	**Vostochnaya**	**38.04**	**48**	P		**P**	**09 53 40.6**	**-1.0**
	comp=Z,6.0nm,1.5s,mb4.1							
DBIC	**Dimbokro**	**38.12**	**226**	P		**P**	**09 53 43.7**	**+1.0**
DBIC				LR	LR		10 10 45.9	
DBIC	**Dimbokro**	**38.12**	**226**	P		**P**	**09 53 43.7**	**+1.0**
	comp=Z,8.3nm,0.7s,mb4.6,baz=24,slow=11,SNR=11							
DBIC				LR	LR		10 10 45.9	
	comp=Z,81nm,19.2s,MS3.5,baz=19,slow=38							
DBIC	**Dimbokro**	**38.12**	**226**	P		**P**	**09 53 43.7**	**+1.0**
TIC	**Toumodi**	**38.24**	**226**	*e*P		**P**	**09 53 44.7**	**+1.1**
	comp=Z,8.3nm,0.2s,mb5.1							
KIC	**Kosan Boka**	**38.30**	**226**	*e*P		**P**	**09 53 45.1**	**+0.9**
	comp=Z,22nm,0.7s,mb5.0							
KIC	**Kosan Boka**	**38.30**	**226**	*e*P		**P**	**09 53 45.1**	**+0.9**
	comp=Z,22nm,0.7s,mb5.0							
LIC	**Lamto**	**38.58**	**226**	*e*P		**P**	**09 53 47.7**	**+1.2**
	comp=Z,38nm,0.7s,mb5.2							
LIC	**Lamto**	**38.58**	**226**	*e*P		**P**	**09 53 47.1**	**+0.6**
	comp=Z,17nm,0.6s,mb4.6							
LIC	**Lamto**	**38.58**	**226**	*e*P		**P**	**09 53 47.1**	**+0.6**
	comp=Z,8.3nm,0.6s,mb4.6							
LIC	**Lamto**	**38.58**	**226**	*e*P		**P**	**09 53 47.1**	**+0.6**
	comp=Z,8.3nm,0.6s,mb4.6							
EKS2	**Erkin-Say**	**40.19**	**64**	*e*P		**P**	**09 54 00.9**	**+1.2**
	comp=Z,5.2nm,0.7s,mb4.4							
EKS2	**Erkin-Say**	**40.19**	**64**	*e*P		**P**	**09 54 00.9**	**+1.2**
	comp=Z,5.2nm,0.7s,mb4.4							
AAK	**Ala-Archa**	**40.72**	**64**	P		**P**	**09 54 04.6**	**+0.6**
	comp=Z,1.5nm,0.3s,mb4.1,baz=70,slow=2.3,SNR=5.5							
AAK				LR	LR		10 12 21.2	
	comp=Z,157nm,18.2s,MS3.9,baz=153,slow=38							
AAK	**Ala-Archa**	**40.72**	**64**	‖ *e*P		**P**	**09 54 05.2**	**+1.1**
AAK				pmax	pmax			
	comp=Z,3.0nm,1.1s,mb3.8							
AAK				MLR	MLR			
	comp=Z,57nm,18.0s,MS3.5							
AAK	**Ala-Archa**	**40.72**	**64**	P		**P**	**09 54 04.6**	**+0.5**
KZA	**Kyzart**	**41.36**	**65**	*e*P		**P**	**09 54 09.7**	**+0.3**
	comp=Z,11nm,1.1s,mb4.4							
KZA	**Kyzart**	**41.36**	**65**	*e*P		**P**	**09 54 09.6**	**+0.2**
	comp=Z,11nm,1.1s,mb4.4							
SPITS	**Spitsbergen Ar**	**42.23**	**358**	P		**P**	**09 54 16.7**	**+0.7**
	comp=Z,5.1nm,0.7s,mb4.3,baz=189,slow=11,SNR=5.2							
SPITS	**Spitsbergen Ar**	**42.23**	**358**	P		**P**	**09 54 16.7**	**+0.7**
KSH	**Kashi**	**42.42**	**68**	*e*P		**P**	**09 54 25.5**	**+7.5**
KSH				*e*pP		pP	09 54 37.0	+7.9
KSH				*e*sP		sP	09 54 45.3	+12
KSH				*e*PP		PP	09 56 08.0	+11
KSH				*e*PcP		PcP	09 56 15.0	+4.4
KSH				*e*ScP		ScP	10 00 01.3	+3.1
KSH				*e*PcS		PcS	10 00 06.3	+3.8
KSH				*e*S		**S**	**10 00 47.0**	**+10**
KSH				*e*sS		sS	10 01 07.3	+12
KSH				*e*SS		SS	10 03 53.0	+6.3
KSH				*e*ScS		ScS	10 04 19.0	+2.6
KSH				pmax	pmax			
	comp=Z,3.0nm,0.3s							
KSH				pmax	pmax			
	comp=Z,59nm,2.6s							
KSH				LR	LR			
	comp=N,390nm,13.6s							
KSH				LR	LR			
	comp=E,230nm,10.5s							
KSH				LR	LR			
	comp=Z,230nm,8.4s							
KURK	**Kurchatov**	**42.74**	**52**	P		**P**	**09 54 20.4**	**0.0**
KURK	**Kurchatov**	**42.74**	**52**	P		**P**	**09 54 20.4**	**0.0**
	comp=Z,1.6nm,0.5s,mb4.0,baz=278,slow=8.9,SNR=7.1							
KURK	**Kurchatov**	**42.74**	**52**	‖ *e*P		**P**	**09 54 20.3**	**-0.1**
KURK				pmax	pmax			
	comp=Z,8.0nm,2.5s,mb4.0							
KURK	**Kurchatov**	**42.74**	**52**	*e*P		**P**	**09 54 20.3**	**-0.1**
	comp=Z,8.0nm,2.5s,mb4.0							
KBS	**Kingsbay**	**43.11**	**357**	*e*P		**P**	**09 54 23.4**	**+0.3**
	comp=Z,14nm,1.1s,mb4.6							
KBS	**Kingsbay**	**43.11**	**357**	*e*P		**P**	**09 54 23.4**	**+0.3**
KBS				pmax	pmax			
	comp=Z,14nm,1.1s,mb4.6							
KBS	**Kingsbay**	**43.11**	**357**	*e*P		**P**	**09 54 23.4**	**+0.3**
	comp=Z,14nm,1.1s,mb4.6							
MK31	**Makanchi Array**	**45.56**	**57**	*e*P		**P**	**09 54 42.2**	**-0.9**
MK31	**Makanchi Array**	**45.56**	**57**	*e*P		**P**	**09 54 42.2**	**-0.9**
MKAR	**Makanchi Array**	**45.56**	**57**	P		**P**	**09 54 42.0**	**-1.1**
	comp=Z,1.9nm,0.3s,mb4.5,baz=268,slow=7.8,SNR=30							
ZAA0	**Zalesovo Array**	**46.35**	**47**	*e*P		**P**	**09 54 48.3**	**-0.9**
ZAA0	**Zalesovo Array**	**46.35**	**47**	*e*P		**P**	**09 54 48.3**	**-0.9**
ZALV	**Zalesovo Beam**	**46.35**	**47**	P		**P**	**09 54 48.3**	**-0.9**
	comp=Z,2.4nm,0.3s,mb4.5,baz=275,slow=8.6,SNR=9.4							
WMQ	**Urumqi**	**49.91**	**60**	*e*P		**P**	**09 55 19.5**	**+2.6**
WMQ				LR	LR			
	comp=N,110nm,17.0s							
WMQ				LR	LR			
	comp=Z,77nm,16.0s							
ZAK	**Zakamensk**	**58.17**	**48**	*e*P		**P**	**09 56 18.4**	**+1.4**
ZAK				pmax	pmax			
	comp=Z,1.0nm,1.1s,mb3.8							
ZAK	**Zakamensk**	**58.17**	**48**	*e*P		**P**	**09 56 18.4**	**+1.4**
	comp=Z,1.0nm,1.1s,mb3.8							
SCHQ	**Schefferville**	**60.65**	**318**	P		**P**	**09 56 35.6**	**+1.6**
	comp=Z,2.3nm,0.5s,mb4.6,baz=91,slow=16,SNR=8.0							
SCHQ	**Schefferville**	**60.65**	**318**	P		**P**	**09 56 35.6**	**+1.6**
SONM	**Songino Array**	**61.00**	**50**	P		**P**	**09 56 36.5**	**0.0**
	comp=Z,0.7nm,0.6s,mb4.0,baz=287,slow=11,SNR=4.7							
SONM	**Songino Array**	**61.00**	**50**	P		**P**	**09 56 36.5**	**0.0**
LZH	**Lanzhou**	**64.24**	**63**	*e*P		**P**	**09 57 01.3**	**+3.0**
LZH				*e*pP		pP	09 57 11.8	+1.8
LZH				*e*sP		sP	09 57 15.8	+1.3
LZH				*e*PP		PP	09 59 24.0	+4.3
LZH				pmax	pmax			
	comp=Z,15nm,1.3s							
LZH				pmax	pmax			
	comp=Z,49nm,6.7s							
LZH				LR	LR			
	comp=E,160nm,15.0s							
LZH				LR	LR			
	comp=Z,200nm,18.5s							
BOSA	**Boshof**	**64.47**	**177**	P		**P**	**09 57 00.3**	**+0.6**
BOSA				LR	LR		10 29 58.3	
BOSA	**Boshof**	**64.47**	**177**	P		**P**	**09 57 00.3**	**+0.6**
	comp=Z,6.8nm,1.1s,mb4.6,baz=103,slow=11,SNR=4.3							
BOSA				LR	LR		10 29 58.3	
	comp=Z,141nm,18.8s,MS4.2,baz=167,slow=40							
BOSA	**Boshof**	**64.47**	**177**	P		**P**	**09 57 00.3**	**+0.6**
HHC	**Hu-ho-hao-te**	**67.38**	**55**	*e*P		**P**	**09 57 19.0**	**+0.5**
HHC				pP		pP	09 57 29.0	-1.2
HHC				PP		PP	09 59 48.3	+1.4
HHC				S		S	10 06 08.3	-3.0
HHC				pmax	pmax			
	comp=Z,16nm,0.8s							
HHC				pmax	pmax			
	comp=Z,85nm,5.6s							
HHC				LR	LR			
	comp=N,94nm,16.6s							
HHC				LR	LR			
	comp=E,80nm,14.3s							
HHC				LR	LR			
	comp=Z,130nm,15.5s							
KMI	**Kunming**	**68.72**	**74**	P		**P**	**09 57 28.5**	**+1.4**
KMI				pP	pP		09 57 40.3	+1.5
KMI				pmax	pmax			
	comp=Z,7.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**69.19**	**82**	P		**P**	**09 57 29.5**	**-0.6**
	comp=Z,1.4nm,0.7s,mb4.0,baz=306,slow=8.8,SNR=9.9							
CMAR	**Chiang Mai Arr**	**69.19**	**82**	P		**P**	**09 57 29.5**	**-0.6**
ACCN	**Adirondack Com**	**69.77**	**309**	*e*P		**P**	**09 57 33.8**	**+0.5**
ACCN	**Adirondack Com**	**69.77**	**309**	*e*P		**P**	**09 57 33.8**	**+0.5**
BJI	**Beijing**	**70.83**	**54**	P		**P**	**09 57 40.0**	**+0.1**
BJI				S		S	10 06 52.0	-0.1
BJI				pmax	pmax			
	comp=Z,4.0nm,0.6s							
BJI				pmax	pmax			
	comp=Z,81nm,3.5s							
BJI				LR	LR			
	comp=N,140nm,24.1s							
BJI				LR	LR			
	comp=E,170nm,24.0s							
BJI				LR	LR			
	comp=Z,84nm,22.6s							
GYA	**Guiyang**	**71.06**	**71**	*e*P		**P**	**09 57 42.0**	**+0.5**
GYA				pmax	pmax			
	comp=Z,10.0nm,1.0s							
NJ2	**Nanjing**	**76.99**	**60**	*e*P		**P**	**09 58 18.5**	**+2.4**
NJ2				pmax	pmax			
	comp=Z,50nm,0.6s							
ILAR	**Eielson Array**	**79.05**	**355**	P		**P**	**09 58 28.9**	**+2.1**
	comp=Z,0.4nm,0.7s,mb3.5,baz=353,slow=4.4,SNR=7.5							
ILAR	**Eielson Array**	**79.05**	**355**	P		**P**	**09 58 28.9**	**+2.1**
KSRS	**Korea Array**	**79.86**	**51**	P		**P**	**09 58 31.5**	**-0.3**
	comp=Z,1.4nm,0.6s,mb4.1,baz=305,slow=5.2,SNR=6.1							
KSRS	**Korea Array**	**79.86**	**51**	P		**P**	**09 58 31.5**	**-0.3**
KSRS				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.9							
KSRS	**Korea Array**	**79.86**	**51**	P		**P**	**09 58 31.5**	**-0.3**
	comp=Z,1.0nm,0.6s,mb3.9							
MJAR	**Matsushiro Arr**	**86.70**	**46**	P		**P**	**09 59 07.7**	**+0.6**
	comp=Z,1.3nm,0.7s,mb4.3,baz=302,slow=4.9,SNR=3.3							
MJAR	**Matsushiro Arr**	**86.70**	**46**	P		**P**	**09 59 07.7**	**+0.6**
MJAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
MJAR	**Matsushiro Arr**	**86.70**	**46**	P		**P**	**09 59 07.7**	**+0.6**
	comp=Z,1.0nm,0.7s,mb4.2							
PDAR	**Pinedale Array**	**89.81**	**326**	P		**P**	**09 59 26.1**	**+4.4**
	comp=Z,0.7nm,0.9s,mb4.0,baz=29,slow=3.4,SNR=5.4							
TXAR	**Lajitas Array**	**97.11**	**314**	LR	LR		10 45 24.6	
	comp=Z,30nm,18.1s,MS3.8,baz=120,slow=36							
WRA	**Warramunga Arr**	**119.43**	**94**	PKP		PKPdf	10 05 12.8	0.0
	comp=Z,0.6nm,0.7s,baz=318,slow=1.3,SNR=9.4							
WRA	**Warramunga Arr**	**119.43**	**94**	PKIKP		PKPdf	10 05 12.9	+0.1
WRA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
ASAR	**Alice Springs**	**120.93**	**98**	PKP		PKPdf	10 05 15.9	+0.3
	comp=Z,0.7nm,0.7s,baz=314,slow=1.3,SNR=11							
ASAR	**Alice Springs**	**120.93**	**98**	PKIKP		PKPdf	10 05 16.0	+0.4
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
SONA				AMb		AMB	10 05 16.3	
	comp=Z,13nm,0.6s							
RTK	**Rohtak**	**6.20**	**255**	*ex*		**Pg**	**10 05 38.3**	**+2.5**
KUDL	**Kundal**	**6.47**	**247**	*e*PKP		**Pn**	**10 05 10.8**	**-1.7**
LSA	**Lhasa**	**6.93**	**97**	Pn		**Pn**	**10 05 18.5**	**-0.3**
LSA	**Lhasa**	**6.93**	**97**	*e*Pn		**Pn**	**10 05 17.0**	**-1.8**
	comp=Z,29nm,0.9s							
KHET	**Khetri**	**7.05**	**249**	*e*PKP		**Pn**	**10 05 19.6**	**-0.8**
KHET				AMb	AMB		10 05 28.2	
	comp=Z,5.4nm,0.9s							
BHPL	**Bhopal**	**9.17**	**216**	*e*PKP		**Pn**	**10 05 44.7**	**-4.9**
BHPL				*ex*		x	10 07 29.9	
SHL	**Shillong**	**9.25**	**122**	*e*PKP		**Pn**	**10 05 45.5**	**-5.1**
KSH	**Kashi**	**10.50**	**328**	Pn		**Pn**	**10 06 01.3**	**-6.4**
KSH				Sn		**Sn**	**10 07 55.5**	**-10**
KSH				smax				
	comp=N,16nm,0.6s							
KSH				smax				
	comp=E,23nm,0.8s							
KSH	**Kashi**	**10.50**	**328**	*e*P		**Pn**	**10 06 07.0**	**-0.7**
KSH				*e*pP			10 06 14.0	
KSH				*e*PP			10 06 15.3	
KSH				*e*sP			10 06 19.0	
KSH				*e*S		**Sn**	**10 08 06.3**	**+0.9**
KSH				*e*SS			10 08 17.8	
KSH				pmax	pmax			
	comp=Z,5.0nm,1.0s							
KSH				pmax	pmax			
	comp=Z,63nm,3.1s							
KSH				LR	LR			
	comp=N,630nm,10.5s							
KSH				LR	LR			
	comp=E,710nm,9.4s							
KSH				LR	LR			
	comp=Z,280nm,6.0s							
AAK	**Ala-Archa**	**13.70**	**332**	Pn		**Pn**	**10 06 54.7**	**+3.3**
	comp=Z,0.5nm,0.3s,baz=234,slow=8.2,SNR=2.4							
HYB	**Hyderabad**	**14.03**	**199**	*i* P		**Pn**	**10 06 51.0**	**-5.0**
HYB				*e*S		**Sn**	**10 09 19.0**	**-13**
MKAR	**Makanchi Array**	**15.95**	**358**	Pn		**Pn**	**10 07 22.5**	**+1.0**
MKAR	**Makanchi Array**	**15.95**	**358**	Pn		**Pn**	**10 07 22.5**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=184,slow=9.5,SNR=10							
GTA	**Gaotai**	**16.01**	**53**	*e*P		**Pn**	**10 07 24.8**	**+2.4**
GTA				pP		pP	10 07 29.0	+0.3
GTA				sP		sP	10 07 32.8	+2.8
GTA				pmax	pmax			
	comp=Z,6.0nm,1.0s							
CMAR	**Chiang Mai Arr**	**18.83**	**127**	P		**Pn**	**10 07 53.2**	**-4.4**
	comp=Z,0.7nm,0.3s,baz=306,slow=12,SNR=11							
KURK	**Kurchatov**	**20.16**	**351**	P		**P**	**10 08 09.8**	**-1.6**
	comp=Z,5.8nm,0.9s,baz=172,slow=9.7,SNR=31							
ZAA0	**Zalesovo Array**	**23.12**	**2**	*e*P		**P**	**10 08 43.7**	**+0.4**
ZALV	**Zalesovo Beam**	**23.12**	**2**	P		**P**	**10 08 43.2**	**0.0**
ZALV	**Zalesovo Beam**	**23.12**	**2**	P		**P**	**10 08 43.2**	**0.0**
	comp=Z,1.6nm,0.7s,mb3.5,baz=177,slow=15,SNR=8.0							
BVAR	**Borovoye Array**	**24.07**	**341**	P		**P**	**10 08 53.4**	**+0.9**
	comp=Z,0.8nm,0.4s,mb3.5,baz=153,slow=10.0,SNR=4.0							
SONM	**Songino Array**	**24.52**	**40**	P		**P**	**10 08 56.5**	**-0.2**
	comp=Z,2.2nm,0.8s,mb3.8,baz=230,slow=10,SNR=10							
ULN	**Ulaanbaatar**	**24.91**	**40**	*e*P		**P**	**10 09 00.1**	**0.0**
	comp=Z,11nm,1.3s,mb4.2							
ABKAR	**Akbulak array**	**25.46**	**323**	*e*P		**P**	**10 09 05.6**	**+0.5**
	comp=Z,1.1nm,0.6s,mb3.6							
AKTO	**Aktyubinsk**	**27.16**	**323**	LR	LR		10 21 09.5	
	comp=Z,40nm,21.7s,MS3.0,baz=131,slow=38							
KSRS	**Korea Array**	**37.29**	**67**	P		**P**	**10 10 47.1**	**-2.2**
	comp=Z,1.6nm,0.7s,mb4.0,baz=268,slow=9.4,SNR=6.6							
KSRS				LR	LR		10 27 22.0	
	comp=Z,83nm,21.6s,MS3.5,baz=288,slow=38							
EIL	**Elat**	**41.48**	**281**	LR	LR		10 31 33.7	
	comp=Z,69nm,18.4s,MS3.6,baz=88,slow=40							
JHJ	**Hachijo jima 2**	**47.52**	**72**	LR	LR		10 32 42.9	
	comp=Z,68nm,19.6s,MS3.6,baz=263,slow=37							
FINES	**FINESS Array B**	**47.83**	**327**	P		**P**	**10 12 15.0**	**+0.4**
	comp=Z,3.9nm,0.9s,mb4.4,baz=138,slow=13,SNR=2.6							
FINES				LR	LR		10 34 33.8	
	comp=Z,65nm,19.1s,MS3.6,baz=190,slow=39							
ARCES	**ARCESS Array B**	**50.29**	**337**	P		**P**	**10 12 34.4**	**+1.0**
	comp=Z,2.8nm,1.0s,mb4.2,baz=93,slow=7.9,SNR=6.7							
NOA	**NORSAR Array B**	**54.92**	**326**	LR	LR		10 38 16.3	
	comp=Z,36nm,20.4s,MS3.4,baz=105,slow=38							
GUMO	**Guam**	**58.90**	**92**	LR	LR		10 38 38.7	
	comp=Z,32nm,21.9s,MS3.4,baz=270,slow=36							
WRA	**Warramunga Arr**	**70.41**	**129**	P		**P**	**10 14 46.9**	**-4.8**
	comp=Z,1.6nm,0.6s,mb4.1,baz=325,slow=6.3,SNR=17							
ASAR	**Alice Springs**	**72.76**	**132**	P		**P**	**10 15 02.5**	**-3.3**
	comp=Z,0.5nm,0.8s,mb3.5,baz=324,slow=5.8,SNR=8.0							
ILAR	**Eielson Array**	**77.02**	**20**	P		**P**	**10 15 28.8**	**-1.1**
	comp=Z,0.7nm,0.9s,mb3.6,baz=299,slow=4.9,SNR=7.7							
YKA	**Yellowknife Ar**	**85.89**	**8**	LR	LR		10 55 48.4	
	comp=Z,3.6nm,18.9s,MS2.8,baz=110,slow=36							
CPUP	**Villa Florida**	**145.22**	**267**	PKPbc	PKPbc		10 23 13.0	-2.1
CPUP	**Villa Florida**	**145.22**	**267**	PKPbc	PKPbc		10 23 13.0	-2.0
	comp=Z,0.3nm,0.3s,baz=59,slow=5.9,SNR=3.4							

BJI ***26*** *10:03:29.0,30.06N×82.84E,h20km, mB4.4/3,mb4.1/8, Ms4.0/4,Ms7 3.7/4*

DMN ***26*** *10:03:31.3±0.7,31.34N×82.81E,h60km,Ml4.5/7, Error ellipse: s-maj=17.3km s-min=13.2km az=80.0*

IDC ***26*** *10:03:33.5±1.0,30.55N×83.41E,h0km,mb3.9/9, mb1 4.1/12,mb1mx3.9/27,mbtmpg3.9/12,ML3.9/3,MS3.4/8, Ms1 3.4/8,ms1mx3.0/37,Error ellipse: s-maj=32.7km s-min=15.8km az=58.0*

NDI ***26*** *10:03:34.6±3.7,30.71N×83.50E,h10km,mb4.3, mb4.1(NEIC)*

NEIC ***26*** *10:03:35.1±0.7,30.58N×83.33E,h10km,mb4.1/2,Error ellipse: s-maj=17.9km s-min=8.8km az=50.0*

ISCJB ***26*** *10:03:35.7±0.3,30.84N±0.03×83.26E±0.04,h10km, mb3.9/11,MS3.4/8,Error ellipse: s-maj=5.2km s-min=3.8km az=42.8*

ISC 26 10:03:37.2±0.3,30.84N±0.03×83.25E±0.03,h10km,n55,σ1§20/59,mb3.9/11,MS3.4/8,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.52**	**170**	*e*Pn		**Pn**		**10 04 18.7**	**+0.6**
DANN				*e*Sn		**Sn**		**10 04 51.5**	**+2.6**
	1μm,0.8s								
PTH	**Pithoragarh**	**2.92**	**245**	*e*PKP		**Pb**		**10 04 29.3**	**0.0**
PTH				*e*S		**Sg**		**10 05 07.4**	**-3.6**
KOLN	**Koldanda**	**3.07**	**174**	*e*Pn		**Pn**		**10 04 24.4**	**-1.4**
KOLN				*e*Sn		**Sn**		**10 05 05.2**	**+2.6**
	395nm,0.5s								
GKN	**Gorkha**	**3.07**	**156**	*e*Pn		**Pn**		**10 04 25.1**	**-0.7**
GKN				*e*Sn		**Sn**		**10 05 05.4**	**+2.8**
	2μm,1.1s								
JOSI	**Joshimath**	**3.19**	**266**	*e*PKP		**Pb**		**10 04 33.4**	**-0.6**
JOSI				*e*S		**Sb**		**10 05 13.1**	**+0.2**
KKN	**Kakani**	**3.52**	**149**	*e*Pn		**

KUR smax
comp=N,3µm,0.5s
KUR smax
comp=E,8µm,0.5s
KUR smax
comp=N,28µm,1.8s
KUR smax
comp=E,20µm,1.8s
KUR Kuril'sk 0.83 344 ⇓ *i*P Pn 10 29 48.6 -2.5
KUR AMB AMB 10 29 49.0
comp=E,6µm,1.0s
KUR AMB AMB 10 29 49.0
comp=E,720nm,0.6s
KUR AMB AMB 10 29 49.0
comp=E,230nm,0.6s
KUR AMB AMB 10 29 49.0
comp=E,2µm,0.6s
KUR *e*S Sn 10 30 00.5 -2.1
KUR A 10 30 01.4
comp=E,3µm,0.5s
KUR A 10 30 01.4
comp=E,8µm,0.5s
KUR A 10 30 04.2
comp=E,28µm,1.6s
KUR A 10 30 04.2
comp=E,20µm,1.6s
YUK Yuzh-Kuril'sk 1.72 257 *d* iPN Pn 10 30 02.3 -0.5
YUK *i* S Sn 10 30 22.0 -1.6
YUK pmax pmax
comp=Z,1µm,0.9s
YUK pmax pmax
comp=Z,2µm,0.4s
YUK pmax pmax
comp=N,376nm,0.2s
YUK pmax pmax
comp=E,376nm,0.1s
YUK smax
comp=N,3201µm,0.7s
YUK smax
comp=E,2µm,0.4s
YUK Yuzh-Kuril'sk 1.72 257 ⇓ *i*P Pn 10 30 02.3 -0.5
YUK AMB AMB 10 30 05.0
comp=E,770nm,0.5s
YUK AMB AMB 10 30 05.0
comp=E,860nm,0.5s
YUK AMB AMB 10 30 05.0
comp=E,1µm,0.5s
YUK *i* S Sn 10 30 22.0 -1.6
YUK A 10 30 32.0
comp=E,6µm,0.4s
YUK A 10 30 32.0
comp=E,4µm,0.4s
YUK A 10 30 32.3
comp=E,12µm,0.9s
YUK A 10 30 32.3
comp=E,3µm,0.9s
NEM2 Nemuro 2 2.06 240 P Pn 10 30 05.9 -1.6
NEM2 *e*S Sn 10 30 29.4 -2.7
JRA Rausu 2.26 258 P Pn 10 30 10.7 +0.5
JRA *e*S Sn 10 30 37.0 +0.1
JNK Nakash 2.64 253 P Pn 10 30 15.4 0.0
JNK *e*S Sn 10 30 46.0 -0.2
JAK Akkeshi 2.91 242 P Pn 10 30 18.2 -0.9
JAK *e*S Sn 10 30 50.5 -2.3
JTKR Abashiri--Toko 3.11 263 P Pn 10 30 22.4 +0.6
JAR Ashorobuto 3.39 252 P Pn 10 30 26.3 +0.6
JAR *e*S Sn 10 31 05.5 +0.9
JOB Onbets 3.50 246 P Pn 10 30 27.2 -0.1
JOB *e*S Sn 10 31 06.6 -0.9
JCH Churui 3.95 244 P Pn 10 30 32.9 -0.4
JKK2 Kamakawa 2 3.95 264 P Pn 10 30 35.3 +1.9
ASAJ Asahikawa 4.03 267 *e*Pn Pn 10 30 35.5 +1.1
ASAJ Asahikawa 4.03 267 P Pn 10 30 36.2 +1.9
comp=E,9.8nm,0.3s,baz=61,slow=20,SNR=38
ASAJ S Sn 10 31 28.8 +8.6
comp=E,7.5nm,0.3s,baz=135,slow=10.0,SNR=1.8
JFR Furan 4.24 255 P Pn 10 30 39.1 +1.8
ERM Erimo 4.40 238 *e*Pn Pn 10 31 41.4 +1.9
ERM *e*Sn Sn 10 31 36.4 +7.1
JNBK Urakawa-nobuka 4.51 243 P Pn 10 30 41.0 0.0
JWK2 Keihoku 4.56 283 P Pn 10 30 44.2 +2.6
YSS Yuzh-Sakhalins 4.56 305 *e*Pn Pn 10 30 42.9 +1.1
YSS *e*Sn Sn 10 31 35.1 +1.6
YSS Yuzh-Sakhalins 4.56 305 ⇓ *i*PN Pn 10 30 42.0 +0.2
YSS *e*S Sn 10 31 34.3 +0.9
YSS pmax pmax
comp=Z,50nm,0.5s
YSS smax
comp=E,80nm,0.8s
YSS Yuzh-Sakhalins 4.56 305 ⇓ *i*P Pn 10 30 42.0 +0.2
YSS AMB AMB 10 30 43.0
comp=E,50nm,0.5s
YSS *e*S Sn 10 31 34.3 +0.9
YSS A 10 31 41.0
comp=E,80nm,0.8s
JHR Hokuryu 4.70 264 P Pn 10 30 46.8 +3.1
JYG Yagishiri 4.84 272 P Pn 10 30 48.3 +2.8
JEW Eniwo 5.14 254 P Pn 10 30 52.7 +3.0
JKB Kayabe 5.81 247 P Pn 10 30 59.1 +0.2
JKB *e*S Sn 10 32 02.3 -1.9
TYV Tymovskoe 7.44 332 *e*P Pn 10 31 21.0 -0.1
TYV AMB AMB 10 31 24.0
comp=E,22nm,1.0s
TYV AMB AMB 10 31 24.0
comp=E,26nm,1.0s
PETK Petropavlovsk- 10.71 32 P Pn 10 32 08.5 +2.8
comp=E,0.2nm,0.3s,baz=191,slow=7.0,SNR=2.5
MJAR Matsushiro Arr 10.94 227 P Pn 10 32 07.5 -1.5
comp=E,0.5nm,0.3s,baz=31,slow=14,SNR=6.3
KSRS Korea Array 16.80 252 P Pn 10 33 26.9 +0.3
comp=E,0.3nm,0.3s,baz=58,slow=12,SNR=5.0
KSRS LR LR 10 39 12.2
comp=E,53nm,21.5s,baz=70,slow=34
YAK Yakutsk 20.68 335 *e*P pP 10 34 23.8 +1.0
YAK pmax pmax
comp=Z,13nm,0.9s
SONM Songino Array 28.90 292 P P 10 35 29.4 +0.8
comp=Z,0.7nm,0.4s,mb3.7,baz=86,slow=8.1,SNR=5.8
SONM LR LR 10 47 54.4
comp=Z,72nm,19.3s,MS3.3,baz=75,slow=38
KDAK Kodiak Island 38.24 48 *i*P P 10 36 49.6 +0.2
ILAR Eielson Array 40.50 37 P P 10 37 07.9 -0.2
comp=Z,1.3nm,0.9s,mb3.7,baz=255,slow=7.3,SNR=16
ZALV Zalesovo Beam 41.19 307 P P 10 37 14.4 +0.5
comp=Z,0.4nm,0.3s,mb3.5,baz=38,slow=7.3,SNR=2.5
ZALV PcP PcP 10 39 11.8 -0.2
comp=Z,3.0nm,0.5s,baz=78,slow=2.6,SNR=14
ZALV LR LR 10 54 18.8
comp=Z,34nm,19.8s,MS3.2,baz=166,slow=36
ZALV Zalesovo Beam 41.19 307 P P 10 37 14.4 +0.5
ZALV 10 39 11.8
EGAK Eagle 42.94 36 *e*P P 10 37 28.2 +0.1
comp=Z,2.7nm,0.8s,mb4.0
MK31 Makanchi Array 44.93 297 *e*P P 10 37 44.2 0.0
MKAR Makanchi Array 44.93 297 P P 10 37 44.3 0.0
comp=Z,2.0nm,0.6s,mb4.2,baz=78,slow=8.9,SNR=18
MKAR PcP PcP 10 39 23.6 -1.1
comp=Z,1.4nm,0.6s,baz=56,slow=4.5,SNR=7.4
MKAR LR LR 10 57 51.3
comp=Z,58nm,18.9s,MS3.5,baz=354,slow=38
MKAR Makanchi Array 44.93 297 *ce*P P 10 37 44.2 -0.1
MKAR pmax pmax
comp=Z,2.0nm,0.6s
INK Inuvik 45.44 31 P P 10 37 47.6 -0.4
comp=Z,1.0nm,0.4s,mb4.0,baz=313,slow=4.9,SNR=6.5
CHTO Chiang Mai 48.19 254 *e*P P 10 38 10.6 +0.5
comp=Z,3.8nm,0.7s,mb4.5
CHTO Chiang Mai 48.19 254 *e*P P 10 38 10.6 +0.6
CHTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
CMAR Chiang Mai Arr 48.43 254 P P 10 38 12.6 +0.6
comp=Z,1.2nm,0.6s,mb4.1,baz=40,slow=7.6,SNR=8.5
KZA Kyzart 51.52 295 *e*P P 10 38 36.5 +1.5
comp=Z,3.2nm,0.6s,mb4.4
GUN Gumba 51.72 273 *e*P P 10 38 36.9 +0.1
AAK Ala-Archa 51.74 296 P P 10 38 36.2 -0.4
comp=Z,1.1nm,0.3s,mb4.3,baz=244,slow=8.6,SNR=3.7
AAK Ala-Archa 51.74 296 ⇓ *e*P P 10 38 34.9 -1.8
AAK pmax pmax
comp=Z,2.0nm,1.7s,mb3.8
RAMN Ramite 51.77 272 *e*P P 10 38 37.4 +0.2
comp=Z,54nm,0.4s
KKN Kakani 52.22 274 *e*P P 10 38 40.8 +0.3
comp=Z,21nm,0.8s,mb5.1
PKI Pulchoki 52.26 273 *e*P P 10 38 41.0 +0.3
PKIN Phulchoki 52.26 273 *e*P P 10 38 40.7 -0.1
comp=Z,11nm,0.5s,mb5.0
DMN Daman 52.45 274 *e*P P 10 38 42.6 +0.4
comp=Z,22nm,0.6s,mb5.3
GKN Gorkha 52.55 274 *e*P P 10 38 43.0 +0.1
comp=Z,20nm,0.5s,mb5.3
DANN Dangsing 52.98 275 *e*P P 10 38 46.9 +0.8
comp=Z,19nm,0.4s,mb5.4
KOLN Koldanda 53.43 275 *e*P P 10 38 50.1 +0.7
comp=Z,6.4nm,0.3s,mb5.1
YKA Yellowknife Ar 54.82 34 P P 10 38 59.7 +0.7
comp=Z,0.7nm,0.4s,mb4.0,baz=304,slow=8.1,SNR=4.6
ABKAR Akbulak array 57.22 309 *e*P P 10 39 15.7 -0.6
comp=Z,1.3nm,0.4s,mb4.3
AKTO Aktyubinsk 57.66 311 LR LR 11 05 23.3
comp=Z,36nm,19.1s,MS3.5,baz=304,slow=37
ARCESS Array B 58.87 340 P P 10 39 26.9 -0.6
comp=Z,0.4nm,0.3s,mb3.9,baz=39,slow=7.8,SNR=4.7
FINES FINESS Array B 64.61 333 P P 10 40 05.8 -0.4
comp=Z,2.6nm,0.6s,mb4.5,baz=45,slow=6.2,SNR=6.5
WRA Warramunga Arr 65.30 194 P P 10 40 10.3 -0.8
comp=Z,0.7nm,0.6s,mb3.9,baz=15,slow=6.9,SNR=12
NVAR Mina Array Bea 66.59 59 P P 10 40 20.1 +0.7
comp=Z,0.9nm,0.7s,mb3.9,baz=292,slow=7.3,SNR=7.3
PDAR Pinedale Array 68.90 50 P P 10 40 34.4 +0.4
comp=Z,0.6nm,0.6s,mb3.7,baz=304,slow=2.4,SNR=4.0
ASAR Alice Springs 69.01 194 P P 10 40 35.4 +0.8
comp=Z,0.8nm,0.5s,mb3.9,baz=15,slow=6.7,SNR=10
NOA NORSAR Array B 69.24 339 P P 10 40 34.4 -1.2
NOA LR LR 11 16 26.7
NOA NORSAR Array B 69.24 339 P P 10 40 34.4 -1.2
comp=Z,0.9nm,0.5s,mb4.0,baz=29,slow=6.5,SNR=7.5
NOA LR LR 11 16 26.7
comp=Z,34nm,18.1s,MS3.6,baz=255,slow=41
AKASG Malin Array Be 71.47 324 P P 10 40 48.4 -1.1
comp=Z,0.8nm,0.4s,mb4.0,baz=37,slow=6.0,SNR=2.9
STKA Stephens Creek 76.18 186 P P 10 41 17.7 +0.7
comp=Z,1.3nm,0.7s,mb4.0,baz=346,slow=8.3,SNR=4.4
SCHQ Schefferville 76.73 20 P P 10 41 19.6 -0.4
comp=Z,3.3nm,1.0s,mb4.2,baz=350,slow=12,SNR=3.5
CLL Collm 77.05 333 *e*P P 10 41 21.0 -0.9
BRTR Keskin Array B 77.61 314 P P 10 41 25.8 +0.5
comp=Z,0.9nm,0.4s,mb4.1,baz=107,slow=2.8,SNR=7.0
BRTR Keskin Array B 77.61 314 *ce*P P 10 41 25.7 +0.4
BRTR pmax pmax
comp=Z,1.0nm,0.4s
CDF Champ du Feu 81.39 335 *e*P P 10 41 44.9 -0.7
TXAR Lajitas Array 81.65 57 P P 10 41 47.8 +0.4
comp=Z,0.9nm,0.6s,mb3.9,baz=296,slow=3.7,SNR=24
FLN La Foliniere 83.22 340 *e*P P 10 41 54.4 -0.8
LDF La Druitiere 83.28 339 *e*P P 10 41 54.5 -1.0
LOR Lormes 83.43 336 *e*P P 10 41 55.4 -0.9
comp=Z,3.3nm,0.5s,mb4.3
LOR Lormes 83.43 336 *e*P P 10 41 55.4 -0.9
comp=Z,1.6nm,0.5s,mb4.3
LOR Lormes 83.43 336 *e*P P 10 41 55.4 -0.9
LOR pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
GRR Gorron 83.66 340 *e*P P 10 41 56.9 -0.5
comp=Z,8.8nm,0.6s,mb4.7
GRR Gorron 83.66 340 *e*P P 10 41 56.9 -0.5
comp=Z,4.4nm,0.6s,mb4.8
GRR Gorron 83.66 340 *e*P P 10 41 56.9 -0.5
GRR pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
SMF Signal de Mont 84.00 336 *e*P P 10 41 59.5 +0.3
comp=Z,11nm,0.8s,mb4.7
SMF Signal de Mont 84.00 336 *e*P P 10 41 59.5 +0.3
comp=Z,5.3nm,0.8s,mb4.7
SMF Signal de Mont 84.00 336 *e*P P 10 41 59.5 +0.3
SMF pmax pmax
comp=Z,5.0nm,0.8s,mb4.7
AVF Avril sur Loir 84.00 337 *e*P P 10 41 59.6 +0.4
comp=Z,8.2nm,0.9s,mb4.5
AVF Avril sur Loir 84.00 337 *e*P P 10 41 59.6 +0.4
comp=Z,4.1nm,0.9s,mb4.6
AVF Avril sur Loir 84.00 337 *e*P P 10 41 59.6 +0.4
AVF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
LPL La Plagne 84.14 334 *e*P P 10 42 00.1 +0.2
LPG La Plagne 84.15 334 *e*P P 10 42 00.1 +0.1
comp=Z,3.5nm,0.5s,mb4.4
LPG La Plagne 84.15 334 *e*P P 10 42 00.1 +0.1
comp=Z,1.8nm,0.5s,mb4.5
LPG La Plagne 84.15 334 *e*P P 10 42 00.1 +0.1
LPG pmax pmax
comp=Z,2.0nm,0.5s,mb4.5
SGMF Saint Gilles 84.19 341 *e*P P 10 41 59.9 -0.3
ROSF Rostrenen 84.28 341 *e*P P 10 42 00.3 -0.3
comp=Z,38nm,1.0s,mb5.2
ROSF Rostrenen 84.28 341 *e*P P 10 42 00.3 -0.3
comp=Z,19nm,1.0s,mb5.2
ROSF Rostrenen 84.28 341 *e*P P 10 42 00.3 -0.3
ROSF pmax pmax
comp=Z,19nm,1.0s,mb5.2
QUIF Quistinic 84.65 341 *e*P P 10 42 01.8 -0.7
TCF Toulx Ste Croi 84.79 337 *e*P P 10 42 03.6 +0.4
MBDF Montbardon 84.83 333 *e*P P 10 42 02.7 -0.8
comp=Z,3.3nm,0.6s,mb4.3
MBDF Montbardon 84.83 333 *e*P P 10 42 02.7 -0.8
comp=Z,1.6nm,0.6s,mb4.3
MBDF Montbardon 84.83 333 *e*P P 10 42 02.7 -0.8
MBDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
ORIF Oris-en-Rattie 84.94 334 *e*P P 10 42 03.9 -0.1
MFF Saint Martin d 85.13 339 *e*P P 10 42 04.4 -0.5
VIVF Saint-Julien-l 85.37 335 *e*P P 10 42 06.0 -0.2
comp=Z,2.3nm,0.5s,mb4.3
VIVF Saint-Julien-l 85.37 335 *e*P P 10 42 06.0 -0.2
comp=Z,1.1nm,0.5s,mb4.2
VIVF Saint-Julien-l 85.37 335 *e*P P 10 42 06.0 -0.2
VIVF pmax pmax
comp=Z,1.0nm,0.5s,mb4.2
RJF Les Rejaudoux 85.88 337 *e*P P 10 42 08.5 -0.2
CAF Calviac 86.08 337 *e*P P 10 42 09.9 +0.3
comp=Z,4.0nm,0.6s,mb4.5
CAF Calviac 86.08 337 *e*P P 10 42 09.9 +0.3
comp=Z,2.0nm,0.6s,mb4.5
CAF Calviac 86.08 337 *e*P P 10 42 09.9 +0.3
CAF pmax pmax
comp=Z,2.0nm,0.6s,mb4.5
LFF La Frestale 86.43 337 *e*P P 10 42 10.4 -1.0
ETSF Etsaut 88.68 338 *e*P P 10 42 22.8 +0.6
comp=Z,7.8nm,0.9s,mb4.8
ETSF Etsaut 88.68 338 *e*P P 10 42 22.8 +0.6
comp=Z,3.9nm,0.9s,mb4.7
ETSF Etsaut 88.68 338 *e*P P 10 42 22.8 +0.6
ETSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.8

IDC 26 10:36:03.3±17.0, **23°.03S**×**179°.71E, h634**km±231km, **mb2.9/5, mb1 3.1/5, mb1mx2.9/17, mbtmp2.9/5, Error ellipse: s-maj=108.6km s-min=81.5km az=156.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTA	**Charters Tower**	**31.21**	**269**	P		P	10 41 34.1	+0.4
	2.6nm,0.3s,baz=104,slow=11,SNR=5.0							
STKA	**Stephens Creek**	**34.80**	**247**	P		P	10 42 03.4	-0.3
	0.8nm,0.5s,baz=75,slow=12,SNR=3.6							
ASAR	**Alice Springs**	**41.92**	**260**	P		P	10 43 01.2	+0.3
	0.9nm,0.5s,baz=98,slow=8.0,SNR=12							
WRA	**Warramunga Arr**	**42.20**	**265**	P		P	10 43 03.1	-0.1
	0.8nm,0.3s,baz=101,slow=8.4,SNR=65							
TXAR	**Lajitas Array**	**90.20**	**58**	P		P	10 47 58.2	+0.2
	0.4nm,0.9s,baz=212,slow=3.2,SNR=3.6							

*DDA **26** 10:45:07.7, 40°.32N×29°.17E, h5km±1km, Md2.6*
*ISCJB **26** 10:45:08.9±0.5, 40°.35N±0°.06×29°.15E±0°.04, h7km±6km, Error ellipse: s-maj=9.7km s-min=4.5km az=173.6*
*CSEM **26** 10:45:08.7±0.2, 40°.39N×29°.14E, h15km, MD2.7, Error ellipse: s-maj=5.6km s-min=3.5km az=167.0*
*ISK **26** 10:45:08.1, 40°.33N×29°.12E, h15km, MD2.7*
ISC 26 10:45:08.9±0.5, **40°.36N**±0°.05×**29°.15E**±0°.04, **h12**km±5km, **n30,σ0°.94/45, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GEMT	**Gemlik**	**0.08**	**25**	*e*PG		**Pg**	**10 45 11.8**	**+0.2**
GEMT				*e*SG		**Sg**	**10 45 14.5**	**+1.0**
GEMT	**Gemlik**	**0.08**	**25**	*e*Pg		**Pg**	**10 45 11.8**	**+0.2**
GEMT				*e*Sg		**Sg**	**10 45 14.5**	**+1.0**
MDNY	**Mudanya-Bursa**	**0.20**	**272**	*e*PG		**Pg**	**10 45 12.7**	**-0.6**
MDNY				*e*SG		**Sg**	**10 45 16.4**	**+0.1**
MDNY	**Mudanya-Bursa**	**0.20**	**272**	*e*Pg		**Pg**	**10 45 12.7**	**-0.6**
MDNY				*e*Sg		**Sg**	**10 45 16.4**	**+0.1**
ULDT	**Uludag**	**0.22**	**182**	*i* P		**Pg**	**10 45 11.1**	**-2.5**
ULDT				*i* S		**Sg**	**10 45 13.3**	**-3.6**
ULDT	**Uludag**	**0.22**	**182**	*i* P		**Pg**	**10 45 11.1**	**-2.6**
YLV	**Yalova**	**0.27**	**40**	*e*PG		**Pg**	**10 45 14.8**	**+0.3**
YLV	**Yalova**	**0.27**	**40**	*e*Pg		**Pg**	**10 45 14.8**	**+0.3**
ARMT	**Armutlu**	**0.30**	**313**	*e*PG		**Pg**	**10 45 15.1**	**+0.1**
ARMT	**Armutlu**	**0.30**	**313**	*e*Pg		**Pg**	**10 45 15.1**	**+0.1**
ADVT	**Abdulvahap**	**0.46**	**81**	*e*PG		**Pg**	**10 45 17.8**	**-0.2**
ADVT	**Abdulvahap**	**0.46**	**81**	*e*Pg		**Pg**	**10 45 17.8**	**-0.2**
KCTX	**Karacabey (Bur**	**0.61**	**261**	*e*PG		**Pg**	**10 45 19.7**	**-1.1**
KCTX	**Karacabey (Bur**	**0.61**	**261**	*e*Pg		**Pg**	**10 45 19.7**	**-1.1**
GPA	**Golpazari**	**0.89**	**94**	*e*PG		**Pg**	**10 45 26.7**	**+0.5**
GPA	**Golpazari**	**0.89**	**94**	*e*Pg		**Pg**	**10 45 26.7**	**+0.5**
DURS	**Dursunbey**	**0.92**	**214**	*i* P		**Pg**	**10 45 27.2**	**+0.6**
DURS				*i* S		**Sg**	**10 45 40.2**	**+1.5**
DURS	**Dursunbey**	**0.92**	**214**	*i* P		**Pg**	**10 45 27.2**	**+0.5**
DURS				*i* S		**Sg**	**10 45 40.2**	**+1.5**
GULT	**Gulveren**	**1.05**	**86**	*e*PG		**Pg**	**10 45 29.4**	**+0.2**
GULT	**Gulveren**	**1.05**	**86**	*e*Pg		**Pg**	**10 45 29.4**	**+0.3**
BORA	**Eskisehir**	**1.11**	**115**	*i* P		**Pb**	**10 45 28.4**	**-1.6**
BORA				*i* S		**Sb**	**10 45 45.4**	**+0.9**
BORA	**Eskisehir**	**1.11**	**115**	*i* P		**Pb**	**10 45 28.4**	**-1.7**
BORA				*i* S		**Sb**	**10 45 45.4**	**+0.9**
GONE	**Gonen-Balikesi**	**1.16**	**255**	*e*PN		**Pn**	**10 45 29.8**	**-1.1**
GONE	**Gonen-Balikesi**	**1.16**	**255**	*e*Pn		**Pn**	**10 45 29.8**	**-1.2**
GDZ	**Gediz**	**1.30**	**168**	*i* P		**Pn**	**10 45 31.8**	**-1.1**
GDZ				*i* S		**Sb**	**10 45 50.0**	**+0.2**
GDZ	**Gediz**	**1.30**	**168**	*i* P		**Pn**	**10 45 31.8**	**-1.0**
GDZ				*i* S		**Sb**	**10 45 50.0**	**+0.1**
BALY	**Balya**	**1.33**	**243**	*i* P		**Pn**	**10 45 33.4**	**+0.2**
BALY				*i* S		**Sb**	**10 45 51.6**	**+1.0**
BALY	**Balya**	**1.33**	**243**	*i* P		**Pn**	**10 45 33.4**	**+0.2**
BALY				*i* S		**Sb**	**10 45 51.6**	**+1.0**
DEMI	**Demirci**	**1.36**	**194**	*i* P		**Pn**	**10 45 34.2**	**+0.5**
DEMI				*i* S		**Sn**	**10 45 52.3**	**+0.7**
DEMI	**Demirci**	**1.36**	**194**	*i* P		**Pn**	**10 45 34.2**	**+0.5**
DEMI				*i* S		**Sn**	**10 45 52.3**	**+0.7**

*BJI **26** 10:59:29.5, 29°.87N×82°.29E, h10km, mB4.6/2, mb3.9/4, Ms3.7/1, Ms7 3.5/1*
*NDI **26** 10:59:38.6±4.1, 30°.43N×83°.70E, h10km, ML3.7, mb3.8(NEIC)*
*ISCJB **26** 10:59:41.1±0.5, 30°.59N±0°.06×83°.23E±0°.04, h10km, mb3.7/11, MS3.2/2, Error ellipse: s-maj=8.2km s-min=4.9km az=163.6*
*IDC **26** 10:59:41.1±0.9, 30°.62N×83°.33E, h0km, mb3.9/10, mb1 4.0/12, mb1mx3.9/27, mbtmp3.9/12, ML3.6/2, MS3.2/3, Ms1 3.2/3, ms1mx2.8/30, Error ellipse: s-maj=34.4km s-min=15.8km az=59.0*
*NEIC **26** 10:59:43.4±0.8, 30°.71N×83°.25E, h10km, mb3.8/2, Error ellipse: s-maj=20.2km s-min=9.2km az=218.0*
ISC 26 10:59:42.9±0.5, **30°.61N**±0°.06×**83°.25E**±0°.05, **h10**km, **n33,** σ1°.9**10/32, mb3.8/11, MS3.2/2, 1C, Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PTH	**Pithoragarh**	**2.84**	**249**	*e*PKP		**Pg**	**11 00 35.9**	**-1.4**
PTH				*e*S		**Sg**	**11 01 14.9**	**+0.9**
JOSI	**Joshimath**	**3.19**	**270**	*e*PKP		**Pg**	**11 00 50.2**	**+6.2**
JOSI				*e*S		**Sg**	**11 01 29.6**	**+4.4**
JOSI				AML		AML	11 01 37.6	
	comp=E,217nm,0.6s							
JOSI				AML		AML	11 01 38.0	
	comp=N,536nm,0.9s							
KLP	**Kalpa**	**4.39**	**283**	*e*PKP		**Pn**	**11 00 51.7**	**+2.1**
KLP				*ex*		x	11 01 19.1	
DDI	**Dehra Dun**	**4.50**	**268**	*e*PKP		**Pn**	**11 00 52.0**	**+0.9**
NDI	**New Delhi**	**5.59**	**251**	*e*PKP		**Pn**	**11 01 05.5**	**-0.6**
SONA	**Sohna**	**5.87**	**248**	*e*PKP		**Pn**	**11 01 10.6**	**+0.6**
SONA				*e*S		**Sn**	**11 02 15.3**	**-2.0**
LSA	**Lhasa**	**6.90**	**96**	Pg		**Pn**	**11 01 27.0**	**+2.9**
LSA				Sg		**Sn**	**11 02 49.0**	**+6.4**
LSA				smax				
	comp=N,30nm,0.5s							
LSA				smax				
	comp=E,90nm,0.9s							
LSA	**Lhasa**	**6.90**	**96**	*e*Pn		**Pn**	**11 01 27.9**	**+3.8**
	comp=E,25nm,0.8s							
KBL	**Kabul**	**12.61**	**292**	*e*Pn		**Pn**	**11 02 43.5**	**+1.3**
	comp=E,13nm,0.9s							
AAK	**Ala-Archa**	**13.89**	**332**	LR		LR	11 08 30.9	
	comp=E,71nm,19.3s,baz=309,slow=38							
EKS2	**Erkin-Say**	**14.22**	**330**	*e*Pn		**Pn**	**11 03 02.6**	**-1.6**
	comp=E,14nm,0.7s							
POO	**Poona**	**14.75**	**218**	*ex*		**Pn**	**11 03 18.0**	**+6.4**
GTA	**Gaotai**	**16.14**	**53**	*e*P		**Pn**	**11 03 32.3**	**+2.5**
GTA				pP		pP	11 03 36.5	+0.6
GTA				sP		sP	11 03 40.0	+2.8
GTA				pmax		pmax		
	comp=Z,6.0nm,1.1s							
MKAR	**Makanchi Array**	**16.18**	**358**	Pn		**Pn**	**11 03 29.7**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=172,slow=9.4,SNR=6.8							
CHTO	**Chiang Mai**	**18.45**	**126**	*e*P		**Pn**	**11 03 59.5**	**+0.8**
	comp=Z,4.5nm,1.0s							
CMAR	**Chiang Mai Arr**	**18.69**	**127**	P		**Pn**	**11 04 00.5**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=310,slow=11,SNR=19							
KURK	**Kurchatov**	**20.38**	**352**	P		**P**	**11 04 18.6**	**-1.0**
	comp=Z,6.4nm,1.0s,baz=174,slow=9.7,SNR=27							
ZALV	**Zalesovo Beam**	**23.35**	**2**	P		**P**	**11 04 50.1**	**-1.3**
	comp=Z,1.3nm,0.6s,mb3.5,baz=194,slow=9.4,SNR=4.5							
BVAR	**Borovoye Array**	**24.29**	**341**	P		**P**	**11 04 59.4**	**-0.7**
	comp=Z,1.5nm,0.6s,mb3.6,baz=138,slow=11,SNR=7.3							
SONM	**Songino Array**	**24.70**	**39**	P		**P**	**11 05 03.8**	**-0.2**
	comp=Z,1.4nm,0.8s,mb3.5,baz=226,slow=11,SNR=8.4							
ABKAR	**Akbulak array**	**25.64**	**323**	*e*P		**P**	**11 05 13.4**	**+0.9**
	comp=Z,3.2nm,0.8s,mb3.9							
AKTK	**Aktyubinsk**	**27.35**	**324**	P		**P**	**11 05 28.5**	**+0.6**
AKTO	**Aktyubinsk**	**27.35**	**324**	⇑Lg			11 06 15.9	
	comp=Z,0.4nm,0.9s							
AKTO	**Aktyubinsk**	**27.35**	**324**	P		**P**	**11 05 28.5**	**+0.6**
	comp=Z,0.5nm,0.3s,mb3.6,baz=106,slow=7.4,SNR=3.6							
KSRS	**Korea Array**	**37.37**	**67**	LR		LR	11 26 06.8	
	comp=Z,36nm,18.7s,MS3.2,baz=194,slow=42							
FINES	**FINESS Array B**	**48.02**	**327**	P		**P**	**11 08 22.2**	**+0.4**
	comp=Z,2.1nm,0.6s,mb4.3,baz=128,slow=9.0,SNR=2.9							
ARCES	**ARCESS Array B**	**50.50**	**337**	P		**P**	**11 08 40.8**	**+0.1**
	comp=Z,1.5nm,0.9s,mb4.0,baz=59,slow=7.5,SNR=4.7							
NOA	**NORSAR Array B**	**55.11**	**326**	P		**P**	**11 09 14.0**	**-0.9**
	comp=Z,0.5nm,0.6s,mb3.7,baz=94,slow=7.0,SNR=3.3							
NOA				LR		LR	11 37 05.7	
	comp=Z,22nm,19.0s,MS3.3,baz=270,slow=41							
WRA	**Warramunga Arr**	**70.26**	**129**	P		**P**	**11 10 56.0**	**-0.5**
	comp=Z,1.6nm,0.7s,mb4.0,baz=324,slow=6.4,SNR=39							
ASAR	**Alice Springs**	**72.61**	**132**	P		**P**	**11 11 10.3**	**-0.3**
	comp=Z,0.5nm,0.9s,mb3.4,baz=319,slow=7.2,SNR=5.7							
ILAR	**Eielson Array**	**77.23**	**20**	P		**P**	**11 11 36.6**	**-0.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=282,slow=4.5,SNR=6.0							
QSPA	**South Pole Qui**	**120.41**	**180**	PKP		PKPdf	11 18 33.3	0.0
	comp=Z,0.8nm,0.8s,baz=63,slow=0.6,SNR=5.3							
CPUP	**Villa Florida**	**145.21**	**267**	PKPbc		PKPbc	11 19 20.6	-0.2
	comp=Z,0.9nm,0.5s,baz=56,slow=3.6,SNR=3.7							

RSPR 26 11:15:17.4, 17°.99N×65°.69W, h10km±1km, MD2.2/3, 6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MTP	**Monte Pirata**	**0.17**	**51**	⇓ *e*P		Pg	11 15 21.4	+0.3
MTP	**Monte Pirata**	**0.17**	**51**	⇓ *e*P		Pg	11 15 21.4	+0.3
MTP				*e*S		Sg	11 15 24.2	+0.5
HUMP	**Col San Antoni**	**0.21**	**316**	⇓ *e*P		Pg	11 15 22.2	+0.4
HUMP	**Col San Antoni**	**0.21**	**316**	⇓ *e*P		Pg	11 15 22.2	+0.4
HUMP				*e*S		Sg	11 15 25.5	+0.6
CBYP	**Canovanas**	**0.32**	**331**	*e*S		Sg	11 15 29.2	+1.0
CBYP	**Canovanas**	**0.32**	**331**	*e*S		Sg	11 15 29.2	+1.0
SJG	**San Juan**	**0.45**	**286**	*e*S		Sg	11 15 32.4	+0.2
SJG	**San Juan**	**0.45**	**286**	*e*S		Sg	11 15 32.4	+0.2
STVI	**Saint Thomas**	**0.79**	**63**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**17.93**	**192**	P	P	11 21 15.8	+0.1
	0.7nm,0.3s,baz=68,slow=7.7,SNR=3.8						
CTA	**Charters Tower**	**33.34**	**265**	P	P	11 23 36.6	+1.3
	2.5nm,0.4s,baz=93,slow=10,SNR=3.8						
STKA	**Stephens Creek**	**37.56**	**244**	P	P	11 24 10.6	-0.2
	1.5nm,0.6s,baz=79,slow=12,SNR=5.8						
ASAR	**Alice Springs**	**44.33**	**257**	P	P	11 25 05.2	-0.3
	3.0nm,0.8s,baz=98,slow=8.0,SNR=42						
WRA	**Warramunga Arr**	**44.44**	**262**	P	P	11 25 05.7	-0.6
	1.4nm,0.3s,baz=96,slow=7.8,SNR=13						
FITZ	**Fitzroy Crossi**	**52.86**	**263**	P	P	11 26 09.8	+0.1
	0.6nm,0.3s,baz=109,slow=8.6,SNR=9.9						
QSPA	**South Pole Qui**	**69.32**	**180**	P	P	11 27 58.4	+0.5
	1.1nm,0.9s,baz=28,slow=5.8,SNR=3.9						

IDC 26 11:19:40.1±6.9, 61°.86S×160°.13E, h0km, mb4.0/4, mb1 4.1/4, mb1mx4.0/12, mbtmp4.0/4, MS4.0/11, Ms1 4.0/11, ms1mx3.8/21, Error ellipse: s-maj=380.7km s-min=26.0km az=74.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**19.29**	**25**	LR	LR	11 29 40.6	
	comp=Z,421nm,19.6s,baz=28,slow=31						
URZ	**Urewera**	**25.86**	**32**	LR	LR	11 34 20.0	
	comp=Z,441nm,18.6s,baz=324,slow=34						
QSPA	**South Pole Qui**	**28.23**	**180**	P	P	11 25 34.6	+0.5
	2.2nm,0.9s,baz=0.0,slow=4.7,SNR=6.1						
QSPA				LR	LR	11 35 28.7	
	comp=Z,246nm,21.4s,baz=25,slow=34						
STKA	**Stephens Creek**	**32.31**	**330**	P	P	11 26 11.2	+0.7
	1.8nm,1.0s,baz=140,slow=6.4,SNR=4.1						
STKA				LR	LR	11 36 54.9	
	comp=Z,266nm,19.7s,baz=202,slow=32						
MAW	**Mawson**	**37.79**	**218**	LR	LR	11 42 52.7	
	comp=Z,251nm,19.6s,baz=22,slow=37						
NWAO	**Narrogin (SRO)**	**39.79**	**297**	LR	LR	11 39 30.4	
	comp=Z,283nm,20.4s,baz=129,slow=30						
ASAR	**Alice Springs**	**42.15**	**323**	P	P	11 27 34.2	+0.2
	2.8nm,0.9s,baz=158,slow=8.3,SNR=16						
CTA	**Charters Tower**	**42.84**	**341**	LR	LR	11 44 45.5	
	comp=Z,142nm,19.6s,baz=228,slow=35						
WRA	**Warramunga Arr**	**45.56**	**325**	P	P	11 28 00.5	-1.1
	1.1nm,1.1s,baz=160,slow=6.8,SNR=3.5						
FITZ	**Fitzroy Crossi**	**49.94**	**315**	LR	LR	11 47 09.3	
	comp=Z,109nm,20.8s,baz=313,slow=33						
PSI	**Prapat**	**79.32**	**297**	LR	LR	12 01 45.8	
	comp=Z,283nm,18.0s,baz=193,slow=32						
BOSA	**Boshof**	**82.80**	**219**	LR	LR	12 09 17.4	
	comp=Z,106nm,19.4s,baz=258,slow=36						
CMAR	**Chiang Mai Arr**	**93.45**	**304**	LR	LR	12 13 27.0	
	comp=Z,41nm,18.2s,baz=4.0,slow=34						

*ISCJB **26** 11:22:16.8±8.4, 30°.8N±0°.1×83°.5E±0°.2, h14km±52km, mb3.5/9, Error ellipse: s-maj=37.4km s-min=13.0km az=143.3*
*IDC **26** 11:22:16.6±1.6, 30°.88N×83°.55E, h0km, mb3.5/7, mb1 3.7/8, mb1mx3.5/25, mbtmp3.5/8, ML4.0/1, MS3.6/2, Ms1 3.7/2, ms1mx2.7/42, Error ellipse: s-maj=61.1km s-min=18.5km az=64.0*
*NEIC **26** 11:22:18.2±0.8, 30°.87N×83°.51E, h10km, mb4.0/2, Error ellipse: s-maj=21.1km s-min=9.5km az=50.0*
ISC 26 11:22:19.1±8.6, 30°.9N±0°.1×83°.5E±0°.2, h16km±54km, n15, σ0°89/14, mb3.5/9, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**6.71**	**98**	*e*Pn	**Pn**	**11 23 57.1**	**0.0**
AAK	**Ala-Archa**	**13.77**	**331**	LR	LR	11 31 03.6	
	comp=Z,78nm,18.8s,baz=119,slow=38						
MKAR	**Makanchi Array**	**15.93**	**357**	Pn	**Pn**	**11 26 02.7**	**+0.2**
	0.2nm,0.3s,baz=179,slow=12,SNR=6.3						
CMAR	**Chiang Mai Arr**	**18.67**	**128**	P	**Pn**	**11 26 36.7**	**-0.2**
	0.2nm,0.3s,baz=322,slow=12,SNR=3.6						
KURK	**Kurchatov**	**20.16**	**351**	P	**P**	**11 26 51.1**	**-1.5**
	1.4nm,0.8s,baz=168,slow=10,SNR=14						
ZALV	**Zalesovo Beam**	**23.08**	**2**	P	**P**	**11 27 23.5**	**-0.4**
	0.8nm,0.6s,mb3.4,baz=172,slow=12,SNR=5.1						
BVAR	**Borovoye Array**	**24.12**	**340**	P	**P**	**11 27 35.8**	**+1.8**
	0.6nm,0.5s,mb3.3,baz=149,slow=12,SNR=3.5						
SONM	**Songino Array**	**24.36**	**39**	P	**P**	**11 27 37.3**	**+1.1**
	0.3nm,0.4s,mb3.1,baz=264,slow=8.0,SNR=2.9						
ABKAR	**Akbulak array**	**25.56**	**323**	*e*P	**P**	**11 27 47.5**	**+0.3**
	0.7nm,0.6s,mb3.4						
ARCES	**ARCESS Array B**	**50.34**	**337**	P	**P**	**11 31 14.8**	**0.0**
ARCES				LR	LR	11 55 05.1	
ARCES	**ARCESS Array B**	**50.34**	**337**	P	**P**	**11 31 14.8**	**0.0**
	1.7nm,0.9s,mb4.0,baz=98,slow=8.7,SNR=4.2						
ARCES				LR	LR	11 55 05.1	
	comp=Z,243nm,20.8s,baz=282,slow=39						
ESLA	**Sonseca Array**	**69.27**	**304**	*e*P	**P**	**11 33 25.3**	**-0.3**
	2.0nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**70.26**	**129**	P	**P**	**11 33 30.8**	**-0.9**
	0.5nm,0.6s,mb3.6,baz=324,slow=6.5,SNR=9.9						
ASAR	**Alice Springs**	**72.62**	**132**	P	**P**	**11 33 47.1**	**+1.2**
	0.2nm,0.9s,mb3.1,baz=326,slow=5.3,SNR=6.5						
ILAR	**Eielson Array**	**76.92**	**20**	P	**P**	**11 34 09.2**	**-1.2**
	0.6nm,0.8s,mb3.6,baz=299,slow=4.1,SNR=8.1						

*ISCJB **26** 11:28:53.7±0.9, 30°.7N±0°.1×83°.3E±0°.2, h10km, mb3.6/8, Error ellipse: s-maj=23.8km s-min=9.5km az=140.4*
*IDC **26** 11:28:53.2±1.5, 30°.71N×83°.22E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.6/26, mbtmp3.7/9, ML3.4/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/38, Error ellipse: s-maj=52.2km s-min=18.4km az=63.0*
*NEIC **26** 11:28:55.7±0.9, 30°.79N×83°.32E, h10km, mb3.6/1, Error ellipse: s-maj=23.5km s-min=9.4km az=52.0*
ISC 26 11:28:55.6±0.9, 30°.8N±0°.1×83°.3E±0°.2, h10km, n17, σ1°06/17, mb3.6/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**6.88**	**97**	*e*Pn	**Pn**	**11 30 37.5**	**+1.0**
AAK	**Ala-Archa**	**13.77**	**332**	Pn	**Pn**	**11 32 18.4**	**+7.6**
	0.6nm,0.3s,baz=264,slow=10,SNR=4.1						
EKS2	**Erkin-Say**	**14.09**	**330**	*e*Pn	**Pn**	**11 32 16.6**	**+1.3**
	1.9nm,0.6s						
MK31	**Makanchi Array**	**16.01**	**357**	*e*Pn	**Pn**	**11 32 41.2**	**+0.4**
MKAR	**Makanchi Array**	**16.01**	**357**	Pn	**Pn**	**11 32 39.9**	**-1.0**
	0.1nm,0.3s,baz=168,slow=15,SNR=3.3						
CMAR	**Chiang Mai Arr**	**18.75**	**127**	P	**Pn**	**11 33 15.9**	**+0.7**
	0.1nm,0.3s,baz=312,slow=13,SNR=4.1						
KURK	**Kurchatov**	**20.22**	**351**	P	**P**	**11 33 28.8**	**-1.9**
	3.0nm,0.9s,baz=168,slow=10,SNR=22						
ZAA0	**Zalesovo Array**	**23.18**	**2**	*e*P	**P**	**11 34 02.7**	**+0.4**
ZALV	**Zalesovo Beam**	**23.18**	**2**	P	**P**	**11 34 00.9**	**-1.4**
	1.2nm,0.6s,mb3.5,baz=186,slow=10,SNR=9.0						
ZALV				LR	LR	11 44 18.9	
	comp=Z,26nm,20.1s,baz=130,slow=40						
BVAR	**Borovoye Array**	**24.14**	**341**	P	**P**	**11 34 11.3**	**-0.3**
	0.8nm,0.5s,mb3.4,baz=152,slow=13,SNR=4.4						
SONM	**Songino Array**	**24.54**	**40**	P	**P**	**11 34 16.5**	**+1.2**
SONM	**Songino Array**	**24.54**	**40**	P	**P**	**11 34 16.5**	**+1.2**
	0.7nm,0.7s,mb3.3,baz=227,slow=10,SNR=5.8						
ABKAR	**Akbulak array**	**25.53**	**323**	*e*P	**P**	**11 34 25.8**	**+1.5**
	1.0nm,0.7s,mb3.5						
FINES	**FINESS Array B**	**47.90**	**327**	P	**P**	**11 37 34.2**	**+0.6**
	1.6nm,0.8s,mb4.1,baz=99,slow=8.7,SNR=3.7						
WRA	**Warramunga Arr**	**70.34**	**129**	P	**P**	**11 40 08.9**	**-0.8**
	0.9nm,0.7s,mb3.8,baz=324,slow=6.2,SNR=8.6						
ASAR	**Alice Springs**	**72.69**	**132**	P	**P**	**11 40 22.3**	**-1.5**
	0.4nm,0.8s,mb3.4,baz=316,slow=5.6,SNR=3.8						
ILAR	**Eielson Array**	**77.07**	**20**	P	**P**	**11 40 48.1**	**-0.5**
	1.2nm,0.8s,mb3.9,baz=301,slow=4.9,SNR=16						

*ISK **26** 11:39:53.8, 39°.46N×28°.16E, h11km, MD2.7*
*ISCJB **26** 11:39:54.2±0.5, 39°.47N±0°.03×28°.17E±0°.03, h5km±5km, Error ellipse: s-maj=5.8km s-min=3.7km az=24.1*
*DDA **26** 11:39:54.7, 39°.46N×28°.16E, h7km±4km, Md2.8*
*CSEM **26** 11:39:54.4±0.1, 39°.47N×28°.17E, h10km, MD2.7, Error ellipse: s-maj=3.4km s-min=2.5km az=26.0*
ISC 26 11:39:54.8±0.5, 39°.48N±0°.03×28°.17E±0°.03, h12km±5km, n38, σ0°77/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.27**	**62**	*i* P	**Pg**	**11 39 59.7**	**-0.6**
DURS				*i* S	**Sg**	**11 40 04.1**	**+0.1**
BALB	**Balikesir**	**0.28**	**306**	*e*PG	**Pg**	**11 39 59.9**	**-0.6**
BALB				*e*SG	**Sg**	**11 40 05.0**	**+0.7**
BALB	**Balikesir**	**0.28**	**306**	*e*Pg	**Pg**	**11 39 59.9**	**-0.6**
BALB				*e*Sg	**Sg**	**11 40 05.0**	**+0.7**
BALY	**Balya**	**0.50**	**302**	*i* P	**Pg**	**11 40 03.9**	**-0.7**
BALY				*i* S	**Sg**	**11 40 12.1**	**+0.9**
BALY	**Balya**	**0.50**	**302**	*i* P	**Pg**	**11 40 03.9**	**-0.7**
BALY				*i* S	**Sg**	**11 40 12.1**	**+0.9**
DEMI	**Demirci**	**0.61**	**136**	*i* P	**Pg**	**11 40 06.2**	**-0.4**
DEMI				*i* S	**Sg**	**11 40 14.7**	**+0.2**
GONE	**Gonen-Balikesi**	**0.68**	**327**	*e*PG	**Pg**	**11 40 06.9**	**-1.1**
GONE				*e*SG	**Sg**	**11 40 17.6**	**+0.7**
GONE	**Gonen-Balikesi**	**0.68**	**327**	*e*Pg	**Pg**	**11 40 06.9**	**-1.1**
GONE				*e*Sg	**Sg**	**11 40 17.6**	**+0.7**
KCTX	**Karacabey (Bur**	**0.80**	**10**	*e*PG	**Pg**	**11 40 09.9**	**-0.4**
KCTX	**Karacabey (Bur**	**0.80**	**10**	*e*Pg	**Pg**	**11 40 09.9**	**-0.4**
EDC	**Edincik**	**0.90**	**345**	*e*PG	**Pg**	**11 40 11.8**	**-0.4**
EDC	**Edincik**	**0.90**	**345**	*e*Pg	**Pg**	**11 40 11.8**	**-0.4**
ULDT	**Uludag**	**1.00**	**48**	*i* P	**Pg**	**11 40 13.6**	**-0.4**
ULDT				*i* S	**Sg**	**11 40 28.5**	**+1.5**
ULDT	**Uludag**	**1.00**	**48**	*i* P	**Pg**	**11 40 13.6**	**-0.4**
ULDT				*i* S	**Sg**	**11 40 28.5**	**+1.5**
KULA	**Kula-Manisa**	**1.03**	**158**	*e*PG	**Pg**	**11 40 13.8**	**-0.9**
KULA	**Kula-Manisa**	**1.03**	**158**	*e*Pg	**Pg**	**11 40 13.8**	**-0.9**
MDNY	**Mudanya-Bursa**	**1.05**	**31**	*e*PG	**Pg**	**11 40 14.6**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.05**	**31**	*e*Pg	**Pg**	**11 40 14.6**	**-0.4**
GDZ	**Gediz**	**1.09**	**110**	*i* P	**Pb**	**11 40 15.8**	**+0.3**
GDZ				*i* S	**Sg**	**11 40 32.7**	**+2.8**
GDZ	**Gediz**	**1.09**	**110**	*i* P	**Pb**	**11 40 15.9**	**+0.3**
GDZ				*i* S	**Sg**	**11 40 32.7**	**+2.8**
AYVA	**Ayvalik**	**1.16**	**262**	*i* P	**Pb**	**11 40 17.0**	**+0.2**
AYVA				*i* S	**Sb**	**11 40 33.6**	**+1.8**
AYVA	**Ayvalik**	**1.16**	**262**	*i* P	**Pb**	**11 40 17.0**	**+0.2**
AYVA				*i* S	**Sb**	**11 40 33.6**	**+1.8**
GEMT	**Gemlik**	**1.24**	**39**	*e*PN	**Pn**	**11 40 18.3**	**+0.4**
GEMT	**Gemlik**	**1.24**	**39**	*e*Pn	**Pn**	**11 40 18.3**	**+0.4**
LPK	**Lapseki**	**1.41**	**310**	*e*PN	**Pn**	**11 40 19.7**	**-0.6**
LPK	**Lapseki**	**1.41**	**310**	*e*Pn	**Pn**	**11 40 19.7**	**-0.6**
YLV	**Yalova**	**1.43**	**40**	*e*PN	**Pn**	**11 40 20.6**	**+0.1**
YLV	**Yalova**	**1.43**	**40**	*e*Pn	**Pn**	**11 40 20.7**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.43**	**328**	*e*PN	**Pn**	**11 40 20.0**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.43**	**328**	*e*Pn	**Pn**	**11 40 20.0**	**-0.6**
EZN	**Ezine**	**1.47**	**284**	*e*PN	**Pn**	**11 40 20.9**	**-0.2**
EZN	**Ezine**	**1.47**	**284**	*e*Pn	**Pn**	**11 40 20.9**	**-0.2**
MFT	**Murefte**	**1.48**	**333**	*e*PN	**Pn**	**11 40 20.8**	**-0.4**
MFT	**Murefte**	**1.48**	**333**	*e*Pn	**Pn**	**11 40 20.8**	**-0.4**
KHL	**Karahalli**	**1.56**	**137**	*e*PN	**Pn**	**11 40 22.1**	**-0.3**
KHL	**Karahalli**	**1.56**	**137**	*e*Pn	**Pn**	**11 40 22.1**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.60**	**306**	*e*PN	**Pn**	**11 40 22.8**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.60**	**306**	*e*Pn	**Pn**	**11 40 22.8**	**-0.1**

MOS 26 11:40:46.2±1.5, 51°.36N×98°.02E, h15km, mb4.3/1, 1D, Error ellipse: s-maj=46.8km s-min=19.5km az=150.2, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORL	**Orlik**	**1.62**	**42**	*e*PN	Pn	11 41 15.8	+1.6
ORL				*e*		11 41 37.3	
ORL				pmax	pmax		
	comp=Z,140nm,0.3s						
ORL				smax			
	comp=N,437nm,1.0s						
MOY	**Mondy**	**1.88**	**79**	↓*i*PN	Pn	11 41 20.7	+2.9
MOY				*e*		11 41 46.2	
MOY				pmax	pmax		
	comp=Z,143nm,0.4s						
MOY				smax			
	comp=N,448nm,0.5s						
ARS	**Arshan**	**2.80**	**77**	*e*PN	Pn	11 41 37.2	+6.8
ARS				*e*		11 42 14.7	
ARS				pmax	pmax		
	comp=Z,73nm,0.2s						
ARS				smax			
	comp=E,737nm,0.3s						
ZAK	**Zakamensk**	**3.47**	**104**	*e*PN	Pn	11 41 42.9	+3.3
ZAK				*e*		11 41 47.9	
ZAK				*e*		11 42 34.3	
ZAK				pmax	pmax		
	comp=Z,18nm,0.5s						
ZAK				smax			
	comp=E,226nm,0.7s						
IRK	**Irkutsk**	**3.98**	**75**	*e*PN	Pn	11 41 56.2	+10
IRK				*e*		11 42 48.1	
IRK				pmax	pmax		
	comp=Z,94nm,0.2s						
IRK				smax			
	comp=N,485nm,0.9s						
TRG	**Tyrgan**	**5.33**	**71**	*e*PN	Pn	11 42 06.1	+1.0
TRG				*e*		11 42 21.5	
TRG				*e*		11 43 29.5	
TRG				pmax	pmax		
	comp=Z,17nm,0.7s						
TRG				smax			
	comp=E,68nm,1.2s						
OGRR	**Ongureny**	**6.28**	**65**	*e*PN	Pn	11 42 19.1	+1.0
OGRR				*e*		11 42 38.5	
OGRR				*e*		11 43 59.0	
OGRR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
OGRR				smax			
	comp=N,33nm,0.6s						

CASC 26 11:46:05.0±1.1, 12°.57N×88°.32W, h36km±716km, MD3.8, ML3.8, 2C-2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.85**	**34**	*e*P	Pn	11 46 20.6	+0.1
CNCH				*e*S	Sn	11 46 32.5	+0.8
VSM	**San Miguel**	**0.85**	**3**	*e*P	Pn	11 46 21.1	+0.5
BLLM	**Bellamira**	**0.87**	**5**	↓*e*P	Pn	11 46 20.9	+0.1
BLLM				*e*S	Sn	11 46 33.2	+0.9
SNVI	**San Vicente**	**1.15**	**334**	↑*e*P	Pn	11 46 24.9	+0.2
SNVI				*e*S	Sn	11 46 40.0	+0.8
CAHU	**Cacacuatique**	**1.20**	**5**	*e*P	Pn	11 46 26.0	+0.7
CAHU				*e*S	Sn	11 46 42.1	+1.8
CRIN	**San Cristobal**	**1.25**	**84**	*e*P	Pn	11 46 26.2	+0.3
CRIN				*e*S	Sn	11 46 43.4	+1.9
LFRS	**El Faro**	**1.27**	**325**	↓*i*P	Pn	11 46 26.4	+0.1
LFRS				*e*S	Sn	11 46 42.9	+0.7
SNET	**Serv Nac Est T**	**1.42**	**321**	*e*P	Pn	11 46 28.4	0.0
SNET				*e*S	Sn	11 46 46.1	+0.2
SNET				AML	AML	11 46 49.7	
	comp=Z,1μm,0.2s						
BOQS	**Boqueron**	**1.49**	**321**	*e*P	Pn	11 46 29.9	+0.6
BOQS				*e*S	Sn	11 46 48.5	+1.0
COPN	**Copaltepe**	**1.73**	**103**	*e*P	Pn	11 46 32.0	-0.6
MOMN	**Momotombo**	**1.75**	**95**	*e*P	Pn	11 46 32.7	-0.1
SBLS	**San Blas**	**1.79**	**315**	*e*P	Pn	11 46 34.2	+0.8
TGUH	**Tegucigalpa,Un**	**1.80**	**34**	↑*e*P	Pn	11 46 34.0	+0.5
SNJE	**San Jose**	**1.80**	**316**	*e*P	Pn	11 46 34.5	+1.0
RTR	**El Retiro**	**1.85**	**316**	*e*P	Pn	11 46 35.1	+0.9
CSAN		**1.89**	**101**	*e*P	Pn	11 46 34.7	-0.2
CSAN				*e*S	Sn	11 46 57.5	+0.1
XAVN	**Gruta Xavier**	**1.99**	**102**	*e*P	Pn	11 46 36.1	-0.1
RBDL	**Robledal**	**2.03**	**319**	*e*P	Pn	11 46 37.7	+0.9
CRUN	**El Crucero**	**2.06**	**106**	*e*P	Pn	11 46 37.9	+0.8
APON	**Apoyo**	**2.29**	**106**	*e*P	Pn	11 46 40.5	+0.2
BOAB	**BOACO BROADBAN**	**2.59**	**92**	*e*P	Pn	11 46 43.3	-1.2

*ISK **26** 11:56:44.0, 38°.49N×29°.72E, h18km, MD2.7*
*ISCJB **26** 11:56:45.0±0.5, 38°.50N±0°.03×29°.74E±0°.03, h10km, Error ellipse: s-maj=5.0km s-min=3.7km az=154.9*
*CSEM **26** 11:56:45.1±0.2, 38°.48N×29°.75E, h10km, MD2.7, Error ellipse: s-maj=6.1km s-min=4.1km az=166.0*
*DDA **26** 11:56:45.8, 38°.53N×29°.73E, h7km±5km, Md2.8*
ISC 26 11:56:45.3±0.7, 38°.47N±0°.04×29°.72E±0°.04, h16km±9km, n18, σ0°61/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHAL	**Karahalli**	**0.20**	**243**	*i* P	**Pg**	**11 56 49.9**	**-0.2**
KHAL				*i* S	**Sg**	**11 56 52.9**	**-0.5**
KHAL	**Karahalli**	**0.20**	**243**	*i* P	**Pg**	**11 56 49.9**	**-0.2**
KHAL				*i* S	**Sg**	**11 56 52.9**	**-0.5**
KHL	**Karahalli**	**0.21**	**228**	*e*PG	**Pg**	**11 56 49.6**	**-0.5**
KHL				*e*SG	**Sg**	**11 56 53.5**	**-0.1**
KHL	**Karahalli**	**0.21**	**228**	*e*Pg	**Pg**	**11 56 49.7**	**-0.5**
KHL				*e*Sg	**Sg**	**11 56 53.5**	**0.0**
GDZ	**Gediz**	**0.65**	**343**	*i* P	**Pg**	**11 56 57.8**	**-0.3**
GDZ				*i* S	**Sg**	**11 57 07.1**	**+0.3**
GDZ	**Gediz**	**0.65**	**343**	*i* P	**Pg**	**11 56 57.8**	**-0.3**
GDZ				*i* S	**Sg**	**11 57 07.1**	**+0.4**
SHUT	**Suhut-Afyon**	**0.66**	**82**	*e*PG	**Pg**	**11 56 57.4**	**-0.7**
SHUT	**Suhut-Afyon**	**0.66**	**82**	*e*Pg	**Pg**	**11 56 57.4**	**-0.7**
KULA	**Kula-Manisa**	**0.83**	**274**	*e*PG	**Pg**	**11 57 01.5**	**-0.1**
KULA				*e*SG	**Sg**	**11 57 12.4**	**-0.1**
KULA	**Kula-Manisa**	**0.83**	**274**	*e*Pg	**Pg**	**11 57 01.5**	**0.0**
KULA				*e*Sg	**Sg**	**11 57 12.5**	**0.0**
DNZL	**Cakiroluk**	**0.94**	**215**	*i* P	**Pg**	**11 57 05.1**	**+1.6**
DNZL				*i* S	**Sg**	**11 57 20.1**	**+4.3**
DNZL	**Cakiroluk**	**0.94**	**215**	*i* P	**Pg**	**11 57 05.1**	**+1.6**
DNZL				*i* S	**Sg**	**11 57 20.1**	**+4.2**
DEMI	**Demirci**	**0.98**	**307**	*i* P	**Pg**	**11 57 04.6**	**+0.4**
DEMI				*i* S	**Sg**	**11 57 17.0**	**0.0**
DEMI	**Demirci**	**0.98**	**307**	*i* P	**Pg**	**11 57 04.6**	**+0.4**
DEMI				*i* S	**Sg**	**11 57 17.0**	**0.0**
BOLV	**Bolvadin**	**0.99**	**75**	*i* P	**Pg**	**11 57 04.4**	**-0.1**
BOLV				*i* S	**Sg**	**11 57 18.5**	**+0.9**
BOLV	**Bolvadin**	**0.99**	**75**	*i* P	**Pg**	**11 57 04.4**	**-0.1**
BOLV				*i* S	**Sg**	**11 57 18.5**	**+0.9**
KIZT	**Kizilcal**	**1.74**	**76**	*e*PN	**Pn**	**11 57 14.0**	**-0.8**
KIZT	**Kizilcal**	**1.74**	**76**	*e*Pn	**Pn**	**11 57 14.0**	**-0.7**

*CSEM **26** 12:30:59.4±0.4, 37°.34N×20°.89E, h2km, MD3.6, Error ellipse: s-maj=8.5km s-min=4.5km az=47.0*
*THE **26** 12:30:59.2, 37°.35N×20°.84E, h5km, ML2.9/4, Error ellipse: s-maj=1.9km s-min=0.6km az=221.0*
*ATH **26** 12:30:59.0, 37°.35N×20°.88E, h10km±2km, MD3.6/14*
*NEIC **26** 12:30:59.0, 37°.35N×20°.88E, h10km, MD3.6(ATH), After ATH.*
*ISCJB **26** 12:30:59.7±0.7, 37°.37N±0°.03×20°.91E±0°.04, h10km, Error ellipse: s-maj=5.4km s-min=3.4km az=141.0*
*NAO **26** 12:39:17.4±3.0, 59°.37N×27°.39E, ML2.1*
ISC 26 12:30:58.9±1.0, 37°.33N±0°.04×20°.85E±0°.05, h4km±6km, n68, σ0°84/98, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.83**	**121**	*e*PB	**Pg**	**12 31 15.3**	**+0.5**
PYL				*e*SB	**Sg**	**12 31 26.1**	**+0.5**
PYL	**PYLOS**	**0.83**	**121**	P	**Pg**	**12 31 15.3**	**+0.5**
PYL	**PYLOS**	**0.83**	**121**	P	**Pg**	**12 31 15.3**	**+0.5**
PYL				*e*Sb	**Sg**	**12 31 26.1**	**+0.5**
ITM	**Ithomi**	**0.87**	**99**	*e*Pb	**Pg**	**12 31 15.5**	**-0.1**
ITM				*e*Sb	**Sg**	**12 31 26.5**	**-0.4**
ITM	**Ithomi**	**0.87**	**99**	*e*PB	**Pg**	**12 31 15.5**	**-0.1**
ITM				*e*SB	**Sg**	**12 31 26.5**	**-0.4**
ITM	**Ithomi**	**0.87**	**99**	P	**Pg**	**12 31 15.9**	**+0.3**
ITM	**Ithomi**	**0.87**	**99**	*e*Pb	**Pg**	**12 31 15.5**	**-0.1**
ITM	**Ithomi**	**0.87**	**99**	P	**Pg**	**12 31 15.9**	**+0.3**
ITM				*e*Sb	**Sg**	**12 31 26.5**	**-0.4**
VLS	**Valsamata**	**0.88**	**347**	*e*Pg	**Pg**	**12 31 15.1**	**-0.6**
VLS				*e*Sb	**Sg**	**12 31 27.5**	**+0.5**
VLS	**Valsamata**	**0.88**	**347**	*e*PG	**Pg**	**12 31 15.1**	**-0.6**
VLS				*e*SB	**Sg**	**12 31 27.5**	**+0.5**
VLS	**Valsamata**	**0.88**	**347**	P	**Pg**	**12 31 15.1**	**-0.6**
VLS				S	**Sg**	**12 31 27.7**	**+0.7**
VLS	**Valsamata**	**0.88**	**347**	P	**Pg**	**12 31 15.1**	**-0.6**
VLS				*e*Sb	**Sg**	**12 31 27.5**	**+0.5**
RLS	**Riolos of Patr**	**0.88**	**34**	*e*Pb	**Pg**	**12 31 15.2**	**-0.6**
RLS				*e*Sg	**Sg**	**12 31 27.4**	**+0.2**
RLS	**Riolos of Patr**	**0.88**	**34**	*e*PB	**Pg**	**12 31 15.2**	**-0.6**
RLS				*e*SG	**Sg**	**12 31 27.4**	**+0.2**
RLS	**Riolos of Patr**	**0.88**	**34**	*e*Pb	**Pg**	**12 31 15.2**	**-0.6**
RLS				*e*Sg	**Sg**	**12 31 27.4**	**+0.2**
VLX	**Vlachokerasia**	**1.22**	**87**	*e*PB	**Pb**	**12 31 21.7**	**-0.8**
VLX				*e*SB	**Sb**	**12 31 38.0**	**-0.6**
VLX	**Vlachokerasia**	**1.22**	**87**	P	**Pg**	**12 31 22.3**	**0.0**
VLX				S	**Sg**	**12 31 40.0**	**+1.9**
VLX	**Vlachokerasia**	**1.22**	**87**	*e*Pb	**Pb**	**12 31 21.7**	**-0.8**
VLX	**Vlachokerasia**	**1.22**	**87**	P	**Pg**	**12 31 22.3**	**0.0**
VLX				*e*Sb	**Sb**	**12 31 38.0**	**-0.6**
VLX		

BKI	**Bering**	**3.41**	**98**	*e*P	Pn	12 36 57.3	+3.0
BKI				*i* S	S	12 37 41.0	+1.2

*NIED **26** 12:43:00.44″.00N×148°.00E, h41km, Mw3.7 Best double couple: M₀3.55000×10¹⁴ NP1:φ₀19.00000°, δ69.00000°, λ97.00000°. NP2:φ₀181.00000°, δ22.00000°, λ73.00000°.*
*JMA **26** 12:43:16.3±0.3, 44°.01N×148°.04E, h0km, M4.5*
*MOS **26** 12:43:18.5±0.7, 44°.49N×148°.02E, h78km, mb3.8/1, Error ellipse: s-maj=28.1km s-min=20.9km az=158.7*
*ISCJB **26** 12:43:18.0±1.3, 44°.31N±0°.07×148°.1E±0°.1, h76km±13km, mb3.2/4, Error ellipse: s-maj=13.7km s-min=10.9km az=26.3*
*IDC **26** 12:43:19.3±5.1, 44°.53N×148°.12E, h68km±47km, mb3.1/3, mb1 3.3/4, mb1mx3.1/22, mbtmp3.1/4, ML3.4/1, Error ellipse: s-maj=44.3km s-min=29.2km az=133.0*
*NEIC **26** 12:43:20.1±2.1, 44°.52N×148°.14E, h77km±21km, MG4.5(JMA), Error ellipse: s-maj=26.0km s-min=16.0km az=107.0*

ISC 26 12:43:18.8±1.3, **44°.30N**±0°.07×**148°.2E**±0°.1, **h65**km±14km, **n22**, σ1§12/33, **mb3.2/4, 1C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**1.67**	**262**	*c* iPN	**Pn**	**12 43 45.1**	**-0.8**
YUK				*i* S	**Sn**	**12 44 05.5**	**-0.9**
YUK				pmax	pmax		
	comp=Z,857nm,0.2s						
YUK				pmax	pmax		
	comp=N,259nm,0.1s						
YUK				pmax	pmax		
	comp=E,266nm,0.2s						
YUK				pmax	pmax		
	comp=Z,590nm,0.9s						
YUK				smax			
	comp=N,330nm,0.5s						
YUK				smax			
	comp=E,230nm,0.5s						
YUK				smax			
	comp=N,927nm,0.2s						
YUK				smax			
	comp=E,1μm,0.5s						
NEM2	**Nemuro 2**	**1.98**	**243**	P	**Pn**	**12 43 48.6**	**-1.5**
NEM2				*e*S	**Sn**	**12 44 12.0**	**-1.9**
JRA	**Rausu**	**2.22**	**262**	P	**Pn**	**12 43 53.4**	**+0.2**
JRA				*e*S	**Sn**	**12 44 20.9**	**+1.4**
JNK	**Nakash**	**2.58**	**255**	P	**Pn**	**12 43 58.1**	**-0.2**
JNK				*e*S	**Sn**	**12 44 28.9**	**+0.4**
JAK	**Akkeshi**	**2.83**	**244**	P	**Pn**	**12 44 00.8**	**-0.8**
JAK				*e*S	**Sn**	**12 44 33.3**	**-1.2**
JTKR	**Abashiri--Toko**	**3.08**	**265**	P	**Pn**	**12 44 05.1**	**+0.1**
JAR	**Ashorobuto**	**3.33**	**254**	P	**Pn**	**12 44 09.1**	**+0.7**
JAR				*e*S	**Sn**	**12 44 48.1**	**+1.3**
JCH	**Churui**	**3.88**	**246**	P	**Pn**	**12 44 15.9**	**0.0**
JKK2	**Kamakawa 2**	**3.92**	**266**	P	**Pn**	**12 44 19.2**	**+2.7**
ASAJ	**Asahikawa**	**4.00**	**269**	*e*Pn	**Pn**	**12 44 19.5**	**+1.9**
ASAJ				*e*Sn	**Sn**	**12 45 04.9**	**+1.7**
ASAJ	**Asahikawa**	**4.00**	**269**	P	**Pn**	**12 44 17.9**	**+0.2**
	comp=E,2.0nm,0.3s,baz=78,slow=6.4,SNR=14						
ASAJ				S	**Sn**	**12 45 14.1**	**+11**
	comp=E,0.9nm,0.3s,baz=198,slow=20,SNR=2.3						
JFR	**Furan**	**4.19**	**256**	P	**Pn**	**12 44 22.0**	**+1.8**
ERM	**Erimo**	**4.31**	**240**	*e*Pn	**Pn**	**12 44 24.1**	**+2.3**
JNBK	**Urakawa-nobuka**	**4.43**	**245**	P	**Pn**	**12 44 23.4**	**-0.1**
YSS	**Yuzh-Sakhalins**	**4.63**	**307**	*e*Pn	**Pn**	**12 44 25.6**	**-0.6**
YSS				*e*Sn	**Sn**	**12 45 17.9**	**-0.5**
JKB	**Kayabe**	**5.75**	**248**	P	**Pn**	**12 44 42.0**	**+0.5**
JKB				*e*S	**Sn**	**12 45 44.9**	**-1.1**
JOT	**Ohata**	**5.98**	**243**	P	**Pn**	**12 44 44.6**	**-0.1**
JOT				*e*S	**Sn**	**12 45 50.6**	**-1.2**
ILAR	**Eielson Array**	**40.62**	**37**	P	**P**	**12 50 50.7**	**-1.1**
	comp=E,0.2nm,0.8s,mb3.0,baz=263,slow=7.8,SNR=4.3						
MKAR	**Makanchi Array**	**44.98**	**297**	P	**P**	**12 51 26.4**	**-0.9**
	comp=E,0.5nm,0.7s,mb3.4,baz=77,slow=9.8,SNR=4.8						
MKAR	**Makanchi Array**	**44.98**	**297**	*e*P	**P**	**12 51 26.8**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**68.88**	**194**	P	**P**	**12 54 18.1**	**+1.7**
	comp=Z,0.2nm,0.5s,mb3.2,baz=12,slow=6.1,SNR=4.2						
TXAR	**Lajitas Array**	**81.74**	**57**	P	**P**	**12 55 29.9**	**-0.5**
	comp=Z,0.2nm,0.5s,mb3.2,baz=310,slow=4.6,SNR=5.5						

*NEIC **26** 12:48:42.4, 31°.54S×69°.15W, h150km, mb3.8/1, MD3.7(GUC), MD3.6(SJA), After GUC.*
NEIC Felt [II] at San Juan.

GUC 26 12:48:42.4±0.8, **31°.54S×69°.15W, h150**km±16km, **MD3.7, ML3.8, 5C-4D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.62**	**283**	*e*P	Pn	12 49 13.9	+0.6
CMCH				*i* S	Sn	12 49 37.8	+0.9
CMCH	**Combarbala**	**1.62**	**283**	*e*P	Pn	12 49 13.9	+0.6
CMCH				*i* S	Sn	12 49 37.8	+0.9
CMCH				AML	AML	12 49 41.7	
	comp=E,2μm,0.4s						
JACH	**Jahuel**	**1.67**	**227**	*e*P	Pn	12 49 14.4	+0.7
JACH				*i* S	Sn	12 49 38.8	+1.0
JACH	**Jahuel**	**1.67**	**227**	*e*P	Pn	12 49 14.4	+0.7
JACH				*i* S	Sn	12 49 38.8	+1.0
TLL	**Tololo Astrono**	**1.98**	**314**	*e*P	Pn	12 49 18.4	+1.1
TLL				*e*S	Sn	12 49 45.5	+1.5
TLL	**Tololo Astrono**	**1.98**	**314**	*e*P	Pn	12 49 18.4	+1.1
TLL				*e*S	Sn	12 49 45.5	+1.5
TLL				AML	AML	12 49 48.7	
	comp=N,446nm,0.7s						
OVCH	**Ovalle**	**1.99**	**297**	*e*P	Pn	12 49 18.0	+0.6
OVCH				*i* S	Sn	12 49 44.6	+0.4
OVCH	**Ovalle**	**1.99**	**297**	*e*P	Pn	12 49 18.0	+0.6
OVCH				*i* S	Sn	12 49 44.6	+0.4
OVCH				AML	AML	12 49 47.5	
	comp=N,835nm,0.9s						
FCH	**Farellones**	**2.02**	**208**	*e*P	Pn	12 49 19.1	+1.4
FCH				*i* S	Sn	12 49 46.7	+1.7
FCH	**Farellones**	**2.02**	**208**	*e*P	Pn	12 49 19.1	+1.4
FCH				*i* S	Sn	12 49 46.7	+1.7
CHNG	**Los Chungos**	**2.03**	**260**	*e*P	Pn	12 49 16.2	-1.6
CHNG				*i* S	Sn	12 49 43.5	-1.6
CHNG				AML	AML	12 49 51.3	
	comp=E,270nm,0.5s						
PEL	**Peldehue**	**2.06**	**219**	⇑*i*P	Pn	12 49 18.4	+0.3
PEL				*i* S	Sn	12 49 46.2	+0.5
PEL				AML	AML	12 49 48.0	
	comp=E,875nm,0.3s						
ROCH	**El Roble**	**2.12**	**227**	⇓*i*P	Pn	12 49 19.3	+0.4
ROCH	**El Roble**	**2.12**	**227**	⇓*i*P	Pn	12 49 19.3	+0.4
CLCH	**Cerro Calan**	**2.19**	**212**	*i* P	Pn	12 49 20.9	+1.2
CLCH				*i* S	Sn	12 49 49.3	+0.8
CLCH				AML	AML	12 49 51.3	
	comp=E,800nm,0.6s						
SAN	**Santiago**	**2.29**	**213**	*i* S	Sn	12 49 51.1	+0.4
SAN				AML	AML	12 49 52.9	
	comp=N,369nm,0.3s						
PCH	**Pirque**	**2.37**	**209**	*e*P	Pn	12 49 22.9	+1.0
PCH				*i* S	Sn	12 49 53.4	+1.0
PCH	**Pirque**	**2.37**	**209**	*e*P	Pn	12 49 22.9	+1.0
PCH				*i* S	Sn	12 49 53.4	+1.0
ANTU	**Antumapu**	**2.38**	**211**	*e*P	Pn	12 49 22.9	+0.9
ANTU				*i* S	Sn	12 49 53.1	+0.6
ANTU	**Antumapu**	**2.38**	**211**	*e*P	Pn	12 49 22.9	+0.9
ANTU				*i* S	Sn	12 49 53.1	+0.6
ANTU				AML	AML	12 49 56.8	
	comp=E,459nm,0.2s						
LMEL	**Las Melosas**	**2.46**	**201**	⇓*i*P	Pn	12 49 23.9	+0.9
LMEL	**Las Melosas**	**2.46**	**201**	⇓*i*P	Pn	12 49 23.9	+0.9
LMEL				AML	AML	12 50 04.8	
	comp=E,245nm,0.2s						
TACH	**Talagante**	**2.59**	**215**	⇑*i*P	Pn	12 49 24.9	+0.4
TACH				*i* S	Sn	12 49 57.5	+0.4
TACH	**Talagante**	**2.59**	**215**	⇑*i*P	Pn	12 49 24.9	+0.4
TACH				*i* S	Sn	12 49 57.5	+0.4
CHCH	**Chadas Angostu**	**2.70**	**208**	*e*P	Pn	12 49 26.4	+0.5
CHCH				*e*S	Sn	12 50 00.0	+0.4
CHCH	**Chadas Angostu**	**2.70**	**208**	*e*P	Pn	12 49 26.4	+0.5
CHCH				*e*S	Sn	12 50 00.0	+0.4
LCO	**Las Campanas**	**2.86**	**332**	⇑*i*P	Pn	12 49 29.2	+1.2
LCO				*i* S	Sn	12 50 04.2	+1.0
LCO	**Las Campanas**	**2.86**	**332**	⇑*i*P	Pn	12 49 29.2	+1.2
LCO				*i* S	Sn	12 50 04.2	+1.0
LCO				AML	AML	12 50 09.0	
	comp=E,332nm,0.4s						
TRQA	**Tornquist**	**8.77**	**140**	*e*Pn	Pn	12 50 44.4	-1.6
	comp=E,12nm,0.6s						
LPAZ	**La Paz**	**15.22**	**4**	*e*Pn	Pn	12 52 09.8	+0.3
	comp=E,3.8nm,0.7s						

IDC 26 13:01:57.8±1.9, **12°.47N×146°.10E, h0**km, **mb3.5/1, mb1 3.9/1, mb1mx3.2/20, mbtmp3.5/1, Error ellipse: s-maj=492.1km s-min=27.8km az=112.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.22**	**200**	P	P	13 08 43.7	-1.6
	0.8nm,0.7s,baz=23,slow=9.3,SNR=3.4						
ASAR	**Alice Springs**	**37.84**	**198**	P	P	13 09 17.8	+1.4
	0.1nm,0.7s,baz=29,slow=12,SNR=4.1						
ILAR	**Eielson Array**	**69.07**	**25**	P	P	13 13 05.2	+0.1
	0.2nm,0.5s,baz=256,slow=5.4,SNR=6.9						

*DDA **26** 13:22:37.0, 38°.43N×39°.14E, h13km±2km, Md3.1*
*ISK **26** 13:22:36.4, 38°.48N×39°.13E, h6km, MD2.9*
*ISCJB **26** 13:22:37.3±0.4, 38°.47N±0°.03×39°.12E±0°.03, h7km±4km, Error ellipse: s-maj=4.9km s-min=3.5km az=4.5*
*CSEM **26** 13:22:37.2±0.2, 38°.47N×39°.13E, h8km, MD3.1, Error ellipse: s-maj=4.0km s-min=3.4km az=167.0*

ISC 26 13:22:37.7±0.4, **38°.46N**±0°.03×**39°.13E**±0°.03, **h5**km±4km, **n28**, σ0§90/48, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.12**	**290**	*i* P	**Pg**	**13 22 40.9**	**+0.8**
ELZG				*i* S	**Sg**	**13 22 43.3**	**+1.6**
ELZG	**Elazig**	**0.12**	**290**	*i* P	**Pg**	**13 22 40.9**	**+0.8**
ELZG				*i* S	**Sg**	**13 22 43.3**	**+1.5**
SVRC	**Sivrice-ELAZID**	**0.16**	**119**	*e*PG	**Pg**	**13 22 40.8**	**-0.2**
SVRC				*e*SG	**Sg**	**13 22 43.3**	**+0.2**
SVRC	**Sivrice-ELAZID**	**0.16**	**119**	*e*Pg	**Pg**	**13 22 40.8**	**-0.1**
SVRC				*e*Sg	**Sg**	**13 22 43.3**	**+0.2**
PTK	**Pertek**	**0.48**	**26**	*e*PG	**Pg**	**13 22 45.5**	**-1.5**
PTK				*e*SG	**Sg**	**13 22 52.4**	**-0.8**
PTK	**Pertek**	**0.48**	**26**	*e*Pg	**Pg**	**13 22 45.5**	**-1.5**
PTK				*e*Sg	**Sg**	**13 22 52.4**	**-0.9**
MYA	**Malataya**	**0.56**	**257**	*e*PG	**Pg**	**13 22 48.3**	**-0.3**
MYA				*e*SG	**Sg**	**13 22 56.5**	**+0.6**
MYA	**Malataya**	**0.56**	**257**	*e*Pg	**Pg**	**13 22 48.3**	**-0.3**
MYA				*e*Sg	**Sg**	**13 22 56.5**	**+0.6**
MALT	**Malatya**	**0.57**	**256**	*e*PG	**Pg**	**13 22 47.9**	**-0.7**
MALT				*e*SG	**Sg**	**13 22 56.0**	**0.0**
MALT	**Malatya**	**0.57**	**256**	*e*Pg	**Pg**	**13 22 47.9**	**-0.7**
MALT				*e*Sg	**Sg**	**13 22 56.0**	**0.0**
KEMA	**Kemaliye**	**0.95**	**329**	*i* P	**Pg**	**13 22 55.0**	**-0.9**
KEMA				*i* S	**Sg**	**13 23 09.1**	**+0.9**
KEMA	**Kemaliye**	**0.95**	**329**	*i* P	**Pg**	**13 22 55.0**	**-0.9**
KEMA				*i* S	**Sg**	**13 23 09.1**	**+0.9**
DIYA	**Diyarbakir**	**0.95**	**124**	*i* P	**Pg**	**13 22 56.1**	**+0.2**
DIYA				*i* S	**Sg**	**13 23 09.6**	**+1.4**
DIYA	**Diyarbakir**	**0.95**	**124**	*i* P	**Pg**	**13 22 56.1**	**+0.2**
DIYA				*i* S	**Sg**	**13 23 09.6**	**+1.4**
AKCD	**Akcadag**	**0.96**	**261**	*i* P	**Pg**	**13 22 55.3**	**-0.8**
AKCD				*i* S	**Sg**	**13 23 10.1**	**+1.6**
AKCD	**Akcadag**	**0.96**	**261**	*i* P	**Pg**	**13 22 55.3**	**-0.8**
AKCD				*i* S	**Sg**	**13 23 10.1**	**+1.6**
ATAB	**Bozova**	**1.19**	**214**	*i* P	**Pg**	**13 22 59.2**	**-1.2**
ATAB				*i* S	**Sg**	**13 23 14.2**	**-1.6**
ATAB	**Bozova**	**1.19**	**214**	*i* P	**Pg**	**13 22 59.2**	**-1.2**
ATAB				*i* S	**Sg**	**13 23 14.2**	**-1.6**
EZC	**Erzincan**	**1.30**	**8**	*e*PN	**Pn**	**13 23 01.8**	**+0.8**
BNGL	**BINGOL**	**1.66**	**72**	*i* P	**Pn**	**13 23 08.3**	**+0.9**
MARD	**Mardin**	**1.74**	**131**	*i* P	**Pn**	**13 23 07.7**	**-0.8**
MARD				*i* S	**Sn**	**13 23 30.7**	**-0.3**
BEST	**Besiri**	**1.78**	**108**	*i* P	**Pn**	**13 23 09.6**	**+0.5**
BEST				*i* S	**Sn**	**13 23 33.8**	**+1.6**
GAZ	**Gaziantep**	**1.99**	**230**	*e*PN	**Pn**	**13 23 11.7**	**-0.2**
GAZ	**Gaziantep**	**1.99**	**230**	*e*Pn	**Pn**	**13 23 11.7**	**-0.2**
KMRS	**Kahramanmaras**	**2.00**	**242**	*e*PN	**Pn**	**13 23 12.2**	**+0.1**
KMRS	**Kahramanmaras**	**2.00**	**242**	*e*Pn	**Pn**	**13 23 12.2**	**+0.1**
SVSK	**Karacayir**	**2.20**	**312**	*e*PN	**Pn**	**13 23 15.0**	**+0.1**
SVSK	**Karacayir**	**2.20**	**312**	*e*Pn	**Pn**	**13 23 15.0**	**+0.1**

*ISCJB **26** 13:29:54.4±0.6, 23°.98N±0°.02×122°.43E±0°.02, h4km±4km, Error ellipse: s-maj=3.8km s-min=2.5km az=171.2*
*TAP **26** 13:29:56.5, 24°.06N×122°.36E, h21km, ML3.3, D*
*JMA **26** 13:29:56.5±0.2, 24°.14N×122°.39E, h26km, M2.8*

ISC 26 13:29:54.6±0.4, **23°.98N**±0°.02×**122°.43E**±0°.02, **h4**km±3km, **n38**, σ0§91/68, **4C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.72**	**48**	P	**Pg**	**13 30 09.0**	**+0.6**
YOJ				S	**Sg**	**13 30 17.8**	**+0.1**
TWD	**Chiawan**	**0.77**	**278**	P	**Pg**	**13 30 10.2**	**+0.9**
	baz=273						
TWD				*e*S	**Sg**	**13 30 21.2**	**+2.0**
	baz=273						
ENA	**Nanau**	**0.77**	**306**	P	**Pg**	**13 30 09.6**	**+0.2**
	baz=312						
ENA				*e*S	**Sg**	**13 30 19.3**	**-0.1**
	baz=312						
TWC	**Suao**	**0.82**	**320**	⇑*i*P	**Pg**	**13 30 10.1**	**-0.2**
	baz=319						
TWC				S	**Sg**	**13 30 19.5**	**-1.5**
	baz=319						
ESL	**Shilin**	**0.93**	**260**	P	**Pg**	**13 30 12.3**	**0.0**
	baz=243						
ILA	**Ilan**	**1.00**	**322**	*e*P	**Pg**	**13 30 14.5**	**+0.8**
	baz=321						
TWE	**Neicheng**	**1.01**	**317**	⇑*i*P	**Pg**	**13 30 13.8**	**-0.2**
	baz=316						
TWE				S	**Sg**	**13 30 27.3**	**+0.2**
	baz=316						
ENTT	**Nioudou**	**1.02**	**310**	⇑*i*P	**Pg**	**13 30 14.3**	**+0.1**
	baz=315						
ENTT				*e*S	**Sg**	**13 30 26.5**	**-1.0**
	baz=315						
NNS	**Nan Shan**	**1.07**	**296**	P	**Pg**	**13 30 15.6**	**+0.6**
	baz=281						
NNS				*e*S	**Sg**	**13 30 29.1**	**+0.2**
	baz=281						
WHF	**Hehuan Shan**	**1.07**	**279**	⇑*i*P	**Pg**	**13 30 15.3**	**+0.1**
	baz=263						
WHF				*e*S	**Sg**	**13 30 29.6**	**+0.5**
	baz=263						
TWB1	**Santiao Chiao**	**1.10**	**339**	P	**Pg**	**13 30 15.6**	**-0.1**
	baz=339						
TWB1				*e*S	**Sg**	**13 30 29.6**	**-0.4**
	baz=339						
EHY	**Hungye**	**1.12**	**245**	*e*P	**Pg**	**13 30 15.9**	**-0.2**
	baz=241						
EHY				*e*S	**Sg**	**13 30 29.9**	**-0.7**
	baz=241						
TWT	**Tachien**	**1.18**	**284**	*e*P	**Pg**	**13 30 17.9**	**+0.8**
	baz=269						
TWT				*e*S	**Sg**	**13 30 33.6**	**+1.1**
	baz=269						
NSK	**Sanguang**	**1.20**	**306**	*i* P	**Pg**	**13 30 17.6**	**+0.1**
	baz=304						
NSK				S	**Sg**	**13 30 31.1**	**-2.0**
	baz=304						
TWF1	**Yuli**	**1.21**	**239**	P	**Pg**	**13 30 17.4**	**-0.4**
	baz=236						
TWF1				*e*S	**Sg**	**13 30 33.2**	**-0.3**
	baz=236						
NWF	**Wu-fen Shan**	**1.23**	**332**	*e*P	**Pg**	**13 30 17.9**	**-0.4**
	baz=331						
NWF				S	**Sg**	**13 30 34.0**	**-0.4**
	baz=331						
IRIF	**Iriomote-Funau**	**1.24**	**73**	P	**Pg**	**13 30 18.3**	**-0.1**
IRIF				S	**Sg**	**13 30 35.2**	**+0.7**
TWA	**Mucha**	**1.26**	**322**	P	**Pg**	**13 30 18.8**	**+0.1**
	baz=334						
TWA				*e*S	**Sg**	**13 30 34.1**	**-0.9**
	baz=334						
HATJ	**Hateruma jima**	**1.26**	**86**	P	**Pg**	**13 30 19.1**	**+0.3**
HATJ				S	**Sg**	**13 30 35.5**	**+0.3**
CHKT	**Chengkung**	**1.31**	**228**	*e*P	**Pn**	**13 30 17.9**	**-1.9**
	baz=213						
CHKT				*e*S	**Sg**	**13 30 33.7**	**-3.1**
	baz=213						
YUS	**Yu-Shan**	**1.44**	**250**	P	**Pn**	**13 30 21.4**	**0.0**
	baz=248						
YUS				*e*S	**Sb**	**13 30 38.8**	**-1.9**
	baz=248						
TYC	**Yuchr**	**1.44**	**267**	*e*P	**Pn**	**13 30 20.8**	**-0.7**
	baz=264						
TWS1	**Kuangyinshan**	**1.45**	**321**	*e*P	**Pn**	**13 30 21.8**	**+0.2**
	baz=331						
TWS1				*e*S	**Sb**	**13 30 40.9**	**0.0**
	baz=331						
NSTT	**Nanjuang**	**1.45**	**297**	*e*P	**Pn**	**13 30 22.3**	**+0.6**
	baz=295						
NSTT				*e*S	**Sb**	**13 30 41.1**	**-0.1**
	baz=295						
JKRS	**Kuro-shima**	**1.47**	**80**	P	**Pn**	**13 30 22.2**	**+0.3**
JKRS				*e*S	**Sb**	**13 30 41.2**	**-0.3**
TWY	**Chenhua**	**1.49**	**330**	P	**Pn**	**13 30 22.2**	**-0.1**
	baz=328						
ELDTW	**Lidau**	**1.52**	**239**	*e*P	**Pn**	**13 30 21.3**	**-1.3**
	baz=237						
ELDTW				*e*S	**Sn**	**13 30 40.0**	**-2.8**
	baz=237						
TWQ1	**Liyutan**	**1.56**	**284**	*e*P	**Pn**	**13 30 24.0**	**+0.9**
	baz=269						
TWQ1				*e*S	**Sn**	**13 30 44.7**	**+1.0**
	baz=269						
ALS	**Alishan**	**1.56**	**253**	P	**Pn**	**13 30 23.4**	**+0.2**
	baz=250						
JIJ	**Ishigaki jima**	**1.61**	**76**	P	**Pn**	**13 30 23.4**	**-0.5**
JIJ				S	**Sn**	**13 30 44.1**	**-1.0**
CHN5	**Tsauling**	**1.65**	**257**	P	**Pn**	**13 30 25.0**	**+0.6**
	baz=243						
TWG	**Pinlang**	**1.70**	**227**	*e*P	**Pn**	**13 30 23.9**	**-1.1**
	baz=238						
TWG				*e*S	**Sn**	**13 30 44.7**	**-2.5**
	baz=238						
STYT	**Tauyuan**	**1.74**	**242**	*e*P	**Pn**	**13 30 25.6**	**0.0**
	baz=228						
CHN4	**Tsaushan**	**1.79**	**250**	*e*P	**Pn**	**13 30 28.1**	**+1.7**
	baz=249						
CHN4				*e*S	**Sn**	**13 30 51.0**	**+1.4**
	baz=249						
WTP	**Ta-pu**	**1.82**	**247**	P	**Pn**	**13 30 27.6**	**+0.9**
	baz=245						
WTP				*e*S	**Sn**	**13 30 50.8**	**+0.6**
	baz=245						
CHN1	**Nanshi**	**1.91**	**246**	*e*P	**Pn**	**13 30 29.0**	**+1.0**
	baz=245						
CHN1				S	**Sn**	**13 30 54.6**	**+2.0**
	baz=245						
SSD	**Sandimen**	**2.06**	**234**	*e*P	**Pn**	**13 30 31.3**	**+1.3**
	baz=223						
JTJ	**Tarama**	**2.18**	**72**	P	**Pn**	**13 30 32.1**	**+0.5**
JTJ				S	**Sn**	**13 30 58.4**	**-0.7**

IDC 26 13:29:59.8±5.3, **2°.86N×129°.83E, h0**km, **mb3.2/3, mb1 3.4/3, mb1mx3.2/19, mbtmp3.3/3, Error ellipse: s-maj=401.6km s-min=25.9km az=70.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.09**	**169**	P	P	13 35 08.7	+1.3
	0.3nm,0.7s,baz=349,slow=10,SNR=2.7						
ASAR	**Alice Springs**	**26.67**	**172**	P	P	13 35 39.6	-1.0
	0.3nm,1.0s,baz=356,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**60.05**	**324**	P	P	13 40 08.8	+0.2
	0.6nm,0.6s,baz=128,slow=7.2,SNR=6.3						

*IDC **26** 13:29:58.8±2.8, 30°.75N×83°.29E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.4/26, mbtmp3.5/6, ML3.3/1, MS3.9/1, Ms1 3.9/1, ms1mx2.5/34, Error ellipse: s-maj=68.5km s-min=29.5km az=50.0*
*NEIC **26** 13:30:00.1±1.3, 30°.69N×83°.31E, h10km, mb4.6/2, Error ellipse: s-maj=30.8km s-min=11.8km az=225.0*
*ISCJB **26** 13:30:01.1±4.4, 30°.7N±0°.1×83°.5E±0°.1, h25km±39km, mb3.4/5, Error ellipse: s-maj=23.7km s-min=13.9km az=21.2*

ISC 26 13:30:03.7±4.5, **30°.8N**±0°.1×**83°.5E**±0°.1, **h31**km±39km, **n12**, σ1§06/11, **mb3.4/5, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**4.67**	**266**	*ex*	**Pn**	**13 31 12.8**	**+0.7**
LSA	**Lhasa**	**6.75**	**97**	P	**Pn**	**13 31 40.4**	**-0.2**
MKAR	**Makanchi Array**	**16.02**	**357**	Pn	**Pn**	**13 33 48.3**	**+1.6**
	0.1nm,0.3s,baz=179,slow=9.7,SNR=5.0						
CMAR	**Chiang Mai Arr**	**18.65**	**128**	P	**Pn**	**13 34 18.9**	**-0.6**
	0.0nm,0.3s,baz=312,slow=11,SNR=6.5						
KURK	**Kurchatov**	**20.25**	**351**	P	**P**	**13 34 34.5**	**-1.7**
	2.0nm,0.6s,baz=172,slow=10,SNR=13						
ZALV	**Zalesovo Beam**	**23.18**	**2**	P	**P**	**13 35 07.0**	**-0.6**
	0.3nm,0.3s,mb3.3,baz=177,slow=10,SNR=3.0						
BVAR	**Borovoye Array**	**24.19**	**341**	P	**P**	**13 35 16.1**	**-1.1**
	0.3nm,0.4s,mb3.0,baz=151,slow=6.3,SNR=2.2						
SONM	**Songino Array**	**24.46**	**39**	P	**P**	**13 35 20.7**	**+1.0**
	0.4nm,0.7s,mb3.0,baz=229,slow=8.8,SNR=4.8						
ABKAR	**Akbulak array**	**25.61**	**323**	*e*P	**P**	**13 35 29.3**	**-0.8**
	1.0nm,0.6s,mb3.5						
DAV	**Davao City (W)**	**45.91**	**112**	LR	LR	13 57 56.4	
	comp=Z,116nm,18.9s,baz=34,slow=36						
ARCES	**ARCESS Array B**	**50.42**	**337**	P	**P**	**13 38 57.7**	**0.0**
	1.8nm,1.0s,mb4.1,baz=96,slow=8.3,SNR=5.6						
PNL	**Peninsula**	**83.20**	**20**	*e*P	**P**	**13 42 28.4**	**+1.8**
	24nm,0.7s						

KRSC 26 13:30:28.7±0.8, **52°.43N×158°.51E, h118**km±37km, **ML3.5, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRL	**Gorelyy**	**0.29**	**295**	*e*P	Pn	13 30 45.9	+0.6
PET	**Petropavlovsk**	**0.60**	**8**	*e*P	Pn	13 30 47.8	+0.8
PET				*i* S	Sn	13 31 01.9	+1.0
AVH	**Avacha**	**0.85**	**9**	*e*P	Pn	13 30 50.7	+1.6
AVH				*i* S	Sn	13 31 07.7	+3.2
**N

KDAG				*i* S	**Sg**	**13 49 34.6 +0.8**	NJ2			*i* P	P	13 56 57.3 +0.1
KDAG	**Bornova**	**0.49**	**11**	*i* P	**Pg**	**13 49 26.8 -0.8**	NJ2			S	S	13 57 06.5 +0.5
KDAG				*i* S	**Sg**	**13 49 34.7 +0.8**	NJ2			P	P	13 57 35.0 -10
URLA	**Izmir**	**0.62**	**315**	*i* P	**Pg**	**13 49 28.7 -1.3**	NJ2			S	**S**	**14 01 20.0 -2.0**
URLA				*i* S	**Sg**	**13 49 37.6 -0.4**	NJ2			sS	sS	14 01 50.0 -2.6
URLA	**Izmir**	**0.62**	**315**	*i* P	**Pg**	**13 49 28.7 -1.3**	NJ2			pmax	pmax	
URLA				*i* S	**Sg**	**13 49 37.6 -0.4**		comp=Z,40nm,0.6s,mb5.2				
AYDN	**Tasoluk**	**0.64**	**114**	*i* P	**Pg**	**13 49 31.4 +1.0**	NJ2			pmax	pmax	
AYDN				*i* S	**Sg**	**13 49 38.9 +0.2**		comp=Z,510nm,3.6s				
AYDN	**Tasoluk**	**0.64**	**114**	*i* P	**Pg**	**13 49 31.4 +1.0**	NJ2			LR	LR	
AYDN				*i* S	**Sg**	**13 49 38.8 +0.2**		comp=N,240nm,19.4s				
MLSB	**Milas**	**0.80**	**141**	*e*PG	**Pg**	**13 49 33.7 +0.2**	NJ2			LR	LR	
MLSB				*e*SG	**Sg**	**13 49 44.8 +0.8**		comp=E,190nm,20.0s				
MLSB	**Milas**	**0.80**	**141**	*e*Pg	**Pg**	**13 49 33.7 +0.2**	NJ2			LR	LR	
MLSB				*e*Sg	**Sg**	**13 49 44.8 +0.9**		comp=Z,260nm,18.2s				
BODT	**Bodrum**	**0.87**	**171**	*e*PG	**Pg**	**13 49 34.0 -0.9**	**QIZ**	**Qiongzhong**	**30.11**	**289**	P	**P**	**13 56 52.8 -0.7**
BODT	**Bodrum**	**0.87**	**171**	*e*Pg	**Pg**	**13 49 34.0 -0.8**	QIZ				pP	pP	13 57 09.8 -1.5
BDRM	**Kayabasi**	**0.89**	**164**	*i* P	**Pg**	**13 49 34.6 -0.6**	QIZ				S	**S**	**14 01 47.3 +0.3**
BDRM				*i* S	**Sg**	**13 49 46.4 -0.3**	QIZ				pmax	pmax	
BDRM	**Kayabasi**	**0.89**	**164**	*i* P	**Pg**	**13 49 34.6 -0.6**		comp=Z,9.0nm,1.3s,mb4.2				
BDRM				*i* S	**Sg**	**13 49 46.4 -0.3**	QIZ				pmax	pmax	
CHOS	**Chios island**	**0.98**	**299**	*e*PB	**Pg**	**13 49 37.3 +0.4**		comp=Z,72nm,5.2s				
CHOS				*e*SB	**Sb**	**13 49 52.5 +1.5**	QIZ				LR	LR	
CHOS	**Chios island**	**0.98**	**299**	P	**Pg**	**13 49 37.2 +0.3**		comp=N,100nm,18.2s				
CHOS				S	**Sg**	**13 49 50.6 +1.0**	QIZ				LR	LR	
CHOS	**Chios island**	**0.98**	**299**	P	**Pg**	**13 49 37.2 +0.3**		comp=Z,130nm,19.4s				
CHOS				S	**Sg**	**13 49 50.6 +1.0**	**WRA**	**Warramunga Arr**	**31.34**	**190**	P	**P**	**13 57 03.7 -0.5**
CHOS				*e*Sb	**Sb**	**13 49 52.5 +1.5**		comp=Z,2.3nm,0.6s,mb4.1,baz=7.3,slow=9.6,SNR=13					
AKHS	**Akhisar**	**1.09**	**29**	*i* P	**Pg**	**13 49 39.0 -0.1**	WRA				LR	LR	14 09 43.9
AKHS				*i* S	**Sg**	**13 49 54.0 +0.8**		comp=Z,230nm,18.5s,baz=45,slow=36					
AKHS	**Akhisar**	**1.09**	**29**	*i* P	**Pg**	**13 49 39.0 0.0**	**CTA**	**Charters Tower**	**31.60**	**169**	P	**P**	**13 57 06.1 -0.4**
AKHS				*i* S	**Sg**	**13 49 54.0 +0.8**	CTA				LR	LR	14 09 36.0
AKS	**Akhisar**	**1.09**	**29**	*e*PN	**Pg**	**13 49 39.5 +0.4**	**CTA**	**Charters Tower**	**31.60**	**169**	P	**P**	**13 57 06.1 -0.4**
AKS	**Akhisar**	**1.09**	**29**	*e*Pn	**Pg**	**13 49 39.5 +0.5**		comp=Z,3.4nm,0.7s,mb4.2,baz=334,slow=10.0,SNR=4.2					
YER	**Yerkesik**	**1.20**	**131**	*e*PN	**Pn**	**13 49 40.9 -0.9**	CTA				LR	LR	14 09 36.1
YER	**Yerkesik**	**1.20**	**131**	*e*Pn	**Pn**	**13 49 40.9 -0.9**		comp=Z,191nm,20.4s,baz=48,slow=36					
DAT	**Datca**	**1.24**	**164**	*e*PN	**Pn**	**13 49 41.8 -0.6**	**CTAO**	**Charters Tower**	**31.60**	**169**	*e*P	**P**	**13 57 06.6 +0.1**
DAT	**Datca**	**1.24**	**164**	*e*Pn	**Pn**	**13 49 41.8 -0.6**		comp=Z,4.6nm,0.8s,mb4.3					
KULA	**Kula-Manisa**	**1.33**	**63**	*e*PN	**Pb**	**13 49 43.9 +0.1**	**CTAO**	**Charters Tower**	**31.60**	**169**	*e*P	**P**	**13 57 06.6 +0.1**
KULA	**Kula-Manisa**	**1.33**	**63**	*e*Pn	**Pb**	**13 49 43.9 +0.1**	CTAO				pmax	pmax	
AYVA	**Ayvalik**	**1.43**	**346**	*i* P	**Pn**	**13 49 44.7 -0.3**		comp=Z,5.0nm,0.8s,mb4.3					
AYVA				*i* S	**Sb**	**13 50 03.0 -1.1**	**GYA**	**Guiyang**	**34.91**	**301**	P	**P**	**13 57 36.5 +1.2**
AYVA	**Ayvalik**	**1.43**	**346**	*i* P	**Pn**	**13 49 44.7 -0.3**	GYA				pmax	pmax	
AYVA				*i* S	**Sb**	**13 50 03.0 -1.0**		comp=Z,10.0nm,1.0s,mb4.6					
PRK	**Paraskevi**	**1.49**	**333**	*e*PB	**Pb**	**13 49 46.2 -0.2**	**ASAR**	**Alice Springs**	**35.06**	**190**	P	**P**	**13 57 36.5 0.0**
PRK	**Paraskevi**	**1.49**	**333**	P	**Pn**	**13 49 45.3 -0.5**		comp=Z,3.3nm,0.5s,mb4.4,baz=20,slow=12,SNR=126					
PRK				S	**Sn**	**13 50 04.9 -0.8**	**BJI**	**Beijing**	**35.71**	**328**	P	**P**	**13 57 42.0 0.0**
PRK	**Paraskevi**	**1.49**	**333**	P	**Pn**	**13 49 45.3 -0.5**	BJI				S	**S**	**14 03 14.5 +1.2**
PRK	**Paraskevi**	**1.49**	**333**	*e*Pb	**Pb**	**13 49 46.2 -0.2**	BJI				pmax	pmax	
PRK				S	**Sn**	**13 50 04.9 -0.8**		comp=Z,19nm,0.8s,mb5.1					
DNZL	**Cakiroluk**	**1.52**	**98**	*i* P	**Pb**	**13 49 47.3 +0.3**	BJI				pmax	pmax	
DNZL				*i* S	**Sb**	**13 50 07.1 +0.4**		comp=Z,92nm,3.6s					
DNZL	**Cakiroluk**	**1.52**	**98**	*i* P	**Pb**	**13 49 47.3 +0.3**	BJI				LR	LR	
DNZL				*i* S	**Sb**	**13 50 07.1 +0.4**		comp=N,130nm,15.2s					
APE	**Apeiranthos**	**1.54**	**237**	*e*PN	**Pb**	**13 49 47.4 +0.1**	BJI				LR	LR	
APE	**Apeiranthos**	**1.54**	**237**	*e*PB	**Pb**	**13 49 46.4 -1.0**		comp=E,160nm,16.2s					
APE				*e*SB	**Sg**	**13 50 08.7 +1.0**	BJI				LR	LR	
APE	**Apeiranthos**	**1.54**	**237**	*e*Pb	**Pb**	**13 49 46.4 -1.0**		comp=Z,92nm,22.4s					
APE	**Apeiranthos**	**1.54**	**237**	*e*Pn	**Pg**	**13 49 47.4 -0.3**	**KMI**	**Kunming**	**37.90**	**297**	P	**P**	**13 58 02.0 +1.2**
APE				*e*Sb	**Sg**	**13 50 08.7 +1.0**	KMI				pP	pP	13 58 19.0 0.0
SIGR	**SIGRI**	**1.64**	**322**	P	**Pg**	**13 49 49.0 -0.5**	KMI				sP	sP	13 58 27.8 0.0
SIGR	**SIGRI**	**1.64**	**322**	P	**Pg**	**13 49 49.0 -0.5**	KMI				PP	PP	13 59 32.8 +4.0
DEMI	**Demirci**	**1.66**	**47**	*i* P	**Pg**	**13 49 50.0 0.0**	KMI				S	**S**	**14 03 47.5 +0.4**
DEMI				*i* S	**Sg**	**13 50 11.8 +0.2**	KMI				sS	sS	14 04 18.0 -0.2
DEMI	**Demirci**	**1.66**	**47**	*i* P	**Pg**	**13 49 50.0 -0.1**	KMI				SS	SS	14 06 25.5 -11
DEMI				*i* S	**Sg**	**13 50 11.8 +0.2**	KMI				pmax	pmax	
BALB	**Balikesir**	**1.81**	**18**	*e*PN	**Pg**	**13 49 51.2 -1.6**		comp=Z,6.0nm,1.2s,mb4.3					
BALB	**Balikesir**	**1.81**	**18**	*e*Pn	**Pg**	**13 49 51.3 -1.5**	KMI				pmax	pmax	
BALY	**Balya**	**1.85**	**11**	*i* P	**Pg**	**13 49 51.9 -1.8**		comp=Z,56nm,4.7s					
BALY				*i* S	**Sg**	**13 50 16.6 -1.1**	KMI				LR	LR	
BALY	**Balya**	**1.85**	**11**	*i* P	**Pg**	**13 49 51.9 -1.8**		comp=N,98nm,17.7s					
BALY				*i* S	**Sg**	**13 50 16.6 -1.1**	KMI				LR	LR	
KHL	**Karahalli**	**1.92**	**77**	*e*PN	**Pb**	**13 49 52.6 -1.1**		comp=E,120nm,16.8s					
KHL	**Karahalli**	**1.92**	**77**	*e*Pn	**Pb**	**13 49 52.6 -1.1**	KMI				LR	LR	
EZN	**Ezine**	**2.00**	**342**	*e*PN	**Pb**	**13 49 54.0 -1.3**		comp=Z,70nm,18.7s					
EZN	**Ezine**	**2.00**	**342**	*e*Pn	**Pb**	**13 49 54.0 -1.3**	**KLR**	**Kul'dur**	**38.62**	**351**	*e*P	**P**	**13 58 02.7 -3.8**
GLHS	**Glhisar (BURDU**	**2.02**	**112**	*e*PN	**Pn**	**13 49 52.6 -0.5**	**HHC**	**Hu-ho-hao-te**	**38.78**	**325**	*e*P	**P**	**13 58 09.0 +1.0**
GLHS	**Glhisar (BURDU**	**2.02**	**112**	*e*Pn	**Pn**	**13 49 52.6 -0.5**	HHC				pP	pP	13 58 27.3 +1.0
GONE	**Gonen-Balikesi**	**2.16**	**11**	*e*PN	**Pb**	**13 49 56.3 -1.7**	HHC				sP	sP	13 58 36.5 +1.5
GONE	**Gonen-Balikesi**	**2.16**	**11**	*e*Pn	**Pb**	**13 49 56.3 -1.6**	HHC				PP	PP	13 59 43.5 +5.3
GADA	**Gvkgeada**	**2.46**	**337**	*e*PN	**Pn**	**13 50 00.3 +1.0**	HHC				*e*S	**S**	**14 04 01.3 +1.3**
GADA	**Gvkgeada**	**2.46**	**337**	*e*Pn	**Pn**	**13 50 00.3 +1.1**	HHC				sS	sS	14 04 32.3 +1.1
KCTX	**Karacabey (Bur**	**2.52**	**22**	*e*PN	**Pn**	**13 50 00.7 +0.7**	HHC				SS	SS	14 06 46.5 -7.2
KCTX	**Karacabey (Bur**	**2.52**	**22**	*e*Pn	**Pn**	**13 50 00.7 +0.7**	HHC				ScS	ScS	14 08 09.0 -1.6
GELI	**Tayfur-Gelibol**	**2.53**	**348**	*e*PN	**Pn**	**13 50 01.2 +1.1**	HHC				pmax	pmax	
GELI	**Tayfur-Gelibol**	**2.53**	**348**	*e*Pn	**Pn**	**13 50 01.2 +1.1**		comp=Z,18nm,0.8s,mb5.0					
ERIK	**Erikli-Kesan**	**2.79**	**350**	*e*PN	**Pn**	**13 50 05.2 +1.5**	HHC				pmax	pmax	
ERIK	**Erikli-Kesan**	**2.79**	**350**	*e*Pn	**Pn**	**13 50 05.2 +1.5**		comp=Z,63nm,4.2s					
MFT	**Murefte**	**2.86**	**2**	*e*PN	**Pn**	**13 50 06.3 +1.6**	HHC				LR	LR	
MFT	**Murefte**	**2.86**	**2**	*e*Pn	**Pn**	**13 50 06.3 +1.6**		comp=N,110nm,14.3s					
YLV	**Yalova**	**3.15**	**33**	*e*PN	**Pn**	**13 50 09.8 +1.0**	HHC				LR	LR	
YLV	**Yalova**	**3.15**	**33**	*e*Pn	**Pn**	**13 50 09.8 +1.1**		comp=E,200nm,16.5s					
							HHC				LR	LR	
								comp=Z,130nm,16.7s					
							CD2	**Chengdu**	**38.89**	**306**	P	**P**	**13 58 09.3 +0.2**
							CD2				pmax	pmax	
								comp=Z,20nm,0.5s,mb5.2					
							CD2				pmax	pmax	
								comp=Z,90nm,4.1s					
							CM31	**Chiang Mai Arr**	**40.28**	**285**	*e*P	**P**	**13 58 20.7 -0.1**
							CMAR	**Chiang Mai Arr**	**40.28**	**285**	P	**P**	**13 58 21.3 +0.6**
							CMAR				LR	LR	14 13 31.3
							CMAR	**Chiang Mai Arr**	**40.28**	**285**	P	**P**	**13 58 21.3 +0.6**
								comp=Z,5.0nm,0.7s,mb4.5,baz=91,slow=6.9,SNR=43					
							CMAR				LR	LR	14 13 31.3
								comp=Z,66nm,20.6s,baz=100,slow=34					
							LZH	**Lanzhou**	**41.04**	**313**	*e*P	**P**	**13 58 29.0 +2.2**
							LZH				pP	pP	13 58 47.5 +2.3
							LZH				sP	sP	13 58 56.8 +2.9
							LZH				pmax	pmax	
								comp=Z,18nm,1.3s,mb4.7					
							LZH				LR	LR	
								comp=E,220nm,13.8s					
							LZH				LR	LR	
								comp=Z,270nm,18.6s					
							STKA	**Stephens Creek**	**42.76**	**178**	P	**P**	**13 58 41.0 +0.3**
								comp=Z,1.8nm,0.8s,mb3.8,baz=346,slow=8.3,SNR=2.8					
							STKA				LR	LR	14 16 43.4
								comp=Z,180nm,20.4s,baz=24,slow=36					
							GTA	**Gaotai**	**45.41**	**315**	*e*P	**P**	**13 59 01.8 -0.2**
							GTA				pP	pP	13 59 19.0 -1.6
							GTA				sP	sP	13 59 28.0 -1.3
							GTA				pmax	pmax	
								comp=Z,5.0nm,1.3s,mb4.1					
							ULN	**Ulaanbaatar**	**45.88**	**329**	P	**P**	**13 59 04.3 -1.2**
								comp=Z,4.0nm,0.6s,mb4.3					
							ULN	**Ulaanbaatar**	**45.88**	**329**	P	**P**	**13 59 04.4 -1.1**
							ULN				pmax	pmax	
								comp=Z,4.0nm,0.6s,mb4.3					
							SONM	**Songino Array**	**46.19**	**329**	P	**P**	**13 59 07.8 -0.2**
								comp=Z,2.4nm,0.7s,mb4.0,baz=131,slow=7.9,SNR=12					
							SONM				LR	LR	14 19 44.0
								comp=Z,97nm,18.6s,baz=101,slow=38					
							NWAO	**Narrogin (SRO)**	**48.86**	**206**	P	**P**	**13 59 29.2 +0.3**
								comp=Z,9.7nm,0.8s,mb4.8,baz=30,slow=10,SNR=6.2					
							TLY	**Talaya**	**50.06**	**331**	*e*P	**P**	**13 59 39.3 +1.6**
							TLY				pmax	pmax	
								comp=Z,6.0nm,0.7s,mb4.6					
							TLY				MLR	MLR	
								comp=Z,92nm,18.0s					
							MOY	**Mondy**	**51.33**	**330**	*e*P	**P**	**13 59 47.8 +0.5**
							YAK	**Yakutsk**	**51.39**	**354**	*e*P	**P**	**13 59 46.1 -1.4**
								comp=Z,34nm,0.8s,mb5.4					
							YAK	**Yakutsk**	**51.39**	**354**	*e*P	**P**	**13 59 46.1 -1.5**
							YAK				*e*		13 59 57.7
							YAK				pmax	pmax	
								comp=Z,26nm,1.0s,mb5.2					
							YAK				pmax	pmax	
								comp=N,5.0nm,1.0s					
							WMQ	**Urumqi**	**55.49**	**316**	*e*P	**P**	**14 00 19.5 +1.6**
							WMQ				pP	pP	14 00 38.8 +1.7
							WMQ				sP	sP	14 00 47.5 +1.9
							WMQ				PcP	PcP	14 01 18.5 +1.3
							WMQ				pmax	pmax	
								comp=Z,9.0nm,0.8s,mb4.8					
							WMQ				pmax	pmax	
								comp=Z,84nm,4.2s					
							WMQ				LR	LR	
								comp=N,45nm,23.0s					
							WMQ				LR	LR	
								comp=Z,57nm,20.3s					
							MK31	**Makanchi Array**	**60.04**	**318**	*e*P	**P**	**14 00 49.6 -0.1**
							MKAR	**Makanchi Array**	**60.04**	**318**	P	**P**	**14 00 49.5 -0.2**
								comp=Z,2.1nm,0.7s,mb4.3,baz=100,slow=8.5,SNR=15					
							MKAR				LR	LR	14 25 12.7
								comp=Z,48nm,19.9s,baz=163,slow=34					
							MKAR	**Makanchi Array**	**60.04**	**318**	*ce*P	**P**	**14 00 49.9 +0.2**
							MKAR				pmax	pmax	
								comp=Z,2.0nm,0.7s					
							ZALV	**Zalesovo Beam**	**60.94**	**326**	P	**P**	**14 00 55.3 -0.5**
								comp=Z,3.4nm,0.7s,mb4.5,baz=107,slow=6.3,SNR=14					
							ZALV				LR	LR	14 28 04.1
								comp=Z,60nm,18.7s,baz=124,slow=37					
							NVS	**Novosibirsk**	**62.14**	**327**	*e*P	**P**	**14 01 01.1 -2.7**
							KURK	**Kurchatov**	**63.47**	**321**	*e*P	**P**	**14 01 11.8 -0.9**
								comp=Z,6.6nm,0.7s,mb4.7					
							KURK	**Kurchatov**	**63.47**	**321**	P	**P**	**14 01 12.7 0.0**
								comp=Z,5.4nm,0.6s,mb4.7,baz=104,slow=7.4,SNR=12					
							KURK	**Kurchatov**	**63.47**	**321**	*e*P	**P**	**14 01 11.8 -0.9**
							KURK				pmax	pmax	
								comp=Z,7.0nm,0.7s,mb4.7					
							KDAK	**Kodiak Island**	**68.70**	**32**	P	**P**	**14 01 46.2 +0.1**
							KDAK	**Kodiak Island**	**68.70**	**32**	P	**P**	**14 01 46.2 +0.1**
								comp=Z,2.7nm,0.5s,mb4.3,baz=259,slow=5.2,SNR=6.9					
							BVAR	**Borovoye Array**	**68.95**	**323**	P	**P**	**14 01 47.3 -0.4**
								comp=Z,5.6nm,0.7s,mb4.5,baz=104,slow=8.7,SNR=16					
							BRVK	**Borovoye**	**69.02**	**323**⇑	*e*P	**P**	**14 01 48.2 0.0**
							BRVK				pmax	pmax	
								comp=Z,5.0nm,0.6s,mb4.5					
							BPAW	**Bear Paw Mtn.**	**70.97**	**26**	*e*P	**P**	**14 01 59.3 -0.6**
								comp=Z,2.9nm,0.7s,mb4.2					
							TRF	**Thorofare Moun**	**71.12**	**26**	*e*P	**P**	**14 01 59.9 -0.9**
								comp=Z,3.2nm,0.7s,mb4.3					
							SML	**Sawmill**	**71.65**	**28**	*e*P	**P**	**14 02 02.7 -1.4**
								comp=Z,1.4nm,0.6s,mb4.0					
							SML	**Sawmill**	**71.65**	**28**	*e*P	**P**	**14 02 02.7 -1.4**
							SML				pmax	pmax	
								comp=Z,1.0nm,0.6s,mb3.8					
							MCK	**McKinley**	**71.77**	**26**	P	**P**	**14 02 03.4 -1.3**
								comp=Z,5.4nm,0.9s,mb4.4					
							MCK	**McKinley**	**71.77**	**26**	P	**P**	**14 02 03.4 -1.3**
							MCK				pmax	pmax	
								comp=Z,5.0nm,0.9s,mb4.3					
							COLD	**Coldfoot**	**72.06**	**23**	*e*P	**P**	**14 02 06.2 -0.2**
								comp=Z,3.9nm,0.7s,mb4.3					
							ILAR	**Eielson Array**	**72.85**	**25**	P	**P**	**14 02 10.1 -1.1**
								comp=Z,2.8nm,0.6s,mb4.3,baz=251,slow=5.9,SNR=37					
							ABKAR	**Akbulak array**	**75.18**	**318**	*e*P	**P**	**14 02 24.3 -0.7**
								comp=Z,1.4nm,0.6s,mb3.9					
							DAWY	**Dawson**	**75.99**	**27**	*e*P	**P**	**14 02 29.9 +0.5**
							ARU	**Arti**	**76.09**	**326**	*e*P	**P**	**14 02 31.7 +1.6**
								comp=Z,5.2nm,0.7s,mb4.4					
							ARU	**Arti**	**76.09**	**326**	*c* P	**P**	**14 02 31.0 +0.9**
							ARU						14 05 17.3
							ARU				S	S	14 12 11.8 +4.2
							ARU				pmax	pmax	
								comp=Z,19nm,2.5s,mb4.4					
							AKTK	**Aktyubinsk**	**76.42**	**319**	P	**P**	**14 02 32.8 +0.7**
							AKTO	**Aktyubinsk**	**76.42**	**319**	P	**P**	**14 02 32.8 +0.7**
								comp=Z,1.2nm,0.6s,mb3.8,baz=81,slow=11,SNR=5.4					
							ZEI	**Tsey**	**86.97**	**313**	*e*P	**P**	**14 03 32.3 +4.5**
							ZEI				pmax	pmax	
								comp=Z,12nm,0.5s,mb5.1					
							JCW	**Jim Creek**	**87.15**	**42**	*e*P	**P**	**14 03 29.6 +1.0**
								comp=Z,15nm,0.8s,mb5.0					
							YKA	**Yellowknife Ar**	**87.23**	**27**	P	**P**	**14 03 30.3 +1.7**
								comp=Z,4.2nm,0.8s,mb4.4,baz=296,slow=4.8,SNR=5.4					
							YKA	**Yellowknife Ar**	**87.23**	**27**	P	**P**	**14 03 30.3 +1.7**
							ARCES	**ARCESS Array B**	**87.94**	**341**	P	**P**	**14 03 30.5 -1.3**
								comp=Z,2.0nm,0.7s,mb4.3,baz=71,slow=6.8,SNR=6.5					
							OBN	**Obninsk**	**88.53**	**326**⇓	*e*P	**P**	**14 03 43.7 +8.8**
							OBN				pmax	pmax	
								comp=Z,5.0nm,0.8s,mb4.6					
							FINES	**FINESS Array B**	**91.34**	**334**	P	**P**	**14 03 46.8 -1.1**
								comp=Z,2.7nm,0.7s,mb4.5,baz=76,slow=5.9,SNR=5.0					
							FINES				LR	LR	14 49 36.6
								comp=Z,104nm,18.4s,baz=96,slow=39					
							NVAR	**Mina Array Bea**	**92.19**	**50**	P	**P**	**14 03 54.8 +2.4**
								comp=Z,1.1nm,0.8s,mb4.1,baz=282,slow=5.4,SNR=7.6					
							HLID	**Hailey**	**93.48**	**45**	*e*P	**P**	**14 04 00.9 +2.7**
								comp=Z,1.8nm,0.9s,mb4.4					
							BRTR	**Keskin Array B**	**95.23**	**312**	LR	LR	14 51 30.2
								comp=Z,21nm,19.1s,baz=114,slow=38					
							NOA	**NORSAR Array B**	**97.59**	**337**	LR	LR	14 47 56.5
								comp=Z,51nm,18.9s,baz=15,slow=35					
							LPAZ	**La Paz**	**152.22**	**104**	PKPbc	PKPbc	14 10 41.7 +3.0
								comp=Z,1.7nm,0.7s,baz=300,slow=3.6,SNR=6.3					

*MOS **26** 13:50:44.3±1.3, 11°.15N×139°.84E, h33km, mb4.7/11, Error ellipse: s-maj=14.8km s-min=8.1km az=101.7*
*BJI **26** 13:50:47.8, 10°.99N×140°.06E, h74km, mB5.0/17, mb4.6/28, Ms4.2/13, Ms7 3.9/13*
*ISCJB **26** 13:50:48.6±1.3, 11°.10N±0°.05×140°.00E±0°.06, h73km±12km, mb4.5/51, Error ellipse: s-maj=9.4km s-min=7.8km az=176.9*
*NEIC **26** 13:50:49.8±1.4, 11°.13N×139°.96E, h67km±13km, mb4.5/19, Error ellipse: s-maj=9.3km s-min=6.7km az=78.0*
*IDC **26** 13:50:49.6±2.8, 11°.13N×139°.90E, h63km±27km, mb4.1/20, mb1 4.3/21, mb1mx4.2/28, mbtmp4.2/21, MS3.8/16, Ms1 3.8/16, ms1mx3.6/30, Error ellipse: s-maj=16.7km s-min=11.2km az=93.0*

ISC 26 13:50:50.8±1.1, 11°.10N±0°.05×139°.98E±0°.05, h76km±11km, h75km±1.2km:pP-P, n85, σ1°06/86, mb4.5/51, 3C-1D, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.38**	**62**	*e*P		**Pn**	**Pn**	**13 52 08.0**	**-0.6**
	322nm,1.3s								
GUMO	**Guam**	**5.38**	**62**	P		**Pn**	**Pn**	**13 52 08.1**	**-0.4**
	9.7nm,0.3s,baz=194,slow=15,SNR=9.5								
GUMO				S		**Sn**	**Sn**	**13 53 10.7**	**+1.6**
	6.8nm,0.3s,baz=45,slow=19,SNR=2.6								
GUMO				LR		LR	LR	13 54 15.4	
	comp=Z,491nm,18.5s,baz=246,slow=38								
GUMO				T				13 57 38.2	
	13nm,0.3s,baz=198,slow=23,SNR=4.2								
GUMO	**Guam**	**5.38**	**62**	*e*P		**Pn**	**Pn**	**13 52 08.0**	**-0.5**
GUMO				pmax		pmax			
	comp=Z,322nm,1.3s								
CBIJ	**Chichi jima**	**16.05**	**7**	LR		LR	LR	13 59 40.3	
	comp=Z,164nm,18.2s,baz=182,slow=33								
PMG	**Port Moresby**	**21.59**	**160**	*e*P		**P**	**P**	**13 55 35.1**	**+0.6**
YULB	**Yu-li**	**21.60**	**307**	*e*P		**P**	**P**	**13 55 36.2**	**+1.7**
	comp=Z,11nm,0.8s,mb4.2								
JHJ	**Hachijo jima 2**	**21.92**	**360**	LR		LR	LR	14 02 18.1	
	comp=Z,408nm,19.6s,baz=223,slow=32								
SSLB	**Suanglung**	**22.07**	**307**	*e*P		**P**	**P**	**13 55 39.1**	**-0.4**
	comp=Z,44nm,0.8s,mb4.8								
TPUB	**Ta-pu**	**22.08**	**306**	*e*P		**P**	**P**	**13 55 39.2**	**-0.4**
	comp=Z,28nm,0.8s,mb4.6								
YHNB	**Yeheng**	**22.22**	**310**	P		**P**	**P**	**13 55 40.6**	**-0.6**
	comp=Z,42nm,1.3s,mb4.6								
KAKA	**Kakadu**	**24.81**	**198**	*e*P		**P**	**P**	**13 56 04.7**	**-1.2**
	comp=Z,69nm,1.0s,mb5.0								
COEN	**Coen**	**25.09**	**173**	*e*P		**P**	**P**	**13 56 07.9**	**-0.6**
MJAR	**Matsushiro Arr**	**25.38**	**357**	P		**P**	**P**	**13 56 10.7**	**-0.3**
	comp=Z,3.7nm,0.7s,mb3.9,baz=180,slow=8.1,SNR=9.4								
MJAR				LR		LR	LR	14 05 06.7	
	comp=Z,152nm,18.0s,baz=150,slow=34								
MAJO	**Matsushiro**	**25.38**	**357**	*e*P		**P**	**P**	**13 56 09.0**	**-2.0**
	comp=Z,7.9nm,0.7s,mb4.2								
MAJO	**Matsushiro**	**25.38**	**357**	*e*P		**P**	**P**	**13 56 09.0**	**-2.0**
MAJO	

DAVOX	**Davos/Dischmat**	**0.78**	**303**	⇑*iP*		**Pg**	**13 55 10.1**	**+0.1**
	56nm,0.4s								
DAVOX	**Davos/Dischmat**	**0.78**	**303**	Pg		**Pg**	**13 55 10.0**	**0.0**
DAVOX				Sg		**Sg**	**13 55 20.5**	**+0.3**
DAVOX	**Davos/Dischmat**	**0.78**	**303**	Pg		**Pg**	**13 55 10.0**	**0.0**
DAVOX				Sg		**Sg**	**13 55 20.5**	**+0.3**
TUE	**Stuetta**	**1.03**	**277**	Pg		**Pg**	**13 55 14.5**	**-0.3**
TUE				Sg		**Sg**	**13 55 27.5**	**-0.8**
TUE	**Stuetta**	**1.03**	**277**	Pg		**Pg**	**13 55 14.5**	**-0.3**
TUE				Sg		**Sg**	**13 55 27.5**	**-0.8**
WTTA	**Wattenberg**	**1.06**	**31**	⇓*iPg*		**Pg**	**13 55 14.9**	**-0.3**
WTTA				⇑*iSg*		**Sg**	**13 55 29.1**	**+0.1**
	3.5nm,0.2s								
WTTA	**Wattenberg**	**1.06**	**31**	Pg		**Pg**	**13 55 14.9**	**-0.3**
WTTA				Sg		**Sg**	**13 55 29.1**	**+0.1**
	3.5nm,0.2s								
ABTA	**Abfaltersbach**	**1.22**	**71**	⇓*iPn*		**Pn**	**13 55 17.8**	**+0.1**
ABTA	**Abfaltersbach**	**1.22**	**71**	Pn		**Pn**	**13 55 17.8**	**+0.1**
MUGIO	**Muggio**	**1.32**	**251**	*eP*		**Pn**	**13 55 19.2**	**+0.1**
	40nm,0.5s								
MUGIO	**Muggio**	**1.32**	**251**	*eP*		**Pn**	**13 55 19.2**	**+0.1**
	40nm,0.5s								

*IDC **26** 13:56:14.4±1.9,30°.65N×83°.18E,h0km,mb3.5/5, mb1 3.7/6,mb1mx3.5/25,mbtmp3.5/6,ML3.7/1,Error ellipse: s-maj=62.3km s-min=24.1km az=64.0*
*ISCJB **26** 13:56:15.2±0.8,30°.8N±0°.1×83°.5E±0°.1,h10km,mb3.5/5, Error ellipse: s-maj=20.4km s-min=11.5km az=24.1*
*NEIC **26** 13:56:16.1±1.1,30°.78N×83°.29E,h10km,mb3.7/2,Error ellipse: s-maj=31.2km s-min=13.2km az=47.0*

ISC 26 13:56:17.1±0.8, 30°.8N±0°.1×83°.4E±0°.1, h10km, n11, σ1§06/11, mb3.5/5, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DDI	**Dehra Dun**	**4.66**	**265**	*ex*		**Pn**	**13 57 29.0**	**+1.4**
LSA	**Lhasa**	**6.76**	**97**	P		**Pn**	**13 57 57.2**	**+0.8**
MKAR	**Makanchi Array**	**15.99**	**357**	Pn		**Pn**	**14 00 06.4**	**+4.4**
	0.1nm,0.3s,baz=180,slow=12,SNR=5.6							
CMAR	**Chiang Mai Arr**	**18.68**	**128**	P		**Pn**	**14 00 35.9**	**+0.1**
	0.1nm,0.3s,baz=313,slow=12,SNR=4.1							
KURK	**Kurchatov**	**20.22**	**351**	*eP*		**P**	**14 00 49.0**	**-3.1**
	5.4nm,1.3s							
KURK	**Kurchatov**	**20.22**	**351**	P		**P**	**14 00 50.9**	**-1.2**
	1.5nm,0.6s,baz=172,slow=9.7,SNR=7.4							
SONM	**Songino Array**	**24.45**	**39**	P		**P**	**14 01 37.5**	**+1.5**
	0.7nm,0.7s,mb3.2,baz=211,slow=8.2,SNR=2.9							
ABKAR	**Akbulak array**	**25.58**	**323**	*eP*		**P**	**14 01 45.7**	**-0.6**
	1.0nm,0.6s,mb3.5							
ARCES	**ARCESS Array B**	**50.38**	**337**	P		**P**	**14 05 13.6**	**-0.4**
	1.3nm,0.7s,mb4.0,baz=94,slow=7.4,SNR=3.6							
WRA	**Warramunga Arr**	**70.26**	**129**	P		**P**	**14 07 29.6**	**-1.1**
	0.5nm,0.9s,mb3.4,baz=326,slow=6.2,SNR=2.6							
ASAR	**Alice Springs**	**72.61**	**132**	P		**P**	**14 07 44.1**	**-0.8**
	0.3nm,0.9s,mb3.2,baz=312,slow=5.7,SNR=3.0							

*ISCJB **26** 14:01:27.0±0.6,37°.31N±0°.05×28°.57E±0°.04,h5km±11km, Error ellipse: s-maj=8.5km s-min=4.8km az=153.6*
*DDA **26** 14:01:27.5,37°.29N×28°.65E,h7km±3km,Md2.8*
*ISK **26** 14:01:27.1,37°.37N×28°.49E,h13km,MD2.7*
*CSEM **26** 14:01:27.1±0.3,37°.31N×28°.57E,h15km,MD2.7, Error ellipse: s-maj=10.1km s-min=3.7km az=141.0*

ISC 26 14:01:27.4±0.6, 37°.30N±0°.05×28°.58E±0°.04, h10km±8km, n25, σ1§00/33, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YER	**Yerkesik**	**0.29**	**235**	*e*PG		**Pg**	**14 01 33.9**	**+0.7**
YER				*e*SG		**Sg**	**14 01 37.9**	**+0.8**
YER	**Yerkesik**	**0.29**	**235**	*e*Pg		**Pg**	**14 01 33.9**	**+0.7**
YER				*e*Sg		**Sg**	**14 01 37.9**	**+0.8**
DNZL	**Cakiroluk**	**0.54**	**44**	*i* P		**Pg**	**14 01 37.7**	**-0.2**
DNZL				*i* S		**Sg**	**14 01 45.3**	**+0.3**
DNZL	**Cakiroluk**	**0.54**	**44**	*i* P		**Pg**	**14 01 37.7**	**-0.2**
DNZL				*i* S		**Sg**	**14 01 45.3**	**+0.3**
DENT	**Denizli**	**0.58**	**39**	*e*PG		**Pg**	**14 01 39.0**	**+0.3**
DENT	**Denizli**	**0.58**	**39**	*e*Pg		**Pg**	**14 01 39.0**	**+0.3**
MLSB	**Milas**	**0.64**	**270**	*e*PG		**Pg**	**14 01 38.3**	**-1.5**
MLSB				*e*SG		**Sg**	**14 01 47.7**	**-0.5**
MLSB	**Milas**	**0.64**	**270**	*e*Pg		**Pg**	**14 01 38.3**	**-1.5**
MLSB				*e*Sg		**Sg**	**14 01 47.7**	**-0.5**
AYDN	**Tasoluk**	**0.66**	**303**	*i* P		**Pg**	**14 01 41.6**	**+1.3**
AYDN				*i* S		**Sg**	**14 01 49.6**	**+0.7**
AYDN	**Tasoluk**	**0.66**	**303**	*i* P		**Pg**	**14 01 41.6**	**+1.4**
AYDN				*i* S		**Sg**	**14 01 49.6**	**+0.7**
GOLH	**Golhisar**	**0.79**	**94**	*i* P		**Pg**	**14 01 41.3**	**-1.4**
GOLH	**Golhisar**	**0.79**	**94**	*i* P		**Pg**	**14 01 41.3**	**-1.3**
BDRM	**Kayabasi**	**0.94**	**256**	*i* P		**Pg**	**14 01 46.0**	**+0.5**
BDRM	**Kayabasi**	**0.94**	**256**	*i* P		**Pg**	**14 01 46.0**	**+0.6**
DAT	**Datca**	**0.98**	**235**	*e*PG		**Pg**	**14 01 45.7**	**-0.7**
DAT	**Datca**	**0.98**	**235**	*e*Pg		**Pg**	**14 01 45.7**	**-0.6**
BODT	**Bodrum**	**1.04**	**257**	*e*PG		**Pg**	**14 01 46.2**	**-1.2**
BODT	**Bodrum**	**1.04**	**257**	*e*Pg		**Pg**	**14 01 46.2**	**-1.2**
ELL	**Elmali**	**1.20**	**117**	*e*PN		**Pn**	**14 01 52.0**	**+1.7**
ELL	**Elmali**	**1.20**	**117**	*e*Pn		**Pn**	**14 01 52.0**	**+1.8**
KULA	**Kula-Manisa**	**1.21**	**3**	*e*PN		**Pn**	**14 01 48.8**	**-1.6**
KULA	**Kula-Manisa**	**1.21**	**3**	*e*Pn		**Pn**	**14 01 48.8**	**-1.6**
KHAL	**Karahalli**	**1.29**	**34**	*i* P		**Pn**	**14 01 52.0**	**+0.6**
KHAL	**Karahalli**	**1.29**	**34**	*i* P		**Pn**	**14 01 52.0**	**+0.5**
KORT	**Korkueli**	**1.45**	**101**	*i* P		**Pn**	**14 02 01.5**	**+7.9**

*ISCJB **26** 14:06:47.1±0.3,47°.73N±0°.02×80°.63E±0°.03,h10km, mb3.7/5,Error ellipse: s-maj=3.5km s-min=3.2km az=139.9*
*IDC **26** 14:06:48.3±0.7,47°.55N×80°.75E,h0km,mb3.5/2, mb1 3.7/8,mb1mx3.5/28,mbtmp3.7/8,ML3.7/6,Error ellipse: s-maj=10.4km s-min=6.9km az=51.0*
*NEIC **26** 14:06:49.1±1.9,47°.61N×80°.85E,h7km±14km,Error ellipse: s-maj=9.5km s-min=7.8km az=138.0*
*NNC **26** 14:06:49.7±0.8,47°.60N×80°.70E,h22km±6km,mb3.9, mpv3.6,Error ellipse: s-maj=5.9km s-min=2.6km az=41.0*
*MOS **26** 14:06:50.3±1.1,47°.63N×80°.51E,h29km,mb4.3/1,Error ellipse: s-maj=11.1km s-min=7.6km az=91.5*
*ASRS **26** 14:06:53.9±1.1,47°.81N×80°.77E,h15km,Ms3.3/4*
*BJI **26** 14:06:55.6,47°.14N×81°.44E,h17km,mB4.2/1,mb4.3/2, ML3.7/7*

ISC 26 14:06:48.9±0.3, 47°.68N±0°.02×80°.69E±0°.03, h10km, n62, σ1§64/86, mb3.7/5, 20C-10D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MK31	**Makanchi Array**	**1.40**	**129**	⇑P		**Pn**	**14 07 13.3**	**-1.2**
	39nm,0.2s,baz=333,slow=6.0,SNR=6606							
MK31				⇑S		**Sn**	**14 07 30.9**	**-2.1**
	262nm,0.3s,baz=308,slow=27,SNR=21							
MK31	**Makanchi Array**	**1.40**	**129**	*e*P		**Pn**	**14 07 13.6**	**-0.9**
MK31				*e*S		**Sn**	**14 07 31.2**	**-1.9**
MK31	**Makanchi Array**	**1.40**	**129**	PG		**Pg**	**14 07 14.0**	**-1.8**
MK31				pmax	pmax			
	comp=Z,168nm,0.2s							
MKAR	**Makanchi Array**	**1.40**	**129**	Pg		**Pg**	**14 07 13.5**	**-2.3**
	comp=Z,100nm,0.3s,baz=323,slow=16,SNR=1582							
MKAR				Lg			14 07 30.7	
	comp=Z,488nm,0.3s,baz=305,slow=28,SNR=68							
KURK	**Kurchatov**	**3.33**	**337**	⇑Pn		**Pn**	**14 07 42.3**	**+1.3**
	comp=Z,1.6nm,0.3s							
KURK				⇓Pg		**Pg**	**14 07 50.7**	**-2.0**
	comp=Z,28nm,0.4s							
KURK				⇑Lg			14 08 37.2	
	comp=Z,313nm,0.5s							
KURK	**Kurchatov**	**3.33**	**337**	*e*P		**Pn**	**14 07 42.6**	**+1.6**
KURK				*e*S		**Sg**	**14 08 35.2**	**-0.6**
KURK	**Kurchatov**	**3.33**	**337**	Pn		**Pn**	**14 07 42.0**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=150,slow=13,SNR=8.8							
KURK				Pg		**Pg**	**14 07 49.0**	**-3.6**
	comp=Z,3.7nm,0.3s,baz=153,slow=16,SNR=30							
KURK				Lg			14 08 33.6	
	comp=Z,20nm,0.3s,baz=151,slow=32,SNR=15							
KURK	**Kurchatov**	**3.33**	**337**	PN		**Pn**	**14 07 42.0**	**+1.0**
KURK							14 07 49.1	
KURK				pmax	pmax			
	comp=Z,1.0nm,0.3s							
KURK				pmax	pmax			
	comp=Z,4.0nm,0.3s							
KUR02	**Kurchatov Arra**	**3.33**	**336**	⇓Pn		**Pn**	**14 07 41.6**	**+0.6**
	comp=Z,0.1nm,0.2s							
KUR02				⇑Pg		**Pg**	**14 07 51.0**	**-1.7**
	comp=Z,1.3nm,0.3s							
KUR02				⇑Lg			14 08 37.3	
	comp=Z,19nm,0.5s							
UKR	**Ust'-Kan**	**4.21**	**38**	*e*PN		**Pn**	**14 07 57.0**	**+3.9**
UKR				*e*			14 08 07.8	
UKR				*e*			14 09 00.6	
UKR	**Ust'-Kan**	**4.21**	**38**	*e*Pn		**Pn**	**14 07 57.0**	**+3.9**
UKR				*e*Pg		**Pg**	**14 08 07.8**	**-1.8**
UKR				*e*Sn		**Sn**	**14 08 43.2**	**+0.8**
UKR				*e*Sg		**Sg**	**14 09 00.6**	**-3.6**
AAA	**Alma-Ata**	**5.13**	**212**	*e*PN		**Pg**	**14 08 24.7**	**-2.5**
AAA				pmax	pmax			
	comp=Z,43nm,0.2s							
KNDC	**Almaty**	**5.17**	**212**	⇓Pg		**Pg**	**14 08 24.2**	**-3.8**
	comp=Z,39nm,0.6s							
KNDC				⇑Lg			14 09 30.8	
	comp=Z,314nm,0.8s							
AKAR	**Aktash**	**5.27**	**57**	*e*PN		**Pn**	**14 08 11.7**	**+4.1**
AKAR				*e*			14 09 35.6	
AKAR	**Aktash**	**5.27**	**57**	*e*Pn		**Pn**	**14 08 11.7**	**+4.1**
AKAR				*e*Sn		**Sn**	**14 09 11.1**	**+2.7**
AKAR				*e*Sg		**Sg**	**14 09 35.6**	**-2.4**
TKM2	**Tokmak 2**	**5.96**	**219**	⇓Pn		**Pn**	**14 08 16.7**	**-0.5**
	comp=Z,9.2nm,0.4s							
TKM2				⇑Lg			14 09 55.0	
	comp=Z,205nm,0.9s							
TKM2	**Tokmak 2**	**5.96**	**219**	P		**Pn**	**14 08 18.5**	**+1.3**
	SNR=10.0							
TKM2	**Tokmak 2**	**5.96**	**219**	*e*P		**Pn**	**14 08 18.5**	**+1.3**
	comp=Z,18nm,0.4s							
TKM2	**Tokmak 2**	**5.96**	**219**	*e*PN		**Pn**	**14 08 18.5**	**+1.3**
TKM2				pmax	pmax			
	comp=Z,18nm,0.4s							
USP	**Ospenovka**	**6.20**	**227**	P		**Pn**	**14 08 21.9**	**+1.5**
	SNR=21							
WMQ	**Urumqi**	**6.23**	**126**	*e*Pn		**Pn**	**14 08 22.0**	**+1.1**
WMQ				smax				
	comp=N,90nm,0.9s							
WMQ				smax				
	comp=E,110nm,0.8s							
ULHL	**Ulahol**	**6.28**	**212**	P		**Pn**	**14 08 24.6**	**+3.0**
	SNR=6.2							
KBK	**Karagaybulak**	**6.46**	**221**	P		**Pn**	**14 08 25.8**	**+1.9**
	SNR=6.9							
ELT	**Yel'tsovka**	**6.61**	**30**	*e*PN		**Pn**	**14 08 29.0**	**+2.9**
ELT				*e*			14 08 53.1	
ELT				*e*			14 10 16.0	
ELT	**Yel'tsovka**	**6.61**	**30**	*e*Pn		**Pn**	**14 08 29.0**	**+2.9**
ELT				*e*Pg		**Pg**	**14 08 53.1**	**-2.4**
ELT				*e*Sn		**Sn**	**14 09 41.5**	**+0.1**
ELT				*e*Sg		**Sg**	**14 10 16.0**	**-5.1**
AAK	**Ala-Archa**	**6.68**	**223**	*e*P		**Pn**	**14 08 28.2**	**+1.1**
	comp=E,12nm,0.4s							
AAK	**Ala-Archa**	**6.68**	**223**	Pn		**Pn**	**14 08 27.8**	**+0.8**
	comp=E,1.7nm,0.3s,baz=85,slow=4.1,SNR=6.8							
AAK				Sn		**Sn**	**14 09 41.5**	**-1.6**
	comp=E,2.9nm,0.3s,baz=25,slow=17,SNR=5.8							
AAK				Lg			14 10 18.2	
	comp=E,8.2nm,0.3s,baz=210,slow=20,SNR=11							
AAK	**Ala-Archa**	**6.68**	**223**	PN		**Pn**	**14 08 27.8**	**+0.8**
AAK							14 09 41.5	
AAK				pmax	pmax			
	comp=Z,2.0nm,0.3s							
AAK				smax				
	comp=N,3.0nm,0.3s							
ZALV	**Zalesovo Beam**	**6.80**	**21**	Pn		**Pn**	**14 08 30.5**	**+1.9**
	comp=N,6.9nm,0.3s,baz=207,slow=16,SNR=75							
ZALV				Sn		**Sn**	**14 09 45.3**	**-0.7**
	comp=N,11nm,0.3s,baz=207,slow=25,SNR=11							
ZALV				Lg			14 10 24.6	
	comp=N,4.7nm,0.3s,baz=199,slow=29,SNR=4.1							
KZA	**Kyzart**	**6.80**	**217**	P		**Pn**	**14 08 31.0**	**+2.3**
	SNR=11							
KZA	**Kyzart**	**6.80**	**217**	*e*P		**Pn**	**14 08 31.3**	**+2.6**
	comp=N,17nm,0.5s							
EKS2	**Erkin-Say**	**7.00**	**227**	P		**Pn**	**14 08 33.3**	**+1.9**
	SNR=7.9							
EKS2	**Erkin-Say**	**7.00**	**227**	*e*P		**Pn**	**14 08 33.0**	**+1.6**
	comp=N,7.5nm,0.4s							
NVS	**Novosibirsk**	**7.35**	**12**	*e*P		**Pn**	**14 08 38.1**	**+2.0**
NVS				*e*			14 09 59.7	
NVS	**Novosibirsk**	**7.35**	**12**	*e*Pn		**Pn**	**14 08 38.1**	**+2.0**
NVS				*e*Sn		**Sn**	**14 09 59.7**	**+0.2**
NVS				*e*Sg		**Sg**	**14 10 39.6**	**-4.9**
VOSK	**Vostochnaya**	**8.02**	**313**	⇓Pn		**Pn**	**14 08 48.0**	**+2.7**
	comp=N,1.7nm,0.3s							
VOSK				⇑Sn		**Sn**	**14 10 15.1**	**-0.9**
	comp=N,11nm,0.6s							
VOSK				⇑Lg			14 11 06.7	
	comp=N,79nm,0.8s							
VOSK	**Vostochnaya**	**8.02**	**313**	P		**Pn**	**14 08 48.1**	**+2.8**
VOSK							14 10 16.2	
VOSK				pmax	pmax			
	comp=Z,2.0nm,0.3s							
VOSK				smax				
	comp=Z,11nm,0.6s							
BVA0	**Borovoye Array**	**8.48**	**313**	⇑Pn		**Pn**	**14 08 53.3**	**+1.5**
	comp=Z,0.3nm,0.3s							
BVA0				⇑Sn		**Sn**	**14 10 27.2**	**-0.2**
	comp=Z,2.0nm,0.5s							
BVA0				⇑Lg			14 11 20.7	
	comp=Z,11nm,0.8s,baz=119,slow=25,SNR=6.1							
BVAR	**Borovoye Array**	**8.48**	**313**	Pn		**Pn**	**14 08 54.0**	**+2.3**
	comp=Z,1.8nm,0.3s,baz=134,slow=16,SNR=13							
BVAR				Sn		**Sn**	**14 10 28.0**	**+0.5**
	comp=Z,5.6nm,0.3s,baz=119,slow=22,SNR=9.9							
BVAR				Lg			14 11 21.1	
	comp=Z,5.8nm,0.3s,baz=127,slow=25,SNR=10							
BVAR	**Borovoye Array**	**8.48**	**313**	P		**Pn**	**14 08 54.0**	**+2.3**
BVAR							14 10 28.0	
KK31	**Karatay Array**	**8.50**	**241**	⇑Pn		**Pn**	**14 08 51.4**	**-0.6**
	comp=Z,1.8nm,0.3s,baz=56,slow=14,SNR=25							
KK31				⇓Sn		**Sn**	**14 10 25.1**	**-2.8**
	comp=Z,14nm,0.7s,baz=54,slow=13,SNR=8.7							
KK31				⇑Lg			14 11 18.5	
	comp=Z,43nm,0.5s,baz=50,slow=30,SNR=7.0							
KK31	**Karatay Array**	**8.50**	**241**	*i* P		**P**	**14 08 52.0**	**0.0**
KK31				*e*			14 10 24.6	
KK31				pmax	pmax			
	comp=Z,3.0nm,0.2s							
KK31				smax				
	comp=Z,5.0nm,0.3s							
KKAR	**Karatay Array**	**8.50**	**241**	*e*P		**Pn**	**14 08 52.3**	**+0.4**
	comp=Z,5.1nm,0.4s							
KKAR	**Karatay Array**	**8.50**	**241**	*e*P		**Pn**	**14 08 52.3**	**+0.3**
KKAR				pmax	pmax			
	comp=Z,5.0nm,0.4s							
BRVK	**Borovoye**	**8.56**	**313**	⇑Sn		**Sn**	**14 10 30.1**	**+0.9**
	comp=Z,36nm,0.7s							
BRVK				⇑Lg			14 11 23.3	
	comp=Z,206nm,1.4s							
BRVK	**Borovoye**	**8.56**	**313**	P		**Pn**	**14 08 49.5**	**-3.2**
BRVK	**Borovoye**	**8.56**	**313**	*e*P		**Pn**	**14 08 56.2**	**+3.5**
CERR	**Cheremushki**	**8.60**	**49**	*e*Sg		Sx	14 11 16.8	
ZRNK	**Zerenda**	**9.15**	**310**	⇑Pn		**Pn**	**14 09 02.7**	**+1.9**
	comp=Z,4.2nm,0.5s							
ZRNK				⇓Sn		**Sn**	**14 10 42.5**	**-1.3**
	comp=Z,18nm,0.6s							
ZRNK				⇓Lg			14 11 41.6	
	comp=Z,33nm,0.8s							
AB31	**Akbulak array**	**13.86**	**284**	⇑Pn		**Pn**	**14 10 05.1**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=95,slow=15,SNR=19							
AB31				⇑Lg			14 14 10.7	
	comp=Z,3.2nm,0.7s,baz=91,slow=11,SNR=2.7							
AB31	**Akbulak array**	**13.86**	**284**	*e*P		**Pn**	**14 10 03.4**	**-1.8**
AB31				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ABKAR	**Akbulak array**	**13.86**	**284**	*e*P		**Pn**	**14 10 03.5**	**-1.6**
	comp=Z,1.2nm,0.4s							
AKTK	**Aktyubinsk**	**15.11**	**289**	Pn		**Pn**	**14 10 20.8**	**-1.5**
AKTK				Sn		**Sn**	**14 13 07.7**	**-1.7**
AKTK				Lg			14 14 46.8	
AKTO	**Aktyubinsk**	**15.11**	**289**	⇓Pn		**Pn**	**14 10 21.0**	**-1.2**
	comp=Z,0.3nm,0.6s							
AKTO				⇓Lg			14 14 50.4	
	comp=Z,2.1nm,1.2s							
AKTO	**Aktyubinsk**	**15.11**	**289**	Pn		**Pn**	**14 10 20.8**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=95,slow=11,SNR=6.6							
AKTO				Sn		**Sn**	**14 13 07.7**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=90,slow=20,SNR=2.1							
AKTO				Lg			14 14 46.8	
	baz=15,slow=20,SNR=2.5							
AKTO	**Aktyubinsk**	**15.11**	**289**	P		**Pn**	**14 10 20.8**	**-1.4**
AKTO							14 13 07.7	
SONM	**Songino Array**	**17.26**	**80**	Pn		**Pn**	**14 10 48.6**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=270,slow=12,SNR=3.1							
SONM				Lg			14 15 53.5	
	comp=Z,0.3nm,0.3s,baz=279,slow=29,SNR=6.2							
KIV	**Kislovodsk**	**26.57**	**276**	P		**P**	**14 12 31.0**	**+4.1**
KIV				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.0							
GYA	**Guiyang**	**29.39**	**127**	*e*P		**P**	**14 12 54.8**	**+2.6**
GYA				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.5							
NOA	**NORSAR Array B**	**40.60**	**316**	P		**P**	**14 14 28.8**	**+0.4**
	comp=Z,0.6nm,0.4s,mb3.6,baz=77,slow=8.2,SNR=2.7							
ILAR	**Eielson Array**	**61.93**	**21**	P		**P**	**14 17 11.1**	**+2.9**
	comp=Z,0.2nm,0.6s,mb3.4,baz=320,slow=4.1,SNR=2.7							
ASAR	**Alice Springs**	**85.59**	**133**	P		**P**	**14 19 26.5**	**-0.8**
	comp=Z,0.1nm,0.9s,mb3.0,baz=334,slow=5.1,SNR=3.8							

*CSEM **26** 14:23:23.9±0.3,38°.33N×39°.32E,h12km,MD2.5,Error ellipse: s-maj=8.2km s-min=3.0km az=142.0*
*ISCJB **26** 14:23:24.8±0.8,38°.32N±0°.06×39°.24E±0°.05,h7km±9km, Error ellipse: s-maj=10.5km s-min=5.8km az=169.2*
*ISK **26** 14:23:24.5,38°.39N×39°.20E,h5km,MD2.5*
*DDA **26** 14:23:25.9,38°.37N×39°.20E,h7km±4km,Md2.7*

ISC 26 14:23:25.2±0.9, 38°.32N±0°.07×39°.26E±0°.05, h6km±10km, n16, σ0§67/23, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SVRC	**Sivrice-ELAZID**	**0.07**	**32**	PG		**Pg**	**14 23 26.5**	**-0.3**
SVRC				*e*SG		**Sg**	**14 23 28.4**	**+0.4**
SVRC	**Sivrice-ELAZID**	**0.07**	**32**	*i* Pg		**Pg**	**14 23 26.5**	**-0.4**
SVRC				*e*Sg		**Sg**	**14 23 28.5**	**+0.5**
ELZG	**Elazig**	**0.28**	**310**	*i* P		**Pg**	**14 23 31.0**	**+0.3**
ELZG				*i* S		**Sg**	**14 23 34.9**	**+0.6**
ELZG	**Elazig**	**0.28**	**310**	*i* P		**Pg**	**14 23 31.0**	**+0.3**
ELZG				*i* S		**Sg**	**14 23 34.9**	**+0.5**
PTK	**Pertek**	**0.58**	**10**	*e*PG		**Pg**	**14 23 35.4**	**-1.0**
PTK				*e*SG		**Sg**	**14 23 44.7**	**+0.7**
PTK	**Pertek**	**0.58**	**10**	*e*Pg		**Pg**	**14 23 35.4**	**-1.0**
MALT	**Malatya**	**0.66**	**270**	*e*PG		**Pg**	**14 23 37.8**	**0.0**
MALT	**Malatya**	**0.66**	**270**	*e*Pg		**Pg**	**14 23 37.8**	**0.0**
MYA	**Malataya**	**0.66**	**271**	*e*PG		**Pg**	**14 23 37.5**	**-0.3**
MYA	**Malataya**	**0.66**	**271**	*e*Pg		**Pg**	**14 23 37.5**	**-0.3**
AKCD	**Akcadag**	**1.05**	**269**	*i* P		**Pg**	**14 23 44.9**	**-0.4**
AKCD				*i* S		**Sg**	**14 23 59.8**	**+0.7**
AKCD	**Akcadag**	**1.05**	**269**	*i* P		**Pg**	**14 23 44.9**	**-0.5**
AKCD				*i* S		**Sg**	**14 23 59.8**	**+0.8**
KEMA	**Kemaliye**	**1.12**	**328**	*i* P		**Pg**	**14 23 45.2**	**-1.5**
KEMA	**Kemaliye**	**1.12**	**328**	*i* P		**Pg**	**14 23 45.2**	**-1.5**
MARD	**Mardin**	**1.57**	**129**	*i* P		**Pn**	**14 23 53.6**	**0.0**
BEST	**Besiri**	**1.64**	**104**	*i* P		**Pn**	**14 23 55.3**	**+0.7**

*ISCJB **26** 14:37:54.0±1.6,6°.73S±0°.08×128°.1E±0°.1,h295km±18km, mb3.2/3,Error ellipse: s-maj=24.1km s-min=11.9km az=163.9*
*NEIC **26** 14:37:55.5±2.3,6°.79S×128°.00E,h293km±29km,Error ellipse: s-maj=25.5km s-min=19.8km az=96.0*
*IDC **26** 14:38:00.4±4.7,7°.01S×127°.88E,h351km±53km,mb2.9/3, mb1 3.2/6,mb1mx2.9/18,mbtmp3.0/6,Error ellipse: s-maj=62.0km s-min=18.1km az=68.0*

ISC 26 14:37:57.0±1.6, 6°.92S±0°.08×128°.1E±0°.1, h313km±17km, n10, σ0§72/14, mb3.2/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAKA	**Kakadu**	**7.20**	**143**	*e*P		**Pn**	**14 39 40.0**	**-1.0**
	42nm,0.4s							
FITZ	**Fitzroy Crossi**	**11.36**	**192**	P		**Pn**	**14 40 32.6**	**+1.0**
FITZ				S		**S**	**14 42 38.2**	**-0.4**
FITZ	**Fitzroy Crossi**	**11.36**	**192**	P		**Pn**	**14 40 32.1**	**+0.4**
	0.2nm,0.3s,baz=31,slow=12,SNR=14							
FITZ				S		**S**	**14 42 38.2**	**-0.4**
	0.7nm,0.3s,baz=162,slow=19,SNR=3.9							
WRA	**Warramunga Arr**	**14.31**	**155**	P		**P**	**14 41 06.6**	**+0.7**
	1.6nm,0.3s,baz=330,slow=12,SNR=20							
WRA				S		**S**

h131km±3km, mb3.4/8, Error ellipse: s-maj=9.7km s-min=6.7km az=154.1
*NEIC **26** 15:57:01.9±0.1, 33°37'N×139°51'E, h124km±13km, Error ellipse: s-maj=23.9km s-min=16.2km az=82.0*
*IDC **26** 15:57:01.7±0.5, 33°33'N×139°60'E, h121km±4km, mb3.2/8, mb1 3.4/11, mb1mx3.2/26, mbtmp3.2/11, Error ellipse: s-maj=27.2km s-min=8.8km az=70.0*
*JMA **26** 15:57:02.7±0.1, 33°53'N×139°78'E, h118km±2km, M2.9*
ISC 26 15:57:01.9±0.5, 33°44'N±0°04×139°77'E±0°06, h125km±4km, n30, σ0°70/35, mb3.6/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**0.32**	**178**	P	**Pn**	**15 57 19.9**	**+0.3**
	522nm,0.3s,baz=66,slow=19,SNR=212						
JHJ				S	**Sn**	**15 57 32.8**	**-0.1**
	167nm,0.3s,baz=73,slow=19,SNR=9.6						
JHJ2	**Mitsune**	**0.33**	**174**	P	**Pn**	**15 57 20.0**	**+0.4**
JMY	**Miyakejima3**	**0.67**	**341**	P	**Pn**	**15 57 21.2**	**-0.4**
JKO	**Kozu shima**	**0.91**	**325**	P	**Pn**	**15 57 23.3**	**-0.3**
JIM2	**Oshima 3**	**1.30**	**348**	P	**Pn**	**15 57 27.2**	**-0.3**
JIZS	**Izushimoda**	**1.47**	**330**	P	**Pn**	**15 57 29.1**	**-0.3**
JIZS				*e*S	**Sn**	**15 57 50.1**	**-0.2**
BSO3	**Boso 3**	**1.49**	**24**	P	**Pn**	**15 57 29.5**	**-0.1**
BSO1	**Boso 1**	**1.57**	**39**	P	**Pn**	**15 57 30.2**	**-0.3**
BSO1				*e*S	**Sn**	**15 57 51.7**	**-0.6**
KTJJ	**Kamata 2**	**1.59**	**339**	P	**Pn**	**15 57 30.2**	**-0.6**
BSO4	**Boso 4**	**1.61**	**17**	P	**Pn**	**15 57 31.8**	**+0.8**
TK04	**Tokai 4**	**1.84**	**301**	P	**Pn**	**15 57 34.0**	**+0.4**
TK01	**Tokai 1**	**1.85**	**281**	*e*S	**Sn**	**15 57 58.1**	**-0.1**
JOD2	**Odawara 2**	**1.90**	**343**	P	**Pn**	**15 57 34.5**	**+0.1**
SHZ3	**Shizuoka 3**	**2.07**	**322**	P	**Pn**	**15 57 36.8**	**+0.3**
SHZ3				*e*S	**Sn**	**15 58 03.9**	**+0.8**
JYN	**Shimob**	**2.29**	**334**	P	**Pn**	**15 57 39.7**	**+0.5**
MJAR	**Matsushiro Arr**	**3.35**	**338**	P	**Pn**	**15 57 54.3**	**+1.4**
	1.6nm,0.3s,baz=158,slow=11,SNR=13						
MJAR				S	**Sn**	**15 58 32.6**	**+0.2**
	1.9nm,0.3s,baz=136,slow=16,SNR=6.3						
MAJO	**Matsushiro**	**3.35**	**338**	P	**Pn**	**15 57 51.4**	**-1.5**
MAT	**Matsushiro**	**3.35**	**338**	P	**Pn**	**15 57 53.8**	**+0.9**
MAT				S	**Sn**	**15 58 31.1**	**-1.3**
CBIJ	**Chichi jima**	**6.66**	**161**	P	**Pn**	**15 58 38.0**	**+0.7**
	baz=287,slow=20						
CBIJ				S	**Sn**	**15 59 48.0**	**-3.8**
KSRS	**Korea Array**	**10.46**	**296**	P	**Pn**	**15 59 29.1**	**+0.7**
	0.1nm,0.3s,baz=104,slow=14,SNR=3.6						
ZALV	**Zalesovo Beam**	**43.43**	**315**	P	**P**	**16 04 51.1**	**-0.8**
	0.4nm,0.3s,mb3.6,baz=95,slow=8.7,SNR=2.3						
ZALV				PcP	PcP	16 06 37.7	-0.3
	0.8nm,0.3s,baz=102,slow=1.8,SNR=6.3						
MKAR	**Makanchi Array**	**44.98**	**305**	P	**P**	**16 05 04.0**	**-0.4**
	0.4nm,0.8s,mb3.2,baz=76,slow=6.1,SNR=3.7						
ILAR	**Eielson Array**	**53.25**	**31**	P	**P**	**16 06 08.4**	**+1.3**
	0.3nm,0.7s,mb3.4,baz=278,slow=8.0,SNR=4.6						
WRA	**Warramunga Arr**	**53.34**	**186**	P	**P**	**16 06 07.9**	**-0.4**
	0.4nm,0.4s,mb3.8,baz=4.9,slow=8.1,SNR=4.3						
ASAR	**Alice Springs**	**57.06**	**186**	P	**P**	**16 06 34.1**	**-0.8**
	0.2nm,0.5s,mb3.5,baz=19,slow=12,SNR=11						
ASAR				PcP	PcP	16 07 28.9	+0.5
	0.3nm,0.6s,baz=6.6,slow=4.7,SNR=5.5						
FINES	**FINESS Array B**	**71.36**	**332**	P	**P**	**16 08 07.4**	**-0.4**
	2.4nm,0.9s,mb4.0,baz=50,slow=6.6,SNR=4.4						
AKASG	**Malin Array Be**	**76.31**	**322**	P	**P**	**16 08 36.3**	**-0.5**
	0.2nm,0.3s,mb3.4,baz=52,slow=7.5,SNR=2.8						
TXAR	**Lajitas Array**	**93.39**	**51**	P	**P**	**16 10 04.3**	**+1.1**
	0.2nm,0.5s,mb3.7,baz=266,slow=2.7,SNR=3.6						
LPAZ	**La Paz**	**149.60**	**63**	PKPbc	PKPbc	16 16 39.7	+2.5
LPAZ	**La Paz**	**149.60**	**63**	PKPbc	PKPbc	16 16 39.7	+2.5
	0.5nm,0.5s,baz=270,slow=3.0,SNR=3.6						

*NEIC **26** 16:06:05.1, 38°48S×175°50E, h244km, MG4.5(WEL), After WEL.*
WEL 26 16:06:05.4±0.5, 38°49S×175°50E, h242km±3km, ML4.5/22, Error ellipse: s-maj=2.9km s-min=2.5km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WATZ	**Wairara**	**0.29**	**140**	PN	Pn	16 06 36.9	+0.1
WATZ	**Wairara**	**0.29**	**140**	P	Pn	16 06 36.9	+0.1
WHTZ	**Whakaora**	**0.40**	**116**	PN	Pn	16 06 37.3	+0.3
RATZ	**Rangitukua**	**0.43**	**150**	PN	Pn	16 06 37.1	0.0
HIZ	**Hauiti**	**0.50**	**267**	PN	Pn	16 06 37.2	-0.2
HIZ				SN	S	16 07 02.4	0.0
HIZ	**Hauiti**	**0.50**	**267**	P	Pn	16 06 37.2	-0.1
HIZ				S	S	16 07 02.4	0.0
KATZ	**Kakaramea**	**0.51**	**162**	PN	Pn	16 06 37.4	+0.1
KATZ	**Kakaramea**	**0.51**	**162**	P	Pn	16 06 37.4	+0.1
RITZ	**Rihia Road**	**0.56**	**150**	PN	Pn	16 06 37.7	+0.2
RITZ	**Rihia Road**	**0.56**	**150**	P	Pn	16 06 37.7	+0.2
TWVZ	**Taurewa**	**0.58**	**184**	PN	Pn	16 06 37.5	-0.1
TWVZ				SN	S	16 07 01.9	-1.1
HATZ	**Hinemaiaia**	**0.61**	**131**	PN	Pn	16 06 37.4	-0.2
HATZ	**Hinemaiaia**	**0.61**	**131**	P	Pn	16 06 37.4	-0.3
KRVZ	**Karewarewa**	**0.61**	**169**	PN	Pn	16 06 37.9	+0.2
WTVZ	**West Tongariro**	**0.63**	**173**	PN	Pn	16 06 37.8	+0.1
WTVZ				SN	S	16 07 02.2	-1.1
ALRZ	**Allen Road**	**0.67**	**97**	PN	Pn	16 06 37.4	-0.6
OTVZ	**Oturere**	**0.69**	**169**	PN	Pn	16 06 38.2	+0.2
NGZ	**Ngauruhoe**	**0.69**	**173**	PN	Pn	16 06 38.3	+0.3
NGZ	**Ngauruhoe**	**0.69**	**173**	P	Pn	16 06 38.3	+0.3
PRRZ	**Plateau Road**	**0.70**	**91**	PN	Pn	16 06 37.5	-0.6
WPVZ	**Whakapapa**	**0.77**	**177**	PN	Pn	16 06 38.2	+0.1
FWVZ	**Far West T-bar**	**0.77**	**177**	PN	Pn	16 06 38.6	+0.3
FWVZ	**Far West T-bar**	**0.77**	**177**	P	Pn	16 06 38.6	+0.3
TUVZ	**Tukino**	**0.79**	**171**	PN	Pn	16 06 38.7	+0.3
TUVZ	**Tukino**	**0.79**	**171**	P	Pn	16 06 38.7	+0.3
PKVZ	**Pokaka**	**0.81**	**188**	PN	Pn	16 06 38.6	+0.1
TRVZ	**Turoa**	**0.81**	**177**	PN	Pn	16 06 38.9	+0.4
RRRZ	**Republican Roa**	**0.81**	**80**	PN	Pn	16 06 38.1	-0.5
RRRZ	**Republican Roa**	**0.81**	**80**	P	Pn	16 06 38.1	-0.5
TARZ	**Mount Tarawera**	**0.83**	**73**	PN	Pn	16 06 38.2	-0.5
WNVZ	**Wahianoa**	**0.84**	**175**	PN	Pn	16 06 39.0	+0.4
WNVZ	**Wahianoa**	**0.84**	**175**	P	Pn	16 06 39.0	+0.3
VRZ	**Vera Road**	**0.86**	**222**	PN	Pn	16 06 38.6	-0.1
VRZ	**Vera Road**	**0.86**	**222**	P	Pn	16 06 38.6	-0.1
MTVZ	**Mangateitei**	**0.90**	**181**	PN	Pn	16 06 39.1	+0.1
MOVZ	**Moawhango**	**0.94**	**168**	PN	Pn	16 06 39.0	-0.1
MOVZ	**Moawhango**	**0.94**	**168**	P	Pn	16 06 39.0	-0.2
BKZ	**Black Stump Fm**	**1.03**	**131**	PN	Pn	16 06 39.2	-0.5
BKZ	**Black Stump Fm**	**1.03**	**131**	P	Pn	16 06 39.2	-0.5
OPRZ	**Ohinepanea**	**1.05**	**53**	PN	Pn	16 06 38.7	-1.2
BHHZ	**Black Hill Sta**	**1.09**	**156**	PN	Pn	16 06 39.9	-0.1
NMHZ	**Naumai**	**1.19**	**121**	PN	Pn	16 06 41.4	+0.8
URZ	**Urewera**	**1.29**	**80**	PN	Pn	16 06 40.1	-1.3
URZ	**Urewera**	**1.29**	**80**	P	Pn	16 06 40.1	-1.3
RAHZ	**Arahi**	**1.31**	**109**	PN	Pn	16 06 41.8	+0.3
WAZ	**Wanganui**	**1.32**	**197**	PN	Pn	16 06 41.7	+0.1
WAZ	**Wanganui**	**1.32**	**197**	P	Pn	16 06 41.7	+0.1
MCHZ	**McNeill Hill**	**1.34**	**136**	PN	Pn	16 06 42.4	+0.7
NEZ	**North Egmont**	**1.34**	**234**	PN	Pn	16 06 41.1	-0.6
NEZ	**North Egmont**	**1.34**	**234**	P	Pn	16 06 41.1	-0.6
DFE	**Dawson Falls**	**1.37**	**232**	PN	Pn	16 06 42.2	+0.3
DFE	**Dawson Falls**	**1.37**	**232**	P	Pn	16 06 42.2	+0.3
PKE	**Pukeiti**	**1.37**	**239**	PN	Pn	16 06 42.0	0.0
PKE	**Pukeiti**	**1.37**	**239**	P	Pn	16 06 42.0	+0.1
PNHZ	**Pukenui**	**1.52**	**159**	PN	Pn	16 06 43.0	-0.1
MWZ	**Matawai**	**1.60**	**85**	PN	Pn	16 06 42.9	-0.8
MWZ	**Matawai**	**1.60**	**85**	P	Pn	16 06 42.9	-0.8
TSZ	**Takapari Road**	**1.61**	**167**	PN	Pn	16 06 43.6	-0.1
TSZ	**Takapari Road**	**1.61**	**167**	P	Pn	16 06 43.6	-0.1
KAHZ	**Kahuranaki**	**1.69**	**141**	PN	Pn	16 06 44.7	+0.3
CKHZ	**Cape Kidnapper**	**1.70**	**134**	PN	Pn	16 06 44.8	+0.3
WPHZ	**Waipukurau**	**1.74**	**155**	PN	Pn	16 06 44.7	0.0
KNZ	**Kokohu**	**1.78**	**108**	PN	Pn	16 06 44.9	-0.3
KNZ	**Kokohu**	**1.78**	**108**	P	Pn	16 06 44.9	-0.3
PXZ	**Pawanui**	**1.87**	**146**	PN	Pn	16 06 45.8	-0.1
DVHZ	**Dannevirke**	**1.88**	**164**	PN	Pn	16 06 45.6	-0.5
POWZ	**Post Office Ro**	**1.91**	**174**	PN	Pn	16 06 45.9	-0.4
PRGZ	**Paritu Road**	**1.92**	**104**	PN	Pn	16 06 46.2	-0.2
PRHZ	**Porangahau**	**1.98**	**154**	PN	Pn	16 06 46.9	-0.1
MHGZ	**Mahia Peninsul**	**2.00**	**110**	PN	Pn	16 06 47.0	-0.1
CNGZ	**Carnagh Statio**	**2.13**	**91**	PN	Pn	16 06 48.3	-0.1
MRZ	**Mangatainoka R**	**2.17**	**178**	PN	Pn	16 06 47.9	-0.8
MRZ	**Mangatainoka R**	**2.17**	**178**	P	Pn	16 06 47.9	-0.8
PUZ	**Puketiti**	**2.21**	**80**	PN	Pn	16 06 47.9	-1.3
PUZ	**Puketiti**	**2.21**	**80**	P	Pn	16 06 47.9	-1.3
BFZ	**Birch Farm**	**2.26**	**165**	PN	Pn	16 06 49.1	-0.5
BFZ	**Birch Farm**	**2.26**	**165**	P	Pn	16 06 49.1	-0.5
TIWZ	**Tintock**	**2.30**	**173**	PN	Pn	16 06 49.3	-0.7
OGWZ	**Otaki Gorge**	**2.34**	**186**	PN	Pn	16 06 49.7	-0.7
MXZ	**Matakaoa Point**	**2.41**	**68**	PN	Pn	16 06 50.0	-1.1
MXZ	**Matakaoa Point**	**2.41**	**68**	P	Pn	16 06 50.0	-1.1
HOWZ	**Holdsworth Sta**	**2.41**	**180**	PN	Pn	16 06 49.9	-1.1
KIW	**Kapiti Island**	**2.41**	**191**	PN	Pn	16 06 50.1	-1.0
KIW	**Kapiti Island**	**2.41**	**191**	P	Pn	16 06 50.1	-1.0
TMWZ	**Te Maipa**	**2.63**	**173**	PN	Pn	16 06 52.3	-1.0
CAW	**Cannon Point**	**2.64**	**187**	PN	Pn	16 06 52.2	-1.2
MTW	**Mount Morrison**	**2.67**	**180**	PN	Pn	16 06 52.3	-1.4
MTW	**Mount Morrison**	**2.67**	**180**	P	Pn	16 06 52.3	-1.4
WEL	**Wellington**	**2.85**	**191**	PN	Pn	16 06 54.4	-1.2
WEL	**Wellington**	**2.85**	**191**	P	Pn	16 06 54.4	-1.2
SNZO	**South Karori**	**2.88**	**192**	PN	Pn	16 06 54.6	-1.4
SNZO	**South Karori**	**2.88**	**192**	P	Pn	16 06 54.6	-1.4
PAWZ	**Paruwai Farm**	**2.89**	**181**	PN	Pn	16 06 54.6	-1.4
PAWZ	**Paruwai Farm**	**2.89**	**181**	P	Pn	16 06 54.6	-1.5
TRWZ	**Traveller**	**2.91**	**177**	PN	Pn	16 06 55.1	-1.2
MSWZ	**Moikau Station**	**2.93**	**184**	PN	Pn	16 06 55.0	-1.5
MSWZ	**Moikau Station**	**2.93**	**184**	P	Pn	16 06 55.0	-1.5
BHW	**Baring Head**	**2.95**	**189**	PN	Pn	16 06 55.4	-1.4
BHW	**Baring Head**	**2.95**	**189**	P	Pn	16 06 55.4	-1.4
PLWZ	**Palliser**	**3.08**	**183**	PN	Pn	16 06 56.5	-1.6
TUWZ	**Tuamarina**	**3.17**	**202**	PN	Pn	16 06 57.7	-1.4
NNZ	**Nelson**	**3.17**	**210**	PN	Pn	16 06 57.2	-2.0
NNZ	**Nelson**	**3.17**	**210**	P	Pn	16 06 57.2	-2.0
BSWZ	**Blackbirch Sta**	**3.45**	**201**	PN	Pn	16 07 01.1	-1.2
BSWZ	**Blackbirch Sta**	**3.45**	**201**	P	Pn	16 07 01.1	-1.2
THZ	**Tophouse**	**3.83**	**210**	PN	Pn	16 07 04.2	-2.5
THZ	**Tophouse**	**3.83**	**210**	P	Pn	16 07 04.2	-2.5
KHZ	**Kahutara**	**4.20**	**200**	PN	Pn	16 07 09.3	-1.8
DSZ	**Denniston Nort**	**4.31**	**220**	PN	Pn	16 07 09.4	-3.1
DSZ	**Denniston Nort**	**4.31**	**220**	P	Pn	16 07 09.4	-3.0
LTZ	**Lake Taylor**	**4.94**	**209**	PN	Pn	16 07 17.4	-2.7
LTZ	**Lake Taylor**	**4.94**	**209**	P	Pn	16 07 17.4	-2.7
CRLZ	**Canterbury Las**	**5.53**	**202**	PN	Pn	16 07 23.9	-3.3
CRLZ	**Canterbury Las**	**5.53**	**202**	P	Pn	16 07 23.9	-3.4
MQZ	**McQueen's Vall**	**5.64**	**201**	PN	Pn	16 07 25.2	-3.5
MQZ	**McQueen's Vall**	**5.64**	**201**	P	Pn	16 07 25.2	-3.5
RPZ	**Rata Peaks**	**6.21**	**211**	PN	Pn	16 07 32.1	-3.7
RPZ	**Rata Peaks**	**6.21**	**211**	P	Pn	16 07 32.1	-3.7
FOZ	**Fox Glacier**	**6.71**	**219**	PN	Pn	16 07 36.6	-5.5
LBZ	**Lake Benmore**	**7.11**	**212**	PN	Pn	16 07 43.4	-3.9
LBZ	**Lake Benmore**	**7.11**	**212**	P	Pn	16 07 43.4	-3.9
ODZ	**Otahua Downs**	**7.49**	**207**	PN	Pn	16 07 49.2	-2.7
ODZ	**Otahua Downs**	**7.49**	**207**	P	Pn	16 07 49.2	-2.7
JCZ	**Jackson Bay**	**7.54**	**220**	PN	Pn	16 07 47.9	-4.7
WKZ	**Wanaka**	**7.97**	**215**	PN	Pn	16 07 53.3	-4.9
WKZ	**Wanaka**	**7.97**	**215**	P	Pn	16 07 53.3	-4.9
EAZ	**Earnscleugh**	**8.16**	**212**	PN	Pn	16 07 56.6	-4.0
MSZ	**Milford Sound**	**8.38**	**200**	PN	Pn	16 07 58.3	-5.1
TUZ	**Tuapeka**	**8.63**	**208**	PN	Pn	16 08 04.1	-2.5
TUZ	**Tuapeka**	**8.63**	**208**	P	Pn	16 08 04.1	-2.4
SYZ	**Scrubby Hill**	**9.31**	**208**	PN	Pn	16 08 12.8	-2.3
SYZ	**Scrubby Hill**	**9.31**	**208**	P	Pn	16 08 12.8	-2.3
APZ	**The Paps**	**10.00**	**211**	PN	Pn	16 08 20.7	-3.1
APZ	**The Paps**	**10.00**	**211**	P	Pn	16 08 20.7	-3.1

*ISK **26** 16:13:19.6, 37°33N×26°98E, h5km, MD3.5*
*NEIC **26** 16:13:19.0, 37°30N×26°95E, h5km, MD3.2(ISK), MD3.2(ATH), After ISK.*
*DDA **26** 16:13:20.1, 37°36N×27°03E, h9km±3km, Md3.0*
*ISCJB **26** 16:13:20.2±0.5, 37°34N±0°02×27°02E±0°03, h2km±4km, Error ellipse: s-maj=4.5km s-min=2.9km az=146.8*
*ATH **26** 16:13:20.0, 37°33N×27°07E, h20km±1km, MD3.2/5*
*CSEM **26** 16:13:20.4±0.2, 37°34N×26°99E, h5km, MD3.5, Error ellipse: s-maj=4.5km s-min=3.1km az=57.0*
*THE **26** 16:13:21.2, 37°33N×27°01E, h4km±1km, ML3.2/1, Error ellipse: s-maj=1.7km s-min=0.6km az=296.0*
ISC 26 16:13:20.7±0.4, 37°33N±0°02×27°01E±0°03, h4km±3km, n76, σ0°92/107, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BODT	**Bodrum**	**0.36**	**138**	PG	**Pg**	**16 13 27.1**	**-0.5**
BODT				*e*SG	**Sg**	**16 13 33.1**	**+0.7**
BODT	**Bodrum**	**0.36**	**138**	*i* Pg	**Pg**	**16 13 27.2**	**-0.5**
BODT				*e*Sg	**Sg**	**16 13 33.1**	**+0.7**
SMG	**Samos**	**0.40**	**340**	*e*Pb	**Pg**	**16 13 28.6**	**+0.1**
SMG				*e*Sb	**Sg**	**16 13 35.0**	**+1.3**
SMG	**Samos**	**0.40**	**340**	*e*PB	**Pg**	**16 13 28.6**	**+0.1**
SMG				*e*SB	**Sg**	**16 13 35.0**	**+1.3**
SMG	**Samos**	**0.40**	**340**	*e*Pb	**Pg**	**16 13 28.6**	**+0.1**
SMG				*e*Sb	**Sg**	**16 13 35.0**	**+1.3**
GCAM	**G?zelcaml?**	**0.41**	**26**	*i* P	**Pg**	**16 13 28.7**	**0.0**
GCAM				*i* S	**Sg**	**16 13 34.4**	**+0.4**
GCAM	**G?zelcaml?**	**0.41**	**26**	*i* P	**Pg**	**16 13 28.7**	**+0.1**
GCAM				*i* S	**Sg**	**16 13 34.4**	**+0.4**
BDRM	**Kayabasi**	**0.44**	**127**	*i* P	**Pg**	**16 13 29.2**	**+0.1**
BDRM				*i* S	**Sg**	**16 13 35.5**	**+0.7**
BDRM	**Kayabasi**	**0.44**	**127**	*i* P	**Pg**	**16 13 29.2**	**0.0**
BDRM				*i* S	**Sg**	**16 13 35.5**	**+0.6**
MLSB	**Milas**	**0.61**	**93**	*e*PG	**Pg**	**16 13 32.8**	**+0.2**
MLSB				*e*SG	**Sg**	**16 13 40.9**	**+0.3**
MLSB	**Milas**	**0.61**	**93**	*e*Pg	**Pg**	**16 13 32.8**	**+0.3**
MLSB				*e*Sg	**Sg**	**16 13 40.9**	**+0.4**
DAT	**Datca**	**0.76**	**143**	*e*PG	**Pg**	**16 13 35.0**	**-0.2**
DAT	**Datca**	**0.76**	**143**	*e*Pg	**Pg**	**16 13 35.0**	**-0.2**
AYDN	**Tasoluk**	**0.77**	**64**	*i* P	**Pg**	**16 13 34.9**	**-0.6**
AYDN	**Tasoluk**	**0.77**	**64**	*i* P	**Pg**	**16 13 34.9**	**-0.6**
YER	**Yerkesik**	**1.04**	**101**	*e*PG	**Pg**	**16 13 40.1**	**-0.5**
YER	**Yerkesik**	**1.04**	**101**	*e*Pg	**Pg**	**16 13 40.1**	**-0.5**
BLCB	**Balcova**	**1.05**	**2**	*e*PN	**Pg**	**16 13 40.4**	**-0.5**
BLCB	**Balcova**	**1.05**	**2**	P	**Pg**	**16 13 40.4**	**-0.5**
BLCB				S	**Sg**	**16 13 56.1**	**+1.5**
BLCB	**Balcova**	**1.05**	**2**	P	**Pg**	**16 13 40.4**	**-0.5**
BLCB				S	**Sg**	**16 13 56.1**	**+1.5**
URLA	**Izmir**	**1.08**	**343**	*i* P	**Pg**	**16 13 40.0**	**-1.4**
URLA				*i* S	**Sg**	**16 13 55.3**	**-0.1**
URLA	**Izmir**	**1.08**	**343**	*i* P	**Pg**	**16 13 40.0**	**-1.4**
URLA				*i* S	**Sg**	**16 13 55.3**	**-0.1**
IZM	**Izmir**	**1.08**	**11**	*e*PN	**Pg**	**16 13 40.4**	**-1.1**
IZM	**Izmir**	**1.08**	**11**	*e*Pn	**Pg**	**16 13 40.4**	**-1.1**
KDAG	**Bornova**	**1.09**	**181**	*i* P	**Pg**	**16 13 39.7**	**-1.9**
KDAG	**Bornova**	**1.09**	**11**	*i* P	**Pg**	**16 13 39.7**	**-1.9**
APE	**Apeiranthos**	**1.21**	**258**	*e*PN	**Pn**	**16 13 42.5**	**-1.9**
APE	**Apeiranthos**	**1.21**	**258**	*e*Pn	**Pn**	**16 13 43.7**	**-0.7**
APE				*e*Sn	**Sn**	**16 14 01.8**	**+0.6**
APE	**Apeiranthos**	**1.21**	**258**	*e*PN	**Pn**	**16 13 43.7**	**-0.7**
APE				*e*SN	**Sn**	**16 14 01.8**	**+0.6**
APE	**Apeiranthos**	**1.21**	**258**	P	**Pg**	**16 13 43.6**	**-0.3**
APE				S	**Sg**	**16 14 00.6**	**+1.1**
APE	**Apeiranthos**	**1.21**	**258**	*e*Pn	**Pn**	**16 13 43.7**	**-0.7**
APE				S	**Sg**	**16 14 00.6**	**+1.1**
APE				*e*Sn	**Sn**	**16 14 01.8**	**+0.6**
CHOS	**Chios island**	**1.29**	**325**	P	**Pg**	**16 13 44.4**	**-1.2**
CHOS				S	**Sg**	**16 14 02.9**	**+0.5**
CHOS	**Chios island**	**1.29**	**325**	P	**Pg**	**16 13 44.4**	**-1.2**
CHOS				S	**Sg**	**16 14 02.9**	**+0.5**
ARG	**Arkhangelos**	**1.43**	**141**	*e*Pn	**Pn**	**16 13 46.8**	**-0.6**
ARG				*e*Sn	**Sn**	**16 14 06.1**	**-0.6**
ARG	**Arkhangelos**	**1.43**	**141**	*e*PN	**Pn**	**16 13 46.8**	**-0.6**
ARG				*e*SN	**Sn**	**16 14 06.1**	**-0.6**
ARG	**Arkhangelos**	**1.43**	**141**	*e*Pn	**Pn**	**16 13 46.8**	**-0.6**
ARG				*e*Sn	**Sn**	**16 14 06.1**	**-0.6**
DNZL	**Cakiroluk**	**1.66**	**77**	*i* P	**Pn**	**16 13 50.5**	**-0.1**
DNZL	**Cakiroluk**	**1.66**	**77**	*i* P	**Pn**	**16 13 50.5**	**-0.1**
DENT	**Denizli**	**1.67**	**75**	*e*PN	**Pn**	**16 13 51.0**	**+0.3**
DENT	**Denizli**	**1.67**	**75**	*e*Pn	**Pn**	**16 13 51.0**	**+0.3**
AKHS	**Akhisar**	**1.67**	**22**	*i* P	**Pn**	**16 13 48.4**	**-2.4**
AKHS				*i* S	**Sn**	**16 14 11.1**	**-1.5**
AKHS	**Akhisar**	**1.67**	**22**	*i* P	**Pn**	**16 13 48.4**	**-2.4**
AKHS				*i* S	**Sn**	**16 14 11.1**	**-1.6**
AKS	**Akhisar**	**1.67**	**22**	*e*PN	**Pn**	**16 13 51.3**	**+0.5**
AKS	**Akhisar**	**1.67**	**22**	*e*Pn	**Pn**	**16 13 51.3**	**+0.5**
KULA	**Kula-Manisa**	**1.76**	**47**	*e*PN	**Pn**	**16 13 51.1**	**-0.9**
KULA	**Kula-Manisa**	**1.76**	**47**	*e*Pn	**Pn**	**16 13 51.1**	**-0.9**
KARP	**Karpathos**	**1.79**	**176**	*e*Pn	**Pn**	**16 13 51.5**	**-0.8**
KARP	**Karpathos**	**1.79**	**176**	*e*PN	**Pn**	**16 13 51.5**	**-0.8**
KARP	**Karpathos**	**1.79**	**176**	*e*Pn	**Pn**	**16 13 51.5**	**-0.8**
AYVA	**Ayvalik**	**1.99**	**353**	*i* P	**Pn**	**16 13 57.4**	**+2.3**
AYVA	**Ayvalik**	**1.99**	**353**	*i* P	**Pn**	**16 13 57.4**	**+2.2**
GLHS	**Glhisar (BURDU**	**2.00**	**94**	*e*PN	**Pn**	**16 13 55.8**	**+0.5**
GLHS	**Glhisar (BURDU**	**2.00**	**94**	*e*Pn	**Pn**	**16 13 55.8**	**+0.6**
PRK	**Paraskevi**	**2.00**	**343**	*e*Pn	**Pn**	**16 13 55.4**	**+0.1**
PRK				*e*Sn	**Sn**	**16 14 21.0**	**+0.3**
PRK	**Paraskevi**	**2.00**	**343**	*e*PN	**Pn**	**16 13 55.4**	**+0.1**
PRK				*e*SN	**Sn**	**16 14 21.0**	**+0.3**
PRK	**Paraskevi**	**2.00**	**343**	*e*Pn	**Pn**	**16 13 55.4**	**+0.1**
PRK				*e*Sn	**Sn**	**16 14 21.0**	**+0.3**
KHAL	**Karahalli**	**2.22**	**61**	*i* P	**Pn**	**16 13 57.7**	**-0.7**
KHAL	**Karahalli**	**2.22**	**61**	*i* P	**Pn**	**16 13 57.7**	**-0.7**
KHL	**Karahalli**	**2.23**	**63**	*e*PN	**Pn**	**16 13 58.1**	**-0.3**
KHL	**Karahalli**	**2.23**	**63**	*e*Pn	**Pn**	**16 13 58.1**	**-0.3**
AKAS	**Kas**	**2.36**	**117**	*i* P	**Pn**	**16 14 00.7**	**+0.5**
AKAS				*i* S	**Sn**	**16 14 34.1**	**+4.5**
AKAS	**Kas**	**2.36**	**117**	*i* P	**Pn**	**16 14 00.7**	**+0.5**
ELL	**Elmali**	**2.39**	**103**	*e*PN	**Pn**	**16 14 01.1**	**+0.4**
ELL	**Elmali**	**2.39**	**103**	*e*Pn	**Pn**	**16 14 01.1**	**+0.4**
BALB	**Balikesir**	**2.41**	**16**	*e*PN	**Pn**	**16 14 01.6**	**+0.7**
BALB	**Balikesir**	**2.41**	**16**	*e*Pn	**Pn**	**16 14 01.6**	**+0.7**
BALY	**Balya**	**2.45**	**11**	*i* P	**Pn**	**16 14 05.3**	**+3.7**
BALY	**Balya**	**2.45**	**11**	*i* P	**Pn**	**16 14 05.3**	**+3.8**
IDI	**Anoyia**	**2.66**	**221**	*e*Pn	**Pn**	**16 14 03.8**	**-0.6**
IDI	**Anoyia**	**2.66**	**221**	*e*Pn	**Pn**	**16 14 03.8**	**-0.6**
SHUT	**Suhut-Afyon**	**3.06**	**65**	*e*PN	**Pn**	**16 14 10.8**	**+1.0**
SHUT	**Suhut-Afyon**	**3.06**	**65**	*e*Pn	**Pn**	**16 14 10.8**	**+1.0**
KIZT	**Kizilcal**	**4.14**	**67**	*e*PN	**Pn**	**16 14 26.1**

comp=Z,8.2nm,1.1s,baz=164,slow=10,SNR=13
ZALV Zalesovo Beam 23.30 2 P **P 16 28 47.9 -0.3**
comp=Z,2.4nm,0.7s,mb3.7,baz=194,slow=8.8,SNR=9.2
ZALV LR LR 16 39 15.1
comp=Z,24nm,18.0s,baz=99,slow=40
BVAR Borovoye Array 24.26 341 P **P 16 28 57.4 +0.2**
comp=Z,2.6nm,0.7s,mb3.8,baz=145,slow=9.0,SNR=9.6
SONM Songino Array 24.62 39 P **P 16 29 01.3 +0.7**
comp=Z,2.8nm,0.9s,mb3.8,baz=237,slow=7.9,SNR=12
ULN Ulaanbaatar 25.00 40 *eP* **P 16 29 04.5 +0.4**
comp=Z,6.6nm,1.0s,mb4.1
ABKAR Akbulak array 25.64 323 *eP* **P 16 29 09.1 -0.8**
comp=Z,2.2nm,0.5s,mb3.9
AKTK Aktyubinsk 27.34 323 P **P 16 29 25.8 +0.6**
AKTO Aktyubinsk 27.34 323 P **P 16 29 25.8 +0.6**
comp=Z,0.9nm,0.6s,mb3.5,baz=111,slow=13,SNR=3.2
IPM Ipoh 30.93 144 *eP* **P 16 29 56.2 -1.2**
YAK Yakutsk 43.29 30 *eP* **P 16 31 41.2 -0.5**
comp=Z,7.7nm,0.8s,mb4.5
FINES FINESS Array B 48.01 327 P **P 16 32 18.7 -0.4**
comp=Z,2.7nm,0.8s,mb4.3,baz=107,slow=10,SNR=2.9
ARCES ARCESS Array B 50.48 337 P **P 16 32 38.2 +0.4**
comp=Z,1.3nm,0.7s,mb4.1,baz=72,slow=7.8,SNR=2.2
NOA NORSAR Array B 55.10 326 P **P 16 33 11.5 -0.6**
NOA NORSAR Array B 55.10 326 P **P 16 33 11.5 -0.6**
comp=Z,1.0nm,0.8s,mb3.9,baz=89,slow=6.9,SNR=3.6
KEST Kesra 60.76 296 P **P 16 33 53.4 +1.1**
comp=Z,2.3nm,1.0s,mb4.3,baz=51,slow=6.5,SNR=4.2
WRA Warramunga Arr 70.25 129 P **P 16 34 54.0 +0.2**
comp=Z,2.3nm,0.7s,mb4.2,baz=324,slow=6.3,SNR=7.1
ASAR Alice Springs 72.59 132 P **P 16 35 07.9 +0.1**
comp=Z,0.5nm,0.6s,mb3.6,baz=320,slow=5.6,SNR=5.7
ILAR Eielson Array 77.17 20 P **P 16 35 33.5 -0.3**
comp=Z,1.8nm,0.8s,mb4.0,baz=298,slow=4.6,SNR=12
CPUP Villa Florida 145.27 267 PKPbc PKPbc 16 43 17.9 -0.4
comp=Z,1.3nm,0.7s,baz=56,slow=3.6,SNR=3.2
LPAZ La Paz 150.27 292 PKPbc PKPbc 16 43 31.6 -0.6
LPAZ PKPab PKPab 16 43 38.1 -0.2
LPAZ La Paz 150.27 292 PKPbc PKPbc 16 43 31.6 -0.6
comp=Z,0.8nm,0.8s,baz=14,slow=6.2,SNR=3.0
LPAZ PKPab PKPab 16 43 38.1 -0.3
comp=Z,1.0nm,0.7s,baz=98,slow=3.3,SNR=3.6

*ISK **26** 16:27:52.6, 37.°35N×27.°07E, h13km, MD2.8*
*ISCJB **26** 16:27:53.4±0.9, 37.°33N±0.°04×27.°05E±0.°07, h10km±8km, Error ellipse: s-maj=9.7km s-min=5.2km az=158.0*
*DDA **26** 16:27:53.8, 37.°37N×27.°08E, h7km±4km, Md2.5*
*CSEM **26** 16:27:53.3±0.3, 37.°32N×27.°03E, h15km, MD2.8, Error ellipse: s-maj=6.5km s-min=2.9km az=69.0*
ISC 26 16:27:53.6±0.9, 37.°33N±0.°04×27.°06E±0.°07, h18km±7km, n20, σ0s67/40, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BODT	**Bodrum**	**0.34**	**143**	*e*PG	**Pg**	**16 27 59.8**	**-0.9**
BODT				*e*PG	**Pg**	**16 27 59.8**	**-0.9**
BODT				*e*SG	**Sg**	**16 28 05.7**	**+0.2**
BODT				*e*SG	**Sg**	**16 28 05.7**	**+0.2**
BODT	**Bodrum**	**0.34**	**143**	*e*Pg	**Pg**	**16 27 59.8**	**-0.9**
BODT				*e*Sg	**Sg**	**16 28 05.7**	**+0.2**
GCAM	**G?zelcaml?**	**0.40**	**21**	*i* P	**Pg**	**16 28 02.1**	**+0.3**
GCAM				*i* S	**Sg**	**16 28 07.9**	**+0.6**
GCAM	**G?zelcaml?**	**0.40**	**21**	*i* P	**Pg**	**16 28 02.1**	**+0.3**
GCAM				*i* S	**Sg**	**16 28 07.9**	**+0.6**
BDRM	**Kayabasi**	**0.41**	**130**	*i* P	**Pg**	**16 28 02.3**	**+0.3**
BDRM				*i* S	**Sg**	**16 28 08.2**	**+0.6**
BDRM	**Kayabasi**	**0.41**	**130**	*i* P	**Pg**	**16 28 02.3**	**+0.3**
BDRM				*i* S	**Sg**	**16 28 08.2**	**+0.6**
MLSB	**Milas**	**0.58**	**93**	*e*PG	**Pg**	**16 28 03.7**	**-1.4**
MLSB				*e*PG	**Pg**	**16 28 03.7**	**-1.4**
MLSB				*e*SG	**Sg**	**16 28 12.9**	**+0.1**
MLSB				*e*SG	**Sg**	**16 28 12.9**	**+0.1**
MLSB	**Milas**	**0.58**	**93**	*e*Pg	**Pg**	**16 28 03.7**	**-1.4**
MLSB				*e*Sg	**Sg**	**16 28 12.9**	**+0.1**
DAT	**Datca**	**0.73**	**145**	*e*PG	**Pg**	**16 28 07.6**	**-0.4**
DAT				*e*PG	**Pg**	**16 28 07.6**	**-0.4**
DAT				*e*SG	**Sg**	**16 28 19.0**	**+1.3**
DAT				*e*SG	**Sg**	**16 28 19.0**	**+1.3**
DAT	**Datca**	**0.73**	**145**	*e*Pg	**Pg**	**16 28 07.6**	**-0.3**
DAT				*e*Sg	**Sg**	**16 28 19.0**	**+1.4**
AYDN	**Tasoluk**	**0.73**	**63**	*i* P	**Pb**	**16 28 07.6**	**-0.3**
AYDN				*i* S	**Sb**	**16 28 18.0**	**+0.4**
AYDN	**Tasoluk**	**0.73**	**63**	*i* P	**Pb**	**16 28 07.6**	**-0.3**
AYDN				*i* S	**Sb**	**16 28 18.0**	**+0.4**
YER	**Yerkesik**	**1.00**	**101**	*e*PG	**Pg**	**16 28 12.2**	**-0.8**
YER	**Yerkesik**	**1.00**	**101**	*e*PG	**Pg**	**16 28 12.2**	**-0.8**
YER	**Yerkesik**	**1.00**	**101**	*e*Pg	**Pg**	**16 28 12.2**	**-0.8**
IZM	**Izmir**	**1.08**	**9**	*e*PG	**Pg**	**16 28 14.0**	**-0.5**
IZM	**Izmir**	**1.08**	**9**	*e*PG	**Pg**	**16 28 14.0**	**-0.5**
IZM	**Izmir**	**1.08**	**9**	*e*Pg	**Pg**	**16 28 14.0**	**-0.5**
URLA	**Izmir**	**1.09**	**341**	*i* P	**Pb**	**16 28 13.8**	**-0.2**
URLA				*i* S	**Sb**	**16 28 28.6**	**+0.7**
URLA	**Izmir**	**1.09**	**341**	*i* P	**Pb**	**16 28 13.8**	**-0.2**
URLA				*i* S	**Sb**	**16 28 28.6**	**+0.7**

*ISK **26** 16:32:59.2, 37.°29N×26.°86E, h6km, MD3.1*
*ATH **26** 16:33:00.3, 37.°24N×26.°91E, h14km±3km, MD3.0/4*
*NEIC **26** 16:33:00.3, 37.°24N×26.°91E, h14km, MD3.0(ATH), MD2.8(ISK), After ATH.*
*CSEM **26** 16:33:00.7±0.3, 37.°28N×26.°92E, h5km, MD3.0, Error ellipse: s-maj=7.5km s-min=4.1km az=51.0*
*DDA **26** 16:33:01.7, 37.°36N×27.°06E, h16km±2km, Md3.0*
ISC 26 16:33:00.7±0.5, 37.°28N±0.°03×26.°91E±0.°03, h1km±4km, n50, σ1s02/76, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BODT	**Bodrum**	**0.38**	**124**	PG	**Pg**	**16 33 08.0**	**0.0**
BODT				*e*SG	**Sg**	**16 33 13.7**	**+0.7**
BODT	**Bodrum**	**0.38**	**124**	*i* Pg	**Pg**	**16 33 08.0**	**0.0**
BODT				*e*Sg	**Sg**	**16 33 13.7**	**+0.7**
SMG	**Samos**	**0.44**	**352**	*e*Pb	**Pg**	**16 33 10.0**	**+1.0**
SMG				*e*Sb	**Sg**	**16 33 16.2**	**+1.5**
SMG	**Samos**	**0.44**	**352**	*e*PB	**Pg**	**16 33 10.0**	**+1.0**
SMG				*e*SB	**Sg**	**16 33 16.2**	**+1.5**
SMG	**Samos**	**0.44**	**352**	*e*Pb	**Pg**	**16 33 10.0**	**+1.0**
SMG				*e*Sb	**Sg**	**16 33 16.2**	**+1.5**
BDRM	**Kayabasi**	**0.47**	**116**	*i* P	**Pg**	**16 33 10.3**	**+0.6**
BDRM				*i* S	**Sg**	**16 33 16.1**	**+0.2**
BDRM	**Kayabasi**	**0.47**	**116**	*i* P	**Pg**	**16 33 10.3**	**+0.6**
BDRM				*i* S	**Sg**	**16 33 16.1**	**+0.2**
GCAM	**G?zelcaml?**	**0.49**	**31**	*i* P	**Pg**	**16 33 09.9**	**-0.2**
GCAM				*i* S	**Sg**	**16 33 15.2**	**-1.3**
GCAM	**G?zelcaml?**	**0.49**	**31**	*i* P	**Pg**	**16 33 09.9**	**-0.3**
GCAM				*i* S	**Sg**	**16 33 15.2**	**-1.4**
MLSB	**Milas**	**0.69**	**88**	*e*PG	**Pg**	**16 33 13.7**	**-0.2**
MLSB				*e*SG	**Sg**	**16 33 23.5**	**+0.7**
DAT	**Datca**	**0.76**	**136**	*e*PG	**Pg**	**16 33 15.2**	**-0.1**
DAT				*e*SG	**Sg**	**16 33 26.9**	**+1.8**
DAT	**Datca**	**0.76**	**136**	*e*Sg	**Sg**	**16 33 27.0**	**+1.8**
AYDN	**Tasoluk**	**0.86**	**63**	*i* P	**Pg**	**16 33 16.0**	**-1.1**
AYDN	**Tasoluk**	**0.86**	**63**	*i* P	**Pg**	**16 33 16.0**	**-1.2**
YER	**Yerkesik**	**1.10**	**97**	*e*PN	**Pg**	**16 33 21.6**	**-0.2**
YER	**Yerkesik**	**1.10**	**97**	*e*Pn	**Pn**	**16 33 21.6**	**-1.7**
URLA	**Izmir**	**1.11**	**347**	*i* P	**Pg**	**16 33 21.1**	**-0.9**
URLA	**Izmir**	**1.11**	**347**	*i* P	**Pg**	**16 33 21.1**	**-0.9**
APE	**Apeiranthos**	**1.12**	**260**	*e*PN	**Pg**	**16 33 19.9**	**-2.3**
APE	**Apeiranthos**	**1.12**	**260**	*e*Pb	**Pg**	**16 33 21.6**	**-0.6**
APE				*e*Sb	**Sg**	**16 33 36.7**	**-0.1**
APE	**Apeiranthos**	**1.12**	**260**	*e*PB	**Pg**	**16 33 21.6**	**-0.6**
APE				*e*SB	**Sg**	**16 33 36.7**	**-0.1**
APE	**Apeiranthos**	**1.12**	**260**	*e*Pn	**Pg**	**16 33 19.9**	**-2.3**
APE	**Apeiranthos**	**1.12**	**260**	*e*Pb	**Pg**	**16 33 21.6**	**-0.6**
IZM	**Izmir**	**1.15**	**14**	*e*PN	**Pn**	**16 33 21.8**	**-2.2**
IZM	**Izmir**	**1.15**	**14**	*e*Pn	**Pn**	**16 33 21.8**	**-2.2**
CHOS	**Chios island**	**1.30**	**329**	*e*PB	**Pb**	**16 33 26.2**	**+0.3**
CHOS				*e*SG	**Sg**	**16 33 43.1**	**+0.6**
CHOS	**Chios island**	**1.30**	**329**	*e*Pb	**Pb**	**16 33 26.2**	**+0.3**
CHOS				*e*Sg	**Sg**	**16 33 43.1**	**+0.6**
ARG	**Arkhangelos**	**1.44**	**137**	*e*Pb	**Pb**	**16 33 27.4**	**-0.9**
ARG				*e*Sb	**Sb**	**16 33 46.2**	**-0.9**
ARG	**Arkhangelos**	**1.44**	**137**	*e*PB	**Pb**	**16 33 27.4**	**-0.9**
ARG				*e*SB	**Sb**	**16 33 46.2**	**-0.9**
ARG	**Arkhangelos**	**1.44**	**137**	*e*Pb	**Pb**	**16 33 27.4**	**-0.9**
ARG				*e*Sb	**Sb**	**16 33 46.2**	**-0.9**
AKHS	**Akhisar**	**1.75**	**24**	*i* P	**Pn**	**16 33 32.8**	**+0.6**
AKHS				*i* S	**Sn**	**16 33 55.0**	**-0.1**
AKHS	**Akhisar**	**1.75**	**24**	*i* P	**Pn**	**16 33 32.8**	**+0.6**
AKHS				*i* S	**Sn**	**16 33 55.0**	**-0.1**
AKS	**Akhisar**	**1.75**	**24**	*e*PN	**Pn**	**16 33 31.3**	**-0.8**
AKS	**Akhisar**	**1.75**	**24**	*e*Pn	**Pn**	**16 33 31.3**	**-0.9**
DENT	**Denizli**	**1.75**	**74**	*e*PN	**Pn**	**16 33 31.6**	**-0.6**
DENT	**Denizli**	**1.75**	**74**	*e*Pn	**Pn**	**16 33 31.6**	**-0.6**
KULA	**Kula-Manisa**	**1.85**	**48**	*e*PN	**Pn**	**16 33 32.9**	**-0.7**
KULA	**Kula-Manisa**	**1.85**	**48**	*e*Pn	**Pn**	**16 33 32.9**	**-0.7**
PRK	**Paraskevi**	**2.03**	**346**	*e*Pn	**Pn**	**16 33 37.7**	**+1.7**
PRK				*e*Sn	**Sn**	**16 34 02.9**	**+0.9**
PRK	**Paraskevi**	**2.03**	**346**	*e*PN	**Pn**	**16 33 37.7**	**+1.7**
PRK				*e*SN	**Sn**	**16 34 02.9**	**+0.9**
PRK	**Paraskevi**	**2.03**	**346**	*e*Pn	**Pn**	**16 33 37.7**	**+1.7**
PRK				*e*Sn	**Sn**	**16 34 02.9**	**+0.9**
GLHS	**Glhisar (BURDU**	**2.07**	**93**	*e*PN	**Pn**	**16 33 36.1**	**-0.4**
GLHS	**Glhisar (BURDU**	**2.07**	**93**	*e*Pn	**Pn**	**16 33 36.1**	**-0.4**
KHAL	**Karahalli**	**2.32**	**61**	*i* P	**Pn**	**16 33 38.8**	**-1.1**
KHAL	**Karahalli**	**2.32**	**61**	*i* P	**Pn**	**16 33 38.8**	**-1.1**
AKAS	**Kas**	**2.40**	**115**	*i* P	**Pn**	**16 33 42.5**	**+1.5**
AKAS				*i* S	**Sn**	**16 34 12.8**	**+1.7**
AKAS	**Kas**	**2.40**	**115**	*i* P	**Pn**	**16 33 42.5**	**+1.4**
AKAS				*i* S	**Sn**	**16 34 12.8**	**+1.7**
ELL	**Elmali**	**2.46**	**101**	*e*PN	**Pn**	**16 33 41.5**	**-0.3**
ELL	**Elmali**	**2.46**	**101**	*e*Pn	**Pn**	**16 33 41.6**	**-0.2**
BALY	**Balya**	**2.52**	**12**	*i* P	**Pn**	**16 33 47.5**	**+4.8**
BALY				*i* S	**Sn**	**16 34 17.3**	**+3.1**

*ISCJB **26** 17:09:39.9±1.3, 30.°4N±0.°1×82.°9E±0.°2, h10km, mb3.3/4, Error ellipse: s-maj=28.1km s-min=13.5km az=145.2*
*NEIC **26** 17:09:40.1±1.3, 30.°36N×82.°67E, h10km, mb3.6/2, Error ellipse: s-maj=32.4km s-min=14.2km az=54.0*
*IDC **26** 17:09:40.9±1.0, 30.°43N×83.°10E, h0km, mb3.4/4, mb1 3.5/6, mb1mx3.3/26, mbtmp3.3/6, ML2.8/1, Error ellipse: s-maj=35.2km s-min=7.1km az=69.0*
ISC 26 17:09:40.8±1.4, 30.°4N±0.°1×82.°8E±0.°2, h10km, n10, σ1s22/10, mb3.3/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**7.31**	**93**	*e*Pn	**Pn**	**17 11 27.8**	**+0.2**
	8.1nm,0.9s						
KBL	**Kabul**	**12.30**	**293**	P	**Pn**	**17 12 43.0**	**+6.9**
MKAR	**Makanchi Array**	**16.41**	**359**	Pn	**Pn**	**17 13 32.8**	**+1.7**
	0.0nm,0.3s,baz=182,slow=11,SNR=3.6						
CMAR	**Chiang Mai Arr**	**18.89**	**125**	P	**Pn**	**17 14 01.1**	**-0.9**
	baz=299,slow=8.2,SNR=4.1						
KURK	**Kurchatov**	**20.57**	**353**	*e*P	**P**	**17 14 18.5**	**-1.0**
	2.9nm,1.0s						
KURK	**Kurchatov**	**20.57**	**353**	P	**P**	**17 14 19.2**	**-0.3**
	1.7nm,0.8s,baz=169,slow=10.0,SNR=8.2						
SONM	**Songino Array**	**25.16**	**39**	P	**P**	**17 15 04.9**	**-1.1**
	0.7nm,0.8s,mb3.2,baz=247,slow=7.6,SNR=5.0						
ABKAR	**Akbulak array**	**25.58**	**324**	*e*P	**P**	**17 15 07.1**	**-2.8**
	0.6nm,0.6s,mb3.3						
WRA	**Warramunga Arr**	**70.44**	**129**	P	**P**	**17 20 56.1**	**+0.6**
	0.4nm,0.3s,mb3.8,baz=326,slow=6.1,SNR=3.7						
ASAR	**Alice Springs**	**72.76**	**132**	P	**P**	**17 21 10.4**	**+1.0**
	0.2nm,1.0s,mb3.0,baz=330,slow=5.4,SNR=2.8						

*ISCJB **26** 17:10:55.9±0.4, 49.°85N±0.°03×18.°38E±0.°02, h0km, Error ellipse: s-maj=3.8km s-min=2.2km az=10.4*
*IPEC **26** 17:10:56.6±0.2, 49.°81N×18.°52E, h0km, ML2.6/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
*CSEM **26** 17:10:56.7±0.2, 49.°86N×18.°40E, h1km, ML3.2/8, Error ellipse: s-maj=4.7km s-min=3.1km az=10.0, Mining induced.*
*PRU **26** 17:10:57.7, 49.°86N×18.°41E, h0km, Rockburst In Reg. Felt Mining induced.*
*VIE **26** 17:10:58.6±0.4, 49.°69N×18.°28E, h0km, mb2.3/4, ML2.6/4, Error ellipse: s-maj=3.1km s-min=2.0km az=98.0 17 km S of Ostrava Suspected Mining induced.*
ISC 26 17:10:57.2±0.3, 49.°82N±0.°02×18.°40E±0.°02, h0km, n47, σ1s22/83, 6C-1D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.17**	**277**	*e*PG	**Pg**	**17 11 01.6**	**+1.2**
OKC				*e*SG	**Sg**	**17 11 05.5**	**+2.9**
	comp=Z,1μm,0.5s						
OKC	**Ostrava-Krasne**	**0.17**	**277**	*e*Pg	**Pg**	**17 11 01.1**	**+0.7**
	baz=97						
OKC				Sg	**Sg**	**17 11 05.5**	**+2.9**
	comp=Z,1μm,0.5s						
RAC	**Raciborz**	**0.30**	**333**	*e*Pg	**Pg**	**17 11 03.9**	**+0.9**
RAC				*e*Sg	**Sg**	**17 11 09.2**	**+2.4**
MORC	**Moravsky Berou**	**0.56**	**266**	*e*Pg	**Pg**	**17 11 08.6**	**+0.7**
MORC				*e*Sg	**Sg**	**17 11 16.5**	**+1.4**
	comp=Z,92nm,0.4s,baz=87						
LIKS	**Likavka**	**0.89**	**149**	*e*	**Pg**	**17 11 16.6**	**+2.3**
LIKS				*e*		17 11 32.5	
OJC	**Ojcow**	**0.99**	**65**	*e*Pg	**Pg**	**17 11 14.6**	**-1.5**
OJC				*e*Sg	**Sg**	**17 11 27.6**	**-1.3**
OJC	**Ojcow**	**0.99**	**65**	*e*Pg	**Pg**	**17 11 14.5**	**-1.6**
	baz=244						
OJC				*e*Sg	**Sg**	**17 11 27.6**	**-1.3**
JAVC	**Velka Javorina**	**1.07**	**207**	*e*Pg	**Pg**	**17 11 18.8**	**+1.1**
JAVC				*e*Sg	**Sg**	**17 11 36.0**	**+4.4**
KOLL	**Kolacno**	**1.24**	**180**	*e*PN	**Pn**	**17 11 21.2**	**-0.5**
KOLL				*e*SN	**Sn**	**17 11 38.8**	**-0.3**
KOLL	**Kolacno**	**1.24**	**180**	*e*Pn	**Pn**	**17 11 21.2**	**-0.5**
KOLL				*e*Sn	**Sn**	**17 11 38.8**	**-0.3**
VRAC	**Vranov**	**1.28**	**247**	⇑*i* P	**Pg**	**17 11 21.7**	**-0.1**
VRAC	**Vranov**	**1.28**	**247**	*i* P	**Pg**	**17 11 21.7**	**-0.1**
VRAC				*e*Sg	**Sg**	**17 11 39.0**	**+0.6**
	comp=Z,82nm,0.5s,baz=68						
NIE	**Niedzica**	**1.30**	**107**	*e*Pg	**Pg**	**17 11 21.1**	**-1.1**
NIE				*e*Sg	**Sg**	**17 11 40.5**	**+1.4**
NIE	**Niedzica**	**1.30**	**107**	*e*Pg	**Pg**	**17 11 21.1**	**-1.1**
NIE				*e*Sg	**Sg**	**17 11 40.5**	**+1.4**
VYHS	**Vyhne**	**1.35**	**168**	*e*PN	**Pn**	**17 11 22.5**	**-0.8**
VYHS				*e*SN	**Sn**	**17 11 41.5**	**-0.5**
VYHS	**Vyhne**	**1.35**	**168**	*e*Pn	**Pn**	**17 11 22.5**	**-0.8**
VYHS				*e*Sn	**Sn**	**17 11 41.5**	**-0.5**
DPC	**Dobruska-Polom**	**1.44**	**293**	*e*PG	**Pg**	**17 11 23.9**	**-1.0**
DPC				*e*SG	**Sg**	**17 11 43.8**	**+0.3**
	comp=Z,37nm,0.6s						
DPC	**Dobruska-Polom**	**1.44**	**293**	Pg	**Pg**	**17 11 23.9**	**-1.0**
DPC				Sg	**Sg**	**17 11 43.8**	**+0.3**
	comp=Z,37nm,0.6s						
KRUC	**Moravsky**	**1.51**	**241**	*e*Pg	**Pg**	**17 11 25.0**	**-1.2**
	baz=61						
KRUC				*e*Sg	**Sg**	**17 11 46.0**	**+0.2**
	comp=Z,74nm,0.9s,baz=61						
MODS	**Modra-Piesok**	**1.62**	**208**	*e*PN	**Pn**	**17 11 27.0**	**0.0**
MODS				*e*SN	**Sn**	**17 11 49.8**	**+1.2**
MODS	**Modra-Piesok**	**1.62**	**208**	*e*Pn	**Pn**	**17 11 27.0**	**0.0**
MODS				*e*Sn	**Sn**	**17 11 49.8**	**+1.2**
KSP	**Ksiaz**	**1.70**	**308**	*e*Pn	**Pn**	**17 11 27.9**	**-0.2**
KSP				*e*Sn	**Sn**	**17 11 52.0**	**+1.5**
KSP	**Ksiaz**	**1.70**	**308**	*e*Pg	**Pg**	**17 11 28.4**	**-1.4**
KSP				*e*Sg	**Sg**	**17 11 49.8**	**-1.9**
KSP	**Ksiaz**	**1.70**	**308**	*e*Pg	**Pg**	**17 11 28.4**	**-1.4**
KSP				*e*Sg	**Sg**	**17 11 49.8**	**-1.9**
ZST	**Bratislava**	**1.83**	**208**	*e*PN	**Pn**	**17 11 29.8**	**-0.1**
ZST				*e*SN	**Sn**	**17 11 53.9**	**+0.1**
ZST	**Bratislava**	**1.83**	**208**	*e*Pn	**Pn**	**17 11 29.8**	**-0.1**
ZST				*e*Sn	**Sn**	**17 11 54.0**	**+0.2**
STHS	**Stebnicka Huta**	**1.89**	**101**	*e*PN	**Pn**	**17 11 32.5**	**+1.8**
STHS				*e*SG	**Sg**	**17 12 00.0**	**+2.1**
STHS	**Stebnicka Huta**	**1.89**	**101**	*e*Pn	**Pn**	**17 11 32.5**	**+1.8**
STHS				*e*Sg	**Sg**	**17 12 00.0**	**+2.1**
KECS	**Kecovo**	**1.91**	**133**	*e*PN	**Pn**	**17 11 30.0**	**-1.0**
KECS				*e*SN	**Sn**	**17 11 54.3**	**-1.4**
PSZ	**Piszkesteto**	**2.14**	**152**	⇑*i* P	**Pn**	**17 11 38.1**	**+4.0**
PSZ	**Piszkesteto**	**2.14**	**152**	*e*	**Pn**	**17 11 39.0**	**+4.9**
PSZ	**Piszkesteto**	**2.14**	**152**	⇑*i* P	**Pn**	**17 11 38.1**	**+4.0**
CRVS	**Cervenica-Dubn**	**2.20**	**113**	*e*PN	**Pn**	**17 11 36.1**	**+1.1**
CRVS				*e*SG	**Sg**	**17 12 08.0**	**+0.2**
CRVS	**Cervenica-Dubn**	**2.20**	**113**	*e*Pn	**Pn**	**17 11 36.1**	**+1.1**
CRVS				*e*Sg	**Sg**	**17 12 08.0**	**+0.2**
SOP	**Sopron**	**2.46**	**210**	*e*P	**Pn**	**17 11 48.1**	**+10**
SOP	**Sopron**	**2.46**	**210**	*e*P	**Pn**	**17 11 38.1**	**-0.4**
PRU	**Pruhonice**	**2.50**	**275**	*e*PG	**Pg**	**17 11 42.4**	**-2.7**
PRU				*e*SG	**Sg**	**17 12 16.9**	**-0.7**
	comp=Z,47nm,1.1s						
PRU	**Pruhonice**	**2.50**	**275**	Pg	**Pg**	**17 11 42.4**	**-2.7**
PRU				Sg	**Sg**	**17 12 16.9**	**-0.7**
	comp=Z,47nm,1.1s						
CONA	**Conrad Observa**	**2.53**	**223**	⇓*i* Pn	**Pn**	**17 11 38.9**	**-0.6**
CONA				⇑*i* Sn	**Sn**	**17 12 10.4**	**-0.5**
CONA	**Conrad Observa**	**2.53**	**223**	Pn	**Pn**	**17 11 38.9**	**-0.6**
KHC	**Kasperske Hory**	**3.22**	**260**	*e*PG	**Pg**	**17 11 57.2**	**-1.7**
KHC				*e*SG	**Sg**	**17 12 41.0**	**+0.4**
	comp=Z,17nm,0.5s						
KHC	**Kasperske Hory**	**3.22**	**260**	Pg	**Pg**	**17 11 57.2**	**-1.7**
KHC				Sg	**Sg**	**17 12 41.0**	**+0.4**
	comp=Z,17nm,0.5s						
MOA	**Molln**	**3.37**	**236**	⇑*i* Sg	**Sg**	**17 12 45.1**	**-0.3**
	comp=Z,10nm,0.4s						
MOA	**Molln**	**3.37**	**236**	Sg	**Sg**	**17 12 45.1**	**-0.2**
	comp=Z,10nm,0.4s						
NKC	**Novy Kostel**	**3.86**	**278**	*e*PG	**Pg**	**17 12 08.0**	**-3.2**
NKC				*e*SG	**Sg**	**17 13 00.4**	**-0.8**
	comp=Z,13nm,0.5s						
NKC	**Novy Kostel**	**3.86**	**278**	Sg	**Sg**	**17 13 00.4**	**-0.8**
	comp=Z,13nm,0.5s						
MOX	**Moxa**	**4.43**	**283**	*e*PG	**Pg**	**17 12 20.8**	**-1.4**
MOX				*e*SG	**Sg**	**17 13 21.9**	**+2.3**

*RSPR **26** 17:20:20.5, 19.°58N×64.°32W, h15km±31km, MD3.6/7*
*NEIC **26** 17:20:20.5, 19.°58N×64.°32W, h15km, MD3.6(RSPR), After RSPR.*
ISC 26 17:20:18.5±2.4, 19.°49N±0.°09×64.°3W±0.°1, h11km±14km, n18, σ0s50/26, 12C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBVI	**Tortola**	**1.10**	**195**	⇓*e*P	**Pb**	**17 20 39.1**	**-0.5**
TBVI				*e*S	**Sg**	**17 20 54.2**	**+0.1**
TBVI	**Tortola**	**1.10**	**195**	⇓*e*P	**Pb**	**17 20 39.6**	**0.0**
TBVI				*e*S	**Sg**	**17 20 54.2**	**+0.1**
STVI	**Saint Thomas**	**1.28**	**208**	⇓*e*P	**Pn**	**17 20 41.6**	**-0.7**
STVI				*e*S	**Sb**	**17 20 59.3**	**+0.2**
STVI	**Saint Thomas**	**1.28**	**208**	⇓*e*P	**Pn**	**17 20 41.6**	**-0.7**
STVI				*e*S	**Sb**	**17 20 59.3**	**+0.2**
MTP	**Monte Pirata**	**1.81**	**220**	⇑*e*P	**Pn**	**17 20 49.2**	**-0.3**
MTP				*e*S	**Sn**	**17 21 12.3**	**-0.2**
MTP	**Monte Pirata**	**1.81**	**220**	⇑*e*P	**Pn**	**17 20 49.2**	**-0.3**
MTP				*e*S	**Sn**	**17 21 12.3**	**-0.2**
SMRT	**St. Maarten**	**1.86**	**140**	⇑*e*P	**Pn**	**17 20 50.6**	**+0.4**
SMRT	**St. Maarten**	**1.86**	**140**	⇑*e*P	**Pn**	**17 20 50.6**	**+0.4**
CBYP	**Canovanas**	**1.89**	**230**	⇑*e*P	**Pn**	**17 20 50.0**	**-0.7**
CBYP	**Canovanas**	**1.89**	**230**	⇑*e*P	**Pn**	**17 20 50.3**	**-0.4**
HUMP	**Col San Antoni**	**1.97**	**227**	⇓*e*P	**Pn**	**17 20 52.1**	**+0.3**
HUMP				*e*S	**Sn**	**17 21 16.8**	**+0.3**
HUMP	**Col San Antoni**	**1.97**	**227**	⇓*e*P	**Pn**	**17 20 52.1**	**+0.3**
HUMP				*e*S	**Sn**	**17 21 16.8**	**+0.3**
CELP	**Cerrillos**	**2.56**	**237**	⇑*e*P	**Pn**	**17 20 59.2**	**-0.6**
CELP	**Cerrillos**	**2.56**	**237**	⇑*e*P	**Pn**	**17 20 59.2**	**-0.6**
ICM	**Isla Caja Muer**	**2.62**	**233**	⇑*e*P	**Pn**	**17 21 01.1**	**+0.3**
ICM	**Isla Caja Muer**	**2.62**	**233**	⇑*e*P	**Pn**	**17 21 01.8**	**+1.1**
CRPR	**Cabo Rojo, PR**	**3.02**	**241**	⇑*e*P	**Pn**	**17 21 07.1**	**+0.8**
CRPR	**Cabo Rojo, PR**	**3.02**	**241**	⇑*e*P	**Pn**	**17 21 07.1**	**+0.8**

**IDC 26 17:33:10.

baz=260
TTN Taitung 0.64 226 *e*P **Pn 17 48 13.2 -0.2**
baz=230
ESL Shilin 0.64 342⇓*i*P **Pn 17 48 12.4 -1.1**
baz=337
ESL *e*S **Sn 17 48 20.6 -2.1**
baz=337
TWG Pinlang 0.65 235 *e*Pg **Pn 17 48 12.3 -1.3**
TWG *e*Sg **Sn 17 48 20.5 -2.2**
TWG Pinlang 0.65 235⇑*i*P **Pn 17 48 12.6 -1.0**
baz=239
TWG *e*S **Sn 17 48 20.9 -1.9**
baz=239
ESF Shoufeng Towns 0.68 349 *e*P **Pn 17 48 12.8 -1.2**
baz=342
YUS Yu-Shan 0.70 294⇑*i*P **Pn 17 48 14.0 -0.2**
baz=294
YUS *e*S **Sn 17 48 23.2 -0.8**
baz=294
HWA Hwalien 0.78 357⇓*i*P **Pn 17 48 14.6 -0.7**
baz=10.0
HWA S **Sn 17 48 25.7 -0.1**
baz=10.0
STYT Tauyuan 0.82 268 P **Pn 17 48 15.4 -0.5**
baz=257
STYT *e*S **Sn 17 48 25.8 -1.0**
baz=257
ALS Alishan 0.83 292⇑*i*P **Pn 17 48 16.2 +0.1**
baz=291
ALS S **Sn 17 48 27.1 -0.1**
baz=291
SSLB Suanglung 0.86 313 *e*Pg **Pn 17 48 15.6 -0.9**
SSLB *e*Sg **Sn 17 48 26.0 -2.0**
ECL Taimali 0.88 227⇓*i*P **Pn 17 48 15.3 -1.3**
baz=229
TWD Chiawan 0.88 357⇓*i*P **Pn 17 48 16.0 -0.7**
baz=348
TWD S **Sn 17 48 27.5 -0.8**
baz=348
TPUB Ta-pu 0.94 276 *e*Pn **Pn 17 48 17.4 -0.1**
TPUB *e*Sn **Sn 17 48 29.9 +0.1**
WTP Ta-pu 0.95 273⇑*i*P **Pn 17 48 17.8 +0.2**
baz=270
WTP *e*S **Sn 17 48 30.5 +0.4**
baz=270
SMLT Sun Moon Lake 0.97 315⇑*i*P **Pn 17 48 17.9 +0.1**
baz=324
NACB Ninganchiao 0.97 357 *e*Pn **Pn 17 48 16.8 -1.1**
NACB *e*Sn **Sn 17 48 28.9 -1.7**
CHN5 Tsauling 0.97 294⇑*i*P **Pn 17 48 18.5 +0.5**
baz=294
CHN4 Tsaushan 0.98 279⇑*i*P **Pn 17 48 18.6 +0.6**
baz=277
CHN4 S **Sn 17 48 31.7 +1.0**
baz=277
SGST Jiashian 0.99 263⇑*e*P **Pn 17 48 18.6 +0.5**
baz=261
WHF Hehuan Shan 1.00 340⇓*i*P **Pn 17 48 17.9 -0.5**
baz=343
WHF *e*S **Sn 17 48 29.9 -1.4**
baz=343
TYC Yuchr 1.01 314⇑*i*P **Pn 17 48 18.6 +0.2**
baz=323
TYC *e*S **Sn 17 48 30.8 -0.7**
baz=323
CHN1 Nanshi 1.03 269⇑*i*P **Pn 17 48 19.4 +0.7**
baz=266
CHN1 *e*S **Sn 17 48 33.1 +1.1**
baz=266
SSD Sandimen 1.04 244⇑*e*P **Pn 17 48 18.4 -0.4**
baz=236
TAW Tawu 1.09 220 *e*P **Pn 17 48 18.6 -0.9**
baz=215
EAST Anshuo 1.10 222 ⇓P **Pn 17 48 18.8 -0.8**
baz=218
WGK Gukeng 1.11 296 *e*P **Pn 17 48 20.5 +0.7**
baz=296
WGK S **Sn 17 48 35.5 +1.6**
baz=296
WNT Mingjian 1.11 308⇑*i*P **Pn 17 48 20.5 +0.6**
baz=308
WNT *e*S **Sn 17 48 34.8 +0.8**
baz=308
TWT Tachien 1.14 338⇓*i*P **Pn 17 48 20.4 +0.3**
baz=346
TWT S **Sn 17 48 33.4 -1.2**
baz=346
LAY Lan-yu 1.16 184 P **Pn 17 48 20.1 -0.3**
baz=173
CHY Chiayi 1.16 285⇑*i*P **Pn 17 48 21.2 +0.7**
baz=271
CHY S **Sn 17 48 35.9 +0.7**
baz=271
SGLT Jiouru 1.17 246 *e*P **Pn 17 48 22.4 +1.8**
baz=234
SGLT *e*S **Sn 17 48 38.9 +3.6**
baz=234
CHN3 Shinhua 1.19 264 P **Pn 17 48 22.5 +1.7**
baz=261
CHN3 *e*S **Sn 17 48 39.0 +3.2**
baz=261
TWM1 Shoushan 1.19 252⇑*i*P **Pn 17 48 23.0 +2.1**
baz=249
TWM1 *e*S **Sn 17 48 39.0 +3.1**
baz=249
ENA Nanau 1.23 4⇓*i*P **Pn 17 48 21.1 -0.3**
baz=17
SCZT Fangliau 1.26 229 *e*P **Pn 17 48 21.9 +0.1**
baz=219
SCZT *e*S **Sn 17 48 39.5 +2.0**
baz=219
NNS Nan Shan 1.26 349 ⇓P **Pn 17 48 21.7 -0.2**
TCU Taichung 1.30 317⇑*i*P **Pn 17 48 23.5 +1.1**
baz=306
TCU *e*S **Sn 17 48 39.8 +1.3**
baz=306
TAI1 Yung-k'ang 1.32 263 *e*P **Pn 17 48 23.7 +1.1**
baz=261
CHN8 Yiju 1.33 277 ⇑P **Pn 17 48 23.3 +0.5**
baz=274
CHN8 S **Sn 17 48 40.2 +0.9**
baz=274
SCLT Jiali 1.34 269 *e*P **Pn 17 48 23.8 +0.9**
baz=266
SCLT *e*S **Sn 17 48 41.4 +1.9**
baz=266
WSF Szhu 1.38 289 ⇑P **Pn 17 48 23.6 +0.1**
baz=288
KAU Kaohsiung 1.39 243 *e*P **Pn 17 48 25.1 +1.6**
baz=256
TWQ1 Liyutan 1.40 325⇑*i*P **Pn 17 48 25.2 +1.4**
baz=336
TWQ1 S **Sn 17 48 42.8 +1.8**
baz=336
TWC Suao 1.42 7⇓*i*P **Pn 17 48 24.3 +0.3**
baz=23
TWC *e*S **Sn 17 48 40.3 -1.1**
baz=23
WTCT Ta-ch'eng 1.42 298⇑*i*P **Pn 17 48 24.4 +0.3**
baz=298
WTCT *e*S **Sn 17 48 41.8 +0.3**
baz=298
ENTT Nioudou 1.44 357 P **Pn 17 48 24.1 -0.2**
HEN Hengchun 1.46 215 *e*P **Pn 17 48 24.3 -0.2**
baz=202
HEN *e*S **Sn 17 48 41.0 -1.4**
baz=202
NSY Sanyi 1.46 326 ⇑P **Pn 17 48 26.0 +1.5**
baz=328
NSY S **Sn 17 48 45.2 +2.7**
baz=328
TWP Hsiaoliuchiu 1.46 235 *e*P **Pn 17 48 27.3 +2.7**
baz=232
TSEB Hengchuen, Pin 1.47 208 *e*P **Pn 17 48 25.1 +0.4**
baz=208
TSEB *e*S **Sn 17 48 43.2 +0.5**
baz=208
TWK1 Hengchun 1.47 212⇓*i*P **Pn 17 48 24.8 0.0**
baz=200
TWK1 *e*S **Sn 17 48 42.5 -0.3**
baz=200
YHNB Yeheng 1.48 350 *e*Pn **Pn 17 48 24.9 0.0**
YHNB *e*Sn **Sn 17 48 42.1 -1.1**
NSK Sanguang 1.49 350⇓*i*P **Pn 17 48 25.3 +0.3**
baz=352
NSK *e*S **Sn 17 48 42.7 -0.7**
baz=352
TWE Neicheng 1.52 1 *e*P **Pn 17 48 25.3 -0.1**
baz=355
NSTT Nanjuang 1.54 338⇓P **Pn 17 48 26.9 +1.1**
baz=339
NSTT *e*S **Sn 17 48 45.6 +1.1**
baz=339
ILA Ilan 1.56 3 *e*P **Pn 17 48 27.9 +1.8**
baz=356
HSN Hsinchu 1.71 339 *e*P **Pn 17 48 29.3 +1.2**
baz=342
HSN *e*S **Sn 17 48 50.5 +1.8**
baz=342
YOJ Yonaguni jima 1.77 45 P **Pn 17 48 30.0 +1.1**
YOJ S **Sn 17 48 51.2 +1.0**
YOJ Yonaguni jima 1.77 45 *e*P **Pn 17 48 29.9 +1.0**
baz=57
YOJ *e*S **Sn 17 48 51.0 +0.8**
baz=57
TATO Taipei 1.77 355 *e*Pn **Pn 17 48 28.8 -0.1**
TATO *e*Sn **Sn 17 48 50.7 +0.4**
TWA Mucha 1.77 358 *e*P **Pn 17 48 29.6 +0.7**
baz=1.0
NCU National Centr 1.81 347 *e*P **Pn 17 48 30.3 +0.8**
baz=349
TWB1 Santiao Chiao 1.83 10⇓*i*P **Pn 17 48 30.6 +1.0**
baz=13
TAP1 Taipei 1.83 356 *e*P **Pn 17 48 30.9 +1.2**
baz=359
NWF Wu-fen Shan 1.87 4 *e*P **Pn 17 48 31.2 +1.0**
baz=352
NWF *e*S **Sn 17 48 53.0 +0.4**
baz=352
TWS1 Kuangyinshan 1.91 354 *e*P **Pn 17 48 32.0 +1.3**
baz=10.0
PNG Penghu 1.96 281⇑*i*P **Pn 17 48 31.2 -0.2**
baz=266
PNG *e*S **Sn 17 48 53.1 -1.7**
baz=266
TWY Chenhua 2.07 359 *e*P **Pn 17 48 33.6 +0.7**
baz=1.0
HATJ Hateruma jima 2.15 66 P **Pn 17 48 35.2 +1.1**
HATJ *e*S **Sn 17 49 00.1 +0.5**
IRIF Iriomote-Funau 2.22 59 P **Pn 17 48 36.1 +1.1**
IRIF *e*S **Sn 17 49 02.7 +1.5**
JKRS Kuro-shima 2.40 64 P **Pn 17 48 38.8 +1.3**
JKRS *e*S **Sn 17 49 06.6 +1.0**
JIJ Ishigaki jima 2.56 63 P **Pn 17 48 40.4 +0.7**
JIJ S **Sn 17 49 09.8 +0.1**
JTJ Tarama 3.14 62 P **Pn 17 48 48.4 +0.7**
JTJ *e*S **Sn 17 49 24.3 +0.3**
KNM Kinmen 3.18 293 *e*P **Pn 17 48 48.8 +0.5**
baz=291
KNM *e*S **Sn 17 49 24.2 -0.8**
baz=291
QZH Quanzhou 3.29 302⇓*i*Pn **Pn 17 48 47.8 -1.9**
QZH Sn **Sn 17 49 23.0 -4.6**
QZH smax
comp=N,720nm,0.4s
QZH smax
comp=E,540nm,0.4s
QZH LR LR
comp=N,1μm,4.0s
QZH LR LR
comp=E,1μm,6.2s
QZH LR LR
comp=Z,2μm,16.1s
JMJ Miyako jima 2 3.70 64 P **Pn 17 48 56.7 +1.3**
JMJ *e*S **Sn 17 49 38.5 +0.7**
JMJ Miyako jima 2 3.70 64 *e*P **Pn 17 48 56.3 +0.9**
baz=65
JOGS Gusukube 3.77 65 P **Pn 17 48 57.7 +1.3**
JOGS *e*S **Sn 17 49 40.2 +0.7**
JKE Kume jima 2 5.61 55 P **Pn 17 49 21.4 -0.2**
JKE *e*S **Sn 17 50 23.2 -1.6**
JAGN Aguni-jima 6.10 55 P **Pn 17 49 28.9 +0.6**
JAGN *e*S **Sn 17 50 36.7 -0.1**
JJT2 Tamagusuku 2 6.27 61 P **Pn 17 49 32.0 +1.3**
JIH Iheya 6.88 55 P **Pn 17 49 38.8 -0.3**
JOW Kunigami 7.01 58 P **Pn 17 49 40.2 -0.7**
JOW *e*S **Sn 17 50 58.7 -0.6**
GZH Guangzhou 7.64 271 P **Pn 17 49 45.8 -3.7**
GZH smax
comp=N,180nm,1.0s
GZH smax
comp=E,95nm,0.8s
JTK Tokunoshima 8.02 54 P **Pn 17 49 52.9 -1.8**
JTK *e*S **Sn 17 51 22.5 -1.6**
JAM Amami Oshima 8.85 52 P **Pn 17 50 04.3 -1.7**
JMZ Minamidaito 2 9.10 71 P **Pn 17 50 06.4 -3.1**
QIZ Qiongzhong 11.77 252 P **Pn 17 50 43.5 -2.6**
QIZ S **Sn 17 53 00.5 +4.4**
QIZ pmax pmax
comp=Z,14nm,1.5s
QIZ LR LR
comp=N,230nm,19.9s
QIZ LR LR
comp=E,80nm,19.0s
QIZ LR LR
comp=Z,240nm,19.9s
QIZ Qiongzhong 11.77 252 *e*Pn **Pn 17 50 47.1 +1.0**
QIZ *e*Sn **Sn 17 52 45.6 -10**
KSRS Korea Array 15.20 19 Pn **Pn 17 51 33.2 +0.9**
comp=Z,0.2nm,0.3s,baz=196,slow=11,SNR=8.1
KSRS LR LR 17 57 55.0
comp=Z,76nm,19.1s,baz=71,slow=39
KMI Kunming 17.36 280 P **Pn 17 52 04.5 +4.6**
KMI pmax pmax
comp=Z,7.0nm,0.7s
KKM Kota Kinabalu 17.84 198 *e*Pn **Pn 17 52 08.6 +2.8**
comp=Z,10nm,1.0s
MJAR Matsushiro Arr 19.53 43 P **Pn 17 52 27.1 +1.1**
comp=Z,0.2nm,0.3s,baz=240,slow=12,SNR=3.7
LZH Lanzhou 20.07 314 *e*P **P 17 52 35.5 +5.2**
LZH pP 17 52 43.0
LZH sP sP 17 52 47.3 +0.9
LZH pmax pmax
comp=Z,19nm,1.4s
CHTO Chiang Mai 21.63 263 *e*P **P 17 52 49.0 +1.7**
comp=Z,8.8nm,0.9s,mb4.2
CHTO Chiang Mai 21.63 263 *e*P **P 17 52 49.0 +1.6**
CHTO pmax pmax
comp=Z,9.0nm,0.9s,mb4.2
CMAR Chiang Mai Arr 21.73 262 P **P 17 52 49.0 +0.5**
comp=Z,3.3nm,0.9s,mb3.8,baz=63,slow=8.1,SNR=29
CMAR LR LR 18 01 34.4
comp=Z,138nm,20.5s,MS3.4,baz=80,slow=38
GUMO Guam 23.99 109 LR LR 18 01 38.4
comp=Z,48nm,18.4s,MS3.0,baz=91,slow=34
KSM Kuching 24.24 209 *e*P **P 17 53 13.6 -0.1**
comp=Z,22nm,1.2s,mb4.5
GTA Gaotai 24.58 316 *e*P **P 17 53 17.0 +0.4**
GTA pP 17 53 21.5
GTA sP sP 17 53 24.8 -8.7
GTA pmax pmax
comp=Z,3.0nm,1.1s,mb3.7
ULN Ulaanbaatar 27.23 338 *e*P **P 17 53 39.6 -0.9**
comp=Z,1.9nm,0.6s,mb3.8
ULN Ulaanbaatar 27.23 338 *e*P **P 17 53 39.6 -0.9**
ULN pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
SONM Songino Array 27.44 337 P **P 17 53 41.4 -0.9**
comp=Z,1.7nm,0.7s,mb3.7,baz=153,slow=9.5,SNR=14
SONM LR LR 18 05 48.8
comp=Z,136nm,18.9s,MS3.5,baz=240,slow=39
LSA Lhasa 28.01 290 *e*P **P 17 53 50.3 +2.6**
comp=Z,2.3nm,0.6s,mb4.0
LSA Lhasa 28.01 290 *e*P **P 17 53 50.3 +2.6**
LSA pmax pmax
comp=Z,2.0nm,0.6s,mb3.9
YSS Yuzh-Sakhalins 29.15 30 P **P 17 53 54.0 -3.6**
PSI Prapat 29.92 231 LR LR 18 05 54.4
comp=Z,102nm,18.3s,MS3.5,baz=172,slow=36
TLY Talaya 31.64 338 *e*P **P 17 54 25.1 +5.6**
TLY pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
TLY MLR MLR
comp=Z,54nm,14.0s,MS3.4
MK31 Makanchi Array 39.34 317 *e*P **P 17 55 25.7 +0.1**
MKAR Makanchi Array 39.34 317 P **P 17 55 25.9 +0.2**
comp=Z,7.2nm,0.6s,mb4.6,baz=112,slow=9.8,SNR=78
MKAR PcP PcP 17 57 33.0 -0.5
comp=Z,0.6nm,0.7s,baz=116,slow=6.6,SNR=3.4
MKAR LR LR 18 13 34.4
comp=Z,52nm,19.3s,MS3.4,baz=349,slow=39
MKAR Makanchi Array 39.34 317 P **P 17 55 25.9 +0.2**
MKAR 17 57 33.0
PETK Petropavlovsk- 40.45 33 P **P 17 55 35.5 +0.7**
comp=Z,2.0nm,0.7s,mb3.9,baz=289,slow=4.4,SNR=4.7
FITZ Fitzroy Crossi 41.23 174 P **P 17 55 39.8 -1.7**
comp=Z,0.9nm,0.7s,mb3.5,baz=1.7,slow=12,SNR=3.2
ZALV Zalesovo Beam 41.30 328 P **P 17 55 40.8 -0.9**
comp=Z,7.5nm,0.5s,mb4.6,baz=110,slow=7.8,SNR=44
ZALV LR LR 18 13 25.7
comp=Z,40nm,20.9s,MS3.3,baz=76,slow=37
KSH Kashi 41.80 304 *e*P **P 17 55 50.0 +4.0**
KSH *e*pP pP 17 56 00.0 +1.9
KSH *e*sP sP 17 56 03.8 +0.6
KSH *e*PP PP 17 57 32.3 +9.1
KSH *e*PcP PcP 17 57 42.3 +0.7
KSH *e*ScP ScP 18 01 29.0 +0.5
KSH *e*PcS PcS 18 01 33.3 +0.2
KSH *e*S **S 18 02 09.8 +9.3**
KSH *e*sS sS 18 02 26.8 +6.2
KSH *e*SS SS 18 05 14.8 +7.2
KSH *e*ScS ScS 18 05 46.0 +0.6
KSH pmax pmax
comp=Z,2.0nm,0.4s,mb4.1
KSH pmax pmax
comp=Z,100nm,5.1s
KSH LR LR
comp=N,82nm,5.1s
KSH LR LR
comp=E,110nm,6.5s
KSH LR LR
comp=Z,150nm,5.5s
PALK Pallekele 42.38 255 *i* P **P 17 55 50.4 -0.7**
NVS Novosibirsk 42.56 328 *e*P **P 17 55 50.5 -1.6**
TKM2 Tokmak 2 42.71 309 *e*P **P 17 55 54.5 +1.1**
comp=Z,3.0nm,0.7s,mb4.1
TKM2 Tokmak 2 42.71 309 *e*P **P 17 55 54.5 +1.1**
TKM2 pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
KURK Kurchatov 43.12 321 *e*P **P 17 55 56.2 -0.4**
comp=Z,8.5nm,0.6s,mb4.7
KURK Kurchatov 43.12 321⇓*i*P **P 17 55 56.1 -0.5**
KURK pmax pmax
comp=Z,7.0nm,0.7s,mb4.5
AML Almayashu 43.93 307 *e*P **P 17 56 04.9 +1.5**
comp=Z,4.1nm,1.0s,mb4.1
AML Almayashu 43.93 307 *e*P **P 17 56 04.9 +1.6**
AML pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
MBWA Marble Bar 44.13 183 *e*P **P 17 56 02.5 -2.5**
comp=Z,4.5nm,0.8s,mb4.2
WRA Warramunga Arr 44.63 163 P **P 17 56 07.6 -1.4**
comp=Z,2.2nm,0.8s,mb4.1,baz=343,slow=9.1,SNR=10
KK31 Karatay Array 46.41 308 *i* P **P 17 56 23.9 +1.0**
KK31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
KKAR Karatay Array 46.41 308 *e*P **P 17 56 23.5 +0.5**
comp=Z,2.7nm,0.8s,mb4.2
KKAR Karatay Array 46.41 308 *e*P **P 17 56 23.5 +0.6**
KKAR pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KBL Kabul 46.97 296 *e*P **P 17 56 29.1 +1.6**
comp=Z,3.7nm,0.6s,mb4.5
KBL Kabul 46.97 296 *e*P **P 17 56 29.1 +1.6**
KBL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ASAR Alice Springs 48.08 165 P **P 17 56 35.7 -0.4**
comp=Z,0.4nm,0.4s,mb3.8,baz=337,slow=6.6,SNR=10
BVA0 Borovoye Array 48.70 321 P **P 17 56 40.3 -0.3**
BVA0 pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
BRVK Borovoye 48.77 321 *e*P **P 17 56 40.8 -0.3**
comp=Z,3.2nm,0.4s,mb4.7
BRVK Borovoye 48.77 321 *e*P **P 17 56 40.8 -0.3**
BRVK pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
AB31 Akbulak array 54.43 315 *i* P **P 17 57 23.5 0.0**
AB31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
ABKAR Akbulak array 54.43 315 *e*P **P 17 57 23.5 0.0**
comp=Z,6.0nm,0.8s,mb4.6
SVE Sverdlovsk 55.09 324 *e*P **P 17 57 28.4 +0.3**
SVE pmax pmax
comp=Z,18nm,0.8s,mb5.2
AKTO Aktyubinsk 55.77 316 P **P 17 57 32.9 -0.2**
AKTO pmax pmax
comp=Z,1.0nm,1.3s,mb3.7
ARU Arti 56.15 323 *e*P **P 17 57 35.0 -0.7**
comp=Z,14nm,0.6s,mb5.2
ARU Arti 56.15 323 *c* P **P 17 57 35.1 -0.6**
ARU *e* 17 59 39.9
ARU PPP 18 00 56.0
ARU S **S 18 05 26.1 +4.5**
ARU SS SS 18 09 07.9 -0.2
ARU pmax pmax
comp=Z,14nm,0.6s,mb5.2
STKA Stephens Creek 57.99 160 *e*P **P 17 57 47.4 -1.6**
comp=Z,1.3nm,1.0s,mb3.9
STKA Stephens Creek 57.99 160 P **P 17 57 48.6 -0.4**
comp=Z,4.1nm,0.8s,mb4.5,baz=314,slow=6.4,SNR=8.8
STKA Stephens Creek 57.99 160 *e*P **P 17 57 47.4 -1.6**
STKA pmax pmax
comp=Z,1.0nm,1.0s
RDF Al-Radifah 65.83 292 *e*P **P 17 58 41.6 -0.3**
RDF AMb AMB 17 58 42.6
comp=Z,13nm,0.6s,mb5.1
ZEI Tsey 65.87 308 *e*P **P 17 58 41.4 -0.5**
ZEI pmax pmax
comp=Z,9.0nm,0.5s,mb5.1
NAY Al-Naaiem 66.01 293 *e*P **P 17 58 42.2 -0.8**
NAY AMb AMB 17 58 43.3
comp=Z,5.1nm,0.6s,mb4.7
VRHR Novokhopersk 66.14 317 *e*P **P 17 58 42.3 -1.2**
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VRHR pmax pmax
comp=N,1.0nm,0.3s
VRHR pmax pmax
comp=E,2.0nm,0.3s
KLMR Klimovskoe 66.22 328 *e*P **P 17 58 41.8 -2.0**
KLMR pmax pmax
comp=Z,29nm,2.2s,mb4.9
KIV Kislovodsk 66.54 309 *e*P **P 17 58 45.9 -0.3**
comp=Z,13nm,1.0s,mb4.9
KIV Kislovodsk 66.54 309 *de*P **P 17 58 46.9 +0.7**
KIV *e* pP 17 58 56.6 -2.3
KIV *e* pP 17 59 00.4 +1.5
KIV pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
VORD Divnogorie 67.61 317 *e*P **P 17 58 51.6 -1.3**
VORD pmax pmax
comp=N,6.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
VSR Storozhevoye 67.65 318 *e*P **P 17 58 52.1 -1.0**
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
VSR pmax pmax
comp=E,7.0nm,0.5s
OBN Obninsk 68.53 322 P **P 17 58 52.0 -6.6**
OBN *e* pP 17 59 05.0 -6.3
OBN pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
JOF Joensuu 69.77 331 *e*P **P 17 59 03.9 -2.2**
JOF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
JOF Joensuu 69.77 331 *ep* **P 17 59 03.9 -2.2**
comp=Z,4.4nm,0.7s,mb4.5
ILAR Eielson Array 69.89 27 P **P 17 59 09.2 +2.4**
comp=Z,0.6nm,0.8s,mb3.6,baz=280,slow=7.1,SNR=7.4
ILAR LR LR 18 32 02.2
comp=Z,25nm,18.9s,MS3.5,baz=90,slow=38
KEV Kevo 70.05 338 *e*P **P 17 59 06.2 -1.5**
KEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
KEV Kevo 70.05 338 *ep* **P 17 59 06.2 -1.5**
comp=Z,3.2nm,0.6s,mb4.4
ARCES ARCESS Array B 70.61 338 P **P 17 59 10.7 -0.4**
comp=Z,2.1nm,0.7s,mb4.2,baz=80,slow=10.0,SNR=6.2
ARE0 ARCESS Array S 70.61 338 *e*P **P 17 59 10.1 -1.0**
MALT Malatya 70.90 304 *e*P **P 17 59 14.1 +0.7**
comp=Z,2.2nm,0.6s,mb4.3
MALT Malatya 70.90 304 *e*P **P 17 59 14.1 +0.7**
MALT pmax pmax
comp=Z,2.0nm,0.6s,mb4.2

KAF	**Kangasniemi**	**72.22**	**331**	*e*P		**P**	**17 59 15.7**	**-5.2**
KAF				pmax		pmax		
	comp=Z,2.0nm,0.7s,mb4.2							
KAF	**Kangasniemi**	**72.22**	**331**	*e*p		**P**	**17 59 15.7**	**-5.2**
	comp=Z,2.4nm,0.7s,mb4.2							
FINES	**FINESS Array B**	**72.51**	**330**	P		**P**	**17 59 21.9**	**-0.8**
	comp=Z,2.5nm,0.6s,mb4.3,baz=53,slow=6.5,SNR=9.9							
FINES				LR		LR	18 34 18.5	
	comp=Z,65nm,20.5s,MS3.9,baz=299,slow=38							
AKASG	**Malin Array Be**	**73.89**	**319**	P		**P**	**17 59 29.6**	**-1.4**
	comp=Z,1.4nm,0.6s,mb4.1,baz=57,slow=7.3,SNR=5.6							
BRTR	**Keskin Array B**	**74.10**	**307**	P		**P**	**17 59 32.5**	**0.0**
	comp=Z,1.6nm,0.6s,mb4.1,baz=108,slow=6.0,SNR=11							
NOA	**NORSAR Array B**	**79.29**	**332**	P		**P**	**18 00 00.3**	**-1.0**
NOA				LR		LR	18 38 56.5	
NOA	**NORSAR Array B**	**79.29**	**332**	P		**P**	**18 00 00.4**	**-1.0**
	comp=Z,0.9nm,0.8s,mb3.8,baz=74,slow=6.0,SNR=3.6							
NOA				LR		LR	18 38 56.4	
	comp=Z,67nm,18.1s,MS4.0,baz=60,slow=39							

ISCJB ***26*** *17:54:35.7±0.5,23°.24N±0°.02×121°.69E±0°.03,h24km±4km, Error ellipse: s-maj=4.5km s-min=3.4km az=136.1*
TAP ***26*** *17:54:36.5,23°.25N×121°.58E,h40km,ML3.2,C*
JMA ***26*** *17:54:37.2±0.3,23°.25N×121°.73E,h80km,M2.5*
ISC 26 17:54:36.3±0.5,23°.25N±0°.02×121°.66E±0°.02,h26km±3km, n38,σ0°.76/68,7C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.30**	**241**	⇓*i*P	**Pb**	**17 54 44.0**	**+0.5**
CHKT	baz=226			*i* S	**Sb**	**17 54 49.7**	**+1.4**
	baz=226						
TWF1	**Yuli**	**0.35**	**288**	⇑P	**Pb**	**17 54 44.8**	**+0.7**
TWF1	baz=291			S	**Sb**	**17 54 50.9**	**+1.5**
	baz=291						
EHY	**Hungye**	**0.40**	**310**	⇑*i*P	**Pb**	**17 54 45.4**	**+0.4**
EHY	baz=306			S	**Sb**	**17 54 51.5**	**+0.7**
	baz=306						
ELDTW	**Lidau**	**0.59**	**265**	*i* P	**Pb**	**17 54 47.2**	**-0.8**
ELDTW	baz=257			S	**Sb**	**17 54 54.7**	**-1.4**
	baz=257						
ESL	**Shilin**	**0.60**	**340**	P	**Pb**	**17 54 47.9**	**-0.3**
ESL	baz=338			S	**Sb**	**17 54 56.0**	**-0.4**
	baz=338						
TWG	**Pinlang**	**0.69**	**232**	P	**Pb**	**17 54 48.4**	**-1.2**
TWG	baz=236			*e*S	**Sb**	**17 54 57.3**	**-1.4**
	baz=236						
YUS	**Yu-Shan**	**0.69**	**291**	⇑*i*P	**Pb**	**17 54 49.8**	**0.0**
YUS	baz=292			S	**Sb**	**17 54 58.8**	**-0.1**
	baz=292						
HWA	**Hwalien**	**0.73**	**356**	*e*P	**Pb**	**17 54 50.3**	**-0.1**
	baz=10.0						
ALS	**Alishan**	**0.82**	**289**	⇑*i*P	**Pb**	**17 54 51.9**	**-0.1**
ALS	baz=290			S	**Sb**	**17 55 02.8**	**+0.1**
	baz=290						
STYT	**Tauyuan**	**0.83**	**264**	*e*P	**Pb**	**17 54 51.6**	**-0.5**
STYT	baz=262			S	**Sb**	**17 55 01.8**	**-1.2**
	baz=262						
TWD	**Chiawan**	**0.83**	**356**	*e*P	**Pb**	**17 54 51.5**	**-0.7**
TWD	baz=349			*e*S	**Sb**	**17 55 02.5**	**-0.5**
	baz=349						
ECL	**Taimali**	**0.91**	**225**	*e*P	**Pn**	**17 54 51.4**	**-2.1**
	baz=227						
WTP	**Ta-pu**	**0.96**	**270**	⇑P	**Pn**	**17 54 53.8**	**-0.3**
WTP	baz=269			S	**Sb**	**17 55 06.5**	**-0.1**
	baz=269						
CHN5	**Tsauling**	**0.96**	**291**	⇑*i*P	**Pn**	**17 54 54.2**	**0.0**
CHN5	baz=292			S	**Sb**	**17 55 07.5**	**+0.8**
	baz=292						
WHF	**Hehuan Shan**	**0.96**	**338**	*e*P	**Pn**	**17 54 53.3**	**-0.9**
WHF	baz=343			*e*S	**Sb**	**17 55 05.4**	**-1.3**
	baz=343						
CHN4	**Tsaushan**	**0.98**	**276**	P	**Pn**	**17 54 54.3**	**-0.1**
CHN4	baz=276			S	**Sb**	**17 55 07.9**	**+0.6**
	baz=276						
TYC	**Yuchr**	**0.98**	**312**	⇑*i*P	**Pn**	**17 54 54.2**	**-0.2**
TYC	baz=321			*e*S	**Sb**	**17 55 07.2**	**-0.1**
	baz=321						
CHN1	**Nanshi**	**1.04**	**267**	P	**Pn**	**17 54 55.1**	**-0.1**
CHN1	baz=265			S	**Sb**	**17 55 09.1**	**+0.3**
	baz=265						
SSD	**Sandimen**	**1.07**	**242**	*e*P	**Pn**	**17 54 55.6**	**0.0**
SSD	baz=234			*e*S	**Sn**	**17 55 09.8**	**+0.3**
	baz=234						
WNT	**Mingjian**	**1.09**	**305**	*e*P	**Pn**	**17 54 56.3**	**+0.4**
	baz=308						
TWT	**Tachien**	**1.09**	**336**	*e*P	**Pn**	**17 54 55.7**	**-0.3**
TWT	baz=346			*e*S	**Sn**	**17 55 08.5**	**-1.7**
	baz=346						
WGK	**Gukeng**	**1.10**	**294**	P	**Pn**	**17 54 56.1**	**+0.2**
WGK	baz=295			S	**Sn**	**17 55 10.8**	**+0.5**
	baz=295						
EAST	**Anshuo**	**1.14**	**221**	*e*P	**Pn**	**17 54 56.8**	**+0.2**
	baz=210						
ENA	**Nanau**	**1.18**	**4**	P	**Pn**	**17 54 56.6**	**-0.5**
ENA	baz=18			*e*S	**Sn**	**17 55 11.1**	**-1.2**
	baz=18						
TWM1	**Shoushan**	**1.21**	**250**	*e*P	**Pn**	**17 54 58.5**	**+0.9**
	baz=247						
NNS	**Nan Shan**	**1.22**	**348**	*e*P	**Pn**	**17 54 58.5**	**+0.9**
	baz=1.0						
TWQ1	**Liyutan**	**1.36**	**324**	*e*P	**Pn**	**17 55 00.3**	**+0.7**
TWQ1	baz=336			*e*S	**Sn**	**17 55 17.9**	**+1.1**
	baz=336						
TWC	**Suao**	**1.37**	**7**	*e*P	**Pn**	**17 54 59.4**	**-0.4**
TWC	baz=11			S	**Sn**	**17 55 16.8**	**-0.2**
	baz=11						
ENTT	**Nioudou**	**1.39**	**357**	*e*P	**Pn**	**17 55 00.7**	**+0.6**
	baz=1.0						
NSY	**Sanyi**	**1.42**	**325**	*e*P	**Pn**	**17 55 01.3**	**+0.8**
NSY	baz=327			*e*S	**Sn**	**17 55 20.1**	**+1.7**
	baz=327						
NSK	**Sanguang**	**1.45**	**349**	*e*P	**Pn**	**17 55 01.0**	**+0.2**
NSK	baz=352			*e*S	**Sn**	**17 55 18.0**	**-1.0**
	baz=352						
TWE	**Neicheng**	**1.47**	**0**	*e*P	**Pn**	**17 55 01.9**	**+0.8**
	baz=356						
YOJ	**Yonaguni jima**	**1.73**	**45**	P	**Pn**	**17 55 05.4**	**+0.7**
YOJ				*e*S	**Sn**	**17 55 26.4**	**+0.4**
HATJ	**Hateruma jima**	**2.13**	**67**	P	**Pn**	**17 55 10.4**	**+0.2**
HATJ				*e*S	**Sn**	**17 55 35.8**	**0.0**
IRIF	**Iriomote-Funau**	**2.19**	**60**	P	**Pn**	**17 55 11.5**	**+0.5**
IRIF				*e*S	**Sn**	**17 55 37.4**	**+0.2**
JKRS	**Kuro-shima**	**2.37**	**65**	P	**Pn**	**17 55 14.2**	**+0.7**
JKRS				*e*S	**Sn**	**17 55 42.1**	**+0.3**
JIJ	**Ishigaki jima**	**2.54**	**63**	P	**Pn**	**17 55 15.7**	**-0.1**
JIJ				*e*S	**Sn**	**17 55 44.4**	**-1.4**
JTJ	**Tarama**	**3.11**	**63**	P	**Pn**	**17 55 24.4**	**+0.7**
JTJ				*e*S	**Sn**	**17 56 00.3**	**+0.2**

ISCJB ***26*** *18:03:51.8±1.4,49°.1N±0°.1×154°.8E±0°.2,h97km±13km, mb3.6/7,Error ellipse: s-maj=25.3km s-min=10.6km az=136.7*
NEIC ***26*** *18:03:53.4±1.3,49°.06N×154°.88E,h95km±12km,mb4.0/1, Error ellipse: s-maj=19.4km s-min=11.7km az=142.0*
IDC ***26*** *18:03:53.7±2.9,49°.06N×154°.79E,h95km±26km,mb3.3/6, mb1 3.5/8,mb1mx3.3/24,mbtmp3.3/8,Error ellipse: s-maj=28.8km s-min=19.3km az=130.0*
ISC 26 18:03:53.6±1.3,49°.1N±0°.1×154°.8E±0°.2,h95km±11km,n14,
σ0°.74/15,mb3.6/7,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**4.39**	**23**	P	**Pn**	**18 04 58.6**	**+0.7**
	1.2nm,0.3s,baz=180,slow=12,SNR=66						
PET	**Petropavlovsk**	**4.60**	**30**	*e*Pn	**Pn**	**18 05 00.1**	**-0.6**
PET				*e*Sn	**Sn**	**18 05 52.6**	**-0.3**
YSS	**Yuzh-Sakhalins**	**8.36**	**260**	*e*Pn	**Pn**	**18 05 52.3**	**+0.5**
YSS				*e*Sn	**Sn**	**18 07 19.8**	**-4.7**
ASAJ	**Asahikawa**	**9.77**	**244**	P	**Pn**	**18 06 10.8**	**-0.2**
	1.1nm,0.3s,baz=70,slow=14,SNR=12						
YAK	**Yakutsk**	**19.04**	**322**	P	**Pn**	**18 08 09.1**	**-0.4**
MKAR	**Makanchi Array**	**46.89**	**296**	P	**P**	**18 12 14.3**	**+0.3**
	0.3nm,0.6s,mb3.2,baz=66,slow=7.5,SNR=4.5						
CMAR	**Chiang Mai Arr**	**54.04**	**256**	P	**P**	**18 13 09.2**	**+1.1**
	1.0nm,0.7s,mb4.0,baz=33,slow=7.6,SNR=10						
ABKAR	**Akbulak array**	**57.79**	**310**	*e*P	**P**	**18 13 34.2**	**-0.3**
	0.6nm,0.4s,mb4.0						
FINES	**FINESS Array B**	**62.38**	**335**	P	**P**	**18 14 05.0**	**-0.6**
	3.2nm,1.0s,mb4.3,baz=35,slow=5.4,SNR=7.5						
PDAR	**Pinedale Array**	**62.45**	**56**	pP	pP	18 14 22.6	-7.4
	0.8nm,0.8s,baz=318,slow=4.2,SNR=4.6						
WRA	**Warramunga Arr**	**71.12**	**200**	P	**P**	**18 15 00.1**	**-1.4**
	0.4nm,0.3s,mb3.7,baz=6.9,slow=6.4,SNR=5.5						
ASAR	**Alice Springs**	**74.82**	**200**	P	**P**	**18 15 23.1**	**-0.2**
ASAR	**Alice Springs**	**74.82**	**200**	P	**P**	**18 15 23.1**	**-0.2**
	0.3nm,0.7s,mb3.1,baz=20,slow=5.1,SNR=5.8						
TXAR	**Lajitas Array**	**75.36**	**62**	P	**P**	**18 15 27.9**	**+1.3**
	0.1nm,0.4s,mb2.9,baz=287,slow=9.3,SNR=3.4						
TXAR				pP	pP	18 15 44.9	-6.1
	0.2nm,0.6s,baz=290,slow=5.0,SNR=3.5						

IDC 26 18:14:06.0±3.7,5°.31S×138°.76E,h0km,mb3.3/1, mb1 3.7/4,mb1mx3.4/14,mbtmp3.5/4,ML3.4/3,Error ellipse: s-maj=112.9km s-min=33.1km az=92.0,Near south coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.17**	**196**	Pn	Pn	18 17 43.8	+2.0
	0.1nm,0.3s,baz=18,slow=13,SNR=5.7						
FITZ	**Fitzroy Crossi**	**18.06**	**224**	P	Pn	18 18 17.9	-0.6
	0.1nm,0.3s,baz=42,slow=14,SNR=3.3						
ASAR	**Alice Springs**	**18.84**	**194**	P	Pn	18 18 27.2	-0.9
	0.1nm,0.3s,baz=20,slow=11,SNR=16						
MKAR	**Makanchi Array**	**71.87**	**323**	P	P	18 25 31.1	+0.2
	0.3nm,0.8s,baz=118,slow=7.8,SNR=3.2						

ISCJB ***26*** *18:31:35.7±0.6,22°.78S±0°.05×66°.24W±0°.07,h249km±8km, mb4.3/11,Error ellipse: s-maj=10.8km s-min=7.3km az=178.6*
NEIC ***26*** *18:31:35.6±0.7,22°.82S×66°.20W,h233km±8km,mb4.5/10, Error ellipse: s-maj=12.7km s-min=8.9km az=97.0*
IDC ***26*** *18:31:36.5±1.2,22°.76S×66°.07W,h234km±10km,mb3.8/6, mb1 3.9/10,mb1mx3.7/17,mbtmp3.8/10,Error ellipse: s-maj=21.8km s-min=12.3km az=87.0*
GUC ***26*** *18:31:38.7±1.0,22°.55S×66°.70W,h270km,ML5.0*
ISC 26 18:31:36.4±0.6,22°.76S±0°.04×66°.23W±0°.07,h239km±8km, n42,σ1°.20/49,mb4.3/11,6C,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MACH	**Maria Elena**	**3.31**	**279**	⇑*i*P	**Pn**	**18 32 33.7**	**+2.0**
MACH				*i* S	**S**	**18 33 15.8**	**+0.4**
CEN1	**Los Morros**	**3.71**	**260**	*e*P	**Pn**	**18 32 36.9**	**+0.6**
CEN1				*i* S	**S**	**18 33 23.1**	**-0.5**
CEN1				AML	AML	18 33 26.0	
	comp=N,1μm,0.7s						
TOCH	**Tocopilla**	**3.74**	**280**	*e*P	**Pn**	**18 32 38.1**	**+1.6**
TOCH				*i* S	**S**	**18 33 22.9**	**-1.3**
TOCH				AML	AML	18 33 26.1	
	comp=N,617nm,0.6s						
MECH	**Mejillones**	**3.91**	**264**	⇑*i*P	**Pn**	**18 32 40.6**	**+2.1**
MECH				*e*S	**S**	**18 33 28.0**	**+0.2**
ANCH	**Antofagasta**	**3.96**	**256**	⇑*i*P	**Pn**	**18 32 36.5**	**-2.6**
ANCH				*i* S	**S**	**18 33 23.7**	**-5.1**
ANCH	**Antofagasta**	**3.96**	**256**	⇑*i*P	**Pn**	**18 32 36.5**	**-2.6**
ANCH				*i* S	**S**	**18 33 23.7**	**-5.1**
HMBC	**Humberston**	**4.21**	**305**	⇑*i*P	**Pn**	**18 32 43.1**	**+0.8**
HMBC				*i* S	**S**	**18 33 32.9**	**-1.6**
MNMC	**Miæe Miæ**	**4.79**	**318**	*e*P	**Pn**	**18 32 51.1**	**+1.8**
MNMC				*i* S	**S**	**18 33 46.6**	**-0.7**
PSGC	**Pisagua**	**4.81**	**310**	⇑*i*P	**Pn**	**18 32 49.4**	**-0.1**
PSGC				*i* S	**S**	**18 33 44.9**	**-2.8**
LPAZ	**La Paz**	**6.69**	**344**	*e*Pn	**Pn**	**18 33 15.0**	**+1.9**
LPAZ				P		18 33 15.2	
LPAZ				*e*S	**S**	**18 34 28.8**	**-1.6**
LPAZ				S	**S**	**18 34 31.5**	**+1.1**
LPAZ	**La Paz**	**6.69**	**344**	P	**Pn**	**18 33 15.2**	**+2.2**
	comp=N,3.7nm,0.3s,baz=172,slow=11,SNR=87						
LPAZ				S	**S**	**18 34 31.5**	**+1.1**
	comp=N,0.5nm,0.3s,baz=351,slow=15,SNR=5.4						
LCO	**Las Campanas**	**7.41**	**212**	*e*Pn	**Pn**	**18 33 21.5**	**-0.6**
	comp=N,11nm,0.4s						
SIV	**San Ignacio**	**8.31**	**37**	P	**Pn**	**18 33 33.2**	**-0.4**
	comp=N,8.3nm,0.3s,baz=226,slow=9.3,SNR=177						
CPUP	**Villa Florida**	**8.84**	**115**	P	**Pn**	**18 33 40.3**	**0.0**
	comp=N,0.1nm,0.3s,baz=266,slow=19,SNR=2.0						
CFAA	**Coronel Fontan**	**8.99**	**191**	P	**Pn**	**18 33 40.9**	**-1.2**
CFAA				S	**S**	**18 35 14.8**	**-8.8**
CFAA	**Coronel Fontan**	**8.99**	**191**	P	**Pn**	**18 33 40.9**	**-1.2**
	comp=N,0.6nm,0.3s,baz=19,slow=13,SNR=37						
CFAA				S	**S**	**18 35 14.8**	**-8.8**
	comp=N,1.0nm,0.3s,baz=282,slow=24,SNR=13						
TRQA	**Tornquist**	**15.67**	**167**	*e*P	**Pn**	**18 35 00.5**	**-4.4**
	comp=N,3.4nm,0.6s						
PLCA	**Paso Flores**	**18.28**	**191**	*e*P	**P**	**18 35 32.9**	**+0.4**
	comp=N,11nm,0.9s						
PLCA	**Paso Flores**	**18.28**	**191**	P	**P**	**18 35 33.3**	**+0.8**
	comp=N,0.6nm,0.3s,baz=9.7,slow=12,SNR=13						
RCBR	**Riachuelo**	**33.75**	**65**	*e*P	**P**	**18 37 55.6**	**-0.1**
	comp=N,28nm,1.0s,mb4.7						
FDF	**Fort de France**	**37.59**	**8**	*e*P	**P**	**18 38 27.4**	**-0.9**
	comp=N,28nm,0.5s,mb5.0						
ANWB	**Willy Bob**	**40.42**	**7**	*e*P	**P**	**18 38 48.0**	**-3.6**
	comp=N,47nm,0.6s,mb5.1						
WVT	**Waverly**	**62.03**	**340**	*e*P	**P**	**18 41 30.9**	**-0.6**
	comp=N,9.8nm,0.9s,mb4.4						
TXAR	**Lajitas Array**	**63.10**	**323**	P	**P**	**18 41 39.9**	**+1.2**
	comp=N,0.1nm,0.5s,baz=153,slow=6.1,SNR=2.7						
DBIC	**Dimbokro**	**66.74**	**72**	*e*P	**P**	**18 42 01.0**	**-1.4**
	comp=N,13nm,1.0s,mb4.5						
DBIC	**Dimbokro**	**66.74**	**72**	P	**P**	**18 42 01.3**	**-1.1**
	comp=N,6.1nm,0.7s,mb4.3,baz=207,slow=6.9,SNR=7.7						
QSPA	**South Pole Qui**	**67.44**	**180**	*e*P	**P**	**18 42 07.5**	**+1.8**
	comp=N,1.8nm,0.9s,mb3.7						
QSPA	**South Pole Qui**	**67.44**	**180**	P	**P**	**18 42 07.8**	**+2.1**
	comp=N,0.7nm,0.4s,mb3.6,baz=180,slow=3.0						
SCHQ	**Schefferville**	**77.28**	**360**	P	**P**	**18 43 03.9**	**0.0**
	comp=N,4.4nm,1.0s,mb4.0,baz=190,slow=7.3,SNR=4.0						
TSUM	**Tsumeb**	**77.30**	**106**	*e*P	**P**	**18 43 04.3**	**-0.7**
	comp=N,5.8nm,0.9s,mb4.2						
BOSA	**Boshof**	**80.66**	**117**	P	**P**	**18 43 22.4**	**-0.6**
BOSA	**Boshof**	**80.66**	**117**	P	**P**	**18 43 22.4**	**-0.6**
	comp=N,4.7nm,1.1s,mb4.0,baz=273,slow=10,SNR=5.9						
LBTB	**Lobatse**	**82.23**	**114**	*e*P	**P**	**18 43 30.3**	**-1.0**
ESDC	**Sonseca Array**	**85.01**	**43**	P	**P**	**18 43 45.2**	**+0.3**
	comp=N,2.0nm,0.8s,mb3.9,baz=240,slow=4.0,SNR=10						
KEST	**Kesra**	**92.10**	**52**	P	**P**	**18 44 19.7**	**+1.1**
	comp=N,1.2nm,0.8s,mb3.9,baz=184,slow=2.9,SNR=3.7						
WRA	**Warramunga Arr**	**133.05**	**207**	SKPbc	SKPbc	18 53 28.5	-0.7
	comp=N,1.0nm,0.8s,baz=156,slow=3.3,SNR=6.8						
ZALV	**Zalesovo Beam**	**141.97**	**28**	PKhKP	PKPpre	18 50 35.2	
	comp=N,0.6nm,0.6s,baz=337,slow=3.3,SNR=2.9						
ZALV				PKP	PKPdf	18 50 40.2	+0.8
	comp=N,0.8nm,0.4s,baz=270,slow=1.5,SNR=4.2						
ZALV				SKPbc	SKPbc	18 53 53.9	0.0
	comp=N,0.4nm,0.3s,baz=316,slow=4.0,SNR=2.9						
MK31	**Makanchi Array**	**145.12**	**39**	*e*P	PKPdf	18 50 45.6	+0.5
MKAR	**Makanchi Array**	**145.12**	**39**	PKPbc	PKPbc	18 50 46.0	+0.8
MKAR				SKPbc	SKPbc	18 54 02.4	+0.7
MKAR	**Makanchi Array**	**145.12**	**39**	PKPbc	PKPbc	18 50 46.0	+0.8
	comp=N,7.1nm,0.8s,baz=310,slow=3.2,SNR=58						
MKAR				SKPbc	SKPbc	18 54 02.4	+0.7
	comp=N,0.4nm,0.7s,baz=292,slow=3.3,SNR=3.6						
SONM	**Songino Array**	**154.29**	**12**	PKP	PKPdf	18 51 00.7	+1.2
SONM				PKPbc	PKPbc	18 51 08.9	+0.9
SONM				PKPab	PKPab	18 51 23.1	+0.2
SONM	**Songino Array**	**154.29**	**12**	PKP	PKPdf	18 51 00.7	+1.2
	comp=N,0.4nm,0.7s,baz=264,slow=1.4,SNR=3.1						
SONM				PKPbc	PKPbc	18 51 08.9	+0.9
	comp=N,0.6nm,0.7s,baz=350,slow=2.4,SNR=4.5						
SONM				PKPab	PKPab	18 51 23.1	+0.2
	comp=N,0.5nm,0.6s,baz=341,slow=2.7,SNR=3.9						

IDC ***26*** *18:33:23.8±1.3,30°.63N×83°.31E,h0km,mb3.6/9, mb1 3.7/10,mb1mx3.6/26,mbtmp3.6/10,ML3.4/1,MS3.5/3, Ms1 3.5/3,ms1mx2.6/32,Error ellipse: s-maj=39.8km s-min=18.8km az=57.0*
ISCJB ***26*** *18:33:24.7±3.7,30°.57N±0°.09×83°.12E±0°.08,h20km±29km, mb3.5/10,MS3.5/3,Error ellipse: s-maj=17.5km s-min=8.5km az=32.5*
NEIC ***26*** *18:33:28.8±1.3,30°.64N×83°.14E,h36km±14km,mb3.7/4, Error ellipse: s-maj=15.3km s-min=8.0km az=225.0*
ISC 26 18:33:25.4±4.9,30°.61N±0°.09×83°.16E±0°.09,h11km±33km, n23,σ0°.89/23,mb3.5/10,MS3.5/3,Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.98**	**95**	Pg	**Pn**	**18 35 15.0**	**+7.4**
LSA				Sg	**Sn**	**18 36 30.5**	**+3.5**
LSA				smax			
	comp=E,40nm,1.1s						
LSA	**Lhasa**	**6.98**	**95**	*e*Pn	**Pn**	**18 35 10.6**	**+3.0**
	comp=E,16nm,1.0s						
LSA				*e*Sn	**Sn**	**18 36 28.3**	**+1.3**
KBL	**Kabul**	**12.54**	**292**	Pn	**Pn**	**18 36 23.7**	**0.0**
MK31	**Makanchi Array**	**16.18**	**358**	*e*Pn	**Pn**	**18 37 12.1**	**-0.6**
MKAR	**Makanchi Array**	**16.18**	**358**	Pn	**Pn**	**18 37 13.6**	**+0.9**
	comp=E,0.2nm,0.3s,baz=197,slow=14,SNR=8.1						
CHTO	**Chiang Mai**	**18.51**	**126**	P	**Pn**	**18 37 42.1**	**+0.1**
	comp=E,1.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**18.75**	**127**	P	**Pn**	**18 37 44.7**	**-0.2**
	comp=E,0.0nm,0.3s,baz=312,slow=12,SNR=4.3						
KURK	**Kurchatov**	**20.37**	**352**	*e*P	**P**	**18 38 00.4**	**-1.5**
	comp=E,8.5nm,1.3s						
KURK	**Kurchatov**	**20.37**	**352**	P	**P**	**18 38 01.3**	**-0.7**
	comp=E,1.5nm,0.6s,baz=174,slow=9.3,SNR=14						
ZALV	**Zalesovo Beam**	**23.36**	**2**	P	**P**	**18 38 33.4**	**-0.4**
	comp=E,0.4nm,0.5s,mb3.1,baz=187,slow=10.0,SNR=3.4						
SONM	**Songino Array**	**24.75**	**39**	P	**P**	**18 38 47.1**	**+0.3**
	comp=E,0.7nm,0.7s,mb3.3,baz=229,slow=10,SNR=5.7						
ULN	**Ulaanbaatar**	**25.13**	**40**	P	**P**	**18 38 49.8**	**-0.5**
	comp=E,3.6nm,1.2s,mb3.8						
ABKAR	**Akbulak array**	**25.59**	**323**	*e*Pn	**P**	**18 38 55.8**	**+1.2**
	comp=E,0.9nm,0.6s,mb3.5						
AKTK	**Aktyubinsk**	**27.30**	**324**	P	**P**	**18 39 10.6**	**+0.6**
AKTO	**Aktyubinsk**	**27.30**	**324**	P	**P**	**18 39 10.6**	**+0.6**
	comp=E,0.3nm,0.3s,mb3.3,baz=114,slow=10.0,SNR=3.9						
KSRS	**Korea Array**	**37.44**	**67**	P	**P**	**18 40 36.5**	**-2.3**
	comp=E,0.7nm,0.7s,mb3.6,baz=271,slow=8.6,SNR=4.7						
KSRS				LR	LR	18 57 39.6	
	comp=E,13nm,18.7s,MS2.8,baz=270,slow=39						
FINES	**FINESS Array B**	**47.98**	**327**	P	**P**	**18 42 04.5**	**+0.6**
	comp=E,2.9nm,1.0s,mb4.3,baz=86,slow=10,SNR=3.4						
JMIC	**Jan Mayen**	**61.94**	**338**	LR	LR	19 11 21.4	
	comp=E,67nm,18.8s,MS3.8,baz=96,slow=37						
BORG	**Borgarnes**	**68.58**	**334**	LR	LR	19 14 32.2	
	comp=E,97nm,18.3s,MS4.1,baz=21,slow=36						
WRA	**Warramunga Arr**	**70.32**	**129**	P	**P**	**18 44 38.9**	**-0.4**
	comp=E,0.7nm,0.5s,mb3.8,baz=323,slow=6.4,SNR=8.8						
ASAR	**Alice Springs**	**72.66**	**132**	P	**P**	**18 44 52.9**	**-0.5**
	comp=E,0.2nm,0.8s,mb3.1,baz=312,slow=5.9,SNR=4.3						
ILAR	**Eielson Array**	**77.26**	**20**	P	**P**	**18 45 18.8**	**-0.6**
ILAR	**Eielson Array**	**77.26**	**20**	P	**P**	**18 45 18.8**	**-0.6**
	comp=E,0.4nm,0.7s,mb3.5,baz=277,slow=3.8,SNR=4.0						

CSEM ***26*** *18:48:06.9±0.9,45°.12N×15°.83E,h10km,ML2.5/4,Error ellipse: s-maj=18.3km s-min=6.2km az=97.0*
VIE ***26*** *18:48:09.8±0.7,45°.27N×15°.79E,h8km,mb1.7/1,ML1.9/1, Error ellipse: s-maj=3.8km s-min=2.7km az=129.0 30 km SE of Karlovac*
ISC 26 18:48:07.5±2.1,45°.15N±0°.04×15°.8E±0°.2,h10km,n10, σ0°.72/20,1C-1D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOJS	**Bojanci**	**0.53**	**312**	*i* Pg	**Pg**	**18 48 18.2**	**+0.3**
BOJS				*i* Sg	**Sg**	**18 48 24.9**	**+0.1**
BOJS							
	comp=Z,7.0nm,0.1s						
BOJS	**Bojanci**	**0.53**	**312**	*i* Pg	**Pg**	**18 48 18.2**	**+0.3**
BOJS				*i* Sg	**Sg**	**18 48 24.9**	**0.0**
	comp=Z,7.0nm,0.1s						
CRES	**Cresnjev**	**0.72**	**339**	*i* Pg	**Pg**	**18 48 21.6**	**+0.2**
CRES				*i* Sg	**Sg**	**18 48 30.9**	**0.0**
CRES							
	comp=Z,4.0nm,0.1s						
CRES	**Cresnjev**	**0.72**	**339**	*i* Pg	**Pg**	**18 48 21.6**	**+0.2**
CRES				*i* Sg	**Sg**	**18 48 30.9**	**+0.1**
	comp=Z,4.0nm,0.1s						
NVLJ	**Novalja**	**0.90**	**229**	*e*Pg	**Pg**	**18 48 22.9**	**-1.8**
NVLJ				Sg	**Sg**	**18 48 37.5**	**+1.1**
NVLJ	**Novalja**	**0.90**	**229**	*e*Pg	**Pg**	**18 48 22.9**	**-1.8**
NVL

comp=Z,43nm,18.6s,MS3.5,baz=311,slow=35
ARU Arti 49.48 47 P **P** 19 18 55.3 **-0.9**
3.8nm,0.9s,mb4.4
ARU Arti 49.48 47 P **P** 19 18 55.3 **-0.9**
3.8nm,0.9s,mb4.4
ILAR Eielson Array 50.41 329 P **P** 19 19 04.5 **+1.3**
0.3nm,0.7s,mb3.4,baz=52,slow=5.1,SNR=5.0
ILAR PcP PcP 19 20 20.8 -0.5
0.2nm,0.6s,baz=35,slow=3.3,SNR=4.1
ILAR LR LR 19 39 29.1
comp=Z,36nm,19.3s,MS3.4,baz=270,slow=35
ILAR Eielson Array 50.41 329 P **P** 19 19 04.5 **+1.3**
ILAR Eielson Array 50.41 329 PcP PcP 19 20 20.9 -0.4
DBIC Dimbokro 53.30 141 LR LR 19 38 32.7
comp=Z,72nm,20.9s,MS3.7,baz=72,slow=32
TXAR Lajitas Array 54.30 272 P **P** 19 19 33.3 **+0.8**
0.3nm,0.7s,mb3.3,baz=56,slow=9.2,SNR=4.8
TXAR LR LR 19 42 12.3
comp=Z,52nm,21.4s,MS3.6,baz=185,slow=36
TXAR Lajitas Array 54.30 272 P **P** 19 19 33.3 **+0.8**
MKAR Makanchi Array 66.45 42 P **P** 19 20 55.6 **+0.3**
0.9nm,1.0s,mb3.8,baz=324,slow=6.0,SNR=3.9
ASAR Alice Springs 148.56 19 PKPbc PKPbc 19 29 52.9 -0.1
0.6nm,0.7s,baz=342,slow=1.9,SNR=5.2
ASAR Alice Springs 148.56 19 PKPbc PKPbc 19 29 52.9 -0.1

IDC 26 19:44:01.8±2.1, 30.53N×83.22E, h0km, mb3.3/2, mb1 3.4/4, mb1mx3.2/25, mbtmp3.2/4, ML3.3/2, MS2.7/1, Ms1 2.7/1, ms1mx2.2/20, Error ellipse: s-maj=57.8km s-min=12.6km az=70.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AAK	**Ala-Archa**	**13.96**	**332**	LR		LR	19 52 49.4	
	comp=Z,30nm,18.5s,baz=34,slow=38							
MKAR	**Makanchi Array**	**16.26**	**358**	Pn		Pn	19 47 52.6	+1.2
	0.1nm,0.3s,baz=174,slow=12,SNR=3.8							
CMAR	**Chiang Mai Arr**	**18.66**	**126**	P		Pn	19 48 22.7	+1.2
	0.1nm,0.3s,baz=318,slow=7.9,SNR=4.4							
SONM	**Songino Array**	**24.78**	**39**	P		P	19 49 24.0	-1.1
	0.3nm,0.6s,baz=224,slow=10,SNR=3.3							
WRA	**Warramunga Arr**	**70.23**	**129**	P		P	19 55 15.9	-1.0
	0.4nm,0.5s,baz=325,slow=6.3,SNR=5.4							

*ISCJB **26** 19:50:38.1±0.9, 30.6N±0.1×83.1E±0.1, h10km, mb3.5/4, Error ellipse: s-maj=21.7km s-min=10.5km az=39.0*
*IDC **26** 19:50:39.3±1.7, 30.64N×83.27E, h0km, mb3.4/5, mb1 3.6/6, mb1mx3.4/25, mbtmp3.4/6, ML3.3/1, Error ellipse: s-maj=60.3km s-min=24.1km az=61.0*
*NEIC **26** 19:50:41.2±5.3, 30.73N×83.13E, h18km±37km, Error ellipse: s-maj=19.3km s-min=10.0km az=216.0*
ISC 26 19:50:40.4±0.8, 30.6N±0.1×83.1E±0.1, h10km, n11, σ1§16/11, mb3.5/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LSA	**Lhasa**	**7.01**	**96**	*e*Pn		**Pn**	**19 52 23.1**	**-0.1**
	3.5nm,0.7s							
KBL	**Kabul**	**12.49**	**292**	*e*Pn		**Pn**	**19 53 38.4**	**+0.1**
TKM2	**Tokmak 2**	**13.66**	**336**	*e*Pn		**Pn**	**19 53 52.5**	**-1.6**
MKAR	**Makanchi Array**	**16.15**	**358**	Pn		**Pn**	**19 54 29.8**	**+2.4**
MKAR	**Makanchi Array**	**16.15**	**358**	Pn		**Pn**	**19 54 29.8**	**+2.4**
	0.1nm,0.3s,baz=183,slow=11,SNR=3.7							
CMAR	**Chiang Mai Arr**	**18.79**	**127**	P		**Pn**	**19 55 00.9**	**+0.5**
	0.0nm,0.3s,baz=312,slow=11,SNR=5.0							
KURK	**Kurchatov**	**20.34**	**352**	P		**P**	**19 55 15.2**	**-1.5**
	0.6nm,0.8s,baz=183,slow=11,SNR=4.2							
SONM	**Songino Array**	**24.75**	**39**	P		**P**	**19 56 02.0**	**0.0**
	0.3nm,0.6s,mb3.0,baz=223,slow=9.7,SNR=3.7							
FINES	**FINESS Array B**	**47.94**	**327**	P		**P**	**19 59 20.7**	**+1.9**
	1.9nm,1.0s,mb4.1,baz=116,slow=16,SNR=3.0							
WRA	**Warramunga Arr**	**70.37**	**129**	P		**P**	**20 01 54.1**	**-0.6**
	0.6nm,0.5s,mb3.8,baz=323,slow=6.3,SNR=5.8							
ASAR	**Alice Springs**	**72.70**	**132**	P		**P**	**20 02 08.3**	**-0.4**
	0.4nm,0.9s,mb3.4,baz=305,slow=5.1,SNR=3.2							

*NEIC **26** 20:02:27.6, 19.49N×65.77W, h80km, MD3.5(RSPR), After RSPR.*
RSPR 26 20:02:27.6, 19.49N×65.77W, h80km±10km, MD3.5/3, 6C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CBYP	**Canovanas**	**1.22 184**		*e*P		Pn	20 02 47.3	-2.0
CBYP	**Canovanas**	**1.22 184**		*e*P		Pn	20 02 47.3	-2.0
STVI	**Saint Thomas**	**1.37 146**		*e*P		Pn	20 02 51.0	-0.3
STVI	**Saint Thomas**	**1.37 146**		*e*P		Pn	20 02 51.0	-0.3
MTP	**Monte Pirata**	**1.40 172**		*e*P		Pn	20 02 50.6	-1.1
MTP	**Monte Pirata**	**1.40 172**		*e*P		Pn	20 02 50.6	-1.1
SJG	**San Juan**	**1.42 195**		*e*S		Sn	20 03 09.7	-0.5
SJG	**San Juan**	**1.42 195**		*e*S		Sn	20 03 09.7	-0.5
AOPR	**Arecibo Observ**	**1.47 220**		*e*P		Pn	20 02 51.9	-0.7
AOPR				*e*S		Sn	20 03 11.0	-0.4
AOPR	**Arecibo Observ**	**1.47 220**		*e*P		Pn	20 02 51.9	-0.7
AOPR				*e*S		Sn	20 03 11.0	-0.4
CELP	**Cerrillos**	**1.61 209**		*e*P		Pn	20 02 53.8	-0.5
CELP	**Cerrillos**	**1.61 209**		*e*P		Pn	20 02 53.8	-0.5
ICM	**Isla Caja Muer**	**1.74 204**		*e*S		Sn	20 03 17.5	-0.2
ICM	**Isla Caja Muer**	**1.74 204**		*e*S		Sn	20 03 17.5	-0.2

IDC 26 20:12:31.9±1.6, 2.16N×121.94E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/20, mbtmp3.4/3, MS3.3/2, Ms1 3.3/2, ms1mx2.8/18, Error ellipse: s-maj=268.0km s-min=25.3km az=61.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.46**	**170**	LR		LR	20 27 12.3	
	comp=Z,56nm,19.0s,baz=261,slow=43							
WRA	**Warramunga Arr**	**25.11**	**152**	P		P	20 17 58.2	-0.4
	0.8nm,0.8s,baz=332,slow=9.9,SNR=5.3							
ASAR	**Alice Springs**	**28.19**	**156**	P		P	20 18 26.8	+0.4
	0.5nm,0.6s,baz=344,slow=14,SNR=11							
CTA	**Charters Tower**	**32.53**	**134**	LR		LR	20 32 10.7	
	comp=Z,60nm,18.1s,baz=206,slow=36							
MKAR	**Makanchi Array**	**56.23**	**328**	P		P	20 22 13.9	0.0
	0.2nm,0.5s,baz=132,slow=9.0,SNR=3.4							

IDC 26 20:24:51.2±1.4, 4.73S×144.61E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.7/16, mbtmp3.7/7, ML3.9/1, MS3.6/1, Ms1 3.5/1, ms1mx2.5/22, Error ellipse: s-maj=53.3km s-min=21.3km az=103.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.13**	**213**	P		Pn	20 29 05.1	+0.5
	0.4nm,0.3s,baz=30,slow=10,SNR=10							
ASAR	**Alice Springs**	**21.47**	**208**	P		P	20 29 41.5	0.0
	0.4nm,0.4s,baz=30,slow=15,SNR=13							
FITZ	**Fitzroy Crossi**	**22.82**	**233**	P		P	20 29 56.4	+0.4
	0.8nm,0.5s,baz=65,slow=10,SNR=8.9							
STKA	**Stephens Creek**	**27.15**	**186**	P		P	20 30 35.8	-0.5
	2.4nm,0.7s,baz=2.1,slow=12,SNR=5.3							
STKA				LR		LR	20 43 23.3	
	comp=Z,112nm,20.0s,baz=192,slow=41							
MKAR	**Makanchi Array**	**75.02**	**321**	P		P	20 36 35.2	+0.5
	0.7nm,0.9s,baz=100,slow=9.8,SNR=4.3							
ZALV	**Zalesovo Beam**	**76.69**	**328**	P		P	20 36 43.3	-0.7
	0.4nm,0.4s,baz=124,slow=7.2,SNR=3.0							
ILAR	**Eielson Array**	**85.27**	**24**	P		P	20 37 30.4	+0.8
	0.3nm,0.7s,baz=258,slow=4.2,SNR=4.1							

*ISCJB **26** 20:36:23.6±0.9, 36.50N±0.07×0.95E±0.07, h15km±19km, Error ellipse: s-maj=13.5km s-min=5.8km az=143.5*
*CSEM **26** 20:36:24.3±0.2, 36.42N×0.97E, h10km, mb3.7/9, Error ellipse: s-maj=6.1km s-min=4.1km az=35.0*
*MDD **26** 20:36:24.4±0.4, 36.46N×0.99E, h0km, mb3.7/9, Error ellipse: s-maj=7.2km s-min=3.9km az=52.0, PRIMO*
*NEIC **26** 20:36:25.6, 36.51N×0.93E, h0km, MG3.7(MDD), After MDD.*
*CRAAG **26** 20:36:26.0, 36.28N×1.20E, Ml3.3*
ISC 26 20:36:24.4±0.9, 36.45N±0.05×0.99E±0.06, h14km±11km, n97, σ1§33/158, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ECHF	**Ech Chlef**	**0.41**	**136**	P		**Pg**	**20 36 31.0**	**-1.7**
ECHF	**Ech Chlef**	**0.41**	**136**	P		**Pg**	**20 36 31.0**	**-1.7**
ECHA	**Ech Chlef**	**0.43**	**135**	P		**Pg**	**20 36 31.0**	**-2.0**
ECHA	**Ech Chlef**	**0.43**	**135**	P		**Pg**	**20 36 31.0**	**-2.0**
EBNR	**Beni Rached**	**0.47**	**110**	P		**Pg**	**20 36 32.9**	**-0.8**
EBNR	**Beni Rached**	**0.47**	**110**	P		**Pg**	**20 36 32.9**	**-0.8**
EANR	**'Ain N'Sour**	**0.51**	**170**	P		**Pg**	**20 36 33.9**	**-0.6**
EANR	**'Ain N'Sour**	**0.51**	**170**	P		**Pg**	**20 36 33.9**	**-0.6**
EANR	**'Ain N'Sour**	**0.51**	**170**	P		**Pg**	**20 36 33.9**	**-0.6**
EANR	**'Ain N'Sour**	**0.51**	**170**	P		**Pg**	**20 36 33.9**	**-0.6**
ETRT	**Tiaret**	**1.09**	**166**	P		**Pb**	**20 36 45.6**	**+0.5**
ETRT	**Tiaret**	**1.09**	**166**	P		**Pb**	**20 36 45.6**	**+0.5**
ETRT	**Tiaret**	**1.09**	**166**	P		**Pb**	**20 36 45.6**	**+0.5**
ETRT	**Tiaret**	**1.09**	**166**	P		**Pb**	**20 36 45.6**	**+0.5**
EMHD	**Djebel Mahouad**	**1.61**	**98**	P		**Pn**	**20 36 53.7**	**+1.3**
EMHD	**Djebel Mahouad**	**1.61**	**98**	P		**Pn**	**20 36 53.7**	**+1.3**
EMHD	**Djebel Mahouad**	**1.61**	**98**	P		**Pn**	**20 36 53.7**	**+1.3**
EMHD	**Djebel Mahouad**	**1.61**	**98**	P		**Pn**	**20 36 53.7**	**+1.3**
EMUR	**La Murta**	**2.26**	**309**	P		**Pn**	**20 37 01.1**	**-0.2**
EMUR				S		Sn	20 37 27.2	-1.7
EMUR	**La Murta**	**2.26**	**309**	P		**Pn**	**20 37 01.1**	**-0.2**
	4.5nm,0.3s,SNR=12							
EMUR				S		Sn	20 37 27.2	-1.7
	1.7nm,0.2s						

BGS ***26*** *21:00:32.5±1.4,8.45S×74.46W,h154km,mb5.6*
ISCJB ***26*** *21:00:34.9±0.1,7.64S±0.02×74.47W±0.02,h152km, mb5.8/402, Error ellipse: s-maj=2.8km s-min=1.9km az=30.8*
MOS ***26*** *21:00:35.3±0.9,7.51S×74.50W,h151km,mb5.8/107, MS5.4/12, Error ellipse: s-maj=6.0km s-min=4.0km az=72.4*
BJI ***26*** *21:00:35.6,7.60S×74.40W,h154km,mB6.2/35*
NEIC ***26*** *21:00:36.6±0.1,7.64S×74.38W,h154km,mb6.0/297, ME5.8,MW6.4,MW6.4,MD6.0(IGQ),Error ellipse: s-maj=3.0km s-min=2.4km az=38.0 Broadband fault plane solution: P waves. NP1:φs5.00000°,δ45.00000°, λ-90.00000°. NP2:φs185.00000°,δ45.00000°, λ-90.00000°. Principal axes: T Plg0.0000°, Azm95.0000°; N Plg0.0000°, Azm0.0000°; P Plg90.0000°, Azm0.0000°; Moment Tensor Solution. s172 Moment tensor: Scale 10¹⁸ Nm; Mrr-3.66; Mθθ-0.29; Mϕϕ3.95; Mrθ1.17; Mϕθ0.30; Mϕr-1.64; Best double couple: M₀4.30000×10¹⁸ NP1:φs201.00000°,δ36.00000°, λ-62.00000°. NP2:φs347.00000°,δ59.00000°, λ-109.00000°. Principal axes: T 4.2900, Plg11.0000°, Azm90.0000°; N 0.0700, Plg16.0000°, Azm357.0000°; P -4.3600, Plg69.0000°, Azm214.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [IV] at Pucallpa and [II] at Lima. Also felt at Bagua Grande, Banos, Bellavista, Campoverde, Chachapoyas, Chimbote, Contamana, Huancayo, Huanuco, Iquitos, Moyobamba, Santiago de Chuco, Saposoa, Soritor, Tarapoto, Tarma, Tingo Maria, Tocache, Trujillo and Yurimaguas. Felt at Ambato, Banos, Eloy Alfaro, Guayaquil and Quito, Ecuador. Also felt at Cruzeiro do Sul, Eirunepe, Tabatinga and Tarauaca, Brazil.
IDC ***26*** *21:00:37.0±0.3,7.59S×74.39W,h157km±2km,mb5.5/35, mb1 5.6/36,mb1mx5.6/36,mbtmp5.5/36,MS5.4/6, Ms1 5.4/6,ms1mx5.1/23 Error ellipse: s-maj=8.8km s-min=5.3km az=79.0*
SZGRF ***26*** *21:00:37.0,8.97S×72.38W,h140km,Peru-Brazil border region*
DJA ***26*** *21:00:38,7.92S×74.32W,h149km,mb6.5/9*
GCMT ***26*** *21:00:40.2±0.1,7.76S×74.49W,h158km,MW6.4, Moment Tensor Solution. s116,c283; s87,c170; Moment tensor: Scale 10¹⁸Nm; Mrr-4.07±.02; Mθθ-0.34±.03; Mϕϕ4.41±.03; Mrθ1.59±.02; Mϕθ0.02±.03; Mϕr-1.44±.02; Best double couple: M₀4.80000×10¹⁸ NP1:φs198.00000°,δ39.00000°,λ-60.00000°. NP2: φs341.00000°,δ57.00000°,λ-112.00000°. Principal axes: T 4.6600, Plg10.0000°, Azm87.0000°; N 0.1900, Plg18.0000°, Azm354.0000°; P -4.8600, Plg69.0000°, Azm204.0000°; Data Used: II IU IC G CN. Surface waves: sta=112, comp=274, per= 50.*

ISC 26 21:00:36.7±0.1,7.66S±0.02×74.37W±0.02,h154km, h154km±.5km:pP-P,n1960,c0884/1597,mb5.8/402, 281C-401D,Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		
ATAH	**Atahualpa**	**4.03**	**277**	P	**Pn**	**21 01 35.0**	**-2.5**
	2μm,0.3s,baz=112,slow=8.7,SNR=2869						
ATAH				S	**Sn**	**21 02 19.5**	**-5.2**
	2μm,0.3s,baz=327,slow=7.6,SNR=5.1						
NNA	**Nana**	**4.94**	**209**	P	**Pn**	**21 01 47.4**	**-2.1**
NNA				S	**Sn**	**21 02 39.2**	**-7.0**
NNA	**Nana**	**4.94**	**209**	P	**Pn**	**21 01 47.4**	**-2.1**
	795nm,0.3s,baz=17,slow=9.2,SNR=228						
NNA				S	**Sn**	**21 02 39.2**	**-7.0**
	1μm,0.3s,baz=192,slow=14,SNR=4.9						
NNA	**Nana**	**4.94**	**209**	Pn	**Pn**	**21 01 48.0**	**-1.4**
	28μm,0.3s						
OTAV	**Otavalo**	**8.84**	**332**	⇑*i*Pn	**Pn**	**21 02 40.5**	**-0.9**
OTAV				eSn	Px	21 03 50.5	
LPAZ	**La Paz**	**10.52**	**145**	P	**Pn**	**21 03 02.2**	**-1.4**
	33nm,0.3s,baz=329,slow=12,SNR=764						
LPAZ				S	**Sn**	**21 04 59.8**	**-0.3**
	60nm,0.3s,baz=157,slow=13,SNR=3.7						
LPAZ				LR	LR	21 07 36.9	
	comp=Z,18μm,20.8s,baz=108,slow=40						
LPAZ	**La Paz**	**10.52**	**145**	P	**Pn**	**21 03 02.2**	**-1.4**
LPAZ				S	**Sn**	**21 04 59.8**	**-0.3**
ROSC	**El Rosal**	**12.44**	**0**	⇑*e*Pn	**Pn**	**21 03 29.3**	**+0.7**
ROSC				eSn	**Sn**	**21 05 45.6**	**-0.7**
ROSC	**El Rosal**	**12.44**	**0**	P	**Pn**	**21 03 31.1**	**+2.4**
	16nm,0.3s,baz=149,slow=5.1,SNR=47						
ROSC				S	**Sn**	**21 05 48.1**	**+1.8**
	22nm,0.3s,baz=277,slow=22,SNR=2.9						
ROSC				LR	LR	21 09 05.4	
	comp=Z,15μm,18.6s,baz=197,slow=41						
SIV	**San Ignacio**	**15.41**	**124**	P	**Pn**	**21 04 05.3**	**-0.9**
	43nm,0.3s,baz=305,slow=12,SNR=259						
SIV				S	**S**	**21 07 03.8**	**+5.6**
	18nm,0.3s,baz=236,slow=17,SNR=3.5						
CEN1	**Los Morros**	**16.14**	**166**	*e*P	**Pn**	**21 04 16.8**	**+1.7**
SDV	**Santo Domingo**	**16.86**	**13**	⇑*e*Pn	**Pn**	**21 04 22.9**	**-0.8**
	2μm,1.1s						
SDV				eS	**S**	**21 07 31.8**	**+0.5**
PAYG	**Puerto Ayora**	**17.32**	**293**	⇑*i*P	**Pn**	**21 04 29.0**	**-0.4**
	4μm,1.2s						
PAYG				eS	**S**	**21 07 41.2**	**+0.3**
BCIP	**Isla Barro Col**	**17.58**	**342**	*e*Pn	**Pn**	**21 04 33.0**	**+0.5**
	3μm,1.4s						
BCIP				eS	**S**	**21 07 47.7**	**+1.6**
BCIP	**Isla Barro Col**	**17.58**	**342**	*e*P	**Pn**	**21 04 33.5**	**+1.0**
BRU2	**Volcan**	**18.33**	**333**	*e*P	**P**	**21 04 41.5**	**+2.0**
ACR	**Cerro Adams**	**18.43**	**331**	*e*P	**P**	**21 04 43.6**	**+3.1**
QCR	**Quepos**	**19.58**	**330**	*e*P	**P**	**21 04 54.9**	**+1.9**
URSC	**Urasca**	**19.75**	**332**	⇑*e*P	**P**	**21 04 56.9**	**+2.1**
LAJ	**Bijagual**	**19.94**	**331**	*e*P	**P**	**21 04 59.9**	**+3.0**
PRS1	**Puriscal**	**20.13**	**330**	*e*P	**P**	**21 05 01.6**	**+2.6**
PCRV	**Puerto La Cruz**	**20.20**	**29**	P	**P**	**21 05 00.1**	**+0.4**
	222nm,0.7s,baz=196,slow=6.4,SNR=41						
PCRV				pP		21 05 28.1	
	760nm,0.9s,baz=72,slow=4.5,SNR=2.9						
PCRV				S	**S**	**21 08 40.4**	**+2.4**
	30nm,0.8s,baz=351,slow=18,SNR=1.5						
CGA2	**Cerro Gallo 2**	**20.24**	**330**	*e*P	**P**	**21 05 02.5**	**+2.4**
JCR	**Jicaral**	**20.42**	**328**	*e*P	**P**	**21 05 03.9**	**+1.8**
JTS	**JuntasAbangare**	**20.72**	**329**	⇓*e*Pn	**P**	**21 05 06.6**	**+1.4**
	1μm,1.3s						
JTS				eS	**S**	**21 08 54.0**	**+5.8**
JTS	**JuntasAbangare**	**20.72**	**329**	*d*⇓*i*P	**P**	**21 05 06.0**	**+0.8**
JTS	**JuntasAbangare**	**20.72**	**329**	*e*P	**P**	**21 05 08.3**	**+3.0**
VCR	**Vista de Mar**	**20.93**	**327**	*e*P	**P**	**21 05 10.8**	**+3.4**
LCO	**Las Campanas**	**21.52**	**171**	⇓*e*Pn	**P**	**21 05 13.9**	**+0.3**
	605nm,1.0s,mb6.0						
LCO				eS	**S**	**21 09 04.5**	**+1.7**
ALNG	**Atlantic LNG**	**21.76**	**36**	*e*	pP	21 05 48.6	+4.8
TPP	**Pointe-a-Pierr**	**22.01**	**36**	⇑*e*P	**P**	**21 05 19.8**	**+0.8**
TPP				eP		21 05 50.7	
TPP	**Pointe-a-Pierr**	**22.01**	**36**	⇑*e*P	**P**	**21 05 19.8**	**+0.8**
TPP	**Pointe-a-Pierr**	**22.01**	**36**	*e*	pP	21 05 50.7	+4.2
SSN	**San Juan del S**	**22.03**	**329**	*e*P	**P**	**21 05 20.7**	**+1.6**
CONN	**Concepcion**	**22.14**	**329**	*e*P	**P**	**21 05 21.7**	**+1.5**
TCE	**Chacachacare**	**22.14**	**35**	*e*P	**P**	**21 05 20.5**	**+0.1**
TCE				eP		21 05 51.9	
TCE	**Chacachacare**	**22.14**	**35**	*e*P	**P**	**21 05 20.5**	**+0.1**
TCE	**Chacachacare**	**22.14**	**35**	*e*	pP	21 05 51.9	+4.0
TRN	**Trinidad (W)**	**22.30**	**36**	⇑*e*P	**P**	**21 05 21.2**	**-0.7**
TRN				eP		21 05 50.9	
TRN	**Trinidad (W)**	**22.30**	**36**	⇑*e*P	**P**	**21 05 21.2**	**-0.7**
TRN	**Trinidad (W)**	**22.30**	**36**	*e*	pP	21 05 50.9	+1.2
TBH	**Brigand Hill**	**22.37**	**36**	⇑*e*P	**P**	**21 05 23.3**	**+0.8**
TBH				eP		21 05 55.7	
TBH	**Brigand Hill**	**22.37**	**36**	⇑*e*P	**P**	**21 05 23.3**	**+0.8**
TBH	**Brigand Hill**	**22.37**	**36**	*e*	pP	21 05 55.7	+5.3
APON	**Apoyo**	**22.66**	**329**	*e*P	**P**	**21 05 26.8**	**+1.6**
APON				AML	AML	21 06 01.4	
	comp=Z,27nm,0.8s						
MGAN	**Managua**		**22.95**	**329**	*e*P	**P**	**21 05 28.2**	**+0.3**
CSAN			**23.07**	**329**	*e*P	**P**	**21 05 29.6**	**+0.6**
HUEN			**23.07**	**329**	*e*P	**P**	**21 05 30.8**	**+1.8**
TPR	**Prospect**		**23.10**	**36**	⇑*e*P	**P**	**21 05 30.5**	**+1.3**
TPR					eP		21 06 01.0	
TPR	**Prospect**		**23.10**	**36**	⇑*e*P	**P**	**21 05 30.5**	**+1.3**
TPR	**Prospect**		**23.10**	**36**	*e*	pP	21 06 01.0	+2.7
BOT	**Bacolet**		**23.12**	**36**	⇓*e*P	**P**	**21 05 30.5**	**+1.1**
BOT					*e*P		21 06 01.5	
BOT	**Bacolet**		**23.12**	**36**	⇓*e*P	**P**	**21 05 30.5**	**+1.1**
BOT	**Bacolet**		**23.12**	**36**	*e*	pP	21 06 01.5	+3.1
COPN	**Copaltepe**		**23.16**	**328**	*e*P	**P**	**21 05 31.2**	**+1.4**
COPN					AML	AML	21 06 12.9	
	comp=Z,142nm,0.9s							
TOSP	**Speyside**		**23.33**	**36**	*e*P	**P**	**21 05 31.4**	**+0.1**
TOSP	**Speyside**		**23.33**	**36**	*e*	**S**	**21 09 33.5**	**+0.9**
GRGR	**Grenville**		**23.38**	**33**	⇑*i*P	**P**	**21 05 30.4**	**-1.4**
	comp=Z,4μm,1.1s,mb6.8							
GRGR					*e*		21 06 02.3	
GRGR					eS	**S**	**21 09 31.5**	**-1.8**
GRGR	**Grenville**		**23.38**	**33**	*e*P	**P**	**21 05 30.7**	**-1.0**
GRW	**Mount Saint Ca**		**23.40**	**33**	⇓*e*P	**P**	**21 05 32.7**	**+0.7**
GRW					eP		21 06 03.7	
GRW	**Mount Saint Ca**		**23.40**	**33**	⇓*e*P	**P**	**21 05 32.7**	**+0.7**
GRW	**Mount Saint Ca**		**23.40**	**33**	⇓*e*P	**P**	**21 05 32.7**	**+0.8**
GRW	**Mount Saint Ca**		**23.40**	**33**	*e*	pP	21 06 03.7	+2.3
GRHS	**Sauteurs**		**23.46**	**33**	⇓*e*P	**P**	**21 05 32.3**	**-0.2**
GRHS					eP		21 06 06.2	
GRHS	**Sauteurs**		**23.46**	**33**	⇓*e*P	**P**	**21 05 32.3**	**-0.2**
GRHS	**Sauteurs**		**23.46**	**33**	*e*	pP	21 06 06.2	+4.0
CNGN	**Cerro Negro**		**23.48**	**328**	*e*P	**P**	**21 05 31.8**	**-0.9**
CNGN					AML	AML	21 06 16.2	
	comp=Z,33nm,0.6s							
GRSS	**Sisters**		**23.54**	**33**	⇑*e*P	**P**	**21 05 33.4**	**+0.1**
GRSS					eP		21 06 06.5	
GRSS	**Sisters**		**23.54**	**33**	⇑*e*P	**P**	**21 05 33.4**	**+0.1**
GRSS	**Sisters**		**23.54**	**33**	*e*	pP	21 06 06.5	+3.5
GRIC	**Isle de Caille**		**23.54**	**33**	*e*P	**P**	**21 05 33.9**	**+0.6**
GRIC	**Isle de Caille**		**23.54**	**33**	*e*	pP	21 06 06.0	+3.0
CMCH	**Combarbala**		**23.60**	**173**	*e*P	**P**	**21 05 33.8**	**+0.2**
CMCH	**Combarbala**		**23.60**	**173**	*e*P	**P**	**21 05 33.8**	**+0.2**
GRCU	**Cariacou**		**23.77**	**33**	⇓*e*P	**P**	**21 05 34.9**	**-0.4**
GRCU					eP		21 06 07.8	
GRCU	**Cariacou**		**23.77**	**33**	⇓*e*P	**P**	**21 05 34.9**	**-0.4**
GRCU	**Cariacou**		**23.77**	**33**	*e*	pP	21 06 07.8	+2.4
CRIN	**San Cristobal**		**23.83**	**328**	*e*P	**P**	**21 05 36.3**	**+0.4**
CFAA	**Coronel Fontan**		**24.50**	**167**	P	**P**	**21 05 41.8**	**0.0**
CFAA					pP		21 06 14.3	
CFAA					S	**S**	**21 09 50.4**	**-0.5**
CFAA	**Coronel Fontan**		**24.50**	**167**	P	**P**	**21 05 41.8**	**0.0**
	comp=Z,29nm,0.7s,mb4.9,baz=342,slow=9.8,SNR=278							
CFAA					pP		21 06 14.3	
	comp=Z,12nm,0.6s,baz=356,slow=6.5,SNR=2.6							
CFAA					S	**S**	**21 09 50.4**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=216,slow=21,SNR=4.0							
SVB	**Belmont**		**24.54**	**32**	*e*P	**P**	**21 05 42.0**	**-0.4**
SVB	**Belmont**		**24.54**	**32**	*e*P	**P**	**21 05 42.0**	**-0.4**
SSV	**Crater Summit**		**24.62**	**32**	*e*P	**P**	**21 05 42.5**	**-0.5**
SSV					eP		21 06 19.3	
SSV	**Crater Summit**		**24.62**	**32**	*e*P	**P**	**21 05 42.5**	**-0.5**
SSV	**Crater Summit**		**24.62**	**32**	*e*	pP	21 06 19.3	+4.8
CPUP	**Villa Florida**		**24.64**	**141**	*e*P	**P**	**21 05 41.5**	**-1.6**
CPUP					P		21 05 42.4	
CPUP					S	**S**	**21 09 52.2**	**-1.2**
CPUP	**Villa Florida**		**24.64**	**141**	P	**P**	**21 05 42.4**	**-0.8**
	comp=Z,451nm,0.9s,mb6.0,baz=308,slow=9.2,SNR=531							
CPUP					S	**S**	**21 09 52.2**	**-1.2**
	comp=Z,46nm,0.9s,baz=51,slow=20,SNR=1.8							
CPUP					P3KPbc		21 38 48.6	
	comp=Z,1.4nm,0.5s,baz=154,slow=4.7,SNR=5.7							
CPUP	**Villa Florida**		**24.64**	**141**	P	**P**	**21 05 42.4**	**-0.8**
CPUP					S	**S**	**21 09 52.2**	**-1.2**
CPUP					pmax	pmax		
	comp=Z,451nm,0.9s							
CPUP					smax			
	comp=N,46nm,0.9s							
CPUP					pmax	pmax		
	comp=Z,1.0nm,0.5s							
MCLT	**Moule a Chique**		**25.07**	**32**	*e*P	**P**	**21 05 42.0**	**-5.1**
MCLT					eP		21 05 45.9	
MCLT	**Moule a Chique**		**25.07**	**32**	*e*P	**P**	**21 05 42.0**	**-5.1**
MCLT	**Moule a Chique**		**25.07**	**32**	*e*P	**P**	**21 05 45.9**	**-1.2**
BLLM	**Bellamira**		**25.09**	**327**	*e*P	**P**	**21 05 47.5**	**+0.3**
TGUH	**Tegucigalpa,Un**		**25.09**	**329**	⇓*e*P	**P**	**21 05 47.6**	**+0.2**
	comp=Z,3μm,1.8s,mb6.6							
TGUH					*e*	pP	21 06 19.6	+0.3
TGUH					eS	**S**	**21 10 01.6**	**+0.9**
TGUH	**Tegucigalpa,Un**		**25.09**	**329**	*e*P	**P**	**21 05 48.1**	**+0.8**
VSM	**San Miguel**		**25.09**	**327**	*e*P	**P**	**21 05 48.5**	**+1.2**
SLB	**Belfond**		**25.12**	**32**	*e*P	**P**	**21 05 46.2**	**-1.3**
SLB	**Belfond**		**25.12**	**32**	*e*P	**P**	**21 05 46.2**	**-1.3**
SLB	**Belfond**		**25.12**	**32**	*e*	pP	21 06 21.1	+1.6
BBGH	**Gun Hill**		**25.37**	**36**	*e*P	**P**	**21 05 50.7**	**+0.9**
	comp=Z,4μm,1.2s,mb6.8							
BBGH					*e*	pP	21 06 24.2	+2.4
BBGH					eS	**S**	**21 10 12.1**	**+7.1**
BBGH	**Gun Hill**		**25.37**	**36**	*e*P	**P**	**21 05 52.0**	**+2.2**
BBSP	**Saint Philip**		**25.40**	**36**	*e*P	**P**	**21 05 52.9**	**+2.8**
BBSP	**Saint Philip**		**25.40**	**36**	*e*P	**P**	**21 05 52.9**	**+2.8**
PEL	**Peldehue**		**25.58**	**173**	⇑*i*P	**P**	**21 05 49.4**	**-2.2**
BIM	**Bigot**		**25.58**	**31**	*e*P	**P**	**21 05 50.2**	**-2.4**
LFRS	**El Faro**		**25.69**	**325**	*e*P	**P**	**21 05 53.4**	**+0.7**
MVM	**Montagne Vaucl**		**25.80**	**31**	*e*P	**P**	**21 05 50.7**	**-3.0**
FCH	**Farellones**		**25.82**	**172**	⇓*i*P	**P**	**21 05 57.0**	**+3.4**
FDF	**Fort de France**		**25.83**	**31**	⇑*e*P	**P**	**21 05 50.4**	**-3.6**
	comp=Z,693nm,0.8s,mb6.3							
FDF					*e*	pP	21 06 23.4	-2.6
FDF					eS	**S**	**21 10 02.8**	**-9.4**
FDF	**Fort de France**		**25.83**	**31**	⇑*e*P	**P**	**21 05 50.4**	**-3.5**
FDF					*e*	pP	21 06 23.4	-2.6
FDF					eS	**S**	**21 10 02.8**	**-9.4**
FDF					pmax	pmax		
	comp=Z,693nm,0.8s,mb6.3							
FDF	**Fort de France**		**25.83**	**31**	*e*P	**P**	**21 05 51.0**	**-3.0**
MTDJ	**Mount Denham**		**25.91**	**353**	⇓*e*P	**P**	**21 05 55.4**	**+0.7**
	comp=Z,3μm,1.9s,mb6.6							
MTDJ					*e*	pP	21 06 26.2	-0.5
MTDJ	**Mount Denham**		**25.91**	**353**	*e*P	**P**	**21 05 56.2**	**+1.5**
DSHT	**Scott's Head**		**26.12**	**30**	*e*P	**P**	**21 05 52.4**	**-4.2**
DSHT	**Scott's Head**		**26.12**	**30**	*e*P	**P**	**21 05 52.4**	**-4.2**
DSHT	**Scott's Head**		**26.12**	**30**	*e*	pP	21 06 28.7	0.0
DSHT	**Scott's Head**		**26.12**	**30**	*e*	pP	21 06 29.9	+1.3
DFBT	**Forest Bistro**		**26.16**	**30**	*e*P	**P**	**21 05 57.0**	**+0.1**
DFBT	**Forest Bistro**		**26.16**	**30**	*e*P	**P**	**21 05 57.0**	**+0.1**
DSTT	**Stowe**		**26.19**	**30**	*e*P	**P**	**21 05 55.0**	**-2.2**
DSTT	**Stowe**		**26.19**	**30**	*e*P	**P**	**21 05 55.0**	**-2.2**
DSTT	**Stowe**		**26.19**	**30**	*e*	pP	21 06 31.2	+1.9
SNJE	**San Jose**		**26.20**	**325**	*e*P	**P**	**21 05 59.5**	**+2.2**
MDN	**Morne-Daniel**		**26.21**	**29**	*e*P	**P**	**21 05 56.2**	**-1.2**
MDN	**Morne-Daniel**		**26.21**	**29**	*e*P	**P**	**21 05 56.2**	**-1.2**
MDN	**Morne-Daniel**		**26.21**	**29**	*e*	pP	21 06 29.4	0.0
RTR	**El Retiro**		**26.24**	**325**	*e*P	**P**	**21 05 59.1**	**+1.4**
DLPL	**La Plaine**		**26.29**	**30**	*e*P	**P**	**21 05 52.3**	**-5.8**
DLPL	**La Plaine**		**26.29**	**30**	*e*	**S**	**21 10 32.6**	**+13**
LMEL	**Las Melosas**		**26.34**	**172**	⇓*i*P	**P**	**21 05 57.9**	**-0.4**
LMEL	**Las Melosas**		**26.34**	**172**	⇓*i*P	**P**	**21 05 57.9**	**-0.4**
CRPR	**Cabo Rojo, PR**		**26.49**	**16**	⇓*e*P	**P**	**21 06 00.4**	**+0.5**
	comp=Z,456nm,1.3s,mb5.9							
CRPR					*e*	pP	21 06 30.5	-1.6
CRPR					eS	**S**	**21 10 22.9**	**+0.3**
TBG	**Guadaloupe-3**		**26.55**	**28**	*e*P	**P**	**21 05 59.5**	**-0.9**
ICM	**Isla Caja Muer**		**26.55**	**17**	*e*P	**P**	**21 06 00.6**	**+0.2**
ICM					*e*	pP	21 06 30.9	-1.6
ICM					eS	**S**	**21 10 22.9**	**-0.7**
HMG	**Houelmont**		**26.63**	**28**	*e*P	**P**	**21 06 01.3**	**+0.1**
SDDR	**Presa de Saban**		**26.65**	**7**	*e*P	**P**	**21 06 01.8**	**+0.6**
	comp=Z,310nm,1.0s,mb5.9							
SDDR					*e*	pP	21 06 33.3	-0.1
SDDR					eS	**S**	**21 10 26.3**	**+1.2**
LSP	**Las Mesas**		**26.66**	**16**	*e*P	**P**	**21 06 02.5**	**+1.1**
OBIP	**Obispado Ponce**		**26.67**	**17**	*e*P	**P**	**21 06 01.6**	**+0.1**
	comp=Z,2μm,1.3s,mb6.5							
OBIP					*e*	pP	21 06 32.9	-0.7
OBIP					eS	**S**	**21 10 26.7**	**+1.3**
MPR	**Mayaguez**		**26.68**	**15**	*e*P	**P**	**21 06 01.7**	**+0.1**
SCG	**Saint Claude**		**26.68**	**28**	*e*P	**P**	**21 06 00.8**	**-0.9**
PHG	**Guadaloupe-2**		**26.69**	**28**	*e*P	**P**	**21 06 00.8**	**-0.8**
CELP	**Cerrillos**		**26.70**	**17**	*e*P	**P**	**21 06 02.1**	**+0.4**
MGG	**Marie-Galante**		**26.76**	**29**	*e*P	**P**	**21 06 02.8**	**+0.5**
LRS	**Lares**		**26.84**	**16**	*e*P	**P**	**21 06 04.2**	**+1.2**
LRS					*e*PcP	PcP	21 09 22.1	+0.3
SJG	**San Juan**		**26.86**	**18**	*e*P	**P**	**21 06 02.8**	**-0.5**
	comp=Z,1μm,0.6s,mb6.7							
SJG					*e*	pP	21 06 36.4	+1.0
SJG					eS	**S**	**21 10 31.0**	**+2.5**
SJG	**San Juan**		**26.86**	**18**	P	**P**	**21 06 02.8**	**-0.4**
	comp=Z,644nm,0.6s,mb6.5,baz=181,slow=6.2,SNR=81							
SJG					pP	pP	21 06 37.0	+1.6
	comp=Z,333nm,0.5s,baz=159,slow=4.6,SNR=2.1							
SJG					S	**S**	**21 10 25.8**	**-2.7**
	comp=Z,21nm,0.5s,baz=207,slow=13,SNR=3.0							
SJG	**San Juan**		**26.86**	**18**	*e*P	**P**	**21 06 02.8**	**-0.4**
SJG					*e*	pP	21 06 36.4	+1.0
SJG					eS	**S**	**21 10 31.0**	**+2.5**
SJG					pmax	pmax		
	comp=Z,1μm,0.6s							
SJG	**San Juan**		**26.86**	**18**	*e*P	**P**	**21 06 03.5**	**+0.3**
AGP	**Aguadilla**		**26.87**	**15**	*e*P	**P**	**21 06 05.0**	**+1.8**
AGPR	**Aguadilla, PR**		**26.93**	**15**	*e*P	**P**	**21 06 04.1**	**+0.3**
	comp=Z,2μm,1.4s,mb6.5							
AGPR					*e*	pP	21 06 37.9	+1.9
AGPR					*e*PP	PP	21 07 06.7	-1.2
CDVI	**St. Croix**		**26.98**	**21**	⇓*e*P	**P**	**21 06 04.5**	**+0.3**
	comp=Z,8μm,2.0s,mb7.0							
CDVI					*e*	pP	21 06 36.3	-0.1
CDVI					eS	**S**	**21 10 32.4**	**+2.1**
MTP	**Monte Pirata**		**27.04**	**19**	⇓*e*P	**P**	**21 06 04.5**	**-0.3**
	comp=Z,1μm,1.2s,mb6.4							
MTP					*e*pP	pP	21 06 36.6	-0.3
MTP					eS	**S**	**21 10 32.0**	**+0.8**
SEG	**Port Louis**		**27.09**	**28**	*e*P	**P**	**21 06 03.7**	**-1.5**
CBYP	**Canovanas**		**27.11**	**18**	*e*P	**P**	**21 06 05.5**	**+0.1**
	comp=Z,576nm,0.7s,mb6.3							
CBYP					*e*	pP	21 06 36.5	-1.1
CBYP					*e*PcP	PcP	21 09 24.8	+2.4
CBYP					eS	**S**	**21 10 33.1**	**+0.8**
DEG	**La Desirade**		**27.22**	**29**	*e*P	**P**	**21 06 04.8**	**-1.6**
SKI	**Saint Kitts**		**27.37**	**25**	*e*P	**P**	**21 06 07.3**	**-0.4**
SKI	**Saint Kitts**		**27.37**	**25**	*e*P	**P**	**21 06 07.3**	**-0.4**
SKI	**Saint Kitts**		**27.37**	**25**	*e*	**S**	**21 10 32.5**	**-3.9**
GTBY	**Guantanamo Bay**		**27.43**	**358**	*e*P	**P**	**21 06 08.7**	**+0.5**
	comp=Z,2μm,1.5s,mb6.6							
GTBY					*e*	pP	21 06 41.0	+0.5
GTBY					*e*PcP	PcP	21 09 26.0	+2.8
STVI	**Saint Thomas**		**27.47**	**20**	*e*P	**P**	**21 06 07.5**	**-1.1**
	comp=Z,1μm,1.3s,mb6.3							
STVI					*e*	pP	21 06 40.2	-0.7
STVI					eS	**S**	**21 10 38.1**	**+0.1**
BPA	**Boggy Peak**		**27.49**	**27**	*e*P	**P**	**21 06 07.7**	**-1.2**
BPA	**Boggy Peak**		**27.49**	**27**	*e*P	**P**	**21 06 07.7**	**-1.2**
BPA	**Boggy Peak**		**27.49**	**27**	*e*	pP	21 06 41.3	+0.3
BPA	**Boggy Peak**		**27.49**	**27**	*e*	**S**	**21 10 49.0**	**+11**
ANWB	**Willy Bob**		**28.07**	**26**	⇑*e*P	**P**	**21 06 11.4**	**-2.5**
	comp=Z,966nm,0.7s,mb6.6							
ANWB					*e*	pP	21 06 45.8	-0.6
ANWB					eS	**S**	**21 10 47.9**	**+0.3**
ANWB	**Willy Bob**		**28.07**	**26**	*e*P	**P**	**21 06 11.4**	**-2.6**
GRTK	**Grand Turk**		**29.17**	**6**	*e*P	**P**	**21 06 24.4**	**+0.8**
GRTK					*e*	pP	21 06 56.0	-0.1
GRTK					eS	**S**	**21 11 06.9**	**+2.3**
GRTK	**Grand Turk**		**29.17**	**6**	*e*P	**P**	**21 06 24.8**	**+1.2**
SPB	**Sao Paulo**		**30.30**	**125**	⇑*e*P	**P**	**21 06 32.8**	**-1.0**
	comp=Z,142nm,0.8s,mb5.8							
SPB					*e*	pP	21 07 21.6	
SPB					eS	**S**	**21 11 18.1**	**-4.5**
TEIG	**Tepich**		**30.91**	**334**	⇓*i*P	**P**	**21 06 38.7**	**-0.3**
	comp=Z,730nm,1.3s,mb6.2							
TEIG					*e*pP	pP	21 07 10.7	-0.9
TEIG					*e*sP	sP	21 07 29.1	-0.2
TEIG					*e*PcP	PcP	21 09 32.0	0.0
TEIG					eS	**S**	**21

LRAL **Lakeview Retre** 42.22 344⇓*iP* **P** 21 08 13.2 **-1.5**
comp=Z,2µm,2.1s,mb6.4
LRAL *epP* pP 21 08 48.3 -0.3
LRAL *ePP* PP 21 09 56.1 +0.4
LRAL *eScP* ScP 21 13 40.7 -1.4
LRAL *eS* **S** **21 14 18.6 -4.7**
JSC **Jenkinsville** 42.22 351 *eP* **P** **21 08 14.6 0.0**
JSC *epP* pP 21 08 49.6 +1.1
VBMS **Vicksburg** 42.55 340⇓*eP* **P** **21 08 15.7 -1.6**
comp=Z,1µm,2.1s,mb6.1
VBMS *epP* pP 21 08 50.2 -1.0
VBMS *ePcP* PcP 21 10 06.3 -0.7
VBMS *eScP* ScP 21 13 39.5 -4.0
VBMS *eS* **S** **21 14 27.5 -0.7**
HKT **Hockley** 42.71 332⇓*iP* **P** **21 08 18.3 -0.3**
comp=Z,580nm,2.0s,mb5.9
HKT *epP* pP 21 08 52.0 -0.6
HKT *esP* sP 21 09 10.0 0.0
HKT PP PP 21 10 02.3 +1.2
HKT *ePcP* PcP 21 10 09.4 +1.8
HKT *eScP* ScP 21 13 41.4 -2.8
HKT *eS* **S** **21 14 30.2 -0.4**
HKT **Hockley** 42.71 332⇓*iP* **P** **21 08 18.3 -0.3**
HKT *e*PP pP 21 08 52.1 -0.6
HKT *e*SP sP 21 09 10.0 0.0
HKT 21 10 02.3
HKT *e* 21 10 09.4
HKT *eS* **S** **21 14 30.2 -0.5**
HKT pmax pmax
comp=Z,580nm,2.0s,mb5.9
CNNC **Cliffs of the** 42.80 356 *eP* **P** **21 08 19.9 +0.7**
comp=Z,143nm,0.8s,mb5.7
CNNC *epP* pP 21 08 52.7 -0.6
CNNC sP sP 21 09 10.6 0.0
CNNC *eS* **S** **21 14 31.7 -0.1**
NATX **Nacogdoches** 43.73 335⇓*iP* **P** **21 08 26.9 0.0**
comp=Z,2µm,1.8s,mb6.5
NATX *epP* pP 21 09 01.0 0.0
MAIG **Mazatlaan** 43.85 315 *eP* **P** **21 08 30.5 +2.6**
CPCT **Cooper Cave** 43.94 348⇓*iP* **P** **21 08 27.1 -1.2**
CPCT *epP* pP 21 09 02.4 -0.1
SWET **Sewanee** 44.02 346⇓*iP* **P** **21 08 27.4 -1.7**
SWET *epP* pP 21 09 01.5 -1.7
SWET sP sP 21 09 31.6 +11
SWET *ePcP* PcP 21 10 12.1 +0.2
OXF **Oxford** 44.29 342⇓*eP* **P** **21 08 29.1 -2.2**
comp=Z,273nm,0.8s,mb5.9
OXF *epP* pP 21 09 04.5 -1.0
OXF *esP* sP 21 09 22.1 -0.7
OXF *eScP* ScP 21 13 49.2 -1.4
OXF *eS* **S** **21 14 49.8 -3.8**
OXF **Oxford** 44.29 342⇓*eP* **P** **21 08 29.1 -2.1**
OXF *e*PP pP 21 09 04.5 -1.0
OXF *e*SP sP 21 09 22.1 -0.7
OXF *eS* **S** **21 14 49.8 -3.8**
OXF pmax pmax
comp=Z,273nm,0.8s,mb5.9
VWCC **Virginia Weste** 44.98 354 *eP* **P** **21 08 36.9 +0.3**
VWCC *epP* pP 21 09 11.6 +0.6
BLA **Blacksburg** 45.00 353⇓*iP* **P** **21 08 36.9 +0.2**
comp=Z,305nm,0.6s,mb6.1
BLA *epP* pP 21 09 10.4 -0.6
BLA **Blacksburg** 45.00 353⇓*iP* **P** **21 08 36.9 +0.2**
BLA *e*PP pP 21 09 10.4 -0.7
BLA pmax pmax
comp=Z,305nm,0.6s,mb6.1
MET **Memphis–Engin** 45.02 342 *eP* **P** **21 08 35.6 -1.3**
comp=Z,580nm,0.4s,mb6.6
JCT **Junction City** 45.10 328 ⇑P **P** **21 08 37.5 -0.2**
baz=45,SNR=36
JCT ⇑S **S** **21 15 04.9 -0.4**
baz=45
JCT **Junction City** 45.10 328⇓*iP* **P** **21 08 37.2 -0.5**
JCT *epP* pP 21 09 11.3 -0.7
JCT *esP* sP 21 09 29.9 +0.6
JCT *ePcP* PcP 21 10 18.3 +2.6
JCT *ePP* PP 21 10 26.2 -0.1
JCT *eScP* ScP 21 13 52.9 -1.1
JCT *eS* **S** **21 15 06.6 +1.3**
JCT **Junction City** 45.10 328⇓*iP* **P** **21 08 37.2 -0.5**
JCT *e*PP pP 21 09 11.3 -0.7
JCT *e*SP sP 21 09 29.9 +0.6
JCT *e* 21 10 18.3
JCT *e* 21 10 26.2
JCT *eS* **S** **21 15 06.6 +1.3**
JSRW **J. Sargeant Re** 45.24 356 *eP* **P** **21 08 38.7 +0.1**
JSRW *epP* pP 21 09 13.7 +0.7
JSRW *ePcP* PcP 21 10 14.5 -1.6
WVT **Waverly** 45.36 345⇓*eP* **P** **21 08 37.0 -2.7**
comp=Z,115nm,0.7s,mb5.6
WVT *epP* pP 21 09 12.6 -1.5
WVT *esP* sP 21 09 32.3 +1.0
WVT *ePcP* PcP 21 10 15.7 -0.8
WVT *ePP* PP 21 10 29.3 +0.2
WVT *eS* **S** **21 15 02.4 -6.6**
WVT **Waverly** 45.36 345⇓*eP* **P** **21 08 37.0 -2.7**
WVT *e*PP pP 21 09 12.6 -1.4
WVT *e*SP sP 21 09 32.3 +1.0
WVT *e* 21 10 15.7
WVT *e* 21 10 29.3
WVT *eS* **S** **21 15 02.4 -6.5**
WVT pmax pmax
comp=Z,115nm,0.7s,mb5.6
UALR **University of** 45.50 339⇓*eP* **P** **21 08 39.0 -1.8**
comp=Z,269nm,0.8s,mb5.9
UALR *epP* pP 21 09 13.3 -1.9
UALR *ePcP* PcP 21 10 17.9 +0.9
UALR *ePP* PP 21 10 33.5 +2.9
UALR *eScP* ScP 21 13 55.7 +0.2
UALR *eS* **S** **21 15 08.2 -2.7**
HBAR **Harrisburg** 45.65 341⇓*eP* **P** **21 08 40.0 -1.9**
HBAR *epP* pP 21 09 15.6 -0.8
HBAR *esP* sP 21 09 34.9 +1.4
HBAR *ePcP* PcP 21 10 16.8 -0.7
HBAR *ePP* PP 21 10 37.2 +5.1
CBN **Corbin** 45.72 357⇓*eP* **P** **21 08 42.0 -0.3**
comp=Z,483nm,0.9s,mb6.1
CBN *epP* pP 21 09 16.9 0.0
MIAR **Mount Ida** 45.74 338⇓*eP* **P** **21 08 41.2 -1.5**
comp=Z,91nm,0.8s,mb5.5
MIAR *epP* pP 21 09 14.0 -3.1
MIAR *esP* sP 21 09 33.0 -1.4
MIAR *ePcP* PcP 21 10 18.1 +0.2
MIAR *ePP* PP 21 10 33.6 +0.6
MIAR *eScP* ScP 21 14 06.0 +9.4
MIAR *eS* **S** **21 15 09.5 -5.0**
MIAR **Mount Ida** 45.74 338⇓*eP* **P** **21 08 41.2 -1.5**
MIAR *e*PP pP 21 09 14.0 -3.1
MIAR *e*SP sP 21 09 33.0 -1.3
MIAR *e* 21 10 18.1
MIAR *e* 21 10 33.7
MIAR *eS* **S** **21 15 09.5 -4.9**
MIAR pmax pmax
comp=Z,91nm,0.8s,mb5.5
GNAR **Gosnell** 45.83 342 *eP* **P** **21 08 42.8 -0.5**
comp=Z,2µm,0.7s,mb6.9
GNAR *epP* pP 21 09 16.5 -1.2
GNAR *ePcP* PcP 21 10 18.6 +0.5
GNAR *ePP* PP 21 10 33.4 -0.5
UTMT **University of** 45.84 344 *eP* **P** **21 08 42.5 -1.0**
comp=Z,177nm,0.6s,mb5.9
UTMT *epP* pP 21 09 16.8 -1.0
UTMT *esP* sP 21 09 35.3 +0.2
UTMT *ePcP* PcP 21 10 15.5 -2.7
GLAT **Glass** 45.89 343 *eP* **P** **21 08 41.5 -2.3**
GLAT *epP* pP 21 09 16.3 -2.0
GLAT PP PP 21 10 34.8 +0.3
628A **Black Gap, Mar** 46.02 325 ⇓P **P** **21 08 45.4 +0.5**
baz=46,SNR=451
628A ⇓S **S** **21 15 19.7 +1.2**
baz=46
PVMO **Portageville** 46.15 343 *eP* **P** **21 08 45.4 -0.4**
627A **Terlingua Ranc** 46.28 324 ⇑P **P** **21 08 47.2 +0.3**
baz=46,SNR=237
627A ⇑S **S** **21 15 22.5 +0.2**
baz=46
TXAR **Lajitas Array** 46.35 324 P **P** **21 08 47.1 -0.4**
comp=Z,135nm,1.1s,mb5.5,baz=148,slow=8.2,SNR=340
TXAR pP pP 21 09 22.0 -0.1
comp=Z,85nm,0.9s,baz=147,slow=9.1,SNR=4.1
TXAR S **S** **21 15 24.8 +1.4**
comp=Z,0.8nm,0.7s,baz=112,slow=4.1,SNR=2.2
TXAR P4KPbc 21 46 32.4
comp=Z,0.4nm,0.7s,baz=134,slow=7.2,SNR=4.9
TXAR **Lajitas Array** 46.35 324 P **P** **21 08 47.1 -0.5**
TXAR *P*PP pP 21 09 22.0 -0.1
TXAR S **S** **21 15 24.8 +1.5**
PARMO **Parma** 46.40 343 *eP* **P** **21 08 47.2 -0.5**
PARMO *epP* pP 21 09 21.4 -0.9
PARMO *esP* sP 21 09 39.5 0.0
PARMO *ePcP* PcP 21 10 20.1 -0.1
528A **Cox Ranch, San** 46.47 325 ⇑P **P** **21 08 48.7 +0.2**
baz=47,SNR=296
528A ⇑S **S** **21 15 25.7 +0.7**
baz=47
626A **Big Bend Ranch** 46.79 324 ⇑P **P** **21 08 51.3 +0.3**
baz=47,SNR=638
428A **Kincaid Ranch,** 46.84 326 ⇑P **P** **21 08 51.6 +0.3**
baz=47,SNR=107
SDMD **Soldier's Deli** 46.89 357⇓*iP* **P** **21 08 51.0 -0.5**
comp=Z,405nm,1.3s,mb5.9
SDMD *epP* pP 21 09 26.1 -0.1
SDMD *esP* sP 21 09 49.1 +5.8
SDMD PP PP 21 10 46.6 +3.0
SDMD *eS* **S** **21 15 31.7 +1.0**
527A **Woodward Ranch** 46.92 325 ⇑P **P** **21 08 52.3 +0.3**
baz=47,SNR=227
WCI **Wyandotte Cave** 46.99 347⇓*eP* **P** **21 08 50.3 -2.0**
comp=Z,1µm,2.0s,mb6.2
WCI *epP* pP 21 09 25.5 -1.4
WCI *ePP* PP 21 10 45.8 +1.3
WCI ScP ScP 21 14 04.7 +3.1
WCI *eS* **S** **21 15 20.9 -11**
WCI **Wyandotte Cave** 46.99 347⇓*eP* **P** **21 08 50.3 -2.0**
WCI *e*PP pP 21 09 25.5 -1.4
WCI *e* 21 10 45.8
WCI *eS* **S** **21 15 20.9 -11**
WCI pmax pmax
comp=Z,1µm,2.0s,mb6.2
USIN **University of** 47.06 346⇓*eP* **P** **21 08 51.1 -1.7**
comp=Z,2µm,1.8s,mb6.4
USIN *epP* pP 21 09 25.9 -1.6
USIN *eS* **S** **21 15 30.7 -2.4**
526A **Mary Lane Ranc** 47.14 324 ⇓P **P** **21 08 53.4 -0.2**
baz=47,SNR=330
SIUC **Southern Illin** 47.23 344⇓*eP* **P** **21 08 52.1 -2.0**
comp=Z,294nm,0.7s,mb6.0
SIUC *epP* pP 21 09 26.9 -1.9
USHA **Ushuaia** 47.28 175 P **P** **21 08 55.6 +1.2**
comp=Z,167nm,0.8s,mb5.7,baz=348,slow=5.5,SNR=66
USHA S **S** **21 15 37.1 +1.3**
comp=Z,7.2nm,1.2s,baz=2.7,slow=20,SNR=3.1
427A **Hayter Ranch,** 47.33 325 ⇓P **P** **21 08 55.2 +0.1**
baz=48,SNR=102
MCWV **Mont Chateau** 47.35 354⇓*eP* **P** **21 08 55.1 -0.1**
comp=Z,239nm,0.6s,mb6.0
MCWV *epP* pP 21 09 30.5 +0.7
MCWV *eS* **S** **21 15 35.3 -1.9**
328A **Wristen Ranch,** 47.41 326 ⇓P **P** **21 08 55.8 +0.1**
baz=48,SNR=185
MVL **Millersville** 47.46 358 *eP* **P** **21 08 56.6 +0.7**
comp=Z,600nm,0.9s,mb6.2
426A **McDonald Obser** 47.55 325 ⇓P **P** **21 08 57.1 +0.2**
baz=48,SNR=190
327A **Balmorhea Ranc** 47.77 326 ⇓P **P** **21 08 58.5 -0.1**
baz=48,SNR=6.0
FVM **French Village** 47.82 343⇓*iP* **P** **21 08 56.7 -2.1**
comp=Z,226nm,0.7s,mb5.9
FVM *epP* pP 21 09 32.2 -1.2
FVM *eS* **S** **21 15 31.9 -12**
FVM **French Village** 47.82 343⇓*iP* **P** **21 08 56.7 -2.0**
FVM *e*PP pP 21 09 32.2 -1.3
FVM *eS* **S** **21 15 31.9 -12**
FVM pmax pmax
comp=Z,226nm,0.7s,mb5.9
OLIL **Olney** 47.89 346⇓*eP* **P** **21 08 57.1 -2.2**
comp=Z,526nm,1.6s,mb5.9
OLIL *epP* pP 21 09 32.4 -1.6
OLIL *ePcP* PcP 21 10 25.4 0.0
OLIL *eS* **S** **21 15 39.8 -5.0**
BLO **Bloomington** 47.94 347⇓*iP* **P** **21 08 57.7 -2.0**
comp=Z,362nm,0.6s,mb6.2
BLO *epP* pP 21 09 33.0 -1.4
BLO *esP* sP 21 09 51.5 -0.1
BLO *ePP* PP 21 10 52.9 -0.3
BLO *eS* **S** **21 15 44.9 -0.6**
BLO **Bloomington** 47.94 347⇓*iP* **P** **21 08 57.7 -2.0**
BLO *e*PP pP 21 09 33.0 -1.4
BLO *e*SP sP 21 09 51.5 -0.1
BLO *e* 21 10 52.9
BLO *eS* **S** **21 15 44.9 -0.6**
BLO pmax pmax
comp=Z,362nm,0.6s,mb6.2
326A **Caldwell Ranch** 48.01 325 ⇓P **P** **21 09 00.2 -0.1**
baz=48,SNR=141
WMOK **Wichita Mounta** 48.07 333⇓*iP* **P** **21 08 59.6 -1.2**
comp=Z,206nm,0.8s,mb5.8
WMOK *epP* pP 21 09 35.1 -0.4
WMOK *esP* sP 21 09 51.7 -0.9
WMOK *ePcP* PcP 21 10 28.3 +2.1
WMOK *ePP* PP 21 10 56.7 +2.2
WMOK *eS* **S** **21 15 47.4 -0.1**
WMOK **Wichita Mounta** 48.07 333⇓*iP* **P** **21 08 59.6 -1.2**
WMOK *e*PP pP 21 09 35.2 -0.3
WMOK *e*SP sP 21 09 51.7 -1.0
WMOK *e* 21 10 28.3
WMOK *e* 21 10 56.7
WMOK *eS* **S** **21 15 47.4 -0.1**
WMOK pmax pmax
comp=Z,206nm,0.8s,mb5.8
BRNJ **Basking Ridge** 48.10 360⇓*eP* **P** **21 09 00.6 -0.3**
comp=Z,149nm,1.0s,mb5.6
BRNJ *epP* pP 21 09 35.4 -0.2
BRNJ PcP PcP 21 10 26.3 +0.2
BRNJ *ePP* PP 21 10 54.6 -0.1
BRNJ *eS* **S** **21 15 46.2 -1.5**
CCM **Cathedral Cave** 48.13 342⇓*iP* **P** **21 08 58.7 -2.4**
comp=Z,137nm,0.6s,mb5.8
CCM *epP* pP 21 09 33.6 -2.3
CCM *ePcP* PcP 21 10 25.6 -0.7
CCM *eS* **S** **21 15 44.7 -3.5**
CCM **Cathedral Cave** 48.13 342⇓*iP* **P** **21 08 58.7 -2.4**
CCM *e*PP pP 21 09 33.6 -2.3
CCM *e* 21 10 25.6
CCM *eS* **S** **21 15 44.7 -3.5**
CCM pmax pmax
comp=Z,137nm,0.6s,mb5.8
227A **Bennet, Jal** 48.15 327 ⇓P **P** **21 09 01.3 -0.1**
baz=48,SNR=24
SSPA **Standing Stone** 48.17 356⇓*iP* **P** **21 09 01.4 +0.1**
comp=Z,1µm,1.7s,mb6.3
SSPA *epP* pP 21 09 36.5 +0.3
SSPA *ePcP* PcP 21 10 25.5 -0.8
SSPA *eScP* ScP 21 14 04.2 -2.4
SSPA *eS* **S** **21 15 40.0 -8.6**
425A **Indio Mountain** 48.19 324 ⇓P **P** **21 09 01.6 -0.1**
baz=48,SNR=178
CPNY **Central Park** 48.21 0⇓*eP* **P** **21 09 01.1 -0.6**
comp=Z,85nm,0.8s,mb5.4
CPNY *epP* pP 21 09 36.0 -0.5
CPNY *ePcP* PcP 21 10 27.0 +0.5
CPNY *ePP* PP 21 10 56.4 +0.7
CPNY *eScP* ScP 21 14 09.0 +2.2
CPNY *eS* **S** **21 15 49.7 +0.4**
ACSO **Alum Creek Sta** 48.31 351⇓*eP* **P** **21 09 01.1 -1.4**
comp=Z,4µm,2.5s,mb6.6
ACSO *epP* pP 21 09 36.1 -1.2
ACSO *esP* sP 21 09 54.0 -0.5
ACSO *ePcP* PcP 21 10 25.6 -1.3
ACSO *eS* **S** **21 15 49.1 -1.6**
SLM **Saint Louis** 48.37 343⇓*iP* **P** **21 09 00.9 -2.1**
comp=Z,126nm,0.6s,mb5.7
SLM *epP* pP 21 09 36.3 -1.4
SLM *ePcP* PcP 21 10 26.9 -0.2
SLM PP PP 21 10 58.4 +1.3
SLM *eS* **S** **21 15 47.3 -4.3**
SLM **Saint Louis** 48.37 343⇓*iP* **P** **21 09 00.9 -2.1**
SLM *e*PP pP 21 09 36.3 -1.4
SLM *e* 21 10 26.9
SLM 21 10 58.4
SLM *eS* **S** **21 15 47.3 -4.3**
SLM pmax pmax
comp=Z,126nm,0.6s,mb5.7
PAL **Palisades** 48.43 0⇓*eP* **P** **21 09 02.4 -1.0**
comp=Z,236nm,0.8s,mb5.9
PAL *epP* pP 21 09 37.6 -0.6
PAL *ePP* PP 21 10 57.0 -0.6
PAL *eS* **S** **21 15 51.5 -0.8**
PAL **Palisades** 48.43 0⇓*eP* **P** **21 09 02.4 -1.0**
PAL *e*PP pP 21 09 37.6 -0.6
PAL *e* 21 10 57.0
PAL *eS* **S** **21 15 51.5 -0.8**
PAL pmax pmax
comp=Z,236nm,0.8s,mb5.9
325A **Bean Ranch, Si** 48.61 325 ⇓P **P** **21 09 05.0 0.0**
baz=49,SNR=285
226A **Malaga, Loving** 48.64 326 ⇑P **P** **21 09 05.6 +0.5**
baz=49,SNR=161
CLNB **Carlsbad** 48.67 326 *eP* **P** **21 09 03.8 -1.6**
comp=Z,120nm,1.2s,mb5.4
CLNB *epP* pP 21 09 39.9 -0.3
CLNB *esP* sP 21 09 56.7 -0.6
CLNB *ePcP* PcP 21 10 28.3 0.0
YLE **Yale** 48.75 1 *eP* **P** **21 09 06.2 +0.3**
YLE *epP* pP 21 09 40.3 -0.4
YLE *ePcP* PcP 21 10 29.6 +1.1
GDL2 **Guadalupe Moun** 48.89 326 *eP* **P** **21 09 08.2 +1.2**
324A **Moseley Ranch,** 48.96 324 ⇑P **P** **21 09 06.8 -0.8**
baz=49,SNR=246
126A **Clayton Basin,** 49.03 326 ⇑P **P** **21 09 08.4 +0.2**
baz=49,SNR=114
225A **Deer Hill, Car** 49.08 325 ⇓P **P** **21 09 08.7 +0.2**
baz=49,SNR=197
MNTX **Cornudas Mount** 49.09 324 ⇑P **P** **21 09 07.9 -0.7**
baz=49,SNR=246
MNTX **Cornudas Mount** 49.09 324⇓*iP* **P** **21 09 07.7 -0.9**
comp=Z,30nm,0.4s,mb5.3
MNTX *epP* pP 21 09 43.0 -0.5
MNTX *esP* sP 21 10 00.4 -0.2
MNTX *eS* **S** **21 16 03.3 +1.4**
Z27A **Tatum** 49.11 328 ⇓P **P** **21 09 08.6 -0.1**
baz=49,SNR=205
CPRX **Cap Rock** 49.24 327 *eP* **P** **21 09 10.2 +0.5**
comp=Z,610nm,0.9s,mb6.2
CPRX *epP* pP 21 09 43.6 -1.0
ALLY **Alegheny Colle** 49.35 354⇓*eP* **P** **21 09 09.9 -0.5**
comp=Z,690nm,1.0s,mb6.2
ALLY *epP* pP 21 09 44.1 -1.2
ALLY *esP* sP 21 10 01.6 -0.8
ALLY *ePcP* PcP 21 10 32.9 +2.2
ALLY *ePP* PP 21 11 07.0 +1.0
ALLY *eS* **S** **21 16 04.0 -1.2**
MSTX **Muleshoe** 49.39 329 ⇓P **P** **21 09 10.1 -0.7**
baz=50,SNR=30
BRYW **Bryant College** 49.41 3 *eP* **P** **21 09 10.9 +0.1**
comp=Z,624nm,1.0s,mb6.2
BRYW *epP* pP 21 09 44.6 -1.1
BRYW PP PP 21 11 06.9 +0.4
Z26A **Caprock** 49.49 327 ⇓P **P** **21 09 11.6 0.0**
baz=50,SNR=258
Y27A **Causey** 49.53 328 ⇓P **P** **21 09 11.4 -0.5**
baz=50,SNR=128
AMTX **Amarillo** 49.56 330 ⇓P **P** **21 09 11.4 -0.7**
baz=50,SNR=52
AMTX **Amarillo** 49.56 330⇓*iP* **P** **21 09 11.2 -0.9**
comp=Z,204nm,0.6s,mb5.9
AMTX *epP* pP 21 09 46.9 -0.2
AMTX *esP* sP 21 10 00.0 -4.1
AMTX *ePcP* PcP 21 10 30.6 -0.9
AMTX *ePP* PP 21 11 07.9 -0.2
AMTX *eS* **S** **21 16 03.0 -5.3**
BINY **Binghamton** 49.64 358⇓*iP* **P** **21 09 12.7 +0.1**
comp=Z,626nm,0.9s,mb6.2
BINY *epP* pP 21 09 47.1 -0.4
BINY *ePP* PP 21 11 08.6 -0.1
BINY *eS* **S** **21 16 09.7 +0.5**
QUA2 **Belchertown** 49.73 2⇓*eP* **P** **21 09 13.7 +0.4**
comp=Z,294nm,1.0s,mb5.9
QUA2 *epP* pP 21 09 47.7 -0.6
QUA2 *ePcP* PcP 21 10 30.8 -1.2
ERPA **Erie** 49.80 355⇓*iP* **P** **21 09 13.0 -0.8**
comp=Z,451nm,0.8s,mb6.2
ERPA *epP* pP 21 09 47.7 -1.1
ERPA *ePcP* PcP 21 10 30.2 -2.1
ERPA *eS* **S** **21 16 10.3 -1.1**
124A **Stringfield Ra** 49.87 325 ⇑P **P** **21 09 14.6 +0.1**
baz=50,SNR=200
WES **Weston** 49.88 3 *eP* **P** **21 09 13.7 -0.7**
comp=Z,329nm,1.0s,mb5.9
WES *epP* pP 21 09 49.0 -0.4
WES **Weston** 49.88 3 *eP* **P** **21 09 13.7 -0.7**
WES *e*PP pP 21 09 49.0 -0.4
WES pmax pmax
comp=Z,329nm,1.0s,mb5.9
Z25A **Roswell** 49.90 326 ⇓P **P** **21 09 14.4 -0.2**
baz=50,SNR=182
Y26A **Elida** 49.90 328 ⇓P **P** **21 09 13.9 -0.8**
baz=50,SNR=63
HDIL **Hopedale** 49.91 345⇓*iP* **P** **21 09 12.4 -2.3**
comp=Z,815nm,0.6s,mb6.5
HDIL *epP* pP 21 09 48.1 -1.6
HDIL *ePP* PP 21 11 12.6 +1.4
HDIL *eScP* ScP 21 14 14.8 +0.8
HDIL *eS* **S** **21 16 04.5 -8.6**
223A **Chaparral, Ant** 49.92 324 ⇓P **P** **21 09 14.4 -0.5**
baz=50
X27A **F and S Farms,** 50.09 329 ⇓P **P** **21 09 16.0 -0.1**
baz=50,SNR=45
TRY **Troy** 50.16 1 *eP* **P** **21 09 16.9 +0.5**
TRY *epP* pP 21 09 50.8 -0.7
TRY *ePcP* PcP 21 10 33.0 -0.5
TRY *ePP* PP 21 11 13.6 +0.3
TRY *eS* **S** **21 16 18.4 +2.0**
123A **Bell Site, Whi** 50.28 325 ⇓P **P** **21 09 17.4 -0.2**
baz=50,SNR=28
Z24A **Sheeppen Canyo** 50.29 326 ⇑P **P** **21 09 17.7 +0.1**
baz=50,SNR=265
Y25A **Mesa, Roswell** 50.37 327 ⇑P **P** **21 09 17.7 -0.5**
baz=50,SNR=28
X26A **CR and CF Fran** 50.38 328 ⇓P **P** **21 09 17.9 -0.4**
baz=50,SNR=120
222A **Williams Famil** 50.39 323 ⇑P **P** **21 09 18.4 0.0**
baz=50,SNR=152
W27A **Bowe Ranch, En** 50.40 329 ⇑P **P** **21 09 18.0 -0.4**
baz=51,SNR=161
AAM **Ann Arbor** 50.44 351 *eP* **P** **21 09 17.8 -0.8**
comp=Z,2µm,2.1s,mb6.3
AAM *epP* pP 21 09 51.7 -2.0
AAM *esP* sP 21 10 09.8 -0.9
AAM *ePcP* PcP 21 10 34.7 +0.1
AAM **Ann Arbor** 50.44 351 *eP* **P** **21 09 17.8 -0.8**
AAM *e*PP pP 21 09 51.7 -2.0
AAM *e*SP sP 21 10 09.8 -0.9
AAM *e* 21 10 34.7
AAM pmax pmax
comp=Z,2µm,2.1s,mb6.3
320A **Kipp Ranch, An** 50.71 322 ⇑P **P** **21 09 21.2 +0.3**
baz=51,SNR=82
221A **Mesquite Ranch** 50.72 323 ⇓P **P** **21 09 21.4 +0.5**
baz=51,SNR=30
Z23A **Rita Site, Whi** 50.73 325 ⇓P **P** **21 09 21.3 +0.4**
baz=51,SNR=128
122A **Conniff Cattle** 50.76 324 ⇑P **P** **21 09 21.7 +0.5**
baz=51,SNR=23
W26A **Owens Ranch, T** 50.77 329 ⇑P **P** **21 09 20.8 -0.5**
baz=51,SNR=37
Y24A **Capitan** 50.77 326 ⇓P **P** **21 09 20.8 -0.5**
baz=51,SNR=152
ACCN **Adirondack Com** 50.81 1⇓*eP* **P** **21 09 20.8 -0.5**
comp=Z,1µm,2.0s,mb6.1
ACCN *epP* pP 21 09 56.0 -0.4
ACCN *esP* sP 21 10 13.6 +0.1
ACCN *ePP* PP 21 11 16.1 -3.1
ACCN *eScP* ScP 21 14 15.3 -2.5
ACCN *eS* **S** **21 16 25.2 -0.1**
X25A **Clemmons Ranch** 50.81 327 ⇑P **P** **21 09 21.0 -0.5**
baz=51,SNR=43
KSU1 **Kansas State U** 50.90 338⇓*eP* **P** **21 09 20.6 -1.5**
comp=Z,410nm,0.9s,mb6.1
KSU1 *epP* pP 21 09 56.3 -0.9
KSU1 *esP* sP 21 10 13.6 -0.6
KSU1 *ePcP* PcP 21 10 36.1 -0.3
KSU1 *eS* **S** **21 16 25.2 -1.5**
FFD **Franklin Falls** 50.95 3⇓*eP* **P** **21 09 22.2 -0.1**
comp=Z,443nm,1.0s,mb6.0
FFD *epP* pP 21 09 57.2 -0.3
FFD *eS* **S** **21 16 27.2 0.0**
121A **Cookes Peak, D** 51.10 323 ⇑P **P** **21 09 24.3 +0.6**
baz=51,SNR=100

baz=53,SNR=9.1
PKME Peaks-Kenny Pk 52.88 4⇓eP P 21 09 36.3 -0.4
comp=Z,237nm,0.8s,mb6.0
PKME epP pP 21 10 11.6 -0.4
PKME esP sP 21 10 28.8 -0.2
PKME eS **S 21 16 54.2 +0.6**
W21A San Fidel 52.88 326 ⇓P P 21 09 37.3 +0.4
baz=53,SNR=84
117A Oracle 52.92 321 ⇓P P 21 09 37.1 -0.1
baz=53,SNR=171
X20A Quemado 52.95 325 ⇓P P 21 09 37.8 +0.4
baz=53,SNR=151
Y19A Nutrioso 52.97 323 ⇑P P 21 09 37.9 +0.3
baz=53,SNR=116
U23A El Rito 52.99 328 ⇑P P 21 09 37.8 +0.2
baz=53,SNR=15
216A Three Points, 52.99 320 ⇑P P 21 09 37.6 -0.1
baz=53,SNR=62
V22A San Miguel Ran 53.06 327 ⇑P P 21 09 38.4 +0.2
baz=53
S25A Robets Cordova 53.12 330 ⇑P P 21 09 38.7 +0.2
baz=53,SNR=338
Z17A San Carlos Hig 53.25 322 ⇑P P 21 09 39.3 -0.3
baz=53,SNR=52
Y18A Canyon Day Jun 53.31 323 ⇑P P 21 09 40.1 +0.1
baz=54,SNR=89
X19A St. Johns 53.33 324 ⇑P P 21 09 40.5 +0.4
baz=54,SNR=79
W20A Ramah 53.37 325 ⇑P P 21 09 40.7 +0.3
baz=54,SNR=67
U22A Llaves 53.38 327 ⇑P P 21 09 41.0 +0.5
baz=54,SNR=135
V21A Milan 53.38 326 ⇓P P 21 09 40.9 +0.4
baz=54,SNR=47
R25A Fountain Ranch 53.42 331 ⇑P P 21 09 40.9 +0.1
baz=54,SNR=40
T23A Casias Ranch, 53.44 328 ⇑P P 21 09 41.0 +0.1
baz=54,SNR=53
S24A Houchin Ranch, 53.49 330 ⇑P P 21 09 41.9 +0.7
baz=54,SNR=121
116A Eloy 53.52 320 ⇑P P 21 09 41.3 -0.3
baz=54,SNR=70
SDCO Great Sand Dun 53.71 329 ⇓P P 21 09 43.2 +0.3
baz=54,SNR=517
SDCO Great Sand Dun 53.71 329 ⇓iP P 21 09 42.6 -0.2
comp=Z,465nm,1.3s,mb6.0
SDCO epP pP 21 10 18.3 0.0
SDCO esP sP 21 10 34.0 -1.3
SDCO eS **S 21 17 05.2 +0.1**
Y17A Roosevelt 53.75 322 ⇓P P 21 09 43.3 +0.1
baz=54,SNR=114
X18A Snowflake 53.79 323 ⇓P P 21 09 43.7 +0.2
baz=54,SNR=118
V20A Brimhall 53.84 326 ⇑P P 21 09 44.0 +0.2
baz=54,SNR=42
U21A Nageezi 53.85 327 ⇑P P 21 09 44.1 +0.2
baz=54,SNR=110
Z16A Peralta Trail, 53.87 321 ⇓P P 21 09 43.9 -0.1
baz=54,SNR=20
W19A Sanders 53.87 324 ⇑P P 21 09 44.1 +0.1
baz=54,SNR=121
T22A Edith 53.88 328 ⇑P P 21 09 44.4 +0.3
baz=54,SNR=28
R24A Sanders Place, 53.89 330 ⇑P P 21 09 44.6 +0.4
baz=54,SNR=24
S23A Nye Farm, Mont 53.94 329 ⇓P P 21 09 44.9 +0.4
baz=54,SNR=5.1
115A Sonoran Desert 53.94 320 ⇑P P 21 09 44.4 -0.3
baz=54,SNR=24
Q25A Bedland, Calha 54.01 331 ⇑P P 21 09 44.6 -0.5
baz=54,SNR=53
W18A Petrified Fore 54.07 324 ⇓P P 21 09 45.8 +0.2
baz=54,SNR=97
V19A Window Rock 54.10 325 ⇑P P 21 09 45.8 +0.1
baz=54,SNR=31
X17A Forest Lakes 54.16 323 ⇓P P 21 09 46.6 +0.4
baz=54,SNR=63
T21A Navajo Lake 54.20 327 ⇑P P 21 09 46.6 +0.2
baz=54,SNR=30
Y16A Circle Bar Ran 54.26 322 ⇑P P 21 09 47.2 +0.3
baz=54,SNR=203
U20A Newcomb 54.28 326 ⇑P P 21 09 47.2 +0.1
baz=54,SNR=85
Z15A Gila River Ind 54.29 321 ⇑P P 21 09 46.7 -0.4
baz=54,SNR=8.2
114A Black Gap (USA 54.39 320 ⇓P P 21 09 47.8 -0.1
baz=54,SNR=54
S22A 4UR Ranch, Cre 54.39 328 ⇓P P 21 09 48.0 +0.2
baz=55,SNR=211
P25A Willow Gulch B 54.45 332 ⇓P P 21 09 48.1 0.0
baz=55,SNR=36
Q24A Divide 54.48 331 ⇓P P 21 09 48.5 +0.1
baz=55,SNR=70
X16A Lo Mia Camp, P 54.60 322 ⇑P P 21 09 49.5 +0.2
baz=55,SNR=209
V18A Ganado 54.60 325 ⇑P P 21 09 49.1 -0.3
baz=55
U19A Dine' College, 54.61 326 ⇑P P 21 09 48.7 -0.7
baz=55,SNR=20
W17A Winslow 54.62 323 ⇑P P 21 09 49.5 0.0
baz=55,SNR=31
OGNE Ogallala 54.65 334 ⇓P P 21 09 49.3 -0.3
baz=55,SNR=11
OGNE Ogallala 54.65 334 ⇓eP P 21 09 48.9 -0.8
comp=Z,2μm,2.0s,mb6.5
OGNE epP pP 21 10 24.7 -0.5
OGNE esP sP 21 10 41.6 -0.5
OGNE eS **S 21 17 15.5 -2.1**
R22A Saguache, Gunn 54.72 329 ⇑P P 21 09 50.6 +0.4
baz=55,SNR=221
Q23A Hartsel 54.77 330 ⇑P P 21 09 50.8 +0.3
baz=55,SNR=37
P24A Kohler Place, 54.80 331 ⇑P P 21 09 50.6 -0.1
baz=55,SNR=11
Z14A Wintersburg 54.83 320 ⇑P P 21 09 50.8 -0.2
baz=55,SNR=14
S21A Coal Bank Pass 54.83 328 ⇓P P 21 09 51.0 +0.1
baz=55,SNR=114
Y15A Casa Rosa Ranc 54.84 321 ⇓P P 21 09 50.9 -0.2
baz=55,SNR=138
MVCO Mesa Verde 54.88 327 ⇑P P 21 09 51.2 -0.1
baz=55,SNR=76
MVCO Mesa Verde 54.88 327 ⇓iP P 21 09 50.9 -0.5
comp=Z,526nm,1.5s,mb6.0
MVCO epP pP 21 10 27.4 +0.4
MVCO ePcP PcP 21 10 51.2 -0.4
MVCO eS **S 21 17 20.5 -0.3**
T19A Beclabito 54.89 326 ⇑P P 21 09 50.9 -0.5
baz=55,SNR=126
O25A Wiggins 54.90 332 ⇓P P 21 09 51.5 +0.1
baz=55,SNR=9.0
113A Mohawk Valley, 54.97 319 ⇑P P 21 09 51.6 -0.4
baz=55,SNR=18
ECSD EROS Data Cent 54.99 340 ⇓iP P 21 09 49.8 -2.1
comp=Z,113nm,0.8s,mb5.7
ECSD epP pP 21 10 26.1 -1.5
ECSD sP sP 21 10 44.1 -0.4
ECSD ePcP PcP 21 10 52.4 +0.6
ECSD eS **S 21 17 17.3 -4.7**
V17A Tonalea, Kykot 55.04 324 ⇑P P 21 09 52.9 +0.4
baz=55,SNR=366
U18A Rough Rock, Ch 55.07 325 ⇑P P 21 09 52.8 0.0
baz=55,SNR=53
W16A Flagstaff 55.12 323 ⇓P P 21 09 53.5 +0.4
baz=55,SNR=66
COWI Conover 55.13 348 ⇓iP P 21 09 50.7 -2.2
comp=Z,590nm,1.6s,mb6.1
COWI epP pP 21 10 28.5 0.0
COWI esP sP 21 10 45.6 +0.2
COWI eS **S 21 17 21.7 -2.0**
X15A Humboldt 55.13 322 ⇓P P 21 09 53.4 +0.2
baz=55,SNR=112
P23A Jefferson 55.14 330 ⇑P P 21 09 53.8 +0.7
baz=55,SNR=55
Z13A Yuma Proving G 55.18 320 ⇑P P 21 09 53.3 -0.3
baz=55,SNR=53
R21A Cimarron 55.23 328 ⇓P P 21 09 54.3 +0.4
baz=55,SNR=109
Q22A Crested Butte, 55.28 329 ⇓P P 21 09 54.4 +0.2
baz=55,SNR=64
WUAZ Wupatki 55.31 323 ⇓P P 21 09 54.8 +0.3
baz=56,SNR=199
WUAZ Wupatki 55.31 323 ⇓eP P 21 09 54.7 +0.2
comp=Z,430nm,1.0s,mb6.1
WUAZ epP pP 21 10 31.3 +1.2
WUAZ esP sP 21 10 47.0 0.0
WUAZ ePcP PcP 21 10 53.5 +0.3
WUAZ eS **S 21 17 27.2 +0.6**
112A Yuma 55.36 318 ⇓P P 21 09 54.6 -0.2
baz=56
O24A Longmont 55.36 332 ⇑P P 21 09 55.0 +0.3
baz=56,SNR=11
ISCO Idaho Springs 55.36 331 ⇓P P 21 09 54.9 +0.2
baz=56,SNR=109
ISCO Idaho Springs 55.36 331 ⇓eP P 21 09 54.7 0.0
comp=Z,258nm,1.3s,mb5.8
ISCO epP pP 21 10 30.4 0.0
ISCO esP sP 21 10 48.5 +1.2
ISCO ePcP PcP 21 10 54.7 +1.3
ISCO ePP PP 21 12 01.2 +0.9
ISCO eScP ScP 21 14 37.5 -0.3
ISCO eS **S 21 17 19.7 -7.4**
ISCO Idaho Springs 55.36 331 ⇓eP P 21 09 54.7 0.0
ISCO e*PP pP 21 10 30.4 0.0
ISCO e*SP sP 21 10 48.5 +1.2
ISCO e 21 10 54.7
ISCO e 21 12 01.2
ISCO eS **S 21 17 19.7 -7.4**
ISCO pmax pmax
comp=Z,258nm,1.3s,mb5.8
N25A Grover 55.45 333 ⇑P P 21 09 55.5 +0.2
baz=56
X14A Yava 55.52 321 ⇑P P 21 09 56.1 +0.1
baz=56,SNR=126
R20A Redvale 55.54 328 ⇑P P 21 09 56.4 +0.4
baz=56,SNR=190
SMCO Snowmass 55.55 329 ⇓iP P 21 09 56.6 +0.5
comp=Z,282nm,1.2s,mb6.0
SMCO epP pP 21 10 32.9 +1.2
SMCO esP sP 21 10 48.8 +0.1
SMCO PcP PcP 21 10 54.7 +0.6
SMCO eScP ScP 21 14 24.2 -14
SMCO eS **S 21 17 29.5 -0.2**
T18A Mexican Hat 55.58 326 ⇓P P 21 09 55.9 -0.5
baz=56,SNR=231
PV01 Paradox Valley 55.60 328 eP P 21 09 56.4 -0.1
comp=Z,15μm,0.9s
PV01 epP pP 21 10 32.5 +0.3
Q21A Lamborn Mesa, 55.60 329 ⇓P P 21 09 56.2 -0.2
baz=56,SNR=17
U16A Tuba City 55.60 324 ⇓P P 21 09 56.8 +0.2
baz=56,SNR=95
W15A Williams 55.62 322 ⇑P P 21 09 57.1 +0.5
baz=56,SNR=50
S19A Harvey Farm, M 55.62 327 ⇓P P 21 09 56.3 -0.3
baz=56,SNR=194
P22A Eagle 55.76 330 ⇓P P 21 09 57.8 +0.2
baz=56,SNR=65
PTCN Pitcairn Islan 55.80 245 eP P 21 09 58.1 -0.1
comp=Z,1μm,1.6s,mb6.5
N24A Carr 55.82 332 ⇑P P 21 09 58.5 +0.5
baz=56,SNR=41
O23A Lake Granby, G 55.83 331 ⇑P P 21 09 58.2 +0.1
baz=56,SNR=45
GLA Glamis 55.84 319 ⇑P P 21 09 58.2 -0.1
baz=56,SNR=41
GLA Glamis 55.84 319 ⇓eP P 21 09 58.0 -0.3
comp=Z,275nm,1.3s,mb5.9
GLA epP pP 21 10 33.5 -0.5
GLA esP sP 21 10 51.1 +0.2
GLA ePcP PcP 21 10 54.6 -0.8
GLA eS **S 21 17 33.0 -0.7**
GLA Glamis 55.84 319 ⇓eP P 21 09 58.0 -0.3
GLA e*PP pP 21 10 33.5 -0.5
GLA e*SP sP 21 10 51.1 +0.2
GLA e 21 10 54.6
GLA eS **S 21 17 33.0 -0.7**
GLA pmax pmax
comp=Z,275nm,1.3s,mb5.9
PV04 Paradox Valley 55.97 327 ⇓eP P 21 09 58.6 -0.4
PV04 epP pP 21 10 35.4 +0.6
PV04 esP sP 21 10 52.2 +0.5
V15A Kaibab Nationa 55.99 323 ⇓P P 21 09 59.8 +0.5
baz=56,SNR=128
T17A Navajo Res., N 56.01 325 ⇓P P 21 09 59.6 +0.2
baz=56,SNR=213
S18A Hurst Farm, Bl 56.05 326 ⇓P P 21 09 59.6 -0.1
baz=56,SNR=236
P21A Newcastle 56.05 329 ⇑P P 21 09 59.7 +0.1
baz=56
R19A Curley Farm, L 56.08 327 ⇓P P 21 09 59.4 -0.5
baz=56,SNR=96
Y12C Blythe 56.09 320 ⇓P P 21 09 59.9 -0.2
baz=56,SNR=45
O22A Kremmling 56.09 331 ⇑P P 21 09 59.8 -0.1
baz=56,SNR=174
W14A Seligman 56.13 322 ⇑P P 21 10 00.7 +0.4
baz=56,SNR=157
M24A Cheyenne 56.31 333 ⇑P P 21 10 01.7 +0.3
baz=56,SNR=72
N23A Red Feather La 56.37 332 ⇑P P 21 10 02.0 +0.1
baz=56,SNR=54
T16A Glen Canyon Da 56.40 325 ⇓P P 21 10 02.1 -0.1
baz=57,SNR=37
SWSC Sam W. Stewart 56.41 318 ⇓P P 21 10 02.3 -0.1
baz=56,SNR=28
V14A Boquillas Ranc 56.43 322 ⇓P P 21 10 03.0 +0.6
baz=57,SNR=289
DVTC Desert V Tower 56.44 318 ⇑P P 21 10 02.5 0.0
baz=57,SNR=26
PHWY Pilot Hill 56.47 332 ⇓eP P 21 10 02.5 0.0
comp=Z,270nm,1.1s,mb6.0
PHWY epP pP 21 10 38.5 +0.2
PHWY esP sP 21 10 55.9 +0.6
PHWY eS **S 21 17 42.7 +1.1**
U15A North Rim 56.48 324 ⇓P P 21 10 03.4 +0.6
baz=57,SNR=192
R18A Canyonlands Na 56.49 327 ⇓P P 21 10 02.4 -0.4
baz=57
P20A De Beque 56.52 329 ⇑P P 21 10 03.0 0.0
baz=57,SNR=38
N22A Wattenberg Ran 56.54 331 ⇓P P 21 10 03.3 +0.2
baz=57,SNR=28
Q19A Hogan Spring (56.57 328 ⇓P P 21 10 03.5 +0.2
baz=57,SNR=173
O21A Pagoda 56.59 330 ⇑P P 21 10 03.9 +0.5
baz=57,SNR=39
BC3 Big Chuckawall 56.63 319 ⇓P P 21 10 04.0 +0.1
baz=57,SNR=229
IRM Iron Mountain 56.75 320 ⇑P P 21 10 04.7 0.0
baz=57,SNR=327
MONP Monument Peak 56.79 318 ⇓P P 21 10 04.9 -0.1
baz=57,SNR=36
NEE2 Needles Airpor 56.80 321 ⇑P P 21 10 04.8 -0.2
baz=57
L24A Wheatland 56.81 333 ⇓P P 21 10 05.0 0.0
baz=57,SNR=17
BAR Barrett 56.84 317 ⇓eP P 21 10 05.0 -0.4
comp=Z,158nm,1.4s,mb5.7
BAR epP pP 21 10 41.5 +0.4
BAR esP sP 21 10 57.6 -0.5
BAR eS **S 21 17 47.9 +1.0**
O20A White River Ci 56.91 329 ⇑P P 21 10 05.7 0.0
baz=57,SNR=45
P19A Cripple Cowboy 56.92 328 ⇓P P 21 10 05.8 0.0
baz=57,SNR=150
T15A Red Dirt Ranch 56.93 324 ⇓P P 21 10 06.2 +0.3
baz=57,SNR=60
R17A Hanksville Air 56.96 326 ⇓P P 21 10 06.3 +0.2
baz=57,SNR=121
S16A Weppner Ranch, 56.97 325 ⇓P P 21 10 05.8 -0.3
baz=57,SNR=183
U14A Mt Trumbull 57.00 323 ⇓P P 21 10 06.8 +0.4
baz=57,SNR=264
N21A Black Mountain 57.03 330 ⇓P P 21 10 07.1 +0.6
baz=57,SNR=72
M22A Cedar Creek Ra 57.08 331 ⇑P P 21 10 07.0 +0.1
baz=57,SNR=33
V13A Grand Canyon W 57.11 322 ⇓P P 21 10 07.3 +0.1
baz=57,SNR=208
Q18A Rafter H Ranch 57.14 327 ⇑P P 21 10 07.2 -0.2
baz=57,SNR=162
BELC Belle Mtn. Jos 57.20 319 ⇓P P 21 10 08.1 +0.2
baz=57,SNR=191
L23A Garrett 57.22 333 ⇑P P 21 10 07.6 -0.2
baz=57,SNR=72
109C Camp Elliot, M 57.25 317 ⇑P P 21 10 08.1 -0.2
baz=57,SNR=6.5
PFO Pinyon Flat Ob 57.25 318 ⇓P P 21 10 08.4 +0.1
baz=57,SNR=93
PFO Pinyon Flat Ob 57.25 318 eP P 21 10 08.3 +0.1
comp=Z,244nm,1.1s,mb6.0
PFO Pinyon Flat Ob 57.25 318 eP P 21 10 08.4 +0.1

220A Playas Peak, P 51.10 322 ⇑P P 21 09 23.9 +0.1
baz=51,SNR=228
Y23A Lovelace Mesa, 51.12 326 ⇑P P 21 09 23.6 -0.2
baz=51,SNR=186
Z22A Elephant Butte 51.14 325 ⇑P P 21 09 24.1 +0.1
baz=51,SNR=84
HNH Hanover 51.16 2⇓eP P 21 09 22.8 -1.1
HNH epP pP 21 09 58.5 -0.6
HNH eS **S 21 16 25.1 -5.0**
319A Douglas 51.20 321 ⇑P P 21 09 24.7 +0.2
baz=51,SNR=127
W25A X Bar L Ranch, 51.23 328 ⇓P P 21 09 24.3 -0.4
baz=51,SNR=106
X24A Lazy VL Ranch, 51.25 327 ⇓P P 21 09 24.6 -0.3
baz=51,SNR=166
V26A Tequesquite Ra 51.34 329 ⇓P P 21 09 25.2 -0.3
baz=52,SNR=46
NCB Newcomb 51.39 0 eP P 21 09 26.2 +0.6
comp=Z,1μm,1.8s,mb6.2
NCB epP pP 21 09 59.6 -1.2
MDV Middlebury 51.43 1 eP P 21 09 26.2 +0.3
MDV epP pP 21 10 01.1 0.0
MDV esP sP 21 10 19.0 +0.9
Z21A St. Cloud Mine 51.59 324 ⇑P P 21 09 27.9 +0.5
baz=52,SNR=88
BNM Barren Site 51.60 326 ⇓eP P 21 09 27.2 -0.2
comp=Z,230nm,1.3s,mb5.7
BNM epP pP 21 10 02.4 -0.2
BNM esP sP 21 10 19.7 0.0
BNM ePcP PcP 21 10 39.5 +0.3
BNM ePP PP 21 11 21.8 -4.8
120A U Bar Ranch, L 51.62 323 ⇑P P 21 09 27.9 +0.4
baz=52,SNR=84
219A White Tail Can 51.62 322 ⇑P P 21 09 27.8 +0.2
baz=52,SNR=235
Y22A Socorro 51.64 325 ⇑P P 21 09 27.9 +0.2
baz=52,SNR=37
X23A Hourglass Bar 51.68 326 ⇑P P 21 09 27.9 0.0
baz=52,SNR=121
318A Bisbee 51.69 321 ⇓P P 21 09 28.0 -0.1
baz=52,SNR=145
LBNH Lisbon 51.71 2⇓eP P 21 09 27.8 -0.2
comp=Z,269nm,1.0s,mb5.8
LBNH epP pP 21 10 03.0 -0.2
LBNH PcP PcP 21 10 39.1 -0.1
LBNH eS **S 21 16 35.4 -2.3**
LBNH Lisbon 51.71 2⇓eP P 21 09 27.8 -0.2
LBNH e*PP pP 21 10 03.0 -0.2
LBNH 21 10 39.1
LBNH eS **S 21 16 35.4 -2.2**
LBNH pmax pmax
comp=Z,269nm,1.0s,mb5.8
Y22D IRIS PASSCAL I 51.71 325 ⇑P P 21 09 28.1 -0.1
baz=52
LPM Los Pinos Moun 51.72 326 eP P 21 09 28.2 -0.1
LPM epP pP 21 10 01.3 -2.3
LPM ePcP PcP 21 10 39.0 -0.5
LPM ePP PP 21 11 22.5 -5.2
W24A Lazy 6 Ranch, 51.73 327 ⇑P P 21 09 27.9 -0.4
baz=52,SNR=122
V25A Rancho No Teng 51.79 329 ⇓P P 21 09 28.6 -0.2
baz=52,SNR=308
LENM Lemitar 51.81 325 eP P 21 09 29.7 +0.7
LENM epP pP 21 10 03.3 -0.9
CBKS Cedar Bluff 51.90 335 ⇑P P 21 09 29.2 -0.4
baz=52,SNR=21
CBKS Cedar Bluff 51.90 335 ⇓eP P 21 09 28.7 -0.9
comp=Z,476nm,1.1s,mb6.0
CBKS epP pP 21 10 05.3 +0.5
CBKS esP sP 21 10 21.6 -0.2
CBKS eS **S 21 16 39.7 -0.8**
CBKS Cedar Bluff 51.90 335 ⇓eP P 21 09 28.7 -0.9
CBKS e*PP pP 21 10 05.3 +0.5
CBKS e*SP sP 21 10 21.6 -0.2
CBKS eS **S 21 16 39.7 -0.8**
CBKS pmax pmax
comp=Z,476nm,1.1s,mb6.0
Z20A Nine Sixteen R 51.99 323 ⇑P P 21 09 30.8 +0.5
baz=52,SNR=257
LONY Lake Ozonia 52.04 360 ⇓eP P 21 09 30.2 -0.3
comp=Z,302nm,1.1s,mb5.8
LONY epP pP 21 10 05.2 -0.6
LONY esP sP 21 10 24.2 +1.4
LONY eS **S 21 16 41.0 -1.1**
V24A Rampart Ranch, 52.05 328 ⇑P P 21 09 30.7 0.0
baz=52,SNR=184
LAZ Ladron 52.07 325 eP P 21 09 31.2 +0.2
comp=Z,256nm,1.5s,mb5.6
LAZ epP pP 21 10 05.5 -0.7
LAZ esP sP 21 10 25.0 +1.8
218A Dragoon 52.09 321 ⇓P P 21 09 31.3 +0.2
baz=52,SNR=99
W23A Werner Place, 52.09 327 ⇑P P 21 09 31.2 +0.2
baz=52,SNR=49
Y21A Point of Rocks 52.09 325 ⇑P P 21 09 31.9 +0.8
baz=52,SNR=430
ANMO Albuquerque 52.10 326 ⇓iP P 21 09 30.7 -0.4
comp=Z,321nm,1.1s,mb5.9
ANMO epP pP 21 10 06.0 -0.4
ANMO esP sP 21 10 24.0 +0.6
ANMO eScP ScP 21 14 23.4 -0.3
ANMO eS **S 21 16 36.3 -7.0**
ANMO Albuquerque 52.10 326 ⇓iP P 21 09 30.7 -0.4
ANMO e*PP pP 21 10 06.0 -0.4
ANMO e*SP sP 21 10 24.0 +0.6
ANMO eS **S 21 16 36.3 -7.1**
ANMO pmax pmax
comp=Z,321nm,1.1s
U25A Circle Dot Ran 52.12 329 ⇓P P 21 09 31.3 +0.1
baz=52,SNR=79
WVL Waterville 52.16 4⇓eP P 21 09 30.3 -1.1
comp=Z,913nm,1.4s,mb6.2
WVL epP pP 21 10 05.3 -1.3
WVL sP sP 21 10 23.8 +0.2
WVL eS **S 21 16 46.8 +3.0**
119A Ashpeak Ranch, 52.17 322 ⇓P P 21 09 32.0 +0.3
baz=52,SNR=86
FRNY Flat Rock 52.26 1 eP P 21 09 31.8 -0.3
comp=Z,2μm,2.0s,mb6.3
FRNY epP pP 21 10 06.9 -0.4
FRNY eS **S 21 16 43.1 -2.0**
SCIA State Center 52.26 342 ⇓eP P 21 09 29.9 -2.2
comp=Z,233nm,0.6s,mb6.0
SCIA epP pP 21 10 06.4 -1.1
SCIA eS **S 21 16 43.2 -2.0**
JFWS Jewell Farm 52.37 345 ⇓eP P 21 09 30.7 -2.3
comp=Z,161nm,0.8s,mb5.7
JFWS epP pP 21 10 06.7 -1.6
JFWS eScP ScP 21 14 23.8 -0.8
JFWS eS **S 21 16 41.2 -5.6**
JFWS Jewell Farm 52.37 345 ⇓eP P 21 09 30.7 -2.3
JFWS e*PP pP 21 10 06.7 -1.5
JFWS eS **S 21 16 41.2 -5.6**
JFWS pmax pmax
comp=Z,161nm,0.8s,mb5.7
W22A Albuquerque 52.41 326 ⇓P P 21 09 33.6 +0.1
baz=53,SNR=17
Y20A Horse Springs, 52.43 324 ⇑P P 21 09 33.8 +0.3
baz=53,SNR=229
217A Green Valley 52.44 320 ⇓P P 21 09 33.8 +0.1
baz=53,SNR=129
X21A Alamocita Cree 52.47 325 ⇑P P 21 09 34.4 +0.6
baz=53,SNR=410
118A Homack Ranch, 52.49 322 ⇑P P 21 09 34.2 +0.1
baz=53,SNR=187
Z19A T-Link Ranch, 52.52 323 ⇓P P 21 09 34.4 +0.2
baz=53,SNR=19
V23A Ortiz Mt. (NFS 52.55 327 ⇓P P 21 09 34.5 +0.2
baz=53,SNR=53
U24A Moreno Valley 52.57 329 ⇑P P 21 09 35.1 +0.5
baz=53,SNR=12
T25A Trinidad 52.70 330 ⇑P P 21 09 35.8 +0.3
baz=53,SNR=231
TUC Tucson 52.77 321 ⇓eP P 21 09 35.7 -0.4
comp=Z,926nm,2.1s,mb6.1
TUC epP pP 21 10 11.4 -0.1
TUC esP sP 21 10 30.9 +2.5
TUC eS **S 21 16 49.1 -3.5**
TUC Tucson 52.77 321 ⇓eP P 21 09 35.7 -0.4
TUC e*PP pP 21 10 11.4 -0.1
TUC e*SP sP 21 10 30.9 +2.4
TUC eS **S 21 16 49.1 -3.5**
TUC pmax pmax
comp=Z,925nm,2.1s,mb6.1
Z18A Geronimo 52.84 322 ⇓P P 21 09 36.6 0.0

PFO pmax pmax
comp=Z,244nm,1.1s,mb6.0
R16A Teasdale 57.30 326 ⇓P **P 21 10 08.6 +0.1**
baz=57,SNR=52
W12A Cal Nev Ari 57.30 321 ⇑P **P 21 10 07.9 -0.7**
baz=57
LDFC Landfair 57.30 321 *e*P **P 21 10 10.2 +1.6**
SRU San Rafael 57.36 327 ⇑P **P 21 10 08.4 -0.5**
baz=58,SNR=146
SRU San Rafael 57.36 327 *e*P **P 21 10 08.5 -0.3**
comp=Z,916nm,1.8s,mb6.3
SRU San Rafael 57.36 327 *e*P **P 21 10 08.5 -0.4**
SRU pmax pmax
comp=Z,916nm,1.8s,mb6.3
S15A Panguitch 57.37 325 ⇓P **P 21 10 09.2 +0.2**
baz=58
T14A Hurricane 57.37 324 ⇑P **P 21 10 09.7 +0.7**
baz=58,SNR=115
EYMN Ely 57.40 346⇓ *e*P **P 21 10 06.8 -2.2**
comp=Z,917nm,1.8s,mb6.3
EYMN *e*pP pP 21 10 43.2 -1.7
EYMN *e*PcP PcP 21 11 01.4 +0.3
EYMN *e*S **S 21 17 51.4 -2.3**
N20A Spence Gulch, 57.45 330 ⇑P **P 21 10 09.7 +0.2**
baz=58,SNR=226
GMRC Granite Mounta 57.47 320 ⇑P **P 21 10 09.8 +0.1**
baz=58,SNR=172
U13A Pakoon Wash 57.47 322 ⇑P **P 21 10 09.9 +0.2**
baz=58,SNR=128
PMSA Palmer Station 57.48 175 P **P 21 10 09.2 -0.1**
comp=Z,261nm,1.1s,mb6.0,baz=352,slow=5.2,SNR=48
PMSA S **S 21 17 55.4 +1.1**
comp=Z,2.2nm,0.8s,baz=16,slow=18,SNR=1.7
O19A Miners Draw (B 57.48 329 ⇑P **P 21 10 09.5 -0.3**
baz=58,SNR=96
V12A Nelson 57.56 321 ⇑P **P 21 10 10.2 -0.2**
baz=58,SNR=123
Q16A Castle Valley 57.57 326 ⇓P **P 21 10 10.2 -0.2**
baz=58,SNR=32
P18A Preston Nutter 57.58 328 ⇑P **P 21 10 10.8 +0.3**
baz=58,SNR=85
RWWY Rawlins 57.59 331 *e*P **P 21 10 10.5 +0.1**
comp=Z,744nm,1.3s,mb6.4
M21A Separation Pea 57.60 331 ⇑P **P 21 10 10.7 +0.1**
baz=58
R15A Junction 57.69 325 ⇑P **P 21 10 11.3 +0.1**
baz=58,SNR=25
P17A Butcher Ranch, 57.73 327 ⇑P **P 21 10 11.1 -0.4**
baz=58,SNR=107
MURC Murrieta 57.74 318 ⇑P **P 21 10 11.5 -0.2**
baz=58,SNR=28
U12A Valley of Fire 57.83 322 ⇓P **P 21 10 12.6 +0.4**
baz=58,SNR=50
T13A Saint George 57.83 323 ⇓P **P 21 10 12.6 +0.4**
baz=58,SNR=48
MSU Marysvale 57.84 325 *e*P **P 21 10 12.5 +0.2**
TMUT Trail Mountain 57.86 327 *e*P **P 21 10 12.8 +0.4**
comp=Z,133nm,0.9s,mb5.8
CCUT Cedar City 57.87 324 *e*P **P 21 10 13.1 +0.7**
comp=Z,854nm,2.1s,mb6.2
L21A Rawlins 57.88 331 ⇑P **P 21 10 12.0 -0.4**
baz=58,SNR=142
S14A Cedar City 57.90 324 ⇓P **P 21 10 12.6 0.0**
baz=58,SNR=15
O18A Roosevelt 57.92 328 ⇑P **P 21 10 13.0 +0.2**
baz=58,SNR=28
HEC Hector,Ludlow 57.93 320 ⇓P **P 21 10 13.2 +0.3**
baz=58,SNR=102
N19A John Jarvie Ra 57.95 329 ⇓P **P 21 10 12.7 -0.3**
baz=58,SNR=51
BBRC Big Bear Solar 57.96 319 ⇓P **P 21 10 13.4 +0.2**
baz=58
V11A Goodsprings 57.99 321 ⇓P **P 21 10 13.3 -0.1**
baz=58,SNR=22
K22A Casper 58.02 332 ⇑P **P 21 10 13.5 +0.1**
baz=58,SNR=32
TUQ Turquoise Moun 58.05 320 ⇑P **P 21 10 13.7 0.0**
baz=58,SNR=26
ARUT Antelope Range 58.07 324 *e*P **P 21 10 13.7 -0.2**
comp=Z,131nm,1.0s,mb5.7
ARUT Antelope Range 58.07 324 *e*P **P 21 10 13.7 -0.2**
ARUT pmax pmax
comp=Z,131nm,1.0s,mb5.7
RSSD Black Hills 58.10 335 *e*P **P 21 10 13.8 -0.2**
comp=Z,287nm,1.1s,mb6.0
RSSD Black Hills 58.10 335 *e*P **P 21 10 13.8 -0.2**
RSSD pmax pmax
comp=Z,287nm,1.1s,mb6.0
T12A Moapa 58.12 322 ⇑P **P 21 10 14.6 +0.3**
baz=58,SNR=28
R14A James Farms, M 58.18 325 ⇑P **P 21 10 14.9 +0.3**
baz=58
S13A Holt Ranch, En 58.18 324 ⇑P **P 21 10 15.1 +0.4**
baz=58,SNR=229
O17A Robinson Place 58.25 328 ⇑P **P 21 10 15.2 +0.1**
baz=58,SNR=52
SHPR Sheep Range 58.25 322 *e*P **P 21 10 15.2 0.0**
N18A Larsen Ranch, 58.27 329 ⇓P **P 21 10 15.1 -0.1**
baz=58,SNR=59
SCI San Clemente I 58.28 316 ⇑P **P 21 10 15.5 +0.1**
baz=58,SNR=16
Q15A Fillmore 58.30 326 ⇓P **P 21 10 15.6 +0.2**
baz=58,SNR=26
P16A Fountain Green 58.33 327 ⇑P **P 21 10 16.0 +0.4**
baz=58,SNR=12
U11A Corn Creek 58.34 322 ⇑P **P 21 10 16.3 +0.5**
baz=58,SNR=6.9
K21A Alcova 58.34 332 ⇑P **P 21 10 15.6 -0.1**
baz=58,SNR=53
L20A Wamsutter 58.38 331 ⇑P **P 21 10 16.0 +0.1**
baz=58,SNR=40
RRX Edison Barstow 58.39 319 ⇓P **P 21 10 16.5 +0.3**
baz=58
M19A Rock Springs 58.40 330 ⇑P **P 21 10 15.6 -0.5**
baz=59,SNR=18
BFSC Mount Baldy Ra 58.43 318 ⇑P **P 21 10 16.4 0.0**
baz=59,SNR=33
CIS Catalina Islan 58.43 317 ⇓P **P 21 10 16.5 0.0**
baz=59,SNR=21
GSC Goldstone 58.52 320 ⇑P **P 21 10 17.0 -0.1**
baz=59,SNR=126
GSC Goldstone 58.52 320 *e*P **P 21 10 17.2 +0.1**
comp=Z,231nm,1.1s,mb5.9
GSC Goldstone 58.52 320 *e*P **P 21 10 17.2 +0.1**
GSC pmax pmax
comp=Z,231nm,1.1s,mb5.9
FMP Fort Macarthur 58.54 317 ⇓P **P 21 10 17.3 +0.1**
baz=59,SNR=7.2
SHOC Shoshone 58.56 321 ⇓P **P 21 10 17.2 -0.1**
baz=59,SNR=58
MPU Maple Canyon 58.60 327 *e*P **P 21 10 17.9 +0.3**
comp=Z,226nm,1.1s,mb5.9
P15A Leamington 58.64 326 ⇑P **P 21 10 17.9 +0.1**
baz=59,SNR=59
R13A O'Grain Ranch, 58.65 324 ⇓P **P 21 10 18.3 +0.4**
baz=59,SNR=186
O16A Springville 58.67 327 ⇓P **P 21 10 18.1 +0.2**
baz=59,SNR=88
DAU Daniels Canyon 58.68 328 *e*P **P 21 10 18.2 +0.2**
MWC Mount Wilson 58.69 318 *e*P **P 21 10 18.3 +0.1**
comp=Z,226nm,1.2s,mb5.9
MWC Mount Wilson 58.69 318 *e*P **P 21 10 18.3 +0.1**
MWC pmax pmax
comp=Z,226nm,1.2s,mb5.9
PASC Pasadena Art C 58.74 318 *e*P **P 21 10 19.1 +0.5**
comp=Z,1μm,1.3s,mb6.5
S12A Delamar Landin 58.78 323 ⇓P **P 21 10 19.4 +0.6**
baz=59,SNR=24
Q14A Sevier Lake (B 58.80 325 ⇑P **P 21 10 19.9 +1.0**
baz=59,SNR=265
NLU North Lily Min 58.80 327 *e*P **P 21 10 19.7 +0.8**
comp=Z,199nm,1.2s,mb5.8
M18A Lyman 58.80 329 ⇓P **P 21 10 18.0 -0.9**
baz=59,SNR=54
N17A Moffit Pass 58.84 328 ⇓P **P 21 10 19.2 0.0**
baz=59,SNR=108
AGMN Agassiz Nation 58.85 343 *e*P **P 21 10 17.6 -1.5**
comp=Z,465nm,0.8s,mb6.4
K20A Yellowstone Ra 58.87 331 ⇑P **P 21 10 18.7 -0.7**
baz=59,SNR=100
DECC Green Verdugo 58.88 318 ⇑P **P 21 10 19.7 +0.1**
baz=59,SNR=6.8
JLU Jordanelle 58.92 328 *e*P **P 21 10 20.0 +0.3**
comp=Z,285nm,1.1s,mb6.0
U10A Ash Meadows, A 58.92 321 ⇓P **P 21 10 19.9 +0.1**
baz=59,SNR=60
EDW2 Edwards Air Fo 59.03 319 ⇑P **P 21 10 20.4 -0.2**
baz=59,SNR=63
P14A Drum Mountains 59.09 326 ⇓P **P 21 10 21.7 +0.8**
baz=59,SNR=203
R12A Pony Springs, 59.12 324 ⇑P **P 21 10 21.7 +0.6**
baz=59,SNR=200
N16A Rees Ranch, Co 59.12 328 ⇓P **P 21 10 21.0 0.0**
baz=59,SNR=49
M17A Scullys Gap (B 59.14 329 ⇑P **P 21 10 20.7 -0.5**
baz=59,SNR=92
CTU Camp Tracy 59.15 327 *e*P **P 21 10 21.8 +0.5**
comp=Z,239nm,1.2s,mb5.9
L18A Fontenelle, Gr 59.15 330 ⇑P **P 21 10 20.9 -0.4**
baz=59,SNR=28
Q13A Wheeler Ranch, 59.20 325 ⇓P **P 21 10 22.1 +0.4**
baz=59,SNR=179
LRMC Laurel Mountai 59.20 319 ⇓P **P 21 10 21.7 -0.1**
baz=59,SNR=15
K19A Absolon Red Bu 59.24 331 ⇓P **P 21 10 21.2 -0.7**
baz=59
O15A The Old Anders 59.24 327 ⇑P **P 21 10 22.2 +0.2**
baz=59,SNR=74
I21A Big Trails, Te 59.27 333 ⇓P **P 21 10 21.6 -0.4**
baz=59,SNR=118
FURC Furnace Creek, 59.29 321 ⇑P **P 21 10 22.2 -0.2**
baz=59,SNR=133
BLG Laguna Peak 59.29 317 ⇓P **P 21 10 22.4 0.0**
baz=59,SNR=10
NOQ North Oquirrh 59.31 327 *e*P **P 21 10 23.1 +0.7**
comp=Z,472nm,1.4s,mb6.1
S11A Rachel 59.35 322 ⇑P **P 21 10 23.0 +0.2**
baz=60,SNR=11
OSI Osito Adit 59.36 318 ⇑P **P 21 10 22.5 -0.4**
baz=60
DUG Dugway 59.37 326 ⇓P **P 21 10 23.2 +0.4**
baz=60,SNR=396
DUG Dugway 59.37 326 *e*P **P 21 10 22.8 -0.1**
comp=Z,1μm,1.6s,mb6.5
DUG Dugway 59.37 326 *e*P **P 21 10 22.8 0.0**
DUG pmax pmax
comp=Z,1μm,1.6s,mb6.5
MPMC Manual Prospec 59.43 320 ⇓P **P 21 10 23.1 -0.2**
baz=60,SNR=112
P13A Bates Ranch, G 59.53 325 ⇑P **P 21 10 24.5 +0.6**
baz=60,SNR=224
BW06 Boulder Array 59.54 331 ⇑P **P 21 10 23.6 -0.3**
baz=60,SNR=56
BW06 Boulder Array 59.54 331 *e*P **P 21 10 23.3 -0.7**
comp=Z,318nm,1.4s,mb6.0
PDAR Pinedale Array 59.54 331 P **P 21 10 23.0 -0.9**
PDAR pP pP 21 11 02.1 +2.1
PDAR S **S 21 18 21.2 -0.4**
PDAR ⇑*e* 21 40 03.3
PDAR Pinedale Array 59.54 331 P **P 21 10 23.0 -0.9**
comp=Z,96nm,1.0s,mb5.6,baz=131,slow=6.8,SNR=146
PDAR pP pP 21 11 02.1 +2.1
comp=Z,13nm,0.7s,baz=177,slow=10,SNR=2.4
PDAR S **S 21 18 21.2 -0.4**
comp=Z,2.5nm,1.0s,baz=86,slow=4.6,SNR=2.6
PDAR PKP2bc 21 40 03.3
comp=Z,2.9nm,1.0s,baz=289,slow=4.5,SNR=5.8
PDAR P4KPbc 21 47 29.4
comp=Z,1.5nm,0.6s,baz=134,slow=6.4,SNR=13
BSC Santa Cruz Isl 59.61 317 ⇑P **P 21 10 24.1 -0.5**
baz=60,SNR=5.8
K18A Toltan Ranch, 59.68 330 ⇑P **P 21 10 24.6 -0.3**
baz=60,SNR=106
N15A Stauny Isla 59.70 327 ⇓P **P 21 10 24.4 -0.6**
baz=60,SNR=22
HWUT Hardware Ranch 59.70 328 *e*P **P 21 10 24.4 -0.7**
comp=Z,2μm,2.0s,mb6.6
L17A Cokeville 59.70 329 ⇓P **P 21 10 24.0 -1.0**
baz=60,SNR=201
R11A Troy Canyon, C 59.71 323 ⇓P **P 21 10 25.4 +0.2**
baz=60,SNR=194
Q12A Willow Creek R 59.72 324 ⇑P **P 21 10 25.3 +0.1**
baz=60,SNR=80
ARVC Arvin 59.73 318 ⇑P **P 21 10 25.3 -0.2**
baz=60
I20A Worland 59.76 332 ⇑P **P 21 10 25.0 -0.4**
baz=60,SNR=125
H21A Big Horn, Sher 59.80 334 ⇓P **P 21 10 24.8 -0.9**
baz=60,SNR=57
ISA Isabella 59.82 319 ⇓P **P 21 10 26.1 +0.1**
baz=60,SNR=72
ISA Isabella 59.82 319 *e*P **P 21 10 25.8 -0.2**
comp=Z,118nm,0.9s,mb5.7
ISA Isabella 59.82 319 *e*P **P 21 10 25.8 -0.2**
ISA pmax pmax
comp=Z,118nm,0.9s,mb5.7
SBC Santa Barbara 59.92 317 ⇓P **P 21 10 25.9 -0.9**
baz=60
L16A Fish Haven 59.93 329 ⇑P **P 21 10 26.0 -0.6**
baz=60,SNR=30
GRAC Grapevine Rang 59.94 321 ⇓P **P 21 10 26.9 +0.1**
baz=60,SNR=56
SPUT South Promonto 59.95 328 *e*P **P 21 10 26.6 -0.3**
comp=Z,416nm,1.1s,mb6.2
O13A Hicks Ranch, I 59.97 326 ⇑P **P 21 10 27.4 +0.4**
baz=60,SNR=42
RKT Rikitea 60.02 248 *e*P **P 21 10 29.9 +2.2**
comp=Z,304nm,1.2s,mb6.0
RKT *e*pP pP 21 11 04.0 +0.1
RKT comp=Z,247nm,1.3s *e*S **S 21 18 27.1 -1.5**
RKT comp=Z,22μm,29.5s *e*LQ 21 25 47.8
RKT comp=Z,13μm,37.0s *e*LR LR 21 28 24.8
RKT comp=Z,9μm,36.2s
RKT Rikitea 60.02 248 *e*P **P 21 10 29.9 +2.2**
comp=Z,304nm,1.2s,mb6.0
RKT *e*pP pP 21 11 04.0 +0.1
RKT *e*S **S 21 18 27.1 -1.5**
RKT *e*LQ 21 25 47.8
RKT Rikitea 60.02 248 *e*P **P 21 10 29.9 +2.2**
RKT *e**PP pP 21 11 04.0 +0.1
RKT *e*S **S 21 18 27.1 -1.5**
RKT pmax pmax
comp=Z,305nm,1.2s,mb6.0
CWC Cottonwood Cre 60.04 320 ⇑P **P 21 10 27.7 +0.2**
baz=60,SNR=52
S10A Tonopah Range, 60.04 322 ⇓P **P 21 10 27.8 +0.4**
baz=60,SNR=224
M15A Larsen Ranch, 60.06 328 ⇓P **P 21 10 27.1 -0.5**
baz=60,SNR=117
Q11A Duckwater 60.07 324 ⇑P **P 21 10 28.0 +0.4**
baz=60,SNR=190
R10A Warm Springs 60.10 323 ⇑P **P 21 10 28.6 +0.7**
baz=60,SNR=97
J18A Kendall Valley 60.10 331 ⇑P **P 21 10 27.3 -0.4**
baz=60,SNR=274
H20A Greybull 60.12 333 ⇑P **P 21 10 27.1 -0.7**
baz=60,SNR=70
K17A Gardner Place, 60.20 330 ⇑P **P 21 10 27.8 -0.6**
baz=60,SNR=40
PKM Peak Mountain 60.26 318 ⇑P **P 21 10 28.8 -0.2**
baz=60,SNR=22
AHID Auburn Hatcher 60.30 330 *e*P **P 21 10 29.3 +0.2**
comp=Z,274nm,1.1s,mb6.0
VES Vestal, Richgr 60.33 319 ⇑P **P 21 10 29.1 -0.4**
baz=60,SNR=36
G21A Lodge Grass 60.34 334 ⇑P **P 21 10 28.6 -0.7**
baz=60,SNR=56
I18A Diamond G Ranc 60.37 331 ⇓P **P 21 10 29.2 -0.3**
baz=60,SNR=113
L15A Malad City 60.41 328 ⇑P **P 21 10 29.4 -0.5**
baz=61,SNR=296
HVU Hansel Valley 60.46 328 *e*P **P 21 10 29.7 -0.5**
comp=Z,314nm,1.2s,mb6.0
HVU Hansel Valley 60.46 328 *e*P **P 21 10 29.7 -0.5**
HVU pmax pmax
comp=Z,314nm,1.2s,mb6.0
O12A Currie 60.49 325 ⇓P **P 21 10 30.5 0.0**
baz=61,SNR=118
Q10A Clear Creek Ra 60.50 323 ⇓P **P 21 10 31.0 +0.4**
baz=61,SNR=94
TIN Tinemaha 60.51 320 ⇑P **P 21 10 30.8 +0.2**
baz=61,SNR=24
J17A Brown Place, J 60.55 330 ⇓P **P 21 10 30.7 -0.1**
baz=61,SNR=41
P11A Circle Ranch, 60.60 324 ⇑P **P 21 10 31.3 +0.1**
baz=61,SNR=48
K16A Soda Springs 60.60 329 ⇑P **P 21 10 31.1 -0.1**
baz=61,SNR=82
SMMC Simmler 60.62 318 ⇓P **P 21 10 31.4 0.0**
baz=61,SNR=29
REDW Red Top Meadow 60.62 330 *e*P **P 21 10 30.9 -0.4**
comp=Z,428nm,1.4s,mb6.1
ULM Lac du Bonnet 60.63 344 P **P 21 10 29.3 -1.9**
ULM pP pP 21 11 06.2 -1.2
ULM S **S 21 18 29.0 -6.2**
ULM LR LR 21 35 55.7
ULM Lac du Bonnet 60.63 344 P **P 21 10 29.3 -1.9**
comp=Z,140nm,0.6s,mb6.0,baz=160,slow=6.4,SNR=70
ULM pP pP 21 11 06.2 -1.2
comp=Z,429nm,0.7s,baz=158,slow=6.5,SNR=15
ULM S **S 21 18 29.0 -6.2**
comp=Z,3.5nm,0.6s,baz=54,slow=22,SNR=2.1
ULM LR LR 21 35 55.7
comp=Z,4μm,19.1s,baz=285,slow=35
SNOW Snow King Moun 60.65 330 *e*P **P 21 10 32.0 +0.6**
comp=Z,1μm,2.1s,mb6.4
LOHW Long Hollow 60.68 331 *e*P **P 21 10 31.2 -0.5**
comp=Z,184nm,1.0s,mb5.9
RCTC Rector, Farmer 60.71 319 ⇑P **P 21 10 31.2 -0.8**
baz=61,SNR=15
TPAW Teton Pass 60.76 330 *e*P **P 21 10 32.0 -0.3**
comp=Z,438nm,1.7s,mb6.0
F21A Absaloka Mine, 60.78 334 ⇓P **P 21 10 31.8 -0.4**
baz=61,SNR=30
G20A Bridger 60.78 333 ⇑P **P 21 10 31.5 -0.8**
baz=61,SNR=216
RRI2 Red Ridge 60.84 330 *e*P **P 21 10 32.6 -0.1**
comp=Z,622nm,1.3s,mb6.3
MOOW Moose Ponds 60.85 331 *e*P **P 21 10 32.9 0.0**
comp=Z,285nm,1.4s,mb5.9
L14A Malta 60.89 328 ⇑P **P 21 10 32.6 -0.5**
baz=61,SNR=155
I17A Pilgrim Ck. 60.90 331 ⇑P **P 21 10 33.1 0.0**
baz=61,SNR=24
MTUM Tungsten Hills 60.90 321 *e*P **P 21 10 27.8 -5.5**
J16A Bone 60.93 330 ⇓P **P 21 10 33.5 +0.1**
baz=61,SNR=139
DCID1 Drake Creek 60.95 330 *e*P **P 21 10 34.6 +1.1**
comp=Z,794nm,1.6s,mb6.3
K15A Arbon 60.98 329 ⇓P **P 21 10 33.4 -0.3**
baz=61
IMW Indian Meadow 61.06 331 *e*P **P 21 10 34.6 +0.4**
comp=Z,205nm,0.9s,mb6.0
P10A Eureka 61.06 324 ⇓P **P 21 10 34.7 +0.4**
baz=61,SNR=64
FLWY Flagg Ranch 61.08 331 *e*P **P 21 10 35.0 +0.6**
comp=Z,640nm,1.3s,mb6.3
LAO LASA Array 61.09 335 ⇓P **P 21 10 33.8 -0.6**
baz=61,SNR=17
LAO LASA Array 61.09 335 *e*P **P 21 10 33.3 -1.1**
comp=Z,235nm,1.1s,mb5.9
LAO *e*pP pP 21 11 10.1 -0.5
RLMT Red Lodge 61.18 332 ⇑P **P 21 10 34.7 -0.3**
baz=61,SNR=85
RLMT Red Lodge 61.18 332 *e*P **P 21 10 34.7 -0.3**
comp=Z,244nm,1.1s,mb6.0
F20A Billings 61.20 334 ⇑P **P 21 10 34.4 -0.8**
baz=61,SNR=49
K14A Jones Ranch, D 61.21 328 ⇑P **P 21 10 34.7 -0.6**
baz=61,SNR=51
MLAC Mammoth Lakes 61.24 321 ⇑P **P 21 10 35.0 -0.6**
baz=61
H17A Grant Village 61.25 331 ⇓P **P 21 10 35.8 +0.3**
baz=61,SNR=32
LKWY Lake 61.29 331 *e*P **P 21 10 38.0 +2.2**
comp=Z,470nm,1.5s,mb6.1
LKWY Lake 61.29 331 *e*P **P 21 10 38.0 +2.2**
LKWY pmax pmax
comp=Z,470nm,1.5s,mb6.1
I16A Newdale 61.31 330 ⇓P **P 21 10 35.8 -0.1**
baz=62,SNR=50
E21A Keefer Ranch, 61.32 335 ⇑P **P 21 10 35.6 -0.3**
baz=62,SNR=7.5
NVAR Mina Array Bea 61.41 322 P **P 21 10 36.6 0.0**
NVAR pP pP 21 11 13.3 +0.3
NVAR P'P' 21 39 49.8
NVAR ⇑*e* 21 39 55.1
NVAR Mina Array Bea 61.41 322 P **P 21 10 36.6 -0.1**
comp=Z,51nm,0.9s,mb5.4,baz=128,slow=6.8,SNR=104
NVAR pP pP 21 11 13.3 +0.3
comp=Z,21nm,0.7s,baz=114,slow=7.4,SNR=3.7
NVAR PKPPKP 21 39 49.8
comp=Z,2.7nm,0.9s,baz=256,slow=5.1,SNR=7.6
NVAR PKP2bc 21 39 55.1
comp=Z,4.7nm,0.9s,baz=48,slow=0.5,SNR=6.2
NVAR P4KPbc 21 47 38.1
comp=Z,0.2nm,0.5s,baz=108,slow=4.8,SNR=4.3
YFT Old Faithful 61.42 331 *e*P **P 21 10 38.5 +1.9**
comp=Z,527nm,1.3s,mb6.2
J15A Blackfoot 61.44 329 ⇓P **P 21 10 37.0 +0.2**
baz=62,SNR=221
G18A Lazy EL Ranch, 61.47 332 ⇓P **P 21 10 36.9 -0.1**
baz=62,SNR=296
YNR Norris Junctio 61.54 331 *e*P **P 21 10 38.6 +1.1**
comp=Z,185nm,1.1s,mb5.8
F19A Roth Farm, Mol 61.60 333 ⇓P **P 21 10 37.6 -0.2**
baz=62,SNR=34
D21A La Casita Ranch 61.71 335 ⇓P **P 21 10 38.7 +0.2**
baz=62,SNR=28
E20A Meyer Farm, Mu 61.74 334 ⇑P **P 21 10 38.8 +0.1**
baz=62,SNR=96
DGMT Dagmar 61.74 338 ⇑P **P 21 10 38.9 +0.2**
baz=62,SNR=33
DGMT Dagmar 61.74 338 *e*P **P 21 10 39.2 +0.5**
comp=Z,641nm,1.4s,mb6.3
H16A Russell Place, 61.80 331 ⇓P **P 21 10 40.0 +0.8**
baz=62,SNR=131
GCMT Greycliff 61.88 333 *e*P **P 21 10 39.6 -0.1**
comp=Z,630nm,1.2s,mb6.3
GCMT *e*pP pP 21 11 15.8 -0.2
I15A Monteview 61.90 330 ⇓P **P 21 10 40.1 +0.3**
baz=62,SNR=50
J14A Carey 61.94 329 ⇑P **P 21 10 40.6 +0.4**
baz=62,SNR=215
F18A Big Timber 61.98 333 ⇓P **P 21 10 40.3 -0.1**
baz=62,SNR=127
E19A Rath Farm, Rou 62.00 334 ⇓P **P 21 10 40.3 -0.1**
baz=62,SNR=43
G17A Pierce Place, 62.02 332 ⇓P **P 21 10 41.3 +0.7**
baz=62,SNR=54
BMN Battle Mountai 62.02 324 *e*P **P 21 10 40.8 0.0**
comp=Z,844nm,2.0s,mb6.2
BMN Battle Mountai 62.02 324 *e*P **P 21 10 40.8 0.0**
BMN pmax pmax
comp=Z,844nm,2.0s,mb6.2
WAKR Walker 62.15 321⇓ *e*P **P 21 10 42.1 +0.4**
WAKR *e*pP pP 21 11 18.2 +0.1
D20A Manuel Ranch, 62.21 335 ⇑P **P 21 10 41.5 -0.3**
baz=62,SNR=148
J13A Cove Ranch, Pi 62.33 328 ⇑P **P 21 10 42.8 0.0**
baz=62,SNR=63
I14A Mackay 62.33 329 ⇑P **P 21 10 43.3 +0.5**
baz=62,SNR=168
SAO San Andreas Ge 62.41 318 *e*P **P 21 10 44.8 +1.4**
comp=Z,88nm,1.1s,mb5.5
SAO San Andreas Ge 62.41 318 *e*P **P 21 10 44.8 +1.4**
SAO pmax pmax
comp=Z,88nm,1.1s,mb5.5
F17A Fitzpatrick Pl 62.42 332 ⇓P **P 21 10 43.5 +0.2**
baz=63,SNR=76
H15A Lima 62.42 330 ⇑P **P 21 10 44.0 +0.6**
baz=63,SNR=144
G16A Moss Hill, Enn 62.45 331 ⇓P **P 21 10 43.6 0.0**
baz=63,SNR=95
CMB Columbia Colle 62.47 320 *e*P **P 21 10 43.2 -0.6**
CMB *e*pP pP 21 11 21.8 +1.6
HLID Hailey 62.57 328 ⇑P **P 21 10 44.4 +0.1**
baz=63,SNR=147
HLID Hailey 62.57 328 *e*P **P 21 10 44.1 -0.2**
HLID *e*pP pP 21 11 21.6 +0.8
CALA Caldeira 62.57 39 *e*P **P 21 10 44.5 0.0**
E18A Harlowton 62.58 333 ⇑P **P 21 10 44.5 +0.2**
baz=63,SNR=175
SCHQ Schefferville 62.58 5 P **P 21 10 44.0 -0.2**
SCHQ pP pP 21 11 20.8 +0.2
SCHQ S **S 21 18 55.9 -3.7**
SCHQ LR LR 21 35 35.4
SCHQ P'P' 21 39 42.7
SCHQ Schefferville 62.58 5 P **P 21 10 44.0 -0.2**
comp=Z,76nm,0.5s,mb5.8,baz=194,slow=5.7,SNR=98
SCHQ pP pP 21 11 20.8 +0.2
comp=Z,220nm,0.8s,baz=177,slow=6.4,SNR=7.9
SCHQ S **S 21 18 55.9 -3.7**
comp=Z,4.2nm,0.7s,baz=230,slow=3.0,SNR=2.4
SCHQ LR LR 21 35 35.4
comp=Z,3μm,20.9s,baz=194,slow=34
SCHQ PKPPKP 21 39 42.7
comp=Z,17nm,1.0s,baz=2.3,slow=2.1,SNR=9.0
PCED Cedros 62.60 39 *e*P **P 21 10 47.3 +2.6**
comp=Z,256nm,0.8s,mb6.1

PCAN **Candelaria** 62.64 39 *eP* P 21 10 46.9 +2.0
comp=Z,265nm,1.0s,mb6.0
I13A **Wildhorse Cree** 62.66 329 ⇓P P 21 10 45.2 +0.3
baz=63,SNR=258
MCMT **McKenzie Canyo** 62.67 330 *eP* P 21 10 45.0 +0.1
comp=Z,214nm,1.4s,mb5.8
MCMT *epP* pP 21 11 21.4 -0.1
BOZ **Bozeman (W)** 62.68 331 ⇑P P 21 10 44.7 -0.3
baz=63,SNR=208
BOZ **Bozeman (W)** 62.68 331 *eP* P 21 10 44.2 -0.8
BOZ *e*PP pP 21 11 21.3 -0.2
PICO **Pico** 62.70 39 *eP* P 21 10 45.4 +0.1
G15A **Dillon** 62.74 331 ⇑P P 21 10 45.4 -0.1
baz=63,SNR=56
F16A **Kennard Place,** 62.78 332 ⇑P P 21 10 45.6 -0.1
baz=63,SNR=65
H14A **Leadore** 62.78 330 ⇑P P 21 10 45.8 +0.1
baz=63,SNR=210
WCN **Washoe City** 62.83 322 ⇓P P 21 10 46.8 +0.6
baz=63,SNR=45
WCN **Washoe City** 62.83 322 *eP* P 21 10 46.0 -0.2
comp=Z,280nm,1.3s,mb5.9
WCN *epP* pP 21 11 23.3 +0.6
WCN Washoe City 62.83 322 *eP* P 21 10 46.0 -0.2
WCN *e*PP pP 21 11 23.3 +0.6
WCN pmax pmax
comp=Z,279nm,1.3s,mb5.9
PAHR **Pah Rah Range** 62.85 322 *eP* P 21 10 46.5 +0.2
PAHR *epP* pP 21 11 23.2 +0.4
PAHR *esP* sP 21 11 40.1 +0.6
PID **Ribeirinha** 62.86 40 *eP* P 21 10 47.5 +1.1
E17A **Martinsdale** 62.92 333 ⇓P P 21 10 46.5 -0.2
baz=63,SNR=182
DLMT **Dillon** 62.94 331 *eP* P 21 10 46.4 -0.3
DLMT *epP* pP 21 11 23.0 -0.2
ROSA **Rosais** 62.94 39 *eP* P 21 10 48.9 +2.0
PMAN **Manadas** 62.99 39 *eP* P 21 10 45.7 -1.5
comp=Z,300nm,1.2s,mb6.0
D18A **Linhart Farms,** 63.01 334 ⇑P P 21 10 47.2 0.0
baz=63,SNR=34
C19A **Slack Wire Ran** 63.10 334 ⇓P P 21 10 47.8 +0.1
baz=63,SNR=86
I12A **Atlanta** 63.11 328 ⇓P P 21 10 48.2 +0.3
baz=63,SNR=181
TRIS **Tristan da Cun** 63.19 128 *eP* P 21 10 48.0 -0.7
comp=Z,370nm,0.5s,mb6.5
H13A **Challis** 63.19 329 ⇓P P 21 10 48.5 0.0
baz=63
LRM **Limekiln Ridge** 63.20 331 *eP* P 21 10 48.3 -0.2
LRM *ePcP* PcP 21 11 25.4 +1.0
MFID **Camas Ranch** 63.22 327 ⇑P P 21 10 48.8 +0.1
baz=63,SNR=243
F15A **Butte** 63.23 331 ⇑P P 21 10 48.4 -0.3
baz=63,SNR=87
G14A **Jackson** 63.27 330 ⇑P P 21 10 48.9 0.0
baz=63,SNR=12
E16A **East Helena** 63.36 332 ⇓P P 21 10 49.5 0.0
baz=64,SNR=43
D17A **Six Diamond Ra** 63.37 333 ⇓P P 21 10 49.5 -0.1
baz=64,SNR=119
H12A **Diamond D Ranc** 63.49 329 ⇑P P 21 10 50.7 +0.4
baz=64,SNR=228
SAC **San Andreas** 63.51 319 *eP* P 21 10 52.4 +1.7
ADH **Angra Heroismo** 63.54 40 *eP* P 21 10 51.7 +0.8
comp=Z,566nm,1.6s,mb6.2
G13A **Cobalt** 63.55 330 ⇓P P 21 10 50.9 +0.1
baz=64,SNR=168
HRY **Holter Researc** 63.56 332 *eP* P 21 10 50.7 -0.1
EGMT **Eagleton** 63.62 334 ⇓P P 21 10 50.8 -0.3
baz=64,SNR=8.1
EGMT **Eagleton** 63.62 334 *eP* P 21 10 50.1 -1.1
comp=Z,401nm,1.2s,mb6.1
F14A **Wisdom** 63.63 331 ⇓P P 21 10 51.3 0.0
baz=64,SNR=66
D16A **Dana Ranch, Ca** 63.67 333 ⇑P P 21 10 51.6 +0.1
baz=64,SNR=63
E15A **Deer Lodge** 63.73 331 ⇑P P 21 10 51.8 -0.1
baz=64,SNR=81
C17A **Wharram Farm,** 63.76 333 ⇓P P 21 10 52.0 -0.1
baz=64,SNR=106
B18A **Beardsley Farm** 63.92 335 ⇑P P 21 10 53.1 0.0
baz=64,SNR=180
PSMA **Santa Maria** 63.98 42 *eP* P 21 10 54.5 +0.8
comp=Z,229nm,1.4s,mb5.8
PDA **Ponta Delgada** 64.04 41 *eP* P 21 10 55.8 +1.7
PSET **Sete Cidades** 64.04 41 *eP* P 21 10 53.3 -0.9
comp=Z,116nm,1.4s,mb5.5
F13A **Darby** 64.09 330 ⇑P P 21 10 54.4 +0.1
baz=64,SNR=172
D15A **Lincoln** 64.12 332 ⇑P P 21 10 54.6 +0.1
baz=64,SNR=62
WVOR **Wild Horse Val** 64.12 325 *eP* P 21 10 54.0 -0.6
comp=Z,309nm,1.3s,mb6.0
WVOR *epP* pP 21 11 31.3 0.0
WVOR Wild Horse Val 64.12 325 *eP* P 21 10 54.0 -0.6
WVOR *e*PP pP 21 11 31.3 +0.1
WVOR pmax pmax
comp=Z,309nm,1.3s,mb6.0
E14A **Clinton** 64.13 331 ⇑P P 21 10 54.7 +0.2
baz=64,SNR=98
CMLA **Cha da Macela** 64.14 42 *eP* P 21 10 55.1 +0.3
comp=Z,340nm,0.7s,mb6.3
CMLA Cha da Macela 64.14 42 *eP* P 21 10 53.7 -1.1
comp=Z,168nm,0.8s,mb5.9
CMLA *epP* pP 21 11 32.3 +0.9
CMLA Cha da Macela 64.14 42 *eP* P 21 10 53.7 -1.1
CMLA *e*PP pP 21 11 32.3 +0.9
CMLA pmax pmax
comp=Z,168nm,0.8s,mb5.9
B17A **L&G Farms, Che** 64.28 334 ⇓P P 21 10 54.8 -0.7
baz=64,SNR=22
C16A **Fuhringer Ranc** 64.33 333 ⇑P P 21 10 55.8 0.0
baz=64,SNR=126
A18A **Metzger Ranch,** 64.35 335 ⇓P P 21 10 55.5 -0.4
baz=64,SNR=235
BART **Pico Bartolome** 64.38 42 *eP* P 21 10 56.4 0.0
comp=Z,396nm,1.0s,mb6.2
E13A **Victor** 64.48 331 ⇓P P 21 10 57.1 +0.3
baz=65,SNR=128
F12A **Elk City** 64.53 329 ⇓P P 21 10 57.2 +0.1
baz=65,SNR=291
D14A **Greenough** 64.61 331 ⇓P P 21 10 57.6 -0.1
baz=65,SNR=62
J08A **Circle Bar Ran** 64.63 326 ⇓P P 21 10 57.4 -0.4
baz=65,SNR=27
MSO **Missoula** 64.64 331 ⇑P P 21 10 58.1 +0.3
baz=65,SNR=184
MSO **Missoula** 64.64 331 *eP* P 21 10 57.8 0.0
comp=Z,420nm,1.1s,mb6.2
MSO *epP* pP 21 11 33.6 -0.9
C15A **Salmond Ranch,** 64.70 332 ⇓P P 21 10 58.6 +0.3
baz=65,SNR=243
SLMT **Seeley Lake** 64.72 332 *epP* pP 21 11 33.4 -1.7
A17A **Triple J Farms** 64.73 334 ⇑P P 21 10 57.9 -0.5
baz=65,SNR=159
HOPS **Hopland** 64.74 320 *eP* P 21 10 58.9 +0.2
comp=Z,60nm,1.2s,mb5.3
HOPS PcP PcP 21 11 30.8 -0.2
MOD **Modoc** 64.76 324 *epP* pP 21 11 35.8 +0.3
B16A **M & M Farms, S** 64.77 333 ⇑P P 21 10 58.1 -0.5
baz=65,SNR=128
CHIE **El Hierro** 64.86 55 P P 21 10 58.8 -0.9
comp=Z,221nm,0.7s,mb6.1
TAOE **Nuku Hiva Isla** 65.03 264 *eS* S 21 19 28.0 -3.5
comp=Z,24μm,30.9s
TAOE *eLR* LR 21 30 39.2
comp=Z,8μm,26.8s
B15A **Bradely Ranch,** 65.08 333 ⇓P P 21 11 00.0 -0.6
baz=65,SNR=108
D13A **Huson** 65.08 331 ⇓P P 21 11 00.5 -0.2
baz=65,SNR=178
A16A **West Butte Ran** 65.12 334 ⇓P P 21 11 00.8 -0.1
baz=65,SNR=70
SWMT **Swartz Lake** 65.16 332 *epP* pP 21 11 39.2 +1.3
EHIG **Higuera** 65.33 54 P P 21 11 05.2 +2.5
comp=Z,421nm,0.8s,mb6.3
YBMT **Yellow Bay** 65.42 332 *epP* pP 21 11 39.2 -0.4
B14A **Marquette Ranc** 65.43 333 ⇑P P 21 11 02.8 -0.1
baz=66,SNR=89
KCPM **Cahto Peak** 65.46 320 *eP* P 21 11 02.2 -1.0
KCPM *ePcP* PcP 21 11 30.0 -3.9
KCPM *epP* pP 21 11 40.1 +0.1
JTMT **Jette** 65.46 332 *epP* pP 21 11 40.7 +0.8
KIPM **Iron Peak** 65.46 320 *eP* P 21 11 04.4 +1.1
comp=Z,632nm,1.6s,mb6.2
KIPM *ePcP* PcP 21 11 34.9 +0.9
KIPM *epP* pP 21 11 41.4 +1.3
KIPM *sP* sP 21 11 57.3 +0.6
C13A **Hot Springs** 65.55 331 ⇑P P 21 11 03.9 +0.2
baz=66,SNR=127
K05A **Summer Lake** 65.61 324 ⇑P P 21 11 04.8 +0.6
baz=66,SNR=157
A15A **Johnson Ranch,** 65.64 333 ⇓P P 21 11 04.1 -0.2
baz=66,SNR=83
I07A **Izee** 65.66 326 ⇑P P 21 11 04.7 +0.2
baz=66,SNR=207
F10A **Beach Ranch, E** 65.68 329 ⇓P P 21 11 04.6 0.0
baz=66,SNR=182
BLMT **Blacktail Moun** 65.69 332 *epP* pP 21 11 41.8 +0.4
BSMT **Bassoo Peak** 65.77 331 *eP* P 21 11 05.5 +0.3
BSMT *epP* pP 21 11 42.5 +0.5
A14A **Double T Ranch** 65.95 333 ⇓P P 21 11 05.8 -0.5
baz=66,SNR=83
B13A **Whitefish** 66.00 332 ⇑P P 21 11 06.4 -0.2
baz=66,SNR=59
C12B **Naegeli Ranch,** 66.00 331 ⇓P P 21 11 06.8 +0.2
baz=66,SNR=15
YBH **Yreka Blue Hor** 66.09 322 *eP* P 21 11 06.5 -0.8
YBH *ePcP* PcP 21 11 37.2 +0.6
YBH *epP* pP 21 11 43.9 -0.3
G08A **Pilot Rock** 66.14 327 ⇓P P 21 11 07.8 +0.2
baz=66,SNR=56
CCAN **Las Canadas** 66.16 55 P P 21 11 08.2 +0.1
comp=Z,117nm,0.8s,mb5.8
LNOR **Lincton Mounta** 66.17 328 *eP* P 21 11 07.3 -0.4
KHMM **Horse Mountain** 66.22 321 *eP* P 21 11 08.4 +0.3
KHMM *PcP* PcP 21 11 37.0 0.0
KHMM *epP* pP 21 11 45.0 0.0
WALA **Waterton Lakes** 66.23 333 *eP* P 21 11 07.9 -0.2
WALA *ePcP* PcP 21 11 37.0 +0.1
WALA *epP* pP 21 11 45.5 +0.6
WALA *sP* sP 21 12 02.0 +0.5
EBAJ **Bajamar** 66.50 54 P P 21 11 10.2 0.0
comp=Z,377nm,1.2s,mb6.1
E09A **Wood Farm, Sta** 66.52 329 ⇑P P 21 11 09.5 -0.4
baz=67,SNR=43
VIPM **Ingram Point** 66.55 326 P P 21 11 10.4 +0.2
B12A **Libby** 66.59 331 ⇑P P 21 11 10.6 +0.3
baz=67,SNR=23
KRMB **Red Mountain** 66.70 322 ⇓*e*P P 21 11 11.1 -0.1
comp=Z,808nm,1.6s,mb6.3
KRMB *epP* pP 21 11 48.8 +0.7
HUMO **Hull Mountain** 66.75 323 *eP* P 21 11 10.5 -1.0
HUMO *epP* pP 21 11 48.4 0.0
HUMO *ePP* PP 21 13 37.8 -2.9
HUMO *eS* S 21 19 46.7 -4.5
A12A **Yaak River Ran** 66.95 332 ⇓P P 21 11 13.0 +0.4
baz=67,SNR=75
EOSO **Osorio** 66.95 55 P P 21 11 16.7 +3.7
comp=Z,402nm,1.3s,mb6.1
G06A **Carlson Farm,** 67.02 326 ⇑P P 21 11 13.7 +0.6
baz=67,SNR=67
HAWA **Hanford** 67.16 328 ⇓*e*P P 21 11 13.6 -0.4
HAWA *ePcP* PcP 21 11 42.0 +1.1
HAWA *ePP* pP 21 11 51.9 +0.9
HAWA *eS* S 21 19 53.5 -2.5
NEW **Newport** 67.19 331 ⇑P P 21 11 13.9 -0.2
baz=67,SNR=110
NEW Newport 67.19 331 ⇓*e*P P 21 11 13.0 -1.1
NEW *e*PP pP 21 11 51.2 +0.2
NEW *eS* S 21 19 57.4 +1.2
RSW **Rattlesnake Hi** 67.19 328 *eP* P 21 11 14.4 +0.2
RSW *ePcP* PcP 21 11 42.0 +1.0
RSW *epP* pP 21 11 51.1 -0.1
WRD **Warden** 67.23 328 P P 21 11 16.8 +2.4
D08A **Wollman Farm,** 67.28 329 ⇑P P 21 11 14.8 +0.1
baz=67,SNR=54
KBO **Bosley Butte** 67.29 322 ⇓*e*P P 21 11 15.0 +0.1
comp=Z,478nm,1.3s,mb6.2
KBO *ePcP* PcP 21 11 41.9 +0.4
KBO *epP* pP 21 11 52.1 +0.3
KBO *ePP* PP 21 13 45.1 -0.3
OD2 **Odessa Site #2** 67.39 329 *eP* P 21 11 15.5 +0.1
OD2 *ePcP* PcP 21 11 42.3 +0.5
OD2 *epP* pP 21 11 52.1 -0.2
SHEL **Horse Pasture** 67.44 104 *eP* P 21 11 16.4 0.0
comp=Z,213nm,0.9s,mb6.0
SHEL **Horse Pasture** 67.44 104 *eP* P 21 11 16.4 +0.1
SHEL pmax pmax
comp=Z,213nm,0.9s,mb6.0
E07A **Sunnyside** 67.44 328 ⇓P P 21 11 15.8 +0.1
baz=68,SNR=32
C09A **Chrisman Ranch** 67.44 330 ⇑P P 21 11 16.1 +0.4
baz=68,SNR=62
BROR **Big Rock Looko** 67.44 325 P P 21 11 15.1 -0.8
H04A **Detroit Lake** 67.54 325 ⇑P P 21 11 16.0 -0.4
baz=68,SNR=28
HOOD **Mount Hood Mea** 67.64 326 ⇓*e*P P 21 11 17.2 +0.2
HOOD *epP* pP 21 11 55.4 +1.4
KEBM **Edson Butte** 67.73 323 ⇓*e*P P 21 11 17.7 +0.1
KEBM *epP* pP 21 11 57.5 +2.9
KEBM *ePP* PP 21 13 49.1 -0.1
FUL **Funchal** 67.75 50 *eP* P 21 11 19.6 +1.6
comp=Z,192nm,1.9s,mb5.5
FUL *epP* pP 21 11 55.7 +0.7
PMAR **Madeira** 67.78 50 *eP* P 21 11 19.6 +1.4
G04A **Mulino** 68.03 325 ⇓P P 21 11 19.0 -0.5
baz=68,SNR=17
FCC **Fort Churchill** 68.09 349 ⇓*e*P P 21 11 18.0 -1.5
FCC *ePcP* PcP 21 11 44.8 +0.4
FCC *epP* pP 21 11 55.9 -0.7
FCC *ePP* PP 21 13 46.2 -5.6
COR **Corvallis** 68.12 325 *eP* P 21 11 20.5 +0.4
COR *PcP* PcP 21 11 45.1 +0.1
COR *epP* pP 21 11 57.7 +0.6
CFTV **Fuerteventura** 68.28 55 P P 21 11 19.0 -2.4
comp=Z,93nm,1.0s,mb5.5
B08A **Colville Reser** 68.34 330 ⇑P P 21 11 21.2 -0.2
baz=68,SNR=130
ETW **Entiat** 68.36 328 *eP* P 21 11 21.8 +0.3
ETW *ePcP* PcP 21 11 45.9 0.0
ETW *epP* pP 21 11 58.5 -0.1
PMPS **Porto Santo** 68.36 50 *eP* P 21 11 24.1 +2.3
comp=Z,290nm,0.3s,mb6.5
F04A **Amboy** 68.43 326 ⇓P P 21 11 21.4 -0.5
baz=69,SNR=40
LON **Longmire** 68.61 327 P P 21 11 22.5 -0.5
NLW **Nelson Butte** 68.67 329 P P 21 11 23.3 -0.1
HEBO **Mount Hebo** 68.75 325 *eP* P 21 11 23.4 -0.5
HEBO *epP* pP 21 12 01.9 +0.8
HEBO *esP* sP 21 12 17.3 -0.3
GSM **Grass Mountain** 68.88 327 P P 21 11 25.0 +0.3
D05A **Enumclaw** 68.97 327 ⇓P P 21 11 25.1 -0.2
baz=69,SNR=49
EFAM **Famara** 69.00 55 P P 21 11 27.2 +1.4
comp=Z,954nm,2.1s,mb6.2
EDM **Edmonton** 69.06 336 ⇓*e*P P 21 11 24.5 -1.1
EDM *ePcP* PcP 21 11 45.8 -2.9
EDM *epP* pP 21 12 02.4 -0.4
EDM *esP* sP 21 12 19.8 +0.4
EDM *eS* S 21 20 16.6 -1.6
F03A **Seaside** 69.07 326 ⇓P P 21 11 26.1 +0.3
baz=69,SNR=20
E03A **Lebam** 69.44 326 ⇑P P 21 11 28.1 0.0
baz=70,SNR=36
RPW **Rockport** 69.51 329 *eP* P 21 11 27.3 -1.2
RPW *epP* pP 21 12 06.5 +0.8
B06A **Marblemount** 69.54 329 ⇓P P 21 11 28.2 -0.5
baz=70,SNR=64
JCW **Jim Creek** 69.57 328 P P 21 11 27.9 -1.0
NLWA **Neilton Lookou** 70.11 327 ⇓*e*P P 21 11 32.4 +0.2
NLWA *ePcP* PcP 21 11 53.8 +0.5
NLWA *epP* pP 21 12 10.2 +0.8
NLWA *eS* S 21 20 27.8 -3.0
A05A **Maple Falls** 70.15 329 ⇑P P 21 11 32.3 -0.1
baz=70,SNR=119
LIC **Lamto** 70.53 81 *eP* P 21 11 34.6 -0.9
comp=Z,1μm,1.1s,mb6.6
LIC Lamto 70.53 81 *eP* P 21 11 34.4 -1.1
comp=Z,1μm,1.1s,mb6.2,baz=259
LIC *eMLR* MLR
comp=Z,7μm,20.2s
LIC Lamto 70.53 81 *eP* P 21 11 34.4 -1.1
comp=Z,616nm,1.1s,mb6.2
LIC LR LR
comp=Z,4μm,20.3s
TIC **Toumodi** 70.61 80 *eP* P 21 11 35.2 -0.8
comp=Z,1μm,0.9s,mb6.5
TIC **Toumodi** 70.61 80 *eP* P 21 11 35.2 -0.8
TIC pmax pmax
comp=Z,1μm,0.9s,mb6.6
PGC **Sidney** 70.65 328 *eP* P 21 11 35.3 -0.2
PGC *ePcP* PcP 21 11 56.4 +0.8
PGC *epP* pP 21 12 12.0 -0.7
DBIC **Dimbokro** 70.77 80 P P 21 11 36.0 -1.0
DBIC pP pP 21 12 14.5 +0.2
DBIC S S 21 20 34.5 -5.2
DBIC P'P' 21 39 33.2
DBIC Dimbokro 70.77 80 P P 21 11 36.0 -1.0
comp=Z,318nm,0.8s,mb6.1,baz=242,slow=5.5,SNR=188
DBIC pP pP 21 12 14.5 +0.2
comp=Z,162nm,0.7s,baz=254,slow=10,SNR=2.4
DBIC S S 21 20 34.5 -5.2
comp=Z,25nm,1.0s,baz=32,slow=20,SNR=20
DBIC PKPPKP 21 39 33.2
comp=Z,9.2nm,1.2s,baz=101,slow=6.0,SNR=4.3
DBIC Dimbokro 70.77 80 P P 21 11 36.0 -1.0
DBIC *PP pP 21 12 14.5 +0.2
DBIC S S 21 20 34.6 -5.2
KIC **Kosan Boka** 70.83 81 *eP* P 21 11 36.6 -0.7
comp=Z,953nm,0.8s,mb6.6
PMOR **Pomariorio Ree** 72.20 257 *eP* P 21 11 46.8 +1.3
PMOR *epP* pP 21 12 22.2 -0.7
comp=Z,808nm,1.4s
MEH **Mehetia** 72.22 254 *eP* P 21 11 47.3 +1.7
comp=Z,237nm,1.2s,mb5.8
TBI **Tubuai** 73.35 248 *eP* P 21 11 54.0 +1.8
TBI *epP* pP 21 12 29.7 0.0
comp=Z,511nm,1.4s
PAE **Paea** 73.67 254 *eP* P 21 11 56.1 +2.0
comp=Z,107nm,1.3s,mb5.4
PAE *epP* pP 21 12 31.7 0.0
comp=Z,87nm,1.4s
PAE Paea 73.67 254 *eP* P 21 11 56.1 +2.0
PAE *e*PP pP 21 12 31.7 0.0
PAE pmax pmax
comp=Z,107nm,1.3s,mb5.4
PPT Papeete 73.67 254 *eP* P 21 11 55.6 +1.5
comp=Z,302nm,1.5s,mb5.8
PPT *epP* pP 21 12 31.5 -0.2
PPT comp=Z,269nm,1.5s *eS* S 21 21 10.1 -2.6
PPT comp=Z,18μm,25.2s *eLQ* 21 31 34.6
PPT comp=Z,11μm,31.0s *eLR* LR 21 34 41.8
comp=Z,16μm,31.2s
PPT Papeete 73.67 254 *eP* P 21 11 55.6 +1.5
comp=Z,302nm,1.5s,mb5.8
PPT *epP* pP 21 12 31.5 -0.2
PPT *eS* S 21 21 10.1 -2.6
PPT eLQ 21 31 34.6
PPT Papeete 73.67 254 P P 21 11 54.3 +0.2
comp=Z,67nm,0.8s,mb5.4,baz=130,slow=3.9,SNR=6.5
PPT pP pP 21 12 33.2 +1.5
comp=Z,17nm,0.3s,baz=152,slow=10.0,SNR=1.8
PPT LR LR 21 37 48.0
comp=Z,2μm,20.1s,baz=268,slow=30
PPT Papeete 73.67 254 *eP* P 21 11 55.6 +1.5
PPT *e*PP pP 21 12 31.5 -0.2
PPT *eS* S 21 21 10.1 -2.6
PPT pmax pmax
comp=Z,302nm,1.5s
VNA3 **Neumayer Olymp** 74.79 162 *eP* P 21 11 56.7 -2.9
VNA1 **Neumayer--Stat** 75.01 162 *eP* P 21 11 59.0 -1.8
PFVI **Vila Bisbo** 75.62 49 *eP* P 21 12 05.9 +0.9
comp=Z,334nm,1.8s,mb5.7
PFVI *epP* pP 21 12 43.4 +0.7
PFVI *eS* S 21 21 34.5 +0.9
MORF **Marmelete** 75.81 49 *eP* P 21 12 07.0 +0.9
comp=Z,418nm,1.3s,mb5.9
MORF *epP* pP 21 12 44.2 +0.4
MORF *eS* S 21 21 37.1 +1.4
MORF Marmelete 75.81 49 *eP* P 21 12 06.5 +0.4
MORF *eS* S 21 21 41.7 +6.0
PTEO **Sao Teotonio** 75.85 48 *eP* P 21 12 07.8 +1.6
comp=Z,367nm,1.9s,mb5.7
PTEO *epP* pP 21 12 44.2 +0.2
PMAFR **Mafra** 75.96 47 *eP* P 21 12 07.3 +0.5
comp=Z,247nm,1.7s,mb5.6
PMAFR *epP* pP 21 12 44.7 +0.1
PMAFR *eS* S 21 21 37.0 -0.2
LIS **Lisbon** 75.97 47 *eP* P 21 12 07.2 +0.3
LIS *eS* S 21 21 37.6 +0.3
LIS *eS* S 21 21 37.7 +0.3
LIS AMS AMS 21 34 01.7
comp=N,5μm,15.3s
LIS Lisbon 75.97 47 *eP* P 21 12 07.2 +0.3
LIS *eS* S 21 21 37.6 +0.3
LIS Lisbon 75.97 47 *eP* P 21 12 07.1 +0.2
MESJ **Messejana** 76.33 48 *eP* P 21 12 09.2 +0.3
MESJ *eS* S 21 21 41.7 +0.4
MESJ *eS* S 21 21 41.9 +0.6
MESJ AMS AMS 21 40 45.4
comp=Z,3μm,28.4s
PBDV **Barranco-do-Ve** 76.33 49 *eP* P 21 12 10.1 +1.1
comp=Z,247nm,1.4s,mb5.7
PBDV *epP* pP 21 12 45.6 -1.2
PBDV *eS* S 21 21 42.2 +0.9
PCVE **Castro Verde** 76.39 48 *eP* P 21 12 10.3 +1.0
comp=Z,205nm,1.2s,mb5.6
PCVE *epP* pP 21 12 47.7 +0.6
PCVE *eS* S 21 21 42.9 +0.9
YKA **Yellowknife Ar** 76.47 342 P P 21 12 08.0 -1.2
comp=Z,30nm,0.5s,mb5.2,baz=140,slow=6.0,SNR=113
YKA pP pP 21 12 45.6 -1.4
comp=Z,54nm,0.7s,baz=140,slow=5.8,SNR=6.0
YKA S S 21 21 39.3 -2.5
comp=Z,1.2nm,0.7s,baz=104,slow=22,SNR=2.3
ALMR **Almeirim** 76.54 47 *eP* P 21 12 10.4 +0.3
PVAQ **Vaqueiros** 76.54 49 *eP* P 21 12 11.1 +0.9
comp=Z,129nm,1.7s,mb5.3
PVAQ *epP* pP 21 12 47.0 -1.0
PVAQ *eS* S 21 21 44.9 +1.2
EVOP **Sao Brissos** 76.64 48 *eP* P 21 12 11.3 +0.6
EVOP *eS* S 21 21 45.2 +0.5
EVOP *eS* S 21 21 45.2 +0.5
EVOP AMS AMS 21 34 27.1
comp=Z,3μm,22.2s
EVOP **Sao Brissos** 76.64 48 *eP* P 21 12 11.3 +0.6
EVOP *eS* S 21 21 45.2 +0.5
PBEJ **Beja** 76.65 48 *eP* P 21 12 11.6 +0.8
comp=Z,114nm,1.8s,mb5.2
PBEJ *epP* pP 21 12 50.2 +1.6
EVO **Evora** 76.73 48 ⇓*eP* P 21 12 11.0 -0.2
comp=Z,235nm,0.7s,mb5.6
EVO *eMLR* MLR
comp=Z,4μm,21.8s
EGRO **El Granado** 76.76 49 P P 21 12 11.7 +0.2
comp=Z,72nm,0.7s,mb5.4
PTOM **Tomar** 76.83 46 *eP* P 21 12 12.0 +0.2
comp=Z,166nm,0.6s,mb5.8
PTOM *epP* pP 21 12 48.6 -1.0
PESTR **Estremoz** 77.16 47 *eP* P 21 12 14.7 +1.1
comp=Z,261nm,1.6s,mb5.6
PESTR *epP* pP 21 12 51.2 -0.3
PESTR *eS* S 21 21 50.1 -0.2
PTO **Porto** 77.26 45 *eP* P 21 12 14.1 0.0
comp=Z,162nm,0.9s,mb5.7
PBAR **Barrancos** 77.32 48 *eP* P 21 12 15.1 +0.6
comp=Z,102nm,1.6s,mb5.2
PBAR *epP* pP 21 12 53.0 +0.6
PBAR *eS* S 21 21 53.4 +1.4
MDT **Midelt** 77.45 54 P P 21 12 16.3 +1.0
comp=Z,67nm,0.8s,mb5.3,baz=263,slow=5.2,SNR=49
MDT pP pP 21 12 53.8 +0.6
comp=Z,24nm,0.8s,baz=240,slow=8.8,SNR=2.0
MDT S S 21 21 48.5 -5.2
comp=Z,1.8nm,1.0s,baz=119,slow=18,SNR=1.5
EMIN **Mina Concepcio** 77.45 49 P P 21 12 15.9 +0.7
comp=Z,177nm,1.7s,mb5.4
PMRV **Marv??o** 77.50 47 *eP* P 21 12 15.3 -0.2
comp=Z,95nm,1.7s,mb5.2
PMRV *epP* pP 21 12 52.8 -0.6
PMRV *eS* S 21 21 52.2 -1.8
EBAD **Badajoz** 77.54 48 P P 21 12 15.9 +0.2
comp=Z,80nm,0.6s,mb5.5
EZAM **Zamans** 77.58 44 P P 21 12 14.8 -1.1
comp=Z,213nm,0.7s,mb5.9
EZAM Zamans 77.58 44 P P 21 12 14.8 -1.1
EZAM pmax pmax
comp=Z,213nm,0.7s,mb5.9
PCBR **Castelo Branco** 77.58 46 *eP* P 21 12 15.8 -0.1
comp=Z,104nm,2.1s,mb5.1
PCBR *epP* pP 21 12 53.4 -0.5

PVIS Viseu 77.61 46 *e*P **P** **21 12 16.6 +0.6**
comp=Z,137nm,1.5s,mb5.4
PVIS *ep*P pP 21 12 52.9 -1.0
EMAZ Mazaricos 77.69 43 P **P** **21 12 17.0 +0.6**
comp=Z,393nm,1.3s,mb5.9
MTE Manteigas 77.74 46 *e*P **P** **21 12 16.8 0.0**
comp=Z,143nm,0.8s,mb5.7
MTE *ep*P pP 21 12 55.0 +0.3
MTE *e*S S 21 21 57.5 +1.0
MTE Manteigas 77.74 46 *e*P **P** **21 12 16.2 -0.6**
ESPR Espera 77.76 50 P **P** **21 12 17.4 +0.5**
comp=Z,104nm,0.6s,mb5.6
PCAB Cabril 77.88 45 *e*P **P** **21 12 17.4 -0.1**
comp=Z,136nm,1.0s,mb5.5
PCAB *ep*P pP 21 12 56.0 +0.5
ELOB Lobios 77.91 44 P **P** **21 12 16.7 -1.0**
comp=Z,53nm,0.7s,mb5.3
EJIF Jimena Fronter 77.92 50 P **P** **21 12 19.4 +1.5**
comp=Z,101nm,0.8s,mb5.5
EJIF Jimena Fronter 77.92 50 P **P** **21 12 19.4 +1.5**
EJIF pmax pmax
comp=Z,101nm,0.8s,mb5.5
PVRL Vila Real 77.94 45 *e*P **P** **21 12 17.9 +0.1**
comp=Z,118nm,1.3s,mb5.4
PVRL *ep*P pP 21 12 56.5 +0.7
STS Santiago 77.96 43 P **P** **21 12 17.5 -0.4**
comp=Z,63nm,0.6s,mb5.4
STS Santiago 77.96 43 P **P** **21 12 17.5 -0.4**
STS pmax pmax
comp=Z,63nm,0.6s,mb5.4
MVO Moncorvo 78.38 45 *e*P **P** **21 12 20.3 0.0**
comp=Z,136nm,2.1s,mb5.2
MVO *ep*P pP 21 12 57.1 -1.2
MVO *e*S S 21 22 04.0 +0.7
EMIJ Mijas 78.48 50 P **P** **21 12 21.1 +0.1**
comp=Z,231nm,0.7s,mb5.9
EPLA Plasencia 78.67 47 P **P** **21 12 20.9 -1.0**
comp=Z,72nm,1.0s,mb5.3
EPLA Plasencia 78.67 47 P **P** **21 12 20.9 -1.0**
EPLA pmax pmax
comp=Z,72nm,1.0s,mb5.3
ERUA La Rua 78.74 44 P **P** **21 12 22.0 -0.2**
comp=Z,104nm,0.6s,mb5.6
ERUA La Rua 78.74 44 P **P** **21 12 22.0 -0.2**
ERUA pmax pmax
comp=Z,104nm,0.6s,mb5.6
PBRG Braganca 78.81 45 *e*P **P** **21 12 22.6 0.0**
comp=Z,106nm,0.7s,mb5.6
PBRG *ep*P pP 21 13 01.4 +0.8
ECAL Calabor 78.86 45 P **P** **21 12 22.6 -0.3**
comp=Z,110nm,1.1s,mb5.4
EPON Pontenova 79.08 43 P **P** **21 12 23.4 -0.6**
comp=Z,237nm,1.2s,mb5.7
ELOJ Sierra Loja 79.14 50 P **P** **21 12 25.9 +1.4**
comp=Z,191nm,0.8s,mb5.8
ELOJ Sierra Loja 79.14 50 P **P** **21 12 25.9 +1.4**
ELOJ pmax pmax
comp=Z,191nm,0.8s,mb5.8
EADA Adamuz 79.14 49 P **P** **21 12 24.8 +0.3**
comp=Z,89nm,0.9s,mb5.4
ELUQ Luque 79.18 50 P **P** **21 12 25.5 +0.8**
comp=Z,95nm,0.6s,mb5.6
ELUQ Luque 79.18 50 P **P** **21 12 25.5 +0.7**
ELUQ pmax pmax
comp=Z,95nm,0.6s,mb5.6
ERON Agron 79.36 50 P **P** **21 12 26.7 +1.0**
comp=Z,261nm,0.6s,mb6.0
CRAG Craig 79.40 330 *e*P **P** **21 12 26.7 +1.2**
CRAG *ep*P pP 21 13 05.0 +1.4
EGUA Guajares 79.49 50 P **P** **21 12 26.7 +0.3**
comp=Z,382nm,0.7s,mb6.1
EGUA Guajares 79.49 50 P **P** **21 12 26.7 +0.3**
EGUA pmax pmax
comp=Z,382nm,0.7s,mb6.1
WRAK Wrangell Islan 79.52 331 *e*P **P** **21 12 25.1 -1.0**
comp=Z,223nm,1.4s,mb5.6
WRAK *e*PcP PcP 21 12 32.9 -0.6
WRAK *ep*P pP 21 13 04.3 +0.1
DLBC Dease Lake 79.55 334⇓*e*P **P** **21 12 26.1 -0.1**
DLBC *ep*P pP 21 13 05.2 +0.9
DLBC *e*S S 21 22 14.8 -0.1
ECOG Cogollos-Vega 79.62 50 P **P** **21 12 28.0 +0.9**
comp=Z,189nm,0.5s,mb6.0
ECOG Cogollos-Vega 79.62 50 P **P** **21 12 28.0 +0.8**
ECOG pmax pmax
comp=Z,189nm,0.5s,mb6.0
EBAN Banos Encina 79.73 49 P **P** **21 12 28.0 +0.3**
comp=Z,50nm,0.6s,mb5.3
EBAN Banos Encina 79.73 49 P **P** **21 12 28.0 +0.3**
EBAN pmax pmax
comp=Z,50nm,0.6s,mb5.3
PAB San Pablo 79.75 48⇓*e*P **P** **21 12 27.7 -0.1**
comp=Z,98nm,0.8s,mb5.5
PAB *e*PcP PcP 21 12 35.2 +0.2
PAB *ep*P pP 21 13 05.9 0.0
PAB *e*PP PP 21 15 30.5 -0.7
PAB San Pablo 79.75 48⇓*e*P **P** **21 12 27.7 -0.1**
PAB *e* 21 12 35.3
PAB *e**PP pP 21 13 05.9 0.0
PAB *e* 21 15 30.5
PAB pmax pmax
comp=Z,98nm,0.8s,mb5.5
EBER Berja 80.03 51 P **P** **21 12 30.2 +0.9**
comp=Z,186nm,0.8s,mb5.8
ESDC Sonseca Array 80.08 48 P **P** **21 12 29.6 +0.1**
comp=Z,57nm,0.6s,mb5.4
ESDC Sonseca Array 80.08 48 P **P** **21 12 29.9 +0.4**
comp=Z,36nm,0.6s,mb5.2,baz=254,slow=6.0,SNR=87
ESDC pP pP 21 13 06.9 -0.8
comp=Z,28nm,0.8s,baz=261,slow=6.6,SNR=2.9
ESDC S S 21 22 20.3 -1.0
comp=Z,0.1nm,0.3s,baz=275,slow=27,SNR=2.4
ESDC PKKPbc PKKPbc 21 31 13.9 -0.6
comp=Z,0.6nm,0.6s,baz=30,slow=2.9,SNR=4.3
ESDC PKPPKP 21 39 14.8
comp=Z,1.5nm,0.9s,baz=55,slow=2.1,SNR=5.0
ESLA Sonseca Array 80.08 48 *e*P **P** **21 12 29.7 +0.2**
ESLA *e*PcP PcP 21 12 35.6 -0.8
ESLA *ep*P pP 21 13 07.4 -0.3
ESLA *es*P sP 21 13 23.3 -0.7
ESLA *e*PP PP 21 15 33.3 -0.6
EQES Quesada 80.16 50 P **P** **21 12 30.4 +0.3**
comp=Z,179nm,0.7s,mb5.8
GUD Guadarrama 80.25 47 P **P** **21 12 30.1 -0.3**
comp=Z,52nm,0.7s,mb5.3
GUD Guadarrama 80.25 47 P **P** **21 12 30.1 -0.3**
GUD pmax pmax
comp=Z,52nm,0.7s,mb5.3
EARI Arriondas 80.39 44 P **P** **21 12 31.4 +0.2**
comp=Z,101nm,0.7s,mb5.6
EHUE Huescar 80.53 50 P **P** **21 12 32.3 +0.3**
comp=Z,116nm,0.4s,mb5.9
EHUE Huescar 80.53 50 P **P** **21 12 32.3 +0.3**
EHUE pmax pmax
comp=Z,117nm,0.4s,mb5.9
ENIJ Nijar 80.57 51 P **P** **21 12 31.9 -0.4**
comp=Z,198nm,0.7s,mb5.8
ENIJ Nijar 80.57 51 P **P** **21 12 31.9 -0.3**
ENIJ pmax pmax
comp=Z,198nm,0.7s,mb5.8
VAL Valentia 80.58 34 *i* SN S 21 22 22.9 -3.1
VAL Valentia 80.58 34 *i* PPN pP 21 13 10.5 +0.4
EVIA Vianos 80.84 49 P **P** **21 12 34.5 +0.9**
comp=Z,305nm,0.7s,mb6.0
EVIA Vianos 80.84 49 P **P** **21 12 34.5 +0.9**
EVIA pmax pmax
comp=Z,305nm,0.7s,mb6.0
SIT Sitka 81.26 331 *e*P **P** **21 12 31.6 -3.8**
SIT *ep*P pP 21 13 13.2 -0.4
MAIT Maitri 81.53 160 *e*P **P** **21 12 37.4 +0.7**
MAIT *e* 21 12 46.4
MAIT *e* pP 21 13 16.9 +2.0
ETOB Tobarra 81.56 49 P **P** **21 12 38.0 +0.6**
comp=Z,220nm,1.0s,mb5.7
EMUR La Murta 81.56 50 P **P** **21 12 37.2 -0.3**
comp=Z,82nm,0.7s,mb5.5
NVL N'lazarevskaya 81.56 160⇓*i*P **P** **21 12 37.0 +0.2**
NVL *e**PP pP 21 13 16.4 +1.3
NVL *e* 21 15 43.3
NVL *i* 21 17 46.4
NVL *i* S S 21 22 28.5 -7.2
NVL *e**SS sS 21 23 44.0 +2.1
NVL *e*SS SS 21 27 54.8 -0.8
NVL pmax pmax
comp=Z,402nm,0.9s,mb6.0
ELAN Lanestosa 81.59 44 P **P** **21 12 38.5 +1.0**
comp=Z,86nm,0.9s,mb5.4
CART Cartagena 81.67 50 *e*P **P** **21 12 37.1 -0.9**
CART *e*PcP PcP 21 12 44.3 +0.9
ETOR Torete 81.82 47 P **P** **21 12 38.5 -0.3**
comp=Z,173nm,0.7s,mb5.8
ETOR Torete 81.82 47 P **P** **21 12 38.5 -0.3**
ETOR pmax pmax
comp=Z,173nm,0.7s,mb5.8
BORG Borgarnes 82.19 20 P **P** **21 12 41.3 +1.2**
BORG pP pP 21 13 19.6 +1.1
BORG PKKPbc PKKPbc 21 31 09.8 -1.2
BORG Borgarnes 82.19 20 P **P** **21 12 41.3 +1.2**
comp=Z,155nm,0.8s,mb5.7,baz=218,slow=4.4,SNR=30
BORG pP pP 21 13 19.6 +1.1
comp=Z,298nm,0.8s,baz=249,slow=4.4,SNR=9.6
BORG PKKPbc PKKPbc 21 31 09.8 -1.2
comp=Z,28nm,1.1s,baz=141,slow=8.1,SNR=3.0
BORG Borgarnes 82.19 20 P **P** **21 12 41.3 +1.2**
BORG *PP pP 21 13 19.6 +1.2
BORG Borgarnes 82.19 20 P **P** **21 12 41.0 +0.9**
comp=Z,1µm,1.0s,mb6.4,SNR=20
ECHE Chera 82.26 48 P **P** **21 12 42.0 +1.0**
comp=Z,82nm,0.6s,mb5.5
ECHE Chera 82.26 48 P **P** **21 12 42.0 +0.9**
ECHE pmax pmax
comp=Z,83nm,0.6s,mb5.5
SKAG Skagway 82.42 333 *e*P **P** **21 12 41.6 +0.1**
comp=Z,341nm,1.7s,mb5.7
SKAG *ep*P pP 21 13 19.5 -0.3
QSPA South Pole Qui 82.44 180⇓*i*P **P** **21 12 41.5 +0.2**
QSPA *e*PcP PcP 21 12 46.9 +0.9
QSPA *ep*P pP 21 13 21.1 +1.5
QSPA *e*PP PP 21 15 53.6 +1.4
QSPA South Pole Qui 82.44 180 PKKPbc PKKPbc 21 31 06.1 -4.1
comp=Z,6.5nm,0.9s,baz=271,slow=2.6,SNR=9.5
EBEN Beniarda 82.56 49 P **P** **21 12 43.1 +0.4**
comp=Z,198nm,1.1s,mb5.8
CCA1 Carnmenellis 82.80 37 P **P** **21 12 42.4 -1.2**
CCA1 AMB AMB 21 12 45.7
comp=Z,186nm,0.9s,mb5.8
CCA1 21 21 40.6
CCA1 Carnmenellis 82.80 37 *e*P **P** **21 12 42.4 -1.2**
CCA1 AMB AMB 21 12 45.7
comp=Z,186nm,0.9s,mb5.8
CCA1 *e* 21 21 40.6
EMOS Mosqueruela 82.84 48 P **P** **21 12 44.9 +0.8**
comp=Z,227nm,0.8s,mb6.0
BST Brest 82.85 39 *e*P **P** **21 12 44.0 +0.1**
EANR 'Ain N'Sour 82.86 52 P **P** **21 12 45.6 +1.3**
ETRT Tiaret 82.87 53 P **P** **21 12 46.7 +2.4**
ELIZ Elizondo 82.90 45 P **P** **21 12 45.4 +1.1**
comp=Z,43nm,0.9s,mb5.2
ELIZ Elizondo 82.90 45 P **P** **21 12 45.4 +1.1**
ELIZ pmax pmax
comp=Z,43nm,0.9s,mb5.2
EALK Alkurruntz 82.93 45 P **P** **21 12 47.6 +3.2**
comp=Z,150nm,1.3s,mb5.6
RAR Rarotonga 83.01 250 *e*P **P** **21 12 45.4 0.0**
SJPF Ste Jean 83.09 45 *e*P **P** **21 12 45.0 -0.3**
comp=Z,184nm,0.7s,mb5.6
SJPF Ste Jean 83.09 45 *e*P **P** **21 12 45.0 -0.3**
comp=Z,92nm,0.7s,mb5.6
SJPF Ste Jean 83.09 45 *e*P **P** **21 12 45.0 -0.3**
SJPF pmax pmax
comp=Z,92nm,0.7s,mb5.6
OSSF Osses 83.11 45 *e*P **P** **21 12 45.5 +0.1**
ECHA Ech Chlef 83.12 52 P **P** **21 12 47.0 +1.4**
RES Resolute Bay 83.17 355⇓*e*P **P** **21 12 43.9 -1.1**
RES *ep*P pP 21 13 23.2 -0.2
RES *e*PP PP 21 16 00.5 +2.0
RES Resolute Bay 83.17 355 S S 21 22 45.0 -6.7
comp=Z,6.9nm,0.9s,baz=103,slow=4.8,SNR=2.4
RES PKKPbc PKKPbc 21 31 05.1 -3.9
comp=Z,4.6nm,0.6s,baz=288,slow=1.7,SNR=4.8
DLF Lyons Farm 83.19 34⇓*i*P **P** **21 12 44.4 -1.2**
ESAC San Caprasio 83.23 46 P **P** **21 12 46.6 +0.6**
comp=Z,334nm,0.7s,mb6.2
LARF Larrau 83.24 45 *e*P **P** **21 12 45.8 -0.2**
DSB Dublin 83.26 34 *e*P **P** **21 12 45.8 -0.1**
DSB *ep*P pP 21 13 23.9 -0.4
DSB *es*P sP 21 13 40.5 0.0
EBNR Beni Rached 83.28 52 P **P** **21 12 49.0 +2.6**
QUIF Quistinic 83.29 40 *e*P **P** **21 12 45.0 -1.2**
comp=Z,98nm,0.8s,mb5.3
QUIF Quistinic 83.29 40 *e*P **P** **21 12 45.0 -1.2**
comp=Z,49nm,0.8s,mb5.3
QUIF Quistinic 83.29 40 *e*P **P** **21 12 45.0 -1.2**
QUIF pmax pmax
comp=Z,49nm,0.8s,mb5.3
ORDF Ordiarp 83.33 45 *e*P **P** **21 12 46.5 0.0**
ROSF Rostrenen 83.36 39 *e*P **P** **21 12 46.3 -0.2**
comp=Z,106nm,0.7s,mb5.4
ROSF *ep*P pP 21 13 23.1 -1.9
ROSF Rostrenen 83.36 39 *e*P **P** **21 12 46.3 -0.2**
comp=Z,53nm,0.7s,mb5.4
ROSF *ep*P pP 21 13 23.1 -1.9
ROSF Rostrenen 83.36 39 *e*P **P** **21 12 46.3 -0.2**
ROSF *e**PP pP 21 13 23.1 -1.9
ROSF pmax pmax
comp=Z,53nm,0.7s,mb5.4
SUMG Summit 83.36 10⇓*e*P **P** **21 12 46.5 +0.4**
SUMG PcP PcP 21 12 50.6 +0.5
SUMG *ep*P pP 21 13 24.9 +0.5
SUMG Summit 83.36 10⇑*i*P **P** **21 12 47.7 +1.6**
comp=Z,385nm,0.8s,mb6.2
SUMG *i* pP 21 13 24.2 -0.3
SUMG *e*S S 21 22 54.9 +1.1
SUMG
comp=Z,3µm,25.0s
XMAS Kiritimati 83.41 273 *e*P **P** **21 12 47.6 -0.1**
comp=Z,1µm,1.5s,mb6.3
XMAS *ep*P pP 21 13 26.0 0.0
XMAS *es*P sP 21 13 39.0 -3.3
ATE Arette 83.45 45 *e*P **P** **21 12 48.0 +0.9**
ETSF Etsaut 83.50 45 *e*P **P** **21 12 47.2 -0.2**
comp=Z,117nm,0.7s,mb5.4
ETSF Etsaut 83.50 45 *e*P **P** **21 12 47.2 -0.2**
comp=Z,58nm,0.7s,mb5.4
ETSF Etsaut 83.50 45 *e*P **P** **21 12 47.2 -0.2**
ETSF pmax pmax
comp=Z,58nm,0.7s,mb5.4
HTL Hartland 83.53 37 *e*P **P** **21 12 46.9 -0.4**
HTL AMB AMB 21 12 56.5
comp=Z,182nm,1.1s,mb5.7
ERTA Horta de San J 83.59 47 P **P** **21 12 48.1 +0.2**
comp=Z,254nm,0.7s,mb6.1
REYF Montagne du Re 83.66 45 *e*P **P** **21 12 49.2 +1.0**
TAM Tamanrasset 83.71 66⇓*e*P **P** **21 12 49.7 +0.8**
comp=Z,127nm,0.8s,mb5.7
TAM *e*PcP PcP 21 12 52.6 -0.1
TAM *ep*P pP 21 13 27.7 +0.3
TAM *e*PP PP 21 16 24.7 +21
TAM *e*S S 21 22 59.8 +0.6
TAM Tamanrasset 83.71 66⇓*e*P **P** **21 12 49.7 +0.8**
TAM *e**PP pP 21 13 27.7 +0.3
TAM *e*S S 21 22 59.8 +0.6
TAM pmax pmax
comp=Z,127nm,0.8s,mb5.7
SGMF Saint Gilles 83.79 40 *e*P **P** **21 12 47.6 -1.1**
comp=Z,151nm,1.0s,mb5.4
SGMF Saint Gilles 83.79 40 *e*P **P** **21 12 47.6 -1.1**
comp=Z,76nm,1.0s,mb5.4
SGMF Saint Gilles 83.79 40 *e*P **P** **21 12 47.6 -1.1**
SGMF pmax pmax
comp=Z,76nm,1.0s,mb5.4
EIBI Ibiza 83.83 49 P **P** **21 12 48.8 -0.4**
comp=Z,119nm,1.2s,mb5.5
GMM Mts of Mourne 83.87 33⇑*e*P **P** **21 12 48.5 -0.5**
STCH Steam Cracks 83.88 290 *e*P **P** **21 12 49.5 -0.3**
STCH *ep*P pP 21 13 28.1 -0.2
VIEF Viey 83.90 45 *e*P **P** **21 12 50.4 +1.0**
EBIE Bielsa 83.93 46 P **P** **21 12 50.2 +0.7**
comp=Z,199nm,0.8s,mb5.9
HEX Exmoor 83.95 37⇑*e*P **P** **21 12 49.2 -0.3**
EPF Esparros 84.17 45 *e*P **P** **21 12 50.6 -0.2**
comp=Z,177nm,0.8s,mb5.5
EPF Esparros 84.17 45 *e*P **P** **21 12 50.6 -0.2**
comp=Z,88nm,0.8s,mb5.5
EPF Esparros 84.17 45 *e*P **P** **21 12 50.6 -0.2**
EPF pmax pmax
comp=Z,88nm,0.8s,mb5.5
EPOB Poblet 84.24 47 P **P** **21 12 50.5 -0.7**
comp=Z,93nm,1.1s,mb5.4
POHA Pohakuloa 84.32 291 *e*P **P** **21 12 51.9 -0.2**
comp=Z,323nm,1.1s,mb6.0
POHA *e*PcP PcP 21 12 56.0 +0.5
POHA *ep*P pP 21 13 30.1 -0.5
POHA *es*P sP 21 13 46.8 0.0
POHA *e*PP PP 21 16 07.0 -2.2
JSA Saint Aubin 84.33 39 *e*P **P** **21 12 49.7 -1.8**
JSA AMB AMB 21 12 53.6
comp=Z,101nm,1.7s,mb5.3
JSA *e* 21 21 51.4
PNL Peninsula 84.36 332 *e*P **P** **21 12 51.5 +0.2**
comp=Z,1µm,1.7s,mb6.3
PNL *e*PcP PcP 21 12 54.6 -0.1
PNL *ep*P pP 21 13 30.7 +0.9
EMHD Djebel Mahouad 84.37 52 P **P** **21 12 54.0 +2.0**
CSOR Sort 84.55 46 P **P** **21 12 52.8 +0.1**
comp=Z,297nm,1.8s,mb5.7
ABA Alger-Bouzarea 84.58 52 P **P** **21 12 58.5 +5.5**
HTR Trewern Hill 84.61 36 *e*P **P** **21 12 52.4 -0.4**
MLS Moulis 84.68 46 *e*P **P** **21 12 54.1 +0.7**
GIM North Isle of 84.70 34 *e*P **P** **21 12 53.0 -0.2**
EMIR Miracle 84.71 47 P **P** **21 12 53.5 -0.1**
comp=Z,88nm,0.9s,mb5.5
HGH Gray Hill 84.73 36 *e*P **P** **21 12 53.0 -0.4**
MCH1 Michaelchurch 84.74 36 *e*P **P** **21 12 52.5 -1.0**
MCH1 AMB AMB 21 12 56.6
comp=Z,197nm,1.3s,mb5.7
MCH1 *e* 21 22 57.0
GAL1 Galloway 84.77 33 *e*P **P** **21 12 52.1 -1.4**
GAL1 AMB AMB 21 12 58.2
comp=Z,180nm,1.5s,mb5.6
GAL1 *e* 21 22 55.1
MFF Saint Martin d 84.84 42 *e*P **P** **21 12 53.9 -0.2**
comp=Z,207nm,0.7s,mb5.7
MFF *ep*P pP 21 13 30.9 -1.7
MFF Saint Martin d 84.84 42 *e*P **P** **21 12 53.9 -0.2**
comp=Z,103nm,0.7s,mb5.7
MFF *ep*P pP 21 13 30.9 -1.7
MFF Saint Martin d 84.84 42 *e*P **P** **21 12 53.9 -0.2**
MFF *e**PP pP 21 13 30.9 -1.7
MFF pmax pmax
comp=Z,103nm,0.7s,mb5.7
RRH Rhenigidale 84.90 30⇑*e*P **P** **21 12 53.9 -0.2**
GRR Gorron 84.91 40 *e*P **P** **21 12 53.8 -0.5**
comp=Z,209nm,0.8s,mb5.6
GRR *ep*P pP 21 13 30.8 -2.1
GRR Gorron 84.91 40 *e*P **P** **21 12 53.8 -0.5**
comp=Z,104nm,0.8s,mb5.6
GRR *ep*P pP 21 13 30.8 -2.1
GRR Gorron 84.91 40 *e*P **P** **21 12 53.8 -0.5**
GRR *e**PP pP 21 13 30.8 -2.1
GRR pmax pmax
comp=Z,104nm,0.8s,mb5.6
KAR1 Arisaig 84.95 31 *e*P **P** **21 12 54.2 -0.1**
LFF La Frestale 84.97 44 *e*P **P** **21 12 54.6 -0.2**
comp=Z,447nm,0.8s,mb6.0
LFF La Frestale 84.97 44 *e*P **P** **21 12 54.6 -0.2**
comp=Z,224nm,0.8s,mb6.0
LFF La Frestale 84.97 44 *e*P **P** **21 12 54.6 -0.2**
LFF pmax pmax
comp=Z,224nm,0.8s,mb6.0
ETOS Mallorca 85.12 49 P **P** **21 12 56.3 +0.6**
comp=Z,100nm,1.0s,mb5.5
CLLI Llivia 85.18 46 P **P** **21 12 56.3 +0.4**
GCD Castle Douglas 85.19 33 *e*P **P** **21 12 54.7 -0.9**
VALF Valcebollere 85.19 46 *e*P **P** **21 12 57.1 +1.2**
KPL Plockton 85.19 30 *e*P **P** **21 12 54.1 -1.4**
KPL AMB AMB 21 13 03.3
comp=Z,196nm,1.9s,mb5.5
KPL *e* 21 22 58.3
PGBU Glenifferbraes 85.23 32 *e*P **P** **21 12 55.7 -0.1**
PGBU AMB AMB 21 12 58.3
comp=Z,172nm,1.5s,mb5.6
FLN La Foliniere 85.26 40 *e*P **P** **21 12 55.8 -0.3**
comp=Z,205nm,0.8s,mb5.6
FLN *ep*P pP 21 13 32.8 -1.9
FLN *e*MLR MLR
comp=Z,2µm,21.5s
FLN La Foliniere 85.26 40 *e*P **P** **21 12 55.8 -0.3**
comp=Z,102nm,0.8s,mb5.6
FLN *ep*P pP 21 13 32.8 -1.9
FLN LR LR
comp=Z,2µm,21.5s
FLN La Foliniere 85.26 40 *e*P **P** **21 12 55.8 -0.3**
FLN *e**PP pP 21 13 32.8 -1.9
FLN pmax pmax
comp=Z,102nm,0.8s,mb5.6
FLN MLR MLR
comp=Z,2µm,21.5s
KSB Sheil Bridge 85.26 31 *e*P **P** **21 12 55.1 -0.8**
SWN1 Swindon 85.29 37 P **P** **21 12 55.6 -0.6**
SWN1 AMB AMB 21 13 04.9
comp=Z,179nm,1.3s,mb5.6
SWN1 Swindon 85.29 37 *e*P **P** **21 12 55.6 -0.6**
SWN1 AMB AMB 21 13 04.9
comp=Z,179nm,1.3s,mb5.6
XDE Dent Fell 85.31 34 *e*P **P** **21 12 55.4 -0.8**
RRR Rubha Reidh 85.31 30⇑*e*P **P** **21 12 55.7 -0.4**
CFON Fontmartina 85.33 47 P **P** **21 12 58.1 +1.5**
comp=Z,119nm,1.4s,mb5.4
KAC Achnashellach 85.43 30 *e*P **P** **21 12 56.4 -0.3**
LDF La Druitiere 85.44 40 *e*P **P** **21 12 56.5 -0.5**
comp=Z,94nm,0.7s,mb5.3
LDF La Druitiere 85.44 40 *e*P **P** **21 12 56.5 -0.5**
comp=Z,47nm,0.7s,mb5.3
LDF La Druitiere 85.44 40 *e*P **P** **21 12 56.5 -0.5**
LDF pmax pmax
comp=Z,47nm,0.7s,mb5.3
EAB Aberfoyle 85.44 32 *e*P **P** **21 12 56.4 -0.4**
SCO Scoresbysund 85.50 15 *i* P **P** **21 12 57.7 +0.9**
SCO *i* pP 21 13 34.4 -1.0
SCO pmax pmax
comp=Z,72nm,1.0s,mb5.4
SCO Scoresbysund 85.50 15 *i* P **P** **21 12 57.7 +0.9**
comp=Z,72nm,1.0s,mb5.4
SCO *i* pP 21 13 34.4 -1.0
STNC Stoke 85.56 35 *e*P **P** **21 12 57.7 +0.2**
MTLF Montolieu 85.58 45 *e*P **P** **21 12 57.0 -0.8**
comp=Z,81nm,0.9s,mb5.2
MTLF *ep*P pP 21 13 34.6 -1.8
MTLF Montolieu 85.58 45 *e*P **P** **21 12 57.0 -0.8**
comp=Z,40nm,0.9s,mb5.2
MTLF *ep*P pP 21 13 34.6 -1.8
MTLF Montolieu 85.58 45 *e*P **P** **21 12 57.0 -0.8**
MTLF *e**PP pP 21 13 34.6 -1.8
MTLF pmax pmax
comp=Z,40nm,0.9s,mb5.2
RJF Les Rejaudoux 85.60 43 *e*P **P** **21 12 57.6 -0.3**
comp=Z,180nm,0.9s,mb5.5
RJF *e*MLR MLR
comp=Z,3µm,20.8s
RJF Les Rejaudoux 85.60 43 *e*P **P** **21 12 57.6 -0.3**
comp=Z,90nm,0.9s,mb5.5
RJF LR LR
comp=Z,3µm,20.8s
RJF Les Rejaudoux 85.60 43 *e*P **P** **21 12 57.6 -0.3**
RJF pmax pmax
comp=Z,90nm,0.9s,mb5.5
RJF MLR MLR
comp=Z,3µm,20.8s
FILF Fillols 85.62 46 *e*P **P** **21 12 58.0 0.0**
LRDF Laroque-de-Fa 85.70 46 *e*P **P** **21 12 58.7 +0.3**
ECK Cauldkaine Hil 85.74 33⇑*e*P **P** **21 12 57.6 -0.7**
ESK Eskdalemuir 85.74 33 *e*P **P** **21 12 57.5 -0.8**
ESK AMB AMB 21 12 59.6
comp=Z,182nm,1.9s,mb5.5
ESK Eskdalemuir 85.74 33 *e*P **P** **21 12 57.7 -0.6**
comp=Z,26nm,0.7s,mb5.1
ESK *ep*P pP 21 13 36.4 -0.5
ESK Eskdalemuir 85.74 33 *e*P **P** **21 12 57.7 -0.6**
ESK *e**PP pP 21 13 36.4 -0.5
ESK pmax pmax
comp=Z,25nm,0.7s,mb5.0
ESK Eskdalemuir 85.74 33 *i* P **P** **21 12 59.3 +1.0**
EKA Eskdalemuir Ar 85.77 33 P **P** **21 12 58.0 -0.5**
comp=Z,19nm,0.6s,mb5.0,baz=241,slow=5.2,SNR=47
EKA pP pP 21 13 36.5 -0.5
comp=Z,15nm,0.7s,baz=233,slow=2.6,SNR=2.8
EAU Auchinoon 85.79 32 *e*P **P** **21 12 58.1 -0.5**
RSC Scourie 85.81 30 *e*P **P** **21 12 58.5 -0.1**
EJON La Jonquera 85.83 46 P **P** **21 12 57.8 -1.3**
comp=Z,107nm,1.1s,mb5.5
SJAF Saint Jean de 85.83 46 *e*P **P** **21 12 59.6 +0.5**
CAF Calviac 85.88 44 *e*P **P** **21 12 58.4 -0.8**
comp=Z,108nm,0.7s,mb5.4
CAF *ep*P pP 21 13 36.1 -1.8

CAF Calviac 85.88 44 *e*P **P 21 12 58.4 -0.8**
comp=Z,54nm,0.7s,mb5.4
CAF *e*pP pP 21 13 36.1 -1.8
CAF Calviac 85.88 44 *e*P **P 21 12 58.4 -0.8**
CAF *e**PP pP 21 13 36.1 -1.8
CAF pmax pmax
comp=Z,54nm,0.7s,mb5.4
MDO Dochfour 85.88 31⇑ *e*P **P 21 12 58.5 -0.5**
EBH Black Hill 85.90 32 *e*P **P 21 12 58.7 -0.4**
LHO Holmfirth 85.90 35⇑ *e*P **P 21 12 59.1 0.0**
EDI Edinburgh 85.96 32 *e*P **P 21 12 58.0 -1.3**
EDI AMB AMB 21 13 00.5
comp=Z,169nm,1.2s,mb5.7
EDI *e* 21 22 37.6
CWF Charnwood Fore 85.96 36 *e*P **P 21 12 58.1 -1.4**
CWF AMB AMB 21 13 02.2
comp=Z,175nm,1.7s,mb5.5
CWF *e* 21 22 40.2
EBL Broad Law 85.98 32⇑ *e*P **P 21 12 58.8 -0.7**
MVH1 Achvaich 86.14 30⇑ *e*P **P 21 12 59.9 -0.4**
HPK Haverah Park 86.17 34 *e*P **P 21 13 00.1 -0.3**
HPK AMB AMB 21 13 04.6
comp=Z,200nm,1.5s,mb5.6
HPK *e* 21 23 03.2
INK Inuvik 86.22 341 *e*P **P 21 12 59.2 -1.2**
INK *e*pP pP 21 13 38.2 -0.8
ESY Stoneypath 86.26 32⇑ *e*P **P 21 13 00.4 -0.5**
DAWY Dawson 86.27 336 *e*P **P 21 12 60.0 -0.8**
DAWY *e*PcP PcP 21 13 03.1 0.0
DAWY *e*pP pP 21 13 39.6 +0.3
SET Setif 86.30 53 P **P 21 13 04.0 +2.5**
TCF Toulx Ste Croi 86.33 43 *e*P **P 21 13 01.0 -0.4**
comp=Z,94nm,1.1s,mb5.1
TCF Toulx Ste Croi 86.33 43 *e*P **P 21 13 01.0 -0.4**
comp=Z,47nm,1.1s,mb5.1
TCF Toulx Ste Croi 86.33 43 *e*P **P 21 13 01.0 -0.4**
TCF pmax pmax
comp=Z,47nm,1.1s,mb5.1
CKHR Kef el Ahmar 86.35 53 P **P 21 13 03.5 +1.7**
SOFL Sornfelli, Far 86.42 26 P **P 21 13 01.2 -0.3**
SOFL Sornfelli, Far 86.42 26 *e*P **P 21 13 01.2 -0.3**
MCD Coleburn Disti 86.49 31⇑ *e*P **P 21 13 01.6 -0.3**
MME1 Meikle Cairn 86.55 31⇑ *e*P **P 21 13 01.4 -0.9**
PYM Petit Puy Mans 86.73 43 *e*P **P 21 13 03.6 +0.2**
DFRA Djebel Bou Aff 86.75 53 P **P 21 13 03.8 +0.1**
LBL Lubilhac 86.76 44 *e*P **P 21 13 04.1 +0.5**
BGF Bois d'Agland 86.82 42 *e*P **P 21 13 03.2 -0.6**
comp=Z,203nm,1.0s,mb5.6
BGF Bois d'Agland 86.82 42 *e*P **P 21 13 03.2 -0.6**
comp=Z,101nm,1.0s,mb5.6
BGF Bois d'Agland 86.82 42 *e*P **P 21 13 03.2 -0.6**
BGF pmax pmax
comp=Z,101nm,1.0s,mb5.6
HYF Humbligny 86.86 42 *e*P **P 21 13 03.4 -0.6**
AGO Saint Agoulin 86.89 43 *e*P **P 21 13 04.1 0.0**
KIP Kipapa 86.90 292 *e*P **P 21 13 04.9 +0.1**
comp=Z,60nm,0.8s,mb5.5
KIP Kipapa 86.90 292 *e*P **P 21 13 04.9 +0.1**
KIP pmax pmax
comp=Z,60nm,0.8s,mb5.5
LASF Ste Croix 86.91 45 *e*P **P 21 13 04.2 -0.1**
comp=Z,78nm,0.9s,mb5.3
CTEI Djebel Teioual 87.07 53 P **P 21 13 05.0 -0.3**
CASM Ain Smara 87.18 53 P **P 21 13 05.1 -0.7**
PLDF La Plantade 87.20 43 *e*P **P 21 13 04.3 -1.3**
AVF Avril sur Loir 87.22 42 *e*P **P 21 13 04.7 -1.0**
comp=Z,31nm,0.7s,mb4.9
AVF *e*pP pP 21 13 42.1 -2.3
AVF Avril sur Loir 87.22 42 *e*P **P 21 13 04.7 -1.0**
comp=Z,15nm,0.7s,mb4.9
AVF *e*pP pP 21 13 42.1 -2.3
AVF Avril sur Loir 87.22 42 *e*P **P 21 13 04.7 -1.0**
AVF *e**PP pP 21 13 42.1 -2.3
AVF pmax pmax
comp=Z,15nm,0.7s,mb4.9
BMRM Bremner River 87.26 333 ↓*i*P **P 21 13 04.3 -1.2**
comp=Z,2µm,2.0s,mb6.5
BMRM *e*pP pP 21 13 44.4 +0.1
BMRM *e*PP PP 21 16 30.7 -1.2
EGAK Eagle 87.27 337 *e*P **P 21 13 05.3 -0.2**
EGAK *e*pP pP 21 13 43.7 -0.6
SSF Saint Saulge 87.38 42 *e*P **P 21 13 05.4 -1.1**
comp=Z,35nm,0.9s,mb4.9
SSF Saint Saulge 87.38 42 *e*P **P 21 13 05.4 -1.1**
comp=Z,17nm,0.9s,mb4.9
SSF Saint Saulge 87.38 42 *e*P **P 21 13 05.4 -1.1**
SSF pmax pmax
comp=Z,17nm,0.9s,mb4.9
CKFL Kef-Lekhel 87.39 53 P **P 21 13 05.2 -1.6**
MENF Mencas 87.40 38 *e*P **P 21 13 03.8 -2.7**
SMF Signal de Mont 87.51 42 *e*P **P 21 13 06.3 -0.8**
comp=Z,112nm,0.8s,mb5.4
SMF Signal de Mont 87.51 42 *e*P **P 21 13 06.3 -0.8**
comp=Z,56nm,0.8s,mb5.5
SMF Signal de Mont 87.51 42 *e*P **P 21 13 06.3 -0.8**
SMF pmax pmax
comp=Z,56nm,0.8s,mb5.5
MID Middleton Isla 87.54 331 *e*P **P 21 13 05.4 -1.5**
MID *e*PcP PcP 21 13 08.7 0.0
MID *e*pP pP 21 13 47.2 +1.5
CAEH 'Ain El Ouahch 87.56 53 P **P 21 13 05.7 -1.9**
MENT Mentasta 87.59 335 *e*P **P 21 13 07.1 0.0**
VIVF Saint-Julien-l 87.66 44 *e*P **P 21 13 06.9 -1.0**
comp=Z,98nm,1.0s,mb5.3
VIVF Saint-Julien-l 87.66 44 *e*P **P 21 13 06.9 -1.0**
comp=Z,49nm,1.0s,mb5.3
VIVF Saint-Julien-l 87.66 44 *e*P **P 21 13 06.9 -1.0**
VIVF pmax pmax
comp=Z,49nm,1.0s,mb5.3
SSB Saint Sauveur 87.66 44 *e*P **P 21 13 08.7 +0.8**
SSB Saint Sauveur 87.66 44 *e*P **P 21 13 07.7 -0.1**
comp=Z,34nm,0.8s,mb5.2
SSB *e*pP pP 21 13 47.1 +0.4
SSB *e*sP sP 21 14 01.6 -1.2
SSB Saint Sauveur 87.66 44 *e*P **P 21 13 07.7 -0.2**
SSB *e**PP pP 21 13 47.1 +0.4
SSB *e**SP sP 21 14 01.6 -1.2
SSB pmax pmax
comp=Z,34nm,0.8s,mb5.2
LOR Lormes 87.67 42 *e*P **P 21 13 06.8 -1.1**
comp=Z,47nm,0.8s,mb5.1
LOR *e*MLR MLR
comp=Z,2µm,18.0s
LOR Lormes 87.67 42 *e*P **P 21 13 06.8 -1.1**
comp=Z,23nm,0.8s,mb5.1
LOR LR LR
comp=Z,2µm,18.0s
LOR Lormes 87.67 42 *e*P **P 21 13 06.8 -1.1**
LOR pmax pmax
comp=Z,23nm,0.8s,mb5.1
LOR MLR MLR
comp=Z,2µm,18.0s
DIV Divide 87.84 333 ↓*i*P **P 21 13 07.4 -1.0**
DIV *e*pP pP 21 13 46.7 -0.5
DIV *e*PP PP 21 16 42.8 +6.2
ABSA Djebel Ababsia 87.96 53 P **P 21 13 07.7 -1.8**
CMAH Djebel Manchou 87.98 53 P **P 21 13 06.9 -2.7**
DOT Dot Lake 88.00 335 ↓*e*P **P 21 13 08.2 -0.9**
comp=Z,468nm,0.8s,mb6.4
DOT *e*pP pP 21 13 47.2 -0.6
DOT *e*PP PP 21 16 38.7 +1.0
SMRF Simiane la Rot 88.09 45 *e*P **P 21 13 09.5 -0.4**
comp=Z,90nm,1.0s,mb5.2
SMRF Simiane la Rot 88.09 45 *e*P **P 21 13 09.5 -0.4**
comp=Z,90nm,1.0s,mb5.5
PAX Paxson 88.35 334 *e*P **P 21 13 10.3 -0.4**
comp=Z,243nm,1.0s,mb6.0
PAX *e*pP pP 21 13 48.7 -0.8
PAX Paxson 88.35 334 *e*P **P 21 13 10.3 -0.4**
PAX *e**PP pP 21 13 48.7 -0.8
PAX pmax pmax
comp=Z,243nm,1.0s,mb6.0
LRW Lerwick 88.35 29 *e*P **P 21 13 10.1 -0.7**
LRW AMB AMB 21 13 13.3
comp=Z,178nm,1.9s,mb5.6
SBA Scott Base 88.39 191 ↓*e*P **P 21 13 11.2 +0.4**
SBA *e*pP pP 21 13 50.6 +0.9
SBA *e*PP PP 21 16 43.8 +3.6
ORIF Oris-en-Rattie 88.51 44 *e*P **P 21 13 11.3 -0.6**
comp=Z,188nm,0.7s,mb5.8
ORIF *e*MLR MLR
comp=Z,3µm,23.0s
ORIF Oris-en-Rattie 88.51 44 *e*P **P 21 13 11.3 -0.6**
comp=Z,94nm,0.7s,mb5.8
ORIF pmax pmax
comp=Z,94nm,0.7s,mb5.8
BAIF Baives 88.55 39 *e*P **P 21 13 10.4 -1.6**
comp=Z,30nm,0.7s,mb5.0
BAIF Baives 88.55 39 *e*P **P 21 13 10.4 -1.6**
comp=Z,15nm,0.7s,mb5.0
BAIF Baives 88.55 39 *e*P **P 21 13 10.4 -1.6**
BAIF pmax pmax
comp=Z,15nm,0.7s,mb5.0
LMR La Mourre 88.62 46 *e*P **P 21 13 11.3 -1.2**
comp=Z,144nm,0.8s,mb5.6
LMR *e*pP pP 21 13 48.3 -3.0
LMR La Mourre 88.62 46 *e*P **P 21 13 11.3 -1.2**
comp=Z,72nm,0.8s,mb5.7
LMR *e*pP pP 21 13 48.3 -3.0
LMR La Mourre 88.62 46 *e*P **P 21 13 11.3 -1.2**
LMR *e**PP pP 21 13 48.3 -3.0
LMR pmax pmax
comp=Z,72nm,0.8s,mb5.7
SFTF Sexfontaines 88.66 41 *e*P **P 21 13 11.7 -0.8**
comp=Z,86nm,0.8s,mb5.4
SFTF Sexfontaines 88.66 41 *e*P **P 21 13 11.7 -0.8**
comp=Z,86nm,0.8s,mb5.7
SNF Seneffe 88.71 39 P **P 21 13 13.0 +0.3**
SNF AP pP 21 13 51.4 -0.2
MEZF Maizieres J'vi 88.73 41 *e*P **P 21 13 11.3 -1.6**
comp=Z,39nm,0.4s,mb5.3
MEZF Maizieres J'vi 88.73 41 *e*P **P 21 13 11.3 -1.6**
comp=Z,39nm,0.4s,mb5.7
FRF La Foret Royal 88.77 46 *e*P **P 21 13 11.9 -1.2**
comp=Z,163nm,0.9s,mb5.7
FRF La Foret Royal 88.77 46 *e*P **P 21 13 11.9 -1.2**
comp=Z,82nm,0.9s,mb5.7
FRF La Foret Royal 88.77 46 *e*P **P 21 13 11.9 -1.2**
FRF pmax pmax
comp=Z,82nm,0.9s,mb5.7
DOU Dourbes 88.81 39 P **P 21 13 12.8 -0.4**
comp=Z,52nm,1.1s,mb5.4
DOU AP pP 21 13 50.5 -1.5
GIVF Givet 88.95 39 *e*P **P 21 13 12.5 -1.3**
comp=Z,155nm,0.6s,mb5.8
GIVF Givet 88.95 39 *e*P **P 21 13 12.5 -1.3**
comp=Z,78nm,0.6s,mb5.8
GIVF Givet 88.95 39 *e*P **P 21 13 12.5 -1.3**
GIVF pmax pmax
comp=Z,78nm,0.6s,mb5.8
CALN Calern 88.98 46 *e*P **P 21 13 14.3 +0.2**
CABF La Chapelle 89.01 43 *e*P **P 21 13 13.8 -0.4**
comp=Z,133nm,0.8s,mb5.6
CABF La Chapelle 89.01 43 *e*P **P 21 13 13.8 -0.4**
comp=Z,67nm,0.8s,mb5.6
CABF La Chapelle 89.01 43 *e*P **P 21 13 13.8 -0.4**
CABF pmax pmax
comp=Z,67nm,0.8s,mb5.6
SURF Saint Ours 89.07 45 *e*P **P 21 13 15.9 +1.4**
MBDF Montbardon 89.09 45 *e*P **P 21 13 13.8 -0.8**
comp=Z,44nm,0.8s,mb5.2
MBDF Montbardon 89.09 45 *e*P **P 21 13 13.8 -0.8**
comp=Z,22nm,0.8s,mb5.1
MBDF Montbardon 89.09 45 *e*P **P 21 13 13.8 -0.8**
MBDF pmax pmax
comp=Z,22nm,0.8s,mb5.1
MVIF Mont Vial 89.19 46 *e*P **P 21 13 15.2 +0.1**
LPL La Plagne 89.22 44 *e*P **P 21 13 15.6 +0.4**
comp=Z,171nm,0.7s,mb5.8
LPL La Plagne 89.22 44 *e*P **P 21 13 15.6 +0.4**
comp=Z,86nm,0.7s,mb5.8
LPL La Plagne 89.22 44 *e*P **P 21 13 15.6 +0.4**
LPL pmax pmax
comp=Z,86nm,0.7s,mb5.8
SML Sawmill 89.23 333 ↓*i*P **P 21 13 13.8 -1.1**
comp=Z,134nm,0.8s,mb5.9
SML *e*PcP PcP 21 13 16.3 +0.1
SML *e*pP pP 21 13 53.1 -0.6
SML *e*PP PP 21 16 50.0 +2.4
SML Sawmill 89.23 333 ↓*i*P **P 21 13 13.8 -1.1**
SML *e**PP pP 21 13 53.2 -0.5
SML *e* 21 16 50.0
SML pmax pmax
comp=Z,134nm,0.8s,mb5.9
LPG La Plagne 89.23 44 *e*P **P 21 13 15.8 +0.5**
comp=Z,184nm,0.7s,mb5.8
LPG La Plagne 89.23 44 *e*P **P 21 13 15.8 +0.5**
comp=Z,92nm,0.7s,mb5.8
LPG La Plagne 89.23 44 *e*P **P 21 13 15.8 +0.5**
LPG pmax pmax
comp=Z,92nm,0.7s,mb5.8
SEW Seward 89.24 331 ↓*i*P **P 21 13 13.6 -1.3**
comp=Z,220nm,0.9s,mb6.1
SEW *e*pP pP 21 13 53.6 -0.3
SEW *e*PP PP 21 16 44.3 -3.5
THEF They Montfort 89.28 41 *e*P **P 21 13 15.7 +0.3**
TOUF Mont Tournerai 89.28 46 *e*P **P 21 13 15.7 +0.2**
REVF Revere 89.31 46 *e*P **P 21 13 15.8 +0.1**
BCLA Clavier 89.32 39 P **P 21 13 15.9 +0.3**
comp=Z,28nm,1.3s,mb5.0
BCLA AP pP 21 13 53.5 -0.9
LUCF Luceram 89.33 46 *e*P **P 21 13 15.6 -0.2**
TSUM Tsumeb 89.35 109 P **P 21 13 16.3 -0.1**
comp=Z,109nm,0.8s,mb5.8,baz=262,slow=4.6,SNR=118
TSUM PKKPbc PKKPbc 21 30 53.8 +2.2
comp=Z,2.8nm,0.7s,baz=18,slow=7.6,SNR=4.7
KEST Kesra 89.36 54 *e*P **P 21 13 16.1 0.0**
KEST Kesra 89.36 54 P **P 21 13 15.9 -0.1**
comp=Z,43nm,0.8s,mb5.5,baz=179,slow=1.2,SNR=51
KEST S SKSac 21 23 29.5 -2.5
comp=Z,1.7nm,0.9s,baz=143,slow=12,SNR=3.2
KEST PKKPbc PKKPbc 21 30 51.6 -0.8
comp=Z,1.1nm,0.7s,baz=298,slow=3.8,SNR=4.4
SBF Sospel 89.39 46 *e*P **P 21 13 14.8 -1.2**
comp=Z,93nm,0.7s,mb5.5
SBF Sospel 89.39 46 *e*P **P 21 13 14.8 -1.2**
comp=Z,46nm,0.7s,mb5.5
SBF Sospel 89.39 46 *e*P **P 21 13 14.8 -1.2**
SBF pmax pmax
comp=Z,46nm,0.7s,mb5.5
AUTN L'Aution 89.41 46 *e*P **P 21 13 16.8 +0.7**
HAU Haudompre 89.47 42 *e*P **P 21 13 15.5 -0.8**
comp=Z,30nm,0.8s,mb5.0
HAU *e*MLR MLR
comp=Z,1µm,20.2s
HAU Haudompre 89.47 42 *e*P **P 21 13 15.5 -0.8**
comp=Z,15nm,0.8s,mb5.0
HAU LR LR
comp=Z,1µm,20.3s
HAU Haudompre 89.47 42 *e*P **P 21 13 15.5 -0.8**
HAU pmax pmax
comp=Z,15nm,0.8s,mb5.0
HAU MLR MLR
comp=Z,1µm,20.3s
SAOF Saorge 89.49 46 *e*P **P 21 13 16.3 -0.2**
PMR Palmer 89.53 333 *e*P **P 21 13 16.0 -0.3**
comp=Z,172nm,1.1s,mb5.9
PMR Palmer 89.53 333 *e*P **P 21 13 16.0 -0.3**
PMR pmax pmax
comp=Z,172nm,1.1s,mb5.9
ILAR Eielson Array 89.55 336 P **P 21 13 15.0 -1.3**
comp=Z,38nm,0.8s,mb5.3,baz=123,slow=3.5,SNR=139
ILAR pP pP 21 13 53.7 -1.5
comp=Z,37nm,0.8s,baz=120,slow=2.7,SNR=4.3
ILAR PP PP 21 16 49.9 -0.1
comp=Z,19nm,1.0s,baz=111,slow=7.2,SNR=8.3
ILAR S SKSac 21 23 28.8 -3.0
comp=Z,0.5nm,0.7s,baz=36,slow=9.4,SNR=3.3
ILAR PKKPbc PKKPbc 21 30 49.1 -4.1
comp=Z,3.8nm,0.6s,baz=290,slow=3.1,SNR=24
ILAR PKPPKP 21 38 55.0
comp=Z,0.5nm,1.0s,baz=287,slow=3.2,SNR=4.8
ILAR Eielson Array 89.55 336 P **P 21 13 15.0 -1.3**
ILAR *PP pP 21 13 53.7 -1.5
ILAR 21 16 49.9
ILAR S SKSac 21 23 28.8 -3.0
JMIC Jan Mayen 89.56 17 *e*P **P 21 13 18.1 +1.9**
JMIC *e*pP pP 21 13 55.0 -0.1
JMIC *e*SKS 21 23 31.3
JMIC Jan Mayen 89.56 17 pP pP 21 13 55.9 +0.8
comp=Z,67nm,0.5s,baz=152,slow=3.4,SNR=1.8
BEBN Eben Emael 89.64 39 P **P 21 13 17.6 +0.6**
comp=Z,24nm,1.2s,mb5.0
BEBN AP pP 21 13 56.3 +0.4
LOMF Lomont 89.66 42 *e*P **P 21 13 17.7 +0.5**
RC01 Rabbit Creek A 89.66 332 *e*P **P 21 13 16.5 -0.4**
comp=Z,226nm,0.7s,mb6.2
RC01 *e*pP pP 21 13 55.7 -0.1
RC01 *e*sP sP 21 14 11.6 -0.3
WLF Walferdange 89.69 40 P **P 21 13 17.5 +0.2**
comp=Z,80nm,1.1s,mb5.6
WLF AP pP 21 13 53.7 -2.5
WLF Walferdange 89.69 40 *e*P **P 21 13 17.7 +0.4**
WLF *e*pP pP 21 13 53.3 -2.9
WLF *e*SKSac SKSac 21 23 33.4 +0.1
WLF Walferdange 89.69 40 ↓*e*P **P 21 13 17.4 0.0**
comp=Z,129nm,0.9s,mb5.9
WLF *e*pP pP 21 13 55.1 -1.1
WLF *e*PP PP 21 16 50.8 -0.8
WLF Walferdange 89.69 40 ↓*e*P **P 21 13 17.4 +0.1**
WLF *e**PP pP 21 13 55.1 -1.1
WLF *e* 21 16 50.8
WLF pmax pmax
comp=Z,129nm,0.9s,mb5.9
SLKM Skilak Lake 89.73 331 *e*P **P 21 13 17.0 -0.3**
SLKM *e*pP pP 21 13 55.8 -0.3
HINF Hinteralfeld 89.77 42 *e*P **P 21 13 16.9 -0.8**
comp=Z,43nm,0.9s,mb5.1
HINF Hinteralfeld 89.77 42 *e*P **P 21 13 16.9 -0.8**
comp=Z,21nm,0.9s,mb5.1
HINF Hinteralfeld 89.77 42 *e*P **P 21 13 16.9 -0.8**
HINF pmax pmax
comp=Z,21nm,0.9s,mb5.1
HGN Heimansgroeve 89.79 39⇑ *e*P **P 21 13 17.4 -0.3**
comp=Z,71nm,1.4s,mb5.4
HGN Heimansgroeve 89.79 39 *e*pP pP 21 13 55.8 -0.9
HGN Heimansgroeve 89.79 39 *e*sP sP 21 14 18.0 +5.2
HGN Heimansgroeve 89.79 39 *e*SKS SKSac 21 23 31.2 -2.6
HGN Heimansgroeve 89.79 39 *e*S S 21 23 53.3 -3.2
MEM Membach 89.80 39 P **P 21 13 17.5 -0.3**
comp=Z,21nm,1.4s,mb4.9
MEM AP pP 21 13 55.9 -0.8
MOF Molkenrain 89.96 42 *e*P **P 21 13 18.4 -0.2**
COLA College 89.97 336 ↓*i*P **P 21 13 16.8 -1.4**
comp=Z,1µm,1.8s,mb6.5
COLA *e*pP pP 21 13 56.6 -0.5
COLA *e*PP PP 21 16 53.2 -0.2
COLA *e*S S 21 23 57.3 -0.3
COLA College 89.97 336 ↓*i*P **P 21 13 16.8 -1.5**
COLA *e**PP pP 21 13 56.6 -0.6
COLA *e* 21 16 53.2
COLA *e*S S 21 23 57.3 -0.3
COLA pmax pmax
comp=Z,1µm,1.8s,mb6.5
DAG Danmarks Havn 90.02 11κ *i*P **P 21 13 18.8 +0.5**
DAG *i* pP 21 13 57.8 +0.6
DAG pmax pmax
comp=Z,70nm,0.9s,mb5.6
DAG Danmarks Havn 90.02 11κ *i*P **P 21 13 18.8 +0.5**
comp=Z,70nm,0.9s,mb5.6
DAG *i* pP 21 13 57.8 +0.6
VSL Villasalto 90.02 50 *e*P **P 21 13 17.8 -1.3**
comp=Z,40nm,0.9s,mb5.3
VSL *e*pP pP 21 13 56.2 -1.8
VSL *e*PP PP 21 16 53.2 -1.3
ECH Echery 90.05 41 *e*P **P 21 13 18.8 -0.2**
ECH Echery 90.05 41 ↓*e*P **P 21 13 18.4 -0.6**
comp=Z,46nm,0.9s,mb5.4
ECH *e*pP pP 21 13 57.0 -0.9
ECH Echery 90.05 41 ↓*e*P **P 21 13 18.4 -0.6**
ECH *e**PP pP 21 13 57.0 -0.9
ECH pmax pmax
comp=Z,46nm,0.9s,mb5.4
MCK McKinley 90.07 335 ↓*i*P **P 21 13 17.6 -1.1**
MCK *e*pP pP 21 13 57.1 -0.5
MCK *e*PP PP 21 16 55.6 +1.4
BBS Basel-Blauen 90.13 42 *e*P **P 21 13 18.3 -1.1**
CDF Champ du Feu 90.16 41 *e*P **P 21 13 18.9 -0.6**
comp=Z,95nm,0.8s,mb5.5
CDF Champ du Feu 90.16 41 *e*P **P 21 13 18.9 -0.6**
comp=Z,48nm,0.8s,mb5.5
CDF Champ du Feu 90.16 41 *e*P **P 21 13 18.9 -0.6**
CDF pmax pmax
comp=Z,48nm,0.8s,mb5.5
KDAK Kodiak Island 90.19 328 P **P 21 13 18.4 -1.0**
comp=Z,91nm,0.7s,mb5.8,baz=142,slow=2.7,SNR=63
KDAK pP pP 21 13 58.8 +0.4
comp=Z,143nm,0.7s,baz=66,slow=4.5,SNR=11
KDAK PKKPbc PKKPbc 21 30 47.3 -4.0
comp=Z,8.5nm,0.8s,baz=213,slow=2.6,SNR=9.3
KDAK Kodiak Island 90.19 328 ↓*i*P **P 21 13 18.3 -1.2**
KDAK *e**PP pP 21 13 58.5 +0.1
ALE Alert 90.23 2 P **P 21 13 19.1 -0.1**
comp=Z,266nm,1.0s,mb6.1,SNR=12
PGF Pioggiola 90.27 47 *e*P **P 21 13 19.7 -0.5**
comp=Z,36nm,0.8s,mb5.1
PGF Pioggiola 90.27 47 *e*P **P 21 13 19.7 -0.5**
comp=Z,18nm,0.8s,mb5.0
PGF Pioggiola 90.27 47 *e*P **P 21 13 19.7 -0.5**
PGF pmax pmax
comp=Z,18nm,0.8s,mb5.0
RUP Ruppelstein 90.28 40 *e*P **P 21 13 20.1 +0.1**
SUR Sutherland 90.29 123 P **P 21 13 21.9 +1.3**
SUR Sutherland 90.29 123 P **P 21 13 21.9 +1.3**
comp=Z,84nm,0.9s,mb5.7,baz=246,slow=5.5,SNR=26
SUR Sutherland 90.29 123 P **P 21 13 21.7 +1.1**
comp=Z,709nm,1.0s,mb6.5,SNR=23
LIBD Limburg 90.33 42 *e*P **P 21 13 20.2 -0.1**
OHAK Old Harbor 90.43 328 *e*P **P 21 13 21.2 +0.6**
comp=Z,1µm,1.8s,mb6.5
FELD Feldberg im Sc 90.54 42 *e*P **P 21 13 21.0 -0.3**
WTSB Winterswijk 90.57 38 *e*P **P 21 13 21.1 -0.2**
comp=Z,96nm,1.0s,mb5.8
WTSB Winterswijk 90.57 38 *e*pP pP 21 13 59.8 -0.5
WTSB Winterswijk 90.57 38 *e*sP sP 21 14 21.7 +5.3
TRF Thorofare Moun 90.57 334 ↓*i*P **P 21 13 20.3 -0.8**
comp=Z,1µm,1.4s,mb6.8
TRF *e*pP pP 21 13 59.9 -0.1
TRF *e*PP PP 21 16 59.0 +0.8
LANF Langenberg 90.61 41 *e*P **P 21 13 21.5 -0.1**
WIT Witteveen 90.66 37⇑ *e*P **P 21 13 23.0 +1.2**
comp=Z,398nm,1.4s,mb6.3
BUG Bochum--Univer 90.75 38 *e*P **P 21 13 22.5 +0.3**
BUG *e*pP pP 21 13 58.0 -3.1
BFO Black Forest 90.84 41 *e*P **P 21 13 22.3 -0.4**
BFO *e*pP pP 21 13 58.2 -3.4
BFO *e*SKSac SKSac 21 23 38.7 -1.3
BFO Black Forest 90.84 41 *e*P **P 21 13 22.3 -0.4**
BFO *e*pP pP 21 13 58.2 -3.4
BFO *e*SKSac SKSac 21 23 38.7 -1.3
BFO Black Forest 90.84 41 *e*P **P 21 13 22.3 -0.4**
BFO *e**PP pP 21 13 58.2 -3.4
BFO *e* 21 23 38.7
RSO Redoubt South 90.93 331 *e*P **P 21 13 22.3 -0.5**
RSO *e*pP pP 21 14 02.0 +0.3
BPAW Bear Paw Mtn. 91.05 335 ↓*i*P **P 21 13 22.1 -1.2**
comp=Z,746nm,1.2s,mb6.6
BPAW *e*pP pP 21 14 01.7 -0.5
SPAK Spaichingen-Ko 91.10 42 *e*P **P 21 13 23.5 -0.4**
TUE Stuetta 91.19 43⇑ *e*P **P 21 13 24.9 +0.6**
comp=Z,40nm,0.8s,mb5.5
TUE *e*pP pP 21 14 02.9 -0.4
TUE *e*PP PP 21 17 03.5 0.0
IBBN Ibbenburen 91.21 37 *e*P **P 21 13 26.7 +2.4**
IBBN *e*pP pP 21 14 00.4 -2.9
SYO Syowa Base 91.23 161 ↓*e*P **P 21 13 23.0 -1.1**
SYO Syowa Base 91.23 161 ↓*i*P **P 21 13 25.2 +1.1**
TNS Taunus Mts 91.25 40 *e*P **P 21 13 24.9 +0.3**
TNS *e*pP pP 21 14 00.5 -3.0
TNS *e*SKSac SKSac 21 23 43.5 +1.2
TNS Taunus Mts 91.25 40 *e*P **P 21 13 24.9 +0.3**
TNS *e*pP pP 21 14 00.5 -3.0
TNS *e*SKSac SKSac 21 23 43.5 +1.2
TNS Taunus Mts 91.25 40 *e*P **P 21 13 24.9 +0.3**
TNS *e**PP pP 21 14 00.5 -3.0
TNS *e* 21 23 43.5
PPLA Purkeypile 91.26 333 ↓*i*P **P 21 13 23.2 -1.1**
comp=Z,216nm,0.8s,mb6.2
PPLA *e*pP pP 21 14 02.2 -1.0
PPLA *e*PP PP 21 17 03.8 +0.2
STU Stuttgart 91.48 41 *e*P **P 21 13 25.7 +0.1**
STU *e*pP pP 21 14 01.2 -3.4
STU *e*SKSac SKSac 21 23 43.7 +0.1
STU Stuttgart 91.48 41 *e*P **P 21 13 26.0 +0.3**
STU *e*PP pP 21 14 05.2 +0.6
STU Stuttgart 91.48 41 *e*P **P 21 13 26.0 +0.4**
STU *e* pP 21 14 05.2 +0.6
VLC Villacollemand 91.53 46⇑ *e*P **P 21 13 25.3 -0.7**
comp=Z,42nm,1.0s,mb5.4
VLC *e*pP pP 21 14 04.0 -0.9
VLC *e*PP PP 21 17 05.8 -0.5
BER Bergen 91.55 29 *e*P **P 21 13 29.3 +3.7**

BER ePP pP 21 14 04.0 -0.6
BER eSKS 21 23 44.2
COLD Coldfoot 91.58 338 ⇓*i*P **P 21 13 25.4 -0.3**
comp=Z,615nm,1.8s,mb6.3
COLD ePP pP 21 14 04.8 +0.2
COLD ePP PP 21 17 07.0 +0.9
DAVOX Davos/Dischmat 91.60 43 P **P 21 13 26.9 +0.6**
comp=Z,61nm,0.8s,mb5.7,baz=257,slow=3.6,SNR=71
DAVOX pP pP 21 14 06.9 +1.7
comp=Z,30nm,0.8s,baz=335,slow=5.8,SNR=2.8
HLG Helgoland 91.64 36 *e*P **P 21 13 29.2 +2.9**
FOO Floro 91.68 28 *e*P **P 21 13 29.2 +3.0**
FOO epP pP 21 14 04.9 -0.3
FOO eSKS 21 23 44.1
DAVA Damuels 91.69 43⇓*i*P **P 21 13 26.3 -0.3**
comp=Z,48nm,0.8s,mb5.6,SNR=23
FETA Feichten 92.22 43⇓*i*P **P 21 13 28.4 -0.7**
comp=Z,41nm,0.9s,mb5.5,SNR=39
RETA Reutte 92.31 43⇓*i*P **P 21 13 29.2 -0.3**
comp=Z,32nm,0.9s,mb5.3,SNR=15
UBBA Unterbreizbach 92.33 39 *e*P **P 21 13 29.9 +0.4**
UBBA epP pP 21 14 05.6 -2.9
UBBA eSKSac SKSac 21 23 50.9 +2.6
SVW2 Sparrevohn 92.42 331 *e*P **P 21 13 27.8 -1.9**
comp=Z,184nm,2.1s,mb5.7
MOTA Moosalm 92.52 43⇑*i*P **P 21 13 29.8 -0.7**
comp=Z,62nm,0.8s,mb5.8,SNR=41
NRDL Niedersach Rie 92.67 38 *e*P **P 21 13 32.6 +1.6**
NRDL epP pP 21 14 06.5 -3.5
NRDL eSKSac SKSac 21 23 51.3 +1.2
CLZ Clausthal 92.72 38 *e*P **P 21 13 32.0 +0.7**
CLZ epP pP 21 14 07.7 -2.6
CLZ Clausthal 92.72 38 *e*P **P 21 13 32.0 +0.7**
CLZ epP pP 21 14 07.7 -2.6
CLZ Clausthal 92.72 38 *e*P **P 21 13 32.0 +0.7**
CLZ e*PP pP 21 14 07.7 -2.6
FUR Furstenfeldbru 92.75 42 *e*P **P 21 13 31.9 +0.4**
FUR epP pP 21 14 07.5 -3.0
FUR eSKSac SKSac 21 23 52.0 +1.2
FUR Furstenfeldbru 92.75 42 *e*P **P 21 13 31.9 +0.4**
FUR epP pP 21 14 07.5 -3.0
FUR eSKSac SKSac 21 23 52.0 +1.2
FUR Furstenfeldbru 92.75 42 *e*P **P 21 13 31.9 +0.4**
FUR e*PP pP 21 14 07.5 -3.0
FUR *e* 21 23 52.0
MUD Monsted U'grnd 92.77 34 *i*P **P 21 13 32.8 +1.4**
MUD pmax pmax
comp=Z,26nm,1.0s,mb5.3
MUD Monsted U'grnd 92.77 34 *i*P **P 21 13 32.8 +1.4**
comp=Z,26nm,1.0s,mb5.3
MUD Monsted U'grnd 92.77 34 *i*P **P** 21 14 11.3 +0.9
MUD *i*S SKSac 21 23 55.1 +4.6
MUD
comp=Z,1μm,22.0s
WATA Walderalm 92.83 43⇓*i*P **P 21 13 31.9 0.0**
comp=Z,22nm,0.8s,mb5.3,SNR=8.9
WTTA Wattenberg 92.86 43⇓*i*P **P 21 13 32.0 -0.1**
comp=Z,72nm,0.9s,mb5.8,SNR=18
GRFO Grafenberg 92.94 40 *e*P **P 21 13 32.6 +0.3**
comp=Z,36nm,1.3s,mb5.3
GRFO epP pP 21 14 11.0 -0.3
GRFO ePP PP 21 17 16.7 -0.5
GRFO Grafenberg 92.94 40 *e*P **P 21 13 32.6 +0.3**
GRFO e*PP pP 21 14 11.0 -0.3
GRFO *e* 21 17 16.7
GRFO pmax pmax
comp=Z,36nm,1.3s,mb5.3
GRA1 Grafenberg Arr 92.94 40 *e*P **P 21 13 33.1 +0.7**
GRA1 epP pP 21 14 08.5 -2.8
GRA1 eSKSac SKSac 21 23 55.2 +3.5
GRA1 ePKKP PKKPbc 21 30 42.4 -1.6
GRA1 eP'P' 21 38 46.9
GRF Grafenberg Arr 92.94 40 *e*P **P 21 13 33.1 +0.7**
GRF epP pP 21 14 08.5 -2.8
GRF eSKSac SKSac 21 23 55.2 +3.5
GRF ePKKP PKKPbc 21 30 42.4 -1.6
GRF ePKPPKP 21 38 46.9
GRF Grafenberg Arr 92.94 40 *e*P **P 21 13 33.1 +0.7**
GRF epP pP 21 14 08.5 -2.8
GRF eSKS 21 23 55.2
GRF ePKKP PKKPbc 21 30 42.4 -1.6
GRF Grafenberg Arr 92.94 40 *e*P **P 21 13 33.1 +0.7**
GRF e*PP pP 21 14 08.5 -2.8
GRF *e* 21 23 55.2
GRF *e* 21 30 42.4
GRF Grafenberg Arr 92.94 40 *e*P **P 21 13 33.1 +0.7**
GRF e*PP pP 21 14 08.5 -2.8
GRF *e* 21 23 55.2
GRF *e* 21 30 42.4
TTA Tatalina 92.97 333 *e*P **P 21 13 30.8 -1.4**
BSEG Bad Segeberg 93.01 36 *e*P **P 21 13 33.2 +0.6**
BSEG epP pP 21 14 08.9 -2.7
BSEG Bad Segeberg 93.01 36 *e*P **P 21 13 33.2 +0.6**
BSEG epP pP 21 14 08.9 -2.7
BSEG Bad Segeberg 93.01 36 *e*P **P 21 13 33.2 +0.6**
BSEG e*PP pP 21 14 08.9 -2.7
MOL Molde 93.03 27 eSKS 21 23 48.0
MOX Moxa 93.32 40 *e*P **P 21 13 34.7 +0.6**
comp=Z,61nm,1.8s,mb5.4
MOX *e* pP 21 14 12.1 -1.0
MOX ePP PP 21 17 33.0 +13
MOX eS SKSac 21 23 55.0 +1.2
MOX eSS SS 21 30 57.0 +8.8
MOX
comp=Z,2μm,17.0s
MOX Moxa 93.32 40 *e*P **P 21 13 34.8 +0.7**
MOX epP pP 21 14 10.4 -2.7
MOX Moxa 93.32 40 *e*P **P 21 13 34.7 +0.6**
comp=Z,61nm,1.8s,mb5.4
MOX *e* pP 21 14 12.1 -1.0
MOX ePP PP 21 17 33.0 +13
MOX eS SKSac 21 23 55.0 +1.2
MOX eSS SS 21 30 57.0 +8.8
MOX LR LR
comp=Z,2μm,17.0s
MOX Moxa 93.32 40 *e*P **P 21 13 34.7 +0.6**
MOX *e* pP 21 14 12.1 -1.0
MOX eS SKSac 21 23 55.0 +1.2
MOX eSS SS 21 30 57.0 +8.8
MOX pmax pmax
comp=Z,61nm,1.8s,mb5.4
MOX MLR MLR
comp=Z,2μm,17.0s
ABTA Abfaltersbach 93.39 43⇓*i*P **P 21 13 34.2 -0.3**
comp=Z,58nm,1.0s,mb5.7,SNR=29
AQU L'Aquila 93.46 48 *e*P **P 21 13 35.1 +0.1**
comp=Z,29nm,0.8s,mb5.5
AQU epP pP 21 14 13.8 -0.1
AQU ePP PP 21 17 17.5 -4.0
AQU L'Aquila 93.46 48 *e*P **P 21 13 35.1 +0.2**
AQU e*PP pP 21 14 13.8 -0.1
AQU *e* 21 17 17.5
AQU pmax pmax
comp=Z,29nm,0.8s,mb5.5
AQU L'Aquila 93.46 48⇓*i*P **P 21 13 35.2 +0.3**
NEUB Neuenburg 93.50 39 *e*P **P 21 13 35.6 +0.7**
NEUB epP pP 21 14 11.2 -2.7
KONO Kongsberg 93.51 30 *e*P **P 21 13 37.5 +2.7**
KONO epP pP 21 14 12.8 -0.9
KONO eSKS 21 23 53.8
KONO Kongsberg 93.51 30 *e*P **P 21 13 34.4 -0.3**
WDD Wield Dalam 93.54 54 *e*P **P 21 13 36.0 +0.5**
comp=Z,84nm,1.0s,mb5.8
WDD epP pP 21 14 09.5 -5.0
ROTZ Rotzenmuhle 93.58 40 *e*P **P 21 13 36.3 +1.0**
ROTZ epP pP 21 14 11.8 -2.5
ROTZ eSKSac SKSac 21 23 57.8 +2.6
VAE Valguarnera 93.64 53 P **P 21 13 36.7 +0.8**
comp=Z,19nm,0.8s,mb5.3,baz=333,slow=3.5,SNR=11
RJOB Jochberg 93.71 43 *e*P **P 21 13 36.1 +0.2**
RJOB epP pP 21 14 12.0 -2.9
RJOB eSKSac SKSac 21 23 56.7 +0.7
WERD Werda 93.73 40 *e*P **P 21 13 36.8 +0.8**
WERD epP pP 21 14 12.4 -2.6
GUNZ Gunzen 93.74 40 *e*P **P 21 13 37.1 +1.1**
GUNZ epP pP 21 14 12.6 -2.4
WERN Wernitzgruen 93.76 40 *e*P **P 21 13 37.0 +0.9**
WERN epP pP 21 14 12.9 -2.2
NKC Novy Kostel 93.80 40 *e*P **P 21 13 37.2 +0.9**
NKC e*PP pP 21 14 13.3 -2.0
NKC *e* 21 21 01.2
NKC eSS SS 21 31 01.2 +6.2
NKC Novy Kostel 93.80 40 *e*P **P 21 13 37.2 +0.9**
NKC epP pP 21 14 13.3 -2.0
NKC ePP PP 21 17 16.7 -7.1
NKC eSKS 21 24 01.2
NKC eSS SS 21 31 01.2 +6.2
NKC *ex* x 21 39 13.5
NKC *ex* x 21 45 11.6
WET Wettzell 93.94 41 *e*P **P 21 13 37.6 +0.6**
WET epP pP 21 14 13.2 -2.7
WET Wettzell 93.94 41 *e*P **P 21 13 37.6 +0.6**
WET epP pP 21 14 13.2 -2.7
WET Wettzell 93.94 41 *e*P **P 21 13 37.6 +0.6**
WET e*PP pP 21 14 13.2 -2.7
KBA Koelnbreinsper 94.00 43⇑*i*P **P 21 13 36.5 -0.8**
comp=Z,23nm,0.7s,mb5.4,SNR=21
SDPT Sand Point 94.03 325 *e*P **P 21 13 36.8 -0.5**
comp=Z,208nm,0.8s,mb6.3
SDPT epP pP 21 14 16.9 +0.7
OSL Oslo 94.11 30 *e*P **P 21 13 38.7 +1.2**
TRI Trieste 94.12 45 *e*P **P 21 13 37.9 0.0**
MYKA Terra Mystica 94.14 44⇓*i*P **P 21 13 37.5 -0.5**
comp=Z,25nm,0.8s,mb5.4
VOY Vojsko 94.25 44 *e*P **P 21 13 39.1 +0.6**
VOY *e* 21 13 41.1
VOY *e* pP 21 14 15.7 -1.8
CLL Collm 94.28 39 *e*P **P 21 13 38.8 +0.3**
CLL epP pP 21 14 14.8 -2.7
CLL Collm 94.28 39⇑*i*P **P 21 13 39.1 +0.6**
comp=Z,23nm,0.9s,mb5.3
CLL *i* pP pP 21 14 16.4 -1.1
CLL eSKS 21 24 02.0
CLL eS S 21 24 35.0 -1.6
CLL *i* PKKP PKKPbc 21 30 37.7 -2.8
CLL Collm 94.28 39⇑*i*P **P 21 13 39.1 +0.6**
CLL *i* *PP pP 21 14 16.4 -1.1
CLL *e* 21 24 02.0
CLL eS S 21 24 35.0 -1.6
CLL pmax pmax
comp=Z,23nm,0.9s,mb5.3
CLL pmax pmax
comp=Z,14nm,1.5s,mb4.9
CLL Collm 94.28 39⇑*i*P **P 21 13 39.1 +0.6**
comp=Z,23nm,0.9s,mb5.3
CLL *e* 21 13 46.0
CLL *i* pP pP 21 14 16.4 -1.1
CLL *e* 21 14 38.0
CLL *e* 21 17 02.0
CLL ePP PP 21 17 28.0 +0.4
CLL epPP 21 18 06.0
CLL eSKSac SKSac 21 24 02.0 +3.1
CLL eS S 21 24 35.0 -1.6
CLL e(SP) 21 25 42.0
CLL ePPS 21 26 54.0
CLL *i* PKKPdf PKKPdf 21 30 37.7 -1.8
comp=Z,14nm,1.5s
CLL eSS SS 21 30 59.0 -2.8
CLL epPKKPdf 21 31 15.0
comp=Z,44nm,2.4s
CLL *e* 21 32 20.0
CLL eSSS 21 34 42.0
CLL *e* 21 35 54.0
CLL *e* 21 37 06.0
SKDS Skadanscina 94.28 45 *e*P **P 21 13 38.9 +0.3**
SKDS *i*S SKSac 21 23 59.4 +0.1
SKDS eSKSac S 21 24 34.2 -2.7
KHC Kasperske Hory 94.39 41 *e*P **P 21 13 39.3 +0.3**
comp=Z,7.6nm,0.9s,mb4.8
KHC epP pP 21 14 17.2 -0.8
KHC ePP PP 21 17 25.7 -2.8
KHC Kasperske Hory 94.39 41 *e*P **P 21 13 39.9 +0.9**
KHC e*PP pP 21 14 17.5 -0.5
KHC *e* 21 17 25.8
KHC *e* 21 24 01.5
KHC eSS SS 21 31 08.5 +5.0
KHC Kasperske Hory 94.39 41 *e*P **P 21 13 39.9 +0.9**
KHC epP pP 21 14 17.5 -0.5
KHC ePP PP 21 17 25.8 -2.7
KHC eSKS 21 24 01.5
KHC eSS SS 21 31 08.5 +5.0
KHC *ex* x 21 39 03.2
KHC *ex* x 21 45 41.6
GEC2 GERESS Array S 94.44 41 *e*P **P 21 13 39.5 +0.2**
GEC2 epP pP 21 14 15.2 -3.1
GEC2 eSKSac SKSac 21 24 01.6 +1.7
GEC2 GERESS Array S 94.44 41 *e*P **P 21 13 39.5 +0.2**
GEC2 epP pP 21 14 15.2 -3.1
GEC2 eSKSac SKSac 21 24 01.6 +1.7
GEC2 GERESS Array S 94.44 41 *e*P **P 21 13 39.5 +0.2**
GEC2 e*PP pP 21 14 15.2 -3.1
GEC2 *e* 21 24 01.6
COP Copenhagen 94.47 35 *e*P **P 21 13 41.0 +1.8**
COP Copenhagen 94.47 35 *i*P **P 21 13 41.0 +1.8**
COP Copenhagen 94.47 35 *i*P pP 21 14 18.3 +0.1
COP *i*S SKSac 21 24 04.9 +5.1
COP
comp=Z,740nm,18.0s
NOA NORSAR Array B 94.51 29 P **P 21 13 39.9 +0.6**
NOA pP pP 21 14 18.3 0.0
NOA S SKSac 21 23 54.1 -5.6
NOA PKKPbc PKKPbc 21 30 37.4 -2.9
NOA NORSAR Array B 94.51 29 P **P 21 13 39.9 +0.6**
comp=Z,29nm,0.8s,mb5.6,baz=259,slow=4.5,SNR=49
NOA pP pP 21 14 18.3 0.0
comp=Z,16nm,1.0s,baz=260,slow=4.6,SNR=3.6
NOA S SKSac 21 23 54.1 -5.6
comp=Z,0.7nm,0.9s,baz=285,slow=0.6,SNR=2.4
NOA PKKPbc PKKPbc 21 30 37.4 -2.9
comp=Z,4.5nm,0.6s,baz=257,slow=2.9,SNR=20
NOA NORSAR Array B 94.51 29 P **P 21 13 39.9 +0.6**
NOA *PP pP 21 14 18.3 0.0
NOA S SKSac 21 23 54.1 -5.7
LJU Ljubljana 94.69 44 *i*P **P 21 13 41.3 +0.8**
LJU *i*S SKSac 21 24 01.8 +0.4
LJU eSKSac S 21 24 36.5 -3.9
MOA Molln 94.70 43⇓*i*P **P 21 13 40.1 -0.4**
comp=Z,26nm,1.1s,mb5.4,SNR=11
BOSA Boshof 94.74 120 P **P 21 13 41.6 +0.4**
comp=Z,71nm,0.9s,mb5.9,baz=263,slow=3.6,SNR=33
BOSA PP PP 21 17 36.6 +5.0
comp=Z,8.4nm,0.8s,baz=255,slow=6.9,SNR=3.6
BOSA PKKPbc PKKPbc 21 30 36.3 -1.8
comp=Z,6.0nm,0.6s,baz=113,slow=4.3,SNR=16
BOSA Boshof 94.74 120 P **P 21 13 41.6 +0.4**
BOSA 21 17 36.6
OBKA Obir 94.75 44⇓*i*PcP PcP 21 13 40.8 -0.3
comp=Z,27nm,0.7s,SNR=14
NVLJ Novalja 94.78 46 P **P 21 13 43.4 +2.5**
BRG Berggiesshubel 94.82 39 *e*P **P 21 13 41.6 +0.6**
BRG epP pP 21 14 17.4 -2.5
BRG eS S 21 24 40.9 -0.4
BRG Berggiesshubel 94.82 39 *e*P **P 21 13 41.8 +0.8**
comp=Z,25nm,1.1s,mb5.3
BRG *e* 21 13 50.2
comp=Z,27nm,1.2s
BRG epP pP 21 14 18.9 -1.1
comp=Z,164nm,2.4s
BRG *e* pP 21 14 21.7 +1.8
comp=Z,71nm,2.1s
BRG PP PP 21 17 33.0 +1.2
BRG SKS 21 24 04.0
BRG PS PS 21 25 51.0 -27
BRG ePKKP PKKPbc 21 30 37.7 -1.3
comp=Z,7.3nm,1.2s
BRG *i* 21 31 12.4
comp=Z,12nm,1.3s
BRG SS SS 21 31 15.0 +5.6
BRG ePKPPKP 21 38 45.7
comp=Z,16nm,1.7s
BRG
comp=N,506nm,16.2s
BRG
comp=E,1μm,18.7s
BRG
comp=Z,1μm,15.3s
BRG Berggiesshubel 94.82 39 *e*P **P 21 13 41.8 +0.8**
BRG *e**PP pP 21 14 18.9 -1.0
BRG pmax pmax
comp=Z,15nm,1.1s,mb5.1
BRG pmax pmax
comp=Z,98nm,2.4s,mb5.6
RGN Rugen 94.84 36 *e*P **P 21 13 42.3 +1.3**
RGN eSKSac SKSac 21 24 04.8 +3.0
VISS Visnje 94.88 45 *i*P **P 21 13 43.9 +2.5**
VISS eS SKSac 21 24 02.5 +0.1
RUE Ruedersdorf 94.89 38 *e*P **P 21 13 41.5 +0.3**
RUE epP pP 21 14 17.4 -2.8
RUE Ruedersdorf 94.89 38 *e*P **P 21 13 41.3 +0.1**
CEL Celeste 94.89 52 *e*P **P 21 13 39.8 -1.8**
comp=Z,17nm,0.8s,mb5.3
CEL epP pP 21 14 20.5 -0.1
CUC Castrocucco 95.01 50 *e*P **P 21 13 42.2 +0.1**
comp=Z,16nm,0.8s,mb5.3
CUC epP pP 21 14 20.4 -0.6
CUC eSP SP 21 14 36.9 -0.3
CUC ePP PP 21 17 33.0 -0.5
PRA Prague 95.05 40 P **P 21 13 44.0 +2.0**
PRA pP pP 21 14 23.0 +2.0
PRA PP PP 21 17 33.0 -0.6
PRA SKS 21 24 07.0
PRA SS SS 21 31 20.0 +7.3
SOKA Soboth 95.10 44⇓*i*P **P 21 13 41.9 -0.4**
comp=Z,14nm,0.8s,mb5.2
PRU Pruhonice 95.11 40 *e*P **P 21 13 44.0 +1.7**
PRU *e**PP pP 21 14 22.5 +1.2
PRU *e* 21 17 32.9
PRU *e* 21 24 06.8
PRU eSS SS 21 31 19.3 +5.7
PRU Pruhonice 95.11 40 *e*P **P 21 13 44.0 +1.7**
PRU epP pP 21 14 22.5 +1.2
PRU ePP PP 21 17 32.9 -1.1
PRU eSKS 21 24 06.8
PRU eSS SS 21 31 19.3 +5.7
PRU *ex* x 21 39 31.3
PRU *ex* x 21 45 57.0
BOJS Bojanci 95.14 45 *i*P **P 21 13 43.3 +0.7**
BOJS eS SKSac 21 24 03.5 -0.3
PERS Pernice 95.16 44 *i*P **P 21 13 44.5 +1.9**
PERS eS SKSac 21 24 03.1 -0.8
PVCC Panska Ves 95.18 40 *e*P **P 21 13 43.7 +1.1**
PVCC e*PP pP 21 14 22.0 +0.4
PVCC *e* 21 24 05.9
PVCC eSS SS 21 31 24.6 +10
PVCC Panska Ves 95.18 40 *e*P **P 21 13 43.7 +1.1**
PVCC epP pP 21 14 22.0 +0.4
PVCC *ex* x 21 17 04.0
PVCC eSKS 21 24 05.9
PVCC eSS SS 21 31 24.6 +10
PVCC *ex* x 21 39 38.3
PVCC *ex* x 21 45 56.1
NSS Namsos 95.28 26 *e*P **P 21 13 43.7 +0.9**
NSS epP pP 21 14 21.6 -0.1
NSS eSKS 21 24 04.1
AFI Afiamalu 95.31 255 *e*P **P 21 13 43.7 -0.3**
ARSA Arzberg 95.49 43⇓*i*P **P 21 13 43.4 -0.7**
comp=Z,40nm,0.8s,mb5.7,SNR=25
HFS Hagfors 95.62 30 P **P 21 13 43.9 -0.5**
comp=Z,32nm,0.8s,mb5.7,baz=225,slow=3.6,SNR=35
HFS pP pP 21 14 22.8 -0.6
comp=Z,24nm,0.9s,baz=216,slow=1.3,SNR=4.0
HFS PKKPbc PKKPbc 21 30 33.9 -3.3
comp=Z,3.2nm,0.6s,baz=142,slow=3.6,SNR=10.0
HFS Hagfors 95.62 30 P **P 21 13 43.9 -0.5**
HFS *PP pP 21 14 22.8 -0.6
TIP Timpagrande 95.65 51 *e*P **P 21 13 43.8 -1.3**
comp=Z,21nm,0.6s,mb5.7
TIP epP pP 21 14 23.3 -0.7
TREC Trest 95.65 41 *e*P **P 21 13 45.5 +0.7**
TREC e*PP pP 21 14 23.6 -0.2
TREC *e* 21 24 08.8
TREC eSS SS 21 31 28.4 +7.0
TREC Trest 95.65 41 *e*P **P 21 13 45.5 +0.7**
TREC epP pP 21 14 23.6 -0.2
TREC eSKS 21 24 08.8
TREC eSS SS 21 31 28.4 +7.0
TREC *ex* x 21 39 51.8
TREC *ex* x 21 46 26.1
FALS False Pass 95.66 324 *e*P **P 21 13 44.3 -0.3**
comp=Z,100nm,0.7s,mb6.3
FALS epP pP 21 14 23.5 -0.2
LBTB Lobatse 95.73 116 P **P 21 13 45.6 -0.2**
comp=Z,53nm,0.8s,mb5.9,baz=271,slow=4.9,SNR=59
LBTB PP PP 21 17 37.0 -2.5
comp=Z,14nm,0.8s,baz=266,slow=6.6,SNR=6.1
LBTB PKKPbc PKKPbc 21 30 34.0 -1.4
comp=Z,4.5nm,0.5s,baz=125,slow=3.3,SNR=14
LBTB Lobatse 95.73 116 P **P 21 13 45.6 -0.2**
LBTB 21 17 37.0
CONA Conrad Observa 95.78 43⇑*i*P **P 21 13 45.2 -0.2**
comp=Z,30nm,0.9s,mb5.6,SNR=26
BSD Bornholm Skovb 95.81 35 *e*P **P 21 13 45.5 +0.1**
BSD Bornholm Skovb 95.81 35 *i*P **P 21 13 45.5 +0.1**
BSD Bornholm Skovb 95.81 35 *i*P pP 21 14 24.7 +0.3
BSD *i*S SKSac 21 24 11.5 +4.6
BSD
comp=Z,1μm,17.0s
UPC Upice 96.09 40 *e*P **P 21 13 47.6 +0.8**
UPC e*PP pP 21 14 25.5 -0.3
UPC Upice 96.09 40 *e*P **P 21 13 47.6 +0.8**
UPC epP pP 21 14 25.5 -0.3
SOP Sopron 96.23 43⇑*e*P **P 21 13 48.1 +0.6**
DPC Dobruska-Polom 96.28 40 *e*P **P 21 13 48.2 +0.6**
DPC e*PP pP 21 14 26.5 -0.2
DPC *e* 21 24 12.8
DPC eSS SS 21 31 39.4 +9.3
DPC Dobruska-Polom 96.28 40 *e*P **P 21 13 48.2 +0.6**
DPC epP pP 21 14 26.5 -0.2
DPC *ex* x 21 17 26.6
DPC eSKS 21 24 12.8
DPC eSS SS 21 31 39.4 +9.3
DPC *ex* x 21 39 52.5
DPC *ex* x 21 46 30.5
VRAC Vranov 96.38 41 ⇑P **P 21 13 47.8 -0.2**
VRAC Vranov 96.38 41 P **P 21 13 48.0 0.0**
comp=Z,20nm,0.9s,mb5.4,baz=267,slow=5.1,SNR=20
VRAC pP pP 21 14 26.3 -0.9
comp=Z,7.8nm,0.9s,baz=243,slow=10.0,SNR=1.1
VRAC PP PP 21 17 42.5 -1.4
comp=Z,6.0nm,0.9s,baz=305,slow=3.7,SNR=4.4
VRAC Vranov 96.38 41 P **P 21 13 48.0 -0.1**
VRAC *PP pP 21 14 26.3 -0.8
VRAC 21 17 42.5
VRAC pmax pmax
comp=Z,21nm,0.9s
VRAC pmax pmax
comp=Z,8.0nm,1.0s
VRAC pmax pmax
comp=Z,6.0nm,1.0s
VRAC Vranov 96.38 41⇑*i*P **P 21 13 47.8 -0.3**
ZST Bratislava 96.63 42 *e*P **P 21 13 49.9 +0.6**
comp=Z,35nm,0.9s,mb5.7
ZST ePP pP 21 14 28.8 +0.5
ZST ePP PP 21 17 45.5 -0.4
ZST eS SKSac 21 24 10.4 -1.1
ZST *e* 21 24 53.5
ZST LR LR
comp=Z,900nm,18.1s
ZST Bratislava 96.63 42 *e*P **P 21 13 49.9 +0.6**
ZST *e* pP 21 14 28.8 +0.5
ZST *e* 21 17 45.5
ZST eS SKSac 21 24 10.4 -1.1
ZST *e* 21 24 53.5
ZST pmax pmax
comp=Z,35nm,0.9s,mb5.7
ZST MLR MLR
comp=Z,900nm,18.1s
ZST Bratislava 96.63 42 *e*P **P 21 13 49.9 +0.6**
ZST epP pP 21 14 28.8 +0.5
ZST ePP PP 21 17 45.5 -0.4
ZST Bratislava 96.63 42⇑*e*SKSp SKSac 21 24 10.4 -1.1
ZST *e* 21 24 53.5
STON Ston 96.67 48 P **P 21 13 48.3 -1.2**
KBS Kingsbay 96.76 11 *e*P **P 21 13 50.3 +1.1**
KBS epP pP 21 14 28.9 +0.6
KBS eSKS 21 24 13.2
KBS Kingsbay 96.76 11 *e*P **P 21 13 49.2 0.0**
comp=Z,10.0nm,0.9s,mb5.2
KBS epP pP 21 14 28.0 -0.3
KBS Kingsbay 96.76 11 *e*P **P 21 13 49.2 0.0**
KBS *e**PP pP 21 14 28.0 -0.3
KBS pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
MODS Modra-Piesok 96.76 42 *e*P **P 21 13 50.7 +0.9**
MODS Modra-Piesok 96.76 42 PDIF **P 21 13 50.7 +0.9**
AKUT Akutan 96.97 324 *e*P **P 21 13 49.7 -0.9**
AKUT epP pP 21 14 29.5 -0.2

MORC **Moravsky Berou** **97.03** **41**‖ *e*P **P** **21 13 51.0 0.0**
comp=Z,23nm,0.9s,mb5.5
MORC *e*pP pP 21 14 30.2 +0.1
MORC *e*PP PP 21 17 48.3 -0.5
MORC Moravsky Berou 97.03 41‖ *e*P **P** **21 13 51.0 0.0**
MORC *e**PP pP 21 14 30.2 +0.1
MORC *e* 21 17 48.3
MORC pmax pmax
comp=Z,23nm,0.9s,mb5.5
MORC Moravsky Berou 97.03 41 ‖ *i*P **P** **21 13 52.2 +1.2**
GKP Gorka Klasztor 97.04 37 *e*P **P** **21 13 52.9 +1.9**
GKP *e*SKS 21 24 15.1
UNV Unalaska Valle 97.39 323 *e*P **P** **21 13 53.1 +0.5**
comp=Z,55nm,1.2s,mb5.8
UNV *e*pP pP 21 14 31.0 -0.6
UNV *e*PP PP 21 17 51.2 -0.3
OKC Ostrava-Krasne 97.42 41 *e*P **P** **21 13 54.5 +1.7**
OKC *e**PP pP 21 14 31.9 +0.1
OKC *e* 21 24 19.2
OKC *e*SS SS 21 31 55.4 +9.2
OKC Ostrava-Krasne 97.42 41 *e*P **P** **21 13 54.5 +1.7**
OKC *e*pP pP 21 14 31.9 +0.1
OKC *ex* x 21 17 33.4
OKC *e*SKS 21 24 19.2
OKC *e*SS SS 21 31 55.4 +9.2
OKC *ex* x 21 40 11.4
OKC *ex* x 21 47 42.9
KOLL Kolacno 97.52 42 *e*P **P** **21 13 53.9 +0.6**
KOLL Kolacno 97.52 42 PDIF **P** **21 13 53.9 +0.6**
PKSM Moragy 97.56 44 ‖ **P** **21 13 53.2 -0.3**
PKSM Moragy 97.56 44 ‖ *i*P **P** **21 13 53.2 -0.3**
SPITS Spitsbergen Ar 97.60 12 P **P** **21 13 52.7 -0.4**
comp=Z,5.0nm,0.6s,mb5.1,baz=225,slow=8.0,SNR=10
SPITS pP pP 21 14 31.3 -0.8
comp=Z,5.3nm,0.6s,baz=208,slow=3.7,SNR=2.7
VYHS Vyhne 97.80 42 *e*P **P** **21 13 55.5 +1.0**
comp=Z,15nm,0.9s,mb5.4
VYHS *e*PP pP 21 14 33.2 -0.4
VYHS *e*PP PP 21 17 57.4 +2.6
VYHS *e*S SKSac 21 24 19.5 +2.0
VYHS *e* 21 24 45.7
VYHS *e* 21 30 29.6
VYHS *e*SS SS 21 31 54.8 +3.1
VYHS LR LR
comp=Z,2µm,38.2s
VYHS Vyhne 97.80 42 *e*P **P** **21 13 55.5 +1.0**
VYHS *e* pP 21 14 33.2 -0.4
VYHS *e* 21 17 57.4
VYHS *e*S SKSac 21 24 19.5 +2.0
VYHS *e*SS SS 21 31 54.8 +3.1
VYHS pmax pmax
comp=Z,15nm,0.9s,mb5.4
VYHS MLR MLR
comp=Z,2µm,38.2s
VYHS Vyhne 97.80 42 *e*P **P** **21 13 55.5 +1.0**
VYHS *e*pP pP 21 14 33.2 -0.4
VYHS *e*PP PP 21 17 57.4 +2.6
VYHS Vyhne 97.80 42↑ *e*SKSp 21 24 19.5
VYHS *e* 21 24 45.7
VYHS *e* 21 30 29.6
VYHS *e*SS SS 21 31 54.8 +3.1
BUD Budapest 97.88 43 *e*P **P** **21 13 53.9 -1.0**
TIR Tirane 98.18 49 *e*P **P** **21 14 00.8 +4.3**
comp=Z,26nm,0.8s,mb5.7
TIR Tirane 98.18 49 *e*P **P** **21 14 00.8 +4.4**
TIR pmax pmax
comp=Z,26nm,0.8s,mb5.7
TRO Tromso 98.28 21 *e*P **P** **21 13 56.7 +0.5**
TRO *e*pP pP 21 14 34.8 -0.6
TRO *e*SKS 21 24 19.3
TRO *e*SS SS 21 31 55.3 -2.0
BJO Bjornoya 98.29 16 *e*pP pP 21 14 32.9 -2.4
BJO *e*SKS 21 24 18.4
BJO *e* 21 26 34.1
BJO *e*SS SS 21 31 56.0 -1.1
PSZ Piszkesteto 98.49 43 *e*P **P** **21 13 58.3 +0.6**
comp=Z,13nm,0.9s,mb5.3
PSZ Piszkesteto 98.49 43 ↑ P **P** **21 13 59.1 +1.5**
PSZ Piszkesteto 98.49 43 ‖ *i*P **P** **21 13 59.1 +1.5**
PSZ Piszkesteto 98.49 43‖ *e*P **P** **21 13 59.3 +1.7**
OJC Ojcow 98.50 40 *e*Pdiff **P** **21 13 57.8 +0.2**
OJC *e* pP 21 14 34.7 -2.0
OJC *e*SKSac SKSac 21 24 20.5 -0.5
OJC *e*sS sS 21 26 22.5 +1.2
OJC *e*SS SS 21 32 02.6 +1.3
OJC L 22 02 02.4
comp=Z,1.6nm,18.3s
OJC Ojcow 98.50 40 *e*P **P** **21 13 57.8 +0.2**
OJC *e* pP 21 14 34.7 -2.0
OJC *e* 21 24 20.5
OJC *e*SS SS 21 32 02.6 +1.3
OJC MLR MLR
comp=Z,2µm,18.3s
VLS Valsamata 98.57 53 *e*P **P** **21 13 59.0 +0.7**
NIKO Nikolski 98.76 322 *e*P **P** **21 13 59.1 +0.3**
comp=Z,180nm,1.5s,mb6.3
NIKO *e*pP pP 21 14 38.2 +0.4
NIE Niedzica 98.81 41 *e*P **P** **21 14 00.3 +1.3**
JAN Janina 98.85 51 *e*P **P** **21 14 02.2 +2.8**
KECS Kecovo 98.90 42 *e*P **P** **21 14 00.8 +1.4**
comp=Z,4.5nm,1.0s,mb4.8
KECS Kecovo 98.90 42 *e*P **P** **21 14 00.8 +1.4**
KECS pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
KECS Kecovo 98.90 42 PDIF **P** **21 14 00.8 +1.4**
MAW Mawson 99.00 165 *e*P **P** **21 13 59.5 -0.1**
comp=Z,27nm,1.1s,mb5.6
MAW *e*pP pP 21 14 39.6 +0.9
MAW Mawson 99.00 165 P **P** **21 13 59.9 +0.3**
comp=Z,32nm,0.9s,mb5.7,baz=230,slow=5.4,SNR=36
MAW pP pP 21 14 39.4 +0.8
comp=Z,24nm,1.0s,baz=223,slow=5.9,SNR=3.8
MAW PKKPbc PKKPbc 21 30 24.8 -3.2
comp=Z,4.3nm,0.5s,baz=68,slow=3.3,SNR=19
MAW LR LR 21 58 11.2
comp=Z,2µm,19.1s,baz=236,slow=35
MAW Mawson 99.00 165 P **P** **21 13 59.9 +0.3**
MAW *PP pP 21 14 39.4 +0.7
RLS Riolos of Patr 99.26 53 *e*P Pdif 21 14 04.0 +3.0
STHS Stebnicka Huta 99.42 41 *e*P Pdif 21 14 03.4 +1.7
comp=Z,4.6nm,1.0s
STHS *e* 21 30 26.6
STHS Stebnicka Huta 99.42 41 *e*P Pdif 21 14 03.4 +1.7
STHS pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
STHS Stebnicka Huta 99.42 41 PDIF Pdif 21 14 03.4 +1.7
STHS *e* 21 30 26.6
CRVS Cervenica-Dubn 99.55 42 *e*P Pdif 21 14 04.0 +1.7
comp=Z,8.3nm,1.2s
CRVS *e*S SKSac 21 24 22.9 -3.4
CRVS *e* 21 25 21.2
CRVS *e* 21 30 25.1
CRVS *e*SS SS 21 32 08.0 -8.1
CRVS LR LR
comp=Z,2µm,40.1s
CRVS Cervenica-Dubn 99.55 42 *e*P Pdif 21 14 04.0 +1.7
CRVS *e*S SKSac 21 24 22.9 -3.4
CRVS *e* 21 25 21.2
CRVS *e*SS SS 21 32 08.0 -8.1
CRVS pmax pmax
comp=Z,8.0nm,1.2s,mb5.0
CRVS MLR MLR
comp=Z,2µm,40.1s
CRVS Cervenica-Dubn 99.55 42 PDIF Pdif 21 14 04.0 +1.7
CRVS Cervenica-Dubn 99.55 42↑ *e*SKSp SKSac 21 24 22.9 -3.4
CRVS SDIF Sdif 21 25 21.2 -0.5
CRVS *e* 21 30 25.1
CRVS *e*SS SS 21 32 08.0 -8.1
EVR Evrytania 99.56 52 *e*P Pdif 21 14 05.4 +3.1
URZ Urewera 99.56 229 PKKPbc PKKPbc 21 30 22.5 -2.9
comp=Z,10.0nm,0.5s,baz=319,slow=2.3,SNR=7.1
ITM Ithomi 99.59 54 *e*P Pdif 21 14 03.4 +1.0
BZS Buzias 99.61 45 ‖ P Pdif 21 14 03.5 +1.0
BZS Buzias 99.61 45 ‖ *i*P Pdif 21 14 03.5 +1.0
EFP Efpalio 99.62 52 *e*P Pdif 21 14 05.4 +2.8
THL Klokotos Trika 99.74 51 *e*P Pdif 21 14 04.8 +1.7
KTK1 Kautokeino 99.84 21 *e*P Pdif 21 14 03.1 -0.5
KTK1 *e*SKS 21 24 26.2
GUR Goura 99.94 53 *e*P Pdif 21 14 03.4 -0.6
VLX Vlachokerasia 99.95 53 *e*P Pdif 21 14 05.7 +1.6
AGG Agios Georgios 99.97 52 *e*P Pdif 21 14 04.8 +0.7
UZH Uzhgorod 100.10 42 *e*P Pdif 21 14 04.9 +0.2
UZH *e* 21 24 30.1
UZH *e*S Sdif 21 25 20.5 -5.8
UZH *e*PS PS 21 27 01.1 -14
LIT Litokhoron 100.12 51 *e*P Pdif 21 14 04.0 -0.8
TRPA Tarpa 100.27 43 ‖ *i*P Pdif 21 14 05.9 +0.5
SNZO South Karori 100.34 226 *e*Pdif Pdif 21 14 05.7 -0.1
KWP Kalwaria Pacla 100.37 41 *e*P Pdif 21 14 09.3 +3.3
KWP *e*SKS 21 24 34.2
KWP Kalwaria Pacla 100.37 41 *e*Pdif Pdif 21 14 06.3 +0.3
comp=Z,30nm,1.0s
KWP *e*PP PP 21 18 13.7 -0.6
KWP Kalwaria Pacla 100.37 41 *e*P Pdif 21 14 06.3 +0.4
KWP *e* 21 18 13.7
KWP pmax pmax
comp=Z,31nm,1.0s
KWP Kalwaria Pacla 100.37 41 ‖ *i*P Pdif 21 14 07.4 +1.5
GZR Gura Zlata 100.42 45 ‖ P Pdif 21 14 07.0 +0.9
GZR Gura Zlata 100.42 45 ‖ *i*P Pdif 21 14 07.0 +0.9
ARCES ARCESS Array B 100.59 21 P Pdif 21 14 06.3 -0.5
ARCES pP 21 14 45.0
ARCES PKKPbc PKKPbc 21 30 20.3 -3.5
ARCES PKKPab 21 30 45.1
ARCES ARCESS Array B 100.59 21 P Pdif 21 14 06.3 -0.5
comp=Z,9.9nm,0.8s,baz=264,slow=4.2,SNR=28
ARCES pP 21 14 45.0
comp=Z,33nm,0.8s,baz=290,slow=3.6,SNR=13
ARCES PKKPbc PKKPbc 21 30 20.3 -3.5
comp=Z,7.3nm,0.6s,baz=122,slow=3.4,SNR=22
ARCES PKKPab 21 30 45.1
comp=Z,8.4nm,0.9s,baz=90,slow=3.6,SNR=5.3
ARE0 ARCESS Array S 100.59 21 *e*Pdif Pdif 21 14 06.3 -0.6
ARE0 PP PP 21 18 10.5 -4.9
SUW Suwalki 100.59 37 *e*P Pdif 21 14 09.9 +3.0
SUW *e*SKS 21 24 30.9
DID Didima 100.64 53 *e*P Pdif 21 14 07.5 +0.4
VTS Vitosha 100.71 48 ‖ P Pdif 21 14 08.2 +0.8
VTS Vitosha 100.71 48 ‖ *i*P Pdif 21 14 08.2 +0.8
SOH Sokhos 100.80 50 *e*P Pdif 21 14 09.3 +1.5
PLG Polygyros 100.86 50 *e*P Pdif 21 14 08.4 +0.3
KEV Kevo 101.08 20 *e*Pdif Pdif 21 14 07.4 -1.7
comp=Z,54nm,1.2s
KEV Kevo 101.08 20 *e*P Pdif 21 14 07.4 -1.7
KEV pmax pmax
comp=Z,54nm,1.2s
KEV Kevo 101.08 20 *e*p Pdif 21 14 06.4 -2.7
comp=Z,4.8nm,0.6s
KEV Kevo 101.08 20 *e*p PKKPbc 21 30 18.1 -4.2
comp=Z,3.2nm,0.6s
NVR Nevrokopi 101.19 49 *e*P Pdif 21 14 10.1 +0.6
LVV L'vov 101.23 41 *e*P Pdif 21 14 10.2 +0.5
LVV *e* 21 18 20.0
LVV *e* 21 24 34.2
LVV MLR MLR
comp=Z,700nm,18.0s
LVV MLR MLR
comp=N,300nm,16.0s
LVV MLR MLR
comp=E,500nm,18.0s
FINES FINESS Array B 101.69 29 P Pdif 21 14 11.6 -0.2
FINES pP 21 14 50.6
FINES PKKPbc PKKPbc 21 30 16.3 -4.0
FINES P'P' 21 38 35.3
FINES FINESS Array B 101.69 29 P Pdif 21 14 11.6 -0.2
comp=E,3.4nm,0.6s,baz=318,slow=5.4,SNR=10
FINES pP 21 14 50.6
comp=E,4.3nm,0.9s,baz=308,slow=6.3,SNR=2.7
FINES PKKPbc PKKPbc 21 30 16.3 -4.0
comp=E,8.2nm,0.7s,baz=64,slow=4.4,SNR=3.4
FINES PKPPKP 21 38 35.3
comp=E,2.9nm,0.9s,baz=44,slow=5.8,SNR=5.8
KAF Kangasniemi 101.73 28 *e*P Pdif 21 14 12.6 +0.7
KAF pmax pmax
comp=Z,4.0nm,0.6s
KAF Kangasniemi 101.73 28 *e*p Pdif 21 14 12.6 +0.7
comp=Z,3.6nm,0.6s
KAF Kangasniemi 101.73 28 *e*p PKKPbc 21 30 16.9 -3.3
comp=Z,4.8nm,0.5s
DRV Dumont d'Urvil 101.79 193 Pdif Pdif 21 14 09.0 -3.2
DRV Dumont d'Urvil 101.79 193 PP PP 21 18 14.0 -10
DRV SS SS 21 32 48.0 +2.8
IDI Anoyia 101.93 56 *e*Pdif Pdif 21 14 13.9 +1.1
comp=Z,30nm,0.8s
IDI *e*PP PP 21 18 26.7 +0.2
VOIR 102.02 45 ‖ P Pdif 21 14 15.2 +1.9
VOIR 102.02 45 ‖ *i*P Pdif 21 14 15.2 +1.9
BUR08 Bucovina Ar. S 102.06 43 *e*Pdif Pdif 21 14 14.9 +1.5
BUR08 *e*PP PP 21 18 24.8 -2.3
BURAR Bucovina Array 102.08 43 ‖ P Pdif 21 14 15.2 +1.7
BURAR Bucovina Array 102.08 43 ‖ *i*P Pdif 21 14 15.2 +1.7
NACGM Naroch 102.64 36 *e*P Pdif 21 14 20.0 +4.0
MLR Muntele Rosu 102.65 45 P Pdif 21 14 16.9 +0.8
comp=Z,5.2nm,0.7s,baz=144,slow=14,SNR=9.5
MLR *e*PP PP 21 18 28.9 -2.6
comp=Z,22nm,1.1s,baz=275,slow=3.4,SNR=5.0
MLR Muntele Rosu 102.65 45 ‖ P Pdif 21 14 16.9 +0.9
APA Apatity 103.80 22 ↑ *i*P Pdif 21 14 27.0 +5.9
APA *i* 21 24 44.0
APA *i* 21 25 26.0
APA *i* S Sdif 21 25 56.0 -1.1
APA *i* 21 28 32.0
APA *e*SS SS 21 33 10.0 -3.6
APA pmax pmax
comp=Z,13nm,1.0s
APA MLR MLR
comp=Z,1µm,16.0s
JOF Joensuu 103.91 27 *e*P Pdif 21 14 21.0 -0.7
JOF pmax pmax
comp=Z,5.0nm,0.7s
JOF Joensuu 103.91 27 *e*p Pdif 21 14 21.0 -0.7
comp=Z,4.8nm,0.7s
JOF Joensuu 103.91 27 *e*p PKKPbc 21 30 10.0 -3.8
comp=Z,4.0nm,0.6s
TIRR Tirgusor 104.45 46 *e*Pdif Pdif 21 14 24.6 +0.5
AKASG Malin Array Be 104.50 40 Pdif Pdif 21 14 24.2 0.0
AKASG PP PP 21 18 41.3 -3.8
AKASG PKKPbc PKKPbc 21 30 08.9 -2.7
AKASG PKKPab PKKPab 21 30 28.2 -0.4
AKASG P'P' 21 38 31.9
AKASG Malin Array Be 104.50 40 Pdif Pdif 21 14 24.2 0.0
comp=Z,0.4nm,0.4s,baz=290,slow=3.8,SNR=4.0
AKASG PP PP 21 18 41.3 -3.8
comp=Z,2.2nm,0.7s,baz=268,slow=7.5,SNR=7.5
AKASG PKKPbc PKKPbc 21 30 08.9 -2.7
comp=Z,6.2nm,0.5s,baz=80,slow=3.3,SNR=22
AKASG PKKPab PKKPab 21 30 28.2 -0.4
comp=Z,4.2nm,0.7s,baz=83,slow=4.3,SNR=8.7
AKASG PKPPKP 21 38 31.9
comp=Z,0.9nm,0.5s,baz=96,slow=1.8,SNR=9.7
AKASG Malin Array Be 104.50 40 P Pdif 21 14 24.3 0.0
AKASG 21 18 41.3
KIS Kishinev 104.56 44 *e*P 21 15 02.0
KIS Kishinev 104.56 44 *e*PKP PKiKP 21 18 42.0 +2.1
KIS *ep*PKP 21 19 23.0
KIS *i* SKS 21 24 50.0
KIS *i* SKKS SKKSac 21 25 34.0 -1.0
KIS Kishinev 104.56 44 *e*PS PS 21 28 46.0 +44
KIS *e*SS SS 21 33 14.0 -11
KIS LRM 22 02 44.0
comp=Z,700nm,20.0s
OBN Obninsk 108.18 34↑ *e*P Pdif 21 14 39.7 -0.9
OBN *i* 21 19 10.6
OBN *i* 21 25 05.7
OBN *e* 21 28 16.5
OBN *i* 21 28 38.3
OBN *i* PS PS 21 29 18.4 +40
OBN pmax pmax
comp=Z,57nm,2.0s
OBN MLR MLR
comp=Z,2µm,18.0s
KLMR Klimovskoe 108.18 28 *i* P Pdif 21 14 40.0 -0.6
KLMR *e* 21 19 07.3
KLMR *e* 21 25 04.4
KLMR *e*PS PS 21 28 17.8 -21
KLMR *e*SS SS 21 34 08.2 -5.2
KLMR pmax pmax
comp=Z,13nm,1.5s
SIM Simferopol' **108.45 45** *e*P Pdif 21 14 39.1 -2.7
SIM *e* 21 25 07.0
SIM *i* PS PS 21 28 22.0 -20
SIM *e*SS SS 21 34 24.0 +6.0
SIM pmax pmax
comp=Z,92nm,10.3s
SIM pmax pmax
comp=Z,56nm,7.9s
BR131 Keskin Array S 108.70 51 *e*PKiKP PKiKP 21 18 47.2 -0.6
BRTR Keskin Array B 108.70 51 Pdiff Pdif 21 14 44.5 +1.6
comp=Z,0.6nm,0.8s,baz=144,slow=2.3,SNR=3.6
BRTR pPdiff 21 15 20.3
comp=Z,1.7nm,0.8s,baz=265,slow=6.2,SNR=4.5
BRTR PKiKP PKiKP 21 18 49.5 +1.7
comp=Z,1.9nm,0.8s,baz=120,slow=4.4,SNR=5.1
BRTR PP PP 21 19 14.3 -1.9
comp=Z,7.4nm,1.1s,baz=261,slow=4.9,SNR=5.1
BRTR PKKPbc PKKPbc 21 29 56.4 -1.8
comp=Z,1.3nm,0.7s,baz=136,slow=4.7,SNR=4.6
BRTR PKKPab PKKPab 21 30 11.5 +1.4
comp=Z,3.3nm,1.0s,baz=129,slow=5.1,SNR=6.6
BRTR Keskin Array B 108.70 51 P Pdif 21 14 44.5 +1.5
BRTR 21 19 14.4
BRTR 21 29 56.4
EIL Elat 110.53 61 PKPdf PKiKP 21 18 51.5 -0.1
EIL PP PP 21 19 26.8 -3.0
EIL PKKPbc PKKPbc 21 29 51.2 -0.8
EIL Elat 110.53 61 PKiKP PKiKP 21 18 51.5 -0.1
comp=Z,6.5nm,0.7s,baz=341,slow=6.6,SNR=7.2
EIL PP PP 21 19 26.8 -3.0
comp=Z,3.7nm,0.8s,baz=210,slow=8.3,SNR=6.9
EIL PKKPbc PKKPbc 21 29 51.2 -0.8
comp=Z,5.2nm,0.9s,baz=21,slow=6.2,SNR=4.1
VSR Storozhevoye 110.61 38 *e*PKiKP PKiKP 21 18 50.2 -0.8
VSR *e* 21 25 15.2
VSR *e*SP SP 21 28 38.6 -4.7
VSR *e* 21 34 44.4
VSR pmax pmax
comp=N,7.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR pmax pmax
comp=E,2.0nm,0.3s
MMAI Mount Meron Ar 110.70 58 PKiKP PKiKP 21 18 52.3 +0.6
comp=E,4.1nm,0.7s,baz=280,slow=5.0,SNR=6.1
MMAI PP PP 21 19 27.2 -3.8
comp=E,7.3nm,1.0s,baz=23,slow=11,SNR=4.8
MMAI PKKPbc PKKPbc 21 29 51.9 +0.4
comp=E,4.0nm,0.6s,baz=76,slow=5.2,SNR=9.5
MMAI PKKPab PKKPab 21 30 03.3 +1.9
comp=E,3.7nm,0.6s,baz=83,slow=6.8,SNR=7.1
ANN Anapa 110.80 45 *i* PKiKP PKiKP 21 18 51.6 0.0
ANN *e* 21 19 30.6
ANN *i* 21 25 15.6
ANN *i* 21 28 42.2
ANN *e*SS SS 21 34 50.9 +1.4
ANN pmax pmax
comp=Z,26nm,0.9s
KMBO Kilima Mbogo 111.26 94 PKiKP PKiKP 21 18 54.5 +1.1
comp=Z,2.2nm,0.5s,baz=0.2,slow=23,SNR=3.2
KMBO PKKPbc PKKPbc 21 29 50.0 +1.0
comp=Z,2.5nm,0.6s,baz=180,slow=21,SNR=3.2
ASF Jabal al Asfar 112.03 58 PKiKP PKiKP 21 18 54.3 0.0
comp=Z,6.6nm,0.8s,baz=156,slow=2.2,SNR=9.4
ASF PP PP 21 19 36.5 -4.0
comp=Z,4.5nm,0.6s,baz=217,slow=1.3,SNR=7.5
ASF PKKPbc PKKPbc 21 29 48.1 +1.0
comp=Z,2.2nm,0.8s,baz=3.9,slow=6.1,SNR=4.2
ASF PKKPab PKKPab 21 29 57.3 +1.8
comp=Z,10nm,1.0s,baz=346,slow=3.0,SNR=13
ASF Jabal al Asfar 112.03 58 PKiKP PKiKP 21 18 54.3 0.0
ASF 21 19 36.5
VRHR Novokhopersk 112.13 38 *e*PKiKP PKiKP 21 18 54.7 +0.8
VRHR *e* 21 25 22.0
VRHR pmax pmax
comp=N,30nm,1.0s
VRHR pmax pmax
comp=E,20nm,1.0s
VRHR pmax pmax
comp=Z,30nm,1.0s
MALT Malatya 112.58 52 *e*PKiKP PKiKP 21 18 55.1 0.0
MALT *e*PP PP 21 19 38.8 -5.3
MALT Malatya 112.58 52 P PKiKP 21 18 56.6 +1.4
SOC Sochi 112.64 46 *i* PKiKP PKiKP 21 18 56.5 +1.4
SOC *e* 21 19 45.1
SOC *e* 21 25 25.1
SOC *e*SP SP 21 29 00.1 -2.4
SOC *e* 21 30 16.1
SOC pmax pmax
comp=Z,37nm,0.9s
DZM Mont Dzumac 113.51 242 *e*Pdif Pdif 21 15 06.2 +1.9
comp=Z,409nm,26.3s
DZM Mont Dzumac 113.51 242 *e*PP PP 21 19 46.9 -4.1
comp=Z,2µm,26.1s
DZM *e*SP SP 21 29 09.5 -2.1
comp=Z,1µm,24.8s
DZM *e*SS SS 21 35 24.1 -2.2
comp=Z,7µm,30.3s
DZM *e*LR LR 21 53 07.0
comp=Z,4µm,25.4s
AAE Adis Abeba 113.91 84 *e*P PP 21 19 46.1 -8.3
AAE *e*S SKSac 21 25 39.9 +9.1
TIXI Tiksi 114.47 352 *e*P Pdif 21 15 07.5 -1.1
TIXI *e* 21 19 52.9
TIXI *e*PPP 21 22 22.8
TIXI *e*SP SP 21 29 17.3 -0.1
TIXI *e*PS PS 21 29 33.9 -2.7
TIXI pmax pmax
comp=Z,74nm,6.8s
KIV Kislovodsk 114.66 45 *e*PKiKP PKiKP 21 18 59.6 +0.7
KIV Kislovodsk 114.66 45‖ *e*P Pdif 21 15 16.5 +7.1
KIV *i* 21 19 00.0
KIV *e* 21 19 41.6
KIV *i* 21 25 33.6
KIV *i*S SP 21 29 21.6 +0.6
KIV *i*PS PS 21 29 42.4 +2.9
KIV *i*SS SS 21 35 42.2 +1.6
KIV pmax pmax
comp=Z,19nm,1.2s
KIV MLR MLR
comp=Z,500nm,18.0s
SEY Seymchan 115.37 338 ‖ *i*PKP PKPdf 21 19 00.8 +1.0
SEY Seymchan 115.37 338 ‖ *i*PKIKP PKPdf 21 19 00.7 +0.9
ZEI Tsey 115.80 46 *e*PKIKP PKPdf 21 19 01.3 +0.1
ZEI pmax pmax
comp=Z,7.0nm,0.4s
ABPO Ambohimpanom 116.64 116 *e*PKPdf PKPdf 21 19 03.6 +0.1
ABPO *ep*PKPdf pPKPdf 21 19 44.4 +0.2
TBLG Delisi 116.66 47 *e*PKIKP PKPdf 21 19 03.3 +0.4
TBLG Delisi 116.66 47 P PKPdf 21 19 03.3 +0.4
MTA Mtatsminda 116.71 47 P PKPdf 21 19 02.7 -0.3
OPO Ambohidratompo 116.75 115 PKP PKPdf 21 19 04.9 +1.2
comp=Z,4.8nm,0.7s,baz=320,slow=1.4,SNR=15
OPO pPKP pPKPdf 21 19 46.7 +2.3
comp=Z,3.4nm,0.9s,baz=264,slow=5.0,SNR=2.3
OPO PKKPbc PKKPbc 21 29 31.7 +0.9
comp=Z,9.2nm,1.1s,baz=93,slow=4.2,SNR=7.8
GNI Garni 117.05 49 PKP PKPdf 21 19 05.0 +1.3
GNI pPKP pPKPdf 21 19 46.4 +2.0
GNI Garni 117.05 49 PKP PKPdf 21 19 04.9 +1.3
comp=Z,9.3nm,0.5s,baz=329,slow=5.0,SNR=8.2
GNI pPKP pPKPdf 21 19 46.4 +2.0
comp=Z,6.7nm,0.5s,baz=103,slow=3.6,SNR=3.6
GNI Garni 117.05 49*d* *i*PKIKP PKPdf 21 19 03.7 0.0
GNI pmax pmax
comp=Z,35nm,1.7s
DGRG David-gareji 117.19 47 P PKPdf 21 19 04.2 +0.3
PET Petropavlovsk 117.76 327 *e*P Pdif 21 15 23.9 +0.7
PET *e* 21 19 05.1
PET *i* 21 20 23.6
PET *e*SP SP 21 29 44.1 -4.2
PET *e*SS SS 21 36 15.9 -4.2
PET pmax pmax
comp=Z,200nm,14.8s
PET pmax pmax
comp=Z,200nm,8.3s
PET pmax pmax
comp=Z,1µm,17.3s
PET MLR MLR
comp=Z,1µm,19.0s
PET MLR MLR
comp=Z,1µm,20.0s
ATD Arta Tunnel 118.07 81 PKP PKPdf 21 19 08.2 +1.9
comp=Z,22nm,1.0s,baz=302,slow=5.0,SNR=9.8
BHD Baghdad 118.15 56 *ex* x 21 15 23.3
BHD *ex* x 21 19 01.0
BHD *ex* x 21 20 21.0
BHD *i* x x 21 25 42.0
PETK Petropavlovsk- 118.23 327 PKP PKPdf 21 19 05.7 +0.1
comp=Z,15nm,1.0s,baz=87,slow=6.2,SNR=12
PETK pPKP pPKPdf 21 19 46.1 -0.2
comp=Z,7.8nm,0.9s,baz=116,slow=6.8,SNR=4.1

PETK PKKPbc PKKPbc 21 29 27.4 +0.9
comp=Z,5.5nm,0.7s,baz=305,slow=3.1,SNR=7.4
PETK Petropavlovsk- 118.23 327 PKIKP PKPdf 21 19 05.7 +0.1
PETK 21 19 46.1
MAK Makhachkala 118.31 45 *e*P Pdif 21 15 25.8 +0.1
MAK *e*PPP 21 22 52.4
MAK MLR MLR
comp=Z,1μm,18.0s
ARU Arti 119.03 28 *e*PKPdf PKPdf 21 19 06.5 -0.5
ARU *ep*PKPdf pPKPdf 21 19 48.2 +0.5
ARU *e*PKKPbc PKKPbc 21 29 21.6 -2.2
ARU Arti 119.03 28 *i* PKIKP PKPdf 21 19 07.0 0.0
ARU 21 20 25.8
ARU PPP 21 22 58.5
SVE Sverdlovsk 119.74 27 *e*PKIKP PKPdf 21 19 09.2 +0.9
SVE pmax pmax
comp=Z,24nm,1.4s
CNB Canberra Magne 120.63 221 *e*PKP PKPdf 21 19 11.2 +0.4
CAN Canberra 120.86 221 *e*PKPdf PKPdf 21 19 10.9 -0.4
CAN *ep*PKPdf pPKPdf 21 19 52.6 +0.7
MIB Mutribah 121.22 60 *e*P PKPdf 21 19 12.4 +0.3
MIB AMb AMB 21 19 15.8
comp=Z,121nm,0.8s
MIB Mutribah 121.22 60 *e*P PKPdf 21 19 12.0 0.0
MIB AMb AMB 21 19 15.8
comp=Z,121nm,0.8s
NAY Al-Naaiem 121.23 60 *e*P PKPdf 21 19 12.1 +0.1
NAY AMb AMB 21 19 16.3
comp=Z,37nm,1.4s
RDF Al-Radifah 121.54 61 *e*P PKPdf 21 19 13.2 +0.5
RDF AMb AMB 21 19 16.0
comp=Z,53nm,0.6s
RDF Al-Radifah 121.54 61 *e*P PKPdf 21 19 13.0 +0.3
RDF AMb AMB 21 19 16.0
comp=Z,52nm,0.6s
UMR Umm Al-Rimmam 121.58 60 *e*P PKPdf 21 19 13.1 +0.4
UMR AMb AMB 21 19 16.2
comp=Z,158nm,0.7s
UMR Umm Al-Rimmam 121.58 60 *e*P PKPdf 21 19 13.0 +0.3
UMR AMb AMB 21 19 16.2
comp=Z,158nm,0.7s
TOO Toolangi 121.61 217 *e*PKP PKPdf 21 19 12.7 +0.1
ARMA Armidale 121.88 227 *e*PKP PKPdf 21 19 13.9 +0.6
ARMA Armidale 121.88 227 *e*PKPdf PKPdf 21 19 14.8 +1.4
ARMA *ep*PKPdf pPKPdf 21 19 54.0 0.0
ARMA *e*PP PP 21 20 46.2 -2.2
QRN Al-Qurain 121.89 61 *e*P PKPdf 21 19 13.6 +0.2
QRN AMb AMB 21 19 17.3
comp=Z,100nm,1.0s
AKTK Aktyubinsk 121.95 34 PKP PKPdf 21 19 13.7 +0.9
AKTK pPKP pPKPdf 21 19 53.7 +0.2
AKTK PKKPbc PKKPbc 21 29 11.2 -1.4
AKTO Aktyubinsk 121.95 34 PKP PKPdf 21 19 13.7 +0.9
comp=Z,23nm,0.8s,baz=327,slow=0.8,SNR=62
AKTO pPKP pPKPdf 21 19 53.7 +0.2
comp=Z,18nm,0.6s,baz=334,slow=3.2,SNR=4.6
AKTO PKKPbc PKKPbc 21 29 11.2 -1.4
comp=Z,25nm,0.8s,baz=130,slow=3.7,SNR=30
AKTO Aktyubinsk 121.95 34 PKIKP PKPdf 21 19 13.7 +0.9
AKTO 21 19 53.7
YAK Yakutsk 122.93 347 *e*PKPdf PKPdf 21 19 14.0 -0.4
YAK *ep*PKPdf pPKPdf 21 19 53.9 -1.1
YAK Yakutsk 122.93 347 *e*PKIKP PKPdf 21 19 13.2 -1.1
YAK *e* 21 19 53.6
YAK *e*PPP 21 23 30.8
YAK *e* 21 25 58.9
YAK *e*SP SP 21 30 27.5 -6.1
YAK *e*PS PS 21 30 56.9 +4.3
YAK *e*SS SS 21 37 22.1 -3.1
YAK pmax pmax
comp=Z,66nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.3s
YAK pmax pmax
comp=Z,419nm,3.7s
YAK pmax pmax
comp=N,73nm,1.5s
YAK pmax pmax
comp=E,77nm,3.0s
RER Riviere de l'E 123.27 121 *e*PKPdf PKPdf 21 19 15.7 -0.5
ABKAR Akbulak array 123.62 34 *e*PKPdf PKPdf 21 19 16.8 +0.8
ABKAR *ep*PKPdf pPKPdf 21 19 56.3 -0.5
EIDS Eidsvold 124.93 232 *e*PKPdf PKPdf 21 19 18.9 -0.4
EIDS *ep*PKPdf pPKPdf 21 20 02.1 +2.1
BRVK Borovoye 126.41 26 *e*PKPdf PKPdf 21 19 21.4 +0.1
BRVK *ep*PKPdf pPKPdf 21 20 01.7 -0.3
BRVK Borovoye 126.41 26*d i* PKIKP PKPdf 21 19 21.3 0.0
BRVK pmax pmax
comp=Z,45nm,1.0s
BRVK Borovoye 126.41 26 PKPdf PKPdf 21 19 21.4 +0.1
SNR=18
BVAR Borovoye Array 126.48 26 PKP PKPdf 21 19 22.4 +1.0
comp=Z,28nm,0.7s,baz=272,slow=2.3,SNR=75
BVAR pPKP pPKPdf 21 20 01.5 -0.6
comp=Z,17nm,0.8s,baz=264,slow=1.5,SNR=3.9
BVAR PKKPbc 21 28 52.4
comp=Z,3.5nm,0.7s,baz=141,slow=5.6,SNR=8.0
BVAR SKKPbc 21 32 30.2
comp=Z,6.3nm,1.1s,baz=132,slow=4.2,SNR=3.7
BVAR Borovoye Array 126.48 26 PKIKP PKPdf 21 19 22.4 +1.0
BVAR 21 20 01.5
STKA Stephens Creek 127.80 219 *e*PKP PKPdf 21 19 24.9 +0.3
comp=Z,101nm,0.8s
STKA *ep*PKP pPKPdf 21 20 05.3 -0.1
STKA Stephens Creek 127.80 219 PKP PKPpre 21 19 17.1
STKA *e*PKPdf PKPdf 21 19 24.7 0.0
STKA PKP PKPdf 21 19 25.1 +0.4
STKA pPKP pPKPdf 21 20 05.0 -0.4
STKA *ep*PKPdf pPKPdf 21 20 05.5 +0.1
STKA PKKPbc 21 28 50.8
STKA Stephens Creek 127.80 219 PKhKP PKPpre 21 19 17.1
comp=Z,4.8nm,0.6s,baz=105,slow=3.4,SNR=10
STKA PKP PKPdf 21 19 25.1 +0.4
comp=Z,120nm,0.7s,baz=113,slow=2.4,SNR=99
STKA pPKP pPKPdf 21 20 05.0 -0.4
comp=Z,18nm,0.6s,baz=89,slow=4.0,SNR=2.1
STKA PKKPbc 21 28 50.8
comp=Z,2.0nm,0.7s,baz=314,slow=21,SNR=3.2
ABTO Aybut 128.15 74 P PKPdf 21 19 27.3 +1.7
SNR=13
ABTO Aybut 128.15 74 PKIKP PKPdf 21 19 27.3 +1.7
SNR=13
ABTO Aybut 128.15 74 P PKPdf 21 19 27.3 +1.7
SNR=13
RBK Rabkut 129.00 74 P PKPdf 21 19 28.1 +0.9
SNR=7.3
RBK Rabkut 129.00 74 PKIKP PKPdf 21 19 28.1 +0.9
SNR=7.3
RBK Rabkut 129.00 74 P PKPdf 21 19 28.1 +0.9
SNR=7.3
ASUD Al Ashush, Dub 129.13 65 PKPdf PKPdf 21 19 29.2 +1.9
SNR=7.5
NAZ Nazwa, Dubai 129.36 64 P PKPdf 21 19 28.8 +1.0
SNR=9.3
NAZ Nazwa, Dubai 129.36 64 P PKPdf 21 19 28.8 +1.0
SNR=9.3
NAZ Nazwa, Dubai 129.36 64 PKIKP PKPdf 21 19 28.8 +1.0
SNR=9.3
NAZ Nazwa, Dubai 129.36 64 P PKPdf 21 19 28.8 +1.0
SNR=9.3
NAZ Nazwa, Dubai 129.36 64 PKPdf PKPdf 21 19 28.4 +0.7
SNR=6.5
YUK Yuzh-Kuril'sk 129.61 323↓ *i* PKIKP PKPdf 21 19 23.0 -4.7
YUK *e* 21 21 36.0
YUK *e*PPP 21 24 28.0
YUK *e* 21 26 16.0
YUK *e*SS SS 21 39 16.0 +26
YUK *e*SSS 21 43 44.0
YUK MLR MLR
comp=N,710nm,19.0s
YUK MLR MLR
comp=E,900nm,19.0s
YUK MLR MLR
comp=Z,870nm,19.0s
YSS Yuzh-Sakhalins 129.63 328 *e*PKPdf PKPdf 21 19 27.5 -0.1
YSS *ep*PKPdf pPKPdf 21 20 08.2 -0.2
YSS Yuzh-Sakhalins 129.63 328 *e*PKIKP PKPdf 21 19 27.0 -0.6
YSS *e* 21 20 07.0
YSS *e* 21 21 38.0
YSS *e*SS SS 21 39 30.0 +40
YSS pmax pmax
comp=Z,140nm,1.2s

NVS Novosibirsk 129.66 17 *e*PKIKP PKPdf 21 19 28.0 +0.6
NVS *e* 21 20 07.5
NVS pmax pmax
comp=Z,162nm,1.7s
NVS pmax pmax
comp=N,7.0nm,0.9s
NVS pmax pmax
comp=E,46nm,1.8s
ASHO Ashiyiah 129.77 64 P PKPdf 21 19 29.2 +0.7
SNR=6.1
ASHO Ashiyiah 129.77 64 PKIKP PKPdf 21 19 29.2 +0.7
SNR=6.1
ASHO Ashiyiah 129.77 64 P PKPdf 21 19 29.2 +0.7
SNR=6.1
HATD Hatta, Dubai 129.81 64 PKPdf PKPdf 21 19 29.1 +0.5
SNR=7.4
BBOO Buckleboo 130.41 214 *e*PKPdf PKPdf 21 19 29.3 -0.3
BBOO *ep*PKPdf pPKPdf 21 20 10.4 +0.1
ARQ Araqi 130.44 66 PKPdf PKPdf 21 19 30.4 +0.6
SNR=8.5
ZAA0 Zalesovo Array 130.88 16 *e*PKPdf PKPdf 21 19 30.2 +0.4
ZAA0 *ep*PKPdf pPKPdf 21 20 09.9 -0.6
ZALV Zalesovo Beam 130.88 16 PKhKP PKPpre 21 19 15.5
comp=E,1.9nm,0.7s,baz=312,slow=5.9,SNR=5.9
ZALV PKP PKPdf 21 19 29.7 0.0
comp=E,169nm,0.9s,baz=320,slow=2.3,SNR=149
ZALV pPKP pPKPdf 21 20 09.4 -1.1
comp=E,39nm,0.6s,baz=302,slow=2.8,SNR=2.6
ZALV PKKPab 21 28 37.1
comp=E,0.9nm,0.4s,baz=142,slow=4.4,SNR=4.6
ZALV SKKPbc 21 32 16.1
comp=E,9.2nm,1.0s,baz=116,slow=3.4,SNR=5.8
ZALV Zalesovo Beam 130.88 16 PKHKP PKPpre 21 19 15.5
ZALV 21 19 29.7
ZALV 21 20 09.4
JMP Maruseppu 131.10 324 P PKPdf 21 19 31.0 +0.5
HOQ Hoqain 131.10 65 PKPdf PKPdf 21 19 30.5 -0.6
SNR=9.8
BSY Bisya 131.15 67 PKPdf PKPdf 21 19 31.9 +0.7
SNR=14
CTA Charters Tower 131.44 235 *e*PKP PKPdf 21 19 32.1 +0.3
comp=E,87nm,1.1s
CTA *ep*PKP pPKPdf 21 20 13.7 +1.1
CTA *e*PKS 21 22 59.3
CTA *e* 21 23 41.5
CTA Charters Tower 131.44 235 PKP PKPdf 21 19 32.2 +0.4
CTA pPKP pPKPdf 21 20 12.8 +0.2
CTA SKPbc SKPbc 21 22 41.5 -1.5
CTA Charters Tower 131.44 235 PKP PKPdf 21 19 32.2 +0.4
comp=E,88nm,0.9s,baz=117,slow=2.0,SNR=42
CTA pPKP pPKPdf 21 20 12.8 +0.2
comp=E,13nm,0.6s,baz=231,slow=1.4,SNR=2.4
CTA SKPbc SKPbc 21 22 41.5 -1.5
comp=E,12nm,0.9s,baz=178,slow=5.1,SNR=3.6
CTA Charters Tower 131.44 235 PKIKP PKPdf 21 19 32.2 +0.4
CTA 21 20 12.8
CTAO Charters Tower 131.44 235 *e*PKPdf PKPdf 21 19 31.9 +0.1
CTAO *ep*PKPdf pPKPdf 21 20 12.5 -0.1
CTAO Charters Tower 131.44 235 P PKPdf 21 19 32.3 +0.5
ASAJ Asahikawa 131.48 325 *e*PKPdf PKPdf 21 19 30.8 -0.4
ASAJ *ep*PKPdf pPKPdf 21 20 11.6 -0.3
ASAJ Asahikawa 131.48 325 PKP PKPdf 21 19 31.2 0.0
comp=E,100nm,1.1s,baz=272,slow=9.6,SNR=17
ASAJ pPKP pPKPdf 21 20 11.8 -0.2
comp=E,37nm,0.9s,baz=274,slow=12,SNR=3.5
ASAJ Asahikawa 131.48 325 PKIKP PKPdf 21 19 31.2 0.0
ASAJ 21 20 11.8
ASAJ pmax pmax
comp=Z,101nm,1.1s
ASAJ pmax pmax
comp=Z,37nm,0.9s
ASAJ Asahikawa 131.48 325 P PKPdf 21 19 31.7 +0.5
KURK Kurchatov 131.58 23 PKhKP PKPpre 21 19 18.7
comp=Z,0.6nm,0.6s,baz=336,slow=3.7,SNR=5.0
KURK PKP PKPdf 21 19 30.9 -0.2
comp=Z,48nm,0.8s,baz=333,slow=3.5,SNR=44
KURK pPKP pPKPdf 21 20 11.9 0.0
comp=Z,28nm,0.8s,baz=334,slow=2.6,SNR=4.2
KURK SKPbc SKPbc 21 22 41.8 -0.7
comp=Z,18nm,1.0s,baz=339,slow=4.0,SNR=5.0
KURK PKKPbc 21 28 36.1
comp=Z,1.8nm,0.6s,baz=137,slow=4.2,SNR=8.0
KURK SKKPbc 21 32 12.6
comp=Z,8.3nm,1.1s,baz=135,slow=4.5,SNR=4.6
KURK Kurchatov 131.58 23*d i* PKIKP PKPdf 21 19 31.3 +0.1
KURK pmax pmax
comp=Z,134nm,1.0s
KURK Kurchatov 131.58 23 PKPdf PKPdf 21 19 30.4 -0.8
SNR=59
SMDO Samad 131.87 66 PKPdf PKPdf 21 19 33.5 +1.0
SNR=29
HABR Khabarovsk 132.33 334*c i* PKIKP PKPdf 21 19 33.3 +0.6
HABR *e* 21 20 13.2
HABR 21 21 56.5
HABR *e*SS SS 21 39 22.1 -0.2
HABR pmax pmax
comp=Z,357nm,2.2s
HABR pmax pmax
comp=N,46nm,1.8s
HABR pmax pmax
comp=E,67nm,1.6s
HABR MLR MLR
comp=Z,1μm,23.0s
JEM Erimo 132.39 322 P PKPdf 21 19 34.7 +1.7
ERM Erimo 132.39 322 *e*PKPdf PKPdf 21 19 33.3 +0.3
ERM *ep*PKPdf pPKPdf 21 20 13.4 -0.3
ERM *e*SPKPdf 21 20 29.1
WBK Wadi Bani Khal 132.78 66 PKPdf PKPdf 21 19 35.9 +1.6
SNR=9.8
JEW Eniwo 132.91 324 P PKPdf 21 19 34.5 +0.5
KLR Kul'dur 133.11 337 *e*PKHKP PKPpre 21 19 25.0
KLR *e* 21 21 57.5
KLR pmax pmax
comp=E,50nm,1.8s
KLR pmax pmax
comp=Z,220nm,1.8s
KKAR Karatay Array 133.16 35 *e*PKPdf PKPdf 21 19 34.9 +0.5
KKAR *ep*PKPdf pPKPdf 21 20 13.3 -1.8
JOT Ohata 134.04 323 P PKPdf 21 19 37.9 +1.8
JOM Ohasama 135.01 320 P PKPdf 21 19 38.8 +0.8
USP Ospenovka 135.25 32 P PKPdf 21 19 40.6 +2.3
SNR=15
EKS2 Erkin-Say 135.27 34 P PKPdf 21 19 40.7 +2.3
SNR=23
EKS2 Erkin-Say 135.27 34 *e*PKPdf PKPdf 21 19 38.9 +0.5
EKS2 *ep*PKPdf pPKPdf 21 20 19.8 +0.6
PMG Port Moresby 135.29 248↑ *i* PKIKP PKPdf 21 19 41.7 +2.5
PMG pmax pmax
comp=Z,49nm,1.0s
CIT Chita 135.30 353 *e*PKIKP PKPdf 21 19 39.2 +1.1
CIT *e* 21 20 19.0
CIT *e* 21 20 36.3
CIT *e* 21 22 14.2
CIT pmax pmax
comp=Z,186nm,1.8s
IRK Irkutsk 135.54 1 *e*PKIKP PKPdf 21 19 38.9 +0.3
IRK *e* 21 20 18.8
IRK pmax pmax
comp=Z,150nm,2.9s
CHMS Chumysh 135.57 33 P PKPdf 21 19 40.7 +1.7
SNR=13
AML Almayashu 135.58 34 P PKPdf 21 19 41.1 +2.1
SNR=11
AML Almayashu 135.58 34 *e*PKPdf PKPdf 21 19 39.3 +0.3
AML *ep*PKPdf pPKPdf 21 20 20.4 +0.7
FRU Bishkek 135.61 33 *i* PKIKP PKPdf 21 19 40.0 +1.0
FRU *i* 21 20 22.0
FRU pmax pmax
comp=Z,300nm,2.1s
FRU pmax pmax
comp=Z,400nm,2.0s
AAK Ala-Archa 135.68 33 P PKPdf 21 19 41.5 +2.3
SNR=12
AAK Ala-Archa 135.68 33 PKP PKPpre 21 19 26.9
AAK *i* PKP PKPdf 21 19 39.9 +0.8
AAK PKP PKPdf 21 19 40.3 +1.2
AAK pPKP pPKPdf 21 20 19.9 0.0
AAK SKKPbc 21 31 57.4
AAK Ala-Archa 135.68 33 PKhKP PKPpre 21 19 26.9
comp=Z,1.7nm,0.4s,baz=105,slow=2.7,SNR=4.2
AAK PKP PKPdf 21 19 40.3 +1.2
comp=Z,23nm,0.7s,baz=179,slow=1.6,SNR=27
AAK pPKP pPKPdf 21 20 19.9 0.0
comp=Z,16nm,0.7s,baz=87,slow=1.7,SNR=1.3
AAK SKKPbc 21 31 57.4
comp=Z,10nm,0.9s,baz=253,slow=1.6,SNR=6.9
AAK Ala-Archa 135.68 33 PKHKP PKPpre 21 19 26.9
AAK *i* 21 19 39.9
AAK 21 20 19.9
AAK Ala-Archa 135.68 33 P PKPdf 21 19 40.9 +1.8
AAK Ala-Archa 135.68 33 PKPdf PKPdf 21 19 41.6 +2.4
SNR=19
KBK Karagaybulak 135.91 33 P PKPdf 21 19 41.6 +2.1
SNR=9.0
MOY Mondy 135.97 4 *e*PKIKP PKPdf 21 19 40.2 +0.8
MOY pmax pmax
comp=Z,234nm,3.2s
UCH Uchtor 135.97 34 *e*PKPdf PKPdf 21 19 39.4 -0.3
UCH *ep*PKPdf pPKPdf 21 20 20.5 +0.1
TKM2 Tokmak 2 136.07 32 P PKPdf 21 19 41.5 +1.7
SNR=21
TKM2 Tokmak 2 136.07 32 *e*PKPdf PKPdf 21 19 40.5 +0.6
TKM2 *ep*PKPdf pPKPdf 21 20 20.8 +0.2
TKM2 *e*SKPbc SKPbc 21 22 58.7 +1.1
TKM2 Tokmak 2 136.07 32 *e*PKIKP PKPdf 21 19 40.5 +0.6
TKM2 *e* 21 20 20.8
TLY Talaya 136.09 2 *e*PKPdf PKPdf 21 19 38.6 -1.0
TLY Talaya 136.09 2 *e*PKIKP PKPdf 21 19 40.0 +0.4
TLY *i* 21 20 22.7
TLY *e* 21 22 19.7
TLY *e*SS SS 21 39 59.2 -7.4
TLY pmax pmax
comp=Z,24nm,0.8s
TLY MLR MLR
comp=Z,1μm,19.0s
FORT Forrest 136.15 208 *e*PKP PKPpre 21 19 28.0
comp=Z,80nm,0.6s
FORT *e* 21 23 10.0
MK31 Makanchi Array 136.18 23 *e*PKPpre PKPpre 21 19 29.8
MK31 *e*PKPdf PKPdf 21 19 40.0 +0.1
MK31 *ep*PKPdf pPKPdf 21 20 20.4 -0.3
MKAR Makanchi Array 136.18 23 PKhKP PKPpre 21 19 26.6
comp=Z,1.6nm,0.6s,baz=335,slow=3.0,SNR=12
MKAR PKP PKPdf 21 19 40.2 +0.3
comp=Z,48nm,0.9s,baz=306,slow=2.9,SNR=14
MKAR pPKP pPKPdf 21 20 20.1 -0.6
comp=Z,16nm,0.7s,baz=306,slow=1.9,SNR=3.3
MKAR SKPbc SKPbc 21 22 57.5 -0.3
comp=Z,4.4nm,0.8s,baz=341,slow=4.3,SNR=2.3
MKAR PKKPbc 21 28 16.4
comp=Z,0.6nm,0.6s,baz=197,slow=2.4,SNR=4.2
MKAR SKKPbc 21 31 54.9
comp=Z,5.5nm,0.8s,baz=132,slow=6.7,SNR=5.4
MKAR Makanchi Array 136.18 23 PKHKP PKPpre 21 19 26.6
MKAR 21 19 40.2
MKAR 21 20 20.1
KZA Kyzart 136.47 33 P PKPdf 21 19 43.2 +2.6
SNR=6.8
KZA Kyzart 136.47 33 *e*PKPdf PKPdf 21 19 41.1 +0.4
KZA *ep*PKPdf pPKPdf 21 20 21.9 +0.5
KZA *e*SKP 21 23 01.3
JYA Atsumi 136.52 320 P PKPpre 21 19 32.5
HIA Hailar 136.87 346 *e*PKPdf PKPdf 21 19 41.0 -0.2
HIA *ep*PKPdf pPKPdf 21 20 21.6 -0.3
HIA *e*SPKPdf 21 20 37.6
ULHL Ulahol 136.89 32 P PKPdf 21 19 44.0 +2.6
SNR=19
COEN Coen 136.99 240 *e*PKPdf PKPdf 21 19 40.2 -2.1
COEN *ep*PKPdf pPKPdf 21 20 23.2 +0.1
COEN Coen 136.99 240 P PKPdf 21 19 42.9 +0.6
KBL Kabul 137.03 46 *e*PKPdf PKPdf 21 19 42.7 +0.8
KBL *ep*PKPdf pPKPdf 21 20 22.4 -0.2
ZAK Zakamensk 137.38 2 *e*PKHKP PKPpre 21 19 30.6
ZAK *e* 21 19 41.4
ZAK *e* 21 20 21.2
ZAK pmax pmax
comp=Z,10.0nm,1.2s
MDJ Mudanjiang 137.70 334 PKP PKPdf 21 19 42.3 -0.5
MDJ sPKP 21 20 36.5
MDJ PP PP 21 22 30.3 0.0
MDJ SKS SKSdf 21 26 38.0 -1.2
MDJ SS SS 21 40 28.5 +2.0
MDJ AMB AMB
comp=Z,890nm,15.2s
MDJ LR LR
comp=N,1μm,33.9s
MDJ LR LR
comp=E,2μm,35.2s
MDJ Mudanjiang 137.70 334 *e*PKPdf PKPdf 21 19 43.0 +0.2
MDJ *ep*PKPdf pPKPdf 21 20 22.5 -1.0
MDJ *e*SPKPdf 21 20 38.5
JSD Sado 137.77 321 P PKPpre 21 19 33.9
NWAO Narrogin (SRO) 138.15 195 PKhKP PKPpre 21 19 33.1
comp=E,11nm,0.5s,baz=157,slow=4.0,SNR=17
NWAO PKP PKPdf 21 19 44.2 +0.1
comp=E,30nm,0.7s,baz=188,slow=2.7,SNR=6.2
ASAR Alice Springs 138.38 221 PKhKP PKPpre 21 19 33.9
comp=E,22nm,0.8s,baz=135,slow=3.2,SNR=50
ASAR PKP PKPdf 21 19 45.0 +0.3
comp=E,94nm,0.7s,baz=128,slow=2.1,SNR=29
ASAR pPKP pPKPdf 21 20 26.9 +1.4
comp=E,25nm,0.6s,baz=138,slow=2.5,SNR=2.4
JRY Ryogami san 138.54 318 P PKPpre 21 19 33.1
KSH Kashi 138.61 35 PKP PKPdf 21 19 40.3 -4.4
KSH *es*PKP 21 20 38.8
KSH PP PP 21 22 35.8 -0.6
KSH PKS 21 23 15.3
KSH *e*SKS SKSdf 21 26 33.0 -8.0
KSH SKKS SKKSac 21 29 10.8 -5.3
KSH AMB AMB
comp=Z,520nm,6.0s
KSH LR LR
comp=N,710nm,16.9s
KSH LR LR
comp=E,510nm,14.2s
KSH LR LR
comp=Z,1μm,19.3s
MJAR Matsushiro Arr 138.69 319 PKP PKPpre 21 19 34.7
MJAR PKP PKPdf 21 19 45.0 +0.1
MJAR pPKP pPKPdf 21 20 25.6 -0.1
MJAR SKPbc SKPbc 21 23 06.2 +0.7
MJAR Matsushiro Arr 138.69 319 PKhKP PKPpre 21 19 34.7
comp=Z,6.8nm,0.5s,baz=42,slow=3.6,SNR=15
MJAR PKP PKPdf 21 19 45.0 +0.1
comp=Z,43nm,0.6s,baz=100,slow=1.1,SNR=19
MJAR pPKP pPKPdf 21 20 25.6 -0.1
comp=Z,18nm,1.0s,baz=120,slow=0.9,SNR=2.1
MJAR SKPbc SKPbc 21 23 06.2 +0.7
comp=Z,21nm,1.0s,baz=89,slow=3.1,SNR=8.0
MJAR Matsushiro Arr 138.69 319 PKHKP PKPpre 21 19 34.7
MJAR 21 19 45.0
MJAR 21 20 25.6
MAJO Matsushiro 138.69 319 *e*PKPpre PKPpre 21 19 36.5
MAJO *e*PKPdf PKPdf 21 19 44.4 -0.5
MAT Matsushiro 138.69 319 PKP PKPdf 21 19 44.8 -0.1
MAT Matsushiro 138.69 319 P PKPpre 21 19 34.2
JOD2 Odawara 2 138.84 317 P PKPpre 21 19 36.1
KLBR Kellerberrin 139.28 196 *e*PKP PKPpre 21 19 36.4
comp=Z,74nm,0.7s
JGF Kuroka 139.80 318 P PKPdf 21 19 40.1 -6.9
ULN Ulaanbaatar 139.92 359 *e*PKPpre PKPpre 21 19 38.2
ULN *e*PKPdf PKPdf 21 19 47.4 +0.7
ULN *ep*PKPdf pPKPdf 21 20 26.7 -0.8
ULN *e*SKPab 21 23 18.6
ULN Ulaanbaatar 139.92 359 *e*PKHKP PKPpre 21 19 38.2
ULN *e* 21 19 47.4
ULN *e* 21 20 26.7
ULN Ulaanbaatar 139.92 359 P PKPpre 21 19 39.2
ULN Ulaanbaatar 139.92 359 PKPdf PKPpre 21 19 38.0
SNR=31
SONM Songino Array 139.97 359 PKP PKPpre 21 19 38.9
SONM PKP PKPdf 21 19 47.0 +0.1
SONM pPKP pPKPdf 21 20 27.4 -0.2
SONM SKPab 21 23 20.9
SONM SKKPbc 21 31 41.8
SONM Songino Array 139.97 359 PKhKP PKPpre 21 19 38.9
comp=Z,9.5nm,0.6s,baz=328,slow=3.3,SNR=30
SONM PKP PKPdf 21 19 47.0 +0.1
comp=Z,18nm,0.6s,baz=318,slow=1.8,SNR=24
SONM pPKP pPKPdf 21 20 27.4 -0.2
comp=Z,17nm,0.8s,baz=346,slow=1.2,SNR=3.2
SONM SKPab 21 23 21.0
comp=Z,9.4nm,0.9s,baz=311,slow=3.3,SNR=3.6
SONM SKKPbc 21 31 41.8
comp=Z,4.2nm,0.9s,baz=165,slow=4.6,SNR=3.6
SONM Songino Array 139.97 359 PKHKP PKPpre 21 19 38.9
SONM 21 19 47.0
SONM 21 20 27.4
CN2 Changchun 140.05 338 *e*PKP PKPdf 21 19 40.3 -6.8

CN2 PP PP 21 22 43.0 -1.7
CN2 PKS 21 23 14.8
CN2 eSS SS 21 40 48.0 -5.9
CN2 AMB AMB
comp=Z,400nm,4.0s
CN2 LR LR
comp=N,800nm,22.0s
CN2 LR LR
comp=E,1μm,22.0s
CBIJ Chichi jima 140.34 304 PKhKP PKPpre 21 19 39.7
comp=E,44nm,0.5s,baz=281,slow=18,SNR=6.3
CBIJ PKP PKPdf 21 19 49.0 +0.8
comp=E,47nm,0.5s,baz=255,slow=12,SNR=6.2
WB2 Warramunga Arr 140.61 225 ePKPdf PKPpre 21 19 41.6
WB2 epPKPdf PKPdf 21 19 47.9 -1.0
WB2 epPKPdf pPKPdf 21 20 30.0 +0.3
WRA Warramunga Arr 140.62 225 PKhKP PKPpre 21 19 42.4
comp=E,25nm,0.4s,baz=134,slow=2.8,SNR=94
WRA PKP PKPdf 21 19 49.6 +0.8
comp=E,162nm,0.9s,baz=136,slow=1.6,SNR=54
WRA pPKP pPKPdf 21 20 30.7 +1.0
comp=E,42nm,0.8s,baz=125,slow=1.4,SNR=2.0
WRA PP PP 21 22 46.0 -3.0
comp=E,6.3nm,1.0s,baz=128,slow=6.3,SNR=7.3
WMQ Urumqi 140.71 21 PKP PKPdf 21 19 47.5 -0.8
WMQ sPKP 21 20 46.5
WMQ PP PP 21 22 52.5 +3.8
WMQ PKS 21 23 21.8
WMQ SKS SKSdf 21 26 39.5 -4.7
WMQ SKKS SKKSac 21 29 25.0 -3.1
WMQ SS SS 21 41 01.3 -0.3
WMQ AMB AMB
comp=Z,2μm,6.5s
WMQ LR LR
comp=N,2μm,24.0s
WMQ LR LR
comp=E,1μm,25.0s
WMQ LR LR
comp=Z,1μm,21.6s
GUMO Guam 141.02 282 PKhKP PKPpre 21 19 44.2
comp=Z,36nm,0.5s,baz=184,slow=17,SNR=5.3
GUMO pPKP pPKPdf 21 20 32.2 +1.8
comp=Z,20nm,0.3s,baz=257,slow=1.5,SNR=2.2
GUMO Guam 141.02 282 P PKPpre 21 19 44.8
JWT Wachi 141.27 320 P PKPdf 21 19 43.3 -6.3
JAD Aida 142.27 320 P PKPdf 21 19 47.3 -4.1
SNY Shenyang 142.44 338 ||PKP PKPdf 21 19 44.8 -6.7
SNY SS SS 21 41 19.0 -2.7
SNY LR LR
comp=N,1μm,22.8s
SNY LR LR
comp=E,810nm,19.2s
JHS Saijyo 142.90 321 P PKPdf 21 19 48.8 -3.7
JMN Monobe 143.22 319 P PKPdf 21 19 51.2 -1.9
DGAR Diego Garcia 143.69 114 ePKPdf PKPdf 21 19 52.7 -1.9
BHK Bhakra 143.93 45 ex x 21 20 30.6
KSRS Korea Array 144.10 329 PKP PKPdf 21 19 51.6 -2.9
comp=E,48nm,0.5s,baz=42,slow=3.8,SNR=78
KSRS pPKP pPKPdf 21 20 32.8 -2.6
comp=E,30nm,0.7s,baz=47,slow=3.6,SNR=2.2
KSRS Korea Array 144.10 329 PKIKP PKPdf 21 19 51.7 -2.9
KSRS 21 20 32.8
KSRS pmax pmax
comp=Z,48nm,0.5s
KSRS pmax pmax
comp=Z,30nm,0.7s
SDNR Sundarnagar 144.27 45 ePKP PKPdf 21 19 52.5 -2.5
INCN Inchon 144.72 330 ePKP PKPdf 21 19 53.5 -2.2
INCN epPKPdf pPKPdf 21 20 34.0 -2.5
INCN Inchon 144.72 330 PKPbc PKPdf 21 19 53.7 -2.0
SNR=17
BHV Bhavnagar 144.82 63 ePKP PKPdf 21 19 55.5 -0.7
KKR Kurukshetra 145.04 47 ePKP PKPbc 21 19 56.5 +0.4
AJM Ajmer 145.12 54 ||iP PKPbc 21 19 55.4 -1.1
AJM i pP 21 20 36.4
KLP Kalpa 145.13 43 ePKP PKPbc 21 19 57.7 +1.3
RTK Rohtak 145.24 49 ePKP PKPbc 21 19 57.4 +0.6
KHET Khetri 145.27 50 ePKP PKPdf 21 19 57.1 +0.3
JTU Tsushima 145.46 324 P PKPdf 21 19 57.2 +0.2
JNU Nakatsue 145.53 321 ePKPdf PKPdf 21 19 56.7 -0.8
JNU epPKPdf pPKPdf 21 20 36.7 -1.3
JNU Nakatsue 145.53 321 P PKPdf 21 19 55.9 -1.3
DL2 Dalian 145.72 338 ||iPKPbc PKPbc 21 19 55.5 -2.4
DL2 pPKP pPKPdf 21 20 34.0 -4.1
DL2 sPKP 21 20 51.5
DL2 PP PP 21 23 18.5 -0.3
DL2 SS SS 21 41 55.3 -3.9
DL2 AMB AMB
comp=Z,880nm,10.5s
KUDL Kundal 145.76 50 ePKP PKPdf 21 19 54.6 -3.1
KUDL i x x 21 20 34.3
NDI New Delhi 146.02 48 ePKP PKPdf 21 19 58.0 -0.1
NDI ex x 21 29 52.0
SONA Sohna 146.15 49 ePKP PKPdf 21 19 58.9 +0.6
BJI Beijing 146.41 345 PKPbc PKPbc 21 19 57.0 -2.9
BJI pPKP pPKPdf 21 20 37.3 -1.9
BJI LR LR
comp=N,980nm,32.7s
BJI LR LR
comp=E,1μm,33.9s
BJT Baijiatuan 146.43 345 ePKPdf PKPdf 21 19 59.0 +0.5
BJT epPKPdf pPKPdf 21 20 39.1 -0.2
JOSI Joshimath 146.62 44 ePKP PKPdf 21 19 58.1 -1.0
JSU Suzuyama 146.85 319 P PKPdf 21 20 00.1 +0.6
BTO Baotou 146.96 354 ePKPbc PKPbc 21 20 00.0 -1.5
JFU Fukue jima 2 147.15 322 P PKPdf 21 20 01.7 +1.8
POO Poona 147.28 68 ePKP PKPdf 21 20 01.5 +1.1
AGRA Agra 147.33 50 ePKP PKPdf 21 20 00.1 -0.3
AGRA ePKP 21 20 01.3
KNA Kununurra 147.35 225 P PKPdf 21 20 01.0 +0.3
FITZ Fitzroy Crossi 147.66 217 ePKP PKPdf 21 20 01.4 +0.2
comp=E,1μm,0.8s
FITZ epPKP pPKPdf 21 20 44.6 +2.6
FITZ Fitzroy Crossi 147.66 217 PKPbc PKPbc 21 20 01.6 -2.5
comp=E,772nm,0.9s,baz=180,slow=1.5,SNR=199
FITZ pPKPbc pPKPbc 21 20 43.6 -0.9
comp=E,81nm,0.4s,baz=230,slow=4.4,SNR=2.2
FITZ Fitzroy Crossi 147.66 217 P PKPdf 21 20 01.7 +0.5
PTH Pithoragarh 147.68 44 ex PKPdf 21 20 02.9 +2.0
PTH ex pPKPdf 21 20 43.9 +2.2
HMDM Hanimaadhoo 147.80 89 P PKPdf 21 20 02.9 +1.4
KAD Karad 147.88 70 ePKP PKPdf 21 20 01.5 0.0
GTA Gaotai 147.96 9 PKPbc PKPbc 21 20 00.8 -3.5
GTA pPKP pPKPdf 21 20 42.8 +0.9
GTA sPKP 21 21 00.5
GTA PKS 21 23 34.0
GTA SKS SKSdf 21 26 50.0 -5.3
GTA SS SS 21 42 24.8 +0.8
GTA AMB AMB
comp=Z,820nm,11.0s
GTA LR LR
comp=N,1μm,21.4s
GTA LR LR
comp=E,580nm,20.8s
GTA LR LR
comp=Z,2μm,20.8s
MBWA Marble Bar 148.19 206 ePKPdf PKPdf 21 20 02.1 +0.1
MBWA ePKPbc PKPbc 21 20 05.5 +0.1
MBWA epPKPdf pPKPdf 21 20 42.0 -0.8
MBWA Marble Bar 148.19 206 P PKPdf 21 20 02.2 +0.2
MBWA Marble Bar 148.19 206 PKPdf PKPdf 21 20 02.4 +0.5
SNR=77
BAKI Biak 148.36 255 P PKPdf 21 20 04.1 +1.6
BHPL Bhopal 148.81 57 ePKP PKPdf 21 20 02.5 -0.4
BHPL i x x 21 20 43.8
JAM Amami Oshima 149.37 315 P PKPdf 21 20 05.6 +1.9
AKL Akola 149.45 62 ePKP PKPdf 21 20 04.1 +0.1
AKL i x x 21 30 12.7
TIY Taiyuan 149.46 349 PKPbc PKPdf 21 20 02.3 -1.2
TIY AMB AMB
comp=Z,1μm,9.6s
TIY LR LR
comp=N,370nm,14.4s
TIY LR LR
comp=E,990nm,19.1s
TIY LR LR
comp=Z,2μm,32.3s
JMZ Minamidaito 2 149.67 310 P PKPdf 21 20 08.3 +4.1
TIA Tai'an 149.71 341 PKPbc PKPdf 21 20 03.5 -0.5
TIA AMB AMB
comp=Z,4μm,11.6s
TIA LR LR
comp=N,780nm,22.0s
TIA LR LR
comp=E,980nm,21.4s
TIA LR LR
comp=Z,1μm,21.4s
LATR Latur 149.78 66 ex PKPdf 21 20 05.2 +0.7
TLE Tual 149.90 245 P PKPdf 21 20 06.5 +1.6
JOW Kunigami 151.27 314 PKP PKPdf 21 20 08.7 +2.0
comp=Z,134nm,1.0s
JOW Kunigami 151.27 314 P PKPdf 21 20 07.9 +1.2
ALBI Allahabad 151.29 50 ex PKPbc 21 20 10.0 -2.8
ALBI ex x 21 20 49.5
TRD Trivandrum 151.60 86 ||ePKP PKPdf 21 20 06.7 -0.8
LZH Lanzhou 151.66 3 ||PKPbc PKPdf 21 20 07.0 0.0
LZH pPKP pPKPdf 21 20 49.0 +1.1
LZH sPKP 21 21 07.0
LZH PP PP 21 23 55.0 +2.0
LZH SKKS SKKSac 21 30 28.0 -2.0
LZH SS SS 21 43 05.3 +0.3
LZH AMB AMB
comp=Z,2μm,7.3s
LZH LR LR
comp=N,1μm,17.0s
LZH LR LR
comp=E,460nm,18.5s
LZH LR LR
comp=Z,2μm,21.0s
HYB Hyderabad 151.88 67 i PKP PKPdf 21 20 08.5 +0.7
HYB e 21 20 15.0
HYB ePKPAB PKPab 21 20 22.0 -2.1
HYB e 21 20 48.0
HYB e 21 21 14.0
HYB ePP PP 21 23 58.0 +1.6
HYB e 21 24 32.0
HYB e 21 28 10.0
HYB e 21 30 28.0
HYB e 21 34 00.0
SSE Sheshan 152.53 330 PKPbc PKPdf 21 20 08.0 -0.4
NJ2 Nanjing 152.79 335 ePKPbc PKPdf 21 20 09.5 +0.7
NJ2 PP PP 21 23 58.0 -1.8
NJ2 SKS SKSdf 21 26 59.0 -2.8
NJ2 SKKS SKKSac 21 30 36.0 -0.4
NJ2 AMB AMB
comp=Z,2μm,7.2s
NJ2 LR LR
comp=N,2μm,33.8s
NJ2 LR LR
comp=E,2μm,29.2s
NJ2 LR LR
comp=Z,2μm,23.5s
XAN Xi'an 153.58 354 PKPbc PKPdf 21 20 09.0 -0.9
XAN AMB AMB
comp=Z,520nm,9.2s
XAN LR LR
comp=N,1μm,31.0s
XAN LR LR
comp=E,330nm,31.0s
LSA Lhasa 154.20 30 PKPbc PKPdf 21 20 11.8 +0.9
LSA Lhasa 154.20 30 ePKPdf PKPdf 21 20 11.7 +0.8
LSA ePKPbc PKPbc 21 20 20.0 +0.8
LSA ePKPab PKPab 21 20 34.6 +1.2
LSA epPKPdf pPKPdf 21 20 53.0 +1.2
MDRS Chennai 154.47 76 ex PKPab 21 20 28.2 -6.9
MDRS ex x 21 23 49.2
PALK Pallekele 155.28 89 ePKPdf PKPdf 21 20 13.1 +0.3
PALK ePKPbc PKPdf 21 20 22.0 +9.2
PALK epPKPdf pPKPdf 21 20 53.7 0.0
WHN Wuhan 155.82 341 ||PKP PKPdf 21 20 12.0 -1.1
WHN PKPab PKPab 21 20 40.8 +0.6
WHN pPKP pPKPdf 21 20 51.3 -2.7
WHN LR LR
comp=N,1μm,16.8s
WHN LR LR
comp=E,2μm,20.3s
WHN LR LR
comp=Z,4μm,25.1s
NLAI Namlea 156.00 244 P PKPab 21 20 42.9 +1.2
NLAI Namlea 156.00 244 P PKPdf 21 20 14.1 +0.3
VIS Vishakhapatnam 156.09 63 i P PKPdf 21 20 13.7 0.0
VIS ex x 21 20 59.7
comp=Z,125nm,1.5s
VIS i x x 21 30 48.4
VIS i x x 21 30 48.7
CD2 Chengdu 156.81 4 PKP PKPdf 21 20 15.0 +0.7
CD2 PKPab PKPab 21 20 45.5 +1.0
CD2 pPKP pPKPdf 21 20 57.8 +2.5
CD2 sPKP 21 21 14.5
CD2 PKS 21 23 47.8
CD2 PP PP 21 24 24.0 +2.2
CD2 SKS SKSdf 21 27 03.5 -2.8
CD2 SKKS SKKSac 21 30 57.3 -0.5
CD2 SS SS 21 43 59.3 -1.6
CD2 AMB AMB
comp=Z,3μm,7.8s
CD2 LR LR
comp=N,1μm,21.1s
CD2 LR LR
comp=E,850nm,27.9s
CD2 LR LR
comp=Z,1μm,27.0s
MMRI Maumere 156.85 226 P PKPab 21 20 46.3 +1.1
comp=Z,8μmcomp=Z,414nm,1.3s
MMRI Maumere 156.85 226 P PKPdf 21 20 14.3 -0.6
ENH Enshi 157.22 351 ePKPdf PKPdf 21 20 14.1 -0.8
ENH ePKPab PKPab 21 20 45.6 -0.6
TNTI Ternate 157.28 253 P PKPdf 21 20 15.5 +0.1
comp=Z,4μmcomp=Z,79nm,2.5s
TNTI Ternate 157.28 253 P PKPdf 21 20 15.0 -0.4
YHNB Yeheng 157.36 320 ePKPdf PKPdf 21 20 15.1 -0.1
CAL Calcutta 157.73 47 ePKP PKPdf 21 20 14.7 -1.1
CAL ex x 21 31 08.1
CAL AMP 21 35 17.2
comp=Z,2μm,18.6s
SHL Shillong 157.89 35 ||iP PKPdf 21 20 15.5 -0.3
SHL ex x 21 31 02.0
SSLB Suanglung 158.25 319 ePKPdf PKPdf 21 20 16.3 0.0
SSLB ePKPab PKPab 21 20 50.0 -1.1
YULB Yu-li 158.30 318 ePKPdf PKPdf 21 20 16.4 0.0
BBSI Bau Bau 158.64 233 P PKPdf 21 20 20.2 +3.1
comp=Z,3μmcomp=Z,68nm,2.7s
BBSI Bau Bau 158.64 233 P PKPdf 21 20 18.2 +1.1
AGT Agartala 158.78 39 i P PKPdf 21 20 13.0 -4.0
AGT i x x 21 20 54.0
TPUB Ta-pu 158.81 319 ePKPdf PKPdf 21 20 17.0 0.0
QZH Quanzhou 158.82 326 i PKP PKPdf 21 20 13.5 -3.5
QZH PKPab PKPab 21 20 49.0 -4.4
QZH PP PP 21 24 34.0 +0.4
QZH AMB AMB
comp=Z,2μm,10.2s
QZH LR LR
comp=N,1μm,18.8s
QZH LR LR
comp=E,3μm,23.4s
QZH LR LR
comp=Z,4μm,35.4s
TWG Pinlang 158.84 317 ePKPdf PKPdf 21 20 17.2 +0.2
KDI Kendari 159.49 236 P PKPdf 21 20 18.9 +0.8
KDI Kendari 159.49 236 P PKPdf 21 20 18.2 +0.1
MNI Manado 159.89 253 P PKPdf 21 20 18.1 -0.5
DAV Davao City (W) 160.21 270 PKP PKPdf 21 20 20.1 +1.2
comp=Z,202nm,0.4s,baz=276,slow=15,SNR=3.7
DAV pPKP pPKPdf 21 21 01.2 +1.3
comp=Z,101nm,0.4s,baz=36,slow=22,SNR=1.0
DAV Davao City (W) 160.21 270 ||eP PKPdf 21 20 16.9 -1.9
KMSI Cibinong 160.40 250 P PKPdf 21 20 19.9 +0.8
BKSI Bulukumba 160.62 229 P PKPdf 21 20 20.7 +1.3
BKSI Bulukumba 160.62 229 P PKPdf 21 20 19.2 -0.2
LUWI Luwuk 160.84 244 P PKPdf 21 20 20.0 +0.4
IGBI Denpasar 161.08 210 P PKPdf 21 20 19.4 -0.4
KHKI Kahang-Kahang 161.23 212 P PKPdf 21 20 21.0 +1.0
comp=Z,4μmcomp=Z,72nm,1.8s
KHKI Kahang-Kahang 161.23 212 P PKPdf 21 20 18.7 -1.3
GYA Guiyang 161.28 357 i PKP PKPdf 21 20 18.5 -1.2
GYA PKPab PKPab 21 21 06.8 +2.8
GYA sPKP 21 21 18.8
GYA PKS 21 23 51.0
GYA SKKS SKKSac 21 31 16.5 -4.7
GYA SS SS 21 44 46.5 -1.6
GYA AMB AMB
comp=Z,2μm,11.5s
GYA LR LR
comp=N,1μm,25.7s
GYA LR LR
comp=E,1μm,27.3s
GYA LR LR
comp=Z,970nm,27.3s
SRBI Singaraja 161.67 212 P PKPdf 21 20 21.4 +1.0
comp=Z,6μmcomp=Z,180nm,1.9s
SRBI Singaraja 161.67 212 P PKPdf 21 20 20.3 -0.1
NBBI Negara 161.73 210 P PKPdf 21 20 11.6 -8.9
SPSI Sidrap Palu 161.77 231 P PKPdf 21 20 21.1 +0.5
MRSI Marisa 162.24 247 P PKPdf 21 20 19.7 -1.4
TTSI Tana Toraja 162.29 234 P PKPdf 21 20 22.0 +0.9
GMJI Gumukmas 162.36 206 P PKPdf 21 20 21.9 +0.8
comp=Z,6μmcomp=Z,81nm,1.3s
GMJI Gumukmas 162.36 206 P PKPdf 21 20 21.5 +0.4
KMI Kunming 162.42 9 PKP PKPdf 21 20 20.5 -0.4
KMI pPKP pPKPdf 21 21 01.0 -0.9
KMI PP PP 21 24 52.0 -0.2
KMI SKKS SKKSac 21 31 23.8 -3.3
KMI AMB AMB
comp=Z,1μm,12.5s
KMI LR LR
comp=N,730nm,22.6s
KMI LR LR
comp=E,770nm,20.5s
KMI LR LR
comp=Z,1μm,27.7s
KRKI Karangkates 162.88 204 P PKPdf 21 20 23.9 +2.3
BCPH Baguio City Da 163.01 302 ||eP PKPdf 21 20 19.8 -1.8
KMMI Kalianget 163.19 210 P PKPdf 21 20 24.8 +2.8
KMMI Kalianget 163.19 210 P PKPdf 21 20 22.7 +0.7
PWJI Pagerwojo 163.25 202 P PKPdf 21 20 22.1 +0.1
comp=Z,6μmcomp=Z,103nm,1.9s
PWJI Pagerwojo 163.25 202 P PKPdf 21 20 21.4 -0.6
HKC Hong Kong Obse 163.28 331 ||PKPdf PKPdf 21 20 22.0 +0.2
SJI Sawahan 163.53 202 P PKPdf 21 20 22.6 +0.3
comp=Z,5μmcomp=Z,105nm,1.4s
SJI Sawahan 163.53 202 P PKPdf 21 20 22.4 +0.1
TOLI Toli-Toli 163.55 247 P PKPdf 21 20 22.8 +0.5
TGY Tagaytay City 163.67 294 PKP PKPdf 21 20 22.3 0.0
comp=Z,84nm,0.3s,baz=114,slow=2.8,SNR=3.5
TGY PKPab PKPab 21 21 16.5 +1.4
comp=Z,129nm,0.4s,baz=172,slow=17,SNR=6.7
NGJI Ngawi 163.98 201 P PKPdf 21 20 28.5 +5.8
NGJI Ngawi 163.98 201 P PKPdf 21 20 24.2 +1.5
BJII Banjamegara 164.56 195 P PKPdf 21 20 25.7 +2.5
comp=Z,5μmcomp=Z,61nm,2.4s
BJII Banjamegara 164.56 195 P PKPdf 21 20 23.0 -0.2
SMRI Semarang 164.62 198 P PKPdf 21 20 26.1 +2.8
SMRI Semarang 164.62 198 P PKPdf 21 20 24.9 +1.6
CISI Cisompet, Garu 164.73 188 P PKPdf 21 20 24.0 +0.6
comp=Z,4μmcomp=Z,191nm,1.3s
CISI Cisompet, Garu 164.73 188 P PKPdf 21 20 23.6 +0.2
KBKI Kotabaru 164.86 224 P PKPdf 21 20 24.3 +0.8
LEM Lembang 165.47 188 P PKPdf 21 20 25.6 +1.6
comp=Z,269nm,1.2s
LEM Lembang 165.47 188 P PKPdf 21 20 24.6 +0.6
DBJI Dramaga 165.83 185 P PKPdf 21 20 24.6 +0.3
comp=Z,6μmcomp=Z,129nm,1.9s
DBJI Dramaga 165.83 185 P PKPdf 21 20 24.4 +0.1
SBJI Serang 166.30 182 P PKPdf 21 20 27.3 +2.6
comp=Z,5μmcomp=Z,182nm,1.5s
RBSI Rajabasa 166.58 180 P PKPab 21 21 28.4 +0.9
CHRT Chiangrai 166.61 24 ||P PKPdf 21 20 22.5 -2.2
comp=Z,358nm,1.1s
MYLDM Lahad Datu 166.98 260 P PKPdf 21 20 26.1 +0.9
MYLDM Lahad Datu 166.98 260 P PKPdf 21 20 26.0 +0.8
BLSI Bandar Lampung 167.05 178 P PKPab 21 21 31.8 +2.2
BLSI Bandar Lampung 167.05 178 P PKPdf 21 20 27.3 +2.1
comp=Z,5μmcomp=Z,130nm,0.5s
CHG Chiang Mai 167.15 30 ||P PKPdf 21 20 24.4 -0.7
comp=Z,67nm,1.5s
CHTO Chiang Mai 167.15 30 ePKPdf PKPdf 21 20 24.2 -0.9
CHTO epPKPdf pPKPdf 21 21 05.4 -0.8
CHTO Chiang Mai 167.15 30 P pPKPdf 21 21 06.0 -0.1
CHTO Chiang Mai 167.15 30 P PKPdf 21 20 24.7 -0.4
CHTO Chiang Mai 167.15 30 PKPdf PKPdf 21 20 25.4 +0.3
SNR=38
LWLI Liwa 167.31 173 P PKPab 21 21 33.7 +3.0
TSM Tawau 167.37 255 P PKPdf 21 20 26.0 +0.5
CMAR Chiang Mai Arr 167.45 31 PKP PKPdf 21 20 25.3 0.0
comp=Z,33nm,1.0s,baz=280,slow=1.7,SNR=132
CMAR pPKP pPKPdf 21 21 06.2 -0.1
comp=Z,18nm,0.8s,baz=273,slow=2.4,SNR=6.2
CMAR PKPab PKPab 21 21 31.6 +0.2
comp=Z,45nm,0.8s,baz=316,slow=6.0,SNR=30
CMAR pPKPab pPKPab 21 22 10.9 +0.4
comp=Z,19nm,0.7s,baz=319,slow=6.1,SNR=9.4
CMAR Chiang Mai Arr 167.45 31 PKIKP PKPdf 21 20 25.3 0.0
CMAR 21 21 06.3
CMAR 21 21 31.6
KLI Kotabumi 167.53 176 P PKPab 21 21 34.6 +2.9
KLSI 167.70 176 P PKPab 21 21 33.6 +1.1
KLSI 167.70 176 P PKPdf 21 20 25.1 -0.6
comp=Z,7μmcomp=Z,110nm,2.4s
KLSI 167.70 176 P PKPdf 21 20 24.5 -1.2
MDSI Maura Dua 167.84 173 P PKPab 21 21 35.4 +2.3
MDSI Maura Dua 167.84 173 P PKPdf 21 20 24.4 -1.4
comp=Z,2μmcomp=Z,119nm,1.0s
MDSI Maura Dua 167.84 173 P PKPdf 21 20 23.8 -2.0
QIZ Qiongzhong 167.98 341 PKP PKPdf 21 20 25.0 -0.7
QIZ pPKP pPKPdf 21 21 04.8 -1.9
QIZ PP PP 21 25 19.3 -2.0
QIZ SS SS 21 45 58.8 +1.7
QIZ AMB AMB
comp=Z,2μm,13.0s
QIZ Qiongzhong 167.98 341 ePKPdf PKPdf 21 20 26.1 +0.4
QIZ epPKPdf pPKPdf 21 21 06.9 +0.2
SDKM Sandakan 168.34 261 P PKPdf 21 20 25.9 -0.3
KSI Kapahiang 168.36 165 P PKPab 21 21 38.9 +3.5
KSI Kapahiang 168.36 165 P PKPdf 21 20 25.9 -0.3
comp=Z,6μmcomp=Z,246nm,1.3s
KSI Kapahiang 168.36 165 P PKPdf 21 20 25.4 -0.8
BDT Bhumibol Dam 168.49 34 P PKPdf 21 20 25.0 -1.1
comp=Z,27nm,1.0s
KKM Kota Kinabalu 169.37 262 ePKPdf PKPdf 21 20 25.9 -0.9
KKM epPKPdf pPKPdf 21 21 08.0 +0.2
KKM ePKPab PKPab 21 21 40.4 0.0
KKM Kota Kinabalu 169.37 262 P PKPdf 21 20 26.6 -0.2
KKM Kota Kinabalu 169.37 262 P PKPdf 21 20 26.7 -0.1
TPI Tanjungpandan 169.46 191 P PKPab 21 21 42.1 +1.8
TPI Tanjungpandan 169.46 191 P PKPdf 21 20 26.1 -0.8
PDSI Padang 170.04 149 P PKPdf 21 20 26.0 -1.2
NST Nakhon Sawan 170.39 34 P PKPdf 21 20 26.2 -1.1
comp=Z,47nm,0.7s
PPI Padang Panjang 170.39 147 P PKPdf 21 20 27.0 -0.4
comp=Z,3μmcomp=Z,78nm,1.1s
PPI Padang Panjang 170.39 147 P PKPdf 21 20 26.3 -1.1
STKI Sintang 170.46 218 P pPKPab 21 22 28.7 +4.7
STKI Sintang 170.46 218 P PKPdf 21 20 27.6 +0.2
SDSI Sungai Dareh 170.49 154 P PKPdf 21 20 25.8 -1.7
comp=Z,2μmcomp=Z,69nm,1.8s
SDSI Sungai Dareh 170.49 154 P PKPdf 21 20 25.6 -1.9
MNSI Mandailing Nat 170.89 138 P PKPdf 21 20 26.4 -1.3
comp=Z,2μmcomp=Z,78nm,1.2s
MNSI Mandailing Nat 170.89 138 P PKPdf 21 20 26.4 -1.3
BTM Bintulu 171.36 240 P PKPdf 21 20 28.0 +0.1
BKNI Bangkinang 171.39 148 P PKPdf 21 20 26.4 -1.5
SBUM Sibu 171.64 232 P PKPdf 21 20 28.1 +0.1
SBUM Sibu 171.64 232 P PKPdf 21 20 28.2 +0.2
PSI Prapat 171.76 126 PKP PKPdf 21 20 26.8 -1.3
comp=Z,56nm,1.0s,baz=217,slow=6.1,SNR=25
PSI pPKP pPKPdf 21 21 08.9 -0.3
comp=Z,25nm,0.9s,baz=214,slow=4.8,SNR=3.3
PSI PKPab PKPab 21 21 51.7 +0.9
comp=Z,52nm,0.8s,baz=291,slow=4.0,SNR=10
KSM Kuching 172.28 217 ePKPdf PKPdf 21 20 28.1 -0.2
KSM epPKPdf pPKPdf 21 21 09.3 -0.1
KSM ePKPab PKPab 21 21 53.3 +0.3
KSM Kuching 172.28 217 P PKPdf 21 20 28.1 -0.2
KSM Kuching 172.28 217 P PKPdf 21 20 27.9 -0.4
MYKOM Kota Tinggi 173.90 163 P PKPdf 21 20 28.6 -0.3
MYKOM Kota Tinggi 173.90 163 P PKPdf 21 20 28.5 -0.5
KGM Kluang 173.94 158 P PKPdf 21 20 28.8 -0.2
FRIM Kepong 174.06 138 P PKPdf 21 20 28.8 -0.3
IPM Ipoh 174.44 124 ePKPdf PKPdf 21 20 27.6 -1.6
IPM epPKPdf pPKPdf 21 21 09.1 -1.2
IPM ePKPab PKPab 21 22 02.6 -0.1
IPM ePP PP 21 25 54.9 +0.1
IPM Ipoh 174.44 124 P PKPdf 21 20 28.8 -0.3
IPM Ipoh 174.44 124 P PKPdf 21 20 28.3 -0.8
KULM Kulim 174.52 115 ePKPdf PKPdf 21 20 28.1 -1.1
KULM epPKPdf pPKPdf 21 21 10.2 -0.1
KULM ePKPab PKPab 21 22 02.8 -0.4
KULM eSS SS 21 25 56.3 +0.7
KULM Kulim 174.52 115 P PKPdf 21 20 28.3 -0.8

KULM	**Kulim**	**174.52**	**115**	P		PKPdf	21 20 28.3	-0.9
KTGM	**Kuala Trenggan**	**176.60**	**133**	P		PKPdf	21 20 29.4	-0.3

IDC 26 21:05:59.6±1.6, 20°98N×121°35E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/23, mbtmp3.7/7, MS4.5/1, Ms1 4.5/1, ms1mx2.8/35, Error ellipse: s-maj=143.3km s-min=18.4km az=65.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Arrav**	**29.39**	**339**	P	P	21 12 05.0	+0.6
	0.2nm,0.6s,baz=156,slow=7.6,SNR=3.0						
SONM				LR	LR	21 23 03.9	
	comp=Z,831nm,20.0s,baz=273,slow=35						
MKAR	**Makanchi Array**	**40.78**	**318**	P	P	21 13 42.5	0.0
	0.8nm,0.7s,baz=110,slow=9.3,SNR=6.3						
WRA	**Warramunga Arr**	**42.61**	**162**	P	P	21 13 57.4	-0.3
	0.6nm,0.6s,baz=342,slow=8.5,SNR=5.4						
ZALV	**Zalesovo Beam**	**43.03**	**329**	P	P	21 14 00.4	-0.4
	1.2nm,0.5s,baz=112,slow=6.7,SNR=6.8						
KURK	**Kurchatov**	**44.67**	**322**	P	P	21 14 14.0	0.0
	1.6nm,0.9s,baz=114,slow=9.3,SNR=6.9						
ASAR	**Alice Springs**	**46.03**	**164**	P	P	21 14 25.3	+0.3
	0.4nm,0.4s,baz=348,slow=7.1,SNR=6.6						
BVAR	**Borovoye Array**	**50.27**	**322**	P	P	21 14 57.5	-0.1
	0.4nm,0.5s,baz=80,slow=10,SNR=3.8						

JMA 26 21:12:11.5±0.3, 43°71N×148°03E, h9km, M3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.70**	**259**	P	Pn	21 12 41.8	+0.5
NEM2				eS	Sn	21 13 03.8	+0.7
JRA	**Rausu**	**2.12**	**277**	P	Pn	21 12 47.7	+0.7
JRA				eS	Sn	21 13 14.3	+0.9
JNK	**Nakash**	**2.41**	**268**	P	Pn	21 12 51.5	+0.5
JNK				eS	Sn	21 13 20.9	+0.3
JAK	**Akkeshi**	**2.53**	**255**	P	Pn	21 12 53.3	+0.5
JAK				eS	Sn	21 13 24.3	+0.6
JAR	**Ashorobuto**	**3.13**	**264**	P	Pn	21 13 02.2	+1.3
JAR				eS	Sn	21 13 40.4	+2.0
JOB	**Onbets**	**3.17**	**257**	P	Pn	21 13 02.5	+1.0
JOB				eS	Sn	21 13 40.4	+1.1
JCH	**Churui**	**3.59**	**254**	P	Pn	21 13 07.8	+0.6
JNBK	**Urakawa-nobuka**	**4.13**	**252**	P	Pn	21 13 15.1	+0.4
JKB	**Kayabe**	**5.46**	**253**	P	Pn	21 13 33.7	+0.7
JKB				eS	Sn	21 14 34.1	-1.8

*IDC **26** 21:16:17.2±1.2, 6°98S×150°31E, h0km, mb4.4/5, mb1 4.5/5, mb1mx4.2/16, mbtmp4.3/5, Error ellipse: s-maj=91.7km s-min=27.9km az=120.0*
*NEIC **26** 21:16:22.9±2.6, 6°96S×150°44E, h44km±21km, mb4.5/4, Error ellipse: s-maj=24.3km s-min=11.1km az=89.0*
*ISCJB **26** 21:16:24.9±3.1, 7°05S±0°1×150°2E±0°2, h67km±26km, mb4.5/13, Error ellipse: s-maj=25.7km s-min=16.7km az=178.9*

ISC 26 21:16:24.5±2.8, 6°97S±0°09×150°3E±0°2, h52km±24km, n20, σ1°00/21, mb4.6/13, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.91**	**232**	*e*Pn	**Pn**	**21 17 23.1**	**+1.1**
PMG				Sn	**Sn**	**21 18 06.1**	**-0.6**
PMG	**Port Moresby**	**3.91**	**232**	P	**Pn**	**21 17 23.3**	**+1.3**
GUMO	**Guam**	**21.11**	**345**	*e*P	**P**	**21 21 02.7**	**-2.3**
	103nm,1.1s,mb5.1						
ASAR	**Alice Springs**	**22.86**	**222**	P	**P**	**21 21 24.2**	**+0.8**
	3.9nm,0.4s,mb4.2,baz=51,slow=9.6,SNR=5.0						
ARMA	**Armidale**	**23.36**	**177**	*e*P	**P**	**21 21 26.9**	**-1.6**
	54nm,1.5s,mb4.8						
FITZ	**Fitzroy Crossi**	**26.42**	**243**	*e*P	**P**	**21 21 56.5**	**-0.1**
	73nm,0.9s,mb5.2						
NACB	**Ninganchiao**	**41.72**	**319**	*e*P	**P**	**21 24 11.1**	**+2.6**
	18nm,0.7s,mb4.8						
YHNB	**Yeheng**	**42.20**	**319**	*e*P	**P**	**21 24 12.0**	**-0.5**
CASY	**Casey**	**65.22**	**197**	*e*P	**P**	**21 27 00.2**	**+0.1**
	2.5nm,0.6s,mb4.4						
TLY	**Talaya**	**70.72**	**331**	*e*P	**P**	**21 27 34.4**	**-0.5**
PALK	**Pallekele**	**70.81**	**280**	P	**P**	**21 27 36.5**	**+0.3**
MAW	**Mawson**	**82.61**	**203**	P	**P**	**21 28 41.4**	**-0.3**
	2.1nm,0.8s,mb4.2,baz=104,slow=7.9,SNR=4.6						
QSPA	**South Pole Qui**	**83.00**	**180**	*e*P	**P**	**21 28 43.3**	**-0.4**
	4.7nm,0.5s,mb4.8						
QSPA	**South Pole Qui**	**83.00**	**180**	P	**P**	**21 28 43.8**	**+0.1**
	6.5nm,0.7s,mb4.8,baz=35,slow=1.0,SNR=27						
MCK	**McKinley**	**83.83**	**23**	P	**P**	**21 28 48.3**	**+0.2**
	6.8nm,0.6s,mb5.0						
KURK	**Kurchatov**	**83.93**	**323**	*e*P	**P**	**21 28 48.5**	**-0.4**
	3.2nm,0.9s,mb4.5						
ILAR	**Eielson Array**	**85.11**	**23**	P	**P**	**21 28 54.2**	**-0.3**
	1.9nm,0.9s,mb4.2,baz=251,slow=5.3,SNR=11						
KBL	**Kabul**	**86.73**	**305**	*e*P	**P**	**21 29 03.4**	**+0.1**
	2.4nm,0.6s,mb4.6						
BRVK	**Borovoye**	**89.53**	**324**	P	**P**	**21 29 16.1**	**0.0**
NVAR	**Mina Array Bea**	**95.40**	**52**	P	**P**	**21 29 45.9**	**+2.3**
	0.6nm,0.8s,mb4.1,baz=274,slow=6.2,SNR=3.3						

*ISCJB **26** 21:20:01.2±0.6, 36°58N±0°03×71°4E±0°1, h120km±9km, mb4.0/7, Error ellipse: s-maj=14.4km s-min=5.4km az=8.5*
*NEIC **26** 21:20:02.5±1.4, 36°60N×71°32E, h116km±13km, mb4.5/4, Error ellipse: s-maj=15.1km s-min=9.9km az=208.0*
*IDC **26** 21:20:02.5±9.3, 36°61N×71°35E, h113km±62km, mb3.5/4, mb1 3.5/8, mb1mx3.3/27, mbtmp3.5/8, MS3.2/1, Ms1 3.2/1, ms1mx3.2/33, Error ellipse: s-maj=86.3km s-min=49.9km az=156.0*

ISC 26 21:20:02.4±0.5, 36°58N±0°03×71°3E±0°1, h114km±9km, n39, σ0°74/44, mb4.0/7, 3C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.79**	**170**	⇑P	**Pn**	**21 20 45.6**	**-0.1**
CEP				S	**Sn**	**21 21 19.0**	**-0.1**
CHCP	**Chirah Chowk**	**3.32**	**151**	P	**Pn**	**21 20 53.0**	**+0.3**
THW	**Thamme Wali**	**3.79**	**175**	⇑P	**Pn**	**21 20 58.2**	**-0.8**
KSH	**Kashi**	**4.70**	**50**	Pn	**Pn**	**21 21 08.0**	**-3.2**
KSH				Sn	**Sn**	**21 21 50.3**	**-14**
KSH	comp=N,280nm,0.5s			smax			
KSH	comp=E,160nm,0.4s			smax			
AML	**Almayashu**	**5.84**	**18**	P	**Pn**	**21 21 26.9**	**+0.3**
	SNR=151						
AML	**Almayashu**	**5.84**	**18**	*e*Pn	**Pn**	**21 21 26.4**	**-0.2**
AML				*e*Sn	**Sn**	**21 22 32.0**	**-0.2**
UCH	**Uchtor**	**6.16**	**23**	P	**Sn**	**21 22 38.5**	**-1.4**
	SNR=6.3						
UCH	**Uchtor**	**6.16**	**23**	*e*Pn	**Pn**	**21 21 32.0**	**+1.1**
UCH				*e*Sn	**Sn**	**21 22 39.1**	**-0.8**
EKS2	**Erkin-Say**	**6.37**	**17**	P	**Pn**	**21 21 33.9**	**+0.3**
	SNR=26						
EKS2	**Erkin-Say**	**6.37**	**17**	*e*Pn	**Pn**	**21 21 33.9**	**+0.3**
AAK	**Ala-Archa**	**6.53**	**21**	P	**Pn**	**21 21 36.5**	**+0.8**
	SNR=7.0						
AAK	**Ala-Archa**	**6.53**	**21**	*e*Pn	**Pn**	**21 21 36.3**	**+0.5**
AAK				*e*Sn	**Sn**	**21 22 48.6**	**-0.1**
AAK	**Ala-Archa**	**6.53**	**21**	P	**Pn**	**21 21 36.5**	**+0.7**
	comp=E,4.7nm,0.3s,baz=146,slow=7.3,SNR=13						
AAK				S	**Sn**	**21 22 48.7**	**0.0**
	comp=E,1.7nm,0.3s,baz=110,slow=21,SNR=7.1						
KK31	**Karatay Array**	**6.55**	**355**	P	**Pn**	**21 21 35.8**	**-0.2**
	comp=E,6.7nm,0.3s,baz=181,slow=13,SNR=50						
KK31				⇑S	**Sn**	**21 22 45.7**	**-3.5**
	comp=E,8.3nm,0.5s,baz=182,slow=22,SNR=9.2						
KKAR	**Karatay Array**	**6.55**	**355**	*e*Pn	**Pn**	**21 21 35.8**	**-0.2**
	comp=E,23nm,0.4s						
KBK	**Karagaybulak**	**6.69**	**24**	P	**Pn**	**21 21 39.6**	**+1.6**
	SNR=5.8						
ULHL	**Ulahol**	**6.82**	**32**	P	**Pn**	**21 21 40.3**	**+0.5**
	SNR=5.8						
CHMS	**Chumysh**	**6.94**	**21**	P	**Pn**	**21 21 41.8**	**+0.5**
	SNR=13						
TKM2	**Tokmak 2**	**7.14**	**26**	P	**Pn**	**21 21 44.4**	**+0.3**
	SNR=5.3						
TKM2	**Tokmak 2**	**7.14**	**26**	*e*Pn	**Pn**	**21 21 43.5**	**-0.6**
MK31	**Makanchi Array**	**13.08**	**35**	*e*Pn	**Pn**	**21 23 04.2**	**+0.5**
BVAR	**Borovoye Array**	**16.46**	**358**	P	**Pn**	**21 23 44.6**	**-1.8**
	comp=E,0.2nm,0.3s,baz=145,slow=7.9,SNR=2.5						
AKTK	**Aktyubinsk**	**16.84**	**329**	P	**Pn**	**21 23 51.7**	**+0.7**
AKTO	**Aktyubinsk**	**16.84**	**329**	P	**Pn**	**21 23 51.7**	**+0.7**
	comp=E,0.5nm,0.3s,baz=159,slow=10,SNR=4.1						
ZALV	**Zalesovo Beam**	**19.74**	**24**	P	**P**	**21 24 22.4**	**-0.6**
	comp=E,0.9nm,0.3s,baz=208,slow=10.0,SNR=7.5						
ARU	**Arti**	**21.64**	**341**	*e*P	**P**	**21 24 43.2**	**-0.1**
	comp=E,2.9nm,0.8s,mb3.7						
MALT	**Malatya**	**26.09**	**284**	P	**P**	**21 25 25.3**	**-0.1**
CHTO	**Chiang Mai**	**30.03**	**119**	P	**P**	**21 26 00.7**	**0.0**
FINES	**FINESS Array B**	**37.56**	**326**	P	**P**	**21 27 05.7**	**+0.5**
	comp=E,0.5nm,0.3s,mb3.8,baz=120,slow=12,SNR=3.6						
PSZ	**Piszkesteto**	**39.04**	**303**	*e*P	**P**	**21 27 17.2**	**-0.6**
	comp=E,2.0nm,0.7s,mb4.1						
ARCES	**ARCESS Array B**	**41.17**	**337**	P	**P**	**21 27 35.7**	**+0.6**
ARCES	**ARCESS Array B**	**41.17**	**337**	P	**P**	**21 27 35.7**	**+0.6**
	comp=E,0.6nm,0.5s,mb3.6,baz=112,slow=9.3,SNR=5.5						
HFS	**Hagfors**	**43.16**	**322**	P	**P**	**21 27 51.3**	**-0.1**
	comp=E,1.3nm,0.3s,mb4.1,baz=106,slow=9.4,SNR=9.8						
CLL	**Collm**	**43.34**	**309**	*e*pP	pP	21 28 18.0	-1.0
NOA	**NORSAR Array B**	**44.47**	**323**	P	**P**	**21 28 01.6**	**-0.2**
	comp=E,0.5nm,0.4s,mb3.6,baz=111,slow=7.7,SNR=7.1						
STU	**Stuttgart**	**46.06**	**306**	*e*P	**P**	**21 28 14.2**	**-0.3**
	comp=E,7.4nm,0.3s,mb4.9						
WLF	**Walferdange**	**47.88**	**307**	*e*P	**P**	**21 28 28.4**	**-0.2**
TGY	**Tagaytay City**	**49.49**	**104**	LR	LR	21 51 43.9	
	comp=E,28nm,20.2s,baz=18,slow=38						
TSUM	**Tsumeb**	**75.16**	**232**	P	**P**	**21 31 32.6**	**+0.2**

*NEIC **26** 21:39:36.9, 15°87N×98°84W, h16km, MD4.0(MEX), After MEX.*

MEX 26 21:39:36.9±0.7, 15°87N×98°84W, h16km±23km, MD4.0, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.86**	**53**	*e*P	Pb	21 39 50.1	-3.4
PNIG				*i* S	Sb	21 40 01.1	-3.7
PNIG	**Pinotepa**	**0.86**	**53**	*e*P	Pb	21 39 50.1	-3.4
PNIG				*i* S	Sb	21 40 01.1	-3.7
ACX	**Acapulco**	**1.39**	**316**	*i* P	Pn	21 39 59.5	-2.2
ACX	**Acapulco**	**1.39**	**316**	*i* P	Pn	21 39 59.5	-2.2
CAIG	**El Cayaco**	**1.80**	**311**	*i* P	Pn	21 40 03.7	-3.6
CAIG				*i* S	Sn	21 40 23.9	-5.9
CAIG	**El Cayaco**	**1.80**	**311**	*i* P	Pn	21 40 03.7	-3.6
CAIG				*i* S	Sn	21 40 23.9	-5.9
MEIG	**Mezcala**	**2.17**	**340**	*i* P	Pn	21 40 11.1	-1.4
MEIG				*i* S	Sn	21 40 35.0	-4.1
UTMO	**Huajuapan**	**2.19**	**27**	*i* P	Pn	21 40 10.8	-1.7
UTMO				*i* S	Sn	21 40 34.2	-5.1
VHO	**Vista Hermosa**	**2.35**	**59**	*i* P	Pn	21 40 12.7	-2.1
VHO				*i* S	Sn	21 40 38.7	-4.6
VHO	**Vista Hermosa**	**2.35**	**59**	*i* P	Pn	21 40 12.7	-2.1
VHO				*i* S	Sn	21 40 38.7	-4.6
PLIG	**Platanillo**	**2.59**	**346**	*i* P	Pn	21 40 14.4	-3.7
PLIG				*i* S	Sn	21 40 45.2	-4.1
PLIG	**Platanillo**	**2.59**	**346**	*i* P	Pn	21 40 14.4	-3.7
PLIG				*i* S	Sn	21 40 45.2	-4.1
ZIIG	**Zihuatanejo**	**3.05**	**305**	*i* P	Pn	21 40 18.0	-6.5
ZIIG				*i* S	Sn	21 40 56.8	-3.9
ZIIG	**Zihuatanejo**	**3.05**	**305**	*i* P	Pn	21 40 18.0	-6.5
ZIIG				*i* S	Sn	21 40 56.8	-3.9
PPM	**Popocatepetl**	**3.19**	**4**	*i* P	Pn	21 40 25.9	-0.5
PPM				*i* S	Sn	21 41 01.9	-2.1
PPM	**Popocatepetl**	**3.19**	**4**	*i* P	Pn	21 40 25.9	-0.5
PPM				*i* S	Sn	21 41 01.9	-2.1

*ISCJB **26** 21:42:27.9±0.5, 30°71N±0°07×83°27E±0°07, h10km, mb3.7/10, Error ellipse: s-maj=12.1km s-min=6.2km az=33.5*
*IDC **26** 21:42:27.8±1.2, 30°67N×83°34E, h0km, mb3.7/10, mb1 3.9/12, mb1mx3.7/27, mbtmp3.7/12, ML3.4/2, Error ellipse: s-maj=48.3km s-min=16.4km az=62.0*
*NEIC **26** 21:42:31.4±2.6, 30°77N×83°35E, h22km±19km, mb3.6/3, Error ellipse: s-maj=11.6km s-min=6.4km az=221.0*

ISC 26 21:42:29.8±0.5, 30°76N±0°07×83°38E±0°09, h10km, n25, σ0°77/26, mb3.7/10, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.80**	**97**	*e*Pn	**Pn**	**21 44 12.8**	**+3.1**
	12nm,0.8s						
LSA				*e*Sn	**Sn**	**21 45 31.9**	**+4.7**
KBL	**Kabul**	**12.66**	**291**	*e*Pn	**Pn**	**21 45 29.9**	**0.0**
	2.7nm,0.4s						
UCH	**Uchtor**	**13.47**	**331**	*e*Pn	**Pn**	**21 45 41.0**	**+0.1**
KKAR	**Karatay Array**	**16.02**	**324**	*e*Pn	**Pn**	**21 46 14.6**	**-0.6**
MK31	**Makanchi Array**	**16.03**	**357**	*e*Pn	**Pn**	**21 46 14.5**	**-0.7**
MKAR	**Makanchi Array**	**16.03**	**357**	Pn	**Pn**	**21 46 14.6**	**-0.6**
	0.0nm,0.3s,baz=187,slow=10.0,SNR=3.3						
CHTO	**Chiang Mai**	**18.45**	**127**	*e*P	**Pn**	**21 46 45.6**	**0.0**
	2.5nm,1.1s						
CMAR	**Chiang Mai Arr**	**18.69**	**127**	P	**Pn**	**21 46 48.2**	**-0.4**
	0.1nm,0.3s,baz=303,slow=12,SNR=12						
KURK	**Kurchatov**	**20.25**	**351**	*e*P	**P**	**21 47 05.3**	**+0.2**
	6.8nm,1.5s						
KURK	**Kurchatov**	**20.25**	**351**	P	**P**	**21 47 04.4**	**-0.7**
	1.0nm,0.7s,baz=169,slow=10,SNR=7.9						
ZALV	**Zalesovo Beam**	**23.19**	**2**	P	**P**	**21 47 36.3**	**-0.2**
	0.5nm,0.5s,mb3.2,baz=190,slow=7.5,SNR=4.6						
BVAR	**Borovoye Array**	**24.18**	**341**	P	**P**	**21 47 46.8**	**+0.7**
	0.6nm,0.4s,mb3.3,baz=149,slow=10,SNR=6.5						
BRVK	**Borovoye**	**24.24**	**341**	P	**P**	**21 47 47.0**	**+0.3**
SONM	**Songino Array**	**24.51**	**39**	P	**P**	**21 47 50.0**	**+0.8**
	0.7nm,0.7s,mb3.3,baz=218,slow=11,SNR=6.3						
ULN	**Ulaanbaatar**	**24.89**	**40**	P	**P**	**21 47 51.8**	**-0.8**
ABKAR	**Akbulak array**	**25.58**	**323**	*e*P	**P**	**21 48 00.1**	**+1.2**
	0.9nm,0.6s,mb3.5						
KIV	**Kislovodsk**	**34.58**	**304**	P	**P**	**21 49 19.1**	**+0.4**
FINES	**FINESS Array B**	**47.95**	**327**	P	**P**	**21 51 08.6**	**+0.3**
	1.0nm,0.8s,mb3.9,baz=92,slow=9.5,SNR=3.7						
ARCES	**ARCESS Array B**	**50.40**	**337**	P	**P**	**21 51 27.1**	**+0.3**
	1.8nm,0.9s,mb4.1,baz=82,slow=8.9,SNR=4.6						
MORC	**Morvsky Berou**	**51.98**	**311**	*e*P	**P**	**21 51 38.2**	**-0.8**
KMBO	**Kilima Mbogo**	**54.09**	**243**	P	**P**	**21 51 55.6**	**+0.6**
WRA	**Warramunga Arr**	**70.27**	**129**	P	**P**	**21 53 43.4**	**-0.1**
	2.5nm,0.5s,mb4.4,baz=331,slow=5.7,SNR=15						
ASAR	**Alice Springs**	**72.62**	**132**	P	**P**	**21 53 57.3**	**-0.3**
	0.5nm,0.7s,mb3.6,baz=316,slow=6.1,SNR=4.8						
ILAR	**Eielson Array**	**77.05**	**20**	P	**P**	**21 54 22.9**	**+0.2**
	0.5nm,0.6s,mb3.6,baz=320,slow=4.6,SNR=4.9						
STKA	**Stephens Creek**	**83.21**	**133**	P	**P**	**21 54 54.2**	**-2.1**
	4.0nm,1.1s,mb4.3,baz=315,slow=5.7,SNR=2.8						

*IDC **26** 21:42:47.8±1.7, 8°04S×126°46E, h0km, mb3.8/1, mb1 4.0/4, mb1mx3.6/16, mbtmp3.8/4, ML3.8/2, Error ellipse: s-maj=101.6km s-min=27.5km az=70.0*
*ISCJB **26** 21:42:50.6±0.7, 8°40S±0°05×126°21E±0°09, h33km, mb3.7/4, Error ellipse: s-maj=12.6km s-min=7.0km az=163.0*
*NEIC **26** 21:43:00.7±3.9, 8°65S×126°14E, h121km±42km, mb3.7/2, Error ellipse: s-maj=32.3km s-min=12.3km az=212.0*

ISC 26 21:42:52.9±0.7, 8°38S±0°05×126°26E±0°08, h35km, n16, σ1°14/20, mb3.7/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**9.69**	**184**	*e*Pn	**Pn**	**21 45 12.6**	**+2.8**
FITZ				*e*Sn	**Sn**	**21 46 56.7**	**-0.7**
FITZ	**Fitzroy Crossi**	**9.69**	**184**	Pn	**Pn**	**21 45 12.5**	**+2.7**
	0.7nm,0.3s,baz=26,slow=8.4,SNR=25						
FITZ				Sn	**Sn**	**21 46 56.1**	**-1.3**
	0.9nm,0.3s,baz=204,slow=14,SNR=3.3						
WRA	**Warramunga Arr**	**13.91**	**147**	Pn	**Pn**	**21 46 06.7**	**-0.9**
WRA				Sn	**Sn**	**21 48 40.2**	**-0.6**
WRA	**Warramunga Arr**	**13.91**	**147**	Pn	**Pn**	**21 46 06.7**	**-0.9**
	0.7nm,0.3s,baz=323,slow=14,SNR=6.8						
WRA				Sn	**Sn**	**21 48 40.2**	**-0.6**
	0.8nm,0.3s,baz=314,slow=28,SNR=5.8						
MBWA	**Marble Bar**	**14.18**	**206**	*e*Pn	**Pn**	**21 46 12.9**	**+1.5**
MBWA				*e*Sn	**Sn**	**21 48 46.9**	**-0.6**
ASAR	**Alice Springs**	**16.88**	**155**	P	**Pn**	**21 46 47.8**	**+1.3**
	0.3nm,0.3s,baz=327,slow=11,SNR=15						
ASAR				S	**S**	**21 49 54.0**	**-8.5**
	0.2nm,0.3s,baz=312,slow=20,SNR=5.1						
CTAO	**Charters Tower**	**22.58**	**123**	*e*P	**P**	**21 47 51.3**	**+0.9**
	1.3nm,0.4s,mb3.7						
STKA	**Stephens Creek**	**27.39**	**151**	P	**P**	**21 48 32.9**	**-2.2**
STKA	**Stephens Creek**	**27.39**	**151**	P	**P**	**21 48 39.1**	**+4.0**
	0.8nm,0.6s,mb3.5,baz=319,slow=11,SNR=2.6						
KULM	**Kulim**	**28.92**	**297**	P	**P**	**21 48 49.3**	**+0.3**
ULN	**Ulaanbaatar**	**58.52**	**345**	*e*P	**P**	**21 52 46.3**	**+0.7**
	0.4nm,0.4s,mb3.8						
MK31	**Makanchi Array**	**67.41**	**329**	P	**P**	**21 53 44.2**	**-0.5**
MKAR	**Makanchi Array**	**67.41**	**329**	P	**P**	**21 53 43.4**	**-1.3**
	0.5nm,0.5s,mb3.8,baz=131,slow=4.4,SNR=5.2						
UCH	**Uchtor**	**69.02**	**321**	*e*P	**P**	**21 53 54.4**	**-0.5**
CPUP	**Villa Florida**	**145.32**	**174**	PKPbc	PKPbc	22 02 30.1	+2.5
CPUP	**Villa Florida**	**145.32**	**174**	PKPbc	PKPbc	22 02 30.1	+2.5
	0.5nm,0.3s,baz=191,slow=5.2,SNR=3.8						

*NEIC **26** 21:45:26.6, 19°39N×65°77W, h95km, MD3.6(RSPR), After RSPR.*

RSPR 26 21:45:26.6, 19°39N×65°77W, h95km±8km, MD3.6/11, 14C-12D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBYP	**Canovanas**	**1.11**	**184**	⇑*e*P	Pn	21 45 46.2	-1.8
CBYP				eS	Sn	21 46 04.2	+0.2
CBYP	**Canovanas**	**1.11**	**184**	⇑*e*P	Pn	21 45 46.2	-1.8
CBYP				eS	Sn	21 46 04.2	+0.1
HUMP	**Col San Antoni**	**1.24**	**183**	⇑*e*P	Pn	21 45 48.0	-1.5
HUMP				eS	Sn	21 46 06.5	-0.2
HUMP	**Col San Antoni**	**1.24**	**183**	⇑*e*P	Pn	21 45 48.2	-1.3
HUMP				eS	Sn	21 46 06.5	-0.2
STVI	**Saint Thomas**	**1.29**	**143**	||*i*P	Pn	21 45 49.7	-0.3
STVI	**Saint Thomas**	**1.29**	**143**	||*i*P	Pn	21 45 49.7	-0.3
MTP	**Monte Pirata**	**1.30**	**171**	⇑*e*P	Pn	21 45 49.3	-0.9
MTP	**Monte Pirata**	**1.30**	**171**	⇑*e*P	Pn	21 45 49.3	-0.9
SJG	**San Juan**	**1.32**	**196**	||*e*P	Pn	21 45 49.3	-1.2
SJG				eS	Sn	21 46 08.3	0.0
SJG	**San Juan**	**1.32**	**196**	||*e*P	Pn	21 45 49.1	-1.3
SJG				eS	Sn	21 46 07.8	-0.6
SJG	**San Juan**	**1.32**	**196**	||*e*P	Pn	21 45 49.1	-1.3
SJG	**San Juan**	**1.32**	**196**	||*e*P	Pn	21 45 49.3	-1.2
SJG				eS	Sn	21 46 07.8	-0.6
SJG				eS	Sn	21 46 08.3	0.0
AOPR	**Arecibo Observ**	**1.39**	**222**	⇑*e*P	Pn	21 45 50.0	-0.4
AOPR				eS	Sn	21 46 09.4	-0.5
AOPR	**Arecibo Observ**	**1.39**	**222**	⇑*e*P	Pn	21 45 50.9	-0.4
AOPR				eS	Sn	21 46 09.4	-0.5
TBVI	**Tortola**	**1.46**	**131**	⇑*e*P	Pn	21 45 51.5	-0.6
TBVI	**Tortola**	**1.46**	**131**	⇑*e*P	Pn	21 45 51.5	-0.6
CELP	**Cerrillos**	**1.51**	**210**	||*i*P	Pn	21 45 52.3	-0.5
CELP	**Cerrillos**	**1.51**	**210**	||*i*P	Pn	21 45 52.3	-0.5
OBIP	**Obispado Ponce**	**1.55**	**211**	||*e*P	Pn	21 45 52.9	-0.4
OBIP				eS	Sn	21 46 13.1	-0.5
OBIP	**Obispado Ponce**	**1.55**	**211**	||*e*P	Pn	21 45 52.9	-0.4
OBIP				eS	Sn	21 46 13.7	+0.2
ICM	**Isla Caja Muer**	**1.65**	**206**	⇑*e*P	Pn	21 45 54.3	-0.2
ICM				eS	Sn	21 46 15.9	+0.2
ICM	**Isla Caja Muer**	**1.65**	**206**	⇑*e*P	Pn	21 45 54.3	-0.2
ICM				eS	Sn	21 46 15.9	+0.2
LSP	**Las Mesas**	**1.73**	**226**	⇑*e*P	Pn	21 45 55.9	+0.3
LSP	**Las Mesas**	**1.73**	**226**	⇑*e*P	Pn	21 45 55.9	+0.3
MPR	**Mayaguez**	**1.75**	**228**	*e*Pn	Pn	21 45 55.4	-0.4
CRPR	**Cabo Rojo, PR**	**1.87**	**223**	||*e*P	Pn	21 45 58.2	+0.9
CRPR	**Cabo Rojo, PR**	**1.87**	**223**	||*e*P	Pn	21 45 58.2	+0.9
CDVI	**St. Croix**	**1.89**	**149**	*e*Pn	Pn	21 45 59.8	+2.2
CDVI				*e*Sn	Sn	21 46 26.9	+5.8
SDDR	**Presa de Saban**	**5.23**	**266**	*e*Pn	Pn	21 46 43.5	+1.1
	20nm,0.5s						
SDDR				Sn	Sn	21 47 40.8	-0.7

*ISCJB **26** 21:45:32.9±0.6, 38°42N±0°03×21°85E±0°03, h14km±4km, Error ellipse: s-maj=4.6km s-min=4.2km az=160.2*
*CSEM **26** 21:45:32.9±0.2, 38°43N×21°86E, h15km, MD2.6, Error ellipse: s-maj=3.8km s-min=3.4km az=135.0*
*ATH **26** 21:45:33.6, 38°41N×21°89E, h10km±1km, MD2.6/7*
*NEIC **26** 21:45:33.6, 38°41N×21°89E, h10km, MD2.6(ATH), After ATH.*
*

comp=N,2μm,0.4s
KSH smax
comp=E,2μm,0.2s
UCH Uchtor 3.95 353 *e*Pn **Pn** 21 50 20.4 +1.3
UCH *e*Sn **Sn** 21 51 05.8 +1.0
AML Almayashu 3.99 344 *e*Pn **Pn** 21 50 20.0 +0.5
AML *e*Sn **Sn** 21 51 05.9 +0.4
AAK Ala-Archa 4.36 354 *e*Pn **Pn** 21 50 24.1 -0.4
AAK *e*Sn **Sn** 21 51 14.8 +0.3
AAK Ala-Archa 4.36 354 P **Pn** 21 50 26.0 +1.4
comp=E,1.4nm,0.3s,baz=148,slow=5.0,SNR=5.4
AAK S **Sn** 21 51 15.1 +0.7
comp=E,2.4nm,0.3s,baz=56,slow=13,SNR=13
EKS2 Erkin-Say 4.48 347 *e*Pn **Pn** 21 50 26.5 +0.3
EKS2 *e*Sn **Sn** 21 51 12.4 -5.0
TKM2 Tokmak 2 4.63 4 ⇑P **Pn** 21 50 28.5 +0.3
comp=E,2.3nm,0.3s
TKM2 ⇑S **Sn** 21 51 20.4 -0.5
comp=E,19nm,0.7s
TKM2 Tokmak 2 4.63 4 *e*Pn **Pn** 21 50 28.1 0.0
TKM2 *e*Sn **Sn** 21 51 20.9 -0.1
CHCP Chirah Chowk 4.88 199 P **Pn** 21 50 32.7 +1.1
CEP Cherat 5.18 211 P **Pn** 21 50 36.1 +0.4
CHM Chimkent 5.84 315 *e*Pn **Pn** 21 50 43.0 -1.4
comp=E,5.9nm,0.6s
KK31 Karatay Array 5.96 325 P **Pn** 21 50 46.3 +0.3
comp=E,1.0nm,0.3s,baz=138,slow=12,SNR=50
KK31 ⇓S **Sn** 21 51 51.3 -1.6
comp=E,6.3nm,0.3s,baz=137,slow=19,SNR=15
KKAR Karatay Array 5.96 325 *e*Pn **Pn** 21 50 45.9 -0.1
comp=E,3.6nm,0.3s
KKAR *e*Sn **Sn** 21 51 52.0 -1.0
THW Thamme Wali 6.16 208 P **Pn** 21 50 48.2 -0.6
KBL Kabul 6.19 235 *e*Pn **Pn** 21 50 49.7 +0.4
comp=E,34nm,0.5s
KBL *e*Sn **Sn** 21 51 57.8 -1.0
MK31 Makanchi Array 9.98 29 Pn **Pn** 21 51 39.4 -1.0
MKAR Makanchi Array 9.98 29 P **Pn** 21 51 39.9 -0.5
comp=E,0.1nm,0.3s,baz=206,slow=17,SNR=4.4
MKAR S **Sn** 21 53 25.6 -4.7
comp=E,0.1nm,0.3s,baz=184,slow=19,SNR=2.5
KURK Kurchatov 12.65 10 *e*Pn **Pn** 21 52 16.3 +0.6
BVA0 Borovoye Array 15.09 349 P **Pn** 21 52 50.4 +3.5
comp=E,0.3nm,0.5s,baz=166,slow=6.8,SNR=17
BVAR Borovoye Array 15.09 349 P **Pn** 21 52 46.8 -0.1
comp=E,0.9nm,0.3s,baz=152,slow=10.0,SNR=20
BRVK Borovoye 15.14 349 *e*Pn **Pn** 21 52 48.0 +0.5
comp=E,3.2nm,0.5s
AB31 Akbulak array 15.48 320 P **Pn** 21 52 50.1 -1.6
comp=E,1.2nm,0.8s,baz=107,slow=15,SNR=7.8
ABKAR Akbulak array 15.48 320 *e*Pn **Pn** 21 52 49.6 -2.1
comp=E,1.0nm,0.6s
ZALV Zalesovo Beam 17.00 20 P **Pn** 21 53 08.0 -2.4
comp=E,0.3nm,0.3s,baz=211,slow=11,SNR=6.6
AKTK Aktyubinsk 17.19 320 P **Pn** 21 53 13.8 +1.1
AKTO Aktyubinsk 17.19 320 ⇓P **Pn** 21 53 13.6 +0.9
comp=E,0.4nm,0.9s
AKTO Aktyubinsk 17.19 320 P **Pn** 21 53 13.8 +1.1
comp=E,0.2nm,0.3s,baz=121,slow=13,SNR=8.2
ARU Arti 21.24 334 *e*P **P** 21 53 57.1 +0.9
comp=E,5.4nm,1.0s,mb3.8
SONM Songino Array 24.59 57 P **P** 21 54 27.7 -1.1
comp=E,0.6nm,0.6s,mb3.2,baz=255,slow=10,SNR=5.6
BR131 Keskin Array S 32.09 286 *e*P **P** 21 55 36.5 +0.8
comp=E,0.4nm,0.4s,mb3.5
FINES FINESS Array B 37.92 324 P **P** 21 56 26.4 +1.1
comp=E,1.5nm,0.7s,mb3.9,baz=113,slow=10.0,SNR=8.4
PSZ Piszkesteto 40.69 302 *e*P **P** 21 56 48.5 -0.1
comp=E,1.6nm,0.6s,mb4.0
ARCES ARCESS Array B 40.81 336 P **P** 21 56 50.5 +1.3
comp=E,1.3nm,0.6s,mb4.0,baz=116,slow=8.1,SNR=7.9
YSS Yuzh-Sakhalins 49.08 57 *e*P **P** 21 57 53.9 -1.1

IDC 26 21:57:13.3±2.2, 7°71'S×127°54'E, h0km, mb3.5/1, mb1 3.8/3, mb1mx3.5/16, mbtmp3.6/3, ML4.0/2, Error ellipse: s-maj=272.0km s-min=32.2km az=63.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.84**	**152**	Pn	Pn	22 00 30.4	-0.5
	0.9nm,0.3s,baz=330,slow=14,SNR=15						
WRA				Sn	Sn	22 02 52.8	-12
	0.6nm,0.3s,baz=334,slow=23,SNR=6.1						
ASAR	**Alice Springs**	**17.00**	**160**	P	Pn	22 01 13.2	+0.5
	0.2nm,0.3s,baz=337,slow=9.9,SNR=9.9						
MKAR	**Makanchi Array**	**67.50**	**328**	P	P	22 08 11.3	+0.1
	0.3nm,0.6s,baz=115,slow=8.3,SNR=5.1						

*ISCJB **26** 22:03:11.9±0.5, 38°11'N±0°03'×42°91'E±0°04, h9km±10km, Error ellipse: s-maj=5.7km s-min=4.8km az=167.9*
*CSEM **26** 22:03:12.9±0.1, 38°11'N×42°96'E, h2km, MD3.0, Error ellipse: s-maj=2.9km s-min=2.0km az=58.0*
*DDA **26** 22:03:12.4, 38°15'N×42°94'E, h8km±6km, Md3.2*
*ISK **26** 22:03:13.4, 38°12'N×43°09'E, h8km, MD3.0*
ISC 26 22:03:12.6±0.5, 38°12'N±0°03'×42°93'E±0°04, h16km±9km, n22, σ0°87/31, Turkey

Code	Station	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANT	**Van**	**0.40**	**42**	PG	**Pg**	**22 03 20.6**	**-0.2**
VANT				*e*SG	**Sg**	22 03 26.1	-0.2
TVAN	**Van**	**0.55**	**43**	*i* P	**Pg**	**22 03 22.9**	**-0.6**
TVAN	**Van**	**0.55**	**43**	*i* P	**Pg**	22 03 23.0	-0.6
VANB	**Van**	**0.60**	**37**	*e*PG	**Pg**	**22 03 23.3**	**-1.1**
VANB				*e*SG	**Sg**	22 03 32.1	-0.3
VANB	**Van**	**0.60**	**37**	*e*Pg	**Pg**	**22 03 23.3**	**-1.1**
VANB				*e*Sg	**Sg**	22 03 32.1	-0.2
TATV	**Tatvan**	**0.65**	**307**	*i* P	**Pg**	**22 03 26.2**	**+0.9**
TATV				*i* S	**Sg**	22 03 34.4	+0.5
TATV	**Tatvan**	**0.65**	**307**	*i* P	**Pg**	22 03 26.2	+0.9
TATV				*i* S	**Sg**	**22 03 34.4**	**+0.5**
HAKT	**HAKKARI**	**0.83**	**132**	*i* P	**Pg**	**22 03 28.4**	**-0.4**
HAKT				*i* S	**Sg**	**22 03 40.9**	**+1.0**
HAKT	**HAKKARI**	**0.83**	**132**	*i* P	**Pg**	22 03 28.4	-0.4
HAKT				*i* S	**Sg**	22 03 40.9	+1.1
CUKT	**Cukurca**	**1.03**	**148**	*e*PG	**Pg**	22 03 32.5	0.0
CUKT	**Cukurca**	**1.03**	**148**	*e*Pg	**Pg**	**22 03 32.5**	**+0.1**
CLDR	**Caldiran**	**1.28**	**37**	*e*PN	**Pn**	22 03 36.9	+1.1
CLDR	**Caldiran**	**1.28**	**37**	*e*Pn	**Pn**	**22 03 36.9**	**+1.1**
BEST	**Besiri**	**1.33**	**261**	*i* P	**Pg**	22 03 40.6	+2.4
BEST				*i* S	**Sg**	**22 04 01.1**	**+5.6**
AGRB	**Hanur-Agry**	**1.45**	**2**	*e*PN	**Pg**	22 03 40.9	+0.3
AGRB	**Hanur-Agry**	**1.45**	**2**	*e*Pn	**Pg**	**22 03 40.9**	**+0.3**
BNGL	**BINGOL**	**1.62**	**301**	*i* P	**Pg**	22 03 44.4	+0.6
MARD	**Mardin**	**1.88**	**245**	*i* P	**Pg**	22 03 47.7	-1.1
MARD				*i* S	**Sg**	**22 04 12.3**	**-0.9**
SVRC	**Sivrice-ELAZID**	**2.86**	**276**	*e*PN	**Pb**	22 04 02.2	-1.0
SVRC	**Sivrice-ELAZID**	**2.86**	**276**	*e*Pn	**Pb**	**22 04 02.2**	**-1.0**
PTK	**Pertek**	**2.88**	**287**	*e*PN	**Pb**	**22 04 02.9**	**-0.6**
PTK	**Pertek**	**2.88**	**287**	*e*Pn	**Pb**	**22 04 02.9**	**-0.6**

*NEIC **26** 22:12:41.1, 15°96N×98°88W, h16km, MD3.8(MEX), After MEX.*
MEX 26 22:12:41.2±0.6, 15°99N×98°88W, h18km±67km, MD3.9, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.82**	**61**	*e*P	Pb	22 12 54.2	-2.9
PNIG				*i* S	Sb	22 13 04.3	-3.5
PNIG	**Pinotepa**	**0.82**	**61**	*e*P	Pb	22 12 54.2	-2.9
PNIG				*i* S	Sb	22 13 04.3	-3.5
ACX	**Acapulco**	**1.28**	**313**	*i* P	Pn	22 13 02.9	-1.4
ACX				*i* S	Sb	22 13 18.5	-2.6
ACX	**Acapulco**	**1.28**	**313**	*i* P	Pn	22 13 01.9	-2.4
ACX				*i* S	Sb	22 13 16.6	-4.5
CAIG	**El Cayaco**	**1.70**	**308**	*i* P	Pn	22 13 08.1	-1.9
CAIG				*i* S	Sn	22 13 26.6	-4.7
CAIG	**El Cayaco**	**1.70**	**308**	*i* P	Pn	22 13 07.3	-2.7
CAIG				*i* S	Sn	22 13 26.6	-4.7
UTMO	**Huajuapan**	**2.10**	**29**	*e*P	Pn	22 13 13.6	-1.9
UTMO				*i* S	Sn	22 13 37.8	-3.4
VHO	**Vista Hermosa**	**2.32**	**62**	*i* P	Pn	22 13 15.3	-3.3
VHO				*i* S	Sn	22 13 43.0	-3.7
VHO	**Vista Hermosa**	**2.32**	**62**	*i* P	Pn	22 13 15.3	-3.3
VHO				*i* S	Sn	22 13 43.0	-3.7
ZIIG	**Zihuatanejo**	**2.95**	**303**	*i* P	Pn	22 13 24.3	-2.9
ZIIG	**Zihuatanejo**	**2.95**	**303**	*i* P	Pn	22 13 24.3	-2.9
PPM	**Popocatepetl**	**3.07**	**4**	*e*P	Pn	22 13 21.6	-7.2
PPM	**Popocatepetl**	**3.07**	**4**	*e*P	Pn	22 13 26.9	-1.9
PPM				*i* S	Sn	22 14 07.7	+2.6

*ISCJB **26** 22:41:15.1±0.6, 56°46S±0°08×25°4W±0°2, h10km, mb4.1/6, Error ellipse: s-maj=17.1km s-min=11.3km az=166.8*
*IDC **26** 22:41:15.4±1.7, 56°46S×25°36W, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.8/13, mbtmp4.0/3, Error ellipse: s-maj=65.0km s-min=36.6km az=10.0*
*NEIC **26** 22:41:20.6±0.4, 56°46S×25°54W, h35km, mb4.2/5, Error ellipse: s-maj=12.6km s-min=11.2km az=113.0*
ISC 26 22:41:17.1±0.6, 56°46S±0°08×25°3W±0°2, h10km, n17, σ0°62/14, mb4.1/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**16.04**	**159**	*e*	**Pn**	**22 45 01.9**	**-0.4**
VNA3	**Neumayer Olymp**	**16.27**	**162**	*e*	**Pn**	**22 45 04.3**	**-1.0**
PMSA	**Palmer Station**	**20.43**	**230**	*e*Pn	**P**	**22 45 54.7**	**+0.6**
	14nm,1.2s						
QSPA	**South Pole Qui**	**33.79**	**180**	*e*P	**P**	**22 47 59.1**	**+0.6**
	3.4nm,0.6s,mb4.5						
CPUP	**Villa Florida**	**37.87**	**309**	P	**P**	**22 48 33.1**	**-0.8**
CPUP	**Villa Florida**	**37.87**	**309**	P	**P**	**22 48 33.3**	**-0.6**
	0.4nm,0.4s,mb3.5,baz=115,slow=14,SNR=2.8						
SHEL	**Horse Pasture**	**43.08**	**28**	P	**P**	**22 49 16.5**	**-0.5**
LBTB	**Lobatse**	**48.14**	**71**	*e*P	**P**	**22 49 58.4**	**+1.3**
	1.1nm,0.5s,mb4.1						
LPAZ	**La Paz**	**51.47**	**303**	*e*P	**P**	**22 50 22.7**	**+0.2**
	1.2nm,0.4s,mb4.2						
LPAZ	**La Paz**	**51.47**	**303**	P	**P**	**22 50 22.9**	**+0.5**
	1.3nm,0.5s,mb4.1,baz=94,slow=6.1,SNR=10						
CASY	**Casey**	**53.17**	**159**	P	**P**	**22 50 34.8**	**+0.3**
DBIC	**Dimbokro**	**65.12**	**23**	P	**P**	**22 51 57.9**	**0.0**
	2.8nm,0.9s,mb4.3,baz=170,slow=11,SNR=2.7						
OTAV	**Otavalo**	**70.75**	**302**	*e*P	**P**	**22 52 33.2**	**-0.2**
	2.1nm,0.8s,mb4.1						
CART	**Cartagena**	**95.93**	**19**	P	**P**	**22 54 43.1**	**-0.3**
INK	**Inuvik**	**146.78**	**320**	PKPbc	PKPbc	23 00 57.5	-0.2
	3.8nm,0.9s,baz=124,slow=8.9,SNR=2.6						
SONM	**Songino Array**	**149.71**	**86**	PKPbc	PKPbc	23 01 05.7	-0.2
	1.3nm,0.7s,baz=224,slow=1.2,SNR=9.0						
ILAR	**Eielson Array**	**151.17**	**311**	PKPbc	PKPbc	23 01 08.4	-0.4
	3.3nm,0.9s,baz=124,slow=1.4,SNR=22						

*ISK **26** 22:47:39.4, 37°29N×26°98E, h2km, MD3.3*
*NEIC **26** 22:47:39.0, 37°30N×26°95E, h5km, MD3.1(ISK), MD2.9(ATH), After ISK.*
*CSEM **26** 22:47:40.8±0.4, 37°33N×26°98E, h2km, MD2.9, Error ellipse: s-maj=10.3km s-min=5.1km az=58.0*
*ISCJB **26** 22:47:40.5±0.6, 37°36N±0°03×27°03E±0°05, h1km±5km, Error ellipse: s-maj=7.6km s-min=3.1km az=150.9*
*DDA **26** 22:47:40.8, 37°37N×27°07E, h23km±2km, Md3.2*
*ATH **26** 22:47:41.5, 37°41N×27°01E, h27km±7km, MD2.9/4*
ISC 26 22:47:41.1±0.6, 37°36N±0°03×27°03E±0°05, h5km±4km, n62, σ1°03/81, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BODT	**Bodrum**	**0.37**	**142**	*e*PG	**Pg**	**22 47 47.0**	**-1.3**
BODT				*e*SG	**Sg**	**22 47 52.9**	**-0.2**
BODT	**Bodrum**	**0.37**	**142**	*e*Pg	**Pg**	**22 47 47.0**	**-1.3**
BODT				*e*Sg	**Sg**	**22 47 52.9**	**-0.2**
GCAM	**G?zelcaml?**	**0.38**	**26**	*i* P	**Pg**	**22 47 48.5**	**0.0**
SMG	**Samos**	**0.38**	**337**	*e*Pb	**Pg**	**22 47 48.8**	**+0.2**
SMG				*e*Sb	**Sg**	**22 47 55.2**	**+1.6**
SMG	**Samos**	**0.38**	**337**	*e*PB	**Pg**	**22 47 48.8**	**+0.2**
SMG				*e*SB	**Sg**	**22 47 55.2**	**+1.6**
SMG	**Samos**	**0.38**	**337**	*e*Pb	**Pg**	**22 47 48.8**	**+0.2**
SMG				*e*Sb	**Sg**	**22 47 55.2**	**+1.6**
BDRM	**Kayabasi**	**0.44**	**131**	*i* P	**Pg**	**22 47 49.3**	**-0.3**
BDRM				*i* S	**Sg**	**22 47 56.1**	**+0.7**
BDRM	**Kayabasi**	**0.44**	**131**	*i* P	**Pg**	**22 47 49.3**	**-0.3**
BDRM				*i* S	**Sg**	**22 47 56.1**	**+0.7**
MLSB	**Milas**	**0.60**	**95**	*e*PG	**Pg**	**22 47 52.6**	**-0.1**
MLSB				*e*SG	**Sg**	**22 48 01.7**	**+1.2**
AYDN	**Tasoluk**	**0.74**	**66**	*i* P	**Pg**	**22 47 54.8**	**-0.7**
DAT	**Datca**	**0.77**	**145**	*e*PG	**Pg**	**22 47 55.0**	**-0.8**
YER	**Yerkesik**	**1.03**	**102**	*e*PN	**Pg**	**22 48 00.9**	**+0.1**
BLCB	**Balcova**	**1.03**	**1**	*e*PN	**Pg**	**22 48 00.6**	**-0.3**
BLCB	**Balcova**	**1.03**	**1**	*e*Pn	**Pg**	**22 48 00.6**	**-0.3**
IZM	**Izmir**	**1.06**	**10**	*e*PN	**Pg**	**22 48 00.9**	**-0.5**
IZM	**Izmir**	**1.06**	**10**	*e*Pn	**Pg**	**22 48 00.9**	**-0.5**
URLA	**Izmir**	**1.06**	**341**	*i* P	**Pg**	**22 48 00.5**	**-1.0**
URLA				*i* S	**Sg**	**22 48 15.7**	**+0.5**
URLA	**Izmir**	**1.06**	**341**	*i* P	**Pg**	**22 48 00.5**	**-1.0**
URLA				*i* S	**Sg**	**22 48 15.7**	**+0.5**
KDAG	**Bornova**	**1.06**	**10**	*i* P	**Pg**	**22 47 59.9**	**-1.7**
KDAG				*i* S	**Sg**	**22 48 15.1**	**-0.3**
KDAG	**Bornova**	**1.06**	**10**	*i* P	**Pg**	**22 47 59.9**	**-1.6**
KDAG				*i* S	**Sg**	**22 48 15.1**	**-0.3**
APE	**Apeiranthos**	**1.23**	**257**	*e*PN	**Pn**	**22 48 02.3**	**-2.7**
APE	**Apeiranthos**	**1.23**	**257**	*e*Pn	**Pn**	**22 48 04.9**	**-0.1**
APE	**Apeiranthos**	**1.23**	**257**	*e*PN	**Pn**	**22 48 04.9**	**-0.1**
APE	**Apeiranthos**	**1.23**	**257**	*e*Pn	**Pn**	**22 48 04.9**	**-0.1**
ARG	**Arkhangelos**	**1.44**	**142**	*e*Pb	**Pb**	**22 48 07.5**	**-0.9**
ARG				*e*Sn	**Sg**	**22 48 29.4**	**+2.0**
ARG	**Arkhangelos**	**1.44**	**142**	*e*PB	**Pb**	**22 48 07.5**	**-0.9**
ARG				*e*SN	**Sg**	**22 48 29.4**	**+2.0**
ARG	**Arkhangelos**	**1.44**	**142**	*e*Pb	**Pb**	**22 48 07.5**	**-0.9**
ARG				*e*Sn	**Sg**	**22 48 29.4**	**+2.0**
DNZL	**Cakiroluk**	**1.64**	**78**	*i* P	**Pn**	**22 48 09.7**	**-1.0**
AKHS	**Akhisar**	**1.64**	**22**	*i* P	**Pn**	**22 48 11.0**	**+0.3**
AKHS				*i* S	**Sn**	**22 48 29.0**	**-3.2**
AKHS	**Akhisar**	**1.64**	**22**	*i* P	**Pn**	**22 48 11.0**	**+0.3**
AKS	**Akhisar**	**1.64**	**22**	*e*PN	**Pn**	**22 48 11.9**	**+1.2**
AKS	**Akhisar**	**1.64**	**22**	*e*Pn	**Pn**	**22 48 11.9**	**+1.2**
DENT	**Denizli**	**1.65**	**75**	*e*PN	**Pn**	**22 48 11.4**	**+0.7**
DENT	**Denizli**	**1.65**	**75**	*e*Pn	**Pn**	**22 48 11.4**	**+0.7**
KULA	**Kula-Manisa**	**1.74**	**48**	*e*PN	**Pn**	**22 48 12.5**	**+0.6**
KULA	**Kula-Manisa**	**1.74**	**48**	*e*Pn	**Pn**	**22 48 12.5**	**+0.5**
AYVA	**Ayvalik**	**1.97**	**352**	*i* P	**Pn**	**22 48 16.3**	**+1.1**
AYVA	**Ayvalik**	**1.97**	**352**	*i* P	**Pn**	**22 48 16.3**	**+1.1**
PRK	**Paraskevi**	**1.98**	**343**	*e*Pb	**Pn**	**22 48 14.4**	**-0.9**
PRK	**Paraskevi**	**1.98**	**343**	*e*PB	**Pn**	**22 48 14.4**	**-0.9**
PRK	**Paraskevi**	**1.98**	**343**	*e*Pb	**Pn**	**22 48 14.4**	**-0.9**
GLHS	**Glhisar (BURDU**	**1.98**	**95**	*e*PN	**Pn**	**22 48 15.7**	**+0.4**
DEMI	**Demirci**	**2.15**	**38**	*i* P	**Pg**	**22 48 21.4**	**-1.0**
DEMI	**Demirci**	**2.15**	**38**	*i* P	**Pg**	**22 48 21.4**	**-0.9**
KHAL	**Karahalli**	**2.20**	**62**	*i* P	**Pn**	**22 48 18.2**	**-0.1**
KHAL	**Karahalli**	**2.20**	**62**	*i* P	**Pn**	**22 48 18.2**	**-0.1**
KHL	**Karahalli**	**2.20**	**63**	*e*PN	**Pn**	**22 48 19.9**	**+1.5**
KHL	**Karahalli**	**2.20**	**63**	*e*Pn	**Pn**	**22 48 19.9**	**+1.5**
AKAS	**Kas**	**2.35**	**118**	*i* P	**Pn**	**22 48 19.3**	**-1.2**
AKAS				*i* S	**Sn**	**22 48 46.9**	**-2.9**
ELL	**Elmali**	**2.38**	**104**	*e*PN	**Pn**	**22 48 21.2**	**+0.4**
BALY	**Balya**	**2.43**	**11**	*i* P	**Pn**	**22 48 21.6**	**+0.1**
BALY				*i* S	**Sn**	**22 48 49.4**	**-2.1**
BALY	**Balya**	**2.43**	**11**	*i* P	**Pn**	**22 48 21.6**	**+0.1**
BALY				*i* S	**Sn**	**22 48 49.4**	**-2.2**
DURS	**Dursunbey**	**2.52**	**26**	*i* P	**Pb**	**22 48 26.6**	**-0.2**
DURS	**Dursunbey**	**2.52**	**26**	*i* P	**Pb**	**22 48 26.6**	**-0.2**
EZN	**Ezine**	**2.53**	**348**	*e*PN	**Pn**	**22 48 24.4**	**+1.6**
EZN	**Ezine**	**2.53**	**348**	*e*Pn	**Pn**	**22 48 24.5**	**+1.7**
GONE	**Gonen-Balikesi**	**2.74**	**11**	*e*PN	**Pn**	**22 48 26.7**	**+1.0**
GONE	**Gonen-Balikesi**	**2.74**	**11**	*e*Pn	**Pn**	**22 48 26.7**	**+1.0**
ALT	**Altintas**	**2.96**	**54**	*e*PN	**Pn**	**22 48 29.9**	**+1.1**
ALT	**Altintas**	**2.96**	**54**	*e*Pn	**Pn**	**22 48 30.0**	**+1.1**
HDMB	**Hadim**	**4.38**	**93**	*e*PN	**Pn**	**22 48 49.2**	**+0.9**
HDMB	**Hadim**	**4.38**	**93**	*e*Pn	**Pn**	**22 48 49.2**	**+0.9**

*ISCJB **26** 22:51:33.1±0.6, 50°14N±0°04×18°98E±0°03, h0km, Error ellipse: s-maj=6.0km s-min=2.8km az=1.8*
*WAR **26** 22:51:33.9, 50°08N×19°12E*
*IPEC **26** 22:51:33.8±0.2, 50°16N×19°06E, h0km, ML1.8/4, Error ellipse: s-maj=2.8km s-min=1.1km az=167.0*
*CSEM **26** 22:51:34.1±0.3, 50°15N×19°01E, h2km, ML2.6/4, Error ellipse: s-maj=7.0km s-min=3.1km az=177.0*
*PRU **26** 22:51:35.0, 50°14N×18°99E, h0km*
ISC 26 22:51:33.7±0.6, 50°15N±0°04×19°02E±0°03, h0km, n24, σ1°14/45, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.51**	**82**	*e*Pg	**Pg**	**22 51 43.1**	**-0.3**
OJC				*e*Sg	**Sg**	**22 51 49.8**	**-0.2**
OJC	**Ojcow**	**0.51**	**82**	*e*Pg	**Pg**	**22 51 42.9**	**-0.5**
	baz=263						
OKC	**Ostrava-Krasne**	**0.64**	**241**	*e*PG	**Pg**	**22 51 46.8**	**+0.8**
OKC				*e*SG	**Sg**	**22 51 56.2**	**+1.9**
OKC	**Ostrava-Krasne**	**0.64**	**241**	*e*Pg	**Pg**	**22 51 46.7**	**+0.7**
	baz=61						
OKC				Sg	**Sg**	**22 51 56.2**	**+1.9**
MORC	**Moravsky Berou**	**1.02**	**249**	*e*Pg	**Pg**	**22 51 53.7**	**+0.4**
	baz=68						
MORC				*e*Sg	**Sg**	**22 52 06.8**	**+0.2**
	17nm,0.5s,baz=68						
NIE	**Niedzica**	**1.11**	**131**	*e*Pg	**Pg**	**22 51 53.7**	**-1.3**
NIE				*e*Sg	**Sg**	**22 52 10.8**	**+1.4**
JAVC	**Velka Javorina**	**1.56**	**215**	*e*Pn	**Pn**	**22 52 02.0**	**-0.7**
JAVC				*e*Sg	**Sg**	**22 52 24.4**	**+0.6**
	11nm,1.0s						
STHS	**Stebnicka Huta**	**1.62**	**116**	*e*PN	**Pn**	**22 52 04.0**	**+0.5**
STHS				*e*SN	**Sn**	**22 52 27.3**	**+2.3**
STHS	**Stebnicka Huta**	**1.62**	**116**	*e*Pn	**Pn**	**22 52 04.0**	**+0.5**
STHS				*e*Sn	**Sn**	**22 52 27.3**	**+2.3**
KOLL	**Kolacno**	**1.62**	**195**	*e*PN	**Pn**	**22 52 03.3**	**-0.2**
KOLL				*e*SN	**Sn**	**22 52 24.2**	**-0.9**
KOLL	**Kolacno**	**1.62**	**195**	*e*Pn	**Pn**	**22 52 03.3**	**-0.2**
KOLL				*e*Sn	**Sn**	**22 52 24.2**	**-0.9**
VYHS	**Vyhne**	**1.66**	**184**	*e*PN	**Pn**	**22 52 02.6**	**-1.4**
VYHS				*e*SN	**Sn**	**22 52 23.8**	**-2.2**
VYHS	**Vyhne**	**1.66**	**184**	*e*Pn	**Pn**	**22 52 02.6**	**-1.4**
VYHS				*e*Sn	**Sn**	**22 52 23.8**	**-2.2**
DPC	**Dobruska-Polom**	**1.74**	**278**	*e*PG	**Pg**	**22 52 06.5**	**-0.6**
DPC				*e*SG	**Sg**	**22 52 29.5**	**-0.2**
DPC	**Dobruska-Polom**	**1.74**	**278**	*e*Pn	**Pn**	**22 52 05.7**	**+0.5**
	baz=95						
DPC				Sg	**Sg**	**22 52 29.5**	**-0.2**
VRAC	**Vranov**	**1.78**	**243**	*e*Pn	**Pn**	**22 52 06.1**	**+0.4**
	baz=61						
VRAC				*e*Sg	**Sg**	**22 52 30.5**	**-0.5**
	5.6nm,0.4s,baz=61						
KECS	**Kecovo**	**1.92**	**149**	*e*PN	**Pn**	**22 52 08.0**	**+0.3**
KECS				*e*SN	**Sn**	**22 52 31.1**	**-1.4**
CRVS	**Cervenica-Dubn**	**2.02**	**127**	*e*PN	**Pn**	**22 52 10.5**	**+1.5**
CRVS	**Cervenica-Dubn**	**2.02**	**127**	*e*Pn	**Pn**	**22 52 10.5**	**+1.5**
KRUC	**Moravsky**	**2.02**	**239**	*e*Pn	**Pn**	**22 52 09.6**	**+0.6**
	baz=57						
KRUC				*e*Sn	**Sn**	**22 52 36.9**	**+1.9**
	4.5nm,0.4s,baz=57						
PRU	**Pruhonice**	**2.89**	**269**	*e*PG	**Pg**	**22 52 26.6**	**-2.5**
PRU				*e*SG	**Sg**	**22 53 06.7**	**+0.2**
PRU	**Pruhonice**	**2.89**	**269**	Pg	**Pg**	**22 52 26.6**	**-2.5**
PRU				Sg	**Sg**	**22 53 06.7**	**+0.2**
KHC	**Kasperske Hory**	**3.68**	**256**	*e*PG	**Pg**	**22 52 41.6**	**-2.6**
KHC				*e*SG	**Sg**	**22 53 32.3**	**+0.4**
KHC	**Kasperske Hory**	**3.68**	**256**	Pg	**Pg**	**22 52 41.6**	**-2.6**
KHC				Sg	**Sg**	**22 53 32.3**	**+0.4**

*NEIC **26** 22:57:52.5, 19°92N×70°58W, h99km±4km, MD3.7(RSPR), After RSPR.*
RSPR 26 22:57:52.5, 19°92N×70°58W, h99km±4km, MD3.7/4, 2C-2D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDDR	**Presa de Saban**	**1.14**	**216**	⇑P	Pn	22 58 14.1	-0.3
SDDR				*e*S	Sn	22 58 30.7	-0.2
SMN1	**Samana, DR**	**1.43**	**120**	⇓P	Pn	22 58 16.6	-1.1
SMN1				*e*S	Sn	22 58 36.9	-0.1
GRTK	**Grand Turk**	**1.67**	**342**	⇑P	Pn	22 58 20.0	-0.7
GRTK				*e*S	Sn	22 58 42.3	0.0
AGPR	**Aguadilla, PR**	**3.58**	**113**	*e*Pn	Pn	22 58 46.8	+0.7
AGPR				*e*Sn	Sn	22 59 27.9	+0.4
CELP	**Cerrillos**	**4.21**	**115**	*e*Pn	Pn	22 58 59.0	+4.6
CELP				*e*Sn	Sn	22 59 43.5	+1.0
GTBY	**Guantanamo Bay**	**4.26**	**271**	Pn	Pn	22 58 55.4	+0.3
GTBY				Sn	Sn	22 59 44.7	+0.9
MTP	**Monte Pirata**	**5.09**	**110**	⇓*e*P	Pn	22 59 07.7	+1.3
MTP				*e*Sn	Sn	23

1.8nm,0.4s,mb4.5

CASY	**Casey**	**68.32**	**187**	*e*P	**P**	**23**	**19**	**42.1** **-0.8**
GNI	**Garni**	**83.37**	**310**	*e*P	**P**	**23**	**21**	**09.4** **0.0**

CSEM ***26*** *23:42:01.9±0.3,39.4°N×40.4°E,48f, h0km±3km, MD2.9, Error ellipse: s-maj=5.9km s-min=4.5km az=120.0*
ISK ***26*** *23:42:01.9,39.4°N×40.4°E,h6km, MD2.9*
DDA ***26*** *23:42:02.0,39.45°N×40.47°E, h7km±6km, Md3.0*
ISCJB ***26*** *23:42:02.1±0.5,39.43°N±0.03°×40.45°E±0.04, h10km, Error ellipse: s-maj=4.3km s-min=4.1km az=177.0*
ISC 26 23:42:02.4±0.5,**39.44N**±0.03°×**40.46E**±0.04,**h4**km±7km, **n27**,σ**0**§**74**/35,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.57**	**178**	PG	**Pg**	**23** **42** **13.1**	**-0.2**
BINT				*e*SG	**Sg**	**23** **42** **21.4**	**+0.7**
BINT	**Bingol**	**0.57**	**178**	*i* Pg	**Pg**	**23** **42** **13.1**	**-0.2**
BINT				*e*Sg	**Sg**	**23** **42** **21.4**	**+0.7**
KOPT	**Kop Dagi**	**0.57**	**3**	*i* P	**Pg**	**23** **42** **15.1**	**+1.6**
KOPT				*i* S	**Sg**	**23** **42** **20.6**	**-0.4**
KOPT	**Kop Dagi**	**0.57**	**3**	*i* P	**Pg**	**23** **42** **15.1**	**+1.6**
KOPT				*i* S	**Sg**	**23** **42** **20.5**	**-0.5**
BNGL	**BINGOL**	**0.73**	**132**	*i* P	**Pg**	**23** **42** **15.6**	**-0.7**
BNGL				*i* S	**Sg**	**23** **42** **26.7**	**+1.0**
ERZM	**Erzurum**	**0.84**	**56**	*i* P	**Pg**	**23** **42** **18.1**	**-0.4**
ERZM	**Erzurum**	**0.84**	**56**	*i* P	**Pg**	**23** **42** **18.1**	**-0.4**
EZC	**Erzincan**	**0.91**	**290**	*e*PG	**Pg**	**23** **42** **20.1**	**+0.2**
PTK	**Pertek**	**1.00**	**237**	*e*PG	**Pg**	**23** **42** **20.2**	**-1.4**
PTK				*e*SG	**Sg**	**23** **42** **34.3**	**-0.2**
PTK	**Pertek**	**1.00**	**237**	*e*Pg	**Pg**	**23** **42** **20.2**	**-1.3**
PTK				*e*Sg	**Sg**	**23** **42** **34.3**	**-0.2**
KELT	**Kelkit**	**1.17**	**308**	*i* P	**Pg**	**23** **42** **23.9**	**-0.9**
KELT	**Kelkit**	**1.17**	**308**	*i* P	**Pg**	**23** **42** **23.9**	**-0.9**
GUMT	**Gumushane**	**1.27**	**324**	*e*PN	**Pn**	**23** **42** **27.3**	**+0.4**
GUMT	**Gumushane**	**1.27**	**324**	*e*Pn	**Pn**	**23** **42** **27.3**	**+0.4**
SVRC	**Sivrice-ELAZID**	**1.39**	**221**	*e*PN	**Pn**	**23** **42** **28.6**	**0.0**
SVRC	**Sivrice-ELAZID**	**1.39**	**221**	*e*Pn	**Pn**	**23** **42** **28.6**	**0.0**
ELZG	**Elazig**	**1.49**	**231**	*i* P	**Pn**	**23** **42** **29.7**	**-0.2**
ELZG	**Elazig**	**1.49**	**231**	*i* P	**Pn**	**23** **42** **29.7**	**-0.2**
KEMA	**Kemaliye**	**1.54**	**264**	*i* P	**Pg**	**23** **42** **31.3**	**-0.6**
KEMA				*i* S	**Sg**	**23** **42** **53.0**	**+1.2**
KEMA	**Kemaliye**	**1.54**	**264**	*i* P	**Pg**	**23** **42** **31.3**	**-0.6**
KEMA				*i* S	**Sg**	**23** **42** **53.0**	**+1.2**
BEST	**Besiri**	**1.67**	**158**	*i* P	Px	23 42 20.1	
AGRB	**Hanur-Agry**	**1.96**	**85**	*e*PN	**Pn**	**23** **42** **35.7**	**-0.8**
AGRB	**Hanur-Agry**	**1.96**	**85**	*e*Pn	**Pn**	**23** **42** **35.7**	**-0.7**
ESPY	**Espiye-Giresun**	**1.98**	**318**	*e*PN	**Pn**	**23** **42** **37.3**	**+0.6**
ESPY	**Espiye-Giresun**	**1.98**	**318**	*e*Pn	**Pn**	**23** **42** **37.3**	**+0.6**
BCA	**Borcka**	**2.19**	**24**	*e*PN	**Pn**	**23** **42** **39.7**	**+0.2**
BCA	**Borcka**	**2.19**	**24**	*e*Pn	**Pn**	**23** **42** **39.7**	**+0.2**

ISCJB ***26*** *23:44:21.1±1.6,22.36S±0.07°×177.41W±0.09, h208km±16km, mb4.0/15, Error ellipse: s-maj=14.4km s-min=10.0km az=25.9*
IDC ***26*** *23:44:23.7±3.6,22.36S×177.39W, h217km±34km, mb3.5/7, mb1 3.8/9, mb1mx3.6/19, mbtmp3.6/9, Error ellipse: s-maj=41.8km s-min=15.7km az=148.0*
NEIC ***26*** *23:44:24.2±1.2,22.35S×177.38W, h225km±11km, mb4.5/11, Error ellipse: s-maj=8.4km s-min=6.6km az=114.0*
ISC 26 23:44:23.5±1.8,**22.36S**±0.07°×**177.40W**±0.09, **h216**km±18km,**n35**,σ**0**§**53**/36,**mb4.0**/15,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.96**	**33**	*e*Pn	**Pn**	**23** **46** **42.1**	**+0.1**
AFI				*e*Sn	**S**	**23** **48** **27.2**	**-6.6**
AFI	**Afiamalu**	**9.96**	**33**	P	**Pn**	**23** **46** **41.7**	**-0.4**
	2.2nm,0.3s,baz=225,slow=5.7,SNR=3.1						
AFI				S	**S**	**23** **48** **27.4**	**-6.4**
	10.0nm,0.3s,baz=89,slow=17,SNR=8.1						
URZ	**Urewera**	**16.54**	**195**	*e*P	**P**	**23** **48** **02.3**	**+0.1**
	14nm,1.0s						
URZ	**Urewera**	**16.54**	**195**	P	**P**	**23** **48** **01.8**	**-0.4**
	0.5nm,0.3s,baz=10.0,slow=14,SNR=6.7						
URZ				S	**S**	**23** **50** **53.0**	**-11**
	1.0nm,0.3s,baz=86,slow=22,SNR=5.6						
SNZO	**South Karori**	**20.03**	**198**	P	**P**	**23** **48** **40.2**	**+0.3**
HNR	**Honiara**	**25.25**	**297**	*e*P	**P**	**23** **49** **29.9**	**-0.1**
	52nm,0.4s						
CTA	**Charters Tower**	**33.91**	**267**	P	**P**	**23** **50** **47.8**	**+1.5**
	3.4nm,0.4s,mb4.2,baz=114,slow=12,SNR=6.6						
CTAO	**Charters Tower**	**33.91**	**267**	*e*P	**P**	**23** **50** **46.5**	**+0.2**
	5.8nm,0.6s,mb4.3						
PMG	**Port Moresby**	**36.33**	**285**	*e*P	**P**	**23** **51** **07.4**	**+0.4**
	16nm,0.7s,mb4.7						
MCQ	**Macquarie Isla**	**36.69**	**203**	P	**P**	**23** **51** **09.8**	**+0.3**
STKA	**Stephens Creek**	**37.52**	**246**	*e*P	**P**	**23** **51** **17.3**	**+0.4**
	0.4nm,0.5s,mb3.2						
STKA	**Stephens Creek**	**37.52**	**246**	P	**P**	**23** **51** **16.9**	**0.0**
	1.8nm,0.6s,mb3.8,baz=103,slow=13,SNR=7.2						
ASAR	**Alice Springs**	**44.67**	**258**	P	**P**	**23** **52** **15.4**	**+0.3**
	1.4nm,0.7s,mb3.4,baz=95,slow=8.2,SNR=16						
ASAR				pP	pP	23 53 01.6	+0.2
	0.4nm,0.5s,baz=338,slow=11,SNR=3.1						
WRA	**Warramunga Arr**	**44.93**	**264**	P	**P**	**23** **52** **16.1**	**-1.1**
	0.5nm,0.3s,mb3.3,baz=99,slow=8.4,SNR=4.2						
MIDW	**Midway**	**50.28**	**0**	P	**P**	**23** **52** **57.5**	**-0.5**
GUMO	**Guam**	**51.42**	**310**	*e*P	**P**	**23** **53** **06.8**	**+0.1**
	37nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**53.36**	**264**	*e*P	**P**	**23** **53** **21.3**	**+0.3**
SBA	**Scott Base**	**56.06**	**184**	*e*P	**P**	**23** **53** **39.4**	**-0.2**
MBWA	**Marble Bar**	**58.01**	**258**	*e*P	**P**	**23** **53** **54.1**	**+0.1**
	3.8nm,0.9s,mb4.0						
CASY	**Casey**	**62.54**	**206**	*e*P	**P**	**23** **54** **22.8**	**-1.1**
	1.9nm,0.6s,mb3.9						
QSPA	**South Pole Qui**	**67.72**	**180**	P	**P**	**23** **54** **57.3**	**+0.2**
KKM	**Kota Kinabalu**	**70.78**	**285**	P	**P**	**23** **55** **17.0**	**+0.2**
KSM	**Kuching**	**74.23**	**278**	*e*P	**P**	**23** **55** **37.0**	**-0.2**
	16nm,1.4s,mb4.5						
NACB	**Ningan chiao**	**75.18**	**304**	P	**P**	**23** **55** **42.2**	**-0.3**
TATO	**Taipei**	**75.69**	**305**	*e*P	**P**	**23** **55** **45.4**	**+0.1**
	17nm,0.6s,mb4.9						
PMSA	**Palmer Station**	**79.37**	**156**	*e*P	**P**	**23** **56** **04.5**	**-0.5**
	2.8nm,0.5s,mb4.2						
KULM	**Kulim**	**84.58**	**278**	P	**P**	**23** **56** **33.0**	**-0.1**
TXAR	**Lajitas Array**	**87.59**	**57**	P	**P**	**23** **56** **48.9**	**+1.5**
	0.2nm,0.4s,mb3.3,baz=212,slow=8.5,SNR=5.5						
PLCA	**Paso Flores**	**87.60**	**133**	P	**P**	**23** **56** **47.4**	**0.0**
TRF	**Thorofare Moun**	**88.14**	**12**	*e*P	**P**	**23** **56** **48.7**	**-0.4**
	9.2nm,0.7s,mb4.7						
PDAR	**Pinedale Array**	**89.93**	**43**	P	**P**	**23** **56** **58.6**	**+0.6**
	1.0nm,1.2s,mb3.5,baz=254,slow=3.4,SNR=3.6						
ILAR	**Eielson Array**	**89.99**	**13**	P	**P**	**23** **56** **57.2**	**-0.6**
	1.6nm,1.0s,mb3.8,baz=225,slow=5.5,SNR=9.5						
HIA	**Hailar**	**90.52**	**324**	P	**P**	**23** **57** **00.6**	**0.0**
ARCES	**ARCESS Array B**	**130.84**	**350**	PKP	PKPdf	00 03 08.1	-0.1
	1.2nm,0.9s,baz=13,slow=2.6,SNR=3.9						
AKASG	**Malin Array Be**	**144.90**	**330**	PKP	PKPdf	00 03 31.8	-2.7
	0.7nm,0.4s,baz=40,slow=3.7,SNR=3.3						

SZGRF ***26*** *23:54:06.4,28.89N×86.15E,h33km, mb5.0, Xizang*
BJI ***26*** *23:54:21.6,30.73N×83.19E,h1km, mB5.0/26, mb4.7/44, Ms4.9/54, Ms7 4.9/50*
IDC ***26*** *23:54:22.0±0.5,30.63N×83.35E, h0km, mb4.4/22, mb1 4.5/25, mb1mx4.5/29, mbtmp4.4/25, ML4.1/3, MS4.3/23, Ms1 4.4/23, ms1mx4.2/32, Error ellipse: s-maj=15.7km s-min=12.6km az=32.0*
DMN ***26*** *23:54:22.5±0.6,31.12N×83.14E, h10km, Ml5.1/2, Error ellipse: s-maj=12.6km s-min=10.4km az=155.0*
ISCJB ***26*** *23:54:23.6±0.9,30.71N±0.03°×83.26E±0.02, h19km±6km, mb4.8/108, MS4.5/50, Error ellipse: s-maj=4.6km s-min=2.8km az=14.1*
NEIC ***26*** *23:54:23.8±0.2,30.66N×83.28E, h10km, mb5.0/58, MS4.4/2, Error ellipse: s-maj=5.4km s-min=4.0km az=24.0*
TEH ***26*** *23:54:24.0,30.69N×83.31E, h10km*
MOS ***26*** *23:54:25.4±1.0,30.66N×83.24E, h33km, mb5.1/57, MS4.4/20, Error ellipse: s-maj=7.4km s-min=4.0km az=126.5*
LDG ***26*** *23:54:25.5±0.3,30.77N×83.10E, h33km, Mb5.0/25, Ms4.2/9, Error ellipse: s-maj=16.4km s-min=6.2km az=97.0*
ISC 26 23:54:25.3±1.0,**30.71N**±0.03°×**83.29E**±0.02,**h16**km±6km, **h15**km±2.2km:**pP-P**,**n430**,σ**1**§**14**/441,**mb4.8**/108,**MS4.5**/50, **16C-19D**,**Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.38**	**170**	*e*Pn	**Pn**	**23** **55** **05.8**	**+2.2**
PTH	**Pithoragarh**	**2.90**	**247**	*e*PKP	**Pg**	**23** **55** **16.5**	**-4.3**
PTH				*e*S	**Sg**	**23** **55** **56.8**	**-1.6**
KOLN	**Koldanda**	**2.94**	**175**	*e*Pn	**Pn**	**23** **55** **13.8**	**+2.5**
GKN	**Gorkha**	**2.94**	**156**	*e*Pn	**Pn**	**23** **55** **13.6**	**+2.3**
JOSI	**Joshimath**	**3.22**	**268**	*ex*	**Pn**	**23** **55** **18.7**	**+3.6**
DMN	**Daman**	**3.47**	**152**	*e*Pn	**Pn**	**23** **55** **21.0**	**+2.4**
DMN				*e*Sn	**Sb**	**23** **56** **04.5**	**-3.8**
	4μm,1.3s						
GUN	**Gumba**	**3.59**	**140**	*e*Pn	**Pn**	**23** **55** **22.7**	**+2.5**
PKIN	**Phulchoki**	**3.62**	**149**	*e*Pn	**Pn**	**23** **55** **22.7**	**+2.0**
PKIN	**Phulchoki**	**3.62**	**149**	*e*Pn	**Pn**	**23** **55** **22.9**	**+2.2**
PKI	**Pulchoki**	**3.63**	**149**	*e*Pn	**Pn**	**23** **55** **22.7**	**+1.9**
PKI				*e*Sn	**Sn**	**23** **56** **07.1**	**+3.7**
	3μm,1.4s						
JIRN	**Jiri**	**3.96**	**139**	*e*Pn	**Pn**	**23** **55** **28.5**	**+3.2**
KLP	**Kalpa**	**4.40**	**282**	*e*PKP	**Pn**	**23** **55** **31.5**	**+0.2**
RAMN	**Ramite**	**4.74**	**141**	*e*Pn	**Pn**	**23** **55** **36.9**	**+0.9**
TAPN	**Taplejung**	**5.12**	**130**	*e*Pn	**Pn**	**23** **55** **42.2**	**+1.0**
ODAN	**Odare**	**5.26**	**136**	*e*Pn	**Pn**	**23** **55** **44.8**	**+1.6**
SDNR	**Sundarnagar**	**5.47**	**280**	*ex*	x	23 56 58.9	
SDNR				*ex*	**Sg**	**23** **57** **16.5**	**-4.5**
ALBI	**Allahabad**	**5.53**	**194**	*ex*	**Pb**	**23** **56** **05.0**	**+3.5**
NDI	**New Delhi**	**5.65**	**251**	*e*PKP	**Pn**	**23** **55** **49.0**	**+0.4**
NDI				*ex*	**Sb**	**23** **57** **16.4**	**+5.4**
SONA	**Sohna**	**5.94**	**247**	*e*PKP	**Pn**	**23** **55** **52.9**	**+0.5**
SONA				AMb	AMB	23 55 59.2	
	comp=Z,105nm,1.1s						
BHK	**Bhakra**	**5.94**	**279**	*ex*	**Pb**	**23** **56** **12.8**	**+4.5**
KUDL	**Kundal**	**6.46**	**248**	*e*PKP	**Pn**	**23** **55** **56.8**	**-2.8**
KUDL				AMb	AMB	23 55 58.6	
	comp=Z,29nm,0.5s						
LSA	**Lhasa**	**6.88**	**96**	*e*Pn	**Pn**	**23** **56** **08.7**	**+3.3**
	comp=Z,112nm,0.9s						
LSA				Sn	**Sn**	**23** **57** **23.9**	**+0.6**
LSA	**Lhasa**	**6.88**	**96**	*e*P	**Pn**	**23** **56** **08.7**	**+3.3**
LSA						23 57 23.9	
LSA				pmax	pmax		
	comp=Z,112nm,0.9s						
KHET	**Khetri**	**7.03**	**250**	*e*PKP	**Pn**	**23** **56** **06.7**	**-0.8**
KHET				AMb	AMB	23 56 11.4	
	comp=Z,22nm,0.7s						
AJM	**Ajmer**	**8.69**	**243**	*e*PKP	**Pn**	**23** **56** **30.0**	**-0.3**
AJM				AMb	AMB	23 56 31.8	
	comp=Z,24nm,0.8s						
AJM				*ex*	x	23 58 06.3	
CHCP	**Chirah Chowk**	**8.99**	**292**	P	**Pn**	**23** **56** **34.7**	**+0.3**
BHPL	**Bhopal**	**9.09**	**216**	*e*PKP	**Pn**	**23** **56** **33.9**	**-1.9**
BHPL				*ex*	x	23 58 02.4	
SHL	**Shillong**	**9.15**	**122**	*e*PKP	**Pn**	**23** **56** **35.0**	**-1.6**
SHL				*ex*	x	23 58 15.0	
CAL	**Calcutta**	**9.30**	**150**	*ex*	x	23 58 32.3	
CAL				*ex*	x	23 59 26.9	
AGT	**Agartala**	**9.81**	**132**	*i* P	**Pn**	**23** **56** **42.0**	**-3.7**
AGT				*i* x	x	23 57 29.0	
THW	**Thamme Wali**	**10.05**	**285**	P	**Pn**	**23** **56** **49.1**	**+0.2**
CEP	**Cherat**	**10.12**	**291**	P	**Pn**	**23** **56** **50.8**	**+0.9**
BWNR	**Bhubaneshwar**	**10.61**	**167**	*e*PKP	**Pn**	**23** **56** **55.0**	**-1.7**
BWNR				*ex*	x	23 57 50.0	
KSH	**Kashi**	**10.63**	**328**	P	**Pn**	**23** **56** **55.3**	**-1.5**
KSH				*e*pP		23 56 58.8	
KSH				*e*sP		23 57 01.5	
KSH				*e*PP		23 57 03.3	
KSH				S	**Sn**	**23** **58** **52.0**	**-3.5**
KSH				sS		23 58 57.5	
KSH				*e*SS		23 59 05.3	
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,140nm,3.1s						
KSH				LR	LR		
	comp=N,3μm,5.4s						
KSH				LR	LR		
	comp=E,5μm,9.0s						
KSH				LR	LR		
	comp=Z,2μm,7.9s						
AKL	**Akola**	**11.45**	**211**	*i* P	**Pn**	**23** **57** **06.8**	**-1.3**
AKL				*i* x	x	23 59 12.2	
KBL	**Kabul**	**12.60**	**291**	*e*Pn	**Pn**	**23** **57** **23.0**	**-0.8**
VIS	**Vishakhapatnam**	**12.93**	**180**	*i* P	**Pn**	**23** **57** **25.1**	**-3.2**
VIS				*i* x	x	23 59 43.6	
BHV	**Bhavnagar**	**13.39**	**231**	*e*PKP	**Pn**	**23** **57** **33.5**	**-1.2**
UCH	**Uchtor**	**13.48**	**331**	*e*Pn	**Pn**	**23** **57** **36.2**	**+0.5**
	comp=Z,20nm,1.2s						
WMQ	**Urumqi**	**13.55**	**14**	P	**Pn**	**23** **57** **37.5**	**+0.8**
WMQ				pP		23 57 41.0	
WMQ				sP		23 57 44.3	
WMQ				PP		23 57 48.5	
WMQ				S	**Sn**	**00** **00** **09.5**	**+2.6**
WMQ				SS		00 00 25.3	
WMQ				PcP	PcP	00 03 03.3	+0.5
WMQ				pmax	pmax		
	comp=Z,49nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,310nm,3.6s						
WMQ				LR	LR		
	comp=N,2μm,17.0s						
WMQ				LR	LR		
	comp=E,2μm,17.2s						
WMQ				LR	LR		
	comp=Z,2μm,15.8s						
TKM2	**Tokmak 2**	**13.65**	**335**	*e*Pn	**Pn**	**23** **57** **39.1**	**+1.0**
	comp=Z,22nm,1.4s						
TKM2	**Tokmak 2**	**13.65**	**335**	*e*P	**Pn**	**23** **57** **39.1**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,22nm,1.4s						
AML	**Almayashu**	**13.76**	**329**	*e*Pn	**Pn**	**23** **57** **38.0**	**-1.5**
	comp=Z,22nm,1.1s						
AAK	**Ala-Archa**	**13.83**	**332**	*e*Pn	**Pn**	**23** **57** **41.5**	**+1.0**
AAK	**Ala-Archa**	**13.83**	**332**	Pn	**Pn**	**23** **57** **40.1**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=321,slow=2.4,SNR=5.0						
AAK				LR	LR	00 03 12.0	
	comp=Z,980nm,20.4s,baz=133,slow=38						
AAK	**Ala-Archa**	**13.83**	**332**	*e*P	**Pn**	**23** **57** **40.8**	**+0.3**
AAK	**Ala-Archa**	**13.83**	**332**	Pn	**Pn**	**23** **57** **40.7**	**+0.2**
	comp=Z,86nm,1.4s,SNR=9.1						
AAK	**Ala-Archa**	**13.83**	**332**	P	Px	23 57 52.4	
	SNR=12						
HYB	**Hyderabad**	**13.91**	**199**	*i* P	**Pn**	**23** **57** **37.5**	**-4.3**
HYB				*e*S	**Sn**	**00** **00** **08.0**	**-8.0**
QUE	**Quetta**	**14.11**	**272**	*e*P	**Pn**	**23** **57** **46.0**	**+1.6**
QUE				*e*S	**Sn**	**00** **00** **30.0**	**+9.4**
EKS2	**Erkin-Say**	**14.15**	**330**	*e*Pn	**Pn**	**23** **57** **45.4**	**+0.5**
	comp=Z,22nm,1.1s						
KAD	**Karad**	**15.71**	**214**	*ex*	x	23 58 55.2	
KK31	**Karatay Array**	**16.02**	**324**	*ce*P	**Pn**	**23** **58** **07.2**	**-2.6**
KK31				pmax	pmax		
	comp=Z,20nm,0.9s						
KKAR	**Karatay Array**	**16.02**	**324**	*e*Pn	**Pn**	**23** **58** **06.9**	**-2.9**
	comp=Z,0.8nm,1.1s						
KKAR				*e*Sn	**Sn**	**00** **01** **07.0**	**-0.1**
KKAR	**Karatay Array**	**16.02**	**324**	*e*P	**Pn**	**23** **58** **06.9**	**-2.9**
KKAR				*e*		00 01 07.0	
KKAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
GTA	**Gaotai**	**16.06**	**53**	P	**Pn**	**23** **58** **09.5**	**-0.8**
GTA				pP	pP	23 58 14.0	-4.2
GTA				sP	sP	23 58 17.0	-3.4
GTA				S	**Sn**	**00** **01** **10.8**	**+2.7**
GTA				sS	sS	00 01 17.0	-12
GTA				SS		00 01 31.5	
GTA				pmax	pmax		
	comp=Z,7.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,220nm,6.2s						
GTA				LR	LR		
	comp=N,3μm,15.0s						
GTA				LR	LR		
	comp=E,1μm,15.5s						
GTA				LR	LR		
	comp=Z,2μm,16.9s						
MK31	**Makanchi Array**	**16.08**	**358**	*e*P	**Pn**	**23** **58** **13.3**	**+2.7**
MKAR	**Makanchi Array**	**16.08**	**358**	Pn	**Pn**	**23** **58** **09.6**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=172,slow=11,SNR=16						
MKAR				LR	LR	00 05 23.4	
	comp=Z,339nm,21.5s,baz=191,slow=41						
MKAR	**Makanchi Array**	**16.08**	**358**	*ce*P	**Pn**	**23** **58** **12.1**	**+1.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CD2	**Chengdu**	**17.59**	**84**	P	**Pn**	**23** **58** **29.5**	**-0.2**
CD2				pP	pP	23 58 33.0	-2.2
CD2				sP	sP	23 58 36.5	-0.9
CD2				PP		23 58 44.0	
CD2				S	**Sn**	**00** **01** **42.5**	**-2.8**
CD2				sS	sS	00 01 48.0	-12
CD2				SS		00 02 04.3	
CD2				pmax	pmax		
	comp=Z,20nm,1.4s						
CD2				pmax	pmax		
	comp=Z,240nm,5.5s						
CD2				LR	LR		
	comp=N,3μm,11.2s						
CD2				LR	LR		
	comp=E,2μm,10.8s						
CD2				LR	LR		
	comp=Z,3μm,11.2s						
LZH	**Lanzhou**	**17.98**	**67**	⇓P	**Pn**	**23** **58** **34.5**	**+0.1**
LZH				pP	pP	23 58 37.0	-2.5
LZH				sP	sP	23 58 39.3	-2.3
LZH				*e*S	**Sn**	**00** **01** **51.5**	**-3.0**
LZH				sS	sS	00 01 56.5	-11
LZH				SS		00 02 13.5	
LZH				pmax	pmax		
	comp=Z,190nm,1.3s						
LZH				pmax	pmax		
	comp=Z,380nm,4.5s						
LZH				LR	LR		
	comp=N,3μm,8.0s						
LZH				LR	LR		
	comp=E,7μm,10.4s						
LZH				LR	LR		
	comp=Z,8μm,12.5s						
KMI	**Kunming**	**18.06**	**103**	P	**Pn**	**23** **58** **34.3**	**-1.3**
KMI				pP	pP	23 58 39.0	-1.5
KMI				sP	sP	23 58 41.8	-0.8
KMI				PP		23 58 50.5	
KMI				S	**Sn**	**00** **01** **57.5**	**+0.7**
KMI				sS	sS	00 02 05.0	-4.8
KMI				SS		00 02 22.0	
KMI				pmax	pmax		
	comp=Z,17nm,1.0s						
KMI				pmax	pmax		
	comp=Z,120nm,3.6s						
KMI				LR	LR		
	comp=N,2μm,15.1s						
KMI				LR	LR		
	comp=E,4μm,17.3s						
KMI				LR	LR		
	comp=Z,5μm,20.2s						
CHRT	**Chiangrai**	**18.39**	**122**	⇓P	**Pn**	**23** **58** **37.0**	**-2.5**
CHTO	**Chiang Mai**	**18.48**	**126**	*e*P	**Pn**	**23** **58** **39.0**	**-1.6**
	comp=Z,28nm,1.2s						
CHTO	**Chiang Mai**	**18.48**	**126**	*e*P	**Pn**	**23** **58** **39.0**	**-1.7**
CHTO				pmax	pmax		
	comp=Z,28nm,1.2s						
CHTO	**Chiang Mai**	**18.48**	**126**	P	**Pn**	**23** **58** **39.5**	**-1.2**
	SNR=12						
CMAR	**Chiang Mai Arr**	**18.72**	**127**	P	**Pn**	**23** **58** **40.5**	**-3.1**
	comp=Z,1.0nm,0.3s,baz=307,slow=11,SNR=36						
CMAR				PcP	PcP	00 03 11.2	+0.2
	comp=Z,0.2nm,0.3s,baz=294,slow=3.3,SNR=4.2						
CMAR				LR	LR	00 07 01.4	
	comp=Z,544nm,20.3s,baz=321,slow=41						
BDT	**Bhumibol Dam**	**19.61**	**130**	P	**Pn**	**23** **58** **52.0**	**-2.3**
IMYA	**Miami**	**20.11**	**292**	*e*P	**P**	**23** **58** **58.8**	**+0.5**
KURK	**Kurchatov**	**20.29**	**351**	*e*P	**P**	**23** **58** **59.2**	**-0.9**
	comp=Z,120nm,1.2s						
KURK	**Kurchatov**	**20.29**	**351**	P	**P**	**23** **58** **58.6**	**-1.5**
	comp=Z,52nm,1.1s,baz=177,slow=10,SNR=152						
KURK	**Kurchatov**	**20.29**	**351**	*d* iP	**P**	**23** **58** **59.4**	**-0.7**
KURK				pmax	pmax		
	comp=Z,174nm,1.7s						
KURK	**Kurchatov**	**20.29**	**351**	P	**P**	**23** **58** **59.7**	**-0.4**
	SNR=61						
ISRO	**Mashad**	**20.61**	**292**	*e*P	**P**	**23** **59** **03.3**	**-0.4**
IMOG	**Moghan**	**20.68**	**291**	*e*P	**P**	**23** **59** **05.5**	**+1.0**
IKOO	**Kooshah**	**20.75**	**281**	*e*P	**P**	**23** **59** **05.9**	**+0.6**
GYA	**Guiyang**	**20.95**	**96**	P	**P**	**23** **59** **09.0**	**+1.5**
GYA				PP		23 59 32.5	
GYA				S	**S**	**00** **02** **57.5**	**-2.9**
GYA				SS		00 03 29.0	
GYA				ScP	ScP	00 06 52.3	+1.3
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,4.3s						
GYA				LR	LR		
	comp=N,4μm,15.7s,MS5.0						
GYA				LR	LR		
	comp=E,2μm,16.3s,MS5.0						
GYA				LR	LR		
	comp=Z,5μm,14.3s,MS5.0						
IPAY	**Payeh**	**21.01**	**292**	*e*P	**P**	**23** **59** **08.2**	**+0.2**
IKRD	**Kardeh**	**21.44**	**293**	*e*P	**P**	**23** **59** **05.4**	**-7.3**
XAN	**Xi'an**	**21.89**	**75**	P	**P**	**23** **59** **16.0**	**-1.5**
XAN				S	**S**	**00** **03** **12.5**	**-6.2**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb3.7						
XAN				LR	LR		
	comp=N,650nm,13.7s,MS4.5						
XAN				LR	LR		
	comp=E,950nm,13.0s,MS4.5						
XAN				LR	LR		

TIY LR LR
comp=Z,3μm,11.9s,MS5.1
ABKAR **Akbulak array 25.58 323** *eP* **P 23 59 53.8 +0.4**
comp=Z,13nm,0.8s,mb4.5
TLY Talaya 25.79 30 *eP* **P 23 59 55.1 -0.2**
comp=Z,8.7nm,0.8s,mb4.3
TLY Talaya 25.79 30 *eP* **P 23 59 56.8 +1.5**
TLY *eSS* 00 05 33.3
TLY pmax pmax
comp=Z,17nm,1.1s,mb4.5
TLY MLR MLR
comp=Z,347nm,16.0s,MS4.0
IFIR Firoozkooh 25.97 289 *eP* **P 23 59 58.1 +1.0**
IPAR Pars 26.09 276 *eP* **P 23 59 59.6 +1.3**
ISFB Sefidab 26.38 286 *eP* **P 00 00 01.8 +1.0**
IDMV Damavand 26.55 289 *eP* **P 00 00 04.7 +2.3**
QIZ Qiongzhong 26.68 110 P **P 00 00 03.0 -0.6**
QIZ S **S 00 04 39.5 +1.1**
QIZ pmax pmax
comp=Z,8.0nm,1.2s,mb4.1
QIZ pmax pmax
comp=Z,180nm,5.8s
QIZ LR LR
comp=N,500nm,11.7s
QIZ LR LR
comp=Z,1μm,14.7s,MS4.5
WHN Wuhan 26.69 82 *eP* **P 00 00 04.3 +0.6**
WHN LR LR
comp=N,2μm,7.0s
WHN LR LR
comp=E,2μm,11.1s
WHN LR LR
comp=Z,3μm,11.1s,MS5.1
IVRN Varamin 26.80 288 *eP* **P 00 00 03.5 -1.0**
AKTK Aktyubinsk 27.29 323 P **P 00 00 09.4 +0.6**
AKTK LR LR 00 12 17.7
AKTO Aktyubinsk 27.29 323 P **P 00 00 09.4 +0.6**
comp=Z,5.0nm,0.8s,mb4.1,baz=120,slow=8.6,SNR=13
AKTO LR LR 00 12 17.7
comp=Z,700nm,18.8s,MS4.2,baz=296,slow=39
IR3 Iran Long-Peri 27.38 289 *eP* **P 00 00 10.7 +0.9**
BJT Baijiatuau 28.25 62 *eP* **P 00 00 17.1 -0.4**
comp=Z,41nm,1.4s,mb4.9
BJT Baijiatuau 28.25 62 *eP* **P 00 00 17.2 -0.3**
BJT pmax pmax
comp=Z,41nm,1.4s
BJI Beijing 28.25 62 P **P 00 00 17.8 +0.2**
BJI S **S 00 05 04.0 +1.1**
BJI pmax pmax
comp=Z,16nm,1.1s,mb4.6
BJI LR LR
comp=N,2μm,16.9s,MS4.7
BJI LR LR
comp=E,1μm,18.6s,MS4.7
BJI LR LR
comp=Z,1μm,21.5s,MS4.4
ISRB Sarab 30.15 293 *eP* **P 00 00 35.7 +1.3**
NJ2 Nanjing 30.31 78 *eP* **P 00 00 37.3 +1.4**
NJ2 pP pP 00 00 41.5 +0.6
NJ2 sP sP 00 00 44.3 +1.4
NJ2 PP PP 00 01 40.0 -4.4
NJ2 S **S 00 05 38.0 +2.6**
NJ2 sS sS 00 05 45.0 +1.4
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
NJ2 pmax pmax
comp=Z,110nm,3.5s
NJ2 LR LR
comp=N,940nm,19.2s,MS4.6
NJ2 LR LR
comp=E,1μm,19.5s,MS4.6
NJ2 LR LR
comp=Z,1μm,10.9s
SVE Sverdlovsk 30.52 335⇓ *eP* **P 00 00 38.6 +1.1**
SVE *eS* **S 00 05 30.7 -7.5**
SVE pmax pmax
comp=Z,43nm,1.5s,mb5.1
SVE MLR MLR
comp=Z,496nm,13.0s,MS4.3
UMR Umm Al-Rimmam 30.71 277 *eP* **P 00 00 40.5 +1.0**
UMR AMb AMB 00 00 41.8
comp=Z,47nm,1.2s,mb5.2
KBD Kabd 30.80 276 *eP* **P 00 00 41.2 +0.9**
KBD AMb AMB 00 00 42.7
comp=Z,26nm,1.0s,mb5.0
MIB Mutribah 30.98 278 *eP* **P 00 00 42.7 +0.8**
MIB AMb AMB 00 00 44.3
comp=Z,49nm,1.2s,mb5.2
MIB Mutribah 30.98 278 *eP* **P 00 00 42.8 +0.9**
MIB AMb AMB 00 00 44.3
comp=Z,49nm,1.3s,mb5.2
ARU Arti 31.01 333 *eP* **P 00 00 42.3 +0.6**
comp=Z,33nm,1.4s,mb5.0
ARU Arti 31.01 333 *d iP* **P 00 00 41.7 -0.1**
ARU *e* 00 01 40.9
ARU *e* 00 03 35.7
ARU S **S 00 05 43.6 -2.1**
ARU pmax pmax
comp=Z,34nm,1.7s,mb4.9
ARU Arti 31.01 333 P **P 00 00 42.8 +1.0**
comp=Z,75nm,1.5s,mb5.3,SNR=5.3
NAY Al-Naaiem 31.18 277 *eP* **P 00 00 44.0 +0.4**
NAY AMb AMB 00 00 46.7
comp=Z,22nm,1.4s,mb4.8
NAY Al-Naaiem 31.18 277 *eP* **P 00 00 44.0 +0.4**
NAY AMb AMB 00 00 46.6
comp=Z,22nm,1.4s,mb4.8
QZH Quanzhou 31.66 92 P **P 00 00 42.5 -5.4**
QZH S **S 00 05 41.5 -15**
QZH LR LR
comp=N,560nm,3.6s
QZH LR LR
comp=E,3μm,11.2s
QZH LR LR
comp=Z,5μm,20.0s
IMRD Marand 31.74 295 *eP* **P 00 00 49.9 +1.5**
ISHB Shabestar 31.79 294 *eP* **P 00 00 50.2 +1.3**
DGRG David-gareji 32.23 300 P **P 00 00 54.5 +1.8**
DL2 Dalian 32.34 65 P **P 00 00 54.8 +1.1**
DL2 *eS* **S 00 06 08.0 +1.0**
DL2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
DL2 LR LR
comp=N,600nm,14.0s,MS4.9
DL2 LR LR
comp=E,2μm,13.2s,MS4.9
DL2 LR LR
comp=Z,2μm,14.1s,MS5.0
GNI Garni 32.58 297 *eP* **P 00 00 58.9 +3.1**
comp=Z,60nm,1.5s,mb5.3
GNI Garni 32.58 297 *d iP* **P 00 00 58.5 +2.7**
GNI pmax pmax
comp=Z,47nm,1.5s
GNI Garni 32.58 297 P **P 00 00 59.4 +3.6**
SNR=14
MTA Mtatsminda 32.70 300 P **P 00 00 58.4 +1.6**
TBLG Delisi 32.74 300 *eP* **P 00 00 59.1 +1.9**
TBLG Delisi 32.74 300 P **P 00 00 59.1 +1.9**
BHD Baghdad 32.97 285 *ex* x 00 01 00.0
BHD *ex* x 00 06 25.0
GOR Gori 33.24 301 P **P 00 01 04.0 +2.5**
ZEI Tsey 33.49 302 *eP* **P 00 01 03.7 -0.1**
ZEI pmax pmax
comp=Z,32nm,1.4s,mb5.1
SOKR Solikamsk 33.93 336 *c iP* **P 00 01 08.7 +1.4**
SOKR pmax pmax
comp=Z,80nm,1.4s,mb5.5
SNY Shenyang 34.05 60⇑ P **P 00 01 08.5 -0.1**
SNY S **S 00 06 27.3 -6.1**
SNY pmax pmax
comp=Z,19nm,1.4s,mb4.8
SNY LR LR
comp=N,490nm,10.3s
SNY LR LR
comp=E,850nm,16.1s
SNY LR LR
comp=Z,1μm,21.6s
NACB Ninganchiao 34.49 91 *eP* **P 00 01 13.0 +0.4**
comp=Z,15nm,0.8s,mb5.0
KIV Kislovodsk 34.54 304 *eP* **P 00 01 14.0 +1.1**
comp=Z,49nm,1.6s,mb5.2
KIV Kislovodsk 34.54 304 *eP* **P 00 01 14.0 +1.2**
KIV pmax pmax
comp=Z,49nm,1.6s,mb5.2
KIV Kislovodsk 34.54 304 P **P 00 01 14.7 +1.8**
SNR=10
SOC Sochi 36.63 303 *eP* **P 00 01 29.5 -1.3**
SOC *eS* **S 00 07 06.1 -6.9**
SOC pmax pmax
comp=Z,31nm,1.0s,mb5.1
SOC MLR MLR
comp=Z,864nm,20.0s,MS4.5
VRHR Novokhopersk 36.86 316 *eP* **P 00 01 32.6 0.0**
VRHR pmax pmax
comp=Z,40nm,1.2s,mb5.1
VRHR pmax pmax
comp=N,40nm,0.6s
VRHR pmax pmax
comp=E,40nm,1.2s
KSRS Korea Array 37.30 67 P **P 00 01 35.0 -1.6**
comp=E,3.3nm,0.6s,mb4.4,baz=271,slow=9.0,SNR=9.7
KSRS PcP PcP 00 03 55.3 -0.5
comp=E,1.5nm,0.8s,baz=270,slow=2.5,SNR=4.5
KSRS LR LR 00 17 44.0
comp=E,699nm,19.8s,MS4.5,baz=279,slow=38
KSRS Korea Array 37.30 67 P **P 00 01 35.1 -1.5**
KSRS 00 03 55.3
KSRS pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
KSRS MLR MLR
comp=Z,699nm,19.8s,MS4.5
MALT Malatya 37.44 294 *eP* **P 00 01 39.5 +1.7**
comp=Z,19nm,1.3s,mb4.8
MALT Malatya 37.44 294 *eP* **P 00 01 39.5 +1.7**
MALT pmax pmax
comp=Z,19nm,1.3s,mb4.8
VORD Divnogorie 38.24 315 *eP* **P 00 01 44.1 -0.2**
VORD pmax pmax
comp=Z,40nm,1.4s,mb5.0
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,40nm,1.4s
VORD MLR MLR
comp=N,1μm,24.0s
VORD MLR MLR
comp=Z,860nm,24.0s,MS4.5
VORD MLR MLR
comp=E,350nm,12.0s
VSR Storozhevoye 38.38 315 *eP* **P 00 01 45.2 -0.3**
VSR pmax pmax
comp=Z,30nm,1.0s,mb5.0
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,20nm,1.0s
VSR MLR MLR
comp=N,880nm,22.0s
VSR MLR MLR
comp=Z,930nm,22.0s,MS4.6
VSR MLR MLR
comp=E,300nm,11.0s
MDJ Mudanjiang 38.69 56 P **P 00 01 48.0 -0.2**
MDJ pP pP 00 01 51.3 -1.9
MDJ PP PP 00 03 16.5 -0.2
MDJ S **S 00 07 45.0 +0.8**
MDJ sS sS 00 07 51.3 -1.2
MDJ ScS ScS 00 11 55.8 -2.0
MDJ pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
MDJ pmax pmax
comp=Z,69nm,4.6s
MDJ LR LR
comp=N,180nm,11.0s,MS4.7
MDJ LR LR
comp=E,760nm,14.2s,MS4.7
MDJ LR LR
comp=Z,960nm,12.0s,MS4.8
JOW Kunigami 39.43 84 LR LR 00 20 09.3
comp=Z,417nm,19.5s,MS4.3,baz=341,slow=39
MOS Moscow 40.58 322 *eP* **P 00 02 03.1 -0.7**
MOS *e* 00 03 37.6
MOS pmax pmax
comp=Z,62nm,1.4s,mb5.0
KLR Kul'dur 40.70 49 *eP* **P 00 02 00.0 -4.9**
KLR pmax pmax
comp=E,65nm,2.2s
KLR pmax pmax
comp=Z,76nm,2.2s,mb4.9
KLR MLR MLR
comp=E,1μm,12.0s
KLR MLR MLR
comp=Z,2μm,12.0s,MS5.1
SIM Simferopol' 40.74 305 *eP* **P 00 02 06.1 +0.8**
SIM pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
SIM MLR MLR
comp=Z,1μm,23.0s,MS4.6
OBN Obninsk 40.96 320 *eP* **P 00 02 07.3 +0.3**
comp=Z,56nm,1.3s,mb5.0
BR131 Keskin Array S 41.10 297 *eP* **P 00 02 09.7 +1.4**
BRTR Keskin Array B 41.10 297 P **P 00 02 08.8 +0.5**
comp=Z,8.3nm,1.2s,mb4.2,baz=99,slow=6.4,SNR=22
BRTR LR LR 00 22 11.9
comp=Z,352nm,20.2s,MS4.2,baz=242,slow=40
BRTR Keskin Array B 41.10 297 *ce* **P 00 02 09.6 +1.3**
BRTR pmax pmax
comp=Z,8.0nm,1.2s
KLMR Klimovskoe 41.62 329 P **P 00 02 08.6 -3.7**
KLMR pmax pmax
comp=Z,98nm,1.5s,mb5.2
AKASG Malin Array Be 44.47 313 P **P 00 02 35.3 -0.2**
AKASG PP PP 00 04 22.4 +3.2
AKASG LR LR 00 24 32.4
AKASG Malin Array Be 44.47 313 P **P 00 02 35.3 -0.2**
comp=Z,2.2nm,0.6s,mb4.1,baz=80,slow=6.8,SNR=21
AKASG PP PP 00 04 22.4 +3.3
comp=Z,2.1nm,0.8s,baz=85,slow=9.8,SNR=5.7
AKASG LR LR 00 24 32.4
comp=Z,542nm,18.2s,MS4.5,baz=85,slow=41
AKASG Malin Array Be 44.47 313 *ce* **P 00 02 35.2 -0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
KIS Kishinev 44.52 307 *eP* **P 00 02 35.0 -0.9**
KIS *e* 00 04 24.0
KIS MLR MLR
comp=Z,400nm,15.0s,MS4.5
KIS MLR MLR
comp=Z,500nm,16.0s
MJAR Matsushiro Arr 45.59 67 P **P 00 02 43.8 -0.7**
comp=Z,0.9nm,0.4s,mb4.1,baz=298,slow=9.6,SNR=4.9
MJAR LR LR 00 23 06.8
comp=Z,610nm,19.6s,MS4.5,baz=280,slow=38
VRI Vrincioaia 45.96 306⇑ *iP* **P 00 02 49.1 +1.7**
JOF Joensuu 46.01 330 *eP* **P 00 02 47.6 +0.1**
JOF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
JOF Joensuu 46.01 330 *ep* **P 00 02 47.6 +0.1**
comp=Z,4.7nm,0.6s,mb4.6
TESR 46.01 307⇓ *iP* **P 00 02 46.8 -0.9**
PLOR Plostina 46.02 306⇓ *iP* **P 00 02 49.2 +1.4**
MLR Muntele Rosu 46.52 305⇓ *iP* **P 00 02 53.3 +1.5**
LVZ Lovozero 46.71 337 *eP* **P 00 02 52.3 -0.6**
LVZ pmax pmax
comp=Z,35nm,1.2s,mb5.2
KARP Karpathos 46.72 292 *eP* **P 00 02 56.0 +2.5**
ALN Alexandroupoli 46.79 299 *eP* **P 00 02 54.3 +0.3**
BURAR Bucovina Array 46.97 308 *iP* **P 00 02 56.5 +1.2**
BUR08 Bucovina Ar. S 46.98 308 *eP* **P 00 02 55.2 -0.1**
CHOS Chios island 47.11 296 *eP* **P 00 02 57.6 +1.1**
VOIR 47.15 305⇑ *iP* **P 00 02 57.3 +0.6**
JHJ Hachijo jima 2 47.52 72 LR LR 00 24 39.8
comp=Z,718nm,18.0s,MS4.7,baz=309,slow=38
TIXI Tiksi 47.71 18 *eP* **P 00 03 01.4 +0.7**
comp=Z,26nm,1.1s,mb5.2
TIXI Tiksi 47.71 18 *eP* **P 00 03 00.7 0.0**
TIXI pmax pmax
comp=Z,43nm,1.7s,mb5.2
TIXI MLR MLR
comp=Z,220nm,14.0s,MS4.3
YSS Yuzh-Sakhalins 47.94 53 *eP* **P 00 03 02.2 -0.6**
YSS MLR MLR
comp=Z,600nm,15.0s,MS4.7
YSS MLR MLR
comp=N,400nm,14.0s,MS4.8
YSS MLR MLR
comp=E,700nm,14.0s,MS4.8
FINES FINESS Array B 47.95 327 P **P 00 03 03.5 +0.7**
comp=E,2.7nm,0.5s,mb4.5,baz=106,slow=8.6,SNR=16
FINES LR LR 00 24 45.2
comp=E,663nm,18.8s,MS4.6,baz=357,slow=38
NPS Neapolis 48.02 292 *eP* **P 00 03 03.1 -0.5**
LAST Lasithi 48.15 291 P **P 00 03 05.7 +1.1**
LAST Lasithi 48.15 291 P **P 00 03 05.7 +1.1**
NVR Nevrokopi 48.38 300 *eP* **P 00 03 05.1 -1.2**
KWP Kalwaria Pacla 48.62 311 *eP* **P 00 03 08.1 +0.1**
comp=E,32nm,1.4s,mb5.2
KWP Kalwaria Pacla 48.62 311 *eP* **P 00 03 08.1 +0.1**
KWP pmax pmax
comp=Z,32nm,1.4s,mb5.2
KWP Kalwaria Pacla 48.62 311⇓ *iP* **P 00 03 08.9 +0.9**
DRGR 48.71 307⇓ *iP* **P 00 03 09.2 +0.4**
VTS Vitosha 48.71 302 P **P 00 03 10.1 +1.3**
VTS Vitosha 48.71 302 P **P 00 03 10.1 +1.3**
VTS Vitosha 48.71 302⇑ *iP* **P 00 03 09.5 +0.7**
SIVA Sivas 48.71 291 P **P 00 03 09.6 +0.6**
SIVA Sivas 48.71 291 P **P 00 03 09.6 +0.6**
PLG Polygyros 48.82 299 P **P 00 03 10.2 +0.5**
PLG Polygyros 48.82 299 *eP* **P 00 03 10.5 +0.8**
PLG Polygyros 48.82 299 P **P 00 03 10.2 +0.5**
SOH Sokhos 48.83 299 *eP* **P 00 03 04.4 -5.4**
VAM Vamos 49.12 292 *eP* **P 00 03 12.6 +0.5**
KNT Kendrikon 49.12 300 P **P 00 03 10.4 -1.6**
KNT Kendrikon 49.12 300 P **P 00 03 10.4 -1.6**
KARN Karanos 49.34 292 P **P 00 03 14.6 +0.8**
LKR Lokris 49.44 296 *eP* **P 00 03 13.7 -0.8**
CRVS Cervenica-Dubn 49.45 310 *eP* **P 00 03 15.1 +0.7**
comp=Z,20nm,2.1s,mb4.8
CRVS Cervenica-Dubn 49.45 310 *eP* **P 00 03 15.1 +0.7**
CRVS pmax pmax
comp=Z,20nm,2.1s,mb4.8
GRG Griva 49.52 300 P **P 00 03 13.8 -1.3**
GRG Griva 49.52 300 P **P 00 03 13.8 -1.3**
BZS Buzias 49.55 306⇓ *iP* **P 00 03 15.7 +0.5**
LTK Loutraki 49.57 296 *eP* **P 00 03 11.2 -4.3**
LIT Litokhoron 49.58 298 P **P 00 03 14.1 -1.5**
LIT Litokhoron 49.58 298 *eP* **P 00 03 14.5 -1.1**
LIT Litokhoron 49.58 298 P **P 00 03 14.1 -1.5**
AGG Agios Georgios 49.88 297 P **P 00 03 17.5 -0.4**
AGG Agios Georgios 49.88 297 *eP* **P 00 03 17.3 -0.6**
AGG Agios Georgios 49.88 297 P **P 00 03 17.5 -0.4**
KEV Kevo 50.00 338 *eP* **P 00 03 19.1 +0.8**
KEV Kevo 50.00 338 *ep* **P 00 03 19.1 +0.8**
THL Klokotos Trika 50.03 298 *eP* **P 00 03 18.5 -0.5**
GUR Goura 50.07 296 *eP* **P 00 03 17.6 -1.7**
GUR Goura 50.07 296 P **P 00 03 17.2 -2.1**
KZN Kozani 50.09 299 P **P 00 03 19.8 +0.3**
KZN Kozani 50.09 299 *eP* **P 00 03 17.8 -1.7**
KZN Kozani 50.09 299 P **P 00 03 19.8 +0.3**
KECS Kecovo 50.12 310 *eP* **P 00 03 21.5 +2.0**
comp=Z,3.3nm,1.2s,mb4.2
KECS Kecovo 50.12 310 *eP* **P 00 03 21.5 +2.0**
KECS pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
VLX Vlachokerasia 50.15 295 P **P 00 03 18.5 -1.5**
NIE Niedzica 50.18 311 *eP* **P 00 03 20.9 +0.9**
EVR Evrytania 50.30 297 *eP* **P 00 03 19.6 -1.5**
EFP Efpalio 50.32 296 *eP* **P 00 03 19.4 -1.8**
ARCES ARCESS Array B 50.42 337 P **P 00 03 21.7 +0.2**
comp=Z,7.9nm,1.0s,mb4.7,baz=98,slow=7.3,SNR=20
ARE0 ARCESS Array S 50.42 337 *eP* **P 00 03 22.4 +0.9**
ITM Ithomi 50.55 295 *eP* **P 00 03 21.4 -1.5**
PSZ Piszkesteto 50.55 309 *eP* **P 00 03 22.7 -0.1**
comp=Z,7.0nm,1.0s,mb4.5
PSZ Piszkesteto 50.55 309 *eP* **P 00 03 22.7 -0.1**
PSZ pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
NEST Nestorio 50.62 299 P **P 00 03 22.4 -1.0**
RLS Riolos of Patr 50.73 296 *eP* **P 00 03 18.2 -6.1**
PYL PYLOS 50.75 294 *eP* **P 00 03 22.7 -1.8**
PYL PYLOS 50.75 294 P **P 00 03 22.8 -1.7**
DIVS Divibare 50.86 304 P **P 00 03 25.6 +0.4**
JAN Janina 50.90 298 *eP* **P 00 03 24.7 -0.9**
CBIJ Chichi jima 51.18 78 LR LR 00 27 56.3
comp=Z,280nm,20.0s,MS4.3,baz=354,slow=39
VYHS Vyhne 51.21 310 *eP* **P 00 03 27.9 +0.2**
comp=Z,10nm,1.7s,mb4.5
VYHS Vyhne 51.21 310 *eP* **P 00 03 27.9 +0.2**
VYHS pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
PKSM Moragy 51.56 307⇑ *iP* **P 00 03 30.7 +0.3**
OKC Ostrava-Krasne 51.56 311 *eP* **P 00 03 29.9 -0.5**
OKC MLR MLR
comp=Z,300nm,16.6s,MS4.4
OKC Ostrava-Krasne 51.56 311 *eP* **P 00 03 29.9 -0.5**
OKC AMS AMS 00 27 30.0
comp=Z,300nm,16.6s
MORC Moravsky Berou 51.96 311 *eP* **P 00 03 32.8 -0.5**
DPC Dobruska-Polom 52.70 312 *eP* **P 00 03 39.4 +0.6**
DPC MLR MLR
comp=Z,400nm,22.9s,MS4.4
DPC Dobruska-Polom 52.70 312 *eP* **P 00 03 39.4 +0.6**
DPC AMS AMS 00 25 00.0
comp=Z,400nm,22.9s
UPC Upice 52.88 312 *eP* **P 00 03 40.2 +0.1**
UPC Upice 52.88 312 *eP* **P 00 03 40.2 +0.1**
KOGS Kog 53.17 307 *eP* **P 00 03 42.1 -0.3**
CONA Conrad Observa 53.24 309⇓ *iP* **P 00 03 42.9 +0.1**
comp=Z,24nm,1.6s,mb4.9,SNR=9.8
TREC Trest 53.34 311 *eP* **P 00 03 43.9 +0.4**
TREC MLR MLR
comp=Z,500nm,20.6s,MS4.5
TREC Trest 53.34 311 *eP* **P 00 03 43.9 +0.4**
TREC AMS AMS 00 26 00.0
comp=Z,500nm,20.6s
SEY Seymchan 53.67 32⇓ *iP* **P 00 03 45.1 -0.7**
GROS Grobnik 53.68 307 *eP* **P 00 03 46.0 -0.2**
PVCC Panska Ves 53.80 313 *eP* **P 00 03 49.1 +2.2**
PVCC MLR MLR
comp=Z,500nm,14.0s,MS4.7
PVCC Panska Ves 53.80 313 *eP* **P 00 03 49.1 +2.2**
PVCC AMS AMS 00 29 00.0
comp=Z,500nm,14.0s
PRU Pruhonice 53.87 312 *eP* **P 00 03 48.4 +1.0**
PRU MLR MLR
comp=Z,400nm,22.5s,MS4.4
PRU Pruhonice 53.87 312 *eP* **P 00 03 48.4 +1.0**
PRU AMS AMS 00 28 50.0
comp=Z,400nm,22.5s
PERS Pernice 53.92 308 *eP* **P 00 03 47.8 0.0**
SOKA Soboth 53.97 308⇑ *i*pP pP 00 03 48.6 -4.8
comp=Z,22nm,1.4s
KMBO Kilima Mbogo 53.99 243 *eP* **P 00 03 49.6 +0.8**
comp=Z,26nm,1.4s,mb5.0
KMBO Kilima Mbogo 53.99 243 P **P 00 03 47.5 -1.2**
comp=Z,4.5nm,0.5s,mb4.6,baz=360,slow=24,SNR=6.0
KMBO Kilima Mbogo 53.99 243 P **P 00 03 47.6 -1.2**
KMBO pmax pmax
comp=Z,5.0nm,0.5s
KMBO Kilima Mbogo 53.99 243 P **P 00 03 50.5 +1.7**
SNR=6.0
TIP Timpagrande 54.10 298 *eP* **P 00 03 49.3 0.0**
BRG Berggiesshubel 54.16 313 *eP* **P 00 03 48.1 -1.3**
comp=Z,5.8nm,1.1s,mb4.4
BRG *e* 00 04 41.5
comp=Z,3.3nm,0.6s
BRG
comp=N,1μm,29.9s
BRG
comp=E,444nm,20.7s
BRG
comp=Z,813nm,36.8s
MOA Molln 54.32 309⇑ *iP* **P 00 03 50.5 -0.2**
comp=Z,9.3nm,1.3s,mb4.6
LJU Ljubljana 54.41 307 *eP* **P 00 03 51.7 +0.2**
KHC Kasperske Hory 54.60 311 *eP* **P 00 03 53.0 +0.3**
KHC MLR MLR
comp=Z,700nm,37.5s,MS4.5
KHC Kasperske Hory 54.60 311 *eP* **P 00 03 53.0 +0.3**
KHC AMS AMS 00 26 10.0
comp=Z,700nm,37.5s
CLL Collm 54.70 314⇓ *iP* **P 00 03 47.6 -5.8**
comp=Z,5.0nm,0.7s,mb4.7
CLL *e* pP 00 03 53.0 -5.6
CLL Collm 54.70 314⇓ *iP* **P 00 03 47.6 -5.8**
CLL *e* pP 00 03 53.0 -5.6
CLL pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
CLL Collm 54.70 314 *i* P **P 00 03 53.0 -0.4**
comp=Z,7.0nm,1.1s,mb4.6
NOA NORSAR Array B 55.05 326 P **P 00 03 54.6 -1.2**
comp=Z,4.9nm,0.9s,mb4.5,baz=88,slow=7.1,SNR=9.6
NOA LR LR 00 28 56.5
comp=Z,402nm,18.4s,MS4.5,baz=85,slow=38
NKC Novy Kostel 55.18 312 *eP* **P 00 03 57.4 +0.5**

NKC MLR MLR
comp=Z,600nm,16.0s,MS4.8
NKC Novy Kostel 55.18 312 *e*P **P 00 03 57.4 +0.5**
NKC AMS AMS 00 30 00.0
comp=Z,600nm,16.0s
AQU L'Aquila 55.90 303 *e*P **P 00 04 03.4 +1.2**
comp=Z,51nm,1.4s,mb5.4
AQU L'Aquila 55.90 303 *e*P **P 00 04 03.4 +1.1**
AQU pmax pmax
comp=Z,51nm,1.4s,mb5.4
GRA1 Grafenberg Arr 56.04 312 *e*P **P 00 04 02.9 -0.2**
comp=Z,30nm,1.8s,mb5.0
GRF Grafenberg Arr 56.04 312 *e*P **P 00 04 02.9 -0.2**
comp=Z,30nm,1.8s,mb5.0
GRF Grafenberg Arr 56.04 312 *e*P **P 00 04 02.9 -0.2**
GRF pmax pmax
comp=Z,30nm,1.8s,mb5.0
GRF Grafenberg Arr 56.04 312 *e*P **P 00 04 02.9 -0.2**
GRF pmax pmax
comp=Z,30nm,1.8s,mb5.0
WTTA Wattenberg 56.17 309⇑ *i*P **P 00 04 03.6 -0.5**
comp=Z,15nm,1.8s,mb4.7
RETA Reutte 56.72 309⇓ *i*P **P 00 04 06.7 -1.3**
comp=Z,9.5nm,1.5s,mb4.6,SNR=5.5
FETA Feichten 56.83 309⇑ *i*P **P 00 04 07.9 -0.9**
comp=Z,8.8nm,1.3s,mb4.6
PETK Petropavlovsk- 56.98 44 P **P 00 04 08.3 -1.4**
comp=Z,3.4nm,0.6s,mb4.6,baz=179,slow=0.6,SNR=6.7
PETK LR LR 00 29 43.4
comp=Z,188nm,18.2s,MS4.2,baz=272,slow=37
DAVA Damuels 57.34 309 *i* P **P 00 04 11.9 -0.5**
comp=Z,16nm,1.2s,mb4.9,SNR=7.4
CDF Champ du Feu 58.83 311 *e*P **P 00 04 21.8 -1.0**
comp=Z,43nm,1.7s,mb4.9
CDF Champ du Feu 58.83 311 *e*P **P 00 04 21.8 -1.0**
comp=Z,21nm,1.7s,mb4.9
CDF Champ du Feu 58.83 311 *e*P **P 00 04 21.8 -1.0**
CDF pmax pmax
comp=Z,21nm,1.7s,mb4.9
GUMO Guam 58.86 92 LR LR 00 31 08.7
comp=Z,310nm,18.4s,MS4.5,baz=284,slow=38
PGF Pioggiola 59.02 304 *e*P **P 00 04 23.1 -1.2**
HINF Hinteralfeld 59.23 310 *e*P **P 00 04 24.6 -1.0**
comp=Z,51nm,1.5s,mb5.0
HINF Hinteralfeld 59.23 310 *e*P **P 00 04 24.6 -1.0**
comp=Z,26nm,1.5s,mb5.0
HINF Hinteralfeld 59.23 310 *e*P **P 00 04 24.6 -1.0**
HINF pmax pmax
comp=Z,26nm,1.5s,mb5.0
WLF Walferdange 59.28 313 P **P 00 04 26.2 +0.3**
HAU Haudompre 59.52 311 *e*P **P 00 04 26.7 -0.9**
comp=Z,19nm,1.1s,mb4.7
HAU *e*MLR MLR
comp=Z,269nm,19.2s,MS4.1
HAU Haudompre 59.52 311 *e*P **P 00 04 26.7 -0.9**
comp=Z,9.3nm,1.1s,mb4.7
HAU LR LR
comp=Z,270nm,19.3s,MS4.4
HAU Haudompre 59.52 311 *e*P **P 00 04 26.7 -0.9**
HAU pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
HAU MLR MLR
comp=Z,270nm,19.3s,MS4.4
VSL Villasalto 59.56 300 *e*P **P 00 04 27.6 -0.4**
SBF Sospel 59.79 306 *e*P **P 00 04 29.0 -0.6**
comp=Z,62nm,1.3s,mb5.2
SBF Sospel 59.79 306 *e*P **P 00 04 29.0 -0.6**
comp=Z,31nm,1.3s,mb5.2
SBF Sospel 59.79 306 *e*P **P 00 04 29.0 -0.6**
SBF pmax pmax
comp=Z,31nm,1.3s,mb5.2
LPG La Plagne 59.85 308 *e*P **P 00 04 29.7 -0.2**
comp=Z,39nm,1.4s,mb4.9
LPG La Plagne 59.85 308 *e*P **P 00 04 29.7 -0.2**
comp=Z,20nm,1.4s,mb4.9
LPG La Plagne 59.85 308 *e*P **P 00 04 29.7 -0.2**
LPG pmax pmax
comp=Z,20nm,1.4s,mb5.0
LPL La Plagne 59.86 308 *e*P **P 00 04 29.8 -0.2**
comp=Z,30nm,1.1s,mb4.9
LPL La Plagne 59.86 308 *e*P **P 00 04 29.8 -0.2**
comp=Z,15nm,1.1s,mb4.9
LPL La Plagne 59.86 308 *e*P **P 00 04 29.8 -0.2**
LPL pmax pmax
comp=Z,15nm,1.1s,mb4.9
GIVF Givet 60.02 313 *e*P **P 00 04 30.6 -0.4**
CABF La Chapelle 60.03 309 *e*P **P 00 04 30.5 -0.6**
MBDF Montbardon 60.03 307 *e*P **P 00 04 29.9 -1.3**
SFTF Sexfontaines 60.33 311 *e*P **P 00 04 32.1 -1.1**
BAIF Baives 60.42 313 *e*P **P 00 04 33.1 -0.7**
FRF La Foret Royal 60.42 306 *e*P **P 00 04 32.9 -1.0**
comp=Z,72nm,1.7s,mb5.1
FRF La Foret Royal 60.42 306 *e*P **P 00 04 32.9 -1.0**
comp=Z,36nm,1.7s,mb5.1
FRF La Foret Royal 60.42 306 *e*P **P 00 04 32.9 -1.0**
FRF pmax pmax
comp=Z,36nm,1.7s,mb5.1
LMR La Mourre 60.58 305 *e*P **P 00 04 34.1 -0.9**
comp=Z,28nm,1.3s,mb4.9
LMR La Mourre 60.58 305 *e*P **P 00 04 34.1 -0.9**
comp=Z,14nm,1.3s,mb4.9
LMR La Mourre 60.58 305 *e*P **P 00 04 34.1 -0.9**
LMR pmax pmax
comp=Z,14nm,1.3s,mb4.9
ORIF Oris-en-Rattie 60.60 307 *e*P **P 00 04 33.9 -1.1**
ORIF *e*MLR MLR
comp=Z,509nm,22.2s,MS4.3
KEST Kesra 60.71 296 *e*P **P 00 04 36.9 +1.0**
KEST Kesra 60.71 296 P **P 00 04 36.7 +0.7**
comp=Z,8.5nm,1.1s,mb4.8,baz=337,slow=1.4,SNR=17
KEST LR LR 00 36 06.3
comp=Z,55nm,20.7s,MS3.7,baz=314,slow=41
SMRF Simiane la Rot 61.06 306 *e*P **P 00 04 37.7 -0.5**
comp=Z,31nm,1.4s,mb4.9
SMRF Simiane la Rot 61.06 306 *e*P **P 00 04 37.7 -0.5**
comp=Z,31nm,1.4s,mb5.2
LOR Lormes 61.34 310 *e*P **P 00 04 38.6 -1.4**
LOR *e*MLR MLR
comp=Z,282nm,20.8s,MS4.1
LOR Lormes 61.34 310 *e*P **P 00 04 38.6 -1.4**
LOR MLR MLR
comp=Z,280nm,20.8s,MS4.4
VIVF Saint-Julien-l 61.44 307 *e*P **P 00 04 40.0 -0.8**
comp=Z,64nm,1.8s,mb5.2
VIVF Saint-Julien-l 61.44 307 *e*P **P 00 04 40.0 -0.8**
comp=Z,32nm,1.8s,mb5.2
VIVF Saint-Julien-l 61.44 307 *e*P **P 00 04 40.0 -0.8**
VIVF pmax pmax
comp=Z,32nm,1.8s,mb5.2
SMF Signal de Mont 61.51 310 *e*P **P 00 04 40.1 -1.1**
comp=Z,60nm,1.7s,mb5.1
SMF Signal de Mont 61.51 310 *e*P **P 00 04 40.1 -1.1**
comp=Z,30nm,1.7s,mb5.2
SMF Signal de Mont 61.51 310 *e*P **P 00 04 40.1 -1.1**
SMF pmax pmax
comp=Z,30nm,1.7s,mb5.2
SSF Saint Saulge 61.62 310 *e*P **P 00 04 40.8 -1.2**
comp=Z,25nm,1.3s,mb4.9
SSF Saint Saulge 61.62 310 *e*P **P 00 04 40.8 -1.2**
comp=Z,13nm,1.3s,mb4.9
SSF Saint Saulge 61.62 310 *e*P **P 00 04 40.8 -1.2**
SSF pmax pmax
comp=Z,13nm,1.3s,mb4.9
AVF Avril sur Loir 61.80 310 *e*P **P 00 04 41.8 -1.4**
BGF Bois d'Agland 62.20 310 *e*P **P 00 04 44.6 -1.2**
LASF Ste Croix 62.22 307 *e*P **P 00 04 45.5 -0.5**
comp=Z,51nm,1.6s,mb5.1
MBWA Marble Bar 62.33 141 P **P 00 04 47.1 +0.2**
TCF Toulx Ste Croi 62.70 310 *e*P **P 00 04 48.4 -0.8**
comp=Z,62nm,1.6s,mb5.2
TCF Toulx Ste Croi 62.70 310 *e*P **P 00 04 48.4 -0.8**
comp=Z,31nm,1.6s,mb5.2
TCF Toulx Ste Croi 62.70 310 *e*P **P 00 04 48.4 -0.8**
TCF pmax pmax
comp=Z,31nm,1.6s,mb5.2
CAF Calviac 63.19 308 *e*P **P 00 04 51.8 -0.7**
RJF Les Rejaudoux 63.45 309 *e*P **P 00 04 53.7 -0.5**
RJF *e*MLR MLR
comp=Z,355nm,22.9s,MS4.2
RJF Les Rejaudoux 63.45 309 *e*P **P 00 04 53.7 -0.5**
RJF MLR MLR
comp=Z,350nm,22.9s,MS4.5
LDF La Druitiere 63.54 313 *e*P **P 00 04 53.3 -1.4**
MTLF Montolieu 63.58 306 *e*P **P 00 04 54.4 -0.7**
comp=Z,37nm,1.6s,mb4.9
MTLF Montolieu 63.58 306 *e*P **P 00 04 54.4 -0.7**
comp=Z,18nm,1.6s,mb4.9
MTLF Montolieu 63.58 306 *e*P **P 00 04 54.4 -0.7**
MTLF pmax pmax
comp=Z,18nm,1.6s,mb4.8
GRR Gorron 64.07 312 *e*P **P 00 04 56.8 -1.4**
comp=Z,43nm,1.4s,mb5.0
GRR Gorron 64.07 312 *e*P **P 00 04 56.8 -1.4**
comp=Z,22nm,1.4s,mb5.0
GRR Gorron 64.07 312 *e*P **P 00 04 56.8 -1.4**
GRR pmax pmax
comp=Z,21nm,1.4s,mb5.0
LFF La Frestale 64.08 308 *e*P **P 00 04 57.8 -0.6**
MFF Saint Martin d 64.16 310 *e*P **P 00 04 57.5 -1.3**
SGMF Saint Gilles 65.19 313 *e*P **P 00 05 04.5 -1.0**
comp=Z,80nm,1.6s,mb5.2
SGMF Saint Gilles 65.19 313 *e*P **P 00 05 04.5 -1.0**
comp=Z,40nm,1.6s,mb5.2
SGMF Saint Gilles 65.19 313 *e*P **P 00 05 04.5 -1.0**
SGMF pmax pmax
comp=Z,40nm,1.6s,mb5.2
ROSF Rostrenen 65.61 313 *e*P **P 00 05 07.2 -1.1**
ETSF Etsaut 65.64 307 *e*P **P 00 05 08.1 -0.5**
comp=Z,33nm,1.5s,mb4.8
ETSF Etsaut 65.64 307 *e*P **P 00 05 08.1 -0.5**
comp=Z,16nm,1.5s,mb4.8
ETSF Etsaut 65.64 307 *e*P **P 00 05 08.1 -0.5**
ETSF pmax pmax
comp=Z,16nm,1.5s,mb4.8
QUIF Quistinic 65.68 313 *e*P **P 00 05 08.2 -0.6**
comp=Z,101nm,1.5s,mb5.3
QUIF Quistinic 65.68 313 *e*P **P 00 05 08.2 -0.6**
comp=Z,51nm,1.5s,mb5.3
QUIF Quistinic 65.68 313 *e*P **P 00 05 08.2 -0.6**
QUIF pmax pmax
comp=Z,51nm,1.5s,mb5.3
SJPF Ste Jean 66.03 307 *e*P **P 00 05 10.8 -0.3**
comp=Z,43nm,1.4s,mb5.0
SJPF Ste Jean 66.03 307 *e*P **P 00 05 10.8 -0.3**
comp=Z,21nm,1.4s,mb5.0
SJPF Ste Jean 66.03 307 *e*P **P 00 05 10.8 -0.3**
SJPF pmax pmax
comp=Z,21nm,1.4s,mb5.0
ESDC Sonseca Array 69.21 304 P **P 00 05 30.8 -0.4**
ESDC LR LR 00 40 20.0
ESDC Sonseca Array 69.21 304 P **P 00 05 30.8 -0.4**
comp=Z,1.7nm,0.8s,mb4.0,baz=55,slow=6.2,SNR=9.6
ESDC LR LR 00 40 20.0
comp=Z,157nm,19.4s,MS4.3,baz=45,slow=40
ESLA Sonseca Array 69.21 304 *e*P **P 00 05 31.3 +0.1**
SUMG Summit 69.64 344 *e*P **P 00 05 34.0 +0.7**
comp=Z,16nm,0.8s,mb5.0
SUMG Summit 69.64 344 *i* P **P 00 05 33.5 +0.2**
comp=Z,15nm,0.9s,mb4.9
WRA Warramunga Arr 70.30 129 P **P 00 05 37.3 -0.8**
comp=Z,5.8nm,0.8s,mb4.5,baz=324,slow=6.3,SNR=8.1
ASAR Alice Springs 72.65 132 P **P 00 05 51.3 -0.9**
comp=Z,17nm,1.0s,mb3.9,baz=308,slow=5.5,SNR=10
COLD Coldfoot 74.42 19 *e*P **P 00 06 02.6 +0.6**
comp=Z,12nm,1.0s,mb4.8
TTA Tatalina 75.49 24 *e*P **P 00 06 09.1 +0.9**
BPAW Bear Paw Mtn. 76.37 22 *e*P **P 00 06 13.4 +0.1**
comp=Z,7.0nm,0.9s,mb4.6
COLA College 76.78 20 *e*P **P 00 06 15.1 -0.5**
comp=Z,74nm,1.8s,mb5.3
COLA College 76.78 20 *e*P **P 00 06 15.1 -0.5**
COLA pmax pmax
comp=Z,74nm,1.8s,mb5.3
PPLA Purkeypile 76.82 23 *e*P **P 00 06 16.8 +1.0**
comp=Z,70nm,1.7s,mb5.3
ILAR Eielson Array 77.14 20 P **P 00 06 17.1 -0.5**
comp=Z,3.2nm,1.0s,mb4.2,baz=303,slow=4.6,SNR=30
ILAR LR LR 00 44 25.9
comp=Z,160nm,18.6s,MS4.4,baz=314,slow=39
MCK McKinley 77.28 21 P **P 00 06 18.5 +0.1**
comp=Z,2.5nm,0.7s,mb4.2
MCK McKinley 77.28 21 P **P 00 06 18.5 +0.1**
MCK pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
INK Inuvik 77.57 13 *e*P **P 00 06 19.6 -0.3**
comp=Z,29nm,1.5s,mb5.0
INK Inuvik 77.57 13 *e*P **P 00 06 19.6 -0.4**
INK pmax pmax
comp=Z,29nm,1.5s
LBTB Lobatse 78.23 232 *e*P **P 00 06 24.4 +0.2**
comp=Z,5.1nm,0.8s,mb4.5
LBTB Lobatse 78.23 232 *e*P **P 00 06 24.4 +0.2**
LBTB pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
RSO Redoubt South 78.29 25 *e*P **P 00 06 25.8 +1.6**
EGAK Eagle 78.72 18 *e*P **P 00 06 27.1 +0.7**
PMR Palmer 78.75 23 *e*P **P 00 06 26.9 +0.3**
CTAO Charters Tower 78.79 121 *e*P **P 00 06 26.6 -0.8**
comp=Z,34nm,1.4s,mb5.1
CTAO Charters Tower 78.79 121 *e*P **P 00 06 26.6 -0.8**
CTAO pmax pmax
comp=Z,34nm,1.4s,mb5.1
SML Sawmill 78.86 22 P **P 00 06 26.9 -0.3**
comp=Z,6.6nm,1.0s,mb4.5
SML Sawmill 78.86 22 P **P 00 06 27.0 -0.2**
SML pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
RC01 Rabbit Creek A 78.91 23 *e*P **P 00 06 27.8 +0.2**
comp=Z,49nm,1.5s,mb5.2
DAWY Dawson 79.75 18 *e*P **P 00 06 32.4 +0.3**
TSUM Tsumeb 80.28 241 *e*P **P 00 06 35.7 +0.1**
OHAK Old Harbor 80.31 27 *e*P **P 00 06 35.7 +0.5**
BOSA Boshof 80.86 229 *e*P **P 00 06 38.2 -0.3**
comp=Z,34nm,1.5s,mb5.0
BOSA Boshof 80.86 229 P **P 00 06 37.9 -0.6**
comp=Z,5.3nm,1.0s,mb4.4,baz=51,slow=9.7,SNR=4.4
BOSA LR LR 00 38 55.1
comp=Z,405nm,18.1s,MS4.8,baz=36,slow=33
BOSA Boshof 80.86 229 *e*P **P 00 06 38.2 -0.3**
BOSA pmax pmax
comp=Z,34nm,1.5s,mb5.1
DBIC Dimbokro 85.05 275 *e*P **P 00 07 00.4 -0.2**
comp=Z,10nm,1.0s,mb4.9
DBIC Dimbokro 85.05 275 P **P 00 07 00.4 -0.2**
comp=Z,5.3nm,0.8s,mb4.7,baz=79,slow=3.9,SNR=5.5
DBIC LR LR 00 48 44.1
comp=Z,455nm,19.6s,MS4.9,baz=40,slow=38
DBIC Dimbokro 85.05 275 *e*P **P 00 07 00.4 -0.2**
DBIC pmax pmax
comp=Z,10.0nm,1.0s
YKA Yellowknife Ar 86.02 8 P **P 00 07 03.7 -0.9**
comp=Z,1.4nm,0.6s,mb4.4,baz=334,slow=5.2,SNR=5.0
YKA LR LR 00 49 05.8
comp=Z,7.8nm,18.3s,baz=110,slow=38
SCHQ Schefferville 91.01 343 LR LR 00 51 12.3
comp=Z,115nm,20.0s,MS4.3,baz=39,slow=37
FFC Flin Flon 94.80 3 *e*P **P 00 07 45.6 -0.3**
MAW Mawson 99.21 188 LR LR 00 50 33.2
comp=Z,121nm,18.2s,MS4.4,baz=142,slow=34
TXAR Lajitas Array 119.93 7 PKP PKPdf 00 13 14.6 -0.7
comp=Z,0.7nm,0.8s,baz=248,slow=0.6,SNR=7.0
ROSC El Rosal 138.66 325 PKP PKPdf 00 13 51.7 +0.5
comp=Z,3.6nm,0.4s,baz=76,slow=23,SNR=4.4
OTAV Otavalo 144.67 327 *e*PKPdf PKPdf 00 14 00.5 -1.4
CPUP Villa Florida 145.24 267 PKPbc PKPbc 00 14 01.3 -0.9
comp=Z,9.6nm,1.0s,baz=49,slow=4.2,SNR=13
LPAZ La Paz 150.22 292 PKP PKPdf 00 14 11.1 +0.2
comp=Z,1.4nm,1.0s,baz=0.5,slow=3.7,SNR=5.9
LPAZ PKPbc PKPbc 00 14 16.4 +0.3
comp=Z,2.3nm,0.9s,baz=38,slow=7.4,SNR=8.1
LPAZ PKPab PKPab 00 14 21.3 -0.9
comp=Z,1.7nm,0.6s,baz=28,slow=2.4,SNR=8.8
TRQA Tornquist 150.54 246 *e*PKPdf PKPdf 00 14 11.8 +0.9
TRQA *e*PKPbc PKPbc 00 14 16.6 +0.4

IDC 26 23:54:33.2±5.6, 6°37S×130°71E, h247km±62km, mb3.2/1, mb1 3.2/3, mb1mx2.9/15, mbtmpg3.0/3, Error ellipse: s-maj=95.5km s-min=21.4km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.95**	**166**	P	Pn	23 57 39.4	-1.5
	0.4nm,0.3s,baz=346,slow=11,SNR=4.8			S			
WRA				S	S	00 00 04.5	-11
	0.5nm,0.3s,baz=331,slow=23,SNR=4.0						
ASAR	**Alice Springs**	**17.48**	**170**	P	P	23 58 21.2	+0.8
	0.2nm,0.3s,baz=351,slow=12,SNR=12						
ASAR				S	S	00 01 29.6	+0.5
	0.1nm,0.3s,baz=347,slow=20,SNR=3.9						
MKAR	**Makanchi Array**	**68.08**	**326**	P	P	00 05 06.5	+0.1
	0.3nm,0.3s,baz=110,slow=7.9,SNR=8.4						

MOS **27** *00:13:59.6±0.8, 41°.52N×142°.13E, h75km, mb4.5/6, Error ellipse: s-maj=13.7km s-min=9.5km az=80.7*
ISCJB **27** *00:13:59.7±0.3, 41°.55N±0°.03×142°.05E±0°.05, h70km±3km, mb4.0/24, Error ellipse: s-maj=7.0km s-min=3.7km az=30.0*
JMA **27** *00:14:00.2±0.1, 41°.56N×142°.05E, h65km±3km, M3.8 Broadband fault plane solution: P waves. NP1: φs148.00000°, δ15.00000°, λ30.00000°. NP2:φs29.00000°, δ82.00000°, λ103.00000°. Principal axes: T Plg51.0000°, Azm314.0000°; N Plg13.0000°, Azm207.0000°; P Plg36.0000°, Azm107.0000°;*
JMA Felt II J1.
IDC **27** *00:14:00.7±0.8, 41°.52N×142°.07E, h63km±6km, mb3.7/16, mb1 3.9/19, mb1mx3.8/27, mbtmpg3.7/19 Error ellipse: s-maj=17.3km s-min=8.8km az=104.0*
NIED **27** *00:14:00, 41°.60N×142°.10E, h56km, Mw4.1 Best double couple: M₀1.44000×10¹⁵ NP1:φs27.00000°, δ69.00000°, λ101.00000°. NP2:φs178.00000°, δ24.00000°, λ63.00000°.*
NEIC **27** *00:14:01.4±0.7, 41°.54N×142°.05E, h70km±6km, mb4.3/6, Error ellipse: s-maj=7.8km s-min=5.9km az=129.0*
NEIC Recorded [2 JMA] in Aomori, Honshu.
ISC 27 00:14:00.8±0.3, 41°.56N±0°.03×142°.07E±0°.05, h62km±3km, h65km±1.1km; pP-P, n57, σ0s71/71, mb4.1/24, 2C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOT	**Ohata**	**0.79**	**257**	⇓P	Pn	**00 14 15.8**	**-0.4**
JOT				*e*S	Sn	**00 14 27.3**	**-0.2**
JKB	**Kayabe**	**0.84**	**293**	⇓P	Pn	**00 14 16.2**	**-0.6**
JKB				*e*S	Sn	**00 14 28.2**	**-0.5**
JNBK	**Urakawa-nobuka**	**0.88**	**35**	⇑P	Pn	**00 14 16.6**	**-0.7**
JNBK				*e*S	Sn	**00 14 29.3**	**-0.3**
JANG	**Nango**	**1.26**	**200**	P	Pn	**00 14 21.8**	**-0.5**
JANG				*e*S	Sn	**00 14 37.4**	**-0.9**
JEW	**Eniwo**	**1.36**	**340**	⇓P	Pn	**00 14 23.7**	**+0.1**
JEW				*e*S	Sn	**00 14 40.0**	**-0.7**
JCH	**Churui**	**1.43**	**42**	⇓P	Pn	**00 14 24.9**	**+0.4**
JCH				*e*S	Sn	**00 14 42.7**	**+0.4**
JFR	**Furan**	**1.65**	**14**	P	Pn	**00 14 27.4**	**0.0**
JFR				*e*S	Sn	**00 14 48.3**	**+0.7**
JOSM	**Okushiri--Mats**	**2.01**	**286**	P	Pn	**00 14 31.8**	**-0.5**
JSK	**Shakotan**	**2.14**	**327**	P	Pn	**00 14 34.3**	**+0.2**
JAR	**Ashorobuto**	**2.14**	**35**	P	Pn	**00 14 34.2**	**+0.1**
JAR				*e*S	Sn	**00 14 59.3**	**-0.3**
JOM	**Ohasama**	**2.17**	**196**	P	Pn	**00 14 34.7**	**+0.2**
JOM				*e*S	Sn	**00 15 00.3**	**0.0**
ASAJ	**Asahikawa**	**2.58**	**8**	*e*Pn	Pn	**00 14 40.7**	**+0.6**
ASAJ				*e*Sn	Sn	**00 15 12.2**	**+1.8**
ASAJ	**Asahikawa**	**2.58**	**8**	P	Pn	**00 14 41.2**	**+1.1**
	13nm,0.3s,baz=223,slow=13,SNR=20						
ASAJ				S	Sn	**00 15 11.9**	**+1.6**
	14nm,0.3s,baz=143,slow=20,SNR=9.2						
ASAJ	**Asahikawa**	**2.58**	**8**	P	Pn	**00 14 41.3**	**+1.2**
ASAJ				S	Sn	**00 15 11.9**	**+1.6**
ASAJ				pmax	pmax		
	comp=Z,13nm,0.3s						
ASAJ				smax			
	comp=N,14nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.73**	**47**⇑	*i*P	Pn	**00 14 55.5**	**-0.3**
YUK				*e*S	Sn	**00 15 35.4**	**-3.0**
YUK				pmax	pmax		
	comp=N,60nm,0.3s						
YUK				pmax	pmax		
	comp=Z,320nm,0.3s						
YUK				pmax	pmax		
	comp=E,100nm,0.1s						
YUK				pmax	pmax		
	comp=Z,240nm,0.6s						
YUK				smax			
	comp=N,500nm,0.6s						
YUK				smax			
	comp=E,1μm,0.6s						
YUK				smax			
	comp=N,230nm,0.4s						
YUK				smax			
	comp=E,580nm,0.4s						
MAJO	**Matsushiro**	**5.84**	**212**	*e*Pn	Pn	**00 15 24.7**	**0.0**
	comp=E,9.3nm,0.6s						
MAJO	**Matsushiro**	**5.84**	**212**	*e*P	Pn	**00 15 24.7**	**0.0**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MAT	**Matsushiro**	**5.84**	**212**	P	Pn	**00 15 26.5**	**+1.8**
MAT				*e*S	Sn	**00 16 30.7**	**+0.4**
MJAR	**Matsushiro Arr**	**5.84**	**212**	P	Pn	**00 15 26.0**	**+1.3**
	comp=Z,0.7nm,0.3s,baz=25,slow=14,SNR=3.5						
KSRS	**Korea Array**	**11.67**	**254**	P	Pn	**00 16 45.8**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=64,slow=14,SNR=3.0						
KSRS				S	Sn	**00 19 01.1**	**+8.1**
	comp=Z,0.3nm,0.3s,baz=70,slow=25,SNR=4.3						
SONM	**Songino Array**	**25.95**	**296**	P	P	**00 19 26.7**	**-0.5**
	comp=Z,1.9nm,0.6s,mb3.8,baz=80,slow=8.9,SNR=10						
ZAA0	**Zalesovo Array**	**39.37**	**308**	*e*P	P	**00 21 23.6**	**-0.2**
ZALV	**Zalesovo Beam**	**39.37**	**308**	P	P	**00 21 24.0**	**+0.2**
	comp=Z,2.1nm,0.5s,mb4.2,baz=85,slow=8.7,SNR=14						
ZALV				PcP	PcP	00 23 31.2	+0.2
	comp=Z,1.2nm,0.7s,baz=108,slow=2.8,SNR=4.2						
MK31	**Makanchi Array**	**42.29**	**298**	*e*P	P	**00 21 47.6**	**-0.3**
MKAR	**Makanchi Array**	**42.29**	**298**	P	P	**00 21 47.9**	**0.0**
	comp=Z,3.6nm,0.9s,mb4.0,baz=78,slow=11,SNR=11						
CMAR	**Chiang Mai Arr**	**43.29**	**251**	P	P	**00 21 57.2**	**+0.9**
	comp=Z,0.4nm,0.3s,mb3.6,baz=42,slow=7.7,SNR=4.3						
KURK	**Kurchatov**	**43.66**	**305**	*e*P	P	**00 21 58.5**	**-0.5**
	comp=Z,5.4nm,0.8s,mb4.3						
KURK	**Kurchatov**	**43.66**	**305**	*e*P	P	**00 21 58.5**	**-0.5**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
BPAW	**Bear Paw Mtn.**	**43.71**	**36**	*e*P	P	**00 22 00.6**	**+1.4**
	comp=Z,2.2nm,0.9s,mb3.9						
ILAR	**Eielson Array**	**45.44**	**35**	P	P	**00 22 13.4**	**+0.5**
	comp=Z,2.2nm,1.0s,mb4.0,baz=276,slow=7.7,SNR=19						
TKM2	**Tokmak 2**	**48.05**	**295**	*e*P	P	**00 22 33.8**	**+0.2**
	comp=Z,5.2nm,0.6s,mb4.7						
TKM2	**Tokmak 2**	**48.05**	**295**	*e*P	P	**00 22 33.8**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
INK	**Inuvik**	**50.16**	**29**	P	P	**00 22 49.9**	**+0.5**
	comp=Z,2.3nm,0.5s,mb4.5,baz=314,slow=16,SNR=5.1						
KKAR	**Karatay Array**	**51.40**	**297**	*e*P	P	**00 22 58.9**	**-0.2**
	comp=Z,0.7nm,0.5s,mb3.9						
KKAR	**Karatay Array**	**51.40**	**297**	*e*P	P	**00 22 58.9**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
ABKAR	**Akbulak array**	**55.48**	**308**	*e*P	P	**00 23 28.9**	**0.0**
	comp=Z,2.0nm,0.6s,mb4.3						
AKTK	**Aktyubinsk**	**56.09**	**310**	P	P	**00 23 33.7**	**+0.5**
AKTO	**Aktyubinsk**	**56.09**	**310**	P	P	**00 23 33.7**	**+0.5**
	comp=Z,1.1nm,0.7s,mb4.0,baz=69,slow=10,SNR=5.7						
ARCES	**ARCESS Array B**	**59.95**	**339**	P	P	**00 23 59.8**	**-0.1**
	comp=Z,2.0nm,0.9s,mb4.2,baz=41,slow=8.4,SNR=2.9						
WRA	**Warramunga Arr**	**61.61**	**188**	P	P	**00 24 10.6**	**-1.1**
	comp=Z,1.3nm,0.7s,mb4.2,baz=6.5,slow=6.6,SNR=6.1						
WRA				pP	pP	00 24 26.9	-1.4
	comp=Z,0.7nm,0.6s,baz=7.4,slow=7.4,SNR=2.0						
JOF	**Joensuu**	**62.23**	**331**	*e*P	P	**00 24 14.1**	**-1.3**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.7						
JOF	**Joensuu**	**62.23**	**331**	*e*p	P	**00 24 14.1**	**-1.3**
	comp=Z,2.5nm,0.5s,mb4.6						
NLWA	**Neilton Lookou**	**63.33**	**49**	P	P	**00 24 23.1**	**+0.1**
KAF	**Kangasniemi**	**64.54**	**332**	*e*P	P	**00 24 29.9**	**-0.8**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KAF	**Kangasniemi**	**64.54**	**332**	*e*p	P	**00 24 29.9**	**-0.8**
	comp=Z,0.8nm,0.4s,mb4.1						
FINES	**FINESS Array B**	**65.06**	**332**	P	P	**00 24 33.8**	**-0.3**
	comp=Z,2.8nm,0.6s,mb4.5,baz=51,slow=8.3,SNR=21						
FINES				pP	pP	00 24 51.2	+0.4
	comp=Z,1.3nm,0.5s,baz=59,slow=6.3,SNR=3.0						
ASAR	**Alice Springs**	**65.34**	**188**	P	P	**00 24 35.7**	**-0.6**
	comp=Z,0.7nm,1.0s,mb3.7,baz=8.9,slow=6.6,SNR=6.0						
ASAR				pP	pP	00 24 53.0	0.0
	comp=Z,0.6nm,0.7s,baz=22,slow=6.3,SNR=4.6						
NOA	**NORSAR Array B**	**70.22**	**337**	P	P	**00 25 06.5**	**-0.1**
	comp=Z,0.8nm,0.7s,mb3.8,baz=41,slow=5.9,SNR=5.2						
AKASG	**Malin Array Be**	**71.05**	**322**	P	P	**00 25 11.6**	**-0.2**
	comp=Z,0.9nm,0.4s,mb4.1,baz=43,slow=5.3,SNR=6.9						
NVAR	**Mina Array Bea**	**71.91**	**55**	P	P	**00 25 18.1**	**+0.8**
	comp=Z,0.3nm,0.4s,mb3.6,baz=300,slow=7.2,SNR=1.7						
LAO	**LASA Array**	**73.25**	**42**	P	P	**00 25 25.3**	**+0.3**

	comp=Z,76nm,0.9s								
DAC	**Darwin (Calif)**	**73.71**	**56**	*e*P		**P**		**00 25 26.9**	**-1.1**
	comp=Z,2.7nm,0.6s,mb4.3								
DAC	**Darwin (Calif)**	**73.71**	**56**	*e*P		**P**		**00 25 26.9**	**-1.0**
DAC				pmax		pmax			
	comp=Z,3.0nm,0.6s,mb4.4								
PDAR	**Pinedale Array**	**74.16**	**47**	P		**P**		**00 25 30.8**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.5,baz=284,slow=3.6,SNR=3.3								
BRTR	**Keskin Array B**	**76.25**	**311**	P		**P**		**00 25 43.0**	**+0.5**
	comp=Z,0.6nm,0.6s,mb3.7,baz=22,slow=3.3,SNR=3.2								
TXAR	**Lajitas Array**	**86.97**	**53**	pP		pP		00 26 57.8	+1.1
	comp=Z,0.2nm,0.7s,baz=303,slow=5.0,SNR=3.6								
PARMO	**Parma**	**88.86**	**39**	*e*P		**P**		**00 26 46.8**	**-1.2**

*ISK **27** 00:17:58.3,38°.15N×37°.31E, h2km, MD3.0*
*ISCJB **27** 00:18:00.0±0.6, 38°.13N±0°.03×37°.34E±0°.04, h2km±8km, Error ellipse: s-maj=5.9km s-min=4.5km az=138.3*
*CSEM **27** 00:18:00.0±0.2, 38°.09N×37°.37E, h5km, MD2.8, Error ellipse: s-maj=7.0km s-min=3.6km az=146.0*
*DDA **27** 00:18:00.4, 38°.10N×37°.40E, h7km±6km, Md2.8*
ISC 27 00:18:00.7±0.5, **38°.14N**±0°.03×**37°.35E**±0°.04, **h7**km±7km, **n22**, σ1.9**00**/33, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.48**	**70**	*i* P	**Pg**	**00 18 10.1**	**+0.2**
AKCD				*i* S	**Sg**	**00 18 17.3**	**+1.1**
AKCD	**Akcadag**	**0.48**	**70**	*i* P	**Pg**	**00 18 10.1**	**+0.2**
AKCD				*i* S	**Sg**	**00 18 17.3**	**+1.1**
KMRS	**Kahramanmaras**	**0.72**	**210**	*e*PG	**Pg**	**00 18 13.3**	**-1.2**
KMRS				*e*SG	**Sg**	**00 18 24.0**	**0.0**
KMRS	**Kahramanmaras**	**0.72**	**210**	*e*Pg	**Pg**	**00 18 13.3**	**-1.2**
KMRS				*e*Sg	**Sg**	**00 18 24.0**	**+0.1**
SARI	**SarD1z-Kayseri**	**0.75**	**317**	*e*PG	**Pg**	**00 18 13.4**	**-1.7**
SARI				*e*SG	**Sg**	**00 18 25.0**	**+0.2**
SARI	**SarD1z-Kayseri**	**0.75**	**317**	*e*Pg	**Pg**	**00 18 13.4**	**-1.6**
SARI				*e*Sg	**Sg**	**00 18 25.0**	**+0.2**
GZT	**Gaziantep**	**0.80**	**168**	*i* P	**Pg**	**00 18 17.2**	**+1.2**
GZT				*i* S	**Sg**	**00 18 26.6**	**+0.4**
MALT	**Malatya**	**0.87**	**78**	*e*PG	**Pg**	**00 18 16.5**	**-0.8**
MALT	**Malatya**	**0.87**	**78**	*e*Pg	**Pg**	**00 18 16.5**	**-0.8**
ANDN	**Andirin**	**0.97**	**235**	*i* P	**Pg**	**00 18 20.5**	**+1.2**
ANDN				*i* S	**Sg**	**00 18 32.8**	**+0.9**
ANDN	**Andirin**	**0.97**	**235**	*i* P	**Pg**	**00 18 20.5**	**+1.2**
ANDN				*i* S	**Sg**	**00 18 32.8**	**+0.9**
ATAB	**Bozova**	**1.00**	**131**	*i* P	**Pg**	**00 18 17.9**	**-1.9**
ATAB	**Bozova**	**1.00**	**131**	*i* P	**Pg**	**00 18 17.9**	**-1.9**
ELZG	**Elazig**	**1.33**	**74**	*i* P	**Pn**	**00 18 25.0**	**-0.7**
ELZG	**Elazig**	**1.33**	**74**	*i* P	**Pn**	**00 18 25.0**	**-0.7**
KOZT	**Kozan**	**1.37**	**242**	*e*PN	**Pn**	**00 18 25.4**	**-0.8**
KEMA	**Kemaliye**	**1.44**	**38**	*i* P	**Pn**	**00 18 28.8**	**+1.6**
KEMA				*i* S	**Sn**	**00 18 47.1**	**+0.7**
KEMA	**Kemaliye**	**1.44**	**38**	*i* P	**Pn**	**00 18 28.8**	**+1.6**
KEMA				*i* S	**Sn**	**00 18 47.1**	**+0.7**
SVRC	**Sivrice-ELAZID**	**1.56**	**80**	*e*PN	**Pn**	**00 18 28.2**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.56**	**80**	*e*Pn	**Pn**	**00 18 28.2**	**-0.6**
PTK	**Pertek**	**1.77**	**64**	*e*PN	**Pn**	**00 18 31.5**	**-0.2**
PTK	**Pertek**	**1.77**	**64**	*e*Pn	**Pn**	**00 18 31.5**	**-0.2**

IDC 27 00:28:12.8±3.8, **10°.73N**×**91°.89E, h0**km, **mb3.7**/4, **mb1 3.9**/4, **mb1mx3.5**/21, **mbtmp3.7**/4, **Error ellipse: s-maj=149.0km s-min=25.9km az=66.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.85**	**349**	P	P	00 35 22.8	0.0
	0.9nm,0.8s,baz=178,slow=8.5,SNR=4.1						
SONM	**Songino Array**	**38.95**	**16**	P	P	00 35 40.6	+0.2
	0.3nm,0.5s,baz=221,slow=5.5,SNR=3.1						
WRA	**Warramunga Arr**	**51.72**	**126**	P	P	00 37 21.9	-0.4
	0.5nm,0.3s,baz=306,slow=8.2,SNR=2.9						
ASAR	**Alice Springs**	**53.44**	**130**	P	P	00 37 35.1	+0.2
	0.9nm,0.5s,baz=306,slow=6.7,SNR=14						

*ISCJB **27** 00:48:11.0±1.7, 36°.65N±0°.07×26°.83E±0°.05, h4km±13km, Error ellipse: s-maj=12.7km s-min=6.6km az=164.9*
*CSEM **27** 00:48:11.2±0.2, 36°.60N×26°.86E, h2km, MD3.0, Error ellipse: s-maj=6.7km s-min=3.8km az=144.0*
*ATH **27** 00:48:11.6, 36°.70N×26°.86E, h28km±3km, MD3.0/3*
*NEIC **27** 00:48:11.6, 36°.70N×26°.86E, h28km, MD3.0(ATH), After ATH.*
ISC 27 00:48:10.6±1.5, **36°.66N**±0°.08×**26°.87E**±0°.05, **h2**km±13km, **n25**, σ0.8**77**/46, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**1.10**	**113**	*e*Pn	**Pn**	**00 48 33.6**	**+0.5**
ARG				*e*Sn	**Sn**	**00 48 48.8**	**-0.1**
ARG	**Arkhangelos**	**1.10**	**113**	*e*PN	**Pn**	**00 48 33.6**	**+0.5**
ARG				*e*SN	**Sn**	**00 48 48.8**	**-0.1**
ARG	**Arkhangelos**	**1.10**	**113**	*e*Pn	**Pn**	**00 48 33.6**	**+0.5**
ARG				*e*Sn	**Sn**	**00 48 48.8**	**-0.1**
KARP	**Karpathos**	**1.13**	**168**	*e*Pn	**Pn**	**00 48 33.5**	**0.0**
KARP				*e*Sn	**Sn**	**00 48 50.4**	**+0.8**
KARP	**Karpathos**	**1.13**	**168**	*e*PN	**Pn**	**00 48 33.5**	**0.0**
KARP				*e*SN	**Sn**	**00 48 50.4**	**+0.8**
KARP	**Karpathos**	**1.13**	**168**	*e*Pn	**Pn**	**00 48 33.5**	**0.0**
KARP				*e*Sn	**Sn**	**00 48 50.4**	**+0.8**
AYDN	**Tasoluk**	**1.29**	**38**	*i* P	**Pg**	**00 48 36.5**	**+1.2**
AYDN	**Tasoluk**	**1.29**	**38**	*i* P	**Pg**	**00 48 36.5**	**+1.2**
ZKR	**Zakros**	**1.63**	**199**	*e*Pb	**Pb**	**00 48 40.6**	**-0.7**
ZKR				*e*Sn	**Sn**	**00 49 02.3**	**+0.5**
ZKR	**Zakros**	**1.63**	**199**	*e*PB	**Pb**	**00 48 40.6**	**-0.7**
ZKR				*e*SN	**Sn**	**00 49 02.3**	**+0.5**
ZKR	**Zakros**	**1.63**	**199**	*e*Pb	**Pb**	**00 48 40.6**	**-0.7**
ZKR				*e*Sn	**Sn**	**00 49 02.3**	**+0.5**
NPS	**Neapolis**	**1.73**	**217**	*e*Pn	**Pn**	**00 48 41.7**	**+0.1**
NPS				*e*Sn	**Sn**	**00 49 04.3**	**+0.1**
NPS	**Neapolis**	**1.73**	**217**	*e*PN	**Pn**	**00 48 41.7**	**+0.1**
NPS				*e*SN	**Sn**	**00 49 04.3**	**+0.1**
NPS	**Neapolis**	**1.73**	**217**	*e*Pn	**Pn**	**00 48 41.7**	**+0.1**
NPS				*e*Sn	**Sn**	**00 49 04.3**	**+0.1**
LAST	**Lasithi**	**1.87**	**218**	*e*Pb	**Pb**	**00 48 44.3**	**-1.2**
LAST				*e*Sn	**Sn**	**00 49 07.6**	**-0.3**
LAST	**Lasithi**	**1.87**	**218**	*e*PB	**Pb**	**00 48 44.3**	**-1.2**
LAST				*e*SN	**Sn**	**00 49 07.6**	**-0.3**
LAST	**Lasithi**	**1.87**	**218**	*e*Pb	**Pb**	**00 48 44.3**	**-1.2**
LAST				*e*Sn	**Sn**	**00 49 07.6**	**-0.3**
IDI	**Anoyia**	**2.11**	**230**	*e*Pn	**Pn**	**00 48 47.5**	**+0.6**
IDI				*e*Sn	**Sn**	**00 49 13.5**	**-0.2**
IDI	**Anoyia**	**2.11**	**230**	*e*PN	**Pn**	**00 48 47.5**	**+0.6**
IDI				*e*SN	**Sn**	**00 49 13.5**	**-0.2**
IDI	**Anoyia**	**2.11**	**230**	*e*Pn	**Pn**	**00 48 47.5**	**+0.6**
IDI				*e*Sn	**Sn**	**00 49 13.5**	**-0.2**
GOLH	**Golhisar**	**2.23**	**74**	*i* P	**Pn**	**00 48 45.5**	**-3.1**
GOLH				*i* S	**Sn**	**00 49 06.5**	**-10**
GOLH	**Golhisar**	**2.23**	**74**	*i* P	**Pn**	**00 48 45.5**	**-3.1**
AKAS	**Kas**	**2.24**	**100**	*i* P	**Pn**	**00 48 44.2**	**-4.5**
KARN	**Karanos**	**2.70**	**243**	*e*PN	**Pn**	**00 48 55.7**	**+0.6**
KARN				*e*SN	**Sn**	**00 49 28.4**	**+0.1**
KARN	**Karanos**	**2.70**	**243**	*e*Pn	**Pn**	**00 48 55.7**	**+0.6**
KARN				*e*Sn	**Sn**	**00 49 28.4**	**+0.1**

*CSEM **27** 01:12:38.8±0.1, 37°.02N×29°.16E, h8km, MD3.1, Error ellipse: s-maj=3.5km s-min=2.7km az=167.0*
*DDA **27** 01:12:38.1, 37°.01N×29°.15E, h7km±5km, Md2.9*
*ISCJB **27** 01:12:38.4±0.4, 37°.00N±0°.02×29°.14E±0°.03, h7km±4km, Error ellipse: s-maj=4.1km s-min=3.2km az=157.9*
*NEIC **27** 01:12:38.0, 37°.06N×29°.15E, h10km, MD3.3(ATH), MD2.9(ISK), After ISK.*
*ISK **27** 01:12:38.6, 37°.05N×29°.16E, h10km, MD3.1*
*ATH **27** 01:12:39.8, 36°.97N×29°.20E, h41km±39km, MD3.3/5*
ISC 27 01:12:39.1±0.4, **37°.02N**±0°.02×**29°.14E**±0°.03, **h9**km±3km, **n65**, σ0.8**89**/96, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**64**	PG	**Pg**	**01 12 44.6**	**-0.8**
GLHS				*e*SG	**Sg**	**01 12 50.0**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.32**	**64**	*i* Pg	**Pg**	**01 12 44.6**	**-0.7**
GLHS				*e*Sg	**Sg**	**01 12 50.0**	**+0.4**
GOLH	**Golhisar**	**0.40**	**57**	*i* P	**Pg**	**01 12 45.4**	**-1.5**
GOLH				*i* S	**Sg**	**01 12 52.3**	**0.0**
GOLH	**Golhisar**	**0.40**	**57**	*i* P	**Pg**	**01 12 45.4**	**-1.5**
GOLH				*i* S	**Sg**	**01 12 52.3**	**+0.1**
ELL	**Elmali**	**0.67**	**113**	*e*PG	**Pg**	**01 12 51.1**	**-0.9**
ELL				*e*SG	**Sg**	**01 13 02.1**	**+1.4**
ELL	**Elmali**	**0.67**	**113**	*e*Pg	**Pg**	**01 12 51.1**	**-0.9**
ELL				*e*Sg	**Sg**	**01 13 02.1**	**+1.3**
DNZL	**Cakiroluk**	**0.68**	**354**	*i* P	**Pg**	**01 12 50.7**	**-1.4**
DNZL				*i* S	**Sg**	**01 13 01.0**	**0.0**
DNZL	**Cakiroluk**	**0.68**	**354**	*i* P	**Pg**	**01 12 50.7**	**-1.4**
DNZL				*i* S	**Sg**	**01 13 01.0**	**0.0**
YER	**Yerkesik**	**0.70**	**280**	*e*PG	**Pg**	**01 12 53.5**	**+1.0**
YER				*e*SG	**Sg**	**01 13 02.6**	**+1.0**
YER	**Yerkesik**	**0.70**	**280**	*e*Pg	**Pg**	**01 12 53.5**	**+1.0**
YER				*e*Sg	**Sg**	**01 13 02.6**	**+1.0**
DENT	**Denizli**	**0.74**	**353**	*e*PG	**Pg**	**01 12 52.6**	**-0.7**
DENT	**Denizli**	**0.74**	**353**	*e*Pg	**Pg**	**01 12 52.7**	**-0.7**
AKAS	**Kas**	**0.87**	**154**	*i* P	**Pg**	**01 12 54.2**	**-1.5**
AKAS				*i* S	**Sg**	**01 13 10.2**	**+3.2**
AKAS	**Kas**	**0.87**	**154**	*i* P	**Pg**	**01 12 54.2**	**-1.5**
AKAS				*i* S	**Sg**	**01 13 10.2**	**+3.2**
KSL	**Kastellorizon**	**0.94**	**158**	*e*P	**Pg**	**01 12 56.8**	**-0.2**
KSL	**Kastellorizon**	**0.94**	**158**	*e*P	**Pg**	**01 12 56.8**	**-0.2**
KORT	**Korkueli**	**0.97**	**91**	*i* P	**Pg**	**01 12 57.8**	**+0.2**
KORT	**Korkueli**	**0.97**	**91**	*i* P	**Pg**	**01 12 57.8**	**+0.1**
MLSB	**Milas**	**1.12**	**285**	*e*PN	**Pg**	**01 13 00.8**	**+0.1**
MLSB	**Milas**	**1.12**	**285**	*e*Pn	**Pg**	**01 13 00.8**	**+0.1**
ARG	**Arkhangelos**	**1.14**	**226**	*e*P	**Pg**	**01 13 00.1**	**-0.9**
ARG				*e*S	**Sg**	**01 13 16.5**	**+0.7**
ARG	**Arkhangelos**	**1.14**	**226**	*e*P	**Pg**	**01 13 00.1**	**-0.9**
ARG				*e*S	**Sg**	**01 13 16.5**	**+0.7**
ARG	**Arkhangelos**	**1.14**	**226**	*e*P	**Pg**	**01 13 00.1**	**-0.9**
ARG				*e*S	**Sg**	**01 13 16.5**	**+0.7**
AYDN	**Tasoluk**	**1.19**	**303**	*i* P	**Pb**	**01 13 01.4**	**-0.5**
AYDN	**Tasoluk**	**1.19**	**303**	*i* P	**Pb**	**01 13 01.4**	**-0.5**
ANTB	**Antalya**	**1.22**	**95**	*e*PN	**Pn**	**01 13 02.2**	**0.0**
ANTB	**Antalya**	**1.22**	**95**	*e*Pn	**Pn**	**01 13 02.2**	**0.0**
BCK	**Bucak**	**1.24**	**69**	*e*PN	**Pn**	**01 13 02.1**	**-0.4**
BCK	**Bucak**	**1.24**	**69**	*e*Pn	**Pn**	**01 13 02.1**	**-0.4**
DAT	**Datca**	**1.29**	**258**	*e*PN	**Pn**	**01 13 04.0**	**+0.8**
DAT	**Datca**	**1.29**	**258**	*e*Pn	**Pn**	**01 13 04.0**	**+0.8**
KHL	**Karahalli**	**1.34**	**13**	*e*PN	**Pn**	**01 13 03.1**	**-0.9**
KHL	**Karahalli**	**1.34**	**13**	*e*Pn	**Pn**	**01 13 03.1**	**-0.8**
BDRM	**Kayabasi**	**1.36**	**273**	*i* P	**Pn**	**01 13 04.8**	**+0.6**
BDRM				*i* S	**Sb**	**01 13 23.1**	**+1.0**
BDRM	**Kayabasi**	**1.36**	**273**	*i* P	**Pn**	**01 13 04.8**	**+0.6**
BDRM				*i* S	**Sb**	**01 13 23.1**	**+1.0**
KHAL	**Karahalli**	**1.38**	**12**	*i* P	**Pn**	**01 13 04.6**	**+0.2**
KHAL				*i* S	**Sb**	**01 13 23.9**	**+1.1**
KHAL	**Karahalli**	**1.38**	**12**	*i* P	**Pn**	**01 13 04.6**	**+0.1**
KHAL				*i* S	**Sb**	**01 13 23.9**	**+1.2**
BODT	**Bodrum**	**1.47**	**272**	*e*PN	**Pn**	**01 13 04.9**	**-0.7**
BODT	**Bodrum**	**1.47**	**272**	*e*Pn	**Pn**	**01 13 04.9**	**-0.8**
KULA	**Kula-Manisa**	**1.54**	**346**	*e*PN	**Pn**	**01 13 06.8**	**0.0**
KULA	**Kula-Manisa**	**1.54**	**346**	*e*Pn	**Pn**	**01 13 06.8**	**+0.1**
SHUT	**Suhut-Afyon**	**1.90**	**36**	*e*PN	**Pn**	**01 13 11.4**	**-0.2**
SHUT	**Suhut-Afyon**	**1.90**	**36**	*e*Pn	**Pn**	**01 13 11.4**	**-0.2**
SMG	**Samos**	**1.96**	**291**	*e*P	**Pn**	**01 13 13.3**	**+0.8**
SMG				*e*S	**Sn**	**01 13 37.2**	**0.0**
SMG	**Samos**	**1.96**	**291**	*e*P	**Pn**	**01 13 13.3**	**+0.8**
SMG				*e*S	**Sn**	**01 13 37.2**	**0.0**
SMG	**Samos**	**1.96**	**291**	*e*P	**Pn**	**01 13 13.3**	**+0.8**
SMG				*e*S	**Sn**	**01 13 37.2**	**0.0**
BLCB	**Balcova**	**2.15**	**310**	*e*PN	**Pn**	**01 13 15.1**	**-0.1**
BLCB	**Balcova**	**2.15**	**310**	*e*Pn	**Pn**	**01 13 15.1**	**0.0**
KARP	**Karpathos**	**2.17**	**228**	*e*P	**Pn**	**01 13 15.7**	**+0.4**
KARP				*e*S	**Sn**	**01 13 40.8**	**-1.5**
KARP	**Karpathos**	**2.17**	**228**	*e*P	**Pn**	**01 13 15.7**	**+0.4**
KARP				*e*S	**Sn**	**01 13 40.8**	**-1.5**
KARP	**Karpathos**	**2.17**	**228**	*e*P	**Pn**	**01 13 15.7**	**+0.4**
KARP				*e*S	**Sn**	**01 13 40.8**	**-1.5**
ALT	**Altintas**	**2.17**	**20**	*e*PN	**Pn**	**01 13 15.1**	**-0.4**
ALT	**Altintas**	**2.17**	**20**	*e*Pn	**Pn**	**01 13 15.1**	**-0.3**
GAZI	**Gazipasa**	**2.67**	**106**	*i* P	**Pn**	**01 13 23.5**	**+1.3**
GAZI	**Gazipasa**	**2.67**	**106**	*i* P	**Pn**	**01 13 23.5**	**+1.3**
HDMB	**Hadim**	**2.68**	**90**	*e*PN	**Pn**	**01 13 23.3**	**+1.0**
HDMB	**Hadim**	**2.68**	**90**	*e*Pn	**Pn**	**01 13 23.3**	**+1.0**
KONT	**Konya--Tatoy**	**2.72**	**69**	*e*PN	**Pn**	**01 13 23.3**	**+0.4**
KONT	**Konya--Tatoy**	**2.72**	**69**	*e*Pn	**Pn**	**01 13 23.3**	**+0.3**
ZKR	**Zakros**	**3.04**	**232**	*e*P	**Pn**	**01 13 28.1**	**+0.9**
ZKR				*e*S	**Sn**	**01 14 02.3**	**-1.4**
ZKR	**Zakros**	**3.04**	**232**	*e*P	**Pn**	**01 13 28.1**	**+0.9**
ZKR				*e*S	**Sn**	**01 14 02.3**	**-1.4**
ZKR	**Zakros**	**3.04**	**232**	*e*P	**Pn**	**01 13 28.1**	**+0.9**
ZKR				*e*S	**Sn**	**01 14 02.3**	**-1.4**
LAST	**Lasithi**	**3.50**	**239**	*e*P	**Pn**	**01 13 34.6**	**+1.0**
LAST				*e*S	**Sn**	**01 14 13.5**	**-1.6**
LAST	**Lasithi**	**3.50**	**239**	*e*P	**Pn**	**01 13 34.6**	**+1.0**
LAST				*e*S	**Sn**	**01 14 13.5**	**-1.6**
LAST	**Lasithi**	**3.50**	**239**	*e*P	**Pn**	**01 13 34.6**	**+1.0**
LAST				*e*S	**Sn**	**01 14 13.5**	**-1.6**

*ISK **27** 01:20:39.4, 39°.02N×26°.20E, h16km, MD3.2*
*DDA **27** 01:20:40.9, 39°.13N×26°.51E, h26km±1km, Md3.1*
*ISCJB **27** 01:20:41.4±0.5, 39°.12N±0°.02×26°.44E±0°.03, h9km±4km, Error ellipse: s-maj=4.3km s-min=3.3km az=159.8*
*CSEM **27** 01:20:41.1±0.2, 39°.11N×26°.44E, h5km, ML2.6/3, Error ellipse: s-maj=5.0km s-min=3.6km az=78.0*
*THE **27** 01:20:41.4, 39°.13N×26°.47E, h7km±5km, ML2.6/3, Error ellipse: s-maj=5.5km s-min=0.5km az=346.0*
ISC 27 01:20:41.6±0.4, **39°.12N**±0°.02×**26°.46E**±0°.03, **h8**km±3km, **n81**, σ1.9**06**/104, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.19**	**312**	P	**Pg**	**01 20 45.6**	**+0.1**
PRK				S	**Sg**	**01 20 48.5**	**+0.4**
PRK	**Paraskevi**	**0.19**	**312**	P	**Pg**	**01 20 45.6**	**+0.1**
PRK				S	**Sg**	**01 20 48.5**	**+0.4**
AYVA	**Ayvalik**	**0.26**	**44**	*i* P	**Pg**	**01 20 46.5**	**-0.3**
AYVA				*i* S	**Sg**	**01 20 50.2**	**-0.1**
AYVA	**Ayvalik**	**0.26**	**44**	*i* P	**Pg**	**01 20 46.5**	**-0.3**
AYVA				*i* S	**Sg**	**01 20 50.2**	**-0.2**
SIGR	**SIGRI**	**0.47**	**281**	P	**Pg**	**01 20 50.5**	**-0.3**
SIGR				S	**Sg**	**01 20 58.2**	**+1.2**
SIGR	**SIGRI**	**0.47**	**281**	P	**Pg**	**01 20 50.5**	**-0.3**
SIGR				S	**Sg**	**01 20 58.2**	**+1.2**
EZN	**Ezine**	**0.71**	**352**	PG	**Pg**	**01 20 54.6**	**-0.8**
EZN				SG	**Sg**	**01 21 07.7**	**+3.1**
EZN	**Ezine**	**0.71**	**352**	*i* Pg	**Pg**	**01 20 54.6**	**-0.7**
EZN				*i* Sg	**Sg**	**01 21 07.7**	**+3.1**
URLA	**Izmir**	**0.77**	**172**	*i* P	**Pg**	**01 20 55.1**	**-1.2**
URLA	**Izmir**	**0.77**	**172**	*i* P	**Pg**	**01 20 55.1**	**-1.2**
BOZC	**Bozcaada**	**0.79**	**337**	*i* P	**Pg**	**01 20 57.0**	**+0.3**
BOZC				*i* P		01 20 57.9	
BOZC				*i* S	**Sg**	**01 21 06.3**	**-0.7**
CHOS	**Chios island**	**0.80**	**203**	P	**Pg**	**01 20 56.6**	**-0.3**
CHOS				S	**Sg**	**01 21 08.9**	**+1.7**
CHOS	**Chios island**	**0.80**	**203**	P	**Pg**	**01 20 56.6**	**-0.3**
CHOS				S	**Sg**	**01 21 08.9**	**+1.7**
BLCB	**Balcova**	**0.86**	**148**	*e*PG	**Pg**	**01 20 57.6**	**-0.6**
BLCB	**Balcova**	**0.86**	**148**	P	**Pg**	**01 20 57.9**	**-0.3**
BLCB	**Balcova**	**0.86**	**148**	*e*Pg	**Pg**	**01 20 57.6**	**-0.6**
BLCB	**Balcova**	**0.86**	**148**	P	**Pg**	**01 20 57.9**	**-0.3**
KDAG	**Bornova**	**0.96**	**138**	*i* P	**Pg**	**01 20 59.2**	**-0.7**
KDAG				*i* S	**Sg**	**01 21 12.0**	**-0.3**
KDAG	**Bornova**	**0.96**	**138**	*i* P	**Pg**	**01 20 59.2**	**-0.7**
KDAG				*i* S	**Sg**	**01 21 12.0**	**-0.4**
IZM	**Izmir**	**0.96**	**138**	*e*PG	**Pg**	**01 21 00.4**	**+0.4**
IZM	**Izmir**	**0.96**	**138**	*e*Pg	**Pg**	**01 21 00.4**	**+0.4**
AKS	**Akhisar**	**1.08**	**102**	*e*PN	**Pn**	**01 21 02.2**	**-0.9**
AKS	**Akhisar**	**1.08**	**102**	*e*Pn	**Pn**	**01 21 02.2**	**-0.9**
AKHS	**Akhisar**	**1.09**	**102**	*i* P	**Pg**	**01 21 02.1**	**-0.3**
AKHS				*i* S	**Sg**	**01 21 16.3**	**-0.2**
AKHS	**Akhisar**	**1.09**	**102**	*i* P	**Pg**	**01 21 02.1**	**-0.3**
AKHS				*i* S	**Sg**	**01 21 16.3**	**-0.2**
BALY	**Balya**	**1.09**	**55**	*i* P	**Pg**	**01 21 01.8**	**-0.8**
BALY				*i* S	**Sg**	**01 21 17.5**	**+0.6**
BALY	**Balya**	**1.09**	**55**	*i* P	**Pg**	**01 21 01.8**	**-0.8**
BALY				*i* S	**Sg**	**01 21 17.5**	**+0.7**
GADA	**Gvkgeada**	**1.15**	**338**	*e*PN	**Pn**	**01 21 02.4**	**-1.7**
GADA				*e*SN	**Sn**	**01 21 18.3**	**-1.7**
GADA	**Gvkgeada**	**1.15**	**338**	*e*Pn	**Pn**	**01 21 02.4**	**-1.7**
GADA				*e*Sn	**Sn**	**01 21 18.3**	**-1.8**
BALB	**Balikesir**	**1.22**	**64**	*e*PN	**Pn**	**01 21 04.8**	**-0.2**
BALB	**Balikesir**	**1.22**	**64**	*e*Pn	**Pn**	**01 21 04.8**	**-0.2**
LPK	**Lapseki**	**1.27**	**11**	*e*PN	**Pn**	**01 21 04.2**	**-1.5**
LPK	**Lapseki**	**1.27**	**11**	*e*Pn	**Pn**	**01 21 04.2**	**-1.5**
GELI	**Tayfur-Gelibol**	**1.28**	**1**	*e*PN	**Pn**	**01 21 04.5**	**-1.3**
GELI	**Tayfur-Gelibol**	**1.28**	**1**	*e*Pn	**Pn**	**01 21 04.5**	**-1.3**
GONE	**Gonen-Balikesi**	**1.33**	**45**	*e*PN	**Pn**	**01 21 06.0**	**-0.5**
GONE	**Gonen-Balikesi**	**1.33**	**45**	*e*Pn	**Pn**	**01 21 06.0**	**-0.5**
GCAM	**G?zelcaml?**	**1.54**	**156**	*i* P	**Pn**	**01 21 10.5**	**+1.1**
GCAM				*i* S	**Sn**	**01 21 31.7**	**+2.1**
GCAM	**G?zelcaml?**	**1.54**	**156**	*i* P	**Pn**	**01 21 10.5**	**+1.1**
GCAM				*i* S	**Sn**	**01 21 31.7**	**+2.1**
ERIK	**Erikli-Kesan**	**1.55**	**2**	*e*PN	**Pn**	**01 21 09.1**	**-0.4**
ERIK	**Erikli-Kesan**	**1.55**	**2**	*e*Pn	**Pn**	**01 21 09.1**	**-0.4**
ENEZ	**Enez**	**1.63**	**352**	*e*PN	**Pn**	**01 21 09.6**	**-1.0**
ENEZ	**Enez**	**1.63**	**352**	*e*Pn	**Pn**	**01 21 09.6**	**-1.1**
DURS	**Dursunbey**	**1.64**	**72**	*i* P	**Pn**	**01 21 09.6**	**-1.1**
DURS				*i* S	**Sn**	**01 21 31.4**	**-0.6**
DURS	**Dursunbey**	**1.64**	**72**	*i* P	**Pn**	**01 21 09.6**	**-1.1**
DURS				*i* S	**Sn**	**01 21 31.4**	**-0.6**
EDC	**Edincik**	**1.64**	**41**	*e*PN	**Pn**	**01 21 11.0**	**+0.3**
EDC	**Edincik**	**1.64**	**41**	*e*Pn	**Pn**	**01 21 11.0**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.66**	**19**	*e*PN	**Pn**	**01 21 10.9**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.66**	**19**	*e*Pn	**Pn**	**01 21 10.9**	**-0.2**
DEMI	**Demirci**	**1.76**	**92**	*i* P	**Pn**	**01 21 11.9**	**-0.5**
DEMI	**Demirci**	**1.76**	**92**	*i* P	**Pn**	**01 21 11.9**	**-0.5**
MFT	**Murefte**	**1.78**	**21**	*e*PN	**Pn**	**01 21 13.5**	**+0.8**
MFT	**Murefte**	**1.78**	**21**	*e*Pn	**Pn**	**01 21 13.5**	**+0.8**
KULA	**Kula-Manisa**	**1.83**	**109**	*e*PN	**Pn**	**01 21 14.0**	**+0.7**
KULA	**Kula-Manisa**	**1.83**	**109**	*e*Pn	**Pn**	**01 21 14.0**	**+0.7**
AYDN	**Tasoluk**	**1.84**	**142**	*i* P	**Pn**	**01 21 12.4**	**-1.0**
AYDN	**Tasoluk**	**1.84**	**142**	*i* P	**Pn**	**01 21 12.4**	**-1.0**
KCTX	**Karacabey (Bur**	**1.86**	**51**	*e*PN	**Pn**	**01 21 14.7**	**+0.9**
KCTX	**Karacabey (Bur**	**1.86**	**51**	*e*Pn	**Pn**	**01 21 14.7**	**+0.9**
BODT	**Bodrum**	**2.16**	**162**	*e*PN	**Pn**	**01 21 15.2**	**-2.8**
BODT	**Bodrum**	**2.16**	**162**	*e*Pn	**Pn**	**01 21 15.2**	**-2.7**
MDNY	**Mudanya-Bursa**	**2.25**	**56**	*e*PN	**Pn**	**01 21 20.4**	**+1.2**
MDNY	**Mudanya-Bursa**	**2.25**	**56**	*e*Pn	**Pn**	**01 21 20.4**	**+1.2**
ULDT	**Uludag**	**2.31**

ARS Arshan 1.10 285 *e*PG **Pg** 01 35 51.2 -1.5
ARS *e* 01 36 06.2
ARS pmax pmax
comp=Z,85µm,0.5s
ARS smax
comp=E,445µm,1.0s
ARS Arshan 1.10 285⇑*i*Pg **Pg** **01 35 50.5 -2.2**
ARS *e*Pb **Pb** **01 35 53.0 +0.3**
ARS max 01 35 57.3
comp=E,267µm,0.6s
ARS *e*Sg **Sg** **01 36 05.5 -1.5**
ARS Smax 01 36 06.6
comp=E,10609µm,1.0s
ZAK Zakamensk 1.39 203 *e*Pg **Pg** **01 35 55.5 -2.7**
ZAK *e*Sg **Sg** **01 36 13.1 -3.1**
ZAK Zakamensk 1.39 203 *e*PG **Pg** **01 35 55.5 -2.7**
ZAK *e* 01 36 15.1
ZAK pmax pmax
comp=Z,61µm,0.5s
ZAK smax
comp=E,487µm,1.4s
ZAK Zakamensk 1.39 203⇓*i*Pg **Pg** **01 35 55.1 -3.1**
comp=E,25µm,2.3s
ZAK ⇓*i*Pg **Pg** **01 35 55.1 -3.1**
comp=E,15µm,2.3s
ZAK ⇑*i*Pg **Pg** **01 35 55.1 -3.1**
comp=E,18µm,2.3s
ZAK Pmax 01 36 00.6
comp=E,72µm,1.2s
ZAK *e*Sg **Sg** **01 36 13.1 -3.1**
ZAK Smax 01 36 15.7
comp=E,491µm,1.5s
KAB Kabansk 1.61 75 *e*PN **Pn** **01 36 00.8 +0.8**
KAB *e* 01 36 23.7
KAB pmax pmax
comp=Z,63µm,1.1s
KAB smax
comp=E,548µm,1.6s
KAB Kabansk 1.61 75⇓*i*Pg **Pg** **01 36 00.2 -2.2**
KAB Pmax 01 36 02.9
comp=E,54µm,1.2s
KAB *e*Sg **Sg** **01 36 24.5 +1.3**
KAB Smax 01 36 26.0
comp=E,801µm,1.0s
TRG Tyrgan 1.75 50⇓*i*PN **Pn** **01 36 03.1 +1.1**
TRG *e* 01 36 28.2
TRG pmax pmax
comp=Z,61µm,0.5s
TRG smax
comp=E,604µm,1.0s
TRG Tyrgan 1.75 50⇓*i*Pn **Pn** **01 36 03.0 +1.0**
TRG *e*Pg **Pg** **01 36 04.1 -1.0**
TRG Pmax 01 36 08.8
comp=E,32µm,0.7s
TRG *e*Sn **Sn** **01 36 27.6 +3.3**
TRG *e*Sg **Sg** **01 36 28.3 +0.5**
TRG Smax 01 36 29.0
comp=E,731µm,1.5s
HRMR Khuramsha 1.75 90⇓*i*Pn **Pn** **01 36 02.3 +0.3**
HRMR ⇓*i*Pg **Pg** **01 36 04.2 -1.0**
HRMR *i* Sg **Sg** **01 36 27.3 -0.6**
MOY Mondy 1.96 272 *e*PN **Pn** **01 36 05.5 +0.6**
MOY *e* 01 36 29.7
MOY pmax pmax
comp=Z,95µm,0.7s
MOY Mondy 1.96 272⇓*i*Pn **Pn** **01 36 04.9 0.0**
MOY ⇑*i*Pg **Pg** **01 36 06.2 -3.0**
MOY ⇓*i* 01 36 08.6
MOY max 01 36 10.2
comp=Z,108µm,1.1s
MOY *i* Sg **Sg** **01 36 31.1 -3.5**
MOY Smax 01 36 34.2
comp=Z,2250µm,1.2s
ZRHB Zarechye 2.06 63⇓*i*Pn **Pn** **01 36 06.9 +0.7**
ZRHB *e*Pg **Pg** **01 36 10.2 -0.9**
ZRHB *e* 01 36 14.1
ZRHB *i* Sg **Sg** **01 36 38.0 +0.2**
UUDB Ulan-Yde 2.20 83⇓*i*Pn **Pn** **01 36 08.9 +0.8**
UUDB *e*Pg **Pg** **01 36 11.9 -1.8**
UUDB *e* 01 36 18.6
UUDB max 01 36 21.2
comp=Z,31µm,1.0s
UUDB *e*Sn **Sn** **01 36 36.8 +1.5**
UUDB *i* Sg **Sg** **01 36 42.5 +0.4**
UUDB *e*SgSg 01 36 51.0
UUDB max 01 36 55.9
comp=Z,152µm,1.1s
ORL Oriik 2.81 290 *e*PN **Pn** **01 36 20.8 +4.2**
ORL *e* 01 36 56.4
ORL pmax pmax
comp=Z,71µm,0.6s
ORL Orlik 2.81 290⇑*i*Pn **Pn** **01 36 17.5 +0.9**
ORL ⇑*i*Pg **Pg** **01 36 20.4 -5.1**
ORL Pmax 01 36 26.2
comp=Z,80µm,0.9s
ORL *e*Sn **Sn** **01 36 51.9 +1.4**
ORL *e*Sg **Sg** **01 36 57.2 -4.8**
ORL Smax 01 37 00.0
comp=Z,1201µm,2.3s
OGRR Ongureny 2.89 45 *e*PN **Pn** **01 36 19.2 +1.5**
OGRR *e* 01 36 24.5
OGRR *e* 01 37 01.4
OGRR pmax pmax
comp=Z,27µm,1.0s
OGRR smax
comp=N,507µm,1.3s
OGRR Ongureny 2.89 45⇓*i*Pn **Pn** **01 36 18.9 +1.2**
OGRR *e*Pg **Pg** **01 36 24.3 -2.7**
OGRR *e*PgPg 01 36 27.9
OGRR max 01 36 34.5
comp=N,33µm,1.4s
OGRR *e*Sg **Sg** **01 37 01.8 -2.7**
OGRR Smax 01 37 09.7
comp=N,509µm,1.2s
MXMB Maximikha 3.24 58⇓*i*Pn **Pn** **01 36 22.9 +0.4**
MXMB *e*Pg **Pg** **01 36 30.5 -3.2**
MXMB *e* 01 36 35.5
MXMB *e*Sn **Sn** **01 37 02.8 +1.7**
MXMB *e*Sg **Sg** **01 37 12.9 -2.7**
SYVR Suvo 4.09 58 *e*PN **Pn** **01 36 34.9 +0.8**
SYVR *e* 01 36 45.7
SYVR *e* 01 37 39.7
SYVR pmax pmax
comp=Z,10µm,1.7s
SYVR smax
comp=N,4µm,0.7s
SYVR Suvo 4.09 58⇓*i*Pn **Pn** **01 36 34.9 +0.8**
SYVR *e*Pg **Pg** **01 36 45.9 -4.0**
SYVR Pmax 01 36 51.7
comp=N,10µm,1.7s
SYVR *e*Sn **Sn** **01 37 23.7 +1.8**
SYVR *e*Sg **Sg** **01 37 40.7 -2.1**
SYVR Smax 01 37 42.9
comp=N,57µm,2.8s
SONM Songino Array 4.09 158 Pn **Pn** **01 36 33.8 -0.4**
comp=N,292nm,0.3s,baz=328,slow=13,SNR=2451
SONM Pg **Pg** **01 36 44.2 -5.8**
comp=N,2µm,0.3s,baz=340,slow=18,SNR=97
SONM Lg 01 37 39.8
comp=N,2µm,0.3s,baz=333,slow=29,SNR=13
SONM LR LR 01 38 10.9
comp=N,261µm,19.8s,baz=152,slow=40
SONM Songino Array 4.09 158 PN **Pn** **01 36 33.8 -0.4**
SONM 01 36 44.2
SONM 01 37 39.8
ULN Ulaanbaatar 4.24 152 *e*Pn **Pn** **01 36 35.3 -0.9**
ULN *e*Pg **Pb** **01 36 47.1 +1.0**
ULN *e*Sn **Sb** **01 37 43.6 +6.2**
ULN Ulaanbaatar 4.24 152⇑*i*Pn **Pn** **01 36 35.7 -0.4**
ULN ⇑*i*Pg **Pb** **01 36 47.0 +0.8**
ULN *e*Sn **Sn** **01 37 28.0 +2.4**
ULN *i* Sg **Sg** **01 37 43.8 -3.8**
ULN Ulaanbaatar 4.24 152 P **Pb** **01 36 47.8 +1.6**
ULN Ulaanbaatar 4.24 152 Pn **Pn** **01 36 35.8 -0.4**
SNR=6146
TDJR Todzha 5.02 282 *e*Pn **Pn** **01 36 49.0 +2.1**
TDJR *i* Pg **Pg** **01 37 01.2 -6.5**
TDJR *i* Sg **Sg** **01 38 03.8 -8.9**
NIZ Nizh Angarsk 5.22 36 *e*PN **Pn** **01 36 51.0 +1.3**
NIZ *e* 01 38 12.9
NIZ pmax pmax
comp=Z,6µm,1.1s
NIZ smax
comp=N,226µm,1.8s
NIZ Nizh Angarsk 5.22 36⇓*i*Pn **Pn** **01 36 49.9 +0.2**
NIZ *e*Pg **Pg** **01 37 04.5 -7.1**
NIZ *e* 01 37 09.1
NIZ max 01 37 19.0
comp=N,4µm,0.6s
NIZ *e*Sn **Sn** **01 37 49.1 -0.8**
NIZ *e*Sg **Sg** **01 38 14.1 -5.0**
NIZ Smax 01 38 22.3
comp=N,224µm,2.0s
YLYR Ulyunkhan 5.30 50 *e*PN **Pn** **01 36 49.3 -1.5**
YLYR *e*S **Sn** **01 37 47.9 -3.9**
YLYR pmax pmax
comp=Z,4µm,0.7s
YLYR smax
comp=N,103µm,1.4s
YLYR Ulyunkhan 5.30 50⇓*i*Pn **Pn** **01 36 51.4 +0.6**
YLYR *e*Pg **Pg** **01 37 07.3 -5.8**
YLYR Pmax 01 37 11.9
comp=N,3µm,1.4s
YLYR *i* Sg **Sg** **01 38 15.5 -6.2**
YLYR Smax 01 38 22.9
comp=N,100µm,2.6s
CIT Chita 5.84 83 *e*Pn **Pn** **01 36 58.1 -0.1**
CIT *e*Pg **Pg** **01 37 17.5 -5.9**
CIT Pmax 01 37 27.6
comp=N,6µm,1.5s
CIT *e*Sn **Sn** **01 38 05.2 0.0**
CIT *e*Sg **Sg** **01 38 33.6 -5.5**
CIT Smax 01 38 54.7
comp=N,67µm,2.0s
KMO Kumora 5.95 42 *e*PN **Pn** **01 37 00.4 +0.7**
KMO Kumora 5.95 42⇓*i*Pn **Pn** **01 37 00.3 +0.6**
KMO *e*Pg **Pg** **01 37 20.0 -5.5**
KMO Pmax 01 37 31.4
comp=N,8µm,1.0s
KMO *e* 01 38 23.7
KMO *e*Sg **Sg** **01 38 37.4 -5.1**
KMO Smax 01 38 52.1
comp=N,249µm,1.2s
YOA Uoyan 6.34 42 *e*Pn **Pn** **01 37 06.1 +1.2**
YOA *e* 01 37 15.1
YOA max 01 37 19.6
comp=N,11µm,1.4s
YOA *e*Sn **Sn** **01 38 15.5 -1.8**
YOA *e*Sg **Sg** **01 38 52.0 -2.8**
YOA Smax 01 39 21.9
comp=N,991µm,5.8s
MINR Mina 6.79 302 *e*Pg Px 01 37 33.3
MINR Mina 6.79 302 *e*Pn **Pn** **01 37 14.3 +3.1**
MINR ⇓*i*Pg **Pg** **01 37 32.9 -8.6**
MINR *i* Sg **Sg** **01 39 02.6 -6.7**
CERR Cheremushki 7.91 284 *e*Pn **Pn** **01 37 30.5 +4.0**
CERR *e*Pg **Pb** **01 37 55.3 +6.7**
CERR *e*Sg **Sb** **01 39 31.0 +8.3**
CERR Cheremushki 7.91 284 *e*PN **Pn** **01 37 30.5 +4.0**
CERR *e* 01 37 55.3
CERR Cheremushki 7.91 284⇓*i*Pn **Pn** **01 37 30.4 +3.9**
CERR *e*Pg **Pb** **01 37 52.8 +4.2**
CERR *i* Sg **Sb** **01 39 32.8 +10**
VEH Verkhnyaya Baz 8.60 286⇑*i*Pn **Pn** **01 37 39.3 +3.4**
VEH *e*Pg Pn 01 38 03.8 +28
VEH Pmax 01 38 30.6
comp=N,7µm,1.4s
VEH *i* Sg Sn 01 39 51.9 +39
VEH Smax 01 39 58.9
comp=N,706µm,2.9s
TEL Teeli 8.76 271 *e*Pn **Pn** **01 37 40.7 +2.6**
TEL *e*Pg Pn 01 38 08.4 +30
TEL *e*Sg Sn 01 39 58.9 +42
CRS Chara 9.78 52 *e*Pn **Pn** **01 37 52.7 +0.6**
CRS *e* 01 38 35.9
CRS max 01 38 38.6
comp=N,2µm,1.7s
CRS *e*Sn **Sn** **01 39 41.8 -0.1**
CRS *e*Sg Sn 01 40 36.0 +54
CRS Smax 01 40 53.7
comp=N,71µm,1.8s
TUP Tupik 9.92 68 *e*Pn **Pn** **01 37 54.3 +0.3**
TUP *e* 01 38 38.0
comp=N,765nm,1.7s
TUP *e*Sg Sn 01 40 39.6 +54
TUP Smax 01 41 09.6
comp=N,38µm,2.8s
TASR Tashtagol 10.05 283 *e*Pn **Pn** **01 38 02.4 +6.6**
TASR *e*Pg Pn 01 38 34.3 +38
TASR *e*Sg Sn 01 40 35.3 +47
BRCR Berchikul' 10.20 299 *e*Sg Sx 01 40 34.0
HIA Hailar 10.23 97 *e*Pn **Pn** **01 37 54.7 -3.6**
comp=N,259nm,0.6s
HIA Hailar 10.23 97 *e*P **Pn** **01 37 54.7 -3.6**
HIA pmax pmax
comp=Z,259nm,0.6s
HIA Hailar 10.23 97⇓*i*Pn **Pn** **01 37 54.8 -3.5**
HIA *i* Sg Sn 01 40 49.8 +57
ARTR Artybash 10.47 277 *e*Pn **Pn** **01 38 05.7 +4.2**
ARTR *e*Pg Pn 01 38 38.6 +37
ARTR *i* Sg Sn 01 40 53.1 +54
AKAR Aktash 10.51 269 *e*Pn **Pn** **01 38 07.0 +4.9**
AKAR *e*Pg Pn 01 38 42.7 +41
AKAR *e*Sg Sn 01 40 56.1 +56
AKAR Aktash 10.51 269 *e*Pg Px 01 38 40.7
AKAR Pmax 01 39 00.4
comp=Z,709nm,0.7s
AKAR *e*Sg Sx 01 40 53.5
AKAR Smax 01 41 08.5
comp=Z,309µm,2.9s
KHNR Khani 10.64 54 *e*Pn **Pn** **01 38 04.4 +0.5**
KHNR *e*Pg Pn 01 38 46.1 +42
KHNR *e*Sg Sn 01 41 04.7 +62
ELT Yel'tsovka 11.04 285 *e*Pn **Pn** **01 38 12.1 +2.7**
ELT *e*Pg Pn 01 38 50.0 +41
ELT *e*Sg Sn 01 41 06.9 +54
BTO Baotou 11.78 158 *e*P **Pn** **01 38 18.3 -1.2**
BTO S **Sn** **01 40 28.5 -2.4**
BTO LR LR
comp=N,32µm,8.8s
BTO LR LR
comp=E,22µm,10.9s
KTNR Kaitanak 11.89 270 *e*Pn **Pn** **01 38 23.9 +2.9**
KTNR *e*Pg Pn 01 39 06.0 +45
KTNR *i* Sg Sn 01 41 38.9 +65
ZAA0 Zalesovo Array 11.92 289⇑*e*Pn **Pn** **01 38 22.9 +1.5**
ZAA0 *e*Lg 01 41 37.5
ZALV Zalesovo Beam 11.92 289 Pn **Pn** **01 38 21.9 +0.6**
ZALV Pg Pn 01 39 05.5 +44
ZALV Lg 01 41 34.9
ZALV Zalesovo Beam 11.92 289 Pn **Pn** **01 38 21.9 +0.6**
comp=E,0.9nm,0.3s,baz=91,slow=12,SNR=62
ZALV Pg Pn 01 39 05.5 +44
comp=E,12nm,0.3s,baz=81,slow=15,SNR=12
ZALV Lg 01 41 34.9
comp=E,144nm,0.3s,baz=98,slow=25,SNR=15
HHC Hu-ho-hao-te 11.96 152 ⇓P **Pn** **01 38 20.8 -1.2**
HHC pP 01 38 24.3
HHC sP 01 38 27.3
HHC PP 01 38 31.0
HHC *e*S **Sn** **01 40 33.8 -1.6**
HHC sS 01 40 41.3
HHC SS 01 40 49.5
HHC pmax pmax
comp=Z,170nm,1.0s
HHC pmax pmax
comp=Z,5µm,4.9s
HHC LR LR
comp=N,94µm,9.8s
HHC LR LR
comp=E,41µm,8.0s
HHC LR LR
comp=Z,116µm,15.9s
UKR Ust'-Kan 12.15 274 *e*Pn **Pn** **01 38 29.2 +4.7**
UKR *e*Pg Pn 01 39 10.3 +46
UKR *e*Sg Sn 01 41 43.2 +63
TNDR Tynda 12.76 66 *e*Pn **Pn** **01 38 33.2 +0.4**
TNDR *e*Sg 01 42 10.3
NVS Novosibirsk 12.91 292 *e*P **Pn** **01 38 38.7 +3.8**
NVS *e* 01 41 01.2
CLNS Chul'man 13.17 59*d*i*P **Pn** **01 38 40.2 +1.7**
CLNS *e*S **Sn** **01 41 04.0 -0.8**
CLNS pmax pmax
comp=Z,121nm,1.2s
CLNS pmax pmax
comp=N,87nm,1.3s
CLNS pmax pmax
comp=E,192nm,1.3s
CLNS smax
comp=E,340nm,1.4s
CLNS smax
comp=N,338nm,1.0s
CLNS MLR MLR
comp=Z,53µm,19.0s
CLNS MLR MLR
comp=E,42µm,17.0s
CLNS MLR MLR
comp=N,15µm,12.0s
CLNS Chul'man 13.17 59⇓*i*Pn **Pn** **01 38 40.0 +1.5**
CLNS *e* 01 41 52.0
CLNS *i* Sg 01 42 23.1
BJI Beijing 14.30 140 P **Pn** **01 38 52.0 -2.0**
BJI S **Sn** **01 41 33.0 +0.4**
BJI pmax pmax
comp=Z,280nm,0.6s
BJI pmax pmax
comp=Z,2µm,5.0s
BJI LR LR
comp=N,81µm,18.3s
BJI LR LR
comp=E,166µm,19.3s
BJI LR LR
comp=Z,33µm,17.1s
BJT Baijiatuau 14.32 140 *e*Pn **Pn** **01 38 51.8 -2.4**
comp=Z,599nm,0.6s
BJT Baijiatuau 14.32 140 *e*P **Pn** **01 38 51.8 -2.4**
BJT pmax pmax
comp=Z,599nm,0.6s
MK31 Makanchi Array 15.06 260 *e*Pn **Pn** **01 39 05.8 +1.5**
MK31 *e*Lg 01 43 21.8
MK31 Makanchi Array 15.06 260 *e*P **Pn** **01 39 05.8 +1.5**
MKAR Makanchi Array 15.06 260 Pn **Pn** **01 39 05.7 +1.4**
comp=Z,1.5nm,0.3s,baz=74,slow=12,SNR=34
MKAR Lg 01 43 18.9
comp=Z,7.8nm,0.3s,baz=66,slow=29,SNR=9.0
MKAR LR LR 01 44 53.4
comp=Z,291µm,18.9s,baz=61,slow=37
TIY Taiyuan 15.12 154 *e*P **Pn** **01 39 04.3 -0.8**
TIY sP sP 01 39 11.5 -2.9
TIY S **Sn** **01 41 51.5 -1.0**
TIY sS sS 01 41 58.5 -16
TIY pmax pmax
comp=Z,1µm,8.1s
TIY LR LR
comp=N,57µm,12.8s
TIY LR LR
comp=E,27µm,9.0s
TIY LR LR
comp=Z,80µm,14.5s
LZH Lanzhou 15.57 181 ⇑P **Pn** **01 39 09.8 -1.2**
LZH pP pP 01 39 12.3 -5.8
LZH PP 01 39 22.8
LZH S **Sn** **01 42 04.0 +0.6**
LZH sS sS 01 42 09.5 -14
LZH SS 01 42 22.8
LZH pmax pmax
comp=Z,650nm,1.2s
LZH pmax pmax
comp=Z,4µm,4.5s
LZH LR LR
comp=N,299µm,16.9s
LZH LR LR
comp=E,70µm,10.5s
LZH LR LR
comp=Z,204µm,16.0s
KURK Kurchatov 16.01 277 Pn **Pn** **01 39 16.0 -0.6**
comp=Z,2µm,1.2s,SNR=76
KURK Kurchatov 16.01 277⇓*e*Pn **Pn** **01 39 16.0 -0.6**
comp=Z,574nm,1.3s
KURK *e*Lg 01 43 44.1
KURK Kurchatov 16.01 277 Pn **Pn** **01 39 16.4 -0.2**
comp=Z,0.2nm,0.3s,baz=81,slow=12,SNR=64
KURK Sn **Sn** **01 42 06.3 -7.7**
comp=Z,1.7nm,0.3s,baz=81,slow=17,SNR=3.9
KURK Lg 01 43 51.1
comp=Z,3.8nm,0.3s,baz=103,slow=29,SNR=8.9
KURK Kurchatov 16.01 277*d*i*P **Pn** **01 39 16.3 -0.3**
KURK pmax pmax
comp=Z,406nm,1.9s
KURK MLR MLR
comp=Z,120µm,17.0s
KURK Kurchatov 16.01 277 P **Pn** **01 39 16.3 -0.3**
SNR=242
CN2 Changchun 16.30 110 *e*P **Pn** **01 39 21.0 +0.5**
CN2 *e*sP sP 01 39 28.0 +0.5
CN2 *e*SS 01 42 40.0
CN2 pmax pmax
comp=Z,100nm,1.0s
CN2 pmax pmax
comp=Z,500nm,3.0s
CN2 LR LR
comp=N,90µm,20.0s
CN2 LR LR
comp=E,92µm,20.0s
CN2 LR LR
comp=Z,77µm,22.0s
SNY Shenyang 16.51 119 ⇓P **Pn** **01 39 22.3 -0.8**
SNY S **Sn** **01 42 30.0 +3.8**
SNY pmax pmax
comp=Z,32nm,2.1s
SNY pmax pmax
comp=Z,3µm,9.2s
SNY LR LR
comp=N,98µm,23.7s
SNY LR LR
comp=E,96µm,21.7s
SNY LR LR
comp=Z,36µm,14.1s
YAK Yakutsk 17.28 43 *e*Pn **Pn** **01 39 28.9 -3.8**
comp=Z,844nm,1.0s
YAK Yakutsk 17.28 43*d*i*P **Pn** **01 39 29.2 -3.4**
YAK *e*S **Sn** **01 42 40.8 -3.8**
YAK pmax pmax
comp=Z,613nm,1.4s
YAK pmax pmax
comp=N,133nm,1.3s
YAK pmax pmax
comp=E,514nm,1.6s
YAK smax
comp=E,3µm,2.3s
YAK smax
comp=N,2µm,1.6s
YAK MLR MLR
comp=Z,56µm,13.0s
YAK MLR MLR
comp=E,39µm,12.0s
YAK MLR MLR
comp=N,9µm,13.0s
DL2 Dalian 17.66 129⇓*i*P **Pn** **01 39 36.8 -0.7**
DL2 *e*S **Sn** **01 42 56.0 +1.9**
DL2 pmax pmax
comp=Z,150nm,1.3s
DL2 pmax pmax
comp=Z,3µm,7.7s
DL2 LR LR
comp=N,38µm,20.4s
DL2 LR LR
comp=E,41µm,21.4s
DL2 LR LR
comp=Z,30µm,16.9s
KLR Kul'dur 17.71 87*ce*P **Pn** **01 39 34.2 -3.9**
KLR pmax pmax
comp=E,820nm,1.4s
KLR pmax pmax
comp=Z,750nm,1.4s
KLR pmax pmax
comp=E,7µm,11.5s
KLR pmax pmax
comp=Z,10µm,11.5s
KLR MLR MLR
comp=Z,34µm,12.0s
XAN Xi'an 17.95 167 P **Pn** **01 39 39.0 -2.1**
XAN sP sP 01 39 45.8 +0.1
XAN PP 01 39 54.5
XAN S **Sn** **01 43 00.0 -1.1**
XAN SS 01 43 23.3
XAN pmax pmax
comp=Z,2µm,15.0s
XAN LR LR
comp=Z,31µm,15.0s
TIA Tai'an 18.00 144 ⇑P **Pn** **01 39 42.5 +0.7**
MDJ Mudanjiang 18.33 103 P **Pn** **01 39 46.3 +0.6**
MDJ pP pP 01 39 50.3 +1.7

MDJ sP sP 01 39 52.3 +2.4
MDJ S **Sn** **01 43 10.3 +0.1**
MDJ ScP ScP 01 47 52.5 +0.4
MDJ PcS PcS 01 47 54.0 +0.6
MDJ pmax pmax
comp=Z,160nm,1.0s
MDJ pmax pmax
comp=Z,6μm,11.1s
MDJ LR LR
comp=N,65μm,16.9s
MDJ LR LR
comp=E,41μm,18.4s
MDJ LR LR
comp=Z,31μm,13.9s
MDJ Mudanjiang 18.33 103⇓ *i* P **Pn** **01 39 45.6 0.0**
comp=Z,220nm,1.3s
HABR Khabarovsk 20.02 87 *d i* P **P** **01 40 05.1 +0.8**
HABR *e* S **S** **01 43 52.7 +3.6**
HABR pmax pmax
comp=Z,257nm,1.6s
HABR pmax pmax
comp=Z,3μm,1.8s
HABR MLR MLR
comp=Z,19μm,13.0s,MS5.6
AAA Alma-Ata 20.12 256 *i* P **P** **01 40 08.3 +2.9**
AAA Alma-Ata 20.12 256 *e* P **P** **01 40 08.2 +2.8**
AAA *e* S **S** **01 43 56.2 +5.1**
AAA pmax pmax
comp=Z,16μm,11.9s
AAA smax
comp=E,25μm,10.7s
AAA MLR MLR
comp=Z,369μm,11.0s,MS7.0
VLA Vladivostok 20.54 104⇓ *i* P **P** **01 40 10.8 +0.9**
VLA *e* 01 40 29.0
VLA *e* S **S** **01 43 58.9 -0.6**
VLA *e* 01 44 20.7
VLA pmax pmax
comp=Z,119nm,1.6s
BVAR Borovoye Array 20.57 287 P **P** **01 40 09.2 -0.9**
comp=Z,45nm,0.6s,baz=82,slow=11,SNR=124
BRVK Borovoye 20.62 287 P **P** **01 40 10.1 -0.7**
comp=Z,3μm,1.3s
BRVK Borovoye 20.62 287 *e* P **P** **01 40 10.1 -0.7**
comp=Z,618nm,1.1s
BRVK *e* S **S** **01 43 59.5 -1.5**
BRVK LR LR
comp=Z,9μm,19.0s,MS5.2
BRVK Borovoye 20.62 287 *d i* P **P** **01 40 10.0 -0.8**
BRVK pmax pmax
comp=Z,599nm,1.1s
BRVK MLR MLR
comp=Z,41μm,13.0s,MS6.0
BRVK Borovoye 20.62 287 P **P** **01 40 10.4 -0.4**
SNR=396
CD2 Chengdu 20.73 181 P **P** **01 40 13.0 +0.9**
CD2 pP 01 40 17.0
CD2 sP sP 01 40 20.0 +3.8
CD2 PP 01 40 35.0
CD2 S **S** **01 43 59.8 -3.7**
CD2 sS sS 01 44 06.3 -1.7
CD2 SS 01 44 31.3
CD2 pmax pmax
comp=Z,610nm,0.6s
CD2 pmax pmax
comp=Z,22μm,6.4s
CD2 LR LR
comp=N,126μm,14.8s,MS6.5
CD2 LR LR
comp=E,90μm,12.3s,MS6.5
CD2 LR LR
comp=Z,132μm,14.8s,MS6.4
TKM2 Tokmak 2 21.13 257 P **P** **01 40 18.3 +2.0**
SNR=6.2
TKM2 Tokmak 2 21.13 257⇓ *i* P **P** **01 40 17.5 +1.2**
comp=Z,128nm,1.6s,mb5.0
TKM2 LR LR
comp=Z,70μm,20.0s,MS6.0
TKM2 Tokmak 2 21.13 257⇓ *i* P **P** **01 40 17.5 +1.1**
TKM2 pmax pmax
comp=Z,128nm,1.6s,mb5.0
TKM2 MLR MLR
comp=Z,70μm,20.0s,MS6.0
ULHL Ulahol 21.13 255 P **P** **01 40 18.9 +2.5**
SNR=26
INCN Inchon 21.27 123⇓ *i* P **P** **01 40 18.2 +0.3**
comp=Z,649nm,1.4s,mb5.8
INCN LR LR
comp=Z,13μm,19.0s,MS5.3
INCN Inchon 21.27 123 P **P** **01 40 19.3 +1.4**
SNR=37
CHMS Chumysh 21.60 258 P **P** **01 40 22.8 +1.3**
SNR=29
USP Ospenovka 21.61 259 P **P** **01 40 21.6 +0.1**
SNR=79
KBK Karagaybulak 21.68 257 P **P** **01 40 24.1 +1.8**
SNR=36
ENH Enshi 21.73 167 *e* P **P** **01 40 22.7 -0.2**
comp=Z,603nm,1.2s,mb5.9
ENH LR LR
comp=Z,77μm,21.0s,MS6.1
FRU Bishkek 21.78 258κ *i* P **P** **01 40 24.0 +0.7**
FRU pmax pmax
comp=Z,2μm,2.1s,mb6.1
FRU MLR MLR
comp=Z,149μm,20.0s,MS6.4
AAK Ala-Archa 21.96 257 P **P** **01 40 26.8 +1.5**
SNR=12
AAK Ala-Archa 21.96 257⇓ *e* P **P** **01 40 26.1 +0.7**
comp=Z,246nm,1.0s,mb5.6
AAK LR LR
comp=Z,166μm,20.0s,MS6.5
AAK Ala-Archa 21.96 257 P **P** **01 40 26.4 +1.1**
comp=Z,26nm,0.9s,mb4.7,baz=74,slow=6.4,SNR=15
AAK Lg 01 46 55.8
comp=Z,137nm,1.0s,baz=238,slow=14,SNR=3.7
AAK LR LR 01 49 29.1
comp=Z,109μm,20.4s,MS6.3,baz=37,slow=38
AAK Ala-Archa 21.96 257⇑ *e* P **P** **01 40 26.9 +1.6**
AAK pmax pmax
comp=Z,149nm,1.1s,mb5.3
AAK MLR MLR
comp=Z,59μm,20.0s,MS6.0
AAK Ala-Archa 21.96 257 P **P** **01 40 26.2 +0.9**
comp=Z,1μm,1.7s,mb6.0,SNR=51
AAK Ala-Archa 21.96 257 P **P** **01 40 26.7 +1.4**
comp=Z,2μmcomp=Z,69nm,1.0s,mb5.0
AAK Ala-Archa 21.96 257 P **P** **01 40 26.6 +1.3**
SNR=69
KSRS Korea Array 21.97 121 P **P** **01 40 25.4 0.0**
comp=Z,33nm,1.0s,mb4.7,baz=323,slow=8.8,SNR=51
KSRS Lg 01 47 04.1
comp=Z,23nm,1.0s,baz=314,slow=30,SNR=4.7
KSRS LR LR 01 48 46.2
comp=Z,13μm,20.9s,MS5.3,baz=317,slow=36
UCH Uchtor 22.18 257 P **P** **01 40 29.4 +1.7**
SNR=16
UCH Uchtor 22.18 257 *e* P **P** **01 40 29.0 +1.3**
comp=Z,3μm,1.1s,mb6.6
UCH *e* 01 47 10.3
UCH LR LR
comp=Z,98μm,22.0s,MS6.2
NJ2 Nanjing 22.36 145 *e* P **P** **01 40 30.5 +0.8**
NJ2 pP 01 40 34.5
NJ2 sP sP 01 40 37.5 +3.7
NJ2 S **S** **01 44 33.5 -2.0**
NJ2 sS sS 01 44 39.0 -1.1
NJ2 SS 01 45 11.0
NJ2 pmax pmax
comp=Z,90nm,1.0s,mb5.2
NJ2 pmax pmax
comp=Z,5μm,10.8s
NJ2 LR LR
comp=N,53μm,15.4s,MS6.1
NJ2 LR LR
comp=E,25μm,17.0s,MS6.1
NJ2 LR LR
comp=Z,65μm,14.5s,MS6.2
EKS2 Erkin-Say 22.39 258 P **P** **01 40 30.9 +1.1**
SNR=60
EKS2 Erkin-Say 22.39 258⇓ *e* P **P** **01 40 30.4 +0.6**
comp=Z,96nm,0.5s,mb5.5
EKS2 LR LR
comp=Z,51nm,19.0s,MS6.0
WHN Wuhan 22.41 156 ⇑ P **P** **01 40 28.8 -1.3**
WHN S **S** **01 44 36.5 +0.2**
WHN LR LR
comp=N,82μm,16.8s,MS6.3
WHN LR LR
comp=E,29μm,11.8s,MS6.3
WHN LR LR
comp=Z,83μm,15.1s,MS6.3
AML Almayashu 22.74 257 P **P** **01 40 38.8 +5.3**
SNR=20
AML Almayashu 22.74 257 *e* P **P** **01 40 33.7 +0.2**
comp=Z,286nm,1.1s,mb5.6
AML LR LR
comp=Z,146μm,20.0s,MS6.4
TIXI Tiksi 22.89 20⇓ *e* P **P** **01 40 33.1 -1.8**
comp=Z,581nm,0.6s,mb6.2
TIXI *e* 01 47 20.1
TIXI LR LR
comp=Z,76μm,19.0s,MS6.2
TIXI Tiksi 22.89 20 *d i* P **P** **01 40 33.2 -1.8**
TIXI *e* S **S** **01 44 39.3 -5.2**
TIXI pmax pmax
comp=N,194nm,0.6s
TIXI pmax pmax
comp=Z,591nm,0.7s,mb6.1
TIXI pmax pmax
comp=E,60nm,0.5s
TIXI pmax pmax
comp=Z,8μm,12.8s
TIXI MLR MLR
comp=N,14μm,13.0s,MS5.8
TIXI MLR MLR
comp=Z,80μm,15.0s,MS6.3
TIXI MLR MLR
comp=E,15μm,11.0s,MS5.8
KSH Kashi 22.99 249 ⇓ P **P** **01 40 43.0 +6.7**
KSH *e* pP 01 40 48.0
KSH *e* sP sP 01 40 50.0 +10
KSH *e* PP 01 41 12.8
KSH *e* PcP PcP 01 44 26.5 +0.7
KSH S **S** **01 44 53.5 +6.9**
KSH sS sS 01 45 00.3 +8.7
KSH *e* SS 01 45 41.5
KSH *e* ScP ScP 01 48 06.0 +2.6
KSH *e* PcS PcS 01 48 07.8 +3.0
KSH pmax pmax
comp=Z,18nm,0.8s,mb4.5
KSH LR LR
comp=N,52μm,8.6s
KSH LR LR
comp=E,52μm,10.2s
KSH LR LR
comp=Z,82μm,8.5s
LSA Lhasa 23.97 209 *e* P **P** **01 40 47.8 +1.7**
comp=Z,120nm,0.8s,mb5.4
LSA LR LR
comp=Z,22μm,21.0s,MS5.6
LSA Lhasa 23.97 209 *e* P **P** **01 40 47.8 +1.8**
LSA pmax pmax
comp=Z,120nm,0.8s,mb5.4
LSA MLR MLR
comp=Z,22μm,21.0s,MS5.6
KK31 Karatay Array 24.15 263⇑ *e* P **P** **01 40 46.8 -0.7**
KKAR Karatay Array 24.15 263⇓ *e* P **P** **01 40 46.7 -0.9**
comp=Z,8,8nm,0.6s,mb4.4
GYA Guiyang 25.24 175⇑ *i* P **P** **01 40 56.8 -0.8**
GYA PP 01 41 38.0
GYA PcP PcP 01 44 33.0 +2.2
GYA S **S** **01 45 23.3 +0.4**
GYA SS 01 46 23.3
GYA ScP ScP 01 48 11.5 +1.8
GYA pmax pmax
comp=Z,230nm,1.0s,mb5.7
GYA pmax pmax
comp=Z,3μm,13.9s
GYA LR LR
comp=N,39μm,18.3s,MS6.1
GYA LR LR
comp=E,24μm,15.2s,MS6.1
GYA LR LR
comp=Z,54μm,18.6s,MS6.1
YSS Yuzh-Sakhalins 25.40 85⇓ *i* P **P** **01 40 58.6 -0.3**
comp=Z,252nm,1.3s,mb5.6
YSS LR LR
comp=Z,6μm,20.0s,MS5.1
YSS Yuzh-Sakhalins 25.40 85κ *e* P **P** **01 40 58.8 -0.1**
YSS *e* *SP sP 01 41 06.0 +2.8
YSS *e* 01 41 47.5
YSS *e* S **S** **01 45 23.0 -2.3**
YSS *e* SS 01 46 23.0
YSS *e* SSS 01 46 45.0
YSS pmax pmax
comp=Z,640nm,1.9s,mb5.8
YSS pmax pmax
comp=E,560nm,2.0s
YSS MLR MLR
comp=Z,14μm,14.0s,MS5.6
YSS MLR MLR
comp=N,15μm,13.0s,MS5.8
YSS MLR MLR
comp=E,15μm,13.0s,MS5.8
SVE Sverdlovsk 25.60 299⇑ *e* P **P** **01 41 00.3 -0.3**
SVE *e* S **S** **01 45 30.8 +2.5**
SVE pmax pmax
comp=Z,3μm,12.1s
SVE pmax pmax
comp=Z,1μm,1.0s,mb6.4
SVE MLR MLR
comp=Z,130μm,13.0s,MS6.6
KMI Kunming 26.52 183 ⇓ P **P** **01 41 08.8 -0.4**
KMI pP pP 01 41 13.3 +1.1
KMI PP 01 41 50.5
KMI S **S** **01 45 36.5 -6.7**
KMI ScP ScP 01 48 15.5 +2.1
KMI pmax pmax
comp=Z,79nm,1.3s,mb5.1
KMI pmax pmax
comp=Z,3μm,13.6s
KMI LR LR
comp=N,104μm,13.1s,MS6.6
KMI LR LR
comp=E,38μm,12.0s,MS6.6
KMI LR LR
comp=Z,112μm,13.1s,MS6.6
ASAJ Asahikawa 26.62 91 *e* P **P** **01 41 08.3 -1.7**
comp=Z,55nm,1.3s,mb4.9
ASAJ Asahikawa 26.62 91 P **P** **01 41 08.6 -1.4**
comp=Z,51nm,0.9s,mb5.0,baz=319,slow=11,SNR=8.5
ASAJ Lg 01 49 26.8
comp=Z,3.4nm,0.3s,baz=330,slow=20,SNR=3.0
ASAJ LR LR 01 52 26.5
comp=Z,11μm,18.9s,MS5.4,baz=303,slow=38
ARU Arti 26.79 298 *e* P **P** **01 41 10.4 -1.0**
comp=Z,449nm,0.9s,mb6.0
ARU LR LR
comp=Z,125μm,21.0s,MS6.5
ARU Arti 26.79 298 *d i* P **P** **01 41 10.5 -0.9**
ARU *e* PPP 01 41 59.4
ARU S **S** **01 45 48.2 +1.1**
ARU SSS 01 47 09.1
ARU pmax pmax
comp=Z,204nm,1.7s,mb5.4
ARU pmax pmax
comp=Z,3μm,14.2s
ARU MLR MLR
comp=Z,139μm,17.0s,MS6.6
ARU Arti 26.79 298 P **P** **01 41 10.9 -0.5**
comp=Z,2μm,0.7s,mb6.8,SNR=36
JNU Nakatsue 26.84 123⇓ *i* P **P** **01 41 11.8 -0.2**
comp=Z,322nm,1.4s,mb5.7
TAPN Taplejung 27.26 213 *e* P **P** **01 41 16.4 +0.5**
comp=Z,499nm,1.2s,mb5.9
SOKR Solikamsk 27.36 305 *d i* P **P** **01 41 15.9 -0.5**
SOKR S **S** **01 45 57.1 +1.1**
SOKR pmax pmax
comp=Z,350nm,1.0s,mb5.8
SOKR MLR MLR
comp=Z,166μm,18.0s,MS6.7
GUN Gumba 27.41 217 *e* P **P** **01 41 18.1 +0.9**
comp=Z,382nm,0.7s,mb6.0
KLP Kalpa 27.67 233 *e* PKP **P** **01 41 19.5 0.0**
KLP AMb AMB 01 41 30.8
comp=Z,149nm,2.2s,mb5.2
SHL Shillong 27.68 204 *e* PKP **P** **01 41 20.0 +0.4**
SEY Seymchan 27.70 47⇑ *i* P **P** **01 41 19.1 -0.4**
SEY Seymchan 27.70 47⇑ *i* P **P** **01 41 19.0 -0.5**
GKN Gorkha 27.80 219 *e* P **P** **01 41 21.4 +0.7**
comp=Z,567nm,1.2s,mb6.1
ODAN Odare 27.82 213 *e* P **P** **01 41 21.6 +0.7**
comp=Z,862nm,1.1s,mb6.3
JOSI Joshimath 27.83 230 *e* PKP **P** **01 41 22.3 +1.3**
DANN Dangsing 27.85 221 *e* P **P** **01 41 22.5 +1.4**
PKI Pulchoki 27.89 218 *e* P **P** **01 41 22.3 +0.8**
comp=Z,830nm,1.4s,mb6.2
AB31 Akbulak array 27.92 283⇑ *e* P **P** **01 41 21.4 -0.2**
AB31 Akbulak array 27.92 283 P **P** **01 41 21.4 -0.2**
AB31 pmax pmax
comp=Z,785nm,1.1s,mb6.2
ABKAR Akbulak array 27.92 283 *e* P **P** **01 41 20.6 -1.0**
comp=Z,62nm,0.8s,mb5.3
DMN Daman 27.97 218 *e* P **P** **01 41 23.5 +1.3**
comp=Z,834nm,1.2s,mb6.2
RAMN Ramite 28.01 215 *e* P **P** **01 41 22.6 0.0**
comp=Z,426nm,1.0s,mb6.0
ERM Erimo 28.07 95 P **P** **01 41 23.1 +0.1**
comp=Z,991nm,1.3s,mb6.3,SNR=7.7
ERM Erimo 28.07 95 *e* P **P** **01 41 22.0 -1.0**
ERM LR LR
comp=Z,15μm,21.0s,MS5.5
ERM Erimo 28.07 95 *c i* P **P** **01 41 21.5 -1.5**
SDNR Sundarnagar 28.34 235 *e* PKP **P** **01 41 24.5 -1.0**
SDNR Sundarnagar 28.34 235 *ex* **P** **01 41 24.5 -1.0**
PTH Pithoragarh 28.36 228 *e* PKP **P** **01 41 25.6 -0.1**
PTH Pithoragarh 28.36 228 *ex* **P** **01 41 25.6 -0.1**
KOLN Koldanda 28.42 221 *e* P **P** **01 41 27.4 +1.1**
comp=Z,199nm,0.8s,mb5.8
MAJO Matsushiro 28.44 109⇓ *i* P **P** **01 41 23.5 -2.8**
comp=Z,60nm,1.3s,mb5.1
MAJO LR LR
comp=Z,8μm,19.0s,MS5.4
MAJO Matsushiro 28.44 109⇓ *i* P **P** **01 41 23.5 -2.8**
MAJO pmax pmax
comp=Z,60nm,1.3s,mb5.1
MAJO MLR MLR
comp=Z,8μm,19.0s,MS5.4
MAT Matsushiro 28.44 109 P **P** **01 41 23.1 -3.2**
MAT S **S** **01 46 11.0 -2.4**
MJAR Matsushiro Arr 28.44 109 P **P** **01 41 24.0 -2.3**
MJAR LR LR 01 53 04.9
MJAR Matsushiro Arr 28.44 109 P **P** **01 41 24.0 -2.3**
comp=Z,13nm,1.1s,mb4.5,baz=313,slow=10.0,SNR=16
MJAR LR LR 01 53 04.9
comp=Z,8μm,19.8s,MS5.3,baz=315,slow=37
AKTK Aktyubinsk 28.66 286 P **P** **01 41 27.2 -1.0**
AKTK LR LR 01 52 20.4
AKTO Aktyubinsk 28.66 286 P **P** **01 41 27.2 -1.0**
comp=Z,20nm,1.0s,mb4.8,baz=83,slow=8.0,SNR=7.6
AKTO LR LR 01 52 20.4
comp=Z,35μm,18.4s,MS6.0,baz=248,slow=35
YUK Yuzh-Kuril'sk 28.69 89⇓ *i* P sP 01 41 40.0 +7.2
YUK *e* PPP 01 42 29.0
YUK *e* S **S** **01 46 14.0 -3.2**
YUK *e* SS SS 01 47 59.0 -19
YUK MLR MLR
comp=N,12μm,21.0s,MS5.5
YUK MLR MLR
comp=E,6μm,21.0s,MS5.5
YUK MLR MLR
comp=Z,9μm,21.0s,MS5.4
BHK Bhakra 28.69 236 *e* PKP **P** **01 41 28.0 -0.6**
BHK *ex* x 01 44 05.0
DDI Dehra Dun 28.75 232 *e* PKP **P** **01 41 28.0 -1.1**
DDI Dehra Dun 28.75 232 *ex* **P** **01 41 28.0 -1.1**
QZH Quanzhou 28.87 152⇓ *i* P **P** **01 41 28.0 -2.3**
QZH S **S** **01 46 12.0 -8.3**
QZH pmax pmax
comp=Z,220nm,1.2s,mb5.8
QZH pmax pmax
comp=Z,1μm,4.5s
QZH LR LR
comp=N,59μm,14.0s
QZH LR LR
comp=E,11μm,9.4s
QZH LR LR
comp=Z,94μm,16.8s,MS6.5
GZH Guangzhou 29.39 163 P **P** **01 41 30.0 -4.9**
GZH S **S** **01 46 19.5 -9.0**
GZH LR LR
comp=N,26μm,18.2s
GZH LR LR
comp=E,10μm,11.2s
GZH LR LR
comp=Z,53μm,15.0s,MS6.3
AGT Agartala 29.45 205 *i* P **P** **01 41 34.0 -1.4**
AGT *i* x x 01 42 26.0
TATO Taipei 29.76 147 PFAKE 01 41 50.0 +12
TATO LR LR
comp=Z,13μm,21.0s,MS5.5
YHNB Yeheng 30.00 147⇓ *i* P **P** **01 41 39.7 -0.6**
comp=Z,268nm,1.3s,mb5.8
YHNB LR LR
comp=Z,15μm,22.0s,MS5.6
HKC Hong Kong Obse 30.32 161 P **P** **01 41 42.0 -1.1**
HKC S **S** **01 46 44.0 +0.9**
KBL Kabul 30.43 250 *e* P **P** **01 41 43.9 -0.1**
NDI New Delhi 30.51 232 *ex* **P** **01 41 48.0 +3.2**
NACB Ninganchiao 30.54 147 *e* P **P** **01 41 42.8 -2.2**
comp=Z,44nm,0.8s,mb5.3
SSLB Suanglung 30.68 149⇓ *i* P **P** **01 41 45.7 -0.6**
comp=Z,175nm,1.3s,mb5.7
SONA Sohna 30.94 231 *e* PKP **P** **01 41 48.8 +0.3**
SONA AMb AMB 01 41 54.6
comp=Z,125nm,0.6s,mb5.9
TPUB Ta-pu 31.03 150⇓ *i* P **P** **01 41 48.5 -0.9**
comp=Z,55nm,0.9s,mb5.4
YULB Yu-li 31.16 148 *e* P **P** **01 41 49.8 -0.8**
comp=Z,164nm,1.3s,mb5.7
KUDL Kundal 31.32 232 *ex* **P** **01 41 48.1 -3.7**
KUDL AMb AMB 01 41 57.5
comp=Z,223nm,2.3s,mb5.6
TWG Pinlang 31.62 149⇓ *i* P **P** **01 41 53.9 -0.7**
comp=Z,203nm,1.3s,mb5.8
KHET Khetri 31.71 233 *e* PKP **P** **01 41 55.1 -0.3**
KHET AMb AMB 01 42 00.8
comp=Z,91nm,1.3s,mb5.4
SKR Severo-Kuril's 32.04 71 *e* P **P** **01 42 01.2 +3.2**
SKR *e* 01 43 09.0
SKR *e* 01 43 26.0
SKR *e* S **S** **01 47 09.0 -0.6**
SKR *e* 01 49 23.0
SKR pmax pmax
comp=N,320nm,1.4s
SKR pmax pmax
comp=Z,390nm,1.4s,mb6.0
SKR pmax pmax
comp=E,3μm,14.0s
SKR pmax pmax
comp=Z,3μm,14.0s
SKR smax
comp=N,3μm,14.0s
SKR smax
comp=E,4μm,18.0s
SKR MLR MLR
comp=Z,22μm,18.0s,MS5.9
SKR MLR MLR
comp=N,23μm,14.0s,MS6.2
SKR MLR MLR
comp=E,21μm,14.0s,MS6.2
PETK Petropavlovsk- 32.09 66 P **P** **01 41 58.5 0.0**
comp=E,30nm,0.7s,mb5.2,baz=266,slow=2.4,SNR=27
PETK LR LR 01 55 59.4
comp=E,6μm,18.3s,MS5.3,baz=297,slow=38
PET Petropavlovsk 32.66 66 *e* P **P** **01 42 02.6 -0.8**
PET LR LR
comp=Z,9μm,20.0s,MS5.5
PET Petropavlovsk 32.66 66κ *i* P **P** **01 42 03.6 +0.2**
PET *e* 01 43 06.3
PET *e* S **S** **01 47 16.1 -3.1**
PET pmax pmax
comp=Z,2μm,4.5s
PET pmax pmax
comp=Z,291nm,1.8s,mb5.9
PET pmax pmax
comp=Z,2μm,18.1s
PET pmax pmax
comp=Z,700nm,15.9s
PET smax
comp=E,400nm,10.4s
PET MLR MLR
comp=Z,12μm,17.0s,MS5.7
PET MLR MLR
comp=Z,10μm,15.0s
QIZ Qiongzhong 32.87 170 P **P** **01 42 05.8 +0.3**
QIZ S **S** **01 47 24.8 +1.9**

QIZ pmax pmax
comp=Z,29nm,2.0s,mb4.9
QIZ pmax pmax
comp=Z,1μm,10.1s
QIZ LR LR
comp=N,64μm,14.6s
QIZ LR LR
comp=Z,96μm,14.7s,MS6.6
QIZ Qiongzhong 32.87 170⇓ *i*P **P** **01 42 05.5 0.0**
comp=Z,53nm,1.1s,mb5.4
QIZ LR LR
comp=Z,18μm,19.0s,MS5.8
CHTO Chiang Mai 33.03 189⇓ *e*P **P** **01 42 06.7 -0.3**
comp=Z,64nm,1.0s,mb5.5
CHTO LR LR
comp=Z,81μm,19.0s,MS6.5
CHTO Chiang Mai 33.03 189⇓ *e*P **P** **01 42 06.7 -0.2**
CHTO pmax pmax
comp=Z,64nm,1.0s,mb5.5
CHTO MLR MLR
comp=Z,81μm,19.0s,MS6.5
CHTO Chiang Mai 33.03 189 P **P** **01 42 06.9 0.0**
comp=Z,2μmcomp=Z,86nm,1.1s,mb5.6
CHTO Chiang Mai 33.03 189 P **P** **01 42 07.4 +0.4**
SNR=34
CMAR Chiang Mai Arr 33.38 189 P **P** **01 42 10.1 0.0**
comp=Z,12nm,0.8s,mb4.9,baz=360,slow=8.7,SNR=35
CMAR LR LR 01 56 57.1
comp=Z,67μm,18.0s,MS6.4,baz=1.3,slow=39
AJM Ajmer 33.61 233 *e*PKP **P** **01 42 11.2 -0.7**
AJM AMb AMB 01 42 18.1
comp=Z,238nm,1.1s,mb6.0
BWNR Bhubaneshwar 34.43 211 *e*PKP **P** **01 42 19.0 -0.2**
QUE Quetta 34.81 246 *e*P **P** **01 42 26.0 +3.6**
QUE *e*S **S** **01 47 58.0 +5.1**
ABKT Ailbek 34.83 265 P **P** **01 42 23.0 +0.6**
comp=Z,408nm,0.9s,mb6.4,SNR=18
BHPL Bhopal 35.04 226 *e*PKP **P** **01 42 24.0 -0.4**
BHPL AMb AMB 01 42 30.8
comp=Z,302nm,1.2s,mb6.1
KLMR Klimovskoe 35.63 311 *e*P **P** **01 42 27.1 -2.0**
KLMR *i*S **S** **01 48 04.9 0.0**
KLMR *i*SS SS 01 50 26.7 -13
KLMR pmax pmax
comp=Z,1μm,14.7s
KLMR pmax pmax
comp=Z,235nm,1.3s,mb6.0
KLMR MLR MLR
comp=Z,137μm,12.0s,MS6.9
LVZ Lovozero 36.23 323⇑ *i*P **P** **01 42 35.6 +1.5**
LVZ LR LR
comp=Z,47μm,20.0s,MS6.3
LVZ Lovozero 36.23 323⇑ *i*P **P** **01 42 35.5 +1.4**
LVZ pmax pmax
comp=Z,85nm,0.9s,mb5.7
LVZ MLR MLR
comp=Z,73μm,14.0s,MS6.6
APA Apatity 36.75 323⇑ *i*P **P** **01 42 40.0 +1.4**
APA *i* 01 42 52.0
APA *i* 01 44 04.0
APA *i* 01 45 06.0
APA *i*S **S** **01 48 22.0 +0.1**
APA *i*SS SS 01 50 54.0 -8.1
APA pmax pmax
comp=Z,74nm,1.3s,mb5.4
APA pmax pmax
comp=Z,2μm,14.0s
APA MLR MLR
comp=Z,103μm,14.0s,MS6.8
AKL Akola 37.44 225⇑ *i*P **P** **01 42 44.6 -0.3**
AKL *ex* x 01 42 55.6
comp=Z,289nm,1.4s
AKL *i*S **S** **01 48 32.9 -0.4**
VIS Vishakhapatnam 37.66 214 *ex* x 01 42 59.2
comp=Z,87nm,2.2s
VIS *i*x **S** **01 48 38.9 +2.3**
VRHR Novokhopersk 37.96 295 *e*P **P** **01 42 47.1 -2.0**
VRHR *e* 01 42 55.9
VRHR pmax pmax
comp=N,30nm,0.5s
VRHR pmax pmax
comp=E,60nm,0.5s
VRHR pmax pmax
comp=Z,100nm,0.5s,mb5.8
MOS Moscow 38.23 303 *e*P **P** **01 42 50.3 -1.0**
MOS *e* 01 42 59.5
MOS *e* 01 44 17.7
MOS *e*S **S** **01 48 40.3 -4.3**
MOS *e*SS SS 01 51 21.4 -11
MOS pmax pmax
comp=Z,500nm,1.8s,mb5.9
MOS pmax pmax
comp=Z,217nm,1.4s,mb5.7
MOS MLR MLR
comp=Z,144μm,16.0s,MS6.9
MAK Makhachkala 38.49 280*c i*P **P** **01 42 55.6 +2.0**
MAK *e* 01 44 20.9
MAK *i*S **S** **01 48 53.0 +4.1**
MAK pmax pmax
comp=E,491nm,2.2s
MAK pmax pmax
comp=N,331nm,2.0s
MAK pmax pmax
comp=Z,4μm,10.6s
MAK pmax pmax
comp=E,164nm,1.6s
MAK pmax pmax
comp=Z,287nm,1.3s,mb5.8
MAK pmax pmax
comp=N,204nm,1.7s
MAK smax
comp=E,13μm,9.7s
MAK smax
comp=N,6μm,8.6s
MAK MLR MLR
comp=E,61μm,10.0s,MS7.0
MAK MLR MLR
comp=Z,73μm,11.0s,MS6.8
MAK MLR MLR
comp=N,131μm,12.0s,MS7.0
KEV Kevo 38.59 327 *e*P **P** **01 42 53.8 -0.3**
comp=N,111nm,1.0s,mb5.5
KEV LR LR
comp=Z,19μm,20.0s,MS5.9
KEV Kevo 38.59 327 *e*P **P** **01 42 53.8 -0.3**
KEV pmax pmax
comp=Z,111nm,1.0s,mb5.5
KEV MLR MLR
comp=Z,19μm,20.0s,MS5.9
KEV Kevo 38.59 327 *ep* **P** **01 42 52.5 -1.6**
comp=Z,50nm,0.9s,mb5.2
JOF Joensuu 38.77 316 *ep* **P** **01 42 53.8 -1.9**
comp=Z,30nm,0.6s,mb5.2
BHV Bhavnagar 38.80 232 *e*PKP **P** **01 42 57.0 +0.6**
OBN Obninsk 39.03 303 *e*P **P** **01 42 57.6 -0.3**
comp=Z,156nm,1.0s,mb5.7
OBN LR LR
comp=Z,137μm,20.0s,MS6.8
OBN Obninsk 39.03 303*c i*P **P** **01 42 57.0 -1.0**
OBN *e* 01 44 34.3
OBN *i*S **S** **01 48 58.5 +1.8**
OBN *e*SS SS 01 51 36.1 -12
OBN pmax pmax
comp=Z,178nm,1.7s,mb5.5
OBN MLR MLR
comp=Z,143μm,21.0s,MS6.8
OBN Obninsk 39.03 303 P **P** **01 42 58.2 +0.2**
comp=Z,470nm,1.4s,mb6.0,SNR=8.0
VOR Voronezh 39.05 297⇓ *i*P **P** **01 42 57.0 -1.1**
VOR pmax pmax
comp=Z,350nm,1.6s,mb5.8
ARCES ARCESS Array B 39.15 327 P **P** **01 42 58.0 -0.9**
comp=Z,7.6nm,0.6s,mb4.6,baz=78,slow=8.6,SNR=65
ARCES LR LR 02 00 05.8
comp=Z,10μm,20.5s,MS5.6,baz=268,slow=38
ARE0 ARCESS Array S 39.15 327 *e*P **P** **01 42 58.6 -0.3**
VSR Storozhevoye 39.30 296*d i*P **P** **01 42 58.8 -1.4**
VSR *e**PP pP 01 43 08.5 +5.2
VSR *e* 01 44 34.3
VSR *e*S **S** **01 48 58.6 -2.2**
VSR pmax pmax
comp=E,130nm,1.5s
VSR pmax pmax
comp=Z,220nm,1.5s,mb5.7
VSR pmax pmax
comp=N,30nm,0.7s
VSR pmax pmax
comp=Z,1μm,2.8s,mb6.1
VSR pmax pmax
comp=N,320nm,0.9s
VSR pmax pmax
comp=E,340nm,0.9s
VSR smax
comp=N,3μm,6.8s
VSR smax
comp=Z,1μm,6.8s
VSR smax
comp=E,1μm,3.4s
VSR MLR MLR
comp=N,73μm,16.0s,MS6.8
VSR MLR MLR
comp=E,93μm,16.0s,MS6.8
VSR MLR MLR
comp=Z,117μm,16.0s,MS6.8
VORD Divnogorie 39.34 295 *e*P **P** **01 43 00.7 +0.1**
VORD *e* 01 44 35.9
VORD *e*S **S** **01 49 02.0 +0.6**
VORD pmax pmax
comp=N,20nm,0.5s
VORD pmax pmax
comp=E,110nm,0.5s
VORD pmax pmax
comp=Z,90nm,0.5s,mb5.8
VORD pmax pmax
comp=Z,2μm,4.7s
VORD pmax pmax
comp=N,540nm,0.9s
VORD pmax pmax
comp=E,760nm,0.9s
VORD smax
comp=N,3μm,6.6s
VORD smax
comp=E,5μm,6.6s
VORD smax
comp=Z,2μm,6.6s
VORD MLR MLR
comp=N,53μm,16.0s,MS6.8
VORD MLR MLR
comp=E,92μm,16.0s,MS6.8
VORD MLR MLR
comp=Z,105μm,16.0s,MS6.8
SPITS Spitsbergen Ar 39.61 341 P **P** **01 43 01.9 -0.7**
comp=Z,21nm,0.5s,mb5.1,baz=91,slow=7.8,SNR=26
LATR Latur 39.66 224 *ex* **P** **01 42 55.8 -7.8**
HYB Hyderabad 39.73 220 *i*P **P** **01 43 04.0 -0.1**
comp=Z,240nm,1.0s,mb5.9
HYB *e**PP PP 01 44 44.0 +8.6
HYB *e* 01 49 08.0
HYB *e*S **S** **01 49 08.0 +0.2**
HYB LR LR 02 00 12.0
comp=Z,76nm,16.0s
BJO Bjornoya 39.81 335 *e*P **P** **01 43 04.2 0.0**
BJO *e*ScP ScP 01 48 55.3 -3.4
BJO *e*SS SS 01 52 07.0 +3.6
BJO AMS AMS 02 04 56.9
comp=Z,43μm,13.4s,MS6.5
TGY Tagaytay City 39.82 154 P **P** **01 43 04.0 -0.9**
comp=Z,180nm,0.5s,mb6.1,baz=311,slow=9.9,SNR=5.7
TGY LR LR 02 00 40.3
comp=Z,55nm,19.8s,baz=358,slow=38
LUBP Lubang 39.99 155 *e*P **P** **01 43 05.7 -0.6**
KTK1 Kautokeino 40.08 326 *e*P **P** **01 43 07.5 +1.0**
KTK1 *e*S **S** **01 49 12.5 +0.4**
KTK1 AMS AMS 02 01 20.4
comp=Z,67μm,12.4s,MS6.7
GOF Gofitskoye 40.08 285 *e*P **P** **01 43 00.0 -6.8**
GOF pmax pmax
comp=Z,240nm,1.5s,mb5.7
KBS Kingsbay 40.28 343 *e*P **P** **01 43 06.7 -1.5**
KBS AMB AMB 01 43 19.3
comp=Z,77nm,1.0s,mb5.4
KBS *e*S **S** **01 49 16.6 +1.5**
KBS AMS AMS 02 02 47.1
comp=Z,36μm,18.4s,MS6.3
KBS Kingsbay 40.28 343 *e*P **P** **01 43 07.3 -0.8**
comp=Z,64nm,0.9s,mb5.3
KBS LR LR
comp=Z,25μm,20.0s,MS6.1
KBS Kingsbay 40.28 343*ce*P **P** **01 43 07.1 -1.1**
KBS pmax pmax
comp=Z,123nm,2.5s,mb5.2
PUL Pulkovo 40.31 311 *e*P **P** **01 43 08.7 +0.1**
PUL pmax pmax
comp=Z,36nm,0.3s,mb5.6
PUL MLR MLR
comp=Z,67μm,13.0s,MS6.7
DGRG David-gareji 40.65 279 P **P** **01 43 12.2 +0.6**
DGRG S **S** **01 49 30.8 +9.5**
POO Poona 40.76 227 *e*PKP **P** **01 43 12.2 -0.6**
POO AMb AMB 01 43 26.8
comp=Z,180nm,1.1s,mb5.6
ZEI Tsey 40.81 282 *e*P **P** **01 43 10.5 -2.4**
ZEI *e*S **S** **01 49 26.5 +2.9**
ZEI pmax pmax
comp=Z,52nm,0.6s,mb5.3
ZEI MLR MLR
comp=Z,102μm,17.0s,MS6.8
ZEI MLR MLR
comp=E,10μm,11.0s
ZEI MLR MLR
comp=N,35μm,14.0s
MTA Mtatsminda 40.87 280 P **P** **01 43 13.5 +0.1**
MTA S **S** **01 49 30.2 +5.7**
TBLG Delisi 40.88 280 *i*P **P** **01 43 13.9 +0.4**
TBLG *i*S **S** **01 49 28.0 +3.3**
TBLG Delisi 40.88 280 P **P** **01 43 13.9 +0.4**
TBLG S **S** **01 49 28.0 +3.3**
KIV Kislovodsk 40.88 284 *e*P **P** **01 43 13.8 +0.3**
comp=N,239nm,1.1s,mb5.7
KIV LR LR
comp=Z,15μm,19.0s,MS5.9
KIV Kislovodsk 40.88 284*d i*P **P** **01 43 13.8 +0.3**
KIV *e* 01 44 47.9
KIV *i*S **S** **01 49 31.6 +6.9**
KIV *i*SS SS 01 52 24.2 -1.5
KIV pmax pmax
comp=Z,212nm,1.6s,mb5.5
KIV MLR MLR
comp=Z,18μm,16.0s,MS6.0
KIV Kislovodsk 40.88 284 P **P** **01 43 14.0 +0.5**
comp=Z,995nm,1.0s,mb6.4,SNR=30
KIV Kislovodsk 40.88 284 P **P** **01 43 14.2 +0.7**
SNR=54
GOR Gori 41.12 281 P **P** **01 43 17.5 +2.0**
KAF Kangasniemi 41.23 316 *e*P **P** **01 43 14.9 -1.2**
KAF Kangasniemi 41.23 316 *ep* **P** **01 43 14.9 -1.2**
comp=Z,3.8nm,0.4s,mb4.4
TRO Tromso 41.33 328 *e*P **P** **01 43 18.1 +1.2**
TRO *e*S **S** **01 49 31.4 +0.7**
TRO *e*SS SS 01 52 33.8 +0.1
TRO AMS AMS 02 02 48.6
comp=Z,26μm,14.9s,MS6.2
TRO Tromso 41.33 328 P **P** **01 43 18.8 +1.9**
SMY Shemya 41.34 60 *e*P **P** **01 43 16.5 -0.6**
comp=Z,189nm,1.4s,mb5.5
SMY Shemya 41.34 60 *e*P **P** **01 43 16.5 -0.6**
SMY pmax pmax
comp=Z,189nm,1.4s,mb5.5
FINES FINESS Array B 41.59 315 P **P** **01 43 18.2 -0.9**
comp=Z,34nm,0.7s,mb5.1,baz=73,slow=7.2,SNR=98
FINES LR LR 02 02 13.0
comp=Z,39μm,21.2s,MS6.2,baz=74,slow=38
KAD Karad 41.68 226 *e*PKP **P** **01 43 20.1 -0.2**
KAD AMb AMB 01 43 25.1
comp=Z,140nm,1.0s,mb5.5
GNI Garni 41.80 278⇓ *i*P **P** **01 43 22.5 +1.4**
comp=Z,245nm,1.1s,mb5.8
GNI LR LR
comp=Z,28μm,19.0s,MS6.2
GNI Garni 41.80 278 P **P** **01 43 22.1 +1.0**
comp=Z,75nm,1.2s,mb5.2,baz=149,slow=2.4,SNR=38
GNI LR LR 02 02 40.0
comp=Z,42μm,18.3s,MS6.4,baz=224,slow=39
GNI Garni 41.80 278*d i*P **P** **01 43 22.4 +1.3**
GNI MLR MLR
comp=Z,48μm,20.0s
GNI Garni 41.80 278 P **P** **01 43 23.0 +1.9**
SNR=43
DIGO Kars 42.49 279 *i*P **P** **01 43 26.9 +0.3**
DYDN Diyadin 42.81 278 *i*P **P** **01 43 30.5 +1.2**
SOC Sochi 42.88 286 *i*P **P** **01 43 28.5 -1.3**
SOC Sochi 42.88 286*d i*P **P** **01 43 29.1 -0.7**
SOC *e**PP pP 01 43 34.9 +2.0
SOC *e* 01 45 19.5
SOC *e*PPP 01 45 43.4
SOC *e*S **S** **01 49 55.3 +1.1**
SOC *e**SS sS 01 50 02.1 +2.8
SOC *e*SSS 01 53 30.9
SOC pmax pmax
comp=Z,111nm,1.4s,mb5.4
SOC MLR MLR
comp=Z,39μm,14.0s,MS6.5
DBOC Borcka 42.98 282 *i*P **P** **01 43 30.0 -0.7**
GAMB Gambell 43.20 40⇓ *i*P **P** **01 43 32.2 +0.1**
comp=Z,205nm,1.4s,mb5.7
DDEM Demirkent 43.20 281 *i*P **P** **01 43 32.7 +0.2**
ANN Anapa 43.56 288*d i*P **P** **01 43 35.2 -0.1**
ANN *i**PP pP 01 43 37.9 -0.5
ANN *i* 01 45 28.7
ANN *i*PPP 01 45 50.5
ANN *i*S **S** **01 50 06.2 +2.1**
ANN pmax pmax
comp=N,55nm,1.3s
ANN pmax pmax
comp=E,74nm,1.3s
ANN pmax pmax
comp=Z,122nm,1.3s,mb5.5
ANN pmax pmax
comp=Z,1μm,8.5s
ANN smax
comp=N,5μm,12.3s
ANN smax
comp=E,6μm,12.3s
ANN MLR MLR
comp=N,19μm,17.0s,MS6.3
ANN MLR MLR
comp=E,30μm,17.0s,MS6.3
ANN MLR MLR
comp=Z,31μm,17.0s,MS6.3
TVAN Van 43.61 277 *i*P **P** **01 43 34.9 -0.9**
HOMI Horasan 43.61 280 *i*P **P** **01 43 36.8 +1.1**
LOF Lofoten 43.71 327 *e*P **P** **01 43 37.6 +1.4**
MICGM Minsk 43.81 305 *e*P **P** **01 43 36.0 -1.2**
MNK Minsk 43.83 305*de*P **P** **01 43 36.0 -1.4**
MNK *e* 01 45 28.0
MNK *e*S **S** **01 50 06.0 -1.8**
MNK pmax pmax
comp=Z,5μm,10.0s
MNK pmax pmax
comp=Z,450nm,1.0s,mb6.2
MNK pmax pmax
comp=E,460nm,1.5s
MNK pmax pmax
comp=N,290nm,1.5s
MNK smax
comp=E,15μm,14.0s
MNK MLR MLR
comp=Z,208μm,16.0s,MS7.1
MNK MLR MLR
comp=E,166μm,14.0s,MS7.1
MNK MLR MLR
comp=N,64μm,14.0s,MS7.1
TNA Tin City 43.89 37⇓ *i*P **P** **01 43 38.4 +0.7**
comp=N,150nm,0.9s,mb5.7
IDID Didziasalis 43.99 307 *e*P **P** **01 43 38.5 -0.1**
IDID AMB AMB 01 43 42.1
comp=Z,32nm,1.4s,mb4.9
IDID *e* 01 44 09.0
HAKT HAKKARI 44.02 276 *i*P **P** **01 43 37.6 -1.5**
IZAR Zarasai 44.02 307 *e*P **P** **01 43 38.9 0.0**
IZAR AMB AMB 01 43 42.4
comp=Z,31nm,1.6s,mb4.8
IZAR *e* 01 44 09.1
IZAR AMB AMB 01 44 10.6
comp=Z,35nm,0.9s,mb5.1
ERZM Erzurum 44.02 280 *i*P **P** **01 43 37.9 -1.2**
ISAL Salakas 44.17 307 *e*P **P** **01 43 40.0 0.0**
ISAL AMB AMB 01 43 43.7
comp=Z,37nm,1.7s,mb4.8
ISAL *e* 01 44 10.5
ISAL AMB AMB 01 44 13.1
comp=Z,48nm,1.1s,mb5.2
NACGM Naroch 44.17 306 *e*P **P** **01 43 37.0 -3.1**
IIGN Ignalina 44.23 307 *e*P **P** **01 43 40.5 0.0**
IIGN AMB AMB 01 43 44.3
comp=Z,39nm,1.7s,mb4.8
IIGN *e* 01 44 10.9
IIGN AMB AMB 01 44 13.5
comp=Z,46nm,1.2s,mb5.1
MOR8 Moi Rana 44.27 324 *e*P **P** **01 43 37.6 -3.1**
MACK Trabzon 44.38 282 *i*P **P** **01 43 41.0 -0.9**
KOPT Kop Dagi 44.49 281 *i*P **P** **01 43 44.5 +1.7**
KONS Konsvik 44.59 325 *e*P **P** **01 43 44.2 +0.9**
STOK Stokkvaagen 44.70 325 *e*S **S** **01 50 24.1 +3.8**
BNGL BINGOL 44.74 279 *i*P **P** **01 43 45.1 +0.3**
AKASG Malin Array Be 45.03 300 P **P** **01 43 46.1 -0.9**
comp=Z,24nm,0.7s,mb5.2,baz=52,slow=8.3,SNR=33
AKASG LR LR 02 03 15.0
comp=Z,39μm,20.8s,MS6.3,baz=55,slow=37
AKASG Malin Array Be 45.03 300*ce*P **P** **01 43 45.0 -2.0**
AKASG pmax pmax
comp=Z,24nm,0.7s
AKBB Malin Array Si 45.03 300 *e*P **P** **01 43 45.9 -1.1**
KIEV Kiev 45.04 300⇓ *e*P **P** **01 43 45.7 -1.4**
comp=Z,77nm,0.9s,mb5.5
KIEV LR LR
comp=Z,48μm,22.0s,MS6.4
KIEV Kiev 45.04 300⇓ *e*P **P** **01 43 45.7 -1.4**
KIEV pmax pmax
comp=Z,77nm,0.9s,mb5.5
KIEV MLR MLR
comp=Z,48μm,22.0s,MS6.4
KELT Kelkit 45.17 282 *i*P **P** **01 43 47.8 -0.4**
WBK Wadi Bani Khal 45.19 248 P **P** **01 43 51.6 +3.1**
SNR=18
ASHO Ashiyiah 45.30 252 P **P** **01 43 49.6 +0.2**
SNR=32
NAZ Nazwa, Dubai 45.30 253 P **P** **01 43 50.6 +1.1**
SNR=14
BEST Besiri 45.32 278 *i*P **P** **01 43 51.4 +1.9**
SMDO Samad 45.37 249 P **P** **01 43 52.2 +2.2**
SNR=40
HOQ Hoqain 45.40 250 P **P** **01 43 52.0 +1.7**
SNR=21
SIM Simferopol' 45.42 290 *e*P **P** **01 43 49.9 -0.3**
SIM Simferopol' 45.42 290*d i*P **P** **01 43 49.8 -0.4**
SIM *e* 01 45 23.0
SIM *e*S **S** **01 50 33.4 +2.2**
SIM *e*SS SS 01 53 48.0 -6.5
SIM pmax pmax
comp=Z,255nm,0.8s,mb6.1
SIM MLR MLR
comp=Z,16μm,15.7s,MS6.1
ASUD Al Ashush, Dub 45.77 253 P **P** **01 43 54.8 +1.6**
SNR=14
KDM Kudat 45.82 162 P **P** **01 43 53.9 +0.3**
JMDO Jabal Madar 45.87 248 P **P** **01 43 59.7 +5.7**
SNR=16
NSS Namsos 45.96 323 *e*P **P** **01 43 53.3 -0.9**
NSS AMB AMB 01 44 02.7
comp=Z,84nm,1.6s,mb5.4
NSS *e*S **S** **01 50 39.6 +1.1**
NSS *e*SS SS 01 54 03.8 +1.2
NSS AMS AMS 02 04 35.3
comp=Z,42μm,14.9s,MS6.5
MARD Mardin 45.99 278 *i*P **P** **01 43 53.9 -0.9**
DIYA Diyarbakir 46.01 279 *i*P **P** **01 43 56.1 +1.2**
ARQ Araqi 46.05 251 P **P** **01 43 57.5 +2.1**
SNR=36
BSY Bisya 46.11 249 P **P** **01 43 58.7 +2.9**
SNR=16
KEMA Kemaliye 46.17 281 *i*P **P** **01 43 56.7 +0.5**
KTGM Kuala Trenggan 46.18 181 P **P** **01 43 58.2 +1.7**
KULM Kulim 46.30 185⇓ *i*P **P** **01 43 57.2 -0.2**
comp=Z,70nm,1.2s,mb5.5
KULM LR LR
comp=Z,45μm,21.0s,MS6.4
KULM Kulim 46.30 185 P **P** **01 43 58.1 +0.7**
ELZG Elazig 46.35 280 *i*P **P** **01 43 58.7 +1.1**
ERBA Erbaa 46.36 284 *i*P **P** **01 43 57.3 -0.4**
BHD Baghdad 46.38 271 *i*x **P** **01 43 55.3 -2.6**
BHD *i*x x 01 45 04.0
BHD *i*x x 01 45 50.8
BHD *i*x x 01 46 33.0
BHD *i*x x 01 50 44.0
BHD *i*x x 01 54 15.5
SUW Suwalki 46.43 306 *e*P **P** **01 43 58.7 +0.7**

SUW ePP PP 01 45 58.5 +12
SUW eS **S** **01 50 45.3 -0.1**
SUW LMZ 02 05 03.4
comp=Z,138μm,17.0s
SUW Suwalki 46.43 306 eP **P** **01 43 56.8 -1.2**
comp=Z,80nm,0.7s,mb5.8
KKM Kota Kinabalu 46.55 163⇓iP **P** **01 43 58.8 -0.6**
comp=Z,158nm,1.6s,mb5.7
KKM LR LR
comp=Z,12μm,21.0s,MS5.8
KKM Kota Kinabalu 46.55 163 P **P** **01 43 59.4 0.0**
ADK Adak 46.65 57 PFAKE 01 44 10.0 +10
ADK LR LR
comp=Z,11μm,20.0s,MS5.8
MALT Malatya 46.80 280⇓iP **P** **01 44 02.2 +1.0**
comp=Z,83nm,0.8s,mb5.7
MALT LR LR
comp=Z,25μm,20.0s,MS6.2
MALT Malatya 46.80 280⇓iP **P** **01 44 02.2 +1.0**
MALT pmax pmax
comp=Z,83nm,0.8s,mb5.7
MALT MLR MLR
comp=Z,25μm,20.0s,MS6.2
MALT Malatya 46.80 280 P **P** **01 44 02.9 +1.7**
comp=Z,2μmcomp=Z,128nm,1.1s,mb5.8
DAG Danmarks Havn 46.88 345α iP **P** **01 44 00.7 -0.6**
DAG pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
DAG MLR MLR
comp=Z,52μm,20.0s,MS6.5
DAG MLR MLR
comp=N,24μm,19.0s,MS6.3
DAG MLR MLR
comp=E,19μm,21.0s,MS6.3
DAG Danmarks Havn 46.88 345α iP **P** **01 44 00.7 -0.6**
comp=E,10nm,0.7s,mb4.9
DAG
comp=Z,52μm,20.0s
MIB Mutribah 46.90 265 eP **P** **01 44 01.7 -0.3**
BOYT Boyabat 47.03 286 iP **P** **01 44 02.6 -0.2**
IPM Ipoh 47.09 184 P **P** **01 44 04.5 +0.9**
AKCD Akcadag 47.12 281 iP **P** **01 44 02.5 -1.1**
SDKM Sandakan 47.13 162 P **P** **01 44 03.6 -0.3**
QRN Al-Qurain 47.29 263 eP **P** **01 44 05.2 +0.1**
KIS Kishinev 47.29 296⇓iP **P** **01 44 03.0 -1.8**
comp=Z,400nm,1.6s,mb6.1
KIS iS **S** **01 51 06.0 +8.1**
KIS iSS SS 01 54 24.0 -0.8
KIS iLQ 02 01 20.0
comp=Z,160μm,16.0s
KIS LRM 02 04 52.0
KIS Kishinev 47.29 296⇓P **P** **01 44 05.2 +0.4**
KIS Kishinev 47.29 296⇓iP **P** **01 44 05.2 +0.4**
NAY Al-Naaiem 47.35 264 eP **P** **01 44 04.9 -0.6**
RDF Al-Radifah 47.38 264 eP **P** **01 44 05.8 0.0**
ATAB Bozova 47.42 280 iP **P** **01 44 05.1 -0.9**
HFA0 Hagfors New Ar 47.56 317 P **P** **01 44 05.0 -1.8**
HFS Hagfors 47.56 317 P **P** **01 44 05.1 -1.7**
comp=Z,18nm,0.7s,mb5.2,baz=69,slow=8.1,SNR=54
HFS LR LR 02 04 21.7
comp=Z,22μm,18.6s,MS6.2,baz=60,slow=36
DAV Davao City (W) 47.84 151 P **P** **01 44 08.7 -0.7**
DAV LR LR
comp=Z,7μm,21.0s,MS5.6
DAV Davao City (W) 47.84 151 P **P** **01 44 08.7 -0.7**
comp=Z,231nm,0.4s,mb6.5,baz=332,slow=1.8,SNR=4.8
DAV Davao City (W) 47.84 151⇓eP **P** **01 44 08.8 -0.6**
DAV Davao City (W) 47.84 151 P **P** **01 44 10.5 +1.1**
SNR=5.7
BALT Daday 47.87 287 iP **P** **01 44 09.1 -0.3**
IAS Iasi 47.88 297⇓P **P** **01 44 10.3 +0.9**
IAS Iasi 47.88 297⇓iP **P** **01 44 10.3 +0.9**
ILGA Ilgaz 47.96 286 iP **P** **01 44 10.8 +0.6**
NOA NORSAR Array B 48.10 319 P **P** **01 44 09.6 -1.3**
NOA LR LR 02 05 32.8
NOA NORSAR Array B 48.10 319 P **P** **01 44 09.6 -1.3**
comp=Z,23nm,0.7s,mb5.3,baz=56,slow=7.7,SNR=79
NOA LR LR 02 05 32.8
comp=Z,15μm,19.9s,MS6.0,baz=55,slow=38
TSI Tuntungan 48.22 187 P **P** **01 44 18.4 +6.1**
PALK Pallekele 48.29 212 P **P** **01 44 14.7 +1.8**
comp=Z,343nm,0.8s,mb6.4,SNR=6.5
PALK Pallekele 48.29 212 eP **P** **01 44 13.5 +0.6**
comp=Z,71nm,1.0s,mb5.7
PALK Pallekele 48.29 212 eP **P** **01 44 13.5 +0.6**
PALK pmax pmax
comp=Z,71nm,1.0s,mb5.7
PALK Pallekele 48.29 212 P **P** **01 44 16.6 +3.7**
comp=Z,1μmcomp=Z,45nm,1.5s,mb5.3
PALK Pallekele 48.29 212 P **P** **01 44 14.4 +1.5**
SNR=9.2
LVV L'vov 48.30 301 eP **P** **01 44 12.4 -0.2**
LVV e 01 46 08.8
LVV eS **S** **01 51 09.4 -2.7**
LVV eSS SS 01 54 38.4 -2.6
LVV eSSS 01 55 51.2
LVV MLR MLR
comp=N,28μm,17.0s,MS6.6
LVV MLR MLR
comp=E,42μm,17.0s,MS6.6
LVV MLR MLR
comp=Z,26μm,17.0s,MS6.3
FRIM Kepong 48.30 183 P **P** **01 44 14.0 +1.1**
TLCR 48.34 294⇓P **P** **01 44 13.1 +0.1**
TLCR 48.34 294⇓iP **P** **01 44 13.1 +0.1**
CDAG Cicekdag 48.45 284 iP **P** **01 44 13.7 -0.3**
WAR Warsaw 48.49 305 eP **P** **01 44 14.0 0.0**
WAR eS **S** **01 51 13.1 -1.7**
WAR LMZ 02 06 07.4
comp=Z,106μm,17.2s
ANDN Andirin 48.54 281 iP **P** **01 44 15.4 +0.7**
TSM Tawau 48.57 162 P **P** **01 44 15.8 +0.7**
KUZU Kuzuini 48.61 280 iP **P** **01 44 15.3 +0.1**
JMIC Jan Mayen 48.67 336 eP **P** **01 44 21.4 +6.2**
JMIC eS **S** **01 51 21.4 +4.5**
JMIC eSS SS 01 54 52.9 +6.6
JMIC AMS AMS 02 08 18.9
comp=Z,20μm,17.3s,MS6.2
MOL Molde 48.69 322 eP **P** **01 44 13.6 -1.8**
MOL eS **S** **01 51 17.6 +0.3**
MOL eSS SS 01 54 51.9 +5.1
MOL AMS AMS 02 06 18.7
comp=Z,43μm,15.9s,MS6.5
AVNT Avonos 48.69 283 iP **P** **01 44 15.4 -0.4**
CFR Carcaliu 48.74 294⇓P **P** **01 44 16.0 0.0**
CFR Carcaliu 48.74 294⇓iP **P** **01 44 16.0 0.0**
TESR 48.78 296⇓P **P** **01 44 16.1 -0.3**
TESR 48.78 296⇓iP **P** **01 44 16.1 -0.3**
BR131 Keskin Array S 48.83 285 eP **P** **01 44 16.8 -0.1**
comp=Z,86nm,1.0s,mb5.7
BR131 LR LR
comp=Z,17μm,20.0s,MS6.0
BRTR Keskin Array B 48.83 285 P **P** **01 44 16.8 -0.1**
comp=Z,62nm,1.2s,mb5.5,baz=70,slow=4.7,SNR=42
BRTR LR LR 02 08 59.6
comp=Z,19μm,18.8s,MS6.1,baz=27,slow=41
BRTR Keskin Array B 48.83 285ceP **P** **01 44 17.0 +0.1**
BRTR pmax pmax
comp=Z,62nm,1.2s
BTM Bintulu 48.87 168 P **P** **01 44 18.5 +1.2**
PSI Prapat 48.88 187 LR LR 02 08 32.3
comp=Z,11μm,18.2s,MS5.9,baz=346,slow=40
OSL Oslo 48.92 318 eP **P** **01 44 15.8 -1.4**
BUR08 Bucovina Ar. S 48.92 298 eP **P** **01 44 17.0 -0.4**
PETR 48.92 295⇑P **P** **01 44 18.7 +1.2**
PETR 48.92 295⇑iP **P** **01 44 18.7 +1.2**
BUR01 Bucovina Ar. S 48.93 298 P **P** **01 44 17.7 +0.2**
BURAR Bucovina Array 48.93 298⇓iP **P** **01 44 17.6 +0.1**
TIRR Tirgusor 49.01 293 eP **P** **01 44 18.1 -0.1**
comp=Z,60nm,0.8s,mb5.7
TIRR Tirgusor 49.01 293⇓P **P** **01 44 18.0 -0.1**
TIRR Tirgusor 49.01 293⇓iP **P** **01 44 18.0 -0.1**
COLD Coldfoot 49.07 30⇓iP **P** **01 44 18.7 +0.3**
comp=Z,96nm,1.2s,mb5.7
KWP Kalwaria Pacla 49.11 302 eP **P** **01 44 19.0 +0.2**
KWP eS **S** **01 51 27.4 +3.8**
KWP eSS SS 01 55 11.7 +18
KWP LMZ 02 06 14.6
comp=Z,89μm,19.5s
KWP Kalwaria Pacla 49.11 302 eP **P** **01 44 18.2 -0.7**
comp=Z,138nm,0.3s,mb6.5
KWP LR LR
comp=Z,82μm,19.0s,MS6.7
KWP Kalwaria Pacla 49.11 302 eP **P** **01 44 19.0 +0.2**
KWP eS **S** **01 51 27.4 +3.8**
KWP MLR MLR
comp=Z,89μm,19.5s,MS6.8
KWP Kalwaria Pacla 49.11 302⇓iP **P** **01 44 19.1 +0.3**
VRI Vrincioaia 49.12 296⇑iP **P** **01 44 19.4 +0.4**
PLOR Plostina 49.18 296⇓P **P** **01 44 20.2 +0.8**
PLOR Plostina 49.18 296⇓iP **P** **01 44 20.2 +0.8**
BBAL Bala 49.26 285 iP **P** **01 44 19.0 -1.1**
GRER 49.27 295⇓P **P** **01 44 21.5 +1.4**
GRER 49.27 295⇓iP **P** **01 44 21.5 +1.3**
COBT Iskenderun 49.28 280 iP **P** **01 44 19.6 -0.8**
CVD Cernavoda 49.31 293⇑iP **P** **01 44 24.8 +4.3**
KGM Kluang 49.47 181 P **P** **01 44 22.9 +1.0**
SBUM Sibu 49.50 169 P **P** **01 44 23.1 +1.0**
AMRR Amara 49.53 294⇑P **P** **01 44 23.5 +1.3**
AMRR Amara 49.53 294⇑iP **P** **01 44 23.5 +1.4**
KONO Kongsberg 49.55 318 eP **P** **01 44 21.6 -0.4**
KONO AMB AMB 01 44 32.8
comp=Z,80nm,2.9s,mb5.2
KONO eS **S** **01 51 27.4 -2.0**
KONO eSS SS 01 55 03.2 +2.5
KONO AMS AMS 02 07 05.3
comp=Z,49μm,15.4s,MS6.6
KONO Kongsberg 49.55 318 eP **P** **01 44 21.2 -0.9**
comp=Z,52nm,1.1s,mb5.5
KONO LR LR
comp=Z,19μm,20.0s,MS6.1
KONO Kongsberg 49.55 318 eP **P** **01 44 21.2 -0.9**
KONO pmax pmax
comp=Z,52nm,1.1s,mb5.5
KONO MLR MLR
comp=Z,19μm,20.0s,MS6.1
PGOR Pogoanele 49.55 294⇓iP **P** **01 44 23.3 +1.0**
YAYL Yayladag 49.68 280 iP **P** **01 44 24.0 +0.6**
GULE Gulek 49.69 282 iP **P** **01 44 24.8 +1.4**
MYKOM Kota Tinggi 49.69 180 P **P** **01 44 24.9 +1.3**
TTA Tatalina 49.69 36 eP **P** **01 44 23.5 +0.4**
MLR Muntele Rosu 49.79 296⇑P **P** **01 44 24.6 +0.6**
MLR Muntele Rosu 49.79 296⇑iP **P** **01 44 24.6 +0.5**
GKP Gorka Klasztor 49.79 308 eP **P** **01 44 24.0 0.0**
GKP eS **S** **01 51 33.6 +0.6**
GKP eSS SS 01 55 14.0 +9.2
GKP LMZ 02 07 23.6
comp=Z,220μm,16.2s
GKP Gorka Klasztor 49.79 308 eP **P** **01 44 24.0 0.0**
GKP eS **S** **01 51 33.6 +0.6**
GKP MLR MLR
comp=Z,220μm,16.2s,MS7.2
DOPR Dopca 49.81 296⇓iP **P** **01 44 25.4 +1.1**
BSD Bornholm Skovb 49.83 311 iP **P** **01 44 24.3 0.0**
BSD pmax pmax
comp=Z,32nm,0.9s,mb5.3
BSD Bornholm Skovb 49.83 311 iP **P** **01 44 24.3 0.0**
comp=Z,32nm,0.9s,mb5.3
BMR Baia Mare 49.84 299⇑P **P** **01 44 25.6 +1.2**
BMR Baia Mare 49.84 299⇑iP **P** **01 44 25.6 +1.2**
UZH Uzhgorod 49.92 301 eP **P** **01 44 21.0 -4.0**
UZH e 01 46 15.0
UZH eS **S** **01 51 27.0 -7.9**
UZH iPS 01 51 39.0
UZH MLR MLR
comp=Z,40μm,16.0s,MS6.5
NIKO Nikolski 50.01 52 eP **P** **01 44 25.8 +0.2**
comp=Z,56nm,1.0s,mb5.5
STHS Stebnicka Huta 50.01 302 eP **P** **01 44 26.8 +1.1**
comp=Z,30nm,1.6s,mb5.1
STHS Stebnicka Huta 50.01 302 eP **P** **01 44 26.8 +1.1**
STHS pmax pmax
comp=Z,30nm,1.6s,mb5.1
STHS Stebnicka Huta 50.01 302 eP **P** **01 44 26.8 +1.1**
TRPA Tarpa 50.08 300⇓iP **P** **01 44 26.4 +0.1**
GUMO Guam 50.08 124 P **P** **01 44 26.9 +0.3**
comp=Z,24nm,0.4s,mb5.5,baz=182,slow=18,SNR=3.6
GUMO LR LR 02 05 54.9
comp=Z,2μm,21.1s,MS5.2,baz=146,slow=36
GUMO Guam 50.08 124 P **P** **01 44 34.5 +7.9**
comp=Z,181nm,1.4s,mb5.9
SULR 50.10 295 P **P** **01 44 28.4 +1.9**
CRVS Cervenica-Dubn 50.20 302 eP **P** **01 44 26.6 -0.6**
comp=Z,73nm,1.7s,mb5.4
CRVS eS **S** **01 51 37.7 -1.1**
CRVS eSS SS 01 55 17.0 +5.4
CRVS LR LR
comp=Z,41μm,19.6s,MS6.4
CRVS Cervenica-Dubn 50.20 302 eP **P** **01 44 26.6 -0.6**
CRVS eS **S** **01 51 37.7 -1.1**
CRVS pmax pmax
comp=Z,73nm,1.7s,mb5.4
CRVS MLR MLR
comp=Z,41μm,19.6s,MS6.4
CRVS Cervenica-Dubn 50.20 302 eP **P** **01 44 26.6 -0.6**
CRVS eS **S** **01 51 37.6 -1.2**
CRVS eSS SS 01 55 17.0 +5.4
FOO Floro 50.21 322 eP **P** **01 44 24.9 -2.2**
FOO eS **S** **01 51 40.7 +2.1**
FOO eSS SS 01 55 13.9 +2.6
FOO AMS AMS 02 07 07.0
comp=Z,57μm,13.8s,MS6.7
KSM Kuching 50.27 172⇓iP **P** **01 44 28.2 +0.2**
comp=Z,138nm,1.1s,mb5.9
KSM LR LR
comp=Z,10μm,21.0s,MS5.8
KSM Kuching 50.27 172 P **P** **01 44 29.0 +1.0**
OJC Ojcow 50.29 304 eP **P** **01 44 24.7 -3.1**
OJC epP pP 01 44 27.5 -3.5
OJC eS **S** **01 51 35.7 -4.3**
OJC eSS SS 01 55 05.4 -7.5
OJC L 02 07 07.4
comp=Z,74nm,18.2s
VOIR 50.32 296⇓P **P** **01 44 28.3 +0.2**
VOIR 50.32 296⇓iP **P** **01 44 28.3 +0.2**
NIE Niedzica 50.50 303 eP **P** **01 44 29.9 +0.5**
UNV Unalaska Valle 50.63 50 eP **P** **01 44 29.2 -1.2**
comp=Z,54nm,0.8s,mb5.5
BORA Eskisehir 50.64 287 iP **P** **01 44 30.7 +0.1**
COP Copenhagen 50.64 313⇓iP **P** **01 44 31.1 +0.7**
COP i 01 46 32.3
COP pmax pmax
comp=Z,28nm,0.9s,mb5.2
COP MLR MLR
comp=Z,24μm,13.0s,MS6.4
COP Copenhagen 50.64 313⇓iP **P** **01 44 31.1 +0.7**
comp=Z,28nm,0.9s,mb5.2
COP i
COP eS **S** **01 51 30.5 -14**
COP e 01 55 31.5
COP
comp=Z,24μm,13.0s
FKH Fakeheh 50.69 278 eP **P** **01 44 32.7 +1.6**
BPAW Bear Paw Mtn. 50.76 33⇓iP **P** **01 44 31.7 +0.5**
comp=Z,20nm,0.3s,mb5.5
DRGR 50.79 299⇑P **P** **01 44 32.3 +0.6**
DRGR 50.79 299⇑iP **P** **01 44 32.3 +0.6**
AKUT Akutan 50.81 49 eP **P** **01 44 30.8 -0.9**
comp=Z,180nm,1.3s,mb5.8
MNSI Mandailing Nat 50.83 186 P **P** **01 44 31.3 -0.9**
comp=Z,5μmcomp=Z,109nm,1.1s,mb5.7
BER Bergen 50.84 321 eP **P** **01 44 31.3 -0.5**
BER eS **S** **01 51 50.1 +2.7**
BER eSS SS 01 55 24.9 +3.6
BER AMS AMS 02 07 44.4
comp=Z,66μm,13.6s,MS6.8
RGN Rugen 50.91 311 eP **P** **01 44 32.3 -0.1**
comp=Z,178nm,1.2s,mb5.9
RGN Rugen 50.91 311 eP **P** **01 44 32.7 +0.2**
comp=Z,110nm,0.8s,mb5.8
HWQ Hawqa 50.94 278 eP **P** **01 44 33.0 +0.1**
KECS Kecovo 50.97 302 eP **P** **01 44 33.3 +0.3**
comp=Z,86nm,1.8s,mb5.4
KECS Kecovo 50.97 302 eP **P** **01 44 33.3 +0.3**
KECS pmax pmax
comp=Z,86nm,1.8s,mb5.4
KECS Kecovo 50.97 302 eP **P** **01 44 33.3 +0.3**
SVW2 Sparrevohn 50.97 38 eP **P** **01 44 33.7 +0.9**
comp=Z,254nm,1.9s,mb5.8
PPLA Purkeypile 51.10 35⇓iP **P** **01 44 34.7 +0.9**
comp=Z,50nm,0.8s,mb5.5
RAC Raciborz 51.20 304 eP **P** **01 44 35.5 +0.8**
RAC e 01 45 48.5
RAC e 01 46 34.3
RAC eS **S** **01 51 53.7 +1.1**
RAC MLR MLR
comp=Z,51μm,18.0s,MS6.6
RAC MLR MLR
comp=E,44μm,14.0s
BKNI Bangkinang 51.21 184 P **P** **01 44 39.9 +4.8**
comp=E,3μmcomp=E,311nm,1.2s,mb6.1
ERMK Ermenek 51.24 282 iP **P** **01 44 33.0 -2.2**
COLA College 51.31 31⇓iP **P** **01 44 35.9 +0.6**
comp=E,116nm,0.8s,mb5.9
COLA LR LR
comp=Z,22μm,19.0s,MS6.2
COLA College 51.31 31⇓iP **P** **01 44 35.9 +0.6**
COLA pmax pmax
comp=Z,116nm,0.8s,mb5.9
COLA MLR MLR
comp=Z,22μm,19.0s,MS6.2
LIKS Likavka 51.35 303 eP **P** **01 44 36.8 +1.0**
LIKS Likavka 51.35 303 eP **P** **01 44 36.8 +1.0**
OKC Ostrava-Krasne 51.37 304 eP **P** **01 44 36.3 +0.3**
OKC eS **S** **01 51 55.9 +0.9**
OKC MLR MLR
comp=Z,71μm,14.0s,MS6.8
OKC Ostrava-Krasne 51.37 304 eP **P** **01 44 36.3 +0.3**
OKC ePP PP 01 46 44.0 +11
OKC eS **S** **01 51 55.9 +0.9**
OKC eSS SS 01 55 41.4 +11
OKC AMS AMS 02 07 50.0
comp=Z,71μm,14.0s
BHL Bhannes 51.37 278 eP **P** **01 44 35.5 -0.7**
TRF Thorofare Moun 51.41 34⇓iP **P** **01 44 36.8 +0.7**
comp=Z,24nm,0.7s,mb5.2
RCY Rachaya 51.55 277 eP **P** **01 44 37.3 -0.2**
GZR Gura Zlata 51.61 297⇑P **P** **01 44 38.5 +0.6**
GZR Gura Zlata 51.61 297⇑iP **P** **01 44 38.5 +0.6**
PSZ Piszkesteto 51.62 301⇓iP **P** **01 44 38.0 +0.1**
comp=Z,242nm,1.6s,mb5.9
PSZ LR LR
comp=Z,48μm,20.0s,MS6.5
PSZ Piszkesteto 51.62 301 P **P** **01 44 38.6 +0.7**
PSZ Piszkesteto 51.62 301⇑iP **P** **01 44 37.8 -0.1**
PSZ Piszkesteto 51.62 301⇓eP **P** **01 44 38.2 +0.3**
MUD Monsted U'grnd 51.63 315 iP **P** **01 44 37.8 -0.1**
MUD i 01 46 42.6
MUD pmax pmax
comp=Z,48nm,0.8s,mb5.5
MUD MLR MLR
comp=Z,120μm,14.0s,MS7.1
MUD Monsted U'grnd 51.63 315 iP **P** **01 44 37.8 -0.1**
comp=Z,48nm,0.8s,mb5.5
MUD i 01 46 42.6
MUD e 01 55 49.2
MUD
comp=Z,115μm,14.0s
PHNC Paralimni 51.63 280 P **P** **01 44 39.4 +1.2**
comp=Z,1.7nm,1.3s
ILAR Eielson Array 51.68 31 P **P** **01 44 38.3 +0.2**
ILAR LR LR 02 09 32.0
ILAR P'P' 02 15 10.0
ILAR ⇑e 02 15 17.6
ILAR Eielson Array 51.68 31 P **P** **01 44 38.3 +0.2**
comp=Z,88nm,0.9s,mb5.7,baz=305,slow=5.1,SNR=611
ILAR LR LR 02 09 32.0
comp=Z,28μm,19.1s,MS6.3,baz=326,slow=40
ILAR PKPPKP 02 15 10.0
comp=Z,0.5nm,1.0s,baz=221,slow=1.7,SNR=4.3
ILAR PKP2bc 02 15 17.6
comp=Z,0.7nm,0.9s,baz=112,slow=1.3,SNR=6.7
MCK McKinley 51.69 33⇓iP **P** **01 44 38.1 -0.1**
comp=Z,64nm,0.4s,mb5.9
MCK McKinley 51.69 33⇓iP **P** **01 44 38.1 -0.1**
MCK pmax pmax
comp=Z,64nm,0.4s,mb5.9
KSP Ksiaz 51.70 306 eP **P** **01 44 38.5 +0.1**
KSP e 01 44 49.2
KSP eS **S** **01 52 00.2 +0.7**
KSP eSS SS 01 55 43.3 +8.0
KSP LMZ 02 08 40.5
comp=Z,173μm,17.8s
MORC Moravsky Berou 51.72 304⇓iP **P** **01 44 38.6 0.0**
comp=Z,77nm,1.1s,mb5.5
MORC Moravsky Berou 51.72 304⇓iP **P** **01 44 38.6 0.0**
MORC pmax pmax
comp=Z,77nm,1.1s,mb5.5
MORC Moravsky Berou 51.72 304⇓iP **P** **01 44 38.6 0.0**
ASF Jabal al Asfar 51.77 275 P **P** **01 44 39.5 +0.3**
comp=Z,20nm,1.1s,mb5.0,baz=45,slow=1.4,SNR=42
ASF LR LR 02 11 19.5
comp=Z,10μm,18.1s,MS5.9,baz=61,slow=42
STKI Sintang 51.78 171 P **P** **01 44 40.7 +1.4**
comp=Z,76nm,1.1s,mb5.5
VYHS Vyhne 51.83 303 eP **P** **01 44 39.7 +0.3**
comp=Z,156nm,1.7s,mb5.7
VYHS eS **S** **01 52 04.3 +2.9**
VYHS eScS ScS 01 54 34.5 +5.2
VYHS eSS SS 01 55 46.8 +9.4
VYHS LR LR
comp=Z,71μm,18.0s,MS6.7
VYHS Vyhne 51.83 303 eP **P** **01 44 39.7 +0.3**
VYHS eS **S** **01 52 04.3 +2.9**
VYHS pmax pmax
comp=Z,156nm,1.7s,mb5.7
VYHS MLR MLR
comp=Z,71μm,18.0s,MS6.7
VYHS Vyhne 51.83 303 eP **P** **01 44 39.7 +0.3**
VYHS eS **S** **01 52 04.3 +2.9**
VYHS eSCS ScS 01 54 34.5 +5.2
VYHS eSS SS 01 55 46.8 +9.4
KSDI Kefar Szold 51.84 277 Pn **P** **01 44 39.7 -0.1**
RUE Ruedersdorf 51.94 309 eP **P** **01 44 40.0 -0.2**
comp=Z,167nm,1.4s,mb5.8
RUE Ruedersdorf 51.94 309 eP **P** **01 44 40.3 +0.1**
comp=Z,193nm,1.3s,mb5.9
DPC Dobruska-Polom 51.99 306 eP **P** **01 44 41.2 +0.6**
DPC e 01 46 44.6
DPC eS **S** **01 52 06.6 +3.1**
DPC MLR MLR
comp=Z,100μm,15.3s,MS7.0
DPC Dobruska-Polom 51.99 306 eP **P** **01 44 41.2 +0.6**
DPC ePP PP 01 46 44.6 +6.3
DPC eS **S** **01 52 06.6 +3.1**
DPC eSS SS 01 55 46.9 +7.0
DPC AMS AMS 02 08 20.0
comp=Z,100μm,15.3s
KOLL Kolacno 52.01 303 eP **P** **01 44 41.5 +0.8**
KOLL Kolacno 52.01 303 eP **P** **01 44 41.5 +0.8**
PPI Padang Panjang 52.02 185 P **P** **01 44 43.2 +2.0**
comp=Z,8μmcomp=Z,30nm,1.2s,mb5.1
MAMC Mamari 52.02 281 P **P** **01 44 40.8 -0.3**
UPC Upice 52.05 306 eP **P** **01 44 41.2 +0.2**
UPC Upice 52.05 306 eP **P** **01 44 41.2 +0.2**
CSS Prodhromos 52.09 281 P **P** **01 44 41.5 -0.1**
comp=Z,2.5nm,1.1s
BZS Buzias 52.12 298⇑P **P** **01 44 41.7 +0.1**
BZS Buzias 52.12 298⇑iP **P** **01 44 41.7 +0.1**
MMAI Mount Meron Ar 52.12 277 P **P** **01 44 41.8 0.0**
comp=Z,18nm,0.7s,mb5.1,baz=46,slow=7.2,SNR=11
MMAI LR LR 02 09 33.3
comp=Z,20μm,18.5s,MS6.2,baz=20,slow=39
SCO Scoresbysund 52.16 340 eP **P** **01 44 37.6 -4.0**
SCO MLR MLR
comp=Z,9μm,16.0s,MS5.9
SCO Scoresbysund 52.16 340 iP **P** **01 44 37.6 -4.0**
SCO
comp=Z,9μm,16.0s
DJES Djerdap 52.21 297 P **P** **01 44 42.4 +0.1**
TIM Timisoara 52.26 298 P **P** **01 44 42.2 +1.6**
TOLI Toli-Toli 52.27 159 P **P** **01 44 45.7 +2.7**
comp=Z,7μmcomp=Z,407nm,0.5s,mb6.6
BUD Budapest 52.36 301⇓eP **P** **01 44 43.5 +0.1**
BALY Balya 52.41 289 iP **P** **01 44 43.1 -0.8**
ALFC Alevga 52.41 281 P **P** **01 44 43.0 -0.9**
comp=Z,1.8nm,0.8s
SDSI Sungai Dareh 52.45 183 P **P** **01 44 50.9 +6.6**
comp=Z,852nmcomp=Z,21nm,1.2s,mb5.0
RSO Redoubt South 52.45 38 eP **P** **01 44 44.7 +0.9**
VRAC Vranov 52.49 304⇓P **P** **01 44 44.9 +0.6**
VRAC Vranov 52.49 304⇓P **P** **01 44 44.9 +0.6**
VRAC Vranov 52.49 304⇓iP **P** **01 44 44.9 +0.6**
SDPT Sand Point 52.50 46 eP **P** **01 44 43.5 -0.8**
comp=Z,64nm,1.0s,mb5.5
MMLI Mount Malkishu 52.50 277 Pn **P** **01 44 44.3 -0.3**
HMDT Nahal Hemdat 52.56 276 Pn **P** **01 44 44.6 -0.5**
ALN Alexandroupoli 52.59 291 eP **P** **01 44 44.3 -0.9**
PLD Plovdiv 52.59 293 P **P** **01 44 46.1 +0.9**
PLD Plovdiv 52.59 293 P **P** **01 44 46.1 +0.9**
OFRI 'Ofer 52.65 277 Pn **P** **01 44 45.1 -0.6**
BSEG Bad Segeberg 52.68 312 eP **P** **01 44 45.8 +0.1**

comp=Z,250nm,1.8s,mb5.8
BSEG Bad Segeberg 52.68 312 *e*P **P** **01 44 45.8 +0.1**
BSEG pmax pmax
comp=Z,250nm,1.8s,mb5.8
MODS Modra-Piesok 52.72 303 *e*P **P** **01 44 49.1 +3.1**
comp=Z,453nm,1.5s,mb6.2
MODS Modra-Piesok 52.72 303 *e*P **P** **01 44 49.1 +3.1**
MODS pmax pmax
comp=Z,453nm,1.5s,mb6.2
MODS Modra-Piesok 52.72 303 *e*P **P** **01 44 49.1 +3.1**
PPCY Paphos 52.75 281 P **P** **01 44 45.8 -0.6**
PVCC Panska Ves 52.76 307 *e*P **P** **01 44 46.8 +0.5**
PVCC *e* 01 46 53.3
PVCC *e*S **S** **01 52 14.9 +0.8**
PVCC MLR MLR
comp=Z,110µm,15.0s,MS7.0
PVCC Panska Ves 52.76 307 *e*P **P** **01 44 46.8 +0.5**
PVCC *e*PP PP 01 46 53.3 +8.1
PVCC *e*S **S** **01 52 14.9 +0.8**
PVCC *e*SS SS 01 56 05.3 +13
PVCC AMS AMS 02 09 10.0
comp=Z,110µm,15.0s
BRG Berggiesshubel 52.86 307 *e*P **P** **01 44 46.7 -0.3**
comp=Z,216nm,1.7s,mb5.8
BRG *e*S **S** **01 52 17.5 +2.1**
BRG Berggiesshubel 52.86 307 *i* P **P** **01 44 46.9 -0.1**
comp=Z,240nm,1.8s,mb5.8
BRG PP PP 01 46 51.0 +4.9
BRG S **S** **01 52 18.0 +2.6**
BRG SS SS 01 56 02.0 +8.5
BRG
comp=N,146µm,15.9s
BRG
comp=E,84µm,13.8s
BRG
comp=Z,78µm,14.8s
BRG Berggiesshubel 52.86 307 *i* P **P** **01 44 46.9 -0.1**
BRG 01 46 51.0
BRG S **S** **01 52 18.0 +2.6**
BRG pmax pmax
comp=Z,144nm,1.8s,mb5.6
BRG MLR MLR
comp=N,88µm,15.9s,MS7.0
BRG MLR MLR
comp=E,51µm,13.8s,MS7.0
BRG MLR MLR
comp=Z,47µm,14.8s,MS6.7
SLTI Sal'it 52.87 277 Pn **P** **01 44 46.9 -0.5**
ZST Bratislava 52.92 303 *e*P **P** **01 44 48.0 +0.5**
comp=Z,121nm,1.6s,mb5.6
ZST *e*S **S** **01 52 23.3 +6.9**
ZST *e*SS SS 01 56 10.5 +16
ZST LR LR
comp=Z,21µm,19.4s,MS6.2
ZST Bratislava 52.92 303 *e*P **P** **01 44 48.0 +0.5**
ZST *e*S **S** **01 52 23.3 +6.9**
ZST pmax pmax
comp=Z,121nm,1.6s,mb5.6
ZST MLR MLR
comp=Z,21µm,19.4s,MS6.2
ZST Bratislava 52.92 303 *e*P **P** **01 44 48.0 +0.5**
ZST *e*S **S** **01 52 23.3 +6.9**
ZST *e*SS SS 01 56 10.5 +16
SISI Saibi 52.96 186 P **P** **01 44 51.8 +3.7**
comp=Z,3µmcomp=Z,201nm,1.3s,mb5.9
INK Inuvik 52.96 23 ⇓*i*P **P** **01 44 47.5 -0.1**
comp=Z,228nm,1.4s,mb5.9
INK Inuvik 52.96 23 P **P** **01 44 47.5 -0.1**
comp=Z,40nm,0.9s,mb5.3,baz=323,slow=8.4,SNR=26
INK Inuvik 52.96 23 ⇓*i*P **P** **01 44 47.5 -0.1**
INK pmax pmax
comp=Z,229nm,1.4s
PMR Palmer 53.04 35 *e*P **P** **01 44 48.3 +0.1**
comp=Z,278nm,1.6s,mb5.9
PMR Palmer 53.04 35 *e*P **P** **01 44 48.3 +0.1**
PMR pmax pmax
comp=Z,278nm,1.6s,mb5.9
CLL Collm 53.05 308 *e*P **P** **01 44 47.9 -0.5**
comp=Z,78nm,1.3s,mb5.5
CLL *e*S **S** **01 52 20.7 +2.7**
CLL Collm 53.05 308 ⇓*i*P **P** **01 44 48.1 -0.3**
comp=Z,41nm,0.7s,mb5.5
CLL *i* 01 45 01.7
CLL *e*S **S** **01 52 19.0 +1.0**
CLL LR LR
comp=Z,50µm,22.0s,MS6.5
CLL Collm 53.05 308 ⇓*i*P **P** **01 44 48.1 -0.3**
CLL *e*S **S** **01 52 19.0 +1.0**
CLL pmax pmax
comp=Z,41nm,0.7s,mb5.5
CLL MLR MLR
comp=Z,50µm,22.0s,MS6.5
CLL Collm 53.05 308 ⇓*i*P **P** **01 44 48.1 -0.3**
comp=Z,41nm,0.7s,mb5.5
CLL *e*PP PP 01 46 54.0 +6.2
CLL *e* 01 48 31.0
CLL *e*S **S** **01 52 19.0 +1.0**
CLL *e*SS SS 01 56 06.0 +9.5
CLL *e* 01 58 31.0
CLL LmH 02 05 00.0
comp=N,201µm,18.7s
CLL LmH 02 05 00.0
comp=E,136µm,19.4s
CLL LV 02 09 18.0
comp=Z,50µm,22.0s
TREC Trest 53.07 305 *e*P **P** **01 44 49.2 +0.6**
TREC *e* 01 46 53.3
TREC *e*S **S** **01 52 20.0 +1.7**
TREC MLR MLR
comp=Z,77µm,16.8s,MS6.8
TREC Trest 53.07 305 *e*P **P** **01 44 49.2 +0.6**
TREC *e*PP PP 01 46 53.3 +5.3
TREC *e*S **S** **01 52 20.0 +1.7**
TREC *e*SS SS 01 56 09.0 +12
TREC AMS AMS 02 09 00.0
comp=Z,77µm,16.8s
PRU Pruhonice 53.11 306 *e*P **P** **01 44 49.9 +1.0**
PRU *e* 01 46 58.7
PRU *e*S **S** **01 52 22.1 +3.2**
PRU MLR MLR
comp=Z,90µm,16.6s,MS6.9
PRU Pruhonice 53.11 306 *e*P **P** **01 44 49.9 +1.0**
PRU *e*PP PP 01 46 58.7 +10
PRU *e*S **S** **01 52 22.1 +3.2**
PRU *e*SS SS 01 56 09.4 +12
PRU AMS AMS 02 09 10.0
comp=Z,90µm,16.6s
PRA Prague 53.11 306 P **P** **01 44 50.0 +1.1**
PRA PP PP 01 46 59.0 +11
PRA S **S** **01 52 22.0 +3.1**
PRA SS SS 01 56 10.0 +12
PRA AMS AMS 02 09 30.0
DSI Dead Sea 53.12 276 Pn **P** **01 44 49.1 -0.1**
VTS Vitosha 53.13 294 P **P** **01 44 48.8 -0.4**
VTS Vitosha 53.13 294 ⇓P **P** **01 44 49.0 -0.2**
VTS Vitosha 53.13 294 *e*P **P** **01 44 49.1 -0.1**
VTS Vitosha 53.13 294 P **P** **01 44 48.8 -0.4**
VTS Vitosha 53.13 294 ⇓*i*P **P** **01 44 49.0 -0.2**
RC01 Rabbit Creek A 53.16 36 ⇓*i*P **P** **01 44 48.9 -0.1**
comp=Z,2µm,1.6s,mb6.8
MRSI Marisa 53.16 158 P **P** **01 44 50.3 +0.7**
comp=Z,3µmcomp=Z,138nm,1.5s,mb5.7
SML Sawmill 53.18 34 ⇓*i*P **P** **01 44 49.5 +0.3**
comp=Z,64nm,0.6s,mb5.7
SML Sawmill 53.18 34 ⇓*i*P **P** **01 44 49.5 +0.3**
SML pmax pmax
comp=Z,64nm,0.6s,mb5.7
SVIS Svilajnac 53.19 297 P **P** **01 44 49.4 -0.1**
RES Resolute Bay 53.30 6 *e*P **P** **01 44 49.6 -0.3**
comp=Z,53nm,1.0s,mb5.4
RES Resolute Bay 53.30 6 P **P** **01 44 49.4 -0.6**
comp=Z,35nm,1.0s,mb5.2,baz=5.5,slow=7.6,SNR=14
RES LR LR 02 09 30.4
comp=Z,8µm,18.4s,MS5.8,baz=335,slow=38
RES Resolute Bay 53.30 6 *e*P **P** **01 44 49.7 -0.3**
RES pmax pmax
comp=Z,53nm,1.0s,mb5.4
MZDA Masada 53.31 276 Pn **P** **01 44 50.5 -0.1**
DOT Dot Lake 53.36 31 ⇓*i*P **P** **01 44 50.1 -0.4**
comp=Z,468nm,1.0s,mb6.4
SUMG Summit 53.36 347 *e*P **P** **01 44 49.8 -0.6**
comp=Z,52nm,1.2s,mb5.3
SUMG Summit 53.36 347 *i* P **P** **01 44 50.1 -0.3**
comp=Z,16nm,0.8s,mb5.0
SUMG *i* 01 46 55.1
SUMG
comp=Z,30µm,19.0s
PKSM Moragy 53.36 300 ⇓*i*P **P** **01 44 50.5 -0.3**
SLKM Skilak Lake 53.37 36 *e*P **P** **01 44 50.2 -0.4**
PAX Paxson 53.37 32 ⇓*i*P **P** **01 44 50.5 -0.1**
comp=Z,135nm,1.0s,mb5.8
PAX Paxson 53.37 32 ⇓*i*P **P** **01 44 50.5 -0.1**
PAX pmax pmax
comp=Z,135nm,1.0s,mb5.8
FRGS Fruska Gora 53.39 299 P **P** **01 44 52.0 +1.0**
KAVA Kavala 53.41 292 P **P** **01 44 50.8 -0.4**
EGAK Eagle 53.47 29 ⇓*i*P **P** **01 44 51.7 +0.4**
comp=Z,120nm,1.1s,mb5.7
EGAK LR LR
comp=Z,21µm,20.0s,MS6.2
LRW Lerwick 53.50 323 *e*P **P** **01 44 51.0 -0.6**
LRW AMB AMB 01 45 00.1
comp=Z,112nm,4.1s
LRW AMS AMS 02 08 34.5
comp=Z,27µm,16.8s,MS6.4
PRK Paraskevi 53.52 289 *e*P **P** **01 44 54.2 +2.1**
SOP Sopron 53.53 303 ⇓*e*P **P** **01 44 52.9 +0.9**
BLCB Balcova 53.63 288 P **P** **01 44 54.0 +1.1**
BLCB Balcova 53.63 288 P **P** **01 44 54.0 +1.1**
HLG Helgoland 53.63 313 *e*P **P** **01 44 52.9 +0.2**
comp=Z,251nm,1.2s,mb6.0
PPBI Pangkal Pinang 53.64 178 P **P** **01 45 00.1 +7.0**
comp=Z,8µmcomp=Z,39nm,1.4s,mb5.1
NRDL Niedersach Rie 53.69 311 *e*P **P** **01 44 52.1 -1.0**
comp=Z,225nm,1.7s,mb5.8
GRUS Gruza 53.70 297 P **P** **01 44 52.9 -0.5**
NEUB Neuenburg 53.71 309 *e*P **P** **01 44 52.9 -0.4**
comp=Z,328nm,1.8s,mb6.0
CONA Conrad Observa 53.74 304 *i* P **P** **01 44 54.4 +0.9**
comp=Z,110nm,1.3s,mb5.6,SNR=60
SRS Serrai 53.86 293 P **P** **01 44 55.6 +1.0**
SRS Serrai 53.86 293 P **P** **01 44 55.6 +1.0**
RTMI Retamim 53.90 276 Pn **P** **01 44 54.3 -0.7**
SEW Seward 53.92 36 ⇓*i*P **P** **01 44 54.4 -0.3**
comp=Z,288nm,1.3s,mb6.0
ZFRI Zfri 53.95 275 Pn **P** **01 44 54.9 -0.4**
MENT Mentasta 53.97 32 *e*P **P** **01 44 54.8 -0.2**
DIVS Divibare 53.97 298 P **P** **01 44 54.4 -0.9**
CLZ Clausthal 53.98 310 *e*P **P** **01 44 55.4 +0.2**
comp=Z,91nm,1.3s,mb5.5
CLZ *e*S **S** **01 52 33.7 +3.1**
CLZ Clausthal 53.98 310 *e*P **P** **01 44 55.4 +0.2**
CLZ *e*S **S** **01 52 33.7 +3.1**
CLZ pmax pmax
comp=Z,91nm,1.3s,mb5.5
NKC Novy Kostel 54.00 307 *e*P **P** **01 44 56.0 +0.6**
NKC *e* 01 47 02.7
NKC *e*S **S** **01 52 32.7 +1.8**
NKC MLR MLR
comp=Z,136µm,14.7s,MS7.1
NKC Novy Kostel 54.00 307 *e*P **P** **01 44 56.0 +0.6**
NKC *e*PP PP 01 47 02.7 +6.3
NKC *e*S **S** **01 52 32.7 +1.8**
NKC *e*SS SS 01 56 25.3 +14
NKC AMS AMS 02 10 00.0
comp=Z,136µm,14.7s
KHC Kasperske Hory 54.14 306 ⇓*i*P **P** **01 44 56.6 +0.1**
comp=Z,130nm,1.4s,mb5.7
KHC Kasperske Hory 54.14 306 *e*P **P** **01 44 56.8 +0.3**
KHC *e* 01 47 05.3
KHC *e*S **S** **01 52 35.0 +2.1**
KHC MLR MLR
comp=Z,94µm,15.1s,MS7.0
KHC Kasperske Hory 54.14 306 *e*P **P** **01 44 56.8 +0.3**
KHC *e*PP PP 01 47 05.3 +7.6
KHC *e*S **S** **01 52 35.0 +2.1**
KHC *e*SS SS 01 56 26.0 +12
KHC AMS AMS 02 09 50.0
comp=Z,94µm,15.1s
MOX Moxa 54.15 308 *e*P **P** **01 44 56.7 +0.2**
comp=Z,387nm,1.8s,mb6.0
MOX *e* 01 45 11.0
MOX *e*S **S** **01 52 37.0 +4.1**
MOX *e*SS SS 01 56 25.0 +11
MOX Moxa 54.15 308 *e*P **P** **01 44 56.5 0.0**
comp=Z,215nm,1.4s,mb5.9
MOX *e*S **S** **01 52 35.1 +2.2**
MOX Moxa 54.15 308 *e*P **P** **01 44 56.7 +0.2**
comp=Z,387nm,1.8s,mb6.0
MOX *e* 01 45 11.0
MOX *e*S **S** **01 52 37.0 +4.1**
MOX *e*SS SS 01 56 25.0 +11
MOX Moxa 54.15 308 *e*P **P** **01 44 56.7 +0.2**
MOX *e*S **S** **01 52 37.0 +4.1**
MOX pmax pmax
comp=Z,387nm,1.8s,mb6.0
KZIT Kziot 54.19 276 Pn **P** **01 44 56.2 -0.8**
SOH Sokhos 54.19 293 P **P** **01 44 56.6 -0.4**
SOH Sokhos 54.19 293 *e*P **P** **01 44 54.7 -2.3**
SOH Sokhos 54.19 293 P **P** **01 44 56.6 -0.4**
SMG Samos 54.20 287 *e*P **P** **01 44 57.7 +0.7**
CHOS Chios island 54.21 289 *e*P **P** **01 44 57.7 +0.6**
KNT Kendrikon 54.23 293 P **P** **01 44 57.4 +0.1**
KNT Kendrikon 54.23 293 P **P** **01 44 57.4 +0.1**
SOFL Sornfelli, Far 54.23 327 AMS AMS 02 12 05.8
comp=Z,23µm,16.6s,MS6.3
GEC2 GERESS Array S 54.26 306 *e*P **P** **01 44 57.2 -0.1**
comp=Z,138nm,1.6s,mb5.6
GEC2 *e*S **S** **01 52 38.4 +3.9**
GEC2 GERESS Array S 54.26 306 *e*P **P** **01 44 57.2 -0.1**
GEC2 *e*S **S** **01 52 38.4 +3.9**
GEC2 pmax pmax
comp=Z,138nm,1.6s,mb5.6
KDAK Kodiak Island 54.27 40 P **P** **01 44 57.0 -0.3**
comp=Z,467nm,0.9s,mb6.4,SNR=12
KDAK Kodiak Island 54.27 40 ⇓*i*P **P** **01 44 56.3 -1.0**
comp=Z,54nm,0.8s,mb5.5
KDAK LR LR
comp=Z,32µm,22.0s,MS6.3
KDAK Kodiak Island 54.27 40 P **P** **01 44 56.8 -0.5**
comp=Z,30nm,0.8s,mb5.3,baz=343,slow=4.0,SNR=24
KDAK LR LR 02 12 12.9
comp=Z,11µm,18.5s,MS6.0,baz=329,slow=41
KDAK Kodiak Island 54.27 40 ⇓*i*P **P** **01 44 56.3 -1.0**
KDAK pmax pmax
comp=Z,53nm,0.8s,mb5.5
KDAK MLR MLR
comp=Z,32µm,22.0s,MS6.3
TPI Tanjungpandan 54.29 176 P **P** **01 45 04.3 +6.4**
comp=Z,60nm,1.2s,mb5.4
VAY Valandovo 54.32 293 P **P** **01 44 58.5 +0.6**
VAY Valandovo 54.32 293 P **P** **01 44 58.5 +0.6**
TNTI Ternate 54.35 151 P **P** **01 45 03.1 +4.8**
comp=Z,3µmcomp=Z,236nm,1.3s,mb6.0
ARSA Arzberg 54.35 303 P **P** **01 44 58.5 +0.5**
ARSA Arzberg 54.35 303 *i* P **P** **01 44 58.5 +0.5**
comp=Z,127nm,1.9s,mb5.5,SNR=40
OHAK Old Harbor 54.36 41 ⇓*i*P **P** **01 44 57.5 -0.4**
comp=Z,494nm,1.2s,mb6.3
HRFI Mount Harif 54.39 275 Pn **P** **01 44 58.1 -0.5**
ARG Arkhangelos 54.42 285 P **P** **01 44 59.6 +0.9**
ARG Arkhangelos 54.42 285 *e*P **P** **01 44 58.6 -0.1**
ARG Arkhangelos 54.42 285 P **P** **01 44 59.6 +0.9**
ROTZ Rotzenmuhle 54.42 307 *e*P **P** **01 44 58.8 +0.3**
comp=Z,129nm,1.5s,mb5.6
PLG Polygyros 54.43 292 P **P** **01 44 59.7 +1.0**
PLG Polygyros 54.43 292 *e*P **P** **01 44 58.6 -0.1**
PLG Polygyros 54.43 292 P **P** **01 44 59.7 +1.0**
BBLS Lazići 54.44 298 P **P** **01 44 59.3 +0.6**
KOGS Kog 54.48 302 *e*P **P** **01 44 58.5 -0.4**
KOGS *e*PP PP 01 47 07.2 +6.3
KOGS *e* 01 48 12.6
KOGS *e*S **S** **01 52 41.6 +4.1**
KOGS *e*SS SS 01 56 31.6 +12
HORT Hortiatis 54.48 292 P **P** **01 44 58.6 -0.5**
HORT Hortiatis 54.48 292 P **P** **01 44 58.6 -0.5**
WET Wettzell 54.48 306 *e*P **P** **01 44 59.2 +0.2**
comp=Z,197nm,1.6s,mb5.8
WET *e*S **S** **01 52 40.7 +3.2**
WET Wettzell 54.48 306 *e*P **P** **01 44 59.2 +0.2**
WET *e*S **S** **01 52 40.7 +3.2**
WET pmax pmax
comp=Z,197nm,1.6s,mb5.8
DAWY Dawson 54.51 29 ⇓*i*P **P** **01 44 59.1 +0.1**
KRMI Paran Flat 54.53 275 Pn **P** **01 44 59.2 -0.4**
DIV Divide 54.54 34 ⇓*i*P **P** **01 44 59.7 +0.6**
comp=Z,494nm,1.4s,mb6.3
MOA Molln 54.61 304 P **P** **01 45 00.3 +0.4**
MOA Molln 54.61 304 ⇓*i*P **P** **01 45 00.3 +0.3**
comp=Z,110nm,1.7s,mb5.6,SNR=44
GRG Griva 54.65 293 P **P** **01 45 01.5 +1.2**
GRG Griva 54.65 293 P **P** **01 45 01.5 +1.2**
EIL Elat 54.70 275 Pn **P** **01 45 00.7 -0.1**
EIL Elat 54.70 275 P **P** **01 45 00.7 -0.1**
comp=Z,16nm,1.0s,mb5.0,baz=35,slow=8.3,SNR=33
EIL LR LR 02 11 48.1
comp=Z,26µm,19.2s,MS6.3,baz=42,slow=40
PLE Pljevlja 54.80 297 ⇑*i*P **P** **01 45 02.4 +1.1**
PLE Pljevlja 54.80 297 ⇑*i*P **P** **01 45 02.5 +1.2**
IVA Berane 54.82 296 ⇑*i*P **P** **01 45 00.4 -1.1**
IVA Berane 54.82 296 ⇑*i*P **P** **01 45 00.4 -1.0**
UBBA Unterbreizbach 54.82 309 *e*P **P** **01 45 01.1 -0.2**
comp=Z,244nm,1.8s,mb5.9
IBBN Ibbenburen 54.91 312 *e*P **P** **01 45 01.4 -0.6**
comp=Z,119nm,1.4s,mb5.7
IBBN *e*S **S** **01 52 42.1 -1.0**
PVY Plav 54.95 296 ⇑*i*P **P** **01 45 01.4 -1.1**
PVY Plav 54.95 296 ⇑*i*P **P** **01 45 01.4 -1.0**
GRA1 Grafenberg Arr 54.95 308 *e*P **P** **01 45 02.7 +0.3**
comp=Z,559nm,1.8s,mb6.3
GRA1 *e*S **S** **01 52 49.1 +5.3**
GRA1 LR LR
comp=Z,122µm,18.8s,MS7.0
GRF Grafenberg Arr 54.95 308 *e*P **P** **01 45 02.7 +0.3**
comp=Z,559nm,1.8s,mb6.3
GRF *e*S **S** **01 52 49.1 +5.3**
GRF *e*L 02 11 04.9
comp=Z,122µm,18.8s
GRF Grafenberg Arr 54.95 308 *e*P **P** **01 45 02.7 +0.3**
GRF *e*S **S** **01 52 49.1 +5.3**
GRF pmax pmax
comp=Z,559nm,1.8s,mb6.3
GRF MLR MLR
comp=Z,122µm,18.8s,MS7.0
GRF Grafenberg Arr 54.95 308 *e*P **P** **01 45 02.7 +0.3**
GRF *e*S **S** **01 52 49.1 +5.3**
GRF pmax pmax
comp=Z,559nm,1.8s,mb6.3
GRF MLR MLR
comp=Z,122µm,18.8s,MS7.0
GRFO Grafenberg 54.96 308 ⇓*i*P **P** **01 45 02.6 +0.2**
comp=Z,205nm,1.1s,mb6.1
GRFO Grafenberg 54.96 308 ⇓*i*P **P** **01 45 02.6 +0.2**
GRFO pmax pmax
comp=Z,205nm,1.1s,mb6.1
PERS Pernice 54.96 303 *e*P **P** **01 45 02.6 +0.2**
PERS *e*PP PP 01 47 11.2 +6.2
AOS Alonnisos 54.97 291 P **P** **01 45 00.7 -1.9**
AOS Alonnisos 54.97 291 P **P** **01 45 00.7 -1.9**
SOKA Soboth 54.97 303 ⇓*i*P **P** **01 45 02.7 +0.2**
comp=Z,120nm,1.6s,mb5.7
BCI Bajram Curri 55.05 296 *e*PN **P** **01 45 04.1 +0.9**
BMRM Bremner River 55.06 34 ⇓*i*P **P** **01 45 03.5 +0.6**
comp=Z,353nm,0.6s,mb5.6
WIT Witteveen 55.08 313 *e*P **P** **01 45 04.1 +0.9**
comp=Z,288nm,1.4s,mb6.1
KSI Kapahiang 55.11 182 P **P** **01 45 09.4 +5.6**
comp=Z,352nm,0.9s,mb6.4
UPM Unac-Piva 55.15 297 ⇑*i*P **P** **01 45 02.7 -1.2**
UPM Unac-Piva 55.15 297 ⇑*i*P **P** **01 45 02.7 -1.2**
LIT Litokhoron 55.16 292 P **P** **01 45 03.5 -0.5**
LIT Litokhoron 55.16 292 *e*P **P** **01 45 01.3 -2.7**
LIT Litokhoron 55.16 292 P **P** **01 45 03.5 -0.5**
BIA Bitola 55.23 294 P **P** **01 45 04.8 +0.4**
BIA Bitola 55.23 294 P **P** **01 45 04.8 +0.4**
XOR Xorichti 55.24 291 P **P** **01 45 02.4 -2.2**
XOR Xorichti 55.24 291 P **P** **01 45 02.4 -2.2**
OBKA Obir 55.34 303 P **P** **01 45 05.7 +0.5**
OBKA Obir 55.34 303 ⇓*i*P **P** **01 45 05.4 +0.2**
comp=Z,116nm,1.0s,mb5.9,SNR=26
FNA Florina 55.35 294 P **P** **01 45 05.8 +0.4**
FNA Florina 55.35 294 P **P** **01 45 05.8 +0.4**
NKY Niksic 55.35 297 ⇑*i*P **P** **01 45 04.6 -0.8**
PUK Puka 55.36 296 *e*PN **P** **01 45 04.9 -0.5**
APE Apeiranthos 55.40 288 ⇓P **P** **01 45 08.0 +2.2**
APE Apeiranthos 55.40 288 *e*P **P** **01 45 05.2 -0.6**
APE Apeiranthos 55.40 288 ⇓*i*P **P** **01 45 07.9 +2.1**
KZN Kozani 55.44 293 P **P** **01 45 04.5 -1.5**
KZN Kozani 55.44 293 *e*P **P** **01 45 04.0 -2.0**
KZN Kozani 55.44 293 P **P** **01 45 04.5 -1.5**
RJOB Jochberg 55.44 305 *e*P **P** **01 45 06.4 +0.5**
comp=Z,126nm,1.5s,mb5.7
KARP Karpathos 55.45 285 *e*P **P** **01 45 03.7 -2.4**
TTG Podgorica 55.46 296 ⇑*i*P **P** **01 45 05.0 -1.1**
MID Middleton Isla 55.53 36 *e*P **P** **01 45 06.8 +0.4**
comp=Z,458nm,1.3s,mb6.3
MID *e*S **S** **01 52 56.9 +3.6**
MID pmax pmax
comp=Z,458nm,1.3s,mb6.3
BRY Bratogost 55.55 297 ⇑*i*P **P** **01 45 04.9 -1.9**
BRY Bratogost 55.55 297 ⇑*i*P **P** **01 45 05.0 -1.8**
WTSB Winterswijk 55.58 312 ⇑*e*P **P** **01 45 06.8 0.0**
comp=Z,170nm,2.1s,mb5.7
KBA Koelnbreinsper 55.59 304 P **P** **01 45 07.8 +0.8**
KBA Koelnbreinsper 55.59 304 *i* P **P** **01 45 07.8 +0.8**
comp=Z,244nm,0.9s,mb6.2,SNR=53
BOJS Bojanci 55.62 302 *e*P **P** **01 45 06.3 -1.0**
BOJS *e*S **S** **01 52 54.3 +1.4**
LJU Ljubljana 55.65 302 *i* P **P** **01 45 07.0 -0.5**
LJU *i* 01 45 13.7
LJU *e* 01 46 01.3
LJU *e*S **S** **01 52 56.9 +3.6**
LJU Ljubljana 55.65 302 *i* P **P** **01 45 07.0 -0.4**
LJU *i* 01 45 13.7
LJU *e*PcP PcP 01 46 01.3 -5.6
LJU *e*S **S** **01 52 56.9 +3.6**
LJU *e*ScS ScS 01 55 02.2 +5.8
LJU *e*SS SS 01 56 52.1 +14
BUG Bochum-Univer 55.71 311 *e*P **P** **01 45 07.5 -0.3**
comp=Z,251nm,1.8s,mb5.9
BUG *e*S **S** **01 52 55.0 +1.2**
LBMI Labuha 55.72 151 P **P** **01 45 15.9 +7.7**
comp=Z,2µmcomp=Z,150nm,1.0s,mb6.0
PTL Penteli 55.73 290 *e*P **P** **01 45 08.4 +0.3**
MYKA Terra Mystica 55.73 304 ⇓*i*P **P** **01 45 08.2 +0.2**
comp=Z,134nm,0.8s,mb6.0
BUM Brajici-Budva 55.75 297 ⇑*i*P **P** **01 45 06.4 -1.8**
BUM Brajici-Budva 55.75 297 ⇑*i*P **P** **01 45 06.4 -1.8**
ULC Ulcinj 55.77 296 ⇑*i*P **P** **01 45 07.7 -0.7**
ULC Ulcinj 55.77 296 ⇑*i*P **P** **01 45 07.8 -0.6**
KBN Korca 55.79 294 *e*PN **P** **01 45 08.9 +0.4**
THL Klokotos Trika 55.79 292 *e*P **P** **01 45 06.3 -2.2**
THL Klokotos Trika 55.79 292 P **P** **01 45 06.7 -1.8**
ATHU Athens Univers 55.83 290 P **P** **01 45 09.1 +0.3**
LKR Lokris 55.83 291 P **P** **01 45 06.6 -2.2**
LKR Lokris 55.83 291 *e*P **P** **01 45 09.0 +0.2**
LKR Lokris 55.83 291 P **P** **01 45 06.6 -2.2**
TIR Tirane 55.84 295 P **P** **01 45 09.9 +1.1**
TIR Tirane 55.84 295 *e*P **P** **01 45 09.3 +0.5**
TIR Tirane 55.84 295 P **P** **01 45 09.9 +1.1**
ATH Athens Observa 55.86 290 P **P** **01 45 09.1 0.0**
ATH Athens Observa 55.86 290 *e*P **P** **01 45 09.6 +0.5**
HCY Herceg Novi 55.87 297 ⇑*i*P **P** **01 45 07.8 -1.3**
VLY Voula,Athens 55.90 290 *e*P **P** **01 45 09.3 0.0**
MDSI Maura Dua 55.92 180 P **P** **01 45 13.3 +3.6**
comp=Z,966nmcomp=Z,56nm,1.0s,mb5.5
FUR Furstenfeldbru 55.93 306 *e*P **P** **01 45 09.6 +0.2**
comp=Z,118nm,1.1s,mb5.8
FUR Furstenfeldbru 55.93 306 *e*P **P** **01 45 09.6 +0.2**
FUR pmax pmax
comp=Z,118nm,1.1s,mb5.8
TNS Taunus Mts 55.96 310 *e*P **P** **01 45 09.7 +0.1**
comp=Z,322nm,1.7s,mb6.1
TNS *e*S **S** **01 53 00.2 +3.0**
TNS Taunus Mts 55.96 310 *e*P **P** **01 45 09.7 +0.1**
TNS *e*S **S** **01 53 00.2 +3.0**
TNS pmax pmax
comp=Z,322nm,1.7s,mb6.1
AGG Agios Georgios 55.97 292 P **P** **01 45 11.2 +1.4**
AGG Agios Georgios 55.97 292 *e*P **P** **01 45 07.8 -2.0**
AGG Agios Georgios 55.97 292 P **P** **01 45 11.2 +1.4**
SIND Sindeldorf 55.98 308 P **P** **01 45 09.9 +0.2**
VOY Vojsko 55.99 303 *e*P **P** **01 45 08.9 -1.0**
VOY *e* 01 45 14.8
VOY *e* 01 45 56.0
VOY *e* 01 46 09.2
PTCC Patocco-Chiusa 56.03 303 P **P** **01 45 09.8 -0.3**
MCD Coleburn Disti 56.03 322 *e*P **P** **01 45 09.1 -0.9**
MME1 Meikle Cairn 56.11 321 *e*P **P** **01 45 09.7 -0.8**
TTSI Tana Toraja 56.11 161 P **P** **01 45 11.4 +0.4**
comp=Z,3µmcomp=Z,53nm,1.4s,mb5.4
KLSI 56.13 179 P **P** **01 45 13.3 +2.2**

MVH1 **Achvaich** 56.15 322 *e*P P 01 45 10.1 -0.7
comp=Z,3µmcomp=Z,198nm,1.2s,mb6.0
GMNA **Gemona** 56.18 303 P P 01 45 11.1 -0.1
HDH **Heidenheim-Cha** 56.19 307 P P 01 45 11.0 -0.2
TOD **Tromm** 56.20 309 *e*P P 01 45 11.4 +0.1
ABTA **Abfaltersbach** 56.24 304⇓*i*P P 01 45 11.2 -0.4
comp=Z,66nm,1.6s,mb5.4,SNR=6.5
SKDS **Skadanscina** 56.25 302 *e*P P 01 45 11.1 -0.7
SKDS *e* 01 52 36.6
SKDS *e*S S 01 53 02.0 +0.8
SKDS *e* 01 55 06.3
DSF **Desfina** 56.27 291 P P 01 45 09.0 -2.9
TRI **Trieste** 56.27 303 *e*P P 01 45 10.8 -1.1
comp=Z,118nm,0.8s,mb6.0
TRI LR LR
comp=Z,63µm,19.0s,MS6.7
TRI **Trieste** 56.27 303 *e*P P 01 45 10.8 -1.1
TRI pmax pmax
comp=Z,118nm,0.8s,mb6.0
TRI MLR MLR
comp=Z,63µm,19.0s,MS6.7
ZKR **Zakros** 56.31 286 *e*P P 01 45 11.7 -0.6
SWS **Schriesheim-Wi** 56.33 309 P P 01 45 12.6 +0.4
WATA **Walderalm** 56.33 305⇓*i*P P 01 45 12.6 +0.3
comp=Z,47nm,0.8s,mb5.6,SNR=16
EVR **Evrytania** 56.34 292 *e*P P 01 45 12.6 +0.1
WTTA **Wattenberg** 56.34 305 *i*P P 01 45 13.0 +0.6
comp=Z,178nm,1.5s,mb5.9,SNR=54
JAN **Janina** 56.40 293 *e*P P 01 45 12.9 0.0
NVLJ **Novalja** 56.45 301 *i*P P 01 45 11.3 -1.9
LWLI **Liwa** 56.45 180 P P 01 45 18.1 +4.7
comp=Z,206nm,0.8s,mb6.2
DID **Didima** 56.46 290 P P 01 45 10.6 -2.7
BORG **Borgarnes** 56.52 335 PFAKE 01 45 30.0 +17
BORG LR LR
comp=Z,10µm,20.0s,MS5.9
BORG **Borgarnes** 56.52 335 LR LR 02 11 01.3
comp=Z,9µm,18.3s,MS5.9,baz=71,slow=38
MOTA **Moosalm** 56.56 306⇓*i*P P 01 45 14.3 +0.4
comp=Z,94nm,1.2s,mb5.7,SNR=22
STU **Stuttgart** 56.56 308 *e*P P 01 45 13.8 -0.1
comp=Z,373nm,1.8s,mb6.1
STU **Stuttgart** 56.56 308⇓*i*P P 01 45 13.8 -0.1
comp=Z,154nm,1.1s,mb5.9
STU **Stuttgart** 56.56 308⇓*i*P P 01 45 13.8 -0.1
STU pmax pmax
comp=Z,154nm,1.1s,mb6.0
ABH **Alteburg** 56.62 310 *e*P P 01 45 15.1 +0.8
RETA **Reutte** 56.64 306 *i*P P 01 45 14.9 +0.5
comp=Z,146nm,1.8s,mb5.7,SNR=40
GUR **Goura** 56.69 291 *e*P P 01 45 11.4 -3.6
GUR **Goura** 56.69 291 P P 01 45 14.5 -0.5
BUCH **Bad Urach** 56.70 307 P P 01 45 15.4 +0.5
LAST **Lasithi** 56.72 286 *e*P P 01 45 16.5 +1.3
SRN **Sarande** 56.74 294 *e*PN P 01 45 14.5 -0.8
HGN **Heimansgroeve** 56.79 311⇑*e*P P 01 45 15.5 +0.1
comp=Z,112nm,1.8s,mb5.6
HGN **Heimansgroeve** 56.79 311 *e*S S 01 53 08.3 +0.1
LBG **Lerchenberg** 56.83 308 P P 01 45 16.1 +0.3
UBR **Ueberruh** 56.84 306 P P 01 45 16.1 +0.2
MEM **Membach** 56.86 311 P P 01 45 15.9 -0.1
comp=Z,48nm,1.5s,mb5.3
KAC **Achnashellach** 56.87 323 *e*P P 01 45 14.9 -1.0
BEBN **Eben Emael** 56.88 311 P P 01 45 17.1 +1.0
comp=Z,28nm,1.9s,mb5.0
ESY **Stoneypath** 56.95 320 *e*P P 01 45 15.5 -1.1
KEK **Kerkira** 56.96 294 P P 01 45 15.7 -1.2
KEK **Kerkira** 56.96 294 P P 01 45 15.7 -1.2
FETA **Feichten** 56.97 305 *i*P P 01 45 17.2 +0.4
comp=Z,86nm,0.8s,mb5.8,SNR=30
RUP **Ruppelstein** 56.97 310 *e*P P 01 45 16.8 0.0
IDI **Anoyia** 56.98 287 *e*P P 01 45 15.9 -1.2
comp=Z,67nm,1.0s,mb5.6
IDI **Anoyia** 56.98 287 *e*P P 01 45 14.4 -2.7
SPSI **Sidrap Palu** 56.99 161 P P 01 45 19.0 +1.7
comp=Z,93nm,1.2s,mb5.7
VLX **Vlachokerasia** 57.05 290 *e*P P 01 45 14.7 -2.9
EBH **Black Hill** 57.07 321 *e*P P 01 45 16.8 -0.6
GUT **Gutenstein** 57.07 307 P P 01 45 17.8 +0.3
APPI **Appiano** 57.08 305 P P 01 45 16.8 +1.2
LANF **Langenberg** 57.10 309 *e*P P 01 45 18.1 +0.4
RLS **Riolos of Patr** 57.12 291 *e*P P 01 45 18.5 +0.5
KPL **Plockton** 57.12 323 *e*P P 01 45 16.2 -1.5
KPL AMB AMB 01 45 19.4
comp=Z,58nm,2.1s,mb5.2
KPL AMS AMS 02 12 35.7
comp=Z,22µm,16.6s,MS6.3
EDI **Edinburgh** 57.17 320 *e*P P 01 45 16.1 -2.0
EDI AMB AMB 01 45 20.6
comp=Z,54nm,2.0s,mb5.2
EDI *e* 01 53 11.3
EDI AMS AMS 02 12 00.2
comp=Z,39µm,15.4s,MS6.6
SPAK **Spaichingen-Ko** 57.21 307 *e*P P 01 45 18.8 +0.3
SIVA **Sivas** 57.22 286 *e*P P 01 45 18.8 +0.1
DAVA **Damuels** 57.22 306 P P 01 45 18.8 +0.2
DAVA **Damuels** 57.22 306 *i*P P 01 45 18.9 +0.3
comp=Z,176nm,1.2s,mb6.0,SNR=33
EBL **Broad Law** 57.22 320 *e*P P 01 45 17.9 -0.6
BFO **Black Forest** 57.28 308 P P 01 45 18.6 -0.4
comp=Z,300nm,1.9s,mb6.0,SNR=21
BFO **Black Forest** 57.28 308 *e*P P 01 45 18.7 -0.3
comp=Z,178nm,1.6s,mb5.8
BFO *e*S S 01 53 19.2 +4.4
BFO **Black Forest** 57.28 308 *e*P P 01 45 18.7 -0.3
BFO *e*S S 01 53 19.2 +4.4
BFO pmax pmax
comp=Z,178nm,1.6s,mb5.8
VAM **Vamos** 57.31 287 *e*P P 01 45 17.6 -1.8
BCLA **Clavier** 57.32 311 P P 01 45 19.2 0.0
comp=Z,46nm,2.2s,mb5.1
EAU **Auchinoon** 57.33 320 *e*P P 01 45 18.9 -0.4
SISB **Singen-Schiene** 57.41 307 P P 01 45 20.1 +0.2
WLF **Walferdange** 57.43 310 P P 01 45 20.8 +0.8
comp=Z,51nm,2.7s,mb5.1
WLF **Walferdange** 57.43 310 *e*P P 01 45 20.3 +0.3
comp=Z,204nm,2.2s,mb5.8
WLF *e*S S 01 53 20.6 +3.9
WLF **Walferdange** 57.43 310 *e*P P 01 45 19.8 -0.3
comp=Z,26nm,0.9s,mb5.3
WLF LR LR
comp=Z,58µm,21.0s,MS6.7
WLF **Walferdange** 57.43 310 *e*P P 01 45 19.8 -0.2
WLF pmax pmax
comp=Z,26nm,0.9s,mb5.3
WLF MLR MLR
comp=Z,58µm,21.0s,MS6.7
EAB **Aberfoyle** 57.44 321 *e*P P 01 45 18.9 -1.1
ITM **Ithomi** 57.45 290 P P 01 45 18.3 -2.0
ITM **Ithomi** 57.45 290 *e*P P 01 45 17.4 -2.9
ITM **Ithomi** 57.45 290 P P 01 45 18.3 -2.0
SCTE **Santa Cesarea** 57.48 295 *e*P P 01 45 23.3 +2.8
KARN **Karanos** 57.48 287 *e*P P 01 45 18.5 -2.1
KARN **Karanos** 57.48 287 P P 01 45 20.0 -0.6
UCC **Uccle** 57.49 312 P P 01 45 20.5 +0.1
VLS **Valsamata** 57.55 292 *e*P P 01 45 20.0 -1.0
DAVOX **Davos/Dischmat** 57.56 306 LR LR 02 12 19.6
comp=Z,97µm,18.1s,MS7.0,baz=198,slow=38
ESK **Eskdalemuir** 57.61 320 P P 01 45 20.6 -0.6
comp=Z,377nm,0.7s,mb6.5,SNR=14
ESK **Eskdalemuir** 57.61 320 *e*P P 01 45 19.5 -1.7
ESK AMB AMB 01 45 27.4
comp=Z,63nm,0.9s,mb5.6
ESK *e* 01 53 12.5
ESK AMS AMS 02 12 23.7
comp=Z,42µm,15.7s,MS6.7
ESK **Eskdalemuir** 57.61 320 *e*P P 01 45 20.7 -0.5
comp=Z,44nm,0.8s,mb5.5
ESK LR LR
comp=Z,36µm,19.0s,MS6.5
ESK **Eskdalemuir** 57.61 320 *e*P P 01 45 20.7 -0.5
ESK pmax pmax
comp=Z,44nm,0.8s,mb5.5
ESK MLR MLR
comp=Z,36µm,19.0s,MS6.5
ECK **Cauldkaine Hil** 57.68 320 *e*P P 01 45 20.8 -0.9
SNF **Seneffe** 57.73 312 P P 01 45 22.8 +0.7
comp=Z,50nm,2.0s,mb5.2
CDF **Champ du Feu** 57.74 309⇓*i*P P 01 45 22.0 -0.3
comp=Z,140nm,1.0s,mb5.6
CDF **Champ du Feu** 57.74 309⇓*i*P P 01 45 22.0 -0.3
comp=Z,70nm,1.0s,mb5.7
CDF **Champ du Feu** 57.74 309⇓*i*P P 01 45 22.0 -0.3
CDF pmax pmax
comp=Z,70nm,1.0s,mb5.7

FELD **Feldberg im Sc** 57.75 308 *e*P P 01 45 21.7 -0.6
GIVF **Givet** 57.76 311 *e*P P 01 45 21.8 -0.5
comp=Z,355nm,1.6s,mb5.8
GIVF **Givet** 57.76 311 *e*P P 01 45 21.8 -0.5
comp=Z,178nm,1.6s,mb5.8
GIVF **Givet** 57.76 311 *e*P P 01 45 21.8 -0.5
GIVF pmax pmax
comp=Z,178nm,1.6s,mb5.8
LIBD **Limburg** 57.76 308 P P 01 45 23.2 +0.8
PGBU **Glenifferbraes** 57.77 321 *e*P P 01 45 22.0 -0.3
PGBU AMB AMB 01 45 27.1
comp=Z,89nm,1.0s,mb5.7
PGBU AMS AMS 02 12 24.4
comp=Z,22µm,15.8s,MS6.4
PNL **Peninsula** 57.78 32⇓*i*P P 01 45 23.4 +1.0
comp=Z,115nm,1.2s,mb5.8
AOI **Ancona** 57.81 301 P P 01 45 22.5 -0.3
DOU **Dourbes** 57.87 311 P P 01 45 22.5 -0.6
comp=Z,38nm,2.0s,mb5.1
HPK **Haverah Park** 57.93 318 *e*P P 01 45 22.7 -0.8
HPK AMB AMB 01 45 26.8
comp=Z,91nm,2.2s,mb5.4
HPK *e* 01 53 11.6
HPK AMS AMS 02 13 01.7
comp=Z,24µm,14.1s,MS6.5
ECH **Echery** 57.94 308 *e*P P 01 45 22.9 -0.7
ECH **Echery** 57.94 308 *e*P P 01 45 23.5 -0.1
comp=Z,246nm,1.7s,mb6.0
ECH LR LR
comp=Z,64µm,19.0s,MS6.8
ECH **Echery** 57.94 308 *e*P P 01 45 23.5 -0.1
ECH pmax pmax
comp=Z,247nm,1.7s,mb6.0
ECH MLR MLR
comp=Z,64µm,19.0s,MS6.8
RGNG **Rignano Grg** 58.00 298 P P 01 45 23.2 -1.0
TUE **Stuetta** 58.04 306 *e*P P 01 45 24.0 -0.4
comp=Z,46nm,1.0s,mb5.5
TUE LR LR
comp=Z,83µm,19.0s,MS6.9
BAIF **Baives** 58.08 312 *e*P P 01 45 24.0 -0.6
comp=Z,122nm,1.2s,mb5.5
BAIF **Baives** 58.08 312 *e*P P 01 45 24.0 -0.6
comp=Z,61nm,1.2s,mb5.5
BAIF **Baives** 58.08 312 *e*P P 01 45 24.0 -0.6
BAIF pmax pmax
comp=Z,61nm,1.2s,mb5.5
CING **Cingoli** 58.14 301 P P 01 45 26.2 +1.1
FSSB **Fossombrone** 58.15 301 P P 01 45 25.1 -0.1
MOF **Molkenrain** 58.20 308 *e*P P 01 45 25.0 -0.5
BBS **Basel-Blauen** 58.28 308 *e*P P 01 45 26.1 +0.1
XDE **Dent d'Ell** 58.31 319 *e*P P 01 45 25.0 -1.1
LHO **Lichtenfirth** 58.32 318 *e*P P 01 45 25.0 -1.2
HINF **Hinteralfeld** 58.36 308 *e*P P 01 45 26.2 -0.4
comp=Z,252nm,1.2s,mb5.8
HINF **Hinteralfeld** 58.36 308 *e*P P 01 45 26.2 -0.4
comp=Z,126nm,1.2s,mb5.8
HINF **Hinteralfeld** 58.36 308 *e*P P 01 45 26.2 -0.4
HINF pmax pmax
comp=Z,126nm,1.2s,mb5.8
SNTG **Esanatoglia** 58.36 301 P P 01 45 26.3 -0.4
ACER **Acerenza** 58.41 297 P P 01 45 27.0 0.0
FDMO **Fiordimonte** 58.43 301 P P 01 45 27.0 -0.2
TERO **Teramo** 58.44 300 P P 01 45 28.0 +0.2
FG5 **Orsara di Pugl** 58.44 298 P P 01 45 27.5 +0.2
HAU **Haudompre** 58.47 309 *e*P P 01 45 27.1 -0.3
comp=Z,155nm,1.0s,mb5.7
HAU *e*MLR MLR
comp=Z,46µm,20.8s,MS6.3
HAU **Haudompre** 58.47 309 *e*P P 01 45 27.1 -0.3
comp=Z,78nm,1.0s,mb5.7
HAU LR LR
comp=Z,46µm,20.8s,MS6.6
HAU **Haudompre** 58.47 309 *e*P P 01 45 27.1 -0.3
HAU pmax pmax
comp=Z,78nm,1.0s,mb5.7
HAU MLR MLR
comp=Z,46µm,20.8s,MS6.6
NOVE **Novellara** 58.48 304 P P 01 45 27.7 +0.2
THEF **They Montfort** 58.50 309 *e*P P 01 45 27.2 -0.3
GAL1 **Galloway** 58.54 320 *e*P P 01 45 26.2 -1.5
GAL1 AMB AMB 01 45 33.1
comp=Z,83nm,2.4s,mb5.3
GAL1 AMS AMS 02 12 51.8
comp=Z,35µm,15.5s,MS6.6
CESI **CESI - Serrava** 58.55 301 P P 01 45 28.2 +0.2
NRCA **Norcia** 58.56 300 P P 01 45 28.1 +0.1
BADI **Badiali** 58.56 302 P P 01 45 27.8 -0.2
MURB **Monte Urbino** 58.58 301 P P 01 45 28.8 +0.6
SEI **Scarperia** 58.65 303 P P 01 45 29.6 +0.9
CWF **Charnwood Fore** 58.66 317 *e*P P 01 45 27.3 -1.3
CWF AMB AMB 01 45 32.4
comp=Z,45nm,2.6s,mb5.0
CWF *e* 01 53 22.2
CWF AMS AMS 02 14 24.8
comp=Z,62µm,13.3s,MS6.9
MRLC **Muro Lucano** 58.68 297 P P 01 45 28.8 -0.1
INTR **Introdacqua** 58.69 299 P P 01 45 29.3 +0.3
LOMF **Lomont** 58.69 308 *e*P P 01 45 28.5 -0.4
FNVD **Fontana Vidola** 58.70 303 P P 01 45 29.7 +0.7
MRB1 **Monte Rocchett** 58.71 298 P P 01 45 29.4 +0.2
AQU **L'Aquila** 58.73 300 *e*P P 01 45 29.3 +0.1
comp=Z,276nm,1.1s,mb6.2
AQU LR LR
comp=Z,44µm,19.0s,MS6.6
AQU **L'Aquila** 58.73 300⇑*e*P P 01 45 29.6 +0.3
AQU **L'Aquila** 58.73 300⇑*i*P P 01 45 29.6 +0.3
PSB1 **Pescosannita** 58.73 298 P P 01 45 29.2 -0.1
MIDA **Miranda** 58.75 299 P P 01 45 29.1 -0.3
MEZF **Maizieres J'vi** 58.76 310 *e*P P 01 45 29.2 -0.1
comp=Z,316nm,1.4s,mb5.8
MEZF **Maizieres J'vi** 58.76 310 *e*P P 01 45 29.2 -0.1
comp=Z,316nm,1.4s,mb6.2
RNI2 **Rionero Sannit** 58.77 299 P P 01 45 29.8 +0.3
STNC **Stoke** 58.79 317 P P 01 45 27.5 -2.0
STNC AMB AMB 01 45 32.1
comp=Z,141nm,1.7s,mb5.7
STNC AMS AMS 02 13 40.0
comp=Z,29µm,14.0s
STNC **Stoke** 58.79 317 *e*P P 01 45 27.5 -2.0
STNC AMB AMB 01 45 32.1
comp=Z,141nm,1.7s,mb5.7
STNC AMS AMS 02 13 40.0
comp=Z,29µm,14.0s,MS6.5
GSCL **Gusciola** 58.85 303 P P 01 45 30.7 +0.6
SGG **Gregorio Mates** 58.86 298 P P 01 45 30.0 -0.2
ERBM **Eremo** 58.90 303 P P 01 45 31.3 +0.9
VVLD **Villa Vallelon** 58.94 299 P P 01 45 30.4 -0.3
FIAM **Fiamignano** 58.94 300 P P 01 45 30.7 0.0
SFTF **Sexfontaines** 58.97 310 *e*P P 01 45 30.3 -0.5
comp=Z,194nm,1.2s,mb5.7
SFTF **Sexfontaines** 58.97 310 *e*P P 01 45 30.3 -0.5
comp=Z,194nm,1.2s,mb6.0
CUC **Cucrocucco** 59.02 296 *e*P P 01 45 30.4 -0.9
comp=Z,143nm,1.0s,mb6.0
CUC LR LR
comp=Z,17µm,20.0s,MS6.2
MGAB **Montegabbione** 59.04 301 P P 01 45 31.3 -0.1
TIP **Timpagrande** 59.05 295⇓*i*P P 01 45 31.3 -0.3
comp=Z,193nm,1.0s,mb6.1
TIP LR LR
comp=Z,64µm,20.0s,MS6.7
BBSI **Bau Bau** 59.07 158 P pP 01 45 40.5 +5.5
comp=Z,98nm,1.0s
CSNT **Castellina Chi** 59.09 302 P P 01 45 31.1 -0.6
VLC **Villacollemand** 59.09 303⇓*i*P P 01 45 32.1 +0.4
comp=Z,149nm,0.9s,mb6.0
VLC LR LR
comp=Z,79µm,19.0s,MS6.9
RFI **Roccamonfina** 59.13 299 P P 01 45 33.0 +0.9
GUAR **Guarcino** 59.16 299 P P 01 45 32.0 -0.3
CERT **Cerreto** 59.23 300 P P 01 45 31.7 -1.1
SKAG **Skagway** 59.27 31 *e*P P 01 45 34.3 +1.6
comp=Z,720nm,1.6s,mb6.5
GMM **Mts of Mourne** 59.49 320 *e*P P 01 45 33.5 -0.8
SJI **Sawahan** 59.52 171 P P 01 45 39.5 +4.6
comp=Z,4µmcomp=Z,70nm,1.0s,mb5.7
MA9 **Marino** 59.53 300 P P 01 45 34.6 -0.2
WLF1 **Llynfaes** 59.56 319 AMS AMS 02 14 11.1
comp=Z,129µm,15.5s,MS7.2
ROM9 **Roma** 59.57 300 P P 01 45 36.3 +1.2
CABF **La Chapelle** 59.57 308 *e*P P 01 45 34.5 -0.5
comp=Z,174nm,1.4s,mb5.6
CABF **La Chapelle** 59.57 308 *e*P P 01 45 34.5 -0.5
comp=Z,87nm,1.4s,mb5.6

CABF **La Chapelle** 59.57 308 *e*P P 01 45 34.5 -0.5
CABF pmax pmax
comp=Z,87nm,1.4s,mb5.6
LAV9 **Lanuvio** 59.57 300 P P 01 45 34.6 -0.5
WOL **Wolverton** 59.64 315 *e*P P 01 45 33.9 -1.5
WOL AMB AMB 01 45 37.4
comp=Z,98nm,1.7s,mb5.6
WOL AMS AMS 02 14 29.4
comp=Z,67µm,14.4s,MS6.9
VENT **Ventotene** 59.79 299 P P 01 45 37.9 +1.3
MCH1 **Michaelchurch** 59.91 317 *e*P P 01 45 35.4 -1.9
MCH1 AMB AMB 01 45 39.5
comp=Z,68nm,2.1s,mb5.3
MCH1 *e* 01 53 50.0
MCH1 AMS AMS 02 15 15.1
comp=Z,62µm,13.2s,MS6.9
HTR **Trewern Hill** 59.97 317 *e*P P 01 45 36.9 -0.7
LPL **La Plagne** 60.02 306⇓*i*P P 01 45 38.1 0.0
comp=Z,305nm,1.4s,mb5.8
LPL **La Plagne** 60.02 306⇓*i*P P 01 45 38.1 0.0
comp=Z,153nm,1.4s,mb5.8
LPL **La Plagne** 60.02 306⇓*i*P P 01 45 38.1 0.0
LPL pmax pmax
comp=Z,153nm,1.4s,mb5.8
LPG **La Plagne** 60.02 306⇓*i*P P 01 45 38.3 +0.2
comp=Z,193nm,1.1s,mb5.7
LPG **La Plagne** 60.02 306⇓*i*P P 01 45 38.3 +0.2
comp=Z,97nm,1.1s,mb5.7
LPG **La Plagne** 60.02 306⇓*i*P P 01 45 38.3 +0.2
LPG pmax pmax
comp=Z,97nm,1.1s,mb5.8
HGH **Gray Hill** 60.09 317 *e*P P 01 45 37.0 -1.5
CEL **Celeste** 60.17 295 *e*P P 01 45 37.9 -1.4
comp=Z,160nm,1.1s,mb6.0
CEL LR LR
comp=Z,51µm,20.0s,MS6.7
LOR **Lormes** 60.19 309⇓*i*P P 01 45 38.3 -1.0
comp=Z,379nm,1.6s,mb5.9,baz=52
LOR *e*MLR MLR
comp=Z,42µm,20.2s,MS6.3
LOR **Lormes** 60.19 309⇓*i*P P 01 45 38.3 -1.0
comp=Z,190nm,1.6s,mb5.9
LOR LR LR
comp=Z,42µm,20.3s,MS6.6
LOR **Lormes** 60.19 309⇓*i*P P 01 45 38.3 -1.0
LOR pmax pmax
comp=Z,190nm,1.6s,mb5.9
LOR MLR MLR
comp=Z,42µm,20.3s,MS6.6
GMJI **Gumukmas** 60.22 169 P P 01 45 42.2 +2.4
comp=Z,2µmcomp=Z,88nm,1.7s,mb5.5
SRBI **Singaraja** 60.26 167 P P 01 45 44.6 +4.6
comp=Z,106nm,1.6s,mb5.6
SCLL **Scilla** 60.28 295 P P 01 45 40.7 +0.7
DSB **Dublin** 60.40 320 *e*P P 01 45 40.7 +0.2
comp=Z,21nm,0.8s,mb5.2
DLF **Lyons Farm** 60.42 320 *e*P P 01 45 40.5 -0.2
DLF **Lyons Farm** 60.42 320 *e*P P 01 45 40.1 -0.6
SSF **Saint Saulge** 60.51 309⇓*i*P P 01 45 40.6 -0.9
comp=Z,449nm,1.6s,mb6.0
SSF **Saint Saulge** 60.51 309⇓*i*P P 01 45 40.6 -0.9
comp=Z,225nm,1.6s,mb6.0
SSF **Saint Saulge** 60.51 309⇓*i*P P 01 45 40.6 -0.9
SSF pmax pmax
comp=Z,225nm,1.6s,mb6.0
GDM **Grand'Maison** 60.55 306 *e*P P 01 45 41.4 -0.3
GDM **Grand'Maison** 60.55 306 *e*P P 01 45 41.4 -0.3
MBDF **Montbardon** 60.55 306⇓*i*P P 01 45 40.9 -0.9
comp=Z,138nm,0.9s,mb5.8
MBDF **Montbardon** 60.55 306⇓*i*P P 01 45 40.9 -0.9
comp=Z,69nm,0.9s,mb5.8
MBDF **Montbardon** 60.55 306⇓*i*P P 01 45 40.9 -0.9
MBDF pmax pmax
comp=Z,69nm,0.9s,mb5.8
SLNA **Salina** 60.56 296 P P 01 45 41.8 -0.1
KHKI **Kahang-Kahang** 60.59 167 P P 01 45 45.4 +3.1
comp=Z,1µmcomp=Z,94nm,1.1s,mb5.8
SMF **Signal de Mont** 60.65 309 *e*P P 01 45 41.5 -0.9
comp=Z,148nm,0.9s,mb5.8
SMF **Signal de Mont** 60.65 309 *e*P P 01 45 41.5 -0.9
comp=Z,74nm,0.9s,mb5.8
SMF **Signal de Mont** 60.65 309 *e*P P 01 45 41.5 -0.9
SMF pmax pmax
comp=Z,74nm,0.9s,mb5.8
SURF **Saint Ours** 60.70 306 *e*P P 01 45 42.2 -0.6
SURF **Saint Ours** 60.70 306 *e*P P 01 45 42.2 -0.6
AUTN **L'Aution** 60.73 305 *e*P P 01 45 42.5 -0.5
AUTN **L'Aution** 60.73 305 *e*P P 01 45 42.5 -0.5
AVF **Avril sur Loir** 60.78 309 *e*P P 01 45 42.5 -0.8
comp=Z,159nm,1.2s,mb5.7
AVF **Avril sur Loir** 60.78 309 *e*P P 01 45 42.5 -0.8
comp=Z,80nm,1.2s,mb5.7
AVF **Avril sur Loir** 60.78 309 *e*P P 01 45 42.5 -0.8
AVF pmax pmax
comp=Z,80nm,1.2s,mb5.7
HYF **Humbligny** 60.78 310 *e*P P 01 45 42.9 -0.4
TOUF **Mont Tournerai** 60.81 305 *e*P P 01 45 43.4 -0.2
TOUF **Mont Tournerai** 60.81 305 *e*P P 01 45 43.4 -0.2
SBF **Sospel** 60.82 305⇓*i*P P 01 45 42.8 -0.8
comp=Z,362nm,1.0s,mb6.2
SBF **Sospel** 60.82 305⇓*i*P P 01 45 42.8 -0.8
comp=Z,181nm,1.0s,mb6.2
SBF **Sospel** 60.82 305⇓*i*P P 01 45 42.8 -0.8
SBF pmax pmax
comp=Z,181nm,1.0s,mb6.2
LUCF **Luceram** 60.85 305 *e*P P 01 45 43.1 -0.7
LUCF **Luceram** 60.85 305 *e*P P 01 45 43.1 -0.7
ORIF **Oris-en-Rattie** 60.87 306⇓*i*P P 01 45 43.6 -0.3
comp=Z,149nm,0.9s,mb5.8
ORIF *e*MLR MLR
comp=Z,46µm,20.8s,MS6.3
ORIF **Oris-en-Rattie** 60.87 306⇓*i*P P 01 45 43.6 -0.3
comp=Z,75nm,0.9s,mb5.8
ORIF **Oris-en-Rattie** 60.87 306⇓*i*P P 01 45 43.6 -0.3
ORIF pmax pmax
comp=Z,75nm,0.9s,mb5.8
HEX **Exmoor** 60.94 317 *e*P P 01 45 43.0 -1.2
PGF **Pioggiola** 60.94 303⇓*i*P P 01 45 44.2 -0.2
comp=Z,207nm,0.9s,mb6.0
PGF **Pioggiola** 60.94 303⇓*i*P P 01 45 44.2 -0.2
comp=Z,103nm,0.9s,mb6.0
PGF **Pioggiola** 60.94 303⇓*i*P P 01 45 44.2 -0.2
PGF pmax pmax
comp=Z,103nm,0.9s,mb6.0
MVIF **Mont Vial** 60.94 305 *e*P P 01 45 44.2 -0.3
REVF **Revere** 60.94 305 *e*P P 01 45 44.2 -0.3
LDF **La Druitiere** 61.11 313 *e*P P 01 45 44.1 -1.4
comp=Z,35nm,0.6s,mb5.3
LDF **La Druitiere** 61.11 313 *e*P P 01 45 44.1 -1.4
comp=Z,17nm,0.6s,mb5.4
LDF **La Druitiere** 61.11 313 *e*P P 01 45 44.1 -1.4
LDF pmax pmax
comp=Z,17nm,0.6s,mb5.3
FLN **La Foliniere** 61.16 313 *e*P P 01 45 44.5 -1.3
comp=Z,197nm,1.1s,mb5.9,baz=43
FLN *e*MLR MLR
comp=Z,31µm,19.5s,MS6.2
FLN **La Foliniere** 61.16 313 *e*P P 01 45 44.5 -1.3
comp=Z,98nm,1.1s,mb5.8
FLN LR LR
comp=Z,31µm,19.5s,MS6.5
FLN **La Foliniere** 61.16 313 *e*P P 01 45 44.5 -1.3
FLN pmax pmax
comp=Z,99nm,1.1s,mb5.8
FLN MLR MLR
comp=Z,31µm,19.5s,MS6.5
SIT **Sitka** 61.17 32 *e*P P 01 45 47.5 +1.7
comp=Z,557nm,2.2s,mb6.3
SIT **Sitka** 61.17 32 *e*P P 01 45 47.5 +1.7
SIT pmax pmax
comp=Z,557nm,2.2s,mb6.3
CALN **Calern** 61.18 305 *e*P P 01 45 45.4 -0.7
CALN **Calern** 61.18 305 *e*P P 01 45 45.4 -0.7
BGF **Bois d'Agland** 61.19 309 *e*P P 01 45 45.4 -0.7
comp=Z,125nm,0.9s,mb5.7
BGF **Bois d'Agland** 61.19 309 *e*P P 01 45 45.4 -0.7
comp=Z,62nm,0.9s,mb5.7
BGF **Bois d'Agland** 61.19 309 *e*P P 01 45 45.4 -0.7
BGF pmax pmax
comp=Z,63nm,0.9s,mb5.8
PLDF **La Plantade** 61.23 309 *e*P P 01 45 46.2 -0.2
SSB **Saint Sauveur** 61.27 307 *e*P P 01 45 45.7 -1.0
comp=Z,108nm,1.6s,mb5.7
SSB LR LR
comp=Z,48µm,20.0s,MS6.7
SSB **Saint Sauveur** 61.27 307 *e*P P 01 45 45.7 -1.0

SSB pmax pmax
comp=Z,108nm,1.6s,mb5.7
SSB MLR MLR
comp=Z,48µm,20.0s,MS6.7
HTL Hartland 61.28 317 *e*P **P 01 45 45.9 -0.8**
HTL AMB AMB 01 45 48.9
comp=Z,126nm,3.9s
HTL AMS AMS 02 16 00.5
comp=Z,64µm,13.3s,MS7.0
AGO Saint Agoulin 61.41 309 *e*P **P 01 45 47.1 -0.5**
SSY Sortino 61.41 295 P **P 01 45 48.3 +0.6**
FRF La Foret Royal 61.44 305⇓*i*P **P 01 45 46.7 -1.1**
comp=Z,184nm,1.1s,mb5.8
FRF La Foret Royal 61.44 305⇓*i*P **P 01 45 46.7 -1.1**
comp=Z,92nm,1.1s,mb5.8
FRF La Foret Royal 61.44 305⇓*i*P **P 01 45 46.7 -1.1**
FRF pmax pmax
comp=Z,92nm,1.1s,mb5.8
DYA Yadsworthy 61.46 316 AMS AMS 02 16 11.6
comp=Z,65µm,13.2s,MS7.0
MIDW Midway 61.47 80 PFAKE 01 46 00.0 +12
MIDW LR LR
comp=Z,2µm,21.0s,MS5.3
VIVF Saint-Julien-l 61.51 307⇓*i*P **P 01 45 47.6 -0.7**
comp=Z,104nm,1.2s,mb5.5
VIVF Saint-Julien-l 61.51 307⇓*i*P **P 01 45 47.6 -0.7**
comp=Z,52nm,1.2s,mb5.5
VIVF Saint-Julien-l 61.51 307⇓*i*P **P 01 45 47.6 -0.7**
VIVF pmax pmax
comp=Z,52nm,1.2s,mb5.5
VAE Valguarnera 61.56 295 LR LR 02 13 24.8
comp=Z,17µm,19.4s,MS6.2,baz=22,slow=37
GRR Gorron 61.60 313 *e*P **P 01 45 47.4 -1.4**
comp=Z,123nm,1.1s,mb5.7
GRR Gorron 61.60 313 *e*P **P 01 45 47.4 -1.4**
comp=Z,62nm,1.1s,mb5.7
GRR Gorron 61.60 313 *e*P **P 01 45 47.4 -1.4**
GRR pmax pmax
comp=Z,61nm,1.1s,mb5.6
JSA Saint Aubin 61.61 314 *e*P **P 01 45 47.2 -1.6**
JSA AMB AMB 01 45 49.5
comp=Z,109nm,2.1s,mb5.6
JSA AMS AMS 02 15 35.8
comp=Z,57µm,14.2s,MS6.9
LMR La Mourre 61.67 305⇓*i*P **P 01 45 48.3 -1.1**
comp=Z,363nm,1.9s,mb5.9
LMR La Mourre 61.67 305⇓*i*P **P 01 45 48.3 -1.1**
comp=Z,182nm,1.9s,mb5.9
LMR La Mourre 61.67 305⇓*i*P **P 01 45 48.3 -1.1**
LMR pmax pmax
comp=Z,182nm,1.9s,mb5.9
TCF Toulx Ste Croi 61.69 310⇓*i*P **P 01 45 49.0 -0.5**
comp=Z,172nm,1.2s,mb5.8
TCF Toulx Ste Croi 61.69 310⇓*i*P **P 01 45 49.0 -0.5**
comp=Z,86nm,1.2s,mb5.8
TCF Toulx Ste Croi 61.69 310⇓*i*P **P 01 45 49.0 -0.5**
TCF pmax pmax
comp=Z,86nm,1.2s,mb5.8
PYM Petit Puy Mans 61.69 309 *e*P **P 01 45 49.2 -0.3**
SMRF Simiane la Rot 61.69 306⇓*i*P **P 01 45 48.9 -0.6**
comp=Z,89nm,1.0s,mb5.6
SMRF Simiane la Rot 61.69 306⇓*i*P **P 01 45 48.9 -0.6**
comp=Z,89nm,1.0s,mb5.8
HMDC Modica 61.72 295 P **P 01 45 49.4 -0.4**
DLBC Dease Lake 61.74 29⇓*i*P **P 01 45 50.5 +0.9**
RAFF Raffo Rosso 61.77 295 P **P 01 45 50.9 +0.8**
YKA Yellowknife Ar 62.14 19 P **P 01 45 51.6 -0.7**
comp=Z,31nm,0.7s,mb5.6,baz=333,slow=6.6,SNR=46
YKA LR LR 02 14 27.8
comp=Z,940nm,20.6s,MS4.9,baz=65,slow=38
DGI Dorgali Grotta 62.19 300 P **P 01 45 52.6 -0.4**
CCA1 Carnmenellis 62.20 317 AMS AMS 02 16 22.4
comp=Z,54µm,13.4s,MS6.9
SGMF Saint Gilles 62.47 314 *e*P **P 01 45 53.6 -1.1**
comp=Z,473nm,1.8s,mb6.0
SGMF Saint Gilles 62.47 314 *e*P **P 01 45 53.6 -1.1**
comp=Z,237nm,1.8s,mb6.0
SGMF Saint Gilles 62.47 314 *e*P **P 01 45 53.6 -1.1**
SGMF pmax pmax
comp=Z,237nm,1.8s,mb6.0
LASF Ste Croix 62.48 307⇓*i*P **P 01 45 54.5 -0.3**
comp=Z,146nm,1.1s,mb5.7
LASF Ste Croix 62.48 307⇓*i*P **P 01 45 54.5 -0.3**
MFF Saint Martin d 62.58 311 *e*P **P 01 45 54.8 -0.6**
comp=Z,433nm,1.6s,mb6.0
MFF Saint Martin d 62.58 311 *e*P **P 01 45 54.8 -0.6**
comp=Z,216nm,1.6s,mb6.0
MFF Saint Martin d 62.58 311 *e*P **P 01 45 54.8 -0.6**
MFF pmax pmax
comp=Z,216nm,1.6s,mb6.0
WDD Wield Dalam 62.64 294 *e*P **P 01 45 56.2 +0.2**
comp=Z,125nm,0.9s,mb6.0
WDD LR LR
comp=Z,19µm,20.0s,MS6.3
WRAK Wrangell Islan 62.66 31⇓*i*P **P 01 45 56.5 +0.6**
comp=Z,78nm,1.2s,mb5.7
WRAK LR LR
comp=Z,15µm,20.0s,MS6.2
ROSF Rostrenen 62.73 314 *e*P **P 01 45 55.4 -1.0**
comp=Z,459nm,1.8s,mb6.0
ROSF Rostrenen 62.73 314 *e*P **P 01 45 55.4 -1.0**
comp=Z,229nm,1.8s,mb6.0
ROSF Rostrenen 62.73 314 *e*P **P 01 45 55.4 -1.0**
ROSF pmax pmax
comp=Z,229nm,1.8s,mb6.0
RJF Les Rejaudoux 62.73 309 *e*P **P 01 45 56.3 -0.2**
comp=Z,284nm,1.7s,mb5.8
RJF *e*MLR MLR
comp=Z,42µm,20.2s,MS6.3
RJF Les Rejaudoux 62.73 309 *e*P **P 01 45 56.3 -0.2**
comp=Z,142nm,1.7s,mb5.8
RJF LR LR
comp=Z,42µm,20.3s,MS6.6
RJF Les Rejaudoux 62.73 309 *e*P **P 01 45 56.3 -0.2**
RJF pmax pmax
comp=Z,142nm,1.7s,mb5.8
RJF MLR MLR
comp=Z,42µm,20.3s,MS6.6
CAF Calviac 62.74 309 *e*P **P 01 45 56.6 0.0**
comp=Z,78nm,1.0s,mb5.5
CAF Calviac 62.74 309 *e*P **P 01 45 56.6 0.0**
comp=Z,39nm,1.0s,mb5.5
CAF Calviac 62.74 309 *e*P **P 01 45 56.6 0.0**
CAF pmax pmax
comp=Z,39nm,1.0s,mb5.5
VSL Villasalto 62.90 300 *e*P **P 01 45 57.0 -0.7**
comp=Z,59nm,1.0s,mb5.7
VSL LR LR
comp=Z,16µm,19.0s,MS6.2
VAL Valentia 62.93 321⇑*i*S **S 01 54 26.9 -0.3**
QUIF Quistinic 62.99 314 *e*P **P 01 45 57.2 -0.9**
comp=Z,117nm,1.0s,mb5.7
QUIF Quistinic 62.99 314 *e*P **P 01 45 57.2 -0.9**
comp=Z,59nm,1.0s,mb5.7
QUIF Quistinic 62.99 314 *e*P **P 01 45 57.2 -0.9**
QUIF pmax pmax
comp=Z,59nm,1.0s,mb5.7
BST Brest 63.10 315 *e*P **P 01 45 58.8 -0.1**
ATD Arta Tunnel 63.35 254 P **P 01 46 00.2 -0.7**
comp=Z,3.8nm,0.5s,mb4.8,baz=81,slow=4.7,SNR=6.2
LFF La Frestale 63.38 309 *e*P **P 01 46 00.9 +0.1**
comp=Z,732nm,1.7s,mb6.2
LFF La Frestale 63.38 309 *e*P **P 01 46 00.9 +0.1**
comp=Z,366nm,1.7s,mb6.2
LFF La Frestale 63.38 309 *e*P **P 01 46 00.9 +0.1**
LFF pmax pmax
comp=Z,366nm,1.7s,mb6.2
MTLF Montolieu 63.83 307⇓*i*P **P 01 46 03.5 -0.3**
comp=Z,249nm,1.8s,mb5.7
MTLF Montolieu 63.83 307⇓*i*P **P 01 46 03.5 -0.3**
comp=Z,125nm,1.8s,mb5.6
MTLF Montolieu 63.83 307⇓*i*P **P 01 46 03.5 -0.3**
MTLF pmax pmax
comp=Z,125nm,1.8s,mb5.6
COCO West Island 63.90 188 PFAKE 01 46 20.0 +16
COCO LR LR
comp=Z,18µm,20.0s,MS6.3
COCO West Island 63.90 188 P **P 01 46 10.8 +6.4**
comp=Z,245nm,1.1s,mb6.2
SJAF Saint Jean de 64.13 306 *e*P **P 01 46 05.1 -0.6**
SJAF Saint Jean de 64.13 306 *e*P **P 01 46 05.1 -0.6**
EJON La Jonquera 64.15 306 P **P 01 46 05.3 -0.5**
comp=Z,286nm,1.9s,mb6.0
FILF Fillols 64.23 307 *e*P **P 01 46 06.0 -0.4**
FILF Fillols 64.23 307 *e*P **P 01 46 06.0 -0.4**
CARF Carcanieres 64.34 307 *e*P **P 01 46 06.4 -0.8**
CARF Carcanieres 64.34 307 *e*P **P 01 46 06.4 -0.8**
CLLI Llivia 64.58 307 P **P 01 46 08.9 +0.2**
VALF Valcebollere 64.62 307 *e*P **P 01 46 08.9 -0.1**
VALF Valcebollere 64.62 307 *e*P **P 01 46 08.9 -0.1**
MLS Moulis 64.67 308 *e*P **P 01 46 08.4 -0.9**
MLS Moulis 64.67 308 *e*P **P 01 46 08.4 -0.9**
FRB Frobisher Bay 64.80 356 LR LR 02 15 19.2
comp=Z,12µm,20.7s,MS6.1,baz=356,slow=37
DGAR Diego Garcia 64.82 215 PFAKE 01 46 20.0 +9.5
DGAR LR LR
comp=Z,14µm,20.0s,MS6.2
CFON Fontmartina 64.88 306 P **P 01 46 10.6 -0.1**
comp=Z,647nm,3.8s
EPF Esparros 64.98 308 *e*P **P 01 46 10.4 -0.9**
comp=Z,115nm,1.3s,mb5.4
EPF Esparros 64.98 308 *e*P **P 01 46 10.4 -0.9**
comp=Z,58nm,1.3s,mb5.5
EPF Esparros 64.98 308 *e*P **P 01 46 10.4 -0.9**
EPF pmax pmax
comp=Z,58nm,1.3s,mb5.5
CSOR Sort 65.08 307 P **P 01 46 11.8 -0.2**
comp=Z,258nm,1.8s,mb6.0
RESF Ens 65.15 308 *e*P **P 01 46 13.5 +1.1**
RESF Ens 65.15 308 *e*P **P 01 46 13.5 +1.1**
EMIR Miracle 65.23 307 P **P 01 46 12.2 -0.7**
comp=Z,26nm,0.7s,mb5.4
VIEF Viey 65.25 308 *e*P **P 01 46 13.9 +0.9**
VIEF Viey 65.25 308 *e*P **P 01 46 13.9 +0.9**
EBIE Bielsa 65.34 308 P **P 01 46 12.9 -0.7**
comp=Z,221nm,1.5s,mb6.0
ETSF Etsaut 65.52 309⇓*i*P **P 01 46 15.1 +0.3**
comp=Z,81nm,1.0s,mb5.4
ETSF Etsaut 65.52 309⇓*i*P **P 01 46 15.1 +0.3**
comp=Z,41nm,1.0s,mb5.4
ETSF Etsaut 65.52 309⇓*i*P **P 01 46 15.1 +0.3**
ETSF pmax pmax
comp=Z,41nm,1.0s,mb5.4
LARF Larrau 65.62 309 *e*P **P 01 46 15.3 -0.2**
LARF Larrau 65.62 309 *e*P **P 01 46 15.3 -0.2**
KEST Kesra 65.64 297 *e*P **P 01 46 15.4 -0.3**
KEST Kesra 65.64 297 P **P 01 46 15.7 0.0**
comp=Z,7.3nm,1.0s,mb4.7,baz=36,slow=5.7,SNR=10
KEST LR LR 02 17 54.5
comp=Z,11µm,18.4s,MS6.1,baz=166,slow=39
SJPF Ste Jean 65.68 309 *e*P **P 01 46 16.3 +0.4**
comp=Z,50nm,0.9s,mb5.2
SJPF Ste Jean 65.68 309 *e*P **P 01 46 16.3 +0.4**
comp=Z,25nm,0.9s,mb5.2
SJPF Ste Jean 65.68 309 *e*P **P 01 46 16.3 +0.4**
SJPF pmax pmax
comp=Z,25nm,0.9s,mb5.2
EALK Alkurruntz 65.74 309 P **P 01 46 16.9 +0.6**
comp=Z,205nm,1.7s,mb5.9
ELIZ Elizondo 65.79 309 P **P 01 46 17.6 +1.1**
comp=Z,93nm,1.4s,mb5.6
ELIZ Elizondo 65.79 309 P **P 01 46 17.7 +1.1**
ELIZ pmax pmax
comp=Z,93nm,1.4s,mb5.6
EPOB Poblet 65.87 307 P **P 01 46 16.4 -0.7**
comp=Z,329nm,2.2s,mb6.0
CMAH Djebel Manchou 66.05 299 P **P 01 46 17.0 -1.3**
ETOS Mallorca 66.17 304 P **P 01 46 18.9 -0.2**
comp=Z,119nm,1.5s,mb5.7
CAEH 'Ain El Ouahch 66.24 300 P **P 01 46 18.0 -1.6**
ABSA Djebel Ababsia 66.28 299 P **P 01 46 17.0 -2.8**
ESAC San Caprasio 66.36 308 P **P 01 46 20.4 +0.2**
comp=Z,304nm,1.1s,mb6.2
ERTA Horta de San J 66.54 307 P **P 01 46 22.9 +1.5**
comp=Z,309nm,2.1s,mb6.0
CKFL Kef-Lekhel 66.59 299 P **P 01 46 20.0 -1.8**
ELAN Lanestosa 66.65 311 P **P 01 46 22.7 +0.6**
comp=Z,238nm,1.4s,mb6.0
CASM Ain Smara 66.82 299 P **P 01 46 22.0 -1.3**
DFRA Djebel Bou Aff 66.94 300 P **P 01 46 22.4 -1.6**
EMOS Mosqueruela 67.39 307 P **P 01 46 26.6 -0.2**
comp=Z,190nm,1.6s,mb5.9
EARI Arriondas 67.43 312 P **P 01 46 27.1 +0.1**
comp=Z,550nm,2.0s,mb6.2
SET Setif 67.46 300 P **P 01 46 29.0 +1.7**
EIBI Ibiza 67.48 305 P **P 01 46 28.3 +0.9**
comp=Z,340nm,2.5s,mb5.9
AAE Adis Abeba 67.77 256 *e*P **P 01 46 31.7 +2.2**
AAE *e*S S 01 55 33.9 +6.5
ETOR Torete 67.82 308 P **P 01 46 28.8 -0.7**
comp=Z,30nm,1.0s,mb5.3
ETOR Torete 67.82 308 P **P 01 46 28.8 -0.7**
ETOR pmax pmax
comp=Z,30nm,1.0s,mb5.3
ECHE Chera 68.22 307 P **P 01 46 33.9 +1.8**
comp=Z,32nm,1.1s,mb5.3
ECHE Chera 68.22 307 P **P 01 46 33.9 +1.8**
ECHE pmax pmax
comp=Z,32nm,1.1s,mb5.3
EPON Pontenova 68.30 313 P **P 01 46 33.5 +1.0**
comp=Z,658nm,3.0s
EBEN Beniarda 68.52 305 P **P 01 46 36.3 +2.4**
comp=Z,307nm,2.4s,mb5.8
EMHD Djebel Mahouad 68.77 302 P **P 01 46 31.5 -4.0**
FCC Fort Churchill 68.94 10⇓*i*P **P 01 46 34.9 -1.4**
comp=Z,2.2nm,1.0s
GUD Guadarrama 68.98 309 P **P 01 46 36.9 +0.1**
comp=Z,149nm,1.5s,mb5.7
GUD Guadarrama 68.98 309 P **P 01 46 36.9 +0.1**
GUD pmax pmax
comp=Z,149nm,1.5s,mb5.7
ERUA La Rua 69.03 312 P **P 01 46 37.1 0.0**
comp=Z,27nm,0.7s,mb5.3
ERUA La Rua 69.03 312 P **P 01 46 37.1 0.0**
ERUA pmax pmax
comp=Z,27nm,0.7s,mb5.3
ECAL Calabor 69.19 312 P **P 01 46 37.1 -0.9**
comp=Z,139nm,1.5s,mb5.7
ETOB Tobarra 69.23 306 P **P 01 46 38.9 +0.5**
comp=Z,410nm,2.3s,mb6.0
STS Santiago 69.28 314 P **P 01 46 40.5 +1.9**
comp=Z,22nm,0.6s,mb5.3
STS Santiago 69.28 314 P **P 01 46 40.5 +1.9**
STS pmax pmax
comp=Z,22nm,0.6s,mb5.3
PBRG Braganca 69.30 312 *e*P **P 01 46 39.0 +0.2**
comp=Z,95nm,1.7s,mb5.5
EBNR Beni Rached 69.45 303 P **P 01 46 39.5 -0.3**
ESDC Sonseca Array 69.64 309 P **P 01 46 40.8 0.0**
comp=Z,21nm,0.8s,mb5.1
ESDC Sonseca Array 69.64 309 P **P 01 46 40.8 -0.1**
comp=Z,13nm,0.7s,mb5.0,baz=38,slow=6.0,SNR=80
ESDC LR LR 02 20 01.2
comp=Z,20µm,18.1s,MS6.4,baz=50,slow=38
ESLA Sonseca Array 69.64 309 *e*P **P 01 46 40.7 -0.2**
comp=Z,86nm,1.6s,mb5.4
ECHA Ech Chlef 69.64 303 P **P 01 46 41.0 0.0**
MSEY Mahe Island 69.71 233 PFAKE 01 46 50.0 +8.4
MSEY LR LR
comp=Z,10µm,20.0s,MS6.0
EVIA Vianos 69.72 307 P **P 01 46 42.0 +0.6**
comp=Z,63nm,0.9s,mb5.5
EVIA Vianos 69.72 307 P **P 01 46 42.0 +0.6**
EVIA pmax pmax
comp=Z,63nm,0.9s,mb5.5
ELOB Lobios 69.86 313 P **P 01 46 43.0 +0.7**
comp=Z,330nm,2.7s,mb5.8
PAB San Pablo 69.92 309 *e*P **P 01 46 42.6 0.0**
comp=Z,24nm,0.9s,mb5.1
PAB LR LR
comp=Z,21µm,19.0s,MS6.4
PAB San Pablo 69.92 309 *e*P **P 01 46 42.6 0.0**
PAB pmax pmax
comp=Z,24nm,0.9s,mb5.1
PAB MLR MLR
comp=Z,21µm,19.0s,MS6.4
EZAM Zamans 69.93 313 P **P 01 46 42.8 +0.1**
comp=Z,119nm,1.2s,mb5.7
EZAM Zamans 69.93 313 P **P 01 46 42.8 +0.2**
EZAM pmax pmax
comp=Z,119nm,1.2s,mb5.7
EANR 'Ain N'Sour 69.93 303 P **P 01 46 42.5 -0.3**
MVO Moncorvo 69.94 311 *e*P **P 01 46 43.2 +0.5**
comp=Z,116nm,1.6s,mb5.6
MVO *e*S S 01 55 54.5 +2.0
MVO *i*P 02 03 39.8
MVO *e*LQ 02 11 12.5
MVO *e*LR LR 02 14 00.3
comp=Z,13µm,16.0s
PCAB Cabril 69.97 312 *e*P **P 01 46 43.3 +0.4**
comp=Z,173nm,1.4s,mb5.8
PVRL Vila Real 70.17 312 *e*P **P 01 46 44.0 -0.1**
comp=Z,125nm,1.8s,mb5.5
ETRT Tiaret 70.25 302 P **P 01 46 44.5 -0.2**
EPLA Plasencia 70.35 310 P **P 01 46 44.1 -1.1**
comp=Z,227nm,1.7s,mb5.8
EPLA Plasencia 70.35 310 P **P 01 46 44.2 -1.1**
EPLA pmax pmax
comp=Z,227nm,1.7s,mb5.8
EHUE Huescar 70.40 306 P **P 01 46 46.0 +0.4**
comp=Z,155nm,2.0s,mb5.6
EHUE Huescar 70.40 306 P **P 01 46 46.0 +0.4**
EHUE pmax pmax
comp=Z,155nm,2.0s,mb5.6
EQES Quesada 70.64 307 P **P 01 46 47.2 +0.1**
comp=Z,176nm,1.4s,mb5.8
PTO Porto 70.69 312 *e*P **P 01 46 47.7 +0.4**
comp=Z,112nm,2.1s,mb5.4
PVIS Viseu 70.69 312 *e*P **P 01 46 47.6 +0.3**
comp=Z,96nm,1.6s,mb5.5
EBAN Banos Encina 70.72 307 P **P 01 46 47.7 +0.2**
comp=Z,24nm,1.1s,mb5.0
EBAN Banos Encina 70.72 307 P **P 01 46 47.7 +0.2**
EBAN pmax pmax
comp=Z,25nm,1.1s,mb5.1
MTE Manteigas 70.78 311 *e*P **P 01 46 48.0 +0.1**
comp=Z,137nm,1.7s,mb5.6
MTE *e*S S 01 56 03.8 +1.4
MTE *i*P 02 03 52.5
MTE *e*LQ 02 11 39.0
MTE *e*LR LR 02 14 21.6
comp=Z,26µm,20.0s
MTE Manteigas 70.78 311⇓*i*P **P 01 46 48.1 +0.2**
comp=Z,86nm,1.1s,mb5.6
MTE LR LR
comp=Z,25µm,20.0s,MS6.5
EDM Edmonton 70.86 23⇓*i*P **P 01 46 48.2 +0.1**
EADA Adamuz 71.11 308 P **P 01 46 50.5 +0.6**
comp=Z,403nm,2.3s,mb5.9
PCBR Castelo Branco 71.19 311 *e*P **P 01 46 50.5 +0.1**
comp=Z,107nm,1.6s,mb5.5
PMG Port Moresby 71.19 135 PFAKE 01 47 00.0 +9.4
PMG LR LR
comp=Z,2µm,20.0s,MS5.4
PMG Port Moresby 71.19 135 *e*P **P 01 46 52.1 +1.5**
PMG pmax pmax
comp=Z,71nm,2.3s
PMG MLR MLR
comp=Z,2µm,17.0s
ECOG Cogollos-Vega 71.30 307 P **P 01 46 49.8 -1.3**
comp=Z,17nm,0.7s,mb5.1
ECOG Cogollos-Vega 71.30 307 P **P 01 46 49.8 -1.3**
ECOG pmax pmax
comp=Z,17nm,0.7s,mb5.1
ELUQ Luque 71.43 307 P **P 01 46 52.2 +0.4**
comp=Z,9.2nm,0.3s,mb5.2
ELUQ Luque 71.43 307 P **P 01 46 52.2 +0.4**
ELUQ pmax pmax
comp=Z,9.0nm,0.3s,mb5.2
PMRV Marv??o 71.47 311 *e*P **P 01 46 52.6 +0.5**
comp=Z,89nm,1.5s,mb5.5
PMRV *e*S S 01 56 14.0 +3.5
PMRV *i*P 02 04 17.6
PMRV *e*LQ 02 11 36.6
PMRV *e*LR LR 02 15 00.8
comp=Z,44µm,16.0s
ERON Agron 71.62 307 P **P 01 46 52.3 -0.7**
comp=Z,6.6nm,0.5s,mb4.8
EGUA Guajares 71.64 306 P **P 01 46 52.1 -1.0**
comp=Z,156nm,1.0s,mb5.9
EGUA Guajares 71.64 306 P **P 01 46 52.1 -1.1**
EGUA pmax pmax
comp=Z,156nm,1.0s,mb5.9
ELOJ Sierra Loja 71.69 307 P **P 01 46 52.9 -0.6**
comp=Z,18nm,0.8s,mb5.0
ELOJ Sierra Loja 71.69 307 P **P 01 46 52.9 -0.6**
ELOJ pmax pmax
comp=Z,18nm,0.8s,mb5.0
FFC Flin Flon 71.78 16 P **P 01 46 52.4 -1.2**
comp=Z,377nm,1.8s,mb6.0,SNR=16
FFC Flin Flon 71.78 16⇓*i*P **P 01 46 52.6 -1.1**
comp=Z,207nm,1.5s,mb5.8
FFC LR LR
comp=Z,10µm,19.0s,MS6.1
FFC Flin Flon 71.78 16⇓*i*P **P 01 46 52.6 -1.0**
FFC pmax pmax
comp=Z,207nm,1.5s,mb5.8
FFC MLR MLR
comp=Z,10µm,19.0s,MS6.1
PTOM Tomar 71.80 311 *e*P **P 01 46 54.2 +0.1**
comp=Z,78nm,1.9s,mb5.3
EBAD Badajoz 71.83 310 P **P 01 46 54.2 -0.1**
comp=Z,336nm,2.2s,mb5.9
FITZ Fitzroy Crossi 71.96 158 *e*P **P 01 46 53.2 -1.8**
comp=Z,43nm,0.8s,mb5.4
PESTR Estremoz 72.01 310 *e*P **P 01 46 55.5 +0.2**
comp=Z,98nm,1.5s,mb5.5
PESTR *e*S S 01 56 18.2 +1.5
PESTR *i*P 02 04 27.1
PESTR *e*LQ 02 11 06.2
PESTR *e*LR LR 02 14 32.5
comp=Z,34µm,16.0s
PGC Sidney 72.13 31⇓*i*P **P 01 46 56.3 +0.5**
comp=Z,10nm,1.6s,mb4.5
ALMR Almeirim 72.25 311 *e*P **P 01 46 56.4 -0.4**
ALMR Almeirim 72.25 311 *e*P **P 01 46 56.3 -0.5**
A05A Maple Falls 72.25 30⇑*i*P **P 01 46 56.2 -0.4**
baz=72
PBAR Barrancos 72.30 310 *e*P **P 01 46 57.4 +0.3**
comp=Z,163nm,1.9s,mb5.6
PBAR *e*S S 01 56 21.0 +1.0
PBAR *i*P 02 04 33.6
PBAR *e*LQ 02 12 20.0
PBAR *e*LR LR 02 15 54.6
comp=Z,40µm,16.0s
EMIN Mina Concepcio 72.44 309 P **P 01 46 58.0 +0.1**
comp=Z,295nm,2.1s,mb5.8
EMIJ Mijas 72.46 307 P **P 01 46 56.1 -1.9**
comp=Z,51nm,1.0s,mb5.4
EVO Evora 72.48 310 *e*P **P 01 46 57.4 -0.7**
comp=Z,290nm,1.6s,mb5.7
EVO *e*MLR MLR
comp=Z,32µm,19.5s,MS6.3
EVO Evora 72.48 310 *e*P **P 01 46 58.3 +0.2**
comp=Z,107nm,1.8s,mb5.5
EVOP Sao Brissos 72.54 310 *e*PP PP 01 49 40.2 +1.0
EVOP *e*S S 01 56 23.9 +1.2
EVOP *e*S S 01 56 24.0 +1.3
EVOP AMS AMS 02 17 02.8
comp=E,80µm,20.7s
PMAFR Mafra 72.74 311 *e*S S 01 56 28.2 +3.2
PMAFR *e*LQ 02 12 39.9
PMAFR *e*LR LR 02 14 38.4
comp=E,22µm,20.0s
ESPR Espera 72.75 308 P **P 01 46 59.3 -0.5**
comp=E,336nm,2.0s,mb5.9
PBEJ Beja 72.81 310 *e*P **P 01 47 00.6 +0.5**
comp=E,107nm,1.6s,mb5.5
B06A Marblemount 72.86 30⇓P **P 01 46 59.8 -0.4**
baz=73
LIS Lisbon 72.87 311 *e*P **P 01 47 00.1 -0.3**
LIS *e*S S 01 56 26.1 -0.4
LIS *e*S S 01 56 26.2 -0.3
LIS AMS AMS 02 17 05.2
comp=N,60µm,21.0s
LIS Lisbon 72.87 311 *e*P **P 01 47 00.1 -0.3**
LIS *e*S S 01 56 26.1 -0.4
LIS Lisbon 72.87 311 *e*P **P 01 47 00.1 -0.3**
LIS *e*S S 01 56 26.0 -0.5
EJIF Jimena Fronter 72.89 307 P **P 01 46 59.9 -0.7**
comp=N,23nm,1.1s,mb5.0
EJIF Jimena Fronter 72.89 307 P **P 01 46 59.9 -0.7**
EJIF pmax pmax
comp=Z,23nm,1.1s,mb5.0
RPW Rockport 72.92 30 *e*P **P 01 47 00.6 0.0**
comp=Z,67nm,1.3s,mb5.4
JCW Jim Creek 73.01 30 P **P 01 47 01.5 +0.4**
EGRO El Granado 73.02 309 P **P 01 47 01.6 +0.3**
comp=Z,266nm,1.2s,mb5.0
NLWA Neilton Lookou 73.09 32⇓*i*P **P 01 47 02.6 +1.0**
comp=Z,130nm,1.4s,mb5.7
NLWA LR LR
comp=Z,10µm,20.0s,MS6.1
MESJ Messejana 73.13 310 *e*P **P 01 47 01.8 -0.2**
MESJ *e*S S 01 56 30.3 +0.8
MESJ *e*S S 01 56 30.3 +0.8
MESJ AMS AMS 02 17 00.6
comp=E,81µm,16.8s
MESJ Messejana 73.13 310 *e*P **P 01 47 01.8 -0.2**

MESJ eS S 01 56 30.3 +0.8
MESJ Messejana 73.13 310 eP **P 01 47 01.8 -0.2**
MESJ eS S 01 56 30.2 +0.7
PCVE Castro Verde 73.21 310 eP **P 01 47 02.8 +0.3**
comp=E,102nm,2.0s,mb5.4
PCVE eS S 01 56 32.6 +2.2
PCVE i P 02 04 49.9
PCVE eLQ 02 13 10.8
PCVE eLR LR 02 15 42.2
comp=E,60µm,16.0s
PVAQ Vaqueiros 73.24 309 eP **P 01 47 02.9 +0.3**
comp=E,132nm,2.1s,mb5.5
PVAQ eS S 01 56 33.1 +2.4
PVAQ i P 02 04 47.7
PVAQ eLQ 02 12 01.6
PVAQ eLR LR 02 14 23.1
comp=E,22µm,16.0s
PBDV Barranco-do-Ve 73.47 310 eP **P 01 47 04.7 +0.7**
comp=E,162nm,2.0s,mb5.6
PBDV eS S 01 56 37.0 +3.7
PBDV i P 02 04 55.3
PBDV eLQ 02 13 12.8
PBDV eLR LR 02 14 44.7
comp=E,29µm,18.0s
COEN Coen 73.60 140 eP **P 01 47 03.9 -1.0**
comp=E,424nm,1.4s,mb6.2
SCHQ Schefferville 73.62 355 P **P 01 47 03.8 -0.8**
comp=E,43nm,1.0s,mb5.3,baz=17,slow=5.5,SNR=25
SCHQ LR LR 02 22 27.0
comp=E,12µm,18.6s,MS6.2,baz=357,slow=38
B08A Colville Reser 73.66 29 ⇓P **P 01 47 05.2 +0.2**
baz=73,SNR=47
B08A ⇑S S 01 56 34.2 -0.9
baz=73
MORF Marmelete 73.76 310 eP **P 01 47 06.2 +0.5**
comp=E,78nm,1.7s,mb5.4
MORF eS S 01 56 39.5 +2.9
MORF i P 02 04 59.4
MORF eLQ 02 13 21.8
MORF eLR LR 02 15 54.1
comp=E,33µm,16.0s
MORF Marmelete 73.76 310 eP **P 01 47 05.5 -0.2**
MORF eS S 01 56 37.6 +1.0
MBWA Marble Bar 73.78 165 ⇓*i*P **P 01 47 03.8 -2.0**
comp=E,46nm,0.8s,mb5.5
MBWA LR LR
comp=Z,5µm,22.0s,MS5.8
MBWA Marble Bar 73.78 165 P **P 01 47 05.9 +0.1**
comp=Z,65nm,0.9s,mb5.6
D05A Enumclaw 73.88 31 ⇑P **P 01 47 06.6 +0.4**
baz=74,SNR=23
D05A ⇑S S 01 56 37.4 -0.2
baz=74
E03A Lebam 73.94 32 ⇓P **P 01 47 07.0 +0.4**
baz=74,SNR=6.2
PFVI Vila Bisbo 73.98 310 eP **P 01 47 06.1 -0.9**
comp=Z,148nm,2.2s,mb5.5
PFVI eS S 01 56 40.0 +0.8
PFVI i P 02 05 07.5
PFVI eLQ 02 12 32.5
PFVI eLR LR 02 17 03.9
comp=Z,47µm,16.0s
ETW Entiat 74.03 30 eP **P 01 47 07.4 +0.3**
comp=Z,61nm,0.9s,mb5.5
WTV Waterville 74.06 29 P **P 01 47 07.8 +0.5**
A12A Yaak River Ran 74.19 26 ⇑P **P 01 47 07.9 -0.1**
baz=74,SNR=11
A12A ⇑S S 01 56 40.7 -0.3
baz=74
LON Longmire 74.33 31⇓*i*P **P 01 47 09.2 +0.3**
comp=Z,69nm,1.0s,mb5.5
LON Longmire 74.33 31⇓*i*P **P 01 47 09.2 +0.3**
LON pmax pmax
comp=Z,69nm,1.0s,mb5.5
TBM Table Mountain 74.33 30 P **P 01 47 09.2 +0.3**
NEW Newport 74.39 27 ⇓P **P 01 47 08.9 -0.3**
baz=74,SNR=13
NEW Newport 74.39 27⇓*i*P **P 01 47 09.3 +0.1**
comp=Z,61nm,0.7s,mb5.6
NEW LR LR
comp=Z,13µm,20.0s,MS6.2
NEW Newport 74.39 27⇓*i*P **P 01 47 09.3 +0.1**
NEW pmax pmax
comp=Z,61nm,0.7s
NEW MLR MLR
comp=Z,13µm,20.0s
C09A Chrisman Ranch 74.47 28 ⇓P **P 01 47 10.1 +0.4**
baz=74,SNR=22
F03A Seaside 74.48 32 ⇑P **P 01 47 10.4 +0.6**
baz=74
A13A Flathead Natio 74.53 25 ⇓P **P 01 47 09.7 -0.3**
baz=74
WALA Waterton Lakes 74.54 25⇓*i*P **P 01 47 09.9 -0.2**
comp=Z,1.8nm,1.1s
B12A Libby 74.63 26 ⇑P **P 01 47 10.5 -0.1**
baz=74
NAC Naches 74.65 30 P **P 01 47 11.5 +0.8**
OD2 Odessa Site #2 74.71 29 eP **P 01 47 11.2 +0.1**
comp=Z,34nm,1.0s,mb5.2
LVP Lakeview Peak 74.74 32 P **P 01 47 12.0 +0.7**
A14A Double T Ranch 74.75 25 ⇓P **P 01 47 10.5 -0.8**
baz=74,SNR=37
F04A Amboy 74.85 32 ⇓P **P 01 47 11.9 0.0**
baz=74,SNR=18
A15A Johnson Ranch, 74.92 24 ⇑P **P 01 47 11.8 -0.5**
baz=75,SNR=111
D08A Wollman Farm, 74.95 29 ⇓P **P 01 47 12.3 -0.1**
baz=75,SNR=14
C11A Tepee Creek (N 75.02 27 ⇑P **P 01 47 13.2 +0.4**
baz=75
B13A Whitefish 75.02 26 ⇓P **P 01 47 12.6 -0.3**
baz=75,SNR=19
HEBO Mount Hebo 75.04 33 eP **P 01 47 13.3 +0.3**
comp=Z,292nm,1.7s,mb5.9
E07A Sunnyside 75.11 30 ⇓P **P 01 47 13.4 0.0**
baz=75,SNR=12
MDT Midelt 75.33 304 LR LR 02 22 14.8
comp=Z,19µm,18.8s,MS6.4,baz=137,slow=37
RSW Rattlesnake Hi 75.34 30 eP **P 01 47 15.8 +1.0**
comp=Z,143nm,1.4s,mb5.7
B14A Marquette Ranc 75.35 25 ⇓P **P 01 47 14.3 -0.5**
baz=75,SNR=17
C12B Naegeli Ranch, 75.36 26 ⇑P **P 01 47 15.3 +0.5**
baz=75
HAWA Hanford 75.36 30⇓*i*P **P 01 47 15.2 +0.3**
comp=Z,87nm,1.4s,mb5.5
HAWA LR LR
comp=Z,13µm,20.0s,MS6.2
BLMT Blacktail Moun 75.38 26 eP **P 01 47 15.3 +0.4**
comp=Z,214nm,0.6s,mb6.2
BSMT Bassoo Peak 75.42 26 eP **P 01 47 15.8 +0.7**
comp=Z,88nm,0.5s,mb5.9
E08A Dider Farm, El 75.42 29 ⇓P **P 01 47 15.5 +0.4**
baz=75
A17A Triple J Farms 75.46 23 ⇓P **P 01 47 14.5 -0.9**
baz=75,SNR=84
G04A Mulino 75.47 32 ⇓P **P 01 47 15.4 -0.1**
baz=75,SNR=14
B15A Bradely Ranch, 75.58 24 ⇓P **P 01 47 15.2 -0.9**
baz=75,SNR=25
YBMT Yellow Bay 75.61 25 eP **P 01 47 16.8 +0.5**
comp=Z,122nm,1.4s,mb5.6
C13A Hot Springs 75.63 26 ⇑P **P 01 47 17.1 +0.7**
baz=75,SNR=40
JTMT Jette 75.65 26 eP **P 01 47 17.1 +0.6**
comp=Z,1µm,0.3s
E09A Wood Farm, Sta 75.67 29 ⇑P **P 01 47 16.8 +0.1**
baz=75,SNR=13
A18A Metzger Ranch, 75.69 22 ⇓P **P 01 47 16.0 -0.6**
baz=75,SNR=20
B16A M & M Farms, S 75.70 24 ⇓P **P 01 47 16.4 -0.4**
baz=75
VFP Flag Point 75.71 31 P **P 01 47 17.4 +0.5**
COR Corvallis 75.75 33⇓*i*P **P 01 47 18.1 +0.9**
comp=Z,316nm,1.6s,mb6.0
COR LR LR
comp=Z,7µm,20.0s,MS6.0
COR Corvallis 75.75 33⇓*i*P **P 01 47 18.1 +1.0**
COR pmax pmax
comp=Z,316nm,1.6s,mb6.0
COR MLR MLR
comp=Z,7µm,20.0s,MS6.0
C14A Swan Lake 75.77 25 ⇑P **P 01 47 17.3 +0.1**
baz=76
SWMT Swartz Lake 75.94 26 eP **P 01 47 18.6 +0.4**
comp=Z,116nm,1.2s,mb5.7
D12A Red Ives Fores 75.99 27 ⇓P **P 01 47 18.1 -0.4**
baz=76
H04A Detroit Lake 76.03 32 ⇓P **P 01 47 18.5 -0.2**
baz=76,SNR=16
WRA Warramunga Arr 76.04 151 P **P 01 47 17.2 -1.7**
comp=Z,8.4nm,0.7s,mb4.8,baz=343,slow=6.3,SNR=19
B17A L&G Farms, Che 76.04 23 ⇓P **P 01 47 18.0 -0.8**
baz=76,SNR=20
G06A Carlson Farm, 76.05 31 ⇑P **P 01 47 19.2 +0.4**
baz=76,SNR=21
C15A Salmond Ranch, 76.06 25 ⇑P **P 01 47 18.2 -0.6**
baz=76,SNR=26
B18A Beardsley Farm 76.19 23 ⇓P **P 01 47 19.2 -0.4**
baz=76,SNR=26
D13A Huson 76.20 26 ⇑P **P 01 47 19.6 0.0**
baz=76,SNR=32
LNOR Lincton Mounta 76.21 29 eP **P 01 47 20.7 +1.0**
comp=Z,22nm,1.0s,mb5.0
LNOR Lincton Mounta 76.21 29 eP **P 01 47 20.7 +1.0**
LNOR pmax pmax
comp=Z,22nm,1.0s,mb5.0
C16A Fuhringer Ranc 76.26 24 ⇑P **P 01 47 19.5 -0.5**
baz=76,SNR=19
SLMT Seeley Lake 76.32 25 eP **P 01 47 20.7 +0.3**
comp=Z,120nm,0.8s,mb5.9
F10A Beach Ranch, E 76.43 28 ⇑P **P 01 47 21.6 +0.6**
baz=76,SNR=32
D14A Greenough 76.47 25 ⇓P **P 01 47 21.0 -0.1**
baz=76,SNR=75
E12A Beaver Dam Sad 76.51 27 ⇓P **P 01 47 21.2 -0.2**
baz=76,SNR=28
G08A Pilot Rock 76.53 30 ⇓P **P 01 47 21.9 +0.4**
baz=76,SNR=40
EGMT Eagleton 76.54 23 ⇓P **P 01 47 20.8 -0.8**
baz=76,SNR=26
EGMT Eagleton 76.54 23⇓*i*P **P 01 47 21.1 -0.5**
comp=Z,142nm,1.3s,mb5.7
EGMT LR LR
comp=Z,9µm,19.0s,MS6.1
MSO Missoula 76.58 26 ⇓P **P 01 47 21.9 +0.1**
baz=76,SNR=46
MSO Missoula 76.58 26⇓*i*P **P 01 47 22.0 +0.2**
comp=Z,108nm,1.3s,mb5.6
MSO LR LR
comp=Z,13µm,20.0s,MS6.2
C17A Wharram Farm, 76.66 23 ⇑P **P 01 47 21.8 -0.5**
baz=76,SNR=69
CHMT Chamberlain Mo 76.69 25 eP **P 01 47 22.1 -0.3**
comp=Z,139nm,1.2s,mb5.8
VIPM Ingram Point 76.70 31 P **P 01 47 23.3 +0.7**
KMBO Kilima Mbogo 76.75 251 eP **P 01 47 22.9 -0.3**
comp=Z,28nm,1.1s,mb5.1
KMBO LR LR
comp=Z,13µm,20.0s,MS6.2
KMBO Kilima Mbogo 76.75 251 P **P 01 47 22.7 -0.5**
comp=Z,2.7nm,0.4s,mb4.5,baz=32,slow=5.4,SNR=9.4
KMBO LR LR 02 25 07.8
comp=Z,23µm,18.4s,MS6.5,baz=20,slow=39
KMBO Kilima Mbogo 76.75 251 eP **P 01 47 22.9 -0.3**
KMBO pmax pmax
comp=Z,29nm,1.1s
KMBO MLR MLR
comp=Z,13µm,20.0s
KMBO Kilima Mbogo 76.75 251 P **P 01 47 24.1 +0.9**
SNR=11
D15A Lincoln 76.76 25 ⇓P **P 01 47 23.0 +0.1**
baz=76,SNR=20
E13A Victor 76.87 26 ⇑P **P 01 47 23.4 0.0**
baz=77,SNR=30
C19A Slack Wire Ran 76.98 22 ⇑P **P 01 47 23.6 -0.5**
baz=77,SNR=18
D16A Dana Ranch, Ca 77.03 24 ⇓P **P 01 47 23.7 -0.6**
baz=77,SNR=28
ULM Lac du Bonnet 77.06 13 P **P 01 47 22.6 -1.8**
comp=Z,28nm,0.9s,mb5.2,baz=347,slow=6.4,SNR=13
ULM LR LR 02 24 02.9
comp=Z,14µm,19.2s,MS6.3,baz=345,slow=38
E14A Clinton 77.08 26 ⇓P **P 01 47 24.5 -0.1**
baz=77,SNR=36
D17A Six Diamond Ra 77.13 24 ⇓P **P 01 47 24.4 -0.5**
baz=77,SNR=32
F12A Elk City 77.20 27 ⇓P **P 01 47 25.1 -0.2**
baz=77,SNR=32
HRY Holter Researc 77.25 24 eP **P 01 47 25.7 +0.1**
comp=Z,148nm,1.4s,mb5.7
E15A Deer Lodge 77.30 25 ⇓P **P 01 47 25.9 0.0**
baz=77,SNR=32
D18A Linhart Farms, 77.31 23 ⇓P **P 01 47 25.9 0.0**
baz=77,SNR=18
DGMT Dagmar 77.35 19 ⇑P **P 01 47 25.7 -0.4**
baz=77,SNR=12
DGMT Dagmar 77.35 19⇓*i*P **P 01 47 25.9 -0.2**
DGMT LR LR
comp=Z,10µm,20.0s,MS6.1
HNR Honiara 77.40 123 PFAKE 01 47 40.0 +13
HNR LR LR
comp=Z,2µm,22.0s,MS5.4
F13A Darby 77.43 26 ⇑P **P 01 47 26.4 -0.2**
baz=77,SNR=35
I07A Izee 77.44 31 ⇑P **P 01 47 27.3 +0.6**
baz=77,SNR=29
E16A East Helena 77.45 24 ⇑P **P 01 47 26.8 +0.1**
baz=77,SNR=13
TAM Tamanrasset 77.58 291 eP **P 01 47 27.8 0.0**
comp=Z,22nm,1.0s,mb5.0
TAM LR LR
comp=Z,17µm,19.0s,MS6.4
TAM Tamanrasset 77.58 291 eP **P 01 47 27.8 0.0**
TAM pmax pmax
comp=Z,22nm,1.0s,mb5.0
TAM MLR MLR
comp=Z,17µm,19.0s,MS6.4
HUMO Hull Mountain 77.61 34⇓*i*P **P 01 47 28.4 +0.7**
comp=Z,107nm,1.5s,mb5.5
HUMO LR LR
comp=Z,11µm,22.0s,MS6.1
F14A Wisdom 77.67 26 ⇑P **P 01 47 28.1 +0.1**
baz=77
E17A Martinsdale 77.73 24 ⇑P **P 01 47 28.4 +0.1**
baz=77,SNR=36
G12A Big Creek, Yel 77.75 27 ⇑P **P 01 47 27.3 -1.1**
baz=77
D20A Manuel Ranch, 77.80 22 ⇑P **P 01 47 28.3 -0.4**
baz=78,SNR=22
E18A Harlowton 77.87 23 ⇓P **P 01 47 29.2 +0.1**
baz=78,SNR=19
F15A Butte 77.88 25 ⇑P **P 01 47 28.8 -0.4**
baz=78,SNR=43
LRM Limekiln Ridge 77.91 25 eP **P 01 47 29.4 +0.2**
comp=Z,188nm,1.2s,mb5.9
D21A La Casa Ranch 78.09 21 ⇑P **P 01 47 29.5 -0.8**
baz=78,SNR=14
G13A Cobalt 78.10 27 ⇑P **P 01 47 29.8 -0.5**
baz=78,SNR=56
F16A Kennard Place, 78.16 25 ⇑P **P 01 47 30.7 0.0**
baz=78,SNR=15
G14A Jackson 78.17 26 ⇓P **P 01 47 31.0 +0.2**
baz=78,SNR=13
KIP Kipapa 78.18 71 PFAKE 01 47 40.0 +8.8
KIP LR LR
comp=Z,3µm,20.0s,MS5.7
K05A Summer Lake 78.20 32 ⇑P **P 01 47 31.9 +0.9**
baz=78,SNR=26
E19A Rath Farm, Rou 78.24 23 ⇑P **P 01 47 31.1 0.0**
baz=78,SNR=54
BOZ Bozeman (W) 78.29 25 ⇑P **P 01 47 31.5 +0.1**
baz=78,SNR=75
BOZ Bozeman (W) 78.29 25⇓*i*P **P 01 47 31.6 +0.2**
comp=Z,33nm,0.8s,mb5.3
BOZ LR LR
comp=Z,16µm,19.0s,MS6.4
BOZ Bozeman (W) 78.29 25⇓*i*P **P 01 47 31.6 +0.2**
BOZ pmax pmax
comp=Z,33nm,0.8s,mb5.3
BOZ MLR MLR
comp=Z,16µm,19.0s,MS6.4
DLMT Dillon 78.30 26⇓*i*P **P 01 47 31.8 +0.4**
comp=Z,148nm,1.2s,mb5.8
F17A Fitzpatrick Pl 78.30 24 ⇓P **P 01 47 31.8 +0.4**
baz=78,SNR=49
E20A Meyer Farm, Mu 78.36 22 ⇓P **P 01 47 31.5 -0.3**
baz=78,SNR=19
J08A Circle Bar Ran 78.42 30 ⇓P **P 01 47 32.9 +0.8**
baz=78
H12A Diamond D Ranc 78.42 27 ⇓P **P 01 47 31.4 -0.7**
baz=78,SNR=29
YBH Yreka Blue Hor 78.47 34 eP **P 01 47 33.1 +0.6**
comp=Z,26nm,1.1s,mb5.1
YBH LR LR
comp=Z,11µm,22.0s,MS6.2
YBH Yreka Blue Hor 78.47 34 P **P 01 47 31.9 -0.6**
comp=Z,10nm,1.2s,mb4.6,baz=353,slow=11,SNR=5.2
YBH Yreka Blue Hor 78.47 34 eP **P 01 47 33.1 +0.6**
YBH pmax pmax
comp=Z,26nm,1.1s
YBH MLR MLR
comp=Z,11µm,22.0s
G15A Dillon 78.51 26 ⇓P **P 01 47 32.7 +0.1**
baz=78,SNR=118
F18A Big Timber 78.54 23 ⇑P **P 01 47 32.9 +0.1**
baz=78,SNR=40
E21A Keefer Ranch, 78.56 21 ⇓P **P 01 47 32.0 -0.9**
baz=78
H13A Challis 78.58 27 ⇓P **P 01 47 32.1 -0.9**
baz=78
LAO LASA Array 78.62 21 ⇑P **P 01 47 32.7 -0.5**
baz=78
LAO LASA Array 78.62 21 eP **P 01 47 31.9 -1.2**
comp=Z,174nm,1.5s,mb5.8
LAO LR LR
comp=Z,10µm,19.0s,MS6.2
G16A Moss Hill, Enn 78.63 25 ⇓P **P 01 47 33.0 -0.2**
baz=78,SNR=56
GCMT Greycliff 78.65 23 eP **P 01 47 33.7 +0.3**
comp=Z,91nm,1.1s,mb5.6
MCMT McKenzie Canyo 78.72 26 eP **P 01 47 34.3 +0.5**
comp=Z,460nm,0.8s,mb6.5
F19A Roth Farm, Mol 78.77 23 ⇓P **P 01 47 34.0 0.0**
baz=78,SNR=17
H14A Leadore 78.78 26 ⇑P **P 01 47 34.3 +0.3**
baz=78,SNR=88
G17A Pierce Place, 78.82 24 ⇑P **P 01 47 35.0 +0.6**
baz=78,SNR=38
AGMN Agassiz Nation 78.96 13⇓*i*P **P 01 47 33.4 -1.6**
comp=Z,116nm,1.4s,mb5.6
AGMN LR LR
comp=Z,11µm,20.0s,MS6.2
H15A Lima 78.97 26 ⇑P **P 01 47 35.7 +0.5**
baz=79,SNR=72
F20A Billings 79.01 22 ⇓P **P 01 47 35.1 -0.3**
baz=79,SNR=17
I12A Atlanta 79.03 28 ⇓P **P 01 47 36.1 +0.6**
baz=79,SNR=177
G18A Lazy EL Ranch, 79.12 23 ⇑P **P 01 47 35.5 -0.5**
baz=79,SNR=20
MOD Modoc 79.14 32⇑*i*P **P 01 47 36.5 +0.4**
comp=Z,74nm,1.1s,mb5.5
MOD LR LR
comp=Z,9µm,20.0s,MS6.1
MFID Camas Ranch 79.17 28 ⇑P **P 01 47 36.8 +0.5**
baz=79,SNR=37
WVOR Wild Horse Val 79.20 31⇓*i*P **P 01 47 37.1 +0.6**
comp=Z,59nm,1.1s,mb5.4
WVOR LR LR
comp=Z,9µm,19.0s,MS6.1
WVOR Wild Horse Val 79.20 31⇓*i*P **P 01 47 37.1 +0.6**
WVOR pmax pmax
comp=Z,59nm,1.1s,mb5.4
WVOR MLR MLR
comp=Z,9µm,19.0s,MS6.1
I13A Wildhorse Cree 79.21 27 ⇓P **P 01 47 36.5 0.0**
baz=79,SNR=54
F21A Absaloka Mine, 79.23 22 ⇓P **P 01 47 35.6 -1.0**
baz=79
H16A Russell Place, 79.27 25 ⇓P **P 01 47 37.0 +0.2**
baz=79,SNR=43
YMR Madison River 79.37 25⇓*i*P **P 01 47 37.9 +0.5**
comp=Z,154nm,1.5s,mb5.7
RLMT Red Lodge 79.38 23 ⇑P **P 01 47 37.5 +0.1**
baz=79,SNR=133
RLMT Red Lodge 79.38 23⇓*i*P **P 01 47 37.5 +0.1**
comp=Z,18nm,1.2s,mb4.9
RLMT LR LR
comp=Z,7µm,19.0s,MS6.0
I14A Mackay 79.39 27 ⇑P **P 01 47 37.6 +0.1**
baz=79,SNR=28
YNR Norris Junctio 79.40 24⇓*i*P **P 01 47 38.3 +0.7**
comp=Z,103nm,1.4s,mb5.6
ASAR Alice Springs 79.42 152 P **P 01 47 36.5 -1.2**
ASAR PKKPbc PKKPbc 02 06 26.3 0.0
ASAR ⇑*e* 02 14 25.6
ASAR Alice Springs 79.42 152 P **P 01 47 36.5 -1.2**
comp=Z,16nm,0.8s,mb5.0,baz=352,slow=5.8,SNR=49
ASAR PKKPbc PKKPbc 02 06 26.3 0.0
comp=Z,0.3nm,0.7s,baz=183,slow=1.9,SNR=3.5
ASAR PKP2bc 02 14 25.6
comp=Z,0.5nm,0.8s,baz=172,slow=2.5,SNR=4.3
HLID Hailey 79.45 27 ⇓P **P 01 47 38.2 +0.4**
baz=79,SNR=7.4
HLID Hailey 79.45 27⇓*i*P **P 01 47 38.0 +0.1**
comp=Z,30nm,0.9s,mb5.2
HLID LR LR
comp=Z,15µm,19.0s,MS6.3
G20A Bridger 79.54 23 ⇑P **P 01 47 37.7 -0.6**
baz=79,SNR=81
WDC Whiskeytown Da 79.55 34⇓*i*P **P 01 47 38.0 -0.4**
comp=Z,96nm,1.7s,mb5.5
WDC LR LR
comp=Z,6µm,20.0s,MS5.9
WDC Whiskeytown Da 79.55 34⇓*i*P **P 01 47 38.0 -0.4**
WDC pmax pmax
comp=Z,96nm,1.7s,mb5.5
WDC MLR MLR
comp=Z,6µm,20.0s,MS5.9
I15A Monteview 79.59 26 ⇓P **P 01 47 39.3 +0.7**
baz=79
YFT Old Faithful 79.61 25⇓*i*P **P 01 47 40.5 +1.9**
comp=Z,157nm,1.3s,mb5.8
LKWY Lake 79.61 24⇓*i*P **P 01 47 40.3 +1.6**
comp=Z,210nm,1.4s,mb5.9
LKWY LR LR
comp=Z,31µm,19.0s,MS6.7
LKWY Lake 79.61 24⇓*i*P **P 01 47 40.3 +1.6**
LKWY pmax pmax
comp=Z,210nm,1.4s,mb5.9
LKWY MLR MLR
comp=Z,31µm,19.0s,MS6.7
J13A Cove Ranch, Pi 79.67 27 ⇑P **P 01 47 39.5 +0.5**
baz=79,SNR=38
H17A Grant Village 79.73 25 ⇑P **P 01 47 41.0 +1.7**
baz=79,SNR=21
G21A Lodge Grass 79.78 22 ⇓P **P 01 47 39.0 -0.5**
baz=80,SNR=38
EYMN Ely 79.88 11⇓*i*P **P 01 47 38.5 -1.5**
comp=Z,140nm,1.4s,mb5.7
EYMN LR LR
comp=Z,13µm,20.0s,MS6.3
KIPM Iron Peak 79.90 35 eP **P 01 47 40.3 0.0**
comp=Z,128nm,1.6s,mb5.6
J14A Carey 79.93 27 ⇑P **P 01 47 40.9 +0.5**
baz=80,SNR=24
I16A Newdale 79.97 25 ⇑P **P 01 47 41.6 +1.0**
baz=80,SNR=51
FLWY Flagg Ranch 79.99 25⇓*i*P **P 01 47 41.8 +1.1**
comp=Z,186nm,1.3s,mb5.9
IMW Indian Meadow 80.10 25⇓*i*P **P 01 47 42.2 +0.9**
comp=Z,64nm,0.7s,mb5.7
J15A Blackfoot 80.16 26 ⇓P **P 01 47 42.4 +0.7**
baz=80,SNR=40
I17A Pilgrim Ck. 80.17 25 ⇑P **P 01 47 42.8 +1.1**
baz=80,SNR=14
MBAR Mbarara 80.23 257 PFAKE 01 47 50.0 +7.6
MBAR LR LR
comp=Z,1µm,20.0s,MS5.2
H20A Greybull 80.28 23 ⇓P **P 01 47 41.8 -0.5**
baz=80,SNR=66
MOOW Moose Ponds 80.29 25⇓*i*P **P 01 47 43.1 +0.7**
comp=Z,241nm,1.4s,mb5.9
DCID1 Drake Creek 80.31 25⇓*i*P **P 01 47 43.5 +1.0**
comp=Z,360nm,1.3s,mb6.1
CTA Charters Tower 80.37 140 eP **P 01 47 42.4 -0.5**
comp=Z,16nm,1.1s,mb4.8
CTAO Charters Tower 80.37 140⇓*i*P **P 01 47 41.8 -1.1**
comp=Z,44nm,1.2s,mb5.3
CTAO LR LR
comp=Z,2µm,21.0s,MS5.5
CTAO Charters Tower 80.37 140⇓*i*P **P 01 47 41.8 -1.1**
CTAO pmax pmax
comp=Z,44nm,1.2s,mb5.3
CTAO MLR MLR
comp=Z,2µm,21.0s,MS5.5
CTAO Charters Tower 80.37 140 P **P 01 47 47.3 +4.4**
comp=Z,29nm,1.5s,mb5.0
H21A Big Horn, Sher 80.38 22 ⇓P **P 01 47 42.7 -0.1**
baz=80,SNR=44
LOHW Long Hollow 80.45 25⇓*i*P **P 01 47 43.8 +0.5**
comp=Z,148nm,1.5s,mb5.7

TPAW Teton Pass 80.47 25⇓iP P 01 47 44.1 +0.8
comp=Z,219nm,1.4s,mb5.9

J16A Bone 80.50 26 ⇑P P 01 47 44.2 +0.7
baz=80,SNR=39

RRI2 Red Ridge 80.51 25⇓iP P 01 47 44.3 +0.7
comp=Z,280nm,1.5s,mb6.0

SNOW Snow King Moun 80.55 25⇓iP P 01 47 44.6 +0.8
comp=Z,94nm,1.3s,mb5.6

I18A Diamond G Ranc 80.57 24 ⇓P P 01 47 44.5 +0.6
baz=80,SNR=13

REDW Red Top Meadow 80.62 25⇓iP P 01 47 44.5 +0.4
comp=Z,170nm,1.4s,mb5.8

J17A Brown Place, J 80.66 25 ⇑P P 01 47 44.9 +0.6
baz=80,SNR=24

CMLA Cha da Macela 80.68 322 eP P 01 47 36.6 -8.0
CMLA eS S 01 57 43.8 -8.1
CMLA eSS SS 02 02 30.3 -33
CMLA eP 02 08 53.4
CMLA eLR LR 02 13 45.6

CMLA Cha da Macela 80.68 322 PFAKE 01 48 00.0 +15
CMLA LR LR
comp=Z,10μm,22.0s,MS6.1

K14A Jones Ranch, D 80.74 27 ⇑P P 01 47 45.7 +0.9
baz=80,SNR=30

I20A Worland 80.76 23 ⇑P P 01 47 44.6 -0.3
baz=80,SNR=19

HOPS Hopland 80.77 35 PFAKE 01 48 00.0 +15
HOPS LR LR
comp=Z,7μm,21.0s,MS6.0

K15A Arbon 80.79 26 ⇓P P 01 47 45.9 +0.9
baz=80,SNR=29

K16A Soda Springs 80.92 26 ⇓P P 01 47 46.5 +0.7
baz=81,SNR=38

POHA Pohakuloa 80.93 70 PFAKE 01 48 00.0 +14
POHA LR LR
comp=Z,3μm,20.0s,MS5.7

J18A Kendall Valley 80.98 25 ⇑P P 01 47 46.4 +0.4
baz=81,SNR=33

I21A Big Trails, Te 81.09 22 ⇑P P 01 47 46.3 -0.4
baz=81,SNR=84

AHID Auburn Hatcher 81.11 25⇓iP P 01 47 46.6 -0.1
comp=Z,120nm,1.4s,mb5.6
AHID LR LR
comp=Z,12μm,21.0s,MS6.2

K17A Gardner Place, 81.17 25 ⇑P P 01 47 46.8 -0.2
baz=81

L14A Malta 81.19 27 ⇑P P 01 47 47.6 +0.4
baz=81,SNR=29

PAHR Pah Rah Range 81.41 33⇓iP P 01 47 48.6 +0.2
comp=Z,82nm,1.4s,mb5.5

BMN Battle Mountai 81.46 31⇓iP P 01 47 49.4 +0.7
comp=Z,67nm,1.4s,mb5.4
BMN LR LR
comp=Z,9μm,22.0s,MS6.1

BMN Battle Mountai 81.46 31⇓iP P 01 47 49.4 +0.7
BMN pmax pmax
comp=Z,67nm,1.4s,mb5.4
BMN MLR MLR
comp=Z,9μm,22.0s,MS6.1

L15A Malad City 81.46 27 ⇑P P 01 47 48.9 +0.3
baz=81,SNR=50

K18A Toltan Ranch, 81.51 25 ⇓P P 01 47 48.8 -0.1
baz=81,SNR=15

BW06 Boulder Array 81.51 24 ⇓P P 01 47 48.2 -0.7
baz=81,SNR=17

BW06 Boulder Array 81.51 24 eP P 01 47 48.1 -0.8
comp=Z,11nm,0.9s,mb4.8
BW06 LR LR
comp=Z,14μm,19.0s,MS6.3

PDAR Pinedale Array 81.51 24 P P 01 47 47.9 -1.0
comp=Z,7.3nm,1.0s,mb4.6,baz=38,slow=2.8,SNR=17
PDAR PKKPbc PKKPbc 02 06 17.4 -2.5
comp=Z,0.1nm,0.3s,baz=152,slow=4.1,SNR=1.8
PDAR LR LR 02 28 60.0
comp=Z,13μm,18.6s,MS6.3,baz=109,slow=39

RSSD Black Hills 81.53 20⇓iP P 01 47 48.6 -0.4
comp=Z,143nm,1.4s,mb5.7
RSSD LR LR
comp=Z,8μm,20.0s,MS6.1

RSSD Black Hills 81.53 20⇓iP P 01 47 48.6 -0.4
RSSD pmax pmax
comp=Z,143nm,1.4s,mb5.7
RSSD MLR MLR
comp=Z,8μm,20.0s,MS6.1

HVU Hansel Valley 81.56 27⇓iP P 01 47 49.6 +0.4
comp=Z,133nm,1.6s,mb5.6

HVU Hansel Valley 81.56 27⇓iP P 01 47 49.6 +0.4
HVU pmax pmax
comp=Z,133nm,1.6s,mb5.6

MCCM Marconi Confer 81.59 36 PFAKE 01 48 00.0 +11
MCCM LR LR
comp=Z,7μm,20.0s,MS6.0

K19A Absolon Red Bu 81.64 24 ⇑P P 01 47 48.3 -1.2
baz=81,SNR=12

WCN Washoe City 81.65 33 ⇓P P 01 47 50.2 +0.5
baz=81,SNR=17

WCN Washoe City 81.65 33⇓iP P 01 47 50.2 +0.6
comp=Z,114nm,1.6s,mb5.5

WCN Washoe City 81.65 33⇓iP P 01 47 50.3 +0.6
WCN pmax pmax
comp=Z,114nm,1.6s,mb5.5

L16A Fish Haven 81.72 26 ⇑P P 01 47 50.1 +0.1
baz=81,SNR=21

L17A Cokeville 81.79 26 ⇓P P 01 47 50.0 -0.4
baz=82,SNR=13

PQI Presque Isle 81.82 355 eP P 01 47 48.9 -1.6
comp=Z,114nm,1.0s,mb5.8

K20A Yellowstone Ra 81.92 24 ⇑P P 01 47 50.2 -0.9
baz=82,SNR=21

M15A Larsen Ranch, 81.95 27 ⇓P P 01 47 51.2 0.0
baz=82,SNR=38

COWI Conover 81.95 9⇓iP P 01 47 49.3 -1.8
comp=Z,58nm,1.4s,mb5.3
COWI LR LR
comp=Z,11μm,19.0s,MS6.2

HWUT Hardware Ranch 82.06 26⇓iP P 01 47 52.2 +0.4
comp=Z,94nm,0.8s,mb5.8
HWUT LR LR
comp=Z,8μm,20.0s,MS6.1

SPUT South Promonto 82.09 27⇓iP P 01 47 52.3 +0.4
comp=Z,48nm,1.0s,mb5.4

L18A Fontenelle, Gr 82.18 25 ⇑P P 01 47 52.0 -0.4
baz=82,SNR=16

K21A Alcova 82.21 23 ⇑P P 01 47 52.2 -0.4
baz=82,SNR=30

BGU Big Grassy Mou 82.28 28⇓iP P 01 47 53.2 +0.3
comp=Z,149nm,1.4s,mb5.7

K22A Casper 82.37 22 ⇑P P 01 47 52.4 -1.0
baz=82,SNR=17

O12A Currie 82.38 29 ⇑P P 01 47 53.9 +0.4
baz=82,SNR=43

M17A Scullys Gap (B 82.43 26 ⇓P P 01 47 53.4 -0.4
baz=82,SNR=14

N15A Stansbury Isla 82.46 27 ⇓P P 01 47 53.8 -0.1
baz=82

WAKR Walker 82.48 33 eP P 01 47 54.5 +0.5
comp=Z,3.6nm,0.5s,mb4.6

L20A Wamsutter 82.53 24 ⇓P P 01 47 54.0 -0.2
baz=82,SNR=16

CMB Columbia Colle 82.57 34⇓iP P 01 47 54.6 0.0
comp=Z,19nm,0.9s,mb5.1
CMB LR LR
comp=Z,6μm,21.0s,MS5.9

CMB Columbia Colle 82.57 34⇓iP P 01 47 54.6 +0.1
CMB pmax pmax
comp=Z,19nm,0.9s,mb5.1
CMB MLR MLR
comp=Z,6μm,21.0s,MS5.9

M18A Lyman 82.63 25 ⇓P P 01 47 54.6 -0.2
baz=82,SNR=14

P11A Circle Ranch, 82.72 30 ⇑P P 01 47 55.7 +0.4
baz=82,SNR=18

O13A Hicks Ranch, I 82.73 29 ⇑P P 01 47 56.0 +0.6
baz=82

N16A Rees Ranch, Co 82.76 26 ⇓P P 01 47 55.6 +0.1
baz=82

NOQ North Oquirrh 82.79 27⇓iP P 01 47 55.9 +0.2
comp=Z,122nm,1.4s,mb5.7

M19A Rock Springs 82.80 25 ⇓P P 01 47 55.3 -0.4
baz=82,SNR=10

L21A Rawlins 82.82 23 ⇑P P 01 47 54.5 -1.2
baz=82,SNR=9.3

CTU Camp Tracy 82.86 27 eP P 01 47 56.2 +0.2
comp=Z,36nm,1.0s,mb5.3

N17A Moffit Pass 82.88 26 ⇓P P 01 47 55.7 -0.4
baz=83,SNR=26

NVAR Mina Array Bea 82.92 32 P P 01 47 56.6 +0.2
NVAR PKKPbc PKKPbc 02 06 14.8 -1.9
comp=Z,150nm,0.9s,mb5.0,baz=319,slow=4.1,SNR=28
NVAR PKKPbc PKKPbc 02 06 14.8 -1.9
comp=Z,0.3nm,0.6s,baz=108,slow=2.9,SNR=2.9

L22A Ellis Ranch, M 82.98 22 ⇑P P 01 47 56.2 -0.4
baz=83

DUG Dugway 83.02 28 ⇑P P 01 47 56.8 0.0
baz=83,SNR=76

DUG Dugway 83.02 28⇓iP P 01 47 57.1 +0.3
comp=Z,19nm,0.6s,mb5.3
DUG LR LR
comp=Z,8μm,19.0s,MS6.1

DUG Dugway 83.02 28⇓iP P 01 47 57.1 +0.3
DUG pmax pmax
comp=Z,19nm,0.6s,mb5.3
DUG MLR MLR
comp=Z,8μm,19.0s,MS6.1

JLU Jordanelle 83.03 27⇓iP P 01 47 57.1 +0.2
comp=Z,127nm,1.4s,mb5.8

O15A The Old Anders 83.04 27 ⇓P P 01 47 57.2 +0.3
baz=83,SNR=17

P12A McGill 83.06 29 ⇓P P 01 47 57.5 +0.4
baz=83

M20A Sweetwater, Wa 83.06 24 ⇑P P 01 47 57.0 0.0
baz=83,SNR=11

L23A Garrett 83.07 22 ⇓P P 01 47 56.1 -1.0
baz=83,SNR=21

RWWY Rawlins 83.11 23⇓iP P 01 47 56.7 -0.6
comp=Z,73nm,1.4s,mb5.5

M21A Separation Pea 83.16 23 ⇓P P 01 47 56.9 -0.6
baz=83

N18A Larsen Ranch, 83.16 25 ⇓P P 01 47 57.0 -0.5
baz=83

Q10A Clear Creek Ra 83.19 31 ⇑P P 01 47 57.8 0.0
baz=83

DAU Daniels Canyon 83.26 26 eP P 01 47 58.5 +0.4
comp=Z,312nm,0.6s,mb6.5

DAU Daniels Canyon 83.26 26 eP P 01 47 58.5 +0.4
DAU pmax pmax
comp=Z,312nm,0.6s,mb6.5

PKME Peaks-Kenny Pk 83.29 355⇓iP P 01 47 58.1 0.0
comp=Z,64nm,1.0s,mb5.6
PKME LR LR
comp=Z,16μm,20.0s,MS6.4

ECSD EROS Data Cent 83.30 15⇓iP P 01 47 56.9 -1.3
comp=Z,1.4nm,0.6s,mb4.2
ECSD LR LR
comp=Z,14μm,19.0s,MS6.4

L24A Wheatland 83.32 21 ⇑P P 01 47 58.1 -0.3
baz=83

SAO San Andreas Ge 83.33 35 PFAKE 01 48 10.0 +11
SAO LR LR
comp=Z,8μm,20.0s,MS6.1

P13A Bates Ranch, G 83.34 29 ⇓P P 01 47 58.6 0.0
baz=83,SNR=24

N19A John Jarvie Ra 83.37 25 ⇑P P 01 47 58.2 -0.4
baz=83

O16A Springville 83.38 27 ⇓P P 01 47 58.7 0.0
baz=83

Q11A Duckwater 83.40 30 ⇓P P 01 47 59.1 +0.3
baz=83,SNR=18

NLU North Lily Min 83.45 27⇓iP P 01 47 59.2 +0.1
comp=Z,60nm,0.9s,mb5.6

MLAC Mammoth Lakes 83.47 33 ⇑P P 01 48 00.1 +0.9
baz=83

Q12A Willow Creek R 83.48 30 ⇑P P 01 47 59.5 +0.3
baz=83,SNR=33

P14A Drum Mountains 83.50 28 ⇓P P 01 47 59.7 +0.4
baz=83,SNR=26

MPU Maple Canyon 83.52 27⇓iP P 01 47 59.0 -0.4
comp=Z,17nm,0.9s,mb5.2

M22A Cedar Creek Ra 83.53 23 ⇓P P 01 47 58.7 -0.8
baz=83

O17A Robison Place 83.60 26 ⇓P P 01 48 00.5 +0.6
baz=83,SNR=74

TPH Tonopah 83.60 32 PFAKE 01 48 10.0 +10
TPH LR LR
comp=Z,9μm,21.0s,MS6.1

N20A Spence Gulch, 83.66 24 ⇑P P 01 48 00.5 +0.4
baz=83,SNR=47

R10A Warm Springs 83.71 31 ⇑P P 01 48 00.6 +0.2
baz=83,SNR=22

MSNY Massena 83.72 359 eP P 01 48 00.1 -0.3
comp=Z,283nm,1.0s,mb6.3

O18A Roosevelt 83.73 26 ⇑P P 01 48 00.8 +0.3
baz=83,SNR=18

EMMW East Machias 83.74 354⇓iP P 01 47 59.6 -0.8
comp=Z,385nm,1.5s,mb6.3

KLBR Kellerberrin 83.75 168 eP P 01 47 58.8 -1.6
comp=Z,37nm,1.0s,mb5.5

P15A Leamington 83.75 27 ⇑P P 01 48 00.6 0.0
baz=83,SNR=28

Q13A Weber Ranch, 83.80 29 ⇓P P 01 48 01.0 +0.1
baz=84,SNR=15

FRNY Flat Rock 83.87 358 eP P 01 48 00.2 -0.9
comp=Z,15nm,0.9s,mb5.1

R11A Troy Canyon, C 83.88 30 ⇑P P 01 48 01.3 0.0
baz=84,SNR=36

M24A Cheyenne 83.89 21 ⇓P P 01 48 01.6 +0.4
baz=84,SNR=18

P16A Fountain Green 83.89 27 ⇑P P 01 48 01.6 +0.3
baz=84

PHWY Pilot Hill 83.90 22⇓iP P 01 48 01.1 -0.2
comp=Z,102nm,1.4s,mb5.8

SADO Sadowa 83.91 2 P P 01 47 60.0 -1.4
SADO LR LR 02 25 59.8

SADO Sadowa 83.91 2 P P 01 47 60.0 -1.4
comp=Z,25nm,0.8s,mb5.4,baz=357,slow=7.0,SNR=9.2
SADO LR LR 02 25 59.8
comp=Z,10μm,20.6s,MS6.2,baz=6.1,slow=36

N21A Black Mountain 83.92 24 ⇓P P 01 48 01.4 0.0
baz=84,SNR=16

O19A Miners Draw (B 83.94 25 ⇓P P 01 48 01.3 -0.2
baz=84,SNR=21

S10A Tonopah Range, 83.94 31 ⇑P P 01 48 02.3 +0.7
baz=84,SNR=73

RER Riviere de l'E 83.95 225 PFAKE 01 48 10.0 +8.3
RER LR LR
comp=Z,15μm,22.0s,MS6.3

Q14A Sevier Lake (B 84.00 28 ⇓P P 01 48 02.0 +0.1
baz=84,SNR=25

WVL Waterville 84.01 356 eP P 01 48 02.2 +0.3
comp=Z,53nm,1.0s,mb5.6

LONY Lake Ozonia 84.10 359⇓iP P 01 48 01.9 -0.4
comp=Z,37nm,0.9s,mb5.5
LONY LR LR
comp=Z,7μm,21.0s,MS6.0

N22A Wattenberg Ran 84.14 23 ⇑P P 01 48 02.7 +0.1
baz=84,SNR=21

N23A Red Feather La 84.17 22 ⇓P P 01 48 02.7 0.0
baz=84,SNR=20

TIN Tinemaha 84.19 33 ⇑P P 01 48 03.3 +0.4
baz=84

R12A Pony Springs, 84.20 30 ⇑P P 01 48 02.7 -0.2
baz=84,SNR=26

Q15A Fillmore 84.25 28 ⇑P P 01 48 03.4 +0.3
baz=84

P18A Preston Nutter 84.27 26 ⇓P P 01 48 03.5 +0.3
baz=84,SNR=20

P17A Butcher Ranch, 84.27 26 ⇑P P 01 48 03.3 0.0
baz=84,SNR=35

TMUT Trail Mountain 84.31 27 eP P 01 48 02.4 -1.1
comp=Z,104nm,1.3s,mb5.8

O20A White River Ci 84.32 24 ⇑P P 01 48 03.5 0.0
baz=84,SNR=52

LBNH Lisbon 84.42 357⇓iP P 01 48 04.1 +0.2
comp=Z,56nm,1.0s,mb5.7
LBNH LR LR
comp=Z,13μm,20.0s,MS6.3

LBNH Lisbon 84.42 357⇓iP P 01 48 04.1 +0.1
LBNH pmax pmax
comp=Z,56nm,1.0s,mb5.7
LBNH MLR MLR
comp=Z,13μm,20.0s,MS6.3

O21A Pagoda 84.44 24 ⇓P P 01 48 04.2 +0.1
baz=84,SNR=16

S11A Rachel 84.47 31 ⇑P P 01 48 04.5 +0.2
baz=84,SNR=5.1

N24A Carr 84.48 22 ⇓P P 01 48 04.4 +0.1
baz=84

RCTC Rector, Farmer 84.52 34 ⇑P P 01 48 04.4 -0.2
baz=84

GRAC Grapevine Rang 84.53 32 ⇑P P 01 48 05.1 +0.4
baz=84,SNR=12

R13A O'Grain Ranch, 84.53 29 ⇑P P 01 48 05.0 +0.4
baz=84,SNR=12

P19A Cripple Cowboy 84.60 25 ⇑P P 01 48 05.2 +0.3
baz=84

Q16A Castle Valley 84.67 27 ⇑P P 01 48 05.3 0.0
baz=84,SNR=28

SRU San Rafael 84.67 26 ⇑P P 01 48 04.6 -0.7
baz=84,SNR=20

SRU San Rafael 84.67 26⇓iP P 01 48 04.7 -0.6
comp=Z,16nm,0.8s,mb5.2

SRU San Rafael 84.67 26⇓iP P 01 48 04.7 -0.6
SRU pmax pmax
comp=Z,16nm,0.8s,mb5.2

N25A Grover 84.68 21 ⇓P P 01 48 05.4 +0.1
baz=84

MDV Middlebury 84.70 358 eP P 01 48 05.1 -0.2

R14A James Farms, M 84.71 29 ⇑P P 01 48 05.3 -0.2
baz=84

O22A Kremmling 84.72 23 ⇑P P 01 48 05.4 -0.1
baz=84,SNR=33

FORT Forrest 84.73 159 eP P 01 48 03.6 -1.8
comp=Z,96nm,0.7s,mb6.0

NCB Newcomb 84.74 359⇓iP P 01 48 04.9 -0.7
comp=Z,259nm,2.1s,mb6.0
NCB LR LR
comp=Z,6μm,20.0s,MS6.0

MSU Marysvale 84.76 28 eP P 01 48 06.2 +0.4
comp=Z,150nm,0.6s,mb6.3

MSU Marysvale 84.76 28 eP P 01 48 06.2 +0.4
MSU pmax pmax
comp=Z,150nm,0.6s,mb6.3

Q18A Rafter H Ranch 84.79 26 ⇓P P 01 48 05.0 -0.9
baz=84,SNR=33

S12A Delamar Landin 84.79 30 ⇓P P 01 48 06.2 +0.3
baz=84

CWC Cottonwood Cre 84.80 33 ⇓P P 01 48 06.5 +0.5
baz=84,SNR=14

O23A Lake Granby, G 84.83 23 ⇑P P 01 48 06.6 +0.5
baz=84,SNR=16

P20A De Beque 84.88 25 ⇑P P 01 48 06.4 0.0
baz=85,SNR=31

HNH Hanover 84.97 357⇓iP P 01 48 05.8 -0.9
comp=Z,81nm,1.2s,mb5.7

JFWS Jewell Farm 84.98 11⇓iP P 01 48 05.2 -1.6
comp=Z,92nm,1.1s,mb5.8
JFWS LR LR
comp=Z,13μm,19.0s,MS6.3

JFWS Jewell Farm 84.98 11⇓iP P 01 48 05.2 -1.6
JFWS pmax pmax
comp=Z,92nm,1.1s,mb5.8
JFWS MLR MLR
comp=Z,13μm,19.0s,MS6.3

VES Vestal, Richgr 85.00 34 ⇓P P 01 48 06.6 -0.4
baz=85

OGNE Ogallala 85.00 20 ⇑P P 01 48 06.2 -0.8
baz=85

OGNE Ogallala 85.00 20 eP P 01 48 05.5 -1.4
comp=Z,230nm,1.5s,mb6.1
OGNE LR LR
comp=Z,10μm,20.0s,MS6.2

NWAO Narrogin (SRO) 85.00 169 eP P 01 48 06.2 -0.5
comp=Z,42nm,1.2s,mb5.4
NWAO LR LR
comp=Z,4μm,21.0s,MS5.8

NWAO Narrogin (SRO) 85.00 169 eP P 01 48 06.2 -0.5
NWAO pmax pmax
comp=Z,42nm,1.2s
NWAO MLR MLR
comp=Z,4μm,21.0s

T11A Corn Creek, Al 85.01 31 ⇑P P 01 48 07.4 +0.4
baz=85,SNR=38

R15A Junction 85.01 28 ⇓P P 01 48 07.7 +0.6
baz=85,SNR=20

ARUT Antelope Range 85.06 29 eP P 01 48 08.0 +0.7
comp=Z,38nm,1.2s,mb5.4

ARUT Antelope Range 85.06 29 eP P 01 48 08.0 +0.7
ARUT pmax pmax
comp=Z,38nm,1.2s,mb5.4

P21A Newcastle 85.10 24 ⇑P P 01 48 07.3 -0.1
baz=85,SNR=21

O24A Longmont 85.11 22 ⇓P P 01 48 07.7 +0.2
baz=85

DAC Darwin (Calif) 85.11 33 PFAKE 01 48 20.0 +12
DAC LR LR
comp=Z,8μm,21.0s,MS6.1

S13A Holt Ranch, En 85.12 29 ⇓P P 01 48 07.6 0.0
baz=85,SNR=27

SMMC Simmler 85.15 35 ⇓P P 01 48 08.3 +0.5
baz=85

Q19A Hogan Spring (85.16 26 ⇓P P 01 48 07.3 -0.5
baz=85,SNR=28

S14A Cedar City 85.16 29 ⇓P P 01 48 08.3 +0.5
baz=85

R16A Teasdale 85.17 27 ⇑P P 01 48 08.3 +0.5
baz=85,SNR=54

FURC Furnace Creek, 85.18 32 ⇓P P 01 48 08.6 +0.7
baz=85,SNR=23

FFD Franklin Falls 85.18 357 eP P 01 48 07.4 -0.4
comp=Z,113nm,1.3s,mb5.8

P22A Eagle 85.20 23 ⇑P P 01 48 08.1 +0.1
baz=85,SNR=41

R17A Hanksville Air 85.27 27 ⇑P P 01 48 07.9 -0.4
baz=85,SNR=38

ISCO Idaho Springs 85.29 23 ⇑P P 01 48 08.8 +0.4
baz=85,SNR=30

ISCO Idaho Springs 85.29 23⇓iP P 01 48 08.7 +0.3
comp=Z,60nm,1.3s,mb5.6
ISCO LR LR
comp=Z,8μm,22.0s,MS6.1

ISCO Idaho Springs 85.29 23⇓iP P 01 48 08.7 +0.3
ISCO pmax pmax
comp=Z,60nm,1.3s,mb5.6
ISCO MLR MLR
comp=Z,8μm,22.0s,MS6.1

CCUT Cedar City 85.30 29⇓iP P 01 48 08.8 +0.4
comp=Z,58nm,1.0s,mb5.7

ACCN Adirondack Com 85.32 358⇓iP P 01 48 08.3 -0.2
comp=Z,44nm,0.8s,mb5.6

O25A Wiggins 85.34 21 ⇓P P 01 48 08.0 -0.6
baz=85

MPMC Manual Prospec 85.34 33 ⇑P P 01 48 09.4 +0.7
baz=85,SNR=42

ISA Isabella 85.37 34 ⇓P P 01 48 08.4 -0.4
baz=85,SNR=13

ISA Isabella 85.37 34⇓iP P 01 48 08.3 -0.6
comp=Z,47nm,1.5s,mb5.4

ISA Isabella 85.37 34⇓iP P 01 48 08.3 -0.6
ISA pmax pmax
comp=Z,47nm,1.5s,mb5.4

U10A Ash Meadows, A 85.40 32 ⇑P P 01 48 09.9 +0.9
baz=85,SNR=26

Q20A Ridgley Place, 85.42 25 ⇓P P 01 48 08.7 -0.4
baz=85

S15A Panguitch 85.48 28 ⇓P P 01 48 10.8 +1.4
baz=85,SNR=17

R18A Canyonlands Na 85.52 26 ⇑P P 01 48 09.1 -0.5
baz=85,SNR=40

SMCO Snowmass 85.55 24⇓iP P 01 48 10.1 +0.4
comp=Z,142nm,1.3s,mb6.0

PKM Peak Mountain 85.59 35 ⇑P P 01 48 10.7 +0.7
baz=85

SCIA State Center 85.60 13 eP P 01 48 09.0 -0.9
comp=Z,61nm,0.9s,mb5.8
SCIA LR LR
comp=Z,11μm,21.0s,MS6.2

T13A Saint George 85.62 30 ⇓P P 01 48 10.5 +0.4
baz=85,SNR=18

P23A Jefferson 85.64 23 ⇑P P 01 48 10.5 +0.4
baz=85,SNR=23

T12A Moapa 85.64 30 ⇑P P 01 48 11.0 +0.8
baz=85

S16A Weppner Ranch, 85.66 28 ⇑P P 01 48 10.7 +0.4
baz=85,SNR=56

SHPR Sheep Range 85.70 31 eP P 01 48 11.1 +0.6
comp=Z,7nm,0.4s,mb4.8

U11A Corn Creek 85.70 31 ⇓P P 01 48 11.2 +0.7
baz=85,SNR=5.3

Q21A Lamborn Mesa, 85.72 24 ⇓P P 01 48 10.7 +0.1
baz=85,SNR=23

OPO Ambohidratompo 85.72 233 P P 01 48 09.8 -0.9
comp=Z,9nm,0.8s,mb4.6,baz=340,slow=6.9,SNR=5.5

P24A Kohler Place, 85.73 22 ⇓P P 01 48 10.5 -0.1
baz=85

PV04 Paradox Valley 85.78 25⇓iP P 01 48 11.0 +0.1

R19A Curley Farm, L 85.78 26 ⇓P P 01 48 11.3 +0.4
baz=86,SNR=32

LRMC Laurel Mountai 85.81 33 ⇓P P 01 48 11.2 +0.2
baz=86

T14A Hurricane 85.83 29 ⇓P P 01 48 11.6 +0.4
baz=86,SNR=23

Q22A Crested Butte, 85.86 24 ⇑P P 01 48 11.8 +0.5
baz=86,SNR=32

SHOC **Shoshone** 85.89 32 ⇓P P 01 48 11.9 +0.4
baz=86,SNR=31
P25A **Willow Gulch B** 85.90 22 ⇑P P 01 48 11.2 -0.3
baz=86
U12A **Valley of Fire** 85.97 30 ⇑P P 01 48 12.0 +0.2
baz=86,SNR=14
S17A **Black Ridge (B** 85.97 27 ⇑P P 01 48 11.8 0.0
baz=86
TRY **Troy** 85.97 358 ⇓*iP* P 01 48 11.8 0.0
comp=Z,181nm,1.1s,mb6.2
SBC **Santa Barbara** 86.03 35 ⇓P P 01 48 12.5 +0.3
baz=86
ABPO **Ambohimpanom** 86.08 233 PFAKE 01 48 20.0 +7.6
ABPO LR LR
comp=Z,12μm,20.0s,MS6.3
T15A **Red Dirt Ranch** 86.08 29 ⇓P P 01 48 12.4 0.0
baz=86
Q23A **Hartsel** 86.09 23 ⇓P P 01 48 12.4 0.0
baz=86
R20A **Redvale** 86.12 25 ⇓P P 01 48 12.8 +0.3
baz=86,SNR=53
PV01 **Paradox Valley** 86.12 25 *eP* P 01 48 12.7 +0.1
comp=Z,408nm,1.2s,mb6.5
S18A **Hurst Farm, Bl** 86.15 27 ⇓P P 01 48 12.6 -0.1
baz=86,SNR=42
U13A **Pakoon Wash** 86.16 30 ⇑P P 01 48 13.3 +0.5
baz=86,SNR=11
R21A **Cimarron** 86.16 24 ⇓P P 01 48 13.0 +0.3
baz=86,SNR=58
AAM **Ann Arbor** 86.18 6 *eP* P 01 48 12.0 -0.8
AAM LR LR
comp=Z,35nm,0.9s,mb5.6
comp=Z,9μm,20.0s,MS6.1
AAM **Ann Arbor** 86.18 6 *eP* P 01 48 12.0 -0.8
AAM pmax pmax
comp=Z,35nm,0.9s,mb5.6
AAM MLR MLR
comp=Z,9μm,20.0s,MS6.1
Q24A **Divide** 86.19 22 ⇓P P 01 48 12.7 -0.2
baz=86,SNR=11
V11A **Goodsprings** 86.22 31 ⇓P P 01 48 13.8 +0.7
baz=86
OSI **Osito Adit** 86.23 34 ⇑P P 01 48 13.8 +0.7
baz=86
EDW2 **Edwards Air Fo** 86.24 34 ⇑P P 01 48 13.9 +0.7
baz=86,SNR=22
WES **Weston** 86.26 357 *eP* P 01 48 12.8 -0.3
comp=Z,82nm,1.0s,mb5.9
WES **Weston** 86.26 357 *eP* P 01 48 12.8 -0.3
WES pmax pmax
comp=Z,82nm,1.0s,mb5.9
GSC **Goldstone** 86.26 32 ⇑P P 01 48 13.6 +0.3
baz=86,SNR=26
GSC **Goldstone** 86.26 32 ⇑*iP* P 01 48 13.8 +0.4
comp=Z,82nm,1.5s,mb5.7
GSC **Goldstone** 86.26 32 ⇑*iP* P 01 48 13.8 +0.5
GSC pmax pmax
comp=Z,82nm,1.5s,mb5.7
S19A **Harvey Farm, M** 86.33 26 ⇑P P 01 48 13.4 -0.2
baz=86,SNR=21
T16A **Glen Canyon Da** 86.37 28 ⇓P P 01 48 13.1 -0.7
baz=86
QUA2 **Belchertown** 86.39 357 ⇓*iP* P 01 48 13.7 -0.1
comp=Z,163nm,1.1s,mb6.2
U14A **Mt Trumbull** 86.40 29 ⇑P P 01 48 14.5 +0.5
baz=86,SNR=26
TUQ **Turquoise Moun** 86.43 32 ⇓P P 01 48 14.8 +0.7
baz=86
Q25A **Bedland, Calha** 86.45 22 ⇓P P 01 48 13.4 -0.7
baz=86
S20A **Disappointment** 86.46 25 ⇑P P 01 48 15.2 +1.0
baz=86
BSC **Santa Cruz Isl** 86.47 35 ⇑P P 01 48 14.6 +0.3
baz=86
R22A **Saguache, Gunn** 86.50 24 ⇓P P 01 48 15.0 +0.6
baz=86,SNR=25
V12A **Nelson** 86.51 31 ⇓P P 01 48 15.0 +0.4
baz=86,SNR=15
BINY **Binghamton** 86.52 0 ⇓*iP* P 01 48 14.1 -0.4
BINY LR LR
comp=Z,74nm,1.0s,mb5.9
comp=Z,9μm,20.0s,MS6.2
ERPA **Erie** 86.54 3 PFAKE 01 48 30.0 +15
ERPA LR LR
comp=Z,10μm,21.0s,MS6.2
BLG **Laguna Peak** 86.56 35 ⇓P P 01 48 15.0 +0.2
baz=86
T17A **Navajo Res., N** 86.56 27 ⇓P P 01 48 14.7 -0.1
baz=86
RRX **Edison Barstow** 86.58 33 ⇑P P 01 48 15.2 +0.3
baz=86
U15A **North Rim** 86.66 29 ⇑P P 01 48 15.8 +0.5
baz=86,SNR=15
V13A **Grand Canyon W** 86.67 30 ⇑P P 01 48 15.7 +0.4
baz=86,SNR=15
DECC **Green Verdugo** 86.70 34 ⇑P P 01 48 15.5 0.0
baz=86
T18A **Mexican Hat** 86.70 27 ⇑P P 01 48 15.1 -0.4
baz=86,SNR=29
BRYW **Bryant College** 86.73 357 *eP* P 01 48 15.5 0.0
comp=Z,72nm,0.7s,mb6.0
S21A **Coal Bank Pass** 86.77 25 ⇓P P 01 48 16.5 +0.8
baz=86,SNR=72
MWC **Mount Wilson** 86.81 34 *eP* P 01 48 16.3 +0.2
comp=Z,115nm,1.3s,mb6.0
MWC **Mount Wilson** 86.81 34 *eP* P 01 48 16.3 +0.3
MWC pmax pmax
comp=Z,115nm,1.3s,mb6.0
PASC **Pasadena Art C** 86.82 34 ⇓*iP* P 01 48 15.9 -0.1
comp=Z,253nm,1.4s,mb6.3
HEC **Hector,Ludlow** 86.85 32 ⇓P P 01 48 16.8 +0.5
baz=87,SNR=14
W12A **Cal Nev Ari** 86.90 31 ⇓P P 01 48 16.8 +0.4
baz=87
R24A **Sanders Place,** 86.90 23 ⇑P P 01 48 16.3 -0.1
baz=87,SNR=17
S22A **4UR Ranch, Cre** 86.94 24 ⇑P P 01 48 17.1 +0.5
baz=87,SNR=30
BFSC **Mount Baldy Ra** 86.94 34 ⇑P P 01 48 17.0 +0.3
baz=87
U17A **Shonto** 86.98 27 ⇓P P 01 48 17.2 +0.4
baz=87
ALLY **Alegheny Colle** 87.00 3 *eP* P 01 48 15.8 -1.0
comp=Z,136nm,1.1s,mb6.1
MVCO **Mesa Verde** 87.00 26 ⇑P P 01 48 16.7 -0.2
baz=87,SNR=20
MVCO **Mesa Verde** 87.00 26 ⇓*iP* P 01 48 17.0 +0.1
comp=Z,94nm,1.4s,mb5.8
MVCO LR LR
comp=Z,9μm,20.0s,MS6.2
LDFC **Landfair** 87.03 31 *eP* P 01 48 17.0 0.0
comp=Z,29nm,0.4s,mb5.9
GMRC **Granite Mounta** 87.12 32 ⇑P P 01 48 17.9 +0.4
baz=87,SNR=17
V14A **Boquillas Ranc** 87.15 30 ⇑P P 01 48 18.4 +0.8
baz=87,SNR=38
BBRC **Big Bear Solar** 87.17 33 ⇓P P 01 48 18.3 +0.6
baz=87
R25A **Fountain Ranch** 87.18 22 ⇓P P 01 48 16.9 -0.9
baz=87,SNR=26
S23A **Nye Farm, Mont** 87.18 24 ⇑P P 01 48 18.4 +0.6
baz=87
FMP **Fort Macarthur** 87.19 34 ⇑P P 01 48 17.8 -0.1
baz=87
T19A **Beclabito** 87.22 26 ⇓P P 01 48 18.0 0.0
baz=87,SNR=38
V15A **Kaibab Nationa** 87.26 29 ⇑P P 01 48 19.1 +0.9
baz=87,SNR=40
U16A **Tuba City** 87.27 28 ⇓P P 01 48 18.6 +0.4
baz=87,SNR=27
SDCO **Great Sand Dun** 87.27 23 ⇑P P 01 48 17.9 -0.2
baz=87,SNR=45
SDCO **Great Sand Dun** 87.27 23 ⇓*iP* P 01 48 17.9 -0.3
SDCO LR LR
comp=Z,32nm,1.0s,mb5.5
comp=Z,10μm,21.0s,MS6.2
U18A **Rough Rock, Ch** 87.37 27 ⇑P P 01 48 18.8 +0.1
baz=87,SNR=13
YLE **Yale** 87.37 358 *eP* P 01 48 18.6 -0.1
comp=Z,41nm,0.7s,mb5.8
HDIL **Hopedale** 87.42 10 ⇓*iP* P 01 48 17.4 -1.4
HDIL LR LR
comp=Z,81nm,1.3s,mb5.8
comp=Z,13μm,19.0s,MS6.4
CIS **Catalina Islan** 87.43 34 ⇑P P 01 48 19.1 +0.1
baz=87
S24A **Houchin Ranch,** 87.44 23 ⇑P P 01 48 19.0 0.0
baz=87,SNR=22

T21A **Navajo Lake** 87.47 25 ⇓P P 01 48 19.5 +0.4
baz=87
NEE2 **Needles Airpor** 87.47 31 ⇓P P 01 48 18.9 -0.3
baz=87
CBKS **Cedar Bluff** 87.52 18 ⇓P P 01 48 18.1 -1.3
baz=87,SNR=5.5
CBKS **Cedar Bluff** 87.52 18 ⇓*iP* P 01 48 18.1 -1.2
comp=Z,118nm,1.3s,mb6.0
CBKS LR LR
comp=Z,12μm,22.0s,MS6.3
CBKS **Cedar Bluff** 87.52 18 ⇓*iP* P 01 48 18.1 -1.3
CBKS pmax pmax
comp=Z,118nm,1.3s,mb6.0
CBKS MLR MLR
comp=Z,12μm,22.0s,MS6.3
W14A **Seligman** 87.54 30 ⇓P P 01 48 20.5 +0.9
baz=87,SNR=12
S25A **Robets Cordova** 87.61 22 ⇑P P 01 48 18.8 -1.0
baz=87,SNR=16
T22A **Edith** 87.61 24 ⇓P P 01 48 20.1 +0.3
baz=87,SNR=17
U19A **Dine' College,** 87.67 26 ⇑P P 01 48 19.8 -0.3
baz=87
MURC **Murrieta** 87.68 33 ⇑P P 01 48 19.8 -0.4
baz=87
PAL **Palisades** 87.70 359 *eP* P 01 48 19.1 -1.1
comp=Z,43nm,0.8s,mb5.7
PAL **Palisades** 87.70 359 *eP* P 01 48 19.1 -1.1
PAL pmax pmax
comp=Z,43nm,0.8s,mb5.7
BELC **Belle Mtn. Jos** 87.72 32 ⇑P P 01 48 21.0 +0.6
baz=87,SNR=11
SCI **San Clemente I** 87.77 35 ⇓P P 01 48 20.4 -0.3
baz=88
WUAZ **Wupatki** 87.78 28 ⇑P P 01 48 21.2 +0.5
baz=88,SNR=18
WUAZ **Wupatki** 87.78 28 ⇓*iP* P 01 48 21.1 +0.5
WUAZ LR LR
comp=Z,64nm,1.1s,mb5.8
comp=Z,6μm,21.0s,MS6.0
U20A **Newcomb** 87.78 26 ⇓P P 01 48 21.0 +0.3
baz=88,SNR=6.7
T23A **Casias Ranch,** 87.81 24 ⇑P P 01 48 21.2 +0.4
baz=88,SNR=21
KSU1 **Kansas State U** 87.82 16 ⇓*iP* P 01 48 19.4 -1.4
comp=Z,34nm,0.9s,mb5.6
KSU1 LR LR
comp=Z,10μm,19.0s,MS6.2
W15A **Williams** 87.82 29 ⇓P P 01 48 21.6 +0.7
baz=88
V17A **Tonalea, Kykot** 87.85 28 ⇑P P 01 48 21.5 +0.5
baz=88,SNR=37
IRM **Iron Mountain** 87.85 32 ⇑P P 01 48 21.6 +0.6
baz=88,SNR=25
CPNY **Central Park** 87.92 359 *eP* P 01 48 20.6 -0.6
comp=Z,69nm,1.1s,mb5.8
PFO **Pinyon Flat Ob** 87.92 33 P P 01 48 22.4 +1.0
comp=Z,210nm,1.3s,mb6.2,SNR=6.3
PFO **Pinyon Flat Ob** 87.92 33 ⇓P P 01 48 21.8 +0.4
baz=88,SNR=14
PFO **Pinyon Flat Ob** 87.92 33 ⇓*iP* P 01 48 21.7 +0.3
comp=Z,66nm,1.3s,mb5.7
PFO LR LR
comp=Z,7μm,20.0s,MS6.1
PFO **Pinyon Flat Ob** 87.92 33 ⇓*iP* P 01 48 21.7 +0.3
PFO pmax pmax
comp=Z,66nm,1.3s,mb5.7
PFO MLR MLR
comp=Z,7μm,20.0s,MS6.1
U21A **Nageezi** 87.97 25 ⇓P P 01 48 21.8 +0.3
baz=88,SNR=28
V18A **Ganado** 88.01 27 ⇓P P 01 48 22.2 +0.4
baz=88,SNR=15
BRNJ **Basking Ridge** 88.03 359 *eP* P 01 48 24.0 +2.2
comp=Z,51nm,0.8s,mb5.8
SSPA **Standing Stone** 88.07 2 ⇓*iP* P 01 48 21.1 -0.9
comp=Z,42nm,0.9s,mb5.7
T25A **Trinidad** 88.11 22 ⇓P P 01 48 21.7 -0.5
baz=88,SNR=17
W16A **Flagstaff** 88.12 29 ⇑P P 01 48 23.1 +0.8
baz=88
BC3 **Big Chuckawall** 88.22 32 ⇑P P 01 48 23.5 +0.7
baz=88,SNR=12
V19A **Window Rock** 88.26 26 ⇓P P 01 48 23.1 +0.2
baz=88
ACSO **Alum Creek Sta** 88.28 5 ⇓*iP* P 01 48 21.9 -1.1
comp=Z,50nm,0.8s,mb5.8
ACSO LR LR
comp=Z,9μm,21.0s,MS6.2
X14A **Yava** 88.29 30 ⇑P P 01 48 24.0 +0.9
baz=88,SNR=8.9
V20A **Brimhall** 88.34 26 ⇓P P 01 48 23.4 0.0
baz=88,SNR=12
109C **Camp Elliot, M** 88.36 34 ⇓P P 01 48 23.3 -0.2
baz=88
W17A **Winslow** 88.38 28 ⇑P P 01 48 24.1 +0.5
baz=88
Y12C **Blythe** 88.43 31 ⇑P P 01 48 24.1 +0.3
baz=88,SNR=9.9
U23A **El Rito** 88.44 24 ⇑P P 01 48 24.1 +0.3
baz=88,SNR=17
X15A **Humboldt** 88.47 29 ⇑P P 01 48 24.7 +0.7
baz=88,SNR=17
V21A **Milan** 88.56 25 ⇓P P 01 48 24.8 +0.4
baz=88
MONP **Monument Peak** 88.59 33 ⇑P P 01 48 25.0 +0.4
baz=88,SNR=12
U24A **Moreno Valley** 88.59 23 ⇓P P 01 48 24.8 +0.3
baz=88,SNR=7.4
Y13A **Salome** 88.60 31 ⇓P P 01 48 25.4 +0.8
baz=88
W18A **Petrified Fore** 88.62 27 ⇑P P 01 48 25.0 +0.3
baz=88,SNR=5.3
V22A **San Miguel Ran** 88.65 25 ⇓P P 01 48 25.1 +0.3
baz=88
BBOO **Buckleboo** 88.66 154 *eP* P 01 48 24.4 -0.1
comp=Z,476nm,1.8s,mb6.5
BAR **Barrett** 88.69 33 *eP* P 01 48 25.2 +0.1
comp=Z,20nm,0.9s,mb5.4
W19A **Sanders** 88.73 27 ⇑P P 01 48 25.6 +0.4
baz=88
Y14A **Wickenburg** 88.75 30 ⇑P P 01 48 25.8 +0.5
baz=88
SWSC **Sam W. Stewart** 88.75 33 ⇓P P 01 48 25.8 +0.4
baz=88
X16A **Lo Mia Camp, P** 88.78 29 ⇓P P 01 48 26.0 +0.5
baz=88,SNR=14
U25A **Circle Dot Ran** 88.81 23 ⇓P P 01 48 25.3 -0.2
baz=88,SNR=15
DVTC **Desert V Tower** 88.91 33 ⇓P P 01 48 26.4 +0.3
baz=89
Y15A **Casa Rosa Ranc** 88.94 30 ⇓P P 01 48 26.6 +0.4
baz=89,SNR=11
W20A **Ramah** 88.96 26 ⇑P P 01 48 26.1 -0.2
baz=89,SNR=16
GLA **Glamis** 88.98 32 ⇓P P 01 48 26.6 +0.2
baz=89,SNR=8.6
GLA **Glamis** 88.98 32 ⇓*iP* P 01 48 26.9 +0.5
comp=Z,89nm,1.4s,mb5.9
GLA **Glamis** 88.98 32 ⇓*iP* P 01 48 26.9 +0.5
GLA pmax pmax
comp=Z,89nm,1.4s,mb5.9
V23A **Ortiz Mt. (NFS** 89.00 24 ⇓P P 01 48 27.6 +1.1
baz=89
MCWV **Mont Chateau** 89.00 3 *eP* P 01 48 25.6 -0.8
comp=Z,33nm,0.7s,mb5.8
MCWV LR LR
comp=Z,14μm,21.0s,MS6.3
X17A **Forest Lakes** 89.04 28 ⇑P P 01 48 27.5 +0.8
baz=89,SNR=9.0
BLO **Bloomington** 89.07 8 *eP* P 01 48 26.0 -0.8
comp=Z,120nm,1.4s,mb6.0
BLO **Bloomington** 89.07 8 *eP* P 01 48 26.0 -0.7
BLO pmax pmax
comp=Z,120nm,1.4s,mb6.0
X18A **Snowflake** 89.11 28 ⇓P P 01 48 27.3 +0.3
baz=89
W21A **San Fidel** 89.20 26 ⇑P P 01 48 27.7 +0.3
baz=89
Z13A **Yuma Proving G** 89.22 31 ⇓P P 01 48 27.7 +0.2
baz=89,SNR=20
V24A **Rampart Ranch,** 89.24 24 ⇓P P 01 48 27.7 +0.1
baz=89,SNR=22
Y16A **Circle Bar Ran** 89.27 29 ⇑P P 01 48 28.2 +0.4
baz=89,SNR=17
Z14A **Wintersburg** 89.30 30 ⇑P P 01 48 28.1 +0.2
baz=89
V25A **Rancho No Teng** 89.30 23 ⇑P P 01 48 27.9 0.0
baz=89,SNR=15
SDMD **Soldier's Deli** 89.31 1 ⇓*iP* P 01 48 26.9 -0.9
comp=Z,45nm,1.3s,mb5.6
OLIL **Olney** 89.35 10 *eP* P 01 48 26.9 -1.1
comp=Z,112nm,1.2s,mb6.1
X19A **St. Johns** 89.40 27 ⇓P P 01 48 28.7 +0.4
baz=89,SNR=5.5
STKA **Stephens Creek** 89.45 149 *eP* P 01 48 26.3 -2.0
comp=Z,24nm,0.9s,mb5.5
STKA **Stephens Creek** 89.45 149 *eP* P 01 48 26.4 -1.9
comp=Z,9.0nm,1.1s,mb5.0
STKA **Stephens Creek** 89.45 149 P P 01 48 26.8 -1.4
comp=Z,7.6nm,0.6s,mb5.2,baz=342,slow=6.7,SNR=8.6
W22A **Albuquerque** 89.45 25 ⇑P P 01 48 29.0 +0.4
baz=89
X20A **Quemado** 89.51 26 ⇑P P 01 48 29.8 +0.9
baz=89,SNR=38
112A **Yuma** 89.53 32 ⇑P P 01 48 29.2 +0.2
baz=89
V26A **Tequesquite Ra** 89.54 22 ⇑P P 01 48 28.5 -0.5
baz=89,SNR=23
W23A **Werner Place,** 89.56 24 ⇑P P 01 48 29.6 +0.5
baz=89,SNR=13
113A **Mohawk Valley,** 89.58 31 ⇑P P 01 48 29.3 +0.1
baz=89,SNR=11
Z15A **Gila River Ind** 89.61 30 ⇑P P 01 48 29.5 +0.2
baz=89
Y17A **Roosevelt** 89.63 29 ⇑P P 01 48 29.7 +0.3
baz=89,SNR=10
CCM **Cathedral Cave** 89.65 12 ⇓*iP* P 01 48 28.2 -1.3
comp=Z,45nm,1.2s,mb5.7
CCM LR LR
comp=Z,12μm,19.0s,MS6.4
CCM **Cathedral Cave** 89.65 12 ⇓*iP* P 01 48 28.2 -1.3
CCM pmax pmax
comp=Z,45nm,1.2s,mb5.7
CCM MLR MLR
comp=Z,12μm,19.0s,MS6.4
ANMO **Albuquerque** 89.68 25 ⇓*iP* P 01 48 30.0 +0.4
comp=Z,37nm,1.0s,mb5.7
ANMO LR LR
comp=Z,10μm,19.0s,MS6.3
ANMO **Albuquerque** 89.68 25 P P 01 48 29.4 -0.2
comp=Z,16nm,1.1s,mb5.2,baz=345,slow=4.5,SNR=30
ANMO **Albuquerque** 89.68 25 ⇓*iP* P 01 48 30.0 +0.4
ANMO pmax pmax
comp=Z,37nm,1.0s
ANMO MLR MLR
comp=Z,10μm,19.0s
W24A **Lazy 6 Ranch,** 89.70 24 ⇓P P 01 48 30.1 +0.4
baz=89,SNR=13
Z16A **Peralta Trail,** 89.78 29 ⇑P P 01 48 30.2 0.0
baz=90
Y18A **Canyon Day Jun** 89.79 28 ⇓P P 01 48 30.7 +0.5
baz=90
X21A **Alamocita Cree** 89.80 26 ⇑P P 01 48 31.2 +1.0
baz=90,SNR=26
FVM **French Village** 89.83 11 ⇓*iP* P 01 48 29.0 -1.3
comp=Z,72nm,1.4s,mb5.8
FVM **French Village** 89.83 11 ⇓*iP* P 01 48 29.0 -1.3
FVM pmax pmax
comp=Z,72nm,1.4s,mb5.8
Y19A **Nutrioso** 89.85 27 ⇓P P 01 48 31.6 +1.1
baz=90,SNR=13
114A **Black Gap (USA** 89.88 30 ⇓P P 01 48 31.0 +0.4
baz=90,SNR=9.1
W25A **X Bar L Ranch,** 89.93 23 ⇓P P 01 48 30.7 -0.1
baz=90,SNR=12
X22A **Bernardo** 89.95 25 ⇑P P 01 48 32.6 +1.6
baz=90
LAZ **Ladron** 90.02 25 *eP* P 01 48 32.1 +0.9
comp=Z,216nm,1.2s,mb6.3
WCI **Wyandotte Cave** 90.03 8 ⇓*iP* P 01 48 30.5 -0.7
comp=Z,74nm,1.0s,mb6.0
WCI LR LR
comp=Z,10μm,19.0s,MS6.3
WCI **Wyandotte Cave** 90.03 8 ⇓*iP* P 01 48 30.5 -0.7
WCI pmax pmax
comp=Z,74nm,1.0s,mb6.0
WCI MLR MLR
comp=Z,10μm,19.0s,MS6.3
X23A **Hourglass Bar** 90.10 25 ⇓P P 01 48 32.1 +0.5
baz=90,SNR=15
Z17A **San Carlos Hig** 90.11 28 ⇑P P 01 48 32.1 +0.4
baz=90
115A **Sonoran Desert** 90.13 30 ⇑P P 01 48 32.6 +0.8
baz=90
Y20A **Horse Springs,** 90.14 27 ⇑P P 01 48 33.0 +1.1
baz=90,SNR=13
USIN **University of** 90.16 9 *eP* P 01 48 30.5 -1.3
comp=Z,92nm,1.0s,mb6.1
W26A **Owens Ranch, T** 90.22 23 ⇓P P 01 48 32.2 0.0
baz=90,SNR=14
LPM **Los Pinos Moun** 90.23 25 *eP* P 01 48 32.8 +0.6
comp=Z,14nm,1.0s,mb5.2
SIUC **Southern Illin** 90.24 11 *eP* P 01 48 31.5 -0.7
comp=Z,117nm,1.1s,mb6.1
Y21A **Point of Rocks** 90.24 26 ⇓P P 01 48 33.5 +1.3
baz=90,SNR=16
LENM **Lemitar** 90.28 25 *eP* P 01 48 32.6 +0.1
comp=Z,38nm,1.3s,mb5.6
X24A **Lazy VL Ranch,** 90.31 24 ⇑P P 01 48 33.0 +0.4
baz=90
Y22D **IRIS PASSCAL I** 90.38 25 ⇑P P 01 48 33.8 +0.9
baz=90
BNM **Barren Site** 90.39 25 *eP* P 01 48 33.3 +0.3
comp=Z,593nm,1.2s,mb6.8
W27A **Bowe Ranch, En** 90.41 22 ⇓P P 01 48 32.9 -0.1
baz=90,SNR=14
116A **Eloy** 90.42 30 ⇑P P 01 48 33.7 +0.5
baz=90
Z18A **Geronimo** 90.44 28 ⇓P P 01 48 34.1 +0.9
baz=90
Z19A **T-Link Ranch,** 90.47 27 ⇓P P 01 48 34.3 +0.9
baz=90
Y22A **Socorro** 90.50 25 ⇑P P 01 48 34.3 +0.8
baz=90,SNR=25
CBN **Corbin** 90.50 1 *eP* P 01 48 33.9 +0.5
comp=Z,47nm,1.1s,mb5.7
CBN LR LR
comp=Z,9μm,22.0s,MS6.2
X25A **Clemmons Ranch** 90.53 23 ⇑P P 01 48 33.6 0.0
baz=90,SNR=14
214A **Organ Pipe Nat** 90.64 31 ⇓P P 01 48 34.3 +0.2
baz=90
117A **Oracle** 90.71 29 ⇓P P 01 48 34.9 +0.4
baz=90,SNR=9.7
X26A **CR and CF Fran** 90.72 23 ⇑P P 01 48 34.9 +0.4
baz=90
Y23A **Lovelace Mesa,** 90.75 25 ⇑P P 01 48 34.9 +0.3
baz=90,SNR=12
X27A **F and S Farms,** 90.80 22 ⇑P P 01 48 35.0 +0.1
baz=90
Z20A **Nine Sixteen R** 90.83 27 ⇑P P 01 48 35.9 +0.9
baz=90,SNR=11
118A **Homack Ranch,** 90.87 28 ⇓P P 01 48 35.7 +0.4
baz=91,SNR=5.3
AMTX **Amarillo** 90.90 21 ⇓P P 01 48 35.3 0.0
baz=91
AMTX **Amarillo** 90.90 21 ⇓*iP* P 01 48 35.0 -0.3
comp=Z,40nm,1.1s,mb5.7
AMTX LR LR
comp=Z,8μm,19.0s,MS6.2
Z21A **St. Cloud Mine** 90.90 26 ⇑P P 01 48 36.4 +1.0
baz=91,SNR=15
Y24A **Capitan** 90.91 24 ⇓P P 01 48 35.8 +0.4
baz=91
TUC **Tucson** 90.94 29 ⇓*iP* P 01 48 35.9 +0.3
comp=Z,91nm,2.1s,mb5.7
TUC LR LR
comp=Z,6μm,19.0s,MS6.0
TUC **Tucson** 90.94 29 ⇓*iP* P 01 48 35.9 +0.3
TUC pmax pmax
comp=Z,91nm,2.1s,mb5.7
TUC MLR MLR
comp=Z,6μm,19.0s,MS6.0
119A **Ashpeak Ranch,** 90.95 28 ⇓P P 01 48 36.1 +0.5
baz=91
JSRW **J. Sargeant Re** 91.01 2 *eP* P 01 48 35.7 -0.1
216A **Three Points,** 91.02 30 ⇑P P 01 48 36.5 +0.5
baz=91
Y25A **Mesa, Roswell** 91.10 24 ⇓P P 01 48 36.4 +0.1
baz=91
Z22A **Elephant Butte** 91.14 26 ⇑P P 01 48 37.1 +0.6
baz=91
PARMO **Parma** 91.21 11 *eP* P 01 48 38.8 +2.1
Y26A **Elida** 91.31 23 ⇓P P 01 48 37.2 -0.1
baz=91

Z23A	**Rita Site, Whi**	**91.33**	**25**	⇓P		**P**	**01 48 37.6**	**+0.3**
	baz=91								
120A	**U Bar Ranch, L**	**91.35**	**27**	⇓P		**P**	**01 48 38.1**	**+0.6**
	baz=91								
DZM	**Mont Dzumac**	**91.35**	**125**	*e*P		**P**	**01 48 37.0**	**-0.4**
	comp=Z,128nm,1.4s,mb6.1								
DZM	**Mont Dzumac**	**91.35**	**125**	*e*PP		PP	01 52 10.0	-5.2
	comp=Z,470nm,26.1s								
DZM	**Mont Dzumac**	**91.35**	**125**	*e*PS		PS	02 00 44.0	-2.0
	comp=Z,1μm,29.2s								
DZM				*e*SS		SS	02 05 40.0	-2.2
	comp=Z,3μm,33.4s								
DZM				*e*LR		LR	02 17 55.5		
	comp=Z,6μm,23.4s								
DZM	**Mont Dzumac**	**91.35**	**125**	*e*P		**P**	**01 48 37.3**	**0.0**
	comp=Z,77nm,1.4s,mb5.8								
VWCC	**Virginia Weste**	**91.40**	**3**	*e*P		**P**	**01 48 39.3**	**+1.7**
BLA	**Blacksburg**	**91.42**	**4**	*e*P		**P**	**01 48 37.7**	**0.0**
	comp=Z,27nm,1.2s,mb5.5								
BLA				LR		LR			
	comp=Z,11μm,19.0s,MS6.3								
BLA	**Blacksburg**	**91.42**	**4**	*e*P		**P**	**01 48 37.7**	**0.0**
BLA				pmax		pmax			
	comp=Z,27nm,1.2s,mb5.5								
BLA				MLR		MLR			
	comp=Z,11μm,19.0s,MS6.3								
217A	**Green Valley**	**91.43**	**29**	⇓P		**P**	**01 48 38.5**	**+0.7**
	baz=91,SNR=14								
218A	**Dragoon**	**91.47**	**29**	⇑P		**P**	**01 48 38.6**	**+0.5**
	baz=91								
Z24A	**Sheeppen Canyo**	**91.50**	**24**	⇑P		**P**	**01 48 38.6**	**+0.5**
	baz=91,SNR=18								
Y27A	**Causey**	**91.51**	**22**	⇓P		**P**	**01 48 38.1**	**-0.1**
	baz=91								
MSTX	**Muleshoe**	**91.52**	**22**	⇓P		**P**	**01 48 38.1**	**-0.1**
	baz=91								
121A	**Cookes Peak, D**	**91.60**	**27**	⇑P		**P**	**01 48 39.5**	**+0.9**
	baz=91								
WMOK	**Wichita Mounta**	**91.65**	**19**	⇓*i*P		**P**	**01 48 38.5**	**-0.3**
WMOK	comp=Z,56nm,0.4s,mb6.2			LR		LR			
	comp=Z,12μm,19.0s,MS6.3								
WMOK	**Wichita Mounta**	**91.65**	**19**	⇓*i*P		**P**	**01 48 38.5**	**-0.3**
WMOK				pmax		pmax			
	comp=Z,56nm,0.4s,mb6.2								
WMOK				MLR		MLR			
	comp=Z,12μm,19.0s,MS6.3								
122A	**Conniff Cattle**	**91.66**	**26**	⇑P		**P**	**01 48 39.7**	**+0.8**
	baz=91								
219A	**White Tail Can**	**91.68**	**28**	⇓P		**P**	**01 48 39.3**	**+0.3**
	baz=91,SNR=9.3								
Z25A	**Roswell**	**91.71**	**24**	⇑P		**P**	**01 48 39.1**	**0.0**
	baz=91,SNR=13								
ARMA	**Armidale**	**91.74**	**140**	*e*P		**P**	**01 48 39.0**	**0.0**
ARMA	**Armidale**	**91.74**	**140**	*e*P		**P**	**01 48 38.3**	**-0.7**
	comp=Z,41nm,1.4s,mb5.6								
Z26A	**Caprock**	**91.90**	**23**	⇑P		**P**	**01 48 39.4**	**-0.6**
	baz=92,SNR=11								
123A	**Bell Site, Whi**	**91.92**	**25**	⇓P		**P**	**01 48 40.6**	**+0.5**
	baz=92								
WVT	**Waverly**	**91.96**	**10**	*e*P		**P**	**01 48 39.0**	**-1.3**
WVT	comp=Z,51nm,1.3s,mb5.7			LR		LR			
	comp=Z,9μm,20.0s,MS6.2								
WVT	**Waverly**	**91.96**	**10**	*e*P		**P**	**01 48 39.0**	**-1.2**
WVT				pmax		pmax			
	comp=Z,51nm,1.3s,mb5.7								
WVT				MLR		MLR			
	comp=Z,9μm,20.0s,MS6.2								
220A	**Playas Peak, P**	**91.98**	**27**	⇑P		**P**	**01 48 40.8**	**+0.4**
	baz=92,SNR=11								
318A	**Bisbee**	**91.99**	**29**	⇓P		**P**	**01 48 40.1**	**-0.3**
	baz=92								
Z27A	**Tatum**	**92.04**	**23**	⇓P		**P**	**01 48 40.3**	**-0.4**
	baz=92,SNR=11								
124A	**Stringfield Ra**	**92.07**	**25**	⇓P		**P**	**01 48 41.0**	**+0.2**
	baz=92,SNR=17								
221A	**Mesquite Ranch**	**92.09**	**27**	⇓P		**P**	**01 48 41.6**	**+0.6**
	baz=92								
222A	**Williams Famil**	**92.19**	**26**	⇑P		**P**	**01 48 41.9**	**+0.5**
	baz=92,SNR=7.6								
319A	**Douglas**	**92.26**	**28**	⇑P		**P**	**01 48 42.0**	**+0.3**
	baz=92								
223A	**Chaparral, Ant**	**92.47**	**26**	⇓P		**P**	**01 48 43.0**	**+0.4**
	baz=92								
126A	**Clayton Basin,**	**92.48**	**23**	⇑P		**P**	**01 48 42.2**	**-0.5**
	baz=92								
320A	**Kipp Ranch, An**	**92.51**	**28**	⇑P		**P**	**01 48 43.5**	**+0.6**
	baz=92								
UALR	**University of**	**92.73**	**14**	*e*P		**P**	**01 48 43.2**	**-0.6**
	comp=Z,40nm,1.2s,mb5.7								
MIAR	**Mount Ida**	**92.77**	**15**	⇓*i*P		**P**	**01 48 43.4**	**-0.6**
MIAR	comp=Z,175nm,2.1s,mb6.1			LR		LR			
	comp=Z,10μm,20.0s,MS6.3								
MIAR	**Mount Ida**	**92.77**	**15**	⇓*i*P		**P**	**01 48 43.4**	**-0.6**
MIAR				pmax		pmax			
	comp=Z,175nm,2.1s,mb6.1								
MIAR				MLR		MLR			
	comp=Z,10μm,20.0s,MS6.3								
TKL	**Tuckaleechee C**	**92.78**	**6**	P		**P**	**01 48 42.9**	**-1.2**
	comp=Z,6.1nm,0.9s,mb5.0,baz=59,slow=2.7,SNR=7.6								
225A	**Deer Hill, Car**	**92.79**	**24**	⇑P		**P**	**01 48 44.0**	**-0.1**
	baz=92								
CPCT	**Cooper Cave**	**92.93**	**7**	*e*P		**P**	**01 48 44.7**	**0.0**
226A	**Malaga, Loving**	**93.02**	**24**	⇑P		**P**	**01 48 44.8**	**-0.4**
	baz=93								
MNTX	**Cornudas Mount**	**93.04**	**25**	⇓P		**P**	**01 48 45.4**	**+0.1**
	baz=93								
MNTX	**Cornudas Mount**	**93.04**	**25**	⇓*i*P		**P**	**01 48 45.4**	**+0.2**
MNTX	comp=Z,26nm,1.5s,mb5.4			LR		LR			
	comp=Z,5μm,20.0s,MS6.0								
SWET	**Sewanee**	**93.05**	**8**	*e*P		**P**	**01 48 45.7**	**+0.4**
324A	**Moseley Ranch,**	**93.25**	**25**	⇑P		**P**	**01 48 46.4**	**+0.1**
	baz=93								
227A	**Bennet, Jal**	**93.27**	**23**	⇓P		**P**	**01 48 45.9**	**-0.4**
	baz=93								
OXF	**Oxford**	**93.38**	**11**	*e*P		**P**	**01 48 46.7**	**-0.1**
OXF	comp=Z,26nm,1.0s,mb5.6			LR		LR			
	comp=Z,10μm,19.0s,MS6.3								
OXF	**Oxford**	**93.38**	**11**	*e*P		**P**	**01 48 46.7**	**-0.1**
OXF				pmax		pmax			
	comp=Z,26nm,1.0s,mb5.6								
OXF				MLR		MLR			
	comp=Z,10μm,19.0s,MS6.3								
325A	**Bean Ranch, Si**	**93.46**	**25**	⇓P		**P**	**01 48 47.1**	**-0.1**
	baz=93,SNR=13								
CNNC	**Cliffs of the**	**93.46**	**2**	*e*P		**P**	**01 48 47.0**	**-0.2**
CNNC	comp=Z,36nm,1.1s,mb5.7			LR		LR			
	comp=Z,8μm,20.0s,MS6.2								
XMAS	**Kiritimati**	**93.63**	**82**	PFAKE			01 49 00.0	+12	
XMAS				LR		LR			
	comp=Z,4μm,22.0s,MS5.9								
326A	**Caldwell Ranch**	**93.76**	**24**	⇓P		**P**	**01 48 47.9**	**-0.8**
	baz=94,SNR=11								
327A	**Balmorhea Ranc**	**93.83**	**23**	⇓P		**P**	**01 48 49.3**	**+0.3**
	baz=94								
328A	**Wristen Ranch,**	**93.99**	**23**	⇓P		**P**	**01 48 49.3**	**-0.4**
	baz=94								
425A	**Indio Mountain**	**94.01**	**25**	⇓P		**P**	**01 48 49.9**	**+0.1**
	baz=94,SNR=12								
MSVF	**Nonsavu**	**94.14**	**113**	PFAKE			01 49 00.0	+10	
MSVF				LR		LR			
	comp=Z,2μm,21.0s,MS5.6								
427A	**Hayter Ranch,**	**94.35**	**24**	⇑P		**P**	**01 48 51.2**	**-0.2**
	baz=94								
426A	**McDonald Obser**	**94.37**	**24**	⇓P		**P**	**01 48 50.9**	**-0.5**
	baz=94,SNR=9.3								
428A	**Kincaid Ranch,**	**94.65**	**23**	⇓P		**P**	**01 48 52.9**	**+0.2**
	baz=94								
526A	**Mary Lane Ranc**	**94.93**	**24**	⇓P		**P**	**01 48 53.8**	**-0.2**
	baz=95								
527A	**Woodward Ranch**	**94.97**	**24**	⇑P		**P**	**01 48 54.3**	**+0.1**
	baz=95,SNR=8.7								
GOGA	**Godfrey**	**95.03**	**6**	*e*P		**P**	**01 48 53.4**	**-1.0**
GOGA	comp=Z,31nm,1.3s,mb5.6			LR		LR			
	comp=Z,7μm,19.0s,MS6.1								
GOGA	**Godfrey**	**95.03**	**6**	*e*P		**P**	**01 48 53.4**	**-1.0**
GOGA				pmax		pmax			
	comp=Z,31nm,1.3s,mb5.6								
GOGA				MLR		MLR			
	comp=Z,7μm,19.0s,MS6.1								
LRAL	**Lakeview Retre**	**95.11**	**9**	*e*P		**P**	**01 48 55.0**	**+0.2**
	comp=Z,12nm,1.2s,mb5.2								
LRAL				LR		LR			
	comp=Z,8μm,20.0s,MS6.2								
CAN	**Canberra**	**95.11**	**145**	PFAKE			01 49 00.0	+5.6	
CAN				LR		LR			
	comp=Z,5μm,19.0s,MS6.0								
528A	**Cox Ranch, San**	**95.16**	**23**	⇓P		**P**	**01 48 54.5**	**-0.5**
	baz=95								
NATX	**Nacogdoches**	**95.31**	**16**	PFAKE			01 49 10.0	+14	
NATX				LR		LR			
	comp=Z,14μm,21.0s,MS6.4								
626A	**Big Bend Ranch**	**95.40**	**24**	⇓P		**P**	**01 48 54.9**	**-1.2**
	baz=95								
VBMS	**Vicksburg**	**95.50**	**12**	PFAKE			01 49 10.0	+13	
VBMS				LR		LR			
	comp=Z,14μm,19.0s,MS6.5								
NHSC	**New Hope**	**95.52**	**4**	PFAKE			01 49 10.0	+13	
NHSC				LR		LR			
	comp=Z,10μm,19.0s,MS6.3								
JCT	**Junction City**	**95.55**	**21**	⇓P		**P**	**01 48 56.4**	**-0.4**
	baz=95								
JCT	**Junction City**	**95.55**	**21**	⇓*i*P		**P**	**01 48 56.2**	**-0.6**
	comp=Z,22nm,1.3s,mb5.4								
JCT				LR		LR			
	comp=Z,13μm,22.0s,MS6.4								
JCT	**Junction City**	**95.55**	**21**	⇓*i*P		**P**	**01 48 56.2**	**-0.6**
JCT				pmax		pmax			
	comp=Z,22nm,1.3s,mb5.4								
JCT				MLR		MLR			
	comp=Z,13μm,22.0s,MS6.4								
627A	**Terlingua Ranc**	**95.69**	**24**	⇓P		**P**	**01 48 57.3**	**-0.2**
	baz=95,SNR=17								
TXAR	**Lajitas Array**	**95.73**	**24**	P		**P**	**01 48 56.9**	**-0.8**
	comp=Z,1.6nm,0.9s,mb4.5,baz=349,slow=2.0,SNR=15								
TXAR				PKKPbc		PKKPbc	02 05 41.0	-4.2	
	comp=Z,0.1nm,0.4s,baz=152,slow=5.7,SNR=3.5								
TXAR				PKPPKP			02 13 58.6		
	comp=Z,0.1nm,0.7s,baz=185,slow=9.9,SNR=2.9								
TXAR				LR		LR	02 33 26.3		
	comp=Z,8μm,21.8s,MS6.2,baz=5.0,slow=36								
BBSR	**BB Station**	**95.76**	**351**	PFAKE			01 49 10.0	+12	
BBSR				LR		LR			
	comp=Z,6μm,20.0s,MS6.1								
628A	**Black Gap, Mar**	**95.78**	**23**	⇑P		**P**	**01 48 57.5**	**-0.4**
	baz=96,SNR=9.2								
DBIC	**Dimbokro**	**96.39**	**289**	*e*P		**P**	**01 49 00.3**	**-0.5**
	comp=Z,108nm,2.0s,mb5.9								
DBIC				LR		LR			
	comp=Z,11μm,20.0s,MS6.3								
DBIC	**Dimbokro**	**96.39**	**289**	P		**P**	**01 48 59.6**	**-1.3**
	comp=Z,2.6nm,0.7s,mb4.8,baz=74,slow=8.6,SNR=3.9								
DBIC				LR		LR	02 39 28.0		
	comp=Z,10μm,19.2s,MS6.3,baz=192,slow=40								
DBIC	**Dimbokro**	**96.39**	**289**	*e*P		**P**	**01 49 00.4**	**-0.4**
DBIC				pmax		pmax			
	comp=Z,108nm,2.0s								
DBIC				MLR		MLR			
	comp=Z,11μm,20.0s								
TIC	**Toumodi**	**96.50**	**289**	*e*P		**P**	**01 49 09.2**	**+7.8**
	comp=Z,22nm,0.9s,mb5.6								
TIC	**Toumodi**	**96.50**	**289**	*e*P		**P**	**01 49 09.2**	**+7.8**
TIC				pmax		pmax			
	comp=Z,22nm,0.9s,mb5.6								
KIC	**Kosan Boka**	**96.56**	**289**	*e*P		**P**	**01 49 08.8**	**+7.1**
	comp=Z,27nm,0.9s,mb5.7								
LIC	**Lamto**	**96.84**	**289**	*e*P		**P**	**01 49 10.7**	**+7.8**
	comp=Z,47nm,1.0s,mb5.9								
LIC	**Lamto**	**96.84**	**289**	*e*P		**P**	**01 49 01.1**	**-1.8**
	comp=Z,36nm,1.0s,mb5.5								
LIC				*e*MLR		MLR			
	comp=Z,14μm,19.5s,MS6.2								
LIC	**Lamto**	**96.84**	**289**	*e*P		**P**	**01 49 01.1**	**-1.8**
	comp=Z,18nm,1.0s,mb5.5								
LIC				LR		LR			
	comp=Z,7μm,19.5s,MS6.2								
HKT	**Hockley**	**96.87**	**17**	*e*P		**P**	**01 49 02.8**	**0.0**
	comp=Z,29nm,1.6s,mb5.5								
HKT				LR		LR			
	comp=Z,16μm,19.0s,MS6.5								
HKT	**Hockley**	**96.87**	**17**	*e*P		**P**	**01 49 02.8**	**0.0**
HKT				pmax		pmax			
	comp=Z,29nm,1.6s,mb5.5								
HKT				MLR		MLR			
	comp=Z,16μm,19.0s,MS6.5								
BRAL	**Brewton**	**97.10**	**10**	PFAKE			01 49 10.0	+6.1	
BRAL				LR		LR			
	comp=Z,10μm,22.0s,MS6.2								
AFI	**Afiamalu**	**97.15**	**103**	PFAKE			01 49 10.0	+5.9	
AFI				LR		LR			
	comp=Z,2μm,20.0s,MS5.7								
KVTX	**Kingsville**	**98.79**	**20**	PFAKE			01 49 20.0	+8.5	
KVTX				LR		LR			
	comp=Z,9μm,19.0s,MS6.3								
DWPF	**Disney**	**100.43**	**5**	PFAKE			01 49 30.0	+11	
DWPF				LR		LR			
	comp=Z,7μm,20.0s,MS6.2								
LBTB	**Lobatse**	**102.52**	**246**	PFAKE			01 49 40.0	+12	
LBTB				LR		LR			
	comp=Z,8μm,20.0s,MS6.2								
TSUM	**Tsumeb**	**102.73**	**255**	PFAKE			01 49 40.0	+11	
TSUM				LR		LR			
	comp=Z,15μm,19.0s,MS6.5								
PAF	**Port-aux-Franc**	**104.70**	**202**	PFAKE			01 49 50.0	+12	
PAF				LR		LR			
	comp=Z,9μm,20.0s,MS6.3								
BOSA	**Boshof**	**105.49**	**244**	PFAKE			01 54 10.0	+16	
BOSA				LR		LR			
	comp=Z,9μm,21.0s,MS6.3								
GRTK	**Grand Turk**	**107.03**	**355**	PFAKE			01 54 10.0	+12	
GRTK				LR		LR			
	comp=Z,7μm,19.0s,MS6.2								
TEIG	**Tepich**	**107.61**	**12**	PFAKE			01 54 10.0	+11	
TEIG				LR		LR			
	comp=Z,9μm,21.0s,MS6.3								
GTBY	**Guantanamo Bay**	**108.72**	**359**	PFAKE			01 54 10.0	+9.1	
GTBY				LR		LR			
	comp=Z,7μm,20.0s,MS6.2								
SDDR	**Presa de Saban**	**109.55**	**355**	PFAKE			01 54 10.0	+7.5	
SDDR				LR		LR			
	comp=Z,12μm,20.0s,MS6.5								
ANWB	**Willy Bob**	**109.89**	**346**	PFAKE			01 54 10.0	+6.9	
ANWB				LR		LR			
	comp=Z,5μm,20.0s,MS6.1								
SJG	**San Juan**	**110.02**	**350**	PFAKE			01 54 10.0	+6.6	
SJG				LR		LR			
	comp=Z,6μm,20.0s,MS6.2								
RAR	**Rarotonga**	**110.06**	**99**	PFAKE			01 54 10.0	+6.8	
RAR				LR		LR			
	comp=Z,2μm,19.0s,MS5.8								
MTDJ	**Mount Denham**	**110.40**	**2**	PFAKE			01 54 20.0	+16	
MTDJ				LR		LR			
	comp=Z,5μm,19.0s,MS6.1								
SUR	**Sutherland**	**110.84**	**244**	PFAKE			01 54 20.0	+16	
SUR				LR		LR			
	comp=Z,13μm,22.0s,MS6.5								
SNZO	**South Karori**	**110.99**	**130**	PFAKE			01 54 20.0	+16	
SNZO				LR		LR			
	comp=Z,3μm,19.0s,MS5.9								
FDF	**Fort de France**	**112.66**	**345**	PFAKE			01 54 20.0	+12	
FDF				LR		LR			
	comp=Z,5μm,20.0s,MS6.1								
TAOE	**Nuku Hiva Isla**	**112.75**	**75**	*e*Pdif		Pdif	01 50 12.7	-0.9	
	comp=Z,282nm,26.3s								
TAOE	**Nuku Hiva Isla**	**112.75**	**75**	*e*PP		PP	01 54 49.4	-6.6	
	comp=Z,638nm,27.0s								
TAOE	**Nuku Hiva Isla**	**112.75**	**75**	*e*PS		PS	02 04 28.0	-2.1	
	comp=Z,1μm,27.3s								
TAOE				*e*SS		SS	02 10 37.3	-0.8	
	comp=Z,3μm,26.9s								
TAOE				*e*LR		LR	02 27 53.2		
	comp=Z,8μm,25.5s,baz=330								
TAOE	**Nuku Hiva Isla**	**112.75**	**75**	*e*Pdif		Pdif	01 50 12.7	-0.9	
TAOE				*e*PP		PP	01 54 49.4	-6.6	
TAOE				*e*PS		PS	02 04 28.0	-2.1	
TAOE				*e*SS		SS	02 10 37.3	-0.8	
PPT	**Papeete**	**113.66**	**89**	*e*Pdif		Pdif	01 50 15.3	-2.4	
	comp=Z,226nm,26.8s								
PPT	**Papeete**	**113.66**	**89**	*e*PP		PP	01 54 57.5	-5.1	
	comp=Z,602nm,24.9s								
PPT	**Papeete**	**113.66**	**89**	*e*PS		PS	02 04 36.0	-2.5	
	comp=Z,3μm,26.2s								
PPT				*e*SS		SS	02 10 45.9	-4.5	
	comp=Z,2μm,28.8s								
PPT				*e*LQ			02 23 29.9		
	comp=Z,5μm,30.5s								
PPT				*e*LR		LR	02 28 12.0		
	comp=Z,13μm,35.0s,baz=320								
PPT	**Papeete**	**113.66**	**89**	*e*Pdif		Pdif	01 50 15.3	-2.4	
PPT				*e*PP		PP	01 54 57.5	-5.1	
PPT				*e*PS		PS	02 04 36.0	-2.5	
PPT				*e*SS		SS	02 10 45.9	-4.5	
PPT				*e*LQ			02 23 29.9		
PPT	**Papeete**	**113.66**	**89**	*e*P		Pdif	01 50 15.3	-2.4	
PPT				*e*PS		PS	02 04 36.0	-2.5	
PPT				*e*SS		SS	02 10 45.9	-4.5	
TGUH	**Tegucigalpa,Un**	**113.81**	**12**	PFAKE			01 54 20.0	+9.4	
TGUH				LR		LR			
	comp=Z,5μm,20.0s,MS6.1								
BBGH	**Gun Hill**	**113.94**	**343**	PFAKE			01 54 20.0	+9.1	
BBGH				LR		LR			
	comp=Z,6μm,20.0s,MS6.2								
SHEL	**Horse Pasture**	**114.68**	**275**	PFAKE			01 54 20.0	+7.9	
SHEL				LR		LR			
	comp=Z,6μm,19.0s,MS6.2								
GRGR	**Grenville**	**115.29**	**345**	PFAKE			01 54 20.0	+6.5	
GRGR				LR		LR			
	comp=Z,7μm,21.0s,MS6.2								
CASY	**Casey**	**117.71**	**177**	PFAKE			01 54 30.0	+14	
CASY				LR		LR			
	comp=Z,4μm,20.0s,MS6.1								
JTS	**JuntasAbangare**	**117.81**	**10**	PFAKE			01 54 30.0	+12	
JTS				LR		LR			
	comp=Z,4μm,19.0s,MS6.0								
BCIP	**Isla Barro Col**	**119.33**	**5**	PFAKE			01 54 30.0	+8.7	
BCIP				LR		LR			
	comp=Z,5μm,22.0s,MS6.1								
SDV	**Santo Domingo**	**119.54**	**354**	PFAKE			01 54 30.0	+8.3	
SDV				LR		LR			
	comp=Z,2μm,21.0s,MS5.8								
DRV	**Dumont d'Urvil**	**121.09**	**164**	PP		PP	01 55 59.0	+5.2	
DRV				SP		SP	02 05 41.0	-2.2	
DRV				SS		SS	02 12 28.0	+1.9	
MAW	**Mawson**	**122.90**	**198**	PKP		PKPdf	01 54 24.9	-1.5	
	comp=Z,4.7nm,0.7s,baz=349,slow=1.3,SNR=11								
RCBR	**Riachuelo**	**123.64**	**310**	PFAKE			01 54 40.0	+10	
RCBR				LR		LR			
	comp=Z,9μm,19.0s,MS6.4								
ROSC	**El Rosal**	**123.69**	**358**	PKP		PKPdf	01 54 29.0	-0.7	
	comp=Z,2.1nm,0.4s,baz=270,slow=20,SNR=3.6								
RKT	**Rikitea**	**126.85**	**81**	*e*SS		SS	02 13 39.1	-0.8	
	comp=Z,3μm,35.0s								
RKT				*e*LQ			02 28 56.5		
	comp=Z,3μm,38.2s								
RKT				*e*LR		LR	02 34 16.0		
	comp=Z,5μm,26.2s,baz=313								
PAYG	**Puerto Ayora**	**127.76**	**18**	PFAKE			01 54 50.0	+13	
PAYG				LR		LR			
	comp=Z,4μm,19.0s,MS6.1								
OTAV	**Otavalo**	**128.25**	**3**	*e*PKPdf		PKPdf	01 54 37.9	-0.5	
OTAV				LR		LR			
	comp=Z,3μm,21.0s,MS6.0								
SYO	**Syowa Base**	**129.29**	**205**	⇑*e*PKPdf		PKPdf	01 54 37.6	-0.9	
SBA	**Scott Base**	**134.73**	**165**	PFAKE			01 55 00.0	+11	
SBA				LR		LR			
	comp=Z,4μm,19.0s,MS6.1								
NVL	**N'lazarevskaya**	**138.28**	**210**	*e*PKIKP		PKPdf	01 54 53.6	-1.8	
MAIT	**Maitri**	**138.31**	**210**	*e*PKPdif		PKPdf	01 54 51.1	-4.3	
QSPA	**South Pole Qui**	**141.41**	**180**	*e*PKPpre		PKPpre	01 54 54.1		
QSPA				*e*PKPdf		PKPdf	01 54 59.8	-1.0	
QSPA				LR		LR			
	comp=Z,6μm,20.0s,MS6.3								
QSPA	**South Pole Qui**	**141.41**	**180**	PKhKP		PKPpre	01 54 54.3		
	comp=Z,1.9nm,0.6s,baz=284,slow=2.1,SNR=7.9								
LPAZ	**La Paz**	**144.18**	**347**	*e*PKPdf		PKPdf	01 55 03.9	-3.7	
LPAZ				LR		LR			
	comp=Z,5μm,20.0s,MS6.3								
LPAZ	**La Paz**	**144.18**	**347**	PKP		PKPdf	01 55 04.5	-3.2	
	comp=Z,11nm,0.9s,baz=357,slow=5.5,SNR=18								
SPB	**Sao Paulo**	**144.48**	**311**	*e*PKPdf		PKPdf	01 55 07.8	-0.1	
SPB				LR		LR			
	comp=Z,5μm,19.0s,MS6.3								
VNA1	**Neumayer--Stat**	**144.75**	**212**	*e*		PKPdf	01 55 09.2	+2.2	
RPN	**Rapa Nui**	**144.87**	**59**	PFAKE			01 55 20.0	+11	
RPN				LR		LR			
	comp=Z,3μm,20.0s,MS6.0								
CPUP	**Villa Florida**	**151.07**	**324**	PKPbc		PKPbc	01 55 22.4	-2.1	
	comp=Z,11nm,0.8s,baz=346,slow=2.0,SNR=14								
LCO	**Las Campanas**	**157.05**	**348**	*e*PKPdf		PKPdf	01 55 27.5	+0.4	
LCO				*e*PKPab		PKPab	01 55 58.9	+1.5	
LCO				LR		LR			
	comp=Z,5μm,20.0s,MS6.4								
CFAA	**Coronel Fontan**	**159.19**	**341**	PKP		PKPdf	01 55 28.9	-0.8	
	comp=Z,1.0nm,0.8s,baz=312,slow=12,SNR=6.2								
CFAA				PKPab		PKPab	01 56 05.9	-0.7	
	comp=Z,2.6nm,0.9s,baz=353,slow=4.5,SNR=5.1								
TRQA	**Tornquist**	**163.26**	**319**	*e*PKPdf		PKPdf	01 55 32.0	-1.7	
TRQA				*e*PKPab		PKPab	01 56 23.9	-0.4	
TRQA				LR		LR			
	comp=Z,9μm,21.0s								
PMSA	**Palmer Station**	**165.49**	**200**	PKP		PKPdf	01 55 35.1	+0.3	
PMSA				*e*PKPab		PKPab	01 56 32.4	-0.9	
PMSA				LR		LR			
	comp=Z,4μm,21.0s								
PMSA	**Palmer Station**	**165.49

KSH					*e*pP		01 38 04.8	
KSH					*e*sP		01 38 07.3	
KSH					*e*PP		01 38 09.8	
KSH					S	**Sn**	**01 39 56.3**	**-3.6**
KSH					SS		01 40 11.5	
KSH					pmax	pmax		
	comp=Z,4.0nm,0.8s							
KBL	**Kabul**	**12.62**	**290**		*e*Pn	**Pn**	**01 38 31.4**	**-1.7**
	comp=Z,27nm,0.8s							
WMQ	**Urumqi**	**13.20**	**14**		P	**Pn**	**01 38 43.0**	**+2.1**
WMQ					pP		01 38 46.5	
WMQ					sP		01 38 49.8	
WMQ					PP		01 38 54.0	
UCH	**Uchtor**	**13.27**	**330**		*e*Pn	**Pn**	**01 38 42.2**	**+0.4**
	comp=Z,7.8nm,0.9s							
TKM2	**Tokmak 2**	**13.42**	**334**		*e*Pn	**Pn**	**01 38 45.0**	**+1.2**
	comp=Z,6.4nm,0.9s							
AML	**Almayashu**	**13.56**	**327**		*e*Pn	**Pn**	**01 38 44.6**	**-1.2**
	comp=Z,14nm,0.9s							
AAK	**Ala-Archa**	**13.61**	**331**		Pn	**Pn**	**01 38 49.9**	**+3.4**
AAK	**Ala-Archa**	**13.61**	**331**		Pn	**Pn**	**01 38 49.9**	**+3.4**
	comp=Z,0.4nm,0.3s,baz=177,slow=10,SNR=7.7							
EKS2	**Erkin-Say**	**13.94**	**329**		*e*Pn	**Pn**	**01 38 49.6**	**-1.4**
	comp=Z,13nm,1.0s							
HYB	**Hyderabad**	**14.27**	**199**		*i* P	**Pn**	**01 38 50.0**	**-5.6**
HYB					*e*S	**Sn**	**01 41 18.0**	**-16**
MK31	**Makanchi Array**	**15.77**	**357**		*e*Pn	**Pn**	**01 39 14.3**	**-1.1**
KKAR	**Karatay Array**	**15.85**	**323**		*e*Pn	**Pn**	**01 39 14.5**	**-2.1**
	comp=Z,20nm,1.1s							
CHTO	**Chiang Mai**	**18.55**	**127**		*e*P	**Pn**	**01 39 47.0**	**-3.6**
	comp=Z,14nm,1.3s							
CMAR	**Chiang Mai Arr**	**18.80**	**128**		P	**Pn**	**01 39 49.5**	**-4.1**
	comp=Z,0.2nm,0.3s,baz=315,slow=12,SNR=31							
GYA	**Guiyang**	**20.84**	**97**	⇑	*i*P	**P**	**01 40 13.0**	**-2.3**
GYA					pmax	pmax		
	comp=Z,20nm,1.0s							
BVAR	**Borovoye Array**	**23.95**	**340**		S	**S**	**01 45 09.1**	**+5.7**
	comp=Z,119nm,0.9s,baz=157,slow=22,SNR=4.0							
ABKAR	**Akbulak array**	**25.41**	**322**		*e*P	**P**	**01 41 00.5**	**-0.3**
	comp=Z,4.5nm,1.5s							
AKTK	**Aktyubinsk**	**27.11**	**323**		P	**P**	**01 41 17.6**	**+1.3**
AKTO	**Aktyubinsk**	**27.11**	**323**		P	**P**	**01 41 17.6**	**+1.3**
	comp=Z,2.3nm,0.8s,baz=132,slow=5.7,SNR=6.6							
ARU	**Arti**	**30.78**	**333**		*e*P	**P**	**01 41 50.5**	**+1.7**
	comp=Z,602nm,1.0s							
GNI	**Garni**	**32.56**	**297**		*e*P	**P**	**01 42 05.7**	**+1.1**
	comp=Z,7.9nm,1.0s,mb4.6							
GNI	**Garni**	**32.56**	**297**		P	**P**	**01 42 05.7**	**+1.1**
	comp=Z,1.7nm,0.5s,mb4.2,baz=233,slow=12,SNR=5.4							
KIV	**Kislovodsk**	**34.48**	**304**		*e*P	**P**	**01 42 22.4**	**+1.0**
	comp=Z,9.3nm,1.0s,mb4.7							
MALT	**Malatya**	**37.44**	**294**		*e*P	**P**	**01 42 48.1**	**+1.4**
	comp=Z,3.3nm,1.0s,mb4.1							
BR131	**Keskin Array S**	**41.09**	**296**		*e*P	**P**	**01 43 16.7**	**-0.6**
	comp=Z,10nm,1.3s,mb4.3							
BRTR	**Keskin Array B**	**41.09**	**296**		P	**P**	**01 43 17.1**	**-0.1**
	comp=Z,2.7nm,1.0s,mb3.8,baz=78,slow=5.7,SNR=10							
MAJO	**Matsushiro**	**45.33**	**68**		*e*P	**P**	**01 43 54.2**	**+2.7**
	comp=Z,34nm,1.1s,mb5.1							
MJAR	**Matsushiro Arr**	**45.33**	**68**		P	**P**	**01 43 55.1**	**+3.5**
	comp=Z,1.1nm,0.9s,mb4.7,baz=307,slow=10,SNR=4.1							
CBIJ	**Chichi jima**	**50.98**	**79**		LR	LR	02 07 43.3	
	comp=Z,2μm,18.3s,baz=139,slow=38							
KMBO	**Kilima Mbogo**	**54.27**	**243**		*e*P	**P**	**01 44 59.7**	**-0.1**
CUC	**Castrocucco**	**54.60**	**299**		*e*P	**P**	**01 45 01.8**	**-0.1**
	comp=Z,4.8nm,0.8s,mb4.6							
CEL	**Celeste**	**54.95**	**297**		*e*P	**P**	**01 45 04.4**	**-0.1**
	comp=Z,17nm,0.9s,mb5.1							
KEST	**Kesra**	**60.70**	**296**		*e*P	**P**	**01 45 46.1**	**+1.2**
KEST	**Kesra**	**60.70**	**296**		P	**P**	**01 45 45.6**	**+0.7**
	comp=Z,2.1nm,0.9s,mb4.3,baz=99,slow=16,SNR=4.2							
WRA	**Warramunga Arr**	**70.39**	**129**		P	**P**	**01 46 45.2**	**-2.4**
	comp=Z,6.2nm,0.6s,mb4.7,baz=323,slow=6.2,SNR=27							
ASAR	**Alice Springs**	**72.76**	**132**		P	**P**	**01 46 58.9**	**-3.0**
	comp=Z,2.6nm,0.8s,mb4.2,baz=320,slow=6.2,SNR=26							
STKA	**Stephens Creek**	**83.34**	**133**		P	**P**	**01 47 58.0**	**-2.5**
	comp=Z,1.2nm,0.4s,mb4.2,baz=334,slow=6.0,SNR=5.5							
CPUP	**Villa Florida**	**145.40**	**268**		PKPbc	PKPbc	01 55 08.8	-3.0
	comp=Z,1.3nm,0.7s,baz=84,slow=4.2,SNR=3.4							

*ISCJB **27** 01:41:29.0±0.4, 51°.59N×0°.03×104°.12E±0°.03, h10km, mb5.2/2, Error ellipse: s-maj=4.8km s-min=2.6km az=166.7*
*MOS **27** 01:41:31.0±1.8, 51°.57N×104°.15E, h12km, mb5.1/1, Error ellipse: s-maj=14.5km s-min=11.1km az=85.0*
MOS Felt (V) at Irkutsk, (III) at Yelantsy.
*NEIC **27** 01:41:31.6±0.7, 51°.60N×103°.91E, h10km, mb4.9/1, Error ellipse: s-maj=10.0km s-min=7.2km az=168.0*
NEIC Felt [V] at Irkutsk.
*BYKL **27** 01:41:31.8±0.3, 51°.61N×104°.03E, h11km±8km, FELT I=V MSK at Irkutsk, III-IV at Gusinoozersk, Yelantsy.*

ISC 27 01:41:30.8±0.4, 51°.61N±0°.03×104°.09E±0°.03, h10km, n46, σ1§46/57, mb5.2/2, 8C-6D, Lake Baykal region

Code	Station Name	Δ°	AZ°		Phase ID		Time	Res
					Op	ISC	h m s	ISC
TLY	**Talaya**	**0.29**	**284**	⇓	*i*Pg	**Pg**	**01 41 37.0**	**+0.5**
TLY					*e*Sg	**Sg**	**01 41 40.9**	**+0.6**
TLY	**Talaya**	**0.29**	**284**		*e*PG	**Pg**	**01 41 36.9**	**+0.4**
TLY					*e*		01 41 41.0	
TLY					pmax	pmax		
	comp=Z,6μm,0.2s							
TLY					smax			
	comp=N,66μm,0.3s							
TLY	**Talaya**	**0.29**	**284**	⇓	*i*Pg	**Pg**	**01 41 37.0**	**+0.5**
TLY					*e*Sg	**Sg**	**01 41 39.8**	**-0.5**
IRK	**Irkutsk**	**0.64**	**10**	⇑	*i*P	**Pg**	**01 41 44.1**	**+0.9**
IRK	**Irkutsk**	**0.64**	**10**	⇑	*i*PG	**Pg**	**01 41 44.2**	**+1.0**
IRK					*e*		01 41 52.9	
IRK					pmax	pmax		
	comp=Z,20μm,0.3s							
IRK					smax			
	comp=N,217μm,0.3s							
IRK	**Irkutsk**	**0.64**	**10**	⇑	*i*Pg	**Pg**	**01 41 44.1**	**+0.9**
IRK					Pmax		01 41 44.5	
	comp=N,17μm,0.3s							
IRK					*i* Sg	**Sg**	**01 41 52.8**	**+1.2**
IRK					Smax		01 41 54.4	
	comp=N,116μm,0.4s							
ARS	**Arshan**	**1.08**	**287**		*e*PG	**Pg**	**01 41 51.2**	**-0.3**
ARS					*e*		01 42 05.0	
ARS					pmax	pmax		
	comp=Z,7μm,0.1s							
ARS					smax			
	comp=N,37μm,0.2s							
ARS	**Arshan**	**1.08**	**287**	⇓	*i*Pg	**Pg**	**01 41 51.2**	**-0.3**
ARS					Pmax		01 41 54.0	
	comp=N,5μm,0.7s							
ARS					*i* Sg	**Sg**	**01 42 04.7**	**-0.8**
ARS					Smax		01 42 05.6	
	comp=N,38μm,0.7s							
ARS					*e*Sb	**Sb**	**01 42 07.9**	**+2.3**
ZAK	**Zakamensk**	**1.33**	**203**		*e*PG	**Pg**	**01 41 55.7**	**-0.6**
ZAK					*e*		01 42 13.1	
ZAK					pmax	pmax		
	comp=Z,48μm,0.3s							
ZAK					smax			
	comp=E,204μm,0.3s							
ZAK	**Zakamensk**	**1.33**	**203**	⇑	*i*Pg	**Pg**	**01 41 55.7**	**-0.6**
ZAK					Pmax		01 41 57.5	
	comp=E,3μm,1.2s							
ZAK					*i* Sg	**Sg**	**01 42 13.0**	**-0.6**
ZAK					Smax		01 42 18.3	
	comp=E,12μm,1.8s							
KAB	**Kabansk**	**1.65**	**74**		Pg	**Pg**	**01 42 02.4**	**0.0**
KAB					*e*Sg	**Sg**	**01 42 25.4**	**+1.6**
KAB					*e*		01 42 29.5	
KAB					max		01 42 35.3	
	comp=E,81μm,2.5s							
HRMR	**Khuramsha**	**1.79**	**88**	⇑	*i*Pn	**Pn**	**01 42 03.6**	**+2.0**
HRMR				⇑	*i*Pg	**Pg**	**01 42 04.5**	**-0.5**
HRMR					Pmax		01 42 05.3	
	comp=E,4μm,0.5s							
HRMR					*e*Sg	**Sg**	**01 42 28.6**	**+0.5**
HRMR					Smax		01 42 29.8	
	comp=E,48μm,1.2s							
TRG	**Tyrgan**	**1.80**	**50**		*e*PN	**Pn**	**01 42 03.7**	**+1.8**
TRG					*e*		01 42 04.8	
TRG					*e*S	**Sn**	**01 42 27.4**	**+2.6**
TRG					*e*		01 42 28.3	
TRG					pmax	pmax		
	comp=Z,896nm,0.2s							
TRG					smax			
	comp=N,11μm,0.1s							
TRG	**Tyrgan**	**1.80**	**50**	⇓	*i*Pg	**Pg**	**01 42 04.0**	**-1.3**
TRG					Pmax		01 42 04.8	
	comp=N,1μm,0.4s							
TRG					*e*Sn	**Sn**	**01 42 26.8**	**+2.0**
TRG					*i* Sg	**Sg**	**01 42 28.3**	**-0.4**
TRG					Smax		01 42 30.3	
	comp=N,12μm,0.3s							
MOY	**Mondy**	**1.93**	**273**		*e*PN	**Pn**	**01 42 05.6**	**+2.0**
MOY					*e*		01 42 31.5	
MOY					pmax	pmax		
	comp=Z,6μm,0.3s							
MOY					smax			
	comp=N,17μm,0.7s							
MOY	**Mondy**	**1.93**	**273**		*e*Pn	**Pn**	**01 42 05.7**	**+2.1**
MOY				⇑	*i*Pg	**Pg**	**01 42 06.3**	**-1.4**
MOY					Pmax		01 42 06.6	
	comp=N,3μm,0.3s							
MOY					*e*Sg	**Sg**	**01 42 31.5**	**-1.2**
MOY					Smax		01 42 34.4	
	comp=N,17μm,1.5s							
ZRHB	**Zarechye**	**2.11**	**62**		*e*Pg	**Pg**	**01 42 09.0**	**-2.2**
ZRHB					*e*Sg	**Sg**	**01 42 37.5**	**-1.1**
ZRHB					Smax		01 43 06.7	
	comp=N,71μm,1.9s							
UUDB	**Ulan-Yde**	**2.24**	**82**		*e*Sg	**Sg**	**01 42 41.7**	**-0.9**
UUDB					Smax		01 42 43.6	
	comp=N,10μm,1.6s							
UUDB					*e*		01 42 44.6	
ORL	**Orlik**	**2.80**	**291**		*e*PN	**Pn**	**01 42 21.3**	**+5.8**
ORL					*e*		01 42 56.7	
ORL					pmax	pmax		
	comp=Z,3μm,0.8s							
ORL					smax			
	comp=E,4μm,0.5s							
ORL	**Orlik**	**2.80**	**291**	⇓	*i*Pg	**Pg**	**01 42 20.7**	**-3.6**
ORL					*e*Sg	**Sg**	**01 42 56.8**	**-3.8**
ORL					*e*		01 43 01.6	
ORL					max		01 43 05.6	
	comp=E,19μm,1.6s							
OGRR	**Ongureny**	**2.95**	**45**		*e*PN	**Pn**	**01 42 20.1**	**+2.5**
OGRR					*e*		01 42 25.1	
OGRR					*e*		01 43 01.2	
OGRR					pmax	pmax		
	comp=Z,15μm,0.4s							
OGRR					smax			
	comp=N,69μm,0.4s							
OGRR	**Ongureny**	**2.95**	**45**		*e*	**Pn**	**01 42 21.1**	**+3.5**
OGRR					max		01 42 32.7	
	comp=N,2μm,1.1s							
OGRR					*e*Sg	**Sg**	**01 43 01.7**	**-3.7**
OGRR					Smax		01 43 05.6	
	comp=N,13μm,0.9s							
OGRR					*e*		01 43 09.1	
MXMB	**Maximikha**	**3.29**	**58**		*e*Pg	**Pg**	**01 42 31.4**	**-2.4**
MXMB					Pmax		01 42 46.7	
	comp=N,4μm,1.0s							
MXMB					*e*Sg	**Sg**	**01 43 15.2**	**-1.3**
MXMB					Smax		01 43 37.1	
	comp=N,12μm,1.6s							
SYVR	**Suvo**	**4.14**	**58**		*e*Sg	**Sg**	**01 43 41.2**	**-2.5**
SYVR					Smax		01 43 55.1	
	comp=N,9μm,2.0s							
ULN	**Ulaanbaatar**	**4.21**	**152**		*i* PN	**Pn**	**01 42 36.5**	**+1.5**
TDJR	**Todzha**	**5.00**	**282**		*e*Sg	**Sg**	**01 44 06.1**	**-5.0**
NIZ	**Nizh Angarsk**	**5.28**	**36**		*e*	**Pb**	**01 43 07.4**	**+4.4**
NIZ					*e*Sg	**Sg**	**01 44 16.0**	**-4.1**
NIZ					Smax		01 45 04.4	
	comp=N,7μm,2.5s							
YLYR	**Ulyunkhan**	**5.36**	**50**		*e*Sg	**Sg**	**01 44 18.6**	**-4.0**
YLYR					Smax		01 44 31.8	
	comp=N,4μm,1.8s							
KMO	**Kumora**	**6.01**	**42**		*e*Sg	**Sg**	**01 44 38.4**	**-5.1**
KMO					Smax		01 44 41.1	
	comp=N,9μm,1.4s							
MINR	**Mina**	**6.79**	**303**		Sg	**Sg**	**01 45 02.0**	**-6.3**
MINR					*e*		01 45 08.8	
CERR	**Cheremushki**	**7.88**	**284**		*e*	Sx	01 45 08.3	
CERR					Sg	Sx	01 45 32.4	
VEH	**Verkhnyaya Baz**	**8.58**	**286**		Sg	Sx	01 45 55.5	
VEH					Smax		01 46 03.5	
	comp=N,6μm,2.4s							
TEL	**Teeli**	**8.72**	**272**		*e*Sg	Sx	01 45 58.0	
TUP	**Tupik**	**9.97**	**67**		*e*	Sx	01 46 33.7	
TUP					*e*Sg	Sx	01 46 41.7	
TUP					Smax		01 47 08.8	
	comp=N,4μm,2.5s							
HIA	**Hailar**	**10.26**	**97**		*e*	Px	01 45 43.3	
HIA					*e*Sg	Sx	01 46 48.2	
HIA					*e*		01 47 17.0	
ARTR	**Artybash**	**10.44**	**278**		Sg	Sx	01 46 52.3	
AKAR	**Aktash**	**10.47**	**269**		Sg	Sx	01 46 56.0	
AKAR					Smax		01 47 09.5	
	comp=N,4μm,2.6s							
KHNR	**Khani**	**10.70**	**54**		*e*Sg	Sx	01 47 03.4	
KTNR	**Kaitanak**	**11.86**	**270**		*e*	Sx	01 47 24.5	
KTNR					Sg	Sx	01 47 34.8	
TNDR	**Tynda**	**12.80**	**66**		*e*Sg	Sx	01 48 10.3	
TNDR					*e*		01 48 23.3	
TNDR					*e*		01 48 40.3	
KURK	**Kurchatov**	**15.98**	**277**		*e*P	**Pn**	**01 45 16.9**	**+1.5**
YAK	**Yakutsk**	**17.33**	**43**	⇑	*e*P	**Pn**	**01 45 34.9**	**+2.4**
YAK	**Yakutsk**	**17.33**	**43**		*e*P	**Pn**	**01 45 34.1**	**+1.6**
YAK					pmax	pmax		
	comp=Z,3μm,1.0s							
VLA	**Vladivostok**	**20.56**	**103**	⇓	*e*P	**P**	**01 46 09.2**	**-0.1**
VLA					*e*		01 46 27.0	
VLA					S	**S**	**01 50 00.3**	**+1.2**
VLA							01 50 19.4	
VLA					pmax	pmax		
	comp=Z,110nm,1.6s							
EKS2	**Erkin-Say**	**22.34**	**258**		P	**P**	**01 46 26.9**	**-1.6**
	comp=Z,44nm,0.9s,mb4.9							
KSH	**Kashi**	**22.95**	**249**		*e*P	**P**	**01 46 43.0**	**+8.1**
KSH					*e*pP		01 46 47.5	
KSH					*e*sP	sP	01 46 50.0	+11
KSH					*e*PP		01 47 15.5	
KSH					*e*PcP	PcP	01 50 29.5	+4.7
KSH					*e*S	**S**	**01 50 53.3**	**+8.3**
KSH					*e*sS	sS	01 51 00.8	+11
KSH					*e*SS		01 51 41.8	
KSH					*e*ScP	ScP	01 54 05.5	+3.1
KSH					*e*PcS	PcS	01 54 07.8	+4.0
KSH					pmax	pmax		
	comp=Z,55nm,0.9s,mb5.0							
KSH					pmax	pmax		
	comp=Z,880nm,2.0s,mb5.8							
KSH					LR	LR		
	comp=N,18μm,9.7s							
KSH					LR	LR		
	comp=E,28μm,8.1s							
KSH					LR	LR		
	comp=Z,10μm,7.4s							

MAN 27 01:42:48, 15°.29N×121°.97E, h33km, mb4.5, ML3.4, MS3.3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POLP	**Polilio Island**	**0.56**	**183**	*e*P	Pb	01 43 00.2	+0.6
BALP	**Baler**	**0.58**	**320**	*e*P	Pb	01 43 01.7	+1.8
GQP	**Guinayangan**	**1.46**	**161**	⇑ *i*P	Pn	01 43 13.2	+1.2
GQP				*i* S	Sn	01 43 31.1	+1.1
CAUP	**Cauayan**	**1.65**	**355**	*e*P	Pn	01 43 14.5	-0.1

WEL 27 01:50:29.4±0.6, 35°.89S×178°.32E, h195km±9km, ML3.6/6, Error ellipse: s-maj=14.6km s-min=11.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.67**	**180**	PN	Pn	01 51 04.4	+0.2
MXZ				SN	Sn	01 51 31.2	-0.1
PUZ	**Puketiti**	**2.18**	**181**	PN	Pn	01 51 09.7	+0.3
PUZ				*e*SN	Sn	01 51 40.5	-0.2
MWZ	**Matawai**	**2.52**	**194**	PN	Pn	01 51 13.7	+0.5
MWZ				SN	Sn	01 51 47.7	+0.3
URZ	**Urewera**	**2.56**	**202**	PN	Pn	01 51 13.6	0.0
URZ				SN	Sn	01 51 48.2	+0.1
KNZ	**Kokohu**	**3.17**	**189**	*e*PN	Pn	01 51 20.2	-0.6
BKZ	**Black Stump Fm**	**3.58**	**203**	*e*PN	Pn	01 51 26.0	+0.3
BFZ	**Birch Farm**	**5.05**	**198**	*e*PN	Pn	01 51 42.9	-1.4
MRZ	**Mangatainoka R**	**5.23**	**205**	*e*PN	Pn	01 51 43.4	-3.1
TIWZ	**Tintock**	**5.24**	**201**	*e*PN	Pn	01 51 44.5	-2.2

IDC 27 01:54:41.5±1.6, 30°.86N×83°.91E, h0km, mb3.8/6, mb1 4.1/8, mb1mx3.8/26, mbtmp3.9/8, ML3.9/2, Error ellipse: s-maj=82.3km s-min=19.7km az=60.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**15.96**	**356**	Pn	Pn	01 58 27.2	0.0
	0.1nm,0.3s,baz=178,slow=11,SNR=2.4						
CMAR	**Chiang Mai Arr**	**18.39**	**129**	P	Pn	01 58 59.6	+1.6
	0.6nm,0.3s,baz=319,slow=9.6,SNR=4.8						
KURK	**Kurchatov**	**20.22**	**350**	P	P	01 59 15.3	-2.6
	2.4nm,0.8s,baz=165,slow=10,SNR=2.4						
ZALV	**Zalesovo Beam**	**23.08**	**1**	P	P	01 59 48.3	-0.2
	1.8nm,0.8s,baz=171,slow=9.9,SNR=2.1						
FINES	**FINESS Array B**	**48.11**	**327**	P	P	02 03 22.6	-0.1
	3.1nm,1.0s,baz=97,slow=10,SNR=4.3						
ARCES	**ARCESS Array B**	**50.48**	**337**	P	P	02 03 41.6	+0.8
	8.0nm,1.2s,baz=111,slow=6.8,SNR=5.1						
WRA	**Warramunga Arr**	**69.99**	**129**	P	P	02 05 55.0	-0.1
	0.6nm,0.5s,baz=325,slow=6.3,SNR=5.8						
ASAR	**Alice Springs**	**72.36**	**133**	P	P	02 06 08.8	-0.5
	0.3nm,0.7s,baz=326,slow=5.8,SNR=2.6						

IDC 27 01:58:04.5±4.3, 11°.84S×167°.38E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.8/18, mbtmp3.7/4, Error ellipse: s-maj=206.0km s-min=32.0km az=141.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.73**	**252**	P	P	02 04 39.0	-0.2
	0.8nm,0.4s,baz=84,slow=8.9,SNR=3.7						
ASAR	**Alice Springs**	**33.89**	**245**	P	P	02 04 49.4	+0.1
	1.4nm,0.7s,baz=69,slow=9.8,SNR=13						
FITZ	**Fitzroy Crossi**	**40.73**	**256**	P	P	02 05 47.4	0.0
	1.1nm,0.8s,baz=96,slow=10,SNR=3.8						
ILAR	**Eielson Array**	**83.76**	**18**	P	P	02 10 35.1	0.0
	0.4nm,0.5s,baz=238,slow=5.2,SNR=6.0						

*DMN **27** 02:04:29.0±0.6, 31°.97N×83°.10E, h10km, Ml5.2/4, Error ellipse: s-maj=18.6km s-min=12.2km az=81.0*
*ISCJB **27** 02:04:36.6±0.2, 30°.73N±0°.02×83°.46E±0°.03, h10km, mb4.4/41, Error ellipse: s-maj=4.3km s-min=2.8km az=138.4*
*BJI **27** 02:04:36.7, 30°.80N×83°.51E, h10km, mb4.6/13, Ms7 4.5/1*
*IDC **27** 02:04:36.9±0.5, 30°.80N×83°.56E, h0km, mb4.3/24, mb1 4.4/27, mb1mx4.3/33, mbtmp4.2/27, ML3.6/3, Error ellipse: s-maj=17.3km s-min=12.0km az=41.0*
*NEIC **27** 02:04:38.4±0.2, 30°.80N×83°.51E, h10km, mb4.6/18, Error ellipse: s-maj=7.0km s-min=4.8km az=45.0*

ISC 27 02:04:38.3±0.2, 30°.73N±0°.02×83°.51E±0°.03, h10km, n113, σ1§08/114, mb4.4/41, 4C-3D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DANN	**Dangsing**	**2.39**	**175**	*e*Pn	**Pb**	**02 05 23.8**	**+2.5**
GKN	**Gorkha**	**2.89**	**160**	*e*Pn	**Pb**	**02 05 30.7**	**+0.7**
GKN				*e*Sn	**Sg**	**02 06 15.5**	**+4.2**
	2μm,1.1s						
PTH	**Pithoragarh**	**3.09**	**248**	*ex*	**Pb**	**02 05 32.1**	**-1.2**
PTH				*ex*	**Sg**	**02 06 17.2**	**-0.2**
JOSI	**Joshimath**	**3.41**	**268**	*e*PKP	**Pb**	**02 05 36.5**	**-2.2**
JOSI				AML	AML	02 06 00.9	
	comp=E,2μm,1.0s						
JOSI				*e*S	**Sn**	**02 06 15.5**	**+3.5**
JOSI				AML	AML	02 06 26.0	
	comp=N,1μm,0.5s						
DMN	**Daman**	**3.41**	**155**	*e*Pn	**Pb**	**02 05 38.2**	**-0.6**
DMN				*e*Sn	**Sg**	**02 06 28.3**	**+0.4**
	comp=N,11μm,1.8s						
GUN	**Gumba**	**3.49**	**143**	*e*Pn	**Pb**	**02 05 38.2**	**-2.0**
GUN	**Gumba**	**3.49**	**143**	*e*Pn	**Pb**	**02 05 38.3**	**-1.9**
PKIN	**Phulchoki**	**3.55**	**152**	*e*Pn	**Pb**	**02 05 39.4**	**-1.8**
PKIN				*e*Sn	**Sg**	**02 06 32.9**	**+0.5**
	comp=N,1μm,0.9s						
PKI	**Pulchoki**	**3.56**	**152**	*e*Pn	**Pb**	**02 05 39.4**	**-2.0**
PKI				*e*Sn	**Sg**	**02 06 32.5**	**-0.2**
	comp=N,6μm,1.8s						
JIRN	**Jiri**	**3.86**	**142**	*e*Pn	**Pb**	**02 05 43.8**	**-2.6**
KLP	**Kalpa**	**4.58**	**281**	*e*PKP	**Pn**	**02 05 48.7**	**+1.1**
RAMN	**Ramite**	**4.64**	**144**	*e*Pn	**Pn**	**02 05 52.9**	**+4.4**
DDI	**Dehra Dun**	**4.72**	**266**	*e*PKP	**Pn**	**02 05 50.0**	**+0.4**
DDI				*ex*	x	02 08 18.0	
TAPN	**Taplejung**	**4.99**	**131**	*e*Pn	**Pn**	**02 05 57.5**	**+4.3**
ODAN	**Odare**	**5.15**	**138**	*e*Pn	**Pn**	**02 06 00.2**	**+4.8**
SDNR	**Sundarnagar**	**5.66**	**279**	*ex*	**Pn**	**02 06 06.5**	**+4.1**
KUDL	**Kundal**	**6.64**	**249**	*e*PKP	**Pn**	**02 06 15.0**	**-0.9**
LSA	**Lhasa**	**6.69**	**97**	P	**Pn**	**02 06 21.0**	**+4.4**
LSA				S	**Sg**	**02 08 24.0**	**+11**
LSA				LR	LR		
	comp=N,760nm,4.2s						
LSA				LR	LR		
	comp=E,8μm,4.9s						
LSA				LR	LR		
	comp=Z,950nm,5.3s						
LSA	**Lhasa**	**6.69**	**97**	*e*Pn	**Pn**	**02 06 21.0**	**+4.4**
	comp=Z,207nm,1.3s						
KHET	**Khetri**	**7.22**	**250**	*e*PKP	**Pn**	**02 06 22.8**	**-1.1**
AJM	**Ajmer**	**8.87**	**244**	*i* x	x	02 08 36.0	
AJM	**Ajmer**	**8.87**	**244**	*ex*	x	02 06 39.1	
SHL	**Shillong**	**9.01**	**123**	*e*PKP	**Pn**	**02 06 48.0**	**-0.4**
SHL				*ex*	x	02 07 29.0	
CHCP	**Chirah Chowk**	**9.16**	**291**	P	**Pn**	**02 06 52.6**	**+2.2**
BHPL	**Bhopal**	**9.22**	**217**	*e*PKP	**Pn**	**02 06 51.5**	**+0.1**

MTA	Mtatsminda	32.85	300	P		P		02 11 07.9	-4.2	
TBLG	Delisi	32.89	300	P		P		02 11 08.0	-4.5	
GOR	Gori	33.39	301	P		P		02 11 08.8	-8.0	
KSRS	Korea Array	37.12	67	P		P		02 11 49.1	+0.1	
	comp=Z,1.0nm,0.4s,mb4.0,baz=273,slow=8.9,SNR=7.4									
MALT	Malatya	37.61	294	*e*P		P		02 11 53.6	+0.5	
	comp=Z,9.5nm,1.5s,mb4.3									
ASF	Jabal al Asfar	39.55	285	P		P		02 12 11.0	+1.4	
	comp=Z,0.8nm,0.6s,mb3.6,baz=78,slow=20,SNR=3.2									
BRTR	Keskin Array B	41.26	297	P		P		02 12 24.8	+1.1	
	comp=Z,2.3nm,1.1s,mb3.7,baz=93,slow=5.8,SNR=12									
EIL	Elat	41.72	281	P		P		02 12 28.7	+1.2	
	comp=Z,6.7nm,1.0s,mb4.2,baz=43,slow=0.2,SNR=6.2									
AKASG	Malin Array Be	44.59	313	P		P		02 12 50.1	-0.4	
	comp=Z,2.9nm,0.6s,mb4.3,baz=83,slow=7.6,SNR=14									
AKBB	Malin Array Si	44.59	313	*e*P		P		02 12 49.5	-0.9	
MJAR	Matsushiro Arr	45.40	67	P		P		02 12 58.3	+1.2	
	comp=Z,1.4nm,0.6s,mb4.0,baz=287,slow=9.3,SNR=4.6									
JOF	Joensuu	46.08	330	*e*p		P		02 13 01.1	-0.9	
	comp=Z,18nm,0.7s,mb5.1									
VRI	Vrincioaia	46.10	306	⇑*i*P		P		02 13 03.7	+1.2	
PLOR	Plostina	46.16	306	⇑*i*P		P		02 13 03.9	+1.0	
MLR	Muntele Rosu	46.66	305	⇑*i*P		P		02 13 08.7	+1.8	
BURAR	Bucovina Array	47.11	308	⇓*i*P		P		02 13 13.4	+3.1	
BUR08	Bucovina Ar. S	47.12	308	*e*P		P		02 13 11.1	+0.7	
FINES	FINESS Array B	48.03	327	P		P		02 13 16.8	-0.5	
	comp=Z,7.6nm,0.7s,mb4.9,baz=101,slow=8.0,SNR=26									
KAF	Kangasniemi	48.08	328	*e*p		P		02 13 17.2	-0.5	
	comp=Z,3.1nm,0.8s,mb4.4									
KEV	Kevo	50.05	338	*e*p		P		02 13 31.2	-1.5	
	comp=Z,2.8nm,0.7s,mb4.4									
ARCES	ARCESS Array B	50.47	337	P		P		02 13 36.2	+0.3	
	comp=Z,8.1nm,1.0s,mb4.7,baz=94,slow=7.3,SNR=12									
KMBO	Kilima Mbogo	54.17	243	*e*P		P		02 14 06.0	+1.8	
	comp=Z,6.0nm,1.0s,mb4.5									
NOA	NORSAR Array B	55.13	326	P		P		02 14 09.7	-0.7	
	comp=Z,4.4nm,0.9s,mb4.5,baz=88,slow=7.1,SNR=12									
HAU	Haudompre	59.65	311	*e*P		P		02 14 41.4	-1.1	
LPG	La Plagne	59.99	308	*e*P		P		02 14 44.7	-0.2	
	comp=Z,10.0nm,1.1s,mb4.5									
LPG	La Plagne	59.99	308	*e*P		P		02 14 44.7	-0.2	
	comp=Z,5.0nm,1.1s,mb4.5									
LPL	La Plagne	59.99	308	*e*P		P		02 14 44.4	-0.6	
	comp=Z,9.5nm,0.9s,mb4.5									
LPL	La Plagne	59.99	308	*e*P		P		02 14 44.4	-0.6	
	comp=Z,4.8nm,0.9s,mb4.5									
KEST	Kesra	60.87	296	*e*P		P		02 14 51.1	+0.1	
KEST	Kesra	60.87	296	P		P		02 14 52.0	+0.9	
	comp=Z,2.7nm,0.9s,mb4.4,baz=49,slow=8.5,SNR=11									
TCF	Toulx Ste Croi	62.83	310	*e*P		P		02 15 03.4	-0.7	
EKA	Eskdalemuir Ar	63.52	320	P		P		02 15 08.1	-0.4	
	comp=Z,1.8nm,0.9s,mb4.1,baz=74,slow=6.5,SNR=3.2									
GRR	Gorron	64.19	313	*e*P		P		02 15 11.6	-1.5	
ESDC	Sonseca Array	69.35	305	P		P		02 15 45.6	-0.6	
	comp=Z,0.1nm,0.4s,baz=66,slow=6.8,SNR=3.3									
SUMG	Summit	69.66	344	*i* P		P		02 15 49.7	+2.2	
	comp=Z,12nm,1.1s,mb4.8									
WRA	Warramunga Arr	70.17	129	P		P		02 15 51.9	+0.5	
	comp=Z,9.0nm,0.9s,mb4.7,baz=322,slow=6.3,SNR=27									
ASAR	Alice Springs	72.52	132	P		P		02 16 06.0	+0.5	
	comp=Z,3.3nm,0.9s,mb4.2,baz=319,slow=5.5,SNR=20									
COLD	Coldfoot	74.34	19	*e*P		P		02 16 16.4	+0.8	
	comp=Z,4.8nm,1.0s,mb4.4									
TTA	Tatalina	75.38	24	*e*P		P		02 16 21.9	+0.2	
	comp=Z,20nm,1.6s,mb4.8									
BPAW	Bear Paw Mtn.	76.28	22	*e*P		P		02 16 27.9	+1.1	
	comp=Z,3.3nm,0.9s,mb4.3									
COLA	College	76.69	20	*e*P		P		02 16 29.5	+0.4	
	comp=Z,2.3nm,0.4s,mb4.5									
ILAR	Eielson Array	77.05	20	P		P		02 16 30.3	-0.8	
	comp=Z,2.0nm,1.0s,mb4.0,baz=309,slow=3.9,SNR=11									
LBTB	Lobatse	78.39	232	P		P		02 16 40.0	+0.7	
	comp=Z,5.9nm,1.0s,mb4.5,baz=28,slow=3.0,SNR=4.1									
EGAK	Eagle	78.64	18	*e*P		P		02 16 40.1	+0.1	
	comp=Z,5.2nm,1.1s,mb4.4									
PMR	Palmer	78.66	23	*e*P		P		02 16 38.4	-1.8	
	comp=Z,6.6nm,1.0s,mb4.5									
OHAK	Old Harbor	80.20	28	*e*P		P		02 16 48.3	-0.3	
	comp=Z,8.1nm,0.9s,mb4.7									
BOSA	Boshof	81.02	229	P		P		02 16 54.4	+1.0	
BOSA	Boshof	81.02	229	P		P		02 16 54.4	+1.0	
	comp=Z,5.8nm,0.9s,mb4.5,baz=72,slow=3.0,SNR=7.5									
STKA	Stephens Creek	83.11	133	P		P		02 17 04.5	+0.2	
STKA	Stephens Creek	83.11	133	P		P		02 17 04.5	+0.2	
	comp=Z,4.0nm,0.9s,mb4.5,baz=338,slow=8.7,SNR=4.7									
DBIC	Dimbokro	85.23	275	P		P		02 17 15.8	+0.1	
	comp=Z,5.2nm,1.1s,mb4.6,baz=43,slow=6.3,SNR=4.8									
YKA	Yellowknife Ar	85.96	8	P		P		02 17 17.6	-0.8	
	comp=Z,1.8nm,0.7s,mb4.4,baz=334,slow=5.2,SNR=4.6									
TXAR	Lajitas Array	119.88	7	PKP		PKPdf		02 23 29.0	-0.3	
	comp=Z,0.4nm,1.0s,baz=61,slow=1.0,SNR=4.3									
SIV	San Ignacio	144.50	286	PKP		PKPdf		02 24 13.9	-1.6	
	comp=Z,1.4nm,1.0s,baz=92,slow=7.0,SNR=5.0									
OTAV	Otavalo	144.75	328	*e*PKPdf		PKPdf		02 24 16.5	+0.4	
CPUP	Villa Florida	145.44	267	PKPbc		PKPbc		02 24 17.0	+0.1	
	comp=Z,0.3nm,0.3s,baz=140,slow=6.7,SNR=3.8									
LPAZ	La Paz	150.39	293	PKPbc		PKPbc		02 24 30.9	+0.3	
	comp=Z,1.1nm,1.0s,baz=15,slow=6.0,SNR=3.8									

ISCJB ***27*** *02:07:54.6±0.3,51°.63N±0°.03×104°.03E±0°.03,h10km, mb4.0/14, Error ellipse: s-maj=4.0km s-min=2.2km az=160.8*

IDC ***27*** *02:07:54.5±0.7,51°.67N×104°.12E,h0km,mb3.9/11, mb1 4.1/14,mb1mx3.9/30,mbtmp3.9/14,ML3.2/2, Error ellipse: s-maj=18.8km s-min=12.6km az=59.0*

MOS ***27*** *02:07:55.4±0.9,51°.66N×103°.90E,h14km,mb4.6/3, Error ellipse: s-maj=10.4km s-min=7.2km az=70.6*

MOS Felt (III) at Irkutsk.

NEIC ***27*** *02:07:56.7±0.4,51°.60N×103°.94E,h10km,mb4.3/4, Error ellipse: s-maj=7.4km s-min=7.1km az=198.0*

NEIC Felt [III] at Irkutsk.

BYKL ***27*** *02:07:56.5±0.2,51°.65N×103°.91E,h16km±3km, #FAULT_PLANE Typ Strike Dip Rake NP NS Plane Author # FM 36.00 44.00 -126.00 26 0 IEC + 261.00 56.00 -61.00 IEC #PRINAX sc T_val T_azim T_pl B_val B_azim B_pl P_val P_azim P_pl Author + eTv eTa eTp eBv eBa eBp ePv ePa ePp fCLVD # 331.00 6.00 64.00 24.00 226.00 65.00 IEC + 0.0 0.0 0.0 0.0 0.0 0.0 0.0 IEC FELT I=III MSK at Irkutsk, II at Yelantsy.*

BJI ***27*** *02:08:04.9,50.85N×103.86E,h10km,mb4.7/5,Ms4.9/2, Ms? 4.6/1*

ISC 27 02:07:56.1±0.2,**51°.61N**±0°.02×**103°.99E**±0°.03,**h10**km,**n76,** σ**1s24**/121,**mb4.0**/14,**18C-15D,Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TLY	**Talaya**	**0.23**	**288**	*e*Pg		**Pg**	**02 08 00.7**	**0.0**
TLY				*e*Sg		**Sg**	**02 08 03.8**	**-0.1**
TLY	**Talaya**	**0.23**	**288**	*e*PG		**Pg**	**02 08 00.4**	**-0.3**
TLY				*e*S		**Sg**	**02 08 03.6**	**-0.2**
TLY	**Talaya**	**0.23**	**288**	⇓*i*Pg		**Pg**	**02 08 00.7**	**0.0**
TLY				*i* Sg		**Sg**	**02 08 03.5**	**-0.3**
IRK	**Irkutsk**	**0.66**	**15**	*e*PG		**Pg**	**02 08 09.1**	**+0.3**
IRK				*e*			02 08 17.8	
IRK	comp=Z,4μm,0.3s			pmax	pmax			
IRK	comp=N,191μm,0.3s			smax				
IRK	**Irkutsk**	**0.66**	**15**	⇑*i*Pg		**Pg**	**02 08 08.9**	**+0.1**
IRK				Pmax			02 08 09.4	
IRK	comp=N,4μm,0.4s			*i* Sg		**Sg**	**02 08 17.8**	**+0.5**
IRK				Smax			02 08 18.2	
ARS	comp=N,191μm,0.5s **Arshan**	**1.02**	**288**	*e*PG		**Pg**	**02 08 14.6**	**-1.1**
ARS				*e*			02 08 26.9	
ARS	comp=Z,897nm,0.1s			pmax	pmax			
ARS	comp=N,25μm,0.8s			smax				
ARS	**Arshan**	**1.02**	**288**	⇓*i*Pg		**Pg**	**02 08 14.5**	**-1.2**
ARS				Pmax			02 08 15.1	
ARS	comp=N,1μm,0.8s			*i* Sg		**Sg**	**02 08 27.5**	**-1.4**
ARS				Smax			02 08 28.3	
ZAK	comp=N,25μm,1.0s **Zakamensk**	**1.31**	**200**	*e*PG		**Pg**	**02 08 20.3**	**-0.9**
ZAK				*e*			02 08 37.4	
ZAK	comp=Z,1μm,0.3s			pmax	pmax			
ZAK	comp=N,9μm,0.5s			smax				
ZAK	**Zakamensk**	**1.31**	**200**	⇑*i*Pg		**Pg**	**02 08 20.3**	**-0.9**
ZAK				⇑*i*Pb		**Pb**	**02 08 21.2**	**+0.5**
ZAK	comp=N,2μm,0.6s			max			02 08 21.8	
ZAK				*i* Sg		**Sg**	**02 08 37.4**	**-0.8**
ZAK	comp=N,9μm,0.5s			Smax			02 08 39.0	
KAB	**Kabansk**	**1.71**	**74**	*e*P		**Pn**	**02 08 28.6**	**+2.7**
KAB	**Kabansk**	**1.71**	**74**	*e*PN		**Pn**	**02 08 28.5**	**+2.6**
KAB				*e*			02 08 52.2	
KAB	comp=Z,1μm,1.1s			pmax	pmax			
KAB	comp=N,12μm,0.9s			smax				
KAB	**Kabansk**	**1.71**	**74**	⇓*i*Pn		**Pn**	**02 08 26.8**	**+0.9**
KAB				⇑*i*Pg		**Pg**	**02 08 28.3**	**-0.6**
KAB	comp=N,946nm,0.8s			Pmax			02 08 32.2	
KAB				*i* Sg		**Sg**	**02 08 51.8**	**+0.8**
KAB	comp=N,12μm,0.5s			Smax			02 08 54.9	
HRMR	**Khuramsha**	**1.85**	**88**	⇓*i*Pn		**Pn**	**02 08 29.0**	**+1.2**
HRMR				⇑*i*Pg		**Pg**	**02 08 30.6**	**-0.9**
HRMR	comp=N,2μm,0.4s			Pmax			02 08 30.9	
HRMR				*e*			02 08 54.9	
HRMR				*i* Sg		**Sg**	**02 08 55.7**	**+0.2**
HRMR	comp=N,50μm,0.5s			Smax			02 08 56.4	
TRG	**Tyrgan**	**1.85**	**51**	*e*PN		**Pn**	**02 08 28.8**	**+1.0**
TRG				*e*			02 08 29.8	
TRG				*e*S		**Sn**	**02 08 52.7**	**+1.4**
TRG				*e*			02 08 54.3	
TRG	comp=Z,2μm,0.4s			pmax	pmax			
TRG	comp=N,12μm,0.2s			smax				
TRG	**Tyrgan**	**1.85**	**51**	⇓*i*Pn		**Pn**	**02 08 28.7**	**+0.9**
	comp=N,92nm,0.8s							
TRG				⇓*i*Pn		**Pn**	**02 08 28.7**	**+0.9**
TRG	comp=N,184nm,0.8s			⇓*i*Pn		**Pn**	**02 08 28.7**	**+0.9**
TRG	comp=N,215nm,0.8s			*i* Pg		**Pg**	**02 08 29.8**	**-1.8**
TRG				Pmax			02 08 30.6	
TRG	comp=N,2μm,0.4s			*i* Sg		**Sg**	**02 08 54.2**	**-1.4**
TRG	comp=N,12μm,0.2s			Smax			02 08 56.2	
MOY	**Mondy**	**1.87**	**273**	*e*PN		**Pn**	**02 08 28.8**	**+0.8**
MOY				*e*			02 08 53.2	
MOY	comp=Z,571nm,0.5s			pmax	pmax			
MOY	comp=N,8μm,0.8s			smax				
MOY	**Mondy**	**1.87**	**273**	⇑*i*Pn		**Pn**	**02 08 28.7**	**+0.7**
MOY				⇑*i*Pg		**Pg**	**02 08 29.8**	**-2.0**
MOY	comp=N,568nm,0.8s			Pmax			02 08 30.5	
MOY				*i* Sg		**Sg**	**02 08 53.4**	**-2.6**
MOY	comp=N,8μm,1.3s			Smax			02 08 56.6	
ZRHB	**Zarechye**	**2.17**	**63**	⇑*i*Pn		**Pn**	**02 08 33.5**	**+1.3**
ZRHB				⇑*i*Pg		**Pg**	**02 08 36.1**	**-1.5**
ZRHB	comp=N,4μm,1.0s			Pmax			02 08 41.7	
ZRHB				*i* Sg		**Sg**	**02 09 04.9**	**-0.8**
ZRHB				*e*			02 09 08.7	
ZRHB	comp=N,20μm,0.6s			max			02 09 10.7	
UUDB	**Ulan-Yde**	**2.30**	**82**	⇑*i*Pn		**Pn**	**02 08 34.5**	**+0.5**
UUDB				⇓*i*Pg		**Pg**	**02 08 38.3**	**-1.8**
UUDB				*e*			02 08 40.2	
UUDB	comp=N,444nm,0.6s			max			02 08 45.3	
UUDB				*e*Sg		**Sg**	**02 09 09.0**	**-0.9**
UUDB	comp=N,3μm,1.0s			Smax			02 09 11.1	
ORL	**Orlik**	**2.74**	**291**	*e*PN		**Pn**	**02 08 44.1**	**+4.1**
ORL				*e*			02 09 18.1	
ORL	comp=Z,823nm,0.6s			pmax	pmax			
ORL	comp=N,7μm,1.6s			smax				
ORL	**Orlik**	**2.74**	**291**	⇑*i*Pg		**Pg**	**02 08 44.2**	**-4.3**
ORL				max			02 08 48.1	
ORL	comp=N,730nm,1.2s			*e*PgPg			02 08 48.9	
ORL				*e*Sg		**Sg**	**02 09 18.5**	**-5.5**
ORL	comp=N,7μm,1.3s			Smax			02 09 24.9	
OGRR	**Ongureny**	**3.00**	**46**	*e*PN		**Pn**	**02 08 45.0**	**+1.5**
OGRR				*e*			02 08 50.1	
OGRR	comp=Z,17μm,0.3s			pmax	pmax			
OGRR	comp=E,40μm,0.5s			pmax	pmax			
OGRR	**Ongureny**	**3.00**	**46**	⇑*i*Pn		**Pn**	**02 08 44.5**	**+1.0**
OGRR				⇓*i*			02 08 45.8	
OGRR				*e*Pg		**Pg**	**02 08 49.7**	**-3.7**
OGRR				*e*			02 08 52.7	
OGRR	comp=E,1μm,0.6s			max			02 08 53.3	
OGRR				*e*Sn		**Sn**	**02 09 19.5**	**+0.1**
OGRR				*i* Sg		**Sg**	**02 09 28.0**	**-4.2**
OGRR	comp=E,8μm,0.9s			Smax			02 09 31.5	
MXMB	**Maximikha**	**3.35**	**59**	⇑*i*Pn		**Pn**	**02 08 49.3**	**+0.9**
MXMB				⇑*i*Pg		**Pg**	**02 08 56.8**	**-3.4**
MXMB				*e*PgPg			02 08 58.9	
MXMB	comp=E,543nm,1.4s			max			02 09 02.5	
MXMB				*e*Sn		**Sb**	**02 09 38.5**	**+2.3**
MXMB				*e*Sg		**Sg**	**02 09 42.3**	**-1.2**
MXMB				*e*SgSg			02 09 45.1	
MXMB	comp=E,4μm,0.8s			max			02 09 46.3	
SONM	**Songino Array**	**4.09**	**157**	Pn		**Pn**	**02 09 00.2**	**+1.6**
	comp=E,43nm,0.3s,baz=326,slow=14,SNR=91							
SONM				Pg		**Pg**	**02 09 09.5**	**-4.9**
SONM	comp=E,236nm,0.3s,baz=334,slow=18,SNR=95			Lg			02 10 03.7	
	comp=E,305nm,0.3s,baz=339,slow=28,SNR=17							
SYVR	**Suvo**	**4.20**	**58**	*e*PN		**Pn**	**02 09 00.9**	**+0.9**
SYVR				*e*			02 09 10.8	
SYVR				*e*			02 10 06.7	
SYVR	comp=Z,138nm,0.6s			pmax	pmax			
SYVR	comp=N,522nm,0.8s			smax				
SYVR	**Suvo**	**4.20**	**58**	⇓*i*Pn		**Pn**	**02 09 00.8**	**+0.8**
	comp=N,745nm,0.8s							
SYVR				⇓*i*Pn		**Pn**	**02 09 00.8**	**+0.8**
	comp=N,140nm,0.8s							
SYVR				⇓*i*Pn		**Pn**	**02 09 00.8**	**+0.8**
	comp=N,261nm,0.8s							
SYVR				⇑*i*			02 09 09.4	
SYVR				*e*Pg		**Pg**	**02 09 11.2**	**-5.2**
SYVR				Pmax			02 09 20.4	
SYVR	comp=N,89nm,0.8s			*i* Sg		**Sg**	**02 10 06.5**	**-4.2**
SYVR				Smax			02 10 14.3	
ULN	comp=N,513nm,1.0s **Ulaanbaatar**	**4.25**	**151**	*e*Pn		**Pn**	**02 09 02.4**	**+1.7**
ULN				*e*Sg		**Sg**	**02 10 10.6**	**-1.7**
ULN	**Ulaanbaatar**	**4.25**	**151**	⇑*i*Pn		**Pn**	**02 09 02.3**	**+1.6**
ULN				*e*Pg		**Pg**	**02 09 13.0**	**-4.3**
ULN				*e*			02 10 08.3	
ULN				*e*Sg		**Sg**	**02 10 10.1**	**-2.2**
TDJR	**Todzha**	**4.94**	**282**	*e*		**Pn**	**02 09 14.4**	**+4.2**
TDJR				*e*Pg		**Pb**	**02 09 22.4**	**-0.1**
TDJR				*e*Sg		**Sg**	**02 10 26.4**	**-8.1**
NIZ	**Nizh Angarsk**	**5.32**	**36**	*e*PN		**Pn**	**02 09 15.6**	**+0.2**
NIZ				*e*			02 09 30.5	
NIZ				*e*S		**Sn**	**02 10 15.2**	**-1.4**
NIZ				*e*			02 10 38.9	
NIZ	comp=Z,125nm,0.7s			pmax	pmax			
NIZ	comp=N,2μm,0.9s			smax				
NIZ	**Nizh Angarsk**	**5.32**	**36**	⇑*i*Pn		**Pn**	**02 09 15.5**	**+0.1**
NIZ				*e*Pg		**Pg**	**02 09 30.5**	**-7.3**
NIZ	comp=N,156nm,0.7s			Pmax			02 09 40.0	
NIZ				*e*Sn		**Sn**	**02 10 15.5**	**-1.1**
NIZ				*e*Sg		**Sg**	**02 10 39.1**	**-7.5**
NIZ				*e*			02 10 45.0	
NIZ	comp=N,2μm,0.9s			max			02 10 48.3	
YLYR	**Ulyunkhan**	**5.41**	**50**	*e*PN		**Pb**	**02 09 32.8**	**+2.3**
YLYR				*e*			02 10 42.2	
YLYR	comp=Z,101nm,0.7s			pmax	pmax			
YLYR	comp=N,910nm,1.4s			smax				
YLYR	**Ulyunkhan**	**5.41**	**50**	⇓*i*Pn		**Pn**	**02 09 17.4**	**+0.8**
YLYR				⇓*i*			02 09 20.7	
YLYR				⇓*i*Pg		**Pg**	**02 09 33.0**	**-6.5**
YLYR				*e*			02 09 41.5	
YLYR	comp=N,50nm,0.6s			max			02 09 45.2	
YLYR				*e*Sn		**Sn**	**02 10 18.4**	**-0.5**
YLYR				*e*Sg		**Sg**	**02 10 43.7**	**-5.8**
YLYR	comp=N,938nm,1.5s			Smax			02 10 51.2	
CIT	**Chita**	**5.95**	**82**	*e*		**Pg**	**02 09 48.6**	**-1.3**
CIT				max			02 09 56.2	
CIT	comp=N,149nm,0.3s			*e*			02 10 44.8	
CIT				*e*Sg		**Sg**	**02 11 02.9**	**-3.9**
CIT	comp=N,834nm,1.0s			Smax			02 11 15.5	
KMO	**Kumora**	**6.05**	**42**	*e*PN		**Pn**	**02 09 26.4**	**+0.9**
KMO				*e*			02 09 44.3	
KMO				*e*S		**Sn**	**02 10 32.8**	**-1.9**
KMO	**Kumora**	**6.05**	**42**	*e*Pn		**Pn**	**02 09 25.7**	**+0.2**
KMO				*e*			02 09 32.6	
KMO				*e*Pg		**Pg**	**02 09 45.8**	**-6.1**
KMO				*e*			02 09 49.1	
KMO	comp=N,123nm,0.8s			max			02 09 52.0	
KMO				*e*Sn		**Sn**	**02 10 35.4**	**+0.7**
KMO				*e*Sg		**Sg**	**02 11 03.4**	**-6.8**
KMO	comp=N,2μm,1.1s			Smax			02 11 10.6	
YOA	**Uoyan**	**6.43**	**42**	*e*		**Pg**	**02 10 10.4**	**+11**
YOA				*e*Sg		**Sg**	**02 11 18.4**	**-4.0**
YOA				*e*			02 11 19.6	
YOA				*e*			02 11 27.3	
YOA	comp=N,5μm,1.4s			Smax			02 11 35.9	
MINR	**Mina**	**6.73**	**303**	*e*Pg		**Pg**	**02 09 57.8**	**-7.1**
MINR				*e*			02 10 11.2	
MINR				*e*			02 10 46.5	
MINR				*e*			02 11 18.3	
MINR				*e*Sg		**Sg**	**02 11 24.7**	**-7.3**
CERR	**Cheremushki**	**7.82**	**284**	*e*		**Pb**	**02 10 16.6**	**+5.0**
CERR				*e*Sg		**Sb**	**02 11 54.6**	**+10**
VEH	**Verkhnyaya Baz**	**8.52**	**286**	*e*		**Pn**	**02 10 00.9**	**+1.6**
VEH				*e*Pg		Pn	02 10 26.4	+27
VEH	comp=N,16nm,1.1s			Pmax			02 10 29.2	
VEH				*e*Sg		Sn	02 12 16.0	+41
VEH	comp=N,553nm,1.1s			Smax			02 12 33.2	
TEL	**Teeli**	**8.66**	**271**	*e*		Px	02 10 30.3	
TEL				*e*Sg		Sx	02 12 24.0	
TEL				*e*			02 12 36.4	
CRS	**Chara**	**9.88**	**52**	*e*		Sx	02 12 58.5	
CRS				*e*Sg		Sx	02 13 02.2	
CRS	comp=N,371nm,1.7s			Smax			02 13 08.3	
TUP	**Tupik**	**10.02**	**67**	*e*		Px	02 11 39.1	
TUP				*e*			02 12 33.0	
TUP				*e*Sg		Sx	02 13 07.4	
TUP	comp=N,232nm,1.1s			Smax			02 13 16.9	
HIA	**Hailar**	**10.32**	**97**	*e*		Px	02 10 50.3	
HIA				*e*Sg		Sx	02 13 18.0	
HIA				*e*			02 13 26.2	
ARTR	**Artybash**	**10.38**	**278**	*e*Pg		Px	02 11 03.9	
ARTR				*e*			02 11 18.3	
ARTR				Sg		Sx	02 13 18.5	
ARTR				*e*			02 13 28.7	
AKAR	**Aktash**	**10.41**	**269**	*e*Pg		Px	02 11 02.9	
AKAR				*e*			02 12 54.4	
AKAR				*e*Sg		Sx	02 13 16.7	
AKAR	comp=N,233nm,1.9s			Smax			02 13 26.2	
KTNR	**Kaitanak**	**11.79**	**270**	*e*		Px	02 11 53.4	
KTNR				*e*			02 12 10.7	
KTNR				*e*Sg		Sx	02 13 57.7	
KTNR				*e*			02 14 12.9	
ZALV	**Zalesovo Beam**	**11.84**	**289**	Lg			02 13 59.0	
	comp=N,0.6nm,0.3s,baz=93,slow=29,SNR=12							
NVS	**Novosibirsk**	**12.84**	**293**	*e*P		**Pn**	**02 10 55.7**	**-2.7**
NVS				*e*			02 13 17.0	
TNDR	**Tynda**	**12.86**	**66**	*e*Sg		Sx	02 14 37.5	
BJT	**Baijiatuau**	**14.35**	**139**	*e*Pn		**Pn**	**02 11 17.7**	**-1.4**
	comp=N,43nm,0.5s							
BJT	**Baijiatuau**	**14.35**	**139**	*e*P		**Pn**	**02 11 17.7**	**-1.4**
BJT				pmax	pmax			
MK31	comp=Z,43nm,0.5s **Makanchi Array**	**14.96**	**260**	*e*Pn		**Pn**	**02 11 27.0**	**-0.4**
MKAR	**Makanchi Array**	**14.96**	**260**	Pn		**Pn**	**02 11 29.9**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=69,slow=13,SNR=3.6							
MKAR				Lg			02 15 43.5	
	comp=Z,0.1nm,0.3s,baz=68,slow=29,SNR=6.8							
KURK	**Kurchatov**	**15.92**	**277**	Pn		**Pn**	**02 11 41.4**	**+1.5**
	comp=Z,0.0nm,0.3s,baz=80,slow=12,SNR=2.2							
KURK				Lg			02 16 21.1	
	comp=Z,0.1nm,0.3s,baz=75,slow=30,SNR=4.1							
YAK	**Yakutsk**	**17.38**	**43**	⇑*e*P		**Pn**	**02 12 00.7**	**+2.4**
YAK	**Yakutsk**	**17.38**	**43**	*e*P		**Pn**	**02 11 59.5**	**+1.2**
YAK				pmax	pmax			
YAK	comp=Z,28nm,1.0s			pmax	pmax			
YAK	comp=E,20nm,1.1s			pmax	pmax			
	comp=N,6.0nm,1.0s							
BVAR	**Borovoye Array**	**20.48**	**287**	P		**P**	**02 12 32.8**	**-1.0**
	comp=N,0.7nm,0.5s,baz=78,slow=13,SNR=3.1							
TKM2	**Tokmak 2**	**21.03**	**257**	*e*P		**P**	**02 12 41.7**	**+2.0**
	comp=N,6.0nm,0.8s,mb4.0							
TKM2	**Tokmak 2**	**21.03**	**257**	*e*P		**P**	**02 12 41.7**	**+2.0**
TKM2				pmax	pmax			
TIXI	comp=Z,6.0nm,0.8s,mb4.0 **Tiksi

EDB				⇓Sn	Sn	02 13 07.4	-3.9	
HOLB	**Holberg**	**1.77**	**15**	⇓Sn	Sn	02 13 14.5	-4.0	
WOSB	**Woss**	**1.94**	**50**	⇑Pn	Pn	02 12 56.1	-2.0	
PHC	**Port Hardy**	**2.00**	**27**	⇑Pn	Pn	02 12 58.1	-1.0	
PHC				⇑Sn	Sn	02 13 20.9	-3.3	
NCRB	**Newcastle Ridg**	**2.35**	**50**	⇓Pn	Pn	02 13 02.5	-1.3	
BBB	**Bella Bella**	**3.29**	**8**	⇑Pn	Pn	02 13 14.5	-2.2	
BBB				⇓Sn	Sn	02 13 52.3	-3.6	

MOS ***27*** *02:36:06.9±1.1, 43°.17N×46°.02E, h22km, mb3.7/1, Error ellipse: s-maj=13.3km s-min=7.3km az=16.0*
CSEM ***27*** *02:36:06.9, 43°.17N×46°.02E, h22km, mb3.7, After OBN*
ISCJB ***27*** *02:36:07.3±0.5, 43°.29N±0°.05×46°.03E±0°.04, h22km±6km, Error ellipse: s-maj=8.6km s-min=3.1km az=25.1*

ISC 27 02:36:07.1±0.4, 43°.22N±0°.03×45°.95E±0°.03, h10km±4km, n42, σ1§16/78, 4C-3D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DLMR	**Dylym**	**0.52**	**107**	PG	**Pg**	**02 36 18.0**	**+0.8**
DLMR				*e*S	**Sg**	**02 36 25.0**	**+1.0**
DLMR				pmax	pmax		
	comp=Z,115nm,0.2s						
DLMR	**Dylym**	**0.52**	**107**	Pg	**Pg**	**02 36 18.0**	**+0.8**
	comp=Z,115nm,0.2s						
DLMR				*e*Sg	**Sg**	**02 36 25.0**	**+1.0**
BTLR	**Botlikh**	**0.59**	**160**	*e*PG	**Pg**	**02 36 17.5**	**-1.0**
BTLR				*e*S	**Sg**	**02 36 26.0**	**-0.3**
BTLR				pmax	pmax		
	comp=Z,29nm,0.3s						
BTLR	**Botlikh**	**0.59**	**160**	*e*Pg	**Pg**	**02 36 17.5**	**-1.0**
	comp=Z,29nm,0.3s						
BTLR				*e*Sg	**Sg**	**02 36 26.0**	**-0.3**
DBC	**Dubki**	**0.67**	**107**	⇓*i*PG	**Pg**	**02 36 19.5**	**-0.6**
DBC				*e*S	**Sg**	**02 36 30.5**	**+1.6**
DBC	**Dubki**	**0.67**	**107**	*i* Pg	**Pg**	**02 36 19.5**	**-0.6**
DBC				*e*Sg	**Sg**	**02 36 30.5**	**+1.6**
UNCR	**Uncukul**	**0.80**	**129**	*e*PG	**Pg**	**02 36 21.0**	**-1.5**
UNCR				*e*S	**Sg**	**02 36 32.0**	**-0.9**
UNCR				pmax	pmax		
	comp=Z,44nm,0.4s						
UNCR	**Uncukul**	**0.80**	**129**	*e*Pg	**Pg**	**02 36 21.0**	**-1.5**
	comp=Z,44nm,0.4s						
UNCR				*e*Sg	**Sg**	**02 36 32.0**	**-0.9**
KRNR	**Karanay**	**0.80**	**119**	*e*PG	**Pg**	**02 36 21.2**	**-1.4**
KRNR				*e*S	**Sg**	**02 36 34.2**	**+1.2**
KRNR				pmax	pmax		
	comp=Z,34nm,0.2s						
KRNR	**Karanay**	**0.80**	**119**	*e*Pg	**Pg**	**02 36 21.2**	**-1.4**
	comp=Z,34nm,0.2s						
KRNR				*e*Sg	**Sg**	**02 36 34.2**	**+1.2**
BUJR	**Buynaksk**	**0.94**	**115**	PG	**Pg**	**02 36 24.0**	**-1.1**
BUJR				*e*S	**Sg**	**02 36 38.5**	**+1.3**
BUJR	**Buynaksk**	**0.94**	**115**	Pg	**Pg**	**02 36 24.0**	**-1.1**
BUJR				*e*Sg	**Sg**	**02 36 38.5**	**+1.3**
VLKR	**Vladikavkaz**	**0.95**	**260**	*e*PG	**Pg**	**02 36 24.5**	**-0.9**
VLKR				*e*S	**Sg**	**02 36 38.6**	**+0.9**
VLKR	**Vladikavkaz**	**0.95**	**260**	*e*Pg	**Pg**	**02 36 24.5**	**-0.9**
VLKR				*e*Sg	**Sg**	**02 36 38.6**	**+0.9**
TRKR	**Terskaya**	**1.02**	**300**	⇓*i*PG	**Pg**	**02 36 25.3**	**-1.5**
TRKR				*e*S	**Sg**	**02 36 41.3**	**+1.3**
TRKR	**Terskaya**	**1.02**	**300**	*i* Pg	**Pg**	**02 36 25.3**	**-1.5**
TRKR				*e*Sg	**Sg**	**02 36 41.3**	**+1.3**
BTKR	**Batakoyurt**	**1.04**	**279**	*e*PG	**Pg**	**02 36 26.9**	**-0.2**
BTKR				*e*S	**Sg**	**02 36 43.0**	**+2.3**
BTKR	**Batakoyurt**	**1.04**	**279**	*e*Pg	**Pg**	**02 36 26.9**	**-0.2**
BTKR				*e*Sg	**Sg**	**02 36 43.0**	**+2.3**
KMSR	**Komsomolskaya**	**1.22**	**278**	⇑*i*PG	**Pg**	**02 36 29.8**	**-0.8**
KMSR				*e*S	**Sg**	**02 36 48.2**	**+1.8**
KMSR	**Komsomolskaya**	**1.22**	**278**	*i* Pg	**Pg**	**02 36 29.8**	**-0.8**
KMSR				*e*Sg	**Sg**	**02 36 48.2**	**+1.8**
ARNR	**Ardon**	**1.23**	**269**	*e*PG	**Pg**	**02 36 29.7**	**-0.9**
ARNR				*e*S	**Sg**	**02 36 47.5**	**+1.0**
ARNR	**Ardon**	**1.23**	**269**	*e*Pg	**Pg**	**02 36 29.7**	**-0.9**
ARNR				*e*Sg	**Sg**	**02 36 47.5**	**+1.0**
LACR	**Lac**	**1.28**	**253**	⇑*i*PG	**Pn**	**02 36 29.4**	**-1.6**
LACR				*i* S	**Sn**	**02 36 47.0**	**-1.2**
LACR	**Lac**	**1.28**	**253**	*i* Pg	**Pn**	**02 36 29.4**	**-1.6**
LACR				*i* Sg	**Sn**	**02 36 47.0**	**-1.2**
PRTR	**Priterechnaya**	**1.33**	**294**	*e*PG	**Pn**	**02 36 30.8**	**-0.9**
PRTR				*e*S	**Sg**	**02 36 50.2**	**+0.4**
PRTR	**Priterechnaya**	**1.33**	**294**	*e*Pg	**Pn**	**02 36 30.8**	**-0.9**
PRTR				*e*Sg	**Sg**	**02 36 50.2**	**+0.4**
KORR	**Kora**	**1.39**	**265**	*e*PG	**Pn**	**02 36 31.7**	**-0.8**
KORR				*i* S	**Sn**	**02 36 51.4**	**+0.5**
KORR	**Kora**	**1.39**	**265**	*e*Pg	**Pn**	**02 36 31.7**	**-0.8**
KORR				*i* Sg	**Sn**	**02 36 51.4**	**+0.5**
LSNR	**Lesken**	**1.56**	**273**	⇓*i*PG	**Pn**	**02 36 34.4**	**-0.6**
LSNR				*e*S	**Sn**	**02 36 56.3**	**+1.0**
LSNR	**Lesken**	**1.56**	**273**	*i* Pg	**Pn**	**02 36 34.4**	**-0.6**
LSNR				*e*Sg	**Sn**	**02 36 56.3**	**+1.0**
ZEI	**Tsey**	**1.57**	**254**	*e*PG	**Pn**	**02 36 33.7**	**-1.4**
ZEI	**Tsey**	**1.57**	**254**	*e*Pg	**Pn**	**02 36 33.7**	**-1.4**
TBLG	**Delisi**	**1.74**	**212**	*i* PN	**Pn**	**02 36 38.1**	**+0.7**
TBLG				*i* S	**Sg**	**02 37 02.3**	**-0.7**
TBLG	**Delisi**	**1.74**	**212**	P	**Pn**	**02 36 38.1**	**+0.7**
TBLG				S	**Sn**	**02 37 02.3**	**+2.7**
TBLG	**Delisi**	**1.74**	**212**	*i* Pn	**Pn**	**02 36 38.1**	**+0.7**
TBLG				*i* Sg	**Sg**	**02 37 02.3**	**-0.7**
MTA	**Mtatsminda**	**1.75**	**210**	P	**Pn**	**02 36 38.6**	**+1.1**
MTA				S	**Sg**	**02 37 02.8**	**-0.6**
DIGR	**Digorskoe uzhe**	**1.77**	**260**	⇑*i*PN	**Pn**	**02 36 36.8**	**-1.0**
DIGR	**Digorskoe uzhe**	**1.77**	**260**	*i* Pn	**Pn**	**02 36 36.8**	**-1.0**
DGRG	**David-gareji**	**1.82**	**194**	P	**Pn**	**02 36 40.2**	**+1.7**
DGRG				S	**Sg**	**02 37 07.0**	**+1.4**
GOR	**Gori**	**1.84**	**228**	P	**Pn**	**02 36 40.1**	**+1.3**
GOR				S	**Sg**	**02 37 04.6**	**-1.6**
KIV	**Kislovodsk**	**2.48**	**288**	*ce*PN	**Pb**	**02 36 51.3**	**-0.5**
KIV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KIV	**Kislovodsk**	**2.48**	**288**	*e*Pn	**Pb**	**02 36 51.3**	**-0.5**
	comp=Z,4.0nm,0.6s						

PGC 27 03:09:23.3±10.0, 49°.64N×130°.39W, h10km, ML3.0/7, Mw3.6, 4D, 242km Wsw of Pt. Hardy, Bc Vancouver Island Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.77**	**55**	⇑Pn	Pn	03 09 52.3	-1.5
HOLB				⇑Sn	Sn	03 10 12.5	-3.8
BPBC	**Brooks Peninsu**	**1.77**	**72**	⇓Sn	Sn	03 10 13.6	-2.9
PHC	**Port Hardy**	**2.18**	**60**	⇓Pn	Pn	03 09 57.0	-2.5
PHC				⇓Sn	Sn	03 10 22.1	-4.6
MAYB	**Maynard**	**2.21**	**69**	⇓Pn	Pn	03 09 58.7	-1.3
MAYB				⇑Sn	Sn	03 10 23.8	-3.6
WOSB	**Woss**	**2.53**	**77**	⇑Pn	Pn	03 10 02.1	-2.2
NCRB	**Newcastle Ridg**	**2.90**	**73**	⇑Pn	Pn	03 10 08.0	-1.4
BBB	**Bella Bella**	**2.93**	**29**	⇑Pn	Pn	03 10 08.4	-1.4
BBB				⇑Sn	Sn	03 10 42.0	-3.1

ISK ***27*** *03:11:31.6, 36°.25N×27°.71E, h68km, ML4.1*
DDA ***27*** *03:11:31.1, 36°.24N×27°.71E, h34km±1km, Md3.5*
ISCJB ***27*** *03:11:31.8±0.1, 36°.19N×0°.01×27°.81E±0°.02, h87km±2km, mb3.9/24, Error ellipse: s-maj=2.8km s-min=2.0km az=44.9*
NEIC ***27*** *03:11:33.2, 36°.30N×27°.71E, h68km, mb4.0/34, After ATH.*
CSEM ***27*** *03:11:33.2±0.1, 36°.21N×27°.79E, h85km±1km, mb4.1/15, Mw3.6, Error ellipse: s-maj=2.4km s-min=1.7km az=52.0*
ATH ***27*** *03:11:33.2, 36°.30N×27°.71E, h68km±1km, ML3.6*
IDC ***27*** *03:11:33.3±1.9, 36°.13N×27°.89E, h97km±21km, mb3.6/10, mb1 3.7/18, mb1mx3.6/32, mbtmp3.6/18, Error ellipse: s-maj=18.2km s-min=13.0km az=57.0*
NIC ***27*** *03:11:34.8±0.1, 35°.95N×27°.88E, h50km, mb4.3, ML3.8, MW3.6*
THE ***27*** *03:11:35.3, 36°.30N×27°.71E, h68km±2km, ML3.7/3, Error ellipse: s-maj=2.4km s-min=0.8km az=102.0*
HLW ***27*** *03:11:36.6, 35°.92N×28°.05E, h35km±50km, Ml4.5*
GII ***27*** *03:11:38.5±1.9, 35°.69N×28°.02E, h32km±4km, Mb4.2/2, Md3.7/6, Mm3.5/7*

ISC 27 03:11:33.1±0.1, 36°.21N±0°.01×27°.79E±0°.02, h82km±2km, n462, σ1§04/521, mb3.9/24, 2C-2D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.28**	**89**	*e*P	**Pn**	**03 11 45.5**	**+0.1**
ARG				*e*S	**Sn**	**03 11 53.8**	**-0.7**
ARG	**Arkhangelos**	**0.28**	**89**	*e*P	**Pn**	**03 11 45.5**	**+0.1**
ARG				*e*S	**Sn**	**03 11 53.8**	**-0.7**
ARG	**Arkhangelos**	**0.28**	**89**	P	**Pn**	**03 11 45.7**	**+0.3**
ARG				S	**Sn**	**03 11 54.2**	**-0.3**
ARG	**Arkhangelos**	**0.28**	**89**	P	**Pn**	**03 11 45.7**	**+0.3**
ARG				S	**Sn**	**03 11 54.2**	**-0.3**
NIS1	**Nisyros Isl.**	**0.63**	**309**	P	**Pn**	**03 11 47.5**	**-0.7**
NIS1				S	**Sn**	**03 11 57.6**	**-1.7**
NIS1	**Nisyros Isl.**	**0.63**	**309**	P	**Pn**	**03 11 47.5**	**-0.7**
KARP	**Karpathos**	**0.83**	**218**	*e*P	**Pn**	**03 11 51.0**	**+0.7**
KARP				*e*S	**Sn**	**03 12 03.4**	**+0.3**
KARP	**Karpathos**	**0.83**	**218**	*e*P	**Pn**	**03 11 51.0**	**+0.7**
KARP				*e*S	**Sn**	**03 12 03.4**	**+0.3**
KARP	**Karpathos**	**0.83**	**218**	*e*P	**Pn**	**03 11 51.0**	**+0.7**
KARP				*e*S	**Sn**	**03 12 03.4**	**+0.3**
BDRM	**Kayabasi**	**0.90**	**342**	*i* P	**Pn**	**03 11 50.1**	**-0.9**
BDRM				*i* S	**Sn**	**03 11 59.8**	**-4.6**
BDRM	**Kayabasi**	**0.90**	**342**	*i* P	**Pn**	**03 11 50.1**	**-0.9**
BODT	**Bodrum**	**0.93**	**336**	PG	**Pn**	**03 11 48.7**	**-2.8**
BODT				*e*SG	**Sn**	**03 12 01.9**	**-3.2**
BODT	**Bodrum**	**0.93**	**336**	*i* Pg	**Pn**	**03 11 48.7**	**-2.8**
YER	**Yerkesik**	**1.01**	**23**	PG	**Pn**	**03 11 50.8**	**-1.5**
YER				*e*SG	**Sn**	**03 12 04.6**	**-2.1**
YER	**Yerkesik**	**1.01**	**23**	*i* Pg	**Pn**	**03 11 50.8**	**-1.5**
YER				*e*Sg	**Sn**	**03 12 04.6**	**-2.1**
MLSB	**Milas**	**1.08**	**360**	PG	**Pn**	**03 11 51.0**	**-2.3**
MLSB	**Milas**	**1.08**	**360**	*i* Pg	**Pn**	**03 11 51.0**	**-2.2**
AYDN	**Tasoluk**	**1.45**	**3**	*i* P	**Pn**	**03 11 57.8**	**0.0**
AYDN	**Tasoluk**	**1.45**	**3**	*i* P	**Pn**	**03 11 57.8**	**0.0**
KSL	**Kastellorizon**	**1.46**	**92**	*e*P	**Pn**	**03 11 59.3**	**+1.4**
KSL	**Kastellorizon**	**1.46**	**92**	*e*P	**Pn**	**03 11 59.3**	**+1.4**
KSL	**Kastellorizon**	**1.46**	**92**	*e*P	**Pn**	**03 11 59.3**	**+1.4**
AKAS	**Kas**	**1.47**	**89**	*i* P	**Pn**	**03 11 58.2**	**+0.1**
AKAS				*i* S	**Sn**	**03 12 15.2**	**-1.8**
AKAS	**Kas**	**1.47**	**89**	*i* P	**Pn**	**03 11 58.2**	**+0.1**
AKAS				*i* S	**Sn**	**03 12 15.2**	**-1.8**
GCAM	**G?zelcaml?**	**1.55**	**344**	*i* P	**Pn**	**03 11 58.8**	**-0.3**
GCAM	**G?zelcaml?**	**1.55**	**344**	*i* P	**Pn**	**03 11 58.8**	**-0.3**
GLHS	**Glhisar (BURDU**	**1.67**	**55**	*e*PN	**Pn**	**03 12 00.3**	**-0.4**
GLHS	**Glhisar (BURDU**	**1.67**	**55**	*e*Pn	**Pn**	**03 12 00.3**	**-0.4**
SMG	**Samos**	**1.68**	**333**	*e*P	**Pn**	**03 12 00.2**	**-0.6**
SMG				*e*S	**Sn**	**03 12 19.7**	**-2.0**
SMG	**Samos**	**1.68**	**333**	*e*P	**Pn**	**03 12 00.2**	**-0.6**
SMG				*e*S	**Sn**	**03 12 19.7**	**-2.0**
SMG	**Samos**	**1.68**	**333**	*e*P	**Pn**	**03 12 00.2**	**-0.6**
SMG				*e*S	**Sn**	**03 12 19.7**	**-2.0**
ZKR	**Zakros**	**1.68**	**230**	*e*P	**Pn**	**03 12 02.2**	**+1.4**
ZKR	**Zakros**	**1.68**	**230**	*e*P	**Pn**	**03 12 02.2**	**+1.4**
ZKR	**Zakros**	**1.68**	**230**	P	**Pn**	**03 12 02.3**	**+1.5**
ZKR				S	**Sn**	**03 12 22.8**	**+1.0**
ZKR	**Zakros**	**1.68**	**230**	*e*P	**Pn**	**03 12 02.2**	**+1.4**
ZKR				S	**Sn**	**03 12 22.8**	**+1.0**
GOLH	**Golhisar**	**1.76**	**54**	*i* P	**Pn**	**03 12 02.4**	**+0.6**
GOLH	**Golhisar**	**1.76**	**54**	*i* P	**Pn**	**03 12 02.4**	**+0.6**
DNZL	**Cakiroluk**	**1.79**	**34**	*i* P	**Pn**	**03 12 02.1**	**-0.2**
DNZL	**Cakiroluk**	**1.79**	**34**	*i* P	**Pn**	**03 12 02.1**	**-0.1**
ELL	**Elmali**	**1.79**	**72**	*e*PN	**Pn**	**03 12 02.4**	**+0.1**
ELL	**Elmali**	**1.79**	**72**	*e*Pn	**Pn**	**03 12 02.4**	**+0.1**
DENT	**Denizli**	**1.84**	**33**	*e*Pn	**Pn**	**03 12 02.2**	**-0.6**
DENT	**Denizli**	**1.84**	**33**	*e*Pn	**Pn**	**03 12 02.2**	**-0.7**
NPS	**Neapolis**	**2.00**	**242**	*e*P	**Pn**	**03 12 05.8**	**+0.7**
NPS	**Neapolis**	**2.00**	**242**	*e*P	**Pn**	**03 12 05.8**	**+0.7**
NPS	**Neapolis**	**2.00**	**242**	*e*P	**Pn**	**03 12 05.8**	**+0.7**
APE	**Apeiranthos**	**2.00**	**296**	*e*PN	**Pn**	**03 12 04.3**	**-0.8**
APE	**Apeiranthos**	**2.00**	**296**	*e*P	**Pn**	**03 12 05.2**	**+0.2**
APE	**Apeiranthos**	**2.00**	**296**	*e*P	**Pn**	**03 12 05.3**	**+0.2**
APE	**Apeiranthos**	**2.00**	**296**	P	**Pn**	**03 12 05.0**	**-0.1**
APE				S	**Sn**	**03 12 27.9**	**-1.6**
APE	**Apeiranthos**	**2.00**	**296**	*e*Pn	**Pn**	**03 12 04.3**	**-0.8**
APE	**Apeiranthos**	**2.00**	**296**	*e*P	**Pn**	**03 12 05.3**	**+0.2**
APE				S	**Sn**	**03 12 27.9**	**-1.6**
LAST	**Lasithi**	**2.15**	**242**	*e*P	**Pn**	**03 12 08.0**	**+1.0**
LAST	**Lasithi**	**2.15**	**242**	*e*P	**Pn**	**03 12 08.0**	**+1.0**
LAST	**Lasithi**	**2.15**	**242**	P	**Pn**	**03 12 08.2**	**+1.2**
LAST	**Lasithi**	**2.15**	**242**	*e*P	**Pn**	**03 12 08.0**	**+1.0**
KORT	**Korkueli**	**2.21**	**68**	*i* P	**Pn**	**03 12 09.9**	**+2.1**
KORT				*i* S	**Sn**	**03 12 36.5**	**+2.2**
KORT	**Korkueli**	**2.21**	**68**	*i* P	**Pn**	**03 12 09.9**	**+2.1**
KORT				*i* S	**Sn**	**03 12 36.5**	**+2.1**
IZM	**Izmir**	**2.22**	**349**	*e*PN	**Pn**	**03 12 07.4**	**-0.6**
IZM	**Izmir**	**2.22**	**349**	*e*Pn	**Pn**	**03 12 07.4**	**-0.6**
KDAG	**Bornova**	**2.23**	**349**	*i* P	**Pn**	**03 12 06.7**	**-1.3**
KDAG	**Bornova**	**2.23**	**349**	*i* P	**Pn**	**03 12 06.7**	**-1.4**
URLA	**Izmir**	**2.35**	**337**	*i* P	**Pn**	**03 12 07.5**	**-2.2**
URLA				*i* S	**Sn**	**03 12 33.3**	**-4.3**
URLA	**Izmir**	**2.35**	**337**	*i* P	**Pn**	**03 12 07.5**	**-2.1**
URLA				*i* S	**Sn**	**03 12 33.3**	**-4.3**
KULA	**Kula-Manisa**	**2.40**	**17**	*e*PN	**Pn**	**03 12 10.0**	**-0.4**
KULA	**Kula-Manisa**	**2.40**	**17**	*e*Pn	**Pn**	**03 12 10.0**	**-0.4**
ANTB	**Antalya**	**2.41**	**73**	*e*PN	**Pn**	**03 12 11.2**	**+0.7**
ANTB	**Antalya**	**2.41**	**73**	*e*Pn	**Pn**	**03 12 11.2**	**+0.7**
KHL	**Karahalli**	**2.52**	**33**	*e*PN	**Pn**	**03 12 12.2**	**+0.2**
KHL	**Karahalli**	**2.52**	**33**	*e*Pn	**Pn**	**03 12 12.2**	**+0.2**
IDI	**Anoyia**	**2.53**	**250**	*e*P	**Pn**	**03 12 12.9**	**+0.8**
IDI	**Anoyia**	**2.53**	**250**	*e*P	**Pn**	**03 12 12.9**	**+0.8**
IDI	**Anoyia**	**2.53**	**250**	*e*P	**Pn**	**03 12 12.9**	**+0.8**
KHAL	**Karahalli**	**2.55**	**32**	*i* P	**Pn**	**03 12 12.6**	**+0.2**
KHAL	**Karahalli**	**2.55**	**32**	*i* P	**Pn**	**03 12 12.6**	**+0.2**
BCK	**Bucak**	**2.57**	**60**	*e*PN	**Pn**	**03 12 13.1**	**+0.5**
BCK	**Bucak**	**2.57**	**60**	*e*Pn	**Pn**	**03 12 13.1**	**+0.4**
CHOS	**Chios island**	**2.57**	**328**	P	**Pn**	**03 12 12.6**	**-0.1**
CHOS				S	**Sn**	**03 12 41.5**	**-1.6**
CHOS	**Chios island**	**2.57**	**328**	P	**Pn**	**03 12 12.6**	**-0.1**
CHOS				S	**Sn**	**03 12 41.5**	**-1.6**
AKHS	**Akhisar**	**2.66**	**0**	*i* P	**Pn**	**03 12 13.7**	**-0.2**
AKHS	**Akhisar**	**2.66**	**0**	*i* P	**Pn**	**03 12 13.7**	**-0.2**
AKS	**Akhisar**	**2.66**	**0**	*e*PN	**Pn**	**03 12 13.3**	**-0.7**
AKS	**Akhisar**	**2.66**	**0**	*e*Pn	**Pn**	**03 12 13.3**	**-0.6**
SIVA	**Sivas**	**2.70**	**245**	P	**Pn**	**03 12 15.9**	**+1.5**
SIVA	**Sivas**	**2.70**	**245**	P	**Pn**	**03 12 15.9**	**+1.5**
SUTC	**Sutluce-Ispart**	**2.87**	**63**	*e*PN	**Pn**	**03 12 17.6**	**+0.9**
SUTC	**Sutluce-Ispart**	**2.87**	**63**	*e*Pn	**Pn**	**03 12 17.6**	**+0.9**
DEMI	**Demirci**	**2.92**	**14**	*i* P	**Pn**	**03 12 17.6**	**+0.2**
DEMI	**Demirci**	**2.92**	**14**	*i* P	**Pn**	**03 12 17.6**	**+0.2**
GDZ	**Gediz**	**3.17**	**25**	*i* P	**Pn**	**03 12 20.0**	**-0.8**
GDZ	**Gediz**	**3.17**	**25**	*i* P	**Pn**	**03 12 20.0**	**-0.8**
SHUT	**Suhut-Afyon**	**3.21**	**42**	*e*PN	**Pn**	**03 12 21.1**	**-0.2**
SHUT	**Suhut-Afyon**	**3.21**	**42**	*e*Pn	**Pn**	**03 12 21.1**	**-0.2**
KARN	**Karanos**	**3.25**	**257**	P	**Pn**	**03 12 22.8**	**+1.0**
KARN	**Karanos**	**3.25**	**257**	P	**Pn**	**03 12 22.8**	**+1.0**
PRK	**Paraskevi**	**3.26**	**339**	*e*P	**Pn**	**03 12 22.0**	**0.0**
PRK	**Paraskevi**	**3.26**	**339**	*e*P	**Pn**	**03 12 22.0**	**0.0**
PRK	**Paraskevi**	**3.26**	**339**	P	**Pn**	**03 12 21.9**	**-0.1**
PRK				S	**Sn**	**03 12 57.8**	**-1.9**
PRK	**Paraskevi**	**3.26**	**339**	*e*P	**Pn**	**03 12 22.0**	**0.0**
PRK				S	**Sn**	**03 12 57.8**	**-1.9**
SIGR	**SIGRI**	**3.36**	**334**	P	**Pn**	**03 12 23.6**	**+0.2**
SIGR	**SIGRI**	**3.36**	**334**	P	**Pn**	**03 12 23.6**	**+0.2**
ALT	**Altintas**	**3.39**	**32**	*e*PN	**Pn**	**03 12 23.8**	**+0.1**
ALT	**Altintas**	**3.39**	**32**	*e*Pn	**Pn**	**03 12 23.8**	**+0.1**
BALB	**Balikesir**	**3.42**	**1**	*e*PN	**Pn**	**03 12 24.1**	**-0.1**
BALB	**Balikesir**	**3.42**	**1**	*e*Pn	**Pn**	**03 12 24.1**	**-0.1**
DURS	**Dursunbey**	**3.43**	**9**	*i* P	**Pn**	**03 12 24.3**	**0.0**
DURS	**Dursunbey**	**3.43**	**9**	*i* P	**Pn**	**03 12 24.3**	**0.0**
BALY	**Balya**	**3.53**	**358**	*i* P	**Pn**	**03 12 25.6**	**0.0**
BALY	**Balya**	**3.53**	**358**	*i* P	**Pn**	**03 12 25.6**	**0.0**
BOLV	**Bolvadin**	**3.55**	**44**	*i* P	**Pn**	**03 12 26.9**	**+1.0**
BOLV	**Bolvadin**	**3.55**	**44**	*i* P	**Pn**	**03 12 26.9**	**+1.0**
VLY	**Voula,Athens**	**3.59**	**298**	*e*P	**Pn**	**03 12 27.4**	**+1.0**
VLY	**Voula,Athens**	**3.59**	**298**	*e*P	**Pn**	**03 12 27.4**	**+1.0**
VLY	**Voula,Athens**	**3.59**	**298**	*e*P	**Pn**	**03 12 27.4**	**+1.0**
GAZI	**Gazipasa**	**3.66**	**88**	*i* P	**Pn**	**03 12 27.8**	**+0.3**
GAZI	**Gazipasa**	**3.66**	**88**	*i* P	**Pn**	**03 12 27.8**	**+0.4**
ATH	**Athens Observa**	**3.70**	**300**	*e*P	**Pn**	**03 12 28.2**	**+0.3**
ATH	**Athens Observa**	**3.70**	**300**	*e*P	**Pn**	**03 12 28.2**	**+0.3**
ATH	**Athens Observa**	**3.70**	**300**	*e*P	**Pn**	**03 12 28.2**	**+0.3**
NAIG	**Nisos Aigina**	**3.77**	**295**	*e*P	**Pn**	**03 12 29.8**	**+0.9**
NAIG	**Nisos Aigina**	**3.77**	**295**	*e*P	**Pn**	**03 12 29.8**	**+0.9**
NAIG	**Nisos Aigina**	**3.77**	**295**	*e*P	**Pn**	**03 12 29.8**	**+0.9**
EZN	**Ezine**	**3.79**	**343**	*e*PN	**Pn**	**03 12 29.0**	**-0.1**
EZN	**Ezine**	**3.79**	**343**	*e*Pn	**Pn**	**03 12 29.0**	**-0.1**
GONE	**Gonen-Balikesi**	**3.83**	**359**	*e*PN	**Pn**	**03 12 29.3**	**-0.4**
GONE	**Gonen-Balikesi**	**3.83**	**359**	*e*Pn	**Pn**	**03 12 29.3**	**-0.4**
KYTH	**Kithira**	**3.84**	**272**	*e*P	**Pn**	**03 12 31.2**	**+1.4**
KYTH	**Kithira**	**3.84**	**272**	*e*P	**Pn**	**03 12 31.2**	**+1.4**
KYTH	**Kithira**	**3.84**	**272**	*e*P	**Pn**	**03 12 31.2**	**+1.4**
HDMB	**Hadim**	**3.86**	**77**	*e*PN	**Pn**	**03 12 31.6**	**+1.5**
HDMB	**Hadim**	**3.86**	**77**	*e*Pn	**Pn**	**03 12 31.6**	**+1.5**
DID	**Didima**	**3.87**	**291**	*e*P	**Pn**	**03 12 31.4**	**+1.2**
DID	**Didima**	**3.87**	**291**	*e*P	**Pn**	**03 12 31.4**	**+1.2**
VLI	**Veliai**	**3.94**	**279**	*e*P	**Pn**	**03 12 32.6**	**+1.4**
VLI	**Veliai**	**3.94**	**279**	*e*P	**Pn**	**03 12 32.6**	**+1.4**
VLI	**Veliai**	**3.94**	**279**	*e*P	**Pn**	**03 12 32.6**	**+1.4**
PPCY	**Paphos**	**3.95**	**108**	P	**Pn**	**03 12 31.5**	**+0.2**
PPCY	**Paphos**	**3.95**	**108**	P	**Pn**	**03 12 31.5**	**+0.2**
KONT	**Konya--Tatoy**	**4.05**	**63**	*e*PN	**Pn**	**03 12 33.7**	**+1.1**
KONT	**Konya--Tatoy**	**4.05**	**63**	*e*Pn	**Pn**	**03 12 33.7**	**+1.0**
ALFC	**Alevga**	**4.06**	**104**	P	**Pn**	**03 12 33.4**	**+0.6**
	30nm,0.2s						
ALFC				S	**Sn**	**03 13 19.0**	**-0.1**
ALFC	**Alevga**	**4.06**	**104**	P	**Pn**	**03 12 33.4**	**+0.6**
	30nm,0.2s						
ALFC				S	**Sn**	**03 13 19.0**	**-0.1**
KCTX	**Karacabey (Bur**	**4.07**	**6**	*e*PN	**Pn**	**03 12 32.4**	**-0.6**
KCTX	**Karacabey (Bur**	**4.07**	**6**	*e*Pn	**Pn**	**03 12 32.4**	**-0.6**
EDC	**Edincik**	**4.13**	**1**	*e*PN	**Pn**	**03 12 33.5**	**-0.3**
EDC	**Edincik**	**4.13**	**1**	*e*Pn	**Pn**	**03 12 33.5**	**-0.3**
ERMK	**Ermenek**	**4.16**	**83**	*i* P	**Pn**	**03 12 34.9**	**+0.7**
ERMK	**Ermenek**	**4.16**	**83**	*i* P	**Pn**	**03 12 34.9**	**+0.7**
KIZT	**Kizilcal**	**4.21**	**49**	*e*PN	**Pn**	**03 12 35.8**	**+1.0**
KIZT	**Kizilcal**	**4.21**	**49**	*e*Pn	**Pn**	**03 12 35.8**	**+1.0**
BORA	**Eskisehir**	**4.23**	**29**	*i* P	**Pn**	**03 12 35.6**	**+0.5**
BORA	**Eskisehir**	**4.23**	**29**	*i*

GLL **Jalalah** 7.39 152 P Pn 03 13 18.0 -0.3
baz=153
GLL **Jalalah** 7.39 152 P Pn 03 13 18.0 -0.3
HMDT **Nahal Hemdat** 7.53 119 Pn Pn 03 13 20.3 +0.2
HMDT Sn Sn 03 14 40.0 -3.9
SUZ 7.63 145 P Pn 03 13 21.7 +0.1
baz=145
SUZ 7.63 145 P Pn 03 13 21.7 +0.1
KZIT **Kziot** 7.64 132 Pn Pn 03 13 21.2 -0.5
KZIT Sn Sn 03 14 41.3 -5.4
RTMI **Retamim** 7.72 130 Pn Pn 03 13 22.0 -0.8
RTMI Sn Sn 03 14 43.1 -5.5
DSI **Dead Sea** 7.83 124 Pn Pn 03 13 23.5 -0.7
DSI Sn Sn 03 14 47.5 -3.8
AWBH 7.92 173 P Pn 03 13 25.0 -0.6
baz=174
AWBH 7.92 173 P Pn 03 13 25.0 -0.6
MZDA **Masada** 7.98 126 Pn Pn 03 13 25.8 -0.5
MZDA Sn Sn 03 14 50.1 -4.9
ZAF 7.99 149 P Pn 03 13 25.7 -0.7
baz=149
ZAF 7.99 149 P Pn 03 13 25.7 -0.7
ZNM 8.05 146 P Pn 03 13 27.2 -0.1
baz=146
ZNM 8.05 146 P Pn 03 13 27.2 -0.1
HNKL **Nakhl** 8.14 139 P Pn 03 13 28.0 -0.5
baz=138
HNKL S Sn 03 14 51.6 -7.2
baz=138
HNKL **Nakhl** 8.14 139 P Pn 03 13 28.0 -0.5
ZFRI **Zfri** 8.37 130 Pn Pn 03 13 31.1 -0.5
KRMI **Paran Flat** 8.41 134 Pn Pn 03 13 31.3 -0.9
KRMI Sn Sn 03 14 59.7 -5.8
ASF **Jabal al Asfar** 8.55 115 P Pn 03 13 34.3 +0.1
comp=E,1.6nm,0.3s,baz=249,slow=9.7,SNR=10
ASF S Sn 03 15 06.3 -2.7
comp=E,0.7nm,0.3s,baz=232,slow=19,SNR=3.2
HRFI **Mount Harif** 8.65 133 Pn Pn 03 13 34.6 -0.9
HRFI Sn Sn 03 15 06.0 -5.4
MBRI **Mt Berech** 8.76 135 Pn Pn 03 13 36.6 -0.4
MBRI Sn Sn 03 15 08.8 -5.2
HRDS **Abu Rudays** 8.81 147 P Pn 03 13 37.3 -0.3
baz=146
EIL **Elat** 8.87 135 P Pn 03 13 37.8 -0.8
comp=E,2.5nm,0.3s,baz=359,slow=6.1,SNR=33
EIL S Sn 03 15 11.2 -5.7
comp=E,10nm,0.3s,baz=288,slow=18,SNR=14
EIL **Elat** 8.87 135 P Pn 03 13 37.8 -0.7
EIL **Elat** 8.87 135 Pn Pn 03 13 37.6 -0.9
EIL Sn Sn 03 15 10.9 -5.9
GRB **Gharib** 8.98 150 P Pn 03 13 39.3 -0.6
baz=151
GRB **Gharib** 8.98 150 P Pn 03 13 39.3 -0.6
HFRF **Wahat Farafira** 9.04 177 P Pn 03 13 40.6 -0.3
baz=178
HFRF **Wahat Farafira** 9.04 177 P Pn 03 13 40.6 -0.3
HBST **Basata** 9.10 138 P Pn 03 13 41.0 -0.6
baz=138
HBST **Basata** 9.10 138 P Pn 03 13 41.0 -0.6
TIP **Timpagrande** 9.23 292 *e*Pn Pn 03 13 45.5 +2.2
TIP **Timpagrande** 9.23 292 *e*Pn Pn 03 13 45.5 +2.2
TR2 9.28 146 P Pn 03 13 43.4 -0.7
baz=145
TR2 9.28 146 P Pn 03 13 43.4 -0.6
HKAT **Jabal Katrina** 9.29 144 P Pn 03 13 43.7 -0.5
baz=144
HKAT **Jabal Katrina** 9.29 144 P Pn 03 13 43.7 -0.5
ASUT 9.36 159 P Pn 03 13 45.3 +0.2
baz=159
ASUT 9.36 159 P Pn 03 13 45.3 +0.2
MLR **Muntele Rosu** 9.38 352 P Pn 03 13 47.3 +2.0
MLR S Sn 03 15 26.7 -2.2
MLR **Muntele Rosu** 9.38 352 P Pn 03 13 47.3 +2.0
comp=E,0.1nm,0.3s,baz=144,slow=17,SNR=3.2
MLR S Sn 03 15 26.7 -2.2
comp=E,0.7nm,0.3s,baz=102,slow=7.6,SNR=4.0
MLR **Muntele Rosu** 9.38 352 P Pn 03 13 47.3 +2.1
MLR S Sn 03 15 26.7 -2.2
HDHB **Dhahab** 9.43 140 P Pn 03 13 45.8 -0.4
baz=140
HDHB **Dhahab** 9.43 140 P Pn 03 13 45.8 -0.4
TR1 9.71 146 P Pn 03 13 49.2 -0.7
baz=146
TR1 9.71 146 P Pn 03 13 49.2 -0.7
SHRM 9.88 145 P Pn 03 13 52.3 0.0
baz=145
SHRM 9.88 145 P Pn 03 13 52.3 0.0
HDK1 **Dakhla** 10.72 172 P Pn 03 14 03.7 -0.1
baz=173
HDK1 **Dakhla** 10.72 172 P Pn 03 14 03.7 0.0
VAE **Valguarnera** 10.79 281 S Sn 03 16 00.7 -2.8
comp=E,1.1nm,0.3s,baz=230,slow=11,SNR=3.7
HSFG 10.95 150 P Pn 03 14 06.4 -0.4
baz=150
HSFG 10.95 150 P Pn 03 14 06.4 -0.4
HQSR 11.86 150 P Pn 03 14 18.9 -0.3
baz=150
HQSR 11.86 150 P Pn 03 14 18.9 -0.3
EMRS **Mersa Alam** 12.70 150 P Pn 03 14 31.0 +0.4
baz=150
EMRS **Mersa Alam** 12.70 150 P Pn 03 14 31.0 +0.4
PSZ **Piszkesteto** 13.08 336 *e*Pn Pn 03 14 37.4 +2.0
PSZ *e*P 03 14 43.4
PSZ **Piszkesteto** 13.08 336 *e*Pn Pn 03 14 37.4 +2.0
BOJS **Bojanci** 13.26 318 *i* Pn Pn 03 14 42.5 +4.7
BOJS *i* Sn Sn 03 16 21.5 -42
VISS **Visnje** 13.67 318 *i* Pn Pn 03 14 47.4 +4.1
VYHS **Vyhne** 13.93 335 *e*P Pn 03 14 53.7 +7.1
VYHS **Vyhne** 13.93 335 *e*P Pn 03 14 53.7 +7.1
VYHS **Vyhne** 13.93 335 *e*P Pn 03 14 53.7 +7.1
SKDS **Skadanscina** 13.96 316 *i* Pn Pn 03 14 50.0 +2.9
AKASG **Malin Array Be** 14.52 4 P Pn 03 14 56.5 +2.2
comp=E,1.5nm,0.3s,baz=193,slow=10,SNR=7.0
AKASG **Malin Array Be** 14.52 4 ⇑*i* P Pn 03 14 56.5 +2.2
KBA **Koelnbreinsper** 15.28 320 ⇑*i* P Pn 03 15 09.0 +4.9
comp=E,4.2nm,0.5s
KBA **Koelnbreinsper** 15.28 320 P Pn 03 15 09.0 +4.9
comp=E,4.2nm,0.5s
VRAC **Vranov** 15.43 331 P Pn 03 15 07.7 +1.8
comp=E,0.8nm,0.3s,baz=174,slow=12,SNR=5.8
VRAC **Vranov** 15.43 331 P Pn 03 15 07.7 +1.7
MORC **Moravsky Berou** 15.47 334 *e*P Pn 03 15 09.3 +2.9
comp=E,2.2nm,0.7s
MORC **Moravsky Berou** 15.47 334 *e*P Pn 03 15 09.3 +2.9
comp=E,2.2nm,0.7s
PGF **Pioggiola** 15.83 299 *e*P Pn 03 15 10.7 -0.3
comp=E,15nm,1.0s
PGF **Pioggiola** 15.83 299 *e*P Pn 03 15 10.7 -0.3
comp=E,7.7nm,1.0s
PGF **Pioggiola** 15.83 299 *e*P Pn 03 15 10.7 -0.3
comp=E,7.7nm,1.0s
TREC **Trest** 15.86 329 *e*P Pn 03 15 15.9 +4.5
DPC **Dobruska-Polom** 16.38 333 *e*P Pn 03 15 21.7 +3.8
KHC **Kasperske Hory** 16.57 326 *e*P Pn 03 15 22.4 +2.1
comp=E,3.4nm,0.7s
KHC **Kasperske Hory** 16.57 326 *e*P Pn 03 15 22.9 +2.7
KHC **Kasperske Hory** 16.57 326 *e*P Pn 03 15 22.4 +2.2
comp=E,3.4nm,0.7s
UPC **Upice** 16.63 333 *e*P Pn 03 15 24.7 +3.8
MOTA **Moosalm** 16.65 317 ⇑*i* P Pn 03 15 23.8 +2.6
comp=E,3.1nm,0.7s
MOTA **Moosalm** 16.65 317 P Pn 03 15 23.8 +2.6
comp=E,3.1nm,0.7s
FETA **Feichten** 16.68 316 ⇓*i* P Pn 03 15 25.2 +3.7
comp=E,8.4nm,0.7s
PRU **Pruhonice** 16.79 329 *e*P Pn 03 15 24.3 +1.4
PRU **Pruhonice** 16.79 329 P Pn 03 15 24.3 +1.4
DAVOX **Davos/Dischmat** 17.03 314 P Pn 03 15 27.5 +1.6
comp=E,0.3nm,0.3s,baz=131,slow=11,SNR=4.0
DAVOX **Davos/Dischmat** 17.03 314 P Pn 03 15 27.5 +1.6
DAVA **Damuels** 17.30 315 ⇓*i* P Pn 03 15 30.5 +1.2
comp=E,3.4nm,0.3s
DAVA **Damuels** 17.30 315 P Pn 03 15 30.5 +1.3
comp=E,3.4nm,0.3s
SBF **Sospel** 17.33 302 *e*P Pn 03 15 30.8 +1.2
comp=E,17nm,0.7s
SBF **Sospel** 17.33 302 *e*P Pn 03 15 30.8 +1.2
comp=E,8.6nm,0.7s
SBF **Sospel** 17.33 302 *e*P Pn 03 15 30.8 +1.2
comp=E,8.6nm,0.7s
BRG **Berggiesshubel** 17.72 330 *e*P Pn 03 15 36.3 +2.1
comp=E,3.5nm,0.7s
BRG *e* 03 15 40.0
comp=E,2.8nm,0.7s
FRF **La Foret Royal** 17.78 301 *e*P Pn 03 15 34.3 -0.8
comp=E,5.1nm,0.7s
FRF **La Foret Royal** 17.78 301 *e*P Pn 03 15 34.3 -0.8
comp=E,2.5nm,0.7s
FRF **La Foret Royal** 17.78 301 *e*P Pn 03 15 34.3 -0.8
comp=E,2.5nm,0.7s
MBDF **Montbardon** 18.07 305 *e*P Pn 03 15 37.8 -0.8
comp=E,7.0nm,0.4s
MBDF **Montbardon** 18.07 305 *e*P Pn 03 15 37.8 -0.8
comp=E,3.5nm,0.4s
MBDF **Montbardon** 18.07 305 *e*P Pn 03 15 37.8 -0.8
comp=E,3.5nm,0.4s
LPG **La Plagne** 18.37 307 *e*P Pn 03 15 42.2 0.0
comp=E,8.4nm,0.5s
LPG **La Plagne** 18.37 307 *e*P Pn 03 15 42.2 0.0
comp=E,4.2nm,0.5s
LPG **La Plagne** 18.37 307 *e*P Pn 03 15 42.2 0.0
comp=E,4.2nm,0.5s
LPL **La Plagne** 18.39 307 *e*P Pn 03 15 42.7 +0.2
comp=E,23nm,0.6s
LPL **La Plagne** 18.39 307 *e*P Pn 03 15 42.7 +0.2
comp=E,12nm,0.6s
LPL **La Plagne** 18.39 307 *e*P Pn 03 15 42.7 +0.2
comp=E,12nm,0.6s
CLL **Collm** 18.43 330 P Pn 03 15 43.0 +0.2
CLL **Collm** 18.43 330 *i* P Pn 03 15 43.0 +0.2
comp=E,7.0nm,0.6s
CLL **Collm** 18.43 330 P Pn 03 15 43.0 +0.2
SMRF **Simiane la Rot** 18.64 301 *e*P Pn 03 15 43.2 -2.2
comp=E,29nm,1.4s
SMRF **Simiane la Rot** 18.64 301 *e*P Pn 03 15 43.2 -2.2
comp=E,29nm,1.4s
SMRF **Simiane la Rot** 18.64 301 *e*P Pn 03 15 43.2 -2.2
comp=E,14nm,1.4s
ORIF **Oris-en-Rattie** 18.73 304 *e*P Pn 03 15 45.4 -1.1
comp=E,7.2nm,0.7s
ORIF **Oris-en-Rattie** 18.73 304 *e*P Pn 03 15 45.4 -1.1
comp=E,3.6nm,0.7s
ORIF **Oris-en-Rattie** 18.73 304 *e*P Pn 03 15 45.4 -1.1
comp=E,3.6nm,0.7s
CABF **La Chapelle** 19.25 309 *e*P Pn 03 15 50.8 -1.8
comp=E,21nm,0.6s
CABF **La Chapelle** 19.25 309 *e*P Pn 03 15 50.8 -1.8
comp=E,10nm,0.6s
CABF **La Chapelle** 19.25 309 *e*P Pn 03 15 50.8 -1.8
comp=E,10nm,0.6s
HINF **Hinteralfeld** 19.33 313 *e*P Pn 03 15 52.3 -1.3
comp=E,3.9nm,0.5s
HINF **Hinteralfeld** 19.33 313 *e*P Pn 03 15 52.3 -1.3
comp=E,2.0nm,0.5s
HINF **Hinteralfeld** 19.33 313 *e*P Pn 03 15 52.3 -1.3
comp=E,2.0nm,0.5s
CDF **Champ du Feu** 19.39 315 *e*P Pn 03 15 53.2 -1.0
comp=E,28nm,0.9s
CDF **Champ du Feu** 19.39 315 *e*P Pn 03 15 53.2 -1.0
comp=E,14nm,0.9s
CDF **Champ du Feu** 19.39 315 *e*P Pn 03 15 53.2 -1.0
comp=E,14nm,0.9s
VIVF **Saint-Julien-l** 19.53 303 *e*P Pn 03 15 54.1 -1.8
comp=E,15nm,0.7s
VIVF **Saint-Julien-l** 19.53 303 *e*P Pn 03 15 54.1 -1.8
comp=E,7.4nm,0.7s
VIVF **Saint-Julien-l** 19.53 303 *e*P Pn 03 15 54.1 -1.8
comp=E,7.4nm,0.7s
HAU **Haudompre** 19.72 313 *e*P Pn 03 15 57.4 -0.8
comp=E,12nm,0.6s
HAU **Haudompre** 19.72 313 *e*P Pn 03 15 57.4 -0.8
comp=E,5.9nm,0.6s
HAU **Haudompre** 19.72 313 *e*P Pn 03 15 57.4 -0.8
comp=E,5.9nm,0.6s
LASF **Ste Croix** 19.86 301 *e*P Pn 03 15 57.1 -2.7
comp=E,3.2nm,0.5s
LASF **Ste Croix** 19.86 301 *e*P Pn 03 15 57.1 -2.7
comp=E,1.6nm,0.5s
SFTF **Sexfontaines** 20.59 313 *e*P P 03 16 06.2 +0.9
comp=E,8.0nm,0.4s
SFTF **Sexfontaines** 20.59 313 *e*P P 03 16 06.2 +0.9
comp=E,8.0nm,0.4s
SFTF **Sexfontaines** 20.59 313 *e*P P 03 16 06.2 +0.9
comp=E,4.0nm,0.4s
SMF **Signal de Mont** 20.68 308 *e*P P 03 16 06.1 -0.3
comp=E,16nm,0.6s
SMF **Signal de Mont** 20.68 308 *e*P P 03 16 06.1 -0.3
comp=E,7.8nm,0.6s
SMF **Signal de Mont** 20.68 308 *e*P P 03 16 06.1 -0.3
comp=E,7.8nm,0.6s
MEZF **Maizieres J'vi** 20.72 313 *e*P P 03 16 09.6 +2.9
comp=E,10nm,0.5s
MEZF **Maizieres J'vi** 20.72 313 *e*P P 03 16 09.6 +2.9
comp=E,10nm,0.5s
MTLF **Montolieu** 20.85 298 *e*P P 03 16 08.0 -0.2
comp=E,6.9nm,0.6s
MTLF **Montolieu** 20.85 298 *e*P P 03 16 08.0 -0.2
comp=E,3.5nm,0.6s
MTLF **Montolieu** 20.85 298 *e*P P 03 16 08.0 -0.2
comp=E,3.5nm,0.6s
LOR **Lormes** 20.91 309 *e*P P 03 16 09.3 +0.5
comp=E,5.9nm,0.6s
LOR **Lormes** 20.91 309 *e*P P 03 16 09.3 +0.5
comp=E,3.0nm,0.6s
LOR **Lormes** 20.91 309 *e*P P 03 16 09.3 +0.5
comp=E,3.0nm,0.6s
AVF **Avril sur Loir** 21.05 308 *e*P P 03 16 09.9 -0.4
comp=E,10nm,0.7s,mb3.9
AVF **Avril sur Loir** 21.05 308 *e*P P 03 16 09.9 -0.4
comp=E,5.2nm,0.7s,mb4.0
AVF **Avril sur Loir** 21.05 308 *e*P P 03 16 09.9 -0.4
comp=E,5.2nm,0.7s,mb4.0
SSF **Saint Saulge** 21.05 309 *e*P P 03 16 10.0 -0.3
comp=E,16nm,0.6s,mb4.3
SSF **Saint Saulge** 21.05 309 *e*P P 03 16 10.0 -0.3
comp=E,8.2nm,0.6s,mb4.2
SSF **Saint Saulge** 21.05 309 *e*P P 03 16 10.0 -0.3
comp=E,8.2nm,0.6s,mb4.3
BGF **Bois d'Agland** 21.29 307 *e*P P 03 16 12.9 0.0
comp=E,8.7nm,0.6s,mb4.0
BGF **Bois d'Agland** 21.29 307 *e*P P 03 16 12.9 0.0
comp=E,4.3nm,0.6s,mb4.0
BGF **Bois d'Agland** 21.29 307 *e*P P 03 16 12.9 0.0
comp=E,4.3nm,0.6s,mb4.0
CAF **Calviac** 21.32 302 *e*P P 03 16 13.7 +0.5
comp=E,12nm,1.0s,mb3.9
CAF **Calviac** 21.32 302 *e*P P 03 16 13.7 +0.5
comp=E,5.8nm,1.0s,mb3.9
CAF **Calviac** 21.32 302 *e*P P 03 16 13.7 +0.5
comp=E,5.8nm,1.0s,mb3.9
TCF **Toulx Ste Croi** 21.62 306 *e*P P 03 16 18.5 +2.1
comp=E,7.3nm,0.8s,mb3.8
TCF **Toulx Ste Croi** 21.62 306 *e*P P 03 16 18.5 +2.1
comp=E,3.7nm,0.8s,mb3.8
TCF **Toulx Ste Croi** 21.62 306 *e*P P 03 16 18.5 +2.1
comp=E,3.7nm,0.8s,mb3.8
RJF **Les Rejaudoux** 21.80 303 *e*P P 03 16 18.4 +0.1
comp=E,7.4nm,0.6s,mb3.9
RJF **Les Rejaudoux** 21.80 303 *e*P P 03 16 18.4 +0.1
comp=E,3.7nm,0.6s,mb3.9
RJF **Les Rejaudoux** 21.80 303 *e*P P 03 16 18.4 +0.1
comp=E,3.7nm,0.6s,mb3.9
LFF **La Frestalee** 22.24 301 *e*P P 03 16 22.6 -0.3
comp=E,11nm,0.7s,mb4.0
LFF **La Frestalee** 22.24 301 *e*P P 03 16 22.6 -0.3
comp=E,5.3nm,0.7s,mb4.0
LFF **La Frestalee** 22.24 301 *e*P P 03 16 22.6 -0.3
comp=E,5.3nm,0.7s,mb4.0
ETSF **Etsaut** 22.79 296 *e*P P 03 16 28.2 -0.6
comp=E,5.1nm,0.6s,mb3.7
ETSF **Etsaut** 22.79 296 *e*P P 03 16 28.2 -0.6
comp=E,2.5nm,0.6s,mb3.7
ETSF **Etsaut** 22.79 296 *e*P P 03 16 28.2 -0.6
comp=E,2.5nm,0.6s,mb3.7
MFF **Saint Martin d** 23.27 305 *e*P P 03 16 32.8 -0.5
comp=E,11nm,0.7s,mb4.0
MFF **Saint Martin d** 23.27 305 *e*P P 03 16 32.8 -0.5
comp=E,5.7nm,0.7s,mb4.0
MFF **Saint Martin d** 23.27 305 *e*P P 03 16 32.8 -0.5
comp=E,5.7nm,0.7s,mb4.0
SJPF **Ste Jean** 23.30 296 *e*P P 03 16 33.6 -0.1
SJPF **Ste Jean** 23.30 296 *e*P P 03 16 33.6 -0.1
LDF **La Druitiere** 23.89 310 *e*P P 03 16 38.6 -0.4
comp=E,17nm,0.6s,mb4.3
LDF **La Druitiere** 23.89 310 *e*P P 03 16 38.6 -0.4
comp=E,8.4nm,0.6s,mb4.2
LDF **La Druitiere** 23.89 310 *e*P P 03 16 38.6 -0.4
comp=E,8.4nm,0.6s,mb4.3
FLN **La Foliniere** 24.17 310 *e*P P 03 16 40.7 -0.9
comp=E,7.2nm,0.2s,mb4.3
FLN **La Foliniere** 24.17 310 *e*P P 03 16 40.7 -0.9
comp=E,3.6nm,0.2s,mb4.4
FLN **La Foliniere** 24.17 310 *e*P P 03 16 40.7 -0.9
comp=E,3.6nm,0.2s,mb4.3
GRR **Gorron** 24.28 309 *e*P P 03 16 42.0 -0.6
comp=E,35nm,0.5s,mb4.6
GRR **Gorron** 24.28 309 *e*P P 03 16 42.0 -0.6
comp=E,17nm,0.5s,mb4.6
GRR **Gorron** 24.28 309 *e*P P 03 16 42.0 -0.6
comp=E,17nm,0.5s,mb4.6
ESDC **Sonseca Array** 25.21 288 P P 03 16 50.3 -0.8
comp=E,1.0nm,0.5s,mb3.5,baz=76,slow=9.5,SNR=12
ESDC **Sonseca Array** 25.21 288 P P 03 16 50.3 -0.8
FINES **FINESS Array B** 25.28 358 P P 03 16 51.3 -0.2
comp=E,1.3nm,0.4s,mb3.7,baz=164,slow=10,SNR=11
FINES **FINESS Array B** 25.28 358 P P 03 16 51.3 -0.2
SGMF **Saint Gilles** 25.31 308 *e*P P 03 16 51.4 -0.5
comp=E,8.5nm,0.6s,mb4.0
SGMF **Saint Gilles** 25.31 308 *e*P P 03 16 51.4 -0.5
comp=E,4.3nm,0.6s,mb4.1
SGMF **Saint Gilles** 25.31 308 *e*P P 03 16 51.4 -0.5
comp=E,4.2nm,0.6s,mb4.0
HFS **Hagfors** 25.61 344 P P 03 16 54.3 -0.1
comp=E,2.5nm,0.6s,mb3.8,baz=148,slow=20,SNR=10
HFS **Hagfors** 25.61 344 P P 03 16 54.3 -0.1
QUIF **Quistinic** 25.61 307 *e*P P 03 16 54.5 -0.1
comp=E,14nm,0.7s,mb4.2
QUIF **Quistinic** 25.61 307 *e*P P 03 16 54.5 -0.1
comp=E,6.8nm,0.7s,mb4.2
QUIF **Quistinic** 25.61 307 *e*P P 03 16 54.5 -0.1
comp=E,6.8nm,0.7s,mb4.2
ROSF **Rostrenen** 25.80 308 *e*P P 03 16 55.7 -0.6
ROSF **Rostrenen** 25.80 308 *e*P P 03 16 55.7 -0.6
NB2 **NORSAR Subarra** 26.99 342 P P 03 17 06.0 -0.9
comp=E,0.7nm,0.6s,mb3.4,SNR=4.5
NOA **NORSAR Array B** 26.99 342 P P 03 17 06.2 -0.8
comp=E,1.1nm,0.7s,mb3.5,baz=143,slow=8.5,SNR=4.6
NOA **NORSAR Array B** 26.99 342 P P 03 17 06.2 -0.7
EKA **Eskdalemuir Ar** 28.48 322 P P 03 17 18.8 -1.4
comp=E,0.5nm,0.5s,mb3.3,baz=121,slow=9.8,SNR=3.1
EKA **Eskdalemuir Ar** 28.48 322 P P 03 17 18.8 -1.4
ARCES **ARCESS Array B** 33.41 359 P P 03 18 03.0 -0.4
comp=E,0.7nm,0.3s,mb3.9,baz=178,slow=8.1,SNR=15
ARCES **ARCESS Array B** 33.41 359 P P 03 18 03.0 -0.4
KURK **Kurchatov** 38.86 52 P P 03 18 49.1 -1.1
comp=E,0.6nm,0.5s,mb3.7,baz=276,slow=8.2,SNR=4.5
KURK **Kurchatov** 38.86 52 P P 03 18 49.1 -1.0
ZALV **Zalesovo Beam** 42.73 47 P P 03 19 20.7 -1.2
comp=E,0.5nm,0.4s,mb3.6,baz=260,slow=5.7,SNR=3.0
SCHQ **Schefferville** 63.77 320 P P 03 21 55.3 -0.8
comp=E,1.2nm,0.6s,mb3.9,baz=84,slow=13,SNR=3.1
SCHQ **Schefferville** 63.77 320 P P 03 21 55.3 -0.8
BOSA **Boshof** 64.52 182 P P 03 21 59.6 -1.6
comp=E,3.1nm,1.0s,mb4.1,baz=26,slow=13,SNR=2.8
BOSA **Boshof** 64.52 182 P P 03 21 59.7 -1.5

*PGC **27** 03:16:25.1±9.1,49°.61N×130°.24W,h10km,ML2.9/5, Mw3.5,235km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **27** 03:16:28.8±1.3,49°.90N±0°.07×129°.9W±0°.2,h10km,Error ellipse: s-maj=14.1km s-min=10.5km az=173.1*
*IDC **27** 03:16:28.0±3.8,49°.73N×129°.96W,h0km,mb1 3.5/3, mb1mx3.3/24,mbtmp3.1/3,ML3.5/2,Error ellipse: s-maj=98.9km s-min=31.0km az=50.0*

ISC 27 03:16:30.5±1.4, 49°.93N±0°.08×129°.8W±0°.2, h10km, n8, σ1§40/10, 2D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HOLB	**Holberg**	1.28	56	⇑Pn	Pn	Pn	03 16 52.9	-1.5
PHC	**Port Hardy**	1.70	62	⇑Pn	Pn	Pn	03 16 58.6	-1.5
PHC				⇑Sn	Sn	Sn	03 17 23.7	+1.8
MAYB	**Maynard**	1.75	73	⇑Pn	Pn	Pn	03 16 58.9	-1.9
WOSB	**Woss**	2.09	82	⇑Pn	Pn	Pn	03 17 04.4	-1.0
BBB	**Bella Bella**	2.49	24	⇓Pn	Pn	Pn	03 17 10.2	-0.8
BBB				⇓Sn	Sn	Sn	03 17 42.8	+1.3
NVAR	**Mina Array Bea**	14.13	140	Pn	Pn	Pn	03 19 51.4	+1.0
	0.1nm,0.3s,baz=315,slow=18,SNR=3.7							
PDAR	**Pinedale Array**	15.67	109	Pn	Pn	Pn	03 20 13.2	+2.0
	0.0nm,0.3s,baz=307,slow=9.7,SNR=5.1							
ILAR	**Eielson Array**	17.40	335	P	Pn	Pn	03 20 33.8	+0.7
	baz=151,slow=11,SNR=5.5							

*IDC **27** 03:16:13.6±11.0,49°.86N×152°.29E,h0km,mb3.6/5, mb1 4.0/5,mb1mx3.6/23,mbtmp3.6/5,MS4.0/1,Ms1 4.0/1, ms1mx3.3/40,Error ellipse: s-maj=289.0km s-min=95.3km az=89.0*
*KRSC **27** 03:16:47.8±2.0,49°.96N×155°.73E,h264km±36km,ML4.2*
*MOS **27** 03:16:52.4±0.6,50°.74N×154°.80E,h255km,mb4.3/1,Error ellipse: s-maj=99.9km s-min=26.0km az=59.7*

ISC 27 03:16:54.7±1.2, 50°.6N±0°.3×155°.3E±0°.5, h245km±7km, n13, σ0§99/14, mb3.2/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ALID	**Alaid**	0.28	36	*e*P	Pn	Pn	03 17 24.4	-1.9
SKR	**Severo-Kuril's**	0.53	85	*e*PN	Pn	Pn	03 17 27.5	+0.5
SKR				*e*			03 17 54.0	
SDLR	**Sedlovina**	3.46	39	*e*P	Pn	Pn	03 17 53.3	+1.6
SDLR				*e*S	S	S	03 18 41.6	+4.6
GNL	**Ganaly**	3.47	27	*e*P	Pn	Pn	03 17 52.7	+0.8
SPN	**Mys Shipunski**	3.83	48	*e*S	S	S	03 18 45.1	+0.2
MKZ	**Mys Kozlova**	5.55	43	*e*P	Pn	Pn	03 18 16.9	0.0
MKZ				*e*S	S	S	03 19 20.7	-1.8
KBTR	**Krutoberegovo**	7.17	36	*e*P	Pn	Pn	03 18 37.8	+0.7
ASAJ	**Asahikawa**	10.79	238	LR	LR	LR	03 21 43.1	
	comp=E,810nm,18.7s,baz=326,slow=38							
ILAR	**Eielson Array**	32.65	42	P	P	P	03 23 03.1	-0.2
	0.7nm,0.6s,mb3.4,baz=268,slow=7.5,SNR=16							
YKA	**Yellowknife Ar**	46.97	39	P	P	P	03 24 59.5	-1.2
	0.7nm,0.6s,mb3.1,baz=300,slow=6.5,SNR=4.2							
NVAR	**Mina Array Bea**	59.43	66	P	P	P	03 26 32.5	+0.9
	0.2nm,0.5s,mb3.0,baz=282,slow=8.8,SNR=3.1							
PDAR	**Pinedale Array**	61.35	57	P	P	P	03 26 44.3	-0.1
	0.3nm,0.6s,mb3.1,baz=319,slow=2.6,SNR=3.5							
TXAR	**Lajitas Array**	74.38	63	P	P	P	03 28 05.5	-0.1
	0.3nm,0.5s,mb3.2,baz=308,slow=6.1,SNR=9.0							

*IDC **27** 03:23:59.5±1.3,30°.76N×83°.40E,h0km,mb3.8/8, mb1 3.9/10,mb1mx3.7/27,mbtmp3.8/10,ML3.8/2,Error ellipse: s-maj=47.3km s-min=18.3km az=61.0*
*NEIC **27** 03:24:01.2±0.8,30°.79N×83°.31E,h10km,mb4.1/1,Error ellipse: s-maj=24.2km s-min=9.5km az=48.0*
*ISCJB **27** 03:24:04.7±1.5,30°.91N±0°.10×83°.5E±0°.1,h49km±16km, mb3.8/8,Error ellipse: s-maj=18.9km s-min=11.1km az=41.1*

ISC 27 03:24:05.5±1.5, 30°.93N±0°.09×83°.6E±0°.1, h36km±17km, n16, σ1§08/16, mb3.8/8, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	4.81	264	*ex*	Pn	Pn	03 25 16.5	+1.0
LSA	**Lhasa**	6.65	99	*e*Pn	Pn	Pn	03 25 44.5	+3.9
	8.0nm,0.6s							
AML	**Almayashu**	13.71	327	*e*Pn	Pn	Pn	03 27 17.4	+0.1
MKAR	**Makanchi Array**	15.87	357	Pn	Pn	Pn	03 27 45.0	-1.1
	0.1nm,0.3s,baz=180,slow=12,SNR=2.4							
KKAR	**Karatay Array**	16.00	323	*e*Pn	Pn	Pn	03 27 44.7	-3.0
	0.4nm,0.3s							
CMAR	**Chiang Mai Arr**	18.65	128	P	Pn	Pn	03 28 19.5	-1.3
	0.3nm,0.3s,baz=310,slow=11,SNR=7.2							
KURK	**Kurchatov**	20.11	351	P	P	P	03 28 34.6	-1.4
	2.1nm,0.8s,baz=164,slow=10,SNR=13							
ZALV	**Zalesovo Beam**	23.02	2	P	P	P	03 29 08.5	+1.4
	0.8nm,0.5s,mb3.4,baz=163,slow=11,SNR=4.8							
SONM	**Songino Array**	24.26	39	P	P	P	03 29 20.6	+1.5
	0.6nm,0.5s,mb3.3,baz=230,slow=9.2,SNR=3.6							
ABKAR	**Akbulak array**	25.56	322	*e*P	P	P	03 29 32.1	+1.2
	3.9nm,1.0s,mb3.9							
FINES	**FINESS Array B**	47.91	327	P	P	P	03 32 39.4	-0.5
	1.5nm,0.8s,mb4.1,baz=101,slow=4.4,SNR=4.4							
HFS	**Hagfors**	53.80	324	P	P	P	03 33 24.0	-0.2
	2.7nm,0.9s,mb4.2,baz=81,slow=10,SNR=3.4							
WRA	**Warramunga Arr**	70.24	129	P	P	P	03 35 14.6	-0.5
	2.2nm,0.7s,mb4.2,baz=323,slow=6.4,SNR=11							
WB2	**Warramunga Arr**	70.25	129	*e*P	P	P	03 35 14.8	-0.3
ASAR	**Alice Springs**	72.60	132	P	P	P	03 35 29.3	0.0
	0.4nm,0.5s,mb3.6,baz=314,slow=5.4,SNR=4.9							
ILAR	**Eielson Array**	76.83	20	P	P	P	03 35 53.8	+0.5
	1.1nm,0.9s,mb3.8,baz=316,slow=6.3,SNR=9.8							

*ISCJB **27** 03:29:12.5±0.4,51°.63N±0°.03×104°.11E±0°.03,h10km,*

Error ellipse: s-maj=4.6km s-min=2.5km az=159.8
*NEIC **27** 03:29:13.9±0.7,51°.58N×104°.17E,h10km,Error ellipse: s-maj=9.4km s-min=6.0km az=159.0*
NEIC Felt [II] at Irkutsk.
*MOS **27** 03:29:14.4±1.4,51°.63N×104°.11E,h17km,mb4.6/1,Error ellipse: s-maj=16.3km s-min=9.5km az=63.3*
MOS Felt (II) at Irkutsk.
*BYKL **27** 03:29:14.4±0.2,51°.61N×104°.04E,h17km±3km,FELT I=II MSK at Irkutsk*

ISC 27 03:29:13.5±0.3,51°.63N±0°.03×104°.07E±0°.03,h10km,n45,σ1°38/95,6C-16D,Lake Baikal region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TLY	**Talaya**	**0.27**	**281**	*e*Pg		**Pg**		**03 29 19.8**	**+0.8**
TLY				*e*Sg		**Sg**		**03 29 23.4**	**+0.7**
TLY	**Talaya**	**0.27**	**281**	*e*PG		**Pg**		**03 29 19.8**	**+0.8**
TLY				*e*S		**Sg**		**03 29 23.8**	**+1.1**
TLY	**Talaya**	**0.27**	**281**	⇓*i*Pg		**Pg**		**03 29 19.5**	**+0.5**
TLY				*i* Sg		**Sg**		**03 29 23.7**	**+1.0**
LSTR	**Listvyanka**	**0.53**	**63**	*i* Pg		**Pg**		**03 29 25.0**	**+1.2**
LSTR				*e*Sg		**Sg**		**03 29 32.5**	**+1.7**
LSTR	**Listvyanka**	**0.53**	**63**	⇓*i*PG		**Pg**		**03 29 25.0**	**+1.2**
LSTR				*e*				03 29 32.5	
LSTR	comp=Z,596nm,0.1s			pmax	pmax				
LSTR	comp=N,2μm,0.1s			smax					
LSTR	**Listvyanka**	**0.53**	**63**	⇓*i*Pg		**Pg**		**03 29 25.0**	**+1.2**
LSTR	comp=N,183nm,0.2s			⇓*i*Pg		**Pg**		**03 29 25.0**	**+1.2**
LSTR	comp=N,873nm,0.2s			⇓*i*Pg		**Pg**		**03 29 25.0**	**+1.2**
LSTR	comp=N,826nm,0.2s			Pmax				03 29 25.1	
LSTR	comp=N,607nm,0.1s			*i* Sg		**Sg**		**03 29 32.5**	**+1.7**
LSTR	comp=N,2μm,0.1s			Smax				03 29 32.9	
IRK	**Irkutsk**	**0.63**	**11**	*e*P		**Pg**		**03 29 26.9**	**+1.2**
IRK	**Irkutsk**	**0.63**	**11**	⇑*i*PG		**Pg**		**03 29 26.9**	**+1.2**
IRK				*e*				03 29 35.7	
IRK	comp=Z,665nm,0.1s			pmax	pmax				
IRK	comp=N,9μm,0.6s			smax					
IRK	**Irkutsk**	**0.63**	**11**	*e*Pg		**Pg**		**03 29 26.8**	**+1.1**
IRK				Pmax				03 29 27.2	
IRK	comp=N,697nm,0.2s			*i* Sg		**Sg**		**03 29 35.5**	**+1.6**
IRK				Smax				03 29 37.1	
ARS	**Arshan**	**1.06**	**287**	⇑*i*Pg		**Pg**		**03 29 33.9**	**-0.1**
ARS	comp=N,24μm,0.5s			*e*Sg		**Sg**		**03 29 47.9**	**+0.1**
ARS	comp=N,3μm,1.1s			Smax				03 29 48.8	
ZAK	**Zakamensk**	**1.34**	**202**	Pg		**Pg**		**03 29 38.3**	**-1.0**
ZAK				Sg		**Sg**		**03 29 55.7**	**-1.1**
ZAK	**Zakamensk**	**1.34**	**202**	*e*PG		**Pg**		**03 29 38.4**	**-0.9**
ZAK				*e*				03 29 55.8	
ZAK	comp=Z,177nm,0.3s			pmax	pmax				
ZAK	comp=E,1μm,0.3s			smax					
ZAK	**Zakamensk**	**1.34**	**202**	⇓*i*Pg		**Pg**		**03 29 38.4**	**-0.9**
ZAK	comp=E,117nm,0.3s			Pmax				03 29 43.6	
ZAK				*i* Sg		**Sg**		**03 29 55.8**	**-1.0**
ZAK				*e*Sb		**Sb**		**03 29 56.8**	**+0.8**
ZAK	comp=E,1μm,0.3s			max				03 29 57.1	
KAB	**Kabansk**	**1.66**	**74**	*e*PN		**Pg**		**03 29 45.2**	**-0.1**
KAB				*e*				03 30 07.9	
KAB	comp=Z,226nm,0.5s			pmax	pmax				
KAB	comp=E,2μm,0.6s			smax					
KAB	**Kabansk**	**1.66**	**74**	⇑*i*Pg		**Pg**		**03 29 45.2**	**-0.1**
KAB	comp=E,169nm,0.6s			Pmax				03 29 53.9	
KAB				*i* Sg		**Sg**		**03 30 07.9**	**+1.1**
KAB	comp=E,2μm,0.6s			Smax				03 30 09.4	
HRMR	**Khuramsha**	**1.80**	**89**	⇑*i*Pn		**Pn**		**03 29 45.7**	**+1.2**
HRMR	comp=E,30nm,0.6s			⇓*i*Pn		**Pn**		**03 29 45.7**	**+1.2**
HRMR	comp=E,48nm,0.6s			⇓*i*Pn		**Pn**		**03 29 45.7**	**+1.2**
HRMR	comp=E,107nm,0.6s			*i* Pg		**Pg**		**03 29 47.3**	**-0.7**
HRMR	comp=E,838nm,0.2s			Pmax				03 29 47.5	
HRMR				*e*				03 30 08.7	
HRMR				*e*Sg		**Sg**		**03 30 11.5**	**+0.2**
HRMR	comp=E,7μm,0.4s			Smax				03 30 12.0	
TRG	**Tyrgan**	**1.80**	**50**	Pg		**Pg**		**03 29 47.5**	**-0.6**
TRG				Sg		**Sg**		**03 30 11.0**	**-0.4**
TRG	**Tyrgan**	**1.80**	**50**	*e*PN		**Pg**		**03 29 46.6**	**-1.5**
TRG				*e*				03 29 47.5	
TRG				*e*				03 30 11.0	
TRG	comp=Z,316nm,0.2s			pmax	pmax				
TRG	comp=E,2μm,0.1s			smax					
TRG	**Tyrgan**	**1.80**	**50**	*e*Pn		**Pn**		**03 29 44.8**	**+0.2**
TRG				*e*Pg		**Pg**		**03 29 46.6**	**-1.5**
TRG	comp=E,311nm,0.4s			Pmax				03 29 47.4	
TRG				*e*Sg		**Sg**		**03 30 11.0**	**-0.4**
TRG	comp=E,2μm,0.1s			Smax				03 30 11.8	
TRG				*e*				03 30 12.8	
MOY	**Mondy**	**1.92**	**272**	*e*PN		**Pn**		**03 29 47.9**	**+1.7**
MOY				*e*				03 30 12.8	
MOY	comp=Z,154nm,0.3s			pmax	pmax				
MOY	comp=N,840nm,0.5s			smax					
MOY	**Mondy**	**1.92**	**272**	*e*Pn		**Pn**		**03 29 47.2**	**+1.0**
MOY	comp=N,23nm,0.6s			⇓*i*Pg		**Pg**		**03 29 48.7**	**-1.6**
MOY	comp=N,53nm,0.6s			⇑*i*Pg		**Pg**		**03 29 48.7**	**-1.6**
MOY	comp=N,75nm,0.6s			⇓*i*Pg		**Pg**		**03 29 48.7**	**-1.6**
MOY	comp=N,155nm,0.5s			Pmax				03 29 49.2	
MOY				*i* Sg		**Sg**		**03 30 13.4**	**-1.8**
MOY	comp=N,1μm,1.3s			Smax				03 30 16.6	
ZRHB	**Zarechye**	**2.11**	**63**	⇑*i*Pg		**Pg**		**03 29 53.0**	**-1.0**
ZRHB	comp=N,571nm,0.9s			Pmax				03 29 58.6	
ZRHB				*i* Sg		**Sg**		**03 30 21.2**	**-0.2**
ZRHB				*e*				03 30 24.3	
ZRHB	comp=N,2μm,0.8s			Smax				03 30 37.7	
UUDB	**Ulan-Yde**	**2.25**	**83**	*e*		**Pn**		**03 29 52.8**	**+2.1**
UUDB				⇓*i*Pg		**Pg**		**03 29 54.9**	**-1.6**
UUDB	comp=N,174nm,0.7s			Pmax				03 30 02.3	
UUDB				*i* Sg		**Sg**		**03 30 25.3**	**-0.3**
UUDB	comp=N,325nm,1.2s			Smax				03 30 26.2	
ORL	**Orlik**	**2.78**	**291**	*e*PN		**Pn**		**03 30 03.4**	**+5.3**
ORL				*e*				03 30 38.0	
ORL	comp=Z,54nm,0.4s			pmax	pmax				
ORL	comp=N,713nm,1.3s			smax					
ORL	**Orlik**	**2.78**	**291**	⇓*i*Pg		**Pg**		**03 30 03.6**	**-3.2**
ORL	comp=N,46nm,0.7s			Pmax				03 30 13.0	
ORL				*i* Sg		**Sg**		**03 30 39.5**	**-1.4**
ORL	comp=N,714nm,1.4s			Smax				03 30 43.7	
OGRR	**Ongureny**	**2.95**	**45**	Pg		**Pg**		**03 30 07.4**	**-2.5**
OGRR				Sg		**Sg**		**03 30 44.3**	**-3.8**
OGRR	**Ongureny**	**2.95**	**45**	*e*PN		**Pn**		**03 30 02.1**	**+1.8**
OGRR				*e*				03 30 07.4	
OGRR				*e*				03 30 44.3	
OGRR	comp=Z,147nm,0.4s			pmax	pmax				
OGRR	comp=E,1μm,0.7s			smax					
OGRR	**Ongureny**	**2.95**	**45**	*e*Pn		**Pn**		**03 30 02.6**	**+2.3**
OGRR				*e*Pg		**Pg**		**03 30 07.6**	**-2.3**
OGRR	comp=E,146nm,0.3s			Pmax				03 30 10.5	
OGRR				*e*Sg		**Sg**		**03 30 44.7**	**-3.4**
OGRR	comp=E,1μm,0.5s			Smax				03 30 47.2	
MXMB	**Maximikha**	**3.29**	**58**	⇓*i*Pn		**Pn**		**03 30 06.1**	**+1.0**
MXMB				*e*Pg		**Pg**		**03 30 13.2**	**-3.4**
MXMB				*e*				03 30 18.6	
MXMB	comp=E,99nm,1.0s			max				03 30 19.4	
MXMB				*e*Sn		**Sn**		**03 30 44.5**	**+0.2**
MXMB				*e*Sg		**Sg**		**03 30 56.6**	**-2.7**
MXMB	comp=E,407nm,0.6s			Smax				03 31 01.5	
SYVR	**Suvo**	**4.14**	**58**	Pg		**Pg**		**03 30 27.9**	**-4.9**
SYVR				Sg		**Sg**		**03 31 23.8**	**-2.7**
SYVR	**Suvo**	**4.14**	**58**	*e*PN		**Pn**		**03 30 18.1**	**+1.3**
SYVR				*e*				03 30 27.9	
SYVR				*e*				03 31 23.8	
SYVR	comp=Z,27nm,0.6s			pmax	pmax				
SYVR	comp=N,92nm,0.8s			smax					
SYVR	**Suvo**	**4.14**	**58**	⇓*i*Pn		**Pn**		**03 30 18.0**	**+1.2**
SYVR				⇓*i*Pg		**Pg**		**03 30 27.9**	**-4.9**
SYVR	comp=N,24nm,0.5s			Pmax				03 30 29.3	
SYVR				*e*				03 30 33.7	
SYVR				*e*Sn		**Sn**		**03 31 07.3**	**+2.1**
SYVR				*e*Sg		**Sg**		**03 31 22.5**	**-4.0**
SYVR	comp=N,92nm,1.1s			Smax				03 31 37.7	
ULN	**Ulaanbaatar**	**4.23**	**152**	*e*Pn		**Pn**		**03 30 19.4**	**+1.4**
ULN				*e*Sg		**Sg**		**03 31 25.2**	**-4.2**
ULN	**Ulaanbaatar**	**4.23**	**152**	*e*Pn		**Pn**		**03 30 19.5**	**+1.5**
ULN				*e*Pg		**Pg**		**03 30 29.9**	**-4.7**
ULN				*e*				03 30 36.0	
ULN				*i* Sg		**Sg**		**03 31 24.0**	**-5.4**
NIZ	**Nizh Angarsk**	**5.27**	**36**	Pg		**Pg**		**03 30 48.3**	**-6.1**
NIZ				Sg		**Sg**		**03 31 56.2**	**-6.5**
NIZ	**Nizh Angarsk**	**5.27**	**36**	*e*PN		**Pn**		**03 30 33.4**	**+1.1**
NIZ				*e*				03 30 48.3	
NIZ				*e*				03 31 56.2	
NIZ	comp=Z,26nm,0.9s			pmax	pmax				
NIZ	comp=N,271nm,0.9s			smax					
NIZ	**Nizh Angarsk**	**5.27**	**36**	*e*Pn		**Pn**		**03 30 33.2**	**+0.9**
NIZ				*e*				03 30 41.7	
NIZ				*e*Pg		**Pg**		**03 30 49.3**	**-5.1**
NIZ	comp=N,26nm,0.9s			Pmax				03 30 59.4	
NIZ				*e*Sn		**Sn**		**03 31 33.1**	**+0.1**
NIZ				*e*Sg		**Sg**		**03 31 57.8**	**-4.9**
NIZ	comp=N,247nm,0.5s			Smax				03 32 09.0	
YLYR	**Ulyunkhan**	**5.36**	**50**	*e*PN		**Pn**		**03 30 49.7**	**+16**
YLYR				*e*				03 31 58.9	
YLYR	comp=Z,13nm,0.4s			pmax	pmax				
YLYR	comp=N,100nm,0.4s			smax					
YLYR	**Ulyunkhan**	**5.36**	**50**	⇓*i*Pn		**Pn**		**03 30 35.1**	**+1.7**
YLYR				*e*Pg		**Pg**		**03 30 50.4**	**-5.6**
YLYR				*e*				03 30 54.8	
YLYR	comp=N,14nm,0.8s			max				03 30 55.4	
YLYR				*e*Sn		**Sn**		**03 31 31.2**	**-3.9**
YLYR				*e*Sg		**Sg**		**03 31 59.6**	**-5.7**
YLYR	comp=N,95nm,1.2s			Smax				03 32 17.6	
CIT	**Chita**	**5.89**	**82**	Sg		**Sg**		**03 32 19.4**	**-3.2**
CIT	**Chita**	**5.89**	**82**	*e*Sg		**Sg**		**03 32 19.5**	**-3.1**
CIT	comp=N,163nm,0.3s			Smax				03 32 30.9	
KMO	**Kumora**	**6.00**	**42**	*e*PN		**Pn**		**03 30 43.0**	**+0.7**
KMO				*e*				03 31 00.9	
KMO				*e*S		**Sn**		**03 31 49.5**	**-1.5**
KMO	**Kumora**	**6.00**	**42**	*e*Pn		**Pn**		**03 30 43.7**	**+1.4**
KMO				*e*				03 30 51.9	
KMO				Pg		**Pg**		**03 31 01.3**	**-7.1**
KMO	comp=N,16nm,0.6s			Pmax				03 31 05.8	
KMO				*e*				03 31 53.5	
KMO				*e*Sg		**Sg**		**03 32 20.4**	**-5.7**
KMO				*e*				03 32 27.1	
KMO	comp=N,286nm,1.0s			max				03 32 27.7	
YOA	**Uoyan**	**6.39**	**42**	*e*Sg		**Sg**		**03 32 34.4**	**-4.0**
YOA	comp=N,461nm,1.0s			Smax				03 32 48.4	
CRS	**Chara**	**9.83**	**52**	*e*Pg		Px		03 32 13.4	
CRS	comp=N,9.0nm,1.8s			Pmax				03 32 34.3	
CRS				*e*				03 34 03.3	
CRS				*e*Sg		Sx		03 34 21.0	
CRS	comp=N,57nm,2.0s			Smax				03 34 40.7	

IGQ 27 04:02:47.8,0°.79S×80°.72W,h44km±4km,Mb4.1,Ms3.9, 2C-2D,Error ellipse: s-maj=9.3km s-min=2.1km az=11.2, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**0.26**	**181**	⇓P			Pn	04 02 56.2	+0.1
CHIS	**Cerro-Chispas-**	**0.26**	**181**	⇓S			Sn	04 03 00.9	-1.0
JAMA	**Jama**	**0.73**	**44**	P			Pn	04 03 02.7	+0.9
JUA2	**San Juan 2**	**2.19**	**75**	P			Pn	04 03 23.4	+1.7
TERV	**Terraza Guagua**	**2.20**	**74**	P			Pn	04 03 26.7	+4.8
GGP	**Refugio Guagua**	**2.21**	**74**	P			Pn	04 03 23.3	+1.3
CAMI	**Rancho Maria**	**2.22**	**87**	P			Pn	04 03 27.2	+5.1
YANA	**Yana**	**2.25**	**73**	P			Pn	04 03 23.7	+1.2
BMOR	**Cotopaxi Volca**	**2.26**	**89**	P			Pn	04 03 27.2	+4.5
MOV1	**Cotopaxi Vol s**	**2.28**	**88**	P			Pn	04 03 27.3	+4.4
BREF	**Cotopaxi Volca**	**2.28**	**87**	P			Pn	04 03 24.7	+1.7
RIOE	**Riobamba**	**2.30**	**115**	P			Pn	04 03 25.1	+1.9
PITA	**Cotopaxi Volc**	**2.30**	**84**	P			Pn	04 03 25.5	+2.3
VC1	**Cotopaxi 1**	**2.32**	**86**	P			Pn	04 03 28.4	+4.9
BTAM	**Cotopaxi Volca**	**2.33**	**87**	P			Pn	04 03 28.1	+4.6
PISA	**Pisayambo**	**2.35**	**97**	P			Pn	04 03 28.4	+4.5
BMAS	**Trigal station**	**2.35**	**108**	P			Pn	04 03 25.8	+1.8
TAMB	**Tambo**	**2.35**	**88**	⇑P			Pn	04 03 29.2	+5.3
ARRY	**Arrayan**	**2.37**	**108**	⇑P			Pn	04 03 25.7	+1.5
COV1	**Cotopaxi Volc**	**2.38**	**87**	P			Pn	04 03 26.2	+1.9
PAT1	**Patacocha**	**2.39**	**107**	P			Pn	04 03 28.2	+3.7
BULB	**Ulba Tungurahu**	**2.40**	**106**	P			Pn	04 03 26.7	+2.1
OTAV	**Otavalo**	**2.49**	**66**	S			Sn	04 03 58.9	+3.9
OTAV	**Otavalo**	**2.49**	**66**	P			Pn	04 03 27.3	+1.5
ANTI	**Antisana**	**2.58**	**83**	P			Pn	04 03 29.7	+2.6
COTA	**Cotacachi**	**2.63**	**65**	P			Pn	04 03 30.7	+3.0
CAYA	**Cayambe**	**2.86**	**73**	P			Pn	04 03 34.5	+3.6

*ISCJB **27** 04:11:17.5±1.4,5°.31S±0°.10×147°.1E±0°.2,h189km±16km, mb3.9/11,Error ellipse: s-maj=29.4km s-min=10.2km az=26.5*
*NEIC **27** 04:11:19.2±1.8,5°.34S×147°.06E,h191km±20km,mb4.1/1, Error ellipse: s-maj=23.7km s-min=13.7km az=124.0*
*IDC **27** 04:11:25.3±3.0,5°.51S×147°.08E,h255km±29km,mb3.6/10, mb1 3.9/12,mb1mx3.7/18,mbtmp3.6/12,Error ellipse: s-maj=37.2km s-min=10.4km az=115.0*

ISC 27 04:11:21.5±1.4,5°.47S±0°.10×147°.1E±0°.2,h216km±15km, n22,σ0°.93/24,mb3.9/11,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.91**	**179**	*e*Pn			**Pn**	**04 12 20.3**	**-2.5**
PMG				*e*Sn			**S**	**04 13 06.7**	**-4.5**
COEN	**Coen**	**9.27**	**204**	*e*P			**Pn**	**04 13 31.4**	**+0.3**
COEN	**Coen**	**9.27**	**204**	*e*Pn			**Pn**	**04 13 31.3**	**+0.2**
COEN	295nm,1.3s			*e*Sn			**S**	**04 15 16.0**	**+0.7**
CTA	**Charters Tower**	**14.55**	**183**	P			**Pn**	**04 14 38.7**	**+1.1**
CTA	**Charters Tower**	**14.55**	**183**	P			**Pn**	**04 14 38.7**	**+1.1**
	0.9nm,0.3s,baz=2.0,slow=12,SNR=5.3								
CTAO	**Charters Tower**	**14.55**	**183**	*e*P			**Pn**	**04 14 38.1**	**+0.5**
	18nm,1.1s								
WRA	**Warramunga Arr**	**18.98**	**220**	P			**P**	**04 15 27.3**	**+0.4**
WRA	8.5nm,0.3s,baz=37,slow=11,SNR=76			S			**S**	**04 18 50.1**	**-0.8**
QLP	**Quilpie**	**21.17**	**187**	*e*P			**P**	**04 15 50.6**	**+0.5**
ASAR	**Alice Springs**	**22.09**	**214**	P			**P**	**04 16 00.2**	**+1.0**
ASAR	7.9nm,0.4s,mb4.6,baz=50,slow=8.8,SNR=118			S			**S**	**04 19 45.5**	**-1.5**
FITZ	**Fitzroy Crossi**	**24.41**	**237**	*e*P			**P**	**04 16 20.7**	**+0.3**
FITZ	1.3nm,0.8s,baz=33,slow=19,SNR=3.3 **Fitzroy Crossi**	**24.41**	**237**	P			**P**	**04 16 20.9**	**+0.5**
	33nm,0.4s								
STKA	19nm,0.5s,mb5.0,baz=47,slow=8.5,SNR=112 **Stephens Creek**	**26.77**	**190**	*e*P			Px	04 16 55.0	
STKA	4.5nm,0.4s **Stephens Creek**	**26.77**	**190**	P			Px	04 16 52.3	
MBWA	4.3nm,0.3s,baz=6.3,slow=11,SNR=12 **Marble Bar**	**30.75**	**237**	*e*P			**P**	**04 17 16.8**	**0.0**
PETK	1.9nm,0.5s,mb4.0 **Petropavlovsk-**	**59.05**	**7**	P			**P**	**04 20 59.3**	**+0.7**
SONM	1.8nm,0.5s,mb3.9,baz=164,slow=6.8,SNR=4.2 **Songino Array**	**63.98**	**331**	P			**P**	**04 21 32.7**	**+1.0**
MKAR	0.9nm,0.7s,mb3.5,baz=146,slow=7.8,SNR=5.3 **Makanchi Array**	**77.14**	**320**	P			**P**	**04 22 51.9**	**+0.7**
ZALV	0.7nm,0.8s,mb3.4,baz=93,slow=6.1,SNR=3.4 **Zelesovo Beam**	**78.60**	**328**	P			**P**	**04 22 58.5**	**-0.5**
KURK	1.8nm,0.5s,mb3.9,baz=124,slow=6.3,SNR=6.7 **Kurchatov**	**80.83**	**323**	P			**P**	**04 23 09.5**	**-1.6**
ILAR	0.2nm,0.2s,mb3.3,baz=122,slow=3.4,SNR=2.2 **Eielson Array**	**84.97**	**23**	P			**P**	**04 23 31.0**	**-1.0**
BVAR	0.8nm,0.6s,mb3.6,baz=251,slow=4.8,SNR=17 **Borovoye Array**	**86.39**	**324**	P			**P**	**04 23 38.7**	**-0.6**
NVAR	0.3nm,0.3s,mb3.5,baz=88,slow=10,SNR=3.8 **Mina Array Bea**	**96.99**	**52**	P			**P**	**04 24 29.5**	**+0.7**
	0.5nm,0.7s,mb3.9,baz=265,slow=6.2,SNR=4.3								

*PGC **27** 04:25:22.2±1.2,49°.77N×130°.30W,h10km,ML3.6/10, Mw4.2,230km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*IDC **27** 04:25:23.0±1.0,49°.89N×130°.23W,h0km,mb3.7/10, mb1 4.0/18,mb1mx3.9/33,mbtmp3.8/18,ML3.3/7,MS4.0/12, Ms1 4.1/12,ms1mx3.7/56,Error ellipse: s-maj=20.4km s-min=12.5km az=69.0*
*BJI **27** 04:25:24.7,50°.27N×130°.09W,h10km,mB4.9/7,mb4.8/9, Ms4.8/4,Ms7 4.4/3*
*NEIC **27** 04:25:26.3±0.4,49°.97N×129°.90W,h10km,mb4.2/35, MW4.2(PGC),Error ellipse: s-maj=9.6km s-min=3.3km az=45.0*

ISC 27 04:25:28.2±1.3,49°.98N±0°.03×129°.87W±0°.05, h24km±10km,h15km±.3km;pP-P,n114,σ1°13/116,mb4.1/21, MS4.1/7,6D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.30**	**59**	⇑Pn			**Pn**	**04 25 49.1**	**-1.7**
HOLB				⇑Sn			**Sn**	**04 26 08.6**	**+1.2**
BPBC	**Brooks Peninsu**	**1.37**	**82**	⇑Sn			**Sn**	**04 26 09.2**	**+0.2**
PHC	**Port Hardy**	**1.73**	**64**	Pn			**Pn**	**04 25 54.5**	**-2.2**
PHC				⇑Sn			**Sn**	**04 26 18.6**	**+0.7**
MAYB	**Maynard**	**1.79**	**75**	⇑Pn			**Pn**	**04 25 56.5**	**-1.0**
WOSB	**Woss**	**2.13**	**84**	⇓Pn			**Pn**	**04 25 59.8**	**-2.5**
BBB	**Bella Bella**	**2.47**	**26**	Pn			**Pn**	**04 26 05.8**	**-1.2**
BBB	58nm,0.3s,baz=46,slow=12,SNR=90			LR			LR	04 26 32.5	
BBB	comp=Z,438nm,21.9s,baz=95,slow=26			Sn			**Sn**	**04 26 37.2**	**+1.0**
BBB	9.4nm,0.3s,baz=131,slow=23,SNR=11 **Bella Bella**	**2.47**	**26**	⇓Pn			**Pn**	**04 26 05.7**	**-1.2**
BBB				⇑Sn			**Sn**	**04 26 37.0**	**+0.7**
BNB	**Barry Inlet**	**2.86**	**336**	⇓Pn			**Pn**	**04 26 07.9**	**-4.3**
MOBC	**Moresby Island**	**3.43**	**338**	⇓Pn			**Pn**	**04 26 15.8**	**-4.3**
TXB	**Texada**	**3.53**	**93**	⇓Pn			**Pn**	**04 26 20.7**	**-0.8**
SHB	**Sechelt**	**3.91**	**93**	⇓Pn			**Pn**	**04 26 25.7**	**-0.9**
LON	**Longmire**	**6.27**	**118**	*e*Pn			**Pn**	**04 26 57.9**	**-1.2**
ETW	**Entiat**	**6.74**	**107**	*e*Pn			**Pn**	**04 27 05.8**	**+0.3**
HOOD	11nm,1.0s **Mount Hood Mea**	**7.25**	**127**	*e*Pn			**Pn**	**04 27 12.8**	**+0.3**
OD2	**Odessa Site #2**	**7.83**	**105**	*e*Pn			**Pn**	**04 27 18.6**	**-1.9**
DLBC	**Dease Lake**	**8.48**	**359**	Pn			**Pn**	**04 27 29.1**	**-0.2**
DLBC	0.1nm,0.3s,baz=176,slow=14,SNR=2.1			LR			LR	04 29 48.4	
NEW	comp=Z,454nm,19.1s,baz=178,slow=31 **Newport**	**8.54**	**97**	*e*Pn			**Pn**	**04 27 31.1**	**+0.9**
LNOR	**Lincton Mounta**	**8.80**	**113**	*e*Pn			**Pn**	**04 27 33.2**	**-0.6**
YBH	**Yreka Blue Hor**	**9.64**	**146**	Pn			**Pn**	**04 27 46.3**	**+1.0**
YBH	0.1nm,0.3s,baz=333,slow=11,SNR=4.0			LR			LR	04 30 59.0	
JTMT	comp=Z,2μm,19.5s,baz=332,slow=35 **Jette**	**10.51**	**96**	*e*Pn			**Pn**	**04 27 55.8**	**-1.4**
SWMT	**Swartz Lake**	**10.77**	**97**	*e*Pn			**Pn**	**04 28 00.3**	**-0.5**
WVOR	**Wild Horse Val**	**10.83**	**130**	*e*Pn			**Pn**	**04 28 01.7**	**+0.1**
SLMT	12nm,1.5s **Seeley Lake**	**11.19**	**98**	*e*Pn			**Pn**	**04 28 07.4**	**+0.9**
CHMT	7.2nm,1.0s **Chamberlain Mo**	**11.46**	**99**	*e*Pn			**Pn**	**04 28 09.0**	**-1.2**
HLID	**Hailey**	**12.38**	**115**	*e*Pn			**Pn**	**04 28 22.4**	**-0.3**
LRM	**Limekiln Ridge**	**12.40**	**103**	*e*Pn			**Pn**	**04 28 22.2**	**-0.9**
DLMT	**Dillon**	**12.52**	**105**	*e*Pn			**Pn**	**04 28 25.5**	**+0.8**
MCMT	**McKenzie Canyo**	**12.62**	**108**	*e*Pn			**Pn**	**04 28 25.9**	**-0.2**
PAHR	1.1nm,0.9s **Pah Rah Range**	**12.67**	**140**	*e*Pn			**Pn**	**04 28 28.5**	**+1.8**
BOZ	**Bozeman (W)**	**13.00**	**102**	*e*Pn			**Pn**	**04 28 36.0**	**+4.8**
EGMT	**Eagleton**	**13.35**	**91**	*e*Pn			**Pn**	**04 28 36.8**	**+0.8**
YMR	**Madison River**	**13.87**	**105**	*e*Pn			**Pn**	**04 28 44.1**	**+1.0**
NVAR	14nm,0.9s **Mina Array Bea**	**14.20**	**140**	Pn			**Pn**	**04 28 47.6**	**0.0**
IMW	0.1nm,0.3s,baz=316,slow=8.3,SNR=6.5 **Indian Meadow**	**14.28**	**108**	*e*Pn			**Pn**	**04 28 49.8**	**+1.1**
FLWY	**Flagg Ranch**	**14.33**	**107**	*e*Pn			**Pn**	**04 28 50.6**	**+1.2**
RRI2	**Red Ridge**	**14.34**	**110**	*e*Pn			**Pn**	**04 28 49.7**	**+0.1**
MOOW	**Moose Ponds**	**14.47**	**108**	*e*Pn			**Pn**	**04 28 50.3**	**-1.0**
TPAW	**Tetos Pass**	**14.49**	**109**	*e*Pn			**Pn**	**04 28 52.8**	**-1.2**
REDW	**Red Top Meadow**	**14.62**	**110**	*e*Pn			**Pn**	**04 28 56.7**	**+3.4**
SNOW	**Snow King Moun**	**14.62**	**109**	*e*Pn			**Pn**	**04 28 54.2**	**+0.8**
LOHW	**Long Hollow**	**14.63**	**108**	*e*Pn			**Pn**	**04 28 52.3**	**-1.2**
RLMT	**Red Lodge**	**14.72**	**101**	*e*Pn			**Pn**	**04 28 54.8**	**+0.1**
BGU	**Big Grassy Mou**	**14.86**	**121**	*e*

66nm,1.8s
SRU San Rafael 17.50 121 *e*P P **04 29 33.5 +3.0**
10nm,1.2s
FFC Flin Flon 17.63 64 *e*P P **04 29 34.6 +2.7**
COLA College 17.68 334 *e*P P **04 29 33.7 +1.2**
15nm,1.4s
PPLA Purkeypile 17.75 325 *e*P P **04 29 34.8 +1.5**
10nm,1.2s
RWWY Rawlins 17.78 109 *e*Pn P **04 29 32.6 -1.3**
63nm,1.9s
BPAW Bear Paw Mtn. 18.09 329 *e*P P **04 29 37.7 +0.3**
16nm,1.3s
SVW2 Sparrevohn 18.18 318 *e*P P **04 29 30.7 -7.9**
117nm,2.5s
LDFC Landfair 18.39 139 *e*P P **04 29 39.5 -1.8**
INK Inuvik 18.47 356 *e*P P **04 29 42.9 +0.7**
INK Inuvik 18.47 356 P P **04 29 42.0 -0.2**
0.1nm,0.3s,baz=154,slow=8.9,SNR=4.6
INK LR LR 04 36 59.8
comp=Z,700nm,18.6s,baz=200,slow=38
RSSD Black Hills 18.50 99 *e*P P **04 29 42.6 -0.2**
4.1nm,1.0s
PV04 Paradox Valley 18.91 120 *e*P P **04 29 46.3 -1.4**
PHWY Pilot Hill 19.08 108 *e*P P **04 29 49.0 -0.8**
37nm,1.8s
TTA Tatalina 19.23 322 *e*P P **04 29 49.8 -1.5**
PV01 Paradox Valley 19.28 120 *e*P P **04 29 51.8 -0.3**
4um,1.8s
SMCO Snowmass 19.48 115 *e*P P **04 29 53.1 -1.4**
12nm,1.3s
WUAZ Wupatki 19.76 130 *e*P P **04 29 57.7 -0.1**
ISCO Idaho Springs 19.89 112 *e*P P **04 29 58.2 -1.1**
MVCO Mesa Verde 19.98 122 *e*P P **04 30 00.1 -0.3**
45nm,1.5s
COLD Coldfoot 20.10 337 *e*P P **04 30 01.2 +1.6**
51nm,1.6s
SDCO Great Sand Dun 21.30 116 *e*P P **04 30 12.7 -0.2**
18nm,1.5s,mb4.2
ULM Lac du Bonnet 21.70 76 P P **04 30 19.5 +2.4**
25nm,1.1s,mb4.5,baz=286,slow=8.0,SNR=7.3
ULM LR LR 04 38 57.8
comp=Z,857nm,18.2s,MS4.2,baz=282,slow=37
AGMN Agassiz Nation 22.21 81 *e*P P **04 30 23.4 +0.8**
54nm,1.5s,mb4.8
TUC Tucson 22.65 134 *e*P P **04 30 27.6 +0.2**
6.7nm,1.3s,mb3.9
ANMO Albuquerque 22.75 122 P P **04 30 28.7 +0.2**
0.4nm,0.3s,mb3.3,baz=309,slow=11,SNR=5.6
ANMO LR LR 04 39 14.9
comp=Z,139nm,20.7s,MS3.4,baz=306,slow=36
LAZ Ladron 22.80 124 *e*P P **04 30 30.8 +1.8**
10nm,1.8s,mb4.0
BNM Barren Site 23.27 124 *e*P P **04 30 33.3 -0.6**
52nm,2.1s,mb4.6
ECSD EROS Data Cent 23.45 93 *e*P P **04 30 36.4 +0.6**
42nm,1.4s,mb4.7
EYMN Ely 25.10 80 *e*P P **04 30 50.3 -0.4**
17nm,0.9s,mb4.6
AMTX Amarillo 25.50 116 *e*P P **04 30 55.6 +1.1**
18nm,1.1s,mb4.5
MNTX Cornudas Mount 25.83 126 *e*P P **04 30 57.4 -0.1**
WMOK Wichita Mounta 27.32 112 *e*P P **04 31 10.1 -0.8**
5.5nm,1.3s,mb3.9
TXAR Lajitas Array 28.60 126 P P **04 31 22.3 -0.1**
TXAR LR LR 04 43 34.0
TXAR Lajitas Array 28.60 126 P P **04 31 22.3 -0.1**
0.2nm,1.0s,baz=322,slow=6.9,SNR=2.5
TXAR LR LR 04 43 34.0
comp=Z,641nm,18.0s,MS4.3,baz=80,slow=38
HKT Hockley 32.47 115 *e*P P **04 31 55.0 -1.5**
2.2nm,0.8s,mb4.0
SADO Sadowa 34.20 79 P P **04 32 12.5 +1.0**
4.4nm,1.0s,mb4.3,baz=304,slow=8.6,SNR=3.0
SADO LR LR 04 46 40.7
comp=Z,488nm,20.2s,MS4.2,baz=290,slow=37
TKL Tuckaleechee C 36.12 96 LR LR 04 48 53.8
comp=Z,144nm,18.4s,MS3.8,baz=300,slow=39
NOA NORSAR Array B 65.00 20 P P **04 36 04.1 -1.5**
1.0nm,0.9s,mb3.9,baz=332,slow=6.2,SNR=2.7
BJI Beijing 73.25 313 P P **04 36 56.8 -0.3**
BJI S S 04 46 23.3 -0.5
BJI pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
BJI pmax pmax
comp=Z,250nm,10.4s
BJI LR LR
comp=N,150nm,17.4s,MS4.5
BJI LR LR
comp=E,180nm,15.2s,MS4.5
BJI LR LR
comp=Z,200nm,20.5s
HHC Hu-ho-hao-te 74.73 316 *e*P P **04 37 05.5 -0.2**
HHC pP pP 04 37 09.8 -3.8
HHC sP sP 04 37 12.8 -3.6
HHC PP PP 04 39 54.0 +1.7
HHC S S 04 46 38.0 -2.3
HHC sS sS 04 46 45.5 -7.8
HHC pmax pmax
comp=Z,15nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,200nm,4.5s
HHC LR LR
comp=N,110nm,17.8s,MS4.4
HHC LR LR
comp=E,120nm,16.7s,MS4.4
HHC LR LR
comp=Z,98nm,16.6s,MS4.2
BVAR Borovoye Array 75.95 348 P P **04 37 11.0 -1.5**
comp=Z,0.2nm,0.4s,mb3.4,baz=23,slow=7.8,SNR=3.0
KURK Kurchatov 76.78 342 P P **04 37 15.3 -1.9**
comp=Z,1.7nm,1.0s,mb3.9,baz=27,slow=6.0,SNR=4.3
AKASG Malin Array Be 78.12 13 P P **04 37 23.5 -1.2**
AKASG Malin Array Be 78.12 13 P P **04 37 23.5 -1.2**
comp=Z,0.1nm,0.3s,mb3.2,baz=344,slow=5.0,SNR=5.4
ESDC Sonseca Array 78.85 40 P P **04 37 29.4 +0.4**
comp=Z,0.1nm,0.3s,mb3.2,baz=356,slow=5.1,SNR=3.2
MKAR Makanchi Array 79.67 338 P P **04 37 32.5 -0.8**
comp=Z,0.3nm,0.4s,mb3.5,baz=338,slow=12,SNR=5.9
WMQ Urumqi 81.00 333 *e*P P **04 37 41.8 +1.3**
WMQ pP pP 04 37 46.5 -1.9
WMQ sP sP 04 37 48.8 -2.5
WMQ pmax pmax
comp=Z,5.0nm,1.2s
WMQ pmax pmax
comp=Z,55nm,4.6s
CD2 Chengdu 86.49 316 P P **04 38 07.8 -1.0**
CD2 pmax pmax
comp=Z,90nm,4.3s
KSH Kashi 88.02 340 *e*P P **04 38 17.3 +1.2**
KSH *ep*P pP 04 38 21.8 -2.3
KSH *es*P sP 04 38 24.3 -2.7
KSH *e*PP PP 04 41 45.5 +3.8
KSH *e*SKS 04 48 42.0
KSH *e*S S 04 48 57.0 -1.0
KSH SS SS 04 54 47.8 +3.4
KSH pmax pmax
comp=Z,2.0nm,0.5s
KSH pmax pmax
comp=Z,47nm,4.7s
KSH LR LR
comp=N,26nm,6.3s
KSH LR LR
comp=E,39nm,3.2s
KSH LR LR
comp=Z,16nm,2.3s
GYA Guiyang 88.89 312 *e*P P **04 38 21.0 +0.5**
GYA pmax pmax
comp=Z,10.0nm,0.9s

FUNV 27 04:34:48.5, 6°87N×73°11W, h170km, MW3.7, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.26**	**38**	⇑*i*P	Pn	04 35 16.8	-0.6
CAPV				*e*S	Sn	04 35 38.0	-1.6
VIGV	**El Vigia**	**2.61**	**41**	*e*P	Pn	04 35 31.5	-0.4
VIGV				*e*S	Sn	04 36 01.6	-4.1
SOCV	**Socops**	**2.64**	**58**	*e*P	Pn	04 35 31.6	-0.6
SOCV				*e*S	Sn	04 36 03.5	-2.7
ELOV	**Elorza**	**3.60**	**88**	*e*P	Pn	04 35 42.5	-1.7
VIRV	**Villa del Rosa**	**3.68**	**11**	*e*P	Pn	04 35 43.7	-1.5
VIRV				*e*S	Sn	04 36 24.0	-5.4
QARV	**Quebrada Arrib**	**4.19**	**37**	*e*P	Pn	04 35 49.9	-1.8
QARV				*e*S	Sn	04 36 35.8	-5.3
SANV	**Sanarito**	**4.40**	**53**	*e*P	Pn	04 35 53.2	-1.2
SANV				*e*S	Sn	04 36 40.5	-5.4
CURV	**Curarigua**	**4.41**	**45**	*e*P	Pn	04 35 53.8	-0.8
TEPV	**Terepaima**	**4.95**	**51**	*e*P	Pn	04 36 00.5	-1.0
TEPV				*e*S	Sn	04 36 53.8	-5.0
BAUV	**El Baul**	**5.42**	**67**	*e*P	Pn	04 36 05.4	-2.4
MAPV	**Macapo**	**5.46**	**57**	*e*P	Pn	04 36 06.3	-2.0
IMOV	**Isla Los Monje**	**5.87**	**22**	*e*P	Pn	04 36 12.5	-1.2
MONV	**Montecano**	**5.92**	**31**	*e*P	Pn	04 36 13.1	-1.3
CAOV	**Caicara del Or**	**6.75**	**86**	*e*P	Pn	04 36 22.7	-2.6
CUPV	**Cœpira**	**7.90**	**66**	*e*P	Pn	04 36 37.5	-3.1

MOS **27** *04:41:29.1±1.4, 50°.91N×102°.23E, h10km, mb4.3/1, Error ellipse: s-maj=22.9km s-min=13.8km az=82.6*

BYKL 27 04:41:29.8±0.6, 50°.90N×102°.24E, h6km, 2C-3D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAK	**Zakamensk**	**0.84**	**128**	*e*PG	Pg	04 41 44.6	-1.3
ZAK				*e*		04 41 56.3	
ZAK				pmax	pmax		
	comp=Z,187nm,0.1s						
ZAK				smax			
	comp=E,493nm,0.1s						
ZAK	**Zakamensk**	**0.84**	**128**	⇓*i*Pg	Pg	04 41 44.7	-1.2
	comp=E,199nm,0.4s						
ZAK				⇑*i*Pg	Pg	04 41 44.7	-1.2
	comp=E,269nm,0.4s						
ZAK				⇑*i*Pg	Pg	04 41 44.7	-1.2
	comp=E,208nm,0.4s						
ZAK				*e*Sg	Sg	04 41 56.1	-0.7
ZAK				Pmax			
	comp=E,186nm,0.2s						
ZAK				Smax			
	comp=E,491nm,0.1s						
ARS	**Arshan**	**1.03**	**6**	*e*PG	Pg	04 41 46.0	-3.5
ARS				*e*		04 42 00.7	
ARS				pmax	pmax		
	comp=Z,11nm,0.1s						
ARS				smax			
	comp=E,983nm,0.4s						
ARS	**Arshan**	**1.03**	**6**	*e*Pg	Pg	04 41 48.2	-1.3
ARS				*e*		04 41 55.4	
ARS				*e*Sg	Sg	04 42 01.7	-1.2
ARS				Pmax			
	comp=E,119nm,0.5s						
ARS				Smax			
	comp=E,987nm,0.9s						
MOY	**Mondy**	**1.10**	**315**	*e*PG	Pg	04 41 49.0	-1.8
MOY				*e*		04 42 04.0	
MOY				pmax	pmax		
	comp=Z,110nm,0.4s						
MOY				smax			
	comp=E,509nm,0.4s						
MOY	**Mondy**	**1.10**	**315**	*e*Sg	Sg	04 42 04.3	-0.7
MOY				*e*		04 42 09.6	
MOY				max			
	comp=E,513nm,0.8s						
TLY	**Talaya**	**1.18**	**48**	*e*PG	Pg	04 41 50.6	-1.8
TLY				*e*S	Sg	04 42 06.0	-1.7
TLY	**Talaya**	**1.18**	**48**	⇓*i*Pg	Pg	04 41 50.7	-1.7
TLY				*e*		04 41 54.0	
TLY				*e*Sg	Sg	04 42 06.4	-1.3
IRK	**Irkutsk**	**1.85**	**43**	*e*PN	Pn	04 42 01.9	-0.1
IRK				*e*		04 42 26.2	
IRK				pmax	pmax		
	comp=Z,245nm,0.6s						
IRK				smax			
	comp=E,1μm,0.6s						
LSTR	**Listvyanka**	**1.89**	**58**	*e*PN	Pn	04 42 03.9	+1.3
LSTR				*e*		04 42 28.3	
LSTR				pmax	pmax		
	comp=Z,63nm,0.4s						
LSTR				smax			
	comp=N,153nm,0.9s						
LSTR	**Listvyanka**	**1.89**	**58**	*e*Sg	Sg	04 42 28.7	-1.8
LSTR				Smax			
	comp=N,152nm,0.8s						
ORL	**Orlik**	**2.23**	**318**	*e*PN	Pn	04 42 08.6	+1.4
ORL				*e*		04 42 37.8	
ORL				pmax	pmax		
	comp=Z,74nm,0.6s						
ORL				smax			
	comp=N,164nm,0.6s						
ORL	**Orlik**	**2.23**	**318**	*e*	Pn	04 42 08.3	+1.1
ORL				⇓*i*Pg	Pg	04 42 09.4	-3.1
ORL				*e*Sg	Sg	04 42 38.7	-2.7
ORL				Pmax			
	comp=N,72nm,0.9s						
ORL				Smax			
	comp=N,169nm,0.8s						
KAB	**Kabansk**	**2.99**	**66**	*e*Sg	Sg	04 43 03.7	-2.1
KAB				Smax			
	comp=N,512nm,0.6s						
HRMR	**Khuramsha**	**3.05**	**74**	*e*Pg	Pg	04 42 24.1	-4.1
HRMR				*e*Sn	Sn	04 42 55.4	+0.1
HRMR				*e*Sg	Sg	04 43 04.1	-3.6
HRMR				Pmax			
	comp=N,158nm,0.5s						
HRMR				Smax			
	comp=N,942nm,0.5s						
TRG	**Tyrgan**	**3.16**	**52**	*e*Pn	Pn	04 42 20.4	+0.4
TRG				*e*Pg	Pg	04 42 25.1	-5.1
TRG				*e*Sg	Sg	04 43 06.0	-5.1
TRG				Pmax			
	comp=N,31nm,0.2s						
TRG				Smax			
	comp=N,131nm,0.3s						
UUDB	**Ulan-Yde**	**3.53**	**72**	*e*	Pn	04 42 27.5	+2.4
UUDB				*e*Pg	Pg	04 42 32.4	-5.0
UUDB				*e*Sg	Sg	04 43 19.0	-4.2
UUDB				Pmax			
	comp=N,46nm,0.7s						
UUDB				Smax			
	comp=N,225nm,1.2s						
OGRR	**Ongureny**	**4.29**	**48**	*e*PN	Pn	04 42 44.7	+9.2
OGRR	**Ongureny**	**4.29**	**48**	*e*	Pn	04 42 40.1	+4.6
OGRR				*e*Pg	Pg	04 42 46.4	-5.4
OGRR				*e*		04 43 38.2	
OGRR				*e*Sg	Sg	04 43 42.7	-4.6
OGRR				Pmax			
	comp=N,45nm,1.0s						
OGRR				Smax			
	comp=N,104nm,0.6s						
ULN	**Ulaanbaatar**	**4.37**	**132**	*e*	Pn	04 42 46.2	+10
ULN				*e*Sg	Sg	04 43 46.7	-3.4
MXMB	**Maximikha**	**4.66**	**57**	*e*	Pn	04 42 51.8	+11
MXMB				*e*Sg	Sg	04 43 53.8	-5.5
MXMB				max			
	comp=N,20nm,0.6s						
MXMB				Smax			
	comp=N,96nm,0.7s						
NIZ	**Nizh Angarsk**	**6.55**	**39**	*e*	Pn	04 43 26.0	+19
NIZ				*e*Sg	Sg	04 44 54.5	-5.5
NIZ				Smax			
	comp=N,38nm,0.9s						

ISCJB **27** *04:42:05.6±0.2, 21°.72S±0°.04×65°.67W±0°.03, h274km, mb4.8/226, Error ellipse: s-maj=5.4km s-min=3.4km az=21.1*

IDC **27** *04:42:05.4±0.6, 21°.85S×65°.71W, h266km±4km, mb4.4/21, mb1 4.5/26, mb1mx4.5/27, mbtmp4.4/26, Error ellipse: s-maj=12.6km s-min=7.3km az=70.0*

NEIC **27** *04:42:06.8±0.2, 21°.74S×65°.68W, mb4.9/195, Error ellipse: s-maj=5.5km s-min=3.4km az=211.0*

LDG **27** *04:42:08.9±0.4, 21°.63S×65°.55W, h300km, Mb4.7/27, Ms3.1/1, Error ellipse: s-maj=37.0km s-min=15.3km az=165.0*

ISC 27 04:42:07.2±0.2, 21°.71S±0°.04×65°.59W±0°.03, h276km, h276km±1.4km: pP-P, n793, σ0s73/759, mb4.8/226, 229C-286D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**5.91**	**336**	*e*Pn	**Pn**	**04 43 34.3**	**-0.6**
LPAZ				*e*S	**S**	**04 44 42.3**	**-3.0**
LPAZ	**La Paz**	**5.91**	**336**	P	**Pn**	**04 43 34.2**	**-0.7**
	32nm,0.3s,baz=125,slow=6.4,SNR=788						
LPAZ				S	**S**	**04 44 40.6**	**-4.7**
	7.6nm,0.3s,baz=234,slow=18,SNR=8.5						
LPAZ				ScP	ScP	04 53 12.1	+1.3
	0.1nm,0.3s,baz=225,slow=1.4,SNR=4.0						
SIV	**San Ignacio 7.12 38**			P	**Pn**	**04 43 50.8**	**+1.0**
	59nm,0.3s,baz=239,slow=9.0,SNR=929						
SIV				S	**S**	**04 45 11.5**	**-0.9**
	0.6nm,0.3s,baz=220,slow=17,SNR=2.9						
LCO	**Las Campanas 8.61 211**			*e*Pn	**Pn**	**04 43 58.4**	**-10**
LCO				*e*S	S	04 45 17.7	-28
CPUP	**Villa Florida 8.84 123**			*e*Pn	**Pn**	**04 44 09.0**	**-2.0**
CPUP	**Villa Florida 8.84 123**			P	**Pn**	**04 44 08.9**	**-2.1**
	0.9nm,0.3s,baz=290,slow=10,SNR=13						
CPUP				ScP	ScP	04 53 14.1	+0.8
	0.2nm,0.3s,baz=125,slow=3.3,SNR=3.7						
CFAA	**Coronel Fontan 10.13 193**			P	**Pn**	**04 44 18.4**	**-8.7**
CFAA				S	**S**	**04 46 01.7**	**-19**
CFAA	**Coronel Fontan 10.13 193**			P	**Pn**	**04 44 18.4**	**-8.7**
	2.2nm,0.3s,baz=30,slow=12,SNR=84						
CFAA				S	**S**	**04 46 01.7**	**-19**
	7.9nm,0.3s,baz=133,slow=17,SNR=20						
NNA	**Nana 14.47 310**			P	**Pn**	**04 45 17.6**	**-2.7**
	14nm,0.3s,baz=157,slow=11,SNR=49						
NNA				S	**S**	**04 47 50.7**	**-9.0**
	13nm,0.3s,baz=204,slow=15,SNR=8.1						
TRQA	**Tornquist 16.58 170**			*e*Pn	**Pn**	**04 45 36.8**	**-8.2**
	8.9nm,0.9s						
SPB	**Sao Paulo 16.87 100**			*e*P	**P**	**04 45 47.4**	**+1.3**
	206nm,1.3s						
ATAH	**Atahualpa 19.05 318**			P	**P**	**04 46 09.9**	**+0.2**
	5.2nm,0.3s,baz=158,slow=7.3,SNR=35						
ATAH				S	**S**	**04 49 34.9**	**+4.0**
	0.2nm,0.3s,baz=230,slow=19,SNR=2.5						
ATAH				ScP	ScP	04 53 32.4	+1.5
	baz=45,slow=3.4,SNR=3.9						
PLCA	**Paso Flores 19.42 191**			*e*P	**P**	**04 46 08.3**	**-5.1**
	32nm,0.9s						
PLCA				*e*S	**S**	**04 49 31.5**	**-6.1**
PLCA	**Paso Flores 19.42 191**			P	**P**	**04 46 08.7**	**-4.7**
	1.4nm,0.3s,baz=19,slow=13,SNR=9.5						
PLCA				S	**S**	**04 49 30.7**	**-6.9**
	0.0nm,0.3s,baz=323,slow=18,SNR=2.7						
PLCA				PcP	PcP	04 50 21.5	-0.3
	0.1nm,0.3s,baz=310,slow=7.9,SNR=3.2						
PLCA				ScP	ScP	04 53 31.8	+0.6
	0.1nm,0.3s,baz=52,slow=12,SNR=4.2						
CAM4	**Nova Friburgo 21.35 96**			⇑*i*P	**P**	**04 46 33.2**	**-0.1**
CAM4				*i*		04 46 38.6	
CAM4				*i*		04 46 47.6	
CAM4				*i*		04 47 02.7	
OTAV	**Otavalo 25.17 328**			*e*P	**P**	**04 47 08.1**	**+0.1**
	23nm,0.8s,mb4.7						
OTAV				*e*PcP	PcP	04 50 34.9	+0.9
OTAV				*e*ScP	ScP	04 53 48.9	+2.3
ROSC	**El Rosal 27.76 341**			*e*P	**P**	**04 47 31.7**	**+0.7**
ROSC	**El Rosal 27.76 341**			P	**P**	**04 47 30.8**	**-0.2**
	9.7nm,0.5s,mb4.5,baz=102,slow=20,SNR=5.8						
ROSC				S	**S**	**04 51 57.6**	**+4.6**
	2.4nm,0.3s,baz=287,slow=19,SNR=2.9						
ROSC				ScP	ScP	04 53 55.8	+1.5
	3.5nm,0.4s,baz=100,slow=6.0,SNR=4.2						
PCRV	**Puerto La Cruz 31.70 2**			P	**P**	**04 48 06.5**	**+0.8**
	9.5nm,0.5s,mb4.6,baz=323,slow=0.7,SNR=6.9						
RCBR	**Riachuelo 32.77 66**			*e*P	**P**	**04 48 15.8**	**+0.7**
	77nm,1.0s,mb5.2						
USHA	**Ushuaia 33.14 183**			P	**P**	**04 48 15.8**	**-1.9**
	10nm,0.5s,mb4.6,baz=349,slow=8.3,SNR=24						
BCIP	**Isla Barro Col 33.72 334**			*e*P	**P**	**04 48 22.5**	**-0.7**
	27nm,0.8s,mb4.8						
GRGR	**Grenville 33.86 7**			*e*P	**P**	**04 48 23.8**	**-0.4**
	67nm,0.6s,mb5.3						
BIM	**Bigot 36.28 7**			*e*P	**P**	**04 48 44.4**	**-0.4**
MVM	**Montagne Vaucl 36.34 8**			*e*P	**P**	**04 48 44.7**	**-0.6**
FDF	**Fort de France 36.48 7**			*e*P	**P**	**04 48 45.3**	**-1.3**
	58nm,0.4s,mb5.5						
FDF	**Fort de France 36.48 7**			*e*P	**P**	**04 48 45.6**	**-0.9**
JTS	**JuntasAbangare 37.05 327**			P	**P**	**04 48 52.9**	**+1.5**
	360nm,1.2s,mb5.7,SNR=6.4						
JTS	**JuntasAbangare 37.05 327**			*e*P	**P**	**04 48 51.9**	**+0.5**
	106nm,1.2s,mb5.2						
ANWB	**Willy Bob 39.31 6**			*e*P	**P**	**04 49 07.4**	**-2.7**
	176nm,0.6s,mb5.7						
ICM	**Isla Caja Muer 39.37 359**			*e*P	**P**	**04 49 10.1**	**-0.5**
CRPR	**Cabo Rojo, PR 39.50 358**			*e*P	**P**	**04 49 10.7**	**-0.9**
	12nm,0.6s,mb4.4						
OBIP	**Obispado Ponce 39.52 358**			*e*P	**P**	**04 49 10.5**	**-1.3**
	105nm,1.3s,mb5.0						
CELP	**Cerrillos 39.55 359**			*e*P	**P**	**04 49 11.1**	**-1.0**
SJG	**San Juan 39.58 359**			*e*P	**P**	**04 49 11.0**	**-1.3**
	48nm,0.8s,mb4.9						
SJG	**San Juan 39.58 359**			P	**P**	**04 49 10.8**	**-1.5**
	21nm,0.4s,mb4.8,baz=188,slow=4.0,SNR=21						
SJG				S	**S**	**04 54 50.7**	**-3.4**
	2.9nm,0.3s,baz=333,slow=18,SNR=7.9						
HUMP	**Col San Antoni 39.61 360**			*e*P	**P**	**04 49 10.5**	**-2.0**
	17nm,1.1s,mb4.3						
CBYP	**Canovanas 39.74 360**			*e*P	**P**	**04 49 11.9**	**-1.7**
	25nm,0.8s,mb4.6						
LRS	**Lares 39.78 358**			*e*P	**P**	**04 49 12.8**	**-1.1**
STVI	**Saint Thomas 39.82 1**			*e*P	**P**	**04 49 13.7**	**-0.6**
	11nm,0.6s,mb4.4						
AOPR	**Arecibo Observ 39.83 358**			*e*P	**P**	**04 49 12.7**	**-1.7**
	17nm,0.6s,mb4.5						
AGPR	**Aguadilla, PR 39.96 358**			*e*P	**P**	**04 49 13.1**	**-2.3**
TGUH	**Tegucigalpa,Un 41.43 327**			*e*P	**P**	**04 49 26.9**	**-0.5**
	121nm,0.9s,mb5.1						
PMSA	**Palmer Station 43.06 179**			*e*P	**P**	**04 49 38.0**	**-1.8**
	9.8nm,0.9s,mb4.0						
PMSA	**Palmer Station 43.06 179**			P	**P**	**04 49 37.3**	**-2.5**
	7.6nm,0.8s,mb4.0,baz=20,slow=5.4,SNR=5.6						
TEIG	**Tepich 47.21 330**			⇓*i*P	**P**	**04 50 11.2**	**-1.7**
GOGA	**Godfrey 57.41 342**			*e*P	**P**	**04 51 26.0**	**-1.3**
	8.7nm,0.9s,mb4.2						
GOGA				*e*PcP	PcP	04 52 17.0	-0.8
LRAL	**Lakeview Retre 58.15 339**			⇓*i*P	**P**	**04 51 30.8**	**-1.7**
	15nm,0.9s,mb4.4						
HKT	**Hockley 59.03 329**			*e*P	**P**	**04 51 37.7**	**-0.9**
	54nm,1.6s,mb4.7						
VNA1	**Neumayer--Stat 59.06 161**			*e*P	**P**	**04 51 35.2**	**-3.0**
TKL	**Tuckaleechee C 59.60 343**			P	**P**	**04 51 40.8**	**-1.5**
	28nm,0.8s,mb4.9,baz=161,slow=8.2,SNR=51						
CPCT	**Cooper Cave 59.62 342**			⇓*i*P	**P**	**04 51 41.4**	**-1.0**
SWET	**Sewanee 59.82 341**			⇓*i*P	**P**	**04 51 42.3**	**-1.5**
NATX	**Nacogdoches 60.02 331**			*e*P	**P**	**04 51 44.9**	**-0.4**
	64nm,0.6s,mb5.3						
VWCC	**Virginia Weste 60.19 347**			*e*P	**P**	**04 51 46.0**	**-0.3**
BLA	**Blacksburg 60.25 346**			⇓*i*P	**P**	**04 51 46.3**	**-0.4**
	13nm,0.8s,mb4.5						
OXF	**Oxford 60.33 337**			⇓*i*P	**P**	**04 51 45.1**	**-2.1**
	98nm,0.9s,mb5.3						
WVT	**Waverly 61.26 340**			⇓*i*P	**P**	**04 51 51.6**	**-1.8**
	58nm,0.8s,mb5.2						
JCT	**Junction City 61.43 326**			⇑P	**P**	**04 51 53.6**	**-1.1**
	baz=62,SNR=15						
JCT	**Junction City 61.43 326**			⇓*i*P	**P**	**04 51 53.3**	**-1.4**
	31nm,0.8s,mb4.9						
UALR	**University of 61.66 335**			⇓*i*P	**P**	**04 51 54.4**	**-1.8**
	34nm,1.1s,mb4.9						
UTMT	**University of 61.79 339**			*e*P	**P**	**04 51 56.1**	**-0.9**
	142nm,1.0s,mb5.5						
GNAR	**Gosnell 61.85 338**			*e*P	**P**	**04 51 56.9**	**-0.5**
	438nm,0.6s,mb6.3						
GLAT	**Glass 61.87 338**			⇓*i*P	**P**	**04 51 56.3**	**-1.3**
MIAR	**Mount Ida 61.95 334**			⇓*i*P	**P**	**04 51 56.6**	**-1.5**
	30nm,1.0s,mb4.9						
628A	**Black Gap, Mar 62.30 323**			⇓P	**P**	**04 51 60.0**	**-0.6**
	baz=62,SNR=39						
PARMO	**Parma 62.38 338**			⇓*i*P	**P**	**04 52 00.0**	**-0.9**
MCWV	**Mont Chateau 62.49 348**			*e*P	**P**	**04 52 01.6**	**0.0**
	17nm,0.7s,mb4.8						
627A	**Terlingua Ranc 62.55 323**			⇓P	**P**	**04 52 01.3**	**-1.0**
	baz=63,SNR=36						
TXAR	**Lajitas Array 62.62 323**			P	**P**	**04 52 01.4**	**-1.2**
TXAR				pP	pP	04 53 03.2	-1.1
TXAR	**Lajitas Array 62.62 323**			P	**P**	**04 52 01.4**	**-1.2**
	6.1nm,0.8s,mb4.3,baz=150,slow=8.3,SNR=90						
TXAR				pP	pP	04 53 03.2	-1.1
	0.2nm,0.5s,baz=142,slow=38,SNR=0.9						
WCI	**Wyandotte Cave 62.72 342**			⇓*i*P	**P**	**04 52 01.1**	**-2.0**
	13nm,0.5s,mb4.8						
528A	**Cox Ranch, San 62.77 324**			⇑P	**P**	**04 52 02.4**	**-1.2**
	baz=63						
USIN	**University of 62.88 341**			*e*P	**P**	**04 52 02.6**	**-1.6**
	16nm,0.7s,mb4.8						
626A	**Big Bend Ranch 63.05 322**			⇑P	**P**	**04 52 04.9**	**-0.6**
	baz=63,SNR=69						
428A	**Kincaid Ranch

16nm,0.6s,mb4.8
527A Woodward Ranch 63.21 323 ⇓P P 04 52 05.5 -1.1
baz=63,SNR=28
526A Mary Lane Ranc 63.41 323 ⇓P P 04 52 07.1 -0.7
baz=64,SNR=51
427A Hayter Ranch, 63.63 324 ⇑P P 04 52 08.2 -1.1
baz=64,SNR=26
BLO Bloomington 63.66 342 eP P 04 52 07.7 -1.6
328A Wristen Ranch, 63.72 325 ⇑P P 04 52 08.7 -1.1
baz=64,SNR=49
ACSO Alum Creek Sta 63.72 345 ⇓iP P 04 52 08.4 -1.2
23nm,0.6s,mb5.0
FVM French Village 63.81 338 ⇓iP P 04 52 08.6 -1.7
49nm,1.1s,mb5.0
FVM epP pP 04 53 11.7 -0.4
426A McDonald Obser 63.84 323 ⇑P P 04 52 09.8 -0.8
baz=64,SNR=38
327A Balmorrhea Ranc 64.08 324 ⇓P P 04 52 11.3 -0.9
baz=64
CCM Cathedral Cave 64.16 338 ⇓iP P 04 52 10.8 -1.7
48nm,0.7s,mb5.2
CCM epP pP 04 53 14.0 -0.5
326A Caldwell Ranch 64.31 324 ⇑P P 04 52 12.7 -1.0
baz=64,SNR=20
BINY Binghamton 64.31 351 ⇓iP P 04 52 13.5 +0.1
19nm,0.9s,mb4.7
WMOK Wichita Mounta 64.39 330 ⇓iP P 04 52 12.0 -2.1
6.6nm,0.8s,mb4.3
WMOK ePcP PcP 04 52 45.6 -0.4
425A Indio Mountain 64.46 323 ⇓P P 04 52 13.6 -1.0
baz=65,SNR=54
227A Bennet, Jal 64.47 325 ⇓P P 04 52 13.9 -0.8
baz=65,SNR=15
TRY Troy 64.55 353 eP P 04 52 15.1 +0.2
24nm,1.0s,mb4.8
325A Bean Ranch, Si 64.90 323 ⇑P P 04 52 16.5 -1.0
baz=65,SNR=140
226A Malaga, Loving 64.94 324 ⇓P P 04 52 17.3 -0.4
baz=65,SNR=23
324A Moseley Ranch, 65.24 323 ⇓P P 04 52 17.9 -1.7
baz=65,SNR=55
126A Clayton Basin, 65.35 325 ⇓P P 04 52 19.4 -0.9
baz=66,SNR=18
MNTX Cornudas Mount 65.37 323 ⇑P P 04 52 18.7 -1.8
baz=66,SNR=45
MNTX Cornudas Mount 65.37 323 ⇓iP P 04 52 18.4 -2.1
25nm,1.0s,mb4.8
225A Deer Hill, Car 65.37 324 ⇓P P 04 52 19.4 -1.0
baz=66,SNR=33
Z27A Tatum 65.44 326 ⇑P P 04 52 19.5 -1.4
baz=66,SNR=37
LIC Lamto 65.50 72 eP P 04 52 21.1 -0.6
76nm,1.3s,mb5.2
LIC Lamto 65.50 72 ⇑iP P 04 52 21.1 -0.6
53nm,1.1s,mb4.8,baz=228
LIC Lamto 65.50 72 ⇑iP P 04 52 21.1 -0.6
27nm,1.1s,mb4.8
TIC Toumodi 65.69 72 eP P 04 52 22.4 -0.5
170nm,1.4s,mb5.6
MSTX Muleshoe 65.72 327 ⇑P P 04 52 21.5 -1.2
baz=66,SNR=81
HDIL Hopedale 65.76 340 eP P 04 52 20.6 -2.2
18nm,0.7s,mb4.9
HDIL ePcP PcP 04 52 50.6 -1.0
Z26A Caprock 65.81 325 ⇑P P 04 52 22.1 -1.1
baz=66,SNR=54
KIC Kosan Boka 65.81 72 eP P 04 52 23.3 -0.4
166nm,1.2s,mb5.7
NCB Newcomb 65.84 353 eP P 04 52 22.1 -1.0
6.1nm,0.8s,mb4.4
DBIC Dimbokro 65.85 72 ⇑iP P 04 52 23.6 -0.4
84nm,1.1s,mb5.4
DBIC Dimbokro 65.85 72 P P 04 52 23.6 -0.3
54nm,1.0s,mb5.2,baz=211,slow=6.7,SNR=28
Y27A Causey 65.86 326 ⇓P P 04 52 22.2 -1.4
baz=66,SNR=31
AMTX Amarillo 65.90 328 ⇓P P 04 52 22.6 -1.1
baz=66,SNR=6.8
AMTX Amarillo 65.90 328 ⇓iP P 04 52 22.4 -1.3
21nm,0.9s,mb4.9
124A Stringfield Ra 66.17 324 ⇑P P 04 52 24.6 -0.9
baz=66,SNR=30
223A Chaparral, Ant 66.19 323 ⇓P P 04 52 24.6 -1.1
baz=66
Z25A Roswell 66.21 325 ⇓P P 04 52 24.6 -1.2
baz=66,SNR=38
Y26A Elida 66.23 326 ⇑P P 04 52 25.2 -0.7
baz=66
X27A F and S Farms, 66.42 327 ⇓P P 04 52 25.9 -1.2
baz=67,SNR=9.4
LONY Lake Ozonia 66.52 353 ⇓iP P 04 52 27.3 -0.2
18nm,0.8s,mb4.8
123A Bell Site, Whi 66.57 323 ⇑P P 04 52 27.2 -0.8
baz=67
Z24A Sheeppen Canyo 66.60 324 ⇑P P 04 52 27.4 -0.8
baz=67,SNR=46
222A Williams Famil 66.64 322 ⇑P P 04 52 28.3 -0.2
baz=67,SNR=7.8
Y25A Mesa, Roswell 66.69 325 ⇑P P 04 52 27.5 -1.3
baz=67,SNR=38
X26A CR and CF Fran 66.71 326 ⇓P P 04 52 28.1 -0.8
baz=67,SNR=32
W27A Bowe Ranch, En 66.73 327 ⇑P P 04 52 28.1 -0.9
baz=67,SNR=21
320A Kipp Ranch, An 66.91 321 ⇑P P 04 52 30.1 -0.2
baz=67,SNR=21
221A Mesquite Ranch 66.96 322 ⇓P P 04 52 30.7 +0.1
baz=67,SNR=15
Z23A Rita Site, Whi 67.02 324 ⇑P P 04 52 30.6 -0.3
baz=67,SNR=30
122A Conniff Cattle 67.03 323 ⇓P P 04 52 31.2 +0.3
baz=67,SNR=12
Y24A Capitan 67.09 325 ⇑P P 04 52 32.2 +0.9
baz=67,SNR=13
KSU1 Kansas State U 67.10 334 ⇓iP P 04 52 30.0 -1.3
74nm,0.9s,mb5.4
W26A Owens Ranch, T 67.11 327 ⇑P P 04 52 30.9 -0.4
baz=67,SNR=5.4
X25A Clemmons Ranch 67.14 326 ⇓P P 04 52 30.5 -1.0
baz=67
SADO Sadowa 67.31 350 P P 04 52 31.8 -0.6
10.0nm,0.6s,mb4.7,baz=195,slow=5.1,SNR=16
220A Playas Peak, P 67.32 321 ⇑P P 04 52 32.6 -0.2
baz=68,SNR=38
121A Cookes Peak, D 67.35 322 ⇑P P 04 52 33.3 +0.4
baz=68,SNR=37
319A Douglas 67.38 320 ⇓P P 04 52 33.1 0.0
baz=68,SNR=43
Z22A Elephant Butte 67.42 323 ⇑P P 04 52 33.7 +0.3
baz=68,SNR=63
Y23A Lovelace Mesa, 67.43 324 ⇑P P 04 52 33.0 -0.4
baz=68,SNR=26
W25A X Bar L Ranch, 67.56 326 ⇓P P 04 52 33.5 -0.7
baz=68,SNR=40
X24A Lazy VL Ranch, 67.57 325 ⇑P P 04 52 33.7 -0.6
baz=68,SNR=6.8
V26A Tequesquite Ra 67.67 327 ⇓P P 04 52 34.3 -0.6
baz=68,SNR=43
219A White Tail Can 67.82 321 ⇓P P 04 52 35.9 0.0
baz=68,SNR=37
120A U Bar Ranch, L 67.85 322 ⇓P P 04 52 36.2 +0.2
baz=68,SNR=44
318A Bisbee 67.85 320 ⇓P P 04 52 36.1 0.0
baz=68,SNR=35
Z21A St. Cloud Mine 67.86 323 ⇓P P 04 52 36.4 +0.3
baz=68,SNR=52
BNM Barren Site 67.90 324 eP P 04 52 36.4 0.0
25nm,1.0s,mb4.9
Y22A Socorro 67.93 324 ⇑P P 04 52 36.5 0.0
baz=68,SNR=12
X23A Hourglass Bar 67.99 325 ⇓P P 04 52 36.9 0.0
baz=68,SNR=8.1
Y22D IRIS PASSCAL I 68.01 324 ⇓P P 04 52 37.2 +0.2
baz=68
LPM Los Pinos Moun 68.03 324 eP P 04 52 36.7 -0.5
27nm,0.8s,mb5.0
W24A Lazy 6 Ranch, 68.05 326 ⇓P P 04 52 36.7 -0.6
baz=68,SNR=27
LENM Lemitar 68.11 324 eP P 04 52 37.1 -0.5
3.5nm,0.6s,mb4.3
V25A Rancho No Teng 68.12 327 ⇓P P 04 52 37.3 -0.4
baz=68,SNR=58
CBKS Cedar Bluff 68.18 332 ⇑P P 04 52 37.8 -0.2
baz=68,SNR=15
CBKS Cedar Bluff 68.18 332 ⇓iP P 04 52 37.6 -0.4
123nm,1.0s,mb5.6
JFWS Jewell Farm 68.20 341 ⇓iP P 04 52 36.5 -1.5
41nm,1.1s,mb5.1

Z20A Nine Sixteen R 68.24 322 ⇓P P 04 52 38.8 +0.4
baz=68,SNR=24
218A Dragoon 68.27 320 ⇓P P 04 52 38.6 0.0
baz=68,SNR=21
SCIA State Center 68.27 338 eP P 04 52 37.2 -1.2
58nm,0.8s,mb5.4
LAZ Ladron 68.37 324 eP P 04 52 39.4 +0.1
18nm,1.5s,mb4.6
LAZ epP pP 04 53 43.7 +1.7
Y21A Point of Rocks 68.38 323 ⇑P P 04 52 39.9 +0.7
baz=69,SNR=54
V24A Rampart Ranch, 68.38 326 ⇑P P 04 52 39.0 -0.3
baz=69,SNR=40
X22A Bernardo 68.38 324 ⇓P P 04 52 39.9 +0.6
baz=69
W23A Werner Place, 68.41 325 ⇑P P 04 52 39.5 0.0
baz=69,SNR=21
ANMO Albuquerque 68.42 325 eP P 04 52 38.4 -1.1
29nm,0.9s,mb5.0
U25A Circle Dot Ran 68.45 327 ⇓P P 04 52 39.5 -0.2
baz=69,SNR=47
QSPA South Pole Qui 68.48 180 eP P 04 52 38.3 -1.0
18nm,1.0s,mb4.8
QSPA South Pole Qui 68.48 180 P P 04 52 38.3 -1.0
15nm,0.8s,mb4.8,baz=159,slow=2.0,SNR=56
217A Green Valley 68.59 320 ⇑P P 04 52 40.6 0.0
baz=69,SNR=32
118A Homack Ranch, 68.70 321 ⇓P P 04 52 41.3 0.0
baz=69
Y20A Horse Springs, 68.70 323 ⇓P P 04 52 41.8 +0.6
baz=69,SNR=28
W22A Albuquerque 68.73 325 ⇑P P 04 52 42.1 +0.6
baz=69,SNR=19
Z19A T-Link Ranch, 68.75 322 ⇓P P 04 52 42.2 +0.5
baz=69,SNR=8.2
X21A Alamosita Cree 68.76 323 ⇓P P 04 52 42.2 +0.6
baz=69,SNR=73
V23A Ortiz Mt. (NFS 68.87 325 ⇑P P 04 52 42.7 +0.4
baz=69,SNR=23
U24A Moreno Valley 68.91 326 ⇓P P 04 52 42.9 +0.4
baz=69,SNR=9.4
TUC Tucson 68.95 320 ⇓iP P 04 52 42.3 -0.5
28nm,1.0s,mb4.9
TUC epP pP 04 53 46.5 +0.8
T25A Trinidad 69.03 328 ⇑P P 04 52 43.5 +0.2
baz=69,SNR=26
Z18A Geronimo 69.05 321 ⇑P P 04 52 43.4 0.0
baz=69,SNR=6.7
117A Oracle 69.10 320 ⇑P P 04 52 43.8 0.0
baz=69,SNR=49
216A Three Points, 69.14 319 ⇑P P 04 52 44.1 +0.1
baz=69,SNR=28
W21A San Fidel 69.18 324 ⇑P P 04 52 44.6 +0.4
baz=69,SNR=12
X20A Quemado 69.23 323 ⇑P P 04 52 45.0 +0.5
baz=69,SNR=46
Y19A Nutrioso 69.23 322 ⇓P P 04 52 45.3 +0.8
baz=69,SNR=58
U23A El Rito 69.32 326 ⇑P P 04 52 45.4 +0.4
baz=70,SNR=25
V22A San Miguel Ran 69.38 325 ⇑P P 04 52 46.0 +0.6
baz=70
S25A Robets Cordova 69.45 328 ⇑P P 04 52 45.9 +0.1
baz=70,SNR=40
Z17A San Carlos Hig 69.46 321 ⇓P P 04 52 45.9 -0.1
baz=70,SNR=6.1
Y18A Canyon Day Jun 69.55 322 ⇓P P 04 52 46.5 0.0
baz=70,SNR=19
X19A St. Johns 69.59 322 ⇑P P 04 52 46.9 +0.1
baz=70,SNR=11
W20A Ramah 69.66 323 ⇓P P 04 52 47.4 +0.3
baz=70,SNR=57
116A Eloy 69.67 320 ⇑P P 04 52 47.2 -0.1
baz=70,SNR=11
V21A Milan 69.69 325 ⇓P P 04 52 47.9 +0.6
baz=70,SNR=7.1
R25A Fountain Ranch 69.76 328 ⇓P P 04 52 47.5 -0.1
baz=70,SNR=16
T23A Casias Ranch, 69.78 326 ⇑P P 04 52 48.2 +0.4
baz=70,SNR=21
S24A Houchin Ranch, 69.82 327 ⇑P P 04 52 48.7 +0.7
baz=70,SNR=32
214A Organ Pipe Nat 69.93 318 ⇑P P 04 52 48.8 0.0
baz=70,SNR=21
Y17A Roosevelt 69.96 321 ⇓P P 04 52 49.3 +0.3
baz=70,SNR=58
X18A Snowflake 70.04 322 ⇓P P 04 52 49.9 +0.4
baz=70,SNR=20
SDCO Great Sand Dun 70.05 327 ⇑P P 04 52 49.9 +0.4
baz=70,SNR=91
SDCO Great Sand Dun 70.05 327 ⇓iP P 04 52 49.6 +0.2
36nm,0.9s,mb5.1
Z16A Peralta Trail, 70.06 320 ⇑P P 04 52 49.7 +0.1
baz=70,SNR=17
V20A Brimhall 70.14 324 ⇓P P 04 52 50.1 +0.1
baz=70,SNR=29
U21A Nageezi 70.17 325 ⇑P P 04 52 50.5 +0.3
baz=70,SNR=32
T22A Edith 70.21 326 ⇓P P 04 52 51.0 +0.6
baz=70,SNR=34
R24A Sanders Place, 70.23 328 ⇓P P 04 52 51.0 +0.5
baz=70,SNR=23
S23A Nye Farm, Mont 70.27 327 ⇑P P 04 52 51.4 +0.6
baz=70
Q25A Bedland, Calha 70.34 329 ⇓P P 04 52 51.0 -0.2
baz=71,SNR=8.0
W18A Petrified Fore 70.34 323 ⇓P P 04 52 51.5 +0.2
baz=71,SNR=14
V19A Window Rock 70.39 324 ⇓P P 04 52 52.0 +0.4
baz=71,SNR=45
X17A Forest Lakes 70.39 321 ⇑P P 04 52 52.4 +0.8
baz=71,SNR=46
Z15A Gila River Ind 70.45 320 ⇓P P 04 52 51.9 -0.1
baz=71,SNR=13
Y16A Circle Bar Ran 70.46 321 ⇑P P 04 52 52.4 +0.4
baz=71,SNR=34
114A Black Gap (USA 70.52 319 ⇓P P 04 52 52.4 0.0
baz=71,SNR=27
T21A Navajo Lake 70.52 325 ⇑P P 04 52 52.7 +0.3
baz=71,SNR=18
U20A Newcomb 70.59 324 ⇑P P 04 52 52.9 +0.1
baz=71,SNR=11
S22A 4UR Ranch, Cre 70.72 326 ⇓P P 04 52 53.8 +0.3
baz=71,SNR=32
P25A Willow Gulch B 70.78 329 ⇓P P 04 52 54.3 +0.5
baz=71,SNR=19
COWI Conover 70.79 343 eP P 04 52 52.7 -1.0
7.7nm,0.8s,mb4.4
Q24A Divide 70.82 328 ⇑P P 04 52 54.5 +0.5
baz=71,SNR=21
X16A Lo Mia Camp, P 70.82 321 ⇑P P 04 52 54.6 +0.5
baz=71,SNR=55
W17A Winslow 70.87 322 ⇓P P 04 52 54.8 +0.3
baz=71
V18A Ganado 70.88 323 ⇑P P 04 52 54.5 -0.1
baz=71,SNR=16
U19A Dine' College, 70.91 324 ⇑P P 04 52 54.3 -0.3
baz=71,SNR=19
OGNE Ogallala 70.94 332 ⇓P P 04 52 54.8 +0.1
baz=71,SNR=12
OGNE Ogallala 70.94 332 ⇓iP P 04 52 54.5 -0.2
77nm,1.1s,mb5.2
Z14A Wintersburg 70.98 319 ⇑P P 04 52 55.0 -0.1
baz=71,SNR=6.4
Y15A Casa Rosa Ranc 71.02 320 ⇓P P 04 52 55.5 +0.1
baz=71,SNR=49
R22A Saguache, Gunn 71.06 327 ⇓P P 04 52 56.0 +0.5
baz=71,SNR=23
113A Mohawk Valley, 71.08 318 ⇑P P 04 52 55.4 -0.4
baz=71,SNR=16
ECSD EROS Data Cent 71.08 337 ⇓iP P 04 52 54.4 -1.1
39nm,1.0s,mb5.0
Q23A Hartsel 71.11 328 ⇑P P 04 52 56.0 +0.3
baz=71,SNR=6.9
P24A Kohler Place, 71.13 329 ⇓P P 04 52 56.6 +0.7
baz=71,SNR=11
S21A Coal Bank Pass 71.16 326 ⇑P P 04 52 56.5 +0.4
baz=71,SNR=32
MVCO Mesa Verde 71.20 325 ⇓P P 04 52 56.7 +0.3
baz=71,SNR=44
MVCO Mesa Verde 71.20 325 ⇓iP P 04 52 56.2 -0.1
77nm,1.1s,mb5.2
T19A Beclabito 71.20 324 ⇓P P 04 52 56.4 0.0
baz=71,SNR=54
O25A Wiggins 71.23 330 ⇑P P 04 52 57.0 +0.6
baz=72,SNR=6.2
Z13A Yuma Proving G 71.30 319 ⇑P P 04 52 56.9 -0.1
baz=72,SNR=15

V17A Tonalea, Kykot 71.31 322 ⇑P P 04 52 57.5 +0.5
baz=72,SNR=48
X15A Humboldt 71.34 321 ⇑P P 04 52 57.6 +0.4
baz=72,SNR=41
W16A Flagstaff 71.35 322 ⇓P P 04 52 58.1 +0.8
baz=72,SNR=41
U18A Rough Rock, Ch 71.36 324 ⇓P P 04 52 57.8 +0.4
baz=72,SNR=41
Y14A Wickenburg 71.41 320 ⇑P P 04 52 57.7 -0.1
baz=72
112A Yuma 71.42 318 ⇓P P 04 52 57.6 -0.2
baz=72
P23A Jefferson 71.47 328 ⇑P P 04 52 58.7 +0.7
baz=72,SNR=11
WUAZ Wupatki 71.56 322 ⇑P P 04 52 59.1 +0.6
baz=72,SNR=42
WUAZ Wupatki 71.56 322 ⇓iP P 04 52 58.8 +0.2
54nm,1.0s,mb5.1
R21A Cimarron 71.57 326 ⇓P P 04 52 59.1 +0.6
baz=72,SNR=34
S20A Disappointment 71.59 325 ⇑P P 04 52 59.4 +0.8
baz=72,SNR=49
Q22A Crested Butte, 71.61 327 ⇑P P 04 52 59.4 +0.6
baz=72,SNR=17
O24A Longmont 71.69 329 ⇓P P 04 52 59.5 +0.3
baz=72,SNR=5.6
ISCO Idaho Springs 71.69 329 ⇓P P 04 52 59.7 +0.4
baz=72,SNR=32
ISCO Idaho Springs 71.69 329 ⇓iP P 04 52 59.7 +0.4
23nm,1.0s,mb4.8
X14A Yava 71.71 320 ⇓P P 04 52 59.8 +0.3
baz=72,SNR=34
N25A Grover 71.77 330 ⇑P P 04 53 00.3 +0.6
baz=72
Y13A Salome 71.83 319 ⇑P P 04 53 00.3 +0.2
baz=72
W15A Williams 71.84 321 ⇓P P 04 53 00.9 +0.7
baz=72,SNR=17
R20A Redvale 71.86 326 ⇑P P 04 53 01.1 +0.8
baz=72,SNR=78
U16A Tuba City 71.87 323 ⇑P P 04 53 01.0 +0.6
baz=72,SNR=44
SMCO Snowmass 71.89 327 ⇓iP P 04 53 01.2 +0.8
30nm,0.9s,mb4.9
T18A Mexican Hat 71.89 324 ⇑P P 04 53 00.6 +0.1
baz=72,SNR=63
PV01 Paradox Valley 71.92 326 eP P 04 53 01.0 +0.4
4μm,1.0s
GLA Glamis 71.92 318 ⇓P P 04 53 00.6 -0.2
baz=72,SNR=5.8
GLA Glamis 71.92 318 eP P 04 53 00.5 -0.3
13nm,0.8s,mb4.6
Q21A Lamborn Mesa, 71.93 327 ⇓P P 04 53 01.2 +0.5
baz=72,SNR=13
U17A Shonto 71.93 323 ⇑P P 04 53 01.4 +0.6
baz=72,SNR=39
S19A Harvey Farm, M 71.94 325 ⇓P P 04 53 01.0 +0.3
baz=72,SNR=73
P22A Eagle 72.10 328 ⇑P P 04 53 02.1 +0.5
baz=72,SNR=23
N24A Carr 72.15 330 ⇑P P 04 53 02.6 +0.7
baz=72,SNR=6.4
O23A Lake Granby, G 72.16 329 ⇓P P 04 53 02.6 +0.6
baz=72,SNR=19
Y12C Blythe 72.21 319 ⇓P P 04 53 02.3 -0.1
baz=72,SNR=11
V15A Kaibab Nationa 72.23 322 ⇑P P 04 53 03.3 +0.8
baz=72,SNR=50
PV04 Paradox Valley 72.29 326 ⇓iP P 04 53 02.9 +0.1
T17A Navajo Res., N 72.30 323 ⇓P P 04 53 03.9 +1.0
baz=72,SNR=54
W14A Seligman 72.34 321 ⇑P P 04 53 04.0 +0.8
baz=72,SNR=31
S18A Hurst Farm, Bl 72.36 324 ⇓P P 04 53 04.0 +0.8
baz=73,SNR=94
P21A Newcastle 72.39 327 ⇓P P 04 53 04.1 +0.7
baz=73,SNR=22
Q20A Ridgley Place, 72.39 326 ⇓P P 04 53 03.4 +0.1
baz=73
R19A Curley Farm, L 72.40 325 ⇓P P 04 53 03.7 +0.2
baz=73,SNR=37
O22A Kremmling 72.43 328 ⇓P P 04 53 03.7 +0.1
baz=73,SNR=32
DVTC Desert V Tower 72.47 317 ⇓P P 04 53 04.1 +0.1
baz=73
M24A Cheyenne 72.62 330 ⇓P P 04 53 05.5 +0.8
baz=73,SNR=39
V14A Boquillas Ranc 72.65 321 ⇓P P 04 53 05.7 +0.8
baz=73,SNR=59
T16A Glen Canyon Da 72.68 323 ⇓P P 04 53 05.7 +0.5
baz=73,SNR=5.9
N23A Red Feather La 72.70 329 ⇑P P 04 53 05.6 +0.5
baz=73,SNR=22
BC3 Big Chuckawall 72.72 318 ⇑P P 04 53 05.4 0.0
baz=73,SNR=22
U15A North Rim 72.73 322 ⇓P P 04 53 06.4 +1.0
baz=73,SNR=76
S17A Black Ridge (B 72.76 324 ⇑P P 04 53 06.0 +0.4
baz=73,SNR=27
PHWY Pilot Hill 72.79 330 ⇓iP P 04 53 05.7 0.0
42nm,1.3s,mb4.9
PHWY ePcP PcP 04 53 20.5 -0.7
R18A Canyonlands Na 72.81 325 ⇑P P 04 53 05.9 +0.1
baz=73,SNR=31
MONP Monument Peak 72.82 317 ⇑P P 04 53 06.0 0.0
baz=73,SNR=12
BAR Barrett 72.84 317 ⇓iP P 04 53 05.6 -0.6
16nm,0.9s,mb4.7
BAR epP pP 04 54 09.8 +0.1
P20A De Beque 72.85 327 ⇓P P 04 53 06.4 +0.4
baz=73
IRM Iron Mountain 72.87 319 ⇓P P 04 53 06.3 0.0
baz=73,SNR=22
N22A Wattenberg Ran 72.88 329 ⇑P P 04 53 07.0 +0.8
baz=73,SNR=25
Q19A Hogan Spring (72.90 326 ⇓P P 04 53 06.8 +0.4
baz=73,SNR=42
O21A Pagoda 72.92 328 ⇓P P 04 53 07.3 +0.8
baz=73,SNR=10
NEE2 Needles Airpor 72.95 319 ⇑P P 04 53 06.6 -0.2
baz=73
L24A Wheatland 73.12 330 ⇓P P 04 53 08.1 +0.4
baz=73
T15A Red Dirt Ranch 73.20 322 ⇓P P 04 53 09.0 +0.9
baz=73,SNR=39
U14A Mt Trumbull 73.23 322 ⇑P P 04 53 09.3 +0.9
baz=73,SNR=22
O20A White River Ci 73.25 327 ⇑P P 04 53 08.9 +0.5
baz=74,SNR=42
P19A Cripple Cowboy 73.25 326 ⇑P P 04 53 09.1 +0.7
baz=74,SNR=13
109C Camp Elliot, M 73.25 317 ⇓P P 04 53 08.5 -0.1
baz=73
S16A Weppner Ranch, 73.26 323 ⇓P P 04 53 08.7 +0.2
baz=74,SNR=26
R17A Hanksville Air 73.27 324 ⇓P P 04 53 08.9 +0.3
baz=74,SNR=76
BELC Belle Mtn. Jos 73.28 318 ⇑P P 04 53 08.9 +0.2
baz=74,SNR=14
PFO Pinyon Flat Ob 73.31 317 P P 04 53 09.2 +0.3
107nm,0.9s,mb5.5,SNR=7.0
PFO Pinyon Flat Ob 73.31 317 ⇓P P 04 53 09.1 +0.2
baz=74,SNR=12
PFO Pinyon Flat Ob 73.31 317 eP P 04 53 08.7 -0.2
23nm,1.2s,mb4.7
V13A Grand Canyon W 73.31 321 ⇑P P 04 53 09.2 +0.4
baz=74,SNR=39
N21A Black Mountain 73.36 328 ⇓P P 04 53 09.9 +0.8
baz=74,SNR=10
M22A Cedar Creek Ra 73.41 329 ⇓P P 04 53 09.8 +0.6
baz=74,SNR=12
LDFC Landfair 73.46 319 ⇓iP P 04 53 10.2 +0.5
38nm,0.9s,mb5.0
Q18A Rafter H Ranch 73.46 325 ⇑P P 04 53 09.9 +0.3
baz=74,SNR=13
W12A Cal Nev Ari 73.47 320 ⇑P P 04 53 09.9 +0.1
baz=74,SNR=10
L23A Garrett 73.54 330 ⇑P P 04 53 10.2 +0.2
baz=74,SNR=9.2
GMRC Granite Mounta 73.59 319 ⇓P P 04 53 10.9 +0.4
baz=74,SNR=57
R16A Teasdale 73.60 324 ⇓P P 04 53 10.9 +0.4
baz=74,SNR=31
T14A Hurricane 73.63 322 ⇓P P 04 53 11.4 +0.8
baz=74,SNR=38
S15A Panguitch 73.65 323 ⇑P P 04 53 11.3 +0.5
baz=74,SNR=9.5
SRU San Rafael 73.68 325 ⇑P P 04 53 11.1 +0.2

baz=74,SNR=63
SRU San Rafael 73.68 325⇓iP P 04 53 10.9 +0.1
55nm,0.8s,mb5.2
U13A Pakoon Wash 73.69 321 ⇓P P 04 53 11.5 +0.5
baz=74,SNR=12
V12A Nelson 73.74 320 ⇑P P 04 53 11.5 +0.1
baz=74,SNR=23
MURC Murrieta 73.78 317 ⇑P P 04 53 11.6 0.0
baz=74,SNR=6.6
N20A Spence Gulch, 73.79 328 ⇓P P 04 53 11.8 +0.3
baz=74,SNR=22
L22A Ellis Ranch, M 73.81 330 ⇑P P 04 53 12.5 +0.9
baz=74
O19A Miners Draw (B 73.82 327 ⇓P P 04 53 12.0 +0.4
baz=74,SNR=21
Q16A Castle Valley 73.88 325 ⇑P P 04 53 12.5 +0.5
baz=74,SNR=13
P18A Preston Nutter 73.91 326 ⇑P P 04 53 13.0 +0.8
baz=74,SNR=62
RWWY Rawlins 73.92 329⇓iP P 04 53 12.6 +0.4
35nm,0.9s,mb5.0
M21A Separation Pea 73.93 329 ⇑P P 04 53 12.9 +0.6
baz=74,SNR=10
R15A Junction 73.98 323 ⇑P P 04 53 13.3 +0.6
baz=74,SNR=30
BBRC Big Bear Solar 74.03 318 ⇓P P 04 53 13.7 +0.6
baz=74
U12A Valley of Fire 74.04 321 ⇓P P 04 53 13.5 +0.5
baz=74,SNR=18
HEC Hector,Ludlow 74.04 319 ⇑P P 04 53 13.6 +0.5
baz=74,SNR=14
P17A Butcher Ranch, 74.05 325 ⇓P P 04 53 13.4 +0.4
baz=74,SNR=48
T13A Saint George 74.07 322 ⇑P P 04 53 14.1 +0.9
baz=74,SNR=32
CCUT Cedar City 74.13 322⇓iP P 04 53 14.4 +0.9
46nm,0.9s,mb5.1
MSU Marysvale 74.14 324 eP P 04 53 14.2 +0.6
39nm,0.8s,mb5.1
MSU epP pP 04 54 18.9 +1.5
S14A Cedar City 74.16 323 ⇓P P 04 53 14.3 +0.6
baz=74,SNR=13
V11A Goodsprings 74.16 320 ⇑P P 04 53 14.0 +0.2
baz=74,SNR=12
TMUT Trail Mountain 74.18 325⇓iP P 04 53 14.0 +0.3
12nm,0.4s,mb4.9
TUQ Turquoise Moun 74.19 319 ⇓P P 04 53 14.2 +0.2
baz=74
L21A Rawlins 74.21 329 ⇑P P 04 53 14.2 +0.3
baz=74,SNR=53
SCI San Clemente I 74.24 316 ⇓P P 04 53 14.0 -0.3
baz=74
M20A Sweetwater, Wa 74.25 328 ⇑P P 04 53 14.4 +0.3
baz=74,SNR=17
O18A Roosevelt 74.25 326 ⇓P P 04 53 14.7 +0.5
baz=74,SNR=8.8
N19A John Jarvie Ra 74.29 327 ⇓P P 04 53 14.5 +0.1
baz=74,SNR=25
K22A Casper 74.34 330 ⇓P P 04 53 14.9 +0.3
baz=75,SNR=15
ARUT Antelope Range 74.34 322 eP P 04 53 15.4 +0.7
41nm,1.0s,mb5.0
ARUT epP pP 04 54 19.5 +0.9
T12A Moapa 74.34 321 ⇓P P 04 53 14.9 +0.2
baz=74
RSSD Black Hills 74.37 332⇓iP P 04 53 14.6 -0.1
18nm,0.8s,mb4.8
CIS Catalina Islan 74.42 316 ⇓P P 04 53 15.2 -0.1
baz=75
S13A Holt Ranch, En 74.43 322 ⇓P P 04 53 16.3 +1.0
baz=75,SNR=44
SHPR Sheep Range 74.45 320 eP P 04 53 15.8 +0.3
22nm,0.9s,mb4.8
SHPR epP pP 04 54 20.9 +1.7
R14A James Farms, M 74.46 323 ⇑P P 04 53 16.0 +0.6
baz=75,SNR=18
BFSC Mount Baldy Ra 74.48 317 ⇑P P 04 53 15.5 -0.1
baz=75,SNR=9.3
RRX Edison Barstow 74.49 318 ⇑P P 04 53 15.9 +0.3
baz=75
U11A Corn Creek 74.53 320 ⇑P P 04 53 16.3 +0.5
baz=75,SNR=7.7
O17A Robinson Place 74.58 326 ⇓P P 04 53 16.9 +0.9
baz=75,SNR=83
Q15A Fillmore 74.60 324 ⇑P P 04 53 16.7 +0.5
baz=75,SNR=13
N18A Larsen Ranch, 74.60 327 ⇓P P 04 53 16.3 +0.1
baz=75,SNR=12
GSC Goldstone 74.64 319 ⇑P P 04 53 16.8 +0.2
baz=75,SNR=23
GSC Goldstone 74.64 319 eP P 04 53 16.5 -0.1
29nm,1.0s,mb4.9
GSC epP pP 04 54 21.1 +0.7
P16A Fountain Green 74.64 325 ⇓P P 04 53 17.1 +0.7
baz=75,SNR=13
K21A Alcova 74.66 329 ⇓P P 04 53 17.1 +0.7
baz=75,SNR=64
L20A Wamsutter 74.71 328 ⇑P P 04 53 17.2 +0.4
baz=75,SNR=29
SHOC Shoshone 74.72 319 ⇓P P 04 53 16.9 -0.1
baz=75
MWC Mount Wilson 74.72 317 eP P 04 53 16.6 -0.4
31nm,1.2s,mb4.8
M19A Rock Springs 74.74 328 ⇓P P 04 53 17.0 +0.1
baz=75,SNR=5.1
PASC Pasadena Art C 74.77 317 eP P 04 53 16.9 -0.4
122nm,1.0s,mb5.5
AGMN Agassiz Nation 74.78 340 eP P 04 53 15.6 -1.4
33nm,0.9s,mb5.0
R13A O'Grain Ranch, 74.91 322 ⇓P P 04 53 19.0 +1.0
baz=75,SNR=21
DECC Green Verdugo 74.91 317 ⇑P P 04 53 18.2 +0.1
baz=75
MPU Maple Canyon 74.92 325⇓iP P 04 53 18.3 +0.3
39nm,0.9s,mb5.0
P15A Leamington 74.95 324 ⇑P P 04 53 18.8 +0.6
baz=75
T11A Corn Creek, Al 74.99 321 ⇑P P 04 53 19.2 +0.7
baz=75,SNR=61
O16A Springville 74.99 325 ⇑P P 04 53 19.0 +0.6
baz=75,SNR=16
DAU Daniels Canyon 75.01 326 eP P 04 53 19.0 +0.5
37nm,0.8s,mb5.1
S12A Delamar Landin 75.02 321 ⇓P P 04 53 19.4 +0.8
baz=75,SNR=12
Q14A Sevier Lake (B 75.08 323 ⇓P P 04 53 19.8 +0.8
baz=75,SNR=41
U10A Ash Meadows, A 75.09 320 ⇓P P 04 53 19.6 +0.6
baz=75,SNR=24
EDW2 Edwards Air Fo 75.10 318 ⇑P P 04 53 18.8 -0.4
baz=75,SNR=14
NLU North Lily Min 75.11 325⇓iP P 04 53 19.5 +0.4
37nm,1.3s,mb4.8
M18A Lyman 75.14 327 ⇑P P 04 53 19.3 +0.1
baz=75,SNR=16
N17A Moffit Pass 75.17 326 ⇑P P 04 53 20.2 +0.8
baz=75,SNR=71
K20A Yellowstone Ra 75.20 329 ⇑P P 04 53 19.5 0.0
baz=75,SNR=43
SYO Syowa Base 75.20 159‖eP P 04 53 17.0 -2.3
SYO Syowa Base 75.20 159 eSH S 05 02 34.0 -0.5
JLU Jordanelle 75.25 326⇓iP P 04 53 20.3 +0.5
42nm,0.8s,mb5.1
BLG Laguna Peak 75.29 316 ⇓P P 04 53 19.8 -0.5
baz=76
LRMC Laurel Mountai 75.30 318 ⇑P P 04 53 20.5 +0.2
baz=76
R12A Pony Springs, 75.38 322 ⇓P P 04 53 21.5 +0.9
baz=76,SNR=38
P14A Drum Mountains 75.39 324 ⇑P P 04 53 21.7 +1.0
baz=76,SNR=51
FURC Furnace Creek, 75.45 319 ⇓P P 04 53 21.5 +0.4
baz=76,SNR=36
N16A Rees Ranch, Co 75.45 326 ⇓P P 04 53 21.6 +0.6
baz=76,SNR=8.9
M17A Scullys Gap (B 75.47 327 ⇑P P 04 53 20.9 -0.2
baz=76,SNR=11
Q13A Wheeler Ranch, 75.48 323 ⇓P P 04 53 21.8 +0.6
baz=76,SNR=30
L18A Fontenelle, Gr 75.49 327 ⇓P P 04 53 21.5 +0.3
baz=76,SNR=28
O15A The Old Anders 75.56 325 ⇓P P 04 53 22.2 +0.6
baz=76,SNR=5.8
MPMC Manual Prospec 75.56 319 ⇑P P 04 53 21.6 -0.1
baz=76,SNR=28
S11A Rachel 75.57 321 ⇑P P 04 53 22.6 +0.8
baz=76,SNR=10
K19A Absolon Red Bu 75.57 329 ⇓P P 04 53 21.5 -0.1
baz=76,SNR=25
BSC Santa Cruz Isl 75.58 316 ⇓P P 04 53 21.5 -0.4
baz=76
I21A Big Trails, Te 75.59 330 ⇑P P 04 53 21.6 -0.1
baz=76,SNR=54
DUG Dugway 75.68 325 ⇓P P 04 53 22.8 +0.5
baz=76,SNR=31
DUG Dugway 75.68 325⇓iP P 04 53 22.6 +0.3
26nm,0.9s,mb4.9
ARVC Arvin 75.79 317 ⇑P P 04 53 22.9 -0.1
baz=76
SUR Sutherland 75.79 119 P P 04 53 23.2 -0.1
19nm,1.1s,mb4.6,baz=219,slow=6.5,SNR=4.9
P13A Bates Ranch, G 75.82 323 ⇓P P 04 53 23.9 +0.8
baz=76,SNR=32
BW06 Boulder Array 75.88 328 ⇓P P 04 53 23.2 -0.1
baz=76,SNR=20
PDAR Pinedale Array 75.88 328 P P 04 53 23.2 -0.2
6.7nm,0.6s,mb4.4,baz=129,slow=7.8,SNR=68
ISA Isabella 75.91 318 ⇓P P 04 53 23.9 +0.2
baz=76,SNR=35
ISA Isabella 75.91 318⇓iP P 04 53 23.9 +0.2
36nm,0.8s,mb5.1
R11A Troy Canyon, C 75.95 322 ⇑P P 04 53 24.5 +0.6
baz=76,SNR=37
Q12A Willow Creek R 75.99 323 ⇓P P 04 53 24.6 +0.5
baz=76,SNR=27
K18A Toltan Ranch, 76.02 328 ⇑P P 04 53 24.9 +0.7
baz=76,SNR=38
N15A Stansbury Isla 76.02 325 ⇑P P 04 53 24.3 +0.1
baz=76
HWUT Hardware Ranch 76.03 326⇓iP P 04 53 24.1 -0.2
40nm,1.0s,mb5.0
L17A Cokeville 76.04 327 ⇑P P 04 53 24.2 -0.1
baz=76,SNR=9.3
I20A Worland 76.08 330 ⇓P P 04 53 24.6 +0.1
baz=76,SNR=15
GRAC Grapevine Rang 76.10 320 ⇑P P 04 53 25.0 +0.2
baz=76,SNR=10
H21A Big Horn, Sher 76.10 331 ⇑P P 04 53 24.1 -0.5
baz=76,SNR=17
CWC Cottonwood Cre 76.17 319 ⇑P P 04 53 25.5 +0.3
baz=76,SNR=13
SCHQ Schefferville 76.24 359 P P 04 53 25.0 -0.1
2.8nm,0.5s,mb4.1,baz=175,slow=8.4,SNR=7.2
S10A Tonopah Range, 76.25 321 ⇓P P 04 53 26.1 +0.5
baz=76,SNR=41
L16A Fish Haven 76.26 327 ⇓P P 04 53 25.5 0.0
baz=76,SNR=12
PKM Peak Mountain 76.27 317 ⇓P P 04 53 26.0 +0.2
baz=76,SNR=12
O13A Hicks Ranch, I 76.27 324 ⇑P P 04 53 26.1 +0.4
baz=76,SNR=5.9
BGU Big Grassy Mou 76.32 325⇓iP P 04 53 25.9 0.0
40nm,1.2s,mb4.9
R10A Warm Springs 76.33 321 ⇓P P 04 53 27.0 +1.0
baz=76,SNR=50
Q11A Duckwater 76.33 322 ⇓P P 04 53 26.5 +0.5
baz=76,SNR=38
P12A McGill 76.33 323 ⇓P P 04 53 26.6 +0.6
baz=76,SNR=18
M15A Larsen Ranch, 76.39 326 ⇑P P 04 53 26.3 0.0
baz=77,SNR=9.8
VES Vestal, Richgr 76.41 318 ⇑P P 04 53 26.5 0.0
baz=77,SNR=21
H20A Greybull 76.43 330 ⇓P P 04 53 26.2 -0.2
baz=77,SNR=23
J18A Kendall Valley 76.43 328 ⇑P P 04 53 26.8 +0.3
baz=77,SNR=82
ULM Lac du Bonnet 76.50 341 P P 04 53 25.9 -0.8
26nm,0.6s,mb5.0,baz=153,slow=6.0,SNR=19
ULM pP 04 54 30.1 -0.7
7.9nm,0.6s,baz=135,slow=6.2,SNR=3.3
K17A Gardner Place, 76.54 327 ⇑P P 04 53 27.2 +0.1
baz=77,SNR=9.6
G21A Lodge Grass 76.64 331 ⇓P P 04 53 27.5 -0.1
baz=77,SNR=10.0
AHID Auburn Hatcher 76.64 327⇓iP P 04 53 27.8 +0.2
50nm,0.9s,mb5.2
SMMC Simmler 76.64 317 ⇑P P 04 53 28.1 +0.3
baz=77,SNR=11
TIN Tinemaha 76.66 319 ⇑P P 04 53 28.2 +0.4
baz=77,SNR=6.6
I18A Diamond G Ranc 76.70 329 ⇑P P 04 53 28.5 +0.5
baz=77,SNR=41
Q10A Clear Creek Ra 76.74 322 ⇓P P 04 53 29.0 +0.7
baz=77,SNR=15
L15A Malad City 76.75 326 ⇑P P 04 53 28.2 -0.1
baz=77,SNR=49
HVU Hansel Valley 76.79 326⇓iP P 04 53 28.4 -0.1
35nm,1.0s,mb5.0
O12A Currie 76.79 324 ⇑P P 04 53 28.9 +0.4
baz=77,SNR=35
RCTC Rector, Farmer 76.80 318 ⇓P P 04 53 27.7 -1.0
baz=77,SNR=6.2
P11A Circle Ranch, 76.86 322 ⇓P P 04 53 29.4 +0.4
baz=77
J17A Brown Place, J 76.89 328 ⇓P P 04 53 29.5 +0.5
baz=77,SNR=28
K16A Soda Springs 76.94 327 ⇑P P 04 53 30.0 +0.7
baz=77,SNR=51
REDW Red Top Meadow 76.95 328⇓iP P 04 53 29.6 +0.2
27nm,0.9s,mb5.0
SNOW Snow King Moun 76.98 328 eP P 04 53 29.6 +0.1
28nm,0.9s,mb5.0
TSUM Tsumeb 77.02 106 eP P 04 53 29.9 -0.5
21nm,0.9s,mb4.9
TSUM Tsumeb 77.02 106 P P 04 53 29.8 -0.6
20nm,0.9s,mb4.8,baz=234,slow=5.1,SNR=25
LOHW Long Hollow 77.02 328⇓iP P 04 53 29.9 +0.2
21nm,0.8s,mb4.9
F21A Absaloka Mine, 77.06 332 ⇓P P 04 53 29.8 -0.1
baz=77,SNR=5.1
G20A Bridger 77.09 331 ⇑P P 04 53 29.6 -0.5
baz=77,SNR=20
TPAW Teton Pass 77.10 328 eP P 04 53 29.9 -0.3
45nm,1.3s,mb5.0
RRI2 Red Ridge 77.18 328⇓iP P 04 53 30.9 +0.3
55nm,1.2s,mb5.2
MOOW Moose Ponds 77.19 328⇓iP P 04 53 30.7 +0.1
19nm,1.1s,mb4.8
MOOW epP pP 04 54 36.1 +1.1
L14A Malta 77.21 326 ⇑P P 04 53 30.8 0.0
baz=77,SNR=41
I17A Pilgrim Ck. 77.23 328 ⇓P P 04 53 31.9 +1.0
baz=78,SNR=16
J16A Bone 77.27 327 ⇓P P 04 53 31.4 +0.3
baz=78,SNR=18
DCID1 Drake Creek 77.29 328 eP P 04 53 31.3 +0.1
66nm,1.5s,mb5.1
K15A Arbon 77.31 326 ⇑P P 04 53 31.6 +0.2
baz=78,SNR=27
LAO LASA Array 77.35 333 ⇑P P 04 53 31.3 -0.1
baz=78,SNR=12
LAO LASA Array 77.35 333 eP P 04 53 31.2 -0.2
36nm,1.2s,mb5.0
IMW Indian Meadow 77.39 328⇓iP P 04 53 32.2 +0.5
38nm,0.9s,mb5.1
IMW epP pP 04 54 37.6 +1.5
MLAC Mammoth Lakes 77.40 319 ⇓P P 04 53 32.5 +0.5
baz=78,SNR=7.7
FLWY Flagg Ranch 77.41 328⇓iP P 04 53 32.5 +0.6
44nm,1.0s,mb5.1
FLWY epP pP 04 54 37.2 +1.0
RLMT Red Lodge 77.50 330 ⇓P P 04 53 32.7 +0.4
baz=78,SNR=21
RLMT Red Lodge 77.50 330⇓iP P 04 53 32.6 +0.3
49nm,1.2s,mb5.1
RLMT epP pP 04 54 37.5 +0.8
F20A Billings 77.51 331 ⇓P P 04 53 32.2 -0.2
baz=78,SNR=7.2
K14A Jones Ranch, D 77.54 326 ⇓P P 04 53 32.5 -0.1
baz=78,SNR=16
H17A Grant Village 77.58 329 ⇓P P 04 53 33.9 +1.1
baz=78,SNR=5.1
NVAR Mina Array Bea 77.60 320 P P 04 53 33.3 +0.2
18nm,0.9s,mb4.8,baz=149,slow=5.8,SNR=84
E21A Keefer Ranch, 77.60 332 ⇑P P 04 53 33.0 +0.1
baz=78,SNR=16
I16A Newdale 77.64 328 ⇓P P 04 53 33.7 +0.6
baz=78,SNR=22
YFT Old Faithful 77.75 329 eP P 04 53 35.2 +1.5
22nm,0.9s,mb4.9
J15A Blackfoot 77.77 327 ⇓P P 04 53 34.4 +0.6
baz=78,SNR=34
G18A Lazy EL Ranch, 77.79 330 ⇓P P 04 53 33.9 0.0
baz=78,SNR=22
F19A Roth Farm, Mol 77.91 331 ⇑P P 04 53 34.5 0.0
baz=78,SNR=22
DGMT Dagmar 77.93 335 ⇑P P 04 53 35.1 +0.5
baz=78,SNR=16
DGMT Dagmar 77.93 335⇓iP P 04 53 35.0 +0.4
89nm,1.2s,mb5.4
D21A La Casta Ranch 77.97 332 ⇓P P 04 53 35.1 +0.2
baz=78,SNR=24
E20A Meyer Farm, Mu 78.04 331 ⇓P P 04 53 35.4 +0.1
baz=78,SNR=32
H16A Russell Place, 78.13 329 ⇑P P 04 53 36.7 +0.9
baz=78,SNR=17
GCMT Greycliff 78.19 330 eP P 04 53 36.2 +0.1
34nm,1.3s,mb4.9
GCMT epP pP 04 54 41.5 +0.9
I15A Monteview 78.23 327 ⇓P P 04 53 37.4 +1.0
baz=78,SNR=22
J14A Carey 78.27 326 ⇓P P 04 53 37.4 +0.8
baz=78,SNR=20
E19A Rath Farm, Rou 78.30 331 ⇑P P 04 53 36.7 0.0
baz=78,SNR=32
F18A Big Timber 78.30 330 ⇓P P 04 53 36.9 +0.2
baz=78,SNR=24
WAKR Walker 78.32 320 eP P 04 53 37.5 +0.4
39nm,1.3s,mb5.0
G17A Pierce Place, 78.34 329 ⇑P P 04 53 37.5 +0.6
baz=79
D20A Manuel Ranch, 78.49 332 ⇑P P 04 53 37.5 -0.2
baz=79,SNR=22
CMB Columbia Colle 78.60 319 eP P 04 53 37.7 -0.9
6.3nm,0.7s,mb4.5
J13A Cove Ranch, Pi 78.66 326 ⇓P P 04 53 39.5 +0.7
baz=79,SNR=13
I14A Mackay 78.67 327 ⇓P P 04 53 39.8 +1.0
baz=79,SNR=37
F17A Fitzpatrick Pl 78.74 330 ⇑P P 04 53 39.7 +0.6
baz=79,SNR=18
H15A Lima 78.75 328 ⇑P P 04 53 40.1 +0.9
baz=79,SNR=16
G16A Moss Hill, Enn 78.79 329 ⇓P P 04 53 39.7 +0.3
baz=79,SNR=8.9
E18A Harlowton 78.89 331 ⇑P P 04 53 39.9 +0.1
baz=79,SNR=8.0
HLID Hailey 78.90 326 ⇓P P 04 53 41.0 +0.9
baz=79,SNR=96
HLID Hailey 78.90 326⇓iP P 04 53 40.8 +0.7
48nm,0.9s,mb5.2
HLID epP pP 04 54 47.3 +2.7
I13A Wildhorse Cree 79.00 327 ⇓P P 04 53 41.5 +1.0
baz=79,SNR=31
BOZ Bozeman (W) 79.01 329 ⇓P P 04 53 40.5 -0.1
baz=79,SNR=10
BOZ Bozeman (W) 79.01 329 eP P 04 53 40.0 -0.5
16nm,1.5s,mb4.5
MCMT McKenzie Canyo 79.01 328⇓iP P 04 53 41.2 +0.6
15nm,0.8s,mb4.8
MCMT epP pP 04 54 46.1 +0.9
WCN Washoe City 79.03 320 ⇑P P 04 53 41.3 +0.5
baz=79,SNR=9.6
WCN Washoe City 79.03 320⇓iP P 04 53 41.1 +0.3
15nm,1.0s,mb4.7
PAHR Pah Rah Range 79.06 321⇓iP P 04 53 41.4 +0.4
102nm,0.9s,mb5.5
PAHR epP pP 04 54 46.9 +1.2
G15A Dillon 79.07 328 ⇓P P 04 53 41.3 +0.4
baz=79,SNR=16
F16A Kennard Place, 79.11 329 ⇓P P 04 53 41.2 +0.1
baz=79,SNR=6.8
H14A Leadore 79.11 327 ⇓P P 04 53 41.9 +0.7
baz=79,SNR=26
E17A Martinsdale 79.24 330 ⇑P P 04 53 42.0 +0.2
baz=80,SNR=16
DLMT Dillon 79.27 328 eP P 04 53 41.5 -0.5
24nm,1.1s,mb4.8
D18A Linhart Farms, 79.31 331 ⇑P P 04 53 42.1 -0.1
baz=80,SNR=14
C19A Slack Wire Ran 79.38 332 ⇑P P 04 53 42.3 -0.2
baz=80,SNR=12
I12A Atlanta 79.44 326 ⇑P P 04 53 43.6 +0.7
baz=80,SNR=34
H13A Challis 79.53 327 ⇓P P 04 53 44.1 +0.7
baz=80,SNR=58
LRM Limekiln Ridge 79.53 329 eP P 04 53 43.9 +0.5
77nm,1.1s,mb5.3
MFID Camas Ranch 79.54 325 ⇑P P 04 53 44.0 +0.5
baz=80,SNR=27
F15A Butte 79.56 329 ⇑P P 04 53 43.9 +0.4
baz=80,SNR=17
G14A Jackson 79.61 328 ⇑P P 04 53 44.3 +0.5
baz=80
D17A Six Diamond Ra 79.68 331 ⇑P P 04 53 44.1 0.0
baz=80,SNR=18
E16A East Helena 79.68 330 ⇓P P 04 53 44.5 +0.4
baz=80,SNR=5.6
H12A Diamond D Ranc 79.82 327 ⇓P P 04 53 45.5 +0.5
baz=80,SNR=49
HRY Holter Researc 79.88 330⇓iP P 04 53 45.3 +0.1
16nm,0.8s,mb4.8
G13A Cobalt 79.89 327 ⇑P P 04 53 46.1 +0.8
baz=80,SNR=90
EGMT Eagleton 79.91 332 ⇑P P 04 53 45.0 -0.4
baz=80,SNR=15
EGMT Eagleton 79.91 332⇓iP P 04 53 44.8 -0.6
45nm,1.1s,mb5.1
EGMT epP pP 04 54 50.9 +0.7
F14A Wisdom 79.97 328 ⇓P P 04 53 46.6 +0.8
baz=80,SNR=19
D16A Dana Ranch, Ca 79.98 330 ⇑P P 04 53 46.3 +0.5
baz=80,SNR=46
E15A Deer Lodge 80.06 329 ⇑P P 04 53 46.5 +0.3
baz=80,SNR=12
PCVE Castro Verde 80.07 43 eP P 04 53 47.4 +0.9
27nm,1.1s,mb4.9
C17A Wharram Farm, 80.07 331 ⇓P P 04 53 45.7 -0.5
baz=80,SNR=15
PVAQ Vaqueiros 80.14 43 eP P 04 53 48.5 +1.7
55nm,1.7s,mb5.0
B18A Beardsley Farm 80.20 332 ⇓P P 04 53 46.9 0.0
baz=80,SNR=18
EGRO El Granado 80.36 43 P P 04 53 49.9 +1.9
7.9nm,0.6s,mb4.6
WVOR Wild Horse Val 80.41 323 eP P 04 53 47.7 -0.5
7.1nm,1.0s,mb4.3
PBEJ Beja 80.42 43 eP P 04 53 49.2 +0.9
18nm,1.3s,mb4.6
F13A Darby 80.43 328 ⇑P P 04 53 48.5 +0.3
baz=81,SNR=50
D15A Lincoln 80.45 330 ⇓P P 04 53 48.8 +0.6
baz=81,SNR=23
E14A Clinton 80.46 329 ⇑P P 04 53 48.8 +0.5
baz=81,SNR=13
G12A Big Creek, Yel 80.46 327 ⇑P P 04 53 48.5 +0.1
baz=81,SNR=15
B17A L&G Farms, Che 80.58 331 ⇑P P 04 53 48.3 -0.5
baz=81,SNR=11
BOSA Boshof 80.61 117 eP P 04 53 48.2 -1.5
BOSA Boshof 80.61 117 P P 04 53 48.4 -1.3
2.2nm,0.4s,mb4.3,baz=271,slow=5.2,SNR=15
A18A Metzger Ranch, 80.63 332 ⇓P P 04 53 48.6 -0.5
baz=81,SNR=15
EVO Evora 80.63 42 eP P 04 53 49.4 0.0
9.7nm,0.5s,mb4.5
EVO Evora 80.63 42 eP P 04 53 50.3 +0.9
20nm,1.5s,mb4.6
C16A Fuhringer Ranc 80.64 330 ⇓P P 04 53 49.0 -0.2
baz=81,SNR=14
E13A Victor 80.82 328 ⇓P P 04 53 50.7 +0.5
baz=81,SNR=24
F12A Elk City 80.86 327 ⇑P P 04 53 50.6 +0.1
baz=81,SNR=15
J08A Circle Bar Ran 80.93 324 ⇓P P 04 53 51.3 +0.5
baz=81
D14A Greenough 80.94 329 ⇓P P 04 53 51.0 +0.1
baz=81,SNR=8.4
MSO Missoula 80.97 329 ⇑P P 04 53 51.4 +0.4
baz=81,SNR=8.6
MSO Missoula 80.97 329⇓iP P 04 53 51.0 0.0
11nm,1.1s,mb4.5
MOD Modoc 81.01 322⇑iP P 04 53 51.0 -0.4
38nm,1.0s,mb5.1
A17A Triple J Farms 81.02 332 ⇓P P 04 53 50.8 -0.3
baz=81,SNR=23
EMIN Mina Concepcio 81.02 43 P P 04 53 51.3 -0.2
19nm,0.8s,mb4.9
ESPR Espera 81.02 45 P P 04 53 51.9 +0.4
16nm,0.9s,mb4.8
C15A Salmond Ranch, 81.02 330 ⇓P P 04 53 51.6 +0.4
baz=81,SNR=48
PBAR Barrancos 81.03 43 eP P 04 53 52.4 +0.9

22nm,1.9s,mb4.6
EJIF Jimena Fronter 81.03 45 P P 04 53 51.7 +0.1
66nm,1.6s,mb5.1
PTOM Tomar 81.04 41 *e*P P 04 53 52.7 +1.1
85nm,1.3s,mb5.3
SLMT Seeley Lake 81.05 329 *e*P P 04 53 51.4 0.0
23nm,1.1s,mb4.8
B16A M & M Farms, S 81.07 331 ⇑P P 04 53 50.8 -0.7
baz=81
EBAD Badajoz 81.39 42 P P 04 53 54.1 +0.7
11nm,0.8s,mb4.6
B15A Bradely Ranch, 81.39 330 ⇓P P 04 53 52.5 -0.7
baz=82,SNR=16
D13A Huson 81.41 329 ⇑P P 04 53 53.4 +0.1
baz=82,SNR=19
E12A Beaver Dam Sad 81.48 328 ⇓P P 04 53 53.7 0.0
baz=82,SNR=26
SWMT Swartz Lake 81.48 329 *e*P P 04 53 53.6 -0.1
15nm,1.0s,mb4.7
WDC Whiskeytown Da 81.49 320 ⇓*i*P P 04 53 52.0 -1.9
15nm,0.7s,mb4.8
C14A Swan Lake 81.55 329 ⇑P P 04 53 54.1 +0.1
baz=82
PMRV Marv??o 81.55 42 *e*P P 04 53 54.5 +0.2
29nm,1.4s,mb4.8
YBMT Yellow Bay 81.74 329 *e*P P 04 53 55.3 +0.3
12nm,0.9s,mb4.6
PCBR Castelo Branco 81.75 41 *e*P P 04 53 55.6 +0.3
24nm,1.1s,mb4.8
B14A Marquette Ranc 81.75 330 ⇓P P 04 53 54.5 -0.5
baz=82
JTMT Jette 81.79 329 *e*P P 04 53 55.3 +0.1
8.9nm,0.9s,mb4.5
JTMT *e*pP pP 04 55 01.4 +1.1
D12A Red Ives Fores 81.82 328 ⇓P P 04 53 55.3 -0.1
baz=82,SNR=22
K05A Summer Lake 81.87 322 ⇑P P 04 53 56.3 +0.5
baz=82,SNR=32
C13A Hot Springs 81.88 329 ⇑P P 04 53 55.9 +0.1
baz=82,SNR=17
A15A Johnson Ranch, 81.95 331 ⇑P P 04 53 54.9 -1.1
baz=82,SNR=5.3
I07A Izee 81.97 324 ⇑P P 04 53 56.6 +0.3
baz=82,SNR=27
BLMT Blacktail Moun 82.01 329 *e*P P 04 53 56.7 +0.3
27nm,1.0s,mb4.9
F10A Beach Ranch, E 82.02 326 ⇓P P 04 53 56.5 0.0
baz=82,SNR=16
HOG Hogback Mounta 82.03 322 P P 04 53 57.0 +0.3
MTE Manteigas 82.05 41 *e*P P 04 53 57.3 +0.5
36nm,1.4s,mb4.9
BSMT Bassoo Peak 82.10 329 *e*P P 04 53 56.8 -0.1
15nm,1.0s,mb4.7
BSMT *e*pP pP 04 55 03.0 +1.0
LBTB Lobatse 82.11 114 *e*P P 04 53 56.5 -1.1
14nm,1.1s,mb4.6
TAM Tamanrasset 82.18 62 ⇑*i*P P 04 53 58.4 +0.5
24nm,1.4s,mb4.7
TAM *e*pP pP 04 55 02.8 -0.3
A14A Double T Ranch 82.26 330 ⇓P P 04 53 57.0 -0.7
baz=82,SNR=5.6
FFC Flin Flon 82.26 340 *e*P P 04 53 56.9 -0.6
12nm,1.1s,mb4.5
ELOJ Sierra Loja 82.30 45 P P 04 53 59.2 +1.0
9.8nm,0.7s,mb4.7
YBH Yreka Blue Hor 82.30 321 *e*P P 04 53 56.6 -1.5
8.5nm,0.8s,mb4.5
B13A Whitefish 82.32 330 ⇓P P 04 53 57.8 -0.2
baz=83,SNR=12
C12B Naegeli Ranch, 82.33 329 ⇓P P 04 53 58.0 -0.1
baz=83
G08A Pilot Rock 82.47 325 ⇑P P 04 53 58.7 -0.1
baz=83,SNR=19
PVRL Vila Real 82.47 40 *e*P P 04 53 59.7 +0.7
34nm,1.6s,mb4.8
LNOR Lincton Mounta 82.50 326 *e*P P 04 53 57.5 -1.5
4.0nm,0.8s,mb4.2
PCAB Cabril 82.55 40 *e*P P 04 54 00.1 +0.7
51nm,1.6s,mb5.1
ELOB Lobios 82.63 39 P P 04 53 58.9 -0.9
5.9nm,0.5s,mb4.7
A13A Flathead Natio 82.69 330 ⇑P P 04 54 00.1 +0.2
baz=83
EPLA Plasencia 82.75 42 P P 04 54 00.8 +0.5
5.8nm,0.7s,mb4.5
EMAZ Mazaricos 82.76 38 P P 04 53 58.4 -2.0
162nm,3.0s
C11A Tepee Creek (N 82.80 328 ⇑P P 04 54 00.1 -0.4
baz=83,SNR=13
MVO Moncorvo 82.82 40 *e*P P 04 54 01.5 +0.8
35nm,2.0s,mb4.8
E09A Wood Farm, Sta 82.85 326 ⇓P P 04 54 00.1 -0.6
baz=83,SNR=5.5
VIPM Ingram Point 82.85 324 P P 04 54 01.2 +0.4
KRMB Red Mountain 82.89 320 *e*P P 04 54 01.1 0.0
400nm,2.3s,mb5.8
B12A Libby 82.92 329 ⇓P P 04 54 01.1 0.0
baz=83
HUMO Hull Mountain 82.98 321 ⇓*i*P P 04 53 59.9 -1.7
8.7nm,0.9s,mb4.6
EBAN Banos Encina 83.11 44 P P 04 54 03.5 +1.2
6.7nm,0.8s,mb4.5
MAW Mawson 83.22 162 P P 04 54 01.6 -0.8
2.4nm,0.6s,mb4.2,baz=200,slow=4.9,SNR=16
A12A Yaak River Ran 83.27 329 ⇑P P 04 54 02.7 -0.2
baz=84,SNR=10
G06A Carlson Farm, 83.33 324 ⇓P P 04 54 03.5 +0.3
baz=84,SNR=9.9
EQES Quesada 83.37 45 P P 04 54 05.0 +1.4
9.3nm,0.9s,mb4.6
PBRG Bragança 83.38 40 *e*P P 04 54 04.9 +1.3
31nm,1.5s,mb4.9
ECAL Calabor 83.46 40 P P 04 54 03.4 -0.6
82nm,2.8s,mb5.1
ERUA La Rua 83.49 39 P P 04 54 04.6 +0.5
42nm,1.3s,mb5.1
HAWA Hanford 83.49 326 ⇓*i*P P 04 54 03.8 -0.3
89nm,1.6s,mb5.3
NEW Newport 83.52 328 *e*P P 04 54 03.0 -1.2
3.8nm,0.7s,mb4.3
RSW Rattlesnake Hi 83.52 326 *e*P P 04 54 04.6 +0.4
88nm,1.4s,mb5.4
PAB San Pablo 83.53 43 *e*P P 04 54 04.9 +0.5
58nm,1.5s,mb5.2
WRD Warden 83.56 326 P P 04 54 05.0 +0.7
FCC Fort Churchill 83.57 346 *e*P P 04 54 03.4 -0.7
0.9nm,0.6s,mb3.8
D08A Wollman Farm, 83.61 327 ⇓P P 04 54 04.4 -0.2
baz=84,SNR=12
EHUE Huesear 83.70 45 P P 04 54 04.9 -0.4
26nm,2.1s,mb4.7
OD2 Odessa Site #2 83.72 327 P P 04 54 05.1 -0.1
E07A Sunnyside 83.77 326 ⇓P P 04 54 05.4 0.0
baz=84,SNR=5.3
C09A Chrisman Ranch 83.78 327 ⇑P P 04 54 05.0 -0.4
baz=84,SNR=8.3
H04A Detroit Lake 83.83 323 ⇑P P 04 54 05.0 -0.7
baz=84
ESDC Sonseca Array 83.85 43 P P 04 54 07.3 +1.3
24nm,1.1s,mb4.9
ESDC Sonseca Array 83.85 43 P P 04 54 06.7 +0.7
15nm,0.9s,mb4.8,baz=241,slow=4.9,SNR=37
ESDC *e*P pP 04 55 09.6 -1.9
0.4nm,0.4s,baz=160,slow=39,SNR=1.3
ESLA Sonseca Array 83.85 43 *e*P P 04 54 06.8 +0.8
1.6nm,0.9s,mb3.9
HOOD Mount Hood Mea 83.94 324 *e*P P 04 54 06.5 +0.2
32nm,1.0s,mb5.1
EVIA Vianos 84.21 45 P P 04 54 08.0 +0.2
13nm,0.6s,mb4.9
GUD Guadarrama 84.28 42 P P 04 54 07.9 -0.2
30nm,1.2s,mb5.0
G04A Mulino 84.32 323 ⇓P P 04 54 07.8 -0.4
baz=84
NAC Naches 84.39 325 P P 04 54 08.9 +0.4
TBM Table Mountain 84.55 326 P P 04 54 09.8 +0.4
WTV Waterville 84.56 327 P P 04 54 09.2 -0.1
B08A Colville Reser 84.68 327 ⇑P P 04 54 09.6 -0.3
baz=85
ETW Entiat 84.69 326 *e*P P 04 54 09.8 -0.2
85nm,0.9s,mb5.6
F04A Amboy 84.74 324 ⇑P P 04 54 09.6 -0.7
baz=85,SNR=10
ETOB Tobarra 84.84 45 P P 04 54 11.9 +0.9
25nm,1.0s,mb5.0
LON Longmire 84.92 325 ⇓*i*P P 04 54 10.2 -1.0
8.0nm,0.9s,mb4.5
D05A Enumclaw 85.30 325 ⇓P P 04 54 12.4 -0.6
baz=86,SNR=13
EDM Edmonton 85.30 333 *e*P P 04 54 11.2 -1.7
F03A Seaside 85.36 324 ⇓P P 04 54 13.2 -0.2
baz=86
ETOR Torete 85.70 43 P P 04 54 15.6 +0.5
19nm,1.0s,mb4.9
ECHE Chera 85.73 44 P P 04 54 17.7 +2.4
13nm,0.9s,mb4.8
E03A Lebam 85.74 324 ⇑P P 04 54 14.6 -0.7
baz=86,SNR=5.2
RPW Rockport 85.84 326 *e*P P 04 54 14.2 -1.5
40nm,1.4s,mb5.0
B06A Marblemount 85.88 326 ⇑P P 04 54 14.7 -1.1
baz=86,SNR=6.4
JCW Jim Creek 85.90 326 *e*P P 04 54 14.8 -1.2
80nm,1.0s,mb5.5
A05A Maple Falls 86.49 327 ⇓P P 04 54 18.0 -0.8
baz=87,SNR=10
PGC Sidney 86.98 326 ⇓*i*P P 04 54 20.7 -0.4
2.2nm,1.0s,mb3.9
ERTA Horta de San J 87.30 44 P P 04 54 24.9 +2.0
11nm,0.9s,mb4.7
SJPF Ste Jean 87.47 41 *e*P P 04 54 24.2 +0.6
ETSF Etsaut 87.77 42 ⇑*i*P P 04 54 24.6 -0.4
22nm,1.0s,mb4.6
ETSF *e*pP pP 04 55 27.8 -3.3
ETSF Etsaut 87.77 42 ⇑*i*P P 04 54 24.6 -0.4
11nm,1.0s,mb4.6
ETSF *e*pP pP 04 55 27.8 -3.3
EBIE Bielsa 88.09 42 P P 04 54 26.8 +0.2
4.9nm,0.7s,mb4.5
EPF Esparros 88.39 42 *e*P P 04 54 28.6 +0.6
8.3nm,0.7s,mb4.3
EPF Esparros 88.39 42 *e*P P 04 54 28.6 +0.6
4.2nm,0.7s,mb4.4
CSOR Sort 88.55 43 P P 04 54 29.9 +1.1
10.4nm,0.9s,mb4.7
SALF Salau 88.78 43 *e*P P 04 54 27.2 -2.6
MLS Moulis 88.83 42 *e*P P 04 54 30.8 +0.8
QUIF Quistinic 89.00 37 *e*P P 04 54 30.4 -0.3
ROSF Rostrenen 89.18 36 ⇑*i*P P 04 54 31.4 -0.1
34nm,0.9s,mb4.9
ROSF Rostrenen 89.18 36 ⇑*i*P P 04 54 31.4 -0.1
17nm,0.9s,mb4.9
CARF Carcanieres 89.34 43 *e*P P 04 54 33.1 +0.7
SGMF Saint Gilles 89.53 37 *e*P P 04 54 32.5 -0.7
17nm,1.0s,mb4.5
SGMF Saint Gilles 89.53 37 *e*P P 04 54 32.5 -0.7
8.5nm,1.0s,mb4.5
LFF La Frestale 89.64 41 *e*P P 04 54 33.9 +0.1
MTLF Montolieu 89.73 42 *e*P P 04 54 34.2 0.0
21nm,1.1s,mb4.6
MTLF Montolieu 89.73 42 *e*P P 04 54 34.2 0.0
11nm,1.1s,mb4.6
MFF Saint Martin d 90.00 39 ⇑*i*P P 04 54 35.3 -0.1
50nm,1.1s,mb5.0
MFF Saint Martin d 90.00 39 ⇑*i*P P 04 54 35.3 -0.1
25nm,1.1s,mb5.0
RJF Les Reiaudoux 90.30 41 *e*P P 04 54 36.7 -0.1
CAF Calviac 90.44 41 *e*P P 04 54 37.7 +0.2
GRR Gorron 90.55 37 *e*P P 04 54 37.4 -0.5
19nm,0.8s,mb4.7
GRR Gorron 90.55 37 *e*P P 04 54 37.4 -0.5
9.4nm,0.8s,mb4.7
FLN La Foliniere 90.96 37 *e*P P 04 54 39.3 -0.5
68nm,1.3s,mb5.0
FLN La Foliniere 90.96 37 *e*P P 04 54 39.3 -0.5
34nm,1.3s,mb5.0
KEST Kesra 90.99 52 *e*P P 04 54 41.1 +0.8
KEST Kesra 90.99 52 P P 04 54 41.9 +1.6
2.1nm,1.1s,mb3.9,baz=310,slow=2.0,SNR=5.4
LDF La Druitiere 91.07 37 ⇑*i*P P 04 54 40.0 -0.3
11nm,0.6s,mb4.6
LDF La Druitiere 91.07 37 ⇑*i*P P 04 54 40.0 -0.3
5.7nm,0.6s,mb4.6
LASF Ste Croix 91.13 42 *e*P P 04 54 41.0 +0.3
11nm,0.9s,mb4.3
LASF *e*pP pP 04 55 44.3 -2.7
TCF Toulx Ste Croi 91.22 40 *e*P P 04 54 40.6 -0.5
6.4nm,0.8s,mb4.2
TCF Toulx Ste Croi 91.22 40 *e*P P 04 54 40.6 -0.5
3.2nm,0.8s,mb4.2
BGF Bois d'Agland 91.74 40 *e*P P 04 54 43.1 -0.4
VIVF Saint-Julien-l 92.02 42 *e*P P 04 54 45.3 +0.5
22nm,1.1s,mb4.7
VIVF Saint-Julien-l 92.02 42 *e*P P 04 54 45.3 +0.5
11nm,1.1s,mb4.7
AVF Avril sur Loir 92.16 40 *e*P P 04 54 45.2 -0.2
SMRF Simiane la Rot 92.17 43 *e*P P 04 54 46.4 +0.9
12nm,0.9s,mb4.5
SMRF Simiane la Rot 92.17 43 *e*P P 04 54 46.4 +0.9
12nm,0.9s,mb4.8
CASY Casey 92.23 178 *e*P P 04 54 44.9 -0.6
15nm,1.0s,mb4.9
SMF Signal de Mont 92.38 40 *e*P P 04 54 46.2 -0.2
45nm,1.3s,mb4.9
SMF Signal de Mont 92.38 40 *e*P P 04 54 46.2 -0.2
22nm,1.3s,mb4.9
SSF Saint Saulge 92.38 40 *e*P P 04 54 45.8 -0.6
10nm,1.0s,mb4.4
SSF *e*pP pP 04 55 50.2 -2.6
SSF Saint Saulge 92.38 40 *e*P P 04 54 45.8 -0.6
5.1nm,1.0s,mb4.4
SSF *e*pP pP 04 55 50.2 -2.6
YKA Yellowknife Ar 92.44 339 P P 04 54 45.9 -0.4
YKA pP pP 04 55 52.1 -0.6
YKA Yellowknife Ar 92.44 339 P P 04 54 45.9 -0.4
7.9nm,0.6s,mb4.8,baz=126,slow=4.5,SNR=48
YKA pP pP 04 55 52.1 -0.6
4.0nm,0.8s,baz=124,slow=4.3,SNR=5.1
LMR La Mourre 92.46 44 ⇑*i*P P 04 54 47.2 +0.3
21nm,0.9s,mb4.8
LMR *e*pP pP 04 55 49.5 -3.8
LMR La Mourre 92.46 44 ⇑*i*P P 04 54 47.2 +0.3
11nm,0.9s,mb4.8
LMR *e*pP pP 04 55 49.5 -3.8
FRF La Foret Royal 92.66 44 *e*P P 04 54 48.1 +0.3
LOR Lormes 92.70 40 *e*P P 04 54 47.2 -0.7
19nm,1.2s,mb4.6
LOR *e*pP pP 04 55 52.7 -1.5
LOR Lormes 92.70 40 *e*P P 04 54 47.2 -0.7
9.6nm,1.2s,mb4.6
LOR *e*pP pP 04 55 52.7 -1.5
ORIF Oris-en-Rattie 92.80 42 ⇑*i*P P 04 54 49.4 +1.0
17nm,0.9s,mb4.7
ORIF Oris-en-Rattie 92.80 42 ⇑*i*P P 04 54 49.4 +1.0
8.7nm,0.9s,mb4.7
REVF Revere 93.20 44 *e*P P 04 54 50.8 +0.5
TOUF Mont Tournerai 93.25 44 *e*P P 04 54 51.2 +0.7
LUCF Luceram 93.26 44 *e*P P 04 54 51.2 +0.7
MBDF Montbardon 93.27 43 *e*P P 04 54 51.4 +0.8
9.7nm,0.8s,mb4.5
MBDF Montbardon 93.27 43 *e*P P 04 54 51.4 +0.8
4.8nm,0.8s,mb4.5
SBF Sospel 93.30 44 *e*P P 04 54 51.1 +0.4
AUTN L'Aution 93.36 44 *e*P P 04 54 50.3 -0.7
SAOF Saorge 93.44 44 *e*P P 04 54 48.8 -2.5
LPL La Plagne 93.61 42 ⇑*i*P P 04 54 53.2 +1.1
19nm,1.0s,mb4.8
LPL La Plagne 93.61 42 ⇑*i*P P 04 54 53.2 +1.1
9.4nm,1.0s,mb4.8
LPG La Plagne 93.62 42 ⇑*i*P P 04 54 53.4 +1.3
14nm,0.7s,mb4.8
LPG La Plagne 93.62 42 ⇑*i*P P 04 54 53.4 +1.3
6.9nm,0.7s,mb4.8
CABF La Chapelle 93.72 41 *e*P P 04 54 52.6 0.0
PGF Pioggiola 93.74 46 *e*P P 04 54 53.1 +0.3
15nm,1.0s,mb4.7
PGF Pioggiola 93.74 46 *e*P P 04 54 53.1 +0.3
7.4nm,1.0s,mb4.7
MEZF Maizieres J'vi 94.00 39 *e*P P 04 54 53.5 -0.3
MEZF *e*pP pP 04 55 57.6 -2.6
BAIF Baives 94.26 37 *e*P P 04 54 54.3 -0.7
GIVF Givet 94.63 37 *e*P P 04 54 56.4 -0.2
42nm,1.2s,mb5.1
GIVF Givet 94.63 37 *e*P P 04 54 56.4 -0.2
21nm,1.2s,mb5.1
HINF Hinteralfeld 94.74 40 *e*P P 04 54 56.7 -0.5
WLF Walferdange 95.18 38 P P 04 54 59.9 +0.7
comp=Z,13nm,1.6s,mb4.8
WLF Walferdange 95.18 38 *e*P P 04 54 59.4 +0.2
comp=Z,19nm,1.2s,mb5.1
CDF Champ du Feu 95.27 40 *e*P P 04 54 59.0 -0.6
MEM Membach 95.53 37 P P 04 55 01.5 +0.8
TUE Stuetta 95.67 42 *e*P P 04 55 01.2 -0.3
comp=Z,7.0nm,1.0s,mb4.8
RUP Ruppelstein 95.72 39 PKP P 04 55 01.8 +0.2
DAVA Damuels 96.35 42 ⇑*i*PcP PcP 04 55 05.1 +0.5
comp=Z,8.7nm,1.2s
FETA Feichten 96.76 42 ⇑*i*P P 04 55 06.5 +0.1
comp=Z,11nm,1.1s,mb5.0
MOTA Moosalm 97.13 42 ⇓*i*PcP PcP 04 55 08.5 +0.4
comp=Z,11nm,1.0s
WTTA Wattenberg 97.43 42 ⇑*i*Pdiff P 04 55 10.0 +0.6
comp=Z,20nm,1.0s,mb5.3
ILAR Eielson Array 105.78 334 PP PP 05 00 10.2 -2.6
comp=Z,0.6nm,0.8s,baz=116,slow=5.9,SNR=4.4
AKASG Malin Array Be 109.48 42 PP PP 05 00 37.2 -2.8
comp=Z,0.1nm,0.3s,baz=262,slow=5.7,SNR=4.9
BRTR Keskin Array B 110.44 54 PP PP 05 00 42.9 -4.4
comp=Z,3.4nm,1.1s,baz=271,slow=8.4,SNR=7.1
STKA Stephens Creek 120.69 207 PKP PKPdf 05 00 25.3 -1.5
comp=Z,1.1nm,0.7s,baz=150,slow=1.2,SNR=3.5
NWAO Narrogin (SRO) 125.60 183 PKP PKPdf 05 00 35.0 -1.2
comp=Z,5.5nm,0.8s,baz=187,slow=8.1,SNR=3.1
AKTK Aktyubinsk 127.73 42 PKP PKPdf 05 00 38.8 -0.7
AKTO Aktyubinsk 127.73 42 PKP PKPdf 05 00 38.8 -0.7
comp=Z,0.6nm,0.3s,baz=280,slow=8.1,SNR=2.7
ABKAR Akbulak array 129.20 43 *e*PKPdf PKPdf 05 00 43.9 +1.5
ASAR Alice Springs 131.06 204 PKP PKPdf 05 00 45.1 -1.7
ASAR pPKP pPKPdf 05 01 54.9 -1.7
ASAR SKPbc SKPbc 05 03 44.0 -1.2
ASAR Alice Springs 131.06 204 PKP PKPdf 05 00 45.1 -1.7
comp=Z,5.1nm,0.8s,baz=149,slow=2.5,SNR=33
ASAR pPKP pPKPdf 05 01 54.9 -1.7
comp=Z,1.2nm,0.9s,baz=155,slow=3.1,SNR=3.4
ASAR SKPbc SKPbc 05 03 44.0 -1.2
comp=Z,8.8nm,0.9s,baz=145,slow=4.3,SNR=32
BVAR Borovoye Array 134.19 36 PKP PKPdf 05 00 50.7 -1.0
comp=Z,0.8nm,0.5s,baz=280,slow=4.2,SNR=4.2
BVAR SKPab 05 03 58.3
comp=Z,0.7nm,0.5s,baz=336,slow=3.3,SNR=3.8
WRA Warramunga Arr 134.24 207 PKP PKPdf 05 00 51.9 -1.0
comp=Z,4.6nm,0.6s,baz=156,slow=1.6,SNR=19
WRA SKPbc SKPbc 05 03 55.4 -0.8
comp=Z,13nm,0.9s,baz=152,slow=2.7,SNR=28
PETK Petropavlovsk- 134.55 325 PKP PKPdf 05 00 51.3 -1.1
comp=Z,1.9nm,0.7s,baz=79,slow=3.5,SNR=3.3
PETK SKPbc SKPbc 05 03 57.2 +1.2
comp=Z,13nm,0.9s,baz=81,slow=9.3,SNR=13
MBWA Marble Bar 137.07 187 *e*PKPdf PKPdf 05 00 57.9 -0.2
KURK Kurchatov 139.77 35 PKhKP PKPpre 05 00 57.2
comp=Z,0.6nm,0.3s,baz=308,slow=2.2,SNR=1.8
KURK PP PP 05 04 03.4 +2.4
comp=Z,0.4nm,0.3s,baz=287,slow=5.7,SNR=1.9
EKS2 Erkin-Say 140.26 49 *e*PKPdf PKPdf 05 01 03.2 0.0
AAK Ala-Archa 140.76 48 SKPbc SKPbc 05 04 15.1 +0.8
comp=Z,1.3nm,0.3s,baz=201,slow=4.2,SNR=7.5
ZAA0 Zalesovo Array 140.78 27 *e*PKPdf PKPdf 05 01 03.5 -0.3
ZALV Zalesovo Beam 140.78 27 PKhKP PKPpre 05 00 59.3
comp=Z,2.9nm,0.5s,baz=277,slow=2.6,SNR=12
ZALV PKP PKPdf 05 01 03.0 -0.8
comp=Z,3.0nm,0.5s,baz=290,slow=1.3,SNR=13
ZALV pPKP pPKPdf 05 02 11.3 -2.3
comp=Z,0.4nm,0.3s,baz=203,slow=34,SNR=1.5
ZALV SKPbc SKPbc 05 04 14.4 +0.6
comp=Z,3.6nm,0.8s,baz=306,slow=5.1,SNR=5.1
KSH Kashi 142.80 53 PKP PKPdf 05 01 04.8 -3.1
MK31 Makanchi Array 143.94 38 *e*PKPdf PKPdf 05 01 08.7 -0.9
MKAR Makanchi Array 143.94 38 PKP PKPdf 05 01 08.8 -0.8
comp=Z,7.7nm,0.4s,baz=343,slow=2.8,SNR=17
MKAR SKPbc SKPbc 05 04 24.6 +2.6
comp=Z,3.1nm,0.9s,baz=324,slow=1.6,SNR=4.1
PALK Pallekele 144.46 109 *e*PKPdf PKPdf 05 01 10.5 -1.0
YSS Yuzh-Sakhalins 145.96 324 *e*PKPbc PKPbc 05 01 13.7 -0.7
HYB Hyderabad 145.99 91 *i* PKP PKPdf 05 01 15.5 +1.5
HYB *e* 05 01 52.0
HYB *e* 05 02 22.0
DDI Dehra Dun 146.34 68 *ex* PKPdf 05 01 15.0 +0.7
ASAJ Asahikawa 147.73 320 *e*PKPbc PKPbc 05 01 18.8 -0.6
WMQ Urumqi 148.76 39 *e*PKPbc PKPdf 05 01 15.0 -2.9
GUMO Guam 149.91 260 PKPbc PKPbc 05 01 23.9 -1.8
comp=Z,114nm,0.9s,baz=195,slow=8.3,SNR=8.2
SONM Songino Array 153.15 12 PKP PKPdf 05 01 25.0 +0.5
comp=Z,1.4nm,0.8s,baz=233,slow=0.7,SNR=6.0
SONM PKPbc PKPbc 05 01 32.4 +0.4
comp=Z,2.5nm,0.5s,baz=323,slow=1.5,SNR=11
ULN Ulaanbaatar 153.25 11 *e*PKPab PKPab 05 01 46.2 +1.0
MAJO Matsushiro 154.59 311 *e*PKPbc PKPbc 05 01 34.4 -1.2
MAJO *e*PKPab PKPab 05 01 49.9 -1.6
MAT Matsushiro 154.59 311 PKP PKPbc 05 01 31.2 -4.3
MJAR Matsushiro Arr 154.59 311 PKPbc PKPbc 05 01 34.5 -1.0
comp=Z,1.2nm,0.4s,baz=75,slow=2.7,SNR=7.7
MJAR PKPab PKPab 05 01 49.5 -1.9
comp=Z,6.9nm,0.9s,baz=56,slow=3.8,SNR=8.7
KSRS Korea Array 160.44 326 PKP PKPdf 05 01 33.7 -0.4
comp=Z,2.4nm,1.0s,baz=281,slow=0.6,SNR=6.3
KSRS PKPab PKPab 05 02 16.4 -0.2
comp=Z,4.3nm,0.9s,baz=48,slow=4.4,SNR=10
HHC Hu-ho-hao-te 160.77 7 *e*PKP PKPdf 05 01 26.3 -8.0
HHC PKPab PKPab 05 02 11.8 -6.1
HHC pPKP pPKPdf 05 02 24.5 -20
HHC sPKP 05 02 47.8
HHC PKS 05 04 58.5
HHC PP PP 05 05 56.5 -4.0
HHC SKKS SKSdf 05 08 07.5 -5.3
HHC SS SS 05 25 49.5 +0.2
HHC AMB AMB
comp=Z,180nm,5.3s
BJI Beijing 161.67 356 PKP PKPdf 05 01 34.0 -1.3
LZH Lanzhou 162.97 30 ⇓PKP PKPdf 05 01 32.8 -3.9
LZH pPKP pPKPdf 05 02 45.5 -1.5
LZH sPKP 05 03 13.5
LZH SKKS SKKSac 05 12 28.8 -4.9
LZH AMB AMB
comp=Z,110nm,9.0s
CMAR Chiang Mai Arr 165.11 100 PKP PKPdf 05 01 39.3 +0.2
comp=Z,0.7nm,0.4s,baz=273,slow=1.6,SNR=5.8
CMAR PKPab PKPab 05 02 37.0 -0.8
comp=Z,0.8nm,0.6s,baz=262,slow=5.2,SNR=6.0
CMAR PP PP 05 06 26.1 +0.6
comp=Z,1.2nm,0.5s,baz=291,slow=10,SNR=4.5
CD2 Chengdu 166.78 44 PKP PKPdf 05 01 35.5 -4.6
CD2 pPKP pPKPdf 05 02 48.5 -1.9
CD2 sPKP 05 03 17.0
CD2 PP PP 05 06 31.5 -1.5
CD2 SKS SKSdf 05 08 09.3 -8.4
CD2 SKKS SKKSac 05 12 47.5 -5.7
CD2 SS SS 05 26 47.0 -5.7
CD2 AMB AMB
comp=Z,160nm,9.2s
CD2 LR LR
comp=N,230nm,15.2s
CD2 LR LR
comp=E,210nm,14.8s
CD2 LR LR
comp=Z,260nm,16.0s
KMI Kunming 168.76 70 PKP PKPdf 05 01 41.0 -0.7
GYA Guiyang 171.49 55 PKP PKPdf 05 01 41.0 -2.2
GYA pPKP pPKPdf 05 02 52.3 -1.2
GYA PKPab PKPab 05 03 05.5 -0.3
GYA sPKP 05 03 20.5
GYA PKS 05 05 12.0
GYA PP PP 05 06 57.8 +0.7
GYA SKKS SKKSac 05 13 14.3 -2.3
GYA SS SS 05 27 37.5 -2.7
GYA AMB AMB
comp=Z,130nm,8.2s
GYA LR LR
comp=N,630nm,21.3s
GYA LR LR
comp=E,550nm,22.2s
GYA LR LR
comp=Z,730nm,20.6s

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*DMN **27** 04:49:03.0±0.8, 31°.50N×83°.28E, h2km, Ml4.6/3, Error ellipse: s-maj=18.3km s-min=10.4km az=126.0*
*BJI **27** 04:49:06.0, 30°.78N×83°.55E, h12km, mB4.5/3, mb4.2/5, Ms4.0/3, Ms7 3.7/2*
*IDC **27** 04:49:06.7±0.7, 30°.84N×83°.79E, h0km, mb4.0/16, mb1 4.2/19, mb1mx4.1/29, mbtmp4.0/19, ML3.8/2, MS3.7/1, Ms1 3.7/1, ms1mx2.7/41, Error ellipse: s-maj=24.2km s-min=14.2km az=55.0*
*ISCJB **27** 04:49:08.5±1.1, 30°.95N±0°.04×83°.50E±0°.04, h15km±9km, mb4.0/21, Error ellipse: s-maj=8.0km s-min=4.1km az=44.8*
*NEIC **27** 04:49:08.7±0.5, 30°.85N×83°.54E, h10km, mb4.2/8, Error ellipse: s-maj=11.7km s-min=6.4km az=224.0*

NDI ***27*** *04:49:12.9±3.0, 30.°22N×83.°47E, h10km, ML4.0, mb4.2(NEIC)*

ISC 27 04:49:10.7±2.1, 30.°92N±0.°03×83.°52E±0.°04, h19km±15km, n72, σ1§28/76, mb4.0/21, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DANN	**Dangsing**	**2.56**	**175**	*e*Pn		**Pn**	**04 49 52.2**	**+1.0**
DANN				*e*Sn		**Sb**	**04 50 28.6**	**+1.4**
	1μm,0.7s							
GKN	**Gorkha**	**3.06**	**161**	*e*Pn		**Pn**	**04 49 59.1**	**+1.1**
GKN				*e*Sn		**Sb**	**04 50 39.6**	**-1.9**
	308nm,0.3s							
KOLN	**Koldanda**	**3.13**	**179**	*e*Pn		**Pn**	**04 49 59.6**	**+0.6**
KOLN				*e*Sn		**Sb**	**04 50 42.3**	**-1.3**
	747nm,0.7s							
PTH	**Pithoragarh**	**3.16**	**245**	*ex*		**Pn**	**04 50 02.9**	**+3.5**
PTH				*ex*		**Sb**	**04 50 47.2**	**+2.8**
JOSI	**Joshimath**	**3.43**	**265**	*e*PKP		**Pn**	**04 50 06.5**	**+3.5**
JOSI				*ex*		**Sb**	**04 50 50.0**	**-1.9**
JOSI				AML		AML	04 51 04.2	
	comp=E,582nm,0.7s							
JOSI				AML		AML	04 51 05.4	
	comp=N,1μm,0.8s							
DMN	**Daman**	**3.58**	**157**	*e*Pn		**Pn**	**04 50 06.6**	**+1.5**
GUN	**Gumba**	**3.63**	**145**	*e*Pn		**Pn**	**04 50 06.7**	**+0.8**
PKIN	**Phulchoki**	**3.71**	**153**	*e*Pn		**Pn**	**04 50 07.7**	**+0.7**
PKI	**Pulchoki**	**3.72**	**153**	*e*Pn		**Pn**	**04 50 08.0**	**+0.9**
JIRN	**Jiri**	**4.00**	**144**	*e*Pn		**Pn**	**04 50 12.5**	**+1.6**
KLP	**Kalpa**	**4.55**	**279**	*e*PKP		**Pn**	**04 50 23.3**	**+4.8**
KLP				*ex*		**Sb**	**04 51 22.3**	**-2.1**
RAMN	**Ramite**	**4.79**	**145**	*e*Pn		**Pn**	**04 50 21.5**	**-0.3**
TAPN	**Taplejung**	**5.11**	**133**	*e*Pn		**Pn**	**04 50 26.3**	**+0.1**
ODAN	**Odare**	**5.28**	**139**	*e*Pn		**Pn**	**04 50 28.7**	**+0.2**
SDNR	**Sundarnagar**	**5.64**	**278**	*ex*		x	04 50 41.5	
NDI	**New Delhi**	**5.91**	**249**	*e*PKP		**Pn**	**04 50 36.5**	**-0.7**
NDI				*e*S		**Sn**	**04 51 37.0**	**-7.3**
AGRA	**Agra**	**6.10**	**234**	*e*PKP		**Pn**	**04 50 37.8**	**-2.1**
SONA	**Sohna**	**6.20**	**246**	*e*PKP		**Pn**	**04 50 41.8**	**+0.7**
SONA				*ex*		x	04 50 43.3	
LSA	**Lhasa**	**6.71**	**98**	Pg		**Pn**	**04 50 50.0**	**+1.8**
LSA				Sg		Px	04 51 12.0	
LSA				smax				
	comp=N,150nm,1.0s							
LSA				smax				
	comp=E,3μm,1.2s							
LSA	**Lhasa**	**6.71**	**98**	*e*Pn		**Pn**	**04 50 49.7**	**+1.5**
	comp=E,33nm,0.9s							
KUDL	**Kundal**	**6.71**	**247**	*e*PKP		**Pn**	**04 50 46.3**	**-2.0**
KUDL				*ex*		x	04 52 16.1	
KHET	**Khetri**	**7.29**	**249**	*e*PKP		**Pn**	**04 50 57.0**	**+0.9**
SHL	**Shillong**	**9.10**	**124**	*e*PKP		**Pn**	**04 51 18.5**	**-2.5**
SHL				*ex*		x	04 52 58.0	
CAL	**Calcutta**	**9.38**	**152**	*ex*		x	04 54 15.9	
KSH	**Kashi**	**10.56**	**326**	P		**Pn**	**04 51 40.5**	**-0.5**
KSH				*e*pP			04 51 44.3	
KSH				*e*sP			04 51 46.5	
KSH				*e*PP			04 51 49.0	
KSH				S		**Sn**	**04 53 34.0**	**-4.8**
KSH				pmax		pmax		
	comp=E,7.0nm,0.7s							
KSH				pmax		pmax		
	comp=E,51nm,3.8s							
KSH				LR		LR		
	comp=N,250nm,6.8s							
KSH				LR		LR		
	comp=E,530nm,10.0s							
KSH				LR		LR		
	comp=E,260nm,7.3s							
KBL	**Kabul**	**12.71**	**290**	*e*Pn		**Pn**	**04 52 08.6**	**-1.7**
	comp=E,14nm,0.9s							
UCH	**Uchtor**	**13.40**	**330**	*e*Pn		**Pn**	**04 52 20.0**	**+0.3**
TKM2	**Tokmak 2**	**13.54**	**334**	*e*Pn		**Pn**	**04 52 23.0**	**+1.3**
	comp=E,2.1nm,0.8s							
AML	**Almayashu**	**13.69**	**328**	*e*Pn		**Pn**	**04 52 23.1**	**-0.5**
	comp=E,13nm,1.1s							
AAK	**Ala-Archa**	**13.74**	**331**	Pn		**Pn**	**04 52 26.6**	**+2.3**
	comp=E,0.2nm,0.3s,baz=317,slow=5.1,SNR=3.8							
AAK				LR		LR	04 57 37.2	
	comp=E,332nm,21.7s,baz=6.4,slow=37							
EKS2	**Erkin-Say**	**14.07**	**329**	*e*Pn		**Pn**	**04 52 28.8**	**-0.1**
	comp=E,4.9nm,1.0s							
HYB	**Hyderabad**	**14.18**	**200**	*i* P		**Pn**	**04 52 24.5**	**-6.0**
HYB				*e*S		**Sn**	**04 55 00.0**	**-7.3**
MK31	**Makanchi Array**	**15.88**	**357**	*e*Pn		**Pn**	**04 52 53.6**	**+0.5**
MKAR	**Makanchi Array**	**15.88**	**357**	Pn		**Pn**	**04 52 52.5**	**-0.5**
	comp=E,0.2nm,0.3s,baz=180,slow=13,SNR=20							
KKAR	**Karatay Array**	**15.97**	**323**	*e*Pn		**Pn**	**04 52 53.0**	**-1.2**
	comp=E,2.0nm,0.6s							
LZH	**Lanzhou**	**17.71**	**68**	*e*P		**Pn**	**04 53 14.8**	**-1.4**
LZH				pP		pP	04 53 19.5	-2.9
LZH				sP		sP	04 53 22.0	-2.9
LZH				pmax		pmax		
	comp=E,20nm,1.2s							
CHTO	**Chiang Mai**	**18.44**	**127**	*e*P		**Pn**	**04 53 23.5**	**-1.8**
	comp=E,3.5nm,0.9s							
CMAR	**Chiang Mai Arr**	**18.69**	**128**	P		**Pn**	**04 53 25.6**	**-2.7**
	comp=E,0.2nm,0.3s,baz=309,slow=10,SNR=13							
KURK	**Kurchatov**	**20.12**	**351**	*e*P		**P**	**04 53 41.5**	**-1.7**
	comp=E,28nm,1.3s							
KURK	**Kurchatov**	**20.12**	**351**	P		**P**	**04 53 41.0**	**-2.2**
	comp=E,5.8nm,0.8s,baz=171,slow=10,SNR=20							
ZAA0	**Zalesovo Array**	**23.04**	**2**	*e*P		**P**	**04 54 14.1**	**-0.5**
ZALV	**Zalesovo Beam**	**23.04**	**2**	P		**P**	**04 54 13.9**	**-0.6**
	comp=E,1.6nm,0.5s,mb3.7,baz=182,slow=11,SNR=11							
BVAR	**Borovoye Array**	**24.08**	**340**	P		**P**	**04 54 24.8**	**+0.2**
	comp=E,1.5nm,0.5s,mb3.7,baz=148,slow=8.7,SNR=8.7							
SONM	**Songino Array**	**24.32**	**40**	P		**P**	**04 54 26.0**	**-0.9**
	comp=E,1.5nm,0.8s,mb3.5,baz=231,slow=9.4,SNR=6.3							
ULN	**Ulaanbaatar**	**24.70**	**40**	*e*P		**P**	**04 54 29.9**	**-0.4**
	comp=Z,6.7nm,0.9s,mb4.2							
ABKAR	**Akbulak array**	**25.53**	**323**	*e*P		**P**	**04 54 39.3**	**+1.3**
	comp=Z,2.0nm,0.6s,mb3.8							
AKTK	**Aktyubinsk**	**27.24**	**323**	P		**P**	**04 54 54.6**	**+1.2**
AKTO	**Aktyubinsk**	**27.24**	**323**	P		**P**	**04 54 54.6**	**+1.2**
	comp=E,0.5nm,0.3s,mb3.6,baz=110,slow=15,SNR=2.4							
BRTR	**Keskin Array B**	**41.19**	**296**	P		**P**	**04 56 56.0**	**+2.0**
	comp=E,0.3nm,0.4s,mb3.3,baz=77,slow=12,SNR=4.1							
AKASG	**Malin Array Be**	**44.48**	**313**	P		**P**	**04 57 20.9**	**+0.4**
	comp=Z,0.9nm,0.5s,mb3.8,baz=86,slow=7.2,SNR=6.2							
AKBB	**Malin Array Si**	**44.48**	**313**	*e*P		**P**	**04 57 20.4**	**-0.1**
JOF	**Joensuu**	**45.92**	**330**	*ep*		**P**	**04 57 31.5**	**-0.3**
	comp=Z,3.9nm,0.6s,mb4.5							
FINES	**FINESS Array B**	**47.89**	**327**	P		**P**	**04 57 47.2**	**+0.1**
	comp=E,3.2nm,0.6s,mb4.5,baz=107,slow=10,SNR=8.7							
KEV	**Kevo**	**49.88**	**338**	*ep*		**P**	**04 58 04.2**	**+1.8**
ARCES	**ARCESS Array B**	**50.31**	**337**	P		**P**	**04 58 06.8**	**+1.2**
ARCES	**ARCESS Array B**	**50.31**	**337**	P		**P**	**04 58 06.8**	**+1.2**
	comp=Z,2.4nm,0.7s,mb4.3,baz=97,slow=8.3,SNR=13							
NOA	**NORSAR Array B**	**54.99**	**326**	P		**P**	**04 58 40.4**	**+0.1**
NOA	**NORSAR Array B**	**54.99**	**326**	P		**P**	**04 58 40.4**	**+0.1**
	comp=Z,2.8nm,0.9s,mb4.3,baz=88,slow=7.2,SNR=5.6							
KEST	**Kesra**	**60.79**	**296**	P		**P**	**04 59 22.3**	**+0.8**
	comp=E,1.8nm,0.9s,mb4.2,baz=316,slow=4.5,SNR=4.5							
WRA	**Warramunga Arr**	**70.28**	**129**	P		**P**	**05 00 20.9**	**-2.0**
	comp=E,3.0nm,0.7s,mb4.3,baz=323,slow=6.3,SNR=14							
ASAR	**Alice Springs**	**72.64**	**132**	P		**P**	**05 00 34.5**	**-2.6**
	comp=Z,0.9nm,0.8s,mb3.8,baz=317,slow=4.9,SNR=8.9							
ASAR	**Alice Springs**	**72.64**	**132**	P		**P**	**05 00 34.5**	**-2.6**
BPAW	**Bear Paw Mtn.**	**76.11**	**22**	*e*P		**P**	**05 00 56.6**	**-0.2**
	comp=Z,3.1nm,1.0s,mb4.2							
ILAR	**Eielson Array**	**76.87**	**20**	P		**P**	**05 00 59.5**	**-1.5**
	comp=Z,2.1nm,1.0s,mb4.0,baz=298,slow=4.5,SNR=10							
EGAK	**Eagle**	**78.46**	**18**	*e*P		**P**	**05 01 10.7**	**+0.7**
	comp=E,3.5nm,0.9s,mb4.3							
SML	**Sawmill**	**78.59**	**22**	*e*P		**P**	**05 01 12.0**	**+1.3**
	comp=E,1.6nm,0.7s,mb4.1							
BOSA	**Boshof**	**81.14**	**229**	P		**P**	**05 01 25.2**	**+0.2**
BOSA	**Boshof**	**81.14**	**229**	P		**P**	**05 01 25.2**	**+0.2**
	comp=Z,1.1nm,0.7s,mb3.9,baz=50,slow=7.9,SNR=3.3							
YKA	**Yellowknife Ar**	**85.78**	**8**	P		**P**	**05 01 48.1**	**-0.2**
	comp=Z,2.6nm,0.9s,mb4.5,baz=356,slow=4.6,SNR=5.4							
TXAR	**Lajitas Array**	**119.70**	**7**	PKP		PKPdf	05 07 59.4	-0.4
	comp=Z,0.1nm,0.4s,baz=29,slow=7.5,SNR=2.5							
QSPA	**South Pole Qui**	**120.71**	**180**	PKP		PKPdf	05 07 59.5	-0.6
	comp=Z,0.3nm,0.5s,baz=315,slow=2.9,SNR=2.8							
LPAZ	**La Paz**	**150.33**	**293**	PKPbc		PKPbc	05 09 01.4	+0.1
	comp=Z,0.8nm,0.9s,baz=307,slow=5.1,SNR=3.8							

IDC ***27*** *04:58:28.4±5.2, 32.°99N×136.°75E, h149km±82km, mb3.3/2, mb1 3.5/5, mb1mx3.1/27, mbtmp3.4/5, MS2.9/1, Ms1 2.9/1, ms1mx2.2/40, Error ellipse: s-maj=72.4km s-min=33.8km az=162.0*

ISCJB ***27*** *04:58:34.2±0.7, 34.°6N±0.°1×137.°24E±0.°08, h347km±8km, mb3.1/2, Error ellipse: s-maj=17.4km s-min=9.7km az=172.3*

JMA ***27*** *04:58:34.4±0.3, 34.°56N×137.°23E, h348km±3km, M3.1*

ISC 27 04:58:35.4±0.7, 34.°6N±0.°1×137.°23E±0.°08, h337km±8km, n23, σ1§01/29, mb3.1/2, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HMMJ	**Hamamatsu 2**	**0.47**	**58**	P		**Pn**	**04 59 18.8**	**+0.7**
JIE	**Ise**	**0.48**	**244**	P		**Pn**	**04 59 18.7**	**+0.5**
JAO	**Obara**	**0.66**	**2**	P		**Pn**	**04 59 19.2**	**+0.7**
JNY	**Yasuok**	**0.91**	**34**	P		**Pn**	**04 59 20.1**	**+0.7**
JGM	**Miyama**	**1.17**	**339**	P		**Pn**	**04 59 21.1**	**+0.7**
JWT	**Wachi**	**1.65**	**295**	P		**Pn**	**04 59 23.2**	**+0.1**
JWT				*e*S		**S**	**04 59 59.3**	**-2.0**
JWZ	**Kozaga**	**1.65**	**230**	P		**Pn**	**04 59 22.8**	**-0.4**
JNG	**Nsakai**	**1.93**	**21**	P		**Pn**	**04 59 25.8**	**+0.8**
JNG				*e*S		**S**	**05 00 04.1**	**-0.6**
JRY	**Ryogami san**	**1.96**	**44**	P		**Pn**	**04 59 26.4**	**+1.2**
JRY				*e*S		**S**	**05 00 06.3**	**+1.2**
JKY	**Yasaka**	**2.02**	**301**	P		**Pn**	**04 59 25.6**	**0.0**
JHU	**Hanno**	**2.09**	**53**	P		**Pn**	**04 59 26.1**	**0.0**
JHU				*e*S		**S**	**05 00 05.6**	**-1.2**
MAT	**Matsushiro**	**2.09**	**22**	P		**Pn**	**04 59 26.6**	**+0.5**
MAT				*e*S		**S**	**05 00 07.2**	**+0.4**
MJAR	**Matsushiro Arr**	**2.09**	**22**	P		**Pn**	**04 59 26.5**	**+0.4**
	3.0nm,0.3s,baz=198,slow=8.0,SNR=17							
MJAR				S		**S**	**05 00 08.7**	**+1.9**
	0.3nm,0.3s,baz=236,slow=19,SNR=3.5							
JAG	**Ashikaga**	**2.57**	**44**	P		**Pn**	**04 59 30.0**	**+0.1**
JAG				*S*		**S**	**05 00 11.1**	**-2.5**
BSO4	**Boso 4**	**2.58**	**81**	*e*S		**S**	**05 00 14.2**	**+0.2**
JHJ	**Hachijo jima 2**	**2.59**	**124**	LR		LR	04 59 42.8	
	comp=Z,211nm,18.7s,baz=50,slow=29							
BSO3	**Boso 3**	**2.71**	**85**	*e*S		**S**	**05 00 15.2**	**-0.7**
JYT	**Yasato**	**2.91**	**55**	*e*S		**S**	**05 00 15.8**	**-3.3**
JHO	**Hitachi**	**3.38**	**53**	P		**Pn**	**04 59 37.3**	**0.0**
JHO				*e*S		**S**	**05 00 23.7**	**-3.4**
KSRS	**Korea Array**	**8.06**	**293**	P		**Pn**	**05 00 28.6**	**-1.4**
	0.4nm,0.3s,baz=117,slow=13,SNR=7.7							
ASAJ	**Asahikawa**	**10.36**	**22**	P		Px	05 01 15.9	
	0.6nm,0.3s,baz=276,slow=7.7,SNR=8.8							
WRA	**Warramunga Arr**	**54.31**	**183**	P		**P**	**05 07 27.5**	**-0.4**
	0.5nm,0.3s,mb3.3,baz=0.0,slow=7.6,SNR=3.8							
ASAR	**Alice Springs**	**58.03**	**184**	P		**P**	**05 07 54.0**	**0.0**
	0.2nm,0.3s,mb2.9,baz=353,slow=5.8,SNR=4.4							

MOS ***27*** *05:00:44.8±1.4, 51.°65N×103.°91E, h8km, mb4.2/1, Error ellipse: s-maj=30.9km s-min=16.1km az=71.9*

BYKL 27 05:00:45.2±0.3, 51.°64N×103.°91E, h2km±6km, 4C-7D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TLY	**Talaya**	**0.17**	**284**	⇓*i*	Pg	Pg	05 00 49.0	+0.5
TLY				*i*	Sg	Sg	05 00 51.7	+1.0
LSTR	**Listvyanka**	**0.62**	**66**	⇓*i*	Pg	Pg	05 00 56.9	-0.1
LSTR				*e*	Sg	Sg	05 01 05.3	+0.3
LSTR				Smax				
	403nm,0.6s							
IRK	**Irkutsk**	**0.64**	**20**	*e*	PG	Pg	05 00 57.4	-0.1
IRK				*e*			05 01 05.9	
IRK				pmax		pmax		
	comp=Z,464nm,0.4s							
IRK				smax				
	comp=E,3μm,0.4s							
IRK	**Irkutsk**	**0.64**	**20**	⇑*i*	Pg	Pg	05 00 57.4	-0.1
IRK				*e*	Pb	Pg	05 01 01.5	+4.0
IRK				*i*	Sg	Sg	05 01 06.0	+0.1
IRK				Pmax				
	comp=E,463nm,0.4s							
IRK				Smax				
	comp=E,3μm,0.5s							
ARS	**Arshan**	**0.96**	**287**	*e*	PG	Pg	05 01 02.8	-0.9
ARS				*e*			05 01 15.0	
ARS				pmax		pmax		
	comp=Z,45nm,0.1s							
ARS				smax				
	comp=E,566nm,0.2s							
ARS	**Arshan**	**0.96**	**287**	⇑*i*	Pg	Pg	05 01 02.7	-1.0
ARS				*i*	Pb	Pb	05 01 04.2	-0.4
ARS				*e*	Sg	Sg	05 01 15.1	-1.1
ARS				max				
	comp=E,109nm,0.4s							
ARS				Smax				
	comp=E,820nm,0.9s							
ZAK	**Zakamensk**	**1.32**	**198**	*e*	PG	Pg	05 01 09.1	-1.4
ZAK				*e*			05 01 26.3	
ZAK				pmax		pmax		
	comp=Z,48nm,0.1s							
ZAK				smax				
	comp=N,402nm,0.3s							
ZAK	**Zakamensk**	**1.32**	**198**	⇑*i*	Pg	Pg	05 01 09.1	-1.4
ZAK				*e*	Pb	Pb	05 01 09.8	-0.9
ZAK				*i*	Sg	Sg	05 01 26.3	-1.3
ZAK				max				
	comp=N,48nm,0.1s							
ZAK				Smax				
	comp=N,404nm,0.3s							
KAB	**Kabansk**	**1.75**	**75**	*e*		Pn	05 01 28.0	+11
KAB				*e*	Sg	Sg	05 01 39.0	-2.4
KAB				Smax				
	comp=N,386nm,0.5s							
MOY	**Mondy**	**1.82**	**272**	⇓*i*	Pn	Pn	05 01 17.4	0.0
MOY				⇑*i*	Pg	Pg	05 01 18.3	-1.7
MOY				*e*	Sg	Sg	05 01 41.7	-1.8
MOY				Pmax				
	comp=N,32nm,0.7s							
MOY				Smax				
	comp=N,256nm,0.6s							
TRG	**Tyrgan**	**1.87**	**52**	⇓*i*	Pg	Pg	05 01 17.5	-3.6
TRG				*i*	Sg	Sg	05 01 42.8	-2.5
TRG				Pmax				
	comp=N,33nm,0.5s							
TRG				Smax				
	comp=N,287nm,0.4s							
HRMR	**Khuramsha**	**1.90**	**89**	*e*	Pn	Pn	05 01 17.8	-0.7
HRMR				*e*	Pg	Pg	05 01 19.7	-1.8
HRMR				*e*	Sg	Sg	05 01 45.5	-0.6
HRMR				*e*			05 01 48.8	
HRMR				Pmax				
	comp=N,97nm,0.4s							
HRMR				Smax				
	comp=N,785nm,0.5s							
ZRHB	**Zarechye**	**2.20**	**64**	*e*	Sg	Sg	05 01 53.0	-2.8
UUDB	**Ulan-Yde**	**2.34**	**83**	*e*	Pg	Pg	05 01 26.7	-3.4
UUDB				*e*	Sg	Sg	05 01 58.2	-2.2
UUDB				Pmax				
	comp=N,27nm,0.9s							
UUDB				Smax				
	comp=N,56nm,1.0s							
ORL	**Orlik**	**2.69**	**291**	*e*	PN	Pn	05 01 32.5	+3.1
ORL				*e*			05 02 06.4	
ORL				pmax		pmax		
	comp=Z,32nm,0.2s							
ORL				smax				
	comp=N,225nm,0.7s							
ORL	**Orlik**	**2.69**	**291**	⇓*i*	Pg	Pg	05 01 32.4	-4.2
ORL				*i*	Sg	Sg	05 02 07.4	-4.0
ORL				Pmax				
	comp=N,21nm,0.7s							
ORL				Smax				
	comp=N,225nm,0.6s							
OGRR	**Ongureny**	**3.01**	**47**	*e*	PN	Pn	05 01 33.8	0.0
OGRR				*e*			05 01 39.1	
OGRR				*e*			05 02 16.0	
OGRR				pmax		pmax		
	comp=Z,40nm,0.4s							
OGRR				smax				
	comp=E,118nm,0.7s							
OGRR	**Ongureny**	**3.01**	**47**	⇓*i*	Pn	Pn	05 01 33.9	+0.1
OGRR				*e*	Pg	Pg	05 01 38.0	-4.9
OGRR				*e*			05 01 41.4	
OGRR				*i*	Sg	Sg	05 02 16.2	-5.7
OGRR				max				
	comp=E,39nm,0.3s							
OGRR				Smax				
	comp=E,188nm,0.6s							
MXMB	**Maximikha**	**3.38**	**59**	*e*	Sg	Sg	05 02 30.7	-2.8
MXMB				*e*			05 02 32.7	
MXMB				max				
	comp=E,153nm,0.1s							
SYVR	**Suvo**	**4.22**	**59**	*e*	Pn	Pn	05 01 53.3	+2.8
SYVR				*e*	Pg	Pg	05 02 01.5	-4.6
SYVR				*e*			05 02 31.2	
SYVR				*e*	Sg	Sg	05 02 56.8	-3.9
SYVR				Pmax				
	comp=E,2.0nm,0.1s							
SYVR				Smax				
	comp=E,20nm,1.0s							
ULN	**Ulaanbaatar**	**4.29**	**150**	*e*	PN	Pn	05 01 51.1	-0.4
ULN				⇓*i*	Pg	Pg	05 02 01.6	-5.8
ULN				*e*			05 02 32.9	
ULN				*e*	Sg	Sg	05 02 57.3	-5.7
NIZ	**Nizh Angarsk**	**5.32**	**37**	*e*	PN	Pn	05 02 04.5	-1.1
NIZ				*e*			05 02 21.8	
NIZ				*e*	S	Sn	05 03 04.5	-2.9
NIZ				*e*			05 03 29.2	
NIZ				pmax		pmax		
	comp=Z,8.0nm,1.4s							
NIZ				smax				
	comp=N,42nm,1.1s							
NIZ	**Nizh Angarsk**	**5.32**	**37**	*e*	Pg	Pg	05 02 19.6	-7.5
NIZ				*e*	Sg	Sg	05 03 29.3	-6.7
NIZ				Pmax				
	comp=N,5.0nm,0.3s							
NIZ				Smax				
	comp=N,55nm,1.0s							
YLYR	**Ulyunkhan**	**5.43**	**50**	*e*	PN	Pn	05 02 22.2	+15
YLYR				*e*			05 03 31.6	
YLYR				pmax		pmax		
	comp=Z,45nm,2.1s							
YLYR				smax				
	comp=N,25nm,1.5s							
YLYR	**Ulyunkhan**	**5.43**	**50**	*e*	Pg	Pg	05 02 22.4	-6.7
YLYR				*e*	Sg	Sg	05 03 31.8	-7.5
YLYR				Pmax				
	comp=N,18nm,3.0s							
YLYR				Smax				
	comp=N,25nm,1.5s							
KMO	**Kumora**	**6.06**	**43**	*e*		Pg	05 02 38.0	-3.3
KMO				*e*			05 03 25.8	
KMO				*e*	Sg	Sg	05 03 52.4	-7.4
KMO				Smax				
	comp=N,60nm,1.2s							
CRS	**Chara**	**9.91**	**52**	*e*		Px	05 04 24.5	
CRS				*e*	Sg	Sx	05 05 52.3	
CRS				Smax				
	comp=N,6.0nm,1.0s							
CLNS	**Chul'man**	**13.30**	**59**	*e*	Sg	Sx	05 07 38.4	

NIED ***27*** *05:24:00, 46.°60N×153.°10E, h38km, Mw5.3 Best double couple: M0 9.67000×10^16 NP1:φs349.00000°, δ58.00000°, λ46.00000°. NP2:φs230.00000°, δ53.00000°, λ138.00000°.*

BGS ***27*** *05:24:30.2±1.7, 45.°14N×154.°62E, h65km, mb5.3*

DJA ***27*** *05:24:34, 47.°20N×153.°59E, h40km, mb5.5/20*

JMA ***27*** *05:24:35.0±0.5, 46.°62N×153.°07E, h30km, M5.9*

JMA Felt I J1.

ISCJB ***27*** *05:24:37.0±0.4, 46.°68N±0.°02×152.°54E±0.°02, h43km±3km, mb5.5/424, MS4.9/85, Error ellipse: s-maj=3.5km s-min=1.7km az=165.1*

IDC ***27*** *05:24:38.0±1.7, 46.°72N×152.°52E, h38km±13km, mb5.0/33, mb1 5.1/35, mb1mx5.1/36, mbtmp5.0/35, ML4.5/1, MS4.8/35, Ms1 4.8/35, ms1mx4.6/45, Error ellipse: s-maj=12.2km s-min=9.5km az=134.0*

BJI ***27*** *05:24:38.8, 46.°76N×152.°56E, h69km, mB5.4/36, mb5.7/62, Ms5.0/64, Ms7 4.9/57*

SKHL ***27*** *05:24:38.1±0.7, 46.°42N×152.°87E, h73km±42km, mb5.9/8, mbh6.1/4, Ms5.1/6*

MOS ***27*** *05:24:38.3±0.9, 46.°70N×152.°50E, h55km, mb5.8/116, MS5.1/36, Error ellipse: s-maj=5.9km s-min=3.7km az=99.0*

NEIC ***27*** *05:24:41.1±0.4, 46.°73N×152.°48E, h65km±3km, mb5.5/235, MW5.3, Error ellipse: s-maj=3.7km s-min=1.9km az=165.0, Moment Tensor Solution. s90 Moment tensor: Scale 10^17Nm; Mrr 1.01; Mθθ -0.45; Mφφ -0.56; Mrθ 0.32; Mrφ -0.28; Mθφ 0.36; Best double couple: M0 1.00000×10^17 NP1: φs40.00000°, δ59.00000°, λ91.00000°. NP2:φs219.00000°, δ31.00000°, λ89.00000°. Principal axes: T 1.1300, Plg75.0000°, Azm312.0000°; N -0.2200, Plg0.0000°, Azm219.0000°; P -0.9000, Plg14.0000°, Azm129.0000°;*

NEIC Recorded [1 JMA] in eastern Hokkaido.

GCMT ***27*** *05:24:42.9±0.1, 46.°69N×152.°82E, h50km, MW5.4, Moment Tensor Solution. s87,c162; s12,c12; Moment tensor: Scale 10^17Nm; Mrr 1.41±.03; Mθθ -0.48±.02; Mφφ -0.93±.02; Mrθ 0.22±.02; Mθφ -0.79±.02; Mrφ 0.69±.02; Best double couple: M0 1.60000×10^17 NP1:φs226.00000°, δ33.00000°, λ105.00000°. NP2:φs28.00000°, δ58.00000°, λ80.00000°. Principal axes: T 1.6000, Plg75.0000°, Azm271.0000°; N 0.0800, Plg8.0000°, Azm33.0000°; P -1.6800, Plg13.0000°, Azm125.0000°; Data Used: II IU IC G CN. Surface waves: sta=101, comp=210, per= 50.*

SZGRF ***27*** *05:24:58.0, 49.°17N×148.°66E, h33km, mb6.0, MS5.0, Northwest of Kuril Islands, Russia*

ISC 27 05:24:40.2±0.3, 46.°75N±0.°02×152.°49E±0.°02, h54km±2km, h51km±2.8km:pP-P,n1631, σ0§79/1658, mb5.5/424, MS4.9/85, 457C-235D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**3.56**	**246**	⇓*i*	PN	**Pn**	**05 25 32.0**	**-0.9**
KUR				*e*	S	**Sn**	**05 26 13.0**	**-0.7**
KUR				pmax		pmax		
	comp=N,2μm,3.0s							
KUR			

SKR comp=N,3µm,8.0s smax
SKR comp=E,10µm,8.0s smax
SKR comp=N,2µm,0.5s smax
SKR comp=E,1µm,0.5s smax
SKR comp=E,8µm,12.0s MLR MLR
SKR comp=Z,6µm,12.0s MLR MLR
SKR comp=N,5µm,14.0s MLR MLR
SKR Severo-Kuril's 4.61 30 *e*P **Pn 05 25 49.1 +1.8**
SKR AMB AMB 05 25 53.0
SKR comp=N,2µm,4.0s AMB AMB 05 25 53.0
SKR comp=N,2µm,4.0s AMB AMB 05 25 53.0
SKR comp=N,2µm,4.0s AMB AMB 05 25 56.0
SKR comp=N,410nm,0.2s AMB AMB 05 25 56.0
SKR comp=N,360nm,0.2s AMB AMB 05 25 56.0
SKR comp=N,690nm,0.5s AMB AMB 05 26 03.0
SKR comp=N,5µm,2.0s AMB AMB 05 26 03.0
SKR comp=N,2µm,0.5s AMB AMB 05 26 03.0
SKR comp=N,900nm,0.5s AMB AMB 05 26 03.0
SKR comp=N,2µm,0.5s *er*x rx 05 26 24.4
SKR *i* S **Sn 05 26 42.0 +2.6**
SKR A 05 26 49.0
SKR comp=N,3µm,8.0s A 05 26 49.0
SKR comp=N,10µm,8.0s A 05 26 49.0
SKR comp=N,6µm,8.0s A 05 26 49.0
SKR comp=N,3µm,8.0s A 05 26 49.0
SKR comp=N,10µm,8.0s A 05 26 49.0
SKR comp=N,6µm,8.0s *e*S **Sn 05 26 59.4 +20**
SKR A 05 27 08.5
SKR comp=N,2µm,0.5s A 05 27 08.5
SKR comp=N,1µm,0.5s A 05 27 08.5
SKR comp=N,850nm,0.5s A 05 27 20.0
SKR comp=N,8µm,0.5s A 05 27 20.0
SKR comp=N,20µm,0.5s A 05 27 24.0
SKR comp=N,55µm,1.0s A 05 27 24.0
SKR comp=N,75µm,1.0s AMS AMS 05 28 00.0
SKR comp=N,6µm,14.0s AMS AMS 05 28 00.0
SKR comp=N,8µm,12.0s AMS AMS 05 28 00.0
SKR comp=N,6µm,12.0s AMS AMS 05 28 00.0
SKR comp=N,8µm,12.0s AMS AMS 05 28 00.0
SKR comp=N,6µm,12.0s AMS AMS 05 28 00.0
SKR comp=N,5µm,14.0s AMS AMS 05 28 14.0
SKR comp=N,9µm,14.0s AMS AMS 05 28 14.0
SKR comp=N,7µm,14.0s AMS AMS 05 28 14.0
YUK Yuzh-Kuril'sk 5.40 242 ⇑*i*PN **Pn 05 25 58.9 +0.8**
YUK *e*S **Sn 05 26 59.4 +0.6**
YUK comp=N,843nm,0.4s pmax pmax
YUK comp=E,2µm,0.4s pmax pmax
YUK comp=Z,4µm,0.4s pmax pmax
YUK comp=Z,2µm,0.4s pmax pmax
YUK comp=E,40µm,0.7s smax
YUK comp=N,14µm,0.3s smax
YUK comp=Z,8µm,14.0s MLR MLR
YUK comp=E,7µm,14.0s MLR MLR
NEM2 Nemuro 2 5.85 237 P **Pn 05 26 02.7 -1.6**
NEM2 *e*S **Sn 05 27 08.0 -2.0**
JRA Rausu 5.90 244 ⇑P **Pn 05 26 06.6 +1.6**
JRA *e*S **Sn 05 27 17.7 +6.5**
JNK Nakash 6.34 243 P **Pn 05 26 11.9 +1.0**
JNK *e*S **Sn 05 27 23.0 +1.1**
JTKR Abashiri--Toko 6.65 248 P **Pn 05 26 17.1 +1.9**
JTKR *e*S **Sn 05 27 34.6 +5.0**
YSS Yuzh-Sakhalins 6.68 275⇓*e*Pn **Pn 05 26 19.0 +3.4**
YSS *e*Sn **Sn 05 27 27.8 -2.5**
YSS Yuzh-Sakhalins 6.68 275ĸ *i*PN **Pn 05 26 18.9 +3.3**
YSS *e*S **Sn 05 27 31.5 +1.3**
YSS comp=Z,2µm,0.9s pmax pmax
YSS comp=N,630nm,1.0s pmax pmax
YSS comp=E,2µm,1.0s pmax pmax
YSS comp=N,2µm,0.9s smax
YSS comp=E,2µm,0.9s smax
YSS comp=N,6µm,16.0s MLR MLR
YSS comp=E,11µm,16.0s MLR MLR
YSS comp=Z,13µm,16.0s MLR MLR
YSS Yuzh-Sakhalins 6.68 275⇓*i*P **Pn 05 26 18.9 +3.3**
YSS AMB AMB 05 26 23.5
YSS comp=Z,630nm,1.0s AMB AMB 05 26 23.5
YSS comp=Z,2µm,1.0s AMB AMB 05 26 23.5
YSS comp=Z,2µm,0.9s *er*x rx 05 26 33.6
YSS *e*S **Sn 05 27 31.5 +1.3**
YSS A 05 27 38.5
YSS comp=Z,2µm,0.9s A 05 27 38.5
YSS comp=Z,2µm,0.9s *e*LQ 05 28 02.0
YSS AMS AMS 05 28 47.0
YSS comp=Z,13µm,16.0s AMS AMS 05 28 47.0
YSS comp=Z,12µm,16.0s AMS AMS 05 28 47.0
YSS comp=Z,6µm,16.0s AMS AMS 05 28 47.0
YSS comp=Z,11µm,16.0s
JAK Akkeshi 6.69 239 P **Pn 05 26 14.3 -1.4**
JAK *e*S **Sn 05 27 27.8 -2.7**
JMP Maruseppu 6.99 250 P **Pn 05 26 22.4 +2.5**
JAR Ashorobuto 7.08 244 P **Pn 05 26 22.0 +0.9**
JAR *e*S **Sn 05 27 40.8 +0.8**
JSE Soyaes 7.14 259 P **Pn 05 26 25.4 +3.4**
PETK Petropavlovsk- 7.20 26 Pn **Pn 05 26 22.8 +0.1**
PETK Sn **Sn 05 27 51.3 +8.4**
PETK LR LR 05 29 16.0
PETK Petropavlovsk- 7.20 26 Pn **Pn 05 26 22.8 +0.1**
comp=Z,7.1nm,0.3s,baz=183,slow=11,SNR=55
PETK Sn **Sn 05 27 51.3 +8.4**
baz=163,slow=21,SNR=1.5
PETK LR LR 05 29 16.0
comp=Z,3µm,20.5s,baz=209,slow=38
PETK Petropavlovsk- 7.20 26 PN **Pn 05 26 22.8 +0.1**
PETK 05 27 51.3

JOB Onbets 7.25 241 P **Pn 05 26 23.0 -0.5**
JOB *e*S **Sn 05 27 42.6 -1.8**
UGL Uglegorsk 7.38 292⇓*i*P **Pn 05 26 30.0 +4.8**
UGL ⇓*i*P 05 26 30.0
UGL AMB AMB 05 26 31.5
UGL comp=Z,2µm,1.0s AMB AMB 05 26 33.0
UGL comp=Z,2µm,1.5s AMB AMB 05 26 33.0
UGL comp=Z,2µm,2.0s AMB AMB 05 26 33.0
UGL comp=Z,6µm,2.0s *e*S **Sn 05 27 52.0 +4.6**
UGL A 05 27 57.0
UGL comp=Z,290nm,0.5s A 05 27 57.0
UGL comp=Z,670nm,0.5s A 05 28 05.0
UGL comp=Z,4µm,8.0s A 05 28 05.0
UGL comp=Z,4µm,8.0s *e*L 05 28 26.0
UGL AMS AMS 05 29 20.0
UGL comp=Z,5µm,16.0s AMS AMS 05 29 20.0
UGL comp=Z,13µm,18.0s
PET Petropavlovsk 7.43 30 *e*Pn **Pn 05 26 26.0 +0.1**
PET *e*Sn **Sn 05 27 48.1 -0.6**
PET Petropavlovsk 7.43 30 *e*PN **Pn 05 26 26.5 +0.6**
PET pmax pmax
PET comp=Z,400nm,3.1s pmax pmax
PET comp=Z,65nm,1.1s pmax pmax
PET comp=Z,400nm,12.9s MLR MLR
PET comp=Z,2µm,12.0s MLR MLR
PET comp=Z,3µm,15.0s
ASAJ Asahikawa 7.44 253 *e*Pn **Pn 05 26 29.1 +3.1**
ASAJ comp=Z,1µm,1.0s *e*Sn **Sn 05 27 49.1 +0.1**
ASAJ Asahikawa 7.44 253 Pn **Pn 05 26 29.3 +3.3**
ASAJ comp=Z,28nm,0.3s,baz=80,slow=17,SNR=113 Sn **Sn 05 27 58.8 +10**
ASAJ comp=Z,20nm,0.3s,baz=162,slow=9.6,SNR=1.6 LR LR 05 29 12.0
ASAJ comp=Z,8µm,20.3s,baz=73,slow=37
ASAJ Asahikawa 7.44 253 PN **Pn 05 26 29.3 +3.3**
ASAJ 05 27 58.8
ASAJ pmax pmax
ASAJ comp=Z,28nm,0.3s smax
ASAJ comp=N,21nm,0.3s MLR MLR
ASAJ comp=Z,8µm,20.3s
ASAJ Asahikawa 7.44 253 P **Pn 05 26 29.3 +3.3**
JKK2 Kamakawa 2 7.44 251 ⇑P **Pn 05 26 28.4 +2.3**
JWK2 Keihoku 7.51 263 P **Pn 05 26 31.9 +4.9**
TYV Tymovskoe 7.68 306 *e*P **Pn 05 26 31.0 +1.7**
TYV AMB AMB 05 26 32.0
TYV comp=Z,2µm,3.0s AMB AMB 05 26 32.0
TYV comp=Z,2µm,3.0s AMB AMB 05 26 33.5
TYV comp=Z,180nm,0.8s AMB AMB 05 26 33.5
TYV comp=Z,213nm,0.8s AMB AMB 05 26 33.5
TYV comp=Z,400nm,0.8s *e*S **Sn 05 28 06.0 +11**
TYV A 05 28 14.0
TYV comp=Z,2µm,8.0s AMS AMS 05 29 42.0
TYV comp=Z,11µm,16.0s AMS AMS 05 29 42.0
TYV comp=Z,15µm,16.0s
JCH Churui 7.70 241 P **Pn 05 26 28.5 -1.2**
JCH *e*S **Sn 05 27 52.5 -3.0**
JSS Shosan 7.82 256 P **Pn 05 26 36.0 +4.7**
JFR Furan 7.88 246 P **Pn 05 26 33.1 +1.0**
JAB Ashibetsu 7.95 250 P **Pn 05 26 36.0 +3.3**
JHR Hokuryu 8.17 252 P **Pn 05 26 39.3 +3.3**
ERM Erimo 8.19 238 Pn **Pn 05 26 36.0 -0.3**
ERM Erimo 8.19 238 *e*PN **Pn 05 26 35.9 -0.4**
JEM Erimo 8.19 238 P **Pn 05 26 35.3 -1.0**
JBT2 Biratori 2 8.22 245 P **Pn 05 26 36.2 -0.6**
JNBK Urakawa-nobuka 8.27 241 P **Pn 05 26 35.5 -1.9**
JNBK *e*S **Sn 05 28 08.9 -0.3**
JEW Eniwo 8.77 247 P **Pn 05 26 45.9 +1.7**
JSK Shakotan 9.15 253 P **Pn 05 26 51.0 +1.5**
OKH Okha 9.15 322⇓*i*P **Pn 05 26 53.8 +4.4**
OKH ⇓*i*P 05 26 54.0
OKH AMB AMB 05 26 55.2
OKH comp=Z,6µm,2.0s AMB AMB 05 26 55.8
OKH comp=Z,1µm,0.9s *e*S **Sn 05 28 34.8 +3.9**
OKH A 05 28 52.8
OKH comp=Z,10µm,10.0s A 05 28 52.8
OKH comp=Z,6µm,5.0s *e*LQ 05 29 46.0
OKH AMS AMS 05 31 38.8
OKH comp=Z,8µm,14.0s AMS AMS 05 31 38.8
OKH comp=Z,7µm,14.0s AMS AMS 05 31 38.8
OKH comp=Z,2µm,8.0s
JNB Noboribetsu 9.22 246 P **Pn 05 26 49.5 -0.9**
JNB *e*S **Sn 05 28 31.5 -1.1**
JKB Kayabe 9.54 243 P **Pn 05 26 53.1 -1.7**
JKB *e*S **Sn 05 28 34.4 -6.0**
JSH Shimam 9.76 250 P **Pn 05 26 58.7 +0.9**
JYM2 Yakumo 2 9.82 246 P **Pn 05 26 58.0 -0.7**
JSR Shiriuchi 10.12 243 P **Pn 05 27 00.8 -1.9**
JTM Tenmabayashi 10.18 238 P **Pn 05 27 00.9 -2.6**
JTM *e*S **Sn 05 28 47.2 -8.9**
JANG Nango 10.19 235 P **Pn 05 26 59.4 -4.3**
JANG *e*S **Sn 05 28 46.4 -10**
JTH Tanohata 10.30 232 P **Pn 05 27 01.0 -4.2**
JTH *e*S **Sn 05 28 48.0 -11**
JSI2 Shiura 2 10.40 241 P **Pn 05 27 03.9 -2.7**
JOSM Okushiri--Mats 10.41 248 P **Pn 05 27 05.8 -0.9**
OFUJ Ofunato 11.02 230 P **Pn 05 27 10.0 -5.1**
OFUJ *e*S **Sn 05 29 07.5 -9.3**
TEY Ternei 11.21 267 *e*P **Pn 05 27 20.5 +3.0**
TEY AMB AMB 05 27 21.0
TEY comp=Z,55nm,1.1s AMB AMB 05 27 21.0
TEY comp=Z,52nm,1.0s *e*LR LR 05 30 24.0
TEY AMS AMS 05 30 58.0
TEY comp=Z,7µm,21.0s AMS AMS 05 30 58.0
TEY comp=Z,5µm,20.0s
JRG Rokugo 11.36 234 P **Pn 05 27 15.5 -4.1**
JRG *e*S **Sn 05 29 17.4 -7.5**
JOG2 Oga 2 11.49 238 P **Pn 05 27 18.0 -3.4**
JYW Yuwa 11.50 236 P **Pn 05 27 19.0 -2.5**
JIO Ouri 11.66 229 P **Pn 05 27 18.6 -5.1**
JIO *e*S **Sn 05 29 20.6 -12**
HABR Khabarovsk 11.89 285*ce*PN **Pn 05 27 32.5 +5.6**
HABR *e*S **Sn 05 29 45.2 +7.3**
HABR pmax pmax
HABR comp=Z,846nm,1.9s pmax pmax
HABR comp=E,701nm,1.9s pmax pmax
HABR comp=N,119nm,1.8s
JYA Atsumi 12.43 234 P **Pn 05 27 30.4 -3.9**
JFK Kawauchi 12.73 227 *e*S **Sn 05 29 46.7 -12**
JFY Yanaizu 13.30 230 P **Pn 05 27 42.2 -3.9**
KLR Kul'dur 14.10 288 *e*P **Pn 05 27 57.0 +0.1**
KLR *e* 05 30 38.5
KLR MLR MLR
KLR comp=Z,6µm,14.0s
MJAR Matsushiro Arr 14.74 231 Pn **Pn 05 28 01.5 -3.9**
MJAR comp=Z,1.9nm,0.3s,baz=28,slow=13,SNR=34 LR LR 05 33 58.9
MJAR comp=Z,2µm,21.4s,baz=55,slow=38
MAJO Matsushiro 14.74 231 *e*P **Pn 05 28 01.7 -3.7**
MAT Matsushiro 14.74 231 P **Pn 05 28 01.3 -4.1**

MAT S **Sn 05 30 45.9 -1.5**
VLA Vladivostok 15.02 263 *i*P **Pn 05 28 08.9 -0.1**
VLA pmax pmax
comp=Z,360nm,1.6s
MDJ Mudanjiang 16.13 271 P **Pn 05 28 23.3 +0.1**
MDJ pP pP 05 28 35.8 -1.7
MDJ sP sP 05 28 41.8 -2.5
MDJ S **S 05 31 19.0 -13**
MDJ ScP ScP 05 36 45.8 +0.4
MDJ PcS PcS 05 36 51.0 -0.2
MDJ pmax pmax
MDJ comp=Z,120nm,1.1s pmax pmax
MDJ comp=Z,820nm,5.5s LR LR
MDJ comp=N,1µm,15.0s LR LR
MDJ comp=E,3µm,17.3s LR LR
MDJ Mudanjiang 16.13 271 *e*Pn **Pn 05 28 22.6 -0.7**
comp=Z,339nm,0.9s
SEY Seymchan 16.22 360⇓*i*P **Pn 05 28 25.2 +1.1**
JHJ Hachijo jima 2 16.71 220 Sn **Sn 05 31 25.8 -9.3**
comp=Z,36nm,0.3s,baz=72,slow=19,SNR=4.9
JHJ LR LR 05 34 02.7
comp=Z,568nm,20.8s,baz=91,slow=34
ZEA Zeya 17.53 303 *e*P **Pn 05 28 38.5 -2.0**
ZEA AMB AMB 05 28 43.1
ZEA comp=Z,170nm,0.9s AMB AMB 05 28 43.1
ZEA comp=Z,160nm,0.8s AMB AMB 05 28 43.1
ZEA comp=Z,220nm,1.0s AMB AMB 05 28 45.0
ZEA comp=Z,400nm,5.0s AMB AMB 05 28 45.0
ZEA comp=Z,2µm,7.0s AMB AMB 05 28 45.0
ZEA comp=Z,1µm,7.0s
CN2 Changchun 19.22 271 *e*P **Pn 05 29 00.0 -1.0**
CN2 *e*S **S 05 32 27.3 -7.1**
CN2 *e*SS 05 32 54.3
CN2 pmax pmax
CN2 comp=Z,200nm,0.6s pmax pmax
CN2 comp=Z,100nm,5.0s LR LR
CN2 comp=N,2µm,17.0s LR LR
CN2 comp=E,3µm,17.0s
CLNS Chul'man 19.69 311 *e*P **Pn 05 29 06.2 -0.3**
CLNS *e*S **S 05 32 46.0 +2.4**
CLNS pmax pmax
CLNS comp=E,33nm,0.7s pmax pmax
CLNS comp=Z,135nm,0.7s pmax pmax
CLNS comp=N,109nm,0.7s smax
CLNS comp=E,272nm,10.4s smax
CLNS comp=N,397nm,12.3s MLR MLR
CLNS comp=N,3µm,18.0s MLR MLR
CLNS comp=Z,5µm,15.0s MLR MLR
CLNS comp=E,4µm,15.0s
YAK Yakutsk 20.09 328 *e*Pn **P 05 29 10.6 +1.6**
comp=E,1µm,0.7s
YAK Yakutsk 20.09 328 *e*P **P 05 29 10.9 +2.0**
YAK *e* 05 29 25.8
YAK *e*S **S 05 32 54.3 +2.9**
YAK *e*SS 05 33 13.3
YAK *e* 05 33 26.5
YAK *e* 05 40 32.8
YAK pmax pmax
YAK comp=E,212nm,0.8s pmax pmax
YAK comp=Z,842nm,0.9s pmax pmax
YAK comp=N,202nm,1.1s pmax pmax
YAK comp=Z,1µm,2.5s pmax pmax
YAK comp=E,794nm,2.2s pmax pmax
YAK comp=N,756nm,1.9s smax
YAK comp=N,609nm,2.7s smax
YAK comp=E,634nm,4.0s MLR MLR
YAK comp=E,742nm,12.0s,MS4.6 MLR MLR
YAK comp=Z,2µm,13.0s,MS4.7 MLR MLR
YAK comp=N,1µm,11.0s,MS4.6
KSRS Korea Array 20.39 252 P **P 05 29 12.2 -0.2**
comp=N,118nm,0.9s,baz=56,slow=10,SNR=63
KSRS S **S 05 33 06.2 +8.5**
KSRS comp=N,1.2nm,0.7s,baz=66,slow=24,SNR=2.4 PcP PcP 05 33 22.6 -0.4
KSRS comp=N,6.9nm,0.8s,baz=356,slow=1.6,SNR=7.0 LR LR 05 36 02.2
KSRS comp=N,2µm,20.5s,MS4.5,baz=53,slow=34 ScP ScP 05 36 56.5 +1.7
comp=N,4.5nm,0.9s,baz=57,slow=0.9,SNR=9.1
SNY Shenyang 21.21 267 ⇑P **P 05 29 20.8 -0.4**
SNY S **S 05 33 07.3 -6.5**
SNY pmax pmax
SNY comp=Z,310nm,0.9s,mb5.6 LR LR
SNY comp=N,2µm,15.9s,MS4.9 LR LR
SNY comp=E,3µm,17.3s,MS4.9 LR LR
SNY comp=Z,4µm,18.6s,MS4.8
INCN Inchon 21.22 253 *e*P **P 05 29 20.8 -0.5**
comp=Z,210nm,0.8s,mb5.5
INCN Inchon 21.22 253 P **P 05 29 22.1 +0.8**
SNR=18
CBIJ Chichi jima 21.24 206 P **P 05 29 20.8 -0.9**
comp=Z,101nm,0.6s,mb5.3,baz=14,slow=2.4,SNR=11
JNU Nakatsue 21.35 238 *e*P **P 05 29 22.7 -0.1**
comp=Z,30nm,0.7s,mb4.7
HIA Hailar 21.96 289 *e*P **P 05 29 27.4 -1.7**
comp=Z,83nm,0.6s,mb5.3
HIA Hailar 21.96 289 *e*P **P 05 29 27.4 -1.7**
HIA pmax pmax
comp=Z,83nm,0.6s
BILL Bilibino 22.49 14 *i*P **P 05 29 36.5 +1.9**
BILL Bilibino 22.49 14⇓*e*P **P 05 29 36.4 +1.8**
BILL *e*S **S 05 33 35.4 -2.3**
BILL pmax pmax
BILL comp=Z,34nm,1.3s,mb4.6 MLR MLR
BILL comp=Z,3µm,21.0s,MS4.6
DL2 Dalian 23.84 262⇑*i*P **P 05 29 48.5 +0.3**
DL2 pP 05 30 01.5
DL2 S **S 05 34 01.3 +1.2**
DL2 pmax pmax
DL2 comp=Z,130nm,1.0s,mb5.3 pmax pmax
DL2 comp=Z,370nm,4.4s LR LR
DL2 comp=N,510nm,16.5s,MS4.2 LR LR
DL2 comp=E,470nm,16.7s,MS4.2 LR LR
DL2 comp=Z,800nm,24.2s
BJI Beijing 27.05 269 P **P 05 30 16.5 -0.8**
BJI S **S 05 34 51.3 +0.2**
BJI pmax pmax
BJI comp=Z,320nm,1.0s,mb5.8 pmax pmax
BJI comp=Z,470nm,4.8s LR LR
BJI comp=N,2µm,14.6s,MS5.0 LR LR
BJI comp=E,3µm,19.5s,MS5.0 LR LR
BJI comp=Z,3µm,20.3s,MS4.8
BJT Baijiatuau 27.06 269 *e*P **P 05 30 17.6 +0.2**
comp=Z,255nm,0.8s,mb5.8
BJT Baijiatuau 27.06 269 *e*P **P 05 30 17.6 +0.2**

BJT pmax pmax
comp=Z,255nm,0.8s
TIXI Tixi 27.35 344⇑ eP P 05 30 18.9 -0.7
TIXI Tixi 27.35 344 eP P 05 30 18.0 -1.6
TIXI eS S 05 35 00.9 +5.7
TIXI pmax pmax
comp=Z,21nm,1.0s,mb4.6
TIXI MLR MLR
comp=Z,1μm,13.0s,MS4.7
JOW Kunigami 27.58 232 eP P 05 30 21.5 -0.6
comp=Z,40nm,1.1s,mb5.0
JOW Kunigami 27.58 232 P P **05 30 21.9 -0.3**
comp=Z,34nm,0.7s,mb5.1,baz=2.0,slow=4.8
NJ2 Nanjing 29.59 252 eP P 05 30 39.8 -0.1
NJ2 pP pP 05 30 57.3 +3.7
NJ2 sP sP 05 31 06.5 +6.6
NJ2 S S **05 35 31.0 -0.2**
NJ2 sS sS 05 36 00.5 +6.2
NJ2 SS SS 05 37 07.0 -31
NJ2 pmax pmax
comp=Z,90nm,1.1s,mb5.4
NJ2 pmax pmax
comp=Z,270nm,6.4s
NJ2 LR LR
comp=N,2μm,15.8s,MS5.0
NJ2 LR LR
comp=E,2μm,16.2s,MS5.0
NJ2 LR LR
comp=Z,2μm,15.2s,MS5.0
HHC Hu-ho-hao-te 29.86 274 eP P 05 30 42.8 +0.5
HHC pP pP 05 30 54.5 -1.4
HHC PP PP 05 31 40.0 -10
HHC PcP PcP 05 33 46.3 +2.1
HHC S S **05 35 34.0 -1.4**
HHC SS SS 05 37 09.0 -35
HHC pmax pmax
comp=Z,240nm,0.7s,mb6.0
HHC pmax pmax
comp=Z,340nm,3.6s
HHC LR LR
comp=N,950nm,13.9s,MS4.8
HHC LR LR
comp=E,2μm,17.0s,MS4.8
HHC LR LR
comp=Z,2μm,18.3s,MS4.8
ULN Ulaanbaatar 30.49 289 eP P 05 30 47.6 -0.2
comp=Z,195nm,0.9s,mb5.8
ULN Ulaanbaatar 30.49 289⇑ iP P 05 30 46.8 -1.0
ULN Ulaanbaatar 30.49 289 P P **05 30 48.0 +0.2**
comp=Z,2μmcomp=Z,236nm,0.9s,mb5.9
ULN Ulaanbaatar 30.49 289 P P **05 30 47.8 +0.1**
SNR=88
TIY Taiyuan 30.72 268 eP P 05 30 51.0 +1.1
TIY pP pP 05 31 02.8 -0.7
TIY S S **05 35 49.3 +0.5**
TIY pmax pmax
comp=Z,120nm,0.8s,mb5.8
TIY pmax pmax
comp=Z,350nm,5.0s
TIY LR LR
comp=N,650nm,11.4s
TIY LR LR
comp=E,2μm,16.6s
TIY LR LR
comp=Z,2μm,20.5s
SONM Songino Array 30.93 289 P P **05 30 51.3 -0.3**
comp=Z,25nm,0.8s,mb5.1,baz=70,slow=8.2,SNR=44
SONM ScP ScP 05 37 25.7 +0.9
comp=Z,3.5nm,0.7s,baz=86,slow=2.5,SNR=5.7
SONM LR LR 05 44 24.1
comp=Z,4μm,18.9s,MS5.1,baz=66,slow=38
BTO Baotou 31.03 274 eP P 05 30 52.0 -0.6
IRK Irkutsk 31.31 298 eP P 05 31 04.1 +9.1
IRK e 05 31 58.1
IRK pmax pmax
comp=Z,75nm,1.7s,mb5.2
TLY Talaya 31.80 297 eP P 05 30 52.6 -6.6
comp=Z,76nm,0.8s,mb5.6
TLY Talaya 31.80 297 eP P 05 30 55.1 -4.1
TLY eS S **05 36 10.6 +5.2**
TLY pmax pmax
comp=Z,79nm,0.8s,mb5.6
TLY MLR MLR
comp=Z,4μm,16.0s,MS5.2
TLY Talaya 31.80 297 P P **05 30 52.7 -6.5**
comp=Z,619nm,0.7s,mb6.5,SNR=36
TLY Talaya 31.80 297 P P **05 30 55.4 -3.9**
SNR=8.7
ZAK Zakamensk 32.29 295⇑ iP P 05 31 03.2 -0.3
ZAK e 05 33 50.8
ZAK pmax pmax
comp=Z,34nm,1.0s,mb5.1
TTA Tatalina 32.71 42 eP P 05 31 06.8 -0.2
YHNB Yeheng 33.18 239 eP P 05 31 12.2 +0.6
MOY Mondy 33.41 298 eP P 05 31 13.4 0.0
WHN Wuhan 33.51 255 ⇑P P 05 31 14.5 0.0
WHN S S **05 36 28.8 -3.7**
WHN pmax pmax
comp=Z,110nm,0.6s,mb6.0
WHN pmax pmax
comp=Z,630nm,8.4s
WHN LR LR
comp=N,2μm,16.2s,MS5.0
WHN LR LR
comp=E,1μm,13.8s,MS5.0
WHN LR LR
comp=Z,2μm,16.1s,MS4.9
GUMO Guam 33.67 193 LR LR 05 44 27.9
comp=Z,973nm,19.1s,MS4.5,baz=16,slow=35
SSLB Suanglung 34.10 239 eP P 05 31 19.1 -0.5
comp=Z,20nm,0.8s,mb5.1
OHAK Old Harbor 34.12 52 eP P 05 31 17.9 -1.4
comp=Z,25nm,0.8s,mb5.2
RSO Redoubt South 34.18 46 eP P 05 31 20.1 +0.2
RSO epP pP 05 31 30.2 -3.4
YULB Yu-li 34.20 238 eP P 05 31 19.9 -0.5
comp=Z,21nm,0.8s,mb5.1
KDAK Kodiak Island 34.44 51 P P **05 31 20.2 -2.0**
comp=Z,266nm,0.8s,mb6.2,SNR=12
KDAK Kodiak Island 34.44 51 eP P 05 31 20.9 -1.3
comp=Z,31nm,0.7s,mb5.3
KDAK Kodiak Island 34.44 51 LR LR 05 44 26.8
comp=Z,632nm,19.9s,MS4.3,baz=250,slow=34
KDAK Kodiak Island 34.44 51 iP P 05 31 20.7 -1.5
PPLA Purkeypile 34.45 42 eP P 05 31 23.0 +0.8
comp=Z,103nm,1.6s,mb5.5
QZH Quanzhou 34.65 243⇑ iP P 05 31 24.8 +0.5
QZH S S **05 36 50.0 -0.1**
QZH pmax pmax
comp=Z,970nm,2.3s,mb6.3
QZH LR LR
comp=N,1μm,19.3s,MS4.9
QZH LR LR
comp=E,1μm,15.0s,MS4.9
QZH LR LR
comp=Z,2μm,30.2s
TPUB Ta-pu 34.66 239 eP P 05 31 24.2 -0.2
comp=Z,64nm,0.8s,mb5.6
TWG Pinlang 34.77 237 eP P 05 31 24.7 -0.7
comp=Z,123nm,1.0s,mb5.8
BPAW Bear Paw Mtn. 35.03 40 eP P 05 31 27.6 +0.4
comp=Z,27nm,0.8s,mb5.2
XAN Xi'an 35.09 265 P P **05 31 28.5 +0.5**
XAN pP pP 05 31 40.8 -1.0
XAN PP PP 05 32 46.0 -2.3
XAN PcP PcP 05 34 01.0 +2.3
XAN S S **05 36 55.0 -1.7**
XAN SS SS 05 39 10.3 -20
XAN pmax pmax
comp=Z,38nm,1.1s,mb5.2
XAN pmax pmax
comp=Z,91nm,9.3s
XAN LR LR
comp=N,810nm,16.8s,MS4.6
XAN LR LR
comp=E,270nm,16.1s,MS4.6
XAN LR LR
comp=Z,520nm,17.4s,MS4.3
TRF Thorofare Moun 35.32 41 eP P 05 31 29.8 0.0
comp=Z,20nm,0.7s,mb5.2
COLD Coldfoot 35.57 34 eP P 05 31 32.2 +0.3
comp=Z,39nm,0.9s,mb5.3
RC01 Rabbit Creek A 35.63 45 eP P 05 31 31.2 -1.2
comp=Z,20nm,1.0s,mb5.0
RC01 ePcP PcP 05 33 59.6 -0.1
SEW Seward 35.84 47 eP P 05 31 33.7 -0.6
comp=Z,20nm,0.9s,mb5.0
PMR Palmer 35.90 44 eP P 05 31 34.7 0.0
comp=Z,11nm,0.7s,mb4.9
PMR Palmer 35.90 44 eP P 05 31 34.7 0.0
PMR pmax pmax
comp=Z,11nm,0.7s,mb4.9
MCK McKinley 35.93 40 eP P 05 31 34.9 0.0
comp=Z,42nm,1.1s,mb5.3
MCK ePcP PcP 05 34 00.7 0.0
MCK McKinley 35.93 40 eP P 05 31 34.9 0.0
MCK e 05 34 00.7
MCK pmax pmax
comp=Z,42nm,1.1s,mb5.3
SML Sawmill 36.27 44 eP P 05 31 37.8 0.0
comp=Z,14nm,0.7s,mb5.0
SML Sawmill 36.27 44 eP P 05 31 37.8 0.0
SML pmax pmax
comp=Z,13nm,0.7s,mb5.0
COLA College 36.40 38 eP P 05 31 39.1 +0.1
comp=Z,62nm,0.9s,mb5.5
COLA College 36.40 38 eP P 05 31 39.1 +0.1
COLA pmax pmax
comp=Z,62nm,0.9s,mb5.5
ILAR Eielson Array 36.82 39 P P **05 31 42.0 -0.5**
ILAR LR LR 05 47 24.9
ILAR Eielson Array 36.82 39 P P **05 31 42.0 -0.5**
comp=Z,4.4nm,0.6s,mb4.5,baz=260,slow=7.1,SNR=83
ILAR LR LR 05 47 25.0
comp=Z,609nm,20.2s,MS4.4,baz=289,slow=37
ENH Enshi 36.94 259 eP P 05 31 43.5 -0.4
comp=Z,98nm,0.9s,mb5.6
LZH Lanzhou 37.46 271 ⇑P P 05 31 49.3 +1.1
LZH pP pP 05 32 01.5 -0.6
LZH PP PP 05 33 17.5 +3.1
LZH S S **05 37 33.0 +0.1**
LZH pmax pmax
comp=Z,170nm,1.1s,mb5.8
LZH pmax pmax
comp=Z,600nm,5.0s
LZH LR LR
comp=N,2μm,16.0s,MS5.1
LZH LR LR
comp=E,2μm,14.8s,MS5.1
LZH LR LR
comp=Z,3μm,17.3s,MS5.1
PAX Paxson 37.52 42 eP P 05 31 49.0 +0.6
comp=Z,10.0nm,0.9s,mb4.5
PAX Paxson 37.52 42 eP P 05 31 49.0 +0.6
PAX pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
DIV Divide 37.55 45 eP P 05 31 49.2 +0.5
comp=Z,28nm,0.6s,mb5.2
DOT Dot Lake 38.10 40 eP P 05 31 52.6 -0.7
comp=Z,51nm,0.7s,mb5.4
BMRM Bremner River 38.13 45 eP P 05 31 53.7 +0.1
comp=Z,21nm,0.7s,mb5.0
MENT Mentasta 38.32 41 eP P 05 31 53.8 -1.4
EGAK Eagle 39.27 38 eP P 05 32 02.6 -0.4
comp=Z,33nm,0.8s,mb5.1
GZH Guangzhou 39.27 247 P P **05 31 58.3 -5.3**
GZH LR LR
comp=N,580nm,18.8s,MS4.5
GZH LR LR
comp=E,500nm,19.9s,MS4.5
GZH LR LR
comp=Z,1μm,21.0s,MS4.8
DAWY Dawson 40.11 39 eP P 05 32 09.7 -0.4
CD2 Chengdu 40.45 265⇑ iP P 05 32 14.0 +0.7
CD2 pP pP 05 32 26.3 -1.0
CD2 PP PP 05 33 51.5 +4.4
CD2 ScP ScP 05 38 01.8 +2.0
CD2 PcP PcP 05 38 07.0 +1.1
CD2 S S **05 38 18.3 +0.3**
CD2 SS SS 05 41 12.5 -6.2
CD2 ScS ScS 05 42 14.0 -0.1
CD2 pmax pmax
comp=Z,430nm,1.0s,mb6.1
CD2 pmax pmax
comp=Z,510nm,4.8s
CD2 LR LR
comp=N,1μm,21.1s,MS4.9
CD2 LR LR
comp=E,890nm,16.7s,MS4.9
CD2 LR LR
comp=Z,1μm,16.7s,MS4.9
GYA Guiyang 41.29 257⇑ iP P 05 32 20.0 -0.3
GYA pP pP 05 32 33.0 -1.3
GYA PP PP 05 34 01.0 +4.7
GYA PcP PcP 05 34 20.5 +2.5
GYA ScP ScP 05 38 04.3 +1.1
GYA S S **05 38 30.3 -0.3**
GYA SS SS 05 41 29.8 -5.8
GYA pmax pmax
comp=Z,90nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,140nm,5.2s
GYA LR LR
comp=N,4μm,17.3s,MS5.4
GYA LR LR
comp=E,3μm,18.2s,MS5.4
GYA LR LR
comp=Z,5μm,16.6s,MS5.4
HYT Haines Junctio 41.57 44 eP P 05 32 23.4 +1.3
INK Inuvik 41.88 32 eP P 05 32 25.3 +0.7
comp=Z,30nm,0.8s,mb5.0
INK Inuvik 41.88 32 eP P 05 32 25.3 +0.7
INK pmax pmax
comp=Z,30nm,0.8s
TGY Tagaytay City 41.90 229 P P **05 32 25.4 +0.1**
comp=Z,115nm,0.3s,mb6.0,baz=157,slow=11,SNR=3.2
ZAA0 Zalesovo Array 42.26 306 eP P 05 32 26.4 -1.5
ZALV Zalesovo Beam 42.26 306 P P **05 32 26.8 -1.1**
comp=Z,33nm,0.6s,mb5.2,baz=63,slow=7.2,SNR=64
ZALV PcP PcP 05 34 20.9 +0.1
comp=Z,36nm,0.8s,baz=82,slow=3.1,SNR=17
ZALV ScP ScP 05 38 07.4 +0.8
comp=Z,2.7nm,0.9s,baz=68,slow=5.4,SNR=2.6
ZALV LR LR 05 51 16.1
comp=Z,4μm,19.0s,MS5.3,baz=79,slow=38
ZALV Zalesovo Beam 42.26 306 P P **05 32 26.8 -1.1**
ZALV 05 34 20.9
NVS Novosibirsk 42.85 307⇑ iP P 05 32 30.9 -1.7
NVS e 05 34 14.1
NVS eS S **05 38 48.6 -4.2**
NVS pmax pmax
comp=Z,13nm,0.9s,mb4.7
NVS pmax pmax
comp=E,7.0nm,0.7s
NVS pmax pmax
comp=Z,32nm,1.7s,mb4.8
NVS pmax pmax
comp=E,13nm,1.5s
NVS smax
comp=E,14nm,2.1s
SKAG Skagway 42.97 46 eP P 05 32 34.6 +1.0
comp=E,108nm,2.2s,mb5.2
QIZ Qiongzhong 44.45 246 P P **05 32 45.5 -0.4**
QIZ pP pP 05 32 59.0 -1.1
QIZ PP PP 05 34 29.5 -0.9
QIZ S S **05 39 17.8 +0.8**
QIZ pmax pmax
comp=Z,43nm,1.7s,mb4.9
QIZ pmax pmax
comp=Z,330nm,5.6s
QIZ LR LR
comp=N,570nm,21.6s
QIZ LR LR
comp=E,150nm,15.3s
QIZ LR LR
comp=Z,760nm,23.2s,MS4.5
QIZ Qiongzhong 44.45 246 eP P 05 32 47.1 +1.1
comp=Z,73nm,1.3s,mb5.2
WMQ Urumqi 44.52 291 P P **05 32 47.8 +1.6**
WMQ pP pP 05 33 00.3 -0.1
WMQ PP PP 05 34 33.3 +2.6
WMQ S S **05 39 19.3 +1.7**
WMQ SS SS 05 42 30.8 -7.4
WMQ ScS ScS 05 42 39.3 +0.4
WMQ pmax pmax
comp=Z,87nm,0.8s,mb5.6
WMQ pmax pmax
comp=Z,310nm,4.4s
WMQ LR LR
comp=N,1μm,19.0s,MS5.0
WMQ LR LR
comp=E,1μm,20.6s,MS5.0
WMQ LR LR
comp=Z,2μm,19.2s,MS5.0
KMI Kunming 44.82 259 ⇑P P 05 32 49.5 +0.7
KMI pP pP 05 33 04.0 +1.0
KMI sP sP 05 33 09.8 +0.6
KMI PP PP 05 34 34.8 +0.6
KMI S S **05 39 19.0 -3.3**
KMI SS SS 05 42 30.3 -14
KMI pmax pmax
comp=Z,81nm,1.1s,mb5.5
KMI pmax pmax
comp=Z,550nm,4.8s
KMI LR LR
comp=N,970nm,17.2s,MS4.8
KMI LR LR
comp=E,350nm,17.2s,MS4.8
KMI LR LR
comp=Z,730nm,20.1s,MS4.6
DAV Davao City (W) 45.78 219 LR LR 05 50 21.2
comp=Z,396nm,20.6s,MS4.3,baz=13,slow=34
DLBC Dease Lake 45.90 46 eP P 05 32 58.2 +1.3
DLBC Dease Lake 45.90 46 LR LR 05 50 29.6
comp=Z,397nm,21.2s,MS4.3,baz=302,slow=34
MK31 Makanchi Array 46.56 297 eP P 05 33 01.4 -0.8
MK31 Makanchi Array 46.56 297 iP P 05 33 01.1 -1.1
MK31 pmax pmax
comp=Z,73nm,0.5s,mb5.9
MKAR Makanchi Array 46.56 297 P P **05 33 01.4 -0.9**
comp=Z,81nm,0.6s,mb5.8,baz=61,slow=5.1,SNR=153
MKAR PcP PcP 05 34 35.2 -0.4
comp=Z,22nm,0.8s,baz=64,slow=5.5,SNR=7.1
MKAR ScP ScP 05 38 24.9 +0.5
comp=Z,3.3nm,0.7s,baz=49,slow=2.7,SNR=4.7
MKAR LR LR 05 53 48.8
comp=Z,5μm,18.9s,MS5.5,baz=69,slow=38
MKAR Makanchi Array 46.56 297 P P **05 33 01.4 -0.8**
MKAR 05 34 35.3
KURK Kurchatov 47.00 303 P P **05 33 04.0 -1.7**
comp=Z,1μm,0.6s,mb6.9,SNR=86
KURK Kurchatov 47.00 303 eP P 05 33 04.3 -1.4
comp=Z,114nm,0.6s,mb6.0
KURK Kurchatov 47.00 303 P P **05 33 05.0 -0.6**
comp=Z,135nm,0.8s,mb6.0,baz=64,slow=8.1,SNR=54
KURK PcP PcP 05 34 37.1 0.0
comp=Z,16nm,0.8s,baz=68,slow=3.6,SNR=5.5
KURK LR LR 05 54 01.6
comp=Z,3μm,19.1s,MS5.3,baz=65,slow=37
KURK Kurchatov 47.00 303 eP P 05 33 04.3 -1.4
KURK pmax pmax
comp=Z,114nm,0.6s,mb6.0
KURK Kurchatov 47.00 303 P P **05 33 04.7 -1.0**
SNR=44
ALE Alert 49.78 6 P P **05 33 26.3 -0.4**
comp=Z,276nm,1.3s,mb6.1,SNR=12
LSA Lhasa 49.84 273 P P **05 33 28.8 +1.0**
LSA Lhasa 49.84 273 eP P 05 33 29.9 +2.1
comp=Z,172nm,0.8s,mb6.1
LSA **Lhasa 49.84 273 eP P 05 33 29.9 +2.1**
LSA pmax pmax
comp=Z,172nm,0.8s,mb6.1
KDM Kudat 50.09 229 P P **05 33 30.3 +0.5**
CHRT Chiangrai 50.40 256 ⇑P P 05 33 32.5 +0.4
comp=Z,395nm,0.8s,mb6.5
BVA0 Borovoye Array 50.52 309 iP P 05 33 31.7 -0.9
BVA0 pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
BVAR Borovoye Array 50.52 309 P P **05 33 31.8 -0.8**
comp=Z,44nm,0.5s,mb5.7,baz=56,slow=8.0,SNR=112
BVAR PcP PcP 05 34 50.0 +0.2
comp=Z,16nm,0.5s,baz=80,slow=4.2,SNR=8.3
BRVK Borovoye 50.56 309 P P **05 33 31.4 -1.5**
comp=Z,718nm,0.5s,mb6.9,SNR=24
BRVK Borovoye 50.56 309 eP P 05 33 31.9 -1.1
comp=Z,68nm,0.6s,mb5.8
BRVK ePcP PcP 05 34 50.1 +0.2
BRVK Borovoye 50.56 309 *c iP* **P 05 33 32.1 -0.8**
BRVK pmax pmax
comp=Z,69nm,0.8s,mb5.6
BRVK MLR MLR
comp=Z,3μm,18.0s,MS5.3
BRVK Borovoye 50.56 309 P P **05 33 31.9 -1.0**
SNR=38
MYLDM Lahad Datu 50.73 226 P P **05 33 35.4 +0.8**
RES Resolute Bay 50.97 18 eP P 05 33 36.0 +0.2
comp=Z,44nm,1.2s,mb5.3
RES Resolute Bay 50.97 18 LR LR 05 55 51.5
comp=Z,533nm,21.8s,MS4.5,baz=119,slow=37
RES Resolute Bay 50.97 18 eP P 05 33 36.0 +0.3
RES pmax pmax
comp=Z,44nm,1.2s,mb5.3
SDKM Sandakan 50.99 228 P P **05 33 37.1 +0.6**
IMP Imphal 51.04 266 *ex* x 05 33 14.0
KKM Kota Kinabalu 51.15 229 P P **05 33 38.5 +0.7**
YKA Yellowknife Ar 51.18 37 P P **05 33 37.4 0.0**
YKA PcP PcP 05 34 51.9 -0.2
YKA LR LR 05 56 45.1
YKA Yellowknife Ar 51.18 37 P P **05 33 37.4 0.0**
comp=Z,7.7nm,0.8s,mb4.7,baz=300,slow=7.0,SNR=23
YKA PcP PcP 05 34 51.8 -0.2
comp=Z,1.7nm,0.4s,baz=304,slow=3.7,SNR=9.7
YKA LR LR 05 56 45.1
comp=Z,32nm,21.3s,baz=245,slow=38
YKA Yellowknife Ar 51.18 37 P P **05 33 37.4 0.0**
YKA 05 34 51.9
CHG Chiang Mai 51.70 256 ⇑P P 05 33 42.9 +1.0
comp=Z,136nm,0.8s,mb5.9
CHTO Chiang Mai 51.70 256 eP P 05 33 42.5 +0.6
comp=Z,76nm,0.7s,mb5.7
CHTO Chiang Mai 51.70 256 eP P 05 33 42.5 +0.6
CHTO pmax pmax
comp=Z,76nm,0.7s,mb5.7
CHTO Chiang Mai 51.70 256 P P **05 33 42.9 +1.0**
CHTO Chiang Mai 51.70 256 P P **05 33 43.1 +1.2**
SNR=56
TSM Tawau 51.80 226 P P **05 33 43.5 +0.9**
CM31 Chiang Mai Arr 51.95 256 eP P 05 33 44.8 +1.0
comp=Z,19nm,0.6s,mb5.2
CMAR Chiang Mai Arr 51.95 256 P P **05 33 45.0 +1.2**
comp=Z,53nm,0.8s,mb5.5,baz=34,slow=7.6,SNR=282
CMAR PcP PcP 05 34 56.8 +1.1
comp=Z,8.1nm,0.8s,baz=24,slow=3.4,SNR=4.4
CMAR ScP ScP 05 38 49.1 +1.3
comp=Z,2.0nm,0.6s,baz=17,slow=4.0,SNR=6.0
CMAR LR LR 05 58 46.8
comp=Z,936nm,18.6s,MS4.8,baz=55,slow=39
CMAR Chiang Mai Arr 51.95 256 P P **05 33 45.0 +1.3**
CMAR 05 34 56.8
KBS Kingsbay 52.43 351 eP P 05 33 46.7 +0.2
KBS eS S **05 41 08.1 0.0**
KBS AMS AMS 05 56 25.1
comp=Z,471nm,22.6s,MS4.5
KBS Kingsbay 52.43 351 eP P 05 33 45.8 -0.8
comp=Z,36nm,0.9s,mb5.3
KBS Kingsbay 52.43 351 ⇓ iP P 05 33 45.7 -0.8
ULHL Ulaiol 52.57 295 P P **05 33 49.0 +0.9**
SNR=7.4
TKM2 Tokmak 2 52.61 296 P P **05 33 48.5 +0.2**
SNR=50
TKM2 Tokmak 2 52.61 296 eP P 05 33 48.3 0.0
comp=Z,34nm,0.7s,mb5.4
TKM2 Tokmak 2 52.61 296 eP P 05 33 48.3 0.0
TKM2 pmax pmax
comp=Z,34nm,0.7s,mb5.4
BDT Bhumibol Dam 52.78 255 P P **05 33 50.5 +0.6**
comp=Z,20nm,1.0s,mb5.0
CHMS Chumnysh 53.09 296 P P **05 33 51.8 -0.1**
SNR=11
USP Ospenovka 53.10 297 P P **05 33 51.4 -0.5**
SNR=140
KBK Karagaybulak 53.16 296 P P **05 33 52.5 +0.1**
SNR=28
NST Nakhon Sawan 53.17 252 P P **05 33 48.6 -4.1**
comp=Z,65nm,1.0s,mb5.5
MRSI Marisa 53.26 219 P P **05 33 52.8 -0.6**
comp=Z,2μmcomp=Z,102nm,1.5s,mb5.5
FRU Bishkek 53.26 296⇑ iP P 05 33 53.0 -0.2
FRU pmax pmax
comp=Z,110nm,1.2s,mb5.7
KZA Kyzart 53.28 295 P P **05 33 54.4 +1.1**
SNR=56
KZA Kyzart 53.28 295 eP P 05 33 54.1 +0.8
comp=Z,64nm,0.8s,mb5.6
AAK Ala-Archa 53.45 296 P P **05 33 54.9 +0.4**
SNR=44
AAK Ala-Archa 53.45 296 eP P 05 33 54.4 -0.1
comp=Z,80nm,0.8s,mb5.7

AAK **Ala-Archa** 53.45 296 P P 05 33 54.9 +0.4
comp=Z,59nm,0.8s,mb5.6,baz=92,slow=3.6,SNR=60
AAK LR LR 05 58 01.1
comp=Z,4µm,18.4s,MS5.5,baz=43,slow=38
AAK **Ala-Archa** 53.45 296 *e*P P 05 33 54.4 -0.1
AAK pmax pmax
comp=Z,80nm,0.8s,mb5.7
AAK **Ala-Archa** 53.45 296 P P 05 33 54.2 -0.3
comp=Z,587nm,0.8s,mb6.6,SNR=26
AAK **Ala-Archa** 53.45 296 P P 05 33 55.1 +0.6
AAK **Ala-Archa** 53.45 296 P P 05 33 54.3 -0.2
SNR=35
SVE **Sverdlovsk** 53.54 317 *e*P P 05 33 54.5 -0.4
SVE *e* 05 35 56.7
SVE pmax pmax
comp=Z,60nm,0.9s,mb5.5
SVE MLR MLR
comp=Z,2µm,18.0s,MS5.1
UCH **Uchtor** 53.66 296 *e*P P 05 33 57.1 +1.0
comp=Z,7.5nm,0.9s,mb4.6
TAPN **Taplejung** 53.67 273 *e*P P 05 33 57.6 +1.3
comp=Z,488nm,0.9s,mb6.5
SOKR **Solikamsk** 53.83 321 ⇓*i*P P 05 33 56.0 -1.0
SOKR pmax pmax
comp=Z,20nm,1.1s,mb5.0
SOKR MLR MLR
comp=Z,2µm,20.0s,MS5.2
EKS2 **Erkin-Say** 53.87 296 P P 05 33 57.7 +0.1
SNR=58
EKS2 **Erkin-Say** 53.87 296 *e*P P 05 33 57.6 0.0
comp=Z,86nm,0.8s,mb5.7
ODAN **Odare** 54.20 273 *e*P P 05 34 01.2 +1.0
comp=Z,463nm,1.1s,mb6.3
AML **Almayashu** 54.22 296 P P 05 34 00.8 +0.6
SNR=56
AML **Almayashu** 54.22 296 *e*P P 05 34 00.7 +0.6
comp=Z,48nm,0.8s,mb5.5
KSH **Kashi** 54.25 292 ⇑*i*P P 05 34 04.3 +3.9
KSH *e*PcP PcP 05 35 07.3 +3.2
KSH *e*PP PP 05 36 07.8 +5.4
KSH *e*ScP ScP 05 39 00.0 +2.5
KSH *e*PcS PcS 05 39 05.3 +1.8
KSH *e*S S 05 41 37.5 +3.7
KSH *e*ScS ScS 05 43 46.3 +1.5
KSH *e*SS SS 05 45 20.3 +4.5
KSH pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
KSH pmax pmax
comp=Z,280nm,3.8s
KSH LR LR
comp=N,2µm,15.0s,MS5.4
KSH LR LR
comp=E,2µm,15.4s,MS5.4
KSH LR LR
comp=Z,1µm,13.2s,MS5.2
A05A **Maple Falls** 54.38 54 ⇑P P 05 34 01.2 0.0
baz=54
JIRN **Jiri** 54.52 274 *e*P P 05 34 04.2 +1.7
comp=Z,468nm,0.7s,mb6.6
GUN **Gumba** 54.57 275 *e*P P 05 34 04.2 +1.3
comp=Z,475nm,0.9s,mb6.5
RAMN **Ramite** 54.69 273 *e*P P 05 34 04.8 +1.1
comp=Z,1µm,0.9s,mb7.0
ARU **Arti** 54.72 317 *e*P P 05 34 02.4 -1.1
ARU *e*PcP PcP 05 35 05.5 -0.1
ARU **Arti** 54.72 317 *e i*P P 05 34 02.3 -1.3
ARU *e**PP pP 05 34 22.5 +4.4
ARU *e* 05 35 05.1
ARU *e* 05 36 02.8
ARU PPP 05 37 14.9
ARU S S 05 41 39.3 -0.3
ARU SS SS 05 45 20.5 -1.9
ARU pmax pmax
comp=Z,86nm,1.0s,mb5.7
ARU MLR MLR
comp=Z,2µm,20.0s,MS5.1
ARU **Arti** 54.72 317 P P 05 34 02.4 -1.2
comp=Z,597nm,0.6s,mb6.8,SNR=22
E03A **Lebam** 54.87 57 ⇓P P 05 34 04.8 0.0
baz=55
JCW **Jim Creek** 54.90 55 *e*P P 05 34 04.7 -0.3
B06A **Marblemount** 54.97 54 ⇑P P 05 34 05.0 -0.5
baz=55
KKN **Kakani** 55.06 275 *e*P P 05 34 07.7 +1.3
comp=Z,445nm,0.7s,mb6.6
PKI **Pulchoki** 55.11 275 *e*P P 05 34 07.9 +1.1
comp=Z,672nm,1.1s,mb6.6
PKIN **Phulchoki** 55.11 275 *e*P P 05 34 08.1 +1.3
comp=Z,364nm,0.7s,mb6.5
BTM **Bintulu** 55.20 231 P P 05 34 08.6 +1.1
DMN **Daman** 55.29 275 *e*P P 05 34 09.6 +1.5
comp=Z,1µm,1.0s,mb6.9
GKN **Gorkha** 55.36 276 *e*P P 05 34 09.8 +1.2
comp=Z,1µm,1.0s,mb6.9
D05A **Enumclaw** 55.42 56 ⇓P P 05 34 09.1 +0.4
baz=55
KK31 **Karatay Array** 55.62 299 ⇑*e*P P 05 34 09.3 -1.0
KKAR **Karatay Array** 55.62 299 *e*P P 05 34 09.9 -0.3
comp=Z,29nm,0.6s,mb5.5
KKAR **Karatay Array** 55.62 299 *e*P P 05 34 09.9 -0.4
KKAR pmax pmax
comp=Z,29nm,0.6s,mb5.5
DANN **Dangsing** 55.74 276 *e*P P 05 34 13.1 +1.7
comp=Z,876nm,0.8s,mb6.8
LON **Longmire** 55.77 56 *e*P P 05 34 11.5 +0.3
LON *e*pP pP 05 34 18.3 -7.5
F04A **Amboy** 55.87 57 ⇑P P 05 34 12.4 +0.4
baz=56
ETW **Entiat** 56.12 55 *e*P P 05 34 13.7 -0.1
KOLN **Koldanda** 56.22 276 *e*P P 05 34 16.2 +1.4
comp=Z,690nm,0.8s,mb6.7
G04A **Mulino** 56.25 58 ⇑P P 05 34 14.6 -0.1
baz=56
B08A **Colville Reser** 56.25 53 ⇓P P 05 34 14.4 -0.3
baz=56,SNR=9.2
SBUM **Sibu** 56.29 231 P P 05 34 16.3 +1.0
LVZ **Lovozero** 56.59 336 ⇑*i*P P 05 34 16.5 -0.3
EDM **Edmonton** 56.62 46 *e*P P 05 34 17.3 0.0
DAG **Danmarks Havn** 56.63 358 ⇓*i*P P 05 34 16.4 -0.6
DAG pmax pmax
comp=Z,58nm,1.2s,mb5.5
DAG **Danmarks Havn** 56.63 358 ⇓*i*P P 05 34 16.4 -0.6
comp=Z,58nm,1.2s,mb5.5
HOOD **Mount Hood Mea** 56.66 57 *e*P P 05 34 18.2 +0.5
H04A **Detroit Lake** 56.72 58 ⇑P P 05 34 18.1 0.0
baz=56,SNR=15
BROR **Big Rock Looko** 56.80 59 P P 05 34 19.4 +0.8
KDI **Kendari** 56.97 216 P P 05 34 21.1 +1.0
comp=Z,712nmcomp=Z,37nm,2.0s,mb5.1
E07A **Sunnyside** 56.98 55 ⇓P P 05 34 19.5 -0.4
baz=57
OD2 **Odessa Site #2** 57.15 54 P P 05 34 20.8 -0.3
C09A **Chrisman Ranch** 57.15 53 ⇓P P 05 34 20.7 -0.4
baz=57
APA **Apatity** 57.16 336 ⇓*i*P P 05 34 20.3 -0.6
APA *e*S S 05 42 13.0 +1.2
APA *e*SS SS 05 46 08.0 +7.5
APA pmax pmax
comp=Z,20nm,0.8s,mb5.2
APA MLR MLR
comp=Z,1µm,18.0s,MS5.1
KEV **Kevo** 57.20 340 *e*P P 05 34 20.8 -0.3
comp=Z,14nm,0.5s,mb5.2
KEV **Kevo** 57.20 340 *e*P P 05 34 19.8 -1.3
KEV pmax pmax
comp=Z,15nm,0.5s,mb5.3
KEV **Kevo** 57.20 340 *ep* P 05 34 19.8 -1.3
comp=Z,15nm,0.5s,mb5.3
D08A **Wollman Farm,** 57.22 54 ⇑P P 05 34 21.2 -0.4
baz=57
RSW **Rattlesnake Hi** 57.23 55 *e*P P 05 34 21.7 +0.1
HAWA **Hanford** 57.26 55 *e*P P 05 34 22.1 +0.3
G06A **Carlson Farm,** 57.30 57 ⇓P P 05 34 21.7 -0.5
baz=57
NEW **Newport** 57.52 52 ⇓P P 05 34 23.5 -0.2
baz=57,SNR=8.8
NEW **Newport** 57.52 52 *e*P P 05 34 23.8 +0.1
comp=Z,31nm,1.7s,mb5.1
NEW **Newport** 57.52 52 *e*P P 05 34 23.8 +0.2
NEW pmax pmax
comp=Z,31nm,1.7s
ARCES **ARCESS Array B** 57.71 341 P P 05 34 24.5 -0.2
ARCES PcP PcP 05 35 17.0 0.0
ARCES LR LR 06 05 09.6
ARCES **ARCESS Array B** 57.71 341 P P 05 34 24.5 -0.2
comp=Z,8.6nm,0.5s,mb5.0,baz=37,slow=7.2,SNR=52
ARCES PcP PcP 05 35 17.0 0.0
comp=Z,18nm,0.9s,baz=46,slow=3.9,SNR=10
ARCES LR LR 06 05 09.6
comp=Z,1µm,19.7s,MS5.0,baz=218,slow=42
ARCES **ARCESS Array B** 57.71 341 P P 05 34 24.5 -0.2
ARCES 05 35 17.0
ARE0 **ARCESS Array S** 57.71 341 *e*P P 05 34 24.2 -0.4
VIPM **Ingram Point** 57.73 58 P P 05 34 25.7 +0.5
A12A **Yaak River Ran** 57.92 51 ⇑P P 05 34 26.6 +0.2
baz=58,SNR=6.9
E09A **Wood Farm, Sta** 57.97 55 ⇑P P 05 34 26.7 -0.1
baz=58,SNR=7.6
AB31 **Akbulak array** 58.09 310 *e*P P 05 34 27.1 -0.6
AB31 pmax pmax
comp=Z,48nm,0.5s,mb5.8
ABKAR **Akbulak array** 58.09 310 *e*P P 05 34 27.0 -0.6
comp=Z,50nm,0.4s,mb5.9
KSM **Kuching** 58.13 232 *e*P P 05 34 28.1 -0.3
KSM **Kuching** 58.13 232 P P 05 34 29.5 +1.2
B12A **Libby** 58.23 51 ⇓P P 05 34 28.6 -0.1
baz=58
G08A **Pilot Rock** 58.23 56 ⇑P P 05 34 28.4 -0.2
baz=58,SNR=16
C11A **Tepee Creek (N** 58.24 52 ⇑P P 05 34 28.8 +0.1
baz=58,SNR=18
LNOR **Lincton Mounta** 58.27 55 *e*P P 05 34 30.7 +1.8
AKTK **Aktyubinsk** 58.40 312 P P 05 34 28.9 -0.9
AKTK PcP PcP 05 35 20.1 +0.1
AKTK LR LR 06 02 12.6
AKTO **Aktyubinsk** 58.40 312 P P 05 34 28.9 -0.9
comp=Z,19nm,0.6s,mb5.3,baz=64,slow=8.7,SNR=31
AKTO PcP PcP 05 35 20.1 +0.1
comp=Z,24nm,0.8s,baz=30,slow=3.2,SNR=7.6
AKTO LR LR 06 02 12.6
comp=Z,5µm,18.2s,MS5.6,baz=235,slow=39
AKTO **Aktyubinsk** 58.40 312 P P 05 34 28.9 -0.9
AKTO 05 35 20.1
A13A **Flathead Natio** 58.58 50 ⇓P P 05 34 30.9 -0.2
baz=58
K05A **Summer Lake** 58.62 60 ⇓P P 05 34 32.3 +0.8
baz=58
KTK1 **Kautokeino** 58.63 341 *e*P P 05 34 30.9 -0.2
KTK1 AMS AMS 06 02 09.5
comp=Z,2µm,23.6s,MS5.2
I07A **Izee** 58.63 58 ⇓P P 05 34 31.6 +0.2
baz=58
C12B **Naegeli Ranch,** 58.74 52 ⇑P P 05 34 32.0 -0.2
baz=58,SNR=5.6
WALA **Waterton Lakes** 58.77 50 *e*P P 05 34 32.5 +0.1
F10A **Beach Ranch, E** 58.80 55 ⇑P P 05 34 32.9 +0.2
baz=59
B13A **Whitefish** 58.89 51 ⇓P P 05 34 33.0 -0.2
baz=59,SNR=29
WDC **Whiskeytown Da** 58.91 62 *e*P P 05 34 33.9 +0.4
BSMT **Bassoo Peak** 59.03 52 *e*P P 05 34 35.1 +1.0
TRO **Tromso** 59.05 343 *e*P P 05 34 33.7 -0.3
TRO AMS AMS 06 04 17.6
comp=Z,997nm,7.7s
A14A **Double T Ranch** 59.08 50 ⇓P P 05 34 34.2 -0.3
baz=59,SNR=12
KTGM **Kuala Trenggan** 59.14 242 P P 05 34 36.6 +1.2
D12A **Red Ives Fores** 59.20 53 ⇓P P 05 34 35.0 -0.4
baz=59
KBKI **Kotabaru** 59.23 223 P P 05 34 37.0 +1.1
comp=Z,3µmcomp=Z,27nm,1.0s,mb5.2
BKSI **Bulukumba** 59.24 218 P P 05 34 38.4 +2.4
comp=Z,539nmcomp=Z,20nm,1.3s,mb5.0
C13A **Hot Springs** 59.24 52 ⇑P P 05 34 35.8 +0.1
baz=59,SNR=8.8
JTMT **Jette** 59.36 52 *e*P P 05 34 37.1 +0.6
A15A **Johnson Ranch,** 59.44 50 ⇓P P 05 34 36.2 -0.8
baz=59,SNR=16
MOD **Modoc** 59.46 60 *e*P P 05 34 37.5 +0.2
B14A **Marquette Ranc** 59.53 51 ⇑P P 05 34 37.5 -0.2
baz=59,SNR=12
C14A **Swan Lake** 59.64 51 ⇓P P 05 34 38.6 +0.2
baz=59
SWMT **Swartz Lake** 59.66 52 *e*P P 05 34 39.0 +0.4
D13A **Huson** 59.66 52 ⇑P P 05 34 39.0 +0.5
baz=59,SNR=9.6
J08A **Circle Bar Ran** 59.66 58 ⇑P P 05 34 38.9 +0.3
baz=59
KLMR **Klimovskoe** 59.88 329 *e*P P 05 34 38.8 -1.1
KLMR *e* 05 36 49.3
KLMR pmax pmax
comp=Z,71nm,1.3s,mb5.5
KLMR MLR MLR
comp=Z,983nm,21.0s,MS4.9
B15A **Bradely Ranch,** 59.94 50 ⇑P P 05 34 40.2 -0.2
baz=60,SNR=13
NDI **New Delhi** 59.98 281 ⇑*i*P P 05 34 40.0 -1.0
F12A **Elk City** 60.04 54 ⇓P P 05 34 41.6 +0.5
baz=60,SNR=18
SLMT **Seeley Lake** 60.09 52 *e*P P 05 34 41.8 +0.2
MSO **Missoula** 60.10 52 ⇓P P 05 34 41.7 +0.1
baz=60,SNR=16
MSO **Missoula** 60.10 52 *e*P P 05 34 41.8 +0.2
comp=Z,8.5nm,0.7s,mb4.9
WVOR **Wild Horse Val** 60.13 59 *e*P P 05 34 42.1 +0.2
comp=Z,15nm,0.9s,mb5.0
WVOR **Wild Horse Val** 60.13 59 *e*P P 05 34 42.1 +0.3
WVOR pmax pmax
comp=Z,15nm,0.9s,mb5.0
D14A **Greenough** 60.19 52 ⇑P P 05 34 42.1 0.0
baz=60,SNR=40
E13A **Victor** 60.20 53 ⇑P P 05 34 42.2 -0.2
baz=60,SNR=14
C15A **Salmond Ranch,** 60.24 51 ⇓P P 05 34 43.1 +0.6
baz=60,SNR=68
B16A **M & M Farms, S** 60.32 50 ⇑P P 05 34 42.8 -0.3
baz=60
G12A **Big Creek, Yel** 60.38 54 ⇑P P 05 34 43.3 -0.3
baz=60,SNR=8.0
CHMT **Chamberlain Mo** 60.42 52 *e*P P 05 34 43.8 0.0
A17A **Triple J Farms** 60.52 49 ⇓P P 05 34 44.2 -0.2
baz=60,SNR=19
F13A **Darby** 60.53 53 ⇓P P 05 34 44.5 0.0
baz=60,SNR=15
E14A **Clinton** 60.60 52 ⇑P P 05 34 45.0 0.0
baz=60,SNR=28
C16A **Fuhringer Ranc** 60.68 50 ⇑P P 05 34 45.6 +0.1
baz=60,SNR=39
KULM **Kulim** 60.69 244 *e*P P 05 34 46.0 0.0
comp=Z,73nm,0.9s,mb5.8
KULM **Kulim** 60.69 244 P P 05 34 47.4 +1.4
SUMG **Summit** 60.73 4 *e*P P 05 34 46.1 +0.7
SUMG **Summit** 60.73 4 ⇑*i*P P 05 34 46.2 +0.7
comp=Z,125nm,0.9s,mb6.0
D15A **Lincoln** 60.74 51 ⇓P P 05 34 46.3 +0.3
baz=60,SNR=10
B17A **L&G Farms, Che** 60.87 49 ⇑P P 05 34 46.9 +0.1
baz=61,SNR=22
A18A **Metzger Ranch,** 60.98 48 ⇓P P 05 34 47.1 -0.5
baz=61,SNR=18
H12A **Diamond D Ranc** 61.00 55 ⇓P P 05 34 47.5 -0.2
baz=61,SNR=7.4
COEN **Coen** 61.00 190 *e*P P 05 34 47.5 -0.5
G13A **Cobalt** 61.01 54 ⇑P P 05 34 47.7 -0.1
baz=61,SNR=32
FFC **Flin Flon** 61.02 40 *e*P P 05 34 47.1 -0.6
F14A **Wisdom** 61.04 53 ⇓P P 05 34 47.7 -0.3
baz=61,SNR=5.6
E15A **Deer Lodge** 61.06 52 ⇑P P 05 34 48.2 +0.1
baz=61,SNR=21
IPM **Ipoh** 61.09 243 *e*P P 05 34 48.6 -0.1
comp=Z,27nm,0.8s,mb5.4
IPM **Ipoh** 61.09 243 P P 05 34 49.9 +1.2
JOF **Joensuu** 61.14 333 *e*P P 05 34 46.1 -2.3
JOF pmax pmax
comp=Z,24nm,0.6s,mb5.5
JOF **Joensuu** 61.14 333 *ep* P 05 34 46.1 -2.3
comp=Z,24nm,0.6s,mb5.5
MFID **Camas Ranch** 61.15 56 ⇑P P 05 34 48.7 -0.1
baz=61,SNR=14
D16A **Dana Ranch, Ca** 61.27 51 ⇓P P 05 34 49.7 +0.2
baz=61,SNR=28
C17A **Wharram Farm,** 61.31 50 ⇓P P 05 34 49.6 -0.2
baz=61,SNR=38
I12A **Atlanta** 61.31 56 ⇑P P 05 34 50.1 +0.3
baz=61,SNR=21
HRY **Holter Researc** 61.32 51 *e*P P 05 34 50.8 +0.9
KHET **Khetri** 61.32 281 AMb AMB 05 41 03.1
comp=Z,8.4nm,1.0s,mb4.8
H13A **Challis** 61.33 54 ⇑P P 05 34 50.0 0.0
baz=61,SNR=27
B18A **Beardsley Farm** 61.34 49 ⇓P P 05 34 50.2 +0.2
baz=61,SNR=22
G14A **Jackson** 61.35 53 ⇑P P 05 34 49.7 -0.4
baz=61
WCN **Washoe City** 61.39 62 ⇑P P 05 34 50.5 0.0
baz=61
WCN **Washoe City** 61.39 62 *e*P P 05 34 51.7 +1.3
comp=Z,28nm,1.3s,mb5.2
WCN **Washoe City** 61.39 62 *e*P P 05 34 51.7 +1.2
WCN pmax pmax
comp=Z,28nm,1.3s,mb5.2
F15A **Butte** 61.50 52 ⇑P P 05 34 50.9 -0.3
baz=61,SNR=22
E16A **East Helena** 61.51 51 ⇑P P 05 34 51.5 +0.3
baz=61
MYKOM **Kota Tinggi** 61.53 239 P P 05 34 53.0 +1.4
LRM **Limekiln Ridge** 61.54 52 *e*P P 05 34 51.9 +0.5
EGMT **Eagleton** 61.59 49 ⇑P P 05 34 51.5 -0.2
baz=61,SNR=13
EGMT **Eagleton** 61.59 49 *e*P P 05 34 51.8 +0.2
comp=Z,20nm,0.7s,mb5.3
D17A **Six Diamond Ra** 61.65 50 ⇑P P 05 34 52.0 -0.1
baz=61,SNR=18
KGM **Kluang** 61.66 239 P P 05 34 53.7 +1.1
KBL **Kabul** 61.66 291 *e*P P 05 34 52.2 -0.2
comp=Z,85nm,0.5s,mb6.1
KBL **Kabul** 61.66 291 *e*P P 05 34 52.3 -0.1
KBL pmax pmax
comp=Z,85nm,0.5s,mb6.1
FRIM **Kepong** 61.70 242 P P 05 34 54.3 +1.4
DLMT **Dillon** 61.75 53 *e*P P 05 34 53.0 +0.2
H14A **Leadore** 61.79 54 ⇑P P 05 34 52.8 -0.3
baz=62
CMB **Columbia Colle** 61.79 64 *e*P P 05 34 52.9 -0.3
I13A **Wildhorse Cree** 61.81 55 ⇑P P 05 34 53.5 +0.3
baz=62,SNR=20
HLID **Hailey** 61.86 55 ⇓P P 05 34 54.2 +0.6
baz=62,SNR=16
HLID **Hailey** 61.86 55 *e*P P 05 34 54.0 +0.4
comp=Z,2.7nm,0.6s,mb4.5
G15A **Dillon** 61.93 53 ⇓P P 05 34 54.1 +0.1
baz=62,SNR=22
MCMT **McKenzie Canyo** 61.94 53 *e*P P 05 34 54.1 0.0
comp=Z,4.0nm,0.9s,mb4.5
E17A **Martinsdale** 61.99 51 ⇓P P 05 34 54.9 +0.5
baz=62,SNR=34
F16A **Kennard Place,** 62.01 52 ⇓P P 05 34 54.6 +0.1
baz=62,SNR=14
WAKR **Walker** 62.08 63 *e*P P 05 34 55.4 +0.3
D18A **Linhart Farms,** 62.09 50 ⇓P P 05 34 55.0 -0.1
baz=62,SNR=7.5
BOZ **Bozeman (W)** 62.09 52 ⇑P P 05 34 55.2 +0.1
baz=62,SNR=27
BOZ **Bozeman (W)** 62.09 52 *e*P P 05 34 55.8 +0.6
comp=Z,8.8nm,0.7s,mb5.0
BOZ **Bozeman (W)** 62.09 52 *e*P P 05 34 55.8 +0.7
BOZ pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
J13A **Cove Ranch, Pi** 62.10 55 ⇓P P 05 34 55.6 +0.4
baz=62,SNR=5.3
C19A **Slack Wire Ran** 62.14 49 ⇑P P 05 34 55.7 +0.3
baz=62,SNR=23
I14A **Mackay** 62.18 55 ⇑P P 05 34 55.9 +0.3
baz=62,SNR=24
H15A **Lima** 62.19 54 ⇑P P 05 34 55.4 -0.4
baz=62
BMN **Battle Mountai** 62.20 60 *e*P P 05 34 56.6 +0.7
comp=Z,12nm,0.7s,mb5.2
BMN **Battle Mountai** 62.20 60 *e*P P 05 34 56.6 +0.7
BMN pmax pmax
comp=Z,13nm,0.7s,mb5.2
G16A **Moss Hill, Enn** 62.27 53 ⇑P P 05 34 56.4 +0.1
baz=62,SNR=60
E18A **Harlowton** 62.43 50 ⇑P P 05 34 57.8 +0.4
baz=62,SNR=8.8
F17A **Fitzpatrick Pl** 62.45 51 ⇓P P 05 34 57.9 +0.3
baz=62,SNR=10
J14A **Carey** 62.52 55 ⇑P P 05 34 58.6 +0.6
baz=62,SNR=25
I15A **Monteview** 62.67 54 ⇓P P 05 34 59.2 +0.3
baz=62
G17A **Pierce Place,** 62.78 52 ⇑P P 05 35 00.3 +0.6
baz=62,SNR=14
NVAR **Mina Array Bea** 62.81 62 P P 05 35 00.3 +0.3
NVAR ⇑*e* 06 04 05.6
NVAR PKP2bc 06 04 05.6
comp=Z,5.3nm,0.8s,mb4.7,baz=292,slow=7.1,SNR=18
NVAR
comp=Z,1.8nm,1.2s,baz=120,slow=5.3,SNR=4.6
MOR8 **Moi Rana** 62.89 342 *e*P P 05 34 58.0 -2.1
MOR8 AMB AMB 05 34 59.7
comp=Z,91nm,1.0s,mb5.9
H16A **Russell Place,** 62.90 53 ⇑P P 05 35 00.4 -0.1
baz=63,SNR=14
F18A **Big Timber** 62.96 51 ⇑P P 05 35 01.0 +0.1
baz=63,SNR=22
MLAC **Mammoth Lakes** 63.00 63 ⇑P P 05 35 02.1 +0.8
baz=63
D20A **Manuel Ranch,** 63.03 49 ⇓P P 05 35 01.6 +0.3
baz=63,SNR=33
GCMT **Greycliff** 63.06 51 *e*P P 05 35 01.8 +0.3
comp=Z,10nm,0.9s,mb5.0
VIS **Vishakhapatnam** 63.07 268 *e*PKP P 05 35 01.9 -0.1
VIS AMb AMB 05 35 04.9
comp=Z,132nm,1.5s,mb5.8
J15A **Blackfoot** 63.08 55 ⇑P P 05 35 02.6 +0.9
baz=63,SNR=9.2
WSI **Waingapu** 63.09 216 P P 05 34 58.2 -3.8
E19A **Rath Farm, Rou** 63.09 50 ⇓P P 05 35 02.1 +0.3
baz=63,SNR=13
AJM **Ajmer** 63.14 281 *e*PKP P 05 35 02.9 +0.5
AJM AMb AMB 05 35 04.6
comp=Z,272nm,1.1s,mb6.3
K14A **Jones Ranch, D** 63.21 56 ⇑P P 05 35 03.1 +0.5
baz=63,SNR=13
KAF **Kangasniemi** 63.26 335 *e*P P 05 35 00.7 -1.9
KAF pmax pmax
comp=Z,43nm,0.6s,mb5.8
KAF **Kangasniemi** 63.26 335 *ep* P 05 35 00.7 -1.9
comp=Z,43nm,0.6s,mb5.8
YFT **Old Faithful** 63.29 53 *e*P P 05 35 05.0 +2.0
I16A **Newdale** 63.30 54 ⇑P P 05 35 04.1 +0.9
baz=63,SNR=9.2
MTUM **Tungsten Hills** 63.34 63 *e*P P 05 35 00.8 -2.8
MTUM *ep*P pP 05 35 21.9 +3.5
BHPL **Bhopal** 63.39 276 *e*PKP P 05 35 04.9 +0.9
BHPL AMb AMB 05 35 06.3
comp=Z,434nm,1.0s,mb6.5
BHPL *ex* x 05 40 44.1
F19A **Roth Farm, Mol** 63.41 51 ⇓P P 05 35 04.3 +0.5
baz=63,SNR=7.8
E20A **Meyer Farm, Mu** 63.41 50 ⇑P P 05 35 04.3 +0.4
baz=63,SNR=9.6
G18A **Lazy EL Ranch,** 63.42 51 ⇑P P 05 35 04.2 +0.2
baz=63
PPBI **Pangkal Pinang** 63.44 234 P P 05 35 05.6 +1.2
comp=Z,3µmcomp=Z,72nm,1.0s,mb5.8
H17A **Grant Village** 63.47 53 ⇑P P 05 35 05.8 +1.5
baz=63
K15A **Arbon** 63.49 55 ⇓P P 05 35 05.3 +0.9
baz=63,SNR=7.7
L14A **Malta** 63.50 56 ⇑P P 05 35 05.1 +0.5
baz=63,SNR=9.1
RCTC **Rector, Farmer** 63.59 64 ⇓P P 05 35 04.9 -0.3
baz=63
IMW **Indian Meadow** 63.59 53 *e*P P 05 35 06.3 +1.2
FLWY **Flagg Ranch** 63.60 53 *e*P P 05 35 06.1 +0.9
J16A **Bone** 63.62 54 ⇓P P 05 35 05.9 +0.6
baz=63,SNR=23
P11A **Circle Ranch,** 63.63 60 ⇓P P 05 35 05.9 +0.5
baz=63
D21A **La Casta Ranch** 63.63 49 ⇓P P 05 35 05.6 +0.3
baz=63,SNR=18
PSI **Prapat** 63.69 244 P P 05 35 06.0 -0.1
comp=Z,33nm,0.9s,mb5.4,baz=7.3,slow=4.7,SNR=24
PSI PcP PcP 05 35 42.2 +0.3
comp=Z,26nm,0.9s,baz=30,slow=3.3,SNR=6.4
PSI LR LR 06 02 07.8
comp=Z,438nm,19.6s,MS4.6,baz=179,slow=35
PSI **Prapat** 63.69 244 P P 05 35 06.0 -0.1
PSI 05 35 42.2
RLMT **Red Lodge** 63.71 51 ⇑P P 05 35 06.6 +0.7
baz=64,SNR=11
RLMT **Red Lodge** 63.71 51 *e*P P 05 35 05.9 +0.1
comp=Z,13nm,0.9s,mb5.0
Q10A **Clear Creek Ra** 63.71 61 ⇓P P 05 35 06.1 +0.1
baz=64
RRI2 **Red Ridge** 63.74 54 *e*P P 05 35 07.2 +1.1

comp=Z,40nm,0.8s,mb5.5
TIN Tinemaha 63.74 63 ⇓P P **05 35 06.6 +0.4**
baz=64
SMMC Simmler 63.76 66 ⇑P P **05 35 06.4 +0.1**
baz=64
O12A Currie 63.77 58 ⇑P P **05 35 06.9 +0.6**
baz=64,SNR=18
I17A Pilgrim Ck. 63.78 53 ⇓P P **05 35 07.2 +0.9**
baz=64
MOOW Moose Ponds 63.80 53 *e*P P **05 35 07.4 +1.0**
PUL Pulkovo 63.83 331 ⇓*e*P P **05 35 06.7 +0.3**
TPAW Teton Pass 63.85 54 *e*P P **05 35 08.5 +1.7**
comp=Z,17nm,0.7s,mb5.2
FINES FINESS Array B 63.85 334 P P **05 35 06.2 -0.3**
FINES PcP PcP 05 35 41.4 -0.4
FINES LR LR 06 05 39.9
FINES FINESS Array B 63.85 334 P P **05 35 06.2 -0.3**
comp=Z,60nm,0.5s,mb5.9,baz=33,slow=7.4,SNR=186
FINES PcP PcP 05 35 41.4 -0.4
comp=Z,16nm,0.7s,baz=46,slow=4.0,SNR=4.4
FINES LR LR 06 05 39.9
comp=Z,1μm,18.7s,MS5.0,baz=43,slow=38
FINES FINESS Array B 63.85 334 P P **05 35 06.2 -0.3**
FINES 05 35 41.4
F20A Billings 63.86 50 ⇓P P **05 35 06.9 +0.1**
baz=64,SNR=6.2
K16A Soda Springs 63.92 55 ⇑P P **05 35 08.4 +1.1**
baz=64,SNR=6.6
HVU Hansel Valley 63.93 56 *e*P P **05 35 07.7 +0.3**
E21A Keefer Ranch, 63.94 49 ⇑P P **05 35 07.9 +0.6**
baz=64,SNR=6.5
KHKI Kahang-Kahang 63.94 221 P P **05 35 11.1 +3.5**
comp=Z,44nm,0.9s,mb5.5
LOHW Long Hollow 63.96 53 *e*P P **05 35 07.8 +0.3**
comp=Z,29nm,1.5s,mb5.1
SNOW Snow King Moun 63.98 54 *e*P P **05 35 08.5 +0.9**
REDW Red Top Meadow 63.99 54 *e*P P **05 35 09.1 +1.4**
L15A Malad City 64.01 56 ⇑P P **05 35 07.9 0.0**
baz=64,SNR=8.9
J17A Brown Place, J 64.06 54 ⇓P P **05 35 09.1 +0.9**
baz=64,SNR=18
R10A Warm Springs 64.11 61 ⇓P P **05 35 08.8 +0.1**
baz=64
DGMT Dagmar 64.12 46 ⇑P P **05 35 08.0 -0.5**
baz=64,SNR=12
DGMT Dagmar 64.12 46 *e*P P **05 35 08.4 -0.1**
comp=Z,16nm,0.5s,mb5.3
PKM Peak Mountain 64.14 66 ⇑P P **05 35 08.9 +0.1**
baz=64
Q11A Duckwater 64.14 60 ⇓P P **05 35 08.7 -0.1**
baz=64
S10A Tonopah Range, 64.17 61 ⇓P P **05 35 08.9 -0.1**
baz=64
P12A McGill 64.18 59 ⇑P P **05 35 09.2 +0.1**
baz=64
MOS Moscow 64.19 325 *e*P P **05 35 15.2 +6.4**
MOS *e* 05 35 42.6
MOS pmax pmax
comp=Z,57nm,1.1s,mb5.5
G20A Bridger 64.21 51 ⇑P P **05 35 08.7 -0.4**
baz=64,SNR=8.7
AHID Auburn Hatcher 64.24 54 *e*P P **05 35 09.7 +0.4**
LAO LASA Array 64.28 49 ⇑P P **05 35 09.5 -0.1**
baz=64,SNR=14
LAO LASA Array 64.28 49 *e*P P **05 35 09.4 -0.1**
comp=Z,31nm,0.9s,mb5.3
GRAC Grapevine Rang 64.30 63 ⇓P P **05 35 09.9 +0.1**
baz=64
O13A Hicks Ranch, I 64.30 58 ⇓P P **05 35 10.0 +0.2**
baz=64
M15A Larsen Ranch, 64.32 56 ⇓P P **05 35 10.4 +0.4**
baz=64,SNR=6.1
I18A Diamond G Ranc 64.34 53 ⇑P P **05 35 10.9 +0.9**
baz=64,SNR=15
BGU Big Grassy Mou 64.34 57 *e*P P **05 35 11.2 +1.2**
comp=Z,6.1nm,1.0s,mb4.6
K17A Gardner Place, 64.35 54 ⇑P P **05 35 10.1 0.0**
baz=64
BKNI Bangkinang 64.36 240 P P **05 35 11.9 +1.4**
comp=Z,4μmcomp=Z,365nm,1.0s,mb6.4
F21A Absaloka Mine, 64.39 50 ⇑P P **05 35 10.1 -0.2**
baz=64
R11A Troy Canyon, C 64.51 61 ⇓P P **05 35 11.1 -0.1**
baz=64,SNR=15
Q12A Willow Creek R 64.51 60 ⇑P P **05 35 11.7 +0.5**
baz=64
L16A Fish Haven 64.54 55 ⇓P P **05 35 11.6 +0.3**
baz=64
J18A Kendall Valley 64.55 53 ⇓P P **05 35 11.9 +0.5**
baz=64,SNR=5.6
N15A Stansbury Isla 64.65 57 ⇑P P **05 35 12.3 +0.2**
baz=64
P13A Bates Ranch, G 64.72 59 ⇓P P **05 35 12.5 0.0**
baz=64
HWUT Hardware Ranch 64.73 56 *e*P P **05 35 13.1 +0.5**
G21A Lodge Grass 64.74 50 ⇓P P **05 35 12.3 -0.3**
baz=64
L17A Cokeville 64.80 55 ⇓P P **05 35 12.8 -0.2**
baz=65,SNR=6.4
H20A Greybull 64.81 51 ⇑P P **05 35 13.0 0.0**
baz=65
MPMC Manual Prospec 64.83 64 ⇓P P **05 35 13.6 +0.2**
baz=65
BSC Santa Cruz Isl 64.84 67 ⇓P P **05 35 13.3 -0.1**
baz=65
NSS Namsos 64.84 342 *e*P P **05 35 11.0 -1.9**
S11A Rachel 64.86 61 ⇑P P **05 35 13.1 -0.5**
baz=65
MNSI Mandailing Nat 64.87 242 P P **05 35 15.1 +1.3**
comp=Z,34nm,0.4s,mb5.7
K18A Toltan Ranch, 64.91 54 ⇓P P **05 35 14.1 +0.4**
baz=65,SNR=12
DUG Dugway 64.94 57 ⇓P P **05 35 14.2 +0.2**
baz=65,SNR=21
DUG Dugway 64.94 57 *e*P P **05 35 14.3 +0.3**
comp=Z,21nm,1.0s,mb5.1
DUG Dugway 64.94 57 *e*P P **05 35 14.3 +0.3**
DUG pmax pmax
comp=Z,21nm,1.0s,mb5.1
FURC Furnace Creek, 64.95 63 ⇓P P **05 35 13.9 -0.2**
baz=65,SNR=10
NOQ North Oquirrh 65.04 57 *e*P P **05 35 14.6 0.0**
Q13A Wheeler Ranch, 65.04 59 ⇓P P **05 35 14.9 +0.2**
baz=65,SNR=20
OBN Obninsk 65.06 325 *e*P P **05 35 14.3 -0.2**
comp=Z,21nm,0.4s,mb5.5
OBN Obninsk 65.06 325⇑*e*P P **05 35 13.8 -0.7**
OBN *e* 05 37 36.5
OBN *e*S S 05 44 06.4 +14
OBN pmax pmax
comp=Z,55nm,1.1s,mb5.5
OBN MLR MLR
comp=Z,800nm,16.0s,MS5.0
O15A The Old Anders 65.08 57 ⇑P P **05 35 15.1 +0.2**
baz=65
LRMC Laurel Mountai 65.09 64 ⇑P P **05 35 14.6 -0.4**
baz=65
I20A Worland 65.09 52 ⇑P P **05 35 15.1 +0.2**
baz=65,SNR=10
BW06 Boulder Array 65.09 54 ⇑P P **05 35 14.6 -0.4**
baz=65,SNR=26
PDAR Pinedale Array 65.09 54 P P **05 35 14.9 0.0**
PDAR LR LR 06 02 48.6
PDAR P'P'
PDAR ⇑*e* 06 04 02.3
PDAR Pinedale Array 65.09 54 P P **05 35 14.9 0.0**
comp=Z,14nm,0.8s,mb5.0,baz=280,slow=1.6,SNR=32
PDAR LR LR 06 02 48.6
comp=Z,256nm,21.6s,MS4.4,baz=321,slow=35
PDAR PKPPKP 06 03 56.5
comp=Z,0.2nm,0.7s,baz=127,slow=1.4,SNR=3.7
PDAR PKP2bc 06 04 02.3
comp=Z,1.6nm,1.2s,baz=149,slow=4.2,SNR=4.7
R12A Pony Springs, 65.10 60 ⇑P P **05 35 14.9 -0.1**
baz=65,SNR=6.0
BLG Laguna Peak 65.12 66 ⇑P P **05 35 15.9 +0.6**
baz=65
SDSI Sungai Dareh 65.14 239 P P **05 35 16.2 +0.6**
comp=Z,2μmcomp=Z,115nm,1.2s,mb5.8
P14A Drum Mountains 65.19 58 ⇑P P **05 35 15.9 +0.3**
baz=65,SNR=5.7
SJI Sawahan 65.20 225 P P **05 35 16.2 +0.3**
comp=Z,47nm,2.1s,mb5.2
H21A Big Horn, Sher 65.22 51 ⇓P P **05 35 15.7 0.0**
baz=65,SNR=19
SMRI Semarang 65.27 227 P P **05 35 17.1 +0.7**
comp=Z,81nm,1.5s,mb5.5

N16A Rees Ranch, Co 65.28 56 ⇓P P **05 35 16.0 -0.2**
baz=65
EDW2 Edwards Air Fo 65.29 65 ⇓P P **05 35 16.3 0.0**
baz=65
U10A Ash Meadows, A 65.31 63 ⇑P P **05 35 16.6 +0.2**
baz=65
M17A Scullys Gap (B 65.33 55 ⇑P P **05 35 16.3 -0.2**
baz=65
PPI Padang Panjang 65.37 240 P P **05 35 18.8 +1.7**
comp=Z,5μmcomp=Z,34nm,1.3s,mb5.2
AKL Akola 65.38 274 *e*PKP P **05 35 17.8 +0.8**
AKL AMb AMB 05 35 19.0
comp=Z,195nm,0.8s,mb6.2
L18A Fontenelle, Gr 65.38 54 ⇑P P **05 35 16.7 -0.1**
baz=65,SNR=12
S12A Delamar Landin 65.43 61 ⇑P P **05 35 17.3 +0.2**
baz=65
PWJI Pagewojo 65.43 225 P P **05 35 16.4 -1.0**
comp=Z,2μmcomp=Z,87nm,1.4s,mb5.6
T11A Corn Creek, Al 65.45 61 ⇑P P **05 35 17.2 -0.1**
baz=65,SNR=15
K19A Absolon Red Bu 65.45 53 ⇓P P **05 35 16.4 -0.9**
baz=65
JLU Jordanelle 65.46 56 *e*P P **05 35 17.6 +0.3**
Q14A Sevier Lake (B 65.46 59 ⇑P P **05 35 17.5 +0.1**
baz=65,SNR=18
DECC Green Verdugo 65.49 66 ⇑P P **05 35 17.6 0.0**
baz=65
NLU North Lily Min 65.52 57 *e*P P **05 35 18.1 +0.4**
R13A O'Grain Ranch, 65.58 60 ⇑P P **05 35 18.4 +0.3**
baz=65
N17A Moffit Pass 65.58 56 ⇑P P **05 35 18.2 +0.1**
baz=65,SNR=28
I21A Big Trails, Te 65.64 51 ⇑P P **05 35 18.1 -0.3**
baz=65,SNR=15
P15A Leamington 65.66 58 ⇑P P **05 35 18.9 +0.2**
baz=65
MWC Mount Wilson 65.68 65 *e*P P **05 35 18.6 -0.3**
MWC *ep*P pP 05 35 33.3 -0.4
SHOC Shoshone 65.68 63 ⇓P P **05 35 18.8 0.0**
baz=66
O16A Springville 65.69 57 ⇑P P **05 35 18.8 0.0**
baz=66,SNR=14
DAU Daniels Canyon 65.69 56 *e*P P **05 35 19.1 +0.2**
comp=Z,8.9nm,0.8s,mb4.8
DAU Daniels Canyon 65.69 56 *e*P P **05 35 19.1 +0.3**
DAU pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
M18A Lyman 65.70 55 ⇑P P **05 35 18.6 -0.2**
baz=66
PDSI Padang 65.70 240 P P **05 35 20.1 +0.9**
comp=Z,72nm,1.4s,mb5.5
MPU Maple Canyon 65.74 57 *e*P P **05 35 20.8 +1.6**
GSC Goldstone 65.75 64 *e*P P **05 35 19.4 +0.2**
K20A Yellowstone Ra 65.84 53 ⇑P P **05 35 19.1 -0.6**
baz=66,SNR=5.4
VRHR Novokhopersk 65.85 320 *e*P P **05 35 18.4 -1.3**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR pmax pmax
comp=Z,60nm,0.6s,mb5.8
U11A Corn Creek 65.88 62 ⇓P P **05 35 20.2 +0.1**
baz=66
BFSC Mount Baldy Ra 65.92 65 ⇓P P **05 35 20.1 -0.2**
baz=66
SHPR Sheep Range 65.97 62 *e*P P **05 35 21.3 +0.6**
Q15A Fillmore 65.98 58 ⇓P P **05 35 20.9 +0.2**
baz=66
P16A Fountain Green 65.99 57 ⇓P P **05 35 21.0 +0.2**
baz=66
S13A Holt Ranch, En 66.04 60 ⇓P P **05 35 21.4 +0.3**
baz=66
R14A James Farms, M 66.06 59 ⇓P P **05 35 21.5 +0.2**
baz=66
T12A Moapa 66.09 61 ⇑P P **05 35 21.5 0.0**
baz=66
O17A Robinson Place 66.13 56 ⇓P P **05 35 22.1 +0.4**
baz=66
ARUT Antelope Range 66.15 60 *e*P P **05 35 21.4 -0.5**
comp=Z,14nm,1.0s,mb4.9
ARUT Antelope Range 66.15 60 *e*P P **05 35 21.4 -0.4**
ARUT pmax pmax
comp=Z,14nm,1.0s,mb5.0
M19A Rock Springs 66.16 54 ⇑P P **05 35 21.6 -0.2**
baz=66
SCI San Clemente I 66.19 67 ⇑P P **05 35 22.3 +0.2**
baz=66
TUQ Turquoise Moun 66.20 63 ⇓P P **05 35 22.0 -0.2**
baz=66
N18A Larsen Ranch, 66.22 55 ⇑P P **05 35 22.0 -0.2**
baz=66
V11A Goodsprings 66.24 63 ⇑P P **05 35 22.7 +0.3**
baz=66
L20A Wansutter 66.27 53 ⇓P P **05 35 22.6 0.0**
baz=66
KLSI 66.31 234 P P **05 35 22.8 -0.3**
comp=Z,2μmcomp=Z,112nm,1.5s,mb5.7
S14A Cedar City 66.33 60 ⇑P P **05 35 22.6 -0.4**
baz=66
HEC Hector,Ludlow 66.35 64 ⇑P P **05 35 23.0 -0.2**
baz=66
CCUT Cedar City 66.36 60 *e*P P **05 35 23.3 +0.1**
comp=Z,10nm,1.0s,mb4.8
BBRC Big Bear Solar 66.36 65 ⇓P P **05 35 23.6 +0.4**
baz=66
T13A Saint George 66.38 61 ⇓P P **05 35 23.3 0.0**
baz=66,SNR=6.6
U12A Valley of Fire 66.39 62 ⇑P P **05 35 23.8 +0.4**
baz=66
MSU Marysvale 66.42 58 *e*P P **05 35 24.2 +0.7**
K21A Alcova 66.45 52 ⇓P P **05 35 23.2 -0.5**
baz=66,SNR=14
MDSI Maura Dua 66.45 234 P P **05 35 23.8 -0.2**
comp=Z,1μmcomp=Z,25nm,1.3s,mb5.1
TMUT Trail Mountain 66.46 57 *e*P P **05 35 26.8 +3.0**
O18A Roosevelt 66.50 56 ⇑P P **05 35 24.6 +0.6**
baz=66,SNR=6.7
N19A John Jarvie Ra 66.55 55 ⇓P P **05 35 24.1 -0.2**
baz=66
R15A Junction 66.56 59 ⇓P P **05 35 24.7 +0.2**
baz=66
HYB Hyderabad 66.57 271⇑*i*P P **05 35 24.0 -0.7**
comp=Z,130nm,1.0s,mb5.9
P17A Butcher Ranch, 66.61 57 ⇑P P **05 35 25.0 +0.2**
baz=66
KSI Kapahiang 66.66 236 P P **05 35 27.1 +1.8**
comp=Z,186nm,0.6s,mb6.3
V12A Nelson 66.67 62 ⇑P P **05 35 25.4 +0.2**
baz=66
M20A Sweetwater, Wa 66.70 54 ⇑P P **05 35 25.5 +0.2**
baz=66
Q16A Cedar Valley 66.73 58 ⇓P P **05 35 25.9 +0.3**
baz=66
U13A Pakoon Wash 66.75 61 ⇑P P **05 35 26.0 +0.3**
baz=66
CTA Charters Tower 66.76 186 P P **05 35 23.9 -1.8**
comp=Z,8.9nm,0.7s,mb4.9,baz=355,slow=6.4,SNR=3.7
DBJI Dramaga 66.76 231 P P **05 35 26.1 +0.2**
P18A Preston Nutter 66.79 56 ⇑P P **05 35 26.4 +0.5**
baz=67,SNR=9.5
GMRC Granite Mounta 66.80 64 ⇓P P **05 35 26.2 +0.2**
baz=67
ULM Lac du Bonnet 66.80 40 P P **05 35 24.8 -1.0**
ULM LR LR 06 04 21.1
ULM Lac du Bonnet 66.80 40 P P **05 35 24.8 -1.0**
comp=Z,5.8nm,0.5s,mb4.8,baz=320,slow=9.5,SNR=6.4
ULM LR LR 06 04 21.1
comp=Z,364nm,21.0s,MS4.6,baz=307,slow=36
K22A Casper 66.83 52 ⇓P P **05 35 26.0 -0.1**
baz=67,SNR=10.0
L21A Rawlins 66.84 53 ⇓P P **05 35 26.0 -0.1**
baz=67
VSR Storozhevoye 66.84 321 *e*P P **05 35 25.2 -0.8**
VSR pmax pmax
comp=N,30nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.6s
VSR pmax pmax
comp=Z,30nm,0.6s,mb5.5
VSR MLR MLR
comp=N,1μm,20.0s,MS5.2
VSR MLR MLR
comp=E,1μm,20.0s,MS5.2
VSR MLR MLR
comp=Z,2μm,20.0s,MS5.3

T14A Hurricane 66.84 60 ⇓P P **05 35 26.7 +0.4**
baz=67
S15A Panguitch 66.86 59 ⇑P P **05 35 27.1 +0.8**
baz=67
W12A Cal Nev Ari 66.94 63 ⇑P P **05 35 26.6 -0.3**
baz=67
LDFC Landfair 66.94 63 *e*P P **05 35 27.0 +0.1**
VORD Divnogorie 66.97 321 *e*P P **05 35 25.6 -1.2**
VORD pmax pmax
comp=N,60nm,0.9s
VORD pmax pmax
comp=E,80nm,0.9s
VORD pmax pmax
comp=Z,40nm,0.9s,mb5.5
VORD MLR MLR
comp=N,2μm,22.0s,MS5.3
VORD MLR MLR
comp=E,1μm,22.0s,MS5.3
VORD MLR MLR
comp=Z,2μm,22.0s,MS5.3
R16A Teasdale 66.98 58 ⇓P P **05 35 27.3 +0.2**
baz=67,SNR=25
SRU San Rafael 66.98 57 ⇑P P **05 35 26.7 -0.4**
baz=67,SNR=32
SRU San Rafael 66.98 57 *e*P P **05 35 27.3 +0.2**
comp=Z,20nm,0.7s,mb5.3
SRU San Rafael 66.98 57 *e*P P **05 35 27.3 +0.2**
SRU pmax pmax
comp=Z,20nm,0.7s,mb5.3
O19A Miners Draw (B 66.98 55 ⇑P P **05 35 26.4 -0.7**
baz=67,SNR=6.2
M21A Separation Pea 67.08 53 ⇓P P **05 35 27.4 -0.3**
baz=67,SNR=6.6
PFO Pinyon Flat Ob 67.08 65 *e*P P **05 35 28.4 +0.6**
comp=Z,11nm,1.2s,mb4.8
PFO Pinyon Flat Ob 67.08 65 *e*P P **05 35 28.4 +0.6**
PFO pmax pmax
comp=Z,11nm,1.2s,mb4.8
N20A Spence Gulch, 67.11 54 ⇓P P **05 35 28.3 +0.4**
baz=67,SNR=17
BELC Belle Mtn. Jos 67.11 64 ⇑P P **05 35 27.2 -0.7**
baz=67
V13A Grand Canyon W 67.11 62 ⇑P P **05 35 28.4 +0.4**
baz=67
RWWY Rawlins 67.11 53 *e*P P **05 35 28.1 +0.2**
RSSD Black Hills 67.15 49 *e*P P **05 35 27.8 -0.3**
comp=Z,16nm,0.8s,mb5.1
RSSD Black Hills 67.15 49 *e*P P **05 35 27.8 -0.3**
RSSD pmax pmax
comp=Z,16nm,0.8s,mb5.1
Q18A Rafter H Ranch 67.21 57 ⇑P P **05 35 28.4 -0.2**
baz=67
U14A Mt Trumbull 67.22 61 ⇑P P **05 35 29.3 +0.7**
baz=67,SNR=18
LATR Latur 67.25 273 *e*PKP P **05 35 29.3 +0.2**
LATR *e*PKP 05 35 29.3
LATR AMb AMB 05 35 30.5
comp=Z,148nm,0.9s,mb6.0
S16A Weppner Ranch, 67.29 59 ⇓P P **05 35 29.4 +0.4**
baz=67,SNR=28
T15A Red Dirt Ranch 67.29 60 ⇓P P **05 35 29.4 +0.3**
baz=67
L22A Ellis Ranch, M 67.30 52 ⇓P P **05 35 28.9 -0.2**
baz=67
R17A Hanksville Air 67.34 58 ⇑P P **05 35 29.2 -0.1**
baz=67,SNR=14
P19A Cripple Cowboy 67.51 56 ⇓P P **05 35 30.3 -0.2**
baz=67,SNR=5.2
IRM Iron Mountain 67.53 64 ⇑P P **05 35 30.6 0.0**
baz=67
BAR Barrett 67.56 66 *e*P P **05 35 31.4 +0.5**
BAR *ep*P pP 05 35 44.9 -0.9
N21A Black Mountain 67.57 54 ⇓P P **05 35 30.6 -0.2**
baz=67
MONP Monument Peak 67.58 66 ⇓P P **05 35 30.5 -0.5**
baz=67
O20A White River Ci 67.59 55 ⇓P P **05 35 30.9 -0.1**
baz=67,SNR=6.4
M22A Cedar Creek Ra 67.64 53 ⇓P P **05 35 30.9 -0.3**
baz=67,SNR=14
L23A Garrett 67.64 52 ⇑P P **05 35 30.6 -0.6**
baz=67,SNR=5.3
BC3 Big Chuckawall 67.67 64 ⇑P P **05 35 31.5 -0.1**
baz=68
U15A North Rim 67.74 60 ⇑P P **05 35 32.5 +0.5**
baz=68,SNR=16
V14A Boquillas Ranc 67.79 61 ⇑P P **05 35 32.2 -0.1**
baz=68,SNR=26
Q19A Hogan Spring (67.81 56 ⇑P P **05 35 31.8 -0.5**
baz=68,SNR=25
S17A Black Ridge (B 67.81 58 ⇓P P **05 35 32.2 -0.1**
baz=68,SNR=22
R18A Canyonlands Na 67.83 57 ⇓P P **05 35 32.1 -0.4**
baz=68,SNR=9.3
T16A Glen Canyon Da 67.83 59 ⇓P P **05 35 31.8 -0.7**
baz=68
P20A De Beque 67.94 56 ⇑P P **05 35 32.7 -0.4**
baz=68
O21A Pagoda 67.97 54 ⇓P P **05 35 32.9 -0.4**
baz=68
W14A Seligman 68.08 62 ⇓P P **05 35 34.2 +0.1**
baz=68,SNR=22
NOA NORSAR Array B 68.09 341 P P **05 35 33.5 -0.1**
comp=Z,70nm,0.7s,mb5.8,baz=27,slow=6.4,SNR=202
NOA LR LR 06 09 43.5
comp=Z,768nm,18.9s,MS5.0,baz=30,slow=40
L24A Wheatland 68.11 52 ⇑P P **05 35 33.8 -0.4**
baz=68
N22A Wattenberg Ran 68.13 53 ⇑P P **05 35 34.6 +0.3**
baz=68
Y12C Blythe 68.19 64 ⇑P P **05 35 34.6 -0.1**
baz=68
V15A Kaibab Nationa 68.22 61 ⇓P P **05 35 34.8 -0.2**
baz=68,SNR=15
T17A Navajo Res., N 68.24 59 ⇑P P **05 35 34.8 -0.2**
baz=68
S18A Hurst Farm, Bl 68.24 58 ⇓P P **05 35 34.5 -0.6**
baz=68
R19A Curley Farm, L 68.26 57 ⇓P P **05 35 35.0 -0.1**
baz=68,SNR=13
PHWY Pilot Hill 68.33 52 *e*P P **05 35 35.9 +0.3**
IZAR Zarasai 68.34 331 *e*P P **05 35 35.4 0.0**
IZAR AMB AMB 05 35 36.7
comp=Z,26nm,0.8s,mb5.3
N23A Red Feather La 68.35 53 ⇑P P **05 35 36.0 +0.3**
baz=68,SNR=8.8
Q20A Ridgley Place, 68.36 56 ⇓P P **05 35 35.0 -0.8**
baz=68
WRA Warramunga Arr 68.38 198 P P **05 35 34.2 -1.6**
WRA LR LR 06 02 12.1
WRA P'P' 06 03 52.0
WRA Warramunga Arr 68.38 198 P P **05 35 34.2 -1.6**
comp=Z,5.7nm,0.8s,mb4.7,baz=21,slow=6.8,SNR=25
WRA LR LR 06 02 12.0
comp=Z,271nm,21.6s,MS4.4,baz=90,slow=33
WRA PKPPKP 06 03 52.0
comp=Z,0.7nm,0.5s,baz=188,slow=2.6,SNR=4.7
PV04 Paradox Valley 68.40 57 *e*P P **05 35 36.6 +0.6**
P21A Newcastle 68.45 55 ⇑P P **05 35 36.6 +0.2**
baz=68,SNR=8.7
GLA Glamis 68.47 64 ⇑P P **05 35 36.2 -0.4**
baz=68
GLA Glamis 68.47 64 *e*P P **05 35 36.9 +0.4**
O22A Kremmling 68.52 54 ⇑P P **05 35 37.1 +0.3**
baz=68
IDID Didziasalis 68.53 330 *e*P P **05 35 36.5 0.0**
IDID AMB AMB 05 35 37.9
comp=Z,38nm,0.8s,mb5.4
ISAL Salakas 68.53 331 *e*P P **05 35 36.6 0.0**
ISAL AMB AMB 05 35 38.1
comp=Z,30nm,0.9s,mb5.2
ISAL *e*PP PP 05 38 06.8 -0.8
M24A Cheyenne 68.56 52 ⇓P P **05 35 37.5 +0.5**
baz=68
Y13A Salome 68.57 63 ⇑P P **05 35 36.7 -0.5**
baz=68
U17A Shonto 68.59 59 ⇓P P **05 35 37.3 0.0**
baz=68,SNR=5.5
W15A Williams 68.60 61 ⇑P P **05 35 37.5 +0.2**
baz=68
U16A Tuba City 68.63 60 ⇓P P **05 35 37.7 +0.2**
baz=68
IIGN Ignalina 68.67 330 *e*P P **05 35 37.4 -0.1**
IIGN AMB AMB 05 35 38.9
comp=Z,49nm,0.7s,mb5.5
T18A Mexican Hat 68.69 58 ⇓P P **05 35 37.1 -0.7**
baz=68,SNR=11

X14A Yava 68.70 62 ⇑P P 05 35 38.1 +0.1
baz=68
S19A Harvey Farm, M 68.70 57 ⇓P P 05 35 37.5 -0.5
baz=68,SNR=32
PV01 Paradox Valley 68.77 57 *e*P P 05 35 37.9 -0.5
comp=Z,721nm,0.8s,mb6.7
MICGM Minsk 68.78 329 *e*P P 05 35 37.0 -1.1
P22A Eagle 68.79 55 ⇑P P 05 35 38.7 +0.2
baz=68,SNR=12
MNK Minsk 68.80 329 *e*P P 05 35 37.0 -1.2
O23A Lake Granby, G 68.83 54 ⇓P P 05 35 39.4 +0.7
baz=69
R20A Redvale 68.84 57 ⇑P P 05 35 39.0 +0.2
baz=69
NACGM Naroch 68.84 330 *e* P 05 35 35.0 -3.5
Q21A Lamborn Mesa, 68.86 56 ⇓P P 05 35 39.0 +0.1
baz=69
FOO Floro 68.86 344 *e*P P 05 35 37.6 -0.9
WUAZ Wupatki 68.91 60 ⇓P P 05 35 39.5 +0.3
baz=69,SNR=9.1
WUAZ Wupatki 68.91 60 *e*P P 05 35 39.8 +0.6
comp=Z,10nm,1.0s,mb4.7
FITZ Fitzroy Crossi 68.94 207 ⇑*i*P P 05 35 38.7 -0.8
comp=Z,18nm,0.9s,mb5.0
FITZ Fitzroy Crossi 68.94 207 *e*P P 05 35 38.9 -0.6
comp=Z,20nm,1.0s,mb5.0
SMCO Snowmass 68.96 55 *e*P P 05 35 39.8 +0.3
comp=Z,16nm,0.9s,mb4.9
112A Yuma 68.97 65 ⇑P P 05 35 39.5 -0.2
baz=69
N24A Carr 68.98 52 ⇑P P 05 35 39.9 +0.3
baz=69
Y14A Wickenburg 68.99 63 ⇑P P 05 35 39.8 0.0
baz=69
POO Poona 69.03 275 *e*PKP P 05 35 41.2 +1.0
POO AMb AMB 05 35 42.6
comp=Z,212nm,0.9s,mb6.1
HYA Hoyanger 69.04 343 *e*P P 05 35 40.9 +1.3
HYA AMB AMB 05 35 41.9
comp=Z,190nm,1.0s,mb6.0
X15A Humboldt 69.08 62 ⇓P P 05 35 40.7 +0.3
baz=69,SNR=18
Z13A Yuma Proving G 69.09 64 ⇓P P 05 35 40.6 +0.1
baz=69
S20A Disappointment 69.09 57 ⇓P P 05 35 40.1 -0.3
baz=69,SNR=13
W16A Flagstaff 69.10 61 ⇓P P 05 35 40.8 +0.3
baz=69
V17A Tonalea, Kykot 69.18 60 ⇓P P 05 35 41.5 +0.5
baz=69,SNR=32
OSL Oslo 69.18 341 *e*P P 05 35 40.7 +0.1
U18A Rough Rock, Ch 69.18 59 ⇑P P 05 35 41.0 0.0
baz=69
R21A Cimarron 69.19 56 ⇑P P 05 35 41.0 +0.1
baz=69,SNR=19
Q22A Crested Butte, 69.21 55 ⇑P P 05 35 41.2 +0.1
baz=69,SNR=7.6
ISCO Idaho Springs 69.29 54 ⇑P P 05 35 41.6 +0.1
baz=69,SNR=19
ISCO Idaho Springs 69.29 54 *e*P P 05 35 42.0 +0.4
comp=Z,12nm,0.9s,mb4.8
ISCO Idaho Springs 69.29 54 *e*P P 05 35 42.0 +0.5
ISCO pmax pmax
comp=Z,12nm,0.9s,mb4.8
113A Mohawk Valley, 69.31 64 ⇓P P 05 35 41.7 -0.1
baz=69
O24A Longmont 69.36 53 ⇓P P 05 35 42.4 +0.4
baz=69
Y15A Casa Rosa Ranc 69.39 62 ⇑P P 05 35 42.2 0.0
baz=69,SNR=13
T19A Beclabito 69.40 58 ⇑P P 05 35 42.0 -0.2
baz=69
Z14A Wintersburg 69.42 63 ⇓P P 05 35 42.3 -0.1
baz=69
N25A Grover 69.42 52 ⇓P P 05 35 42.4 0.0
baz=69
MVCO Mesa Verde 69.44 57 ⇓P P 05 35 42.5 0.0
baz=69,SNR=13
P23A Jefferson 69.46 54 ⇓P P 05 35 42.9 +0.3
baz=69
GOF Gofitskoye 69.52 314 ⇓*i*P P 05 35 34.7 -8.2
GOF pmax pmax
comp=Z,170nm,0.8s,mb6.0
S21A Coal Bank Pass 69.54 57 ⇑P P 05 35 43.7 +0.6
baz=69,SNR=19
W17A Winslow 69.60 60 ⇑P P 05 35 43.6 +0.1
baz=69
X16A Lo Mia Camp, P 69.61 61 ⇑P P 05 35 44.1 +0.5
baz=69,SNR=16
V18A Ganado 69.63 59 ⇓P P 05 35 43.9 +0.2
baz=69,SNR=17
KAD Karad 69.64 274 *e*PKP P 05 35 44.3 +0.2
KAD AMb AMB 05 35 46.1
comp=Z,209nm,1.2s,mb6.0
DZM Mont Dzumac 69.65 166 *e*S S 05 44 51.0 +2.9
comp=Z,252nm,28.2s
DZM *e*LR LR 05 56 59.5
comp=Z,892nm,25.4s
U19A Dine' College, 69.66 58 ⇑P P 05 35 44.0 +0.2
baz=69,SNR=16
KONO Kongsberg 69.69 341 *e*P P 05 35 44.0 +0.3
KONO Kongsberg 69.69 341 *e*P P 05 35 43.7 0.0
comp=Z,136nm,1.0s,mb5.8
KONO Kongsberg 69.69 341 *e*P P 05 35 43.7 0.0
KONO pmax pmax
comp=Z,136nm,1.0s,mb5.8
R22A Saguache, Gunn 69.74 56 ⇓P P 05 35 44.6 +0.2
baz=70,SNR=20
Q23A Hartsel 69.79 55 ⇓P P 05 35 44.6 0.0
baz=70,SNR=6.8
114A Black Gap (USA 69.87 63 ⇑P P 05 35 45.4 +0.1
baz=70
P24A Kohler Place, 69.88 54 ⇑P P 05 35 45.9 +0.7
baz=70
O25A Wiggins 69.89 53 ⇑P P 05 35 45.3 0.0
baz=70
BER Bergen 69.92 343 *e*P P 05 35 46.0 +0.9
BER AMS AMS 06 12 41.8
comp=Z,792nm,17.6s,MS5.0
Z15A Gila River Ind 69.95 63 ⇓P P 05 35 45.7 0.0
baz=70,SNR=6.6
Y16A Circle Bar Ran 69.96 62 ⇓P P 05 35 45.9 +0.1
baz=70
U20A Newcomb 70.00 58 ⇑P P 05 35 46.1 +0.1
baz=70
S22A 4UR Ranch, Cre 70.03 56 ⇑P P 05 35 46.4 +0.2
baz=70,SNR=21
X17A Forest Lakes 70.05 61 ⇑P P 05 35 46.5 +0.2
baz=70,SNR=5.9
Q24A Divide 70.13 54 ⇑P P 05 35 46.2 -0.5
baz=70
V19A Window Rock 70.15 59 ⇑P P 05 35 46.8 -0.1
baz=70
W18A Petrified Fore 70.15 60 ⇓P P 05 35 47.1 +0.2
baz=70
P25A Willow Gulch B 70.29 53 ⇑P P 05 35 47.9 +0.2
baz=70,SNR=12
Z16A Peralta Trail, 70.36 62 ⇑P P 05 35 48.5 +0.2
baz=70
OGNE Ogallala 70.43 51 ⇑P P 05 35 47.9 -0.6
baz=70,SNR=13
OGNE Ogallala 70.43 51 *e*P P 05 35 48.3 -0.2
comp=Z,40nm,0.8s,mb5.4
X18A Snowflake 70.43 60 ⇓P P 05 35 48.2 -0.4
baz=70
V20A Brimhall 70.43 58 ⇑P P 05 35 48.5 -0.1
baz=70
EYMN Ely 70.45 40 *e*P P 05 35 47.4 -1.1
comp=Z,36nm,1.3s,mb5.2
214A Organ Pipe Nat 70.46 64 ⇑P P 05 35 48.8 -0.1
baz=70
U21A Nageezi 70.47 57 ⇑P P 05 35 48.9 0.0
baz=70,SNR=7.9
Y17A Roosevelt 70.47 61 ⇓P P 05 35 48.7 -0.1
baz=70
KIV Kislovodsk 70.49 314 *e*P P 05 35 49.1 +0.3
comp=Z,91nm,1.1s,mb5.6
KIV Kislovodsk 70.49 314 ⇓*e*P P 05 35 49.3 +0.5
KIV *e*S S 05 45 01.9 +4.2
KIV pmax pmax
comp=Z,61nm,0.9s,mb5.5
KIV MLR MLR
comp=Z,2µm,17.0s,MS5.4
KIV Kislovodsk 70.49 314 P P 05 35 50.2 +1.4
comp=Z,372nm,1.0s,mb6.3,SNR=7.5
KIV Kislovodsk 70.49 314 P P 05 35 50.1 +1.2
SNR=16
T22A Edith 70.50 57 ⇓P P 05 35 49.3 +0.2
baz=70,SNR=11
S23A Nye Farm, Mont 70.53 56 ⇓P P 05 35 49.3 +0.1
baz=70
Q25A Bedland, Calha 70.66 54 ⇓P P 05 35 49.8 -0.2
baz=70,SNR=5.6
R24A Sanders Place, 70.66 55 ⇑P P 05 35 49.7 -0.3
baz=70,SNR=16
116A Eloy 70.72 63 ⇓P P 05 35 50.4 -0.1
baz=70
ZEI Tsey 70.74 312 *e*P P 05 35 50.4 0.0
ZEI pmax pmax
comp=Z,49nm,0.9s,mb5.4
SDCO Great Sand Dun 70.78 55 ⇑P P 05 35 50.7 0.0
baz=70,SNR=13
SDCO Great Sand Dun 70.78 55 *e*P P 05 35 50.8 +0.1
comp=Z,4.5nm,0.8s,mb4.5
SUW Suwalki 70.79 331 *e*P P 05 35 49.9 -0.6
SUW LMZ 06 08 24.1
comp=Z,800nm,21.7s
SUW Suwalki 70.79 331 *e*P P 05 35 50.0 -0.4
comp=Z,132nm,0.8s,mb5.9
W20A Ramah 70.88 59 ⇓P P 05 35 51.3 -0.1
baz=71
X19A St. Johns 70.89 60 ⇑P P 05 35 51.5 +0.1
baz=71,SNR=12
Y18A Canyon Day Jun 70.90 61 ⇓P P 05 35 52.0 +0.5
baz=71,SNR=12
V21A Milan 70.91 58 ⇓P P 05 35 51.6 0.0
baz=71
DGRG David-gareji 70.93 311 P P 05 35 51.8 +0.2
Z17A San Carlos Hig 70.97 62 ⇑P P 05 35 51.7 -0.3
baz=71
T23A Casias Ranch, 70.98 56 ⇑P P 05 35 52.2 +0.2
baz=71,SNR=5.5
S24A Houchin Ranch, 71.02 55 ⇑P P 05 35 52.5 +0.3
baz=71,SNR=6.7
MTA Mtatsminda 71.06 311 P P 05 35 53.6 +1.3
TBLG Delisi 71.06 311 *e*P P 05 35 53.8 +1.5
TBLG Delisi 71.06 311 P P 05 35 53.8 +1.4
R25A Fountain Ranch 71.18 54 ⇑P P 05 35 52.7 -0.4
baz=71,SNR=8.1
ECSD EROS Data Cent 71.19 46 *e*P P 05 35 52.0 -1.1
comp=Z,52nm,1.4s,mb5.3
GOR Gori 71.20 312 P P 05 35 54.2 +1.0
Y19A Nutrioso 71.24 60 ⇓P P 05 35 54.0 +0.5
baz=71
216A Three Points, 71.26 63 ⇓P P 05 35 53.7 0.0
baz=71
V22A San Miguel Ran 71.26 57 ⇑P P 05 35 53.6 -0.1
baz=71
X20A Quemado 71.29 59 ⇑P P 05 35 54.0 +0.2
baz=71,SNR=15
AKASG Malin Array Be 71.31 326 P P 05 35 53.0 -0.7
comp=Z,59nm,0.4s,mb5.9,baz=33,slow=6.3,SNR=272
AKASG LR LR 06 09 27.3
comp=Z,2µm,19.4s,MS5.3,baz=35,slow=38
AKBB Malin Array Si 71.31 326 *e*P P 05 35 52.9 -0.8
117A Oracle 71.31 62 ⇓P P 05 35 53.5 -0.5
baz=71
KIEV Kiev 71.32 326 *e*P P 05 35 52.9 -0.9
comp=Z,114nm,0.8s,mb5.8
KIEV Kiev 71.32 326 *e*P P 05 35 52.9 -0.8
KIEV pmax pmax
comp=Z,114nm,0.8s,mb5.8
Z18A Geronimo 71.38 61 ⇑P P 05 35 54.5 +0.1
baz=71
U23A El Rito 71.38 57 ⇓P P 05 35 54.4 0.0
baz=71,SNR=39
W21A San Fidel 71.39 58 ⇑P P 05 35 54.5 0.0
baz=71
SNART Snartemo 71.41 342 *e*P P 05 35 54.5 +0.3
SNART AMB AMB 05 35 55.6
comp=Z,112nm,0.8s,mb5.8
S25A Robets Cordova 71.44 55 ⇑P P 05 35 54.0 -0.8
baz=71
TUC Tucson 71.46 62 *e*P P 05 35 54.5 -0.5
comp=Z,7.5nm,1.1s,mb4.5
Z19A T-Link Ranch, 71.70 61 ⇓P P 05 35 56.6 +0.2
baz=72
118A Homack Ranch, 71.73 62 ⇑P P 05 35 56.5 0.0
baz=72
X21A Alamocita Cree 71.77 59 ⇑P P 05 35 57.2 +0.4
baz=72,SNR=9.9
V23A Ortiz Mt. (NFS 71.80 57 ⇑P P 05 35 57.0 +0.1
baz=72,SNR=8.3
Y20A Horse Springs, 71.80 60 ⇑P P 05 35 57.6 +0.7
baz=72,SNR=8.1
217A Green Valley 71.81 63 ⇑P P 05 35 57.3 +0.3
baz=72
T25A Trinidad 71.83 55 ⇑P P 05 35 56.9 -0.1
baz=72,SNR=13
U24A Moreno Valley 71.85 56 ⇓P P 05 35 57.7 +0.5
baz=72
W22A Albuquerque 71.87 58 ⇓P P 05 35 57.9 +0.5
baz=72
ASAR Alice Springs 72.07 198 P P 05 35 58.1 -0.3
comp=Z,9.1nm,0.6s,mb4.9,baz=14,slow=5.0,SNR=111
218A Dragoon 72.14 62 ⇑P P 05 35 59.2 +0.1
baz=72,SNR=8.4
Y21A Point of Rocks 72.14 59 ⇑P P 05 35 59.6 +0.6
baz=72
LAZ Ladron 72.19 59 *e*P P 05 36 00.0 +0.8
comp=Z,4.2nm,1.0s,mb4.3
X22A Bernardo 72.19 59 ⇓P P 05 35 59.6 +0.3
baz=72
ANMO Albuquerque 72.20 58 *e*P P 05 35 59.1 -0.2
comp=Z,6.6nm,0.9s,mb4.6
GNI Garni 72.20 310 *e*P P 05 36 01.4 +2.1
comp=Z,50nm,0.8s,mb5.5
GNI Garni 72.20 310 P P 05 36 00.2 +1.0
comp=Z,20nm,0.7s,mb5.2,baz=90,slow=4.2,SNR=21
GNI Garni 72.20 310 *c i*P P 05 36 00.9 +1.7
GNI pmax pmax
comp=Z,78nm,1.3s
GNI MLR MLR
comp=Z,1µm,17.0s
GNI Garni 72.20 310 P P 05 36 01.5 +2.3
SNR=18
SOC Sochi 72.22 315 *e*P P 05 35 58.0 -1.3
SOC *e*S S 05 45 10.3 -7.3
SOC *e* 05 45 59.1
SOC pmax pmax
comp=Z,41nm,0.6s,mb5.5
Z20A Nine Sixteen R 72.23 61 ⇓P P 05 35 59.2 -0.3
baz=72
W23A Werner Place, 72.23 58 ⇓P P 05 35 59.5 0.0
baz=72
PALK Pallekele 72.27 262 P P 05 36 00.4 +0.4
comp=Z,462nm,0.9s,mb6.4,SNR=9.1
PALK Pallekele 72.27 262 *e*P P 05 35 60.0 0.0
comp=Z,77nm,0.9s,mb5.6
PALK Pallekele 72.27 262 *e*P P 05 36 00.0 0.0
PALK pmax pmax
comp=Z,77nm,0.9s,mb5.6
PALK Pallekele 72.27 262 P P 05 36 00.0 0.0
comp=Z,615nmcomp=Z,48nm,1.3s,mb5.2
PALK Pallekele 72.27 262 P P 05 36 00.9 +0.9
SNR=5.9
V24A Rampart Ranch, 72.34 57 ⇑P P 05 36 00.1 0.0
baz=72,SNR=9.1
U25A Circle Dot Ran 72.35 56 ⇑P P 05 36 00.3 +0.1
baz=72,SNR=15
BSD Bornholm Skovb 72.38 336 ⇑*i*P P 05 35 59.5 -0.5
BSD pmax pmax
comp=Z,100nm,0.9s,mb5.8
BSD MLR MLR
comp=Z,830nm,24.0s,MS4.9
BSD Bornholm Skovb 72.38 336 ⇑*i*P P 05 35 59.5 -0.5
comp=Z,102nm,0.9s,mb5.8
BSD
comp=Z,820nm,24.0s
ANN Anapa 72.39 317 *c i*P P 05 35 58.8 -1.5
ANN *e**PP pP 05 36 16.6 +1.2
ANN *e* 05 38 42.8
ANN *e*PPP 05 40 25.7
ANN *e*S S 05 45 21.6 +2.1
ANN *e*SS SS 05 50 05.9 +8.3
ANN pmax pmax
comp=Z,61nm,1.4s,mb5.3
Y22D IRIS PASSCAL I 72.54 59 ⇑P P 05 36 01.8 +0.4
baz=72
318A Bisbee 72.55 63 ⇑P P 05 36 01.9 +0.4
baz=72
COP Copenhagen 72.55 338 *i* P P 05 36 01.9 +0.9
COP pmax pmax
comp=Z,86nm,0.9s,mb5.7
COP Copenhagen 72.55 338 *i* P P 05 36 01.9 +0.9
comp=Z,86nm,0.9s,mb5.7
120A U Bar Ranch, L 72.60 61 ⇓P P 05 36 02.1 +0.4
baz=72,SNR=5.2
219A White Tail Can 72.60 62 ⇓P P 05 36 01.8 0.0
baz=72,SNR=10
Y22A Socorro 72.61 59 ⇓P P 05 36 02.4 +0.6
baz=72
X23A Hourglass Bar 72.61 58 ⇑P P 05 36 01.6 -0.2
baz=72
W24A Lazy 6 Ranch, 72.62 57 ⇑P P 05 36 02.1 +0.3
baz=72,SNR=21
V25A Rancho No Teng 72.63 56 ⇑P P 05 36 01.9 0.0
baz=72,SNR=5.5
Z21A St. Cloud Mine 72.64 60 ⇑P P 05 36 02.2 +0.2
baz=72,SNR=11
BNM Barren Site 72.66 59 *e*P P 05 36 02.0 -0.1
comp=Z,5.3nm,1.1s,mb4.4
MUD Monsted U'grnd 72.68 340 *i* P P 05 36 01.9 +0.1
MUD pmax pmax
comp=Z,52nm,0.8s,mb5.5
MUD MLR MLR
comp=Z,650nm,18.0s,MS5.0
MUD Monsted U'grnd 72.68 340 *i* P P 05 36 01.9 +0.1
comp=Z,52nm,0.8s,mb5.5
MUD
comp=Z,640nm,18.0s
COWI Conover 72.90 40 *e*P P 05 36 02.2 -1.1
comp=Z,40nm,1.5s,mb5.1
DBOC Borcka 72.91 313 ⇑*i*P P 05 36 03.8 +0.3
319A Douglas 73.03 62 ⇓P P 05 36 03.9 -0.3
baz=73,SNR=19
X24A Lazy VL Ranch, 73.06 58 ⇑P P 05 36 04.8 +0.3
baz=73
Z22A Elephant Butte 73.09 59 ⇓P P 05 36 04.9 +0.2
baz=73
220A Playas Peak, P 73.11 61 ⇑P P 05 36 05.0 +0.3
baz=73
121A Cookes Peak, D 73.12 60 ⇓P P 05 36 05.4 +0.6
baz=73
V26A Tequesquite Ra 73.13 56 ⇑P P 05 36 04.0 -0.9
baz=73,SNR=13
Y23A Lovelace Mesa, 73.15 58 ⇑P P 05 36 05.3 +0.3
baz=73
W25A X Bar L Ranch, 73.16 56 ⇓P P 05 36 04.8 -0.2
baz=73,SNR=15
CBKS Cedar Bluff 73.19 51 ⇑P P 05 36 03.6 -1.6
baz=73
CBKS Cedar Bluff 73.19 51 *e*P P 05 36 03.9 -1.2
DYDN Diyadin 73.20 310 ⇑*i*P P 05 36 06.6 +1.5
DDEM Demirkent 73.21 312 ⇑*i*P P 05 36 05.9 +0.7
GKP Gorka Klasztor 73.31 334 *e*P P 05 36 05.5 -0.1
GKP LMZ 06 11 39.4
comp=Z,3µm,19.9s
RGN Rugen 73.32 337 *e*P P 05 36 05.8 +0.2
comp=Z,208nm,0.9s,mb6.1
QLP Quilpie 73.37 188 *e*P P 05 36 05.5 -0.6
122A Conniff Cattle 73.47 60 ⇓P P 05 36 07.2 +0.4
baz=73
SCHQ Schefferville 73.47 22 P P 05 36 05.0 -1.5
SCHQ LR LR 06 11 07.8
SCHQ Schefferville 73.47 22 P P 05 36 05.0 -1.5
comp=Z,5.5nm,0.5s,mb4.7,baz=345,slow=7.4,SNR=13
SCHQ LR LR 06 11 07.8
comp=Z,339nm,18.9s,MS4.7,baz=151,slow=38
221A Mesquite Ranch 73.49 61 ⇑P P 05 36 07.1 +0.1
baz=73
320A Kipp Ranch, An 73.51 62 ⇑P P 05 36 06.8 -0.3
baz=73
Y24A Capitan 73.52 58 ⇑P P 05 36 07.1 -0.1
baz=73,SNR=8.5
Z23A Rita Site, Whi 73.52 59 ⇑P P 05 36 07.4 +0.2
baz=73
X25A Clemmons Ranch 73.54 57 ⇑P P 05 36 07.2 -0.1
baz=73
W26A Owens Ranch, T 73.65 56 ⇑P P 05 36 07.8 -0.1
baz=73
HOMI Horasan 73.75 312 ⇑*i*P P 05 36 09.7 +1.3
MBWA Marble Bar 73.79 212 P P 05 36 08.4 -0.2
SIM Simferopol' 73.79 319 *e*P P 05 36 09.3 +0.8
SIM *e* pP 05 36 20.0 -3.7
SIM pmax pmax
comp=Z,34nm,0.9s,mb5.3
SIM MLR MLR
comp=Z,2µm,18.6s,MS5.3
222A Williams Famil 73.83 60 ⇑P P 05 36 09.2 +0.2
baz=74
MVH1 Achvaich 73.91 347 *e*P P 05 36 08.4 -0.6
123A Bell Site, Whi 73.95 59 ⇑P P 05 36 10.2 +0.5
baz=74
Y25A Mesa, Roswell 73.95 58 ⇓P P 05 36 09.1 -0.6
baz=74,SNR=13
LVV L'vov 73.97 328 *e*P P 05 36 09.2 -0.3
Z24A Sheeppen Canyo 73.98 58 ⇑P P 05 36 09.6 -0.3
baz=74,SNR=5.5
X26A CR and CF Fran 74.01 57 ⇓P P 05 36 09.6 -0.5
baz=74
W27A Bowe Ranch, En 74.07 56 ⇓P P 05 36 10.4 0.0
baz=74
MCD Coleburn Disti 74.09 347 *e*P P 05 36 09.5 -0.6
SCIA State Center 74.22 45 *e*P P 05 36 10.5 -0.6
comp=Z,50nm,0.8s,mb5.5
223A Chaparral, Ant 74.30 60 ⇓P P 05 36 11.7 0.0
baz=74
MME1 Meikle Cairn 74.30 346 *e*P P 05 36 10.4 -0.9
X27A F and S Farms, 74.35 56 ⇑P P 05 36 11.9 -0.1
baz=74
124A Stringfield Ra 74.38 59 ⇑P P 05 36 12.0 -0.2
baz=74,SNR=6.0
Z25A Roswell 74.40 58 ⇓P P 05 36 12.0 -0.3
baz=74
MDO Dochfour 74.40 347 *e*P P 05 36 11.3 -0.6
KIS Kishinev 74.43 324 *i* P P 05 36 11.0 -1.2
comp=Z,400nm,1.0s,mb6.3
KIS *i* pP pP 05 36 31.0 +3.6
KIS *e*LQ 06 04 25.0
KIS LRM 06 11 54.0
comp=Z,1µm,17.0s
KIS Kishinev 74.43 324 *α i*P P 05 36 11.0 -1.2
KIS *i* *PP pP 05 36 31.0 +3.6
KIS pmax pmax
comp=Z,380nm,1.0s,mb6.3
KIS MLR MLR
comp=Z,1µm,17.0s,MS5.3
KIS MLR MLR
comp=N,1µm,18.0s,MS5.3
KIS MLR MLR
comp=E,500nm,15.0s,MS5.3
KIS MLR MLR
comp=Z,2µm,17.0s
Y26A Elida 74.45 57 ⇓P P 05 36 12.0 -0.6
baz=74
KAC Achnashellach 74.48 348 *e*P P 05 36 12.0 -0.3
KWP Kalwaria Pacla 74.60 329 *i* P P 05 36 13.6 +0.4
comp=Z,400nm,1.0s,mb6.3
KWP *e*PcP PcP 05 36 24.7 -2.6
KWP LMZ 06 11 32.9
comp=Z,1µm,20.7s
KWP Kalwaria Pacla 74.60 329 *e*P P 05 36 13.5 +0.4
comp=Z,254nm,0.9s,mb6.2
KWP Kalwaria Pacla 74.60 329 ⇑*i*P P 05 36 13.5 +0.3
KWP *e* pP 05 36 24.7 -3.6
KWP pmax pmax
comp=Z,400nm,1.0s,mb6.3
KWP MLR MLR
comp=Z,1µm,20.7s,MS5.2
KSU1 Kansas State U 74.62 49 *e*P P 05 36 11.7 -1.9
comp=Z,15nm,0.8s,mb5.0
HAKT HAKKARI 74.64 309 ⇑*i*P P 05 36 13.5 -0.2
BSEG Bad Segeberg 74.67 338 *e*P P 05 36 13.6 +0.1
comp=Z,94nm,1.0s,mb5.7
BSEG Bad Segeberg 74.67 338 *e*P P 05 36 13.6 +0.1
BSEG Bad Segeberg 74.67 338 *e*P P 05 36 13.6 +0.1
BSEG pmax pmax
comp=Z,94nm,1.0s,mb5.7
KPL Plockton 74.69 348 *e*P P 05 36 13.1 -0.5
KPL AMB AMB 05 36 17.1
comp=Z,77nm,1.4s,mb5.5
IAS Iasi 74.78 325 ⇑P P 05 36 14.1 -0.2
IAS Iasi 74.78 325 ⇑*i*P P 05 36 14.1 -0.1
KSB Sheil Bridge 74.78 348 *e*P P 05 36 13.6 -0.4
Z26A Caprock 74.83 58 ⇑P P 05 36 14.8 -0.1
baz=75,SNR=39
Y27A Causey 74.86 57 ⇑P P 05 36 14.7 -0.3
baz=75,SNR=19
BNGL BINGOL 74.96 311 ⇑*i*P P 05 36 15.7 +0.2
AMTX Amarillo 74.98 55 ⇑P P 05 36 15.0 -0.6
baz=75,SNR=8.6

AMTX Amarillo 74.98 55 *e*P P **05 36 15.0 -0.7**
comp=Z,35nm,1.0s,mb5.2
RUE Ruedersdorf 75.02 335 *e*P P **05 36 15.5 0.0**
comp=Z,185nm,1.0s,mb6.0
RUE Ruedersdorf 75.02 335 *e*P P **05 36 15.2 -0.3**
comp=Z,184nm,1.2s,mb5.9
KELT Kelkit 75.02 313⇑ *i*P P **05 36 17.0 +1.2**
MSTX Muleshoe 75.03 56⇑P P **05 36 15.5 -0.4**
baz=75,SNR=12
OJC Ojcow 75.11 331 *e*P P **05 36 15.8 -0.3**
KAR1 Arisaig 75.12 348 *e*P P **05 36 15.4 -0.6**
MNTX Cornudas Mount 75.14 60⇓P P **05 36 16.5 -0.1**
baz=75,SNR=14
MNTX Cornudas Mount 75.14 60 *e*P P **05 36 16.1 -0.5**
comp=Z,9.8nm,1.1s,mb4.7
225A Deer Hill, Car 75.17 59⇓P P **05 36 16.3 -0.5**
baz=75,SNR=5.8
Z27A Tatum 75.24 57⇓P P **05 36 16.4 -0.8**
baz=75,SNR=42
126A Clayton Basin, 75.26 58⇓P P **05 36 17.0 -0.3**
baz=75
324A Moseley Ranch, 75.26 60⇓P P **05 36 17.1 -0.2**
baz=75
STHS Stebnicka Huta 75.30 329 *e*P P **05 36 18.4 +1.2**
comp=Z,72nm,0.8s,mb5.7
STHS Stebnicka Huta 75.30 329 *e*P P **05 36 18.4 +1.2**
STHS pmax pmax
comp=Z,72nm,0.8s,mb5.7
STHS Stebnicka Huta 75.30 329 *e*P P **05 36 18.4 +1.2**
BUR08 Bucovina Ar. S 75.33 326 *e*P P **05 36 17.6 +0.2**
BUR01 Bucovina Ar. S 75.35 326 P P **05 36 18.3 +0.8**
BURAR Bucovina Array 75.35 326⇓ *i*P P **05 36 18.4 +0.8**
BURAR Bucovina Array 75.35 326⇓ *i*P P **05 36 18.4 +0.9**
EBH Black Hill 75.42 346 *e*P P **05 36 16.0 -1.8**
BANOM Banah 75.58 292 P P **05 36 20.1 +0.9**
SNR=35
ESY Stoneypath 75.58 346 *e*P P **05 36 17.8 -0.9**
UZH Uzhgorod 75.59 328⇑ *i*P P **05 36 18.9 0.0**
UZH *e* pP 05 36 37.7 +3.6
UZH *e* 05 36 44.7
UZH *e*S S 05 45 51.7 -3.7
UZH *e*SS SS 05 50 47.0 +1.0
UZH MLR MLR
comp=N,1μm,17.0s,MS5.8
UZH MLR MLR
comp=E,4μm,17.0s,MS5.8
UZH MLR MLR
comp=Z,700nm,17.0s,MS5.0
EAB Aberfoyle 75.61 347 *e*P P **05 36 17.6 -1.2**
NIE Niedzica 75.62 330 *e*P P **05 36 19.6 +0.6**
325A Bean Ranch, Si 75.62 60⇓P P **05 36 19.0 -0.4**
baz=75
226A Malaga, Loving 75.63 58⇑P P **05 36 18.9 -0.5**
baz=75,SNR=12
CRVS Cervenica-Dubn 75.66 329 *e*P P **05 36 19.8 +0.5**
comp=Z,42nm,0.8s,mb5.4
CRVS Cervenica-Dubn 75.66 329 *e*P P **05 36 19.8 +0.5**
CRVS pmax pmax
comp=Z,42nm,0.8s,mb5.4
CRVS Cervenica-Dubn 75.66 329 *e*P P **05 36 19.8 +0.5**
TESR 75.70 325⇓P P **05 36 20.2 +0.6**
TESR 75.70 325⇓ *i*P P **05 36 20.2 +0.7**
KSP Ksiaz 75.71 333 *i*P P **05 36 19.7 +0.2**
comp=Z,200nm,0.9s,mb6.0
KSP *e*PcP PcP 05 36 26.5 -5.6
KSP LMZ 06 13 13.3
comp=Z,4μm,20.1s
RAC Raciborz 75.76 332 *e*P P **05 36 20.6 +0.8**
EAU Auchinoon 75.79 346 *e*P P **05 36 19.8 -0.1**
EBL Broad Law 75.79 346 *e*P P **05 36 19.4 -0.5**
ERBA Erbaa 75.85 315⇑ *i*P P **05 36 21.5 +1.0**
GLMI Grayling 75.86 38 *e*P P **05 36 20.0 -0.5**
comp=Z,33nm,0.6s,mb5.4
TRPA Tarpa 75.92 328⇓ *i*P P **05 36 22.0 +1.2**
BMR Baia Mare 75.95 327 P P **05 36 22.1 +1.2**
OKC Ostrava-Krasne 75.99 331 *e*P P **05 36 21.7 +0.6**
OKC Ostrava-Krasne 75.99 331 *e*P P **05 36 21.7 +0.6**
OKC AMS AMS 06 14 10.0
PGBU Glenifferbraes 75.99 347 *e*P P **05 36 21.3 +0.3**
PGBU AMB AMB 05 36 23.1
comp=Z,139nm,1.5s,mb5.7
NRDL Niedersach Rie 76.02 337 *e*P P **05 36 20.1 -1.2**
comp=Z,87nm,0.9s,mb5.7
425A Indio Mountain 76.03 60⇑P P **05 36 21.9 +0.1**
baz=76,SNR=17
KEMA Kemaliye 76.07 313⇑ *i*P P **05 36 22.8 +1.0**
UPC Upice 76.09 333 *e*P P **05 36 22.3 +0.6**
UPC Upice 76.09 333 *e*P P **05 36 22.3 +0.6**
PETR 76.11 324⇓P P **05 36 23.9 +2.0**
PETR 76.11 324⇓ *i*P P **05 36 23.9 +2.0**
DPC Dobruska-Polom 76.13 333 *e*P P **05 36 22.4 +0.5**
DPC MLR MLR
comp=Z,1μm,19.7s,MS5.3
DPC Dobruska-Polom 76.13 333 *e*P P **05 36 22.4 +0.5**
DPC *ex* x 05 52 00.1
DPC AMS AMS 06 14 00.0
comp=Z,1μm,19.7s
CFR Carcaliu 76.18 323⇑P P **05 36 23.0 +0.7**
CFR Carcaliu 76.18 323⇑ *i*P P **05 36 23.0 +0.7**
VRI Vrincioaia 76.19 324⇓P P **05 36 23.3 +0.9**
VRI Vrincioaia 76.19 324⇓ *i*P P **05 36 23.3 +0.9**
WBK Wadi Bani Khal 76.20 288 P P **05 36 24.9 +2.1**
SNR=18
EKA Eskdalemuir Ar 76.23 346 P P **05 36 22.4 0.0**
comp=Z,10nm,0.5s,mb5.0,baz=24,slow=5.0,SNR=45
MORC Moravsky Berou 76.24 332 *e*P P **05 36 22.6 +0.1**
comp=Z,122nm,0.9s,mb5.8
MORC Moravsky Berou 76.24 332⇓P P **05 36 23.5 +1.0**
MORC Moravsky Berou 76.24 332⇓ *i*P P **05 36 23.5 +1.0**
PLOR Plostina 76.24 324⇓P P **05 36 23.5 +0.9**
326A Caldwell Ranch 76.24 59⇓P P **05 36 22.7 -0.2**
baz=76
ESK Eskdalemuir 76.26 346 P P **05 36 22.4 -0.2**
comp=Z,270nm,1.1s,mb6.1,SNR=8.8
ESK Eskdalemuir 76.26 346 *e*P P **05 36 21.6 -1.0**
ESK AMB AMB 05 36 23.5
comp=Z,56nm,1.3s,mb5.3
ESK Eskdalemuir 76.26 346 *e*P P **05 36 22.6 0.0**
comp=Z,75nm,1.3s,mb5.5
ESK Eskdalemuir 76.26 346 *i*P P **05 36 24.1 +1.5**
CLL Collm 76.28 335 *e*P P **05 36 22.3 -0.5**
comp=Z,188nm,0.9s,mb6.0
CLL Collm 76.28 335⇑ *i*P P **05 36 22.4 -0.4**
CLL comp=Z,188nm,0.9s,mb6.0 LR LR
comp=Z,800nm,19.5s,MS5.0
CLL Collm 76.28 335⇑ *i*P P **05 36 22.4 -0.4**
CLL pmax pmax
comp=Z,188nm,0.9s,mb6.0
CLL MLR MLR
comp=Z,800nm,19.5s,MS5.0
CLL Collm 76.28 335⇑ *i*P P **05 36 22.4 -0.4**
comp=Z,188nm,0.9s,mb6.0
CLL *e* 05 51 42.0
CLL *e* 05 55 18.0
CLL LmH 06 14 00.0
comp=N,700nm,19.8s
CLL LmH 06 14 00.0
comp=E,400nm,19.5s
CLL LmV 06 14 00.0
comp=Z,800nm,19.5s
SCER sogukcermik 76.30 314⇑ *i*P P **05 36 24.4 +1.3**
LIKS Likavka 76.34 331 *e*P P **05 36 24.3 +1.1**
comp=Z,89nm,1.0s,mb5.7
LIKS Likavka 76.34 331 *e*P P **05 36 24.3 +1.1**
LIKS pmax pmax
comp=Z,89nm,1.0s,mb5.7
LIKS Likavka 76.34 331 *e*P P **05 36 24.3 +1.1**
KECS Kecovo 76.35 329 *e*P P **05 36 23.6 +0.4**
comp=Z,40nm,1.0s,mb5.3
KECS Kecovo 76.35 329 *e*P P **05 36 23.6 +0.4**
KECS pmax pmax
comp=Z,40nm,1.0s,mb5.3
KECS Kecovo 76.35 329 *e*P P **05 36 23.6 +0.4**
ECK Cauldkaine Hil 76.38 346 *e*P P **05 36 22.8 -0.4**
MARD Mardin 76.38 310⇑ *i*P P **05 36 23.5 -0.1**
BRG Berggiesshubel 76.39 334 *e*P P **05 36 23.1 -0.3**
comp=Z,68nm,1.1s,mb5.5
BRG Berggiesshubel 76.39 334 *i*P P **05 36 23.2 -0.2**
comp=Z,68nm,1.1s,mb5.5
BRG S S 05 46 06.0 +1.8
BRG SS SS 05 51 02.0 +4.0
BRG
comp=N,1μm,20.2s
BRG
comp=E,686nm,16.2s
BRG
comp=Z,688nm,15.6s
BRG Berggiesshubel 76.39 334 *i*P P **05 36 23.2 -0.2**
BRG S S 05 46 06.0 +1.8
BRG SS SS 05 51 02.0 +4.0
BRG pmax pmax
comp=Z,41nm,1.1s,mb5.3
BRG MLR MLR
comp=N,707nm,20.2s,MS5.1
BRG MLR MLR
comp=E,411nm,16.2s,MS5.1
BRG MLR MLR
comp=Z,412nm,15.6s,MS4.8
ELZG Elazig 76.41 312⇑ *i*P P **05 36 25.4 +1.7**
HATD Hatta, Dubai 76.47 292 P P **05 36 25.1 +0.9**
SNR=52
SMDO Samad 76.48 289 P P **05 36 25.8 +1.5**
SNR=19
327A Balmorhea Ranc 76.49 59⇓P P **05 36 23.9 -0.4**
baz=76
GRER 76.49 324⇓P P **05 36 26.0 +2.0**
GRER 76.49 324⇓ *i*P P **05 36 26.0 +1.9**
PVCC Panska Ves 76.51 334 *e*P P **05 36 24.5 +0.4**
PVCC MLR MLR
comp=Z,1μm,20.1s,MS5.2
PVCC Panska Ves 76.51 334 *e*P P **05 36 24.5 +0.4**
PVCC AMS AMS 06 12 40.0
comp=Z,1μm,20.1s
CLZ Clausthal 76.54 337 *e*P P **05 36 24.6 +0.4**
comp=Z,203nm,1.0s,mb6.0
CLZ Clausthal 76.54 337 *e*P P **05 36 24.6 +0.4**
comp=Z,203nm,1.0s,mb6.0
CLZ Clausthal 76.54 337 *e*P P **05 36 24.6 +0.4**
CLZ pmax pmax
comp=Z,203nm,1.0s,mb6.0
HOQ Hoqain 76.59 290 P P **05 36 25.6 +0.6**
SNR=36
WIT Witteveen 76.60 339⇑ *e*P P **05 36 25.8 +1.3**
comp=Z,525nm,1.1s,mb6.4
ASHO Ashiyiah 76.61 292 P P **05 36 25.9 +0.8**
SNR=39
DOPR Dopca 76.64 325⇓ *i*P P **05 36 26.5 +1.6**
TIRR Tirgusor 76.65 322 *e*P P **05 36 24.9 -0.1**
comp=Z,47nm,1.0s,mb5.4
TIRR Tirgusor 76.65 322⇑P P **05 36 25.5 +0.5**
TIRR Tirgusor 76.65 322⇑ *i*P P **05 36 25.5 +0.5**
NAZ Nazwa, Dubai 76.65 292 P P **05 36 25.9 +0.6**
SNR=21
426A McDonald Obser 76.68 59⇓P P **05 36 25.2 -0.2**
baz=76
WMOK Wichita Mounta 76.70 53 *e*P P **05 36 24.9 -0.6**
comp=Z,8.0nm,0.8s,mb4.7
WMOK Wichita Mounta 76.70 53 *e*P P **05 36 24.9 -0.6**
WMOK pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
NEUB Neuenburg 76.72 336 *e*P P **05 36 25.1 -0.2**
comp=Z,183nm,1.1s,mb5.9
ARMA Armidale 76.81 181 *e*P P **05 36 25.9 +0.1**
GCD Castle Douglas 76.81 346 *e*P P **05 36 24.8 -0.9**
MLR Muntele Rosu 76.81 325⇓P P **05 36 26.8 +0.9**
MLR Muntele Rosu 76.81 325⇓ *i*P P **05 36 26.8 +0.9**
MALT Malatya 76.83 312 *e*P P **05 36 27.3 +1.2**
comp=Z,95nm,0.9s,mb5.7
MALT Malatya 76.83 312⇓P P **05 36 28.5 +2.4**
MALT Malatya 76.83 312⇓ *i*P P **05 36 28.5 +2.4**
MALT Malatya 76.83 312 P P **05 36 28.3 +2.2**
328A Wristen Ranch, 76.88 58⇑P P **05 36 26.3 -0.3**
baz=77,SNR=35
MDB Medias 76.89 326 P P **05 36 28.2 +1.9**
VYHS Vyhne 76.91 330 *e*P P **05 36 26.8 +0.4**
comp=Z,50nm,1.0s,mb5.4
VYHS Vyhne 76.91 330 *e*P P **05 36 26.8 +0.4**
VYHS pmax pmax
comp=Z,50nm,1.0s,mb5.4
VYHS Vyhne 76.91 330 *e*P P **05 36 26.8 +0.4**
427A Hayter Ranch, 76.92 59⇑P P **05 36 26.5 -0.2**
baz=77,SNR=5.3
JMDO Jabal Madar 76.93 289 P P **05 36 28.0 +1.1**
SNR=26
GAL1 Galloway 76.94 347 *e*P P **05 36 24.8 -1.6**
GAL1 AMB AMB 05 36 27.6
comp=Z,66nm,1.3s,mb5.4
VRAC Vranov 76.95 332⇑P P **05 36 27.6 +1.0**
PRA Prague 76.96 334 P P **05 36 29.0 +2.4**
PRA AMS AMS 06 15 00.0
AMRR Amara 76.97 323 P P **05 36 28.3 +1.5**
DRGR 76.98 327⇓P P **05 36 27.6 +0.7**
DRGR 76.98 327⇓ *i*P P **05 36 27.5 +0.7**
KOLL Kolacno 76.99 331 *e*P P **05 36 27.6 +0.8**
KOLL Kolacno 76.99 331 *e*P P **05 36 27.6 +0.8**
PRU Pruhonice 77.00 334 *e*P P **05 36 28.1 +1.3**
PRU MLR MLR
comp=Z,1μm,17.9s,MS5.3
PRU Pruhonice 77.00 334 *e*P P **05 36 28.1 +1.3**
PRU *ex* x 05 52 12.7
PRU AMS AMS 06 14 00.0
comp=Z,1μm,17.9s
ILGA Ilgaz 77.01 317⇑ *i*P P **05 36 28.8 +1.7**
PSZ Piszkesteto 77.04 329 *e*P P **05 36 27.2 +0.1**
comp=Z,188nm,1.4s,mb5.8
PSZ Piszkesteto 77.04 329⇑P P **05 36 28.2 +1.1**
PSZ Piszkesteto 77.04 329⇑ *i*P P **05 36 28.1 +1.0**
PSZ Piszkesteto 77.04 329⇑ *e*P P **05 36 27.6 +0.5**
XDE Dent Fell 77.08 346 *e*P P **05 36 26.8 -0.4**
526A Mary Lane Ranc 77.09 60⇑P P **05 36 27.4 -0.3**
baz=77,SNR=20
AKCD Akcadag 77.10 313⇑ *i*P P **05 36 29.2 +1.6**
ASUD Al Ashush, Dub 77.12 292 P P **05 36 28.8 +0.9**
SNR=20
HDIL Hopedale 77.14 44 *e*P P **05 36 27.0 -0.9**
comp=Z,26nm,0.7s,mb5.3
VOIR 77.22 325⇓P P **05 36 29.4 +1.3**
VOIR 77.22 325⇓ *i*P P **05 36 29.4 +1.3**
WERD Werda 77.25 335 *e*P P **05 36 28.3 0.0**
comp=Z,85nm,1.1s,mb5.6
BSY Bisya 77.25 290 P P **05 36 29.8 +1.0**
SNR=41
ARQ Araqi 77.27 290 P P **05 36 29.9 +1.1**
SNR=23
MOX Moxa 77.27 336 *e*P P **05 36 28.4 0.0**
comp=Z,140nm,1.2s,mb5.8
MOX Moxa 77.27 336 *e*P P **05 36 28.3 -0.1**
comp=Z,116nm,1.0s,mb5.8
MOX Moxa 77.27 336 *e*P P **05 36 28.4 0.0**
MOX pmax pmax
comp=Z,140nm,1.2s,mb5.8
HPK Haverah Park 77.28 345 *e*P P **05 36 28.1 -0.3**
HPK AMB AMB 05 36 29.9
comp=Z,145nm,1.2s,mb5.8
527A Woodward Ranch 77.31 60⇓P P **05 36 29.0 0.0**
baz=77,SNR=14
TREC Trest 77.31 333 *e*P P **05 36 29.1 +0.5**
TREC MLR MLR
comp=Z,1μm,19.8s,MS5.2
TREC Trest 77.31 333 *e*P P **05 36 29.1 +0.5**
TREC AMS AMS 06 15 30.0
comp=Z,1μm,19.8s
GUNZ Gunzen 77.32 335 *e*P P **05 36 29.0 +0.4**
comp=Z,83nm,0.9s,mb5.7
WTSB Winterswijk 77.35 339⇑ *e*P P **05 36 28.8 +0.1**
comp=Z,172nm,0.8s,mb6.0
SULR 77.36 324 P P **05 36 29.4 +0.5**
WERN Wernitzgruen 77.38 335 *e*P P **05 36 29.1 +0.2**
comp=Z,106nm,0.9s,mb5.8
NKC Novy Kostel 77.40 335 *e*P P **05 36 29.4 +0.3**
NKC MLR MLR
comp=Z,800nm,16.1s,MS5.1
NKC Novy Kostel 77.40 335 *e*P P **05 36 29.4 +0.3**
NKC AMS AMS 06 16 40.0
comp=Z,800nm,16.1s
626A Big Bend Ranch 77.43 60⇓P P **05 36 29.4 -0.2**
baz=77,SNR=19
428A Kincaid Ranch, 77.43 59⇑P P **05 36 29.5 -0.1**
baz=77,SNR=11
BHD Baghdad 77.44 305 *ex* x 05 36 28.0
BHD *ex* x 05 46 14.0
MODS Modra-Piesok 77.54 331 *e*P P **05 36 31.3 +1.4**
comp=Z,452nm,0.9s,mb6.4
MODS Modra-Piesok 77.54 331 *e*P P **05 36 31.3 +1.4**
MODS pmax pmax
comp=Z,452nm,0.9s,mb6.4
MODS Modra-Piesok 77.54 331 *e*P P **05 36 31.3 +1.4**
ATAB Bozova 77.55 312⇑ *i*P P **05 36 30.7 +0.6**
UBBA Unterbreizbach 77.56 337 *e*P P **05 36 29.9 -0.1**
comp=Z,159nm,1.7s,mb5.7
ELDT Eldivan 77.59 317⇑ *i*P P **05 36 31.8 +1.4**
BUG Bochum--Univer 77.71 339 *e*P P **05 36 30.7 -0.1**
comp=Z,178nm,1.1s,mb5.9
LHO Holmfirth 77.72 345 *e*P P **05 36 29.8 -1.0**
BUD Budapest 77.72 330⇑ *e*P P **05 36 31.5 +0.6**
ZST Bratislava 77.75 331 *e*P P **05 36 32.1 +1.0**
comp=Z,98nm,1.0s,mb5.7
ZST Bratislava 77.75 331 *e*P P **05 36 32.1 +1.0**
ZST pmax pmax
comp=Z,98nm,1.0s,mb5.7
ZST Bratislava 77.75 331 *e*P P **05 36 32.1 +1.0**
528A Cox Ranch, San 77.78 59⇓P P **05 36 31.7 +0.1**
baz=78
CDAG Cicekdag 77.82 316⇑ *i*P P **05 36 32.7 +1.1**
TXAR Lajitas Array 77.87 60 P P **05 36 31.6 -0.4**
comp=Z,18nm,0.8s,mb5.0,baz=296,slow=4.5,SNR=107
ROTZ Rotzenmuhle 77.89 335 *e*P P **05 36 32.2 +0.4**
comp=Z,110nm,1.0s,mb5.7
627A Terlingua Ranc 77.95 60⇑P P **05 36 31.9 -0.6**
baz=78,SNR=14
KHC Kasperske Hory 78.05 334 *e*P P **05 36 32.7 0.0**
comp=Z,119nm,0.9s,mb5.8
KHC Kasperske Hory 78.05 334 *e*P P **05 36 32.7 0.0**
KHC pmax pmax
comp=Z,119nm,0.9s,mb5.8
KHC Kasperske Hory 78.05 334 *e*P P **05 36 32.4 -0.3**
KHC *ex* x 05 52 29.5
KHC AMS AMS 06 14 40.0
comp=Z,2μm,16.5s
BR131 Keskin Array S 78.09 316 *e*P P **05 36 33.7 +0.5**
comp=Z,58nm,0.9s,mb5.5
BRTR Keskin Array B 78.09 316 P P **05 36 34.0 +0.9**
comp=Z,63nm,0.9s,mb5.6,baz=67,slow=4.2,SNR=192
BRTR PP PP 05 39 31.6 +2.2
comp=Z,4.1nm,0.9s,baz=69,slow=6.9,SNR=3.8
BRTR LR LR 06 17 01.8
comp=Z,887nm,19.4s,MS5.1,baz=204,slow=40
BRTR Keskin Array B 78.09 316 P P **05 36 34.0 +0.9**
BRTR 05 39 31.6
GZR Gura Zlata 78.13 326⇓P P **05 36 33.7 +0.5**
GZR Gura Zlata 78.13 326⇓ *i*P P **05 36 33.7 +0.5**
SADO Sadowa 78.14 35 LR LR 06 13 53.4
comp=Z,337nm,19.6s,MS4.7,baz=22,slow=38
CCM Cathedral Cave 78.14 46 *e*P P **05 36 32.0 -1.5**
comp=Z,10.0nm,0.8s,mb4.8
CCM Cathedral Cave 78.14 46 *e*P P **05 36 32.0 -1.5**
CCM pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SLM Saint Louis 78.19 45 *e*P P **05 36 32.6 -1.1**
628A Black Gap, Mar 78.22 60⇓P P **05 36 33.5 -0.5**
baz=78
GRA1 Grafenberg Arr 78.24 335 *e*P P **05 36 34.2 +0.4**
comp=Z,284nm,0.9s,mb6.2
GRA1 LR LR
comp=Z,700nm,18.3s,MS5.0
GRF Grafenberg Arr 78.24 335 *e*P P **05 36 34.2 +0.4**
comp=Z,284nm,0.9s,mb6.2
GRF *e*L 06 14 17.2
comp=Z,750nm,18.3s
GRF Grafenberg Arr 78.24 335 *e*P P **05 36 34.2 +0.4**
comp=Z,284nm,0.9s,mb6.2
GRF LR LR
comp=Z,700nm,18.3s,MS5.0
GRF Grafenberg Arr 78.24 335 *e*P P **05 36 34.2 +0.4**
GRF pmax pmax
comp=Z,284nm,0.9s,mb6.2
GRF MLR MLR
comp=Z,700nm,18.3s,MS5.0
GRF Grafenberg Arr 78.24 335 *e*P P **05 36 34.2 +0.4**
GRF pmax pmax
comp=Z,284nm,0.9s,mb6.2
GRF MLR MLR
comp=Z,700nm,18.3s,MS5.0
GRFO Grafenberg 78.24 335 *e*P P **05 36 33.9 +0.2**
comp=Z,184nm,0.9s,mb6.0
GRFO Grafenberg 78.24 335 *e*P P **05 36 33.9 +0.1**
GRFO pmax pmax
comp=Z,184nm,0.9s,mb6.0
WET Wettzell 78.25 334 *e*P P **05 36 34.2 +0.4**
comp=Z,144nm,1.0s,mb5.9
WET Wettzell 78.25 334 *e*P P **05 36 34.2 +0.4**
comp=Z,144nm,1.0s,mb5.9
WET Wettzell 78.25 334 *e*P P **05 36 34.2 +0.4**
WET pmax pmax
comp=Z,144nm,1.0s,mb5.9
AVNT Avonos 78.25 315⇑ *i*P P **05 36 35.1 +1.1**
UMR Umm Al-Rimmam 78.26 301 *e*P P **05 36 34.8 +0.6**
UMR AMb AMB 05 36 35.9
comp=Z,564nm,0.9s,mb6.5
GEC2 GERESS Array S 78.27 334 *e*P P **05 36 33.8 -0.1**
comp=Z,61nm,1.0s,mb5.5
GEC2 GERESS Array S 78.27 334 *e*P P **05 36 33.8 -0.1**
comp=Z,61nm,1.0s,mb5.5
GEC2 GERESS Array S 78.27 334 *e*P P **05 36 33.8 -0.1**
GEC2 pmax pmax
comp=Z,61nm,1.0s,mb5.5
MIB Mutribah 78.29 301 *e*P P **05 36 34.8 +0.4**
MIB AMb AMB 05 36 36.1
comp=Z,839nm,0.9s,mb6.7
SOP Sopron 78.38 331⇑ *e*P P **05 36 35.3 +0.7**
BZS Buzias 78.38 327⇓P P **05 36 34.9 +0.2**
BZS Buzias 78.38 327⇓ *i*P P **05 36 34.9 +0.3**
CWF Charnwood Fore 78.39 344 *e*P P **05 36 33.2 -1.3**
CWF AMB AMB 05 36 35.0
comp=Z,79nm,1.5s,mb5.4
CONA Conrad Observa 78.39 332⇑ *i*P P **05 36 35.4 +0.7**
comp=Z,110nm,0.8s,mb5.8,SNR=44
ANDN Andirin 78.45 313⇑ *i*P P **05 36 36.4 +1.2**
BBAL Bala 78.48 317⇑ *i*P P **05 36 36.2 +0.9**
TNS Taunus Mts 78.52 337 *e*P P **05 36 35.5 +0.2**
comp=Z,209nm,0.9s,mb6.1
TNS Taunus Mts 78.52 337 *e*P P **05 36 35.5 +0.2**
comp=Z,209nm,0.9s,mb6.1
TNS Taunus Mts 78.52 337 *e*P P **05 36 35.5 +0.2**
TNS pmax pmax
comp=Z,209nm,0.9s,mb6.1
KBD Kabd 78.54 300 *e*P P **05 36 35.9 +0.1**
KBD AMb AMB 05 36 37.6
comp=Z,338nm,1.1s,mb6.2
FVM French Village 78.61 46 *e*P P **05 36 35.2 -0.8**
comp=Z,37nm,1.3s,mb5.2
FVM French Village 78.61 46 *e*P P **05 36 35.2 -0.8**
FVM pmax pmax
comp=Z,37nm,1.3s,mb5.2
CRAR CRAIOVA 78.63 325 P P **05 36 36.7 +0.7**
HGN Heimansgroeve 78.67 339⇑ *e*P P **05 36 36.0 -0.1**
comp=Z,157nm,1.1s,mb5.8
BEBN Eben Emael 78.70 339 P P **05 36 36.4 +0.1**
comp=Z,68nm,1.1s,mb5.5
KUZU Kuzuini 78.70 312⇑ *i*P P **05 36 37.7 +1.1**
QRN Al-Qurain 78.73 300 *e*P P **05 36 37.2 +0.4**
QRN AMb AMB 05 36 38.6
comp=Z,467nm,1.1s,mb6.3
NAY Al-Naaiem 78.76 301 *e*P P **05 36 36.7 -0.2**
NAY AMb AMB 05 36 38.7
comp=Z,341nm,1.0s,mb6.2
MEM Membach 78.79 339 P P **05 36 36.8 0.0**
comp=Z,130nm,1.1s,mb5.8
RDF Al-Radifah 78.81 300 *e*P P **05 36 37.8 +0.5**
RDF AMb AMB 05 36 39.5
comp=Z,829nm,1.1s,mb6.6
STKA Stephens Creek 78.88 189 P P **05 36 36.5 -0.8**
comp=Z,1.4nm,0.2s,mb4.5,baz=22,slow=5.4,SNR=5.8
STKA LR LR 06 07 38.3
comp=Z,340nm,22.0s,MS4.6,baz=22,slow=33
PKSM Moragy 78.95 329⇓P P **05 36 37.4 -0.3**
PKSM Moragy 78.95 329⇓ *i*P P **05 36 37.4 -0.3**
MOA Molln 78.97 333⇑ *i*P P **05 36 38.1 +0.3**
comp=Z,77nm,0.8s,mb5.7,SNR=31
TOD Tromm 78.99 337 *e*P P **05 36 38.2 +0.3**
ABH Alteburg 79.07 338 *e*P P **05 36 38.4 +0.1**
ARSA Arzberg 79.10 332⇑ *i*P P **05 36 38.9 +0.4**
comp=Z,77nm,1.1s,mb5.5,SNR=29
BCLA Clavier 79.14 339 P P **05 36 38.7 0.0**
comp=Z,98nm,1.3s,mb5.7
OLIL Olney 79.15 44 *e*P P **05 36 38.6 -0.3**
comp=Z,34nm,1.0s,mb5.2
JCT Junction City 79.29 57⇓P P **05 36 39.4 -0.5**
baz=79,SNR=6.7
JCT Junction City 79.29 57 *e*P P **05 36 39.5 -0.3**
comp=Z,18nm,0.8s,mb5.1
JCT Junction City 79.29 57 *e*P P **05 36 39.6 -0.3**
JCT pmax pmax
comp=Z,19nm,0.8s,mb5.1
SNF Seneffe 79.30 340 P P **05 36 39.7 +0.2**

comp=Z,62nm,1.4s,mb5.3
RUP Ruppelstein 79.36 338 eP P 05 36 40.0 +0.1
HTR Trewern Hill 79.38 345 eP P 05 36 39.2 -0.7
MCH1 Michaelchurch 79.41 345 eP P 05 36 37.4 -2.7
MCH1 AMB AMB 05 36 41.6
comp=Z,69nm,1.3s,mb5.4
SIUC Southern Illin 79.41 45 eP P 05 36 39.5 -0.9
comp=Z,75nm,1.4s,mb5.4
BORA Eskisehir 79.45 318⇑ iP P 05 36 40.9 +0.3
GULE Gulek 79.46 314⇑ iP P 05 36 42.0 +1.3
RJOB Jochberg 79.53 334 eP P 05 36 41.3 +0.4
comp=Z,84nm,0.9s,mb5.7
BLO Bloomington 79.54 43 eP P 05 36 40.0 -1.1
comp=Z,13nm,0.6s,mb5.0
BLO Bloomington 79.54 43 eP P 05 36 40.0 -1.1
BLO pmax pmax
comp=Z,13nm,0.6s,mb5.0
GIVF Givet 79.55 339⇑ iP P 05 36 41.0 +0.1
comp=Z,201nm,1.1s,mb5.7
GIVF Givet 79.55 339⇑ iP P 05 36 41.0 +0.1
comp=Z,100nm,1.1s,mb5.7
GIVF Givet 79.55 339⇑ iP P 05 36 41.0 +0.1
GIVF pmax pmax
comp=Z,100nm,1.1s,mb5.7
KOGS Kog 79.56 331 eP P 05 36 40.8 -0.3
FUR Furstenfeldbru 79.60 335 eP P 05 36 41.5 +0.3
comp=Z,194nm,1.0s,mb6.0
FUR Furstenfeldbru 79.60 335 eP P 05 36 41.5 +0.3
comp=Z,194nm,1.0s,mb6.0
FUR Furstenfeldbru 79.60 335 eP P 05 36 41.5 +0.3
FUR pmax pmax
comp=Z,194nm,1.0s,mb6.0
DOU Dourbes 79.61 340 P P 05 36 41.2 -0.1
comp=Z,49nm,1.4s,mb5.2
WLF Walferdange 79.63 339 P P 05 36 40.6 -0.7
comp=Z,40nm,1.4s,mb5.2
WLF Walferdange 79.63 339 eP P 05 36 44.2 +2.8
WLF Walferdange 79.63 339 eP P 05 36 42.0 +0.6
comp=Z,52nm,1.0s,mb5.4
WLF Walferdange 79.63 339 eP P 05 36 42.0 +0.6
WLF pmax pmax
comp=Z,52nm,1.0s,mb5.4
STU Stuttgart 79.64 336 eP P 05 36 41.5 0.0
comp=Z,157nm,1.1s,mb5.8
STU Stuttgart 79.64 336 eP P 05 36 41.5 +0.1
comp=Z,134nm,1.0s,mb5.8
STU Stuttgart 79.64 336 eP P 05 36 41.5 0.0
STU pmax pmax
comp=Z,134nm,1.0s,mb5.8
MIAR Mount Ida 79.66 50 eP P 05 36 41.1 -0.8
comp=Z,10nm,0.8s,mb4.8
MIAR Mount Ida 79.66 50 eP P 05 36 41.1 -0.7
MIAR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
HGH Gray Hill 79.72 345 eP P 05 36 41.2 -0.6
WOL Wolverton 79.73 344 eP P 05 36 41.2 -0.7
WOL AMB AMB 05 36 43.1
comp=Z,120nm,1.4s,mb5.6
BAIF Baives 79.74 340⇑ iP P 05 36 42.1 +0.1
comp=Z,171nm,1.1s,mb5.6
BAIF Baives 79.74 340⇑ iP P 05 36 42.1 +0.1
comp=Z,85nm,1.1s,mb5.6
BAIF Baives 79.74 340⇑ iP P 05 36 42.1 +0.1
BAIF pmax pmax
comp=Z,85nm,1.1s,mb5.6
SOKA Soboth 79.76 332⇑ iP P 05 36 42.3 +0.1
comp=Z,162nm,1.0s,mb5.9
KDHN Kadinhani 79.77 317⇑ iP P 05 36 42.7 +0.4
YAYL Yayladag 79.77 312⇑ iP P 05 36 43.4 +1.0
PERS Pernice 79.77 332 eP P 05 36 42.5 +0.3
LANF Langenberg 79.83 337 eP P 05 36 42.9 +0.4
KBA Koelnbreinsper 79.94 333⇑ iP P 05 36 43.8 +0.7
comp=Z,270nm,1.0s,mb6.1,SNR=102
USIN University of 79.96 44 eP P 05 36 42.9 -0.5
comp=Z,36nm,0.9s,mb5.3
PARMO Parma 79.97 46 eP P 05 36 43.2 -0.3
OBKA Obir 80.07 332⇑ iP P 05 36 43.9 +0.1
comp=Z,45nm,0.8s,mb5.5,SNR=11
PLD Plovdiv 80.12 323 P P 05 36 44.1 -0.1
PLD Plovdiv 80.12 323 P P 05 36 44.1 -0.1
BOLV Bolvadin 80.16 317⇑ iP P 05 36 45.2 +0.8
MYKA Terra Mystica 80.25 333⇓ iP P 05 36 44.6 -0.2
comp=Z,44nm,0.8s,mb5.5
WATA Walderalm 80.25 334⇑ iP P 05 36 45.4 +0.6
comp=Z,211nm,1.0s,mb6.0,SNR=34
FORT Forrest 80.26 201 eP P 05 36 44.7 -0.1
comp=Z,55nm,0.7s,mb5.6
FORT Forrest 80.26 201 eP P 05 36 44.6 -0.3
comp=Z,52nm,0.6s,mb5.6
DIVS Divibare 80.28 327 P P 05 36 44.7 -0.3
BFO Black Forest 80.28 337 P P 05 36 45.2 +0.3
comp=Z,791nm,0.9s,mb6.6,SNR=47
BFO Black Forest 80.28 337 eP P 05 36 44.9 0.0
comp=Z,148nm,1.0s,mb5.9
BFO Black Forest 80.28 337 eP P 05 36 44.9 0.0
comp=Z,148nm,1.0s,mb5.9
BFO Black Forest 80.28 337 eP P 05 36 44.9 0.0
BFO pmax pmax
comp=Z,148nm,1.0s,mb5.9
ACSO Alum Creek Sta 80.29 40 eP P 05 36 44.0 -1.1
comp=Z,52nm,1.1s,mb5.4
WTTA Wattenberg 80.30 334 iP P 05 36 45.9 +0.9
comp=Z,299nm,1.1s,mb6.1,SNR=74
VTS Vitosha 80.32 325 P P 05 36 45.5 +0.3
VTS Vitosha 80.32 325⇑ P P 05 36 46.1 +0.9
VTS Vitosha 80.32 325 P P 05 36 45.5 +0.3
VTS Vitosha 80.32 325⇑ iP P 05 36 46.1 +0.9
RETA Reutte 80.36 335⇑ iP P 05 36 45.7 +0.3
comp=Z,94nm,1.0s,mb5.7,SNR=47
SPAK Spaichingen-Ko 80.36 336 eP P 05 36 45.8 +0.4
HBAR Harrisburg 80.39 48 eP P 05 36 45.5 -0.2
GNAR Gosnell 80.39 47 eP P 05 36 45.3 -0.5
MOTA Moosalm 80.39 335⇑ iP P 05 36 46.0 +0.5
comp=Z,209nm,1.0s,mb6.0,SNR=74
WCI Wyandotte Cave 80.40 43 eP P 05 36 44.8 -1.0
comp=Z,21nm,0.9s,mb5.1
WCI Wyandotte Cave 80.40 43 eP P 05 36 44.8 -1.0
WCI pmax pmax
comp=Z,21nm,0.9s,mb5.1
LJU Ljubljana 80.49 332 eP P 05 36 45.6 -0.4
CDF Champ du Feu 80.49 337⇑ iP P 05 36 46.3 +0.3
comp=Z,342nm,1.0s,mb5.9
CDF Champ du Feu 80.49 337⇑ iP P 05 36 46.3 +0.3
comp=Z,171nm,1.0s,mb5.9
CDF Champ du Feu 80.49 337⇑ iP P 05 36 46.3 +0.3
CDF pmax pmax
comp=Z,171nm,1.0s,mb5.9
ABTA Abfaltersbach 80.50 333 iP P 05 36 45.7 -0.4
comp=Z,67nm,1.0s,mb5.5,SNR=21
GLAT Glass 80.51 46 eP P 05 36 46.1 -0.3
GDZ Gediz 80.53 319⇑ iP P 05 36 45.9 -0.6
ALN Alexandroupoli 80.57 322 P P 05 36 45.6 -1.0
ALN Alexandroupoli 80.57 322 P P 05 36 45.6 -1.0
DURS Dursunbey 80.57 320⇑ iP P 05 36 46.9 +0.3
CADS Cadrg 80.58 332 iP P 05 36 45.4 -1.1
HTL Hartland 80.63 345 eP P 05 36 45.1 -1.7
HTL AMB AMB 05 36 47.6
comp=Z,79nm,3.1s
LIBD Limburg 80.64 337 eP P 05 36 47.3 +0.4
UTMT University of 80.67 46 eP P 05 36 46.2 -1.0
VOY Vojsko 80.70 332 eP P 05 36 45.8 -1.4
VOY e 05 36 53.7
ECH Echery 80.70 337 eP P 05 36 47.4 +0.2
ECH Echery 80.70 337 eP P 05 36 47.0 -0.2
comp=Z,141nm,1.0s,mb5.8
ECH Echery 80.70 337 eP P 05 36 47.0 -0.2
ECH pmax pmax
comp=Z,141nm,1.0s,mb5.8
BOJS Bojanci 80.72 331 iP P 05 36 47.0 -0.4
FELD Feldberg im Sc 80.79 337 eP P 05 36 47.7 +0.1
FETA Feichten 80.79 335⇑ iP P 05 36 48.3 +0.6
comp=Z,84nm,1.0s,mb5.6,SNR=58
DAVA Damuels 80.80 335⇑ iP P 05 36 48.1 +0.4
comp=Z,119nm,0.9s,mb5.8,SNR=36
BALY Balya 80.84 320⇑ iP P 05 36 48.4 +0.3
ERMK Ermenek 80.88 315⇑ iP P 05 36 46.9 -1.4
MEZF Maizieres J'vi 80.98 339⇑ iP P 05 36 49.1 +0.4
comp=Z,378nm,1.0s,mb6.0
MEZF Maizieres J'vi 80.98 339⇑ iP P 05 36 49.1 +0.4
comp=Z,378nm,1.0s,mb6.3
KNDS Knezji Dol 80.99 332 eP P 05 36 48.5 -0.3
THEF They Montfort 81.00 338 eP P 05 36 49.1 +0.3
FKH Fakeheh 81.02 311 eP P 05 36 49.9 +0.8
TRI Trieste 81.03 332 eP P 05 36 48.0 -0.9
comp=Z,67nm,0.9s,mb5.6
TRI Trieste 81.03 332 eP P 05 36 48.0 -1.0
TRI pmax pmax
comp=Z,67nm,0.9s,mb5.6
MOF Molkenrain 81.04 337 eP P 05 36 49.1 +0.1
HAU Haudompre 81.11 338⇑ iP P 05 36 49.4 +0.1
comp=Z,194nm,1.0s,mb5.7
HAU eMLR MLR
comp=Z,1μm,20.2s,MS4.9
HAU Haudompre 81.11 338⇑ iP P 05 36 49.4 +0.1
comp=Z,97nm,1.0s,mb5.7
HAU LR LR
comp=Z,1μm,20.3s,MS5.2
HAU Haudompre 81.11 338⇑ iP P 05 36 49.4 +0.1
HAU pmax pmax
comp=Z,97nm,1.0s,mb5.7
HAU MLR MLR
comp=Z,1μm,20.3s,MS5.2
KHAL Karahalli 81.11 318⇑ iP P 05 36 49.4 -0.2
KAVA Kavala 81.13 323 P P 05 36 49.8 +0.2
HINF Hinteralfeld 81.15 337⇑ iP P 05 36 49.4 -0.2
comp=Z,123nm,1.0s,mb5.5
HINF Hinteralfeld 81.15 337⇑ iP P 05 36 49.4 -0.2
comp=Z,61nm,1.0s,mb5.5
HINF Hinteralfeld 81.15 337⇑ iP P 05 36 49.4 -0.2
HINF pmax pmax
comp=Z,61nm,1.0s,mb5.5
PLE Pljevlja 81.16 327⇑ iP P 05 36 49.9 +0.2
PLE Pljevlja 81.16 327⇑ iP P 05 36 50.0 +0.3
NATX Nacogdoches 81.21 53 eP P 05 36 50.2 0.0
comp=Z,44nm,0.8s,mb5.4
HWQ Hawga 81.22 311 eP P 05 36 50.4 +0.2
SFTF Sexfontaines 81.26 339⇑ iP P 05 36 50.4 +0.3
comp=Z,597nm,1.0s,mb6.2
SFTF Sexfontaines 81.26 339⇑ iP P 05 36 50.4 +0.3
comp=Z,597nm,1.0s,mb6.5
BBS Basel-Blauen 81.30 337 eP P 05 36 50.6 +0.2
WVT Waverly 81.34 45 eP P 05 36 49.9 -0.9
comp=Z,30nm,1.4s,mb5.0
WVT Waverly 81.34 45 eP P 05 36 49.9 -0.9
WVT pmax pmax
comp=Z,30nm,1.4s,mb5.0
TAOE Nuku Hiva Isla 81.35 113 eLR LR 06 02 15.2
comp=Z,2μm,28.4s
IVA Berane 81.37 327 eP P 05 36 49.8 -1.0
IVA Berane 81.37 327 eP P 05 36 49.9 -0.9
ACCN Adirondack Com 81.39 32 eP P 05 36 49.5 -1.5
comp=Z,26nm,1.4s,mb5.0
SRS Serrai 81.41 324 P P 05 36 50.9 -0.2
SRS Serrai 81.41 324 P P 05 36 50.9 -0.2
UPM Unac-Piva 81.45 328⇑ iP P 05 36 50.3 -0.9
UPM Unac-Piva 81.45 328⇑ iP P 05 36 50.3 -0.9
AKHS Akhisar 81.46 320⇑ iP P 05 36 51.7 +0.3
CCA1 Carnmenellis 81.54 346 eP P 05 36 49.6 -1.9
CCA1 AMB AMB 05 36 51.3
comp=Z,82nm,1.6s,mb5.4
SKO Skopje 81.54 325 P P 05 36 52.6 +0.8
SKO Skopje 81.54 325 P P 05 36 52.6 +0.8
SKO Skopje 81.54 325⇓ iP P 05 36 53.0 +1.2
PVY Plav 81.58 327⇑ iP P 05 36 50.5 -1.4
PVY Plav 81.58 327⇑ iP P 05 36 50.6 -1.3
LOMF Lomont 81.59 337 eP P 05 36 52.1 +0.2
AYVA Ayvalik 81.60 320⇑ iP P 05 36 52.0 -0.2
PHNC Paralimni 81.62 313 P P 05 36 55.4 +3.1
comp=Z,1.3nm,0.8s
VAY Valandovo 81.65 324 P P 05 36 51.7 -0.6
VAY Valandovo 81.65 324 P P 05 36 51.7 -0.6
VAY Valandovo 81.65 324⇑ iP P 05 36 52.1 -0.3
KNT Kendrikon 81.65 324 P P 05 36 52.3 0.0
KNT Kendrikon 81.65 324 P P 05 36 52.3 0.0
BHL Bhannes 81.66 311 eP P 05 36 53.0 +0.5
NVLJ Novalja 81.68 331 P P 05 36 51.8 -0.7
TUE Stuetta 81.69 335 eP P 05 36 52.8 +0.3
comp=Z,113nm,0.8s,mb5.8
BCI Bajram Curri 81.74 326 iP P 05 36 52.8 0.0
NKY Niksic 81.75 327⇑ iP P 05 36 51.7 -1.2
KORT Korkueli 81.82 317⇑ iP P 05 36 52.8 -0.5
PRK Paraskevi 81.83 321 eP P 05 36 54.0 +0.7
OXF Oxford 81.84 47 eP P 05 36 52.7 -0.8
comp=Z,70nm,1.3s,mb5.4
OXF Oxford 81.84 47 eP P 05 36 52.7 -0.8
OXF pmax pmax
comp=Z,70nm,1.3s,mb5.4
BRY Bratogost 81.84 328⇑ iP P 05 36 51.6 -1.7
BRY Bratogost 81.84 328⇑ iP P 05 36 51.7 -1.6
DNZL Cakiroluk 81.87 318⇑ iP P 05 36 53.7 +0.1
MAMC Mammari 81.90 314 P P 05 36 53.5 -0.3
RCY Rachaya 81.91 311 eP P 05 36 54.7 +0.8
JSA Saint Aubin 81.94 344 eP P 05 36 52.6 -1.1
JSA AMB AMB 05 36 53.4
comp=Z,101nm,1.5s,mb5.5
TTG Podgorica 81.99 327⇑ iP P 05 36 53.0 -1.1
TTG Podgorica 81.99 327⇑ iP P 05 36 53.1 -1.0
FLN La Foliniere 82.00 342⇑ iP P 05 36 54.0 -0.1
comp=Z,249nm,1.3s,mb5.7
FLN eMLR MLR
comp=Z,975nm,22.5s,MS4.8
FLN La Foliniere 82.00 342⇑ iP P 05 36 54.0 -0.1
comp=Z,124nm,1.3s,mb5.7
FLN LR LR
comp=Z,980nm,22.5s,MS5.1
FLN La Foliniere 82.00 342⇑ iP P 05 36 54.0 -0.1
FLN pmax pmax
comp=Z,124nm,1.3s,mb5.7
FLN MLR MLR
comp=Z,980nm,22.5s,MS5.1
CSS Prodhromos 82.01 314 P P 05 36 54.7 +0.4
comp=Z,1.8nm,1.0s
GRG Griva 82.02 324 P P 05 36 54.2 -0.1
GRG Griva 82.02 324 P P 05 36 54.2 -0.1
SIGR SIGRI 82.04 321 P P 05 36 54.3 -0.1
SIGR SIGRI 82.04 321 P P 05 36 54.3 -0.1
HORT Hortiatis 82.04 324 P P 05 36 53.6 -0.8
HORT Hortiatis 82.04 324 P P 05 36 53.6 -0.8
PUK Puka 82.08 326 iP P 05 36 54.3 -0.3
LDF La Druitiere 82.09 342⇑ iP P 05 36 54.4 -0.1
comp=Z,18nm,0.5s,mb4.9
LDF La Druitiere 82.09 342⇑ iP P 05 36 54.4 -0.1
comp=Z,9.2nm,0.5s,mb5.0
LDF La Druitiere 82.09 342⇑ iP P 05 36 54.4 -0.1
LDF pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
PLG Polygyros 82.09 323 P P 05 36 54.3 -0.4
PLG Polygyros 82.09 323 P P 05 36 54.3 -0.4
SSPA Standing Stone 82.11 36 eP P 05 36 54.1 -0.7
comp=Z,7.4nm,0.6s,mb4.8
MCWV Mont Chateau 82.12 38 eP P 05 36 54.3 -0.6
comp=Z,17nm,0.8s,mb5.0
KRUS Krusevo 82.13 325⇓ iP P 05 36 54.6 -0.2
PHP Peshkopia 82.18 326 iP P 05 36 54.0 -1.1
STON Ston 82.18 328 P P 05 36 52.6 -2.5
ALFC Alevga 82.22 314 P P 05 36 55.0 -0.4
comp=Z,1.6nm,0.7s,mb4.1
BUM Brajici-Budva 82.23 327⇑ iP P 05 36 54.3 -1.1
BUM Brajici-Budva 82.23 327⇑ iP P 05 36 54.4 -1.0
HCY Herceg Novi 82.25 327⇑ iP P 05 36 53.9 -1.6
ULC Ulcinj 82.39 327⇑ iP P 05 36 55.4 -0.8
ULC Ulcinj 82.39 327⇑ iP P 05 36 55.5 -0.7
LOR Lormes 82.42 339⇑ iP P 05 36 56.4 +0.1
comp=Z,318nm,1.1s,mb5.8
LOR eMLR MLR
comp=Z,1μm,21.8s,MS5.0
LOR Lormes 82.42 339⇑ iP P 05 36 56.4 +0.1
comp=Z,159nm,1.1s,mb5.9
LOR LR LR
comp=Z,1μm,21.8s,MS5.3
LOR Lormes 82.42 339⇑ iP P 05 36 56.4 +0.1
LOR pmax pmax
comp=Z,159nm,1.1s,mb5.9
LOR MLR MLR
comp=Z,1μm,21.8s,MS5.3
URLA Izmir 82.42 320⇑ iP P 05 36 55.5 -0.9
AYDN Tasoluk 82.42 319⇑ iP P 05 36 57.4 +0.9
GRR Gorron 82.44 342⇑ iP P 05 36 56.5 +0.2
comp=Z,346nm,1.3s,mb5.8
GRR Gorron 82.44 342⇑ iP P 05 36 56.5 +0.2
comp=Z,173nm,1.3s,mb5.8
GRR Gorron 82.44 342⇑ iP P 05 36 56.5 +0.2
GRR pmax pmax
comp=Z,173nm,1.3s,mb5.8
CABF La Chapelle 82.46 337⇑ iP P 05 36 57.0 +0.5
comp=Z,99nm,1.0s,mb5.4
CABF La Chapelle 82.46 337⇑ iP P 05 36 57.0 +0.5
comp=Z,50nm,1.0s,mb5.4
CABF La Chapelle 82.46 337⇑ iP P 05 36 57.0 +0.5
CABF pmax pmax
comp=Z,50nm,1.0s,mb5.4
PPT Papeete 82.51 125 eS S 05 47 14.6 +5.1
comp=Z,902nm,29.8s
PPT eLR LR 06 02 53.8
comp=Z,2μm,24.5s
PPT Papeete 82.51 125 LR LR 06 04 27.4
comp=Z,894nm,21.8s,MS5.1,baz=294,slow=29
PPCY Paphos 82.56 314 P P 05 36 57.0 -0.2
FNA Florina 82.58 325 P P 05 36 56.0 -1.2
FNA Florina 82.58 325 P P 05 36 56.0 -1.2
CHOS Chios island 82.64 320 P P 05 36 57.6 0.0
TIR Tirane 82.69 326 P P 05 36 57.6 -0.2
TIR Tirane 82.69 326 P P 05 36 57.6 -0.2
SSF Saint Saulge 82.70 339⇑ iP P 05 36 57.9 +0.2
comp=Z,86nm,0.9s,mb5.5
SSF Saint Saulge 82.70 339⇑ iP P 05 36 57.9 +0.2
comp=Z,43nm,0.9s,mb5.5
SSF Saint Saulge 82.70 339⇑ iP P 05 36 57.9 +0.2
SSF pmax pmax
comp=Z,43nm,0.9s,mb5.5
LIT Litokhoron 82.71 324 P P 05 36 55.8 -2.1
LIT Litokhoron 82.71 324 P P 05 36 55.8 -2.1
HYF Humbligny 82.72 340 eP P 05 36 58.4 +0.6
AKAS Kas 82.79 317⇑ iP P 05 36 57.1 -1.3
KZN Kozani 82.83 324 P P 05 36 57.7 -0.8
KZN Kozani 82.83 324 P P 05 36 57.7 -0.8
SGMF Saint Gilles 82.91 343⇑ iP P 05 36 58.9 +0.1
comp=Z,66nm,0.5s,mb5.6
SGMF Saint Gilles 82.91 343⇑ iP P 05 36 58.9 +0.1
comp=Z,33nm,0.5s,mb5.6
SGMF Saint Gilles 82.91 343⇑ iP P 05 36 58.9 +0.1
SGMF pmax pmax
comp=Z,33nm,0.5s,mb5.6
KBN Korca 82.95 325 iP P 05 36 58.8 -0.3
RBK Rabkut 82.96 288 P P 05 37 00.1 +0.6
SNR=5.8
ROSF Rostrenen 82.97 344⇑ iP P 05 36 59.3 +0.2
comp=Z,241nm,1.2s,mb5.8
ROSF Rostrenen 82.97 344⇑ iP P 05 36 59.3 +0.2
comp=Z,121nm,1.2s,mb5.8
ROSF Rostrenen 82.97 344⇑ iP P 05 36 59.3 +0.2
ROSF pmax pmax
comp=Z,121nm,1.2s,mb5.8
AVF Avril sur Loir 82.99 339⇑ iP P 05 36 59.6 +0.4
comp=Z,448nm,1.3s,mb6.0
AVF Avril sur Loir 82.99 339⇑ iP P 05 36 59.6 +0.4
comp=Z,224nm,1.3s,mb6.0
AVF Avril sur Loir 82.99 339⇑ iP P 05 36 59.6 +0.4
AVF pmax pmax
comp=Z,224nm,1.3s,mb6.0
SWET Sewanee 83.00 45 eP P 05 36 58.2 -1.3
SMF Signal de Mont 83.01 339⇑ iP P 05 36 59.7 +0.4
comp=Z,695nm,1.2s,mb6.3
SMF Signal de Mont 83.01 339⇑ iP P 05 36 59.7 +0.4
comp=Z,348nm,1.2s,mb6.3
SMF Signal de Mont 83.01 339⇑ iP P 05 36 59.7 +0.4
SMF pmax pmax
comp=Z,348nm,1.2s,mb6.3
NEST Nestorio 83.03 325 P P 05 36 58.6 -0.9
XOR Xorichti 83.04 323 P P 05 36 58.8 -0.9
XOR Xorichti 83.04 323 P P 05 36 58.8 -0.9
WES Weston 83.11 31 eP P 05 36 59.3 -0.6
comp=Z,55nm,1.3s,mb5.4
WES Weston 83.11 31 eP P 05 36 59.3 -0.6
WES pmax pmax
comp=Z,55nm,1.3s,mb5.4
BDRM Kayabasi 83.11 319⇑ iP P 05 37 00.3 +0.3
BST Brest 83.15 344 eP P 05 37 00.0 0.0
LPL La Plagne 83.30 337⇑ iP P 05 37 02.0 +1.1
comp=Z,137nm,1.0s,mb5.6
LPL La Plagne 83.30 337⇑ iP P 05 37 02.0 +1.1
comp=Z,69nm,1.0s,mb5.6
LPL La Plagne 83.30 337⇑ iP P 05 37 02.0 +1.1
LPL pmax pmax
comp=Z,69nm,1.0s,mb5.6
LPG La Plagne 83.31 337⇑ iP P 05 37 02.1 +1.2
comp=Z,196nm,1.1s,mb5.8
LPG La Plagne 83.31 337⇑ iP P 05 37 02.1 +1.2
comp=Z,98nm,1.1s,mb5.8
LPG La Plagne 83.31 337⇑ iP P 05 37 02.1 +1.2
LPG pmax pmax
comp=Z,98nm,1.1s,mb5.8
BGF Bois d'Agland 83.33 339⇑ iP P 05 37 01.4 +0.4
comp=Z,214nm,1.3s,mb5.7
BGF Bois d'Agland 83.33 339⇑ iP P 05 37 01.4 +0.4
comp=Z,107nm,1.3s,mb5.7
BGF Bois d'Agland 83.33 339⇑ iP P 05 37 01.4 +0.4
BGF pmax pmax
comp=Z,107nm,1.3s,mb5.7
QUIF Quistinic 83.35 344⇑ iP P 05 37 01.0 -0.1
comp=Z,73nm,1.1s,mb5.3
QUIF Quistinic 83.35 344⇑ iP P 05 37 01.0 -0.1
comp=Z,37nm,1.1s,mb5.3
QUIF Quistinic 83.35 344⇑ iP P 05 37 01.0 -0.1
QUIF pmax pmax
comp=Z,37nm,1.1s,mb5.3
VLC Villacollemand 83.48 334 eP P 05 37 01.8 0.0
comp=Z,87nm,0.9s,mb5.8
CPCT Cooper Cave 83.48 44 eP P 05 37 00.8 -1.2
ARG Arkhangelos 83.50 318 P P 05 37 02.2 +0.2
ARG Arkhangelos 83.50 318 P P 05 37 02.2 +0.2
ABTO Aybut 83.66 288 P P 05 37 04.1 +1.0
SNR=7.1
ATAL Atalanti 83.68 323 P P 05 37 01.8 -1.2
PLDF La Plantade 83.69 339 eP P 05 37 04.7 +1.8
LKR Lokris 83.73 323 P P 05 37 01.3 -1.9
LKR Lokris 83.73 323 P P 05 37 01.3 -1.9
AGO Saint Agoulin 83.74 339 eP P 05 37 04.7 +1.6
TCF Toulx Ste Croi 83.74 340⇑ iP P 05 37 03.5 +0.4
comp=Z,189nm,1.3s,mb5.8
TCF Toulx Ste Croi 83.74 340⇑ iP P 05 37 03.5 +0.4
comp=Z,94nm,1.3s,mb5.8
TCF Toulx Ste Croi 83.74 340⇑ iP P 05 37 03.5 +0.4
TCF pmax pmax
comp=Z,94nm,1.3s,mb5.8
GDM Grand'Maison 83.76 337 eP P 05 37 04.3 +1.1
SRN Sarande 83.90 325 iP P 05 37 02.7 -1.3
BLA Blacksburg 83.91 40 eP P 05 37 03.4 -0.7
comp=Z,17nm,0.9s,mb5.2
BLA Blacksburg 83.91 40 eP P 05 37 03.4 -0.7
BLA pmax pmax
comp=Z,17nm,0.9s,mb5.2
MFF Saint Martin d 83.98 341 eP P 05 37 04.4 +0.1
comp=Z,65nm,0.7s,mb5.5
MFF Saint Martin d 83.98 341 eP P 05 37 04.4 +0.1
comp=Z,32nm,0.7s,mb5.6
MFF Saint Martin d 83.98 341 eP P 05 37 04.4 +0.1
MFF pmax pmax
comp=Z,32nm,0.7s,mb5.6
MBDF Montbardon 84.02 336⇑ iP P 05 37 04.9 +0.4
comp=Z,38nm,0.7s,mb5.3
MBDF Montbardon 84.02 336⇑ iP P 05 37 04.9 +0.4
comp=Z,19nm,0.7s,mb5.3
MBDF Montbardon 84.02 336⇑ iP P 05 37 04.9 +0.4
MBDF pmax pmax
comp=Z,19nm,0.7s,mb5.3
KLBR Kellerberrin 84.05 209 eP P 05 37 03.8 -0.8
comp=Z,16nm,0.8s,mb5.2
PYM Petit Puy Mans 84.05 339 eP P 05 37 06.1 +1.4
ORIF Oris-en-Rattie 84.08 337⇑ iP P 05 37 05.8 +0.9
comp=Z,126nm,0.9s,mb5.7
ORIF eMLR MLR
comp=Z,1μm,22.5s,MS4.9
ORIF Oris-en-Rattie 84.08 337⇑ iP P 05 37 05.8 +0.9
comp=Z,63nm,0.9s,mb5.7
ORIF Oris-en-Rattie 84.08 337⇑ iP P 05 37 05.8 +0.9
ORIF pmax pmax
comp=Z,63nm,0.9s,mb5.8
SSB Saint Sauveur 84.10 338 eP P 05 37 05.4 +0.5
comp=Z,126nm,1.1s,mb6.0
SSB Saint Sauveur 84.10 338 eP P 05 37 05.4 +0.4
SSB pmax pmax
comp=Z,126nm,1.1s,mb6.0
KEK Kerkira 84.12 325 P P 05 37 03.8 -1.4
KEK Kerkira 84.12 325 P P 05 37 03.8 -1.4
AQU L'Aquila 84.13 331 eP P 05 37 05.6 +0.4
comp=Z,96nm,0.9s,mb5.9
AQU L'Aquila 84.13 331⇑ iP P 05 37 06.5 +1.3
AQU L'Aquila 84.13 331⇑ iP P 05 37 06.5 +1.3
LRAL Lakeview Retre 84.22 47 eP P 05 37 04.5 -1.3
comp=Z,6.5nm,0.9s,mb4.8
SURF Saint Ours 84.23 336 eP P 05 37 06.6 +1.0
KALE Kalithea 84.31 323 P P 05 37 04.4 -1.7
EFP Efpalio 84.37 323 P P 05 37 05.6 -0.9

CBN	Corbin	84.38	37	*e*P	P	05 37 05.7	-0.8	
	comp=Z,16nm,0.8s,mb5.2							
VIVF	Saint-Julien-I	84.46	338⇑	*i*P	P	05 37 07.6	+0.8	
	comp=Z,270nm,1.2s,mb6.0							
VIVF	Saint-Julien-I	84.46	338⇑	*i*P	P	05 37 07.6	+0.8	
	comp=Z,135nm,1.2s,mb6.0							
VIVF	Saint-Julien-I	84.46	338⇑	*i*P	P	05 37 07.6	+0.8	
VIVF				pmax	pmax			
	comp=Z,135nm,1.2s,mb6.0							
SAOF	Saorge	84.48	335	*e*P	P	05 37 06.6	-0.3	
LAKA	Lakka	84.50	323	P	P	05 37 06.3	-0.8	
AUTN	L'Aution	84.50	335	*e*P	P	05 37 07.8	+0.8	
TOUF	Mont Tournerai	84.54	336	*e*P	P	05 37 07.4	+0.2	
DID	Didima	84.59	322	P	P	05 37 05.1	-2.5	
JSRW	J. Sargeant Re	84.60	38	*e*P	P	05 37 06.7	-0.9	
GUR	Goura	84.61	323	P	P	05 37 06.2	-1.5	
LUCF	Luceram	84.62	335	*e*P	P	05 37 07.6	0.0	
SBF	Sospel	84.62	335⇑	*i*P	P	05 37 07.5	-0.1	
	comp=Z,204nm,1.1s,mb5.9							
SBF	Sospel	84.62	335⇑	*i*P	P	05 37 07.5	-0.1	
	comp=Z,102nm,1.1s,mb5.9							
SBF	Sospel	84.62	335⇑	*i*P	P	05 37 07.5	-0.1	
SBF				pmax	pmax			
	comp=Z,102nm,1.1s,mb5.9							
MVIF	Mont Vial	84.67	336	*e*P	P	05 37 08.1	+0.2	
REVF	Revere	84.76	335	*e*P	P	05 37 08.3	0.0	
RJF	Les Rejaudoux	84.83	340⇑	*i*P	P	05 37 08.6	0.0	
	comp=Z,33nm,0.8s,mb5.2							
RJF				*e*MLR	MLR			
	comp=Z,1μm,22.0s,MS5.0							
RJF	Les Rejaudoux	84.83	340⇑	*i*P	P	05 37 08.6	0.0	
	comp=Z,16nm,0.8s,mb5.2							
RJF				LR	LR			
	comp=Z,1μm,22.0s,MS5.3							
RJF	Les Rejaudoux	84.83	340⇑	*i*P	P	05 37 08.6	0.0	
RJF				pmax	pmax			
	comp=Z,17nm,0.8s,mb5.2							
RJF				MLR	MLR			
	comp=Z,1μm,22.0s,MS5.3							
CALN	Calern	84.88	336	*e*P	P	05 37 09.2	+0.3	
SMRF	Simiane la Rot	85.04	337⇑	*i*P	P	05 37 10.7	+1.0	
	comp=Z,248nm,1.4s,mb5.8							
SMRF	Simiane la Rot	85.04	337⇑	*i*P	P	05 37 10.7	+1.0	
	comp=Z,248nm,1.4s,mb6.2							
CAF	Calviac	85.06	339⇑	*i*P	P	05 37 10.1	+0.3	
	comp=Z,44nm,0.6s,mb5.5							
CAF	Calviac	85.06	339⇑	*i*P	P	05 37 10.1	+0.3	
	comp=Z,22nm,0.6s,mb5.5							
CAF	Calviac	85.06	339⇑	*i*P	P	05 37 10.1	+0.3	
CAF				pmax	pmax			
	comp=Z,22nm,0.6s,mb5.5							
VLX	Vlachokerasia	85.07	322	P	P	05 37 08.8	-1.2	
KFL	Anninata	85.10	324	P	P	05 37 09.8	-0.3	
VLS	Valsamata	85.12	324	P	P	05 37 09.3	-0.9	
VLS	Valsamata	85.12	324	P	P	05 37 09.3	-0.9	
FRF	La Foret Royal	85.13	336⇑	*i*P	P	05 37 10.2	0.0	
	comp=Z,250nm,1.4s,mb5.8							
FRF	La Foret Royal	85.13	336⇑	*i*P	P	05 37 10.2	0.0	
	comp=Z,125nm,1.4s,mb5.8							
FRF	La Foret Royal	85.13	336⇑	*i*P	P	05 37 10.2	0.0	
FRF				pmax	pmax			
	comp=Z,125nm,1.4s,mb5.8							
ZKR	Zakros	85.28	318	P	P	05 37 10.5	-0.6	
ZKR	Zakros	85.28	318	P	P	05 37 10.5	-0.6	
LFF	La Frestale	85.36	340⇑	*i*P	P	05 37 11.1	-0.2	
	comp=Z,64nm,0.6s,mb5.6							
LFF	La Frestale	85.36	340⇑	*i*P	P	05 37 11.1	-0.2	
	comp=Z,32nm,0.6s,mb5.6							
LFF	La Frestale	85.36	340⇑	*i*P	P	05 37 11.1	-0.2	
LFF				pmax	pmax			
	comp=Z,32nm,0.6s,mb5.6							
PGF	Pioggiola	85.37	334⇑	*i*P	P	05 37 11.3	-0.1	
	comp=Z,191nm,1.3s,mb5.8							
PGF	Pioggiola	85.37	334⇑	*i*P	P	05 37 11.3	-0.1	
	comp=Z,95nm,1.3s,mb5.8							
PGF	Pioggiola	85.37	334⇑	*i*P	P	05 37 11.3	-0.1	
PGF				pmax	pmax			
	comp=Z,95nm,1.3s,mb5.8							
LMR	La Mourre	85.37	336⇑	*i*P	P	05 37 11.7	+0.3	
	comp=Z,390nm,1.2s,mb6.1							
LMR	La Mourre	85.37	336⇑	*i*P	P	05 37 11.7	+0.3	
	comp=Z,195nm,1.2s,mb6.1							
LMR	La Mourre	85.37	336⇑	*i*P	P	05 37 11.7	+0.3	
LMR				pmax	pmax			
	comp=Z,195nm,1.2s,mb6.1							
CUC	Castrocucco	85.38	328	*e*P	P	05 37 09.9	-1.5	
	comp=Z,46nm,1.0s,mb5.6							
LASF	Ste Croix	85.40	338⇑	*i*P	P	05 37 12.6	+1.1	
	comp=Z,123nm,1.3s,mb5.6							
ITM	Ithomi	85.42	323	P	P	05 37 10.5	-1.3	
ITM	Ithomi	85.42	323	P	P	05 37 10.5	-1.3	
NWAO	Narrogin (SRO)	85.44	209	LR	LR	06 12 52.4		
	comp=Z,179nm,19.3s,MS4.5,baz=204,slow=34							
LAST	Lasithi	85.58	319	P	P	05 37 11.7	-0.9	
LAST	Lasithi	85.58	319	P	P	05 37 11.7	-0.9	
GOGA	Godfrey	85.65	44	*e*P	P	05 37 12.0	-0.9	
	comp=Z,9.1nm,0.8s,mb5.1							
GOGA	Godfrey	85.65	44	*e*P	P	05 37 12.0	-0.9	
GOGA				pmax	pmax			
	comp=Z,9.0nm,0.8s,mb5.0							
IDI	Anoyia	85.73	319	*e*P	P	05 37 11.7	-1.6	
	comp=Z,65nm,0.8s,mb5.9							
PYL	PYLOS	85.74	322	P	P	05 37 11.5	-1.9	
TIP	Timpagrande	85.75	327	*e*P	P	05 37 13.1	-0.3	
	comp=Z,165nm,1.1s,mb6.2							
JSC	Jenkinsville	85.96	42	*e*P	P	05 37 13.9	-0.6	
SIVA	Sivas	86.00	319	P	P	05 37 14.3	-0.3	
SIVA	Sivas	86.00	319	P	P	05 37 14.3	-0.3	
KARN	Karanos	86.07	320	P	P	05 37 13.5	-1.5	
MTLF	Montolieu	86.51	339⇑	*i*P	P	05 37 16.9	-0.1	
	comp=Z,58nm,1.2s,mb5.4							
MTLF	Montolieu	86.51	339⇑	*i*P	P	05 37 16.9	-0.1	
	comp=Z,29nm,1.2s,mb5.4							
MTLF	Montolieu	86.51	339⇑	*i*P	P	05 37 16.9	-0.1	
MTLF				pmax	pmax			
	comp=Z,29nm,1.2s,mb5.4							
CEL	Celeste	86.88	327	*e*P	P	05 37 17.8	-1.1	
	comp=Z,39nm,0.8s,mb5.7							
CARF	Carcanieres	87.12	339	*e*P	P	05 37 19.8	-0.2	
SJAF	Saint Jean de	87.14	338	*e*P	P	05 37 19.7	-0.4	
MLS	Moulis	87.14	339	*e*P	P	05 37 19.7	-0.4	
FILF	Fillols	87.15	338	*e*P	P	05 37 20.1	-0.1	
EJON	La Jonquera	87.17	338	P	P	05 37 19.3	-0.9	
	comp=Z,105nm,1.5s,mb5.8							
EPF	Esparros	87.25	340⇑	*i*P	P	05 37 19.6	-1.0	
	comp=Z,23nm,0.7s,mb5.2							
EPF	Esparros	87.25	340⇑	*i*P	P	05 37 19.6	-1.0	
	comp=Z,11nm,0.7s,mb5.2							
EPF	Esparros	87.25	340⇑	*i*P	P	05 37 19.6	-1.0	
EPF				pmax	pmax			
	comp=Z,11nm,0.7s,mb5.2							
CLLI	Llivia	87.38	339	P	P	05 37 21.0	-0.2	
VALF	Valcebollere	87.44	339	*e*P	P	05 37 21.8	+0.2	
RESF	Ens	87.47	340	*e*P	P	05 37 22.0	+0.3	
VIEF	Viey	87.47	340	*e*P	P	05 37 21.6	-0.1	
EALK	Alkurruntz	87.50	341	P	P	05 37 21.6	-0.2	
	comp=Z,238nm,2.5s,mb6.0							
SJPF	Ste Jean	87.54	341⇑	*i*P	P	05 37 21.7	-0.3	
	comp=Z,55nm,1.3s,mb5.3							
SJPF	Ste Jean	87.54	341⇑	*i*P	P	05 37 21.7	-0.3	
	comp=Z,28nm,1.3s,mb5.3							
SJPF	Ste Jean	87.54	341⇑	*i*P	P	05 37 21.7	-0.3	
SJPF				pmax	pmax			
	comp=Z,27nm,1.3s,mb5.3							
ELIZ	Elizondo	87.56	341	P	P	05 37 21.3	-0.8	
	comp=Z,37nm,0.9s,mb5.6							
ELIZ	Elizondo	87.56	341	P	P	05 37 21.3	-0.8	
ELIZ				pmax	pmax			
	comp=Z,37nm,0.9s,mb5.6							
ETSF	Etsaut	87.59	341⇑	*i*P	P	05 37 21.9	-0.4	
	comp=Z,33nm,0.7s,mb5.3							
ETSF	Etsaut	87.59	341⇑	*i*P	P	05 37 21.9	-0.4	
	comp=Z,16nm,0.7s,mb5.4							
ETSF	Etsaut	87.59	341⇑	*i*P	P	05 37 21.9	-0.4	
ETSF				pmax	pmax			
	comp=Z,17nm,0.7s,mb5.4							
EBIE	Bielsa	87.63	340	P	P	05 37 23.1	+0.6	
	comp=Z,54nm,1.7s,mb5.5							
CSOR	Sort	87.68	339	P	P	05 37 23.0	+0.3	
	comp=Z,154nm,2.7s,mb5.8							
ELAN	Lanestosa	87.90	343	P	P	05 37 23.3	-0.4	
	comp=Z,558nm,3.8s							
CFON	Fontmartina	87.93	338	P	P	05 37 23.6	-0.4	
	comp=Z,78nm,1.5s,mb5.7							
EMIR	Miracle	88.02	339	P	P	05 37 24.0	-0.4	
	comp=Z,586nm,4.1s							
VSL	Villasalto	88.03	332	*e*P	P	05 37 23.6	-0.8	
	comp=Z,26nm,0.9s,mb5.5							
EARI	Arriondas	88.18	344	P	P	05 37 24.6	-0.5	
	comp=Z,193nm,1.6s,mb6.1							
EPON	Pontenova	88.51	345	P	P	05 37 25.4	-1.2	
	comp=Z,417nm,2.9s,mb6.3							
EPOB	Poblet	88.66	339	P	P	05 37 27.3	-0.1	
	comp=Z,158nm,3.0s							
ESAC	San Caprasio	88.69	340	P	P	05 37 27.4	0.0	
	comp=Z,255nm,2.5s,mb6.1							
STS	Santiago	89.18	346	P	P	05 37 28.4	-1.4	
	comp=Z,650nm,2.5s,mb6.5							
STS	Santiago	89.18	346	P	P	05 37 28.4	-1.4	
STS				pmax	pmax			
	comp=Z,650nm,2.5s,mb6.5							
EMAZ	Mazaricos	89.18	346	P	P	05 37 28.7	-1.1	
	comp=Z,295nm,3.3s							
ERTA	Horta de San J	89.22	339	P	P	05 37 29.0	-1.0	
	comp=Z,110nm,2.2s,mb5.8							
ERUA	La Rua	89.42	345	P	P	05 37 30.2	-0.6	
	comp=Z,52nm,1.2s,mb5.7							
ERUA	La Rua	89.42	345	P	P	05 37 30.2	-0.7	
ERUA				pmax	pmax			
	comp=Z,52nm,1.2s,mb5.7							
WDD	Wield Dalam	89.50	327	*e*P	P	05 37 30.3	-1.1	
	comp=Z,91nm,0.9s,mb6.1							
ETOS	Mallorca	89.70	337	P	P	05 37 32.2	-0.1	
	comp=Z,427nm,1.1s,mb5.7							
ECAL	Calabor	89.78	345	P	P	05 37 31.9	-0.7	
	comp=Z,323nm,4.0s							
ETOR	Torete	89.91	341	P	P	05 37 31.8	-1.4	
	comp=Z,20nm,1.1s,mb5.3							
ETOR	Torete	89.91	341	P	P	05 37 31.8	-1.4	
ETOR				pmax	pmax			
	comp=Z,20nm,1.1s,mb5.4							
PBRG	Braganca	89.91	345	*e*P	P	05 37 32.0	-1.2	
	comp=Z,56nm,1.8s,mb5.6							
EZAM	Zamans	89.92	346	P	P	05 37 33.2	-0.1	
	comp=Z,26nm,0.7s,mb5.7							
EZAM	Zamans	89.92	346	P	P	05 37 33.2	0.0	
EZAM				pmax	pmax			
	comp=Z,26nm,0.7s,mb5.7							
EMOS	Mosqueruela	89.97	340	P	P	05 37 33.5	-0.1	
	comp=Z,115nm,2.3s,mb5.8							
ELOB	Lobios	90.09	346	P	P	05 37 33.4	-0.7	
	comp=Z,231nm,3.3s							
PCAB	Cabril	90.23	346	*e*P	P	05 37 34.0	-0.7	
	comp=Z,79nm,1.7s,mb5.8							
GUD	Guadarrama	90.53	342	P	P	05 37 35.3	-0.8	
	comp=Z,8.9nm,0.8s,mb5.2							
GUD	Guadarrama	90.53	342	P	P	05 37 35.3	-0.8	
GUD				pmax	pmax			
	comp=Z,9.0nm,0.8s,mb5.2							
MVO	Moncorvo	90.59	345	*e*P	P	05 37 35.3	-1.1	
	comp=Z,76nm,1.5s,mb5.8							
MVO				*e*LR	LR	06 19 13.1		
	comp=Z,507nm,20.0s							
PVRL	Vila Real	90.60	345	*e*P	P	05 37 35.6	-0.8	
	comp=Z,65nm,1.5s,mb5.7							
EIBI	Ibiza	90.79	338	P	P	05 37 36.7	-0.7	
	comp=Z,323nm,2.8s,mb6.2							
ECHE	Chera	90.83	340	P	P	05 37 37.3	-0.3	
	comp=Z,23nm,1.7s,mb5.2							
ECHE	Chera	90.83	340	P	P	05 37 37.3	-0.2	
ECHE				pmax	pmax			
	comp=Z,23nm,1.7s,mb5.2							
PVIS	Viseu	91.18	345	*e*P	P	05 37 38.3	-0.8	
	comp=Z,57nm,1.3s,mb5.7							
CMAH	Djebel Manchou	91.27	333	P	P	05 37 37.1	-2.5	
ESDC	Sonseca Array	91.42	342	P	P	05 37 39.5	-0.8	
	comp=Z,18nm,1.1s,mb5.3							
ESDC	Sonseca Array	91.42	342	P	P	05 37 39.2	-1.1	
	comp=Z,13nm,1.0s,mb5.2,baz=11,slow=4.2,SNR=34							
ESDC				LR	LR	06 22 46.7		
	comp=Z,422nm,19.9s,MS4.9,baz=35,slow=38							
ESLA	Sonseca Array	91.42	342	*e*P	P	05 37 39.3	-1.0	
	comp=Z,4.0nm,1.1s,mb4.7							
MTE	Manteigas	91.42	345	*e*P	P	05 37 39.1	-1.2	
	comp=Z,34nm,1.9s,mb5.4							
MTE				*e*LR	LR	06 20 01.2		
	comp=Z,433nm,18.0s							
KEST	Kesra	91.46	331	*e*P	P	05 37 40.5	-0.1	
KEST	Kesra	91.46	331	P	P	05 37 40.5	0.0	
	comp=Z,20nm,1.2s,mb5.3,baz=277,slow=0.9,SNR=19							
KEST				LR	LR	06 27 15.7		
	comp=Z,168nm,18.3s,MS4.5,baz=171,slow=41							
EPLA	Plasencia	91.47	344	P	P	05 37 38.8	-1.7	
	comp=Z,35nm,1.1s,mb5.6							
EPLA	Plasencia	91.47	344	P	P	05 37 38.8	-1.7	
EPLA				pmax	pmax			
	comp=Z,35nm,1.1s,mb5.6							
EBEN	Beniarda	91.49	339	P	P	05 37 39.5	-1.1	
	comp=Z,57nm,1.4s,mb5.7							
RPZ	Rata Peaks	91.57	167	LR	LR	06 15 36.0		
	comp=Z,541nm,18.2s,MS5.0,baz=298,slow=33							
ABSA	Djebel Ababsia	91.58	332	P	P	05 37 38.0	-3.1	
CKFL	Kef-Lekhel	91.70	333	P	P	05 37 39.0	-2.6	
DFRA	Djebel Bou Aff	91.83	334	P	P	05 37 40.0	-2.2	
ETOB	Tobarra	91.86	340	P	P	05 37 42.1	-0.3	
	comp=Z,522nm,3.8s							
CASM	Ain Smara	91.90	333	P	P	05 37 39.4	-3.2	
PCBR	Castelo Branco	91.95	345	*e*P	P	05 37 41.5	-1.2	
	comp=Z,38nm,1.5s,mb5.5							
EVIA	Vianos	92.09	341	P	P	05 37 43.2	-0.2	
	comp=Z,23nm,1.2s,mb5.4							
EVIA	Vianos	92.09	341	P	P	05 37 43.2	-0.2	
EVIA				pmax	pmax			
	comp=Z,23nm,1.2s,mb5.4							
SET	Setif	92.29	334	P	P	05 37 45.0	+0.6	
PTOM	Tomar	92.33	345	*e*P	P	05 37 43.3	-1.2	
	comp=Z,54nm,1.4s,mb5.7							
PMRV	Marv??o	92.34	345	*e*P	P	05 37 43.9	-0.6	
	comp=Z,47nm,1.4s,mb5.6							
PMRV				*e*LR	LR	06 10 58.6		
	comp=Z,689nm,20.0s							
EBAN	Banos Encina	92.83	341	P	P	05 37 46.5	-0.3	
	comp=Z,6.8nm,0.8s,mb5.1							
EBAN	Banos Encina	92.83	341	P	P	05 37 46.5	-0.3	
EBAN				pmax	pmax			
	comp=Z,7.0nm,0.8s,mb5.1							
EHUE	Huescar	92.90	340	P	P	05 37 46.6	-0.6	
	comp=Z,21nm,1.2s,mb5.4							
EHUE	Huescar	92.90	340	P	P	05 37 46.6	-0.5	
EHUE				pmax	pmax			
	comp=Z,21nm,1.2s,mb5.4							
EBAD	Badajoz	92.92	344	P	P	05 37 46.8	-0.5	
	comp=Z,222nm,4.9s							
EADA	Adamuz	93.00	342	P	P	05 37 46.6	-1.0	
	comp=Z,151nm,2.9s,mb5.9							
EVO	Evora	93.32	345⇑	*i*P	P	05 37 47.6	-1.5	
	comp=Z,71nm,1.4s,mb5.6							
EVO				*e*MLR	MLR			
	comp=Z,822nm,19.0s,MS4.9							
EVO	Evora	93.32	345	*e*P	P	05 37 47.7	-1.4	
	comp=Z,42nm,1.6s,mb5.6							
PBAR	Barrancos	93.49	344	*e*P	P	05 37 48.9	-0.9	
	comp=Z,34nm,1.4s,mb5.6							
PBAR				*e*LR	LR	06 12 01.1		
	comp=Z,460nm,20.0s							
PBEJ	Beja	93.78	345	*e*P	P	05 37 50.4	-0.8	
	comp=Z,58nm,1.5s,mb5.8							
EMIN	Mina Concepcio	93.81	344	P	P	05 37 50.0	-1.3	
	comp=Z,370nm,3.0s							
ELOJ	Sierra Loja	93.89	341	P	P	05 37 50.9	-0.8	
	comp=Z,3.9nm,0.5s,mb5.1							
ELOJ	Sierra Loja	93.89	341	P	P	05 37 50.9	-0.8	
ELOJ				pmax	pmax			
	comp=Z,4.0nm,0.5s,mb5.1							
EGUA	Guajares	94.06	341	P	P	05 37 51.5	-1.0	
	comp=Z,143nm,0.9s,mb6.4							
EGUA	Guajares	94.06	341	P	P	05 37 51.5	-1.0	
EGUA				pmax	pmax			
	comp=Z,143nm,0.9s,mb6.4							
EGRO	El Granado	94.19	344	P	P	05 37 51.9	-1.2	
	comp=Z,167nm,2.4s,mb6.0							
PCVE	Castro Verde	94.20	345	*e*P	P	05 37 51.9	-1.2	
	comp=Z,62nm,1.6s,mb5.8							
PVAQ	Vaqueiros	94.36	344	*e*LR	LR	06 11 15.4		
	comp=Z,454nm,20.0s							
PTEO	Sao Teotonio	94.41	345	*e*P	P	05 37 53.6	-0.5	
	comp=Z,65nm,1.1s,mb6.0							
ESPR	Espera	94.52	343	P	P	05 37 53.7	-0.9	
	comp=Z,15nm,1.0s,mb5.4							
PBDV	Barranco-do-Ve	94.56	344	*e*LR	LR	06 11 57.3		
	comp=Z,521nm,20.0s							
MORF	Marmelete	94.63	345	*e*LR	LR	06 19 02.4		
	comp=Z,398nm,22.0s							
EALB	Alboran	94.79	340	P	P	05 37 55.7	-0.2	
	comp=Z,286nm,1.2s,mb6.6							
PFVI	Vila Bisbo	94.83	345	*e*LR	LR	06 12 03.8		
	comp=Z,533nm,18.0s							
EJIF	Jimena Fronter	94.84	342	P	P	05 37 55.7	-0.4	
	comp=Z,31nm,1.0s,mb5.7							
EJIF	Jimena Fronter	94.84	342	P	P	05 37 55.7	-0.4	
EJIF				pmax	pmax			
	comp=Z,31nm,1.0s,mb5.7							
RKT	Rikitea	95.37	118	*e*LR	LR	06 08 48.1		
	comp=Z,1μm,29.8s							
DBIC	Dimbokro	123.13	333	PKP	PKPdf	05 43 30.0	-1.0	
	comp=Z,9.4nm,0.8s,baz=313,slow=2.6,SNR=12							
TIC	Toumodi	123.20	333	*e*PKP1	PKPdf	05 43 30.0	-1.2	
	comp=Z,52nm,1.2s							
KIC	Kosan Boka	123.38	333	*e*PKP1	PKPdf	05 43 30.4	-1.1	
	comp=Z,33nm,1.1s							
LIC	Lamto	123.60	333	*e*PKP1	PKPdf	05 43 30.9	-1.0	
	comp=Z,38nm,0.9s							
LIC	Lamto	123.60	333	*e*PKIKP	PKPdf	05 43 30.9	-1.0	
	comp=Z,27nm,0.9s							
LIC				*e*MLR	MLR			
	comp=Z,290nm,21.0s,MS4.6							
LIC	Lamto	123.60	333	*e*PKPdf	PKPdf	05 43 30.9	-1.0	
LIC				LR	LR			
	comp=Z,140nm,21.0s,MS4.6							
MAW	Mawson	131.98	211	PKP	PKPdf	05 43 45.8	-0.3	
	comp=Z,2.5nm,0.6s,baz=69,slow=5.5,SNR=13							
LBTB	Lobatse	132.83	278	*e*PKPdf	PKPdf	05 43 49.4	+0.3	
LPAZ	La Paz	134.72	62	PKP	PKPdf	05 43 52.6	-0.2	
	comp=Z,1.3nm,0.7s,baz=18,slow=4.4,SNR=9.3							
BOSA	Boshof	135.37	275	PKhKP	PKPpre	05 43 48.6		
	comp=Z,3.8nm,0.8s,baz=134,slow=4.0,SNR=5.0							
QSPA	South Pole Qui	136.49	180	*e*PKPdf	PKPdf	05 43 54.3	0.0	
PLCA	Paso Flores	148.64	95	PKPbc	PKPbc	05 44 20.4	-0.2	
	comp=Z,17nm,0.8s,baz=238,slow=2.2,SNR=17							
CPUP	Villa Florida	148.84	60	PKPbc	PKPbc	05 44 20.9	-0.7	
	comp=Z,5.9nm,0.6s,baz=302,slow=2.5,SNR=27							
NVL	N'lazarevskaya	149.46	204	*i* PKP2	PKPdf	05 44 20.3	+3.1	
NVL				pmax	pmax			
	comp=Z,52nm,1.2s							
MAIT	Maitri	149.48	204	*e*PKPdif	PKPdf	05 44 20.9	+3.6	
SPB	Sao Paulo	151.89	42	*e*PKPbc	PKPbc	05 44 29.2	+0.2	
VNA1	Neumayer--Stat	154.28	195	*e*PKPdf	PKPdf	05 44 29.5	+5.0	
VNA1				*e*		05 44 43.9		

IDC 27 05:29:56.4±1.6, 21°.71N×143°.01E, h300km±15km, mb3.3/8, mb1 3.6/10, mb1mx3.3/24, mbtmp3.4/10, Error ellipse: s-maj=24.9km s-min=13.6km az=79.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.41**	**352**	P	Pn	05 31 19.1	+0.4
	13nm,0.3s,baz=108,slow=18,SNR=12						
CBIJ				S	S	05 32 24.6	-0.1
	28nm,0.3s,baz=273,slow=23,SNR=11						
GUMO	**Guam**	**8.27**	**167**	P	Pn	05 31 54.7	+1.3
	4.5nm,0.3s,baz=18,slow=19,SNR=3.9						
KSRS	**Korea Array**	**20.40**	**324**	P	P	05 34 12.2	+0.8
	1.3nm,0.5s,baz=142,slow=8.7,SNR=3.8						
WRA	**Warramunga Arr**	**42.26**	**192**	P	P	05 37 19.8	-1.2
	3.1nm,0.7s,baz=7.2,slow=7.7,SNR=3.2						
ZALV	**Zalesovo Beam**	**54.10**	**322**	PcP	PcP	05 39 50.0	-1.1
	0.9nm,0.4s,baz=106,slow=3.0,SNR=2.5						
ILAR	**Eielson Array**	**62.10**	**27**	P	P	05 39 44.4	-1.1
	0.3nm,0.6s,baz=253,slow=5.2,SNR=4.9						
BVAR	**Borovoye Array**	**62.55**	**319**	P	P	05 39 48.7	+0.1
	1.0nm,0.3s,baz=78,slow=9.0,SNR=3.4						
YKA	**Yellowknife Ar**	**76.52**	**28**	P	P	05 41 13.0	-0.4
	0.7nm,0.7s,baz=293,slow=6.0,SNR=4.4						
ARCES	**ARCESS Array B**	**78.86**	**341**	P	P	05 41 26.7	+0.6
	1.7nm,0.8s,baz=84,slow=8.3,SNR=3.8						
FINES	**FINESS Array B**	**83.10**	**334**	P	P	05 41 47.5	-0.9
	0.8nm,0.4s,baz=66,slow=5.2,SNR=4.2						
NVAR	**Mina Array Bea**	**83.26**	**51**	P	P	05 41 50.1	+0.3
	0.7nm,0.7s,baz=292,slow=4.8,SNR=3.6						
PLCA	**Paso Flores**	**145.89**	**131**	PKPbc	PKPbc	05 49 00.9	+0.2
	2.0nm,0.6s,baz=236,slow=4.2,SNR=4.4						
LPAZ	**La Paz**	**150.10**	**85**	PKPbc	PKPbc	05 49 13.4	+0.9
	1.9nm,0.6s,baz=352,slow=1.7,SNR=13						
LPAZ				PKPab	PKPab	05 49 20.4	+0.9
	1.

AKTO	Aktyubinsk	34.82	321	P	P	05 42 03.8	+0.2
	2.1nm,0.7s,mb4.2,baz=111,slow=7.9,SNR=4.7							
MJAR	Matsushiro Arr	40.07	65	P	P	05 42 48.1	0.0
	1.5nm,0.5s,mb4.0,baz=272,slow=10,SNR=3.1							
BRTR	Keskin Array B	49.53	300	P	P	05 44 04.4	+1.0
	0.6nm,0.6s,mb3.8,baz=89,slow=7.7,SNR=3.1							
AKASG	Malin Array Be	52.49	315	P	P	05 44 24.9	-0.4
AKASG	Malin Array Be	52.49	315	P	P	05 44 24.9	-0.4
	2.6nm,0.5s,mb4.4,baz=81,slow=6.7,SNR=9.8							
FINES	FINESS Array B	55.11	328	P	P	05 44 43.7	-0.7
	0.6nm,0.3s,mb4.1,baz=107,slow=14,SNR=2.5							
ARCES	ARCESS Array B	56.70	337	P	P	05 44 55.3	-0.3
	1.3nm,0.9s,mb4.0,baz=96,slow=8.3,SNR=2.9							
WRA	Warramunga Arr	62.20	134	P	P	05 45 35.6	+1.5
	1.4nm,0.7s,mb4.2,baz=324,slow=7.0,SNR=2.6							
NOA	NORSAR Array B	62.28	327	P	P	05 45 33.8	-0.3
	1.3nm,0.7s,mb4.2,baz=83,slow=6.7,SNR=4.6							
ASAR	Alice Springs	64.68	137	P	P	05 45 51.8	+1.3
	1.0nm,0.6s,mb4.0,baz=305,slow=6.6,SNR=4.4							
ILAR	Eielson Array	77.78	22	P	P	05 47 09.4	+0.5
	0.7nm,0.9s,mb3.6,baz=317,slow=3.8,SNR=3.8							
KDAK	Kodiak Island	79.78	29	P	P	05 47 20.5	+0.4
KDAK	Kodiak Island	79.78	29	P	P	05 47 20.5	+0.4
	2.5nm,0.7s,mb4.3,baz=310,slow=7.9,SNR=2.5							
TXAR	Lajitas Array	121.93	16	PKP	PKPdf	05 54 07.8	+1.2
TXAR	Lajitas Array	121.93	16	PKP	PKPdf	05 54 07.8	+1.2
	0.1nm,0.4s,baz=11,slow=0.9,SNR=2.8							
ROSC	El Rosal	145.60	335	PKPbc	PKPbc	05 54 53.7	+2.5
	2.5nm,0.5s,baz=274,slow=9.8,SNR=2.7							

*ISCJB **27** 05:38:27.9±3.3,30.9°N±0.1°×83.4°E±0.1°,10,h7km±25km, mb3.5/5, Error ellipse: s-maj=18.7km s-min=13.1km az=19.9*

*IDC **27** 05:38:28.8±1.4,30.81°N×83.20°E,h0km, mb3.6/6, mb1 3.8/8, mb1mx3.6/26, mbtmp3.6/8, ML4.1/2, MS3.7/1, Ms1 3.7/1, ms1mx2.8/32, Error ellipse: s-maj=46.6km s-min=22.5km az=55.0*

*NEIC **27** 05:38:30.2±0.9,30.88°N×83.37°E,h10km, Error ellipse: s-maj=25.1km s-min=11.6km az=48.0*

ISC 27 05:38:31.5±3.4, 30.9°N±0.1°×83.5°E±0.1, h16km±25km, n11, σ0°92/11, mb3.5/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTH	Pithoragarh	3.12	245	*ex*	Pb	05 39 20.7	-5.8
PTH				*ex*	Sg	05 40 11.9	+0.2
LSA	Lhasa	6.77	98	*e*Pn	Pn	05 40 09.7	-0.5
	94nm,1.2s						
MKAR	Makanchi Array	15.87	357	Pn	Pn	05 42 13.4	-0.6
	0.1nm,0.3s,baz=186,slow=13,SNR=3.0						
CMAR	Chiang Mai Arr	18.75	128	P	Pn	05 42 49.6	-0.5
	0.9nm,0.3s,baz=308,slow=10,SNR=3.7						
KURK	Kurchatov	20.09	351	P	P	05 43 04.0	-0.1
	1.4nm,0.7s,baz=176,slow=9.8,SNR=5.0						
ZALV	Zalesovo Beam	23.02	2	P	P	05 43 37.8	+2.1
	0.4nm,0.3s,mb3.3,baz=183,slow=8.4,SNR=2.2						
BRTR	Keskin Array B	41.13	296	P	P	05 46 13.5	-1.3
	0.6nm,0.8s,mb3.3,baz=64,slow=9.8,SNR=2.5						
JHJ	Hachijo jima 2	47.32	72	LR	LR	06 06 51.6	
	comp=Z,88nm,21.5s,baz=129,slow=36						
FINES	FINESS Array B	47.84	327	P	P	05 47 07.7	-0.4
	1.2nm,0.9s,mb3.9,baz=96,slow=12,SNR=2.2						
WRA	Warramunga Arr	70.33	129	P	P	05 49 45.9	+1.3
	0.3nm,0.3s,mb3.6,baz=325,slow=6.3,SNR=4.9						
ILAR	Eielson Array	76.88	20	P	P	05 50 22.5	+0.1
	0.8nm,1.0s,mb3.6,baz=308,slow=5.3,SNR=6.2						

*PGC **27** 05:53:21.2±3.4,49.70°N×130.36°W,h10km, ML3.0/6, Mw3.6,237km Wsw of Pt. Hardy, Bc Vancouver Island Region*

*IDC **27** 05:53:24.6±2.5,49.83°N×129.80°W,h0km, mb3.3/2, mb1 3.9/8, mb1mx3.7/28, mbtmp3.6/8, ML3.3/6, MS3.4/2, Ms1 3.5/2, ms1mx3.1/21, Error ellipse: s-maj=43.2km s-min=12.6km az=82.0*

*ISCJB **27** 05:53:25.1±0.4,49.94°N±0.04°×129.94°W±0.06,h15km, mb3.6/4, Error ellipse: s-maj=6.4km s-min=4.6km az=142.9*

*BJI **27** 05:53:26.8,50.70°N×130.24°W,h10km,mB4.6/1, mb4.5/4, Ms4.6/1, Ms7 4.2/2*

*NEIC **27** 05:53:26.4±0.7,49.95°N×129.95°W,h10km,mb3.9/13, MW3.6(PGC), Error ellipse: s-maj=13.6km s-min=5.9km az=56.0*

ISC 27 05:53:26.0±2.2, 50.01°N±0.04°×129.90°W±0.07°, h7km±15km, h16km±.5km:pP-P,n58,σ1s20/61, mb3.6/4,6D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	Holberg	1.30	60	⇓Pn	Pn	05 53 49.0	-1.6
BPBC	Brooks Peninsu	1.38	83	⇓Pn	Pn	05 53 48.8	-2.9
BPBC				⇑Sn	Sn	05 54 09.7	-0.5
PHC	Port Hardy	1.73	65	⇓Pn	Pn	05 53 54.9	-1.6
PHC				⇓Sn	Sn	05 54 19.8	+1.0
MAYB	Maynard	1.80	76	⇓Pn	Pn	05 53 55.0	-2.4
BBB	Bella Bella	2.46	27	Pn	Pn	05 54 06.4	0.0
	34nm,0.3s,baz=243,slow=4.5,SNR=143						
BBB				Sn	Sn	05 54 37.5	+0.8
	4.7nm,0.3s,baz=288,slow=20,SNR=3.0						
BBB	Bella Bella	2.46	27	⇑Pn	Pn	05 54 06.2	-0.2
BBB				⇓Sn	Sn	05 54 37.5	+0.8
GDR	Gold River	2.51	94	⇑Pn	Pn	05 54 04.5	-2.8
LON	Longmire	6.30	118	*e*Pn	Pn	05 55 00.7	+1.5
WRAK	Wrangell Islan	6.59	348	*e*Pn	Pn	05 55 02.8	-0.4
ETW	Entiat	6.76	107	*e*Pn	Pn	05 55 06.6	+1.0
HOOD	Mount Hood Mea	7.28	127	*e*Pn	Pn	05 55 13.3	+0.6
	6.3nm,0.6s						
OD2	Odessa Site #2	7.86	105	*e*Pn	Pn	05 55 19.5	-1.1
DLBC	Dease Lake	8.45	360	LR	LR	05 59 26.7	
	comp=Z,180nm,18.7s,baz=51,slow=42						
NEW	Newport	8.56	97	*e*Pn	Pn	05 55 30.4	+0.1
LNOR	Lincton Mounta	8.83	114	*e*Pn	Pn	05 55 34.6	+0.7
YBH	Yreka Blue Hor	9.67	146	Pn	Pn	05 55 44.7	-0.8
	0.1nm,0.3s,baz=301,slow=11,SNR=3.0						
MOD	Modoc	10.50	137	*e*Pn	Pn	05 55 57.8	+1.0
WVOR	Wild Horse Val	10.87	130	*e*Pn	Pn	05 56 01.5	-0.3
	33nm,2.1s						
NVAR	Mina Array Bea	14.23	140	Pn	Pn	05 56 46.8	-1.1
	0.1nm,0.3s,baz=326,slow=11,SNR=4.1						
IMW	Indian Meadow	14.30	108	*e*Pn	Pn	05 56 49.0	+0.2
FLWY	Flagg Ranch	14.36	107	*e*Pn	Pn	05 56 51.9	+2.4
MOOW	Moose Ponds	14.50	108	*e*Pn	Pn	05 56 52.9	+1.4
TPAW	Teton Pass	14.52	109	*e*Pn	Pn	05 56 55.6	+3.9
REDW	Red Top Meadow	14.65	110	*e*Pn	Pn	05 56 54.7	+1.3
	16nm,1.4s						
SNOW	Snow King Moun	14.65	109	*e*Pn	Pn	05 56 53.6	0.0
	8.8nm,1.0s						
LOHW	Long Hollow	14.66	108	*e*Pn	Pn	05 56 53.5	-0.1
	13nm,1.4s						
RLMT	Red Lodge	14.75	101	*e*Pn	Pn	05 56 57.7	+2.8
	86nm,2.6s						
AHID	Auburn Hatcher	14.84	112	*e*Pn	Pn	05 56 54.9	-1.2
	12nm,1.0s						
MTUM	Tungsten Hills	15.05	143	*e*P	Pn	05 57 09.0	+10
YKA	Yellowknife Ar	15.07	28	Pn	Pn	05 56 58.5	-0.6
	0.0nm,0.3s,baz=219,slow=11,SNR=3.1						
BW06	Boulder Array	15.77	110	*e*Pn	Pn	05 57 10.8	+2.5
	9.6nm,1.4s						
PDAR	Pinedale Array	15.77	110	Pn	Pn	05 57 09.1	+0.8
	0.0nm,0.3s,baz=306,slow=12,SNR=16						
LAO	LASA Array	16.07	93	*e*Pn	Pn	05 57 13.1	+0.9
	25nm,1.6s						
ISA	Isabella	16.58	146	*e*Pn	Pn	05 57 20.2	+1.4
	14nm,1.5s						
CCUT	Cedar City	17.20	130	*e*Pn	Pn	05 57 28.6	+1.9
	91nm,3.0s						
ILAR	Eielson Array	17.30	335	P	Pn	05 57 29.3	+1.5
	0.0nm,0.3s,baz=152,slow=10,SNR=14						
ILAR				LR	LR	06 03 14.4	
	comp=Z,201nm,21.2s,baz=298,slow=34						
SRU	San Rafael	17.54	121	*e*Pn	Pn	05 57 31.1	+0.3
	2.1nm,0.9s						
LDFC	Landfair	18.42	138	*e*Pn	Pn	05 57 40.4	-1.4
PV04	Paradox Valley	18.94	120	*e*P	Pn	05 57 47.4	-0.6
PHWY	Pilot Hill	19.11	108	*e*P	Pn	05 57 49.8	-0.3
	3.5nm,1.0s						
TTA	Tatalina	19.19	322	*e*P	Pn	05 57 50.3	-0.6
	9.1nm,1.2s						
PV01	Paradox Valley	19.31	120	*e*P	Pn	05 57 50.8	-1.7
	523nm,1.1s						
WUAZ	Wupatki	19.79	130	*e*Pn	Pn	05 57 58.0	-0.3
	11nm,1.4s						

ISCO	Idaho Springs	19.92	112	*e*Pn	Pn	05 58 00.5	+0.8
	4.4nm,1.1s							
MVCO	Mesa Verde	20.01	122	*e*P	P	05 57 59.0	-0.1
	12nm,1.4s							
COLD	Coldfoot	20.07	337	*e*P	P	05 58 01.3	+1.8
	17nm,1.6s							
SDCO	Great Sand Dun	21.33	116	*e*P	P	05 58 12.0	-1.4
	2.1nm,0.9s,mb3.5							
TUC	Tucson	22.69	134	*e*P	P	05 58 27.9	-0.1
ANMO	Albuquerque	22.79	122	P	P	05 58 26.5	-2.5
	1.0nm,0.7s,mb3.3,baz=312,slow=8.7,SNR=5.6							
EYMN	Ely	25.11	80	*e*P	P	05 58 51.2	0.0
	8.5nm,0.8s,mb4.3							
TXAR	Lajitas Array	28.63	126	P	P	05 59 21.1	-1.9
TXAR	Lajitas Array	28.63	126	P	P	05 59 21.1	-1.9
	0.4nm,0.8s,mb3.2,baz=320,slow=7.8,SNR=2.8							
BJI	Beijing	73.22	313	P	P	06 04 56.5	-1.0
BJI				S	S	06 14 24.0	-1.7
BJI				SS	SS	06 19 05.5	-0.7
BJI				pmax	pmax			
	comp=Z,4.0nm,0.6s							
BJI				LR	LR			
	comp=Z,93nm,22.8s							
HHC	Hu-ho-hao-te	74.69	316	*e*P	P	06 05 06.0	-0.1
HHC				pP	pP	06 05 10.3	+1.9
HHC				PP	PP	06 07 54.3	+1.9
HHC				S	S	06 14 38.8	-3.5
HHC				sS	sS	06 14 46.5	+0.4
HHC				SS	SS	06 19 27.5	-1.0
HHC				LR	LR			
	comp=Z,140nm,13.4s							
WMQ	Urumqi	80.96	333	*e*P	P	06 05 41.8	+0.9
WMQ				pP	pP	06 05 46.5	+3.3
WMQ				sP	sP	06 05 48.8	+4.7
WMQ				pmax	pmax			
	comp=Z,4.0nm,1.0s							
WMQ				pmax	pmax			
	comp=Z,29nm,4.2s							
CD2	Chengdu	86.45	316	P	P	06 06 08.5	-0.8
KSH	Kashi	87.99	340	*e*P	P	06 06 17.0	+0.4
KSH				*e*pP	pP	06 06 22.0	+3.1
KSH				*e*sP	sP	06 06 23.0	+3.3
KSH				*e*SKS		06 16 42.0	
KSH				*e*S	S	06 16 57.5	-2.7
KSH				*e*sS	sS	06 17 05.0	+1.0
KSH				*e*SS	SS	06 22 47.5	+1.4
KSH				pmax	pmax			
	comp=Z,2.0nm,0.6s							
KSH				LR	LR			
	comp=N,42nm,9.4s							
KSH				LR	LR			
	comp=E,22nm,3.3s							
KSH				LR	LR			
	comp=Z,59nm,3.1s							
GYA	Guiyang	88.86	312	*e*P	P	06 06 21.0	+0.1

*NEIC **27** 05:54:35.7, 31.78S×70.02W, h135km, MD3.5(GUC), After GUC.*

GUC 27 05:54:35.7±0.3, 31.78S×70.02W, h135km±2km, MD3.5, ML3.5,15C-8D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JACH	Jahuel	1.02	208	⇑*i*P	Pn	05 54 59.7	+0.5
JACH				*i* S	Sn	05 55 17.9	+0.8
JACH	Jahuel	1.02	208	⇑*i*P	Pn	05 54 59.7	+0.5
JACH				*i* S	Sn	05 55 17.9	+0.8
CMCH	Combarbala	1.03	306	⇓*i*P	Pn	05 54 59.6	+0.3
CMCH				*i* S	Sn	05 55 18.0	+0.8
CMCH	Combarbala	1.03	306	⇓*i*P	Pn	05 54 59.6	+0.3
CMCH				*i* S	Sn	05 55 18.0	+0.8
ROCH	El Roble	1.45	215	⇓*i*P	Pn	05 55 04.5	+0.9
ROCH				*i* S	Sn	05 55 26.1	+1.2
ROCH	El Roble	1.45	215	⇓*i*P	Pn	05 55 04.5	+0.9
ROCH				*i* S	Sn	05 55 26.1	+1.2
PEL	Peldehue	1.47	202	⇑*i*P	Pn	05 55 04.2	+0.5
PEL				*i* S	Sn	05 55 25.8	+0.5
PEL				AML	AML	05 55 26.6	
	comp=E,564nm,0.6s						
OVCH	Ovalle	1.55	319	AML	AML	05 55 31.6	
	comp=N,1μm,0.1s						
FCH	Farellones	1.56	188	⇑*i*P	Pn	05 55 05.9	+1.2
FCH				*i* S	Sn	05 55 28.7	+1.7
FCH	Farellones	1.56	188	⇑*i*P	Pn	05 55 05.9	+1.2
FCH				AML	AML	05 55 26.5	
	comp=E,429nm,0.2s						
FCH				*i* S	Sn	05 55 28.7	+1.7
TLL	Tololo Astrono	1.74	337	⇑*i*P	Pn	05 55 07.9	+1.0
TLL				*i* S	Sn	05 55 32.1	+1.4
TLL	Tololo Astrono	1.74	337	⇑*i*P	Pn	05 55 07.9	+1.0
TLL				*i* S	Sn	05 55 32.1	+1.4
TLL				AML	AML	05 55 33.8	
	comp=N,1μm,0.6s						
SAN	Santiago	1.75	198	*i* S	Sn	05 55 31.6	+0.7
SAN				AML	AML	05 55 41.9	
	comp=N,230nm,0.4s						
ANTU	Antumapu	1.86	196	⇑*i*P	Pn	05 55 08.6	+0.4
ANTU				*i* S	Sn	05 55 33.7	+0.6
ANTU	Antumapu	1.86	196	⇑*i*P	Pn	05 55 08.6	+0.4
ANTU				*i* S	Sn	05 55 33.7	+0.6
ANTU				AML	AML	05 55 35.6	
	comp=N,327nm,0.5s						
PCH	Pirque	1.88	193	⇑*i*P	Pn	05 55 09.2	+0.7
PCH				*i* S	Sn	05 55 34.4	+0.8
PCH	Pirque	1.88	193	⇑*i*P	Pn	05 55 09.2	+0.7
PCH				*i* S	Sn	05 55 34.4	+0.8
TACH	Talagante	2.02	202	⇓*i*P	Pn	05 55 10.5	+0.4
TACH				*i* S	Sn	05 55 37.1	+0.5
TACH	Talagante	2.02	202	⇓*i*P	Pn	05 55 10.5	+0.4
TACH				*i* S	Sn	05 55 37.1	+0.5
LMEL	Las Melosas	2.07	184	*i* P	Pn	05 55 11.5	+0.8
LMEL				*i* S	Sn	05 55 38.7	+1.1
LMEL	Las Melosas	2.07	184	*i* P	Pn	05 55 11.5	+0.8
LMEL				*i* S	Sn	05 55 38.7	+1.1
LMEL				AML	AML	05 55 48.0	
	comp=N,302nm,0.2s						
LCCH	Las Cruces	2.14	217	*e*P	Pn	05 55 12.0	+0.4
LCCH				*i* S	Sn	05 55 39.4	+0.4
LCCH	Las Cruces	2.14	217	*e*P	Pn	05 55 12.0	+0.4
LCCH				*i* S	Sn	05 55 39.4	+0.4
CHCH	Chadas Angostu	2.21	194	⇑*i*P	Pn	05 55 12.9	+0.4
CHCH				*i* S	Sn	05 55 41.3	+0.5
CHCH	Chadas Angostu	2.21	194	⇑*i*P	Pn	05 55 12.9	+0.4
CHCH				*i* S	Sn	05 55 41.3	+0.5
CACH	El Canelo	2.38	192	⇓*i*P	Pn	05 55 15.8	+1.3
CACH				*i* S	Sn	05 55 46.1	+1.7
CACH	El Canelo	2.38	192	⇓*i*P	Pn	05 55 15.8	+1.3
CACH				*i* S	Sn	05 55 46.1	+1.7
LNV	Longovilo	2.46	208	⇑*i*P	Pn	05 55 15.5	-0.1
LNV				*i* S	Sn	05 55 46.2	-0.1
LNV	Longovilo	2.46	208	⇑*i*P	Pn	05 55 15.5	-0.1
LNV				*i* S	Sn	05 55 46.2	-0.1
TRQA	Tornquist	9.10	136	*e*Pn	Pn	05 56 40.8	-3.0

*IDC **27** 06:04:28.2±8.2,2.13°N×124.82°E,h143km±75km, mb3.6/7, mb1 3.7/7, mb1mx3.4/23, mbtmp3.6/7, Error ellipse: s-maj=61.3km s-min=17.6km az=63.0*

*ISCJB **27** 06:04:32.2±0.6,2.03°N±0.05°×124.96°E±0.06,h199km±4km, mb3.9/6, Error ellipse: s-maj=10.7km s-min=8.5km az=154.6*

*DJA **27** 06:04:34,2.00°N×125.00°E,h173km,MLv4.0/6*

ISC 27 06:04:33.3±0.6, 2.02°N±0.05°×124.96°E±0.06, h193km±4km, n15, σ0°87/19, mb3.9/6, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	Manado	0.59	192	P	Pn	06 05 00.6	+0.6
MNI				S	Sn	06 05 19.3	-1.3
KMSI	Cibinong	1.74	214	P	Pn	06 05 08.5	-0.2
KMSI				S	Sn	06 05 37.0	+0.8
SGSI	Sangihe	1.75	19	P	Pn	06 05 08.5	-0.2
SGSI				S	Sn	06 05 36.4	+0.1
TNTI	Ternate	2.71	117	P	Pn	06 05 20.2	+1.1
TNTI				S	Sn	06 05 55.3	+0.5
MRSI	Marisa	3.39	243	P	Pn	06 05 28.0	+0.7
LBMI	Labuha	3.66	136	P	Pn	06 05 31.0	+0.3
LBMI				S	Sn	06 06 14.8	-0.8
NLAI	Namlea	5.65	158	P	Sn	06 06 58.2	-2.9
FITZ	Fitzroy Crossi	20.01	178	P	P	06 08 50.8	-0.6
	1.1nm,0.3s,baz=348,slow=6.5,SNR=20						

WRA	Warramunga Arr	23.69	158	P	P	06 09 28.1	+0.5
	2.6nm,0.4s,mb4.2,baz=337,slow=10,SNR=11							
ASAR	Alice Springs	26.98	162	P	P	06 09 57.8	+0.5
	0.6nm,0.2s,mb3.8,baz=344,slow=7.3,SNR=14							
ASAR				PcP	PcP	06 13 14.6	+0.6
	0.5nm,0.6s,baz=358,slow=2.5,SNR=6.1							
NWAO	Narrogin (SRO)	35.52	191	P	P	06 11 12.0	+0.1
	3.9nm,0.6s,mb4.1,baz=5.7,slow=10,SNR=3.1							
STKA	Stephens Creek	37.23	156	P	P	06 11 27.4	+1.1
	0.8nm,0.5s,mb3.5,baz=328,slow=13,SNR=3.0							
MKAR	Makanchi Array	57.97	327	P	P	06 14 04.1	-1.6
	0.8nm,0.4s,mb3.8,baz=120,slow=7.7,SNR=16							
MKAR				PcP	PcP	06 14 55.1	-0.4
	0.8nm,0.6s,baz=122,slow=3.4,SNR=5.9							
KURK	Kurchatov	62.25	329	P	P	06 14 34.2	-0.4
	1.1nm,0.5s,mb3.8,baz=130,slow=6.4,SNR=5.4							
TXAR	Lajitas Array	124.03	52	PKP	PKPdf	06 23 10.7	+1.3
	0.1nm,0.8s,baz=305,slow=3.2,SNR=2.7							

*IDC **27** 06:09:22.9±7.3,55.38°N×154.07°W,h0km, mb3.4/4, mb1 3.9/6, mb1mx3.6/26, mbtmp3.5/6, ML3.9/1, MS2.2/1, Ms1 2.2/1, ms1mx2.2/28, Error ellipse: s-maj=132.1km s-min=24.2km az=75.0*

*ISCJB **27** 06:09:30.1±0.5,55.91°N±0.04°×153.12°W±0.09,h33km, mb3.9/9, Error ellipse: s-maj=7.6km s-min=5.5km az=177.3*

*NEIC **27** 06:09:32.4,55.92°N×153.04°W,h25km,ML3.3(AEIC), After AEIC.*

ISC 27 06:09:32.4±0.5, 55.93°N±0.04°×153.19°W±0.10, h35km, n28, σ0°77/33, mb3.9/9, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	Old Harbor	1.29	358	P	Pn	06 09 53.6	-0.3
OHAK				S	Sn	06 10 10.2	+0.3
KDAK	Kodiak Island	1.88	10	P	Pn	06 10 01.9	0.0
KDAK				S	Sn	06 10 24.1	-0.4
KDAK	Kodiak Island	1.88	10	Pn	Pn	06 10 01.9	-0.1
	15nm,0.3s,baz=204,slow=11,SNR=122						
KDAK				Sn	Sn	06 10 23.3	-1.1
	18nm,0.3s,baz=253,slow=17,SNR=16						
CHGN	Chignik	2.95	279	*e*Pn	Pn	06 10 16.5	0.0
BRLK	Bradley Lake	4.03	17	P	Pn	06 10 31.2	-0.3
BRLK				S	Sn	06 11 17.0	-0.4
SDPT	Sand Point	4.17	265	P	Pn	06 10 33.2	-0.2
RSO	Redoubt South	4.55	3	*e*Pn	Pn	06 10 40.9	+2.3
SEW	Seward	4.63	24	P	Pn	06 10 39.8	+0.1
SLKM	Skilak Lake	4.85	18	P	Pn	06 10 42.3	-0.4
RC01	Rabbit Creek A	5.48	18	P	Pn	06 10 50.6	-0.7
FALS	False Pass	5.92	264	P	Pn	06 10 57.3	-0.2
KNK	Knik Glacier	6.02	22	P	Pn	06 10 59.4	+0.6
TRF	Thorofare Moun	7.68	10	P	Pn	06 11 21.8	+0.3
DHY	Denali Highway	7.75	20	P	Pn	06 11 22.1	-0.4
RND	Reindeer	7.81	15	P	Pn	06 11 23.7	+0.4
PNL	Peninsula	8.26	57	P	Pn	06 11 28.4	-1.0
ILAR	Eielson Array	9.39	17	Pn	Pn	06 11 45.0	0.0
	0.4nm,0.3s,baz=205,slow=14,SNR=24						
ILAR				Sn	Sn	06 13 24.4	-4.8
	0.1nm,0.3s,baz=208,slow=21,SNR=3.3						
YKA	Yellowknife Ar	20.55	56	P	P	06 14 09.1	+1.7
	1.0nm,0.9s,baz=270,slow=9.2,SNR=8.3						
YKA				LR	LR	06 23 09.6	
	comp=Z,6.8nm,20.0s,baz=95,slow=39						
NVAR	Mina Array Bea	29.05	112	P	P	06 15 26.4	-2.5
NVAR	Mina Array Bea	29.05	112	P	P	06 15 26.4	-2.5
	0.1nm,0.4s,mb2.9,baz=330,slow=12,SNR=4.0							
IMW	Indian Meadow	29.28	96	*e*P	P	06 15 31.2	+0.3
	5.7nm,1.1s,mb4.2							
MOOW	Moose Ponds	29.48	96	*e*P	P	06 15 33.1	+0.4
	3.5nm,1.0s,mb4.0							
TPAW	Teton Pass	29.53	97	*e*P	P	06 15 33.4	+0.2
	9.1nm,1.3s,mb4.3							
LOHW	Long Hollow	29.65	96	*e*P	P	06 15 34.6	+0.4
	6.7nm,1.4s,mb4.2							
SNOW	Snow King Moun	29.66	97	*e*P	P	06 15 35.3	+1.0
	5.6nm,1.1s,mb4.2							
REDW	Red Top Meadow	29.67	97	*e*P	P	06 15 34.6	+0.2
	17nm,1.9s,mb4.5							
PDAR	Pinedale Array	30.78	97	P	P	06 15 43.6	-0.5
	1.5nm,1.0s,mb3.8,baz=301,slow=10,SNR=8.0							
TXAR	Lajitas Array	43.79	106	P	P	06 17 34.0	-0.4
	0.1nm,0.5s,mb2.8,baz=305,slow=6.5,SNR=3.3							

IDC 27 06:09:39.4±11.0, 18.25S×116.46W, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.8/15, mbtmp3.7/4, MS4.1/1, Ms1 4.2/1, ms1mx3.2/19, Error ellipse: s-maj=383.3km s-min=37.6km az=56.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	46.09	95	LR	LR	06 33 21.8	
	comp=Z,216nm,21.6s,baz=169,slow=31						
ANMO	Albuquerque	53.75	10	P	P	06 19 04.2	+0.8
	0.5nm,0.6s,baz=227,slow=12,SNR=3.6						
CPUP	Villa Florida	54.91	110	P	P	06 19 12.2	0.0
	0.2nm,0.4s,baz=270,slow=10,SNR=3.4						
NVAR	Mina Array Bea	56.40	358	P	P	06 19 23.5	+1.0
	1.2nm,0.9s,baz=172,slow=

BOQS	**Boqueron**	**2.66**	**335**	*e*P		Pn	06 24 33.9	+0.4
TGUH	**Tegucigalpa,Un**	**2.85**	**17**	*e*P		Pn	06 24 36.3	+0.3
JCR	**Jicaral**	**3.29**	**116**	*e*P		Pn	06 24 42.7	+0.6
JCR				*e*S		Sn	06 25 18.2	-1.9
CGA2	**Cerro Gallo 2**	**3.81**	**109**	*e*P		Pn	06 24 51.0	+1.7
PRS1	**Puriscal**	**3.97**	**109**	*e*P		Pn	06 24 52.7	+1.4
LAJ	**Bijagual**	**4.18**	**110**	*e*P		Pn	06 24 51.4	-2.9
URSC	**Urasca**	**4.51**	**109**	*e*P		Pn	06 25 02.4	+3.5
BUS	**Buena Vista**	**4.63**	**112**	*e*P		Pn	06 25 02.8	+2.3

PGC ***27*** *06:24:33.3±2.3, 49°.69N×130°.32W, h10km, ML2.9/7, Mw3.6, 235km Wsw of Pt. Hardy, Bc Vancouver Island Region*

BJI ***27*** *06:24:34.9, 50°.00N×129°.80W, h10km, mB4.8/3, mb4.6/3, Ms4.6/1, Ms7 4.4/2*

ISCJB ***27*** *06:24:36.9±0.4, 49°.92N±0°.03×129°.87W±0°.06, h10km, mb4.0/6, MS3.3/3, Error ellipse: s-maj=5.8km s-min=4.8km az=158.7*

IDC ***27*** *06:24:37.3±2.7, 49°.84N×129°.76W, h0km, mb3.3/2, mb1 3.9/8, mb1mx3.6/28, mbtmp3.6/8, ML3.3/6, MS3.5/9, Ms1 3.5/9, ms1mx3.3/20, Error ellipse: s-maj=50.3km s-min=14.3km az=77.0*

NEIC ***27*** *06:24:39.0±0.8, 49°.96N×129°.84W, h10km, mb4.1/15, MW3.6(PGC), Error ellipse: s-maj=13.1km s-min=6.5km az=63.0*

ISC 27 06:24:38.7±0.4**, 49°.98N**±0°.03×**129°.84W**±0°.06**, h10**km**, n65, σ1§12/65, mb4.0/6, MS3.3**/3**, 5D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.28**	**58**	⇑Pn	**Pn**	**06 25 01.0**	**-1.5**
HOLB				⇓Sn	**Sn**	**06 25 20.8**	**+1.1**
BPBC	**Brooks Peninsu**	**1.34**	**82**	⇓Pn	**Pn**	**06 25 00.8**	**-2.7**
BPBC				⇑Sn	**Sn**	**06 25 21.5**	**+0.2**
PHC	**Port Hardy**	**1.70**	**64**	⇑Pn	**Pn**	**06 25 06.9**	**-1.5**
PHC				⇓Sn	**Sn**	**06 25 31.3**	**+1.1**
MAYB	**Maynard**	**1.76**	**75**	⇑Pn	**Pn**	**06 25 07.1**	**-2.1**
WOSB	**Woss**	**2.11**	**84**	⇑Pn	**Pn**	**06 25 12.3**	**-1.7**
BBB	**Bella Bella**	**2.46**	**26**	Pn	**Pn**	**06 25 18.3**	**-0.5**
	32nm,0.3s,baz=41,slow=12,SNR=217						
BBB				LR	LR	06 26 34.4	
	comp=Z,224nm,18.4s,baz=51,slow=46						
BBB	**Bella Bella**	**2.46**	**26**	⇓Pn	**Pn**	**06 25 18.3**	**-0.5**
BBB				⇑Sn	**Sn**	**06 25 49.5**	**+0.7**
GDR	**Gold River**	**2.47**	**93**	⇓Pn	**Pn**	**06 25 16.5**	**-2.4**
PGC	**Sidney**	**4.38**	**105**	*e*Pn	**Pn**	**06 25 45.1**	**-0.1**
NLWA	**Neilton Lookou**	**4.73**	**121**	*e*Pn	**Pn**	**06 25 49.6**	**-0.4**
JCW	**Jim Creek**	**5.49**	**106**	*e*Pn	**Pn**	**06 26 00.2**	**-0.3**
LON	**Longmire**	**6.25**	**118**	*e*Pn	**Pn**	**06 26 10.1**	**-0.7**
HEBO	**Mount Hebo**	**6.30**	**137**	*e*Pn	**Pn**	**06 26 06.6**	**-4.9**
OD2	**Odessa Site #2**	**7.81**	**105**	*e*Pn	**Pn**	**06 26 31.2**	**-1.0**
DLBC	**Dease Lake**	**8.47**	**359**	LR	LR	06 30 24.8	
	comp=Z,185nm,20.3s,baz=296,slow=40						
LNOR	**Lincton Mounta**	**8.78**	**114**	*e*Pn	**Pn**	**06 26 46.0**	**+0.5**
YBH	**Yreka Blue Hor**	**9.63**	**146**	Pn	**Pn**	**06 26 57.0**	**-0.2**
	0.1nm,0.3s,baz=345,slow=13,SNR=4.2						
YBH				LR	LR	06 30 10.1	
	comp=Z,544nm,19.4s,baz=349,slow=35						
MOD	**Modoc**	**10.45**	**137**	*e*Pn	**Pn**	**06 27 08.3**	**-0.1**
WVOR	**Wild Horse Val**	**10.82**	**130**	*e*Pn	**Pn**	**06 27 13.3**	**-0.1**
	4.2nm,1.2s						
CHMT	**Chamberlain Mo**	**11.43**	**99**	*e*Pn	**Pn**	**06 27 20.4**	**-1.5**
	3.2nm,1.1s						
WCN	**Washoe City**	**12.85**	**142**	*e*Pn	**Pn**	**06 27 41.0**	**-0.3**
	7.3nm,1.3s						
NVAR	**Mina Array Bea**	**14.18**	**140**	Pn	**Pn**	**06 27 59.1**	**-0.3**
	0.0nm,0.3s,baz=316,slow=9.9,SNR=3.4						
IMW	**Indian Meadow**	**14.26**	**108**	*e*Pn	**Pn**	**06 28 01.8**	**+1.4**
FLWY	**Flagg Ranch**	**14.31**	**107**	*e*Pn	**Pn**	**06 28 01.0**	**-0.1**
TPAW	**Teton Pass**	**14.47**	**109**	*e*Pn	**Pn**	**06 28 04.4**	**+1.1**
REDW	**Red Top Meadow**	**14.60**	**110**	*e*Pn	**Pn**	**06 28 06.2**	**+1.1**
SNOW	**Snow King Moun**	**14.60**	**109**	*e*Pn	**Pn**	**06 28 07.4**	**+2.3**
LOHW	**Long Hollow**	**14.61**	**108**	*e*Pn	**Pn**	**06 28 06.9**	**+1.6**
RLMT	**Red Lodge**	**14.70**	**101**	*e*Pn	**Pn**	**06 28 07.8**	**+1.3**
YKA	**Yellowknife Ar**	**15.07**	**28**	Pn	**Pn**	**06 28 11.0**	**-0.4**
	0.1nm,0.3s,baz=211,slow=13,SNR=3.8						
KDAK	**Kodiak Island**	**15.46**	**309**	LR	LR	06 32 37.4	
	comp=Z,296nm,20.1s,baz=66,slow=31						
DUG	**Dugway**	**15.47**	**123**	*e*Pn	**Pn**	**06 28 17.0**	**+0.2**
	9.6nm,1.4s						
BW06	**Boulder Array**	**15.72**	**110**	*e*Pn	**Pn**	**06 28 23.1**	**+3.1**
	60nm,2.5s						
PDAR	**Pinedale Array**	**15.72**	**110**	Pn	**Pn**	**06 28 21.7**	**+1.7**
	0.0nm,0.3s,baz=301,slow=10,SNR=18						
DAU	**Daniels Canyon**	**16.18**	**119**	*e*P	**Pn**	**06 28 31.4**	**+5.5**
ISA	**Isabella**	**16.53**	**146**	*e*P	**Pn**	**06 28 32.4**	**+1.9**
	65nm,2.8s						
ARUT	**Antelope Range**	**16.93**	**130**	*e*Pn	**Pn**	**06 28 34.6**	**-0.9**
	4.1nm,1.0s						
SHPR	**Sheep Range**	**17.15**	**136**	*e*Pn	**Pn**	**06 28 39.4**	**+1.1**
	3.6nm,1.0s						
CCUT	**Cedar City**	**17.16**	**130**	*e*Pn	**Pn**	**06 28 39.8**	**+1.4**
	39nm,2.4s						
ILAR	**Eielson Array**	**17.35**	**335**	P	**Pn**	**06 28 42.9**	**+2.3**
	0.0nm,0.3s,baz=153,slow=9.6,SNR=14						
ILAR				LR	LR	06 34 47.7	
	comp=Z,182nm,18.7s,baz=62,slow=35						
SRU	**San Rafael**	**17.48**	**121**	*e*Pn	**Pn**	**06 28 42.7**	**+0.2**
	4.2nm,1.1s						
LDFC	**Landfair**	**18.38**	**139**	*e*Pn	**Pn**	**06 28 52.4**	**-1.1**
INK	**Inuvik**	**18.47**	**356**	LR	LR	06 36 12.1	
	comp=Z,156nm,20.3s,baz=216,slow=37						
PV04	**Paradox Valley**	**18.89**	**120**	*e*P	**Pn**	**06 28 59.6**	**0.0**
PV01	**Paradox Valley**	**19.26**	**120**	*e*P	**Pn**	**06 29 03.3**	**-0.8**
	658nm,1.2s						
WUAZ	**Wupatki**	**19.74**	**130**	*e*P	**Pn**	**06 29 09.1**	**-0.8**
	6.7nm,1.1s						
ISCO	**Idaho Springs**	**19.87**	**112**	*e*P	**Pn**	**06 29 12.6**	**+1.2**
	39nm,2.7s						
MVCO	**Mesa Verde**	**19.96**	**122**	*e*P	**Pn**	**06 29 10.6**	**-1.9**
	11nm,1.3s						
COLD	**Coldfoot**	**20.11**	**337**	*e*P	**P**	**06 29 12.2**	**+0.1**
	16nm,1.6s						
SDCO	**Great Sand Dun**	**21.28**	**116**	*e*P	**P**	**06 29 25.1**	**0.0**
	2.1nm,0.8s,mb3.5						
ULM	**Lac du Bonnet**	**21.68**	**76**	LR	LR	06 38 39.0	
	comp=Z,70nm,19.4s,MS3.1,baz=320,slow=39						
TUC	**Tucson**	**22.64**	**134**	*e*P	**P**	**06 29 39.7**	**0.0**
	16nm,1.7s,mb4.2						
ANMO	**Albuquerque**	**22.74**	**123**	*e*P	**P**	**06 29 41.0**	**+0.4**
	39nm,2.5s,mb4.4						
ANMO	**Albuquerque**	**22.74**	**123**	P	**P**	**06 29 40.3**	**-0.4**
	0.9nm,0.7s,mb3.3,baz=320,slow=8.9,SNR=7.6						
ANMO				LR	LR	06 38 54.2	
	comp=Z,70nm,18.1s,MS3.1,baz=132,slow=38						
EYMN	**Ely**	**25.07**	**80**	*e*P	**P**	**06 30 02.9**	**-0.2**
	14nm,1.0s,mb4.4						
SCIA	**State Center**	**26.50**	**94**	*e*P	**P**	**06 30 24.1**	**+8.2**
	19nm,0.4s,mb5.0						
TXAR	**Lajitas Array**	**28.58**	**126**	P	**P**	**06 30 33.7**	**-1.0**
TXAR				LR	LR	06 42 16.0	
TXAR	**Lajitas Array**	**28.58**	**126**	P	**P**	**06 30 33.7**	**-1.0**
	0.3nm,0.9s,mb3.0,baz=316,slow=8.8,SNR=4.0						
TXAR				LR	LR	06 42 16.0	
	comp=Z,163nm,19.5s,MS3.6,baz=165,slow=37						
BJI	**Beijing**	**73.27**	**313**	P	**P**	**06 36 09.0**	**-0.9**
HHC	**Hu-ho-hao-te**	**74.74**	**316**	*e*P	**P**	**06 36 19.0**	**+0.5**
HHC				pP	pP	06 36 23.3	+1.5
HHC				sP	sP	06 36 26.3	+3.3
HHC				PP	PP	06 39 07.3	+2.3
HHC				S	S	06 45 50.8	-3.9
HHC				pmax	pmax		
	comp=Z,74nm,4.5s						
HHC				LR	LR		
	comp=N,100nm,14.3s						
HHC				LR	LR		
	comp=E,120nm,17.8s						
HHC				LR	LR		
	comp=Z,120nm,16.7s						
WMQ	**Urumqi**	**81.00**	**333**	*e*P	**P**	**06 36 54.8**	**+1.5**
WMQ				pP	pP	06 36 59.5	+2.9
WMQ				sP	sP	06 37 01.8	+4.0
WMQ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,38nm,4.2s						
LZH	**Lanzhou**	**82.06**	**319**	*e*P	**P**	**06 36 59.3**	**+0.3**
LZH				sP	sP	06 37 05.8	+2.3
CD2	**Chengdu**	**86.50**	**316**	P	**P**	**06 37 20.0**	**-1.7**
KSH	**Kashi**	**88.03**	**340**	*e*P	**P**	**06 37 29.0**	**+0.1**
KSH				*e*SKS		06 47 54.3	
KSH				*e*S	S	06 48 08.3	-4.1
KSH				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KSH				LR	LR		
	comp=Z,44nm,4.1s						
GYA	**Guiyang**	**88.91**	**312**	*e*P	**P**	**06 37 33.3**	**0.0**

BJI ***27*** *06:38:17.2, 39°.62N×77°.54E, h13km, ML3.8/7, Ms3.6/1*

ISC 27 06:38:26.4±2.2**, 39°.96N**±0°.08×**77°.3E**±0°.1**, h10**km**, n9, σ0§99/11, 2C-1D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.08**	**246**	⇑*i*Pg	**Pg**	**06 38 44.5**	**-2.6**
KSH				Sg	**Sg**	**06 39 02.0**	**+0.9**
KSH				smax			
	comp=N,2μm,0.5s						
KSH				smax			
	comp=E,2μm,0.8s						
ULHL	**Ulahol**	**2.41**	**342**	P	**Pb**	**06 39 09.5**	**-0.4**
	SNR=13						
KZA	**Kyzart**	**2.60**	**325**	P	**Pb**	**06 39 12.9**	**-0.2**
	SNR=17						
KBK	**Karagaybulak**	**3.21**	**328**	P	**Pb**	**06 39 23.9**	**+0.5**
	SNR=23						
TKM2	**Tokmak 2**	**3.21**	**338**	P	**Pb**	**06 39 18.2**	**-5.3**
	SNR=9.6						
AML	**Almayashu**	**3.46**	**310**	P	**Pb**	**06 39 20.7**	**-7.0**
	SNR=6.3						
EKS2	**Erkin-Say**	**3.76**	**317**	P	**Pb**	**06 39 33.3**	**+0.4**
	SNR=7.5						
USP	**Ospenovka**	**3.90**	**329**	P	**Pb**	**06 39 35.0**	**-0.2**
	SNR=10.0						
KK31	**Karatay Array**	**5.95**	**304**	⇓P	**Pb**	**06 40 11.7**	**+1.5**
	comp=E,3.6nm,0.8s,baz=132,slow=15,SNR=4.3						
KK31				⇑S	**Sg**	**06 41 36.6**	**-0.8**
	comp=E,24nm,0.8s,baz=132,slow=26						

IDC ***27*** *06:46:17.6±0.4, 10°.74S×41°.35E, h0km, mb5.3/24, mb1 5.4/26, mb1mx5.4/28, mbtmp5.3/26, ML5.2/2, MS5.3/25, Ms1 5.3/25, ms1mx5.3/26, Error ellipse: s-maj=14.2km s-min=8.6km az=120.0*

ISCJB ***27*** *06:46:18.0±0.1, 10°.66S±0°.02×41°.42E±0°.02, h10km, mb5.7/309, MS5.5/261, Error ellipse: s-maj=3.4km s-min=2.9km az=41.5*

BJI ***27*** *06:46:17.3, 10°.38S×40°.98E, h13km, mB5.7/40, mb5.4/56, Ms5.5/59, Ms7 5.3/52*

LDG ***27*** *06:46:18.5±0.1, 10°.54S×41°.40E, h10km, Mb5.9/49, Ms5.1/10, Error ellipse: s-maj=12.9km s-min=5.7km az=57.0*

NEIC ***27*** *06:46:19.5±0.1, 10°.75S×41°.47E, h10km, mb5.9/150, MS5.6/202, MW5.7, MW5.6, Error ellipse: s-maj=5.2km s-min=3.7km az=53.0, Moment Tensor Solution. s82 Moment tensor: Scale 10^17 Nm; Mrr=1.32; Mθθ 0.47; Mφφ 0.85; Mrθ 0.43; Mθφ -1.52; Mφr 2.14; Best double couple: Mo 2.90000×10^17 NP1:ϕs 174.00000°, δ74.00000°, λ-57.00000°. NP2:ϕs 287.00000°, δ36.00000°, λ-152.00000°. Principal axes: T 2.7300, Plg21.0000°, Azm239.0000°; N 0.3100, Plg31.0000°, Azm344.0000°; P -3.0500, Plg49.0000°, Azm121.0000°;*

NEIC Felt at Pemba, Mozambique.

MOS ***27*** *06:46:19.0±0.9, 10°.42S×41°.51E, h10km, mb5.9/107, MS5.2/64 Error ellipse: s-maj=8.4km s-min=3.4km az=105.8*

DJA ***27*** *06:46:20, 10°.62S×41°.31E, h10km, Mw6.2/44*

GCMT ***27*** *06:46:23.3±0.1, 10°.57S×41°.42E, h29km, MW5.7, Moment Tensor Solution. s91,c169; s37,c40; Moment tensor: Scale 10^17 Nm; Mrr-2.56±.05; Mθθ-0.32±.04; Mφφ 2.88±.05; Mrθ 1.00±.08; Mθφ-2.19±.04; Mφr 3.80±.11; Best double couple: Mo 5.30000×10^17 NP1:ϕs 302.00000°, δ33.00000°, λ-148.00000°. NP2:ϕs 184.00000°, δ73.00000°, λ-62.00000°. Principal axes: T 5.2600, Plg23.0000°, Azm253.0000°; N 0.0100, Plg27.0000°, Azm355.0000°; P -5.2700, Plg53.0000°, Azm128.0000°; Data Used: II IU IC G CN. Surface waves: sta=107, comp=220, per= 50.*

ISC 27 06:46:20.7±1.0**, 10°.70S**±0°.02×**41°.43E**±0°.02**, h15**km±6**km, h30**km±3.1**km; pP-P, n1404,** σ0§98/754**, mb5.7**/309**, MS5.5**/261**, 242C-281D, Northwest of Madagascar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**9.61**	**145**	Pn	**Pn**	**06 48 38.0**	**-0.5**
	232nm,0.3s,baz=301,slow=12,SNR=764						
OPO				Sn	**Sn**	**06 50 20.1**	**-6.1**
	671nm,0.3s,baz=49,slow=21,SNR=10						
ABPO	**Ambohimpanom**	**9.99**	**147**	Pn	**Pn**	**06 48 43.0**	**-0.8**
	7μm,0.6s						
ABPO	**Ambohimpanom**	**9.99**	**147**	*e*Pn	**Pn**	**06 48 43.3**	**-0.5**
	5μm,1.1s						
ABPO				*e*Sn	**Sn**	**06 50 29.4**	**-6.3**
ABPO	**Ambohimpanom**	**9.99**	**147**	*e*P	**Pn**	**06 48 43.3**	**-0.5**
ABPO				pmax	pmax		
	comp=Z,5μm,1.1s						
KMBO	**Kilima Mbogo**	**10.37**	**336**	*e*Pn	**Pn**	**06 48 46.6**	**-2.5**
KMBO				*e*Sn	**Sn**	**06 50 33.2**	**-12**
KMBO	**Kilima Mbogo**	**10.37**	**336**	Pn	**Pn**	**06 48 46.1**	**-3.0**
	comp=Z,2.1nm,0.3s,baz=359,slow=24,SNR=31						
KMBO				Sn	**Sn**	**06 50 33.3**	**-12**
	comp=Z,41nm,0.3s,baz=62,slow=19,SNR=8.3						
KMBO				LR	LR	06 52 55.3	
	comp=Z,20μm,19.9s,baz=96,slow=38						
KMBO	**Kilima Mbogo**	**10.37**	**336**	Pn	**Pn**	**06 48 45.8**	**-3.3**
	SNR=327						
MBAR	**Mbarara**	**14.61**	**313**	Pn	**Pn**	**06 49 42.7**	**-4.4**
	comp=Z,417nm,0.9s,SNR=25						
MSEY	**Mahe Island**	**15.15**	**68**	Pn	**Pn**	**06 49 52.6**	**-1.7**
	comp=Z,3μm,0.7s,SNR=10						
MSEY	**Mahe Island**	**15.15**	**68**	*e*Pn	**Pn**	**06 49 53.0**	**-1.3**
	comp=Z,671nm,1.1s						
MSEY				*e*Sn	**Sn**	**06 52 28.6**	**-13**
MSEY	**Mahe Island**	**15.15**	**68**	*e*P	**Pn**	**06 49 53.0**	**-1.3**
MSEY				pmax	pmax		
	comp=Z,671nm,1.1s						
MSEY	**Mahe Island**	**15.15**	**68**	Pn	**Pn**	**06 49 52.8**	**-1.5**
	SNR=12						
MSNA	**Messina**	**15.92**	**222**	*e*P	**Pn**	**06 50 03.1**	**-1.2**
MSNA				AMb	AMB	06 50 11.5	
	comp=Z,2μm,1.4s						
RER	**Riviere de l'E**	**17.24**	**129**	*e*Pn	**Pn**	**06 50 21.2**	**+0.1**
	comp=Z,211nm,0.6s						
POGA	**Pongola**	**18.99**	**208**	*e*P	**Pn**	**06 50 40.6**	**-1.9**
POGA				AMb	AMB	06 50 55.1	
	comp=Z,618nm,1.6s						
AAE	**Adis Abeba**	**19.77**	**352**	*e*P	**Pn**	**06 50 54.3**	**+2.3**
AAE				*e*S	**Sn**	**06 54 53.8**	**+20**
KSR	**Koster**	**20.41**	**220**	*e*P	**P**	**06 50 57.1**	**-0.2**
KSR				AMb	AMB	06 51 07.1	
	comp=Z,477nm,1.8s						
LBTB	**Lobatse**	**20.70**	**224**	*e*P	**P**	**06 50 59.7**	**-0.8**
	comp=Z,705nm,1.0s						
LBTB				LR	LR		
	comp=Z,21μm,19.0s,MS5.5						
LBTB	**Lobatse**	**20.70**	**224**	P	**P**	**06 50 59.8**	**-0.8**
	comp=Z,192nm,0.6s,baz=55,slow=11,SNR=232						
LBTB				S	**S**	**06 54 47.3**	**-4.2**
	comp=Z,59nm,0.9s,baz=129,slow=18,SNR=2.4						
LBTB				Lg		06 56 56.9	
	comp=Z,121nm,0.7s,baz=335,slow=19,SNR=3.8						
LBTB				LR	LR	06 59 03.7	
	comp=Z,23μm,18.8s,MS5.6,baz=61,slow=37						
LBTB	**Lobatse**	**20.70**	**224**	P	**P**	**06 50 59.8**	**-0.7**
LBTB				S	**S**	**06 54 47.3**	**-4.2**
LBTB				pmax	pmax		
	comp=Z,192nm,0.6s						
LBTB				smax			
	comp=N,59nm,0.9s						
LBTB				MLR	MLR		
	comp=Z,23μm,18.8s,MS5.6						
LBTB	**Lobatse**	**20.70**	**224**	⇑*i*P	**P**	**06 50 59.6**	**-1.0**
LBTB				AMb	AMB	06 51 06.9	
	comp=Z,2μm,1.4s						
PRYS	**Parys**	**20.89**	**217**	⇑*i*P	**P**	**06 51 02.3**	**-0.3**
PRYS				AMb	AMB	06 51 04.6	
	comp=Z,986nm,1.3s						
DESE	**Dese**	**21.75**	**355**	*e*P	**P**	**06 51 18.1**	**+6.3**
DESE				*e*S	**S**	**06 55 16.1**	**+4.0**
ATD	**Arta Tunnel**	**22.12**	**4**	P	**P**	**06 51 16.6**	**+0.7**
	comp=Z,38nm,0.9s,mb4.8,baz=175,slow=5.9,SNR=15						
ATD				S	**S**	**06 55 23.2**	**+3.7**
	comp=Z,5.3nm,0.4s,baz=150,slow=20,SNR=2.1						
ATD				LR	LR	06 59 28.3	
	comp=Z,2μm,21.7s,MS4.6,baz=175,slow=36						
SWZ	**Schweizer**	**22.34**	**221**	⇑*i*P	**P**	**06 51 16.9**	**-1.1**
SWZ				AMb	AMB	06 51 23.6	
	comp=Z,2μm,1.9s,mb6.2						
KSD	**Kokstad**	**22.69**	**208**	⇑*i*P	**P**	**06 51 21.3**	**-0.5**
KSD				AMb	AMB	06 51 29.7	
	comp=Z,369nm,2.0s,mb5.5						
BOSA	**Boshof**	**23.40**	**218**	*e*P	**P**	**06 51 27.9**	**-1.4**
	comp=Z,2μm,1.7s,mb6.3						
BOSA				LR	LR		
	comp=Z,10μm,19.0s,MS5.3						
BOSA	**Boshof**	**23.40**	**218**	P	**P**	**06 51 27.9**	**-1.3**
	comp=Z,302nm,0.9s,mb5.7,baz=46,slow=9.2,SNR=194						
BOSA				S	**S**	**06 55 38.4**	**-3.3**
	comp=Z,17nm,0.7s,baz=90,slow=20,SNR=1.9						
BOSA				Lg		06 58 19.3	
	comp=Z,56nm,0.7s,baz=127,slow=19,SNR=2.3						
BOSA				LR	LR	07 00 41.8	
	comp=Z,9μm,19.0s,MS5.2,baz=51,slow=37						
BOSA	**Boshof**	**23.40**	**218**	P	**P**	**06 51 28.0**	**-1.3**
BOSA				S	**S**	**06 55 38.4**	**-3.3**
BOSA				pmax	pmax		
	comp=Z,302nm,0.9s,mb5.7						
BOSA				smax			
	comp=N,17nm,0.7s						
BOSA				MLR	MLR		
	comp=Z,9μm,19.0s,MS5.2						
BOSA	**Boshof**	**23.40**	**218**	⇑*i*P	**P**	**06 51 27.9**	**-1.4**
BOSA				AMb	AMB	06 51 31.5	
	comp=Z,2μm,1.6s,mb6.2						
TRBA	**At Turbah**	**23.92**	**6**	*e*P	**P**	**06 51 36.7**	**+2.4**
TSUM	**Tsumeb**	**24.52**	**247**	*e*P	**P**	**06 51 38.7**	**-1.1**
	comp=Z,968nm,1.4s,mb6.1						
TSUM				LR	LR		
	comp=Z,37μm,19.0s,MS5.9						
TSUM	**Tsumeb**	**24.52**	**247**	P	**P**	**06 51 38.8**	**-1.0**
	comp=Z,359nm,1.1s,mb5.8,baz=54,slow=8.2,SNR=173						
TSUM				S	**S**	**06 55 59.2**	**-0.9**
	comp=Z,54nm,1.0s,baz=82,slow=13,SNR=1.9						
TSUM				Lg		06 58 50.6	
	comp=Z,82nm,1.2s,baz=140,slow=16,SNR=2.0						
TSUM				LR	LR	07 01 45.3	
	comp=Z,36μm,19.1s,MS5.9,baz=55,slow=38						
LBOS		**24.70**	**9**	*e*P	**P**	**06 51 43.0**	**+1.6**
PKA	**Prieska**	**25.69**	**220**	⇑*i*P	**P**	**06 51 49.4**	**-0.9**
PKA				AMb	AMB	06 51 52.3	
	comp=Z,944nm,1.3s,mb6.2						
UPI	**Upington**	**25.82**	**224**	*e*P	**P**	**06 51 50.6**	**-0.9**
UPI				AMb	AMB	06 51 54.7	
	comp=Z,921nm,1.5s,mb6.1						
SOE	**Somerset East**	**26.34**	**211**	*e*P	**P**	**06 51 57.0**	**+0.8**
SOE				AMb	AMB	06 52 00.5	
	comp=Z,384nm,1.4s,mb5.7						
SUR	**Sutherland**	**28.76**	**218**	*e*P	**P**	**06 52 17.8**	**-0.2**
	comp=Z,801nm,1.8s,mb6.2						
SUR				LR	LR		
	comp=Z,11μm,19.0s,MS5.5						
SUR	**Sutherland**	**28.76**	**218**	P	**P**	**06 52 17.8**	**-0.1**
	comp=Z,61nm,0.9s,mb5.3,baz=56,slow=5.6,SNR=30						
SUR				S	**S**	**06 57 07.1**	**+0.1**
	comp=Z,17nm,0.8s,baz=315,slow=20,SNR=1.8						
SUR				Lg		07 01 14.3	
	comp=Z,46nm,0.8s,baz=129,slow=21,SNR=3.9						
SUR				LR	LR	07 03 54.9	
	comp=Z,10μm,19.4s,MS5.4,baz=48,slow=37						
SUR	**Sutherland**	**28.76**	**218**	P	**P**	**06 52 17.9**	**0.0**
	comp=Z,875nm,0.7s,mb6.5,SNR=17						
SUR	**Sutherland**	**28.76**	**218**	⇑*i*P	**P**	**06 52 17.7**	**-0.2**
SUR				AMb	AMB	06 52 32.0	
	comp=Z,334nm,1.6s,mb5.8						
SUR	**Sutherland**	**28.76**	**218**	P	**P**	**06 52 17.9**	**0.0**
	SNR=8.3						
KOMG	**Komaggas**	**29.31**	**226**	*e*P	**P**	**06 52 21.8**	**-1.1**
KOMG				AMb	AMB	06 53 04.3	
	comp=Z,368nm,1.4s,mb5.9						
DGAR	**Diego Garcia**	**30.80**	**87**	PFAKE		06 52 50.0	+14
DGAR				LR	LR		
	comp=Z,11μm,19.0s,MS5.5						
BSY	**Bisya**	**36.65**	**25**	P	**P**	**06 53 27.5**	**+0.6**
	SNR=42						
ARQ	**Araqi**	**36.91**	**23**	P	**P**	**06 53 30.1**	**+1.1**
	SNR=25						
SMDO	**Samad**	**37.28**	**26**	P	**P**	**06 53 32.9**	**+0.6**
	SNR=27						
WBK	**Wadi Bani Khal**	**37.30**	**27**	P	**P**	**06 53 33.7**	**+1.3**
	SNR=6.2						
HOQ	**Hoqain**	**37.44**	**24**	P	**P**	**06 53 34.4**	**+0.8**
	SNR=14						
ASUD	**Al Ashush, Dub**	**37.64**	**21**	P	**P**	**06 53 36.7**	**+1.5**
	SNR=6.4						
ASHO	**Ashiyiah**	**37.95**	**22**	P	**P**	**06 53 38.5**	**+0.6**
	SNR=24						
NAZ	**Nazwa, Dubai**	**38.09**	**21**	P	**P**	**06 53 40.0**	**+1.0**
	SNR=31						
HATD	**Hatta, Dubai**	**38.11**	**22**	P	**P**	**06 53 40.0**	**+0.8**
	SNR=30						
NAY	**Al-Naaiem**	**40.10**	**8**	*e*P	**P**	**06 53 55.9**	**0.0**
NAY				AMb	AMB	06 54 10.6	
	comp=Z,60nm,1.1s,mb5.2						
TRD	**Trivandrum**	**40.17**	**63**	⇓*e*x	sP	06 54 04.0	+0.8
TRD				*e*x	ScP	06 59 52.0	+2.1
UMR	**Umm Al-Rimmam**	**40.47**

comp=Z,265nm,1.0s,mb6.2
DBIC LR LR
comp=Z,6μm,20.0s,MS5.6
DBIC Dimbokro 49.20 288 P **P 06 55 07.6 -1.3**
comp=Z,26nm,1.0s,mb5.2,baz=96,slow=8.8,SNR=12
DBIC PP PP 06 56 59.5 -3.3
comp=Z,34nm,1.1s,baz=100,slow=7.1,SNR=4.0
DBIC LR LR 07 16 24.5
comp=Z,6μm,18.8s,MS5.6,baz=96,slow=37
DBIC Dimbokro 49.20 288 *e*P **P 06 55 07.6 -1.3**
DBIC pmax pmax
comp=Z,265nm,1.0s
DBIC MLR MLR
comp=Z,6μm,20.0s
LIC Lamto 49.21 288 *e*P **P 06 55 07.0 -1.9**
comp=Z,822nm,1.2s,mb6.6
LIC Lamto 49.21 288⇑*i*P **P 06 55 07.5 -1.4**
comp=Z,765nm,1.2s,mb6.3,baz=107
LIC *e*MLR MLR
comp=Z,8μm,18.8s,MS5.4
LIC Lamto 49.21 288⇑*i*P **P 06 55 07.5 -1.4**
comp=Z,383nm,1.2s,mb6.3
LIC LR LR
comp=Z,4μm,18.8s,MS5.4
TIC Toumodi 49.35 288 *e*P **P 06 55 08.2 -1.8**
comp=Z,850nm,0.9s,mb6.8
TIC Toumodi 49.35 288 *e*P **P 06 55 08.2 -1.8**
TIC pmax pmax
comp=Z,850nm,0.9s,mb6.8
VIS Vishakhapatnam 50.09 56 *i* P **P 06 55 16.7 +1.2**
VIS AMb AMB 06 55 19.7
comp=Z,154nm,1.6s,mb5.8
VIS *i* S **S 07 02 28.0 +1.3**
GNI Garni 50.68 3 *e*P **P 06 55 19.6 0.0**
comp=Z,56nm,1.1s,mb5.4
GNI LR LR
comp=Z,2μm,21.0s,MS5.0
GNI Garni 50.68 3*d i*P **P 06 55 20.4 +0.8**
GNI pmax pmax
comp=Z,101nm,1.7s
GNI MLR MLR
comp=Z,1μm,16.0s
GNI Garni 50.68 3 P **P 06 55 20.9 +1.3**
SNR=25
BR131 Keskin Array S 50.68 352 *e*P **P 06 55 20.3 +0.7**
BR131 LR LR
comp=Z,1μm,20.0s,MS5.0
BRTR Keskin Array B 50.68 352 P **P 06 55 19.8 +0.2**
comp=Z,21nm,1.1s,mb5.0,baz=181,slow=6.9,SNR=50
BRTR LR LR 07 16 41.2
comp=Z,1μm,20.1s,MS5.0,baz=159,slow=36
BRTR Keskin Array B 50.68 352 *i* P **P 06 55 20.1 +0.5**
BRTR pmax pmax
comp=Z,21nm,1.1s
KHET Khetri 50.91 40 *e*PKP **P 06 55 21.2 -0.3**
KUDL Kundal 51.40 40 *ex* **P 06 55 20.9 -4.3**
KUDL AMb AMB 06 55 23.9
comp=Z,90nm,1.2s,mb5.6
AGRA Agra 51.72 42 *e*PKP **P 06 55 25.6 -2.0**
AGRA AMb AMB 06 55 27.0
comp=Z,54nm,0.3s,mb5.9
SONA Sohna 51.85 41 *e*PKP **P 06 55 27.8 -0.8**
RTK Rohtak 51.96 40 *e*PKP **P 06 55 27.9 -1.5**
RTK AMb AMB 06 55 30.4
comp=Z,106nm,0.5s,mb6.0
DGRG David-gareji 52.01 4 P **P 06 55 29.2 -0.3**
KBL Kabul 52.06 29 *e*P **P 06 55 30.8 +0.8**
comp=Z,84nm,1.4s,mb5.5
KBL Kabul 52.06 29 *e*P **P 06 55 30.8 +0.8**
KBL pmax pmax
comp=Z,84nm,1.4s,mb5.5
MTA Mtatsminda 52.22 3 P **P 06 55 29.4 -1.7**
NDI New Delhi 52.23 41 *e*PKP **P 06 55 30.0 -1.4**
TBLG Delisi 52.25 3 *e*P **P 06 55 32.1 +0.8**
TBLG Delisi 52.25 3 P **P 06 55 32.1 +0.8**
GOR Gori 52.48 3 P **P 06 55 34.8 +1.8**
WDD Wield Dalam 52.82 333 PFAKE 06 55 50.0 +14
WDD LR LR
comp=Z,2μm,19.0s,MS5.2
ZEI Tsey 53.25 2 *e*P **P 06 55 36.7 -2.0**
ZEI *e*S **S 07 03 14.0 +4.6**
ZEI pmax pmax
comp=Z,145nm,1.6s,mb5.7
ZEI MLR MLR
comp=Z,3μm,18.0s,MS5.4
MAK Makhachkala 53.68 6 *e*P **P 06 55 40.8 -1.1**
MAK *e* 06 56 41.5
MAK *e* 06 57 41.4
MAK *e*S **S 07 03 16.5 +1.2**
MAK *e* 07 05 22.8
MAK pmax pmax
comp=Z,209nm,1.2s,mb5.9
MAK MLR MLR
comp=Z,2μm,18.0s,MS5.2
DDI Dehra Dun 53.88 40 *ex* **P 06 55 41.5 -2.1**
SOC Sochi 54.04 358 *e*P **P 06 55 42.6 -1.8**
SOC *e**PP pP 06 55 44.9 -4.3
SOC *e* 06 56 54.8
SOC *e*S **S 07 03 12.2 -7.9**
SOC pmax pmax
comp=Z,33nm,1.0s,mb5.2
SOC MLR MLR
comp=Z,1μm,17.0s,MS5.0
CEL Celeste 54.24 335 PFAKE 06 56 00.0 +14
CEL LR LR
comp=Z,3μm,19.0s,MS5.4
COCO West Island 54.24 97 *e*P **P 06 55 46.7 +0.1**
COCO LR LR
comp=Z,1μm,20.0s,MS4.9
KIV Kislovodsk 54.40 1 *e*P **P 06 55 47.3 +0.2**
comp=Z,63nm,1.2s,mb5.4
KIV LR LR
comp=Z,3μm,20.0s,MS5.3
KIV Kislovodsk 54.40 1⇑*e*P **P 06 55 47.2 +0.1**
KIV *e* 06 57 45.7
KIV *i* S **S 07 03 32.4 +7.5**
KIV pmax pmax
comp=Z,97nm,1.7s,mb5.5
KIV MLR MLR
comp=Z,2μm,18.0s,MS5.3
KIV Kislovodsk 54.40 1 P **P 06 55 47.6 +0.5**
comp=Z,269nm,1.1s,mb6.1,SNR=5.2
KIV Kislovodsk 54.40 1 P **P 06 55 47.2 +0.2**
SNR=16
VAY Valandovo 54.60 343 *e*Pg **P 06 55 48.4 -0.2**
VAY *e*Sg pP 06 56 01.2 +7.8
TIP Timpagrande 54.68 337 *e*P **P 06 55 49.6 +0.4**
TIP *e*pP pP 06 56 01.4 +7.4
TIP LR LR
comp=Z,2μm,19.0s,MS5.2
KLP Kalpa 54.84 39 *e*PKP **P 06 55 51.0 +0.5**
KLP AMb AMB 06 55 53.4
comp=Z,107nm,0.9s,mb5.9
TRIS Tristan da Cun 54.86 232 PFAKE 06 56 00.0 +9.3
TRIS LR LR
comp=Z,7μm,20.0s,MS5.7
KRUS Krusevo 55.05 342 *e*Pg **P 06 55 52.0 +0.2**
KEST Kesra 55.23 328 *e*P **P 06 55 54.0 +0.8**
KEST Kesra 55.23 328 P **P 06 55 54.0 +0.7**
comp=Z,2.6nm,0.9s,mb4.3,baz=250,slow=0.1,SNR=8.4
KEST LR LR 07 22 18.5
comp=Z,2μm,18.1s,MS5.2,baz=258,slow=39
ANN Anapa 55.35 357 *e*P **P 06 55 52.2 -1.7**
ANN *e* 06 56 52.1
ANN *e* 06 57 56.6
ANN *e*S **S 07 03 38.4 +0.7**
ANN pmax pmax
comp=Z,56nm,1.4s,mb5.4
ANN MLR MLR
comp=N,1μm,21.0s,MS5.0
ANN MLR MLR
comp=E,927nm,21.0s,MS5.0
ANN MLR MLR
comp=Z,1μm,21.0s,MS4.9
TIR Tirane 55.47 340 *e*P **P 06 55 56.0 +1.1**
comp=Z,193nm,1.1s,mb6.0
TIR LR LR
comp=Z,2μm,20.0s,MS5.1
TIR Tirane 55.47 340 *e*P **P 06 55 56.0 +1.1**
TIR pmax pmax
comp=Z,193nm,1.1s,mb6.0
TIR MLR MLR
comp=Z,2μm,20.0s,MS5.1
CUC Castrocucco 55.75 336 *e*P **P 06 55 59.6 +2.7**
comp=Z,50nm,1.4s,mb5.4
CUC LR LR
comp=Z,1μm,21.0s,MS5.0
SIM Simferopol' 55.78 354 *de*P **P 06 55 57.1 +0.1**
SIM *e*S **S 07 03 41.8 -1.5**
SIM pmax pmax
comp=Z,154nm,1.6s,mb5.8
SIM MLR MLR
comp=Z,2μm,20.4s,MS5.1
KOLN Koldanda 55.94 46 *e*P **P 06 55 57.8 -0.7**
comp=Z,95nm,1.2s,mb5.7
BSI Banda Aceh 55.98 76 P **P 06 56 00.1 +1.0**
comp=Z,3μmcomp=Z,177nm,1.3s,mb5.9
TIRR Tirgusor 56.15 349 *e*P **P 06 55 59.1 -0.6**
comp=Z,15nm,1.1s,mb4.9
TIRR Tirgusor 56.15 349⇑P **P 06 55 59.3 -0.4**
TIRR Tirgusor 56.15 349⇑*i*P **P 06 55 59.3 -0.4**
ULC Ulcinj 56.23 340⇓*i*P **P 06 56 00.8 +0.5**
ULC Ulcinj 56.23 340⇓*i*P **P 06 56 00.9 +0.6**
DANN Dangsing 56.40 45 *e*P **P 06 56 00.8 -1.0**
comp=Z,154nm,1.0s,mb6.0
PVY Plav 56.56 341⇓*i*P **P 06 56 03.0 +0.4**
PVY Plav 56.56 341⇓*i*P **P 06 56 03.0 +0.4**
CAL Calcutta 56.59 54⇓*i*P **P 06 56 02.7 -0.5**
CAL *ex* x 07 04 11.2
TTG Podgorica 56.64 340⇓*i*P **P 06 56 04.1 +0.9**
BUM Brajici-Budva 56.64 340⇓*i*P **P 06 56 04.0 +0.7**
BUM Brajici-Budva 56.64 340⇓*i*P **P 06 56 04.0 +0.8**
GKN Gorkha 56.81 46 *e*P **P 06 56 03.7 -1.1**
IVA Berane 56.83 341⇓*i*P **P 06 56 04.6 0.0**
IVA Berane 56.83 341⇓*i*P **P 06 56 04.6 +0.1**
CFR Carcaliu 56.90 349⇑P **P 06 56 05.0 +0.1**
CFR Carcaliu 56.90 349⇑*i*P **P 06 56 05.0 0.0**
HCY Herceg Novi 56.91 340⇓*i*P **P 06 56 06.0 +0.9**
HCY Herceg Novi 56.91 340⇓*i*P **P 06 56 06.1 +1.0**
CMAH Djebel Manchou 56.91 328 P sP 06 56 12.0 +0.1
DMN Daman 56.92 47 *e*P **P 06 56 04.9 -0.6**
comp=Z,113nm,1.0s,mb5.9
CTEI Djebel Teioual 57.04 326 P sP 06 56 17.0 +4.2
NKY Niksic 57.07 340 *e*P **P 06 56 06.9 +0.6**
NKY Niksic 57.07 340 *e*P **P 06 56 07.0 +0.7**
PKIN Phulchoki 57.11 47 *e*P **P 06 56 06.3 -0.6**
PKI Pulchoki 57.11 47 *e*P **P 06 56 06.0 -0.9**
CKFL Kef-Lekhel 57.12 327 P sP 06 56 13.0 -0.4
CASM Ain Smara 57.14 327 P sP 06 56 16.0 +2.5
TPTI 57.19 79 P **P 06 56 08.8 +1.1**
comp=Z,1μmcomp=Z,91nm,1.4s,mb5.6
BRY Bratogost 57.30 340⇓*i*P **P 06 56 08.1 +0.2**
BRY Bratogost 57.30 340⇓*i*P **P 06 56 08.2 +0.3**
CAEH 'Ain El Ouahch 57.33 327 P **P 06 56 14.0 +5.7**
CAEH P pP 06 56 18.0 +4.9
PLE Pljevlja 57.40 341⇓*i*P **P 06 56 08.0 -0.6**
PLE Pljevlja 57.40 341⇓*i*P **P 06 56 08.1 -0.5**
UPM Unac-Piva 57.45 341⇓*i*P **P 06 56 09.6 +0.7**
UPM Unac-Piva 57.45 341⇓*i*P **P 06 56 09.6 +0.7**
RAMN Ramite 57.63 49 *e*P **P 06 56 10.4 -0.1**
comp=Z,171nm,1.2s,mb6.0
MLR Muntele Rosu 57.64 347⇓P **P 06 56 10.1 -0.1**
MLR Muntele Rosu 57.64 347⇓*i*P **P 06 56 10.1 -0.2**
GUN Gumba 57.65 47 *e*P **P 06 56 10.4 -0.3**
comp=Z,375nm,1.3s,mb6.2
DFRA Djebel Bou Aff 57.68 326 P sP 06 56 20.0 +2.6
SET Setif 57.69 326 P sP 06 56 22.0 +4.6
VOIR 57.79 346⇓P **P 06 56 10.8 -0.5**
VOIR 57.79 346⇓*i*P **P 06 56 10.8 -0.5**
VRI Vrincioaia 57.84 348⇓P **P 06 56 11.8 +0.2**
VRI Vrincioaia 57.84 348⇓*i*P **P 06 56 11.8 +0.2**
PLOR Plostina 57.84 348⇑P **P 06 56 11.7 +0.1**
PLOR Plostina 57.84 348⇑*i*P **P 06 56 11.7 +0.1**
VSL Villasalto 58.15 331 *e*P **P 06 56 13.0 -0.9**
VSL *ep*P pP 06 56 21.5 +2.8
VSL LR LR
comp=Z,1μm,21.0s,MS5.0
ODAN Odare 58.16 49 *e*P **P 06 56 13.6 -0.7**
comp=Z,180nm,1.2s,mb6.0
DOPR Dopca 58.22 347⇓*i*P **P 06 56 13.9 -0.4**
SYO Syowa Base 58.27 181⇑*i*P **P 06 56 15.0 +0.7**
SYO Syowa Base 58.27 181⇓*ep*P pP 06 56 18.6 -0.5
GZR Gura Zlata 58.31 345⇑P **P 06 56 15.0 0.0**
GZR Gura Zlata 58.31 345⇑*i*P **P 06 56 15.0 +0.1**
KIS Kishinev 58.53 350 *e*P **P 06 56 15.0 -1.4**
comp=Z,400nm,2.0s,mb6.1
KIS *e*S **S 07 04 18.0 -1.5**
KIS Kishinev 58.53 350 *e*PS 07 04 33.0
KIS *e*ScS ScS 07 06 03.0 -2.7
KIS *e*SS SS 07 08 36.0 +23
KIS *e*SSS 07 11 25.0
KIS *e*L 07 15 10.0
KIS LRM 07 24 24.0
comp=Z,700nm,20.0s
KIS Kishinev 58.53 350 *e*P **P 06 56 15.0 -1.4**
KIS *e* 06 56 24.0
KIS *e*S **S 07 04 18.0 -1.5**
KIS *e*PS 07 04 33.0
KIS *e* ScS 07 06 03.0 -2.7
KIS pmax pmax
comp=Z,420nm,2.0s,mb6.1
KIS pmax pmax
comp=Z,900nm,4.5s
KIS pmax pmax
comp=Z,900nm,6.0s
KIS MLR MLR
comp=N,800nm,20.0s,MS4.9
KIS MLR MLR
comp=E,300nm,20.0s,MS4.9
KIS MLR MLR
comp=Z,700nm,20.0s,MS4.8
KIS MLR MLR
comp=Z,700nm,20.0s
TSI Tuntungan 58.59 79 P **P 06 56 18.7 +1.2**
comp=Z,5μmcomp=Z,294nm,1.6s,mb6.1
MAW Mawson 58.61 171⇓*i*P **P 06 56 18.5 +1.8**
comp=Z,35nm,1.2s,mb5.3
MAW Mawson 58.61 171 P **P 06 56 18.7 +1.9**
comp=Z,43nm,1.1s,mb5.4,baz=333,slow=7.5,SNR=40
MAW LR LR 07 18 21.8
comp=Z,4μm,18.4s,MS5.6,baz=339,slow=33
TAPN Taplejung 58.67 49 *e*P **P 06 56 17.1 -0.7**
comp=Z,562nm,1.9s,mb6.3
AQU L'Aquila 58.71 336 *e*P **P 06 56 17.2 -0.6**
comp=Z,116nm,1.1s,mb5.8
AQU *ep*P pP 06 56 28.3 +5.7
AQU LR LR
comp=Z,2μm,21.0s,MS5.2
AQU L'Aquila 58.71 336 *e*P **P 06 56 17.2 -0.6**
AQU pmax pmax
comp=Z,116nm,1.1s,mb5.8
AQU MLR MLR
comp=Z,2μm,21.0s,MS5.2
AQU L'Aquila 58.71 336⇓*i*P **P 06 56 15.6 -2.2**
BZS Buzias 58.83 344⇓P **P 06 56 18.5 -0.1**
BZS Buzias 58.83 344⇓*i*P **P 06 56 18.5 0.0**
MNSI Mandailing Nat 58.93 83 P **P 06 56 21.9 +2.0**
comp=Z,9μmcomp=Z,162nm,1.3s,mb5.9
KSH Kashi 59.38 31⇓*i*P **P 06 56 18.3 -4.2**
KSH *ep*P pP 06 56 22.5 -4.8
KSH *es*P sP 06 56 25.3 -3.8
KSH PcP PcP 06 57 08.0 -2.3
KSH *e*PP PP 06 58 30.0 -3.9
KSH *e*ScP ScP 07 01 06.0 -4.8
KSH *e*PcS PcS 07 01 08.3 -3.9
KSH *e*S **S 07 04 20.5 -10**
KSH *e*ScS ScS 07 06 03.8 -8.5
KSH *e*SS SS 07 08 14.0 -12
KSH pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
KSH pmax pmax
comp=Z,240nm,4.3s
KSH LR LR
comp=N,2μm,21.0s,MS5.3
KSH LR LR
comp=E,870nm,17.7s,MS5.3
KSH LR LR
comp=Z,3μm,23.1s
PDSI Padang 59.43 85 P **P 06 56 25.4 +2.0**
comp=Z,183nm,1.6s,mb5.9
PPI Padang Panjang 59.46 84 P **P 06 56 24.9 +1.3**
comp=Z,2μmcomp=Z,71nm,1.7s,mb5.4
AGT Agartala 59.59 54 *i* P **P 06 56 23.0 -1.3**
AGT *i* x x 06 56 35.0
DRGR 59.63 345⇓P **P 06 56 24.5 +0.5**
DRGR 59.63 345⇓*i*P **P 06 56 24.5 +0.4**
KK31 Karatay Array 59.76 24 *i* P **P 06 56 24.7 -0.4**
KK31 pmax pmax
comp=Z,195nm,1.2s,mb6.0
KKAR Karatay Array 59.76 24 *e*P **P 06 56 24.9 -0.2**
comp=Z,145nm,1.1s,mb5.9
KKAR Karatay Array 59.76 24 *e*P **P 06 56 24.9 -0.2**
KKAR pmax pmax
comp=Z,145nm,1.1s,mb5.9
BUR01 Bucovina Ar. S 59.82 347 P **P 06 56 26.2 +0.8**
BURAR Bucovina Array 59.82 347⇓P **P 06 56 25.8 +0.5**
BURAR Bucovina Array 59.82 347⇓*i*P **P 06 56 25.8 +0.4**
BUR08 Bucovina Ar. S 59.85 347 *e*P **P 06 56 25.7 +0.1**
PKSM Moragy 60.23 342⇑P **P 06 56 27.9 -0.3**
PKSM Moragy 60.23 342⇑*i*P **P 06 56 27.9 -0.3**
BKNI Bangkinang 60.25 83 P **P 06 56 30.3 +1.2**
comp=Z,4μmcomp=Z,337nm,1.3s,mb6.2
BMR Baia Mare 60.26 346 P **P 06 56 29.2 +0.8**
AML Almayashu 60.33 27 P **P 06 56 29.4 +0.5**
SNR=17
AML Almayashu 60.33 27 *e*P **P 06 56 29.2 +0.2**
comp=Z,79nm,1.4s,mb5.5
AML LR LR
comp=Z,2μm,21.0s,MS5.2
SDSI Sungai Dareh 60.37 85 P **P 06 56 31.1 +1.2**
comp=Z,2μmcomp=Z,140nm,1.6s,mb5.7
PGF Pioggiola 60.74 333 *e*P **P 06 56 31.4 -0.4**
comp=Z,273nm,1.6s,mb5.8
PGF Pioggiola 60.74 333 *e*P **P 06 56 31.4 -0.4**
comp=Z,137nm,1.6s,mb5.8
PGF Pioggiola 60.74 333 *e*P **P 06 56 31.4 -0.4**
PGF pmax pmax
comp=Z,137nm,1.6s,mb5.8
UCH Uchtor 60.78 28 *e*P **P 06 56 32.6 +0.5**
comp=Z,14nm,1.0s,mb5.0
UCH LR LR
comp=Z,847nm,22.0s,MS4.8
EKS2 Erkin-Say 60.79 27 P **P 06 56 32.4 +0.3**
SNR=34
EKS2 Erkin-Say 60.79 27 *e*P **P 06 56 32.0 -0.1**
comp=Z,43nm,1.3s,mb5.4
EKS2 LR LR
comp=Z,2μm,21.0s,MS5.2
SHL Shillong 60.91 53⇓*i*P **P 06 56 33.0 -0.3**
SHL *ex* x 07 00 30.0
TRPA Tarpa 60.92 346⇑*i*P **P 06 56 32.7 -0.2**
CRES Cresnjev 60.92 339 *e*P **P 06 56 33.3 +0.4**
KZA Kyzart 61.00 28 P **P 06 56 35.0 +1.4**
SNR=13
KZA Kyzart 61.00 28 *e*P **P 06 56 33.5 0.0**
comp=Z,58nm,1.1s,mb5.6
KULM Kulim 61.05 78 *e*P **P 06 56 33.7 -0.8**
comp=Z,201nm,1.5s,mb6.0
KULM LR LR
comp=Z,5μm,20.0s,MS5.6
KULM Kulim 61.05 78 P **P 06 56 34.6 +0.1**
AAK Ala-Archa 61.09 27 P **P 06 56 34.7 +0.5**
SNR=19
AAK Ala-Archa 61.09 27 *e*P **P 06 56 34.6 +0.5**
comp=Z,68nm,1.2s,mb5.7
AAK LR LR
comp=Z,3μm,21.0s,MS5.4
AAK Ala-Archa 61.09 27 P **P 06 56 34.2 0.0**
comp=Z,23nm,1.0s,mb5.3,baz=196,slow=2.4,SNR=56
AAK Ala-Archa 61.09 27*d i*P **P 06 56 34.6 +0.4**
AAK pmax pmax
comp=Z,29nm,1.0s,mb5.4
AAK Ala-Archa 61.09 27 P **P 06 56 34.9 +0.7**
comp=Z,240nm,1.1s,mb6.2,SNR=18
AAK Ala-Archa 61.09 27 P **P 06 56 34.5 +0.3**
comp=Z,253nmcomp=Z,13nm,1.6s,mb4.8
AAK Ala-Archa 61.09 27 P **P 06 56 34.9 +0.7**
SNR=36
KOGS Kog 61.20 340 *e*P **P 06 56 34.9 +0.1**
KOGS *e* 06 56 44.9
IPM Ipoh 61.21 79 *e*P **P 06 56 35.6 +0.1**
comp=Z,189nm,1.3s,mb6.1
IPM Ipoh 61.21 79 P **P 06 56 35.7 +0.1**
BUD Budapest 61.26 343⇓*ep*P pP 06 56 44.9 +4.9
FRU Bishkek 61.30 27⇓*i*P **P 06 56 35.5 -0.1**
FRU *e* 07 05 14.0
FRU pmax pmax
comp=Z,230nm,2.2s,mb5.9
FRU pmax pmax
comp=N,2μm,21.0s
KBK Karagaybulak 61.31 28 P **P 06 56 36.4 +0.7**
SNR=42
PSZ Piszkesteto 61.41 344 *e*P **P 06 56 35.8 -0.4**
comp=N,74nm,1.2s,mb5.7
PSZ LR LR
comp=Z,907nm,20.0s,MS4.9
PSZ Piszkesteto 61.41 344⇑P **P 06 56 35.7 -0.5**
PSZ Piszkesteto 61.41 344⇑*i*P **P 06 56 35.7 -0.5**
PSZ Piszkesteto 61.41 344⇓*ep*P pP 06 56 45.6 +4.6
TRI Trieste 61.42 338 PFAKE 06 56 50.0 +14
TRI LR LR
comp=Z,1μm,21.0s,MS5.1
VORD Divnogorie 61.43 358 *e*P **P 06 56 35.1 -1.2**
VORD *e*S **S 07 04 55.9 -0.8**
VORD pmax pmax
comp=Z,130nm,1.2s,mb5.9
VORD pmax pmax
comp=N,80nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD smax
comp=N,450nm,5.2s
VORD smax
comp=Z,130nm,5.2s
VORD smax
comp=E,220nm,2.6s
VORD MLR MLR
comp=N,680nm,20.0s
VORD MLR MLR
comp=Z,1μm,20.0s,MS5.1
VORD MLR MLR
comp=E,110nm,7.0s
LJU Ljubljana 61.43 339 *e*P **P 06 56 45.5 +9.1**
VLC Villacollemand 61.44 335 PFAKE 06 56 50.0 +13
VLC LR LR
comp=Z,1μm,19.0s,MS5.0
UZH Uzhgorod 61.44 346⇓*i*P **P 06 56 36.0 -0.4**
UZH *e* 06 57 16.5
UZH *e* 06 58 50.5
UZH *e*S **S 07 04 53.0 -4.0**
UZH *e*PS 07 05 13.9
UZH *e*SS SS 07 09 00.0 +1.7
UZH MLR MLR
comp=N,700nm,16.0s,MS5.1
UZH MLR MLR
comp=E,800nm,16.0s,MS5.1
UZH MLR MLR
comp=Z,400nm,16.0s,MS4.7
FRIM Kepong 61.48 80 P **P 06 56 37.8 +0.3**
CHMS Chumysh 61.49 27 P **P 06 56 36.8 -0.1**
SNR=15
SNG Songkhla 61.53 76 P **P 06 56 36.0 -1.7**
comp=Z,140nm,0.8s,mb6.1
VRHR Novokhopersk 61.53 0 *e*P **P 06 56 36.8 -0.2**
VRHR pmax pmax
comp=N,140nm,0.9s
VRHR pmax pmax
comp=Z,180nm,0.9s,mb6.2
VRHR pmax pmax
comp=E,10.0nm,0.5s
USP Ospenovka 61.59 27 P **P 06 56 37.0 -0.5**
SNR=26
ULHL Ulahol 61.60 29 P **P 06 56 38.6 +1.0**
SNR=9.5
VOJS Vojsko 61.65 339 *i* P **P 06 56 37.7 -0.2**
ETOS Mallorca 61.68 327 P **P 06 56 39.7 +1.5**
comp=E,376nm,2.8s,mb6.0
VSR Storozhevoye 61.69 358 *e*P **P 06 56 37.0 -1.0**
VSR *e**PP pP 06 56 46.2 +3.4
VSR *e*S **S 07 04 58.2 -1.8**
VSR pmax pmax
comp=N,150nm,1.1s
VSR pmax pmax
comp=Z,130nm,1.1s,mb6.0
VSR pmax pmax
comp=E,7.0nm,0.6s
VSR smax
comp=N,490nm,4.6s
VSR smax
comp=E,260nm,4.6s
VSR smax
comp=Z,280nm,4.6s
VSR MLR MLR
comp=N,1μm,19.0s
VSR MLR MLR
comp=Z,1μm,19.0s,MS5.1

VSR MLR MLR
comp=E,60nm,6.0s
PERS Pernice 61.74 340 *i* P **P 06 56 38.6 +0.1**
PERS *e* 06 56 48.5
KECS Kecovo 61.77 344 *eP* **P 06 56 38.4 -0.2**
comp=E,14nm,1.1s,mb5.0
KECS *e* 06 56 48.3
KECS Kecovo 61.77 344 *eP* **P 06 56 38.4 -0.2**
KECS pmax pmax
comp=Z,14nm,1.1s,mb5.0
KECS Kecovo 61.77 344 *eP* **P 06 56 38.4 -0.2**
KECS *epP* pP 06 56 48.3 +4.9
SOKA Soboth 61.81 340⇑*i*P **P 06 56 39.1 +0.2**
comp=Z,55nm,1.2s,mb5.5
TKM2 Tokmak 2 61.82 28 P **P 06 56 38.8 -0.3**
SNR=118
TKM2 Tokmak 2 61.82 28 *eP* **P 06 56 39.0 0.0**
comp=Z,124nm,1.1s,mb6.0
TKM2 LR LR
comp=Z,2µm,21.0s,MS5.2
TKM2 Tokmak 2 61.82 28 *eP* **P 06 56 39.0 -0.1**
TKM2 pmax pmax
comp=Z,124nm,1.1s,mb6.0
TKM2 MLR MLR
comp=Z,2µm,21.0s,MS5.2
OBKA Obir 61.83 339⇑*i*P **P 06 56 39.3 +0.2**
comp=Z,61nm,1.6s,mb5.5,SNR=7.0
AB31 Akbulak array 61.88 14 *i* P **P 06 56 38.3 -1.0**
AB31 Akbulak array 61.88 14 *i* P **P 06 56 38.2 -1.1**
AB31 pmax pmax
comp=Z,126nm,1.0s,mb6.0
ABKAR Akbulak array 61.88 14 *eP* **P 06 56 38.4 -0.9**
comp=Z,100nm,0.9s,mb5.9
CRVS Cervenica-Dubn 61.90 345 *eP* **P 06 56 39.5 0.0**
comp=Z,24nm,1.3s,mb5.2
CRVS *e* 06 56 49.9
CRVS Cervenica-Dubn 61.90 345 *eP* **P 06 56 39.5 0.0**
CRVS pmax pmax
comp=Z,24nm,1.3s,mb5.2
CRVS Cervenica-Dubn 61.90 345 *eP* **P 06 56 39.5 0.0**
CRVS *epP* pP 06 56 49.9 +5.6
EIBI Ibiza 61.96 325 P **P 06 56 42.0 +1.9**
comp=Z,379nm,1.7s,mb6.2
KIEV Kiev 62.05 351 *eP* **P 06 56 38.7 -1.8**
comp=Z,65nm,1.4s,mb5.6
KIEV LR LR
comp=Z,1µm,20.0s,MS5.0
KIEV Kiev 62.05 351 *eP* **P 06 56 38.7 -1.8**
KIEV pmax pmax
comp=Z,65nm,1.4s,mb5.6
KIEV MLR MLR
comp=Z,1µm,20.0s,MS5.0
AKASG Malin Array Be 62.06 351 P **P 06 56 39.0 -1.6**
AKASG PcP PcP 06 57 20.5 -0.3
AKASG LR LR 07 26 08.7
AKASG Malin Array Be 62.06 351 P **P 06 56 39.0 -1.5**
comp=Z,15nm,0.9s,mb5.1,baz=172,slow=6.0,SNR=43
AKASG PcP PcP 06 57 20.5 -0.3
comp=Z,8.0nm,0.8s,baz=174,slow=5.2,SNR=6.8
AKASG LR LR 07 26 08.7
comp=Z,1µm,20.5s,MS5.0,baz=130,slow=38
AKASG Malin Array Be 62.06 351 P **P 06 56 39.0 -1.5**
AKASG 06 57 20.5
AKBB Malin Array Si 62.06 351 *eP* **P 06 56 39.1 -1.4**
ARSA Arzberg 62.14 340⇓*i*P **P 06 56 40.9 -0.3**
comp=Z,78nm,1.4s,mb5.7
SOP Sopron 62.19 341⇓*epP* pP 06 56 50.3 +4.0
VOR Voronezh 62.20 358 *eP* **P 06 56 43.0 +1.6**
VOR pmax pmax
comp=Z,350nm,1.4s,mb6.3
VYHS Vyhne 62.23 343 *eP* **P 06 56 41.6 -0.1**
comp=Z,16nm,1.5s,mb4.9
VYHS *e* 06 56 51.5
VYHS Vyhne 62.23 343 *eP* **P 06 56 41.6 -0.1**
VYHS pmax pmax
comp=Z,16nm,1.5s,mb4.9
VYHS Vyhne 62.23 343 *eP* **P 06 56 41.6 -0.1**
VYHS *epP* pP 06 56 51.5 +4.9
KWP Kalwaria Pacla 62.28 346 PFAKE 06 56 50.0 +8.0
KWP LR LR
comp=Z,1µm,22.0s,MS5.1
REVF Revere 62.41 333 *eP* **P 06 56 44.9 +1.8**
MDSI Maura Dua 62.42 89 P **P 06 56 44.2 +0.5**
comp=Z,2µmcomp=Z,87nm,1.6s,mb5.6
KOLL Kolacno 62.43 343 *eP* pP 06 56 56.1 +8.2
KOLL Kolacno 62.43 343 *e* pP 06 56 56.1 +8.2
STHS Stebnicka Huta 62.43 345 *eP* **P 06 56 43.1 0.0**
comp=Z,12nm,0.9s,mb5.0
STHS *e* 06 56 53.2
STHS Stebnicka Huta 62.43 345 *eP* **P 06 56 43.1 0.0**
STHS pmax pmax
comp=Z,13nm,0.9s,mb5.1
STHS Stebnicka Huta 62.43 345 *eP* **P 06 56 43.1 0.0**
STHS *epP* pP 06 56 53.2 +5.3
ZST Bratislava 62.47 342 *eP* **P 06 56 42.9 -0.5**
comp=Z,24nm,1.5s,mb5.1
ZST *e* 06 56 55.4
ZST Bratislava 62.47 342 *eP* **P 06 56 42.9 -0.5**
ZST pmax pmax
comp=Z,24nm,1.5s,mb5.1
ZST Bratislava 62.47 342 *eP* **P 06 56 42.9 -0.5**
ZST *epP* pP 06 56 55.4 +7.2
SBF Sospel 62.48 333 *eP* **P 06 56 43.5 0.0**
comp=Z,339nm,1.7s,mb5.9
SBF Sospel 62.48 333 *eP* **P 06 56 43.5 0.0**
comp=Z,169nm,1.7s,mb5.9
SBF Sospel 62.48 333 *eP* **P 06 56 43.5 0.0**
SBF pmax pmax
comp=Z,169nm,1.7s,mb5.9
LSA Lhasa 62.48 48 P **P 06 56 37.0 -6.8**
LSA pP pP 06 57 02.3 +14
LSA PP PP 06 58 53.8 -7.7
LSA ScS **S 07 05 11.5 +0.6**
LSA pmax pmax
comp=Z,70nm,0.4s,mb6.1
LSA pmax pmax
comp=Z,40nm,1.2s,mb5.4
LSA LR LR
comp=N,2µm,21.2s,MS5.4
LSA LR LR
comp=E,2µm,19.6s,MS5.4
LSA LR LR
comp=Z,3µm,21.2s,MS5.4
LSA Lhasa 62.48 48 PFAKE 06 57 00.0 +16
LSA LR LR
comp=Z,3µm,21.0s,MS5.5
LMR La Mourre 62.49 332 *eP* **P 06 56 43.3 -0.3**
comp=Z,264nm,1.6s,mb5.8
LMR La Mourre 62.49 332 *eP* **P 06 56 43.3 -0.3**
comp=Z,132nm,1.6s,mb5.8
LMR La Mourre 62.49 332 *eP* **P 06 56 43.3 -0.3**
LMR pmax pmax
comp=Z,132nm,1.6s,mb5.8
EALB Alboran 62.52 320 P **P 06 56 48.8 +4.8**
comp=Z,395nm,1.1s,mb6.5
SAOF Saorge 62.52 333 *eP* **P 06 56 44.7 +0.9**
KASI Kota Agung 62.56 91 P **P 06 56 45.7 +1.0**
comp=Z,3µmcomp=Z,227nm,1.3s,mb6.2
AKTK Aktyubinsk 62.57 12 P **P 06 56 43.2 -0.7**
AKTO Aktyubinsk 62.57 12 P **P 06 56 43.2 -0.7**
comp=Z,81nm,0.9s,mb5.8,baz=198,slow=6.6,SNR=151
MODS Modra-Piesok 62.58 342 *eP* pP 06 56 57.0 +8.1
MODS Modra-Piesok 62.58 342 *e* pP 06 56 57.0 +8.1
AUTN L'Aution 62.59 333 *eP* **P 06 56 47.7 +3.5**
FRF La Foret Royal 62.60 332 *eP* **P 06 56 44.2 -0.1**
comp=Z,358nm,1.7s,mb5.9
FRF La Foret Royal 62.60 332 *eP* **P 06 56 44.2 -0.1**
comp=Z,179nm,1.7s,mb5.9
FRF La Foret Royal 62.60 332 *eP* **P 06 56 44.2 -0.1**
FRF pmax pmax
comp=Z,179nm,1.7s,mb5.9
CONA Conrad Observa 62.62 341 *i* P **P 06 56 44.2 -0.2**
comp=Z,92nm,1.2s,mb5.8,SNR=12
EBEN Beniarda 62.63 324 P **P 06 56 47.1 +2.5**
comp=Z,286nm,3.6s
MVIF Mont Vial 62.63 333 *eP* **P 06 56 45.9 +1.4**
CALN Calern 62.64 332 *eP* **P 06 56 46.0 +1.4**
EMUR La Murta 62.65 323 P **P 06 56 48.5 +3.7**
comp=Z,375nm,1.4s,mb6.3
ENIJ Nijar 62.66 322 P **P 06 56 48.2 +3.4**
comp=Z,96nm,1.0s,mb5.9
ENIJ Nijar 62.66 322 P **P 06 56 48.2 +3.3**
ENIJ pmax pmax
comp=Z,96nm,1.0s,mb5.9
NIE Niedzica 62.67 345 *eP* **P 06 56 44.9 +0.2**
NIE *e* 06 56 55.1
TOUF Mont Tournerai 62.68 333 *eP* **P 06 56 46.0 +1.2**
KBA Koelnbreinsper 62.74 339⇑*i*P **P 06 56 44.6 -0.6**
comp=Z,60nm,1.2s,mb5.6
ABTA Abfaltersbach 62.76 338 P **P 06 56 45.2 -0.1**
comp=Z,28nm,1.3s,mb5.2
NVL N'lazarevskaya 62.79 191 *eP* **P 06 56 46.5 +1.3**
NVL pmax pmax
comp=Z,18nm,0.8s,mb5.2
MAIT Maitri 62.82 191 *eP* **P 06 56 47.5 +2.1**
KLSI 62.92 90 P **P 06 56 47.8 +0.7**
comp=Z,3µmcomp=Z,161nm,1.9s,mb5.8
EBER Berja 63.03 321 P **P 06 56 51.1 +3.7**
comp=Z,395nm,1.4s,mb6.3
MOA Molin 63.08 340⇓*i*P **P 06 56 47.0 -0.4**
comp=Z,121nm,1.3s,mb5.9,SNR=12
SURF Saint Ours 63.24 333 *eP* **P 06 56 50.6 +2.0**
BDT Bhumibol Dam 63.30 65⇑P **P 06 56 49.5 0.0**
comp=Z,24nm,1.1s,mb5.2
CFON Fontmartina 63.31 328 P **P 06 56 49.5 +0.4**
comp=Z,295nm,1.6s,mb6.2
ETOB Tobarra 63.36 323 P **P 06 56 52.2 +2.7**
comp=Z,376nm,3.0s
EGUA Guajares 63.41 321 P **P 06 56 53.1 +3.2**
comp=Z,261nm,1.2s,mb6.2
EGUA Guajares 63.41 321 P **P 06 56 53.1 +3.2**
EGUA pmax pmax
comp=Z,261nm,1.2s,mb6.2
SMRF Simiane la Rot 63.42 332 *eP* **P 06 56 50.3 +0.6**
comp=Z,231nm,1.6s,mb5.8
SMRF Simiane la Rot 63.42 332 *eP* **P 06 56 50.3 +0.6**
comp=Z,231nm,1.6s,mb6.1
EHUE Huescar 63.44 322 P **P 06 56 52.8 +2.7**
comp=Z,256nm,2.1s,mb6.0
EHUE Huescar 63.44 322 P **P 06 56 52.8 +2.8**
EHUE pmax pmax
comp=Z,256nm,2.1s,mb6.0
MBDF Montbardon 63.45 333 *eP* **P 06 56 50.8 +0.9**
comp=Z,286nm,1.3s,mb5.9
MBDF Montbardon 63.45 333 *eP* **P 06 56 50.8 +0.9**
comp=Z,143nm,1.3s,mb5.9
MBDF Montbardon 63.45 333 *eP* **P 06 56 50.8 +0.9**
MBDF pmax pmax
comp=Z,143nm,1.3s,mb5.9
OG25 Le Caire 63.49 332 *eP* **P 06 56 51.6 +1.4**
OJC Ojcow 63.54 345 *eP* **P 06 56 49.6 -0.8**
OJC *epP* pP 06 56 51.9 -3.3
OJC *eS* **S 07 05 23.0 -0.3**
OJC L 07 25 06.5
comp=Z,1.1nm,23.3s
CGJI Cibinong 63.57 92 P **P 06 56 52.3 +0.9**
comp=Z,3µmcomp=Z,155nm,1.6s,mb5.8
EJON La Jonquera 63.58 329 P **P 06 56 50.1 -0.7**
comp=Z,189nm,1.9s,mb5.8
VRAC Vranov 63.62 342⇓P **P 06 56 50.1 -0.8**
VRAC Vranov 63.62 342⇓*i*P **P 06 56 50.2 -0.7**
OKC Ostrava-Krasne 63.64 343 *eP* **P 06 56 50.2 -0.9**
OKC *eS* **S 07 05 26.3 +1.7**
OKC MLR MLR
comp=Z,600nm,18.5s,MS4.8
OKC Ostrava-Krasne 63.64 343 *eP* **P 06 56 50.2 -0.9**
OKC *ex* x 06 57 01.1
OKC *eS* **S 07 05 26.3 +1.7**
OKC AMS AMS 07 32 00.0
comp=Z,600nm,18.5s
ECHE Chera 63.65 324 P **P 06 56 53.8 +2.4**
comp=Z,70nm,1.2s,mb5.6
ECHE Chera 63.65 324 P **P 06 56 53.8 +2.4**
ECHE pmax pmax
comp=Z,70nm,1.2s,mb5.6
FETA Feichten 63.66 337⇑*i*P **P 06 56 50.9 -0.3**
comp=Z,75nm,1.2s,mb5.6,SNR=11
ERON Agron 63.68 321 P **P 06 56 54.1 +2.5**
comp=Z,118nm,1.2s,mb5.8
ECOG Cogollos-Vega 63.69 321 P **P 06 56 54.3 +2.5**
comp=Z,199nm,1.3s,mb6.0
ECOG Cogollos-Vega 63.69 321 P **P 06 56 54.3 +2.6**
ECOG pmax pmax
comp=Z,199nm,1.3s,mb6.0
CMAR Chiang Mai Arr 63.70 63 P **P 06 56 52.5 +0.3**
comp=Z,87nm,1.0s,mb5.7,baz=255,slow=7.7,SNR=238
CMAR LR LR 07 21 15.9
comp=Z,4µm,19.7s,MS5.6,baz=242,slow=33
EQES Quesada 63.72 322 P **P 06 56 54.8 +2.9**
comp=Z,514nm,1.5s,mb6.3
EPOB Poblet 63.73 327 P **P 06 56 52.7 +0.8**
comp=Z,381nm,1.6s,mb6.2
NST Nakhon Sawan 63.75 67⇑P **P 06 56 52.0 -0.5**
comp=Z,75nm,1.2s,mb5.6
TUE Stuetta 63.75 336 *eP* **P 06 56 51.5 -0.4**
comp=Z,89nm,1.4s,mb5.6
TUE LR LR
comp=Z,1µm,20.0s,MS5.0
MORC Moravsky Berou 63.76 343 *eP* **P 06 56 51.1 -0.7**
comp=Z,200nm,1.7s,mb5.9
MORC Moravsky Berou 63.76 343⇓P **P 06 56 51.3 -0.5**
MORC Moravsky Berou 63.76 343⇓*i*P **P 06 56 51.3 -0.5**
CHG Chiang Mai 63.84 63⇓P **P 06 56 53.2 +0.2**
comp=Z,127nm,1.1s,mb5.9
CHTO Chiang Mai 63.84 63 *eP* **P 06 56 52.6 -0.4**
comp=Z,166nm,1.2s,mb5.9
CHTO LR LR
comp=Z,4µm,20.0s,MS5.6
CHTO Chiang Mai 63.84 63 *eP* **P 06 56 52.7 -0.3**
CHTO pmax pmax
comp=Z,166nm,1.2s,mb5.9
CHTO MLR MLR
comp=Z,4µm,20.0s,MS5.6
CHTO Chiang Mai 63.84 63 P **P 06 56 53.1 +0.1**
comp=Z,2µmcomp=Z,153nm,1.4s,mb5.8
CHTO Chiang Mai 63.84 63 P **P 06 56 53.4 +0.4**
SNR=81
ERTA Horta de San J 63.86 326 P **P 06 56 52.8 0.0**
comp=Z,388nm,1.9s,mb6.1
EMIR Miracle 63.90 328 P **P 06 56 53.5 +0.5**
comp=Z,284nm,1.9s,mb6.0
EMOS Mosqueruela 63.90 325 P **P 06 56 54.0 +1.0**
comp=Z,445nm,1.9s,mb6.2
EVIA Vianos 63.92 323 P **P 06 56 56.8 +3.6**
comp=Z,52nm,1.3s,mb5.4
EVIA Vianos 63.92 323 P **P 06 56 56.8 +3.6**
EVIA pmax pmax
comp=Z,52nm,1.3s,mb5.4
TREC Trest 63.95 341 AMS AMS 07 30 40.0
comp=Z,900nm,16.9s
ELOJ Sierra Loja 63.98 321 P **P 06 56 56.5 +2.9**
comp=Z,321nm,1.4s,mb6.2
ELOJ Sierra Loja 63.98 321 P **P 06 56 56.5 +2.9**
ELOJ pmax pmax
comp=Z,321nm,1.4s,mb6.2
ORIF Oris-en-Rattie 64.00 333 *eP* **P 06 56 53.7 +0.1**
comp=Z,153nm,1.5s,mb5.5
ORIF *e*MLR MLR
comp=Z,2µm,21.2s,MS5.0
ORIF Oris-en-Rattie 64.00 333 *eP* **P 06 56 53.7 +0.1**
comp=Z,77nm,1.5s,mb5.5
ORIF Oris-en-Rattie 64.00 333 *eP* **P 06 56 53.7 +0.1**
ORIF pmax pmax
comp=Z,77nm,1.5s,mb5.5
EMIJ Mijas 64.01 320 P **P 06 56 57.2 +3.4**
comp=Z,175nm,1.7s,mb5.8
RETA Reutte 64.03 337⇓*i*P **P 06 56 53.0 -0.8**
comp=Z,68nm,1.7s,mb5.4
LPG La Plagne 64.06 334 *eP* **P 06 56 53.4 -0.6**
comp=Z,139nm,1.2s,mb5.6
LPG La Plagne 64.06 334 *eP* **P 06 56 53.4 -0.6**
comp=Z,69nm,1.2s,mb5.6
LPG La Plagne 64.06 334 *eP* **P 06 56 53.4 -0.6**
LPG pmax pmax
comp=Z,69nm,1.2s,mb5.6
CLLI Llivia 64.07 328 P **P 06 56 54.4 +0.4**
LPL La Plagne 64.09 334 *eP* **P 06 56 53.6 -0.5**
comp=Z,261nm,1.6s,mb5.7
LPL La Plagne 64.09 334 *eP* **P 06 56 53.6 -0.5**
comp=Z,130nm,1.6s,mb5.7
LPL La Plagne 64.09 334 *eP* **P 06 56 53.6 -0.5**
LPL pmax pmax
comp=Z,130nm,1.6s,mb5.7
GDM Grand'Maison 64.11 333 *eP* **P 06 56 55.6 +1.3**
DAVA Damuels 64.21 337⇑*i*P **P 06 56 54.8 -0.1**
comp=Z,107nm,1.4s,mb5.7,SNR=6.2
LASF Ste Croix 64.30 331 *eP* **P 06 56 56.2 +0.6**
comp=Z,395nm,1.5s,mb5.9
ELUQ Luque 64.31 321 P **P 06 56 58.8 +3.0**
comp=Z,220nm,1.6s,mb5.9
ELUQ Luque 64.31 321 P **P 06 56 58.8 +3.1**
ELUQ pmax pmax
comp=Z,220nm,1.6s,mb5.9
EJIF Jimena Fronter 64.38 319 P **P 06 57 01.2 +5.0**
comp=Z,131nm,1.4s,mb5.8
EJIF Jimena Fronter 64.38 319 P **P 06 57 01.2 +4.9**
EJIF pmax pmax
comp=Z,131nm,1.4s,mb5.8
EBAN Banos Encina 64.39 322 P **P 06 56 58.6 +2.4**
comp=Z,45nm,1.6s,mb5.2
EBAN Banos Encina 64.39 322 P **P 06 56 58.6 +2.3**
EBAN pmax pmax
comp=Z,45nm,1.6s,mb5.2
KHC Kasperske Hory 64.42 340 *eP* **P 06 56 55.0 -1.2**
comp=Z,71nm,1.4s,mb5.5
KHC Kasperske Hory 64.42 340 *eP* **P 06 56 55.0 -1.2**
KHC pmax pmax
comp=Z,71nm,1.4s,mb5.5
KHC Kasperske Hory 64.42 340 *eP* **P 06 56 55.0 -1.2**
KHC *ex* x 06 57 08.2
KHC *eS* **S 07 05 33.9 -0.4**
KHC AMS AMS 07 25 00.0
comp=Z,1µm,21.1s
CSOR Sort 64.43 328 P **P 06 56 56.5 0.0**
comp=Z,125nm,1.6s,mb5.7
VIVF Saint-Julien-l 64.50 332 *eP* **P 06 56 57.6 +0.7**
comp=Z,529nm,1.5s,mb6.0
VIVF Saint-Julien-l 64.50 332 *eP* **P 06 56 57.6 +0.7**
comp=Z,264nm,1.5s,mb6.0
VIVF Saint-Julien-l 64.50 332 *eP* **P 06 56 57.6 +0.7**
VIVF pmax pmax
comp=Z,264nm,1.5s,mb6.0
MTLF Montolieu 64.57 329 *eP* **P 06 56 57.2 -0.1**
comp=Z,179nm,1.4s,mb5.6
MTLF Montolieu 64.57 329 *eP* **P 06 56 57.2 -0.1**
comp=Z,90nm,1.4s,mb5.6
MTLF Montolieu 64.57 329 *eP* **P 06 56 57.2 -0.1**
MTLF pmax pmax
comp=Z,90nm,1.4s,mb5.6
DPC Dobruska-Polom 64.62 342 *eP* **P 06 56 56.8 -0.7**
DPC *eS* **S 07 05 34.9 -1.9**
DPC MLR MLR
comp=Z,1µm,20.7s,MS5.1
DPC Dobruska-Polom 64.62 342 *eP* **P 06 56 56.8 -0.7**
DPC *ex* x 06 57 07.1
DPC *eS* **S 07 05 34.9 -1.9**
DPC AMS AMS 07 28 00.0
comp=Z,1µm,20.7s
CBJI Citeko 64.73 92 P **P 06 57 01.1 +2.0**
comp=Z,419nm,1.5s,mb6.2
OG01 Vacheresse 64.75 334 *eP* **P 06 56 58.0 -0.4**
PPBI Pangkal Pinang 64.75 87 P **P 06 56 58.5 -0.7**
comp=Z,54nm,1.8s,mb5.3
ESAC San Caprasio 64.83 326 P **P 06 57 00.1 +1.0**
comp=Z,522nm,1.9s,mb6.2
PRU Pruhonice 64.85 341 *ex* pP 06 57 11.6 +7.7
PRU *eS* **S 07 05 41.2 +1.6**
PRU AMS AMS 07 29 10.0
comp=Z,700nm,21.0s
UPC Upice 64.86 342 *eP* **P 06 56 58.5 -0.5**
UPC Upice 64.86 342 *eP* **P 06 56 58.5 -0.5**
UPC *ex* x 06 57 09.1
SFS San Fernando 64.86 319 PFAKE 06 57 10.0 +11
SFS LR LR
comp=Z,11µm,20.0s,MS6.0
EADA Adamuz 64.88 321 P **P 06 57 01.8 +2.4**
comp=Z,130nm,1.4s,mb5.8
ESPR Espera 64.88 319 P **P 06 57 04.1 +4.5**
comp=Z,565nm,1.6s,mb6.3
SSB Saint Sauveur 64.89 332 *eP* **P 06 56 59.8 +0.4**
comp=Z,249nm,1.7s,mb6.0
SSB LR LR
comp=Z,2µm,21.0s,MS5.2
SSB Saint Sauveur 64.89 332 *eP* **P 06 56 59.8 +0.4**
SSB pmax pmax
comp=Z,249nm,1.7s,mb6.0
SSB MLR MLR
comp=Z,2µm,21.0s,MS5.2
PRA Prague 64.96 341 P **P 06 56 59.0 -0.7**
PRA S **S 07 05 41.0 +0.1**
PRA AMS AMS 07 30 00.0
CHRT Chiangrai 64.97 62⇓P **P 06 56 59.5 -0.9**
comp=Z,160nm,1.4s,mb5.9
ETOR Torete 65.09 325 P **P 06 57 02.3 +1.5**
comp=Z,50nm,1.1s,mb5.5
ETOR Torete 65.09 325 P **P 06 57 02.3 +1.5**
ETOR pmax pmax
comp=Z,50nm,1.1s,mb5.5
EBIE Bielsa 65.17 328 P **P 06 57 02.0 +0.7**
comp=Z,193nm,1.6s,mb5.9
CABF La Chapelle 65.22 334 *eP* **P 06 57 01.5 0.0**
comp=Z,574nm,1.4s,mb6.1
CABF La Chapelle 65.22 334 *eP* **P 06 57 01.5 0.0**
comp=Z,287nm,1.4s,mb6.1
CABF La Chapelle 65.22 334 *eP* **P 06 57 01.5 0.0**
CABF pmax pmax
comp=Z,287nm,1.4s,mb6.1
BBS Basel-Blauen 65.30 335 *eP* **P 06 57 02.5 +0.5**
EPF Esparros 65.31 328 *eP* **P 06 57 02.3 +0.2**
comp=Z,282nm,1.6s,mb5.8
EPF Esparros 65.31 328 *eP* **P 06 57 02.3 +0.2**
comp=Z,141nm,1.6s,mb5.7
EPF Esparros 65.31 328 *eP* **P 06 57 02.3 +0.2**
EPF pmax pmax
comp=Z,141nm,1.6s,mb5.8
PVCC Panska Ves 65.31 341 *eP* **P 06 57 00.9 -1.1**
PVCC *eS* S 07 05 50.4 +5.2
PVCC MLR MLR
comp=Z,800nm,16.5s,MS5.0
PVCC Panska Ves 65.31 341 *eP* **P 06 57 00.9 -1.1**
PVCC *ex* x 06 57 14.1
PVCC *eS* S 07 05 50.4 +5.2
PVCC AMS AMS 07 31 10.0
comp=Z,800nm,16.5s
FELD Feldberg im Sc 65.43 336 *eP* **P 06 57 02.9 +0.1**
LEM Lembang 65.43 93 P **P 06 57 05.7 +2.1**
comp=Z,3µmcomp=Z,194nm,1.6s,mb5.9
ESDC Sonseca Array 65.45 323 P **P 06 57 05.1 +2.0**
comp=Z,141nm,1.9s,mb5.7
ESDC Sonseca Array 65.45 323 P **P 06 57 03.1 0.0**
comp=Z,5.1nm,0.8s,mb4.6,baz=134,slow=6.1,SNR=13
ESDC LR LR 07 28 20.8
comp=Z,4µm,18.3s,MS5.6,baz=135,slow=39
ESLA Sonseca Array 65.45 323 *eP* **P 06 57 03.1 -0.1**
ESLA LR LR
comp=Z,22µm,19.0s,MS6.4
COLF Collangettes 65.46 332 *eP* **P 06 57 04.3 +1.2**
LOMF Lomont 65.49 335 *eP* **P 06 57 03.8 +0.6**
CISI Cisompet, Garu 65.52 93 P **P 06 57 04.8 +0.7**
comp=Z,3µmcomp=Z,144nm,1.6s,mb5.8
MIR Mirnyy 65.58 160⇓*i*P **P 06 57 05.6 +2.0**
MIR pmax pmax
comp=Z,240nm,1.4s,mb6.0
MIR pmax pmax
comp=Z,729nm,3.0s
MIR pmax pmax
comp=N,303nm,2.0s
MIR MLR MLR
comp=N,1µm,16.0s,MS5.2
MIR MLR MLR
comp=E,800nm,16.0s,MS5.2
MIR MLR MLR
comp=Z,2µm,16.0s,MS5.3
PAB San Pablo 65.60 323 *eP* **P 06 57 03.4 -0.7**
comp=Z,21nm,1.5s,mb5.0
PAB LR LR
comp=Z,3µm,19.0s,MS5.5
PAB San Pablo 65.60 323 *eP* **P 06 57 03.4 -0.7**
PAB pmax pmax
comp=Z,21nm,1.5s,mb5.0
PAB MLR MLR
comp=Z,3µm,19.0s,MS5.5
BFO Black Forest 65.66 336 P **P 06 57 04.8 +0.5**
comp=Z,124nm,1.2s,mb5.8,SNR=7.1
BFO Black Forest 65.66 336 *eP* **P 06 57 03.7 -0.6**
comp=Z,30nm,1.1s,mb5.2
BFO LR LR
comp=Z,908nm,21.0s,MS5.0
BFO Black Forest 65.66 336 *eP* **P 06 57 03.7 -0.6**
BFO pmax pmax
comp=Z,30nm,1.1s,mb5.2
BFO MLR MLR
comp=Z,908nm,21.0s,MS5.0
ETSF Etsaut 65.69 327 *eP* **P 06 57 04.9 +0.3**
comp=Z,169nm,1.2s,mb5.6
ETSF Etsaut 65.69 327 *eP* **P 06 57 04.9 +0.3**
comp=Z,84nm,1.2s,mb5.7
ETSF Etsaut 65.69 327 *eP* **P 06 57 04.9 +0.3**

ETSF pmax pmax
comp=Z,84nm,1.2s,mb5.7
OBN Obninsk 65.69 357 *e*P **P** **06 57 03.8 -0.6**
comp=Z,205nm,1.3s,mb6.0
OBN *e*pP pP 06 57 19.0 +10
OBN LR LR
comp=Z,964nm,20.0s,MS5.0
OBN Obninsk 65.69 357⇓ *e*P **P** **06 57 03.4 -0.9**
OBN *e* 06 59 32.7
OBN *i*S S 07 05 43.2 -6.4
OBN pmax pmax
comp=Z,232nm,1.7s,mb5.9
OBN MLR MLR
comp=Z,900nm,21.0s,MS5.0
GRA1 Grafenberg Arr 65.71 339 *e*P **P** **06 57 03.5 -1.1**
comp=Z,76nm,1.3s,mb5.6
GRA1 LR LR
comp=Z,700nm,19.2s,MS4.9
GRF Grafenberg Arr 65.71 339 *e*P **P** **06 57 03.5 -1.1**
comp=Z,76nm,1.3s,mb5.6
GRF *e*L 07 28 34.4
comp=Z,739nm,19.2s
GRF Grafenberg Arr 65.71 339 *e*P **P** **06 57 03.5 -1.1**
GRF pmax pmax
comp=Z,76nm,1.3s,mb5.6
GRF MLR MLR
comp=Z,700nm,19.2s,MS4.9
GRF Grafenberg Arr 65.71 339 *e*P **P** **06 57 03.5 -1.1**
GRF pmax pmax
comp=Z,76nm,1.3s,mb5.6
GRF MLR MLR
comp=Z,700nm,19.2s,MS4.9
GRFO Grafenberg 65.71 339 *e*P **P** **06 57 04.1 -0.5**
comp=Z,6.6nm,0.8s,mb4.7
GRFO Grafenberg 65.71 339 *e*P **P** **06 57 04.1 -0.5**
GRFO pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
NKC Novy Kostel 65.75 340 *e*P **P** **06 57 04.4 -0.4**
NKC *e*S S 07 05 52.1 +1.6
NKC MLR MLR
comp=Z,1μm,21.2s,MS5.1
NKC Novy Kostel 65.75 340 *e*P **P** **06 57 04.4 -0.4**
NKC *ex* x 06 57 17.3
NKC *e*S S 07 05 52.1 +1.6
NKC AMS AMS 07 27 00.0
comp=Z,1μm,21.2s
CAF Calviac 65.80 330 *e*P **P** **06 57 05.8 +0.5**
comp=Z,287nm,1.4s,mb5.8
CAF Calviac 65.80 330 *e*P **P** **06 57 05.8 +0.5**
comp=Z,143nm,1.4s,mb5.8
CAF Calviac 65.80 330 *e*P **P** **06 57 05.8 +0.5**
CAF pmax pmax
comp=Z,143nm,1.4s,mb5.8
BRG Berggiesshubel 65.81 341 *i*P **P** **06 57 03.9 -1.4**
comp=Z,17nm,1.1s,mb5.0
BRG *i* 06 57 16.5
comp=Z,70nm,1.6s
BRG S S 07 05 51.0 -0.3
BRG *i* 07 07 00.0
BRG *e*PKPPKP 07 25 46.3
comp=Z,17nm,1.7s
BRG
comp=N,660nm,17.1s
BRG
comp=E,593nm,19.1s
BRG
comp=Z,1μm,18.6s
BRG Berggiesshubel 65.81 341 *i*P **P** **06 57 03.9 -1.3**
BRG S S 07 05 51.0 -0.3
BRG *i* 07 07 00.0
BRG pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
BRG pmax pmax
comp=Z,10.0nm,1.7s,mb4.6
BRG MLR MLR
comp=N,395nm,17.1s,MS4.8
BRG MLR MLR
comp=E,355nm,19.1s,MS4.8
BRG MLR MLR
comp=Z,640nm,18.6s,MS4.9
HINF Hinteralfeld 65.85 335 *e*P **P** **06 57 04.9 -0.6**
comp=Z,302nm,1.6s,mb5.8
HINF Hinteralfeld 65.85 335 *e*P **P** **06 57 04.9 -0.6**
comp=Z,151nm,1.6s,mb5.8
HINF Hinteralfeld 65.85 335 *e*P **P** **06 57 04.9 -0.6**
HINF pmax pmax
comp=Z,151nm,1.6s,mb5.8
EMIN Mina Concepcio 65.94 320 P **P** **06 57 10.6 +4.3**
comp=Z,405nm,1.8s,mb6.2
MICGM Minsk 65.95 351⇑ *i*P **P** **06 57 03.0 -3.0**
PYM Petit Puy Mans 65.95 332 *e*P **P** **06 57 08.7 +2.4**
MNK Minsk 65.96 351⇑ *i*P **P** **06 57 03.0 -3.1**
MNK *e*S S 07 05 48.0 -4.9
MNK *e* 07 06 10.0
MNK pmax pmax
comp=Z,240nm,1.2s,mb6.1
ECH Echery 66.04 336 *e*P **P** **06 57 06.8 0.0**
ECH Echery 66.04 336 *e*P **P** **06 57 05.9 -0.9**
comp=Z,69nm,1.3s,mb5.5
ECH LR LR
comp=Z,932nm,20.0s,MS5.0
ECH Echery 66.04 336 *e*P **P** **06 57 05.9 -0.9**
ECH pmax pmax
comp=Z,69nm,1.3s,mb5.5
ECH MLR MLR
comp=Z,932nm,20.0s,MS5.0
TPI Tanjungpandan 66.13 88 P **P** **06 57 05.4 -2.7**
CDF Champ du Feu 66.15 336 *e*P **P** **06 57 06.6 -0.8**
comp=Z,225nm,1.6s,mb5.7
CDF Champ du Feu 66.15 336 *e*P **P** **06 57 06.6 -0.8**
comp=Z,113nm,1.6s,mb5.7
CDF Champ du Feu 66.15 336 *e*P **P** **06 57 06.6 -0.8**
CDF pmax pmax
comp=Z,113nm,1.6s,mb5.7
GUD Guadarrama 66.19 324 P **P** **06 57 09.9 +2.0**
comp=Z,88nm,1.2s,mb5.7
GUD Guadarrama 66.19 324 P **P** **06 57 09.9 +2.0**
GUD pmax pmax
comp=Z,88nm,1.2s,mb5.7
SJPF Ste Jean 66.19 327 *e*P **P** **06 57 08.1 +0.3**
comp=Z,135nm,1.3s,mb5.5
SJPF Ste Jean 66.19 327 *e*P **P** **06 57 08.1 +0.3**
comp=Z,68nm,1.3s,mb5.5
SJPF Ste Jean 66.19 327 *e*P **P** **06 57 08.1 +0.3**
SJPF pmax pmax
comp=Z,68nm,1.3s,mb5.5
HAU Haudompre 66.20 335 *e*P **P** **06 57 07.3 -0.5**
comp=Z,422nm,1.6s,mb5.9
HAU *e*MLR MLR
comp=Z,1μm,21.5s,MS4.7
HAU Haudompre 66.20 335 *e*P **P** **06 57 07.3 -0.5**
comp=Z,211nm,1.6s,mb5.9
HAU LR LR
comp=Z,1μm,21.5s,MS5.0
HAU Haudompre 66.20 335 *e*P **P** **06 57 07.3 -0.5**
HAU pmax pmax
comp=Z,211nm,1.6s,mb5.9
HAU MLR MLR
comp=Z,1μm,21.5s,MS5.0
SMF Signal de Mont 66.24 333 *e*P **P** **06 57 07.8 -0.3**
comp=Z,263nm,1.4s,mb5.8
SMF Signal de Mont 66.24 333 *e*P **P** **06 57 07.8 -0.3**
comp=Z,131nm,1.4s,mb5.8
SMF Signal de Mont 66.24 333 *e*P **P** **06 57 07.8 -0.3**
SMF pmax pmax
comp=Z,131nm,1.4s,mb5.8
MOS Moscow 66.26 358 *e*P **P** **06 57 04.8 -3.2**
MOS *e* 06 57 35.0
MOS *e* 06 59 30.7
MOS pmax pmax
comp=Z,266nm,1.2s,mb6.2
MOS pmax pmax
comp=Z,500nm,1.6s,mb6.3
MOS MLR MLR
comp=Z,2μm,19.0s,MS5.3
MOS MLR MLR
comp=N,2μm,20.0s
EGRO El Granado 66.32 319 P **P** **06 57 13.1 +4.3**
comp=N,155nm,1.5s,mb5.8
RJF Les Rejaudoux 66.34 330 *e*P **P** **06 57 09.1 +0.4**
comp=N,329nm,1.7s,mb5.8
RJF *e*MLR MLR
comp=Z,3μm,22.5s,MS5.2
RJF Les Rejaudoux 66.34 330 *e*P **P** **06 57 09.1 +0.4**
comp=Z,165nm,1.7s,mb5.8
RJF LR LR
comp=Z,3μm,22.5s,MS5.5
RJF Les Rejaudoux 66.34 330 *e*P **P** **06 57 09.1 +0.4**
RJF pmax pmax
comp=Z,165nm,1.7s,mb5.8
RJF MLR MLR
comp=Z,3μm,22.5s,MS5.5
MOX Moxa 66.38 340 *e*P **P** **06 57 08.2 -0.7**
MOX *e* 06 57 21.4
comp=Z,61nm,1.5s
MOX *e*S S 07 06 01.0 +2.8
MOX
comp=Z,1μm,23.0s
MOX Moxa 66.38 340 *e*P **P** **06 57 08.2 -0.7**
comp=Z,61nm,1.5s,mb5.4
MOX *e* 06 57 21.4
MOX *e*S S 07 06 01.0 +2.8
MOX LR LR
comp=Z,1μm,23.0s,MS5.0
MOX Moxa 66.38 340 *e*P **P** **06 57 08.2 -0.7**
MOX *e*S S 07 06 01.0 +2.8
MOX pmax pmax
comp=Z,61nm,1.5s,mb5.4
MOX MLR MLR
comp=Z,1μm,23.0s,MS5.0
ELIZ Elizondo 66.38 327 P **P** **06 57 08.8 -0.3**
comp=Z,38nm,1.2s,mb5.3
ELIZ Elizondo 66.38 327 P **P** **06 57 08.8 -0.3**
ELIZ pmax pmax
comp=Z,38nm,1.2s,mb5.3
PVAQ Vaqueiros 66.40 319 *e*P pP 06 57 20.9 +6.7
comp=Z,99nm,1.5s
PVAQ *e*S S 07 06 01.1 +2.1
PVAQ *e*LR LR 07 21 11.5
comp=Z,1μm,19.4s
EALK Alkurruntz 66.41 327 P **P** **06 57 09.0 -0.2**
comp=Z,320nm,1.8s,mb6.0
PBAR Barrancos 66.42 320 *e*P PcP 06 57 37.4 -1.7
comp=Z,45nm,1.5s
PBAR *e*S S 07 06 06.1 +6.9
PBAR *e*LR LR 07 21 05.4
comp=Z,4μm,18.5s
PBDV Barranco-do-Ve 66.44 319 *e*S S 07 06 02.4 +2.9
PBDV *e*LR LR 07 21 31.5
comp=Z,2μm,19.0s
LFF La Frestale 66.45 330 *e*P **P** **06 57 09.8 +0.3**
comp=Z,220nm,1.4s,mb5.7
LFF La Frestale 66.45 330 *e*P **P** **06 57 09.8 +0.3**
comp=Z,110nm,1.4s,mb5.7
LFF La Frestale 66.45 330 *e*P **P** **06 57 09.8 +0.3**
LFF pmax pmax
comp=Z,110nm,1.4s,mb5.7
CLL Collm 66.48 341 *e*P **P** **06 57 08.0 -1.5**
comp=Z,19nm,1.2s,mb5.0
CLL *e* 06 57 16.0
CLL *i* 06 57 21.2
CLL *e*S S 07 05 54.0 -5.5
CLL *e*ScS ScS 07 07 10.0 +4.3
CLL LR LR
comp=Z,1μm,19.4s,MS5.1
CLL Collm 66.48 341 *e*P **P** **06 57 08.0 -1.5**
CLL *e* 06 57 16.0
CLL *e*S S 07 05 54.0 -5.5
CLL pmax pmax
comp=Z,19nm,1.2s,mb5.0
CLL MLR MLR
comp=Z,1μm,19.4s,MS5.1
CLL Collm 66.48 341 *e*P **P** **06 57 08.0 -1.5**
comp=Z,19nm,1.2s,mb5.0
CLL *e*P(2) 06 57 16.0
CLL *i* Pmax 06 57 21.2
comp=Z,62nm,1.3s
CLL *e*PcP PcP 06 57 37.0 -2.0
CLL *e* 06 57 50.0
CLL *e*(PPP) 07 01 36.0
CLL *e*S S 07 05 54.0 -5.5
comp=N,600nm,23.5s
CLL *e*S S 07 05 54.0 -5.5
comp=E,700nm,24.0s
CLL *e*ScS ScS 07 07 10.0 +4.3
CLL *e*SS SS 07 10 36.0 +19
CLL *e*SSS 07 13 39.0
CLL LmH 07 28 00.0
comp=N,500nm,19.6s
CLL LmH 07 28 00.0
comp=E,900nm,20.5s
CLL LmV 07 31 00.0
comp=Z,1μm,19.4s
NACGM Naroch 66.50 351 *e* **P** **06 57 07.0 -2.6**
TOD Tromm 66.52 338 *e*P **P** **06 57 09.8 0.0**
THEF They Montfort 66.53 335 *e*P **P** **06 57 10.0 +0.1**
AVF Avril sur Loir 66.57 332 *e*P **P** **06 57 10.1 -0.1**
comp=Z,274nm,1.4s,mb5.8
AVF Avril sur Loir 66.57 332 *e*P **P** **06 57 10.1 -0.1**
comp=Z,137nm,1.4s,mb5.8
AVF Avril sur Loir 66.57 332 *e*P **P** **06 57 10.1 -0.1**
AVF pmax pmax
comp=Z,137nm,1.4s,mb5.8
BGF Bois d'Agland 66.63 332 *e*P **P** **06 57 10.6 0.0**
comp=Z,183nm,1.4s,mb5.6
BGF Bois d'Agland 66.63 332 *e*P **P** **06 57 10.6 0.0**
comp=Z,91nm,1.4s,mb5.6
BGF Bois d'Agland 66.63 332 *e*P **P** **06 57 10.6 0.0**
BGF pmax pmax
comp=Z,91nm,1.4s,mb5.6
LOR Lormes 66.70 333 *e*P **P** **06 57 10.9 -0.1**
comp=Z,332nm,1.3s,mb5.9
LOR *e*MLR MLR
comp=Z,1μm,19.5s,MS4.9
LOR Lormes 66.70 333 *e*P **P** **06 57 10.9 -0.1**
comp=Z,166nm,1.3s,mb5.9
LOR LR LR
comp=Z,1μm,19.5s,MS5.2
LOR Lormes 66.70 333 *e*P **P** **06 57 10.9 -0.1**
LOR pmax pmax
comp=Z,166nm,1.3s,mb5.9
LOR MLR MLR
comp=Z,1μm,19.5s,MS5.2
SSF Saint Saulge 66.70 333 *e*P **P** **06 57 10.7 -0.4**
comp=Z,167nm,1.6s,mb5.5
SSF Saint Saulge 66.70 333 *e*P **P** **06 57 10.7 -0.4**
comp=Z,83nm,1.6s,mb5.5
SSF Saint Saulge 66.70 333 *e*P **P** **06 57 10.7 -0.4**
SSF pmax pmax
comp=Z,83nm,1.6s,mb5.5
TCF Toulx Ste Croi 66.72 331 *e*P **P** **06 57 11.9 +0.7**
comp=Z,373nm,1.5s,mb5.9
TCF Toulx Ste Croi 66.72 331 *e*P **P** **06 57 11.9 +0.7**
comp=Z,187nm,1.5s,mb5.9
TCF Toulx Ste Croi 66.72 331 *e*P **P** **06 57 11.9 +0.7**
TCF pmax pmax
comp=Z,187nm,1.5s,mb5.9
PCVE Castro Verde 66.74 319 *e*S S 07 06 08.6 +5.5
PCVE *e*LR LR 07 20 23.1
comp=Z,1μm,22.0s
EBAD Badajoz 66.75 320 P **P** **06 57 13.3 +1.8**
comp=Z,553nm,3.1s
IDID Didziasalis 66.91 351 *e*P **P** **06 57 11.9 -0.3**
IDID AMB AMB 06 57 12.8
comp=Z,24nm,1.4s,mb5.0
SFTF Sexfontaines 66.91 334 *e*P **P** **06 57 12.2 -0.1**
comp=Z,309nm,1.2s,mb5.9
SFTF Sexfontaines 66.91 334 *e*P **P** **06 57 12.2 -0.1**
comp=Z,309nm,1.2s,mb6.2
MORF Marmelete 66.95 318 *e*S S 07 06 12.4 +6.7
MORF *e*LR LR 07 22 54.3
comp=Z,2μm,18.0s
MORF Marmelete 66.95 318 *e*P **P** **06 57 12.7 -0.1**
MORF *e*S S 07 06 06.2 +0.5
PFVI Vila Bisbo 66.96 318 *e*S S 07 06 07.9 +2.0
PFVI *e*LR LR 07 23 07.2
comp=Z,2μm,18.3s
EPLA Plasencia 66.97 322 P **P** **06 57 14.1 +1.2**
comp=Z,265nm,1.4s,mb6.1
EPLA Plasencia 66.97 322 P **P** **06 57 14.1 +1.2**
EPLA pmax pmax
comp=Z,265nm,1.4s,mb6.1
MESJ Messejana 66.97 319 *e*P **P** **06 57 12.8 -0.2**
MESJ *e*S S 07 06 07.2 +1.2
MESJ AMS AMS 07 29 37.1
comp=N,3μm,26.0s
MESJ Messejana 66.97 319 *e*P **P** **06 57 12.8 -0.2**
MESJ *e*S S 07 06 07.2 +1.2
MESJ Messejana 66.97 319 *e*P **P** **06 57 12.8 -0.2**
MESJ *e*S S 07 06 07.1 +1.1
GKP Gorka Klasztor 66.98 344 *e*P **P** **06 57 12.5 -0.2**
IIGN Ignalina 67.03 351 *e*P **P** **06 57 12.5 -0.4**
IIGN AMB AMB 06 57 13.5
comp=Z,20nm,1.1s,mb5.0
MEZF Maizieres J'vi 67.13 335 *e*P **P** **06 57 13.8 +0.1**
comp=Z,317nm,1.2s,mb5.9
MEZF Maizieres J'vi 67.13 335 *e*P **P** **06 57 13.8 +0.1**
comp=Z,317nm,1.2s,mb6.2
EVO Evora 67.25 320 *e*P **P** **06 57 14.6 -0.1**
comp=Z,177nm,1.4s,mb5.6
EVO *e*MLR MLR
comp=Z,6μm,19.0s,MS5.5
EVO Evora 67.25 320 *e*P pP 06 57 27.0 +7.4
comp=Z,135nm,1.8s
HYF Humbligny 67.25 332 *e*P **P** **06 57 14.6 +0.1**
ISAL Salakas 67.25 351 *e*P **P** **06 57 14.0 -0.4**
ISAL AMB AMB 06 57 14.8
comp=Z,20nm,1.2s,mb5.0
RUP Ruppelstein 67.26 337 *e*P **P** **06 57 14.6 +0.1**
VNA1 Neumayer--Stat 67.31 196 *e*P **P** **06 57 14.8 +0.2**
EVOP Sao Brissos 67.31 320 *e*P **P** **06 57 14.6 -0.5**
EVOP *e*S S 07 06 10.7 +0.7
EVOP *e*S S 07 06 10.9 +0.9
EVOP AMS AMS 07 29 47.3
comp=Z,4μm,10.4s,MS6.0
EVOP Sao Brissos 67.31 320 *e*P **P** **06 57 14.5 -0.6**
EVOP *e*S S 07 06 10.7 +0.7
PMRV Marv??o 67.39 321 *e*P pP 06 57 25.9 +5.5
comp=Z,94nm,1.6s
PMRV *e*S S 07 06 15.4 +4.5
PMRV *e*LR LR 07 20 32.2
comp=Z,3μm,15.8s
BJII Banjamegara 67.41 94 P **P** **06 57 16.7 +0.5**
comp=Z,2μmcomp=Z,79nm,1.4s,mb5.5
IZAR Zarasai 67.41 351 *e*P **P** **06 57 14.9 -0.4**
IZAR AMB AMB 06 57 15.8
comp=Z,16nm,1.1s,mb5.0
ELAN Lanestosa 67.46 326 P **P** **06 57 15.6 -0.4**
comp=Z,571nm,3.5s
WLF Walferdange 67.59 336 P **P** **06 57 16.4 -0.2**
comp=Z,41nm,1.3s,mb5.3
WLF Walferdange 67.59 336 *e*P **P** **06 57 16.0 -0.6**
comp=Z,54nm,1.1s,mb5.5
WLF LR LR
comp=Z,837nm,20.0s,MS5.0
WLF Walferdange 67.59 336 *e*P **P** **06 57 16.0 -0.6**
WLF pmax pmax
comp=Z,54nm,1.1s,mb5.5
WLF MLR MLR
comp=Z,837nm,20.0s,MS5.0
MK31 Makanchi Array 67.87 29 *i*P **P** **06 57 17.4 -1.0**
MK31 pmax pmax
comp=Z,117nm,1.4s,mb5.7
MKAR Makanchi Array 67.87 29 P **P** **06 57 17.6 -0.8**
comp=Z,24nm,1.0s,mb5.2,baz=224,slow=5.1,SNR=76
MKAR LR LR 07 25 26.8
comp=Z,1μm,21.4s,MS5.0,baz=225,slow=35
MTE Manteigas 68.06 322 *e*S S 07 06 19.4 +0.5
MTE *e*LR LR 07 21 06.1
comp=Z,4μm,17.7s
MTE Manteigas 68.06 322 *e*P **P** **06 57 18.4 -1.4**
comp=Z,62nm,1.3s,mb5.5
MTE *ep*P pP 06 57 32.4 +7.8
MTE LR LR
comp=Z,4μm,20.0s,MS5.6
MFF Saint Martin d 68.08 330 *e*P **P** **06 57 19.8 +0.1**
comp=Z,114nm,1.3s,mb5.4
MFF Saint Martin d 68.08 330 *e*P **P** **06 57 19.8 +0.1**
comp=Z,57nm,1.3s,mb5.4
MFF Saint Martin d 68.08 330 *e*P **P** **06 57 19.8 +0.1**
MFF pmax pmax
comp=Z,57nm,1.3s,mb5.4
UGM Wanagama 68.12 94 P **P** **06 57 21.9 +1.2**
comp=Z,172nm,1.4s,mb5.9
BRVK Borovoye 68.12 18 P **P** **06 57 19.9 0.0**
comp=Z,261nm,1.3s,mb6.1,SNR=14
BRVK Borovoye 68.12 18 *e*P **P** **06 57 19.4 -0.5**
comp=Z,95nm,1.3s,mb5.7
BRVK LR LR
comp=Z,2μm,20.0s,MS5.3
BRVK Borovoye 68.12 18*d i*P **P** **06 57 19.2 -0.7**
BRVK pmax pmax
comp=Z,80nm,1.2s,mb5.6
BRVK MLR MLR
comp=Z,1μm,16.0s,MS5.3
BRVK Borovoye 68.12 18 P **P** **06 57 19.6 -0.3**
SNR=56
BVAR Borovoye Array 68.13 18 P **P** **06 57 19.4 -0.6**
comp=Z,28nm,0.9s,mb5.3,baz=213,slow=7.1,SNR=101
BVAR PP PP 06 59 50.1 -0.4
comp=Z,3.3nm,0.9s,baz=206,slow=9.6,SNR=2.5
SMRI Semarang 68.17 93 P **P** **06 57 21.7 +0.7**
comp=Z,203nm,1.4s,mb6.0
MVO Moncorvo 68.21 323 *e*P pP 06 57 33.9 +8.3
comp=Z,129nm,2.0s
MVO *e*S S 07 06 21.9 +1.2
MVO *e*LR LR 07 21 14.0
comp=Z,3μm,15.8s
PMAFR Mafra 68.30 319 *e*P **P** **06 57 30.7 +9.4**
comp=Z,124nm,1.4s,mb5.8
PMAFR *e*S S 07 06 26.0 +4.2
PMAFR *e*LR LR 07 22 38.0
comp=Z,4μm,18.6s
ARU Arti 68.38 10 *e*P **P** **06 57 20.4 -1.0**
comp=Z,108nm,1.1s,mb5.8
ARU LR LR
comp=Z,2μm,20.0s,MS5.3
ARU Arti 68.38 10*d i*P **P** **06 57 20.4 -1.0**
ARU *e* 06 59 55.7
ARU *e*PPP 07 01 27.3
ARU S S 07 06 23.6 +1.5
ARU 07 07 15.1
ARU SS SS 07 10 38.3 -7.7
ARU pmax pmax
comp=Z,132nm,1.2s,mb5.8
ARU Arti 68.38 10 P **P** **06 57 20.7 -0.7**
comp=Z,429nm,1.3s,mb6.3,SNR=8.9
MEM Membach 68.40 337 P **P** **06 57 22.0 +0.3**
comp=Z,19nm,1.4s,mb4.9
GIVF Givet 68.47 336 *e*P **P** **06 57 21.6 -0.5**
comp=Z,158nm,1.3s,mb5.6
GIVF Givet 68.47 336 *e*P **P** **06 57 21.6 -0.5**
comp=Z,79nm,1.3s,mb5.6
GIVF Givet 68.47 336 *e*P **P** **06 57 21.6 -0.5**
GIVF pmax pmax
comp=Z,79nm,1.3s,mb5.6
EARI Arriondas 68.49 325 P **P** **06 57 23.2 +0.8**
comp=Z,784nm,3.9s
ECAL Calabor 68.52 323 P **P** **06 57 23.0 +0.4**
comp=Z,394nm,1.9s,mb6.0
BCLA Clavier 68.53 336 P **P** **06 57 22.8 +0.3**
comp=Z,47nm,1.3s,mb5.3
DOU Dourbes 68.56 335 P **P** **06 57 23.2 +0.5**
comp=Z,39nm,2.8s,mb4.8
WMQ Urumqi 68.62 34 P **P** **06 57 23.5 +0.3**
WMQ pP pP 06 57 28.3 +0.2
WMQ sP sP 06 57 30.5 +0.6
WMQ PcP PcP 06 57 48.5 +0.4
WMQ PP PP 06 59 57.3 +2.4
WMQ ScP 07 01 50.5
WMQ S S 07 06 24.3 -1.1
WMQ ScS ScS 07 07 19.3 -3.4
WMQ SS SS 07 10 50.0 -0.2
WMQ pmax pmax
comp=Z,58nm,1.2s,mb5.4
WMQ pmax pmax
comp=Z,620nm,7.0s
WMQ LR LR
comp=N,760nm,20.8s,MS5.1
WMQ LR LR
comp=E,690nm,19.5s,MS5.1
WMQ LR LR
comp=Z,860nm,19.5s,MS5.0
BEBN Eben Emael 68.67 337 P **P** **06 57 23.8 +0.4**
comp=Z,9.2nm,1.5s,mb4.5
BAIF Baives 68.69 335 *e*P **P** **06 57 23.3 -0.2**
comp=Z,181nm,1.5s,mb5.5
BAIF Baives 68.69 335 *e*P **P** **06 57 23.3 -0.2**
comp=Z,90nm,1.5s,mb5.5
BAIF Baives 68.69 335 *e*P **P** **06 57 23.3 -0.2**
BAIF pmax pmax
comp=Z,90nm,1.5s,mb5.5
SNF Seneffe 69.00 336 P **P** **06 57 25.9 +0.4**
comp=Z,62nm,1.3s,mb5.4
ERUA La Rua 69.03 323 P **P** **06 57 27.4 +1.6**
comp=Z,93nm,1.3s,mb5.6
ERUA La Rua 69.03 323 P **P** **06 57 27.4 +1.6**
ERUA pmax pmax

comp=Z,93nm,1.3s,mb5.5
NGJI Ngawi 69.12 94 P **P 06 57 28.3 +1.3**
comp=Z,84nm,1.2s,mb5.5
SVE Sverdlovsk 69.13 11⇓*e*P **P 06 57 25.7 -0.4**
SVE *e*S S 07 06 34.2 +3.2
SVE *e*SS SS 07 10 52.4 -5.2
SVE pmax pmax
comp=Z,140nm,1.3s,mb5.7
KURK Kurchatov 69.18 24 P **P 06 57 26.4 -0.1**
comp=Z,472nm,1.0s,mb6.4,SNR=38
KURK Kurchatov 69.18 24 *e*P **P 06 57 25.8 -0.7**
comp=Z,110nm,1.1s,mb5.7
KURK LR LR
comp=Z,2μm,21.0s,MS5.3
KURK Kurchatov 69.18 24 P **P 06 57 25.2 -1.4**
comp=Z,58nm,1.0s,mb5.5,baz=222,slow=7.0,SNR=90
KURK Kurchatov 69.18 24*d* P **P 06 57 25.9 -0.6**
KURK pmax pmax
comp=Z,106nm,1.0s,mb5.7
KURK MLR MLR
comp=Z,2μm,20.0s,MS5.2
KURK Kurchatov 69.18 24 P **P 06 57 26.4 -0.2**
SNR=48
BSD Bornholm Skovb 69.25 344 *i* P **P 06 57 25.2 -1.7**
BSD pmax pmax
comp=Z,40nm,1.2s,mb5.2
BSD MLR MLR
comp=Z,720nm,20.0s,MS4.9
BSD Bornholm Skovb 69.25 344 *i* P **P 06 57 25.2 -1.7**
comp=Z,40nm,1.2s,mb5.2
ELOB Lobios 69.25 323 P **P 06 57 27.0 -0.2**
comp=Z,245nm,1.9s,mb5.8
PWJI Pagerwojo 69.36 95 P **P 06 57 28.1 -0.4**
comp=Z,2μmcomp=Z,117nm,1.2s,mb5.7
SJI Sawahan 69.36 94 P **P 06 57 28.9 +0.4**
comp=Z,4μmcomp=Z,117nm,1.7s,mb5.5
LDF La Druitiere 69.49 332 *e*P **P 06 57 28.1 -0.4**
comp=Z,135nm,1.4s,mb5.4
LDF La Druitiere 69.49 332 *e*P **P 06 57 28.1 -0.4**
comp=Z,68nm,1.4s,mb5.4
LDF La Druitiere 69.49 332 *e*P **P 06 57 28.1 -0.4**
LDF pmax pmax
comp=Z,68nm,1.4s,mb5.4
KMI Kunming 69.52 58 ⇓P **P 06 57 29.3 +0.1**
KMI pP pP 06 57 32.3 -1.8
KMI PP PP 07 00 04.5 +1.3
KMI S S 07 06 34.5 -2.3
KMI SKS 07 07 25.0
KMI SS SS 07 11 03.0 -1.8
KMI pmax pmax
comp=Z,53nm,1.2s,mb5.3
KMI pmax pmax
comp=Z,550nm,4.7s
KMI LR LR
comp=N,1μm,19.1s,MS5.3
KMI LR LR
comp=E,1μm,20.2s,MS5.3
KMI LR LR
comp=Z,1μm,19.1s,MS5.2
KSM Kuching 69.55 84 *e*P **P 06 57 29.8 +0.1**
comp=Z,114nm,1.1s,mb5.7
KSM LR LR
comp=Z,5μm,20.0s,MS5.7
EPON Pontenova 69.61 324 P **P 06 57 30.1 +0.7**
comp=Z,785nm,3.2s
GRR Gorron 69.69 331 *e*P **P 06 57 29.3 -0.4**
comp=Z,197nm,1.4s,mb5.5
GRR Gorron 69.69 331 *e*P **P 06 57 29.3 -0.4**
comp=Z,98nm,1.4s,mb5.5
GRR Gorron 69.69 331 *e*P **P 06 57 29.3 -0.4**
GRR pmax pmax
comp=Z,99nm,1.4s,mb5.5
FLN La Foliniere 69.78 332 *e*P **P 06 57 29.9 -0.4**
comp=Z,227nm,1.4s,mb5.6
FLN *e*MLR MLR
comp=Z,2μm,20.8s,MS5.1
FLN La Foliniere 69.78 332 *e*P **P 06 57 29.9 -0.4**
comp=Z,114nm,1.4s,mb5.6
FLN LR LR
comp=Z,2μm,20.8s,MS5.4
FLN La Foliniere 69.78 332 *e*P **P 06 57 29.9 -0.4**
FLN pmax pmax
comp=Z,114nm,1.4s,mb5.6
FLN MLR MLR
comp=Z,2μm,20.8s,MS5.4
EZAM Zamans 69.80 323 P **P 06 57 30.4 -0.2**
comp=Z,60nm,1.1s,mb5.4
EZAM Zamans 69.80 323 P **P 06 57 30.4 -0.2**
EZAM pmax pmax
comp=Z,60nm,1.1s,mb5.4
KRKI Karangkates 69.97 95 P **P 06 57 33.0 +0.7**
comp=Z,232nm,1.0s,mb6.1
STS Santiago 70.16 323 P **P 06 57 32.9 +0.2**
comp=Z,147nm,1.7s,mb5.6
STS Santiago 70.16 323 P **P 06 57 32.9 +0.2**
STS pmax pmax
comp=Z,147nm,1.7s,mb5.6
SGMF Saint Gilles 70.40 330 *e*P **P 06 57 33.6 -0.5**
comp=Z,186nm,1.5s,mb5.5
SGMF Saint Gilles 70.40 330 *e*P **P 06 57 33.6 -0.5**
comp=Z,93nm,1.5s,mb5.5
SGMF Saint Gilles 70.40 330 *e*P **P 06 57 33.6 -0.5**
SGMF pmax pmax
comp=Z,93nm,1.5s,mb5.5
EMAZ Mazaricos 70.44 323 P **P 06 57 34.4 -0.2**
comp=Z,446nm,2.9s,mb5.9
QUIF Quistinic 70.47 330 *e*P **P 06 57 34.4 -0.1**
comp=Z,156nm,1.4s,mb5.5
QUIF Quistinic 70.47 330 *e*P **P 06 57 34.4 -0.1**
comp=Z,78nm,1.4s,mb5.5
QUIF Quistinic 70.47 330 *e*P **P 06 57 34.4 -0.1**
QUIF pmax pmax
comp=Z,78nm,1.4s,mb5.5
PUL Pulkovo 70.79 354⇑*e*P **P 06 57 37.2 +1.0**
PUL Pulkovo 70.79 354⇑*e*P **P 06 57 37.1 +0.9**
PUL pmax pmax
comp=Z,78nm,0.6s,mb5.8
PUL MLR MLR
comp=Z,600nm,17.0s,MS4.9
ROSF Rostrenen 70.81 330 *e*P **P 06 57 35.8 -0.8**
comp=Z,147nm,1.6s,mb5.4
ROSF Rostrenen 70.81 330 *e*P **P 06 57 35.8 -0.8**
comp=Z,74nm,1.6s,mb5.4
ROSF Rostrenen 70.81 330 *e*P **P 06 57 35.8 -0.8**
ROSF pmax pmax
comp=Z,74nm,1.6s,mb5.4
GMJI Gumukmas 70.93 95 P **P 06 57 38.1 0.0**
comp=Z,54nm,1.2s,mb5.3
SOKR Solikamsk 71.11 8*d* *i*P **P 06 57 38.0 -0.2**
SOKR S S 07 06 49.7 -4.4
SOKR SS SS 07 11 24.7 -3.3
SOKR pmax pmax
comp=Z,190nm,1.2s,mb5.9
SOKR MLR MLR
comp=Z,1μm,17.0s,MS5.2
KLMR Klimovskoe 71.33 359*d* *i*P **P 06 57 38.4 -1.1**
KLMR *e*S S 07 06 55.0 -1.6
KLMR pmax pmax
comp=Z,370nm,1.5s,mb6.1
KLMR pmax pmax
comp=Z,106nm,4.3s
KLMR MLR MLR
comp=Z,2μm,20.0s,MS5.3
JAGI Jajag, Banyuwa 71.59 95 P **P 06 57 41.4 -0.7**
comp=Z,2μmcomp=Z,185nm,1.2s,mb5.9
KMMI Kalianget 71.62 94 P **P 06 57 42.8 +0.5**
comp=Z,4μmcomp=Z,216nm,1.4s,mb5.9
CASY Casey 71.91 157 *e*P **P 06 57 44.8 +1.7**
CASY Casey 71.91 157 PFAKE 06 57 50.0 +6.9
CASY LR LR
comp=Z,5μm,22.0s,MS5.8
MUD Monsted U'grnd 72.06 342 *i* P **P 06 57 44.8 +0.8**
MUD pmax pmax
comp=Z,22nm,1.0s,mb5.0
MUD MLR MLR
comp=Z,810nm,17.0s,MS5.1
MUD Monsted U'grnd 72.06 342 *i* P **P 06 57 44.8 +0.8**
comp=Z,22nm,1.0s,mb5.0
MUD
comp=Z,800nm,17.0s
NWAO Narrogin (SRO) 72.39 121 *e*P **P 06 57 47.6 +1.0**
comp=Z,159nm,1.2s,mb5.8
NWAO LR LR
comp=Z,2μm,22.0s,MS5.3
NWAO Narrogin (SRO) 72.39 121 *e*P **P 06 57 47.6 +1.0**
NWAO pmax pmax
comp=Z,159nm,1.2s
NWAO MLR MLR
comp=Z,2μm,22.0s
NWAO Narrogin (SRO) 72.39 121 P **P 06 57 48.3 +1.7**
SNR=6.6
IGBI Denpasar 72.51 96 P **P 06 57 47.7 0.0**
comp=Z,9μmcomp=Z,559nm,1.2s,mb6.4
CD2 Chengdu 72.66 53 ⇓P **P 06 57 47.3 -0.8**
CD2 pP pP 06 57 52.0 -1.1
CD2 sP sP 06 57 54.3 -0.5
CD2 PP PP 07 00 31.5 +1.5
CD2 S S 07 07 11.5 -1.6
CD2 sS sS 07 07 19.3 -1.8
CD2 SKS 07 07 47.5
CD2 ScS ScS 07 07 50.8 -4.5
CD2 SS SS 07 11 53.5 +0.6
CD2 pmax pmax
comp=Z,110nm,1.3s,mb5.6
CD2 pmax pmax
comp=Z,320nm,5.6s
CD2 LR LR
comp=N,2μm,21.6s,MS5.4
CD2 LR LR
comp=E,2μm,20.5s,MS5.4
CD2 LR LR
comp=Z,2μm,16.5s,MS5.3
SRBI Singaraja 72.69 95 P **P 06 57 49.0 +0.3**
comp=Z,2μmcomp=Z,147nm,1.5s,mb5.7
KLBR Kellerberrin 72.88 120⇓*i*P **P 06 57 49.9 +0.4**
comp=Z,124nm,1.1s,mb5.8
FINES FINESS Array B 72.92 352 P **P 06 57 48.5 -0.5**
FINES LR LR 07 34 08.6
FINES FINESS Array B 72.92 352 P **P 06 57 48.5 -0.5**
comp=Z,20nm,0.9s,mb5.0,baz=134,slow=5.5,SNR=31
FINES LR LR 07 34 08.6
comp=Z,694nm,19.0s,MS5.0,baz=44,slow=39
KHKI Kahang-Kahang 73.03 96 P **P 06 57 50.4 -0.3**
comp=Z,1μmcomp=Z,82nm,1.7s,mb5.4
GYA Guiyang 73.30 58⇓*i*P **P 06 57 51.5 -0.5**
GYA PP PP 07 00 39.5 +3.9
GYA S S 07 07 22.0 +1.5
GYA SKS 07 07 55.5
GYA SS SS 07 12 06.5 +3.7
GYA pmax pmax
comp=Z,80nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,590nm,5.3s
GYA LR LR
comp=N,6μm,18.3s,MS6.0
GYA LR LR
comp=E,4μm,20.2s,MS6.0
GYA LR LR
comp=Z,6μm,19.6s,MS5.9
KAF Kangasniemi 73.54 353 *e*P **P 06 57 50.6 -2.0**
KAF pmax pmax
comp=Z,23nm,0.7s,mb5.2
KAF Kangasniemi 73.54 353 *e*p **P 06 57 50.6 -2.0**
comp=Z,23nm,0.7s,mb5.2
GTA Gaotai 73.59 43 ⇓P **P 06 57 53.8 +0.4**
GTA pP pP 06 57 57.8 -0.6
GTA sP sP 06 58 00.5 +0.3
GTA PP PP 07 00 40.3 +2.5
GTA S S 07 07 24.0 +0.7
GTA sS sS 07 07 31.8 +0.4
GTA SS SS 07 12 09.0 +2.3
GTA pmax pmax
comp=Z,42nm,1.8s,mb5.1
GTA pmax pmax
comp=Z,450nm,5.7s
GTA LR LR
comp=N,2μm,19.0s,MS5.5
GTA LR LR
comp=E,2μm,19.0s,MS5.5
GTA LR LR
comp=Z,2μm,19.0s,MS5.5
QIZ Qiongzhong 73.60 66 P **P 06 57 53.5 -0.4**
QIZ PP PP 07 00 40.0 +1.7
QIZ S S 07 07 23.3 -0.9
QIZ pmax pmax
comp=Z,26nm,1.9s,mb4.8
QIZ pmax pmax
comp=Z,390nm,7.6s
QIZ LR LR
comp=E,1μm,21.4s
QIZ LR LR
comp=Z,3μm,19.1s,MS5.6
QIZ Qiongzhong 73.60 66 PFAKE 06 58 10.0 +16
QIZ LR LR
comp=Z,3μm,20.0s,MS5.6
JOF Joensuu 73.81 355 *e*P **P 06 57 53.2 -1.0**
JOF pmax pmax
comp=Z,20nm,0.7s,mb5.2
JOF Joensuu 73.81 355 *e*p **P 06 57 53.2 -1.0**
comp=Z,20nm,0.7s,mb5.2
ZAA0 Zalesovo Array 74.13 25 *e*P **P 06 57 54.8 -1.5**
ZALV Zalesovo Beam 74.13 25 P **P 06 57 54.9 -1.4**
comp=Z,52nm,1.0s,mb5.4,baz=235,slow=5.2,SNR=119
ZALV LR LR 07 29 54.6
comp=Z,1μm,21.2s,MS5.1,baz=229,slow=35
NVS Novosibirsk 74.13 24 *e*P **P 06 57 55.5 -0.8**
NVS *e* 07 00 40.3
NVS pmax pmax
comp=Z,128nm,1.9s,mb5.5
NVS pmax pmax
comp=N,71nm,1.8s
KBKI Kotabaru 74.40 90 P **P 06 57 58.4 -0.4**
comp=N,5μmcomp=N,144nm,1.3s,mb5.7
KONO Kongsberg 74.62 344 *e*P **P 06 57 58.1 -0.9**
comp=N,105nm,1.3s,mb5.6
KONO LR LR
comp=Z,754nm,19.0s,MS5.0
KONO Kongsberg 74.62 344 *e*P **P 06 57 58.1 -0.9**
KONO pmax pmax
comp=Z,105nm,1.3s,mb5.6
KONO MLR MLR
comp=Z,754nm,19.0s,MS5.0
LZH Lanzhou 74.90 48 ⇓P **P 06 58 01.5 +0.3**
LZH pP pP 06 58 04.8 -1.3
LZH sP sP 06 58 08.8 +0.9
LZH S S 07 07 37.5 -0.6
LZH sS sS 07 07 45.5 -0.7
LZH SS SS 07 12 29.8 +3.0
LZH pmax pmax
comp=Z,140nm,1.5s,mb5.7
LZH pmax pmax
comp=Z,690nm,6.3s
LZH LR LR
comp=N,1μm,16.1s,MS5.4
LZH LR LR
comp=E,640nm,15.2s,MS5.4
LZH LR LR
comp=Z,2μm,18.5s,MS5.3
NOA NORSAR Array B 75.39 345 P **P 06 58 02.9 -0.5**
NOA LR LR 07 34 21.6
NOA NORSAR Array B 75.39 345 P **P 06 58 02.9 -0.5**
comp=Z,12nm,0.9s,mb4.8,baz=149,slow=6.0,SNR=20
NOA LR LR 07 34 21.6
comp=Z,375nm,20.6s,MS4.7,baz=165,slow=38
MBWA Marble Bar 75.39 109 *e*P **P 06 58 04.5 +0.2**
comp=Z,141nm,1.4s,mb5.7
MBWA LR LR
comp=Z,3μm,19.0s,MS5.6
MBWA Marble Bar 75.39 109 P **P 06 58 04.7 +0.3**
comp=Z,105nm,1.6s,mb5.5
MBWA Marble Bar 75.39 109 P **P 06 58 05.0 +0.6**
SNR=9.9
ESK Eskdalemuir 75.61 336 *e*P **P 06 58 03.9 -1.0**
comp=Z,114nm,1.6s,mb5.5
ESK *e*pP pP 06 58 19.6 +10
ESK LR LR
comp=Z,1μm,19.0s,MS5.2
ESK Eskdalemuir 75.61 336 *e*P **P 06 58 03.9 -0.9**
ESK *e**PP pP 06 58 19.6 +10
ESK pmax pmax
comp=Z,114nm,1.6s,mb5.5
ESK MLR MLR
comp=Z,1μm,19.0s,MS5.2
KKM Kota Kinabalu 76.27 81 PFAKE 06 58 20.0 +10
KKM LR LR
comp=Z,4μm,20.0s,MS5.7
RCBR Riachuelo 76.53 267 PFAKE 06 58 20.0 +9.0
RCBR LR LR
comp=Z,3μm,20.0s,MS5.6
ENH Enshi 76.98 55 PFAKE 06 58 20.0 +6.8
ENH LR LR
comp=Z,1μm,20.0s,MS5.1
WSI Waingapu 77.41 98 P **P 06 58 17.0 +1.0**
comp=Z,752nm,1.3s,mb6.5
MOL Molde 77.62 345 *e*P **P 06 58 15.2 -0.8**
MOL *e*S S 07 08 11.1 +4.1
SPSI Sidrap Palu 77.83 92 P **P 06 58 18.2 -0.1**
comp=Z,2μmcomp=Z,50nm,3.0s,mb4.9
XAN Xi'an 77.89 52 P **P 06 58 17.8 -0.4**
XAN sP sP 06 58 24.0 -1.0
XAN PcP PcP 06 58 28.0 -0.1
XAN PP PP 07 01 15.0 +0.7
XAN S S 07 08 08.8 -2.3
XAN SKS 07 08 27.0
XAN ScS ScS 07 08 33.0 -4.3
XAN SS SS 07 13 11.5 -0.8
XAN pmax pmax
comp=Z,19nm,1.4s,mb4.8
XAN pmax pmax
comp=Z,130nm,13.5s
XAN LR LR
comp=N,480nm,21.1s,MS4.9
XAN LR LR
comp=E,350nm,21.1s,MS4.9
XAN LR LR
comp=Z,300nm,26.3s
GZH Guangzhou 77.93 64 P **P 06 58 20.0 +1.3**
GZH S S 07 08 08.5 -3.4
GZH LR LR
comp=N,1μm,19.0s,MS5.6
GZH LR LR
comp=E,3μm,18.6s,MS5.6
GZH LR LR
comp=Z,4μm,18.8s,MS5.7
BKSI Bulukumba 77.94 93 P **P 06 58 18.7 -0.3**
comp=Z,2μmcomp=Z,121nm,1.5s,mb5.6
TTSI Tana Toraja 78.04 91 P **P 06 58 18.7 -0.8**
comp=Z,3μmcomp=Z,105nm,1.3s,mb5.6
NSS Namsos 78.24 347 *e*P **P 06 58 17.7 -1.7**
APA Apatity 78.28 357⇑*i*P **P 06 58 19.0 -0.6**
APA *i* 06 58 32.0
APA *i*S S 07 08 15.0 +1.2
APA *i* 07 08 34.0
APA *e*PS 07 09 00.0
APA *i*SS SS 07 13 14.0 -2.6
APA pmax pmax
comp=Z,40nm,1.2s,mb5.2
APA MLR MLR
comp=Z,1μm,17.0s,MS5.2
LVZ Lovozero 78.54 357⇑*e*P **P 06 58 20.9 -0.2**
LVZ MLR MLR
comp=Z,869nm,20.0s,MS5.1
CMLA Cha da Macela 78.90 312 PFAKE 06 58 40.0 +16
CMLA LR LR
comp=Z,3μm,19.0s,MS5.6
QSPA South Pole Qui 79.39 180 PFAKE 06 58 40.0 +14
QSPA LR LR
comp=Z,2μm,20.0s,MS5.5
MMRI Maumere 79.47 97 P **P 06 58 26.4 -1.0**
comp=Z,5μmcomp=Z,302nm,1.5s,mb6.0
MOY Mondy 80.45 33 *e*P **P 06 58 32.4 +0.6**
MOY pmax pmax
comp=Z,106nm,2.3s,mb5.4
CAM4 Nova Friburgo 80.51 249⇑*i*P **P 06 58 35.1 +2.2**
CAM4 *i* 06 58 42.8
CAM4 *i* 06 58 45.7
CAM4 *i* 06 58 50.7
CAM4 *i* 06 58 57.3
CAM4 *i* 06 59 00.8
CAM4 *i* 06 59 13.5
CAM4 *i* 06 59 20.0
CAM4 *i* 06 59 51.7
KTK1 Kautokeino 80.54 353 *e*P **P 06 58 30.5 -1.4**
KTK1 *e*S S 07 08 40.6 +2.7
KTK1 AMS AMS 07 37 40.2
comp=Z,2μm,20.6s,MS5.5
KDI Kendari 80.63 92 P **P 06 58 34.0 +0.4**
comp=Z,1μmcomp=Z,65nm,1.4s,mb5.4
ARCES ARCESS Array B 80.81 354 P **P 06 58 32.8 -0.6**
comp=Z,23nm,0.9s,mb5.1,baz=174,slow=4.5,SNR=44
ARCES LR LR 07 38 35.7
comp=Z,1μm,20.6s,MS5.2,baz=337,slow=39
ARE0 ARCESS Array S 80.81 354 *e*P **P 06 58 32.6 -0.7**
KEV Kevo 80.88 355 *e*P **P 06 58 33.3 -0.5**
comp=Z,73nm,1.2s,mb5.5
KEV LR LR
comp=Z,961nm,20.0s,MS5.2
KEV Kevo 80.88 355 *e*P **P 06 58 32.0 -1.7**
KEV pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KEV Kevo 80.88 355 *e*p **P 06 58 32.0 -1.7**
comp=Z,9.2nm,0.8s,mb4.8
WHN Wuhan 81.03 57 ⇓P **P 06 58 36.0 +0.6**
WHN S S 07 08 43.5 -1.1
WHN LR LR
comp=N,2μm,18.5s,MS5.7
WHN LR LR
comp=E,2μm,17.2s,MS5.7
WHN LR LR
comp=Z,2μm,20.5s,MS5.5
ZAK Zakamensk 81.07 35 *e*P **P 06 58 35.1 0.0**
ZAK pmax pmax
comp=Z,15nm,1.6s,mb4.7
BTO Baotou 81.16 46 *e*P **P 06 58 35.0 -0.9**
FITZ Fitzroy Crossi 81.30 107⇓*i*P **P 06 58 37.5 +0.4**
comp=Z,128nm,1.0s,mb5.8
FITZ Fitzroy Crossi 81.30 107 *e*P **P 06 58 37.5 +0.4**
comp=Z,98nm,1.0s,mb5.7
LUWI Luwuk 81.30 89 P **P 06 58 37.8 +0.6**
comp=Z,2μmcomp=Z,114nm,1.3s,mb5.7
TRO Tromso 81.65 352 *e*P **P 06 58 37.2 -0.6**
TRO *e*S S 07 08 52.5 +3.1
TRO AMS AMS 07 40 19.3
comp=Z,867nm,17.3s,MS5.2
SONM Songino Array 81.72 38 P **P 06 58 39.3 +0.6**
comp=Z,7.7nm,1.0s,mb4.6,baz=237,slow=4.9,SNR=34
SONM PKKPbc PKKPbc 07 17 20.8 +8.0
comp=Z,0.4nm,0.3s,baz=288,slow=5.9,SNR=2.9
SONM LR LR 07 36 37.5
comp=Z,897nm,20.2s,MS5.1,baz=244,slow=37
FORT Forrest 81.74 120 *e*P **P 06 58 39.4 +0.1**
comp=Z,117nm,1.1s,mb5.7
FORT Forrest 81.74 120 *e*P **P 06 58 39.7 +0.5**
comp=Z,216nm,1.1s,mb6.0
TIY Taiyuan 81.87 49 *e*P **P 06 58 39.3 -0.4**
TIY sP sP 06 58 46.3 -0.1
TIY PP PP 07 01 47.3 0.0
TIY S S 07 08 48.0 -4.9
TIY pmax pmax
comp=Z,470nm,3.5s
TIY LR LR
comp=N,1μm,17.3s,MS5.5
TIY LR LR
comp=E,870nm,17.8s,MS5.5
TIY LR LR
comp=Z,1μm,19.5s,MS5.2
TLY Talaya 81.89 34 *i* P **P 06 58 40.1 +0.6**
TLY LR LR
comp=Z,899nm,21.0s,MS5.1
TLY Talaya 81.89 34 *e*P **P 06 58 40.2 +0.7**
TLY *e*S S 07 08 52.1 -0.5
TLY pmax pmax
comp=Z,38nm,2.0s,mb5.0
TLY MLR MLR
comp=Z,741nm,17.0s,MS5.1
ULN Ulaanbaatar 82.13 38 *e*P **P 06 58 41.4 +0.6**
ULN LR LR
comp=Z,919nm,19.0s,MS5.2
ULN Ulaanbaatar 82.13 38 *i* P **P 06 58 41.4 +0.6**
ULN Ulaanbaatar 82.13 38 P **P 06 58 41.3 +0.5**
comp=Z,644nmcomp=Z,22nm,2.3s,mb4.7
ULN Ulaanbaatar 82.13 38 P **P 06 58 41.3 +0.5**
SNR=15
HHC Hu-ho-hao-te 82.34 46 *e*P **P 06 58 43.3 +1.2**
HHC pP pP 06 58 47.0 -0.1
HHC sP sP 06 58 49.8 +0.9
HHC PP PP 07 01 54.0 +2.9
HHC S S 07 08 57.0 -0.7
HHC sS sS 07 09 05.8 -0.1
HHC SS SS 07 14 21.0 +2.4
HHC pmax pmax
comp=Z,94nm,1.2s,mb5.6
HHC pmax pmax
comp=Z,590nm,4.3s
HHC LR LR
comp=N,510nm,16.1s,MS5.3
HHC LR LR
comp=E,950nm,19.0s,MS5.3

HHC LR LR
comp=Z,1μm,17.8s,MS5.3
IRK Irkutsk 82.50 33 *e*P **P 06 58 41.9 -0.8**
IRK pmax pmax
comp=Z,93nm,2.3s,mb5.4
QZH Quanzhou 83.05 63⇓ *i*P **P 06 58 45.8 -0.4**
QZH pmax pmax
comp=Z,300nm,1.3s,mb6.2
QZH pmax pmax
comp=Z,1μm,3.0s
QZH LR LR
comp=N,4μm,20.0s,MS5.9
QZH LR LR
comp=E,3μm,18.7s,MS5.9
QZH LR LR
comp=Z,4μm,23.0s,MS5.7
TPUB Ta-pu 84.44 65 *e*P **P 06 58 53.7 +0.4**
comp=Z,89nm,1.1s,mb5.8
KNA Kununurra 84.62 105⇓ *i*P **P 06 58 54.1 -0.3**
comp=Z,222nm,1.2s,mb6.2
SPB Sao Paulo 84.76 247 PFAKE 06 59 10.0 +15
SPB LR LR
comp=Z,4μm,20.0s,MS5.8
SSLB Suanglung 84.85 65 *e*P **P 06 58 55.9 +0.5**
comp=Z,41nm,1.4s,mb5.4
YULB Yu-li 85.06 65 *e*P **P 06 58 56.2 -0.2**
comp=Z,51nm,1.0s,mb5.6
NJ2 Nanjing 85.16 56 *e*P **P 06 58 56.3 -0.5**
NJ2 pP pP 06 59 01.0 -0.7
NJ2 sP sP 06 59 03.3 -0.2
NJ2 SKS 07 09 18.5
NJ2 S S 07 09 25.0 -1.4
NJ2 sS sS 07 09 33.5 -1.2
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
NJ2 pmax pmax
comp=Z,150nm,7.4s
NJ2 LR LR
comp=N,1μm,21.6s,MS5.4
NJ2 LR LR
comp=E,1μm,18.4s,MS5.4
NJ2 LR LR
comp=Z,1μm,20.5s,MS5.3
BJT Baijiatuan 85.38 48 PFAKE 06 59 10.0 +12
BJT LR LR
comp=Z,1μm,19.0s,MS5.4
BJI Beijing 85.39 48 P **P 06 58 57.8 +0.1**
BJI S S 07 09 26.0 -2.4
BJI SS SS 07 15 06.3 +2.6
BJI pmax pmax
comp=Z,59nm,1.7s,mb5.4
BJI pmax pmax
comp=Z,680nm,4.0s
BJI LR LR
comp=N,1μm,21.0s,MS5.3
BJI LR LR
comp=E,690nm,24.5s,MS5.3
BJI LR LR
comp=Z,1μm,26.8s,MS5.1
YHNB Yeheng 85.43 64 *e*P **P 06 58 57.3 -1.0**
comp=Z,80nm,1.3s,mb5.7
YHNB LR LR
comp=Z,2μm,20.0s,MS5.5
DAV Davao City (W) 85.59 82 PFAKE 06 59 10.0 +11
DAV LR LR
comp=Z,1μm,21.0s,MS5.3
DAV Davao City (W) 85.59 82⇑ *e*P **P 06 58 58.5 -0.8**
TATO Taipei 85.61 64 PFAKE 06 59 10.0 +11
TATO LR LR
comp=Z,2μm,19.0s,MS5.6
LBMI Labuha 86.02 90 P **P 06 59 00.9 -0.6**
comp=Z,5μmcomp=Z,283nm,1.8s,mb6.2
TNTI Ternate 86.15 88 P **P 06 59 01.7 -0.4**
comp=Z,3μmcomp=Z,130nm,1.6s,mb5.9
SBA Scott Base 86.57 170 *e*P **P 06 59 02.7 -0.2**
comp=Z,59nm,1.5s,mb5.6
SBA LR LR
comp=Z,2μm,19.0s,MS5.5
SBA Scott Base 86.57 170 *e*P **P 06 59 02.7 -0.2**
SBA pmax pmax
comp=Z,59nm,1.5s,mb5.6
SBA MLR MLR
comp=Z,2μm,19.0s,MS5.5
PMSA Palmer Station 86.89 204 PFAKE 06 59 20.0 +15
PMSA LR LR
comp=Z,1μm,22.0s,MS5.2
CIT Chita 87.62 36 *e*P **P 06 59 06.0 -2.4**
CIT pmax pmax
comp=Z,201nm,2.1s,mb6.0
ASAR Alice Springs 88.01 114 P **P 06 59 10.8 -0.2**
comp=Z,16nm,1.0s,mb5.3,baz=258,slow=4.4,SNR=85
ASAR PKKPbc PKKPbc 07 16 55.5 -0.9
comp=Z,0.4nm,0.6s,baz=40,slow=7.0,SNR=4.1
BBOO Buckleboo 88.13 123 *e*P **P 06 59 10.7 -0.6**
comp=Z,15nm,1.1s,mb5.1
BBOO Buckleboo 88.13 123 *e*P **P 06 59 11.4 +0.1**
WRA Warramunga Arr 89.10 110 P **P 06 59 15.9 -0.3**
WRA PKKPbc PKKPbc 07 17 06.7 +13
WRA LR LR 07 33 57.5
WRA Warramunga Arr 89.10 110 P **P 06 59 15.9 -0.3**
comp=Z,54nm,1.0s,mb5.8,baz=263,slow=3.3,SNR=110
WRA PKKPbc PKKPbc 07 17 06.7 +13
comp=Z,1.2nm,0.7s,baz=75,slow=2.2,SNR=7.4
WRA LR LR 07 33 57.5
comp=Z,2μm,21.7s,MS5.6,baz=270,slow=32
DL2 Dalian 89.13 50⇓ P **P 06 59 15.0 -0.8**
DL2 S S 07 10 02.0 -2.4
DL2 pmax pmax
comp=Z,20nm,1.1s,mb5.4
DL2 pmax pmax
comp=Z,180nm,3.7s
DL2 LR LR
comp=N,470nm,17.6s,MS5.1
DL2 LR LR
comp=E,360nm,17.3s,MS5.1
DL2 LR LR
comp=Z,580nm,19.4s,MS5.0
TLE Tual 90.25 96 P **P 06 59 21.1 -0.6**
HIA Hailar 90.51 40 PFAKE 06 59 30.0 +8.0
HIA LR LR
comp=Z,1μm,20.0s,MS5.4
KBS Kingsbay 90.89 355 *e*SKS 07 09 55.4
KBS AMS AMS 07 48 19.1
comp=Z,826nm,19.1s,MS5.2
KBS Kingsbay 90.89 355 *e*P **P 06 59 22.7 -0.5**
KBS *e*pP pP 06 59 35.7 +7.5
KBS LR LR
comp=Z,859nm,20.0s,MS5.2
INCN Inchon 92.66 53 PFAKE 06 59 40.0 +7.7
INCN LR LR
comp=Z,1μm,20.0s,MS5.3
STKA Stephens Creek 92.90 123⇓ *i*P **P 06 59 33.2 -0.4**
comp=Z,16nm,1.0s,mb5.4
STKA Stephens Creek 92.90 123 *e*P **P 06 59 33.3 -0.4**
STKA Stephens Creek 92.90 123 P **P 06 59 33.4 -0.3**
comp=Z,17nm,1.0s,mb5.4,baz=273,slow=5.2,SNR=20
STKA PP PP 07 03 13.3 -2.7
comp=Z,3.2nm,1.0s,baz=209,slow=13,SNR=2.5
STKA LR LR 07 34 42.3
comp=Z,1μm,21.2s,MS5.4,baz=250,slow=31
CPUP Villa Florida 93.04 243 P **P 06 59 36.0 +1.6**
comp=Z,3.0nm,0.7s,mb4.8,baz=85,slow=4.2,SNR=12
CPUP LR LR 07 36 57.7
comp=Z,5μm,21.6s,MS5.9,baz=84,slow=33
KSRS Korea Array 93.66 53 P **P 06 59 35.7 -1.2**
comp=Z,14nm,1.1s,mb5.3,baz=254,slow=4.6,SNR=28
KSRS LR LR 07 42 39.7
comp=Z,1μm,19.9s,MS5.4,baz=258,slow=36
KSRS Korea Array 93.66 53 P **P 06 59 35.7 -1.2**
KSRS pmax pmax
comp=Z,14nm,1.1s,mb5.3
KSRS MLR MLR
comp=Z,1μm,19.9s,MS5.4
TRQA Tornquist 93.83 230 PFAKE 06 59 50.0 +12
TRQA LR LR
comp=Z,3μm,19.0s,MS5.7
MDJ Mudanjiang 96.11 46 P **P 06 59 46.3 -1.7**
MDJ sP sP 06 59 52.5 -2.3
MDJ PP PP 07 03 39.5 -1.5
MDJ S S 07 11 07.8 +1.1
MDJ pmax pmax
comp=Z,15nm,1.1s,mb5.3
MDJ pmax pmax
comp=Z,89nm,4.4s
MDJ LR LR
comp=N,270nm,12.2s,MS5.4
MDJ LR LR
comp=E,870nm,17.1s,MS5.4
MDJ LR LR
comp=Z,930nm,18.3s,MS5.3
MDJ Mudanjiang 96.11 46 PFAKE 07 00 00.0 +12
MDJ LR LR
comp=Z,943nm,19.0s,MS5.3
CAN Canberra 97.84 128 PFAKE 07 00 10.0 +14
CAN LR LR
comp=Z,2μm,19.0s,MS5.6
KLR Kul'dur 98.21 41 *e*P **P 06 59 51.0 -6.3**
KLR pmax pmax
comp=Z,34nm,1.6s,mb5.6
YAK Yakutsk 98.54 28 *i* P **P 06 59 57.7 -0.8**
YAK LR LR
comp=Z,715nm,19.0s,MS5.2
YAK Yakutsk 98.54 28 *e*P **P 06 59 57.2 -1.3**
YAK pmax pmax
comp=Z,13nm,0.8s,mb5.5
PLCA Paso Flores 99.19 226 PFAKE 07 00 10.0 +8.0
PLCA LR LR
comp=Z,2μm,20.0s,MS5.6
PLCA Paso Flores 99.19 226 LR LR 07 41 08.4
comp=Z,2μm,20.6s,MS5.5,baz=108,slow=33
TIXI Tiksi 99.26 19 PFAKE 07 00 10.0 +8.5
TIXI LR LR
comp=Z,995nm,20.0s,MS5.3
CTAO Charters Tower 99.98 113 PFAKE 07 00 20.0 +15
CTAO LR LR
comp=Z,4μm,20.0s,MS6.0
MAJO Matsushiro 101.69 55 PFAKE 07 00 20.0 +7.2
MAJO LR LR
comp=Z,855nm,21.0s,MS5.2
MJAR Matsushiro Arr 101.70 55 P Pdif 07 00 12.1 -0.7
comp=Z,1.9nm,0.7s,baz=276,slow=5.0,SNR=6.9
MJAR PP PP 07 04 26.6 +2.8
comp=Z,0.6nm,0.3s,baz=267,slow=7.7,SNR=4.9
BBGH Gun Hill 102.96 281 PFAKE 07 00 30.0 +12
BBGH LR LR
comp=Z,3μm,21.0s,MS5.8
PMG Port Moresby 103.47 102 PFAKE 07 00 30.0 +9.3
PMG LR LR
comp=Z,2μm,20.0s,MS5.7
LCO Las Campanas 103.61 237 PFAKE 07 00 30.0 +8.7
LCO LR LR
comp=Z,4μm,20.0s,MS6.0
FDF Fort de France 104.70 283 PFAKE 07 00 40.0 +14
FDF LR LR
comp=Z,693nm,19.0s,MS5.2
GRGR Grenville 104.84 280 PFAKE 07 00 40.0 +13
GRGR LR LR
comp=Z,1μm,21.0s,MS5.4
LPAZ La Paz 105.35 250 PFAKE 07 05 00.0 +16
LPAZ LR LR
comp=Z,4μm,20.0s,MS6.0
LPAZ La Paz 105.35 250 PP PP 07 04 58.8 +7.4
comp=Z,3.6nm,1.2s,baz=95,slow=2.2,SNR=5.2
GUMO Guam 105.37 79 PFAKE 07 05 00.0 +16
GUMO LR LR
comp=Z,857nm,20.0s,MS5.3
YSS Yuzh-Sakhalins 105.46 44 PFAKE 07 04 50.0 +6.7
YSS LR LR
comp=Z,236nm,20.0s,MS4.7
ANWB Willy Bob 105.66 285 PFAKE 07 05 00.0 +16
ANWB LR LR
comp=Z,984nm,20.0s,MS5.3
ERM Erimo 105.77 49 PFAKE 07 05 00.0 +16
ERM LR LR
comp=Z,1μm,19.0s,MS5.4
SCHQ Schefferville 109.19 324 PP PP 07 05 22.9 +4.3
comp=Z,12nm,1.2s,baz=58,slow=12,SNR=3.9
BBSR BB Station 109.23 301 PFAKE 07 05 00.0 +9.3
BBSR LR LR
comp=Z,3μm,20.0s,MS5.8
SJG San Juan 109.84 285 PFAKE 07 05 00.0 +7.7
SJG LR LR
comp=Z,2μm,20.0s,MS5.8
PKME Peaks-Kenny Pk 112.10 315 PFAKE 07 05 10.0 +14
PKME LR LR
comp=Z,2μm,20.0s,MS5.8
BILL Bilibino 112.46 20 PFAKE 07 05 10.0 +14
BILL LR LR
comp=Z,914nm,20.0s,MS5.4
BILL Bilibino 112.46 20⇓ *i*P Pdif 07 00 59.4 -1.3
BILL *e* 07 05 38.6
BILL *i* SS SS 07 21 37.7 +17
BILL pmax pmax
comp=Z,5.0nm,0.5s
BILL MLR MLR
comp=Z,1μm,22.0s,MS5.4
SNZO South Karori 112.72 144 PFAKE 07 05 10.0 +13
SNZO LR LR
comp=Z,2μm,19.0s,MS5.6
SDV Santo Domingo 113.15 275 PFAKE 07 05 10.0 +11
SDV LR LR
comp=Z,473nm,21.0s,MS5.1
LBNH Lisbon 114.10 314 PFAKE 07 05 10.0 +10
LBNH LR LR
comp=Z,2μm,20.0s,MS5.8
NNA Nana 114.68 252 PFAKE 07 05 10.0 +8.4
NNA LR LR
comp=Z,2μm,19.0s,MS5.8
GRTK Grand Turk 114.73 289 PFAKE 07 05 10.0 +8.5
GRTK LR LR
comp=Z,1μm,19.0s,MS5.5
PET Petropavlovsk 114.74 36 PFAKE 07 05 10.0 +9.4
PET LR LR
comp=Z,842nm,21.0s,MS5.3
SDDR Presa de Saban 114.76 286 PFAKE 07 05 10.0 +8.4
SDDR LR LR
comp=Z,1μm,20.0s,MS5.5
HNR Honiara 115.65 106 PFAKE 07 05 10.0 +6.5
HNR LR LR
comp=Z,1μm,19.0s,MS5.5
NCB Newcomb 115.77 314 PFAKE 07 05 10.0 +7.2
NCB LR LR
comp=Z,2μm,19.0s,MS5.7
LONY Lake Ozonia 115.91 314 PFAKE 07 05 10.0 +6.9
LONY LR LR
comp=Z,2μm,19.0s,MS5.7
DZM Mont Dzumac 117.01 121 *e*PP PP 07 06 09.1 -5.9
comp=Z,174nm,24.4s
DZM Mont Dzumac 117.01 121 *e*PS PS 07 16 00.0 +0.9
comp=Z,384nm,26.2s
DZM *e*LR LR 07 40 37.5
comp=Z,3μm,23.6s
BINY Binghamton 117.37 312 PFAKE 07 05 20.0 +14
BINY LR LR
comp=Z,4μm,21.0s,MS6.0
GTBY Guantanamo Bay 118.41 287 PFAKE 07 05 20.0 +11
GTBY LR LR
comp=Z,1μm,20.0s,MS5.6
CBN Corbin 119.12 308 PFAKE 07 05 20.0 +11
CBN LR LR
comp=Z,3μm,22.0s,MS5.8
OTAV Otavalo 119.37 264 PFAKE 07 05 20.0 +9.3
OTAV LR LR
comp=Z,4μm,19.0s,MS6.0
CNNC Cliffs of the 120.00 305 PFAKE 07 05 20.0 +8.7
CNNC LR LR
comp=Z,2μm,20.0s,MS5.8
ERPA Erie 120.29 313 PFAKE 07 05 20.0 +8.4
ERPA LR LR
comp=Z,3μm,20.0s,MS5.9
MTDJ Mount Denham 120.65 285 PFAKE 07 05 20.0 +7.0
MTDJ LR LR
comp=Z,1μm,21.0s,MS5.5
MCWV Mont Chateau 120.74 310 PFAKE 07 05 20.0 +7.5
MCWV LR LR
comp=Z,3μm,20.0s,MS6.0
BLA Blacksburg 121.68 307 PFAKE 07 05 30.0 +16
BLA LR LR
comp=Z,1μm,22.0s,MS5.6
NHSC New Hope 122.18 302 PFAKE 07 05 30.0 +14
NHSC LR LR
comp=Z,2μm,20.0s,MS5.8
BCIP Isla Barro Col 122.20 274 PFAKE 07 05 30.0 +14
BCIP LR LR
comp=Z,758nm,19.0s,MS5.4
INK Inuvik 122.36 358 PKP PKPdf 07 05 13.7 -1.1
comp=Z,12nm,1.1s,baz=55,slow=1.2,SNR=6.4
INK Inuvik 122.36 358 *e*PKIKP PKPdf 07 05 13.4 -1.4
GLMI Grayling 122.76 317 PFAKE 07 05 30.0 +14
GLMI LR LR
comp=Z,3μm,21.0s,MS5.9
AAM Ann Arbor 122.87 314 PFAKE 07 05 30.0 +13
AAM LR LR
comp=Z,3μm,20.0s,MS6.0
ACSO Alum Creek Sta 122.95 311 PFAKE 07 05 30.0 +13
ACSO LR LR
comp=Z,2μm,19.0s,MS5.8
COLD Coldfoot 123.00 5 *e*PKPdf PKPdf 07 05 15.5 -0.5
DWPF Disney 123.89 297 PFAKE 07 05 30.0 +11
DWPF LR LR
comp=Z,1μm,19.0s,MS5.7
GOGA Godfrey 124.85 303 *e*PKPdf PKPdf 07 05 19.6 -1.0
GOGA LR LR
comp=Z,2μm,20.0s,MS5.8
COWI Conover 125.25 320 PFAKE 07 05 30.0 +9.0
COWI LR LR
comp=Z,2μm,21.0s,MS5.8
YKA Yellowknife Ar 125.47 347 PKP PKPdf 07 05 19.6 -1.3
YKA PP PP 07 07 08.9 -2.4
YKA Yellowknife Ar 125.47 347 PKP PKPdf 07 05 19.6 -1.3
comp=Z,5.1nm,1.0s,baz=24,slow=1.9,SNR=11
YKA PP PP 07 07 08.9 -2.4
comp=Z,1.8nm,0.9s,baz=29,slow=8.0,SNR=3.9
YKA Yellowknife Ar 125.47 347 PKIKP PKPdf 07 05 19.6 -1.3
YKA 07 07 08.9
YKA pmax pmax
comp=Z,5.0nm,1.0s
YKA pmax pmax
comp=Z,2.0nm,0.9s
COLA College 125.51 5 *e*PKPdf PKPdf 07 05 19.1 -1.8
COLA LR LR
comp=Z,661nm,20.0s,MS5.3
ILAR Eielson Array 125.69 4 PKP PKPdf 07 05 19.9 -1.4
comp=Z,8.0nm,1.1s,baz=315,slow=2.9,SNR=47
ILAR PP PP 07 07 06.8 -5.9
comp=Z,3.5nm,1.1s,baz=353,slow=5.2,SNR=5.8
ILAR PKKPab 07 14 57.6
comp=Z,1.1nm,1.1s,baz=185,slow=4.7,SNR=5.2
EYMN Ely 125.91 323 *e*PKPdf PKPdf 07 05 21.3 -0.9
EYMN LR LR
comp=Z,2μm,21.0s,MS5.7
BPAW Bear Paw Mtn. 125.96 7 *e*PKPdf PKPdf 07 05 20.2 -1.6
WCI Wyandotte Cave 125.96 310 PFAKE 07 05 30.0 +7.4
WCI LR LR
comp=Z,2μm,22.0s,MS5.7
EGAK Eagle 125.97 1 *e*PKPdf PKPdf 07 05 21.0 -0.8
EGAK LR LR
comp=Z,701nm,21.0s,MS5.3
TTA Tatalina 126.37 10 *e*PKPdf PKPdf 07 05 22.8 +0.2
SWET Sewanee 126.46 306 *e*PKPdf PKPdf 07 05 22.6 -1.1
MCK McKinley 126.54 6 *e*PKPdf PKPdf 07 05 22.1 -0.9
TRF Thorofare Moun 126.67 7 *e*PKPdf PKPdf 07 05 22.3 -0.9
DAWY Dawson 126.71 0 *e*PKPdf PKPdf 07 05 22.8 -0.5
PPLA Purkeypile 126.97 8 *e*PKPdf PKPdf 07 05 23.7 -0.1
DOT Dot Lake 126.99 3 *e*PKPdf PKPdf 07 05 23.7 -0.1
OLIL Olney 127.17 311 *e*PKPdf PKPdf 07 05 24.1 -0.8
ULM Lac du Bonnet 127.24 327 PKP PKPdf 07 05 23.5 -1.1
ULM Lac du Bonnet 127.24 327 PKP PKPdf 07 05 23.5 -1.1
comp=Z,13nm,0.9s,baz=51,slow=5.7,SNR=4.7
JFWS Jewell Farm 127.25 316 *e*PKPdf PKPdf 07 05 23.9 -1.0
JFWS LR LR
comp=Z,2μm,21.0s,MS5.8
JTS JuntasAbangare 127.34 275 PFAKE 07 05 40.0 +14
JTS LR LR
comp=Z,1μm,21.0s,MS5.6
FFC Flin Flon 127.44 334 PFAKE 07 05 40.0 +15
FFC LR LR
comp=Z,1μm,20.0s,MS5.6
HDIL Hopedale 127.45 313 *e*PKPdf PKPdf 07 05 24.8 -0.5
HDIL LR LR
comp=Z,2μm,19.0s,MS5.7
PAX Paxson 127.58 4 *e*PKPdf PKPdf 07 05 24.3 -0.7
MENT Mentasta 127.71 3 *e*PKPdf PKPdf 07 05 24.9 -0.3
WVT Waverly 127.72 308 *e*PKPdf PKPdf 07 05 24.3 -1.7
WVT LR LR
comp=Z,2μm,19.0s,MS5.7
LRAL Lakeview Retre 127.82 304 *e*PKPdf PKPdf 07 05 25.6 -0.7
LRAL LR LR
comp=Z,1μm,21.0s,MS5.6
AGMN Agassiz Nation 128.28 325 PFAKE 07 05 40.0 +13
AGMN LR LR
comp=Z,2μm,20.0s,MS5.8
BRAL Brewton 128.30 301 PFAKE 07 05 40.0 +13
BRAL LR LR
comp=Z,2μm,21.0s,MS5.9
SML Sawmill 128.48 6 *e*PKPdf PKPdf 07 05 26.1 -0.6
PMR Palmer 128.61 6 *e*PKPdf PKPdf 07 05 26.3 -0.6
MSVF Nonsavu 128.68 123 PFAKE 07 05 40.0 +12
MSVF LR LR
comp=Z,4μm,20.0s,MS6.1
RC01 Rabbit Creek A 129.03 7 *e*PKPdf PKPdf 07 05 27.4 -0.4
OXF Oxford 129.40 306 *e*PKPdf PKPdf 07 05 28.1 -1.2
OXF LR LR
comp=Z,2μm,20.0s,MS5.8
SLKM Skilak Lake 129.54 7 *e*PKPdf PKPdf 07 05 27.8 -0.9
BMRM Bremner River 129.62 4 *e*PKPdf PKPdf 07 05 28.8 -0.1
SCIA State Center 129.66 316 PFAKE 07 05 40.0 +10
SCIA LR LR
comp=Z,2μm,20.0s,MS5.8
CCM Cathedral Cave 129.73 311 *e*PKPdf PKPdf 07 05 29.2 -0.6
CCM LR LR
comp=Z,3μm,22.0s,MS5.9
TGUH Tegucigalpa,Un 129.86 279 *e*PKPdf PKPdf 07 05 31.2 +0.6
TGUH LR LR
comp=Z,1μm,22.0s,MS5.5
SEW Seward 130.02 7 *e*PKPdf PKPdf 07 05 29.9 +0.2
PAYG Puerto Ayora 130.68 260 PFAKE 07 05 40.0 +7.7
PAYG LR LR
comp=Z,3μm,19.0s,MS6.0
TEIG Tepich 130.77 287 PFAKE 07 05 40.0 +7.7
TEIG LR LR
comp=Z,1μm,20.0s,MS5.5
VBMS Vicksburg 130.90 303 PFAKE 07 05 40.0 +7.8
VBMS LR LR
comp=Z,2μm,19.0s,MS5.9
ECSD EROS Data Cent 131.06 320 *e*PKPdf PKPdf 07 05 31.0 -1.2
ECSD LR LR
comp=Z,3μm,19.0s,MS6.0
UALR University of 131.64 307 *e*PKPdf PKPdf 07 05 33.1 -0.4
KDAK Kodiak Island 131.80 10 PKP PKPdf 07 05 33.2 +0.1
comp=Z,5.4nm,1.0s,baz=140,slow=2.9,SNR=4.3
KDAK PP PP 07 07 51.4 -1.4
comp=Z,16nm,1.0s,baz=100,slow=4.2,SNR=6.3
KDAK Kodiak Island 131.80 10 PKIKP PKPdf 07 05 33.2 +0.1
KDAK 07 07 51.4
KDAK MLR MLR
comp=Z,922nm,20.0s,MS5.5
DGMT Dagmar 132.65 329⇓ P PKPdf 07 05 34.3 -0.7
baz=133
DGMT Dagmar 132.65 329 *e*PKPdf PKPdf 07 05 35.5 +0.5
DGMT LR LR
comp=Z,2μm,20.0s,MS5.8
MIAR Mount Ida 132.67 307 *e*PKPdf PKPdf 07 05 35.4 -0.1
MIAR LR LR
comp=Z,2μm,21.0s,MS5.9
EDM Edmonton 133.00 339 *e*PKPdf PKPdf 07 05 35.2 -0.4
KSU1 Kansas State U 133.20 314 *e*PKPdf PKPdf 07 05 36.6 +0.2
KSU1 LR LR
comp=Z,2μm,21.0s,MS5.9
WRAK Wrangell Islan 134.13 355 PFAKE 07 05 50.0 +12
WRAK LR LR
comp=Z,1μm,22.0s,MS5.7
NATX Nacogdoches 134.41 304 PFAKE 07 05 50.0 +11
NATX LR LR
comp=Z,2μm,20.0s,MS5.8
LAO LASA Array 134.86 329⇑ P PKPdf 07 05 39.4 +0.2
baz=135
LAO LASA Array 134.86 329 *e*PKPdf PKPdf 07 05 40.0 +0.8
LAO LR LR
comp=Z,3μm,20.0s,MS6.0
D21A La Casta Ranch 134.99 330⇑ P PKPdf 07 05 39.4 0.0
baz=135
A18A Metzger Ranch, 135.00 333⇑ P PKPdf 07 05 38.4 -1.0
baz=135
RSSD Black Hills 135.32 325 *e*PKPdf PKPdf 07 05 40.7 +0.6
RSSD LR LR
comp=Z,3μm,19.0s,MS6.0
A17A Triple J Farms 135.36 334⇓ P PKPdf 07 05 39.3 -0.8
baz=135
B18A Beardsley Farm 135.36 333⇑ P PKPdf 07 05 40.0 -0.1
baz=135
E21A Keefer Ranch, 135.39 329⇑ P PKPdf 07 05 40.3 +0.1
baz=135
CBKS Cedar Bluff 135.50 316⇑ P PKPdf 07 05 40.5 -0.1
baz=135
CBKS Cedar Bluff 135.50 316 PFAKE 07 05 50.0 +9.3
CBKS LR LR

comp=Z,3µm,21.0s,MS5.9
C19A Slack Wire Ran 135.51 332 ⇓P PKPdf 07 05 40.5 +0.1
baz=135
D20A Manuel Ranch, 135.54 330 ⇓P PKPdf 07 05 40.7 +0.2
baz=135
EGMT Eagleton 135.63 332 ⇓P PKPdf 07 05 40.6 0.0
baz=136
EGMT Eagleton 135.63 332 ePKPdf PKPdf 07 05 41.0 +0.4
EGMT LR LR
comp=Z,2µm,19.0s,MS5.8
B17A L&G Farms, Che 135.89 333 ⇑P PKPdf 07 05 40.9 -0.2
baz=136
HKT Hockley 135.90 302 ePKPdf PKPdf 07 05 41.8 +0.1
HKT LR LR
comp=Z,2µm,19.0s,MS5.8
F21A Absaloka Mine, 135.91 328 ⇓P PKPdf 07 05 40.8 -0.4
baz=136
OGNE Ogallala 135.94 320 ⇑P PKPdf 07 05 40.9 -0.5
baz=136
OGNE Ogallala 135.94 320 PFAKE 07 05 50.0 +8.6
OGNE LR LR
comp=Z,2µm,22.0s,MS5.9
E20A Meyer Farm, Mu 135.94 330 ⇓P PKPdf 07 05 41.5 +0.3
baz=136
A15A Johnson Ranch, 136.18 335 ⇑P PKPdf 07 05 41.5 -0.1
baz=136,SNR=5.4
B16A M & M Farms, S 136.19 334 ⇓P PKPdf 07 05 41.2 -0.4
baz=136
D18A Linhart Farms, 136.25 332 ⇓P PKPdf 07 05 42.1 +0.3
baz=136
E19A Rath Farm, Rou 136.30 330 ⇑P PKPdf 07 05 41.6 -0.3
baz=136
G21A Lodge Grass 136.35 328 ⇑P PKPdf 07 05 41.9 -0.1
baz=136
C17A Wharram Farm, 136.37 333 ⇓P PKPdf 07 05 41.8 -0.2
baz=136
F20A Billings 136.44 329 ⇑P PKPdf 07 05 42.1 -0.1
baz=136
A14A Double T Ranch 136.47 336 ⇓P PKPdf 07 05 41.9 -0.2
baz=136,SNR=5.1
WMOK Wichita Mounta 136.60 310 ePKPdf PKPdf 07 05 42.4 -0.5
WMOK LR LR
comp=Z,2µm,20.0s,MS5.9
B15A Bradely Ranch, 136.63 335 ⇑P PKPdf 07 05 41.9 -0.6
baz=136,SNR=6.3
H21A Big Horn, Sher 136.66 327 ⇓P PKPdf 07 05 42.2 -0.4
baz=137
C16A Fuhringer Ranc 136.68 334 ⇓P PKPdf 07 05 42.4 -0.2
baz=137
D17A Six Diamond Ra 136.69 332 ⇓P PKPdf 07 05 43.0 +0.4
baz=137
E18A Harlowton 136.76 331 ⇑P PKPdf 07 05 42.9 +0.1
baz=137
F19A Roth Farm, Mol 136.80 330 ⇓P PKPdf 07 05 43.0 +0.1
baz=137
G20A Bridger 136.88 328 ⇑P PKPdf 07 05 42.5 -0.5
baz=137
A13A Flathead Natio 136.89 337 ⇓P PKPdf 07 05 42.4 -0.5
baz=137
B14A Marquette Ranc 136.89 335 ⇓P PKPdf 07 05 42.8 -0.2
baz=137
C15A Salmond Ranch, 137.07 334 ⇑P PKPdf 07 05 43.1 -0.2
baz=137
L24A Wheatland 137.10 323 ⇓P PKPdf 07 05 43.2 -0.4
baz=137
F18A Big Timber 137.15 330 ⇓P PKPdf 07 05 43.9 +0.4
baz=137
D16A Dana Ranch, Ca 137.18 333 ⇑P PKPdf 07 05 43.8 +0.3
baz=137
GCMT Greycliff 137.21 330 ePKPdf PKPdf 07 05 44.0 +0.4
H20A Greybull 137.26 328 ⇓P PKPdf 07 05 43.2 -0.5
baz=137
E17A Martinsdale 137.29 332 ⇓P PKPdf 07 05 43.4 -0.4
baz=137
I21A Big Trails, Te 137.34 326 ⇑P PKPdf 07 05 43.3 -0.6
baz=137
A12A Yaak River Ran 137.36 338 ⇑P PKPdf 07 05 44.0 +0.2
baz=137
B13A Whitefish 137.36 336 ⇓P PKPdf 07 05 43.9 0.0
baz=137
RLMT Red Lodge 137.48 329 ⇑P PKPdf 07 05 44.3 +0.2
baz=137
RLMT Red Lodge 137.48 329 ePKPdf PKPdf 07 05 44.6 +0.4
RLMT LR LR
comp=Z,2µm,20.0s,MS5.8
L23A Garrett 137.51 323 ⇑P PKPdf 07 05 44.1 -0.2
baz=137
HRY Holter Researc 137.54 333 ePKPdf PKPdf 07 05 43.6 -0.6
C14A Swan Lake 137.55 335 ⇑P PKPdf 07 05 44.3 +0.2
baz=137
YBMT Yellow Bay 137.59 335 ePKPdf PKPdf 07 05 44.7 +0.5
D15A Lincoln 137.60 334 ⇓P PKPdf 07 05 44.2 -0.1
baz=138
F17A Fitzpatrick Pl 137.60 331 ⇑P PKPdf 07 05 44.2 -0.1
baz=138
E16A East Helena 137.61 332 ⇓P PKPdf 07 05 44.4 +0.1
baz=138
BLMT Blacktail Moun 137.61 336 ePKPdf PKPdf 07 05 44.9 +0.6
K22A Casper 137.66 324 ⇑P PKPdf 07 05 44.1 -0.5
baz=138
I20A Worland 137.70 327 ⇓P PKPdf 07 05 44.7 +0.2
baz=138
O25A Wiggins 137.72 320 ⇑P PKPdf 07 05 44.6 -0.2
baz=138
JTMT Jette 137.79 336 ePKPdf PKPdf 07 05 44.5 -0.1
N24A Carr 137.79 321 ⇓P PKPdf 07 05 44.6 -0.3
baz=138
SLMT Seeley Lake 137.86 335 ePKPdf PKPdf 07 05 44.3 -0.5
SWMT Swartz Lake 137.86 335 ePKPdf PKPdf 07 05 44.6 -0.1
BSMT Bassoo Peak 137.91 336 ePKPdf PKPdf 07 05 44.5 -0.3
C13A Hot Springs 137.96 336 ⇓P PKPdf 07 05 44.8 -0.1
baz=138,SNR=9.3
D14A Greenough 137.99 334 ⇓P PKPdf 07 05 44.7 -0.3
baz=138,SNR=7.7
L22A Ellis Ranch, M 137.99 324 ⇑P PKPdf 07 05 45.2 0.0
baz=138
CHMT Chamberlain Mo 138.02 334 ePKPdf PKPdf 07 05 45.0 -0.1
G17A Pierce Place, 138.07 330 ⇑P PKPdf 07 05 45.7 +0.4
baz=138
K21A Alcova 138.08 325 ⇑P PKPdf 07 05 45.2 -0.1
baz=138
P25A Willow Gulch B 138.09 319 ⇓P PKPdf 07 05 45.4 -0.1
baz=138
E15A Deer Lodge 138.13 333 ⇑P PKPdf 07 05 44.8 -0.5
baz=138
F16A Kennard Place, 138.15 332 ⇓P PKPdf 07 05 45.8 +0.5
baz=138
BOZ Bozeman (W) 138.25 331 ⇓P PKPdf 07 05 46.1 +0.6
baz=138
BOZ Bozeman (W) 138.25 331 ePKIKP PKPdf 07 05 46.2 +0.7
BOZ MLR MLR
comp=Z,2µm,20.0s,MS5.8
C12B Naegeli Ranch, 138.30 337 ⇓P PKPdf 07 05 44.9 -0.6
baz=138
KVTX Kingsville 138.30 300 PFAKE 07 06 00.0 +14
KVTX LR LR
comp=Z,2µm,21.0s,MS5.8
O24A Longmont 138.32 320 ⇑P PKPdf 07 05 45.9 +0.1
baz=138
MSO Missoula 138.38 334 ⇓P PKPdf 07 05 45.5 -0.2
baz=138,SNR=9.3
MSO Missoula 138.38 334 ePKPdf PKPdf 07 05 45.5 -0.2
MSO LR LR
comp=Z,897nm,19.0s,MS5.5
D13A Huson 138.38 335 ⇓P PKPdf 07 05 45.5 -0.3
baz=138,SNR=14
N23A Red Feather La 138.40 322 ⇑P PKPdf 07 05 45.9 0.0
baz=138
LKWY Lake 138.44 329 PFAKE 07 06 00.0 +14
LKWY LR LR
comp=Z,3µm,20.0s,MS6.1
NEW Newport 138.46 338 ⇓P PKPdf 07 05 45.8 0.0
baz=138
NEW Newport 138.46 338 ePKIKP PKPdf 07 05 45.3 -0.5
NEW MLR MLR
comp=Z,2µm,19.0s
Q25A Bedland, Calha 138.47 318 ⇑P PKPdf 07 05 46.2 0.0
baz=138
YNR Norris Junctio 138.47 330 ePKPdf PKPdf 07 05 45.4 -0.6
M22A Cedar Creek Ra 138.48 323 ⇑P PKPdf 07 05 45.9 -0.2
baz=138
LRM Limekiln Ridge 138.50 332 ePKPdf PKPdf 07 05 45.5 -0.5
F15A Butte 138.50 332 ⇑P PKPdf 07 05 46.1 +0.1
baz=138,SNR=5.6
E14A Clinton 138.51 334 ⇓P PKPdf 07 05 46.2 +0.2
baz=138
P24A Kohler Place, 138.56 320 ⇓P PKPdf 07 05 46.6 +0.3
baz=138
L21A Rawlins 138.58 324 ⇑P PKPdf 07 05 45.4 -0.9
baz=138
G16A Moss Hill, Enn 138.64 331 ⇑P PKPdf 07 05 46.5 +0.2
baz=138
YMR Madison River 138.65 330 ePKPdf PKPdf 07 05 48.0 +1.7
H17A Grant Village 138.65 329 ⇓P PKPdf 07 05 46.2 -0.1
baz=138
RWWY Rawlins 138.66 324 ePKPdf PKPdf 07 05 45.8 -0.6
K20A Yellowstone Ra 138.67 326 ⇓P PKPdf 07 05 45.8 -0.6
baz=139
AMTX Amarillo 138.70 312 ⇑P PKPdf 07 05 46.0 -0.7
baz=139
AMTX Amarillo 138.70 312 PFAKE 07 06 00.0 +13
AMTX LR LR
comp=Z,2µm,20.0s,MS5.9
YFT Old Faithful 138.74 330 ePKPdf PKPdf 07 05 48.7 +2.2
I18A Diamond G Ranc 138.76 328 ⇓P PKPdf 07 05 46.3 -0.2
baz=139
H16A Russell Place, 138.76 330 ⇓P PKPdf 07 05 46.4 -0.1
baz=139
N22A Wattenberg Ran 138.76 322 ⇓P PKPdf 07 05 47.0 +0.3
baz=139
D12A Red Ives Fores 138.78 336 ⇑P PKPdf 07 05 46.3 -0.1
baz=139
E13A Victor 138.79 334 ⇑P PKPdf 07 05 46.3 -0.2
baz=139,SNR=8.0
O23A Lake Granby, G 138.79 321 ⇑P PKPdf 07 05 46.6 -0.1
baz=139
M21A Separation Pea 138.80 324 ⇑P PKPdf 07 05 46.4 -0.3
baz=139
K19A Absolon Red Bu 138.84 326 ⇑P PKPdf 07 05 46.0 -0.8
baz=139
ISCO Idaho Springs 138.84 320 ⇑P PKPdf 07 05 46.7 -0.1
baz=139
ISCO Idaho Springs 138.84 320 ePKIKP PKPdf 07 05 44.9 -1.9
ISCO MLR MLR
comp=Z,2µm,22.0s,MS5.8
R25A Fountain Ranch 138.91 317 ⇑P PKPdf 07 05 46.9 -0.1
baz=139
DLMT Dillon 138.91 332 ePKPdf PKPdf 07 05 47.0 +0.2
F14A Wisdom 138.92 333 ⇓P PKPdf 07 05 47.0 +0.2
baz=139
FLWY Flagg Ranch 138.94 329 ePKPdf PKPdf 07 05 47.5 +0.7
I17A Pilgrim Ck. 138.99 329 ⇓P PKPdf 07 05 47.6 +0.6
baz=139
JCT Junction City 139.00 305 ⇑P PKPdf 07 05 46.7 -0.7
baz=139
JCT Junction City 139.00 305 ePKIKP PKPdf 07 05 46.4 -1.0
JCT MLR MLR
comp=Z,1µm,20.0s,MS5.7
G15A Dillon 139.01 332 ⇑P PKPdf 07 05 47.7 +0.8
baz=139,SNR=15
Q24A Divide 139.03 319 ⇑P PKPdf 07 05 47.3 +0.1
baz=139
L20A Wamsutter 139.10 325 ⇓P PKPdf 07 05 46.9 -0.3
baz=139
B08A Colville Reser 139.14 340 ⇓P PKPdf 07 05 47.1 0.0
baz=139
J18A Kendall Valley 139.20 328 ⇓P PKPdf 07 05 47.5 +0.1
baz=139
O22A Kremmling 139.21 322 ⇓P PKPdf 07 05 47.5 0.0
baz=139
LOHW Long Hollow 139.22 329 ePKPdf PKPdf 07 05 46.8 -0.6
P23A Jefferson 139.23 320 ⇑P PKPdf 07 05 48.1 +0.5
baz=139
C09A Chrisman Ranch 139.26 339 ⇓P PKPdf 07 05 47.6 +0.2
baz=139
BW06 Boulder Array 139.26 327 ⇑P PKPdf 07 05 46.7 -0.8
baz=139
BW06 Boulder Array 139.26 327 PFAKE 07 06 00.0 +13
BW06 LR LR
comp=Z,4µm,20.0s,MS6.1
PDAR Pinedale Array 139.26 327 PKP PKPdf 07 05 47.2 -0.2
comp=Z,7.9nm,1.1s,baz=64,slow=3.4,SNR=31
S25A Robets Cordova 139.27 317 ⇑P PKPdf 07 05 48.0 +0.3
baz=139
M20A Sweetwater, Wa 139.35 324 ⇑P PKPdf 07 05 47.5 -0.2
baz=139
F13A Darby 139.36 334 ⇓P PKPdf 07 05 47.8 +0.2
baz=139,SNR=8.9
G14A Jackson 139.40 333 ⇑P PKPdf 07 05 48.4 +0.8
baz=139
SNOW Snow King Moun 139.41 329 ePKPdf PKPdf 07 05 46.4 -1.3
R24A Sanders Place, 139.41 318 ⇓P PKPdf 07 05 48.1 +0.2
baz=139
N21A Black Mountain 139.43 323 ⇑P PKPdf 07 05 47.6 -0.2
baz=139
MCMT McKenzie Canyo 139.44 332 ePKPdf PKPdf 07 05 47.7 -0.1
J17A Brown Place, J 139.46 328 ⇓P PKPdf 07 05 48.1 +0.2
baz=139
I16A Newdale 139.48 330 ⇓P PKPdf 07 05 48.3 +0.5
baz=139
H15A Lima 139.50 331 ⇓P PKPdf 07 05 48.2 +0.4
baz=139,SNR=9.1
Q23A Hartsel 139.50 319 ⇓P PKPdf 07 05 48.0 0.0
baz=139
REDW Red Top Meadow 139.53 328 ePKPdf PKPdf 07 05 48.1 +0.1
T25A Trinidad 139.53 316 ⇓P PKPdf 07 05 48.1 0.0
baz=139
K18A Toltan Ranch, 139.61 327 ⇑P PKPdf 07 05 47.8 -0.3
baz=140
W27A Bowe Ranch, En 139.62 313 ⇓P PKPdf 07 05 48.0 -0.3
baz=140
B06A Marblemount 139.68 342 ⇓P PKPdf 07 05 47.5 -0.5
baz=140
P22A Eagle 139.68 321 ⇑P PKPdf 07 05 48.7 +0.4
baz=140
O21A Pagoda 139.74 322 ⇓P PKPdf 07 05 48.3 -0.1
baz=140
OD2 Odessa Site #2 139.76 339 P PKPdf 07 05 47.9 -0.3
F12A Elk City 139.78 335 ⇓P PKPdf 07 05 47.9 -0.5
baz=140
V26A Tequesquite Ra 139.79 314 ⇑P PKPdf 07 05 47.6 -1.1
baz=140
S24A Bouchin Ranch, 139.80 317 ⇓P PKPdf 07 05 47.9 -0.8
baz=140
N20A Spence Gulch, 139.81 324 ⇓P PKPdf 07 05 48.5 -0.1
baz=140
H14A Leadore 139.84 332 ⇓P PKPdf 07 05 48.3 -0.2
baz=140,SNR=6.3
X27A F and S Farms, 139.84 312 ⇓P PKPdf 07 05 48.4 -0.4
baz=140
G13A Cobalt 139.86 333 ⇑P PKPdf 07 05 48.3 -0.2
baz=140,SNR=13
I15A Monteview 139.88 330 ⇓P PKPdf 07 05 48.6 0.0
baz=140
M19A Rock Springs 139.89 325 ⇑P PKPdf 07 05 48.5 -0.2
baz=140
MSTX Muleshoe 139.91 311 ⇑P PKPdf 07 05 48.5 -0.5
baz=140
U25A Circle Dot Ran 139.92 315 ⇑P PKPdf 07 05 48.6 -0.3
baz=140
SDCO Great Sand Dun 139.94 318 ⇓P PKPdf 07 05 49.0 +0.1
baz=140
SDCO Great Sand Dun 139.94 318 PFAKE 07 06 00.0 +11
SDCO LR LR
comp=Z,2µm,21.0s,MS5.8
J16A Bone 139.98 329 ⇑P PKPdf 07 05 49.0 +0.2
baz=140
K17A Gardner Place, 140.00 328 ⇑P PKPdf 07 05 48.7 -0.2
baz=140
SMCO Snowmass 140.06 321 ePKPdf PKPdf 07 05 49.0 0.0
AHID Auburn Hatcher 140.08 328 PFAKE 07 06 00.0 +11
AHID LR LR
comp=Z,3µm,20.0s,MS6.0
JCW Jim Creek 140.10 343 ePKPdf PKPdf 07 05 47.1 -1.7
W26A Owens Ranch, T 140.12 313 ⇑P PKPdf 07 05 48.8 -0.5
baz=140
D08A Wollman Farm, 140.12 339 ⇓P PKPdf 07 05 49.1 +0.2
baz=140
ETW Entiat 140.13 341 ePKPdf PKPdf 07 05 47.6 -1.3
P21A Newcastle 140.15 321 ⇓P PKPdf 07 05 49.3 +0.1
baz=140
Q22A Crested Butte, 140.21 320 ⇓P PKPdf 07 05 49.6 +0.2
baz=140
Y27A Causey 140.24 311 ⇓P PKPdf 07 05 49.0 -0.5
baz=140
O20A White River Ci 140.25 323 ⇑P PKPdf 07 05 48.4 -1.0
baz=140
H13A Challis 140.28 333 ⇑P PKPdf 07 05 49.6 +0.3
baz=140,SNR=5.9
K16A Soda Springs 140.29 329 ⇑P PKPdf 07 05 49.0 -0.3
baz=140
S23A Nye Farm, Mont 140.29 318 ⇓P PKPdf 07 05 49.6 +0.1
baz=140
N19A John Jarvie Ra 140.31 324 ⇑P PKPdf 07 05 48.9 -0.6
baz=140
E09A Wood Farm, Sta 140.31 338 ⇑P PKPdf 07 05 49.4 +0.2
baz=140
V25A Rancho No Teng 140.35 315 ⇑P PKPdf 07 05 49.6 -0.1
baz=140
I14A Mackay 140.40 331 ⇓P PKPdf 07 05 49.3 -0.3
baz=140,SNR=17
X26A CR and CF Fran 140.41 312 ⇑P PKPdf 07 05 49.5 -0.4
baz=140
F10A Beach Ranch, E 140.41 337 ⇑P PKPdf 07 05 49.4 -0.1
baz=140
L17A Cokeville 140.43 327 ⇑P PKPdf 07 05 49.4 -0.2
baz=140,SNR=8.3
M18A Lyman 140.45 326 ⇑P PKPdf 07 05 49.4 -0.3
baz=140
R22A Saguache, Gunn 140.48 319 ⇓P PKPdf 07 05 49.9 +0.1
baz=140
U24A Moreno Valley 140.51 316 ⇑P PKPdf 07 05 49.0 -1.0
baz=140
Z27A Tatum 140.54 310 ⇓P PKPdf 07 05 49.6 -0.5
baz=140
W25A X Bar L Ranch, 140.55 314 ⇑P PKPdf 07 05 50.3 +0.3
baz=140
H12A Diamond D Ranc 140.56 333 ⇓P PKPdf 07 05 49.7 -0.1
baz=140,SNR=9.0
Q21A Lamborn Mesa, 140.64 321 ⇓P PKPdf 07 05 50.0 -0.2
baz=140
O19A Miners Draw (B 140.66 324 ⇓P PKPdf 07 05 49.5 -0.6
baz=141
T23A Casias Ranch, 140.69 317 ⇑P PKPdf 07 05 49.3 -0.9
baz=141
Y26A Elida 140.71 312 ⇓P PKPdf 07 05 50.0 -0.4
baz=141
I13A Wildhorse Cree 140.72 332 ⇓P PKPdf 07 05 50.1 0.0
baz=141
P20A De Beque 140.74 322 ⇓P PKPdf 07 05 49.8 -0.5
baz=141
M17A Scullys Gap (B 140.75 326 ⇓P PKPdf 07 05 49.8 -0.5
baz=141
L16A Fish Haven 140.78 327 ⇓P PKPdf 07 05 50.3 0.0
baz=141
S22A 4UR Ranch, Cre 140.81 319 ⇓P PKPdf 07 05 49.8 -0.7
baz=141
V24A Rampart Ranch, 140.86 315 ⇑P PKPdf 07 05 50.1 -0.5
baz=141
K15A Arbon 140.87 329 ⇓P PKPdf 07 05 50.8 +0.4
baz=141
E07A Sunnyside 140.88 339 ⇑P PKPdf 07 05 50.5 +0.2
baz=141
J14A Carey 140.88 331 ⇓P PKPdf 07 05 50.1 -0.3
baz=141,SNR=8.4
LNOR Lincton Mounta 140.90 337 ePKPdf PKPdf 07 05 49.3 -1.0
R21A Cimarron 140.91 320 ⇓P PKPdf 07 05 50.8 +0.2
baz=141
HAWA Hanford 140.91 339 ePKPdf PKPdf 07 05 50.4 +0.1
HAWA LR LR
comp=Z,1µm,20.0s,MS5.6
RSW Rattlesnake Hi 140.93 339 ePKPdf PKPdf 07 05 51.5 +1.1
P19A Cripple Cowboy 141.00 323 ⇑P PKPdf 07 05 51.0 +0.2
baz=141
Q20A Ridgley Place, 141.01 321 ⇓P PKPdf 07 05 50.9 +0.1
baz=141
D05A Enumclaw 141.02 342 ⇓P PKPdf 07 05 50.6 0.0
baz=141
X25A Clemmons Ranch 141.03 313 ⇓P PKPdf 07 05 50.7 -0.3
baz=141
328A Wristen Ranch, 141.05 307 ⇑P PKPdf 07 05 51.0 -0.1
baz=141,SNR=7.4
HLID Hailey 141.13 332 ⇑P PKPdf 07 05 50.8 -0.1
baz=141
HLID Hailey 141.13 332 ePKPdf PKPdf 07 05 49.9 -1.0
HLID LR LR
comp=Z,2µm,20.0s,MS5.9
Z26A Caprock 141.13 311 ⇑P PKPdf 07 05 50.5 -0.7
baz=141,SNR=8.2
J13A Cove Ranch, Pi 141.14 331 ⇑P PKPdf 07 05 51.1 +0.2
baz=141
HWUT Hardware Ranch 141.14 327 PFAKE 07 06 00.0 +9.1
HWUT LR LR
comp=Z,2µm,19.0s,MS5.9
227A Bennet, Jal 141.16 309 ⇓P PKPdf 07 05 50.7 -0.6
baz=141
U23A El Rito 141.18 316 ⇑P PKPdf 07 05 50.9 -0.2
baz=141
O18A Roosevelt 141.19 324 ⇓P PKPdf 07 05 50.6 -0.5
baz=141
N17A Moffit Pass 141.21 326 ⇑P PKPdf 07 05 51.3 +0.3
baz=141
428A Kincaid Ranch, 141.21 306 ⇑P PKPdf 07 05 51.0 -0.4
baz=141,SNR=9.7
W24A Lazy 6 Ranch, 141.22 314 ⇑P PKPdf 07 05 50.9 -0.4
baz=141
T22A Edith 141.27 318 ⇓P PKPdf 07 05 51.6 +0.3
baz=141
I12A Atlanta 141.28 333 ⇑P PKPdf 07 05 51.7 +0.6
baz=141,SNR=10.0
L15A Malad City 141.29 328 ⇓P PKPdf 07 05 51.6 +0.4
baz=141
K14A Jones Ranch, D 141.30 330 ⇑P PKPdf 07 05 51.3 +0.2
baz=141,SNR=7.9
Y25A Mesa, Roswell 141.35 312 ⇓P PKPdf 07 05 51.4 -0.2
baz=141
LON Longmire 141.35 341 ePKPdf PKPdf 07 05 51.0 -0.1
NLWA Neilton Lookou 141.38 344 PFAKE 07 06 00.0 +8.8
NLWA LR LR
comp=Z,2µm,19.0s,MS5.9
126A Clayton Basin, 141.44 310 ⇓P PKPdf 07 05 51.3 -0.5
baz=141
S21A Coal Bank Pass 141.48 319 ⇓P PKPdf 07 05 51.8 +0.2
baz=141
V23A Ortiz Mt. (NFS 141.48 316 ⇑P PKPdf 07 05 52.5 +0.7
baz=141
528A Cox Ranch, San 141.51 306 ⇓P PKPdf 07 05 51.7 -0.3
baz=141,SNR=14
R20A Redvale 141.53 320 ⇓P PKPdf 07 05 51.9 +0.2
baz=141,SNR=10
X24A Lazy VL Ranch, 141.57 313 ⇓P PKPdf 07 05 51.9 0.0
baz=142
N16A Rees Ranch, Co 141.57 326 ⇓P PKPdf 07 05 51.6 -0.1
baz=142
327A Balmorhea Ranc 141.59 308 ⇑P PKPdf 07 05 51.3 -0.7
baz=142
Q19A Hogan Spring (141.60 322 ⇓P PKPdf 07 05 52.0 +0.2
baz=142,SNR=15
G08A Pilot Rock 141.65 338 ⇓P PKPdf 07 05 52.4 +0.7
baz=142,SNR=25
O17A Robinson Place 141.66 325 ⇓P PKPdf 07 05 51.9 0.0
baz=142,SNR=6.6
Z25A Roswell 141.67 311 ⇑P PKPdf 07 05 52.2 +0.1
baz=142
PV01 Paradox Valley 141.69 321 ePKPdf PKPdf 07 05 47.0 -5.0
T21A Navajo Lake 141.70 318 ⇑P PKPdf 07 05 52.2 +0.1
baz=142
L14A Malta 141.71 329 ⇓P PKPdf 07 05 52.1 +0.1
baz=142
M15A Larsen Ranch, 141.71 328 ⇑P PKPdf 07 05 52.2 +0.2
baz=142
427A Hayter Ranch, 141.73 307 ⇓P PKPdf 07 05 52.2 -0.1
baz=142
S20A Disappointment 141.74 320 ⇑P PKPdf 07 05 52.3 +0.2
baz=142
P18A Preston Nutter 141.75 324 ⇑P PKPdf 07 05 52.0 0.0
baz=142,SNR=21
226A Malaga, Loving 141.76 309 ⇑P PKPdf 07 05 51.9 -0.5
baz=142,SNR=7.4
W23A Werner Place, 141.77 315 ⇓P PKPdf 07 05 52.1 -0.2
baz=142
628A Black Gap, Mar 141.85 305 ⇓P PKPdf 07 05 51.9 -0.7
baz=142,SNR=8.6
V22A San Miguel Ran 141.89 316 ⇓P PKPdf 07 05 52.9 +0.5
baz=142
Y24A Capitan 141.89 313 ⇓P PKPdf 07 05 52.5 -0.1
baz=142,SNR=13
MFID Camas Ranch 141.89 333 ⇑P PKPdf 07 05 52.4 +0.2
baz=142
326A Caldwell Ranch 141.99 308 ⇑P PKPdf 07 05 51.9 -0.9
baz=142
R19A Curley Farm, L 142.02 321 ⇓P PKPdf 07 05 52.5 -0.1
baz=142,SNR=14
Q18A Rafter H Ranch 142.03 323 ⇓P PKPdf 07 05 52.4 -0.2
baz=142
E03A Lebam 142.06 343 ⇓P PKPdf 07 05 52.4 0.0
baz=142
O16A Springville 142.08 325 ⇑P PKPdf 07 05 52.1 -0.5
baz=142
ANMO Albuquerque 142.10 315 ePKPdf PKPpre 07 05 48.0
ANMO LR LR
comp=Z,2µm,19.0s,MS5.8

ANMO Albuquerque 142.10 315 PKhKP PKPpre 07 05 47.8
comp=Z,2.2nm,0.9s,baz=73,slow=3.4,SNR=5.7
ANMO Albuquerque 142.10 315 PKHKP PKPpre 07 05 47.8
ANMO pmax pmax
comp=Z,2.0nm,0.9s
X23A Hourglass Bar 142.10 314 ⇑P PKPdf 07 05 53.2 +0.3
baz=142,SNR=11
U21A Nageezi 142.10 318 ⇓P PKPdf 07 05 53.1 +0.2
baz=142,SNR=12
Z24A Sheeppen Canyo 142.13 312 ⇓P PKPdf 07 05 53.4 +0.4
baz=142,SNR=11
P17A Butcher Ranch, 142.14 324 ⇓P PKPdf 07 05 52.6 -0.2
baz=142
N15A Stansbury Isla 142.16 327 ⇑P PKPdf 07 05 52.4 -0.4
baz=142
527A Woodward Ranch 142.18 306 ⇑P PKPdf 07 05 53.1 0.0
baz=142
MVCO Mesa Verde 142.20 319 ⇓P PKPdf 07 05 53.5 +0.5
baz=142
MVCO Mesa Verde 142.20 319 PFAKE 07 06 00.0 +7.0
MVCO LR LR
comp=Z,2μm,21.0s,MS5.8
SRU San Rafael 142.25 323 ⇓P PKPdf 07 05 53.1 +0.1
baz=142,SNR=11
627A Terlingua Ranc 142.27 305 ⇑P PKPdf 07 05 53.5 +0.2
baz=142,SNR=14
F04A Amboy 142.28 342 ⇑P PKPdf 07 05 52.5 -0.3
baz=142
S19A Harvey Farm, M 142.28 320 ⇓P PKPdf 07 05 53.1 0.0
baz=142
225A Deer Hill, Car 142.29 310 ⇑P PKPdf 07 05 52.7 -0.6
baz=142
426A McDonald Obser 142.30 307 ⇑P PKPdf 07 05 53.4 +0.1
baz=142,SNR=15
G06A Carlson Farm, 142.30 339 ⇓P PKPdf 07 05 52.6 -0.3
baz=142
W22A Albuquerque 142.31 315 ⇑P PKPdf 07 05 53.7 +0.5
baz=142
Y23A Lovelace Mesa, 142.33 313 ⇑P PKPdf 07 05 53.5 +0.2
baz=142,SNR=30
R18A Canyonlands Na 142.34 322 ⇓P PKPdf 07 05 53.0 -0.2
baz=142,SNR=13
BGU Big Grassy Mou 142.40 328 ePKPdf PKPdf 07 05 53.6 +0.4
V21A Milan 142.44 317 ⇓P PKPdf 07 05 53.8 +0.3
baz=142
124A Stringfield Ra 142.49 311 ⇓P PKPdf 07 05 53.7 0.0
baz=142,SNR=9.2
VFP Flag Point 142.51 340 P PKPdf 07 05 54.2 +1.0
TMUT Trail Mountain 142.53 324 ePKPdf PKPdf 07 05 51.8 -1.7
TXAR Lajitas Array 142.54 305 PKhKP PKPpre 07 05 48.5
comp=Z,1.2nm,0.9s,baz=72,slow=2.9,SNR=11
TXAR PKP PKPdf 07 05 54.0 +0.1
comp=Z,6.3nm,0.9s,baz=79,slow=3.5,SNR=15
O15A The Old Anders 142.56 326 ⇓P PKPdf 07 05 54.1 +0.6
baz=142
NLU North Lily Min 142.57 326 ePKPdf PKPdf 07 05 49.7 -3.9
P16A Fountain Green 142.58 325 ⇓P PKPdf 07 05 54.0 +0.4
baz=142
526A Mary Lane Ranc 142.59 306 ⇓P PKPdf 07 05 53.8 0.0
baz=142,SNR=37
F03A Seaside 142.62 343 ⇓P PKPdf 07 05 54.0 +0.6
baz=142
BNM Barren Site 142.63 314 ePKPdf PKPdf 07 05 49.5 -4.3
U20A Newcomb 142.70 318 ⇓P PKPdf 07 05 54.0 +0.1
baz=143
X22A Bernardo 142.72 314 ⇓P PKPdf 07 05 54.2 +0.2
baz=143
325A Bean Ranch, Si 142.73 309 ⇑P PKPdf 07 05 54.0 -0.1
baz=143
Q16A Castle Valley 142.76 324 ⇓P PKPdf 07 05 54.2 +0.3
baz=143
T19A Beclabito 142.76 319 ⇓P PKPdf 07 05 54.3 +0.4
baz=143,SNR=20
Z23A Rita Site, Whi 142.79 312 ⇑P PKPdf 07 05 54.8 +0.6
baz=143,SNR=8.7
DUG Dugway 142.81 327 ⇑P PKPdf 07 05 54.4 +0.4
baz=143,SNR=7.9
DUG Dugway 142.81 327 ePKIKP PKPdf 07 05 51.3 -2.7
DUG MLR MLR
comp=Z,2μm,20.0s,MS5.9
R17A Hanksville Air 142.82 323 ⇑P PKPdf 07 05 54.3 +0.3
baz=143,SNR=16
626A Big Bend Ranch 142.83 305 ⇑P PKPdf 07 05 53.4 -0.9
baz=143,SNR=7.1
W21A San Fidel 142.83 316 ⇑P PKPdf 07 05 54.2 +0.1
baz=143,SNR=6.2
S18A Hurst Farm, Bl 142.85 321 ⇑P PKPdf 07 05 54.5 +0.4
baz=143,SNR=8.2
LAZ Ladron 142.86 314 ePKPdf PKPdf 07 05 50.8 -3.5
LENM Lemitar 142.87 314 ePKPdf PKPdf 07 05 50.1 -4.1
I07A Izee 142.88 337 ⇓P PKPdf 07 05 54.5 +0.5
baz=143,SNR=11
MNTX Cornudas Mount 142.90 309 ⇓P PKPdf 07 05 54.0 -0.4
baz=143,SNR=43
MNTX Cornudas Mount 142.90 309 PFAKE 07 06 10.0 +16
MNTX LR LR
comp=Z,438nm,20.0s,MS5.2
VIPM Ingram Point 142.92 339 P PKPdf 07 05 55.0 +1.0
G04A Mulino 142.94 341 ⇑P PKPdf 07 05 53.6 -0.4
baz=143
P15A Leamington 142.95 325 ⇑P PKPdf 07 05 54.5 +0.3
baz=143
Y22A Socorro 142.98 314 ⇑P PKPdf 07 05 53.5 -1.0
baz=143,SNR=18
425A Indio Mountain 142.99 308 ⇑P PKPdf 07 05 53.5 -1.0
baz=143,SNR=22
V20A Brimhall 143.00 317 ⇑P PKPdf 07 05 53.4 -1.0
baz=143,SNR=12
J08A Circle Bar Ran 143.07 335 ⇑P PKPdf 07 05 54.0 -0.4
baz=143
324A Moseley Ranch, 143.09 309 ⇑P PKPdf 07 05 54.5 -0.3
baz=143,SNR=7.1
T18A Mexican Hat 143.12 320 ⇓P PKPdf 07 05 54.5 -0.1
baz=143,SNR=28
123A Bell Site, Whi 143.12 311 ⇑P PKPdf 07 05 53.8 -1.0
baz=143
U19A Dine' College, 143.20 319 ⇓P PKPdf 07 05 54.0 -0.8
baz=143
X21A Alamocita Cree 143.29 315 ⇑P PKPdf 07 05 54.7 -0.3
baz=143,SNR=33
Z22A Elephant Butte 143.33 313 ⇑P PKPdf 07 05 54.4 -0.7
baz=143,SNR=7.6
R16A Teasdale 143.36 323 ⇑P PKPdf 07 05 53.9 -1.1
baz=143,SNR=38
P14A Drum Mountains 143.37 326 ⇓P PKPdf 07 05 54.1 -0.8
baz=143,SNR=8.3
S17A Black Ridge (B 143.38 322 ⇓P PKPdf 07 05 53.4 -1.6
baz=143,SNR=8.2
Q15A Fillmore 143.40 325 ⇑P PKPdf 07 05 53.7 -1.3
baz=143,SNR=6.4
W20A Ramah 143.40 316 ⇓P PKPdf 07 05 52.0 -3.1
baz=143,SNR=15
V19A Window Rock 143.43 318 ⇑P PKPdf 07 05 52.4 -2.8
baz=143,SNR=5.5
Y21A Point of Rocks 143.44 314 ⇑P PKPdf 07 05 52.8 -2.4
baz=143,SNR=15
O13A Hicks Ranch, I 143.48 328 ⇑P PKPdf 07 05 52.8 -2.4
baz=143
223A Chaparral, Ant 143.54 310 ⇑P PKPdf 07 05 52.9 -2.6
baz=144
U18A Rough Rock, Ch 143.55 319 ⇓P PKPdf 07 05 52.4 -3.0
baz=143,SNR=18
MSU Marysvale 143.62 324 ePKPdf PKPdf 07 05 54.0 -1.4
122A Conniff Cattle 143.63 312 ⇑P PKPdf 07 05 53.6 -2.0
baz=144,SNR=6.4
X20A Quemado 143.73 316 ⇓P PKPdf 07 05 53.4 -2.4
baz=144,SNR=47
COR Corvallis 143.76 341 PFAKE 07 06 10.0 +15
COR LR LR
comp=Z,1μm,20.0s,MS5.7
O12A Currie 143.78 328 ⇑P PKPdf 07 05 53.3 -2.3
baz=144,SNR=14
T17A Navajo Res., N 143.78 321 ⇓P PKPdf 07 05 52.9 -2.9
baz=144
S16A Weppner Ranch, 143.80 322 ⇓P PKPdf 07 05 52.9 -2.9
baz=144,SNR=27
Z21A St. Cloud Mine 143.81 313 ⇑P PKPdf 07 05 53.9 -2.0
baz=144,SNR=10
R15A Junction 143.88 324 ⇑P PKPdf 07 05 54.1 -1.8
baz=144
WVOR Wild Horse Val 143.90 335 ePKPdf PKPdf 07 05 54.0 -1.8
WVOR LR LR
comp=Z,2μm,20.0s,MS5.9
Q14A Sevier Lake (B 143.91 326 ⇓P PKPdf 07 05 54.0 -2.0
baz=144,SNR=27
P13A Bates Ranch, G 143.98 327 ⇑P PKPdf 07 05 54.0 -2.0
baz=144,SNR=21
Y20A Horse Springs, 143.99 315 ⇑P PKPdf 07 05 54.2 -2.1
baz=144,SNR=45
222A Williams Famil 144.00 311 ⇓P PKPdf 07 05 54.3 -2.1
baz=144,SNR=6.8
V18A Ganado 144.02 318 ⇑P PKPdf 07 05 54.3 -2.0
baz=144,SNR=26
T16A Glen Canyon Da 144.22 321 ⇑P PKPdf 07 05 54.2 -2.3
baz=144,SNR=8.4
W18A Petrified Fore 144.24 317 ⇓P PKPdf 07 05 54.3 -2.3
baz=144
R14A James Farms, M 144.25 324 ⇓P PKPdf 07 05 55.1 -1.5
baz=144,SNR=5.5
S15A Panguitch 144.28 323 ⇑P PKPdf 07 05 55.1 -1.6
baz=144,SNR=12
121A Cookes Peak, D 144.29 312 ⇑P PKPdf 07 05 55.5 -1.3
baz=144,SNR=52
X19A St. Johns 144.33 316 ⇓P PKPdf 07 05 55.3 -1.6
baz=144,SNR=21
Q13A Wheeler Ranch, 144.34 326 ⇓P PKPdf 07 05 55.5 -1.2
baz=144,SNR=60
P12A McGill 144.44 328 ⇓P PKPdf 07 05 55.7 -1.1
baz=144,SNR=18
U16A Tuba City 144.52 320 ⇑P PKPdf 07 05 56.2 -0.9
baz=144,SNR=98
221A Mesquite Ranch 144.54 311 ⇑P PKPdf 07 05 56.5 -0.7
baz=144,SNR=34
K05A Summer Lake 144.56 337 ⇑P PKPdf 07 05 56.0 -0.9
baz=144
Z20A Nine Sixteen R 144.57 314 ⇑P PKPdf 07 05 56.4 -0.9
baz=144,SNR=54
Y19A Nutrioso 144.57 315 ⇓P PKPdf 07 05 56.4 -0.8
baz=144,SNR=72
V17A Tonalea, Kykot 144.63 319 ⇓P PKPdf 07 05 56.4 -0.9
baz=144,SNR=139
S14A Cedar City 144.70 324 ⇓P PKPdf 07 05 56.5 -0.9
baz=145,SNR=27
Q12A Willow Creek R 144.72 327 ⇑P PKPdf 07 05 56.8 -0.5
baz=145,SNR=66
X18A Snowflake 144.72 317 ⇑P PKPdf 07 05 56.4 -1.1
baz=145,SNR=20
T15A Red Dirt Ranch 144.73 322 ⇑P PKPdf 07 05 55.6 -1.8
baz=145,SNR=47
P11A Circle Ranch, 144.82 329 ⇓P PKPdf 07 05 57.1 -0.4
baz=145,SNR=30
ARUT Antelope Range 144.84 324 ePKPdf PKPdf 07 05 57.4 -0.1
R13A O'Grain Ranch, 144.86 325 ⇑P PKPdf 07 05 57.4 -0.2
baz=145,SNR=88
BMN Battle Mountai 144.88 331 ePKPdf PKPdf 07 05 57.1 -0.5
BMN LR LR
comp=Z,2μm,20.0s,MS5.9
120A U Bar Ranch, L 144.90 313 ⇓P PKPdf 07 05 57.1 -0.7
baz=145,SNR=39
W17A Winslow 144.91 318 ⇓P PKPdf 07 05 57.1 -0.7
baz=145,SNR=6.4
Z19A T-Link Ranch, 144.95 314 ⇑P PKPdf 07 05 57.2 -0.7
baz=145
CCUT Cedar City 144.96 324 ePKPdf PKPdf 07 05 57.3 -0.5
MOD Modoc 145.03 336 ePKPdf PKPdf 07 05 57.4 -0.4
MOD LR LR
comp=Z,2μm,20.0s,MS5.9
U15A North Rim 145.06 321 ⇓P PKPbc 07 05 57.7 +0.3
baz=145,SNR=177
WUAZ Wupatki 145.07 319 ⇓P PKPbc 07 05 57.8 +0.3
baz=145,SNR=89
WUAZ Wupatki 145.07 319 ePKPdf PKPdf 07 05 57.7 -0.3
WUAZ LR LR
comp=Z,2μm,22.0s,MS5.8
R12A Pony Springs, 145.11 326 ⇓P PKPbc 07 05 57.8 +0.3
baz=145,SNR=53
T14A Hurricane 145.12 323 ⇓P PKPbc 07 05 57.5 -0.1
baz=145,SNR=32
220A Playas Peak, P 145.15 312 ⇑P PKPbc 07 05 58.1 +0.3
baz=145,SNR=30
Y18A Canyon Day Jun 145.21 316 ⇓P PKPbc 07 05 57.8 -0.1
baz=145,SNR=50
S13A Holt Ranch, En 145.22 324 ⇑P PKPbc 07 05 58.3 +0.4
baz=145,SNR=48
VSP Spence Mountai 145.28 338 P PKPbc 07 05 58.1 +0.2
Q11A Duckwater 145.30 328 ⇑P PKPbc 07 05 58.2 +0.1
baz=145,SNR=66
V15A Kaibab Nationa 145.38 321 ⇑P PKPbc 07 05 58.9 +0.4
baz=145,SNR=90
X17A Forest Lakes 145.41 317 ⇑P PKPbc 07 05 59.1 +0.5
baz=145,SNR=82
HUMO Hull Mountain 145.41 340 ePKPdf PKPdf 07 05 58.0 -0.4
HUMO LR LR
comp=Z,2μm,21.0s,MS5.8
W16A Flagstaff 145.43 319 ⇑P PKPbc 07 05 59.0 +0.4
baz=145,SNR=74
320A Kipp Ranch, An 145.43 311 ⇑P PKPbc 07 05 59.2 +0.4
baz=145,SNR=28
BUOR Burton Butte 145.45 338 P PKPbc 07 05 58.8 +0.4
Z18A Geronimo 145.60 315 ⇑P PKPdf 07 05 59.3 +0.3
baz=146
U14A Mt Trumbull 145.61 322 ⇓P PKPdf 07 05 59.6 +0.6
baz=146,SNR=64
KEBM Edson Butte 145.63 341 ePKPdf PKPdf 07 05 59.1 +0.3
R11A Troy Canyon, C 145.63 327 ⇓P PKPdf 07 05 59.0 +0.1
baz=146,SNR=42
219A White Tail Can 145.63 313 ⇓P PKPdf 07 05 59.7 +0.5
baz=146,SNR=58
T13A Saint George 145.63 324 ⇓P PKPdf 07 05 60.0 +1.0
baz=146,SNR=163
Q10A Clear Creek Ra 145.70 328 ⇑P PKPdf 07 05 59.4 +0.4
baz=146,SNR=11
S12A Delamar Landin 145.76 325 ⇑P PKPdf 07 06 00.3 +1.1
baz=146,SNR=35
X16A Lo Mia Camp, P 145.78 318 ⇓P PKPdf 07 06 00.6 +1.3
baz=146,SNR=65
Z17A San Carlos Hig 145.78 315 ⇓P PKPdf 07 06 00.2 +0.9
baz=146,SNR=14
Y17A Roosevelt 145.81 316 ⇑P PKPdf 07 06 00.2 +0.8
baz=146,SNR=40
W15A Wilkins 145.85 320 ⇑P PKPdf 07 06 00.3 +0.9
baz=146,SNR=18
319A Douglas 145.97 312 ⇓P PKPdf 07 06 01.0 +1.3
baz=146
R10A Warm Springs 146.05 328 ⇑P PKPdf 07 06 00.7 +1.1
baz=146,SNR=24
U13A Pakoon Wash 146.08 323 ⇑P PKPdf 07 06 01.0 +1.2
baz=146,SNR=30
V14A Boquillas Ranc 146.08 321 ⇑P PKPdf 07 06 00.9 +1.1
baz=146,SNR=54
YBH Yreka Blue Hor 146.09 338 PKPbc PKPbc 07 06 00.1 -0.4
comp=Z,29nm,1.2s,baz=49,slow=4.5,SNR=15
YBH Yreka Blue Hor 146.09 338 ePKP2 PKPab 07 05 59.4 -1.6
YBH MLR MLR
comp=Z,2μm,19.0s
Y16A Circle Bar Ran 146.13 317 ⇓P PKPdf 07 06 00.7 +0.7
baz=146,SNR=35
KBO Bosley Butte 146.19 341 ePKPdf PKPdf 07 05 59.6 -0.2
RKT Rikitea 146.21 186 eLR LR 07 53 53.0
comp=Z,1μm,24.2s
218A Dragon 146.21 313 ⇑P PKPdf 07 06 00.7 +0.5
baz=146,SNR=48
S11A Rachel 146.23 326 ⇓P PKPdf 07 06 01.0 +1.0
baz=146,SNR=12
X15A Humboldt 146.26 319 ⇑P PKPdf 07 06 00.9 +0.7
baz=146,SNR=64
T12A Moapa 146.31 324 ⇓P PKPdf 07 06 01.2 +1.1
baz=146,SNR=6.2
W14A Seligman 146.34 321 ⇓P PKPdf 07 06 02.0 +1.7
baz=146,SNR=86
117A Oracle 146.38 315 ⇓P PKPdf 07 06 01.0 +0.6
baz=146,SNR=25
U12A Valley of Fire 146.41 324 ⇓P PKPdf 07 06 01.3 +0.9
baz=146,SNR=6.8
Z16A Peralta Trail, 146.41 316 ⇑P PKPdf 07 06 01.2 +0.8
baz=146,SNR=28
PAHR Pah Rah Range 146.45 333 ePKPdf PKPdf 07 06 00.8 +0.6
318A Bisbee 146.46 312 ⇑P PKPdf 07 06 01.8 +1.3
baz=146
V13A Grand Canyon W 146.47 322 ⇓P PKPdf 07 06 02.1 +1.6
baz=146,SNR=52
S10A Tonopah Range, 146.48 328 ⇑P PKPdf 07 06 01.4 +1.0
baz=146,SNR=49
TUC Tucson 146.56 314 ePKPdf PKPdf 07 06 01.3 +0.6
TUC LR LR
comp=Z,1μm,20.0s,MS5.8
Y15A Casa Rosa Ranc 146.65 318 ⇑P PKPdf 07 06 02.1 +1.3
baz=147,SNR=78
TPH Tonopah 146.69 328 PFAKE 07 06 10.0 +9.3
TPH LR LR
comp=Z,2μm,21.0s,MS6.0
X14A Yava 146.69 319 ⇑P PKPdf 07 06 02.3 +1.4
baz=147,SNR=19
SHPR Sheep Range 146.71 324 ePKPdf PKPdf 07 06 02.4 +1.5
217A Green Valley 146.87 313 ⇑P PKPdf 07 06 02.2 +1.0
baz=147
U11A Corn Creek 146.90 324 ⇓P PKPdf 07 06 02.9 +1.7
baz=147
Z15A Gila River Ind 146.94 317 ⇓P PKPdf 07 06 02.1 +0.8
baz=147
WCN Washoe City 146.95 333 ⇑P PKPdf 07 06 02.2 +1.1
baz=147
NVAR Mina Array Bea 146.96 330 PKPbc PKPbc 07 06 02.7 -0.4
comp=Z,49nm,1.0s,baz=92,slow=0.9,SNR=148
WDC Whiskeytown Da 147.03 337 ePKPdf PKPdf 07 06 01.3 0.0
WDC LR LR
comp=Z,2μm,20.0s,MS5.9
116A Eloy 147.05 315 ⇓P PKPdf 07 06 02.4 +0.8
baz=147
V12A Nelson 147.07 323 ⇑P PKPdf 07 06 02.9 +1.4
baz=147,SNR=20
Y14A Wickenburg 147.10 319 ⇑P PKPdf 07 06 03.2 +1.7
baz=147
216A Three Points, 147.20 314 ⇓P PKPdf 07 06 03.4 +1.6
baz=147
V11A Goodsprings 147.34 324 ⇓P PKPdf 07 06 03.5 +1.6
baz=147
W12A Cal Nev Ari 147.38 322 ⇑P PKPdf 07 06 03.3 +1.3
baz=147,SNR=7.7
Z14A Wintersburg 147.42 318 ⇓P PKPbc 07 06 04.1 -0.4
baz=147
U10A Ash Meadows, A 147.44 325 ⇑P PKPbc 07 06 04.2 -0.3
baz=147
WAKR Walker 147.45 331 ePKPbc PKPbc 07 06 03.8 -0.6
GRAC Grapevine Rang 147.58 327 ⇓P PKPdf 07 06 03.9 +1.6
baz=148
NEE2 Needles Airpor 147.58 321 ⇓P PKPbc 07 06 04.6 -0.3
baz=148
LDFC Landfair 147.67 322 ePKPbc PKPbc 07 06 03.7 -1.5
FURC Furnace Creek, 147.69 326 ⇓P PKPbc 07 06 05.4 +0.2
baz=148
Y13A Salome 147.71 319 ⇓P PKPbc 07 06 05.2 -0.1
baz=148
114A Black Gap (USA 147.75 317 ⇓P PKPbc 07 06 05.0 -0.4
baz=148
SHOC Shoshone 147.78 325 ⇓P PKPbc 07 06 05.3 -0.2
baz=148
MLAC Mammoth Lakes 147.85 330 ⇓P PKPbc 07 06 05.8 +0.2
baz=148
TUQ Turquoise Moun 147.91 324 ⇓P PKPbc 07 06 05.9 +0.1
baz=148
TIN Tinemaha 147.98 328 ⇓P PKPbc 07 06 06.3 +0.3
baz=148
Z13A Yuma Proving G 147.98 318 ⇑P PKPbc 07 06 06.2 +0.1
baz=148
214A Organ Pipe Nat 148.17 316 ⇑P PKPbc 07 06 06.4 -0.3
baz=148
Y12C Blythe 148.19 320 ⇓P PKPbc 07 06 06.9 +0.2
baz=148
GMRC Granite Mounta 148.20 323 ⇓P PKPbc 07 06 07.0 +0.4
baz=148
DAC Darwin (Calif) 148.24 327 PFAKE 07 06 10.0 +6.6
DAC LR LR
comp=Z,1μm,19.0s,MS5.8
CMB Columbia Colle 148.27 332 ePKPbc PKPbc 07 06 04.3 -2.4
CMB LR LR
comp=Z,1μm,20.0s,MS5.7
IRM Iron Mountain 148.31 321 ⇑P PKPbc 07 06 07.6 +0.6
baz=148
113A Mohawk Valley, 148.32 318 ⇑P PKPbc 07 06 06.7 -0.3
baz=148
MPMC Manual Prospec 148.34 326 ⇑P PKPbc 07 06 07.5 +0.5
baz=148
CWC Cottonwood Cre 148.37 327 ⇑P PKPbc 07 06 06.9 -0.1
baz=148
GSC Goldstone 148.51 325 ⇑P PKPbc 07 06 07.5 +0.1
baz=148
GSC Goldstone 148.51 325 ePKP2 PKPbc 07 06 05.6 -1.8
HEC Hector,Ludlow 148.57 323 ⇓P PKPbc 07 06 08.1 +0.5
baz=148
HOPS Hopland 148.61 336 PFAKE 07 06 20.0 +16
HOPS LR LR
comp=Z,1μm,19.0s,MS5.7
GLA Glamis 148.84 319 ⇓P PKPbc 07 06 08.8 +0.5
baz=149
GLA Glamis 148.84 319 ePKP2 PKPbc 07 06 07.9 -0.4
BC3 Big Chuckawall 148.84 321 ⇓P PKPbc 07 06 08.8 +0.5
baz=149
LRMC Laurel Mountai 148.88 326 ⇓P PKPbc 07 06 08.8 +0.5
baz=149
RRX Edison Barstow 148.92 324 ⇑P PKPbc 07 06 08.8 +0.3
baz=149
BELC Belle Mtn. Jos 148.94 322 ⇓P PKPbc 07 06 08.8 +0.3
baz=149
112A Yuma 149.00 318 ⇑P PKPbc 07 06 08.9 +0.2
baz=149
RCTC Rector, Farmer 149.08 329 ⇓P PKPbc 07 06 08.2 -0.7
baz=149
ISA Isabella 149.17 327 ⇓P PKPbc 07 06 09.5 +0.5
baz=149
ISA Isabella 149.17 327 ePKIKP PKPdf 07 06 05.8 +0.9
MCCM Marconi Confer 149.26 335 PFAKE 07 06 20.0 +15
MCCM LR LR
comp=Z,1μm,20.0s,MS5.8
BBRC Big Bear Solar 149.31 323 ⇓P PKPbc 07 06 10.2 +0.7
baz=149
JOHN Johnston Islan 149.35 75 PFAKE 07 06 20.0 +14
JOHN LR LR
comp=Z,747nm,20.0s,MS5.5
VES Vestal, Richgr 149.36 328 ⇓P PKPbc 07 06 10.5 +0.9
baz=149
EDW2 Edwards Air Fo 149.48 325 ⇑P PKPbc 07 06 10.4 +0.5
baz=149
PFO Pinyon Flat Ob 149.49 322 ⇑P PKPbc 07 06 10.6 +0.6
baz=149
PFO Pinyon Flat Ob 149.49 322 ePKIKP PKPdf 07 06 04.8 -0.7
PFO e 07 06 10.7
PFO MLR MLR
comp=Z,1μm,21.0s,MS5.8
SWSC Sam W. Stewart 149.53 320 ⇑P PKPbc 07 06 10.3 +0.2
baz=149
BFSC Mount Baldy Ra 149.76 324 ⇑P PKPbc 07 06 10.9 +0.3
baz=150
ARVC Arvin 149.76 327 ⇑P PKPbc 07 06 10.6 0.0
baz=150
SAO San Andreas Ge 149.79 332 PFAKE 07 06 20.0 +14
SAO LR LR
comp=Z,2μm,22.0s,MS6.0
PAE Paea 149.80 159 ePKiKP PKPbc 07 06 11.9 +0.8
comp=Z,34nm,1.2s
PPT Papeete 149.80 159 ePKiKP PKPbc 07 06 12.9 +1.5
comp=Z,197nm,1.3s
PPT Papeete 149.88 159 ePP PP 07 09 36.3 -7.1
comp=Z,226nm,24.2s
PPT eSS SS 07 29 03.4 +4.9
comp=Z,894nm,25.8s
PPT eLR LR 07 55 33.4
comp=Z,1μm,23.0s
PPT Papeete 149.88 159 PKPbc PKPbc 07 06 12.9 +1.5
comp=Z,120nm,1.0s,baz=215,slow=18,SNR=5.0
PPT Papeete 149.88 159 PKIKP PKPbc 07 06 12.9 +1.5
PPT pmax pmax
comp=Z,120nm,1.0s
DVTC Desert V Tower 149.90 320 ⇑P PKPbc 07 06 11.4 +0.3
baz=150
MURC Murrieta 149.94 323 ⇑P PKPbc 07 06 11.4 +0.3
baz=150
MONP Monument Peak 149.95 321 ⇑P PKPbc 07 06 11.3 +0.2
baz=150
TIAR Tiarei 149.97 159 ePKiKP PKPbc 07 06 12.0 +0.4
comp=Z,284nm,1.2s
MWC Mount Wilson 150.00 325 ePKPdf PKPdf 07 06 07.2 +0.9
MWC ePKPbc PKPbc 07 06 11.3 +0.2
OSI Osito Adit 150.09 326 ⇓P PKPbc 07 06 11.7 +0.4
baz=150
MEH Mehetia 150.10 162 ePKiKP PKPbc 07 06 12.1 +0.2
comp=Z,513nm,1.2s
PASC Pasadena Art C 150.11 325 ePKPdf PKPdf 07 06 07.0 +0.6
DECC Green Verdugo 150.13 325 ⇑P PKPbc 07 06 11.8 +0.3
baz=150
SMMC Simmler 150.24 328 ⇑P PKPbc 07 06 12.2 +0.5
baz=150
BAR Barrett 150.25 321 ePKPdf PKPdf 07 06 06.4 -0.3
BAR ePKPbc PKPbc 07 06 12.1 +0.3
109C Camp Elliot, M 150.37 321 ⇑P PKPbc 07 06 12.3 +0.2
baz=150
PKM Peak Mountain 150.46 328 ⇑P PKPbc 07 06 13.5 +1.2
baz=150
FMP Fort Macarthur 150.50 324 ⇑P PKPbc 07 06 13.0 +0.6
baz=150
BLG Laguna Peak 150.65 326 ⇓P PKPbc 07 06 12.8 0.0
baz=150
SBC Santa Barbara 150.75 327 ⇑P PKPbc 07 06 13.7 +0.7

baz=151
CIS Catalina Islan 150.78 324 ⇓P PKPbc 07 06 14.0 +0.9
baz=151
BSC Santa Cruz Isl 151.05 326 ⇑P PKPbc 07 06 14.6 +0.9
baz=151
PMOR Pomariorio Ree 152.85 160 *e*PKiKP PKPbc 07 06 19.5 +1.2
comp=Z,201nm,1.2s
XMAS Kiritimati 159.38 113 PFAKE 07 06 30.0 +10
XMAS LR LR
comp=Z,1μm,21.0s,MS5.8
TAOE Nuku Hiva Isla 160.51 175 *e*LR LR 08 02 17.0
comp=Z,2μm,25.0s
POHA Pohakuloa 161.33 59 PFAKE 07 06 30.0 +8.3
POHA LR LR
comp=Z,795nm,19.0s

PGC ***27*** *06:52:17.1±3.9, 49°.73N×130°.42W, h10km, ML3.2/10, Mw3.8, 239km Wsw of Pt. Hardy, Bc Vancouver Island Region*
IDC ***27*** *06:52:18.2±1.3, 49°.86N×130°.35W, h0km, mb3.8/5, mb1 4.0/13, mb1mx3.8/30, mbtmp3.8/13, ML3.4/8, MS3.7/5, Ms1 3.7/5, ms1mx3.2/36, Error ellipse: s-maj=25.7km s-min=12.9km az=72.0*
ISCJB ***27*** *06:52:21.2±0.3, 50°.00N±0°.03×129°.90W±0°.05, h10km, mb4.2/14, Error ellipse: s-maj=6.0km s-min=3.5km az=44.4*
BJI ***27*** *06:52:22.0, 49°.87N×130°.85W, h5km, mB4.8/6, mb4.8/10, Ms4.8/4, Ms7 4.4/4*
NEIC ***27*** *06:52:22.6±0.6, 49°.97N×129°.99W, h10km, mb4.2/25, MW3.8(PGC), Error ellipse: s-maj=12.1km s-min=4.6km az=49.0*

ISC 27 06:52:23.1±0.3, 50°.04N±0°.03×129°.87W±0°.05, h10km, (h15km±.8km); pP-P), n92, σ1°40/96, mb4.2/14, 6D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.27**	**61**	⇑Pn	**Pn**	**06 52 45.4**	**-1.4**
BPBC	**Brooks Peninsu**	**1.36**	**84**	⇓Pn	**Pn**	**06 52 45.0**	**-3.0**
BPBC				⇑Sn	**Sn**	**06 53 06.0**	**-0.1**
PHC	**Port Hardy**	**1.70**	**66**	⇑Pn	**Pn**	**06 52 51.3**	**-1.4**
PHC				⇓Sn	**Sn**	**06 53 15.3**	**+0.8**
MAYB	**Maynard**	**1.77**	**77**	⇑Pn	**Pn**	**06 52 51.6**	**-2.1**
WOSB	**Woss**	**2.13**	**86**	⇑Pn	**Pn**	**06 52 56.5**	**-2.1**
BBB	**Bella Bella**	**2.42**	**27**	Pn	**Pn**	**06 53 02.5**	**-0.1**
	44nm,0.3s,baz=43,slow=13,SNR=144						
BBB				Sn	**Sn**	**06 53 33.6**	**+1.5**
	8.7nm,0.3s,baz=127,slow=23,SNR=5.7						
BBB	**Bella Bella**	**2.42**	**27**	⇓Pn	**Pn**	**06 53 02.6**	**0.0**
BBB				⇓Sn	**Sn**	**06 53 33.5**	**+1.4**
GDR	**Gold River**	**2.50**	**95**	⇑Pn	**Pn**	**06 53 01.1**	**-2.6**
BNB	**Barry Inlet**	**2.80**	**336**	⇓Pn	**Pn**	**06 52 03.0**	**-4.8**
MOBC	**Moresby Island**	**3.37**	**338**	⇓Pn	**Pn**	**06 53 10.5**	**-5.2**
DIB	**Dawson Inlet,**	**3.56**	**334**	Pn	**Pn**	**06 53 14.9**	**-3.3**
DIB	**Dawson Inlet,**	**3.56**	**334**	⇑Pn	**Pn**	**06 53 14.1**	**-4.1**
PGC	**Sidney**	**4.42**	**106**	*e*Pn	**Pn**	**06 53 28.6**	**-1.5**
NLWA	**Neilton Lookou**	**4.78**	**121**	*e*Pn	**Pn**	**06 53 32.9**	**-2.1**
JCW	**Jim Creek**	**5.54**	**106**	*e*Pn	**Pn**	**06 53 45.3**	**-0.1**
RPW	**Rockport**	**5.70**	**103**	*e*Pn	**Pn**	**06 53 47.3**	**-0.4**
LON	**Longmire**	**6.30**	**118**	*e*Pn	**Pn**	**06 53 55.2**	**-0.7**
WRAK	**Wrangell Islan**	**6.56**	**348**	*e*Pn	**Pn**	**06 53 59.4**	**-0.1**
ETW	**Entiat**	**6.76**	**108**	*e*Pn	**Pn**	**06 54 02.2**	**0.0**
OD2	**Odessa Site #2**	**7.85**	**105**	*e*Pn	**Pn**	**06 54 16.0**	**-1.1**
DLBC	**Dease Lake**	**8.41**	**359**	Pn	**Pn**	**06 54 22.9**	**-2.0**
	0.1nm,0.3s,baz=194,slow=15,SNR=3.4						
DLBC				LR	LR	06 57 35.6	
	comp=Z,240nm,21.9s,baz=272,slow=37						
LNOR	**Lincton Mounta**	**8.82**	**114**	*e*Pn	**Pn**	**06 54 30.8**	**+0.3**
YBH	**Yreka Blue Hor**	**9.69**	**146**	Pn	**Pn**	**06 54 39.5**	**-2.9**
	0.1nm,0.3s,baz=12,slow=9.3,SNR=3.2						
YBH				LR	LR	06 57 55.0	
	comp=Z,556nm,18.7s,baz=328,slow=35						
BSMT	**Bassoo Peak**	**10.17**	**97**	*e*Pn	**Pn**	**06 54 51.3**	**+2.4**
	3.5nm,0.9s						
MOD	**Modoc**	**10.51**	**137**	*e*Pn	**Pn**	**06 54 54.5**	**+0.8**
WDC	**Whiskeytown Da**	**10.77**	**149**	*e*Pn	**Pn**	**06 55 00.8**	**+3.5**
WVOR	**Wild Horse Val**	**10.88**	**130**	*e*Pn	**Pn**	**06 54 58.2**	**-0.5**
	19nm,1.8s						
SLMT	**Seeley Lake**	**11.20**	**98**	*e*Pn	**Pn**	**06 55 02.4**	**-0.6**
	3.1nm,0.8s						
CHMT	**Chamberlain Mo**	**11.47**	**99**	*e*Pn	**Pn**	**06 55 06.3**	**-0.4**
HLID	**Hailey**	**12.41**	**116**	*e*Pn	**Pn**	**06 55 21.0**	**+1.4**
DLMT	**Dillon**	**12.54**	**105**	*e*Pn	**Pn**	**06 55 20.4**	**-1.0**
	12nm,1.4s						
MCMT	**McKenzie Canyo**	**12.64**	**108**	*e*Pn	**Pn**	**06 55 22.0**	**-0.8**
	0.6nm,0.8s						
PAHR	**Pah Rah Range**	**12.72**	**140**	*e*Pn	**Pn**	**06 55 24.2**	**+0.4**
EGMT	**Eagleton**	**13.35**	**91**	*e*Pn	**Pn**	**06 55 34.3**	**+1.9**
NVAR	**Mina Array Bea**	**14.25**	**140**	Pn	**Pn**	**06 55 42.7**	**-2.0**
NVAR	**Mina Array Bea**	**14.25**	**140**	Pn	**Pn**	**06 55 42.7**	**-2.0**
	0.0nm,0.3s,baz=320,slow=12,SNR=7.2						
IMW	**Indian Meadow**	**14.30**	**108**	*e*Pn	**Pn**	**06 55 47.0**	**+1.7**
FLWY	**Flagg Ranch**	**14.35**	**107**	*e*Pn	**Pn**	**06 55 49.4**	**+3.3**
MOOW	**Moose Ponds**	**14.50**	**108**	*e*Pn	**Pn**	**06 55 49.9**	**+1.8**
TPAW	**Teton Pass**	**14.51**	**110**	*e*Pn	**Pn**	**06 55 51.8**	**+3.5**
REDW	**Red Top Meadow**	**14.64**	**110**	*e*Pn	**Pn**	**06 55 51.8**	**+1.7**
	24nm,1.4s						
SNOW	**Snow King Moun**	**14.64**	**109**	*e*Pn	**Pn**	**06 55 52.9**	**+2.8**
LOHW	**Long Hollow**	**14.65**	**109**	*e*Pn	**Pn**	**06 55 53.5**	**+3.3**
RLMT	**Red Lodge**	**14.74**	**102**	*e*Pn	**Pn**	**06 55 52.4**	**+1.0**
YKA	**Yellowknife Ar**	**15.03**	**28**	Pn	**Pn**	**06 55 53.9**	**-1.3**
	0.1nm,0.3s,baz=213,slow=13,SNR=5.3						
MTUM	**Tungsten Hills**	**15.07**	**143**	*e*Pn	**Pn**	**06 56 01.0**	**+5.1**
DUG	**Dugway**	**15.52**	**123**	*e*Pn	**Pn**	**06 56 05.4**	**+3.5**
	16nm,1.5s						
SLKM	**Skilak Lake**	**15.55**	**320**	*e*Pn	**Pn**	**06 56 03.7**	**+1.5**
SML	**Sawmill**	**15.61**	**326**	*e*Pn	**Pn**	**06 56 04.7**	**+1.9**
	3.4nm,1.2s						
BW06	**Boulder Array**	**15.76**	**110**	*e*Pn	**Pn**	**06 56 06.7**	**+1.8**
	31nm,1.8s						
PDAR	**Pinedale Array**	**15.76**	**110**	Pn	**Pn**	**06 56 05.5**	**+0.6**
	0.1nm,0.3s,baz=307,slow=12,SNR=23						
EGAK	**Eagle**	**15.93**	**342**	*e*Pn	**Pn**	**06 56 08.1**	**+1.1**
	25nm,1.6s						
LAO	**LASA Array**	**16.05**	**93**	*e*Pn	**Pn**	**06 56 07.5**	**-1.2**
	7.5nm,1.0s						
RSO	**Redoubt South**	**16.61**	**318**	*e*Pn	**Pn**	**06 56 16.1**	**+0.5**
ARUT	**Antelope Range**	**16.99**	**130**	*e*Pn	**Pn**	**06 56 19.3**	**-1.4**
	3.9nm,0.7s						
TMUT	**Trail Mountain**	**17.03**	**122**	*e*P	**Pn**	**06 56 29.0**	**+7.9**
	38nm,0.5s						
MSU	**Marysvale**	**17.08**	**126**	*e*Pn	**Pn**	**06 56 23.9**	**+2.1**
CCUT	**Cedar City**	**17.21**	**130**	*e*Pn	**Pn**	**06 56 24.1**	**+0.7**
	6.2nm,1.2s						
ILAR	**Eielson Array**	**17.28**	**335**	P	**Pn**	**06 56 22.0**	**-2.1**
	0.0nm,0.3s,baz=150,slow=10,SNR=23						
ILAR				LR	LR	07 02 30.2	
	comp=Z,159nm,18.3s,baz=336,slow=35						
GSC	**Goldstone**	**17.55**	**142**	*e*Pn	**Pn**	**06 56 26.8**	**-0.9**
	6.9nm,1.2s						
BPAW	**Bear Paw Mtn.**	**18.03**	**329**	*e*Pn	**Pn**	**06 56 33.1**	**-0.3**
	14nm,1.2s						
INK	**Inuvik**	**18.41**	**356**	P	**Pn**	**06 56 37.5**	**-0.6**
	0.0nm,0.3s,baz=90,slow=3.0,SNR=2.5						
INK				LR	LR	07 03 56.2	
	comp=Z,208nm,19.4s,baz=146,slow=38						
LDFC	**Landfair**	**18.44**	**139**	*e*Pn	**Pn**	**06 56 37.8**	**-0.8**
PV04	**Paradox Valley**	**18.94**	**120**	*e*P	**Pn**	**06 56 44.5**	**-0.2**
TTA	**Tatalina**	**19.18**	**322**	*e*P	**Pn**	**06 56 45.6**	**-1.7**
	23nm,1.2s						
PV01	**Paradox Valley**	**19.31**	**120**	*e*P	**Pn**	**06 56 47.6**	**-1.5**
	1μm,1.3s						
SMCO	**Snowmass**	**19.51**	**115**	*e*P	**Pn**	**06 56 50.5**	**-1.0**
	4.7nm,0.8s						
ISCO	**Idaho Springs**	**19.92**	**112**	*e*P	**Pn**	**06 56 55.5**	**-0.9**
	55nm,2.4s						
COLD	**Coldfoot**	**20.04**	**337**	*e*P	**P**	**06 56 56.6**	**+0.8**
	30nm,1.5s						
SDCO	**Great Sand Dun**	**21.33**	**116**	*e*P	**P**	**06 57 09.9**	**-0.1**
	3.0nm,0.8s,mb3.7						
OGNE	**Ogallala**	**21.43**	**104**	*e*P	**P**	**06 57 12.8**	**+1.8**
	13nm,0.8s,mb4.3						
ULM	**Lac du Bonnet**	**21.68**	**76**	P	**P**	**06 57 15.2**	**+1.5**
	6.4nm,0.7s,mb4.2,baz=303,slow=12,SNR=5.2						
AGMN	**Agassiz Nation**	**22.20**	**81**	*e*P	**P**	**06 57 21.4**	**+2.2**
	9.8nm,1.0s,mb4.2						
TUC	**Tucson**	**22.70**	**134**	*e*P	**P**	**06 57 24.8**	**+0.1**
	24nm,2.1s,mb4.3						
ANMO	**Albuquerque**	**22.79**	**123**	*e*P	**P**	**06 57 25.5**	**-0.1**
	29nm,2.5s,mb4.3						
ANMO	**Albuquerque**	**22.79**	**123**	P	**P**	**06 57 25.4**	**-0.2**
	1.6nm,0.8s,mb3.5,baz=322,slow=10,SNR=8.6						
LAZ	**Ladron**	**22.84**	**125**	*e*P	**P**	**06 57 26.4**	**+0.3**
	2.7nm,1.3s,mb3.5						
BNM	**Barren Site**	**23.30**	**124**	*e*P	**P**	**06 57 31.2**	**+0.2**
	76nm,2.6s,mb4.7						
ECSD	**EROS Data Cent**	**23.45**	**93**	*e*P	**P**	**06 57 34.3**	**+1.7**
	12nm,1.1s,mb4.2						
EYMN	**Ely**	**25.09**	**80**	*e*P	**P**	**06 57 48.0**	**+0.5**
	23nm,0.9s,mb4.7						
TXAR	**Lajitas Array**	**28.64**	**126**	P	**P**	**06 58 18.6**	**-1.0**
	0.3nm,0.8s,baz=345,slow=7.9,SNR=4.3						
TXAR				LR	LR	07 09 49.0	
	comp=Z,233nm,18.3s,baz=5.0,slow=36						
JCT	**Junction City**	**29.83**	**120**	*e*P	**P**	**06 58 28.6**	**-1.7**
	4.9nm,0.3s,mb4.7						
OTAV	**Otavalo**	**66.10**	**121**	*e*P	**P**	**07 03 12.4**	**+2.1**
	4.6nm,0.5s,mb4.8						
BJI	**Beijing**	**73.21**	**313**	P	**P**	**07 03 54.0**	**+0.1**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**74.68**	**316**	*e*P	**P**	**07 04 04.0**	**+1.5**
HHC				pP	pP	07 04 08.0	+2.2
HHC				sP	sP	07 04 10.8	+3.8
HHC				PP	PP	07 06 52.0	+3.1
HHC				S	S	07 13 37.0	-1.4
HHC				sS	sS	07 13 44.8	+1.0
HHC				ScS	ScS	07 14 11.5	-2.5
HHC				SS	SS	07 18 25.0	+0.4
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				pmax	pmax		
	comp=Z,94nm,6.1s						
HHC				LR	LR		
	comp=N,150nm,17.8s						
HHC				LR	LR		
	comp=E,220nm,17.8s						
HHC				LR	LR		
	comp=Z,110nm,17.8s						
AKASG	**Malin Array Be**	**78.06**	**13**	P	**P**	**07 04 19.2**	**-2.3**
	comp=Z,0.2nm,0.3s,mb3.5,baz=335,slow=5.1,SNR=6.4						
MKAR	**Makanchi Array**	**79.61**	**338**	P	**P**	**07 04 27.5**	**-2.6**
	comp=Z,1.2nm,0.7s,mb3.8,baz=28,slow=5.5,SNR=4.8						
WMQ	**Urumqi**	**80.94**	**333**	*e*P	**P**	**07 04 40.3**	**+3.0**
WMQ				pP	pP	07 04 45.0	+4.4
WMQ				sP	sP	07 04 47.3	+5.5
WMQ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,38nm,4.2s						
LZH	**Lanzhou**	**82.00**	**319**	*e*P	**P**	**07 04 43.5**	**+0.4**
LZH				*e*PP	PP	07 07 52.8	+2.8
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,48nm,7.6s						
LZH				LR	LR		
	comp=N,210nm,16.7s						
LZH				LR	LR		
	comp=E,160nm,18.5s						
LZH				LR	LR		
	comp=Z,240nm,20.0s						
CD2	**Chengdu**	**86.44**	**316**	P	**P**	**07 05 05.5**	**-0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
KSH	**Kashi**	**87.96**	**340**	*e*P	**P**	**07 05 17.0**	**+4.0**
KSH				*e*pP	pP	07 05 22.0	+5.7
KSH				*e*sP	sP	07 05 24.0	+6.5
KSH				*e*PP	PP	07 08 46.5	+8.3
KSH				*e*SKS		07 15 43.0	
KSH				*e*S	S	07 15 59.5	+3.4
KSH				*e*sS	sS	07 16 07.0	+5.4
KSH				*e*SS	SS	07 21 51.3	+9.4
KSH				pmax	pmax		
	comp=Z,13nm,1.9s						
KSH				pmax	pmax		
	comp=Z,110nm,2.7s						
KSH				LR	LR		
	comp=N,33nm,4.4s						
KSH				LR	LR		
	comp=E,48nm,3.5s						
KSH				LR	LR		
	comp=Z,78nm,4.2s						
GYA	**Guiyang**	**88.85**	**312**	*e*P	**P**	**07 05 18.0**	**+0.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						

ISK ***27*** *06:59:45.8, 36°.97N×29°.29E, h17km, MD2.9*
ISCJB ***27*** *06:59:46.1±0.8, 36°.94N±0°.04×29°.26E±0°.06, h9km±8km, Error ellipse: s-maj=7.6km s-min=7.1km az=151.1*
CSEM ***27*** *06:59:46.2±0.1, 36°.94N×29°.25E, h8km, MD2.9, Error ellipse: s-maj=3.7km s-min=3.0km az=22.0*
DDA ***27*** *06:59:47.3, 37°.03N×29°.23E, h7km±2km, Md3.0*

ISC 27 06:59:46.5±0.7, 36°.95N±0°.05×29°.26E±0°.06, h11km±7km, n20, σ0°63/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.28**	**42**	*e*PG	**Pg**	**06 59 51.8**	**-0.5**
GLHS				*e*SG	**Sg**	**06 59 56.1**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.28**	**42**	*e*Pg	**Pg**	**06 59 51.8**	**-0.5**
GLHS				*e*Sg	**Sg**	**06 59 56.1**	**0.0**
ELL	**Elmali**	**0.55**	**111**	*e*PG	**Pg**	**06 59 57.0**	**-0.3**
ELL				*e*SG	**Sg**	**07 00 05.3**	**+0.7**
ELL	**Elmali**	**0.55**	**111**	*e*Pg	**Pg**	**06 59 57.0**	**-0.3**
ELL				*e*Sg	**Sg**	**07 00 05.3**	**+0.7**
AKAS	**Kas**	**0.76**	**159**	*i* P	**Pg**	**07 00 01.3**	**0.0**
AKAS				*i* S	**Sg**	**07 00 16.0**	**+4.8**
AKAS	**Kas**	**0.76**	**159**	*i* P	**Pg**	**07 00 01.3**	**+0.1**
YER	**Yerkesik**	**0.81**	**284**	*e*PG	**Pg**	**07 00 02.6**	**+0.6**
YER	**Yerkesik**	**0.81**	**284**	*e*Pg	**Pg**	**07 00 02.6**	**+0.5**
AYDN	**Tasoluk**	**1.31**	**303**	*i* P	**Pn**	**07 00 11.3**	**+0.6**
AYDN				*i* S	**Sb**	**07 00 28.4**	**+0.4**
AYDN	**Tasoluk**	**1.31**	**303**	*i* P	**Pn**	**07 00 11.3**	**+0.6**
AYDN				*i* S	**Sb**	**07 00 28.4**	**+0.4**
DAT	**Datca**	**1.37**	**261**	*e*PN	**Pn**	**07 00 11.1**	**-0.3**
DAT	**Datca**	**1.37**	**261**	*e*Pn	**Pn**	**07 00 11.1**	**-0.4**
KHL	**Karahalli**	**1.39**	**8**	*e*PN	**Pn**	**07 00 10.8**	**-1.0**
KHL	**Karahalli**	**1.39**	**8**	*e*Pn	**Pn**	**07 00 10.8**	**-1.0**
KHAL	**Karahalli**	**1.43**	**7**	*i* P	**Pn**	**07 00 13.0**	**+0.6**
KHAL				*i* S	**Sn**	**07 00 32.1**	**+0.9**
KHAL	**Karahalli**	**1.43**	**7**	*i* P	**Pn**	**07 00 13.0**	**+0.6**
KHAL				*i* S	**Sn**	**07 00 32.1**	**+0.9**
BODT	**Bodrum**	**1.57**	**275**	*e*PN	**Pn**	**07 00 13.8**	**-0.4**
BODT	**Bodrum**	**1.57**	**275**	*e*Pn	**Pn**	**07 00 13.8**	**-0.4**
KULA	**Kula-Manisa**	**1.64**	**343**	*e*PN	**Pn**	**07 00 14.0**	**-1.2**
KULA	**Kula-Manisa**	**1.64**	**343**	*e*Pn	**Pn**	**07 00 14.0**	**-1.2**

ISCJB ***27*** *07:06:43.5±0.4, 48°.27N±0°.03×6°.63E±0°.02, h10km, Error ellipse: s-maj=4.3km s-min=2.4km az=178.9*
NEIC ***27*** *07:06:44.6, 48°.31N×6°.69E, h11km, ML2.5(LDG), After LDG.*
LDG ***27*** *07:06:44.6±0.1, 48°.31N×6°.69E, h11km, Md2.2/3, Ml2.5/8, Error ellipse: s-maj=1.1km s-min=1.0km az=8.0*
STR ***27*** *07:06:44.2±0.5, 48°.30N×6°.67E, h10km, Ml1.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
CSEM ***27*** *07:06:44.0±0.1, 48°.29N×6°.66E, h20km, ML2.2/11, Error ellipse: s-maj=2.3km s-min=1.3km az=4.0*

ISC 27 07:06:44.1±0.4, 48°.30N±0°.03×6°.66E±0°.02, h10km, n36, σ0°70/66, France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECH	**Echery**	**0.34**	**105**	Pg	**Pg**	**07 06 51.5**	**+0.6**
ECH				Sg	**Sg**	**07 06 55.7**	**+0.2**
ECH	**Echery**	**0.34**	**105**	Pg	**Pg**	**07 06 51.5**	**+0.6**
ECH				Sg	**Sg**	**07 06 55.7**	**+0.2**
HAU	**Haudompre**	**0.36**	**215**	*e*Pg	**Pg**	**07 06 52.3**	**+1.0**
HAU				*e*Sg	**Sg**	**07 06 57.0**	**+0.9**
	12nm,0.2s						
HAU	**Haudompre**	**0.36**	**215**	*e*Pg	**Pg**	**07 06 52.3**	**+1.0**
HAU				*e*Sg	**Sg**	**07 06 57.0**	**+0.9**
	6.2nm,0.2s						
CDF	**Champ du Feu**	**0.42**	**75**	*e*Pg	**Pg**	**07 06 52.7**	**+0.3**
CDF				*e*Sg	**Sg**	**07 06 58.2**	**+0.1**
	32nm,0.2s						
CDF	**Champ du Feu**	**0.42**	**75**	*e*Pg	**Pg**	**07 06 52.7**	**+0.3**
CDF				*e*Sg	**Sg**	**07 06 58.2**	**+0.1**
	16nm,0.2s						
THEF	**They Montfort**	**0.46**	**261**	Pg	**Pg**	**07 06 53.4**	**+0.3**
THEF				Sg	**Sg**	**07 06 59.4**	**+0.3**
THEF	**They Montfort**	**0.46**	**261**	Pg	**Pg**	**07 06 53.4**	**+0.3**
THEF				Sg	**Sg**	**07 06 59.4**	**+0.3**
HINF	**Hinteralfeld**	**0.50**	**165**	*e*Pg	**Pg**	**07 06 54.7**	**+0.8**
HINF				*e*Sg	**Sg**	**07 07 01.6**	**+1.1**
	14nm,0.1s						
HINF	**Hinteralfeld**	**0.50**	**165**	*e*Pg	**Pg**	**07 06 54.7**	**+0.8**
HINF				*e*Sg	**Sg**	**07 07 01.6**	**+1.1**
	6.8nm,0.1s						
MOF	**Molkenrain**	**0.55**	**145**	Pg	**Pg**	**07 06 54.8**	**0.0**
MOF	**Molkenrain**	**0.55**	**145**	Pg	**Pg**	**07 06 54.8**	**0.0**
RFYF	**Reffroy**	**0.85**	**293**	*e*Pg	**Pg**	**07 07 01.1**	**+0.5**
RFYF				*e*Sg	**Sg**	**07 07 12.7**	**+1.0**
	14nm,0.2s						
RFYF	**Reffroy**	**0.85**	**293**	*e*Pg	**Pg**	**07 07 01.1**	**+0.5**
RFYF				*e*Sg	**Sg**	**07 07 12.7**	**+1.0**
	6.9nm,0.2s						
FELD	**Feldberg im Sc**	**1.00**	**115**	Pg	**Pg**	**07 07 03.8**	**+0.5**
FELD				Sg	**Sg**	**07 07 16.5**	**+0.3**
SFTF	**Sexfontaines**	**1.09**	**265**	*e*Pg	**Pg**	**07 07 05.4**	**+0.3**
SFTF				*e*Sg	**Sg**	**07 07 19.8**	**+0.6**
	16nm,0.2s						
SFTF	**Sexfontaines**	**1.09**	**265**	*e*Pn	**Pn**	**07 07 04.6**	**-0.8**
SFTF				*e*Pg	**Pg**	**07 07 05.4**	**+0.3**
SFTF				*e*Sg	**Sg**	**07 07 19.8**	**+0.6**
SFTF	**Sexfontaines**	**1.09**	**265**	*e*Pn	**Pn**	**07 07 04.6**	**-0.8**
SFTF	**Sexfontaines**	**1.09**	**265**	*e*Pg	**Pg**	**07 07 05.4**	**+0.3**
SFTF				*e*Sg	**Sg**	**07 07 19.8**	**+0.6**
	8.2nm,0.2s						
MEZF	**Maizieres J'vi**	**1.09**	**281**	*e*Pg	**Pg**	**07 07 05.3**	**+0.2**
MEZF				*e*Sg	**Sg**	**07 07 19.7**	**+0.4**
	6.9nm,0.2s						
MEZF	**Maizieres J'vi**	**1.09**	**281**	*e*Pg	**Pg**	**07 07 05.3**	**+0.2**
MEZF				*e*Sg	**Sg**	**07 07 19.7**	**+0.4**
	3.5nm,0.2s						
BFO	**Black Forest**	**1.11**	**88**	*e*Pg	**Pg**	**07 07 05.1**	**-0.4**
BFO				*e*Sg	**Sg**	**07 07 18.2**	**-1.8**
CABF	**La Chapelle**	**1.74**	**193**	*e*Pg	**Pg**	**07 07 17.2**	**-0.2**
CABF				*e*Sg	**Sg**	**07 07 39.9**	**0.0**
	2.3nm,0.2s						
CABF	**La Chapelle**	**1.74**	**193**	*e*Pg	**Pg**	**07 07 17.2**	**-0.2**
CABF				*e*Sg	**Sg**	**07 07 39.9**	**0.0**
	1.1nm,0.2s						
LOR	**Lormes**	**2.15**	**242**	*e*Pg	**Pg**	**07 07 24.8**	**-0.6**
LOR				*e*Sg	**Sg**	**07 07 52.5**	**-0.8**
	3.4nm,0.2s						
LOR	**Lormes**	**2.15**	**242**	*e*Pn	**Pn**	**07 07 18.9**	**-1.2**
LOR				*e*Pg	**Pg**	**07 07 24.8**	**-0.6**
LOR				*e*Sg	**Sg**	**07 07 52.5**	**-0.8**
LOR	**Lormes**	**2.15**	**242**	*e*Pn	**Pn**	**07 07 18.9**	**-1.2**
LOR	**Lormes**	**2.15**	**242**	*e*Pg	**Pg**	**07 07 24.8**	**-0.6**
LOR				*e*Sg	**Sg**	**07 07 52.5**	**-0.8**
	1.7nm,0.2s						
SSF	**Saint Saulge**	**2.47**	**241**	*e*Sg	**Sg**	**07 08 02.7**	**-0.7**
	3.0nm,0.2s						
SSF	**Saint Saulge**	**2.47**	**241**	*e*Sg	**Sg**	**07 08 02.7**	**-0.7**
	1.5nm,0.2s						
SMF	**Signal de Mont**	**2.53**	**230**	*e*Pg	**Pg**	**07 07 32.0**	**-0.6**
SMF				*e*Sg	**Sg**	**07 08 05.0**	**-0.4**
	4.5nm,0.3s						
SMF	**Signal de Mont**	**2.53**	**230**	*e*Pn	**Pn**	**07 07 23.9**	**-1.3**
SMF				*e*Pg	**Pg**	**07 07 32.0**	**-0.6**
SMF				*e*Sg	**Sg**	**07 08 05.0**	**-0.4**
SMF	**Signal de Mont**	**2.53**	**230**	*e*Pn	**Pn**	**07 07 23.9**	**-1.3**
SMF	**Signal de Mont**	**2.53**	**230**	*e*Pg	**Pg**	**07 07 32.0**	**-0.6**
SMF				*e*Sg	**Sg**	**07 08 05.0**	**-0.4**
	2.2nm,0.3s						
AVF	**Avril sur Loir**	**2.70**	**237**	*e*Sg	**Sg**	**07 08 10.3**	**-0.6**
	1.2nm,0.2s						
AVF	**Avril sur Loir**	**2.70**	**237**	*e*Sg	**Sg**	**07 08 10.3**	**-0.6**
	0.6nm,0.2s						

IDC ***27*** *07:18:35.9±3.8, 49°.71N×130°.41W, h0km, mb1 3.6/5, mb1mx3.4/26, mbtmp3.3/5, ML3.3/4, Error ellipse: s-maj=59.3km s-min=21.8km az=70.0*
ISCJB ***27*** *07:18:37.3±1.6, 49°.9N±0°.1×130°.1W±0°.2, h10km, Error ellipse: s-maj=26.3km s-min=9.8km az=148.5*
NEIC ***27*** *07:18:38.8±1.7, 49°.94N×130°.18W, h10km, Error ellipse: s-maj=28.2km s-min=10.3km az=58.0*

ISC 27 07:18:39.0±1.6, 50°.0N±0°.1×130°.2W±0°.2, h10km, n14, σ1°21/14, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBB	**Bella Bella**	**2.59**	**29**	Pn	**Pn**	**07 19 20.9**	**0.0**
	17nm,0.3s,baz=39,slow=13,SNR=43						
PGC	**Sidney**	**4.59**	**104**	*e*Pn	**Pn**	**07 19 46.3**	**-2.0**
NLWA

GRG	**Griva**	**0.69**	**335**	P	**Pg**	07 24 54.8	-1.1
GRG	**Griva**	**0.69**	**335**	P	**Pg**	07 24 55.0	-0.9
GRG				S	**Sg**	07 25 04.7	-0.2
GRG	**Griva**	**0.69**	**335**	P	**Pg**	07 24 55.0	-0.9
GRG				S	**Sg**	07 25 04.7	-0.2
KZN	**Kozani**	**0.77**	**269**	P	**Pg**	07 24 56.9	-0.6
KZN	**Kozani**	**0.77**	**269**	*e*PN	**Pg**	07 24 56.4	-1.1
KZN				*e*SN	**Sg**	07 25 08.7	+1.1
KZN	**Kozani**	**0.77**	**269**	P	**Pg**	07 24 56.7	-0.8
KZN				S	**Sg**	07 25 07.3	-0.3
KZN	**Kozani**	**0.77**	**269**	*e*Pn	**Pg**	07 24 56.4	-1.1
KZN	**Kozani**	**0.77**	**269**	P	**Pg**	07 24 56.9	-0.6
KZN				S	**Sg**	07 25 07.3	-0.3
KZN				*e*Sn	**Sg**	07 25 08.7	+1.1
PAIG	**Paliouri**	**0.80**	**120**	P	**Pg**	07 24 57.8	-0.1
PAIG	**Paliouri**	**0.80**	**120**	P	**Pg**	07 24 57.8	-0.1
PAIG				S	**Sg**	07 25 10.2	+1.9
PAIG	**Paliouri**	**0.80**	**120**	P	**Pg**	07 24 57.8	-0.1
PAIG				S	**Sg**	07 25 10.2	+1.9
KNT	**Kendrikon**	**0.83**	**6**	P	**Pg**	07 24 57.5	-1.2
KNT				S	**Sg**	07 25 09.9	+0.3
KNT	**Kendrikon**	**0.83**	**6**	P	**Pg**	07 24 57.5	-1.2
KNT				S	**Sg**	07 25 09.9	+0.3
OUR	**Ouranopolis**	**0.92**	**89**	P	**Pg**	07 24 59.5	-0.7
OUR	**Ouranopolis**	**0.92**	**89**	P	**Pg**	07 24 59.5	-0.7
OUR				S	**Sg**	07 25 13.1	+1.0
OUR	**Ouranopolis**	**0.92**	**89**	P	**Pg**	07 24 59.5	-0.7
OUR				S	**Sg**	07 25 13.1	+1.0
THL	**Klokotos Trika**	**0.97**	**218**	*e*PN	**Pg**	07 25 01.0	-0.2
THL				*e*SN	**Sg**	07 25 14.7	+0.9
THL	**Klokotos Trika**	**0.97**	**218**	P	**Pg**	07 25 00.6	-0.6
THL				S	**Sg**	07 25 15.5	+1.7
THL	**Klokotos Trika**	**0.97**	**218**	P	**Pg**	07 25 00.6	-0.6
THL	**Klokotos Trika**	**0.97**	**218**	*e*Pn	**Pg**	07 25 01.0	-0.2
THL				*e*Sn	**Sg**	07 25 14.7	+0.9
THL				S	**Sg**	07 25 15.5	+1.7
SRS	**Serrai**	**1.00**	**38**	P	**Pg**	07 25 01.0	-0.8
SRS	**Serrai**	**1.00**	**38**	P	**Pg**	07 25 00.9	-0.9
SRS				S	**Sg**	07 25 15.3	+0.6
SRS	**Serrai**	**1.00**	**38**	P	**Pg**	07 25 01.0	-0.8
SRS				S	**Sg**	07 25 15.3	+0.6
VAY	**Valandovo**	**1.00**	**351**	P	**Pg**	07 25 00.2	-1.6
VAY	**Valandovo**	**1.00**	**351**	*e*Pg	**Pg**	07 25 00.3	-1.5
VAY				*e*Sg	**Sg**	07 25 14.6	-0.3
VAY				*e*Lg		07 25 14.8	
	comp=N,485nm,0.6s						
VAY				*e*Lg		07 25 15.2	
	comp=E,443nm,0.6s						
VAY	**Valandovo**	**1.00**	**351**	P	**Pg**	07 25 00.2	-1.6
XOR	**Xorichti**	**1.01**	**162**	P	**Pg**	07 25 02.3	+0.2
XOR	**Xorichti**	**1.01**	**162**	P	**Pg**	07 25 01.7	-0.4
XOR	**Xorichti**	**1.01**	**162**	P	**Pg**	07 25 01.7	-0.4
NEO	**Neokhori**	**1.08**	**162**	P	**Pg**	07 25 02.6	-0.7
NEO	**Neokhori**	**1.08**	**162**	*e*PN	**Pg**	07 25 02.7	-0.6
NEO	**Neokhori**	**1.08**	**162**	P	**Pg**	07 25 02.6	-0.7
FNA	**Florina**	**1.16**	**293**	P	**Pb**	07 25 04.2	-0.5
FNA	**Florina**	**1.16**	**293**	P	**Pb**	07 25 03.5	-1.2
FNA				S	**Sb**	07 25 19.9	+0.2
FNA	**Florina**	**1.16**	**293**	P	**Pb**	07 25 04.2	-0.5
FNA				S	**Sb**	07 25 19.9	+0.2
BIA	**Bitola**	**1.30**	**302**	P	**Pn**	07 25 05.3	-1.4
BIA				S	**Sb**	07 25 23.4	-0.4
BIA	**Bitola**	**1.30**	**302**	*e*Pn	**Pn**	07 25 06.3	-0.4
BIA				*e*Sn	**Sn**	07 25 26.0	+1.9
BIA	**Bitola**	**1.30**	**302**	P	**Pn**	07 25 05.3	-1.4
BIA				S	**Sb**	07 25 23.4	-0.4
NVR	**Nevrokopi**	**1.31**	**38**	P	**Pn**	07 25 06.8	+0.1
NVR	**Nevrokopi**	**1.31**	**38**	*e*PN	**Pn**	07 25 05.7	-1.0
NVR				*e*SN	**Sn**	07 25 24.3	+0.2
NVR	**Nevrokopi**	**1.31**	**38**	*e*Pn	**Pn**	07 25 05.7	-1.0
NVR	**Nevrokopi**	**1.31**	**38**	P	**Pn**	07 25 06.8	+0.1
NVR				*e*Sn	**Sn**	07 25 24.3	+0.2
AGG	**Agios Georgios**	**1.35**	**195**	P	**Pn**	07 25 09.1	+1.7
AGG	**Agios Georgios**	**1.35**	**195**	*e*PN	**Pn**	07 25 06.9	-0.5
AGG	**Agios Georgios**	**1.35**	**195**	P	**Pn**	07 25 07.2	-0.2
AGG				S	**Sb**	07 25 25.7	+0.5
AGG	**Agios Georgios**	**1.35**	**195**	*e*Pn	**Pn**	07 25 06.9	-0.5
AGG	**Agios Georgios**	**1.35**	**195**	P	**Pn**	07 25 07.2	-0.2
AGG				S	**Sb**	07 25 25.7	+0.5
KAVA	**Kavala**	**1.48**	**63**	P	**Pn**	07 25 08.1	-0.9
KAVA				S	**Sn**	07 25 27.2	-1.1
KAVA	**Kavala**	**1.48**	**63**	P	**Pn**	07 25 08.1	-0.9
KAVA				S	**Sn**	07 25 27.2	-1.1
KBN	**Korca**	**1.55**	**282**	*i* PG	**Pg**	07 25 16.1	+3.8
KBN				*i* SG	**Sg**	07 25 19.4	-13
KBN	**Korca**	**1.55**	**282**	*i* Pg	**Pg**	07 25 16.1	+3.8
	SNR=9.0						
KRUS	**Krusevo**	**1.56**	**312**	*e*Pg	**Pn**	07 25 09.8	-0.4
EVR	**Evrytania**	**1.60**	**208**	*e*Pn	**Pn**	07 25 11.1	+0.3
EVR	**Evrytania**	**1.60**	**208**	*e*PN	**Pn**	07 25 11.1	+0.3
EVR	**Evrytania**	**1.60**	**208**	*e*Pn	**Pn**	07 25 11.1	+0.3
JAN	**Janina**	**1.63**	**246**	*e*Pn	**Pn**	07 25 11.5	+0.3
JAN	**Janina**	**1.63**	**246**	*e*PN	**Pn**	07 25 11.5	+0.3
JAN	**Janina**	**1.63**	**246**	*e*Pn	**Pn**	07 25 11.5	+0.3
ATAL	**Atalanti**	**1.65**	**174**	P	**Pn**	07 25 10.9	-0.5
ATAL	**Atalanti**	**1.65**	**174**	P	**Pn**	07 25 10.9	-0.5
LKR	**Lokris**	**1.69**	**174**	*e*Pn	**Pn**	07 25 12.2	+0.3
LKR	**Lokris**	**1.69**	**174**	*e*PN	**Pn**	07 25 12.2	+0.3
LKR	**Lokris**	**1.69**	**174**	*e*Pn	**Pn**	07 25 12.2	+0.3
LIA	**Limnos Island**	**1.89**	**102**	*e*Pb	**Pn**	07 25 13.5	-1.2
LIA	**Limnos Island**	**1.89**	**102**	*e*PB	**Pn**	07 25 13.5	-1.2
LIA	**Limnos Island**	**1.89**	**102**	*e*Pb	**Pn**	07 25 13.5	-1.2
SRN	**Sarande**	**2.18**	**259**	*i* PG	**Pg**	07 25 30.9	+6.5
SRN				*i* SG	**Sg**	07 25 50.8	-1.8
VTS	**Vitosha**	**2.28**	**8**	⇓P	**Pn**	07 25 21.6	+1.5
VTS				S	**Sg**	07 25 57.5	+1.6
VTS	**Vitosha**	**2.28**	**8**	⇓*i*P	**Pn**	07 25 21.6	+1.5
VTS				S	**Sg**	07 25 57.5	+1.7
VTS	**Vitosha**	**2.28**	**8**	⇓P	**Pn**	07 25 21.6	+1.5
LTK	**Loutraki**	**2.31**	**176**	*e*PN	**Pn**	07 25 19.8	-0.7
LTK	**Loutraki**	**2.31**	**176**	*e*Pn	**Pn**	07 25 19.8	-0.7
PTL	**Penteli**	**2.43**	**159**	*e*Pn	**Pn**	07 25 22.0	-0.1
PTL	**Penteli**	**2.43**	**159**	*e*PN	**Pn**	07 25 22.0	-0.1
PTL	**Penteli**	**2.43**	**159**	*e*Pn	**Pn**	07 25 22.0	-0.1
ATH	**Athens Observa**	**2.46**	**163**	*e*Pn	**Pn**	07 25 22.5	-0.1
ATH	**Athens Observa**	**2.46**	**163**	*e*PN	**Pn**	07 25 22.5	-0.1
ATH	**Athens Observa**	**2.46**	**163**	*e*Pn	**Pn**	07 25 22.5	-0.1
ALN	**Alexandroupoli**	**2.55**	**76**	*e*Pn	**Pn**	07 25 22.9	-0.9
ALN	**Alexandroupoli**	**2.55**	**76**	*e*PN	**Pn**	07 25 22.9	-0.9
ALN	**Alexandroupoli**	**2.55**	**76**	P	**Pn**	07 25 23.5	-0.3
ALN				S	**Sn**	07 25 55.0	+0.3
ALN	**Alexandroupoli**	**2.55**	**76**	*e*Pn	**Pn**	07 25 22.9	-0.9
ALN	**Alexandroupoli**	**2.55**	**76**	P	**Pn**	07 25 23.5	-0.3
ALN				S	**Sn**	07 25 55.0	+0.3
BARS	**Barje**	**2.59**	**344**	*e*Pn	**Pn**	07 25 24.1	-0.2
NAIG	**Nisos Aigina**	**2.63**	**168**	*e*Pn	**Pn**	07 25 24.7	-0.2
NAIG	**Nisos Aigina**	**2.63**	**168**	*e*PN	**Pn**	07 25 24.7	-0.2
NAIG	**Nisos Aigina**	**2.63**	**168**	*e*Pn	**Pn**	07 25 24.7	-0.2
PUK	**Puka**	**2.77**	**309**	*i* PN	**Pg**	07 25 39.1	+3.5
BCI	**Bajram Curri**	**2.88**	**316**	*i* PN	**Pg**	07 25 47.2	+9.4
BCI				*i* SN	**Sg**	07 26 17.3	+2.1
CHOS	**Chios island**	**3.19**	**126**	*e*PN	**Pn**	07 25 33.5	+0.6
CHOS	**Chios island**	**3.19**	**126**	*e*Pn	**Pn**	07 25 33.3	+0.6
GRUS	**Gruza**	**3.87**	**337**	*e*Pn	**Pn**	07 25 41.5	-0.5
GZR	**Gura Zlata**	**5.06**	**360**	⇑P	**Pn**	07 25 59.8	+1.5
GZR	**Gura Zlata**	**5.06**	**360**	⇑*i*P	**Pn**	07 25 59.8	+1.5
GZR	**Gura Zlata**	**5.06**	**360**	⇑P	**Pn**	07 25 59.8	+1.5
BZS	**Buzias**	**5.35**	**351**	⇓P	**Pn**	07 26 02.3	0.0
BZS	**Buzias**	**5.35**	**351**	⇓*i*P	**Pn**	07 26 02.3	0.0
BZS	**Buzias**	**5.35**	**351**	⇓P	**Pn**	07 26 02.3	0.0
VOIR		**5.37**	**17**	⇓P	**Pn**	07 26 02.6	+0.1
VOIR		**5.37**	**17**	⇓*i*P	**Pn**	07 26 02.6	+0.1
VOIR		**5.37**	**17**	⇓P	**Pn**	07 26 02.6	+0.1
MLR	**Muntele Rosu**	**5.66**	**23**	⇑P	**Pn**	07 26 07.1	+0.7
MLR	**Muntele Rosu**	**5.66**	**23**	⇑*i*P	**Pn**	07 26 07.1	+0.6
MLR	**Muntele Rosu**	**5.66**	**23**	⇑P	**Pn**	07 26 07.1	+0.6
PLOR	**Plostina**	**6.20**	**26**	⇓*i*P	**Pn**	07 26 15.0	+1.1
PLOR	**Plostina**	**6.20**	**26**	⇓*i*P	**Pn**	07 26 15.0	+1.1

*PGC **27** 07:31:40.4±2.9, 49.°75N×130.°31W, h10km, ML3.4/10, Mw4.0, 231km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*IDC **27** 07:31:40.0±1.2, 49.°75N×130.°41W, h0km, mb3.8/7, mb1 4.1/15, mb1mx3.9/30, mbtmp3.9/15, ML3.4/7, Error ellipse: s-maj=27.1km s-min=13.0km az=64.0*
*BJI **27** 07:31:41.6, 50.°20N×129.°66W, h4km, mB5.0/7, mb4.9/11, Ms4.5/3, Ms7 4.1/3*

*ISCJB **27** 07:31:42.7±0.3, 49.°94N±0.°03×129.°96W±0.°05, h13km, mb4.1/15, Error ellipse: s-maj=5.5km s-min=2.8km az=44.1*
*NEIC **27** 07:31:44.1±0.3, 49.°92N×130.°02W, h10km, mb4.3/37, MW4.0(PGC), Error ellipse: s-maj=7.9km s-min=2.9km az=46.0*

ISC 27 07:31:44.9±1.6, **49.°98N**±0.°03×**129.°93W**±0.°05, **h14**km±12km, **h14**km±1.0km**:pP-P,n112,**σ1§**21**/117, **mb4.1**/15**,7D,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.32**	**60**	⇓P	n	**Pn**		**07 32 07.2**	**-1.7**
BPBC	**Brooks Peninsu**	**1.40**	**82**	⇓P	n	**Pn**		**07 32 07.3**	**-2.6**
BPBC				⇑Sn		**Sn**		**07 32 27.7**	**-0.5**
PHC	**Port Hardy**	**1.75**	**65**	Pn		**Pn**		**07 32 13.2**	**-1.6**
PHC				⇑Sn		**Sn**		**07 32 37.2**	**+0.3**
MAYB	**Maynard**	**1.82**	**76**	⇓P	n	**Pn**		**07 32 13.5**	**-2.2**
WOSB	**Woss**	**2.17**	**84**	⇓P	n	**Pn**		**07 32 18.7**	**-1.8**
BBB	**Bella Bella**	**2.48**	**27**	Pn		**Pn**		**07 32 24.4**	**-0.4**
BBB				Sn		**Sn**		**07 32 55.7**	**+0.8**
BBB	**Bella Bella**	**2.48**	**27**	Pn		**Pn**		**07 32 24.4**	**-0.5**
	58nm,0.3s,baz=45,slow=13,SNR=160								
BBB				Sn		**Sn**		**07 32 55.7**	**+0.8**
	15nm,0.3s,baz=143,slow=21,SNR=7.1								
BBB	**Bella Bella**	**2.48**	**27**	Pn		**Pn**		**07 32 24.4**	**-0.5**
BBB				⇓Sn		**Sn**		**07 32 55.5**	**+0.6**
GDR	**Gold River**	**2.53**	**93**	⇓Pn		**Pn**		**07 32 23.7**	**-1.7**
BNB	**Barry Inlet**	**2.84**	**337**	⇓Pn		**Pn**		**07 32 25.2**	**-4.5**
MOBC	**Moresby Island**	**3.41**	**339**	⇑Pn		**Pn**		**07 32 34.5**	**-3.1**
DIB	**Dawson Inlet,**	**3.59**	**335**	⇓Pn		**Pn**		**07 32 36.6**	**-3.4**
DIB	**Dawson Inlet,**	**3.59**	**335**	⇓Pn		**Pn**		**07 32 36.9**	**-3.2**
PGC	**Sidney**	**4.44**	**105**	*e*Pn	n	**Pn**		**07 32 49.3**	**-2.4**
NLWA	**Neilton Lookou**	**4.78**	**121**	*e*Pn	n	**Pn**		**07 32 54.1**	**-2.3**
RPW	**Rockport**	**5.72**	**102**	*e*Pn	n	**Pn**		**07 33 09.8**	**+0.5**
CRAG	**Craig**	**5.83**	**342**	*e*P	n	**Pn**		**07 33 12.3**	**+1.6**
LON	**Longmire**	**6.30**	**118**	*e*Pn	n	**Pn**		**07 33 16.6**	**-0.6**
ETW	**Entiat**	**6.77**	**107**	*e*Pn	n	**Pn**		**07 33 23.4**	**-0.3**
OD2	**Odessa Site #2**	**7.86**	**105**	*e*Pn	n	**Pn**		**07 33 37.8**	**-0.9**
DLBC	**Dease Lake**	**8.47**	**360**	Pn		**Pn**		**07 33 49.2**	**+2.3**
	0.1nm,0.3s,baz=182,slow=13,SNR=4.3								
NEW	**Newport**	**8.57**	**97**	*e*Pn	n	**Pn**		**07 33 48.5**	**+0.1**
HUMO	**Hull Mountain**	**8.81**	**144**	Pn		**Pn**		**07 33 51.5**	**-0.2**
LNOR	**Lincton Mounta**	**8.83**	**113**	*e*Pn	n	**Pn**		**07 33 52.7**	**+0.7**
YBH	**Yreka Blue Hor**	**9.66**	**146**	Pn		**Pn**		**07 34 03.1**	**-0.3**
	0.1nm,0.3s,baz=330,slow=18,SNR=2.8								
BSMT	**Bassoo Peak**	**10.19**	**96**	*e*Pn	n	**Pn**		**07 34 10.2**	**-0.4**
	4.3nm,1.0s								
WALA	**Waterton Lakes**	**10.46**	**89**	*e*Pn	n	**Pn**		**07 34 16.5**	**+2.3**
MOD	**Modoc**	**10.49**	**137**	*e*Pn	n	**Pn**		**07 34 14.9**	**+0.2**
EDM	**Edmonton**	**10.81**	**66**	*e*Pn	n	**Pn**		**07 34 22.2**	**+3.3**
SWMT	**Swartz Lake**	**10.81**	**97**	*e*Pn	n	**Pn**		**07 34 20.7**	**+1.7**
	6.3nm,1.3s								
WVOR	**Wild Horse Val**	**10.86**	**130**	*e*Pn	n	**Pn**		**07 34 20.2**	**+0.4**
	5.7nm,1.2s								
MSO	**Missoula**	**11.09**	**100**	*e*Pn	n	**Pn**		**07 34 23.3**	**+0.5**
CHMT	**Chamberlain Mo**	**11.49**	**99**	*e*Pn	n	**Pn**		**07 34 28.1**	**-0.2**
HLID	**Hailey**	**12.41**	**115**	*e*Pn	n	**Pn**		**07 34 41.4**	**+0.4**
	5.8nm,1.3s								
DLMT	**Dillon**	**12.56**	**105**	*e*Pn	n	**Pn**		**07 34 42.3**	**-0.6**
MCMT	**McKenzie Canyo**	**12.66**	**108**	*e*Pn	n	**Pn**		**07 34 43.6**	**-0.7**
	1.7nm,1.1s								
PAHR	**Pah Rah Range**	**12.70**	**140**	*e*Pn	n	**Pn**		**07 34 45.5**	**+0.6**
BOZ	**Bozeman (W)**	**13.03**	**102**	*e*Pn	n	**Pn**		**07 34 52.6**	**+3.2**
EGMT	**Eagleton**	**13.39**	**91**	*e*Pn	n	**Pn**		**07 34 54.8**	**+0.6**
NVAR	**Mina Array Bea**	**14.22**	**140**	Pn		**Pn**		**07 35 05.2**	**-0.5**
	0.1nm,0.3s,baz=317,slow=10,SNR=10.0								
IMW	**Indian Meadow**	**14.31**	**108**	*e*Pn	n	**Pn**		**07 35 08.3**	**+1.4**
DCID1	**Drake Creek**	**14.32**	**109**	*e*Pn	n	**Pn**		**07 35 07.7**	**+0.7**
FLWY	**Flagg Ranch**	**14.36**	**107**	*e*Pn	n	**Pn**		**07 35 09.3**	**+1.7**
RRI2	**Red Ridge**	**14.38**	**110**	*e*Pn	n	**Pn**		**07 35 08.0**	**+0.2**
HVU	**Hansel Valley**	**14.47**	**118**	*e*Pn	n	**Pn**		**07 35 10.0**	**+0.9**
MOOW	**Moose Ponds**	**14.51**	**108**	*e*Pn	n	**Pn**		**07 35 11.8**	**+2.2**
TPAW	**Teton Pass**	**14.52**	**109**	*e*Pn	n	**Pn**		**07 35 13.3**	**+3.5**
REDW	**Red Top Meadow**	**14.65**	**110**	*e*Pn	n	**Pn**		**07 35 15.7**	**+4.1**
LOHW	**Long Hollow**	**14.67**	**108**	*e*Pn	n	**Pn**		**07 35 15.3**	**+3.6**
RLMT	**Red Lodge**	**14.76**	**101**	*e*Pn	n	**Pn**		**07 35 13.5**	**+0.6**
DAWY	**Dawson**	**15.00**	**344**	*e*Pn	n	**Pn**		**07 35 17.8**	**+1.6**
YKA	**Yellowknife Ar**	**15.10**	**28**	Pn		**Pn**		**07 35 17.0**	**-0.4**
	0.1nm,0.3s,baz=219,slow=12,SNR=8.5								
HWUT	**Hardware Ranch**	**15.27**	**116**	*e*P	n	**Pn**		**07 35 25.8**	**+5.9**
	12nm,1.4s								
DUG	**Dugway**	**15.52**	**123**	*e*Pn	n	**Pn**		**07 35 22.5**	**-0.6**
	14nm,1.3s								
PAX	**Paxson**	**15.53**	**333**	*e*Pn	n	**Pn**		**07 35 23.9**	**+0.9**
	12nm,1.3s								
OHAK	**Old Harbor**	**15.59**	**307**	*e*P	n	**Pn**		**07 35 23.4**	**-0.5**
	36nm,1.9s								
SML	**Sawmill**	**15.64**	**326**	*e*Pn	n	**Pn**		**07 35 26.6**	**+2.1**
	4.8nm,1.3s								
DOT	**Dot Lake**	**15.67**	**336**	*e*Pn	n	**Pn**		**07 35 25.5**	**+0.6**
	170nm,1.8s								
BW06	**Boulder Array**	**15.77**	**109**	*e*Pn	n	**Pn**		**07 35 29.3**	**+2.9**
	39nm,1.5s								
PDAR	**Pinedale Array**	**15.77**	**109**	Pn		**Pn**		**07 35 28.8**	**+2.4**
	0.1nm,0.3s,baz=307,slow=10,SNR=32								
PMR	**Palmer**	**15.79**	**325**	*e*P	n	**Pn**		**07 35 25.5**	**-1.0**
	0.9nm,0.7s								
EGAK	**Eagle**	**15.98**	**342**	*e*Pn	n	**Pn**		**07 35 29.0**	**+0.1**
	44nm,1.7s								
JLU	**Jordanelle**	**15.99**	**119**	*e*Pn	n	**Pn**		**07 35 29.7**	**+0.4**
	39nm,2.1s								
LAO	**LASA Array**	**16.09**	**93**	*e*P	n	**Pn**		**07 35 31.1**	**+0.7**
	25nm,1.2s								
DAU	**Daniels Canyon**	**16.23**	**119**	*e*Pn	n	**Pn**		**07 35 31.6**	**-0.7**
	15nm,1.4s								
ISA	**Isabella**	**16.57**	**145**	*e*P	n	**Pn**		**07 35 38.9**	**+2.3**
	15nm,1.4s								
DGMT	**Dagmar**	**16.85**	**85**	*e*Pn	n	**Pn**		**07 35 40.2**	**0.0**
	260nm,2.5s								
MSU	**Marysvale**	**17.07**	**125**	*e*Pn	n	**Pn**		**07 35 42.9**	**-0.2**
MCK	**McKinley**	**17.15**	**331**	*e*Pn	n	**Pn**		**07 35 40.6**	**-3.2**
	87nm,2.3s								
SHPR	**Sheep Range**	**17.20**	**136**	*e*Pn	n	**Pn**		**07 35 44.4**	**-0.2**
CCUT	**Cedar City**	**17.20**	**130**	*e*Pn	n	**Pn**		**07 35 44.9**	**+0.3**
	38nm,2.0s								
ILAR	**Eielson Array**	**17.32**	**335**	P		**Pn**		**07 35 45.2**	**-0.6**
	0.1nm,0.3s,baz=148,slow=11,SNR=23								
TRF	**Throfare Moun**	**17.40**	**328**	*e*Pn	n	**Pn**		**07 35 47.0**	**+0.2**
	148nm,2.4s								
SRU	**San Rafael**	**17.54**	**121**	*e*Pn	n	**Pn**		**07 35 48.8**	**0.0**
	9.4nm,1.2s								
FFC	**Flin Flon**	**17.66**	**64**	*e*Pn	n	**Pn**		**07 35 51.2**	**+1.1**
	84nm,1.7s								
COLA	**College**	**17.66**	**334**	*e*Pn	n	**Pn**		**07 35 50.4**	**+0.3**
	22nm,1.5s								
PPLA	**Purkeypile**	**17.72**	**325**	*e*Pn	n	**Pn**		**07 35 51.1**	**+0.2**
	13nm,1.3s								
BPAW	**Bear Paw Mtn.**	**18.07**	**329**	*e*Pn	n	**Pn**		**07 35 54.4**	**-0.7**
	19nm,1.3s								
SVW2	**Sparrevohn**	**18.15**	**318**	*e*P	n	**Pn**		**07 35 54.5**	**-1.7**
	22nm,1.6s								
LDFC	**Landfair**	**18.42**	**138**	*e*Pn	n	**Pn**		**07 35 59.0**	**-0.6**
INK	**Inuvik**	**18.47**	**356**	P		**Pn**		**07 35 58.9**	**-1.1**
	0.0nm,0.3s,baz=159,slow=15,SNR=1.9								
PV04	**Paradox Valley**	**18.94**	**120**	*e*P	n	**Pn**		**07 36 05.9**	**0.0**
PHWY	**Pilot Hill**	**19.12**	**108**	*e*P	n	**Pn**		**07 36 07.2**	**-0.9**
	12nm,1.4s								
TTA	**Tatalina**	**19.20**	**322**	*e*P	n	**Pn**		**07 36 07.6**	**-1.3**
PV01	**Paradox Valley**	**19.31**	**120**	*e*P	n	**Pn**		**07 36 09.2**	**-1.2**
	2um,1.4s								
SMCO	**Snowmass**	**19.52**	**115**	*e*P	n	**Pn**		**07 36 11.4**	**-1.5**
	16nm,1.5s								
WUAZ	**Wupatki**	**19.79**	**130**	*e*P	n	**Pn**		**07 36 14.8**	**-1.4**
	140nm,2.8s								
ISCO	**Idaho Springs**	**19.93**	**111**	*e*P	n	**Pn**		**07 36 16.5**	**-1.2**
	22nm,1.6s								
MVCO	**Mesa Verde**	**20.01**	**122**	*e*P		**P**		**07 36 16.7**	**-0.3**
	51nm,1.8s								
COLD	**Coldfoot**	**20.08**	**337**	*e*P		**P**		**07 36 18.6**	**+1.0**
	50nm,1.6s								
SDCO	**Great Sand Dun**	**21.33**	**116**	*e*P		**P**		**07 36 31.6**	**+0.4**
	8.4nm,1.3s,mb3.9								
ULM	**Lac du Bonnet**	**21.73**	**76**	P		**P**		**07 36 36.8**	**+1.3**
	13nm,0.9s,mb4.3,baz=292,slow=10,SNR=6.6								
AGMN	**Agassiz Nation**	**22.24**	**81**	*e*P		**P**		**07 36 40.9**	**0.0**
	19nm,1.1s,mb4.4								
TUC	**Tucson**	**22.68**	**134**	*e*P		**P**		**07 36 46.0**	**+0.3**
	86nm,2.8s,mb4.7								
ANMO	**Albuquerque**	**22.79**	**122**	*e*P		**P**		**07 36 47.2**	**+0.4**
	5.0nm,1.3s,mb3.8								
ANMO	**Albuquerque**	**22.79**	**122**	P		**P**		**07 36 45.9**	**-1.0**
	1.4nm,0.9s,mb3.4,baz=296,slow=10,SNR=7.1								
LAZ	**Ladron**	**22.83**	**124**	*e*P		**P**		**07 36 48.4**	**+1.0**
	53nm,2.7s,mb4.5								

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BNM	**Barren Site**	**23.30**	**124**	*e*P		**P**		**07 36 52.3**	**+0.1**
	68nm,2.2s,mb4.7								
ECSD	**EROS Data Cent**	**23.49**	**93**	*e*P		**P**		**07 36 53.6**	**-0.5**
	22nm,1.1s,mb4.5								
EYMN	**Ely**	**25.13**	**80**	*e*P		**P**		**07 37 09.7**	**+0.6**
	16nm,0.8s,mb4.6								
WMOK	**Wichita Mounta**	**27.35**	**112**	*e*P		**P**		**07 37 29.1**	**-0.2**
	5.2nm,1.1s,mb4.0								
TXAR	**Lajitas Array**	**28.63**	**126**	P		**P**		**07 37 39.5**	**-1.3**
	0.3nm,0.9s,mb3.0,baz=339,slow=12,SNR=3.3								
ZALV	**Zalesovo Beam**	**72.39**	**339**	P		**P**		**07 43 08.3**	**-1.7**
	0.4nm,0.3s,mb3.8,baz=12,slow=7.6,SNR=4.5								
HHC	**Hu-ho-hao-te**	**74.70**	**316**	*e*P		**P**		**07 43 25.3**	**+1.5**
HHC				pP		pP		07 43 29.5	+1.1
HHC				sP		sP		07 43 31.8	+1.7
HHC				PP		PP		07 46 13.3	+3.1
HHC				S		S		07 52 57.5	-1.8
HHC				sS		sS		07 53 05.0	-1.9
HHC				SS		SS		07 57 46.8	+1.1
HHC				pmax		pmax			
	comp=Z,20nm,0.9s								
HHC				pmax		pmax			
	comp=Z,260nm,4.6s								
HHC				LR		LR		

DGMT	**Dagmar**	**16.91**	**85**	*e*Pn		**Pn**	**07 40 19.2**	**+1.1**
	151nm,2.3s								
MSU	**Marysvale**	**17.08**	**125**	*e*Pn		**Pn**	**07 40 20.6**	**+0.2**
SHPR	**Sheep Range**	**17.19**	**136**	*e*Pn		**Pn**	**07 40 20.4**	**-1.3**
	5.1nm,1.1s								
CCUT	**Cedar City**	**17.20**	**130**	*e*Pn		**Pn**	**07 40 22.1**	**+0.2**
	15nm,1.5s								
ILAR	**Eielson Array**	**17.35**	**335**	P		**Pn**	**07 40 23.5**	**0.0**
	0.0nm,0.3s,baz=148,slow=10.0,SNR=16								
COLA	**College**	**17.69**	**334**	*e*Pn		**Pn**	**07 40 27.9**	**+0.1**
	14nm,1.4s								
FFC	**Flin Flon**	**17.73**	**64**	*e*Pn		**Pn**	**07 40 31.0**	**+2.8**
	18nm,1.1s								
LDFC	**Landfair**	**18.41**	**138**	*e*Pn		**Pn**	**07 40 36.1**	**-0.6**
RSSD	**Black Hills**	**18.58**	**98**	*e*P		**Pn**	**07 40 39.9**	**+1.0**
	6.8nm,1.2s								
PV04	**Paradox Valley**	**18.96**	**119**	*e*Pn		**Pn**	**07 40 44.0**	**+0.5**
TTA	**Tatalina**	**19.21**	**322**	*e*P		**Pn**	**07 40 45.5**	**-0.8**
PV01	**Paradox Valley**	**19.33**	**119**	*e*P		**Pn**	**07 40 46.1**	**-1.8**
SMCO	**Snowmass**	**19.54**	**115**	*e*P		**Pn**	**07 40 49.7**	**-0.7**
	8.7nm,1.0s								
WUAZ	**Wupatki**	**19.79**	**130**	*e*P		**Pn**	**07 40 52.0**	**-1.4**
	8.7nm,1.1s								
ISCO	**Idaho Springs**	**19.95**	**111**	*e*P		**Pn**	**07 40 54.4**	**-0.9**
	7.4nm,1.0s								
COLD	**Coldfoot**	**20.11**	**337**	*e*P		**P**	**07 40 56.9**	**+1.8**
	22nm,1.6s								
SDCO	**Great Sand Dun**	**21.35**	**115**	*e*P		**P**	**07 41 08.9**	**+0.1**
	3.5nm,0.9s,mb3.7								
ULM	**Lac du Bonnet**	**21.80**	**76**	P		**P**	**07 41 15.4**	**+2.0**
	8.9nm,0.8s,mb4.2,baz=280,slow=11,SNR=5.2								
AGMN	**Agassiz Nation**	**22.30**	**81**	*e*P		**P**	**07 41 19.9**	**+1.0**
	7.3nm,0.9s,mb4.1								
TUC	**Tucson**	**22.68**	**134**	*e*P		**P**	**07 41 20.8**	**-2.2**
	12nm,1.5s,mb4.1								
ANMO	**Albuquerque**	**22.80**	**122**	P		**P**	**07 41 23.8**	**-0.4**
	1.4nm,0.8s,mb3.4,baz=321,slow=11,SNR=6.7								
BNM	**Barren Site**	**23.31**	**124**	*e*P		**P**	**07 41 29.5**	**-0.1**
	9.2nm,1.4s,mb4.0								
ECSD	**EROS Data Cent**	**23.53**	**92**	*e*P		**P**	**07 41 31.1**	**-0.8**
	8.5nm,1.0s,mb4.1								
EYMN	**Ely**	**25.19**	**80**	*e*P		**P**	**07 41 47.4**	**+0.4**
	28nm,1.0s,mb4.8								
AMTX	**Amarillo**	**25.56**	**115**	*e*P		**P**	**07 41 50.8**	**+0.4**
	8.3nm,0.9s,mb4.3								
WMOK	**Wichita Mounta**	**27.38**	**112**	*e*P		**P**	**07 42 06.3**	**-0.5**
	65nm,3.0s								
TXAR	**Lajitas Array**	**28.64**	**126**	P		**P**	**07 42 17.4**	**-0.8**
	0.5nm,0.9s,mb3.3,baz=324,slow=7.7,SNR=6.0								
OXF	**Oxford**	**33.32**	**102**	*e*P		**P**	**07 42 58.7**	**-0.7**
	20nm,1.0s,mb5.0								
ZALV	**Zalesovo Beam**	**72.43**	**339**	P		**P**	**07 47 45.2**	**-2.3**
ZALV	**Zalesovo Beam**	**72.43**	**339**	P		**P**	**07 47 45.2**	**-2.3**
	0.4nm,0.4s,mb3.7,baz=32,slow=8.5,SNR=3.1								
HHC	**Hu-ho-hao-te**	**74.71**	**316**	*e*P		**P**	**07 48 01.5**	**+0.4**
HHC				pP		pP	07 48 05.8	+0.6
HHC				sP		sP	07 48 09.0	+2.4
HHC				PP		PP	07 50 50.5	+2.9
HHC				S		S	07 57 33.8	-3.1
HHC				sS		sS	07 57 42.0	-1.5
HHC				SS		SS	08 02 22.8	-0.4
HHC				pmax		pmax		
	comp=Z,12nm,1.0s								
HHC				pmax		pmax		
	comp=Z,220nm,5.0s								
HHC				LR		LR		
	comp=N,120nm,19.0s								
HHC				LR		LR		
	comp=E,140nm,17.8s								
HHC				LR		LR		
	comp=Z,110nm,16.6s								
WMQ	**Urumqi**	**81.00**	**333**	*e*P		**P**	**07 48 38.3**	**+2.2**
WMQ				pP		pP	07 48 43.0	+2.8
WMQ				sP		sP	07 48 45.3	+3.6
WMQ				pmax		pmax		
	comp=Z,4.0nm,1.1s								
WMQ				pmax		pmax		
	comp=Z,38nm,4.2s								
LPAZ	**La Paz**	**85.42**	**122**	P		**P**	**07 48 57.3**	**-1.8**
	comp=Z,1.1nm,0.8s,mb4.0,baz=325,slow=5.2,SNR=6.0								
CD2	**Chengdu**	**86.46**	**316**	P		**P**	**07 49 03.8**	**-0.5**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s								
CD2				pmax		pmax		
	comp=Z,130nm,5.0s								
KSH	**Kashi**	**88.04**	**340**	*e*P		**P**	**07 49 13.0**	**+1.2**
KSH				*ep*P		pP	07 49 17.8	+1.9
KSH				*es*P		sP	07 49 20.0	+2.6
KSH				*eP*P		PP	07 52 42.3	+4.9
KSH				*e*SKS			07 59 39.0	
KSH				*eS*		S	07 59 53.8	-1.3
KSH				*es*S		sS	08 00 02.0	+0.1
KSH				*e*SS		SS	08 05 44.8	+3.4
KSH				pmax		pmax		
	comp=Z,2.0nm,0.6s								
KSH				pmax		pmax		
	comp=Z,66nm,3.2s								
GYA	**Guiyang**	**88.86**	**311**	*e*P		**P**	**07 49 17.3**	**+1.4**
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s								

*ISCJB **27** 07:40:39.3±1.4,20°.4S±0°.2×177°.8W±0°.2, h488km±21km, mb3.8/7, Error ellipse: s-maj=30.0km s-min=15.4km az=135.5*
*NEIC **27** 07:40:40.8±1.3,20°.44S×177°.80W, h489km±18km, Error ellipse: s-maj=28.7km s-min=13.9km az=140.0*
*IDC **27** 07:40:40.6±2.4,20°.45S×177°.78W, h485km±32km, mb3.4/7, mb1 3.7/9, mb1mx3.4/19, mbtmp3.5/9, Error ellipse: s-maj=35.4km s-min=17.5km az=145.0*

ISC 27 07:40:40.9±1.6, 20°.5S±0°.2×177°.7W±0°.2, h497km±22km, n14, σ1§04/14, mb3.8/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.69**	**42**	P	P	**P**	**07 42 44.3**	**-0.2**
	2.6nm,0.3s,baz=66,slow=11,SNR=4.7							
AFI				S	S	**S**	**07 44 20.8**	**-5.1**
	4.7nm,0.3s,baz=176,slow=24,SNR=6.9							
URZ	**Urewera**	**18.22**	**193**	*e*P	P	**P**	**07 44 23.7**	**+0.4**
URZ	**Urewera**	**18.22**	**193**	P	P	**P**	**07 44 23.6**	**+0.3**
	2.4nm,0.3s,baz=281,slow=3.7,SNR=13							
STKA	**Stephens Creek**	**38.02**	**244**	P	P	**P**	**07 47 16.9**	**+0.9**
	2.3nm,0.5s,mb3.9,baz=91,slow=11,SNR=10.0							
ASAR	**Alice Springs**	**44.78**	**257**	P	P	**P**	**07 48 10.1**	**+0.3**
	12nm,0.5s,mb4.6,baz=96,slow=7.7,SNR=235							
ASAR				S	S	**S**	**07 54 07.2**	**-3.2**
	1.1nm,0.9s,baz=94,slow=16,SNR=6.3							
WB2	**Warramunga Arr**	**44.86**	**262**	*e*P	P	**P**	**07 48 09.9**	**-0.6**
WRA	**Warramunga Arr**	**44.88**	**262**	P	P	**P**	**07 48 10.1**	**-0.5**
	5.3nm,0.5s,mb4.2,baz=96,slow=8.2,SNR=30							
FITZ	**Fitzroy Crossi**	**53.30**	**262**	P	P	**P**	**07 49 13.2**	**0.0**
	3.1nm,0.5s,mb3.9,baz=118,slow=4.4,SNR=25							
TXAR	**Lajitas Array**	**86.84**	**57**	P	P	**P**	**07 52 34.6**	**+2.1**
	0.2nm,0.7s,mb3.0,baz=232,slow=4.2,SNR=3.2							
ILAR	**Eielson Array**	**88.29**	**13**	P	P	**P**	**07 52 37.3**	**-1.0**
	0.2nm,0.4s,mb3.2,baz=215,slow=5.0,SNR=2.7							
VNA1	**Neumayer--Stat**	**88.75**	**176**	*e*PKPdf	P	**P**	**07 52 39.0**	**-1.6**
CMAR	**Chiang Mai Arr**	**90.39**	**289**	P	P	**P**	**07 52 50.3**	**+1.1**
	1.6nm,0.8s,mb3.9,baz=118,slow=3.3,SNR=9.0							
AKASG	**Malin Array Be**	**143.19**	**331**	PKhKP	PKPpre		07 59 14.5	
	0.2nm,0.3s,baz=43,slow=4.2,SNR=4.7							
BRTR	**Keskin Array B**	**147.07**	**312**	PKPbc	PKPbc		07 59 27.6	-0.2
	0.9nm,0.6s,baz=146,slow=3.6,SNR=3.8							

IDC 27 07:43:51.3±4.9, 49°.94N×129°.62W, h0km, mb1 3.5/4, mb1mx3.4/25, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=70.0km s-min=25.3km az=62.0, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**2.44**	**22**	Pn	Pn	Pn	07 44 31.1	-1.2
	7.0nm,0.3s,baz=57,slow=6.7,SNR=9.6							
YKA	**Yellowknife Ar**	**15.04**	**28**	Pn	Pn	Pn	07 47 21.5	-3.3
	0.0nm,0.3s,baz=213,slow=13,SNR=2.8							
PDAR	**Pinedale Array**	**15.57**	**110**	Pn	Pn	Pn	07 47 34.9	+2.9
	0.1nm,0.3s,baz=299,slow=10.0,SNR=4.5							
ILAR	**Eielson Array**	**17.44**	**335**	P	P	Pn	07 47 55.6	0.0
	baz=137,slow=14,SNR=5.4							

*PGC **27** 07:44:54.0±14.0, 49°.76N×130°.38W, h10km, ML3.0/6, Mw3.6, 235km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **27** 07:44:55.4±0.7, 49°.98N±0°.06×130°.14W±0°.09, h10km, mb3.6/3, Error ellipse: s-maj=9.1km s-min=6.5km az=44.6*
*IDC **27** 07:44:55.3±1.9, 49°.89N×130°.24W, h0km, mb3.6/3, mb1 3.8/8, mb1mx3.6/27, mbtmp3.5/8, ML3.6/4, Error ellipse: s-maj=29.6km s-min=16.7km az=78.0*
*NEIC **27** 07:44:57.5±0.9, 50°.02N×130°.08W, h10km, mb3.9/2, Error ellipse: s-maj=19.5km s-min=7.8km az=49.0*

ISC 27 07:44:57.0±0.7, 50°.01N±0°.06×130°.07W±0°.09, h10km, n22, σ1§12/26, mb3.6/3, 6D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.39**	**62**	||Pn	**Pn**	**07 45 21.9**	**-0.6**
BPBC	**Brooks Peninsu**	**1.49**	**84**	||Pn	**Pn**	**07 45 21.8**	**-1.9**
PHC	**Port Hardy**	**1.82**	**67**	||Pn	**Pn**	**07 45 27.8**	**-0.6**
PHC				||Sn	**Sn**	**07 45 51.6**	**+0.1**
MAYB	**Maynard**	**1.90**	**77**	||Pn	**Pn**	**07 45 28.8**	**-0.7**
WOSB	**Woss**	**2.26**	**85**	||Pn	**Pn**	**07 45 33.6**	**-0.8**
BBB	**Bella Bella**	**2.50**	**29**	Pn	Pn	**Pn**	**07 45 37.2**	**-0.5**
BBB				Sn	Sn	**Sn**	**07 46 10.5**	**+2.3**
BBB	**Bella Bella**	**2.50**	**29**	Pn	Pn	**Pn**	**07 45 37.2**	**-0.5**
	23nm,0.3s,baz=42,slow=13,SNR=25							
BBB				Sn	Sn	**Sn**	**07 46 10.5**	**+2.3**
	3.5nm,0.3s,baz=128,slow=23,SNR=5.3							
BBB	**Bella Bella**	**2.50**	**29**	||Pn	**Pn**	**07 45 36.7**	**-1.0**
BBB				||Sn	**Sn**	**07 46 09.9**	**+1.8**
DIB	**Dawson Inlet,**	**3.53**	**336**	Pn	Pn	**Pn**	**07 45 50.3**	**-1.5**
PGC	**Sidney**	**4.54**	**105**	*e*Pn	Pn	**Pn**	**07 46 05.3**	**-0.3**
NLWA	**Neilton Lookou**	**4.87**	**120**	*e*Pn	Pn	**Pn**	**07 46 10.3**	**+0.1**
NVAR	**Mina Array Bea**	**14.30**	**140**	Pn	Pn	**Pn**	**07 48 20.1**	**+0.6**
	0.1nm,0.3s,baz=321,slow=9.8,SNR=2.5							
REDW	**Red Top Meadow**	**14.75**	**109**	*e*Pn	Pn	**Pn**	**07 48 26.2**	**+0.7**
	9.4nm,1.4s							
YKA	**Yellowknife Ar**	**15.11**	**28**	Pn	Pn	**Pn**	**07 48 30.0**	**-0.3**
	0.0nm,0.3s,baz=211,slow=13,SNR=3.3							
PDAR	**Pinedale Array**	**15.87**	**109**	Pn	Pn	**Pn**	**07 48 43.4**	**+3.1**
	0.1nm,0.3s,baz=311,slow=11,SNR=8.1							
ILAR	**Eielson Array**	**17.25**	**335**	P	P	**Pn**	**07 48 59.7**	**+2.0**
	0.0nm,0.3s,baz=151,slow=11,SNR=11							
BPAW	**Bear Paw Mtn.**	**17.99**	**329**	*e*Pn	Pn	**Pn**	**07 49 06.4**	**-0.5**
	10nm,1.4s							
TTA	**Tatalina**	**19.12**	**322**	*e*P	P	**Pn**	**07 49 20.5**	**-0.1**
	10.0nm,1.2s							
PV01	**Paradox Valley**	**19.40**	**120**	*e*P	P	**Pn**	**07 49 23.1**	**-1.0**
	950nm,1.6s							
ULM	**Lac du Bonnet**	**21.81**	**76**	P	P	**P**	**07 49 51.9**	**+2.8**
	4.5nm,0.7s,mb4.0,baz=295,slow=12,SNR=3.1							
ANMO	**Albuquerque**	**22.88**	**122**	P	P	**P**	**07 50 01.4**	**+0.8**
	0.6nm,0.7s,mb3.1,baz=333,slow=11,SNR=4.2							
MKAR	**Makanchi Array**	**79.59**	**338**	P	P	**P**	**07 57 04.1**	**+0.1**
	0.5nm,0.6s,mb3.6,baz=35,slow=5.3,SNR=3.4							

*IDC **27** 07:45:19.9±1.9, 2°.25S×99°.83E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.8/21, mbtmp4.0/8, ML1.9/1, Error ellipse: s-maj=81.8km s-min=18.6km az=57.0*
*NEIC **27** 07:45:25.2±0.8, 2°.14S×99°.95E, h35km, mb4.0/1, Error ellipse: s-maj=28.9km s-min=8.7km az=61.0*
*ISCJB **27** 07:45:26.4±0.8, 2°.20S±0°.06×99°.81E±0°.06, h68km±7km, mb4.1/7, Error ellipse: s-maj=11.7km s-min=7.4km az=135.4*
*DJA **27** 07:45:27, 2°.08S×99°.89E, h10km, MLv4.1/11*

ISC 27 07:45:27.6±0.8, 2°.17S±0°.06×99°.82E±0°.06, h59km±7km, n25, σ1§06/28, mb4.1/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**1.11**	**319**	P	Pn	**Pn**	**07 45 46.2**	**-0.9**
SISI				S	Sn	**Sn**	**07 46 02.8**	**+1.1**
PDSI	**Padang**	**1.41**	**27**	P	Pn	**Pn**	**07 45 48.9**	**-2.2**
PDSI				S	Sn	**Sn**	**07 46 08.0**	**-0.6**
KRJI	**Kerinci**	**1.64**	**87**	P	Pn	**Pn**	**07 45 54.5**	**+0.3**
PPI	**Padang Panjang**	**1.80**	**19**	P	Pn	**Pn**	**07 45 54.7**	**-1.7**
PPI				S	Sn	**Sn**	**07 46 18.7**	**+0.6**
SDSI	**Sungai Dareh**	**2.02**	**53**	P	Pn	**Pn**	**07 45 59.6**	**+0.2**
SDSI				S	Sn	**Sn**	**07 46 24.8**	**+1.2**
BKNI	**Bangkinang**	**2.77**	**26**	P	Pn	**Pn**	**07 46 10.5**	**+1.0**
MNSI	**Mandailing Nat**	**2.96**	**355**	P	Pn	**Pn**	**07 46 13.1**	**+0.9**
KSI	**Kapahiang**	**3.13**	**118**	P	Pn	**Pn**	**07 46 20.4**	**+5.8**
MNAI	**Manna**	**3.81**	**125**	P	Pn	**Pn**	**07 46 24.0**	**+0.2**
MDSI	**Maura Dua**	**4.92**	**118**	P	Pn	**Pn**	**07 46 40.2**	**+1.2**
PSI	**Prapat**	**5.02**	**350**	Pn	Pn	**Pn**	**07 46 35.9**	**-4.6**
	0.1nm,0.3s,baz=162,slow=16,SNR=3.2							
KLSI		**5.50**	**117**	P	P	**Pn**	**07 46 47.5**	**+0.5**
KULM	**Kulim**	**7.46**	**6**	Pn	Pn	**Pn**	**07 47 11.2**	**-2.6**
CMAR	**Chiang Mai Arr**	**20.52**	**358**	P	P	**P**	**07 49 59.5**	**-1.5**
	1.6nm,0.6s,baz=186,slow=10,SNR=11							
WRA	**Warramunga Arr**	**38.06**	**120**	P	P	**P**	**07 52 40.2**	**-0.5**
	1.7nm,0.8s,mb3.8,baz=296,slow=9.5,SNR=8.3							
WB2	**Warramunga Arr**	**38.07**	**120**	*e*P	P	**P**	**07 52 39.8**	**-1.0**
ASAR	**Alice Springs**	**39.30**	**126**	P	P	**P**	**07 52 49.7**	**-1.3**
	0.4nm,0.5s,mb3.4,baz=308,slow=8.1,SNR=7.0							
SONM	**Songino Array**	**50.13**	**6**	P	P	**P**	**07 54 18.0**	**+1.2**
	3.6nm,0.7s,mb4.5,baz=188,slow=8.0,SNR=18							
MK31	**Makanchi Array**	**51.15**	**345**	*e*P	P	**P**	**07 54 25.3**	**+0.8**
MKAR	**Makanchi Array**	**51.15**	**345**	P	P	**P**	**07 54 25.4**	**+0.9**
MKAR	**Makanchi Array**	**51.15**	**345**	P	P	**P**	**07 54 25.4**	**+0.9**
	3.5nm,0.6s,mb4.4,baz=146,slow=8.1,SNR=30							
ZALV	**Zalesovo Beam**	**57.30**	**350**	P	P	**P**	**07 55 09.7**	**+0.6**
	2.3nm,0.7s,mb4.3,baz=176,slow=5.7,SNR=10							
ABKAR	**Akbulak array**	**61.70**	**332**	*e*P	P	**P**	**07 55 39.4**	**-0.2**
	1.1nm,0.8s,mb4.0							
FINES	**FINESS Array B**	**84.18**	**332**	P	P	**P**	**07 57 52.9**	**+0.7**
	1.0nm,0.7s,mb4.1,baz=119,slow=5.2,SNR=3.0							
TXAR	**Lajitas Array**	**144.95**	**37**	PKPbc	PKPdf		08 04 59.6	+0.7
	1.8nm,0.7s,baz=282,slow=1.2,SNR=37							

*ISCJB **27** 07:48:03.0±0.8, 49°.98N±0°.08×130°.3W±0°.1, h10km, mb3.5/4, Error ellipse: s-maj=16.1km s-min=7.3km az=143.1*
*IDC **27** 07:48:02.9±1.5, 49°.89N×130°.24W, h0km, mb3.6/4, mb1 3.8/10, mb1mx3.6/29, mbtmp3.6/10, ML3.3/4, Error ellipse: s-maj=33.4km s-min=15.7km az=74.0*
*NEIC **27** 07:48:04.8±0.7, 50°.01N×130°.25W, h10km, mb3.8/3, Error ellipse: s-maj=13.5km s-min=6.2km az=52.0*

ISC 27 07:48:04.7±0.8, 50°.02N±0°.08×130°.3W±0°.1, h10km, n25, σ0§91/25, mb3.5/4, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**2.56**	**31**	Pn	Pn	**Pn**	**07 48 45.2**	**-1.0**
	15nm,0.3s,baz=40,slow=10,SNR=15							
PGC	**Sidney**	**4.66**	**104**	*e*Pn	Pn	**Pn**	**07 49 15.5**	**+0.4**
LON	**Longmire**	**6.51**	**117**	*e*Pn	Pn	**Pn**	**07 49 39.5**	**-1.0**
	4.1nm,0.9s							
YBH	**Yreka Blue Hor**	**9.81**	**145**	Pn	Pn	**Pn**	**07 50 26.1**	**+0.3**
	0.0nm,0.3s,baz=301,slow=17,SNR=2.2							
NVAR	**Mina Array Bea**	**14.39**	**139**	Pn	Pn	**Pn**	**07 51 28.5**	**+0.2**
NVAR	**Mina Array Bea**	**14.39**	**139**	Pn	Pn	**Pn**	**07 51 28.5**	**+0.2**
	0.0nm,0.3s,baz=330,slow=10,SNR=2.5							
IMW	**Indian Meadow**	**14.53**	**108**	*e*Pn	Pn	**Pn**	**07 51 29.8**	**-0.4**
	7.5nm,0.9s							
MOOW	**Moose Ponds**	**14.73**	**108**	*e*Pn	Pn	**Pn**	**07 51 34.6**	**+1.7**
	8.8nm,1.0s							
TPAW	**Teton Pass**	**14.74**	**109**	*e*Pn	Pn	**Pn**	**07 51 33.6**	**+0.5**
	23nm,1.3s							
REDW	**Red Top Meadow**	**14.87**	**109**	*e*Pn	Pn	**Pn**	**07 51 35.6**	**+0.7**
	17nm,1.3s							
SNOW	**Snow King Moun**	**14.88**	**109**	*e*Pn	Pn	**Pn**	**07 51 35.8**	**+0.8**
	11nm,1.1s							
LOHW	**Long Hollow**	**14.89**	**108**	*e*Pn	Pn	**Pn**	**07 51 37.0**	**+1.9**
	12nm,1.4s							
RLMT	**Red Lodge**	**14.98**	**101**	*e*Pn	Pn	**Pn**	**07 51 35.2**	**-1.1**
	11nm,1.4s							
YKA	**Yellowknife Ar**	**15.17**	**29**	Pn	Pn	**Pn**	**07 51 38.0**	**-0.8**
YKA	**Yellowknife Ar**	**15.17**	**29**	Pn	Pn	**Pn**	**07 51 38.0**	**-0.8**
	0.0nm,0.3s,baz=220,slow=10,SNR=3.1							
PDAR	**Pinedale Array**	**15.99**	**109**	Pn	Pn	**Pn**	**07 51 50.3**	**+0.7**
	0.0nm,0.3s,baz=312,slow=13,SNR=10							
ILAR	**Eielson Array**	**17.20**	**336**	P	Pn	**Pn**	**07 52 06.2**	**+1.4**
	baz=155,slow=9.0,SNR=3.0							
MSU	**Marysvale**	**17.27**	**125**	*e*Pn	Pn	**Pn**	**07 52 05.3**	**-0.6**
	6.2nm,1.4s							
LDFC	**Landfair**	**18.59**	**138**	*e*P	Pn	**Pn**	**07 52 21.2**	**-0.9**
	14nm,1.0s							
TTA	**Tatalina**	**19.04**	**322**	*e*P	Pn	**Pn**	**07 52 27.2**	**-0.2**
	6.0nm,1.1s							
PV01	**Paradox Valley**	**19.52**	**119**	*e*P	Pn	**Pn**	**07 52 31.8**	**-1.5**
	816nm,1.3s							
ANMO	**Albuquerque**	**22.99**	**122**	P	P	**P**	**07 53 09.3**	**-0.1**
	0.5nm,0.4s,mb3.3,baz=331,slow=10.0,SNR=4.6							

TXAR	**Lajitas Array**	**28.83**	**126**	P		**P**	**07 54 02.5**	**-0.5**
	0.3nm,0.9s,mb3.0,baz=305,slow=9.8,SNR=3.5							
TXAR				PcP		PcP	07 57 11.9	-0.6
	0.4nm,1.0s,baz=321,slow=1.6,SNR=3.4							
BVAR	**Borovoye Array**	**75.86**	**347**	P		**P**	**07 59 51.3**	**+0.5**
	0.3nm,0.4s,mb3.6,baz=29,slow=6.6,SNR=3.7							
LPAZ	**La Paz**	**85.61**	**122**	P		**P**	**08 00 42.5**	**-0.7**
	1.4nm,0.9s,mb4.2,baz=347,slow=5.9,SNR=4.4							

IDC 27 07:53:02.8±4.9, 48°.67N×129°.56W, h0km, mb1 3.7/4, mb1mx3.4/24, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=75.0km s-min=26.6km az=53.0, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**3.63**	**14**	Pn	Pn	Pn	07 53 58.3	-1.9
	4.0nm,0.3s,baz=22,slow=14,SNR=6.2							
PDAR	**Pinedale Array**	**15.15**	**105**	Pn	Pn	Pn	07 56 41.2	+3.3
	0.1nm,0.3s,baz=305,slow=9.5,SNR=5.4							
YKA	**Yellowknife Ar**	**16.16**	**25**	Pn	Pn	Pn	07 56 49.3	-1.6
	0.0nm,0.3s,baz=219,slow=9.6,SNR=3.7							
ILAR	**Eielson Array**	**18.62**	**336**	P	P	Pn	07 57 21.9	+0.2
	0.0nm,0.3s,baz=149,slow=11,SNR=5.8							

*NEIC **27** 07:54:22.4±2.1, 49°.96N×130°.98W, h10km, mb4.0/10, Error ellipse: s-maj=31.3km s-min=12.7km az=81.0*
*IDC **27** 07:54:24.2±1.7, 49°.79N×130°.28W, h0km, mb3.8/5, mb1 4.0/10, mb1mx3.8/28, mbtmp3.7/10, ML3.5/3, MS4.0/1, Ms1 4.1/1, ms1mx3.2/37, Error ellipse: s-maj=33.9km s-min=17.3km az=69.0*

ISC 27 07:54:22.4±1.9, 49°.98N±0°.08×131°.0W±0°.3, h10km, n31, σ1§49/31, mb3.7/5, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**2.87**	**39**	Pn	Pn	**Pn**	**07 55 07.0**	**-1.1**
	17nm,0.3s,baz=46,slow=13,SNR=7.8							
PGC	**Sidney**	**5.13**	**102**	*e*Pn	Pn	**Pn**	**07 55 37.4**	**-1.9**
NLWA	**Neilton Lookou**	**5.40**	**116**	*e*Pn	Pn	**Pn**	**07 55 40.9**	**-2.1**
LON	**Longmire**	**6.94**	**114**	*e*Pn	Pn	**Pn**	**07 56 01.8**	**-2.3**
OD2	**Odessa Site #2**	**8.55**	**103**	*e*Pn	Pn	**Pn**	**07 56 22.4**	**-3.8**
	12nm,0.9s							
WVOR	**Wild Horse Val**	**11.42**	**127**	*e*Pn	Pn	**Pn**	**07 57 05.2**	**-0.2**
NVAR	**Mina Array Bea**	**14.70**	**137**	Pn	Pn	**Pn**	**07 57 48.0**	**-2.1**
	0.0nm,0.3s,baz=292,slow=9.6,SNR=3.2							
IMW	**Indian Meadow**	**14.99**	**106**	*e*Pn	Pn	**Pn**	**07 57 55.0**	**+0.9**
FLWY	**Flagg Ranch**	**15.05**	**105**	Pn	Pn	**Pn**	**07 57 57.3**	**+2.4**
	7.3nm,1.0s							
MOOW	**Moose Ponds**	**15.19**	**106**	*e*Pn	Pn	**Pn**	**07 58 00.2**	**+3.5**
	12nm,1.0s							
TPAW	**Teton Pass**	**15.20**	**108**	*e*Pn	Pn	**Pn**	**07 57 58.5**	**+1.6**
	15nm,1.0s							
REDW	**Red Top Meadow**	**15.33**	**108**	*e*P	Pn	**Pn**	**07 58 04.7**	**+6.1**
	6.7nm,1.0s							
SNOW	**Snow King Moun**	**15.33**	**107**	*e*P	Pn	**Pn**	**07 58 04.9**	**+6.3**
LOHW	**Long Hollow**	**15.35**	**107**	*e*P	Pn	**Pn**	**07 58 04.4**	**+5.6**
	7.3nm,1.0s							
YKA	**Yellowknife Ar**	**15.44**	**30**	Pn	Pn	**Pn**	**07 58 00.3**	**+0.3**
YKA	**Yellowknife Ar**	**15.44**	**30**	Pn	Pn	**Pn**	**07 58 00.3**	**+0.4**
	0.0nm,0.3s,baz=220,slow=11,SNR=2.8							
RLMT	**Red Lodge**	**15.46**

0.0nm,0.3s,baz=220,slow=10,SNR=2.4
KDAK Kodiak Island 15.42 309 LR LR 08 11 02.3
comp=Z,860nm,19.8s,baz=90,slow=32
PDAR Pinedale Array 15.80 109 Pn Pn 08 06 36.0 +2.5
0.0nm,0.3s,baz=316,slow=12,SNR=10
ILAR Eielson Array 17.35 335 P Pn 08 06 54.0 +0.8
0.0nm,0.3s,baz=154,slow=11,SNR=5.6
LDFC Landfair 18.40 138 *eP* **Pn 08 07 06.8 +0.4**
8.4nm,0.8s
ISCO Idaho Springs 19.95 111 *eP* **Pn 08 07 26.1 +1.2**
4.7nm,1.1s
SDCO Great Sand Dun 21.35 115 *eP* **P 08 07 39.3 +0.9**
2.0nm,1.1s,mb3.4
ULM Lac du Bonnet 21.79 76 LR LR 08 16 04.5
comp=Z,438nm,20.0s,baz=66,slow=36
ANMO Albuquerque 22.79 122 P P 08 07 53.9 0.0
0.5nm,0.7s,mb3.0,baz=333,slow=8.6,SNR=4.2
TXAR Lajitas Array 28.63 126 P P 08 08 48.6 +0.8
0.4nm,1.0s,mb3.1,baz=314,slow=7.0,SNR=3.4
LPAZ La Paz 85.41 122 P P 08 15 27.6 -1.2
0.9nm,1.0s,mb3.9,baz=331,slow=6.7,SNR=3.3

ISCJB ***27*** *08:07:16.0±0.9, 49°.64N±0°.06×130°.20W±0°.08, h10km, Error ellipse: s-maj=9.7km s-min=6.6km az=31.1*
IDC ***27*** *08:07:16.3±3.6, 49°.45N×129°.99W, h0km, mb1 3.7/5, mb1mx3.5/26, mbtmp3.4/5, ML3.4/5, Error ellipse: s-maj=58.9km s-min=20.2km az=70.0*
NEIC ***27*** *08:07:19.1±1.7, 49°.67N×129°.73W, h10km, Error ellipse: s-maj=30.0km s-min=10.2km az=56.0*
PGC ***27*** *08:07:20.4±2.1, 49°.81N×130°.25W, h10km, ML3.1/10, Mw3.7, 224km Wsw of Pt. Hardy, Bc Vancouver Island Region*

ISC 27 08:07:18.0±0.8, 49°.71N±0°.06×130°.12W±0°.08, h10km, n22, σ1§26/27, 12D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.58**	**53**	⇑Pn	**Pn**	**08 07 46.5**	**+0.4**
HOLB				⇓Sn	**Sn**	**08 08 05.9**	**-0.6**
BPBC	**Brooks Peninsu**	**1.58**	**73**	⇓Pn	**Pn**	**08 07 46.9**	**+0.8**
BPBC				⇓Sn	**Sn**	**08 08 06.3**	**-0.2**
PHC	**Port Hardy**	**1.99**	**59**	⇓Pn	**Pn**	**08 07 52.4**	**+0.6**
PHC				⇓Sn	**Sn**	**08 08 15.4**	**-1.3**
MAYB	**Maynard**	**2.02**	**69**	⇑Pn	**Pn**	**08 07 53.2**	**+1.1**
WOSB	**Woss**	**2.34**	**78**	⇓Pn	**Pn**	**08 07 58.6**	**+2.2**
BBB	**Bella Bella**	**2.78**	**26**	Pn	**Pn**	**08 08 03.5**	**+0.9**
	38nm,0.3s,baz=44,slow=13,SNR=24						
BBB				Sn	**Sn**	**08 08 33.1**	**-3.0**
	6.0nm,0.3s,baz=276,slow=19,SNR=3.2						
BBB	**Bella Bella**	**2.78**	**26**	⇓Pn	**Pn**	**08 08 03.4**	**+0.9**
BBB				⇑Sn	**Sn**	**08 08 33.8**	**-2.4**
BNB	**Barry Inlet**	**3.04**	**341**	⇓Pn	**Pn**	**08 08 04.9**	**-1.2**
OZB	**Mount Ozzard**	**3.12**	**102**	⇓Sn	**Sn**	**08 08 46.3**	**+1.8**
BCBC	**Bella Coola**	**3.41**	**37**	⇓Pn	**Pn**	**08 08 12.5**	**+1.4**
MOBC	**Moresby Island**	**3.62**	**342**	⇓Pn	**Pn**	**08 08 13.9**	**-0.2**
DIB	**Dawson Inlet,**	**3.79**	**338**	⇓Pn	**Pn**	**08 08 16.0**	**-0.4**
NVAR	**Mina Array Bea**	**14.10**	**139**	Pn	**Pn**	**08 10 37.1**	**-0.5**
	0.1nm,0.3s,baz=321,slow=6.9,SNR=2.3						
IMW	**Indian Meadow**	**14.35**	**107**	*e*Pn	**Pn**	**08 10 38.7**	**-2.4**
	7.3nm,1.2s						
MOOW	**Moose Ponds**	**14.55**	**107**	*e*Pn	**Pn**	**08 10 40.5**	**-3.3**
	4.8nm,1.1s						
TPAW	**Teton Pass**	**14.56**	**108**	*e*Pn	**Pn**	**08 10 39.7**	**-4.2**
	8.1nm,1.0s						
LOHW	**Long Hollow**	**14.71**	**107**	*e*Pn	**Pn**	**08 10 44.6**	**-1.4**
	4.4nm,1.1s						
YKA	**Yellowknife Ar**	**15.39**	**28**	Pn	**Pn**	**08 10 55.4**	**+0.5**
YKA	**Yellowknife Ar**	**15.39**	**28**	Pn	**Pn**	**08 10 55.4**	**+0.5**
	0.1nm,0.3s,baz=213,slow=12,SNR=4.0						
PDAR	**Pinedale Array**	**15.80**	**108**	Pn	**Pn**	**08 11 00.6**	**+0.1**
	0.0nm,0.3s,baz=304,slow=16,SNR=2.5						
ILAR	**Eielson Array**	**17.51**	**336**	P	**Pn**	**08 11 25.0**	**+3.1**
	0.0nm,0.3s,baz=154,slow=11,SNR=9.1						
KBS	**Kingsbay**	**49.66**	**9**	*e*P	**P**	**08 16 09.1**	**0.0**

IDC 27 08:14:25.5±6.0, 34°.48S×55°.98E, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.5/20, mbtmp3.8/2, Error ellipse: s-maj=362.0km s-min=42.3km az=34.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**67.45**	**104**	P	P	08 25 24.7	+1.4
	0.5nm,0.7s,baz=233,slow=5.6,SNR=5.2						
WRA	**Warramunga Arr**	**69.64**	**101**	P	P	08 25 35.9	-1.1
	0.3nm,0.4s,baz=236,slow=5.5,SNR=5.6						
INK	**Inuvik**	**145.70**	**6**	PKPbc	PKPbc	08 34 05.1	-0.2
	4.3nm,0.9s,baz=342,slow=3.2,SNR=4.3						
ILAR	**Eielson Array**	**146.66**	**18**	PKPbc	PKPbc	08 34 07.2	-1.0
	0.1nm,0.6s,baz=317,slow=3.7,SNR=5.6						
YKA	**Yellowknife Ar**	**151.34**	**351**	PKPbc	PKPbc	08 34 19.8	-0.4
	1.1nm,0.8s,baz=11,slow=2.0,SNR=8.3						

IDC 27 08:16:37.6±1.7, 24°.27S×67°.69W, h180km±21km, mb1 2.8/3, mb1mx2.8/17, mbtmp2.6/3, Error ellipse: s-maj=40.9km s-min=15.2km az=88.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CFAA	**Coronel Fontan**	**7.33**	**184**	P	Pn	08 18 23.8	+1.9
	0.1nm,0.3s,baz=12,slow=13,SNR=12						
CFAA				S	Sn	08 19 42.9	-1.6
	0.1nm,0.3s,baz=190,slow=14,SNR=7.6						
LPAZ	**La Paz**	**7.95**	**357**	P	Pn	08 18 31.5	+1.2
	0.3nm,0.3s,baz=174,slow=10,SNR=18						
LPAZ				S	Sn	08 19 59.6	+0.1
	0.1nm,0.3s,baz=0.0,slow=0.0,SNR=3.6						
CPUP	**Villa Florida**	**9.59**	**105**	P	Pn	08 18 51.8	0.0
	0.5nm,0.3s,baz=270,slow=11,SNR=6.3						
SIV	**San Ignacio**	**10.31**	**38**	P	Pn	08 18 55.2	-6.1
	0.4nm,0.3s,baz=225,slow=15,SNR=10.0						
ZALV	**Zalesovo Beam**	**143.92**	**28**	PKP	PKPdf	08 35 49.4	-1.8
	0.5nm,0.5s,baz=307,slow=5.2,SNR=2.3						
MKAR	**Makanchi Array**	**147.13**	**39**	PKPbc	PKPbc	08 35 58.8	-0.5
	0.8nm,0.7s,baz=318,slow=1.9,SNR=5.1						

ISCJB ***27*** *08:23:30.1±0.5, 43°.86N±0°.01×17°.37E±0°.02, h0km±3km, Error ellipse: s-maj=3.0km s-min=2.1km az=142.6*
NEIC ***27*** *08:23:32.0±0.4, 43°.73N×17°.34E, h10km, ML3.6(PDG), Error ellipse: s-maj=6.6km s-min=4.2km az=32.0*
PRU ***27*** *08:23:32.5, 43°.84N×17°.23E, h0km*
BEO ***27*** *08:23:32.8±0.6, 43°.82N×17°.40E, h12km±3km, ML3.5/8*
PDG ***27*** *08:23:32.4±0.5, 43°.86N×17°.53E, h8km±1km, MD3.5/6, ML3.6/10, Error ellipse: s-maj=1.0km s-min=1.5km az=0.0*
CSEM ***27*** *08:23:33.2±0.1, 43°.86N×17°.45E, h10km, Ms3.2, Error ellipse: s-maj=3.8km s-min=2.1km az=48.0*
LDG ***27*** *08:23:34.6±0.1, 43°.90N×17°.51E, h30km, Ml3.5/6, Error ellipse: s-maj=2.7km s-min=2.3km az=31.0*
VIE ***27*** *08:23:35.0±0.3, 44°.02N×17°.48E, h10km, mb3.2/10, ML3.2/10, Ms3.2/1, Error ellipse: s-maj=2.8km s-min=2.4km az=23.0 78 km WNW of Sarajevo*

ISC 27 08:23:32.3±0.5, 43°.84N±0°.01×17°.46E±0°.02, h5km±3km, n160, σ1§25/261, 31C-38D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLY	**Banja Luka**	**0.92**	**351**	*e*Pg	**Pg**	**08 23 50.2**	**+0.3**
BLY				*i* Sg	**Sg**	**08 24 04.2**	**+2.3**
BLY	**Banja Luka**	**0.92**	**351**	*e*Pg	**Pg**	**08 23 50.2**	**+0.3**
BLY				*i* Sg	**Sg**	**08 24 04.2**	**+2.3**
STON	**Ston**	**0.99**	**167**	*i* Pg	**Pg**	**08 23 46.9**	**-4.4**
STON				Sg	**Sg**	**08 24 00.9**	**-3.3**
BRY	**Bratogost**	**1.26**	**138**	⇑*i*Pg	**Pg**	**08 23 52.8**	**-3.6**
BRY				*e*Sg	**Sg**	**08 24 13.7**	**+1.0**
BRY	**Bratogost**	**1.26**	**138**	⇑*i*Pg	**Pn**	**08 23 52.8**	**-3.6**
BRY				*e*Sg	**Sg**	**08 24 13.7**	**+1.0**
UPM	**Unac-Piva**	**1.27**	**120**	⇓*i*Pg	**Pn**	**08 23 53.9**	**-2.7**
UPM				*e*Sg	**Sg**	**08 24 13.8**	**+0.7**
UPM	**Unac-Piva**	**1.27**	**120**	⇓*i*Pg	**Pn**	**08 23 53.9**	**-2.7**
UPM				*e*Sg	**Sg**	**08 24 13.8**	**+0.7**
BBLS	**Lazići**	**1.45**	**88**	⇑*i*Pg	**Pn**	**08 23 58.2**	**-0.9**
BBLS				*i* Sg	**Sg**	**08 24 19.6**	**+0.7**
BBLS	**Lazići**	**1.45**	**88**	⇑*i*Pg	**Pn**	**08 23 58.2**	**-0.9**
BBLS				*i* Sg	**Sg**	**08 24 19.6**	**+0.7**
PLE	**Pljevlja**	**1.54**	**109**	⇑*i*Pg	**Pn**	**08 23 59.5**	**-0.8**
PLE				*e*Sg	**Sg**	**08 24 22.3**	**+0.6**
PLE	**Pljevlja**	**1.54**	**109**	⇑*i*Pg	**Pn**	**08 23 59.5**	**-0.8**
PLE				*e*Sg	**Sg**	**08 24 22.3**	**+0.6**
NKY	**Niksic**	**1.56**	**131**	⇑*i*Pg	**Pn**	**08 23 59.6**	**-0.9**
NKY				*e*Sg	**Sg**	**08 24 22.6**	**+0.4**
NKY	**Niksic**	**1.56**	**131**	⇑*i*Pg	**Pn**	**08 23 59.6**	**-0.9**
NKY				*e*Sg	**Sg**	**08 24 22.6**	**+0.4**
HCY	**Herceg Novi**	**1.61**	**150**	⇓*i*Pn	**Pn**	**08 24 01.5**	**+0.3**
HCY				*e*Sn	**Sn**	**08 24 24.9**	**+2.6**
HCY	**Herceg Novi**	**1.61**	**150**	⇓*i*Pn	**Pn**	**08 24 01.5**	**+0.3**
HCY				*e*Sn	**Sn**	**08 24 24.9**	**+2.6**
SISC	**Sisak**	**1.79**	**336**	*e*Pn	**Pn**	**08 24 03.8**	**+0.1**
SISC				Sn	**Sn**	**08 24 29.7**	**+3.0**
SISC	**Sisak**	**1.79**	**336**	*e*Pn	**Pn**	**08 24 03.8**	**+0.1**
SISC				Sn	**Sn**	**08 24 29.7**	**+3.0**
BUM	**Brajici-Budva**	**1.89**	**144**	⇑*i*Pn	**Pn**	**08 24 05.0**	**-0.1**
BUM				*e*Sn	**Sn**	**08 24 31.3**	**+2.0**
BUM	**Brajici-Budva**	**1.89**	**144**	⇑*i*Pn	**Pn**	**08 24 05.0**	**-0.1**
BUM				*e*Sn	**Sn**	**08 24 31.3**	**+2.0**
DIVS	**Divibare**	**1.89**	**81**	*e*Pn	**Pn**	**08 24 04.5**	**-0.6**
DIVS				*i* Sg	**Sg**	**08 24 32.9**	**-0.1**
DIVS	**Divibare**	**1.89**	**81**	*e*Pn	**Pn**	**08 24 04.5**	**-0.6**
NVLJ	**Novalja**	**1.96**	**293**	*e*Pn	**Pn**	**08 24 07.2**	**+1.2**
NVLJ				Sn	**Sn**	**08 24 35.4**	**+4.5**
NVLJ	**Novalja**	**1.96**	**293**	*e*Pn	**Pn**	**08 24 07.1**	**+1.1**
NVLJ				Sn	**Sn**	**08 24 35.3**	**+4.4**
SJES	**Sjenica**	**1.96**	**106**	*e*Pn	**Pn**	**08 24 06.1**	**0.0**
SJES				*i* Sg	**Sg**	**08 24 35.0**	**-0.2**
PDG	**Podgorica**	**1.96**	**135**	*e*Pn	**Pn**	**08 24 05.8**	**-0.3**
PDG				*i* Sg	**Sg**	**08 24 34.3**	**-1.0**
PDG	**Podgorica**	**1.96**	**135**	⇑*i*Pn	**Pn**	**08 24 06.0**	**-0.1**
PDG				*e*Sn	**Sn**	**08 24 33.2**	**+2.2**
PDG				*i* Sg	**Sg**	**08 24 34.0**	**-1.0**
TTG	**Podgorica**	**1.96**	**135**	⇑*i*Pn	**Pn**	**08 24 06.0**	**-0.1**
TTG				*e*Sn	**Sn**	**08 24 33.2**	**+2.2**
TTG	**Podgorica**	**1.96**	**135**	⇑*i*Pn	**Pn**	**08 24 06.0**	**-0.1**
TTG				*e*Sn	**Sn**	**08 24 33.2**	**+2.2**
BEY	**Berane**	**2.07**	**117**	⇓*i*Pn	**Pn**	**08 24 07.8**	**+0.3**
BEY				*e*Sn	**Sn**	**08 24 35.4**	**+1.8**
IVA	**Berane**	**2.07**	**117**	⇓*i*Pn	**Pn**	**08 24 07.8**	**+0.3**
IVA				*e*Sn	**Sn**	**08 24 35.4**	**+1.8**
IVA	**Berane**	**2.07**	**117**	⇓*i*Pn	**Pn**	**08 24 07.8**	**+0.3**
IVA				*e*Sn	**Sn**	**08 24 35.4**	**+1.8**
RHK3	**Tenkes**	**2.14**	**16**	*i*ePn	**Pn**	**08 24 08.3**	**-0.2**
FGSL	**Fruska Gora**	**2.17**	**52**	*e*Pn	**Pn**	**08 24 08.0**	**-1.0**
FGSL				*i* Sg	**Sg**	**08 24 43.0**	**+1.0**
FRGS	**Fruska Gora**	**2.17**	**52**	*e*Pn	**Pn**	**08 24 08.0**	**-1.0**
FRGS				*i* Sg	**Sg**	**08 24 43.0**	**+1.0**
PVY	**Plav**	**2.26**	**123**	⇑*i*Pn	**Pn**	**08 24 10.8**	**+0.6**
PVY				*e*Sn	**Sn**	**08 24 40.2**	**+1.9**
PVY	**Plav**	**2.26**	**123**	⇑*i*Pn	**Pn**	**08 24 10.8**	**+0.6**
PVY				*e*Sn	**Sn**	**08 24 40.2**	**+1.9**
BOJS	**Bojanci**	**2.26**	**318**	*i* Pn	**Pn**	**08 24 10.9**	**+0.7**
BOJS				*i* Sn	**Sn**	**08 24 41.3**	**+2.9**
BOJS	**Bojanci**	**2.26**	**318**	*i* Pn	**Pn**	**08 24 10.9**	**+0.7**
BOJS				*i* Sn	**Sn**	**08 24 41.3**	**+2.9**
ULC	**Ulcinj**	**2.32**	**143**	⇓*i*Pn	**Pn**	**08 24 10.9**	**-0.1**
ULC				*e*Sn	**Sn**	**08 24 42.0**	**+2.2**
ULC	**Ulcinj**	**2.32**	**143**	⇓*i*Pn	**Pn**	**08 24 10.9**	**-0.1**
ULC				*e*Sn	**Sn**	**08 24 42.0**	**+2.2**
MS1	**Monte Sant'Ang**	**2.39**	**207**	*e*Pn	**Pg**	**08 24 16.6**	**-1.4**
MS1				*e*Sn	**Sn**	**08 24 40.0**	**-1.5**
GRUS	**Gruza**	**2.40**	**88**	*e*Pn	**Pn**	**08 24 11.6**	**-0.5**
GRUS				*i* Sg	**Sg**	**08 24 48.4**	**-1.0**
GRUS	**Gruza**	**2.40**	**88**	*e*Pn	**Pn**	**08 24 11.6**	**-0.5**
GRUS				*i* Sg	**Sg**	**08 24 48.4**	**-1.0**
CRES	**Cresnjev**	**2.42**	**326**	*i* Pn	**Pn**	**08 24 13.6**	**+1.2**
CRES				*i* Sn	**Sn**	**08 24 45.1**	**+2.8**
CRES	**Cresnjev**	**2.42**	**326**	*i* Pn	**Pn**	**08 24 13.6**	**+1.2**
CRES				*i* Sn	**Sn**	**08 24 45.1**	**+2.8**
BCI	**Bajram Curri**	**2.45**	**126**	*i* PG	**Pg**	**08 24 16.2**	**-3.0**
BCI				*i* SG	**Sn**	**08 24 33.9**	**-9.2**
BCI	**Bajram Curri**	**2.45**	**126**	*i* Pg	**Pg**	**08 24 16.2**	**-3.0**
PKSM	**Moragy**	**2.53**	**20**	⇑*i*P	**Pn**	**08 24 13.9**	**-0.1**
PKSM				S	**Sn**	**08 24 40.2**	**-4.9**
PKSM	**Moragy**	**2.53**	**20**	⇑*i*P	**Pn**	**08 24 13.9**	**0.0**
PKSM	**Moragy**	**2.53**	**20**	S	**Sn**	**08 24 40.2**	**-4.9**
PKSM	**Moragy**	**2.53**	**20**	⇓*i*Pn	**Pn**	**08 24 13.6**	**-0.3**
PKSM	**Moragy**	**2.53**	**20**	⇑P	**Pn**	**08 24 13.9**	**0.0**
PKSM				S	**Sn**	**08 24 40.2**	**-4.9**
PKSM				*e*Sn	**Sn**	**08 24 43.3**	**-1.8**
PUK	**Puka**	**2.57**	**134**	*i* PG	**Pg**	**08 24 17.9**	**-3.5**
PUK				*i* SG	**Sn**	**08 24 31.5**	**-14**
PUK	**Puka**	**2.57**	**134**	*i* Pg	**Pg**	**08 24 17.9**	**-3.5**
BEHE	**Becsehely**	**2.67**	**351**	*i* Pn	**Pn**	**08 24 16.9**	**+1.1**
BEHE				*i* Sn	**Sn**	**08 24 43.3**	**-0.1**
VISS	**Visnje**	**2.68**	**318**	*i* Pn	**Pn**	**08 24 16.9**	**+1.0**
VISS				*i* Sn	**Sg**	**08 24 57.0**	**-1.2**
VISS	**Visnje**	**2.68**	**318**	*i* Pn	**Pn**	**08 24 16.9**	**+1.0**
VISS	**Visnje**	**2.68**	**318**	*i* Pn	**Pn**	**08 24 16.9**	**+1.0**
PKS9	**Tamasi**	**2.82**	**12**	*e*Pn	**Pn**	**08 24 18.5**	**+0.6**
CDT	**Castel del Mon**	**2.88**	**197**	*e*Pn	**Pn**	**08 24 17.7**	**-1.0**
CDT				*e*Sn	**Sn**	**08 24 54.6**	**+0.9**
SKDS	**Skadanscina**	**2.95**	**306**	*i* Pn	**Pn**	**08 24 21.7**	**+1.9**
TIR	**Tirane**	**3.09**	**143**	*e*Pn	**Pn**	**08 24 21.0**	**-0.6**
TIR	**Tirane**	**3.09**	**143**	*e*Pn	**Pn**	**08 24 21.0**	**-0.6**
PKS6	**Bocsa**	**3.16**	**28**	*e*Sn	**Sn**	**08 25 00.9**	**+0.4**
SOKA	**Soboth**	**3.29**	**330**	⇓*i*Pn	**Pn**	**08 24 25.0**	**+0.7**
SOKA				⇑*i*Sn	**Sn**	**08 25 03.6**	**-0.3**
SOKA	**Soboth**	**3.29**	**330**	Pn	**Pn**	**08 24 25.0**	**+0.6**
SOKA				Sn	**Sn**	**08 25 03.6**	**-0.3**
OBKA	**Obir**	**3.34**	**324**	⇑*i*Pn	**Pn**	**08 24 26.7**	**+1.6**
	SNR=9.8						
OBKA				⇓*i*Sn	**Sn**	**08 25 05.2**	**+0.1**
OBKA	**Obir**	**3.34**	**324**	Pn	**Pn**	**08 24 26.7**	**+1.6**
	SNR=9.8						
OBKA				Sn	**Sn**	**08 25 05.2**	**+0.1**
BARS	**Barje**	**3.38**	**106**	⇑*i*Pn	**Pn**	**08 24 25.3**	**-0.3**
BARS				*e*Sn	**Sn**	**08 25 05.4**	**-0.7**
PKS7	**Kunszentmiklos**	**3.44**	**21**	*e*Pn	**Pn**	**08 24 25.0**	**-1.4**
PKS7				*e*Sn	**Sn**	**08 25 06.2**	**-1.3**
BZS	**Buzias**	**3.49**	**58**	⇓P	**Pn**	**08 24 26.1**	**-1.0**
BZS				S	**Sn**	**08 25 02.4**	**-6.4**
BZS	**Buzias**	**3.49**	**58**	⇓*i*P	**Pn**	**08 24 26.1**	**-1.0**
BZS	**Buzias**	**3.49**	**58**	S	**Sn**	**08 25 02.4**	**-6.4**
BZS	**Buzias**	**3.49**	**58**	⇓P	**Pn**	**08 24 26.1**	**-1.0**
PKSG		**3.62**	**11**	⇓*e*Pn	**Pn**	**08 24 29.6**	**+0.7**
ARSA	**Arzberg**	**3.66**	**340**	⇓*i*Pn	**Pn**	**08 24 30.3**	**+0.9**
ARSA				*i* Sn	**Sn**	**08 25 11.3**	**-1.5**
ARSA	**Arzberg**	**3.66**	**340**	⇓*i*Pn	**Pn**	**08 24 29.5**	**+0.1**
	SNR=31						
ARSA				⇓*i*Sn	**Sn**	**08 25 11.9**	**-0.9**
ARSA	**Arzberg**	**3.66**	**340**	⇓*i*Pn	**Pn**	**08 24 30.3**	**+0.9**
ARSA				Sn	**Sn**	**08 25 11.9**	**-0.9**
BUD	**Budapest**	**3.82**	**17**	*e*SB	**Sg**	**08 25 34.7**	**-0.1**
ZAPS	**Zavoj**	**3.85**	**97**	⇑*i*Pn	**Pn**	**08 24 32.4**	**+0.4**
ZAPS				*i* Sn	**Sn**	**08 25 15.3**	**-2.3**
SOP	**Sopron**	**3.89**	**352**	*e*Sn	**Sn**	**08 25 09.8**	**-8.8**
GZR	**Gura Zlata**	**4.14**	**66**	⇓P	**Pn**	**08 24 35.8**	**-0.2**
GZR	**Gura Zlata**	**4.14**	**66**	⇓*i*P	**Pn**	**08 24 35.8**	**-0.3**
GZR	**Gura Zlata**	**4.14**	**66**	S	**Sn**	**08 25 29.3**	**+4.4**
GZR	**Gura Zlata**	**4.14**	**66**	⇓P	**Pn**	**08 24 35.8**	**-0.3**
CONA	**Conrad Observa**	**4.23**	**346**	⇑*i*Pn	**Pn**	**08 24 37.7**	**+0.4**
CONA				⇓*i*Sn	**Sn**	**08 25 26.2**	**-0.7**
CONA	**Conrad Observa**	**4.23**	**346**	Pn	**Pn**	**08 24 37.7**	**+0.5**
CONA				Sn	**Sn**	**08 25 26.2**	**-0.7**
ZST	**Bratislava**	**4.36**	**357**	*e*Pn	**Pn**	**08 24 40.8**	**+1.7**
ZST				*e*Sn	**Sn**	**08 25 27.4**	**-2.8**
ZST	**Bratislava**	**4.36**	**357**	*e*PN	**Pn**	**08 24 40.8**	**+1.7**
ZST				*e*SN	**Sn**	**08 25 27.4**	**-2.8**
ZST	**Bratislava**	**4.36**	**357**	*e*Pn	**Pn**	**08 24 40.8**	**+1.7**
ZST				*e*Sn	**Sn**	**08 25 27.4**	**-2.8**
VTS	**Vitosha**	**4.43**	**104**	⇑P	**Pn**	**08 24 46.2**	**+6.2**
VTS	**Vitosha**	**4.43**	**104**	⇑*i*P	**Pn**	**08 24 46.2**	**+6.2**
PSZ	**Piszkesteto**	**4.44**	**22**	⇓P	**Pn**	**08 24 39.9**	**-0.2**
PSZ	**Piszkesteto**	**4.44**	**22**	⇓*i*P	**Pn**	**08 24 39.9**	**-0.2**
PSZ	**Piszkesteto**	**4.44**	**22**	⇓*i*Pn	**Pn**	**08 24 39.9**	**-0.2**
PSZ				*e*Sn	**Sn**	**08 25 30.8**	**-1.3**
PSZ	**Piszkesteto**	**4.44**	**22**	⇓P	**Pn**	**08 24 39.9**	**-0.2**
PSZ				*e*Sn	**Sn**	**08 25 30.8**	**-1.3**
MODS	**Modra-Piesok**	**4.54**	**359**	*e*Pn	**Pn**	**08 24 41.1**	**-0.4**
MODS				*e*Sn	**Sn**	**08 25 32.3**	**-2.2**
MODS	**Modra-Piesok**	**4.54**	**359**	*e*PN	**Pn**	**08 24 41.1**	**-0.4**
MODS				*e*SN	**Sn**	**08 25 32.3**	**-2.2**
MODS	**Modra-Piesok**	**4.54**	**359**	*e*Pn	**Pn**	**08 24 41.1**	**-0.4**
MODS				*e*Sn	**Sn**	**08 25 32.3**	**-2.2**
MOA	**Molln**	**4.57**	**332**	⇓*i*Pn	**Pn**	**08 24 42.8**	**+0.9**
	SNR=10						
MOA				⇓*i*Sn	**Sn**	**08 25 36.0**	**+0.7**
MOA	**Molln**	**4.57**	**332**	Pn	**Pn**	**08 24 42.8**	**+0.9**
	SNR=10						
MOA				Sn	**Sn**	**08 25 36.0**	**+0.7**
VYHS	**Vyhne**	**4.76**	**12**	*e*Pn	**Pn**	**08 24 45.2**	**+0.6**
VYHS				*e*Sn	**Sn**	**08 25 38.7**	**-1.4**
VYHS	**Vyhne**	**4.76**	**12**	*e*PN	**Pn**	**08 24 45.2**	**+0.6**
VYHS				*e*SN	**Sn**	**08 25 38.7**	**-1.4**
VYHS	**Vyhne**	**4.76**	**12**	*e*Pn	**Pn**	**08 24 45.2**	**+0.6**
VYHS				*e*Sn	**Sn**	**08 25 38.7**	**-1.4**
DRGR		**4.77**	**50**	⇓*i*P	**Pn**	**08 24 48.0**	**+3.3**
DRGR				S	**Pb**	**08 24 50.9**	**-5.4**
DRGR		**4.77**	**50**	⇓*i*P	**Pn**	**08 24 48.0**	**+3.3**
KOLL	**Kolacno**	**4.79**	**8**	*e*Pn	**Pn**	**08 24 46.1**	**+1.1**
KOLL				*e*Sn	**Sn**	**08 25 39.4**	**-1.4**
KOLL	**Kolacno**	**4.79**	**8**	*e*Pn	**Pn**	**08 24 46.1**	**+1.1**
KOLL				*e*SN	**Sn**	**08 25 39.4**	**-1.4**
KOLL	**Kolacno**	**4.79**	**8**	*e*Pn	**Pn**	**08 24 46.1**	**+1.1**
KOLL				*e*Sn	**Sn**	**08 25 39.4**	**-1.4**
KECS	**Kecovo**	**5.12**	**24**	*e*Pn	**Pn**	**08 24 50.0**	**+0.6**
KECS				*e*Sn	**Sn**	**08 25 47.1**	**-1.7**
KECS	**Kecovo**	**5.12**	**24**	*e*PN	**Pn**	**08 24 50.0**	**+0.6**
KECS				*e*SN	**Sn**	**08 25 47.1**	**-1.7**
WTTA	**Wattenberg**	**5.30**	**312**	⇓*i*Pn	**Pn**	**08 24 53.3**	**+1.3**
	SNR=10						
WTTA				⇓*i*Sn	**Sn**	**08 25 54.7**	**+1.4**
WTTA	**Wattenberg**	**5.30**	**312**	Pn	**Pn**	**08 24 53.3**	**+1.4**
	SNR=10						
WTTA				Sn	**Sn**	**08 25 54.7**	**+1.4**
WATA	**Walderalm**	**5.38**	**313**	⇓*i*Pn	**Pn**	**08 24 54.5**	**+1.5**
	SNR=7.6						
WATA	**Walderalm**	**5.38**	**313**	Pn	**Pn**	**08 24 54.5**	**+1.5**
	SNR=7.6						
VRAC	**Vranov**	**5.50**	**355**	*e*Sn	**Sn**	**08 25 55.9**	**-2.3**
VRAC				S	**Sn**	**08 25 56.5**	**-1.7**
MOTA	**Moosalm**	**5.64**	**311**	⇑*i*Pn	**Pn**	**08 24 58.1**	**+1.5**
	SNR=8.6						
MOTA	**Moosalm**	**5.64**	**311**	Pn	**Pn**	**08 24 58.1**	**+1.5**
	SNR=8.6						
FETA	**Feichten**	**5.67**	**306**	⇓*i*Pn	**Pn**	**08 24 58.8**	**+1.7**
	SNR=7.4						
FETA				⇓*i*Sn	**Sn**	**08 26 04.2**	**+1.8**
FETA	**Feichten**	**5.67**	**306**	Pn	**Pn**	**08 24 58.8**	**+1.8**
	SNR=7.4						
FETA				Sn	**Sn**	**08 26 04.2**	**+1.8**
VOIR		**5.69**	**71**	⇑P	**Pn**	**08 24 58.2**	**+0.9**
VOIR		**5.69**	**71**	⇑*i*P	**Pn**	**08 24 58.2**	**+0.9**
**V

GTA					pmax		pmax		
	comp=Z,9.0nm,1.1s,mb4.7								
MKAR	**Makanchi Array**	**83.66**	**18**	P		**P**		**08 43 16.7**	**0.0**
	comp=Z,1.0nm,0.8s,mb4.0,baz=216,slow=7.3,SNR=5.6								
BVAR	**Borovoye Array**	**87.42**	**8**	LR		LR		09 15 26.5	
	comp=Z,36nm,20.4s,MS3.8,baz=126,slow=31								
AKASG	**Malin Array Be**	**87.53**	**343**	P		**P**		**08 43 35.0**	**-0.8**
	comp=Z,1.1nm,0.5s,mb4.4,baz=177,slow=4.9,SNR=8.4								
TTA	**Tatalina**	**144.62**	**25**	*e*PKPdf		PKPdf		08 50 23.2	-1.0
INK	**Inuvik**	**145.08**	**6**	PKPbc		PKPbc		08 50 24.2	-0.2
	comp=Z,20nm,1.0s,baz=18,slow=6.6,SNR=12								
BPAW	**Bear Paw Mtn.**	**145.43**	**21**	*e*PKPbc		PKPbc		08 50 25.4	-0.2
PPLA	**Purkeypile**	**145.93**	**23**	*e*PKPdf		PKPdf		08 50 27.1	+0.6
ILAR	**Eielson Array**	**146.02**	**18**	PKPbc		PKPbc		08 50 26.1	-1.3
	comp=Z,2.3nm,0.6s,baz=310,slow=3.7,SNR=30								
TRF	**Thorofare Moun**	**146.12**	**21**	*e*PKPdf		PKPdf		08 50 27.1	+0.3
MCK	**McKinley**	**146.30**	**20**	*e*PKPbc		PKPbc		08 50 28.4	+0.2
PAX	**Paxson**	**147.86**	**19**	*e*PKPdf		PKPdf		08 50 29.6	-0.1
YKA	**Yellowknife Ar**	**150.79**	**351**	PKPbc		PKPbc		08 50 39.1	-0.9
	comp=Z,4.3nm,0.7s,baz=16,slow=2.0,SNR=35								
EYMN	**Ely**	**152.10**	**310**	*e*PKPbc		PKPbc		08 50 43.1	-0.5
ULM	**Lac du Bonnet**	**153.84**	**317**	PKPbc		PKPbc		08 50 45.8	-1.5
	comp=Z,4.4nm,0.7s,baz=344,slow=5.3,SNR=2.9								
TXAR	**Lajitas Array**	**162.31**	**261**	PKP		PKPdf		08 50 51.3	+0.9
	comp=Z,0.7nm,1.1s,baz=204,slow=2.7,SNR=5.6								
PDAR	**Pinedale Array**	**165.78**	**313**	PKP		PKPdf		08 50 51.8	-1.3
	comp=Z,0.6nm,0.8s,baz=95,slow=1.8,SNR=5.1								
NVAR	**Mina Array Bea**	**173.68**	**317**	PKP		PKPdf		08 51 00.1	+2.2
	comp=Z,0.7nm,0.8s,baz=207,slow=1.7,SNR=6.5								

*IDC **27** 08:33:35.1±1.5, 49.°68N×130.°63W, h0km, mb3.7/6, mb1 3.9/12, mb1mx3.8/28, mbtmp3.7/12, ML3.3/5, MS3.8/1, Ms1 3.8/1, ms1mx3.0/39, Error ellipse: s-maj=31.3km s-min=15.6km az=68.0*

*PGC **27** 08:33:35.7±6.2, 49.°68N×130.°32W, h10km, ML3.0/8, Mw3.6, 236km Wsw of Pt. Hardy, Bc Vancouver Island Region*

*ISCJB **27** 08:33:38.1±0.5, 49.°97N±0.°04×130.°07W±0.°07, h10km, mb3.8/11, Error ellipse: s-maj=6.6km s-min=4.4km az=148.0*

*NEIC **27** 08:33:39.8±0.5, 49.°95N×130.°14W, h10km, mb3.9/19, Error ellipse: s-maj=11.7km s-min=4.9km az=51.0*

ISC 27 08:33:40.0±0.5, 50.°02N±0.°04×130.°02W±0.°07, h10km, n67, σ1°39/70, mb3.8/11, 4D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.36**	**62**	⇓Pn	**Pn**	**08 34 03.3**	**-1.8**
BPBC	**Brooks Peninsu**	**1.46**	**84**	⇑Pn	**Pn**	**08 34 03.6**	**-2.8**
BPBC				⇑Sn	**Sn**	**08 34 23.6**	**-1.9**
PHC	**Port Hardy**	**1.80**	**66**	⇑Pn	**Pn**	**08 34 09.1**	**-1.9**
PHC				⇑Sn	**Sn**	**08 34 33.7**	**-0.2**
MAYB	**Maynard**	**1.87**	**77**	⇓Pn	**Pn**	**08 34 10.1**	**-2.0**
WOSB	**Woss**	**2.23**	**85**	⇑Pn	**Pn**	**08 34 14.7**	**-2.3**
BBB	**Bella Bella**	**2.48**	**28**	Pn	**Pn**	**08 34 21.2**	**+0.8**
	14nm,0.3s,baz=45,slow=8.4,SNR=22						
BBB	**Bella Bella**	**2.48**	**28**	⇓Pn	**Pn**	**08 34 21.0**	**+0.6**
BBB				⇓Sn	**Sn**	**08 34 52.7**	**+2.0**
GDR	**Gold River**	**2.59**	**94**	⇑Pn	**Pn**	**08 34 19.0**	**-3.0**
BNB	**Barry Inlet**	**2.78**	**338**	⇑Pn	**Pn**	**08 34 22.1**	**-2.4**
PGC	**Sidney**	**4.51**	**105**	*e*Pn	**Pn**	**08 34 46.6**	**-1.7**
NLWA	**Neilton Lookou**	**4.85**	**120**	*e*Pn	**Pn**	**08 34 51.7**	**-1.3**
LON	**Longmire**	**6.37**	**118**	*e*Pn	**Pn**	**08 35 13.0**	**-0.9**
OD2	**Odessa Site #2**	**7.93**	**105**	*e*Pn	**Pn**	**08 35 33.9**	**-1.4**
LNOR	**Lincton Mounta**	**8.90**	**113**	*e*Pn	**Pn**	**08 35 48.4**	**-0.2**
YBH	**Yreka Blue Hor**	**9.72**	**146**	*e*Pn	**Pn**	**08 36 00.9**	**+1.0**
YBH	**Yreka Blue Hor**	**9.72**	**146**	Pn	**Pn**	**08 35 57.2**	**-2.7**
	0.1nm,0.3s,baz=320,slow=10,SNR=2.8						
MOD	**Modoc**	**10.56**	**137**	*e*Pn	**Pn**	**08 36 12.7**	**+1.4**
WVOR	**Wild Horse Val**	**10.93**	**130**	*e*Pn	**Pn**	**08 36 17.0**	**+0.5**
	19nm,1.7s						
SLMT	**Seeley Lake**	**11.29**	**98**	*e*Pn	**Pn**	**08 36 21.2**	**0.0**
CHMT	**Chamberlain Mo**	**11.56**	**99**	*e*Pn	**Pn**	**08 36 24.5**	**-0.4**
WCN	**Washoe City**	**12.96**	**142**	*e*Pn	**Pn**	**08 36 44.7**	**+0.7**
	6.9nm,1.2s						
NVAR	**Mina Array Bea**	**14.29**	**140**	Pn	**Pn**	**08 37 01.4**	**-0.9**
	0.1nm,0.3s,baz=316,slow=15,SNR=3.1						
IMW	**Indian Meadow**	**14.38**	**108**	*e*Pn	**Pn**	**08 37 04.4**	**+0.9**
DCID1	**Drake Creek**	**14.39**	**109**	*e*Pn	**Pn**	**08 37 04.6**	**+0.9**
FLWY	**Flagg Ranch**	**14.43**	**107**	*e*Pn	**Pn**	**08 37 06.0**	**+1.8**
	7.9nm,0.9s						
RRI2	**Red Ridge**	**14.45**	**110**	*e*Pn	**Pn**	**08 37 06.5**	**+2.1**
	18nm,1.5s						
MOOW	**Moose Ponds**	**14.58**	**108**	*e*Pn	**Pn**	**08 37 06.7**	**+0.5**
TPAW	**Teton Pass**	**14.59**	**109**	*e*Pn	**Pn**	**08 37 08.6**	**+2.2**
REDW	**Red Top Meadow**	**14.72**	**110**	*e*Pn	**Pn**	**08 37 09.7**	**+1.5**
SNOW	**Snow King Moun**	**14.73**	**109**	*e*Pn	**Pn**	**08 37 10.1**	**+1.9**
LOHW	**Long Hollow**	**14.74**	**108**	*e*Pn	**Pn**	**08 37 10.7**	**+2.3**
RLMT	**Red Lodge**	**14.83**	**101**	*e*Pn	**Pn**	**08 37 11.3**	**+1.8**
YKA	**Yellowknife Ar**	**15.10**	**28**	Pn	**Pn**	**08 37 14.1**	**+1.0**
	0.0nm,0.3s,baz=218,slow=12,SNR=3.8						
PMR	**Palmer**	**15.72**	**325**	*e*Pn	**Pn**	**08 37 22.4**	**+1.0**
	34nm,1.9s						
BW06	**Boulder Array**	**15.84**	**109**	*e*Pn	**Pn**	**08 37 25.5**	**+2.5**
	12nm,1.2s						
PDAR	**Pinedale Array**	**15.84**	**109**	Pn	**Pn**	**08 37 24.4**	**+1.4**
	0.0nm,0.3s,baz=310,slow=12,SNR=19						
EGAK	**Eagle**	**15.93**	**342**	*e*Pn	**Pn**	**08 37 25.9**	**+2.0**
	27nm,1.8s						
JLU	**Jordanelle**	**16.07**	**119**	*e*Pn	**Pn**	**08 37 27.5**	**+1.7**
	4.1nm,1.1s						
LAO	**LASA Array**	**16.15**	**93**	*e*Pn	**Pn**	**08 37 27.1**	**+0.2**
	6.9nm,1.0s						
NLU	**North Lily Min**	**16.16**	**122**	*e*Pn	**Pn**	**08 37 28.3**	**+1.2**
	8.1nm,1.2s						
ARUT	**Antelope Range**	**17.05**	**130**	*e*Pn	**Pn**	**08 37 37.7**	**-0.7**
	4.2nm,0.9s						
MSU	**Marysvale**	**17.14**	**125**	*e*Pn	**Pn**	**08 37 38.8**	**-0.8**
ILAR	**Eielson Array**	**17.26**	**335**	P	**Pn**	**08 37 40.9**	**0.0**
	baz=154,slow=9.0,SNR=6.4						
SHPR	**Sheep Range**	**17.26**	**136**	*e*Pn	**Pn**	**08 37 41.0**	**-0.1**
CCUT	**Cedar City**	**17.27**	**130**	*e*Pn	**Pn**	**08 37 42.8**	**+1.7**
	18nm,1.8s						
SRU	**San Rafael**	**17.61**	**121**	*e*P	**Pn**	**08 37 47.8**	**+2.5**
	6.2nm,1.1s						
LDFC	**Landfair**	**18.48**	**138**	*e*P	**Pn**	**08 37 55.3**	**-0.9**
PV04	**Paradox Valley**	**19.01**	**120**	*e*P	**Pn**	**08 38 02.0**	**-0.5**
TTA	**Tatalina**	**19.14**	**322**	*e*P	**Pn**	**08 38 03.2**	**-0.6**
PV01	**Paradox Valley**	**19.38**	**120**	*e*P	**Pn**	**08 38 05.4**	**-1.6**
	1μm,1.4s						
SMCO	**Snowmass**	**19.59**	**115**	*e*P	**Pn**	**08 38 08.2**	**-1.2**
	4.4nm,0.9s						
WUAZ	**Wupatki**	**19.86**	**130**	*e*P	**Pn**	**08 38 11.6**	**-1.0**
	11nm,1.3s						
ISCO	**Idaho Springs**	**20.00**	**111**	*e*P	**Pn**	**08 38 13.7**	**-0.6**
	6.7nm,1.1s						
COLD	**Coldfoot**	**20.02**	**337**	*e*P	**P**	**08 38 13.9**	**+1.3**
	23nm,1.6s						
MVCO	**Mesa Verde**	**20.08**	**121**	*e*P	**P**	**08 38 12.8**	**-0.6**
	15nm,1.3s						
SDCO	**Great Sand Dun**	**21.40**	**116**	*e*P	**P**	**08 38 27.5**	**-0.2**
	2.7nm,0.9s,mb3.6						
ULM	**Lac du Bonnet**	**21.78**	**76**	P	**P**	**08 38 34.0**	**+2.3**
	6.4nm,0.7s,mb4.2,baz=273,slow=6.8,SNR=4.9						
TUC	**Tucson**	**22.75**	**134**	*e*P	**P**	**08 38 41.6**	**-0.6**
	5.5nm,1.2s,mb3.9						
ANMO	**Albuquerque**	**22.86**	**122**	P	**P**	**08 38 42.5**	**-0.8**
	1.5nm,0.9s,mb3.4,baz=322,slow=10,SNR=7.3						
LAZ	**Ladron**	**22.91**	**124**	*e*P	**P**	**08 38 44.0**	**+0.2**
BNM	**Barren Site**	**23.37**	**124**	*e*P	**P**	**08 38 48.2**	**-0.5**
	6.1nm,1.4s,mb3.8						
EYMN	**Ely**	**25.19**	**80**	*e*P	**P**	**08 39 05.8**	**+0.4**
	18nm,1.0s,mb4.5						
AMTX	**Amarillo**	**25.61**	**115**	*e*P	**P**	**08 39 09.6**	**+0.3**
	7.3nm,0.8s,mb4.3						
TXAR	**Lajitas Array**	**28.70**	**126**	P	**P**	**08 39 36.0**	**-1.1**
	0.7nm,1.1s,mb3.3,baz=328,slow=4.4,SNR=5.1						
TXAR				LR	LR	08 51 15.8	
	comp=Z,170nm,18.9s,baz=70,slow=37						
AKASG	**Malin Array Be**	**78.11**	**13**	P	**P**	**08 45 37.0**	**-1.8**
	0.2nm,0.3s,mb3.5,baz=346,slow=4.8,SNR=4.6						
MKAR	**Makanchi Array**	**79.59**	**338**	P	**P**	**08 45 45.1**	**-1.9**
	0.3nm,0.5s,mb3.5,baz=28,slow=6.0,SNR=3.5						
LPAZ	**La Paz**	**85.47**	**122**	P	**P**	**08 46 14.8**	**-3.1**
	0.4nm,0.3s,mb4.0,baz=333,slow=7.7,SNR=5.6						

PGC 27 08:34:40.6±3.8, 49.°77N×130.°20W, h10km, ML2.9/5, Mw3.5, 3D, 223km Wsw of Pt. Hardy, Bc Vancouver Island Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.59**	**56**	⇑Pn	Pn	08 35 06.4	-2.4
BPBC	**Brooks Peninsu**	**1.61**	**75**	⇓Pn	Pn	08 35 06.8	-2.3
BPBC				⇑Sn	Sn	08 35 26.3	-3.7
PHC	**Port Hardy**	**2.01**	**61**	⇓Pn	Pn	08 35 12.5	-2.0
PHC				⇑Sn	Sn	08 35 36.1	-3.5
MAYB	**Maynard**	**2.05**	**71**	⇓Pn	Pn	08 35 12.8	-2.3
WOSB	**Woss**	**2.37**	**79**	⇑Pn	Pn	08 35 18.8	-0.7
BBB	**Bella Bella**	**2.75**	**28**	⇑Pn	Pn	08 35 23.6	-1.2
BBB				⇑Sn	Sn	08 35 54.3	-3.7

IDC 27 08:41:20.9±58.0, 29.°40S×175.°95W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.8/16, mbtmp3.8/3, Error ellipse: s-maj=1071.0km s-min=199.9km az=97.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.45**	**255**	P	P	08 48 27.6	+0.1
	1.4nm,0.6s,baz=119,slow=13,SNR=4.6						
ASAR	**Alice Springs**	**44.96**	**265**	P	P	08 49 37.5	-0.5
	0.4nm,0.6s,baz=103,slow=7.7,SNR=9.5						
WRA	**Warramunga Arr**	**45.86**	**270**	P	P	08 49 45.5	+0.3
	0.9nm,0.4s,baz=112,slow=7.4,SNR=6.2						

CASC 27 08:44:51.7±1.5, 15.°20N×88.°59W, h33km±119km, MD3.7, Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAHU	**Cacaucatique**	**1.47**	**165**	*e*P	Pn	08 45 25.4	+9.5
SNVI	**San Vicente**	**1.60**	**189**	*e*P	Pn	08 45 18.8	+1.1
BOQS	**Boqueron**	**1.60**	**205**	*e*P	Pn	08 45 18.7	+1.0
BOQS				*e*S	Sn	08 45 38.8	+1.5
SNET	**Serv Nac Est T**	**1.63**	**202**	*e*P	Pn	08 45 18.0	-0.1
LFRS	**El Faro**	**1.63**	**196**	*e*P	Pn	08 45 17.4	-0.8
TGUH	**Tegucigalpa,Un**	**1.71**	**132**	*e*P	Pn	08 45 36.6	+17
BLLM	**Bellamira**	**1.78**	**169**	*e*P	Pn	08 45 21.1	+0.9
VSM	**San Miguel**	**1.79**	**170**	*e*P	Pn	08 45 20.4	0.0
CNCH	**Conchagua**	**2.05**	**159**	*e*P	Pn	08 45 24.1	+0.2

*CSEM **27** 08:47:10.4±0.4, 38.°07N×38.°08E, h28km±3km, MD2.6, Error ellipse: s-maj=14.1km s-min=8.7km az=147.0*

*ISCJB **27** 08:47:12.6±0.9, 38.°21N±0.°07×38.°09E±0.°07, h26km±5km, Error ellipse: s-maj=12.6km s-min=8.3km az=164.5*

*ISK **27** 08:47:12.9, 38.°61N×38.°30E, h11km, MD2.6*

*DDA **27** 08:47:13.8, 38.°31N×38.°16E, h7km±5km, Md2.6*

ISC 27 08:47:12.5±0.8, 38.°21N±0.°08×38.°09E±0.°07, h26km±5km, n19, σ1°00/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKCD	**Akcadag**	**0.16**	**303**	*i* P	**Pb**	**08 47 18.0**	**+0.1**
AKCD				*i* S	**Sb**	**08 47 20.9**	**-0.5**
AKCD	**Akcadag**	**0.16**	**303**	*i* P	**Pb**	**08 47 18.0**	**+0.1**
AKCD				*i* S	**Sb**	**08 47 20.9**	**-0.5**
MALT	**Malatya**	**0.28**	**69**	*e*PG	**Pb**	**08 47 19.5**	**0.0**
MALT				*e*SG	**Sb**	**08 47 24.3**	**+0.2**
MALT	**Malatya**	**0.28**	**69**	*e*Pg	**Pb**	**08 47 19.5**	**+0.1**
MALT				*e*Sg	**Sb**	**08 47 24.3**	**+0.2**
MYA	**Malatya**	**0.29**	**66**	*e*PG	**Pb**	**08 47 19.9**	**+0.5**
MYA				*e*SG	**Sb**	**08 47 24.2**	**0.0**
MYA	**Malatya**	**0.29**	**66**	*e*Pg	**Pb**	**08 47 19.9**	**+0.4**
MYA				*e*Sg	**Sb**	**08 47 24.2**	**0.0**
ELZG	**Elazig**	**0.76**	**68**	*i* P	**Pb**	**08 47 26.5**	**-0.6**
ELZG				*i* S	**Sb**	**08 47 40.5**	**+3.4**
ELZG	**Elazig**	**0.76**	**68**	*i* P	**Pb**	**08 47 26.5**	**-0.6**
ELZG				*i* S	**Sb**	**08 47 40.5**	**+3.4**
GZT	**Gaziantep**	**0.95**	**206**	*i* P	**Pn**	**08 47 31.4**	**+1.2**
SVRC	**Sivrice-ELAZID**	**0.97**	**80**	*e*PG	**Pn**	**08 47 29.4**	**-1.0**
SVRC	**Sivrice-ELAZID**	**0.97**	**80**	*e*Pg	**Pn**	**08 47 29.4**	**-1.1**
KEMA	**Kemaliye**	**1.10**	**16**	*i* P	**Pn**	**08 47 31.6**	**-0.7**
KEMA				*i* S	**Sn**	**08 47 48.3**	**+1.7**
KEMA	**Kemaliye**	**1.10**	**16**	*i* P	**Pn**	**08 47 31.5**	**-0.8**
KEMA				*i* S	**Sn**	**08 47 48.3**	**+1.7**
SARI	**SarD1z-Kayseri**	**1.19**	**294**	*e*PN	**Pn**	**08 47 40.0**	**+6.5**
SARI	**SarD1z-Kayseri**	**1.19**	**294**	*e*Pn	**Pn**	**08 47 40.0**	**+6.5**
PTK	**Pertek**	**1.23**	**56**	*e*PG	**Pn**	**08 47 30.6**	**-3.4**
PTK	**Pertek**	**1.23**	**56**	*e*Pg	**Pn**	**08 47 30.6**	**-3.4**
GAZ	**Gaziantep**	**1.25**	**214**	*e*PN	**Pn**	**08 47 43.1**	**+8.8**
GAZ	**Gaziantep**	**1.25**	**214**	*e*Pn	**Pn**	**08 47 43.1**	**+8.8**

*PGC **27** 08:48:09.0±4.5, 49.°76N×130.°20W, h10km, ML3.0/6, Mw3.6, 224km Wsw of Pt. Hardy, Bc Vancouver Island Region*

*ISCJB **27** 08:48:10.8±0.7, 49.°94N±0.°05×129.°82W±0.°08, h10km, mb3.6/3, Error ellipse: s-maj=8.5km s-min=6.3km az=141.4*

*IDC **27** 08:48:11.3±2.3, 49.°88N×129.°70W, h0km, mb3.4/2, mb1 3.8/8, mb1mx3.6/28, mbtmp3.5/8, ML3.1/3, MS3.6/5, Ms1 3.6/5, ms1mx3.2/30, Error ellipse: s-maj=37.2km s-min=14.2km az=75.0*

*NEIC **27** 08:48:13.3±0.7, 49.°99N×129.°60W, h10km, mb3.9/4, Error ellipse: s-maj=14.2km s-min=5.7km az=52.0*

ISC 27 08:48:12.8±0.7, 49.°97N±0.°05×129.°72W±0.°09, h10km, n29, σ0°96/30, mb3.6/3, 5D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.22**	**56**	⇓Pn	**Pn**	**08 48 35.2**	**-0.7**
BPBC	**Brooks Peninsu**	**1.27**	**81**	⇑Pn	**Pn**	**08 48 35.4**	**-1.2**
BPBC				⇓Sn	**Sn**	**08 48 54.8**	**+1.1**
PHC	**Port Hardy**	**1.64**	**62**	⇑Pn	**Pn**	**08 48 41.1**	**-0.6**
PHC				⇓Sn	**Sn**	**08 49 04.6**	**+1.7**
MAYB	**Maynard**	**1.69**	**74**	⇓Pn	**Pn**	**08 48 41.1**	**-1.3**
WOSB	**Woss**	**2.04**	**83**	⇓Pn	**Pn**	**08 48 47.0**	**-0.2**
BBB	**Bella Bella**	**2.44**	**24**	Pn	**Pn**	**08 48 52.4**	**-0.3**
	47nm,0.3s,baz=45,slow=10,SNR=32						
BBB				Sn	**Sn**	**08 49 22.0**	**-0.5**
	9.7nm,0.3s,baz=141,slow=23,SNR=9.4						
BBB	**Bella Bella**	**2.44**	**24**	Pn	**Pn**	**08 48 52.2**	**-0.4**
BBB				⇑Sn	**Sn**	**08 49 22.1**	**-0.4**
DIB	**Dawson Inlet,**	**3.67**	**333**	Pn	**Pn**	**08 49 05.2**	**-4.3**
PGC	**Sidney**	**4.31**	**105**	*e*Pn	**Pn**	**08 49 17.9**	**-0.4**
OD2	**Odessa Site #2**	**7.73**	**105**	*e*Pn	**Pn**	**08 50 04.7**	**-0.6**
	11nm,1.1s						
DLBC	**Dease Lake**	**8.49**	**359**	Pn	**Pn**	**08 50 16.9**	**+1.3**
	0.1nm,0.3s,baz=190,slow=14,SNR=2.4						
DLBC				LR	LR	08 52 57.4	
	comp=Z,161nm,18.6s,baz=12,slow=33						
YBH	**Yreka Blue Hor**	**9.57**	**147**	LR	LR	08 53 34.5	
	comp=Z,536nm,20.0s,baz=43,slow=34						
NVAR	**Mina Array Bea**	**14.13**	**140**	Pn	**Pn**	**08 51 33.6**	**+0.8**
	0.0nm,0.3s,baz=317,slow=13,SNR=5.1						
MOOW	**Moose Ponds**	**14.38**	**108**	*e*Pn	**Pn**	**08 51 35.8**	**-0.5**
TPAW	**Teton Pass**	**14.39**	**110**	*e*P	**Pn**	**08 51 41.4**	**+5.0**
	10nm,1.1s						
SNOW	**Snow King Moun**	**14.53**	**109**	*e*P	**Pn**	**08 51 47.4**	**+9.1**
	5.6nm,1.1s						
LOHW	**Long Hollow**	**14.54**	**109**	*e*Pn	**Pn**	**08 51 42.3**	**+3.9**
	4.3nm,1.1s						
RLMT	**Red Lodge**	**14.62**	**102**	*e*Pn	**Pn**	**08 51 38.8**	**-0.8**
YKA	**Yellowknife Ar**	**15.05**	**28**	Pn	**Pn**	**08 51 43.6**	**-1.6**
	0.1nm,0.3s,baz=214,slow=13,SNR=5.6						
PDAR	**Pinedale Array**	**15.64**	**110**	Pn	**Pn**	**08 51 54.5**	**+1.4**
	0.0nm,0.3s,baz=313,slow=11,SNR=4.2						
MCK	**McKinley**	**17.23**	**330**	*e*P	**Pn**	**08 52 14.8**	**+1.5**
	5.1nm,0.3s						
ILAR	**Eielson Array**	**17.39**	**335**	P	**Pn**	**08 52 15.5**	**+0.3**
	0.0nm,0.3s,baz=152,slow=10,SNR=8.7						
ILAR				LR	LR	08 58 21.8	
	comp=Z,242nm,18.8s,baz=255,slow=35						
LDFC	**Landfair**	**18.32**	**139**	*e*P	**Pn**	**08 52 26.4**	**-0.5**
	7.6nm,1.0s						
INK	**Inuvik**	**18.49**	**356**	LR	LR	08 59 19.6	
	comp=Z,228nm,19.5s,baz=231,slow=36						
TTA	**Tatalina**	**19.30**	**322**	P	**Pn**	**08 52 37.9**	**-0.6**
	5.5nm,1.2s						
ULM	**Lac du Bonnet**	**21.61**	**76**	P	**P**	**08 53 03.4**	**+0.8**
	2.9nm,0.7s,mb3.8,baz=291,slow=9.6,SNR=1.8						
ANMO	**Albuquerque**	**22.66**	**123**	P	**P**	**08 53 14.2**	**+0.1**
	0.2nm,0.3s,mb3.0,baz=331,slow=11,SNR=3.1						
ECSD	**EROS Data Cent**	**23.35**	**93**	*e*P	**P**	**08 53 22.3**	**+1.0**
	4.3nm,0.9s,mb3.9						
TXAR	**Lajitas Array**	**28.51**	**127**	LR	LR	09 05 51.3	
	comp=Z,115nm,20.4s,baz=0.0,slow=37						

*NDI **27** 08:58:20.0±3.3, 31.°09N×83.°42E, h10km, ML3.0*

*IDC **27** 08:58:53.8±1.9, 30.°86N×83.°59E, h0km, mb3.5/8, mb1 3.8/10, mb1mx3.6/28, mbtmp3.6/10, ML3.2/1, Error ellipse: s-maj=70.1km s-min=19.9km az=67.0*

*ISCJB **27** 08:58:54.0±2.2, 30.°81N±0.°09×83.°3E±0.°1, h15km±17km, mb3.4/7, Error ellipse: s-maj=17.0km s-min=12.6km az=138.3*

*NEIC **27** 08:58:54.8±1.2, 30.°83N×83.°33E, h10km, Error ellipse: s-maj=31.8km s-min=10.9km az=59.0*

ISC 27 08:58:54.2±2.5, 30.°80N±0.°09×83.°2E±0.°1, h10km±19km, n17, σ0°78/17, mb3.4/7, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSI	**Joshimath**	**3.17**	**267**	*e*S	**Pb**	**08 59 50.8**	**+0.3**
JOSI				AML	AML	09 00 53.3	
	comp=N,215nm,0.6s						
JOSI				AML	AML	09 00 54.4	
	comp=E,116nm,0.6s						
KLP	**Kalpa**	**4.33**	**281**	*e*S	**Pg**	**09 00 16.8**	**-0.3**
KLP				AML	AML	09 00 32.5	
	comp=N,12nm,0.2s						
KLP				AML	AML	09 00 32.5	
	comp=E,20nm,0.2s						
NDI	**New Delhi**	**5.63**	**250**	*e*S	**Pg**	**09 00 50.0**	**+7.9**
SONA	**Sohna**	**5.92**	**246**	*ex*	**Pg**	**09 00 52.6**	**+5.0**
SONA				AML	AML	09 02 22.6	
	comp=N,17nm,0.3s						
SONA				AML	AML	09 02 25.8	
	comp=E,18nm,0.3s						
LSA	**Lhasa**	**6.94**	**97**	*e*Pn	**Pn**	**09 00 37.0**	**+1.0**
	comp=E,11nm,0.7s						
MK31	**Makanchi Array**	**15.99**	**358**	*e*Pn	**Pn**	**09 02 39.6**	**+0.6**
MKAR	**Makanchi Array**	**15.99**	**358**	Pn	**Pn**	**09 02 39.1**	**0.0**
	comp=E,0.1nm,0.3s,baz=202,slow=14,SNR=5.1						
CMAR	**Chiang Mai Ar**	**18.82**	**127**	P	**Pn**	**09 03 13.4**	**-1.2**
	baz=311,slow=8.2,SNR=3.1						
KURK	**Kurchatov**	**20.19**	**351**	P	**P**	**09 03 28.1**	**-0.7**
	comp=E,3.9nm,1.0s,baz=172,slow=10.0,SNR=16						
ZALV	**Zalesovo Beam**	**23.16**	**2**	P	**P**	**09 03 59.7**	**-1.0**
ZALV	**Zalesovo Beam**	**23.16**	**2**	P	**P**	**09 03 59.7**	**-1.0**
	comp=E,0.5nm,0.4s,mb3.3,baz=161,slow=9.2,SNR=4.0						
BVAR	**Borovoye Array**	**24.10**	**341**	P	**P**	**09 04 13.2**	**+3.5**
	comp=E,0.4nm,0.4s,mb3.2,baz=128,slow=6.3,SNR=2.5						
SONM	**Songino Array**	**24.57**	**40**	P	**P**	**09 04 14.0**	**-0.1**
	comp=E,0.6nm,0.6s,mb3.3,baz=220,slow=11,SNR=3.4						
WRA	**Warramunga Arr**	**70.40**	**129**	P	**P**	**09 10 07.9**	**-0.7**
	comp=E,0.6nm,0.7s,mb3.6,baz=326,slow=6.2,SNR=4.0						
ASAR	**Alice Springs**	**72.75**	**132**	P	**P**	**09 10 23.6**	**+0.8**
	comp=E,0.3nm,0.9s,mb3.2,baz=310,slow=5.1,SNR=4.6						
ILAR	**Eielson Array**	**77.07**	**20**	P	**P**	**09 10 47.6**	**+0.5**
	comp=E,0.6nm,0.9s,mb3.5,baz=304,slow=6.1,SNR=5.9						
YKA	**Yellowknife Ar**	**85.93**	**8**	P	**P**	**09 11 34.2**	**+0.1**
	comp=E,0.4nm,0.6s,mb3.9,baz=334,slow=5.8,SNR=4.0						

*PGC **27** 09:01:06.6±2.8, 49.°75N×130.°15W, h10km, ML2.9/6, Mw3.5, 221km Wsw of Pt. Hardy, Bc Vancouver Island Region*

*ISCJB **27** 09:01

s-maj=60.7km s-min=21.8km az=69.0
*PGC **27** 10:06:04.7±46.0, 49.80N×130.18W, h10km, ML2.8/6, Mw3.4, 220km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **27** 10:06:05.1±1.4, 49.90N±0.10×129.9W±0.1, h10km, Error ellipse: s-maj=14.5km s-min=13.1km az=40.1*

ISC 27 10:06:06.5±1.4, **49.93N**±0.1×**129.9W**±0.2, **h10km**, **n10,** σ**0.55**/**11**, **4D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.31**	**56**	⇑Pn	**Pn**	**10 06 30.9**	**+0.1**
BPBC	**Brooks Peninsu**	**1.36**	**79**	⇑Pn	**Pn**	**10 06 30.9**	**-0.5**
PHC	**Port Hardy**	**1.73**	**62**	⇓Pn	**Pn**	**10 06 36.6**	**0.0**
PHC				⇓Sn	**Sn**	**10 06 59.3**	**+0.5**
MAYB	**Maynard**	**1.79**	**74**	⇓Pn	**Pn**	**10 06 37.0**	**-0.3**
WOSB	**Woss**	**2.13**	**82**	⇑Pn	**Pn**	**10 06 41.7**	**-0.3**
BBB	**Bella Bella**	**2.51**	**25**	Pn	**Pn**	**10 06 46.9**	**-0.4**
	3.0nm,0.3s,baz=345,slow=16,SNR=9.0						
BBB	**Bella Bella**	**2.51**	**25**	⇓Pn	**Pn**	**10 06 46.8**	**-0.5**
NVAR	**Mina Array Bea**	**14.15**	**140**	Pn	**Pn**	**10 09 26.8**	**+0.1**
	0.1nm,0.3s,baz=318,slow=12,SNR=2.6						
PDAR	**Pinedale Array**	**15.71**	**109**	Pn	**Pn**	**10 09 51.2**	**+3.6**
	0.1nm,0.3s,baz=305,slow=13,SNR=9.4						
ILAR	**Eielson Array**	**17.39**	**335**	P	**Pn**	**10 10 09.2**	**+0.4**
	0.0nm,0.3s,baz=148,slow=11,SNR=5.8						

ISC 27 10:09:20.4±0.9, **49.19N**±0.06×**19.70E**±0.07, **h0km**, **n6,** σ**0.96**/**11**, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIE	**Niedzica**	**0.46**	**60**	*e*Pg	**Pg**	**10 09 27.8**	**-1.4**
NIE				*e*Sg	**Sg**	**10 09 35.6**	**+0.4**
KECS	**Kecovo**	**0.87**	**143**	*e*PG	**Pg**	**10 09 36.1**	**-1.0**
KECS				*e*SG	**Sg**	**10 09 48.1**	**-0.3**
VYHS	**Vyhne**	**0.90**	**220**	*e*PG	**Pg**	**10 09 38.1**	**+0.5**
VYHS				*e*SG	**Sg**	**10 09 50.9**	**+1.6**
STHS	**Stebnicka Huta**	**1.03**	**77**	*e*PG	**Pg**	**10 09 41.3**	**+1.1**
STHS				*e*SG	**Sg**	**10 09 58.0**	**+4.4**
KOLL	**Kolacno**	**1.05**	**235**	*e*PG	**Pg**	**10 09 40.4**	**-0.1**
KOLL				*e*SG	**Sg**	**10 09 52.9**	**-1.3**
CRVS	**Cervenica-Dubn**	**1.19**	**103**	*e*PG	**Pg**	**10 09 43.6**	**+0.4**

*ISK **27** 10:37:07.9, 37.00N×29.17E, h5km, MD2.8*
*DDA **27** 10:37:08.9, 36.96N×29.19E, h7km±5km, Md2.9*
*ISCJB **27** 10:37:09.1±0.6, 36.99N±0.04×29.16E±0.03, h10km, Error ellipse: s-maj=5.4km s-min=3.8km az=3.7*
*CSEM **27** 10:37:09.3±0.3, 36.97N×29.21E, h5km, MD2.8, Error ellipse: s-maj=7.0km s-min=5.6km az=4.0*

ISC 27 10:37:09.6±0.6, **36.97N**±0.04×**29.17E**±0.03, **h9**km±17km, **n19,** σ**0.89**/**34**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.32**	**55**	*e*PG	**Pg**	**10 37 15.1**	**-0.8**
GLHS				*e*SG	**Sg**	**10 37 20.7**	**+0.5**
GLHS	**Glhisar (BURDU**	**0.32**	**55**	*e*Pg	**Pg**	**10 37 15.1**	**-0.8**
GLHS				*e*Sg	**Sg**	**10 37 20.7**	**+0.5**
GOLH	**Golhisar**	**0.41**	**50**	*i* P	**Pg**	**10 37 16.3**	**-1.3**
GOLH				*i* S	**Sg**	**10 37 23.5**	**+0.5**
GOLH	**Golhisar**	**0.41**	**50**	*i* P	**Pg**	**10 37 16.3**	**-1.3**
GOLH				*i* S	**Sg**	**10 37 23.5**	**+0.5**
TURN	**Turunc**	**0.47**	**258**	*i* P	**Pg**	**10 37 24.3**	**+5.6**
TURN				*i* S	**Sg**	**10 37 34.5**	**+10**
TURN	**Turunc**	**0.47**	**258**	*i* P	**Pg**	**10 37 24.3**	**+5.7**
TURN				*i* S	**Sg**	**10 37 34.5**	**+10**
ELL	**Elmali**	**0.63**	**110**	*e*PG	**Pg**	**10 37 21.5**	**-0.3**
ELL				*e*SG	**Sg**	**10 37 31.6**	**+1.6**
ELL	**Elmali**	**0.63**	**110**	*e*Pg	**Pg**	**10 37 21.5**	**-0.3**
DNZL	**Cakiroluk**	**0.72**	**352**	*i* P	**Pg**	**10 37 21.8**	**-1.7**
DNZL				*i* S	**Sg**	**10 37 33.0**	**0.0**
DNZL	**Cakiroluk**	**0.72**	**352**	*i* P	**Pg**	**10 37 21.8**	**-1.8**
DNZL				*i* S	**Sg**	**10 37 33.0**	**0.0**
YER	**Yerkesik**	**0.73**	**283**	*e*PG	**Pg**	**10 37 22.8**	**-0.8**
AKAS	**Kas**	**0.81**	**154**	*i* P	**Pg**	**10 37 24.4**	**-0.9**
AKAS				*i* S	**Sg**	**10 37 40.5**	**+4.6**
AKAS	**Kas**	**0.81**	**154**	*i* P	**Pg**	**10 37 24.4**	**-0.9**
AKAS				*i* S	**Sg**	**10 37 40.5**	**+4.6**
AYDN	**Tasoluk**	**1.24**	**304**	*i* P	**Pg**	**10 37 33.6**	**+0.3**
AYDN				*i* S	**Sg**	**10 37 50.9**	**+1.5**
AYDN	**Tasoluk**	**1.24**	**304**	*i* P	**Pg**	**10 37 33.7**	**+0.3**
AYDN				*i* S	**Sg**	**10 37 50.9**	**+1.5**
DAT	**Datca**	**1.30**	**260**	*e*PN	**Pn**	**10 37 33.8**	**-0.1**
DAT	**Datca**	**1.30**	**260**	*e*Pn	**Pn**	**10 37 33.8**	**-0.1**
BDRM	**Kayabasi**	**1.39**	**274**	*i* P	**Pg**	**10 37 36.5**	**+0.4**
BDRM				*i* S	**Sg**	**10 37 54.4**	**+0.3**
BDRM	**Kayabasi**	**1.39**	**274**	*i* P	**Pg**	**10 37 36.5**	**+0.3**
BDRM				*i* S	**Sg**	**10 37 54.4**	**+0.3**

*IDC **27** 10:49:38.0±7.8, 21.99S×179.18W, h502km±90km, mb3.4/7, mb1 3.5/8, mb1mx3.2/19, mbtmp3.4/8, Error ellipse: s-maj=51.7km s-min=39.7km az=3.0*
*ISCJB **27** 10:49:44.3±1.6, 22.34S±0.10×179.3W±0.3, h593km±12km, mb3.8/7, Error ellipse: s-maj=39.2km s-min=14.5km az=173.5*
*NEIC **27** 10:49:44.6±1.4, 22.32S×179.30W, h584km±13km, mb3.7/2, Error ellipse: s-maj=29.0km s-min=19.0km az=105.0*

ISC 27 10:49:43.9±1.6, **22.4S**±0.1×**179.2W**±0.3, **h577km**±13km, **n12,** σ**0.96**/**13**, **mb3.8/7, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.32**	**331**	*e*P	**P**	**10 51 18.6**	**+0.6**
	139nm,0.4s						
MSVF				*e*S	**S**	**10 52 34.2**	**-0.7**
URZ	**Urewera**	**16.09**	**190**	P	**P**	**10 53 03.9**	**+1.1**
	0.8nm,0.3s,baz=120,slow=20,SNR=5.2						
URZ				S	**S**	**10 55 43.7**	**-1.4**
	0.3nm,0.3s,baz=53,slow=22,SNR=6.0						
CTA	**Charters Tower**	**32.21**	**268**	P	**P**	**10 55 24.6**	**-1.2**
	4.8nm,0.6s,mb4.3,baz=100,slow=12,SNR=7.2						
CTAO	**Charters Tower**	**32.21**	**268**	*e*P	**P**	**10 55 25.5**	**-0.3**
	3.3nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**35.94**	**246**	*e*P	**P**	**10 55 58.1**	**+1.3**
	0.4nm,0.6s,mb3.1						
STKA	**Stephens Creek**	**35.94**	**246**	P	**P**	**10 55 58.1**	**+1.2**
	1.5nm,0.5s,mb3.8,baz=90,slow=10,SNR=4.3						
ASAR	**Alice Springs**	**42.99**	**259**	P	**P**	**10 56 53.8**	**+0.3**
	4.4nm,0.8s,mb4.0,baz=99,slow=8.1,SNR=58						
WRA	**Warramunga Arr**	**43.23**	**264**	P	**P**	**10 56 54.5**	**-0.9**
	2.8nm,0.7s,mb3.9,baz=98,slow=9.1,SNR=13						
FITZ	**Fitzroy Crossi**	**51.66**	**264**	P	**P**	**10 57 58.7**	**+0.3**
	1.3nm,0.6s,mb3.5,baz=101,slow=10,SNR=11						
PETK	**Petropavlovsk-**	**77.84**	**346**	P	**P**	**11 00 41.0**	**-1.2**
	2.4nm,0.7s,mb3.7,baz=132,slow=8.0,SNR=4.3						
CMAR	**Chiang Mai Arr**	**89.68**	**290**	P	**P**	**11 01 42.9**	**+1.4**
	0.8nm,0.7s,mb3.7,baz=128,slow=3.4,SNR=7.0						
AKASG	**Malin Array Be**	**144.10**	**329**	PKP	PKPdf	11 08 13.3	-0.9
	1.0nm,0.5s,baz=42,slow=4.7,SNR=6.4						

*NEIC **27** 10:54:32.4±1.2, 2.20S×99.77E, h35km, mb3.9/1, Error ellipse: s-maj=37.0km s-min=12.9km az=65.0*
*ISCJB **27** 10:54:34.1±0.9, 2.03S±0.07×99.71E±0.06, h73km±7km, mb4.0/10, Error ellipse: s-maj=12.4km s-min=8.7km az=26.1*
*IDC **27** 10:54:35.5±1.5, 1.86S×100.14E, h48km±7km, mb3.8/10, mb1 3.9/10, mb1mx3.7/22, mbtmp3.8/10, MS3.2/2, Ms1 3.2/2, ms1mx2.7/29, Error ellipse: s-maj=53.0km s-min=13.7km az=57.0*
*DJA **27** 10:54:37, 1.83S×99.79E, h20km, MLv4.2/13*

ISC 27 10:54:37.1±0.7, **1.90S**±0.06×**99.67E**±0.05, **h76km**±6km, **h50km**±.5km:**pP-P, n29,** σ**1.55**/**32**, **mb4.0**/10, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.81**	**314**	P	**Pn**	**10 54 51.6**	**-2.2**
SISI				S	**Sn**	**10 55 05.6**	**-0.5**
PDSI	**Padang**	**1.26**	**39**	P	**Pn**	**10 54 54.4**	**-4.8**
PDSI				S	**Sn**	**10 55 11.6**	**-4.2**
PPI	**Padang Panjang**	**1.61**	**27**	P	**Pn**	**10 55 00.4**	**-3.3**
PPI				S	**Sn**	**10 55 23.8**	**0.0**
KRJI	**Kerinci**	**1.80**	**96**	P	**Pn**	**10 55 07.5**	**+1.3**
KRJI				S	**Sn**	**10 55 29.3**	**+0.9**
SDSI	**Sungai Dareh**	**2.00**	**61**	P	**Pn**	**10 55 05.1**	**-3.8**
SDSI				S	**Sn**	**10 55 32.8**	**-0.4**
BKNI	**Bangkinang**	**2.60**	**32**	P	**Pn**	**10 55 21.2**	**+4.2**
MNSI	**Mandailing Nat**	**2.68**	**358**	P	**Pn**	**10 55 19.4**	**+1.3**
KSI	**Kapahiang**	**3.40**	**121**	P	**Pn**	**10 55 29.6**	**+1.8**
MNAI	**Manna**	**4.09**	**127**	P	**Pn**	**10 55 39.6**	**+2.3**
LHSI	**Lahat**	**4.30**	**117**	P	**Pn**	**10 55 41.9**	**+1.8**
PSI	**Prapat**	**4.73**	**351**	P	**Pn**	**10 55 47.1**	**+1.1**
	1.5nm,0.3s,baz=173,slow=13,SNR=7.3						
PSI				LR	LR	10 58 04.3	
	comp=Z,372nm,19.4s,baz=180,slow=45						
MDSI	**Maura Dua**	**5.18**	**120**	P	**Pn**	**10 55 49.8**	**-2.4**
	1.0nm28nm,0.8s						
MYKOM	**Kota Tinggi**	**5.56**	**49**	P	**Pn**	**10 55 55.4**	**-1.9**
	0.1nm429nm20nm,1.0s						
IPM	**Ipoh**	**6.48**	**12**	*e*Pn	**Pn**	**10 56 11.7**	**+1.8**
	8.1nm,0.4s						
IPM	**Ipoh**	**6.48**	**12**	P	**Pn**	**10 56 10.9**	**+1.0**
KULM	**Kulim**	**7.21**	**8**	*e*Pn	**Pn**	**10 56 18.9**	**-1.0**
CMAR	**Chiang Mai Arr**	**20.24**	**358**	P	**P**	**10 59 06.0**	**-0.2**
	1.5nm,0.6s,baz=184,slow=9.4,SNR=13						
FITZ	**Fitzroy Crossi**	**30.14**	**124**	P	**P**	**11 00 37.6**	**-2.4**
	3.2nm,1.1s,mb3.9,baz=291,slow=8.6,SNR=3.6						
WRA	**Warramunga Arr**	**38.33**	**120**	P	**P**	**11 01 48.2**	**-2.5**
	2.5nm,0.9s,mb4.0,baz=300,slow=9.3,SNR=6.7						
ASAR	**Alice Springs**	**39.58**	**126**	P	**P**	**11 01 59.5**	**-1.6**
	1.2nm,0.8s,mb3.8,baz=307,slow=8.2,SNR=13						
ASAR				pP	pP	11 02 12.6	-7.0
	1.4nm,0.7s,baz=307,slow=6.3,SNR=8.4						
KSRS	**Korea Array**	**47.10**	**31**	P	**P**	**11 03 01.0**	**-0.5**
	1.3nm,0.7s,mb3.8,baz=225,slow=8.6,SNR=5.1						
KSRS				LR	LR	11 22 59.5	
	comp=Z,21nm,18.8s,baz=145,slow=36						
SONM	**Songino Array**	**49.88**	**6**	P	**P**	**11 03 23.9**	**+1.2**
	1.4nm,0.6s,mb4.1,baz=184,slow=8.4,SNR=9.3						
SONM				pP	pP	11 03 36.9	-4.8
	1.2nm,0.7s,baz=180,slow=6.5,SNR=4.6						
MKAR	**Makanchi Array**	**50.84**	**345**	P	**P**	**11 03 31.9**	**+1.9**
	3.7nm,0.7s,mb4.5,baz=156,slow=9.0,SNR=32						
MKAR				pP	pP	11 03 45.4	-3.7
	1.7nm,0.7s,baz=147,slow=7.3,SNR=6.1						
MJAR	**Matsushiro Arr**	**52.41**	**39**	P	**P**	**11 03 40.4**	**-1.5**
	1.1nm,0.7s,mb4.0,baz=197,slow=11,SNR=4.1						
ZALV	**Zalesovo Beam**	**57.01**	**350**	P	**P**	**11 04 15.9**	**+1.2**
	3.6nm,0.6s,mb4.5,baz=164,slow=6.7,SNR=22						
ZALV				pP	pP	11 04 29.2	-5.0
	3.4nm,0.6s,baz=173,slow=5.3,SNR=9.1						
BVAR	**Borovoye Array**	**59.98**	**340**	P	**P**	**11 04 38.7**	**+3.2**
	0.4nm,0.3s,mb3.9,baz=154,slow=4.5,SNR=4.3						
ABKAR	**Akbulak array**	**61.40**	**332**	*e*P	**P**	**11 04 45.6**	**+0.4**
	0.4nm,0.4s,mb3.8						
TXAR	**Lajitas Array**	**144.82**	**37**	PKP	PKPdf	11 14 06.7	+0.6
	1.9nm,0.6s,baz=282,slow=1.8,SNR=35						
JCT	**Junction City**	**146.11**	**31**	*e*PKPbc	PKPbc	11 14 10.3	+1.1

*ISCJB **27** 10:59:50.0±0.6, 15.96S±0.07×69.43W±0.0, h242km±6km, mb4.0/14, Error ellipse: s-maj=14.8km s-min=9.5km az=156.1*
*NEIC **27** 10:59:50.9±0.6, 15.94S×69.43W, h231km±6km, mb4.2/4, Error ellipse: s-maj=10.5km s-min=6.9km az=65.0*
*IDC **27** 10:59:50.6±0.7, 15.87S×69.44W, h227km±5km, mb3.7/11, mb1 3.8/15, mb1mx3.6/23, mbtmp3.6/15, Error ellipse: s-maj=17.5km s-min=11.7km az=50.0*

ISC 27 10:59:51.1±0.6, **15.96S**±0.06×**69.43W**±0.09, **h236km**±6km, **n34,** σ**0.87**/**30**, **mb4.0**/14, **Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.29**	**105**	P	**Pn**	**11 00 27.3**	**+0.8**
	134nm,0.3s,baz=289,slow=9.2,SNR=4217						
LPAZ				S	**S**	**11 00 54.0**	**-0.2**
	51nm,0.3s,baz=356,slow=19,SNR=19						
SIV	**San Ignacio**	**8.04**	**91**	P	**Pn**	**11 01 44.2**	**-0.6**
	0.9nm,0.3s,baz=275,slow=11,SNR=20						
NNA	**Nana**	**8.21**	**298**	P	**Pn**	**11 01 46.2**	**-0.9**
	1.4nm,0.3s,baz=128,slow=13,SNR=2.7						
NNA				S	**S**	**11 03 11.4**	**-9.0**
	4.5nm,0.3s,baz=158,slow=19,SNR=4.0						
LCO	**Las Campanas**	**13.04**	**185**	*e*Pn	**Pn**	**11 02 47.4**	**-0.5**
CPUP	**Villa Florida**	**15.28**	**134**	P	**Pn**	**11 03 15.4**	**+0.3**
	0.5nm,0.3s,baz=300,slow=13,SNR=6.6						
CFAA	**Coronel Fontan**	**15.61**	**176**	P	**Pn**	**11 03 19.3**	**+0.2**
CFAA	**Coronel Fontan**	**15.61**	**176**	P	**Pn**	**11 03 19.3**	**+0.2**
	0.2nm,0.3s,baz=351,slow=12,SNR=17						
OTAV	**Otavalo**	**18.40**	**330**	*e*P	**P**	**11 03 51.2**	**+2.2**
	4.0nm,0.6s						
TRQA	**Tornquist**	**22.97**	**165**	*e*P	**P**	**11 04 35.2**	**+0.3**
	56nm,1.3s,mb4.9						
PLCA	**Paso Flores**	**24.70**	**182**	P	**P**	**11 04 50.7**	**0.0**
PLCA	**Paso Flores**	**24.70**	**182**	P	**P**	**11 04 50.7**	**+0.1**
	1.6nm,0.5s,mb3.9,baz=6.4,slow=14,SNR=6.9						
SJG	**San Juan**	**34.01**	**6**	P	**P**	**11 06 11.7**	**-1.2**
SJG	**San Juan**	**34.01**	**6**	P	**P**	**11 06 11.7**	**-1.2**
	5.8nm,0.3s,mb4.6,baz=345,slow=14,SNR=4.6						
CBYP	**Canovanas**	**34.20**	**6**	*e*P	**P**	**11 06 13.9**	**-0.6**
	5.5nm,0.6s,mb4.3						
CMIG	**Matias Romero**	**41.34**	**322**	P	**P**	**11 07 13.9**	**-0.2**
	1.6nm,0.5s,mb3.7,baz=99,slow=6.6,SNR=8.4						
TXAR	**Lajitas Array**	**55.86**	**324**	P	**P**	**11 09 04.6**	**+0.1**
	0.3nm,0.5s,mb3.1,baz=146,slow=6.6,SNR=9.7						
SDCO	**Great Sand Dun**	**63.27**	**328**	*e*P	**P**	**11 09 56.0**	**+1.3**
	2.1nm,0.9s,mb3.8						
VNA3	**Neumayer Olymp**	**65.46**	**162**	*e*	**P**	**11 10 07.1**	**-1.3**
VNA1	**Neumayer--Stat**	**65.65**	**161**	*e*	**P**	**11 10 08.9**	**-0.7**
DBIC	**Dimbokro**	**67.74**	**76**	P	**P**	**11 10 24.2**	**+0.3**
	3.9nm,0.4s,mb4.4,baz=229,slow=6.9,SNR=15						
PDAR	**Pinedale Array**	**69.10**	**329**	P	**P**	**11 10 32.0**	**+0.4**
PDAR	**Pinedale Array**	**69.10**	**329**	P	**P**	**11 10 32.0**	**+0.4**
	0.3nm,0.3s,mb3.3,baz=133,slow=6.6,SNR=6.1						
ULM	**Lac du Bonnet**	**69.92**	**342**	P	**P**	**11 10 34.8**	**-1.6**
ULM	**Lac du Bonnet**	**69.92**	**342**	P	**P**	**11 10 34.8**	**-1.6**
	2.1nm,0.3s,mb4.2,baz=158,slow=3.7,SNR=4.2						
TORD	**Torodi Ar. Bea**	**76.03**	**72**	P	**P**	**11 11 13.0**	**0.0**
	6.0nm,0.6s,mb4.4,baz=262,slow=4.6,SNR=34						
ESDC	**Sonseca Array**	**82.27**	**45**	P	**P**	**11 11 47.0**	**+0.8**
	0.6nm,0.4s,mb3.5,baz=232,slow=4.8,SNR=3.3						
YKA	**Yellowknife Ar**	**85.83**	**341**	P	**P**	**11 12 03.3**	**-0.2**
	0.4nm,0.4s,mb3.5,baz=132,slow=4.9,SNR=12						
MAW	**Mawson**	**89.75**	**164**	P	**P**	**11 12 24.0**	**+1.7**
	0.6nm,0.4s,mb3.8,baz=211,slow=3.2,SNR=6.3						
BVAR	**Borovoye Array**	**131.43**	**31**	SKPbc	SKPbc	11 21 38.5	+0.4
	0.7nm,0.5s,baz=330,slow=5.0,SNR=3.9						
ASAR	**Alice Springs**	**134.49**	**211**	PKP	PKPdf	11 18 42.5	+0.6
	0.9nm,0.7s,baz=134,slow=1.9,SNR=12						
ASAR				SKPbc	SKPbc	11 21 50.1	+0.7
	0.9nm,0.9s,baz=137,slow=3.5,SNR=4.6						
ZALV	**Zalesovo Beam**	**137.10**	**22**	PKP	PKPdf	11 18 47.2	+1.5
	1.1nm,0.6s,baz=270,slow=1.4,SNR=5.6						
ZALV				SKP		11 21 59.9	
	2.1nm,0.8s,baz=322,slow=4.4,SNR=6.1						
WRA	**Warramunga Arr**	**137.35**	**214**	PKP	PKPdf	11 18 47.2	0.0
	0.8nm,0.3s,baz=142,slow=1.7,SNR=13						
WRA				SKPbc	SKPbc	11 21 59.4	+1.1
	0.5nm,0.6s,baz=143,slow=2.4,SNR=4.9						
MKAR	**Makanchi Array**	**141.32**	**31**	SKPbc	SKPbc	11 22 10.9	+2.8
	0.8nm,0.6s,baz=354,slow=2.7,SNR=4.2						
SONM	**Songino Array**	**148.03**	**5**	PKPbc	PKPbc	11 19 09.4	+0.8
	0.5nm,0.3s,baz=1.4,slow=5.8,SNR=4.2						

*ISCJB **27** 11:16:30.0±0.3, 68.56N±0.02×17.7W±0.1, h10km, mb4.1/37, MS3.8/24, Error ellipse: s-maj=5.5km s-min=2.8km az=4.8*
*CSEM **27** 11:16:29.7±0.2, 68.56N×17.81W, h2km, ML3.6, Ms3.4, Error ellipse: s-maj=6.6km s-min=4.2km az=93.0*
*REY **27** 11:16:29.9, 68.63N×17.04W, h15km, ML3.6, ML3.5*
*IDC **27** 11:16:30.2±0.7, 68.56N×17.56W, h0km, mb3.9/13, mb1 4.1/16, mb1mx3.9/28, mbtmp3.9/16, ML3.2/3, MS3.8/23, Ms1 3.8/23, ms1mx3.7/38, Error ellipse: s-maj=19.8km s-min=14.2km az=24.0*
*MOS **27** 11:16:30.1±0.9, 68.67N×17.55W, h10km, mb4.5/24, Error ellipse: s-maj=18.2km s-min=6.4km az=99.9*
*NEIC **27** 11:16:31.8±0.2, 68.62N×17.61W, h10km, mb4.3/17, Error ellipse: s-maj=6.4km s-min=4.0km az=55.0*
*SZGRF **27** 11:16:37.7, 68.84N×16.29W, h33km, mb4.3, Iceland region*

ISC 27 11:16:31.6±0.3, **68.53N**±0.02×**17.70W**±0.10, **h10km**, **n171,** σ**1.03**/**176**, **mb4.1**/37, **MS3.8**/24, **7C-3D, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**2.00**	**184**	P	**Pn**	**11 17 04.1**	**-1.3**
IGRI				S	**Sn**	**11 17 30.6**	**+0.1**
ILEI	**Leirhofn**	**2.19**	**167**	P	**Pn**	**11 17 06.1**	**-1.8**
ILEI				S	**Sn**	**11 17 33.9**	**-1.1**
IFLA	**Flatey**	**2.38**	**181**	P	**Pn**	**11 17 09.7**	**-1.0**
IFLA				S	**Sn**	**11 17 40.7**	**+0.8**
IBRE	**Brettingsstaoi**	**2.42**	**182**	P	**Pn**	**11 17 10.1**	**-1.1**
IBRE				S	**Sn**	**11 17 41.0**	**+0.2**
ISIG	**Siglufjorour**	**2.46**	**192**	P	**Pn**	**11 17 11.2**	**-0.5**
SCO	**Scoresbysund**	**2.46**	**325**	*i* P	**Pn**	**11 17 08.1**	**-3.7**
SCO				*i*		11 17 46.5	
SCO	**Scoresbysund**	**2.46**	**325**	*i* P	**Pn**	**11 17 08.1**	**-3.7**
SCO				*i* LG		11 17 46.5	
SCO	**Scoresbysund**	**2.46**	**325**	*i* P	**Pn**	**11 17 08.2**	**-3.6**
	SNR=71						
SCO				*i* Sg	**Sg**	**11 17 46.5**	**-4.2**
	96nm,0.7s,SNR=94						
SCO				*i* Lg		11 17 46.5	
IHED	**Heoinshofoi**	**2.47**	**176**	P	**Pn**	**11 17 10.5**	**-1.3**
IHED				S	**Sn**	**11 17 41.7**	**-0.2**
IGIL	**Gilhagi**	**2.52**	**167**	P	**Pn**	**11 17 10.7**	**-1.9**
IGIL				S	**Sn**	**11 17 42.4**	**-0.9**
IHRN	**Hraun**	**2.61**	**202**	P	**Pn**	**11 17 14.1**	**+0.4**
IHLA	**Hella**	**2.62**	**186**	P	**Pn**	**11 17 13.1**	**-0.7**
IHLA				S	**Sn**	**11 17 46.6**	**+1.0**
IGRA	**Granastaoir**	**2.63**	**179**	P	**Pn**	**11 17 13.2**	**-0.8**
IGRA				S	**Sn**	**11 17 46.3**	**+0.4**
IKVO	**Krokottuvotn**	**2.85**	**173**	P	**Pn**	**11 17 15.9**	**-1.2**
IKVO				S	**Sn**	**11 17 52.0**	**+0.6**
IREN	**Reynihlio**	**2.92**	**174**	P	**Pn**	**11 17 17.0**	**-1.0**
IREN				S	**Sn**	**11 17 54.0**	**+1.0**
IGRS	**Grimsstaoir**	**2.97**	**167**	P	**Pn**	**11 17 17.7**	**-1.0**
IGRS				S	**Sn**	**11 17 54.2**	**-0.2**
ISVA	**Svartarkot**	**3.22**	**177**	P	**Pn**	**11 17 21.6**	**-0.5**
ISVA				S	**Sn**	**11 18 01.7**	**+1.3**
IMKO	**Mokollar**	**3.61**	**171**	P	**Pn**	**11 17 27.0**	**-0.5**
IADA	**Aoalbol**	**3.63**	**166**	P	**Pn**	**11 17 26.5**	**-1.3**
IHVA	**Hvannstoosfjol**	**3.67**	**168**	P	**Pn**	**11 17 27.4**	**-0.9**
IGLU	**Glumsstadir**	**3.72**	**163**	P	**Pn**	**11 17 27.6**	**-1.3**
IBRU	**Bruarjokull**	**3.78**	**169**	P	**Pn**	**11 17 29.1**	**-0.7**
IKRE	**Kreppuhraun**	**3.80**	**171**	P	**Pn**	**11 17 29.8**	**-0.3**
IVSH	**V-Sauoahnukur**	**3.82**	**167**	P	**Pn**	**11 17 29.3**	**-1.1**
JMIC	**Jan Mayen**	**4.03**	**48**	LR	LR	11 18 28.9	
	comp=Z,216nm,18.6s,baz=209,slow=30						
IASB	**`sbjarnarst**	**4.07**	**202**	P	**Pn**	**11 17 35.0**	**+1.2**
BORG	**Borgarnes**	**4.07**	**202**	*e*Pn	**Pn**	**11 17 35.2**	**+1.4**
BORG				*e*Sg	**Sg**	**11 18 42.0**	**0.0**
BORG	**Borgarnes**	**4.07**	**202**	Pn	**Pn**	**11 17 35.2**	**+1.5**
	11nm,0.3s,baz=9.8,slow=8.3,SNR=19						
BORG	**Borgarnes**	**4.07**	**202**	*e*P	**Pn**	**11 17 35.2**	**+1.4**
BORG				*e*Sg	**Sg**	**11 18 42.0**	**0.0**
SUMG	**Summit**	**7.99**	**310**	*e*Pn	**Pn**	**11 18 26.4**	**-1.2**
	14nm,0.6s						
SUMG	**Summit**	**7.99**	**310**	*e*Pn	**Pn**	**11 18 26.4**	**-1.2**
	14nm,0.6s						
KBS	**Kingsbay**	**13.07**	**25**	*e*Pn	**Pn**	**11 19 35.2**	**-1.8**
	13nm,1.0s						
KBS	**Kingsbay**	**13.07**	**25**	*e*P	**Pn**	**11 19 35.2**	**-1.7**
KBS				pmax	pmax		
	comp=Z,13nm,1.0s						
NOA	**NORSAR Array B**	**14.29**	**108**	LR	LR	11 25 12.1	
	comp=Z,262nm,18.3s,baz=305,slow=37						
ARCES	**ARCESS Array B**	**15.26**	**66**	Pn	**Pn**	**11 20 05.2**	**-1.5**
ARCES				LR	LR	11 24 49.7	
ARCES	**ARCESS Array B**	**15.26**	**66**	Pn	**Pn**	**11 20 05.2**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=314,slow=12,SNR=2.6						
ARCES				LR	LR	11 24 49.7	
	comp

GRF pmax pmax
comp=Z,19nm,1.7s,mb4.2
CDF Champ du Feu 23.70 136 *eP* **P 11 21 43.8 +0.5**
MFF Saint Martin d 23.73 149 *eP* **P 11 21 43.0 -0.6**
comp=Z,18nm,0.9s,mb4.2
MFF Saint Martin d 23.73 149 *eP* **P 11 21 43.0 -0.6**
comp=Z,9.2nm,0.9s,mb4.2
MFF Saint Martin d 23.73 149 *eP* **P 11 21 43.0 -0.6**
MFF pmax pmax
comp=Z,9.0nm,0.9s,mb4.2
LOR Lormes 23.94 142 *eP* **P 11 21 45.5 0.0**
LOR *e*MLR MLR
comp=Z,302nm,18.0s,MS3.5
LOR Lormes 23.94 142 *eP* **P 11 21 45.5 0.0**
LOR MLR MLR
comp=Z,300nm,18.0s,MS3.8
AVF Avril sur Loir 24.28 143 *eP* **P 11 21 48.5 0.0**
comp=Z,18nm,1.3s,mb4.1
AVF Avril sur Loir 24.28 143 *eP* **P 11 21 48.5 0.0**
comp=Z,9.2nm,1.3s,mb4.0
AVF Avril sur Loir 24.28 143 *eP* **P 11 21 48.5 0.0**
AVF pmax pmax
comp=Z,9.0nm,1.3s,mb4.0
BGF Bois d'Agland 24.39 144 *eP* **P 11 21 50.4 +0.8**
BGF Bois d'Agland 24.39 144 *eP* **P 11 21 50.4 +0.8**
TCF Toulx Ste Croi 24.51 145 *eP* **P 11 21 51.6 +0.9**
comp=Z,14nm,0.9s,mb4.2
TCF Toulx Ste Croi 24.51 145 *eP* **P 11 21 51.6 +0.9**
comp=Z,7.3nm,0.9s,mb4.2
TCF Toulx Ste Croi 24.51 145 *eP* **P 11 21 51.6 +0.9**
TCF pmax pmax
comp=Z,7.0nm,0.9s,mb4.2
TCF Toulx Ste Croi 24.51 145 *eP* **P 11 21 51.6 +0.9**
comp=Z,7.2nm,0.9s,mb4.2
SMF Signal de Mont 24.52 142 *eP* **P 11 21 50.9 +0.1**
SMF Signal de Mont 24.52 142 *eP* **P 11 21 50.9 +0.1**
KLMR Klimovskoe 24.73 80 P **P 11 21 50.1 -2.4**
KLMR pmax pmax
comp=Z,23nm,1.5s,mb4.5
RJF Les Rejaudoux 25.31 147 *eP* **P 11 21 58.5 +0.6**
comp=Z,35nm,1.3s,mb4.4
RJF Les Rejaudoux 25.31 147 *eP* **P 11 21 58.5 +0.6**
comp=Z,18nm,1.3s,mb4.4
RJF Les Rejaudoux 25.31 147 *eP* **P 11 21 58.5 +0.6**
RJF pmax pmax
comp=Z,18nm,1.3s,mb4.4
RJF Les Rejaudoux 25.31 147 *eP* **P 11 21 58.5 +0.6**
comp=Z,18nm,1.3s,mb4.4
MORC Moravsky Berou 25.47 120 *eP* **P 11 22 00.5 +1.1**
comp=Z,12nm,1.3s,mb4.2
MORC Moravsky Berou 25.47 120 *eP* **P 11 22 00.5 +1.1**
MORC pmax pmax
comp=Z,12nm,1.3s,mb4.3
MORC Moravsky Berou 25.47 120 *eP* **P 11 22 00.5 +1.1**
comp=Z,12nm,1.3s,mb4.2
LFF La Frestale 25.50 149 *eP* **P 11 22 00.6 +0.9**
comp=Z,61nm,1.4s,mb4.6
LFF La Frestale 25.50 149 *eP* **P 11 22 00.6 +0.9**
comp=Z,30nm,1.4s,mb4.6
LFF La Frestale 25.50 149 *eP* **P 11 22 00.6 +0.9**
LFF pmax pmax
comp=Z,30nm,1.4s,mb4.6
LFF La Frestale 25.50 149 *eP* **P 11 22 00.6 +0.9**
comp=Z,30nm,1.4s,mb4.6
VRAC Vranov 25.58 121 LR LR 11 30 34.4
comp=Z,195nm,21.5s,MS3.6,baz=328,slow=33
CAF Calviac 25.78 146 *eP* **P 11 22 03.3 +1.1**
comp=Z,20nm,1.2s,mb4.2
CAF Calviac 25.78 146 *eP* **P 11 22 03.3 +1.1**
comp=Z,9.8nm,1.2s,mb4.2
CAF Calviac 25.78 146 *eP* **P 11 22 03.3 +1.1**
CAF pmax pmax
comp=Z,10.0nm,1.2s,mb4.2
CAF Calviac 25.78 146 *eP* **P 11 22 03.3 +1.1**
comp=Z,9.8nm,1.2s,mb4.2
DAVOX Davos/Dischmat 25.89 133 LR LR 11 31 54.3
comp=Z,205nm,20.2s,MS3.6,baz=262,slow=36
SCHQ Schefferville 26.14 263 LR LR 11 31 51.9
comp=Z,262nm,18.1s,MS3.8,baz=292,slow=35
VIVF Saint-Julien-l 26.40 142 *eP* **P 11 22 09.3 +1.4**
VIVF Saint-Julien-l 26.40 142 *eP* **P 11 22 09.3 +1.4**
ORIF Oris-en-Rattie 26.62 141 *eP* **P 11 22 11.3 +1.5**
LASF Ste Croix 26.97 144 *eP* **P 11 22 15.4 +2.5**
comp=Z,36nm,1.5s,mb4.4
LASF Ste Croix 26.97 144 *eP* **P 11 22 15.4 +2.5**
comp=Z,18nm,1.5s,mb4.4
MBDF Montbardon 27.01 139 *eP* **P 11 22 15.6 +2.2**
comp=Z,7.3nm,0.8s,mb3.9
MBDF Montbardon 27.01 139 *eP* **P 11 22 15.6 +2.2**
comp=Z,3.7nm,0.8s,mb4.0
MBDF Montbardon 27.01 139 *eP* **P 11 22 15.6 +2.2**
MBDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
MBDF Montbardon 27.01 139 *eP* **P 11 22 15.6 +2.2**
comp=Z,3.7nm,0.8s,mb3.9
OBN Obninsk 27.81 91⇑ *eP* **P 11 22 21.7 +1.3**
OBN pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
OBN MLR MLR
comp=Z,600nm,21.0s,MS4.2
OBN Obninsk 27.81 91 *eP* **P 11 22 21.7 +1.3**
comp=Z,600nm,21.0s
AKASG Malin Array Be 28.66 104 P **P 11 22 26.9 -1.1**
comp=Z,2.3nm,0.6s,mb4.1,baz=328,slow=9.2,SNR=7.9
AKASG Malin Array Be 28.66 104 P **P 11 22 26.9 -1.2**
ESDC Sonseca Array 29.87 158 P **P 11 22 38.1 -0.7**
comp=Z,0.4nm,0.3s,mb3.6,baz=346,slow=8.3,SNR=3.5
ESDC Sonseca Array 29.87 158 P **P 11 22 38.1 -0.7**
ARU Arti 34.75 71 *d* *i*P **P 11 23 21.0 -0.4**
ARU *e* 11 24 33.3
ARU S **S 11 28 52.3 +1.2**
ARU pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
ARU Arti 34.75 71 *i* P **P 11 23 21.0 -0.4**
comp=Z,10.0nm,1.7s,mb4.5
KEST Kesra 36.17 141 LR LR 11 38 37.2
comp=Z,51nm,18.5s,MS3.3,baz=185,slow=37
INK Inuvik 36.53 326 LR LR 11 39 10.4
comp=Z,114nm,18.1s,MS3.7,baz=72,slow=37
YKA Yellowknife Ar 36.59 309 P **P 11 23 36.9 -0.2**
YKA LR LR 11 37 51.1
YKA Yellowknife Ar 36.59 309 P **P 11 23 36.9 -0.2**
comp=Z,3.4nm,0.9s,mb4.2,baz=38,slow=8.6,SNR=6.9
YKA LR LR 11 37 51.1
comp=Z,20nm,20.9s,MS2.9,baz=40,slow=35
YKA Yellowknife Ar 36.59 309 P **P 11 23 36.9 -0.2**
KIV Kislovodsk 39.24 97⇓ *eP* **P 11 24 00.7 +1.0**
KIV *e*S **S 11 30 00.5 +0.7**
KIV *e*SS SS 11 32 50.1 -2.4
KIV pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
KIV MLR MLR
comp=Z,200nm,17.0s,MS4.0
KIV Kislovodsk 39.24 97 *eP* **P 11 24 00.7 +1.0**
comp=Z,5.0nm,0.5s,mb4.5
BRTR Keskin Array B 39.72 110 P **P 11 24 04.9 +1.2**
comp=Z,1.4nm,0.7s,mb3.8,baz=339,slow=6.3,SNR=6.0
BRTR Keskin Array B 39.72 110 *ceP* **P 11 24 05.6 +1.9**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
BRTR Keskin Array B 39.72 110 P **P 11 24 04.9 +1.2**
ULM Lac du Bonnet 40.42 284 LR LR 11 40 52.0
comp=Z,461nm,18.6s,MS4.4,baz=53,slow=36
ABKAR Akbulak array 41.06 77 *eP* **P 11 24 14.8 +0.1**
comp=Z,1.1nm,0.6s,mb3.7
ABKAR Akbulak array 41.06 77 *eP* **P 11 24 14.8 +0.1**
comp=Z,1.1nm,0.6s,mb3.7
MAK Makhachkala 41.87 93 *eP* **P 11 24 20.0 -1.4**
MAK *e*S **S 11 30 38.8 -0.1**
MAK *e*SS SS 11 33 44.5 -0.3
MAK pmax pmax
comp=Z,236nm,1.6s
MAK MLR MLR
comp=Z,317nm,17.0s,MS4.3
MAK Makhachkala 41.87 93 *eP* **P 11 24 20.0 -1.4**
comp=Z,236nm,1.6s
ILAR Eielson Array 42.24 330 P **P 11 24 25.0 +0.9**
ILAR PcP PcP 11 26 18.1 +0.3
ILAR LR LR 11 43 47.2
ILAR Eielson Array 42.24 330 P **P 11 24 25.0 +0.9**
comp=Z,2.6nm,1.1s,mb3.8,baz=20,slow=7.4,SNR=17
ILAR PcP PcP 11 26 18.1 +0.3
comp=Z,0.5nm,0.9s,baz=310,slow=2.3,SNR=5.4
ILAR LR LR 11 43 47.3
comp=Z,112nm,20.6s,MS3.7,baz=227,slow=39
ILAR Eielson Array 42.24 330 P **P 11 24 25.0 +0.8**
ILAR 11 26 18.1
ILAR Eielson Array 42.24 331 *eP* **P 11 24 25.0 +0.8**
COLA College 42.32 331 *eP* **P 11 24 25.4 +0.6**
comp=Z,9.5nm,1.4s,mb4.2
COLA College 42.32 331 *eP* **P 11 24 25.4 +0.6**
COLA pmax pmax
comp=Z,10.0nm,1.4s,mb4.2
PAX Paxson 43.61 328 *eP* **P 11 24 35.8 +0.5**
comp=Z,8.5nm,1.5s,mb4.2
PAX Paxson 43.61 328 *eP* **P 11 24 35.8 +0.5**
PAX pmax pmax
comp=Z,8.0nm,1.5s,mb4.2
BILL Bilibino 43.67 358⇑ *eP* **P 11 24 34.6 -1.1**
BILL *e*S **S 11 31 05.7 +0.9**
BILL pmax pmax
comp=Z,9.0nm,1.6s,mb4.2
ZALV Zalesovo Beam 45.35 54 P **P 11 24 48.7 -0.5**
comp=Z,0.4nm,0.3s,mb3.7,baz=340,slow=7.7,SNR=1.7
ZALV LR LR 11 47 52.7
comp=Z,31nm,18.3s,MS3.3,baz=28,slow=42
ZALV Zalesovo Beam 45.35 54 P **P 11 24 48.7 -0.6**
ZALV MLR MLR
comp=Z,31nm,18.3s,MS3.3
KURK Kurchatov 46.22 61 P **P 11 24 55.8 -0.4**
baz=325,slow=8.0
KURK Kurchatov 46.22 61⇑ *eP* **P 11 24 56.4 +0.2**
KURK pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
KURK MLR MLR
comp=Z,88nm,18.0s,MS3.8
MKAR Makanchi Array 50.83 61 P **P 11 25 31.7 0.0**
comp=Z,0.8nm,0.7s,mb3.8,baz=339,slow=7.7,SNR=4.7
PDAR Pinedale Array 51.66 290 P **P 11 25 39.4 +1.3**
comp=Z,1.1nm,1.0s,mb3.8,baz=30,slow=12,SNR=6.3
PDAR LR LR 11 47 43.5
comp=Z,374nm,18.3s,MS4.5,baz=24,slow=36
AAK Ala-Archa 51.90 70 *i* P **P 11 25 42.6 +2.8**
AAK pmax pmax
comp=Z,3.0nm,2.1s,mb3.9
PV01 Paradox Valley 55.44 287 *eP* **P 11 26 07.3 +1.5**
comp=Z,391nm,1.2s
TORD Torodi Ar. Bea 56.74 157 P **P 11 26 15.8 +0.5**
comp=Z,2.0nm,1.0s,mb4.1,baz=352,slow=8.7,SNR=6.5
SONM Songino Array 56.77 42 LR LR 11 52 57.5
comp=Z,29nm,18.7s,MS3.4,baz=62,slow=39
ANMO Albuquerque 57.54 283 LR LR 11 51 02.2
comp=Z,182nm,20.6s,MS4.2,baz=19,slow=36
TXAR Lajitas Array 61.59 278 P **P 11 26 48.9 +0.1**
comp=Z,0.5nm,1.0s,mb3.6,baz=21,slow=5.9,SNR=3.8
TXAR LR LR 11 53 19.2
comp=Z,150nm,20.8s,MS4.1,baz=175,slow=36
DBIC Dimbokro 62.37 166 LR LR 11 52 38.5
comp=Z,45nm,20.2s,MS3.6,baz=226,slow=35
KSRS Korea Array 71.26 28 LR LR 11 59 28.9
comp=Z,34nm,20.3s,MS3.6,baz=335,slow=36
MJAR Matsushiro Arr 73.71 20 P **P 11 28 05.0 -0.2**
comp=Z,0.5nm,0.5s,mb3.7,baz=343,slow=3.8,SNR=3.5
CMAR Chiang Mai Arr 82.19 59 P **P 11 28 52.0 -0.5**
comp=Z,0.5nm,0.5s,mb3.7,baz=332,slow=7.2,SNR=4.8
CMAR LR LR 12 13 33.7
comp=Z,35nm,19.4s,MS3.7,baz=49,slow=42
ASAR Alice Springs 131.91 36 PKP PKPdf 11 35 44.0 -0.5
comp=Z,0.3nm,0.7s,baz=341,slow=2.0,SNR=4.2
SBA Scott Base 170.55 186 *e*PKPdf PKPdf 11 36 37.0 -0.5

WEL 27 11:19:04.1±0.6, 38.66S×175.38E, h209km±4km, ML3.6/13, Error ellipse: s-maj=6.5km s-min=5.2km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRZ	**Vera Road**	**0.67**	**226**	PN	Pn	11 19 32.6	-0.3
VRZ				SN	Sn	11 19 55.5	+0.1
MTVZ	**Mangateitei**	**0.73**	**174**	PN	Pn	11 19 33.4	+0.3
MTVZ				SN	Sn	11 19 55.6	-0.4
BHHZ	**Black Hill Sta**	**0.98**	**147**	PN	Pn	11 19 34.7	+0.1
BHHZ				SN	Sn	11 19 57.6	-0.9
BKZ	**Black Stump Fm**	**1.01**	**121**	PN	Pn	11 19 35.0	+0.2
BKZ				SN	Sn	11 19 58.0	-0.7
WAZ	**Wanganui**	**1.14**	**195**	PN	Pn	11 19 35.6	-0.1
NMHZ	**Naumai**	**1.20**	**112**	PN	Pn	11 19 37.3	+1.2
MCHZ	**McNeill Hill**	**1.29**	**128**	PN	Pn	11 19 37.4	+0.6
RAHZ	**Arahi**	**1.36**	**101**	PN	Pn	11 19 38.0	+0.7
PNHZ	**Pukenui**	**1.41**	**153**	PN	Pn	11 19 37.9	+0.2
URZ	**Urewera**	**1.42**	**74**	PN	Pn	11 19 37.3	-0.6
TSZ	**Takapari Road**	**1.47**	**162**	PN	Pn	11 19 38.1	-0.2
MWZ	**Matawai**	**1.72**	**80**	PN	Pn	11 19 40.4	-0.2
DVHZ	**Dannevirke**	**1.75**	**160**	PN	Pn	11 19 40.3	-0.5
POWZ	**Post Office Ro**	**1.76**	**170**	PN	Pn	11 19 40.2	-0.7
MRZ	**Mangatainoka R**	**2.01**	**176**	PN	Pn	11 19 42.1	-1.2
TIWZ	**Tintock**	**2.15**	**170**	PN	Pn	11 19 43.3	-1.4
OGWZ	**Otaki Gorge**	**2.16**	**184**	PN	Pn	11 19 43.7	-1.2
CNGZ	**Carnagh Statio**	**2.22**	**86**	PN	Pn	11 19 46.1	+0.5
KIW	**Kapiti Island**	**2.23**	**189**	PN	Pn	11 19 43.9	-1.7
HOWZ	**Holdsworth Sta**	**2.24**	**177**	PN	Pn	11 19 44.1	-1.6
QRZ	**Quartz Range**	**3.08**	**225**	PN	Pn	11 19 51.2	-3.9
DSZ	**Denniston Nort**	**4.12**	**200**	PN	Pn	11 20 03.1	-4.6
LTZ	**Lake Taylor**	**4.75**	**209**	PN	Pn	11 20 11.2	-4.8
MQZ	**McQuen's Vall**	**5.45**	**201**	PN	Pn	11 20 19.0	-5.3
ODZ	**Otahua Downs**	**7.29**	**207**	PN	Pn	11 20 43.4	-4.7

*PGC **27** 11:30:17.9±4.4, 49.81N×130.06W, h10km, ML2.7/6, Mw3.3, 212km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **27** 11:30:21.0±1.3, 50.06N±0.08×129.7W±0.1, h10km, Error ellipse: s-maj=12.6km s-min=9.5km az=44.6*
*IDC **27** 11:30:21.2±3.2, 50.00N×129.72W, h0km, mb3.2/1, mb1 3.6/5, mb1mx3.4/26, mbtmp3.4/5, ML3.1/4, MS3.3/3, Ms1 3.3/3, ms1mx2.7/16, Error ellipse: s-maj=47.8km s-min=18.4km az=77.0*
ISC 27 11:30:21.7±1.4, 50.01N±0.09×129.6W±0.1, h10km, n15, σ1°12/16, 2D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.12**	**55**	⇑Pn	**Pn**	**11 30 42.4**	**-1.1**
BPBC	**Brooks Peninsu**	**1.18**	**82**	⇑Pn	**Pn**	**11 30 42.5**	**-1.7**
BPBC				⇓Sn	**Sn**	**11 31 01.0**	**+0.7**
PHC	**Port Hardy**	**1.54**	**62**	Pn	**Pn**	**11 30 48.4**	**-0.8**
PHC				⇓Sn	**Sn**	**11 31 11.0**	**+1.7**
MAYB	**Maynard**	**1.60**	**75**	Pn	**Pn**	**11 30 48.8**	**-1.2**
WOSB	**Woss**	**1.95**	**84**	Pn	**Pn**	**11 30 54.6**	**-0.1**
BBB	**Bella Bella**	**2.37**	**23**	Pn	**Pn**	**11 30 59.7**	**-0.8**
	25nm,0.3s,baz=47,slow=10.0,SNR=124						
BBB				Sn	**Sn**	**11 31 30.2**	**+0.7**
	3.3nm,0.3s,baz=307,slow=20,SNR=3.6						
BBB	**Bella Bella**	**2.37**	**23**	Pn	**Pn**	**11 30 59.5**	**-1.0**
BBB				⇑Sn	**Sn**	**11 31 29.8**	**+0.3**
BCBC	**Bella Coola**	**2.96**	**36**	⇑Pn	**Pn**	**11 31 08.7**	**0.0**
DLBC	**Dease Lake**	**8.45**	**358**	LR	LR	11 35 41.2	
	comp=Z,120nm,19.9s,baz=126,slow=38						
YBH	**Yreka Blue Hor**	**9.56**	**147**	LR		11 35 53.5	
	comp=Z,121nm,21.9s,baz=285,slow=35						
YKA	**Yellowknife Ar**	**14.97**	**28**	Pn	**Pn**	**11 33 52.7**	**-0.3**
	0.1nm,0.3s,baz=218,slow=12,SNR=5.5						
PDAR	**Pinedale Array**	**15.57**	**110**	Pn	**Pn**	**11 34 05.6**	**+4.5**
	0.0nm,0.3s,baz=309,slow=8.7,SNR=5.9						
ILAR	**Eielson Array**	**17.39**	**335**	P	**Pn**	**11 34 25.4**	**+1.3**
	0.0nm,0.3s,baz=151,slow=11,SNR=7.7						
ANMO	**Albuquerque**	**22.61**	**123**	P	**P**	**11 35 24.6**	**+2.2**
	0.5nm,0.6s,baz=326,slow=7.3,SNR=3.5						
CMIG	**Matias Romero**	**43.08**	**127**	LR	LR	11 59 13.4	
	comp=Z,76nm,21.2s,baz=297,slow=40						

*PGC **27** 11:49:55.4±5.9, 49.80N×130.11W, h10km, ML2.9/6, Mw3.5, 215km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*IDC **27** 11:49:55.5±5.3, 49.74N×130.23W, h0km, mb1 3.6/3, mb1mx3.3/24, mbtmp3.2/3, ML3.5/2, Error ellipse: s-maj=81.9km s-min=30.6km az=54.0*
*ISCJB **27** 11:49:56.5±1.6, 50.0N±0.1×129.8W±0.1, h10km, Error ellipse: s-maj=16.0km s-min=9.0km az=30.8*
ISC 27 11:49:57.1±1.7, 49.9N±0.1×129.8W±0.1, h10km, n10, σ0°49/13, 5D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.27**	**56**	⇑Pn	**Pn**	**11 50 20.5**	**-0.3**
BPBC	**Brooks Peninsu**	**1.31**	**80**	⇓Pn	**Pn**	**11 50 20.6**	**-0.8**
BPBC				⇓Sn	**Sn**	**11 50 39.9**	**+0.9**
PHC	**Port Hardy**	**1.69**	**62**	⇓Pn	**Pn**	**11 50 26.5**	**-0.1**
PHC				⇓Sn	**Sn**	**11 50 48.8**	**+0.5**
EDB	**Eliza Dome**	**1.72**	**91**	⇑Pn	**Pn**	**11 50 48.8**	**-0.2**
MAYB	**Maynard**	**1.74**	**74**	⇑Pn	**Pn**	**11 50 26.9**	**-0.4**
WOSB	**Woss**	**2.08**	**83**	⇑Pn	**Pn**	**11 50 32.1**	**+0.1**
BBB	**Bella Bella**	**2.48**	**24**	⇑Pn	**Pn**	**11 50 37.6**	**+0.1**
BBB				⇓Sn	**Sn**	**11 51 07.2**	**-0.6**
YKA	**Yellowknife Ar**	**15.09**	**28**	Pn	**Pn**	**11 53 30.2**	**+0.2**
	0.1nm,0.3s,baz=218,slow=14,SNR=4.1						
PDAR	**Pinedale Array**	**15.67**	**110**	Pn	**Pn**	**11 53 43.0**	**+5.2**
	0.1nm,0.3s,baz=310,slow=10,SNR=4.6						
ILAR	**Eielson Array**	**17.40**	**335**	P	**Pn**	**11 54 00.2**	**+0.6**
	baz=147,slow=12,SNR=7.7						

*PGC **27** 11:52:44.9±5.9, 49.82N×130.13W, h10km, ML2.8/6, Mw3.4, 216km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **27** 11:52:48.4±1.3, 50.10N±0.07×129.7W±0.1, h10km, Error ellipse: s-maj=12.2km s-min=9.6km az=145.6*
*IDC **27** 11:52:49.0±3.6, 50.04N×129.52W, h0km, mb1 3.7/4, mb1mx3.4/25, mbtmp3.2/4, ML3.1/4, Error ellipse: s-maj=60.5km s-min=22.8km az=69.0*
ISC 27 11:52:48.3±1.5, 50.05N±0.09×129.7W±0.1, h10km, n10, σ1°32/13, 4D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.18**	**59**	⇑Pn	**Pn**	**11 53 10.1**	**-0.6**
BPBC	**Brooks Peninsu**	**1.25**	**84**	⇑Pn	**Pn**	**11 53 10.3**	**-1.5**
BPBC				⇑Sn	**Sn**	**11 53 29.6**	**+0.9**
PHC	**Port Hardy**	**1.60**	**65**	⇓Pn	**Pn**	**11 53 16.3**	**-0.4**
PHC				⇑Sn	**Sn**	**11 53 38.8**	**+1.4**
MAYB	**Maynard**	**1.67**	**77**	⇑Pn	**Pn**	**11 53 15.8**	**-1.7**
WOSB	**Woss**	**2.03**	**86**	⇓Pn	**Pn**	**11 53 22.0**	**-0.5**
BBB	**Bella Bella**	**2.37**	**25**	⇓Pn	**Pn**	**11 53 27.2**	**0.0**
BBB				⇓Sn	**Sn**	**11 53 56.5**	**+0.3**
NVAR	**Mina Array Bea**	**14.18**	**141**	Pn	**Pn**	**11 56 14.0**	**+5.0**
	0.1nm,0.3s,baz=324,slow=12,SNR=3.5						
YKA	**Yellowknife Ar**	**14.98**	**28**	Pn	**Pn**	**11 56 17.5**	**-2.3**
	0.0nm,0.3s,baz=213,slow=13,SNR=2.6						
PDAR	**Pinedale Array**	**15.66**	**110**	Pn	**Pn**	**11 56 31.2**	**+2.3**
	0.1nm,0.3s,baz=299,slow=12,SNR=4.5						
ILAR	**Eielson Array**	**17.32**	**335**	P	**Pn**	**11 56 51.7**	**+1.9**
	0.0nm,0.3s,baz=145,slow=10.0,SNR=6.5						

*IDC **27** 11:53:33.2±0.7, 12.63N×87.62W, h0km, mb4.2/9, mb1 4.4/10, mb1mx4.1/22, mbtmp4.2/10, ML3.7/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/36, Error ellipse: s-maj=40.6km s-min=16.2km az=60.0*
*CASC **27** 11:53:35.9±3.4, 11.96N×88.27W, h33km±25km, MD4.5, ML3.7, mb4.5(NEIC)*
*ISCJB **27** 11:53:36.6±0.5, 12.09N±0.05×88.16W±0.04, h45km±4km, mb4.4/41, MS3.2/3, Error ellipse: s-maj=9.8km s-min=3.7km az=37.7*
*NEIC **27** 11:53:43.0±0.9, 12.39N×87.80W, h81km±10km, mb4.5/34, Error ellipse: s-maj=12.9km s-min=7.3km az=68.0*
ISC 27 11:53:38.1±0.5, 12.16N±0.05×88.12W±0.04, h37km±4km, n242, σ0°93/241, mb4.4/41, MS3.2/3, 76C-69D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**1.14**	**14**⇑ *i*P		**Pn**	**11 53 58.4**	**+0.7**
CNCH			*e*S		**Sn**	**11 54 19.8**	**+7.7**
VSM	**San Miguel**	**1.27**	**353**	*e*P	**Pn**	**11 54 00.0**	**+0.7**
BLLM	**Bellamira**	**1.28**	**355**	*i* P	**Pn**	**11 53 59.7**	**+0.2**
BLLM			*e*S		**Sn**	**11 54 20.9**	**+5.5**
CNGN	**Cerro Negro**	**1.43**	**76**	*e*P	**Pn**	**11 54 01.8**	**+0.1**
COPN	**Copaltepe**	**1.50**	**89**	*e*P	**Pn**	**11 54 02.1**	**-0.4**
MOMN	**Momotombo**	**1.57**	**81**	*e*P	**Pn**	**11 54 03.4**	**-0.1**
CAHU	**Cacacuatique**	**1.60**	**357**	*e*P	**Pn**	**11 54 04.8**	**+0.8**
SNVI	**San Vicente**	**1.60**	**334**	*e*P	**Pn**	**11 54 03.6**	**-0.4**
CSAN		**1.66**	**89**	*e*P	**Pn**	**11 54 04.4**	**-0.4**
LFRS	**El Faro**	**1.71**	**328**	*i* P	**Pn**	**11 54 04.1**	**-1.4**
XAVN	**Gruta Xavier**	**1.76**	**90**	*e*P	**Pn**	**11 54 05.7**	**-0.4**
CRUN	**El Crucero**	**1.79**	**96**	*e*P	**Pn**	**11 54 07.5**	**+0.9**
TISN	**Laguna Tiscapa**	**1.81**	**90**	*e*P	**Pn**	**11 54 06.4**	**-0.4**
MGAN	**Managua**	**1.83**	**90**	*e*P	**Pn**	**11 54 06.5**	**-0.7**
MGAN			*e*S		**Sn**	**11 54 30.7**	**+1.5**
MGAN			AML		AML	11 54 40.7	
	comp=E,742nm,0.6s						
SNET	**Serv Nac Est T**	**1.86**	**325**	*e*P	**Pn**	**11 54 03.9**	**-3.6**
WILN	**Americas 2**	**1.89**	**90**	*e*P	**Pn**	**11 54 07.4**	**-0.6**
WILN			*e*S		**Sn**	**11 54 32.7**	**+2.0**
BOQS	**Boqueron**	**1.93**	**324**	*e*P	**Pn**	**11 54 08.3**	**-0.1**
APON	**Apoyo**	**2.03**	**97**	*e*P	**Pn**	**11 54 12.6**	**+2.8**
TGUH	**Tegucigalpa,Un**	**2.06**	**24**	*e*Pn	**Pn**	**11 54 11.6**	**+1.3**
TGUH			*e*Sn		**Sn**	**11 54 41.4**	**+6.7**
TGUH	**Tegucigalpa,Un**	**2.06**	**24**	*e*P	**Pn**	**11 54 11.4**	**+1.2**
SBLS	**San Blas**	**2.22**	**319**	*e*P	**Pn**	**11 54 10.9**	**-1.6**
SNJE	**San Jose**	**2.23**	**320**	*i* P	**Pn**	**11 54 11.5**	**-1.1**
RTR	**El Retiro**	**2.27**	**319**	*i* P	**Pn**	**11 54 12.3**	**-0.9**
SSN	**San Juan del S**	**2.38**	**111**	*e*P	**Pn**	**11 54 13.5**	**-1.2**
BOAB	**BOACO BROADBAN**	**2.42**	**83**	*e*P	**Pn**	**11 54 15.0**	**-0.2**
RBDL	**Robledal**	**2.46**	**322**	*i* P	**Pn**	**11 54 15.4**	**-0.4**
CONN	**Concepcion**	**2.52**	**103**	*e*P	**Pn**	**11 54 15.5**	**-1.0**
VCR	**Vista de Mar**	**3.17**	**129**	*e*P	**Pn**	**11 54 22.9**	**-2.7**
JTS	**JuntasAbangare**	**3.62**	**121**	*e*Pn	**Pn**	**11 54 34.0**	**+2.2**
JTS	**JuntasAbangare**	**3.62**	**121**	*e*P	**Pn**	**11 54 31.6**	**-0.2**
JCR	**Jicaral**	**3.75**	**128**⇓ *e*P		**Pn**	**11 54 32.7**	**-0.8**
CGA2	**Cerro Gallo 2**	**4.18**	**120**	*e*P	**Pn**	**11 54 40.2**	**+0.8**
PRS1	**Puriscal**	**4.32**	**120**⇑ *e*P		**Pn**	**11 54 43.5**	**+2.0**
PRS1			*e*S		**Sn**	**11 55 29.1**	**-1.6**
LAJ	**Bijagual**	**4.55**	**120**	*e*P	**Pn**	**11 54 40.3**	**-4.0**
QCR	**Quepos**	**4.75**	**125**⇑ *e*P		**Pn**	**11 54 46.8**	**-0.4**
URSC	**Urasca**	**4.85**	**118**⇓ *e*P		**Pn**	**11 54 51.0**	**+2.3**
BUS	**Buena Vista**	**5.01**	**121**⇑ *e*P		**Pn**	**11 54 52.0**	**+1.1**
BUS			*e*S		**Sn**	**11 55 46.6**	**-1.0**
ACR	**Cerro Adams**	**5.99**	**125**⇓ *e*P		**Pn**	**11 55 05.0**	**+0.6**
ACR			*e*S		**Sn**	**11 56 05.2**	**-6.7**
TEIG	**Tepich**	**8.02**	**359**	Pn	**Pn**	**11 55 33.0**	**+0.8**
CMIG	**Matias Romero**	**8.17**	**308**	Pn	**Pn**	**11 55 33.7**	**-0.6**
CMIG	**Matias Romero**	**8.17**	**308**	Pn	**Pn**	**11 55 33.7**	**-0.6**
	comp=E,1.0nm,0.3s,baz=125,slow=13,SNR=11						
BCIP	**Isla Barro Col**	**8.67**	**109**	*e*Pn	**Pn**	**11 55 42.3**	**+1.2**
PAYG	**Puerto Ayora**	**12.93**	**190**	*e*Pn	**Pn**	**11 56 48.2**	**+8.7**
HKT	**Hockley**	**19.09**	**339**	*e*P	**Pn**	**11 57 58.9**	**+0.2**
	comp=E,10nm,1.1s						
VBMS	**Vicksburg**	**20.08**	**354**	*e*P	**P**	**11 58 10.4**	**+1.9**
	comp=E,30nm,0.6s						
LRAL	**Lakeview Retre**	**20.80**	**3**	*e*Pn	**P**	**11 58 17.1**	**+0.9**
	comp=E,9.6nm,0.9s						
JCT

JSC					*e*pP			11 58 47.0	
527A	**Woodward Ranch**	**22.95**	**324**	⇓P		**P**		**11 58 38.5**	**-0.7**
	baz=23								
SWET	**Sewanee**	**23.04**	**5**	*e*P		**P**		**11 58 39.8**	**-0.3**
526A	**Mary Lane Ranc**	**23.16**	**323**	⇑P		**P**		**11 58 41.4**	**-0.2**
	baz=23								
427A	**Hayter Ranch,**	**23.35**	**325**	⇑P		**P**		**11 58 42.5**	**-1.0**
	baz=23								
CPCT	**Cooper Cave**	**23.41**	**7**	*e*P		**P**		**11 58 42.4**	**-1.6**
328A	**Wristen Ranch,**	**23.44**	**327**	⇓P		**P**		**11 58 43.9**	**-0.5**
	baz=24,SNR=7.3								
426A	**McDonald Obser**	**23.58**	**324**	⇓P		**P**		**11 58 45.1**	**-0.4**
	baz=24								
TKL	**Tuckaleechee C**	**23.72**	**9**	P		**P**		**11 58 45.8**	**-1.1**
TKL				LR		LR		12 10 51.4	
TKL	**Tuckaleechee C**	**23.72**	**9**	P		**P**		**11 58 45.8**	**-1.1**
	comp=E,21nm,1.1s,mb4.5,baz=185,slow=13,SNR=17								
TKL				LR		LR		12 10 51.4	
	comp=E,64nm,18.0s,MS3.1,baz=267,slow=45								
326A	**Caldwell Ranch**	**24.03**	**325**	⇑P		**P**		**11 58 48.9**	**-0.9**
	baz=24,SNR=7.4								
425A	**Indio Mountain**	**24.22**	**323**	⇑P		**P**		**11 58 50.8**	**-0.6**
	baz=24								
WMOK	**Wichita Mounta**	**24.47**	**338**	*e*P		**P**		**11 58 52.9**	**-0.8**
	comp=E,14nm,1.1s,mb4.3								
325A	**Bean Ranch, Si**	**24.64**	**324**	⇑P		**P**		**11 58 54.5**	**-0.8**
	baz=25,SNR=7.6								
226A	**Malaga, Loving**	**24.66**	**326**	⇑P		**P**		**11 58 55.1**	**-0.3**
	baz=25								
324A	**Moseley Ranch,**	**24.99**	**323**	⇓P		**P**		**11 58 57.7**	**-0.7**
	baz=25,SNR=7.3								
126A	**Clayton Basin,**	**25.07**	**327**	⇓P		**P**		**11 58 58.6**	**-0.6**
	baz=25								
225A	**Deer Hill, Car**	**25.10**	**325**	⇓P		**P**		**11 58 59.3**	**-0.2**
	baz=25								
MNTX	**Cornudas Mount**	**25.12**	**323**	⇑P		**P**		**11 58 59.2**	**-0.4**
	baz=25,SNR=7.5								
MNTX	**Cornudas Mount**	**25.12**	**323**	*e*P		**P**		**11 58 59.2**	**-0.4**
	comp=E,2.9nm,0.8s,mb3.9								
Z27A	**Tatum**	**25.18**	**329**	⇑P		**P**		**11 58 59.1**	**-1.1**
	baz=25,SNR=8.0								
MSTX	**Muleshoe**	**25.49**	**331**	⇓P		**P**		**11 59 02.2**	**-0.8**
	baz=26								
Z26A	**Caprock**	**25.53**	**328**	⇑P		**P**		**11 59 02.4**	**-1.0**
	baz=26								
Y27A	**Causey**	**25.61**	**330**	⇑P		**P**		**11 59 02.8**	**-1.2**
	baz=26,SNR=9.1								
AMTX	**Amarillo**	**25.75**	**334**	⇑P		**P**		**11 59 03.7**	**-1.7**
	baz=26,SNR=9.0								
AMTX	**Amarillo**	**25.75**	**334**	*e*P		**P**		**11 59 04.9**	**-0.4**
	comp=E,26nm,0.8s,mb4.8								
124A	**Stringfield Ra**	**25.89**	**325**	⇓P		**P**		**11 59 05.5**	**-1.1**
	baz=26,SNR=8.5								
Z25A	**Roswell**	**25.93**	**327**	⇑P		**P**		**11 59 06.6**	**-0.3**
	baz=26								
CCM	**Cathedral Cave**	**25.93**	**354**	*e*P		**P**		**11 59 05.8**	**-1.2**
	comp=E,8.6nm,0.7s,mb4.4								
Y26A	**Elida**	**25.97**	**329**	⇑P		**P**		**11 59 06.3**	**-1.0**
	baz=26								
X27A	**F and S Farms,**	**26.20**	**331**	⇑P		**P**		**11 59 08.8**	**-0.6**
	baz=26								
Z24A	**Sheeppen Canyo**	**26.32**	**326**	⇑P		**P**		**11 59 10.1**	**-0.4**
	baz=26,SNR=9.2								
Y25A	**Mesa, Roswell**	**26.41**	**328**	⇓P		**P**		**11 59 11.5**	**+0.2**
	baz=26,SNR=8.6								
X26A	**CR and CF Fran**	**26.46**	**330**	⇑P		**P**		**11 59 11.5**	**-0.3**
	baz=26								
W27A	**Bowe Ranch, En**	**26.52**	**332**	⇑P		**P**		**11 59 12.1**	**-0.2**
	baz=27,SNR=9.5								
Z23A	**Rita Site, Whi**	**26.75**	**325**	⇓P		**P**		**11 59 14.2**	**-0.2**
	baz=27								
221A	**Mesquite Ranch**	**26.78**	**321**	⇓P		**P**		**11 59 15.3**	**+0.7**
	baz=27								
Y24A	**Capitan**	**26.81**	**327**	⇓P		**P**		**11 59 15.6**	**+0.7**
	baz=27,SNR=14								
X25A	**Clemmons Ranch**	**26.87**	**329**	⇑P		**P**		**11 59 15.6**	**+0.1**
	baz=27								
W26A	**Owens Ranch, T**	**26.87**	**331**	⇑P		**P**		**11 59 15.7**	**+0.2**
	baz=27								
121A	**Cookes Peak, D**	**27.14**	**321**	⇑P		**P**		**11 59 18.6**	**+0.7**
	baz=27								
Y23A	**Lovelace Mesa,**	**27.15**	**326**	⇑P		**P**		**11 59 18.5**	**+0.5**
	baz=27,SNR=8.1								
Z22A	**Elephant Butte**	**27.16**	**324**	⇓P		**P**		**11 59 18.7**	**+0.6**
	baz=27								
220A	**Playas Peak, P**	**27.18**	**320**	⇑P		**P**		**11 59 18.3**	**+0.1**
	baz=27								
X24A	**Lazy VL Ranch,**	**27.30**	**328**	⇑P		**P**		**11 59 19.4**	**+0.2**
	baz=27								
W25A	**X Bar L Ranch,**	**27.31**	**330**	⇑P		**P**		**11 59 19.8**	**+0.4**
	baz=27,SNR=9.6								
V26A	**Tequesquite Ra**	**27.46**	**332**	⇑P		**P**		**11 59 21.0**	**+0.3**
	baz=28,SNR=7.7								
BNM	**Barren Site**	**27.63**	**325**	*e*P		**P**		**11 59 24.2**	**+1.9**
	comp=E,2.9nm,0.9s,mb3.9								
Y22A	**Socorro**	**27.66**	**325**	⇓P		**P**		**11 59 24.0**	**+1.5**
	baz=28,SNR=6.2								
W24A	**Lazy 6 Ranch,**	**27.78**	**329**	⇑P		**P**		**11 59 24.2**	**+0.5**
	baz=28,SNR=5.2								
LENM	**Lemitar**	**27.83**	**325**	*e*P		**P**		**11 59 27.2**	**+3.1**
V25A	**Rancho No Teng**	**27.89**	**330**	⇓P		**P**		**11 59 25.8**	**+1.2**
	baz=28,SNR=12								
Z20A	**Nine Sixteen R**	**28.03**	**321**	⇑P		**P**		**11 59 26.6**	**+0.7**
	baz=28								
Y21A	**Point of Rocks**	**28.11**	**324**	⇓P		**P**		**11 59 28.2**	**+1.6**
	baz=28,SNR=6.7								
V24A	**Rampart Ranch,**	**28.12**	**329**	⇓P		**P**		**11 59 26.8**	**+0.1**
	baz=28								
W23A	**Werner Place,**	**28.13**	**327**	⇓P		**P**		**11 59 27.8**	**+1.0**
	baz=28,SNR=5.3								
ANMO	**Albuquerque**	**28.13**	**327**	*e*P		**P**		**11 59 29.3**	**+2.5**
	comp=E,31nm,2.5s,mb4.5								
ANMO	**Albuquerque**	**28.13**	**327**	P		**P**		**11 59 29.4**	**+2.6**
	comp=E,1.0nm,0.8s,mb3.5,baz=148,slow=12,SNR=3.0								
U25A	**Circle Dot Ran**	**28.24**	**331**	⇑P		**P**		**11 59 28.2**	**+0.5**
	baz=28								
Y20A	**Horse Springs,**	**28.45**	**323**	⇑P		**P**		**11 59 30.5**	**+0.9**
	baz=28								
X21A	**Alamocita Cree**	**28.49**	**324**	⇓P		**P**		**11 59 30.8**	**+0.9**
	baz=29								
V23A	**Ortiz Mt. (NFS**	**28.59**	**328**	⇓P		**P**		**11 59 31.9**	**+1.0**
	baz=29								
T25A	**Trinidad**	**28.85**	**332**	⇑P		**P**		**11 59 33.8**	**+0.7**
	baz=29								
TUC	**Tucson**	**28.90**	**318**	*e*P		**P**		**11 59 38.9**	**+5.2**
	comp=E,12nm,1.9s,mb4.3								
X20A	**Quemado**	**28.97**	**324**	⇓P		**P**		**11 59 35.7**	**+1.5**
	baz=29								
Y19A	**Nutrioso**	**29.01**	**322**	⇓P		**P**		**11 59 36.4**	**+1.8**
	baz=29								
U23A	**El Rito**	**29.05**	**329**	⇓P		**P**		**11 59 36.3**	**+1.3**
	baz=29,SNR=8.1								
S25A	**Robets Cordova**	**29.29**	**333**	⇑P		**P**		**11 59 38.5**	**+1.5**
	baz=29								
X19A	**St. Johns**	**29.36**	**322**	⇓P		**P**		**11 59 39.1**	**+1.4**
	baz=29								
W20A	**Ramah**	**29.39**	**324**	⇓P		**P**		**11 59 39.4**	**+1.5**
	baz=30								
S24A	**Houchin Ranch,**	**29.62**	**332**	⇓P		**P**		**11 59 41.5**	**+1.5**
	baz=30								
SDCO	**Great Sand Dun**	**29.84**	**332**	⇓P		**P**		**11 59 42.8**	**+0.9**
	baz=30,SNR=7.3								
SDCO	**Great Sand Dun**	**29.84**	**332**	*e*P		**P**		**11 59 43.3**	**+1.4**
	comp=E,4.2nm,0.9s,mb4.2								
S22A	**4UR Ranch, Cre**	**30.48**	**330**	⇓P		**P**		**11 59 48.2**	**+0.7**
	baz=30								
S21A	**Coal Bank Pass**	**30.89**	**329**	⇓P		**P**		**11 59 52.1**	**+0.9**
	baz=31								
V17A	**Tonalea, Kykot**	**31.07**	**323**	⇑P		**P**		**11 59 53.6**	**+0.8**
	baz=31								
ISCO	**Idaho Springs**	**31.57**	**334**	*e*P		**P**		**11 59 57.0**	**-0.2**
	comp=E,3.0nm,1.0s,mb4.1								
S19A	**Harvey Farm, M**	**31.66**	**327**	⇑P		**P**		**11 59 58.9**	**+0.9**
	baz=32								
T17A	**Navajo Res., N**	**32.03**	**324**	⇑P		**P**		**12 00 01.8**	**+0.6**
	baz=32								
V15A	**Kaibab Nationa**	**32.04**	**321**	⇓P		**P**		**12 00 02.5**	**+1.2**
	baz=32								
O23A	**Lake Granby, G**	**32.04**	**334**	⇓P		**P**		**12 00 01.6**	**+0.3**
	baz=32								
S18A	**Hurst Farm, Bl**	**32.08**	**326**	⇓P		**P**		**12 00 02.6**	**+1.0**
	baz=32								
O22A	**Kremmling**	**32.28**	**333**	⇑P		**P**		**12 00 04.3**	**+1.0**
	baz=32								
ECSD	**EROS Data Cent**	**32.30**	**348**	*e*P		**P**		**12 00 01.9**	**-1.6**
	comp=E,5.5nm,0.8s,mb4.4								
O20A	**White River Ci**	**33.03**	**331**	⇑P		**P**		**12 00 10.6**	**+0.6**
	baz=33								
N21A	**Black Mountain**	**33.20**	**333**	⇑P		**P**		**12 00 12.0**	**+0.6**
	baz=33								
S15A	**Panguitch**	**33.40**	**324**	⇓P		**P**		**12 00 14.0**	**+0.9**
	baz=34								
SRU	**San Rafael**	**33.40**	**327**	⇑P		**P**		**12 00 13.8**	**+0.7**
	baz=33								
T14A	**Hurricane**	**33.41**	**322**	⇑P		**P**		**12 00 14.4**	**+1.1**
	baz=34								
BELC	**Belle Mtn. Jos**	**33.42**	**315**	⇑P		**P**		**12 00 14.5**	**+1.0**
	baz=34								
U13A	**Pakoon Wash**	**33.53**	**320**	⇓P		**P**		**12 00 15.0**	**+0.7**
	baz=34								
L23A	**Garrett**	**33.54**	**336**	⇓P		**P**		**12 00 14.9**	**+0.5**
	baz=34								
N20A	**Spence Gulch,**	**33.60**	**332**	⇑P		**P**		**12 00 16.0**	**+1.1**
	baz=34								
M21A	**Separation Pea**	**33.81**	**334**	⇓P		**P**		**12 00 17.7**	**+0.9**
	baz=34								
L21A	**Rawlins**	**34.11**	**334**	⇑P		**P**		**12 00 19.6**	**+0.3**
	baz=34								
P13A	**Bates Ranch, G**	**35.55**	**324**	⇑P		**P**		**12 00 32.3**	**+0.4**
	baz=36								
PDAR	**Pinedale Array**	**35.72**	**333**	P		**P**		**12 00 32.6**	**-0.5**
	comp=E,0.7nm,0.5s,mb3.8,baz=131,slow=11,SNR=6.4								
PDAR				PcP		PcP		12 03 01.0	+0.2
	comp=E,0.6nm,0.6s,baz=151,slow=2.1,SNR=4.6								
I20A	**Worland**	**36.05**	**335**	⇑P		**P**		**12 00 36.7**	**+0.7**
	baz=36								
H21A	**Big Horn, Sher**	**36.19**	**337**	⇑P		**P**		**12 00 36.9**	**-0.2**
	baz=36								
H20A	**Greybull**	**36.45**	**336**	⇓P		**P**		**12 00 39.5**	**+0.1**
	baz=36								
I18A	**Diamond G Ranc**	**36.57**	**333**	⇓P		**P**		**12 00 40.9**	**+0.4**
	baz=37								
AGMN	**Agassiz Nation**	**36.60**	**351**	*e*P		**P**		**12 00 38.8**	**-1.8**
	comp=E,29nm,1.3s,mb5.0								
REDW	**Red Top Meadow**	**36.77**	**332**	*e*P		**P**		**12 00 42.1**	**-0.1**
	comp=E,9.1nm,0.8s,mb4.7								
SNOW	**Snow King Moun**	**36.81**	**332**	*e*P		**P**		**12 00 42.8**	**+0.3**
	comp=E,15nm,1.0s,mb4.8								
LOHW	**Long Hollow**	**36.85**	**332**	*e*P		**P**		**12 00 43.5**	**+0.6**
	comp=E,4.2nm,0.8s,mb4.3								
TPAW	**Teton Pass**	**36.92**	**332**	*e*P		**P**		**12 00 44.2**	**+0.8**
	comp=E,9.9nm,1.1s,mb4.5								
MOOW	**Moose Ponds**	**37.02**	**332**	*e*P		**P**		**12 00 44.4**	**0.0**
	comp=E,39nm,2.7s,mb4.8								
G20A	**Bridger**	**37.14**	**336**	⇑P		**P**		**12 00 44.7**	**-0.6**
	baz=37								
K14A	**Jones Ranch, D**	**37.28**	**329**	⇓P		**P**		**12 00 46.1**	**-0.4**
	baz=37								
RLMT	**Red Lodge**	**37.48**	**335**	⇑P		**P**		**12 00 47.8**	**-0.3**
	baz=38								
RLMT	**Red Lodge**	**37.48**	**335**	*e*P		**P**		**12 00 52.2**	**+4.0**
	comp=E,6.1nm,1.1s,mb4.3								
NVAR	**Mina Array Bea**	**37.49**	**320**	P		**P**		**12 00 49.0**	**+0.7**
	comp=E,0.6nm,0.7s,mb3.5,baz=136,slow=7.1,SNR=4.4								
NVAR				PcP		PcP		12 03 06.9	+0.7
	comp=E,0.7nm,0.6s,baz=122,slow=4.4,SNR=5.8								
G18A	**Lazy EL Ranch,**	**37.76**	**335**	⇓P		**P**		**12 00 50.2**	**-0.3**
	baz=38								
F19A	**Roth Farm, Mol**	**37.95**	**336**	⇓P		**P**		**12 00 51.3**	**-0.8**
	baz=38								
H16A	**Russell Place,**	**38.00**	**333**	⇓P		**P**		**12 00 52.2**	**-0.3**
	baz=38								
E20A	**Meyer Farm, Mu**	**38.18**	**338**	⇑P		**P**		**12 00 53.7**	**-0.3**
	baz=38,SNR=8.3								
D21A	**La Casta Ranch**	**38.25**	**339**	⇓P		**P**		**12 00 53.7**	**-0.9**
	baz=38								
G17A	**Pierce Place,**	**38.26**	**334**	⇓P		**P**		**12 00 54.1**	**-0.7**
	baz=38								
F18A	**Big Timber**	**38.30**	**336**	⇓P		**P**		**12 00 54.5**	**-0.6**
	baz=38								
E19A	**Rath Farm, Rou**	**38.39**	**337**	⇓P		**P**		**12 00 55.6**	**-0.2**
	baz=38								
I14A	**Mackay**	**38.43**	**330**	⇑P		**P**		**12 00 55.9**	**-0.3**
	baz=38								
ULM	**Lac du Bonnet**	**38.51**	**352**	P		**P**		**12 00 54.0**	**-2.7**
	comp=E,16nm,0.6s,mb4.9,baz=163,slow=10,SNR=9.5								
ULM				LR		LR		12 16 57.6	
	comp=E,50nm,20.9s,MS3.3,baz=284,slow=37								
H15A	**Lima**	**38.56**	**332**	⇓P		**P**		**12 00 57.3**	**0.0**
	baz=39								
DGMT	**Dagmar**	**38.59**	**343**	⇑P		**P**		**12 00 57.2**	**-0.3**
	baz=39								
DGMT	**Dagmar**	**38.59**	**343**	*e*P		**P**		**12 00 57.3**	**-0.2**
	comp=E,18nm,0.8s,mb4.8								
HLID	**Hailey**	**38.64**	**329**	⇑P		**P**		**12 00 58.2**	**+0.2**
	baz=39								
G16A	**Moss Hill, Enn**	**38.65**	**333**	⇑P		**P**		**12 00 58.6**	**+0.6**
	baz=39								
D20A	**Muel Ranch,**	**38.68**	**338**	⇓P		**P**		**12 00 57.9**	**-0.3**
	baz=39,SNR=6.8								
F17A	**Fitzpatrick Pl**	**38.69**	**335**	⇑P		**P**		**12 00 58.2**	**-0.2**
	baz=39								
SIV	**San Ignacio**	**38.71**	**136**	P		**P**		**12 00 57.7**	**-1.1**
	comp=E,2.2nm,0.7s,mb4.0,baz=322,slow=9.4,SNR=13								
SIV				PcP		PcP		12 03 12.3	+2.0
	comp=E,1.3nm,0.6s,baz=252,slow=4.2,SNR=5.2								
I13A	**Wildhorse Cree**	**38.75**	**330**	⇓P		**P**		**12 00 58.9**	**0.0**
	baz=39								
MCMT	**McKenzie Canyo**	**38.82**	**332**	*e*P		**P**		**12 00 59.9**	**+0.5**
	comp=E,2.5nm,0.7s,mb4.0								
BOZ	**Bozeman (W)**	**38.90**	**334**	⇓P		**P**		**12 00 59.7**	**-0.4**
	baz=39								
BOZ	**Bozeman (W)**	**38.90**	**334**	*e*P		**P**		**12 01 05.3**	**+5.2**
	comp=E,3.4nm,0.8s,mb4.1								
H14A	**Leadore**	**38.90**	**331**	⇓P		**P**		**12 01 00.1**	**0.0**
	baz=39								
G15A	**Dillon**	**38.91**	**332**	⇑P		**P**		**12 01 00.8**	**+0.6**
	baz=39								
E18A	**Harlowton**	**38.92**	**336**	⇑P		**P**		**12 01 00.4**	**+0.1**
	baz=39								
F16A	**Kennard Place,**	**39.01**	**334**	⇓P		**P**		**12 01 01.1**	**+0.1**
	baz=39								
DLMT	**Dillon**	**39.11**	**332**	*e*P		**P**		**12 01 03.8**	**+1.9**
	comp=E,4.8nm,0.9s,mb4.2								
I12A	**Atlanta**	**39.17**	**329**	⇓P		**P**		**12 01 02.8**	**+0.4**
	baz=39								
E17A	**Martinsdale**	**39.22**	**335**	⇑P		**P**		**12 01 02.9**	**+0.2**
	baz=39								
H13A	**Challis**	**39.29**	**330**	⇓P		**P**		**12 01 02.6**	**-0.8**
	baz=39								
D18A	**Linhart Farms,**	**39.40**	**337**	⇑P		**P**		**12 01 03.4**	**-0.9**
	baz=39								
C19A	**Slack Wire Ran**	**39.56**	**338**	⇓P		**P**		**12 01 05.2**	**-0.4**
	baz=40,SNR=5.9								
E16A	**East Helena**	**39.62**	**334**	⇑P		**P**		**12 01 05.9**	**-0.2**
	baz=40								
D17A	**Six Diamond Ra**	**39.71**	**336**	⇑P		**P**		**12 01 05.9**	**-1.0**
	baz=40								
HRY	**Holter Researc**	**39.83**	**334**	*e*P		**P**		**12 01 07.5**	**-0.3**
	comp=E,4.0nm,0.7s,mb4.3								
D16A	**Dana Ranch, Ca**	**39.96**	**335**	⇑P		**P**		**12 01 08.2**	**-0.7**
	baz=40								
EGMT	**Eagleton**	**40.06**	**337**	⇓P		**P**		**12 01 08.9**	**-0.9**
	baz=40								
EGMT	**Eaglon**	**40.06**	**337**	*e*P		**P**		**12 01 12.7**	**+3.0**
	comp=E,9.3nm,0.9s,mb4.5								
C17A	**Wharram Farm,**	**40.13**	**336**	⇑P		**P**		**12 01 09.7**	**-0.6**
	baz=40								
F13A	**Darby**	**40.23**	**331**	⇓P		**P**		**12 01 10.4**	**-0.8**
	baz=40								
B18A	**Beardsley Farm**	**40.38**	**338**	⇓P		**P**		**12 01 11.9**	**-0.5**
	baz=40								
D15A	**Lincoln**	**40.38**	**334**	⇑P		**P**		**12 01 11.9**	**-0.4**
	baz=40								
F12A	**Elk City**	**40.65**	**331**	⇑P		**P**		**12 01 14.1**	**-0.5**
	baz=41								
D14A	**Greenough**	**40.84**	**333**	⇓P		**P**		**12 01 16.0**	**-0.2**
	baz=41								
MSO	**Missoula**	**40.84**	**333**	⇓P		**P**		**12 01 16.2**	**+0.1**
	baz=41								
MSO	**Missoula**	**40.84**	**333**	*e*P		**P**		**12 01 20.8**	**+4.7**
	comp=E,40nm,2.6s,mb4.6								
A18A	**Metzger Ranch,**	**40.84**	**338**	⇓P		**P**		**12 01 15.8**	**-0.4**
	baz=41								
C15A	**Salmond Ranch,**	**40.99**	**335**	⇑P		**P**		**12 01 17.3**	**-0.1**
	baz=41								
A17A	**Triple J Farms**	**41.18**	**337**	⇑P		**P**		**12 01 18.2**	**-0.7**
	baz=41								
D13A	**Huson**	**41.27**	**333**	⇓P		**P**		**12 01 19.0**	**-0.7**
	baz=41								
B15A	**Bradely Ranch,**	**41.40**	**335**	⇑P		**P**		**12 01 20.2**	**-0.6**
	baz=41								
D12A	**Red Ives Fores**	**41.64**	**332**	⇑P		**P**		**12 01 21.8**	**-1.0**
	baz=42								
I07A	**Izee**	**41.69**	**326**	⇓P		**P**		**12 01 21.9**	**-1.3**
	baz=42								
A15A	**Johnson Ranch,**	**41.99**	**336**	⇑P		**P**		**12 01 24.9**	**-0.7**
	baz=42,SNR=6.4								
A14A	**Double T Ranch**	**42.27**	**335**	⇑P		**P**		**12 01 27.9**	**0.0**
	baz=42								
SCHQ	**Schefferville**	**45.74**	**17**	P		**P**		**12 01 52.2**	**-3.5**
SCHQ	**Schefferville**	**45.74**	**17**	P		**P**		**12 01 52.2**	**-3.5**
	comp=E,7.9nm,0.7s,mb4.8,baz=209,slow=9.5,SNR=11								
YKA	**Yellowknife Ar**	**53.72**	**345**	P		**P**		**12 02 54.1**	**-2.1**
YKA				PcP		PcP		12 04 01.3	-0.6
YKA	**Yellowknife Ar**	**53.72**	**345**	P		**P**		**12 02 54.1**	**-2.1**
	comp=E,1.9nm,0.7s,mb4.1,baz=137,slow=7.6,SNR=9.3								
YKA				PcP		PcP		12 04 01.3	-0.6
	comp=E,1.3nm,0.6s,baz=150,slow=3.9,SNR=7.3								
PLCA	**Paso Flores**	**55.09**	**164**	P		**P**		**12 03 10.1**	**+3.7**
	comp=E,2.8nm,0.9s,mb4.3,baz=22,slow=5.4,SNR=3.5								
ILAR	**Eielson Array**	**66.02**	**336**	P		**P**		**12 04 18.5**	**-2.1**
	comp=E,0.9nm,0.9s,mb3.8,baz=118,slow=5.2,SNR=9.1								
BJI	**Beijing**	**123.37**	**338**	PKP		PKPdf		12 12 32.0	+0.3
BJI				SS		SS		12 30 54.8	+0.3
BJI				LR		LR			
	comp=Z,15nm,17.3s								
WMQ	**Urumqi**	**124.16**	**4**	*e*PKP		PKPdf		12 12 35.0	+1.9
WMQ				LR		LR			
	comp=N,25nm,20.0s								
WMQ				LR		LR			
	comp=Z,28nm,19.0s								
HHC	**Hu-ho-hao-te**	**124.20**	**342**	*e*PKP		PKPdf		12 12 34.5	+1.3
HHC				PP		PP		12 14 22.8	+5.8
HHC				PKS				12 16 09.0	
HHC				SKKS		SKKSac		12 21 10.3	-3.7
HHC				SS		SS		12 31 05.0	+0.2
HHC				AMB		AMB			
	comp=Z,64nm,6.7s								
HHC				LR		LR			
	comp=N,100nm,16.6s								
HHC				LR		LR			
	comp=Z,100nm,17.8s								
LZH	**Lanzhou**	**130.70**	**347**	*e*PKP		PKPdf		12 12 47.5	+1.7
LZH				LR		LR			
	comp=N,120nm,18.2s								
LZH				LR		LR			
	comp=E,100nm,19.0s								
LZH				LR		LR			
	comp=Z,150nm,20.1s								
CD2	**Chengdu**	**135.68**	**345**	PKP		PKPdf		12 12 50.3	-5.0
ASAR	**Alice Springs**	**138.55**	**248**	PKhKP		PKPpre		12 12 54.6	
	comp=Z,0.2nm,0.6s,baz=117,slow=3.2,SNR=3.5								
ASAR				PKP		PKPdf		12 13 04.0	+3.2
	comp=Z,0.4nm,0.7s,baz=106,slow=1.5,SNR=6.5								
WRA	**Warramunga Arr**	**138.56**	**254**	PKP		PKPdf		12 13 04.3	+3.5
	comp=Z,0.8nm,0.6s,baz=91,slow=2.1,SNR=6.6								
CMAR	**Chiang Mai Arr**	**148.79**	**347**	PKP		PKPdf		12 13 19.5	+0.7
	comp=Z,2.7nm,0.7s,baz=330,slow=2.4,SNR=16								
CMAR				PKPbc		PKPbc		12 13 22.1	-0.5
	comp=Z,2.9nm,0.7s,baz=351,slow=3.7,SNR=19								

NEIC ***27*** *12:03:45.4, 17°.23N×61°.64W, h73km, MD4.3(RSPR), After RSPR.*
RSPR ***27*** *12:03:45.4, 17°.23N×61°.64W, h73km±20km, MD4.3/3*
TRN 27 12:03:42.6, 18°.05N×61°.39W, h79km, 6C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ANWB	**Willy Bob**	**0.54**	**225**	*e*Pg		Pn	12 03 54.9	-1.7
SMRT	**St. Maarten**	**1.60**	**270**	*e*P		Pn	12 04 10.8	+1.6
SMRT				*e*S		Sn	12 04 31.2	+1.8
SMRT	**St. Maarten**	**1.60**	**270**	*e*P		Pn	12 04 10.8	+1.6
SMRT				*e*S		Sn	12 04 31.2	+1.8

JCT	Junction City	17.20	339	⇑P		Pn	12 12 27.8	-0.4	
	baz=17								
JCT	Junction City	17.20	339	Pn		Pn	12 12 26.2	-2.1	
	8.9nm,0.6s								
JCT				eSn		Sn	12 15 28.8	-10	
628A	Black Gap, Mar	17.62	330	⇓P		Pn	12 12 33.7	+0.2	
	baz=18,SNR=35								
627A	Terlingua Ranc	17.84	328	⇓P		Pn	12 12 36.9	+0.6	
	baz=18,SNR=43								
TXAR	Lajitas Array	17.89	328	Pn		Pn	12 12 37.4	+0.6	
TXAR				LR		LR	12 21 25.8		
TXAR	Lajitas Array	17.89	328	Pn		Pn	12 12 37.4	+0.6	
	0.3nm,0.3s,baz=150,slow=13,SNR=83								
TXAR				LR		LR	12 21 25.8		
	comp=Z,33nm,18.9s,baz=0.0,slow=43								
528A	Cox Ranch, San	18.14	331	⇓P		Pn	12 12 40.3	+0.5	
	baz=18,SNR=11								
626A	Big Bend Ranch	18.31	327	⇑P		Pn	12 12 42.7	+0.7	
	baz=18,SNR=59								
527A	Woodward Ranch	18.52	329	⇓P		Pn	12 12 45.1	+0.5	
	baz=19,SNR=20								
428A	Kincaid Ranch,	18.57	332	⇑P		Pn	12 12 45.2	+0.1	
	baz=19,SNR=16								
526A	Mary Lane Ranc	18.69	328	⇓P		Pn	12 12 47.0	+0.3	
	baz=19,SNR=29								
427A	Hayter Ranch,	19.00	331	⇓P		Pn	12 12 50.4	+0.1	
	baz=19,SNR=15								
426A	McDonald Obser	19.16	329	⇓P		Pn	12 12 52.4	+0.2	
	baz=19,SNR=18								
328A	Wristen Ranch,	19.18	333	⇑P		Pn	12 12 51.8	-0.7	
	baz=19,SNR=38								
LRAL	Lakeview Retre	19.24	15	ePn		Pn	12 12 52.5	-0.7	
	5.9nm,0.9s								
326A	Caldwell Ranch	19.66	330	⇓P		Pn	12 12 57.2	-1.0	
	baz=20,SNR=24								
425A	Indio Mountain	19.73	327	⇓P		Pn	12 12 57.7	-1.5	
	baz=20,SNR=21								
227A	Bennet, Jal	19.93	333	⇑P		Pn	12 12 59.9	-1.6	
	baz=20,SNR=20								
MIAR	Mount Ida	20.02	358	ePn		P	12 12 59.4	-1.1	
	38nm,0.9s								
325A	Bean Ranch, Si	20.20	329	⇓P		P	12 13 02.8	+0.3	
	baz=20,SNR=10.0								
OXF	Oxford	20.20	8	P		P	12 13 02.7	+0.2	
	25nm,0.6s								
226A	Malaga, Loving	20.34	331	⇑P		P	12 13 04.5	+0.4	
	baz=20,SNR=13								
324A	Moseley Ranch,	20.51	328	⇓P		P	12 13 06.0	+0.1	
	baz=21,SNR=7.9								
GDL2	Guadalupe Moun	20.58	331	ePn		P	12 13 08.7	+2.1	
MNTX	Cornudas Mount	20.67	328	⇓P		P	12 13 07.8	+0.2	
	baz=21,SNR=19								
GOGA	Godfrey	20.69	23	eP		P	12 13 06.0	-1.9	
	14nm,0.8s								
225A	Deer Hill, Car	20.72	330	⇑P		P	12 13 08.6	+0.4	
	baz=21,SNR=25								
126A	Clayton Basin,	20.79	332	⇑P		P	12 13 08.8	-0.2	
	baz=21,SNR=23								
WMOK	Wichita Mounta	20.90	346	eP		P	12 13 08.5	-1.6	
	6.9nm,0.8s								
WMOK				eS		S	12 16 54.2	-7.3	
Z27A	Tatum	21.02	335	⇑P		P	12 13 11.1	-0.3	
	baz=21,SNR=32								
CPRX	Cap Rock	21.05	333	eP		P	12 13 11.8	0.0	
	55nm,0.9s,mb4.9								
Z26A	Caprock	21.31	333	⇑P		P	12 13 13.8	-0.7	
	baz=21,SNR=25								
MSTX	Muleshoe	21.42	337	⇓P		P	12 13 14.7	-1.0	
	baz=22,SNR=8.5								
Y27A	Causey	21.50	336	⇑P		P	12 13 15.8	-0.8	
	baz=22,SNR=6.2								
124A	Stringfield Ra	21.51	330	⇓P		P	12 13 17.3	+0.6	
	baz=22,SNR=36								
SWET	Sewanee	21.58	15	eP		P	12 13 15.9	-1.5	
Z25A	Roswell	21.64	332	⇑P		P	12 13 18.0	-0.1	
	baz=22								
Y26A	Elida	21.80	335	⇑P		P	12 13 19.9	+0.1	
	baz=22								
AMTX	Amarillo	21.86	340	⇓P		P	12 13 19.8	-0.6	
	baz=22								
AMTX	Amarillo	21.86	340	eP		P	12 13 19.5	-0.9	
	16nm,0.8s,mb4.5								
123A	Bell Site, Whi	21.86	328	⇓P		P	12 13 20.2	-0.2	
	baz=22,SNR=5.1								
222A	Williams Famil	21.89	326	⇓P		P	12 13 21.0	+0.2	
	baz=22,SNR=8.6								
Z24A	Sheeppen Canyo	21.98	331	⇓P		P	12 13 22.0	+0.3	
	baz=22,SNR=31								
320A	Kipp Ranch, An	22.14	322	⇑P		P	12 13 23.2	-0.3	
	baz=22								
X27A	F and S Farms,	22.15	337	⇑P		P	12 13 22.9	-0.6	
	baz=22								
Y25A	Mesa, Roswell	22.17	333	⇓P		P	12 13 23.4	-0.4	
	baz=22,SNR=43								
221A	Mesquite Ranch	22.19	324	⇓P		P	12 13 25.0	+1.0	
	baz=22								
CPCT	Cooper Cave	22.19	18	eP		P	12 13 22.1	-1.9	
122A	Conniff Cattle	22.30	327	⇓P		P	12 13 26.0	+0.9	
	baz=22								
X26A	CR and CF Fran	22.34	336	⇓P		P	12 13 24.7	-0.9	
	baz=22,SNR=5.8								
Z23A	Rita Site, Whi	22.35	329	⇓P		P	12 13 25.7	0.0	
	baz=22,SNR=28								
W27A	Bowe Ranch, En	22.50	338	⇓P		P	12 13 25.9	-1.3	
	baz=23,SNR=17								
220A	Playas Peak, P	22.54	323	⇑P		P	12 13 27.7	0.0	
	baz=23,SNR=11								
121A	Cookes Peak, D	22.59	325	⇑P		P	12 13 28.7	+0.5	
	baz=23,SNR=21								
319A	Douglas	22.62	321	⇑P		P	12 13 28.2	-0.3	
	baz=23								
TKL	Tuckaleechee C	22.62	19	P		P	12 13 27.0	-1.5	
	3.0nm,0.6s,mb3.9,baz=187,slow=12,SNR=6.5								
TKL				LR		LR	12 22 35.7		
	comp=Z,72nm,21.2s,MS3.1,baz=216,slow=38								
X25A	Clemmons Ranch	22.67	334	⇑P		P	12 13 29.0	-0.1	
	baz=23								
Z22A	Elephant Butte	22.71	328	⇑P		P	12 13 29.9	+0.4	
	baz=23,SNR=24								
Y23A	Lovelace Mesa,	22.80	331	⇓P		P	12 13 30.7	+0.2	
	baz=23,SNR=24								
X24A	Lazy VL Ranch,	23.04	333	⇑P		P	12 13 32.0	-0.9	
	baz=23,SNR=5.3								
219A	White Tail Can	23.04	322	⇓P		P	12 13 32.7	-0.3	
	baz=23,SNR=8.3								
120A	U Bar Ranch, L	23.08	324	⇑P		P	12 13 34.9	+1.5	
	baz=23,SNR=9.7								
W25A	X Bar L Ranch,	23.18	335	⇓P		P	12 13 33.9	-0.6	
	baz=23,SNR=17								
Y22A	Socorro	23.25	329	⇓P		P	12 13 35.9	+0.7	
	baz=23,SNR=17								
LPM	Los Pinos Moun	23.39	330	eP		P	12 13 36.3	-0.4	
X23A	Hourglass Bar	23.40	331	⇓P		P	12 13 36.6	-0.2	
	baz=24,SNR=10								
V26A	Tequesquite Ra	23.43	337	⇑P		P	12 13 36.2	-0.8	
	baz=24,SNR=18								
LENM	Lemitar	23.44	329	eP		P	12 13 38.4	+1.3	
Z20A	Nine Sixteen R	23.47	325	⇓P		P	12 13 37.4	0.0	
	baz=24								
218A	Dragoon	23.50	321	⇑P		P	12 13 37.9	+0.2	
	baz=24,SNR=8.8								
W24A	Lazy 6 Ranch,	23.57	333	⇑P		P	12 13 38.3	-0.1	
	baz=24,SNR=16								
Y21A	Point of Rocks	23.67	328	⇑P		P	12 13 39.8	+0.6	
	baz=24								
V25A	Rancho No Teng	23.78	336	⇑P		P	12 13 40.1	-0.2	
	baz=24,SNR=22								
ANMO	Albuquerque	23.83	331	eP		P	12 13 41.1	+0.4	
	4.3nm,0.8s,mb3.9								
ANMO	Albuquerque	23.83	331	P		P	12 13 40.9	+0.2	
	5.2nm,1.0s,mb3.9,baz=151,slow=12,SNR=13								
W23A	Werner Place,	23.86	332	⇓P		P	12 13 41.6	+0.6	
	baz=24								
V24A	Rampart Ranch,	23.95	334	⇓P		P	12 13 42.1	+0.2	
	baz=24,SNR=18								
Y20A	Horse Springs,	23.96	327	⇑P		P	12 13 42.5	+0.6	
	baz=24,SNR=12								
X21A	Alamocita Cree	24.07	328	⇑P		P	12 13 43.5	+0.6	
	baz=24,SNR=9.9								
TUC	Tucson	24.19	320	eP		P	12 13 43.9	-0.1	
	6.1nm,1.0s,mb4.0								
U25A	Circle Dot Ran	24.19	337	⇑P		P	12 13 44.0	0.0	
	baz=24,SNR=28								
117A	Oracle	24.34	321	⇓P		P	12 13 46.2	+0.8	
	baz=24								
V23A	Ortiz Mt. (NFS	24.36	333	⇑P		P	12 13 46.6	+1.0	
	baz=24,SNR=13								
216A	Three Points,	24.40	319	⇓P		P	12 13 45.8	-0.1	
	baz=24								
Y19A	Nutrioso	24.47	325	⇑P		P	12 13 46.8	+0.3	
	baz=25,SNR=7.3								
X20A	Quemado	24.51	327	⇓P		P	12 13 48.3	+1.4	
	baz=25,SNR=8.3								
W21A	San Fidel	24.53	330	⇑P		P	12 13 47.4	+0.3	
	baz=25								
U24A	Moreno Valley	24.55	335	⇑P		P	12 13 48.1	+0.9	
	baz=25,SNR=8.1								
Z17A	San Carlos Hig	24.68	323	⇓P		P	12 13 48.8	+0.3	
	baz=25								
Y18A	Canyon Day Jun	24.77	324	⇓P		P	12 13 50.0	+0.7	
	baz=25								
V22A	San Miguel Ran	24.83	332	⇓P		P	12 13 50.6	+0.7	
	baz=25								
X19A	St. Johns	24.84	326	⇓P		P	12 13 50.1	+0.2	
	baz=25								
T25A	Trinidad	24.84	338	⇓P		P	12 13 50.4	+0.5	
	baz=25,SNR=30								
U23A	El Rito	24.86	334	⇓P		P	12 13 50.4	+0.4	
	baz=25,SNR=53								
MPR	Mayaguez	24.90	78	eP		P	12 13 42.1	-8.6	
W20A	Ramah	24.96	328	⇓P		P	12 13 50.9	-0.1	
	baz=25								
X18A	Snowflake	25.28	325	⇑P		P	12 13 54.1	+0.2	
	baz=25								
S25A	Robets Cordova	25.32	338	⇑P		P	12 13 54.7	+0.5	
	baz=26,SNR=13								
T23A	Casias Ranch,	25.39	335	⇑P		P	12 13 55.7	+0.8	
	baz=26,SNR=5.6								
S24A	Houchin Ranch,	25.59	337	⇑P		P	12 13 57.2	+0.5	
	baz=26,SNR=5.5								
U21A	Nageezi	25.60	331	⇑P		P	12 13 57.3	+0.5	
	baz=26								
X17A	Forest Lakes	25.62	324	⇓P		P	12 13 57.3	+0.3	
	baz=26								
Y16A	Circle Bar Ran	25.69	322	⇑P		P	12 13 58.0	+0.3	
	baz=26								
R25A	Fountain Ranch	25.70	339	⇓P		P	12 13 58.2	+0.5	
	baz=26,SNR=6.4								
T22A	Edith	25.74	333	⇓P		P	12 13 58.7	+0.6	
	baz=26,SNR=11								
SDCO	Great Sand Dun	25.79	336	⇓P		P	12 13 59.2	+0.7	
	baz=26,SNR=15								
SDCO	Great Sand Dun	25.79	336	eP		P	12 13 58.5	-0.1	
	6.7nm,0.9s,mb4.2								
S23A	Nye Farm, Mont	25.95	336	⇓P		P	12 14 00.5	+0.5	
	baz=26,SNR=9.3								
T21A	Navajo Lake	26.00	332	⇓P		P	12 14 01.1	+0.7	
	baz=26								
X16A	Lo Mia Camp, P	26.05	323	⇓P		P	12 14 01.0	+0.1	
	baz=26								
R24A	Sanders Place,	26.07	338	⇑P		P	12 14 01.6	+0.5	
	baz=26,SNR=7.3								
V18A	Ganado	26.16	327	⇑P		P	12 14 02.1	+0.2	
	baz=26								
U19A	Dine' College,	26.23	329	⇑P		P	12 14 02.7	+0.2	
	baz=26								
Y15A	Casa Rosa Ranc	26.25	321	⇑P		P	12 14 02.8	0.0	
	baz=26								
S22A	4UR Ranch, Cre	26.33	334	⇑P		P	12 14 04.2	+0.8	
	baz=26,SNR=25								
V17A	Tonalea, Kykot	26.55	326	⇓P		P	12 14 05.8	+0.3	
	baz=27								
Z13A	Yuma Proving G	26.59	318	⇑P		P	12 14 05.7	-0.1	
	baz=27								
MVCO	Mesa Verde	26.62	331	P		P	12 14 06.9	+0.8	
	baz=27,SNR=21								
MVCO	Mesa Verde	26.62	331	eP		P	12 14 06.8	+0.8	
	23nm,0.8s,mb4.8								
U18A	Rough Rock, Ch	26.67	328	⇓P		P	12 14 06.3	-0.2	
	baz=27								
S21A	Coal Bank Pass	26.67	333	⇓P		P	12 14 06.9	+0.4	
	baz=27,SNR=8.3								
R22A	Saguache, Gunn	26.71	335	⇑P		P	12 14 07.6	+0.8	
	baz=27,SNR=8.3								
Q24A	Divide	26.73	338	⇑P		P	12 14 07.2	+0.2	
	baz=27								
WUAZ	Wupatki	26.80	325	eP		P	12 14 06.4	-1.2	
	4.6nm,0.9s,mb4.0								
P25A	Willow Gulch B	26.89	340	⇑P		P	12 14 08.2	-0.2	
	baz=27								
Q23A	Hartsel	26.93	337	⇓P		P	12 14 09.1	+0.3	
	baz=27								
X14A	Yava	26.94	321	⇓P		P	12 14 08.7	-0.2	
	baz=27								
S20A	Disappointment	27.07	332	⇑P		P	12 14 10.7	+0.7	
	baz=27,SNR=6.5								
Y13A	Salome	27.09	319	⇑P		P	12 14 10.4	0.0	
	baz=27								
T18A	Mccan Hat	27.23	329	⇓P		P	12 14 12.1	+0.6	
	baz=27								
Q22A	Crested Butte,	27.31	336	⇓P		P	12 14 12.7	+0.4	
	baz=28,SNR=7.5								
P23A	Jefferson	27.34	338	⇑P		P	12 14 13.1	+0.6	
	baz=28,SNR=8.9								
S19A	Harvey Farm, M	27.36	331	⇑P		P	12 14 13.0	+0.3	
	baz=28,SNR=6.1								
R20A	Redvale	27.37	333	⇓P		P	12 14 13.4	+0.7	
	baz=28								
PV01	Paradox Valley	27.41	332	eP		P	12 14 14.3	+1.2	
	1um,1.1s								
V15A	Kaibab Nationa	27.46	324	⇑P		P	12 14 13.9	+0.2	
	baz=28								
Y12C	Blythe	27.50	318	⇑P		P	12 14 14.1	+0.2	
	baz=28								
Q21A	Lamborn Mesa,	27.56	335	⇓P		P	12 14 14.8	+0.3	
	baz=28								
W14A	Seligman	27.57	322	⇓P		P	12 14 14.6	0.0	
	baz=28								
T17A	Navajo Res., N	27.59	328	⇑P		P	12 14 15.0	+0.2	
	baz=28								
ISCO	Idaho Springs	27.64	338	⇑P		P	12 14 15.6	+0.5	
	baz=28								
ISCO	Idaho Springs	27.64	338	eP		P	12 14 14.5	-0.6	
	1.3nm,0.7s,mb3.7								
S18A	Hurst Farm, Bl	27.72	330	⇓P		P	12 14 16.5	+0.6	
	baz=28								
PV04	Paradox Valley	27.77	332	eP		P	12 14 17.0	+0.6	
R19A	Curley Farm, L	27.85	332	⇑P		P	12 14 17.2	+0.1	
	baz=28,SNR=5.1								
V14A	Boquillas Ranc	27.87	323	⇑P		P	12 14 17.5	+0.3	
	baz=28								
P22A	Eagle	27.88	337	⇓P		P	12 14 17.4	+0.1	
	baz=28								
Q20A	Ridgley Place,	27.97	334	⇑P		P	12 14 18.4	+0.3	
	baz=28								
U15A	North Rim	27.97	325	⇑P		P	12 14 18.1	0.0	
	baz=28								
BC3	Big Chuckawall	28.05	317	⇑P		P	12 14 19.1	+0.2	
	baz=28,SNR=5.4								
S17A	Black Ridge (B	28.08	329	⇓P		P	12 14 19.0	-0.1	
	baz=28								
IRM	Iron Mountain	28.16	318	⇑P		P	12 14 19.8	-0.1	
	baz=28								
R18A	Canyonlands Na	28.23	331	⇑P		P	12 14 20.6	+0.2	
	baz=28								
O22A	Kremmling	28.30	337	⇑P		P	12 14 20.9	-0.1	
	baz=28								
Q19A	Hogan Spring (	28.39	332	⇑P		P	12 14 22.2	+0.4	
	baz=28,SNR=10								
U14A	Mt Trumbull	28.46	324	⇓P		P	12 14 22.4	-0.1	
	baz=29								
V13A	Grand Canyon W	28.54	322	⇓P		P	12 14 23.3	0.0	
	baz=29								
R17A	Hanksville Air	28.64	330	⇓P		P	12 14 25.0	+0.9	
	baz=29,SNR=8.4								
N23A	Red Feather La	28.72	339	⇑P		P	12 14 24.7	-0.1	
	baz=29								
N22A	Wattenberg Ran	28.82	338	⇑P		P	12 14 25.8	+0.1	
	baz=29								
Q18A	Rafter H Ranch	28.91	331	⇓P		P	12 14 27.2	+0.7	
	baz=29,SNR=5.9								
U13A	Pakoon Wash	28.91	323	⇓P		P	12 14 26.8	+0.3	
	baz=29								
O20A	White River Ci	28.93	335	⇓P		P	12 14 27.2	+0.5	
	baz=29								
V12A	Nelson	28.98	321	⇑P		P	12 14 27.7	+0.5	
	baz=29								
N21A	Black Mountain	29.18	337	⇑P		P	12 14 29.4	+0.5	
	baz=29								
CCUT	Cedar City	29.37	325	eP		P	12 14 32.3	+1.7	
	59nm,3.0s								
P18A	Preston Nutter	29.38	332	⇓P		P	12 14 31.2	+0.5	
	baz=30								
N20A	Spence Gulch,	29.54	336	⇑P		P	12 14 32.0	0.0	
	baz=30,SNR=10								
ARUT	Antelope Range	29.58	326	eP		P	12 14 33.3	+0.8	
	7.5nm,0.9s,mb4.4								
S13A	Holt Ranch, En	29.67	325	⇓P		P	12 14 33.5	+0.3	
	baz=30								
L23A	Garrett	29.73	340	⇑P		P	12 14 33.8	0.0	
	baz=30								
M21A	Separation Pea	29.86	338	⇓P		P	12 14 35.5	+0.7	
	baz=30								
RWWY	Rawlins	29.87	338	eP		P	12 14 35.4	+0.4	
	7.2nm,0.9s,mb4.4								
L22A	Ellis Ranch, M	29.90	339	⇑P		P	12 14 35.8	+0.5	
	baz=30								
N19A	John Jarvie Ra	29.96	335	⇑P		P	12 14 35.6	-0.1	
	baz=30								
O17A	Robinson Place	30.06	332	⇑P		P	12 14 36.8	+0.1	
	baz=30,SNR=5.7								
M20A	Sweetwater, Wa	30.07	337	⇓P		P	12 14 37.2	+0.5	
	baz=30								
R13A	O'Grain Ranch,	30.16	326	⇓P		P	12 14 38.1	+0.5	
	baz=30								
L21A	Rawlins	30.17	338	⇑P		P	12 14 37.9	+0.3	
	baz=30								
DAU	Daniels Canyon	30.48	332	eP		P	12 14 41.3	+1.0	
N17A	Moffit Pass	30.71	333	⇓P		P	12 14 42.0	-0.3	
	baz=31								
K21A	Alcova	30.72	339	⇓P		P	12 14 42.5	0.0	
	baz=31								
M17A	Scullys Gap (B	31.07	333	⇑P		P	12 14 45.4	-0.1	
	baz=31								
K20A	Yellowstone Ra	31.13	338	⇓P		P	12 14 46.3	+0.2	
	baz=31								
L18A	Fontenelle, Gr	31.17	335	⇑P		P	12 14 46.9	+0.4	
	baz=31								
R11A	Troy Canyon, C	31.18	324	⇓P		P	12 14 47.1	+0.5	
	baz=31								
K19A	Absolon Red Bu	31.46	337	⇓P		P	12 14 48.8	-0.2	
	baz=32								
S10A	Tonopah Range,	31.48	322	⇑P		P	12 14 50.3	+1.0	
	baz=32								
R10A	Warm Springs	31.55	323	⇑P		P	12 14 51.0	+1.2	
	baz=32								
Q11A	Duckwater	31.56	325	⇓P		P	12 14 51.2	+1.3	
	baz=32								
HWUT	Hardware Ranch	31.57	333	eP		P	12 14 50.8	+0.8	
	7.4nm,1.2s,mb4.4								
L17A	Cokeville	31.67	334	⇑P		P	12 14 51.0	+0.2	
	baz=32,SNR=5.3								
BW06	Boulder Array	31.69	336	⇑P		P	12 14 50.9	-0.1	
	baz=32								
BW06	Boulder Array	31.69	336	eP		P	12 14 50.6	-0.4	
	7.0nm,1.4s,mb4.3								
PDAR	Pinedale Array	31.69	336	P		P	12 14 50.7	-0.3	
	2.0nm,0.8s,mb4.0,baz=138,slow=8.3,SNR=12								
K18A	Toltan Ranch,	31.77	335	⇑P		P	12 14 51.6	-0.1	
	baz=32,SNR=5.8								
I21A	Big Trails, Te	31.77	340	⇑P		P	12 14 52.5	+0.8	
	baz=32								
L16A	Fish Haven	31.84	333	⇑P		P	12 14 53.2	+0.9	
	baz=32								
Q10A	Clear Creek Ra	31.97	324	⇓P		P	12 14 55.1	+1.5	
	baz=32								
O12A	Currie	32.08	327	⇓P		P	12 14 55.2	+0.6	
	baz=32								
K17A	Gardner Place,	32.22	335	⇓P		P	12 14 55.7	0.0	
	baz=32,SNR=5.7								
J18A	Kendall Valley	32.24	336	⇓P		P	12 14 55.9	0.0	
	baz=32,SNR=7.7								
L15A	Malad City	32.26	332	⇓P		P	12 14 56.4	+0.4	
	baz=32								
H21A	Big Horn, Sher	32.42	341	⇑P		P	12 14 57.6	+0.2	
	baz=33								
I18A	Diamond G Ranc	32.58	337	⇓P		P	12 14 59.1	+0.3	
	baz=33								
H20A	Greybull	32.61	340	⇑P		P	12 14 59.1	+0.1	
	baz=33								
J17A	Brown Place, J	32.65	335	⇓P		P	12 14 59.4	0.0	
	baz=33,SNR=22								
REDW	Red Top Meadow	32.70	335	eP		P	12 15 00.0	+0.1	
	30nm,1.0s,mb5.2								
SNOW	Snow King Moun	32.75	335	eP		P	12 15 00.6	+0.3	
	43nm,0.8s,mb5.4								
LOHW	Long Hollow	32.81	336	eP		P	12 15 00.5	-0.4	
	10.0nm,0.8s,mb4.8								
NVAR	Mina Array Bea	32.83	321	P		P	12 15 01.8	+0.7	
	3.1nm,0.7s,mb4.3,baz=132,slow=8.0,SNR=26								
NVAR				PcP		PcP	12 17 44.4	-1.2	
	0.8nm,0.7s,baz=119,slow=4.0,SNR=5.0								
TPAW	Teton Pass	32.85	335	eP		P	12 15 01.8	+0.6	
	23nm,1.3s,mb5.0								
K15A	Arbon	32.86	333	⇓P		P	12 15 01.6	+0.3	
	baz=33,SNR=6.4								
RRI2	Red Ridge	32.88	335	eP		P	12 15 01.3	-0.1	
	11nm,0.9s,mb4.8								
J16A	Bone	32.94	334	⇓P		P	12 15 02.3	+0.3	
	baz=33								
K14A	Jones Ranch, D	33.04	332	⇑P		P	12 15 02.0	-0.8	
	baz=33								
IMW	Indian Meadow	33.18	336	eP		P	12 15 04.5	+0.5	
	6.5nm,0.7s,mb4.7								
FLWY	Flagg Ranch	33.24	336	eP		P	12 15 02.2	-2.4	
	6.8nm,0.8s,mb4.6								
G20A	Bridger	33.33	340	⇑P		P	12 15 04.9	-0.4	
	baz=34								
I16A	Newdale	33.39	335	⇓P		P	12 15 06.1	+0.3	
	baz=34								
J14A	Carey	33.81

baz=36
D17A Six Diamond Ra 35.85 339 ⇓P P **12 15 27.1 -0.1**
baz=36
HRY Holter Researc 35.89 338 *e*P P **12 15 26.8 -0.7**
E15A Deer Lodge 35.95 336 ⇓P P **12 15 28.3 +0.3**
baz=36
F13A Darby 36.12 334 ⇑P P **12 15 29.2 -0.2**
baz=36,SNR=8.5
J08A Circle Bar Ran 36.24 328 ⇑P P **12 15 30.2 -0.3**
baz=36,SNR=9.8
E14A Clinton 36.28 336 ⇑P P **12 15 30.9 +0.1**
baz=36
C17A Wharram Farm, 36.29 339 ⇑P P **12 15 30.3 -0.5**
baz=36
EGMT Eagleton 36.30 341 ⇓P P **12 15 30.8 -0.2**
baz=36
D15A Lincoln 36.42 337 ⇑P P **12 15 31.8 -0.2**
baz=37
F12A Elk City 36.49 333 ⇓P P **12 15 32.4 -0.2**
baz=37,SNR=16
E13A Victor 36.58 335 ⇓P P **12 15 33.2 -0.2**
baz=37,SNR=11
B18A Beardsley Farm 36.63 341 ⇓P P **12 15 33.6 -0.2**
baz=37
MSO Missoula 36.80 336 ⇓P P **12 15 34.6 -0.6**
baz=37
MSO Missoula 36.80 336 *e*P P **12 15 35.2 0.0**
7.9nm,1.2s,mb4.4
D14A Greenough 36.83 336 ⇑P P **12 15 35.1 -0.4**
baz=37
C15A Salmond Ranch, 37.07 338 ⇑P P **12 15 37.1 -0.4**
baz=37
A18A Metzger Ranch, 37.12 341 ⇑P P **12 15 37.1 -0.8**
baz=37
D13A Huson 37.22 335 ⇑P P **12 15 38.1 -0.7**
baz=37,SNR=6.7
A17A Triple J Farms 37.41 341 ⇑P P **12 15 39.0 -1.4**
baz=38
B15A Bradely Ranch, 37.50 338 ⇓P P **12 15 40.6 -0.5**
baz=38
F10A Beach Ranch, E 37.54 332 ⇓P P **12 15 41.2 -0.3**
baz=38
D12A Red Ives Fores 37.55 335 ⇓P P **12 15 40.8 -0.8**
baz=38
C13A Hot Springs 37.74 336 ⇑P P **12 15 42.3 -0.9**
baz=38
A15A Johnson Ranch, 38.13 339 ⇑P P **12 15 45.9 -0.5**
baz=38
B13A Whitefish 38.26 337 ⇑P P **12 15 47.7 +0.1**
baz=38
A14A Double T Ranch 38.37 338 ⇓P P **12 15 48.5 +0.1**
baz=38
LPAZ La Paz 39.08 141 LR LR 12 30 49.5
comp=Z,655nm,20.4s,MS3.4,baz=228,slow=35
A12A Yaak River Ran 39.18 336 ⇓P P **12 15 55.1 -0.2**
baz=39
C09A Chrisman Ranch 39.39 333 ⇓P P **12 15 57.0 0.0**
baz=40
SIV San Ignacio 43.57 133 P P **12 16 28.8 -2.9**
1.7nm,0.6s,mb4.0,baz=310,slow=8.2,SNR=8.8
SCHQ Schefferville 45.07 21 LR LR 12 35 53.9
comp=Z,104nm,20.5s,MS3.8,baz=178,slow=37
YKA Yellowknife Ar 50.41 347 P **12 17 22.7 -1.7**
3.1nm,0.6s,mb4.5,baz=150,slow=7.4,SNR=19
DLBC Dease Lake 51.92 336 *e*P P **12 17 37.7 +1.8**
CPUP Villa Florida 53.23 139 P P **12 17 42.5 -3.6**
0.3nm,0.3s,mb3.6,baz=135,slow=14,SNR=3.3
CPUP LR LR 12 37 47.8
comp=Z,53nm,21.3s,MS3.6,baz=81,slow=33
PLCA Paso Flores 58.66 160 LR LR 12 38 20.6
comp=Z,83nm,21.5s,MS3.8,baz=92,slow=31
INK Inuvik 59.78 344 *e*P P **12 18 30.5 -1.6**
9.6nm,1.0s,mb4.8
PAX Paxson 60.72 335 *e*P P **12 18 37.1 -1.5**
2.4nm,0.7s,mb4.4
ILAR Eielson Array 62.12 337 P P **12 18 46.0 -2.0**
1.0nm,0.6s,mb4.1,baz=133,slow=5.2,SNR=18
MCK McKinley 62.46 335 *e*P P **12 18 49.0 -1.2**
69nm,2.9s,mb5.3
RSO Redoubt South 62.88 331 *e*P P **12 18 51.9 -1.2**
TRF Thorofare Moun 62.90 335 *e*P P **12 18 51.6 -1.6**
3.7nm,0.7s,mb4.6
BPAW Bear Paw Mtn. 63.44 335 *e*P P **12 18 54.6 -2.1**
2.5nm,0.7s,mb4.5
PPLA Purkeypile 63.48 334 *e*P P **12 18 55.2 -1.9**
4.6nm,0.9s,mb4.6
BJI Beijing 119.45 335 PKP PKPdf 12 27 17.0 -0.1
BJI LR LR
comp=N,97nm,24.9s,MS4.4
BJI LR LR
comp=E,74nm,24.7s,MS4.4
BJI LR LR
comp=Z,16nm,26.9s,MS3.5
HHC Hu-ho-hao-te 120.52 339 *e*PKP PKPdf 12 27 20.8 +1.7
HHC PP PP 12 28 48.0 +3.0
HHC PKS 12 30 56.0
HHC SKS SKSdf 12 34 28.0 -1.1
HHC SKKS SKKSac 12 35 37.0 -6.8
HHC AMB AMB
comp=Z,71nm,4.4s
HHC LR LR
comp=N,130nm,19.0s,MS4.7
HHC LR LR
comp=E,87nm,19.0s,MS4.7
HHC LR LR
comp=Z,84nm,17.8s,MS4.4
WMQ Urumqi 122.01 360 *e*PKP PKPdf 12 27 22.0 +0.1
WMQ LR LR
comp=N,25nm,20.2s
WMQ LR LR
comp=Z,28nm,19.8s,MS3.9
LZH Lanzhou 127.33 343 *e*PKP PKPdf 12 27 35.0 +2.7
LZH LR LR
comp=N,120nm,18.0s,MS4.7
LZH LR LR
comp=E,97nm,18.3s,MS4.7
LZH LR LR
comp=Z,170nm,20.5s,MS4.7
CD2 Chengdu 132.17 341 PKP PKPdf 12 27 38.5 -3.2
WRA Warramunga Arr 134.75 256 PKP PKPdf 12 27 44.2 -2.5
comp=Z,0.6nm,0.7s,baz=49,slow=1.4,SNR=4.7
CMAR Chiang Mai Arr 145.31 340 PKPbc PKPbc 12 28 03.3 -2.3
comp=Z,1.8nm,0.7s,baz=344,slow=3.5,SNR=14

DJA 27 12:33:42.0 52S×122°99E, h104km, MLv4.1/4,
Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.56**	**203**	P	Pn	12 34 00.1	+1.4
LUWI				S	Sn	12 34 13.3	+2.1
APSI	**Ampana**	**1.40**	**254**	P	Pn	12 34 07.8	+0.6
MNI	**Manado**	**2.69**	**43**	P	Pn	12 34 24.4	+0.7
TOLI	**Toli-Toli**	**2.73**	**307**	P	Pn	12 34 23.8	-0.5
TOLI				S	Sn	12 34 57.9	+1.0
TTSI	**Tana Toraja**	**4.04**	**232**	P	Pn	12 34 42.4	+0.6

PGC 27 12:43:42.4±3.0,49.83N×130.05W,h10km,ML2.8/6,
Mw3.4,210km Wsw of Pt. Hardy, Bc Vancouver Island
Region
ISCJB 27 12:43:44.8±0.9,50.05N±0.06×129.67W±0.08,h10km,
mb3.1/2,MS3.2/2,Error ellipse: s-maj=8.6km s-min=7.2km
az=40.9
IDC 27 12:43:45.6±2.0,50.02N×129.66W,h0km,mb3.2/2,
mb1 3.7/8,mb1mx3.5/28,mbtmp3.3/8,ML3.2/6,MS3.2/6,
Ms1 3.2/6,ms1mx2.7/17,Error ellipse: s-maj=34.7km
s-min=12.5km az=76.0
ISC 27 12:43:46.7±0.9, 50.07N±0.06×129.56W±0.09, h10km, n18,
σ1§18/22, mb3.1/2, MS3.2/2, 5D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.08**	**57**	Pn	**Pn**	**12 44 06.8**	**-1.0**
HOLB				⇑Sn	**Sn**	**12 44 25.1**	**+2.3**
BPBC	**Brooks Peninsu**	**1.16**	**85**	⇓Pn	**Pn**	**12 44 06.9**	**-1.9**
BPBC				⇑Sn	**Sn**	**12 44 25.0**	**+0.4**
PHC	**Port Hardy**	**1.50**	**64**	Pn	**Pn**	**12 44 12.9**	**-0.8**
PHC				⇓Sn	**Sn**	**12 44 34.1**	**+0.8**
MAYB	**Maynard**	**1.57**	**77**	Pn	**Pn**	**12 44 13.1**	**-1.4**
MAYB				⇓Sn	**Sn**	**12 44 35.2**	**+0.3**
EDB	**Eliza Dome**	**1.59**	**96**	⇑Pn	**Pn**	**12 44 12.4**	**-2.4**
EDB				⇑Sn	**Sn**	**12 44 35.4**	**+0.1**
WOSB	**Woss**	**1.93**	**86**	⇓Pn	**Pn**	**12 44 18.8**	**-0.6**
BBB	**Bella Bella**	**2.31**	**23**	Pn	**Pn**	**12 44 23.8**	**-1.0**
	22nm,0.3s,baz=46,slow=12,SNR=173						
BBB				Sn	**Sn**	**12 44 53.2**	**+0.1**
	19nm,0.3s,baz=129,slow=22,SNR=15						
BBB	**Bella Bella**	**2.31**	**23**	Pn	**Pn**	**12 44 24.0**	**-0.7**
BBB				⇓Sn	**Sn**	**12 44 53.4**	**+0.2**
DLBC	**Dease Lake**	**8.39**	**358**	Pn	**Pn**	**12 45 50.0**	**+1.8**
	0.0nm,0.3s,baz=183,slow=15,SNR=2.8						
DLBC				LR	LR	12 49 06.0	
	comp=Z,150nm,18.8s,baz=197,slow=38						
YBH	**Yreka Blue Hor**	**9.60**	**148**	LR	LR	12 49 18.4	
	comp=Z,179nm,20.4s,baz=276,slow=35						
NVAR	**Mina Array Bea**	**14.13**	**141**	Pn	**Pn**	**12 47 08.0**	**+1.2**
	0.1nm,0.3s,baz=318,slow=12,SNR=4.0						
YKA	**Yellowknife Ar**	**14.91**	**28**	Pn	**Pn**	**12 47 16.4**	**-0.8**
	0.1nm,0.3s,baz=219,slow=11,SNR=3.3						
PDAR	**Pinedale Array**	**15.58**	**110**	Pn	**Pn**	**12 47 30.4**	**+4.3**
	0.1nm,0.3s,baz=308,slow=15,SNR=8.2						
ILAR	**Eielson Array**	**17.35**	**335**	Pn	**Pn**	**12 47 48.7**	**+0.2**
	0.0nm,0.3s,baz=145,slow=9.7,SNR=11						
ILAR				LR	LR	12 53 44.7	
	comp=Z,53nm,19.7s,baz=294,slow=34						
INK	**Inuvik**	**18.40**	**355**	LR	LR	12 55 42.6	
	comp=Z,60nm,20.8s,baz=222,slow=39						
ANMO	**Albuquerque**	**22.63**	**123**	P	**P**	**12 48 49.0**	**+1.5**
	1.0nm,0.8s,mb3.3,baz=322,slow=12,SNR=3.3						
TXAR	**Lajitas Array**	**28.49**	**127**	P	**P**	**12 49 42.7**	**+0.8**
	0.2nm,0.7s,mb2.8,baz=17,slow=9.4,SNR=2.8						
TXAR				LR	LR	13 01 43.3	
	comp=Z,47nm,18.7s,MS3.1,baz=5.0,slow=38						
SCHQ	**Schefferville**	**37.39**	**58**	LR	LR	13 05 55.3	
	comp=Z,49nm,19.2s,MS3.3,baz=130,slow=36						

ISCJB 27 12:44:49.0±0.8,29.21N±0.08×104.0E±0.2,h10km,
mb3.4/5,Error ellipse: s-maj=23.9km s-min=5.8km
az=156.4
IDC 27 12:44:49.0±1.1,29.49N×104.53E,h0km,mb3.5/5,
mb1 3.6/5,mb1mx3.4/22,mbtmp3.5/5,Error ellipse:
s-maj=232.2km s-min=19.8km az=57.0
BJI 27 12:44:54.0,29.31N×104.21E,h19km,ML3.4/9
ISC 27 12:44:50.8±0.8, 29°22N±0.0°8×104°0E±0°2, h10km, n7,
σ0§79/10, mb3.4/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.69**	**353**	Pg	**Pg**	**12 45 23.0**	**-0.4**
CD2				Sg	**Sg**	**12 45 45.5**	**+0.1**
CD2				smax			
	comp=N,2μm,0.7s						
GYA	**Guiyang**	**3.63**	**139**	Pn	**Pn**	**12 45 48.5**	**+1.5**
GYA				Sn	**Sn**	**12 46 31.0**	**+1.1**
GYA				Sg	**Sg**	**12 46 46.0**	**-1.3**
GYA				smax			
	comp=N,80nm,0.8s						
GYA				smax			
	comp=E,80nm,0.8s						
MKAR	**Makanchi Array**	**24.37**	**322**	P	**P**	**12 50 08.6**	**-0.4**
	comp=E,0.3nm,0.4s,mb3.1,baz=113,slow=12,SNR=4.5						
ZALV	**Zalesovo Beam**	**28.38**	**336**	P	**P**	**12 50 45.4**	**+0.3**
	comp=E,0.3nm,0.3s,mb3.4,baz=152,slow=6.4,SNR=2.7						
KURK	**Kurchatov**	**28.72**	**325**	P	**P**	**12 50 48.2**	**+0.1**
	comp=E,1.0nm,0.5s,mb3.8,baz=130,slow=9.7,SNR=8.1						
WRA	**Warramunga Arr**	**56.97**	**145**	P	**P**	**12 54 35.7**	**-0.9**
	comp=E,0.2nm,0.6s,mb3.4,baz=336,slow=8.2,SNR=2.9						
ASAR	**Alice Springs**	**59.94**	**148**	P	**P**	**12 54 57.3**	**0.0**
	comp=E,0.2nm,0.8s,mb3.2,baz=332,slow=6.6,SNR=2.6						

REY 27 13:05:17.9,68.62N×16.97W,h17km,ML3.5,ML3.5
ISCJB 27 13:05:18.1±0.5,68.54N±0.03×17.4W±0.2,h10km,
mb3.9/14,MS3.8/24,Error ellipse: s-maj=9.0km
s-min=3.4km az=14.3
IDC 27 13:05:18.6±0.8,68.62N×17.65W,h0km,mb4.0/12,
mb1 4.1/16,mb1mx3.9/32,mbtmp4.0/16,ML3.3/4,MS3.8/28,
Ms1 3.8/28,ms1mx3.7/45,Error ellipse: s-maj=20.9km
s-min=16.9km az=10.0
CSEM 27 13:05:18.0±0.2,68.52N×17.43W,h2km,ML3.5,Error
ellipse: s-maj=8.7km s-min=3.7km az=105.0
NEIC 27 13:05:20.2±0.4,68.67N×17.56W,h10km,mb4.1/2,Error
ellipse: s-maj=9.6km s-min=8.0km az=118.0
ISC 27 13:05:19.7±0.5, 68.52N±0.03×17.4W±0.2, h10km, n80,
σ1§02/72, mb3.9/14, MS3.8/24, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**2.00**	**187**	P	**Pn**	**13 05 51.9**	**-1.5**
IGRI				S	**Sn**	**13 06 18.4**	**0.0**
ILEI	**Leirhofn**	**2.15**	**170**	P	**Pn**	**13 05 53.8**	**-1.7**
ILEI				S	**Sn**	**13 06 21.6**	**-0.6**
IFLA	**Flatey**	**2.37**	**184**	P	**Pn**	**13 05 58.2**	**-0.4**
IFLA				S	**Sn**	**13 06 28.4**	**+0.7**
IBRE	**Brettingsstaoi**	**2.41**	**185**	P	**Pn**	**13 05 58.1**	**-1.0**
IBRE				S	**Sn**	**13 06 29.1**	**+0.4**
IHED	**Heoinshofoi**	**2.45**	**179**	P	**Pn**	**13 05 58.0**	**-1.6**
IHED				S	**Sn**	**13 06 29.5**	**0.0**
IGIL	**Gilhagi**	**2.49**	**170**	P	**Pn**	**13 05 58.6**	**-1.5**
IGIL				S	**Sn**	**13 06 30.0**	**-0.5**
IHLA	**Hella**	**2.61**	**189**	P	**Pn**	**13 06 00.8**	**-1.0**
IHLA				S	**Sn**	**13 06 34.8**	**+1.2**
IGRA	**Granastaoir**	**2.61**	**181**	P	**Pn**	**13 06 00.5**	**-1.4**
IGRA				S	**Sn**	**13 06 33.8**	**+0.2**
IHRN	**Hraun**	**2.63**	**205**	P	**Pn**	**13 06 02.0**	**-0.1**
IHRN				S	**Sn**	**13 06 35.8**	**+1.7**
IKVO	**Krokottuvotn**	**2.83**	**175**	P	**Pn**	**13 06 03.5**	**-1.3**
IKVO				S	**Sn**	**13 06 39.7**	**+0.9**
IREN	**Reynihlio**	**2.89**	**176**	P	**Pn**	**13 06 04.9**	**-0.8**
IREN				S	**Sn**	**13 06 42.0**	**+1.6**
IGRS	**Grimsstaoir**	**2.94**	**169**	P	**Pn**	**13 06 05.3**	**-1.0**
IGRS				S	**Sn**	**13 06 41.9**	**+0.3**
ISVA	**Svartarkot**	**3.20**	**179**	P	**Pn**	**13 06 09.4**	**-0.5**
ISVA				S	**Sn**	**13 06 49.2**	**+1.2**
IMKO	**Mokollar**	**3.58**	**172**	P	**Pn**	**13 06 14.6**	**-0.6**
IADA	**Aoalbol**	**3.59**	**167**	P	**Pn**	**13 06 14.2**	**-1.1**
IHVA	**Hvannstoosfjol**	**3.63**	**169**	P	**Pn**	**13 06 15.3**	**-0.6**
IGLU	**Glumsstadir**	**3.67**	**164**	P	**Pn**	**13 06 15.5**	**-0.9**
IBRU	**Bruarjokull**	**3.75**	**171**	P	**Pn**	**13 06 16.7**	**-0.7**
IKRE	**Kreppuhraun**	**3.78**	**173**	P	**Pn**	**13 06 17.6**	**-0.2**
IVSH	**V-Sauoahnukur**	**3.79**	**169**	P	**Pn**	**13 06 17.1**	**-0.9**
JMIC	**Jan Mayen**	**3.97**	**47**	LR	LR	13 07 04.2	
	comp=Z,504nm,18.8s,baz=259,slow=27						
IASB	**`sbjarnarst**	**4.09**	**204**	P	**Pn**	**13 06 23.5**	**+1.4**
BORG	**Borgarnes**	**4.09**	**204**	*e*P	**Pn**	**13 06 23.9**	**+1.8**
BORG				LR	LR	13 07 49.8	
BORG	**Borgarnes**	**4.09**	**204**	Pn	**Pn**	**13 06 23.4**	**+1.2**
	5.6nm,0.3s,baz=18,slow=8.7,SNR=11						
BORG				LR	LR	13 07 49.8	
	comp=Z,841nm,18.1s,baz=68,slow=36						
BORG	**Borgarnes**	**4.09**	**204**	*e*P	**Pn**	**13 06 23.9**	**+1.7**
KBS	**Kingsbay**	**13.04**	**25**	*e*P	**Pn**	**13 08 23.3**	**-1.3**
KBS	**Kingsbay**	**13.04**	**25**	*e*P	**Pn**	**13 08 23.3**	**-1.3**
NOA	**NORSAR Array B**	**14.20**	**108**	LR	LR	13 13 51.3	
	comp=Z,278nm,18.0s,baz=305,slow=36						
EKA	**Eskdalemuir Ar**	**14.77**	**146**	Pn	**Pn**	**13 08 51.5**	**+3.2**
	0.1nm,0.3s,baz=193,slow=37,SNR=2.4						
ARCES	**ARCESS Array B**	**15.18**	**66**	Pn	**Pn**	**13 08 52.8**	**-0.9**
	0.1nm,0.3s,baz=282,slow=14,SNR=2.3						
ARCES	**ARCESS Array B**	**15.18**	**66**	Pn	**Pn**	**13 08 52.8**	**-0.8**
FINES	**FINESS Array B**	**19.32**	**90**	P	**Pn**	**13 09 46.4**	**+0.8**
	0.3nm,0.3s,baz=330,slow=11,SNR=17						
FINES				LR	LR	13 16 31.1	
	comp=Z,654nm,19.0s,baz=313,slow=35						
FINES	**FINESS Array B**	**19.32**	**90**	P	**Pn**	**13 09 46.4**	**+0.8**
FRB	**Frobisher Bay**	**20.68**	**281**	LR	LR	13 17 38.2	
	comp=Z,479nm,18.3s,MS3.9,baz=59,slow=36						
CLL	**Collm**	**22.62**	**124**	*e*P	**P**	**13 10 21.0**	**+0.8**
	comp=Z,9.0nm,1.1s,mb4.1						
CLL				*e*		13 10 24.0	
CLL				Lm		13 17 00.0	
	comp=Z,200nm,22.0s						
RES	**Resolute Bay**	**23.43**	**319**	LR	LR	13 19 24.7	
	comp=Z,416nm,20.6s,MS3.9,baz=63,slow=36						
VRAC	**Vranov**	**25.49**	**122**	P	**P**	**13 10 50.4**	**+2.8**
	comp=Z,2.9nm,0.4s,mb4.1,baz=303,slow=13,SNR=3.6						
VRAC				LR	LR	13 20 30.1	
	comp=Z,170nm,19.3s,MS3.6,baz=331,slow=36						
DAVOX	**Davos/Dischmat**	**25.81**	**134**	LR	LR	13 21 44.8	
	comp=Z,202nm,18.4s,MS3.7,baz=76,slow=38						
SCHQ	**Schefferville**	**26.23**	**264**	LR	LR	13 20 31.1	
	comp=Z,306nm,19.5s,MS3.9,baz=44,slow=35						
AKASG	**Malin Array Be**	**28.57**	**105**	P	**P**	**13 11 15.4**	**+0.1**
	comp=Z,0.6nm,0.3s,mb3.8,baz=332,slow=9.3,SNR=8.3						
AKASG				LR	LR	13 22 29.6	
	comp=Z,269nm,18.6s,MS3.9,baz=330,slow=36						
AKASG	**Malin Array Be**	**28.57**	**105**	P	**P**	**13 11 15.4**	**+0.1**
KEST	**Kesra**	**36.09**	**142**	LR	LR	13 26 23.6	
	comp=Z,55nm,18.2s,MS3.4,baz=191,slow=35						
MDT	**Midelt**	**36.50**	**162**	LR	LR	13 25 46.4	
	comp=Z,78nm,19.6s,MS3.5,baz=178,slow=34						
YKA	**Yellowknife Ar**	**36.67**	**310**	LR	LR	13 26 39.2	
	comp=Z,21nm,21.2s,MS2.9,baz=305,slow=35						
AKTK	**Aktyubinsk**	**39.30**	**78**	P	**P**	**13 12 48.3**	**+0.2**
AKTK	**Aktyubinsk**	**39.30**	**78**	P	**P**	**13 12 48.3**	**+0.2**
AKTO	**Aktyubinsk**	**39.30**	**78**	P	**P**	**13 12 48.3**	**+0.2**
	comp=Z,1.4nm,0.8s,mb3.7,baz=308,slow=10,SNR=5.0						
BRTR	**Keskin Array B**	**39.62**	**110**	P	**P**	**13 12 53.3**	**+2.3**
	comp=Z,1.5nm,0.9s,mb3.7,baz=330,slow=7.1,SNR=5.3						
BRTR				LR	LR	13 30 28.1	
	comp=Z,155nm,18.8s,MS3.9,baz=295,slow=38						
BRTR	**Keskin Array B**	**39.62**	**110**	P	**P**	**13 12 53.3**	**+2.3**
ULM	**Lac du Bonnet**	**40.52**	**285**	LR	LR	13 29 40.0	
	comp=Z,519nm,18.1s,MS4.4,baz=37,slow=36						
ABKAR	**Akbulak array**	**40.97**	**77**	*e*P	**P**	**13 13 03.1**	**+1.0**
	comp=Z,2.8nm,0.8s,mb3.9						
ABKAR	**Akbulak array**	**40.97**	**77**	*e*P	**P**	**13 13 03.1**	**+1.1**
	comp=Z,2.8nm,0.8s,mb3.9						
ILAR	**Eielson Array**	**42.30**	**331**	P	**P**	**13 13 13.4**	**+0.7**
	comp=Z,1.0nm,1.1s,mb3.4,baz=35,slow=4.6,SNR=6.8						
ILAR				PcP	PcP	13 15 05.5	-0.5
	comp=Z,0.4nm,0.8s,baz=15,slow=7.5,SNR=5.2						
ILAR				LR	LR	13 32 25.3	
	comp=Z,129nm,21.0s,MS3.8,baz=150,slow=39						
ILAR	**Eielson Array**	**42.30**	**331**	P	**P**	**13 13 13.4**	**+0.7**
ILAR	**Eielson Array**	**42.30**	**331**	PcP	PcP	13 15 05.6	-0.4
ZALV	**Zalesovo Beam**	**45.28**	**54**	P	**P**	**13 13 37.4**	**+0.6**
	comp=Z,0.7nm,0.6s,mb3.7,baz=328,slow=7.7,SNR=3.6						
ZALV				LR	LR	13 36 29.7	
	comp=Z,28nm,18.3s,MS3.2,baz=290,slow=41						
KURK	**Kurchatov**	**46.14**	**61**	*e*P	**P**	**13 13 43.8**	**+0.1**
	comp=Z,2.4nm,0.8s,mb4.2						
KURK				LR	LR	13 36 09.8	
KURK	**Kurchatov**	**46.14**	**61**	P	**P**	**13 13 44.7**	**+1.1**
	comp=Z,2.0nm,1.0s,mb4.0,baz=326,slow=8.1,SNR=5.9						
KURK				LR	LR	13 36 09.8	
	comp=Z,57nm,18.9s,MS3.5,baz=10.0,slow=40						
KURK	**Kurchatov**	**46.14**	**61**	*e*P	**P**	**13 13 43.8**	**+0.2**
	comp=Z,2.4nm,0.8s,mb4.2						
MK31	**Makanchi Array**	**50.75**	**61**	*e*P	**P**	**13 14 19.3**	**+0.1**
MK31	**Makanchi Array**	**50.75**	**61**	*e*P	**P**	**13 14 19.3**	**+0.1**
MKAR	**Makanchi Array**	**50.75**	**61**	P	**P**	**13 14 19.3**	**+0.1**
	comp=Z,1.3nm,0.7s,mb4.0,baz=340,slow=6.4,SNR=6.0						
MKAR				LR	LR	13 38 52.9	
	comp=Z,82nm,19.7s,MS3.8,baz=96,slow=40						
PDAR	**Pinedale Array**	**51.76**	**290**	P	**P**	**13 14 26.3**	**-0.5**
	comp=Z,0.2nm,0.3s,mb3.5,baz=1.6,slow=6.3,SNR=3.6						
PDAR				PcP	PcP	13 15 39.2	-0.7
	comp=Z,0.4nm,0.8s,baz=12,slow=4.6,SNR=3.0						
PDAR				LR	LR	13 36 22.6	
	comp=Z,378nm,19.2s,MS4.4,baz=27,slow=36						
PDAR	**Pinedale Array**	**51.76**	**290**	P	**P**	**13 14 26.3**	**-0.5**
PDAR	**Pinedale Array**	**51.76**	**290**	PcP	PcP	13 15 39.2	-0.7
AAK	**Ala-Archa**	**51.81**	**70**	LR	LR	13 35 56.3	
	comp=Z,117nm,18.7s,MS3.9,baz=335,slow=35						
TORD	**Torodi Ar. Bea**	**56.69**	**158**	P	**P**	**13 15 03.9**	**+0.9**
TORD				LR	LR	13 40 14.1	
TORD	**Torodi Ar. Bea**	**56.69**	**158**	P	**P**	**13 15 03.9**	**+0.9**
	comp=Z,1.8nm,1.0s,mb4.0,baz=330,slow=8.6,SNR=5.9						
TORD				LR	LR	13 40 14.1	
	comp=Z,34nm,19.7s,MS3.5,baz=135,slow=37						
ANMO	**Albuquerque**	**57.63**	**283**	LR	LR	13 40 11.0	
	comp=Z,189nm,20.2s,MS4.2,baz=30,slow=36						
TXAR	**Lajitas Array**	**61.69**	**278**	LR	LR	13 42 07.4	
	comp=Z,184nm,20.9s,MS4.2,baz=205,slow=36						
CMIG	**Matias Romero**	**69.63**	**265**	LR	LR	13 45 28.7	
	comp=Z,81nm,20.5s,MS4.0,baz=90,slow=35						
ROSC	**El Rosal**	**73.82**	**240**	LR	LR	13 45 25.5	
	comp=Z,41nm,18.7s,MS3.7,baz=34,slow=33						
KMBO	**Kilima Mbogo**	**78.77**	**124**	LR	LR	13 51 46.7	
	comp=Z,125nm,20.6s,MS4.2,baz=271,slow=35						
CMAR	**Chiang Mai Arr**	**82.11**	**59**	P	**P**	**13 17 40.2**	**0.0**
	comp=Z,0.5nm,0.7s,mb3.6,baz=321,slow=5.6,SNR=5.1						
CMAR	**Chiang Mai Arr**	**82.11**	**59**	P	**P**	**13 17 40.2**	**0.0**
SIV	**San Ignacio**	**89.89**	**222**	P	**P**	**13 18 19.1**	**+0.7**
	comp=Z,0.4nm,0.3s,mb4.2,baz=36,slow=14,SNR=3.2						
SIV	**San Ignacio**	**89.89**	**222**	P	**P**	**13 18 19.1**	**+0.7**
PSI	**Prapat**	**96.79**	**64**	LR	LR	14 07 53.8	
	comp=Z,97nm,19.1s,MS4.3,baz=224,slow=39						
ASAR	**Alice Springs**	**131.87**	**36**	PKP	PKPdf	13 24 33.7	+1.2
	comp=Z,0.5nm,1.1s,baz=356,slow=3.1,SNR=4.0						
ASAR	**Alice Springs**	**131.87**	**36**	PKIKP	PKPdf	13 24 33.7	+1.2

TAP 27 13:08:12.3,22.87N×120.60E,h18km,ML3.7,B
ISCJB 27 13:08:13.7±0.2,22.86N±0.01×120.64E±0.02,h13km±2km,
Error ellipse: s-maj=2.8km s-min=1.8km az=173.2
NEIC 27 13:08:13.8±3.0,22.93N×120.66E,h15km±8km,Error
ellipse: s-maj=33.5km s-min=11.1km az=51.0
JMA 27 13:08:13.0±0.4,22.75N×120.63E,h124km,M2.9
ISC 27 13:08:13.9±0.2, 22.86N±0.01×120.62E±0.02, h15km±1km,
n68, σ0§92/124, 13C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSD	**Sandimen**	**0.11**	**176**	⇓*i*P	**Pg**	**13 08 16.7**	**-0.5**
	baz=165						
SSD				S	**Sg**	**13 08 19.6**	**0.0**
	baz=165						
SGLT	**Jiouru**	**0.18**	**223**	⇓*i*P	**Pg**	**13 08 18.2**	**0.0**
	baz=205						
SGLT				*e*S	**Sg**	**13 08 22.8**	**+1.6**
	baz=205						
TWM1	**Shoushan**	**0.19**	**259**	⇑*i*P	**Pg**	**13 08 18.1**	**-0.3**
	baz=251						
TWM1				*e*S	**Sg**	**13 08 22.6**	**+1.2**
	baz=251						
SGST	**Jiashian**	**0.23**	**350**	⇓*i*P	**Pg**	**13 08 18.3**	**-0.6**
	baz=358						
SGST				*i* S	**Sg**	**13 08 22.8**	**+0.4**
	baz=358						
CHN3	**Shinhua**	**0.32**	**312**	P	**Pg**	**13 08 20.6**	**0.0**
	baz=313						
CHN3				*e*S	**Sg**	**13 08 26.7**	**+1.7**
	baz=313						
STYT	**Tauyuan**	**0.33**	**22**	⇑*i*P	**Pg**	**13 08 20.2**	**-0.4**
	baz=32				

baz=151
EAST S **Sg** 13 08 31.6 +0.6
baz=151
TAW **Tawu** 0.56 153 *i* P **Pg** 13 08 24.4 -0.5
baz=149
TAW S **Sg** 13 08 32.7 +0.3
baz=149
TWP **Hsiaoliuchiu** 0.56 205⇑ *e*P **Pg** 13 08 26.2 +1.2
baz=202
TWP *e*S **Sg** 13 08 34.7 +2.1
baz=202
CHN8 **Yiju** 0.62 322 *e*P **Pg** 13 08 24.9 -1.0
baz=324
CHN8 S **Sg** 13 08 35.0 +0.8
baz=324
CHY **Chiayi** 0.66 344 P **Pg** 13 08 25.9 -0.9
baz=346
CHY S **Sg** 13 08 36.1 +0.5
baz=346
ALS **Alishan** 0.67 14 P **Pg** 13 08 25.9 -1.0
baz=17
ALS *e*S **Sg** 13 08 36.6 +0.8
baz=17
YUS **Yu-Shan** 0.70 26 *e*P **Pg** 13 08 26.8 -0.6
baz=29
YUS *e*S **Sg** 13 08 37.3 +0.7
baz=29
CHKT **Chengkung** 0.72 71⇑ *i*P **Pg** 13 08 27.6 -0.4
baz=87
CHKT *e*S **Sg** 13 08 38.4 +0.8
baz=87
CHN5 **Tsauling** 0.74 4 *e*P **Pg** 13 08 27.0 -1.2
baz=6.0
CHN5 S **Sg** 13 08 38.6 +0.6
baz=6.0
TWF1 **Yuli** 0.79 51⇑ *i*P **Pg** 13 08 28.4 -0.9
baz=61
TWF1 S **Sg** 13 08 39.3 -0.3
baz=61
YULB **Yu-li** 0.82 49 *e*P **Pg** 13 08 28.4 -1.3
WGK **Gukeng** 0.82 356 P **Pg** 13 08 29.1 -0.8
baz=358
WGK S **Sg** 13 08 41.0 +0.2
baz=358
HEN **Hengchun** 0.86 173 *e*P **Pb** 13 08 29.9 -0.5
baz=161
HEN *e*S **Sb** 13 08 42.3 +0.5
baz=161
EHY **Hungye** 0.91 45⇑ *i*P **Pb** 13 08 30.2 -1.1
baz=54
EHY *e*S **Sb** 13 08 42.5 -0.8
baz=54
TWK1 **Hengchun** 0.93 170 P **Pb** 13 08 31.0 -0.7
baz=168
TWK1 *e*S **Sb** 13 08 44.7 +0.9
baz=168
SSLB **Suanglung** 0.97 18 *e*P **Pb** 13 08 31.0 -1.4
TSEB **Hengchuen, Pin** 0.99 165 *e*P **Pb** 13 08 32.1 -0.6
baz=167
TSEB *e*S **Sb** 13 08 46.3 +0.8
baz=167
WNT **Mingjian** 1.01 3 *e*P **Pb** 13 08 31.8 -1.4
baz=5.0
WNT *e*S **Sb** 13 08 46.4 +0.1
baz=5.0
WTCT **Ta-ch'eng** 1.05 343 *e*P **Pb** 13 08 31.4 -2.3
baz=344
WTCT *e*S **Sb** 13 08 46.1 -1.3
baz=344
SMLT **Sun Moon Lake** 1.05 14 *e*P **Pb** 13 08 32.8 -1.0
baz=16
TYC **Yuchr** 1.06 12 P **Pb** 13 08 32.9 -1.1
baz=14
TYC S **Sb** 13 08 48.5 +0.8
baz=14
LAY **Lan-yu** 1.18 133 *e*P **Pn** 13 08 34.2 -1.7
baz=133
LAY *e*S **Sb** 13 08 50.7 -0.5
baz=133
ESL **Shilin** 1.21 38 P **Pn** 13 08 35.6 -0.6
baz=32
ESL S **Sb** 13 08 51.8 -0.1
baz=32
PNG **Penghu** 1.21 306 *e*P **Pn** 13 08 32.7 -3.6
baz=307
TCU **Taichung** 1.28 2 *e*P **Pn** 13 08 36.7 -0.6
baz=4.0
TCU *e*S **Sb** 13 08 53.1 -0.9
baz=4.0
WHF **Hehuan Shan** 1.41 25 P **Pn** 13 08 38.7 -0.3
baz=17
WHF *e*S **Sn** 13 08 59.1 +1.7
baz=17
TWT **Tachien** 1.48 20 P **Pn** 13 08 39.4 -0.6
baz=21
TWT *e*S **Sn** 13 08 59.9 +0.8
baz=21
TWQ1 **Liyutan** 1.49 5 P **Pn** 13 08 39.3 -0.8
baz=7.0
TWQ1 S **Sn** 13 08 59.2 -0.1
baz=7.0
TWD **Chiawan** 1.51 36 P **Pn** 13 08 39.6 -0.8
baz=37
TWD *e*S **Sn** 13 08 60.0 +0.2
baz=37
NSY **Sanyi** 1.56 5 *e*P **Pn** 13 08 41.1 +0.1
baz=6.0
NSY *e*S **Sn** 13 09 01.3 +0.3
baz=6.0
NACB **Ninganchiao** 1.58 34 *e*P **Pn** 13 08 40.4 -1.0
NNS **Nan Shan** 1.72 23 *e*P **Pn** 13 08 43.1 -0.2
baz=14
NSTT **Nanjuang** 1.80 11 *e*P **Pn** 13 08 44.0 -0.3
baz=354
NSTT *e*S **Sn** 13 09 07.2 +0.3
baz=354
ENA **Nanau** 1.87 33 *e*P **Pn** 13 08 44.8 -0.5
baz=34
ENA *e*S **Sn** 13 09 09.8 +1.1
baz=34
NSK **Sanguang** 1.93 20 *e*P **Pn** 13 08 46.0 -0.2
baz=21
NSK *e*S **Sn** 13 09 12.0 +1.8
baz=21
YHNB **Yeheng** 1.93 21 *e*P **Pn** 13 08 45.0 -1.2
ENTT **Nioudou** 1.97 26 *e*P **Pn** 13 08 47.4 +0.6
baz=27
ENTT *e*S **Sn** 13 09 13.6 +2.4
baz=27
TWC **Suao** 2.07 33 *e*P **Pn** 13 08 48.6 +0.5
baz=43
TWC *e*S **Sn** 13 09 15.4 +1.7
baz=43
TWE **Neicheng** 2.08 27 *e*P **Pn** 13 08 48.9 +0.6
baz=29
TWE *e*S **Sn** 13 09 16.2 +2.2
baz=29
TATO **Taipei** 2.25 20 *e*P **Pn** 13 08 53.9 +3.3
TWA **Mucha** 2.29 22 *e*P **Pn** 13 08 52.0 +0.9
baz=23
TWA *e*S **Sn** 13 09 19.0 0.0
baz=23
NWF **Wu-fen Shan** 2.44 25 *e*P **Pn** 13 08 54.5 +1.3
baz=27
NWF *e*S **Sn** 13 09 26.5 +3.6
baz=27
TWB1 **Santiao Chiao** 2.48 30 *e*P **Pn** 13 08 54.4 +0.7
baz=31
TWB1 *e*S **Sn** 13 09 24.4 +0.6
baz=31
YOJ **Yonaguni jima** 2.71 53 P **Pn** 13 08 57.1 +0.2
YOJ S **Sn** 13 09 30.0 +0.6
HATJ **Hateruma jima** 3.15 67 P **Pn** 13 09 02.5 -0.5
HATJ S **Sn** 13 09 40.4 0.0
IRIF **Iriomote-Funau** 3.21 62 P **Pn** 13 09 03.6 -0.1
IRIF S **Sn** 13 09 43.4 +1.7
JKRS **Kuro-shima** 3.40 66 P **Pn** 13 09 06.0 -0.4
JKRS S **Sn** 13 09 47.3 +0.9
JIJ **Ishigaki jima** 3.56 64 P **Pn** 13 09 07.8 -0.8
JIJ S **Sn** 13 09 49.1 -1.3
JTJ **Tarama** 4.13 64 P **Pn** 13 09 15.9 -0.6
JTJ S **Sn** 13 10 04.4 -0.3

*PGC **27** 13:35:25.5±4.6, 49.°98N×129.°95W, h10km, ML2.9/6, Mw3.5, 197km Wsw of Pt. Hardy, Bc Vancouver Island Region*

*ISCJB **27** 13:35:26.4±0.8, 50.°16N±0.°06×129.°69W±0.°08, h10km, mb3.4/3, MS3.0/3, Error ellipse: s-maj=8.8km s-min=6.6km az=40.3*
*IDC **27** 13:35:27.2±2.1, 50.°09N×129.°61W, h0km, mb3.4/3, mb1 3.8/9, mb1mx3.6/28, mbtmp3.5/9, ML3.3/5, MS3.2/6, Ms1 3.2/6, ms1mx2.9/25, Error ellipse: s-maj=35.2km s-min=12.8km az=76.0*
*NEIC **27** 13:35:28.7±1.4, 50.°22N×129.°64W, h10km, MW3.5(PGC), Error ellipse: s-maj=27.7km s-min=10.4km az=62.0*
ISC 27 13:35:28.2±0.9, 50.°18N±0.°06×129.°57W±0.°09, h10km, n33, σ1°03/35, mb3.3/3, MS3.0/3, 6D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.03**	**63**	⇑Pn	**Pn**	**13 35 48.2**	**-0.5**
HOLB				⇓Sn	**Sn**	**13 36 04.1**	**+1.0**
BPBC	**Brooks Peninsu**	**1.16**	**90**	⇓Pn	**Pn**	**13 35 48.7**	**-1.7**
BPBC				⇓Sn	**Sn**	**13 36 05.6**	**-0.7**
PHC	**Port Hardy**	**1.47**	**68**	Pn	**Pn**	**13 35 54.4**	**-0.3**
PHC				⇓Sn	**Sn**	**13 36 15.1**	**+1.3**
MAYB	**Maynard**	**1.56**	**81**	⇓Pn	**Pn**	**13 35 55.2**	**-0.7**
EDB	**Eliza Dome**	**1.61**	**100**	⇑Sn	**Sn**	**13 36 16.4**	**-1.0**
WOSB	**Woss**	**1.93**	**89**	⇑Pn	**Pn**	**13 36 00.8**	**-0.2**
BBB	**Bella Bella**	**2.21**	**24**	Pn	**Pn**	**13 36 04.3**	**-0.5**
BBB				Sn	**Sn**	**13 36 32.9**	**+0.8**
BBB	**Bella Bella**	**2.21**	**24**	Pn	**Pn**	**13 36 04.3**	**-0.5**
	29nm,0.3s,baz=46,slow=13,SNR=43						
BBB				Sn	**Sn**	**13 36 32.9**	**+0.8**
	26nm,0.3s,baz=134,slow=24,SNR=13						
BBB	**Bella Bella**	**2.21**	**24**	⇑Pn	**Pn**	**13 36 04.5**	**-0.3**
BBB				⇓Sn	**Sn**	**13 36 32.8**	**+0.7**
CRAG	**Craig**	**5.72**	**339**	P	**Pn**	**13 36 51.8**	**-1.2**
DLBC	**Dease Lake**	**8.28**	**358**	Pn	**Pn**	**13 37 30.9**	**+2.8**
	0.3nm,0.3s,baz=197,slow=14,SNR=6.8						
DLBC				LR	LR	13 40 37.1	
	comp=Z,168nm,19.2s,baz=242,slow=37						
YBH	**Yreka Blue Hor**	**9.70**	**148**	LR	LR	13 41 02.6	
	comp=Z,215nm,20.4s,baz=340,slow=35						
NVAR	**Mina Array Bea**	**14.23**	**141**	Pn	**Pn**	**13 38 51.3**	**+1.7**
	0.2nm,0.3s,baz=317,slow=9.1,SNR=6.0						
YKA	**Yellowknife Ar**	**14.82**	**28**	Pn	**Pn**	**13 38 57.0**	**-0.5**
	0.1nm,0.3s,baz=220,slow=11,SNR=3.1						
PDAR	**Pinedale Array**	**15.63**	**111**	Pn	**Pn**	**13 39 11.9**	**+3.6**
	baz=311,slow=9.6,SNR=8.8						
ILAR	**Eielson Array**	**17.24**	**335**	P	**Pn**	**13 39 28.4**	**-0.3**
	0.0nm,0.3s,baz=135,slow=12,SNR=3.5						
ILAR				LR	LR	13 45 24.0	
	comp=Z,50nm,19.4s,baz=102,slow=34						
ULM	**Lac du Bonnet**	**21.46**	**77**	P	**P**	**13 40 16.4**	**-0.1**
	1.3nm,0.3s,mb3.8,baz=299,slow=10,SNR=2.3						
ANMO	**Albuquerque**	**22.70**	**123**	P	**P**	**13 40 30.0**	**+0.2**
	0.5nm,0.4s,mb3.3,baz=0.0,slow=11,SNR=1.9						
ANMO				LR	LR	13 50 06.3	
	comp=Z,45nm,19.6s,MS2.9,baz=124,slow=39						
RES	**Resolute Bay**	**28.49**	**18**	LR	LR	13 53 53.4	
	comp=Z,17nm,20.5s,MS2.6,baz=285,slow=39						
TXAR	**Lajitas Array**	**28.56**	**127**	P	**P**	**13 41 25.1**	**+1.0**
	0.1nm,0.4s,mb2.9,baz=311,slow=5.8,SNR=3.5						
TXAR				LR	LR	13 53 46.8	
	comp=Z,78nm,18.1s,MS3.4,baz=0.0,slow=38						

*NIED **27** 13:42:00, 28.°10N×139.°80E, h540km, Mw4.9 Best double couple: M0 2.14000×10^16 NP1:φ=268.00000°, δ64.00000°, λ=-74.00000°. NP2:φ=54.00000°, δ30.00000°, λ=-120.00000°.*
*BJI **27** 13:42:42.4, 27.°85N×139.°52E, h509km, mB4.7/18, mb4.8/37*
*MOS **27** 13:42:43.7±0.9, 27.°98N×139.°32E, h512km, mb4.5/29, Error ellipse: s-maj=11.4km s-min=5.8km az=103.2*
*JMA **27** 13:42:44.4±0.1, 28.°07N×139.°85E, h538km, M4.9*
*NEIC **27** 13:42:44.6±0.2, 27.°95N×139.°37E, mb4.6/50, MW4.8(NIED), Error ellipse: s-maj=4.7km s-min=3.9km az=129.0*
*ISCJB **27** 13:42:44.6±0.3, 27.°99N±0.°03×139.°29E±0.°03, h513km±2km, mb4.5/119, Error ellipse: s-maj=4.3km s-min=3.4km az=152.6*
*IDC **27** 13:42:45.8±0.6, 27.°99N×139.°31E, h523km±6km, mb3.9/32, mb1 4.0/36, mb1mx4.0/39, mbtmp3.9/36, Error ellipse: s-maj=8.5km s-min=6.0km az=86.0*
*DJA **27** 13:42:48, 28.°04N×139.°51E, h568km, mb4.6/19*
ISC 27 13:42:45.4±0.3, 27.°99N±0.°03×139.°35E±0.°03, h510km±2km, h511km±1.7km; pP-P, n353, σ0°85/387, mb4.5/119, 56C-72D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.67**	**109**	P	**P**	**13 43 54.5**	**-0.5**
	336nm,0.3s,baz=286,slow=1.3,SNR=89						
CBIJ				S	**S**	**13 44 49.1**	**-2.5**
	520nm,0.3s,baz=270,slow=22,SNR=12						
CBIJ	**Chichi jima**	**2.67**	**109**	P	**P**	**13 43 54.6**	**-0.4**
CBIJ				*e*S	**S**	**13 44 49.5**	**-2.1**
JHHJ	**Haha-jima-NKT**	**2.86**	**118**	P	**P**	**13 43 56.4**	**+0.2**
JHHJ				*e*S	**S**	**13 44 52.3**	**-1.5**
JHJ2	**Mitsune**	**5.12**	**4**	P	**P**	**13 44 14.6**	**+0.8**
JHJ2				S	**S**	**13 45 26.2**	**0.0**
JHJ	**Hachijo jima 2**	**5.13**	**4**	P	**P**	**13 44 14.7**	**+0.8**
	124nm,0.3s,baz=83,slow=21,SNR=59						
JHJ				S	**S**	**13 45 24.2**	**-2.0**
	138nm,0.3s,baz=267,slow=22,SNR=14						
TK01	**Tokai 1**	**5.95**	**346**	P	**P**	**13 44 24.5**	**+3.0**
TK01				*e*S	**S**	**13 45 42.9**	**+2.7**
JWZ	**Kozaga**	**6.35**	**331**	P	**P**	**13 44 27.7**	**+2.4**
JIE	**Ise**	**6.77**	**341**	P	**P**	**13 44 32.5**	**+3.1**
JIE				*e*S	**S**	**13 45 57.7**	**+2.9**
BSO1	**Boso 1**	**6.79**	**11**	P	**P**	**13 44 29.8**	**+0.2**
BSO1				*e*S	**S**	**13 45 53.7**	**-1.4**
JOD2	**Odawara 2**	**7.26**	**358**	P	**P**	**13 44 34.3**	**0.0**
JOD2				*e*S	**S**	**13 46 02.6**	**-1.0**
JTO	**Tosashimizu**	**7.45**	**312**	P	**P**	**13 44 38.8**	**+2.5**
JRY	**Ryogami san**	**8.02**	**357**	P	**P**	**13 44 41.8**	**-0.1**
JRY				*e*S	**S**	**13 46 14.3**	**-3.4**
MJAR	**Matsushiro Arr**	**8.58**	**354**	P	**P**	**13 44 46.9**	**-0.9**
	9.3nm,0.3s,baz=207,slow=7.8,SNR=124						
MJAR				S	**S**	**13 46 29.8**	**+1.4**
	2.8nm,0.3s,baz=36,slow=28,SNR=5.8						
MAJO	**Matsushiro**	**8.59**	**354**	*e*P	**P**	**13 44 47.4**	**-0.4**
	108nm,0.6s						
MAJO	**Matsushiro**	**8.59**	**354**	*e*P	**P**	**13 44 47.4**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,108nm,0.6s						
MAT	**Matsushiro**	**8.59**	**354**	P	**P**	**13 44 46.8**	**-1.0**
MAT				S	**S**	**13 46 27.3**	**-1.2**
MAT	**Matsushiro**	**8.59**	**354**	P	**P**	**13 44 47.4**	**-0.4**
JHS	**Saijyo**	**8.78**	**324**	P	**P**	**13 44 51.9**	**+2.0**
JHS				*e*S	**S**	**13 46 34.3**	**+2.0**
JNU	**Nakatsue**	**8.91**	**307**	*e*P	**P**	**13 44 53.6**	**+2.3**
	comp=Z,80nm,1.4s						
KSRS	**Korea Array**	**13.47**	**317**	P	**P**	**13 45 38.5**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=133,slow=9.9,SNR=19						
KSRS				S	**S**	**13 48 06.2**	**+3.7**
	baz=126,slow=21,SNR=4.6						
KSRS				ScP	ScP	13 53 08.6	-1.6
	baz=86,slow=0.3,SNR=5.3						
KSRS	**Korea Array**	**13.47**	**317**	P	**P**	**13 45 38.5**	**-0.7**
KSRS				S	**S**	**13 48 06.2**	**+3.8**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ERM	**Erimo**	**14.34**	**12**	*e*P	**P**	**13 45 49.1**	**+0.9**
	comp=Z,50nm,0.8s						
ERM	**Erimo**	**14.34**	**12**	*d*iP	**P**	**13 45 48.7**	**+0.5**
GUMO	**Guam**	**15.22**	**159**	*e*P	**P**	**13 45 58.1**	**+0.2**
	comp=Z,1μm,1.1s						
GUMO	**Guam**	**15.22**	**159**	P	**P**	**13 45 59.0**	**+1.1**
	comp=Z,22nm,0.3s,baz=199,slow=1.3,SNR=44						
GUMO				S	**S**	**13 48 40.0**	**+3.4**
	comp=Z,2.0nm,0.3s,baz=54,slow=19,SNR=4.2						
GUMO	**Guam**	**15.22**	**159**	P	**P**	**13 45 59.0**	**+1.2**
GUMO				S	**S**	**13 48 40.0**	**+3.4**
GUMO				pmax	pmax		
	comp=Z,22nm,0.3s						
GUMO				smax			
	comp=N,2.0nm,0.3s						
GUMO	**Guam**	**15.22**	**159**	P	**P**	**13 45 58.2**	**+0.4**
	comp=N,1μm,1.2s						
ASAJ	**Asahikawa**	**16.31**	**8**	*e*P	**P**	**13 46 09.0**	**+0.3**
	comp=N,27nm,1.0s						
ASAJ	**Asahikawa**	**16.31**	**8**	P	**P**	**13 46 09.0**	**+0.3**
	comp=N,2.8nm,0.3s,baz=225,slow=12,SNR=18						
ASAJ				ScP	ScP	13 53 12.9	-2.3
	comp=N,0.3nm,0.3s,baz=290,slow=29,SNR=5.0						
YHNB	**Yeheng**	**16.45**	**263**	*e*P	**P**	**13 46 08.8**	**-1.6**
	comp=N,19nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**16.85**	**16**	⇓*i*P	**P**	**13 46 12.0**	**-2.3**
YUK				*e*S	**S**	**13 49 05.0**	**-0.2**
YUK				pmax	pmax		
	comp=N,330nm,1.3s						
YUK				pmax	pmax		
	comp=Z,1μm,1.3s						
YUK				pmax	pmax		
	comp=E,190nm,0.6s						
YULB	**Yu-li**	**16.90**	**258**	*e*P	**P**	**13 46 14.5**	**-0.6**
	comp=E,19nm,0.8s						
SSLB	**Suanglung**	**17.07**	**260**	*e*P	**P**	**13 46 15.8**	**-1.0**
	comp=E,112nm,1.0s						
TWG	**Pinlang**	**17.29**	**257**	*e*P	**P**	**13 46 18.5**	**-0.3**
	comp=E,18nm,0.3s						
TPUB	**Ta-pu**	**17.51**	**259**	*e*P	**P**	**13 46 20.0**	**-0.7**
	comp=E,14nm,0.4s						
NJ2	**Nanjing**	**18.20**	**288**	*e*P	**P**	**13 46 26.8**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
MDJ	**Mudanjiang**	**18.34**	**337**	P	**P**	**13 46 29.3**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,36nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,200nm,4.8s						
MDJ	**Mudanjiang**	**18.34**	**337**	*e*P	**P**	**13 46 28.9**	**+0.9**
	comp=Z,70nm,1.4s						
SNY	**Shenyang**	**18.88**	**321**	⇓P	**P**	**13 46 33.3**	**+0.3**
SNY				sP	sP	13 48 42.5	-1.6
SNY				S	**S**	**13 49 40.0**	**+1.6**
SNY				pmax	pmax		
	comp=Z,47nm,0.7s						
SNY				pmax	pmax		
	comp=Z,370nm,3.6s						
YSS	**Yuzh-Sakhalins**	**19.12**	**7**	*e*P	**P**	**13 46 34.7**	**-0.4**
	comp=Z,26nm,0.5s						
YSS	**Yuzh-Sakhalins**	**19.12**	**7**	*e*P	**P**	**13 46 35.0**	**-0.2**
YSS				*e*S	**S**	**13 49 40.0**	**-2.2**
YSS				pmax	pmax		
	comp=N,30nm,1.0s						
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,300nm,11.0s						
HABR	**Khabarovsk**	**20.72**	**352**	*c*e P	**P**	**13 46 48.9**	**-0.8**
HABR				*e*S	**S**	**13 50 05.2**	**-2.7**
HABR				pmax	pmax		
	comp=Z,70nm,1.0s						
HABR				pmax	pmax		
	comp=E,28nm,1.0s						
HABR				pmax	pmax		
	comp=N,29nm,1.0s						
HABR				MLR	MLR		
	comp=Z,39nm,17.0s						
WHN	**Wuhan**	**21.95**	**283**	⇑P	**P**	**13 47 02.0**	**+1.0**
KLR	**Kul'dur**	**22.00**	**347**	*e*P	**P**	**13 46 57.9**	**-3.4**
KLR				*e*S	**S**	**13 50 23.9**	**-4.2**
BJI	**Beijing**	**22.59**	**308**	P	**P**	**13 47 05.5**	**-1.2**
BJI				S	**S**	**13 50 38.0**	**+0.3**
BJI				PcP	PcP	13 50 40.0	-0.7
BJI				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
HIA	**Hailar**	**26.05**	**330**	*e*P	**P**	**13 47 36.9**	**-0.4**
	comp=Z,16nm,0.8s,mb4.7						
HIA	**Hailar**	**26.05**	**330**	*e*P	**P**	**13 47 36.9**	**-0.3**
HIA				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC	**Hu-ho-hao-te**	**26.14**	**307**	*e*P	**P**	**13 47 38.3**	**+0.1**
HHC				PcP	PcP	13 50 49.0	+0.4
HHC				*e*S	**S**	**13 51 33.3**	**-0.3**
HHC				PcS	PcS	13 54 30.3	+0.2
HHC				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.7						
HHC				pmax	pmax		
	comp=Z,84nm,3.8s						
ENH	**Enshi**	**26.15**	**282**	*e*P	**P**	**13 47 38.0**	**-0.5**
	comp=Z,47nm,0.9s,mb5.1						
XAN	**Xi'an**	**26.71**	**291**	P	**P**	**13 47 43.5**	**+0.2**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
PETK	**Petropavlovsk-**	**28.54**	**23**	P	**P**	**13 47 59.2**	**+0.2**
	comp=Z,5.2nm,0.7s,mb4.2,baz=351,slow=3.7,SNR=23						
PETK				ScP	ScP	13 53 43.3	-3.7
	comp=Z,4.2nm,0.8s,baz=216,slow=7.2,SNR=5.9						
GYA	**Guiyang**	**29.06**	**275**	P	**P**	**13 48 04.3**	**+0.3**
GYA				sP	sP	13 50 31.0	+1.7
GYA				PcP	PcP	13 50 57.0	+0.8
GYA				S	**S**	**13 52 19.0**	**-0.4**
GYA				ScP	ScP	13 53 48.0	-1.3
GYA				PcS	PcS	13 54 38.3	-1.5
GYA				ScS	ScS	13 57 41.5	-3.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
MYLDM	**Lahad Datu**	**30.12**	**225**	P	**P**	**13 48 15.0**	**+1.7**
	comp=Z,34nm,1.3s,mb4.7						
LBMI	**Labuha**	**30.65**	**204**	P	**P**	**13 48 19.7**	**+1.8**
	comp=Z,1μmcomp=Z,49nm,1.4s,mb4.8						
LZH	**Lanzhou**	**31.03**	**294**	⇓P	**P**	**13 48 22.0**	**+1.1**
LZH				pP		13 49 49.5	
LZH				sP	sP	13 50 48.0	+1.2
LZH				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.5						
LZH				pmax	pmax		
	comp=Z,56nm,4.6s						
CD2	**Chengdu**	**31.05**	**284**	P	**P**	**13 48 21.8**	**+0.6**
CD2				pP		13 49 49.3	
CD2				PP	PP	13 49 51.3	-9.4
CD2				sP	sP	13 50 47.5	+0.5
CD2				PcP	PcP	13 51 02.8	+1.4
CD2				S	**S**	**13 52 51.0**	**+1.0**
CD2				PcS	PcS	13 54 46.5	+0.2
CD2				SS	SS	13 55 31.5	-26
CD2				ScS	ScS	13 57 54.0	-0.3
CD2				pmax	pmax		
	comp=Z,60nm,0.6s,mb5.3						
CD2				pmax	pmax		
	comp=Z,110nm,5.5s						
ULN	**Ulaanbaatar**	**31.95**	**317**	*e*P	**P**	**13 48 28.8**	**+0.2**
	comp=Z,21nm,1.3s,mb4.5						
ULN	**Ulaanbaatar**	**31.95**	**317**	*e*P	**P**	**13 48 28.8**	**+0.2**
ULN				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.5						
ULN	**Ulaanbaatar**	**31.95**	**317**	P	**P**	**13 48 29.1**	**+0.5**
	comp=Z,13nm,1.5s,mb4.2						
SONM	**Songino Array**	**32.34**	**317**	P	**P**	**13 48 31.9**	**0.0**
	comp=Z,1.8nm,0.4s,mb3.9,baz=133,slow=9.3,SNR=15						
SONM				PcP	PcP	13 51 04.2	-0.4
	comp=Z,0.8nm,0.5s,baz=160,slow=3.8,SNR=4.1						
SONM				S	**S**	**13 53 08.1**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=264,slow=34,SNR=1.8						
SONM				ScP	ScP	13 53 57.3	-2.5
	comp=Z,9.4nm,0.8s,baz=148,slow=3.8,SNR=33						
SONM	**Songino Array**	**32.34**	**317**	P	**P**	**13 48 31.9**	**0.0**
SONM						13 51 04.2	
SONM				S	**S**	**13 53 08.1**	**-1.1**
KMI	**Kunming**	**32.80**	**274**	P	**P**	**13 48 36.8**	**+0.7**
KMI				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.5						
GTA	**Gaotai**	**34.56**	**300**	P	**P**	**13 48 51.5**	**+0.7**
GTA				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.4						
YAK	**Yakutsk**	**34.65**	**352**	*e*P	**P**	**13 48 49.9**	**-1.3**
	comp=Z,69nm,0.9s,mb5.2						
YAK	**Yakutsk**	**34.65**	**352**	*i* P	**P**	**13 48 50.2**	**-1.0**
YAK				*e*		13 51 08.5	
YAK				*e*S	**S**	**13 53 39.4**	**-4.4**
YAK				*e**SS	sS	13 56 44.9	+18
YAK				*e*		13 58 06.0	
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,42nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=N,21nm,1.2s						
YAK				smax			
	comp=N,89nm,1.3s						
YAK				smax			
	comp=E,72nm,1.5s						
ZAK	**Zakamensk**	**35.29**	**319**	*e*P	**P**	**13 48 54.6**	**-2.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb3.8						
KDI	**Kendari**	**35.62**	**210**	P	**P**	**13 48 59.5**	**-0.4**
	comp=Z,19nm,1.2s,mb4.5						
SEY	**Seymchan**	**35.98**	**10**	*c i*P	**P**	**13 49 02.3**	**+0.1**

SBUM Sibu 36.28 230 P **P** **13 49 05.2 -0.2**
comp=Z,14nm,1.4s,mb4.3
CHTO Chiang Mai 38.05 265 *e*P **P** **13 49 19.7 -0.2**
comp=Z,23nm,1.1s,mb4.6
CHTO Chiang Mai 38.05 265 *e*P **P** **13 49 19.7 -0.2**
CHTO pmax pmax
comp=Z,23nm,1.1s,mb4.6
CHTO Chiang Mai 38.05 265 P **P** **13 49 19.2 -0.7**
comp=Z,25nm,1.1s,mb4.7
CM31 Chiang Mai Arr 38.18 265 *e*P **P** **13 49 20.8 -0.2**
comp=Z,3.8nm,0.6s,mb4.1
CMAR Chiang Mai Arr 38.18 265 P **P** **13 49 21.3 +0.3**
comp=Z,3.8nm,0.6s,mb4.1,baz=53,slow=8.2,SNR=41
CMAR PcP PcP 13 51 22.8 +0.1
comp=Z,2.2nm,0.9s,baz=96,slow=0.8,SNR=10
CMAR ScP ScP 13 54 21.4 -0.3
comp=Z,1.1nm,0.7s,baz=46,slow=2.9,SNR=7.4
CMAR Chiang Mai Arr 38.18 265 P **P** **13 49 21.3 +0.3**
CMAR 13 51 22.8
KSM Kuching 38.29 232 P **P** **13 49 23.8 +1.8**
comp=Z,17nm,1.2s,mb4.5
SHL Shillong 42.24 278 *e*PKP **P** **13 49 54.0 +0.5**
MYKOM Kota Tinggi 42.77 239 P **P** **13 49 58.0 +0.2**
comp=Z,15nm,1.5s,mb4.3
KHKI Kahang-Kahang 42.81 216 P **P** **13 49 56.6 -1.5**
comp=Z,953nmcomp=Z,88nm,1.4s,mb5.1
KULM Kulim 43.11 246 P **P** **13 50 00.4 -0.1**
comp=Z,46nm,1.2s,mb4.9
BILL Bilibino 43.19 14 *e*P **P** **13 50 00.1 -0.1**
comp=Z,68nm,0.9s,mb5.2
BILL Bilibino 43.19 14⇑ *e*P **P** **13 50 00.2 0.0**
BILL *e* 13 51 50.4
BILL *e*S **S** **13 55 46.1 -3.0**
BILL *e*SS SS 13 59 07.9 -8.8
BILL pmax pmax
comp=Z,112nm,1.3s,mb5.2
IPM Ipoh 43.29 244 P **P** **13 50 02.6 +0.8**
comp=Z,33nm,1.5s,mb4.7
WMQ Urumqi 44.01 305 *e*P **P** **13 50 08.0 +1.0**
WMQ pP pP 13 51 42.8 +2.0
WMQ sP sP 13 52 38.3 +0.3
WMQ pmax pmax
comp=Z,15nm,0.9s,mb4.5
WMQ pmax pmax
comp=Z,64nm,5.0s
TIXI Tiksi 44.09 355 *e*P **P** **13 50 06.2 -1.0**
TIXI pmax pmax
comp=Z,21nm,0.9s,mb4.7
SJI Sawahan 44.41 221 P **P** **13 50 10.2 -0.3**
comp=Z,6µmcomp=Z,31nm,1.5s,mb4.6
KNA Kununurra 44.67 195 P **P** **13 50 12.0 -0.4**
comp=Z,795nmcomp=Z,59nm,1.2s,mb5.0
TAPN Taplejung 45.45 282 *e*P **P** **13 50 18.9 +0.5**
comp=Z,20nm,0.6s,mb4.8
ODAN Odare 45.84 281 *e*P **P** **13 50 21.5 +0.1**
comp=Z,31nm,0.5s,mb5.1
PSI Prapat 45.97 244 P **P** **13 50 23.0 +0.5**
comp=Z,14nm,0.6s,mb4.7,baz=140,slow=3.9,SNR=6.0
PSI PcP PcP 13 51 48.5 -0.4
comp=Z,2.3nm,0.3s,baz=296,slow=15,SNR=4.3
LEM Lembang 46.23 226 P **P** **13 50 25.1 +0.6**
comp=Z,2µmcomp=Z,118nm,1.4s,mb5.2
RAMN Ramite 46.51 282 *e*P **P** **13 50 27.0 +0.5**
comp=Z,71nm,0.8s,mb5.2
KLSI 46.57 231 P **P** **13 50 27.0 -0.1**
comp=Z,2µmcomp=Z,150nm,1.3s,mb5.4
JIRN Jiri 46.69 283 *e*P **P** **13 50 28.9 +1.0**
MDSI Maura Dua 46.81 232 P **P** **13 50 28.2 -0.7**
comp=Z,1µmcomp=Z,118nm,1.1s,mb5.3
GUN Gumba 46.90 283 *e*P **P** **13 50 30.6 +1.1**
comp=Z,86nm,0.7s,mb5.4
ZALV Zalesovo Beam 47.17 319 P **P** **13 50 30.2 -0.8**
ZALV PcP PcP 13 51 51.2 -1.3
ZALV ScP ScP 13 54 53.8 -3.7
ZALV Zalesovo Beam 47.17 319 P **P** **13 50 30.2 -0.8**
comp=Z,4.8nm,0.4s,mb4.3,baz=103,slow=7.8,SNR=21
ZALV PcP PcP 13 51 51.2 -1.3
comp=Z,4.6nm,0.5s,baz=110,slow=4.0,SNR=11
ZALV ScP ScP 13 54 53.8 -3.7
comp=Z,12nm,0.8s,baz=105,slow=4.3,SNR=23
ZALV Zalesovo Beam 47.17 319 P **P** **13 50 30.2 -0.8**
ZALV 13 51 51.2
PKI Pulchoki 47.39 283 *e*P **P** **13 50 33.7 +0.6**
comp=Z,14nm,0.5s,mb4.8
PKIN Phulchoki 47.40 283 *e*P **P** **13 50 34.0 +0.8**
DMN Daman 47.64 283 *e*P **P** **13 50 35.4 +0.4**
comp=Z,23nm,0.5s,mb5.0
FITZ Fitzroy Crossi 47.70 198 *e*P **P** **13 50 34.9 -0.5**
comp=Z,33nm,1.2s,mb4.7
FITZ Fitzroy Crossi 47.70 198 P **P** **13 50 35.1 -0.4**
comp=Z,7.8nm,0.6s,mb4.4,baz=19,slow=6.8,SNR=41
FITZ PcP PcP 13 51 53.9 -1.1
comp=Z,1.8nm,0.8s,baz=138,slow=3.1,SNR=3.5
FITZ Fitzroy Crossi 47.70 198 P **P** **13 50 34.9 -0.6**
comp=Z,38nm,1.3s,mb4.8
WRA Warramunga Arr 47.89 186 P **P** **13 50 35.7 -1.2**
WRA PcP PcP 13 51 55.1 -0.4
WRA ScP ScP 13 54 58.9 -2.2
WRA S **S** **13 56 48.2 -8.1**
WRA Warramunga Arr 47.89 186 P **P** **13 50 35.7 -1.2**
comp=Z,18nm,0.5s,mb4.9,baz=2.0,slow=7.9,SNR=90
WRA PcP PcP 13 51 55.2 -0.4
comp=Z,6.4nm,0.9s,baz=356,slow=3.7,SNR=6.6
WRA ScP ScP 13 54 58.9 -2.2
comp=Z,2.5nm,0.9s,baz=360,slow=4.3,SNR=5.3
WRA S **S** **13 56 48.2 -8.1**
comp=Z,1.6nm,0.9s,baz=7.7,slow=14,SNR=4.7
WRA Warramunga Arr 47.89 186 P **P** **13 50 35.7 -1.2**
WRA 13 51 55.2
WRA S **S** **13 56 48.2 -8.1**
GKN Gorkha 47.95 284 *e*P **P** **13 50 37.6 +0.3**
MK31 Makanchi Array 47.96 309 *e*P **P** **13 50 37.0 -0.1**
MK31 ePcP PcP 13 51 54.7 -0.9
MK31 Makanchi Array 47.96 309 P **P** **13 50 37.0 -0.1**
MK31 pmax pmax
comp=Z,3.0nm,0.3s,mb4.3
MKAR Makanchi Array 47.96 309 P **P** **13 50 37.0 -0.1**
MKAR PcP PcP 13 51 54.7 -0.9
MKAR ScP ScP 13 54 58.1 -3.0
MKAR S **S** **13 56 53.5 -3.3**
MKAR Makanchi Array 47.96 309 P **P** **13 50 37.0 -0.1**
comp=Z,3.7nm,0.4s,mb4.2,baz=89,slow=10,SNR=37
MKAR PcP PcP 13 51 54.7 -0.9
comp=Z,2.9nm,0.8s,baz=79,slow=6.4,SNR=8.2
MKAR ScP ScP 13 54 58.1 -3.0
comp=Z,7.4nm,0.9s,baz=80,slow=5.1,SNR=13
MKAR S **S** **13 56 53.5 -3.3**
comp=Z,1.0nm,1.0s,baz=91,slow=13,SNR=3.6
MKAR Makanchi Array 47.96 309 P **P** **13 50 37.0 -0.1**
MKAR 13 51 54.7
MKAR S **S** **13 56 53.5 -3.3**
NVS Novosibirsk 48.24 320 *e*P **P** **13 50 38.2 -0.8**
NVS *e*S **S** **13 56 53.9 -6.4**
NVS pmax pmax
comp=Z,12nm,1.7s,mb4.2
NVS pmax pmax
comp=E,7.0nm,1.5s
NVS smax
comp=N,31nm,3.2s
CTAO Charters Tower 48.26 171 *e*P **P** **13 50 38.6 -0.9**
comp=N,6.5nm,0.7s,mb4.3
CTAO Charters Tower 48.26 171 *e*P **P** **13 50 38.7 -0.9**
CTAO pmax pmax
comp=Z,7.0nm,0.7s,mb4.3
DANN Dangsing 48.62 284 *e*P **P** **13 50 43.1 +0.7**
comp=Z,36nm,0.5s,mb5.1
KOLN Koldamda 48.90 284 *e*P **P** **13 50 45.0 +0.6**
comp=Z,22nm,0.7s,mb4.8
KURK Kurchatov 50.56 314 *e*P **P** **13 50 55.6 -0.6**
comp=Z,14nm,0.6s,mb4.5
KURK Kurchatov 50.56 314 P **P** **13 50 56.1 -0.2**
comp=Z,18nm,0.4s,mb4.7,baz=92,slow=8.3,SNR=91
KURK ScP ScP 13 55 08.6 -3.6
comp=Z,2.1nm,0.9s,baz=103,slow=3.9,SNR=5.1
KURK S **S** **13 57 29.8 -2.4**
comp=Z,0.8nm,0.8s,baz=35,slow=27,SNR=7.7
KURK Kurchatov 50.56 314 P **P** **13 50 56.1 -0.2**
KURK S **S** **13 57 29.8 -2.3**
KURK pmax pmax
comp=Z,18nm,0.4s,mb4.8
KURK smax
comp=N,1.0nm,0.8s
SDPT Sand Point 50.62 40 *e*P **P** **13 50 55.0 -1.6**
comp=N,30nm,0.6s,mb4.8
ASAR Alice Springs 51.62 186 P **P** **13 51 03.2 -1.1**
comp=N,6.2nm,0.5s,mb4.2,baz=19,slow=12,SNR=154
ASAR PcP PcP 13 52 09.3 -0.1
comp=N,5.3nm,0.9s,baz=12,slow=3.5,SNR=14
ASAR ScP ScP 13 55 14.6 -2.4
comp=N,0.4nm,0.5s,baz=359,slow=4.4,SNR=3.6
ASAR S **S** **13 57 43.3 -3.7**
comp=N,1.6nm,0.9s,baz=11,slow=15,SNR=9.1
ASAR Alice Springs 51.62 186 P **P** **13 51 03.2 -1.1**
ASAR 13 52 09.3
ASAR S **S** **13 57 43.3 -3.6**
JOSI Joshimath 51.69 288 *e*PKP **P** **13 51 04.9 +0.1**
VIS Vishakhapatnam 52.24 271 *e*PKP **P** **13 51 08.8 -0.1**
MBWA Marble Bar 52.41 203 P **P** **13 51 09.3 -0.7**
KLP Kalpa 52.56 290 *e*PKP **P** **13 51 09.3 -1.8**
TKM2 Tokmak 2 52.84 304 *e*P **P** **13 51 12.9 +0.1**
comp=N,3.6nm,0.4s,mb4.0
TKM2 Tokmak 2 52.84 304 *e*P **P** **13 51 12.9 0.0**
TKM2 pmax pmax
comp=Z,4.0nm,0.4s,mb4.1
KZA Kyzart 53.18 303 *e*P **P** **13 51 16.9 +1.6**
comp=Z,7.5nm,0.5s,mb4.3
AAK Ala-Archa 53.68 304⇓ *e*P **P** **13 51 19.4 +0.6**
AAK pmax pmax
comp=Z,3.0nm,0.6s,mb3.8
EIDS Eidsvold 54.24 167 *e*P **P** **13 51 22.0 -0.9**
EIDS Eidsvold 54.24 167 *e*P **P** **13 51 21.9 -1.0**
comp=Z,20nm,1.1s,mb4.4
AYAN Aya Nagar 54.25 286 *e*PKP **P** **13 51 21.4 -1.8**
AML Almayashu 54.33 303 *e*P **P** **13 51 24.5 +1.0**
comp=Z,13nm,0.6s,mb4.4
SONA Sohna 54.35 286 *e*PKP **P** **13 51 23.0 -0.8**
QLP Quilpie 54.46 175 *e*P **P** **13 51 23.0 -1.5**
OHAK Old Harbor 54.77 38 *e*P **P** **13 51 25.5 -0.8**
comp=Z,26nm,1.4s,mb4.3
KUDL Kundal 54.88 286 *ex* **P** **13 51 23.0 -4.5**
KDAK Kodiak Island 55.17 37 *e*P **P** **13 51 28.5 -0.6**
comp=Z,23nm,1.1s,mb4.3
KDAK Kodiak Island 55.17 37 P **P** **13 51 28.6 -0.5**
comp=Z,17nm,1.0s,mb4.2,baz=286,slow=3.9,SNR=10
KDAK Kodiak Island 55.17 37 P **P** **13 51 28.6 -0.5**
KDAK pmax pmax
comp=Z,17nm,1.0s,mb4.2
RSO Redoubt South 55.23 34 *e*P **P** **13 51 29.2 -0.2**
KHET Khetri 55.48 286 *e*PKP **P** **13 51 31.3 -0.5**
KHET AMb AMb 13 51 32.4
comp=Z,20nm,0.5s,mb4.6
BHPL Bhopal 55.53 280 *e*PKP **P** **13 51 32.9 +0.8**
BVAR Borovoye Array 55.68 317 P **P** **13 51 32.4 -0.3**
comp=Z,30nm,0.4s,mb4.8,baz=89,slow=6.9,SNR=169
BVAR PcP PcP 13 52 24.1 -0.5
comp=Z,2.3nm,0.5s,baz=89,slow=4.5,SNR=2.2
BVAR ScP ScP 13 55 31.0 -3.5
comp=Z,3.6nm,0.7s,baz=90,slow=4.4,SNR=9.8
BVAR S **S** **13 58 35.2 -4.6**
comp=Z,0.7nm,0.6s,baz=67,slow=11,SNR=3.5
BVAR Borovoye Array 55.68 317 P **P** **13 51 32.4 -0.3**
BVAR 13 52 24.2
BVAR S **S** **13 58 35.3 -4.5**
PPLA Purkeypile 55.69 31 *e*P **P** **13 51 33.3 +0.7**
comp=Z,30nm,1.4s,mb4.3
BRVK Borovoye 55.74 317 *e*P **P** **13 51 32.9 -0.3**
comp=Z,14nm,0.5s,mb4.5
BRVK Borovoye 55.74 317 *e*P **P** **13 51 32.9 -0.2**
BRVK pmax pmax
comp=Z,14nm,0.5s,mb4.5
BPAW Bear Paw Mtn. 56.34 30 *e*P **P** **13 51 37.3 +0.3**
comp=Z,8.4nm,0.6s,mb4.2
KK31 Karatay Array 56.52 305 *i* P **P** **13 51 38.4 -0.3**
KK31 pmax pmax
comp=Z,12nm,0.5s,mb4.4
KKAR Karatay Array 56.52 305 *e*P **P** **13 51 38.6 -0.1**
comp=Z,24nm,0.7s,mb4.5
KKAR Karatay Array 56.52 305 *e*P **P** **13 51 38.6 -0.1**
KKAR pmax pmax
comp=Z,24nm,0.7s,mb4.5
HYB Hyderabad 56.58 273 *i* P **P** **13 51 40.0 +0.5**
RC01 Rabbit Creek A 56.74 33 *e*P **P** **13 51 39.3 -0.5**
comp=Z,12nm,0.9s,mb4.1
SEW Seward 56.85 34 *e*P **P** **13 51 39.7 -1.0**
comp=Z,21nm,1.0s,mb4.3
COLD Coldfoot 56.96 26 *e*P **P** **13 51 41.3 0.0**
comp=Z,12nm,1.1s,mb4.0
PMR Palmer 57.04 33 *e*P **P** **13 51 41.0 -1.0**
comp=Z,20nm,1.0s,mb4.3
PMR Palmer 57.04 33 *e*P **P** **13 51 41.0 -1.0**
PMR pmax pmax
comp=Z,20nm,1.0s,mb4.3
MCK McKinley 57.21 30 *e*P **P** **13 51 42.5 -0.6**
comp=Z,40nm,0.9s,mb4.7
MCK McKinley 57.21 30 *e*P **P** **13 51 42.5 -0.6**
MCK pmax pmax
comp=Z,40nm,0.9s,mb4.7
SML Sawmill 57.43 32 *e*P **P** **13 51 43.9 -0.6**
comp=Z,6.0nm,0.8s,mb3.9
SML Sawmill 57.43 32 *e*P **P** **13 51 43.9 -0.7**
SML pmax pmax
comp=Z,6.0nm,0.8s,mb3.9
COLA College 57.74 29 *e*P **P** **13 51 46.9 +0.3**
comp=Z,4.9nm,0.8s,mb3.8
COLA College 57.74 29 *e*P **P** **13 51 46.9 +0.2**
COLA pmax pmax
comp=Z,5.0nm,0.8s,mb3.8
ILAR Eielson Array 58.15 29 P **P** **13 51 48.0 -1.4**
comp=Z,3.2nm,0.5s,mb3.8,baz=249,slow=5.6,SNR=55
ILAR S **S** **13 59 09.7 -1.4**
comp=Z,1.3nm,1.0s,baz=251,slow=9.7,SNR=9.9
PAX Paxson 58.76 31 *e*P **P** **13 51 53.2 -0.4**
comp=Z,21nm,1.2s,mb4.2
PAX Paxson 58.76 31 *e*P **P** **13 51 53.2 -0.4**
PAX pmax pmax
comp=Z,21nm,1.2s,mb4.2
BMRM Bremner River 59.24 33 *e*P **P** **13 51 56.6 -0.2**
comp=Z,32nm,0.8s,mb4.6
KBL Kabul 59.37 295 *e*P **P** **13 51 58.1 -0.2**
comp=Z,20nm,1.0s,mb4.3
KBL Kabul 59.37 295 *e*P **P** **13 51 58.1 -0.1**
KBL pmax pmax
comp=Z,20nm,1.0s,mb4.3
DOT Dot Lake 59.38 30 *e*P **P** **13 51 57.5 -0.3**
comp=Z,50nm,0.7s,mb4.8
FORT Forrest 59.42 191 *e*P **P** **13 51 57.5 -0.9**
comp=Z,67nm,1.4s,mb4.7
MENT Mentasta 59.56 31 *e*P **P** **13 51 59.2 +0.2**
STKA Stephens Creek 59.57 178 *e*P **P** **13 51 58.2 -1.2**
comp=Z,7.2nm,1.0s,mb4.0
STKA Stephens Creek 59.57 178 P **P** **13 51 58.6 -0.8**
comp=Z,8.3nm,0.8s,mb4.1,baz=357,slow=7.6,SNR=13
STKA PcP PcP 13 52 36.3 -4.0
comp=Z,2.3nm,0.6s,baz=347,slow=16,SNR=4.1
POO Poona 60.30 276 *e*PKP **P** **13 52 04.8 +0.1**
POO AMb AMb 13 52 06.5
comp=Z,15nm,0.3s,mb4.8
KAD Karad 60.47 275 *e*PKP **P** **13 52 05.8 0.0**
EGAK Eagle 60.60 29 *e*P **P** **13 52 05.0 -0.8**
comp=Z,5.5nm,0.8s,mb3.9
SVE Sverdlovsk 60.98 322 *e*P **P** **13 52 08.7 +0.2**
ARU Arti 62.17 322 *e*P **P** **13 52 14.9 -1.4**
comp=Z,15nm,0.4s,mb4.8
ARU Arti 62.17 322 *c i*P **P** **13 52 15.5 -0.8**
ARU S **S** **13 59 56.6 -5.1**
ARU pmax pmax
comp=Z,14nm,0.7s,mb4.5
AB31 Akbulak array 62.67 314 P **P** **13 52 18.6 -1.0**
AB31 pmax pmax
comp=Z,4.0nm,0.3s,mb4.3
ABKAR Akbulak array 62.67 314 *e*P **P** **13 52 18.9 -0.8**
comp=Z,8.6nm,0.5s,mb4.4
INK Inuvik 63.27 25 P **P** **13 52 22.4 -0.8**
comp=Z,2.4nm,0.4s,mb4.0,baz=294,slow=7.3,SNR=13
AKTK Aktyubinsk 63.63 315 P **P** **13 52 25.0 -0.8**
AKTO Aktyubinsk 63.63 315 P **P** **13 52 25.0 -0.8**
comp=Z,6.3nm,0.7s,mb4.2,baz=101,slow=5.9,SNR=22
NWAO Narrogin (SRO) 64.12 201 P **P** **13 52 28.3 -0.8**
comp=Z,11nm,0.7s,mb4.4,baz=22,slow=9.0,SNR=7.5
DLBC Dease Lake 66.92 35 P **P** **13 52 47.1 +0.7**
comp=Z,4.1nm,1.0s,mb3.9,baz=316,slow=6.2,SNR=6.1
KLMR Klimovskoe 70.54 329 *e*P **P** **13 53 06.4 -1.8**
KLMR pmax pmax
comp=Z,19nm,1.5s,mb4.4
KEV Kevo 71.30 340 *e*P **P** **13 53 11.1 -1.4**
KEV pmax pmax
comp=Z,6.0nm,0.5s,mb4.4
RES Resolute Bay 71.78 13 P **P** **13 53 15.2 0.0**
comp=Z,10nm,0.8s,mb4.3,baz=317,slow=6.6,SNR=7.8
ARCES ARCESS Array B 71.86 340 P **P** **13 53 15.4 -0.4**
comp=Z,7.0nm,0.5s,mb4.4,baz=75,slow=8.7,SNR=75
YKA Yellowknife Ar 72.55 28 P **P** **13 53 18.9 -1.0**
comp=Z,4.9nm,0.6s,mb4.1,baz=298,slow=6.0,SNR=16
JOF Joensuu 73.16 333 *e*P **P** **13 53 22.6 -0.8**
JOF pmax pmax
comp=Z,6.0nm,0.4s,mb4.4
VRHR Novokhopersk 73.30 319 *e*P **P** **13 53 23.0 -1.4**
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,20nm,0.4s
VRHR pmax pmax
comp=Z,20nm,0.4s,mb4.9
OBN Obninsk 74.36 324⇓ *e*P **P** **13 53 30.3 0.0**
OBN *e*S S 14 02 17.0 -6.0
OBN pmax pmax
comp=Z,8.0nm,1.1s,mb4.1
OBN MLR MLR
comp=Z,100nm,16.0s
VSR Storozhevoye 74.66 320 *e*P **P** **13 53 31.7 -0.4**
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
VSR pmax pmax
comp=N,3.0nm,0.3s
VSR pmax pmax
comp=E,5.0nm,0.5s
GOF Gofitskoye 74.91 313 *e*P **P** **13 53 34.8 +1.1**
KAF Kangasniemi 75.57 333 *e*P **P** **13 53 35.0 -2.0**
KAF pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
KIV Kislovodsk 75.59 312⇑ *e*P **P** **13 53 38.5 +1.0**
KIV *e* 13 56 32.9
KIV *e*S S 14 02 26.1 -11
KIV *e*SS SS 14 07 50.6 +9.5
KIV pmax pmax
comp=Z,11nm,0.9s,mb4.3
FINES FINESS Array B 76.03 333 P **P** **13 53 38.4 -1.2**
comp=Z,15nm,0.4s,mb4.8,baz=67,slow=5.1,SNR=89
B08A Colville Reser 76.58 42 ⇓P **P** **13 53 43.0 +0.1**
baz=76
RPZ Rata Peaks 77.05 157 P **P** **13 53 44.7 -0.7**
comp=Z,19nm,0.8s,mb4.6,baz=78,slow=4.8,SNR=5.5
K05A Summer Lake 78.16 48 ⇑P **P** **13 53 52.2 +0.5**
baz=78
MIB Mutribah 78.24 297 *e*P **P** **13 53 51.6 -0.6**
MIB AMb AMb 13 53 52.0
comp=Z,49nm,0.6s,mb5.0
I07A Izee 78.44 46 ⇓P **P** **13 53 53.6 +0.5**
baz=78
RDF Al-Radifah 78.45 297 *e*P **P** **13 53 52.8 -0.6**
RDF AMb AMb 13 53 53.5
comp=Z,34nm,0.6s,mb4.8
NAY Al-Naaiem 78.55 297 *e*P **P** **13 53 53.2 -0.8**
NAY AMb AMb 13 53 54.1
comp=Z,28nm,1.0s,mb4.6
C11A Tepee Creek (N 78.65 42 ⇑P **P** **13 53 54.3 +0.2**
baz=78
B13A Whitefish 79.42 41 ⇑P **P** **13 53 58.6 +0.4**
baz=79
J08A Circle Bar Ran 79.44 46 ⇓P **P** **13 53 59.4 +1.0**
baz=79
D12A Red Ives Fores 79.57 42 ⇓P **P** **13 53 59.2 +0.2**
baz=79
C13A Hot Springs 79.71 41 ⇓P **P** **13 53 59.9 +0.2**
baz=80
A14A Double T Ranch 79.72 40 ⇓P **P** **13 54 00.4 +0.7**
baz=80
E12A Beaver Dam Sad 79.75 43 ⇑P **P** **13 54 00.8 +0.8**
baz=80
D13A Huson 80.08 42 ⇓P **P** **13 54 01.7 0.0**
baz=80
A15A Johnson Ranch, 80.10 40 ⇑P **P** **13 54 01.9 +0.2**
baz=80
C14A Swan Lake 80.15 41 ⇑P **P** **13 54 02.7 +0.7**
baz=80
F12A Elk City 80.28 43 ⇓P **P** **13 54 03.4 +0.6**
baz=80
AKASG Malin Array Be 80.40 323 P **P** **13 54 02.1 -1.2**
comp=Z,1.5nm,0.4s,mb3.7,baz=47,slow=5.3,SNR=14
KIEV Kiev 80.41 323 P **P** **13 54 02.1 -1.2**
comp=Z,3.7nm,0.4s,mb4.1
KIEV Kiev 80.41 323 P **P** **13 54 02.1 -1.2**
KIEV pmax pmax
comp=Z,4.0nm,0.4s,mb4.1
WCN Washoe City 80.52 51 ⇓P **P** **13 54 04.5 +0.4**
baz=80
B15A Bradely Ranch, 80.55 40 ⇑P **P** **13 54 04.5 +0.4**
baz=80
G12A Big Creek, Yel 80.55 44 ⇑P **P** **13 54 04.3 +0.1**
baz=80
C15A Salmond Ranch, 80.80 41 ⇓P **P** **13 54 06.3 +0.9**
baz=81
F13A Darby 80.81 43 ⇑P **P** **13 54 05.2 -0.4**
baz=81
B16A M & M Farms, S 80.98 40 ⇑P **P** **13 54 06.5 +0.2**
baz=81,SNR=5.6
MALT Malatya 81.00 309 *e*P **P** **13 54 07.2 +0.5**
comp=Z,12nm,1.1s,mb4.2
MALT Malatya 81.00 309 *e*P **P** **13 54 07.2 +0.5**
MALT pmax pmax
comp=Z,12nm,1.1s,mb4.2
MFID Camas Ranch 81.09 45 ⇑P **P** **13 54 07.7 +0.6**
baz=81
H12A Diamond D Ranc 81.13 44 ⇓P **P** **13 54 07.8 +0.6**
baz=81
G13A Cobalt 81.23 43 ⇑P **P** **13 54 07.6 -0.1**
baz=81
A17A Triple J Farms 81.26 39 ⇑P **P** **13 54 08.0 +0.3**
baz=81
C16A Fuhringer Ranc 81.28 40 ⇓P **P** **13 54 08.2 +0.3**
baz=81
I12A Atlanta 81.34 45 ⇓P **P** **13 54 08.7 +0.4**
baz=81
H13A Challis 81.49 44 ⇓P **P** **13 54 09.3 +0.2**
baz=81
E15A Deer Lodge 81.49 42 ⇑P **P** **13 54 09.3 +0.3**
baz=81
B17A L&G Farms, Che 81.55 39 ⇓P **P** **13 54 09.6 +0.3**
baz=81,SNR=11
HFS Hagfors 81.60 336 P **P** **13 54 07.4 -1.9**
comp=Z,3.8nm,0.4s,mb4.2,baz=98,slow=3.3,SNR=31
A18A Metzger Ranch, 81.74 39 ⇓P **P** **13 54 10.3 0.0**
baz=82
D16A Dana Ranch, Ca 81.81 41 ⇑P **P** **13 54 11.1 +0.5**
baz=82
NOA NORSAR Array B 81.84 337 P **P** **13 54 08.8 -1.6**
comp=Z,6.4nm,0.5s,mb4.3,baz=46,slow=4.9,SNR=25
F15A Butte 81.89 42 ⇓P **P** **13 54 11.2 +0.1**
baz=82,SNR=5.2
HLID Hailey 81.91 45 ⇑P **P** **13 54 11.7 +0.5**
baz=82
HLID Hailey 81.91 45 *e*P **P** **13 54 11.8 +0.6**
comp=Z,2.2nm,1.1s,mb3.5
I13A Wildhorse Cree 81.91 44 ⇓P **P** **13 54 12.1 +0.8**
baz=82
NVAR Mina Array Bea 81.93 51 P **P** **13 54 11.7 +0.3**
comp=Z,1.6nm,0.5s,mb3.7,baz=293,slow=5.5,SNR=22
NVAR pP pP 13 56 02.7 +0.5
comp=Z,0.4nm,0.6s,baz=266,slow=5.4,SNR=2.1
H14A Leadore 82.00 44 ⇓P **P** **13 54 12.0 +0.3**
baz=82
B18A Beardsley Farm 82.07 39 ⇓P **P** **13 54 12.1 +0.1**
baz=82,SNR=5.1
J13A Cove Ranch, Pi 82.14 45 ⇑P **P** **13 54 12.9 +0.5**
baz=82
D17A Six Diamond Ra 82.24 40 ⇓P **P** **13 54 13.1 +0.2**
baz=82
EGMT Eagleton 82.29 39 ⇓P **P** **13 54 13.4 +0.4**
baz=82
I14A Mackay 82.31 44 ⇑P **P** **13 54 14.6 +1.3**
baz=82,SNR=8.3
E17A Martinsdale 82.51 41 ⇑P **P** **13 54 15.0 +0.7**
baz=82,SNR=5.1
J14A Carey 82.59 45 ⇓P **P** **13 54 15.9 +1.2**
baz=82,SNR=6.0
C19A Slack Wire Ran 82.84 39 ⇓P **P** **13 54 16.2 +0.4**
baz=83
F17A Fitzpatrick Pl 82.93 41 ⇓P **P** **13 54 16.9 +0.6**
baz=83
E18A Harlowton 83.00 41 ⇑P **P** **13 54 16.9 +0.2**
baz=83
K14A Jones Ranch, D 83.21 45 ⇑P **P** **13 54 18.1 +0.3**
baz=83
S10A Tonopah Range, 83.35 51 ⇓P **P** **13 54 18.8 +0.2**
baz=83,SNR=8.8
R10A Warm Springs 83.36 50 ⇓P **P** **13 54 19.1 +0.4**
baz=83
O12A Currie 83.39 48 ⇓P **P** **13 54 19.3 +0.5**
baz=83
L14A Malta 83.44 46 ⇓P **P** **13 54 19.7 +0.7**

baz=83
F18A **Big Timber** 83.48 41 ⇓P P 13 54 19.7 +0.6
baz=83
BR131 **Keskin Array S** 83.54 312 *e*P P 13 54 18.7 -0.9
comp=Z,2.1nm,0.4s,mb4.0
BRTR **Keskin Array B** 83.54 312 P P 13 54 18.5 -1.0
comp=Z,1.9nm,0.4s,mb4.0,baz=98,slow=3.2,SNR=12
MPMC **Manual Prospec** 83.66 53 ⇑P P 13 54 20.3 0.0
baz=84
P12A **McGill** 83.69 49 ⇑P P 13 54 20.8 +0.5
baz=84
E19A **Rath Farm, Rou** 83.71 40 ⇓P P 13 54 20.2 0.0
baz=84
D20A **Manuel Ranch,** 83.72 39 ⇓P P 13 54 20.5 +0.2
baz=84
J16A **Bone** 83.79 44 ⇓P P 13 54 21.4 +0.7
baz=84
LRMC **Laurel Mountai** 83.81 53 ⇑P P 13 54 21.1 +0.2
baz=84,SNR=5.1
R11A **Troy Canyon, C** 83.82 50 ⇓P P 13 54 21.1 +0.2
baz=84,SNR=5.8
EDW2 **Edwards Air Fo** 83.89 54 ⇑P P 13 54 21.6 +0.3
baz=84
FURC **Furnace Creek,** 83.90 52 ⇓P P 13 54 21.6 +0.3
baz=84
L15A **Malad City** 84.00 45 ⇑P P 13 54 21.8 0.0
baz=84
E20A **Meyer Farm, Mu** 84.06 40 ⇓P P 13 54 22.0 +0.1
baz=84
RLMT **Red Lodge** 84.18 42 ⇑P P 13 54 22.9 +0.3
baz=84
U10A **Ash Meadows, A** 84.29 52 ⇑P P 13 54 23.7 +0.4
baz=84
P13A **Bates Ranch, G** 84.29 48 ⇓P P 13 54 23.7 +0.4
baz=84
BUR08 **Bucovina Ar. S** 84.30 322 *e*P P 13 54 22.8 -0.3
R12A **Pony Springs,** 84.49 49 ⇓P P 13 54 24.4 +0.1
baz=84
GSC **Goldstone** 84.52 53 ⇑P P 13 54 24.3 -0.2
baz=84
L16A **Fish Haven** 84.59 45 ⇑P P 13 54 25.2 +0.5
baz=84
T11A **Corn Creek, Al** 84.64 51 ⇓P P 13 54 24.8 -0.2
baz=84
DUG **Dugway** 84.69 47 ⇓P P 13 54 25.5 +0.3
baz=84
S12A **Delamar Landin** 84.70 50 ⇓P P 13 54 25.6 +0.3
baz=84
G20A **Bridger** 84.74 41 ⇓P P 13 54 25.3 -0.1
baz=84
P14A **Drum Mountains** 84.84 48 ⇓P P 13 54 26.5 +0.5
baz=85
LAO **LASA Array** 85.02 39 ⇓P P 13 54 26.6 -0.1
baz=85
Q14A **Sevier Lake (B** 85.03 48 ⇓P P 13 54 27.1 +0.3
baz=85
TUQ **Turquoise Moun** 85.08 52 ⇓P P 13 54 27.3 +0.1
baz=85
BW06 **Boulder Array** 85.33 44 ⇑P P 13 54 28.5 +0.3
baz=85
PDAR **Pinedale Array** 85.33 44 P P 13 54 28.4 +0.2
comp=Z,0.7nm,0.7s,mb3.3,baz=283,slow=2.6,SNR=6.4
PDAR pP pP 13 56 21.4 +1.3
comp=Z,0.6nm,0.7s,baz=303,slow=5.0,SNR=2.5
M17A **Scullys Gap (B** 85.36 45 ⇑P P 13 54 28.7 +0.3
baz=85
GMRC **Granite Mounta** 85.60 53 ⇑P P 13 54 29.7 0.0
baz=85
PFO **Pinyon Flat Ob** 85.63 54 ⇓P P 13 54 29.9 0.0
baz=86
T13A **Saint George** 85.65 50 ⇑P P 13 54 30.3 +0.4
baz=86
BELC **Belle Mtn. Jos** 85.76 54 ⇑P P 13 54 30.4 -0.1
baz=86
H21A **Big Horn, Sher** 85.76 41 ⇓P P 13 54 29.8 -0.5
baz=86
MONP **Monument Peak** 86.02 55 ⇑P P 13 54 32.0 +0.2
baz=86
IRM **Iron Mountain** 86.28 53 ⇓P P 13 54 32.9 -0.1
baz=86
BC3 **Big Chuckawall** 86.32 54 ⇑P P 13 54 33.3 +0.1
baz=86
SRU **San Rafael** 86.76 47 ⇑P P 13 54 34.8 -0.4
baz=87
K21A **Alcova** 86.80 43 ⇑P P 13 54 35.5 +0.2
baz=87
Z13A **Yuma Proving G** 87.84 53 ⇓P P 13 54 40.4 +0.1
baz=88
113A **Mohawk Valley,** 87.99 54 ⇓P P 13 54 40.6 -0.4
baz=88
L23A **Garrett** 88.03 42 ⇓P P 13 54 40.4 -0.7
baz=88
N23A **Red Feather La** 88.61 44 ⇑P P 13 54 44.1 +0.3
baz=88
Q22A **Crested Butte,** 89.21 46 ⇓P P 13 54 46.8 +0.2
baz=89
Q23A **Hartsel** 89.87 45 ⇓P P 13 54 49.7 0.0
baz=90
U21A **Nageezi** 90.15 48 ⇓P P 13 54 51.9 +0.9
baz=90
X19A **St. Johns** 90.20 50 ⇓P P 13 54 51.7 +0.4
baz=90
T22A **Edith** 90.30 47 ⇑P P 13 54 51.7 0.0
baz=90
W20A **Ramah** 90.34 49 ⇑P P 13 54 52.2 +0.3
baz=90
Y19A **Nutrioso** 90.50 51 ⇓P P 13 54 52.9 +0.3
baz=90
X20A **Quemado** 90.68 50 ⇑P P 13 54 53.8 +0.3
baz=90
R24A **Sanders Place,** 90.72 45 ⇑P P 13 54 54.1 +0.5
baz=90
SDCO **Great Sand Dun** 90.77 46 ⇓P P 13 54 54.4 +0.5
baz=91
V22A **San Miguel Ran** 90.94 48 ⇑P P 13 54 54.8 +0.1
baz=91
EKA **Eskdalemuir Ar** 91.02 340 P P 13 54 52.3 -2.3
comp=Z,0.9nm,0.6s,mb3.9,baz=48,slow=2.8,SNR=4.8
ESK **Eskdalemuir** 91.05 340 *i* P P 13 54 57.3 +2.5
218A **Dragoon** 91.06 53 ⇑P P 13 54 55.9 +0.6
baz=91
Y20A **Horse Springs,** 91.12 50 ⇓P P 13 54 56.1 +0.5
baz=91
X21A **Alamocita Cree** 91.21 50 ⇑P P 13 54 56.3 +0.4
baz=91
Z20A **Nine Sixteen R** 91.43 51 ⇓P P 13 54 57.6 +0.6
baz=91
Y21A **Point of Rocks** 91.54 50 ⇑P P 13 54 58.2 +0.7
baz=91
219A **White Tail Can** 91.60 52 ⇑P P 13 54 58.4 +0.6
baz=91
ANMO **Albuquerque** 91.81 49 P P 13 54 59.0 +0.3
comp=Z,2.9nm,0.9s,mb4.3,baz=274,slow=6.2,SNR=6.7
319A **Douglas** 91.94 53 ⇓P P 13 54 59.8 +0.5
baz=92
Z21A **St. Cloud Mine** 91.95 50 ⇓P P 13 54 59.6 +0.2
baz=92
Y22A **Socorro** 92.06 50 ⇓P P 13 55 00.1 +0.2
baz=92
V24A **Rampart Ranch,** 92.12 47 ⇓P P 13 55 00.9 +0.7
baz=92
U25A **Circle Dot Ran** 92.28 46 ⇑P P 13 55 01.0 +0.2
baz=92
W24A **Lazy 6 Ranch,** 92.34 48 ⇓P P 13 55 01.7 +0.6
baz=92
Z22A **Elephant Butte** 92.46 50 ⇓P P 13 55 02.1 +0.3
baz=92
TXAR **Lajitas Array** 97.06 52 P P 13 55 22.3 -0.4
comp=Z,0.9nm,0.7s,mb4.1,baz=301,slow=2.8,SNR=12
TXAR pP pP 13 57 17.4 +1.0
comp=Z,1.5nm,0.9s,baz=264,slow=2.4,SNR=4.4
QSPA **South Pole Qui** 117.75 180 PKP PKPdf 14 00 31.1 -1.2
comp=Z,2.2nm,0.6s,baz=348,slow=1.4,SNR=29
LBTB **Lobatse** 121.30 256 *e*PKPdf PKPdf 14 00 40.1 -0.5
TORD **Torodi Ar. Bea** 122.09 309 PKP PKPdf 14 00 40.8 -1.7
comp=Z,1.7nm,0.6s,baz=68,slow=0.7,SNR=10
BOSA **Boshof** 122.67 252 PKP PKPdf 14 00 42.5 -0.7
comp=Z,1.9nm,0.6s,baz=329,slow=2.7,SNR=3.8
DBIC **Dimbokro** 131.20 309 SKPbc SKPbc 14 03 34.5 -2.6
comp=Z,18nm,0.9s,baz=30,slow=4.4,SNR=11
USHA **Ushuaia** 146.45 151 PKPbc PKPbc 14 01 26.7 -1.8
comp=Z,16nm,0.9s,baz=256,slow=3.8,SNR=4.1
LPAZ **La Paz** 152.08 71 PKP PKPdf 14 01 36.1 -0.1
LPAZ PKPbc PKPbc 14 01 43.7 +0.3
LPAZ **La Paz** 152.08 71 PKP PKPdf 14 01 36.1 -0.1
comp=Z,0.9nm,0.9s,baz=334,slow=4.8,SNR=4.1
LPAZ PKPbc PKPbc 14 01 43.7 +0.4
comp=Z,5.2nm,0.7s,baz=316,slow=2.2,SNR=23

PLCA Paso Flores 152.38 125 PKPbc PKPbc 14 01 43.0 -0.3
PLCA PKPab PKPab 14 01 56.7 +0.7
PLCA Paso Flores 152.38 125 PKPbc PKPbc 14 01 43.0 -0.3
comp=Z,7.7nm,0.6s,baz=219,slow=3.7,SNR=20
PLCA PKPab PKPab 14 01 56.7 +0.7
comp=Z,5.7nm,1.0s,baz=294,slow=5.2,SNR=4.1
CPUP Villa Florida 165.06 88 PKP PKPdf 14 01 50.5 -0.7
comp=Z,1.3nm,0.6s,baz=151,slow=3.8,SNR=4.3

IDC ***27*** *13:44:35.6±0.8, 10.02N×127.16E, h0km, mb4.2/13, mb1 4.3/14, mb1mx4.1/24, mbtmp4.2/14, ML4.7/1, MS3.1/2, Ms1 3.1/2, ms1mx2.4/29, Error ellipse: s-maj=38.0km s-min=13.9km az=72.0*
ISCJB ***27*** *13:44:38.6±0.5, 10.01N±0.07×127.2E±0.1, h33km, mb4.2/13, Error ellipse: s-maj=14.2km s-min=9.5km az=178.4*
NEIC ***27*** *13:44:40.6±0.4, 10.00N×127.19E, h35km, mb4.8/2, Error ellipse: s-maj=13.4km s-min=9.1km az=76.0*
NEIC Felt [IV PIVS] in Dinagat and [III PIVS] at Surigao, Mindanao.
MAN ***27*** *13:44:41, 10.15N×125.64E, h13km, mb4.7, ML3.7, MS3.7*
MAN INTENSITY IV - DINAGAT PROVINCE; INTENSITY III - SURIGAO CITY.

ISC 27 13:44:40.8±0.5, 10.00N±0.07×127.2E±0.1, h35km, n26, σ0.8 88/26, mb4.2/13, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUKP	**Musuan**	**2.98**	**225**	*e*P	**Pn**	**13 45 19.9**	**-5.6**
MATI	**Mati**	**3.17**	**197**	*e*P	**Pn**	**13 45 32.5**	**+4.3**
DAV	**Davao City (W)**	**3.32**	**209**	*e*P	**Pn**	**13 45 29.8**	**-0.4**
DAV				Sn	**Sn**	**13 46 14.1**	**+5.6**
DAV				LR	LR	13 47 02.4	
DAV	**Davao City (W)**	**3.32**	**209**	Pn	**Pn**	**13 45 29.9**	**-0.3**
	78nm,0.3s,baz=275,slow=3.6,SNR=5.3						
DAV				Sn	**Sn**	**13 46 14.1**	**+5.6**
	54nm,0.3s,baz=247,slow=19,SNR=4.1						
DAV				LR	LR	13 47 02.4	
	comp=Z,294nm,21.6s,baz=188,slow=44						
PVCP	**Virac**	**4.65**	**321**	*e*P	**Pn**	**13 45 40.5**	**-8.0**
GUMO	**Guam**	**17.67**	**77**	P	**Pn**	**13 48 43.5**	**-0.8**
	143nm,1.1s						
GUMO	**Guam**	**17.67**	**77**	LR	LR	13 54 16.5	
	comp=Z,68nm,20.2s,baz=91,slow=33						
FITZ	**Fitzroy Crossi**	**27.96**	**183**	*e*P	**P**	**13 50 26.9**	**-1.3**
	40nm,1.5s,mb4.8						
FITZ	**Fitzroy Crossi**	**27.96**	**183**	P	**P**	**13 50 26.9**	**-1.3**
FITZ	**Fitzroy Crossi**	**27.96**	**183**	P	**P**	**13 50 26.9**	**-1.3**
	1.1nm,0.5s,mb3.7,baz=60,slow=8.3,SNR=10						
CMAR	**Chiang Mai Arr**	**28.61**	**290**	P	**P**	**13 50 32.7**	**-1.4**
	1.1nm,0.9s,mb3.6,baz=102,slow=8.4,SNR=3.1						
WRA	**Warramunga Arr**	**30.57**	**167**	P	**P**	**13 50 51.4**	**+0.1**
	2.5nm,0.3s,mb4.5,baz=2.6,slow=7.4,SNR=9.3						
ASAR	**Alice Springs**	**34.10**	**169**	P	**P**	**13 51 22.3**	**+0.2**
	3.5nm,0.5s,mb4.6,baz=356,slow=7.0,SNR=12						
STKA	**Stephens Creek**	**43.86**	**162**	P	**P**	**13 52 45.5**	**+1.7**
	4.6nm,0.5s,mb4.5,baz=338,slow=7.8,SNR=9.1						
MK31	**Makanchi Array**	**52.79**	**322**	*e*P	**P**	**13 53 52.6**	**+0.1**
MKAR	**Makanchi Array**	**52.79**	**322**	P	**P**	**13 53 52.2**	**-0.3**
MKAR	**Makanchi Array**	**52.79**	**322**	P	**P**	**13 53 52.2**	**-0.3**
	5.3nm,0.6s,mb4.7,baz=120,slow=7.8,SNR=23						
ZALV	**Zalesovo Beam**	**55.30**	**331**	P	**P**	**13 54 11.1**	**+0.5**
	1.4nm,0.6s,mb4.2,baz=134,slow=7.4,SNR=3.3						
KURK	**Kurchatov**	**56.80**	**325**	*e*P	**P**	**13 54 20.9**	**-0.6**
	3.2nm,0.5s,mb4.6						
KURK	**Kurchatov**	**56.80**	**325**	P	**P**	**13 54 21.5**	**0.0**
	3.6nm,0.5s,mb4.6,baz=126,slow=7.0,SNR=12						
BVAR	**Borovoye Array**	**62.40**	**325**	P	**P**	**13 54 59.8**	**-0.2**
	1.0nm,0.6s,mb4.2,baz=105,slow=3.3,SNR=3.1						
ILAR	**Eielson Array**	**79.29**	**26**	P	**P**	**13 56 41.3**	**-1.0**
	0.2nm,0.7s,mb3.1,baz=255,slow=5.5,SNR=3.3						
ARCES	**ARCESS Array B**	**84.76**	**340**	P	**P**	**13 57 12.6**	**+1.6**
	0.6nm,0.5s,mb4.0,baz=114,slow=9.0,SNR=5.3						
BRTR	**Keskin Array B**	**86.40**	**310**	P	**P**	**13 57 20.2**	**+0.4**
	0.5nm,0.5s,mb4.0,baz=78,slow=3.4,SNR=2.2						
FINES	**FINESS Array B**	**86.56**	**332**	P	**P**	**13 57 21.1**	**+1.0**
	1.1nm,0.5s,mb4.3,baz=64,slow=4.4,SNR=3.6						
PLCA	**Paso Flores**	**145.60**	**156**	PKPbc	PKPbc	14 04 15.2	-0.6
	1.5nm,0.6s,baz=264,slow=3.9,SNR=4.1						

CSEM ***27*** *13:48:22.4±0.3, 40.00N×42.18E, h10km, MD2.8, Error ellipse: s-maj=7.8km s-min=7.4km az=47.0*
DDA ***27*** *13:48:23.8, 40.06N×42.15E, h7km, 3km, Md2.8*
ISCJB ***27*** *13:48:24.1±1.0, 40.02N±0.05×42.13E±0.09, h17km±14km, Error ellipse: s-maj=12.1km s-min=8.7km az=175.0*

ISC 27 13:48:23.8±1.0, 40.05N±0.04×42.20E±0.08, h14km±11km, n11, σ0.8 84/19, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOMI	**Horasan**	**0.22**	**268**	*i* P	**Pg**	**13 48 28.2**	**-0.5**
HOMI				*i* S	**Sg**	**13 48 31.5**	**-0.5**
ERZM	**Erzurum**	**0.65**	**257**	*i* P	**Pg**	**13 48 35.6**	**-0.9**
ERZM				*i* S	**Sg**	**13 48 47.3**	**+2.1**
ERZM	**Erzurum**	**0.65**	**257**	*i* P	**Pg**	**13 48 35.6**	**-0.9**
ERZM				*i* S	**Sg**	**13 48 47.3**	**+2.1**
EZM	**Erzurum**	**0.66**	**257**	*e*PG	**Pg**	**13 48 36.2**	**-0.3**
AGRB	**Hanur-Agry**	**0.78**	**128**	*e*PN	**Pg**	**13 48 39.4**	**+0.6**
AGRB				*e*SN	**Sg**	**13 48 56.7**	**+7.6**
AGRB	**Hanur-Agry**	**0.78**	**128**	*e*Pn	**Pg**	**13 48 39.4**	**+0.6**
AGRB				*e*Sn	**Sg**	**13 48 56.7**	**+7.6**
DDEM	**Demirkent**	**0.90**	**338**	*i* P	**Pg**	**13 48 40.8**	**-0.5**
DDEM				*i* S	**Sg**	**13 48 52.8**	**-0.4**
DDEM	**Demirkent**	**0.90**	**338**	*i* P	**Pg**	**13 48 40.8**	**-0.5**
DDEM				*i* S	**Sg**	**13 48 52.8**	**-0.3**
DAGI	**Agillar**	**1.05**	**348**	*i* P	**Pg**	**13 48 43.7**	**-0.3**
DAGI				*i* S	**Sg**	**13 48 58.9**	**+1.3**
BCA	**Borcka**	**1.46**	**343**	*e*PN	**Pn**	**13 48 49.4**	**-0.3**
BCA	**Borcka**	**1.46**	**343**	*e*Pn	**Pn**	**13 48 49.4**	**-0.3**

IDC 27 14:00:53.6±0.8, 15.14S×174.43W, h150km±35km, mb3.4/3, mb1 3.7/4, mb1mx3.3/18, mbtmp3.4/4, Error ellipse: s-maj=270.3km s-min=13.0km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.84**	**65**	P	Pn	14 01 39.2	+0.2
	16nm,0.3s,baz=61,slow=1.6,SNR=4.8						
AFI				S	Sn	14 02 13.4	-0.6
	17nm,0.3s,baz=52,slow=22,SNR=7.8						
WRA	**Warramunga Arr**	**48.94**	**257**	P	P	14 09 25.0	0.0
	0.3nm,0.4s,baz=90,slow=8.3,SNR=2.7						
ASAR	**Alice Springs**	**49.25**	**252**	P	P	14 09 27.2	-0.1
	2.2nm,0.5s,baz=89,slow=7.6,SNR=84						
NVAR	**Mina Array Bea**	**74.80**	**43**	P	P	14 12 18.9	+1.5
	0.1nm,0.3s,baz=240,slow=7.1,SNR=4.2						

JMA 27 14:16:56.7±0.3, 28.11N×140.03E, h533km±4km, M3.6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.16**	**117**	P	P	14 18 06.1	+0.5
CBIJ				S	S	14 19 00.6	-1.0
JRY	**Ryogami san**	**7.94**	**353**	P	P	14 18 54.4	+1.3
JYT	**Yasato**	**8.10**	**1**	P	P	14 18 55.6	+0.9
JYT				*e*S	S	14 20 31.0	-0.6
JHO	**Hitachi**	**8.49**	**3**	P	P	14 19 00.4	+1.7
JHO				S	S	14 20 38.1	-0.8

IDC ***27*** *14:41:21.8±1.7, 16.16S×175.97W, h341km±31km, mb3.7/5, mb1 3.9/6, mb1mx3.4/19, mbtmp3.7/6, Error ellipse: s-maj=46.0km s-min=25.7km az=125.0*
ISCJB ***27*** *14:41:22.6±0.8, 16.13S±0.2×175.7W±0.2, h376km±14km, mb3.7/5, Error ellipse: s-maj=39.9km s-min=17.0km az=154.7*
NEIC ***27*** *14:41:23.5±0.9, 16.22S×175.72W, h372km±11km, mb3.6/2, Error ellipse: s-maj=31.0km s-min=15.2km az=151.0*

ISC 27 14:41:23.2±0.8, 16.12S±0.2×175.7W±0.2, h370km±14km, n11, σ0.9 81/12, mb3.7/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.42**	**59**	*e*P	**Pn**	**14 42 38.3**	**+0.6**
AFI				S	**S**	**14 43 37.5**	**-0.5**
AFI	**Afiamalu**	**4.42**	**59**	P	**Pn**	**14 42 38.1**	**+0.4**
	24nm,0.3s,baz=130,slow=2.2,SNR=35						
AFI				S	**S**	**14 43 37.5**	**-0.5**
	0.3nm,0.3s,baz=233,slow=21,SNR=1.5						
MSVF	**Nonsavu**	**6.18**	**255**	*e*P	**Pn**	**14 42 56.9**	**+0.1**
	40nm,0.9s						
DZM	**Mont Dzumac**	**17.85**	**248**	*e*P	**P**	**14 45 08.4**	**+0.8**
URZ	**Urewera**	**22.86**	**195**	P	**P**	**14 45 55.9**	**+0.3**
	2.6nm,0.4s,mb3.9,baz=333,slow=4.5,SNR=2.4						
STKA	**Stephens Creek**	**41.72**	**240**	*e*P	**P**	**14 48 37.3**	**-0.3**
	0.3nm,0.5s,mb2.7						
STKA	**Stephens Creek**	**41.72**	**240**	P	**P**	**14 48 37.3**	**-0.3**
	1.9nm,0.7s,mb3.4,baz=85,slow=6.1,SNR=5.4						
WRA	**Warramunga Arr**	**47.52**	**258**	P	**P**	**14 49 21.7**	**-1.3**
	4.8nm,0.6s,mb3.9,baz=91,slow=7.4,SNR=37						
ASAR	**Alice Springs**	**47.77**	**253**	P	**P**	**14 49 23.9**	**-1.0**
	17nm,0.6s,mb4.5,baz=88,slow=7.9,SNR=981						
CMAR	**Chiang Mai Arr**	**90.79**	**289**	P	**P**	**14 53 47.2**	**+1.5**
	0.3nm,0.7s,mb3.3,baz=107,slow=6.0,SNR=3.6						
BRTR	**Keskin Array B**	**145.35**	**318**	PKPbc	PKPbc	15 00 18.4	0.0
	1.1nm,0.7s,baz=25,slow=3.0,SNR=4.9						

ISCJB ***27*** *15:06:40.9±0.9, 37.04N±0.05×27.97E±0.04, h25km±10km, Error ellipse: s-maj=8.5km s-min=5.2km az=174.1*
ISK ***27*** *15:06:40.9, 37.15N×27.93E, h25km, ML2.2*
DDA ***27*** *15:06:41.6, 37.11N×27.97E, h7km±5km, Md2.7*
CSEM ***27*** *15:06:41.4±0.3, 37.10N×27.93E, h24km±3km, ML2.2, Error ellipse: s-maj=6.6km s-min=4.2km az=155.0*

ISC 27 15:06:41.0±0.7, 37.05N±0.05×27.97E±0.04, h25km±11km, n16, σ1.9 16/29, 1C, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.27**	**71**	*e*PG	**Pb**	**15 06 48.2**	**+0.6**
YER				*e*SG	**Sb**	**15 06 53.3**	**+1.2**
YER	**Yerkesik**	**0.27**	**71**	*e*Pg	**Pb**	**15 06 48.2**	**+0.6**
YER				*e*Sg	**Sb**	**15 06 53.3**	**+1.2**
MLSB	**Milas**	**0.29**	**329**	*e*PG	**Pb**	**15 06 46.9**	**-1.1**
MLSB				*e*SG	**Sb**	**15 06 51.1**	**-1.5**
MLSB	**Milas**	**0.29**	**329**	*e*Pg	**Pb**	**15 06 46.9**	**-1.0**
MLSB				*e*Sg	**Sb**	**15 06 51.1**	**-1.5**
BDRM	**Kayabasi**	**0.42**	**273**	⇑*i* P	**Pb**	**15 06 49.8**	**-0.1**
BDRM				*i* S	**Sb**	**15 06 56.0**	**+0.1**
BDRM	**Kayabasi**	**0.42**	**273**	*i* P	**Pb**	**15 06 49.8**	**-0.1**
BDRM				*i* S	**Sb**	**15 06 56.0**	**+0.1**
DAT	**Datca**	**0.44**	**225**	*e*PG	**Pb**	**15 06 52.0**	**+1.7**
DAT	**Datca**	**0.44**	**225**	*e*Pg	**Pb**	**15 06 52.0**	**+1.7**
BODT	**Bodrum**	**0.53**	**272**	*e*PG	**Pb**	**15 06 51.0**	**-0.7**
BODT				*e*SG	**Sb**	**15 06 59.6**	**+0.8**
BODT	**Bodrum**	**0.53**	**272**	*e*Pg	**Pb**	**15 06 51.0**	**-0.6**
BODT				*e*Sg	**Sb**	**15 06 59.6**	**+0.7**
TURN	**Turunc**	**0.54**	**109**	*e*P	**Pb**	**15 06 49.7**	**-2.2**
TURN				*e*S	**Sb**	**15 06 56.2**	**-3.0**
TURN	**Turunc**	**0.54**	**109**	*e*P	**Pb**	**15 06 49.7**	**-2.1**
AYDN	**Tasoluk**	**0.62**	**354**	*e*P	**Pb**	**15 06 53.2**	**0.0**
AYDN				*e*S	**Sb**	**15 07 01.6**	**+0.1**
AYDN	**Tasoluk**	**0.62**	**354**	*e*P	**Pb**	**15 06 53.2**	**0.0**
AYDN				*e*S	**Sb**	**15 07 01.6**	**+0.1**
DNZL	**Cakiroluk**	**1.07**	**53**	*e*P	**Pn**	**15 07 00.4**	**0.0**
DNZL				*e*S	**Sb**	**15 07 16.0**	**+1.5**
DNZL	**Cakiroluk**	**1.07**	**53**	*e*P	**Pn**	**15 07 00.4**	**0.0**
DNZL				*e*S	**Sb**	**15 07 16.0**	**+1.5**

IDC ***27*** *15:16:34.2±1.6, 16.78N×120.40E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.3/21, mbtmp3.3/4, Error ellipse: s-maj=43.4km s-min=28.8km az=77.0*
ISCJB ***27*** *15:16:37.7±0.9, 16.94N±0.03×120.06E±0.07, h17km±9km, mb3.2/3, Error ellipse: s-maj=11.2km s-min=5.4km az=3.6*
MAN ***27*** *15:16:37, 16.99N×120.07E, h9km, mb4.6, ML3.5, MS3.5*

ISC 27 15:16:37.2±0.9, 16.96N±0.03×120.11E±0.07, h2km±7km, n17, σ1.9 09/20, mb3.2/3, 3C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOLP	**Bolinao**	**0.60**	**198**	*e*P	**Pg**	**15 16 50.1**	**+1.4**
BCPH	**Baguio City Da**	**0.73**	**142**	⇑*i* P	**Pg**	**15 16 51.1**	**-0.2**
BCPH				*i* S	**Sg**	**15 17 00.5**	**-0.3**
ABRA	**Dolores**	**0.90**	**40**	*e*P	**Pg**	**15 16 54.5**	**+0.1**
SIPP	**Brgy, Tapao**	**1.01**	**19**	⇑*i* P	**Pg**	**15 16 56.6**	**-0.1**
SIPP				*i* S	**Sg**	**15 17 10.3**	**+0.5**
SCZP	**Santa Cruz**	**1.19**	**189**	*e*P	**Pg**	**15 16 58.4**	**-1.7**
APYP	**Conner**	**1.41**	**50**	*e*P	**Pn**	**15 17 02.1**	**-1.7**
PIP	**Pasuquin**	**1.44**	**20**	⇑*i* P	**Pn**	**15 17 03.3**	**-1.0**
PIP				*e*S	**Sb**	**15 17 24.5**	**+0.9**
CAUP	**Cauayan**	**1.64**	**90**	*e*P	**Pn**	**15 17 07.6**	**+0.6**
BALP	**Baler**	**1.86**	**130**	*e*P	**Pn**	**15 17 09.8**	**-0.2**
PALP	**Palanan**	**2.22**	**87**	*e*P	**Pn**	**15 17 15.8**	**+0.8**
POLP	**Polilio Island**	**2.83**	**141**	*e*P	**Pn**	**15 17 25.7**	**+2.3**
TGY	**Tagaytay City**	**2.95**	**164**	Pn	**Pn**	**15 17 23.8**	**-1.2**
	49nm,0.3s,baz=221,slow=23,SNR=1.6						
TGY				Lg		15 18 01.8	
	41nm,0.3s,baz=175,slow=21,SNR=3.7						
LUBP	**Lubang**	**3.21**	**178**	*e*P	**Pn**	**15 17 29.8**	**+1.1**
CMAR	**Chiang Mai Arr**	**20.22**	**277**	P	**P**	**15 21 13.8**	**+0.3**
	0.8nm,0.7s,baz=72,slow=8.6,SNR=5.6						
KSRS	**Korea Array**	**21.55**	**17**	P	**P**	**15 21 25.4**	**-2.4**
	0.6nm,0.6s,mb3.2,baz=197,slow=11,SNR=2.8						
SONM	**Songino Array**	**32.79**	**343**	P	**P**	**15 23 12.2**	**+0.6**
	0.2nm,0.3s,mb3.5,baz=154,slow=7.7,SNR=2.4						
ASAR	**Alice Springs**	**42.57**	**161**	P	**P**	**15 24 29.9**	**-4.7**
	0.3nm,0.9s,mb3.0,baz=341,slow=6.9,SNR=4.1						

IDC ***27*** *15:24:16.8±2.9, 35.49S×179.45W, h0km, mb4.2/3, mb1 4.3/4, mb1mx4.0/16, mbtmp4.1/4, ML3.5/1, Error ellipse: s-maj=65.5km s-min=35.6km az=127.0*

ISC 27 15:24:22.8±2.4, 35.38S±0.4×179.2W±0.5, h62km±44km, n10, σ0.7 70/13, mb4.1/3, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.68**	**227**	PN	**Pn**	**15 25 02.5**	**-1.0**
MXZ				SN	**Sn**	**15 25 35.1**	**+0.4**
CNGZ	**Carnagh Statio**	**3.40**	**216**	PN	**Pn**	**15 25 14.7**	**+1.4**
MWZ	**Matawai**	**3.65**	**225**	PN	**Pn**	**15 25 16.4**	**-0.3**
MWZ				SN	**Sn**	**15 25 58.7**	**+0.1**
URZ	**Urewera**	**3.85**	**229**	Pn	**Pn**	**15 25 18.9**	**-0.6**
	3.0nm,0.3s,baz=33,slow=4.5,SNR=14						
URZ				Sn	**Sn**	**15 26 04.2**	**+0.8**
	3.3nm,0.3s,baz=326,slow=23,SNR=1.5						
URZ	**Urewera**	**3.85**	**229**	PN	**Pn**	**15 25 18.9**	**-0.6**
BKZ	**Black Stump Fm**	**4.81**	**224**	PN	**Pn**	**15 25 32.9**	**+0.3**
BKZ				SN	**Sn**	**15 26 25.9**	**-1.1**
CTA	**Charters Tower**	**34.07**	**288**	P	**P**	**15 31 01.9**	**+0.7**
	12nm,1.1s,mb4.7,baz=91,slow=4.6,SNR=4.1						
ASAR	**Alice Springs**	**42.10**	**273**	P	**P**	**15 32 08.6**	**-0.2**
	0.9nm,0.8s,mb3.5,baz=115,slow=8.0,SNR=17						
WRA	**Warramunga Arr**	**43.58**	**278**	P	**P**	**15 32 20.5**	**-0.3**
	2.3nm,0.6s,mb4.1,baz=120,slow=7.7,SNR=24						
FINES	**FINESS Array B**	**149.73**	**336**	PKPbc	PKPbc	15 44 06.3	+1.7
	1.6nm,0.8s,baz=52,slow=2.3,SNR=4.0						

ISCJB ***27*** *15:30:34.6±

XOR	**Xorichti**	**0.59**	**318**	P	**Pg**	**15**	**30**	**46.3 -0.5**
XOR				S	**Sg**	**15**	**30**	**54.6 0.0**
XOR	**Xorichti**	**0.59**	**318**	P	**Pg**	**15**	**30**	**46.3 -0.5**
XOR				S	**Sg**	**15**	**30**	**54.6 0.0**
LKR	**Lokris**	**0.61**	**243**	*e*Pn	**Pg**	**15**	**30**	**47.3 +0.1**
LKR				*e*Sn	**Sg**	**15**	**30**	**55.8 +0.5**
LKR	**Lokris**	**0.61**	**243**	*e*PN	**Pg**	**15**	**30**	**47.2 0.0**
LKR				*e*SN	**Sg**	**15**	**30**	**55.8 +0.5**
LKR	**Lokris**	**0.61**	**243**	P	**Pg**	**15**	**30**	**46.4 -0.8**
LKR				S	**Sg**	**15**	**30**	**55.4 +0.1**
LKR	**Lokris**	**0.61**	**243**	P	**Pg**	**15**	**30**	**46.4 -0.8**
LKR	**Lokris**	**0.61**	**243**	*e*Pn	**Pg**	**15**	**30**	**47.3 +0.1**
LKR				S	**Sg**	**15**	**30**	**55.4 +0.1**
PTL	**Penteli**	**0.89**	**171**	*e*Pn	**Pg**	**15**	**30**	**52.0 -0.5**
PTL				*e*Sn	**Sg**	**15**	**31**	**04.1 0.0**
PTL	**Penteli**	**0.89**	**171**	*e*PN	**Pg**	**15**	**30**	**52.0 -0.5**
PTL				*e*SN	**Sg**	**15**	**31**	**04.1 0.0**
PTL	**Penteli**	**0.89**	**171**	*e*Pn	**Pg**	**15**	**30**	**52.0 -0.5**
ATH	**Athens Observa**	**0.95**	**179**	*e*Pn	**Pg**	**15**	**30**	**53.8 0.0**
ATH				*e*Sn	**Sg**	**15**	**31**	**06.4 +0.2**
ATH	**Athens Observa**	**0.95**	**179**	*e*PN	**Pg**	**15**	**30**	**53.8 0.0**
ATH				*e*SN	**Sg**	**15**	**31**	**06.4 +0.2**
ATH	**Athens Observa**	**0.95**	**179**	*e*Pn	**Pg**	**15**	**30**	**53.8 0.0**
ATH				*e*Sn	**Sg**	**15**	**31**	**06.4 +0.2**
ATHU	**Athens Univers**	**0.96**	**176**	P	**Pg**	**15**	**30**	**53.7 -0.2**
ATHU				S	**Sg**	**15**	**31**	**07.5 +1.0**
ATHU	**Athens Univers**	**0.96**	**176**	P	**Pg**	**15**	**30**	**53.7 -0.2**
ATHU				S	**Sg**	**15**	**31**	**07.5 +1.0**
PAIG	**Paliouri**	**1.00**	**359**	P	**Pg**	**15**	**30**	**54.4 -0.2**
PAIG				S	**Sg**	**15**	**31**	**08.4 +0.8**
PAIG	**Paliouri**	**1.00**	**359**	P	**Pg**	**15**	**30**	**54.4 -0.2**
PAIG				S	**Sg**	**15**	**31**	**08.4 +0.8**
DSF	**Desfina**	**1.05**	**241**	P	**Pg**	**15**	**30**	**54.7 -0.9**
DSF				S	**Sg**	**15**	**31**	**09.6 +0.3**
DSF	**Desfina**	**1.05**	**241**	P	**Pg**	**15**	**30**	**54.7 -0.9**
DSF				S	**Sg**	**15**	**31**	**09.6 +0.3**
AGG	**Agios Georgios**	**1.07**	**275**	*e*Pn	**Pg**	**15**	**30**	**54.9 -1.0**
AGG				*e*Sn	**Sg**	**15**	**31**	**10.3 +0.5**
AGG	**Agios Georgios**	**1.07**	**275**	*e*PN	**Pg**	**15**	**30**	**54.9 -1.0**
AGG				*e*SN	**Sg**	**15**	**31**	**10.3 +0.5**
AGG	**Agios Georgios**	**1.07**	**275**	P	**Pg**	**15**	**30**	**54.7 -1.2**
AGG				S	**Sg**	**15**	**31**	**09.9 +0.1**
AGG	**Agios Georgios**	**1.07**	**275**	P	**Pg**	**15**	**30**	**54.7 -1.2**
AGG				S	**Sg**	**15**	**31**	**09.9 +0.1**
AGG				*e*Sn	**Sg**	**15**	**31**	**10.3 +0.5**
LTK	**Loutraki**	**1.07**	**213**	*e*PN	**Pg**	**15**	**30**	**55.2 -0.7**
LTK				*e*SN	**Sg**	**15**	**31**	**11.0 +1.1**
LTK	**Loutraki**	**1.07**	**213**	P	**Pg**	**15**	**30**	**55.2 -0.7**
LTK				S	**Sg**	**15**	**31**	**10.5 +0.6**
LTK	**Loutraki**	**1.07**	**213**	P	**Pg**	**15**	**30**	**55.2 -0.7**
LTK				S	**Sg**	**15**	**31**	**10.5 +0.6**
LTK				*e*Sn	**Sg**	**15**	**31**	**11.0 +1.1**
VLY	**Voula,Athens**	**1.08**	**176**	*e*Pn	**Pg**	**15**	**30**	**55.3 -0.8**
VLY				*e*Sn	**Sg**	**15**	**31**	**10.5 +0.4**
VLY	**Voula,Athens**	**1.08**	**176**	*e*PN	**Pg**	**15**	**30**	**55.3 -0.8**
VLY				*e*SN	**Sg**	**15**	**31**	**10.5 +0.4**
VLY	**Voula,Athens**	**1.08**	**176**	*e*Pn	**Pg**	**15**	**30**	**55.3 -0.8**
NAIG	**Nisos Aigina**	**1.18**	**188**	*e*Pn	**Pn**	**15**	**30**	**57.2 -0.3**
NAIG	**Nisos Aigina**	**1.18**	**188**	*e*PN	**Pn**	**15**	**30**	**57.2 -0.3**
NAIG	**Nisos Aigina**	**1.18**	**188**	*e*Pn	**Pn**	**15**	**30**	**57.2 -0.3**
THL	**Klokotos Trika**	**1.45**	**296**	*e*PN	**Pn**	**15**	**31**	**02.0 +0.8**
THL				*e*SN	**Sn**	**15**	**31**	**21.1 +1.0**
THL	**Klokotos Trika**	**1.45**	**296**	P	**Pn**	**15**	**30**	**59.9 -1.3**
THL				S	**Sn**	**15**	**31**	**19.6 -0.5**
THL	**Klokotos Trika**	**1.45**	**296**	P	**Pn**	**15**	**30**	**59.9 -1.3**
THL	**Klokotos Trika**	**1.45**	**296**	*e*Pn	**Pn**	**15**	**31**	**02.0 +0.8**
THL				S	**Sn**	**15**	**31**	**19.6 -0.5**
THL				*e*Sn	**Sn**	**15**	**31**	**21.1 +1.0**
GUR	**Goura**	**1.45**	**227**	*e*PN	**Pn**	**15**	**31**	**01.2 0.0**
GUR				*e*SN	**Sn**	**15**	**31**	**20.5 +0.4**
GUR	**Goura**	**1.45**	**227**	*e*Pn	**Pn**	**15**	**31**	**01.2 0.0**
GUR				*e*Sn	**Sn**	**15**	**31**	**20.5 +0.4**
PLG	**Polygyros**	**1.46**	**352**	*e*Pn	**Pn**	**15**	**31**	**01.1 -0.2**
PLG				*e*Sn	**Sn**	**15**	**31**	**19.6 -0.6**
PLG	**Polygyros**	**1.46**	**352**	*e*PN	**Pn**	**15**	**31**	**01.1 -0.2**
PLG				*e*SN	**Sn**	**15**	**31**	**19.6 -0.6**
PLG	**Polygyros**	**1.46**	**352**	P	**Pn**	**15**	**31**	**00.7 -0.6**
PLG	**Polygyros**	**1.46**	**352**	P	**Pn**	**15**	**31**	**00.7 -0.6**
PLG	**Polygyros**	**1.46**	**352**	*e*Pn	**Pn**	**15**	**31**	**01.1 -0.2**
PLG				*e*Sn	**Sn**	**15**	**31**	**19.6 -0.6**
DID	**Didima**	**1.47**	**194**	*e*PN	**Pn**	**15**	**31**	**01.3 -0.1**
DID				*e*SN	**Sn**	**15**	**31**	**21.2 +0.8**
DID	**Didima**	**1.47**	**194**	P	**Pn**	**15**	**31**	**01.0 -0.4**
DID				S	**Sn**	**15**	**31**	**20.4 0.0**
DID	**Didima**	**1.47**	**194**	*e*Pn	**Pn**	**15**	**31**	**01.3 -0.1**
DID	**Didima**	**1.47**	**194**	*e*Pn	**Pn**	**15**	**31**	**01.3 -0.1**
DID				S	**Sn**	**15**	**31**	**20.4 0.0**
EVR	**Evrytania**	**1.47**	**270**	*e*Pn	**Pn**	**15**	**31**	**01.8 +0.3**
EVR	**Evrytania**	**1.47**	**270**	*e*PN	**Pn**	**15**	**31**	**01.8 +0.3**
EVR	**Evrytania**	**1.47**	**270**	*e*Pn	**Pn**	**15**	**31**	**01.8 +0.3**
LIT	**Litokhoron**	**1.50**	**322**	*e*Pn	**Pn**	**15**	**31**	**02.1 +0.3**
LIT				*e*Sn	**Sn**	**15**	**31**	**22.1 +0.9**
LIT	**Litokhoron**	**1.50**	**322**	*e*PN	**Pn**	**15**	**31**	**02.1 +0.3**
LIT				*e*SN	**Sn**	**15**	**31**	**22.1 +0.9**
LIT	**Litokhoron**	**1.50**	**322**	P	**Pn**	**15**	**31**	**01.5 -0.3**
LIT				S	**Sn**	**15**	**31**	**20.7 -0.5**
LIT	**Litokhoron**	**1.50**	**322**	P	**Pn**	**15**	**31**	**01.5 -0.3**
LIT	**Litokhoron**	**1.50**	**322**	*e*Pn	**Pn**	**15**	**31**	**02.1 +0.3**
LIT				S	**Sn**	**15**	**31**	**20.7 -0.5**
LIT				*e*Sn	**Sn**	**15**	**31**	**22.1 +0.9**
SOH	**Sokhos**	**1.91**	**352**	*e*Pn	**Pn**	**15**	**31**	**07.8 +0.3**
SOH				*e*Sn	**Sn**	**15**	**31**	**31.3 -0.1**
SOH	**Sokhos**	**1.91**	**352**	*e*PN	**Pn**	**15**	**31**	**07.8 +0.3**
SOH				*e*SN	**Sn**	**15**	**31**	**31.3 -0.1**
SOH	**Sokhos**	**1.91**	**352**	*e*Pn	**Pn**	**15**	**31**	**07.8 +0.3**
SOH				*e*Sn	**Sn**	**15**	**31**	**31.3 -0.1**
VLI	**Veliai**	**2.29**	**195**	*e*Pn	**Pn**	**15**	**31**	**12.9 +0.2**
VLI	**Veliai**	**2.29**	**195**	*e*PN	**Pn**	**15**	**31**	**12.9 +0.2**
VLI	**Veliai**	**2.29**	**195**	*e*Pn	**Pn**	**15**	**31**	**12.9 +0.2**
APE	**Apeiranthos**	**2.36**	**141**	*e*Pn	**Pn**	**15**	**31**	**14.0 +0.3**
APE	**Apeiranthos**	**2.36**	**141**	*e*PN	**Pn**	**15**	**31**	**14.0 +0.3**
APE	**Apeiranthos**	**2.36**	**141**	*e*Pn	**Pn**	**15**	**31**	**14.0 +0.3**

*ISK **27** 15:40:33.2, 37°.90N×27°.02E, h5km, MD3.1*
*NEIC **27** 15:40:33.0, 37°.89N×27°.25E, h10km, MD3.3(ATH), MD3.0(ISK), After ATH.*
*ATH **27** 15:40:33.0, 37°.89N×27°.25E, h10km±4km, MD3.3/5*
*ISCJB **27** 15:40:34.7±0.3, 37°.91N±0°.02×27°.13E±0°.03, h10km, Error ellipse: s-maj=3.1km s-min=2.2km az=156.9*
*CSEM **27** 15:40:34.5±0.1, 37°.91N×27°.10E, h5km, MD3.3, Error ellipse: s-maj=3.6km s-min=2.6km az=72.0*
*DDA **27** 15:40:34.4, 37°.92N×27°.10E, h5km±3km, Md3.3*
*THE **27** 15:40:35.3, 37°.99N×27°.14E, h0km, ML3.3/4, Error ellipse: s-maj=1.7km s-min=0.7km az=77.0*

ISC 27 15:40:34.7±0.4, 37°.92N±0°.02×27°.13E±0°.03, h3km±3km, n76, σ0s92/118, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
GCAM	**G?zelcaml?**	**0.23**	**160**	*i* P	**Pg**	**15**	**40**	**39.5 +0.4**
GCAM				*i* S	**Sg**	**15**	**40**	**43.0 +0.8**
GCAM	**G?zelcaml?**	**0.23**	**160**	*i* P	**Pg**	**15**	**40**	**39.5 +0.3**
GCAM				*i* S	**Sg**	**15**	**40**	**43.0 +0.8**
SMG	**Samos**	**0.31**	**229**	*e*Pb	**Pg**	**15**	**40**	**40.5 -0.3**
SMG				*e*Sb	**Sg**	**15**	**40**	**45.4 +0.6**
SMG	**Samos**	**0.31**	**229**	*e*PB	**Pg**	**15**	**40**	**40.5 -0.3**
SMG				*e*SB	**Sg**	**15**	**40**	**45.4 +0.6**
SMG	**Samos**	**0.31**	**229**	*e*Pb	**Pg**	**15**	**40**	**40.5 -0.3**
SMG				*e*Sb	**Sg**	**15**	**40**	**45.4 +0.6**
BLCB	**Balcova**	**0.47**	**351**	PG	**Pg**	**15**	**40**	**43.3 -0.5**
BLCB				*e*SG	**Sg**	**15**	**40**	**50.4 +0.4**
BLCB	**Balcova**	**0.47**	**351**	P	**Pg**	**15**	**40**	**43.9 +0.1**
BLCB	**Balcova**	**0.47**	**351**	*i* Pg	**Pg**	**15**	**40**	**43.3 -0.5**
BLCB	**Balcova**	**0.47**	**351**	P	**Pg**	**15**	**40**	**43.9 +0.1**
BLCB				*e*Sg	**Sg**	**15**	**40**	**50.4 +0.4**
IZM	**Izmir**	**0.49**	**12**	*e*PG	**Pg**	**15**	**40**	**44.0 -0.2**
IZM				*e*SG	**Sg**	**15**	**40**	**51.7 +1.1**
IZM	**Izmir**	**0.49**	**12**	*e*Pg	**Pg**	**15**	**40**	**44.0 -0.2**
IZM				*e*Sg	**Sg**	**15**	**40**	**51.7 +1.1**
KDAG	**Bornova**	**0.50**	**12**	*i* P	**Pg**	**15**	**40**	**43.5 -0.8**
KDAG				*i* S	**Sg**	**15**	**40**	**50.1 -0.7**
KDAG	**Bornova**	**0.50**	**12**	*i* P	**Pg**	**15**	**40**	**43.5 -0.8**
KDAG				*i* S	**Sg**	**15**	**40**	**50.1 -0.7**
URLA	**Izmir**	**0.61**	**316**	*i* P	**Pg**	**15**	**40**	**45.2 -1.3**
URLA				*i* S	**Sg**	**15**	**40**	**54.2 -0.3**
URLA	**Izmir**	**0.61**	**316**	*i* P	**Pg**	**15**	**40**	**45.2 -1.3**
URLA				*i* S	**Sg**	**15**	**40**	**54.2 -0.3**

AYDN	**Tasoluk**	**0.64**	**113**	*i* P	**Pg**	**15**	**40**	**47.5 +0.4**
AYDN				*i* S	**Sg**	**15**	**40**	**56.9 +1.4**
AYDN	**Tasoluk**	**0.64**	**113**	*i* P	**Pg**	**15**	**40**	**47.5 +0.4**
AYDN				*i* S	**Sg**	**15**	**40**	**56.9 +1.4**
MLSB	**Milas**	**0.80**	**140**	*e*PG	**Pg**	**15**	**40**	**50.5 +0.3**
MLSB	**Milas**	**0.80**	**140**	*e*Pg	**Pg**	**15**	**40**	**50.5 +0.4**
BODT	**Bodrum**	**0.86**	**171**	*e*PG	**Pg**	**15**	**40**	**50.4 -0.9**
BODT				*e*SG	**Sg**	**15**	**41**	**01.8 -0.7**
BODT	**Bodrum**	**0.86**	**171**	*e*Pg	**Pg**	**15**	**40**	**50.4 -0.9**
BODT				*e*Sg	**Sg**	**15**	**41**	**01.8 -0.7**
BDRM	**Kayabasi**	**0.89**	**164**	*i* P	**Pg**	**15**	**40**	**51.4 -0.3**
BDRM				*i* S	**Sg**	**15**	**41**	**02.2 -0.9**
BDRM	**Kayabasi**	**0.89**	**164**	*i* P	**Pg**	**15**	**40**	**51.4 -0.3**
BDRM				*i* S	**Sg**	**15**	**41**	**02.2 -1.0**
CHOS	**Chios island**	**0.97**	**299**	*e*PN	**Pg**	**15**	**40**	**53.3 -0.1**
CHOS				*e*SB	**Sb**	**15**	**41**	**08.2 +0.8**
CHOS	**Chios island**	**0.97**	**299**	P	**Pg**	**15**	**40**	**53.9 +0.5**
CHOS				S	**Sg**	**15**	**41**	**07.6 +1.7**
CHOS	**Chios island**	**0.97**	**299**	*e*Pn	**Pg**	**15**	**40**	**53.3 -0.1**
CHOS	**Chios island**	**0.97**	**299**	P	**Pg**	**15**	**40**	**53.9 +0.5**
CHOS				S	**Sg**	**15**	**41**	**07.6 +1.7**
CHOS				*e*Sb	**Sb**	**15**	**41**	**08.2 +0.8**
AKS	**Akhisar**	**1.10**	**29**	*e*PN	**Pg**	**15**	**40**	**55.6 -0.2**
AKS	**Akhisar**	**1.10**	**29**	*e*Pn	**Pg**	**15**	**40**	**55.7 -0.1**
YER	**Yerkesik**	**1.20**	**130**	*e*PN	**Pn**	**15**	**40**	**57.8 -0.6**
YER	**Yerkesik**	**1.20**	**130**	*e*Pn	**Pn**	**15**	**40**	**57.8 -0.6**
DAT	**Datca**	**1.24**	**163**	*e*PN	**Pn**	**15**	**40**	**57.0 -1.9**
DAT	**Datca**	**1.24**	**163**	*e*Pn	**Pn**	**15**	**40**	**57.0 -1.9**
NIS1	**Nisyros Isl.**	**1.31**	**178**	P	**Pn**	**15**	**41**	**00.1 +0.2**
NIS1				S	**Sg**	**15**	**41**	**20.7 +3.8**
NIS1	**Nisyros Isl.**	**1.31**	**178**	P	**Pn**	**15**	**41**	**00.1 +0.2**
KULA	**Kula-Manisa**	**1.34**	**63**	*e*PN	**Pn**	**15**	**41**	**00.5 +0.1**
KULA	**Kula-Manisa**	**1.34**	**63**	*e*Pn	**Pn**	**15**	**41**	**00.5 +0.1**
AYVA	**Ayvalik**	**1.43**	**346**	*i* P	**Pn**	**15**	**41**	**02.0 +0.4**
AYVA				*i* S	**Sb**	**15**	**41**	**21.7 +1.0**
AYVA	**Ayvalik**	**1.43**	**346**	*i* P	**Pn**	**15**	**41**	**02.0 +0.4**
AYVA				*i* S	**Sb**	**15**	**41**	**21.7 +1.0**
PRK	**Paraskevi**	**1.49**	**333**	*e*Pg	**Pg**	**15**	**41**	**02.0 -1.3**
PRK				*e*Sb	**Sb**	**15**	**41**	**23.6 +1.3**
PRK	**Paraskevi**	**1.49**	**333**	*e*PG	**Pg**	**15**	**41**	**02.0 -1.3**
PRK				*e*SB	**Sb**	**15**	**41**	**23.6 +1.3**
PRK	**Paraskevi**	**1.49**	**333**	P	**Pn**	**15**	**41**	**01.1 -1.3**
PRK				S	**Sn**	**15**	**41**	**21.7 -0.6**
PRK	**Paraskevi**	**1.49**	**333**	P	**Pn**	**15**	**41**	**01.1 -1.3**
PRK	**Paraskevi**	**1.49**	**333**	*e*Pg	**Pg**	**15**	**41**	**02.0 -1.3**
PRK				S	**Sn**	**15**	**41**	**21.7 -0.6**
PRK				*e*Sb	**Sb**	**15**	**41**	**23.6 +1.3**
DENT	**Denizli**	**1.51**	**96**	*e*PN	**Pn**	**15**	**41**	**03.1 +0.4**
DENT	**Denizli**	**1.51**	**96**	*e*Pn	**Pn**	**15**	**41**	**03.1 +0.4**
APE	**Apeiranthos**	**1.53**	**237**	*e*PN	**Pn**	**15**	**41**	**01.4 -1.5**
APE	**Apeiranthos**	**1.53**	**237**	*e*Pb	**Pb**	**15**	**41**	**03.3 -0.4**
APE	**Apeiranthos**	**1.53**	**237**	*e*PB	**Pb**	**15**	**41**	**03.3 -0.4**
APE	**Apeiranthos**	**1.53**	**237**	P	**Pn**	**15**	**41**	**03.1 +0.2**
APE				S	**Sn**	**15**	**41**	**25.2 +1.9**
APE	**Apeiranthos**	**1.53**	**237**	*e*Pn	**Pn**	**15**	**41**	**01.4 -1.5**
APE	**Apeiranthos**	**1.53**	**237**	P	**Pn**	**15**	**41**	**03.1 +0.2**
APE	**Apeiranthos**	**1.53**	**237**	*e*Pb	**Pb**	**15**	**41**	**03.3 -0.4**
APE				S	**Sn**	**15**	**41**	**25.2 +1.9**
DNZL	**Cakiroluk**	**1.53**	**98**	*i* P	**Pn**	**15**	**41**	**02.9 -0.1**
DNZL				*i* S	**Sn**	**15**	**41**	**22.4 -1.0**
DNZL	**Cakiroluk**	**1.53**	**98**	*i* P	**Pn**	**15**	**41**	**02.8 -0.2**
DNZL				*i* S	**Sn**	**15**	**41**	**22.4 -1.0**
SIGR	**SIGRI**	**1.64**	**323**	P	**Pn**	**15**	**41**	**03.3 -1.1**
SIGR				S	**Sn**	**15**	**41**	**25.5 -0.4**
SIGR	**SIGRI**	**1.64**	**323**	P	**Pn**	**15**	**41**	**03.3 -1.1**
SIGR				S	**Sn**	**15**	**41**	**25.5 -0.4**
DEMI	**Demirci**	**1.68**	**47**	*i* P	**Pn**	**15**	**41**	**06.3 +1.4**
DEMI				*i* S	**Sn**	**15**	**41**	**28.1 +1.2**
DEMI	**Demirci**	**1.68**	**47**	*i* P	**Pn**	**15**	**41**	**06.3 +1.4**
DEMI				*i* S	**Sn**	**15**	**41**	**28.1 +1.2**
BALB	**Balikesir**	**1.82**	**19**	*e*PN	**Pn**	**15**	**41**	**06.8 -0.1**
BALB	**Balikesir**	**1.82**	**19**	*e*Pn	**Pn**	**15**	**41**	**06.8 -0.1**
BALY	**Balya**	**1.86**	**12**	*i* P	**Pn**	**15**	**41**	**05.7 -1.7**
BALY				*i* S	**Sn**	**15**	**41**	**29.7 -1.7**
BALY	**Balya**	**1.86**	**12**	*i* P	**Pn**	**15**	**41**	**05.7 -1.8**
BALY				*i* S	**Sn**	**15**	**41**	**29.7 -1.8**
KHL	**Karahalli**	**1.93**	**77**	*e*PN	**Pn**	**15**	**41**	**09.7 +1.2**
KHL	**Karahalli**	**1.93**	**77**	*e*Pn	**Pn**	**15**	**41**	**09.7 +1.3**
DURS	**Dursunbey**	**1.98**	**32**	*i* P	**Pn**	**15**	**41**	**09.1 0.0**
DURS				*i* S	**Sn**	**15**	**41**	**39.8 +5.3**
DURS	**Dursunbey**	**1.98**	**32**	*i* P	**Pn**	**15**	**41**	**09.1 -0.1**
GLHS	**Glhisar (BURDU**	**2.03**	**111**	*e*PN	**Pn**	**15**	**41**	**09.7 -0.1**
GLHS	**Glhisar (BURDU**	**2.03**	**111**	*e*Pn	**Pn**	**15**	**41**	**09.7 -0.1**
LIA	**Limnos Island**	**2.50**	**323**	*e*Pn	**Pn**	**15**	**41**	**16.9 +0.7**
LIA	**Limnos Island**	**2.50**	**323**	*e*PN	**Pn**	**15**	**41**	**16.9 +0.7**
LIA	**Limnos Island**	**2.50**	**323**	*e*Pn	**Pn**	**15**	**41**	**16.9 +0.7**
ELL	**Elmali**	**2.50**	**117**	*e*PN	**Pn**	**15**	**41**	**17.5 +1.2**
ELL	**Elmali**	**2.50**	**117**	*e*Pn	**Pn**	**15**	**41**	**17.5 +1.2**
ALT	**Altintas**	**2.60**	**63**	*e*PN	**Pn**	**15**	**41**	**17.9 +0.3**
ALT	**Altintas**	**2.60**	**63**	*e*Pn	**Pn**	**15**	**41**	**17.9 +0.3**

KRSC 27 15:40:48.7±0.7, 55°.66N×162°.35E, h19km±18km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
KBTR	**Krutoberegovo**	**0.61**	**25**	*e*P	Pb	15	41	00.8 +0.1
KBTR				*i* S	Sb	15	41	09.4 +0.5
ZLN	**Zelenaya**	**0.94**	**293**	*e*P	Pb	15	41	07.1 +0.7
ZLN				*i* S	Sb	15	41	20.3 +1.8
CIRR	**Tsirk**	**1.01**	**297**	*e*P	Pb	15	41	08.2 +0.6
SMKR	**Semkarok**	**1.05**	**332**	*e*P	Pb	15	41	08.1 -0.1
SMKR				*i* S	Sb	15	41	22.4 +0.9
BZMR	**Bezymyannaya**	**1.09**	**285**	*e*P	Pb	15	41	09.1 +0.3
BZMR				*i* S	Sb	15	41	24.0 +1.4
BDR	**Baidarnaya**	**1.11**	**325**	*e*P	Pn	15	41	09.6 +0.4
KRSR	**Krestovskiy**	**1.15**	**300**	*e*P	Pn	15	41	09.6 -0.1
KRSR				*i* S	Sb	15	41	24.8 +0.4
KLY	**Klyuchi**	**1.16**	**305**	*e*P	Pn	15	41	08.4 -1.4
KLY				*i* S	Sb	15	41	22.5 -2.1
MKZ	**Mys Kozlova**	**1.16**	**198**	*e*P	Pn	15	41	09.7 -0.2
MKZ				*i* S	Sb	15	41	24.8 0.0
SRKR	**Sorokina**	**1.20**	**327**	*e*P	Pn	15	41	10.7 +0.3
SRKR				*i* S	Sb	15	41	26.8 +1.0
KPT	**Kopyto**	**1.24**	**285**	*e*P	Pn	15	41	11.8 +0.8
KPT				*i* S	Sb	15	41	28.9 +1.9
KOZ	**Kozyrevsk**	**1.45**	**287**	*e*P	Pn	15	41	15.6 +1.7
KOZ				*i* S	Sn	15	41	34.9 +2.5
SRDR	**Sredinnyy**	**1.62**	**295**	*e*P	Pn	15	41	17.7 +1.5
SRDR				*i* S	Sn	15	41	39.1 +2.6
BKI	**Bering**	**2.11**	**101**	*e*P	Pn	15	41	24.7 +1.7
BKI				*i* S	Sn	15	41	50.4 +1.7
SPN	**Mys Shipunski**	**2.91**	**209**	*e*P	Pn	15	41	33.9 +0.1
SPN				*i* S	Sn	15	42	06.7 -1.5
NLC	**Nalytchevo**	**3.05**	**216**	*e*P	Pn	15	41	37.1 +1.3
NLC				*i* S	Sn	15	42	12.4 +0.7
AVH	**Avacha**	**3.19**	**223**	*e*P	Pn	15	41	40.3 +2.5
AVH				*i* S	Sn	15	42	17.3 +2.0
GNL	**Ganaly**	**3.23**	**234**	*e*P	Pn	15	41	39.9 +1.6
PET	**Petropavlovsk**	**3.41**	**221**	*e*P	Pn	15	41	43.2 +2.4
PET				*i* S	Sn	15	42	22.2 +1.5

KRSC 27 15:41:05.1±1.1, 54°.45N×160°.56E, h89km±89km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
MKZ	**Mys Kozlova**	**0.69**	**81**	P	Pn	15	41	23.6 +2.2
MKZ				*i* S	Sn	15	41	36.8 +3.3
SPN	**Mys Shipunski**	**1.39**	**193**	*e*P	Pn	15	41	31.1 +1.7
SPN				*i* S	Sn	15	41	50.2 +2.5
NLC	**Nalytchevo**	**1.47**	**210**	*e*P	Pn	15	41	32.7 +2.3
NLC				*i* S	Sn	15	41	52.9 +3.4
AVH	**Avacha**	**1.60**	**223**	*e*P	Pn	15	41	34.6 +2.5
GNL	**Ganaly**	**1.72**	**245**	*e*P	Pn	15	41	36.6 +3.1
PET	**Petropavlovsk**	**1.82**	**219**	*e*P	Pn	15	41	37.5 +2.6

IDC 27 16:02:30.2±2.2, 4°.93S×147°.49E, h0km, mb3.3/4, mb1 3.7/5, mb1mx3.5/16, mbtmp3.4/5, Error ellipse: s-maj=88.3km s-min=26.7km az=117.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
WRA	**Warramunga Arr**	**19.66**	**220**	P	Pn	16	07	01.7 -0.5
	0.4nm,0.3s,baz=38,slow=11,SNR=14							
ASAR	**Alice Springs**	**22.77**	**214**	P	P	16	07	34.0 -0.4
	0.6nm,0.7s,baz=51,slow=8.5,SNR=13							
FITZ	**Fitzroy Crossi**	**25.05**	**237**	P	P	16	07	56.3 -0.1
	0.6nm,0.5s,baz=58,slow=7.9,SNR=4.3							
MKAR	**Makanchi Array**	**76.99**	**320**	P	P	16	14	24.8 -0.1
	0.3nm,0.7s,baz=100,slow=6.4,SNR=2.7							
ILAR	**Eielson Array**	**84.31**	**23**	P	P	16	15	04.2 +0.4
	0.2nm,0.5s,baz=251,slow=5.6,SNR=3.3							

*NEIC **27** 16:07:23.7±0.5, 5°.52S×128°.23E, h350km, mb3.6/1, Error ellipse: s-maj=19.7km s-min=7.5km az=68.0*
*IDC **27** 16:07:28.0±3.0, 5°.68S×128°.21E, h403km±35km, mb3.1/6, mb1 3.1/9, mb1mx3.0/21, mbtmp3.0/9, Error ellipse: s-maj=44.6km s-min=11.3km az=64.0*

ISC 27 16:07:27.3±1.9, 5°.7S±0°.1×128°.2E±0°.2, h394km±21km, n13, σ0s50/15, mb3.4/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
FITZ	**Fitzroy Crossi**	**12.60**	**191**	P	**P**	**16**	**10**	**14.6 +0.8**
	0.1nm,0.3s,baz=18,slow=13,SNR=2.8							
WRA	**Warramunga Arr**	**15.39**	**158**	P	**P**	**16**	**10**	**43.8 -0.5**
	1.5nm,0.3s,baz=339,slow=11,SNR=32							
WRA				S	**S**	**16**	**13**	**27.0 -0.4**
	0.3nm,0.3s,baz=332,slow=20,SNR=6.5							
WB2	**Warramunga Arr**	**15.40**	**158**	*e*P	**P**	**16**	**10**	**43.7 -0.6**
MBWA	**Marble Bar**	**17.44**	**207**	*e*P	**P**	**16**	**11**	**06.0 -0.2**
	1.9nm,0.5s							
ASAR	**Alice Springs**	**18.71**	**163**	P	**P**	**16**	**11**	**19.9 +0.2**
	0.5nm,0.3s,baz=346,slow=12,SNR=30							
ASAR			

*IDC **27** 16:45:06.8±3.7, 50.24N×129.39W, h0km, mb1 3.4/3, mb1mx3.2/23, mbtmp3.0/3, ML2.8/2, Error ellipse: s-maj=99.1km s-min=32.7km az=51.0*

ISC 27 16:45:04.7±1.4, 50.17N±0.08×129.9W±0.1, h10km, n11, σ0s81/15, 3D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.25**	**67**	⇓Pn	**Pn**	**16 45 27.8**	**-0.3**
HOLB				⇑Sn	**Sn**	**16 45 45.3**	**+0.3**
BPBC	**Brooks Peninsu**	**1.39**	**90**	⇑Pn	**Pn**	**16 45 29.0**	**-1.1**
BPBC				⇓Sn	**Sn**	**16 45 48.4**	**-0.2**
PHC	**Port Hardy**	**1.69**	**70**	⇑Pn	**Pn**	**16 45 33.9**	**-0.3**
PHC				⇑Sn	**Sn**	**16 45 56.2**	**+0.3**
MAYB	**Maynard**	**1.79**	**81**	⇑Pn	**Pn**	**16 45 36.3**	**+0.7**
EDB	**Eliza Dome**	**1.84**	**98**	⇓Sn	**Sn**	**16 45 58.4**	**-1.2**
WOSB	**Woss**	**2.17**	**89**	⇑Pn	**Pn**	**16 45 40.5**	**-0.2**
BBB	**Bella Bella**	**2.32**	**29**	⇑Pn	**Pn**	**16 45 43.3**	**+0.4**
BBB				⇑Sn	**Sn**	**16 46 11.8**	**+0.3**
DIB	**Dawson Inlet,** SNR=3.9	**3.43**	**334**	Pn	**Pn**	**16 45 57.2**	**-0.8**
NVAR	**Mina Array Bea** 0.0nm,0.3s,baz=327,slow=9.9,SNR=1.6	**14.37**	**140**	Pn	**Pn**	**16 48 32.4**	**+4.4**
PDAR	**Pinedale Array** baz=310,slow=14,SNR=2.0	**15.84**	**110**	Pn	**Pn**	**16 48 49.6**	**+2.1**
ILAR	**Eielson Array** 0.0nm,0.3s,baz=151,slow=11,SNR=3.1	**17.15**	**335**	P	**Pn**	**16 49 08.7**	**+4.6**

IDC 27 16:57:41.9±1.4, 6.69S×129.93E, h0km, mb3.9/4, mb1 4.0/7, mb1mx3.8/17, mbtmp3.9/7, ML3.9/3, Error ellipse: s-maj=71.9km s-min=20.0km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=22,slow=12,SNR=20	**12.09**	**200**	Pn	**Pn**	17 00 33.9	-1.6
FITZ				Sn	Sn	17 02 32.8	-18
	1.2nm,0.3s,baz=66,slow=20,SNR=6.6						
WRA	**Warramunga Arr** 1.0nm,0.3s,baz=337,slow=14,SNR=32	**13.85**	**162**	Pn	Pn	17 00 59.2	-0.3
WRA				Sn	Sn	17 03 20.7	-13
	1.4nm,0.3s,baz=337,slow=22,SNR=12						
ASAR	**Alice Springs** 0.4nm,0.3s,baz=351,slow=12,SNR=44	**17.30**	**168**	P	Pn	17 01 45.1	+0.1
ASAR				S	Sn	17 04 45.4	-13
	0.4nm,0.3s,baz=344,slow=26,SNR=7.2						
STKA	**Stephens Creek** 1.0nm,0.5s,baz=315,slow=13,SNR=2.8	**27.32**	**158**	P	P	17 03 29.4	+0.9
CMAR	**Chiang Mai Arr** 0.7nm,0.7s,baz=143,slow=7.3,SNR=7.1	**39.49**	**310**	P	P	17 05 15.2	+0.8
MKAR	**Makanchi Array** 0.8nm,0.3s,baz=126,slow=7.5,SNR=22	**67.94**	**327**	P	P	17 08 43.1	+0.6
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=121,slow=6.6,SNR=3.5	**71.28**	**334**	P	P	17 09 01.8	-1.2

IDC 27 17:07:21.1±2.1, 4.81S×152.29E, h0km, mb3.2/3, mb1 3.6/3, mb1mx3.3/16, mbtmp3.3/3, Error ellipse: s-maj=122.3km s-min=28.4km az=130.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=53,slow=10,SNR=5.0	**23.06**	**228**	P	P	17 12 27.6	-0.7
ASAR	**Alice Springs** 1.0nm,1.0s,baz=60,slow=10,SNR=4.1	**25.81**	**222**	P	P	17 12 54.5	+0.4
FITZ	**Fitzroy Crossi** baz=66,slow=10.0	**29.21**	**241**	P	P	17 13 25.3	+0.5
ILAR	**Eielson Array** 0.4nm,0.7s,baz=237,slow=6.0,SNR=4.4	**82.36**	**22**	P	P	17 19 44.5	-0.1

*NEIC **27** 17:08:11.5, 17.17N×99.82W, h29km, MD3.7(MEX), After MEX.*

MEX 27 17:08:11.3±0.8, 17.17N×99.82W, h31km±11km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.30**	**188**	*i* P	Pb	17 08 17.6	-1.3
ACX				*i* S	Sb	17 08 22.8	-1.1
ACX	**Acapulco**	**0.30**	**188**	*i* P	Pb	17 08 17.6	-1.3
ACX				*i* S	Sb	17 08 22.8	-1.1
CAIG	**El Cayaco**	**0.45**	**254**	*e*P	Pb	17 08 18.7	-2.3
CAIG				*i* S	Sb	17 08 26.0	-1.5
CAIG	**El Cayaco**	**0.45**	**254**	*e*P	Pb	17 08 18.7	-2.3
CAIG				*i* S	Sb	17 08 26.0	-1.5
MEIG	**Mezcala**	**0.78**	**14**	*e*P	Pn	17 08 24.5	-1.7
MEIG				*i* S	Sb	17 08 33.6	-3.0
ZIIG	**Zihuatanejo**	**1.63**	**286**	*i* P	Pn	17 08 36.4	-1.6
ZIIG				*i* S	Sn	17 08 56.4	-1.5
ZIIG	**Zihuatanejo**	**1.63**	**286**	*i* P	Pn	17 08 36.4	-1.6
ZIIG				*i* S	Sn	17 08 56.4	-1.5
PNIG	**Pinotepa**	**1.79**	**115**	*i* P	Pn	17 08 38.7	-1.5
PNIG				*i* S	Sn	17 09 00.0	-1.9
PNIG	**Pinotepa**	**1.79**	**115**	*i* P	Pn	17 08 38.7	-1.5
PNIG				*i* S	Sn	17 09 00.0	-1.9
UTMO	**Huajuapan**	**2.03**	**71**	*i* P	Pn	17 08 40.8	-2.6
UTMO				*i* S	Sn	17 09 06.1	-1.6
PPM	**Popocatepetl**	**2.20**	**31**	*i* P	Pn	17 08 45.6	-0.2
PPM				*i* S	Sn	17 09 09.0	-3.0
PPM	**Popocatepetl**	**2.20**	**31**	*i* P	Pn	17 08 45.6	-0.2
PPM				*i* S	Sn	17 09 09.0	-3.0

IDC 27 17:17:10.3±4.6, 46.74N×152.63E, h54km±38km, mb3.3/4, mb1 3.5/6, mb1mx3.2/25, mbtmp3.3/6, ML3.1/2, Error ellipse: s-maj=48.6km s-min=30.3km az=163.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-** 0.1nm,0.3s,baz=182,slow=12,SNR=3.6	**7.17**	**25**	P	Pn	17 18 52.6	+0.3
MJAR	**Matsushiro Arr** 0.2nm,0.3s,baz=314,slow=18,SNR=4.2	**14.81**	**232**	P	Pn	17 20 35.6	-0.7
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=70,slow=6.8,SNR=4.1	**46.65**	**297**	P	P	17 25 33.9	+0.8
FINES	**FINESS Array B** 0.7nm,0.5s,baz=43,slow=6.3,SNR=6.2	**63.91**	**335**	P	P	17 27 36.5	-0.5
NOA	**NORSAR Array B** 0.6nm,0.6s,baz=29,slow=6.6,SNR=2.8	**68.13**	**341**	P	P	17 28 04.1	0.0
TXAR	**Lajitas Array** 0.1nm,0.5s,baz=317,slow=6.1,SNR=3.1	**77.79**	**60**	P	P	17 29 02.1	+0.3
TXAR				pP	pP	17 29 15.9	-1.0
	0.2nm,0.5s,baz=298,slow=4.0,SNR=4.3						

*ISCJB **27** 17:24:00.9±0.9, 50.00N±0.06×129.93W±0.08, h10km, Error ellipse: s-maj=9.4km s-min=6.5km az=30.9*

*IDC **27** 17:24:00.9±2.2, 49.86N×129.66W, h0km, mb3.0/1, mb1 3.7/7, mb1mx3.5/27, mbtmp3.4/7, ML3.3/3, MS3.1/6, Ms1 3.1/6, ms1mx2.9/14, Error ellipse: s-maj=38.1km s-min=14.5km az=78.0*

*PGC **27** 17:24:02.4±2.3, 49.97N×130.09W, h10km, ML3.0/7, Mw3.6, 206km Wsw of Pt. Hardy, Bc Vancouver Island Region*

ISC 27 17:24:02.4±0.9, 50.00N±0.06×129.84W±0.08, h10km, n19, σ1s06/22, 3D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.27**	**59**	⇓Pn	**Pn**	**17 24 26.3**	**+0.1**
HOLB				⇑Sn	**Sn**	**17 24 43.3**	**0.0**
BPBC	**Brooks Peninsu**	**1.34**	**83**	⇑Pn	**Pn**	**17 24 26.9**	**-0.4**
BPBC				⇑Sn	**Sn**	**17 24 45.4**	**+0.3**
PHC	**Port Hardy**	**1.70**	**65**	Pn	**Pn**	**17 24 32.7**	**+0.7**
PHC				⇑Sn	**Sn**	**17 24 53.6**	**-0.2**
MAYB	**Maynard**	**1.76**	**76**	⇓Pn	**Pn**	**17 24 33.5**	**+0.5**
EDB	**Eliza Dome**	**1.77**	**93**	⇑Pn	**Pn**	**17 24 32.7**	**-0.3**
EDB				⇑Sn	**Sn**	**17 24 55.4**	**-0.1**
WOSB	**Woss**	**2.12**	**84**	⇓Pn	**Pn**	**17 24 38.8**	**+1.0**
BBB	**Bella Bella** 20nm,0.3s,baz=292,slow=19,SNR=54	**2.44**	**26**	Pn	**Pn**	**17 24 42.4**	**+0.1**
BBB				Sn	**Sn**	**17 25 11.7**	**-0.4**
	12nm,0.3s,baz=298,slow=22,SNR=8.7						
BBB				LR	LR	17 25 44.0	
	comp=Z,283nm,21.5s,baz=159,slow=41						
BBB	**Bella Bella**	**2.44**	**26**	⇑Pn	**Pn**	**17 24 42.4**	**+0.1**
BBB				⇑Sn	**Sn**	**17 25 10.8**	**-1.4**
BNB	**Barry Inlet**	**2.84**	**336**	⇑Pn	**Pn**	**17 24 45.8**	**-2.0**
DIB	**Dawson Inlet,** SNR=3.7	**3.60**	**334**	Pn	**Pn**	**17 24 58.5**	**+0.3**
DLBC	**Dease Lake** 0.1nm,0.3s,baz=184,slow=13,SNR=2.7	**8.45**	**359**	Pn	**Pn**	**17 26 06.5**	**+1.8**
DLBC				LR	LR	17 29 07.0	
	comp=Z,150nm,19.1s,baz=334,slow=36						
YBH	**Yreka Blue Hor** comp=Z,142nm,18.0s,baz=240,slow=36	**9.65**	**146**	LR	LR	17 29 42.7	
NVAR	**Mina Array Bea** baz=316,slow=17,SNR=2.2	**14.20**	**140**	Pn	**Pn**	**17 27 23.1**	**-0.4**
YKA	**Yellowknife Ar** 0.1nm,0.3s,baz=218,slow=13,SNR=2.7	**15.05**	**28**	Pn	**Pn**	**17 27 33.2**	**-1.7**
PDAR	**Pinedale Array** 0.4nm,0.3s,baz=304,slow=9.7,SNR=3.6	**15.73**	**110**	Pn	**Pn**	**17 27 45.0**	**+1.2**
ILAR	**Eielson Array** 0.1nm,0.3s,baz=150,slow=11,SNR=9.9	**17.32**	**335**	P	**Pn**	**17 28 06.8**	**+2.8**
INK	**Inuvik** comp=Z,28nm,18.8s,baz=7.5,slow=35	**18.45**	**356**	LR	LR	17 34 52.7	
TXAR	**Lajitas Array** 0.1nm,0.8s,baz=302,slow=7.4,SNR=2.5	**28.60**	**126**	P	**P**	**17 29 56.5**	**-2.1**
TXAR				LR	LR	17 42 16.5	
	comp=Z,46nm,19.8s,baz=180,slow=39						
TKL	**Tuckaleechee C** comp=Z,67nm,18.4s,baz=266,slow=37	**36.11**	**96**	LR	LR	17 46 16.0	

*PGC **27** 17:31:02.3±2.5, 49.92N×130.06W, h10km, ML3.1/7, Mw3.7, 207km Wsw of Pt. Hardy, Bc Vancouver Island Region*

*ISCJB **27** 17:31:03.2±1.1, 50.08N±0.07×129.80W±0.09, h10km, Error ellipse: s-maj=10.9km s-min=6.9km az=29.3*

*IDC **27** 17:31:05.0±2.0, 50.11N×129.82W, h0km, mb3.0/1, mb1 3.7/7, mb1mx3.5/27, mbtmp3.3/7, ML2.9/4, Error ellipse: s-maj=34.7km s-min=13.7km az=77.0*

ISC 27 17:31:03.6±1.3, 50.00N±0.08×129.74W±0.10, h10km, n15, σ0s91/21, 7D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.22**	**58**	Pn	**Pn**	**17 31 26.2**	**-0.4**
HOLB				⇓Sn	**Sn**	**17 31 43.7**	**+0.6**
BPBC	**Brooks Peninsu**	**1.28**	**82**	⇓Pn	**Pn**	**17 31 26.8**	**-0.7**
BPBC				⇑Sn	**Sn**	**17 31 45.2**	**+0.5**
PHC	**Port Hardy**	**1.64**	**64**	⇓Pn	**Pn**	**17 31 32.5**	**0.0**
PHC				⇓Sn	**Sn**	**17 31 54.2**	**+0.7**
EDB	**Eliza Dome**	**1.70**	**93**	⇑Pn	**Pn**	**17 31 32.4**	**-0.9**
EDB				⇑Sn	**Sn**	**17 31 54.4**	**-0.6**
MAYB	**Maynard**	**1.70**	**75**	⇓Pn	**Pn**	**17 31 32.8**	**-0.5**
WOSB	**Woss**	**2.05**	**84**	⇑Pn	**Pn**	**17 31 38.8**	**+0.7**
BBB	**Bella Bella** 38nm,0.3s,baz=299,slow=10,SNR=101	**2.42**	**25**	Pn	**Pn**	**17 31 43.0**	**-0.1**
BBB				Sn	**Sn**	**17 32 12.0**	**-0.7**
	8.6nm,0.3s,baz=288,slow=20,SNR=8.2						
BBB	**Bella Bella**	**2.42**	**25**	⇑Pn	**Pn**	**17 31 42.9**	**-0.2**
BBB				⇓Sn	**Sn**	**17 32 11.6**	**-1.1**
BNB	**Barry Inlet**	**2.87**	**335**	⇓Pn	**Pn**	**17 31 46.9**	**-2.4**
DLBC	**Dease Lake** 0.0nm,0.3s,baz=183,slow=17,SNR=2.5	**8.46**	**359**	Pn	**Pn**	**17 33 07.6**	**+1.6**
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=319,slow=11,SNR=2.5	**14.16**	**140**	Pn	**Pn**	**17 34 30.7**	**+6.6**
YKA	**Yellowknife Ar** 0.1nm,0.3s,baz=218,slow=12,SNR=5.5	**15.03**	**28**	Pn	**Pn**	**17 34 35.5**	**-0.2**
PDAR	**Pinedale Array** baz=313,slow=8.5,SNR=1.3	**15.67**	**110**	Pn	**Pn**	**17 34 50.5**	**+6.3**
ILAR	**Eielson Array** 0.1nm,0.3s,baz=142,slow=13,SNR=5.5	**17.35**	**335**	P	**Pn**	**17 35 06.6**	**+1.1**
TXAR	**Lajitas Array** 0.1nm,0.6s,baz=327,slow=4.3,SNR=2.2	**28.55**	**127**	P	**P**	**17 37 03.4**	**+4.1**

*IDC **27** 17:38:20.9±1.6, 0.50N×97.37E, h0km, mb3.6/7, mb1 3.6/9, mb1mx3.5/24, mbtmp3.5/9, ML3.1/2, Error ellipse: s-maj=55.3km s-min=17.9km az=60.0*

*ISCJB **27** 17:38:23.9±1.1, 0.6N±0.1×97.5E±0.2, h33km, mb3.7/8, Error ellipse: s-maj=30.6km s-min=12.2km az=158.6*

*NEIC **27** 17:38:26.3±0.9, 0.57N×97.49E, h35km, mb4.1/1, Error ellipse: s-maj=25.9km s-min=10.1km az=68.0*

ISC 27 17:38:26.6±1.1, 0.6N±0.1×97.6E±0.2, h35km, n10, σ0s74/10, mb3.7/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.55**	**32**	Pn	**Pn**	**17 39 05.4**	**-0.1**
	0.9nm,0.3s,baz=246,slow=20,SNR=3.6						
CMAR	**Chiang Mai Arr** 0.1nm,0.3s,baz=195,slow=11,SNR=4.0	**17.78**	**4**	P	**Pn**	**17 42 30.6**	**-0.9**
MBWA	**Marble Bar** 2.8nm,0.9s,mb4.1	**30.61**	**136**	*e*P	**P**	**17 44 36.7**	**-0.9**
FITZ	**Fitzroy Crossi** 1.5nm,1.0s,mb3.9,baz=307,slow=7.6,SNR=3.6	**33.28**	**125**	P	**P**	**17 45 01.0**	**-0.1**
WRA	**Warramunga Arr** 0.4nm,0.4s,mb3.4,baz=303,slow=9.0,SNR=9.2	**41.40**	**122**	P	**P**	**17 46 10.1**	**+0.2**
ASAR	**Alice Springs** 0.4nm,0.6s,mb3.4,baz=300,slow=7.9,SNR=9.9	**42.74**	**127**	P	**P**	**17 46 21.5**	**+0.7**
SONM	**Songino Array** 0.2nm,0.6s,mb3.3,baz=191,slow=6.9,SNR=2.4	**47.65**	**8**	P	**P**	**17 47 00.9**	**+1.5**
MKAR	**Makanchi Array** 0.6nm,0.5s,mb3.9,baz=150,slow=8.2,SNR=8.9	**47.90**	**346**	P	**P**	**17 47 01.8**	**+0.5**
ZALV	**Zalesovo Beam** 0.6nm,0.3s,mb3.9,baz=169,slow=8.2,SNR=5.1	**54.19**	**351**	P	**P**	**17 47 48.7**	**+0.3**
BVAR	**Borovoye Array** 0.3nm,0.5s,mb3.6,baz=150,slow=3.2,SNR=4.0	**56.92**	**341**	P	**P**	**17 48 07.1**	**-1.0**

*PGC **27** 17:41:47.9±1.1, 49.95N×130.17W, h10km, ML3.4/10, Mw4.0, 212km Wsw of Pt. Hardy, Bc Vancouver Island Region*

*ISCJB **27** 17:41:51.2±0.4, 50.22N±0.04×129.73W±0.06, h10km, mb4.1/14, MS3.3/7, Error ellipse: s-maj=6.2km s-min=4.2km az=135.3*

*IDC **27** 17:41:51.8±1.2, 50.16N×129.67W, h0km, mb3.9/5, mb1 4.1/13, mb1mx3.8/30, mbtmp3.9/13, ML3.6/6, MS3.3/9, Ms1 3.3/9, ms1mx3.1/40, Error ellipse: s-maj=22.3km s-min=11.4km az=74.0*

*BJI **27** 17:41:53.4, 50.87N×130.39W, h10km, mB4.7/5, mb4.7/4, Ms4.1/3, Ms7 3.7/3*

*NEIC **27** 17:41:53.4±0.6, 50.25N×129.67W, h10km, mb4.0/21, MW4.3(PGC), Error ellipse: s-maj=13.6km s-min=5.8km az=58.0*

ISC 27 17:41:53.0±0.4, 50.27N±0.04×129.67W±0.06, h10km, n68, σ1s24/70, mb4.1/14, MS3.3/7, 7D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.05**	**69**	Pn	**Pn**	**17 42 12.7**	**-1.0**
BPBC	**Brooks Peninsu**	**1.23**	**94**	⇓Pn	**Pn**	**17 42 14.2**	**-1.9**
BPBC				⇓Sn	**Sn**	**17 42 31.1**	**-1.6**
PHC	**Port Hardy**	**1.50**	**72**	Pn	**Pn**	**17 42 18.9**	**-1.0**
PHC				⇓Sn	**Sn**	**17 42 40.9**	**+1.5**
MAYB	**Maynard**	**1.61**	**84**	⇑Pn	**Pn**	**17 42 19.7**	**-1.7**
EDB	**Eliza Dome**	**1.69**	**102**	⇑Sn	**Sn**	**17 42 41.8**	**-2.3**
WOSB	**Woss**	**1.99**	**92**	Pn	**Pn**	**17 42 25.4**	**-1.2**
BBB	**Bella Bella**	**2.16**	**26**	Pn	**Pn**	**17 42 28.8**	**-0.1**
BBB				Sn	**Sn**	**17 42 56.9**	**+1.2**
BBB	**Bella Bella** 67nm,0.3s,baz=192,slow=9.3,SNR=68	**2.16**	**26**	Pn	**Pn**	**17 42 28.8**	**-0.1**
BBB				Sn	**Sn**	**17 42 56.9**	**+1.2**
	12nm,0.3s,baz=294,slow=19,SNR=3.6						
BBB	**Bella Bella**	**2.16**	**26**	⇑Pn	**Pn**	**17 42 28.6**	**-0.2**
BBB				⇓Sn	**Sn**	**17 42 57.9**	**+2.3**
BNB	**Barry Inlet**	**2.66**	**331**	⇑Pn	**Pn**	**17 42 30.8**	**-4.9**
BNB				⇓Sn	**Sn**	**17 43 03.1**	**-4.8**
OZB	**Mount Ozzard**	**3.02**	**114**	⇓Sn	**Sn**	**17 43 13.1**	**-3.7**
MOBC	**Moresby Island**	**3.22**	**334**	⇓Pn	**Pn**	**17 42 39.7**	**-3.7**
DIB	**Dawson Inlet,** SNR=13	**3.42**	**330**	Pn	**Pn**	**17 42 42.0**	**-4.2**
DIB	**Dawson Inlet,**	**3.42**	**330**	⇑Pn	**Pn**	**17 42 42.0**	**-4.3**
LON	**Longmire** 12nm,1.0s	**6.30**	**121**	*e*P	**Pn**	**17 43 26.1**	**+0.4**
HOOD	**Mount Hood Mea**	**7.32**	**129**	*e*P	**Pn**	**17 43 40.5**	**+0.7**
DLBC	**Dease Lake**	**8.19**	**359**	*e*P	**Pn**	**17 43 53.1**	**+1.4**
DLBC	**Dease Lake** 0.5nm,0.3s,baz=206,slow=14,SNR=9.0	**8.19**	**359**	Pn	**Pn**	**17 43 53.1**	**+1.4**
YBH	**Yreka Blue Hor** 0.2nm,0.3s,baz=315,slow=7.1,SNR=2.5	**9.81**	**148**	Pn	**Pn**	**17 44 15.3**	**+1.3**
HLID	**Hailey** 2.1nm,0.9s	**12.39**	**117**	*e*P	**Pn**	**17 44 50.4**	**+1.2**
WCN	**Washoe City**	**13.02**	**144**	*e*P	**Pn**	**17 44 57.5**	**-0.3**
IMW	**Indian Meadow** 14nm,0.9s	**14.25**	**109**	P	**Pn**	**17 45 16.1**	**+1.5**
NVAR	**Mina Array Bea**	**14.34**	**141**	Pn	**Pn**	**17 45 15.8**	**0.0**
	baz=319,slow=12,SNR=3.9						
MOOW	**Moose Ponds** 9.7nm,0.9s	**14.44**	**110**	P	**Pn**	**17 45 20.4**	**+3.1**
TPAW	**Teton Pass** 17nm,0.9s	**14.46**	**111**	*e*P	**Pn**	**17 45 26.4**	**+8.9**
REDW	**Red Top Meadow** 14nm,0.9s	**14.60**	**111**	P	**Pn**	**17 45 25.1**	**+5.7**
LOHW	**Long Hollow** 6.8nm,0.9s	**14.61**	**110**	*e*P	**Pn**	**17 45 19.5**	**0.0**
YKA	**Yellowknife Ar** 0.2nm,0.3s,baz=220,slow=12,SNR=6.8	**14.77**	**28**	Pn	**Pn**	**17 45 20.4**	**-1.2**
YKA				LR	LR	17 51 24.0	
	comp=Z,17nm,19.5s,baz=10.0,slow=38						
HWUT	**Hardware Ranch** 2.3nm,0.9s	**15.25**	**118**	P	**Pn**	**17 45 30.1**	**+1.9**
DUG	**Dugway** 10nm,1.1s	**15.54**	**124**	*e*P	**Pn**	**17 45 35.2**	**+3.3**
PDAR	**Pinedale Array** 0.0nm,0.3s,baz=300,slow=11,SNR=7.3	**15.71**	**111**	Pn	**Pn**	**17 45 36.2**	**+2.0**
LAO	**LASA Array** 10nm,0.9s	**15.94**	**94**	*e*P	**Pn**	**17 45 42.2**	**+5.2**
ISA	**Isabella** 14nm,1.2s	**16.71**	**147**	*e*P	**Pn**	**17 45 46.7**	**-0.3**
MSU	**Marysvale** 9.5nm,1.2s	**17.11**	**127**	*e*P	**Pn**	**17 45 52.3**	**+0.3**
ILAR	**Eielson Array** 0.0nm,0.3s,baz=150,slow=11,SNR=8.1	**17.13**	**334**	P	**Pn**	**17 45 53.8**	**+1.6**
ILAR				LR	LR	17 51 47.3	
	comp=Z,118nm,20.8s,baz=148,slow=35						
FFC	**Flin Flon** 12nm,0.8s	**17.38**	**64**	*e*P	**Pn**	**17 45 54.9**	**-0.4**
SRU	**San Rafael** 13nm,1.1s	**17.54**	**122**	*e*P	**Pn**	**17 46 01.3**	**+3.9**
INK	**Inuvik** 0.1nm,0.3s,baz=158,slow=11,SNR=3.2	**18.20**	**355**	P	**Pn**	**17 46 07.3**	**+2.0**
LDFC	**Landfair** 18nm,1.1s	**18.52**	**140**	*e*P	**Pn**	**17 46 08.8**	**-0.7**
TTA	**Tatalina** 4.5nm,1.1s	**19.08**	**322**	*e*P	**Pn**	**17 46 14.4**	**-1.6**
PV01	**Paradox Valley** 531nm,0.4s	**19.31**	**121**	*e*P	**Pn**	**17 46 20.6**	**+1.6**
SMCO	**Snowmass** 7.3nm,1.1s	**19.49**	**116**	*e*P	**Pn**	**17 46 20.7**	**-0.4**
COLD	**Coldfoot** 7.9nm,1.4s	**19.89**	**336**	*e*P	**Pn**	**17 46 26.2**	**+0.6**
SDCO	**Great Sand Dun** 3.7nm,1.2s,mb3.6	**21.31**	**117**	*e*P	**P**	**17 46 40.3**	**+0.6**
ULM	**Lac du Bonnet** 10nm,0.6s,mb4.5,baz=292,slow=11,SNR=4.9	**21.50**	**77**	P	**P**	**17 46 42.6**	**+0.9**
TUC	**Tucson** 8.9nm,1.2s,mb4.1	**22.76**	**135**	*e*P	**P**	**17 46 54.6**	**-0.6**
ANMO	**Albuquerque** 8.1nm,1.0s,mb4.1	**22.80**	**123**	*e*P	**P**	**17 46 57.3**	**+1.7**
ANMO	**Albuquerque** 1.8nm,0.7s,mb3.6,baz=323,slow=9.0,SNR=3.6	**22.80**	**123**	P	**P**	**17 46 56.2**	**+0.5**
ANMO				LR	LR	17 55 59.8	
	comp=Z,11nm,21.9s,MS2.3,baz=123,slow=37						
BNM	**Barren Site** 5.2nm,0.9s,mb4.0	**23.32**	**125**	*e*P	**P**	**17 46 59.6**	**-1.5**
ECSD	**EROS Data Cent** 6.3nm,0.8s,mb4.1	**23.34**	**93**	*e*P	**P**	**17 46 59.4**	**-1.8**
EYMN	**Ely** 20nm,1.0s,mb4.6	**24.92**	**80**	*e*P	**P**	**17 47 16.3**	**+0.4**
AMTX	**Amarillo** 25nm,0.9s,mb4.7	**25.51**	**116**	*e*P	**P**	**17 47 19.5**	**-1.9**
MNTX	**Cornudas Mount** 3.8nm,1.2s,mb3.8	**25.89**	**127**	*e*P	**P**	**17 47 24.8**	**-0.1**
WMOK	**Wichita Mounta** 6.6nm,0.9s,mb4.2	**27.30**	**113**	*e*P	**P**	**17 47 37.1**	**-0.5**
TXAR	**Lajitas Array** 1.9nm,1.1s,mb3.7,baz=322,slow=7.9,SNR=7.1	**28.67**	**127**	P	**P**	**17 47 49.7**	**0.0**
TXAR				LR	LR	18 00 02.5	
	comp=Z,111nm,20.2s,MS3.5,baz=290,slow=38						
MIAR	**Mount Ida** 6.6nm,1.0s,mb4.4	**30.58**	**107**	*e*P	**P**	**17 48 07.1**	**+0.4**
SCHQ	**Schefferville** comp=Z,138nm,20.6s,MS3.7,baz=285,slow=37	**37.34**	**58**	LR	LR	18 04 59.0	
PETK	**Petropavlovsk-** 2.3nm,0.8s,mb3.9,baz=71,slow=6.4,SNR=3.6	**43.34**	**303**	P	**P**	**17 49 55.9**	**+1.1**
PETK				LR	LR	18 09 19.8	
	comp=Z,23nm,18.4s,MS3.1,baz=184,slow=38						
NOA	**NORSAR Array B** comp=Z,27nm,21.8s,MS3.4,baz=180,slow=35	**64.69**	**20**	LR	LR	18 19 24.8	
FINES	**FINESS Array B** comp=Z,46nm,18.2s,MS3.7,baz=128,slow=37	**66.96**	**12**	LR	LR	18 22 47.6	
BJI	**Beijing**	**73.15**	**313**	P	**P**	**17 53 22.0**	**-1.5**
BJI				S	S	18 02 48.8	-2.3
BJI				SS	SS	18 07 29.8	-1.5
BJI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BJI				pmax	pmax		
	comp=Z,80nm,5.1s						
BJI				LR	LR		
	comp=N,85nm,35.1s						
BJI				LR	LR		
	comp=E,73nm,35.8s						
BJI				LR	LR		
	comp=Z,13nm,33.4s						
HHC	**Hu-ho-hao-te**	**74.61**	**316**	*e*P	**P**	**17 53 31.0**	**-1.0**
HHC				pP	pP	17 53 35.3	0.0
HHC				sP	sP	17 53 37.8	+1.3
HHC				PP	PP	17 56 19.3	+1.2
HHC				S	S	18 03 03.5	-4.0
HHC				sS	sS	18 03 11.3	-1.6
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,83nm,4.8s						
HHC				LR	LR		
	comp=N,97nm,19.0s						
HHC				LR	LR		
	comp=E,96nm,14.3s						
HHC				LR	LR		
	comp=Z,57nm,16.7s						
MKAR	**Makanchi Array** comp=Z,25nm,18.2s,MS3.6,baz=173,slow=37	**79.45**	**338**	LR	LR	18 31 22.5	
WMQ	**Urumqi**	**80.80**	**334**	*e*P	**P**	**17 54 06.5**	**+0.1**
LZH	**Lanzhou**	**81.92**	**319**	*e*P	**P**	**17 54 12.5**	**0.0**
LZH				pP	pP	17 54 17.3	+1.5
LZH				sP	sP	17 54 19.5	+2.5
LZH				*e*PP	PP	17 57 21.8	+2.6
LZH				pmax	pmax		
	comp=Z,53nm,7.5s						
CD2	**Chengdu**	**86.37**	**316**	P	**P**	**17 54 33.5**	**-1.8**
CD2				pmax	pmax		
	comp=Z,12nm,5.0s						
GYA	**Guiyang**	**88.80**	**312**	*e*P	**P**	**17

DLBC				LR	LR	17 49 27.9		
	comp=Z,218nm,19.0s,baz=209,slow=37							
NVAR	**Mina Array Bea**	**14.37**	**142**	Pn	**Pn**	**17 47 56.6**	**+3.6**	
	0.1nm,0.3s,baz=324,slow=15,SNR=2.5							
YKA	**Yellowknife Ar**	**14.69**	**28**	Pn	**Pn**	**17 47 55.1**	**-2.2**	
	0.0nm,0.3s,baz=219,slow=11,SNR=2.6							
PDAR	**Pinedale Array**	**15.70**	**111**	Pn	**Pn**	**17 48 13.0**	**+2.2**	
	0.1nm,0.3s,baz=312,slow=11,SNR=4.8							
ILAR	**Eielson Array**	**17.09**	**334**	P	**Pn**	**17 48 28.7**	**+0.3**	
	0.0nm,0.3s,baz=137,slow=11,SNR=5.6							
INK	**Inuvik**	**18.13**	**355**	LR	LR	17 55 33.3		
	comp=Z,44nm,20.0s,baz=326,slow=37							
ULM	**Lac du Bonnet**	**21.45**	**77**	LR	LR	17 57 50.5		
	comp=Z,94nm,20.6s,baz=268,slow=37							
TXAR	**Lajitas Array**	**28.68**	**127**	P	**P**	**17 50 26.4**	**-0.3**	
	0.1nm,0.6s,baz=339,slow=4.8,SNR=3.3							

*IDC **27** 18:05:07.0±1.4, 12°.22N×88°.24W, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.7/23, mbtmp3.8/4, ML2.8/1, Error ellipse: s-maj=60.9km s-min=23.5km az=52.0*
*NEIC **27** 18:05:07.8±0.7, 12°.09N×88°.37W, h10km, mb4.2/2, Error ellipse: s-maj=17.9km s-min=9.7km az=46.0*
*CASC **27** 18:05:08.7±2.3, 12°.00N×88°.26W, h16km±11km, MD3.9, ML3.6, mb4.2(NEIC)*

ISC 27 18:05:09.9±1.0, 11°.94N±0°.08×88°.29W±0°.07, h40km±13km, n27, σ0s79/29, mb3.9/5, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**1.40**	**19**	*e*P	**Pn**	**18 05 32.2**	**-0.7**
CNCH				*e*S	**Sn**	**18 05 50.7**	**+0.4**
CRIN	**San Cristobal**	**1.43**	**58**	*i* P	**Pn**	**18 05 33.0**	**-0.4**
CRIN				AML	AML	18 06 02.7	
	comp=N,1μm,0.3s						
VSM	**San Miguel**	**1.48**	**1**	*e*P	**Pn**	**18 05 33.9**	**-0.2**
BLLM	**Bellamira**	**1.49**	**2**	*e*P	**Pn**	**18 05 34.2**	**-0.1**
CNGN	**Cerro Negro**	**1.65**	**70**	*e*P	**Pn**	**18 05 36.2**	**-0.3**
COPN	**Copaltepe**	**1.68**	**82**	*e*P	**Pn**	**18 05 36.5**	**-0.4**
MOMN	**Momotombo**	**1.77**	**75**	*e*P	**Pn**	**18 05 37.8**	**-0.4**
CAHU	**Cacacuatique**	**1.82**	**2**	*e*P	**Pn**	**18 05 39.0**	**+0.2**
CAHU				*e*S	**Sn**	**18 06 04.2**	**+3.6**
LFRS	**El Faro**	**1.83**	**336**	*e*P	**Pn**	**18 05 38.2**	**-0.7**
LFRS				*e*S	**Sn**	**18 06 01.3**	**+0.4**
XAVN	**Gruta Xavier**	**1.93**	**84**	*e*P	**Pn**	**18 05 39.6**	**-0.8**
BOQS	**Boqueron**	**2.02**	**332**	*e*P	**Pn**	**18 05 41.7**	**+0.1**
SBLS	**San Blas**	**2.29**	**326**	*e*P	**Pn**	**18 05 45.6**	**+0.4**
SBLS				*e*S	**Sn**	**18 06 16.3**	**+4.1**
TGUH	**Tegucigalpa,Un**	**2.32**	**25**	*e*P	**Pn**	**18 05 45.4**	**-0.3**
TGUH	**Tegucigalpa,Un**	**2.32**	**25**	*e*P	**Pn**	**18 05 46.2**	**+0.5**
RBDL	**Robledal**	**2.55**	**328**	*e*P	**Pn**	**18 05 49.6**	**+0.8**
CONN	**Concepcion**	**2.64**	**98**	*i* P	**Pn**	**18 05 50.5**	**+0.5**
JTS	**JuntasAbangare**	**3.67**	**116**	*e*P	**Pn**	**18 06 06.0**	**+1.9**
CMIG	**Matias Romero**	**8.18**	**309**	Pn	**Pn**	**18 07 04.6**	**-1.6**
	comp=N,0.1nm,0.3s,baz=106,slow=18,SNR=2.0						
TXAR	**Lajitas Array**	**22.46**	**323**	P	**P**	**18 10 06.6**	**+0.9**
TXAR	**Lajitas Array**	**22.46**	**323**	P	**P**	**18 10 06.6**	**+0.9**
	comp=N,1.8nm,0.8s,mb3.6,baz=140,slow=10,SNR=26						
MIAR	**Mount Ida**	**23.01**	**349**	*e*P	**P**	**18 10 11.8**	**+0.5**
	comp=N,12nm,0.9s,mb4.3						
TKL	**Tuckaleechee C**	**23.96**	**9**	P	**P**	**18 10 20.3**	**-0.3**
TKL	**Tuckaleechee C**	**23.96**	**9**	P	**P**	**18 10 20.3**	**-0.3**
	comp=N,6.1nm,0.9s,mb4.0,baz=177,slow=14,SNR=4.4						
WMOK	**Wichita Mounta**	**24.61**	**339**	*e*P	**P**	**18 10 25.5**	**-1.1**
	comp=N,3.4nm,1.0s,mb3.8						
SIV	**San Ignacio**	**38.67**	**135**	P	**P**	**18 12 34.1**	**+4.1**
	comp=N,1.1nm,0.8s,mb3.7,baz=302,slow=8.6,SNR=7.8						
ASAR	**Alice Springs**	**138.32**	**248**	PKP	PKPdf	18 24 34.0	+2.3
	comp=N,0.3nm,1.0s,baz=106,slow=2.4,SNR=2.6						
CMAR	**Chiang Mai Arr**	**148.96**	**347**	PKPbc	PKPbc	18 24 56.5	+2.1
	comp=N,1.0nm,0.8s,baz=341,slow=3.7,SNR=7.8						

*BJI **27** 18:10:02.3, 49°.59N×130°.58W, h10km, mB4.9/5, mb4.5/5, Ms4.5/4, Ms7 3.9/3*
*ISCJB **27** 18:10:03.8±1.5, 50°.08N±0°.04×129°.82W±0°.05, h5km±10km, mb3.9/11, MS3.4/9, Error ellipse: s-maj=7.8km s-min=4.9km az=30.5*
*PGC **27** 18:10:04.5±2.4, 49°.90N×130°.03W, h10km, ML3.4/8, Mw4.0, 205km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*IDC **27** 18:10:04.5±1.4, 50°.05N×130°.05W, h0km, mb3.7/5, mb1 4.0/11, mb1mx3.8/29, mbtmp3.8/11, ML3.9/5, MS3.4/13, Ms1 3.4/13, ms1mx3.2/31, Error ellipse: s-maj=24.1km s-min=13.2km az=75.0*
*NEIC **27** 18:10:06.6±0.7, 50°.12N×129°.82W, h10km, mb4.1/14, MW4.5(PGC), Error ellipse: s-maj=12.9km s-min=5.2km az=49.0*

ISC 27 18:10:07.3±1.7, 50°.14N±0°.04×129°.78W±0°.06, h16km±12km, h13km±1.1km: pP-P, n76, σ1s25/75, mb3.9/11, MS3.4/9, 8D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.17**	**64**	⇓Pn	**Pn**	**18 10 28.3**	**-0.6**
HOLB				⇓Sn	**Sn**	**18 10 44.2**	**-0.2**
BPBC	**Brooks Peninsu**	**1.29**	**89**	⇓Pn	**Pn**	**18 10 28.7**	**-1.9**
BPBC				⇑Sn	**Sn**	**18 10 46.3**	**-1.3**
PHC	**Port Hardy**	**1.60**	**69**	Pn	**Pn**	**18 10 34.4**	**-0.5**
PHC				⇑Sn	**Sn**	**18 10 55.9**	**+0.6**
MAYB	**Maynard**	**1.69**	**80**	Pn	**Pn**	**18 10 35.0**	**-1.1**
EDB	**Eliza Dome**	**1.74**	**98**	Pn	**Pn**	**18 10 34.4**	**-2.3**
EDB				⇓Sn	**Sn**	**18 10 57.0**	**-1.5**
WOSB	**Woss**	**2.06**	**88**	⇓Pn	**Pn**	**18 10 40.5**	**-0.7**
BBB	**Bella Bella**	**2.30**	**27**	Pn	**Pn**	**18 10 44.6**	**+0.2**
	89nm,0.3s,baz=146,slow=16,SNR=227						
BBB				Sn	**Sn**	**18 11 14.5**	**+2.1**
	29nm,0.3s,baz=286,slow=20,SNR=7.8						
BBB	**Bella Bella**	**2.30**	**27**	Pn	**Pn**	**18 10 44.9**	**+0.5**
BBB				⇓Sn	**Sn**	**18 11 13.5**	**+1.1**
GDR	**Gold River**	**2.45**	**97**	⇓Pn	**Pn**	**18 10 44.9**	**-1.6**
OZB	**Mount Ozzard**	**3.03**	**111**	⇑Pn	**Pn**	**18 10 53.1**	**-1.4**
OZB				⇓Sn	**Sn**	**18 11 26.9**	**-3.5**
DIB	**Dawson Inlet,**	**3.49**	**332**	Pn	**Pn**	**18 10 59.2**	**-1.7**
	SNR=12						
PGC	**Sidney**	**4.39**	**107**	*e*P	**Pn**	**18 11 13.2**	**0.0**
JCW	**Jim Creek**	**5.50**	**108**	*e*P	**Pn**	**18 11 27.8**	**-0.7**
	10nm,0.4s						
RPW	**Rockport**	**5.67**	**104**	*e*P	**Pn**	**18 11 30.9**	**+0.2**
	15nm,0.7s						
LON	**Longmire**	**6.29**	**120**	*e*P	**Pn**	**18 11 38.8**	**-0.5**
	11nm,0.8s						
ETW	**Entiat**	**6.73**	**109**	*e*P	**Pn**	**18 11 44.7**	**-0.6**
	24nm,0.5s						
RSW	**Rattlesnake Hi**	**7.76**	**115**	*e*P	**Pn**	**18 11 59.6**	**+0.2**
	25nm,0.5s						
HAWA	**Hanford**	**7.80**	**115**	*e*P	**Pn**	**18 12 00.8**	**+0.8**
	19nm,0.9s						
OD2	**Odessa Site #2**	**7.81**	**106**	*e*P	**Pn**	**18 12 00.4**	**+0.2**
	30nm,0.6s						
DLBC	**Dease Lake**	**8.31**	**359**	Pn	**Pn**	**18 12 08.2**	**+1.3**
	0.7nm,0.3s,baz=176,slow=15,SNR=6.5						
DLBC				LR	LR	18 15 10.2	
	comp=Z,285nm,19.5s,baz=173,slow=36						
NEW	**Newport**	**8.50**	**98**	*e*P	**Pn**	**18 12 10.7**	**+1.1**
	11nm,1.0s						
LNOR	**Lincton Mounta**	**8.81**	**115**	*e*P	**Pn**	**18 12 14.4**	**+0.6**
	7.9nm,0.7s						
YBH	**Yreka Blue Hor**	**9.74**	**147**	LR	LR	18 15 43.7	
	comp=Z,264nm,18.4s,baz=60,slow=35						
BSMT	**Bassoo Peak**	**10.12**	**97**	*e*P	**Pn**	**18 12 32.6**	**+0.9**
JTMT	**Jette**	**10.47**	**97**	*e*P	**Pn**	**18 12 38.1**	**+1.4**
CHMT	**Chamberlain Mo**	**11.42**	**100**	*e*P	**Pn**	**18 12 50.7**	**+1.1**
	2.3nm,0.6s						
LRM	**Limekiln Ridge**	**12.38**	**104**	P	**Pn**	**18 13 04.1**	**+1.4**
HLID	**Hailey**	**12.39**	**116**	*e*P	**Pn**	**18 13 05.1**	**+2.2**
	3.0nm,0.8s						
MCMT	**McKenzie Canyo**	**12.62**	**108**	*e*P	**Pn**	**18 13 06.6**	**+0.7**
	3.9nm,0.9s						
IMW	**Indian Meadow**	**14.27**	**109**	P	**Pn**	**18 13 27.7**	**-0.8**
	14nm,0.8s						
IMW				*e*		18 13 39.4	
NVAR	**Mina Array Bea**	**14.29**	**141**	Pn	**Pn**	**18 13 31.2**	**+2.5**
	0.1nm,0.3s,baz=336,slow=11,SNR=2.6						
MOOW	**Moose Ponds**	**14.47**	**109**	P	**Pn**	**18 13 29.7**	**-1.5**
	14nm,0.8s						
MOOW				*e*		18 13 40.8	
TPAW	**Teton Pass**	**14.49**	**110**	P	**Pn**	**18 13 27.7**	**-3.7**
	24nm,0.9s						
TPAW				*e*		18 13 41.1	
REDW	**Red Top Meadow**	**14.62**	**110**	P	**Pn**	**18 13 37.8**	**+4.6**
	19nm,0.9s						
LOHW	**Long Hollow**	**14.63**	**109**	P	**Pn**	**18 13 32.8**	**-0.6**
	6.4nm,0.6s						
LOHW				*e*		18 13 42.7	
RLMT	**Red Lodge**	**14.70**	**102**	P	**Pn**	**18 13 38.0**	**+3.7**
	9.2nm,0.6s						
YKA	**Yellowknife Ar**	**14.91**	**28**	Pn	**Pn**	**18 13 35.9**	**-1.2**
	0.3nm,0.3s,baz=221,slow=12,SNR=10						
DUG	**Dugway**	**15.53**	**123**	P	**Pn**	**18 13 44.5**	**-0.8**
	7.2nm,1.0s						
PDAR	**Pinedale Array**	**15.74**	**110**	Pn	**Pn**	**18 13 51.0**	**+2.9**
	0.1nm,0.3s,baz=316,slow=12,SNR=14						
MSU	**Marysvale**	**17.09**	**126**	*e*P	**Pn**	**18 14 06.8**	**+1.5**
	15nm,1.6s						
ILAR	**Eielson Array**	**17.21**	**335**	P	**Pn**	**18 14 06.9**	**+0.2**
ILAR				LR	LR	18 19 38.2	
ILAR	**Eielson Array**	**17.21**	**335**	P	**Pn**	**18 14 06.9**	**+0.2**
	0.7nm,0.3s,baz=146,slow=9.8,SNR=8.0						
ILAR				LR	LR	18 19 38.2	
	comp=Z,61nm,20.1s,baz=190,slow=33						
FFC	**Flin Flon**	**17.50**	**64**	P	**Pn**	**18 14 12.2**	**+1.8**
	10nm,0.6s						
INK	**Inuvik**	**18.31**	**356**	LR	LR	18 21 02.5	
	comp=Z,107nm,18.8s,baz=229,slow=36						
PV04	**Paradox Valley**	**18.94**	**120**	*e*P	**Pn**	**18 14 26.6**	**-1.5**
TTA	**Tatalina**	**19.14**	**322**	*e*P	**Pn**	**18 14 30.1**	**-0.1**
	38nm,1.6s						
PV01	**Paradox Valley**	**19.31**	**120**	*e*P	**Pn**	**18 14 30.5**	**-2.0**
SMCO	**Snowmass**	**19.50**	**116**	*e*P	**Pn**	**18 14 34.1**	**-0.7**
	10.0nm,1.0s						
COLD	**Coldfoot**	**19.97**	**337**	P	**Pn**	**18 14 38.8**	**-1.4**
	9.5nm,1.3s						
MVCO	**Mesa Verde**	**20.01**	**122**	*e*P	**P**	**18 14 39.5**	**+0.4**
	54nm,1.7s						
SDCO	**Great Sand Dun**	**21.32**	**116**	*e*P	**P**	**18 14 54.2**	**+0.9**
	6.4nm,1.1s,mb3.9						
ULM	**Lac du Bonnet**	**21.60**	**77**	P	**P**	**18 14 57.0**	**+0.8**
ULM				LR	LR	18 23 27.7	
ULM	**Lac du Bonnet**	**21.60**	**77**	P	**P**	**18 14 57.0**	**+0.8**
	4.9nm,0.6s,mb4.1,baz=249,slow=8.6,SNR=2.4						
ULM				LR	LR	18 23 27.7	
	comp=Z,170nm,20.5s,MS3.4,baz=330,slow=37						
AGMN	**Agassiz Nation**	**22.12**	**82**	P	**P**	**18 15 03.9**	**+2.1**
	4.6nm,0.6s,mb4.1						
ANMO	**Albuquerque**	**22.79**	**123**	*e*P	**P**	**18 15 10.0**	**+1.0**
	4.2nm,1.0s,mb3.8						
ANMO	**Albuquerque**	**22.79**	**123**	P	**P**	**18 15 10.4**	**+1.4**
	2.7nm,0.9s,mb3.7,baz=311,slow=9.3,SNR=4.0						
ANMO				LR	LR	18 24 45.1	
	comp=Z,79nm,18.1s,MS3.2,baz=106,slow=38						
ECSD	**EROS Data Cent**	**23.40**	**93**	*e*P	**P**	**18 15 16.2**	**+0.9**
	11nm,0.7s,mb4.4						
EYMN	**Ely**	**25.01**	**80**	*e*P	**P**	**18 15 31.6**	**+1.5**
	12nm,0.9s,mb4.4						
WMOK	**Wichita Mounta**	**27.32**	**112**	*e*P	**P**	**18 15 51.3**	**+0.2**
	4.9nm,1.0s,mb4.0						
RES	**Resolute Bay**	**28.57**	**19**	LR	LR	18 27 21.9	
	comp=Z,64nm,19.9s,MS3.2,baz=264,slow=36						
TXAR	**Lajitas Array**	**28.65**	**127**	P	**P**	**18 16 04.2**	**+1.2**
	0.6nm,0.8s,mb3.4,baz=331,slow=5.2,SNR=8.1						
TXAR				LR	LR	18 28 07.0	
	comp=Z,89nm,19.9s,MS3.4,baz=10.0,slow=38						
MIAR	**Mount Ida**	**30.61**	**107**	*e*P	**P**	**18 16 18.6**	**-1.8**
	6.6nm,1.2s,mb4.3						
SCHQ	**Schefferville**	**37.47**	**58**	LR	LR	18 32 47.3	
	comp=Z,71nm,21.6s,MS3.4,baz=0.1,slow=36						
PETK	**Petropavlovsk-**	**43.34**	**303**	LR	LR	18 32 36.2	
	comp=Z,32nm,21.6s,MS3.2,baz=185,slow=31						
ROSC	**El Rosal**	**64.66**	**115**	LR	LR	18 50 52.7	
	comp=Z,42nm,19.1s,MS3.6,baz=175,slow=38						
NOA	**NORSAR Array B**	**64.82**	**20**	LR	LR	18 49 32.3	
	comp=Z,19nm,18.9s,MS3.3,baz=20,slow=36						
BJI	**Beijing**	**73.19**	**313**	P	**P**	**18 21 35.5**	**-1.5**
BJI				S	S	18 31 03.0	-1.2
BJI				SS	SS	18 35 44.5	-0.1
BJI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,55nm,4.8s						
BJI				LR	LR		
	comp=N,160nm,17.5s						
BJI				LR	LR		
	comp=E,200nm,17.3s						
BJI				LR	LR		
	comp=Z,67nm,20.8s						
HHC	**Hu-ho-hao-te**	**74.65**	**316**	*e*P	**P**	**18 21 45.5**	**-0.1**
HHC				pP	pP	18 21 49.8	-1.0
HHC				sP	sP	18 21 52.8	+0.1
HHC				PP	PP	18 24 33.8	+1.9
HHC				S	S	18 31 17.5	-3.2
HHC				SS	SS	18 36 07.0	+0.2
HHC				pmax	pmax		
	comp=Z,65nm,4.7s						
HHC				LR	LR		
	comp=N,80nm,15.5s						
HHC				LR	LR		
	comp=E,76nm,14.3s						
HHC				LR	LR		
	comp=Z,100nm,15.5s						
KURK	**Kurchatov**	**76.64**	**342**	P	**P**	**18 21 57.1**	**+0.3**
	comp=Z,0.3nm,0.6s,mb3.4,baz=14,slow=3.9,SNR=2.5						
GUMO	**Guam**	**76.74**	**275**	LR	LR	18 51 17.5	
	comp=Z,25nm,21.1s,MS3.5,baz=90,slow=32						
MKAR	**Makanchi Array**	**79.54**	**338**	P	**P**	**18 22 12.5**	**-0.4**
	comp=Z,0.4nm,0.6s,mb3.5,baz=34,slow=5.4,SNR=3.0						
WMQ	**Urumqi**	**80.88**	**334**	*e*P	**P**	**18 22 22.3**	**+2.1**
LZH	**Lanzhou**	**81.96**	**319**	*e*P	**P**	**18 22 24.0**	**-2.1**
LZH				pP	pP	18 22 27.3	-4.1
LZH				*e*PP	PP	18 25 33.3	+0.3
LZH				pmax	pmax		
	comp=Z,49nm,7.8s						
CD2	**Chengdu**	**86.41**	**316**	P	**P**	**18 22 48.0**	**-0.8**
CD2				pmax	pmax		
	comp=Z,130nm,5.0s						
KSH	**Kashi**	**87.89**	**340**	*e*P	**P**	**18 22 58.0**	**+2.2**
KSH				*e*pP	pP	18 23 02.5	+1.4
KSH				*e*sP	sP	18 23 05.3	+2.3
KSH				*e*PP	PP	18 26 27.0	+6.1
KSH				*e*SKS		18 33 23.5	
KSH				*e*S	S	18 33 39.5	+1.5
KSH				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSH				LR	LR		
	comp=N,17nm,4.4s						
KSH				LR	LR		
	comp=E,12nm,2.2s						
GYA	**Guiyang**	**88.83**	**312**	*e*P	**P**	**18 23 00.3**	**-0.2**

*ISCJB **27** 18:19:10.3±1.3, 50°.06N±0°.07×129°.8W±0°.2, h10km, Error ellipse: s-maj=20.5km s-min=9.4km az=166.8*
*IDC **27** 18:19:10.0±2.3, 49°.97N×129°.83W, h0km, mb1 3.7/6, mb1mx3.5/27, mbtmp3.4/6, ML3.1/2, Error ellipse: s-maj=35.3km s-min=15.7km az=73.0*
*NEIC **27** 18:19:12.9±1.5, 50°.14N×129°.61W, h10km, Error ellipse: s-maj=30.5km s-min=10.2km az=65.0*

ISC 27 18:19:12.7±1.3, 50°.11N±0°.07×129°.7W±0°.2, h10km, n7, σ1s04/8, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBB	**Bella Bella**	**2.32**	**25**	Pn	**Pn**	**18 19 50.8**	**0.0**
	9.2nm,0.3s,baz=125,slow=16,SNR=28						
BBB				Sn	**Sn**	**18 20 19.9**	**+0.6**
	5.4nm,0.3s,baz=131,slow=22,SNR=6.5						
HOOD	**Mount Hood Mea**	**7.25**	**128**	P	**Pn**	**18 20 57.2**	**-1.4**
DLBC	**Dease Lake**	**8.35**	**359**	Pn	**Pn**	**18 21 14.2**	**+0.6**
	0.1nm,0.3s,baz=164,slow=20,SNR=2.4						
NVAR	**Mina Array Bea**	**14.23**	**141**	Pn	**Pn**	**18 22 34.6**	**+0.5**
	baz=317,slow=6.1,SNR=2.0						
YKA	**Yellowknife Ar**	**14.93**	**28**	Pn	**Pn**	**18 22 41.3**	**-2.2**
	0.0nm,0.3s,baz=220,slow=12,SNR=5.1						
PDAR	**Pinedale Array**	**15.69**	**110**	Pn	**Pn**	**18 22 55.0**	**+1.4**
	0.6nm,0.3s,baz=299,slow=11,SNR=9.6						
ILAR	**Eielson Array**	**17.27**	**335**	P	**Pn**	**18 23 13.6**	**+0.1**
	0.1nm,0.3s,baz=143,slow=11,SNR=3.3						

SKHL 27 18:29:20.9±1.0, 55°.20N×124°.06E, h8km±3km, mb5.0/8, Ms3.8/1, 1C-3D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLNS	**Chul'man**	**1.71**	**16**	*e*Pg	Pg	18 29 53.4	-0.2
CLNS				AMB	AMB	18 29 55.0	
	730nm,0.1s						
CLNS				*e*Sg	Sg	18 30 15.9	+0.2
CLNS				A		18 30 17.9	
	2μm,0.3s						
KROS	**Kirovskiy**	**1.85**	**113**	⇓*i*Pn	Pn	18 29 52.5	-0.4
KROS				⇓*i*Pg	Pg	18 29 53.6	-2.8
KROS				AMB	AMB	18 29 54.1	
	440nm,0.3s						
KROS				AMB	AMB	18 29 54.1	
	420nm,0.3s						
KROS				AMB	AMB	18 29 54.1	
	640nm,0.3s						
KROS				*e*Sg	Sg	18 30 17.7	-2.6
ZEA	**Zeya**	**2.37**	**127**	*e*Pn	Pn	18 30 00.5	+0.5
ZEA				⇑*i*Pg	Pg	18 30 03.5	-2.8
ZEA				AMB	AMB	18 30 04.2	
	490nm,0.3s						
ZEA				AMB	AMB	18 30 04.2	
	720nm,0.3s						
ZEA				AMB	AMB	18 30 04.5	
	1μm,0.5s						
ZEA				*i* Sn	Sn	18 30 30.2	+1.0
ZEA				*i* Sg	Sg	18 30 35.1	-1.8
ZEA				A		18 30 36.5	
	4μm,0.5s						
ZEA				A		18 30 36.6	
	76nm,0.5s						
ZEA				AMS	AMS	18 31 06.0	
	900nm,4.0s						
TUP	**Tupik**	**2.50**	**254**	*e*Pn	Pn	18 30 04.3	+2.5
TUP				*e*Pg	Pg	18 30 08.0	-0.8
TUP				AMB	AMB	18 30 11.1	
	432nm,0.7s						
TUP				*e*Sn	Sn	18 30 34.8	+2.4
TUP				*e*Sg	Sg	18 30 40.0	-1.1
TUP				A		18 30 45.6	
	3μm,1.0s						
BMKR	**Bomnak**	**2.80**	**98**	⇓*i*Pn	Pn	18 30 03.9	-2.0
BMKR				pPn		18 30 06.1	
BMKR				*e*Pg	Pg	18 30 10.3	-4.2
BMKR				AMB	AMB	18 30 12.0	
	9μm,0.5s						
BMKR				AMB	AMB	18 30 12.0	
	570nm,0.5s						
CRS	**Chara**	**3.67**	**300**	*e*Pn	Pn	18 30 20.9	+3.1
CRS				*e*Pg	Pg	18 30 27.0	-4.1
CRS				AMB	AMB	18 30 30.5	
	255nm,0.8s						
CRS				*e*Sg	Sg	18 31 15.3	-3.3
CRS				A		18 31 20.7	
	906nm,1.0s						
EKMR	**Ekimchan**	**5.64**	**109**	*e*Pn	Pn	18 30 44.0	-1.0
EKMR				AMB	AMB	18 30 45.4	
	66nm,0.5s						
EKMR				pPn		18 30 47.0	
EKMR				sPn		18 30 49.5	
EKMR				*e*Pg	Pg	18 31 02.4	-6.5
EKMR				*e*Sg	Sg	18 32 17.0	-5.0
EKMR				A		18 32 29.6	
	240nm,0.6s						
EKMR				A		18 32 29.6	
	74nm,0.6s						
EKMR				A		18 32 29.6	
	82nm,0.6s						
KLR	**Kul'dur**	**7.62**	**139**	*e*Pn	Pn	18 31 11.7	-0.3
GRNR	**Gornyy**	**8.68**	**116**	*e*Pg	Pn	18 31 58.0	+31
GRNR				AMB	AMB	18 32 02.0	
	13nm,1.0s						
GRNR				*e*Sg	Sn	18 33 52.9	+48
GRNR				A		18 34 04.2	
	92nm,1.0s						
NKL	**Nikolayevsk**	**9.96**	**95**	*e*rx	rx	18 31 43.0	
NKL				*e*Sg	Sn	18 34 29.9	+54
NKL				A		18 34 36.1	
	172nm,1.0s						

IDC 27 18:29:53.2±1.7, 9°.22S×125°.23E, h0km, mb3.7/1, mb1 3.9/4, mb1mx3.6/17, mbtmp3.7/4, ML3.8/3, Error ellipse: s-maj=94.6km s-min=26.8km az=66.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**8.84**	**177**	Pn	Pn	18 32 01.6	-0.7
	1.5nm,0.3s,baz=360,slow=8.0,SNR=49						
FITZ				Sn	Sn	18 33 33.4	-9.4
	0.8nm,0.3s,baz=292,slow=23,SNR=8.4						
WRA	**Warramunga Arr**	**13.83**	**141**	Pn	Pn	18 33 11.2	+0.5
	0.3nm,0.3s,baz=318,slow=13,SNR=14						
WRA				Sn	Sn	18 35 39.7	-5.4
	0.3nm,0.3s,baz=317,slow=24,SNR=4.5						
ASAR	**Alice Springs**	**16.59**	**151**	Pn	Pn	18 33 47.8	+0.4
	0.2nm,0.3s,baz=320,slow=11,SNR=19						
ASAR				Sn	Sn	18 36 45.5	-6.8
	0.1nm,0.3s,baz=318,slow=21,SNR=5.2						
MKAR	**Makanchi Array**	**67.61**	**330**	P	P	18 40 51.9	+0.1
	0.4nm,0.5s,baz=132,slow=7.9,SNR=7.2						

*PGC **27** 18:47:05.1±2.3, 49°.99N×130°.17W, h10km, ML3.5/11, Mw4.1, 210km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*IDC **27** 18:47:06.0±0.9, 50°.10N×130°.04W, h0km, mb3.9/9, mb1 4.1/17, mb1mx3.9/30, mbtmp3.9/17, ML3.6/8, MS3.8/22, Ms1 3.8/22, ms1mx3.7/37, Error ellipse: s-maj=19.7km s-min=11.4km az=72.0*
*ISCJB **27** 18:47:08.0±0.3, 50°.22N±0°.03×129°.75W±0°.04, h10km, mb4.6/35, MS3.9/19, Error ellipse: s-maj=4.9km s-min=3.0km az=135.7*
*NEIC **27** 18:47:09.6±0.4, 50°.24N×129°.83W, h10km, mb4.5/37, MW4.1(PGC), Error ellipse: s-maj=9.0km s-min=3.8km az

comp=Z,545nm,19.1s,baz=185,slow=36
NEW Newport 8.49 99 *e*P **Pn 18 49 14.6 +1.9**
8.7nm,1.0s
HUMO Hull Mountain 8.98 146 P **Pn 18 49 19.1 -0.4**
18nm,1.3s
YBH Yreka Blue Hor 9.84 148 *e*P **Pn 18 49 31.3 0.0**
67nm,1.8s
YBH Yreka Blue Hor 9.84 148 Pn **Pn 18 49 29.2 -2.0**
0.1nm,0.3s,baz=338,slow=6.9,SNR=2.0
YBH LR LR 18 52 46.1
comp=Z,1μm,19.8s,baz=329,slow=35
WALA Waterton Lakes 10.33 91 *e*P **Pn 18 49 38.2 +0.3**
0.4nm,1.2s
MOD Modoc 10.62 138 *e*P **Pn 18 49 42.1 +0.1**
42nm,1.5s
WDC Whiskeytown Da 10.93 150 *e*P **Pn 18 49 45.2 -1.0**
42nm,1.4s
WVOR Wild Horse Val 10.96 131 *e*P **Pn 18 49 46.3 -0.2**
48nm,1.6s
SLMT Seeley Lake 11.14 100 *e*P **Pn 18 49 49.5 +0.5**
25nm,1.5s
CHMT Chamberlain Mo 11.42 101 *e*P **Pn 18 49 52.8 +0.1**
21nm,1.4s
HLID Hailey 12.43 117 *e*P **Pn 18 50 06.8 +0.2**
9.7nm,1.1s
MCMT McKenzie Canyo 12.63 109 *e*P **Pn 18 50 09.7 +0.4**
4.3nm,1.1s
PAHR Pah Rah Range 12.84 141 *e*P **Pn 18 50 11.5 -0.8**
41nm,1.3s
WCN Washoe City 13.05 143 *e*P **Pn 18 50 14.6 -0.5**
62nm,1.5s
BMN Battle Mountai 13.18 134 P **Pn 18 50 16.7 -0.3**
27nm,1.2s
WAKR Walker 13.86 144 *e*P **Pn 18 50 27.7 +1.4**
21nm,1.2s
CMB Columbia Colle 13.94 148 *e*P **Pn 18 50 28.5 +1.2**
40nm,1.6s
GCMT Greycliff 14.14 101 P **Pn 18 50 33.5 +3.5**
8.8nm,0.9s
IMW Indian Meadow 14.28 109 *e*P **Pn 18 50 34.0 +2.0**
35nm,1.0s
DCID1 Drake Creek 14.30 111 *e*P **Pn 18 50 33.2 +0.9**
83nm,1.1s
RRI2 Red Ridge 14.36 112 *e*P **Pn 18 50 36.5 +3.5**
87nm,1.8s
NVAR Mina Array Bea 14.37 141 Pn **Pn 18 50 32.5 -0.6**
0.1nm,0.3s,baz=314,slow=10,SNR=10
MOOW Moose Ponds 14.48 110 *e*P **Pn 18 50 35.2 +0.6**
38nm,1.1s
TPAW Teton Pass 14.50 111 *e*P **Pn 18 50 44.1 +9.2**
68nm,1.1s
REDW Red Top Meadow 14.63 111 *e*P **Pn 18 50 41.7 +4.9**
45nm,1.0s
SNOW Snow King Moun 14.64 110 P **Pn 18 50 38.1 +1.4**
44nm,1.0s
LOHW Long Hollow 14.64 110 *e*P **Pn 18 50 40.0 +3.1**
36nm,1.2s
RLMT Red Lodge 14.69 103 *e*P **Pn 18 50 46.1 +8.5**
37nm,1.3s
DAWY Dawson 14.75 343 *e*P **Pn 18 50 40.9 +2.7**
YKA Yellowknife Ar 14.77 28 Pn **Pn 18 50 37.4 -1.1**
0.1nm,0.3s,baz=219,slow=11,SNR=4.4
YKA LR LR 18 56 40.7
comp=Z,48nm,19.1s,baz=285,slow=38
AHID Auburn Hatcher 14.84 113 *e*P **Pn 18 50 43.4 +3.9**
60nm,1.2s
BGU Big Grassy Mou 14.94 122 *e*P **Pn 18 50 42.5 +1.6**
32nm,1.4s
SPUT South Promonto 14.99 120 *e*P **Pn 18 50 42.7 +1.1**
20nm,1.1s
HWUT Hardware Ranch 15.29 118 *e*P **Pn 18 50 48.3 +2.8**
24nm,1.2s
KDAK Kodiak Island 15.33 308 LR LR 18 55 06.3
comp=Z,845nm,20.7s,baz=68,slow=31
SML Sawmill 15.46 325 *e*P **Pn 18 50 51.0 +3.3**
5.5nm,1.2s
DUG Dugway 15.57 124 *e*P **Pn 18 50 51.9 +2.7**
35nm,1.2s
PMR Palmer 15.62 324 P **Pn 18 50 52.8 +3.0**
EGAK Eagle 15.73 342 *e*P **Pn 18 50 52.3 +1.1**
12nm,0.1s
PDAR Pinedale Array 15.75 111 Pn **Pn 18 50 53.7 +2.1**
0.1nm,0.3s,baz=309,slow=9.4,SNR=19
PDAR LR LR 18 57 05.2
comp=Z,315nm,19.3s,baz=347,slow=38
DAU Daniels Canyon 16.27 120 *e*P **Pn 18 50 59.4 +1.1**
36nm,1.4s
DGMT Dagmar 16.70 86 *e*P **Pn 18 51 05.3 +1.6**
49nm,1.2s
ISA Isabella 16.74 147 *e*P **Pn 18 51 05.8 +1.6**
40nm,1.2s
ILAR Eielson Array 17.11 335 P **Pn 18 51 09.0 +0.3**
0.0nm,0.3s,baz=144,slow=9.5,SNR=7.0
ILAR LR LR 18 57 03.5
comp=Z,347nm,20.1s,baz=138,slow=35
MSU Marysvale 17.14 127 *e*P **Pn 18 51 09.1 -0.2**
TRF Thorofare Moun 17.22 328 *e*P **Pn 18 51 11.4 +1.3**
106nm,2.0s
CCUT Cedar City 17.30 131 *e*P **Pn 18 51 10.5 -0.8**
FFC Flin Flon 17.41 65 *e*P **Pn 18 51 11.3 -1.2**
18nm,0.8s
SRU San Rafael 17.58 122 *e*P **Pn 18 51 14.9 +0.2**
GSC Goldstone 17.68 143 *e*P **Pn 18 51 16.4 +0.4**
14nm,0.9s
BPAW Bear Paw Mtn. 17.88 329 *e*P **Pn 18 51 20.3 +2.0**
66nm,2.0s
SVW2 Sparrevohn 18.02 317 *e*P **Pn 18 51 19.0 -1.1**
19nm,1.5s
INK Inuvik 18.18 355 P **Pn 18 51 20.7 -1.2**
0.1nm,0.3s,baz=207,slow=11,SNR=2.7
INK LR LR 18 59 06.1
comp=Z,177nm,19.8s,baz=325,slow=39
RSSD Black Hills 18.46 100 *e*P **Pn 18 51 26.2 +0.6**
21nm,1.4s
LDFC Landfair 18.55 139 *e*P **Pn 18 51 25.2 -1.5**
PV04 Paradox Valley 18.98 121 *e*P **Pn 18 51 31.3 -0.6**
TTA Tatalina 19.05 322 *e*P **Pn 18 51 33.1 +0.6**
53nm,1.8s
PV01 Paradox Valley 19.35 121 *e*P **Pn 18 51 35.5 -0.8**
3μm,1.1s
SMCO Snowmass 19.53 116 *e*P **Pn 18 51 38.3 -0.2**
41nm,1.4s
COLD Coldfoot 19.86 336 *e*P **Pn 18 51 42.4 +0.2**
WUAZ Wupatki 19.88 131 *e*P **Pn 18 51 40.2 -2.5**
ISCO Idaho Springs 19.92 112 *e*P **Pn 18 51 42.2 -0.9**
24nm,1.4s
MVCO Mesa Verde 20.06 123 *e*P **P 18 51 42.9 -0.1**
BAR Barrett 20.07 146 *e*P **P 18 51 43.6 +0.5**
47nm,1.6s
GLA Glamis 20.43 142 *e*P **P 18 51 46.9 -0.2**
32nm,1.3s
SDCO Great Sand Dun 21.35 117 *e*P **P 18 51 56.5 -0.5**
OGNE Ogallala 21.40 105 *e*P **P 18 51 58.1 +0.7**
84nm,1.3s,mb4.9
ULM Lac du Bonnet 21.54 77 P **P 18 51 58.9 0.0**
ULM LR LR 19 00 30.1
ULM Lac du Bonnet 21.54 77 P **P 18 51 58.9 0.0**
71nm,1.2s,mb5.0,baz=287,slow=12,SNR=15
ULM LR LR 19 00 30.1
comp=Z,318nm,19.9s,MS3.7,baz=277,slow=37
TUC Tucson 22.80 135 *e*P **P 18 52 11.8 -0.7**
31nm,1.2s,mb4.6
ANMO Albuquerque 22.84 123 *e*P **P 18 52 14.2 +1.3**
ANMO Albuquerque 22.84 123 P **P 18 52 11.6 -1.3**
12nm,1.0s,mb4.3,baz=322,slow=10,SNR=12
ANMO LR LR 19 01 38.3
comp=Z,168nm,19.1s,MS3.5,baz=298,slow=38
LAZ Ladron 22.90 125 *e*P **P 18 52 15.2 +1.7**
11nm,1.4s,mb4.1
LENM Lemitar 23.17 125 *e*P **P 18 52 16.4 +0.1**
48nm,1.7s,mb4.7
LPM Los Pinos Moun 23.23 125 *e*P **P 18 52 16.9 -0.2**
12nm,1.1s,mb4.2
BNM Barren Site 23.36 125 *e*P **P 18 52 18.1 -0.3**
ECSD EROS Data Cent 23.37 93 *e*P **P 18 52 17.7 -0.7**
19nm,1.0s,mb4.5
EYMN Ely 24.95 80 *e*P **P 18 52 33.1 +0.1**
40nm,1.0s,mb4.9
AMTX Amarillo 25.55 116 *e*P **P 18 52 39.1 +0.6**
83nm,1.0s,mb5.2
MNTX Cornudas Mount 25.93 127 *e*P **P 18 52 41.9 -0.2**
19nm,1.2s,mb4.5
WMOK Wichita Mounta 27.34 113 *e*P **P 18 52 54.0 -0.8**
23nm,1.0s,mb4.7
RES Resolute Bay 28.43 19 LR LR 19 03 20.4
comp=Z,99nm,21.6s,MS3.4,baz=242,slow=34
TXAR Lajitas Array 28.70 127 P **P 18 53 06.6 -0.4**
2.1nm,0.9s,mb3.9,baz=328,slow=6.1,SNR=13
TXAR LR LR 19 05 10.7
comp=Z,292nm,19.4s,MS3.9,baz=5.0,slow=38
JCT Junction City 29.87 120 *e*P **P 18 53 16.3 -1.0**
22nm,1.1s,mb4.8
MIAR Mount Ida 30.62 107 *e*P **P 18 53 23.5 -0.4**
27nm,1.2s,mb5.0
HKT Hockley 32.52 116 *e*P **P 18 53 41.7 +1.0**
19nm,1.3s,mb4.9
WVT Waverly 33.19 99 *e*P **P 18 53 49.4 +3.0**
8.3nm,1.1s,mb4.6
OXF Oxford 33.22 103 *e*P **P 18 53 47.2 +0.4**
74nm,1.2s,mb5.5
LRAL Lakeview Retre 35.70 102 *e*P **P 18 54 10.8 +2.6**
7.4nm,1.0s,mb4.6
SCHQ Schefferville 37.37 58 LR LR 19 09 35.3
comp=Z,200nm,18.8s,MS3.9,baz=107,slow=36
GOGA Godfrey 37.68 99 *e*P **P 18 54 23.2 -1.9**
19nm,1.0s,mb4.8
PETK Petropavlovsk- 43.30 303 LR LR 19 10 13.4
comp=Z,63nm,21.5s,MS3.5,baz=257,slow=32
NOA NORSAR Array B 64.68 20 LR LR 19 27 22.1
comp=Z,58nm,18.2s,MS3.8,baz=340,slow=37
ROSC El Rosal 64.69 115 LR LR 19 25 02.6
comp=Z,55nm,21.3s,MS3.7,baz=232,slow=35
FINES FINESS Array B 66.95 12 P **P 18 58 01.0 -0.9**
FINES LR LR 19 26 20.4
FINES FINESS Array B 66.95 12 P **P 18 58 01.0 -0.9**
3.6nm,1.0s,mb4.4,baz=316,slow=7.8,SNR=3.9
FINES LR LR 19 26 20.5
comp=Z,102nm,19.1s,MS4.1,baz=311,slow=35
KSRS Korea Array 69.19 304 LR LR 19 26 44.5
comp=Z,22nm,19.7s,MS3.4,baz=255,slow=34
PPT Papeete 69.78 200 LR LR 19 20 02.2
comp=Z,112nm,20.7s,MS4.1,baz=12,slow=28
SONM Songino Array 70.98 324 P **P 18 58 26.0 -1.3**
0.2nm,0.3s,mb3.5,baz=111,slow=6.3,SNR=4.3
ZALV Zalesovo Beam 72.16 339 P **P 18 58 33.0 -1.2**
0.2nm,0.3s,mb3.5,baz=23,slow=7.8,SNR=3.3
BJI Beijing 73.12 313 P **P 18 58 39.0 -1.2**
BJI S S 19 08 04.5 -3.0
BJI pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
BJI pmax pmax
comp=Z,31nm,5.2s
BJI LR LR
comp=N,66nm,14.9s,MS4.2
BJI LR LR
comp=E,75nm,17.6s,MS4.2
BJI LR LR
comp=Z,12nm,18.6s,MS3.2
HHC Hu-ho-hao-te 74.58 316 *e*P **P 18 58 49.3 +0.6**
HHC pP pP 18 58 53.0 +1.0
HHC sP sP 18 58 56.0 +2.8
HHC PP PP 19 01 37.0 +2.3
HHC S S 19 08 21.5 -2.4
HHC SS SS 19 13 10.3 +0.6
HHC pmax pmax
comp=Z,17nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,68nm,4.7s
HHC LR LR
comp=N,91nm,16.7s,MS4.3
HHC LR LR
comp=E,82nm,17.8s,MS4.3
HHC LR LR
comp=Z,76nm,15.5s,MS4.1
AKASG Malin Array Be 77.81 14 P **P 18 59 05.1 -1.8**
comp=Z,0.7nm,0.5s,mb3.8,baz=356,slow=5.5,SNR=5.3
NJ2 Nanjing 78.11 306 *e*P **P 18 59 10.5 +1.6**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
MKAR Makanchi Array 79.42 338 P **P 18 59 13.2 -2.6**
comp=Z,0.4nm,0.9s,mb3.4,baz=38,slow=6.1,SNR=4.0
ABKAR Akbulak array 80.50 354 *e*P **P 18 59 19.7 -1.9**
comp=Z,3.5nm,1.0s,mb4.2
WMQ Urumqi 80.77 334 *e*P **P 18 59 24.5 +1.3**
WMQ pP pP 18 59 29.3 +2.8
WMQ sP sP 18 59 31.5 +3.8
WMQ pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
WMQ pmax pmax
comp=Z,80nm,7.0s
WMQ LR LR
comp=N,69nm,18.0s
WMQ LR LR
comp=Z,56nm,19.0s,MS3.9
LZH Lanzhou 81.88 319 *e*P **P 18 59 28.0 -1.2**
LZH *e*PP PP 19 02 37.5 +1.7
LZH pmax pmax
comp=Z,20nm,1.4s,mb4.8
LZH pmax pmax
comp=Z,54nm,8.5s
LZH LR LR
comp=N,190nm,17.0s,MS4.6
LZH LR LR
comp=E,150nm,16.9s,MS4.6
LZH LR LR
comp=Z,250nm,19.7s,MS4.6
LPAZ La Paz 85.45 122 P **P 18 59 46.0 -1.6**
comp=Z,1.6nm,0.8s,mb4.2,baz=356,slow=4.9,SNR=4.8
CD2 Chengdu 86.33 316 P **P 18 59 51.3 -0.7**
CD2 pP pP 18 59 56.0 +0.7
CD2 sP sP 18 59 58.3 +1.8
CD2 PP PP 19 03 13.3 +1.0
CD2 SKS 19 10 13.5
CD2 S S 19 10 23.5 -4.0
CD2 SS SS 19 16 05.5 -0.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.3
CD2 pmax pmax
comp=Z,150nm,5.0s
CD2 LR LR
comp=N,160nm,14.0s,MS4.7
CD2 LR LR
comp=E,140nm,14.8s,MS4.7
CD2 LR LR
comp=Z,240nm,15.3s,MS4.7
GYA Guiyang 88.77 312 *e*P **P 19 00 03.5 -0.2**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
KMI Kunming 91.75 314 P **P 19 00 18.3 +0.6**
KMI pP pP 19 00 25.0 +4.0
KMI sP sP 19 00 27.8 +5.6
KMI pmax pmax
comp=Z,4.0nm,1.1s,mb4.7
MMAI Mount Meron Ar 96.03 13 LR LR 19 45 45.4
comp=Z,46nm,19.0s,MS4.0,baz=150,slow=37
EIL Elat 99.25 13 LR LR 19 46 06.6
comp=Z,41nm,21.1s,MS3.9,baz=293,slow=36
CPUP Villa Florida 99.45 120 LR LR 19 52 50.0
comp=Z,40nm,19.6s,MS3.9,baz=185,slow=40

*ATH **27** 19:00:46.2,37.˚06N×28.˚14E,h30km±2km, MD3.3/4*
*ISK **27** 19:00:47.0,37.˚05N×27.˚95E,h9km, MD3.3*
*ISCJB **27** 19:00:47.4±0.4,37.˚03N±0.˚02×27.˚96E±0.˚03,h10km±3km, Error ellipse: s-maj=3.6km s-min=3.3km az=32.4*
*DDA **27** 19:00:47.0,37.˚00N×27.˚99E,h9km±3km, Md3.0*
*NEIC **27** 19:00:47.0,37.˚08N×27.˚93E,h6km, MD3.3(ATH), MD2.9(ISK), After ISK.*
*CSEM **27** 19:00:47.7±0.1,37.˚05N×27.˚95E,h9km, MD3.3, Error ellipse: s-maj=3.8km s-min=2.8km az=177.0*
ISC 27 19:00:48.0±0.4,37.˚03N±0.˚02×27.˚95E±0.˚03,h12km±3km, n58,σ1º04/88,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h	m	s	ISC
YER	**Yerkesik**	**0.28**	**69**	PG		**Pg**	**19 00 53.0**			**-0.9**
YER				*e*SG		**Sg**	**19 00 57.3**			**-0.5**
YER	**Yerkesik**	**0.28**	**69**	*i* Pg		**Pg**	**19 00 53.0**			**-0.9**
YER				*e*Sg		**Sg**	**19 00 57.3**			**-0.5**
MLSB	**Milas**	**0.30**	**332**	PG		**Pg**	**19 00 53.2**			**-0.9**
MLSB				*e*SG		**Sg**	**19 00 58.0**			**-0.3**
MLSB	**Milas**	**0.30**	**332**	*i* Pg		**Pg**	**19 00 53.2**			**-0.9**
MLSB				*e*Sg		**Sg**	**19 00 58.0**			**-0.3**
BDRM	**Kayabasi**	**0.41**	**275**	*i* P		**Pg**	**19 00 55.3**			**-0.8**
BDRM				*i* S		**Sg**	**19 01 02.3**			**+0.7**
BDRM	**Kayabasi**	**0.41**	**275**	*i* P		**Pg**	**19 00 55.3**			**-0.8**
BDRM				*i* S		**Sg**	**19 01 02.3**			**+0.7**
DAT	**Datca**	**0.43**	**225**	*e*PG		**Pg**	**19 00 55.9**			**-0.6**
DAT				*e*SG		**Sg**	**19 01 02.9**			**+0.8**
DAT	**Datca**	**0.43**	**225**	*e*Pg		**Pg**	**19 00 55.9**			**-0.5**
DAT				*e*Sg		**Sg**	**19 01 02.9**			**+0.8**
BODT	**Bodrum**	**0.52**	**274**	*e*PG		**Pg**	**19 00 56.7**			**-1.4**
AYDN	**Tasoluk**	**0.63**	**355**	*i* P		**Pg**	**19 01 00.0**			**-0.3**
AYDN				*i* S		**Sg**	**19 01 09.6**			**+0.9**
AYDN	**Tasoluk**	**0.63**	**355**	*i* P		**Pg**	**19 01 00.0**			**-0.3**
AYDN				*i* S		**Sg**	**19 01 09.6**			**+0.9**
ARG	**Arkhangelos**	**0.83**	**170**	*e*Pn		**Pg**	**19 01 02.7**			**-1.3**
ARG				*e*Sn		**Sg**	**19 01 15.6**			**+0.8**
ARG	**Arkhangelos**	**0.83**	**170**	*e*PN		**Pg**	**19 01 02.7**			**-1.3**
ARG				*e*SN		**Sg**	**19 01 15.6**			**+0.8**
ARG	**Arkhangelos**	**0.83**	**170**	*e*Pn		**Pg**	**19 01 02.7**			**-1.3**
ARG				*e*Sn		**Sg**	**19 01 15.6**			**+0.8**
GCAM	**G?zelcaml?**	**0.88**	**320**	*i* P		**Pg**	**19 01 04.1**			**-1.0**
GCAM				*i* S		**Sg**	**19 01 18.2**			**+1.7**
GCAM	**G?zelcaml?**	**0.88**	**320**	*i* P		**Pg**	**19 01 04.1**			**-0.9**
GCAM				*i* S		**Sg**	**19 01 18.2**			**+1.7**
DNZL	**Cakiroluk**	**1.09**	**53**	*i* P		**Pb**	**19 01 07.3**			**-1.6**
DNZL				*i* S		**Sb**	**19 01 27.0**			**+4.0**
DNZL	**Cakiroluk**	**1.09**	**53**	*i* P		**Pb**	**19 01 07.3**			**-1.5**
DNZL				*i* S		**Sb**	**19 01 27.0**			**+4.0**
SMG	**Samos**	**1.12**	**308**	*e*Pn		**Pg**	**19 01 09.1**			**-0.4**
SMG				*e*Sn		**Sg**	**19 01 25.7**			**+1.6**
SMG	**Samos**	**1.12**	**308**	*e*PN		**Pg**	**19 01 09.1**			**-0.4**
SMG				*e*SN		**Sg**	**19 01 25.7**			**+1.6**
SMG	**Samos**	**1.12**	**308**	*e*Pn		**Pg**	**19 01 09.1**			**-0.4**
SMG				*e*Sn		**Sg**	**19 01 25.7**			**+1.6**
DENT	**Denizli**	**1.12**	**50**	*e*PN		**Pg**	**19 01 08.5**			**-1.2**
DENT	**Denizli**	**1.12**	**50**	*e*Pn		**Pg**	**19 01 08.5**			**-1.2**
GLHS	**Glhisar (BURDU**	**1.24**	**84**	*e*PN		**Pn**	**19 01 11.7**			**+0.5**
GLHS	**Glhisar (BURDU**	**1.24**	**84**	*e*Pn		**Pn**	**19 01 11.7**			**+0.5**
GOLH	**Golhisar**	**1.30**	**80**	*i* P		**Pn**	**19 01 11.2**			**-0.8**
GOLH				*i* S		**Sg**	**19 01 33.1**			**+3.1**
GOLH	**Golhisar**	**1.30**	**80**	*i* P		**Pn**	**19 01 11.2**			**-0.8**
GOLH				*i* S		**Sg**	**19 01 33.1**			**+3.1**
IZM	**Izmir**	**1.47**	**338**	*e*PN		**Pn**	**19 01 13.8**			**-0.5**
IZM	**Izmir**	**1.47**	**338**	*e*Pn		**Pn**	**19 01 13.8**			**-0.5**
BLCB	**Balcova**	**1.53**	**332**	*e*PN		**Pn**	**19 01 14.5**			**-0.6**
BLCB	**Balcova**	**1.53**	**332**	*e*Pn		**Pn**	**19 01 14.5**			**-0.7**
AKAS	**Kas**	**1.55**	**120**	*i* P		**Pn**	**19 01 15.8**			**+0.4**
AKAS				*i* S		**Sg**	**19 01 39.1**			**+1.3**
AKAS	**Kas**	**1.55**	**120**	*i* P		**Pn**	**19 01 15.8**			**+0.4**
AKAS				*i* S		**Sg**	**19 01 39.2**			**+1.3**
KULA	**Kula-Manisa**	**1.58**	**21**	*e*PN		**Pn**	**19 01 15.6**			**-0.3**
KULA	**Kula-Manisa**	**1.58**	**21**	*e*Pn		**Pn**	**19 01 15.6**			**-0.3**
ELL	**Elmali**	**1.59**	**100**	*e*PN		**Pn**	**19 01 16.5**			**+0.5**
ELL	**Elmali**	**1.59**	**100**	*e*Pn		**Pn**	**19 01 16.5**			**+0.5**
KARP	**Karpathos**	**1.61**	**204**	*e*Pb		**Pb**	**19 01 15.6**			**-2.1**
KARP				*e*Sn		**Sn**	**19 01 37.3**			**+0.3**
KARP	**Karpathos**	**1.61**	**204**	*e*PB		**Pb**	**19 01 15.6**			**-2.1**
KARP				*e*SN		**Sn**	**19 01 37.3**			**+0.3**
KARP	**Karpathos**	**1.61**	**204**	*e*Pb		**Pb**	**19 01 15.6**			**-2.1**
KARP				*e*Sn		**Sn**	**19 01 37.3**			**+0.3**
KHL	**Karahalli**	**1.79**	**44**	*e*PN		**Pn**	**19 01 18.8**			**+0.1**
KHL	**Karahalli**	**1.79**	**44**	*e*Pn		**Pn**	**19 01 18.8**			**0.0**
KHAL	**Karahalli**	**1.81**	**42**	*i* P		**Pn**	**19 01 19.8**			**+0.8**
KHAL				*i* S		**Sn**	**19 01 39.9**			**-1.9**
KHAL	**Karahalli**	**1.81**	**42**	*i* P		**Pn**	**19 01 19.8**			**+0.8**
KHAL				*i* S		**Sn**	**19 01 39.9**			**-1.9**
AKHS	**Akhisar**	**1.85**	**357**	*i* P		**Pn**	**19 01 18.9**			**-0.6**
AKHS				*i* S		**Sg**	**19 01 49.0**			**+1.6**
AKHS	**Akhisar**	**1.85**	**357**	*i* P		**Pn**	**19 01 18.9**			**-0.6**
BCK	**Bucak**	**2.15**	**78**	*e*PN		**Pn**	**19 01 23.9**			**+0.3**
BCK	**Bucak**	**2.15**	**78**	*e*Pn		**Pn**	**19 01 23.9**			**+0.3**
SUTC	**Sutluce-Ispart**	**2.47**	**79**	*e*PN		**Pn**	**19 01 28.5**			**+0.4**
SUTC	**Sutluce-Ispart**	**2.47**	**79**	*e*Pn		**Pn**	**19 01 28.5**			**+0.4**
ALT	**Altintas**	**2.64**	**39**	*e*PN		**Pn**	**19 01 31.3**			**+0.8**
ALT	**Altintas**	**2.64**	**39**	*e*Pn		**Pn**	**19 01 31.3**			**+0.9**
SIVA	**Sivas**	**3.24**	**233**	*e*Pn		**Pn**	**19 01 39.9**			**+1.2**
SIVA	**Sivas**	**3.24**	**233**	*e*PN		**Pn**	**19 01 39.9**			**+1.2**
SIVA	**Sivas**	**3.24**	**233**	*e*Pn		**Pn**	**19 01 39.9**			**+1.2**
HDMB	**Hadim**	**3.63**	**90**	*e*PN		**Pn**	**19 01 45.5**			**+1.5**
HDMB	**Hadim**	**3.63**	**90**	*e*Pn		**Pn**	**19 01 45.5**			**+1.5**

*ISK **27** 19:10:54.8,37.˚93N×27.˚11E,h2km, MD2.8*
*ATH **27** 19:10:54.8,37.˚70N×27.˚05E,h35km±2km, MD2.9/3*
*ISCJB **27** 19:10:55.9±0.4,37.˚90N±0.˚02×27.˚07E±0.˚03,h10km, Error ellipse: s-maj=4.1km s-min=2.9km az=156.2*
*DDA **27** 19:10:55.3,37.˚92N×27.˚12E,h8km±3km, Md2.8*
*CSEM **27** 19:10:55.7±0.2,37.˚92N×27.˚08E,h2km, MD2.9, Error ellipse: s-maj=5.0km s-min=3.6km az=70.0*
ISC 27 19:10:56.0±0.5,37.˚92N±0.˚02×27.˚07E±0.˚03,h2km±5km, n38,σ0º93/61,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h	m	s	ISC
GCAM	**G?zelcaml?**	**0.25**	**150**	*i* P		**Pg**	**19 11 00.6**			**-0.3**
GCAM				*i* S		**Sg**	**19 11 03.9**			**-0.2**
GCAM	**G?zelcaml?**	**0.25**	**150**	*i* P		**Pg**	**19 11 00.6**			**-0.2**
GCAM				*i* S		**Sg**	**19 11 03.9**			**-0.2**
SMG	**Samos**	**0.28**	**222**	*e*PB		**Pg**	**19 11 01.6**			**+0.2**
SMG				*e*SB		**Sg**	**19 11 06.5**			**+1.4**
SMG	**Samos**	**0.28**	**222**	*e*Pb		**Pg**	**19 11 01.6**			**+0.2**
SMG				*e*Sb		**Sg**	**19 11 06.5**			**+1.4**
BLCB	**Balcova**	**0.46**	**357**	PG		**Pg**	**19 11 04.8**			**0.0**
BLCB				*e*SG		**Sg**	**19 11 11.2**			**+0.2**
BLCB	**Balcova**	**0.46**	**357**	*i* Pg		**Pg**	**19 11 04.9**			**0.0**
BLCB				*e*Sg		**Sg**	**19 11 11.2**			**+0.3**
IZM	**Izmir**	**0.50**	**17**	PG		**Pg**	**19 11 05.0**			**-0.5**
IZM				*e*SG		**Sg**	**19 11 13.3**			**+1.3**
IZM	**Izmir**	**0.50**	**17**	*i* Pg		**Pg**	**19 11 05.1**			**-0.5**
IZM				*e*Sg		**Sg**	**19 11 13.3**			**+1.3**
URLA	**Izmir**	**0.58**	**319**	*i* P		**Pg**	**19 11 06.3**			**-0.7**
URLA				*i* S		**Sg**	**19 11 15.1**			**+0.6**
URLA	**Izmir**	**0.58**	**319**	*i* P		**Pg**	**19 11 06.3**			**-0.8**
URLA				*i* S		**Sg**	**19 11 15.1**			**+0.5**
AYDN	**Tasoluk**	**0.69**	**112**	*i* P		**Pg**	**19 11 08.0**			**-0.6**
AYDN				*i* S		**Sg**	**19 11 17.4**			**-0.7**
AYDN	**Tasoluk**	**0.69**	**112**	*i* P		**Pg**	**19 11 08.6**			**-0.6**
AYDN				*i* S		**Sg**	**19 11 17.4**			**-0.7**
MLSB	**Milas**	**0.84**	**138**	*e*PG		**Pg**	**19 11 11.9**			**-0.1**
MLSB				*e*SG		**Sg**	**19 11 24.0**			**+1.1**
MLSB	**Milas**	**0.84**	**138**	*e*Pg		**Pg**	**19 11 12.0**			**0.0**
MLSB				*e*Sg		**Sg**	**19 11 24.0**			**+1.1**
BODT	**Bodrum**	**0.88**	**168**	*e*PG		**Pg**	**19 11 12.2**			**-0.6**
BODT	**Bodrum**	**0.88**	**168**	*e*Pg		**Pg**	**19 11 12.2**			**-0.6**
CHOS	**Chios island**	**0.93**	**300**	*e*PN		**Pn**	**19 11 14.6**			**-1.5**
CHOS				*e*SN		**Sn**	**19 11 28.9**			**-1.1**
CHOS	**Chios island**	**0.93**	**300**	*e*Pn		**Pn**	**19 11 14.6**			**-1.5**
CHOS				*e*Sn		**Sn**	**19 11 28.9**			**-1.1**
AKHS	**Akhisar**	**1.12**	**31**	*i* P		**Pg**	**19 11 17.2**			**-0.2**
AKHS				*i* S		**Sg**	**19 11 31.6**			**-0.3**
AKHS	**Akhisar**	**1.12**	**31**	*i* P		**Pg**	**19 11 17.2**			**-0.2**
AKHS				*i* S		**Sg**	**19 11 31.6**			**-0.4**
AKS	**Akhisar**	**1.12**	**31**	*e*PN		**Pn**	**19 11 16.8**			**-1.9**
AKS	**Akhisar**	**1.12**	**31**	*e*Pn		**Pn**	**19 11 16.8**			**-1.9**
YER	**Yerkesik**	**1.24**	**129**	*e*PN		**Pn**	**19 11 18.3**			**-2.1**
YER	**Yerkesik**	**1.24**	**129**	*e*Pn		**Pn**	**19 11 18.3**			**-2.1**
DAT	**Datca**	**1.26**	**161**	*e*PN		**Pn**	**19 11 20.7**			**+0.1**
DAT	**Datca**	**1.26**	**161**	*e*Pn		**Pn**	**19 11 20.7**			**+0.1**
KULA	**Kula-Manisa**	**1.38**	**64**	*e*PN		**Pn**	**19 11 21.8**			**-0.6**
KULA	**Kula-Manisa**	**1.38**	**64**	*e*Pn		**Pn**	**19 11 21.8**			**-0.5**
PRK	**Paraskevi**	**1.47**	**335**	*e*PN		**Pn**	**19 11 23.4**			**-0.1**
PRK				*e*SN		**Sn**	**19 11 43.9**			**+0.7**
PRK	**Paraskevi**	**1.47**	**335**	*e*Pn		**Pn**	**19 11 23.4**			**-0.1**
PRK				*e*Sn		**Sn**	**19 11 43.9**			**+0.7**
APE	**Apeiranthos**	**1.49**	**236**	*e*PN		**Pn**	**19 11 24.7**			**+0.9**
APE	**Apeiranthos**	**1.49**	**236**	*e*Pn		**Pn**	**19 11 24.7**			**+0.9**
DEMI	**Demirci**	**1.71**	**49**	*i* P		**Pn**	**19 11 27.4**			**+0.6**
DEMI				*i* S		**Sn**	**19 11 41.5**			**-7.8**
DEMI	**Demirci**	**1.71**	**49**	*i* P		**Pn

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**6.63**	**355**	*e*Pn	**Pn**	**19 19 10.3**	**+6.1**
WMQ				Sg	**Sg**	**19 20 56.8**	**-2.6**
WMQ	comp=N,29nm,0.8s			smax			
WMQ	comp=E,45nm,0.6s			smax			
MK31	**Makanchi Array**	**10.63**	**336**	*e*P	**Pn**	**19 19 57.8**	**-1.4**
MKAR	**Makanchi Array**	**10.63**	**336**	Pn	**Pn**	**19 19 60.0**	**+0.8**
MKAR				Sn	**Sn**	**19 21 59.8**	**+1.5**
MKAR				Lg		19 23 10.5	
MKAR				LR	LR	19 24 40.0	
MKAR	**Makanchi Array**	**10.63**	**336**	Pn	**Pn**	**19 19 60.0**	**+0.8**
MKAR	comp=E,0.3nm,0.3s,baz=148,slow=13,SNR=14			Sn	**Sn**	**19 21 59.8**	**+1.5**
MKAR	comp=E,0.1nm,0.3s,baz=168,slow=21,SNR=2.5			Lg		19 23 10.5	
MKAR	comp=E,0.1nm,0.3s,baz=147,slow=27,SNR=3.1			LR	LR	19 24 40.1	
KURK	**Kurchatov**	**15.25**	**335**	Pn	**Pn**	**19 20 59.4**	**-2.6**
SONM	**Songino Array**	**16.86**	**45**	Pn	**Pn**	**19 21 24.0**	**+1.2**
SONM	comp=E,0.0nm,0.3s,baz=143,slow=13,SNR=3.0 baz=234,slow=12,SNR=2.4			Lg		19 26 24.4	
ZALV	**Zalesovo Beam**	**16.93**	**352**	P	**Pn**	**19 21 25.8**	**+2.2**
ZALV				S	**Sn**	**19 24 30.4**	**-1.2**
ZALV	**Zalesovo Beam**	**16.93**	**352**	P	**Pn**	**19 21 25.8**	**+2.2**
ZALV	comp=E,0.2nm,0.3s,baz=173,slow=13,SNR=8.5 comp=E,0.1nm,0.3s,baz=179,slow=26,SNR=2.1			S	**Sn**	**19 24 30.4**	**-1.2**
BVAR	**Borovoye Array**	**20.25**	**327**	P	**P**	**19 22 05.6**	**+3.5**
CMAR	**Chiang Mai Arr**	**20.80**	**151**	P	**P**	**19 22 08.3**	**0.0**
WRA	**Warramunga Arr**	**71.37**	**135**	P	**P**	**19 28 46.2**	**-0.8**
WRA	**Warramunga Arr**	**71.37**	**135**	P	**P**	**19 28 46.2**	**-0.8**
ASAR	**Alice Springs**	**74.10**	**137**	P	**P**	**19 29 02.6**	**-0.6**

comp=E,0.6nm,0.7s,mb3.5,baz=330,slow=6.3,SNR=2.9
comp=E,0.4nm,0.9s,mb3.4,baz=345,slow=6.9,SNR=3.9

*PGC **27** 19:19:05.0±1.0,49°.88N×130°.15W,h10km,ML3.3/8, Mw3.9,214km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **27** 19:19:06.1±1.8,50°.09N±0°.05×129°.75W±0°.07,h1km±13km, mb4.0/8,MS3.6/9, Error ellipse: s-maj=9.4km s-min=6.3km az=38.0*
*IDC **27** 19:19:07.9±1.9,50°.04N×129°.70W,h0km,mb3.7/3, mb1 3.9/9,mb1mx3.7/28,mbtmp3.7/9,ML3.5/4,MS3.5/12, Ms1 3.5/12,ms1mx3.3/41, Error ellipse: s-maj=30.4km s-min=14.4km az=73.0*
*NEIC **27** 19:19:09.5±0.7,50°.12N×129°.71W,h10km,mb4.0/9, Error ellipse: s-maj=13.8km s-min=6.0km az=47.0*
*BJI **27** 19:19:10.4,50°.92N×130°.03W,h17km,mB4.9/1,mb4.5/1, Ms7 3.9/1*
ISC 27 19:19:08.7±2.1,50°.12N±0°.05×129°.68W±0°.07,h6km±16km, n46,σ1§29/45,mb4.0/8,MS3.6/9,7D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.12**	**62**	⇓P	**Pn**	**19 19 29.9**	**-0.9**
BPBC	**Brooks Peninsu**	**1.23**	**88**	Pn	**Pn**	**19 19 30.1**	**-2.2**
BPBC				⇓Sn	**Sn**	**19 19 49.1**	**-0.2**
PHC	**Port Hardy**	**1.55**	**67**	Pn	**Pn**	**19 19 36.0**	**-0.9**
PHC				⇓Sn	**Sn**	**19 19 58.5**	**+1.2**
MAYB	**Maynard**	**1.64**	**79**	⇑Pn	**Pn**	**19 19 36.4**	**-1.5**
EDB	**Eliza Dome**	**1.67**	**98**	⇓Pn	**Pn**	**19 19 35.6**	**-2.8**
EDB				⇑Sn	**Sn**	**19 19 58.7**	**-1.4**
WOSB	**Woss**	**2.00**	**88**	Pn	**Pn**	**19 19 41.9**	**-1.1**
BBB	**Bella Bella**	**2.29**	**25**	Pn	**Pn**	**19 19 46.3**	**-0.6**
BBB	47nm,0.3s,baz=197,slow=14,SNR=209			Sn	**Sn**	**19 20 16.1**	**+0.7**
BBB	36nm,0.3s,baz=131,slow=22,SNR=22			LR	LR	19 20 58.7	
BBB	**Bella Bella**	**2.29**	**25**	⇓Pn	**Pn**	**19 19 46.5**	**-0.4**
BBB				⇓Sn	**Sn**	**19 20 16.4**	**+1.0**
GDR	**Gold River**	**2.38**	**97**	⇑Pn	**Pn**	**19 19 46.8**	**-1.4**
OZB	**Mount Ozzard**	**2.97**	**111**	⇓Pn	**Pn**	**19 19 54.2**	**-2.0**
JCW	**Jim Creek**	**5.44**	**108**	P	**Pn**	**19 20 29.6**	**-0.6**
ETW	**Entiat**	**6.66**	**109**	*e*P	**Pn**	**19 20 48.5**	**+1.5**
DLBC	**Dease Lake**	**8.34**	**359**	Pn	**Pn**	**19 21 10.5**	**+0.6**
DLBC				LR	LR	19 24 14.1	
DLBC	**Dease Lake**	**8.34**	**359**	Pn	**Pn**	**19 21 10.5**	**+0.6**
DLBC	comp=Z,335nm,19.9s,baz=42,slow=36			LR	LR	19 24 14.1	
CHMT	**Chamberlain Mo**	**11.36**	**100**	*e*P	**Pn**	**19 21 52.1**	**+0.7**
MOOW	**Moose Ponds**	**14.40**	**109**	P	**Pn**	**19 22 33.7**	**+0.8**
MOOW				*e*		19 22 43.0	
TPAW	**Teton Pass**	**14.42**	**110**	P	**Pn**	**19 22 36.3**	**+3.2**
TPAW				*e*		19 22 43.4	
LOHW	**Long Hollow**	**14.56**	**109**	P	**Pn**	**19 22 37.4**	**+2.4**
YKA	**Yellowknife Ar**	**14.90**	**28**	Pn	**Pn**	**19 22 38.7**	**-0.9**
YKA				LR	LR	19 28 42.1	
YKA	**Yellowknife Ar**	**14.90**	**28**	Pn	**Pn**	**19 22 38.7**	**-0.9**
YKA	comp=Z,12nm,18.7s,baz=5.0,slow=38			LR	LR	19 28 42.1	
KDAK	**Kodiak Island**	**15.45**	**309**	Pn	**Pn**	**19 22 47.6**	**+0.7**
TCUT	**Toone Canyon**	**15.60**	**118**	*e*P	**Pn**	**19 22 49.6**	**+0.6**
PDAR	**Pinedale Array**	**15.67**	**110**	Pn	**Pn**	**19 22 51.9**	**+2.0**
PDAR				LR	LR	19 29 03.3	
LAO	**LASA Array**	**15.93**	**93**	*e*P	**Pn**	**19 22 53.7**	**+0.4**
MSU	**Marysvale**	**17.03**	**126**	*e*P	**Pn**	**19 23 07.7**	**+0.4**
ILAR	**Eielson Array**	**17.26**	**335**	P	**Pn**	**19 23 12.0**	**+2.0**
FFC	**Flin Flon**	**17.45**	**64**	*e*P	**Pn**	**19 23 15.0**	**+2.5**
INK	**Inuvik**	**18.34**	**355**	LR	LR	19 30 05.5	
TTA	**Tatalina**	**19.19**	**322**	*e*P	**Pn**	**19 23 32.3**	**-1.3**
PV01	**Paradox Valley**	**19.24**	**120**	*e*P	**Pn**	**19 23 34.0**	**-0.4**
SDCO	**Great Sand Dun**	**21.25**	**116**	*e*P	**P**	**19 23 55.0**	**-0.4**
ULM	**Lac du Bonnet**	**21.55**	**77**	P	**P**	**19 24 00.1**	**+1.7**
ULM				LR	LR	19 32 28.6	
AGMN	**Agassiz Nation**	**22.07**	**82**	*e*P	**P**	**19 24 04.5**	**+0.6**
ANMO	**Albuquerque**	**22.73**	**123**	P	**P**	**19 24 12.1**	**+0.9**
ANMO				LR	LR	19 33 36.0	
LAZ	**Ladron**	**22.78**	**125**	*e*P	**P**	**19 24 13.6**	**+1.9**
ECSD	**EROS Data Cent**	**23.34**	**93**	*e*P	**P**	**19 24 16.9**	**-0.6**
EYMN	**Ely**	**24.95**	**80**	*e*P	**P**	**19 24 33.0**	**+0.4**
WMOK	**Wichita Mounta**	**27.26**	**113**	*e*P	**P**	**19 24 52.9**	**-0.6**
RES	**Resolute Bay**	**28.57**	**18**	LR	LR	19 37 18.3	
TXAR	**Lajitas Array**	**28.59**	**127**	P	**P**	**19 25 04.5**	**-0.9**
TXAR				LR	LR	19 37 16.4	
SADO	**Sadowa**	**34.05**	**79**	LR	LR	19 40 19.1	
SCHQ	**Schefferville**	**37.43**	**58**	LR	LR	19 42 15.8	
CMIG	**Matias Romero**	**43.19**	**127**	LR	LR	19 49 25.2	
PCRV	**Puerto La Cruz**	**66.32**	**103**	LR	LR	19 59 32.7	
HHC	**Hu-ho-hao-te**	**74.71**	**316**	*e*P	**P**	**19 30 48.0**	**-1.0**
HHC				PP	PP	19 33 36.5	+1.2
HHC				S	S	19 40 20.8	-4.6
HHC	comp=Z,71nm,4.6s			pmax	pmax		
HHC	comp=Z,45nm,14.3s,MS3.9			LR	LR		
CD2	**Chengdu**	**86.47**	**316**	P	**P**	**19 31 50.0**	**-2.2**

*ISK **27** 19:22:53.6,37°.83N×26°.96E,h6km,MD2.5*
*ISCJB **27** 19:22:54.9±0.9,37°.84N±0°.04×26°.98E±0°.07,h10km, Error ellipse: s-maj=9.3km s-min=4.1km az=150.5*
*CSEM **27** 19:22:54.7±0.6,37°.83N×26°.95E,h15km,MD2.8, Error ellipse: s-maj=15.7km s-min=6.9km az=65.0*
*DDA **27** 19:22:57.3,37°.93N×27°.12E,h7km±4km,Md2.8*
ISC 27 19:22:55.4±0.9,37°.84N±0°.04×26°.96E±0°.08,h10km,n13, σ1§31/22,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.26**	**123**	*i*P	**Pg**	**19 23 02.6**	**+2.0**
GCAM				*i*S	**Sg**	**19 23 06.1**	**+1.9**
GCAM	**G?zelcaml?**	**0.26**	**123**	*i*P	**Pg**	**19 23 02.6**	**+2.0**
GCAM				*i*S	**Sg**	**19 23 06.1**	**+2.0**
BLCB	**Balcova**	**0.55**	**7**	*e*PG	**Pg**	**19 23 04.5**	**-1.6**
BLCB				*e*SG	**Sg**	**19 23 13.1**	**-0.2**
BLCB	**Balcova**	**0.55**	**7**	*e*Pg	**Pg**	**19 23 04.5**	**-1.6**
BLCB				*e*Sg	**Sg**	**19 23 13.1**	**-0.2**
URLA	**Izmir**	**0.59**	**331**	*i*P	**Pg**	**19 23 06.7**	**-0.3**
URLA				*i*S	**Sg**	**19 23 17.2**	**+2.5**
URLA	**Izmir**	**0.59**	**331**	*i*P	**Pg**	**19 23 06.7**	**-0.2**
URLA				*i*S	**Sg**	**19 23 17.2**	**+2.5**
IZM	**Izmir**	**0.60**	**23**	*e*PG	**Pg**	**19 23 07.0**	**-0.2**
IZM				*e*SG	**Sg**	**19 23 14.8**	**-0.3**
AYDN	**Tasoluk**	**0.75**	**104**	*i*P	**Pg**	**19 23 10.6**	**+0.8**
AYDN				*i*S	**Sg**	**19 23 19.1**	**-0.6**
AYDN	**Tasoluk**	**0.75**	**104**	*i*P	**Pg**	**19 23 10.6**	**+0.7**
AYDN				*i*S	**Sg**	**19 23 19.1**	**-0.5**
BODT	**Bodrum**	**0.83**	**160**	*e*PG	**Pg**	**19 23 09.7**	**-1.7**
BODT	**Bodrum**	**0.83**	**160**	*e*Pg	**Pg**	**19 23 09.7**	**-1.6**
MLSB	**Milas**	**0.85**	**130**	*e*PG	**Pg**	**19 23 10.1**	**-1.6**
MLSB	**Milas**	**0.85**	**130**	*e*Pg	**Pg**	**19 23 10.1**	**-1.6**

*DMN **27** 19:28:14.6±0.5,31°.21N×83°.06E,h2km,Ml4.6/4, Error ellipse: s-maj=11.8km s-min=8.3km az=106.0*
*LDG **27** 19:28:16.0±0.1,30°.64N×83°.25E,h10km,Mb4.7/16, Ms3.8/8, Error ellipse: s-maj=7.9km s-min=5.8km az=63.0*
*IDC **27** 19:28:16.9±0.5,30°.66N×83°.45E,h0km,mb4.3/27, mb1 4.4/30,mb1mx4.4/34,mbtmp4.3/30,ML3.5/3,MS3.9/16, Ms1 3.9/16,ms1mx3.8/31, Error ellipse: s-maj=15.7km s-min=12.0km az=23.0*
*ISCJB **27** 19:28:17.5±0.1,30°.74N±0°.02×83°.30E±0°.02,h10km, mb4.5/74,MS4.0/31, Error ellipse: s-maj=3.1km s-min=2.5km az=28.3*
*BJI **27** 19:28:17.7,30°.64N×83°.36E,h15km,mB4.8/31,mb4.6/41, Ms4.5/44,Ms7 4.2/41*
*NDI **27** 19:28:19.4±5.1,30°.63N×83°.47E,h15km±55km,mb4.7, mb4.7(NEIC)*
*MOS **27** 19:28:20.5±1.1,30°.67N×83°.36E,h37km,mb4.8/37, Error ellipse: s-maj=8.6km s-min=4.5km az=123.6*
*DJA **27** 19:28:21,30°.34N×83°.32E,h19km,mb4.3/5*
*NEIC **27** 19:28:21.7±1.6,30°.67N×83°.36E,h32km±11km,mb4.7/30, Error ellipse: s-maj=7.5km s-min=4.2km az=204.0*
ISC 27 19:28:19.2±0.1,30°.73N±0°.02×83°.35E±0°.02,h10km,n268, σ1§15/280,mb4.5/74,MS4.0/31,28C-11D,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.40**	**171**	*e*Pn	**Pn**	**19 29 00.5**	**+2.0**
DANN				*e*Sn	**Sb**	**19 29 33.8**	**+1.7**
GKN	**Gorkha**	**2.94**	**157**	*e*Pn	**Pn**	**19 29 08.0**	**+2.0**
GKN	788nm,0.6s			*e*Sn	**Sb**	**19 29 47.2**	**-0.5**
KOLN	**Koldanda**	**2.96**	**176**	*e*Pn	**Pn**	**19 29 08.0**	**+1.8**
KOLN	1µm,0.6s			*e*Sn	**Sb**	**19 29 47.4**	**-0.9**
PTH	**Pithoragarh**	**2.96**	**247**	*e*PKP	**Pb**	**19 29 11.9**	**-0.1**
PTH				*e*S	**Sg**	**19 29 51.2**	**-3.2**
JOSI	**Joshimath**	**3.28**	**268**	*ex*	**Pn**	**19 29 14.2**	**+3.6**
DMN	**Daman**	**3.47**	**153**	*e*Pn	**Pn**	**19 29 14.7**	**+1.5**
DMN	1µm,1.1s			*e*Sn	**Sn**	**19 29 59.8**	**+5.4**
GUN	**Gumba**	**3.57**	**141**	*e*Pn	**Pn**	**19 29 16.9**	**+2.2**
PKIN	**Phulchoki**	**3.62**	**150**	*e*Pn	**Pn**	**19 29 17.2**	**+2.0**
PKI	**Pulchoki**	**3.63**	**150**	*e*Pn	**Pn**	**19 29 17.3**	**+1.9**
PKI	485nm,0.8s			*e*Sn	**Sn**	**19 30 04.0**	**+5.7**
JIRN	**Jiri**	**3.94**	**140**	*e*Pn	**Pn**	**19 29 22.0**	**+2.3**
KLP	**Kalpa**	**4.45**	**282**	*e*PKP	**Pn**	**19 29 28.4**	**+1.8**
DDI	**Dehra Dun**	**4.59**	**266**	⇓*i*P	**Pn**	**19 29 30.5**	**+1.9**
DDI				*ex*	x	19 31 06.5	
RAMN	**Ramite**	**4.72**	**142**	*e*Pn	**Pn**	**19 29 31.4**	**+0.9**
TAPN	**Taplejung**	**5.09**	**130**	*e*Pn	**Pn**	**19 29 37.4**	**+1.9**
ODAN	**Odare**	**5.24**	**136**	*e*Pn	**Pn**	**19 29 39.0**	**+1.5**
SMLA	**Simla**	**5.33**	**276**	*i*P	**Pn**	**19 29 39.3**	**+0.5**
SDNR	**Sundarnagar**	**5.53**	**280**	*ex*	**Pn**	**19 29 47.5**	**+6.0**
BISR	**Bishrakh**	**5.58**	**249**	*e*PKP	**Pn**	**19 29 42.0**	**-0.2**
KKR	**Kurukshetra**	**5.70**	**264**	*e*PKP	**Pn**	**19 29 44.6**	**+0.7**
NDI	**New Delhi**	**5.72**	**251**	*e*PKP	**Pn**	**19 29 45.0**	**+0.9**
NDI				*ex*	**Sn**	**19 30 48.0**	**-1.8**
AYAN	**Aya Nagar**	**5.87**	**249**	*e*PKP	**Pn**	**19 29 45.2**	**-0.9**
AGRA	**Agra**	**5.88**	**235**	*e*PKP	**Pn**	**19 29 46.1**	**-0.3**
BHK	**Bhakra**	**5.99**	**278**	*ex*	x	19 30 09.1	
SONA	**Sohna**	**6.00**	**247**	*e*PKP	**Pn**	**19 29 47.4**	**-0.6**
KUDL	**Kundal**	**6.52**	**248**	*ex*	**Pn**	**19 29 50.0**	**-5.1**
LSA	**Lhasa**	**6.83**	**97**	⇓*e*P	**Pn**	**19 30 02.1**	**+2.7**
LSA	**Lhasa**	**6.83**	**97**	⇓*e*P	**Pn**	**19 30 02.1**	**+2.8**
LSA	comp=Z,94nm,1.1s			pmax	pmax		
KHET	**Khetri**	**7.10**	**250**	*e*PKP	**Pn**	**19 30 02.1**	**-1.0**
KHET	comp=Z,26nm,1.1s			AMb	AMB	19 30 12.6	
AJM	**Ajmer**	**8.75**	**243**	*e*PKP	**Pn**	**19 30 25.5**	**-0.3**
AJM				*ex*	x	19 31 58.7	
SHL	**Shillong**	**9.12**	**122**	*e*PKP	**Pn**	**19 30 30.0**	**-0.8**
SHL				*ex*	x	19 32 12.5	
BHPL	**Bhopal**	**9.14**	**217**	*e*PKP	**Pn**	**19 30 29.7**	**-1.5**
BHPL				*ex*	x	19 32 07.1	
NGP	**Nagpur**	**10.30**	**203**	*e*PKP	**Pn**	**19 30 45.1**	**-1.9**
NGP	comp=Z,28nm,1.2s			*ex*	x	19 32 34.7	
KSH	**Kashi**	**10.64**	**327**	P	**Pn**	**19 30 51.3**	**-0.3**
KSH				*e*pP		19 30 55.5	
KSH				*e*sP		19 30 59.5	
KSH				*e*PP		19 31 01.0	
KSH				S	**Sn**	**19 32 48.0**	**-2.8**
KSH				SS		19 33 04.0	
KSH	comp=Z,3.0nm,0.7s			pmax	pmax		
KSH	comp=N,1µm,7.6s			LR	LR		
KSH	comp=E,2µm,6.5s			LR	LR		
KSH	comp=Z,630nm,8.6s			LR	LR		
AKL	**Akola**	**11.50**	**211**	*i*P	**Pn**	**19 31 01.7**	**-1.8**
AKL				*i*x	x	19 33 02.8	
KBL	**Kabul**	**12.64**	**291**	*e*P	**Pn**	**19 31 18.6**	**-0.4**
KBL	comp=Z,13nm,0.6s **Kabul**	**12.64**	**291**	*e*P	**Pn**	**19 31 18.6**	**-0.5**
KBL	comp=Z,13nm,0.6s			pmax	pmax		
VIS	**Vishakhapatnam**	**12.96**	**180**	*i*x	x	19 31 35.5	
VIS				*i*S	**Sn**	**19 33 31.6**	**-16**
KZA	**Kyzart**	**13.06**	**332**	*e*P	**Pn**	**19 31 26.6**	**+1.9**
UCH	comp=Z,13nm,0.9s **Uchtor**	**13.49**	**331**	*e*P	**Pn**	**19 31 33.1**	**+2.6**
WMQ	comp=Z,6.2nm,0.7s **Urumqi**	**13.51**	**14**	P	**Pn**	**19 31 34.0**	**+3.2**
WMQ				pP		19 31 38.5	
WMQ				sP		19 31 42.3	
WMQ				PP		19 31 45.0	
WMQ				S	**Sn**	**19 34 05.8**	**+4.8**
WMQ				SS		19 34 21.5	
WMQ	comp=Z,32nm,0.8s			pmax	pmax		
WMQ	comp=Z,170nm,3.6s			pmax	pmax		
WMQ				LR	LR		
WMQ	comp=N,650nm,14.2s			LR	LR		
WMQ	comp=E,430nm,11.0s			LR	LR		
WMQ	comp=Z,560nm,14.3s			LR	LR		
TKM2	**Tokmak 2**	**13.65**	**335**	*e*P	**Pn**	**19 31 33.4**	**+0.7**
TKM2	comp=Z,6.0nm,0.8s **Tokmak 2**	**13.65**	**335**	*e*P	**Pn**	**19 31 33.4**	**+0.7**
TKM2				pmax	pmax		
AML	comp=Z,6.0nm,0.8s **Almayashu**	**13.77**	**328**	*e*P	**Pn**	**19 31 35.1**	**+0.8**
AAK	**Ala-Archa**	**13.83**	**332**	*e*P	**Pn**	**19 31 38.2**	**+3.0**
AAK	comp=Z,7.2nm,0.8s **Ala-Archa**	**13.83**	**332**	Pn	**Pn**	**19 31 36.7**	**+1.5**
AAK	comp=Z,0.2nm,0.3s,baz=150,slow=8.9,SNR=2.8 comp=Z,1.5nm,0.3s,baz=152,slow=2.6,SNR=5.2			Lg		19 35 46.5	
AAK	comp=Z,566nm,19.1s,baz=134,slow=40			LR	LR	19 37 36.8	
AAK	**Ala-Archa**	**13.83**	**332**	P	**Pn**	**19 31 41.2**	**+6.0**
HYB	comp=Z,2.9nm,1.1s **Hyderabad**	**13.96**	**199**	*i*P	**Pn**	**19 31 34.0**	**-3.1**
HYB				*e*S	**Sn**	**19 34 02.0**	**-10**
EKS2	**Erkin-Say**	**14.15**	**330**	*e*P	**Pn**	**19 31 39.9**	**+0.3**
GTA	comp=Z,19nm,1.0s **Gaotai**	**16.00**	**53**	P	**Pn**	**19 32 04.0**	**-0.2**
GTA				pP	pP	19 32 08.5	-2.1
GTA				sP	sP	19 32 12.0	+0.1
GTA				S	**Sn**	**19 34 57.0**	**-4.6**
GTA				SS		19 35 16.5	
GTA	comp=Z,4.0nm,1.0s			pmax	pmax		
GTA	comp=Z,160nm,4.2s			pmax	pmax		
GTA	comp=N,980nm,14.9s			LR	LR		
GTA	comp=E,460nm,14.6s			LR	LR		
GTA	comp=Z,420nm,14.9s			LR	LR		
KKAR	**Karatay Array**	**16.03**	**324**	*e*P	**Pn**	**19 32 03.4**	**-1.3**
KKAR	comp=Z,4.7nm,0.6s			pmax	pmax		
KKAR	**Karatay Array**	**16.03**	**324**	*e*P	**Pn**	**19 32 03.4**	**-1.3**
KKAR	comp=Z,5.0nm,0.6s			pmax	pmax		
MK31	**Makanchi Array**	**16.06**	**357**	*e*P	**Pn**	**19 32 04.5**	**-0.4**
MKAR	**Makanchi Array**	**16.06**	**357**	Pn	**Pn**	**19 32 04.5**	**-0.5**
MKAR	comp=Z,0.2nm,0.3s,baz=180,slow=12,SNR=20 comp=Z,122nm,19.8s,baz=166,slow=41			LR	LR	19 39 17.4	
MKAR	**Makanchi Array**	**16.06**	**357**	*i*P	**Pn**	**19 32 04.9**	**0.0**
MKAR	comp=Z,3.0nm,0.7s			pmax	pmax		
CD2	**Chengdu**	**17.53**	**84**	⇑P	**Pn**	**19 32 24.5**	**+0.8**
CD2				pP	pP	19 32 29.3	+1.7
CD2				sP	sP	19 32 33.0	+4.1
CD2				PP		19 32 39.3	
CD2				S	**Sn**	**19 35 38.0**	**-0.9**
CD2				sS	sS	19 35 45.8	-5.6
CD2				SS		19 36 00.3	
CD2	comp=Z,20nm,1.3s			pmax	pmax		
CD2	comp=Z,70nm,4.7s			pmax	pmax		
CD2	comp=N,1µm,10.6s			LR	LR		
CD2	comp=E,780nm,7.2s			LR	LR		
CD2	comp=Z,640nm,11.2s			LR	LR		
LZH	**Lanzhou**	**17.91**	**67**	⇓P	**Pn**	**19 32 29.0**	**+0.7**
LZH				pP	pP	19 32 33.8	+2.0
LZH				sP	sP	19 32 37.5	+4.4
LZH				PP		19 32 44.0	
LZH				*e*S	**Sn**	**19 35 47.0**	**-1.1**
LZH				sS	sS	19 35 54.3	-4.8
LZH				SS		19 36 10.0	
LZH	comp=Z,59nm,1.4s			pmax	pmax		
LZH	comp=Z,200nm,5.2s			pmax	pmax		
LZH	comp=N,1µm,11.4s			LR	LR		
LZH	comp=E,1µm,11.8s			LR	LR		
LZH	comp=Z,2µm,12.6s			LR	LR		
KMI	**Kunming**	**18.01**	**103**	⇑P	**Pn**	**19 32 29.5**	**-0.2**
KMI				PP		19 32 45.3	
KMI				S	**Sn**	**19 35 48.5**	**-2.2**
KMI				sS	sS	19 35 56.5	-4.8
KMI	comp=Z,11nm,0.9s			pmax	pmax		
KMI	comp=Z,160nm,6.5s			pmax	pmax		
KMI	comp=N,510nm,16.4s			LR	LR		
KMI	comp=E,1µm,17.1s			LR	LR		
KMI	comp=Z,2µm,18.1s			LR	LR		
CHTO	**Chiang Mai**	**18.45**	**126**	*e*P	**Pn**	**19 32 32.6**	**-2.5**
CHTO	comp=Z,10nm,1.1s **Chiang Mai**	**18.45**	**126**	*e*P	**Pn**	**19 32 32.6**	**-2.4**
CHTO	comp=Z,10.0nm,1.1s			pmax	pmax		
CHTO	**Chiang Mai**	**18.45**	**126**	P	**Pn**	**19 32 32.7**	**-2.3**
CM31	comp=Z,394nmcomp=Z,12nm,1.2s **Chiang Mai Arr**	**18.69**	**127**	*e*P	**Pn**	**19 32 36.2**	**-1.7**
CMAR	comp=Z,1.5nm,0.5s **Chiang Mai Arr**	**18.69**	**127**	P	**Pn**	**19 32 37.0**	**-1.0**
CMAR	comp=Z,0.2nm,0.3s,baz=317,slow=11,SNR=22 comp=Z,0.1nm,0.3s,baz=291,slow=2.1,SNR=7.3			PcP	PcP	19 37 06.2	+0.3
CMAR	comp=Z,107nm,18.4s,baz=320,slow=38			LR	LR	19 40 11.2	
KURK	**Kurchatov**	**20.27**	**351**	*e*P	**P**	**19 32 54.6**	**-0.1**
KURK	comp=Z,42nm,1.1s **Kurchatov**	**20.27**	**351**	P	**P**	**19 32 54.1**	**-0.6**
KURK	comp=Z,22nm,1.0s,baz=175,slow=9.7,SNR=31 comp=Z,272nm,19.0s,MS3.6,baz=180,slow=40			LR	LR	19 41 51.6	
KURK	**Kurchatov**	**20.27**	**351**	*d*P	**P**	**19 32 54.7**	**0.0**
KURK	comp=Z,56nm,1.2s			pmax	pmax		
KURK	comp=Z,326nm,24.0s,MS3.6			MLR	MLR		
GYA	**Guiyang**	**20.89**	**96**	P	**P**	**19 33 02.3**	**+0.6**
GYA				pP		19 33 09.3	
GYA				PP		19 33 25.5	
GYA				S	**S**	**19 36 49.8**	**-4.9**
GYA				PcP	PcP	19 37 10.5	+0.7
GYA				ScP	ScP	19 40 44.0	-2.6
GYA	comp=Z,20nm,0.8s			pmax	pmax		
GYA	comp=Z,90nm,4.3s			pmax	pmax		
GYA	comp=N,730nm,11.3s,MS4.4			LR	LR		
GYA	comp=E,550nm,12.2s,MS4.4			LR	LR		
GYA	comp=Z,830nm,10.6s,MS4.4			LR	LR		
XAN	**Xi'an**	**21.82**	**75**	P	**P**	**19 33 10.8**	**-0.8**
XAN				S	**S**	**19 37 12.8**	**-0.1**
XAN	comp=Z,7.0nm,1.1s,mb4.0			pmax	pmax		
XAN	comp=N,240nm,10.0s			LR	LR		
XAN	comp=E,240nm,9.8s			LR	LR		
XAN	comp=Z,160nm,8.4s			LR	LR		
ENH	**Enshi**	**22.51**	**84**	*e*P	**P**	**19 33 19.0**	**+0.1**
ZAA0	**Zalesovo Array**	**23.22**	**2**	*e*P	**P**	**19 33 25.5**	**-0.8**
ZALV	**Zalesovo Beam**	**23.22**	**2**	P	**P**	**19 33 25.4**	**-0.9**
ZALV				LR	LR	19 44 47.2	
ZALV	**Zalesovo Beam**	**23.22**	**2**	P	**P**	**19 33 25.4**	**-0.8**
ZALV	comp=Z,6.0nm,0.7s,mb4.1,baz=186,slow=11,SNR=26 comp=Z,60nm,18.7s,MS3.1,baz=168,slow=42			LR	LR	19 44 47.2	
BTO	**Baotou**	**23.72**	**58**	*e*P	**P**	**19 33 29.5**	**-1.9**
NVS	**Novosibirsk**	**24.09**	**360**	*e*P	**P**	**19 33 33.5**	**-1.1**
NVS				*e*S	**S**	**19 37 52.1**	**+0.1**
NVS	comp=Z,26nm,2.8s,mb4.2			pmax	pmax		

NVS pmax pmax
comp=N,15nm,2.3s
NVS smax
comp=N,17nm,2.8s
BVAR Borovoye Array 24.20 341 P **P** **19 33 36.0 +0.4**
comp=N,3.1nm,0.6s,mb3.9,baz=142,slow=10,SNR=24
BVAR PcP PcP 19 37 16.4 +0.4
comp=N,1.5nm,1.0s,baz=151,slow=3.3,SNR=4.1
BRVK Borovoye 24.26 341 *e*P **P** **19 33 35.6 -0.6**
comp=N,8.7nm,1.0s,mb4.1
BRVK Borovoye 24.26 341⇑ *e*P **P** **19 33 37.0 +0.8**
BRVK pmax pmax
comp=Z,21nm,2.5s,mb4.1
BRVK MLR MLR
comp=Z,190nm,22.0s,MS3.5
SONM Songino Array 24.55 39 P **P** **19 33 40.1 +1.2**
comp=Z,8.3nm,0.8s,mb4.3,baz=228,slow=9.7,SNR=56
SONM PcP PcP 19 37 16.6 -0.2
comp=Z,0.8nm,0.8s,baz=238,slow=3.7,SNR=4.3
SONM LR LR 19 44 06.8
comp=Z,258nm,19.3s,MS3.7,baz=236,slow=39
SONM Songino Array 24.55 39 P **P** **19 33 40.1 +1.2**
SONM 19 37 16.7
HHC Hu-ho-hao-te 24.91 58 *e*P **P** **19 33 44.0 +1.7**
HHC pP 19 33 49.5
HHC sP sP 19 33 52.0 +5.4
HHC PP 19 34 21.5
HHC *e*S **S** **19 38 04.5 -1.1**
HHC sS sS 19 38 13.5 +2.9
HHC pmax pmax
comp=Z,17nm,1.2s,mb4.5
HHC pmax pmax
comp=Z,180nm,5.0s
HHC LR LR
comp=N,260nm,10.0s,MS4.2
HHC LR LR
comp=E,290nm,12.4s,MS4.2
HHC LR LR
comp=Z,350nm,12.8s,MS4.0
ULN Ulaanbaatar 24.93 40 *e*P **P** **19 33 43.3 +0.9**
comp=Z,17nm,1.0s,mb4.5
ULN Ulaanbaatar 24.93 40 *e*P **P** **19 33 43.3 +1.0**
ULN pmax pmax
comp=Z,17nm,1.0s,mb4.5
ULN Ulaanbaatar 24.93 40 P **P** **19 33 43.6 +1.3**
comp=Z,270nmcomp=Z,19nm,1.2s,mb4.5
ABKAR Akbulak array 25.59 323 *e*P **P** **19 33 49.5 +1.2**
TLY Talaya 25.74 30 *e*P **P** **19 33 51.7 +2.0**
TLY pmax pmax
comp=Z,9.0nm,0.9s,mb4.3
TLY MLR MLR
comp=Z,111nm,16.0s,MS3.5
QIZ Qiongzhong 26.64 110 P **P** **19 33 57.0 -1.1**
QIZ S **S** **19 38 31.5 -1.7**
QIZ pmax pmax
comp=Z,9.0nm,1.8s,mb4.0
QIZ pmax pmax
comp=Z,100nm,4.7s
QIZ LR LR
comp=N,270nm,15.9s
QIZ LR LR
comp=Z,300nm,16.6s,MS3.9
AKTK Aktyubinsk 27.30 323 P **P** **19 34 04.5 +0.7**
AKTK LR LR 19 46 14.8
AKTO Aktyubinsk 27.30 323 P **P** **19 34 04.5 +0.7**
comp=Z,3.1nm,0.8s,mb3.9,baz=126,slow=7.0,SNR=9.4
AKTO LR LR 19 46 14.8
comp=Z,369nm,20.3s,MS3.9,baz=297,slow=39
BJT Baijiatuan 28.18 62 *e*P **P** **19 34 13.2 +1.4**
comp=Z,16nm,1.1s,mb4.6
BJT Baijiatuan 28.18 62 *e*P **P** **19 34 13.2 +1.4**
BJT pmax pmax
comp=Z,16nm,1.1s
BJI Beijing 28.19 62 P **P** **19 34 11.8 -0.1**
BJI pmax pmax
comp=Z,14nm,1.1s,mb4.5
BJI pmax pmax
comp=Z,110nm,3.9s
BJI LR LR
comp=N,690nm,15.8s,MS4.4
BJI LR LR
comp=E,300nm,15.8s,MS4.4
BJI LR LR
comp=Z,270nm,22.9s
NJ2 Nanjing 30.25 78 *e*P **P** **19 34 32.8 +2.6**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
SVE Sverdlovsk 30.52 335⇓ *e*P **P** **19 34 33.4 +1.1**
SVE pmax pmax
comp=Z,18nm,1.0s,mb4.9
SVE MLR MLR
comp=Z,198nm,14.0s,MS3.9
ARU Arti 31.01 333 *d i*P **P** **19 34 37.4 +0.8**
ARU *e* 19 35 36.1
ARU S **S** **19 39 42.2 +1.0**
ARU SS SS 19 41 28.2 -25
ARU pmax pmax
comp=Z,13nm,1.2s,mb4.6
RDF Al-Radifah 31.03 276 *e*P **P** **19 34 38.1 +0.9**
RDF AMb AMB 19 34 43.9
comp=Z,19nm,1.2s,mb4.8
MIB Mutribah 31.04 278 *e*P **P** **19 34 38.1 +0.9**
MIB AMb AMB 19 34 41.1
comp=Z,28nm,1.1s,mb5.0
NAY Al-Naaiem 31.23 277 *e*P **P** **19 34 39.5 +0.6**
NAY AMb AMB 19 34 42.1
comp=Z,11nm,1.2s,mb4.6
GNI Garni 32.62 297 *i*P **P** **19 34 55.3 +4.3**
GNI pmax pmax
comp=Z,19nm,1.4s
GNI MLR MLR
comp=Z,173nm,23.0s
ZEI Tsey 33.53 302 *e*P **P** **19 35 00.3 +1.4**
ZEI pmax pmax
comp=Z,8.0nm,0.4s,mb5.0
KIV Kislovodsk 34.57 304⇑ *e*P **P** **19 35 11.3 +3.3**
KIV *e* 19 36 28.2
KIV *e*S **S** **19 40 36.1 -0.9**
KIV pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
KIV MLR MLR
comp=Z,400nm,22.0s,MS4.1
VRHR Novokhopersk 36.88 316 *e*P **P** **19 35 28.2 +0.5**
VRHR pmax pmax
comp=N,9.0nm,0.5s
VRHR pmax pmax
comp=E,5.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
KSRS Korea Array 37.24 67 P **P** **19 35 30.2 -0.7**
comp=Z,4.0nm,0.6s,mb4.4,baz=276,slow=9.5,SNR=16
KSRS LR LR 19 52 14.4
comp=Z,304nm,18.2s,MS4.1,baz=11,slow=39
KSRS Korea Array 37.24 67 P **P** **19 35 30.2 -0.7**
KSRS pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
KSRS MLR MLR
comp=Z,305nm,18.2s,MS4.1
MALT Malatya 37.48 294 P **P** **19 35 35.3 +2.3**
VSR Storozhevoye 38.40 315 *e*P **P** **19 35 42.7 +2.2**
VSR MLR MLR
comp=Z,1μm,29.0s,MS4.5
VSR MLR MLR
comp=N,290nm,14.0s
VSR MLR MLR
comp=E,280nm,29.0s
MDJ Mudanjiang 38.62 56 *e*P **P** **19 35 43.1 +0.6**
comp=E,60nm,0.6s,mb5.5
MMAI Mount Meron Ar 40.51 286 P **P** **19 36 00.3 +1.9**
comp=E,1.9nm,0.8s,mb3.8,baz=50,slow=7.7,SNR=3.4
KLR Kul'dur 40.64 49 *e*P **P** **19 35 56.2 -3.1**
SIM Simferopol' 40.78 305 *e*P **P** **19 36 01.9 +1.5**
SIM pmax pmax
comp=Z,8.0nm,0.7s,mb4.5
SIM MLR MLR
comp=Z,400nm,21.6s,MS4.2
OBN Obninsk 40.98 320⇑ *e*P **P** **19 36 02.1 +0.2**
OBN *e*S **S** **19 42 13.7 -0.1**
OBN pmax pmax
comp=Z,18nm,1.2s,mb4.6
OBN MLR MLR
comp=Z,200nm,25.0s,MS3.9
BRTR Keskin Array B 41.14 297 P **P** **19 36 05.4 +1.9**
comp=Z,1.0nm,0.8s,mb3.5,baz=144,slow=8.6,SNR=7.0
BRTR LR LR 19 56 08.2
comp=Z,115nm,20.3s,MS3.7,baz=237,slow=40
BRTR Keskin Array B 41.14 297 *ce*P **P** **19 36 06.8 +3.3**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
EIL Elat 41.59 281 P **P** **19 36 08.6 +1.3**
EIL Elat 41.59 281 P **P** **19 36 08.6 +1.3**
comp=Z,5.3nm,0.7s,mb4.3,baz=55,slow=5.5,SNR=4.7
KLMR Klimovskoe 41.63 329 *e*P **P** **19 36 06.5 -0.7**
KLMR pmax pmax
comp=Z,17nm,1.2s,mb4.5
YAK Yakutsk 43.22 30 *e*P **P** **19 36 20.6 +0.5**
comp=Z,15nm,0.8s,mb4.8
YAK Yakutsk 43.22 30 *e*P **P** **19 36 20.0 -0.1**
YAK pmax pmax
comp=Z,13nm,0.9s,mb4.7
AKASG Malin Array Be 44.50 313 P **P** **19 36 30.0 -0.6**
comp=Z,4.5nm,0.7s,mb4.3,baz=85,slow=7.5,SNR=9.3
AKASG LR LR 19 58 29.2
comp=Z,220nm,19.3s,MS4.1,baz=125,slow=41
AKASG Malin Array Be 44.50 313 *ce*P **P** **19 36 30.2 -0.4**
AKASG pmax pmax
comp=Z,5.0nm,0.7s
AKBB Malin Array Si 44.50 313 *e*P **P** **19 36 29.0 -1.5**
KIEV Kiev 44.51 313 *e*P **P** **19 36 29.4 -1.3**
comp=Z,5.2nm,0.8s,mb4.4
KIEV Kiev 44.51 313 *e*P **P** **19 36 29.4 -1.2**
KIEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
TLCR 44.54 305⇑ P **P** **19 36 31.7 +0.7**
TLCR 44.54 305⇑ *i*P **P** **19 36 31.7 +0.7**
TIRR Tirgusor 44.84 304⇑ P **P** **19 36 37.8 +4.4**
TIRR Tirgusor 44.84 304⇑ *i*P **P** **19 36 37.8 +4.4**
MJAR Matsushiro Arr 45.52 67 P **P** **19 36 38.1 -0.9**
comp=Z,3.4nm,1.1s,mb4.2,baz=299,slow=10,SNR=7.9
MJAR LR LR 19 57 00.5
comp=Z,112nm,19.2s,MS3.8,baz=295,slow=38
VRI Vrincioaia 45.99 306⇑ P **P** **19 36 44.1 +1.6**
VRI Vrincioaia 45.99 306⇑ *i*P **P** **19 36 44.1 +1.6**
JOF Joensuu 46.01 330 *e*P **P** **19 36 42.2 -0.2**
JOF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
JOF Joensuu 46.01 330 *e*p **P** **19 36 42.2 -0.2**
comp=Z,8.0nm,0.7s,mb4.8
TESR 46.04 307⇑ P **P** **19 36 43.2 +0.3**
TESR 46.04 307⇑ *i*P **P** **19 36 43.2 +0.3**
PLOR Plostina 46.05 306⇓ P **P** **19 36 44.7 +1.7**
PLOR Plostina 46.05 306⇓ *i*P **P** **19 36 44.7 +1.7**
IDID Didziasalis 46.52 319 *e*P **P** **19 36 46.4 -0.2**
MLR Muntele Rosu 46.55 305⇑ P **P** **19 36 49.0 +2.0**
MLR Muntele Rosu 46.55 305⇑ *i*P **P** **19 36 49.0 +2.1**
IIGN Ignalina 46.82 319 *e*P **P** **19 36 48.6 -0.2**
IZAR Zarasai 46.86 319 *e*P **P** **19 36 49.0 -0.2**
ISAL Salakas 46.90 319 *e*P **P** **19 36 49.3 -0.2**
BURAR Bucovina Array 47.00 308⇑ P **P** **19 36 50.9 +0.5**
BURAR Bucovina Array 47.00 308⇑ *i*P **P** **19 36 50.9 +0.5**
BUR08 Bucovina Ar. S 47.01 308 *e*P **P** **19 36 50.9 +0.4**
VOIR 47.19 305⇑ P **P** **19 36 52.3 +0.4**
VOIR 47.19 305⇑ *i*P **P** **19 36 52.3 +0.4**
TIXI Tiksi 47.67 18 *e*P **P** **19 36 55.1 -0.1**
comp=Z,7.7nm,0.8s,mb4.8
TIXI Tiksi 47.67 18 *e*P **P** **19 36 55.4 +0.2**
TIXI pmax pmax
comp=Z,14nm,1.3s,mb4.8
TIXI MLR MLR
comp=Z,103nm,14.0s,MS4.0
FINES FINESS Array B 47.96 327 P **P** **19 36 57.7 +0.1**
comp=Z,4.1nm,0.7s,mb4.6,baz=103,slow=8.0,SNR=13
KAF Kangasniemi 48.01 328 *e*P **P** **19 36 52.3 -5.7**
KAF pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
KAF Kangasniemi 48.01 328 *e*p **P** **19 36 52.3 -5.7**
comp=Z,2.4nm,0.8s,mb4.3
KWP Kalwaria Pacla 48.64 311⇑ P **P** **19 37 04.1 +1.0**
KWP Kalwaria Pacla 48.64 311⇑ *i*P **P** **19 37 04.1 +1.0**
DRGR 48.74 307⇑ P **P** **19 37 05.1 +1.2**
DRGR 48.74 307⇑ *i*P **P** **19 37 05.1 +1.2**
VTS Vitosha 48.74 302⇑ P **P** **19 37 05.4 +1.4**
VTS Vitosha 48.74 302⇑ *i*P **P** **19 37 05.4 +1.4**
CRVS Cervenica-Dubn 49.48 310 *e*P **P** **19 37 10.0 +0.5**
CRVS Cervenica-Dubn 49.48 310 *e*P **P** **19 37 10.0 +0.5**
KEV Kevo 50.00 338 *e*P **P** **19 37 12.5 -0.7**
KEV pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KEV Kevo 50.00 338 *e*p **P** **19 37 12.5 -0.7**
comp=Z,3.4nm,0.7s,mb4.5
ARCES ARCESS Array B 50.42 337 P **P** **19 37 16.4 +0.1**
comp=Z,5.0nm,0.8s,mb4.6,baz=96,slow=8.7,SNR=13
VYHS Vyhne 51.24 310 *e*P **P** **19 37 23.0 +0.2**
VYHS Vyhne 51.24 310 *e*P **P** **19 37 23.0 +0.2**
OKC Ostrava-Krasne 51.59 311 AMS AMS 19 58 20.0
PKSM Moragy 51.59 307⇓ P **P** **19 37 25.6 +0.1**
PKSM Moragy 51.59 307⇓ *i*P **P** **19 37 25.6 +0.1**
DPC Dobruska-Polom 52.72 312 *e*P **P** **19 37 34.4 +0.5**
DPC MLR MLR
comp=Z,200nm,20.8s,MS4.1
DPC Dobruska-Polom 52.72 312 *e*P **P** **19 37 34.4 +0.5**
DPC AMS AMS 19 58 50.0
comp=Z,200nm,20.8s
UPC Upice 52.91 312 *e*P **P** **19 37 35.8 +0.6**
UPC Upice 52.91 312 *e*P **P** **19 37 35.8 +0.6**
TREC Trest 53.36 311 AMS AMS 20 01 00.0
comp=Z,300nm,26.1s
SEY Seymchan 53.62 32⇑ *e*P **P** **19 37 40.5 +0.2**
PVCC Panska Ves 53.82 313 AMS AMS 19 58 30.0
comp=Z,200nm,32.2s
PRU Pruhonice 53.90 312 *e*P **P** **19 37 43.6 +1.1**
PRU MLR MLR
comp=Z,200nm,21.4s,MS4.1
PRU Pruhonice 53.90 312 *e*P **P** **19 37 43.6 +1.1**
PRU AMS AMS 19 59 00.0
comp=Z,200nm,21.4s
TIP Timpagrande 54.14 298 *e*P **P** **19 37 44.0 -0.5**
comp=Z,7.9nm,0.9s,mb4.6
KHC Kasperske Hory 54.62 311 *e*P **P** **19 37 48.5 +0.7**
KHC MLR MLR
comp=Z,200nm,14.8s,MS4.3
KHC Kasperske Hory 54.62 311 *e*P **P** **19 37 48.5 +0.7**
KHC AMS AMS 20 03 20.0
comp=Z,200nm,14.8s
CUC Castrocucco 54.67 300 *e*P **P** **19 37 49.0 +0.7**
comp=Z,11nm,0.8s,mb5.0
CLL Collm 54.72 314 *e*SS SS 19 49 24.0 +13
CEL Celeste 55.01 297 *e*P **P** **19 37 50.9 +0.1**
comp=Z,37nm,0.9s,mb5.4
NOA NORSAR Array B 55.06 326 P **P** **19 37 49.7 -1.1**
comp=Z,4.0nm,0.8s,mb4.5,baz=89,slow=7.1,SNR=8.7
NOA LR LR 20 02 43.9
comp=Z,143nm,19.0s,MS4.1,baz=85,slow=38
NKC Novy Kostel 55.20 312 AMS AMS 20 01 20.0
PETK Petropavlovsk- 56.92 44 P **P** **19 38 02.7 -1.5**
comp=Z,2.6nm,0.7s,mb4.3,baz=116,slow=3.4,SNR=4.4
GUMO Guam 58.80 92 LR LR 20 05 11.6
comp=Z,110nm,19.6s,MS4.0,baz=68,slow=38
HINF Hinteralfeld 59.26 310 *e*P **P** **19 38 19.7 -1.0**
HAU Haudompre 59.55 311 *e*P **P** **19 38 21.7 -1.0**
HAU *e*MLR MLR
comp=Z,96nm,18.5s,MS3.7
HAU Haudompre 59.55 311 *e*P **P** **19 38 21.7 -1.0**
HAU MLR MLR
comp=Z,100nm,18.5s,MS4.0
SBF Sospel 59.82 306 *e*P **P** **19 38 24.1 -0.6**
comp=Z,21nm,0.9s,mb4.9
SBF Sospel 59.82 306 *e*P **P** **19 38 24.1 -0.6**
comp=Z,10nm,0.9s,mb4.9
SBF Sospel 59.82 306 *e*P **P** **19 38 24.1 -0.6**
SBF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
LPG La Plagne 59.88 308 *e*P **P** **19 38 24.8 -0.3**
comp=Z,13nm,0.8s,mb4.7
LPG La Plagne 59.88 308 *e*P **P** **19 38 24.8 -0.3**
comp=Z,6.4nm,0.8s,mb4.7
LPG La Plagne 59.88 308 *e*P **P** **19 38 24.8 -0.3**
LPG pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
LPL La Plagne 59.89 308 *e*P **P** **19 38 24.9 -0.2**
comp=Z,23nm,1.0s,mb4.8
LPL La Plagne 59.89 308 *e*P **P** **19 38 24.9 -0.2**
comp=Z,12nm,1.0s,mb4.9
LPL La Plagne 59.89 308 *e*P **P** **19 38 24.9 -0.2**
LPL pmax pmax
comp=Z,12nm,1.0s,mb4.9
CABF La Chapelle 60.05 309 *e*P **P** **19 38 26.5 +0.3**
MBDF Montbardon 60.06 307 *e*P **P** **19 38 25.1 -1.2**
comp=Z,7.8nm,1.0s,mb4.4
MBDF Montbardon 60.06 307 *e*P **P** **19 38 25.1 -1.2**
comp=Z,3.9nm,1.0s,mb4.4
MBDF Montbardon 60.06 307 *e*P **P** **19 38 25.1 -1.2**
MBDF pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
MEZF Maizieres J'vi 60.27 311 *e*P **P** **19 38 27.5 -0.2**
SFTF Sexfontaines 60.35 311 *e*P **P** **19 38 27.2 -1.1**
BAIF Baives 60.44 313 *e*P **P** **19 38 28.0 -0.8**
FRF La Foret Royal 60.45 306 *e*P **P** **19 38 28.0 -1.0**
comp=Z,23nm,1.3s,mb4.7
FRF La Foret Royal 60.45 306 *e*P **P** **19 38 28.0 -1.0**
comp=Z,12nm,1.3s,mb4.8
FRF La Foret Royal 60.45 306 *e*P **P** **19 38 28.0 -1.0**
FRF pmax pmax
comp=Z,12nm,1.3s,mb4.8
LMR La Mourre 60.61 305 *e*P **P** **19 38 29.2 -0.9**
comp=Z,21nm,1.3s,mb4.8
LMR La Mourre 60.61 305 *e*P **P** **19 38 29.2 -0.9**
comp=Z,11nm,1.3s,mb4.8
LMR La Mourre 60.61 305 *e*P **P** **19 38 29.2 -0.9**
LMR pmax pmax
comp=Z,11nm,1.3s,mb4.8
ORIF Oris-en-Rattie 60.62 307 *e*P **P** **19 38 29.0 -1.2**
comp=Z,8.6nm,1.0s,mb4.5
ORIF *e*MLR MLR
comp=Z,216nm,21.8s,MS4.0
ORIF Oris-en-Rattie 60.62 307 *e*P **P** **19 38 29.0 -1.2**
comp=Z,4.3nm,1.0s,mb4.5
ORIF Oris-en-Rattie 60.62 307 *e*P **P** **19 38 29.0 -1.2**
ORIF pmax pmax
comp=Z,4.0nm,1.0s,mb4.5
KEST Kesra 60.75 296 *e*P **P** **19 38 31.4 +0.2**
KEST Kesra 60.75 296 P **P** **19 38 31.2 0.0**
comp=Z,3.5nm,0.9s,mb4.5,baz=310,slow=3.1,SNR=9.3
SMRF Simiane la Rot 61.09 306 *e*P **P** **19 38 32.9 -0.4**
VIVF Saint-Julien-l 61.47 307 *e*P **P** **19 38 35.0 -0.9**
SMF Signal de Mont 61.54 310 *e*P **P** **19 38 35.2 -1.1**
comp=Z,10.0nm,0.9s,mb4.6
SMF Signal de Mont 61.54 310 *e*P **P** **19 38 35.2 -1.1**
comp=Z,5.0nm,0.9s,mb4.6
SMF Signal de Mont 61.54 310 *e*P **P** **19 38 35.2 -1.1**
SMF pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
SSF Saint Saulge 61.65 310 *e*P **P** **19 38 35.8 -1.3**
comp=Z,14nm,1.2s,mb4.6
SSF Saint Saulge 61.65 310 *e*P **P** **19 38 35.8 -1.3**
comp=Z,6.8nm,1.2s,mb4.7
SSF Saint Saulge 61.65 310 *e*P **P** **19 38 35.8 -1.3**
SSF pmax pmax
comp=Z,7.0nm,1.2s,mb4.7
AVF Avril sur Loir 61.82 310 *e*P **P** **19 38 37.5 -0.8**
BGF Bois d'Agland 62.22 310 *e*P **P** **19 38 39.7 -1.2**
LASF Ste Croix 62.25 307 *e*P **P** **19 38 40.6 -0.6**
TCF Toulx Ste Croi 62.72 310 *e*P **P** **19 38 43.6 -0.7**
comp=Z,20nm,1.2s,mb4.8
TCF Toulx Ste Croi 62.72 310 *e*P **P** **19 38 43.6 -0.7**
comp=Z,9.8nm,1.2s,mb4.8
TCF Toulx Ste Croi 62.72 310 *e*P **P** **19 38 43.6 -0.7**
TCF pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
CAF Calviac 63.22 308 *e*P **P** **19 38 47.1 -0.5**
comp=Z,6.9nm,0.9s,mb4.5
CAF Calviac 63.22 308 *e*P **P** **19 38 47.1 -0.5**
comp=Z,3.5nm,0.9s,mb4.5
CAF Calviac 63.22 308 *e*P **P** **19 38 47.1 -0.5**
CAF pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
RJF Les Rejaudoux 63.48 309 *e*P **P** **19 38 48.9 -0.4**
RJF *e*MLR MLR
comp=Z,103nm,19.5s,MS3.7
RJF Les Rejaudoux 63.48 309 *e*P **P** **19 38 48.9 -0.4**
RJF MLR MLR
comp=Z,100nm,19.5s,MS4.0
LDF La Druitiere 63.56 313 *e*P **P** **19 38 48.6 -1.2**
comp=Z,6.8nm,0.7s,mb4.5
LDF La Druitiere 63.56 313 *e*P **P** **19 38 48.6 -1.2**
comp=Z,3.4nm,0.7s,mb4.5
LDF La Druitiere 63.56 313 *e*P **P** **19 38 48.6 -1.2**
LDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
MTLF Montolieu 63.60 306 *e*P **P** **19 38 49.6 -0.6**
comp=Z,10nm,1.2s,mb4.4
MTLF Montolieu 63.60 306 *e*P **P** **19 38 49.6 -0.6**
comp=Z,5.3nm,1.2s,mb4.5
MTLF Montolieu 63.60 306 *e*P **P** **19 38 49.6 -0.6**
MTLF pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
LFF La Frestale 64.11 308 *e*P **P** **19 38 52.8 -0.7**
MFF Saint Martin d 64.18 310 *e*P **P** **19 38 52.6 -1.3**
EPF Esparros 65.00 307 *e*P **P** **19 38 57.4 -2.0**
SGMF Saint Gilles 65.21 313 *e*P **P** **19 38 59.8 -0.8**
ETSF Etsaut 65.67 307 *e*P **P** **19 39 03.2 -0.5**
ESDC Sonseca Array 69.24 304 P **P** **19 39 25.6 -0.7**
comp=Z,0.9nm,0.7s,mb3.8,baz=54,slow=5.9,SNR=6.8
SUMG Summit 69.63 344 *e*P **P** **19 39 29.6 +1.4**
comp=Z,200nm,0.8s,mb5.1
SUMG Summit 69.63 344 *i*P **P** **19 39 29.0 +0.8**
comp=Z,19nm,0.9s,mb5.0
WRA Warramunga Arr 70.27 129 P **P** **19 39 31.3 -1.5**
comp=Z,3.4nm,0.5s,mb4.5,baz=325,slow=6.4,SNR=75
WRA Warramunga Arr 70.27 129 P **P** **19 39 31.3 -1.5**
WB2 Warramunga Arr 70.28 129 *e*P **P** **19 39 31.1 -1.8**
ASAR Alice Springs 72.62 132 P **P** **19 39 45.5 -1.4**
comp=Z,0.8nm,0.7s,mb3.7,baz=317,slow=5.5,SNR=9.2
COLD Coldfoot 74.38 19 *e*P **P** **19 39 57.4 +0.7**
comp=Z,9.1nm,1.1s,mb4.6
TORD Torodi Ar. Bea 76.31 277 P **P** **19 40 07.9 -0.8**
comp=Z,3.9nm,0.8s,mb4.4,baz=51,slow=4.0,SNR=19
TORD LR LR 20 19 08.9
comp=Z,164nm,18.2s,MS4.4,baz=30,slow=40
BPAW Bear Paw Mtn. 76.33 22 *e*P **P** **19 40 08.1 +0.1**
comp=Z,5.6nm,0.9s,mb4.5
ILAR Eielson Array 77.09 20 P **P** **19 40 12.1 -0.2**
comp=Z,3.5nm,0.9s,mb4.3,baz=304,slow=4.5,SNR=27
INK Inuvik 77.53 13 P **P** **19 40 13.7 -1.0**
comp=Z,1.6nm,0.4s,mb4.3,baz=0.1,slow=7.0,SNR=5.3
SML Sawmill 78.81 22 *e*P **P** **19 40 22.2 +0.3**
comp=Z,2.1nm,0.9s,mb4.1
SML Sawmill 78.81 22 *e*P **P** **19 40 22.2 +0.3**
SML pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
DAWY Dawson 79.71 18 *e*P **P** **19 40 26.1 -0.6**
KDAK Kodiak Island 80.15 27 P **P** **19 40 27.8 -1.4**
comp=Z,3.4nm,0.7s,mb4.4,baz=333,slow=6.8,SNR=3.4
BOSA Boshof 80.92 229 P **P** **19 40 32.5 -1.2**
comp=Z,6.4nm,1.1s,mb4.5,baz=82,slow=8.0,SNR=3.7
BOSA LR LR 20 12 42.0
comp=Z,112nm,20.9s,MS4.2,baz=3.8,slow=33
DBIC Dimbokro 85.10 275 P **P** **19 40 55.4 -0.5**
comp=Z,5.0nm,0.8s,mb4.7,baz=90,slow=3.0,SNR=3.7
DBIC LR LR 20 22 30.1
comp=Z,134nm,18.6s,MS4.4,baz=202,slow=38
YKA Yellowknife Ar 85.98 8 P **P** **19 40 58.1 -1.2**
comp=Z,1.2nm,0.8s,mb4.2,baz=332,slow=4.5,SNR=4.6
SCHQ Schefferville 91.00 343 P **P** **19 41 23.7 +0.3**
comp=Z,5.5nm,0.8s,mb4.9,baz=120,slow=4.4,SNR=5.3
TXAR Lajitas Array 119.89 7 PKP PKPdf 19 47 09.1 -1.1
comp=Z,0.5nm,0.9s,baz=72,slow=2.9,SNR=2.4
CPUP Villa Florida 145.30 267 PKPbc PKPbc 19 47 56.4 -0.9
comp=Z,6.3nm,0.8s,baz=28,slow=4.0,SNR=9.4
LPAZ La Paz 150.27 292 PKPbc PKPbc 19 48 11.2 +0.1
comp=Z,2.3nm,1.0s,baz=52,slow=3.4,SNR=5.9

PGC ***27*** *19:45:04.9±2.2, 49.°91N×130.°01W, h10km, ML3.5/9, Mw4.1, 204km Wsw of Pt. Hardy, Bc Vancouver Island Region*

ISCJB ***27*** *19:45:05.4±1.4, 50.°04N±0.°04×129.°78W±0.°06, h13km±10km, mb4.3/14, MS3.8/6, Error ellipse: s-maj=7.7km s-min=5.2km az=137.7*

IDC ***27*** *19:45:06.8±1.7, 50.°03N×129.°71W, h0km, mb3.8/3, mb1 4.1/11, mb1mx3.8/30, mbtmp3.9/11, ML3.8/6, MS3.5/11, Ms1 3.5/11, ms1mx3.3/43, Error ellipse: s-maj=28.8km s-min=11.7km az=73.0*

NEIC ***27*** *19:45:08.3±0.7, 50.°13N×129.°56W, h10km, mb4.2/14, MW4.7(PGC), Error ellipse: s-maj=12.1km s-min=5.8km az=56.0*

ISC 27 19:45:07.8±1.7, 50.°09N±0.°04×129.°62W±0.°07, h9km±13km, n90, σ1°24/93, mb4.3/14, MS3.8/6, 5D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.10**	**59**	⇑Pn	**Pn**	**Pn**	**19 45 28.4**	**-0.9**
HOLB				⇓Sn	**Sn**	**Sn**	**19 45 45.0**	**+0.3**
BPBC	**Brooks Peninsu**	**1.19**	**86**	⇓Pn	**Pn**	**Pn**	**19 45 28.6**	**-2.1**

BPBC					⇓Sn		**Sn**	**19 45 47.0**	**+0.1**
PHC	**Port Hardy**	**1.53**	**65**		Pn		**Pn**	**19 45 34.6**	**-0.7**
PHC					⇑Sn		**Sn**	**19 45 56.3**	**+1.0**
MAYB	**Maynard**	**1.60**	**78**		Pn		**Pn**	**19 45 34.9**	**-1.3**
EDB	**Eliza Dome**	**1.63**	**97**		Pn		**Pn**	**19 45 34.1**	**-2.5**
EDB					⇓Sn		**Sn**	**19 45 56.6**	**-1.1**
WOSB	**Woss**	**1.96**	**87**		⇑Pn		**Pn**	**19 45 40.3**	**-0.9**
BBB	**Bella Bella**	**2.30**	**24**		Pn		**Pn**	**19 45 45.6**	**-0.3**
BBB					Sn		**Sn**	**19 46 14.5**	**+0.2**
BBB					LR		LR	19 46 47.1	
	comp=Z,460nm,19.1s,baz=162,slow=42								
BBB	**Bella Bella**	**2.30**	**24**		⇑Pn		**Pn**	**19 45 45.6**	**-0.3**
BBB					⇑Sn		**Sn**	**19 46 14.4**	**+0.1**
GDR	**Gold River**	**2.34**	**96**		Pn		**Pn**	**19 45 44.7**	**-1.7**
OZB	**Mount Ozzard**	**2.92**	**111**		⇑Pn		**Pn**	**19 45 53.4**	**-1.0**
OZB					⇑Sn		**Sn**	**19 46 28.8**	**-0.7**
PFB	**Port Renfrew**	**3.71**	**112**		⇓Pn		**Pn**	**19 46 04.2**	**-1.1**
HDW	**Hoodsport**	**4.97**	**117**		P		**Pn**	**19 46 23.5**	**+0.9**
VDB	**Vedder Mountai**	**5.01**	**99**		P		**Pn**	**19 46 24.4**	**+1.3**
CMW	**Cultus Mountai**	**5.19**	**106**		P		**Pn**	**19 46 26.6**	**+1.1**
JCW	**Jim Creek**	**5.39**	**108**		P		**Pn**	**19 46 29.0**	**+0.6**
FMW	**Mount Fremont**	**6.15**	**118**		P		**Pn**	**19 46 41.4**	**+2.6**
LON	**Longmire**	**6.18**	**120**		*eP*		**Pn**	**19 46 39.3**	**+0.1**
	9.4nm,0.9s								
ETW	**Entiat**	**6.62**	**109**		P		**Pn**	**19 46 46.4**	**+1.3**
TBM	**Table Mountain**	**6.66**	**113**		P		**Pn**	**19 46 47.2**	**+1.6**
HAWA	**Hanford**	**7.68**	**115**		*eP*		**Pn**	**19 46 59.7**	**-0.1**
	11nm,0.9s								
OD2	**Odessa Site #2**	**7.70**	**106**		P		**Pn**	**19 47 00.4**	**+0.4**
DLBC	**Dease Lake**	**8.37**	**359**		Pn		**Pn**	**19 47 08.6**	**-0.6**
	0.1nm,0.3s,baz=188,slow=15,SNR=4.3								
DLBC					Sn		**Sn**	**19 48 45.8**	**+2.2**
	0.1nm,0.3s,baz=114,slow=19,SNR=2.6								
NEW	**Newport**	**8.39**	**98**		*eP*		**Pn**	**19 47 10.1**	**+0.6**
	10nm,1.0s								
YBH	**Yreka Blue Hor**	**9.64**	**147**		LR		LR	19 50 18.6	
	comp=Z,74nm,22.0s,baz=330,slow=32								
WVOR	**Wild Horse Val**	**10.78**	**131**		*eP*		**Pn**	**19 47 43.5**	**+1.2**
	14nm,1.5s								
SLMT	**Seeley Lake**	**11.04**	**99**		*eP*		**Pn**	**19 47 46.4**	**+0.6**
	6.3nm,0.7s								
CHMT	**Chamberlain Mo**	**11.31**	**100**		*eP*		**Pn**	**19 47 50.6**	**+1.1**
	15nm,1.3s								
DLMT	**Dillon**	**12.39**	**106**		*eP*		**Pn**	**19 48 04.6**	**+0.4**
	5.5nm,0.8s								
MCMT	**McKenzie Canyo**	**12.50**	**108**		*eP*		**Pn**	**19 48 04.7**	**-1.0**
	3.0nm,0.9s								
IMW	**Indian Meadow**	**14.16**	**109**		*eP*		**Pn**	**19 48 30.3**	**+1.9**
	16nm,1.0s								
NVAR	**Mina Array Bea**	**14.18**	**141**		Pn		**Pn**	**19 48 29.4**	**+0.7**
	baz=324,slow=9.9,SNR=7.5								
MOOW	**Moose Ponds**	**14.36**	**109**		*eP*		**Pn**	**19 48 32.9**	**+1.8**
	41nm,1.3s								
TPAW	**Teton Pass**	**14.37**	**110**		P		**Pn**	**19 48 29.5**	**-1.8**
	41nm,1.1s								
REDW	**Red Top Meadow**	**14.50**	**110**		*eP*		**Pn**	**19 48 32.9**	**-0.2**
	52nm,1.4s								
LOHW	**Long Hollow**	**14.52**	**109**		*eP*		**Pn**	**19 48 33.5**	**+0.3**
	11nm,0.8s								
AHID	**Auburn Hatcher**	**14.70**	**113**		P		**Pn**	**19 48 35.8**	**+0.1**
	51nm,1.4s								
BGU	**Big Grassy Mou**	**14.78**	**122**		*eP*		**Pn**	**19 48 35.5**	**-1.3**
	11nm,1.3s								
YKA	**Yellowknife Ar**	**14.91**	**28**		Pn		**Pn**	**19 48 37.1**	**-1.3**
	0.2nm,0.3s,baz=218,slow=12,SNR=4.3								
YKA					LR		LR	19 54 41.1	
	comp=Z,14nm,20.5s,baz=240,slow=38								
DUG	**Dugway**	**15.41**	**124**		*eP*		**Pn**	**19 48 44.6**	**-0.6**
	13nm,1.3s								
KDAK	**Kodiak Island**	**15.50**	**309**		Pn		**Pn**	**19 48 45.6**	**-0.8**
	0.2nm,0.3s,baz=138,slow=11,SNR=4.9								
KDAK					LR		LR	19 53 16.6	
	comp=Z,226nm,19.2s,baz=132,slow=32								
PDAR	**Pinedale Array**	**15.62**	**110**		Pn		**Pn**	**19 48 51.2**	**+3.2**
	0.2nm,0.3s,baz=313,slow=11,SNR=23								
PDAR					LR		LR	19 55 01.6	
	comp=Z,191nm,21.8s,baz=93,slow=38								
LAO	**LASA Array**	**15.89**	**93**		*eP*		**Pn**	**19 48 52.4**	**+0.9**
	50nm,1.4s								
MSU	**Marysvale**	**16.98**	**126**		P		**Pn**	**19 49 05.2**	**-0.2**
	7.7nm,1.4s								
ILAR	**Eielson Array**	**17.31**	**335**		P		**Pn**	**19 49 11.2**	**+1.8**
	baz=146,slow=9.8,SNR=8.5								
ILAR					LR		LR	19 54 49.2	
	comp=Z,62nm,20.0s,baz=174,slow=34								
SRU	**San Rafael**	**17.42**	**122**		*eP*		**Pn**	**19 49 13.2**	**+2.2**
	7.1nm,1.0s								
FFC	**Flin Flon**	**17.43**	**64**		P		**Pn**	**19 49 09.7**	**-1.3**
	24nm,0.8s								
LDFC	**Landfair**	**18.37**	**139**		*eP*		**Pn**	**19 49 20.6**	**-2.0**
	27nm,1.4s								
INK	**Inuvik**	**18.38**	**355**		P		**Pn**	**19 49 24.3**	**+1.8**
	0.2nm,0.3s,baz=170,slow=7.9,SNR=5.3								
INK					LR		LR	19 56 04.5	
	comp=Z,203nm,19.1s,baz=139,slow=36								
PV01	**Paradox Valley**	**19.19**	**121**		*eP*		**Pn**	**19 49 32.3**	**-0.3**
	1µm,1.3s								
ISCO	**Idaho Springs**	**19.78**	**112**		*eP*		**Pn**	**19 49 37.6**	**-2.0**
	16nm,1.5s								
MVCO	**Mesa Verde**	**19.90**	**122**		*eP*		**Pn**	**19 49 39.9**	**-1.2**
	38nm,1.6s								
SDCO	**Great Sand Dun**	**21.20**	**116**		*eP*		**P**	**19 49 53.7**	**+0.1**
	9.9nm,1.4s,mb4.0								
ULM	**Lac du Bonnet**	**21.51**	**77**		P		**P**	**19 49 58.7**	**+1.9**
	19nm,0.8s,mb4.6,baz=289,slow=11,SNR=9.5								
ULM					LR		LR	19 59 00.9	
	comp=Z,181nm,19.4s,MS3.5,baz=227,slow=39								
AGMN	**Agassiz Nation**	**22.03**	**82**		P		**P**	**19 49 57.7**	**-4.7**
	29nm,1.4s,mb4.5								
ANMO	**Albuquerque**	**22.68**	**123**		P		**P**	**19 50 10.8**	**+1.5**
ANMO					LR		LR	19 59 06.4	
ANMO	**Albuquerque**	**22.68**	**123**		P		**P**	**19 50 10.8**	**+1.5**
	1.1nm,0.6s,mb3.4,baz=347,slow=10,SNR=4.2								
ANMO					LR		LR	19 59 06.4	
	comp=Z,74nm,18.6s,MS3.1,baz=80,slow=37								
BNM	**Barren Site**	**23.20**	**125**		*eP*		**P**	**19 50 14.6**	**-0.2**
	1.0nm,0.7s,mb3.4								
ECSD	**EROS Data Cent**	**23.29**	**93**		*eP*		**P**	**19 50 14.2**	**-1.6**
	24nm,1.0s,mb4.6								
EYMN	**Ely**	**24.92**	**80**		*eP*		**P**	**19 50 31.0**	**+0.1**
	26nm,0.9s,mb4.8								
MNTX	**Cornudas Mount**	**25.76**	**126**		*eP*		**P**	**19 50 33.9**	**-4.8**
	2.9nm,0.9s,mb3.8								
WMOK	**Wichita Mounta**	**27.21**	**113**		*eP*		**P**	**19 50 51.7**	**0.0**
TXAR	**Lajitas Array**	**28.53**	**127**		P		**P**	**19 51 04.9**	**+1.2**
	0.4nm,0.7s,mb3.3,baz=310,slow=5.6,SNR=4.0								
TXAR					LR		LR	20 03 05.9	
	comp=Z,134nm,20.8s,MS3.5,baz=180,slow=38								
SADO	**Sadowa**	**34.02**	**79**		LR		LR	20 06 18.0	
	comp=Z,367nm,19.0s,MS4.1,baz=173,slow=37								
TKL	**Tuckaleechee C**	**35.97**	**96**		LR		LR	20 07 16.4	
	comp=Z,305nm,18.7s,MS4.1,baz=99,slow=37								
BJI	**Beijing**	**73.30**	**313**		P		**P**	**19 56 34.8**	**-4.6**
BJI					pmax		pmax		
	comp=Z,3.0nm,0.5s,mb4.5								
HHC	**Hu-ho-hao-te**	**74.76**	**316**		*eP*		**P**	**19 56 43.8**	**-4.1**
HHC					pP		pP	19 56 47.8	-3.0
HHC					sP		sP	19 56 50.5	-1.4
HHC					PP		PP	19 59 32.0	-2.4
HHC					S		S	20 06 15.5	-8.8
HHC					sS		sS	20 06 23.8	-5.3
HHC					SS		SS	20 11 05.0	-5.8
HHC					pmax		pmax		
	comp=Z,10.0nm,0.8s,mb4.8								
HHC					pmax		pmax		
	comp=Z,63nm,5.0s								
HHC					LR		LR		
	comp=N,120nm,15.5s,MS4.3								
HHC					LR		LR		
	comp=E,67nm,16.7s,MS4.3								
HHC					LR		LR		
	comp=Z,70nm,17.8s,MS4.0								
WMQ	**Urumqi**	**80.97**	**334**		*eP*		**P**	**19 57 20.3**	**-2.1**
CD2	**Chengdu**	**86.52**	**316**		P		**P**	**19 57 46.0**	**-5.1**
CD2					pmax		pmax		
	comp=Z,10.0nm,0.5s,mb5.3								
CD2					pmax		pmax		
	comp=Z,12nm,5.0s								
KSH	**Kashi**	**87.97**	**340**		*eP*		**P**	**19 57 59.3**	**+1.3**
KSH					*e*pP		pP	19 58 04.0	+3.1
KSH					*e*sP		sP	19 58 06.3	+4.4
KSH					*e*PP		PP	20 01 30.3	+7.1
KSH					*e*SKS			20 08 25.3	
KSH					*e*S		S	20 08 43.8	+2.5
KSH					*e*sS		sS	20 08 51.3	+5.2
KSH					*e*SS		SS	20 14 37.0	+10
KSH					pmax		pmax		
	comp=Z,2.0nm,0.7s,mb4.5								
KSH					pmax		pmax		
	comp=Z,68nm,4.6s								
KSH					LR		LR		
	comp=N,10.0nm,1.6s								
KSH					LR		LR		
	comp=E,15nm,2.3s								
KSH					LR		LR		
	comp=Z,17nm,2.0s								
GYA	**Guiyang**	**88.94**	**312**		*eP*		**P**	**19 57 59.0**	**-3.8**
GYA					pmax		pmax		
	comp=Z,10.0nm,1.0s,mb5.1								

*IDC **27** 19:52:57.0±2.2,30°.62N×82°.97E,h0km,mb3.5/6, mb1 3.6/8,mb1mx3.4/28,mbtmp3.4/8,ML3.3/2,Error ellipse: s-maj=68.7km s-min=21.4km az=65.0*
*NEIC **27** 19:52:58.2±1.2,30°.65N×82°.84E,h10km,mb3.6/1,Error ellipse: s-maj=28.3km s-min=9.8km az=55.0*
*ISCJB **27** 19:52:59.9±1.5,30°.6N±0°.2×82°.9E±0°.2,h33km,mb3.4/5, Error ellipse: s-maj=34.7km s-min=12.1km az=143.6*
ISC 27 19:53:01.7±1.6,30°.7N±0°.2×82°.9E±0°.2,h35km,n13, σ0s69/13,mb3.4/5,Xizang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**7.21**	**95**	*eP*		**Pn**	**19 54 45.1**	**+0.5**
	12nm,1.0s							
MK31	**Makanchi Array**	**16.13**	**359**	*eP*		**Pn**	**19 56 49.8**	**+4.2**
MKAR	**Makanchi Array**	**16.13**	**359**	Pn		**Pn**	**19 56 44.7**	**-0.9**
MKAR	**Makanchi Array**	**16.13**	**359**	Pn		**Pn**	**19 56 44.7**	**-0.9**
	0.1nm,0.3s,baz=182,slow=11,SNR=3.1							
CMAR	**Chiang Mai Arr**	**18.96**	**126**	P		**Pn**	**19 57 20.0**	**-0.8**
	0.1nm,0.3s,baz=307,slow=12,SNR=5.5							
KURK	**Kurchatov**	**20.30**	**352**	*eP*		**P**	**19 57 33.3**	**-1.1**
	3.3nm,1.0s							
KURK	**Kurchatov**	**20.30**	**352**	P		**P**	**19 57 34.5**	**+0.1**
	2.4nm,1.0s,baz=175,slow=9.9,SNR=13							
ZALV	**Zalesovo Beam**	**23.33**	**3**	P		**P**	**19 58 06.7**	**+0.1**
ZALV	**Zalesovo Beam**	**23.33**	**3**	P		**P**	**19 58 06.7**	**+0.1**
	0.4nm,0.4s,mb3.2,baz=188,slow=9.0,SNR=4.6							
BVAR	**Borovoye Array**	**24.15**	**341**	P		**P**	**19 58 15.4**	**+1.1**
	0.3nm,0.5s,mb3.0,baz=152,slow=6.5,SNR=3.5							
SONM	**Songino Array**	**24.86**	**40**	P		**P**	**19 58 21.2**	**+0.3**
	1.1nm,0.9s,mb3.4,baz=219,slow=8.2,SNR=8.0							
WRA	**Warramunga Arr**	**70.53**	**129**	P		**P**	**20 04 13.5**	**+0.3**
	0.6nm,0.8s,mb3.6,baz=325,slow=6.4,SNR=8.1							
ILAR	**Eielson Array**	**77.30**	**20**	P		**P**	**20 04 51.9**	**-0.3**
	1.1nm,1.0s,mb3.7,baz=292,slow=7.4,SNR=2.3							

*PGC **27** 19:54:06.4±1.2,49°.87N×130°.12W,h10km,ML3.1/9, Mw3.7,213km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **27** 19:54:08.1±0.7,50°.15N±0°.04×129°.85W±0°.08,h10km, mb3.8/6,Error ellipse: s-maj=7.9km s-min=5.8km az=161.3*
*IDC **27** 19:54:10.3±2.1,50°.11N×129°.67W,h0km,mb3.7/3, mb1 3.9/9,mb1mx3.6/28,mbtmp3.6/9,ML3.5/5,Error ellipse: s-maj=34.6km s-min=13.0km az=76.0*
*NEIC **27** 19:54:12.3±1.2,50°.20N×129°.53W,h10km,mb3.9/6, MW3.7(PGC),Error ellipse: s-maj=21.8km s-min=7.9km az=66.0*
ISC 27 19:54:11.9±0.8,50°.18N±0°.04×129°.56W±0°.10,h10km,n52, σ1s38/52,mb3.7/6,3D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.02**	**63**	⇑Pn		**Pn**	**19 54 31.3**	**-1.0**
HOLB				⇑Sn		**Sn**	**19 54 49.3**	**+2.6**
BPBC	**Brooks Peninsu**	**1.15**	**90**	⇑Pn		**Pn**	**19 54 31.6**	**-2.4**
BPBC				⇑Sn		**Sn**	**19 54 49.4**	**-0.3**
PHC	**Port Hardy**	**1.46**	**68**	Pn		**Pn**	**19 54 37.4**	**-0.8**
PHC				⇑Sn		**Sn**	**19 54 59.7**	**+2.3**
MAYB	**Maynard**	**1.55**	**81**	⇑Pn		**Pn**	**19 54 38.0**	**-1.4**
EDB	**Eliza Dome**	**1.60**	**100**	⇓Pn		**Pn**	**19 54 37.6**	**-2.7**
WOSB	**Woss**	**1.92**	**89**	⇓Pn		**Pn**	**19 54 43.6**	**-1.0**
BBB	**Bella Bella**	**2.21**	**24**	Pn		**Pn**	**19 54 47.6**	**-0.9**
	25nm,0.3s,baz=215,slow=12,SNR=30							
BBB				Sn		**Sn**	**19 55 15.9**	**+0.1**
	29nm,0.3s,baz=121,slow=23,SNR=11							
BBB	**Bella Bella**	**2.21**	**24**	Pn		**Pn**	**19 54 47.6**	**-0.9**
BBB				⇑Sn		**Sn**	**19 55 16.1**	**+0.3**
GDR	**Gold River**	**2.31**	**99**	⇓Pn		**Pn**	**19 54 47.1**	**-2.9**
BNB	**Barry Inlet**	**2.77**	**331**	⇑Pn		**Pn**	**19 54 51.0**	**-5.3**
MOBC	**Moresby Island**	**3.33**	**334**	⇑Pn		**Pn**	**19 54 59.4**	**-4.5**
LON	**Longmire**	**6.19**	**121**	*eP*		**Pn**	**19 55 44.1**	**+0.9**
	16nm,1.2s							
HAWA	**Hanford**	**7.68**	**116**	*eP*		**Pn**	**19 56 04.2**	**+0.4**
	7.3nm,0.9s							
DLBC	**Dease Lake**	**8.28**	**358**	Pn		**Pn**	**19 56 12.5**	**+0.6**
	0.3nm,0.3s,baz=168,slow=17,SNR=6.8							
NEW	**Newport**	**8.37**	**98**	*eP*		**Pn**	**19 56 12.6**	**-0.4**
WVOR	**Wild Horse Val**	**10.81**	**132**	*eP*		**Pn**	**19 56 48.3**	**+1.7**
	6.1nm,1.2s							
NVAR	**Mina Array Bea**	**14.22**	**141**	Pn		**Pn**	**19 57 33.8**	**+0.6**
	baz=322,slow=14,SNR=2.3							
TPAW	**Teton Pass**	**14.37**	**111**	P		**Pn**	**19 57 36.9**	**+1.8**
	18nm,1.0s							
YKA	**Yellowknife Ar**	**14.81**	**28**	Pn		**Pn**	**19 57 40.2**	**-0.9**
YKA	**Yellowknife Ar**	**14.81**	**28**	Pn		**Pn**	**19 57 40.2**	**-0.9**
	0.1nm,0.3s,baz=223,slow=11,SNR=4.6							
DUG	**Dugway**	**15.43**	**124**	*eP*		**Pn**	**19 57 49.7**	**+0.3**
	7.6nm,1.2s							
PDAR	**Pinedale Array**	**15.62**	**111**	Pn		**Pn**	**19 57 54.8**	**+2.9**
	0.1nm,0.3s,baz=308,slow=12,SNR=10.0							
ISA	**Isabella**	**16.59**	**147**	*eP*		**Pn**	**19 58 05.0**	**+0.5**
	16nm,1.7s							
ILAR	**Eielson Array**	**17.24**	**334**	P		**Pn**	**19 58 13.7**	**+1.2**
	0.1nm,0.3s,baz=152,slow=11,SNR=5.4							
PV01	**Paradox Valley**	**19.20**	**121**	*eP*		**Pn**	**19 58 36.5**	**-0.2**
	691nm,0.9s							
SMCO	**Snowmass**	**19.39**	**116**	*eP*		**Pn**	**19 58 36.6**	**-2.2**
	4.8nm,0.3s							
SDCO	**Great Sand Dun**	**21.20**	**117**	*eP*		**P**	**19 58 55.6**	**-1.9**
	4.2nm,1.1s,mb3.7							
ULM	**Lac du Bonnet**	**21.45**	**77**	P		**P**	**19 59 01.9**	**+1.7**
	6.3nm,0.8s,mb4.0,baz=296,slow=8.2,SNR=4.2							
ANMO	**Albuquerque**	**22.69**	**123**	P		**P**	**19 59 15.3**	**+1.9**
ANMO	**Albuquerque**	**22.69**	**123**	P		**P**	**19 59 15.3**	**+1.9**
	1.3nm,0.7s,mb3.5,baz=308,slow=14,SNR=2.9							
ECSD	**EROS Data Cent**	**23.26**	**93**	*eP*		**P**	**19 59 20.0**	**+0.7**
	9.5nm,1.1s,mb4.1							
WMOK	**Wichita Mounta**	**27.20**	**113**	*eP*		**P**	**19 59 54.6**	**-1.1**
	2.3nm,0.9s,mb3.7							
TXAR	**Lajitas Array**	**28.55**	**127**	P		**P**	**20 00 07.5**	**-0.2**
	0.6nm,0.8s,mb3.4,baz=320,slow=8.3,SNR=2.9							

*PGC **27** 19:59:18.2±3.0,49°.95N×130°.19W,h10km,ML3.9/11, Mw4.5,214km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*IDC **27** 19:59:18.9±0.6,49°.98N×130°.17W,h0km,mb4.3/23, mb1 4.4/32,mb1mx4.4/38,mbtmp4.3/32,ML4.0/8,MS4.3/15, Ms1 4.3/15,ms1mx4.0/43,Error ellipse: s-maj=16.2km s-min=9.7km az=59.0*
*GCMT **27** 19:59:20.9±0.2,49°.80N×130°.31W,h16km±1km,MW5.0, Moment Tensor Solution. s46,c67; s87,c151; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.78±.12; M_{tt}-2.96±.11; M_{pp}3.74±.12; M_{rt}1.91±.32; M_{rp}2.23±.09; M_{tp}-1.01±.29; Best double couple: $M_0$4.60000×10^{16} NP1:ϕ_s238.00000°, δ67.00000°, λ-17.00000°. NP2:ϕ_s335.00000°, δ74.00000°, λ-156.00000°. Principal axes: T 4.4500, Plg5.0000°, Azm105.0000°; N 0.3200, Plg61.0000°, Azm6.0000°; P -4.7700, Plg28.0000°, Azm198.0000°; Data Used: II IC G IU CN.*
*MOS **27** 19:59:21.7±1.1,50°.11N×129°.90W,h19km,mb5.0/48, MS4.4/10 Error ellipse: s-maj=7.5km s-min=4.1km az=110.1*
*BJI **27** 19:59:21.8,50°.28N×130°.33W,h10km,mB5.1/10, mb4.9/15,Ms5.0/12,Ms7 4.6/13*
*ISCJB **27** 19:59:22.5±0.2,50°.32N±0°.02×129°.56W±0°.03,h14km, mb4.7/103,MS4.4/26,Error ellipse: s-maj=3.7km s-min=1.7km az=139.4*
*NEIC **27** 19:59:22.6±0.2,50°.19N×129°.81W,h10km,mb4.8/97, MW4.5(PGC),Error ellipse: s-maj=6.1km s-min=2.1km az=46.0*
*SZGRF **27** 19:59:32.6,49°.39N×126°.88W,h33km,mb4.6,Vancouver Island, Canada, region*
ISC 27 19:59:23.2±0.9,50°.30N±0°.02×129°.69W±0°.03,h9km±5km, h15km±1.1km:pP-P,n760,σ0s90/749,mb4.7/103,MS4.4/26, 212C-180D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.05**	**70**	⇓Pn		**Pn**	**19 59 43.2**	**-0.8**
BPBC	**Brooks Peninsu**	**1.24**	**96**	⇓Pn		**Pn**	**19 59 43.9**	**-2.7**
PHC	**Port Hardy**	**1.50**	**73**	⇑Pn		**Pn**	**19 59 49.5**	**-0.7**
PHC				⇓Sn		**Sn**	**20 00 11.3**	**+1.6**
MAYB	**Maynard**	**1.61**	**85**	Pn		**Pn**	**19 59 50.3**	**-1.5**
EDB	**Eliza Dome**	**1.71**	**103**	⇑Pn		**Pn**	**19 59 49.8**	**-3.2**
EDB				⇑Sn		**Sn**	**20 00 12.1**	**-2.8**
WOSB	**Woss**	**2.00**	**93**	⇑Pn		**Pn**	**19 59 55.5**	**-1.6**
BBB	**Bella Bella**	**2.13**	**27**	Pn		**Pn**	**19 59 59.6**	**+0.7**
	120nm,0.3s,baz=43,slow=14,SNR=46							
BBB				Sn		**Sn**	**20 00 28.0**	**+2.5**
	142nm,0.3s,baz=123,slow=23,SNR=16							
BBB				LR		LR	20 01 10.2	
	comp=Z,5µm,18.1s,baz=275,slow=43							
BBB	**Bella Bella**	**2.13**	**27**	⇑Pn		**Pn**	**19 59 59.3**	**+0.3**
BBB				⇑Sn		**Sn**	**20 00 28.0**	**+2.5**
GDR	**Gold River**	**2.41**	**101**	⇓Pn		**Pn**	**20 00 00.5**	**-2.3**
BNB	**Barry Inlet**	**2.62**	**331**	⇑Pn		**Pn**	**20 00 01.4**	**-4.3**
OZB	**Mount Ozzard**	**3.04**	**115**	⇑Sn		**Sn**	**20 00 44.2**	**-3.5**
MOBC	**Moresby Island**	**3.19**	**334**	⇑Pn		**Pn**	**20 00 09.2**	**-4.2**
DIB	**Dawson Inlet,**	**3.39**	**330**	Pn		**Pn**	**20 00 12.8**	**-3.4**
	SNR=57							
DIB	**Dawson Inlet,**	**3.39**	**330**	⇑Pn		**Pn**	**20 00 12.9**	**-3.3**
OTR	**Olympics--Tyee**	**4.14**	**120**	P		**Pn**	**20 00 25.2**	**-1.3**
OBC	**Olympics--Boni**	**4.32**	**119**	P		**Pn**	**20 00 26.9**	**-2.0**
PGC	**Sidney**	**4.38**	**110**	*eP*		**Pn**	**20 00 27.0**	**-2.9**
NLWA	**Neilton Lookou**	**4.81**	**125**	*eP*		**Pn**	**20 00 33.4**	**-2.4**
BLN	**Blyn Mountain**	**4.96**	**115**	P		**Pn**	**20 00 35.9**	**-2.0**
VDB	**Vedder Mountai**	**5.08**	**102**	P		**Pn**	**20 00 39.3**	**-0.2**
A05A	**Maple Falls**	**5.11**	**102**	⇓Pn		**Pn**	**20 00 38.1**	**-1.7**
	baz=5.3							
MBW	**Mount Baker**	**5.29**	**104**	P		**Pn**	**20 00 42.4**	**+0.1**
JCW	**Jim Creek**	**5.50**	**110**	P		**Pn**	**20 00 45.3**	**+0.2**
E03A	**Lebam**	**5.54**	**130**	⇑P		**Pn**	**20 00 45.8**	**+0.1**
	baz=5.6							
CRAG	**Craig**	**5.58**	**339**	*eP*		**Pn**	**20 00 44.6**	**-1.7**
	89nm,1.1s							
RPW	**Rockport**	**5.65**	**106**	*eP*		**Pn**	**20 00 47.4**	**+0.2**
	28nm,0.7s							
HTW	**Haystack Looko**	**5.77**	**113**	P		**Pn**	**20 00 49.0**	**+0.1**
D05A	**Enumclaw**	**5.96**	**118**	⇑P		**Pn**	**20 00 50.2**	**-1.3**
	baz=6.1							
LON	**Longmire**	**6.32**	**121**	*eP*		**Pn**	**20 00 56.1**	**-0.3**
	65nm,1.3s							
LON	**Longmire**	**6.32**	**121**	*eP*		**Pn**	**20 00 56.2**	**-0.2**
LON				pmax	pmax			
	comp=Z,65nm,1.3s							
WPW	**White Pass**	**6.50**	**121**	P		**Pn**	**20 00 59.9**	**+1.0**
F04A	**Amboy**	**6.53**	**129**	⇑P		**Pn**	**20 00 59.3**	**-0.1**
	baz=6.6							
ETW	**Entiat**	**6.72**	**110**	*eP*		**Pn**	**20 01 02.1**	**+0.1**
	comp=Z,128nm,1.2s							
TBM	**Table Mountain**	**6.77**	**114**	P		**Pn**	**20 01 02.9**	**+0.2**
EBG	**Ellensburg**	**6.93**	**116**	P		**Pn**	**20 01 05.0**	**+0.2**
G04A	**Mulino**	**7.04**	**134**	⇓P		**Pn**	**20 01 07.1**	**+0.8**
	baz=7.0							
B08A	**Colville Reser**	**7.04**	**102**	⇑P		**Pn**	**20 01 06.3**	**0.0**
	baz=7.3							
HOOD	**Mount Hood Mea**	**7.35**	**130**	*eP*		**Pn**	**20 01 06.7**	**-3.9**
	comp=Z,72nm,0.9s							
E07A	**Sunnyside**	**7.53**	**116**	⇑P		**Pn**	**20 01 12.7**	**-0.3**
	baz=7.7							
MDW	**Midway**	**7.55**	**115**	P		**Pn**	**20 01 12.9**	**-0.5**

A15A **Johnson Ranch,** 11.08 90 ⇑P Pn 20 02 01.0 -0.6
baz=11
SLMT **Seeley Lake** 11.11 100 *eP* Pn 20 02 01.3 -0.8
comp=Z,19nm,0.9s
D14A **Greenough** 11.17 101 ⇓P Pn 20 02 02.4 -0.4
baz=11
F13A **Darby** 11.22 108 ⇑P Pn 20 02 02.4 -1.1
baz=11
B15A **Bradely Ranch,** 11.36 93 ⇓P Pn 20 02 05.8 +0.4
baz=12
CHMT **Chamberlain Mo** 11.39 101 *eP* Pn 20 02 05.9 -0.1
comp=Z,62nm,1.4s
E14A **Clinton** 11.45 104 ⇓P Pn 20 02 07.1 +0.4
baz=12
C15A **Salmond Ranch,** 11.49 96 ⇓P Pn 20 02 07.0 -0.2
baz=12
H12A **Diamond D Ranc** 11.56 114 ⇓P Pn 20 02 09.1 +0.8
baz=12
G13A **Cobalt** 11.63 111 ⇓P Pn 20 02 09.2 -0.1
baz=12
MFID **Camas Ranch** 11.71 121 ⇓P Pn 20 02 11.0 +0.7
baz=12
F14A **Wisdom** 11.80 106 ⇑P Pn 20 02 11.8 +0.3
baz=12
D15A **Lincoln** 11.80 99 ⇑P Pn 20 02 11.7 +0.2
baz=12
I12A **Atlanta** 11.86 118 ⇓P Pn 20 02 12.7 +0.4
baz=12
H13A **Challis** 11.91 113 ⇓P Pn 20 02 13.1 +0.1
baz=12
E15A **Deer Lodge** 11.98 102 ⇑P Pn 20 02 13.9 0.0
baz=12
G14A **Jackson** 12.02 109 ⇓P Pn 20 02 14.7 +0.1
baz=12
C16A **Fuhringer Ranc** 12.03 95 ⇓P Pn 20 02 15.2 +0.5
baz=12
F15A **Butte** 12.33 105 ⇑P Pn 20 02 18.5 -0.2
baz=12
LRM **Limekiln Ridge** 12.36 105 *eP* Pn 20 02 19.0 -0.2
comp=Z,144nm,1.3s
I13A **Wildhorse Cree** 12.37 115 ⇓P Pn 20 02 19.2 -0.1
baz=12
A17A **Triple J Farms** 12.39 89 ⇑P Pn 20 02 19.1 -0.4
baz=13
H14A **Leadore** 12.41 111 ⇑P Pn 20 02 19.8 -0.1
baz=13
HLID **Hailey** 12.41 117 ⇓P Pn 20 02 20.2 +0.3
baz=12
HLID **Hailey** 12.41 117 *eP* Pn 20 02 19.8 0.0
comp=Z,31nm,1.4s
D16A **Dana Ranch, Ca** 12.43 98 ⇑P Pn 20 02 20.2 +0.1
baz=13
DLMT **Dillon** 12.49 107 *eP* Pn 20 02 19.8 -1.2
comp=Z,71nm,1.4s
E16A **East Helena** 12.54 101 ⇓P Pn 20 02 22.0 +0.4
baz=13
MCMT **McKenzie Canyo** 12.61 109 *eP* Pn 20 02 21.6 -1.0
comp=Z,8.8nm,1.0s
J13A **Cove Ranch, Pi** 12.65 117 ⇓P Pn 20 02 23.0 -0.2
baz=13
G15A **Dillon** 12.65 107 ⇑P Pn 20 02 23.0 -0.2
baz=13
C17A **Wharram Farm,** 12.71 95 ⇓P Pn 20 02 23.8 -0.2
baz=13
I14A **Mackay** 12.75 114 ⇓P Pn 20 02 24.6 +0.1
baz=13
PAHR **Pah Rah Range** 12.84 142 *eP* Pn 20 02 25.4 -0.4
comp=Z,45nm,1.3s
H15A **Lima** 12.84 110 ⇑P Pn 20 02 25.6 -0.1
baz=13
D17A **Six Diamond Ra** 12.93 97 ⇓P Pn 20 02 27.0 +0.1
baz=13
BOZ **Bozeman (W)** 12.95 104 ⇑P Pn 20 02 27.4 +0.1
baz=13
BOZ **Bozeman (W)** 12.95 104 *eP* Pn 20 02 27.4 +0.1
comp=Z,10nm,1.1s
BOZ **Bozeman (W)** 12.95 104 *eP* Pn 20 02 27.4 +0.1
BOZ pmax pmax
comp=Z,10.0nm,1.1s
WCN **Washoe City** 13.04 144 ⇑P Pn 20 02 29.8 +1.3
baz=13
WCN **Washoe City** 13.04 144 *eP* Pn 20 02 28.8 +0.3
comp=Z,48nm,1.4s
WCN **Washoe City** 13.04 144 *eP* Pn 20 02 28.8 +0.3
WCN pmax pmax
comp=Z,48nm,1.4s
G16A **Moss Hill, Enn** 13.04 106 ⇑P Pn 20 02 28.6 +0.1
baz=13
J14A **Carey** 13.07 116 ⇓P Pn 20 02 29.6 +0.7
baz=13
E17A **Martinsdale** 13.08 100 ⇓P Pn 20 02 29.3 +0.3
baz=13
B18A **Beardsley Farm** 13.12 91 ⇑P Pn 20 02 29.8 +0.3
baz=13
BMN **Battle Mountai** 13.17 134 *eP* Pn 20 02 30.9 +0.5
comp=Z,45nm,1.3s
BMN **Battle Mountai** 13.17 134 *eP* Pn 20 02 30.9 +0.6
BMN pmax pmax
comp=Z,45nm,1.3s
I15A **Monteview** 13.28 112 ⇓P Pn 20 02 31.1 -0.6
baz=13
F17A **Fitzpatrick Pl** 13.44 102 ⇑P Pn 20 02 34.6 +0.7
baz=14
D18A **Linhart Farms,** 13.48 96 ⇑P Pn 20 02 34.2 -0.2
baz=14
BMRM **Bremner River** 13.57 328 *eP* Pn 20 02 34.7 -1.0
comp=Z,16nm,1.1s
E18A **Harlowton** 13.64 98 ⇓P Pn 20 02 37.0 +0.3
baz=14
H16A **Russell Place,** 13.65 107 ⇑P Pn 20 02 36.9 +0.1
baz=14
K14A **Jones Ranch, D** 13.76 118 ⇓P Pn 20 02 39.1 +0.9
baz=14
C19A **Slack Wire Ran** 13.78 93 ⇓P Pn 20 02 37.4 -1.1
baz=14
YMR **Madison River** 13.84 107 P Pn 20 02 39.2 -0.1
comp=Z,201nm,1.6s
WAKR **Walker** 13.86 144 *eP* Pn 20 02 40.2 +0.5
comp=Z,69nm,1.8s
CMB **Columbia Colle** 13.94 148 *eP* Pn 20 02 41.4 +0.7
comp=Z,35nm,1.6s
CMB **Columbia Colle** 13.94 148 *eP* Pn 20 02 41.4 +0.6
CMB pmax pmax
comp=Z,35nm,1.6s
I16A **Newdale** 13.95 110 ⇓P Pn 20 02 41.4 +0.6
baz=14
YNR **Norris Junctio** 13.99 106 *eP* Pn 20 02 43.0 +1.6
comp=Z,71nm,1.4s
YFT **Old Faithful** 14.03 107 *eP* Pn 20 02 42.7 +0.7
comp=Z,80nm,1.2s
K15A **Arbon** 14.04 116 ⇓P Pn 20 02 42.7 +0.7
baz=14
F18A **Big Timber** 14.04 101 ⇑P Pn 20 02 42.8 +0.7
baz=14
L14A **Malta** 14.05 120 ⇑P Pn 20 02 42.8 +0.5
baz=14
DIV **Divide** 14.09 326 *eP* Pn 20 02 43.3 +0.6
comp=Z,16nm,0.9s
GCMT **Greycliff** 14.12 101 *eP* Pn 20 02 43.8 +0.6
comp=Z,15nm,1.0s
P10A **Eureka** 14.17 134 ⇓P Pn 20 02 45.3 +1.4
baz=14
J16A **Bone** 14.21 113 ⇑P Pn 20 02 44.5 0.0
baz=14
H17A **Grant Village** 14.22 107 ⇓P Pn 20 02 44.7 +0.1
baz=14
IMW **Indian Meadow** 14.26 109 *eP* Pn 20 02 45.6 +0.5
comp=Z,121nm,1.2s
DCID1 **Drake Creek** 14.28 111 *eP* Pn 20 02 46.4 +0.9
comp=Z,182nm,1.3s
FLWY **Flagg Ranch** 14.31 108 *eP* Pn 20 02 45.0 -0.8
comp=Z,135nm,1.5s
RRI2 **Red Ridge** 14.35 112 *eP* Pn 20 02 45.0 -1.3
comp=Z,57nm,1.4s
NVAR **Mina Array Bea** 14.37 141 Pn Pn 20 02 46.4 -0.2
comp=Z,0.1nm,0.3s,baz=321,slow=11,SNR=14
G18A **Lazy EL Ranch,** 14.39 102 ⇓P Pn 20 02 47.3 +0.4
baz=15
I17A **Pilgrim Ck.** 14.47 109 ⇑P Pn 20 02 48.4 +0.4
baz=15
HVU **Hansel Valley** 14.48 120 *eP* Pn 20 02 47.8 -0.3
comp=Z,52nm,1.4s
HVU **Hansel Valley** 14.48 120 *eP* Pn 20 02 47.8 -0.3
HVU pmax pmax
comp=Z,53nm,1.4s
K16A **Soda Springs** 14.49 114 ⇑P Pn 20 02 48.7 +0.5
baz=15
O12A **Currie** 14.50 128 ⇑P Pn 20 02 49.7 +1.3
baz=14
F19A **Roth Farm, Mol** 14.55 100 ⇑P Pn 20 02 48.7 -0.3
baz=15
L15A **Malad City** 14.55 118 ⇓P Pn 20 02 50.1 +1.0
baz=15
P11A **Circle Ranch,** 14.56 132 ⇓P Pn 20 02 51.1 +2.0
baz=15
D20A **Manuel Ranch,** 14.58 94 ⇓P Pn 20 02 49.6 +0.1
baz=15
REDW **Red Top Meadow** 14.62 111 *eP* Pn 20 02 52.6 +2.7
comp=Z,187nm,1.4s
SNOW **Snow King Moun** 14.62 111 *eP* Pn 20 02 54.3 +4.3
comp=Z,127nm,1.1s
RLMT **Red Lodge** 14.67 103 *eP* Pn 20 02 50.7 0.0
comp=Z,117nm,1.5s
DAWY **Dawson** 14.75 343 *eP* Pn 20 02 53.0 +1.4
YKA **Yellowknife Ar** 14.75 28 Pn Pn 20 02 51.7 +0.1
comp=Z,0.3nm,0.3s,baz=212,slow=12,SNR=8.4
YKA **Yellowknife Ar** 14.75 28 P Pn 20 02 51.7 +0.1
E20A **Meyer Farm, Mu** 14.80 97 ⇑P Pn 20 02 52.6 +0.2
baz=15
AHID **Auburn Hatcher** 14.82 113 *eP* Pn 20 02 55.6 +2.9
comp=Z,171nm,1.3s
Q10A **Clear Creek Ra** 14.84 136 ⇓P Pn 20 02 54.1 +1.0
baz=15
M15A **Larsen Ranch,** 14.88 120 ⇓P Pn 20 02 55.0 +1.5
baz=15
SEW **Seward** 14.90 319 P Pn 20 02 52.1 -1.6
comp=Z,63nm,1.7s
BGU **Big Grassy Mou** 14.92 123 *eP* Pn 20 02 55.3 +1.1
comp=Z,132nm,1.7s
SPUT **South Promonto** 14.98 120 *eP* Pn 20 02 56.5 +1.6
comp=Z,111nm,1.7s
O13A **Hicks Ranch, I** 14.99 127 ⇑P Pn 20 02 56.6 +1.4
baz=15
I18A **Diamond G Ranc** 15.05 108 ⇑P Pn 20 02 56.8 +0.9
baz=15
F20A **Billings** 15.07 99 ⇑P Pn 20 02 56.5 +0.3
baz=15
L16A **Fish Haven** 15.09 116 ⇓P Pn 20 02 58.1 +1.7
baz=15
Q11A **Duckwater** 15.17 134 ⇑P Pn 20 02 57.7 +0.2
baz=15
J18A **Kendall Valley** 15.20 110 ⇓P Pn 20 02 59.5 +1.6
baz=15
N15A **Stansbury Isla** 15.23 122 ⇓P Pn 20 02 59.0 +0.8
baz=15
HWUT **Hardware Ranch** 15.28 118 *eP* Pn 20 03 00.7 +1.8
G20A **Bridger** 15.29 101 ⇓P Pn 20 02 59.2 +0.2
baz=16
D21A **La Casta Ranch** 15.32 93 ⇑P Pn 20 02 59.2 -0.1
baz=16
PAX **Paxson** 15.32 332 *eP* Pn 20 02 58.1 -1.2
comp=Z,20nm,1.1s
PAX **Paxson** 15.32 332 *eP* Pn 20 02 58.1 -1.2
PAX pmax pmax
comp=Z,20nm,1.1s
R10A **Warm Springs** 15.33 136 ⇑P Pn 20 02 58.9 -0.7
baz=15
KDAK **Kodiak Island** 15.34 308 *eP* Pn 20 02 58.7 -1.0
comp=Z,97nm,1.5s
KDAK **Kodiak Island** 15.34 308 Pn Pn 20 02 56.6 -3.1
comp=Z,0.3nm,0.3s,baz=102,slow=8.1,SNR=3.8
KDAK LR LR 20 07 20.9
comp=Z,2µm,21.2s,baz=134,slow=32
KDAK **Kodiak Island** 15.34 308 *eP* Pn 20 02 58.7 -0.9
KDAK pmax pmax
comp=Z,97nm,1.5s
L17A **Cokeville** 15.36 115 ⇑P Pn 20 03 00.9 +1.0
baz=16
M16A **Huntsville** 15.43 119 ⇓P Pn 20 03 01.4 +0.5
baz=16
SLKM **Skilak Lake** 15.44 319 *eP* Pn 20 02 59.9 -1.0
DOT **Dot Lake** 15.45 335 *eP* Pn 20 03 01.3 +0.3
comp=Z,46nm,1.1s
E21A **Keefer Ranch,** 15.46 95 ⇓P Pn 20 03 01.4 +0.2
baz=16
SML **Sawmill** 15.47 325 *eP* Pn 20 03 00.7 -0.6
comp=Z,6.3nm,1.0s
SML **Sawmill** 15.47 325 *eP* Pn 20 03 00.7 -0.5
SML pmax pmax
comp=Z,6.0nm,1.0s
P13A **Bates Ranch, G** 15.48 128 ⇑P Pn 20 03 01.1 -0.4
baz=16
S10A **Tonopah Range,** 15.50 138 ⇓P Pn 20 03 01.8 -0.1
baz=16
K18A **Toltan Ranch,** 15.52 112 ⇑P Pn 20 03 01.7 -0.3
baz=16
OHAK **Old Harbor** 15.53 306 *eP* Pn 20 03 03.3 +1.2
comp=Z,99nm,1.6s
DUG **Dugway** 15.56 124 ⇓P Pn 20 03 02.9 +0.4
baz=16
DUG **Dugway** 15.56 124 *eP* Pn 20 03 00.9 -1.6
comp=Z,82nm,1.3s
DUG **Dugway** 15.56 124 *eP* Pn 20 03 00.9 -1.7
DUG pmax pmax
comp=Z,83nm,1.3s
RC01 **Rabbit Creek A** 15.56 322 *eP* Pn 20 03 02.4 -0.1
comp=Z,24nm,1.0s
TIN **Tinemaha** 15.59 144 ⇑P Pn 20 03 04.4 +1.4
baz=16
R11A **Troy Canyon, C** 15.60 135 ⇓P Pn 20 03 02.1 -1.0
baz=16
NOQ **North Oquirrh** 15.61 121 *eP* Pn 20 03 06.3 +3.0
comp=Z,140nm,1.4s
PMR **Palmer** 15.63 324 *eP* Pn 20 03 07.5 +4.2
comp=Z,50nm,1.2s
PMR **Palmer** 15.63 324 *eP* Pn 20 03 07.5 +4.2
PMR pmax pmax
comp=Z,51nm,1.2s
O15A **The Old Anders** 15.68 123 ⇓P Pn 20 03 04.9 +0.7
baz=16
F21A **Absaloka Mine,** 15.71 98 ⇓P Pn 20 03 04.3 -0.3
baz=16
EGAK **Eagle** 15.73 342 *eP* Pn 20 03 05.9 +1.3
comp=Z,35nm,1.1s
BW06 **Boulder Array** 15.73 111 ⇓P Pn 20 03 05.3 +0.5
baz=16
BW06 **Boulder Array** 15.73 111 *eP* Pn 20 03 05.4 +0.6
comp=Z,62nm,1.1s
PDAR **Pinedale Array** 15.73 111 Pn Pn 20 03 06.5 +1.7
comp=Z,0.2nm,0.3s,baz=308,slow=8.7,SNR=21
PDAR LR LR 20 09 18.3
comp=Z,1µm,21.2s,baz=326,slow=38
H20A **Greybull** 15.77 103 ⇓P Pn 20 03 05.6 +0.3
baz=16
N16A **Rees Ranch, Co** 15.83 119 ⇑P Pn 20 03 06.7 +0.7
baz=16
Q13A **Wheeler Ranch,** 15.87 130 ⇑P Pn 20 03 07.8 +1.2
baz=16
P14A **Drum Mountains** 15.87 126 ⇑P Pn 20 03 07.1 +0.6
baz=16
M17A **Scullys Gap (B** 15.88 116 ⇑P Pn 20 03 07.0 +0.3
baz=16
RCTC **Rector, Farmer** 15.89 148 ⇓P Pn 20 03 08.2 +1.3
baz=16
G21A **Lodge Grass** 15.92 100 ⇓P Pn 20 03 06.7 -0.5
baz=16
LAO **LASA Array** 15.95 94 ⇓P Pn 20 03 07.3 -0.3
baz=16
L18A **Fontenelle, Gr** 15.96 114 ⇓P Pn 20 03 07.7 0.0
baz=16
I20A **Worland** 15.96 105 ⇑P Pn 20 03 08.0 +0.3
baz=16
GRAC **Grapevine Rang** 15.97 142 ⇓P Pn 20 03 08.8 +0.9
baz=16
JLU **Jordanelle** 16.01 120 *eP* Pn 20 03 08.2 -0.2
comp=Z,143nm,1.9s
R12A **Pony Springs,** 16.07 132 ⇓P Pn 20 03 09.4 +0.1
baz=16
S11A **Rachel** 16.11 136 ⇓P Pn 20 03 10.1 +0.5
baz=16
NLU **North Lily Min** 16.12 123 *eP* Pn 20 03 09.8 -0.1
comp=Z,36nm,1.1s
K19A **Absolon Red Bu** 16.13 110 ⇑P Pn 20 03 09.8 -0.1
baz=16
Q14A **Sevier Lake (B** 16.21 128 ⇓P Pn 20 03 11.1 +0.1
baz=16
DAU **Daniels Canyon** 16.25 120 *eP* Pn 20 03 12.2 +0.7
comp=Z,67nm,1.4s
DAU **Daniels Canyon** 16.25 120 *eP* Pn 20 03 12.2 +0.7
DAU pmax pmax
comp=Z,67nm,1.4s
P15A **Leamington** 16.29 124 ⇑P Pn 20 03 12.2 +0.2
baz=16
H21A **Big Horn, Sher** 16.30 102 ⇑P Pn 20 03 12.3 +0.2
baz=16
VES **Vestal, Richgr** 16.36 148 ⇓P Pn 20 03 14.0 +1.0
baz=16
R13A **O'Grain Ranch,** 16.50 131 ⇓P Pn 20 03 14.9 +0.2
baz=16
K20A **Yellowstone Ra** 16.53 109 ⇓P Pn 20 03 15.1 0.0
baz=17
S12A **Delamar Landin** 16.54 134 ⇑P Pn 20 03 15.6 +0.4
baz=16
I21A **Big Trails, Te** 16.55 104 ⇓P Pn 20 03 15.0 -0.2
baz=17
SMMC **Simmler** 16.55 151 ⇑P Pn 20 03 17.0 +1.6
baz=16
FURC **Furnace Creek,** 16.63 141 ⇓P Pn 20 03 16.8 +0.4
baz=17
Q15A **Fillmore** 16.66 126 ⇑P Pn 20 03 16.9 +0.1
baz=17
DGMT **Dagmar** 16.68 86 ⇓P Pn 20 03 16.1 -0.8
baz=17
DGMT **Dagmar** 16.68 86 *eP* Pn 20 03 17.2 +0.3
comp=Z,312nm,1.8s
O17A **Robinson Place** 16.69 120 ⇑P Pn 20 03 17.2 +0.1
baz=17
ISA **Isabella** 16.74 147 ⇑P Pn 20 03 18.9 +1.2
baz=17
ISA **Isabella** 16.74 147 *eP* Pn 20 03 18.3 +0.6
comp=Z,51nm,1.4s
ISA **Isabella** 16.74 147 *eP* Pn 20 03 18.3 +0.6
ISA pmax pmax
comp=Z,51nm,1.4s
MPMC **Manual Prospec** 16.75 144 ⇑P Pn 20 03 18.7 +0.9
baz=17
R14A **James Farms, M** 16.87 129 ⇓P Pn 20 03 19.9 +0.5
baz=17
L20A **Wamsutter** 16.91 111 ⇑P Pn 20 03 19.8 0.0
baz=17
MCK **McKinley** 16.96 330 *eP* Pn 20 03 20.8 +0.4
comp=Z,27nm,0.9s
MCK **McKinley** 16.96 330 *eP* Pn 20 03 20.8 +0.5
MCK pmax pmax
comp=Z,27nm,0.9s
PKM **Peak Mountain** 16.99 151 ⇑P Pn 20 03 23.1 +2.1
baz=17
S13A **Holt Ranch, En** 17.02 132 ⇑P Pn 20 03 21.6 +0.3
baz=17
O18A **Roosevelt** 17.05 118 ⇑P Pn 20 03 21.8 +0.2
baz=17
ARVC **Arvin** 17.10 148 ⇓P Pn 20 03 23.6 +1.3
baz=17
ILAR **Eielson Array** 17.10 334 P Pn 20 03 22.3 +0.2
comp=Z,0.1nm,0.3s,baz=149,slow=11,SNR=28
ILAR PcP PcP 20 08 02.4 -3.9
baz=196,slow=1.4,SNR=3.3
ILAR LR LR 20 10 09.4
comp=Z,632nm,18.2s,baz=327,slow=38
N19A **John Jarvie Ra** 17.11 115 ⇓P Pn 20 03 22.5 +0.1
baz=17
LRMC **Laurel Mountai** 17.19 145 ⇓P Pn 20 03 24.2 +0.9
baz=17
P17A **Butcher Ranch,** 17.19 122 ⇑P Pn 20 03 23.8 +0.4
baz=17
K21A **Alcova** 17.21 108 ⇑P Pn 20 03 24.0 +0.4
baz=17
S14A **Cedar City** 17.21 130 ⇑P Pn 20 03 24.1 +0.4
baz=17
TRF **Thorofare Moun** 17.22 328 *eP* Pn 20 03 24.5 +0.9
comp=Z,219nm,2.0s
CCUT **Cedar City** 17.29 131 *eP* Pn 20 03 23.3 -1.3
comp=Z,92nm,1.8s
R15A **Junction** 17.31 128 ⇑P Pn 20 03 26.1 +1.2
baz=17
M20A **Sweetwater, Wa** 17.31 112 ⇓P Pn 20 03 25.2 +0.3
baz=17
SHPR **Sheep Range** 17.31 137 *eP* Pn 20 03 23.1 -1.9
comp=Z,48nm,1.5s
Q16A **Castle Valley** 17.36 124 ⇑P Pn 20 03 26.1 +0.6
baz=17
SHOC **Shoshone** 17.36 141 ⇓P Pn 20 03 26.6 +1.0
baz=17
FFC **Flin Flon** 17.38 65 *eP* Pn 20 03 26.2 +0.6
comp=Z,66nm,0.8s
FFC **Flin Flon** 17.38 65 *eP* Pn 20 03 26.2 +0.5
FFC pmax pmax
comp=Z,66nm,0.8s
COLA **College** 17.45 334 *eP* Pn 20 03 28.2 +1.7
comp=Z,33nm,1.4s
COLA **College** 17.45 334 *eP* Pn 20 03 28.2 +1.7
COLA pmax pmax
comp=Z,33nm,1.4s
T13A **Saint George** 17.45 133 ⇑P Pn 20 03 26.0 -0.7
baz=17
L21A **Rawlins** 17.52 110 ⇑P Pn 20 03 27.2 -0.3
baz=18
O19A **Miners Draw (B** 17.53 117 ⇑P Pn 20 03 28.1 +0.5
baz=18
PPLA **Purkeypile** 17.56 324 *eP* Pn 20 03 28.8 +1.0
comp=Z,68nm,1.5s
SRU **San Rafael** 17.57 122 ⇑P Pn 20 03 29.1 +1.0
baz=18
SRU **San Rafael** 17.57 122 *eP* Pn 20 03 28.5 +0.4
EDW2 **Edwards Air Fo** 17.61 147 ⇓P Pn 20 03 29.1 +0.4
baz=18
K22A **Casper** 17.64 107 ⇑P Pn 20 03 29.4 +0.4
baz=18
U12A **Valley of Fire** 17.65 136 ⇓P Pn 20 03 29.1 -0.1
baz=18
R16A **Teasdale** 17.66 126 ⇓P Pn 20 03 30.0 +0.7
baz=18
GSC **Goldstone** 17.67 143 ⇓P Pn 20 03 29.9 +0.4
baz=18
GSC **Goldstone** 17.67 143 *eP* Pn 20 03 29.1 -0.4
comp=Z,28nm,1.3s
GSC **Goldstone** 17.67 143 *eP* Pn 20 03 29.1 -0.3
GSC pmax pmax
comp=Z,28nm,1.3s
N20A **Spence Gulch,** 17.68 114 ⇑P Pn 20 03 30.0 +0.5
baz=18
M21A **Separation Pea** 17.73 111 ⇓P Pn 20 03 29.7 -0.5
baz=18
V11A **Goodsprings** 17.76 139 ⇑P Pn 20 03 30.6 +0.1
baz=18
Q18A **Rafter H Ranch** 17.79 122 ⇓P Pn 20 03 30.9 +0.1
baz=18
T14A **Hurricane** 17.81 132 ⇑P Pn 20 03 31.3 +0.2
baz=18
BPAW **Bear Paw Mtn.** 17.88 329 *eP* Pn 20 03 31.6 -0.1
comp=Z,46nm,1.2s
TUQ **Turquoise Moun** 17.91 141 ⇑P Pn 20 03 33.0 +0.7
baz=18
U13A **Pakoon Wash** 17.92 135 ⇓P Pn 20 03 32.4 -0.1
baz=18
R17A **Hanksville Air** 17.97 124 ⇑P Pn 20 03 33.3 +0.3
baz=18
S16A **Weppner Ranch,** 18.03 127 ⇓P Pn 20 03 34.3 +0.5
baz=18
L22A **Ellis Ranch, M** 18.05 108 ⇓P Pn 20 03 33.8 -0.2
baz=18
P19A **Cripple Cowboy** 18.06 118 ⇓P Pn 20 03 34.4 +0.3
baz=18
V12A **Nelson** 18.11 138 ⇓P Pn 20 03 35.9 +1.2
baz=18
O20A **White River Ci** 18.14 116 ⇓P Pn 20 03 35.9 +0.7
baz=18
N21A **Black Mountain** 18.16 113 ⇓P Pn 20 03 35.0 -0.4
baz=18
INK **Inuvik** 18.17 355 *eP* Pn 20 03 36.8 +1.5
comp=Z,35nm,1.2s
INK **Inuvik** 18.17 355 P Pn 20 03 36.6 +1.4
comp=Z,0.2nm,0.3s,baz=149,slow=15,SNR=13
INK LR LR 20 10 08.1
comp=Z,566nm,19.4s,baz=358,slow=35
INK **Inuvik** 18.17 355 *eP* Pn 20 03 36.8 +1.5
INK pmax pmax
comp=Z,35nm,1.2s
MWC **Mount Wilson** 18.18 148 *eP* Pn 20 03 35.3 -0.4
comp=Z,23nm,0.2s
MWC **Mount Wilson** 18.18 148 *eP* Pn 20 03 35.3 -0.4
MWC pmax pmax
comp=Z,23nm,0.2s
T15A **Red Dirt Ranch** 18.18 130 ⇓P Pn 20 03 35.9 +0.2
baz=18
HEC **Hector,Ludlow** 18.27 143 ⇑P Pn 20 03 36.9 0.0
baz=18
U14A **Mt Trumbull** 18.28 133 ⇓P Pn 20 03 36.7 -0.2
baz=18
BFSC **Mount Baldy Ra** 18.31 147 ⇓P Pn 20 03 37.3 0.0
baz=18
Q19A **Hogan Spring (** 18.37 120 ⇑P Pn 20 03 37.1 -0.9
baz=18
V13A **Grand Canyon W** 18.38 136 ⇓P Pn 20 03 37.7 -0.4

baz=18
R18A **Canyonlands Na** 18.43 123 ⇑P Pn 20 03 38.6 -0.1
baz=18
RSSD **Black Hills** 18.44 100 eP Pn 20 03 37.5 -1.3
comp=Z,54nm,1.4s
RSSD **Black Hills** 18.44 100 eP Pn 20 03 37.5 -1.2
RSSD pmax pmax
comp=Z,54nm,1.4s
L23A **Garrett** 18.45 107 ⇓P Pn 20 03 37.9 -1.0
baz=19
S17A **Black Ridge (B** 18.50 126 ⇓P Pn 20 03 39.4 -0.2
baz=18
O21A **Pagoda** 18.54 114 ⇓P Pn 20 03 39.3 -0.7
baz=19
LDFC **Landfair** 18.55 140 eP Pn 20 03 39.1 -1.1
comp=Z,78nm,1.1s
FMP **Fort Macarthur** 18.57 149 ⇓P Pn 20 03 42.6 +2.2
baz=18
GMRC **Granite Mounta** 18.58 141 ⇓P Pn 20 03 40.5 -0.1
baz=18
T16A **Glen Canyon Da** 18.64 129 ⇓P Pn 20 03 42.2 +0.8
baz=19
U15A **North Rim** 18.70 131 ⇑P Pn 20 03 41.7 -0.2
baz=19
N22A **Wattenberg Ran** 18.77 111 ⇓P Pn 20 03 41.7 -1.1
baz=19
CIS **Catalina Islan** 18.81 150 ⇓P Pn 20 03 44.8 +1.4
baz=19
R19A **Curley Farm, L** 18.84 122 ⇓P Pn 20 03 43.3 -0.4
baz=19
S18A **Hurst Farm, Bl** 18.89 124 ⇑P Pn 20 03 44.5 +0.3
baz=19
Q20A **Ridgley Place,** 18.91 119 ⇓P Pn 20 03 44.2 -0.3
baz=19
L24A **Wheatland** 18.96 106 ⇓P Pn 20 03 43.6 -1.5
baz=19
V14A **Boquillas Ranc** 18.96 134 ⇑P Pn 20 03 45.0 -0.1
baz=19
PV04 **Paradox Valley** 18.96 121 eP Pn 20 03 43.8 -1.4
T17A **Navajo Res., N** 18.99 127 ⇑P Pn 20 03 44.9 -0.6
baz=19
N23A **Red Feather La** 19.02 111 ⇑P Pn 20 03 44.3 -1.6
baz=19
NEE2 **Needles Airpor** 19.02 139 ⇓P Pn 20 03 45.7 -0.2
baz=19
TTA **Tatalina** 19.05 322 eP Pn 20 03 44.4 -1.7
O22A **Kremmling** 19.11 113 ⇑P Pn 20 03 46.4 -0.6
baz=19
BELC **Belle Mtn. Jos** 19.13 143 ⇑P Pn 20 03 46.1 -1.2
baz=19
SDPT **Sand Point** 19.19 297 eP Pn 20 03 44.8 -3.0
comp=Z,208nm,1.6s
V15A **Kaibab Nationa** 19.24 132 ⇑P Pn 20 03 48.5 0.0
baz=19
S19A **Harvey Farm, M** 19.30 123 ⇓P Pn 20 03 49.1 -0.2
baz=19
PFO **Pinyon Flat Ob** 19.31 145 ⇑P Pn 20 03 48.8 -0.6
baz=19
W14A **Seligman** 19.32 135 ⇑P Pn 20 03 49.5 0.0
baz=19
IRM **Iron Mountain** 19.33 141 ⇑P Pn 20 03 48.8 -0.8
baz=19
PV01 **Paradox Valley** 19.33 121 eP Pn 20 03 49.4 -0.2
comp=Z,9µm,1.3s
M24A **Cheyenne** 19.35 108 ⇓P Pn 20 03 49.2 -0.6
baz=20
P22A **Eagle** 19.36 115 ⇑P Pn 20 03 49.1 -0.8
baz=20
T18A **Mexican Hat** 19.36 125 ⇑P Pn 20 03 48.7 -1.3
baz=19
Q21A **Lamborn Mesa,** 19.40 118 ⇑P Pn 20 03 49.7 -0.8
baz=20
R20A **Redvale** 19.40 120 ⇓P Pn 20 03 48.9 -1.5
baz=20
O23A **Lake Granby, G** 19.46 112 ⇑P Pn 20 03 50.2 -0.9
baz=20
U16A **Tuba City** 19.49 129 ⇑P Pn 20 03 51.3 -0.3
baz=20
SMCO **Snowmass** 19.51 116 eP Pn 20 03 50.5 -1.2
comp=Z,81nm,1.4s
BC3 **Big Chuckawall** 19.65 142 ⇑P Pn 20 03 53.3 -0.1
baz=20
S20A **Disappointment** 19.67 121 ⇓P Pn 20 03 52.7 -0.9
baz=20
N24A **Carr** 19.70 109 ⇓P Pn 20 03 52.7 -1.3
baz=20
W15A **Williams** 19.72 133 ⇑P Pn 20 03 54.8 +0.5
baz=20
R21A **Cimarron** 19.73 119 ⇓P Pn 20 03 54.4 -0.1
baz=20
Q22A **Crested Butte,** 19.76 117 ⇑P Pn 20 03 53.9 -0.8
baz=20
COLD **Coldfoot** 19.86 336 eP Pn 20 03 56.5 +0.8
comp=Z,33nm,1.2s
WUAZ **Wupatki** 19.87 131 ⇑P Pn 20 03 55.4 -0.7
baz=20
WUAZ **Wupatki** 19.87 131 eP Pn 20 03 54.4 -1.7
comp=Z,91nm,1.7s
ISCO **Idaho Springs** 19.90 113 ⇑P Pn 20 03 55.4 -0.9
baz=20
ISCO **Idaho Springs** 19.90 113 eP Pn 20 03 54.7 -1.7
comp=Z,72nm,1.5s
ISCO **Idaho Springs** 19.90 113 eP Pn 20 03 54.7 -1.7
ISCO pmax pmax
comp=Z,72nm,1.5s
U18A **Rough Rock, Ch** 19.91 127 ⇑P Pn 20 03 55.7 -0.8
baz=20
Y12C **Blythe** 19.94 140 ⇓P Pn 20 03 56.7 -0.2
baz=20
MONP **Monument Peak** 19.97 146 ⇑P Pn 20 03 57.1 -0.2
baz=20
O24A **Longmont** 20.02 111 ⇓P P 20 03 56.8 +0.8
baz=20
X14A **Yava** 20.02 136 ⇑P P 20 03 56.9 +0.7
baz=20
P23A **Jefferson** 20.04 114 ⇑P P 20 03 57.0 +0.7
baz=20
MVCO **Mesa Verde** 20.04 123 ⇑P P 20 03 56.9 +0.6
baz=20
MVCO **Mesa Verde** 20.04 123 eP P 20 03 55.2 -1.2
comp=Z,185nm,1.5s
T19A **Beclabito** 20.04 124 ⇓P P 20 03 57.0 +0.6
baz=20
BAR **Barrett** 20.07 146 eP P 20 03 57.0 +0.4
comp=Z,37nm,1.6s
V17A **Tonalea, Kykot** 20.07 130 ⇑P P 20 03 57.6 +1.0
baz=20
S21A **Coal Bank Pass** 20.10 121 ⇓P P 20 03 58.1 +1.1
baz=20
W16A **Flagstaff** 20.14 132 ⇓P P 20 03 58.2 +0.8
baz=20
SWSC **Sam W. Stewart** 20.15 144 ⇓P P 20 03 59.4 +1.9
baz=20
Y13A **Salome** 20.17 139 ⇑P P 20 03 57.6 -0.1
baz=20
N25A **Grover** 20.19 108 ⇓P P 20 03 57.6 -0.3
baz=20
R22A **Saguache, Gunn** 20.28 118 ⇑P P 20 03 59.5 +0.6
baz=20
DVTC **Desert V Tower** 20.29 145 ⇓P P 20 04 00.9 +1.8
baz=20
X15A **Humboldt** 20.31 134 ⇑P P 20 04 00.3 +1.0
baz=20
Q23A **Hartsel** 20.35 115 ⇑P P 20 04 00.4 +0.7
baz=20
U19A **Dine' College,** 20.35 126 ⇓P P 20 03 59.4 -0.3
baz=20
Y14A **Wickenburg** 20.42 137 ⇓P P 20 04 00.5 0.0
baz=20
GLA **Glamis** 20.43 142 ⇑P P 20 04 00.7 +0.2
baz=20
GLA **Glamis** 20.43 142 eP P 20 03 58.8 -1.7
comp=Z,60nm,1.4s
GLA **Glamis** 20.43 142 eP P 20 03 58.8 -1.7
GLA pmax pmax
comp=Z,60nm,1.4s
V18A **Ganado** 20.43 128 ⇑P P 20 04 00.5 -0.1
baz=20
W17A **Winslow** 20.54 131 ⇑P P 20 04 02.5 +0.8
baz=20
S22A **4UR Ranch, Cre** 20.58 119 ⇑P P 20 04 02.8 +0.7
baz=21
O25A **Wiggins** 20.59 110 ⇓P P 20 04 01.9 -0.4
baz=21
U20A **Newcomb** 20.65 124 ⇓P P 20 04 03.8 +0.9
baz=21
Y15A **Casa Rosa Ranc** 20.71 135 ⇑P P 20 04 03.3 -0.3
baz=21

Q24A **Divide** 20.71 114 ⇑P P 20 04 04.4 +0.7
baz=21
T21A **Navajo Lake** 20.73 121 ⇓P P 20 04 04.4 +0.6
baz=21
X16A **Lo Mia Camp, P** 20.73 133 ⇓P P 20 04 04.1 +0.2
baz=21
Z13A **Yuma Proving G** 20.77 139 ⇓P P 20 04 04.0 -0.3
baz=21
V19A **Window Rock** 20.88 126 ⇓P P 20 04 06.1 +0.7
baz=21
Z14A **Wintersburg** 20.94 138 ⇑P P 20 04 05.7 -0.4
baz=21
P25A **Willow Gulch B** 20.94 111 ⇑P P 20 04 06.9 +0.8
baz=21
112A **Yuma** 20.98 142 ⇓P P 20 04 07.6 +1.0
baz=21
W18A **Petrified Fore** 21.00 129 ⇑P P 20 04 07.7 +1.1
baz=21
T22A **Edith** 21.06 120 ⇑P P 20 04 08.3 +1.0
baz=21
S23A **Nye Farm, Mont** 21.07 118 ⇓P P 20 04 07.8 +0.3
baz=21
U21A **Nageezi** 21.07 123 ⇑P P 20 04 08.1 +0.6
baz=21
X17A **Forest Lakes** 21.10 132 ⇓P P 20 04 09.1 +1.3
baz=21
V20A **Brimhall** 21.12 125 ⇓P P 20 04 08.4 +0.4
baz=21
Y16A **Circle Bar Ran** 21.16 134 ⇑P P 20 04 09.3 +0.8
baz=21
W19A **Sanders** 21.18 128 ⇓P P 20 04 09.8 +1.2
baz=21
R24A **Sanders Place,** 21.23 115 ⇓P P 20 04 09.6 +0.4
baz=21
Q25A **Bedland, Calha** 21.28 113 ⇑P P 20 04 10.1 +0.3
baz=21
SDCO **Great Sand Dun** 21.33 117 ⇑P P 20 04 10.5 +0.2
baz=21
SDCO **Great Sand Dun** 21.33 117 eP P 20 04 09.8 -0.5
comp=Z,58nm,1.3s,mb4.8
X18A **Snowflake** 21.36 130 ⇓P P 20 04 11.1 +0.5
baz=21
OGNE **Ogallala** 21.37 105 ⇑P P 20 04 10.8 0.0
baz=22
OGNE **Ogallala** 21.37 105 eP P 20 04 10.2 -0.6
comp=Z,74nm,1.0s,mb5.0
114A **Black Gap (USA** 21.49 138 ⇓P P 20 04 11.2 -0.9
baz=21
ULM **Lac du Bonnet** 21.51 77 P P 20 04 13.5 +1.4
comp=Z,33nm,0.7s,mb4.8,baz=295,slow=10.0,SNR=16
ULM LR LR 20 12 43.3
comp=Z,2µm,20.9s,MS4.4,baz=89,slow=37
T23A **Casias Ranch,** 21.52 119 ⇓P P 20 04 13.2 +0.8
baz=22
V21A **Milan** 21.55 124 ⇓P P 20 04 13.5 +0.9
baz=22
S24A **Houchin Ranch,** 21.57 117 ⇓P P 20 04 13.7 +0.9
baz=22
Y17A **Roosevelt** 21.61 133 ⇑P P 20 04 13.4 +0.1
baz=22
W20A **Ramah** 21.62 126 ⇑P P 20 04 14.1 +0.7
baz=22
Z16A **Peralta Trail,** 21.63 135 ⇑P P 20 04 13.6 +0.1
baz=22
R25A **Fountain Ranch** 21.76 114 ⇑P P 20 04 15.2 +0.3
baz=22
X19A **St. Johns** 21.77 129 ⇑P P 20 04 15.6 +0.6
baz=22
115A **Sonoran Desert** 21.81 137 ⇑P P 20 04 15.6 +0.1
baz=22
V22A **San Miguel Ran** 21.86 122 ⇑P P 20 04 16.2 +0.2
baz=22
Y18A **Canyon Day Jun** 21.92 131 ⇑P P 20 04 17.1 +0.5
baz=22
U23A **El Rito** 21.95 121 ⇓P P 20 04 17.3 +0.4
baz=22
S25A **Robets Cordova** 22.00 115 ⇓P P 20 04 17.6 +0.1
baz=22
AGMN **Agassiz Nation** 22.04 82 eP P 20 04 18.1 +0.3
comp=Z,36nm,1.1s,mb4.7
W21A **San Fidel** 22.07 125 ⇑P P 20 04 17.8 -0.4
baz=22
X20A **Quemado** 22.07 127 ⇑P P 20 04 18.6 +0.3
baz=22
Z17A **San Carlos Hig** 22.11 133 ⇑P P 20 04 19.1 +0.4
baz=22
Y19A **Nutrioso** 22.16 130 ⇓P P 20 04 19.3 +0.1
baz=22
116A **Eloy** 22.16 136 ⇑P P 20 04 17.9 -1.4
baz=22
214A **Organ Pipe Nat** 22.21 139 ⇓P P 20 04 18.8 -0.9
baz=22
T25A **Trinidad** 22.38 116 ⇑P P 20 04 21.1 -0.4
baz=22
V23A **Ortiz Mt. (NFS** 22.38 122 ⇑P P 20 04 22.2 +0.7
baz=22
U24A **Moreno Valley** 22.40 119 ⇑P P 20 04 21.2 -0.5
baz=22
Z18A **Geronimo** 22.49 132 ⇓P P 20 04 22.9 +0.2
baz=22
W22A **Albuquerque** 22.51 124 ⇑P P 20 04 22.5 -0.5
baz=23
X21A **Alamocita Cree** 22.51 126 ⇓P P 20 04 23.2 +0.3
baz=22
117A **Oracle** 22.59 134 ⇓P P 20 04 23.5 -0.2
baz=23
Y20A **Horse Springs,** 22.64 128 ⇑P P 20 04 24.3 +0.1
baz=23
Z19A **T-Link Ranch,** 22.69 131 ⇓P P 20 04 25.2 +0.3
baz=23
TUC **Tucson** 22.79 135 eP P 20 04 24.2 -1.7
comp=Z,34nm,1.3s,mb4.6
TUC **Tucson** 22.79 135 eP P 20 04 24.2 -1.7
TUC pmax pmax
comp=Z,34nm,1.3s,mb4.6
ANMO **Albuquerque** 22.82 123 eP P 20 04 26.5 +0.2
comp=Z,30nm,1.1s,mb4.6
ANMO **Albuquerque** 22.82 123 P P 20 04 26.4 +0.1
comp=Z,9.5nm,0.9s,mb4.2,baz=322,slow=9.7,SNR=12
ANMO LR LR 20 13 22.5
comp=Z,393nm,18.3s,MS3.9,baz=132,slow=37
ANMO **Albuquerque** 22.82 123 eP P 20 04 26.5 +0.3
ANMO pmax pmax
comp=Z,30nm,1.1s
W23A **Werner Place,** 22.83 123 ⇓P P 20 04 26.3 0.0
baz=23
LAZ **Ladron** 22.88 125 eP P 20 04 26.6 -0.3
comp=Z,44nm,1.8s,mb4.6
118A **Homack Ranch,** 22.89 133 ⇓P P 20 04 26.5 -0.4
baz=23
U25A **Circle Dot Ran** 22.89 118 ⇑P P 20 04 26.8 -0.2
baz=23
V24A **Rampart Ranch,** 22.89 120 ⇓P P 20 04 27.3 +0.3
baz=23
Y21A **Point of Rocks** 22.91 127 ⇑P P 20 04 27.7 +0.5
baz=23
119A **Ashpeak Ranch,** 23.10 132 ⇑P P 20 04 29.0 -0.2
baz=23
LENM **Lemitar** 23.15 125 eP P 20 04 31.1 +1.4
comp=Z,102nm,1.8s,mb5.0
Z20A **Nine Sixteen R** 23.16 130 ⇑P P 20 04 29.8 -0.1
baz=23
V25A **Rancho No Teng** 23.18 119 ⇓P P 20 04 29.7 -0.3
baz=23
W24A **Lazy 6 Ranch,** 23.20 121 ⇓P P 20 04 30.2 0.0
baz=23
LPM **Los Pinos Moun** 23.22 125 eP P 20 04 30.1 -0.3
comp=Z,31nm,1.4s,mb4.5
X23A **Hourglass Bar** 23.25 124 ⇑P P 20 04 30.5 -0.2
baz=23
Y22D **IRIS PASSCAL I** 23.25 126 ⇑P P 20 04 30.5 -0.2
baz=23
Y22A **Socorro** 23.34 126 ⇑P P 20 04 31.8 +0.1
baz=23
BNM **Barren Site** 23.35 125 eP P 20 04 31.2 -0.6
comp=Z,109nm,1.8s,mb5.0
ECSD **EROS Data Cent** 23.35 94 eP P 20 04 30.8 -0.9
comp=Z,124nm,1.3s,mb5.2
218A **Dragoon** 23.41 134 ⇓P P 20 04 32.6 +0.1
baz=23
Z21A **St. Cloud Mine** 23.47 128 ⇑P P 20 04 32.9 -0.1
baz=24
120A **U Bar Ranch, L** 23.60 131 ⇑P P 20 04 34.2 -0.2
baz=24
X24A **Lazy VL Ranch,** 23.67 122 ⇑P P 20 04 34.4 -0.6
baz=24
V26A **Tequesquite Ra** 23.68 118 ⇑P P 20 04 34.7 -0.3
baz=24

W25A **X Bar L Ranch,** 23.72 120 ⇑P P 20 04 34.7 -0.7
baz=24
219A **White Tail Can** 23.75 133 ⇑P P 20 04 35.2 -0.5
baz=24
Y23A **Lovelace Mesa,** 23.82 124 ⇑P P 20 04 35.6 -0.7
baz=24
Z22A **Elephant Butte** 23.87 127 ⇑P P 20 04 36.0 -0.9
baz=24
121A **Cookes Peak, D** 24.03 129 ⇑P P 20 04 38.0 -0.3
baz=24
CBKS **Cedar Bluff** 24.06 107 ⇑P P 20 04 37.7 -0.9
baz=24
CBKS **Cedar Bluff** 24.06 107 eP P 20 04 39.0 +0.4
comp=Z,65nm,1.1s,mb5.0
CBKS **Cedar Bluff** 24.06 107 eP P 20 04 39.0 +0.5
CBKS pmax pmax
comp=Z,65nm,1.1s,mb5.0
X25A **Clemmons Ranch** 24.12 121 ⇑P P 20 04 38.9 -0.2
baz=24
Y24A **Capitan** 24.15 123 ⇓P P 20 04 39.4 0.0
baz=24
220A **Playas Peak, P** 24.18 131 ⇑P P 20 04 39.2 -0.4
baz=24
W26A **Owens Ranch, T** 24.20 119 ⇓P P 20 04 39.7 -0.1
baz=24
Z23A **Rita Site, Whi** 24.24 126 ⇓P P 20 04 40.2 0.0
baz=24
319A **Douglas** 24.26 133 ⇓P P 20 04 41.2 +0.8
baz=24
122A **Conniff Cattle** 24.29 128 ⇑P P 20 04 40.5 -0.2
baz=24
221A **Mesquite Ranch** 24.46 130 ⇑P P 20 04 42.1 -0.1
baz=24
Y25A **Mesa, Roswell** 24.55 122 ⇑P P 20 04 43.0 0.0
baz=25
X26A **CR and CF Fran** 24.57 120 ⇓P P 20 04 43.2 0.0
baz=25
Z24A **Sheeppen Canyo** 24.65 124 ⇑P P 20 04 44.1 +0.2
baz=25
320A **Kipp Ranch, An** 24.65 132 ⇑P P 20 04 43.7 -0.3
baz=25
123A **Bell Site, Whi** 24.72 127 ⇑P P 20 04 44.8 +0.3
baz=25
X27A **F and S Farms,** 24.90 119 ⇑P P 20 04 46.4 +0.2
baz=25
EYMN **Ely** 24.92 81 eP P 20 04 46.6 +0.3
comp=Z,68nm,1.0s,mb5.1
Y26A **Elida** 25.03 121 ⇑P P 20 04 47.5 +0.2
baz=25
Z25A **Roswell** 25.03 123 ⇑P P 20 04 47.4 0.0
baz=25
124A **Stringfield Ra** 25.09 125 ⇑P P 20 04 48.0 +0.1
baz=25
Y27A **Causey** 25.42 120 ⇑P P 20 04 50.7 -0.2
baz=26
Z26A **Caprock** 25.43 122 ⇑P P 20 04 50.9 -0.1
baz=26
AMTX **Amarillo** 25.53 116 ⇑P P 20 04 52.0 0.0
baz=26
AMTX **Amarillo** 25.53 116 eP P 20 04 51.7 -0.3
comp=Z,99nm,1.0s,mb5.3
224A **Cornudas Mount** 25.54 126 ⇑P P 20 04 51.8 -0.2
baz=26
MSTX **Muleshoe** 25.58 119 ⇓P P 20 04 51.7 -0.6
baz=26
Z27A **Tatum** 25.82 121 ⇑P P 20 04 54.0 -0.6
baz=26
KSU1 **Kansas State U** 25.83 103 eP P 20 04 55.2 +0.6
comp=Z,91nm,1.4s,mb5.1
225A **Deer Hill, Car** 25.88 125 ⇑P P 20 04 55.0 -0.2
baz=26
126A **Clayton Basin,** 25.89 123 ⇓P P 20 04 54.9 -0.4
baz=26
MNTX **Cornudas Mount** 25.91 127 ⇑P P 20 04 55.0 -0.5
baz=26
MNTX **Cornudas Mount** 25.91 127 eP P 20 04 53.1 -2.3
comp=Z,22nm,1.3s,mb4.5
324A **Moseley Ranch,** 26.07 127 ⇓P P 20 04 56.1 -0.7
baz=26
226A **Malaga, Loving** 26.30 124 ⇑P P 20 04 58.4 -0.6
baz=26
325A **Bean Ranch, Si** 26.39 126 ⇑P P 20 04 59.1 -0.6
baz=26
SCIA **State Center** 26.42 94 eP P 20 04 58.9 -1.0
227A **Bennet, Jal** 26.77 123 ⇓P P 20 05 03.2 0.0
baz=27
425A **Indio Mountain** 26.85 127 ⇑P P 20 05 03.4 -0.4
baz=27
326A **Caldwell Ranch** 26.95 125 ⇑P P 20 05 04.7 0.0
baz=27
COWI **Conover** 27.11 83 eP P 20 05 03.7 -2.4
comp=Z,39nm,0.6s,mb4.1
WMOK **Wichita Mounta** 27.32 113 eP P 20 05 07.5 -0.6
comp=Z,26nm,1.1s,mb4.7
WMOK **Wichita Mounta** 27.32 113 eP P 20 05 07.5 -0.6
WMOK pmax pmax
comp=Z,26nm,1.1s,mb4.7
426A **McDonald Obser** 27.43 126 ⇑P P 20 05 08.7 -0.5
baz=28
328A **Wristen Ranch,** 27.52 123 ⇓P P 20 05 09.4 -0.4
baz=28
427A **Hayter Ranch,** 27.62 125 ⇑P P 20 05 10.7 -0.1
baz=28
JFWS **Jewell Farm** 27.82 90 eP P 20 05 14.1 +1.6
comp=Z,31nm,1.0s,mb4.9
JFWS **Jewell Farm** 27.82 90 eP P 20 05 14.1 +1.6
JFWS pmax pmax
comp=Z,31nm,1.0s,mb4.9
526A **Mary Lane Ranc** 27.89 127 ⇑P P 20 05 13.0 -0.2
baz=28
527A **Woodward Ranch** 28.07 126 ⇑P P 20 05 14.4 -0.5
baz=28
428A **Kincaid Ranch,** 28.09 124 ⇑P P 20 05 15.0 0.0
baz=28
626A **Big Bend Ranch** 28.27 127 ⇑P P 20 05 16.5 -0.1
baz=28
RES **Resolute Bay** 28.40 19 LR LR 20 16 36.9
comp=Z,699nm,19.1s,MS4.3,baz=65,slow=36
TXAR **Lajitas Array** 28.69 127 P P 20 05 19.3 -1.1
TXAR LR LR 20 17 32.0
TXAR **Lajitas Array** 28.69 127 P P 20 05 19.3 -1.1
comp=Z,2.6nm,0.8s,mb4.0,baz=325,slow=7.7,SNR=12
TXAR LR LR 20 17 32.0
comp=Z,1µm,18.1s,MS4.5,baz=5.0,slow=38
627A **Terlingua Ranc** 28.74 127 ⇑P P 20 05 20.5 -0.3
baz=29
628A **Black Gap, Mar** 28.97 126 ⇑P P 20 05 22.3 -0.6
baz=29
CCM **Cathedral Cave** 29.83 99 eP P 20 05 29.8 -0.6
comp=Z,16nm,1.4s,mb4.5
CCM **Cathedral Cave** 29.83 99 eP P 20 05 29.8 -0.6
CCM pmax pmax
comp=Z,16nm,1.4s,mb4.6
JCT **Junction City** 29.85 120 ⇑P P 20 05 30.0 -0.6
baz=30
JCT **Junction City** 29.85 120 eP P 20 05 29.3 -1.4
comp=Z,30nm,1.1s,mb4.9
JCT **Junction City** 29.85 120 eP P 20 05 29.3 -1.4
JCT pmax pmax
comp=Z,30nm,1.1s,mb4.9
MIAR **Mount Ida** 30.59 107 eP P 20 05 36.8 -0.4
comp=Z,34nm,1.3s,mb5.0
MIAR **Mount Ida** 30.59 107 eP P 20 05 36.8 -0.4
MIAR pmax pmax
comp=Z,34nm,1.3s,mb5.0
OLIL **Olney** 31.43 95 eP P 20 05 44.3 -0.2
comp=Z,44nm,1.0s,mb5.2
HKT **Hockley** 32.50 116 eP P 20 05 54.4 +0.4
comp=Z,26nm,1.4s,mb4.9
HKT **Hockley** 32.50 116 eP P 20 05 54.4 +0.4
HKT pmax pmax
comp=Z,26nm,1.4s,mb4.9
WVT **Waverly** 33.16 99 eP P 20 05 58.5 -1.2
comp=Z,13nm,1.2s,mb4.7
WVT **Waverly** 33.16 99 eP P 20 05 58.5 -1.2
WVT pmax pmax
comp=Z,13nm,1.2s,mb4.7
OXF **Oxford** 33.20 103 eP P 20 06 00.3 +0.3
comp=Z,103nm,1.1s,mb5.7
OXF **Oxford** 33.20 103 eP P 20 06 00.3 +0.2
OXF pmax pmax
comp=Z,103nm,1.1s,mb5.7
ACSO **Alum Creek Sta** 33.87 89 eP P 20 06 05.7 -0.1
comp=Z,32nm,1.1s,mb5.2
SADO **Sadowa** 34.02 79 P P 20 06 06.5 -0.7
comp=Z,8.6nm,1.0s,mb4.7,baz=301,slow=10.0,SNR=4.1
SADO LR LR 20 20 33.5
comp=Z,2µm,18.7s,MS4.8,baz=21,slow=37

BILL Bilibino 35.27 324⇓ *e*P P **20 06 16.5 -1.1**
BILL *e* 20 07 30.8
BILL *e*S S **20 11 54.3 +3.3**
BILL pmax pmax
comp=Z,25nm,2.4s,mb4.7
BILL MLR MLR
comp=Z,300nm,19.0s,MS4.1
LRAL Lakeview Retre 35.68 102 *e*P P **20 06 20.7 -0.8**
comp=Z,9.8nm,1.0s,mb4.7
TKL Tuckaleechee C 36.03 96 P P **20 06 23.7 -0.9**
TKL LR LR 20 23 23.2
TKL Tuckaleechee C 36.03 96 P P **20 06 23.7 -0.9**
comp=Z,3.9nm,0.8s,mb4.4,baz=289,slow=8.0,SNR=4.1
TKL LR LR 20 23 23.2
comp=Z,103nm,20.0s,MS3.6,baz=3.0,slow=40
BLA Blacksburg 37.23 91 *e*P P **20 06 37.3 +2.5**
comp=Z,16nm,0.5s,mb5.1
BLA Blacksburg 37.23 91 *e*P P **20 06 37.3 +2.5**
BLA pmax pmax
comp=Z,16nm,0.5s,mb5.1
SCHQ Schefferville 37.34 58 LR LR 20 20 45.5
comp=Z,447nm,20.4s,MS4.2,baz=292,slow=34
GOGA Godfrey 37.66 99 *e*P P **20 06 37.1 -1.4**
comp=Z,43nm,1.4s,mb5.0
GOGA Godfrey 37.66 99 *e*P P **20 06 37.1 -1.3**
GOGA pmax pmax
comp=Z,43nm,1.4s,mb5.0
JSRW J. Sargeant Re 38.58 89 *e*P P **20 06 47.0 +0.8**
SEY Seymchan 41.96 318⇑ *e*P P **20 07 11.8 -2.1**
CMIG Matias Romero 43.30 127 LR LR 20 26 25.8
comp=Z,156nm,21.9s,MS3.9,baz=124,slow=38
SUMG Summit 43.33 26 *e*P P **20 07 27.3 +2.4**
comp=Z,18nm,1.0s,mb4.8
SUMG Summit 43.33 26 *e*P P **20 07 27.3 +2.4**
SUMG pmax pmax
comp=Z,18nm,1.0s
SUMG Summit 43.33 26 *i*P P **20 07 26.8 +1.9**
comp=Z,12nm,1.0s,mb4.6
YAK Yakutsk 51.63 324 *e*P P **20 08 27.4 -2.1**
YAK pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
YAK MLR MLR
comp=Z,368nm,17.0s,MS4.5
YAK MLR MLR
comp=E,261nm,16.0s
KEV Kevo 59.06 9 *e*P P **20 09 24.7 +1.8**
KEV pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
KEV Kevo 59.06 9 *e*p P **20 09 24.7 +1.8**
comp=Z,8.8nm,0.9s,mb4.8
ARCES ARCESS Array B 59.11 10 P P **20 09 22.4 -0.8**
comp=Z,2.3nm,0.8s,mb4.3,baz=335,slow=7.9,SNR=4.4
SJG San Juan 59.41 98 P P **20 09 26.3 +0.3**
comp=Z,5.6nm,0.2s,mb5.2,baz=348,slow=8.9,SNR=3.4
TAOE Nuku Hiva Isla 59.60 192 *e*LR LR 20 26 45.8
comp=Z,583nm,30.2s
LVZ Lovozero 61.55 7⇓ *e*P P **20 09 40.4 +0.5**
LVZ pmax pmax
comp=Z,14nm,0.8s,mb5.1
LVZ MLR MLR
comp=Z,156nm,18.0s,MS4.2
MJAR Matsushiro Arr 64.16 297 P P **20 09 54.7 -3.1**
comp=Z,1.3nm,0.8s,mb4.0,baz=41,slow=4.7,SNR=3.3
NOA NORSAR Array B 64.66 20 P P **20 10 01.1 +0.4**
comp=Z,2.8nm,0.9s,mb4.3,baz=333,slow=6.5,SNR=3.7
OTAV Otavalo 66.12 121 *e*P P **20 10 10.3 -0.5**
comp=Z,9.6nm,1.2s,mb4.7
JOF Joensuu 66.14 9 *e*P P **20 10 09.5 -0.7**
JOF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
JOF Joensuu 66.14 9 *e*p P **20 10 09.5 -0.7**
comp=Z,9.6nm,0.9s,mb4.8
FINES FINESS Array B 66.93 12 P P **20 10 15.1 -0.2**
comp=Z,12nm,0.9s,mb4.9,baz=12,slow=10,SNR=12
PMOR Pomariorio Ree 66.96 199 *e*T 20 10 20.0
TLY Talaya 68.78 328 *e*P P **20 10 24.6 -2.5**
TLY pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
TLY MLR MLR
comp=Z,199nm,19.0s,MS4.4
KLMR Klimovskoe 68.86 6 *e*P P **20 10 28.4 +0.9**
KLMR pmax pmax
comp=Z,43nm,1.3s,mb5.2
KSRS Korea Array 69.20 304 P P **20 10 26.2 -3.8**
comp=Z,0.9nm,0.6s,mb3.9,baz=52,slow=7.9,SNR=3.4
PPT Papeete 69.81 200 *e*S S 20 19 48.5 +5.5
comp=Z,298nm,26.8s
PPT *e*LR LR 20 31 22.0
comp=Z,345nm,28.0s,baz=13
SONM Songino Array 70.99 324 P P **20 10 39.4 -1.4**
comp=Z,0.7nm,1.0s,mb3.5,baz=28,slow=6.5,SNR=4.0
ROSF Rostrenen 71.49 34 *e*P P **20 10 44.1 +0.3**
comp=Z,50nm,1.5s,mb4.9
ROSF Rostrenen 71.49 34 *e*P P **20 10 44.1 +0.3**
comp=Z,25nm,1.5s,mb4.9
ROSF Rostrenen 71.49 34 *e*P P **20 10 44.1 +0.3**
ROSF pmax pmax
comp=Z,25nm,1.5s,mb4.9
SGMF Saint Gilles 71.82 34 *e*P P **20 10 46.2 +0.4**
comp=Z,103nm,1.8s,mb5.2
SGMF Saint Gilles 71.82 34 *e*P P **20 10 46.2 +0.4**
comp=Z,51nm,1.8s,mb5.2
SGMF Saint Gilles 71.82 34 *e*P P **20 10 46.2 +0.4**
SGMF pmax pmax
comp=Z,51nm,1.8s,mb5.2
FLN La Foliniere 72.12 33 *e*P P **20 10 47.6 0.0**
comp=Z,79nm,1.6s,mb5.1
FLN *e*MLR MLR
comp=Z,374nm,20.0s,MS4.4
FLN La Foliniere 72.12 33 *e*P P **20 10 47.6 0.0**
comp=Z,40nm,1.6s,mb5.1
FLN LR LR
comp=Z,370nm,20.0s,MS4.7
FLN La Foliniere 72.12 33 *e*P P **20 10 47.6 0.0**
FLN pmax pmax
comp=Z,40nm,1.6s,mb5.1
FLN MLR MLR
comp=Z,370nm,20.0s,MS4.7
ZAA0 Zalesovo Array 72.16 339 *e*P P **20 10 45.2 -2.5**
ZALV Zalesovo Beam 72.16 339 P P **20 10 45.6 -2.1**
comp=Z,1.6nm,0.7s,mb4.1,baz=26,slow=4.3,SNR=7.1
GRR Gorron 72.31 33 *e*P P **20 10 49.5 +0.8**
comp=Z,72nm,1.7s,mb5.0
GRR Gorron 72.31 33 *e*P P **20 10 49.5 +0.8**
comp=Z,36nm,1.7s,mb5.0
GRR Gorron 72.31 33 *e*P P **20 10 49.5 +0.8**
GRR pmax pmax
comp=Z,36nm,1.7s,mb5.0
LDF La Druitiere 72.39 32 *e*P P **20 10 49.5 +0.3**
comp=Z,14nm,1.1s,mb4.5
LDF La Druitiere 72.39 32 *e*P P **20 10 49.5 +0.3**
comp=Z,7.3nm,1.1s,mb4.5
LDF La Druitiere 72.39 32 *e*P P **20 10 49.5 +0.3**
LDF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
BAIF Baives 72.54 29 *e*P P **20 10 50.6 +0.5**
comp=Z,48nm,1.6s,mb4.9
BAIF Baives 72.54 29 *e*P P **20 10 50.6 +0.5**
comp=Z,24nm,1.6s,mb4.9
BAIF Baives 72.54 29 *e*P P **20 10 50.6 +0.5**
BAIF pmax pmax
comp=Z,24nm,1.6s,mb4.9
SVE Sverdlovsk 72.90 354 *e*P P **20 10 52.8 +0.7**
BJI Beijing 73.13 313 P P **20 10 52.0 -1.7**
BJI pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
RKT Rikitea 73.23 185 *e*LR LR 20 33 22.0
comp=Z,354nm,28.8s
ARU Arti 73.42 355 *e*P P **20 10 53.0 -2.2**
comp=Z,8.4nm,1.0s,mb4.6
ARU Arti 73.42 355 *d i*P P **20 10 53.9 -1.3**
ARU *e* 20 13 35.5
ARU S S 20 20 24.3 +0.2
ARU pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CLL Collm 73.92 23 *e*P P **20 10 59.0 +0.8**
CLL Collm 73.92 23 *e*P P **20 10 59.0 +0.8**
CLL *e*SS SS 20 25 11.0 -1.7
CLL Lm 20 44 00.0
comp=Z,300nm,19.5s
MFF Saint Martin d 74.09 34 *e*P P **20 10 59.9 +0.7**
comp=Z,39nm,1.4s,mb4.8
MFF Saint Martin d 74.09 34 *e*P P **20 10 59.9 +0.7**
comp=Z,20nm,1.4s,mb4.8
MFF Saint Martin d 74.09 34 *e*P P **20 10 59.9 +0.7**
MFF pmax pmax
comp=Z,20nm,1.4s,mb4.8

MEZF Maizieres J'vi 74.18 29 *e*P P **20 11 00.2 +0.5**
OBN Obninsk 74.34 8 *e*P P **20 11 01.7 +1.1**
comp=Z,45nm,1.1s,mb5.3
OBN Obninsk 74.34 8⇑ *e*P P **20 11 01.6 +1.1**
OBN *e* 20 13 47.6
OBN *e*S S 20 20 24.6 -10
OBN pmax pmax
comp=Z,39nm,1.0s,mb5.3
OBN MLR MLR
comp=Z,200nm,18.0s,MS4.5
SFTF Sexfontaines 74.43 30 *e*P P **20 11 01.7 +0.5**
BRG Berggiesshubel 74.55 23 *e*P P **20 11 07.1 +5.2**
comp=Z,7.2nm,1.1s,mb4.5
BRG Berggiesshubel 74.55 23 *e*P P **20 11 07.1 +5.2**
BRG pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
HHC Hu-ho-hao-te 74.58 316 *e*P P **20 11 01.3 -0.9**
HHC PP PP 20 13 49.0 +0.7
HHC S S 20 20 33.0 -4.6
HHC SS SS 20 25 22.3 -1.1
HHC pmax pmax
comp=Z,13nm,0.7s,mb5.0
HHC pmax pmax
comp=Z,85nm,4.0s
HHC LR LR
comp=N,150nm,14.3s,MS4.7
HHC LR LR
comp=E,270nm,15.5s,MS4.7
HHC LR LR
comp=Z,160nm,16.7s,MS4.4
LOR Lormes 74.88 31 *e*P P **20 11 04.4 +0.6**
comp=Z,29nm,1.3s,mb4.7
LOR *e*MLR MLR
comp=Z,409nm,20.2s,MS4.4
LOR Lormes 74.88 31 *e*P P **20 11 04.4 +0.6**
comp=Z,14nm,1.3s,mb4.7
LOR LR LR
comp=Z,410nm,20.3s,MS4.7
LOR Lormes 74.88 31 *e*P P **20 11 04.4 +0.6**
LOR pmax pmax
comp=Z,14nm,1.3s,mb4.7
LOR MLR MLR
comp=Z,410nm,20.3s,MS4.7
GRA1 Grafenberg Arr 74.92 25 *e*P P **20 11 08.9 +4.9**
comp=Z,8.0nm,1.3s,mb4.5
GRF Grafenberg Arr 74.92 25 *e*P P **20 11 08.9 +4.9**
comp=Z,8.0nm,1.3s
GRF Grafenberg Arr 74.92 25 *e*P P **20 11 08.9 +4.9**
comp=Z,8.0nm,1.3s,mb4.5
GRF Grafenberg Arr 74.92 25 *e*P P **20 11 08.9 +4.9**
GRF pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
GRF Grafenberg Arr 74.92 25 *e*P P **20 11 08.9 +4.9**
GRF pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
CDF Champ du Feu 74.94 28 *e*P P **20 11 04.9 +0.7**
comp=Z,30nm,1.4s,mb4.7
CDF Champ du Feu 74.94 28 *e*P P **20 11 04.9 +0.7**
comp=Z,15nm,1.4s,mb4.7
CDF Champ du Feu 74.94 28 *e*P P **20 11 04.9 +0.7**
CDF pmax pmax
comp=Z,15nm,1.4s,mb4.7
SSF Saint Saulge 74.94 31 *e*P P **20 11 04.6 +0.4**
comp=Z,34nm,1.5s,mb4.8
SSF Saint Saulge 74.94 31 *e*P P **20 11 04.6 +0.4**
comp=Z,17nm,1.5s,mb4.8
SSF Saint Saulge 74.94 31 *e*P P **20 11 04.6 +0.4**
SSF pmax pmax
comp=Z,17nm,1.5s,mb4.8
HAU Haudompre 75.02 29 *e*P P **20 11 05.2 +0.6**
HAU *e*MLR MLR
comp=Z,214nm,19.5s,MS4.2
HAU Haudompre 75.02 29 *e*P P **20 11 05.2 +0.6**
HAU MLR MLR
comp=Z,210nm,19.5s,MS4.4
PVCC Panska Ves 75.03 23 *e*P pP 20 11 10.8 +3.2
PVCC Panska Ves 75.03 23 *ep*P pP 20 11 10.8 +3.2
AVF Avril sur Loir 75.13 31 *e*P P **20 11 05.5 +0.2**
BGF Bois d'Agland 75.16 32 *e*P P **20 11 05.9 +0.4**
TCF Toulx Ste Croi 75.18 32 *e*P P **20 11 06.2 +0.6**
comp=Z,26nm,1.4s,mb4.7
TCF Toulx Ste Croi 75.18 32 *e*P P **20 11 06.2 +0.6**
comp=Z,13nm,1.4s,mb4.7
TCF Toulx Ste Croi 75.18 32 *e*P P **20 11 06.2 +0.6**
TCF pmax pmax
comp=Z,13nm,1.4s,mb4.7
HINF Hinteralfeld 75.34 29 *e*P P **20 11 07.0 +0.5**
comp=Z,18nm,1.3s,mb4.5
HINF Hinteralfeld 75.34 29 *e*P P **20 11 07.0 +0.5**
comp=Z,9.1nm,1.3s,mb4.5
HINF Hinteralfeld 75.34 29 *e*P P **20 11 07.0 +0.5**
HINF pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
SMF Signal de Mont 75.42 31 *e*P P **20 11 07.0 +0.1**
DPC Dobruska-Polom 75.62 22 *e*P pP 20 11 13.8 +2.8
DPC Dobruska-Polom 75.62 22 *ep*P pP 20 11 13.8 +2.8
BRVK Borovoye 75.65 348⇑ *e*P P **20 11 10.8 +2.6**
BRVK pmax pmax
comp=Z,9.0nm,2.5s,mb4.3
BVAR Borovoye Array 75.67 348 P P **20 11 08.5 +0.2**
comp=Z,1.9nm,0.9s,mb4.0,baz=34,slow=6.1,SNR=9.0
RJF Les Rejaudoux 75.80 33 *e*P P **20 11 09.4 +0.3**
RJF *e*MLR MLR
comp=Z,380nm,20.8s,MS4.4
RJF Les Rejaudoux 75.80 33 *e*P P **20 11 09.4 +0.3**
RJF MLR MLR
comp=Z,380nm,20.8s,MS4.7
LFF La Frestale 75.84 34 *e*P P **20 11 09.9 +0.5**
KHC Kasperske Hory 76.06 24 *e*P P **20 11 14.9 +4.3**
KHC Kasperske Hory 76.06 24 *e*P P **20 11 14.9 +4.3**
CABF La Chapelle 76.18 30 *e*P P **20 11 12.2 +0.9**
CAF Calviac 76.32 33 *e*P P **20 11 12.5 +0.4**
KURK Kurchatov 76.51 342 P P **20 11 13.8 +0.6**
comp=Z,4.7nm,1.1s,mb4.3
KURK Kurchatov 76.51 342 P P **20 11 11.6 -1.5**
comp=Z,3.7nm,1.1s,mb4.2,baz=18,slow=4.8,SNR=4.5
KURK Kurchatov 76.51 342⇑ *e*P P **20 11 14.7 +1.6**
KURK pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
OKC Ostrava-Krasne 76.52 21 *e*P pP 20 11 18.5 +2.3
OKC Ostrava-Krasne 76.52 21 *ep*P pP 20 11 18.5 +2.3
OJC Ojcow 76.53 20 *e*P pP 20 11 18.2 +2.0
DAVA Damuels 76.73 27⇑ *i*sP sP 20 11 17.5 -1.0
comp=Z,13nm,1.5s
FETA Feichten 77.21 27⇑ *i*sP sP 20 11 20.0 -1.3
comp=Z,6.6nm,1.2s
VIVF Saint-Julien-l 77.27 31 *e*P P **20 11 18.0 +0.5**
LPL La Plagne 77.36 30 *e*P P **20 11 19.4 +1.4**
LPG La Plagne 77.38 30 *e*P P **20 11 19.6 +1.5**
comp=Z,24nm,1.5s,mb4.6
LPG La Plagne 77.38 30 *e*P P **20 11 19.6 +1.5**
comp=Z,12nm,1.5s,mb4.6
LPG La Plagne 77.38 30 *e*P P **20 11 19.6 +1.5**
LPG pmax pmax
comp=Z,12nm,1.5s,mb4.6
NIE Niedzica 77.39 20 *e*P P **20 11 23.6 +5.5**
STHS Stebnicka Huta 77.59 19 *e*P P **20 11 24.7 +5.5**
comp=Z,4.0nm,0.8s,mb4.4
STHS Stebnicka Huta 77.59 19 *e*P P **20 11 24.7 +5.5**
STHS pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
STHS Stebnicka Huta 77.59 19 *e*P P **20 11 24.7 +5.5**
ORIF Oris-en-Rattie 77.61 31 *e*P P **20 11 20.1 +0.7**
ORIF *e*MLR MLR
comp=Z,406nm,20.8s,MS4.4
LASF Ste Croix 77.68 32 *e*P P **20 11 20.7 +0.9**
MTLF Montolieu 77.75 34 *e*P P **20 11 20.9 +0.7**
EVO Evora 77.77 43 *e*P P **20 11 20.2 -0.2**
comp=Z,27nm,1.2s,mb4.7
EVO *e*MLR MLR
comp=Z,198nm,20.5s,MS4.1
AKASG Malin Array Be 77.79 14 P P **20 11 19.1 -1.1**
comp=Z,2.7nm,0.8s,mb4.2,baz=346,slow=5.1,SNR=9.3
AKBB Malin Array Si 77.79 14 *e*P P **20 11 19.4 -0.8**
KIEV Kiev 77.79 14 *e*P P **20 11 19.3 -1.0**
comp=Z,10nm,1.0s,mb4.7
KIEV Kiev 77.79 14 *e*P P **20 11 19.3 -1.0**
KIEV pmax pmax
comp=Z,11nm,1.0s,mb4.7
VYHS Vyhne 77.94 21 *e*P P **20 11 26.1 +5.0**
comp=Z,1.8nm,1.1s,mb3.9
VYHS Vyhne 77.94 21 *e*P P **20 11 26.1 +5.0**
VYHS pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
VYHS Vyhne 77.94 21 *e*P P **20 11 26.1 +5.0**

MBDF Montbardon 78.07 30 *e*P P **20 11 23.4 +1.4**
NJ2 Nanjing 78.12 306 *e*P P **20 11 23.8 +1.4**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CRVS Cervenica-Dubn 78.12 19 *e*P P **20 11 28.8 +6.6**
comp=Z,14nm,1.9s,mb4.6
CRVS Cervenica-Dubn 78.12 19 *e*P P **20 11 28.8 +6.6**
CRVS pmax pmax
comp=Z,14nm,1.9s,mb4.6
CRVS Cervenica-Dubn 78.12 19 *e*P P **20 11 28.8 +6.6**
KECS Kecovo 78.31 20 *e*P P **20 11 28.4 +5.2**
comp=Z,2.3nm,0.9s,mb4.1
KECS Kecovo 78.31 20 *e*P P **20 11 28.4 +5.2**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KECS Kecovo 78.31 20 *e*P P **20 11 28.4 +5.2**
SMRF Simiane la Rot 78.35 31 *e*P P **20 11 24.7 +1.2**
comp=Z,44nm,1.6s,mb4.8
SMRF Simiane la Rot 78.35 31 *e*P P **20 11 24.7 +1.2**
comp=Z,44nm,1.6s,mb5.1
VSR Storozhevoye 78.42 7 *e*P P **20 11 27.0 +3.2**
VSR pmax pmax
comp=N,8.0nm,0.4s
VSR pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
VSR pmax pmax
comp=E,10.0nm,0.8s
ESDC Sonseca Array 78.53 40 P P **20 11 24.1 -0.5**
comp=E,0.5nm,0.7s,mb3.6,baz=319,slow=4.9,SNR=3.7
UZH Uzhgorod 78.55 19 *e*P P **20 11 30.2 +5.6**
UZH *e* 20 11 40.8
VORD Divnogorie 78.68 7 *e*P P **20 11 28.3 +3.1**
VORD pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,40nm,1.2s
SOKA Soboth 78.70 24⇑ *i*P P **20 11 24.8 -0.6**
comp=E,10nm,1.3s,mb4.6
VRHR Novokhopersk 78.72 6 *e*P P **20 11 27.4 +2.0**
VRHR pmax pmax
comp=N,8.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.5s
VRHR pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
SBF Sospel 79.06 30 *e*P P **20 11 27.9 +0.5**
comp=Z,34nm,1.5s,mb4.8
SBF Sospel 79.06 30 *e*P P **20 11 27.9 +0.5**
comp=Z,17nm,1.5s,mb4.8
SBF Sospel 79.06 30 *e*P P **20 11 27.9 +0.5**
SBF pmax pmax
comp=Z,17nm,1.5s,mb4.8
FRF La Foret Royal 79.07 31 *e*P P **20 11 27.5 0.0**
comp=Z,42nm,1.6s,mb4.8
FRF La Foret Royal 79.07 31 *e*P P **20 11 27.5 0.0**
comp=Z,21nm,1.6s,mb4.8
FRF La Foret Royal 79.07 31 *e*P P **20 11 27.5 0.0**
FRF pmax pmax
comp=Z,21nm,1.6s,mb4.8
LMR La Mourre 79.23 31 *e*P P **20 11 28.7 +0.3**
comp=Z,24nm,1.3s,mb4.7
LMR La Mourre 79.23 31 *e*P P **20 11 28.7 +0.3**
comp=Z,12nm,1.3s,mb4.7
LMR La Mourre 79.23 31 *e*P P **20 11 28.7 +0.3**
LMR pmax pmax
comp=Z,12nm,1.3s,mb4.7
MK31 Makanchi Array 79.42 338 P P **20 11 26.7 -2.7**
MKAR Makanchi Array 79.42 338 P P **20 11 27.0 -2.3**
comp=Z,0.8nm,0.7s,mb3.8,baz=28,slow=4.4,SNR=9.2
AKTK Aktyubinsk 79.44 355 P P **20 11 27.9 -1.4**
AKTO Aktyubinsk 79.44 355 P P **20 11 27.9 -1.4**
comp=Z,3.8nm,0.9s,mb4.3,baz=30,slow=7.8,SNR=5.7
PKSM Moragy 80.04 22⇑ P P **20 11 33.6 +0.9**
PKSM Moragy 80.04 22⇑ *i*P P **20 11 33.6 +0.9**
ABKAR Akbulak array 80.49 354 *e*P P **20 11 33.8 -1.3**
comp=Z,7.5nm,1.0s,mb4.6
PGF Pioggiola 80.74 30 *e*P P **20 11 37.0 +0.4**
comp=Z,13nm,1.0s,mb4.5
PGF Pioggiola 80.74 30 *e*P P **20 11 37.0 +0.4**
comp=Z,6.5nm,1.0s,mb4.5
PGF Pioggiola 80.74 30 *e*P P **20 11 37.0 +0.4**
PGF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
WMQ Urumqi 80.77 334 *e*P P **20 11 36.5 -0.2**
WMQ pP pP 20 11 41.0 +1.3
WMQ sP sP 20 11 43.5 +2.7
WMQ pmax pmax
comp=Z,11nm,1.2s,mb4.7
WMQ pmax pmax
comp=Z,100nm,4.0s
WMQ LR LR
comp=N,120nm,20.0s
WMQ LR LR
comp=Z,110nm,22.5s,MS4.2
BZS Buzias 81.28 20 ⇓P P **20 11 38.1 -1.3**
BZS Buzias 81.28 20 ⇓*i*P P **20 11 38.1 -1.3**
TESR 81.42 16 ⇓P P **20 11 43.5 +3.4**
TESR 81.42 16 ⇓*i*P P **20 11 43.5 +3.4**
LZH Lanzhou 81.89 319 *e*P P **20 11 38.5 -4.3**
LZH pP pP 20 11 41.8 -4.0
LZH sP sP 20 11 43.3 -3.6
LZH *e*PP PP 20 14 47.5 -1.9
LZH pmax pmax
comp=Z,21nm,1.3s,mb4.9
LZH pmax pmax
comp=Z,85nm,4.6s
LZH LR LR
comp=N,200nm,17.0s,MS4.7
LZH LR LR
comp=E,210nm,16.9s,MS4.7
LZH LR LR
comp=Z,230nm,19.5s,MS4.5
VRI Vrincioaia 82.06 16 ⇓P P **20 11 42.6 -0.9**
VRI Vrincioaia 82.06 16 ⇓*i*P P **20 11 42.6 -0.9**
VOIR 82.16 18 ⇑P P **20 11 43.5 -0.5**
VOIR 82.16 18 ⇑*i*P P **20 11 43.5 -0.5**
TIRR Tirgusor 83.72 16 ⇓P P **20 11 51.8 -0.4**
TIRR Tirgusor 83.72 16 ⇓*i*P P **20 11 51.8 -0.3**
GOF Gofitskoye 84.82 5 *e*P P **20 12 00.4 +2.7**
LPAZ La Paz 85.44 122 P P **20 11 57.9 -3.1**
comp=Z,0.6nm,0.3s,mb4.2,baz=277,slow=8.1,SNR=6.1
KIV Kislovodsk 85.90 6⇑ *e*P P **20 12 02.8 -0.3**
KIV *e* 20 15 21.2
KIV pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
KIV MLR MLR
comp=Z,100nm,14.0s,MS4.4
CD2 Chengdu 86.34 316 P P **20 12 03.5 -2.0**
CD2 pP pP 20 12 08.3 -0.3
CD2 PP PP 20 15 25.5 -0.4
CD2 SKS 20 22 26.0
CD2 S S 20 22 36.0 -5.1
CD2 SS SS 20 28 17.8 -1.5
CD2 pmax pmax
comp=Z,12nm,0.5s,mb5.4
CD2 LR LR
comp=N,280nm,12.0s,MS5.0
CD2 LR LR
comp=E,210nm,11.2s,MS5.0
CD2 LR LR
comp=Z,250nm,14.3s,MS4.8
KSH Kashi 87.77 340 *e*P P **20 12 17.3 +5.0**
KSH *ep*P pP 20 12 22.3 +6.9
KSH *es*P sP 20 12 24.0 +7.5
KSH *e*PP PP 20 15 48.0 +11
KSH *e*SKS 20 22 43.0
KSH *e*S S 20 23 01.8 +7.2
KSH *es*S sS 20 23 09.0 +9.3
KSH pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
KSH pmax pmax
comp=Z,50nm,3.9s
KSH LR LR
comp=N,47nm,4.1s
KSH LR LR
comp=E,46nm,3.1s
KSH LR LR
comp=Z,36nm,5.4s
GYA Guiyang 88.78 312 P P **20 12 17.3 0.0**
GYA PP PP 20 15 46.5 +1.0
GYA SKS 20 22 42.0
GYA S S 20 23 01.8 -2.8
GYA SS SS 20 28 54.3 -0.8

GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,110nm,5.9s
GYA LR LR
comp=N,460nm,21.3s,MS5.0
GYA LR LR
comp=E,350nm,22.2s,MS5.0
GYA LR LR
comp=Z,430nm,21.6s,MS4.8
SIV San Ignacio 89.14 116 P **P** **20 12 15.4 -3.6**
comp=Z,0.4nm,0.3s,mb4.2,baz=319,slow=10,SNR=2.6
BRTR Keskin Array B 89.17 13 P **P** **20 12 17.8 -1.2**
comp=Z,0.8nm,0.8s,mb4.1,baz=320,slow=4.3,SNR=3.4
KMI Kunming 91.75 314 P **P** **20 12 31.5 +0.3**
KMI S S 20 23 28.3 -3.8
KMI LR LR
comp=Z,150nm,21.8s,MS4.4
CMAR Chiang Mai Arr 99.26 314 P **P** **20 13 03.1 -2.4**
comp=Z,0.5nm,0.8s,mb4.1,baz=14,slow=6.2,SNR=4.4
BOSA Boshof 151.21 51 PKPbc PKPbc 20 19 14.0 -2.6
comp=Z,2.3nm,0.8s,baz=328,slow=1.5,SNR=3.6

*ISCJB **27** 20:08:05.7±1.0,50.10N±0.07×129.97W±0.09,h10km, Error ellipse: s-maj=11.8km s-min=5.9km az=38.4*
*PGC **27** 20:08:05.7±1.7,49.97N×130.20W,h10km,ML3.2/9, Mw3.8,213km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*IDC **27** 20:08:09.4±2.5,50.16N×129.75W,h0km,mb4.1/1, mb1 3.8/7,mb1mx3.5/27,mbtmp3.5/7,ML3.4/5,MS3.1/1, Ms1 3.1/1,ms1mx1.9/39,Error ellipse: s-maj=36.4km s-min=14.5km az=72.0*
*NEIC **27** 20:08:12.2±1.5,50.39N×129.75W,h10km,mb3.6/1,Error ellipse: s-maj=27.3km s-min=10.2km az=64.0*
ISC 27 20:08:06.7±1.2,50.04N±0.08×129.9W±0.1,h10km,n24, σ1§24/26,5D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.28**	**61**	⇓Pn		**Pn**	**Pn**	**20 08 30.6**	**0.0**
BPBC	**Brooks Peninsu**	**1.37**	**84**	⇓Pn		**Pn**	**Pn**	**20 08 31.3**	**-0.5**
PHC	**Port Hardy**	**1.71**	**66**	Pn		**Pn**	**Pn**	**20 08 36.8**	**+0.2**
PHC				⇑Sn		**Sn**	**Sn**	**20 08 59.1**	**+0.6**
MAYB	**Maynard**	**1.79**	**77**	⇑Pn		**Pn**	**Pn**	**20 08 37.4**	**-0.2**
EDB	**Eliza Dome**	**1.80**	**94**	⇓Pn		**Pn**	**Pn**	**20 08 37.3**	**-0.4**
EDB				⇑Sn		**Sn**	**Sn**	**20 08 60.0**	**-0.6**
WOSB	**Woss**	**2.14**	**85**	⇑Pn		**Pn**	**Pn**	**20 08 42.9**	**+0.4**
BBB	**Bella Bella**	**2.43**	**27**	Pn		**Pn**	**Pn**	**20 08 46.6**	**+0.2**
	12nm,0.3s,baz=43,slow=12,SNR=22								
BBB				Sn		**Sn**	**Sn**	**20 09 13.9**	**-2.2**
	19nm,0.3s,baz=139,slow=22,SNR=3.9								
BBB	**Bella Bella**	**2.43**	**27**	Pn		**Pn**	**Pn**	**20 08 46.6**	**+0.2**
BBB				⇑Sn		**Sn**	**Sn**	**20 09 14.3**	**-1.7**
BNB	**Barry Inlet**	**2.80**	**336**	⇓Pn		**Pn**	**Pn**	**20 08 48.2**	**-3.2**
MOBC	**Moresby Island**	**3.37**	**338**	⇓Pn		**Pn**	**Pn**	**20 08 57.0**	**-2.4**
DIB	**Dawson Inlet,**	**3.56**	**334**	Pn		**Pn**	**Pn**	**20 09 01.1**	**-0.8**
	SNR=17								
DIB	**Dawson Inlet,**	**3.56**	**334**	⇑Pn		**Pn**	**Pn**	**20 08 59.3**	**-2.6**
DLBC	**Dease Lake**	**8.42**	**360**	Pn		**Pn**	**Pn**	**20 10 10.8**	**+2.2**
	0.3nm,0.3s,baz=174,slow=15,SNR=4.5								
DLBC				Sn		**Sn**	**Sn**	**20 11 45.6**	**+2.0**
	0.2nm,0.3s,baz=338,slow=19,SNR=2.3								
YBH	**Yreka Blue Hor**	**9.69**	**146**	LR		LR	LR	20 13 35.3	
	comp=Z,120nm,21.0s,baz=293,slow=33								
NVAR	**Mina Array Bea**	**14.25**	**140**	Pn		**Pn**	**Pn**	**20 11 36.4**	**+8.0**
	0.1nm,0.3s,baz=329,slow=12,SNR=2.6								
MOOW	**Moose Ponds**	**14.50**	**108**	*eP*		Px	Px	20 11 43.8	
	5.2nm,0.9s								
TPAW	**Teton Pass**	**14.52**	**110**	*eP*		Px	Px	20 11 44.4	
	14nm,1.1s								
LOHW	**Long Hollow**	**14.66**	**109**	P		**Pn**	**Pn**	**20 11 35.0**	**+1.0**
	2.1nm,0.8s								
YKA	**Yellowknife Ar**	**15.04**	**28**	Pn		**Pn**	**Pn**	**20 11 38.7**	**-0.3**
YKA	**Yellowknife Ar**	**15.04**	**28**	Pn		**Pn**	**Pn**	**20 11 38.7**	**-0.3**
	0.1nm,0.3s,baz=219,slow=11,SNR=2.7								
DUG	**Dugway**	**15.53**	**123**	*eP*		**Pn**	**Pn**	**20 11 54.3**	**+8.7**
	4.4nm,1.1s								
PDAR	**Pinedale Array**	**15.77**	**110**	Pn		**Pn**	**Pn**	**20 11 53.8**	**+5.1**
	0.1nm,0.3s,baz=315,slow=10,SNR=7.0								
ILAR	**Eielson Array**	**17.28**	**335**	P		**Pn**	**Pn**	**20 12 09.2**	**+1.4**
	baz=130,slow=9.7,SNR=3.3								
ULM	**Lac du Bonnet**	**21.70**	**76**	P		**P**	**P**	**20 13 02.1**	**+4.6**
	4.0nm,0.5s,baz=297,slow=9.4,SNR=4.4								

DJA 27 20:13:25,0.24S×122.85E,h29km,MLv3.5/4,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.80**	**186**	P		Pn		20 13 37.2	-3.1
LUWI				S		Sb		20 13 49.3	-1.6
MRSI	**Marisa**	**1.16**	**308**	P		Pn		20 13 43.6	-1.6
MRSI				S		Sn		20 14 00.3	+0.2
APSI	**Ampana**	**1.37**	**241**	P		Pn		20 13 51.1	+2.9
APSI				S		Sn		20 14 13.6	+8.1
MNI	**Manado**	**2.60**	**50**	P		Pn		20 14 06.5	+1.4

*ISCJB **27** 20:14:27.1±0.7,67.07S±0.08×112.9E±0.2,h10km, mb3.7/4,Error ellipse: s-maj=14.9km s-min=8.4km az=44.6*
*IDC **27** 20:14:27.9±1.3,67.02S×112.90E,h0km,mb3.7/4, mb1 3.8/5,mb1mx3.7/11,mbtmp3.7/5,ML3.3/1,Error ellipse: s-maj=57.5km s-min=22.6km az=115.0*
*NEIC **27** 20:14:28.6±0.7,67.03S×112.73E,h10km,mb4.2/1,Error ellipse: s-maj=15.1km s-min=11.8km az=71.0*
ISC 27 20:14:28.6±0.7,67.04S±0.08×112.7E±0.2,h10km,n9, σ0§88/10,mb3.7/4,Antarctica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CASY	**Casey**	**1.16**	**310**	*eP*		**Pb**	**Pb**	**20 14 49.6**	**-1.1**
CASY				*eS*		**Sb**	**Sb**	**20 15 05.9**	**+0.1**
SBA	**Scott Base**	**18.60**	**147**	P		**Pn**	**Pn**	**20 18 44.7**	**-1.1**
MAW	**Mawson**	**18.82**	**245**	P		**Pn**	**Pn**	**20 18 49.3**	**+0.8**
	0.1nm,0.3s,baz=122,slow=9.5,SNR=2.3								
QSPA	**South Pole Qui**	**23.04**	**180**	*eP*		**P**	**P**	**20 19 34.8**	**+1.4**
	9.0nm,1.3s,mb4.0								
QSPA	**South Pole Qui**	**23.04**	**180**	P		**P**	**P**	**20 19 34.7**	**+1.3**
	5.0nm,1.1s,mb3.9,baz=338,slow=6.5,SNR=12								
STKA	**Stephens Creek**	**39.13**	**41**	P		**P**	**P**	**20 21 56.6**	**+0.7**
	1.1nm,0.6s,mb3.8,baz=187,slow=9.2,SNR=3.2								
ASAR	**Alice Springs**	**45.36**	**28**	P		**P**	**P**	**20 22 47.2**	**+0.4**
	0.6nm,0.6s,mb3.6,baz=190,slow=6.8,SNR=15								
PMSA	**Palmer Station**	**48.46**	**182**	P		**P**	**P**	**20 23 09.2**	**-1.3**
WRA	**Warramunga Arr**	**49.08**	**27**	P		**P**	**P**	**20 23 15.7**	**0.0**
	0.6nm,0.9s,mb3.6,baz=195,slow=7.1,SNR=4.9								

*PGC **27** 20:15:03.1±1.3,49.99N×130.23W,h10km,ML3.2/10, Mw3.8,214km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **27** 20:15:07.0±0.8,50.19N±0.05×129.7W±0.1,h10km, mb3.7/7,Error ellipse: s-maj=10.2km s-min=7.3km az=161.4*
*IDC **27** 20:15:07.9±1.4,50.19N×129.62W,h0km,mb3.7/5, mb1 3.9/10,mb1mx3.7/27,mbtmp3.7/10,ML3.2/4,Error ellipse: s-maj=27.7km s-min=13.8km az=81.0*
*NEIC **27** 20:15:10.2±1.0,50.35N×129.27W,h10km,mb4.1/3,Error ellipse: s-maj=23.9km s-min=8.2km az=64.0*
ISC 27 20:15:09.3±0.8,50.24N±0.05×129.5W±0.1,h10km,n28, σ1§29/32,mb3.7/7,6D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**0.94**	**64**	⇓Pn		**Pn**	**Pn**	**20 15 28.4**	**-0.1**
BPBC	**Brooks Peninsu**	**1.09**	**94**	⇑Pn		**Pn**	**Pn**	**20 15 29.5**	**-1.2**
PHC	**Port Hardy**	**1.38**	**70**	⇓Pn		**Pn**	**Pn**	**20 15 34.6**	**-0.1**
PHC				⇓Sn		**Sn**	**Sn**	**20 15 56.5**	**+3.6**
MAYB	**Maynard**	**1.48**	**83**	⇑Pn		**Pn**	**Pn**	**20 15 34.6**	**-1.3**
WOSB	**Woss**	**1.86**	**91**	⇑Pn		**Pn**	**Pn**	**20 15 40.6**	**-0.7**
BBB	**Bella Bella**	**2.12**	**23**	Pn		**Pn**	**Pn**	**20 15 44.1**	**-0.7**
BBB				Sn		**Sn**	**Sn**	**20 16 12.6**	**+1.3**
BBB	**Bella Bella**	**2.12**	**23**	Pn		**Pn**	**Pn**	**20 15 44.1**	**-0.7**
	22nm,0.3s,baz=355,slow=9.8,SNR=22								
BBB				Sn		**Sn**	**Sn**	**20 16 12.6**	**+1.3**
	48nm,0.3s,baz=131,slow=23,SNR=15								
BBB	**Bella Bella**	**2.12**	**23**	⇑Pn		**Pn**	**Pn**	**20 15 43.9**	**-0.9**
BBB				⇓Sn		**Sn**	**Sn**	**20 16 12.5**	**+1.2**
GDR	**Gold River**	**2.26**	**100**	⇑Pn		**Pn**	**Pn**	**20 15 45.0**	**-1.8**
BNB	**Barry Inlet**	**2.74**	**329**	⇓Pn		**Pn**	**Pn**	**20 15 45.9**	**-7.4**
MOBC	**Moresby Island**	**3.30**	**333**	⇑Pn		**Pn**	**Pn**	**20 15 54.5**	**-6.5**
DIB	**Dawson Inlet,**	**3.50**	**329**	Pn		**Pn**	**Pn**	**20 15 57.1**	**-6.7**
	SNR=15								
DIB	**Dawson Inlet,**	**3.50**	**329**	⇓Pn		**Pn**	**Pn**	**20 15 56.4**	**-7.4**
LON	**Longmire**	**6.17**	**122**	*eP*		**Pn**	**Pn**	**20 16 41.8**	**+1.3**
	5.1nm,0.6s								
DLBC	**Dease Lake**	**8.22**	**358**	Pn		**Pn**	**Pn**	**20 17 09.3**	**+0.9**
	0.3nm,0.3s,baz=193,slow=12,SNR=6.1								
NVAR	**Mina Array Bea**	**14.24**	**142**	Pn		**Pn**	**Pn**	**20 18 31.8**	**+0.9**
NVAR	**Mina Array Bea**	**14.24**	**142**	Pn		**Pn**	**Pn**	**20 18 31.8**	**+0.9**
	0.1nm,0.3s,baz=321,slow=12,SNR=6.0								
YKA	**Yellowknife Ar**	**14.73**	**28**	Pn		**Pn**	**Pn**	**20 18 35.1**	**-2.3**
	0.1nm,0.3s,baz=218,slow=11,SNR=2.3								
ILAR	**Eielson Array**	**17.21**	**334**	P		**Pn**	**Pn**	**20 19 08.3**	**-1.2**
	0.0nm,0.3s,baz=148,slow=9.5,SNR=12								
MVCO	**Mesa Verde**	**19.90**	**123**	*eP*		**Pn**	**Pn**	**20 19 41.9**	**-0.5**
	56nm,1.8s								
ULM	**Lac du Bonnet**	**21.38**	**77**	P		**P**	**P**	**20 19 59.3**	**+2.5**
	11nm,0.8s,mb4.2,baz=296,slow=10,SNR=6.4								
ANMO	**Albuquerque**	**22.68**	**124**	P		**P**	**P**	**20 20 12.4**	**+1.7**
	0.7nm,0.4s,mb3.4,baz=311,slow=15,SNR=3.6								
ECSD	**EROS Data Cent**	**23.20**	**94**	*eP*		**P**	**P**	**20 20 14.8**	**-1.4**
	4.0nm,0.7s,mb4.0								
MNTX	**Cornudas Mount**	**25.77**	**127**	*eP*		**P**	**P**	**20 20 38.9**	**-1.2**
	1.3nm,1.0s,mb3.4								
TXAR	**Lajitas Array**	**28.55**	**127**	P		**P**	**P**	**20 21 06.1**	**+1.0**
	0.5nm,1.0s,mb3.2,baz=349,slow=8.3,SNR=3.2								
ZALV	**Zalesovo Beam**	**72.26**	**340**	P		**P**	**P**	**20 26 35.9**	**+1.6**
	0.5nm,0.5s,mb3.7,baz=41,slow=4.6,SNR=3.1								
AKASG	**Malin Array Be**	**77.80**	**14**	P		**P**	**P**	**20 27 06.7**	**+0.3**
AKASG	**Malin Array Be**	**77.80**	**14**	P		**P**	**P**	**20 27 06.7**	**+0.3**
	0.9nm,0.5s,mb4.0,baz=345,slow=5.5,SNR=3.0								

*IDC **27** 20:17:32.4±0.6,50.03N×130.18W,h0km,mb4.4/26, mb1 4.6/34,mb1mx4.6/36,mbtmp4.5/34,ML4.1/8,MS4.7/30, Ms1 4.8/30,ms1mx4.7/33,Error ellipse: s-maj=14.5km s-min=9.2km az=55.0*
*BJI **27** 20:17:32.1,50.20N×130.00W,h10km,mB5.2/22, mb4.8/23,Ms5.2/28,Ms7 4.9/28*
*PGC **27** 20:17:33.8±2.5,50.07N×130.16W,h10km,ML4.3/16, Mw5.0,206km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*MOS **27** 20:17:33.2±1.0,50.26N×129.94W,h10km,mb5.2/67, MS4.9/38,Error ellipse: s-maj=7.3km s-min=3.8km az=109.3*
*ISCJB **27** 20:17:33.9±0.8,50.21N±0.02×129.99W±0.03,h14km±5km, mb4.9/135,MS4.9/160,Error ellipse: s-maj=4.3km s-min=2.2km az=40.6*
*NEIC **27** 20:17:35.1±0.2,50.23N×130.04W,h10km,mb5.1/130, MS4.9/108,MW5.3(PGC),Error ellipse: s-maj=5.3km s-min=2.0km az=45.0*
*GCMT **27** 20:17:36.1±0.1,49.85N×130.43W,h15km,MW5.4, Moment Tensor Solution. s77,c150; s23,c24; Moment tensor: Scale 10^17^Nm; Mrr~0.04±.02; Mθθ~0.97±.02; Mϕϕ~1.01±.02; Mrθ~0.49±.07; Mθϕ~1.02±.02; Mϕr~0.19±.06; Best double couple: M0~1.50000×10^17^ NP1:ϕs~339.00000°, δ~76.00000°,λ~167.00000°. NP2:ϕs~246.00000°, δ~77.00000°,λ~14.00000°. Principal axes: T 1.4400, Plg1.0000°, Azm293.0000°; N 0.1400, Plg71.0000°, Azm25.0000°; P -1.5800, Plg19.0000°, Azm203.0000°; Data Used: ll IU IC CN G. Surface waves: sta=101, comp=211, per~ 50.*
ISC 27 20:17:38.2~0.6,50.23N±0.02×129.96W±0.03,h32km±4km, h24km±2.6km:pP-P,n593,σ1§15/518,mb4.9/135,MS4.9/160, 4C-31D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.24**	**70**	⇓P		**Pn**	**Pn**	**20 17 56.7**	**-2.5**
HOLB				⇓S		**Sn**	**Sn**	**20 18 15.0**	**+0.2**
BPBC	**Brooks Peninsu**	**1.41**	**92**	⇑P		**Pn**	**Pn**	**20 17 57.8**	**-3.8**
BPBC				⇑S		**Sn**	**Sn**	**20 18 16.3**	**-2.8**
PHC	**Port Hardy**	**1.69**	**73**	⇓Pn		**Pn**	**Pn**	**20 18 03.3**	**-2.0**
PHC				⇓Sn		**Sn**	**Sn**	**20 18 25.0**	**-0.8**
MAYB	**Maynard**	**1.80**	**83**	⇓Pn		**Pn**	**Pn**	**20 18 04.6**	**-2.3**
EDB	**Eliza Dome**	**1.87**	**100**	⇑Pn		**Pn**	**Pn**	**20 18 04.0**	**-3.8**
WOSB	**Woss**	**2.18**	**91**	⇓Pn		**Pn**	**Pn**	**20 18 09.8**	**-2.4**
BBB	**Bella Bella**	**2.28**	**30**	Pn		**Pn**	**Pn**	**20 18 12.7**	**-0.8**
	556nm,0.3s,baz=52,slow=8.4,SNR=216								
BBB				Sn		**Sn**	**Sn**	**20 18 40.0**	**-0.3**
	1μm,0.3s,baz=140,slow=22,SNR=26								
BBB	**Bella Bella**	**2.28**	**30**	⇑Pn		**Pn**	**Pn**	**20 18 12.7**	**-0.8**
BBB				⇓Sn		**Sn**	**Sn**	**20 18 39.9**	**-0.6**
ETB	**Estevan Point**	**2.38**	**110**	⇓Pn		**Pn**	**Pn**	**20 18 10.9**	**-4.0**
NCRB	**Newcastle Ridg**	**2.51**	**85**	⇓Pn		**Pn**	**Pn**	**20 18 15.1**	**-1.6**
GDR	**Gold River**	**2.58**	**99**	⇑Pn		**Pn**	**Pn**	**20 18 14.3**	**-3.3**
BNB	**Barry Inlet**	**2.60**	**335**	⇓Pn		**Pn**	**Pn**	**20 18 14.2**	**-3.7**
BCBC	**Bella Coola**	**2.94**	**42**	⇓Pn		**Pn**	**Pn**	**20 18 23.7**	**+1.1**
CBB	**Campbell River**	**2.96**	**92**	⇑Pn		**Pn**	**Pn**	**20 18 20.9**	**-2.1**
CBB				⇓Sn		**Sn**	**Sn**	**20 18 56.2**	**-1.2**
MOBC	**Moresby Island**	**3.17**	**338**	⇓Pn		**Pn**	**Pn**	**20 18 23.1**	**-2.7**
OZB	**Mount Ozzard**	**3.17**	**112**	⇑Pn		**Pn**	**Pn**	**20 18 24.1**	**-1.7**
DIB	**Dawson Inlet,**	**3.36**	**333**	Pn		**Pn**	**Pn**	**20 18 25.5**	**-2.9**
	SNR=676								
DIB	**Dawson Inlet,**	**3.36**	**333**	⇑Pn		**Pn**	**Pn**	**20 18 25.1**	**-3.3**
BMSB	**Bamfield Mari**	**3.44**	**112**	⇓Pn		**Pn**	**Pn**	**20 18 28.3**	**-1.2**
ALB	**Alberni**	**3.46**	**104**	⇑Pn		**Pn**	**Pn**	**20 18 28.8**	**-1.0**
MGB	**Mount Grey**	**3.64**	**108**	⇓Pn		**Pn**	**Pn**	**20 18 30.6**	**-1.7**
OTR	**Olympics--Tyee**	**4.27**	**118**	P		**Pn**	**Pn**	**20 18 39.7**	**-1.1**
PGC	**Sidney**	**4.53**	**108**	*ePn*		**Pn**	**Pn**	**20 18 41.9**	**-2.6**
OSD	**Olympics--Snow**	**4.77**	**118**	P		**Pn**	**Pn**	**20 18 47.2**	**-0.6**
OSR	**Olympics--Salm**	**4.81**	**122**	P		**Pn**	**Pn**	**20 18 48.4**	**+0.2**
NLWA	**Neilton Lookou**	**4.93**	**123**	*ePn*		**Pn**	**Pn**	**20 18 48.2**	**-1.7**
HDW	**Hoodsport**	**5.23**	**117**	P		**Pn**	**Pn**	**20 18 53.4**	**-0.7**
VDB	**Vedder Mountai**	**5.25**	**100**	P		**Pn**	**Pn**	**20 18 53.3**	**-1.0**
MBW	**Mount Baker**	**5.45**	**102**	P		**Pn**	**Pn**	**20 18 56.8**	**-0.2**
CRAG	**Craig**	**5.58**	**341**	*eP*		**Pn**	**Pn**	**20 18 59.7**	**+0.8**
JCW	**Jim Creek**	**5.64**	**108**	*ePn*		**Pn**	**Pn**	**20 18 59.1**	**-0.6**
MEW	**McNeil Island**	**5.71**	**119**	P		**Pn**	**Pn**	**20 19 01.6**	**+1.0**
RPW	**Rockport**	**5.80**	**105**	*ePn*		**Pn**	**Pn**	**20 19 00.1**	**-1.9**
HTW	**Haystack Looko**	**5.91**	**111**	P		**Pn**	**Pn**	**20 19 02.6**	**-0.8**
WRAK	**Wrangell Islan**	**6.36**	**348**	*eP*		**Pn**	**Pn**	**20 19 09.2**	**-0.4**
	62nm,0.6s								
LON	**Longmire**	**6.44**	**120**	*ePn*		**Pn**	**Pn**	**20 19 10.3**	**-0.4**
TDL	**Tradedollar La**	**6.46**	**124**	P		**Pn**	**Pn**	**20 19 11.1**	**+0.1**
MTMW	**Mount Mitchell**	**6.68**	**126**	P		**Pn**	**Pn**	**20 19 14.4**	**+0.4**
ETW	**Entiat**	**6.87**	**109**	P		**Pn**	**Pn**	**20 19 16.6**	**+0.1**
TBM	**Table Mountain**	**6.91**	**113**	P		**Pn**	**Pn**	**20 19 17.4**	**+0.2**
ASR	**Mount Adams--S**	**6.92**	**123**	P		**Pn**	**Pn**	**20 19 17.5**	**+0.2**
COR	**Corvallis**	**7.23**	**139**	P		**Pn**	**Pn**	**20 19 22.7**	**+1.1**
HOOD	**Mount Hood Mea**	**7.45**	**128**	*ePn*		**Pn**	**Pn**	**20 19 25.2**	**+0.7**
SIT	**Sitka**	**7.54**	**337**	*eP*		**Pn**	**Pn**	**20 19 25.7**	**-0.1**
	19nm,0.6s								
SIT	**Sitka**	**7.54**	**337**	*eP*		**Pn**	**Pn**	**20 19 25.7**	**-0.1**
SIT				pmax		pmax	pmax		
	comp=Z,19nm,0.6s								
RSW	**Rattlesnake Hi**	**7.91**	**115**	*ePn*		**Pn**	**Pn**	**20 19 30.4**	**-0.4**
HAWA	**Hanford**	**7.94**	**115**	*ePn*		**Pn**	**Pn**	**20 19 30.6**	**-0.7**
OD2	**Odessa Site #2**	**7.95**	**107**	*ePn*		**Pn**	**Pn**	**20 19 30.3**	**-1.1**
DLBC	**Dease Lake**	**8.22**	**360**	*ePn*		**Pn**	**Pn**	**20 19 37.0**	**+1.9**
DLBC	**Dease Lake**	**8.22**	**360**	Pn		**Pn**	**Pn**	**20 19 36.9**	**+1.8**
	comp=Z,5.0nm,0.3s,baz=200,slow=11,SNR=64								
DLBC				Sn		**Sn**	**Sn**	**20 21 11.7**	**+4.9**
	comp=Z,1.7nm,0.3s,baz=274,slow=15,SNR=4.1								
DLBC				LR		LR	LR	20 22 37.0	
	comp=Z,10μm,19.8s,baz=184,slow=36								
NEW	**Newport**	**8.63**	**98**	*eP*		**Pn**	**Pn**	**20 19 39.4**	**-1.3**
	comp=Z,83nm,1.1s								
NEW	**Newport**	**8.63**	**98**	*eP*		**Pn**	**Pn**	**20 19 39.4**	**-1.3**
NEW				pmax		pmax	pmax		
	comp=Z,83nm,1.1s								
LNOR	**Lincton Mounta**	**8.95**	**115**	*ePn*		**Pn**	**Pn**	**20 19 44.4**	**-0.8**
HUMO	**Hull Mountain**	**9.03**	**145**	*ePn*		**Pn**	**Pn**	**20 19 46.8**	**+0.6**
KRMB	**Red Mountain**	**9.67**	**152**	*eP*		**Pn**	**Pn**	**20 19 56.3**	**+1.3**
	comp=Z,152nm,1.6s								
SKAG	**Skagway**	**9.75**	**344**	*ePn*		**Pn**	**Pn**	**20 19 56.2**	**+0.2**
YBH	**Yreka Blue Hor**	**9.88**	**147**	Pn		**Pn**	**Pn**	**20 19 56.4**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=333,slow=13,SNR=12								
YBH				LR		LR	LR	20 23 15.8	
	comp=Z,9μm,18.7s,baz=329,slow=35								
YBH	**Yreka Blue Hor**	**9.88**	**147**	*eP*		**Pn**	**Pn**	**20 19 59.3**	**+1.4**
BSMT	**Bassoo Peak**	**10.25**	**98**	*ePn*		**Pn**	**Pn**	**20 20 02.2**	**-0.6**
KHMM	**Horse Mountain**	**10.32**	**153**	*ePn*		**Pn**	**Pn**	**20 20 01.8**	**-2.1**
BLMT	**Blacktail Moun**	**10.47**	**96**	*ePn*		**Pn**	**Pn**	**20 20 05.5**	**-0.4**
WALA	**Waterton Lakes**	**10.48**	**90**	*ePn*		**Pn**	**Pn**	**20 20 06.7**	**+0.7**
JTMT	**Jette**	**10.60**	**98**	*ePn*		**Pn**	**Pn**	**20 20 07.4**	**-0.3**
MOD	**Modoc**	**10.69**	**138**	*ePn*		**Pn**	**Pn**	**20 20 09.8**	**+0.9**
	comp=Z,225nm,1.8s								
EDM	**Edmonton**	**10.73**	**67**	*ePn*		**Pn**	**Pn**	**20 20 10.4**	**+1.0**
YBMT	**Yellow Bay**	**10.74**	**97**	*ePn*		**Pn**	**Pn**	**20 20 11.4**	**+1.9**
SWMT	**Swartz Lake**	**10.86**	**98**	*ePn*		**Pn**	**Pn**	**20 20 12.1**	**+0.8**
PNL	**Peninsula**	**10.89**	**334**	*eP*		**Pn**	**Pn**	**20 20 09.8**	**-1.8**
	comp=Z,36nm,1.0s								
WDC	**Whiskeytown Da**	**10.96**	**149**	*ePn*		**Pn**	**Pn**	**20 20 13.2**	**+0.5**
WVOR	**Wild Horse Val**	**11.04**	**131**	*ePn*		**Pn**	**Pn**	**20 20 13.8**	**0.0**
	comp=Z,478nm,1.7s								
WVOR	**Wild Horse Val**	**11.04**	**131**	*eP*		**Pn**	**Pn**	**20 20 13.8**	**+0.1**
WVOR				pmax		pmax	pmax		
	comp=Z,478nm,1.7s								
SLMT	**Seeley Lake**	**11.28**	**99**	*ePn*		**Pn**	**Pn**	**20 20 16.2**	**-0.8**
KIPM	**Iron Peak**	**11.38**	**154**	*ePn*		**Pn**	**Pn**	**20 20 18.9**	**+0.5**
	comp=Z,100nm,1.5s								
HYT	**Haines Junctio**	**11.44**	**341**	*ePn*		**Pn**	**Pn**	**20 20 20.4**	**+1.4**
CHMT	**Chamberlain Mo**	**11.56**	**100**	*ePn*		**Pn**	**Pn**	**20 20 20.9**	**+0.1**
OHCM	**Honcut**	**12.44**	**148**	*ePn*		**Pn**	**Pn**	**20 20 32.9**	**+0.1**
LRM	**Limekiln Ridge**	**12.52**	**104**	*ePn*		**Pn**	**Pn**	**20 20 32.8**	**-1.1**
HRY	**Holter Researc**	**12.53**	**99**	*ePn*		**Pn**	**Pn**	**20 20 33.9**	**-0.2**
HLID	**Hailey**	**12.54**	**116**	*ePn*		**Pn**	**Pn**	**20 20 34.0**	**-0.2**
MCMT	**McKenzie Canyo**	**12.76**	**108**	*ePn*		**Pn**	**Pn**	**20 20 36.5**	**-0.7**
	comp=Z,22nm,1.1s								
PAHR	**Pah Rah Range**	**12.90**	**141**	*ePn*		**Pn**	**Pn**	**20 20 39.7**	**+0.5**
WCN	**Washoe City**	**13.10**	**143**	*ePn*		**Pn**	**Pn**	**20 20 42.5**	**+0.7**
	comp=Z,267nm,1.8s								
WCN	**Washoe City**	**13.10**	**143**	*eP*		**Pn**	**Pn**	**20 20 42.5**	**+0.6**
WCN				pmax		pmax	pmax		
	comp=Z,267nm,1.8s								
BOZ	**Bozeman (W)**	**13.11**	**103**	*ePn*		**Pn**	**Pn**	**20 20 41.7**	**-0.3**
BMN	**Battle Mountai**	**13.26**	**133**	*ePn*		**Pn**	**Pn**	**20 20 44.6**	**+0.5**
EGMT	**Eagleton**	**13.41**	**92**	*ePn*		**Pn**	**Pn**	**20 20 46.2**	**+0.1**
BMRM	**Bremner River**	**13.53**	**328**	*ePn*		**Pn**	**Pn**	**20 20 47.3**	**-0.3**
	comp=Z,35nm,1.2s								
WAKR	**Walker**	**13.91**	**143**	*ePn*		**Pn**	**Pn**	**20 20 52.3**	**-0.7**
CMB	**Columbia Colle**	**13.98**	**147**	*ePn*		**Pn**	**Pn**	**20 20 52.2**	**-1.7**
DIV	**Divide**	**14.05**	**327**	*eP*		**Pn**	**Pn**	**20 20 55.5**	**+0.8**
	comp=Z,22nm,1.0s								
YNR	**Norris Junctio**	**14.15**

FFC Flin Flon 17.57 64 eP Pn 20 21 39.9 -0.4
FFC pmax pmax
comp=Z,74nm,0.9s
SRU San Rafael 17.68 122 eP Pn 20 21 42.4 +0.6
comp=Z,195nm,1.2s
SRU San Rafael 17.68 122 eP Pn 20 21 42.4 +0.6
SRU pmax pmax
comp=Z,195nm,1.2s
GSC Goldstone 17.73 142 eP Pn 20 21 43.0 +0.6
comp=Z,314nm,1.9s
GSC Goldstone 17.73 142 eP Pn 20 21 43.0 +0.6
GSC pmax pmax
comp=Z,314nm,1.9s
BPAW Bear Paw Mtn. 17.84 329 eP Pn 20 21 44.3 +0.7
comp=Z,121nm,1.2s
RWWY Rawlins 17.92 110 ePn Pn 20 21 44.7 -0.1
comp=Z,128nm,1.1s
SVW2 Sparrevohn 17.95 317 eP Pn 20 21 43.3 -1.7
comp=Z,704nm,2.3s
CHGN Chignik 17.99 301 eP Pn 20 21 43.3 -2.1
INK Inuvik 18.22 356 ePn Pn 20 21 50.0 +1.8
comp=Z,56nm,1.2s
INK Inuvik 18.22 356 P Pn 20 21 49.2 +1.0
comp=Z,0.2nm,0.3s,baz=171,slow=11,SNR=20
INK LR LR 20 28 20.4
comp=Z,2µm,19.6s,baz=0.0,slow=35
INK Inuvik 18.22 356 eP Pn 20 21 50.0 +1.8
INK pmax pmax
comp=Z,56nm,1.2s
MWC Mount Wilson 18.23 147 ePn Pn 20 21 48.8 +0.3
comp=Z,115nm,1.5s
MWC Mount Wilson 18.23 147 eP Pn 20 21 48.8 +0.3
MWC pmax pmax
comp=Z,115nm,1.5s
PASC Pasadena Art C 18.23 147 eP Pn 20 21 49.8 +1.2
RSSD Black Hills 18.60 99 eP Pn 20 21 52.7 -0.3
comp=Z,79nm,1.2s
RSSD Black Hills 18.60 99 eP Pn 20 21 52.7 -0.3
RSSD pmax pmax
comp=Z,79nm,1.2s
LDFC Landfair 18.62 139 ePn Pn 20 21 53.2 -0.1
TTA Tatalina 18.99 322 eP Pn 20 21 57.9 +0.3
SDPT Sand Point 19.06 297 eP Pn 20 21 57.4 -1.0
comp=Z,600nm,1.8s
PV04 Paradox Valley 19.08 120 eP Pn 20 21 58.7 -0.2
PHWY Pilot Hill 19.21 108 eP Pn 20 21 59.6 -0.8
comp=Z,180nm,1.4s
PFO Pinyon Flat Ob 19.36 144 P Pn 20 22 00.0 -2.2
comp=Z,185nm,1.6s,SNR=6.5
PFO Pinyon Flat Ob 19.36 144 eP Pn 20 22 00.9 -1.3
comp=Z,98nm,1.6s
PFO Pinyon Flat Ob 19.36 144 eP Pn 20 22 00.9 -1.3
PFO pmax pmax
comp=Z,98nm,1.6s
PV01 Paradox Valley 19.45 120 eP Pn 20 22 02.1 -1.2
comp=Z,77µm,1.8s
SMCO Snowmass 19.64 115 eP Pn 20 22 04.7 -0.8
comp=Z,180nm,1.1s
COLD Coldfoot 19.84 337 eP Pn 20 22 08.8 +1.1
comp=Z,141nm,1.5s
WUAZ Wupatki 19.96 130 eP Pn 20 22 08.2 -1.1
comp=Z,680nm,2.1s
ISCO Idaho Springs 20.04 112 eP P 20 22 09.7 +1.4
comp=Z,132nm,1.4s
ISCO Idaho Springs 20.04 112 eP P 20 22 09.7 +1.4
ISCO pmax pmax
comp=Z,132nm,1.4s
BAR Barrett 20.11 146 eP P 20 22 09.5 +0.3
comp=Z,276nm,2.0s
MVCO Mesa Verde 20.16 122 eP P 20 22 10.0 +0.3
comp=Z,2µm,2.0s
MVCO LR LR
comp=Z,2µm,19.0s,MS4.6
GLA Glamis 20.49 141 eP P 20 22 13.7 +0.5
comp=Z,126nm,1.4s
GLA Glamis 20.49 141 eP P 20 22 13.7 +0.5
GLA pmax pmax
comp=Z,126nm,1.4s
FALS False Pass 20.74 296 eP P 20 22 07.9 -7.9
comp=Z,693nm,1.3s
SDCO Great Sand Dun 21.46 116 eP P 20 22 24.3 +0.6
comp=Z,194nm,1.4s,mb5.2
SDCO LR LR
comp=Z,4µm,19.0s,MS4.9
OGNE Ogallala 21.53 105 eP P 20 22 25.4 +0.9
comp=Z,334nm,1.1s,mb5.7
OGNE LR LR
comp=Z,3µm,19.0s,MS4.6
ULM Lac du Bonnet 21.70 77 P P 20 22 26.4 +0.2
comp=Z,178nm,0.8s,mb5.5,baz=289,slow=11,SNR=29
ULM LR LR 20 30 58.6
comp=Z,5µm,20.7s,MS4.9,baz=284,slow=37
AKUT Akutan 22.15 294 eP P 20 22 31.1 +0.2
comp=Z,409nm,1.6s,mb5.6
AGMN Agassiz Nation 22.23 82 eP P 20 22 32.6 +0.8
comp=Z,66nm,0.8s,mb5.1
FCC Fort Churchill 22.27 54 eP P 20 22 35.3 +3.2
comp=Z,6.6nm,1.3s,mb3.9
FCC Fort Churchill 22.27 54 eP P 20 22 35.3 +3.1
FCC pmax pmax
comp=Z,7.0nm,1.3s,mb3.9
UNV Unalaska Valle 22.60 293 eP P 20 22 35.9 +0.2
comp=Z,252nm,1.4s,mb5.5
TUC Tucson 22.87 134 eP P 20 22 38.3 -0.4
comp=Z,100nm,1.5s,mb5.0
TUC Tucson 22.87 134 eP P 20 22 38.3 -0.4
TUC pmax pmax
comp=Z,100nm,1.5s,mb5.0
ANMO Albuquerque 22.94 123 eP P 20 22 39.4 0.0
comp=Z,154nm,1.5s,mb5.2
ANMO LR LR
comp=Z,2µm,21.0s,MS4.4
ANMO Albuquerque 22.94 123 P P 20 22 39.2 -0.3
comp=Z,33nm,1.0s,mb4.7,baz=317,slow=10,SNR=56
ANMO LR LR 20 31 59.2
comp=Z,1µm,19.5s,MS4.3,baz=317,slow=38
ANMO Albuquerque 22.94 123 eP P 20 22 39.4 0.0
ANMO pmax pmax
comp=Z,154nm,1.5s
ANMO MLR MLR
comp=Z,2µm,21.0s
LAZ Ladron 22.99 125 eP P 20 22 39.5 -0.5
comp=Z,271nm,2.2s,mb5.3
LENM Lemitar 23.26 125 eP P 20 22 43.1 +0.2
LPM Los Pinos Moun 23.33 124 eP P 20 22 43.7 +0.1
BNM Barren Site 23.46 124 eP P 20 22 44.5 -0.3
comp=Z,731nm,2.3s,mb5.7
ECSD EROS Data Cent 23.52 93 eP P 20 22 45.0 -0.3
comp=Z,399nm,1.6s,mb5.6
ECSD LR LR
comp=Z,665nm,20.0s,MS4.1
CBKS Cedar Bluff 24.22 107 eP P 20 22 53.2 +1.5
comp=Z,444nm,1.5s,mb5.7
CBKS LR LR
comp=Z,2µm,22.0s,MS4.5
CBKS Cedar Bluff 24.22 107 eP P 20 22 53.2 +1.5
CBKS pmax pmax
comp=Z,444nm,1.5s,mb5.7
CBKS MLR MLR
comp=Z,2µm,22.0s,MS4.5
SPIA Saint Paul Isl 24.54 302 eP P 20 22 54.9 +0.4
EYMN Ely 25.11 80 eP P 20 23 00.6 +0.8
comp=Z,90nm,0.8s,mb5.3
AMTX Amarillo 25.66 116 eP P 20 23 04.9 0.0
comp=Z,206nm,1.0s,mb5.6
AMTX LR LR
comp=Z,5µm,19.0s,MS5.0
CPRX Cap Rock 25.80 122 eP P 20 23 06.8 +0.7
comp=Z,93nm,1.2s,mb5.2
KSU1 Kansas State U 25.99 102 eP P 20 23 09.0 +1.1
comp=Z,99nm,0.9s,mb5.3
KSU1 LR LR
comp=Z,1µm,19.0s,MS4.5
MNTX Cornudas Mount 26.02 126 eP P 20 23 07.5 -0.6
comp=Z,95nm,1.5s,mb5.1
MNTX LR LR
comp=Z,2µm,19.0s,MS4.7
SCIA State Center 26.59 94 eP P 20 23 14.7 +1.4
comp=Z,135nm,1.3s,mb5.3
SCIA LR LR
comp=Z,4µm,19.0s,MS4.9
COWI Conover 27.29 83 eP P 20 23 19.9 +0.4
comp=Z,59nm,1.3s,mb5.0
WMOK Wichita Mounta 27.46 112 eP P 20 23 21.4 +0.2
JFWS Jewell Farm 28.00 90 eP P 20 23 26.3 +0.4
RES Resolute Bay 28.52 19 LR LR 20 36 52.8
comp=Z,794nm,18.1s,MS4.4,baz=238,slow=40

TXAR Lajitas Array 28.80 127 P P 20 23 33.0 -0.1
comp=Z,12nm,1.0s,mb4.6,baz=324,slow=7.2,SNR=48
TXAR LR LR 20 35 39.8
comp=Z,3µm,20.2s,MS4.8,baz=0.0,slow=38
HDIL Hopedale 29.82 93 eP P 20 23 42.8 +0.7
HDIL LR LR
comp=Z,4µm,19.0s,MS5.1
JCT Junction City 29.98 120 eP P 20 23 43.0 -0.5
CCM Cathedral Cave 29.99 99 eP P 20 23 43.1 -0.5
comp=Z,35nm,1.4s,mb4.9
CCM LR LR
comp=Z,5µm,22.0s,MS5.1
CCM Cathedral Cave 29.99 99 eP P 20 23 43.1 -0.5
CCM pmax pmax
comp=Z,35nm,1.4s,mb4.9
CCM MLR MLR
comp=Z,5µm,22.0s,MS5.1
MIAR Mount Ida 30.75 107 eP P 20 23 51.0 +0.7
UALR University of 31.36 105 eP P 20 23 55.8 +0.2
AMKA Amchitka 31.57 292 eP P 20 23 55.5 -1.8
comp=Z,49nm,0.9s,mb5.3
OLIL Olney 31.60 95 eP P 20 23 58.3 +0.5
NATX Nacogdoches 32.01 112 PFAKE 20 24 10.0 +8.6
NATX LR LR
comp=Z,2µm,20.0s,MS4.8
USIN University of 32.32 96 eP P 20 24 04.4 +0.3
BLO Bloomington 32.36 93 eP P 20 24 05.0 +0.6
HKT Hockley 32.63 115 eP P 20 24 06.8 -0.1
comp=Z,72nm,1.4s,mb5.4
HKT LR LR
comp=Z,5µm,20.0s,MS5.2
HKT Hockley 32.63 115 eP P 20 24 06.8 -0.1
HKT pmax pmax
comp=Z,73nm,1.4s,mb5.4
HKT MLR MLR
comp=Z,5µm,20.0s,MS5.2
KVTX Kingsville 33.30 121 PFAKE 20 24 30.0 +17
KVTX LR LR
comp=Z,1µm,20.0s,MS4.6
OXF Oxford 33.36 102 eP P 20 24 13.4 +0.2
comp=Z,258nm,1.0s,mb6.1
OXF LR LR
comp=Z,3µm,22.0s,MS4.9
OXF Oxford 33.36 102 eP P 20 24 13.4 +0.2
OXF pmax pmax
comp=Z,258nm,1.0s,mb6.1
OXF MLR MLR
comp=Z,3µm,22.0s,MS4.9
ACSO Alum Creek Sta 34.05 89 eP P 20 24 19.3 +0.2
SADO Sadowa 34.21 79 P P 20 24 20.2 -0.3
SADO LR LR 20 37 39.3
SADO Sadowa 34.21 79 P P 20 24 20.2 -0.3
comp=Z,13nm,1.0s,mb4.8,baz=296,slow=7.8,SNR=4.4
SADO LR LR 20 37 39.3
comp=Z,3µm,19.9s,MS5.0,baz=320,slow=35
ERPA Erie 34.97 84 PFAKE 20 24 40.0 +13
ERPA LR LR
comp=Z,2µm,20.0s,MS4.9
SWET Sewanee 35.10 98 eP P 20 24 28.1 -0.3
BILL Bilibino 35.22 324 ||eP P 20 24 29.9 +1.0
BILL e 20 25 44.3
BILL eS S 20 30 09.1 +9.2
BILL pmax pmax
comp=Z,41nm,2.5s,mb4.9
BILL MLR MLR
comp=Z,800nm,16.0s,MS4.6
LRAL Lakeview Retre 35.84 102 eP P 20 24 33.9 -0.8
comp=Z,28nm,1.1s,mb5.1
LRAL LR LR
comp=Z,1µm,22.0s,MS4.5
TKL Tuckaleechee C 36.20 96 P P 20 24 37.3 -0.4
comp=Z,9.6nm,0.9s,mb4.7,baz=275,slow=5.1,SNR=8.3
TKL LR LR 20 39 48.5
comp=Z,5µm,18.1s,MS5.3,baz=310,slow=37
MCWV Mont Chateau 36.38 87 PFAKE 20 24 50.0 +11
MCWV LR LR
comp=Z,3µm,22.0s,MS5.0
POHA Pohakuloa 36.56 223 PFAKE 20 24 50.0 +9.1
POHA LR LR
comp=Z,1µm,19.0s,MS4.7
LONY Lake Ozonia 37.14 77 PFAKE 20 25 00.0 +14
LONY LR LR
comp=Z,3µm,19.0s,MS5.1
BRAL Brewton 37.17 105 PFAKE 20 25 00.0 +14
BRAL LR LR
comp=Z,1µm,20.0s,MS4.7
BLA Blacksburg 37.41 91 eP P 20 24 48.2 +0.2
comp=Z,22nm,0.6s,mb5.2
BLA Blacksburg 37.41 91 eP P 20 24 48.2 +0.2
BLA pmax pmax
comp=Z,22nm,0.6s,mb5.2
BINY Binghamton 37.47 81 PFAKE 20 25 00.0 +12
BINY LR LR
comp=Z,3µm,19.0s,MS5.1
SCHQ Schefferville 37.52 58 P P 20 24 49.6 +0.8
comp=Z,6.0nm,1.0s,mb4.3,baz=278,slow=9.7,SNR=1.6
SCHQ LR LR 20 38 58.3
comp=Z,2µm,19.2s,MS4.9,baz=292,slow=34
FRNY Flat Rock 37.66 76 eP P 20 24 49.6 -0.4
comp=Z,15nm,1.1s,mb4.6
NCB Newcomb 37.69 77 PFAKE 20 25 00.0 +10
NCB LR LR
comp=Z,4µm,21.0s,MS5.2
GOGA Godfrey 37.82 98 eP P 20 24 50.6 -1.0
comp=Z,98nm,1.3s,mb5.4
GOGA LR LR
comp=Z,4µm,21.0s,MS5.2
GOGA Godfrey 37.82 98 eP P 20 24 50.6 -1.0
GOGA pmax pmax
comp=Z,98nm,1.3s,mb5.4
GOGA MLR MLR
comp=Z,4µm,21.0s,MS5.2
JSC Jenkinsville 38.67 95 eP P 20 24 58.8 +0.1
CBN Corbin 38.79 87 PFAKE 20 25 10.0 +10
CBN LR LR
comp=Z,556nm,20.0s,MS4.4
LBNH Lisbon 38.99 76 PFAKE 20 25 10.0 +8.8
LBNH LR LR
comp=Z,4µm,20.0s,MS5.2
PKME Peaks-Kenny Pk 40.11 73 PFAKE 20 25 20.0 +9.5
PKME LR LR
comp=Z,870nm,20.0s,MS4.6
NHSC New Hope 40.12 96 PFAKE 20 25 20.0 +9.3
NHSC LR LR
comp=Z,528nm,19.0s,MS4.4
SEY Seymchan 41.89 318|| eP P 20 25 25.0 0.0
DWPF Disney 42.70 103 PFAKE 20 25 40.0 +8.1
DWPF LR LR
comp=Z,430nm,21.0s,MS4.3
PET Petropavlovsk 42.72 302 PFAKE 20 25 40.0 +8.2
PET LR LR
comp=Z,972nm,20.0s,MS4.7
PET Petropavlovsk 42.72 302 eP P 20 25 30.7 -1.1
PET eS S 20 31 51.6 -1.4
PET pmax pmax
comp=Z,200nm,16.4s
PETK Petropavlovsk- 43.20 303 P P 20 25 34.9 -0.8
PETK LR LR 20 41 11.8
PETK Petropavlovsk- 43.20 303 P P 20 25 34.9 -0.8
comp=Z,14nm,0.9s,mb4.7,baz=72,slow=14,SNR=12
PETK LR LR 20 41 11.9
comp=Z,493nm,19.8s,MS4.4,baz=249,slow=33
CMIG Matias Romero 43.40 127 P P 20 25 36.6 -1.1
comp=Z,2.8nm,0.7s,mb4.1,baz=271,slow=11,SNR=4.8
CMIG LR LR 20 44 30.1
comp=Z,450nm,21.2s,MS4.3,baz=168,slow=37
SUMG Summit 43.47 26 eP P 20 25 39.8 +2.2
comp=Z,27nm,1.3s,mb4.8
TEIG Tepich 44.45 117 eP P 20 25 45.3 -0.8
comp=Z,17nm,0.9s,mb4.8
TIXI Tiksi 46.56 335 P P 20 26 02.6 +0.4
comp=Z,12nm,1.0s,mb4.8
TIXI Tiksi 46.56 335 eP P 20 26 05.1 +2.9
TIXI eS S 20 32 52.4 +4.2
TIXI pmax pmax
comp=Z,17nm,1.4s,mb4.8
TIXI MLR MLR
comp=Z,558nm,15.0s,MS4.6
KBS Kingsbay 49.13 9 eP P 20 26 24.3 +2.2
comp=Z,12nm,0.7s,mb5.0
KBS LR LR
comp=Z,1µm,21.0s,MS4.9
KBS Kingsbay 49.13 9 eP P 20 26 24.3 +2.2
KBS pmax pmax
comp=Z,12nm,0.7s,mb5.0
KBS MLR MLR
comp=Z,1µm,21.0s,MS4.9
BBSR BB Station 50.52 85 PFAKE 20 26 50.0 +17
BBSR LR LR
comp=Z,1µm,20.0s,MS5.0
YAK Yakutsk 51.57 324 eP P 20 26 40.0 -0.7
comp=Z,20nm,0.8s,mb5.1
YAK Yakutsk 51.57 324 eP P 20 26 39.8 -0.9
YAK e*PP pP 20 26 42.8 -7.5
YAK e 20 28 39.6
YAK eS S 20 34 03.6 +4.8
YAK e*SS sS 20 34 08.6 -6.0
YAK pmax pmax
comp=Z,15nm,1.2s,mb4.8
YAK pmax pmax
comp=E,145nm,6.3s
YAK pmax pmax
comp=Z,59nm,2.9s,mb5.0
YAK pmax pmax
comp=N,23nm,1.8s
YAK smax
comp=E,355nm,10.4s
YAK MLR MLR
comp=N,336nm,11.0s,MS5.0
YAK MLR MLR
comp=Z,1µm,16.0s,MS5.0
YAK MLR MLR
comp=E,995nm,18.0s,MS5.0
MTDJ Mount Denham 52.38 108 PFAKE 20 27 00.0 +13
MTDJ LR LR
comp=Z,443nm,20.0s,MS4.5
GRTK Grand Turk 53.92 100 PFAKE 20 27 10.0 +11
GRTK LR LR
comp=Z,1µm,19.0s,MS4.9
JTS JuntasAbangare 54.35 121 PFAKE 20 27 10.0 +8.3
JTS LR LR
comp=Z,501nm,19.0s,MS4.6
SDDR Presa de Saban 55.68 102 PFAKE 20 27 20.0 +8.7
SDDR LR LR
comp=Z,931nm,19.0s,MS4.9
ERM Erimo 57.51 298 PFAKE 20 27 40.0 +16
ERM LR LR
comp=Z,750nm,22.0s,MS4.8
HABR Khabarovsk 57.66 308 eP P 20 27 24.7 -0.3
HABR e*SP sP 20 27 29.1 -9.4
HABR e 20 28 17.5
HABR e 20 29 32.4
HABR eS S 20 35 24.2 +3.3
HABR e*SS sS 20 35 29.3 -7.6
HABR e 20 37 14.5
HABR eSS SS 20 39 16.3 +5.6
HABR pmax pmax
comp=E,51nm,3.5s
HABR pmax pmax
comp=N,34nm,4.0s
HABR pmax pmax
comp=Z,88nm,4.0s
HABR MLR MLR
comp=Z,741nm,18.0s,MS4.8
BCIP Isla Barro Col 58.14 117 PFAKE 20 27 40.0 +11
BCIP LR LR
comp=Z,606nm,21.0s,MS4.7
KLR Kul'dur 58.79 311 eP P 20 27 28.2 -4.7
KEV Kevo 59.15 9 PFAKE 20 27 50.0 +15
KEV LR LR
comp=Z,846nm,19.0s,MS4.9
KEV Kevo 59.15 9 eP P 20 27 34.2 -0.9
KEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
KEV Kevo 59.15 9 ep P 20 27 34.2 -0.9
comp=Z,5.0nm,0.8s,mb4.6
ARCES ARCESS Array B 59.20 10 P P 20 27 35.5 +0.1
comp=Z,4.7nm,0.8s,mb4.5,baz=345,slow=8.9,SNR=3.8
ARCES LR LR 20 52 45.9
comp=Z,783nm,19.6s,MS4.8,baz=192,slow=36
TAOE Nuku Hiva Isla 59.50 192 eLR LR 20 45 00.4
comp=Z,2µm,26.4s
SJG San Juan 59.58 98 PFAKE 20 27 50.0 +11
SJG LR LR
comp=Z,693nm,20.0s,MS4.8
MTP Monte Pirata 59.97 98 eP P 20 27 40.2 -1.2
comp=Z,20nm,1.2s,mb5.0
PAYG Puerto Ayora 60.97 133 PFAKE 20 28 00.0 +12
PAYG LR LR
comp=Z,618nm,22.0s,MS4.7
LVZ Lovozero 61.63 7 PFAKE 20 28 00.0 +8.0
LVZ LR LR
comp=Z,734nm,19.0s,MS4.9
LVZ Lovozero 61.63 7|| eP P 20 27 53.7 +1.7
LVZ pmax pmax
comp=Z,36nm,1.7s,mb5.2
LVZ MLR MLR
comp=Z,634nm,19.0s,MS4.8
ANWB Willy Bob 62.69 95 PFAKE 20 28 10.0 +10
ANWB LR LR
comp=Z,980nm,22.0s,MS4.9
MDJ Mudanjiang 63.04 308 P P 20 28 00.0 -1.8
MDJ pP pP 20 28 03.0 -8.6
MDJ sP sP 20 28 05.3 -10
MDJ PcP PcP 20 28 38.8 -0.6
MDJ S S 20 36 30.0 0.0
MDJ sS sS 20 36 36.0 -10
MDJ pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
MDJ pmax pmax
comp=Z,86nm,3.8s
MDJ LR LR
comp=N,360nm,24.8s,MS4.7
MDJ LR LR
comp=E,520nm,22.8s,MS4.7
MDJ LR LR
comp=Z,840nm,20.7s,MS4.9
SDV Santo Domingo 63.81 109 PFAKE 20 28 20.0 +13
SDV LR LR
comp=Z,190nm,22.0s,MS4.2
MAJO Matsushiro 64.03 296 PFAKE 20 28 20.0 +11
MAJO LR LR
comp=Z,667nm,22.0s,MS4.8
MJAR Matsushiro Arr 64.03 296 P P 20 28 06.9 -1.6
comp=Z,1.5nm,0.7s,mb4.2,baz=48,slow=5.6,SNR=5.7
MJAR LR LR 20 52 06.2
comp=Z,228nm,20.4s,MS4.3,baz=45,slow=32
NOA NORSAR Array B 64.78 20 P P 20 28 14.1 +1.1
comp=Z,3.0nm,0.9s,mb4.3,baz=334,slow=6.3,SNR=4.3
NOA LR LR 20 57 49.5
comp=Z,673nm,18.6s,MS4.9,baz=0.0,slow=37
ROSC El Rosal 64.80 115 P P 20 28 14.4 +0.6
comp=Z,2.8nm,0.3s,mb4.7,baz=326,slow=9.7,SNR=4.0
ROSC LR LR 21 01 13.1
comp=Z,233nm,18.6s,MS4.4,baz=108,slow=40
FDF Fort de France 65.27 97 PFAKE 20 28 30.0 +13
FDF LR LR
comp=Z,1µm,21.0s,MS5.1
JHJ Hachijo jima 2 65.52 293 LR LR 20 50 56.0
comp=Z,156nm,20.5s,MS4.2,baz=156,slow=31
KONO Kongsberg 65.67 21 PFAKE 20 28 30.0 +11
KONO LR LR
comp=Z,523nm,20.0s,MS4.7
ESK Eskdalemuir 65.84 30 PFAKE 20 28 30.0 +10
ESK LR LR
comp=Z,1µm,19.0s,MS5.2
JOF Joensuu 66.23 9 eP P 20 28 22.5 +0.2
JOF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
JOF Joensuu 66.23 9 ep P 20 28 22.5 +0.2
comp=Z,7.3nm,0.8s,mb4.8
OTAV Otavalo 66.24 121 eP P 20 28 24.2 +1.1
comp=Z,15nm,1.3s,mb4.9
OTAV LR LR
comp=Z,294nm,22.0s,MS4.5
KAF Kangasniemi 66.42 12 eP P 20 28 23.7 +0.1
KAF pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
KAF Kangasniemi 66.42 12 ep P 20 28 23.7 +0.1
comp=Z,2.4nm,0.7s,mb4.3
GRGR Grenville 66.91 99 PFAKE 20 28 40.0 +13
GRGR LR LR
comp=Z,623nm,21.0s,MS4.8
FINES FINESS Array B 67.03 12 P P 20 28 27.6 +0.2
comp=Z,12nm,1.0s,mb4.9,baz=352,slow=5.8,SNR=12
FINES LR LR 20 58 52.1
comp=Z,911nm,18.5s,MS5.0,baz=345,slow=37
BBGH Gun Hill 67.48 97 PFAKE 20 28 40.0 +9.0
BBGH LR LR
comp=Z,2µm,22.0s,MS5.2
TLY Talaya 68.74 327 PFAKE 20 28 50.0 +12
TLY LR LR

comp=Z,791nm,19.0s,MS5.0
TLY Talaya 68.74 327 *e*P **P** **20 28 44.4 +6.0**
TLY pmax pmax
comp=Z,12nm,1.3s,mb4.7
KLMR Klimovskoe 68.95 5 *e*P **P** **20 28 39.5 0.0**
KLMR *e*S S 20 37 41.8 +0.5
KLMR pmax pmax
comp=Z,64nm,1.4s,mb5.4
KLMR pmax pmax
comp=Z,78nm,7.6s
KLMR MLR MLR
comp=Z,635nm,15.0s,MS5.0
KSRS Korea Array 69.09 304 P **P** **20 28 40.0 -0.9**
comp=Z,1.0nm,0.6s,mb3.9,baz=46,slow=5.4,SNR=4.6
MOY Mondy 69.65 329 *e*P **P** **20 28 45.2 +1.2**
MOY pmax pmax
comp=Z,35nm,3.0s
PPT Papeete 69.69 200 *e*S S 20 37 49.6 -1.3
comp=Z,1μm,27.5s
PPT *e*LR LR 20 49 35.1
comp=Z,2μm,30.0s,baz=10
PPT Papeete 69.69 200 LR LR 20 50 04.1
comp=Z,475nm,21.8s,MS4.7,baz=28,slow=28
INCN Inchon 69.76 304 PFAKE 20 29 00.0 +15
INCN LR LR
comp=Z,296nm,19.0s,MS4.5
ZAK Zakamensk 69.95 327 *e*P **P** **20 29 00.7 +15**
ZAK pmax pmax
comp=Z,2.0nm,1.9s,mb3.7
SONM Songino Array 70.93 324 P **P** **20 28 52.5 +0.6**
comp=Z,2.0nm,1.0s,mb4.0,baz=33,slow=5.2,SNR=6.5
SONM LR LR 21 00 19.3
comp=Z,1μm,20.4s,MS5.1,baz=26,slow=36
ROSF Rostrenen 71.65 34 *e*P **P** **20 28 55.1 -1.1**
comp=Z,101nm,1.8s,mb5.2
ROSF Rostrenen 71.65 34 *e*P **P** **20 28 55.1 -1.1**
comp=Z,50nm,1.8s,mb5.2
ROSF Rostrenen 71.65 34 *e*P **P** **20 28 55.1 -1.1**
ROSF pmax pmax
comp=Z,50nm,1.8s,mb5.1
NVS Novosibirsk 71.68 341 *e*P **P** **20 28 55.2 -1.1**
NVS *e* 20 38 40.0
NVS pmax pmax
comp=Z,21nm,1.9s,mb4.7
NVS pmax pmax
comp=N,10.0nm,2.1s
NVS pmax pmax
comp=E,4.0nm,1.3s
SGMF Saint Gilles 71.97 34 *e*P **P** **20 28 57.2 -1.0**
QUIF Quistinic 72.04 34 *e*P **P** **20 28 57.4 -1.2**
comp=E,89nm,1.6s,mb5.2
QUIF Quistinic 72.04 34 *e*P **P** **20 28 57.4 -1.2**
comp=E,45nm,1.6s,mb5.2
QUIF Quistinic 72.04 34 *e*P **P** **20 28 57.4 -1.2**
QUIF pmax pmax
comp=Z,45nm,1.6s,mb5.2
ZAA0 Zalesovo Array 72.16 339 *e*P **P** **20 28 58.3 -0.8**
ZALV Zalesovo Beam 72.16 339 P **P** **20 28 58.7 -0.4**
ZALV LR LR 21 04 08.2
ZALV Zalesovo Beam 72.16 339 P **P** **20 28 58.7 -0.4**
comp=Z,3.0nm,0.7s,mb4.3,baz=31,slow=6.9,SNR=11
ZALV LR LR 21 04 08.2
comp=Z,369nm,18.9s,MS4.7,baz=20,slow=39
FLN La Foliniere 72.27 32 *e*P **P** **20 28 58.7 -1.3**
FLN *e*MLR MLR
comp=Z,1μm,22.0s,MS4.9
FLN La Foliniere 72.27 32 *e*P **P** **20 28 58.7 -1.3**
FLN MLR MLR
comp=Z,1μm,22.0s,MS5.2
GRR Gorron 72.46 33 *e*P **P** **20 29 00.3 -0.8**
comp=Z,55nm,1.5s,mb5.0
GRR Gorron 72.46 33 *e*P **P** **20 29 00.3 -0.8**
comp=Z,28nm,1.5s,mb5.0
GRR Gorron 72.46 33 *e*P **P** **20 29 00.3 -0.8**
GRR pmax pmax
comp=Z,28nm,1.5s,mb5.0
LDF La Druitiere 72.54 32 *e*P **P** **20 29 00.4 -1.2**
comp=Z,21nm,1.1s,mb4.7
LDF La Druitiere 72.54 32 *e*P **P** **20 29 00.4 -1.2**
comp=Z,11nm,1.1s,mb4.7
LDF La Druitiere 72.54 32 *e*P **P** **20 29 00.4 -1.2**
LDF pmax pmax
comp=Z,11nm,1.1s,mb4.7
BAIF Baives 72.69 29 *e*P **P** **20 29 01.5 -0.9**
comp=Z,85nm,1.6s,mb5.1
BAIF Baives 72.69 29 *e*P **P** **20 29 01.5 -0.9**
comp=Z,43nm,1.6s,mb5.1
BAIF Baives 72.69 29 *e*P **P** **20 29 01.5 -0.9**
BAIF pmax pmax
comp=Z,43nm,1.6s,mb5.1
BCLA Clavier 72.70 28 P **P** **20 29 04.0 +1.4**
comp=Z,11nm,1.8s,mb4.5
MEM Membach 72.75 28 P **P** **20 29 05.4 +2.6**
comp=Z,14nm,1.9s,mb4.6
DOU Dourbes 72.77 29 P **P** **20 29 04.6 +1.7**
comp=Z,11nm,1.8s,mb4.5
GIVF Givet 72.84 29 *e*P **P** **20 29 02.5 -0.8**
SVE Sverdlovsk 72.95 354 *e*P **P** **20 29 07.0 +3.2**
SVE pmax pmax
comp=Z,24nm,1.6s,mb4.9
BJI Beijing 73.04 313 P **P** **20 29 03.5 -1.2**
BJI S S 20 38 29.3 -0.2
BJI pmax pmax
comp=Z,4.0nm,1.6s,mb4.1
BJI pmax pmax
comp=Z,130nm,5.3s
BJI LR LR
comp=N,490nm,19.1s,MS5.0
BJI LR LR
comp=E,610nm,19.9s,MS5.0
BJI LR LR
comp=Z,360nm,21.2s,MS4.6
RKT Rikitea 73.16 185 *e*S S 20 38 34.8 +4.0
comp=Z,961nm,31.8s
RKT *e*LR LR 20 51 22.9
comp=Z,1μm,27.8s,baz=0.4
ARU Arti 73.47 355 *e*P **P** **20 29 07.5 +0.5**
comp=Z,31nm,1.4s,mb5.0
ARU LR LR
comp=Z,429nm,21.0s,MS4.7
ARU Arti 73.47 355 *d*i P **P** **20 29 09.2 +2.3**
ARU *e* 20 31 47.5
ARU PPP 20 33 34.7
ARU S S 20 38 40.8 +7.0
ARU SS SS 20 43 18.3 +3.0
ARU pmax pmax
comp=Z,30nm,1.7s,mb5.0
ARU MLR MLR
comp=Z,405nm,22.0s,MS4.7
SUW Suwalki 73.70 16 *e*P **P** **20 29 08.9 +0.5**
comp=Z,34nm,1.1s,mb5.2
SUW Suwalki 73.70 16 *e*P **P** **20 29 08.9 +0.6**
SUW pmax pmax
comp=Z,34nm,1.1s,mb5.2
CLL Collm 74.05 23 *e*P **P** **20 29 10.0 -0.4**
CLL *e* pP 20 29 18.0 -2.4
CLL LR LR
comp=Z,600nm,17.9s,MS4.9
CLL Collm 74.05 23 *e*P **P** **20 29 10.0 -0.4**
CLL *e* pP 20 29 18.0 -2.4
CLL *e* pP 20 29 21.0 +0.6
CLL LmH 21 03 00.0
comp=N,400nm,18.1s
CLL LmH 21 03 00.0
comp=E,300nm,18.8s
MFF Saint Martin d 74.24 33 *e*P **P** **20 29 10.7 -0.9**
comp=E,19nm,1.0s,mb4.7
MFF Saint Martin d 74.24 33 *e*P **P** **20 29 10.7 -0.9**
comp=E,9.4nm,1.0s,mb4.7
MFF Saint Martin d 74.24 33 *e*P **P** **20 29 10.7 -0.9**
MFF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
MOX Moxa 74.29 24 *e*P **P** **20 29 12.9 +1.1**
comp=Z,14nm,0.9s,mb4.9
MOX
comp=Z,500nm,18.0s
MOX Moxa 74.29 24 *e*P **P** **20 29 12.9 +1.1**
MOX pmax pmax
comp=Z,14nm,0.9s,mb4.9
MOX MLR MLR
comp=Z,500nm,18.0s,MS4.8
MEZF Maizieres J'vi 74.32 29 *e*P **P** **20 29 11.1 -0.9**
OBN Obninsk 74.42 8 *e*P **P** **20 29 13.4 +0.8**
comp=Z,47nm,1.2s,mb5.3
OBN LR LR
comp=Z,506nm,21.0s,MS4.8

OBN Obninsk 74.42 8 *i*P **P** **20 29 13.4 +0.9**
OBN *i* S S 20 38 47.5 +2.9
OBN *e*SS SS 20 43 40.1 +10
OBN pmax pmax
comp=Z,22nm,1.0s,mb5.0
OBN MLR MLR
comp=Z,600nm,17.0s,MS5.0
HHC Hu-ho-hao-te 74.51 316 *e*P **P** **20 29 13.3 0.0**
HHC PP PP 20 32 01.5 +2.2
HHC S S 20 38 45.0 -1.0
HHC SS SS 20 43 34.5 +2.6
HHC pmax pmax
comp=Z,14nm,0.8s,mb4.9
HHC pmax pmax
comp=Z,120nm,4.6s
HHC LR LR
comp=N,560nm,17.1s,MS5.2
HHC LR LR
comp=E,850nm,16.3s,MS5.2
HHC LR LR
comp=Z,450nm,23.8s
SFTF Sexfontaines 74.58 29 *e*P **P** **20 29 12.5 -1.0**
HYF Humbligny 74.62 31 *e*P **P** **20 29 13.0 -0.8**
BRG Berggiesshubel 74.68 23 *e*P **P** **20 29 15.4 +1.3**
comp=Z,3.8nm,1.1s,mb4.2
BRG *e* pP 20 29 25.6 +1.5
comp=Z,23nm,1.5s
BRG
comp=N,411nm,17.7s
BRG
comp=E,346nm,14.8s
BRG
comp=Z,686nm,17.0s
BRG Berggiesshubel 74.68 23 *e*P **P** **20 29 15.4 +1.3**
BRG *e* pP 20 29 25.6 +1.5
BRG pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
BRG MLR MLR
comp=N,246nm,17.7s,MS4.7
BRG MLR MLR
comp=E,207nm,14.8s,MS4.7
BRG MLR MLR
comp=Z,411nm,17.0s,MS4.8
NKC Novy Kostel 74.89 24 *e*P **P** **20 29 18.9 +3.6**
NKC *e* pP 20 29 27.2 +1.9
NKC MLR MLR
comp=Z,600nm,18.2s,MS4.9
NKC Novy Kostel 74.89 24 *e*P **P** **20 29 18.9 +3.6**
NKC *e*PCP PcP 20 29 27.2 -1.9
NKC AMS AMS 21 03 30.0
comp=Z,600nm,18.2s
LOR Lormes 75.02 31 *e*P **P** **20 29 15.3 -0.8**
comp=Z,69nm,1.5s,mb5.1
LOR *e*MLR MLR
comp=Z,1μm,19.8s,MS4.9
LOR Lormes 75.02 31 *e*P **P** **20 29 15.3 -0.8**
comp=Z,34nm,1.5s,mb5.1
LOR LR LR
comp=Z,1μm,19.8s,MS5.2
LOR Lormes 75.02 31 *e*P **P** **20 29 15.3 -0.8**
LOR pmax pmax
comp=Z,34nm,1.5s,mb5.1
LOR MLR MLR
comp=Z,1μm,19.8s,MS5.2
CDF Champ du Feu 75.08 28 *e*P **P** **20 29 15.7 -0.8**
comp=Z,37nm,1.3s,mb4.8
CDF Champ du Feu 75.08 28 *e*P **P** **20 29 15.7 -0.8**
comp=Z,18nm,1.3s,mb4.8
CDF Champ du Feu 75.08 28 *e*P **P** **20 29 15.7 -0.8**
CDF pmax pmax
comp=Z,19nm,1.3s,mb4.9
SSF Saint Saulge 75.09 31 *e*P **P** **20 29 15.5 -1.0**
comp=Z,33nm,1.2s,mb4.8
SSF Saint Saulge 75.09 31 *e*P **P** **20 29 15.5 -1.0**
comp=Z,16nm,1.2s,mb4.8
SSF Saint Saulge 75.09 31 *e*P **P** **20 29 15.5 -1.0**
SSF pmax pmax
comp=Z,16nm,1.2s,mb4.8
PVCC Panska Ves 75.15 23 *e*P **P** **20 29 24.6 +7.8**
PVCC MLR MLR
comp=Z,800nm,16.7s,MS5.1
PVCC Panska Ves 75.15 23 *e*pP pP 20 29 24.6 -2.2
PVCC AMS AMS 21 04 20.0
comp=Z,800nm,16.7s
HAU Haudompre 75.16 29 *e*P **P** **20 29 15.9 -1.0**
comp=Z,29nm,1.3s,mb4.8
HAU *e*MLR MLR
comp=Z,835nm,21.0s,MS4.7
HAU Haudompre 75.16 29 *e*P **P** **20 29 15.9 -1.0**
comp=Z,15nm,1.3s,mb4.8
HAU LR LR
comp=Z,840nm,21.0s,MS5.0
HAU Haudompre 75.16 29 *e*P **P** **20 29 15.9 -1.0**
HAU pmax pmax
comp=Z,15nm,1.3s,mb4.8
HAU MLR MLR
comp=Z,840nm,21.0s,MS5.0
ECH Echery 75.22 28 PFAKE 20 29 30.0 +13
ECH LR LR
comp=Z,682nm,21.0s,MS4.9
AVF Avril sur Loir 75.28 31 *e*P **P** **20 29 16.5 -1.1**
comp=Z,68nm,1.6s,mb5.0
AVF Avril sur Loir 75.28 31 *e*P **P** **20 29 16.5 -1.1**
comp=Z,34nm,1.6s,mb5.0
AVF Avril sur Loir 75.28 31 *e*P **P** **20 29 16.5 -1.1**
AVF pmax pmax
comp=Z,34nm,1.6s,mb5.0
BGF Bois d'Agland 75.31 32 *e*P **P** **20 29 16.6 -1.2**
comp=Z,23nm,1.1s,mb4.7
BGF Bois d'Agland 75.31 32 *e*P **P** **20 29 16.6 -1.2**
comp=Z,11nm,1.1s,mb4.7
BGF Bois d'Agland 75.31 32 *e*P **P** **20 29 16.6 -1.2**
BGF pmax pmax
comp=Z,11nm,1.1s,mb4.7
TCF Toulx Ste Croi 75.33 32 *e*P **P** **20 29 16.9 -1.0**
comp=Z,90nm,1.7s,mb5.1
TCF Toulx Ste Croi 75.33 32 *e*P **P** **20 29 16.9 -1.0**
comp=Z,45nm,1.7s,mb5.1
TCF Toulx Ste Croi 75.33 32 *e*P **P** **20 29 16.9 -1.0**
TCF pmax pmax
comp=Z,45nm,1.7s,mb5.1
BFO Black Forest 75.47 27 *e*P **P** **20 29 19.5 +0.9**
comp=Z,31nm,1.5s,mb5.0
BFO LR LR
comp=Z,976nm,19.0s,MS5.1
BFO Black Forest 75.47 27 *e*P **P** **20 29 19.5 +0.8**
BFO pmax pmax
comp=Z,31nm,1.5s,mb5.0
BFO MLR MLR
comp=Z,976nm,19.0s,MS5.1
HINF Hinteralfeld 75.49 28 *e*P **P** **20 29 17.8 -1.0**
comp=Z,47nm,1.4s,mb4.9
HINF Hinteralfeld 75.49 28 *e*P **P** **20 29 17.8 -1.0**
comp=Z,24nm,1.4s,mb4.9
HINF Hinteralfeld 75.49 28 *e*P **P** **20 29 17.8 -1.0**
HINF pmax pmax
comp=Z,23nm,1.4s,mb4.9
UPC Upice 75.52 22 *e*P **P** **20 29 22.4 +3.5**
UPC Upice 75.52 22 *e*P **P** **20 29 22.4 +3.5**
PRA Prague 75.54 23 AMS AMS 21 06 30.0
SMF Signal de Mont 75.56 31 *e*P **P** **20 29 17.9 -1.4**
comp=Z,24nm,1.3s,mb4.7
SMF Signal de Mont 75.56 31 *e*P **P** **20 29 17.9 -1.4**
comp=Z,12nm,1.3s,mb4.7
SMF Signal de Mont 75.56 31 *e*P **P** **20 29 17.9 -1.4**
SMF pmax pmax
comp=Z,12nm,1.3s,mb4.7
PRU Pruhonice 75.65 23 *e*P PcP 20 29 31.9 -0.5
PRU MLR MLR
comp=Z,800nm,15.9s,MS5.1
PRU Pruhonice 75.65 23 *e*PCP PcP 20 29 31.9 -0.5
PRU *e*S S 20 39 12.2 +14
PRU AMS AMS 21 05 00.0
comp=Z,800nm,15.9s
BRVK Borovoye 75.67 348 *e*P **P** **20 29 22.4 +2.6**
comp=Z,18nm,1.4s,mb4.8
BRVK LR LR
comp=Z,550nm,20.0s,MS4.9
BRVK Borovoye 75.67 348 *e*P **P** **20 29 22.4 +2.6**
BRVK pmax pmax
comp=Z,18nm,1.4s,mb4.8
BRVK MLR MLR
comp=Z,550nm,20.0s,MS4.9
BVAR Borovoye Array 75.69 347 P **P** **20 29 19.8 0.0**
comp=Z,2.9nm,0.9s,mb4.2,baz=9.5,slow=4.5,SNR=8.3
DPC Dobruska-Polom 75.74 22 *e*P **P** **20 29 21.9 +1.7**

DPC *e* pP 20 29 32.4 +2.2
DPC MLR MLR
comp=Z,800nm,20.0s,MS5.0
DPC Dobruska-Polom 75.74 22 *e*P **P** **20 29 21.9 +1.7**
DPC *e*PCP PcP 20 29 32.4 -0.4
DPC *e*S S 20 39 11.1 +12
DPC AMS AMS 21 04 00.0
comp=Z,800nm,20.0s
RAR Rarotonga 75.86 209 LR LR 20 54 45.9
comp=Z,414nm,18.6s,MS4.8,baz=349,slow=30
RJF Les Rejaudoux 75.95 33 *e*P **P** **20 29 20.2 -1.3**
comp=Z,89nm,1.5s,mb5.2
RJF *e*MLR MLR
comp=Z,1μm,21.0s,MS4.8
RJF Les Rejaudoux 75.95 33 *e*P **P** **20 29 20.2 -1.3**
comp=Z,44nm,1.5s,mb5.2
RJF LR LR
comp=Z,1μm,21.0s,MS5.1
RJF Les Rejaudoux 75.95 33 *e*P **P** **20 29 20.2 -1.3**
RJF pmax pmax
comp=Z,44nm,1.5s,mb5.2
RJF MLR MLR
comp=Z,1μm,21.0s,MS5.1
LFF La Frestale 75.99 34 *e*P **P** **20 29 21.1 -0.6**
comp=Z,47nm,1.2s,mb5.0
LFF La Frestale 75.99 34 *e*P **P** **20 29 21.1 -0.6**
comp=Z,24nm,1.2s,mb5.0
LFF La Frestale 75.99 34 *e*P **P** **20 29 21.1 -0.6**
LFF pmax pmax
comp=Z,24nm,1.2s,mb5.0
KHC Kasperske Hory 76.19 24 *e*P **P** **20 29 26.1 +3.3**
KHC *e* pP 20 29 34.9 +2.1
KHC MLR MLR
comp=Z,600nm,14.1s,MS5.0
KHC Kasperske Hory 76.19 24 *e*P **P** **20 29 26.1 +3.3**
KHC *e*PCP PcP 20 29 34.9 +0.1
KHC *e*S S 20 39 15.4 +11
KHC AMS AMS 21 05 40.0
comp=Z,600nm,14.1s
CABF La Chapelle 76.32 30 *e*P **P** **20 29 23.1 -0.5**
comp=Z,196nm,1.7s,mb5.3
CABF La Chapelle 76.32 30 *e*P **P** **20 29 23.1 -0.5**
comp=Z,68nm,1.7s,mb5.3
CABF La Chapelle 76.32 30 *e*P **P** **20 29 23.1 -0.5**
CABF pmax pmax
comp=Z,68nm,1.7s,mb5.3
CAF Calviac 76.47 33 *e*P **P** **20 29 23.4 -1.0**
comp=Z,46nm,1.5s,mb4.9
CAF Calviac 76.47 33 *e*P **P** **20 29 23.4 -1.0**
comp=Z,23nm,1.5s,mb4.9
CAF Calviac 76.47 33 *e*P **P** **20 29 23.4 -1.0**
CAF pmax pmax
comp=Z,23nm,1.5s,mb4.9
KURK Kurchatov 76.52 342 P **P** **20 29 24.6 0.0**
comp=Z,38nm,1.0s,mb5.3,SNR=5.4
KURK Kurchatov 76.52 342 *e*P **P** **20 29 24.3 -0.3**
comp=Z,16nm,1.4s,mb4.8
KURK LR LR
comp=Z,432nm,19.0s,MS4.8
KURK Kurchatov 76.52 342 P **P** **20 29 25.1 +0.5**
comp=Z,5.4nm,0.9s,mb4.5,baz=19,slow=5.2,SNR=9.1
KURK Kurchatov 76.52 342|| *e*P **P** **20 29 24.5 -0.1**
KURK pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
TREC Trest 76.52 22 AMS AMS 21 05 30.0
comp=Z,1μm,16.1s
MTE Manteigas 76.59 42 PFAKE 20 29 40.0 +15
MTE LR LR
comp=Z,506nm,19.0s,MS4.8
GUMO Guam 76.61 275 PFAKE 20 29 40.0 +14
GUMO LR LR
comp=Z,580nm,21.0s,MS4.9
OKC Ostrava-Krasne 76.64 21 *e*P **P** **20 29 26.7 +1.4**
OKC *e* pP 20 29 37.0 +1.7
OKC MLR MLR
comp=Z,600nm,16.2s,MS5.0
OKC Ostrava-Krasne 76.64 21 *e*P **P** **20 29 26.7 +1.4**
OKC *e*PCP PcP 20 29 37.0 +0.3
OKC AMS AMS 21 05 10.0
comp=Z,600nm,16.2s
OJC Ojcow 76.64 19 *e*P **P** **20 29 25.2 -0.1**
VRAC Vranov 76.78 22 ||P **P** **20 29 25.4 -0.7**
VRAC Vranov 76.78 22 ||P **P** **20 29 25.4 -0.7**
SJPF Ste Jean 76.84 36 *e*P **P** **20 29 24.9 -1.7**
comp=Z,54nm,1.4s,mb5.0
SJPF Ste Jean 76.84 36 *e*P **P** **20 29 24.9 -1.7**
comp=Z,27nm,1.4s,mb5.0
SJPF Ste Jean 76.84 36 *e*P **P** **20 29 24.9 -1.7**
SJPF pmax pmax
comp=Z,27nm,1.4s,mb5.0
SSB Saint Sauveur 77.00 31 PFAKE 20 29 40.0 +13
SSB LR LR
comp=Z,922nm,20.0s,MS5.1
ETSF Etsaut 77.27 36 *e*P **P** **20 29 27.9 -1.1**
comp=Z,22nm,1.1s,mb4.7
ETSF Etsaut 77.27 36 *e*P **P** **20 29 27.9 -1.1**
comp=Z,11nm,1.1s,mb4.7
ETSF Etsaut 77.27 36 *e*P **P** **20 29 27.9 -1.1**
ETSF pmax pmax
comp=Z,11nm,1.1s,mb4.7
VIVF Saint-Julien-l 77.42 31 *e*P **P** **20 29 29.0 -0.8**
TUE Stuetta 77.44 27 *e*P **P** **20 29 32.6 +2.7**
comp=Z,40nm,1.8s,mb5.0
EPF Esparros 77.49 35 *e*P **P** **20 29 29.0 -1.2**
LPL La Plagne 77.50 30 *e*P **P** **20 29 30.1 -0.1**
comp=Z,19nm,1.2s,mb4.6
LPL La Plagne 77.50 30 *e*P **P** **20 29 30.1 -0.1**
comp=Z,9.5nm,1.2s,mb4.6
LPL La Plagne 77.50 30 *e*P **P** **20 29 30.1 -0.1**
LPL pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
LPG La Plagne 77.52 30 *e*P **P** **20 29 30.5 +0.1**
comp=Z,63nm,1.6s,mb5.0
LPG La Plagne 77.52 30 *e*P **P** **20 29 30.5 +0.1**
comp=Z,32nm,1.6s,mb5.0
LPG La Plagne 77.52 30 *e*P **P** **20 29 30.5 +0.1**
LPG pmax pmax
comp=Z,32nm,1.6s,mb5.0
STHS Stebnicka Huta 77.71 19 *e*P **P** **20 29 34.6 +3.3**
comp=Z,5.3nm,1.4s,mb4.3
STHS *e*PcP PcP 20 29 44.5 +3.2
STHS Stebnicka Huta 77.71 19 *e*P **P** **20 29 34.6 +3.3**
STHS *e* pP 20 29 44.5 +3.2
STHS pmax pmax
comp=Z,5.0nm,1.4s,mb4.2
STHS Stebnicka Huta 77.71 19 *e*P **P** **20 29 34.6 +3.3**
STHS *e*PCP PcP 20 29 44.5 +3.2
ORIF Oris-en-Rattie 77.76 30 *e*P **P** **20 29 30.8 -0.9**
ORIF *e*MLR MLR
comp=Z,1μm,20.2s,MS5.0
KWP Kalwaria Pacla 77.80 18 PFAKE 20 29 40.0 +8.2
KWP LR LR
comp=Z,1μm,21.0s,MS5.2
LASF Ste Croix 77.83 32 *e*P **P** **20 29 31.4 -0.7**
comp=Z,72nm,1.9s,mb5.0
KOLL Kolacno 77.88 21 *e*P **P** **20 29 33.9 +1.6**
KOLL Kolacno 77.88 21 *e*P **P** **20 29 33.9 +1.6**
AKASG Malin Array Be 77.89 13 P **P** **20 29 32.5 +0.1**
AKASG LR LR 21 04 39.9
AKASG Malin Array Be 77.89 13 P **P** **20 29 32.5 +0.1**
comp=Z,4.7nm,0.8s,mb4.5,baz=346,slow=5.4,SNR=14
AKASG LR LR 21 04 39.9
comp=Z,936nm,19.9s,MS5.1,baz=325,slow=36
AKASG Malin Array Be 77.89 13 *i* P **P** **20 29 32.2 -0.1**
AKASG pmax pmax
comp=Z,5.0nm,0.8s
AKBB Malin Array Si 77.89 13 *e*P **P** **20 29 30.9 -1.4**
KIEV Kiev 77.89 13 *e*P **P** **20 29 32.6 +0.3**
comp=Z,17nm,1.2s,mb4.8
KIEV LR LR
comp=Z,981nm,20.0s,MS5.1
KIEV Kiev 77.89 13 *e*P **P** **20 29 32.6 +0.3**
KIEV pmax pmax
comp=Z,17nm,1.2s,mb4.8
KIEV MLR MLR
comp=Z,981nm,20.0s,MS5.1
MTLF Montolieu 77.90 34 *e*P **P** **20 29 31.5 -1.0**
comp=Z,40nm,1.6s,mb4.8
MTLF Montolieu 77.90 34 *e*P **P** **20 29 31.5 -1.0**
comp=Z,20nm,1.6s,mb4.8
MTLF Montolieu 77.90 34 *e*P **P** **20 29 31.5 -1.0**
MTLF pmax pmax
comp=Z,20nm,1.6s,mb4.8
EVO Evora 77.94 43 *e*P **P** **20 29 30.6 -2.2**
comp=Z,73nm,1.7s,mb5.0
EVO *e*MLR MLR

comp=Z,851nm,19.5s,MS4.8
NJ2 Nanjing 78.01 306 *e*P P **20 29 34.5 +1.2**
NJ2 pP pP 20 29 39.0 -4.3
NJ2 sP sP 20 29 41.5 -5.5
NJ2 S S 20 39 25.0 +0.3
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
NJ2 pmax pmax
comp=Z,160nm,8.8s
NJ2 LR LR
comp=N,670nm,23.9s,MS5.0
NJ2 LR LR
comp=E,660nm,27.0s,MS5.0
NJ2 LR LR
comp=Z,690nm,27.2s,MS4.8
VYHS Vyhne 78.06 21 *e*P P **20 29 36.6 +3.3**
comp=Z,6.2nm,1.6s,mb4.3
VYHS *e*PcP PcP 20 29 44.2 +1.3
VYHS Vyhne 78.06 21 *e*P P **20 29 36.6 +3.3**
VYHS *e* pP 20 29 44.2 +0.9
VYHS pmax pmax
comp=Z,6.0nm,1.6s,mb4.3
VYHS Vyhne 78.06 21 *e*P P **20 29 36.6 +3.3**
VYHS *e*PCP PcP 20 29 44.2 +1.3
MBDF Montbardon 78.22 30 *e*P P **20 29 34.1 -0.1**
CRVS Cervenica-Dubn 78.24 19 *e*P P **20 29 38.1 +3.8**
comp=Z,67nm,3.3s
CRVS *e*PcP PcP 20 29 47.1 +3.4
CRVS Cervenica-Dubn 78.24 19 *e*P P **20 29 38.1 +3.8**
CRVS *e* pP 20 29 47.1 +2.8
CRVS pmax pmax
comp=Z,67nm,3.3s
CRVS Cervenica-Dubn 78.24 19 *e*P P **20 29 38.1 +3.8**
CRVS *e*PCP PcP 20 29 47.1 +3.4
KECS Kecovo 78.43 20 *e*P P **20 29 37.6 +2.2**
comp=Z,2.0nm,0.9s,mb4.0
KECS Kecovo 78.43 20 *e*P P **20 29 37.6 +2.2**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
KECS Kecovo 78.43 20 *e*P P **20 29 37.6 +2.2**
SMRF Simiane la Rot 78.50 31 *e*P P **20 29 35.6 -0.2**
comp=Z,83nm,1.6s,mb5.1
SMRF Simiane la Rot 78.50 31 *e*P P **20 29 35.6 -0.2**
comp=Z,83nm,1.6s,mb5.4
VSR Storozhevoye 78.51 7 *e*P P **20 29 36.3 +0.6**
VSR pmax pmax
comp=N,20nm,1.4s
VSR pmax pmax
comp=Z,20nm,1.4s,mb4.8
VSR pmax pmax
comp=E,2.0nm,0.3s
VSR MLR MLR
comp=N,320nm,14.0s,MS4.9
VSR MLR MLR
comp=E,180nm,14.0s,MS4.9
VSR MLR MLR
comp=Z,490nm,14.0s,MS5.0
PAB San Pablo 78.64 40 PFAKE 20 29 50.0 +13
PAB LR LR
comp=Z,726nm,19.0s,MS5.0
UZH Uzhgorod 78.67 18 *e*P P **20 29 34.0 -2.7**
UZH *e* 20 29 40.6
UZH *i* 20 29 48.4
UZH *e*S S 20 39 26.4 -4.8
UZH MLR MLR
comp=N,600nm,20.0s,MS5.0
UZH MLR MLR
comp=E,500nm,20.0s,MS5.0
UZH MLR MLR
comp=Z,400nm,20.0s,MS4.8
ESDC Sonseca Array 78.69 40 P P **20 29 37.2 +0.2**
ESDC LR LR 21 01 59.2
ESDC Sonseca Array 78.69 40 P P **20 29 37.2 +0.2**
comp=Z,0.3nm,0.4s,baz=312,slow=5.1,SNR=5.5
ESDC LR LR 21 01 59.2
comp=Z,458nm,18.2s,MS4.8,baz=305,slow=34
ESLA Sonseca Array 78.69 40 PFAKE 20 29 50.0 +13
ESLA LR LR
comp=Z,4μm,19.0s,MS5.7
VORD Divnogorie 78.77 7 *e*P P **20 29 40.3 +3.2**
VORD pmax pmax
comp=N,7.0nm,0.5s
VORD pmax pmax
comp=E,4.0nm,0.5s
VORD pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
VORD MLR MLR
comp=N,580nm,17.0s,MS5.0
VORD MLR MLR
comp=E,110nm,17.0s,MS5.0
VORD MLR MLR
comp=Z,560nm,17.0s,MS5.0
VRHR Novokhopersk 78.80 5 *e*P P **20 29 33.8 -3.5**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,6.0nm,0.8s
VRHR pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SOKA Soboth 78.83 24⇑*i*pP P **20 29 38.9 +1.3**
comp=Z,19nm,1.6s,mb4.8
PSZ Piszkesteto 78.84 20 PFAKE 20 29 50.0 +12
PSZ LR LR
comp=Z,476nm,19.0s,MS4.8
SBF Sospel 79.20 30 *e*P P **20 29 38.7 -1.0**
comp=Z,44nm,1.2s,mb5.0
SBF Sospel 79.20 30 *e*P P **20 29 38.7 -1.0**
comp=Z,22nm,1.2s,mb5.0
SBF Sospel 79.20 30 *e*P P **20 29 38.7 -1.0**
SBF pmax pmax
comp=Z,22nm,1.2s,mb5.0
FRF La Foret Royal 79.22 31 *e*P P **20 29 38.8 -1.0**
comp=Z,57nm,1.6s,mb5.0
FRF La Foret Royal 79.22 31 *e*P P **20 29 38.8 -1.0**
comp=Z,29nm,1.6s,mb5.0
FRF La Foret Royal 79.22 31 *e*P P **20 29 38.8 -1.0**
FRF pmax pmax
comp=Z,29nm,1.6s,mb5.0
LMR La Mourre 79.38 31 *e*P P **20 29 39.6 -1.0**
comp=Z,32nm,1.4s,mb4.8
LMR La Mourre 79.38 31 *e*P P **20 29 39.6 -1.0**
comp=Z,16nm,1.4s,mb4.8
LMR La Mourre 79.38 31 *e*P P **20 29 39.6 -1.0**
LMR pmax pmax
comp=Z,16nm,1.4s,mb4.8
MK31 Makanchi Array 79.41 338 *e*P P **20 29 39.6 -1.2**
MKAR Makanchi Array 79.41 338 P P **20 29 40.1 -0.7**
comp=Z,2.2nm,0.8s,mb4.2,baz=45,slow=3.6,SNR=9.6
MKAR LR LR 21 08 37.5
comp=Z,447nm,18.5s,MS4.8,baz=14,slow=38
PKSM Moragy 80.16 22⇓P P **20 29 46.4 +1.6**
PKSM Moragy 80.16 22⇓*i*P P **20 29 46.4 +1.6**
BUR08 Bucovina Ar. S 80.18 17 *e*P P **20 29 48.4 +3.5**
BURAR Bucovina Array 80.21 17⇓P P **20 29 48.9 +3.8**
BURAR Bucovina Array 80.21 17⇓*i*P P **20 29 48.9 +3.8**
SFS San Fernando 80.45 43 PFAKE 20 30 00.0 +13
SFS LR LR
comp=Z,1μm,19.0s,MS5.3
ABKAR Akbulak array 80.53 353 *e*P P **20 29 47.9 +1.1**
comp=Z,20nm,1.0s,mb5.0
GTA Gaotai 80.60 323 *e*P P **20 29 48.3 +1.0**
GTA pP pP 20 29 52.5 -4.9
GTA sP sP 20 29 55.3 -5.7
GTA S S 20 39 54.0 +2.1
GTA SKS 20 40 00.0
GTA SS SS 20 45 08.5 +5.0
GTA pmax pmax
comp=Z,110nm,4.2s
GTA LR LR
comp=N,350nm,24.4s,MS4.8
GTA LR LR
comp=E,440nm,22.3s,MS4.8
GTA LR LR
comp=Z,200nm,19.6s,MS4.5
WMQ Urumqi 80.75 333 P P **20 29 49.5 +1.5**
WMQ pP pP 20 29 54.3 -3.8
WMQ sP sP 20 29 56.5 -5.3
WMQ PP PP 20 32 56.0 +4.6
WMQ *e*S S 20 39 55.8 +2.5
WMQ SKS 20 40 03.0
WMQ SS SS 20 45 12.3 +6.9
WMQ pmax pmax
comp=Z,11nm,1.1s,mb4.7
WMQ pmax pmax
comp=Z,160nm,4.0s
WMQ LR LR
comp=N,330nm,20.1s,MS4.9
WMQ LR LR
comp=E,560nm,24.4s,MS4.9
WMQ LR LR
comp=Z,500nm,21.2s,MS4.8
PGF Pioggiola 80.88 29 *e*P P **20 29 47.8 -1.0**
comp=Z,49nm,1.4s,mb5.0
PGF Pioggiola 80.88 29 *e*P P **20 29 47.8 -1.0**
comp=Z,24nm,1.4s,mb4.9
PGF Pioggiola 80.88 29 *e*P P **20 29 47.8 -1.0**
PGF pmax pmax
comp=Z,25nm,1.4s,mb5.0
XAN Xi'an 81.29 314 P P **20 29 49.3 -1.8**
LZH Lanzhou 81.82 319 *e*P P **20 29 53.0 -0.8**
LZH *e*S S 20 40 03.0 -1.7
LZH *e*SS SS 20 45 27.0 +5.1
LZH pmax pmax
comp=Z,27nm,1.3s,mb5.0
LZH pmax pmax
comp=Z,110nm,4.5s
LZH LR LR
comp=N,1μm,16.3s,MS5.4
LZH LR LR
comp=E,870nm,18.4s,MS5.4
LZH LR LR
comp=Z,1μm,16.5s,MS5.3
GZR Gura Zlata 81.86 19⇓P P **20 29 55.0 +1.1**
GZR Gura Zlata 81.86 19⇓*i*P P **20 29 55.0 +1.1**
PLOR Plostina 82.17 16⇓P P **20 29 57.4 +1.9**
PLOR Plostina 82.17 16⇓*i*P P **20 29 57.4 +1.9**
VRI Vrincioaia 82.17 16⇓P P **20 29 58.5 +3.0**
VRI Vrincioaia 82.17 16⇓*i*P P **20 29 58.5 +3.0**
AQU L'Aquila 82.39 27 PFAKE 20 30 10.0 +13
AQU LR LR
comp=Z,887nm,20.0s,MS5.1
TKM2 Tokmak 2 84.58 341 *e*P P **20 30 07.8 -0.2**
comp=Z,15nm,1.3s,mb5.0
TKM2 LR LR
comp=Z,415nm,20.0s,MS4.8
TKM2 Tokmak 2 84.58 341 *e*P P **20 30 07.8 -0.2**
TKM2 pmax pmax
comp=Z,15nm,1.3s,mb5.0
TKM2 MLR MLR
comp=Z,415nm,20.0s,MS4.8
HNR Honiara 84.78 249 PFAKE 20 30 20.0 +11
HNR LR LR
comp=Z,309nm,19.0s,MS4.7
GOF Gofitskoye 84.90 5 *e*P P **20 30 10.1 +0.6**
GOF pmax pmax
comp=Z,40nm,1.5s,mb5.3
TIR Tirane 85.04 22 PFAKE 20 30 20.0 +10
TIR LR LR
comp=Z,967nm,19.0s,MS5.2
AAK Ala-Archa 85.08 342 P P **20 30 12.4 +1.9**
comp=Z,1.6nm,0.4s,mb4.5,baz=342,slow=19,SNR=4.3
AAK Ala-Archa 85.08 342 P P **20 30 12.4 +1.9**
AAK MLR MLR
comp=Z,318nm,19.0s,MS4.7
EKS2 Erkin-Say 85.19 343 *e*P P **20 30 11.9 +0.8**
comp=Z,16nm,1.4s,mb5.0
EKS2 LR LR
comp=Z,262nm,20.0s,MS4.6
CUC Castrocucco 85.26 26 PFAKE 20 30 20.0 +8.6
CUC LR LR
comp=Z,459nm,21.0s,MS4.8
KKAR Karatay Array 85.34 345 P P **20 30 13.2 +1.4**
comp=Z,5.3nm,1.1s,mb4.6
KKAR Karatay Array 85.34 345 P P **20 30 13.2 +1.4**
KKAR pmax pmax
comp=Z,5.0nm,1.1s,mb4.6
LPAZ La Paz 85.55 122 *e*P P **20 30 11.2 -1.8**
comp=Z,13nm,1.4s,mb5.0
LPAZ LR LR
comp=Z,663nm,20.0s,MS5.0
LPAZ La Paz 85.55 122 P P **20 30 11.8 -1.2**
comp=Z,2.4nm,0.9s,mb4.4,baz=340,slow=6.1,SNR=5.9
LPAZ LR LR 21 11 58.0
comp=Z,237nm,21.2s,MS4.6,baz=328,slow=38
LPAZ La Paz 85.55 122 *e*P P **20 30 11.2 -1.8**
LPAZ pmax pmax
comp=Z,13nm,1.4s
LPAZ MLR MLR
comp=Z,663nm,20.0s
AML Almayashu 85.72 343 PFAKE 20 30 30.0 +16
AML LR LR
comp=Z,471nm,19.0s,MS4.9
KIV Kislovodsk 85.98 5 *e*P P **20 30 16.5 +1.6**
comp=Z,14nm,1.0s,mb5.2
KIV LR LR
comp=Z,408nm,20.0s,MS4.8
KIV Kislovodsk 85.98 5⇑*e*P P **20 30 17.6 +2.7**
KIV *e* 20 33 29.4
KIV *i* S S 20 40 47.0 +0.8
KIV pmax pmax
comp=Z,11nm,1.0s,mb5.0
KIV MLR MLR
comp=Z,300nm,16.0s,MS4.8
CHM Chimkent 86.25 346 *e*P P **20 30 09.3 -7.0**
comp=Z,18nm,1.5s,mb5.1
CHM Chimkent 86.25 346 *e*P P **20 30 09.3 -7.0**
CHM pmax pmax
comp=Z,18nm,1.5s,mb5.1
CD2 Chengdu 86.26 316 P P **20 30 16.0 -0.6**
CD2 pP pP 20 30 20.8 -5.9
CD2 sP sP 20 30 23.0 -7.4
CD2 PP PP 20 33 37.5 +0.6
CD2 SKS 20 40 38.3
CD2 S S 20 40 48.0 -1.5
CD2 SS SS 20 46 29.3 +1.6
CD2 pmax pmax
comp=Z,10.0nm,0.4s,mb5.4
CD2 pmax pmax
comp=Z,140nm,5.2s
CD2 LR LR
comp=N,290nm,10.8s,MS5.1
CD2 LR LR
comp=E,250nm,11.2s,MS5.1
CD2 LR LR
comp=Z,320nm,12.8s,MS4.9
TIP Timpagrande 86.28 25 PFAKE 20 30 30.0 +14
TIP LR LR
comp=Z,662nm,20.0s,MS5.0
CEL Celeste 86.89 26 PFAKE 20 30 30.0 +10
CEL LR LR
comp=Z,334nm,21.0s,MS4.7
KEST Kesra 87.17 32 P P **20 30 22.6 +1.6**
comp=Z,1.1nm,1.0s,mb4.0,baz=0.0,slow=10,SNR=2.5
KSH Kashi 87.77 340 *e*P P **20 30 28.0 +4.3**
KSH *e*pP pP 20 30 33.0 -0.9
KSH *e*sP sP 20 30 35.0 -2.5
KSH *e*PP PP 20 33 59.0 +10
KSH SKS 20 40 54.3
KSH S S 20 41 10.3 +6.6
KSH *e*sS sS 20 41 20.3 -0.2
KSH *e*SS SS 20 47 02.5 +14
KSH pmax pmax
comp=Z,31nm,1.7s,mb5.3
KSH LR LR
comp=N,450nm,17.3s,MS5.1
KSH LR LR
comp=E,390nm,15.3s,MS5.1
KSH LR LR
comp=Z,350nm,10.3s,MS5.1
GYA Guiyang 88.68 312 P P **20 30 28.0 -0.3**
GYA PP PP 20 33 57.8 +1.3
GYA SKS 20 40 54.0
GYA S S 20 41 11.8 -1.0
GYA SS SS 20 47 04.5 +1.2
GYA pmax pmax
comp=Z,30nm,1.0s,mb5.6
GYA pmax pmax
comp=Z,160nm,6.9s
GYA LR LR
comp=N,860nm,20.3s,MS5.2
GYA LR LR
comp=E,650nm,21.2s,MS5.2
GYA LR LR
comp=Z,830nm,20.6s,MS5.1
BR131 Keskin Array S 89.27 13 PFAKE 20 30 40.0 +9.2
BR131 LR LR
comp=Z,157nm,19.0s,MS4.5
BRTR Keskin Array B 89.27 13 P P **20 30 31.8 +0.9**
comp=Z,0.7nm,0.7s,mb4.1,baz=21,slow=4.9,SNR=3.3
GNI Garni 89.88 4 PFAKE 20 30 50.0 +16
GNI LR LR
comp=Z,312nm,21.0s,MS4.7
DZM Mont Dzumac 91.23 236 *e*LR LR 20 59 49.0
comp=Z,268nm,22.0s
MALT Malatya 91.24 9 PFAKE 20 30 50.0 +10
MALT LR LR
comp=Z,313nm,22.0s,MS4.7
KMI Kunming 91.67 314 P P **20 30 43.3 +1.1**
KMI PP PP 20 34 22.0 +1.8
KMI SKS 20 41 13.5
KMI S S 20 41 38.8 -1.6
KMI SS SS 20 47 46.3 -0.2
KMI LR LR
comp=N,300nm,18.7s,MS5.0
KMI LR LR
comp=E,370nm,19.4s,MS5.0
KMI LR LR
comp=Z,480nm,21.4s,MS4.9
PMG Port Moresby 92.63 259 PFAKE 20 31 00.0 +13
PMG LR LR
comp=Z,300nm,19.0s,MS4.8
QIZ Qiongzhong 93.28 305 P P **20 30 47.5 -2.2**
QIZ S S 20 41 53.5 -1.4
QIZ SS SS 20 48 11.5 +1.6
QIZ LR LR
comp=N,240nm,17.5s
QIZ LR LR
comp=Z,310nm,20.3s,MS4.8
DAV Davao City (W) 93.75 286 PFAKE 20 31 00.0 +8.0
DAV LR LR
comp=Z,609nm,21.0s,MS5.0
KBL Kabul 93.94 344 P P **20 30 52.8 +0.3**
comp=Z,8.2nm,1.2s,mb5.0
KBL Kabul 93.94 344 P P **20 30 52.8 +0.3**
KBL pmax pmax
comp=Z,8.0nm,1.2s,mb5.0
NIL Nilore 93.99 341 PFAKE 20 31 00.0 +7.2
NIL LR LR
comp=Z,99nm,19.0s,MS4.3
RCBR Riachuelo 97.04 91 PFAKE 20 31 20.0 +13
RCBR LR LR
comp=Z,622nm,20.0s,MS5.1
TAM Tamanrasset 97.32 41 PFAKE 20 31 20.0 +12
TAM LR LR
comp=Z,401nm,21.0s,MS4.9
CHTO Chiang Mai 98.87 314 PFAKE 20 31 30.0 +15
CHTO LR LR
comp=Z,386nm,19.0s,MS4.9
CMAR Chiang Mai Arr 99.18 314 P P **20 31 15.5 -1.0**
comp=Z,0.6nm,0.9s,mb4.1,baz=12,slow=4.6,SNR=4.9
CMAR LR LR 21 19 07.6
comp=Z,338nm,19.1s,MS4.9,baz=29,slow=37
KKM Kota Kinabalu 100.24 292 PFAKE 20 31 30.0 +8.8
KKM LR LR
comp=Z,244nm,21.0s,MS4.7
CTAO Charters Tower 101.32 252 PFAKE 20 31 40.0 +14
CTAO LR LR
comp=Z,506nm,19.0s,MS5.0
SPB Sao Paulo 103.20 111 PFAKE 20 31 50.0 +16
SPB LR LR
comp=Z,477nm,21.0s,MS5.0
DBIC Dimbokro 106.17 58 PFAKE 20 36 10.0 +11
DBIC LR LR
comp=Z,761nm,20.0s,MS5.2
KSM Kuching 107.39 295 PFAKE 20 36 10.0 +8.4
KSM LR LR
comp=Z,154nm,19.0s,MS4.6
MBWA Marble Bar 118.89 271 PFAKE 20 36 40.0 +17
MBWA LR LR
comp=Z,501nm,19.0s,MS5.2
MBAR Mbarara 127.89 25 PFAKE 20 36 50.0 +9.2
MBAR LR LR
comp=Z,719nm,21.0s,MS5.3
KMBO Kilima Mbogo 129.88 17 PFAKE 20 37 00.0 +15
KMBO LR LR
comp=Z,290nm,20.0s,MS5.0
MSEY Mahe Island 134.37 352 PFAKE 20 37 10.0 +17
MSEY LR LR
comp=Z,262nm,21.0s,MS4.9
QSPA South Pole Qui 140.03 180 PFAKE 20 37 10.0 +8.6
QSPA LR LR
comp=Z,491nm,20.0s,MS5.2
CASY Casey 145.99 219 PFAKE 20 37 20.0 +7.7
CASY LR LR
comp=Z,781nm,19.0s,MS5.5
LBTB Lobatse 148.52 46 PFAKE 20 37 30.0 +12
LBTB LR LR
comp=Z,466nm,20.0s,MS5.3
BOSA Boshof 151.38 50 PKPbc PKPbc 20 37 28.7 +0.4
BOSA LR LR
comp=Z,411nm,19.0s,MS5.2
BOSA Boshof 151.38 50 PKPbc PKPbc 20 37 28.7 +0.4
comp=Z,3.7nm,0.8s,baz=318,slow=5.4,SNR=5.3

NEIC ***27*** *20:20:18.7,27°.23N×55°.93E,h8km,mb3.6/1,ML3.5(THR), After THR.*
IDC ***27*** *20:20:18.2±2.1,27°.24N×55°.90E,h0km,mb3.8/9, mb1 3.9/9,mb1mx3.6/27,mbtmp3.8/9,MS3.0/1,Ms1 3.0/1, ms1mx2.0/36,Error ellipse: s-maj=50.3km s-min=22.1km az=160.0*
TEH ***27*** *20:20:18.9,27°.00N×55°.94E,h6km*
ISCJB ***27*** *20:20:19.2±0.9,27°.23N±0°.07×55°.93E±0°.05,h15km±6km, mb3.6/10,Error ellipse: s-maj=11.7km s-min=7.0km az=173.7*
CSEM ***27*** *20:20:21.4±0.5,27°.26N×55°.98E,h10km,ML3.7,Error ellipse: s-maj=13.5km s-min=7.5km az=177.0*
SGS ***27*** *20:20:23.6,27°.36N×55°.94E,h18km*
OMAN ***27*** *20:20:43.6±99.0,25°.99N×56°.03E,h24km,Error ellipse: s-maj=146.2km s-min=25.8km az=336.0*

ISC 27 20:20:21.7±0.9, 27.35N±0°.05×55.95E±0°.05, h10km±7km, n58, σ1§19/63, mb3.6/10, 3C, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.20**	**75**	*e*Pg		**Pg**	**Pg**	**20 20 24.0**	**-1.9**
BNDS				*e*S		**Sg**	**Sg**	**20 20 28.0**	**-0.7**
IBND	**Bandar-abas**	**0.53**	**79**	*e*Pg		**Pg**	**Pg**	**20 20 31.1**	**-0.9**
IBND				*e*Pg		**Pg**	**Pg**	**20 20 31.5**	**-0.5**
IBND				*e*Sg		**Sg**	**Sg**	**20 20 40.5**	**+1.5**
IBND				*e*Sg		**Sg**	**Sg**	**20 20 40.7**	**+1.7**
IBND				*e*				20 20 51.4	
IBND	comp=Z,43μm,0.2s			*e*				20 20 52.3	
IBND	comp=Z,59μm,0.3s **Bandar-abas**	**0.53**	**79**	*e*Pg		**Pg**	**Pg**	**20 20 31.1**	**-0.9**
IBND				*e*Sg		**Sg**	**Sg**	**20 20 40.5**	**+1.5**
BANOM	**Banah** SNR=168	**1.45**	**168**	⇑P			**Pn**	**20 20 49.8**	**+1.8**
ASHO	**Ashiyiah** SNR=122	**2.65**	**178**	⇑P			**Pn**	**20 21 06.4**	**+1.8**
KRBR	**Kerman**	**2.72**	**15**	*e*Pn			**Pn**	**20 21 06.0**	**+0.5**
KRBR	**Kerman**	**2.72**	**15**	*e*Pn			**Pn**	**20 21 06.0**	**+0.5**
ASUD	**Al Ashush, Dub** SNR=23	**2.77**	**192**	⇑P			**Pn**	**20 21 09.1**	**+3.0**
ISRV	**Sarvestan**	**3.22**	**310**	*e*Pn			**Pn**	**20 21 13.3**	**+0.9**
ISRV				*e*				20 22 32.2	
ISRV	comp=Z,5μm,0.5s **Sarvestan**	**3.22**	**310**	*e*Pn			**Pn**	**20 21 13.3**	**+0.9**
IPAR	**Pars**	**3.56**	**315**	*e*Pn			**Pn**	**20 21 17.7**	**+0.6**
IPAR				*e*				20 22 36.7	
IPAR	comp=Z,2μm,0.4s **Pars**	**3.56**	**315**	*e*Pn			**Pn**	**20 21 17.7**	**+0.6**
IMEH	**Mehriz**	**4.20**	**344**	*e*Pn			**Pn**	**20 21 27.6**	**+1.8**
IMEH				*e*				20 22 48.0	
IMEH	comp=Z,1μm,0.5s **Mehriz**	**4.20**	**344**	*e*Pn			**Pn**	**20 21 27.6**	**+1.8**
IBAF	**Bafgh**	**4.24**	**356**	*e*Pn			**Pn**	**20 21 27.9**	**+1.5**
IBAF				*e*				20 22 46.5	
IBAF	comp=Z,536nm,0.5s **Bafgh**	**4.24**	**356**	*e*Pn			**Pn**	**20 21 27.9**	**+1.5**
ZHSF	**Zahedan**	**4.81**	**61**	*e*Pn			**Pn**	**20 21 34.0**	**-0.2**
ZHSF	**Zahedan**	**4.81**	**61**	*e*Pn			**Pn**	**20 21 34.0**	**-0.2**
ISAD	**Sadrabad**	**4.96**	**337**	*e*Pn			**Pn**	**20 21 38.2**	**+1.9**
ISAD				*e*				20 23 07.6	
ISAD	comp=Z,547nm,0.3s **Sadrabad**	**4.96**	**337**	*e*Pn			**Pn**	**20 21 38.2**	**+1.9**
ICHK	**Chekchek**	**5.06**	**345**	*e*Pn			**Pn**	**20 21 39.2**	**+1.5**
ICHK				*e*				20 23 14.1	
ICHK	comp=Z,408nm,0.4s **Chekchek**	**5.06**	**345**	*e*Pn			**Pn**	**20 21 39.2**	**+1.5**
BTHS		**5.66**	**236**	P			**Pn**	**20 21 45.5**	**-0.4**
BTHS		**5.66**	**236**	P			**Pn**	**20 21 45.5**	**-0.4**
IKOO	**Kooshah**	**5.71**	**27**	*e*Pn			**Pn**	**20 21 47.9**	**+1.3**

IKOO				*e*			20 23 54.8	
	comp=Z,138nm,0.3s							
IKOO	**Kooshah**	**5.71**	**27**	*e*Pn		**Pn**	**20 21 47.9**	**+1.3**
IGAR	**Gharneh**	**6.08**	**327**	*e*Pn		**Pn**	**20 21 52.3**	**+0.7**
IGAR				*e*			20 23 02.0	
	comp=Z,613nm,0.2s							
NASN	**Na'in**	**6.08**	**334**	*e*Pn		**Pn**	**20 21 52.0**	**+0.3**
NASN	**Na'in**	**6.08**	**334**	*e*Pn		**Pn**	**20 21 52.0**	**+0.3**
IZEF	**Zefreh**	**6.36**	**331**	*e*Pn		**Pn**	**20 21 55.6**	**+0.1**
IZEF				*e*			20 23 09.2	
	comp=Z,131nm,0.3s							
IZEF	**Zefreh**	**6.36**	**331**	*e*Pn		**Pn**	**20 21 55.6**	**+0.1**
IPIR	**Pirpir**	**6.89**	**322**	*e*Pn		**Pn**	**20 22 03.6**	**+0.7**
IPIR				*e*			20 23 22.3	
	comp=Z,684nm,0.4s							
IPIR	**Pirpir**	**6.89**	**322**	*e*Pn		**Pn**	**20 22 03.6**	**+0.7**
IKLH	**Kolahrood**	**7.05**	**329**	*e*Pn		**Pn**	**20 22 04.6**	**-0.4**
IKLH				*e*			20 23 32.1	
	comp=Z,142nm,0.2s							
IKLH	**Kolahrood**	**7.05**	**329**	*e*Pn		**Pn**	**20 22 04.6**	**-0.4**
QRN	**Al-Qurain**	**7.24**	**283**	*e*P		**Pn**	**20 22 07.0**	**-0.6**
QRN				AML	AML		20 23 27.2	
	comp=Z,56nm,0.3s							
RDF	**Al-Radifah**	**7.58**	**284**	*e*P		**Pn**	**20 22 11.8**	**-0.5**
RDF				AML	AML		20 23 35.0	
	comp=Z,22nm,0.5s							
ISFB	**Sefidab**	**7.68**	**336**	*e*Pn		**Pn**	**20 22 14.1**	**+0.5**
ISFB				*e*			20 24 47.3	
	comp=Z,68nm,0.4s							
ISFB	**Sefidab**	**7.68**	**336**	*e*Pn		**Pn**	**20 22 14.1**	**+0.5**
NAY	**Al-Naaiem**	**7.91**	**286**	*e*P		**Pn**	**20 22 15.9**	**-0.9**
NAY				AML	AML		20 23 44.6	
	comp=Z,13nm,0.5s							
MIB	**Mutribah**	**7.96**	**290**	*e*P		**Pn**	**20 22 16.9**	**-0.6**
MIB				AML	AML		20 23 45.0	
	comp=Z,23nm,0.5s							
GHVR	**GHOM**	**8.16**	**332**	*e*Pn		**Pn**	**20 22 21.0**	**+0.8**
GHVR	**GHOM**	**8.16**	**332**	*e*Pn		**Pn**	**20 22 21.0**	**+0.8**
ASAO	**Ashtian**	**8.80**	**326**	*e*Pn		**Pn**	**20 22 29.0**	**0.0**
ASAO	**Ashtian**	**8.80**	**326**	*e*Pn		**Pn**	**20 22 29.0**	**0.0**
KIV	**Kislovodsk**	**19.73**	**331**	*e*P		**Pn**	**20 24 51.0**	**-1.9**
AAK	**Ala-Archa**	**21.45**	**40**	P		**P**	**20 25 10.2**	**+0.1**
	comp=Z,1.8nm,0.4s,mb3.7,baz=210,slow=7.5,SNR=3.3							
AAK				LR		LR	20 34 00.1	
	comp=Z,35nm,19.4s,baz=18,slow=38							
ABKAR	**Akbulak array**	**22.09**	**7**	*e*P		**P**	**20 25 15.8**	**-1.1**
	comp=Z,1.4nm,0.6s,mb3.6							
BRTR	**Keskin Array B**	**22.26**	**309**	P		**P**	**20 25 17.9**	**-0.8**
	comp=Z,2.1nm,1.0s,mb3.5,baz=131,slow=13,SNR=8.0							
BVAR	**Borovoye Array**	**27.81**	**19**	P		**P**	**20 26 09.6**	**-1.3**
	comp=Z,1.3nm,0.8s,mb3.6,baz=209,slow=14,SNR=6.8							
MKAR	**Makanchi Array**	**28.39**	**40**	P		**P**	**20 26 15.4**	**-0.8**
	comp=Z,0.2nm,0.7s,mb2.9,baz=212,slow=5.1,SNR=2.3							
FINES	**FINESS Array B**	**39.53**	**338**	P		**P**	**20 27 50.5**	**-2.0**
FINES	**FINESS Array B**	**39.53**	**338**	P		**P**	**20 27 50.5**	**-2.0**
	comp=Z,1.4nm,0.7s,mb3.8,baz=143,slow=10.0,SNR=4.9							
SONM	**Songino Array**	**44.00**	**48**	P		**P**	**20 28 29.2**	**-0.1**
	comp=Z,0.3nm,0.6s,mb3.2,baz=237,slow=10,SNR=4.1							
ARCES	**ARCESS Array B**	**45.78**	**346**	P		**P**	**20 28 42.4**	**-0.7**
	comp=Z,3.9nm,1.1s,mb4.2,baz=131,slow=9.7,SNR=3.8							
TORD	**Torodi Ar. Bea**	**52.45**	**266**	P		**P**	**20 29 32.8**	**-2.2**
	comp=Z,0.9nm,0.6s,mb3.9,baz=70,slow=6.4,SNR=12							
ILAR	**Eielson Array**	**86.47**	**10**	P		**P**	**20 33 01.6**	**-2.7**
ILAR	**Eielson Array**	**86.47**	**10**	P		**P**	**20 33 01.7**	**-2.7**
	comp=Z,0.3nm,0.7s,mb3.6,baz=335,slow=6.0,SNR=3.7							

PGC ***27*** *20:24:09.4±3.7,50.°03N×130.°18W,h10km,ML2.8/4, Mw3.4,210km Wsw of Pt. Hardy, Bc Vancouver Island Region*

ISCJB ***27*** *20:24:12.2±0.8,50.°26N±0.°07×129.°76W±0.°09,h10km, mb3.5/4,Error ellipse: s-maj=10.6km s-min=7.3km az=37.8*

IDC ***27*** *20:24:13.7±1.4,50.°34N×129.°81W,h0km,mb3.7/4, mb1 3.8/9,mb1mx3.7/26,mbtmp3.6/9,ML3.5/4,Error ellipse: s-maj=24.4km s-min=15.2km az=77.0*

NEIC ***27*** *20:24:15.5±1.1,50.°37N×129.°57W,h10km,Error ellipse: s-maj=23.4km s-min=9.4km az=51.0*

ISC 27 20:24:14.4±0.8,50.°30N±0.°07×129.°7W±0.°1,h10km,n21, σ1§47/25,mb3.5/4,4D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.03**	**70**	⇑Pn			**Pn**	**20 24 33.0**	**-1.9**
BPBC	**Brooks Peninsu**	**1.22**	**96**	⇓Pn			**Pn**	**20 24 34.5**	**-2.9**
PHC	**Port Hardy**	**1.48**	**73**	⇑Pn			**Pn**	**20 24 39.3**	**-1.7**
PHC				⇓Sn			**Sn**	**20 25 01.9**	**+1.6**
MAYB	**Maynard**	**1.59**	**85**	⇓Pn			**Pn**	**20 24 41.7**	**-1.0**
WOSB	**Woss**	**1.99**	**93**	⇑Pn			**Pn**	**20 24 45.8**	**-2.2**
BBB	**Bella Bella**	**2.12**	**27**	Pn			**Pn**	**20 24 48.6**	**-1.3**
BBB				Sn			**Sn**	**20 25 17.2**	**+0.9**
BBB	**Bella Bella**	**2.12**	**27**	Pn			**Pn**	**20 24 48.6**	**-1.3**
	7.6nm,0.3s,baz=44,slow=13,SNR=9.9								
BBB				Sn			**Sn**	**20 25 17.2**	**+0.9**
	6.8nm,0.3s,baz=312,slow=23,SNR=3.3								
BBB	**Bella Bella**	**2.12**	**27**	⇓Pn			**Pn**	**20 24 48.9**	**-1.0**
BBB				⇑Sn			**Sn**	**20 25 17.6**	**+1.3**
BNB	**Barry Inlet**	**2.63**	**331**	⇑Pn			**Pn**	**20 24 52.0**	**-4.8**
DIB	**Dawson Inlet,**	**3.40**	**330**	Pn			**Pn**	**20 25 05.0**	**-2.3**
JCW	**Jim Creek**	**5.48**	**110**	P			**Pn**	**20 25 37.9**	**+1.8**
LON	**Longmire**	**6.30**	**121**	P			**Pn**	**20 25 48.4**	**+1.0**
DLBC	**Dease Lake**	**8.16**	**359**	Pn			**Pn**	**20 26 14.4**	**+1.7**
	0.2nm,0.3s,baz=172,slow=14,SNR=2.4								
NVAR	**Mina Array Bea**	**14.36**	**141**	Pn			**Pn**	**20 27 43.5**	**+5.9**
NVAR	**Mina Array Bea**	**14.36**	**141**	Pn			**Pn**	**20 27 43.5**	**+5.9**
	0.1nm,0.3s,baz=314,slow=10,SNR=3.7								
PDAR	**Pinedale Array**	**15.72**	**111**	Pn			**Pn**	**20 28 01.8**	**+6.0**
	0.1nm,0.3s,baz=302,slow=9.1,SNR=3.5								
ILAR	**Eielson Array**	**17.11**	**334**	P			**Pn**	**20 28 14.6**	**+1.3**
	0.0nm,0.3s,baz=150,slow=11,SNR=4.2								
ULM	**Lac du Bonnet**	**21.49**	**77**	P			**P**	**20 29 03.1**	**+0.2**
	4.0nm,0.6s,mb4.0,baz=333,slow=8.5,SNR=2.9								
TXAR	**Lajitas Array**	**28.68**	**127**	P			**P**	**20 30 12.5**	**+1.2**
	0.2nm,0.5s,mb3.1,baz=347,slow=6.5,SNR=3.1								
ZALV	**Zalesovo Beam**	**72.16**	**339**	P			**P**	**20 35 39.0**	**+0.2**
	0.5nm,0.5s,mb3.7,baz=23,slow=7.8,SNR=3.3								
MKAR	**Makanchi Array**	**79.42**	**338**	P			**P**	**20 36 20.6**	**+0.2**
	0.2nm,0.5s,mb3.3,baz=31,slow=5.9,SNR=2.6								

PGC ***27*** *20:32:14.7±2.9,49.°85N×130.°02W,h10km,ML3.2/8, Mw3.8,208km Wsw of Pt. Hardy, Bc Vancouver Island Region*

ISCJB ***27*** *20:32:15.5±0.8,50.°04N±0.°06×129.°79W±0.°07,h10km, Error ellipse: s-maj=8.7km s-min=5.4km az=24.8*

IDC ***27*** *20:32:16.9±2.0,50.°04N×129.°78W,h0km,mb3.0/1, mb1 3.9/7,mb1mx3.6/27,mbtmp3.6/7,ML3.6/6,MS3.2/3, Ms1 3.2/3,ms1mx2.9/12,Error ellipse: s-maj=30.6km s-min=16.5km az=73.0*

NEIC ***27*** *20:32:19.3±1.1,50.°21N×129.°76W,h10km,Error ellipse: s-maj=22.0km s-min=9.8km az=49.0*

ISC 27 20:32:16.5±0.8,50.°01N±0.°06×129.°71W±0.°07,h10km,n24, σ1§12/30,6D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.20**	**57**	Pn			**Pn**	**20 32 39.1**	**-0.1**
HOLB				⇓Sn			**Sn**	**20 32 56.0**	**+0.5**
BPBC	**Brooks Peninsu**	**1.26**	**82**	⇑Pn			**Pn**	**20 32 39.0**	**-1.0**
BPBC				⇓Sn			**Sn**	**20 32 57.2**	**+0.1**
PHC	**Port Hardy**	**1.62**	**64**	Pn			**Pn**	**20 32 45.1**	**+0.1**
PHC				⇑Sn			**Sn**	**20 33 07.2**	**+1.2**
MAYB	**Maynard**	**1.68**	**75**	Pn			**Pn**	**20 32 45.4**	**-0.4**
MAYB				⇑Sn			**Sn**	**20 33 08.0**	**+0.6**
EDB	**Eliza Dome**	**1.68**	**94**	⇓Pn			**Pn**	**20 32 44.7**	**-1.2**
EDB				⇑Sn			**Sn**	**20 33 06.3**	**-1.1**
WOSB	**Woss**	**2.03**	**84**	Pn			**Pn**	**20 32 50.9**	**+0.2**
GDR	**Gold River**	**2.39**	**94**	⇑Pn			**Pn**	**20 32 55.2**	**-0.4**
BBB	**Bella Bella**	**2.40**	**24**	Pn			**Pn**	**20 32 56.0**	**+0.3**
	67nm,0.3s,baz=43,slow=13,SNR=69								
BBB				Sn			**Sn**	**20 33 25.3**	**+0.1**
	52nm,0.3s,baz=134,slow=23,SNR=24								
BBB				LR			LR	20 34 06.8	
	comp=Z,260nm,20.7s,baz=124,slow=46								
BBB	**Bella Bella**	**2.40**	**24**	Pn			**Pn**	**20 32 56.1**	**+0.3**
BBB				⇓Sn			**Sn**	**20 33 25.2**	**0.0**
BNB	**Barry Inlet**	**2.87**	**334**	⇓Pn			**Pn**	**20 33 00.3**	**-1.9**
BMSB	**Bamfield Mari**	**3.21**	**110**	⇓Sn			**Sn**	**20 33 43.5**	**-1.7**
DIB	**Dawson Inlet,**	**3.63**	**333**	Pn			**Pn**	**20 33 11.4**	**-1.3**
LON	**Longmire**	**6.19**	**119**	*e*P			**Pn**	**20 33 50.1**	**+2.2**
DLBC	**Dease Lake**	**8.45**	**359**	Pn			**Pn**	**20 34 19.5**	**+0.7**
	0.2nm,0.3s,baz=168,slow=13,SNR=4.4								
DLBC				LR			LR	20 37 43.1	
	comp=Z,302nm,18.3s,baz=145,slow=39								
YBH	**Yreka Blue Hor**	**9.61**	**147**	LR			LR	20 37 26.6	
	comp=Z,142nm,21.6s,baz=125,slow=32								
HLID	**Hailey**	**12.30**	**116**	P			**Pn**	**20 35 16.3**	**+4.8**
	2.1nm,1.0s								
TPAW	**Teton Pass**	**14.40**	**110**	*e*P			**Pn**	**20 35 45.7**	**+5.6**
	21nm,1.1s								
LOHW	**Long Hollow**	**14.54**	**109**	*e*P			**Pn**	**20 35 52.8**	**+11**
	11nm,1.2s								
YKA	**Yellowknife Ar**	**15.01**	**28**	Pn			**Pn**	**20 35 47.5**	**-0.8**
YKA	**Yellowknife Ar**	**15.01**	**28**	Pn			**Pn**	**20 35 47.5**	**-0.8**
	0.1nm,0.3s,baz=220,slow=12,SNR=3.7								
KDAK	**Kodiak Island**	**15.51**	**309**	Pn			**Pn**	**20 35 54.9**	**-0.1**
	0.6nm,0.3s,baz=112,slow=5.4,SNR=4.3								
PDAR	**Pinedale Array**	**15.65**	**110**	Pn			**Pn**	**20 36 01.8**	**+4.9**
	0.1nm,0.3s,baz=312,slow=11,SNR=14								
ILAR	**Eielson Array**	**17.36**	**335**	P			**Pn**	**20 36 20.8**	**+2.3**
	0.1nm,0.3s,baz=145,slow=9.9,SNR=4.0								
TXAR	**Lajitas Array**	**28.53**	**127**	P			**P**	**20 38 14.6**	**+2.5**
	0.1nm,0.6s,baz=329,slow=4.7,SNR=2.4								

NIED ***27*** *20:34:00,23.°30N×121.°70E,h53km,Mw4.3 Best double couple: M0 3.43000×10^15 NP1:φ=17.00000°,δ=80.00000°, λ=113.00000°. NP2:φ=130.00000°,δ=25.00000°,λ=25.00000°.*

IDC ***27*** *20:34:06.5±0.7,23.°24N×121.°82E,h0km,mb4.0/14, mb1 4.0/16,mb1mx4.0/26,mbtmp4.0/16,ML3.3/1,MS3.3/1, Ms1 3.3/1,ms1mx2.4/44,Error ellipse: s-maj=26.6km s-min=14.6km az=66.0*

NEIC ***27*** *20:34:12.2±0.6,23.°19N×121.°73E,h39km±5km,mb4.3/2, ML4.9(TAP),Error ellipse: s-maj=7.4km s-min=5.8km az=130.0*

NEIC Recorded [3 TAP] in T'ai-tung, [2 TAP] in Hua-lien and [1 TAP] in Chia-i, Kao-hsiung, T'ai-chung and Yun-lin.

ISCJB ***27*** *20:34:12.4±0.2,23.°18N±0.°02×121.°67E±0.°02,h50km±2km, mb3.9/17,Error ellipse: s-maj=3.0km s-min=2.2km az=139.9*

TAP ***27*** *20:34:13.3,23.°23N×121.°58E,h40km,ML4.7,B*

JMA ***27*** *20:34:14.3±0.2,23.°26N×121.°73E,h90km,M4.2*

BJI ***27*** *20:34:18.5,23.°48N×120.°99E,h38km,mB4.3/1,mb3.9/4, ML3.8/6,Ms4.2/2,Ms7 3.8/1*

ISC 27 20:34:13.3±0.2,23.°19N±0.°02×121.°66E±0.°02,h41km±3km, n121,σ1§04/183,mb3.9/17,27C-15D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.28**	**252**	⇓*i*P			**Pn**	**20 34 20.7**	**-0.7**
	baz=236								
CHKT				S			**Sn**	**20 34 26.1**	**-1.1**
	baz=236								
TWF1	**Yuli**	**0.37**	**296**	⇑*i*P			**Pn**	**20 34 21.6**	**-0.8**
	baz=295								
TWF1				*e*S			**Sn**	**20 34 28.1**	**-0.7**
	baz=295								
YULB	**Yu-li**	**0.39**	**302**	*e*P			**Pn**	**20 34 21.3**	**-1.3**
EHY	**Hungye**	**0.44**	**316**	⇑*i*P			**Pn**	**20 34 22.3**	**-1.0**
	baz=307								
EHY				*e*S			**Sn**	**20 34 28.6**	**-1.7**
	baz=307								
TEGC	**Jichi Village**	**0.53**	**348**	*e*P			**Pn**	**20 34 23.7**	**-0.8**
	baz=2.0								
TEGC				*e*S			**Sn**	**20 34 31.7**	**-0.7**
	baz=2.0								
ELDTW	**Lidau**	**0.59**	**270**	⇑*i*P			**Pn**	**20 34 24.1**	**-1.2**
	baz=260								
TTN	**Taitung**	**0.64**	**227**	*e*P			**Pn**	**20 34 26.2**	**+0.3**
	baz=232								
TTN				*e*S			**Sn**	**20 34 35.4**	**+0.5**
	baz=232								
TWG	**Pinlang**	**0.65**	**236**	*e*P			**Pn**	**20 34 24.8**	**-1.2**
TWG	**Pinlang**	**0.65**	**236**	⇑*i*P			**Pn**	**20 34 25.2**	**-0.9**
	baz=239								
TWG				S			**Sn**	**20 34 33.6**	**-1.6**
	baz=239								
ESL	**Shilin**	**0.66**	**342**	⇓*i*P			**Pn**	**20 34 24.9**	**-1.2**
	baz=337								
ESL				*e*S			**Sn**	**20 34 34.9**	**-0.5**
	baz=337								
ESF	**Shoufeng Towns**	**0.69**	**349**	*e*P			**Pn**	**20 34 24.5**	**-2.1**
	baz=342								
YUS	**Yu-Shan**	**0.71**	**295**	⇑*i*P			**Pn**	**20 34 26.6**	**-0.3**
	baz=294								
YUS				*e*S			**Sn**	**20 34 34.8**	**-1.9**
	baz=294								
HWA	**Hwalien**	**0.79**	**357**	⇓*i*P			**Pn**	**20 34 27.3**	**-0.7**
	baz=10.0								
HWA				*e*S			**Sn**	**20 34 38.3**	**-0.2**
	baz=10.0								
STYT	**Tauyuan**	**0.83**	**268**	⇑*i*P			**Pn**	**20 34 28.0**	**-0.5**
	baz=264								
STYT				*e*S			**Sn**	**20 34 38.6**	**-0.9**
	baz=264								
ALS	**Alishan**	**0.84**	**292**	⇑*i*P			**Pn**	**20 34 28.8**	**+0.1**
	baz=291								
ALS				*e*S			**Sn**	**20 34 39.0**	**-0.9**
	baz=291								
ECL	**Taimali**	**0.88**	**228**	⇓*i*P			**Pn**	**20 34 27.9**	**-1.2**
	baz=229								
SSLB	**Suanglung**	**0.88**	**313**	*e*P			**Pn**	**20 34 27.9**	**-1.2**
TWD	**Chiawan**	**0.89**	**356**	⇓*i*P			**Pn**	**20 34 28.5**	**-0.8**
	baz=348								
TWD				S			**Sn**	**20 34 39.9**	**-1.2**
	baz=348								
TPUB	**Ta-pu**	**0.95**	**277**	*e*P			**Pn**	**20 34 29.8**	**-0.3**
WTP	**Ta-pu**	**0.96**	**274**	⇑*i*P			**Pn**	**20 34 30.4**	**+0.2**
	baz=270								
WTP				*e*S			**Sn**	**20 34 43.0**	**+0.2**
	baz=270								
SMLT	**Sun Moon Lake**	**0.98**	**315**	⇑*i*P			**Pn**	**20 34 30.5**	**-0.1**
	baz=317								
NACB	**Ninganchiao**	**0.98**	**357**	*e*P			**Pn**	**20 34 29.3**	**-1.3**
CHN5	**Tsauling**	**0.99**	**295**	⇑*i*P			**Pn**	**20 34 31.1**	**+0.4**
	baz=294								
CHN4	**Tsaushan**	**0.99**	**280**	⇑*i*P			**Pn**	**20 34 31.0**	**+0.3**
	baz=277								
CHN4				*e*S			**Sn**	**20 34 44.2**	**+0.7**
	baz=277								
SGST	**Jiashian**	**0.99**	**264**	⇑*i*P			**Pn**	**20 34 31.4**	**+0.7**
	baz=260								
SGST				*e*S			**Sn**	**20 34 44.6**	**+1.0**
	baz=260								
WHF	**Hehuan Shan**	**1.02**	**339**	⇓*i*P			**Pn**	**20 34 30.5**	**-0.6**
	baz=343								
WHF				*e*S			**Sn**	**20 34 42.4**	**-1.8**
	baz=343								
TYC	**Yuchr**	**1.02**	**314**	⇑*i*P			**Pn**	**20 34 31.1**	**0.0**
	baz=324								
TYC				S			**Sn**	**20 34 43.4**	**-0.9**
	baz=324								
CHN1	**Nanshi**	**1.04**	**270**	⇑*i*P			**Pn**	**20 34 32.0**	**+0.7**
	baz=267								
CHN1				*e*S			**Sn**	**20 34 46.3**	**+1.6**
	baz=267								
SSD	**Sandimen**	**1.04**	**245**	⇑P			**Pn**	**20 34 31.0**	**-0.4**
	baz=241								
SSD				*e*S			**Sn**	**20 34 45.2**	**+0.5**
	baz=241								
TAW	**Tawu**	**1.08**	**220**	*e*P			**Pn**	**20 34 31.1**	**-0.8**
	baz=215								
EAST	**Anshuo**	**1.09**	**223**	*e*P			**Pn**	**20 34 31.3**	**-0.9**
	baz=218								
WGK	**Gukeng**	**1.12**	**296**	*e*P			**Pn**	**20 34 32.7**	**+0.2**
	baz=296								
WGK				*e*S			**Sn**	**20 34 47.8**	**+1.1**
	baz=296								
WNT	**Mingjian**	**1.13**	**308**	⇑*i*P			**Pn**	**20 34 33.1**	**+0.6**
	baz=308								
WNT				*e*S			**Sn**	**20 34 47.1**	**+0.3**
	baz=308								
LAY	**Lan-yu**	**1.15**	**185**	*e*P			**Pn**	**20 34 32.8**	**0.0**
	baz=175								
LAY				*e*S			**Sn**	**20 34 45.9**	**-1.4**
	baz=175								
TWT	**Tachien**	**1.15**	**338**	⇓*i*P			**Pn**	**20 34 33.1**	**+0.3**
	baz=346								
TWT				S			**Sn**	**20 34 45.7**	**-1.7**
	baz=346								
SGLT	**Jiouru**	**1.17**	**247**	*e*P			**Pn**	**20 34 35.0**	**+1.8**
	baz=234								
SGLT				*e*S			**Sn**	**20 34 52.5**	**+4.7**
	baz=234								
CHY	**Chiayi**	**1.17**	**285**	⇑*i*P			**Pn**	**20 34 33.8**	**+0.6**
	baz=271								
CHY				*e*S			**Sn**	**20 34 48.4**	**+0.4**
	baz=271								
TWM1	**Shoushan**	**1.19**	**253**	⇑*i*P			**Pn**	**20 34 35.6**	**+2.2**
	baz=249								
CHN3	**Shinhua**	**1.19**	**265**	P			**Pn**	**20 34 35.2**	**+1.7**
	baz=261								
CHN3				*e*S			**Sn**	**20 34 52.0**	**+3.5**
	baz=261								
ENA	**Nanau**	**1.24**	**4**	⇓*i*P			**Pn**	**20 34 33.8**	**-0.3**
	baz=17								
ENA				*e*S			**Sn**	**20 34 48.2**	**-1.3**
	baz=17								
SCZT	**Fangliau**	**1.25**	**230**	*e*P			**Pn**	**20 34 34.9**	**+0.6**
	baz=224								
NNS	**Nan Shan**	**1.27**	**348**	⇓P			**Pn**	**20 34 34.2**	**-0.3**
TCU	**Taichung**	**1.31**	**317**	⇑*i*P			**Pn**	**20 34 36.1**	**+1.0**
	baz=306								
TCU				*e*S			**Sn**	**20 34 52.4**	**+1.0**
	baz=306								
TAI1	**Yung-k'ang**	**1.32**	**264**	*e*P			**Pn**	**20 34 35.7**	**+0.5**
	baz=261								
CHN8	**Yiju**	**1.34**	**277**	⇑*i*P			**Pn**	**20 34 35.9**	**+0.5**
	baz=274								
CHN8				*e*S			**Sn**	**20 34 53.0**	**+1.0**
	baz=274								
SCLT	**Jiali**	**1.34**	**270**	*e*P			**Pn**	**20 34 36.1**	**+0.5**
	baz=266								
SCLT				*e*S			**Sn**	**20 34 53.3**	**+1.1**
	baz=266								
KAU	**Kaohsiung**	**1.39**	**244**	*e*P			**Pn**	**20 34 37.9**	**+1.8**
	baz=256								
TWQ1	**Liyutan**	**1.41**	**325**	⇑*i*P			**Pn**	**20 34 37.7**	**+1.3**
	baz=336								
TWQ1				*e*S			**Sn**	**20 34 54.9**	**+1.0**
	baz=336								
WTCT	**Ta-ch'eng**	**1.43**	**298**	*e*P			**Pn**	**20 34 36.6**	**-0.1**
	baz=298								
WTCT				*e*S			**Sn**	**20 34 54.5**	**+0.2**
	baz=298								
ENTT	**Nioudou**	**1.45**	**357**	⇓P			**Pn**	**20 34 36.8**	**-0.2**
HEN	**Hengchun**	**1.45**	**216**	*e*P			**Pn**	**20 34 37.6**	**+0.6**
	baz=202								
HEN				*e*S			**Sn**	**20 34 54.1**	**-0.7**
	baz=202								
TWP	**Hsiaoliuchiu**	**1.46**	**235**	*e*P			**Pn**	**20 34 40.1**	**+2.9**
	baz=232								
TSEB	**Hengchuen, Pin**	**1.46**	**209**	*e*P			**Pn**	**20 34 37.2**	**0.0**
	baz=208								
TSEB				*e*S			**Sn**	**20 34 56.1**	**+1.1**
	baz=208								
TWK1	**Hengchun**	**1.47**	**213**	P			**Pn**	**20 34 37.1**	**-0.1**
	baz=200								
TWK1				*e*S			**Sn**	**20 34 55.0**	**-0.2**
	baz=200								
NSY	**Sanyi**	**1.47**	**326**	⇑*i*P			**Pn**	**20 34 38.7**	**+1.4**
	baz=328								
NSY				S			**Sn**	**20 34 58.1**	**+2.8**
	baz=328								
YHNB	**Yeheng**	**1.50**	**350**	*e*P			**Pn**	**20 34 37.4**	**-0.2**
NSK	**Sanguang**	**1.51**	**350**	⇓*i*P			**Pn**	**20 34 38.1**	**+0.3**
	baz=352								
NSK				*e*S			**Sn**	**20 34 55.5**	**-0.7**
	baz=352								
TWE	**Neicheng**	**1.53**	**0**	*e*P			**Pn**	**20 34 38.1**	**+0.1**
	baz=356								
NSTT	**Nanjuang**	**1.56**	**337**	⇓*i*P			**Pn**	**20 34 39.5**	**+1.0**
	baz=339								
NSTT				S			**Sn**	**20 34 58.0**	**+0.5**
	baz=339								
ILA	**Ilan**	**1.57**	**3**	*e*P			**Pn**	**20 34 40.4**	**+1.7**
	baz=357								
HSN	**Hsinchu**	**1.73**	**339**	*e*P			**Pn**	**20 34 41.8**	**+1.1**
	baz=342								
HSN				*e*S			**Sn**	**20 35 04.1**	**+2.5**
	baz=342								
YOJ	**Yonaguni jima**	**1.77**	**44**	P			**Pn**	**20 34 42.6**	**+1.1**
YOJ				S			**Sn**	**20 35 03.9**	**+1.1**
YOJ	**Yonaguni jima**	**1.77**	**44**	*e*P			**Pn**	**20 34 42.5**	**+1.1**
	baz=57								
YOJ				*e*S			**Sn**	**20 35 02.9**	**+0.1**
	baz=57								
TWA	**Mucha**	**1.79**	**358**	⇑*e*P			**Pn**	**20 34 42.5**	**+0.9**
	baz=1.0								
TATO	**Taipei**	**1.79**	**355**	*e*P			**Pn**	**20 34 41.7**	**0.0**
NCU	**National Centr**

WHN					LR	LR			
	comp=E,830nm,4.0s								
QIZ	**Qiongzhong**	**11.78**	**252**	*eP*		**Pn**	**20 37 00.4**	**+1.7**	
KSRS	**Korea Array**	**15.21**	**19**	Pn		**Pn**	**20 37 42.0**	**-3.0**	
	comp=E,0.2nm,0.3s,baz=194,slow=11,SNR=4.8								
KSRS					LR	LR	20 43 37.0		
	comp=E,116nm,20.8s,baz=177,slow=38								
MJAR	**Matsushiro Arr**	**19.54**	**43**	P		**Pn**	**20 38 34.8**	**-4.0**	
	comp=E,0.1nm,0.3s,baz=239,slow=11,SNR=2.6								
LZH	**Lanzhou**	**20.08**	**314**	*eP*		**P**	**20 38 52.5**	**+9.3**	
LZH				pP			20 39 04.0		
LZH				sP		sP	20 39 07.5	+8.8	
LZH				pmax		pmax			
	comp=Z,19nm,1.4s								
CHTO	**Chiang Mai**	**21.64**	**263**	*eP*		**P**	**20 38 59.3**	**-0.9**	
	comp=Z,9.4nm,1.3s,mb4.1								
CMAR	**Chiang Mai Arr**	**21.74**	**262**	P		**P**	**20 39 01.6**	**+0.4**	
	comp=Z,2.2nm,0.9s,mb3.6,baz=64,slow=7.9,SNR=19								
GTA	**Gaotai**	**24.60**	**316**	*eP*		**P**	**20 39 33.0**	**+3.5**	
GTA				pmax		pmax			
	comp=Z,3.0nm,1.1s,mb3.7								
SONM	**Songino Array**	**27.45**	**337**	P		**P**	**20 39 54.7**	**-0.5**	
	comp=Z,1.0nm,0.7s,mb3.5,baz=161,slow=9.9,SNR=4.8								
MK31	**Makanchi Array**	**39.35**	**317**	*eP*		**P**	**20 41 38.7**	**+0.1**	
MKAR	**Makanchi Array**	**39.35**	**317**	P		**P**	**20 41 38.8**	**+0.3**	
	comp=Z,4.0nm,0.6s,mb4.3,baz=111,slow=9.7,SNR=52								
ZALV	**Zalesovo Beam**	**41.31**	**328**	P		**P**	**20 41 53.9**	**-0.8**	
	comp=Z,5.6nm,0.4s,mb4.5,baz=115,slow=8.1,SNR=32								
KURK	**Kurchatov**	**43.13**	**321**	P		**P**	**20 42 09.3**	**-0.2**	
	comp=Z,1.9nm,0.4s,mb4.2,baz=112,slow=9.1,SNR=7.1								
WRA	**Warramunga Arr**	**44.62**	**163**	P		**P**	**20 42 20.1**	**-1.6**	
	comp=Z,0.6nm,0.4s,mb3.8,baz=345,slow=8.6,SNR=14								
ASAR	**Alice Springs**	**48.07**	**165**	P		**P**	**20 42 48.1**	**-0.7**	
	comp=Z,0.3nm,0.3s,mb3.8,baz=329,slow=7.0,SNR=11								
BVAR	**Borovoye Array**	**48.72**	**321**	P		**P**	**20 42 53.0**	**-0.4**	
	comp=Z,2.0nm,0.4s,mb4.5,baz=109,slow=8.0,SNR=13								
BRVK	**Borovoye**	**48.79**	**321**	*eP*		**P**	**20 42 53.9**	**-0.1**	
ABKAR	**Akbulak array**	**54.45**	**315**	*eP*		**P**	**20 43 36.4**	**+0.1**	
	comp=Z,3.2nm,0.7s,mb4.4								
STKA	**Stephens Creek**	**57.98**	**160**	P		**P**	**20 44 01.4**	**-0.2**	
	comp=Z,0.7nm,0.4s,mb4.0,baz=342,slow=11,SNR=5.7								
ILAR	**Eielson Array**	**69.90**	**27**	P		**P**	**20 45 18.4**	**-1.2**	
	comp=Z,0.2nm,0.8s,mb3.1,baz=294,slow=6.8,SNR=3.2								
ARCES	**ARCESS Array B**	**70.62**	**338**	P		**P**	**20 45 23.2**	**-0.8**	
	comp=Z,2.1nm,0.9s,mb4.1,baz=65,slow=9.1,SNR=5.7								
FINES	**FINESS Array B**	**72.52**	**330**	P		**P**	**20 45 34.8**	**-0.8**	
	comp=Z,1.3nm,0.6s,mb4.0,baz=51,slow=5.3,SNR=9.7								
BRTR	**Keskin Array B**	**74.11**	**307**	P		**P**	**20 45 45.0**	**-0.4**	
	comp=Z,0.9nm,0.7s,mb3.8,baz=31,slow=2.9,SNR=6.5								
TESR		**76.84**	**315**	⇑*iP*		**P**	**20 46 00.8**	**-0.1**	
VRI	**Vrincioaia**	**77.01**	**314**	⇑*iP*		**P**	**20 46 02.6**	**+0.8**	
PLOR	**Plostina**	**77.06**	**314**	⇓*iP*		**P**	**20 46 01.9**	**-0.2**	
MLR	**Muntele Rosu**	**77.65**	**314**	⇓*iP*		**P**	**20 46 06.0**	**+0.6**	
NOA	**NORSAR Array B**	**79.30**	**332**	P		**P**	**20 46 12.9**	**-1.3**	
	comp=Z,0.4nm,0.7s,mb3.5,baz=277,slow=3.1,SNR=3.0								

MOS ***27*** *20:34:50.4±1.2,51.66N×103.87E,h18km,mb4.2/1, Error ellipse: s-maj=27.8km s-min=25.1km az=46.3*

BYKL 27 20:34:50.9±0.2, 51.64N×103.88E, h12km±3km, 4C-4D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TLY	**Talaya**	**0.15**	**286**	*e*PG		Pg	20 34 54.2	-0.3
TLY				*e*S		Sg	20 34 56.9	-0.1
TLY	**Talaya**	**0.15**	**286**	⇓*i*Pg		Pg	20 34 54.4	-0.1
TLY				*e*Sg		Sg	20 34 57.0	0.0
LSTR	**Listvyanka**	**0.63**	**69**	*e*Pg		Pg	20 35 02.3	-0.9
LSTR				*e*Sg		Sg	20 35 10.8	-0.8
LSTR				Pmax				
	29nm,0.1s							
LSTR				Smax				
	183nm,0.2s							
IRK	**Irkutsk**	**0.65**	**22**	*e*PG		Pg	20 35 02.8	-0.7
IRK				*e*			20 35 11.4	
IRK				pmax		pmax		
	comp=Z,178nm,0.2s							
IRK				smax				
	comp=E,2μm,0.4s							
IRK	**Irkutsk**	**0.65**	**22**	⇑*i*Pg		Pg	20 35 02.8	-0.7
IRK				*e*Sg		Sg	20 35 11.3	-0.8
IRK				Pmax				
	comp=E,177nm,0.2s							
IRK				Smax				
	comp=E,2μm,0.3s							
ARS	**Arshan**	**0.95**	**288**	*e*PG		Pg	20 35 08.2	-0.9
ARS				*e*			20 35 20.4	
ARS				pmax		pmax		
	comp=Z,72nm,0.1s							
ARS				smax				
	comp=E,563nm,0.3s							
ARS	**Arshan**	**0.95**	**288**	*e*Pg		Pg	20 35 08.2	-0.9
ARS				*e*Sg		Sg	20 35 20.6	-0.9
ARS				Pmax				
	comp=E,66nm,0.1s							
ARS				Smax				
	comp=E,549nm,0.3s							
ZAK	**Zakamensk**	**1.31**	**197**	⇑*i*Pg		Pg	20 35 14.6	-1.5
ZAK				*e*Pb		Pb	20 35 15.8	+0.3
ZAK				*e*Sg		Sg	20 35 31.8	-1.4
ZAK				max				
	comp=E,30nm,0.1s							
ZAK				Smax				
	comp=E,149nm,0.2s							
KAB	**Kabansk**	**1.77**	**75**	*e*Sg		Sg	20 35 47.4	-0.3
KAB				Smax				
	comp=E,180nm,0.4s							
MOY	**Mondy**	**1.80**	**272**	⇓*i*Pn		Pn	20 35 23.1	+1.4
MOY				⇑⇑*i*Pg		Pg	20 35 23.7	-1.7
MOY				*e*Sg		Sg	20 35 46.6	-2.1
MOY				Pmax				
	comp=E,68nm,0.3s							
MOY				Smax				
	comp=E,222nm,0.6s							
TRG	**Tyrgan**	**1.89**	**53**	*e*PN		Pn	20 35 24.2	+1.3
TRG				*e*			20 35 48.1	
TRG				pmax		pmax		
	comp=Z,32nm,0.2s							
TRG				smax				
	comp=N,187nm,0.1s							
TRG	**Tyrgan**	**1.89**	**53**	⇑*i*Pn		Pn	20 35 23.2	+0.3
TRG				*e*Pg		Pg	20 35 24.3	-2.8
TRG				*e*Sn		Sn	20 35 47.1	+0.5
TRG				*e*Sg		Sg	20 35 48.9	-2.7
TRG				Pmax				
	comp=N,13nm,0.1s							
TRG				Smax				
	comp=N,186nm,0.2s							
HRMR	**Khuramsha**	**1.92**	**89**	⇓*i*Pn		Pn	20 35 23.4	+0.1
HRMR				*e*Pg		Pg	20 35 24.5	-3.1
HRMR				*e*Sn		Sn	20 35 48.1	+0.8
HRMR				*e*Sg		Sg	20 35 50.9	-1.6
HRMR				Pmax				
	comp=N,48nm,0.5s							
HRMR				Smax				
	comp=N,842nm,0.5s							
UUDB	**Ulan-Yde**	**2.36**	**83**	*e*Pg		Pg	20 35 33.1	-3.0
UUDB				*e*Sg		Sg	20 36 04.9	-1.8
UUDB				Pmax				
	comp=N,14nm,0.9s							
UUDB				Smax				
	comp=N,24nm,0.9s							
ORL	**Orlik**	**2.67**	**291**	*e*PN		Pn	20 35 37.9	+4.3
ORL				*e*			20 36 12.0	
ORL				pmax		pmax		
	comp=Z,25nm,0.4s							
ORL				smax				
	comp=N,148nm,0.8s							
ORL	**Orlik**	**2.67**	**291**	⇓*i*Pg		Pg	20 35 38.0	-4.0
ORL				*e*Sg		Sg	20 36 12.2	-4.3
ORL				Pmax				
	comp=N,18nm,0.4s							
ORL				Smax				
	comp=N,148nm,0.9s							
SKR	**Severo-Kuril's**	**32.20**	**71**	*e*P		P	20 41 17.0	-1.4

PGC ***27*** *20:35:42.0±1.4,49.86N×130.05W,h10km,ML3.0/7, Mw3.6,209km Wsw of Pt. Hardy, Bc Vancouver Island Region*

ISCJB ***27*** *20:35:44.1±0.8,50.03N±0.05×129.69W±0.08,h10km, mb3.5/2, Error ellipse: s-maj=8.1km s-min=6.4km az=37.6*

IDC ***27*** *20:35:44.6±2.3,50.00N×129.60W,h0km,mb3.6/2, mb1 3.8/7,mb1mx3.6/26,mbtmp3.5/7,ML3.8/4,Error ellipse: s-maj=37.5km s-min=14.3km az=75.0*

NEIC ***27*** *20:35:46.9±1.4,50.06N×129.62W,h10km,Error ellipse: s-maj=28.7km s-min=9.6km az=60.0*

ISC 27 20:35:46.3±0.8, 50.07N±0.05×129.57W±0.08, h10km, n20, σ1§30/27, mb3.4/2, 5D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOLB	**Holberg**	**1.08**	**58**	Pn		**Pn**	**20 36 06.3**	**-1.2**
HOLB				⇓Sn		**Sn**	**20 36 23.5**	**+1.0**
BPBC	**Brooks Peninsu**	**1.16**	**85**	Pn		**Pn**	**20 36 06.4**	**-2.2**
BPBC				⇓Sn		**Sn**	**20 36 25.0**	**+0.5**
PHC	**Port Hardy**	**1.51**	**64**	Pn		**Pn**	**20 36 12.4**	**-1.0**
PHC				⇑Sn		**Sn**	**20 36 33.9**	**+0.8**
MAYB	**Maynard**	**1.58**	**77**	Pn		**Pn**	**20 36 12.7**	**-1.5**
MAYB				⇑Sn		**Sn**	**20 36 35.6**	**+0.9**
EDB	**Eliza Dome**	**1.59**	**96**	⇓Pn		**Pn**	**20 36 11.8**	**-2.7**
EDB				⇓Sn		**Sn**	**20 36 34.3**	**-0.8**
WOSB	**Woss**	**1.93**	**86**	⇑Pn		**Pn**	**20 36 18.4**	**-0.8**
BBB	**Bella Bella**	**2.31**	**23**	Pn		**Pn**	**20 36 23.4**	**-0.9**
	45nm,0.3s,baz=42,slow=14,SNR=34							
BBB				Sn		**Sn**	**20 36 52.6**	**-0.2**
	29nm,0.3s,baz=129,slow=23,SNR=18							
BBB	**Bella Bella**	**2.31**	**23**	Pn		**Pn**	**20 36 23.4**	**-0.9**
BBB				⇓Sn		**Sn**	**20 36 52.7**	**-0.1**
BNB	**Barry Inlet**	**2.86**	**332**	⇑Pn		**Pn**	**20 36 27.1**	**-4.8**
DIB	**Dawson Inlet,**	**3.62**	**331**	Pn		**Pn**	**20 36 41.6**	**-0.8**
LON	**Longmire**	**6.14**	**120**	*e*P		**Pn**	**20 37 18.3**	**+1.3**
DLBC	**Dease Lake**	**8.39**	**358**	Pn		**Pn**	**20 37 48.8**	**+1.0**
	0.2nm,0.3s,baz=188,slow=16,SNR=3.8							
NVAR	**Mina Array Bea**	**14.14**	**141**	Pn		**Pn**	**20 39 06.9**	**+0.4**
	0.0nm,0.3s,baz=316,slow=6.3,SNR=2.6							
TPAW	**Teton Pass**	**14.34**	**110**	P		**Pn**	**20 39 10.6**	**+1.4**
	7.3nm,0.8s							
LOHW	**Long Hollow**	**14.48**	**109**	P		**Pn**	**20 39 07.8**	**-3.2**
	3.5nm,0.7s							
PDAR	**Pinedale Array**	**15.59**	**110**	Pn		**Pn**	**20 39 28.5**	**+2.6**
	0.2nm,0.3s,baz=308,slow=16,SNR=8.4							
ILAR	**Eielson Array**	**17.34**	**335**	P		**Pn**	**20 39 49.5**	**+1.5**
	0.0nm,0.3s,baz=147,slow=10,SNR=3.4							
ULM	**Lac du Bonnet**	**21.49**	**76**	P		**P**	**20 40 36.7**	**+1.8**
ULM	**Lac du Bonnet**	**21.49**	**76**	P		**P**	**20 40 36.7**	**+1.8**
	5.5nm,0.7s,mb4.0,baz=300,slow=7.9,SNR=3.9							
TXAR	**Lajitas Array**	**28.50**	**127**	P		**P**	**20 41 41.1**	**-0.5**
	0.1nm,0.5s,mb2.7,baz=305,slow=3.2,SNR=2.7							

PGC ***27*** *20:49:30.2±1.1,49.96N×130.22W,h10km,ML3.3/11, Mw3.9,215km Wsw of Pt. Hardy, Bc Vancouver Island Region*

ISCJB ***27*** *20:49:31.2±1.8,50.29N±0.04×129.94W±0.07,h2km±13km, mb4.1/14,Error ellipse: s-maj=9.0km s-min=5.1km az=140.8*

IDC ***27*** *20:49:31.4±1.1,50.15N×130.27W,h0km,mb4.0/8, mb1 4.0/16,mb1mx3.9/30,mbtmp3.8/16,ML3.7/6,MS3.6/2, Ms1 3.7/2,ms1mx3.0/41,Error ellipse: s-maj=22.4km s-min=12.2km az=72.0*

NEIC ***27*** *20:49:34.3±0.6,50.29N×129.97W,h10km,mb4.2/15, Error ellipse: s-maj=13.1km s-min=5.2km az=57.0*

ISC 27 20:49:34.8±2.2, 50.35N±0.04×129.87W±0.08, h14km±16km, n59, σ1§31/65, mb4.1/14, 5D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOLB	**Holberg**	**1.15**	**75**	⇑Pn		**Pn**	**20 49 55.4**	**-1.1**
BPBC	**Brooks Peninsu**	**1.36**	**97**	⇑Pn		**Pn**	**20 49 56.3**	**-3.1**
BPBC				⇑Sn		**Sn**	**20 50 14.8**	**-2.5**
PHC	**Port Hardy**	**1.60**	**76**	⇓Pn		**Pn**	**20 50 01.5**	**-1.1**
PHC				⇓Sn		**Sn**	**20 50 23.7**	**+0.6**
MAYB	**Maynard**	**1.73**	**87**	⇑Pn		**Pn**	**20 50 02.8**	**-1.7**
EDB	**Eliza Dome**	**1.83**	**104**	⇑Pn		**Pn**	**20 50 02.3**	**-3.6**
EDB				⇑Sn		**Sn**	**20 50 24.2**	**-4.7**
WOSB	**Woss**	**2.13**	**94**	⇓Pn		**Pn**	**20 50 08.0**	**-1.9**
BBB	**Bella Bella**	**2.15**	**30**	Pn		**Pn**	**20 50 11.3**	**+1.2**
BBB				Sn		**Sn**	**20 50 39.7**	**+3.1**
BBB	**Bella Bella**	**2.15**	**30**	Pn		**Pn**	**20 50 11.3**	**+1.2**
	46nm,0.3s,baz=43,slow=13,SNR=53							
BBB				Sn		**Sn**	**20 50 39.7**	**+3.1**
	28nm,0.3s,baz=280,slow=23,SNR=9.5							
BBB	**Bella Bella**	**2.15**	**30**	Pn		**Pn**	**20 50 11.3**	**+1.2**
BBB				⇑Sn		**Sn**	**20 50 40.1**	**+3.5**
BNB	**Barry Inlet**	**2.52**	**333**	⇓Pn		**Pn**	**20 50 12.9**	**-2.4**
GDR	**Gold River**	**2.54**	**101**	⇓Pn		**Pn**	**20 50 11.7**	**-3.8**
MOBC	**Moresby Island**	**3.09**	**336**	⇑Pn		**Pn**	**20 50 21.3**	**-1.9**
OZB	**Mount Ozzard**	**3.17**	**114**	⇑Sn		**Sn**	**20 50 56.4**	**-5.3**
DIB	**Dawson Inlet,**	**3.29**	**331**	Pn		**Pn**	**20 50 23.9**	**-1.9**
DIB	**Dawson Inlet,**	**3.29**	**331**	⇓Pn		**Pn**	**20 50 24.0**	**-1.8**
NLWA	**Neilton Lookou**	**4.94**	**124**	*e*P		**Pn**	**20 50 47.1**	**+1.5**
HOOD	**Mount Hood Mea**	**7.47**	**129**	P		**Pn**	**20 51 23.0**	**-0.3**
DLBC	**Dease Lake**	**8.11**	**359**	Pn		**Pn**	**20 51 34.6**	**+2.6**
	0.4nm,0.3s,baz=202,slow=13,SNR=7.0							
YBH	**Yreka Blue Hor**	**9.95**	**147**	Pn		**Pn**	**20 51 57.4**	**+0.2**
	0.2nm,0.3s,baz=339,slow=14,SNR=2.9							
YBH				LR		LR	20 55 12.8	
	comp=Z,428nm,19.4s,baz=308,slow=34							
NVAR	**Mina Array Bea**	**14.48**	**141**	Pn		**Pn**	**20 53 00.2**	**+1.0**
	0.1nm,0.3s,baz=327,slow=9.7,SNR=6.5							
REDW	**Red Top Meadow**	**14.75**	**111**	P		**Pn**	**20 53 04.2**	**+1.4**
	17nm,0.8s							
LOHW	**Long Hollow**	**14.75**	**110**	*e*P		**Pn**	**20 53 05.9**	**+3.0**
YKA	**Yellowknife Ar**	**14.76**	**29**	Pn		**Pn**	**20 53 03.6**	**+0.7**
	0.1nm,0.3s,baz=221,slow=11,SNR=4.4							
AHID	**Auburn Hatcher**	**14.95**	**113**	*e*P		**Pn**	**20 53 10.9**	**+5.3**
	22nm,1.1s							
SPUT	**South Promonto**	**15.11**	**120**	P		**Pn**	**20 53 05.9**	**-1.8**
	20nm,1.6s							
DUG	**Dugway**	**15.69**	**124**	*e*P		**Pn**	**20 53 16.2**	**+1.0**
	18nm,1.3s							
PDAR	**Pinedale Array**	**15.87**	**111**	Pn		**Pn**	**20 53 20.3**	**+2.7**
	0.1nm,0.3s,baz=316,slow=8.3,SNR=9.9							
ISA	**Isabella**	**16.85**	**146**	P		**Pn**	**20 53 30.6**	**+0.4**
ILAR	**Eielson Array**	**17.00**	**335**	P		**Pn**	**20 53 31.8**	**-0.1**
	0.0nm,0.3s,baz=141,slow=10,SNR=2.8							
ILAR				LR		LR	20 59 29.0	
	comp=Z,175nm,18.3s,baz=122,slow=35							
MSU	**Marysvale**	**17.26**	**127**	*e*P		**Pn**	**20 53 37.2**	**+1.9**
	12nm,1.3s							
FFC	**Flin Flon**	**17.47**	**65**	P		**Pn**	**20 53 37.7**	**0.0**
	22nm,1.1s							
SRU	**San Rafael**	**17.70**	**122**	*e*P		**Pn**	**20 53 41.5**	**+0.8**
	13nm,1.0s							
BPAW	**Bear Paw Mtn.**	**17.77**	**329**	P		**Pn**	**20 53 43.0**	**+1.5**
GSC	**Goldstone**	**17.79**	**143**	*e*P		**Pn**	**20 53 44.6**	**+2.7**
INK	**Inuvik**	**18.11**	**356**	P		**Pn**	**20 53 47.0**	**+1.4**
INK	**Inuvik**	**18.11**	**356**	P		**Pn**	**20 53 47.0**	**+1.4**
	0.1nm,0.3s,baz=176,slow=14,SNR=2.9							
TTA	**Tatalina**	**18.94**	**322**	*e*P		**Pn**	**20 53 56.0**	**+0.3**
	15nm,1.4s							
PV01	**Paradox Valley**	**19.46**	**121**	*e*P		**Pn**	**20 54 01.0**	**-1.2**
	1μm,1.2s							
SMCO	**Snowmass**	**19.64**	**116**	*e*P		**Pn**	**20 54 03.4**	**-0.9**
	11nm,1.1s							
MVCO	**Mesa Verde**	**20.17**	**122**	*e*P		**P**	**20 54 09.3**	**+0.6**
	41nm,1.4s							
SDCO	**Great Sand Dun**	**21.46**	**117**	*e*P		**P**	**20 54 23.1**	**+0.5**
	14nm,1.3s,mb4.1							
ULM	**Lac du Bonnet**	**21.61**	**77**	P		**P**	**20 54 25.5**	**+1.3**
	21nm,1.0s,mb4.5,baz=285,slow=11,SNR=8.5							
AGMN	**Agassiz Nation**	**22.15**	**82**	P		**P**	**20 54 31.9**	**+2.0**
	28nm,1.5s,mb4.5							
ANMO	**Albuquerque**	**22.95**	**123**	*e*P		**P**	**20 54 38.5**	**0.0**
	7.1nm,1.1s,mb4.0							
ANMO	**Albuquerque**	**22.95**	**123**	P		**P**	**20 54 39.4**	**+0.8**
	4.4nm,1.0s,mb3.9,baz=319,slow=9.8,SNR=9.1							
ECSD	**EROS Data Cent**	**23.47**	**93**	*e*P		**P**	**20 54 43.9**	**-0.1**
	16nm,1.1s,mb4.3							
BNM	**Barren Site**	**23.48**	**125**	*e*P		**P**	**20 54 43.7**	**-0.4**
	7.0nm,1.0s,mb4.0							
EYMN	**Ely**	**25.03**	**81**	*e*P		**P**	**20 54 58.4**	**+0.1**
AMTX	**Amarillo**	**25.66**	**116**	*e*P		**P**	**20 55 04.0**	**-0.1**
	31nm,1.0s,mb4.8							
KSU1	**Kansas State U**	**25.96**	**103**	P		**P**	**20 55 06.4**	**-0.3**
WMOK	**Wichita Mounta**	**27.46**	**113**	*e*P		**P**	**20 55 19.7**	**-0.6**
TXAR	**Lajitas Array**	**28.82**	**127**	P		**P**	**20 55 31.7**	**-0.7**
	1.5nm,1.1s,mb3.6,baz=336,slow=6.3,SNR=2.1							
MIAR	**Mount Ida**	**30.73**	**107**	*e*P		**P**	**20 55 49.7**	**+0.4**
	9.7nm,1.1s,mb4.5							
FINES	**FINESS Array B**	**66.91**	**12**	P		**P**	**21 00 26.3**	**+0.2**
FINES	**FINESS Array B**	**66.91**	**12**	P		**P**	**21 00 26.3**	**+0.2**
	3.5nm,0.9s,mb4.4,baz=305,slow=4.9,SNR=4.6							
ZALV	**Zalesovo Beam**	**72.07**	**339**	P		**P**	**21 00 57.6**	**-0.4**
	0.3nm,0.4s,mb3.5,baz=20,slow=4.6,SNR=3.9							
AKASG	**Malin Array Be**	**77.76**	**13**	P		**P**	**21 01 29.9**	**-1.1**
	1.0nm,0.7s,mb3.9,baz=346,slow=5.2,SNR=4.2							
MKAR	**Makanchi Array**	**79.33**	**338**	P		**P**	**21 01 38.1**	**-1.6**
	0.3nm,0.6s,mb3.4,baz=16,slow=4.6,SNR=3.6							
LPAZ	**La Paz**	**85.57**	**122**	P		**P**	**21 02 12.9**	**+0.3**
	0.4nm,0.5s,mb4.0,baz=331,slow=10,SNR=4.3							

PGC ***27*** *20:51:57.6±2.7,49.85N×129.97W,h10km,ML3.0/4, Mw3.7,204km Wsw of Pt. Hardy, Bc Vancouver Island Region*

ISCJB ***27*** *20:51:59.9±1.3,50.09N±0.07×129.6W±0.1,h10km,Error ellipse: s-maj=12.0km s-min=8.8km az=146.9*

IDC ***27*** *20:52:01.3±2.9,50.06N×129.38W,h0km,mb1 3.7/4, mb1mx3.4/25,mbtmp3.4/4,ML3.8/1,Error ellipse: s-maj=46.4km s-min=15.6km az=80.0*

ISC 27 20:51:57.6±1.6, 49.96N±0.10×129.8W±0.1, h10km, n12, σ0§55/17, 6D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOLB	**Holberg**	**1.25**	**56**	⇓Pn		**Pn**	**20 52 21.4**	**+0.3**
BPBC	**Brooks Peninsu**	**1.30**	**80**	⇑Pn		**Pn**	**20 52 21.6**	**-0.2**
BPBC				⇓Sn		**Sn**	**20 52 38.8**	**-0.4**
PHC	**Port Hardy**	**1.67**	**62**	⇑Pn		**Pn**	**20 52 27.6**	**+0.6**
PHC				⇑Sn		**Sn**	**20 52 48.8**	**+0.4**
EDB	**Eliza Dome**	**1.71**	**92**	⇓Pn		**Pn**	**20 52 26.9**	**-0.6**
EDB				⇓Sn		**Sn**	**20 52 48.7**	**-0.6**
MAYB	**Maynard**	**1.73**	**74**	⇑Pn		**Pn**	**20 52 27.8**	**+0.2**
WOSB	**Woss**	**2.07**	**83**	⇑Pn		**Pn**	**20 52 33.2**	**+0.8**
BBB	**Bella Bella**	**2.46**	**24**	Pn		**Pn**	**20 52 38.5**	**+0.8**
	36nm,0.3s,baz=42,slow=13,SNR=21							
BBB				Sn		**Sn**	**20 53 07.4**	**-0.5**
	16nm,0.3s,baz=134,slow=23,SNR=8.9							
BBB	**Bella Bella**	**2.46**	**24**	⇓Pn		**Pn**	**20 52 38.5**	**+0.7**
BBB				⇓Sn		**Sn**	**20 53 07.3**	**-0.5**
BNB	**Barry Inlet**	**2.91**	**335**	⇑Pn		**Pn**	**20 52 43.1**	**-0.7**
NVAR	**Mina Array Bea**	**14.13**	**140**	Pn		**Pn**	**20 55 24.2**	**+6.5**
	0.0nm,0.3s,baz=322,slow=10,SNR=3.2							
PDAR	**Pinedale Array**	**15.67**	**110**	Pn		**Pn**	**20 55 44.1**	**+5.9**
	0.1nm,0.3s,baz=312,slow=12,SNR=3.9							
ILAR	**Eielson Array**	**17.39**	**335**	P		**Pn**	**20 56 06.4**	**+6.4**
	baz=140,slow=11,SNR=3.9							

IDC 27 20:53:27.9±3.1, 50.32N×129.63W, h0km, mb1 3.6/4, mb1mx3.4/25, mbtmp3.3/4, ML3.4/3, Error ellipse: s-maj=46.2km s-min=17.6km az=83.0, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BBB	**Bella Bella**	**2.09**	**26**	Pn		Pn	20 54 02.2	-2.0
	19nm,0.3s,baz=42,slow=13,SNR=5.2							
BBB				Sn		Sn	20 54 30.1	-0.8
	6.4nm,0.3s,baz=300,slow=20,SNR=7.1							
NVAR	**Mina Array Bea**	**14.36**	**142**	Pn		Pn	20 56 55.4	+3.2
	0.1nm,0.3s,baz=325,slow=12,SNR=2.7							
PDAR	**Pinedale Array**	**15.71**	**111**	Pn		Pn	20 57 13.2	+2.9
	0.1nm,0.3s,baz=304,slow=8.6,SNR=4.7							
ILAR	**Eielson Array**	**17.10**	**334**	P		Pn	20 57 29.5	+1.6
	0.1nm,0.3s,baz=151,slow=11,SNR=3.6							

ISCJB ***27*** *20:58:29.5±0.7,31.42N±0.05×103.92E±0.10,h10km, mb3.5/4,Error ellipse: s-maj=12.1km s-min=6.3km az=13.1*

IDC ***27*** *20:58:29.4±1.5,31.83N×104.71E,h0km,mb3.5/4, mb1 3.7/5,mb1mx3.4/25,mbtmp3.5/5,ML3.7/1,Error ellipse: s-maj=73.7km s-min=23.5km az=61.0*

NEIC ***27*** *20:58:33.3±0.8,31.81N×104.16E,h10km,Error ellipse: s-maj=17.5km s-min=12.0km az=54.0*

BJI ***27*** *20:58:34.2,31.23N×103.57E,h13km,ML3.2/6*

ISC 27 20:58:31.5±0.7, 31.37N±0.04×103.84E±0.10, h10km, n9, σ0§62/11, mb3.5/4, Sichuan

| Code | Station Name | Δ° | AZ° | Phase | ID | ISC | Time | Res |

	comp=Z,130nm,18.9s,baz=144,slow=37								
BSMT	**Bassoo Peak**	**10.07**	**98**	*e*Pn		**Pn**	**21 03 18.2**	**0.0**
KHMM	**Horse Mountain**	**10.19**	**154**	Pn		**Pn**	**21 03 19.9**	**0.0**
WALA	**Waterton Lakes**	**10.31**	**90**	*e*Pn		**Pn**	**21 03 23.1**	**+1.6**
	0.7nm,1.4s								
MOD	**Modoc**	**10.53**	**138**	*e*Pn		**Pn**	**21 03 24.9**	**+0.4**
EDM	**Edmonton**	**10.60**	**67**	Pn		**Pn**	**21 03 27.4**	**+2.1**
WDC	**Whiskeytown Da**	**10.83**	**150**	*e*Pn		**Pn**	**21 03 28.6**	**+0.1**
WDC				Sn		**Sn**	**21 05 28.7**	**-1.1**
WVOR	**Wild Horse Val**	**10.88**	**131**	*e*Pn		**Pn**	**21 03 29.5**	**+0.3**
	3.4nm,0.9s								
MSO	**Missoula**	**10.98**	**102**	*e*Pn		**Pn**	**21 03 30.7**	**+0.1**
CHMT	**Chamberlain Mo**	**11.38**	**100**	*e*Pn		**Pn**	**21 03 35.4**	**-0.7**
	9.9nm,1.5s								
HLID	**Hailey**	**12.36**	**116**	*e*Pn		**Pn**	**21 03 51.3**	**+1.7**
PAHR	**Pah Rah Range**	**12.75**	**141**	*e*P		**Pn**	**21 03 57.6**	**+2.8**
CMB	**Columbia Colle**	**13.84**	**148**	*e*Pn		**Pn**	**21 04 09.1**	**-0.7**
IMW	**Indian Meadow**	**14.23**	**109**	*e*Pn		**Pn**	**21 04 16.5**	**+1.4**
	14nm,0.9s								
NVAR	**Mina Array Bea**	**14.28**	**141**	Pn		**Pn**	**21 04 13.6**	**-2.1**
	0.0nm,0.3s,baz=299,slow=13,SNR=4.3								
RRI2	**Red Ridge**	**14.31**	**111**	*e*Pn		**Pn**	**21 04 19.6**	**+3.5**
	8.4nm,1.0s								
MOOW	**Moose Ponds**	**14.43**	**109**	*e*Pn		**Pn**	**21 04 19.1**	**+1.3**
	29nm,1.2s								
TPAW	**Teton Pass**	**14.45**	**110**	*e*Pn		**Pn**	**21 04 21.4**	**+3.4**
	33nm,1.1s								
LOHW	**Long Hollow**	**14.59**	**109**	*e*Pn		**Pn**	**21 04 21.3**	**+1.4**
	15nm,1.0s								
AHID	**Auburn Hatcher**	**14.78**	**113**	*e*Pn		**Pn**	**21 04 23.8**	**+1.3**
YKA	**Yellowknife Ar**	**14.86**	**28**	Pn		**Pn**	**21 04 22.4**	**-1.1**
	0.1nm,0.3s,baz=218,slow=12,SNR=3.2								
KDAK	**Kodiak Island**	**15.41**	**308**	Pn		**Pn**	**21 04 32.6**	**+1.8**
	0.1nm,0.3s,baz=335,slow=2.7,SNR=3.8								
PAX	**Paxson**	**15.43**	**332**	*e*Pn		**Pn**	**21 04 30.7**	**-0.3**
DUG	**Dugway**	**15.50**	**124**	*e*Pn		**Pn**	**21 04 34.1**	**+2.0**
	9.4nm,1.2s								
SLKM	**Skilak Lake**	**15.53**	**320**	*e*Pn		**Pn**	**21 04 31.5**	**-0.8**
SML	**Sawmill**	**15.56**	**326**	*e*Pn		**Pn**	**21 04 32.7**	**0.0**
	2.4nm,1.2s								
RC01	**Rabbit Creek A**	**15.65**	**322**	Pn		**Pn**	**21 04 33.4**	**-0.6**
PDAR	**Pinedale Array**	**15.70**	**110**	Pn		**Pn**	**21 04 35.2**	**+0.5**
	0.1nm,0.3s,baz=310,slow=12,SNR=26								
EGAK	**Eagle**	**15.84**	**342**	Pn		**Pn**	**21 04 36.6**	**+0.2**
TPNV	**Topopah Spring**	**16.39**	**139**	Pn		**Pn**	**21 04 44.8**	**+1.2**
ISA	**Isabella**	**16.64**	**146**	Pn		**Pn**	**21 04 46.9**	**+0.1**
MCK	**McKinley**	**17.06**	**330**	*e*Pn		**Pn**	**21 04 51.2**	**-0.7**
MSU	**Marysvale**	**17.07**	**126**	*e*Pn		**Pn**	**21 04 53.5**	**+1.3**
	6.8nm,1.3s								
ILAR	**Eielson Array**	**17.21**	**335**	P		**Pn**	**21 04 56.4**	**+2.6**
	0.1nm,0.3s,baz=137,slow=12,SNR=9.0								
CCUT	**Cedar City**	**17.21**	**131**	*e*Pn		**Pn**	**21 04 54.4**	**+0.3**
FFC	**Flin Flon**	**17.44**	**64**	*e*Pn		**Pn**	**21 04 58.2**	**+1.4**
	18nm,1.0s								
INK	**Inuvik**	**18.29**	**355**	*e*Pn		**Pn**	**21 05 07.8**	**+0.8**
INK				LR		LR	21 11 36.5		
INK	**Inuvik**	**18.29**	**355**	P		**Pn**	**21 05 07.8**	**+0.7**
	0.1nm,0.3s,baz=158,slow=11,SNR=4.1								
INK				LR		LR	21 11 36.5		
	comp=Z,206nm,18.9s,baz=120,slow=35								
TTA	**Tatalina**	**19.14**	**322**	*e*P		**Pn**	**21 05 17.2**	**-0.3**
	7.3nm,1.2s								
PFO	**Pinyon Flat Ob**	**19.21**	**144**	P		**Pn**	**21 05 18.4**	**-0.2**
SDPT	**Sand Point**	**19.23**	**297**	*e*P		**Pn**	**21 05 16.4**	**-2.2**
PV01	**Paradox Valley**	**19.28**	**121**	*e*P		**Pn**	**21 05 18.5**	**-0.8**
	1µm,1.3s								
WUAZ	**Wupatki**	**19.80**	**131**	P		**Pn**	**21 05 25.1**	**-0.5**
ISCO	**Idaho Springs**	**19.86**	**112**	*e*P		**Pn**	**21 05 26.3**	**0.0**
	4.7nm,1.1s								
GLA	**Glamis**	**20.34**	**142**	*e*P		**P**	**21 05 30.0**	**+0.1**
OGNE	**Ogallala**	**21.35**	**105**	*e*P		**P**	**21 05 41.4**	**+0.6**
	21nm,0.8s,mb4.5								
ULM	**Lac du Bonnet**	**21.55**	**77**	P		**P**	**21 05 44.0**	**+1.2**
	10nm,0.7s,mb4.4,baz=291,slow=12,SNR=6.9								
ULM				LR		LR	21 14 46.4		
	comp=Z,138nm,20.1s,baz=291,slow=39								
ANMO	**Albuquerque**	**22.77**	**123**	*e*P		**P**	**21 05 56.7**	**+0.8**
ANMO	**Albuquerque**	**22.77**	**123**	P		**P**	**21 05 55.1**	**-0.9**
	1.5nm,0.8s,mb3.5,baz=316,slow=11,SNR=3.8								
ECSD	**EROS Data Cent**	**23.35**	**93**	*e*P		**P**	**21 06 02.8**	**+0.8**
	17nm,1.0s,mb4.4								
EYMN	**Ely**	**24.96**	**80**	*e*P		**P**	**21 06 16.8**	**-0.1**
	15nm,0.9s,mb4.5								
AMTX	**Amarillo**	**25.49**	**116**	*e*P		**P**	**21 06 20.8**	**-1.1**
	8.7nm,0.8s,mb4.3								
RES	**Resolute Bay**	**28.52**	**19**	*e*P		**P**	**21 06 49.5**	**+0.8**
TXAR	**Lajitas Array**	**28.63**	**127**	P		**P**	**21 06 47.8**	**-2.3**
	0.2nm,0.6s,mb3.0,baz=332,slow=9.3,SNR=3.1								
YSS	**Yuzh-Sakhalins**	**54.77**	**303**	*e*P		**P**	**21 10 22.4**	**-0.7**
MAJO	**Matsushiro**	**64.21**	**297**	P		**P**	**21 11 27.4**	**-1.0**
NAO01	**NORSAR Array S**	**64.88**	**20**	*e*P		**P**	**21 11 32.4**	**0.0**
ULN	**Ulaanbaatar**	**70.80**	**323**	P		**P**	**21 12 09.5**	**-0.4**
BRVK	**Borovoye**	**75.77**	**348**	P		**P**	**21 12 38.7**	**-0.4**
AML	**Almayashu**	**85.82**	**343**	P		**P**	**21 13 33.0**	**0.0**
KIV	**Kislovodsk**	**86.02**	**6**	P		**P**	**21 13 34.2**	**+0.2**

*NEIC **27** 21:22:24.7±0.6,50.33N×130.76W,h10km,mb4.3/21, Error ellipse: s-maj=11.3km s-min=5.3km az=55.0*
*PGC **27** 21:22:27.6±1.0,49.87N×129.99W,h10km,ML3.4/11, Mw4.1,205km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*IDC **27** 21:22:28.6±2.1,50.00N×129.73W,h0km,mb3.8/3, mb1 4.0/9,mb1mx3.7/28,mbtmp3.7/9,ML3.8/6,MS3.3/12, Ms1 3.3/12,ms1mx3.2/49,Error ellipse: s-maj=35.4km s-min=13.0km az=75.0*

ISC 27 21:22:32.6±1.8,50°24'N×129°77'W±0'.08, h24km±17km,n87,σ1°46/84,mb4.2/10,MS3.4/7,10D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.12**	**68**	⇑Pn	**Pn**	**21 22 50.9**	**-1.9**
HOLB				⇑Sn	**Sn**	**21 23 08.2**	**+0.7**
BPBC	**Brooks Peninsu**	**1.29**	**93**	⇑Pn	**Pn**	**21 22 51.0**	**-4.1**
BPBC				⇑Sn	**Sn**	**21 23 10.0**	**-1.6**
PHC	**Port Hardy**	**1.57**	**72**	⇓Pn	**Pn**	**21 22 57.0**	**-1.9**
PHC				⇓Sn	**Sn**	**21 23 18.9**	**+0.5**
MAYB	**Maynard**	**1.68**	**83**	⇓Pn	**Pn**	**21 22 58.2**	**-2.2**
EDB	**Eliza Dome**	**1.75**	**101**	⇑Pn	**Pn**	**21 22 56.6**	**-4.7**
EDB				⇓Sn	**Sn**	**21 23 19.0**	**-3.9**
WOSB	**Woss**	**2.06**	**91**	⇑Pn	**Pn**	**21 23 02.9**	**-2.7**
BBB	**Bella Bella**	**2.21**	**28**	Pn	**Pn**	**21 23 07.7**	**0.0**
BBB				Sn	**Sn**	**21 23 37.0**	**+2.7**
BBB				LR	LR	21 24 20.1	
BBB	**Bella Bella**	**2.21**	**28**	Pn	**Pn**	**21 23 07.7**	**0.0**
	87nm,0.3s,baz=42,slow=14,SNR=152						
BBB				Sn	**Sn**	**21 23 37.0**	**+2.7**
	46nm,0.3s,baz=128,slow=19,SNR=19						
BBB				LR	LR	21 24 20.1	
	comp=Z,385nm,20.7s,baz=18,slow=46						
BBB	**Bella Bella**	**2.21**	**28**	⇑Pn	**Pn**	**21 23 08.1**	**+0.4**
BBB				⇓Sn	**Sn**	**21 23 37.1**	**+2.8**
NCRB	**Newcastle Ridg**	**2.39**	**85**	⇓Pn	**Pn**	**21 23 08.3**	**-1.9**
NCRB				⇓Sn	**Sn**	**21 23 38.1**	**-0.5**
GDR	**Gold River**	**2.46**	**99**	⇓Pn	**Pn**	**21 23 07.6**	**-3.6**
OZB	**Mount Ozzard**	**3.06**	**113**	⇓Sn	**Sn**	**21 23 50.4**	**-4.9**
MOBC	**Moresby Island**	**3.21**	**336**	⇑Pn	**Pn**	**21 23 20.5**	**-1.0**
DIB	**Dawson Inlet,**	**3.41**	**332**	Pn	**Pn**	**21 23 22.1**	**-2.1**
DIB	**Dawson Inlet,**	**3.41**	**332**	⇓Pn	**Pn**	**21 23 24.1**	**-0.2**
PGC	**Sidney**	**4.42**	**109**	Pn	**Pn**	**21 23 41.2**	**+3.1**
NLWA	**Neilton Lookou**	**4.83**	**124**	Pn	**Pn**	**21 23 45.9**	**+2.2**
RPW	**Rockport**	**5.69**	**105**	*e*Pn	**Pn**	**21 23 55.2**	**-0.3**
LON	**Longmire**	**6.34**	**120**	*e*Pn	**Pn**	**21 24 05.5**	**+1.1**
ETW	**Entiat**	**6.76**	**109**	*e*Pn	**Pn**	**21 24 09.9**	**-0.3**
SIT	**Sitka**	**7.58**	**336**	Pn	Px	21 24 10.2	
RSW	**Rattlesnake Hi**	**7.80**	**116**	*e*Pn	**Pn**	**21 24 31.3**	**+6.8**
HAWA	**Hanford**	**7.83**	**115**	*e*Pn	**Pn**	**21 24 31.6**	**+6.6**
OD2	**Odessa Site #2**	**7.84**	**107**	*e*Pn	**Pn**	**21 24 22.8**	**-2.2**
DLBC	**Dease Lake**	**8.22**	**359**	*e*Pn	**Pn**	**21 24 22.3**	**-7.8**
DLBC				LR	LR	21 28 14.2	
DLBC	**Dease Lake**	**8.22**	**359**	Pn	**Pn**	**21 24 31.8**	**+1.6**
	0.3nm,0.3s,baz=190,slow=16,SNR=5.1						
DLBC				LR	LR	21 28 14.2	
	comp=Z,167nm,20.2s,baz=132,slow=41						
KEBM	**Edson Butte**	**8.26**	**151**	*e*Pn	**Pn**	**21 24 30.8**	**0.0**
NEW	**Newport**	**8.51**	**99**	*e*Pn	**Pn**	**21 24 33.8**	**-0.4**
YBH	**Yreka Blue Hor**	**9.82**	**147**	*e*Pn	**Pn**	**21 24 52.9**	**+0.7**
BSMT	**Bassoo Peak**	**10.13**	**98**	*e*Pn	**Pn**	**21 24 55.6**	**-0.7**
KHMM	**Horse Mountain**	**10.27**	**153**	Pn	**Pn**	**21 24 58.3**	**-0.1**
WALA	**Waterton Lakes**	**10.36**	**90**	*e*Pn	**Pn**	**21 25 01.4**	**+1.9**
EDM	**Edmonton**	**10.62**	**67**	*e*Pn	**Pn**	**21 25 04.7**	**+1.7**
WVOR	**Wild Horse Val**	**10.95**	**131**	*e*Pn	**Pn**	**21 25 04.3**	**-3.4**
	11nm,1.6s						
CHMT	**Chamberlain Mo**	**11.44**	**101**	*e*Pn	**Pn**	**21 25 12.9**	**-1.4**
HOPS	**Hopland**	**12.21**	**155**	Pn	**Pn**	**21 25 25.1**	**+0.2**
HLID	**Hailey**	**12.44**	**117**	*e*Pn	**Pn**	**21 25 26.1**	**-1.8**
	3.0nm,1.1s						
PAHR	**Pah Rah Range**	**12.83**	**141**	*e*Pn	**Pn**	**21 25 34.1**	**+0.8**
BMN	**Battle Mountai**	**13.18**	**133**	*e*Pn	**Pn**	**21 25 40.0**	**+1.9**
IMW	**Indian Meadow**	**14.30**	**109**	Pn	**Pn**	**21 25 57.0**	**+3.7**
	12nm,0.8s						
NVAR	**Mina Array Bea**	**14.36**	**141**	Pn	**Pn**	**21 25 51.2**	**-3.0**
	0.1nm,0.3s,baz=305,slow=13,SNR=3.0						
MOOW	**Moose Ponds**	**14.50**	**109**	*e*Pn	**Pn**	**21 26 04.0**	**+7.9**
	14nm,0.9s						
TPAW	**Teton Pass**	**14.52**	**110**	*e*Pn	Px	21 26 04.7	
	82nm,1.8s						
REDW	**Red Top Meadow**	**14.65**	**111**	*e*Pn	**Pn**	**21 26 05.6**	**+7.5**
	18nm,1.0s						
SNOW	**Snow King Moun**	**14.65**	**110**	*e*Pn	**Pn**	**21 26 00.5**	**+2.4**
LOHW	**Long Hollow**	**14.66**	**110**	*e*Pn	**Pn**	**21 26 05.6**	**+7.4**
	10nm,0.9s						
RLMT	**Red Lodge**	**14.71**	**102**	*e*Pn	**Pn**	**21 26 05.7**	**+6.7**
	10nm,0.6s						
YKA	**Yellowknife Ar**	**14.83**	**28**	Pn	**Pn**	**21 26 00.0**	**-0.4**
	0.2nm,0.3s,baz=219,slow=12,SNR=3.4						
YKA				LR	LR	21 31 51.9	
	comp=Z,17nm,18.5s,baz=105,slow=38						
AHID	**Auburn Hatcher**	**14.85**	**113**	*e*Pn	**Pn**	**21 26 03.8**	**+2.9**
SPUT	**South Promonto**	**15.00**	**120**	*e*Pn	**Pn**	**21 26 08.5**	**+5.7**
	11nm,1.4s						
SML	**Sawmill**	**15.48**	**326**	Pn	Px	21 25 55.9	
DUG	**Dugway**	**15.57**	**124**	*e*Pn	**Pn**	**21 26 13.7**	**+3.3**
	11nm,1.4s						
RC01	**Rabbit Creek A**	**15.57**	**322**	Pn	Px	21 25 57.9	
BW06	**Boulder Array**	**15.77**	**111**	*e*Pn	**Pn**	**21 26 15.1**	**+2.2**
	10.0nm,1.2s						
PDAR	**Pinedale Array**	**15.77**	**111**	Pn	**Pn**	**21 26 12.4**	**-0.5**
	0.3nm,0.3s,baz=311,slow=9.6,SNR=14						
RSO	**Redoubt South**	**16.50**	**317**	*e*Pn	Px	21 26 09.4	
ISA	**Isabella**	**16.72**	**146**	Pn	**Pn**	**21 26 25.6**	**+0.5**
ILAR	**Eielson Array**	**17.13**	**335**	P	**Pn**	**21 26 33.5**	**+3.5**
	0.1nm,0.3s,baz=150,slow=12,SNR=8.9						
ILAR				LR	LR	21 32 08.1	
	comp=Z,113nm,19.3s,baz=154,slow=33						
CCUT	**Cedar City**	**17.29**	**131**	*e*Pn	**Pn**	**21 26 32.9**	**+0.7**
FFC	**Flin Flon**	**17.46**	**64**	*e*Pn	**Pn**	**21 26 35.1**	**+0.9**
	15nm,0.8s						
SRU	**San Rafael**	**17.58**	**122**	*e*Pn	**Pn**	**21 26 38.2**	**+2.4**
	5.4nm,0.9s						
BPAW	**Bear Paw Mtn.**	**17.90**	**329**	Pn	Px	21 26 28.7	
	5.7nm,1.1s						
INK	**Inuvik**	**18.22**	**356**	LR	LR	21 33 48.6	
	comp=Z,170nm,18.2s,baz=181,slow=37						
PV04	**Paradox Valley**	**18.98**	**121**	*e*P	**Pn**	**21 26 52.1**	**-0.9**
PFO	**Pinyon Flat Ob**	**19.30**	**144**	*e*P	**Pn**	**21 26 55.5**	**-1.3**
PV01	**Paradox Valley**	**19.35**	**121**	*e*P	**Pn**	**21 26 57.1**	**-0.2**
	805nm,1.1s						
SMCO	**Snowmass**	**19.54**	**116**	*e*Pn	**Pn**	**21 27 02.7**	**+3.2**
	14nm,0.7s						
MVCO	**Mesa Verde**	**20.06**	**122**	*e*P	**P**	**21 27 04.9**	**+1.0**
	57nm,2.0s						
SDCO	**Great Sand Dun**	**21.36**	**117**	*e*P	**P**	**21 27 16.9**	**-1.0**
	8.4nm,1.4s,mb3.9						
ULM	**Lac du Bonnet**	**21.58**	**77**	P	**P**	**21 27 21.6**	**+1.4**
	18nm,0.9s,mb4.5,baz=281,slow=10,SNR=9.0						
ULM				LR	LR	21 35 36.2	
	comp=Z,152nm,21.0s,MS3.4,baz=306,slow=36						
AGMN	**Agassiz Nation**	**22.11**	**82**	*e*P	**P**	**21 27 27.1**	**+1.2**
	22nm,1.4s,mb4.4						
ANMO	**Albuquerque**	**22.84**	**123**	*e*P	**P**	**21 27 32.1**	**-1.7**
ANMO				LR	LR	21 35 25.0	
ANMO	**Albuquerque**	**22.84**	**123**	P	**P**	**21 27 31.9**	**-1.9**
	1.3nm,0.6s,mb3.5,baz=313,slow=9.8,SNR=2.8						
ANMO				LR	LR	21 35 25.0	
	comp=Z,100nm,20.1s,MS3.2,baz=133,slow=34						
BNM	**Barren Site**	**23.36**	**125**	*e*P	**P**	**21 27 38.1**	**-1.2**
	2.6nm,1.0s,mb3.6						
ECSD	**EROS Data Cent**	**23.40**	**93**	*e*P	**P**	**21 27 40.1**	**+0.5**
	19nm,1.0s,mb4.5						
EYMN	**Ely**	**24.99**	**80**	*e*P	**P**	**21 27 54.1**	**0.0**
	21nm,1.0s,mb4.6						
AMTX	**Amarillo**	**25.56**	**116**	*e*P	**P**	**21 27 58.3**	**-1.1**
	22nm,1.4s,mb4.5						
WMOK	**Wichita Mounta**	**27.36**	**113**	*e*P	**P**	**21 28 14.4**	**-1.3**
	6.6nm,1.3s,mb4.0						
RES	**Resolute Bay**	**28.48**	**19**	LR	LR	21 39 36.0	
	comp=Z,93nm,18.8s,MS3.4,baz=299,slow=36						
TXAR	**Lajitas Array**	**28.70**	**127**	P	**P**	**21 28 26.6**	**-1.1**
	0.3nm,0.7s,baz=340,slow=6.6,SNR=3.5						
TXAR				LR	LR	21 40 37.9	
	comp=Z,117nm,19.3s,MS3.5,baz=5.0,slow=38						
ACSO	**Alum Creek Sta**	**33.93**	**89**	*e*P	**P**	**21 29 07.3**	**-6.3**
	50nm,0.5s						
SCHQ	**Schefferville**	**37.41**	**58**	LR	LR	21 43 41.5	
	comp=Z,108nm,21.1s,MS3.6,baz=336,slow=34						
SDMD	**Soldier's Deli**	**38.32**	**86**	*e*P	**P**	**21 29 52.2**	**+1.1**
	16nm,0.5s,mb5.1						
PETK	**Petropavlovsk-**	**43.30**	**303**	LR	LR	21 47 18.2	
	comp=Z,51nm,18.3s,MS3.5,baz=290,slow=34						
BORG	**Borgarnes**	**52.75**	**31**	LR	LR	21 54 52.6	
	comp=Z,21nm,21.8s,MS3.1,baz=350,slow=37						
KEV	**Kevo**	**59.12**	**9**	*e*P	**P**	**21 32 24.3**	**-6.1**
ARE0	**ARCESS Array S**	**59.17**	**10**	*e*P	**P**	**21 32 25.9**	**-4.9**

PGC 27 21:25:31.8±2.7,50°24N×130°10W,h10km,ML2.9/6, Mw3.5,7D,197km west of Pt. Hardy, Bc Vancouver Island Region,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.32**	**71**	⇓Pn	Pn	21 25 54.4	-1.9
HOLB				⇓Sn	Sn	21 26 10.1	-3.8
BPBC	**Brooks Peninsu**	**1.50**	**92**	⇓Pn	Pn	21 25 55.9	-2.9
BPBC				⇑Sn	Sn	21 26 13.1	-5.2
PHC	**Port Hardy**	**1.77**	**74**	⇓Pn	Pn	21 26 00.6	-1.9
PHC				⇓Sn	Sn	21 26 20.5	-4.4
MAYB	**Maynard**	**1.89**	**84**	⇓Pn	Pn	21 26 02.9	-1.1
WOSB	**Woss**	**2.27**	**91**	⇓Pn	Pn	21 26 07.2	-2.2
BBB	**Bella Bella**	**2.32**	**32**	⇑Pn	Pn	21 26 07.8	-2.2
BBB				⇑Sn	Sn	21 26 35.1	-3.4

*ISCJB **27** 21:35:07.9±1.1,50°10N±0°.07×130°.0W±0°.1,h10km, mb3.4/2,Error ellipse: s-maj=12.2km s-min=9.3km az=154.3*
*IDC **27** 21:35:07.2±2.1,49°.99N×129°.75W,h0km,mb3.6/2, mb1 3.7/7,mb1mx3.5/26,mbtmp3.4/7,ML3.7/3,MS3.2/3, Ms1 3.2/3,ms1mx2.7/42, Error ellipse: s-maj=35.3km s-min=14.1km az=77.0*
*PGC **27** 21:35:09.1±7.6,50°.03N×130°.12W,h10km,ML2.9/6, Mw3.5,205km Wsw of Pt. Hardy, Bc Vancouver Island Region*

ISC 27 21:35:09.6±1.1,50°10N±0°.07×129°8W±0°.1,h10km,n14, σ1°01/16,mb3.4/2,4D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.22**	**63**	⇑Pn	**Pn**	**21 35 32.4**	**-0.3**
BPBC	**Brooks Peninsu**	**1.33**	**87**	⇓Pn	**Pn**	**21 35 33.7**	**-0.5**
PHC	**Port Hardy**	**1.65**	**68**	⇓Pn	**Pn**	**21 35 39.5**	**+0.8**
PHC				⇑Sn	**Sn**	**21 36 00.2**	**+0.3**
MAYB	**Maynard**	**1.74**	**79**	⇑Pn	**Pn**	**21 35 41.0**	**+1.2**
WOSB	**Woss**	**2.10**	**87**	⇓Pn	**Pn**	**21 35 44.8**	**0.0**
BBB	**Bella Bella**	**2.35**	**27**	Pn	**Pn**	**21 35 47.8**	**-0.5**
	8.6nm,0.3s,baz=217,slow=19,SNR=7.6						
BBB				Sn	**Sn**	**21 36 15.8**	**-1.4**
	44nm,0.3s,baz=140,slow=22,SNR=17						
BBB	**Bella Bella**	**2.35**	**27**	⇓Pn	**Pn**	**21 35 47.8**	**-0.5**
BBB				⇑Sn	**Sn**	**21 36 16.9**	**-0.2**
DLBC	**Dease Lake**	**8.35**	**359**	Pn	**Pn**	**21 37 11.4**	**+0.8**
	0.2nm,0.3s,baz=168,slow=15,SNR=4.5						
DLBC				LR	LR	21 40 00.1	
	comp=Z,148nm,18.9s,baz=294,slow=35						
NVAR	**Mina Array Bea**	**14.28**	**140**	Pn	**Pn**	**21 38 31.5**	**-0.2**
	0.1nm,0.3s,baz=332,slow=13,SNR=3.2						
PDAR	**Pinedale Array**	**15.76**	**110**	Pn	**Pn**	**21 38 53.4**	**+1.9**
	0.1nm,0.3s,baz=293,slow=13,SNR=2.5						
ILAR	**Eielson Array**	**17.24**	**335**	P	**Pn**	**21 39 10.6**	**+0.5**
	baz=143,slow=7.7,SNR=2.5						
INK	**Inuvik**	**18.35**	**356**	LR	LR	21 46 34.8	
	comp=Z,98nm,19.0s,baz=99,slow=37						
ULM	**Lac du Bonnet**	**21.65**	**76**	P	**P**	**21 39 58.5**	**-1.4**
	4.0nm,0.6s,mb4.0,baz=299,slow=19,SNR=2.2						
ULM				LR	LR	21 49 18.6	
	comp=Z,50nm,21.9s,baz=303,slow=39						
TXAR	**Lajitas Array**	**28.65**	**127**	P	**P**	**21 41 03.6**	**-2.8**
	0.1nm,0.5s,mb2.8,baz=359,slow=15,SNR=2.6						

*PGC **27** 21:52:29.1±1.9,49°.83N×130°.13W,h10km,ML3.7/11, Mw4.3,215km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*IDC **27** 21:52:31.9±1.6,50°.02N×129°.71W,h0km,mb4.0/3, mb1 4.2/12,mb1mx4.0/31,mbtmp4.0/12,ML4.1/7,MS3.9/9, Ms1 3.9/9,ms1mx3.8/30,Error ellipse: s-maj=27.7km s-min=11.3km az=74.0*
*NEIC **27** 21:52:35.1±0.3,50°.15N×129°.52W,h10km,mb4.3/34, MW4.8(PGC),Error ellipse: s-maj=5.8km s-min=2.5km az=47.0*

ISC 27 21:52:36.4±1.3,50°13N±0°.03×129°58W±0°.05, h22km±11km,n126,σ1°16/132,mb4.4/16,MS3.9/4,8D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.06**	**61**	⇓Pn	**Pn**	**21 52 54.3**	**-1.6**
BPBC	**Brooks Peninsu**	**1.17**	**88**	⇑Pn	**Pn**	**21 52 54.5**	**-2.9**
BPBC				⇓Sn	**Sn**	**21 53 13.4**	**+0.8**
PHC	**Port Hardy**	**1.49**	**67**	⇓Pn	**Pn**	**21 53 00.4**	**-1.4**
PHC				⇓Sn	**Sn**	**21 53 22.6**	**+2.1**
MAYB	**Maynard**	**1.57**	**79**	⇑Pn	**Pn**	**21 53 00.6**	**-2.3**
EDB	**Eliza Dome**	**1.61**	**98**	Pn	**Pn**	**21 53 00.0**	**-3.5**
EDB				⇑Sn	**Sn**	**21 53 21.8**	**-1.8**
WOSB	**Woss**	**1.94**	**88**	Pn	**Pn**	**21 53 06.0**	**-2.0**
BBB	**Bella Bella**	**2.25**	**24**	Pn	**Pn**	**21 53 10.7**	**-1.6**
	264nm,0.3s,baz=42,slow=13,SNR=577						
BBB				Sn	**Sn**	**21 53 40.1**	**+0.8**
	82nm,0.3s,baz=125,slow=22,SNR=20						
BBB				LR	LR	21 54 23.3	
	comp=Z,2µm,19.2s,baz=194,slow=47						
BBB	**Bella Bella**	**2.25**	**24**	Pn	**Pn**	**21 53 11.2**	**-1.1**
BBB				⇓Sn	**Sn**	**21 53 40.4**	**+1.0**
GDR	**Gold River**	**2.32**	**97**	⇑Pn	**Pn**	**21 53 10.7**	**-2.6**
BNB	**Barry Inlet**	**2.80**	**332**	⇓Pn	**Pn**	**21 53 13.5**	**-6.3**
OZB	**Mount Ozzard**	**2.91**	**112**	⇓Sn	**Sn**	**21 53 52.5**	**-3.1**
MOBC	**Moresby Island**	**3.36**	**335**	⇑Pn	**Pn**	**21 53 23.1**	**-4.4**
DIB	**Dawson Inlet,**	**3.56**	**331**	Pn	**Pn**	**21 53 24.9**	**-5.4**
DIB	**Dawson Inlet,**	**3.56**	**331**	⇓Pn	**Pn**	**21 53 24.8**	**-5.5**
PGC	**Sidney**	**4.27**	**108**	*e*Pn	**Pn**	**21 53 39.0**	**-1.0**
PGC				*e*Sn	**Sn**	**21 54 30.1**	**+1.0**
NLWA	**Neilton Lookou**	**4.67**	**124**	*e*Pn	**Pn**	**21 53 44.4

RSSD	**Black Hills**	**18.34**	**99**	*e*P	**Pn**	**21 56 56.2**	**+7.0**
	26nm,1.6s						
PV04	**Paradox Valley**	**18.82**	**121**	*e*P	**Pn**	**21 56 55.3**	**+0.2**
PV01	**Paradox Valley**	**19.19**	**121**	*e*P	**Pn**	**21 56 58.8**	**-0.7**
	3μm,1.5s						
TTA	**Tatalina**	**19.22**	**322**	*e*P	**Pn**	**21 56 59.3**	**-0.4**
WUAZ	**Wupatki**	**19.71**	**131**	*e*P	**Pn**	**21 57 05.0**	**-0.8**
	24nm,1.8s						
ISCO	**Idaho Springs**	**19.77**	**112**	*e*P	**Pn**	**21 57 06.3**	**-0.2**
	40nm,2.0s						
MVCO	**Mesa Verde**	**19.90**	**122**	*e*P	**Pn**	**21 57 06.4**	**-1.6**
	40nm,1.4s						
COLD	**Coldfoot**	**20.03**	**336**	*e*P	**P**	**21 57 08.9**	**+1.4**
	13nm,1.2s						
GLA	**Glamis**	**20.26**	**142**	*e*P	**P**	**21 57 09.9**	**-0.3**
	8.9nm,1.2s						
FALS	**False Pass**	**21.00**	**296**	*e*P	**P**	**21 57 19.2**	**+1.2**
SDCO	**Great Sand Dun**	**21.20**	**117**	*e*P	**P**	**21 57 20.3**	**0.0**
	13nm,1.3s,mb4.1						
ULM	**Lac du Bonnet**	**21.48**	**77**	P	**P**	**21 57 23.1**	**-0.1**
	22nm,0.9s,mb4.5,baz=284,slow=11,SNR=12						
ULM				LR	LR	22 05 53.0	
	comp=Z,610nm,21.7s,MS4.0,baz=106,slow=37						
AGMN	**Agassiz Nation**	**22.00**	**82**	*e*P	**P**	**21 57 29.1**	**+0.2**
	12nm,0.8s,mb4.4						
TUC	**Tucson**	**22.63**	**135**	*e*P	**P**	**21 57 34.9**	**-0.8**
	2.7nm,0.8s,mb3.7						
ANMO	**Albuquerque**	**22.68**	**123**	*e*P	**P**	**21 57 35.7**	**-0.5**
	6.1nm,1.0s,mb4.0						
ANMO	**Albuquerque**	**22.68**	**123**	P	**P**	**21 57 34.8**	**-1.4**
	3.7nm,0.9s,mb3.8,baz=315,slow=8.5,SNR=7.7						
ANMO				LR	LR	22 06 52.2	
	comp=Z,147nm,20.4s,MS3.4,baz=319,slow=38						
BNM	**Barren Site**	**23.20**	**125**	*e*P	**P**	**21 57 41.6**	**-0.1**
	4.7nm,1.0s,mb3.9						
ECSD	**EROS Data Cent**	**23.27**	**93**	*e*P	**P**	**21 57 42.5**	**+0.1**
	54nm,1.3s,mb4.8						
EYMN	**Ely**	**24.89**	**80**	*e*P	**P**	**21 57 57.2**	**-0.1**
	44nm,1.1s,mb4.9						
AMTX	**Amarillo**	**25.40**	**116**	*e*P	**P**	**21 58 02.4**	**+0.3**
MNTX	**Cornudas Mount**	**25.77**	**127**	*e*P	**P**	**21 58 04.7**	**-0.7**
	18nm,1.8s,mb4.3						
WMOK	**Wichita Mounta**	**27.20**	**113**	*e*P	**P**	**21 58 18.1**	**-0.3**
	9.6nm,1.0s,mb4.3						
TXAR	**Lajitas Array**	**28.54**	**127**	P	**P**	**21 58 29.3**	**-1.1**
TXAR				LR	LR	22 10 31.8	
TXAR	**Lajitas Array**	**28.54**	**127**	P	**P**	**21 58 29.3**	**-1.1**
	0.9nm,0.9s,mb3.5,baz=355,slow=7.5,SNR=5.0						
TXAR				LR	LR	22 10 31.8	
	comp=Z,302nm,19.4s,MS3.9,baz=355,slow=38						
MIAR	**Mount Ida**	**30.48**	**107**	*e*P	**P**	**21 58 47.2**	**-0.3**
	13nm,1.2s,mb4.5						
WVT	**Waverly**	**33.07**	**99**	P	**P**	**21 59 10.3**	**+0.1**
	12nm,0.3s,mb5.3						
OXF	**Oxford**	**33.10**	**103**	*e*P	**P**	**21 59 10.4**	**-0.1**
	14nm,0.3s,mb5.4						
GOGA	**Godfrey**	**37.57**	**99**	*e*P	**P**	**21 59 47.1**	**-1.8**
	3.9nm,0.7s,mb4.2						
PET	**Petropavlovsk**	**42.98**	**303**	*e*P	**P**	**22 00 33.2**	**-0.4**
YAK	**Yakutsk**	**51.80**	**324**	P	**P**	**22 01 42.8**	**+0.9**
CBIJ	**Chichi jima**	**68.63**	**287**	LR	LR	22 27 20.2	
	comp=Z,204nm,21.6s,MS4.3,baz=104,slow=30						
TLY	**Talaya**	**68.96**	**328**	P	**P**	**22 03 39.8**	**+0.4**
JNU	**Nakatsue**	**70.93**	**299**	*e*P	**P**	**22 03 49.7**	**-2.2**
	16nm,1.1s,mb4.9						

BJI **27** *21:52:29.3, 32˚.12N×46˚.49E, h10km, mB5.4/46, mb5.1/57, Ms5.9/41, Ms7 5.6/56*

ISCJB **27** *21:52:35.8±0.3, 32˚.29N±0˚.01×47˚.38E±0˚.01, h8km±1km, mb5.3/352, MS5.4/285, Error ellipse: s-maj=2.2km s-min=1.5km az=21.6*

IDC **27** *21:52:38.7±1.7, 32˚.42N×47˚.39E, h16km±9km, mb5.0/31, mb1 5.0/37, mb1mx5.0/38, mbtmp4.9/37, ML4.8/4, MS5.3/32, Ms1 5.3/32, ms1mx5.1/43, Error ellipse: s-maj=9.6km s-min=9.1km az=5.0*

NEIC **27** *21:52:38.1±0.2, 32˚.31N×47˚.35E, h10km, mb5.3/187, MS5.5/199, MW5.7, MW5.7, ML5.6(THR), MN5.7(TEH), Error ellipse: s-maj=3.9km s-min=2.0km az=183.0, Moment Tensor Solution. s39 Moment tensor: Scale 10^17Nm; Mrr=0.74; Mθθ=-3.10; Mϕϕ=2.36; Mrθ=0.07; Mrϕ=2.82; Mθϕ=0.25; Best double couple: M=4.00000×10^17 NP1: ϕs=248.00000°, δ86.00000°, λ2.00000°. NP2:ϕs=158.00000°, δ88.00000°, λ176.00000°. Principal axes: T 3.5700, Plg4.0000°, Azm112.0000°; N 0.7300, Plg85.0000°, Azm317.0000°; P -4.3000, Plg1.0000°, Azm203.0000°;*

NEIC Felt [IV] at As Salimiyah; [III] at Al Farwaniyah and Hawalli; [II] at Kuwait, Kuwait. Felt at Abu Hulayfah, Al Fintas, Al Fuhayhil, Al Jabiriyah, Al Mahbulah and Salwa. Also felt at Al 'Amarah and Al Basrah, Iraq and at Ahvaz, Iran.

THR **27** *21:52:39.9±0.9, 32˚.36N×47˚.36E, h32km±12km, ML5.6*

MOS **27** *21:52:39.4±1.1, 32˚.36N×47˚.35E, h33km, mb5.4/110, MS5.1/80, Error ellipse: s-maj=5.2km s-min=2.5km az=129.4*

OMAN **27** *21:52:40.3±3.1, 32˚.16N×47˚.54E, h17km, Error ellipse: s-maj=1.7km s-min=0.7km az=246.0*

TEH **27** *21:52:40.7, 32˚.34N×47˚.33E, h20km*

CSEM **27** *21:52:40.7±0.1, 32˚.32N×47˚.36E, h29km, mb5.3/99, Ms5.2, Mw5.7, Error ellipse: s-maj=2.7km s-min=1.7km az=10.0*

GCMT **27** *21:52:43.4±0.1, 32˚.23N×47˚.36E, h12km, MW5.8, Moment Tensor Solution. s97,c187; s50,c67; Moment tensor: Scale 10^17Nm; Mrr=1.19±.05; Mθθ=-4.68±.06; Mϕϕ=3.48±.06; Mrθ=0.97±.16; Mϕθ=4.03±.05; Mrϕ=-0.43±.14; Best double couple: M=5.80000×10^17 NP1:ϕs=247.00000°, δ84.00000°, λ-5.00000°. NP2:ϕs=338.00000°, δ85.00000°, λ-174.00000°. Principal axes: T 5.1400, Plg0.0000°, Azm112.0000°; N 1.3400, Plg82.0000°, Azm19.0000°; P -6.4800, Plg8.0000°, Azm202.0000°; Data Used: II IU IC G CN. Surface waves: sta=108, comp=227, per= 50.*

SGS **27** *21:52:46.8, 32˚.14N×47˚.72E, h54km*

SZGRF **27** *21:52:48.7, 33˚.12N×46˚.12E, h33km, mb5.2, MS5.1, Iran-Iraq border region*

DJA **27** *21:52:57, 32˚.15N×47˚.99E, h149km, mb5.5/38*

BGS **27** *21:53:15.2±1.9, 35˚.55N×43˚.44E, h10km, mb5.1, MS5.0*

ISC 27 21:52:39.3±0.3, 32˚.32N±0˚.01×47˚.38E±0˚.01, h18km±2km, h21km±2.8km:pP-P,n2049,σ1ϕ20/2133,mb5.3/352, MS5.4/285,136C-93D,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**1.22**	**100**	Pg	**Pg**	**21 53 03.1**	**+0.2**
SHGR				Sg	**Sg**	**21 53 22.0**	**+3.1**
SHGR	**Shooshtar-Gavs**	**1.22**	**100**	*e*Pg	**Pg**	**21 53 03.0**	**0.0**
SHGR				AML	AML	21 53 24.8	
	comp=N,459μm,0.5s						
SHGR	**Shooshtar-Gavs**	**1.22**	**100**	Pg	**Pg**	**21 53 03.1**	**+0.2**
SHGR				Sg	**Sg**	**21 53 22.0**	**+3.1**
IKOM	**Komasi**	**1.85**	**3**	Pn	**Pn**	**21 53 11.5**	**+1.3**
IKOM	**Komasi**	**1.85**	**3**	*e*Pn	**Pn**	**21 53 11.4**	**+1.2**
IKOM				*e*Sg	**Sg**	**21 53 37.1**	**-1.9**
IKOM				*e*		21 53 41.5	
	comp=Z,60μm,0.3s						
IKOM	**Komasi**	**1.85**	**3**	*e*Pn	**Pn**	**21 53 11.4**	**+1.2**
IKOM				*e*Sg	**Sg**	**21 53 37.1**	**-1.9**
IGHG	**Ghaleghazi**	**2.12**	**341**	Pn	**Pn**	**21 53 14.9**	**+1.1**
IGHG	**Ghaleghazi**	**2.12**	**341**	*e*Pn	**Pn**	**21 53 15.0**	**+1.2**
IGHG				*e*Sg	**Sg**	**21 53 45.2**	**-2.2**
IGHG				*e*		21 53 59.8	
	comp=Z,86μm,0.3s						
IGHG	**Ghaleghazi**	**2.12**	**341**	*e*Pn	**Pn**	**21 53 15.0**	**+1.2**
IGHG				*e*Sg	**Sg**	**21 53 45.2**	**-2.2**
IVIS	**Veis**	**2.24**	**349**	Pn	**Pn**	**21 53 16.6**	**+1.0**
IVIS	**Veis**	**2.24**	**349**	*e*Pn	**Pn**	**21 53 16.4**	**+0.8**
IVIS				*e*		21 53 58.4	
	comp=Z,90μm,0.4s						
IVIS	**Veis**	**2.24**	**349**	*e*Pn	**Pn**	**21 53 16.4**	**+0.8**
MIB	**Mutribah**	**2.51**	**181**	*e*P	**Pn**	**21 53 21.8**	**+2.6**
IDHR	**Dehrash**	**2.51**	**341**	Pn	**Pn**	**21 53 20.0**	**+0.7**
IDHR	**Dehrash**	**2.51**	**341**	*e*Pn	**Pn**	**21 53 20.0**	**+0.7**
IDHR				*e*Sg	**Sg**	**21 53 57.5**	**-2.6**
IDHR				*e*		21 54 04.9	
	comp=Z,32μm,0.3s						
IDHR	**Dehrash**	**2.51**	**341**	*e*Pn	**Pn**	**21 53 20.0**	**+0.7**
IDHR				*e*Sg	**Sg**	**21 53 57.5**	**-2.6**
ILIN	**Lien**	**2.61**	**352**	Pn	**Pn**	**21 53 21.5**	**+0.8**
ILIN				Sg	**Sg**	**21 54 02.2**	**-1.1**
ILIN	**Lien**	**2.61**	**352**	*e*Pn	**Pn**	**21 53 21.7**	**+1.0**
ILIN				*e*		21 54 16.0	
	comp=N,67μm,0.5s						
ILIN	**Lien**	**2.61**	**352**	*e*Pn	**Pn**	**21 53 21.7**	**+1.0**
ILIN				Sg	**Sg**	**21 54 02.2**	**-1.1**
BHD	**Baghdad**	**2.70**	**291**	*ex*	**Pn**	**21 53 22.2**	**+0.4**
BHD				*i* x	x	21 53 30.0	
BHD				*i* x	x	21 53 30.0	
BHD				*i* x	**Sn**	**21 53 55.8**	**+1.7**
BHD				*i* x	x	21 54 04.5	
BHD	**Baghdad**	**2.70**	**291**	*e*Pn	**Pn**	**21 53 22.2**	**+0.4**
UMR	**Umm Al-Rimmam**	**2.78**	**174**	*e*P	**Pn**	**21 53 25.5**	**+2.6**
IPIR	**Pirpir**	**2.99**	**82**	Pn	**Pn**	**21 53 28.2**	**+2.4**
IPIR	**Pirpir**	**2.99**	**82**	*e*Pn	**Pn**	**21 53 28.5**	**+2.7**
IPIR				*e*		21 54 30.6	
	comp=Z,79μm,0.4s						
IPIR	**Pirpir**	**2.99**	**82**	*e*Pn	**Pn**	**21 53 28.5**	**+2.7**
NAY	**Al-Naaiem**	**3.06**	**182**	*e*P	**Pn**	**21 53 29.8**	**+2.9**
NAY				AML	AML	21 54 12.0	
	comp=Z,6μm,0.6s						
ASAO	**Ashtian**	**3.13**	**44**	Pn	**Pn**	**21 53 32.3**	**+4.5**
ASAO	**Ashtian**	**3.13**	**44**	*e*Pn	**Pn**	**21 53 29.9**	**+2.1**
ASAO				*e*Sg	**Sg**	**21 54 15.1**	**-4.9**
ASAO				AML	AML	21 54 23.2	
	comp=N,11μm,0.6s						
ASAO				AML	AML	21 54 25.2	
	comp=E,11μm,0.6s						
ASAO	**Ashtian**	**3.13**	**44**	Pn	**Pn**	**21 53 32.3**	**+4.5**
KBD	**Kabd**	**3.15**	**175**	*e*P	**Pn**	**21 53 30.9**	**+2.9**
KBD				AML	AML	21 54 14.1	
	comp=Z,14μm,0.6s						
QRN	**Al-Qurain**	**3.59**	**172**	*e*P	**Pn**	**21 53 37.0**	**+2.8**
QRN				AML	AML	21 54 21.2	
	comp=Z,7μm,0.6s						
IKLH	**Kolahrood**	**3.67**	**73**	Pn	**Pn**	**21 53 37.2**	**+2.0**
IKLH	**Kolahrood**	**3.67**	**73**	*e*Pn	**Pn**	**21 53 37.2**	**+2.0**
IKLH				*e*		21 54 44.1	
	comp=Z,35μm,0.3s						
IKLH	**Kolahrood**	**3.67**	**73**	*e*Pn	**Pn**	**21 53 37.2**	**+2.0**
IRAZ	**Razeghan**	**3.73**	**34**	Pn	**Pn**	**21 53 38.0**	**+1.9**
IRAZ	**Razeghan**	**3.73**	**34**	*e*Pn	**Pn**	**21 53 37.8**	**+1.7**
IRAZ				*e*		21 54 44.1	
	comp=Z,926nm,0.4s						
IRAZ	**Razeghan**	**3.73**	**34**	*e*Pn	**Pn**	**21 53 37.8**	**+1.7**
GHVR	**GHOM**	**3.92**	**56**	Pn	**Pn**	**21 53 41.7**	**+3.1**
GHVR	**GHOM**	**3.92**	**56**	Pn	**Pn**	**21 53 41.7**	**+3.1**
IGAR	**Gharneh**	**3.94**	**88**	*e*Pn	**Pn**	**21 53 40.3**	**+1.3**
IGAR				*e*		21 55 02.7	
	comp=Z,7μm,0.5s						
KFJS		**4.15**	**173**	P	**Pn**	**21 53 43.6**	**+1.8**
KFJS		**4.15**	**173**	P	**Pn**	**21 53 43.6**	**+1.8**
IZEF	**Zefreh**	**4.21**	**81**	Pn	**Pn**	**21 53 44.1**	**+1.4**
IZEF	**Zefreh**	**4.21**	**81**	*e*Pn	**Pn**	**21 53 44.0**	**+1.3**
IZEF				*e*		21 55 13.1	
	comp=Z,54μm,0.3s						
IZEF	**Zefreh**	**4.21**	**81**	*e*Pn	**Pn**	**21 53 44.0**	**+1.3**
IMHD	**Mahdasht**	**4.33**	**38**	Pn	**Pn**	**21 53 44.8**	**+0.6**
IMHD	**Mahdasht**	**4.33**	**38**	*e*Pn	**Pn**	**21 53 44.9**	**+0.7**
IMHD				*e*		21 54 04.0	
	comp=Z,27μm,0.3s						
IMHD	**Mahdasht**	**4.33**	**38**	*e*Pn	**Pn**	**21 53 44.9**	**+0.7**
IR3	**Iran Long-Peri**	**4.37**	**43**	*e*Pn	**Pn**	**21 53 45.8**	**+1.0**
IR3	**Iran Long-Peri**	**4.37**	**43**	*e*Pn	**Pn**	**21 53 45.8**	**+1.0**
IVRN	**Varamin**	**4.50**	**52**	*e*Pn	**Pn**	**21 53 47.6**	**+1.0**
IVRN	**Varamin**	**4.50**	**52**	*e*Pn	**Pn**	**21 53 47.6**	**+1.0**
ISFB	**Sefidab**	**4.54**	**62**	Pn	**Pn**	**21 53 48.0**	**+0.8**
ISFB	**Sefidab**	**4.54**	**62**	*e*Pn	**Pn**	**21 53 48.1**	**+0.9**
ISFB				*e*		21 55 27.2	
	comp=Z,50μm,0.6s						
ISFB	**Sefidab**	**4.54**	**62**	*e*Pn	**Pn**	**21 53 48.1**	**+0.9**
NASN	**Na'in**	**4.61**	**83**	Pn	**Pn**	**21 53 49.4**	**+1.3**
NASN	**Na'in**	**4.61**	**83**	*e*Pn	**Pn**	**21 53 49.9**	**+1.8**
NASN				AML	AML	21 55 15.3	
	comp=N,2μm,0.5s						
NASN	**Na'in**	**4.61**	**83**	Pn	**Pn**	**21 53 49.4**	**+1.3**
THKV	**Tehran--Karaj**	**4.61**	**38**	*e*Pn	**Pn**	**21 53 49.8**	**+1.7**
CHTH	**Charan**	**4.74**	**40**	*e*Pn	**Pn**	**21 53 50.7**	**+0.8**
DAMV	**Damavand**	**5.04**	**48**	*e*Pn	**Pn**	**21 53 55.5**	**+1.5**
IDMV	**Damavand**	**5.05**	**49**	Pn	**Pn**	**21 53 54.9**	**+0.8**
IDMV	**Damavand**	**5.05**	**49**	*e*Pn	**Pn**	**21 53 54.9**	**+0.8**
IDMV				*e*		21 55 43.3	
	comp=Z,61μm,0.5s						
IDMV	**Damavand**	**5.05**	**49**	*e*Pn	**Pn**	**21 53 54.9**	**+0.8**
SHI	**Shiraz**	**5.15**	**120**	*e*Pn	**Pn**	**21 53 57.0**	**+1.4**
SHI	**Shiraz**	**5.15**	**120**	*e*Pn	**Pn**	**21 53 57.0**	**+1.4**
ISAD	**Sadrabad**	**5.36**	**93**	Pn	**Pn**	**21 53 59.2**	**+0.7**
ISAD	**Sadrabad**	**5.36**	**93**	*e*Pn	**Pn**	**21 53 59.3**	**+0.8**
ISAD				*e*		21 55 56.2	
	comp=Z,83μm,0.5s						
ISAD	**Sadrabad**	**5.36**	**93**	*e*Pn	**Pn**	**21 53 59.3**	**+0.8**
IPAR	**Pars**	**5.45**	**115**	Pn	**Pn**	**21 54 01.0**	**+1.3**
IPAR	**Pars**	**5.45**	**115**	*e*Pn	**Pn**	**21 54 00.8**	**+1.1**
IPAR				*e*		21 55 52.9	
	comp=Z,30μm,0.5s						
IPAR	**Pars**	**5.45**	**115**	*e*Pn	**Pn**	**21 54 00.8**	**+1.1**
IAZR	**Azarshahr**	**5.47**	**348**	Pn	**Pn**	**21 54 00.4**	**+0.5**
IAZR	**Azarshahr**	**5.47**	**348**	*e*Pn	**Pn**	**21 54 00.1**	**+0.2**
IAZR				*e*		21 55 44.3	
	comp=Z,66μm,0.5s						
IAZR	**Azarshahr**	**5.47**	**348**	*e*Pn	**Pn**	**21 54 00.1**	**+0.2**
ISRB	**Sarab**	**5.50**	**2**	Pn	**Pn**	**21 54 01.2**	**+0.9**
ISRB	**Sarab**	**5.50**	**2**	*e*Pn	**Pn**	**21 54 01.0**	**+0.7**
ISRB				*e*		21 54 30.1	
	comp=Z,25μm,0.6s						
ISRB	**Sarab**	**5.50**	**2**	*e*Pn	**Pn**	**21 54 01.0**	**+0.7**
ILAS	**Lasjerd**	**5.55**	**55**	Pn	**Pn**	**21 54 02.0**	**+0.9**
ILAS	**Lasjerd**	**5.55**	**55**	*e*Pn	**Pn**	**21 54 02.0**	**+0.9**
ILAS				*e*		21 55 56.7	
	comp=Z,28μm,0.4s						
ILAS	**Lasjerd**	**5.55**	**55**	*e*Pn	**Pn**	**21 54 02.0**	**+0.9**
IFIR	**Firoozkooh**	**5.56**	**52**	Pn	**Pn**	**21 54 01.6**	**+0.5**
IFIR	**Firoozkooh**	**5.56**	**52**	*e*Pn	**Pn**	**21 54 02.0**	**+0.9**
IFIR				*e*		21 54 29.2	
	comp=Z,10μm,0.2s						
IFIR	**Firoozkooh**	**5.56**	**52**	*e*Pn	**Pn**	**21 54 02.0**	**+0.9**
IPRN	**Peran**	**5.67**	**45**	Pn	**Pn**	**21 54 04.8**	**+2.2**
IPRN	**Peran**	**5.67**	**45**	*e*Pn	**Pn**	**21 54 04.8**	**+2.2**
IPRN	**Peran**	**5.67**	**45**	*e*Pn	**Pn**	**21 54 04.8**	**+2.2**
ISRV	**Sarvestan**	**5.73**	**119**	Pn	**Pn**	**21 54 05.0**	**+1.4**
ISRV	**Sarvestan**	**5.73**	**119**	*e*Pn	**Pn**	**21 54 05.0**	**+1.4**
ISRV				*e*		21 56 27.7	
	comp=Z,74μm,1.2s						
ISRV	**Sarvestan**	**5.73**	**119**	*e*Pn	**Pn**	**21 54 05.0**	**+1.4**
IFTB	**Fath-abad**	**5.74**	**352**	*e*Pn	**Pn**	**21 54 04.1**	**+0.5**
CUKT	**Cukurca**	**5.81**	**329**	*e*PN	**Pn**	**21 54 03.0**	**-1.6**
CUKT	**Cukurca**	**5.81**	**329**	*e*Pn	**Pn**	**21 54 03.1**	**-1.5**
IALA	**Alasht**	**5.86**	**49**	Pn	**Pn**	**21 54 05.6**	**+0.4**
IALA	**Alasht**	**5.86**	**49**	*e*Pn	**Pn**	**21 54 05.7**	**+0.5**
IALA	**Alasht**	**5.86**	**49**	*e*Pn	**Pn**	**21 54 05.7**	**+0.5**
ICHK	**Chekchek**	**5.95**	**89**	Pn	**Pn**	**21 54 06.9**	**+0.4**
ICHK	**Chekchek**	**5.95**	**89**	*e*Pn	**Pn**	**21 54 06.9**	**+0.4**
ICHK				*e*		21 56 00.6	
	comp=Z,70μm,0.7s						
ICHK	**Chekchek**	**5.95**	**89**	*e*Pn	**Pn**	**21 54 06.9**	**+0.4**
ITBZ	**Tabriz**	**5.98**	**351**	Pn	**Pn**	**21 54 07.4**	**+0.4**
ITBZ	**Tabriz**	**5.98**	**351**	*e*	**Pg**	**21 54 33.5**	**-0.3**
	comp=Z,10μm,0.4s						
ITBZ				*e*Pn	**Pn**	**21 54 07.3**	**+0.3**
IHRS	**Heris**	**5.99**	**357**	Pn	**Pn**	**21 54 08.9**	**+1.9**
IHRS	**Heris**	**5.99**	**357**	*e*	**Pg**	**21 54 36.1**	**+2.1**
	comp=Z,11μm,0.4s						
IHRS				*e*Pn	**Pn**	**21 54 08.6**	**+1.6**
ISHM	**Shahmirzad**	**6.01**	**53**	Pn	**Pn**	**21 54 08.5**	**+1.1**
ISHM	**Shahmirzad**	**6.01**	**53**	*e*	**Pg**	**21 54 41.9**	**+7.5**
	comp=Z,23μm,0.3s						
ISHM				*e*Pn	**Pn**	**21 54 08.6**	**+1.2**
HAKT	**HAKKARI**	**6.03**	**331**	*i* P	**Pn**	**21 54 07.7**	**+0.1**
HAKT	**HAKKARI**	**6.03**	**331**	*i* P	**Pn**	**21 54 07.7**	**+0.1**
HKR	**Hakkari**	**6.04**	**331**	*e*PN	**Pn**	**21 54 07.2**	**-0.5**
HKR	**Hakkari**	**6.04**	**331**	*e*Pn	**Pn**	**21 54 07.2**	**-0.5**
ISHB	**Shabestar**	**6.12**	**347**	Pn	**Pn**	**21 54 08.4**	**-0.4**
ISHB	**Shabestar**	**6.12**	**347**	*e*Pn	**Pn**	**21 54 08.4**	**-0.4**
ISHB				*e*		21 56 06.3	
	comp=Z,35μm,0.7s						
IMEH	**Mehriz**	**6.22**	**97**	Pn	**Pn**	**21 54 10.7**	**+0.4**
IMEH	**Mehriz**	**6.22**	**97**	*e*Pn	**Pn**	**21 54 10.7**	**+0.4**
IMEH				*e*		21 57 02.4	
	comp=Z,99μm,1.3s						
IMEH	**Mehriz**	**6.22**	**97**	*e*Pn	**Pn**	**21 54 10.7**	**+0.4**
IANJ	**Anjilo**	**6.27**	**58**	Pn	**Pn**	**21 54 11.3**	**+0.4**
IANJ	**Anjilo**	**6.27**	**58**	*e*Pn	**Pn**	**21 54 11.3**	**+0.4**
IANJ				*e*		21 57 26.5	
	comp=Z,35μm,0.9s						
IANJ	**Anjilo**	**6.27**	**58**	*e*Pn	**Pn**	**21 54 11.3**	**+0.4**
GRMI	**Germi**	**6.49**	**4**	*e*Pn	**Pn**	**21 54 15.0**	**+1.1**
IKIA	**Kiasar**	**6.50**	**52**	Pn	**Pn**	**21 54 16.0**	**+2.0**
IKIA	**Kiasar**	**6.50**	**52**	*e*Pn	**Pn**	**21 54 16.1**	**+2.1**
IKIA	**Kiasar**	**6.50**	**52**	*e*Pn	**Pn**	**21 54 16.1**	**+2.1**
IMRD	**Marand**	**6.52**	**348**	Pn	**Pn**	**21 54 16.4**	**+2.0**
IMRD	**Marand**	**6.52**	**348**	*e*Pn	**Pn**	**21 54 16.4**	**+2.0**
IMRD				*e*		21 56 20.9	
	comp=Z,14μm,0.3s						
IMRD	**Marand**	**6.52**	**348**	*e*Pn	**Pn**	**21 54 16.4**	**+2.0**
BOQSS		**6.66**	**164**	P	**Pn**	**21 54 16.8**	**+0.5**
IGLO	**Ghaloghah**	**6.77**	**50**	Pn	**Pn**	**21 54 19.0**	**+1.3**
IGLO	**Ghaloghah**	**6.77**	**50**	*e*Pn	**Pn**	**21 54 19.1**	**+1.4**
IGLO	**Ghaloghah**	**6.77**	**50**	*e*Pn	**Pn**	**21 54 19.1**	**+1.4**
VANT	**Van**	**6.95**	**332**	*e*PN	**Pn**	**21 54 21.9**	**+1.6**
TVAN	**Van**	**6.99**	**333**	*i* P	**Pn**	**21 54 18.4**	**-2.4**
IBAF	**Bafgh**	**7.00**	**94**	Pn	**Pn**	**21 54 21.3**	**+0.4**
IBAF	**Bafgh**	**7.00**	**94**	*e*Pn	**Pn**	**21 54 21.3**	**+0.4**
IBAF				*e*		21 56 56.9	
	comp=Z,26μm,0.6s						
IBAF	**Bafgh**	**7.00**	**94**	*e*Pn	**Pn**	**21 54 21.3**	**+0.4**
VANB	**Van**	**7.05**	**334**	*e*PN	**Pn**	**21 54 22.3**	**+0.7**
VANB	**Van**	**7.05**	**334**	*e*Pn	**Pn**	**21 54 22.3**	**+0.6**
CLDR	**Caldiran**	**7.37**	**338**	*e*PN	**Pn**	**21 54 28.2**	**+2.2**
CLDR	**Caldiran**	**7.37**	**338**	*e*Pn	**Pn**	**21 54 28.2**	**+2.3**
TATV	**Tatvan**	**7.45**	**327**	*i* P	**Pn**	**21 54 23.7**	**-3.4**
BEST	**Besiri**	**7.48**	**320**	*i* P	**Pn**	**21 54 26.8**	**-0.7**
DYDN	**Diyadin**	**7.80**	**338**	*i* P	**Pn**	**21 54 31.2**	**-0.8**
DYDN	**Diyadin**	**7.80**	**338**	*i* P	**Pn**	**21 54 31.2**	**-0.7**
AGRB	**Hanur-Agry**	**8.06**	**335**	*e*PN	**Pn**	**21 54 37.3**	**+1.7**
AGRB	**Hanur-Agry**	**8.06**	**335**	*e*Pn	**Pn**	**21 54 37.3**	**+1.8**
GNI	**Garni**	**8.10**	**345**	*e*Pn	**Pn**	**21 54 42.7**	**+6.7**
GNI	**Garni**	**8.10**	**345**	*e*Pn	**Pn**	**21 54 37.1**	**+1.1**
GNI				*e*Sn	**Sn**	**21 56 10.7**	**+3.6**
GNI	**Garni**	**8.10**	**345**	Pn	**Pn**	**21 54 38.0**	**+2.0**
	comp=Z,2.4nm,0.3s,baz=256,slow=1.8,SNR=15						
GNI				Lg		21 56 57.6	
	comp=Z,0.8nm,0.3s,baz=248,slow=18,SNR=1.9						
GNI				LR	LR	21 57 48.5	
	comp=Z,11μm,18.3s,baz=160,slow=39						
GNI	**Garni**	**8.10**	**345**	*e*P	**Pn**	**21 54 37.1**	**+1.1**
GNI	**Garni**	**8.10**	**345**	P	**Pn**	**21 54 41.0**	**+5.0**
	SNR=14						
DIYA	**Diyarbakir**	**8.16**	**315**	*i* P	**Pn**	**21 54 36.5**	**-0.3**
DIYA	**Diyarbakir**	**8.16**	**315**	*i* P	**Pn**	**21 54 36.5**	**-0.3**
BNGL	**BINGOL**	**8.33**	**324**	*i* P	**Pn**	**21 54 37.7**	**-1.5**
BINT	**Bingol**	**8.62**	**321**	*e*PN	**Pn**	**21 54 43.0**	**-0.1**
BINT	**Bingol**	**8.62**	**321**	*e*Pn	**Pn**	**21 54 43.0**	**-0.1**
DIGO	**Kars**	**8.70**	**339**	*i* P	**Pn**	**21 54 42.9**	**-1.3**
DIGO	**Kars**	**8.70**	**339**	*i* P	**Pn**	**21 54 42.9**	**-1.3**
BTHS		**8.79**	**159**	P	**Pn**	**21 54 45.4**	**-0.2**
BTHS		**8.79**	**159**	P	**Pn**	**21 54 45.3**	**-

IAKL **Akhelmad** 10.31 62 *e*Pn Pn 21 55 07.6 +1.2
IAKL *e* 21 58 38.7
comp=Z,20µm,1.3s
GUMT Gumushane 10.32 324 *e*PN Pn 21 55 06.6 +0.2
GUMT Gumushane 10.32 324 *e*Pn Pn 21 55 06.6 +0.2
ASUD Al Ashush, Dub 10.37 136 P Pn 21 55 07.4 +0.2
SNR=66
ASUD Al Ashush, Dub 10.37 136 P Pn 21 55 07.6 +0.3
SNR=133
ASUD Al Ashush, Dub 10.37 136 P Pn 21 55 07.4 +0.2
SNR=66
ABKT Ailbek 10.42 55 Pn Pn 21 55 09.9 +2.1
comp=Z,586nm,0.9s,SNR=32
VAN Vannovskaya 10.42 54 *e*P Pn 21 55 09.1 +1.3
VAN Vannovskaya 10.42 54 *e*P Pn 21 55 09.1 +1.3
IPAY Payeh 10.44 64 Pn Pn 21 55 08.9 +0.8
IPAY Payeh 10.44 64 *e*Pn Pn 21 55 08.9 +0.8
IPAY *e* 21 58 40.5
comp=Z,12µm,1.5s
IPAY Payeh 10.44 64 *e*Pn Pn 21 55 08.9 +0.8
SLTI Sal'it 10.45 273 Pn Pn 21 55 07.3 -0.9
SLTI Sal'it 10.45 273 Pn Pn 21 55 07.3 -0.9
ANDN Andirin 10.46 303 *i* P Pn 21 55 05.3 -3.1
OFRI 'Ofer 10.48 275 Pn Pn 21 55 08.1 -0.5
OFRI 'Ofer 10.48 275 Pn Pn 21 55 08.1 -0.5
IDAH Dahanechah 10.55 84 *e*Pn Pn 21 55 10.2 +0.6
IDAH *e* 21 58 50.5
comp=Z,13µm,0.7s
IDAH Dahanechah 10.55 84 *e*Pn Pn 21 55 10.2 +0.6
IEMG Emamgholi 10.56 58 Pn Pn 21 55 11.6 +1.9
IEMG Emamgholi 10.56 58 *e*Pn Pn 21 55 11.6 +1.9
IEMG *e* 21 59 31.7
comp=Z,4µm,0.6s
IEMG Emamgholi 10.56 58 *e*Pn Pn 21 55 11.6 +1.9
ZFRI Zfri 10.57 264 Pn Pn 21 55 08.9 -1.0
ZFRI Zfri 10.57 264 Pn Pn 21 55 08.9 -1.0
IMOG Moghan 10.60 66 Pn Pn 21 55 11.4 +1.2
IMOG Moghan 10.60 66 *e*Pn Pn 21 55 11.4 +1.2
IMOG *e* 21 59 14.8
comp=Z,6µm,0.8s
IMOG Moghan 10.60 66 *e*Pn Pn 21 55 11.4 +1.2
MAK Makhachkala 10.62 0*d* *i*P Pn 21 55 13.6 +3.0
MAK *e* 21 57 16.8
MAK MLR MLR
comp=Z,31µm,20.0s
MAK Makhachkala 10.62 0 *i* P Pn 21 55 13.6 +3.0
CEYT Ceyhan 10.66 299 *e*PN Pn 21 55 16.4 +5.3
YURE YUREGIR 10.68 298 *i* P Pn 21 55 12.8 +1.5
YURE YUREGIR 10.68 298 *i* P Pn 21 55 12.8 +1.5
HATD Hatta, Dubai 10.72 132 P Pn 21 55 10.9 -1.0
SNR=94
HATD Hatta, Dubai 10.72 132 Pn Pn 21 55 11.4 -0.5
SNR=83
HATD Hatta, Dubai 10.72 132 P Pn 21 55 10.9 -1.1
SNR=94
HATD Hatta, Dubai 10.72 132 P Pn 21 55 11.4 -0.6
SNR=83
ISRO Mashad 10.76 65 *e*Pn Pn 21 55 13.3 +0.8
ISRO Mashad 10.76 65 *e*Pn Pn 21 55 13.3 +0.8
SARI SarD1z-Kayseri 10.77 309 *e*PN Pn 21 55 14.3 +1.7
SARI SarD1z-Kayseri 10.77 309 *e*Pn Pn 21 55 14.3 +1.7
ASHO Ashiyiah 10.77 133 P Pn 21 55 11.6 -1.1
SNR=103
ASHO Ashiyiah 10.77 133 P Pn 21 55 11.6 -1.1
SNR=103
KRTS Karatas 10.78 296 *e*PN Pn 21 55 19.2 +6.4
ZEI Tsey 10.79 346 *e*P Pn 21 55 16.4 +3.6
ZEI pmax pmax
comp=Z,41nm,0.7s
ZEI MLR MLR
comp=Z,6µm,11.0s
KOZT Kozan 10.79 302 *e*PN Pn 21 55 16.4 +3.5
HRFI Mount Harif 10.82 261 Pn Pn 21 55 12.8 -0.5
HRFI Mount Harif 10.82 261 Pn Pn 21 55 12.8 -0.5
RTMI Retamim 10.88 267 Pn Pn 21 55 13.3 -0.9
RTMI Retamim 10.88 267 Pn Pn 21 55 13.3 -0.9
EIL Elat 10.99 259 Pn Pn 21 55 14.7 -1.0
EIL Elat 10.99 259 Pn Pn 21 55 14.4 -1.2
comp=Z,3.8nm,0.3s,baz=67,slow=4.3,SNR=27
EIL Lg 21 58 38.9
comp=Z,16nm,0.3s,baz=358,slow=18,SNR=4.0
EIL LR LR 22 00 14.1
comp=Z,12µm,21.9s,baz=81,slow=41
EIL Elat 10.99 259 Pn Pn 21 55 14.7 -1.0
ESPY Espiye-Giresun 11.04 323 *e*PN Pn 21 55 17.1 +0.9
ESPY Espiye-Giresun 11.04 323 *e*Pn Pn 21 55 17.1 +0.9
KRMI Paran Flat 11.06 262 Pn Pn 21 55 15.6 -1.0
KRMI Paran Flat 11.06 262 Pn Pn 21 55 15.6 -1.0
KZIT Kziot 11.16 266 Pn Pn 21 55 17.1 -0.9
KZIT Kziot 11.16 266 Pn Pn 21 55 17.1 -0.9
KARA Karaisali 11.27 299 *e*PN Pn 21 55 22.7 +3.3
GRSN GIRESUNGRSN 11.28 322 *i* P Pn 21 55 18.1 -1.4
GRSN GIRESUNGRSN 11.28 322 *i* P Pn 21 55 18.1 -1.4
SVSK Karacayir 11.30 315 *e*PN Pn 21 55 21.3 +1.4
SVSK Karacayir 11.30 315 *e*Pn Pn 21 55 21.3 +1.4
RSDY Resadiye-TOKAT 11.42 318 *e*PN Pn 21 55 22.0 +0.5
RSDY Resadiye-TOKAT 11.42 318 *e*Pn Pn 21 55 22.0 +0.5
EREN Erenkoy 11.43 290 *e*PN Pn 21 55 29.7 +8.0
TOKA Tokat 11.87 315 *i* P Pn 21 55 32.0 +4.4
LFK Lefkose 11.89 288 *e*PN Pn 21 55 35.3 +7.3
IKL Isikli 11.98 293 *e*PN Pn 21 55 35.3 +6.1
ARQ Araqi 12.06 136 P Pn 21 55 28.9 -1.4
SNR=377
ARQ Araqi 12.06 136 P Pn 21 55 28.9 -1.4
SNR=377
AVNT Avonos 12.06 306 *i* P Pn 21 55 25.6 -4.6
KIV Kislovodsk 12.19 344 *i* P Pn 21 55 34.3 +2.4
KIV Kislovodsk 12.19 344⇑ *e*P Pn 21 55 34.2 +2.3
KIV *e*S Sn 21 57 45.8 -1.5
KIV pmax pmax
comp=Z,157nm,1.7s
KIV MLR MLR
comp=Z,5µm,18.0s
KIV Kislovodsk 12.19 344 Pn Pn 21 55 35.3 +3.4
comp=Z,394nm,1.4s,SNR=9.0
KIV Kislovodsk 12.19 344 *e*P Pn 21 55 34.2 +2.3
comp=Z,157nm,1.7s
KIV *e*S Sn 21 57 45.8 -1.5
comp=Z,5µm,18.0s
KIV Kislovodsk 12.19 344 P Pn 21 55 34.4 +2.4
SNR=24
HOQ Hoqain 12.36 132 P Pn 21 55 31.5 -2.9
SNR=60
LEF Lefka 12.38 287 *e*PN Pn 21 55 41.4 +6.7
KVT Kavak 12.61 317 *e*PN Pn 21 55 37.4 -0.3
KVT Kavak 12.61 317 *e*Pn Pn 21 55 37.4 -0.3
ERMK Ermenek 12.69 294 *i* P Pn 21 55 31.0 -7.9
SULT Sultanhani-AKS 12.75 301 *e*PN Pn 21 55 42.3 +2.5
SULT Sultanhani-AKS 12.75 301 *e*Pn Pn 21 55 42.3 +2.6
SOC Sochi 12.76 334⇑ *i*P Pn 21 55 44.1 +4.3
SOC Sochi 12.76 334*c* *i*P Pn 21 55 44.0 +4.2
SOC *e*S Sn 21 58 01.2 -0.1
SOC pmax pmax
comp=Z,90nm,0.8s
SOC MLR MLR
comp=Z,16µm,17.0s
CDAG Cicekdag 12.80 308 *i* P Pn 21 55 36.3 -4.1
BSY Bisya 12.91 135 P Pn 21 55 40.5 -1.5
SNR=191
CORM Corum 12.93 311 *e*PN Pn 21 55 42.3 +0.2
CORM Corum 12.93 311 *e*Pn Pn 21 55 42.3 +0.2
BSYO Bisya 12.95 135 P Pn 21 55 40.5 -1.9
SNR=191
CTKT Corum 13.08 313 *i* P Pn 21 55 38.4 -5.7
HDMB Hadim 13.11 295 *e*PN Pn 21 55 48.7 +4.1
KAMT Kaman 13.12 306 *e*PN Pn 21 55 46.5 +1.8
KAMT Kaman 13.12 306 *e*Pn Pn 21 55 46.6 +1.8
GOF Gofitskoye 13.16 346 *e*P Pn 21 55 48.2 +3.0
GOF pmax pmax
comp=Z,410nm,0.8s
GOF Gofitskoye 13.16 346 *e*P Pn 21 55 48.2 +3.0
comp=Z,410nm,0.8s
SMDO Samad 13.20 132 P Pn 21 55 43.7 -2.2
SNR=117
SMDO Samad 13.20 132 P Pn 21 55 43.7 -2.2
SNR=117
BR131 Keskin Array S 13.34 307 *e*Pn Pn 21 55 47.8 0.0
BR131 Sn Sn 21 58 16.1 +0.5
BR131 Keskin Array S 13.34 307 *e*Pn Pn 21 55 47.8 0.0
BR131 Sn Sn 21 58 16.1 +0.5
BRTR Keskin Array B 13.34 307 Pn Pn 21 55 48.5 +0.7
comp=Z,0.3nm,0.3s,baz=133,slow=12,SNR=19
BRTR LR LR 22 01 56.0
comp=Z,14µm,18.7s,baz=109,slow=42

BRTR Keskin Array B 13.34 307 P Pn 21 55 48.5 +0.7
KONT Konya--Tatoy 13.51 299 *e*PN Pn 21 55 53.5 +3.4
BYBT Boyabat 13.60 316 *e*PN Pn 21 55 50.6 -0.6
BYBT Boyabat 13.60 316 *e*Pn Pn 21 55 50.7 -0.5
BBAL Bala 13.61 306 *i* P Pn 21 55 48.0 -3.3
JMDO Jabal Madar 13.74 134 P Pn 21 55 50.6 -2.7
SNR=73
TOS Tosya 13.79 313 *e*PN Pn 21 55 54.9 +1.0
TOS Tosya 13.79 313 *e*Pn Pn 21 55 54.9 +1.0
CANT Cankiri 13.81 311 *e*PN Pn 21 55 54.1 0.0
ELDT Eldivan 13.87 310 *i* P Pn 21 55 54.5 -0.5
ILGA Ilgaz 13.99 312 *i* P Pn 21 55 59.8 +3.2
LOD Lodumlu 14.01 307 *e*PN Pn 21 55 57.6 +0.7
LOD Lodumlu 14.01 307 *e*Pn Pn 21 55 57.6 +0.7
WBK Wadi Bani Khal 14.11 130 P Pn 21 55 55.7 -2.6
SNR=56
KIZT Kizilcal 14.20 302 *e*PN Pn 21 56 01.8 +2.3
KIZT Kizilcal 14.20 302 *e*Pn Pn 21 56 01.8 +2.3
BZK Bozkurt 14.35 316 *e*PN Pn 21 56 01.1 -0.4
BZK Bozkurt 14.35 316 *e*Pn Pn 21 56 01.1 -0.4
BALT Daday 14.47 313 *i* P Pn 21 55 59.8 -3.4
ANN Anapa 14.67 331*c* *i*P Pn 21 56 10.1 +4.2
ANN *i*S Sn 21 58 56.4 +8.4
ANN pmax pmax
comp=Z,52nm,1.0s
ANN MLR MLR
comp=N,9µm,19.0s
ANN MLR MLR
comp=E,19µm,19.0s
ANN MLR MLR
comp=Z,18µm,19.0s
ANN Anapa 14.67 331 *i* P Pn 21 56 10.1 +4.2
comp=Z,52nm,1.0s
SAFT Safranbolu 14.74 311 *e*PN Pn 21 56 06.0 -0.8
SAFT Safranbolu 14.74 311 *e*Pn Pn 21 56 06.0 -0.9
KORT Korkueli 14.77 293 *i* P Pn 21 56 03.0 -4.3
SGKT Sivrigoynuk 14.81 308 *i* P Pn 21 56 07.3 -0.6
BOLV Bolvadin 14.82 300 *i* P Pn 21 56 05.1 -2.8
ESKT Eskisehir 15.19 303 *i* P Pn 21 56 10.5 -2.4
AKAS Kas 15.20 290 *i* P Pn 21 56 09.5 -3.6
KSL Kastellorizon 15.21 289 *e*P Pn 21 56 16.5 +3.4
GOLH Golhisar 15.44 293 *i* P Pn 21 56 12.3 -3.9
KHAL Karahalli 15.79 297 *i* P Pn 21 56 16.9 -3.8
ABTO Aybut 15.83 159 Pn Pn 21 56 18.6 -2.8
SNR=34
ABTO Aybut 15.83 159 P Pn 21 56 18.6 -2.8
SNR=34
DNZL Cakiroluk 15.94 295 *i* P Pn 21 56 16.9 -5.8
RBK Rabkut 15.99 156 P Pn 21 56 19.5 -3.9
SNR=83
GDZ Gediz 16.02 300 *i* P Pn 21 56 16.9 -6.8
SIM Simferopol' 16.29 324 *e*P Pn 21 56 30.6 +3.5
SIM *e*S Sn 21 59 32.2 +4.8
SIM pmax pmax
comp=Z,49nm,1.0s
SIM MLR MLR
comp=Z,16µm,21.2s
SIM Simferopol' 16.29 324 *e*P Pn 21 56 30.6 +3.5
comp=Z,49nm,1.0s
ARG Arkhangelos 16.38 289 *e*P Pn 21 56 26.0 -2.3
ARG Arkhangelos 16.38 289 P Pn 21 56 31.4 +3.1
DEMI Demirci 16.57 299 *i* P Pn 21 56 24.3 -6.4
AYDN Tasoluk 16.84 294 *i* P Pn 21 56 28.0 -6.1
QUE Quetta 16.87 92 *e*P Pn 21 56 38.0 +3.4
QUE *e*S Sn 21 59 47.0 +5.4
QUE Quetta 16.87 92 *e*P Pn 21 56 38.0 +3.4
HAJJ Hajjah 16.90 193 *e*P Pn 21 56 33.4 -1.7
HAJJ Hajjah 16.90 193 *e*Pn Pn 21 56 35.3 +0.3
DURS Dursunbey 16.93 301 *i* P Pn 21 56 29.7 -5.5
BDRM Kayabasi 17.06 292 *i* P Pn 21 56 34.1 -2.8
AKHS Akhisar 17.19 298 *i* P Pn 21 56 38.1 -0.5
AKHS Akhisar 17.19 298 *i* P Pn 21 56 38.1 -0.4
KDAG Bornova 17.48 296 *i* P Pn 21 56 39.3 -2.8
SMG Samos 17.66 293 *e*P Pn 21 56 43.0 -1.3
MUKL Al Mukalla 17.83 175⇑ *e*P Pn 21 56 45.5 -1.0
DHBB Dhamar BB 17.88 189⇓ *e*P Pn 21 56 46.7 -0.5
DHBB *i*S Sn 22 00 01.4 -4.8
DHBB Dhamar BB 17.88 189 *e*P Pn 21 56 47.6 +0.4
AYVA Ayvalik 18.15 298 *i* P Pn 21 56 49.3 -1.1
AYVA Ayvalik 18.15 298 *i* P Pn 21 56 49.3 -1.1
KBL Kabul 18.21 77⇑ *i*Pn Pn 21 56 52.0 +0.8
comp=Z,2µm,2.5s
KBL *e*S Sn 22 00 21.2 +7.0
KBL Kabul 18.21 77⇑ *i*P Pn 21 56 52.0 +0.8
KBL pmax pmax
comp=Z,2µm,2.5s
KBL Kabul 18.21 77 *i* P Pn 21 56 52.0 +0.8
comp=Z,2µm,2.5s
KBL *e*S Sn 22 00 21.2 +7.1
NPS Neapolis 18.33 285 *e*P Pn 21 56 53.5 +0.9
BDHA Al Bayda' 18.34 186⇑ *e*P Pn 21 56 52.7 -0.1
BDHA AMb AMB 21 56 54.4
comp=Z,192nm,1.5s
BDHA *i*S Sn 22 00 11.9 -5.3
BDHA Al Bayda' 18.34 186 *e*P Pn 21 56 52.5 -0.3
comp=Z,96nm,1.5s
LAST Lasithi 18.43 285 P Pn 21 56 56.2 +2.3
PRK Paraskevi 18.45 298 *e*P Pn 21 56 54.0 0.0
LBOS 18.47 187⇓ *e*P Pn 21 56 54.5 0.0
LBOS AMb AMB 21 56 56.7
comp=Z,442nm,1.6s
LBOS *i*S Sn 22 00 15.5 -5.0
APE Apeiranthos 18.57 291 ⇓P Pn 21 56 55.7 +0.2
APE Apeiranthos 18.57 291 *e*P Pn 21 56 55.5 0.0
APE Apeiranthos 18.57 291 ⇓*i*P Pn 21 56 55.7 +0.2
APE Apeiranthos 18.57 291 P Pn 21 56 55.7 +0.2
IDI Anoyia 18.92 285 *e*P Pn 21 56 59.8 0.0
IDI *e*S Sn 22 00 31.1 0.0
IDI Anoyia 18.92 285 *e*P Pn 21 56 59.8 0.0
IDI *e*S Sn 22 00 31.1 0.0
ALN Alexandroupoli 19.11 303 P Pn 21 57 02.1 0.0
TIRR Tirgusor 19.13 315 ⇓P Pn 21 57 01.6 -0.6
TIRR Tirgusor 19.13 315 ⇓*i*P Pn 21 57 01.6 -0.6
TIRR Tirgusor 19.13 315 P Pn 21 57 01.6 -0.6
VRHR Novokhopersk 19.23 349 *e*P Pn 21 57 01.7 -1.7
VRHR pmax pmax
comp=N,150nm,0.6s
VRHR pmax pmax
comp=E,30nm,0.6s
VRHR pmax pmax
comp=Z,230nm,0.6s
VRHR Novokhopersk 19.23 349 *e*P Pn 21 57 01.7 -1.7
TRBA At Turbah 19.24 190⇓ *e*P Pn 21 57 04.6 +0.9
TRBA *i*S Sn 22 00 33.6 -5.4
TLCR 19.30 317 ⇑P Pn 21 57 04.2 -0.1
TLCR 19.30 317 ⇑*i*P Pn 21 57 04.2 -0.1
TLCR 19.30 317 P Pn 21 57 04.2 -0.1
ABKAR Akbulak array 19.36 25⇓ *e*P Pn 21 57 02.8 -2.1
comp=Z,1.4nm,0.7s
ABKAR *e*Sn Sn 22 00 39.2 -2.3
ABKAR Akbulak array 19.36 25⇓ *e*P Pn 21 57 02.8 -2.2
comp=Z,1.4nm,0.7s
VAM Vamos 19.49 285 *e*P Pn 21 57 05.5 -1.1
RDO Rodhopi 19.56 303 *e*P Pn 21 57 07.0 -0.4
VORD Divnogorie 19.56 345 *e*P Pn 21 57 05.5 -1.9
VORD *e*S Sn 22 00 39.5 -6.9
VORD pmax pmax
comp=N,290nm,0.6s
VORD pmax pmax
comp=E,250nm,0.6s
VORD pmax pmax
comp=Z,200nm,0.6s
VORD smax
comp=E,530nm,0.9s
VORD smax
comp=Z,30nm,0.5s
VORD smax
comp=N,210nm,0.9s
VORD MLR MLR
comp=N,4µm,18.0s
VORD MLR MLR
comp=Z,5µm,18.0s
VORD MLR MLR
comp=E,1µm,9.0s
VORD Divnogorie 19.56 345 *e*P Pn 21 57 05.5 -1.9
CFR Carcaliu 19.69 316 ⇓P Pn 21 57 08.1 -0.8
CFR Carcaliu 19.69 316 ⇓*i*P Pn 21 57 08.1 -0.8
CFR Carcaliu 19.69 316 P Pn 21 57 08.1 -0.8
AKTK Aktyubinsk 19.74 20 P Pn 21 57 06.9 -2.6
AKTK S Sn 22 00 42.7 -8.0
AKTK Aktyubinsk 19.74 20 P Pn 21 57 06.9 -2.6
comp=E,4.6nm,0.3s,baz=194,slow=9.4,SNR=47

AKTO S Sn 22 00 42.7 -8.0
comp=E,0.0nm,0.3s,baz=90,slow=11,SNR=2.0
VSR Storozhevoye 19.82 345 *e*P Pn 21 57 07.4 -3.1
VSR *e*S Sn 22 00 41.9 -11
VSR pmax pmax
comp=N,100nm,0.6s
VSR pmax pmax
comp=E,50nm,0.6s
VSR pmax pmax
comp=Z,200nm,0.6s
VSR smax
comp=N,200nm,1.2s
VSR smax
comp=E,300nm,1.2s
VSR smax
comp=Z,60nm,1.2s
VSR MLR MLR
comp=N,3µm,17.0s
VSR MLR MLR
comp=E,2µm,17.0s
VSR MLR MLR
comp=Z,5µm,17.0s
VSR Storozhevoye 19.82 345 *e*P Pn 21 57 07.4 -3.1
LTBQ Tobrug 19.86 276 *i* P Pn 21 57 11.0 0.0
comp=Z,261nm,1.3s,SNR=140
AMRR Amara 19.86 314 ⇓P Pn 21 57 11.7 +0.7
AMRR Amara 19.86 314 ⇓*i*P Pn 21 57 11.7 +0.7
AMRR Amara 19.86 314 ⇓*i*P Pn 21 57 11.7 +0.7
ATH Athens Observa 20.13 293 *e*P P 21 57 13.5 +1.1
PGOR Pogoanele 20.23 314⇑ *i*P P 21 57 15.1 +1.8
PGOR Pogoanele 20.23 314⇑ *i*P P 21 57 15.1 +1.8
NAIG Nisos Aigina 20.28 292 *e*P P 21 57 14.0 0.0
KIS Kishinev 20.40 321 *i* P P 21 57 16.0 +0.9
comp=Z,400nm,2.2s
KIS Kishinev 20.40 321 *e*PP Px 21 57 36.0
KIS Kishinev 20.40 321 *e*PPP x 21 57 46.0
KIS *e*S S 22 00 58.0 -4.9
comp=Z,4µm,12.0s
KIS Kishinev 20.40 321 *i* PcP PcP 22 01 22.0 -5.2
KIS *e*SS 22 01 46.0
KIS *e*Li 22 02 51.0
KIS *e*Lg1 22 03 22.0
KIS *e*Rg 22 04 55.0
KIS LRM 22 08 16.0
comp=Z,5µm,20.0s
KIS Kishinev 20.40 321 ⇓P P 21 57 17.5 +2.4
KIS Kishinev 20.40 321*c* *i*P P 21 57 16.0 +0.9
KIS *i* 21 57 26.0
KIS *e* 21 57 36.0
KIS *e*PPP 21 57 46.0
KIS *e*S S 22 00 58.0 -4.9
KIS *i* 22 01 22.0
KIS *e*SS 22 01 46.0
KIS pmax pmax
comp=Z,430nm,2.2s
KIS pmax pmax
comp=Z,1µm,5.0s
KIS pmax pmax
comp=Z,1µm,10.0s
KIS smax
comp=N,4µm,12.0s
KIS smax
comp=E,3µm,8.0s
KIS MLR MLR
comp=Z,4µm,18.0s,MS4.8
KIS MLR MLR
comp=N,3µm,22.0s,MS4.8
KIS MLR MLR
comp=E,3µm,18.0s,MS4.8
KIS MLR MLR
comp=Z,5µm,20.0s
KIS Kishinev 20.40 321 ⇓*i*P P 21 57 17.5 +2.4
KIS Kishinev 20.40 321 *i* P P 21 57 16.0 +0.9
comp=Z,1µm,10.0s
PLD Plovdiv 20.48 305 P P 21 57 17.0 +0.9
KYTH Kithira 20.48 288 *e*P P 21 57 15.5 -0.7
GRER 20.48 315 ⇓P P 21 57 18.0 +1.9
GRER 20.48 315 ⇓*i*P P 21 57 18.0 +1.9
GRER 20.48 315 ⇓*i*P P 21 57 18.0 +1.9
PETR 20.52 316 ⇓P P 21 57 17.8 +1.3
PETR 20.52 316 ⇓*i*P P 21 57 17.8 +1.3
PETR 20.52 316 ⇓*i*P P 21 57 17.8 +1.3
THW Thamme Wali 20.53 82 P P 21 57 15.0 -1.8
PAIG Paliouri 20.56 298 P P 21 57 17.7 +0.7
SULR 20.56 313 ⇓P P 21 57 17.3 +0.4
SULR 20.56 313 ⇓*i*P P 21 57 17.3 +0.4
SULR 20.56 313 ⇓*i*P P 21 57 17.3 +0.4
VLI Veliai 20.59 289 *e*P P 21 57 16.0 -1.4
NEO Neokhori 20.76 296 *e*P P 21 57 19.5 +0.4
VRI Vrincioaia 20.89 316 ⇓P P 21 57 20.6 +0.1
VRI Vrincioaia 20.89 316 ⇓*i*P P 21 57 20.6 +0.1
VRI Vrincioaia 20.89 316 P P 21 57 20.6 +0.1
PLOR Plostina 20.93 316 ⇑P P 21 57 21.6 +0.7
PLOR Plostina 20.93 316 ⇑*i*P P 21 57 21.6 +0.7
PLOR Plostina 20.93 316 P P 21 57 21.6 +0.7
SRS Serrai 20.94 302 P P 21 57 21.0 -0.1
SOH Sokhos 21.03 301 P P 21 57 22.3 +0.2
ATD Arta Tunnel 21.11 192 P P 21 57 25.2 +2.2
ATD S S 22 01 20.0 +2.7
ATD LR LR 22 06 03.9
ATD Arta Tunnel 21.11 192 P P 21 57 25.2 +2.2
comp=Z,51nm,0.8s,mb4.9,baz=344,slow=6.8,SNR=27
ATD S S 22 01 20.0 +2.7
comp=Z,12nm,0.8s,baz=274,slow=19,SNR=1.9
ATD LR LR 22 06 03.9
comp=Z,16µm,18.5s,MS5.5,baz=15,slow=38
HORT Hortiatis 21.16 300 P P 21 57 23.2 -0.2
HORT Hortiatis 21.16 300 P P 21 57 23.2 -0.2
MLR Muntele Rosu 21.16 315 P P 21 57 25.3 +1.9
comp=Z,37nm,0.8s,mb4.8,baz=96,slow=4.5,SNR=25
MLR Muntele Rosu 21.16 315 ⇓P P 21 57 25.8 +2.4
MLR Muntele Rosu 21.16 315 ⇓*i*P P 21 57 25.8 +2.4
MLR Muntele Rosu 21.16 315 P P 21 57 25.8 +2.4
KKAR Karatay Array 21.16 53⇑ *e*P P 21 57 22.3 -1.2
comp=Z,80nm,0.6s,mb5.2
KKAR *e*S S 22 01 18.6 +0.5
KKAR Karatay Array 21.16 53⇑ *e*P P 21 57 22.3 -1.2
KKAR *e*S S 22 01 18.6 +0.5
KKAR pmax pmax
comp=Z,80nm,0.6s,mb5.2
IAS Iasi 21.19 320 ⇓P P 21 57 24.9 +1.2
IAS Iasi 21.19 320 ⇓*i*P P 21 57 24.9 +1.2
IAS Iasi 21.19 320 P P 21 57 24.9 +1.2
THE Thessaloniki 21.27 300 P P 21 57 24.4 -0.2
TESR 21.30 318 ⇑P P 21 57 25.3 +0.4
TESR 21.30 318 ⇑*i*P P 21 57 25.3 +0.4
TESR 21.30 318 ⇑*i*P P 21 57 25.3 +0.4
AGG Agios Georgios 21.38 295 P P 21 57 25.8 -0.1
SARP Sargodha 21.41 84 P P 21 57 25.5 -0.8
ITM Ithomi 21.44 290 P P 21 57 25.4 -1.1
ITM Ithomi 21.44 290 *e*P P 21 57 25.5 -1.0
ITM Ithomi 21.44 290 P P 21 57 25.4 -1.1
KNT Kendrikon 21.46 301 P P 21 57 26.9 +0.2
VOIR 21.68 314 ⇓P P 21 57 29.9 +0.9
VOIR 21.68 314 ⇓*i*P P 21 57 29.9 +0.9
VOIR 21.68 314 P P 21 57 29.9 +0.9
VTS Vitosha 21.69 305 ⇓P P 21 57 28.9 -0.2
VTS Vitosha 21.69 305 ⇓*i*P P 21 57 28.9 -0.2
VTS Vitosha 21.69 305 P P 21 57 28.9 -0.2
CHCP Chirah Chowk 21.74 79 P P 21 57 29.3 -0.4
VAY Valandovo 21.74 301 ⇑*i*P P 21 57 29.5 -0.2
KZN Kozani 22.07 298 *e*P P 21 57 33.5 +0.3
DESE Dese 22.28 200 *e*P P 21 57 39.3 +3.7
DESE *e*S S 22 01 50.3 +10
MARJ Al Marj 22.35 278 *i* P P 21 57 38.3 +2.0
comp=Z,470nm,1.1s,mb5.8,SNR=140
MARJ *e*S S 22 01 42.4 +0.9
SNR=4.0
MDB Medias 22.43 315 ⇓P P 21 57 38.8 +1.8
MDB Medias 22.43 315 ⇓*i*P P 21 57 38.8 +1.8
MDB Medias 22.43 315 P P 21 57 38.8 +1.8
BIA Bitola 22.57 300 P P 21 57 38.5 0.0
BIA Bitola 22.57 300 ⇑*i*P P 21 57 38.3 -0.2
BIA Bitola 22.57 300 P P 21 57 38.5 0.0
KMPD K-Podol'skiy 22.62 322 P P 21 57 38.0 -1.0
KRUS Krusevo 22.71 301 ⇑*i*P P 21 57 43.9 +3.8
BUR01 Bucovina Ar. S 22.73 319 P P 21 57 40.0 -0.2
BUR01 Bucovina Ar. S 22.73 319 P P 21 57 40.0 -0.2
BURAR Bucovina Array 22.73 319 ⇑P P 21 57 40.5 +0.3
BURAR Bucovina Array 22.73 319 ⇑*i*P P 21 57 40.5 +0.3
BURAR Bucovina Array 22.73 319 ⇑*i*P P 21 57 40.5 +0.3
BARS Barje 22.73 305 P P 21 57 38.6 -1.6
BARS Barje 22.73 305 *e*P P 21 57 38.9 -1.3

AKASG **Malin Array Be** 22.74 329 P **P** 21 57 38.8 -1.4
comp=Z,49nm,0.7s,mb5.1,baz=136,slow=9.9,SNR=52
AKASG S **S** 22 01 42.6 -5.7
comp=Z,3.1nm,0.7s,baz=21,slow=19,SNR=3.2
AKASG LR LR 22 07 59.7
comp=Z,7μm,21.5s,MS5.0,baz=140,slow=41
AKASG **Malin Array Be** 22.74 329 P **P** 21 57 38.8 -1.4
AKASG S **S** 22 01 42.6 -5.7
AKASG **Malin Array Be** 22.74 329 P **P** 21 57 38.8 -1.4
AKBB **Malin Array Si** 22.74 329 *eP* **P** 21 57 38.9 -1.3
AKBB *eS* **S** 22 01 43.2 -5.2
AKBB **Malin Array Si** 22.74 329 *eP* **P** 21 57 38.9 -1.3
KIEV **Kiev** 22.74 329⇓ *eP* **P** 21 57 38.9 -1.4
comp=Z,122nm,0.8s,mb5.4
KIEV *eS* **S** 22 01 43.3 -5.0
KIEV LR LR
comp=Z,7μm,22.0s,MS5.0
KIEV **Kiev** 22.74 329⇓ *eP* **P** 21 57 38.9 -1.4
KIEV *eS* **S** 22 01 43.3 -5.1
KIEV pmax pmax
comp=Z,122nm,0.8s,mb5.4
KIEV MLR MLR
comp=Z,7μm,22.0s,MS5.0
KIEV **Kiev** 22.74 329 *eP* **P** 21 57 38.9 -1.4
comp=Z,122nm,0.8s,mb5.4
BUR08 **Bucovina Ar. S** 22.75 319⇓ *eP* **P** 21 57 39.8 -0.7
BUR08 S **S** 22 01 49.4 +0.8
BUR08 **Bucovina Ar. S** 22.75 319⇓ *eP* **P** 21 57 39.8 -0.6
BUR08 S **S** 22 01 49.4 +0.8
LKFR **Kufra** 22.76 255 *i* P **P** 21 57 41.2 +0.5
comp=Z,191nm,1.3s,mb5.4,SNR=147
LKFR *eS* **S** 22 01 48.7 -0.4
SNR=3.0
DJES **Djerdap** 22.93 310 P **P** 21 57 47.0 +4.7
BOLS **Boljevac** 22.99 307 *eP* **P** 21 57 43.4 +0.5
AML **Almayashu** 23.05 57 P **P** 21 57 44.1 +0.5
SNR=50
AML **Almayashu** 23.05 57⇑ *iP* **P** 21 57 43.5 -0.1
comp=Z,79nm,0.8s,mb5.2
AML *eS* **S** 22 01 55.7 +2.1
AML LR LR
comp=Z,9μm,19.0s,MS5.2
AML **Almayashu** 23.05 57⇑ *iP* **P** 21 57 43.5 -0.1
comp=Z,79nm,0.8s,mb5.2
AML *eS* **S** 22 01 55.7 +2.2
GZR **Gura Zlata** 23.07 312⇑ P **P** 21 57 43.1 -0.8
GZR **Gura Zlata** 23.07 312⇑ *iP* **P** 21 57 43.1 -0.7
GZR **Gura Zlata** 23.07 312⇑ *iP* **P** 21 57 43.1 -0.7
DEV **Deva** 23.21 313⇑ P **P** 21 57 46.0 +0.7
DEV **Deva** 23.21 313⇑ *iP* **P** 21 57 46.0 +0.7
DEV **Deva** 23.21 313 P **P** 21 57 46.0 +0.7
EKS2 **Erkin-Say** 23.26 56 P **P** 21 57 46.1 +0.3
SNR=31
EKS2 **Erkin-Say** 23.26 56⇑ *eP* **P** 21 57 46.5 +0.6
comp=Z,86nm,1.1s,mb5.1
EKS2 *eS* **S** 22 01 59.4 +2.4
EKS2 LR LR
comp=Z,21μm,19.0s,MS5.6
EKS2 **Erkin-Say** 23.26 56⇑ *eP* **P** 21 57 46.5 +0.7
comp=Z,86nm,1.1s,mb5.1
UCH **Uchtor** 23.66 58 *eP* **P** 21 57 51.7 +1.9
UCH *eS* **S** 22 02 05.4 +1.9
UCH LR LR
comp=Z,11μm,20.0s,MS5.3
UCH **Uchtor** 23.66 58 *eP* **P** 21 57 51.7 +1.9
UCH *eS* **S** 22 02 05.4 +1.9
TIR **Tirane** 23.72 300 P **P** 21 57 50.2 -0.1
BMR **Baia Mare** 23.74 317⇑ *iP* **P** 21 57 50.2 -0.3
BMR **Baia Mare** 23.74 317 P **P** 21 57 50.2 -0.3
DRGR 23.76 315⇑ P **P** 21 57 50.9 +0.3
DRGR 23.76 315⇑ *iP* **P** 21 57 50.9 +0.3
DRGR 23.76 315 P **P** 21 57 50.9 +0.3
AAK **Ala-Archa** 23.76 57 P **P** 21 57 53.2 +2.5
SNR=9.5
AAK **Ala-Archa** 23.76 57 P **P** 21 57 51.5 +0.7
comp=Z,6.9nm,0.4s,mb4.4,baz=224,slow=3.3,SNR=17
AAK ScP ScP 22 05 11.1 -0.5
comp=Z,9.8nm,0.8s,baz=207,slow=4.5,SNR=3.4
AAK LR LR 22 08 44.0
comp=Z,18μm,18.4s,MS5.6,baz=255,slow=41
AAK **Ala-Archa** 23.76 57*c* *iP* **P** 21 57 50.8 +0.1
AAK pmax pmax
comp=Z,14nm,1.2s,mb4.3
AAK MLR MLR
comp=Z,8μm,17.0s,MS5.2
AAK **Ala-Archa** 23.76 57 P **P** 21 57 52.7 +2.0
comp=Z,262nm,0.9s,mb5.7,SNR=9.6
AAK **Ala-Archa** 23.76 57 P **P** 21 57 51.9 +1.2
comp=Z,264nmcomp=Z,16nm,1.4s,mb4.2
AAK **Ala-Archa** 23.76 57 *iP* **P** 21 57 50.8 +0.1
comp=Z,8μm,17.0s
AAK **Ala-Archa** 23.76 57 P **P** 21 57 52.2 +1.5
SNR=26
GRUS **Gruza** 23.84 307 P **P** 21 57 51.0 -0.5
GRUS **Gruza** 23.84 307 *eP* **P** 21 57 50.2 -1.3
FRU **Bishkek** 23.90 56⇑ *eP* **P** 21 57 52.0 0.0
FRU *i* SS 22 02 47.0
FRU pmax pmax
comp=Z,320nm,2.5s,mb5.3
FRU pmax pmax
comp=N,6μm,16.0s
FRU pmax pmax
comp=N,28μm,20.0s
FRU pmax pmax
comp=N,26μm,13.0s
FRU **Bishkek** 23.90 56 *eP* **P** 21 57 52.0 0.0
comp=N,6μm,16.0s
BZS **Buzias** 23.91 311⇓ P **P** 21 57 51.2 -0.8
BZS **Buzias** 23.91 311⇓ *iP* **P** 21 57 51.2 -0.8
BZS **Buzias** 23.91 311 P **P** 21 57 51.2 -0.8
USP **Ospenovka** 23.95 55 P **P** 21 57 52.7 +0.3
SNR=42
PVY **Plav** 23.96 303⇓ *iP* **P** 21 57 51.9 -0.6
PVY **Plav** 23.96 303⇓ *iP* **P** 21 57 51.9 -0.6
PVY **Plav** 23.96 303⇓ *iP* **P** 21 57 51.9 -0.6
OBN **Obninsk** 24.03 345 *eP* **P** 21 57 51.9 -1.2
comp=N,115nm,0.8s,mb5.4
OBN *eS* **S** 22 02 06.3 -2.9
OBN LR LR
comp=Z,7μm,20.0s,MS5.1
OBN **Obninsk** 24.03 345⇑ *eP* **P** 21 57 52.8 -0.2
OBN *e* 21 58 19.3
OBN *i* S **S** 22 02 11.4 +2.2
OBN pmax pmax
comp=Z,37nm,0.6s,mb5.0
OBN MLR MLR
comp=Z,6μm,18.0s,MS5.1
OBN **Obninsk** 24.03 345 P **P** 21 57 52.5 -0.5
comp=Z,1μm,0.9s,mb6.2,SNR=10
OBN **Obninsk** 24.03 345 *eP* **P** 21 57 52.8 -0.2
comp=Z,37nm,0.6s,mb5.0
OBN *eS* **S** 22 02 06.3 -2.9
CHMS **Chumysh** 24.05 56 P **P** 21 57 54.2 +0.9
SNR=32
KBK **Karagaybulak** 24.09 57 P **P** 21 57 54.9 +1.2
SNR=47
BEY **Berane** 24.09 304⇓ *iP* **P** 21 57 53.0 -0.7
IVA **Berane** 24.09 304⇓ *iP* **P** 21 57 53.0 -0.7
IVA **Berane** 24.09 304⇓ *iP* **P** 21 57 53.0 -0.7
IVA **Berane** 24.09 304⇓ *iP* **P** 21 57 53.0 -0.7
TRUS **Trudelj** 24.17 307 *eP* **P** 21 57 53.5 -0.9
KSH **Kashi** 24.18 65 ⇓P **P** 21 57 52.5 -2.1
KSH *ePP* 21 57 56.5
KSH *eSP* sP 21 57 59.8 -2.3
KSH PP 21 58 26.3
KSH S **S** 22 02 04.8 -7.1
KSH *eScP* ScP 22 05 12.0 -0.7
KSH *ePcS* PcS 22 05 13.5 -1.2
KSH *eScS* ScS 22 08 57.5 -2.4
KSH pmax pmax
comp=Z,26nm,1.1s,mb4.6
KSH pmax pmax
comp=Z,870nm,3.1s
KSH LR LR
comp=N,13μm,13.8s,MS5.8
KSH LR LR
comp=E,16μm,15.0s,MS5.8
KSH LR LR
comp=Z,17μm,14.3s,MS5.7
ULC **Ulcinj** 24.31 301⇓ *iP* **P** 21 57 53.6 -2.2
ULC **Ulcinj** 24.31 301⇓ *iP* **P** 21 57 53.6 -2.2
BHV **Bhavnagar** 24.39 109 *ePKP* **P** 21 57 56.5 -0.1
MOS **Moscow** 24.39 347 *eP* **P** 21 57 53.5 -2.8
MOS *eS* **S** 22 02 10.4 -4.6
MOS pmax pmax
comp=Z,199nm,0.8s,mb5.6
MOS MLR MLR
comp=Z,4μm,14.0s,MS5.0
DIVS **Divibare** 24.41 307 *eP* **P** 21 57 56.5 -0.1
AJM **Ajmer** 24.42 97 *i* P **P** 21 57 57.0 +0.1
PDG **Podgorica** 24.42 302⇓ *iP* **P** 21 57 55.0 -1.7
TTG **Podgorica** 24.42 302⇓ *iP* **P** 21 57 55.0 -1.7
TTG **Podgorica** 24.42 302⇓ *iP* **P** 21 57 55.1 -1.6
TTG **Podgorica** 24.42 302 *i* P **P** 21 57 55.1 -1.6
AAE **Adis Abeba** 24.52 201 *eP* **P** 21 58 01.6 +3.8
AAE *eS* **S** 22 02 21.2 +3.6
TRPA **Tarpa** 24.53 317⇑ *iP* **P** 21 57 58.8 +1.2
TRPA **Tarpa** 24.53 317⇑ *eP* **P** 21 57 57.6 0.0
PLE **Pljevlja** 24.58 305⇓ *iP* **P** 21 57 58.3 +0.1
PLE **Pljevlja** 24.58 305⇓ *iP* **P** 21 57 58.3 +0.1
TKM2 **Tokmak 2** 24.62 56 P **P** 21 58 00.1 +1.6
SNR=8.9
TKM2 **Tokmak 2** 24.62 56⇑ *iP* **P** 21 57 59.3 +0.7
comp=Z,61nm,0.6s,mb5.3
TKM2 *eS* **S** 22 02 21.4 +2.4
TKM2 LR LR
comp=Z,10μm,21.0s,MS5.3
TKM2 **Tokmak 2** 24.62 56⇑ *iP* **P** 21 57 59.3 +0.7
TKM2 *eS* **S** 22 02 21.4 +2.4
TKM2 pmax pmax
comp=Z,61nm,0.6s,mb5.3
TKM2 MLR MLR
comp=Z,10μm,21.0s,MS5.3
TKM2 **Tokmak 2** 24.62 56 *i* P **P** 21 57 59.3 +0.7
comp=Z,61nm,0.6s,mb5.3
BHK **Bhakra** 24.65 84 *ex* **P** 21 57 55.6 -3.3
LVV **L'vov** 24.65 322 *eP* **P** 21 57 59.2 +0.5
LVV *e* 21 58 31.8
LVV *eS* **S** 22 02 15.2 -4.1
LVV *eSS* 22 03 32.4
LVV **L'vov** 24.65 322 *eP* **P** 21 57 59.2 +0.5
BUM **Brajici-Budva** 24.65 302⇓ *iP* **P** 21 57 57.1 -1.7
BUM **Brajici-Budva** 24.65 302⇓ *iP* **P** 21 57 57.1 -1.7
BUM **Brajici-Budva** 24.65 302⇓ *iP* **P** 21 57 57.1 -1.7
NKY **Niksic** 24.71 303⇓ *iP* **P** 21 57 56.6 -2.8
NKY **Niksic** 24.71 303⇓ *iP* **P** 21 57 56.7 -2.7
FGSL **Fruska Gora** 24.90 309 *eP* **P** 21 58 00.7 -0.4
FRGS **Fruska Gora** 24.90 309 P **P** 21 58 02.2 +1.1
FRGS **Fruska Gora** 24.90 309 *eP* **P** 21 58 00.7 -0.4
ULHL **Ulahol** 24.91 58 P **P** 21 58 04.5 +3.4
SNR=11
UZH **Uzhgorod** 24.93 318 *eP* **P** 21 58 01.6 +0.3
UZH *e* 21 58 08.8
UZH *e* 21 58 12.6
UZH *e* 21 58 47.2
UZH *eS* **S** 22 02 22.6 -1.2
UZH **Uzhgorod** 24.93 318 *eP* **P** 21 58 01.6 +0.3
HCY **Herceg Novi** 24.97 302⇓ *iP* **P** 21 58 00.9 -0.9
HCY **Herceg Novi** 24.97 302⇓ *iP* **P** 21 58 01.0 -0.8
HCY **Herceg Novi** 24.97 302⇓ *iP* **P** 21 58 01.0 -0.8
BRY **Bratogost** 25.05 303 *eP* **P** 21 58 00.4 -2.1
BRY **Bratogost** 25.05 303 *eP* **P** 21 58 00.4 -2.1
SDNR **Sundarnagar** 25.10 84 *ePKP* **P** 21 58 02.9 -0.1
KWP **Kalwaria Pacla** 25.24 320 *eP* **P** 21 58 05.4 +1.3
KWP *epP* pP 21 58 13.2 +3.7
KWP *eS* **S** 22 02 29.7 +0.9
KWP LMZ 22 08 19.3
comp=Z,6μm,28.5s
KWP **Kalwaria Pacla** 25.24 320⇓ P **P** 21 58 04.9 +0.8
KWP **Kalwaria Pacla** 25.24 320⇓ *iP* **P** 21 58 04.9 +0.8
KWP **Kalwaria Pacla** 25.24 320⇓ *iP* **P** 21 58 04.9 +0.8
KWP *epP* pP 21 58 13.2 +3.7
KWP *eS* **S** 22 02 29.7 +0.9
ARU **Arti** 25.33 15⇑ *eP* **P** 21 58 04.2 -0.6
comp=Z,90nm,1.0s,mb5.3
ARU *eS* **S** 22 02 31.2 +1.2
ARU LR LR
comp=Z,7μm,19.0s,MS5.2
ARU **Arti** 25.33 15*c* *iP* **P** 21 58 04.2 -0.6
ARU *ePPP* 21 58 46.8
ARU S **S** 22 02 29.3 -0.7
ARU SS 22 03 21.3
ARU SSS 22 03 39.0
ARU pmax pmax
comp=Z,66nm,1.0s,mb5.1
ARU MLR MLR
comp=Z,7μm,19.0s,MS5.2
ARU **Arti** 25.33 15 P **P** 21 58 04.8 0.0
comp=Z,438nm,0.9s,mb6.0,SNR=40
ARU **Arti** 25.33 15 *i* P **P** 21 58 04.2 -0.6
comp=Z,66nm,1.0s,mb5.1
ARU *eS* **S** 22 02 31.2 +1.2
SMLA **Simla** 25.33 85 *i* P **P** 21 58 04.8 -0.4
PE1 **Pezze di Greco** 25.41 298 *eP* **P** 21 58 05.5 -0.3
CRVS **Cervenica-Dubn** 25.54 318 *eP* **P** 21 58 07.1 +0.3
comp=Z,57nm,0.8s,mb5.2
CRVS *eS* **S** 22 02 40.6 +7.1
CRVS LR LR
comp=Z,2μm,29.9s,MS4.5
CRVS **Cervenica-Dubn** 25.54 318 *eP* **P** 21 58 07.1 +0.3
comp=Z,57nm,0.8s,mb5.2
CRVS pmax pmax
comp=Z,2μm,29.9s,MS4.5
CRVS **Cervenica-Dubn** 25.54 318 *eP* **P** 21 58 07.1 +0.3
CRVS *eS* **S** 22 02 40.6 +7.1
CRVS **Cervenica-Dubn** 25.54 318 *eP* **P** 21 58 07.1 +0.3
comp=Z,57nm,0.8s,mb5.2
PKSN **Nyarlorinc** 25.55 313 *eP* **P** 21 58 08.3 +1.4
STON **Ston** 25.65 303 P **P** 21 58 06.5 -1.3
STON **Ston** 25.65 303 *i* P **P** 21 58 06.5 -1.4
AAA **Alma-Ata** 25.67 56 *eP* **P** 21 58 08.6 +0.5
AAA **Alma-Ata** 25.67 56 *eP* **P** 21 58 08.3 +0.2
AAA *eS* **S** 22 02 37.4 +1.7
AAA pmax pmax
comp=Z,1μm,9.8s
AAA smax
comp=N,7μm,19.7s
AAA MLR MLR
comp=Z,18μm,17.0s,MS5.7
AAA **Alma-Ata** 25.67 56 *eP* **P** 21 58 08.3 +0.2
comp=Z,1μm,9.8s
TIP **Timpagrande** 25.70 294 P **P** 21 58 08.0 -0.4
TIP **Timpagrande** 25.70 294 P **P** 21 58 08.0 -0.4
PKS2 **Kecel** 25.79 311 *eP* **P** 21 58 11.0 +1.8
BAI **Bari** 25.87 298 *eP* **P** 21 58 11.1 +1.1
KECS **Kecovo** 25.89 316 *eP* **P** 21 58 10.7 +0.7
comp=Z,75nm,0.7s,mb5.3
KECS **Kecovo** 25.89 316 *eP* **P** 21 58 10.7 +0.7
KECS pmax pmax
comp=Z,75nm,0.7s,mb5.3
KECS **Kecovo** 25.89 316 *eP* **P** 21 58 10.7 +0.7
NDI **New Delhi** 25.92 90 *ePKP* **P** 21 58 10.5 0.0
NDI *ex* x 22 02 45.0
GRI **Girifalco** 25.93 293 P **P** 21 58 10.9 +0.4
STHS **Stebnicka Huta** 25.93 319 *eP* **P** 21 58 13.9 +3.6
comp=Z,56nm,0.8s,mb5.1
STHS **Stebnicka Huta** 25.93 319 *eP* **P** 21 58 13.9 +3.6
STHS pmax pmax
comp=Z,56nm,0.8s,mb5.2
STHS **Stebnicka Huta** 25.93 319 *eP* **P** 21 58 13.9 +3.6
LZLA **Zalla** 25.94 270 *i* P **P** 21 58 12.4 +1.7
comp=Z,217nm,1.2s,mb5.6,SNR=142
PSZ **Piszkesteto** 25.98 315 *eP* **P** 21 58 10.4 -0.4
comp=Z,76nm,1.0s,mb5.2
PSZ *eS* **S** 22 02 42.0 +1.5
PSZ LR LR
comp=Z,5μm,20.0s,MS5.0
PSZ **Piszkesteto** 25.98 315 *eP* **P** 21 58 10.4 -0.4
PSZ *eS* **S** 22 02 42.0 +1.5
PSZ pmax pmax
comp=Z,75nm,1.0s,mb5.2
PSZ MLR MLR
comp=Z,5μm,20.0s,MS5.0
PSZ **Piszkesteto** 25.98 315⇑ *iP* **P** 21 58 11.6 +0.8
PSZ **Piszkesteto** 25.98 315 *eP* **P** 21 58 12.2 +1.4
PSZ **Piszkesteto** 25.98 315 *eP* **P** 21 58 10.4 -0.4
comp=Z,75nm,1.0s,mb5.2
PSZ *eS* **S** 22 02 42.0 +1.5
SG1 **Sgolgore (BA)** 25.98 298 *eP* **P** 21 58 11.2 +0.3
PKS7 **Kunszentmiklos** 26.05 313 *eP* **P** 21 58 11.9 +0.4
PKSM **Moragy** 26.05 311⇑ P **P** 21 58 11.0 -0.5
PKSM **Moragy** 26.05 311⇑ *iP* **P** 21 58 11.0 -0.5
PKSM **Moragy** 26.05 311 P **P** 21 58 11.0 -0.5
MICGM **Minsk** 26.14 334 *eP* **P** 21 58 11.0 -1.2
MNK **Minsk** 26.16 334 *eP* **P** 21 58 11.0 -1.4
MNK *e* 21 58 52.0
MNK *ePPP* 21 59 00.0
MNK *eS* **S** 22 02 38.0 -5.1
MNK pmax pmax
comp=Z,2μm,0.9s,mb6.5
MNK pmax pmax
comp=N,530nm,1.0s
MNK pmax pmax
comp=E,730nm,1.0s
MNK MLR MLR
comp=Z,13μm,18.0s,MS5.5
MNK **Minsk** 26.16 334 *eP* **P** 21 58 11.0 -1.4
comp=Z,2μm,0.9s,mb6.5
SVE **Sverdlovsk** 26.16 17⇑ *eP* **P** 21 58 12.5 +0.1
SVE *eS* **S** 22 02 42.0 -1.2
SVE pmax pmax
comp=Z,89nm,1.1s,mb5.2
SVE MLR MLR
comp=Z,9μm,18.0s,MS5.4
SVE **Sverdlovsk** 26.16 17 *eP* **P** 21 58 12.5 +0.1
comp=Z,89nm,1.1s,mb5.2
RHK3 **Tenkes** 26.18 310 *eP* **P** 21 58 12.4 -0.3
CEL **Celeste** 26.30 292 P **P** 21 58 14.5 +0.7
CEL **Celeste** 26.30 292 P **P** 21 58 14.5 +0.7
BUD **Budapest** 26.32 313⇓ *eP* **P** 21 58 14.6 +0.7
BUD **Budapest** 26.32 313⇓ *eP* **P** 21 58 14.6 +0.7
CDT **Castel del Mon** 26.32 298 *eP* **P** 21 58 14.1 +0.1
PTRP **Pietrapertosa** 26.39 297 P **P** 21 58 14.8 +0.1
PTRP **Pietrapertosa** 26.39 297 P **P** 21 58 14.8 +0.1
PKS9 **Tamasi** 26.43 311 *eP* **P** 21 58 15.0 +0.1
MTTG **Motta San Giov** 26.44 291 P **P** 21 58 15.2 +0.1
MTTG **Motta San Giov** 26.44 291 P **P** 21 58 15.2 +0.1
NIE **Niedzica** 26.45 318 *eP* **P** 21 58 15.8 +0.7
NIE *epP* pP 21 58 23.3 +2.9
NIE **Niedzica** 26.45 318 P **P** 21 58 16.1 +1.0
NIE **Niedzica** 26.45 318 *eP* **P** 21 58 15.8 +0.7
NIE *epP* pP 21 58 23.3 +2.9
BRVK **Borovoye** 26.49 32⇑ *eP* **P** 21 58 15.0 -0.4
comp=Z,109nm,0.9s,mb5.4
BRVK *eS* **S** 22 02 50.8 +2.3
BRVK LR LR
comp=Z,15μm,21.0s,MS5.5
BRVK **Borovoye** 26.49 32⇑ *eP* **P** 21 58 15.0 -0.4
BRVK *eS* **S** 22 02 50.8 +2.3
BRVK pmax pmax
comp=Z,109nm,0.9s,mb5.4
BRVK MLR MLR
comp=Z,15μm,21.0s,MS5.5
BRVK **Borovoye** 26.49 32 *eP* **P** 21 58 15.0 -0.4
comp=Z,109nm,0.9s,mb5.4
BRVK **Borovoye** 26.49 32 P **P** 21 58 15.6 +0.1
SNR=71
CUC **Castrocucco** 26.51 296 P **P** 21 58 16.1 +0.3
CUC **Castrocucco** 26.51 296 P **P** 21 58 16.1 +0.3
BVAR **Borovoye Array** 26.52 32 P **P** 21 58 15.5 -0.1
BVAR PcP PcP 22 01 38.9 -1.1
BVAR ScP ScP 22 05 18.2 -0.9
BVAR LR LR 22 10 38.1
BVAR **Borovoye Array** 26.52 32 P **P** 21 58 15.5 -0.1
comp=Z,60nm,0.8s,mb5.2,baz=224,slow=8.2,SNR=115
BVAR PcP PcP 22 01 38.9 -1.1
comp=Z,9.4nm,0.4s,baz=200,slow=1.6,SNR=13
BVAR ScP ScP 22 05 18.2 -0.9
comp=Z,13nm,0.9s,baz=261,slow=3.8,SNR=5.5
BVAR LR LR 22 10 38.1
comp=Z,177nm,18.0s,baz=16,slow=41
BVAR **Borovoye Array** 26.52 32 P **P** 21 58 15.5 -0.1
BVAR 22 01 38.9
BVAR **Borovoye Array** 26.52 32 P **P** 21 58 15.5 -0.1
BVAR **Borovoye Array** 26.52 32 PcP PcP 22 01 38.9 -1.1
ACER **Acerenza** 26.52 298 P **P** 21 58 16.7 +0.9
ACER **Acerenza** 26.52 298 P **P** 21 58 16.7 +0.9
PKSG 26.67 313 *eP* **P** 21 58 17.1 0.0
MS1 **Monte Sant'Ang** 26.67 300 *eP* **P** 21 58 19.2 +2.0
MGR **Morigerati** 26.73 296 P **P** 21 58 17.8 +0.1
MGR **Morigerati** 26.73 296 P **P** 21 58 17.8 +0.1
SGRT **San Giovanni R** 26.83 300 P **P** 21 58 21.0 +2.4
MRLC **Muro Lucano** 26.86 297 P **P** 21 58 19.7 +0.8
MRLC **Muro Lucano** 26.86 297 P **P** 21 58 19.7 +0.8
NACGM **Naroch** 26.86 333 *eP* **P** 21 58 16.0 -2.7
VYHS **Vyhne** 26.87 315 *eP* **P** 21 58 18.7 -0.2
comp=Z,7.1nm,0.9s,mb4.2
VYHS *eS* **S** 22 03 10.6 +16
VYHS LR LR
comp=Z,3μm,20.9s,MS4.9
VYHS **Vyhne** 26.87 315 *eP* **P** 21 58 18.7 -0.2
VYHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.2
VYHS MLR MLR
comp=Z,3μm,20.9s,MS4.9
VYHS **Vyhne** 26.87 315 *eP* **P** 21 58 18.7 -0.2
VYHS *eS* **S** 22 03 10.6 +16
VYHS *e* 22 36 27.1
VYHS **Vyhne** 26.87 315 *eP* **P** 21 58 18.7 -0.2
comp=Z,7.1nm,0.9s,mb4.2
SSY **Sortino** 26.91 289 P **P** 21 58 20.2 +0.8
SSY **Sortino** 26.91 289 P **P** 21 58 20.2 +0.8
RGNG **Rignano Grg** 26.93 299 P **P** 21 58 19.4 -0.1
RGNG **Rignano Grg** 26.93 299 P **P** 21 58 19.4 -0.1
LIKS **Likavka** 26.96 317 *eP* **P** 21 58 20.9 +1.2
comp=Z,57nm,0.7s,mb5.2
LIKS **Likavka** 26.96 317 *eP* **P** 21 58 20.9 +1.2
LIKS pmax pmax
comp=Z,57nm,0.7s,mb5.2
LIKS **Likavka** 26.96 317 *eP* **P** 21 58 20.9 +1.2
LIKS **Likavka** 26.96 317 *eP* **P** 21 58 20.9 +1.2
comp=Z,57nm,0.7s,mb5.2
SGO **Sicignano** 26.97 297 P **P** 21 58 20.5 +0.6
FG5 **Orsara di Pugl** 27.10 298 P **P** 21 58 23.0 +1.9
FG5 **Orsara di Pugl** 27.10 298 P **P** 21 58 23.0 +1.9
OJC **Ojcow** 27.14 319 *eP* **P** 21 58 21.0 -0.3
OJC *epP* pP 21 58 29.0 +2.3
OJC *eS* **S** 22 02 56.8 -2.0
OJC L 22 10 02.0
comp=Z,4.6nm,22.5s
OJC **Ojcow** 27.14 319 P **P** 21 58 21.3 0.0
OJC **Ojcow** 27.14 319 *eP* **P** 21 58 21.0 -0.3
OJC *e*PP* pP 21 58 29.0 +2.3
OJC MLR MLR
comp=Z,5μm,22.5s,MS5.0
OJC **Ojcow** 27.14 319 *eP* **P** 21 58 21.0 -0.3
OJC *epP* pP 21 58 29.0 +2.3
OJC *eS* **S** 22 02 56.8 -2.0
SLNA **Salina** 27.15 292 P **P** 21 58 23.0 +1.5
SLNA **Salina** 27.15 292 P **P** 21 58 23.0 +1.5
KOLL **Kolacno** 27.16 315 *eP* **P** 21 58 22.3 +0.8
KOLL **Kolacno** 27.16 315 *eP* **P** 21 58 22.3 +0.8
KOLL **Kolacno** 27.16 315 *eP* **P** 21 58 22.3 +0.8
IDID **Didziasalis** 27.19 334 *eP* **P** 21 58 21.6 0.0
IDID AMB AMB 21 58 28.5
comp=Z,78nm,0.8s,mb5.3
IDID **Didziasalis** 27.19 334 *eP* **P** 21 58 21.6 0.0
comp=Z,78nm,0.8s,mb5.3,SNR=28
LJFR **Jufra** 27.28 272 *i* P **P** 21 58 24.1 +1.3
comp=Z,190nm,1.3s,mb5.5,SNR=148
MRB1 **Monte Rocchett** 27.30 298 P **P** 21 58 24.2 +1.4
MRB1 **Monte Rocchett** 27.30 298 P **P** 21 58 24.2 +1.4
BEHE **Becsehely** 27.35 310⇑ *eP* **P** 21 58 23.7 +0.5
WDD **Wield Dalam** 27.37 287 *eP* **P** 21 58 23.7 +0.2
comp=Z,125nm,0.8s,mb5.5
WDD *eS* **S** 22 03 02.4 -0.3
WDD LR LR
comp=Z,3μm,20.0s,MS4.9
WDD **Wield Dalam** 27.37 287 *eP* **P** 21 58 23.7 +0.2
comp=Z,125nm,0.8s,mb5.5
WDD *eS* **S** 22 03 02.4 -0.3
IIGN **Ignalina** 27.41 333 *eP* **P** 21 58 23.6 0.0
IIGN AMB AMB 21 58 27.5
comp=Z,71nm,0.7s,mb5.3
IIGN **Ignalina** 27.41 333 *eP* **P** 21 58 23.6 0.0
comp=Z,71nm,0.7s,mb5.3,SNR=28
CIGN **Sant'Elia a Pi** 27.43 299 P **P** 21 58 26.7 +2.7
PSB1 **Pescosannita** 27.43 298 P **P** 21 58 25.4 +1.4
PSB1 **Pescosannita** 27.43 298 P **P** 21 58 25.4 +1.4
VAE **Valguarnera** 27.44 290 P **P** 21 58 27.7 +3.5
VAE **Valguarnera** 27.44 290 P **P** 21 58 27.7 +3.5
comp=Z,40nm,0.9s,mb5.0,baz=348,slow=2.9,SNR=15
POO **Poona** 27.48 114 *ePKP* **P** 21 58 26.4 +1.8
ISAL **Salakas** 27.61 334 *eP* **P** 21 58 25.5 0.0
ISAL AMB AMB 21 58 30.2
comp=Z,63nm,0.7s,mb5.3
ISAL **Salakas** 27.61 334 *eP* **P** 21 58 25.5 +0.1
comp=Z,63nm,0.7s,mb5.3,SNR=28
KOGS **Kog** 27.68 310 *eP* **P** 21 58 26.2 0.0

KOGS eS S 22 03 05.2 -2.3
KOGS Kog 27.68 310 eP P 21 58 26.2 0.0
KOGS eS S 22 03 05.2 -2.2
IZAR Zarasai 27.70 334 eP P 21 58 26.3 +0.1
IZAR AMB AMB 21 58 31.1
comp=Z,46nm,0.9s,mb5.1
IZAR Zarasai 27.70 334 eP P 21 58 26.3 +0.1
comp=Z,46nm,0.9s,mb5.1,SNR=28
SUW Suwalki 27.71 329 eP P 21 58 25.6 -0.8
SUW eS S 22 03 10.7 +3.0
SUW LMZ 22 10 13.0
comp=Z,6µm,25.1s
SUW Suwalki 27.71 329 eP P 21 58 25.8 -0.5
comp=Z,311nm,1.2s,mb5.8
SUW eS S 22 03 12.8 +5.2
SUW Suwalki 27.71 329 eP P 21 58 25.6 -0.7
JAVC Velka Javorina 27.72 315 P P 21 58 27.7 +1.2
MODS Modra-Piesok 27.75 314 eP P 21 58 27.9 +1.1
MODS Modra-Piesok 27.75 314 eP P 21 58 27.9 +1.1
MODS Modra-Piesok 27.75 314 eP P 21 58 27.9 +1.1
SGG Gregorio Mates 27.78 298 P P 21 58 30.0 +2.9
ZST Bratislava 27.79 314 eP P 21 58 27.7 +0.6
comp=Z,19nm,0.7s,mb4.8
ZST eS S 22 03 07.7 -1.4
ZST Bratislava 27.79 314 eP P 21 58 27.7 +0.6
ZST eS S 22 03 07.7 -1.4
ZST pmax pmax
comp=Z,19nm,0.7s,mb4.8
ZST Bratislava 27.79 314 eP P 21 58 27.7 +0.6
ZST eS S 22 03 07.7 -1.4
ZST Bratislava 27.79 314 eP P 21 58 27.7 +0.6
comp=Z,19nm,0.7s,mb4.8
ZST eS S 22 03 07.7 -1.4
OKC Ostrava-Krasne 27.89 317 P P 21 58 28.6 +0.6
OKC Ostrava-Krasne 27.89 317 eP P 21 58 27.6 -0.4
OKC MLR MLR
comp=Z,4µm,16.6s,MS5.0
OKC Ostrava-Krasne 27.89 317 eP P 21 58 27.6 -0.4
OKC eXS sS 22 03 22.0 +2.6
OKC AMS AMS 22 11 30.0
comp=Z,4µm,16.6s
OKC Ostrava-Krasne 27.89 317 eP P 21 58 27.6 -0.4
comp=Z,4µm,16.6s
SOP Sopron 27.93 312⇓ eP P 21 58 29.3 +0.9
GOLS Golise 27.95 309 eP P 21 58 28.7 0.0
GOLS Golise 27.95 309 eP P 21 58 28.7 +0.1
SOKR Solikamsk 27.97 10*c* iP P 21 58 28.7 +0.1
SOKR S S 22 03 11.0 -0.7
SOKR pmax pmax
comp=Z,70nm,0.7s,mb5.4
SOKR MLR MLR
comp=Z,9µm,23.0s,MS5.3
SOKR Solikamsk 27.97 10 *i* P P 21 58 28.7 +0.1
comp=Z,70nm,0.7s,mb5.4
RAC Raciborz 27.97 318 eP P 21 58 29.4 +0.6
RAC eS S 22 03 12.2 +0.3
RAC MLR MLR
comp=N,4µm,18.0s,MS5.2
RAC MLR MLR
comp=E,5µm,18.0s,MS5.2
RAC MLR MLR
comp=Z,4µm,17.0s,MS5.1
RAC Raciborz 27.97 318 eP P 21 58 29.4 +0.6
RAC eS S 22 03 12.2 +0.3
BHPL Bhopal 28.00 101 ePKP P 21 58 28.1 -1.2
RFI Roccamonfina 28.06 298 P P 21 58 32.9 +3.3
MORC Moravsky Berou 28.20 317⇑ eP P 21 58 30.5 -0.4
comp=Z,83nm,1.7s,mb5.1
MORC ePcP PcP 22 01 45.0 +0.8
MORC eS S 22 03 18.4 +2.9
MORC Moravsky Berou 28.20 317⇑ eP P 21 58 30.5 -0.3
MORC e 22 01 45.0
MORC eS S 22 03 18.5 +2.9
MORC pmax pmax
comp=Z,83nm,1.7s,mb5.1
MORC Moravsky Berou 28.20 317⇓ *i*P P 21 58 30.9 +0.1
MORC Moravsky Berou 28.20 317 eP P 21 58 30.5 -0.3
comp=Z,83nm,1.7s,mb5.1
MORC Moravsky Berou 28.20 317 ePcP PcP 22 01 45.0 +0.9
PTH Pithoragarh 28.24 87 ePKP P 21 58 31.3 -0.1
PTH ex x 22 01 50.2
SDI San Donato 28.25 299 P P 21 58 33.0 +1.7
ARSA Arzberg 28.43 311 P P 21 58 33.8 +1.0
ARSA Arzberg 28.43 311⇑ iP P 21 58 32.7 -0.2
comp=Z,14nm,0.7s,mb4.7,SNR=5.6
ARSA Arzberg 28.43 311 P P 21 58 32.7 -0.1
comp=Z,14nm,0.7s,mb4.7,SNR=5.6
KAD Karad 28.45 115 ePKP P 21 58 31.8 -1.5
KAD AMb AMB 21 58 42.3
comp=Z,87nm,1.6s,mb5.1
USI Ustica 28.45 293 P P 21 58 33.5 +0.4
USI Ustica 28.45 293 P P 21 58 33.5 +0.4
CONA Conrad Observa 28.45 312⇓ iP P 21 58 32.7 -0.4
comp=Z,23nm,0.9s,mb4.8,SNR=12
CONA Conrad Observa 28.45 312 P P 21 58 32.7 -0.4
comp=Z,23nm,0.9s,mb4.8,SNR=12
TERO Teramo 28.54 301 P P 21 58 35.3 +1.4
TERO Teramo 28.54 301 P P 21 58 35.3 +1.4
SOKA Soboth 28.55 310⇓ *i*P P 21 58 34.0 +0.1
comp=Z,25nm,1.4s,mb4.7
SOKA Soboth 28.55 310 P P 21 58 34.0 0.0
comp=Z,25nm,1.4s,mb4.7
VRAC Vranov 28.55 316 P P 21 58 31.9 -2.0
comp=Z,8.5nm,0.7s,mb4.6,baz=121,slow=7.1,SNR=14
VRAC S S 22 03 20.7 -0.4
comp=Z,2.4nm,0.6s,baz=112,slow=12,SNR=2.4
VRAC LR LR 22 11 54.8
comp=Z,5µm,21.0s,MS5.1,baz=260,slow=41
VRAC Vranov 28.55 316⇑ P P 21 58 34.5 +0.5
VRAC Vranov 28.55 316⇑ iP P 21 58 34.5 +0.5
VRAC Vranov 28.55 316 eP P 21 58 34.3 +0.3
AQU L'Aquila 28.65 300 eP P 21 58 35.4 +0.6
comp=Z,53nm,0.8s,mb5.3
AQU PP PP 21 59 39.1 -0.5
AQU eS S 22 03 24.1 +1.4
AQU LR LR
comp=Z,7µm,20.0s,MS5.3
AQU L'Aquila 28.65 300 eP P 21 58 35.4 +0.5
AQU 21 59 39.1
AQU eS S 22 03 24.1 +1.4
AQU pmax pmax
comp=Z,53nm,0.8s,mb5.3
AQU MLR MLR
comp=Z,7µm,20.0s,MS5.3
AQU L'Aquila 28.65 300 eP P 21 58 35.4 +0.5
comp=Z,53nm,0.8s,mb5.3
LJU Ljubljana 28.69 308 eP P 21 58 35.8 +0.6
LJU eS S 22 03 16.2 -7.1
LJU Ljubljana 28.69 308 eP P 21 58 35.8 +0.6
LJU eS S 22 03 16.2 -7.1
LJU e 22 03 53.3
LJU e 22 05 30.1
LJU Ljubljana 28.69 308 eP P 21 58 35.8 +0.6
OBKA Obir 28.82 309⇓ *i*pP pP 21 58 38.3 -3.4
comp=Z,43nm,1.3s,SNR=11
OBKA Obir 28.82 309 P P 21 58 38.3 +2.0
comp=Z,43nm,1.3s,mb5.0,SNR=11
AKL Akola 28.84 106⇑ iP P 21 58 36.2 -0.6
AKL ex x 21 58 39.8
comp=Z,75nm,1.4s
AKL *i* x x 22 03 37.9
CERT Cerreto 28.89 299 P P 21 58 40.6 +3.5
NRCA Norcia 28.94 301 P P 21 58 38.3 +0.9
NRCA Norcia 28.94 301 P P 21 58 38.3 +0.9
KLMR Klimovskoe 29.01 352 eP P 21 58 36.7 -1.1
KLMR eS S 22 03 30.8 +2.9
KLMR pmax pmax
comp=Z,160nm,1.5s,mb5.5
KLMR pmax pmax
comp=Z,151nm,9.5s
KLMR MLR MLR
comp=Z,4µm,16.0s,MS5.2
KLMR Klimovskoe 29.01 352 eP P 21 58 36.7 -1.1
comp=Z,4µm,16.0s
LUMB Murzuk 29.06 266 *i* P P 21 58 39.8 +1.1
comp=Z,108nm,2.1s,mb5.2,SNR=144
TRI Trieste 29.11 307 eP P 21 58 38.7 -0.2
comp=Z,21nm,0.9s,mb4.9
TRI ePP PP 21 59 44.3 -0.3
TRI PcP PcP 22 01 46.8 +0.3
TRI eS S 22 03 31.0 +1.1
TRI LR LR
comp=Z,5µm,19.0s,MS5.1
TRI Trieste 29.11 307 eP P 21 58 38.7 -0.2
TRI *e* 21 59 44.3
TRI 22 01 46.8
TRI eS S 22 03 31.0 +1.1
TRI pmax pmax
comp=Z,21nm,0.9s,mb4.9
TRI MLR MLR
comp=Z,5µm,19.0s,MS5.1
TRI Trieste 29.11 307 eP P 21 58 38.7 -0.2
comp=Z,21nm,0.9s,mb4.9
CESI CESI - Serrava 29.12 301 P P 21 58 40.4 +1.4
CESI CESI - Serrava 29.12 301 P P 21 58 40.4 +1.4
VOJS Vojsko 29.12 308 eP P 21 58 38.6 -0.4
VOJS Vojsko 29.12 308 eP P 21 58 38.6 -0.4
SNTG Esanatoglia 29.14 302 P P 21 58 40.2 +1.0
SNTG Esanatoglia 29.14 302 P P 21 58 40.2 +1.0
DPC Dobruska-Polom 29.16 317 P P 21 58 39.2 -0.2
DPC Dobruska-Polom 29.16 317 eP P 21 58 39.1 -0.3
DPC *e* 21 59 32.5
DPC eS S 22 03 33.5 +2.8
DPC MLR MLR
comp=Z,4µm,13.2s,MS5.2
DPC Dobruska-Polom 29.16 317 eP P 21 58 39.1 -0.3
DPC *ex* x 21 59 32.5
DPC eS S 22 03 33.5 +2.8
DPC AMS AMS 22 13 30.0
comp=Z,4µm,13.2s
DPC Dobruska-Polom 29.16 317 eP P 21 58 39.1 -0.3
TREC Trest 29.21 315 eP P 21 58 39.9 +0.1
TREC eS S 22 03 27.8 -3.6
TREC MLR MLR
comp=Z,4µm,15.8s,MS5.2
TREC Trest 29.21 315 eP P 21 58 39.9 +0.1
TREC eS S 22 03 27.8 -3.6
TREC AMS AMS 22 13 30.0
comp=Z,4µm,15.8s
TREC Trest 29.21 315 eP P 21 58 39.9 +0.1
comp=Z,4µm,15.8s
ASS Assisi 29.31 301 P P 21 58 41.4 +0.7
FSSB Fossombrone 29.33 303 P P 21 58 41.7 +0.8
FSSB Fossombrone 29.33 303 P P 21 58 41.7 +0.8
KSP Ksiaz 29.40 318 eP P 21 58 42.1 +0.7
KSP eS S 22 03 39.2 +4.8
KSP LMZ 22 15 08.5
comp=Z,6µm,18.8s
KSP Ksiaz 29.40 318 P P 21 58 46.2 +4.7
KSP Ksiaz 29.40 318 eP P 21 58 41.6 +0.1
UPC Upice 29.41 317 eP P 21 58 41.0 -0.5
UPC Upice 29.41 317 eP P 21 58 41.0 -0.5
UPC Upice 29.41 317 eP P 21 58 41.0 -0.5
KURK Kurchatov 29.43 42⇑ eP P 21 58 41.8 +0.1
comp=Z,86nm,1.0s,mb5.4
KURK ePcP PcP 22 01 47.5 +0.3
KURK eS S 22 03 36.0 +1.2
KURK LR LR
comp=Z,7µm,19.0s,MS5.3
KURK Kurchatov 29.43 42 P P 21 58 40.7 -1.0
comp=Z,29nm,0.7s,mb5.1,baz=247,slow=9.3,SNR=26
KURK S S 22 03 41.6 +6.8
comp=Z,3.8nm,1.1s,baz=93,slow=19,SNR=2.7
KURK LR LR 22 12 55.8
comp=Z,8µm,18.6s,MS5.4,baz=240,slow=42
KURK Kurchatov 29.43 42⇑ eP P 21 58 41.8 +0.1
KURK *e* 22 01 47.5
KURK eS S 22 03 36.0 +1.2
KURK pmax pmax
comp=Z,86nm,1.0s,mb5.4
KURK MLR MLR
comp=Z,7µm,19.0s,MS5.3
KURK Kurchatov 29.43 42 eP P 21 58 41.8 +0.1
comp=Z,86nm,1.0s,mb5.4
KURK Kurchatov 29.43 42 ePcP PcP 22 01 47.5 +0.3
KURK Kurchatov 29.43 42 P P 21 58 42.3 +0.6
SNR=53
MOA Molln 29.43 312⇑ iP P 21 58 41.7 -0.1
comp=Z,44nm,0.6s,mb5.3,SNR=66
MOA Molln 29.43 312 P P 21 58 41.7 0.0
comp=Z,44nm,0.6s,mb5.3,SNR=66
MYKA Terra Mystica 29.45 309⇓ *i*P P 21 58 42.6 +0.6
comp=Z,27nm,1.2s,mb4.9
MYKA Terra Mystica 29.45 309 P P 21 58 42.6 +0.7
comp=Z,27nm,1.2s,mb4.9
TOLF Tolfa 29.64 299 P P 21 58 47.1 +3.5
VSU Vasula 29.64 338 *i* P P 21 58 42.8 -0.7
VSU Vasula 29.64 338 *i* P P 21 58 42.8 -0.7
LATR Latur 29.66 111 ePKP P 21 58 45.2 +1.1
BADI Badiali 29.68 302 P P 21 58 45.2 +1.2
BADI Badiali 29.68 302 P P 21 58 45.2 +1.2
KBA Koelnbreinsper 29.78 310⇑ iP P 21 58 44.8 0.0
comp=Z,38nm,0.7s,mb5.2,SNR=24
KBA Koelnbreinsper 29.78 310 P P 21 58 44.8 0.0
comp=Z,38nm,0.7s,mb5.2,SNR=24
PRU Pruhonice 30.05 316 eP P 21 58 47.4 +0.2
PRU eS S 22 03 49.3 +4.7
PRU MLR MLR
comp=Z,4µm,16.8s,MS5.2
PRU Pruhonice 30.05 316 eP P 21 58 47.4 +0.2
PRU ex x 21 59 33.3
PRU eS S 22 03 49.3 +4.7
PRU AMS AMS 22 13 10.0
comp=Z,4µm,16.8s
PRU Pruhonice 30.05 316 eP P 21 58 47.4 +0.2
ALAS Alassa 30.06 281 *i* P P 21 58 48.9 +1.4
comp=Z,127nm,1.2s,mb5.5,SNR=35
GKP Gorka Klasztor 30.09 323 eP P 21 58 47.8 +0.2
GKP eS S 22 03 51.7 +6.5
GKP LMZ 22 12 45.4
comp=Z,9µm,21.4s
GKP Gorka Klasztor 30.09 323 P P 21 58 48.6 +1.0
GKP Gorka Klasztor 30.09 323 eP P 21 58 47.8 +0.2
GEC2 GERESS Array S 30.13 313 eP P 21 58 47.9 0.0
comp=Z,14nm,0.9s,mb4.7
GEC2 GERESS Array S 30.13 313 eP P 21 58 47.9 0.0
comp=Z,14nm,0.9s,mb4.7
GEC2 GERESS Array S 30.13 313 eP P 21 58 47.9 0.0
GEC2 pmax pmax
comp=Z,14nm,0.9s,mb4.7
GEC2 GERESS Array S 30.13 313 eP P 21 58 47.9 0.0
comp=Z,14nm,0.9s,mb4.7
PRA Prague 30.15 316 P P 21 58 47.0 -1.1
PRA S S 22 03 53.0 +6.9
PRA AMS AMS 22 14 00.0
ABTA Abfaltersbach 30.23 309⇑ iP P 21 58 48.7 -0.2
comp=Z,39nm,1.1s,mb5.0
ABTA Abfaltersbach 30.23 309 P P 21 58 48.7 -0.1
comp=Z,39nm,1.1s,mb5.0
PVCC Panska Ves 30.25 317 P P 21 58 49.8 +0.8
PVCC Panska Ves 30.25 317 eP P 21 58 48.8 -0.2
PVCC eS S 22 03 50.3 +2.5
PVCC MLR MLR
comp=Z,5µm,24.2s,MS5.1
PVCC Panska Ves 30.25 317 eP P 21 58 48.8 -0.2
PVCC eS S 22 03 50.3 +2.5
PVCC AMS AMS 22 12 30.0
comp=Z,5µm,24.2s
PVCC Panska Ves 30.25 317 eP P 21 58 48.8 -0.2
comp=Z,5µm,24.2s
MK31 Makanchi Array 30.27 51⇑ eP P 21 58 49.1 -0.1
MK31 Makanchi Array 30.27 51 eP P 21 58 49.1 -0.1
MKAR Makanchi Array 30.27 51 P P 21 58 49.2 0.0
MKAR ScP ScP 22 05 28.9 -2.0
MKAR LR LR 22 12 47.4
MKAR Makanchi Array 30.27 51 P P 21 58 49.2 0.0
comp=Z,30nm,0.7s,mb5.1,baz=248,slow=11,SNR=117
MKAR ScP ScP 22 05 28.9 -2.0
comp=Z,6.7nm,1.0s,baz=256,slow=3.0,SNR=3.3
MKAR LR LR 22 12 47.4
comp=Z,7µm,21.2s,MS5.3,baz=157,slow=40
MKAR Makanchi Array 30.27 51 P P 21 58 49.2 0.0
NGP Nagpur 30.29 104 ePKP P 21 58 49.9 +0.3
NGP *ex* x 21 58 59.0
comp=Z,86nm,1.3s
NGP *ex* x 22 03 49.8
KHC Kasperske Hory 30.31 314⇑ eP P 21 58 48.1 -1.3
comp=Z,13nm,0.8s,mb4.7
KHC ePP PP 21 59 57.2 -0.6
KHC eS S 22 03 47.9 -0.7
KHC Kasperske Hory 30.31 314⇑ eP P 21 58 48.2 -1.3
KHC *e* 21 59 57.3
KHC eS S 22 03 47.9 -0.7
KHC pmax pmax
comp=Z,13nm,0.8s,mb4.7
KHC Kasperske Hory 30.31 314 eP P 21 58 49.9 +0.4
KHC *ex* x 21 59 43.9
KHC eS S 22 03 49.2 +0.6
KHC AMS AMS 22 14 40.0
comp=Z,5µm,17.3s
KHC Kasperske Hory 30.31 314 eP P 21 58 48.2 -1.3
comp=Z,13nm,0.8s,mb4.7
KHC S S 22 03 49.2 +0.6
RJOB Jochberg 30.33 311 eP P 21 58 50.0 +0.3
comp=Z,28nm,0.9s,mb5.0
FNVD Fontana Vidola 30.60 303 P P 21 58 53.5 +1.4
FNVD Fontana Vidola 30.60 303 P P 21 58 53.5 +1.4
WET Wettzell 30.74 313 eP P 21 58 53.0 -0.3
comp=Z,18nm,1.4s,mb4.7
WET Wettzell 30.74 313 eP P 21 58 53.0 -0.3
comp=Z,18nm,1.4s,mb4.7
WET Wettzell 30.74 313 eP P 21 58 53.0 -0.3
WET pmax pmax
comp=Z,18nm,1.4s,mb4.7
WET Wettzell 30.74 313 eP P 21 58 53.0 -0.3
comp=Z,18nm,1.4s,mb4.7
BRG Berggiesshubel 30.76 317 eP P 21 58 53.6 +0.1
comp=Z,17nm,0.8s,mb4.9
BRG Berggiesshubel 30.76 317 eP P 21 58 52.6 -0.9
comp=Z,9.7nm,0.8s,mb4.7
BRG S S 22 03 56.0 +0.3
BRG *e* 22 24 22.6
comp=Z,14nm,1.8s
BRG
comp=N,5µm,17.1s
BRG
comp=E,5µm,20.5s
BRG
comp=Z,5µm,22.3s
BRG Berggiesshubel 30.76 317 eP P 21 58 52.6 -0.9
comp=Z,6.0nm,0.8s,mb4.5
WTTA Wattenberg 30.95 309⇑ iP P 21 58 54.7 -0.5
comp=Z,69nm,1.0s,mb5.4,SNR=32
WTTA Wattenberg 30.95 309 P P 21 58 54.7 -0.5
comp=Z,69nm,1.0s,mb5.4,SNR=32
GSCL Gusciola 31.01 303 P P 21 58 57.6 +1.9
GSCL Gusciola 31.01 303 P P 21 58 57.6 +1.9
WATA Walderalm 31.01 309⇑ iP P 21 58 54.8 -0.9
comp=Z,49nm,0.8s,mb5.4,SNR=16
WATA Walderalm 31.01 309 P P 21 58 54.8 -0.9
comp=Z,49nm,0.8s,mb5.4,SNR=16
VLC Villacollemand 31.12 303 eP P 21 58 57.5 +0.8
comp=Z,50nm,0.8s,mb5.4
VLC ePP PP 22 00 05.2 -1.8
VLC eS S 22 04 01.7 +0.3
VLC LR LR
comp=Z,6µm,22.0s,MS5.2
VLC Villacollemand 31.12 303 eP P 21 58 57.5 +0.8
comp=Z,50nm,0.8s,mb5.4
ERBM Eremo 31.14 304 P P 21 58 58.7 +1.8
ERBM Eremo 31.14 304 P P 21 58 58.7 +1.8
MOTA Moosalm 31.32 309⇑ iP P 21 58 57.4 -1.1
comp=Z,86nm,0.9s,mb5.6,SNR=56
MOTA Moosalm 31.32 309 P P 21 58 57.4 -1.0
comp=Z,86nm,0.9s,mb5.6,SNR=56
ROTZ Rotzenmuhle 31.37 314 eP P 21 58 58.9 +0.1
comp=Z,60nm,0.9s,mb5.4
NKC Novy Kostel 31.39 315 eP P 21 58 58.9 -0.1
NKC eS S 22 04 09.8 +4.3
NKC MLR MLR
comp=Z,4µm,18.2s,MS5.1
NKC Novy Kostel 31.39 315 eP P 21 58 58.9 -0.1
NKC eS S 22 04 09.8 +4.3
NKC AMS AMS 22 13 50.0
comp=Z,4µm,18.2s
NKC Novy Kostel 31.39 315 eP P 21 58 58.9 -0.1
comp=Z,4µm,18.2s
VSL Villasalto 31.43 294 eP P 21 59 00.6 +1.1
comp=Z,32nm,0.6s,mb5.3
VSL ePP PP 22 00 09.0 -1.4
VSL ePcP PcP 22 01 52.9 +0.2
VSL eS S 22 04 07.7 +1.3
VSL LR LR
comp=Z,3µm,20.0s,MS4.9
VSL Villasalto 31.43 294 eP P 21 59 00.6 +1.1
comp=Z,32nm,0.6s,mb5.3
FUR Furstenfeldbru 31.44 311 eP P 21 58 58.6 -0.9
comp=Z,202nm,0.7s,mb6.1
FUR Furstenfeldbru 31.44 311 eP P 21 58 58.6 -0.9
comp=Z,202nm,0.7s,mb6.1
FUR Furstenfeldbru 31.44 311 eP P 21 58 58.6 -0.9
FUR pmax pmax
comp=Z,202nm,0.7s,mb6.1
FUR Furstenfeldbru 31.44 311 eP P 21 58 58.6 -0.9
comp=Z,202nm,0.7s,mb6.1
TANN Tannenbergstha 31.45 315 eP P 21 58 59.7 +0.2
comp=Z,8.0nm,0.9s,mb4.5
CLL Collm 31.48 317 eP P 21 58 59.6 -0.2
comp=Z,15nm,0.9s,mb4.8
CLL Collm 31.48 317 eP P 21 58 59.0 -0.8
comp=Z,11nm,0.8s,mb4.7
CLL *e* pP 21 59 04.0 -1.2
CLL eS S 22 04 10.0 +3.1
CLL LR LR
comp=Z,4µm,18.4s,MS5.1
CLL Collm 31.48 317 eP P 21 58 59.0 -0.8
CLL *e* pP 21 59 04.0 -1.2
CLL eS S 22 04 10.0 +3.1
CLL pmax pmax
comp=Z,11nm,0.8s,mb4.7
CLL MLR MLR
comp=Z,4µm,18.4s,MS5.1
CLL Collm 31.48 317 eP P 21 58 59.0 -0.8
comp=Z,11nm,0.8s,mb4.7
CLL *e* pP 21 59 04.0 -1.2
CLL e(sP) sP 21 59 07.0 -0.4
CLL e(PP) 22 00 12.0
CLL eS S 22 04 10.0 +3.1
CLL LmH 22 13 00.0
comp=N,6µm,21.1s
CLL LmH 22 13 00.0
comp=E,2µm,19.5s
CLL LmV 22 14 00.0
comp=Z,4µm,18.4s
CLL Collm 31.48 317 eP P 21 58 59.0 -0.8
comp=Z,11nm,0.8s,mb4.7
FETA Feichten 31.48 309⇓ *i*P P 21 58 59.0 -0.8
comp=Z,68nm,0.9s,mb5.5,SNR=22
FETA Feichten 31.48 309 P P 21 58 59.0 -0.9
comp=Z,68nm,0.9s,mb5.5,SNR=22
GUNZ Gunzen 31.51 315 eP P 21 58 59.3 -0.8
comp=Z,27nm,1.4s,mb4.9
RUE Ruedersdorf 31.54 320 eP P 21 58 59.8 -0.5
comp=Z,30nm,1.0s,mb5.1
RUE Ruedersdorf 31.54 320 eP P 21 58 60.0 -0.3
RUE Ruedersdorf 31.54 320 eP P 21 59 00.0 -0.3
DANN Dangsing 31.55 88 eP P 21 59 01.9 +1.2
comp=Z,425nm,0.8s,mb6.3
WERD Werda 31.55 315 eP P 21 58 59.4 -1.1
comp=Z,11nm,0.8s,mb4.7
KEST Kesra 31.58 287 eP P 21 59 02.8 +1.9
KEST ePP PP 22 00 12.8 +0.6
KEST Kesra 31.58 287 P P 21 59 03.2 +2.3
comp=Z,11nm,0.9s,mb4.7,baz=344,slow=2.7,SNR=13
KEST Kesra 31.58 287 eP P 21 59 02.8 +1.9
KEST Kesra 31.58 287 ePP PP 22 00 12.8 +0.6
RETA Reutte 31.58 309⇓ iP P 21 58 59.5 -1.2
comp=Z,34nm,0.7s,mb5.3,SNR=9.8
RETA Reutte 31.58 309 P P 21 58 59.5 -1.2
comp=Z,34nm,0.7s,mb5.3,SNR=9.8
KOLN Koldanda 31.58 89 eP P 21 59 01.0 0.0
comp=Z,54nm,0.6s,mb5.5
PLN Plauen 31.66 315 eP P 21 59 01.2 -0.2
HYB Hyderabad 31.80 110 *i* P P 21 59 04.0 +1.1
HYB eS S 22 04 08.0 -4.5
HYB LR LR 22 14 00.0
comp=Z,13nm,18.0s
PGF Pioggiola 31.90 300 eP P 21 59 02.4 -1.2
comp=Z,35nm,0.8s,mb5.0
PGF Pioggiola 31.90 300 eP P 21 59 02.4 -1.2
comp=Z,18nm,0.8s,mb4.9
PGF Pioggiola 31.90 300 eP P 21 59 02.4 -1.2
PGF pmax pmax
comp=Z,18nm,0.8s,mb5.0
PGF Pioggiola 31.90 300 eP P 21 59 02.4 -1.2
comp=Z,18nm,0.8s,mb5.0
GRA1 Grafenberg Arr 31.94 314 eP P 21 59 03.5 -0.4
comp=Z,176nm,1.6s,mb5.6
GRA1 LR LR
comp=Z,4µm,20.0s,MS5.1
GRA1 Grafenberg Arr 31.94 314 eP P 21 59 03.5 -0.4
comp=Z,4µm,20.0s
GRF Grafenberg Arr 31.94 314 eP P 21 59 03.5 -0.4
comp=Z,176nm,1.6s,mb5.6

GRF eL 22 15 16.9
comp=Z,4µm,20.0s
GRF Grafenberg Arr 31.94 314 eP **P** **21 59 03.5 -0.4**
comp=Z,176nm,1.6s,mb5.6
GRF LR LR
comp=Z,4µm,20.0s,MS5.1
GRF Grafenberg Arr 31.94 314 eP **P** **21 59 03.5 -0.4**
GRF pmax pmax
comp=Z,176nm,1.6s,mb5.6
GRF MLR MLR
comp=Z,4µm,20.0s,MS5.1
GRF Grafenberg Arr 31.94 314 eP **P** **21 59 03.5 -0.4**
GRF pmax pmax
comp=Z,176nm,1.6s,mb5.6
GRF MLR MLR
comp=Z,4µm,20.0s,MS5.1
GRF Grafenberg Arr 31.94 314 eP **P** **21 59 03.5 -0.4**
comp=Z,4µm,20.0s
GRFO Grafenberg 31.95 314 eP **P** **21 59 03.5 -0.4**
GRFO Grafenberg 31.95 314⇑ eP **P** **21 59 03.4 -0.6**
comp=Z,21nm,0.6s,mb5.2
GRFO Grafenberg 31.95 314⇑ eP **P** **21 59 03.4 -0.5**
GRFO pmax pmax
comp=Z,21nm,0.6s,mb5.1
GRFO Grafenberg 31.95 314 eP **P** **21 59 03.4 -0.5**
comp=Z,21nm,0.6s,mb5.1
DAVOX Davos/Dischmat 31.99 308 P **P** **21 59 04.2 -0.2**
comp=Z,13nm,0.8s,mb4.8,baz=106,slow=10,SNR=18
DAVOX Davos/Dischmat 31.99 308 P **P** **21 59 04.2 -0.1**
MOX Moxa 32.03 315 eP **P** **21 59 04.6 -0.1**
comp=Z,20nm,1.6s,mb4.7
MOX eS **S** **22 04 23.0 +7.4**
MOX
comp=Z,3µm,21.0s
MOX Moxa 32.03 315 eP **P** **21 59 05.0 +0.3**
comp=Z,9.0nm,0.9s,mb4.6
MOX Moxa 32.03 315 eP **P** **21 59 04.6 -0.1**
MOX pmax pmax
comp=Z,20nm,1.6s,mb4.7
MOX MLR MLR
comp=Z,3µm,21.0s,MS5.0
MOX Moxa 32.03 315 eP **P** **21 59 04.6 -0.1**
comp=Z,3µm,21.0s
UBR Ueberruh 32.06 310 P **P** **21 59 05.1 +0.2**
UBR Ueberruh 32.06 310 P **P** **21 59 05.1 +0.2**
DAVA Damuels 32.11 309⇑ iP **P** **21 59 04.6 -0.8**
comp=Z,59nm,0.6s,mb5.6,SNR=52
DAVA Damuels 32.11 309 P **P** **21 59 04.6 -0.8**
comp=Z,59nm,0.6s,mb5.6,SNR=52
NEUB Neuenburg 32.15 317 eP **P** **21 59 05.3 -0.4**
comp=Z,30nm,0.7s,mb5.2
BSD Bornholm Skovb 32.23 325 P **P** **21 59 08.5 +2.2**
BSD Bornholm Skovb 32.23 325 iP **P** **21 59 04.6 -1.7**
BSD eS **S** **22 04 15.9 -2.6**
BSD pmax pmax
comp=Z,99nm,0.8s,mb5.7
BSD MLR MLR
comp=Z,3µm,16.0s,MS5.1
BSD Bornholm Skovb 32.23 325 iP **P** **21 59 04.6 -1.7**
comp=Z,99nm,0.8s,mb5.7
BSD eS **S** **22 04 15.9 -2.6**
BSD
comp=Z,3µm,16.0s
BSD Bornholm Skovb 32.23 325 iP **P** **21 59 04.6 -1.7**
comp=Z,99nm,0.8s,mb5.7
BSD eS **S** **22 04 15.9 -2.6**
SNR=28
FINES FINESS Array B 32.26 341 P **P** **21 59 05.5 -1.0**
comp=Z,43nm,0.8s,mb5.3,baz=146,slow=10,SNR=45
FINES LR LR 22 13 34.5
comp=Z,5µm,21.9s,MS5.2,baz=142,slow=39
FINES FINESS Array B 32.26 341 P **P** **21 59 05.5 -1.0**
JOF Joensuu 32.28 346 eP **P** **21 59 05.5 -1.2**
JOF pmax pmax
comp=Z,82nm,0.7s,mb5.7
JOF Joensuu 32.28 346 ep **P** **21 59 05.5 -1.2**
comp=Z,82nm,0.7s,mb5.7
JOF Joensuu 32.28 346 eP **P** **21 59 05.5 -1.2**
comp=Z,82nm,0.7s,mb5.7
TUE Stuetta 32.28 307 eP **P** **21 59 07.0 +0.1**
comp=Z,24nm,0.8s,mb5.1
TUE ePP PP 22 00 15.4 -4.4
TUE ePcP PcP 22 01 56.4 +1.6
TUE eS **S** **22 04 17.5 -2.0**
TUE LR LR
comp=Z,4µm,22.0s,MS5.0
TUE Stuetta 32.28 307 eP **P** **21 59 07.0 +0.1**
comp=Z,24nm,0.8s,mb5.1
GKN Gorkha 32.39 88 eP **P** **21 59 08.4 +0.3**
LGHD Ghdames 32.44 276 iP **P** **21 59 09.2 +0.7**
comp=Z,84nm,1.6s,mb5.3,SNR=149
LGHD eS **S** **22 04 22.2 -0.1**
SNR=40
RGN Rugen 32.74 323 eP **P** **21 59 10.4 -0.4**
comp=Z,285nm,1.2s,mb6.1
RGN Rugen 32.74 323 eP **P** **21 59 10.9 +0.1**
RGN Rugen 32.74 323 eP **P** **21 59 10.9 +0.1**
KAF Kangasniemi 32.74 342 eP **P** **21 59 09.2 -1.6**
KAF pmax pmax
comp=Z,36nm,0.7s,mb5.4
KAF Kangasniemi 32.74 342 ep **P** **21 59 09.2 -1.6**
comp=Z,36nm,0.7s,mb5.4
KAF Kangasniemi 32.74 342 eP **P** **21 59 09.2 -1.6**
comp=Z,36nm,0.7s,mb5.4
BUCH Bad Urach 32.75 311 P **P** **21 59 15.6 +4.6**
GUT Gutenstein 32.80 310 P **P** **21 59 11.5 0.0**
GUT Gutenstein 32.80 310 P **P** **21 59 11.5 0.0**
SISB Singen-Schiene 32.81 309 P **P** **21 59 12.0 +0.5**
SISB Singen-Schiene 32.81 309 P **P** **21 59 12.0 +0.5**
DMN Daman 32.90 88 eP **P** **21 59 12.7 +0.1**
comp=Z,796nm,1.4s,mb6.5
STU Stuttgart 32.94 311 eP **P** **21 59 11.6 -1.0**
comp=Z,18nm,0.8s,mb5.0
STU Stuttgart 32.94 311 eP **P** **21 59 12.2 -0.4**
STU ePP PP 22 00 26.9 -0.2
STU Stuttgart 32.94 311 eP **P** **21 59 12.3 -0.3**
STU e 22 00 26.9
STU Stuttgart 32.94 311 eP **P** **21 59 12.3 -0.3**
STU Stuttgart 32.94 311 ePP PP 22 00 26.9 -0.2
SPAK Spaichingen-Ko 33.03 310 eP **P** **21 59 13.7 +0.3**
SPAK Spaichingen-Ko 33.03 310 eP **P** **21 59 13.7 +0.3**
ABSA Djebel Ababsia 33.04 288 P **P** **21 59 13.8 +0.1**
ABSA Djebel Ababsia 33.04 288 P **P** **21 59 13.8 +0.1**
CMAH Djebel Manchou 33.06 289 P **P** **21 59 14.8 +1.0**
CMAH Djebel Manchou 33.06 289 P **P** **21 59 14.8 +1.0**
UBBA Unterbreizbach 33.06 315 eP **P** **21 59 13.6 -0.1**
comp=Z,28nm,1.4s,mb5.0
SAOF Saorge 33.11 302 eP **P** **21 59 15.5 +1.3**
SAOF Saorge 33.11 302 eP **P** **21 59 15.5 +1.3**
PKI Pulchoki 33.17 88 eP **P** **21 59 15.2 +0.3**
SBF Sospel 33.18 302 eP **P** **21 59 13.8 -1.0**
comp=Z,127nm,0.7s,mb5.6
SBF Sospel 33.18 302 eP **P** **21 59 13.8 -1.0**
comp=Z,64nm,0.7s,mb5.7
SBF Sospel 33.18 302 eP **P** **21 59 13.8 -1.0**
SBF pmax pmax
comp=Z,64nm,0.7s,mb5.7
SBF Sospel 33.18 302 eP **P** **21 59 13.8 -1.0**
comp=Z,64nm,0.7s,mb5.6
CLZ Clausthal 33.20 317 eP **P** **21 59 15.4 +0.5**
comp=Z,55nm,0.7s,mb5.6
CLZ Clausthal 33.20 317 eP **P** **21 59 15.4 +0.5**
comp=Z,55nm,0.7s,mb5.6
CLZ Clausthal 33.20 317 eP **P** **21 59 15.4 +0.5**
CLZ pmax pmax
comp=Z,55nm,0.7s,mb5.6
CLZ Clausthal 33.20 317 eP **P** **21 59 15.4 +0.5**
comp=Z,55nm,0.7s,mb5.6
AUTN L'Aution 33.20 302 eP **P** **21 59 16.9 +1.9**
AUTN L'Aution 33.20 302 eP **P** **21 59 16.9 +1.9**
LUCF Luceram 33.25 302 eP **P** **21 59 15.0 -0.4**
LUCF Luceram 33.25 302 eP **P** **21 59 15.0 -0.4**
TOUF Mont Tournerai 33.33 302 eP **P** **21 59 16.0 -0.2**
TOUF Mont Tournerai 33.33 302 eP **P** **21 59 16.0 -0.2**
BFO Black Forest 33.38 310 eP **P** **21 59 15.5 -1.0**
comp=Z,29nm,1.2s,mb5.1
BFO Black Forest 33.38 310 eP **P** **21 59 15.5 -1.0**
comp=Z,29nm,1.2s,mb5.1
BFO Black Forest 33.38 310 eP **P** **21 59 15.5 -1.0**
BFO pmax pmax
comp=Z,29nm,1.2s,mb5.1
BFO Black Forest 33.38 310 eP **P** **21 59 15.5 -1.0**
comp=Z,29nm,1.2s,mb5.1
MVIF Mont Vial 33.39 302 eP **P** **21 59 16.3 -0.3**
MVIF Mont Vial 33.39 302 eP **P** **21 59 16.3 -0.3**

TOD Tromm 33.41 313 eP **P** **21 59 17.0 +0.2**
TOD Tromm 33.41 313 eP **P** **21 59 17.0 +0.2**
WMQ Urumqi 33.44 58 P **P** **21 59 18.0 +0.9**
WMQ pP pP 21 59 22.5 0.0
WMQ sP sP 21 59 25.0 +0.3
WMQ PP PP 22 00 30.0 -2.7
WMQ S **S** **22 04 37.8 +0.1**
WMQ ScP ScP 22 05 42.5 +0.7
WMQ ScS ScS 22 09 41.8 -0.8
WMQ pmax pmax
comp=Z,48nm,0.9s,mb5.4
WMQ pmax pmax
comp=Z,440nm,4.8s
WMQ LR LR
comp=N,15µm,26.8s,MS5.7
WMQ LR LR
comp=E,7µm,22.0s,MS5.7
WMQ LR LR
comp=Z,6µm,26.0s,MS5.2
GUN Gumba 33.47 87 eP **P** **21 59 18.5 +1.0**
comp=Z,700nm,0.9s,mb6.6
FELD Feldberg im Sc 33.48 309 eP **P** **21 59 17.2 -0.2**
FELD Feldberg im Sc 33.48 309 eP **P** **21 59 17.2 -0.2**
KIZ Kirchzarten 33.56 309 P **P** **21 59 21.2 +3.2**
NRDL Niedersach Rie 33.59 318 eP **P** **21 59 17.9 -0.4**
comp=Z,38nm,0.8s,mb5.4
OG22 Abries 33.65 304 eP **P** **21 59 19.4 +0.5**
OG22 Abries 33.65 304 eP **P** **21 59 19.4 +0.5**
SURF Saint Ours 33.70 303 eP **P** **21 59 20.7 +1.4**
SURF Saint Ours 33.70 303 eP **P** **21 59 20.7 +1.4**
BBS Basel-Blauen 33.72 308 eP **P** **21 59 19.9 +0.4**
BBS Basel-Blauen 33.72 308 eP **P** **21 59 19.9 +0.4**
FRF La Foret Royal 33.72 301 eP **P** **21 59 18.4 -1.1**
comp=Z,52nm,1.1s,mb5.1
FRF La Foret Royal 33.72 301 eP **P** **21 59 18.4 -1.1**
comp=Z,26nm,1.1s,mb5.1
FRF La Foret Royal 33.72 301 eP **P** **21 59 18.4 -1.1**
FRF pmax pmax
comp=Z,26nm,1.1s,mb5.1
FRF La Foret Royal 33.72 301 eP **P** **21 59 18.4 -1.1**
comp=Z,26nm,1.1s,mb5.1
COP Copenhagen 33.74 324 iP **P** **21 59 21.5 +2.0**
COP iS **S** **22 04 44.6 +2.6**
COP pmax pmax
comp=Z,63nm,0.8s,mb5.6
COP MLR MLR
comp=Z,2µm,15.0s,MS4.9
COP Copenhagen 33.74 324 iP **P** **21 59 21.5 +2.0**
comp=Z,63nm,0.8s,mb5.6
COP
COP
comp=Z,2µm,15.0s
COP Copenhagen 33.74 324 iP **P** **21 59 21.5 +2.0**
comp=Z,63nm,0.8s,mb5.6
MBDF Montbardon 33.76 303 eP **P** **21 59 18.7 -1.2**
comp=Z,96nm,0.7s,mb5.6
MBDF Montbardon 33.76 303 eP **P** **21 59 18.7 -1.2**
comp=Z,48nm,0.7s,mb5.5
MBDF Montbardon 33.76 303 eP **P** **21 59 18.7 -1.2**
MBDF pmax pmax
comp=Z,48nm,0.7s,mb5.5
MBDF Montbardon 33.76 303 eP **P** **21 59 18.7 -1.2**
comp=Z,48nm,0.7s,mb5.6
LMR La Mourre 33.80 301 eP **P** **21 59 19.4 -0.8**
comp=Z,22nm,1.0s,mb4.8
LMR La Mourre 33.80 301 eP **P** **21 59 19.4 -0.8**
comp=Z,11nm,1.0s,mb4.7
LMR La Mourre 33.80 301 eP **P** **21 59 19.4 -0.8**
LMR pmax pmax
comp=Z,11nm,1.0s,mb4.7
LMR La Mourre 33.80 301 eP **P** **21 59 19.4 -0.8**
comp=Z,11nm,1.0s,mb4.8
NVS Novosibirsk 33.80 38 eP **P** **21 59 18.1 -1.9**
NVS eS **S** **22 04 41.3 -1.6**
NVS pmax pmax
comp=Z,49nm,1.1s,mb5.3
NVS pmax pmax
comp=N,21nm,1.3s
NVS pmax pmax
comp=E,16nm,1.0s
NVS smax
comp=N,118nm,3.2s
NVS smax
comp=E,134nm,3.8s
NVS Novosibirsk 33.80 38 eP **P** **21 59 18.1 -1.9**
comp=E,21nm,1.3s,mb4.9
JIRN Jiri 33.81 88 eP **P** **21 59 21.6 +1.1**
TNS Taunus Mts 33.81 313 eP **P** **21 59 20.0 -0.2**
comp=Z,47nm,1.3s,mb5.3
TNS Taunus Mts 33.81 313 eP **P** **21 59 20.0 -0.2**
comp=Z,47nm,1.3s,mb5.3
TNS Taunus Mts 33.81 313 eP **P** **21 59 20.0 -0.2**
TNS pmax pmax
comp=Z,47nm,1.3s,mb5.3
TNS Taunus Mts 33.81 313 eP **P** **21 59 20.0 -0.2**
comp=Z,47nm,1.3s,mb5.3
CASM Ain Smara 33.84 288 P **P** **21 59 17.3 -3.3**
LPG La Plagne 33.88 305 eP **P** **21 59 19.8 -1.1**
comp=Z,110nm,0.7s,mb5.6
LPG La Plagne 33.88 305 eP **P** **21 59 19.8 -1.1**
comp=Z,55nm,0.7s,mb5.6
LPG La Plagne 33.88 305 eP **P** **21 59 19.8 -1.1**
LPG pmax pmax
comp=Z,55nm,0.7s,mb5.6
LPG La Plagne 33.88 305 eP **P** **21 59 19.8 -1.1**
comp=Z,55nm,0.7s,mb5.6
LPL La Plagne 33.90 305 eP **P** **21 59 19.9 -1.1**
comp=Z,157nm,0.8s,mb5.7
LPL La Plagne 33.90 305 eP **P** **21 59 19.9 -1.1**
comp=Z,78nm,0.8s,mb5.7
LPL La Plagne 33.90 305 eP **P** **21 59 19.9 -1.1**
LPL pmax pmax
comp=Z,78nm,0.8s,mb5.7
LPL La Plagne 33.90 305 eP **P** **21 59 19.9 -1.1**
comp=Z,78nm,0.8s,mb5.7
BSEG Bad Segeberg 34.05 320 eP **P** **21 59 22.6 +0.4**
comp=Z,34nm,0.8s,mb5.3
BSEG Bad Segeberg 34.05 320 eP **P** **21 59 22.6 +0.4**
BSEG Bad Segeberg 34.05 320 eP **P** **21 59 22.6 +0.4**
BSEG pmax pmax
comp=Z,34nm,0.8s,mb5.3
BSEG Bad Segeberg 34.05 320 eP **P** **21 59 22.6 +0.4**
comp=Z,34nm,0.8s,mb5.3
MOF Molkenrain 34.05 309 eP **P** **21 59 20.9 -1.4**
MOF Molkenrain 34.05 309 eP **P** **21 59 20.9 -1.4**
OG01 Vacheresse 34.06 306 eP **P** **21 59 21.9 -0.5**
OG01 Vacheresse 34.06 306 eP **P** **21 59 21.9 -0.5**
CDF Champ du Feu 34.08 310 eP **P** **21 59 21.0 -1.6**
comp=Z,37nm,0.8s,mb5.0
CDF Champ du Feu 34.08 310 eP **P** **21 59 21.0 -1.6**
comp=Z,18nm,0.8s,mb5.1
CDF Champ du Feu 34.08 310 eP **P** **21 59 21.0 -1.6**
CDF pmax pmax
comp=Z,18nm,0.8s,mb5.0
CDF Champ du Feu 34.08 310 eP **P** **21 59 21.0 -1.6**
comp=Z,18nm,0.8s,mb5.0
ECH Echery 34.11 310 eP **P** **21 59 21.6 -1.3**
ECH Echery 34.11 310 eP **P** **21 59 21.6 -1.3**
LOMF Lomont 34.15 308 eP **P** **21 59 22.2 -1.0**
LOMF Lomont 34.15 308 eP **P** **21 59 22.2 -1.0**
OG25 Le Caire 34.21 303 eP **P** **21 59 24.2 +0.4**
OG25 Le Caire 34.21 303 eP **P** **21 59 24.2 +0.4**
HINF Hinteralfeld 34.23 309 eP **P** **21 59 22.0 -1.9**
comp=Z,121nm,1.1s,mb5.4
HINF Hinteralfeld 34.23 309 eP **P** **21 59 22.0 -1.9**
comp=Z,60nm,1.1s,mb5.4
HINF Hinteralfeld 34.23 309 eP **P** **21 59 22.0 -1.9**
HINF pmax pmax
comp=Z,61nm,1.1s,mb5.4
HINF Hinteralfeld 34.23 309 eP **P** **21 59 22.0 -1.9**
comp=Z,60nm,1.1s,mb5.4
ZAA0 Zalesovo Array 34.25 40⇑ eP **P** **21 59 23.1 -0.9**
ZAA0 ePP PP 22 00 43.0 +1.5
ZAA0 eS **S** **22 04 50.0 0.0**
ZAA0 Zalesovo Array 34.25 40⇑ eP **P** **21 59 23.0 -1.0**
ZALV Zalesovo Beam 34.25 40 P **P** **21 59 23.6 -0.4**
comp=Z,47nm,0.7s,mb5.5,baz=256,slow=8.7,SNR=97
ZALV LR LR 22 14 50.4
comp=Z,4µm,19.1s,MS5.2,baz=65,slow=39
DFRA Djebel Bou Aff 34.30 289 P **P** **21 59 25.7 +1.0**
DFRA Djebel Bou Aff 34.30 289 P **P** **21 59 25.7 +1.0**
RAMN Ramite 34.37 89 eP **P** **21 59 25.0 -0.4**
comp=Z,216nm,1.0s,mb6.0
ORIF Oris-en-Rattie 34.41 304 eP **P** **21 59 23.6 -1.9**
comp=Z,56nm,0.8s,mb5.2

ORIF eMLR MLR
comp=Z,2µm,20.5s,MS4.5
ORIF Oris-en-Rattie 34.41 304 eP **P** **21 59 23.6 -1.9**
comp=Z,28nm,0.8s,mb5.2
ORIF Oris-en-Rattie 34.41 304 eP **P** **21 59 23.6 -1.9**
ORIF pmax pmax
comp=Z,28nm,0.8s,mb5.2
ORIF Oris-en-Rattie 34.41 304 eP **P** **21 59 23.6 -1.9**
comp=Z,28nm,0.8s,mb5.2
CABF La Chapelle 34.51 307 eP **P** **21 59 25.3 -1.1**
comp=Z,266nm,0.8s,mb5.9
CABF La Chapelle 34.51 307 eP **P** **21 59 25.3 -1.1**
comp=Z,133nm,0.8s,mb5.9
CABF La Chapelle 34.51 307 eP **P** **21 59 25.3 -1.1**
CABF pmax pmax
comp=Z,133nm,0.8s,mb5.9
CABF La Chapelle 34.51 307 eP **P** **21 59 25.3 -1.1**
comp=Z,133nm,0.8s,mb5.9
RUP Ruppelstein 34.53 312 eP **P** **21 59 24.8 -1.7**
RUP Ruppelstein 34.53 312 eP **P** **21 59 24.8 -1.7**
SMRF Simiane la Rot 34.53 302 eP **P** **21 59 25.3 -1.3**
comp=Z,16nm,0.8s,mb4.7
SMRF Simiane la Rot 34.53 302 eP **P** **21 59 25.3 -1.3**
comp=Z,16nm,0.8s,mb5.0
SMRF Simiane la Rot 34.53 302 eP **P** **21 59 25.3 -1.3**
comp=Z,7.9nm,0.8s,mb4.7
HAU Haudompre 34.60 309 eP **P** **21 59 25.1 -2.0**
comp=Z,82nm,0.9s,mb5.4
HAU eMLR MLR
comp=Z,4µm,22.5s,MS4.8
HAU Haudompre 34.60 309 eP **P** **21 59 25.1 -2.0**
comp=Z,41nm,0.9s,mb5.4
HAU LR LR
comp=Z,4µm,22.5s,MS5.1
HAU Haudompre 34.60 309 eP **P** **21 59 25.1 -2.0**
HAU pmax pmax
comp=Z,41nm,0.9s,mb5.4
HAU MLR MLR
comp=Z,4µm,22.5s,MS5.1
HAU Haudompre 34.60 309 eP **P** **21 59 25.1 -2.0**
comp=Z,41nm,0.9s,mb5.4
KMBO Kilima Mbogo 34.62 198 eP **P** **21 59 29.1 +1.5**
comp=Z,16nm,1.1s,mb4.8
KMBO ePcP PcP 22 02 02.8 +0.9
KMBO eS **S** **22 04 57.5 +1.2**
KMBO LR LR
comp=Z,7µm,19.0s,MS5.4
KMBO Kilima Mbogo 34.62 198 LR LR 22 13 56.7
comp=Z,4µm,19.6s,MS5.4,baz=187,slow=37
KMBO Kilima Mbogo 34.62 198 eP **P** **21 59 29.1 +1.5**
KMBO e 22 02 02.8
KMBO eS **S** **22 04 57.5 +1.2**
KMBO pmax pmax
comp=Z,16nm,1.1s
KMBO MLR MLR
comp=Z,7µm,19.0s
KMBO Kilima Mbogo 34.62 198 eP **P** **21 59 29.1 +1.5**
comp=Z,16nm,1.1s,mb4.9
KMBO Kilima Mbogo 34.62 198 P **P** **21 59 30.9 +3.4**
SNR=11
SET Setif 34.72 288 P **P** **21 59 32.0 +3.7**
IBBN Ibbenburen 34.87 317 eP **P** **21 59 30.1 +0.7**
comp=Z,76nm,1.0s,mb5.6
THEF They Montfort 34.88 309 eP **P** **21 59 29.5 0.0**
THEF They Montfort 34.88 309 eP **P** **21 59 29.5 0.0**
BUG Bochum--Univer 34.89 315 eP **P** **21 59 29.7 +0.2**
comp=Z,79nm,1.7s,mb5.4
ODAN Odare 35.07 88 eP **P** **21 59 31.3 -0.1**
comp=Z,126nm,0.9s,mb5.9
WLF Walferdange 35.09 312 P **P** **21 59 30.4 -0.9**
comp=Z,24nm,1.1s,mb5.0
WLF Walferdange 35.09 312 eP **P** **21 59 30.5 -0.8**
comp=Z,44nm,1.0s,mb5.3
WLF ePP PP 22 00 51.0 +0.1
WLF eS **S** **22 05 03.6 +0.6**
WLF LR LR
comp=Z,3µm,19.0s,MS5.1
WLF Walferdange 35.09 312 eP **P** **21 59 30.5 -0.8**
WLF e 22 00 51.0
WLF eS **S** **22 05 03.7 +0.7**
WLF pmax pmax
comp=Z,44nm,1.0s,mb5.3
WLF MLR MLR
comp=Z,3µm,19.0s,MS5.1
WLF Walferdange 35.09 312 P **P** **21 59 30.4 -0.9**
comp=Z,24nm,1.1s,mb5.0
WLF Walferdange 35.09 312 ePP PP 22 00 51.0 +0.1
TAPN Taplejung 35.19 87 eP **P** **21 59 32.8 +0.4**
VIVF Saint-Julien-l 35.26 303 eP **P** **21 59 30.8 -2.0**
VIVF Saint-Julien-l 35.26 303 eP **P** **21 59 30.8 -2.0**
SSB Saint Sauveur 35.40 304 eP **P** **21 59 33.2 -0.8**
SSB Saint Sauveur 35.40 304 eP **P** **21 59 33.4 -0.6**
comp=Z,39nm,1.4s,mb5.1
SSB ePP PP 22 00 55.1 +0.8
SSB ePcP PcP 22 02 03.4 -0.3
SSB eS **S** **22 05 08.3 +0.5**
SSB LR LR
comp=Z,2µm,20.0s,MS4.8
SSB Saint Sauveur 35.40 304 eP **P** **21 59 33.4 -0.6**
SSB e 22 00 55.1
SSB e 22 02 03.4
SSB eS **S** **22 05 08.3 +0.5**
SSB pmax pmax
comp=Z,39nm,1.4s,mb5.1
SSB MLR MLR
comp=Z,2µm,20.0s,MS4.8
SSB Saint Sauveur 35.40 304 eP **P** **21 59 33.2 -0.8**
SSB Saint Sauveur 35.40 304 ePP PP 22 00 55.1 +0.7
MEM Membach 35.42 313 P **P** **21 59 34.9 +0.8**
comp=Z,6.8nm,0.9s,mb4.6
MEM Membach 35.42 313 P **P** **21 59 34.9 +0.8**
comp=Z,6.8nm,0.9s,mb4.6
HLG Helgoland 35.46 320 eP **P** **21 59 34.7 +0.3**
comp=Z,338nm,1.4s,mb6.1
VIS Vishakhapatnam 35.48 105 iP **P** **21 59 35.8 +0.7**
VIS ex x 21 59 52.0
comp=Z,118nm,1.6s
VIS ix x 22 05 11.5
SFTF Sexfontaines 35.50 309 eP **P** **21 59 33.2 -1.6**
comp=Z,107nm,1.0s,mb5.4
SFTF Sexfontaines 35.50 309 eP **P** **21 59 33.2 -1.6**
comp=Z,107nm,1.0s,mb5.7
SFTF Sexfontaines 35.50 309 eP **P** **21 59 33.2 -1.6**
comp=Z,54nm,1.0s,mb5.4
MEZF Maizieres J'vi 35.55 310 eP **P** **21 59 33.8 -1.4**
comp=Z,108nm,0.7s,mb5.6
MEZF Maizieres J'vi 35.55 310 eP **P** **21 59 33.8 -1.4**
comp=Z,108nm,0.7s,mb5.9
MEZF Maizieres J'vi 35.55 310 eP **P** **21 59 33.8 -1.4**
comp=Z,54nm,0.7s,mb5.6
HFS Hagfors 35.58 332 P **P** **21 59 34.7 -0.7**
comp=Z,130nm,0.6s,mb6.1,baz=132,slow=8.8,SNR=77
HFS LR LR 22 15 51.5
comp=Z,4µm,20.9s,MS5.2,baz=123,slow=39
HFS Hagfors 35.58 332 P **P** **21 59 34.7 -0.7**
HFA0 Hagfors New Ar 35.59 332 P **P** **21 59 34.0 -1.5**
HFA0 Hagfors New Ar 35.59 332 P **P** **21 59 34.0 -1.5**
BEBN Eben Emael 35.67 314 P **P** **21 59 38.2 +1.9**
BEBN Eben Emael 35.67 314 P **P** **21 59 38.1 +1.8**
MUD Monsted U'grnd 35.72 324 iP **P** **21 59 36.8 +0.2**
MUD iS **S** **22 05 13.3 +0.9**
MUD pmax pmax
comp=Z,110nm,0.7s,mb5.9
MUD MLR MLR
comp=Z,3µm,25.0s,MS5.0
MUD Monsted U'grnd 35.72 324 iP **P** **21 59 36.8 +0.2**
comp=Z,112nm,0.7s,mb5.9
MUD iS **S** **22 05 13.3 +0.9**
MUD
comp=Z,3µm,25.0s
MUD Monsted U'grnd 35.72 324 iP **P** **21 59 36.8 +0.2**
comp=Z,113nm,0.7s,mb5.9
MUD iS **S** **22 05 13.4 +1.0**
SNR=28
LASF Ste Croix 35.77 302 eP **P** **21 59 35.5 -1.8**
comp=Z,28nm,0.7s,mb5.0
LASF Ste Croix 35.77 302 eP **P** **21 59 35.5 -1.8**
comp=Z,14nm,0.7s,mb5.0
BCLA Clavier 35.81 313 P **P** **21 59 37.8 +0.3**
comp=Z,8.4nm,1.3s,mb4.5
BCLA Clavier 35.81 313 P **P** **21 59 37.7 +0.2**
comp=Z,8.4nm,1.3s,mb4.5
GIVF Givet 36.03 312 eP **P** **21 59 38.1 -1.3**
comp=Z,60nm,0.8s,mb5.3
GIVF Givet 36.03 312 eP **P** **21 59 38.1 -1.3**
comp=Z,30nm,0.8s,mb5.3

GIVF **Givet** 36.03 312 *e*P **P** 21 59 38.1 -1.3
GIVF pmax pmax
comp=Z,30nm,0.8s,mb5.3
GIVF **Givet** 36.03 312 *e*P **P** 21 59 38.1 -1.3
comp=Z,30nm,0.8s,mb5.3
SMF **Signal de Mont** 36.05 306 *e*P **P** 21 59 37.9 -1.7
comp=Z,161nm,0.7s,mb5.8
SMF **Signal de Mont** 36.05 306 *e*P **P** 21 59 37.9 -1.7
comp=Z,81nm,0.7s,mb5.8
SMF **Signal de Mont** 36.05 306 *e*P **P** 21 59 37.9 -1.7
SMF pmax pmax
comp=Z,81nm,0.7s,mb5.8
SMF **Signal de Mont** 36.05 306 *e*P **P** 21 59 37.9 -1.7
comp=Z,81nm,0.7s,mb5.8
PLDF **La Plantade** 36.12 305 *e*P **P** 21 59 39.7 -0.5
PLDF **La Plantade** 36.12 305 *e*P **P** 21 59 39.7 -0.5
LOR **Lormes** 36.12 307 *e*P **P** 21 59 38.2 -2.0
comp=Z,40nm,0.6s,mb5.2
LOR *e*MLR MLR
comp=Z,1µm,21.0s,MS4.4
LOR **Lormes** 36.12 307 *e*P **P** 21 59 38.2 -2.0
comp=Z,20nm,0.6s,mb5.2
LOR LR LR
comp=Z,1µm,21.0s,MS4.7
LOR **Lormes** 36.12 307 *e*P **P** 21 59 38.2 -2.0
LOR pmax pmax
comp=Z,20nm,0.6s,mb5.2
LOR MLR MLR
comp=Z,1µm,21.0s,MS4.7
LOR **Lormes** 36.12 307 *e*P **P** 21 59 38.2 -2.0
comp=Z,20nm,0.6s,mb5.2
DOU **Dourbes** 36.17 312 P **P** 21 59 40.2 -0.4
comp=Z,7.4nm,0.8s,mb4.7
DOU **Dourbes** 36.17 312 P **P** 21 59 40.2 -0.4
comp=Z,7.4nm,0.8s,mb4.7
APA **Apatity** 36.23 351 ⇑ *i*P **P** 21 59 40.0 -0.8
APA *i* S **S** 22 05 18.0 -2.0
APA pmax pmax
comp=Z,36nm,0.7s,mb5.4
APA MLR MLR
comp=Z,3µm,20.0s,MS5.1
APA **Apatity** 36.23 351 *i* P **P** 21 59 40.0 -0.8
comp=Z,36nm,0.7s,mb5.4
MBAR **Mbarara** 36.33 209 *i* P **P** 21 59 42.8 +0.5
MBAR **Mbarara** 36.33 209 *i* P **P** 21 59 42.8 +0.5
SSF **Saint Saulge** 36.33 307 *e*P **P** 21 59 40.3 -1.7
comp=Z,98nm,0.7s,mb5.5
SSF **Saint Saulge** 36.33 307 *e*P **P** 21 59 40.3 -1.7
comp=Z,49nm,0.7s,mb5.5
SSF **Saint Saulge** 36.33 307 *e*P **P** 21 59 40.3 -1.7
SSF pmax pmax
comp=Z,49nm,0.7s,mb5.5
SSF **Saint Saulge** 36.33 307 *e*P **P** 21 59 40.3 -1.7
comp=Z,49nm,0.7s,mb5.5
LVZ **Lovozero** 36.38 352⇓ *e*P **P** 21 59 43.1 +0.9
LVZ LR LR
comp=Z,5µm,19.0s,MS5.3
LVZ **Lovozero** 36.38 352⇓ *e*P **P** 21 59 43.0 +0.8
LVZ pmax pmax
comp=Z,44nm,0.8s,mb5.4
LVZ MLR MLR
comp=Z,6µm,26.0s,MS5.3
LVZ **Lovozero** 36.38 352 P **P** 21 59 43.3 +1.1
comp=Z,300nm,0.8s,mb6.3,SNR=7.8
LVZ **Lovozero** 36.38 352 *e*P **P** 21 59 43.0 +0.8
comp=Z,6µm,26.0s
AVF **Avril sur Loir** 36.40 306 *e*P **P** 21 59 40.7 -1.9
comp=Z,59nm,0.8s,mb5.3
AVF **Avril sur Loir** 36.40 306 *e*P **P** 21 59 40.7 -1.9
comp=Z,30nm,0.8s,mb5.3
AVF **Avril sur Loir** 36.40 306 *e*P **P** 21 59 40.7 -1.9
AVF pmax pmax
comp=Z,30nm,0.8s,mb5.3
AVF **Avril sur Loir** 36.40 306 *e*P **P** 21 59 40.7 -1.9
comp=Z,30nm,0.8s,mb5.3
EJON **La Jonquera** 36.41 299 P **P** 21 59 43.2 +0.5
comp=Z,39nm,1.8s,mb5.0
EJON **La Jonquera** 36.41 299 P **P** 21 59 43.2 +0.5
comp=Z,39nm,1.8s,mb5.0
BAIF **Baives** 36.41 312 *e*P **P** 21 59 41.5 -1.1
comp=Z,85nm,0.9s,mb5.4
BAIF **Baives** 36.41 312 *e*P **P** 21 59 41.5 -1.1
comp=Z,42nm,0.9s,mb5.4
BAIF **Baives** 36.41 312 *e*P **P** 21 59 41.5 -1.1
BAIF pmax pmax
comp=Z,42nm,0.9s,mb5.4
BAIF **Baives** 36.41 312 *e*P **P** 21 59 41.5 -1.1
comp=Z,42nm,0.9s,mb5.4
AGO **Saint Agoulin** 36.47 305 *e*P **P** 21 59 42.1 -1.1
AGO **Saint Agoulin** 36.47 305 *e*P **P** 21 59 42.1 -1.1
ETOS **Mallorca** 36.49 295 P **P** 21 59 44.9 +1.5
comp=Z,125nm,1.7s,mb5.6
ETOS **Mallorca** 36.49 295 P **P** 21 59 44.9 +1.4
comp=Z,125nm,1.7s,mb5.6
PYM **Petit Puy Mans** 36.52 305 *e*P **P** 21 59 42.6 -1.0
PYM **Petit Puy Mans** 36.52 305 *e*P **P** 21 59 42.6 -1.0
EMHD **Djebel Mahouad** 36.68 289 P **P** 21 59 46.7 +1.6
EMHD **Djebel Mahouad** 36.68 289 P **P** 21 59 46.7 +1.6
OSL **Oslo** 36.71 330 *e*P **P** 21 59 45.4 +0.4
OSL **Oslo** 36.71 330 *e*P **P** 21 59 45.4 +0.4
SNR=26
BGF **Bois d'Agland** 36.72 306 *e*P **P** 21 59 43.5 -1.8
comp=Z,42nm,0.6s,mb5.1
BGF **Bois d'Agland** 36.72 306 *e*P **P** 21 59 43.5 -1.8
comp=Z,21nm,0.6s,mb5.1
BGF **Bois d'Agland** 36.72 306 *e*P **P** 21 59 43.5 -1.8
BGF pmax pmax
comp=Z,21nm,0.6s,mb5.1
BGF **Bois d'Agland** 36.72 306 *e*P **P** 21 59 43.5 -1.8
comp=Z,21nm,0.6s,mb5.1
CFON **Fontmartina** 36.74 298 P **P** 21 59 48.0 +2.5
comp=Z,52nm,1.5s,mb5.1
MTLF **Montolieu** 36.92 301 *e*P **P** 21 59 44.7 -2.4
comp=Z,8.7nm,0.7s,mb4.4
MTLF **Montolieu** 36.92 301 *e*P **P** 21 59 44.7 -2.4
comp=Z,4.3nm,0.7s,mb4.4
MTLF **Montolieu** 36.92 301 *e*P **P** 21 59 44.7 -2.4
MTLF pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
MTLF **Montolieu** 36.92 301 *e*P **P** 21 59 44.7 -2.4
comp=Z,4.3nm,0.7s,mb4.4
HYF **Humbligny** 36.95 307 *e*P **P** 21 59 46.1 -1.1
HYF **Humbligny** 36.95 307 *e*P **P** 21 59 46.1 -1.1
KONO **Kongsberg** 37.04 329 *e*P **P** 21 59 47.4 -0.4
KONO *e*S **S** 22 05 30.9 -1.7
KONO AMS AMS 22 15 27.0
comp=Z,4µm,23.0s,MS5.1
KONO **Kongsberg** 37.04 329 *e*P **P** 21 59 47.7 -0.2
comp=Z,36nm,0.7s,mb5.3
KONO *e*PP PP 22 01 12.5 +0.2
KONO *e*PcP PcP 22 02 08.9 +0.6
KONO *e*S **S** 22 05 33.4 +0.8
KONO LR LR
comp=Z,3µm,19.0s,MS5.2
KONO **Kongsberg** 37.04 329 *e*P **P** 21 59 47.7 -0.2
KONO *e* 22 01 12.5
KONO *e* 22 02 08.9
KONO *e*S **S** 22 05 33.4 +0.8
KONO pmax pmax
comp=Z,36nm,0.7s,mb5.3
KONO MLR MLR
comp=Z,3µm,19.0s,MS5.2
KONO **Kongsberg** 37.04 329 *e*P **P** 21 59 47.4 -0.5
SNR=26
KONO **Kongsberg** 37.04 329 *e*PP PP 22 01 12.5 +0.3
KONO *e*S **S** 22 05 30.9 -1.7
SNR=27
VALF **Valcebollere** 37.05 299 *e*P **P** 21 59 49.1 +0.9
VALF **Valcebollere** 37.05 299 *e*P **P** 21 59 49.1 +0.9
NB2 **NORSAR Subarra** 37.11 332 P **P** 21 59 47.1 -1.3
baz=124,slow=8.6
NB2 **NORSAR Subarra** 37.11 332 P **P** 21 59 47.1 -1.3
NB2 **NORSAR Subarra** 37.11 332 P **P** 21 59 47.1 -1.3
NB2 **NORSAR Subarra** 37.11 332 P **P** 21 59 47.1 -1.3
comp=Z,26nm,0.7s,mb5.2,SNR=36
NOA **NORSAR Array B** 37.11 332 P **P** 21 59 46.4 -2.0
NOA PP PP 22 01 13.1 +0.1
NOA S **S** 22 05 34.0 +0.4
NOA LR LR 22 16 48.6
NOA **NORSAR Array B** 37.11 332 P **P** 21 59 46.4 -2.0
comp=Z,25nm,0.6s,mb5.2,baz=124,slow=8.5,SNR=41
NOA PP PP 22 01 13.1 +0.1
comp=Z,17nm,0.7s,baz=128,slow=11,SNR=5.1
NOA S **S** 22 05 34.0 +0.4
comp=Z,9.2nm,0.9s,baz=132,slow=17,SNR=3.5
NOA LR LR 22 16 48.6
comp=Z,4µm,21.5s,MS5.2,baz=140,slow=39
NOA **NORSAR Array B** 37.11 332 P **P** 21 59 46.4 -2.0
NOA 22 01 13.1
NOA S **S** 22 05 34.0 +0.4
NOA **NORSAR Array B** 37.11 332 P **P** 21 59 46.4 -2.0
NOA **NORSAR Array B** 37.11 332 PP PP 22 01 13.1 +0.1
CAF **Calviac** 37.11 303 *e*P **P** 21 59 46.8 -1.9
comp=Z,15nm,0.8s,mb4.6
CAF **Calviac** 37.11 303 *e*P **P** 21 59 46.8 -1.9
comp=Z,7.7nm,0.8s,mb4.6
CAF **Calviac** 37.11 303 *e*P **P** 21 59 46.8 -1.9
CAF pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
CAF **Calviac** 37.11 303 *e*P **P** 21 59 46.8 -1.9
comp=Z,7.7nm,0.8s,mb4.6
TCF **Toulx Ste Croi** 37.13 305 *e*P **P** 21 59 47.1 -1.7
comp=Z,35nm,0.7s,mb5.0
TCF **Toulx Ste Croi** 37.13 305 *e*P **P** 21 59 47.1 -1.7
comp=Z,17nm,0.7s,mb5.0
TCF **Toulx Ste Croi** 37.13 305 *e*P **P** 21 59 47.1 -1.7
TCF pmax pmax
comp=Z,17nm,0.7s,mb5.0
TCF **Toulx Ste Croi** 37.13 305 *e*P **P** 21 59 47.1 -1.7
comp=Z,17nm,0.7s,mb5.0
NAO01 **NORSAR Array S** 37.13 331 *e*P **P** 21 59 48.3 -0.4
NAO01 *e*PP PP 22 01 13.6 +0.4
NAO01 *e*PcP PcP 22 02 07.4 -1.1
NAO01 *e*S **S** 22 05 35.3 +1.3
NAO01 LR LR
comp=Z,5µm,22.0s,MS5.3
NAO01 **NORSAR Array S** 37.13 331 *e*P **P** 21 59 48.3 -0.3
LSA **Lhasa** 37.41 82⇑ *i*P **P** 21 59 52.0 +0.6
comp=Z,181nm,1.2s,mb5.8
LSA *e*S **S** 22 05 40.3 +1.3
LSA LR LR
comp=Z,13µm,19.0s,MS5.7
LSA **Lhasa** 37.41 82⇑ *i*P **P** 21 59 52.0 +0.6
LSA *e*S **S** 22 05 40.3 +1.3
LSA pmax pmax
comp=Z,181nm,1.2s,mb5.8
LSA MLR MLR
comp=Z,13µm,19.0s,MS5.7
LSA **Lhasa** 37.41 82 *i* P **P** 21 59 52.0 +0.6
comp=Z,181nm,1.2s,mb5.8
LSA *e*S **S** 22 05 40.3 +1.3
EMIR **Miracle** 37.41 298 P **P** 21 59 50.3 -1.0
comp=Z,237nm,2.9s,mb5.5
EMIR **Miracle** 37.41 298 P **P** 21 59 50.3 -1.0
comp=Z,237nm,2.9s,mb5.5
SNART **Snartemo** 37.50 326 *e*P **P** 21 59 55.2 +3.4
RJF **Les Rejaudoux** 37.53 304 *e*P **P** 21 59 50.8 -1.4
comp=Z,27nm,0.8s,mb4.8
RJF *e*MLR MLR
comp=Z,4µm,18.8s,MS4.9
RJF **Les Rejaudoux** 37.53 304 *e*P **P** 21 59 50.8 -1.4
comp=Z,14nm,0.8s,mb4.7
RJF LR LR
comp=Z,4µm,18.8s,MS5.2
RJF **Les Rejaudoux** 37.53 304 *e*P **P** 21 59 50.8 -1.4
RJF pmax pmax
comp=Z,14nm,0.8s,mb4.7
RJF MLR MLR
comp=Z,4µm,18.8s,MS5.2
RJF **Les Rejaudoux** 37.53 304 *e*P **P** 21 59 50.8 -1.4
comp=Z,14nm,0.8s,mb4.8
MSEY **Mahe Island** 37.59 167 PFAKE 22 00 00.0 +7.1
MSEY LR LR
comp=Z,7µm,22.0s,MS5.4
EIBI **Ibiza** 37.67 293 P **P** 21 59 54.6 +1.1
comp=Z,155nm,1.7s,mb5.5
EIBI **Ibiza** 37.67 293 P **P** 21 59 54.6 +1.1
comp=Z,155nm,1.7s,mb5.5
MLS **Moulis** 37.74 300 *e*P **P** 21 59 52.8 -1.2
MLS **Moulis** 37.74 300 *e*P **P** 21 59 52.8 -1.2
EPOB **Poblet** 37.76 297 P **P** 21 59 54.3 0.0
comp=Z,60nm,1.5s,mb5.1
EPOB **Poblet** 37.76 297 P **P** 21 59 54.3 +0.1
comp=Z,60nm,1.5s,mb5.1
LFF **La Frestale** 38.05 303 *e*P **P** 21 59 55.1 -1.5
comp=Z,46nm,0.6s,mb5.1
LFF **La Frestale** 38.05 303 *e*P **P** 21 59 55.1 -1.5
comp=Z,23nm,0.6s,mb5.1
LFF **La Frestale** 38.05 303 *e*P **P** 21 59 55.1 -1.5
LFF pmax pmax
comp=Z,23nm,0.6s,mb5.1
LFF **La Frestale** 38.05 303 *e*P **P** 21 59 55.1 -1.5
comp=Z,23nm,0.6s,mb5.1
TAM **Tamanrasset** 38.10 266 *e*P **P** 21 59 58.0 +0.7
comp=Z,23nm,0.7s,mb5.0
TAM *e*PP PP 22 01 21.8 -2.6
TAM *e*S **S** 22 05 51.6 +2.0
TAM LR LR
comp=Z,8µm,19.0s,MS5.6
TAM **Tamanrasset** 38.10 266 *e*P **P** 21 59 58.0 +0.7
TAM *e* 22 01 21.8
TAM *e*S **S** 22 05 51.6 +2.0
TAM pmax pmax
comp=Z,23nm,0.7s,mb5.0
TAM MLR MLR
comp=Z,8µm,19.0s,MS5.6
TAM **Tamanrasset** 38.10 266 *e*P **P** 21 59 58.0 +0.7
comp=Z,23nm,0.7s,mb5.0
EANR **'Ain N'Sour** 38.20 289 P **P** 22 00 02.0 +4.0
EPF **Esparros** 38.29 300 *e*P **P** 21 59 56.1 -2.6
comp=Z,6.9nm,0.5s,mb4.4
EPF **Esparros** 38.29 300 *e*P **P** 21 59 56.1 -2.6
comp=Z,3.5nm,0.5s,mb4.3
EPF **Esparros** 38.29 300 *e*P **P** 21 59 56.1 -2.6
EPF pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
EPF **Esparros** 38.29 300 *e*P **P** 21 59 56.1 -2.6
comp=Z,3.5nm,0.5s,mb4.4
RESF **Ens** 38.29 300 *e*P **P** 21 59 58.1 -0.6
RESF **Ens** 38.29 300 *e*P **P** 21 59 58.1 -0.6
ERTA **Horta de San J** 38.34 297 P **P** 22 00 01.0 +2.0
comp=Z,393nm,2.5s,mb5.7
ERTA **Horta de San J** 38.34 297 P **P** 22 00 01.0 +1.9
comp=Z,393nm,2.5s,mb5.7
BLS5 **Blasjo** 38.34 327 *e*P **P** 21 59 59.9 +1.0
BLS5 **Blasjo** 38.34 327 *e*P **P** 21 59 59.9 +1.1
SNR=26
EBIE **Bielsa** 38.44 299 P **P** 21 59 59.6 -0.3
comp=Z,90nm,1.6s,mb5.2
EBIE **Bielsa** 38.44 299 P **P** 21 59 59.6 -0.3
comp=Z,90nm,1.6s,mb5.2
MFF **Saint Martin d** 38.78 306 *e*P **P** 22 00 00.5 -2.2
comp=Z,37nm,0.8s,mb4.9
MFF **Saint Martin d** 38.78 306 *e*P **P** 22 00 00.5 -2.2
comp=Z,19nm,0.8s,mb4.9
MFF **Saint Martin d** 38.78 306 *e*P **P** 22 00 00.5 -2.2
MFF pmax pmax
comp=Z,19nm,0.8s,mb4.9
MFF **Saint Martin d** 38.78 306 *e*P **P** 22 00 00.5 -2.2
comp=Z,19nm,0.8s,mb4.9
NSS **Namsos** 38.91 336 *e*P **P** 22 00 00.9 -2.6
NSS *e*S **S** 22 06 03.1 +2.4
NSS AMS AMS 22 16 22.4
comp=Z,4µm,20.8s,MS5.2
ESAC **San Caprasio** 38.91 298 P **P** 22 00 03.1 -0.8
comp=Z,60nm,0.9s,mb5.3
ESAC **San Caprasio** 38.91 298 P **P** 22 00 03.1 -0.8
comp=Z,60nm,0.9s,mb5.3
EBEN **Beniarda** 38.92 293 P **P** 22 00 05.7 +1.7
comp=Z,32nm,1.0s,mb5.0
EBEN **Beniarda** 38.92 293 P **P** 22 00 05.7 +1.7
comp=Z,32nm,1.0s,mb5.0
ETSF **Etsaut** 38.95 300 *e*P **P** 22 00 02.4 -1.8
comp=Z,11nm,0.6s,mb4.5
ETSF **Etsaut** 38.95 300 *e*P **P** 22 00 02.4 -1.8
comp=Z,5.5nm,0.6s,mb4.5
ETSF **Etsaut** 38.95 300 *e*P **P** 22 00 02.4 -1.8
ETSF pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
ETSF **Etsaut** 38.95 300 *e*P **P** 22 00 02.4 -1.8
comp=Z,5.5nm,0.6s,mb4.5
LDF **La Druitiere** 38.95 309 *e*P **P** 22 00 02.3 -1.9
comp=Z,31nm,0.5s,mb5.0
LDF **La Druitiere** 38.95 309 *e*P **P** 22 00 02.3 -1.9
comp=Z,15nm,0.5s,mb5.0
LDF **La Druitiere** 38.95 309 *e*P **P** 22 00 02.3 -1.9
LDF pmax pmax
comp=Z,15nm,0.5s,mb5.0
LDF **La Druitiere** 38.95 309 *e*P **P** 22 00 02.3 -1.9
comp=Z,15nm,0.5s,mb5.0
EMOS **Mosqueruela** 38.98 296 P **P** 22 00 07.0 +2.5
comp=Z,374nm,2.7s,mb5.6
KEV **Kevo** 39.19 349 *e*P **P** 22 00 05.0 -0.8
comp=Z,42nm,0.7s,mb5.3
KEV *e*PP PP 22 01 35.5 -0.1
KEV *e*S **S** 22 06 05.8 +1.0
KEV LR LR
comp=Z,3µm,20.0s,MS5.1
KEV **Kevo** 39.19 349 *e*P **P** 22 00 05.0 -0.8
KEV *e* 22 01 35.5
KEV *e*S **S** 22 06 05.8 +1.0
KEV pmax pmax
comp=Z,42nm,0.7s,mb5.3
KEV MLR MLR
comp=Z,3µm,20.0s,MS5.1
KEV **Kevo** 39.19 349 *e*p **P** 22 00 04.4 -1.4
comp=Z,39nm,0.7s,mb5.2
KEV **Kevo** 39.19 349 *e*P **P** 22 00 04.4 -1.4
comp=Z,39nm,0.7s,mb5.2
MOR8 **Moi Rana** 39.20 340 *e*P **P** 22 00 05.3 -0.7
MOR8 **Moi Rana** 39.20 340 *e*P **P** 22 00 05.3 -0.7
SNR=26
FLN **La Foliniere** 39.21 309 *e*P **P** 22 00 04.0 -2.3
comp=Z,61nm,0.8s,mb5.1
FLN *e*MLR MLR
comp=Z,3µm,22.5s,MS4.8
FLN **La Foliniere** 39.21 309 *e*P **P** 22 00 04.0 -2.3
comp=Z,30nm,0.8s,mb5.1
FLN LR LR
comp=Z,3µm,22.5s,MS5.1
FLN **La Foliniere** 39.21 309 *e*P **P** 22 00 04.0 -2.3
FLN pmax pmax
comp=Z,30nm,0.8s,mb5.1
FLN MLR MLR
comp=Z,3µm,22.5s,MS5.1
FLN **La Foliniere** 39.21 309 *e*P **P** 22 00 04.0 -2.3
comp=Z,30nm,0.8s,mb5.1
ARCES **ARCESS Array B** 39.24 348 P **P** 22 00 05.2 -1.1
comp=Z,15nm,0.4s,mb5.1,baz=158,slow=10,SNR=69
ARCES PP PP 22 01 36.8 +0.5
comp=Z,23nm,0.8s,baz=147,slow=8.4,SNR=6.0
ARCES LR LR 22 19 00.9
comp=Z,3µm,20.2s,MS5.1,baz=328,slow=40
ARCES **ARCESS Array B** 39.24 348 P **P** 22 00 05.2 -1.1
ARCES 22 01 36.8
ARCES **ARCESS Array B** 39.24 348 P **P** 22 00 05.2 -1.1
ARCES **ARCESS Array B** 39.24 348 PP PP 22 01 36.8 +0.5
ARE0 **ARCESS Array S** 39.24 348 *e*P **P** 22 00 05.8 -0.5
ARE0 *e*PP PP 22 01 36.9 +0.7
ARE0 **ARCESS Array S** 39.24 348 *e*P **P** 22 00 05.8 -0.5
LARF **Larrau** 39.26 300 *e*P **P** 22 00 05.1 -1.7
LARF **Larrau** 39.26 300 *e*P **P** 22 00 05.1 -1.7
RUND **Rundenannen** 39.27 328 *e*P **P** 22 00 07.1 +0.5
BER **Bergen** 39.27 328 *e*P **P** 22 00 08.1 +1.4
BER *e*SS SS 22 09 00.7 +1.0
BER AMS AMS 22 16 56.9
comp=Z,3µm,29.3s,MS5.0
BER **Bergen** 39.27 328 *e*P **P** 22 00 08.1 +1.4
SNR=26
BER *e*SS SS 22 09 00.7 +1.0
SNR=47
SHL **Shillong** 39.30 88 *e*PKP **P** 22 00 08.5 +1.1
SHL *ex* x 22 06 04.0
ASK **Askoy** 39.38 328 *e*P **P** 22 00 06.6 -1.0
ECHE **Chera** 39.42 295 P **P** 22 00 10.7 +2.5
comp=Z,12nm,0.8s,mb4.7
ECHE **Chera** 39.42 295 P **P** 22 00 10.7 +2.5
ECHE pmax pmax
comp=Z,13nm,0.8s,mb4.7
GRR **Gorron** 39.42 308 *e*P **P** 22 00 05.9 -2.1
comp=Z,47nm,0.6s,mb5.1
GRR **Gorron** 39.42 308 *e*P **P** 22 00 05.9 -2.1
comp=Z,24nm,0.6s,mb5.1
GRR **Gorron** 39.42 308 *e*P **P** 22 00 05.9 -2.1
GRR pmax pmax
comp=Z,24nm,0.6s,mb5.1
GRR **Gorron** 39.42 308 *e*P **P** 22 00 05.9 -2.1
comp=Z,24nm,0.6s,mb5.1
SJPF **Ste Jean** 39.44 300 *e*P **P** 22 00 07.0 -1.3
comp=Z,33nm,0.6s,mb5.0
SJPF **Ste Jean** 39.44 300 *e*P **P** 22 00 07.0 -1.3
comp=Z,16nm,0.6s,mb4.9
SJPF **Ste Jean** 39.44 300 *e*P **P** 22 00 07.0 -1.3
SJPF pmax pmax
comp=Z,17nm,0.6s,mb5.0
SJPF **Ste Jean** 39.44 300 *e*P **P** 22 00 07.0 -1.3
comp=Z,16nm,0.6s,mb5.0
FLOS **Flostrand** 39.64 339 *e*P **P** 22 00 09.5 -0.1
EALK **Alkurruntz** 39.64 300 P **P** 22 00 12.4 +2.4
comp=Z,127nm,2.2s,mb5.3
CART **Cartagena** 39.66 291 P **P** 22 00 10.6 +0.5
CART **Cartagena** 39.66 291 P **P** 22 00 10.6 +0.4
ELIZ **Elizondo** 39.66 300 P **P** 22 00 10.6 +0.5
comp=Z,15nm,1.0s,mb4.7
ELIZ **Elizondo** 39.66 300 P **P** 22 00 10.6 +0.5
ELIZ pmax pmax
comp=Z,15nm,1.0s,mb4.7
ELIZ **Elizondo** 39.66 300 P **P** 22 00 10.6 +0.5
comp=Z,15nm,1.0s,mb4.7
PALK **Pallekele** 39.75 122 *e*P **P** 22 00 11.8 +0.6
comp=Z,154nm,1.3s,mb5.6
PALK *e*PP PP 22 01 43.4 +0.7
PALK **Pallekele** 39.75 122 *e*P **P** 22 00 11.8 +0.6
PALK *e* 22 01 43.4
PALK pmax pmax
comp=Z,154nm,1.3s,mb5.6
PALK **Pallekele** 39.75 122 P **P** 22 00 12.3 +1.1
comp=Z,756nmcomp=Z,38nm,1.2s,mb5.0
PALK **Pallekele** 39.75 122 *e*P **P** 22 00 11.8 +0.6
comp=Z,154nm,1.3s,mb5.6
PALK **Pallekele** 39.75 122 *e*PP PP 22 01 43.4 +0.7
PALK **Pallekele** 39.75 122 P **P** 22 00 13.1 +1.9
SNR=7.1
KONS **Konsvik** 39.82 339 *e*P **P** 22 00 12.8 +1.6
FOO **Floro** 39.95 330 *e*P **P** 22 00 14.4 +2.1
FOO *e*S **S** 22 06 18.1 +1.6
FOO AMS AMS 22 18 27.4
comp=Z,3µm,19.5s,MS5.2
FOO **Floro** 39.95 330 *e*P **P** 22 00 14.4 +2.1
SNR=26
FOO *e*S **S** 22 06 18.1 +1.6
SNR=27
ETOB **Tobarra** 39.96 293 P **P** 22 00 15.0 +2.4
comp=Z,124nm,2.2s,mb5.2
WOL **Wolverton** 40.04 313 P **P** 22 00 12.1 -1.1
WOL AMb AMB 22 00 19.9
comp=Z,121nm,0.8s,mb5.7
WOL AMS AMS 22 15 29.4
comp=Z,2µm,27.4s
WOL **Wolverton** 40.04 313 *e*P **P** 22 00 12.1 -1.1
WOL AMb AMB 22 00 19.9
comp=Z,121nm,0.8s,mb5.7
WOL AMS AMS 22 15 29.4
comp=Z,2µm,27.4s,MS4.9
WOL **Wolverton** 40.04 313 *e*P **P** 22 00 12.1 -1.0
ETOR **Torete** 40.15 297 P **P** 22 00 13.9 -0.4
comp=Z,15nm,1.0s,mb4.7
ETOR **Torete** 40.15 297 P **P** 22 00 13.9 -0.3
ETOR pmax pmax
comp=Z,15nm,1.0s,mb4.7
ETOR **Torete** 40.15 297 P **P** 22 00 13.9 -0.3
comp=Z,15nm,1.0s,mb4.7
CWF **Charnwood Fore** 40.33 315 P **P** 22 00 13.0 -2.6
CWF AMb AMB 22 00 17.9
comp=Z,32nm,0.7s,mb5.2
CWF AMS AMS 22 16 27.5
comp=Z,2µm,24.1s
CWF **Charnwood Fore** 40.33 315 *e*P **P** 22 00 13.0 -2.6
CWF AMb AMB 22 00 17.9
comp=Z,32nm,0.7s,mb5.2
CWF AMS AMS 22 16 27.5
comp=Z,2µm,24.1s,MS4.9
CWF **Charnwood Fore** 40.33 315 *e*P **P** 22 00 13.0 -2.6
JSA **Saint Aubin** 40.36 310 P **P** 22 00 13.2 -2.7
JSA AMB AMB 22 00 20.6
comp=Z,42nm,1.0s,mb5.1
JSA AMS AMS 22 16 44.2
comp=Z,2µm,21.9s
JSA **Saint Aubin** 40.36 310 *e*P **P** 22 00 13.2 -2.7
JSA AMB AMB 22 00 20.6
comp=Z,42nm,1.0s,mb5.1
JSA AMS AMS 22 16 44.2
comp=Z,2µm,21.9s,MS5.0
JSA **Saint Aubin** 40.36 310 *e*P **P** 22 00 13.2 -2.7
SGMF **Saint Gilles** 40.53 308 *e*P **P** 22 00 15.3 -2.0
comp=Z,57nm,0.6s,mb5.0
SGMF **Saint Gilles** 40.53 308 *e*P **P** 22 00 15.3 -2.0
comp=Z,29nm,0.6s,mb5.1

SGMF Saint Gilles 40.53 308 *e*P **P** **22 00 15.3 -2.0**
SGMF pmax pmax
comp=Z,29nm,0.6s,mb5.1
SGMF Saint Gilles 40.53 308 *e*P **P** **22 00 15.3 -2.0**
comp=Z,29nm,0.6s,mb5.0
TRO Tromso 40.62 345 *e*P **P** **22 00 17.0 -0.8**
TRO *e*S **S** **22 06 27.4 +1.1**
TRO *e*SS SS 22 09 24.8 -1.5
TRO AMS AMS 22 21 57.2
comp=Z,3µm,21.1s,MS5.1
TRO Tromso 40.62 345 *e*P **P** **22 00 17.0 -0.7**
SNR=26
TRO *e*S **S** **22 06 27.4 +1.1**
SNR=27
TRO *e*SS SS 22 09 24.8 -1.5
SNR=37
EVIA Vianos 40.70 293 P **P** **22 00 20.5 +1.6**
comp=Z,28nm,0.6s,mb5.1
EVIA Vianos 40.70 293 P **P** **22 00 20.5 +1.7**
EVIA pmax pmax
comp=Z,28nm,0.6s,mb5.1
EVIA Vianos 40.70 293 P **P** **22 00 20.5 +1.7**
comp=Z,28nm,0.6s,mb5.1
HPK Haverah Park 40.76 317 P **P** **22 00 17.8 -1.2**
HPK AMB AMB 22 00 25.2
comp=Z,100nm,3.1s
HPK AMS AMS 22 22 06.1
comp=Z,2µm,19.9s
HPK Haverah Park 40.76 317 *e*P **P** **22 00 17.8 -1.2**
HPK AMB AMB 22 00 25.2
comp=Z,100nm,3.1s
HPK AMS AMS 22 22 06.1
comp=Z,2µm,19.9s,MS5.0
HPK Haverah Park 40.76 317 *e*P **P** **22 00 17.8 -1.3**
LHO Holmfirth 40.81 316 *e*P **P** **22 00 18.2 -1.3**
LHO Holmfirth 40.81 316 *e*P **P** **22 00 18.2 -1.3**
EHUE Huescar 40.88 292 P **P** **22 00 23.0 +2.8**
comp=Z,8.2nm,0.8s,mb4.4
EHUE Huescar 40.88 292 P **P** **22 00 23.0 +2.7**
EHUE pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
QUIF Quistinic 40.92 308 *e*P **P** **22 00 18.1 -2.4**
comp=Z,61nm,0.7s,mb5.1
QUIF Quistinic 40.92 308 *e*P **P** **22 00 18.1 -2.4**
comp=Z,31nm,0.7s,mb5.0
QUIF Quistinic 40.92 308 *e*P **P** **22 00 18.1 -2.4**
QUIF pmax pmax
comp=Z,31nm,0.7s,mb5.0
QUIF Quistinic 40.92 308 *e*P **P** **22 00 18.1 -2.4**
comp=Z,31nm,0.7s,mb5.1
ROSF Rostrenen 41.02 308 *e*P **P** **22 00 19.0 -2.3**
comp=Z,37nm,0.6s,mb4.9
ROSF Rostrenen 41.02 308 *e*P **P** **22 00 19.0 -2.3**
comp=Z,19nm,0.6s,mb4.9
ROSF Rostrenen 41.02 308 *e*P **P** **22 00 19.0 -2.3**
ROSF pmax pmax
comp=Z,19nm,0.6s,mb4.9
ROSF Rostrenen 41.02 308 *e*P **P** **22 00 19.0 -2.3**
comp=Z,19nm,0.6s,mb4.9
ELAN Lanestosa 41.05 300 P **P** **22 00 21.7 +0.1**
comp=Z,64nm,1.4s,mb5.1
ELAN Lanestosa 41.05 300 P **P** **22 00 21.7 +0.1**
comp=Z,64nm,1.4s,mb5.1
HGH Gray Hill 41.06 313⇑ *e*P **P** **22 00 20.3 -1.3**
HGH Gray Hill 41.06 313⇑ *e*P **P** **22 00 20.3 -1.3**
MCH1 Michaelchurch 41.23 314 *e*P **P** **22 00 21.2 -1.8**
MCH1 AMb AMB 22 00 29.3
comp=Z,82nm,2.2s,mb5.0
MCH1 AMS AMS 22 21 22.0
comp=Z,2µm,18.8s,MS5.1
MCH1 Michaelchurch 41.23 314 *e*P **P** **22 00 21.2 -1.8**
EBER Berja 41.24 291 P **P** **22 00 22.8 -0.6**
comp=Z,128nm,1.7s,mb5.3
EBER Berja 41.24 291 P **P** **22 00 22.8 -0.5**
comp=Z,128nm,1.7s,mb5.3
EQES Quesada 41.25 292 P **P** **22 00 25.4 +2.0**
comp=Z,86nm,1.5s,mb5.2
EQES Quesada 41.25 292 P **P** **22 00 25.4 +2.0**
comp=Z,86nm,1.5s,mb5.2
XAL Allendale 41.28 318 *e*P **P** **22 00 22.4 -1.0**
XAL Allendale 41.28 318 *e*P **P** **22 00 22.4 -1.0**
HTR Trewern Hill 41.41 314⇑ *e*P **P** **22 00 22.3 -2.2**
HTR Trewern Hill 41.41 314⇑ *e*P **P** **22 00 22.3 -2.2**
HEX Exmoor 41.61 312 *e*P **P** **22 00 24.9 -1.2**
HEX Exmoor 41.61 312 *e*P **P** **22 00 24.9 -1.2**
DYA Yadsworthy 41.62 311 AMS AMS 22 19 11.1
comp=Z,2µm,22.4s,MS4.9
ESDC Sonseca Array 41.71 295 P **P** **22 00 26.1 -1.0**
comp=Z,9.9nm,1.0s,mb4.4
ESDC Sonseca Array 41.71 295 P **P** **22 00 27.4 +0.3**
comp=Z,5.0nm,0.7s,mb4.3,baz=76,slow=8.4,SNR=25
ESDC LR LR 22 17 58.0
comp=Z,2µm,21.1s,MS4.9,baz=95,slow=36
ESDC Sonseca Array 41.71 295 P **P** **22 00 26.1 -1.0**
comp=Z,9.9nm,1.0s,mb4.4
ESLA Sonseca Array 41.71 295 *e*P **P** **22 00 25.8 -1.3**
ESLA *e*PP PP 22 02 02.4 -1.1
ESLA *e*S **S** **22 06 44.1 +0.9**
ESLA LR LR
comp=Z,11µm,19.0s,MS5.8
ESLA Sonseca Array 41.71 295 *e*P **P** **22 00 25.8 -1.3**
ESY Stoneypath 41.74 320⇑ *e*P **P** **22 00 26.2 -0.9**
ESY Stoneypath 41.74 320⇑ *e*P **P** **22 00 26.2 -0.9**
GUD Guadarrama 41.76 297 P **P** **22 00 27.1 -0.4**
comp=Z,24nm,0.8s,mb4.9
GUD Guadarrama 41.76 297 P **P** **22 00 27.1 -0.4**
GUD pmax pmax
comp=Z,24nm,0.8s,mb4.9
GUD Guadarrama 41.76 297 P **P** **22 00 27.1 -0.4**
comp=Z,24nm,0.8s,mb4.9
EBAN Banos Encina 41.76 293 P **P** **22 00 26.9 -0.7**
comp=Z,21nm,0.8s,mb4.8
EBAN Banos Encina 41.76 293 P **P** **22 00 26.9 -0.7**
EBAN pmax pmax
comp=Z,21nm,0.8s,mb4.8
EBAN Banos Encina 41.76 293 P **P** **22 00 26.9 -0.7**
comp=Z,21nm,0.8s,mb4.8
EGUA Guajares 41.79 291 P **P** **22 00 29.9 +2.1**
comp=Z,119nm,0.8s,mb5.6
EGUA Guajares 41.79 291 P **P** **22 00 29.9 +2.1**
EGUA pmax pmax
comp=Z,119nm,0.8s,mb5.6
ECK Cauldkaine Hil 41.87 318⇑ *e*P **P** **22 00 26.9 -1.3**
ECK Cauldkaine Hil 41.87 318⇑ *e*P **P** **22 00 26.9 -1.3**
EKA Eskdalemuir Ar 41.91 319 P **P** **22 00 27.8 -0.8**
comp=Z,24nm,0.6s,mb5.0,baz=104,slow=8.4,SNR=57
EKA Eskdalemuir Ar 41.91 319 P **P** **22 00 27.8 -0.8**
ESK Eskdalemuir 41.94 319 P **P** **22 00 26.3 -2.5**
ESK AMb AMB 22 00 32.9
comp=Z,52nm,2.8s,mb4.7
ESK AMS AMS 22 22 09.3
comp=Z,3µm,20.0s
ESK Eskdalemuir 41.94 319 *e*P **P** **22 00 26.3 -2.5**
ESK AMb AMB 22 00 32.9
comp=Z,52nm,2.8s,mb4.7
ESK AMS AMS 22 22 09.3
comp=Z,3µm,20.0s,MS5.1
ESK Eskdalemuir 41.94 319 *e*P **P** **22 00 27.8 -1.0**
comp=Z,97nm,1.4s,mb5.2
ESK *e*PP PP 22 02 05.8 +0.1
ESK *e*S **S** **22 06 45.7 -0.5**
ESK LR LR
comp=Z,3µm,19.0s,MS5.2
ESK Eskdalemuir 41.94 319 *e*P **P** **22 00 27.8 -0.9**
ESK *e* 22 02 05.8
ESK *e*S **S** **22 06 45.7 -0.5**
ESK pmax pmax
comp=Z,97nm,1.4s,mb5.2
ESK MLR MLR
comp=Z,3µm,19.0s,MS5.2
ESK Eskdalemuir 41.94 319 *e*P **P** **22 00 27.8 -0.9**
comp=Z,97nm,1.4s,mb5.2
ESK Eskdalemuir 41.94 319 *e*PP PP 22 02 05.8 +0.1
ESK *e*S **S** **22 06 45.7 -0.5**
EBL Broad Law 41.94 319⇑ *e*P **P** **22 00 28.0 -0.8**
EBL Broad Law 41.94 319⇑ *e*P **P** **22 00 28.0 -0.8**
PAB San Pablo 42.02 295 *e*P **P** **22 00 30.3 +0.7**
comp=Z,44nm,1.4s,mb4.9
PAB *e*PP PP 22 02 07.6 +0.7
PAB *e*S **S** **22 06 49.5 +1.7**
PAB LR LR
comp=Z,2µm,21.0s,MS5.0
PAB San Pablo 42.02 295 *e*P **P** **22 00 30.3 +0.6**
PAB *e* 22 02 07.6
PAB *e*S **S** **22 06 49.5 +1.7**
PAB pmax pmax
comp=Z,44nm,1.4s,mb4.9
PAB MLR MLR
comp=Z,2µm,21.0s,MS5.0
PAB San Pablo 42.02 295 *e*P **P** **22 00 30.3 +0.6**
comp=Z,44nm,1.4s,mb4.9
HTL Hartland 42.03 312 P **P** **22 00 29.4 -0.1**
HTL AMB AMB 22 00 34.2
comp=Z,40nm,3.6s
HTL AMS AMS 22 19 46.7
comp=Z,3µm,19.9s
HTL Hartland 42.03 312 *e*P **P** **22 00 29.4 -0.1**
HTL AMB AMB 22 00 34.2
comp=Z,40nm,3.6s
HTL AMS AMS 22 19 46.7
comp=Z,3µm,19.9s,MS5.2
HTL Hartland 42.03 312 *e*P **P** **22 00 29.4 -0.2**
EDI Edinburgh 42.05 320 P **P** **22 00 27.7 -2.0**
EDI AMb AMB 22 00 32.9
comp=Z,118nm,3.2s
EDI AMS AMS 22 20 16.9
comp=Z,3µm,22.0s
EDI Edinburgh 42.05 320 *e*P **P** **22 00 27.7 -2.0**
EDI AMb AMB 22 00 32.9
comp=Z,118nm,3.2s
EDI AMS AMS 22 20 16.9
comp=Z,3µm,22.0s,MS5.1
EDI Edinburgh 42.05 320 *e*P **P** **22 00 27.7 -2.0**
LRW Lerwick 42.17 326 P **P** **22 00 29.5 -1.1**
LRW AMb AMB 22 00 33.9
comp=Z,115nm,0.7s,mb5.6
LRW AMS AMS 22 22 21.2
comp=Z,2µm,19.4s
LRW Lerwick 42.17 326 *e*P **P** **22 00 29.5 -1.1**
LRW AMb AMB 22 00 33.9
comp=Z,115nm,0.7s,mb5.6
LRW AMS AMS 22 22 21.2
comp=Z,2µm,19.4s,MS5.0
LRW Lerwick 42.17 326 *e*P **P** **22 00 29.5 -1.1**
EAU Auchinoon 42.18 319 *e*P **P** **22 00 30.8 +0.1**
EAU Auchinoon 42.18 319 *e*P **P** **22 00 30.8 +0.1**
ELOJ Sierra Loja 42.20 291 P **P** **22 00 33.2 +2.1**
comp=Z,5.9nm,0.4s,mb4.6
ELOJ Sierra Loja 42.20 291 P **P** **22 00 33.2 +2.0**
ELOJ pmax pmax
comp=Z,6.0nm,0.4s,mb4.6
ELOJ Sierra Loja 42.20 291 P **P** **22 00 33.2 +2.0**
comp=Z,6.0nm,0.4s,mb4.6
ELUQ Luque 42.23 292 P **P** **22 00 30.8 -0.6**
comp=Z,13nm,0.6s,mb4.7
ELUQ Luque 42.23 292 P **P** **22 00 30.8 -0.6**
ELUQ pmax pmax
comp=Z,13nm,0.6s,mb4.7
ELUQ Luque 42.23 292 P **P** **22 00 30.8 -0.6**
comp=Z,13nm,0.6s,mb4.7
MME1 Meikle Cairn 42.26 322⇑ *e*P **P** **22 00 31.1 -0.3**
MME1 Meikle Cairn 42.26 322⇑ *e*P **P** **22 00 31.1 -0.2**
GCD Castle Douglas 42.26 318⇑ *e*P **P** **22 00 30.1 -1.3**
GCD Castle Douglas 42.26 318⇑ *e*P **P** **22 00 30.1 -1.3**
WLF1 Llynfaes 42.27 315 P **P** **22 00 31.4 -0.1**
WLF1 AMB AMB 22 00 37.9
comp=Z,132nm,3.3s
WLF1 AMS AMS 22 17 39.2
comp=Z,7µm,24.1s
WLF1 Llynfaes 42.27 315 *e*P **P** **22 00 31.4 -0.1**
WLF1 AMB AMB 22 00 37.9
comp=Z,132nm,3.3s
WLF1 AMS AMS 22 17 39.2
comp=Z,7µm,24.1s,MS5.5
WLF1 Llynfaes 42.27 315 *e*P **P** **22 00 31.4 0.0**
EBH Black Hill 42.30 320 *e*P **P** **22 00 29.9 -1.8**
EBH Black Hill 42.30 320 *e*P **P** **22 00 29.9 -1.8**
EARI Arriondas 42.34 301 P **P** **22 00 31.3 -0.9**
comp=Z,79nm,0.8s,mb5.4
EARI Arriondas 42.34 301 P **P** **22 00 31.3 -0.9**
comp=Z,79nm,0.8s,mb5.4
EADA Adamuz 42.38 293 P **P** **22 00 32.7 +0.1**
comp=Z,198nm,2.2s,mb5.3
EADA Adamuz 42.38 293 P **P** **22 00 32.7 +0.1**
comp=Z,198nm,2.2s,mb5.3
WAL1 Walls 42.42 326⇑ *e*P **P** **22 00 32.7 +0.1**
WAL1 Walls 42.42 326⇑ *e*P **P** **22 00 32.7 +0.1**
CCA1 Carnmenellis 42.43 311 P **P** **22 00 32.0 -0.8**
CCA1 AMb AMB 22 00 35.1
comp=Z,37nm,2.8s,mb4.5
CCA1 AMS AMS 22 21 39.1
comp=Z,2µm,16.2s
CCA1 Carnmenellis 42.43 311 *e*P **P** **22 00 32.0 -0.8**
CCA1 AMb AMB 22 00 35.1
comp=Z,37nm,2.8s,mb4.5
CCA1 AMS AMS 22 21 39.1
comp=Z,2µm,16.2s,MS5.1
CCA1 Carnmenellis 42.43 311 *e*P **P** **22 00 32.0 -0.8**
GIM North Isle of 42.47 317 *e*P **P** **22 00 31.1 -1.9**
GIM North Isle of 42.47 317 *e*P **P** **22 00 31.1 -2.0**
MCD Coleburn Disti 42.48 322⇑ *e*P **P** **22 00 31.9 -1.2**
MCD Coleburn Disti 42.48 322⇑ *e*P **P** **22 00 31.9 -1.2**
GTA Gaotai 42.58 65 *e*P **P** **22 00 34.5 +0.3**
GTA PP PP 22 02 16.5 +3.6
GTA S **S** **22 06 54.5 -1.5**
GTA ScS ScS 22 10 33.5 -1.4
GTA pmax pmax
comp=Z,24nm,2.0s,mb4.6
GTA pmax pmax
comp=Z,240nm,4.2s
GTA LR LR
comp=N,14µm,21.4s,MS5.9
GTA LR LR
comp=E,8µm,22.6s,MS5.9
GTA LR LR
comp=Z,7µm,23.2s,MS5.5
GAL1 Galloway 42.70 318 P **P** **22 00 34.1 -0.8**
GAL1 AMb AMB 22 00 39.2
comp=Z,58nm,3.6s
GAL1 AMS AMS 22 20 36.7
comp=Z,3µm,23.0s
GAL1 Galloway 42.70 318 *e*P **P** **22 00 34.1 -0.8**
GAL1 AMb AMB 22 00 39.2
comp=Z,58nm,3.6s
GAL1 AMS AMS 22 20 36.7
comp=Z,3µm,23.0s,MS5.1
GAL1 Galloway 42.70 318 *e*P **P** **22 00 34.1 -0.9**
EAB Aberfoyle 42.74 320 *e*P **P** **22 00 34.3 -1.0**
EAB Aberfoyle 42.74 320 *e*P **P** **22 00 34.3 -1.0**
PGBU Glenifferbraes 42.75 319 P **P** **22 00 34.7 -0.6**
PGBU AMB AMB 22 00 42.2
comp=Z,85nm,2.1s,mb5.1
PGBU AMS AMS 22 17 27.9
comp=Z,2µm,22.4s
PGBU Glenifferbraes 42.75 319 *e*P **P** **22 00 34.7 -0.6**
PGBU AMB AMB 22 00 42.2
comp=Z,85nm,2.1s,mb5.1
PGBU AMS AMS 22 17 27.9
comp=Z,2µm,22.4s,MS5.0
EMIJ Mijas 42.79 291 P **P** **22 00 36.3 +0.3**
comp=Z,68nm,1.1s,mb5.3
EMIJ Mijas 42.79 291 P **P** **22 00 36.3 +0.3**
comp=Z,68nm,1.1s,mb5.3
TZK Tazeka 42.81 287 *i* P **P** **22 00 38.0 +1.9**
ORE Reay 42.98 323 *e*P **P** **22 00 35.9 -1.3**
ORE Reay 42.98 323 *e*P **P** **22 00 35.9 -1.3**
MDO Dochfour 43.02 322 *e*P **P** **22 00 37.6 +0.1**
MDO Dochfour 43.02 322 *e*P **P** **22 00 37.6 +0.1**
MVH1 Achvaich 43.04 322⇑ *e*P **P** **22 00 37.1 -0.6**
MVH1 Achvaich 43.04 322⇑ *e*P **P** **22 00 37.1 -0.6**
MOY Mondy 43.19 47 *e*P **P** **22 00 40.7 +1.8**
MOY pmax pmax
comp=Z,53nm,1.9s,mb5.0
MOY Mondy 43.19 47 *e*P **P** **22 00 40.7 +1.8**
comp=Z,53nm,1.9s,mb5.0
EPLA Plasencia 43.28 296 P **P** **22 00 39.2 -0.7**
comp=Z,31nm,0.9s,mb5.0
EPLA Plasencia 43.28 296 P **P** **22 00 39.2 -0.7**
EPLA pmax pmax
comp=Z,31nm,0.9s,mb5.0
EPLA Plasencia 43.28 296 P **P** **22 00 39.2 -0.7**
comp=Z,31nm,0.9s,mb5.0
GMM Mts of Mourne 43.32 317⇑ *e*P **P** **22 00 38.8 -1.1**
GMM Mts of Mourne 43.32 317⇑ *e*P **P** **22 00 38.8 -1.2**
DSB Dublin 43.44 315 *e*P **P** **22 00 40.9 -0.1**
comp=Z,27nm,0.8s,mb5.0
DSB Dublin 43.44 315 *e*P **P** **22 00 40.9 -0.1**
comp=Z,27nm,0.8s,mb5.0
KAC Achnashellach 43.53 321 *e*P **P** **22 00 41.0 -0.7**
KAC Achnashellach 43.53 321 *e*P **P** **22 00 41.0 -0.6**
ECAL Calabor 43.57 299 P **P** **22 00 42.6 +0.5**
comp=Z,36nm,0.9s,mb5.1
ECAL Calabor 43.57 299 P **P** **22 00 42.7 +0.5**
comp=Z,36nm,0.9s,mb5.1
PBRG Braganca 43.59 299 *e*P **P** **22 00 42.5 +0.2**
comp=Z,66nm,1.7s,mb5.1
PBRG Braganca 43.59 299 *e*P **P** **22 00 42.5 +0.2**
comp=Z,66nm,1.7s,mb5.1
RSC Scourie 43.65 323⇑ *e*P **P** **22 00 42.2 -0.4**
RSC Scourie 43.65 323⇑ *e*P **P** **22 00 42.2 -0.4**
KPL Plockton 43.68 321 P **P** **22 00 43.3 +0.5**
KPL AMB AMB 22 00 50.2
comp=Z,77nm,3.1s
KPL AMS AMS 22 23 04.5
comp=Z,3µm,19.8s
KPL Plockton 43.68 321 *e*P **P** **22 00 43.3 +0.5**
KPL AMB AMB 22 00 50.2
comp=Z,77nm,3.1s
KPL AMS AMS 22 23 04.5
comp=Z,3µm,19.8s,MS5.2
KPL Plockton 43.68 321 *e*P **P** **22 00 43.3 +0.4**
KAR1 Arisaig 43.70 321 *e*P **P** **22 00 41.9 -1.1**
KAR1 Arisaig 43.70 321 *e*P **P** **22 00 41.9 -1.1**
CZD Col de Zad 43.75 286 *i* P **P** **22 00 45.0 +1.3**
EPON Pontenova 43.75 301 P **P** **22 00 43.0 -0.6**
comp=Z,72nm,1.0s,mb5.4
EPON Pontenova 43.75 301 P **P** **22 00 43.0 -0.6**
comp=Z,72nm,1.0s,mb5.4
MVO Moncorvo 43.87 298 *e*P **P** **22 00 45.6 +1.0**
comp=Z,52nm,1.4s,mb5.1
MVO *e*S **S** **22 07 15.4 +0.5**
MVO A 22 25 48.6
comp=Z,1µm,18.0s
MVO Moncorvo 43.87 298 P **P** **22 00 43.9 -0.7**
MVO Moncorvo 43.87 298 *e*P **P** **22 00 45.6 +1.0**
comp=Z,52nm,1.4s,mb5.1
MVO *e*S **S** **22 07 15.4 +0.5**
comp=Z,1µm,18.0s
RRR Rubha Reidh 43.87 322 *e*P **P** **22 00 43.1 -1.3**
RRR Rubha Reidh 43.87 322 *e*P **P** **22 00 43.1 -1.3**
SFS San Fernando 43.94 291 *e*P **P** **22 00 45.3 +0.1**
SFS *e*S **S** **22 07 15.6 -0.5**
SFS LR LR
comp=Z,5µm,19.0s,MS5.5
SFS San Fernando 43.94 291 *e*P **P** **22 00 45.3 0.0**
comp=Z,5µm,19.0s
SFS *e*S **S** **22 07 15.6 -0.6**
EMIN Mina Concepcio 44.08 293 P **P** **22 00 46.8 +0.5**
comp=Z,227nm,2.0s,mb5.6
EMIN Mina Concepcio 44.08 293 P **P** **22 00 46.8 +0.5**
comp=Z,227nm,2.0s,mb5.6
EBAD Badajoz 44.18 294 P **P** **22 00 48.9 +1.8**
comp=Z,29nm,1.5s,mb4.8
EBAD Badajoz 44.18 294 P **P** **22 00 48.9 +1.8**
comp=Z,29nm,1.5s,mb4.8
PBAR Barrancos 44.29 293 *e*P **P** **22 00 48.6 +0.5**
comp=Z,64nm,2.7s,mb4.9
PBAR *e*S **S** **22 07 23.0 +1.8**
PBAR A 22 23 19.7
comp=Z,2µm,18.0s
PBAR Barrancos 44.29 293 *e*P **P** **22 00 48.6 +0.5**
comp=Z,64nm,2.7s,mb4.9
RRH Rhenigidale 44.34 322⇑ *e*P **P** **22 00 47.9 -0.3**
RRH Rhenigidale 44.34 322⇑ *e*P **P** **22 00 47.9 -0.3**
MTE Manteigas 44.35 297 *e*P **P** **22 00 50.0 +1.5**
comp=Z,57nm,1.3s,mb5.1
MTE *e*S **S** **22 07 25.6 +3.6**
MTE A 22 23 50.0
comp=Z,2µm,16.0s
MTE Manteigas 44.35 297 *e*P **P** **22 00 48.1 -0.3**
comp=Z,27nm,1.0s,mb4.9
MTE *e*PP PP 22 02 32.0 +0.1
MTE *e*S **S** **22 07 21.0 -1.0**
MTE LR LR
comp=Z,2µm,19.0s,MS5.0
MTE Manteigas 44.35 297 *e*P **P** **22 00 50.0 +1.5**
comp=Z,57nm,1.3s,mb5.1
MTE Manteigas 44.35 297 *e*PP PP 22 02 32.0 +0.1
PMRV Marv??o 44.37 295 *e*P **P** **22 00 49.0 +0.3**
comp=Z,33nm,2.3s,mb4.7
PMRV *e*S **S** **22 07 23.9 +1.6**
PMRV A 22 24 03.7
comp=Z,2µm,18.0s
PMRV Marv??o 44.37 295 *e*P **P** **22 00 49.0 +0.3**
comp=Z,33nm,2.3s,mb4.7
PVRL Vila Real 44.37 298 *e*P **P** **22 00 49.5 +0.9**
comp=Z,71nm,1.3s,mb5.2
PVRL Vila Real 44.37 298 *e*P **P** **22 00 49.5 +0.9**
comp=Z,71nm,1.3s,mb5.2
PCBR Castelo Branco 44.38 296 *e*P **P** **22 00 48.9 +0.2**
comp=Z,55nm,1.1s,mb5.2
PCBR Castelo Branco 44.38 296 *e*P **P** **22 00 48.9 +0.2**
comp=Z,55nm,1.1s,mb5.2
BJO Bjornoya 44.51 350 *e*P **P** **22 00 49.0 -0.3**
BJO *e*S **S** **22 07 24.7 +1.3**
BJO *e*SS SS 22 10 46.4 +3.8
BJO AMS AMS 22 21 43.0
comp=Z,2µm,21.1s,MS5.0
BJO Bjornoya 44.51 350 *e*P **P** **22 00 49.0 -0.3**
SNR=25
BJO *e*S **S** **22 07 24.7 +1.2**
SNR=26
ZAK Zakamensk 44.55 49 *e*P **P** **22 00 50.1 +0.2**
ZAK pmax pmax
comp=Z,10.0nm,1.3s,mb4.5
ZAK Zakamensk 44.55 49 *e*P **P** **22 00 50.1 +0.2**
comp=Z,10.0nm,1.3s,mb4.5
PCAB Cabril 44.55 299 *e*P **P** **22 00 50.9 +0.8**
comp=Z,66nm,1.4s,mb5.3
PCAB Cabril 44.55 299 *e*P **P** **22 00 50.9 +0.8**
comp=Z,66nm,1.4s,mb5.3
ELOB Lobios 44.56 299 P **P** **22 00 50.5 +0.4**
comp=Z,195nm,1.8s,mb5.6
ELOB Lobios 44.56 299 P **P** **22 00 50.5 +0.4**
comp=Z,195nm,1.8s,mb5.6
PVIS Viseu 44.57 297 *e*P **P** **22 00 51.1 +0.8**
comp=Z,68nm,1.4s,mb5.3
PVIS Viseu 44.57 297 *e*P **P** **22 00 51.1 +0.8**
comp=Z,68nm,1.4s,mb5.3
KIB El Ksiba 44.67 285 *i* P **P** **22 00 52.0 +0.8**
EGRO El Granado 44.75 293 P **P** **22 00 52.3 +0.6**
comp=Z,29nm,1.6s,mb4.9
EGRO El Granado 44.75 293 P **P** **22 00 52.3 +0.6**
comp=Z,29nm,1.6s,mb4.9
STS Santiago 44.81 300 P **P** **22 00 53.2 +1.0**
comp=Z,32nm,0.8s,mb5.2
STS Santiago 44.81 300 P **P** **22 00 53.2 +1.1**
STS pmax pmax
comp=Z,32nm,0.8s,mb5.2
STS Santiago 44.81 300 P **P** **22 00 53.2 +1.1**
comp=Z,32nm,0.8s,mb5.2
TLY Talaya 44.83 47 *e*P **P** **22 00 52.5 +0.4**
TLY *e*S **S** **22 07 29.0 +0.3**
TLY LR LR
comp=Z,7µm,19.0s,MS5.6
TLY Talaya 44.83 47 *e*P **P** **22 00 55.2 +3.0**
TLY *e*PPP 22 03 23.6
TLY *e*S **S** **22 07 26.6 -2.1**
TLY pmax pmax
comp=Z,15nm,0.9s,mb4.8
TLY MLR MLR
comp=Z,7µm,18.0s,MS5.6
TLY Talaya 44.83 47 *e*P **P** **22 00 52.5 +0.3**
TLY *e*S **S** **22 07 26.6 -2.1**
comp=Z,7µm,18.0s
PVAQ Vaqueiros 44.96 292 *e*P **P** **22 00 54.4 +1.0**
comp=Z,36nm,1.5s,mb5.0
PVAQ *e*S **S** **22 07 32.6 +1.7**
PVAQ A 22 23 30.8
comp=Z,1µm,20.0s
PVAQ Vaqueiros 44.96 292 *e*P **P** **22 00 54.4 +1.0**
comp=Z,36nm,1.5s,mb5.0
PBEJ Beja 44.96 293 *e*P **P** **22 00 53.7 +0.3**
comp=Z,67nm,2.1s,mb5.1
PBEJ Beja 44.96 293 *e*P **P** **22 00 53.7 +0.3**
comp=Z,67nm,2.1s,mb5.1
EVO Evora 44.99 294 *e*P **P** **22 00 52.2 -1.4**
comp=Z,12nm,0.7s,mb4.5
EVO *e*MLR MLR
comp=Z,3µm,20.2s,MS5.0
EZAM Zamans 45.00 299 P **P** **22 00 57.0 +3.4**
comp=Z,32nm,0.5s,mb5.4
EZAM Zamans 45.00 299 P **P** **22 00 57.0 +3.4**
EZAM pmax pmax
comp=Z,32nm,0.5s,mb5.4
PTO Porto 45.05 298 *e*P **P** **22 00 54.8 +0.7**

comp=Z,78nm,1.3s,mb5.4
PTO Porto 45.05 298 *e*P P **22 00 54.8 +0.7**
comp=Z,78nm,1.3s,mb5.4
EVOP Sao Brissos 45.08 294 *e*P P **22 00 54.3 0.0**
EVOP *e*PP PP 22 02 39.7 +0.1
EVOP *e*S S **22 07 34.1 +1.6**
EVOP *e*S S **22 07 34.2 +1.7**
EVOP AMS AMS 22 23 44.2
comp=Z,2µm,19.5s,MS5.0
EVOP Sao Brissos 45.08 294 *e*P P **22 00 54.2 -0.1**
EVOP *e*S S **22 07 34.1 +1.6**
EVOP Sao Brissos 45.08 294 *e*P P **22 00 52.2 -2.1**
comp=Z,5.8nm,0.7s,mb4.5
EMAZ Mazaricos 45.12 300 P P **22 00 53.8 -0.8**
comp=Z,196nm,1.4s,mb5.8
EMAZ Mazaricos 45.12 300 P P **22 00 53.8 -0.8**
comp=Z,196nm,1.4s,mb5.8
PTOM Tomar 45.12 296 *e*P P **22 00 55.6 +1.0**
comp=Z,52nm,1.8s,mb5.1
PTOM Tomar 45.12 296 *e*P P **22 00 55.6 +1.0**
comp=Z,52nm,1.8s,mb5.1
PBDV Barranco-do-Ve 45.16 292 *e*S S **22 07 35.2 +1.5**
PBDV A 22 25 43.3
comp=Z,1µm,20.0s
PCVE Castro Verde 45.17 293 *e*P P **22 00 57.1 +2.1**
comp=Z,55nm,1.9s,mb5.1
PCVE *e*S S **22 07 35.3 +1.4**
PCVE A 22 26 41.0
comp=Z,1µm,18.0s
PCVE Castro Verde 45.17 293 *e*P P **22 00 57.1 +2.1**
comp=Z,55nm,1.9s,mb5.1
IRK Irkutsk 45.25 46 *e*P P **22 00 55.3 -0.2**
IRK pmax pmax
comp=Z,68nm,1.6s,mb5.2
IRK Irkutsk 45.25 46 *e*P P **22 00 55.3 -0.2**
comp=Z,68nm,1.6s,mb5.2
MESJ Messejana 45.27 293 *e*P P **22 00 55.6 -0.2**
MESJ *e*S S **22 07 37.2 +1.8**
MESJ *e*S S **22 07 37.5 +2.1**
MESJ AMS AMS 22 26 52.6
comp=Z,2µm,19.3s,MS5.0
MESJ Messejana 45.27 293 *e*P P **22 00 55.6 -0.3**
MESJ *e*S S **22 07 37.2 +1.8**
MESJ A 22 26 52.6
comp=Z,2µm,19.3s
MESJ Messejana 45.27 293 *e*P P **22 00 55.6 -0.3**
MESJ *e*S S **22 07 37.2 +1.8**
MESJ Messejana 45.27 293 *e*P P **22 00 55.6 -0.3**
MORF Marmelete 45.71 292 *e*S S **22 07 47.2 +5.5**
MORF A 22 26 21.8
comp=Z,2µm,20.0s
MORF Marmelete 45.71 292 *e*P P **22 00 59.6 +0.3**
MORF *e*S S **22 07 43.8 +2.1**
MORF Marmelete 45.71 292 *e*P P **22 00 59.6 +0.3**
LIS Lisbon 45.84 295 *e*PP PP 22 02 47.6 -0.1
LIS *e*S S **22 07 45.2 +1.8**
LIS AMS AMS 22 28 05.7
comp=N,2µm,22.4s
LIS Lisbon 45.84 295 *e*PP PP 22 02 47.6 -0.1
LIS *e*S S **22 07 45.3 +1.8**
LIS Lisbon 45.84 295 *e*PP PP 22 02 47.6 -0.1
TORD Torodi Ar. Bea 45.86 256 P P **22 01 00.8 0.0**
TORD ScP ScP 22 06 31.6 +1.4
TORD LR LR 22 19 30.5
TORD Torodi Ar. Bea 45.86 256 P P **22 01 00.8 0.0**
comp=N,20nm,0.7s,mb5.2,baz=59,slow=7.9,SNR=17
TORD ScP ScP 22 06 31.6 +1.4
comp=N,5.3nm,0.4s,baz=35,slow=5.3,SNR=4.5
TORD LR LR 22 19 30.5
comp=N,5µm,21.5s,MS5.4,baz=65,slow=35
PFVI Vila Bisbo 45.88 292 *e*P P **22 01 03.3 +2.6**
comp=N,108nm,1.8s,mb5.5
PFVI *e*S S **22 07 44.6 +0.4**
PFVI A 22 26 03.9
comp=N,1µm,20.0s
PMAFR Mafra 45.90 295 *e*S S **22 07 48.5 +4.1**
PMAFR A 22 23 53.4
comp=N,1µm,20.0s
DGAR Diego Garcia 46.18 144 *e*P P **22 01 03.5 +0.3**
DGAR *e*S S **22 07 49.0 +0.3**
DGAR LR LR
comp=Z,7µm,21.0s,MS5.6
DGAR Diego Garcia 46.18 144 *e*P P **22 01 03.5 +0.3**
comp=Z,7µm,21.0s
DGAR *e*S S **22 07 49.0 +0.2**
LZH Lanzhou 46.30 69 ⇑P P **22 01 04.5 +0.5**
LZH pP pP 22 01 07.5 -2.0
LZH sP sP 22 01 09.0 -2.7
LZH PP PP 22 02 52.5 -0.1
LZH S S **22 07 48.0 -2.2**
LZH pmax pmax
comp=Z,67nm,1.1s,mb5.5
LZH pmax pmax
comp=Z,450nm,5.3s
LZH LR LR
comp=Z,13µm,20.1s,MS5.9
SONM Songino Array 46.62 53 P P **22 01 06.7 +0.4**
comp=Z,4.8nm,0.6s,mb4.6,baz=277,slow=9.6,SNR=19
SONM ScP ScP 22 06 33.9 +1.1
comp=Z,5.0nm,0.9s,baz=235,slow=5.1,SNR=3.8
SONM LR LR 22 24 04.6
comp=Z,4µm,18.9s,MS5.4,baz=150,slow=40
SONM Songino Array 46.62 53 P P **22 01 06.7 +0.4**
ULN Ulaanbaatar 47.06 53⇑*e*P P **22 01 09.7 0.0**
comp=Z,36nm,0.9s,mb5.3
ULN *e*PP PP 22 03 00.2 -0.2
ULN *e*ScP ScP 22 06 35.1 +0.4
ULN *e*S S **22 08 01.2 +0.4**
ULN LR LR
comp=Z,4µm,20.0s,MS5.4
ULN Ulaanbaatar 47.06 53⇑*e*P P **22 01 09.7 -0.1**
ULN *e* 22 03 00.2
ULN *e*S S **22 08 01.2 +0.4**
ULN pmax pmax
comp=Z,36nm,0.9s,mb5.3
ULN MLR MLR
comp=Z,4µm,20.0s,MS5.4
ULN Ulaanbaatar 47.06 53 P P **22 01 09.7 -0.1**
comp=Z,515nmcomp=Z,43nm,0.9s,mb5.4
ULN Ulaanbaatar 47.06 53 *e*P P **22 01 09.7 -0.1**
comp=Z,36nm,0.9s,mb5.3
ULN Ulaanbaatar 47.06 53 *e*PP PP 22 03 00.2 -0.2
ULN *e*S S **22 08 01.2 +0.4**
comp=Z,4µm,20.0s
ULN Ulaanbaatar 47.06 53 P P **22 01 09.8 +0.1**
SNR=20
CD2 Chengdu 47.55 76 P P **22 01 13.5 -0.4**
CD2 pP pP 22 01 18.0 -1.4
CD2 sP sP 22 01 20.5 -1.1
CD2 PP PP 22 03 04.3 -1.0
CD2 ScP ScP 22 06 36.8 -0.3
CD2 S S **22 08 06.5 -1.7**
CD2 ScS ScS 22 11 04.5 -2.6
CD2 pmax pmax
comp=Z,50nm,0.6s,mb5.7
CD2 pmax pmax
comp=Z,270nm,5.5s
CD2 LR LR
comp=Z,12µm,22.1s,MS5.8
CHG Chiang Mai 48.00 93 P P **22 01 16.7 -0.8**
CHTO Chiang Mai 48.00 93⇑*e*P P **22 01 16.7 -0.7**
comp=Z,37nm,0.8s,mb5.5
CHTO *e*PcP PcP 22 02 46.3 +0.8
CHTO *e*PP PP 22 03 09.4 -0.2
CHTO *e*ScP ScP 22 06 41.2 +2.1
CHTO *e*S S **22 08 15.6 +0.8**
CHTO LR LR
comp=Z,4µm,19.0s,MS5.4
CHTO Chiang Mai 48.00 93⇑*e*P P **22 01 16.7 -0.8**
CHTO *e* 22 02 46.3
CHTO *e* 22 03 09.4
CHTO *e*S S **22 08 15.6 +0.8**
CHTO pmax pmax
comp=Z,37nm,0.8s,mb5.5
CHTO MLR MLR
comp=Z,4µm,19.0s,MS5.4
CHTO Chiang Mai 48.00 93 P P **22 01 16.8 -0.7**
comp=Z,1µmcomp=Z,50nm,0.9s,mb5.5
CHTO Chiang Mai 48.00 93 *e*P P **22 01 16.7 -0.8**
comp=Z,37nm,0.8s,mb5.5
CHTO Chiang Mai 48.00 93 *e*PcP PcP 22 02 46.3 +0.8
CHTO *e*S S **22 08 15.6 +0.8**
CHTO Chiang Mai 48.00 93 P P **22 01 17.1 -0.4**
SNR=28
CM31 Chiang Mai Arr 48.16 94⇑*e*P P **22 01 18.0 -0.7**
CM31 *e*PcP PcP 22 02 46.7 +0.7
CM31 *e*PP PP 22 03 10.6 -0.4
CM31 *e*PcP ScP 22 06 43.5 +3.7
CM31 *e*S S **22 08 19.4 +2.3**
CM31 LR LR
comp=Z,3µm,20.0s,MS5.3
CM31 Chiang Mai Arr 48.16 94⇑*e*P P **22 01 18.0 -0.7**
CMAR Chiang Mai Arr 48.16 94 P P **22 01 18.2 -0.5**
comp=Z,5.0nm,0.6s,mb4.7,baz=293,slow=8.2,SNR=40
CMAR ScP ScP 22 06 40.5 +0.7
comp=Z,2.2nm,0.9s,baz=284,slow=3.6,SNR=4.0
CMAR LR LR 22 25 55.2
comp=Z,4µm,19.6s,MS5.4,baz=293,slow=42
CMAR Chiang Mai Arr 48.16 94 P P **22 01 18.2 -0.5**
CHRT Chiangrai 48.24 91⇑P P **22 01 18.0 -1.3**
comp=Z,434nm,0.8s,mb6.5
KMI Kunming 48.63 84⇑P P **22 01 22.0 -0.3**
KMI pP pP 22 01 25.0 -2.8
KMI PP PP 22 03 14.5 -0.7
KMI S S **22 08 21.5 -2.1**
KMI pmax pmax
comp=Z,56nm,0.8s,mb5.7
KMI pmax pmax
comp=Z,490nm,5.4s
KMI LR LR
comp=N,11µm,20.7s,MS5.8
KMI LR LR
comp=E,4µm,19.8s,MS5.8
KMI LR LR
comp=Z,6µm,16.5s,MS5.7
BDT Bhumibol Dam 48.77 95 P P **22 01 22.0 -1.4**
comp=Z,16nm,1.0s,mb5.0
KBS Kingsbay 49.05 351 *e*P P **22 01 23.9 -0.9**
KBS *e*S S **22 08 30.8 +2.6**
KBS *e*SS SS 22 12 04.0 +5.2
KBS AMS AMS 22 27 42.7
comp=Z,2µm,15.1s,MS5.2
KBS Kingsbay 49.05 351 *e*P P **22 01 24.0 -0.7**
comp=Z,33nm,0.9s,mb5.4
KBS Kingsbay 49.05 351 PFAKE 22 01 40.0 +15
KBS LR LR
comp=Z,2µm,19.0s,MS5.1
KBS Kingsbay 49.05 351*c i*P P **22 01 23.8 -1.0**
KBS pmax pmax
comp=Z,23nm,1.0s,mb5.2
KBS Kingsbay 49.05 351 *i* P P **22 01 23.8 -1.0**
comp=Z,23nm,1.0s,mb5.2
BTO Baotou 50.12 62 *e*P P **22 01 33.5 +0.1**
NST Nakhon Sawan 50.47 96 P P **22 01 34.0 -2.4**
XAN Xi'an 50.84 70 P P **22 01 37.5 -1.5**
XAN PP PP 22 03 39.0 +3.8
XAN S S **22 08 52.8 -1.5**
XAN pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
XAN pmax pmax
comp=Z,72nm,4.6s
XAN LR LR
comp=N,11µm,17.7s,MS5.9
XAN LR LR
comp=E,5µm,20.3s,MS5.9
XAN LR LR
comp=Z,2µm,20.3s,MS5.2
ABPO Ambohimpanom 51.05 180 *e*P P **22 01 42.1 +1.6**
comp=Z,36nm,1.0s,mb5.3
ABPO *e*PcP PcP 22 02 53.7 -2.6
ABPO *e*S S **22 08 58.2 +1.1**
ABPO LR LR
comp=Z,6µm,22.0s,MS5.6
ABPO Ambohimpanom 51.05 180 *e*P P **22 01 42.1 +1.6**
ABPO *e* 22 02 53.7
ABPO *e*S S **22 08 58.2 +1.0**
ABPO pmax pmax
comp=Z,36nm,1.0s,mb5.3
ABPO MLR MLR
comp=Z,6µm,22.0s,MS5.6
ABPO Ambohimpanom 51.05 180 *e*P P **22 01 42.1 +1.6**
comp=Z,36nm,1.0s,mb5.3
HHC Hu-ho-hao-te 51.21 61 *e*P P **22 01 42.3 +0.6**
HHC pP pP 22 01 52.0 +4.7
HHC PP PP 22 03 39.0 +0.6
HHC S S **22 08 56.8 -2.6**
HHC sS sS 22 09 12.5 +4.0
HHC ScS ScS 22 11 26.0 -5.5
HHC pmax pmax
comp=Z,18nm,1.5s,mb4.8
HHC pmax pmax
comp=Z,290nm,5.0s
HHC LR LR
comp=Z,4µm,19.0s,MS5.4
GYA Guiyang 51.43 80⇑*i*P P **22 01 42.0 -1.5**
GYA PP PP 22 03 43.8 +3.1
GYA S S **22 08 59.5 -3.2**
GYA SS SS 22 12 35.5 -3.0
GYA pmax pmax
comp=Z,80nm,0.7s,mb5.8
GYA pmax pmax
comp=Z,260nm,4.5s
GYA LR LR
comp=N,5µm,21.7s,MS5.7
GYA LR LR
comp=E,6µm,20.8s,MS5.7
GYA LR LR
comp=Z,7µm,17.7s,MS5.7
BORG Borgarnes 52.23 330 PFAKE 22 02 00.0 +11
BORG LR LR
comp=Z,3µm,22.0s,MS5.2
ENH Enshi 52.44 75 *e*P P **22 01 50.0 -1.0**
comp=Z,64nm,0.8s,mb5.6
ENH LR LR
comp=Z,7µm,21.0s,MS5.7
ENH Enshi 52.44 75 *e*P P **22 01 50.0 -1.0**
comp=Z,64nm,0.8s,mb5.6
TIY Taiyuan 52.60 65 *e*P P **22 01 51.5 -0.6**
TIY pP pP 22 01 55.5 -2.2
TIY sP sP 22 01 58.8 -1.1
TIY PP PP 22 03 50.0 -1.1
TIY S S **22 09 13.3 -5.2**
TIY pmax pmax
comp=Z,350nm,11.5s
TIY LR LR
comp=N,1µm,12.0s,MS5.7
TIY LR LR
comp=E,5µm,15.0s,MS5.7
TIY LR LR
comp=Z,8µm,20.1s
DAG Danmarks Havn 53.34 345⇑*e*P P **22 01 57.0 0.0**
DAG pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
DAG Danmarks Havn 53.34 345⇑*i*P P **22 01 57.0 0.0**
comp=Z,3.5nm,0.5s,mb4.5
PMAR Madeira 53.43 289 *e*P P **22 02 01.6 +3.3**
RER Riviere de l'E 53.78 170 PFAKE 22 02 10.0 +9.3
RER LR LR
comp=Z,4µm,20.0s,MS5.5
DBIC Dimbokro 54.80 254 *e*P P **22 02 08.9 +0.4**
comp=Z,43nm,0.9s,mb5.5
DBIC LR LR
comp=Z,4µm,22.0s,MS5.4
DBIC Dimbokro 54.80 254 P P **22 02 09.1 +0.6**
comp=Z,17nm,0.7s,mb5.2,baz=33,slow=6.7,SNR=25
DBIC LR LR 22 27 51.0
comp=Z,5µm,18.1s,MS5.6,baz=25,slow=38
DBIC Dimbokro 54.80 254 *e*P P **22 02 08.9 +0.4**
DBIC pmax pmax
comp=Z,43nm,0.9s
DBIC MLR MLR
comp=Z,4µm,22.0s
DBIC Dimbokro 54.80 254 *e*P P **22 02 08.9 +0.4**
comp=Z,4µm,22.0s
BJI Beijing 54.82 61 P P **22 02 07.5 -0.8**
BJI PP PP 22 04 10.3 -0.7
BJI S S **22 09 48.0 -0.6**
BJI SS SS 22 13 30.8 -0.8
BJI pmax pmax
comp=Z,17nm,0.7s,mb5.2
BJI pmax pmax
comp=Z,270nm,4.2s
BJI LR LR
comp=Z,3µm,35.5s,MS5.2
BJT Baijiatuau 54.83 61 *e*P P **22 02 08.0 -0.4**
comp=Z,20nm,0.6s,mb5.3
BJT *e*PP PP 22 04 10.2 -0.8
BJT *e*S S **22 09 48.2 -0.4**
BJT LR LR
comp=Z,7µm,22.0s,MS5.7
BJT Baijiatuau 54.83 61 *e*P P **22 02 08.0 -0.3**
BJT *e* 22 04 10.3
BJT *e*S S **22 09 48.2 -0.4**
BJT pmax pmax
comp=Z,20nm,0.6s
BJT MLR MLR
comp=Z,7µm,22.0s
BJT Baijiatuau 54.83 61 *e*P P **22 02 08.0 -0.3**
comp=Z,20nm,0.6s,mb5.3
TPTI 54.85 111 P P **22 02 07.7 -1.2**
comp=Z,1µmcomp=Z,56nm,1.1s,mb5.5
KIC Kosan Boka 54.88 254 *e*P P **22 02 08.8 -0.3**
comp=Z,123nm,0.7s,mb6.0
KIC Kosan Boka 54.88 254 *e*P P **22 02 08.8 -0.3**
comp=Z,123nm,0.7s,mb6.0
TIC Toumodi 54.95 254 *e*P P **22 02 11.5 +1.9**
comp=Z,131nm,1.1s,mb5.9
TIC Toumodi 54.95 254 *e*P P **22 02 11.5 +1.9**
TIC pmax pmax
comp=Z,131nm,1.1s,mb5.9
LIC Lamto 55.19 254 *e*P P **22 02 11.7 +0.4**
comp=Z,232nm,0.7s,mb6.3
LIC Lamto 55.19 254 *e*P P **22 02 10.5 -0.8**
comp=Z,145nm,0.7s,mb5.8
LIC *e*MLR MLR
comp=Z,18µm,18.0s,MS5.9
LIC Lamto 55.19 254 *e*P P **22 02 10.5 -0.8**
comp=Z,72nm,0.7s,mb5.8
LIC LR LR
comp=Z,9µm,18.0s,MS5.9
LIC Lamto 55.19 254 *e*P P **22 02 10.5 -0.8**
comp=Z,72nm,0.7s,mb5.8
HIA Hailar 55.24 49 *e*P P **22 02 11.4 +0.2**
comp=Z,30nm,0.9s,mb5.3
HIA *e*PcP PcP 22 03 12.3 +0.4
HIA LR LR
comp=Z,7µm,19.0s,MS5.8
HIA Hailar 55.24 49 *e*P P **22 02 11.4 +0.2**
HIA *e* 22 03 12.3
HIA pmax pmax
comp=Z,29nm,0.9s
HIA MLR MLR
comp=Z,7µm,19.0s
HIA Hailar 55.24 49 *e*P P **22 02 11.4 +0.2**
comp=Z,29nm,0.9s,mb5.3
WHN Wuhan 56.30 73 P P **22 02 19.5 +0.4**
WHN S S **22 10 08.0 -0.5**
KULM Kulim 56.43 107 *e*P P **22 02 19.2 -1.0**
comp=Z,124nm,1.0s,mb5.9
KULM LR LR
comp=Z,2µm,20.0s,MS5.3
KULM Kulim 56.43 107 P P **22 02 19.9 -0.3**
KULM Kulim 56.43 107 P P **22 02 19.1 -1.1**
comp=Z,2µmcomp=Z,140nm,1.0s,mb5.9
KULM Kulim 56.43 107 *e*P P **22 02 19.2 -1.0**
comp=Z,124nm,1.0s,mb5.9
TIA Tai'an 56.63 65 P P **22 02 21.0 -0.4**
TIA S S **22 10 12.3 -0.5**
TIA LR LR
comp=Z,4µm,26.2s,MS5.3
CLNS Chul'man 56.97 40 *e*P P **22 02 21.5 -1.9**
CLNS *e**PP pP 22 02 31.7 +2.7
CLNS *e* 22 03 18.4
CLNS *e* 22 04 31.3
CLNS *e* 22 05 52.1
CLNS *e*SS S **22 10 16.3 -0.2**
CLNS *e*SS SS 22 14 02.0 -2.6
CLNS pmax pmax
comp=Z,23nm,0.9s,mb5.2
CLNS pmax pmax
comp=N,10.0nm,0.8s
CLNS pmax pmax
comp=E,7.0nm,1.1s
CLNS pmax pmax
comp=Z,13nm,0.9s,mb5.0
CLNS pmax pmax
comp=N,10.0nm,0.9s
CLNS pmax pmax
comp=E,7.0nm,1.2s
CLNS smax
comp=N,264nm,11.4s
CLNS smax
comp=E,175nm,10.9s
CLNS MLR MLR
comp=Z,3µm,14.0s,MS5.5
CLNS MLR MLR
comp=E,2µm,17.0s,MS5.5
CLNS MLR MLR
comp=N,2µm,16.0s,MS5.5
CLNS Chul'man 56.97 40 *e*P P **22 02 21.5 -1.9**
comp=N,10.0nm,0.8s,mb4.9
CLNS Chul'man 56.97 40 *e*PcP PcP 22 03 18.4 -0.1
CLNS *e*S S **22 10 16.3 -0.2**
comp=N,264nm,11.4s
TIXI Tiksi 57.02 22 *e*P P **22 02 23.4 -0.2**
comp=N,18nm,0.8s,mb5.1
TIXI *e*PP PP 22 04 27.1 -2.8
TIXI *e*S S **22 10 15.4 -1.4**
TIXI LR LR
comp=Z,8µm,20.0s,MS5.8
TIXI Tiksi 57.02 22 *e*P P **22 02 23.2 -0.3**
TIXI *e* 22 03 18.0
TIXI *e*S S **22 10 15.2 -1.6**
TIXI pmax pmax
comp=Z,37nm,1.4s,mb5.2
TIXI MLR MLR
comp=Z,8µm,19.0s,MS5.8
TIXI Tiksi 57.02 22 *e*P P **22 02 23.2 -0.3**
comp=Z,37nm,1.4s,mb5.2
TIXI Tiksi 57.02 22 *e*PcP PcP 22 03 18.0 -0.4
comp=Z,8µm,19.0s
TIXI *e*S S **22 10 15.2 -1.6**
QIZ Qiongzhong 57.13 87 P P **22 02 24.8 -0.3**
QIZ S S **22 10 17.0 -2.7**
QIZ SS SS 22 14 09.5 +0.9
QIZ pmax pmax
comp=Z,30nm,1.0s,mb5.3
QIZ pmax pmax
comp=Z,330nm,7.7s
QIZ LR LR
comp=N,3µm,20.9s
QIZ LR LR
comp=Z,4µm,21.2s,MS5.5
QIZ Qiongzhong 57.13 87 *e*P P **22 02 24.8 -0.3**
comp=Z,77nm,1.3s,mb5.6
QIZ *e*S S **22 10 21.7 +2.0**
QIZ LR LR
comp=Z,4µm,20.0s,MS5.5
QIZ Qiongzhong 57.13 87 *e*P P **22 02 24.8 -0.3**
comp=Z,77nm,1.3s,mb5.6
IPM Ipoh 57.20 107⇑*e*P P **22 02 24.1 -1.6**
comp=Z,170nm,0.8s,mb6.1
IPM *e*PP PP 22 04 32.5 -0.3
IPM *e*S S **22 10 21.7 +0.9**
IPM Ipoh 57.20 107 P P **22 02 25.5 -0.2**
IPM Ipoh 57.20 107 P P **22 02 24.5 -1.2**
comp=Z,2µmcomp=Z,210nm,0.9s,mb6.2
MNSI Mandailing Nat 58.25 112 P P **22 02 33.0 0.0**
comp=Z,2µmcomp=Z,64nm,1.1s,mb5.6
SUMG Summit 58.27 339 *e*P P **22 02 32.5 +0.2**
comp=Z,60nm,0.6s,mb5.8
SUMG *e*PP PP 22 04 42.0 +1.0
SUMG Summit 58.27 339 *i* P P **22 02 32.3 -0.1**
comp=Z,58nm,0.7s,mb5.7
SUMG
comp=Z,2µm,23.0s
SUMG Summit 58.27 339 *i* P P **22 02 32.3 -0.1**
comp=Z,58nm,0.7s,mb5.7
SUMG Summit 58.27 339 *e*PP PP 22 04 42.0 +1.0
BART Pico Bartolome 58.28 297 *e*P P **22 02 38.3 +5.3**
comp=Z,127nm,1.3s,mb5.8
BART Pico Bartolome 58.28 297 *e*P P **22 02 38.3 +5.3**
comp=Z,127nm,1.3s,mb5.8
GZH Guangzhou 58.33 81 P P **22 02 32.5 -1.0**
GZH S S **22 10 31.5 -3.9**
GZH LR LR
comp=N,5µm,18.2s,MS5.8
GZH LR LR
comp=E,5µm,18.9s,MS5.8
GZH LR LR
comp=Z,6µm,19.4s,MS5.7
FRIM Kepong 58.41 108 P P **22 02 34.1 -0.1**
KTGM Kuala Trenggan 58.43 105 P P **22 02 34.3 0.0**
YAK Yakutsk 58.48 33 *e*P P **22 02 32.3 -1.7**
YAK PcP PcP 22 03 24.6 +0.2
YAK *e*S S **22 10 37.1 +0.8**

YAK LR LR
comp=Z,4µm,22.0s,MS5.5
YAK Yakutsk 58.48 33 *e*P **P** **22 02 33.0 -1.0**
YAK *e**PP pP 22 02 41.1 +1.5
YAK *e* 22 03 24.6
YAK *e* 22 04 39.7
YAK *e*S **S** **22 10 32.6 -3.7**
YAK *e**SS sS 22 10 50.4 +4.8
YAK *e* 22 12 21.4
YAK pmax pmax
comp=Z,45nm,0.9s,mb5.5
YAK pmax pmax
comp=E,20nm,1.0s
YAK pmax pmax
comp=N,17nm,1.7s
YAK pmax pmax
comp=N,20nm,1.1s
YAK pmax pmax
comp=Z,18nm,0.7s,mb5.2
YAK pmax pmax
comp=E,36nm,1.9s
YAK smax
comp=E,48nm,2.3s
YAK smax
comp=N,172nm,2.4s
YAK MLR MLR
comp=N,1µm,12.0s,MS5.6
YAK MLR MLR
comp=Z,3µm,12.0s,MS5.6
YAK MLR MLR
comp=E,3µm,15.0s,MS5.6
YAK Yakutsk 58.48 33 *e*P **P** **22 02 33.0 -1.0**
comp=E,17nm,1.7s,mb4.8
YAK Yakutsk 58.48 33 *e*PcP PcP 22 03 24.6 +0.2
YAK *e*ScS ScS 22 12 21.4 -1.2
comp=E,3µm,12.0s
CMLA Cha da Macela 58.55 297 *e*P **P** **22 02 40.5 +5.6**
comp=E,117nm,1.2s,mb5.8
CMLA Cha da Macela 58.55 297 PFAKE 22 02 50.0 +15
CMLA LR LR
comp=Z,1µm,22.0s,MS5.0
CMLA Cha da Macela 58.55 297 *e*P **P** **22 02 40.5 +5.6**
comp=Z,117nm,1.2s,mb5.8
TSUM Tsumeb 58.64 213 *e*P **P** **22 02 36.8 +1.2**
comp=Z,33nm,1.1s,mb5.3
TSUM *e*PcP PcP 22 03 26.2 +0.6
TSUM *e*S **S** **22 10 40.5 +1.3**
TSUM LR LR
comp=Z,6µm,19.0s,MS5.8
TSUM Tsumeb 58.64 213 *e*P **P** **22 02 36.8 +1.2**
comp=Z,33nm,1.1s,mb5.3
PDA Ponta Delgada 58.66 297 *e*P **P** **22 02 38.0 +2.4**
PDA Ponta Delgada 58.66 297 *e*P **P** **22 02 38.0 +2.4**
DL2 Dalian 59.19 61 P **P** **22 02 39.0 -0.3**
DL2 PP PP 22 04 52.0 +2.1
DL2 S **S** **22 10 44.0 -2.2**
DL2 SS SS 22 14 41.5 +1.2
DL2 pmax pmax
comp=Z,20nm,0.6s,mb5.3
DL2 pmax pmax
comp=Z,200nm,4.9s
DL2 LR LR
comp=N,4µm,20.1s
DL2 LR LR
comp=Z,4µm,19.1s,MS5.6
NJ2 Nanjing 59.37 69 *e*P **P** **22 02 40.0 -0.7**
NJ2 pP pP 22 02 45.8 -0.5
NJ2 sP sP 22 02 47.3 -1.2
NJ2 S **S** **22 10 47.5 -1.2**
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb5.2
NJ2 pmax pmax
comp=Z,430nm,5.0s
PPI Padang Panjang 59.66 112 P **P** **22 02 42.8 0.0**
comp=Z,2µmcomp=Z,79nm,1.5s,mb5.5
BKNI Bangkinang 59.69 111 P **P** **22 02 42.3 -0.7**
comp=Z,3µmcomp=Z,280nm,1.0s,mb6.2
SNY Shenyang 59.70 57 ⇓P **P** **22 02 41.0 -1.8**
SNY pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
SNY pmax pmax
comp=Z,330nm,9.6s
SNY LR LR
comp=N,4µm,18.0s,MS5.8
SNY LR LR
comp=E,6µm,19.6s,MS5.8
SNY LR LR
comp=Z,6µm,20.8s,MS5.7
PDSI Padang 59.99 113 P **P** **22 02 44.8 -0.3**
comp=Z,2µmcomp=Z,271nm,1.1s,mb6.2
KGM Kluang 60.49 108 P **P** **22 02 48.3 -0.2**
LBTB Lobatse 60.69 203 *e*P **P** **22 02 51.0 +1.4**
LBTB *e*PcP PcP 22 03 34.1 +0.5
LBTB *e*S **S** **22 11 06.6 +1.2**
LBTB LR LR
comp=Z,6µm,21.0s,MS5.7
LBTB Lobatse 60.69 203 *e*P **P** **22 02 51.0 +1.4**
SDSI Sungai Dareh 60.76 112 P **P** **22 02 49.3 -1.1**
comp=Z,3µmcomp=Z,280nm,0.6s,mb6.6
MYKOM Kota Tinggi 61.05 108 P **P** **22 02 52.2 -0.2**
MYKOM Kota Tinggi 61.05 108 P **P** **22 02 51.7 -0.7**
comp=Z,1µmcomp=Z,72nm,1.3s,mb5.7
KRJI Kerinci 61.50 113 P **P** **22 02 54.9 -0.5**
comp=Z,562nm,1.0s,mb6.6
QZH Quanzhou 61.92 77⇑ *i*P **P** **22 02 56.0 -2.1**
QZH S **S** **22 11 17.0 -4.5**
QZH LR LR
comp=Z,9µm,19.3s,MS5.9
KLR Kul'dur 62.85 47 *e*S **S** **22 11 26.5 -6.0**
KLR MLR MLR
comp=E,3µm,13.0s
KLR MLR MLR
comp=Z,5µm,13.0s,MS5.8
MDJ Mudanjiang 62.97 53 P **P** **22 03 03.5 -1.4**
MDJ pP pP 22 03 06.5 -4.1
MDJ sP sP 22 03 08.3 -4.4
MDJ PcP PcP 22 03 41.8 -1.0
MDJ S **S** **22 11 33.5 -0.7**
MDJ pmax pmax
comp=Z,5.0nm,1.1s,mb4.6
MDJ pmax pmax
comp=Z,200nm,7.6s
MDJ LR LR
comp=Z,4µm,23.8s,MS5.5
MDJ Mudanjiang 62.97 53 *e*P **P** **22 03 03.2 -1.7**
MDJ *e*S **S** **22 11 35.7 +1.5**
MDJ LR LR
comp=Z,3µm,21.0s,MS5.5
MDJ Mudanjiang 62.97 53 *e*P **P** **22 03 03.2 -1.7**
MDJ *e*S **S** **22 11 35.7 +1.5**
KSI Kapahiang 63.36 114 P **P** **22 03 08.2 +0.4**
comp=Z,4µmcomp=Z,216nm,0.9s,mb6.3
INCN Inchon 63.38 61 PFAKE 22 03 20.0 +12
INCN LR LR
comp=E,6µm,21.0s,MS5.8
BOSA Boshof 64.14 202 P **P** **22 03 13.8 +1.2**
comp=Z,49nm,0.9s,mb5.5,baz=17,slow=6.2,SNR=22
BOSA LR LR 22 30 58.0
comp=Z,6µm,19.5s,MS5.8,baz=23,slow=36
BOSA Boshof 64.14 202 *e*P **P** **22 03 13.7 +1.1**
BOSA *e* 22 03 48.5
BOSA *e*S **S** **22 11 48.6 -0.2**
BOSA MLR MLR
comp=Z,6µm,22.0s,MS5.8
BOSA Boshof 64.14 202 *e*P **P** **22 03 13.7 +1.1**
BOSA Boshof 64.14 202 *e*PcP PcP 22 03 48.5 +0.9
BOSA *e*S **S** **22 11 48.6 -0.2**
comp=Z,6µm,22.0s
TATO Taipei 64.29 76 *e*P **P** **22 03 14.4 +0.5**
comp=Z,115nm,1.0s,mb5.9
TATO Taipei 64.29 76 *e*P **P** **22 03 14.4 +0.5**
comp=Z,115nm,1.0s,mb5.9
TPUB Ta-pu 64.30 78 *e*P **P** **22 03 14.2 +0.2**
comp=Z,91nm,0.9s,mb5.8
TPUB Ta-pu 64.30 78 *e*P **P** **22 03 14.2 +0.2**
comp=Z,91nm,0.9s,mb5.8
YHNB Yeheng 64.33 76 *e*P **P** **22 03 14.7 +0.6**
comp=Z,133nm,0.9s,mb6.0
YHNB *e*PcP PcP 22 03 49.5 +0.8
YHNB Yeheng 64.33 76 *e*P **P** **22 03 14.7 +0.6**
comp=Z,133nm,0.9s,mb6.0
KSRS Korea Array 64.35 61 P **P** **22 03 12.7 -1.4**
comp=Z,8.7nm,0.6s,mb5.0,baz=286,slow=7.3,SNR=36
KSRS Korea Array 64.35 61 P **P** **22 03 12.7 -1.4**
KSRS pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
KSRS Korea Array 64.35 61 P **P** **22 03 12.7 -1.4**
comp=Z,9.0nm,0.6s,mb5.0
SSLB Suanglung 64.36 77 *e*P **P** **22 03 13.2 -1.2**
comp=Z,83nm,1.1s,mb5.7
SSLB Suanglung 64.36 77 *e*P **P** **22 03 13.2 -1.1**
comp=Z,83nm,1.1s,mb5.7
NACB Ninganchiao 64.72 76 *e*P **P** **22 03 14.9 -1.8**
comp=Z,44nm,1.0s,mb5.4
NACB Ninganchiao 64.72 76 *e*P **P** **22 03 14.9 -1.8**
comp=Z,44nm,1.0s,mb5.4
COCO West Island 64.75 125 PFAKE 22 03 30.0 +13
COCO LR LR
comp=Z,2µm,20.0s,MS5.3
COCO West Island 64.75 125 *i* P **P** **22 03 17.6 +0.7**
COCO West Island 64.75 125 *i* P **P** **22 03 17.6 +0.7**
YULB Yu-li 64.81 77 *e*P **P** **22 03 17.7 +0.4**
comp=Z,61nm,0.9s,mb5.6
YULB *e*PcP PcP 22 03 53.1 +2.4
YULB Yu-ti 64.81 77 *e*P **P** **22 03 17.7 +0.4**
comp=Z,61nm,0.9s,mb5.6
TWG Pinlang 64.88 78 *e*P **P** **22 03 18.6 +0.9**
comp=Z,51nm,1.0s,mb5.5
TWG Pinlang 64.88 78 *e*P **P** **22 03 18.6 +0.9**
comp=Z,51nm,1.0s,mb5.5
MDSI Maura Dua 65.11 113 P **P** **22 03 17.4 -1.9**
comp=Z,1µmcomp=Z,55nm,1.2s,mb5.5
LWLI Liwa 65.35 114 P **P** **22 03 19.4 -1.4**
comp=Z,2µmcomp=Z,225nm,1.0s,mb6.2
KLSI 65.66 113 P **P** **22 03 21.1 -1.8**
comp=Z,73nm,1.1s,mb5.6
KSM Kuching 66.50 104 *e*P **P** **22 03 27.8 -0.5**
comp=Z,47nm,1.1s,mb5.4
KSM PP PP 22 05 55.4 +0.5
KSM LR LR
comp=Z,2µm,21.0s,MS5.3
KSM Kuching 66.50 104 P **P** **22 03 28.8 +0.6**
KSM Kuching 66.50 104 P **P** **22 03 25.7 -2.6**
comp=Z,793nmcomp=Z,38nm,1.2s,mb5.3
KSM Kuching 66.50 104 *e*P **P** **22 03 27.8 -0.5**
comp=Z,47nm,1.1s,mb5.4
KSM Kuching 66.50 104 PP PP 22 05 55.4 +0.5
SBUM Sibu 67.53 102 P **P** **22 03 35.1 +0.3**
BTM Bintulu 67.83 101 P **P** **22 03 36.7 0.0**
SEY Seymchan 68.11 28⇑ *e*P **P** **22 03 37.6 -0.1**
SEY Seymchan 68.11 28⇑ *e*P **P** **22 03 37.5 -0.2**
SEY Seymchan 68.11 28 *e*P **P** **22 03 37.5 -0.2**
DBJI Dramaga 68.39 113 P **P** **22 03 38.7 -1.5**
comp=Z,99nm,1.4s,mb5.7
SKJI Sukabumi 68.52 114 P **P** **22 03 38.3 -2.7**
comp=Z,3µmcomp=Z,316nm,0.8s,mb6.3
TGY Tagaytay City 68.81 86 P **P** **22 03 42.6 -0.3**
comp=Z,123nm,0.4s,mb6.2,baz=20,slow=2.7,SNR=3.6
TGY Tagaytay City 68.81 86 P **P** **22 03 42.6 -0.3**
KKM Kota Kinabalu 68.92 96 *e*P **P** **22 03 43.5 -0.1**
comp=Z,77nm,0.8s,mb5.7
KKM *e*S S 22 12 44.7 -2.8
KKM LR LR
comp=Z,3µm,22.0s,MS5.4
KKM Kota Kinabalu 68.92 96 P **P** **22 03 44.1 +0.5**
KKM Kota Kinabalu 68.92 96 P **P** **22 03 43.8 +0.2**
comp=Z,1µmcomp=Z,117nm,0.8s,mb5.8
KKM Kota Kinabalu 68.92 96 *e*P **P** **22 03 43.5 -0.1**
comp=Z,77nm,0.8s,mb5.7
KKM *e*S S 22 12 44.7 -2.8
KDM Kudat 68.98 95 P **P** **22 03 44.5 +0.5**
JOW Kunigami 68.98 71 P **P** **22 03 44.7 +0.8**
comp=Z,15nn,0.8s,mb5.0
JOW Kunigami 68.98 71 P **P** **22 03 44.7 +0.9**
comp=Z,15nn,0.8s,mb5.0
SUR Sutherland 69.07 204 *e*P **P** **22 03 45.9 +1.9**
comp=Z,90nn,1.3s,mb5.5
SUR *e*S S 22 12 47.7 -0.7
SUR LR LR
comp=Z,8µm,19.0s,MS6.0
SUR Sutherland 69.07 204 P **P** **22 03 45.5 +1.5**
comp=Z,282nn,1.1s,mb6.1,SNR=6.6
SUR Sutherland 69.07 204 *e*P **P** **22 03 45.9 +1.9**
comp=Z,90nn,1.3s,mb5.5
SUR *e*S S 22 12 47.7 -0.7
CISI Cisompet, Garu 69.84 113 P **P** **22 03 46.0 -3.2**
comp=Z,2µmcomp=Z,175nn,1.1s,mb5.9
SHEL Horse Pasture 69.92 235 PFAKE 22 04 00.0 +10
SHEL LR LR
comp=Z,4µm,21.0s,MS5.6
SDKM Sandakan 69.96 96 P **P** **22 03 50.5 +0.4**
BILL Bilibino 70.17 20 *i* P **P** **22 03 50.5 0.0**
BILL LR LR
comp=Z,4µm,21.0s,MS5.6
BILL Bilibino 70.17 20⇑ *e*P **P** **22 03 50.5 0.0**
BILL *e*S S 22 12 58.3 -2.4
BILL pmax pmax
comp=Z,11nm,0.8s,mb4.8
BILL MLR MLR
comp=Z,4µm,21.0s,MS5.6
BILL Bilibino 70.17 20 *e*P **P** **22 03 50.5 0.0**
comp=Z,11nm,0.8s,mb4.8
BILL *e*S S 22 12 58.3 -2.4
comp=Z,4µm,21.0s
YSS Yuzh-Sakhalins 70.53 46 *e*P **P** **22 03 52.7 -0.3**
comp=Z,107nm,1.1s,mb5.7
YSS LR LR
comp=Z,916nm,20.0s,MS5.0
YSS Yuzh-Sakhalins 70.53 46 *e*P **P** **22 03 52.1 -0.9**
YSS *e* 22 04 11.0
YSS *e*PPP 22 08 14.0
YSS *e*S S 22 13 00.0 -5.5
YSS pmax pmax
comp=Z,60nn,1.0s,mb5.5
YSS MLR MLR
comp=Z,3µm,15.0s,MS5.7
YSS MLR MLR
comp=N,3µm,19.0s,MS5.9
YSS MLR MLR
comp=E,5µm,14.0s,MS5.9
YSS Yuzh-Sakhalins 70.53 46 *e*P **P** **22 03 52.1 -0.9**
comp=E,60nn,1.0s,mb5.5
TSM Tawau 71.24 97 P **P** **22 03 57.6 -0.3**
MYLDM Lahad Datu 71.30 96 P **P** **22 03 59.1 +0.9**
comp=E,1µmcomp=E,70nm,1.5s,mb5.4
ASAJ Asahikawa 71.72 49 LR LR 22 37 35.7
comp=E,6µm,21.4s,MS5.8,baz=293,slow=38
MAJO Matsushiro 72.20 58 *e*P **P** **22 04 01.7 -1.6**
comp=E,98nm,1.6s,mb5.5
MAJO *e*S S 22 13 26.6 +1.3
MAJO LR LR
comp=Z,3µm,21.0s,MS5.5
MAJO Matsushiro 72.20 58 *e*P **P** **22 04 01.7 -1.6**
MAJO *e*S S 22 13 26.6 +1.4
MAJO pmax pmax
comp=Z,98nm,1.6s,mb5.5
MAJO MLR MLR
comp=Z,3µm,21.0s,MS5.5
MAJO Matsushiro 72.20 58 *e*P **P** **22 04 01.7 -1.6**
comp=Z,98nm,1.6s,mb5.5
MAT Matsushiro 72.20 58 P **P** **22 04 00.9 -2.4**
MAT S S 22 13 20.0 -5.2
MJAR Matsushiro Arr 72.21 58 P **P** **22 04 02.6 -0.7**
comp=Z,3.1nm,0.8s,mb4.3,baz=298,slow=11,SNR=9.4
MJAR LR LR 22 39 10.7
comp=Z,3µm,21.5s,MS5.5,baz=275,slow=39
MJAR Matsushiro Arr 72.21 58 P **P** **22 04 02.6 -0.7**
NGJI Ngawi 72.58 111 P **P** **22 04 06.0 +0.1**
comp=Z,2µmcomp=Z,64nm,1.6s,mb5.3
SJI Sawahan 73.05 111 P **P** **22 04 06.2 -2.4**
comp=Z,2µmcomp=Z,43nm,0.6s,mb5.6
ERM Erimo 73.06 51 PFAKE 22 04 20.0 +12
ERM LR LR
comp=Z,4µm,22.0s,MS5.6
ERM Erimo 73.06 51 *i* P **P** **22 04 08.9 +0.6**
ERM Erimo 73.06 51 *i* P **P** **22 04 08.9 +0.6**
PWJI Pagerwojo 73.25 111 P **P** **22 04 07.2 -2.6**
comp=Z,49nn,0.8s,mb5.5
YUK Yuzh-Kuril'sk 73.83 48⇓ *i*P **P** **22 04 05.4 -7.4**
YUK MLR MLR
comp=N,2µm,17.0s,MS5.7
YUK MLR MLR
comp=E,2µm,17.0s,MS5.7
YUK MLR MLR
comp=Z,2µm,17.0s,MS5.6
GMJI Gumukmas 74.70 110 P **P** **22 04 15.2 -3.1**
PETK Petropavlovsk- 75.68 36 P **P** **22 04 21.2 -2.2**
comp=Z,9.7nm,0.9s,mb4.7,baz=263,slow=1.2,SNR=9.9
PETK LR LR 22 41 34.2
comp=Z,3µm,19.3s,MS5.6,baz=295,slow=39
PETK Petropavlovsk- 75.68 36 P **P** **22 04 21.2 -2.2**
PET Petropavlovsk 76.20 35 PFAKE 22 04 40.0 +14
PET LR LR
comp=Z,3µm,20.0s,MS5.7
PET Petropavlovsk 76.20 35 *e*P **P** **22 04 20.6 -5.7**
PET *e* 22 04 33.3
PET *e* 22 07 16.5
PET *e*S S 22 13 57.1 -12
PET *e*PS 22 14 55.2
PET *e*SS SS 22 19 08.0 +5.8
PET pmax pmax
comp=Z,200nm,14.5s
PET pmax pmax
comp=Z,200nm,20.9s
PET MLR MLR
comp=Z,4µm,20.0s,MS5.7
PET MLR MLR
comp=Z,3µm,18.0s
DAV Davao City (W) 76.29 90 PFAKE 22 04 40.0 +12
DAV LR LR
comp=Z,2µm,19.0s,MS5.5
DAV Davao City (W) 76.29 90⇑ *e*P **P** **22 04 25.1 -2.4**
SCHQ Schefferville 76.52 327 P **P** **22 04 27.2 -0.9**
SCHQ LR LR 22 41 35.0
SCHQ Schefferville 76.52 327 P **P** **22 04 27.2 -0.9**
comp=Z,29nm,0.7s,mb5.3,baz=47,slow=7.1,SNR=24
SCHQ LR LR 22 41 35.0
comp=Z,2µm,19.3s,MS5.3,baz=86,slow=38
SCHQ Schefferville 76.52 327 P **P** **22 04 27.2 -0.9**
INK Inuvik 79.68 0 P **P** **22 04 43.8 -1.6**
comp=Z,10nm,0.7s,mb4.9,baz=8.0,slow=11,SNR=13
INK Inuvik 79.68 0 P **P** **22 04 43.8 -1.6**
COLD Coldfoot 79.87 7 *e*P **P** **22 04 46.5 0.0**
comp=Z,7.9nm,0.7s,mb4.8
COLD Coldfoot 79.87 7 *e*P **P** **22 04 46.5 +0.1**
comp=Z,7.9nm,0.7s,mb4.8
COLA College 82.39 6 *e*P **P** **22 04 58.7 -1.2**
comp=Z,13nm,0.7s,mb5.0
COLA *e*S S 22 15 15.7 +0.8
COLA LR LR
comp=Z,1µm,21.0s,MS5.3
COLA College 82.39 6 *e*P **P** **22 04 58.7 -1.2**
COLA *e*S S 22 15 15.7 +0.8
COLA pmax pmax
comp=Z,13nm,0.7s,mb5.0
COLA MLR MLR
comp=Z,1µm,21.0s,MS5.3
COLA College 82.39 6 *e*P **P** **22 04 58.7 -1.2**
comp=Z,13nm,0.7s,mb5.0
ILAR Eielson Array 82.58 6 P **P** **22 04 59.9 -1.0**
comp=Z,4.5nm,0.7s,mb4.6,baz=321,slow=4.0,SNR=30
ILAR PP PP 22 08 18.4 +8.8
comp=Z,4.0nm,1.1s,baz=337,slow=7.1,SNR=4.3
ILAR PKKPbc PKKPbc 22 23 27.6 +1.0
comp=Z,0.5nm,0.7s,baz=201,slow=2.0,SNR=4.0
ILAR LR LR 22 49 47.3
comp=Z,1µm,20.0s,MS5.3,baz=245,slow=42
ILAR Eielson Array 82.58 6 P **P** **22 04 59.9 -1.0**
ILAR 22 08 18.4
ILAR Eielson Array 82.58 6 P **P** **22 04 59.9 -1.0**
BPAW Bear Paw Mtn. 82.81 8 *e*P **P** **22 05 01.3 -0.8**
comp=Z,17nm,0.8s,mb5.1
BPAW Bear Paw Mtn. 82.81 8 *e*P **P** **22 05 01.3 -0.8**
comp=Z,17nm,0.8s,mb5.1
EGAK Eagle 82.99 4 *e*P **P** **22 05 02.4 -0.6**
comp=Z,20nm,0.9s,mb5.2
EGAK LR LR
comp=Z,1µm,21.0s,MS5.2
EGAK Eagle 82.99 4 *e*P **P** **22 05 02.4 -0.6**
comp=Z,20nm,0.9s,mb5.2
TTA Tatalina 83.25 11 *e*P **P** **22 05 06.0 +1.6**
TTA Tatalina 83.25 11 *e*P **P** **22 05 06.0 +1.6**
MCK McKinley 83.40 7 *e*P **P** **22 05 05.8 +0.7**
comp=Z,36nm,1.2s,mb5.3
MCK McKinley 83.40 7 *e*P **P** **22 05 05.8 +0.7**
MCK pmax pmax
comp=Z,36nm,1.2s,mb5.3
MCK McKinley 83.40 7 *e*P **P** **22 05 05.8 +0.7**
comp=Z,36nm,1.2s,mb5.3
TRF Thorofare Moun 83.52 8 *e*P **P** **22 05 07.1 +1.4**
comp=Z,16nm,1.0s,mb5.1
TRF Thorofare Moun 83.52 8 *e*P **P** **22 05 07.1 +1.3**
comp=Z,16nm,1.0s,mb5.1
FCC Fort Churchill 83.75 341 *e*P **P** **22 05 07.1 +0.1**
FCC Fort Churchill 83.75 341 *e*P **P** **22 05 07.1 +0.1**
PKME Peaks-Kenny Pk 83.78 321 PFAKE 22 05 20.0 +13
PKME LR LR
comp=Z,1µm,20.0s,MS5.3
DAWY Dawson 83.79 3 *e*P **P** **22 05 05.4 -1.8**
DAWY Dawson 83.79 3 *e*P **P** **22 05 05.4 -1.7**
PAF Port-aux-Franc 83.81 165 PFAKE 22 05 20.0 +13
PAF LR LR
comp=Z,4µm,20.0s,MS5.8
PPLA Purkeypile 83.82 9 *e*P **P** **22 05 07.0 -0.3**
comp=Z,10nm,0.7s,mb5.1
PPLA *e*PcP PcP 22 05 11.8 +0.4
PPLA Purkeypile 83.82 9 *e*P **P** **22 05 07.1 -0.2**
comp=Z,10nm,0.7s,mb5.1
DOT Dot Lake 83.93 5 *e*P **P** **22 05 07.5 -0.3**
comp=Z,64nm,0.9s,mb5.8
DOT Dot Lake 83.93 5 *e*P **P** **22 05 07.6 -0.2**
comp=Z,64nm,0.9s,mb5.8
YKA Yellowknife Ar 84.41 352 P **P** **22 05 09.4 -0.9**
YKA LR LR 22 49 52.4
YKA Yellowknife Ar 84.41 352 P **P** **22 05 09.4 -0.9**
comp=Z,10nm,0.7s,mb5.1,baz=16,slow=5.7,SNR=16
YKA LR LR 22 49 52.4
comp=Z,129nm,19.9s,MS4.3,baz=235,slow=41
YKA Yellowknife Ar 84.41 352 P **P** **22 05 09.4 -0.9**
MENT Mentasta 84.66 5 *e*P **P** **22 05 11.9 +0.3**
MENT Mentasta 84.66 5 *e*P **P** **22 05 11.9 +0.4**
SVW2 Sparrevohn 85.05 11 *e*P **P** **22 05 14.1 +0.6**
comp=Z,21nm,1.3s,mb5.1
SVW2 Sparrevohn 85.05 11 *e*P **P** **22 05 14.1 +0.6**
comp=Z,21nm,1.3s,mb5.1
SML Sawmill 85.34 7 *e*P **P** **22 05 14.4 -0.6**
comp=Z,15nm,1.2s,mb5.0
SML Sawmill 85.34 7 *e*P **P** **22 05 14.4 -0.6**
SML pmax pmax
comp=Z,15nm,1.2s,mb5.0
SML Sawmill 85.34 7 *e*P **P** **22 05 14.4 -0.6**
comp=Z,15nm,1.2s,mb5.0
PMR Palmer 85.46 8 *e*P **P** **22 05 14.8 -0.9**
comp=Z,23nm,1.1s,mb5.2
PMR Palmer 85.46 8 *e*P **P** **22 05 14.8 -0.8**
PMR pmax pmax
comp=Z,23nm,1.1s,mb5.2
PMR Palmer 85.46 8 *e*P **P** **22 05 14.8 -0.8**
comp=Z,23nm,1.1s,mb5.2
LBNH Lisbon 85.87 321 *e*P **P** **22 05 18.5 +0.5**
comp=Z,13nm,0.7s,mb5.3
LBNH *e*S S 22 15 50.8 +0.3
LBNH LR LR
comp=Z,2µm,19.0s,MS5.5
LBNH Lisbon 85.87 321 *e*P **P** **22 05 18.5 +0.5**
LBNH *e*S S 22 15 50.8 +0.3
LBNH pmax pmax
comp=Z,13nm,0.7s,mb5.3
LBNH MLR MLR
comp=Z,2µm,19.0s,MS5.5
LBNH Lisbon 85.87 321 *e*P **P** **22 05 18.5 +0.5**
comp=Z,13nm,0.7s,mb5.3
RC01 Rabbit Creek A 85.88 8 *e*P **P** **22 05 17.0 -0.7**
comp=Z,18nm,0.6s,mb5.5
RC01 Rabbit Creek A 85.88 8 *e*P **P** **22 05 17.0 -0.7**
comp=Z,18nm,0.6s,mb5.5
DIV Divide 86.27 6 *e*P **P** **22 05 19.7 0.0**
comp=Z,27nm,0.7s,mb5.6
DIV *e*PcP PcP 22 05 22.9 +0.7
DIV Divide 86.27 6 *e*P **P** **22 05 19.7 +0.1**
comp=Z,27nm,0.7s,mb5.6
FRNY Flat Rock 86.34 322 *e*P **P** **22 05 19.4 -0.9**
comp=Z,20nn,1.2s,mb5.2
FRNY *e*PcP PcP 22 05 23.2 +0.4
FRNY Flat Rock 86.34 322 *e*P **P** **22 05 19.4 -0.9**
comp=Z,20nn,1.2s,mb5.2
SLKM Skilak Lake 86.39 9 *e*P **P** **22 05 19.1 -1.1**
SLKM Skilak Lake 86.39 9 *e*P **P** **22 05 19.1 -1.1**
HNH Hanover 86.42 321 *e*P **P** **22 05 21.6 +0.9**
comp=Z,37nn,1.0s,mb5.6
HNH Hanover 86.42 321 *e*P **P** **22 05 21.6 +0.9**
comp=Z,37nn,1.0s,mb5.6
BMRM Bremner River 86.53 6 *e*P **P** **22 05 21.2 +0.3**
comp=Z,25nn,1.1s,mb5.3
BMRM *e*PcP PcP 22 05 24.6 +1.3
BMRM Bremner River 86.53 6 *e*P **P** **22 05 21.2 +0.3**
comp=Z,24nn,1.1s,mb5.3
AMKA Amchitka 86.56 28 *e*P **P** **22 05 20.0 -1.2**

comp=Z,31nm,0.7s,mb5.6
AMKA ePcP PcP 22 05 24.2 +0.6
AMKA Amchitka 86.56 28 eP **P 22 05 20.0 -1.2**
comp=Z,31nm,0.7s,mb5.6
SEW Seward 86.87 8 eP **P 22 05 22.4 -0.3**
comp=Z,25nm,0.8s,mb5.5
SEW ePcP PcP 22 05 25.5 +0.7
SEW Seward 86.87 8 eP **P 22 05 22.4 -0.2**
comp=Z,25nm,0.8s,mb5.5
LONY Lake Ozonia 87.00 323 eP **P 22 05 23.2 -0.3**
comp=Z,31nm,1.1s,mb5.5
LONY ePcP PcP 22 05 26.4 +0.7
LONY LR LR
comp=Z,2µm,19.0s,MS5.6
LONY Lake Ozonia 87.00 323 eP **P 22 05 23.2 -0.3**
comp=Z,31nm,1.1s,mb5.5
MBWA Marble Bar 87.21 117 eP **P 22 05 24.6 -0.2**
comp=Z,15nm,0.9s,mb5.2
MBWA LR LR
comp=Z,3µm,22.0s,MS5.6
MBWA Marble Bar 87.21 117 eP **P 22 05 24.6 -0.2**
comp=Z,15nm,0.9s,mb5.2
NCB Newcomb 87.26 322 PFAKE 22 05 40.0 +15
NCB LR LR
comp=Z,2µm,19.0s,MS5.6
RCBR Riachuelo 87.43 262 PFAKE 22 05 40.0 +14
RCBR LR LR
comp=Z,3µm,20.0s,MS5.7
ADK Adak 87.68 26 PFAKE 22 05 40.0 +13
ADK LR LR
comp=Z,2µm,20.0s,MS5.5
PNL Peninsula 88.18 3 eP **P 22 05 29.2 +0.3**
comp=Z,35nm,0.7s,mb5.7
PNL Peninsula 88.18 3 eP **P 22 05 29.2 +0.3**
comp=Z,35nm,0.7s,mb5.7
SKAG Skagway 88.53 1 eP **P 22 05 30.6 +0.1**
comp=Z,23nm,0.8s,mb5.6
SKAG Skagway 88.53 1 eP **P 22 05 30.6 0.0**
comp=Z,23nm,0.8s,mb5.6
KDAK Kodiak Island 88.68 11 P **P 22 05 31.7 +0.4**
comp=Z,12nm,0.7s,mb5.3,baz=56,slow=4.4,SNR=8.2
KDAK Kodiak Island 88.68 11 P **P 22 05 31.7 +0.4**
GUMO Guam 89.03 75 PFAKE 22 05 50.0 +16
GUMO LR LR
comp=Z,1µm,20.0s,MS5.3
OHAK Old Harbor 89.11 11 eP **P 22 05 33.2 -0.1**
comp=Z,17nm,0.9s,mb5.4
OHAK Old Harbor 89.11 11 eP **P 22 05 33.2 -0.1**
comp=Z,17nm,0.9s,mb5.4
BBSR BB Station 89.19 308 PFAKE 22 05 50.0 +16
BBSR LR LR
comp=Z,1µm,20.0s,MS5.3
FFC Flin Flon 89.38 343 eP **P 22 05 34.5 -0.2**
comp=Z,12nm,0.6s,mb5.4
FFC LR LR
comp=Z,1µm,20.0s,MS5.3
FFC Flin Flon 89.38 343 eP **P 22 05 34.5 -0.1**
FFC pmax pmax
comp=Z,12nm,0.6s,mb5.4
FFC MLR MLR
comp=Z,1µm,20.0s,MS5.3
FFC Flin Flon 89.38 343 eP **P 22 05 34.5 -0.1**
comp=Z,1µm,20.0s
BINY Binghamton 89.42 322 PFAKE 22 05 50.0 +15
BINY LR LR
comp=Z,2µm,21.0s,MS5.5
DLBC Dease Lake 89.56 359 eP **P 22 05 36.1 +0.7**
DLBC ePP PP 22 09 08.7 +2.6
DLBC Dease Lake 89.56 359 LR LR 22 54 27.2
comp=Z,956nm,19.9s,MS5.2,baz=358,slow=42
DLBC Dease Lake 89.56 359 eP **P 22 05 36.1 +0.7**
FITZ Fitzroy Crossi 90.03 111 P **P 22 05 37.4 -0.8**
comp=Z,10nm,0.8s,mb5.2,baz=291,slow=3.8,SNR=14
FITZ Fitzroy Crossi 90.03 111 P **P 22 05 37.4 -0.8**
ERPA Erie 91.54 324 PFAKE 22 06 00.0 +15
ERPA LR LR
comp=Z,2µm,21.0s,MS5.5
ULM Lac du Bonnet 91.58 337 P **P 22 05 47.0 +2.1**
comp=Z,18nm,0.8s,mb5.4,baz=20,slow=5.2,SNR=11
ULM LR LR 22 47 58.0
comp=Z,2µm,21.4s,MS5.4,baz=29,slow=36
ULM Lac du Bonnet 91.58 337 P **P 22 05 47.0 +2.0**
WRAK Wrangell Islan 91.61 360 PFAKE 22 06 00.0 +15
WRAK LR LR
comp=Z,1µm,19.0s,MS5.4
EYMN Ely 92.00 334 eP **P 22 05 47.0 +0.1**
comp=Z,22nm,0.9s,mb5.5
EYMN LR LR
comp=Z,2µm,22.0s,MS5.6
EYMN Ely 92.00 334 eP **P 22 05 47.0 0.0**
comp=Z,22nm,0.9s,mb5.5
NWAO Narrogin (SRO) 92.44 128 PFAKE 22 06 00.0 +11
NWAO LR LR
comp=Z,2µm,21.0s,MS5.5
COWI Conover 92.60 331 eP **P 22 05 50.2 +0.5**
comp=Z,12nm,0.8s,mb5.4
COWI LR LR
comp=Z,2µm,22.0s,MS5.4
COWI Conover 92.60 331 eP **P 22 05 50.2 +0.4**
comp=Z,12nm,0.8s,mb5.4
CBN Corbin 93.01 320 PFAKE 22 06 00.0 +8.1
CBN LR LR
comp=Z,1µm,21.0s,MS5.2
AAM Ann Arbor 93.19 326 PFAKE 22 06 00.0 +7.4
AAM LR LR
comp=Z,1µm,20.0s,MS5.4
AGMN Agassiz Nation 93.26 336 eP **P 22 05 52.7 -0.1**
comp=Z,14nm,0.9s,mb5.4
AGMN LR LR
comp=Z,2µm,22.0s,MS5.5
AGMN Agassiz Nation 93.26 336 eP **P 22 05 52.7 -0.1**
comp=Z,14nm,0.9s,mb5.4
MCWV Mont Chateau 93.28 322 PFAKE 22 06 00.0 +6.9
MCWV LR LR
comp=Z,1µm,20.0s,MS5.4
ACSO Alum Creek Sta 94.44 324 PFAKE 22 06 10.0 +12
ACSO LR LR
comp=Z,1µm,22.0s,MS5.4
BLA Blacksburg 95.39 321 PFAKE 22 06 10.0 +7.2
BLA LR LR
comp=Z,1µm,20.0s,MS5.3
CNNC Cliffs of the 95.43 318 PFAKE 22 06 10.0 +7.0
CNNC LR LR
comp=Z,2µm,22.0s,MS5.5
DGMT Dagmar 95.65 341 PFAKE 22 06 20.0 +16
DGMT LR LR
comp=Z,2µm,22.0s,MS5.5
JFWS Jewell Farm 95.66 330 PFAKE 22 06 20.0 +16
JFWS LR LR
comp=Z,1µm,19.0s,MS5.3
BBB Bella Bella 95.76 357 LR LR 22 54 10.6
comp=Z,641nm,20.1s,MS5.1,baz=345,slow=39
ANWB Willy Bob 96.00 295 PFAKE 22 06 20.0 +14
ANWB LR LR
comp=Z,1µm,20.0s,MS5.5
BBGH Gun Hill 96.90 290 PFAKE 22 06 20.0 +10
BBGH LR LR
comp=Z,2µm,20.0s,MS5.6
HDIL Hopedale 97.16 328 PFAKE 22 06 20.0 +9.2
HDIL LR LR
comp=Z,1µm,20.0s,MS5.4
FDF Fort de France 97.23 292 PFAKE 22 06 20.0 +8.5
FDF LR LR
comp=Z,758nm,19.0s,MS5.2
WALA Waterton Lakes 97.28 348 eP **P 22 06 11.5 +0.4**
WALA Waterton Lakes 97.28 348 eP **P 22 06 11.5 +0.4**
EGMT Eagleton 97.43 345 PFAKE 22 06 20.0 +8.2
EGMT LR LR
comp=Z,1µm,20.0s,MS5.4
ECSD EROS Data Cent 97.47 335 eP **P 22 06 11.5 -0.6**
comp=Z,6.0nm,0.9s,mb5.0
ECSD LR LR
comp=Z,3µm,22.0s,MS5.7
ECSD EROS Data Cent 97.47 335 eP **P 22 06 11.5 -0.6**
comp=Z,6.0nm,0.9s,mb5.0
WCI Wyandotte Cave 97.62 325 PFAKE 22 06 20.0 +7.1
WCI LR LR
comp=Z,884nm,20.0s,MS5.2
SCIA State Center 97.72 331 PFAKE 22 06 20.0 +6.8
SCIA LR LR
comp=Z,997nm,20.0s,MS5.3
LAO LASA Array 97.83 342 PFAKE 22 06 30.0 +16
LAO LR LR
comp=Z,1µm,20.0s,MS5.5
WRA Warramunga Arr 97.94 108 P **P 22 06 13.8 -0.7**
comp=Z,3.2nm,0.6s,mb5.0,baz=314,slow=4.0,SNR=15
WRA PKKPbc PKKPbc 22 22 49.8 +2.1
comp=Z,0.7nm,0.7s,baz=119,slow=2.6,SNR=8.7
WRA LR LR 22 53 30.1
comp=Z,1µm,21.7s,MS5.4,baz=295,slow=37
WRA Warramunga Arr 97.94 108 P **P 22 06 13.8 -0.7**
NHSC New Hope 98.28 318 PFAKE 22 06 30.0 +14
NHSC LR LR
comp=Z,2µm,19.0s,MS5.7
TKL Tuckaleechee C 98.33 322 LR LR 22 52 36.1
comp=Z,1µm,21.1s,MS5.3,baz=46,slow=37
NEW Newport 98.59 350 eP **P 22 06 18.1 +1.1**
comp=Z,9.7nm,1.1s,mb5.2
NEW LR LR
comp=Z,1µm,21.0s,MS5.5
NEW Newport 98.59 350 eP **P 22 06 18.1 +1.1**
NEW pmax pmax
comp=Z,10.0nm,1.1s
NEW MLR MLR
comp=Z,1µm,21.0s
NEW Newport 98.59 350 eP **P 22 06 18.1 +1.1**
comp=Z,1µm,21.0s
SJG San Juan 99.04 298 PFAKE 22 06 30.0 +10
SJG LR LR
comp=Z,1µm,20.0s,MS5.3
GRGR Grenville 99.15 291 PFAKE 22 06 30.0 +10
GRGR LR LR
comp=Z,754nm,22.0s,MS5.2
JCW Jim Creek 99.28 353 eP **P 22 06 19.6 -0.5**
comp=Z,16nm,0.9s,mb5.6
JCW Jim Creek 99.28 353 eP **P 22 06 19.6 -0.5**
comp=Z,16nm,0.9s,mb5.6
MSO Missoula 99.43 347 PFAKE 22 06 30.0 +9.2
MSO LR LR
comp=Z,1µm,22.0s,MS5.4
ASAR Alice Springs 99.51 112 P **P 22 06 20.1 -1.3**
comp=Z,3.2nm,0.7s,mb4.9,baz=305,slow=4.6,SNR=21
ASAR PKKPbc PKKPbc 22 22 44.0 +0.6
comp=Z,0.2nm,0.4s,baz=110,slow=3.8,SNR=4.2
ASAR Alice Springs 99.51 112 P **P 22 06 20.2 -1.3**
RSSD Black Hills 99.58 340 eP **P 22 06 21.8 +0.2**
RSSD LR LR
comp=Z,2µm,22.0s,MS5.6
RSSD Black Hills 99.58 340 eP **P 22 06 21.8 +0.3**
comp=Z,2µm,22.0s
GOGA Godfrey 99.88 320 PFAKE 22 06 30.0 +7.1
GOGA LR LR
comp=Z,1µm,20.0s,MS5.3
WVT Waverly 100.03 325 PFAKE 22 06 30.0 +6.5
WVT LR LR
comp=Z,1µm,20.0s,MS5.4
RLMT Red Lodge 100.05 343 ePdif Pdif 22 06 23.8 +0.2
comp=Z,5.9nm,1.0s
RLMT LR LR
comp=Z,2µm,22.0s,MS5.6
CCM Cathedral Cave 100.08 328 PFAKE 22 06 40.0 +16
CCM LR LR
comp=Z,1µm,22.0s,MS5.4
BOZ Bozeman (W) 100.10 345 PFAKE 22 06 40.0 +16
BOZ LR LR
comp=Z,1µm,21.0s,MS5.4
NLWA Neilton Lookou 100.26 354 PFAKE 22 06 40.0 +15
NLWA LR LR
comp=Z,1µm,20.0s,MS5.5
MAW Mawson 100.30 174 PFAKE 22 06 40.0 +15
MAW LR LR
comp=Z,4µm,21.0s,MS5.9
GRTK Grand Turk 100.51 304 PFAKE 22 06 40.0 +14
GRTK LR LR
comp=Z,1µm,21.0s,MS5.4
HAWA Hanford 100.76 351 PFAKE 22 06 40.0 +13
HAWA LR LR
comp=Z,1µm,21.0s,MS5.5
LKWY Lake 100.85 344 PFAKE 22 06 40.0 +13
LKWY LR LR
comp=Z,2µm,21.0s,MS5.7
KSU1 Kansas State U 101.46 332 PFAKE 22 06 40.0 +10
KSU1 LR LR
comp=Z,2µm,20.0s,MS5.5
OGNE Ogallala 101.82 337 PFAKE 22 06 40.0 +8.5
OGNE LR LR
comp=Z,2µm,22.0s,MS5.6
LRAL Lakeview Retre 102.05 322 PFAKE 22 06 40.0 +7.5
LRAL LR LR
comp=Z,1µm,21.0s,MS5.4
OXF Oxford 102.09 325 PFAKE 22 06 40.0 +7.3
OXF LR LR
comp=Z,973nm,19.0s,MS5.3
SDDR Presa de Saban 102.26 302 PFAKE 22 06 50.0 +17
SDDR LR LR
comp=Z,1µm,20.0s,MS5.4
BW06 Boulder Array 102.34 343 PFAKE 22 06 50.0 +16
BW06 LR LR
comp=Z,2µm,22.0s,MS5.6
WAKE Wake Island 102.50 58 PFAKE 22 06 50.0 +16
WAKE LR LR
comp=Z,1µm,20.0s,MS5.4
HLID Hailey 102.67 347 PFAKE 22 06 50.0 +15
HLID LR LR
comp=Z,2µm,22.0s,MS5.5
DWPF Disney 102.67 315 PFAKE 22 06 50.0 +15
DWPF LR LR
comp=Z,1µm,19.0s,MS5.4
AHID Auburn Hatcher 102.71 344 PFAKE 22 06 50.0 +15
AHID LR LR
comp=Z,2µm,20.0s,MS5.5
CBKS Cedar Bluff 102.91 334 PFAKE 22 06 50.0 +14
CBKS LR LR
comp=Z,3µm,22.0s,MS5.7
COR Corvallis 102.99 353 PFAKE 22 06 50.0 +13
COR LR LR
comp=Z,1µm,20.0s,MS5.5
PMG Port Moresby 103.19 93 PFAKE 22 06 50.0 +12
PMG LR LR
comp=Z,923nm,22.0s,MS5.3
BRAL Brewton 103.66 321 PFAKE 22 06 50.0 +10
BRAL LR LR
comp=Z,1µm,20.0s,MS5.3
HWUT Hardware Ranch 103.92 344 PFAKE 22 06 50.0 +9.2
HWUT LR LR
comp=Z,2µm,21.0s,MS5.6
ISCO Idaho Springs 104.00 339 PFAKE 22 06 50.0 +8.8
ISCO LR LR
comp=Z,2µm,22.0s,MS5.6
MIAR Mount Ida 104.03 328 PFAKE 22 06 50.0 +8.7
MIAR LR LR
comp=Z,1µm,19.0s,MS5.5
GTBY Guantanamo Bay 104.34 305 PFAKE 22 06 50.0 +7.3
GTBY LR LR
comp=Z,2µm,19.0s,MS5.6
VBMS Vicksburg 104.49 324 PFAKE 22 06 50.0 +6.7
VBMS LR LR
comp=Z,1µm,22.0s,MS5.4
WVOR Wild Horse Val 104.51 349 PFAKE 22 07 00.0 +17
WVOR LR LR
comp=Z,1µm,21.0s,MS5.4
HUMO Hull Mountain 104.91 353 PFAKE 22 07 00.0 +15
HUMO LR LR
comp=Z,1µm,22.0s,MS5.3
MOD Modoc 105.28 350 PFAKE 22 11 10.0 +9.1
MOD LR LR
comp=Z,1µm,20.0s,MS5.4
DUG Dugway 105.55 344 PFAKE 22 11 10.0 +8.5
DUG LR LR
comp=Z,1µm,21.0s,MS5.5
YBH Yreka Blue Hor 105.75 352 PFAKE 22 11 10.0 +8.2
YBH LR LR
comp=Z,937nm,22.0s,MS5.3
SDCO Great Sand Dun 105.85 338 PKiKP PKiKP 22 11 03.3 +1.2
SDCO LR LR
comp=Z,1µm,19.0s,MS5.5
SDCO Great Sand Dun 105.85 338 PKiKP PKiKP 22 11 03.3 +1.2
SPB Sao Paulo 106.08 252 PFAKE 22 11 10.0 +7.3
SPB LR LR
comp=Z,3µm,20.0s,MS5.8
WMOK Wichita Mounta 106.10 331 PFAKE 22 11 10.0 +7.4
WMOK LR LR
comp=Z,1µm,21.0s,MS5.5
BMN Battle Mountai 106.22 348 PFAKE 22 11 10.0 +7.3
BMN LR LR
comp=Z,1µm,21.0s,MS5.5
MIDW Midway 106.28 40 PFAKE 22 11 10.0 +6.9
MIDW LR LR
comp=Z,1µm,20.0s,MS5.5
NATX Nacogdoches 106.86 327 PFAKE 22 11 20.0 +16
NATX LR LR
comp=Z,1µm,19.0s,MS5.5
WDC Whiskeytown Da 106.87 352 PFAKE 22 11 20.0 +16
WDC LR LR
comp=Z,951nm,22.0s,MS5.3
AMTX Amarillo 107.10 334 PFAKE 22 11 20.0 +16
AMTX LR LR
comp=Z,1µm,19.0s,MS5.5
MTDJ Mount Denham 107.17 305 PFAKE 22 11 20.0 +15
MTDJ LR LR
comp=Z,808nm,20.0s,MS5.3
MVCO Mesa Verde 107.25 340 PFAKE 22 11 20.0 +15
MVCO LR LR
comp=Z,2µm,22.0s,MS5.7
CTAO Charters Tower 107.72 103 PFAKE 22 11 20.0 +14
CTAO LR LR
comp=Z,2µm,20.0s,MS5.6
SDV Santo Domingo 108.14 293 PFAKE 22 11 20.0 +13
SDV LR LR
comp=Z,335nm,19.0s,MS4.9
NVAR Mina Array Bea 108.36 348 PKiKP PKiKP 22 11 05.2 -1.6
comp=Z,0.9nm,0.6s,baz=88,slow=2.3,SNR=4.2
HOPS Hopland 108.50 352 PFAKE 22 11 20.0 +13
HOPS LR LR
comp=Z,2µm,22.0s,MS5.6
TPH Tonopah 108.51 347 PFAKE 22 11 20.0 +13
TPH LR LR
comp=Z,2µm,22.0s,MS5.6
ANMO Albuquerque 108.71 338 PFAKE 22 11 20.0 +13
ANMO LR LR
comp=Z,2µm,21.0s,MS5.6
HKT Hockley 108.92 327 PFAKE 22 11 20.0 +12
HKT LR LR
comp=Z,1µm,21.0s,MS5.4
CMB Columbia Colle 109.08 350 PFAKE 22 11 20.0 +12
CMB LR LR
comp=Z,1µm,22.0s,MS5.4
MCCM Marconi Confer 109.31 352 PFAKE 22 11 20.0 +11
MCCM LR LR
comp=Z,1µm,21.0s,MS5.4
CASY Casey 109.39 158 PFAKE 22 11 20.0 +12
CASY LR LR
comp=Z,2µm,19.0s,MS5.8
STKA Stephens Creek 109.42 116 ePKiKP PKiKP 22 11 08.9 +0.2
WUAZ Wupatki 109.64 342 PFAKE 22 11 20.0 +11
WUAZ LR LR
comp=Z,1µm,20.0s,MS5.4
JCT Junction City 110.23 330 PFAKE 22 11 20.0 +10
JCT LR LR
comp=Z,1µm,22.0s,MS5.4
DAC Darwin (Calif) 110.32 347 PFAKE 22 11 20.0 +10
DAC LR LR
comp=Z,1µm,20.0s,MS5.5
SAO San Andreas Ge 110.48 350 PFAKE 22 11 20.0 +9.2
SAO LR LR
comp=Z,1µm,20.0s,MS5.5
MNTX Cornudas Mount 111.31 335 PFAKE 22 11 20.0 +7.5
MNTX LR LR
comp=Z,2µm,22.0s,MS5.5
KVTX Kingsville 111.91 327 PFAKE 22 11 30.0 +16
KVTX LR LR
comp=Z,971nm,20.0s,MS5.4
TUC Tucson 112.49 340 PFAKE 22 11 30.0 +15
TUC LR LR
comp=Z,2µm,22.0s,MS5.7
PFO Pinyon Flat Ob 112.68 345 PFAKE 22 11 30.0 +15
PFO LR LR
comp=Z,1µm,20.0s,MS5.5
TEIG Tepich 112.69 315 PFAKE 22 11 30.0 +15
TEIG LR LR
comp=Z,780nm,20.0s,MS5.3
TXAR Lajitas Array 112.80 333 PKiKP PKiKP 22 11 15.9 +0.5
comp=Z,0.4nm,0.8s,baz=30,slow=7.3,SNR=2.8
HNR Honiara 114.03 86 PFAKE 22 11 30.0 +12
HNR LR LR
comp=Z,1µm,20.0s,MS5.5
BCIP Isla Barro Col 114.93 300 PFAKE 22 11 30.0 +10
BCIP LR LR
comp=Z,616nm,19.0s,MS5.2
CPUP Villa Florida 115.32 254 PFAKE 22 11 30.0 +10
CPUP LR LR
comp=Z,470nm,21.0s,MS5.1
CAN Canberra 116.47 117 PFAKE 22 11 30.0 +8.0
CAN LR LR
comp=Z,2µm,21.0s,MS5.7
TGUH Tegucigalpa,Un 116.68 309 PFAKE 22 11 30.0 +6.9
TGUH LR LR
comp=Z,966nm,21.0s,MS5.4
JTS JuntasAbangare 117.82 305 PFAKE 22 11 40.0 +15
JTS LR LR
comp=Z,932nm,21.0s,MS5.4
CMIG Matias Romero 119.01 318 PKP PKPdf 22 11 26.8 -0.8
comp=Z,2.0nm,0.8s,baz=227,slow=6.5,SNR=3.0
OTAV Otavalo 119.57 291 PFAKE 22 11 40.0 +11
OTAV LR LR
comp=Z,1µm,20.0s,MS5.6
JOHN Johnston Islan 119.76 42 PFAKE 22 11 40.0 +11
JOHN LR LR
comp=Z,2µm,19.0s,MS5.7
LPAZ La Paz 119.90 269 PKP PKPdf 22 11 27.9 -1.3
comp=Z,0.9nm,0.4s,baz=246,slow=3.4,SNR=3.6
LPAZ La Paz 119.90 269 PKIKP PKPdf 22 11 27.9 -1.3
LPAZ MLR MLR
comp=Z,3µm,20.0s
KIP Kipapa 121.30 28 PFAKE 22 11 40.0 +8.1
KIP LR LR
comp=Z,1µm,19.0s,MS5.6
QSPA South Pole Qui 122.16 180 ePKPdf PKPdf 22 11 31.4 -0.3
QSPA LR LR
comp=Z,2µm,19.0s,MS5.8
TRQA Tornquist 123.25 243 PFAKE 22 11 50.0 +15
TRQA LR LR
comp=Z,2µm,20.0s,MS5.8
POHA Pohakuloa 123.76 26 PFAKE 22 11 50.0 +13
POHA LR LR
comp=Z,2µm,22.0s,MS5.6
DZM Mont Dzumac 125.47 95 eLR LR 22 50 50.9
comp=Z,3µm,26.3s
LCO Las Campanas 127.29 256 PFAKE 22 12 00.0 +17
LCO LR LR
comp=Z,3µm,19.0s,MS6.0
SBA Scott Base 127.44 167 PFAKE 22 11 50.0 +8.1
SBA LR LR
comp=Z,2µm,20.0s,MS5.7
PMSA Palmer Station 127.83 210 ePKPdf PKPdf 22 11 43.3 +0.4
PMSA LR LR
comp=Z,1µm,21.0s,MS5.6
PAYG Puerto Ayora 129.20 300 PFAKE 22 12 00.0 +13
PAYG LR LR
comp=Z,937nm,19.0s,MS5.5
PLCA Paso Flores 130.34 242 PKP PKPdf 22 11 49.8 +1.4
comp=Z,5.6nm,1.0s,baz=45,slow=14,SNR=3.0
PLCA Paso Flores 130.34 242 PKIKP PKPdf 22 11 49.8 +1.3
PLCA MLR MLR
comp=Z,3µm,19.0s
MSVF Nonsavu 133.39 84 PFAKE 22 12 10.0 +15
MSVF LR LR
comp=Z,1µm,19.0s,MS5.6
SNZO South Karori 137.45 118 PFAKE 22 12 10.0 +8.2
SNZO LR LR
comp=Z,2µm,21.0s,MS5.7
XMAS Kiritimati 138.51 39 PFAKE 22 12 20.0 +15
XMAS LR LR
comp=Z,2µm,21.0s,MS5.8
TAOE Nuku Hiva Isla 155.63 18 eLR LR 23 04 55.5
comp=Z,2µm,24.3s
PPT Papeete 158.78 50 eLR LR 23 06 18.4
comp=Z,2µm,23.2s
RKT Rikitea 170.60 13 eLR LR 23 11 49.0
comp=Z,2µm,22.5s

IDC 27 22:00:33.9±5.2, 32°81N×39°69W, h0km, mb4.1/6, mb1 4.2/6, mb1mx3.8/28, mbtmp4.1/6, MS4.0/2, Ms1 3.9/2, ms1mx3.7/31, Error ellipse: s-maj=167.6km s-min=35.2km az=177.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCHQ	**Schefferville**	**29.15**	**327**	LR	LR	22 18 08.4	
	comp=Z,218nm,18.6s,baz=63,slow=36						
ROSC	**El Rosal**	**42.63**	**237**	LR	LR	22 23 18.7	
	comp=Z,220nm,20.4s,baz=88,slow=32						
FINES	**FINESS Array B**	**50.28**	**35**	P	P	22 09 32.5	+0.8
	1.6nm,0.6s,baz=265,slow=8.2,SNR=4.6						
AKASG	**Malin Array Be**	**52.49**	**48**	P	P	22 09 47.0	-1.5
	5.0nm,0.8s,baz=274,slow=6.9,SNR=14						
PDAR	**Pinedale Array**	**54.68**	**302**	P	P	22 10 04.8	+0.2

1.0nm,0.9s,baz=61,slow=7.3,SNR=3.9
BRTR Keskin Array B 58.02 61 P P 22 10 29.2 +0.7
2.3nm,0.9s,baz=263,slow=7.2,SNR=6.1
AKTO Aktyubinsk 69.98 42 P P 22 11 47.7 +0.7
1.6nm,0.6s,baz=331,slow=8.4,SNR=4.6
KURK Kurchatov 80.66 35 P P 22 12 48.5 0.0
0.9nm,0.7s,baz=313,slow=5.3,SNR=4.3

PGC 27 22:03:52.8±1.9, 49°.85N×130°.13W, h10km, ML2.9/6, Mw3.5,7D,215km Wsw of Pt. Hardy, Bc Vancouver Island Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.51**	**57**	⇓Pn	Pn	22 04 17.5	-2.3
HOLB				⇓Sn	Sn	22 04 36.4	-3.1
BPBC	**Brooks Peninsu**	**1.55**	**78**	⇓Pn	Pn	22 04 17.8	-2.6
BPBC				⇑Sn	Sn	22 04 37.2	-3.4
PHC	**Port Hardy**	**1.93**	**63**	Pn	Pn	22 04 23.7	-2.0
PHC				⇑Sn	Sn	22 04 45.6	-4.4
EDB	**Eliza Dome**	**1.95**	**88**	⇓Pn	Pn	22 04 24.0	-1.8
EDB				⇓Sn	Sn	22 04 46.2	-4.2
MAYB	**Maynard**	**1.98**	**73**	⇓Pn	Pn	22 04 24.4	-2.0
WOSB	**Woss**	**2.32**	**81**	⇓Pn	Pn	22 04 30.1	-0.9
BBB	**Bella Bella**	**2.67**	**28**	Pn	Pn	22 04 34.3	-1.4
BBB				⇑Sn	Sn	22 05 04.1	-3.9

*PGC **27** 22:12:30.2±3.0, 49°.78N×130°.14W, h10km, ML4.1/9, Mw4.7, 219km Wsw of Pt. Hardy, Bc Vancouver Island Region*

*BJI **27** 22:12:30.0, 49°.52N×129°.81W, h10km, mb4.7/7, Ms5.0/1, Ms7 4.7/1*

*IDC **27** 22:12:33.9±0.7, 50°.02N×129°.92W, h0km, mb4.2/16, mb1 4.4/25, mb1mx4.3/31, mbtmp4.3/25, ML3.7/8, MS4.4/14, Ms1 4.4/14, ms1mx4.2/42, Error ellipse: s-maj=15.2km s-min=10.3km az=64.0*

*MOS **27** 22:12:35.5±1.7, 49°.89N×129°.96W, h10km, mb5.1/40, Error ellipse: s-maj=8.0km s-min=4.2km az=110.6*

*ISCJB **27** 22:12:36.1±0.2, 50°.09N±0°.02×129°.64W±0°.04, h10km, mb4.7/76, MS4.6/9, Error ellipse: s-maj=4.3km s-min=2.3km az=137.8*

*GCMT **27** 22:12:36.6±0.3, 49°.78N×130°.24W, h12km, MW5.1, Moment Tensor Solution. s24,c29; s75,c124; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.51±.19; $M_{\theta\theta}$-4.85±.15; $M_{\phi\phi}$5.36±.14; $M_{r\theta}$1.17±.51; $M_{r\phi}$1.55±.16; $M_{\theta\phi}$0.36±.46; Best double couple: $M_0$5.50000×10^{16} NP1:ϕ_s324.00000°, δ77.00000°,λ-174.00000°. NP2:ϕ_s233.00000°, δ84.00000°,λ-13.00000°. Principal axes: T 5.6400, Plg5.0000°, Azm279.0000°; N -0.3000, Plg76.0000°, Azm30.0000°; P -5.3300, Plg13.0000°, Azm188.0000°; Data Used: II IU G IC CN.*

*NEIC **27** 22:12:38.5±0.3, 50°.08N×129°.59W, h10km, mb4.8/73, MW5.1(PGC) Error ellipse: s-maj=6.9km s-min=3.0km az=51.0*

ISC 27 22:12:37.8±1.3, 50°.10N±0°.03×129°.70W±0°.04, h10km±8km, n328, σ1$, 30/333, mb4.7/76, MS4.6/9, 4C-7D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.14**	**61**	⇑Pn	**Pn**	**22 12 55.9**	**-3.8**
HOLB				⇑Sn	**Sn**	**22 13 13.3**	**-2.1**
BPBC	**Brooks Peninsu**	**1.24**	**86**	⇑Pn	**Pn**	**22 12 56.0**	**-5.1**
BPBC				⇑Sn	**Sn**	**22 13 14.7**	**-3.1**
PHC	**Port Hardy**	**1.57**	**66**	⇑Pn	**Pn**	**22 13 01.9**	**-3.8**
PHC				⇓Sn	**Sn**	**22 13 25.3**	**-0.8**
MAYB	**Maynard**	**1.65**	**78**	Pn	**Pn**	**22 13 02.3**	**-4.4**
EDB	**Eliza Dome**	**1.68**	**97**	Pn	**Pn**	**22 13 01.4**	**-5.7**
EDB				⇓Sn	**Sn**	**22 13 25.0**	**-3.6**
WOSB	**Woss**	**2.01**	**87**	⇓Pn	**Pn**	**22 13 07.7**	**-4.0**
BBB	**Bella Bella**	**2.32**	**25**	Pn	**Pn**	**22 13 12.8**	**-3.1**
	231nm,0.3s,baz=40,slow=13,SNR=236						
BBB				Sn	**Sn**	**22 13 44.6**	**+0.2**
	79nm,0.3s,baz=118,slow=21,SNR=15						
BBB				LR	LR	22 14 26.6	
	comp=Z,6μm,18.1s,baz=22,slow=46						
BBB	**Bella Bella**	**2.32**	**25**	Pn	**Pn**	**22 13 12.8**	**-3.1**
BBB				⇓Sn	**Sn**	**22 13 43.2**	**-1.2**
BNB	**Barry Inlet**	**2.80**	**333**	⇓Pn	**Pn**	**22 13 16.6**	**-5.9**
MOBC	**Moresby Island**	**3.37**	**336**	⇑Pn	**Pn**	**22 13 24.8**	**-5.6**
DIB	**Dawson Inlet,**	**3.56**	**332**	Pn	**Pn**	**22 13 27.5**	**-5.5**
DIB	**Dawson Inlet,**	**3.56**	**332**	⇑Pn	**Pn**	**22 13 27.1**	**-5.9**
OBC	**Olympics--Boni**	**4.23**	**117**	P	**Pn**	**22 13 40.1**	**-2.1**
PGC	**Sidney**	**4.33**	**107**	*e*Pn	**Pn**	**22 13 42.6**	**-0.9**
STW	**Striped Peak**	**4.41**	**114**	P	**Pn**	**22 13 45.8**	**+1.1**
NLWA	**Neilton Lookou**	**4.71**	**123**	*e*Pn	**Pn**	**22 13 48.2**	**-0.6**
BLN	**Blyn Mountain**	**4.89**	**113**	P	**Pn**	**22 13 51.1**	**-1.3**
HDW	**Hoodsport**	**5.02**	**117**	P	**Pn**	**22 13 53.1**	**+0.1**
VDB	**Vedder Mountai**	**5.06**	**99**	P	**Pn**	**22 13 52.8**	**-0.8**
CMW	**Cultus Mountai**	**5.24**	**106**	P	**Pn**	**22 13 55.2**	**-0.8**
MBW	**Mount Baker**	**5.25**	**101**	P	**Pn**	**22 13 56.1**	**-0.2**
JCW	**Jim Creek**	**5.44**	**108**	P	**Pn**	**22 13 58.1**	**-0.8**
RPW	**Rockport**	**5.60**	**104**	*e*Pn	**Pn**	**22 14 00.1**	**-1.0**
CRAG	**Craig**	**5.77**	**340**	*e*Pn	**Pn**	**22 13 58.6**	**-4.7**
	68nm,1.2s						
RCS	**Mount Rainier-**	**6.20**	**118**	P	**Pn**	**22 14 09.8**	**+0.5**
LON	**Longmire**	**6.22**	**120**	*e*Pn	**Pn**	**22 14 09.6**	**0.0**
WRAK	**Wrangell Islan**	**6.53**	**347**	*e*Pn	**Pn**	**22 14 13.1**	**-0.7**
	20nm,0.7s						
ETW	**Entiat**	**6.66**	**108**	*e*Pn	**Pn**	**22 14 16.0**	**+0.4**
HOOD	**Mount Hood Mea**	**7.23**	**128**	*e*Pn	**Pn**	**22 14 24.0**	**+0.6**
RSW	**Rattlesnake Hi**	**7.69**	**115**	*e*Pn	**Pn**	**22 14 29.8**	**0.0**
HAWA	**Hanford**	**7.73**	**115**	*e*Pn	**Pn**	**22 14 29.9**	**-0.3**
OD2	**Odessa Site #2**	**7.75**	**106**	*e*Pn	**Pn**	**22 14 28.1**	**-2.4**
KEBM	**Edson Butte**	**8.12**	**151**	Pn	**Pn**	**22 14 36.5**	**+0.9**
DLBC	**Dease Lake**	**8.36**	**359**	*e*Pn	**Pn**	**22 14 38.0**	**-0.9**
DLBC				LR	LR	22 18 19.5	
DLBC	**Dease Lake**	**8.36**	**359**	Pn	**Pn**	**22 14 37.7**	**-1.1**
	0.6nm,0.3s,baz=190,slow=12,SNR=10.0						
DLBC				LR	LR	22 18 19.5	
	comp=Z,2μm,18.2s,baz=180,slow=41						
NEW	**Newport**	**8.44**	**98**	*e*Pn	**Pn**	**22 14 40.1**	**+0.1**
LNOR	**Lincton Mounta**	**8.74**	**115**	*e*Pn	**Pn**	**22 14 43.8**	**-0.3**
HUMO	**Hull Mountain**	**8.82**	**146**	*e*Pn	**Pn**	**22 14 45.2**	**0.0**
KRMB	**Red Mountain**	**9.47**	**153**	*e*Pn	**Pn**	**22 14 53.6**	**-0.6**
YBH	**Yreka Blue Hor**	**9.67**	**147**	Pn	**Pn**	**22 14 55.5**	**-1.4**
	0.1nm,0.3s,baz=340,slow=12,SNR=8.5						
YBH	**Yreka Blue Hor**	**9.67**	**147**	*e*P	**Pn**	**22 14 57.6**	**+0.7**
BSMT	**Bassoo Peak**	**10.06**	**97**	*e*Pn	**Pn**	**22 15 02.4**	**+0.3**
KHMM	**Horse Mountain**	**10.12**	**153**	*e*Pn	**Pn**	**22 15 04.2**	**+1.1**
BLMT	**Blacktail Moun**	**10.28**	**96**	*e*Pn	**Pn**	**22 15 06.2**	**+1.0**
WALA	**Waterton Lakes**	**10.31**	**90**	*e*Pn	**Pn**	**22 15 06.1**	**+0.5**
JTMT	**Jette**	**10.41**	**97**	*e*Pn	**Pn**	**22 15 07.8**	**+0.7**
MOD	**Modoc**	**10.47**	**138**	*e*Pn	**Pn**	**22 15 08.5**	**+0.7**
EDM	**Edmonton**	**10.62**	**67**	*e*Pn	**Pn**	**22 15 08.9**	**-1.0**
EDM				Sn	**Sn**	**22 17 05.1**	**-3.7**
SWMT	**Swartz Lake**	**10.67**	**98**	*e*Pn	**Pn**	**22 15 11.6**	**+1.0**
WDC	**Whiskeytown Da**	**10.76**	**149**	*e*Pn	**Pn**	**22 15 13.1**	**+1.3**
WVOR	**Wild Horse Val**	**10.82**	**131**	Pn	**Pn**	**22 15 12.2**	**-0.4**
MSO	**Missoula**	**10.96**	**101**	*e*Pn	**Pn**	**22 15 13.8**	**-0.7**
SLMT	**Seeley Lake**	**11.09**	**99**	*e*Pn	**Pn**	**22 15 15.7**	**-0.6**
CHMT	**Chamberlain Mo**	**11.36**	**100**	*e*Pn	**Pn**	**22 15 19.9**	**-0.1**
HYT	**Haines Junctio**	**11.62**	**341**	*e*Pn	**Pn**	**22 15 29.0**	**+5.5**
OHCM	**Honcut**	**12.23**	**148**	*e*Pn	Px	22 15 49.2	
LRM	**Limekiln Ridge**	**12.32**	**104**	*e*Pn	**Pn**	**22 15 34.0**	**+0.9**
HLID	**Hailey**	**12.33**	**116**	*e*Pn	**Pn**	**22 15 33.4**	**+0.2**
HRY	**Holter Researc**	**12.34**	**99**	*e*Pn	**Pn**	**22 15 33.4**	**0.0**
DLMT	**Dillon**	**12.44**	**106**	*e*Pn	**Pn**	**22 15 34.2**	**-0.5**
MCMT	**McKenzie Canyo**	**12.55**	**108**	*e*Pn	**Pn**	**22 15 34.1**	**-2.2**
	12nm,0.9s						
PAHR	**Pah Rah Range**	**12.69**	**141**	*e*Pn	**Pn**	**22 15 39.7**	**+1.5**
WCN	**Washoe City**	**12.89**	**143**	*e*Pn	**Pn**	**22 15 41.4**	**+0.5**
	23nm,1.2s						
WCN	**Washoe City**	**12.89**	**143**	*e*P	**Pn**	**22 15 41.4**	**+0.5**
WCN				pmax	pmax		
	comp=Z,23nm,1.2s						
BOZ	**Bozeman (W)**	**12.91**	**103**	*e*Pn	**Pn**	**22 15 42.5**	**+1.3**
WAKR	**Walker**	**13.70**	**144**	*e*Pn	**Pn**	**22 15 51.8**	**-0.2**
CMB	**Columbia Colle**	**13.78**	**148**	*e*Pn	**Pn**	**22 15 51.3**	**-1.7**
YMR	**Madison River**	**13.79**	**106**	*e*Pn	**Pn**	**22 15 52.8**	**-0.3**
	comp=Z,30nm,0.3s						
YNR	**Norris Junctio**	**13.94**	**105**	*e*Pn	**Pn**	**22 15 55.1**	**-0.2**
YFT	**Old Faithful**	**13.98**	**107**	*e*Pn	**Pn**	**22 15 56.6**	**+0.8**
IMW	**Indian Meadow**	**14.21**	**109**	*e*Pn	**Pn**	**22 15 59.0**	**+0.2**
NVAR	**Mina Array Bea**	**14.21**	**141**	Pn	**Pn**	**22 15 58.7**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=316,slow=10,SNR=21						
DCID1	**Drake Creek**	**14.22**	**110**	*e*Pn	**Pn**	**22 15 59.7**	**+0.7**
FLWY	**Flagg Ranch**	**14.25**	**108**	*e*Pn	**Pn**	**22 15 59.9**	**+0.4**
RRI2	**Red Ridge**	**14.28**	**111**	*e*Pn	**Pn**	**22 16 00.3**	**+0.5**
HVU	**Hansel Valley**	**14.39**	**119**	*e*Pn	**Pn**	**22 16 01.4**	**0.0**
MOOW	**Moose Ponds**	**14.40**	**109**	*e*Pn	**Pn**	**22 16 02.9**	**+1.4**
TPAW	**Teton Pass**	**14.42**	**110**	Pn	**Pn**	**22 16 03.5**	**+1.8**
REDW	**Red Top Meadow**	**14.55**	**110**	*e*Pn	**Pn**	**22 16 04.5**	**+1.0**
SNOW	**Snow King Moun**	**14.55**	**110**	*e*Pn	**Pn**	**22 16 04.0**	**+0.4**
LOHW	**Long Hollow**	**14.56**	**109**	*e*Pn	**Pn**	**22 16 04.5**	**+0.8**
RLMT	**Red Lodge**	**14.63**	**102**	*e*Pn	**Pn**	**22 16 05.9**	**+1.2**
AHID	**Auburn Hatcher**	**14.75**	**113**	*e*Pn	**Pn**	**22 16 07.0**	**+0.8**
BGU	**Big Grassy Mou**	**14.82**	**122**	*e*Pn	**Pn**	**22 16 07.2**	**0.0**
	comp=Z,44nm,1.3s						
SPUT	**South Promonto**	**14.88**	**120**	*e*Pn	**Pn**	**22 16 09.1**	**+1.0**
YKA	**Yellowknife Ar**	**14.93**	**28**	Pn	**Pn**	**22 16 05.3**	**-3.3**
	comp=Z,0.4nm,0.3s,baz=215,slow=12,SNR=10						
YKA				LR	LR	22 22 11.1	
	comp=Z,168nm,21.8s,baz=175,slow=38						
DAWY	**Dawson**	**14.94**	**343**	*e*Pn	**Pn**	**22 16 08.7**	**+0.1**
MTUM	**Tungsten Hills**	**15.04**	**144**	*e*Pn	**Pn**	**22 16 10.4**	**+0.1**
HWUT	**Hardware Ranch**	**15.19**	**117**	*e*Pn	**Pn**	**22 16 14.0**	**+1.8**
	comp=Z,58nm,1.4s						
DUG	**Dugway**	**15.45**	**123**	*e*Pn	**Pn**	**22 16 15.1**	**-0.6**
	comp=Z,67nm,1.3s						
DUG	**Dugway**	**15.45**	**123**	*e*P	**Pn**	**22 16 15.1**	**-0.6**
DUG				pmax	pmax		
	comp=Z,67nm,1.3s						
KDAK	**Kodiak Island**	**15.46**	**309**	*e*Pn	**Pn**	**22 16 17.5**	**+1.8**
KDAK				LR	LR	22 20 36.0	
KDAK	**Kodiak Island**	**15.46**	**309**	Pn	**Pn**	**22 16 12.2**	**-3.4**
	comp=Z,0.1nm,0.3s,baz=262,slow=14,SNR=3.9						
KDAK				LR	LR	22 20 36.0	
	comp=Z,2μm,21.6s,baz=125,slow=31						
NOQ	**North Oquirrh**	**15.51**	**121**	*e*Pn	**Pn**	**22 16 17.7**	**+1.2**
	comp=Z,95nm,1.4s						
BW06	**Boulder Array**	**15.67**	**110**	*e*Pn	**Pn**	**22 16 19.9**	**+1.4**
	comp=Z,93nm,1.3s						
PDAR	**Pinedale Array**	**15.67**	**110**	Pn	**Pn**	**22 16 19.8**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=308,slow=12,SNR=60						
PDAR				LR	LR	22 22 29.9	
	comp=Z,1μm,21.6s,baz=310,slow=38						
PMR	**Palmer**	**15.79**	**324**	*e*Pn	**Pn**	**22 16 20.3**	**+0.4**
	comp=Z,58nm,1.5s						
PMR	**Palmer**	**15.79**	**324**	*e*P	**Pn**	**22 16 20.3**	**+0.5**
PMR				pmax	pmax		
	comp=Z,58nm,1.5s						
EGAK	**Eagle**	**15.92**	**342**	*e*Pn	**Pn**	**22 16 21.9**	**+0.4**
	comp=Z,37nm,1.3s						
JLU	**Jordanelle**	**15.92**	**120**	*e*Pn	**Pn**	**22 16 23.1**	**+1.4**
	comp=Z,27nm,1.1s						
LAO	**LASA Array**	**15.94**	**93**	*e*Pn	**Pn**	**22 16 21.2**	**-0.8**
NLU	**North Lily Min**	**16.02**	**123**	*e*Pn	**Pn**	**22 16 23.1**	**0.0**
	comp=Z,30nm,1.1s						
DAU	**Daniels Canyon**	**16.16**	**120**	*e*Pn	**Pn**	**22 16 25.9**	**+1.1**
MPU	**Maple Canyon**	**16.22**	**122**	*e*Pn	**Pn**	**22 16 26.3**	**+0.7**
	comp=Z,16nm,1.0s						
ISA	**Isabella**	**16.57**	**146**	*e*Pn	**Pn**	**22 16 30.4**	**+0.3**
	comp=Z,40nm,1.3s						
ISA	**Isabella**	**16.57**	**146**	*e*P	**Pn**	**22 16 30.4**	**+0.3**
ISA				pmax	pmax		
	comp=Z,40nm,1.3s						
DGMT	**Dagmar**	**16.70**	**86**	*e*Pn	**Pn**	**22 16 32.4**	**+0.8**
	comp=Z,118nm,1.3s						
ARUT	**Antelope Range**	**16.94**	**130**	*e*Pn	**Pn**	**22 16 34.2**	**-0.5**
	comp=Z,45nm,1.3s						
ARUT	**Antelope Range**	**16.94**	**130**	*e*P	**Pn**	**22 16 34.2**	**-0.5**
ARUT				pmax	pmax		
	comp=Z,45nm,1.3s						
TMUT	**Trail Mountain**	**16.96**	**122**	*e*Pn	**Pn**	**22 16 35.4**	**+0.4**
	comp=Z,56nm,1.5s						
MSU	**Marysvale**	**17.02**	**126**	*e*Pn	**Pn**	**22 16 35.3**	**-0.4**
CCUT	**Cedar City**	**17.16**	**131**	*e*Pn	**Pn**	**22 16 37.0**	**-0.5**
	comp=Z,35nm,1.3s						
SHPR	**Sheep Range**	**17.17**	**137**	*e*Pn	**Pn**	**22 16 37.4**	**-0.3**
ILAR	**Eielson Array**	**17.28**	**335**	P	**Pn**	**22 16 37.5**	**-1.3**
	comp=Z,0.0nm,0.3s,baz=146,slow=8.6,SNR=24						
ILAR				LR	LR	22 22 38.5	
	comp=Z,529nm,20.7s,baz=319,slow=35						
SRU	**San Rafael**	**17.47**	**122**	*e*Pn	**Pn**	**22 16 42.2**	**+0.9**
	comp=Z,42nm,1.1s						
SRU	**San Rafael**	**17.47**	**122**	*e*P	**Pn**	**22 16 42.2**	**+0.9**
SRU				pmax	pmax		
	comp=Z,42nm,1.1s						
FFC	**Flin Flon**	**17.47**	**64**	*e*P	**Pn**	**22 16 42.2**	**+0.9**
GSC	**Goldstone**	**17.52**	**143**	*e*Pn	**Pn**	**22 16 42.2**	**+0.3**
	comp=Z,73nm,1.8s						
GSC	**Goldstone**	**17.52**	**143**	*e*P	**Pn**	**22 16 42.3**	**+0.3**
GSC				pmax	pmax		
	comp=Z,73nm,1.8s						
COLA	**College**	**17.63**	**334**	*e*P	**Pn**	**22 16 44.2**	**+1.1**
RWWY	**Rawlins**	**17.71**	**110**	*e*Pn	**Pn**	**22 16 44.2**	**-0.2**
	comp=Z,179nm,1.6s						
PPLA	**Purkeypile**	**17.72**	**325**	*e*Pn	**Pn**	**22 16 45.2**	**+1.0**
	comp=Z,89nm,1.7s						
MWC	**Mount Wilson**	**18.02**	**147**	*e*P	**Pn**	**22 16 49.4**	**+1.2**
	comp=Z,16nm,1.0s						
MWC	**Mount Wilson**	**18.02**	**147**	*e*P	**Pn**	**22 16 49.4**	**+1.2**
MWC				pmax	pmax		
	comp=Z,16nm,1.0s						
SVW2	**Sparrevohn**	**18.17**	**317**	*e*P	**Pn**	**22 16 47.2**	**-2.6**
	comp=Z,90nm,1.9s						
INK	**Inuvik**	**18.37**	**355**	*e*Pn	**Pn**	**22 16 52.3**	**+0.1**
	comp=Z,50nm,1.1s						
INK	**Inuvik**	**18.37**	**355**	P	**Pn**	**22 16 51.0**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=174,slow=12,SNR=17						
INK				LR	LR	22 24 32.0	
	comp=Z,2μm,18.1s,baz=183,slow=39						
INK	**Inuvik**	**18.37**	**355**	*e*P	**Pn**	**22 16 52.3**	**+0.1**
INK				pmax	pmax		
	comp=Z,50nm,1.1s						
LDFC	**Landfair**	**18.40**	**139**	*e*Pn	**Pn**	**22 16 52.8**	**0.0**
RSSD	**Black Hills**	**18.41**	**99**	*e*Pn	**Pn**	**22 16 51.8**	**-1.1**
	comp=Z,23nm,0.9s						
RSSD	**Black Hills**	**18.41**	**99**	*e*P	**Pn**	**22 16 51.8**	**-1.1**
RSSD				pmax	pmax		
	comp=Z,23nm,0.9s						
PV04	**Paradox Valley**	**18.87**	**120**	*e*P	**Pn**	**22 16 58.0**	**-0.5**
PHWY	**Pilot Hill**	**19.01**	**108**	*e*P	**Pn**	**22 17 00.2**	**0.0**
	comp=Z,60nm,1.3s						
PFO	**Pinyon Flat Ob**	**19.15**	**144**	*e*P	**Pn**	**22 17 01.2**	**-0.7**
	comp=Z,6.7nm,1.1s						
PFO	**Pinyon Flat Ob**	**19.15**	**144**	*e*P	**Pn**	**22 17 01.2**	**-0.7**
PFO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TTA	**Tatalina**	**19.20**	**322**	*e*P	**Pn**	**22 17 00.9**	**-1.4**
PV01	**Paradox Valley**	**19.24**	**120**	*e*Pn	**Pn**	**22 17 01.8**	**-1.2**
	comp=Z,9μm,1.4s						
SDPT	**Sand Point**	**19.27**	**298**	*e*P	**Pn**	**22 16 59.0**	**-4.2**
	comp=Z,114nm,1.4s						
SMCO	**Snowmass**	**19.43**	**116**	*e*P	**Pn**	**22 17 04.5**	**-0.8**
	comp=Z,52nm,1.2s						
WUAZ	**Wupatki**	**19.75**	**131**	*e*P	**Pn**	**22 17 08.0**	**-1.0**
ISCO	**Idaho Springs**	**19.83**	**112**	*e*P	**Pn**	**22 17 09.4**	**-0.6**
BAR	**Barrett**	**19.90**	**146**	*e*P	**Pn**	**22 17 09.2**	**-1.7**
	comp=Z,30nm,1.4s						
MVCO	**Mesa Verde**	**19.94**	**122**	*e*P	**Pn**	**22 17 09.2**	**-2.2**
	comp=Z,173nm,1.5s						
COLD	**Coldfoot**	**20.04**	**337**	*e*P	**P**	**22 17 10.5**	**0.0**
	comp=Z,37nm,1.2s						
GLA	**Glamis**	**20.27**	**142**	*e*P	**P**	**22 17 13.0**	**-0.3**
	comp=Z,30nm,1.2s						
GLA	**Glamis**	**20.27**	**142**	*e*P	**P**	**22 17 13.0**	**-0.3**
GLA				pmax	pmax		
	comp=Z,30nm,1.2s						
SDCO	**Great Sand Dun**	**21.25**	**116**	*e*P	**P**	**22 17 23.7**	**-0.1**
	comp=Z,42nm,1.3s,mb4.6						
OGNE	**Ogallala**	**21.33**	**105**	*e*P	**P**	**22 17 24.3**	**-0.4**
	comp=Z,118nm,1.1s,mb5.1						
ULM	**Lac du Bonnet**	**21.56**	**76**	P	**P**	**22 17 26.7**	**-0.4**
	comp=Z,90nm,1.1s,mb5.1,baz=283,slow=12,SNR=24						
ULM				LR	LR	22 25 56.2	
	comp=Z,2μm,21.5s,MS4.4,baz=86,slow=37						
AGMN	**Agassiz Nation**	**22.08**	**82**	*e*P	**P**	**22 17 32.0**	**-0.6**
TUC	**Tucson**	**22.65**	**135**	*e*P	**P**	**22 17 38.3**	**-0.6**
ANMO	**Albuquerque**	**22.72**	**123**	P	**P**	**22 17 39.0**	**-0.7**
	comp=Z,13nm,1.0s,mb4.3,baz=320,slow=9.7,SNR=22						
ANMO				LR	LR	22 26 55.7	
	comp=Z,378nm,19.9s,MS3.8,baz=327,slow=38						
ANMO	**Albuquerque**	**22.72**	**123**	*e*P	**P**	**22 17 38.8**	**-0.8**
LAZ	**Ladron**	**22.77**	**125**	*e*P	**P**	**22 17 39.1**	**-1.0**
LENM	**Lemitar**	**23.04**	**125**	*e*P	**P**	**22 17 44.0**	**+1.0**
LPM	**Los Pinos Moun**	**23.11**	**124**	*e*P	**P**	**22 17 43.5**	**-0.3**
BNM	**Barren Site**	**23.24**	**125**	*e*P	**P**	**22 17 44.2**	**-0.9**
	comp=Z,22nm,1.2s,mb4.5						
ECSD	**EROS Data Cent**	**23.34**	**93**	*e*P	**P**	**22 17 45.0**	**-1.1**
CBKS	**Cedar Bluff**	**24.01**	**107**	*e*P	**P**	**22 17 52.4**	**-0.1**
	comp=Z,140nm,1.4s,mb5.2						
CBKS	**Cedar Bluff**	**24.01**	**107**	*e*P	**P**	**22 17 52.4**	**-0.1**
CBKS				pmax	pmax		
	comp=Z,140nm,1.4s,mb5.2						
EYMN	**Ely**	**24.96**	**80**	*e*P	**P**	**22 18 00.1**	**-1.0**
	comp=Z,77nm,1.1s,mb5.2						
AMTX	**Amarillo**	**25.45**	**116**	*e*P	**P**	**22 18 04.8**	**-0.9**
	comp=Z,102nm,1.1s,mb5.3						
KSU1	**Kansas State U**	**25.79**	**103**	*e*P	**P**	**22 18 09.1**	**+0.4**
MNTX	**Cornudas Mount**	**25.80**	**126**	*e*P	**P**	**22 18 08.1**	**-0.8**
	comp=Z,30nm,1.4s,mb4.6						
SCIA	**State Center**	**26.41**	**94**	*e*P	**P**	**22 18 16.0**	**+1.6**
COWI	**Conover**	**27.14**	**83**	*e*P	**P**	**22 18 20.5**	**-0.4**
	comp=Z,28nm,1.2s,mb4.7						
WMOK	**Wichita Mounta**	**27.25**	**112**	*e*P	**P**	**22 18 21.0**	**-0.9**
JFWS	**Jewell Farm**	**27.83**	**90**	*e*P	**P**	**22 18 27.8**	**+0.8**
TXAR	**Lajitas Array**	**28.58**	**127**	P	**P**	**22 18 32.7**	**-1.1**
TXAR				LR	LR	22 30 43.6	
TXAR	**Lajitas Array**	**28.58**	**127**	P	**P**	**22 18 32.7**	**-1.1**
	comp=Z,3.4nm,1.0s,mb4.0,baz=325,slow=6.4,SNR=16						
TXAR				LR	LR	22 30 43.6	
	comp=Z,1μm,18.4s,MS4.5,baz=5.0,slow=38						
RES	**Resolute Bay**	**28.59**	**18**	P	**P**	**22 18 33.1**	**-0.5**
JCT	**Junction City**	**29.76**	**120**	*e*P	**P**	**22 18 42.9**	**-1.4**
	comp=Z,30nm,1.1s,mb4.9						
JCT	**Junction City**	**29.76**	**120**	*e*P	**P**	**22 18 42.9**	**-1.4**
JCT				pmax	pmax		
	comp=Z,30nm,1.1s,mb4.9						
CCM	**Cathedral Cave**	**29.80**	**99**	*e*P	**P**	**22 18 43.4**	**-1.2**
	comp=Z,48nm,1.8s,mb4.9						
CCM	**Cathedral Cave**	**29.80**	**99**	*e*P	**P**	**22 18 43.4**	**-1.2**
CCM				pmax	pmax		
	comp=Z,48nm,1.8s,mb4.9						
MIAR	**Mount Ida**	**30.54**	**107**	*e*P	**P**	**22 18 50.6**	**-0.6**
	comp=Z,53nm,1.4s,mb5.2						
MIAR	**Mount Ida**	**30.54**	**107**	*e*P	**P**	**22 18 50.6**	**-0.6**
MIAR				pmax	pmax		
	comp=Z,53nm,1.4s,mb5.2						
OLIL	**Olney**	**31.42**	**95**	*e*P	**P**	**22 18 57.6**	**-1.2**
	comp=Z,22nm,0.2s,mb5.6						
HKT	**Hockley**	**32.42**	**116**	*e*P	**P**	**22 19 07.4**	**-0.3**
	comp=Z,33nm,1.4s,mb5.0						
HKT	**Hockley**	**32.42**	**116**	*e*P	**P**	**22 19 07.4**	**-0.3**
HKT				pmax	pmax		
	comp=Z,33nm,1.4s,mb5.0						
OXF	**Oxford**	**33.16**	**103**	*e*P	**P**	**22 19 13.5**	**-0.6**
	comp=Z,45nm,0.5s,mb5.7						
OXF	**Oxford**	**33.16**	**103**	*e*P	**P**	**22 19 13.5**	**-0.7**
OXF				pmax	pmax		
	comp=Z,45nm,0.5s,mb5.7						
FRB	**Frobisher Bay**	**34.58**	**43**	LR	LR	22 35 20.6	
	comp=Z,2μm,19.2s,MS4.8,baz=56,slow=39	

	comp=Z,28nm,1.6s,mb4.7							
AVF	**Avril sur Loir**	**75.30**	**31**	*eP*		**P**	**22 24 22.9**	**+2.2**
	comp=Z,14nm,1.6s,mb4.7							
AVF	**Avril sur Loir**	**75.30**	**31**	*eP*		**P**	**22 24 22.9**	**+2.2**
AVF				pmax	pmax			
	comp=Z,14nm,1.6s,mb4.6							
BGF	**Bois d'Agland**	**75.33**	**32**	*eP*		**P**	**22 24 23.3**	**+2.4**
	comp=Z,9.1nm,0.9s,mb4.4							
BGF	**Bois d'Agland**	**75.33**	**32**	*eP*		**P**	**22 24 23.3**	**+2.4**
	comp=Z,4.6nm,0.9s,mb4.4							
BGF	**Bois d'Agland**	**75.33**	**32**	*eP*		**P**	**22 24 23.3**	**+2.4**
BGF				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.4							
TCF	**Toulx Ste Croi**	**75.35**	**32**	*eP*		**P**	**22 24 23.6**	**+2.6**
HINF	**Hinteralfeld**	**75.52**	**29**	*eP*		**P**	**22 24 24.4**	**+2.5**
UPC	**Upice**	**75.58**	**22**	*eP*		**P**	**22 24 26.5**	**+4.3**
UPC	**Upice**	**75.58**	**22**	*eP*		**P**	**22 24 26.5**	**+4.3**
SMF	**Signal de Mont**	**75.59**	**31**	*eP*		**P**	**22 24 24.4**	**+2.0**
	comp=Z,12nm,1.2s,mb4.4							
SMF	**Signal de Mont**	**75.59**	**31**	*eP*		**P**	**22 24 24.4**	**+2.0**
	comp=Z,5.9nm,1.2s,mb4.4							
SMF	**Signal de Mont**	**75.59**	**31**	*eP*		**P**	**22 24 24.4**	**+2.0**
SMF				pmax	pmax			
	comp=Z,6.0nm,1.2s,mb4.4							
PRU	**Pruhonice**	**75.70**	**23**	*eP*		**P**	**22 24 29.1**	**+6.2**
PRU	**Pruhonice**	**75.70**	**23**	*eP*		**P**	**22 24 29.1**	**+6.2**
DPC	**Dobruska-Polom**	**75.80**	**22**	*eP*		**P**	**22 24 27.6**	**+4.1**
DPC	**Dobruska-Polom**	**75.80**	**22**	*eP*		**P**	**22 24 27.6**	**+4.1**
BRVK	**Borovoye**	**75.84**	**348**	*eP*		**P**	**22 24 22.0**	**-1.7**
BRVK				pmax	pmax			
	comp=Z,5.0nm,1.7s,mb4.2							
RJF	**Les Rejaudoux**	**75.97**	**33**	*eP*		**P**	**22 24 26.8**	**+2.3**
LFF	**La Frestale**	**76.00**	**34**	*eP*		**P**	**22 24 27.7**	**+2.9**
	comp=Z,102nm,1.9s,mb5.1							
LFF	**La Frestale**	**76.00**	**34**	*eP*		**P**	**22 24 27.7**	**+2.9**
	comp=Z,51nm,1.9s,mb5.1							
LFF	**La Frestale**	**76.00**	**34**	*eP*		**P**	**22 24 27.7**	**+2.9**
LFF				pmax	pmax			
	comp=Z,51nm,1.9s,mb5.1							
KHC	**Kasperske Hory**	**76.25**	**24**	*eP*		**P**	**22 24 27.3**	**+1.2**
KHC	**Kasperske Hory**	**76.25**	**24**	*eP*		**P**	**22 24 27.3**	**+1.2**
CABF	**La Chapelle**	**76.35**	**30**	*eP*		**P**	**22 24 30.0**	**+3.3**
CAF	**Calviac**	**76.49**	**33**	*eP*		**P**	**22 24 30.2**	**+2.7**
	comp=Z,58nm,1.9s,mb4.9							
CAF	**Calviac**	**76.49**	**33**	*eP*		**P**	**22 24 30.2**	**+2.7**
	comp=Z,29nm,1.9s,mb4.9							
CAF	**Calviac**	**76.49**	**33**	*eP*		**P**	**22 24 30.2**	**+2.7**
CAF				pmax	pmax			
	comp=Z,29nm,1.9s,mb4.9							
KURK	**Kurchatov**	**76.70**	**342**	P		**P**	**22 24 27.1**	**-1.4**
	comp=Z,3.2nm,1.1s,mb4.2,baz=19,slow=5.0,SNR=6.1							
KURK	**Kurchatov**	**76.70**	**342**	*eP*		**P**	**22 24 27.1**	**-1.5**
KURK				pmax	pmax			
	comp=Z,7.0nm,1.7s,mb4.3							
OKC	**Ostrava-Krasne**	**76.71**	**21**	*eP*		**P**	**22 24 32.1**	**+3.4**
OKC	**Ostrava-Krasne**	**76.71**	**21**	*eP*		**P**	**22 24 32.1**	**+3.4**
SJPF	**Ste Jean**	**76.85**	**36**	*eP*		**P**	**22 24 31.6**	**+2.0**
	comp=Z,30nm,1.2s,mb4.8							
SJPF	**Ste Jean**	**76.85**	**36**	*eP*		**P**	**22 24 31.6**	**+2.0**
	comp=Z,15nm,1.2s,mb4.8							
SJPF	**Ste Jean**	**76.85**	**36**	*eP*		**P**	**22 24 31.6**	**+2.0**
SJPF				pmax	pmax			
	comp=Z,15nm,1.2s,mb4.8							
ETSF	**Etsaut**	**77.28**	**36**	*eP*		**P**	**22 24 35.5**	**+3.5**
	comp=Z,13nm,1.1s,mb4.5							
ETSF	**Etsaut**	**77.28**	**36**	*eP*		**P**	**22 24 35.5**	**+3.5**
	comp=Z,6.5nm,1.1s,mb4.5							
ETSF	**Etsaut**	**77.28**	**36**	*eP*		**P**	**22 24 35.5**	**+3.5**
ETSF				pmax	pmax			
	comp=Z,7.0nm,1.1s,mb4.5							
VIVF	**Saint-Julien-l**	**77.44**	**31**	*eP*		**P**	**22 24 35.6**	**+2.7**
EPF	**Esparros**	**77.51**	**35**	*eP*		**P**	**22 24 36.1**	**+2.8**
	comp=Z,20nm,1.4s,mb4.5							
EPF	**Esparros**	**77.51**	**35**	*eP*		**P**	**22 24 36.1**	**+2.8**
	comp=Z,9.8nm,1.4s,mb4.5							
EPF	**Esparros**	**77.51**	**35**	*eP*		**P**	**22 24 36.1**	**+2.8**
EPF				pmax	pmax			
	comp=Z,10.0nm,1.4s,mb4.5							
LPL	**La Plagne**	**77.53**	**30**	*eP*		**P**	**22 24 37.0**	**+3.6**
	comp=Z,31nm,1.8s,mb4.6							
LPL	**La Plagne**	**77.53**	**30**	*eP*		**P**	**22 24 37.0**	**+3.6**
	comp=Z,15nm,1.8s,mb4.6							
LPL	**La Plagne**	**77.53**	**30**	*eP*		**P**	**22 24 37.0**	**+3.6**
LPL				pmax	pmax			
	comp=Z,15nm,1.8s,mb4.6							
LPG	**La Plagne**	**77.56**	**30**	*eP*		**P**	**22 24 37.2**	**+3.7**
	comp=Z,39nm,1.7s,mb4.8							
LPG	**La Plagne**	**77.56**	**30**	*eP*		**P**	**22 24 37.2**	**+3.7**
	comp=Z,20nm,1.7s,mb4.8							
LPG	**La Plagne**	**77.56**	**30**	*eP*		**P**	**22 24 37.2**	**+3.7**
LPG				pmax	pmax			
	comp=Z,19nm,1.7s,mb4.8							
ORIF	**Oris-en-Rattie**	**77.79**	**31**	*eP*		**P**	**22 24 37.6**	**+2.8**
LASF	**Ste Croix**	**77.85**	**32**	*eP*		**P**	**22 24 38.1**	**+2.9**
	comp=Z,28nm,1.6s,mb4.5							
EVO	**Evora**	**77.92**	**43**	*eP*		**P**	**22 24 33.5**	**-2.2**
	comp=Z,40nm,1.5s,mb4.8							
MTLF	**Montolieu**	**77.92**	**34**	*eP*		**P**	**22 24 38.1**	**+2.5**
AKASG	**Malin Array Be**	**77.98**	**14**	P		**P**	**22 24 34.6**	**-1.1**
	comp=Z,2.1nm,0.9s,mb4.1,baz=339,slow=4.7,SNR=5.6							
AKASG				LR		LR	22 59 44.7	
	comp=Z,569nm,19.7s,MS4.9,baz=30,slow=36							
KIEV	**Kiev**	**77.99**	**14**	*eP*		**P**	**22 24 36.2**	**+0.4**
	comp=Z,1.6nm,0.4s,mb4.3							
KIEV	**Kiev**	**77.99**	**14**	*eP*		**P**	**22 24 36.3**	**+0.5**
KIEV				pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.4							
NJ2	**Nanjing**	**78.23**	**306**	*eP*		**P**	**22 24 35.5**	**-2.0**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.8							
MBDF	**Montbardon**	**78.25**	**30**	*eP*		**P**	**22 24 40.7**	**+3.3**
SMRF	**Simiane la Rot**	**78.52**	**31**	*eP*		**P**	**22 24 42.1**	**+3.2**
	comp=Z,24nm,1.5s,mb4.6							
SMRF	**Simiane la Rot**	**78.52**	**31**	*eP*		**P**	**22 24 42.1**	**+3.2**
	comp=Z,24nm,1.5s,mb4.9							
VSR	**Storozhevoye**	**78.62**	**7**	*eP*		**P**	**22 24 38.3**	**-1.0**
VSR				pmax	pmax			
	comp=N,7.0nm,0.4s							
VSR				pmax	pmax			
	comp=E,10.0nm,0.4s							
VSR				pmax	pmax			
	comp=Z,6.0nm,0.4s,mb4.9							
ESDC	**Sonseca Array**	**78.69**	**40**	P		**P**	**22 24 40.1**	**+0.2**
	comp=Z,1.4nm,0.9s,mb3.9,baz=335,slow=5.9,SNR=5.9							
VORD	**Divnogorie**	**78.88**	**7**	*eP*		**P**	**22 24 39.1**	**-1.6**
VORD				pmax	pmax			
	comp=N,30nm,0.5s							
VORD				pmax	pmax			
	comp=E,100nm,0.5s							
VORD				pmax	pmax			
	comp=Z,10.0nm,0.5s,mb5.0							
PSZ	**Piszkesteto**	**78.91**	**20**	*eP*		**P**	**22 24 41.2**	**+0.3**
	comp=Z,1.7nm,0.6s,mb4.2							
PSZ	**Piszkesteto**	**78.91**	**20**	*eP*		**P**	**22 24 41.2**	**+0.3**
PSZ				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.2							
VRHR	**Novokhopersk**	**78.92**	**6**	*eP*		**P**	**22 24 39.7**	**-1.2**
VRHR				pmax	pmax			
	comp=N,7.0nm,0.7s							
VRHR				pmax	pmax			
	comp=E,10.0nm,0.7s							
VRHR				pmax	pmax			
	comp=Z,10.0nm,0.7s,mb4.8							
SBF	**Sospel**	**79.23**	**30**	*eP*		**P**	**22 24 45.4**	**+2.6**
	comp=Z,23nm,1.2s,mb4.7							
SBF	**Sospel**	**79.23**	**30**	*eP*		**P**	**22 24 45.4**	**+2.6**
	comp=Z,12nm,1.2s,mb4.7							
SBF	**Sospel**	**79.23**	**30**	*eP*		**P**	**22 24 45.4**	**+2.6**
SBF				pmax	pmax			
	comp=Z,12nm,1.2s,mb4.7							
FRF	**La Foret Royal**	**79.25**	**31**	*eP*		**P**	**22 24 45.3**	**+2.4**
	comp=Z,46nm,1.7s,mb4.8							
FRF	**La Foret Royal**	**79.25**	**31**	*eP*		**P**	**22 24 45.3**	**+2.4**
	comp=Z,23nm,1.7s,mb4.8							
FRF	**La Foret Royal**	**79.25**	**31**	*eP*		**P**	**22 24 45.3**	**+2.4**
FRF				pmax	pmax			
	comp=Z,23nm,1.7s,mb4.8							
LMR	**La Mourre**	**79.40**	**31**	*eP*		**P**	**22 24 46.2**	**+2.5**
	comp=Z,23nm,1.2s,mb4.7							
LMR	**La Mourre**	**79.40**	**31**	*eP*		**P**	**22 24 46.2**	**+2.5**
	comp=Z,12nm,1.2s,mb4.7							
LMR	**La Mourre**	**79.40**	**31**	*eP*		**P**	**22 24 46.2**	**+2.5**
LMR				pmax	pmax			
	comp=Z,12nm,1.2s,mb4.7							
MK31	**Makanchi Array**	**79.60**	**338**	*eP*		**P**	**22 24 44.3**	**-0.5**
MKAR	**Makanchi Array**	**79.60**	**338**	P		**P**	**22 24 42.5**	**-2.3**
	comp=Z,0.7nm,0.7s,mb3.7,baz=44,slow=5.9,SNR=4.4							
ABKAR	**Akbulak array**	**80.69**	**354**	*eP*		**P**	**22 24 49.4**	**-1.1**
	comp=Z,6.3nm,1.1s,mb4.5							
PGF	**Pioggiola**	**80.92**	**30**	*eP*		**P**	**22 24 54.6**	**+2.7**
	comp=Z,37nm,1.6s,mb4.8							
PGF	**Pioggiola**	**80.92**	**30**	*eP*		**P**	**22 24 54.6**	**+2.7**
	comp=Z,18nm,1.6s,mb4.8							
PGF	**Pioggiola**	**80.92**	**30**	*eP*		**P**	**22 24 54.6**	**+2.7**
PGF				pmax	pmax			
	comp=Z,19nm,1.6s,mb4.8							
TKM2	**Tokmak 2**	**84.76**	**342**	*eP*		**P**	**22 25 12.1**	**+0.3**
	comp=Z,16nm,1.6s,mb4.9							
TKM2	**Tokmak 2**	**84.76**	**342**	*eP*		**P**	**22 25 12.1**	**+0.2**
TKM2				pmax	pmax			
	comp=Z,16nm,1.6s,mb4.9							
GOF	**Gofitskoye**	**85.02**	**5**	*eP*		**P**	**22 25 11.7**	**-1.4**
LPAZ	**La Paz**	**85.34**	**122**	P		**P**	**22 25 13.7**	**-1.3**
	comp=Z,1.9nm,1.0s,mb4.2,baz=305,slow=1.0,SNR=4.0							
EKS2	**Erkin-Say**	**85.37**	**343**	*eP*		**P**	**22 25 15.0**	**+0.1**
AML	**Almayashu**	**85.90**	**343**	*eP*		**P**	**22 25 17.9**	**+0.3**
KIV	**Kislovodsk**	**86.10**	**6**	*eP*		**P**	**22 25 18.8**	**+0.3**
KIV	**Kislovodsk**	**86.10**	**6**	*eP*		**P**	**22 25 19.0**	**+0.5**
KIV				*eS*		S	22 35 52.3	-0.3
KIV				pmax	pmax			
	comp=Z,15nm,1.6s,mb5.0							
KIV				MLR	MLR			
	comp=Z,300nm,16.0s,MS4.8							
TIP	**Timpagrande**	**86.33**	**25**	*eP*		**P**	**22 25 19.6**	**-0.1**
KSH	**Kashi**	**87.95**	**340**	*eP*		**P**	**22 25 27.0**	**-0.6**
KSH				*ep*	pP		22 25 31.8	+0.7
KSH				*es*	sP		22 25 34.3	+2.0
KSH				*eP*	PP		22 28 56.8	+4.0
KSH				*e*SKS			22 35 53.0	
KSH				*eS*	S		22 36 08.5	-2.2
KSH				pmax	pmax			
	comp=Z,3.0nm,1.1s,mb4.4							
KSH				LR	LR			
	comp=N,100nm,8.1s							
KSH				LR	LR			
	comp=E,53nm,3.2s							
KSH				LR	LR			
	comp=Z,78nm,5.0s							
GNI	**Garni**	**90.00**	**4**	*eP*		**P**	**22 25 36.5**	**-0.7**
LSA	**Lhasa**	**92.68**	**325**	*eP*		**P**	**22 25 50.6**	**+0.7**
	comp=Z,84nm,1.3s							
LSA	**Lhasa**	**92.68**	**325**	*eP*		**P**	**22 25 50.6**	**+0.7**
LSA				pmax	pmax			
	comp=Z,84nm,1.3s							
CMAR	**Chiang Mai Arr**	**99.40**	**314**	P		**P**	**22 26 19.6**	**-0.9**
	comp=Z,0.3nm,0.4s,mb4.2,baz=51,slow=4.0,SNR=4.2							

PGC ***27*** *22:18:18.4±1.7,49.96N×130.16W,h10km,ML3.1/7, Mw3.8,211km Wsw of Pt. Hardy, Bc Vancouver Island Region*

IDC ***27*** *22:18:19.9±2.2,50.15N×129.97W,h0km,mb3.7/3, mb1 3.9/9,mb1mx3.7/28,mbtmp3.7/9,ML3.8/4,Error ellipse: s-maj=37.5km s-min=13.0km az=80.0*

ISCJB ***27*** *22:18:20.8±0.5,50.27N±0.04×129.87W±0.06,h10km, mb4.2/6,Error ellipse: s-maj=7.0km s-min=4.6km az=42.0*

NEIC ***27*** *22:18:22.3±0.8,50.18N×130.17W,h10km,mb3.9/8,Error ellipse: s-maj=20.2km s-min=6.9km az=51.0*

ISC 27 22:18:22.6±0.5,50.32N±0.04×129.80W±0.07,h10km,n45, σ1s52/52,mb4.2/6,7D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOLB	**Holberg**	**1.12**	**72**	⇑Pn		**Pn**	**22 18 43.6**	**-0.7**
HOLB				⇑Sn		**Sn**	**22 18 59.4**	**-0.3**
BPBC	**Brooks Peninsu**	**1.31**	**96**	⇓Pn		**Pn**	**22 18 43.5**	**-3.5**
BPBC				⇓Sn		**Sn**	**22 19 02.1**	**-2.5**
PHC	**Port Hardy**	**1.56**	**75**	Pn		**Pn**	**22 18 49.4**	**-1.1**
PHC				⇑Sn		**Sn**	**22 19 11.1**	**+0.4**
MAYB	**Maynard**	**1.69**	**86**	⇓Pn		**Pn**	**22 18 49.9**	**-2.3**
EDB	**Eliza Dome**	**1.79**	**103**	⇓Pn		**Pn**	**22 18 49.6**	**-3.9**
EDB				⇑Sn		**Sn**	**22 19 12.0**	**-4.2**
WOSB	**Woss**	**2.08**	**93**	⇓Pn		**Pn**	**22 18 55.5**	**-2.1**
BBB	**Bella Bella**	**2.15**	**29**	Pn		**Pn**	**22 18 59.0**	**+0.5**
BBB				Sn		**Sn**	**22 19 27.3**	**+2.1**
BBB	**Bella Bella**	**2.15**	**29**	Pn		**Pn**	**22 18 59.0**	**+0.5**
	15nm,0.3s,baz=39,slow=13,SNR=12							
BBB				Sn		**Sn**	**22 19 27.3**	**+2.1**
	19nm,0.3s,baz=131,slow=22,SNR=6.7							
BBB	**Bella Bella**	**2.15**	**29**	Pn		**Pn**	**22 18 59.5**	**+1.0**
BBB				⇓Sn		**Sn**	**22 19 27.5**	**+2.3**
BNB	**Barry Inlet**	**2.57**	**332**	⇑Pn		**Pn**	**22 19 02.2**	**-2.0**
MOBC	**Moresby Island**	**3.13**	**335**	⇓Pn		**Pn**	**22 19 09.5**	**-2.6**
DIB	**Dawson Inlet,**	**3.33**	**331**	Pn		**Pn**	**22 19 13.2**	**-1.6**
PGC	**Sidney**	**4.46**	**110**	Pn		**Pn**	**22 19 30.9**	**+0.6**
LON	**Longmire**	**6.40**	**121**	*e*Pn		**Pn**	**22 19 55.7**	**-1.1**
DLBC	**Dease Lake**	**8.14**	**359**	Pn		**Pn**	**22 20 21.0**	**+0.3**
	0.1nm,0.3s,baz=168,slow=18,SNR=1.5							
YBH	**Yreka Blue Hor**	**9.90**	**147**	Pn		**Pn**	**22 20 44.1**	**-0.8**
	0.1nm,0.3s,baz=0.0,slow=12,SNR=3.4							
IMW	**Indian Meadow**	**14.34**	**109**	*e*Pn		**Pn**	**22 21 50.4**	**+4.8**
	24nm,1.0s							
NVAR	**Mina Array Bea**	**14.43**	**141**	Pn		**Pn**	**22 21 47.2**	**+0.4**
	0.2nm,0.3s,baz=317,slow=13,SNR=5.6							
MOOW	**Moose Ponds**	**14.54**	**110**	*e*Pn		**Pn**	**22 21 52.1**	**+3.8**
TPAW	**Teton Pass**	**14.56**	**111**	*e*Pn		**Pn**	**22 21 53.6**	**+5.0**
REDW	**Red Top Meadow**	**14.70**	**111**	*e*Pn		**Pn**	**22 21 53.9**	**+3.5**
	26nm,1.4s							
LOHW	**Long Hollow**	**14.70**	**110**	*e*Pn		**Pn**	**22 21 55.5**	**+5.1**
	6.3nm,0.8s							
BGU	**Big Grassy Mou**	**15.00**	**122**	P		**Pn**	**22 21 56.4**	**+1.9**
	4.1nm,1.2s							
SPUT	**South Promonto**	**15.06**	**120**	*e*Pn		**Pn**	**22 21 58.8**	**+3.5**
	11nm,1.4s							
KDAK	**Kodiak Island**	**15.27**	**308**	Pn		**Pn**	**22 22 00.2**	**+2.2**
KDAK	**Kodiak Island**	**15.27**	**308**	Pn		**Pn**	**22 22 00.2**	**+2.2**
	0.2nm,0.3s,baz=74,slow=8.7,SNR=4.4							
HWUT	**Hardware Ranch**	**15.35**	**118**	*e*P		**Pn**	**22 22 01.5**	**+2.3**
	6.8nm,1.2s							
DUG	**Dugway**	**15.63**	**124**	*e*P		**Pn**	**22 22 06.2**	**+3.3**
	13nm,1.4s							
PDAR	**Pinedale Array**	**15.81**	**111**	Pn		**Pn**	**22 22 06.7**	**+1.6**
	0.1nm,0.3s,baz=311,slow=9.7,SNR=11							
ILAR	**Eielson Array**	**17.05**	**335**	P		**Pn**	**22 22 23.8**	**+3.0**
	0.1nm,0.3s,baz=148,slow=11,SNR=7.2							
ARUT	**Antelope Range**	**17.13**	**131**	*e*Pn		**Pn**	**22 22 22.0**	**0.0**
CCUT	**Cedar City**	**17.36**	**131**	*e*Pn		**Pn**	**22 22 26.2**	**+1.4**
INK	**Inuvik**	**18.14**	**356**	P		**Pn**	**22 22 36.4**	**+2.1**
	baz=144,slow=8.7,SNR=2.4							
RSSD	**Black Hills**	**18.52**	**100**	P		**Pn**	**22 22 40.6**	**+1.6**
	8.9nm,1.9s							
TTA	**Tatalina**	**18.99**	**322**	*e*P		**Pn**	**22 22 43.9**	**-0.7**
	9.1nm,1.3s							
PV01	**Paradox Valley**	**19.41**	**121**	*e*P		**Pn**	**22 22 48.4**	**-1.5**
MVCO	**Mesa Verde**	**20.12**	**123**	*e*P		**P**	**22 22 57.7**	**+1.2**
ULM	**Lac du Bonnet**	**21.58**	**77**	P		**P**	**22 23 11.8**	**-0.3**
ULM	**Lac du Bonnet**	**21.58**	**77**	P		**P**	**22 23 11.8**	**-0.3**
	3.7nm,0.6s,mb4.0,baz=290,slow=15,SNR=2.2							
ANMO	**Albuquerque**	**22.90**	**123**	P		**P**	**22 23 25.5**	**-0.8**
ANMO	**Albuquerque**	**22.90**	**123**	P		**P**	**22 23 25.5**	**-0.8**
	2.2nm,0.9s,mb3.6,baz=317,slow=11,SNR=3.9							
AMTX	**Amarillo**	**25.61**	**116**	*e*P		**P**	**22 23 50.9**	**-1.1**
	16nm,1.0s,mb4.5							
TXAR	**Lajitas Array**	**28.77**	**127**	P		**P**	**22 24 18.5**	**-1.9**
	0.5nm,0.7s,mb3.3,baz=90,slow=0.9,SNR=2.9							
ENH	**Enshi**	**84.16**	**312**	*e*P		**P**	**22 30 53.7**	**-0.2**
	44nm,2.1s,mb5.2							
KBL	**Kabul**	**93.88**	**344**	*e*P		**P**	**22 31 39.8**	**-0.4**
	1.9nm,0.4s,mb4.9							

IDC ***27*** *22:22:44.9±2.6,50.16N×130.62W,h0km,mb3.7/2, mb1 3.8/6,mb1mx3.6/25,mbtmp3.5/6,ML3.9/3,MS3.7/2, Ms1 3.7/2,ms1mx3.1/44,Error ellipse: s-maj=38.1km s-min=19.4km az=84.0*

PGC ***27*** *22:22:47.4±1.2,50.11N×130.26W,h10km,ML3.4/10, Mw4.0,212km Wsw of Pt. Hardy, Bc Vancouver Island Region*

ISCJB ***27*** *22:22:48.2±1.9,50.35N±0.04×130.12W±0.07, h11km±14km,mb3.8/4,Error ellipse: s-maj=9.3km s-min=4.8km az=141.0*

NEIC ***27*** *22:22:49.1±0.6,50.27N×130.39W,h10km,mb4.2/12, Error ellipse: s-maj=12.8km s-min=5.2km az=58.0*

ISC 27 22:22:49.7±2.7,50.35N±0.05×130.22W±0.09, h11km±21km,n49,σ1s31/55,mb3.8/4,10D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOLB	**Holberg**	**1.36**	**77**	⇓Pn		**Pn**	**22 23 11.6**	**-3.1**
HOLB				⇑Sn		**Sn**	**22 23 28.5**	**-4.2**
BPBC	**Brooks Peninsu**	**1.58**	**96**	⇓Pn		**Pn**	**22 23 13.1**	**-4.6**
BPBC				⇓Sn		**Sn**	**22 23 31.5**	**-6.6**
PHC	**Port Hardy**	**1.81**	**78**	⇑Pn		**Pn**	**22 23 18.4**	**-2.4**
PHC				⇓Sn		**Sn**	**22 23 39.7**	**-4.1**
MAYB	**Maynard**	**1.95**	**87**	⇓Pn		**Pn**	**22 23 19.3**	**-3.5**
EDB	**Eliza Dome**	**2.05**	**102**	⇓Pn		**Pn**	**22 23 19.9**	**-4.2**
BBB	**Bella Bella**	**2.26**	**35**	Pn		**Pn**	**22 23 26.9**	**-0.1**
BBB				Sn		**Sn**	**22 23 56.2**	**+1.3**
BBB				LR		LR	22 24 28.1	
BBB	**Bella Bella**	**2.26**	**35**	Pn		**Pn**	**22 23 26.9**	**-0.1**
	43nm,0.3s,baz=48,slow=13,SNR=33							
BBB				Sn		**Sn**	**22 23 56.2**	**+1.3**
	25nm,0.3s,baz=242,slow=17,SNR=5.7							
BBB				LR		LR	22 24 28.1	
	comp=Z,965nm,18.5s,baz=340,slow=40							
BBB	**Bella Bella**	**2.26**	**35**	⇑Pn		**Pn**	**22 23 26.9**	**-0.2**
BBB				⇓Sn		**Sn**	**22 23 55.0**	**+0.1**
WOSB	**Woss**	**2.35**	**93**	⇑Pn		**Pn**	**22 23 24.9**	**-3.3**
BNB	**Barry Inlet**	**2.43**	**337**	⇓Pn		**Pn**	**22 23 28.3**	**-1.0**
BNB				⇑Sn		**Sn**	**22 23 59.0**	**+0.1**
NCRB	**Newcastle Ridg**	**2.67**	**87**	⇑Pn		**Pn**	**22 23 29.7**	**-2.9**
MOBC	**Moresby Island**	**3.00**	**339**	⇓Pn		**Pn**	**22 23 36.3**	**-0.8**
DIB	**Dawson Inlet,**	**3.18**	**335**	Pn		**Pn**	**22 23 40.1**	**+0.5**
	SNR=26							
DIB	**Dawson Inlet,**	**3.18**	**335**	⇓Pn		**Pn**	**22 23 38.6**	**-1.1**
PGC	**Sidney**	**4.73**	**109**	Pn		**Pn**	**22 24 02.2**	**+1.4**
NLWA	**Neilton Lookou**	**5.13**	**123**	*e*Pn		**Pn**	**22 24 07.2**	**+0.8**
COR	**Corvallis**	**7.43**	**138**	Pn		**Pn**	**22 24 38.1**	**+0.2**
DLBC	**Dease Lake**	**8.11**	**1**	Pn		**Pn**	**22 24 48.7**	**+1.5**
NEW	**Newport**	**8.81**	**99**	*e*Pn		**Pn**	**22 24 58.0**	**+1.1**
YBH	**Yreka Blue Hor**	**10.07**	**146**	LR		LR	22 28 31.1	
	comp=Z,453nm,18.3s,baz=108,slow=34							
MOD	**Modoc**	**10.89**	**137**	*e*Pn		**Pn**	**22 25 25.6**	**+0.3**
PAHR	**Pah Rah Range**	**13.10**	**140**	Pn		**Pn**	**22 25 54.5**	**-1.1**
NVAR	**Mina Array Bea**	**14.62**	**140**	Pn		**Pn**	**22 26 14.3**	**-2.1**
	0.2nm,0.3s,baz=312,slow=11,SNR=2.8							
MOOW	**Moose Ponds**	**14.80**	**109**	*e*P		**Pn**	**22 26 20.5**	**+1.7**
	7.5nm,0.8s							
TPAW	**Teton Pass**	**14.82**	**110**	*e*Pn		**Pn**	**22 26 21.8**	**+2.7**
	23nm,1.2s							
YKA	**Yellowknife Ar**	**14.87**	**29**	Pn		**Pn**	**22 26 19.8**	**+0.3**
	0.1nm,0.3s,baz=225,slow=12,SNR=3.0							
REDW	**Red Top Meadow**	**14.96**	**110**	*e*Pn		**Pn**	**22 26 20.7**	**-0.2**
	20nm,1.1s							
LOHW	**Long Hollow**	**14.96**	**109**	*e*Pn		**Pn**	**22 26 21.9**	**+0.9**
	10nm,1.2s							
BGU	**Big Grassy Mou**	**15.24**	**122**	*e*Pn		**Pn**	**22 26 25.4**	**+0.7**
	46nm,1.9s							
PMR	**Palmer**	**15.38**	**324**	*e*Pn		**Pn**	**22 26 26.2**	**-0.2**
	23nm,1.6s							
DUG	**Dugway**	**15.88**	**123**	*e*Pn		**Pn**	**22 26 34.0**	**+1.0**
	47nm,1.9s							
PDAR	**Pinedale Array**	**16.07**	**110**	Pn		**Pn**	**22 26 36.7**	**+1.2**
	0.1nm,0.3s,baz=307,slow=10,SNR=14						

WOSB	**Woss**		1.91	87	⇑Pn		Pn	22 46 05.0	-1.3	
BBB	**Bella Bella**		2.26	23	Pn		Pn	22 46 07.2	-3.8	
BBB					Sn		Sn	22 46 38.6	+0.2	
BBB	**Bella Bella**		2.26	23	Pn		Pn	22 46 07.2	-3.8	
	153nm,0.3s,baz=47,slow=9.3,SNR=50									
BBB					Sn		Sn	22 46 38.6	+0.2	
	39nm,0.3s,baz=150,slow=21,SNR=11									
BBB	**Bella Bella**		2.26	23	⇑Pn		Pn	22 46 09.9	-1.2	
BBB					⇓Sn		Sn	22 46 39.1	+0.7	
GDR	**Gold River**		2.29	97	⇑Pn		Pn	22 46 08.8	-2.6	
BNB	**Barry Inlet**		2.83	332	⇑Pn		Pn	22 46 13.5	-5.3	
OZB	**Mount Ozzard**		2.88	112	⇓Sn		Sn	22 46 51.9	-1.7	
MOBC	**Moresby Island**		3.39	334	⇑Pn		Pn	22 46 21.8	-4.8	
DIB	**Dawson Inlet,**		3.59	331	Pn		Pn	22 46 24.7	-4.7	
DIB	**Dawson Inlet,**		3.59	331	⇑Pn		Pn	22 46 24.3	-5.1	
OBC	**Olympics--Boni**		4.15	118	P		Pn	22 46 36.1	-0.9	
PGC	**Sidney**		4.24	108	*e*Pn		Pn	22 46 37.6	-0.6	
MCW	**Mount Constitu**		4.61	106	P		Pn	22 46 42.9	-0.4	
NLWA	**Neilton Lookou**		4.64	124	*e*Pn		Pn	22 46 41.3	-2.4	
BLN	**Blyn Mountain**		4.81	113	P		Pn	22 46 43.3	-2.8	
VDB	**Vedder Mountai**		4.96	100	P		Pn	22 46 48.8	+0.6	
JCW	**Jim Creek**		5.35	108	P		Pn	22 46 53.3	-0.2	
RPW	**Rockport**		5.51	105	*e*Pn		Pn	22 46 54.6	-1.1	
HTW	**Haystack Looko**		5.62	111	P		Pn	22 46 57.0	-0.2	
CRAG	**Craig**		5.79	339	*e*P		Pn	22 47 01.7	+2.2	
	46nm,1.2s									
LON	**Longmire**		6.15	120	*e*Pn		Pn	22 47 04.1	-0.4	
WRAK	**Wrangell Islan**		6.54	346	*e*Pn		Pn	22 47 09.9	+0.2	
ETW	**Entiat**		6.58	109	*e*Pn		Pn	22 47 11.1	+0.8	
TBM	**Table Mountain**		6.62	113	P		Pn	22 47 11.7	+0.8	
NAC	**Naches**		6.71	117	P		Pn	22 47 13.1	+0.9	
COR	**Corvallis**		6.96	140	Pn		Pn	22 47 16.2	+0.6	
HOOD	**Mount Hood Mea**		7.16	129	*e*Pn		Pn	22 47 18.4	+0.1	
MDW	**Midway**		7.40	115	P		Pn	22 47 21.7	+0.2	
RSW	**Rattlesnake Hi**		7.61	115	*e*Pn		Pn	22 47 25.2	+0.6	
HAWA	**Hanford**		7.65	115	*e*Pn		Pn	22 47 25.1	0.0	
OD2	**Odessa Site #2**		7.66	107	*e*Pn		Pn	22 47 22.4	-2.8	
NEW	**Newport**		8.35	98	*e*Pn		Pn	22 47 35.0	+0.4	
DLBC	**Dease Lake**		8.35	358	*e*Pn		Pn	22 47 34.2	-0.4	
DLBC	**Dease Lake**		8.35	358	Pn		Pn	22 47 32.4	-2.1	
	0.9nm,0.3s,baz=203,slow=12,SNR=11									
LNOR	**Lincton Mounta**		8.66	115	*e*Pn		Pn	22 47 38.8	-0.1	
KRMB	**Red Mountain**		9.45	153	Pn		Pn	22 47 50.1	+0.4	
YBH	**Yreka Blue Hor**		9.63	148	*e*Pn		Pn	22 47 52.7	+0.4	
YBH					Sn		Sn	22 49 41.1	+1.2	
YBH	**Yreka Blue Hor**		9.63	148	Pn		Pn	22 47 50.5	-1.8	
	0.2nm,0.3s,baz=234,slow=8.7,SNR=3.2									
SKAG	**Skagway**		9.94	343	*e*Pn		Pn	22 47 58.7	+2.3	
BSMT	**Bassoo Peak**		9.96	97	*e*Pn		Pn	22 47 57.8	+1.1	
WALA	**Waterton Lakes**		10.21	90	*e*Pn		Pn	22 48 02.2	+2.1	
JTMT	**Jette**		10.32	97	*e*Pn		Pn	22 48 02.0	+0.4	
EDM	**Edmonton**		10.53	67	*e*Pn		Pn	22 48 05.4	+0.9	
WDC	**Whiskeytown Da**		10.72	150	*e*Pn		Pn	22 48 08.4	+1.2	
WVOR	**Wild Horse Val**		10.76	131	*e*Pn		Pn	22 48 08.6	+0.9	
	16nm,1.4s									
MSO	**Missoula**		10.87	102	*e*Pn		Pn	22 48 09.3	+0.2	
SLMT	**Seeley Lake**		10.99	99	*e*Pn		Pn	22 48 11.2	+0.3	
CHMT	**Chamberlain Mo**		11.27	100	*e*Pn		Pn	22 48 15.2	+0.6	
HYT	**Haines Junctio**		11.64	340	*e*Pn		Pn	22 48 24.9	+5.3	
LRM	**Limekiln Ridge**		12.23	104	*e*Pn		Pn	22 48 28.8	+1.0	
HLID	**Hailey**		12.25	117	*e*Pn		Pn	22 48 28.7	+0.7	
DLMT	**Dillon**		12.35	106	*e*Pn		Pn	22 48 28.6	-0.8	
MCMT	**McKenzie Canyo**		12.46	109	*e*Pn		Pn	22 48 30.2	-0.7	
	5.4nm,0.9s									
PAHR	**Pah Rah Range**		12.64	142	*e*Pn		Pn	22 48 34.3	+0.9	
BOZ	**Bozeman (W)**		12.82	104	*e*Pn		Pn	22 48 36.2	+0.4	
WCN	**Washoe City**		12.84	144	*e*Pn		Pn	22 48 36.1	-0.1	
	13nm,1.3s									
BMN	**Battle Mountai**		12.98	134	Pn		Pn	22 48 38.4	+0.3	
WAKR	**Walker**		13.66	144	*e*Pn		Pn	22 48 47.5	+0.2	
YNR	**Norris Junctio**		13.85	106	*e*Pn		Pn	22 48 53.2	+3.3	
IMW	**Indian Meadow**		14.12	109	*e*Pn		Pn	22 48 55.3	+1.7	
DCID1	**Drake Creek**		14.13	110	*e*Pn		Pn	22 48 55.0	+1.2	
	81nm,1.3s									
FLWY	**Flagg Ranch**		14.16	108	*e*Pn		Pn	22 48 55.3	+1.1	
	28nm,1.0s									
NVAR	**Mina Array Bea**		14.16	141	Pn		Pn	22 48 52.7	-1.5	
	baz=317,slow=8.5,SNR=14									
RRI2	**Red Ridge**		14.19	112	*e*Pn		Pn	22 48 53.5	-1.0	
	12nm,0.9s									
HVU	**Hansel Valley**		14.31	119	*e*Pn		Pn	22 49 03.6	+7.4	
MOOW	**Moose Ponds**		14.32	109	*e*Pn		Pn	22 48 57.2	+1.0	
TPAW	**Teton Pass**		14.33	110	*e*Pn		Pn	22 48 58.8	+2.3	
SNOW	**Snow King Moun**		14.47	110	Pn		Pn	22 48 57.9	-0.5	
LOHW	**Long Hollow**		14.48	109	*e*Pn		Pn	22 48 58.7	+0.3	
RLMT	**Red Lodge**		14.54	102	*e*Pn		Pn	22 48 59.2	-0.1	
AHID	**Auburn Hatcher**		14.66	113	*e*Pn		Pn	22 49 00.6	-0.3	
BGU	**Big Grassy Mou**		14.75	122	*e*P		Pn	22 49 02.5	+0.4	
	9.5nm,1.0s									
SPUT	**South Promonto**		14.81	120	*e*Pn		Pn	22 49 02.2	-0.8	
YKA	**Yellowknife Ar**		14.87	28	Pn		Pn	22 49 01.2	-2.4	
	0.3nm,0.3s,baz=221,slow=12,SNR=5.2									
DAWY	**Dawson**		14.95	343	*e*Pn		Pn	22 49 06.3	+1.6	
HWUT	**Hardware Ranch**		15.11	117	*e*Pn		Pn	22 49 06.0	-1.0	
	16nm,1.4s									
DUG	**Dugway**		15.38	124	*e*Pn		Pn	22 49 11.0	+0.5	
	18nm,1.1s									
KDAK	**Kodiak Island**		15.53	308	Pn		Pn	22 49 08.5	-3.8	
KDAK	**Kodiak Island**		15.53	308	Pn		Pn	22 49 08.5	-3.8	
	0.2nm,0.3s,baz=135,slow=17,SNR=2.6									
BW06	**Boulder Array**		15.58	110	*e*Pn		Pn	22 49 14.6	+1.4	
	22nm,1.1s									
PDAR	**Pinedale Array**		15.58	110	Pn		Pn	22 49 13.2	0.0	
	0.3nm,0.3s,baz=310,slow=10,SNR=32									
SML	**Sawmill**		15.67	325	*e*Pn		Pn	22 49 15.7	+1.6	
	4.2nm,1.1s									
PMR	**Palmer**		15.83	324	*e*Pn		Pn	22 49 17.1	+0.8	
	3.7nm,0.6s									
EGAK	**Eagle**		15.93	342	*e*Pn		Pn	22 49 18.7	+1.2	
	11nm,1.0s									
DAU	**Daniels Canyon**		16.08	120	*e*Pn		Pn	22 49 19.8	+0.1	
ISA	**Isabella**		16.54	147	*e*Pn		Pn	22 49 27.3	+1.8	
	15nm,1.3s									
DGMT	**Dagmar**		16.60	86	*e*Pn		Pn	22 49 27.9	+1.8	
	107nm,1.8s									
RSO	**Redoubt South**		16.70	317	*e*Pn		Pn	22 49 28.1	+0.8	
ARUT	**Antelope Range**		16.87	131	*e*Pn		Pn	22 49 26.8	-2.9	
	20nm,1.4s									
MSU	**Marysvale**		16.95	127	*e*Pn		Pn	22 49 31.1	+0.4	
CCUT	**Cedar City**		17.10	131	*e*Pn		Pn	22 49 32.9	+0.4	
	29nm,1.7s									
SHPR	**Sheep Range**		17.12	137	*e*Pn		Pn	22 49 32.7	-0.1	
	5.2nm,1.3s									
MCK	**McKinley**		17.16	330	*e*Pn		Pn	22 49 33.9	+0.7	
	7.2nm,0.8s									
ILAR	**Eielson Array**		17.31	335	P		Pn	22 49 32.5	-2.5	
	0.1nm,0.3s,baz=151,slow=10,SNR=21									
FFC	**Flin Flon**		17.38	64	*e*Pn		Pn	22 49 36.6	+0.7	
	45nm,1.0s									
SRU	**San Rafael**		17.39	122	*e*Pn		Pn	22 49 38.0	+1.8	
	14nm,0.9s									
GSC	**Goldstone**		17.47	143	*e*Pn		Pn	22 49 37.8	+0.6	
	8.1nm,1.s									
SVW2	**Sparrevohn**		18.22	317	*e*P		Pn	22 49 42.7	-3.6	
	41nm,2.0s									
RSSD	**Black Hills**		18.32	99	*e*Pn		Pn	22 49 48.4	+0.9	
	13nm,1.2s									
INK	**Inuvik**		18.36	355	*e*Pn		Pn	22 49 47.8	-0.1	
	16nm,1.1s									
INK	**Inuvik**		18.36	355	P		Pn	22 49 45.4	-2.5	
	0.3nm,0.3s,baz=195,slow=11,SNR=4.1									
PV04	**Paradox Valley**		18.79	121	*e*P		Pn	22 49 53.4	+0.1	
PHWY	**Pilot Hill**		18.92	109	*e*P		Pn	22 49 55.5	+0.6	
	17nm,0.8s									
PV01	**Paradox Valley**		19.16	121	*e*P		Pn	22 49 56.9	-0.9	
	3µm,1.2s									
TTA	**Tatalina**		19.25	322	*e*P		Pn	22 49 56.6	-2.1	
SMCO	**Snowmass**		19.35	116	*e*Pn		Pn	22 50 01.9	+1.9	
	20nm,1.1s									
SDPT	**Sand Point**		19.35	298	*e*P		Pn	22 49 58.2	-1.8	
	160nm,1.7s									
WUAZ	**Wupatki**		19.68	131	*e*P		Pn	22 50 02.3	-1.8	
	6.0nm,0.8s									
ISCO	**Idaho Springs**		19.74	112	*e*P		Pn	22 50 04.8	0.0	
	11nm,1.1s									
MVCO	**Mesa Verde**		19.87	122	*e*P		Pn	22 50 04.1	-2.2	
	103nm,1.8s									
GLA	**Glamis**		20.23	142	*e*P		P	22 50 08.3	-0.2	
SDCO	**Great Sand Dun**		21.17	117	*e*P		P	22 50 17.9	-0.8	
	18nm,1.3s,mb4.2									
ULM	**Lac du Bonnet**		21.46	77	P		P	22 50 21.5	-0.2	
ULM	**Lac du Bonnet**		21.46	77	P		P	22 50 21.5	-0.2	
	21nm,0.8s,mb4.5,baz=285,slow=11,SNR=14									
AGMN	**Agassiz Nation**		21.98	82	*e*P		P	22 50 27.6	+0.4	
	54nm,1.6s,mb4.7									
TUC	**Tucson**		22.59	135	*e*P		P	22 50 34.3	+0.3	
	15nm,1.3s,mb4.3									
ANMO	**Albuquerque**		22.65	123	*e*P		P	22 50 35.2	+0.6	
	6.0nm,0.9s,mb4.0									
ANMO	**Albuquerque**		22.65	123	P		P	22 50 33.3	-1.2	
	4.4nm,0.9s,mb3.9,baz=320,slow=9.7,SNR=11									
LAZ	**Ladron**		22.70	125	*e*P		P	22 50 34.0	-1.1	
	5.9nm,1.3s,mb3.9									
LENM	**Lemitar**		22.97	125	*e*P		P	22 50 39.0	+1.0	
LPM	**Los Pinos Moun**		23.04	125	*e*P		P	22 50 39.2	+0.5	
BNM	**Barren Site**		23.17	125	*e*P		P	22 50 40.5	+0.5	
	41nm,1.8s,mb4.6									
ECSD	**EROS Data Cent**		23.24	93	*e*P		P	22 50 41.0	+0.2	
	36nm,1.0s,mb4.8									
EYMN	**Ely**		24.86	80	*e*P		P	22 50 55.6	-0.3	
	33nm,0.8s,mb4.9									
AMTX	**Amarillo**		25.37	116	*e*P		P	22 51 00.1	-0.4	
	25nm,0.9s,mb4.8									
MNTX	**Cornudas Mount**		25.73	127	*e*P		P	22 51 03.4	-0.5	
	12nm,1.3s,mb4.3									
COWI	**Conover**		27.04	83	*e*P		P	22 51 15.0	-0.6	
	11nm,1.0s,mb4.3									
WMOK	**Wichita Mounta**		27.17	113	*e*P		P	22 51 16.3	-0.5	
	10nm,1.0s,mb4.3									
JFWS	**Jewell Farm**		27.73	90	*e*P		P	22 51 21.9	+0.2	
	14nm,0.8s,mb4.7									
TXAR	**Lajitas Array**		28.51	127	P		P	22 51 26.8	-2.0	
TXAR	**Lajitas Array**		28.51	127	P		P	22 51 26.8	-2.0	
	1.5nm,0.8s,mb3.8,baz=317,slow=7.2,SNR=12									
JCT	**Junction City**		29.68	120	*e*P		P	22 51 38.9	-0.3	
	13nm,1.1s,mb4.6									
MIAR	**Mount Ida**		30.45	107	*e*P		P	22 51 46.1	0.0	
	9.5nm,1.1s,mb4.4									
HKT	**Hockley**		32.34	116	*e*P		P	22 52 02.3	-0.4	
	8.9nm,1.3s,mb4.4									
SADO	**Sadowa**		33.97	79	P		P	22 52 15.4	-1.3	
	6.0nm,0.9s,mb4.5,baz=306,slow=8.9,SNR=4.5									
LRAL	**Lakeview Retre**		35.55	102	*e*P		P	22 52 31.6	+1.1	
	4.5nm,0.9s,mb4.4									
TKL	**Tuckaleechee C**		35.92	96	P		P	22 52 32.2	-1.5	
TKL	**Tuckaleechee C**		35.92	96	P		P	22 52 32.2	-1.5	
	1.8nm,0.6s,mb4.2,baz=288,slow=6.4,SNR=3.7									
FRNY	**Flat Rock**		37.43	76	*e*P		P	22 52 45.5	-0.9	
	8.1nm,0.8s,mb4.6									
GOGA	**Godfrey**		37.54	99	*e*P		P	22 52 45.2	-2.3	
	11nm,1.1s,mb4.5									
BJI	**Beijing**		73.32	313	P		P	22 57 04.0	-0.8	
BJI					pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.5									
HHC	**Hu-ho-hao-te**		74.78	317	*e*P		P	22 57 12.3	-1.0	
HHC					PP	PP		23 00 00.3	+0.3	
HHC					S	S		23 06 44.3	-4.4	
HHC					pmax	pmax				
	comp=Z,10.0nm,0.9s									
HHC					pmax	pmax				
	comp=Z,300nm,7.6s									
HHC					LR	LR				
	comp=N,140nm,16.7s									
HHC					LR	LR				
	comp=E,230nm,17.8s									
HHC					LR	LR				
	comp=Z,140nm,17.8s									
NJ2	**Nanjing**		78.30	306	*e*P		P	22 57 34.5	+1.1	
NJ2					pmax	pmax				
	comp=Z,10.0nm,0.7s									
WMQ	**Urumqi**		80.97	334	*e*P		P	22 57 49.3	+1.6	
WMQ					pP	pP		22 57 53.8	-0.2	
WMQ					sP	sP		22 57 56.3	+0.1	
WMQ					pmax	pmax				
	comp=Z,11nm,1.2s									
WMQ					pmax	pmax				
	comp=Z,100nm,4.0s									
WMQ					LR	LR				
	comp=N,120nm,20.0s									
WMQ					LR	LR				
	comp=Z,110nm,22.5s									
LZH	**Lanzhou**		82.09	319	*e*P		P	22 57 53.5	-0.2	
LZH					*e*PP	PP		23 01 02.5	+1.4	
LZH					pmax	pmax				
	comp=Z,18nm,1.5s									
LZH					pmax	pmax				
	comp=Z,49nm,8.4s									
LZH					LR	LR				
	comp=E,170nm,17.0s									
LZH					LR	LR				
	comp=Z,210nm,19.5s									
CD2	**Chengdu**		86.54	316	P		P	22 58 16.5	+0.1	
CD2					pmax	pmax				
	comp=Z,10.0nm,0.5s									
CD2					pmax	pmax				
	comp=Z,120nm,5.0s									
KSH	**Kashi**		87.97	341	*e*P		P	22 58 26.0	+2.8	
KSH					*e*pP	pP		22 58 30.0	+0.5	
KSH					*e*sP	sP		22 58 32.5	+0.7	
KSH					*e*PP	PP		23 01 55.3	+6.7	
KSH					*e*SKS			23 08 52.3		
KSH					*e*S	S		23 09 08.0	+2.6	
KSH					*e*SS	SS		23 15 00.3	+8.9	
KSH					pmax	pmax				
	comp=Z,1.0nm,0.3s									
KSH					pmax	pmax				
	comp=Z,170nm,3.9s									
KSH					LR	LR				
	comp=N,57nm,5.1s									
KSH					LR	LR				
	comp=E,29nm,4.7s									
KSH					LR	LR				
	comp=Z,65nm,5.8s									
GYA	**Guiyang**		88.97	312	*e*P		P	22 58 28.3	+0.2	
GYA					pmax	pmax				
	comp=Z,10.0nm,1.0s									

*ISCJB **27** 22:56:16.6±1.7, 32.°29N±0.°03×47.°53E±0.°06, h6km±11km, Error ellipse: s-maj=8.4km s-min=4.7km az=2.5*
*KISR **27** 22:56:16.2±0.8, 32.°33N×48.°22E, h43km±999km, ML2.9*
*TEH **27** 22:56:18.2, 32.°23N×47.°41E, h18km*
ISC 27 22:56:17.6±2.1, 32.°30N±0.°03×47.°49E±0.°06, h6km±14km, n19, σ0.°65/25, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IKOM	**Komasi**	1.87	1	*e*Pn		Pn	22 56 50.6	+0.4
IKOM				*e*Sn		Sn	22 57 14.3	+0.1
IKOM				*e*			22 57 27.0	
	comp=Z,5µm,0.1s							
IVIS	**Veis**	2.29	347	*e*Pn		Pn	22 56 55.9	0.0
IVIS				*e*			22 57 34.5	
	comp=Z,2µm,0.1s							
MIB	**Mutribah**	2.49	183	*e*P		Pn	22 56 58.3	-0.4
MIB				*e*S		Sn	22 57 30.6	+1.3
MIB				AML		AML	22 57 39.5	
	comp=Z,52nm,0.5s							
IDHR	**Dehrash**	2.57	339	*e*Pn		Pn	22 56 59.5	-0.2
IDHR				*e*			22 57 41.1	
	comp=Z,2µm,0.2s							
ILIN	**Lien**	2.65	351	*e*Pn		Pn	22 57 01.0	+0.1
ILIN				*e*Sn		Sn	22 57 32.6	-0.8
ILIN				*e*			22 57 39.3	
	comp=N,1µm,0.2s							
BHD	**Baghdad**	2.79	291	*ex*		x	22 57 19.7	
BHD				*ex*		x	22 57 54.3	
IPIR	**Pirpir**	2.90	81	*e*Sn		Sn	22 57 38.9	-0.6
IPIR				*e*Pn		Pn	22 57 04.9	+0.6
IPIR				*e*Sn		Sn	22 57 39.7	+0.2
IPIR				*e*			22 58 04.3	
	comp=Z,776nm,0.2s							
NAY	**Al-Naaiem**	3.04	184	*e*P		Pn	22 57 06.2	0.0
NAY				*e*S		Sn	22 57 44.4	+1.3
NAY				AML		AML	22 57 50.7	
	comp=Z,15nm,0.4s							
RDF	**Al-Radifah**	3.36	179	*e*P		Pn	22 57 10.4	-0.2
QRN	**Al-Qurain**	3.56	174	*e*P		Pn	22 57 12.4	-0.9
QRN				*e*S		Sn	22 57 53.9	-1.9
QRN				AML		AML	22 57 59.3	
	comp=Z,30nm,0.3s							
IKLH	**Kolahrood**	3.59	72	*e*Pn		Pn	22 57 14.3	+0.5
IKLH				*e*			22 58 15.0	
	comp=Z,352nm,0.2s							
IRAZ	**Razeghan**	3.71	33	*e*Pn		Pn	22 57 16.0	+0.6
IRAZ				*e*			22 58 04.2	
	comp=Z,647nm,0.2s							
IGAR	**Gharneh**	3.86	87	*e*Pn		Pn	22 57 17.0	-0.4
IZEF	**Zefreh**	4.13	80	*e*Pn		Pn	22 57 21.4	+0.2
IMHD	**Mahdasht**	4.29	37	*e*Pn		Pn	22 57 23.9	+0.5
IMHD				*e*			22 58 15.1	
	comp=Z,194nm,0.1s							
ISFB	**Sefidab**	4.48	61	*e*Pn		Pn	22 57 25.9	-0.1
ISFB				*e*			22 58 44.4	
	comp=Z,122nm,0.2s							
IDMV	**Damavand**	5.00	48	*e*Pn		Pn	22 57 32.9	-0.2
IDMV				*e*			22 58 38.4	
	comp=Z,154nm,0.2s							
ISAD	**Sadrabad**	5.27	92	*e*Pn		Pn	22 57 36.9	0.0
ISAD				*e*			22 58 47.2	
	comp=Z,131nm,0.3s							
ICHK	**Chekchek**	5.86	89	*e*Pn		Pn	22 57 44.7	-0.3
ICHK				*e*			22 59 33.7	
	comp=Z,100nm,0.2s							

*THR **27** 23:04:10.6±0.4, 31.°94N×47.°09E, h45km±6km, ML3.5*
*IDC **27** 23:04:10.5±1.9, 32.°51N×47.°18E, h0km, mb3.8/7, mb1 3.8/7, mb1mx3.6/24, mbtmp3.8/7, MS2.9/1, Ms1 2.9/1, ms1mx1.9/44, Error ellipse: s-maj=46.7km s-min=22.6km az=156.0*
*ISCJB **27** 23:04:10.2±0.7, 32.°52N±0.°03×47.°18E±0.°04, h8km±5km, mb3.6/11, Error ellipse: s-maj=5.3km s-min=4.3km az=148.7*
*TEH **27** 23:04:14.6, 32.°50N×47.°42E, h2km*
*CSEM **27** 23:04:14.3±0.3, 32.°42N×47.°21E, h30km, ML3.5, Error ellipse: s-maj=10.0km s-min=6.1km az=31.0*
*NEIC **27** 23:04:15.5, 32.°44N×47.°37E, h16km, mb3.5/5, MN3.5(TEH), After TEH.*
*SGS **27** 23:04:17.2, 32.°18N×47.°36E, h28km*
ISC 27 23:04:11.7±0.7, 32.°49N±0.°03×47.°18E±0.°04, h7km±5km, n119, σ1.°04/129, mb3.6/11, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SHGR	**Shooshtar-Gavs**	1.43	105	*e*Pg		Pg	23 04 37.6	-1.4
SHGR				*e*Sg		Sg	23 04 57.3	-0.2
IKOM	**Komasi**	1.71	9	*e*Pn		Pg	23 04 45.2	+0.8
IKOM	**Komasi**	1.71	9	*e*Pn		Pg	23 04 45.1	+0.7
IKOM				*e*			23 05 18.2	
	comp=Z,7µm,0.3s							
IKOM	**Komasi**	1.71	9	*e*Pn		Pg	23 04 45.1	+0.7
IVIS	**Veis**	2.05	352	Pn		Pg	23 04 50.5	-0.5
IVIS	**Veis**	2.05	352	*e*Pn		Pg	23 04 50.4	-0.6
IVIS				*e*Sg		Sg	23 05 18.7	+1.0
IVIS				*e*			23 05 26.9	
	comp=Z,2µm,0.4s							
IVIS	**Veis**	2.05	352	*e*Pn		Pg	23 04 50.4	-0.6
IVIS				*e*Sg		Sg	23 05 18.7	+1.0
IDHR	**Dehrash**	2.30	344	Pn		Pg	23 04 53.6	-2.2
IDHR	**Dehrash**	2.30	344	*e*Pn		Pg	23 04 53.6	-2.2
IDHR				*e*			23 05 34.4	
	comp=Z,2µm,0.3s							
IDHR	**Dehrash**	2.30	344	*e*Pn		Pg	23 04 53.6	-2.2
ILIN	**Lien**	2.43	356	Pn		Pg	23 04 56.0	-2.3
ILIN	**Lien**	2.43	356	*e*Pn		Pg	23 04 55.8	-2.5
ILIN				*e*			23 05 42.9	
	comp=N,1µm,0.4s							
ILIN	**Lien**	2.43	356	*e*Pn		Pg	23 04 55.8	-2.5
BHD	**Baghdad**	2.48	289	*ex*		x	23 05 09.9	
MIB	**Mutribah**	2.68	177	*e*P		Pn	23 04 56.2	+1.0
UMR	**Umm Al-Rimmam**	2.96	171	*e*P		Pn	23 04 59.0	-0.1
IPIR	**Pirpir**	3.14	85	Pn		Pn	23 05 02.9	+1.3
IPIR				Sn		Sn	23 05 37.4	-1.9
IPIR	**Pirpir**	3.14	85	*e*		Pg	23 05 16.5	+4.6
	comp=Z,2µm,0.2s							
IPIR				*e*Pn		Pn	23 05 02.2	+0.6

comp=Z,75nm,0.2s
IBAF Bafgh 7.18 95 *e*Pn **Pn 23 05 56.2 -0.9**
GNI Garni 7.90 346 *e*Pn **Pn 23 06 07.0 +0.1**
GNI Garni 7.90 346 LR LR 23 09 51.4
comp=Z,82nm,21.4s,baz=180,slow=43
GNI Garni 7.90 346 *e*Pn **Pn 23 06 06.9 0.0**
BTHS 9.01 158 P **Pn 23 06 20.0 -2.2**
BTHS 9.01 158 P **Pn 23 06 20.0 -2.2**
HRDDS 9.73 167 P **Pn 23 06 30.0 -2.1**
KIV Kislovodsk 11.98 344 Pn **Pn 23 07 02.6 -0.2**
KIV Kislovodsk 11.98 344 Pn **Pn 23 07 02.6 -0.2**
BR131 Keskin Array S 13.11 307 *e*Pn **Pn 23 07 17.8 -0.4**
BR131 Keskin Array S 13.11 307 *e*Pn **Pn 23 07 17.8 -0.4**
KBL Kabul 18.35 78 *e*Pn **Pn 23 08 26.6 0.0**
comp=Z,1.3nm,0.3s
KBL Kabul 18.35 78 *e*Pn **Pn 23 08 26.6 0.0**
comp=Z,1.3nm,0.3s
ABKAR Akbulak array 19.29 26 *e*Pn **Pn 23 08 36.3 -1.6**
comp=Z,0.5nm,0.4s
ABKAR Akbulak array 19.29 26 *e*Pn **Pn 23 08 36.3 -1.6**
comp=Z,0.5nm,0.4s
KKAR Karatay Array 21.20 53 *e*P **P 23 08 58.1 +0.3**
comp=Z,0.7nm,0.4s,mb3.3
KKAR Karatay Array 21.20 53 *e*P **P 23 08 58.1 +0.3**
comp=Z,0.7nm,0.4s,mb3.3
BUR08 Bucovina Ar. S 22.52 319 *e*P **P 23 09 12.9 +1.1**
BUR08 Bucovina Ar. S 22.52 319 *e*P **P 23 09 12.9 +1.1**
AML Almayashu 23.11 58 P **P 23 09 19.2 +1.1**
AML Almayashu 23.11 58 P **P 23 09 19.2 +1.1**
EKS2 Erkin-Say 23.32 57 *e*P **P 23 09 19.6 -0.7**
comp=Z,2.2nm,0.8s,mb3.6
EKS2 Erkin-Say 23.32 57 *e*P **P 23 09 19.6 -0.7**
comp=Z,2.2nm,0.8s,mb3.6
UCH Uchtor 23.72 58 *e*P **P 23 09 23.9 -0.5**
UCH Uchtor 23.72 58 *e*P **P 23 09 23.9 -0.4**
KWP Kalwaria Pacla 25.00 320 P **P 23 09 35.3 -0.7**
KWP Kalwaria Pacla 25.00 320 P **P 23 09 35.3 -0.7**
ARU Arti 25.21 15 *e*P **P 23 09 37.2 -0.6**
ARU Arti 25.21 15 *e*P **P 23 09 37.2 -0.6**
TIP Timpagrande 25.47 294 *e*P **P 23 09 42.0 +1.6**
comp=Z,1.5nm,0.5s,mb3.8
TIP Timpagrande 25.47 294 *e*P **P 23 09 42.0 +1.6**
comp=Z,1.5nm,0.5s,mb3.8
BVAR Borovoye Array 26.47 32 P **P 23 09 48.6 -0.6**
comp=Z,0.5nm,0.5s,mb3.4,baz=257,slow=12,SNR=4.4
BVAR Borovoye Array 26.47 32 P **P 23 09 48.6 -0.6**
KURK Kurchatov 29.43 42 P **P 23 10 15.2 -0.5**
KURK Kurchatov 29.43 42 P **P 23 10 14.8 -0.8**
comp=Z,0.9nm,0.6s,mb3.7,baz=247,slow=9.5,SNR=7.1
KURK Kurchatov 29.43 42 P **P 23 10 15.2 -0.5**
MK31 Makanchi Array 30.30 52 *e*P **P 23 10 22.4 -1.0**
MK31 Makanchi Array 30.30 52 *e*P **P 23 10 22.5 -1.0**
MKAR Makanchi Array 30.30 52 P **P 23 10 23.0 -0.5**
MKAR Makanchi Array 30.30 52 P **P 23 10 23.0 -0.5**
comp=Z,0.3nm,0.4s,mb3.4,baz=248,slow=10,SNR=6.9
MKAR Makanchi Array 30.30 52 P **P 23 10 23.0 -0.5**
FINES FINESS Array B 32.04 341 P **P 23 10 38.4 -0.1**
comp=Z,0.6nm,0.5s,mb3.7,baz=148,slow=16,SNR=3.3
FINES FINESS Array B 32.04 341 P **P 23 10 38.5 -0.1**
ZALV Zalesovo Beam 34.24 40 P **P 23 10 58.0 +0.1**
comp=Z,0.5nm,0.4s,mb3.8,baz=258,slow=7.4,SNR=3.6
NOA NORSAR Array B 36.88 332 P **P 23 11 20.1 -0.5**
comp=Z,1.0nm,0.9s,mb3.7,baz=111,slow=5.4,SNR=3.3
NOA NORSAR Array B 36.88 332 P **P 23 11 20.0 -0.5**
ARCES ARCESS Array B 39.05 348 P **P 23 11 38.4 -0.3**
ARCES ARCESS Array B 39.05 348 P **P 23 11 38.4 -0.3**
comp=Z,0.5nm,0.4s,mb3.6,baz=153,slow=11,SNR=7.5
ARCES ARCESS Array B 39.05 348 P **P 23 11 38.4 -0.3**
TORD Torodi Ar. Bea 45.73 256 P **P 23 12 33.7 -0.1**
TORD Torodi Ar. Bea 45.73 256 P **P 23 12 33.7 -0.1**
comp=Z,0.4nm,0.7s,mb3.4,baz=60,slow=8.5,SNR=11

*ISCJB **27**.23:16:18.2±0.5, 32.07N±0.02×47.33E±0.05, h10km, Error ellipse: s-maj=6.7km s-min=3.5km az=175.4*
*TEH **27**.23:16:19.9, 32.11N×47.29E, h7km*
*KISR **27**.23:16:20.0±1.0, 32.38N×47.68E, h43km±999km, ML2.7*

ISC 27 23:16:18.8±0.5, 32.05N±0.02×47.26E±0.06, h10km, n17, σ09.92/26, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IKOM	**Komasi**	**2.13**	**6**	*e*Pn		**Pn**	**23 16 54.7**	**+0.2**
IKOM				*e*Sn		**Sn**	**23 17 20.9**	**-0.2**
IKOM				*e*			23 17 46.4	
	comp=Z,3μm,0.2s							
MIB	**Mutribah**	**2.23**	**178**	*e*P		**Pg**	**23 17 01.6**	**0.0**
MIB				*e*S		**Sg**	**23 17 33.2**	**+2.5**
IVIS	**Veis**	**2.50**	**352**	*e*Pn		**Pn**	**23 17 00.0**	**+0.5**
IVIS				*e*Sn		**Sn**	**23 17 29.7**	**-0.4**
IVIS				*e*			23 17 53.7	
	comp=Z,1μm,0.3s							
IDHR	**Dehrash**	**2.75**	**345**	*e*Pn		**Pn**	**23 17 03.9**	**+0.9**
IDHR				*e*Sn		**Sn**	**23 17 35.2**	**-1.0**
IDHR				*e*			23 18 33.6	
	comp=Z,2μm,0.1s							
NAY	**Al-Naaiem**	**2.79**	**180**	*e*P		**Pg**	**23 17 09.4**	**-2.8**
ILIN	**Lien**	**2.88**	**355**	*e*Sn		**Sn**	**23 17 38.8**	**-0.6**
ILIN				*e*Pn		**Pn**	**23 17 05.4**	**+0.7**
ILIN				*e*			23 17 59.5	
	comp=N,930nm,0.2s							
RDF	**Al-Radifah**	**3.12**	**175**	*e*P		**Pb**	**23 17 14.4**	**0.0**
RDF				*e*S		**Sg**	**23 17 55.1**	**-3.9**
RDF				AML		AML	23 18 13.7	
	comp=Z,20nm,0.5s							
IPIR	**Pirpir**	**3.14**	**77**	*e*Pn		**Pn**	**23 17 09.3**	**+1.0**
IPIR				*e*			23 18 08.8	
	comp=Z,1μm,0.4s							
QRN	**Al-Qurain**	**3.34**	**170**	*e*P		**Pb**	**23 17 16.9**	**-1.2**
QRN				*e*S		**Sb**	**23 17 58.7**	**-0.1**
QRN				AML		AML	23 17 59.1	
	comp=Z,13nm,0.3s							
IKLH	**Kolahrood**	**3.85**	**70**	*e*Pn		**Pn**	**23 17 18.9**	**+0.7**
IKLH				*e*Sn		**Sn**	**23 18 02.7**	**-0.8**
IKLH				*e*			23 18 32.2	
	comp=Z,445nm,0.4s							
IRAZ	**Razeghan**	**4.02**	**33**	*e*Pn		**Pn**	**23 17 20.7**	**+0.3**
IRAZ				*e*			23 18 12.6	
	comp=Z,512nm,0.3s							
IGAR	**Gharneh**	**4.07**	**84**	*e*Pn		**Pn**	**23 17 21.6**	**+0.5**
IGAR				*e*			23 18 09.2	
	comp=Z,838nm,0.2s							
IZEF	**Zefreh**	**4.37**	**77**	*e*Pn		**Pn**	**23 17 25.5**	**+0.3**
IZEF				*e*			23 17 41.0	
	comp=Z,239nm,0.4s							
IZEF				*e*Sn		**Sn**	**23 18 14.6**	**-1.5**
IMHD	**Mahdasht**	**4.61**	**37**	*e*Pn		**Pn**	**23 17 28.2**	**-0.3**
IMHD				*e*			23 18 33.6	
	comp=Z,183nm,0.2s							
ISFB	**Sefidab**	**4.76**	**60**	*e*Pn		**Pn**	**23 17 31.9**	**+1.2**
ISFB				*e*			23 18 47.4	
	comp=Z,110nm,0.2s							
IDMV	**Damavand**	**5.31**	**47**	*e*Pn		**Pn**	**23 17 38.0**	**-0.1**
IDMV				*e*			23 18 52.2	
	comp=Z,128nm,0.2s							
ISAD	**Sadrabad**	**5.46**	**90**	*e*Pn		**Pn**	**23 17 40.6**	**+0.4**
ISAD				*e*			23 18 46.9	
	comp=Z,163nm,0.1s							

IDC 27 23:26:58.1±1.3, 3.30S×142.71E, h0km, mb3.9/8, mb1 4.2/9, mb1mx4.0/17, mbtmp4.0/9, ML4.1/1, Error ellipse: s-maj=42.9km s-min=19.1km az=96.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.45**	**206**	P		Pn	23 31 15.0	-0.4
	0.6nm,0.3s,baz=25,slow=13,SNR=21							
ASAR	**Alice Springs**	**21.96**	**202**	P		P	23 31 54.1	+0.4
	2.3nm,0.8s,baz=29,slow=9.1,SNR=17							
FITZ	**Fitzroy Crossi**	**22.27**	**227**	P		P	23 31 56.5	-0.5
	3.8nm,0.6s,baz=48,slow=8.5,SNR=19							
STKA	**Stephens Creek**	**28.45**	**182**	P		P	23 32 55.0	+0.2
	2.3nm,0.7s,baz=351,slow=16,SNR=4.7							
CMAR	**Chiang Mai Arr**	**48.22**	**298**	P		P	23 35 41.6	+0.6
	0.6nm,0.3s,baz=118,slow=5.9,SNR=6.6							
MKAR	**Makanchi Array**	**72.72**	**321**	P		P	23 38 28.4	+0.3
	0.6nm,0.5s,baz=95,slow=9.2,SNR=9.5							
ZALV	**Zalesovo Beam**	**74.48**	**329**	P		P	23 38 37.6	-0.6
	0.4nm,0.4s,baz=101,slow=4.7,SNR=3.8							
BVAR	**Borovoye Array**	**82.09**	**324**	P		P	23 39 20.5	0.0
	0.9nm,0.7s,baz=107,slow=7.9,SNR=6.5							
ILAR	**Eielson Array**	**84.73**	**24**	P		P	23 39 34.0	+0.2

2008 AUG

1.1nm,0.8s,baz=252,slow=5.2,SNR=6.9

*PGC **27**.23:40:02.0±1.5, 49.91N×130.06W, h10km, ML3.6/10, Mw4.2, 207km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **27**.23:40:04.0±0.3, 50.18N±0.03×129.72W±0.05, h10km, mb4.4/18, Error ellipse: s-maj=5.2km s-min=2.9km az=138.7*
*IDC **27**.23:40:03.4±1.9, 50.07N×129.90W, h0km, mb4.1/3, mb1 4.2/10, mb1mx3.9/29, mbtmp4.0/10, ML3.5/5, MS3.7/3, Ms1 3.7/3, ms1mx3.2/44, Error ellipse: s-maj=32.4km s-min=12.5km az=74.0*
*NEIC **27**.23:40:06.4±0.3, 50.24N×129.63W, h10km, mb4.4/36, MW4.6(PGC), Error ellipse: s-maj=6.6km s-min=2.9km az=50.0*

ISC 27 23:40:07.5±1.3, 50.22N±0.03×129.68W±0.05, h20km±12km, n126, σ1.908/132, mb4.4/18, 10D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOLB	**Holberg**	**1.08**	**66**	⇓Pn		**Pn**	**23 40 25.8**	**-1.6**
HOLB				⇑Sn		**Sn**	**23 40 43.0**	**+1.3**
BPBC	**Brooks Peninsu**	**1.23**	**92**	⇓Pn		**Pn**	**23 40 26.4**	**-3.1**
BPBC				⇓Sn		**Sn**	**23 40 44.2**	**-1.3**
PHC	**Port Hardy**	**1.52**	**70**	Pn		**Pn**	**23 40 32.1**	**-1.4**
PHC				⇓Sn		**Sn**	**23 40 54.1**	**+1.4**
MAYB	**Maynard**	**1.62**	**82**	⇓Pn		**Pn**	**23 40 32.8**	**-2.0**
EDB	**Eliza Dome**	**1.69**	**101**	Pn		**Pn**	**23 40 32.0**	**-3.8**
EDB				⇑Sn		**Sn**	**23 40 54.3**	**-2.4**
WOSB	**Woss**	**2.00**	**90**	⇑Pn		**Pn**	**23 40 38.2**	**-1.9**
BBB	**Bella Bella**	**2.20**	**26**	Pn		**Pn**	**23 40 42.9**	**0.0**
	162nm,0.3s,baz=39,slow=14,SNR=155							
BBB				Sn		**Sn**	**23 41 11.2**	**+1.7**
	53nm,0.3s,baz=123,slow=24,SNR=3.9							
BBB	**Bella Bella**	**2.20**	**26**	⇓Pn		**Pn**	**23 40 42.8**	**-0.1**
BBB				⇓Sn		**Sn**	**23 41 11.3**	**+1.8**
GDR	**Gold River**	**2.40**	**99**	⇓Pn		**Pn**	**23 40 42.4**	**-3.1**
OZB	**Mount Ozzard**	**3.00**	**113**	⇑Pn		**Pn**	**23 40 51.0**	**-2.9**
OZB				⇓Sn		**Sn**	**23 41 26.0**	**-3.2**
MOBC	**Moresby Island**	**3.26**	**335**	⇑Pn		**Pn**	**23 40 54.0**	**-3.4**
DIB	**Dawson Inlet,**	**3.46**	**331**	Pn		**Pn**	**23 40 57.4**	**-2.7**
DIB	**Dawson Inlet,**	**3.46**	**331**	⇓Pn		**Pn**	**23 40 57.4**	**-2.7**
PGC	**Sidney**	**4.36**	**109**	*e*Pn		**Pn**	**23 41 11.0**	**-1.5**
PGC				*e*Sn		**Sn**	**23 42 02.4**	**-0.2**
NLWA	**Neilton Lookou**	**4.77**	**124**	*e*Pn		**Pn**	**23 41 16.8**	**-1.3**
JCW	**Jim Creek**	**5.47**	**109**	*e*Pn		**Pn**	**23 41 27.6**	**-0.2**
RPW	**Rockport**	**5.63**	**105**	*e*Pn		**Pn**	**23 41 30.4**	**+0.5**
CRAG	**Craig**	**5.66**	**340**	*e*Pn		**Pn**	**23 41 30.9**	**+0.6**
GSM	**Grass Mountain**	**6.03**	**117**	P		**Pn**	**23 41 35.5**	**0.0**
FMW	**Mount Fremont**	**6.25**	**119**	P		**Pn**	**23 41 38.5**	**+0.1**
LON	**Longmire**	**6.28**	**121**	*e*Pn		**Pn**	**23 41 38.7**	**-0.1**
WRAK	**Wrangell Islan**	**6.42**	**347**	Pn		**Pn**	**23 41 39.4**	**-1.3**
WPW	**White Pass**	**6.46**	**120**	P		**Pn**	**23 41 42.5**	**+1.2**
TWW	**Teanaway**	**6.60**	**114**	P		**Pn**	**23 41 44.1**	**+0.9**
ETW	**Entiat**	**6.70**	**109**	P		**Pn**	**23 41 44.8**	**+0.3**
TBM	**Table Mountain**	**6.74**	**113**	P		**Pn**	**23 41 44.8**	**-0.4**
NAC	**Naches**	**6.84**	**117**	P		**Pn**	**23 41 46.7**	**+0.1**
EBG	**Ellensburg**	**6.89**	**115**	P		**Pn**	**23 41 47.6**	**+0.3**
COR	**Corvallis**	**7.10**	**140**	*e*Pn		**Pn**	**23 41 49.9**	**-0.3**
HOOD	**Mount Hood Mea**	**7.30**	**129**	*e*Pn		**Pn**	**23 41 53.6**	**+0.8**
MDW	**Midway**	**7.52**	**115**	P		**Pn**	**23 41 55.4**	**-0.5**
SIT	**Sitka**	**7.63**	**336**	*e*Pn		**Pn**	**23 41 58.0**	**+0.7**
RSW	**Rattlesnake Hi**	**7.74**	**116**	*e*Pn		**Pn**	**23 41 59.6**	**+0.8**
HAWA	**Hanford**	**7.77**	**116**	*e*Pn		**Pn**	**23 41 58.8**	**-0.6**
OD2	**Odessa Site #2**	**7.78**	**107**	*e*Pn		**Pn**	**23 41 58.5**	**-0.9**
DLBC	**Dease Lake**	**8.24**	**359**	*e*Pn		**Pn**	**23 42 06.5**	**+0.8**
DLBC	**Dease Lake**	**8.24**	**359**	Pn		**Pn**	**23 42 05.3**	**-0.4**
	0.1nm,0.3s,baz=212,slow=14,SNR=2.7							
NEW	**Newport**	**8.45**	**99**	*e*Pn		**Pn**	**23 42 08.8**	**+0.1**
LNOR	**Lincton Mounta**	**8.79**	**115**	*e*Pn		**Pn**	**23 42 13.7**	**+0.5**
HUMO	**Hull Mountain**	**8.91**	**146**	Pn		**Pn**	**23 42 14.5**	**-0.5**
YBH	**Yreka Blue Hor**	**9.77**	**148**	*e*Pn		**Pn**	**23 42 26.4**	**-0.4**
YBH	**Yreka Blue Hor**	**9.77**	**148**	LR		LR	23 45 40.9	
	comp=Z,523nm,18.8s,baz=234,slow=35							
SKAG	**Skagway**	**9.81**	**343**	*e*Pn		**Pn**	**23 42 26.7**	**-0.6**
BSMT	**Bassoo Peak**	**10.07**	**98**	*e*Pn		**Pn**	**23 42 31.3**	**+0.6**
WALA	**Waterton Lakes**	**10.30**	**90**	*e*Pn		**Pn**	**23 42 33.6**	**-0.3**
MOD	**Modoc**	**10.56**	**138**	*e*Pn		**Pn**	**23 42 39.3**	**+1.8**
EDM	**Edmonton**	**10.57**	**67**	*e*Pn		**Pn**	**23 42 38.0**	**+0.3**
WVOR	**Wild Horse Val**	**10.90**	**131**	*e*P		**Pn**	**23 42 41.7**	**-0.5**
MSO	**Missoula**	**10.98**	**102**	*e*Pn		**Pn**	**23 42 44.2**	**+1.0**
SLMT	**Seeley Lake**	**11.10**	**99**	*e*Pn		**Pn**	**23 42 46.2**	**+1.3**
CHMT	**Chamberlain Mo**	**11.38**	**101**	*e*Pn		**Pn**	**23 42 48.7**	**0.0**
HLID	**Hailey**	**12.37**	**117**	*e*Pn		**Pn**	**23 43 03.9**	**+1.6**
MCMT	**McKenzie Canyo**	**12.58**	**109**	*e*Pn		**Pn**	**23 43 04.0**	**-1.2**
	2.8nm,0.8s							
PAHR	**Pah Rah Range**	**12.78**	**141**	*e*Pn		**Pn**	**23 43 07.9**	**+0.1**
BOZ	**Bozeman (W)**	**12.93**	**104**	*e*Pn		**Pn**	**23 43 09.9**	**0.0**
WCN	**Washoe City**	**12.98**	**143**	*e*Pn		**Pn**	**23 43 11.2**	**+0.6**
	18nm,1.5s							
BMN	**Battle Mountai**	**13.12**	**133**	*e*Pn		**Pn**	**23 43 13.6**	**+1.1**
	6.4nm,0.8s							
WAKR	**Walker**	**13.80**	**144**	Pn		**Pn**	**23 43 22.8**	**+1.0**
IMW	**Indian Meadow**	**14.24**	**109**	*e*Pn		**Pn**	**23 43 28.2**	**+0.4**
DCID1	**Drake Creek**	**14.26**	**111**	*e*Pn		**Pn**	**23 43 28.4**	**+0.4**
	34nm,0.9s							
NVAR	**Mina Array Bea**	**14.30**	**141**	Pn		**Pn**	**23 43 27.8**	**-0.9**
	0.1nm,0.3s,baz=291,slow=8.9,SNR=7.9							
MOOW	**Moose Ponds**	**14.44**	**109**	*e*Pn		**Pn**	**23 43 32.4**	**+1.9**
TPAW	**Teton Pass**	**14.46**	**111**	Pn		**Pn**	**23 43 31.1**	**+0.4**
REDW	**Red Top Meadow**	**14.59**	**111**	*e*Pn		**Pn**	**23 43 33.5**	**+0.9**
SNOW	**Snow King Moun**	**14.59**	**110**	*e*Pn		**Pn**	**23 43 33.1**	**+0.6**
RLMT	**Red Lodge**	**14.65**	**103**	*e*Pn		**Pn**	**23 43 34.5**	**+1.1**
YKA	**Yellowknife Ar**	**14.82**	**28**	Pn		**Pn**	**23 43 34.4**	**-1.1**
YKA	**Yellowknife Ar**	**14.82**	**28**	Pn		**Pn**	**23 43 34.4**	**-1.1**
	0.4nm,0.3s,baz=219,slow=12,SNR=7.2							
BGU	**Big Grassy Mou**	**14.88**	**122**	*e*Pn		**Pn**	**23 43 36.3**	**-0.3**
	28nm,1.7s							
SPUT	**South Promonto**	**14.94**	**120**	*e*Pn		**Pn**	**23 43 37.2**	**-0.2**
HWUT	**Hardware Ranch**	**15.24**	**117**	*e*Pn		**Pn**	**23 43 41.4**	**+0.1**
	42nm,1.8s							
KDAK	**Kodiak Island**	**15.39**	**308**	Pn		**Pn**	**23 43 43.8**	**+0.6**
	0.1nm,0.3s,baz=119,slow=8.9,SNR=6.5							
DUG	**Dugway**	**15.51**	**124**	*e*Pn		**Pn**	**23 43 45.0**	**+0.1**
	15nm,1.1s							
PMR	**Palmer**	**15.69**	**324**	Pn		**Pn**	**23 43 47.6**	**+0.6**
BW06	**Boulder Array**	**15.71**	**111**	*e*Pn		**Pn**	**23 43 49.1**	**+1.7**
	25nm,1.2s							
PDAR	**Pinedale Array**	**15.71**	**111**	Pn		**Pn**	**23 43 48.1**	**+0.7**
	0.3nm,0.3s,baz=316,slow=12,SNR=17							
NLU	**North Lilly Min**	**16.08**	**123**	*e*P		**Pn**	**23 43 56.1**	**+3.9**
	106nm,2.5s							
RSO	**Redoubt South**	**16.56**	**317**	*e*P		**Pn**	**23 44 01.2**	**+3.0**
ISA	**Isabella**	**16.67**	**147**	*e*P		**Pn**	**23 44 02.7**	**+2.9**
	18nm,1.3s							
DGMT	**Dagmar**	**16.68**	**86**	*e*Pn		**Pn**	**23 44 01.9**	**+2.1**
	68nm,1.5s							
ARUT	**Antelope Range**	**17.01**	**131**	*e*Pn		**Pn**	**23 44 03.9**	**-0.1**
	11nm,1.1s							
MCK	**McKinley**	**17.03**	**330**	*e*P		**Pn**	**23 44 07.4**	**+3.4**
	117nm,2.7s							
MSU	**Marysvale**	**17.09**	**127**	*e*Pn		**Pn**	**23 44 04.2**	**-0.7**
ILAR	**Eielson Array**	**17.17**	**335**	P		**Pn**	**23 44 06.0**	**+0.1**
	0.1nm,0.3s,baz=149,slow=11,SNR=11							
ILAR				LR		LR	23 49 50.0	
	comp=Z,150nm,19.7s,baz=326,slow=34							
CCUT	**Cedar City**	**17.23**	**131**	*e*Pn		**Pn**	**23 44 07.9**	**+1.0**
	20nm,1.4s							
SHPR	**Sheep Range**	**17.26**	**137**	*e*Pn		**Pn**	**23 44 06.7**	**-0.4**
FFC	**Flin Flon**	**17.41**	**64**	*e*Pn		**Pn**	**23 44 08.9**	**0.0**
	15nm,0.6s							
SRU	**San Rafael**	**17.52**	**122**	*e*Pn		**Pn**	**23 44 09.8**	**-0.6**
	19nm,1.1s							
GSC	**Goldstone**	**17.61**	**143**	*e*P		**Pn**	**23 44 12.7**	**+1.2**
	60nm,2.3s							
PPLA	**Purkeypile**	**17.62**	**325**	*e*Pn		**Pn**	**23 44 12.3**	**+0.9**
	10.0nm,0.9s							
RWWY	**Rawlins**	**17.75**	**110**	*e*Pn		**Pn**	**23 44 11.0**	**-2.2**
	40nm,1.1s							
BPAW	**Bear Paw Mtn.**	**17.95**	**329**	*e*Pn		**Pn**	**23 44 14.7**	**-0.7**
	8.0nm,1.1s							
SVW2	**Sparrevohn**	**18.09**	**317**	*e*P		**Pn**	**23 44 15.4**	**-1.8**
	38nm,2.1s							
INK	**Inuvik**	**18.25**	**355**	*e*Pn		**Pn**	**23 44 18.6**	**-0.5**
	14nm,1.1s							
INK	**Inuvik**	**18.25**	**355**	P		**Pn**	**23 44 20.8**	**+1.7**
	0.3nm,0.3s,baz=174,slow=18,SNR=5.5							
RSSD	**Black Hills**	**18.42**	**99**	*e*Pn		**Pn**	**23 44 22.9**	**+1.4**
	7.5nm,1.1s							
PV04	**Paradox Valley**	**18.92**	**121**	*e*P		**Pn**	**23 44 27.3**	**-0.3**
TTA	**Tatalina**	**19.11**	**322**	*e*P		**Pn**	**23 44 28.6**	**-1.1**
PV01	**Paradox Valley**	**19.29**	**121**	*e*P		**Pn**	**23 44 30.0**	**-1.9**
	6μm,1.7s							
WUAZ	**Wupatki**	**19.82**	**131**	*e*P		**Pn**	**23 44 36.1**	**-2.2**
	30nm,1.6s							
ISCO	**Idaho Springs**	**19.87**	**112**	*e*Pn		**Pn**	**23 44 39.0**	**+0.2**
	58nm,2.3s							
MVCO	**Mesa Verde**	**20.00**	**122**	*e*P		**Pn**	**23 44 39.6**	**-0.8**
	113nm,1.8s							
GLA	**Glamis**	**20.36**	**142**	*e*P		**P**	**23 44 42.4**	**-0.2**
FALS	**False Pass**	**20.91**	**296**	*e*P		**P**	**23 44 43.8**	**-4.5**
	100nm,0.4s							
SDCO	**Great Sand Dun**	**21.29**	**117**	*e*P		**P**	**23 44 52.7**	**+0.1**
	20nm,1.3s,mb4.3							
ULM	**Lac du Bonnet**	**21.52**	**77**	P		**P**	**23 44 57.4**	**+2.4**
ULM	**Lac du Bonnet**	**21.52**	**77**	P		**P**	**23 44 57.4**	**+2.4**
	27nm,1.0s,mb4.7,baz=284,slow=12,SNR=12							
AGMN	**Agassiz Nation**	**22.05**	**82**	*e*P		**P**	**23 45 00.9**	**+0.3**
	29nm,1.3s,mb4.5							
TUC	**Tucson**	**22.73**	**135**	*e*P		**P**	**23 45 07.8**	**-0.2**
	14nm,1.3s,mb4.2							
ANMO	**Albuquerque**	**22.78**	**123**	*e*P		**P**	**23 45 08.6**	**+0.1**
ANMO	**Albuquerque**	**22.78**	**123**	P		**P**	**23 45 07.9**	**-0.6**
	5.4nm,0.9s,mb4.0,baz=320,slow=9.4,SNR=12							
LAZ	**Ladron**	**22.84**	**125**	*e*P		**P**	**23 45 09.3**	**+0.2**
	20nm,1.8s,mb4.2							
LPM	**Los Pinos Moun**	**23.18**	**125**	*e*P		**P**	**23 45 13.2**	**+0.6**
BNM	**Barren Site**	**23.30**	**125**	*e*P		**P**	**23 45 14.2**	**+0.2**
	57nm,2.1s,mb4.6							
ECSD	**EROS Data Cent**	**23.34**	**93**	P		**P**	**23 45 14.9**	**+0.6**
	27nm,0.9s,mb4.7							
EYMN	**Ely**	**24.94**	**80**	*e*P		**P**	**23 45 29.7**	**+0.7**
	24nm,1.0s,mb4.7							
AMTX	**Amarillo**	**25.50**	**116**	*e*P		**P**	**23 45 33.4**	**-0.8**
	32nm,1.0s,mb4.8							
MNTX	**Cornudas Mount**	**25.87**	**126**	*e*P		**P**	**23 45 37.8**	**+0.1**
	25nm,1.8s,mb4.4							
WMOK	**Wichita Mounta**	**27.29**	**113**	*e*P		**P**	**23 45 49.4**	**-1.1**
	12nm,1.3s,mb4.3							
TXAR	**Lajitas Array**	**28.64**	**127**	P		**P**	**23 46 03.3**	**+0.7**
	0.9nm,0.8s,mb3.6,baz=316,slow=5.2,SNR=9.6							
JCT	**Junction City**	**29.81**	**120**	*e*P		**P**	**23 46 13.2**	**+0.3**
	3.9nm,0.8s,mb4.2							
MIAR	**Mount Ida**	**30.57**	**107**	*e*P		**P**	**23 46 19.9**	**+0.2**
	16nm,1.2s,mb4.7							
HKT	**Hockley**	**32.47**	**116**	*e*P		**P**	**23 46 36.1**	**-0.2**
	12nm,1.4s,mb4.5							
OXF	**Oxford**	**33.18**	**103**	*e*P		**P**	**23 46 41.8**	**-0.7**
	32nm,1.1s,mb5.2							
GOGA	**Godfrey**	**37.64**	**99**	*e*P		**P**	**23 47 19.8**	**-1.2**
	7.0nm,0.9s,mb4.4							
KSRS	**Korea Array**	**69.25**	**304**	LR		LR	00 23 07.0	
	comp=Z,62nm,19.5s,baz=75,slow=37							

PGC 27 23:46:37.1±1.9, 49.83N×130.13W, h10km, ML3.1/6, Mw3.7, 5D, 216km Wsw of Pt. Hardy, Bc Vancouver Island Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOLB	**Holberg**	**1.52**	**57**	⇑Pn		Pn	23 47 02.2	-2.1
BPBC	**Brooks Peninsu**	**1.56**	**77**	⇑Pn		Pn	23 47 02.5	-2.3
BPBC				⇑Sn		Sn	23 47 21.4	-3.7
PHC	**Port Hardy**	**1.94**	**62**	⇓Pn		Pn	23 47 08.

PAHR	Pah Rah Range	12.89	141	ePn		Pn	23 50 53.2	+1.1
BMN	Battle Mountai	13.23	134	ePn		Pn	23 50 57.6	+0.9
CMB	Columbia Colle	13.99	148	ePn		Pn	23 51 05.5	-1.5
IMW	Indian Meadow	14.33	109	ePn		Pn	23 51 12.6	+1.0
NVAR	Mina Array Bea	14.42	141	Pn		Pn	23 51 12.1	-0.9
	0.2nm,0.3s,baz=337,slow=9.0,SNR=3.6							
MOOW	Moose Ponds	14.53	110	ePn		Pn	23 51 14.9	+0.6
TPAW	Teton Pass	14.55	111	ePn		Pn	23 51 15.2	+0.6
REDW	Red Top Meadow	14.68	111	ePn		Pn	23 51 16.6	+0.2
	52nm,1.4s							
SNOW	Snow King Moun	14.68	111	ePn		Pn	23 51 17.0	+0.6
LOHW	Long Hollow	14.69	110	ePn		Pn	23 51 16.6	+0.1
DAWY	Dawson	14.70	343	ePn		Pn	23 51 16.5	-0.1
RLMT	Red Lodge	14.73	103	ePn		Pn	23 51 18.2	+1.1
	13nm,1.1s							
YKA	Yellowknife Ar	14.75	28	Pn		Pn	23 51 19.6	+2.4
	0.1nm,0.3s,baz=217,slow=12,SNR=4.3							
BGU	Big Grassy Mou	14.99	122	ePn		Pn	23 51 20.6	-0.1
	13nm,1.5s							
SPUT	South Promonto	15.04	120	ePn		Pn	23 51 23.9	+2.6
	10nm,1.2s							
MTUM	Tungsten Hills	15.26	144	ePn		Pn	23 51 29.9	+5.7
PMR	Palmer	15.57	324	ePn		Pn	23 51 29.0	+0.8
DUG	Dugway	15.62	124	ePn		Pn	23 51 29.0	0.0
	22nm,1.5s							
EGAK	Eagle	15.69	342	ePn		Pn	23 51 29.8	+0.2
	23nm,1.7s							
BW06	Boulder Array	15.80	111	ePn		Pn	23 51 34.0	+2.8
	38nm,1.7s							
PDAR	Pinedale Array	15.80	111	Pn		Pn	23 51 33.5	+2.2
	0.3nm,0.3s,baz=317,slow=11,SNR=12							
PDAR				LR		LR	23 57 19.3	
	comp=Z,209nm,22.0s,baz=341,slow=36							
DAU	Daniels Canyon	16.31	120	eP		Pn	23 51 45.7	+7.8
MCK	McKinley	16.91	330	Pn		Pn	23 51 44.9	-0.3
ILAR	Eielson Array	17.05	335	P		Pn	23 51 52.4	+5.3
	0.1nm,0.3s,baz=151,slow=9.3,SNR=6.3							
TRF	Thorofare Moun	17.17	328	ePn		Pn	23 51 49.8	+1.3
	14nm,1.4s							
MSU	Marysvale	17.19	127	ePn		Pn	23 51 50.2	+1.2
CCUT	Cedar City	17.35	131	ePn		Pn	23 51 51.1	+0.2
	6.9nm,1.2s							
FFC	Flin Flon	17.42	65	ePn		Pn	23 51 52.0	+0.3
	20nm,0.9s							
SRU	San Rafael	17.63	122	ePn		Pn	23 51 55.5	+1.1
	24nm,1.5s							
GSC	Goldstone	17.73	143	ePn		Pn	23 51 56.0	+0.2
	8.4nm,1.5s							
BPAW	Bear Paw Mtn.	17.82	329	ePn		Pn	23 51 57.8	+1.1
	5.9nm,1.1s							
MSU	Marysvale	17.19	127	ePn		Pn	23 51 50.2	+1.2
CCUT	Cedar City	17.35	131	ePn		Pn	23 51 51.1	+0.2
	6.9nm,1.2s							
FFC	Flin Flon	17.42	65	ePn		Pn	23 51 52.0	+0.3
	20nm,0.9s							
SRU	San Rafael	17.63	122	ePn		Pn	23 51 55.5	+1.1
	24nm,1.5s							
GSC	Goldstone	17.73	143	ePn		Pn	23 51 56.0	+0.2
	8.4nm,1.5s							
BPAW	Bear Paw Mtn.	17.82	329	ePn		Pn	23 51 57.8	+1.1
	5.9nm,1.1s							
INK	Inuvik	18.14	356	Pn		Pn	23 52 00.7	+0.2
	5.0nm,1.0s							
INK	Inuvik	18.14	356	LR		LR	23 59 43.2	
	comp=Z,223nm,18.6s,baz=282,slow=39							
RSSD	Black Hills	18.50	100	ePn		Pn	23 52 06.2	+1.1
	6.0nm,0.9s							
TTA	Tatalina	19.00	322	P		Pn	23 52 11.2	+0.2
	14nm,1.3s							
PV04	Paradox Valley	19.03	121	ePn		Pn	23 52 12.4	+0.8
SDPT	Sand Point	19.12	297	P		Pn	23 52 11.5	-1.0
	11nm,0.4s							
PV01	Paradox Valley	19.39	121	eP		Pn	23 52 14.6	-1.3
	2µm,1.3s							
WUAZ	Wupatki	19.93	131	ePn		Pn	23 52 21.6	-0.7
	4.6nm,0.9s							
ISCO	Idaho Springs	19.96	113	eP		Pn	23 52 20.8	-1.9
	16nm,1.5s							
MVCO	Mesa Verde	20.10	123	ePn		P	23 52 22.9	+0.3
	53nm,1.6s							
SDCO	Great Sand Dun	21.39	117	eP		P	23 52 34.7	-1.9
	8.7nm,1.3s,mb3.9							
ULM	Lac du Bonnet	21.56	77	P		P	23 52 38.3	+0.1
ULM				LR		LR	00 01 43.8	
ULM	Lac du Bonnet	21.56	77	P		P	23 52 38.3	+0.1
	3.1nm,0.6s,mb3.9,baz=294,slow=10.0,SNR=1.9							
ULM				LR		LR	00 01 43.8	
	comp=Z,193nm,20.1s,MS3.5,baz=300,slow=38							
TUC	Tucson	22.85	135	eP		P	23 52 51.5	-0.6
	26nm,2.0s,mb4.3							
ANMO	Albuquerque	22.89	123	eP		P	23 52 52.7	+0.2
	4.5nm,1.0s,mb3.9							
ANMO	Albuquerque	22.89	123	P		P	23 52 50.8	-1.7
	3.1nm,0.9s,mb3.7,baz=319,slow=9.6,SNR=6.1							
ANMO				LR		LR	00 02 26.1	
	comp=Z,323nm,18.3s,MS3.8,baz=65,slow=38							
ECSD	EROS Data Cent	23.40	93	eP		P	23 52 58.8	+0.9
	32nm,1.1s,mb4.7							
BNM	Barren Site	23.41	125	eP		P	23 52 58.4	+0.4
	3.7nm,0.9s,mb3.8							
EYMN	Ely	24.98	81	eP		P	23 53 13.6	+1.3
	14nm,1.0s,mb4.5							
AMTX	Amarillo	25.59	116	eP		P	23 53 17.6	-0.4
	17nm,0.8s,mb4.6							
RES	Resolute Bay	28.39	19	LR		LR	00 05 28.4	
	comp=Z,255nm,18.2s,MS3.9,baz=298,slow=37							
TXAR	Lajitas Array	28.75	127	P		P	23 53 44.9	-1.6
	1.7nm,1.0s,mb3.8,baz=335,slow=8.3,SNR=8.1							
MIAR	Mount Ida	30.66	107	eP		P	23 54 04.9	+1.6
	52nm,2.4s,mb4.9							
SADO	Sadowa	34.07	79	P		P	23 54 32.9	-0.3
	2.6nm,0.8s,mb4.2,baz=304,slow=9.2,SNR=3.1							
SADO				LR		LR	00 09 00.1	
	comp=Z,514nm,19.7s,MS4.3,baz=193,slow=37							
TKL	Tuckaleechee C	36.09	96	LR		LR	00 09 58.3	
	comp=Z,394nm,18.3s,MS4.2,baz=144,slow=37							
SCHQ	Schefferville	37.37	58	LR		LR	00 10 10.1	
	comp=Z,222nm,19.6s,MS4.0,baz=283,slow=36							
MIV	Mineville/With	37.93	77	eP		Px	23 55 17.4	
ASAJ	Asahikawa	56.53	300	LR		LR	00 20 01.7	
	comp=Z,248nm,21.2s,MS4.3,baz=184,slow=34							
ZALV	Zalesovo Beam	72.11	339	P		P	23 59 11.9	-1.0
	0.5nm,0.6s,mb3.6,baz=15,slow=6.0,SNR=2.3							
KURK	Kurchatov	76.47	342	P		P	23 59 38.3	-0.1
	0.5nm,0.8s,mb3.5,baz=26,slow=5.9,SNR=2.7							

*IDC **27** 23:51:47.0±1.2,3°.23S×142°.82E,h0km,mb4.1/8, mb1 4.4/9,mb1mx4.2/17,mbtmp4.2/9,ML4.3/1,MS4.0/4, Ms1 4.0/4,ms1mx3.4/28,Error ellipse: s-maj=40.2km s-min=18.3km az=95.0*

*ISCJB **27** 23:51:49.4±4.9,3°.22S±0°.08×142°.66E±0°.09,h23km±36km, mb4.3/14,MS4.5/2,Error ellipse: s-maj=14.5km s-min=13.3km az=160.6*

*NEIC **27** 23:51:52.6±3.7,3°.23S×142°.65E,h35km±27km,mb4.3/4, Error ellipse: s-maj=9.6km s-min=8.7km az=90.0*

ISC 27 23:51:53.0±2.1,3°.25S±0°.08×142°.67E±0°.09,h35km±21km, **n39,σ0s84/36,mb4.3**/14,**MS4.5**/2,**Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.57	144	ePn	Pn	23 53 40.8	-0.1
CTAO	Charters Tower	17.10	168	ePn	Pn	23 55 49.3	0.0
HNR	Honiara	18.23	110	Pn	Pn	23 56 03.5	0.0
WRA	Warramunga Arr	18.47	205	P	Pn	23 56 05.3	-1.0
	1.0nm,0.3s,baz=31,slow=12,SNR=12						
WRA				LR	LR	00 02 45.0	
	comp=Z,231nm,19.1s,baz=45,slow=36						
KNA	Kununurra	18.48	227	eP	Pn	23 56 07.2	+0.8
	22nm,1.1s						
DAV	Davao City (W)	19.90	301	LR	LR	00 03 55.9	
	comp=Z,118nm,19.7s,baz=63,slow=36						
ASAR	Alice Springs	21.99	202	P	P	23 56 44.1	-0.1
	3.2nm,0.8s,mb3.8,baz=29,slow=9.5,SNR=21						
FITZ	Fitzroy Crossi	22.27	227	eP	P	23 56 46.8	-0.4
	20nm,1.0s,mb4.5						
FITZ	Fitzroy Crossi	22.27	227	eP	P	23 56 47.3	+0.1
FITZ	Fitzroy Crossi	22.27	227	P	P	23 56 46.6	-0.6
	8.6nm,0.7s,mb4.3,baz=50,slow=7.6,SNR=26						
EIDS	Eidsvold	23.43	161	eP	P	23 56 59.7	+0.4
EIDS	Eidsvold	23.43	161	eP	P	23 56 59.6	+0.3
	29nm,1.3s,mb4.5						
RMQ	Roma	23.83	166	eP	P	23 57 04.0	+1.0
	49nm,1.9s,mb4.6						
STKA	Stephens Creek	28.49	182	eP	P	23 57 45.3	+0.3
	3.3nm,0.6s,mb4.1						
STKA	Stephens Creek	28.49	182	eP	P	23 57 44.8	-0.3
	0.5nm,0.5s,mb3.4						
STKA	Stephens Creek	28.49	182	P	P	23 57 44.5	-0.5
	2.2nm,0.5s,mb4.1,baz=350,slow=5.0,SNR=8.3						
MBWA	Marble Bar	28.54	230	eP	P	23 57 45.1	-0.5
BBOO	Buckleboo	30.05	191	eP	P	23 57 59.3	+0.5
	3.1nm,0.4s,mb4.4						
KULM	Kulim	42.82	281	P	P	23 59 47.1	-0.8
ENH	Enshi	46.00	319	P	P	00 00 12.4	-0.7
CMAR	Chiang Mai Arr	48.15	298	P	P	00 00 29.7	-0.4
	0.8nm,0.3s,mb4.2,baz=126,slow=6.7,SNR=10						
YSS	Yuzh-Sakhalins	49.99	0	eP	P	00 00 43.4	-0.3
MCQ	Macquarie Isla	52.79	168	eP	P	00 01 04.9	+0.3
LZH	Lanzhou	53.34	321	eP	P	00 01 11.0	+2.1
LZH				pP	pP	00 01 16.3	-3.2
LZH				sP	sP	00 01 18.8	-4.9
LZH				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
GTA	Gaotai	57.90	322	eP	P	00 01 43.8	+2.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
LSA	Lhasa	59.15	308	P	P	00 01 50.8	+0.2
MK31	Makanchi Array	72.65	321	eP	P	00 03 17.2	+0.2
MKAR	Makanchi Array	72.65	321	P	P	00 03 18.2	+1.1
MKAR	Makanchi Array	72.65	321	P	P	00 03 18.2	+1.1
	comp=Z,0.9nm,0.5s,mb4.0,baz=94,slow=9.3,SNR=17						
ZAA0	Zalesovo Array	74.42	329	eP	P	00 03 26.0	-1.3
ZALV	Zalesovo Beam	74.42	329	P	P	00 03 26.4	-0.9
	comp=Z,1.1nm,0.6s,mb4.0,baz=107,slow=5.1,SNR=6.1						
AAK	Ala-Archa	76.35	315	P	P	00 03 38.7	0.0
KURK	Kurchatov	76.45	324	eP	P	00 03 37.6	-1.4
	comp=Z,0.8nm,0.6s,mb3.8						
KURK	Kurchatov	76.45	324	P	P	00 03 39.4	+0.3
	comp=Z,0.5nm,0.8s,mb3.5,baz=123,slow=4.7,SNR=4.9						
KDAK	Kodiak Island	79.60	30	LR	LR	00 32 46.3	
	comp=Z,299nm,21.2s,MS4.6,baz=125,slow=31						
BRVK	Borovoye	82.10	324	P	P	00 04 10.6	+0.8
ILAR	Eielson Array	84.70	24	P	P	00 04 21.6	-1.3
	comp=Z,2.5nm,0.8s,mb4.4,baz=257,slow=4.6,SNR=11						
ILAR				LR	LR	00 38 24.9	
	comp=Z,136nm,19.0s,MS4.3,baz=313,slow=33						
QSPA	South Pole Qui	86.70	180	eP	P	00 04 32.0	-0.7
	comp=Z,7.4nm,1.1s,mb4.8						
DBIC	Dimbokro	147.47	277	PKPbc	PKPbc	00 11 34.8	+0.3
	comp=Z,3.4nm,0.9s,baz=117,slow=2.3,SNR=3.6						

*ISCJB **27** 23:54:27.0±0.8,49°.10N±0°.03×4°.00W±0°.05,h6km±4km, Error ellipse: s-maj=6.7km s-min=4.9km az=45.0*

*CSEM **27** 23:54:28.0±0.4,49°.09N×4°.08W,h10km,ML2.6/6,Error ellipse: s-maj=7.1km s-min=6.1km az=56.0*

*NEIC **27** 23:54:28.1,49°.14N×4°.10W,h5km,ML2.5(LDG),After LDG.*

*LDG **27** 23:54:28.1±0.2,49°.14N×4°.10W,h5km,Md2.4/1,Ml2.5/7, Error ellipse: s-maj=3.4km s-min=2.9km az=63.0*

*BGS **27** 23:54:29.6±0.8,49°.07N×4°.19W,h15km,ML1.7*

ISC 27 23:54:27.9±0.8,49°.09N±0°.04×4°.08W±0°.05,h11km±4km, **n56,σ1s09/110,North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSF	Rostrenen	0.92	144	eP	Pg	23 54 47.8	+2.2
ROSF				eSg	Sg	23 54 57.9	+0.2
ROSF				eSn	Sn	23 55 00.2	+0.2
	13nm,0.3s						
ROSF	Rostrenen	0.92	144	ePg	Pg	23 54 45.7	+0.1
ROSF				ePn	Pn	23 54 46.5	-0.3
ROSF				eP		23 54 47.8	
ROSF				eSg	Sg	23 54 57.9	+0.2
ROSF				eSn	Sn	23 55 00.2	+0.2
ROSF	Rostrenen	0.92	144	ePg	Pg	23 54 45.7	+0.1
ROSF	Rostrenen	0.92	144	eP	Pg	23 54 47.8	+2.2
ROSF				eSg	Sg	23 54 57.9	+0.2
ROSF				eSn	Sn	23 55 00.2	+0.2
	6.3nm,0.3s						
JSA	Saint Aubin	1.26	85	P	Pn	23 54 52.1	+0.7
JSA				S	Sb	23 55 09.0	+1.2
JSA				AML	AML	23 55 11.4	
	23nm,0.5s						
JSA				AML	AML	23 55 12.3	
	10nm,0.2s						
JSA	Saint Aubin	1.26	85	eP	Pn	23 54 52.1	+0.7
JSA				eS	Sb	23 55 09.0	+1.2
JSA				AML	AML	23 55 11.4	
	comp=N,23nm,0.5s						
JSA				AML	AML	23 55 12.3	
	comp=E,10nm,0.2s						
JSA	Saint Aubin	1.26	85	P	Pn	23 54 52.1	+0.7
JSA				S	Sb	23 55 09.0	+1.2
JSA				AML	AML	23 55 11.4	
	comp=E,23nm,0.5s						
JSA				AML	AML	23 55 12.3	
	comp=E,10nm,0.2s						
JSA	Saint Aubin	1.26	85	P	Pn	23 54 52.1	+0.7
JSA				S	Sb	23 55 09.0	+1.2
JSA	Saint Aubin	1.26	85	eP	Pn	23 54 52.1	+0.7
JSA				eS	Sb	23 55 09.0	+1.2
	comp=E,10nm,0.2s						
JLP	Les Platons	1.31	82	P	Pn	23 54 53.9	+1.8
JLP				S	Sb	23 55 11.3	+2.1
JLP	Les Platons	1.31	82	eP	Pn	23 54 53.9	+1.8
JLP				eS	Sb	23 55 11.3	+2.1
JLP	Les Platons	1.31	82	P	Pn	23 54 53.9	+1.8
JLP				S	Sb	23 55 11.3	+2.1
JLP	Les Platons	1.31	82	eP	Pn	23 54 53.9	+1.9
JLP				eS	Sb	23 55 11.3	+2.1
JRS	Jersey	1.31	85	P	Pn	23 54 53.6	+1.5
JRS				S	Sb	23 55 11.3	+2.1
JRS				AML	AML	23 55 13.6	
	comp=E,17nm,0.3s						
JRS	Jersey	1.31	85	eP	Pn	23 54 53.6	+1.5
JRS				eS	Sb	23 55 11.3	+2.1
JRS				AML	AML	23 55 13.6	
	comp=E,17nm,0.3s						
JRS	Jersey	1.31	85	P	Pn	23 54 53.6	+1.5
JRS				S	Sb	23 55 11.3	+2.1
JRS				AML	AML	23 55 13.6	
	comp=E,17nm,0.3s						
JRS	Jersey	1.31	85	P	Pn	23 54 53.6	+1.5
JRS				S	Sb	23 55 11.3	+2.1
JRS	Jersey	1.31	85	eP	Pn	23 54 53.6	+1.5
JRS				eS	Sb	23 55 11.4	+2.1
	comp=E,17nm,0.3s						
SGMF	Saint Gilles	1.31	129	ePg	Pg	23 54 53.3	+0.3
SGMF				eSn	Sn	23 55 08.8	-0.8
SGMF				eSg	Sg	23 55 10.8	+0.8
	comp=E,12nm,0.3s						
SGMF	Saint Gilles	1.31	129	ePg	Pg	23 54 53.3	+0.3
SGMF				eSn	Sn	23 55 08.8	-0.8
SGMF				eSg	Sg	23 55 10.8	+0.8
	comp=E,5.9nm,0.3s						
QUIF	Quistinic	1.32	152	ePg	Pg	23 54 53.7	+0.5
QUIF				eSg	Sg	23 55 10.7	+0.3
	comp=E,11nm,0.3s						
QUIF	Quistinic	1.32	152	ePn	Pn	23 54 52.4	+0.2
QUIF				ePg	Pg	23 54 53.7	+0.5
QUIF				eSg	Sg	23 55 10.7	+0.3
QUIF	Quistinic	1.32	152	ePn	Pn	23 54 52.4	+0.2
QUIF	Quistinic	1.32	152	ePg	Pg	23 54 53.7	+0.5
QUIF				eSg	Sg	23 55 10.7	+0.3
	comp=E,5.7nm,0.3s						
CCA1	Carnmenellis	1.33	326	P	Pn	23 54 52.5	+0.2
CCA1				S	Sb	23 55 08.7	-1.1
CCA1				AML	AML	23 55 13.4	
	comp=E,6.0nm,0.4s						
CCA1				AML	AML	23 55 18.8	
	comp=E,5.6nm,0.4s						
CCA1	Carnmenellis	1.33	326	eP	Pn	23 54 52.5	+0.2
CCA1				eS	Sb	23 55 08.7	-1.1
CCA1				AML	AML	23 55 13.4	
	comp=N,6.0nm,0.4s						
CCA1				AML	AML	23 55 18.8	
	comp=E,5.6nm,0.4s						
CCA1	Carnmenellis	1.33	326	P	Pn	23 54 52.5	+0.2
CCA1				S	Sb	23 55 08.7	-1.1
CCA1				AML	AML	23 55 13.4	
	comp=E,6.0nm,0.4s						
CCA1				AML	AML	23 55 18.8	
	comp=E,5.6nm,0.4s						
CCA1	Carnmenellis	1.33	326	eP	Pn	23 54 52.5	+0.2
CCA1				eS	Sb	23 55 08.7	-1.1
	comp=E,5.6nm,0.4s						
JQE	Queens East	1.35	84	P	Pn	23 54 53.6	+1.0
JQE				S	Sb	23 55 11.7	+1.3
JQE	Queens East	1.35	84	eP	Pn	23 54 53.6	+1.0
JQE				eS	Sb	23 55 11.7	+1.3
JQE	Queens East	1.35	84	P	Pn	23 54 53.6	+1.0
JQE				S	Sb	23 55 11.7	+1.3
JQE	Queens East	1.35	84	eP	Pn	23 54 53.6	+1.0
JQE				eS	Sb	23 55 11.6	+1.3
	comp=E,13nm,0.8s						
HTL	Hartland	1.93	352	AML	AML	23 55 34.6	
	comp=N,11nm,0.7s						
HTL				AML	AML	23 55 38.1

ARCES	**ARCES Array B**	**50.30**	**334**	P		**P**	**00 13 42.0**	**+1.6**
	comp=E,1.6nm,0.7s,mb4.2,baz=82,slow=8.7,SNR=6.9							
FINES	**FINESS Array B**	**50.88**	**323**	P		**P**	**00 13 45.4**	**+0.5**
	comp=E,1.0nm,0.6s,mb3.9,baz=29,slow=4.4,SNR=4.7							
BRTR	**Keskin Array B**	**51.80**	**295**	P		**P**	**00 13 52.7**	**+0.5**
	comp=E,0.6nm,0.7s,mb3.6,baz=99,slow=7.6,SNR=4.0							
KWP	**Kalwaria Pacla**	**55.70**	**309**	*eP*		**P**	**00 14 21.0**	**+0.5**
	comp=E,6.3nm,1.0s,mb4.6							
STU	**Stuttgart**	**64.13**	**313**	*eP*		**P**	**00 15 18.3**	**-0.2**
	comp=E,7.8nm,0.6s,mb4.9							
ILAR	**Eielson Array**	**64.73**	**26**	P		**P**	**00 15 21.6**	**-0.5**
	comp=E,0.5nm,0.9s,mb3.5,baz=288,slow=5.7,SNR=4.6							

IDC 28 00:05:21.9±1.9, 50.07N×129.07W, h0km, mb3.4/2, mb1 3.8/7, mb1mx3.6/26, mbtmp3.5/7, ML3.5/5, MS3.0/3, Ms1 3.0/3, ms1mx2.9/31, Error ellipse: s-maj=38.2km s-min=11.3km az=73.0, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**2.20**	**16**	Pn		Pn	00 05 57.6	-2.1
	27nm,0.3s,baz=43,slow=14,SNR=43							
BBB					Sn	Sn	00 06 26.4	-1.2
	16nm,0.3s,baz=311,slow=24,SNR=7.0							
BBB					LR	LR	00 07 00.7	
	comp=Z,366nm,20.0s,baz=147,slow=45							
DLBC	**Dease Lake**	**8.40**	**357**	Pn		Pn	00 07 25.8	+1.1
	0.1nm,0.3s,baz=189,slow=24,SNR=2.2							
YBH	**Yreka Blue Hor**	**9.44**	**150**	LR		LR	00 10 52.9	
	comp=Z,259nm,19.9s,baz=168,slow=35							
NVAR	**Mina Array Bea**	**13.95**	**142**	Pn		Pn	00 08 42.3	+1.6
	0.2nm,0.3s,baz=318,slow=6.6,SNR=4.5							
YKA	**Yellowknife Ar**	**14.76**	**27**	LR		LR	00 14 23.5	
	comp=Z,22nm,18.6s,baz=80,slow=37							
PDAR	**Pinedale Array**	**15.29**	**111**	Pn		Pn	00 09 02.1	+3.3
	0.0nm,0.3s,baz=307,slow=13,SNR=11							
ILAR	**Eielson Array**	**17.48**	**334**	P		Pn	00 09 25.4	-1.3
	0.0nm,0.3s,baz=145,slow=10,SNR=8.9							
ULM	**Lac du Bonnet**	**21.18**	**77**	P		P	00 10 12.1	+3.5
ULM	**Lac du Bonnet**	**21.18**	**77**	P		P	00 10 12.1	+3.5
	4.7nm,0.6s,baz=279,slow=13,SNR=4.9							
ANMO	**Albuquerque**	**22.37**	**124**	P		P	00 10 22.6	+1.1
	2.5nm,1.1s,baz=322,slow=8.3,SNR=4.8							
TXAR	**Lajitas Array**	**28.24**	**128**	P		P	00 11 17.3	+0.8
	0.3nm,0.8s,baz=340,slow=9.6,SNR=4.0							

*ISCJB **28** 00:19:08.9±1.7, 49.98N×0.04×129.88W±0.06, h17km±17km, mb3.8/5, Error ellipse: s-maj=7.8km s-min=4.5km az=135.4*

*PGC **28** 00:19:09.6±18.0, 49.94N×129.93W, h10km, ML3.2/13, Mw3.8, 197km Wsw of Pt. Hardy, Bc Vancouver Island Region*

*NEIC **28** 00:19:09.9±0.4, 50.00N×129.87W, h10km, mb3.9/12, MW3.8(PGC), Error ellipse: s-maj=6.8km s-min=2.9km az=48.0*

*IDC **28** 00:19:12.9±1.8, 50.16N×129.61W, h0km, mb3.6/3, mb1 3.9/11, mb1mx3.7/30, mbtmp3.7/11, ML3.7/7, Error ellipse: s-maj=31.9km s-min=11.5km az=77.0*

ISC 28 00:19:11.7±1.8, 50.04N±0.04×129.84W±0.06, h23km±18km, n106, σ1§02/102, mb3.8/5, 1C-8D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.25**	**60**	⇑Pn		**Pn**	**00 19 32.6**	**-1.1**
BPBC	**Brooks Peninsu**	**1.34**	**84**	⇓Pn		**Pn**	**00 19 34.9**	**0.0**
BPBC				⇑Sn		**Sn**	**00 19 52.2**	**+0.3**
PHC	**Port Hardy**	**1.68**	**66**	⇑Pn		**Pn**	**00 19 35.9**	**-3.7**
PHC				⇑Sn		**Sn**	**00 19 59.3**	**-1.0**
MAYB	**Maynard**	**1.75**	**77**	⇑Pn		**Pn**	**00 19 39.8**	**-0.8**
EDB	**Eliza Dome**	**1.76**	**94**	⇑Pn		**Pn**	**00 19 36.1**	**-4.6**
EDB				⇑Sn		**Sn**	**00 20 00.3**	**-2.1**
WOSB	**Woss**	**2.11**	**85**	⇓Pn		**Pn**	**00 19 44.6**	**-0.9**
BBB	**Bella Bella**	**2.41**	**26**	⇑Pn		**Pn**	**00 19 49.4**	**-0.2**
BBB				⇑Sn		**Sn**	**00 20 17.6**	**-0.7**
BBB	**Bella Bella**	**2.41**	**26**	Pn		**Pn**	**00 19 49.4**	**-0.2**
	78nm,0.3s,baz=44,slow=13,SNR=32							
BBB					Sn	**Sn**	**00 20 17.6**	**-0.7**
	36nm,0.3s,baz=138,slow=22,SNR=13							
BBB	**Bella Bella**	**2.41**	**26**	⇑Pn		**Pn**	**00 19 49.4**	**-0.2**
NCRB	**Newcastle Ridg**	**2.46**	**80**	⇑Pn		**Pn**	**00 19 49.9**	**-0.4**
GDR	**Gold River**	**2.47**	**95**	⇓Pn		**Pn**	**00 19 50.9**	**+0.4**
BNB	**Barry Inlet**	**2.81**	**335**	⇓Pn		**Pn**	**00 19 53.7**	**-1.5**
BTB	**Buttle Lake**	**2.86**	**100**	⇑Pn		**Pn**	**00 19 56.2**	**+0.4**
CBB	**Campbell River**	**2.88**	**88**	⇓Pn		**Pn**	**00 19 55.4**	**-0.7**
OZB	**Mount Ozzard**	**3.03**	**109**	⇓Pn		**Pn**	**00 19 58.0**	**-0.1**
ALB	**Alberni**	**3.34**	**101**	⇓Pn		**Pn**	**00 20 02.0**	**-0.4**
MOBC	**Moresby Island**	**3.38**	**338**	⇓Pn		**Pn**	**00 20 03.9**	**+0.9**
MGB	**Mount Grey**	**3.51**	**105**	⇑Pn		**Pn**	**00 20 04.7**	**-0.1**
PGC	**Sidney**	**4.40**	**145**	*e*Pn		**Pn**	**00 20 16.7**	**-0.3**
NLWA	**Neilton Lookou**	**4.76**	**122**	*e*Pn		**Pn**	**00 20 21.6**	**-0.3**
JCW	**Jim Creek**	**5.51**	**107**	*e*Pn		**Pn**	**00 20 32.4**	**+0.2**
JCW				*e*Sn		**Sn**	**00 21 36.8**	**+2.0**
RPW	**Rockport**	**5.68**	**103**	*e*Pn		**Pn**	**00 20 36.8**	**+2.2**
LON	**Longmire**	**6.28**	**119**	*e*Pn		**Pn**	**00 20 43.0**	**+0.3**
WRAK	**Wrangell Islan**	**6.57**	**348**	Pn		**Pn**	**00 20 45.1**	**-1.6**
ETW	**Entiat**	**6.73**	**108**	*e*Pn		**Pn**	**00 20 49.4**	**+0.4**
RSW	**Rattlesnake Hi**	**7.75**	**114**	*e*Pn		**Pn**	**00 21 04.7**	**+1.7**
	20nm,0.6s							
OD2	**Odessa Site #2**	**7.82**	**106**	*e*Pn		**Pn**	**00 21 04.4**	**+0.4**
DLBC	**Dease Lake**	**8.42**	**359**	*e*Pn		**Pn**	**00 21 13.4**	**+1.4**
DLBC	**Dease Lake**	**8.42**	**359**	Pn		**Pn**	**00 21 14.6**	**+2.5**
	0.4nm,0.3s,baz=190,slow=15,SNR=7.0							
NEW	**Newport**	**8.52**	**97**	*e*Pn		**Pn**	**00 21 13.8**	**+0.2**
HUMO	**Hull Mountain**	**8.82**	**145**	Pn		**Pn**	**00 21 16.3**	**-1.4**
YBH	**Yreka Blue Hor**	**9.68**	**146**	*e*Pn		**Pn**	**00 21 28.8**	**-0.5**
YBH	**Yreka Blue Hor**	**9.68**	**146**	Pn		**Pn**	**00 21 35.0**	**+5.7**
	baz=341,slow=13,SNR=2.7							
SKAG	**Skagway**	**9.96**	**344**	Pn		**Pn**	**00 21 29.9**	**-3.2**
BSMT	**Bassoo Peak**	**10.14**	**97**	Pn		**Pn**	**00 21 36.1**	**+0.4**
WALA	**Waterton Lakes**	**10.40**	**89**	*e*Pn		**Pn**	**00 21 39.1**	**-0.1**
MOD	**Modoc**	**10.49**	**137**	Pn		**Pn**	**00 21 39.4**	**-1.2**
WVOR	**Wild Horse Val**	**10.85**	**130**	Pn		**Pn**	**00 21 45.8**	**+0.3**
MSO	**Missoula**	**11.04**	**101**	*e*Pn		**Pn**	**00 21 49.2**	**+1.2**
SLMT	**Seeley Lake**	**11.17**	**98**	*e*Pn		**Pn**	**00 21 53.2**	**+3.4**
CHMT	**Chamberlain Mo**	**11.44**	**99**	*e*Pn		**Pn**	**00 21 55.5**	**+2.0**
HLID	**Hailey**	**12.38**	**116**	*e*Pn		**Pn**	**00 22 06.0**	**-0.4**
	2.5nm,1.0s							
MCMT	**McKenzie Canyo**	**12.62**	**108**	*e*Pn		**Pn**	**00 22 10.5**	**+0.9**
	2.1nm,0.9s							
NVAR	**Mina Array Bea**	**14.23**	**140**	Pn		**Pn**	**00 22 37.2**	**+5.7**
	0.1nm,0.3s,baz=323,slow=15,SNR=2.7							
DIV	**Divide**	**14.26**	**327**	*e*Pn		**Pn**	**00 22 31.9**	**+0.1**
IMW	**Indian Meadow**	**14.27**	**108**	*e*Pn		**Pn**	**00 22 32.5**	**+0.4**
MOOW	**Moose Ponds**	**14.47**	**108**	*e*Pn		**Pn**	**00 22 42.6**	**+7.7**
	12nm,1.0s							
TPAW	**Teton Pass**	**14.49**	**110**	*e*Pn		**Pn**	**00 22 35.0**	**0.0**
	14nm,0.9s							
SNOW	**Snow King Moun**	**14.62**	**109**	*e*Pn		**Pn**	**00 22 36.3**	**-0.6**
LOHW	**Long Hollow**	**14.63**	**109**	*e*Pn		**Pn**	**00 22 37.0**	**0.0**
	15nm,1.1s							
RLMT	**Red Lodge**	**14.71**	**102**	*e*Pn		**Pn**	**00 22 38.5**	**+0.3**
	7.8nm,1.1s							
YKA	**Yellowknife Ar**	**15.02**	**28**	Pn		**Pn**	**00 22 41.5**	**-0.7**
YKA	**Yellowknife Ar**	**15.02**	**28**	Pn		**Pn**	**00 22 41.5**	**-0.7**
	0.1nm,0.3s,baz=221,slow=12,SNR=2.9							
DUG	**Dugway**	**15.50**	**123**	*e*Pn		**Pn**	**00 22 55.3**	**+6.7**
	7.5nm,1.4s							
BW06	**Boulder Array**	**15.74**	**110**	*e*Pn		**Pn**	**00 22 57.0**	**+5.4**
	20nm,1.6s							
PDAR	**Pinedale Array**	**15.74**	**110**	Pn		**Pn**	**00 22 55.9**	**+4.2**
	0.2nm,0.3s,baz=308,slow=13,SNR=9.7							
ISA	**Isabella**	**16.58**	**146**	*e*Pn		**Pn**	**00 23 01.1**	**-1.3**
MCK	**McKinley**	**17.13**	**330**	*e*Pn		**Pn**	**00 23 09.5**	**+0.2**
ILAR	**Eielson Array**	**17.29**	**335**	P		**Pn**	**00 23 15.2**	**+3.9**
	0.0nm,0.3s,baz=151,slow=11,SNR=9.6							
GSC	**Goldstone**	**17.53**	**142**	*e*Pn		**Pn**	**00 23 13.3**	**-1.1**
	8.1nm,1.4s							
FFC	**Flin Flon**	**17.58**	**64**	*e*Pn		**Pn**	**00 23 15.7**	**+0.8**
	11nm,0.7s							
PPLA	**Purkeypile**	**17.71**	**325**	*e*Pn		**Pn**	**00 23 17.5**	**+1.1**
RWWY	**Rawlins**	**17.78**	**109**	*e*P		**Pn**	**00 23 27.4**	**+10**
	11nm,0.8s							
BPAW	**Bear Paw Mtn.**	**18.05**	**329**	*e*Pn		**Pn**	**00 23 20.9**	**+0.4**
	4.8nm,1.1s							
INK	**Inuvik**	**18.42**	**356**	*e*Pn		**Pn**	**00 23 25.0**	**0.0**
INK	**Inuvik**	**18.42**	**356**	P		**Pn**	**00 23 27.0**	**+2.0**
	0.2nm,0.3s,baz=169,slow=6.5,SNR=3.5							
RSSD	**Black Hills**	**18.49**	**99**	*e*Pn		**Pn**	**00 23 25.6**	**-0.5**
	3.7nm,0.9s							
TTA	**Tatalina**	**19.19**	**322**	*e*P		**Pn**	**00 23 34.6**	**+0.1**
	4.5nm,1.1s							
PV01	**Paradox Valley**	**19.29**	**120**	*e*P		**Pn**	**00 23 35.5**	**-0.3**
	336nm,0.6s							
MVCO	**Mesa Verde**	**19.99**	**122**	*e*P		**Pn**	**00 23 41.9**	**-2.2**
	30nm,1.8s							
SDCO	**Great Sand Dun**	**21.30**	**116**	*e*P		**P**	**00 23 56.9**	**+0.3**
ULM	**Lac du Bonnet**	**21.66**	**76**	P		**P**	**00 24 03.9**	**+3.6**
	7.1nm,0.7s,mb4.2,baz=303,slow=15,SNR=2.3							
ANMO	**Albuquerque**	**22.77**	**123**	*e*P		**P**	**00 24 12.3**	**+0.1**
	4.3nm,1.1s,mb3.8							
ANMO	**Albuquerque**	**22.77**	**123**	P		**P**	**00 24 17.9**	**+5.8**
	1.4nm,0.9s,mb3.4,baz=336,slow=7.2,SNR=3.7							
EYMN	**Ely**	**25.06**	**80**	*e*P		**P**	**00 24 36.7**	**+2.7**
AMTX	**Amarillo**	**25.51**	**116**	*e*P		**P**	**00 24 38.1**	**0.0**
	18nm,1.0s,mb4.5							
WMOK	**Wichita Mounta**	**27.32**	**112**	*e*P		**P**	**00 24 54.3**	**-0.2**
	2.2nm,0.9s,mb3.7							
TXAR	**Lajitas Array**	**28.61**	**126**	P		**P**	**00 25 11.2**	**+5.1**
	0.3nm,0.7s,mb3.1,baz=300,slow=7.2,SNR=3.5							

*IDC **28** 00:22:26.2±2.1, 49.92N×130.46W, h0km, mb3.5/2, mb1 3.9/9, mb1mx3.7/28, mbtmp3.6/9, ML3.7/7, MS3.6/5, Ms1 3.6/5, ms1mx3.3/28, Error ellipse: s-maj=36.5km s-min=13.4km az=79.0*

*ISCJB **28** 00:22:30.7±1.5, 49.90N±0.03×129.89W±0.05, h21km±14km, mb4.1/12, MS3.9/3, Error ellipse: s-maj=6.0km s-min=5.0km az=153.5*

*PGC **28** 00:22:31.3±6.3, 49.87N×129.97W, h10km, ML3.5/10, Mw4.1, 203km Wsw of Pt. Hardy, Bc Vancouver Island Region*

*NEIC **28** 00:22:31.4±0.5, 49.94N×129.88W, h10km, mb4.2/17, MW4.5(PGC), Error ellipse: s-maj=7.4km s-min=4.6km az=63.0*

ISC 28 00:22:33.9±1.5, 49.95N±0.03×129.82W±0.06, h29km±14km, n106, σ1§03/113, mb4.1/12, MS3.8/3, 1C-10D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.28**	**57**	⇑Pn		**Pn**	**00 22 54.8**	**-1.0**
HOLB				⇓Sn		**Sn**	**00 23 11.7**	**-0.4**
BPBC	**Brooks Peninsu**	**1.34**	**80**	⇓Pn		**Pn**	**00 22 54.8**	**-1.8**
BPBC				⇑Sn		**Sn**	**00 23 13.0**	**-0.4**
PHC	**Port Hardy**	**1.71**	**63**	⇑Pn		**Pn**	**00 23 00.8**	**-0.9**
PHC				⇓Sn		**Sn**	**00 23 22.3**	**-0.2**
EDB	**Eliza Dome**	**1.75**	**92**	⇑Pn		**Pn**	**00 23 00.4**	**-1.8**
EDB				⇓Sn		**Sn**	**00 23 22.9**	**-0.6**
MAYB	**Maynard**	**1.76**	**74**	⇓Pn		**Pn**	**00 23 01.1**	**-1.4**
WOSB	**Woss**	**2.11**	**83**	⇓Pn		**Pn**	**00 23 06.8**	**-0.3**
GDR	**Gold River**	**2.46**	**93**	⇑Pn		**Pn**	**00 23 10.8**	**-1.1**
NCRB	**Newcastle Ridg**	**2.46**	**78**	⇑Pn		**Pn**	**00 23 12.5**	**+0.5**
BBB	**Bella Bella**	**2.48**	**25**	⇑Pn		**Pn**	**00 23 11.8**	**-0.4**
BBB					Sn	**Sn**	**00 23 40.9**	**-0.6**
BBB					LR	LR	00 24 23.5	
	comp=Z,1μm,18.4s,baz=57,slow=43							
BBB	**Bella Bella**	**2.48**	**25**	Pn		**Pn**	**00 23 11.8**	**-0.7**
	99nm,0.3s,baz=40,slow=13,SNR=42							
BBB					Sn	**Sn**	**00 23 40.9**	**-0.6**
	80nm,0.3s,baz=130,slow=22,SNR=21							
BBB					LR	LR	00 24 23.5	
	comp=Z,1μm,18.4s,baz=57,slow=43							
BBB	**Bella Bella**	**2.48**	**25**	⇑Pn		**Pn**	**00 23 11.8**	**-0.4**
BBB				⇑Sn		**Sn**	**00 23 40.5**	**-1.1**
BTB	**Buttle Lake**	**2.83**	**98**	⇓Pn		**Pn**	**00 23 17.5**	**+0.3**
BTB				⇓Sn		**Sn**	**00 23 50.3**	**0.0**
CBB	**Campbell River**	**2.88**	**87**	⇓Pn		**Pn**	**00 23 17.5**	**-0.2**
CBB				⇓Sn		**Sn**	**00 23 52.2**	**+0.8**
OZB	**Mount Ozzard**	**3.00**	**108**	⇑Pn		**Pn**	**00 23 19.9**	**+0.5**
OZB				⇑Sn		**Sn**	**00 23 53.7**	**-0.5**
PGC	**Sidney**	**4.37**	**105**	*e*Pn		**Pn**	**00 23 39.0**	**+0.8**
JCW	**Jim Creek**	**5.48**	**106**	*e*Pn		**Pn**	**00 23 54.0**	**+0.6**
	15nm,0.7s							
LON	**Longmire**	**6.23**	**118**	*e*Pn		**Pn**	**00 24 03.5**	**-0.2**
	10nm,1.1s							
ETW	**Entiat**	**6.70**	**107**	Pn		**Pn**	**00 24 10.3**	**+0.1**
RSW	**Rattlesnake Hi**	**7.71**	**114**	*e*Pn		**Pn**	**00 24 25.1**	**+1.0**
HAWA	**Hanford**	**7.75**	**113**	*e*Pn		**Pn**	**00 24 25.9**	**+1.3**
	35nm,1.4s							
OD2	**Odessa Site #2**	**7.79**	**105**	*e*Pn		**Pn**	**00 24 26.8**	**+1.6**
DLBC	**Dease Lake**	**8.50**	**359**	Pn		**Pn**	**00 24 29.8**	**-5.1**
	0.2nm,0.3s,baz=221,slow=8.4,SNR=3.8							
NEW	**Newport**	**8.51**	**97**	*e*Pn		**Pn**	**00 24 37.0**	**+2.0**
HUMO	**Hull Mountain**	**8.75**	**145**	Pn		**Pn**	**00 24 37.2**	**-1.2**
LNOR	**Lincton Mounta**	**8.76**	**113**	*e*Pn		**Pn**	**00 24 42.4**	**+3.9**
YBH	**Yreka Blue Hor**	**9.60**	**146**	*e*Pn		**Pn**	**00 24 49.3**	**-0.7**
YBH	**Yreka Blue Hor**	**9.60**	**146**	Pn		**Pn**	**00 24 51.7**	**+1.7**
	0.1nm,0.3s,baz=86,slow=22,SNR=2.7							
KHMM	**Horse Mountain**	**10.04**	**152**	*e*Pn		**Pn**	**00 24 54.8**	**-1.2**
SKAG	**Skagway**	**10.04**	**344**	*e*Pn		**Pn**	**00 24 55.7**	**-0.2**
BSMT	**Bassoo Peak**	**10.12**	**96**	*e*Pn		**Pn**	**00 24 57.9**	**+0.8**
WALA	**Waterton Lakes**	**10.39**	**89**	*e*Pn		**Pn**	**00 25 02.1**	**+1.3**
MOD	**Modoc**	**10.42**	**137**	Pn		**Pn**	**00 25 01.2**	**0.0**
WDC	**Whiskeytown Da**	**10.68**	**149**	Pn		**Pn**	**00 25 03.3**	**-1.5**
EDM	**Edmonton**	**10.76**	**66**	*e*Pn		**Pn**	**00 25 06.2**	**+0.4**
WVOR	**Wild Horse Val**	**10.79**	**130**	*e*Pn		**Pn**	**00 25 05.2**	**-1.1**
	6.3nm,1.2s							
MSO	**Missoula**	**11.01**	**100**	*e*Pn		**Pn**	**00 25 08.7**	**-0.7**
CHMT	**Chamberlain Mo**	**11.42**	**99**	*e*Pn		**Pn**	**00 25 16.2**	**+1.3**
HLID	**Hailey**	**12.34**	**115**	*e*Pn		**Pn**	**00 25 25.4**	**-2.1**
	7.9nm,1.5s							
MCMT	**McKenzie Canyo**	**12.59**	**108**	*e*Pn		**Pn**	**00 25 32.2**	**+1.4**
	2.2nm,0.8s							
PAHR	**Pah Rah Range**	**12.63**	**140**	*e*Pn		**Pn**	**00 25 31.4**	**-0.1**
MCCM	**Marconi Confer**	**12.81**	**155**	*e*Pn		**Pn**	**00 25 32.4**	**-1.5**
NVAR	**Mina Array Bea**	**14.16**	**140**	Pn		**Pn**	**00 25 52.7**	**+0.4**
	0.2nm,0.3s,baz=313,slow=9.9,SNR=4.4							
IMW	**Indian Meadow**	**14.24**	**108**	*e*Pn		**Pn**	**00 26 01.2**	**+7.9**
	22nm,1.0s							
DIV	**Divide**	**14.33**	**327**	Pn		**Pn**	**00 25 54.2**	**-0.3**
MOOW	**Moose Ponds**	**14.44**	**108**	*e*Pn		**Pn**	**00 25 56.7**	**+0.6**
TPAW	**Teton Pass**	**14.45**	**109**	*e*Pn		**Pn**	**00 25 57.0**	**+0.7**
LOHW	**Long Hollow**	**14.60**	**108**	*e*Pn		**Pn**	**00 25 58.9**	**+0.7**
RLMT	**Red Lodge**	**14.69**	**101**	*e*Pn		**Pn**	**00 26 00.0**	**+0.6**
DAWY	**Dawson**	**15.05**	**344**	Pn		**Pn**	**00 26 04.4**	**+0.2**
YKA	**Yellowknife Ar**	**15.09**	**28**	Pn		**Pn**	**00 26 01.8**	**-3.0**
	0.2nm,0.3s,baz=225,slow=12,SNR=5.2							
YKA					LR	LR	00 32 07.9	
	comp=Z,34nm,18.9s,baz=190,slow=38							
HWUT	**Hardware Ranch**	**15.20**	**116**	*e*Pn		**Pn**	**00 26 05.3**	**-1.0**
	6.6nm,0.6s							
DUG	**Dugway**	**15.45**	**123**	*e*Pn		**Pn**	**00 26 10.3**	**+0.8**
	19nm,1.6s							
BW06	**Boulder Array**	**15.70**	**110**	*e*Pn		**Pn**	**00 26 19.0**	**+6.2**
	15nm,2.1s							
PDAR	**Pinedale Array**	**15.70**	**110**	Pn		**Pn**	**00 26 14.7**	**+1.9**
	0.2nm,0.3s,baz=304,slow=8.8,SNR=13							
EGAK	**Eagle**	**16.03**	**342**	*e*Pn		**Pn**	**00 26 19.3**	**+2.4**
	11nm,1.3s							
TPNV	**Topopah Spring**	**16.28**	**138**	*e*Pn		**Pn**	**00 26 19.7**	**-0.5**
ISA	**Isabella**	**16.50**	**146**	Pn		**Pn**	**00 26 22.4**	**-0.7**
MCK	**McKinley**	**17.21**	**331**	Pn		**Pn**	**00 26 31.6**	**-0.2**
ILAR	**Eielson Array**	**17.37**	**335**	P		**Pn**	**00 26 28.6**	**-5.2**
	0.0nm,0.3s,baz=148,slow=11,SNR=6.6							
GSC	**Goldstone**	**17.46**	**142**	*e*Pn		**Pn**	**00 26 35.3**	**+0.2**
FFC	**Flin Flon**	**17.61**	**64**	*e*Pn		**Pn**	**00 26 37.9**	**+1.0**
	16nm,0.9s							
RSSD	**Black Hills**	**18.47**	**99**	*e*P		**Pn**	**00 26 48.2**	**+0.8**
	6.9nm,1.0s							
INK	**Inuvik**	**18.50**	**356**	P		**Pn**	**00 26 40.0**	**-7.6**
INK				*e*Pn		**Pn**	**00 26 48.1**	**+0.4**
INK	**Inuvik**	**18.50**	**356**	P		**Pn**	**00 26 40.0**	**-7.6**
	0.6nm,0.3s,baz=251,slow=1.7,SNR=3.8							
PV04	**Paradox Valley**	**18.87**	**120**	*e*Pn		**Pn**	**00 26 55.8**	**+3.5**
TTA	**Tatalina**	**19.27**	**322**	*e*P		**Pn**	**00 26 57.8**	**+0.9**
ISCO	**Idaho Springs**	**19.85**	**112**	*e*P		**Pn**	**00 27 02.8**	**-1.3**
	5.3nm,1.1s							
MVCO	**Mesa Verde**	**19.94**	**122**	*e*P		**Pn**	**00 27 04.4**	**-0.7**
	67nm,1.8s							
GLA	**Glamis**	**20.22**	**141**	*e*P		**P**	**00 27 05.6**	**-0.7**
SDCO	**Great Sand Dun**	**21.26**	**116**	*e*P		**P**	**00 27 18.2**	**+0.6**
	14nm,1.4s,mb4.1							
ULM	**Lac du Bonnet**	**21.67**	**76**	P		**P**	**00 27 19.7**	**-2.2**
	3.2nm,0.5s,mb4.0,baz=295,slow=9.2,SNR=4.0							
AGMN	**Agassiz Nation**	**22.18**	**81**	*e*P		**P**	**00 27 30.5**	**+3.1**
	14nm,1.1s,mb4.3							
TUC	**Tucson**	**22.61**	**134**	*e*P		**P**	**00 27 27.4**	**-4.7**
	7.4nm,1.3s,mb4.0							
ANMO	**Albuquerque**	**22.71**	**122**	*e*P		**P**	**00 27 34.3**	**+1.1**
ANMO	**Albuquerque**	**22.71**	**122**	P		**P**	**00 27 31.4**	**-1.8**
	0.4nm,0.3s,mb3.3,baz=334,slow=11,SNR=2.5							
BNM	**Barren Site**	**23.23**	**124**	P		**P**	**00 27 38.9**	**+0.3**
	6.7nm,1.2s,mb4.0							
ECSD	**EROS Data Cent**	**23.42**	**93**	*e*P		**P**	**00 27 35.9**	**-4.6**
	19nm,0.9s,mb4.5							
EYMN	**Ely**	**25.07**	**80**	*e*P		**P**	**00 27 56.5**	**+0.9**
	22nm,1.4s,mb4.5							
AMTX	**Amarillo**	**25.46**	**116**	*e*P		**P**	**00 27 59.5**	**+0.3**
	28nm,1.4s,mb4.6							
WMOK	**Wichita Mounta**	**27.28**	**112**	*e*P		**P**	**00 28 15.5**	**-0.1**
	5.3nm,1.0s,mb4.0							
TXAR	**Lajitas Array**	**28.56**	**126**	P		**P**	**00 28 27.6**	**+0.5**
	0.7nm,1.0s,mb3.4,baz=338,slow=9.5,SNR=5.6							
TXAR					LR	LR	00 39 58.2	
	comp=Z,127nm,18.6s,MS3.5,baz=355,slow=36							
RES	**Resolute Bay**	**28.75**	**18**	LR		LR	00 39 46.7	
	comp=Z,187nm,19.6s,MS3.7,baz=253,slow=36							
MIAR	**Mount Ida**	**30.58**	**106**	*e*P		**P**	**00 28 45.4**	**+0.5**
	6.2nm,1.3s,mb4.3							
PPT	**Papeete**	**69.46**	**200**	LR		LR	00 57 45.1	
	comp=Z,155nm,18.4s,MS4.3,baz=57,slow=31							

*PGC **28** 00:25:01.5±10.0, 50.01N×130.05W, h10km, ML3.6/10, Mw4.2, 202km Wsw of Pt. Hardy, Bc Vancouver Island Region*

*IDC **28** 00:25:02.7±0.8, 50.06N×129.80W, h0km, mb4.1/11, mb1 4.2/20, mb1mx4.1/32, mbtmp4.0/20, ML3.7/9, MS4.0/9, Ms1 4.0/9, ms1mx3.6/35, Error ellipse: s-maj=16.4km s-min=10.1km az=70.0*

*NEIC **28** 00:25:06.4±0.3, 50.31N×129.63W, h10km, mb4.3/34, MW4.2(PGC), Error ellipse: s-maj=7.0km s-min=2.9km az=49.0*

ISC 28 00:25:08.0±1.1, 50.27N±0.03×129.70W±0.05, h26km±10km, n164, σ1§26/166, mb4.3/25, MS4.0/6, 6D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.07**	**69**	⇓Pn		**Pn**	**00 25 24.6**	**-2.7**
BPBC	**Brooks Peninsu**	**1.24**	**94**	⇓Pn		**Pn**	**00 25 25.1**	**-4.6**
BPBC				⇑Sn		**Sn**	**00 25 42.1**	**-3.5**
PHC	**Port Hardy

ISA	**Isabella**	**16.72**	**147**	*e*Pn		**Pn**	**00 29 00.3**	**0.0**
	21nm,1.5s							
MCK	**McKinley**	**16.98**	**330**	*e*Pn		**Pn**	**00 29 03.5**	**+0.2**
	19nm,1.3s							
MSU	**Marysvale**	**17.12**	**127**	*e*Pn		**Pn**	**00 29 07.1**	**+1.7**
ILAR	**Eielson Array**	**17.12**	**335**	P		**Pn**	**00 29 06.7**	**+1.5**
	0.1nm,0.3s,baz=147,slow=8.7,SNR=13							
CCUT	**Cedar City**	**17.27**	**131**	*e*Pn		**Pn**	**00 29 09.4**	**+2.2**
	24nm,1.7s							
FFC	**Flin Flon**	**17.40**	**64**	*e*Pn		**Pn**	**00 29 08.3**	**-0.5**
	60nm,1.2s							
SRU	**San Rafael**	**17.56**	**122**	*e*Pn		**Pn**	**00 29 12.2**	**+1.4**
	26nm,1.1s							
PPLA	**Purkeypile**	**17.57**	**325**	*e*Pn		**Pn**	**00 29 10.6**	**-0.2**
	19nm,1.3s							
GSC	**Goldstone**	**17.66**	**143**	*e*Pn		**Pn**	**00 29 10.3**	**-1.7**
	21nm,1.4s							
RWWY	**Rawlins**	**17.78**	**110**	*e*Pn		**Pn**	**00 29 15.3**	**+1.8**
	25nm,1.1s							
BPAW	**Bear Paw Mtn.**	**17.90**	**329**	*e*Pn		**Pn**	**00 29 14.2**	**-0.6**
	20nm,1.2s							
INK	**Inuvik**	**18.20**	**355**	*e*Pn		**Pn**	**00 29 19.1**	**+0.7**
	11nm,0.9s							
INK	**Inuvik**	**18.20**	**355**	P		**Pn**	**00 29 18.6**	**+0.2**
	0.1nm,0.3s,baz=166,slow=7.5,SNR=5.1							
INK				LR		LR	00 36 56.3	
	comp=Z,630nm,18.7s,baz=1.0,slow=39							
LDFC	**Landfair**	**18.53**	**139**	*e*Pn		**Pn**	**00 29 20.1**	**-2.7**
PV04	**Paradox Valley**	**18.96**	**121**	*e*Pn		**Pn**	**00 29 30.4**	**+2.5**
TTA	**Tatalina**	**19.07**	**322**	*e*P		**Pn**	**00 29 27.5**	**-1.5**
PFO	**Pinyon Flat Ob**	**19.29**	**145**	P		**Pn**	**00 29 30.8**	**-1.1**
WUAZ	**Wupatki**	**19.86**	**131**	*e*P		**Pn**	**00 29 37.9**	**-0.8**
	12nm,1.1s							
ISCO	**Idaho Springs**	**19.90**	**112**	*e*Pn		**Pn**	**00 29 38.8**	**-0.3**
	26nm,1.7s							
MVCO	**Mesa Verde**	**20.04**	**123**	*e*P		**P**	**00 29 39.6**	**+0.7**
	53nm,1.4s							
GLA	**Glamis**	**20.41**	**142**	P		**P**	**00 29 43.7**	**+0.7**
SDCO	**Great Sand Dun**	**21.33**	**117**	*e*P		**P**	**00 29 52.5**	**-0.3**
	22nm,1.4s,mb4.3							
ULM	**Lac du Bonnet**	**21.52**	**77**	P		**P**	**00 29 55.7**	**+0.9**
ULM				LR		LR	00 38 58.8	
ULM	**Lac du Bonnet**	**21.52**	**77**	P		**P**	**00 29 55.7**	**+0.9**
	54nm,1.0s,mb4.9,baz=289,slow=12,SNR=13							
ULM				LR		LR	00 38 58.8	
	comp=Z,369nm,20.8s,MS3.8,baz=284,slow=39							
AGMN	**Agassiz Nation**	**22.05**	**82**	*e*P		**P**	**00 30 01.1**	**+0.5**
	16nm,0.9s,mb4.5							
TUC	**Tucson**	**22.78**	**135**	*e*P		**P**	**00 30 05.8**	**-2.5**
	15nm,1.3s,mb4.3							
ANMO	**Albuquerque**	**22.82**	**123**	*e*P		**P**	**00 30 07.4**	**-1.3**
	15nm,1.4s,mb4.2							
ANMO	**Albuquerque**	**22.82**	**123**	P		**P**	**00 30 06.7**	**-2.0**
	3.4nm,1.0s,mb3.7,baz=323,slow=11,SNR=5.8							
LAZ	**Ladron**	**22.88**	**125**	P		**P**	**00 30 10.4**	**+1.0**
	8.0nm,1.5s,mb3.9							
LPM	**Los Pinos Moun**	**23.21**	**125**	*e*P		**P**	**00 30 12.6**	**-0.3**
ECSD	**EROS Data Cent**	**23.35**	**93**	*e*P		**P**	**00 30 14.1**	**-0.2**
	50nm,1.2s,mb4.8							
EYMN	**Ely**	**24.94**	**80**	*e*P		**P**	**00 30 28.9**	**0.0**
	20nm,0.9s,mb4.7							
AMTX	**Amarillo**	**25.53**	**116**	*e*P		**P**	**00 30 34.4**	**+0.1**
	34nm,1.1s,mb4.8							
KSU1	**Kansas State U**	**25.83**	**103**	*e*P		**P**	**00 30 38.8**	**+1.7**
	38nm,1.3s,mb4.8							
MNTX	**Cornudas Mount**	**25.91**	**127**	*e*P		**P**	**00 30 35.7**	**-2.0**
	9.1nm,1.3s,mb4.2							
WMOK	**Wichita Mounta**	**27.32**	**113**	*e*P		**P**	**00 30 50.5**	**-0.1**
	12nm,1.2s,mb4.3							
TXAR	**Lajitas Array**	**28.68**	**127**	P		**P**	**00 31 00.2**	**-2.5**
TXAR	**Lajitas Array**	**28.68**	**127**	P		**P**	**00 31 00.2**	**-2.5**
	1.4nm,0.9s,mb3.7,baz=330,slow=4.3,SNR=9.6							
MIAR	**Mount Ida**	**30.60**	**107**	*e*P		**P**	**00 31 19.3**	**-0.3**
	16nm,1.3s,mb4.7							
OXF	**Oxford**	**33.20**	**103**	*e*P		**P**	**00 31 42.2**	**-0.3**
	31nm,0.9s,mb5.2							
SADO	**Sadowa**	**34.04**	**79**	P		**P**	**00 31 48.9**	**-0.8**
	3.3nm,0.7s,mb4.4,baz=263,slow=16,SNR=2.9							
TKL	**Tuckaleechee C**	**36.04**	**96**	LR		LR	00 47 24.0	
	comp=Z,488nm,19.0s,MS4.3,baz=153,slow=37							
SCHQ	**Schefferville**	**37.36**	**58**	LR		LR	00 48 10.7	
	comp=Z,345nm,21.4s,MS4.1,baz=101,slow=37							
PETK	**Petropavlovsk-**	**43.32**	**303**	P		**P**	**00 33 04.7**	**-2.7**
	1.5nm,0.8s,mb3.8,baz=274,slow=21,SNR=2.5							
SUMG	**Summit**	**43.36**	**26**	*i* P		**P**	**00 33 09.7**	**+2.3**
	6.2nm,1.0s,mb4.3							
FINES	**FINESS Array B**	**66.96**	**12**	P		**P**	**00 35 59.4**	**+1.7**
	4.5nm,1.0s,mb4.5,baz=309,slow=12,SNR=5.6							
SONM	**Songino Array**	**71.00**	**324**	P		**P**	**00 36 23.3**	**+0.3**
	0.5nm,0.5s,mb3.8,baz=38,slow=7.7,SNR=2.6							
ZALV	**Zalesovo Beam**	**72.18**	**339**	P		**P**	**00 36 31.5**	**+1.4**
	1.0nm,0.7s,mb3.9,baz=18,slow=5.2,SNR=6.1							
ZALV				LR		LR	01 09 19.1	
	comp=Z,78nm,19.9s,MS4.0,baz=264,slow=37							
CLL	**Coll m**	**73.95**	**23**	*e*(pP)		pP	00 36 45.0	-3.8
BRG	**Berggiesshubel**	**74.58**	**23**	*e*P		**P**	**00 36 48.2**	**+3.9**
	14nm,2.0s,mb4.6							
GUMO	**Guam**	**76.78**	**275**	LR		LR	01 03 47.5	
	comp=Z,43nm,20.6s,MS3.8,baz=105,slow=30							
AKASG	**Malin Array Be**	**77.82**	**14**	P		**P**	**00 37 03.8**	**+1.2**
	0.6nm,0.4s,mb3.9,baz=345,slow=5.2,SNR=7.7							
MKAR	**Makanchi Array**	**79.44**	**338**	P		**P**	**00 37 09.7**	**-1.9**
	0.7nm,0.9s,mb3.6,baz=18,slow=4.2,SNR=4.3							
LPAZ	**La Paz**	**85.43**	**122**	P		**P**	**00 37 42.0**	**-1.2**
	1.2nm,1.0s,mb4.0,baz=145,slow=9.7,SNR=3.1							
LPAZ				LR		LR	01 14 28.5	
	comp=Z,63nm,21.7s,MS4.0,baz=114,slow=35							

KISR ***28*** *00:30:11.5±0.5,31°.93N×48°.23E,h34km±617km, ML2.3*
TEH 28 00:30:12.8,32°.38N×47°.28E,h18km,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKOM	**Komasi**	**1.80**	**6**	*e*Pn	Pn	00 30 43.3	+0.3
IKOM				*e*Sn	Sn	00 31 05.5	+0.1
IKOM				*e*		00 31 15.6	
	comp=Z,4μm,0.3s						
IVIS	**Veis**	**2.17**	**351**	*e*Pn	Pn	00 30 48.5	+0.5
IVIS				*e*Sn	Sn	00 31 14.0	-0.5
IVIS				*e*		00 31 24.0	
	comp=Z,900nm,0.1s						
IDHR	**Dehrash**	**2.43**	**342**	*e*Pn	Pn	00 30 52.0	+0.4
IDHR				*e*Sn	Sn	00 31 20.0	-0.9
IDHR				*e*		00 31 29.7	
	comp=Z,2μm,0.2s						
MIB	**Mutribah**	**2.57**	**179**	*e*P	Pn	00 30 53.7	+0.2
MIB				*e*S	Sn	00 31 25.9	+1.6
MIB				AML	AML	00 31 27.1	
	comp=Z,18nm,0.7s						
MIB	**Mutribah**	**2.57**	**179**	*e*P	Pn	00 30 53.7	+0.2
MIB				*e*S	Sn	00 31 25.1	+0.9
MIB				AML	AML	00 31 33.7	
	comp=Z,32nm,0.6s						
IPIR	**Pirpir**	**3.07**	**83**	*e*Pn	Pn	00 31 00.6	+0.2
IPIR				*e*		00 31 11.2	
	comp=Z,348nm,0.2s						
NAY	**Al-Naaiem**	**3.12**	**181**	*e*P	Pn	00 31 00.9	-0.1
NAY				*e*S	Sn	00 31 37.1	-0.7
NAY				AML	AML	00 31 44.0	
	comp=Z,4.5nm,0.6s						
NAY	**Al-Naaiem**	**3.12**	**181**	*e*P	Pn	00 31 01.2	+0.1
NAY				*e*S	Sn	00 31 39.0	+1.1
NAY				AML	AML	00 31 42.6	
	comp=Z,4.6nm,0.5s						
RDF	**Al-Radifah**	**3.45**	**176**	*e*P	Pn	00 31 05.9	+0.3
RDF	**Al-Radifah**	**3.45**	**176**	*e*P	Pn	00 31 05.0	-0.6
RDF				*e*S	Sn	00 31 44.9	-1.1
RDF				AML	AML	00 31 52.4	
	comp=Z,10.0nm,0.4s						
IRAZ	**Razeghan**	**3.74**	**35**	*e*Pn	Pn	00 31 10.1	+0.5
IRAZ				*e*		00 31 20.8	
	comp=Z,303nm,0.2s						
IRAZ				*e*Sn	Sn	00 31 51.7	-1.4
IKLH	**Kolahrood**	**3.74**	**74**	*e*	Pg	00 31 21.7	-2.8
	comp=Z,276nm,0.3s						
IKLH				*e*Pn	Pn	00 31 09.2	-0.4
IZEF	**Zefreh**	**4.29**	**82**	*e*Pn	Pn	00 31 16.4	-0.8
IZEF				*e*		00 31 30.7	
	comp=Z,136nm,0.3s						
IDMV	**Damavand**	**5.08**	**50**	*e*Pn	Pn	00 31 26.7	-1.3
IDMV				*e*		00 31 50.8	
	comp=Z,75nm,0.2s						

PGC ***28*** *00:42:14.4±4.5,49°.89N×130°.01W,h10km,ML3.0/9, Mw3.7,205km Wsw of Pt. Hardy, Bc Vancouver Island Region*
ISCJB ***28*** *00:42:16.0±0.8,50°.01N±0°.04×129°.59W±0°.09,h10km, mb3.3/2,MS3.6/3,Error ellipse: s-maj=8.1km s-min=6.3km az=176.1*
IDC ***28*** *00:42:16.4±2.7,50°.03N×129°.61W,h0km,mb3.4/2, mb1 3.7/6,mb1mx3.5/26,mbtmp3.4/6,ML3.6/4,MS3.4/6, Ms1 3.4/6,ms1mx3.1/26,Error ellipse: s-maj=45.7km s-min=14.4km az=81.0*
NEIC ***28*** *00:42:18.9±0.7,50°.13N×129°.32W,h10km,mb3.6/2, MW3.7(PGC),Error ellipse: s-maj=9.0km s-min=5.5km az=76.0*
ISC 28 00:42:18.5±0.8,50°.08N±0°.04×129°.42W±0°.09,h10km,n57, σ0s94/58,mb3.3/2,MS3.6/3,1C-12D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.00**	**55**	⇓Pn	**Pn**	**00 42 37.9**	**-0.6**
BPBC	**Brooks Peninsu**	**1.06**	**85**	⇑Pn	**Pn**	**00 42 38.1**	**-1.4**
BPBC				⇓Sn	**Sn**	**00 42 56.8**	**+2.5**
PHC	**Port Hardy**	**1.42**	**63**	⇑Pn	**Pn**	**00 42 44.2**	**-0.2**
PHC				⇑Sn	**Sn**	**00 43 05.8**	**+2.8**
MAYB	**Maynard**	**1.48**	**77**	⇓Pn	**Pn**	**00 42 44.5**	**-0.7**
EDB	**Eliza Dome**	**1.50**	**97**	⇓Pn	**Pn**	**00 42 43.4**	**-2.0**
EDB				⇓Sn	**Sn**	**00 43 05.8**	**+0.8**
WOSB	**Woss**	**1.84**	**86**	⇓Pn	**Pn**	**00 42 50.0**	**-0.1**
NCRB	**Newcastle Ridg**	**2.18**	**80**	⇑Pn	**Pn**	**00 42 55.3**	**+0.5**
BBB	**Bella Bella**	**2.26**	**21**	⇑Pn	**Pn**	**00 42 55.2**	**-0.7**
BBB				Sn	**Sn**	**00 43 24.0**	**+0.2**
BBB				LR	LR	00 43 56.7	
BBB	**Bella Bella**	**2.26**	**21**	Pn	**Pn**	**00 42 55.0**	**-0.9**
	26nm,0.3s,baz=47,slow=10,SNR=66						
BBB				Sn	**Sn**	**00 43 24.1**	**+0.2**
	10.0nm,0.3s,baz=124,slow=23,SNR=8.7						
BBB				LR	LR	00 43 56.7	
	comp=Z,338nm,18.1s,baz=139,slow=43						
BBB	**Bella Bella**	**2.26**	**21**	⇑Pn	**Pn**	**00 42 55.2**	**-0.7**
BBB				⇓Sn	**Sn**	**00 43 24.0**	**+0.2**
BTB	**Buttle Lake**	**2.60**	**102**	⇓Pn	**Pn**	**00 43 01.1**	**+0.5**
CBB	**Campbell River**	**2.61**	**89**	⇑Pn	**Pn**	**00 43 00.9**	**+0.2**
CBB				⇓Sn	**Sn**	**00 43 35.9**	**+3.4**
OZB	**Mount Ozzard**	**2.79**	**112**	⇓Pn	**Pn**	**00 43 03.4**	**+0.2**
MGB	**Mount Grey**	**3.26**	**108**	⇓Pn	**Pn**	**00 43 09.8**	**+0.2**
PGC	**Sidney**	**4.16**	**108**	Pn	**Pn**	**00 43 21.5**	**-0.4**
PGC				*e*Sn	**Sn**	**00 44 09.5**	**-1.0**
NLWA	**Neilton Lookou**	**4.55**	**124**	Pn	**Pn**	**00 43 27.4**	**0.0**
OD2	**Odessa Site #2**	**7.58**	**107**	*e*Pn	**Pn**	**00 44 09.2**	**+0.3**
OD2				*e*Sn	**Sn**	**00 45 33.7**	**-1.0**
NEW	**Newport**	**8.26**	**98**	*e*Pn	**Pn**	**00 44 18.2**	**-0.1**
NEW				Sn	**Sn**	**00 45 50.6**	**-1.0**
DLBC	**Dease Lake**	**8.38**	**358**	LR	LR	00 47 08.7	
	comp=Z,269nm,21.0s,baz=303,slow=35						
WALA	**Waterton Lakes**	**10.13**	**90**	*e*Pn	**Pn**	**00 44 43.5**	**-0.4**
MOD	**Modoc**	**10.34**	**139**	*e*Pn	**Pn**	**00 44 47.2**	**+0.4**
MSO	**Missoula**	**10.78**	**102**	*e*Pn	**Pn**	**00 44 52.5**	**-0.3**
CMB	**Columbia Colle**	**13.67**	**148**	Pn	**Pn**	**00 45 33.8**	**+1.6**
NVAR	**Mina Array Bea**	**14.09**	**142**	Pn	**Pn**	**00 45 38.5**	**+0.5**
	0.1nm,0.3s,baz=281,slow=11,SNR=4.4						
DUG	**Dugway**	**15.30**	**124**	*e*Pn	**Pn**	**00 45 55.0**	**+0.6**
	3.9nm,1.1s						
PDAR	**Pinedale Array**	**15.50**	**111**	Pn	**Pn**	**00 46 00.8**	**+3.9**
	0.1nm,0.3s,baz=306,slow=10,SNR=8.6						
CCUT	**Cedar City**	**17.02**	**131**	*e*Pn	**Pn**	**00 46 15.6**	**-0.9**
ILAR	**Eielson Array**	**17.37**	**333**	P	**Pn**	**00 46 21.1**	**+0.4**
	0.0nm,0.3s,baz=148,slow=8.4,SNR=5.7						
INK	**Inuvik**	**18.40**	**355**	LR	LR	00 53 13.6	
	comp=Z,72nm,19.1s,baz=125,slow=36						
WUAZ	**Wupatki**	**19.60**	**131**	P	**Pn**	**00 46 47.4**	**-0.7**
ANMO	**Albuquerque**	**22.56**	**123**	*e*P	**P**	**00 47 19.0**	**+0.4**
	1.9nm,1.0s,mb3.5						
ANMO	**Albuquerque**	**22.56**	**123**	P	**P**	**00 47 20.5**	**+1.8**
	1.5nm,1.0s,mb3.4,baz=308,slow=10,SNR=5.0						
TXAR	**Lajitas Array**	**28.43**	**127**	P	**P**	**00 48 13.2**	**0.0**
	0.5nm,0.9s,mb3.1,baz=331,slow=7.4,SNR=4.4						
SADO	**Sadowa**	**33.90**	**79**	LR	LR	01 03 56.6	
	comp=Z,80nm,19.0s,MS3.5,baz=2.9,slow=38						
TKL	**Tuckaleechee C**	**35.84**	**96**	LR	LR	01 04 15.7	
	comp=Z,87nm,21.7s,MS3.5,baz=275,slow=37						
SCHQ	**Schefferville**	**37.30**	**58**	LR	LR	01 04 12.1	
	comp=Z,161nm,18.1s,MS3.9,baz=329,slow=35						

PGC 28 00:43:39.4±12.0,49°.89N×129°.97W,h10km,ML3.1/7, Mw3.7,6D,202km Wsw of Pt. Hardy, Bc Vancouver Island Region,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.40**	**57**	⇓Pn	Pn	00 44 02.7	-2.2
HOLB				⇑Sn	Sn	00 44 19.8	-3.5
BPBC	**Brooks Peninsu**	**1.44**	**79**	⇓Pn	Pn	00 44 03.1	-2.4
BPBC				⇓Sn	Sn	00 44 20.6	-3.9
PHC	**Port Hardy**	**1.82**	**62**	⇑Pn	Pn	00 44 08.9	-1.8
PHC				⇑Sn	Sn	00 44 30.2	-3.6
EDB	**Eliza Dome**	**1.84**	**89**	⇓Pn	Pn	00 44 08.3	-2.7
EDB				⇓Sn	Sn	00 44 29.2	-4.5
WOSB	**Woss**	**2.21**	**82**	⇓Pn	Pn	00 44 14.9	-1.5
NCRB	**Newcastle Ridg**	**2.57**	**77**	⇑Pn	Pn	00 44 20.0	-0.9
BBB	**Bella Bella**	**2.58**	**26**	⇑Pn	Pn	00 44 18.9	-2.1
BBB				⇑Sn	Sn	00 44 47.8	-4.6
CBB	**Campbell River**	**2.98**	**86**	⇑Pn	Pn	00 44 25.2	-1.3
CBB				⇓Sn	Sn	00 45 00.4	-1.9

PGC 28 00:54:04.4±3.9,50°.12N×130°.19W,h10km,ML3.2/9, Mw3.8,11D,206km Wsw of Pt. Hardy, Bc Vancouver Island Region,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.42**	**67**	⇓P	Pn	00 54 27.8	-2.5
HOLB				⇓S	Sn	00 54 44.3	-4.6
BPBC	**Brooks Peninsu**	**1.56**	**88**	⇓Pn	Pn	00 54 29.0	-3.1
BPBC				⇓Sn	Sn	00 54 47.1	-5.2
PHC	**Port Hardy**	**1.86**	**70**	⇓Pn	Pn	00 54 34.0	-2.3
PHC				⇓Sn	Sn	00 54 55.9	-3.9
MAYB	**Maynard**	**1.96**	**80**	⇓Pn	Pn	00 54 35.7	-1.9
BBB	**Bella Bella**	**2.45**	**31**	⇑Pn	Pn	00 54 43.0	-1.4
BBB				⇓Sn	Sn	00 55 10.8	-3.5
BNB	**Barry Inlet**	**2.65**	**339**	⇓Sn	Sn	00 55 14.6	-4.8
NCRB	**Newcastle Ridg**	**2.67**	**82**	⇓Pn	Pn	00 54 46.1	-1.3
BTB	**Buttle Lake**	**3.09**	**100**	⇑Sn	Sn	00 55 27.4	-2.7
CBB	**Campbell River**	**3.11**	**90**	⇑Pn	Pn	00 54 51.0	-2.4
CBB				⇑Sn	Sn	00 55 27.2	-3.4
MOBC	**Moresby Island**	**3.23**	**341**	⇓Pn	Pn	00 54 52.8	-2.4
MGB	**Mount Grey**	**3.75**	**105**	⇑Sn	Sn	00 55 42.9	-3.5

ISCJB ***28*** *00:57:15.9±0.7,49°.91N±0°.04×129°.79W±0°.08,h10km, mb3.7/4,MS3.2/3,Error ellipse: s-maj=7.1km s-min=5.7km az=165.6*
PGC ***28*** *00:57:16.7±4.0,49°.92N×129°.97W,h10km,ML3.1/10, Mw3.7,201km Wsw of Pt. Hardy, Bc Vancouver Island Region*
IDC ***28*** *00:57:18.8±2.0,50°.05N×129°.73W,h0km,mb3.7/3, mb1 3.8/8,mb1mx3.6/27,mbtmp3.5/8,ML3.3/5,MS3.3/5, Ms1 3.3/5,ms1mx2.9/36,Error ellipse: s-maj=36.4km s-min=13.8km az=79.0*
NEIC ***28*** *00:57:18.2±1.0,49°.96N×129°.69W,h10km,mb4.2/3, MW3.7(PGC),Error ellipse: s-maj=12.6km s-min=7.2km az=82.0*
ISC 28 00:57:18.4±0.7,49°.99N±0°.04×129°.68W±0°.08,h10km,n63, σ1s20/65,mb3.7/4,MS3.2/3,7D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.19**	**56**	⇓Pn	**Pn**	**00 57 40.0**	**-1.1**
BPBC	**Brooks Peninsu**	**1.24**	**81**	⇑Pn	**Pn**	**00 57 40.2**	**-1.5**
BPBC				⇑Sn	**Sn**	**00 57 58.3**	**-0.2**
PHC	**Port Hardy**	**1.61**	**62**	⇓Pn	**Pn**	**00 57 46.0**	**-0.8**
PHC				⇓Sn	**Sn**	**00 58 07.5**	**-0.1**
EDB	**Eliza Dome**	**1.66**	**93**	⇓Pn	**Pn**	**00 57 45.7**	**-1.8**
EDB				⇑Sn	**Sn**	**00 58 07.4**	**-1.4**
MAYB	**Maynard**	**1.67**	**74**	Pn	**Pn**	**00 57 46.5**	**-1.0**
WOSB	**Woss**	**2.01**	**84**	⇑Pn	**Pn**	**00 57 52.0**	**-0.4**
NCRB	**Newcastle Ridg**	**2.37**	**78**	⇓Pn	**Pn**	**00 57 57.6**	**+0.4**
GDR	**Gold River**	**2.37**	**94**	⇑Pn	**Pn**	**00 57 57.1**	**-0.1**
BBB	**Bella Bella**	**2.41**	**24**	Pn	**Pn**	**00 57 57.1**	**-0.8**
	44nm,0.3s,baz=42,slow=12,SNR=52						
BBB				Sn	**Sn**	**00 58 26.2**	**-1.3**
	18nm,0.3s,baz=125,slow=23,SNR=13						
BBB	**Bella Bella**	**2.41**	**24**	⇑Pn	**Pn**	**00 57 57.1**	**-0.8**
BBB				⇓Sn	**Sn**	**00 58 25.8**	**-1.7**
BTB	**Buttle Lake**	**2.75**	**99**	⇑Pn	**Pn**	**00 58 03.6**	**+1.2**
CBB	**Campbell River**	**2.78**	**87**	⇑Pn	**Pn**	**00 58 03.0**	**+0.1**
CBB				⇑Sn	**Sn**	**00 58 38.2**	**+1.6**
OZB	**Mount Ozzard**	**2.92**	**109**	⇑Pn	**Pn**	**00 58 04.9**	**+0.1**
MGB	**Mount Grey**	**3.40**	**105**	⇓Pn	**Pn**	**00 58 11.8**	**+0.4**
MGB				⇑Sn	**Sn**	**00 58 51.5**	**-0.2**
PGC	**Sidney**	**4.29**	**106**	*e*Pn	**Pn**	**00 58 25.3**	**+1.7**
PGC				Sn	**Sn**	**00 59 15.0**	**+1.4**
NLWA	**Neilton Lookou**	**4.64**	**122**	*e*Pn	**Pn**	**00 58 29.3**	**+0.8**
NLWA				*e*Sn	**Sn**	**00 59 29.4**	**+7.0**
COR	**Corvallis**	**6.92**	**139**	*e*Pn	**Pn**	**00 58 58.5**	**-1.4**
NEW	**Newport**	**8.42**	**97**	*e*Pn	**Pn**	**00 59 20.8**	**+0.5**
DLBC	**Dease Lake**	**8.47**	**359**	Pn	**Pn**	**00 59 22.1**	**+1.1**
	0.2nm,0.3s,baz=200,slow=16,SNR=2.9						
DLBC				LR	LR	01 02 24.2	
	comp=Z,273nm,19.1s,baz=262,slow=36						
YBH	**Yreka Blue Hor**	**9.57**	**147**	Pn	**Pn**	**00 59 34.5**	**-1.7**
BSMT	**Bassoo Peak**	**10.04**	**97**	*e*Pn	**Pn**	**00 59 43.0**	**+0.5**
WALA	**Waterton Lakes**	**10.30**	**89**	Pn	**Pn**	**00 59 46.2**	**+0.2**
MOD	**Modoc**	**10.38**	**138**	Pn	**Pn**	**00 59 47.3**	**+0.1**
WDC	**Whiskeytown Da**	**10.66**	**149**	Pn	**Pn**	**00 59 49.5**	**-1.5**
WVOR	**Wild Horse Val**	**10.74**	**130**	*e*Pn	**Pn**	**00 59 50.9**	**-1.2**
CHMT	**Chamberlain Mo**	**11.33**	**99**	Pn	**Pn**	**01 00 02.2**	**+2.0**
	9.6nm,1.6s						
HOPS	**Hopland**	**11.95**	**154**	*e*Pn	**Pn**	**01 00 07.2**	**-1.5**
HLID	**Hailey**	**12.27**	**116**	*e*Pn	**Pn**	**01 00 13.7**	**+0.7**
NVAR	**Mina Array Bea**	**14.12**	**141**	Pn	**Pn**	**01 00 42.2**	**+3.9**
	0.1nm,0.3s,baz=328,slow=14,SNR=4.8						
YKA	**Yellowknife Ar**	**15.02**	**28**	Pn	**Pn**	**01 00 49.7**	**-0.7**
	0.1nm,0.3s,baz=171,slow=36,SNR=3.1						
ILAR	**Eielson Array**	**17.39**	**335**	P	**Pn**	**01 01 22.6**	**+1.9**
	0.0nm,0.3s,baz=156,slow=11,SNR=6.9						
INK	**Inuvik**	**18.48**	**355**	LR	LR	01 09 07.1	
	comp=Z,620nm,21.0s,baz=117,slow=38						
MVCO	**Mesa Verde**	**19.87**	**122**	P	**Pn**	**01 01 50.4**	**-0.7**
	26nm,1.6s						
ULM	**Lac du Bonnet**	**21.58**	**76**	P	**P**	**01 02 10.9**	**+3.1**
	3.3nm,0.5s,mb4.0,baz=292,slow=13,SNR=3.9						
ULM				LR	LR	01 10 47.4	
	comp=Z,130nm,18.2s,MS3.4,baz=328,slow=37						
ANMO	**Albuquerque**	**22.65**	**123**	*e*P	**P**	**01 02 19.7**	**+0.3**
	2.0nm,0.9s,mb3.5						
ANMO	**Albuquerque**	**22.65**	**123**	P	**P**	**01 02 22.8**	**+3.3**
	1.8nm,0.9s,mb3.5,baz=323,slow=9.5,SNR=6.0						
ECSD	**EROS Data Cent**	**23.33**	**93**	*e*P	**P**	**01 02 28.4**	**+1.9**
	9.6nm,1.0s,mb4.2						
TXAR	**Lajitas Array**	**28.50**	**127**	P	**P**	**01 03 16.6**	**+2.8**
	0.5nm,0.9s,mb3.2,baz=309,slow=6.0,SNR=4.7						
RES	**Resolute Bay**	**28.70**	**18**	LR	LR	01 15 28.0	
	comp=Z,32nm,18.4s,MS3.0,baz=80,slow=38						
SADO	**Sadowa**	**34.08**	**79**	LR	LR	01 17 34.7	
	comp=Z,68nm,21.2s,MS3.4,baz=342,slow=36						

PGC ***28*** *01:15:12.4±11.0,49°.94N×129°.96W,h10km,ML3.9/11, Mw4.5, 199km Wsw of Pt. Hardy, Bc Vancouver Island Region*
ISCJB ***28*** *01:15:12.4±0.8,50°.12N±0°.02×129°.66W±0°.04,h2km±5km, mb4.7/72,MS4.2/35,Error ellipse: s-ma

BLMT Blacktail Moun 10.25 96 *e*Pn **Pn 01 17 43.7 +1.2**
WALA Waterton Lakes 10.27 90 *e*Pn **Pn 01 17 43.8 +0.9**
JTMT Jette 10.39 97 *e*Pn **Pn 01 17 45.0 +0.6**
MOD Modoc 10.49 138 *e*Pn **Pn 01 17 46.8 +0.9**
EDM Edmonton 10.57 67 *e*Pn **Pn 01 17 49.3 +2.4**
SWMT Swartz Lake 10.65 98 *e*Pn **Pn 01 17 48.3 +0.3**
WDC Whiskeytown Da 10.79 150 *e*Pn **Pn 01 17 51.0 +1.1**
WVOR Wild Horse Val 10.83 131 *e*Pn **Pn 01 17 51.0 +0.5**
34nm,1.4s
WVOR Wild Horse Val 10.83 131 *e*P **Pn 01 17 51.0 +0.5**
WVOR pmax pmax
comp=Z,34nm,1.4s
MSO Missoula 10.94 102 *e*Pn **Pn 01 17 51.4 -0.6**
SLMT Seeley Lake 11.06 99 *e*Pn **Pn 01 17 53.5 -0.1**
CHMT Chamberlain Mo 11.34 100 *e*Pn **Pn 01 17 58.0 +0.6**
HYT Haines Junctio 11.58 340 *e*Pn **Pn 01 18 04.7 +4.0**
LRM Limekiln Ridge 12.30 104 *e*Pn **Pn 01 18 10.6 0.0**
HRY Holter Researc 12.32 99 *e*Pn **Pn 01 18 10.6 -0.2**
HLID Hailey 12.32 116 *e*Pn **Pn 01 18 10.8 0.0**
DLMT Dillon 12.42 106 *e*Pn **Pn 01 18 11.8 -0.4**
MCMT McKenzie Canyo 12.54 109 *e*Pn **Pn 01 18 13.4 -0.4**
comp=Z,10nm,0.8s
PAHR Pah Rah Range 12.71 141 *e*Pn **Pn 01 18 16.9 +0.7**
BOZ Bozeman (W) 12.89 104 *e*Pn **Pn 01 18 18.9 +0.2**
WCN Washoe City 12.91 143 *e*Pn **Pn 01 18 19.4 +0.5**
comp=Z,28nm,1.3s
WCN Washoe City 12.91 143 *e*P **Pn 01 18 19.4 +0.5**
WCN pmax pmax
comp=Z,28nm,1.3s
BMN Battle Mountai 13.05 133 *e*Pn **Pn 01 18 22.5 +1.6**
WAKR Walker 13.73 144 Pn **Pn 01 18 32.2 +2.2**
YMR Madison River 13.77 106 *e*Pn **Pn 01 18 30.4 -0.2**
comp=Z,155nm,1.5s
CMB Columbia Colle 13.80 148 *e*Pn **Pn 01 18 30.5 -0.6**
YNR Norris Junctio 13.93 106 *e*Pn **Pn 01 18 34.4 +1.7**
YFT Old Faithful 13.96 107 *e*Pn **Pn 01 18 37.1 +3.8**
GCMT Greycliff 14.06 100 *e*Pn **Pn 01 18 35.4 +0.8**
comp=Z,7.8nm,0.7s
IMW Indian Meadow 14.19 109 *e*Pn **Pn 01 18 37.6 +1.3**
DCID1 Drake Creek 14.21 110 *e*Pn **Pn 01 18 36.1 -0.5**
NVAR Mina Array Bea 14.23 141 Pn **Pn 01 18 35.8 -1.2**
comp=Z,0.1nm,0.3s,baz=315,slow=11,SNR=17
FLWY Flagg Ranch 14.24 108 *e*Pn **Pn 01 18 38.6 +1.6**
RRI2 Red Ridge 14.27 111 *e*Pn **Pn 01 18 38.9 +1.5**
HVU Hansel Valley 14.38 119 *e*Pn **Pn 01 18 39.5 +0.4**
MOOW Moose Ponds 14.39 109 *e*Pn **Pn 01 18 40.2 +1.1**
TPAW Teton Pass 14.41 110 *e*Pn **Pn 01 18 42.3 +3.0**
REDW Red Top Meadow 14.54 111 *e*Pn **Pn 01 18 44.3 +3.2**
SNOW Snow King Moun 14.54 110 *e*Pn **Pn 01 18 44.6 +3.4**
LOHW Long Hollow 14.55 109 *e*Pn **Pn 01 18 42.5 +1.3**
RLMT Red Lodge 14.61 102 *e*Pn **Pn 01 18 43.4 +1.2**
AHID Auburn Hatcher 14.73 113 *e*Pn **Pn 01 18 46.9 +3.1**
BGU Big Grassy Mou 14.82 122 *e*Pn **Pn 01 18 44.0 -1.1**
comp=Z,36nm,1.5s
YKA Yellowknife Ar 14.87 28 Pn **Pn 01 18 43.8 -1.6**
comp=Z,0.5nm,0.3s,baz=220,slow=12,SNR=17
YKA LR LR 01 24 38.1
comp=Z,68nm,19.7s,baz=260,slow=38
SPUT South Promonto 14.88 120 *e*Pn **Pn 01 18 47.6 +1.8**
DAWY Dawson 14.89 343 *e*Pn **Pn 01 18 47.2 +1.4**
MENT Mentasta 14.93 334 *e*Pn **Pn 01 18 41.2 -5.2**
MTUM Tungsten Hills 15.06 144 *e*Pn **Pn 01 18 50.3 +2.0**
HWUT Hardware Ranch 15.18 117 *e*Pn **Pn 01 18 52.3 +2.4**
comp=Z,58nm,1.6s
DUG Dugway 15.46 124 *e*Pn **Pn 01 18 52.9 -0.5**
comp=Z,31nm,1.1s
DUG Dugway 15.46 124 *e*P **Pn 01 18 52.9 -0.5**
DUG pmax pmax
comp=Z,31nm,1.1s
KDAK Kodiak Island 15.46 308 Pn **Pn 01 18 52.6 -0.7**
comp=Z,0.3nm,0.3s,baz=130,slow=6.9,SNR=6.4
KDAK LR LR 01 23 12.9
comp=Z,1μm,21.9s,baz=26,slow=31
PAX Paxson 15.47 332 *e*Pn **Pn 01 18 53.6 +0.2**
comp=Z,13nm,1.0s
PAX Paxson 15.47 332 *e*P **Pn 01 18 53.6 +0.2**
PAX pmax pmax
comp=Z,13nm,1.0s
NOQ North Oquirrh 15.51 121 *e*Pn **Pn 01 18 55.0 +0.9**
comp=Z,26nm,0.9s
SLKM Skilak Lake 15.57 320 *e*Pn **Pn 01 18 56.8 +2.0**
SML Sawmill 15.60 326 *e*Pn **Pn 01 18 54.3 -0.9**
comp=Z,9.4nm,1.0s
SML Sawmill 15.60 326 *e*P **Pn 01 18 54.3 -0.9**
SML pmax pmax
comp=Z,9.0nm,1.0s
BW06 Boulder Array 15.66 110 *e*Pn **Pn 01 18 58.1 +2.1**
comp=Z,236nm,2.0s
PDAR Pinedale Array 15.66 110 Pn **Pn 01 18 55.5 -0.6**
comp=Z,0.6nm,0.3s,baz=308,slow=10.0,SNR=20
RC01 Rabbit Creek A 15.70 322 *e*Pn **Pn 01 18 56.7 +0.3**
comp=Z,18nm,0.9s
PMR Palmer 15.76 324 *e*Pn **Pn 01 19 00.5 +3.2**
comp=Z,21nm,1.0s
PMR Palmer 15.76 324 *e*P **Pn 01 19 00.5 +3.2**
PMR pmax pmax
comp=Z,21nm,1.0s
EGAK Eagle 15.88 342 *e*Pn **Pn 01 18 59.6 +0.9**
comp=Z,40nm,1.1s
LAO LASA Array 15.91 94 *e*Pn **Pn 01 18 58.2 -1.1**
comp=Z,48nm,1.0s
JLU Jordanelle 15.92 120 *e*Pn **Pn 01 19 00.2 +0.8**
comp=Z,16nm,1.0s
NLU North Lily Min 16.02 123 *e*Pn **Pn 01 19 02.6 +1.8**
comp=Z,15nm,0.8s
DAU Daniels Canyon 16.15 120 *e*Pn **Pn 01 19 03.6 +1.1**
ISA Isabella 16.60 146 *e*Pn **Pn 01 19 09.3 +1.2**
comp=Z,20nm,1.1s
ISA Isabella 16.60 146 *e*P **Pn 01 19 09.3 +1.1**
ISA pmax pmax
comp=Z,20nm,1.1s
RSO Redoubt South 16.63 317 *e*Pn **Pn 01 19 10.3 +1.9**
DGMT Dagmar 16.66 86 *e*Pn **Pn 01 19 09.1 +0.2**
comp=Z,285nm,1.8s
ARUT Antelope Range 16.94 131 *e*Pn **Pn 01 19 12.4 -0.1**
comp=Z,32nm,1.4s
ARUT Antelope Range 16.94 131 *e*P **Pn 01 19 12.4 -0.1**
ARUT pmax pmax
comp=Z,32nm,1.4s
TMUT Trail Mountain 16.96 123 *e*Pn **Pn 01 19 14.0 +1.3**
comp=Z,116nm,2.1s
MSU Marysvale 17.02 126 *e*Pn **Pn 01 19 12.8 -0.7**
MCK McKinley 17.10 330 *e*Pn **Pn 01 19 15.6 +1.3**
comp=Z,17nm,0.9s
MCK McKinley 17.10 330 *e*P **Pn 01 19 15.6 +1.3**
MCK pmax pmax
comp=Z,17nm,0.9s
CCUT Cedar City 17.17 131 *e*Pn **Pn 01 19 14.0 -1.4**
comp=Z,48nm,1.8s
SHPR Sheep Range 17.19 137 *e*Pn **Pn 01 19 15.4 -0.2**
ILAR Eielson Array 17.25 335 P **Pn 01 19 15.0 -1.1**
comp=Z,0.1nm,0.3s,baz=148,slow=10,SNR=41
ILAR PcP PcP 01 23 59.1 +0.6
baz=217,slow=1.2,SNR=6.4
ILAR LR LR 01 25 24.9
comp=Z,732nm,18.0s,baz=147,slow=35
TRF Thorofare Moun 17.36 328 *e*Pn **Pn 01 19 18.0 +0.5**
comp=Z,94nm,1.7s
FFC Flin Flon 17.42 64 *e*Pn **Pn 01 19 18.0 -0.3**
comp=Z,78nm,0.8s
FFC Flin Flon 17.42 64 *e*P **Pn 01 19 18.0 -0.3**
FFC pmax pmax
comp=Z,78nm,0.8s
SRU San Rafael 17.46 122 *e*Pn **Pn 01 19 20.3 +1.3**
comp=Z,34nm,1.0s
SRU San Rafael 17.46 122 *e*P **Pn 01 19 20.3 +1.3**
SRU pmax pmax
comp=Z,34nm,1.0s
GSC Goldstone 17.54 143 *e*Pn **Pn 01 19 19.7 -0.3**
comp=Z,20nm,1.2s
GSC Goldstone 17.54 143 *e*P **Pn 01 19 19.7 -0.3**
GSC pmax pmax
comp=Z,20nm,1.2s
COLA College 17.59 334 *e*Pn **Pn 01 19 23.4 +2.9**
comp=Z,20nm,1.2s
COLA College 17.59 334 *e*P **Pn 01 19 23.4 +3.0**
COLA pmax pmax
comp=Z,20nm,1.2s
PPLA Purkeypile 17.69 325 *e*Pn **Pn 01 19 21.5 -0.2**
comp=Z,49nm,1.5s
BPAW Bear Paw Mtn. 18.02 329 *e*Pn **Pn 01 19 24.7 -1.0**
comp=Z,27nm,1.1s
SVW2 Sparrevohn 18.15 317 *e*P **Pn 01 19 25.3 -2.0**
comp=Z,41nm,1.7s
CHGN Chignik 18.20 301 *e*Pn **Pn 01 19 23.7 -4.3**

INK Inuvik 18.32 355 *e*Pn **Pn 01 19 29.3 +0.1**
comp=Z,41nm,1.1s
INK Inuvik 18.32 355 P **Pn 01 19 29.3 0.0**
comp=Z,0.2nm,0.3s,baz=164,slow=12,SNR=16
INK LR LR 01 26 33.3
comp=Z,1μm,19.1s,baz=174,slow=37
INK Inuvik 18.32 355 *e*P **Pn 01 19 29.3 0.0**
INK pmax pmax
comp=Z,41nm,1.1s
RSSD Black Hills 18.39 99 *e*Pn **Pn 01 19 29.2 -1.1**
comp=Z,15nm,0.8s
RSSD Black Hills 18.39 99 *e*P **Pn 01 19 29.2 -1.1**
RSSD pmax pmax
comp=Z,15nm,0.8s
PV04 Paradox Valley 18.86 121 *e*P **Pn 01 19 35.6 -0.6**
PHWY Pilot Hill 18.99 108 *e*P **Pn 01 19 37.4 -0.3**
comp=Z,19nm,0.8s
PFO Pinyon Flat Ob 19.17 145 *e*P **Pn 01 19 39.8 -0.2**
comp=Z,5.8nm,1.0s
PFO Pinyon Flat Ob 19.17 145 *e*P **Pn 01 19 39.8 -0.1**
PFO pmax pmax
comp=Z,6.0nm,1.0s
TTA Tatalina 19.18 322 *e*P **Pn 01 19 38.4 -1.4**
PV01 Paradox Valley 19.23 121 *e*P **Pn 01 19 39.6 -1.0**
comp=Z,14μm,1.7s
SDPT Sand Point 19.28 298 *e*P **Pn 01 19 37.2 -3.8**
comp=Z,72nm,1.1s
SMCO Snowmass 19.42 116 *e*P **Pn 01 19 41.9 -0.9**
comp=Z,28nm,1.0s
WUAZ Wuupatki 19.75 131 *e*P **Pn 01 19 44.7 -2.1**
comp=Z,18nm,0.9s
ISCO Idaho Springs 19.82 112 *e*P **Pn 01 19 46.8 -0.8**
comp=Z,28nm,1.3s
ISCO Idaho Springs 19.82 112 *e*P **Pn 01 19 46.8 -0.8**
ISCO pmax pmax
comp=Z,28nm,1.3s
MVCO Mesa Verde 19.94 122 *e*P **Pn 01 19 47.0 -2.0**
comp=Z,218nm,1.6s
GLA Glamis 20.30 142 *e*P **P 01 19 51.0 -0.2**
comp=Z,19nm,1.0s
GLA Glamis 20.30 142 *e*P **P 01 19 51.0 -0.2**
GLA pmax pmax
comp=Z,19nm,1.0s
SDCO Great Sand Dun 21.24 116 *e*P **P 01 20 01.6 +0.2**
comp=Z,31nm,1.1s,mb4.5
OGNE Ogallala 21.31 105 *e*P **P 01 20 02.7 +0.5**
comp=Z,65nm,0.8s,mb5.0
ULM Lac du Bonnet 21.52 77 P **P 01 20 03.9 -0.4**
ULM LR LR 01 29 25.0
ULM Lac du Bonnet 21.52 77 P **P 01 20 03.9 -0.4**
comp=Z,30nm,0.7s,mb4.9,baz=286,slow=11,SNR=19
ULM LR LR 01 29 25.0
comp=Z,278nm,18.3s,MS3.7,baz=94,slow=40
AGMN Agassiz Nation 22.04 82 *e*P **P 01 20 10.2 +0.3**
comp=Z,20nm,0.8s,mb4.6
TUC Tucson 22.67 135 *e*P **P 01 20 15.4 -1.3**
comp=Z,35nm,1.6s,mb4.5
TUC Tucson 22.67 135 *e*P **P 01 20 15.4 -1.3**
TUC pmax pmax
comp=Z,35nm,1.6s,mb4.5
ANMO Albuquerque 22.72 123 *e*P **P 01 20 16.2 -1.1**
comp=Z,15nm,1.0s,mb4.4
ANMO Albuquerque 22.72 123 P **P 01 20 15.6 -1.7**
comp=Z,10nm,0.9s,mb4.2,baz=321,slow=10.0,SNR=24
ANMO LR LR 01 29 59.9
comp=Z,348nm,18.2s,MS3.8,baz=144,slow=39
ANMO Albuquerque 22.72 123 *e*P **P 01 20 16.2 -1.1**
ANMO pmax pmax
comp=Z,15nm,1.0s
LAZ Ladron 22.78 125 *e*P **P 01 20 17.6 -0.3**
comp=Z,11nm,1.4s,mb4.1
LENM Lemitar 23.05 125 *e*P **P 01 20 21.4 +0.6**
LPM Los Pinos Moun 23.11 124 *e*P **P 01 20 21.3 -0.1**
BNM Barren Site 23.24 125 *e*P **P 01 20 22.8 +0.1**
comp=Z,67nm,1.7s,mb4.8
ECSD EROS Data Cent 23.31 93 *e*P **P 01 20 22.7 -0.7**
comp=Z,63nm,0.8s,mb5.1
CBKS Cedar Bluff 24.00 107 *e*P **P 01 20 30.9 +0.9**
comp=Z,291nm,2.0s,mb5.4
CBKS Cedar Bluff 24.00 107 *e*P **P 01 20 30.9 +0.9**
CBKS pmax pmax
comp=Z,291nm,2.0s,mb5.4
EYMN Ely 24.92 80 *e*P **P 01 20 38.7 +0.3**
comp=Z,55nm,0.8s,mb5.1
AMTX Amarillo 25.44 116 *e*P **P 01 20 42.8 -0.5**
comp=Z,51nm,0.8s,mb5.1
KSU1 Kansas State U 25.77 103 *e*P **P 01 20 46.2 0.0**
comp=Z,41nm,1.0s,mb4.9
MNTX Cornudas Mount 25.81 126 *e*P **P 01 20 45.9 -0.7**
comp=Z,19nm,1.4s,mb4.4
COWI Conover 27.10 83 *e*P **P 01 20 57.6 -0.5**
comp=Z,31nm,1.1s,mb4.8
WMOK Wichita Mounta 27.24 113 *e*P **P 01 20 59.0 -0.5**
comp=Z,14nm,0.8s,mb4.5
WMOK Wichita Mounta 27.24 113 *e*P **P 01 20 59.0 -0.5**
WMOK pmax pmax
comp=Z,14nm,0.8s,mb4.5
JFWS Jewell Farm 27.79 90 *e*P **P 01 21 04.5 +0.2**
comp=Z,34nm,1.1s,mb4.9
JFWS Jewell Farm 27.79 90 *e*P **P 01 21 04.5 +0.2**
JFWS pmax pmax
comp=Z,34nm,1.1s,mb4.9
RES Resolute Bay 28.53 18 LR LR 01 32 20.2
comp=Z,551nm,20.6s,MS4.1,baz=75,slow=36
TXAR Lajitas Array 28.58 127 P **P 01 21 09.9 -1.5**
comp=Z,3.3nm,0.8s,mb4.1,baz=330,slow=7.6,SNR=35
TXAR LR LR 01 33 13.9
comp=Z,412nm,18.8s,MS4.1,baz=5.0,slow=38
JCT Junction City 29.76 120 *e*P **P 01 21 20.6 -1.4**
comp=Z,14nm,1.0s,mb4.6
JCT Junction City 29.76 120 *e*P **P 01 21 20.6 -1.3**
JCT pmax pmax
comp=Z,14nm,1.0s,mb4.7
CCM Cathedral Cave 29.78 99 *e*P **P 01 21 21.7 -0.3**
comp=Z,54nm,2.0s,mb4.9
CCM Cathedral Cave 29.78 99 *e*P **P 01 21 21.7 -0.3**
CCM pmax pmax
comp=Z,54nm,2.0s,mb4.9
MIAR Mount Ida 30.53 107 *e*P **P 01 21 28.3 -0.4**
comp=Z,27nm,1.3s,mb4.9
MIAR Mount Ida 30.53 107 *e*P **P 01 21 28.3 -0.4**
MIAR pmax pmax
comp=Z,27nm,1.3s,mb4.9
SIUC Southern Illin 31.27 98 *e*P **P 01 21 34.1 -1.1**
comp=Z,7.6nm,0.6s,mb4.7
OLIL Olney 31.39 95 *e*P **P 01 21 35.6 -0.6**
comp=Z,16nm,0.9s,mb4.8
USIN University of 32.11 96 *e*P **P 01 21 41.5 -1.1**
comp=Z,16nm,0.6s,mb5.0
HKT Hockley 32.41 116 *e*P **P 01 21 45.4 +0.1**
comp=Z,25nm,1.5s,mb4.8
HKT Hockley 32.41 116 *e*P **P 01 21 45.4 +0.1**
HKT pmax pmax
comp=Z,25nm,1.5s,mb4.8
WVT Waverly 33.11 99 *e*P **P 01 21 50.6 -0.8**
comp=Z,11nm,1.2s,mb4.7
WVT Waverly 33.11 99 *e*P **P 01 21 50.6 -0.8**
WVT pmax pmax
comp=Z,11nm,1.2s,mb4.7
OXF Oxford 33.14 103 *e*P **P 01 21 50.8 -0.9**
comp=Z,45nm,0.8s,mb5.5
OXF Oxford 33.14 103 *e*P **P 01 21 50.8 -0.8**
OXF pmax pmax
comp=Z,45nm,0.8s,mb5.5
ACSO Alum Creek Sta 33.84 89 *e*P **P 01 21 57.4 -0.4**
comp=Z,19nm,1.1s,mb4.9
LRAL Lakeview Retre 35.62 102 *e*P **P 01 22 11.8 -1.4**
comp=Z,52nm,0.9s,mb4.5
SCHQ Schefferville 37.39 58 LR LR 01 37 46.3
comp=Z,682nm,20.0s,MS4.4,baz=100,slow=36
FRNY Flat Rock 37.48 76 *e*P **P 01 22 28.2 -0.7**
comp=Z,14nm,0.8s,mb4.8
GOGA Godfrey 37.61 99 *e*P **P 01 22 29.0 -1.1**
comp=Z,14nm,0.8s,mb4.8
GOGA Godfrey 37.61 99 *e*P **P 01 22 29.0 -1.1**
GOGA pmax pmax
comp=Z,14nm,0.8s,mb4.7
JSRW J. Sargeant Re 38.56 89 *e*P **P 01 22 37.7 -0.4**
SEY Seymchan 42.09 318 *i* P **P 01 23 05.2 -1.8**
PETK Petropavlovsk- 43.41 303 P **P 01 23 17.2 -0.6**
comp=Z,2.9nm,0.6s,mb4.2,baz=84,slow=14,SNR=4.9
PETK LR LR 01 39 13.8
comp=Z,125nm,19.2s,MS3.8,baz=257,slow=33
SUMG Summit 43.45 26 *i* P **P 01 23 20.0 +2.1**
comp=Z,6.4nm,0.9s,mb4.3
KEV Kevo 59.20 9 *e*P **P 01 25 12.3 -3.6**
KEV pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
KEV Kevo 59.20 9 *e*p **P 01 25 12.3 -3.6**
comp=Z,3.4nm,0.8s,mb4.4
ARCES ARCESS Array B 59.25 10 P **P 01 25 15.5 -0.7**
comp=Z,3.2nm,0.8s,mb4.4,baz=337,slow=12,SNR=3.8
TAOE Nuku Hiva Isla 59.47 192 *e*LR LR 01 42 38.5
comp=Z,361nm,24.7s
HUMP Col San Antoni 59.53 98 *e*P **P 01 25 19.6 +0.7**
comp=Z,5.5nm,0.9s,mb4.6
LVZ Lovozero 61.69 7↑ *e*P **P 01 25 32.2 -0.7**
LVZ pmax pmax
comp=Z,22nm,1.0s,mb5.2
LVZ MLR MLR
comp=Z,197nm,20.0s,MS4.3
MJAR Matsushiro Arr 64.25 297 LR LR 01 48 51.7
comp=Z,98nm,20.7s,MS4.0,baz=25,slow=31
ROSC El Rosal 64.58 115 P **P 01 25 53.3 +0.5**
comp=Z,3.2nm,0.4s,mb4.7,baz=256,slow=23,SNR=4.3
ROSC LR LR 01 52 52.6
comp=Z,76nm,21.6s,MS3.9,baz=177,slow=35
NOA NORSAR Array B 64.79 20 LR LR 01 53 41.2
comp=Z,154nm,18.0s,MS4.2,baz=5.0,slow=36
JHJ Hachijo jima 2 65.74 293 LR LR 01 47 48.6
comp=Z,69nm,21.2s,MS3.8,baz=265,slow=30
CN2 Changchun 65.91 310 *e*P **P 01 26 01.0 -0.1**
CN2 *e*S S 01 34 45.0 -2.8
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
CN2 pmax pmax
comp=Z,100nm,8.0s
CN2 LR LR
comp=N,100nm,20.0s,MS4.4
CN2 LR LR
comp=E,200nm,20.0s,MS4.4
CN2 LR LR
comp=Z,200nm,27.0s
JOF Joensuu 66.28 9 *e*P **P 01 26 01.6 -1.6**
JOF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
JOF Joensuu 66.28 9 *e*p **P 01 26 01.6 -1.6**
comp=Z,5.5nm,0.9s,mb4.6
PMOR Pomariorio Ree 66.83 199 *e*T 02 38 27.0
FINES FINESS Array B 67.07 12 P **P 01 26 07.0 -1.2**
comp=Z,6.6nm,1.0s,mb4.6,baz=343,slow=12,SNR=6.7
FINES LR LR 01 56 33.4
comp=Z,281nm,18.7s,MS4.5,baz=327,slow=37
CBIJ Chichi jima 68.58 287 LR LR 01 49 09.3
comp=Z,136nm,21.8s,MS4.1,baz=103,slow=30
KLMR Klimovskoe 69.01 6 *e*P **P 01 26 20.4 0.0**
KLMR pmax pmax
comp=Z,27nm,1.3s,mb5.0
KSRS Korea Array 69.31 304 LR LR 01 54 51.2
comp=Z,53nm,18.9s,MS3.8,baz=52,slow=34
PPT Papeete 69.68 200 *e*LR LR 01 47 13.1
comp=Z,364nm,28.8s
ZAK Zakamensk 70.14 327 *e*P **P 01 26 31.4 +3.8**
ZAK pmax pmax
comp=Z,1.0nm,1.2s,mb3.6
SONM Songino Array 71.12 324 LR LR 01 57 14.4
comp=Z,288nm,21.9s,MS4.5,baz=59,slow=35
ROSF Rostrenen 71.60 34 *e*P **P 01 26 37.5 +1.0**
ZALV Zalesovo Beam 72.31 339 P **P 01 26 38.5 -2.1**
comp=Z,0.8nm,0.5s,mb3.9,baz=46,slow=4.3,SNR=4.7
ZALV LR LR 02 00 31.1
comp=Z,131nm,20.3s,MS4.2,baz=36,slow=38
BAIF Baives 72.66 29 *e*P **P 01 26 43.8 +1.0**
RKT Rikitea 73.09 185 *e*LR LR 01 48 53.6
comp=Z,472nm,26.5s
BJI Beijing 73.25 313 P **P 01 26 45.3 -1.2**
BJI S S 01 36 13.0 -1.2
BJI pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
BJI LR LR
comp=N,150nm,19.9s,MS4.4
BJI LR LR
comp=E,130nm,19.9s,MS4.4
BJI LR LR
comp=Z,25nm,24.6s,MS3.4
ARU Arti 73.57 355 *d* iP **P 01 26 45.8 -2.3**
ARU S S 01 36 16.5 -0.9
ARU SS SS 01 40 55.2 -3.7
ARU pmax pmax
comp=Z,8.0nm,1.7s,mb4.4
CLL Collm 74.04 23 *e*(P) **P 01 26 54.0 +3.1**
CLL *e*SS SS 01 41 12.0 +5.7
CLL *e* 01 42 36.0
CLL LmH 02 01 00.0
comp=N,200nm,18.0s
CLL LmH 02 01 00.0
comp=E,100nm,21.3s
OBN Obninsk 74.48 8↑ *e*P **P 01 26 53.8 +0.4**
OBN *e* 01 27 06.8
OBN pmax pmax
comp=Z,32nm,2.5s,mb4.8
OBN MLR MLR
comp=Z,200nm,20.0s,MS4.4
BRG Berggiesshubel 74.68 23 *e*P **P 01 27 00.5 +5.8**
comp=Z,7.8nm,1.2s,mb4.5
BRG S S 01 36 37.0 +7.0
BRG
comp=N,140nm,18.6s
BRG
comp=E,92nm,14.5s
BRG
comp=Z,266nm,17.5s
BRG
comp=N,152nm,14.8s
BRG
comp=E,160nm,21.8s
BRG
comp=Z,230nm,17.4s
HHC Hu-ho-hao-te 74.71 316 *e*P **P 01 26 54.5 -0.5**
HHC pP pP 01 26 58.8 -0.5
HHC sP sP 01 27 01.8 +0.9
HHC PP PP 01 29 43.3 +1.9
HHC S S 01 36 26.3 -4.4
HHC sS sS 01 36 34.3 -3.4
HHC SS SS 01 41 15.5 -1.5
HHC pmax pmax
comp=Z,17nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,81nm,3.9s
HHC LR LR
comp=N,240nm,15.9s,MS4.8
HHC LR LR
comp=E,310nm,14.7s,MS4.8
HHC LR LR
comp=Z,150nm,18.8s,MS4.3
LOR Lormes 74.99 31 *e*P **P 01 26 57.3 +0.8**
comp=Z,46nm,1.7s,mb4.8
LOR *e*MLR MLR
comp=Z,265nm,19.5s,MS4.2
LOR Lormes 74.99 31 *e*P **P 01 26 57.3 +0.8**
comp=Z,23nm,1.7s,mb4.8
LOR LR LR
comp=Z,270nm,19.5s,MS4.5
LOR Lormes 74.99 31 *e*P **P 01 26 57.3 +0.8**
LOR pmax pmax
comp=Z,23nm,1.7s,mb4.8
LOR MLR MLR
comp=Z,270nm,19.5s,MS4.5
CDF Champ du Feu 75.06 28 *e*P **P 01 26 58.0 +1.1**
comp=Z,22nm,1.4s,mb4.6
CDF Champ du Feu 75.06 28 *e*P **P 01 26 58.0 +1.1**
comp=Z,11nm,1.4s,mb4.6
CDF Champ du Feu 75.06 28 *e*P **P 01 26 58.0 +1.1**
CDF pmax pmax
comp=Z,11nm,1.4s,mb4.6
HAU Haudompre 75.14 29 *e*P **P 01 26 58.3 +1.0**
HAU *e*MLR MLR
comp=Z,196nm,21.8s,MS4.1
HAU Haudompre 75.14 29 *e*P **P 01 26 58.3 +1.0**
HAU MLR MLR
comp=Z,200nm,21.8s,MS4.4
AVF Avril sur Loir 75.24 31 *e*P **P 01 26 58.6 +0.6**
BGF Bois d'Agland 75.27 32 *e*P **P 01 26 58.9 +0.7**
comp=Z,25nm,1.3s,mb4.7
BGF Bois d'Agland 75.27 32 *e*P **P 01 26 58.9 +0.7**
comp=Z,12nm,1.3s,mb4.7
BGF Bois d'Agland 75.27 32 *e*P **P 01 26 58.9 +0.7**
BGF pmax pmax
comp=Z,12nm,1.3s,mb4.7
TCF Toulx Ste Croi 75.29 32 *e*P **P 01 26 59.1 +0.8**
comp=Z,57nm,1.8s,mb4.9
TCF Toulx Ste Croi 75.29 32 *e*P **P 01 26 59.1 +0.8**
comp=Z,28nm,1.8s,mb4.9
TCF Toulx Ste Croi 75.29 32 *e*P **P 01 26 59.1 +0.8**

TCF pmax pmax
comp=Z,28nm,1.8s,mb4.9
HINF Hinteralfeld 75.46 29 *e*P **P 01 26 59.9 +0.7**
SMF Signal de Mont 75.53 31 *e*P **P 01 27 00.1 +0.5**
BRVK Borovoye 75.80 348⇑ *e*P **P 01 27 01.0 -0.1**
BRVK pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BRVK MLR MLR
comp=Z,202nm,23.0s,MS4.4
RJF Les Rejaudoux 75.90 33 *e*P **P 01 27 02.5 +0.7**
RJF *e*MLR MLR
comp=Z,352nm,20.8s,MS4.3
RJF Les Rejaudoux 75.90 33 *e*P **P 01 27 02.5 +0.7**
RJF MLR MLR
comp=Z,350nm,20.8s,MS4.7
LFF La Frestale 75.94 34 *e*P **P 01 27 03.1 +1.1**
CABF La Chapelle 76.29 30 *e*P **P 01 27 05.3 +1.3**
comp=Z,28nm,1.2s,mb4.8
CABF La Chapelle 76.29 30 *e*P **P 01 27 05.3 +1.3**
comp=Z,14nm,1.2s,mb4.8
CABF La Chapelle 76.29 30 *e*P **P 01 27 05.3 +1.3**
CABF pmax pmax
comp=Z,14nm,1.2s,mb4.8
KURK Kurchatov 76.66 342 *de*P **P 01 27 04.6 -1.4**
KURK pmax pmax
comp=Z,5.0nm,1.7s,mb4.2
KURK MLR MLR
comp=Z,120nm,19.0s,MS4.2
SJPF Ste Jean 76.79 36 *e*P **P 01 27 07.2 +0.4**
comp=Z,45nm,1.4s,mb4.9
SJPF Ste Jean 76.79 36 *e*P **P 01 27 07.2 +0.4**
comp=Z,22nm,1.4s,mb4.9
SJPF Ste Jean 76.79 36 *e*P **P 01 27 07.2 +0.4**
SJPF pmax pmax
comp=Z,22nm,1.4s,mb4.9
VIVF Saint-Julien-l 77.38 31 *e*P **P 01 27 11.3 +1.1**
EPF Esparros 77.44 35 *e*P **P 01 27 11.8 +1.3**
LPL La Plagne 77.47 30 *e*P **P 01 27 12.4 +1.8**
LPG La Plagne 77.49 30 *e*P **P 01 27 12.9 +2.1**
comp=Z,39nm,1.7s,mb4.8
LPG La Plagne 77.49 30 *e*P **P 01 27 12.9 +2.1**
LPG pmax pmax
comp=Z,20nm,1.7s,mb4.8
ORIF Oris-en-Rattie 77.73 31 *e*P **P 01 27 13.4 +1.3**
ORIF *e*MLR MLR
comp=Z,319nm,20.0s,MS4.3
AKASG Malin Array Be 77.92 14 P **P 01 27 12.3 -0.7**
comp=Z,3.0nm,0.8s,mb4.2,baz=347,slow=5.1,SNR=8.9
AKASG LR LR 02 02 21.8
comp=Z,279nm,20.5s,MS4.6,baz=340,slow=36
AKASG Malin Array Be 77.92 14 *ce*P **P 01 27 13.3 +0.2**
AKASG pmax pmax
comp=Z,3.0nm,0.8s
MBDF Montbardon 78.19 30 *e*P **P 01 27 16.4 +1.8**
comp=Z,8.0nm,1.0s,mb4.3
MBDF Montbardon 78.19 30 *e*P **P 01 27 16.4 +1.8**
comp=Z,4.0nm,1.0s,mb4.3
MBDF Montbardon 78.19 30 *e*P **P 01 27 16.4 +1.8**
MBDF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
NJ2 Nanjing 78.23 306 *e*P **P 01 27 12.3 -2.8**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
SMRF Simiane la Rot 78.46 31 *e*P **P 01 27 17.6 +1.4**
comp=Z,40nm,1.8s,mb4.7
SMRF Simiane la Rot 78.46 31 *e*P **P 01 27 17.6 +1.4**
comp=Z,40nm,1.8s,mb5.0
VSR Storozhevoye 78.56 7 *e*P **P 01 27 15.4 -1.2**
VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
VSR pmax pmax
comp=E,4.0nm,0.9s
ESDC Sonseca Array 78.63 40 P **P 01 27 17.6 +0.5**
comp=E,0.4nm,0.6s,mb3.5,baz=328,slow=7.0,SNR=3.9
FRF La Foret Royal 79.19 31 *e*P **P 01 27 20.9 +0.7**
comp=E,11nm,1.1s,mb4.4
FRF La Foret Royal 79.19 31 *e*P **P 01 27 20.9 +0.7**
comp=E,5.6nm,1.1s,mb4.4
FRF La Foret Royal 79.19 31 *e*P **P 01 27 20.9 +0.7**
FRF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
MKAR Makanchi Array 79.56 338 LR LR 02 08 18.7
comp=Z,113nm,18.7s,MS4.2,baz=6.7,slow=40
WMQ Urumqi 80.91 334 *e*P **P 01 27 30.0 +0.5**
WMQ pP pP 01 27 34.8 +1.0
WMQ sP sP 01 27 37.0 +1.6
WMQ pmax pmax
comp=Z,14nm,0.9s,mb4.9
WMQ pmax pmax
comp=Z,120nm,6.0s
WMQ LR LR
comp=N,130nm,20.3s,MS4.5
WMQ LR LR
comp=E,180nm,23.3s,MS4.5
WMQ LR LR
comp=Z,160nm,23.2s,MS4.3
LZH Lanzhou 82.02 319 *e*P **P 01 27 32.0 -3.5**
LZH *e*PP PP 01 30 41.3 -1.2
LZH pmax pmax
comp=Z,21nm,1.4s,mb4.9
LZH pmax pmax
comp=Z,53nm,8.3s
LZH LR LR
comp=N,200nm,18.6s,MS4.7
LZH LR LR
comp=E,220nm,17.0s,MS4.7
LZH LR LR
comp=Z,260nm,19.7s,MS4.6
LPAZ La Paz 85.34 122 P **P 01 27 49.8 -2.8**
comp=Z,2.1nm,0.9s,mb4.2,baz=290,slow=6.5,SNR=3.4
LPAZ LR LR 02 07 28.6
comp=Z,134nm,20.6s,MS4.3,baz=201,slow=37
CD2 Chengdu 86.47 316 P **P 01 27 57.8 -0.4**
CD2 pP pP 01 28 02.5 -0.1
CD2 sP sP 01 28 04.8 +0.7
CD2 PP PP 01 31 20.3 +1.4
CD2 SKS 01 38 20.3
CD2 S S 01 38 30.5 -3.5
CD2 sS sS 01 38 38.5 -2.7
CD2 SS SS 01 44 12.8 0.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.3
CD2 pmax pmax
comp=Z,120nm,5.0s
KEST Kesra 87.13 32 LR LR 02 06 04.8
comp=Z,47nm,19.5s,MS3.9,baz=226,slow=35
KSH Kashi 87.91 340 *e*P **P 01 28 07.0 +2.0**
KSH *ep*P pP 01 28 11.5 +2.1
KSH *es*P sP 01 28 14.5 +3.5
KSH *e*PP PP 01 31 36.0 +5.8
KSH *e*SKS 01 38 33.0
KSH *e*S S 01 38 48.5 +0.9
KSH *e*sS sS 01 38 56.3 +1.5
KSH *e*SS SS 01 44 39.8 +6.5
KSH pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
KSH pmax pmax
comp=Z,47nm,3.5s
KSH LR LR
comp=N,42nm,4.4s
KSH LR LR
comp=E,33nm,3.0s
KSH LR LR
comp=Z,35nm,4.2s
GYA Guiyang 88.89 312 *e*P **P 01 28 11.0 +1.1**
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
BRTR Keskin Array B 89.31 13 LR LR 02 13 31.8
comp=Z,70nm,18.9s,MS4.1,baz=174,slow=39
KMI Kunming 91.88 314 P **P 01 28 21.5 -2.3**
KMI pmax pmax
comp=Z,12nm,0.6s,mb5.4
CPUP Villa Florida 99.34 120 LR LR 02 17 13.1
comp=Z,98nm,21.1s,MS4.3,baz=322,slow=38
CMAR Chiang Mai Arr 99.38 314 LR LR 02 15 53.9
comp=Z,60nm,18.0s,MS4.1,baz=201,slow=37

NEIC ***28*** *01:16:32.9±2.1,7.°33S×128.°60E,h121km±18km, mb4.4/7, Error ellipse: s-maj=18.1km s-min=8.4km az=67.0*
IDC ***28*** *01:16:32.2±3.1,7.°29S×128.°63E,h112km±28km, mb4.1/10,*

mb1 4.3/13,mb1mx4.3/17,mbtmp4.2/13,Error ellipse: s-maj=26.2km s-min=12.3km az=76.0
ISCJB ***28*** *01:16:35.4±0.5,7.°50S±0.°04×128.°69E±0.°04,h169km±6km, mb4.4/23,Error ellipse: s-maj=7.0km s-min=5.9km az=34.6*
DJA ***28*** *01:16:37,7.°48S×128.°78E,h163km,mb4.4/12*
ISC 28 01:16:36.3±0.5,7.°53S±0.°04×128.°68E±0.°04,h161km±5km, n85,σ1°31/66,mb4.4/23,1C-2D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**3.23**	**22**	P		P	**Pn**	**01 17 26.0**	**-1.1**
TLE	**Tual**	**4.45**	**65**	P		P	**Pn**	**01 17 44.2**	**+1.4**
TLE				S		S	**Sn**	**01 18 34.3**	**-0.3**
NLAI	**Namlea**	**4.55**	**340**	P		P	**Pn**	**01 17 44.0**	**0.0**
BBSI	**Bau Bau**	**6.40**	**288**	P		P	**Pn**	**01 18 09.8**	**+1.3**
	0.1nm53nm,0.8s								
MMRI	**Maumere**	**6.47**	**260**	P		P	**Pn**	**01 18 09.2**	**-0.2**
	0.5nm2μm105nm,0.9s								
MMRI				S		S	**Sn**	**01 19 20.9**	**-1.5**
	0.5nm2μm105nm,0.9s								
KDI	**Kendari**	**7.00**	**300**	P		P	**Pn**	**01 18 19.5**	**+3.1**
	0.1nm27nm,0.7s								
KNA	**Kunumurra**	**8.17**	**179**	*e*P		P	**Pn**	**01 18 31.3**	**-0.6**
	356nm,0.7s								
KNA				*e*S		S	**Sn**	**01 19 59.1**	**-4.0**
KNA	**Kunumurra**	**8.17**	**179**	P		P	**Pn**	**01 18 33.3**	**+1.4**
	973nm,0.8s								
BAKI	**Biak**	**9.72**	**50**	P		P	**Pn**	**01 18 54.1**	**+1.6**
	2μm84nm,0.7s								
BAKI				S		S	**Sn**	**01 20 36.9**	**-3.6**
	2μm84nm,0.7s								
FITZ	**Fitzroy Crossi**	**10.91**	**195**⇓	*i*P		P	**Pn**	**01 19 06.5**	**-1.7**
	65nm,0.4s								
FITZ				*e*S		S	**Sn**	**01 21 01.4**	**-7.7**
FITZ	**Fitzroy Crossi**	**10.91**	**195**	P		P	**Pn**	**01 19 06.6**	**-1.6**
	8.2nm,0.3s,baz=29,slow=10,SNR=178								
FITZ				S		S	**Sn**	**01 21 01.8**	**-7.3**
	13nm,0.3s,baz=100,slow=15,SNR=11								
WRA	**Warramunga Arr**	**13.50**	**157**	P		P	**Pn**	**01 19 40.6**	**-0.9**
	4.1nm,0.3s,baz=330,slow=13,SNR=64								
WRA				S		S	**Sn**	**01 22 04.7**	**-6.7**
	9.6nm,0.3s,baz=326,slow=25,SNR=9.5								
WB2	**Warramunga Arr**	**13.51**	**157**	*e*Pn		P	**Pn**	**01 19 49.8**	**+8.2**
WB2				*e*S		S	**Sn**	**01 22 05.2**	**-6.2**
COEN	**Coen**	**15.60**	**115**	*e*P		P	**Pn**	**01 20 12.2**	**+4.4**
MBWA	**Marble Bar**	**16.07**	**212**	*e*P		P	**Pn**	**01 20 12.5**	**-0.9**
MBWA				*e*S		S	**S**	**01 23 00.4**	**-12**
MBWA	**Marble Bar**	**16.07**	**212**	*e*Pn		P	**Pn**	**01 20 12.8**	**-0.6**
	11nm,0.4s								
MBWA				*e*S		S	**S**	**01 23 03.0**	**-9.2**
MBWA	**Marble Bar**	**16.07**	**212**	P		P	**Pn**	**01 20 13.1**	**-0.3**
	18nm,0.5s								
MYLDM	**Lahad Datu**	**16.20**	**321**	P		P	**Pn**	**01 20 18.5**	**+3.4**
	21nm,1.4s								
ASAR	**Alice Springs**	**16.81**	**163**	P		P	**Pn**	**01 20 24.9**	**+2.5**
	6.4nm,0.3s,baz=337,slow=9.8,SNR=520								
ASAR				S		S	**S**	**01 23 26.9**	**-2.1**
	3.1nm,0.3s,baz=343,slow=25,SNR=9.1								
SBUM	**Sibu**	**19.18**	**301**	P		P	**P**	**01 20 50.0**	**+2.2**
	15nm,1.1s								
KSM	**Kuching**	**20.39**	**295**	*e*P		P	**P**	**01 20 60.0**	**-0.9**
	26nm,0.8s								
KSM	**Kuching**	**20.39**	**295**	P		P	**P**	**01 21 00.3**	**-0.5**
	29nm,0.9s								
MEEK	**Meekatharra**	**21.27**	**206**	*e*P		P	**P**	**01 21 11.8**	**+1.8**
MEEK				*e*S		S	**P**	**01 25 06.2**	**+9.0**
KMBL	**Kambalda**	**24.55**	**194**	*e*P		P	**P**	**01 21 43.7**	**+2.6**
	40nm,0.4s,mb5.3								
KMBL				*e*S		Sx		01 26 22.6	
KLBR	**Kellerberrin**	**26.02**	**202**	*e*P		P	**P**	**01 21 58.2**	**+3.8**
	41nm,1.5s,mb4.8								
STKA	**Stephens Creek**	**27.05**	**155**	*e*P		P	**P**	**01 22 07.0**	**+3.4**
	4.9nm,1.8s,mb3.8								
STKA				*e*S		Sx		01 27 26.3	
STKA	**Stephens Creek**	**27.05**	**155**	*e*P		P	**P**	**01 22 07.0**	**+3.4**
	0.6nm,0.7s,mb3.3								
STKA	**Stephens Creek**	**27.05**	**155**	P		P	**P**	**01 22 07.1**	**+3.5**
	3.1nm,0.4s,mb4.2,baz=328,slow=8.4,SNR=11								
CMAR	**Chiang Mai Arr**	**39.08**	**312**	P		P	**P**	**01 23 47.9**	**-0.1**
	2.8nm,0.8s,mb4.0,baz=142,slow=7.4,SNR=19								
CMAR				PcP		PcP		01 25 55.7	+1.0
	0.5nm,0.3s,baz=170,slow=2.1,SNR=5.0								
CHTO	**Chiang Mai**	**39.31**	**312**	*e*P		P	**P**	**01 23 49.3**	**-0.5**
	7.8nm,1.0s,mb4.3								
CHTO	**Chiang Mai**	**39.31**	**312**	P		P	**P**	**01 23 49.4**	**-0.4**
	11nm,1.0s,mb4.5								
NJ2	**Nanjing**	**40.46**	**347**	*e*P		P	**P**	**01 23 57.3**	**-1.9**
NJ2				pmax		pmax			
	comp=Z,20nm,0.6s,mb4.9								
MJAR	**Matsushiro Arr**	**44.74**	**11**	P		P	**P**	**01 24 32.3**	**-1.3**
	comp=Z,2.2nm,0.5s,mb4.0,baz=188,slow=8.6,SNR=5.9								
KSRS	**Korea Array**	**44.76**	**359**	P		P	**P**	**01 24 32.6**	**-1.0**
	comp=Z,0.8nm,0.4s,mb3.7,baz=190,slow=11,SNR=6.7								
XAN	**Xi'an**	**45.39**	**337**	P		P	**P**	**01 24 37.3**	**-1.4**
XAN				pmax		pmax			
	comp=Z,3.0nm,0.9s,mb3.9								
XAN				pmax		pmax			
	comp=Z,12nm,4.7s								
LZH	**Lanzhou**	**49.27**	**333**⇓	P		P	**P**	**01 25 08.5**	**-0.2**
LZH				pmax		pmax			
	comp=Z,23nm,1.3s,mb4.7								
GTA	**Gaotai**	**53.82**	**332**⇑	P		P	**P**	**01 25 42.8**	**+0.4**
GTA				pmax		pmax			
	comp=Z,14nm,0.8s,mb4.7								
GTA				pmax		pmax			
	comp=Z,36nm,4.5s								
GTA				LR		LR			
	comp=N,130nm,19.3s								
GTA				LR		LR			
	comp=E,190nm,19.0s								
GTA				LR		LR			
	comp=Z,69nm,19.6s								
ULN	**Ulaanbaatar**	**58.38**	**343**	P		P	**P**	**01 26 15.3**	**+0.7**
	comp=Z,12nm,1.2s,mb4.6								
SONM	**Songino Array**	**58.54**	**343**	P		P	**P**	**01 26 16.1**	**+0.3**
	comp=Z,9.7nm,1.0s,mb4.6,baz=161,slow=8.2,SNR=18								
PETK	**Petropavlovsk-**	**65.24**	**19**	P		P	**P**	**01 27 00.9**	**+0.6**
	comp=Z,8.9nm,0.7s,mb4.7,baz=184,slow=4.9,SNR=12								
KSH	**Kashi**	**67.53**	**318**	*e*P		P	**P**	**01 27 16.0**	**+0.8**
KSH				*ep*P		pP		01 27 26.5	-27
KSH				*es*P		sP		01 27 30.3	-41
KSH				*e*PcP		PcP		01 27 43.0	+1.7
KSH				*e*PP		PP		01 29 48.3	+1.9
KSH				*e*ScP				01 31 42.3	
KSH				*e*PcS				01 31 46.3	
KSH				*e*S		S		01 36 10.0	+11
KSH				*es*S		sS		01 36 27.3	-38
KSH				*e*ScS		ScS		01 37 08.3	+10
KSH				*e*SS		SS		01 40 33.0	+10
KSH				pmax		pmax			
	comp=Z,3.0nm,0.4s,mb4.4								
KSH				pmax		pmax			
	comp=Z,39nm,1.5s,mb4.9								
KSH				LR		LR			
	comp=N,32nm,4.4s								
KSH				LR		LR			
	comp=E,36nm,3.5s								
KSH				LR		LR			
	comp=Z,29nm,3.8s								
MK31	**Makanchi Array**	**67.96**	**328**	*e*P		P	**P**	**01 27 17.6**	**-0.2**
MK31	**Makanchi Array**	**67.96**	**328**	*e*P		P	**P**	**01 27 17.6**	**-0.1**
MKAR	**Makanchi Array**	**67.96**	**328**	P		P	**P**	**01 27 17.9**	**+0.1**
	comp=Z,3.3nm,0.5s,mb4.3,baz=128,slow=7.9,SNR=46								
MKAR	**Makanchi Array**	**67.96**	**328**	P		P	**P**	**01 27 17.9**	**+0.2**
AAK	**Ala-Archa**	**70.11**	**320**	P		P	**P**	**01 27 32.1**	**+1.0**
ZAA0	**Zalesovo Array**	**71.48**	**334**	*e*P		P	**P**	**01 27 38.1**	**-1.0**
ZALV	**Zalesovo Beam**	**71.48**	**334**	P		P	**P**	**01 27 38.5**	**-0.6**
	comp=Z,4.6nm,0.5s,mb4.5,baz=139,slow=5.4,SNR=14								
KURK	**Kurchatov**	**72.29**	**329**	*e*P		P	**P**	**01 27 43.8**	**-0.3**
	comp=Z,10.0nm,0.8s,mb4.6								
MAW	**Mawson**	**73.98**	**201**	P		P	**P**	**01 27 56.8**	**+3.1**
	comp=Z,0.6nm,0.4s,mb3.7,baz=51,slow=10.0,SNR=3.1								
ABKAR	**Akbulak array**	**82.11**	**322**	*e*P		P	**P**	**01 28 38.4**	**-0.4**
	comp=Z,2.0nm,0.4s,mb4.1								
QSPA	**South Pole Qui**	**82.45**	**180**	*e*P		P	**P**	**01 28 42.6**	**+2.5**
	comp=Z,3.9nm,0.8s,mb4.1								
ARU	**Arti**	**85.47**	**328**	*e*P		P	**P**	**01 28 54.6**	**-1.1**
	comp=Z,3.7nm,0.8s,mb4.2								
ILAR	**Eielson Array**	**94.39**	**25**	P		P	**P**	**01 29 36.4**	**-1.0**
	comp=Z,1.4nm,1.0s,mb4.0,baz=263,slow=4.0,SNR=9.5								
ARCES	**ARCESS Array B**	**101.62**	**340**	P		Pdif		01 30 09.7	-0.5
	comp=Z,1.8nm,0.8s,baz=103,slow=4.1,SNR=4.2								
PGF	**Pioggiola**	**116.78**	**314**	*e*PKIKP		PKPdf		01 35 01.7	-0.1
	comp=Z,5.6nm,0.6s								
LPG	**La Plagne**	**117.47**	**318**	*e*PKIKP		PKPdf		01 35 03.4	+0.4
LPL	**La Plagne**	**117.48**	**318**	*e*PKIKP		PKPdf		01 35 03.2	+0.2
	comp=Z,3.0nm,0.6s								
SBF	**Sospel**	**117.51**	**316**	*e*PKIKP		PKPdf		01 35 02.9	-0.2
CABF	**La Chapelle**	**117.55**	**319**	*e*PKIKP		PKPdf		01 35 03.4	+0.3
	comp=Z,7.4nm,0.7s								
KEST	**Kesra**	**118.09**	**306**	PKP		PKPdf		01 35 04.5	-0.1
	comp=Z,0.5nm,0.6s,baz=72,slow=6.4,SNR=5.0								
FRF	**La Foret Royal**	**118.14**	**316**	*e*PKIKP		PKPdf		01 35 04.2	-0.2
PDAR	**Pinedale Array**	**118.19**	**45**	PKP		PKPdf		01 35 05.8	+1.4
	comp=Z,0.7nm,0.6s,baz=197,slow=1.5,SNR=5.3								
ORIF	**Oris-en-Rattie**	**118.24**	**317**	*e*PKIKP		PKPdf		01 35 04.5	0.0
	comp=Z,2.4nm,0.6s								
SMF	**Signal de Mont**	**118.99**	**320**	*e*PKIKP		PKPdf		01 35 05.6	-0.3
SSF	**Saint Saulge**	**119.05**	**320**	*e*PKIKP		PKPdf		01 35 06.0	0.0
	comp=Z,4.3nm,0.7s								
AVF	**Avril sur Loir**	**119.24**	**320**	*e*PKIKP		PKPdf		01 35 06.0	-0.4
BGF	**Bois d'Agland**	**119.66**	**320**	*e*PKIKP		PKPdf		01 35 06.9	-0.3
LASF	**Ste Croix**	**119.89**	**317**	*e*PKIKP		PKPdf		01 35 07.8	+0.1
TCF	**Toulx Ste Croi**	**120.17**	**320**	*e*PKIKP		PKPdf		01 35 08.3	+0.1
	comp=Z,3.3nm,0.7s								
LDF	**La Druitiere**	**120.65**	**323**	*e*PKIKP		PKPdf		01 35 08.7	-0.3
CAF	**Calviac**	**120.78**	**318**	*e*PKIKP		PKPdf		01 35 08.7	-0.7
MTLF	**Montolieu**	**121.26**	**317**	*e*PKIKP		PKPdf		01 35 10.3	-0.1
MFF	**Saint Martin d**	**121.53**	**321**	*e*PKIKP		PKPdf		01 35 10.6	-0.2
	comp=Z,7.0nm,0.7s								
SGMF	**Saint Gilles**	**122.25**	**324**	*e*PKIKP		PKPdf		01 35 12.0	-0.1
EPF	**Esparros**	**122.65**	**317**	*e*PKIKP		PKPdf		01 35 12.3	-0.7
	comp=Z,2.8nm,0.6s								
ANMO	**Albuquerque**	**122.67**	**53**	PKP		PKPdf		01 35 15.4	+2.1
	comp=Z,0.4nm,0.5s,baz=229,slow=4.6,SNR=3.6								
TXAR	**Lajitas Array**	**126.33**	**59**	PKP		PKPdf		01 35 22.5	+2.0
TXAR	**Lajitas Array**	**126.33**	**59**	PKP		PKPdf		01 35 22.5	+2.0
	comp=Z,0.4nm,0.4s,baz=176,slow=2.5,SNR=11								
TORD	**Torodi Ar. Bea**	**127.62**	**281**	PKP		PKPdf		01 35 24.3	+1.0
	comp=Z,1.5nm,0.6s,baz=50,slow=1.9,SNR=26								
SCHQ	**Schefferville**	**131.22**	**12**	PKP		PKPdf		01 35 29.8	+0.8
	comp=Z,1.9nm,0.7s,baz=202,slow=15,SNR=3.1								
DBIC	**Dimbokro**	**133.90**	**272**	PKP		PKPdf		01 35 36.8	+1.5
	comp=Z,1.8nm,0.6s,baz=162,slow=12,SNR=6.2								
CPUP	**Villa Florida**	**145.84**	**170**	PKPbc		PKPbc		01 35 58.8	+1.4
	comp=Z,1.5nm,0.4s,baz=123,slow=2.5,SNR=10								
LPAZ	**La Paz**	**151.07**	**145**	PKPbc		PKPbc		01 36 14.8	+3.5
LPAZ				PKPab		PKPab		01 36 23.3	+4.0
LPAZ	**La Paz**	**151.07**	**145**	PKPbc		PKPbc		01 36 14.8	+3.5
	comp=Z,2.5nm,0.4s,baz=44,slow=2.0,SNR=21								
LPAZ				PKPab		PKPab		01 36 23.3	+4.0
	comp=Z,4.6nm,0.6s,baz=200,slow=4.3,SNR=4.7								

ISK ***28*** *01:18:13.6,37.°32N×26.°99E,h5km,MD3.3*
DDA ***28*** *01:18:14.5,37.°32N×26.°98E,h7km±3km,Md3.1*
CSEM ***28*** *01:18:15.0±0.4,37.°32N×27.°00E,h2km,MD3.3,Error ellipse: s-maj=8.8km s-min=4.3km az=55.0*
ATH ***28*** *01:18:16.9,37.°51N×27.°19E,h5km±1km,MD3.1/4*
ISC 28 01:18:14.8±0.8,37.°32N±0.°03×26.°96E±0.°05,h2km±7km, n35,σ0°85/51,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.38**	**132**	*e*P		G	**Pg**	**01 18 21.0**	**-1.1**
BODT				*e*SG		G	**Sg**	**01 18 26.9**	**-0.2**
BODT	**Bodrum**	**0.38**	**132**	*e*Pg		G	**Pg**	**01 18 21.0**	**-1.1**
BODT				*e*Sg		G	**Sg**	**01 18 26.9**	**-0.2**
SMG	**Samos**	**0.40**	**346**	*e*PG		G	**Pg**	**01 18 23.5**	**+1.0**
SMG				*e*SB		G	**Sg**	**01 18 28.5**	**+0.8**
SMG	**Samos**	**0.40**	**346**	*e*Pg		G	**Pg**	**01 18 23.5**	**+1.0**
SMG				*e*Sb		G	**Sg**	**01 18 28.5**	**+0.8**
GCAM	**G?zelcaml?**	**0.44**	**30**	*i* P		G	**Pg**	**01 18 23.1**	**-0.1**
GCAM				*i* S		G	**Sg**	**01 18 29.3**	**+0.4**
GCAM	**G?zelcaml?**	**0.44**	**30**	*i* P		G	**Pg**	**01 18 23.1**	**-0.1**
GCAM				*i* S		G	**Sg**	**01 18 29.3**	**+0.4**
BDRM	**Kayabasi**	**0.47**	**123**	*i* P		G	**Pg**	**01 18 23.4**	**-0.3**
BDRM				*i* S		G	**Sg**	**01 18 30.9**	**+1.1**
BDRM	**Kayabasi**	**0.47**	**123**	*i* P		G	**Pg**	**01 18 23.4**	**-0.3**
BDRM				*i* S		G	**Sg**	**01 18 30.9**	**+1.2**
MLSB	**Milas**	**0.65**	**92**	*e*PG		G	**Pg**	**01 18 26.6**	**-0.8**
MLSB				*e*SG		G	**Sg**	**01 18 36.2**	**+0.4**
MLSB	**Milas**	**0.65**	**92**	*e*Pg		G	**Pg**	**01 18 26.6**	**-0.7**
MLSB				*e*Sg		G	**Sg**	**01 18 36.2**	**+0.4**
DAT	**Datca**	**0.77**	**140**	*e*PG		G	**Pg**	**01 18 29.3**	**-0.3**
DAT				*e*SG		G	**Sg**	**01 18 41.2**	**+1.6**
DAT	**Datca**	**0.77**	**140**	*e*Pg		G	**Pg**	**01 18 29.3**	**-0.3**
DAT				*e*Sg		G	**Sg**	**01 18 41.2**	**+1.6**
AYDN	**Tasoluk**	**0.81**	**65**	*i* P		G	**Pg**	**01 18 29.2**	**-1.1**
AYDN				*i* S		G	**Sg**	**01 18 41.6**	**+0.8**
AYDN	**Tasoluk**	**0.81**	**65**	*i* P		G	**Pg**	**01 18 29.2**	**-1.1**
AYDN				*i* S		G	**Sg**	**01 18 41.6**	**+0.8**
YER	**Yerkesik**	**1.07**	**100**	*e*PG		G	**Pg**	**01 18 35.1**	**-0.3**
YER	**Yerkesik**	**1.07**	**100**	*e*Pg		G	**Pg**	**01 18 35.1**	**-0.3**
IZM	**Izmir**	**1.10**	**13**	*e*PN		G	**Pg**	**01 18 35.4**	**-0.6**
IZM	**Izmir**	**1.10**	**13**	*e*Pn		G	**Pg**	**01 18 35.4**	**-0.6**
APE	**Apeiranthos**	**1.17**	**258**	*e*PB		G	**Pg**	**01 18 43.2**	**+6.0**
CHOS	**Chios island**	**1.28**	**326**	*e*PB		G	**Pg**	**01 18 40.4**	**+1.0**
CHOS	**Chios island**	**1.28**	**326**	*e*Pb		G	**Pg**	**01 18 40.4**	**+1.0**
AKS	**Akhisar**	**1.70**	**23**	*e*PN		G	**Pn**	**01 18 45.1**	**-0.3**
AKS	**Akhisar**	**1.70**	**23**	*e*Pn		G	**Pn**	**01 18 45.1**	**-0.3**
DNZL	**Cakiroluk**	**1.70**	**77**	*i* P		G	**Pg**	**01 18 45.6**	**-1.9**
DNZL				*i* S		G	**Sg**	**01 19 09.9**	**+0.5**
DNZL	**Cakiroluk**	**1.70**	**77**	*i* P		G	**Pg**	**01 18 45.6**	**-1.8**
DNZL				*i* S		G	**Sg**	**01 19 09.9**	**+0.4**
DENT	**Denizli**	**1.71**	**75**	*e*PN		G	**Pn**	**01 18 44.8**	**-0.7**
DENT	**Denizli**	**1.71**	**75**	*e*Pn		G	**Pn**	**01 18 44.8**	**-0.7**
KULA	**Kula-Manisa**	**1.80**	**48**	*e*PN		G	**Pn**	**01 18 46.6**	**-0.2**
KULA	**Kula-Manisa**	**1.80**	**48**	*e*Pn		G	**Pn**	**01 18 46.6**	**-0.2**
PRK	**Paraskevi**	**2.00**	**345**	*e*PN		G	**Pg**	**01 18 51.7**	**-1.4**
PRK	**Paraskevi**	**2.00**	**345**	*e*Pn		G	**Pg**	**01 18 51.7**	**-1.4**
BALB	**Balikesir**	**2.43**	**17**	*e*PN		G	**Pn**	**01 18 56.1**	**+0.7**
BALB	**Balikesir**	**2.43**	**17**	*e*Pn		G	**Pn**	**01 18 56.2**	**+0

ENTT	**Nioudou**	**0.92**	**268**	*e*P		**Pn**	**01 33 46.8**	**+0.1**
	baz=270							
TWD	**Chiawan**	**1.07**	**237**	*e*P		**Pn**	**01 33 48.0**	**-0.3**
	baz=231							
TWD				*e*S		**Sn**	**01 34 03.9**	**-0.6**
	baz=231							
IRIF	**Iriomote-Funau**	**1.11**	**108**	P		**Pn**	**01 33 48.4**	**-0.4**
IRIF				*e*S		**Sn**	**01 34 05.6**	**+0.3**
TWS1	**Kuangyinshan**	**1.13**	**292**	*e*P		**Pn**	**01 33 48.1**	**-0.9**
	baz=286							
HATJ	**Hateruma jima**	**1.28**	**118**	P		**Pn**	**01 33 50.4**	**-0.4**
HATJ				*e*S		**Sn**	**01 34 10.3**	**+1.5**
WHF	**Hehuan Shan**	**1.30**	**246**	*i* P		**Pn**	**01 33 51.3**	**+0.3**
	baz=244							
WHF				S		**Sn**	**01 34 09.5**	**+0.3**
	baz=244							
ESL	**Shilin**	**1.35**	**231**	*e*P		**Pn**	**01 33 50.5**	**-1.0**
	baz=224							
ESL				*e*S		**Sn**	**01 34 09.3**	**-0.9**
	baz=224							
JKRS	**Kuro-shima**	**1.38**	**108**	P		**Pn**	**01 33 52.0**	**+0.1**
JKRS				*e*S		**Sn**	**01 34 11.4**	**+0.5**
NSTT	**Nanjuang**	**1.43**	**269**	*e*P		**Pn**	**01 33 52.9**	**+0.4**
	baz=267							
JIJ	**Ishigaki jima**	**1.47**	**102**	P		**Pn**	**01 33 52.5**	**-0.4**
JIJ				*e*S		**Sn**	**01 34 11.4**	**-1.3**
EHY	**Hungye**	**1.63**	**225**	*e*P		**Pn**	**01 33 54.2**	**-0.7**
	baz=218							
EHY				*e*S		**Sn**	**01 34 14.4**	**-1.9**
	baz=218							
TYC	**Yuchr**	**1.74**	**244**	*e*P		**Pn**	**01 33 57.1**	**+0.8**
	baz=245							
TYC				*e*S		**Sn**	**01 34 19.5**	**+0.7**
	baz=245							
TWF1	**Yuli**	**1.76**	**222**	P		**Pn**	**01 33 55.4**	**-1.1**
	baz=228							
TWF1				*e*S		**Sn**	**01 34 18.0**	**-1.1**
	baz=228							
YUS	**Yu-Shan**	**1.89**	**232**	*e*P		**Pn**	**01 33 58.5**	**+0.2**
	baz=224							
YUS				*e*S		**Sn**	**01 34 22.5**	**+0.3**
	baz=224							
ALS	**Alishan**	**1.99**	**235**	*e*P		**Pn**	**01 34 00.1**	**+0.7**
	baz=228							
ALS				*e*S		**Sn**	**01 34 24.8**	**+0.4**
	baz=228							
CHN5	**Tsauling**	**2.04**	**239**	*e*P		**Pn**	**01 34 00.9**	**+0.8**
	baz=246							
CHN5				*e*S		**Sn**	**01 34 26.6**	**+1.1**
	baz=246							
CHN4	**Tsaushan**	**2.24**	**234**	*e*P		**Pn**	**01 34 03.5**	**+0.8**
	baz=233							
CHN4				*e*S		**Sn**	**01 34 31.4**	**+1.2**
	baz=233							
CHN1	**Nanshi**	**2.39**	**232**	*e*P		**Pn**	**01 34 04.6**	**-0.1**
	baz=231							
CHN1				*e*S		**Sn**	**01 34 33.5**	**-0.1**
	baz=231							

*ISCJB **28** 01:37:44.9±0.6, 13°.46N±0°.05×120°.31E±0°.06, h59km±8km, mb3.7/4, Error ellipse: s-maj=10.8km s-min=7.8km az=18.2*
*IDC **28** 01:37:45.6±0.9, 13°.46N×120°.36E, h49km±10km, mb3.4/4, mb1 3.5/4, mb1mx3.3/21, mbtmp3.4/4, Error ellipse: s-maj=20.9km s-min=10.2km az=109.0*
*MAN **28** 01:37:45, 13°.47N×120°.35E, h33km, mb4.7, ML3.5, MS3.5*
ISC 28 01:37:45.8±0.6, **13°.45N**±0°.05×**120°.32E**±0°.07, **h50**km±9km, **h52**km±1.6km**:pP-P, n19**, σ0**s69**/21, **mb3.7**/4, **1C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.29**	**346**	*e*P	**Pn**	**01 37 54.7**	**-0.2**
TGY	**Tagaytay City**	**0.88**	**43**	P	**Pn**	**01 38 01.2**	**-0.8**
	2μm,0.3s,baz=218,slow=2.1,SNR=68						
TGY				S	**Sn**	**01 38 13.9**	**+0.1**
	4μm,0.3s,baz=156,slow=23,SNR=85						
TGY	**Tagaytay City**	**0.88**	**43**	⇑*i*P	**Pn**	**01 38 01.2**	**-0.8**
LQP	**Lukban**	**1.36**	**61**	*e*P	**Pn**	**01 38 09.8**	**+1.4**
BUSP	**Coron**	**1.44**	**185**	*e*P	**Pn**	**01 38 10.2**	**+0.6**
BOAC	**Boac**	**1.48**	**89**	*e*P	**Pn**	**01 38 08.9**	**-1.2**
OTRP	**Odiongan**	**1.98**	**123**	*e*P	**Pn**	**01 38 16.5**	**-0.4**
POLP	**Polilio Island**	**2.02**	**51**	*e*P	**Pn**	**01 38 16.7**	**-0.8**
GQP	**Guinayangan**	**2.12**	**77**	⇓*e*P	**Pn**	**01 38 18.7**	**-0.1**
GQP				*e*S	**Sn**	**01 38 45.0**	**+1.0**
ENPP	**El Nido**	**2.40**	**201**	*e*P	**Pn**	**01 38 23.4**	**+0.8**
BALP	**Baler**	**2.58**	**28**	*e*P	**Pn**	**01 38 25.6**	**+0.4**
CUYO	**Cuyo Island**	**2.67**	**165**	*e*P	**Pn**	**01 38 26.1**	**-0.3**
BOLP	**Bolinao**	**2.94**	**352**	*e*P	**Pn**	**01 38 29.3**	**-0.8**
GUIM	**Jordan**	**3.58**	**141**	*e*P	**Pn**	**01 38 27.0**	**-12**
CAUP	**Cauayan**	**3.77**	**23**	*e*P	**Pn**	**01 38 41.9**	**+0.5**
WRA	**Warramunga Arr**	**35.94**	**157**	P	**P**	**01 44 41.0**	**-0.7**
	0.3nm,0.3s,mb3.7,baz=334,slow=10,SNR=2.6						
WRA				pP	pP	01 44 54.5	-0.3
	0.7nm,0.5s,baz=333,slow=10.0,SNR=4.6						
SONM	**Songino Array**	**36.19**	**344**	P	**P**	**01 44 43.6**	**+0.1**
	1.7nm,0.5s,mb4.2,baz=168,slow=8.3,SNR=5.0						
SONM				pP	pP	01 44 56.0	-0.6
	0.5nm,0.5s,baz=162,slow=10.0,SNR=1.5						
ASAR	**Alice Springs**	**39.21**	**160**	P	**P**	**01 45 09.1**	**-0.2**
	0.3nm,0.4s,mb3.4,baz=333,slow=6.8,SNR=6.6						
ASAR				pP	pP	01 45 22.9	+0.4
	1.3nm,0.5s,baz=338,slow=6.7,SNR=11						
MKAR	**Makanchi Array**	**46.01**	**324**	P	**P**	**01 46 04.9**	**+0.6**
	0.3nm,0.3s,mb3.7,baz=120,slow=8.8,SNR=4.5						

*ISK **28** 01:57:13.5, 38°.29N×42°.42E, h9km, MD3.6*
*CSEM **28** 01:57:13.5±0.2, 38°.29N×42°.44E, h2km, MD3.2, Error ellipse: s-maj=6.2km s-min=3.8km az=1.0*
*DDA **28** 01:57:13.1, 38°.42N×42°.46E, h6km±3km, Md3.2*
*ISCJB **28** 01:57:14.0±0.4, 38°.26N±0°.03×42°.42E±0°.03, h10km, Error ellipse: s-maj=4.6km s-min=3.4km az=163.6*
ISC 28 01:57:13.6±0.6, **38°.27N**±0°.03×**42°.41E**±0°.03, **h1**km±5km, **n46**, σ1**s07**/63, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TATV	**Tatvan**	**0.27**	**336**	*i* P	**Pg**	**01 57 17.7**	**-1.0**
TATV				*i* S	**Sg**	**01 57 20.9**	**-1.2**
TATV	**Tatvan**	**0.27**	**336**	*i* P	**Pg**	**01 57 17.7**	**-1.0**
TATV				*i* S	**Sg**	**01 57 21.0**	**-1.1**
VANT	**Van**	**0.69**	**77**	PG	**Pg**	**01 57 27.6**	**+0.7**
TVAN	**Van**	**0.83**	**71**	*i* P	**Pg**	**01 57 28.2**	**-1.3**
TVAN				*i* S	**Sg**	**01 57 44.1**	**+3.9**
TVAN	**Van**	**0.83**	**71**	*i* P	**Pg**	**01 57 28.2**	**-1.3**
VANB	**Van**	**0.84**	**67**	PG	**Pg**	**01 57 29.0**	**-0.7**
VANB				*e*SG	**Sg**	**01 57 42.1**	**+1.6**
VANB	**Van**	**0.84**	**67**	*i* Pg	**Pg**	**01 57 29.0**	**-0.7**
VANB				*e*Sg	**Sg**	**01 57 42.1**	**+1.5**
BEST	**Besiri**	**0.97**	**248**	*i* P	**Pg**	**01 57 33.7**	**+1.6**
BEST				*i* S	**Sg**	**01 57 48.8**	**+4.1**
BNGL	**BINGOL**	**1.20**	**305**	*i* P	**Pg**	**01 57 35.6**	**-1.0**
BNGL				*i* S	**Sg**	**01 57 55.6**	**+3.5**
HAKT	**HAKKARI**	**1.25**	**124**	*i* P	**Pg**	**01 57 37.4**	**-0.1**
HAKT				*i* S	**Sg**	**01 57 57.8**	**+4.1**
HAKT	**HAKKARI**	**1.25**	**124**	*i* P	**Pg**	**01 57 37.4**	**-0.1**
HKR	**Hakkari**	**1.26**	**123**	*e*PN	**Pn**	**01 57 37.9**	**-0.4**
HKR	**Hakkari**	**1.26**	**123**	*e*Pn	**Pn**	**01 57 37.9**	**-0.4**
AGRB	**Hanur-Agry**	**1.39**	**19**	*e*PN	**Pn**	**01 57 39.6**	**-0.4**
AGRB				*e*SN	**Sn**	**01 57 58.0**	**-1.0**
AGRB	**Hanur-Agry**	**1.39**	**19**	*e*Pn	**Pn**	**01 57 39.7**	**-0.4**
AGRB				*e*Sn	**Sn**	**01 57 58.0**	**-1.0**
CUKT	**Cukurca**	**1.39**	**136**	*e*PN	**Pn**	**01 57 40.0**	**-0.2**
CUKT	**Cukurca**	**1.39**	**136**	*e*Pn	**Pn**	**01 57 40.0**	**-0.1**
CLDR	**Caldiran**	**1.47**	**53**	*e*PN	**Pn**	**01 57 39.9**	**-1.3**
CLDR	**Caldiran**	**1.47**	**53**	*e*Pn	**Pn**	**01 57 39.9**	**-1.3**
MARD	**Mardin**	**1.60**	**234**	*i* P	**Pn**	**01 57 42.2**	**-0.8**
MARD				*i* S	**Sn**	**01 58 03.3**	**-0.9**
BINT	**Bingol**	**1.62**	**293**	*e*PN	**Pn**	**01 57 43.6**	**+0.3**
BINT	**Bingol**	**1.62**	**293**	*e*Pn	**Pn**	**01 57 43.6**	**+0.3**
HOMI	**Horasan**	**1.82**	**348**	*i* P	**Pn**	**01 57 48.1**	**+2.1**
HOMI				*i* S	**Sg**	**01 58 17.4**	**+5.4**
ERZM	**Erzurum**	**1.83**	**334**	*i* P	**Pn**	**01 57 47.9**	**+1.8**
ERZM				*i* S	**Sn**	**01 58 10.2**	**+0.3**
ERZM	**Erzurum**	**1.83**	**334**	*i* P	**Pn**	**01 57 47.9**	**+1.8**
ERZM				*i* S	**Sn**	**01 58 10.2**	**+0.3**
EZM	**Erzurum**	**1.83**	**334**	*e*PN	**Pn**	**01 57 46.0**	**-0.2**
DIYA	**Diyarbakir**	**1.83**	**260**	*i* P	**Pn**	**01 57 46.0**	**-0.2**
DIYA				*i* S	**Sn**	**01 58 08.9**	**-1.2**
DIYA	**Diyarbakir**	**1.83**	**260**	*i* P	**Pn**	**01 57 46.0**	**-0.2**

DIYA				*i* S		**Sn**	**01 58 08.9**	**-1.2**
KARS	**Kars**	**2.42**	**12**	*e*PN		**Pn**	**01 57 53.8**	**-0.4**
KARS	**Kars**	**2.42**	**12**	*e*Pn		**Pn**	**01 57 53.8**	**-0.4**
SVRC	**Sivrice-ELAZID**	**2.44**	**274**	*e*PN		**Pn**	**01 57 54.5**	**0.0**
SVRC	**Sivrice-ELAZID**	**2.44**	**274**	*e*Pn		**Pn**	**01 57 54.5**	**0.0**
PTK	**Pertek**	**2.44**	**286**	*e*PN		**Pn**	**01 57 54.2**	**-0.4**
PTK	**Pertek**	**2.44**	**286**	*e*Pn		**Pn**	**01 57 54.2**	**-0.4**
EZC	**Erzincan**	**2.80**	**303**	*e*PN		**Pn**	**01 58 00.2**	**+0.7**
MALT	**Malatya**	**3.13**	**272**	*e*PN		**Pn**	**01 58 04.4**	**+0.4**
MALT	**Malatya**	**3.13**	**272**	*e*Pn		**Pn**	**01 58 04.4**	**+0.4**
MYA	**Malataya**	**3.13**	**272**	*e*PN		**Pn**	**01 58 04.8**	**+0.8**
MYA	**Malataya**	**3.13**	**272**	*e*Pn		**Pn**	**01 58 04.8**	**+0.7**
GUMT	**Gumushane**	**3.15**	**315**	*e*PN		**Pn**	**01 58 04.5**	**+0.1**
GUMT	**Gumushane**	**3.15**	**315**	*e*Pn		**Pn**	**01 58 04.5**	**+0.1**
ATAB	**Bozova**	**3.35**	**258**	*i* P		**Pg**	**01 58 15.3**	**-2.4**
ATAB				*i* S		**Sg**	**01 59 00.5**	**-0.7**
GAZ	**Gaziantep**	**4.26**	**257**	*e*PN		**Pn**	**01 58 20.8**	**+1.2**
GAZ	**Gaziantep**	**4.26**	**257**	*e*Pn		**Pn**	**01 58 20.8**	**+1.2**
KMRS	**Kahramanmaras**	**4.42**	**262**	*e*PN		**Pn**	**01 58 23.6**	**+1.8**
KMRS	**Kahramanmaras**	**4.42**	**262**	*e*Pn		**Pn**	**01 58 23.6**	**+1.8**

*PGC **28** 01:58:31.5±7.6, 49°.91N×129°.79W, h10km, ML3.7/9, Mw4.3, 190km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*IDC **28** 01:58:32.3±0.8, 50°.05N×129°.79W, h0km, mb4.0/10, mb1 4.2/18, mb1mx4.1/30, mbtmp4.1/18, ML4.0/7, MS4.2/30, Ms1 4.2/30, ms1mx4.2/32, Error ellipse: s-maj=18.4km s-min=10.7km az=71.0*
*MOS **28** 01:58:34.0±1.4, 50°.10N×129°.60W, h14km, mb4.9/21, MS4.4/6, Error ellipse: s-maj=10.7km s-min=5.1km az=122.5*
*ISCJB **28** 01:58:34.6±0.3, 50°.15N±0°.03×129°.49W±0°.04, h15km, mb4.6/52, MS4.3/35, Error ellipse: s-maj=5.0km s-min=2.7km az=135.7*
*NEIC **28** 01:58:35.1±0.3, 50°.15N×129°.60W, h10km, mb4.6/55, MW5.0(PGC), Error ellipse: s-maj=7.4km s-min=3.0km az=49.0*
*BJI **28** 01:58:36.0, 50°.60N×130°.51W, h5km, mB4.9/11, mb4.9/17, Ms4.8/13, Ms7 4.5/13*
ISC 28 01:58:35.1±1.3, **50°.19N**±0°.03×**129°.49W**±0°.05, **h5**km±9km, **h16**km±.6km**:pP-P, n223**, σ1**s26**/211, **mb4.6**/52, **MS4.3**/35, **4C-9D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**0.98**	**62**	⇑Pn	**Pn**	**01 58 53.5**	**-1.9**
BPBC	**Brooks Peninsu**	**1.11**	**91**	⇑Pn	**Pn**	**01 58 53.7**	**-3.5**
BPBC				⇓Sn	**Sn**	**01 59 11.3**	**-1.5**
PHC	**Port Hardy**	**1.42**	**68**	⇑Pn	**Pn**	**01 58 59.6**	**-1.8**
PHC				⇓Sn	**Sn**	**01 59 21.7**	**+1.3**
MAYB	**Maynard**	**1.50**	**81**	⇑Pn	**Pn**	**01 58 59.9**	**-2.7**
EDB	**Eliza Dome**	**1.56**	**101**	⇓Pn	**Pn**	**01 58 59.2**	**-4.3**
EDB				⇓Sn	**Sn**	**01 59 21.5**	**-2.5**
WOSB	**Woss**	**1.88**	**90**	⇓Pn	**Pn**	**01 59 05.4**	**-2.4**
BBB	**Bella Bella**	**2.18**	**23**	Pn	**Pn**	**01 59 10.5**	**-1.4**
BBB				Sn	**Sn**	**01 59 40.4**	**+1.2**
BBB				LR	LR	02 00 14.8	
BBB	**Bella Bella**	**2.18**	**23**	⇑Pn	**Pn**	**01 59 10.5**	**-1.4**
	138nm,0.3s,baz=48,slow=12,SNR=200						
BBB				Sn	**Sn**	**01 59 40.4**	**+1.2**
	58nm,0.3s,baz=139,slow=23,SNR=13						
BBB				LR	LR	02 00 14.8	
	comp=Z,6μm,21.0s,baz=244,slow=43						
BBB	**Bella Bella**	**2.18**	**23**	⇑Pn	**Pn**	**01 59 10.6**	**-1.3**
BBB				⇓Sn	**Sn**	**01 59 40.0**	**+0.9**
NCRB	**Newcastle Ridg**	**2.21**	**83**	⇓Pn	**Pn**	**01 59 10.9**	**-1.5**
GDR	**Gold River**	**2.27**	**99**	⇓Pn	**Pn**	**01 59 10.4**	**-2.8**
CBB	**Campbell River**	**2.66**	**92**	Pn	**Pn**	**01 59 16.4**	**-2.1**
BTB	**Buttle Lake**	**2.67**	**104**	⇑Pn	**Pn**	**01 59 16.7**	**-2.0**
PGC	**Sidney**	**4.24**	**109**	*e*Pn	**Pn**	**01 59 38.6**	**-1.5**
NLWA	**Neilton Lookou**	**4.65**	**125**	*e*Pn	**Pn**	**01 59 42.9**	**-3.1**
BLN	**Blyn Mountain**	**4.81**	**115**	P	**Pn**	**01 59 46.9**	**-1.1**
HDW	**Hoodsport**	**4.95**	**118**	P	**Pn**	**01 59 48.9**	**-1.1**
JCW	**Jim Creek**	**5.35**	**109**	*e*Pn	**Pn**	**01 59 55.2**	**-0.2**
RPW	**Rockport**	**5.50**	**105**	*e*Pn	**Pn**	**01 59 57.4**	**-0.1**
CRAG	**Craig**	**5.73**	**339**	*e*Pn	**Pn**	**01 59 57.5**	**-3.1**
LON	**Longmire**	**6.16**	**121**	*e*Pn	**Pn**	**02 00 05.8**	**-0.8**
TDL	**Tradedollar La**	**6.19**	**126**	P	**Pn**	**02 00 06.6**	**-0.4**
WRAK	**Wrangell Islan**	**6.47**	**346**	*e*Pn	**Pn**	**02 00 10.8**	**-0.1**
	9.2nm,0.6s						
ETW	**Entiat**	**6.57**	**110**	P	**Pn**	**02 00 11.9**	**-0.3**
TBM	**Table Mountain**	**6.62**	**114**	P	**Pn**	**02 00 12.3**	**-0.6**
HOOD	**Mount Hood Mea**	**7.18**	**130**	*e*Pn	**Pn**	**02 00 20.2**	**-0.5**
RSW	**Rattlesnake Hi**	**7.62**	**116**	*e*Pn	**Pn**	**02 00 26.6**	**0.0**
HAWA	**Hanford**	**7.65**	**116**	*e*Pn	**Pn**	**02 00 27.0**	**-0.6**
OD2	**Odessa Site #2**	**7.65**	**107**	*e*Pn	**Pn**	**02 00 26.4**	**-0.6**
DLBC	**Dease Lake**	**8.27**	**358**	*e*Pn	**Pn**	**02 00 36.1**	**+0.7**
DLBC	**Dease Lake**	**8.27**	**358**	Pn	**Pn**	**02 00 35.8**	**+0.3**
	0.9nm,0.3s,baz=195,slow=13,SNR=13						
NEW	**Newport**	**8.33**	**99**	*e*Pn	**Pn**	**02 00 36.1**	**-0.2**
LNOR	**Lincton Mounta**	**8.66**	**116**	*e*Pn	**Pn**	**02 00 40.1**	**-0.8**
HUMO	**Hull Mountain**	**8.82**	**147**	*e*Pn	**Pn**	**02 00 45.9**	**+2.7**
	16nm,1.5s						
YBH	**Yreka Blue Hor**	**9.68**	**148**	*e*Pn	**Pn**	**02 00 55.7**	**+0.7**
YBH				LR	LR	02 04 32.9	
YBH	**Yreka Blue Hor**	**9.68**	**148**	Pn	**Pn**	**02 00 54.4**	**-0.6**
	0.1nm,0.3s,baz=318,slow=11,SNR=4.5						
YBH				LR	LR	02 04 32.9	
	comp=Z,828nm,20.2s,baz=329,slow=37						
BSMT	**Bassoo Peak**	**9.94**	**98**	*e*Pn	**Pn**	**02 00 59.6**	**+1.1**
WALA	**Waterton Lakes**	**10.18**	**90**	*e*Pn	**Pn**	**02 01 02.4**	**+0.8**
JTMT	**Jette**	**10.30**	**98**	*e*Pn	**Pn**	**02 01 03.2**	**-0.1**
MOD	**Modoc**	**10.46**	**139**	*e*Pn	**Pn**	**02 01 06.7**	**+1.2**
EDM	**Edmonton**	**10.47**	**67**	*e*Pn	**Pn**	**02 01 09.7**	**+4.1**
SWMT	**Swartz Lake**	**10.56**	**99**	*e*Pn	**Pn**	**02 01 08.4**	**+1.5**
WDC	**Whiskeytown Da**	**10.78**	**150**	*e*Pn	**Pn**	**02 01 10.9**	**+1.0**
WVOR	**Wild Horse Val**	**10.79**	**132**	*e*Pn	**Pn**	**02 01 08.4**	**-1.6**
	37nm,1.6s						
WVOR	**Wild Horse Val**	**10.79**	**132**	*e*P	**Pn**	**02 01 08.4**	**-1.6**
WVOR				pmax	pmax		
	comp=Z,37nm,1.6s						
MSO	**Missoula**	**10.85**	**102**	*e*Pn	**Pn**	**02 01 10.9**	**0.0**
SLMT	**Seeley Lake**	**10.98**	**99**	*e*Pn	**Pn**	**02 01 12.8**	**+0.2**
CHMT	**Chamberlain Mo**	**11.25**	**101**	*e*Pn	**Pn**	**02 01 16.9**	**+0.5**
HYT	**Haines Junctio**	**11.57**	**340**	*e*Pn	**Pn**	**02 01 27.4**	**+6.7**
LRM	**Limekiln Ridge**	**12.22**	**104**	*e*Pn	**Pn**	**02 01 29.8**	**+0.3**
OHCM	**Honcut**	**12.25**	**149**	*e*Pn	**Pn**	**02 01 26.7**	**-3.3**
HLID	**Hailey**	**12.25**	**117**	*e*Pn	**Pn**	**02 01 30.8**	**+0.8**
DLMT	**Dillon**	**12.34**	**107**	*e*Pn	**Pn**	**02 01 29.7**	**-1.6**
MCMT	**McKenzie Canyo**	**12.46**	**109**	*e*Pn	**Pn**	**02 01 32.3**	**-0.6**
	comp=Z,4.1nm,0.8s						
PAHR	**Pah Rah Range**	**12.68**	**142**	*e*Pn	**Pn**	**02 01 36.0**	**+0.1**
BOZ	**Bozeman (W)**	**12.81**	**104**	*e*Pn	**Pn**	**02 01 37.7**	**0.0**
WCN	**Washoe City**	**12.89**	**144**	*e*Pn	**Pn**	**02 01 38.3**	**-0.4**
	comp=Z,24nm,1.5s						
WCN	**Washoe City**	**12.89**	**144**	*e*P	**Pn**	**02 01 38.3**	**-0.4**
WCN				pmax	pmax		
	comp=Z,24nm,1.5s						
WAKR	**Walker**	**13.70**	**145**	*e*Pn	**Pn**	**02 01 53.0**	**+3.1**
CMB	**Columbia Colle**	**13.79**	**148**	*e*Pn	**Pn**	**02 01 51.1**	**+0.1**
YNR	**Norris Junctio**	**13.85**	**106**	*e*Pn	**Pn**	**02 01 54.5**	**+2.7**
	comp=Z,29nm,1.3s						
YFT	**Old Faithful**	**13.88**	**107**	*e*Pn	**Pn**	**02 01 58.1**	**+5.8**
GCMT	**Greycliff**	**13.98**	**101**	*e*Pn	**Pn**	**02 01 54.8**	**+1.2**
	comp=Z,9.8nm,1.0s						
IMW	**Indian Meadow**	**14.11**	**109**	*e*Pn	**Pn**	**02 01 56.8**	**+1.3**
FLWY	**Flagg Ranch**	**14.16**	**108**	*e*Pn	**Pn**	**02 01 57.3**	**+1.2**
RRI2	**Red Ridge**	**14.19**	**112**	*e*Pn	**Pn**	**02 01 59.1**	**+2.6**
NVAR	**Mina Array Bea**	**14.21**	**142**	Pn	**Pn**	**02 01 55.9**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=318,slow=9.9,SNR=12						
MOOW	**Moose Ponds**	**14.31**	**110**	*e*Pn	**Pn**	**02 02 00.6**	**+2.4**
HVU	**Hansel Valley**	**14.32**	**120**	*e*Pn	**Pn**	**02 02 01.6**	**+3.3**
TPAW	**Teton Pass**	**14.33**	**111**	*e*Pn	**Pn**	**02 02 04.2**	**+5.8**
REDW	**Red Top Meadow**	**14.46**	**111**	*e*Pn	**Pn**	**02 02 04.0**	**+3.8**
SNOW	**Snow King Moun**	**14.46**	**111**	*e*Pn	**Pn**	**02 02 06.2**	**+5.9**
LOHW	**Long Hollow**	**14.47**	**110**	*e*Pn	**Pn**	**02 02 02.7**	**+2.4**
RLMT	**Red Lodge**	**14.53**	**103**	*e*Pn	**Pn**	**02 02 03.6**	**+2.5**
BGU	**Big Grassy Mou**	**14.77**	**123**	*e*Pn	**Pn**	**02 02 05.9**	**+1.6**
	comp=Z,24nm,1.3s						
YKA	**Yellowknife Ar**	**14.78**	**28**	Pn	**Pn**	**02 02 03.2**	**-1.3**
YKA				LR	LR	02 08 08.0	
YKA	**Yellowknife Ar**	**14.78**	**28**	Pn	**Pn**	**02 02 03.2**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=217,slow=12,SNR=13						
YKA				LR	LR	02 08 08.0	
	comp=Z,200nm,21.2s,baz=285,slow=38						
SPUT	**South Promonto**	**14.82**	**120**	*e*Pn	**Pn**	**02 02 08.9**	**+3.8**
	comp=Z,20nm,1.3s						
DAWY	**Dawson**	**14.88**	**343**	*e*Pn	**Pn**	**02 02 06.2**	**+0.4**
MTUM	**Tungsten Hills**	**15.04**	**144**	*e*Pn	**Pn**	**02 02 08.1**	**-0.1**

HWUT	**Hardware Ranch**	**15.12**	**118**	*e*Pn		**Pn**	**02 02 11.8**	**+2.6**
	comp=Z,123nm,2.2s							
DUG	**Dugway**	**15.40**	**124**	*e*Pn		**Pn**	**02 02 13.4**	**+0.5**
	comp=Z,26nm,1.1s							
DUG	**Dugway**	**15.40**	**124**	*e*P		**Pn**	**02 02 13.4**	**+0.6**
DUG				pmax	pmax			
	comp=Z,26nm,1.1s							
KDAK	**Kodiak Island**	**15.50**	**308**	Pn		**Pn**	**02 02 14.4**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=120,slow=6.5,SNR=3.7							
KDAK				LR	LR	02 06 33.9		
	comp=Z,2μm,21.5s,baz=128,slow=31							
BW06	**Boulder Array**	**15.58**	**111**	*e*Pn		**Pn**	**02 02 17.6**	**+2.4**
	comp=Z,73nm,1.5s							
PDAR	**Pinedale Array**	**15.58**	**111**	Pn		**Pn**	**02 02 16.9**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=310,slow=10,SNR=29							
PDAR				LR	LR	02 08 27.0		
	comp=Z,1μm,21.9s,baz=322,slow=38							
SML	**Sawmill**	**15.62**	**325**	*e*Pn		**Pn**	**02 02 15.3**	**-0.4**
	comp=Z,47nm,2.4s							
SML	**Sawmill**	**15.62**	**325**	*e*P		**Pn**	**02 02 15.3**	**-0.3**
SML				pmax	pmax			
	comp=Z,47nm,2.4s							
LAO	**LASA Array**	**15.82**	**94**	*e*Pn		**Pn**	**02 02 19.5**	**+1.2**
	comp=Z,60nm,1.4s							
JLU	**Jordanelle**	**15.86**	**120**	*e*Pn		**Pn**	**02 02 20.2**	**+1.4**
	comp=Z,120nm,2.6s							
EGAK	**Eagle**	**15.87**	**342**	*e*Pn		**Pn**	**02 02 19.2**	**+0.4**
	comp=Z,143nm,2.4s							
NLU	**North Lily Min**	**15.96**	**123**	Pn		**Pn**	**02 02 23.2**	**+3.0**
	comp=Z,15nm,1.1s							
DAU	**Daniels Canyon**	**16.09**	**120**	*e*Pn		**Pn**	**02 02 22.0**	**+0.1**
DGMT	**Dagmar**	**16.56**	**86**	*e*Pn		**Pn**	**02 02 29.6**	**+1.9**
	comp=Z,240nm,2.1s							
ISA	**Isabella**	**16.58**	**147**	*e*Pn		**Pn**	**02 02 29.4**	**+1.2**
	comp=Z,35nm,1.6s							
ISA	**Isabella**	**16.58**	**147**	*e*P		**Pn**	**02 02 29.4**	**+1.2**
ISA				pmax	pmax			
	comp=Z,35nm,1.6s							
RSO	**Redoubt South**	**16.66**	**317**	*e*Pn		**Pn**	**02 02 29.2**	**+0.2**
ARUT	**Antelope Range**	**16.90**	**131**	*e*Pn		**Pn**	**02 02 32.3**	**+0.2**
	comp=Z,13nm,1.2s							
ARUT	**Antelope Range**	**16.90**	**131**	*e*P		**Pn**	**02 02 32.3**	**+0.1**
ARUT				pmax	pmax			
	comp=Z,13nm,1.2s							
MSU	**Marysvale**	**16.97**	**127**	*e*Pn		**Pn**	**02 02 33.4**	**+0.4**
MCK	**McKinley**	**17.11**	**330**	*e*Pn		**Pn**	**02 02 36.2**	**+1.6**
	comp=Z,90nm,2.0s							
MCK	**McKinley**	**17.11**

WMOK	**Wichita Mounta**	**27.17**	**113**	*e*P		**P**		**02 04 18.1**	**-1.1**
WMOK				pmax		pmax			
	comp=Z,12nm,0.9s,mb4.4								
JFWS	**Jewell Farm**	**27.70**	**90**	*e*P		**P**		**02 04 24.7**	**+0.8**
	comp=Z,12nm,0.8s,mb4.6								
JFWS	**Jewell Farm**	**27.70**	**90**	*e*P		**P**		**02 04 24.7**	**+0.8**
JFWS				pmax		pmax			
	comp=Z,12nm,0.8s,mb4.6								
RES	**Resolute Bay**	**28.46**	**18**	LR		LR		02 15 49.6	
	comp=Z,821nm,19.9s,MS4.3,baz=46,slow=36								
TXAR	**Lajitas Array**	**28.53**	**127**	P		**P**		**02 04 31.1**	**-0.3**
	comp=Z,1.8nm,0.8s,mb3.9,baz=335,slow=5.5,SNR=22								
TXAR				LR		LR		02 16 31.8	
	comp=Z,768nm,19.7s,MS4.3,baz=260,slow=38								
CCM	**Cathedral Cave**	**29.69**	**99**	*e*P		**P**		**02 04 41.4**	**-0.2**
	comp=Z,11nm,1.4s,mb4.4								
CCM	**Cathedral Cave**	**29.69**	**99**	*e*P		**P**		**02 04 41.4**	**-0.2**
CCM				pmax		pmax			
	comp=Z,11nm,1.4s,mb4.4								
JCT	**Junction City**	**29.70**	**120**	*e*P		**P**		**02 04 39.4**	**-2.3**
	comp=Z,30nm,1.4s,mb4.8								
JCT	**Junction City**	**29.70**	**120**	*e*P		**P**		**02 04 39.4**	**-2.4**
JCT				pmax		pmax			
	comp=Z,30nm,1.4s,mb4.8								
MIAR	**Mount Ida**	**30.45**	**107**	*e*P		**P**		**02 04 48.5**	**+0.1**
	comp=Z,37nm,1.5s,mb4.9								
MIAR	**Mount Ida**	**30.45**	**107**	*e*P		**P**		**02 04 48.5**	**+0.1**
MIAR				pmax		pmax			
	comp=Z,37nm,1.5s,mb4.9								
OLIL	**Olney**	**31.30**	**95**	*e*P		**P**		**02 04 55.8**	**0.0**
	comp=Z,29nm,1.4s,mb4.9								
HKT	**Hockley**	**32.34**	**116**	*e*P		**P**		**02 05 05.2**	**+0.1**
	comp=Z,19nm,1.4s,mb4.7								
HKT	**Hockley**	**32.34**	**116**	*e*P		**P**		**02 05 05.2**	**+0.1**
HKT				pmax		pmax			
	comp=Z,19nm,1.4s,mb4.7								
WVT	**Waverly**	**33.02**	**99**	*e*P		**P**		**02 05 10.4**	**-0.6**
	comp=Z,9.9nm,1.2s,mb4.6								
WVT	**Waverly**	**33.02**	**99**	*e*P		**P**		**02 05 10.4**	**-0.6**
WVT				pmax		pmax			
	comp=Z,10.0nm,1.2s,mb4.6								
OXF	**Oxford**	**33.05**	**103**	*e*P		**P**		**02 05 10.2**	**-1.1**
	comp=Z,57nm,1.1s,mb5.4								
OXF	**Oxford**	**33.05**	**103**	*e*P		**P**		**02 05 10.3**	**-1.0**
OXF				pmax		pmax			
	comp=Z,57nm,1.1s,mb5.4								
ACSO	**Alum Creek Sta**	**33.75**	**89**	*e*P		**P**		**02 05 17.2**	**-0.1**
SCHQ	**Schefferville**	**37.29**	**58**	LR		LR		02 21 22.0	
	comp=Z,864nm,18.7s,MS4.6,baz=110,slow=36								
FRNY	**Flat Rock**	**37.38**	**76**	*e*P		**P**		**02 05 47.7**	**-0.7**
	comp=Z,6.5nm,0.9s,mb4.5								
GOGA	**Godfrey**	**37.52**	**99**	*e*P		**P**		**02 05 49.1**	**-0.7**
	comp=Z,16nm,1.3s,mb4.6								
GOGA	**Godfrey**	**37.52**	**99**	*e*P		**P**		**02 05 49.1**	**-0.7**
GOGA				pmax		pmax			
	comp=Z,16nm,1.3s,mb4.6								
MIV	**Mineville/With**	**37.78**	**77**	*e*P		**P**		**02 05 51.0**	**-0.8**
PETK	**Petropavlovsk-**	**43.47**	**303**	P		**P**		**02 06 35.5**	**-3.2**
	comp=Z,1.5nm,0.8s,mb3.8,baz=234,slow=31,SNR=2.8								
PETK				LR		LR		02 21 42.0	
	comp=Z,203nm,21.3s,MS4.0,baz=258,slow=32								
ASAJ	**Asahikawa**	**56.75**	**301**	LR		LR		02 28 13.0	
	comp=Z,195nm,21.6s,MS4.2,baz=357,slow=31								
ARCES	**ARCESS Array B**	**59.19**	**10**	LR		LR		02 34 21.6	
	comp=Z,388nm,19.9s,MS4.5,baz=74,slow=36								
TAOE	**Nuku Hiva Isla**	**59.53**	**192**	*e*LR		LR		02 26 01.4	
	comp=Z,683nm,25.0s								
MJAR	**Matsushiro Arr**	**64.32**	**297**	LR		LR		02 31 59.6	
	comp=Z,143nm,21.8s,MS4.1,baz=80,slow=31								
ROSC	**El Rosal**	**64.51**	**115**	LR		LR		02 37 16.0	
	comp=Z,90nm,21.1s,MS3.9,baz=171,slow=36								
NOA	**NORSAR Array B**	**64.72**	**20**	LR		LR		02 37 21.1	
	comp=Z,251nm,20.0s,MS4.4,baz=5.0,slow=36								
CN2	**Changchun**	**65.96**	**310**	*e*P		**P**		**02 09 25.5**	**+3.6**
CN2				*e*S		S		02 18 05.8	-3.8
CN2				pmax		pmax			
	comp=Z,10.0nm,0.8s,mb4.9								
CN2				pmax		pmax			
	comp=Z,90nm,3.0s								
CN2				LR		LR			
	comp=N,100nm,21.0s,MS4.3								
CN2				LR		LR			
	comp=E,200nm,21.0s,MS4.3								
CN2				LR		LR			
	comp=Z,100nm,14.0s								
PMOR	**Pomariorio Ree**	**66.90**	**199**	*e*T				03 21 35.0	
FINES	**FINESS Array B**	**67.01**	**12**	P		**P**		**02 09 27.4**	**-0.9**
FINES				LR		LR		02 40 02.5	
FINES	**FINESS Array B**	**67.01**	**12**	P		**P**		**02 09 27.4**	**-0.9**
	comp=Z,1.9nm,0.9s,mb4.1,baz=289,slow=10,SNR=2.8								
FINES				LR		LR		02 40 02.5	
	comp=Z,326nm,19.4s,MS4.6,baz=328,slow=37								
TLY	**Talaya**	**68.94**	**328**	*e*P		**P**		**02 09 44.5**	**+3.9**
TLY				*e*S		S		02 18 50.7	+5.5
TLY				pmax		pmax			
	comp=Z,15nm,2.2s,mb4.5								
TLY				MLR		MLR			
	comp=Z,172nm,18.0s,MS4.3								
KLMR	**Klimovskoe**	**68.96**	**6**	*e*P		**P**		**02 09 43.0**	**+2.4**
KLMR				pmax		pmax			
	comp=Z,31nm,1.6s,mb5.0								
KSRS	**Korea Array**	**69.36**	**304**	LR		LR		02 39 57.2	
	comp=Z,89nm,20.0s,MS4.0,baz=26,slow=36								
PPT	**Papeete**	**69.75**	**200**	*e*LR		LR		02 30 45.7	
	comp=Z,476nm,26.5s,baz=10								
PPT	**Papeete**	**69.75**	**200**	LR		LR		02 32 41.4	
	comp=Z,267nm,18.7s,MS4.5,baz=4.4,slow=30								
SONM	**Songino Array**	**71.14**	**324**	LR		LR		02 41 11.3	
	comp=Z,224nm,21.6s,MS4.4,baz=252,slow=36								
ZALV	**Zalesovo Beam**	**72.30**	**340**	P		**P**		**02 09 59.7**	**-1.4**
	comp=Z,0.5nm,0.4s,mb3.8,baz=36,slow=5.5,SNR=3.7								
ZALV				LR		LR		02 43 40.8	
	comp=Z,117nm,20.7s,MS4.1,baz=334,slow=37								
RKT	**Rikitea**	**73.14**	**185**	*e*LR		LR		02 32 27.7	
	comp=Z,664nm,27.5s,baz=2.6								
BJI	**Beijing**	**73.29**	**313**	P		**P**		**02 10 06.0**	**-1.2**
BJI				S		S		02 19 32.5	-3.5
BJI				pmax		pmax			
	comp=Z,5.0nm,0.6s,mb4.6								
BJI				LR		LR			
	comp=N,170nm,21.1s,MS4.5								
BJI				LR		LR			
	comp=E,200nm,20.0s,MS4.5								
BJI				LR		LR			
	comp=Z,120nm,21.1s,MS4.2								
ARU	**Arti**	**73.54**	**355**	*e*P		**P**		**02 10 10.1**	**+1.7**
	comp=Z,5.6nm,0.9s,mb4.5								
ARU	**Arti**	**73.54**	**355**	*d i*P		**P**		**02 10 09.9**	**+1.5**
ARU								02 12 53.0	
ARU				S		S		02 19 41.1	+2.8
ARU				SS		SS		02 24 22.0	+2.5
ARU				pmax		pmax			
	comp=Z,6.0nm,0.8s,mb4.6								
OBN	**Obninsk**	**74.42**	**8**[1]	*e*P		**P**		**02 10 15.7**	**+2.1**
OBN				*e*				02 10 28.8	
OBN				*e*S		S		02 19 53.1	+4.8
OBN				pmax		pmax			
	comp=Z,28nm,1.8s,mb4.9								
OBN				MLR		MLR			
	comp=Z,300nm,20.0s,MS4.6								
HHC	**Hu-ho-hao-te**	**74.74**	**317**	*e*P		**P**		**02 10 16.0**	**+0.3**
HHC				pP		pP		02 10 20.0	+2.6
HHC				sP		sP		02 10 23.0	+4.9
HHC				PP		PP		02 13 04.3	+2.2
HHC				S		S		02 19 48.5	-3.9
HHC				sS		sS		02 19 55.8	+0.6
HHC				SS		SS		02 24 36.8	-1.9
HHC				pmax		pmax			
	comp=Z,13nm,0.7s,mb5.0								
HHC				pmax		pmax			
	comp=Z,55nm,3.7s								
HHC				LR		LR			
	comp=N,250nm,15.4s,MS4.8								
HHC				LR		LR			
	comp=E,290nm,14.6s,MS4.8								
HHC				LR		LR			
	comp=Z,250nm,14.6s,MS4.6								
BRVK	**Borovoye**	**75.78**	**348**[1]	*e*P		**P**		**02 10 25.4**	**+4.0**
BRVK				pmax		pmax			
	comp=Z,6.0nm,1.5s,mb4.3								
BRVK				MLR		MLR			
	comp=Z,178nm,24.0s,MS4.3								
KURK	**Kurchatov**	**76.65**	**342**	*ce*P		**P**		**02 10 26.4**	**0.0**
KURK				pmax		pmax			
	comp=Z,7.0nm,2.0s,mb4.2								
AKASG	**Malin Array Be**	**77.86**	**14**	P		**P**		**02 10 34.1**	**+0.9**
	comp=Z,0.4nm,0.4s,mb3.7,baz=350,slow=5.8,SNR=6.1								
AKASG				LR		LR		02 45 40.8	
	comp=Z,469nm,20.1s,MS4.8,baz=335,slow=36								
VSR	**Storozhevoye**	**78.51**	**7**	*e*P		**P**		**02 10 38.2**	**+1.4**
VSR				pmax		pmax			
	comp=N,6.0nm,0.9s								
VSR				pmax		pmax			
	comp=E,10.0nm,0.9s								
VSR				pmax		pmax			
	comp=Z,9.0nm,0.9s,mb4.7								
VSR				MLR		MLR			
	comp=N,210nm,17.0s,MS4.6								
VSR				MLR		MLR			
	comp=E,130nm,17.0s,MS4.6								
VSR				MLR		MLR			
	comp=Z,280nm,17.0s,MS4.7								
ESDC	**Sonseca Array**	**78.53**	**40**	P		**P**		**02 10 36.7**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=322,slow=15,SNR=3.6								
VORD	**Divnogorie**	**78.77**	**7**	*e*P		**P**		**02 10 38.9**	**+0.7**
VORD				pmax		pmax			
	comp=N,20nm,0.6s								
VORD				pmax		pmax			
	comp=E,60nm,0.6s								
VORD				pmax		pmax			
	comp=Z,8.0nm,0.6s,mb4.8								
VORD				MLR		MLR			
	comp=N,320nm,19.0s,MS4.7								
VORD				MLR		MLR			
	comp=E,80nm,19.0s,MS4.7								
VORD				MLR		MLR			
	comp=Z,360nm,19.0s,MS4.7								
MKAR	**Makanchi Array**	**79.56**	**338**	P		**P**		**02 10 40.2**	**-2.5**
MKAR				LR		LR		02 51 38.8	
MKAR	**Makanchi Array**	**79.56**	**338**	P		**P**		**02 10 40.2**	**-2.5**
	comp=Z,0.5nm,0.7s,mb3.5,baz=19,slow=5.1,SNR=5.3								
MKAR				LR		LR		02 51 38.8	
	comp=Z,142nm,18.7s,MS4.3,baz=5.6,slow=40								
ABKAR	**Akbulak array**	**80.61**	**354**	*e*P		**P**		**02 10 46.6**	**-1.6**
	comp=Z,4.5nm,1.1s,mb4.3								
WMQ	**Urumqi**	**80.92**	**334**	P		**P**		**02 10 52.3**	**+2.3**
WMQ				pP		pP		02 10 57.0	+5.2
WMQ				sP		sP		02 10 59.3	+6.9
WMQ				pmax		pmax			
	comp=Z,14nm,1.0s,mb4.8								
WMQ				pmax		pmax			
	comp=Z,120nm,5.4s								
WMQ				LR		LR			
	comp=N,140nm,21.0s,MS4.5								
WMQ				LR		LR			
	comp=E,180nm,23.2s,MS4.5								
WMQ				LR		LR			
	comp=Z,150nm,23.2s,MS4.3								
LZH	**Lanzhou**	**82.05**	**319**	*e*P		**P**		**02 10 56.5**	**+0.4**
LZH				pP		pP		02 11 02.0	+4.1
LZH				sP		sP		02 11 04.3	+5.8
LZH				pmax		pmax			
	comp=Z,20nm,1.5s,mb4.8								
LZH				pmax		pmax			
	comp=Z,55nm,8.3s								
LZH				LR		LR			
	comp=N,210nm,18.3s,MS4.7								
LZH				LR		LR			
	comp=E,190nm,17.5s,MS4.7								
LZH				LR		LR			
	comp=Z,270nm,20.0s,MS4.6								
LPAZ	**La Paz**	**85.28**	**122**	P		**P**		**02 11 11.8**	**-1.0**
	comp=Z,1.5nm,1.0s,mb4.1,baz=318,slow=6.9,SNR=3.8								
LPAZ				LR		LR		02 51 14.4	
	comp=Z,114nm,21.9s,MS4.2,baz=200,slow=37								
KIV	**Kislovodsk**	**85.99**	**6**[1]	*e*P		**P**		**02 11 20.0**	**+3.9**
KIV				*e*				02 14 35.8	
KIV				*e*SS		SS		02 27 32.8	+6.7
KIV				pmax		pmax			
	comp=Z,15nm,1.7s,mb5.0								
KIV				MLR		MLR			
	comp=Z,100nm,17.0s,MS4.3								
CD2	**Chengdu**	**86.50**	**316**	P		**P**		**02 11 18.0**	**-0.9**
CD2				pP		pP		02 11 22.8	+2.2
CD2				sP		sP		02 11 25.0	+3.7
CD2				PP		PP		02 14 40.5	+0.9
CD2				SKS				02 21 40.5	
CD2				S		S		02 21 50.8	-4.9
CD2				sS		sS		02 21 58.8	+0.2
CD2				SS		SS		02 27 33.0	-1.6
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s,mb5.3								
CD2				pmax		pmax			
	comp=Z,120nm,5.0s								
KEST	**Kesra**	**87.04**	**32**	LR		LR		02 49 25.4	
	comp=Z,52nm,18.2s,MS4.0,baz=265,slow=35								
KSH	**Kashi**	**87.90**	**341**	*e*P		**P**		**02 11 30.3**	**+4.8**
KSH				*e*pP		pP		02 11 35.0	+7.7
KSH				*e*sP		sP		02 11 37.3	+9.4
KSH				*e*PP		PP		02 15 00.0	+9.5
KSH				*e*SKS				02 21 55.5	
KSH				*e*S		S		02 22 14.0	+5.1
KSH				*e*sS		sS		02 22 22.0	+10
KSH				LR		LR			
	comp=N,62nm,4.9s								
KSH				LR		LR			
	comp=E,46nm,7.4s								
KSH				LR		LR			
	comp=Z,74nm,8.0s								
GYA	**Guiyang**	**88.94**	**312**	*e*P		**P**		**02 11 30.8**	**+0.2**
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s,mb5.1								
BRTR	**Keskin Array B**	**89.24**	**13**	LR		LR		02 56 51.2	
	comp=Z,101nm,18.3s,MS4.3,baz=309,slow=39								
KMI	**Kunming**	**91.92**	**314**	P		**P**		**02 11 46.0**	**+1.5**
KMI				pP		pP		02 11 50.5	+4.2
KMI				sP		sP		02 11 52.8	+5.9
KMI				PP		PP		02 15 25.5	+2.5
KMI				S		S		02 22 43.5	-3.0
KMI				SS		SS		02 28 51.5	-1.9
KMI				pmax		pmax			
	comp=Z,12nm,0.9s,mb5.2								
KMI				pmax		pmax			
	comp=Z,76nm,6.3s								
KMI				LR		LR			
	comp=N,150nm,19.0s,MS4.6								
KMI				LR		LR			
	comp=E,130nm,21.0s,MS4.6								
KMI				LR		LR			
	comp=Z,180nm,20.0s,MS4.5								
CPUP	**Villa Florida**	**99.28**	**120**	LR		LR		03 01 07.8	
	comp=Z,67nm,18.3s,MS4.2,baz=335,slow=38								
CMAR	**Chiang Mai Arr**	**99.42**	**314**	LR		LR		03 00 18.3	
	comp=Z,99nm,19.0s,MS4.3,baz=45,slow=37								

*ISCJB **28** 02:02:39.6±0.5,40.°72N±0.°03×32.°92E±0.°03,h1km±5km, Error ellipse: s-maj=4.3km s-min=3.6km az=158.9*
*ISK **28** 02:02:39.7,40.°70N×32.°91E,h5km,MD2.9*
*DDA **28** 02:02:39.9,40.°72N×32.°96E,h6km±3km,Md2.9*
*CSEM **28** 02:02:40.5±0.1,40.°74N×32.°95E,h8km,MD2.9,Error ellipse: s-maj=2.8km s-min=2.5km az=101.0*

ISC 28 02:02:40.5±0.4,40.72N±0.02×32.94E±0.03,h5km±4km, n41,σ0.90/64,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELDT	**Eldivan**	**0.43**	**122**	*i* P		**Pg**	**02 02 49.0**	**+0.1**
ELDT				*i* S		**Sg**	**02 02 54.8**	**+0.3**
ELDT	**Eldivan**	**0.43**	**122**	*i* P		**Pg**	**02 02 49.0**	**+0.2**
ELDT				*i* S		**Sg**	**02 02 54.8**	**+0.3**
CANT	**Cankiri**	**0.53**	**102**	PG		**Pg**	**02 02 51.0**	**+0.4**
CANT				*e*SG		**Sg**	**02 02 58.9**	**+1.4**
SAFT	**Safranbolu**	**0.55**	**340**	*e*PG		**Pg**	**02 02 51.7**	**+0.5**
SAFT				*e*SG		**Sg**	**02 02 59.2**	**+0.8**
SAFT	**Safranbolu**	**0.55**	**340**	*e*Pg		**Pg**	**02 02 51.7**	**+0.5**
SAFT				*e*Sg		**Sg**	**02 02 59.2**	**+0.8**
ILGA	**Ilgaz**	**0.67**	**60**	*i* P		**Pg**	**02 02 53.5**	**+0.1**
ILGA				*i* S		**Sg**	**02 03 03.9**	**+1.7**
ILGA	**Ilgaz**	**0.67**	**60**	*i* P		**Pg**	**02 02 53.5**	**+0.1**
ILGA				*i* S		**Sg**	**02 03 03.9**	**+1.7**
SGKT	**Sivrigoynuk**	**0.69**	**258**	*i* P		**Pg**	**02 02 52.9**	**-0.9**
SGKT	**Sivrigoynuk**	**0.69**	**258**	*i* P		**Pg**	**02 02 52.9**	**-0.8**
LOD	**Lodumlu**	**0.84**	**189**	*e*PG		**Pg**	**02 02 55.5**	**-1.1**
LOD				*e*SG		**Sg**	**02 03 07.7**	**+0.2**
LOD	**Lodumlu**	**0.84**	**189**	*e*Pg		**Pg**	**02 02 55.6**	**-1.0**
LOD				*e*Sg		**Sg**	**02 03 07.7**	**+0.2**
TOS	**Tosya**	**0.88**	**69**	*e*PG		**Pg**	**02 02 56.8**	**-0.5**
TOS	**Tosya**	**0.88**	**69**	*e*Pg		**Pg**	**02 02 56.8**	**-0.5**
BALT	**Daday**	**0.88**	**22**	*i* P		**Pg**	**02 02 56.9**	**-0.5**
BALT				*i* S		**Sg**	**02 03 07.7**	**-1.1**
BBAL	**Bala**	**1.18**	**173**	*i* P		**Pg**	**02 03 02.4**	**-0.7**
BBAL				*i* S		**Sg**	**02 03 20.0**	**+1.5**
BBAL	**Bala**	**1.18**	**173**	*i* P		**Pg**	**02 03 02.4**	**-0.8**
BBAL				*i* S		**Sg**	**02 03 20.0**	**+1.5**
MDU	**Mudurnu**	**1.34**	**260**	*e*PN		**Pn**	**02 03 05.2**	**-0.6**
MDU	**Mudurnu**	**1.34**	**260**	*e*Pn		**Pn**	**02 03 05.2**	**-0.6**
CORM	**Corum**	**1.40**	**112**	*e*PN		**Pn**	**02 03 07.1**	**+0.6**
CORM	**Corum**	**1.40**	**112**	*e*Pn		**Pn**	**02 03 07.1**	**+0.5**
CTKT	**Corum**	**1.41**	**93**	*i* P		**Pn**	**02 03 06.3**	**-0.5**
CTKT				*i* S		**Sb**	**02 03 23.2**	**-2.2**
CTKT	**Corum**	**1.41**	**93**	*i* P		**Pn**	**02 03 06.3**	**-0.4**
CTKT				*i* S		**Sb**	**02 03 23.2**	**-2.2**
KAMT	**Kaman**	**1.47**	**156**	*e*PN		**Pn**	**02 03 07.3**	**-0.3**
KAMT	**Kaman**	**1.47**	**156**	*e*Pn		**Pn**	**02 03 07.3**	**-0.3**
CDAG	**Cicekdag**	**1.55**	**135**	*i* P		**Pn**	**02 03 09.0**	**+0.3**
CDAG				*i* S		**Sn**	**02 03 29.5**	**+0.4**
CDAG	**Cicekdag**	**1.55**	**135**	*i* P		**Pn**	**02 03 09.0**	**+0.3**
CDAG				*i* S		**Sn**	**02 03 29.5**	**+0.4**
BYBT	**Boyabat**	**1.57**	**61**	*e*PN		**Pn**	**02 03 09.0**	**+0.1**
BYBT	**Boyabat**	**1.57**	**61**	*e*Pn		**Pn**	**02 03 09.0**	**+0.1**
SVRH	**Sivrihisar-ESK**	**1.67**	**221**	*e*PN		**Pn**	**02 03 09.8**	**-0.6**
SVRH	**Sivrihisar-ESK**	**1.67**	**221**	*e*Pn		**Pn**	**02 03 09.8**	**-0.6**
ESKT	**Eskisehir**	**2.00**	**234**	*i* P		**Pn**	**02 03 16.3**	**+1.4**
ESKT				*i* S		**Sn**	**02 03 40.8**	**+0.4**
SEYT	**Eskypehyr**	**2.00**	**234**	*i* P		**Pn**	**02 03 16.3**	**+1.4**
SEYT				*i* S		**Sn**	**02 03 40.8**	**+0.5**
BORA	**Eskisehir**	**2.08**	**247**	*i* P		**Pg**	**02 03 19.3**	**-1.1**
BORA				*i* S		**Sg**	**02 03 48.0**	**+0.7**
YOZ	**Yozgat**	**2.12**	**120**	*e*PN		**Pn**	**02 03 16.3**	**-0.2**
YOZ	**Yozgat**	**2.12**	**120**	*e*Pn		**Pn**	**02 03 16.3**	**-0.2**
KDHN	**Kadinhani**	**2.29**	**196**	*i* P		**Pn**	**02 03 19.6**	**+0.7**
KDHN				*e*S		**Sn**	**02 03 47.0**	**-0.3**
KDHN	**Kadinhani**	**2.29**	**196**	*i* P		**Pn**	**02 03 19.5**	**+0.7**
KDHN				*e*S		**Sn**	**02 03 47.0**	**-0.3**
AVNT	**Avonos**	**2.44**	**142**	*i* P		**Pg**	**02 03 26.0**	**-1.1**
AVNT				*i* S		**Sg**	**02 03 55.6**	**-3.1**
SULT	**Sultanhani-AKS**	**2.56**	**170**	*e*PN		**Pn**	**02 03 23.4**	**+0.9**
SULT	**Sultanhani-AKS**	**2.56**	**170**	*e*Pn		**Pn**	**02 03 23.4**	**+0.9**

*IDC **28** 02:03:44.7±0.7,12.°40N×143.°96E,h0km,mb4.0/10, mb1 4.3/10,mb1mx4.0/22,mbtmp4.0/10,MS3.4/1, Ms1 3.6/1,ms1mx2.9/30,Error ellipse: s-maj=26.8km s-min=15.3km az=115.0*
*ISCJB **28** 02:03:47.7±0.7,12.°4N±0.°1×144.°0E±0.°1,h33km,mb4.0/11, Error ellipse: s-maj=21.7km s-min=7.6km az=37.2*
*NEIC **28** 02:03:49.5±0.6,12.°36N×144.°02E,h35km,mb4.0/1,Error ellipse: s-maj=22.0km s-min=12.6km az=115.0*

ISC 28 02:03:49.6±0.7,12.°4N±0.°1×144.°0E±0.°1,h35km,n19, σ0.89/16,mb4.0/11,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.46**	**34**	*e*Pn		**Pn**	**02 04 13.0**	**-0.5**
GUMO				S		**Sn**	**02 04 29.8**	**-1.7**
GUMO	**Guam**	**1.46**	**34**	Pn		**Pn**	**02 04 13.3**	**-0.2**
	114nm,0.3s,baz=186,slow=7.5,SNR=72							
GUMO				Sn		**Sn**	**02 04 32.3**	**+0.9**
	158nm,0.3s,baz=25,slow=23,SNR=16							
MJAR	**Matsushiro Arr**	**24.63**	**349**	P		**P**	**02 09 07.1**	**+0.4**
	0.8nm,0.4s,mb3.6,baz=172,slow=10,SNR=3.9							
WRA	**Warramunga Arr**	**33.50**	**197**	P		**P**	**02 10 25.4**	**-0.5**
	1.7nm,0.5s,mb4.2,baz=21,slow=9.9,SNR=9.6							
ASAR	**Alice Springs**	**37.16**	**195**	P		**P**	**02 10 57.4**	**+0.1**
	1.1nm,0.7s,mb3.8,baz=21,slow=10,SNR=15							
ASAR				PcP		PcP	02 13 18.6	+1.5
	0.9nm,0.8s,baz=46,slow=2.2,SNR=7.4							
CMAR	**Chiang Mai Arr**	**43.79**	**284**	P		**P**	**02 11 51.0**	**-1.3**
	0.9nm,0.3s,mb4.0,baz=87,slow=5.9,SNR=4.5							
CMAR				LR		LR	02 30 27.7	
	comp=Z,42nm,20.1s,baz=30,slow=37							
MKAR	**Makanchi Array**	**61.80**	**317**	P		**P**	**02 14 06.1**	**+1.1**
MKAR				PcP		PcP	02 14 46.5	+0.7
MKAR	**Makanchi Array**	**61.80**	**317**	P		**P**	**02 14 06.1**	**+1.2**
	0.7nm,0.6s,mb4.0,baz=90,slow=8.5,SNR=7.7							
MKAR				PcP		PcP	02 14 46.5	+0.7
	0.6nm,0.7s,baz=94,slow=5.2,SNR=3.7							
ILAR	**Eielson Array**	**70.01**	**25**	P		**P**	**02 14 56.4**	**-1.1**
	0.6nm,0.8s,mb3.6,baz=256,slow=6.0,SNR=7.9							
ABKAR	**Akbulak array**	**76.89**	**318**	*e*P		**P**	**02 15 38.5**	**+0.3**
	1.0nm,0.6s,mb3.9							
YKA	**Yellowknife Ar**	**84.31**	**27**	P		**P**	**02 16 18.5**	**+0.8**
	1.4nm,0.5s,mb4.1,baz=139,slow=37,SNR=3.3							
ARCES	**ARCESS Array B**	**87.98**	**342**	P		**P**	**02 16 36.6**	**+0.9**
	1.3nm,0.7s,mb4.3,baz=48,slow=7.2,SNR=3.6							
NVAR	**Mina Array Bea**

*IDC **28** 02:08:25.9±1.0,50.01N×129.75W,h0km,mb3.9/6, mb1 4.2/14,mb1mx4.0/30,mbtmp4.0/14,ML3.5/6,MS3.6/5, Ms1 3.5/5,ms1mx3.1/34,Error ellipse: s-maj=20.7km s-min=11.1km az=72.0*

*ISCJB **28** 02:08:26.6±0.4,50.10N±0.04×129.60W±0.07,h10km, mb4.4/23,MS4.0/4,Error ellipse: s-maj=7.6km s-min=3.6km az=140.5*

*BJI **28** 02:08:27.1,49.81N×130.54W,h12km,mB4.9/7,mb4.8/9, Ms4.5/5,Ms7 4.3/5*

*NEIC **28** 02:08:28.1±0.4,50.08N×129.70W,h10km,mb4.2/29, Error ellipse: s-maj=8.4km s-min=3.3km az=52.0*

ISC 28 02:08:28.3±0.4,50.11N±0.04×129.68W±0.07,h10km, (h14km±1.1km:pP-P),n100,σ0§98/102,mb4.4/23,MS4.0/4, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**2.31**	**25**	Pn	**Pn**	**02 09 05.2**	**-1.1**
	139nm,0.3s,baz=43,slow=13,SNR=270						
BBB				Sn	**Sn**	**02 09 34.3**	**-0.4**
	77nm,0.3s,baz=126,slow=23,SNR=15						
BBB				LR	LR	02 10 05.7	
	comp=Z,579nm,19.5s,baz=320,slow=41						
PGC	**Sidney**	**4.32**	**107**	*e*Pn	**Pn**	**02 09 32.7**	**-1.3**
NLWA	**Neilton Lookou**	**4.71**	**123**	*e*Pn	**Pn**	**02 09 37.3**	**-2.0**
CMW	**Cultus Mountai**	**5.23**	**106**	P	**Pn**	**02 09 46.6**	**+0.1**
MBW	**Mount Baker**	**5.25**	**102**	P	**Pn**	**02 09 47.0**	**+0.3**
JCW	**Jim Creek**	**5.43**	**108**	*e*Pn	**Pn**	**02 09 48.8**	**-0.5**
JCW				*e*S	**Sn**	**02 10 51.3**	**-0.5**
RPW	**Rockport**	**5.60**	**104**	*e*Pn	**Pn**	**02 09 51.4**	**-0.1**
CRAG	**Craig**	**5.76**	**340**	*e*Pn	**Pn**	**02 09 52.5**	**-1.3**
LON	**Longmire**	**6.22**	**120**	*e*Pn	**Pn**	**02 09 59.9**	**-0.2**
WRAK	**Wrangell Islan**	**6.52**	**347**	*e*Pn	**Pn**	**02 10 02.9**	**-1.3**
LTY	**Liberty**	**6.61**	**112**	P	**Pn**	**02 10 05.8**	**+0.4**
ETW	**Entiat**	**6.66**	**109**	P	**Pn**	**02 10 06.3**	**+0.2**
TBM	**Table Mountain**	**6.70**	**113**	P	**Pn**	**02 10 07.1**	**+0.5**
NAC	**Naches**	**6.79**	**116**	P	**Pn**	**02 10 08.5**	**+0.6**
EBG	**Ellensburg**	**6.85**	**114**	P	**Pn**	**02 10 09.0**	**+0.4**
WTV	**Waterville**	**6.85**	**107**	P	**Pn**	**02 10 08.8**	**+0.1**
HOOD	**Mount Hood Mea**	**7.23**	**128**	*e*Pn	**Pn**	**02 10 14.3**	**+0.5**
MDW	**Midway**	**7.47**	**114**	P	**Pn**	**02 10 17.1**	**-0.1**
GBB	**Gable Butte**	**7.56**	**114**	P	**Pn**	**02 10 17.9**	**-0.5**
RSW	**Rattlesnake Hi**	**7.69**	**115**	*e*Pn	**Pn**	**02 10 20.1**	**-0.1**
HAWA	**Hanford**	**7.72**	**115**	*e*Pn	**Pn**	**02 10 19.6**	**-1.1**
OD2	**Odessa Site #2**	**7.74**	**106**	*e*Pn	**Pn**	**02 10 20.3**	**-0.7**
DLBC	**Dease Lake**	**8.35**	**359**	*e*Pn	**Pn**	**02 10 29.9**	**+0.7**
DLBC	**Dease Lake**	**8.35**	**359**	Pn	**Pn**	**02 10 30.0**	**+0.8**
	0.7nm,0.3s,baz=194,slow=13,SNR=15						
DLBC				LR	LR	02 13 42.6	
	comp=Z,318nm,19.6s,baz=43,slow=38						
NEW	**Newport**	**8.43**	**98**	*e*Pn	**Pn**	**02 10 29.7**	**-0.7**
LNOR	**Lincton Mounta**	**8.74**	**115**	*e*Pn	**Pn**	**02 10 34.2**	**-0.4**
YBH	**Yreka Blue Hor**	**9.68**	**147**	Pn	**Pn**	**02 10 47.8**	**+0.4**
	0.1nm,0.3s,baz=351,slow=8.6,SNR=3.9						
WALA	**Waterton Lakes**	**10.30**	**90**	*e*Pn	**Pn**	**02 10 57.2**	**+1.3**
SWMT	**Swartz Lake**	**10.67**	**98**	*e*Pn	**Pn**	**02 11 02.0**	**+1.1**
	4.5nm,0.9s						
MSO	**Missoula**	**10.95**	**101**	*e*Pn	**Pn**	**02 11 04.6**	**-0.3**
SLMT	**Seeley Lake**	**11.08**	**99**	*e*Pn	**Pn**	**02 11 06.5**	**-0.2**
CHMT	**Chamberlain Mo**	**11.36**	**100**	*e*Pn	**Pn**	**02 11 10.6**	**+0.1**
LRM	**Limekiln Ridge**	**12.31**	**104**	*e*Pn	**Pn**	**02 11 23.8**	**+0.3**
HLID	**Hailey**	**12.32**	**116**	*e*Pn	**Pn**	**02 11 24.2**	**+0.6**
DLMT	**Dillon**	**12.44**	**106**	*e*Pn	**Pn**	**02 11 24.6**	**-0.6**
MCMT	**McKenzie Canyo**	**12.54**	**108**	*e*Pn	**Pn**	**02 11 26.2**	**-0.5**
	3.6nm,0.7s						
PAHR	**Pah Rah Range**	**12.69**	**141**	*e*Pn	**Pn**	**02 11 29.4**	**+0.7**
BOZ	**Bozeman (W)**	**12.91**	**103**	*e*Pn	**Pn**	**02 11 31.9**	**+0.3**
YMR	**Madison River**	**13.78**	**106**	*e*Pn	**Pn**	**02 11 44.0**	**+0.4**
	24nm,0.9s						
IMW	**Indian Meadow**	**14.20**	**109**	*e*Pn	**Pn**	**02 11 50.0**	**+0.8**
NVAR	**Mina Array Bea**	**14.22**	**141**	Pn	**Pn**	**02 11 49.3**	**-0.2**
	0.1nm,0.3s,baz=308,slow=12,SNR=9.9						
FLWY	**Flagg Ranch**	**14.25**	**108**	*e*Pn	**Pn**	**02 11 51.0**	**+1.0**
MOOW	**Moose Ponds**	**14.40**	**109**	*e*Pn	**Pn**	**02 11 53.5**	**+1.6**
TPAW	**Teton Pass**	**14.41**	**110**	*e*Pn	**Pn**	**02 11 55.7**	**+3.5**
REDW	**Red Top Meadow**	**14.55**	**110**	*e*Pn	**Pn**	**02 11 54.4**	**+0.4**
SNOW	**Snow King Moun**	**14.55**	**110**	*e*Pn	**Pn**	**02 11 58.3**	**+4.3**
LOHW	**Long Hollow**	**14.56**	**109**	*e*Pn	**Pn**	**02 11 56.1**	**+2.0**
RLMT	**Red Lodge**	**14.63**	**102**	*e*Pn	**Pn**	**02 11 55.8**	**+0.7**
YKA	**Yellowknife Ar**	**14.91**	**28**	Pn	**Pn**	**02 11 56.9**	**-2.0**
	0.3nm,0.3s,baz=224,slow=12,SNR=8.6						
HWUT	**Hardware Ranch**	**15.19**	**117**	*e*Pn	**Pn**	**02 12 05.5**	**+2.9**
	25nm,1.7s						
DUG	**Dugway**	**15.45**	**123**	*e*Pn	**Pn**	**02 12 05.8**	**-0.3**
	12nm,1.1s						
BW06	**Boulder Array**	**15.66**	**110**	*e*Pn	**Pn**	**02 12 10.8**	**+1.9**
	26nm,1.4s						
PDAR	**Pinedale Array**	**15.66**	**110**	Pn	**Pn**	**02 12 10.8**	**+1.9**
	0.6nm,0.3s,baz=307,slow=10.0,SNR=22						
EGAK	**Eagle**	**15.91**	**342**	*e*Pn	**Pn**	**02 12 13.1**	**+1.1**
	8.1nm,1.0s						
JLU	**Jordanelle**	**15.92**	**120**	*e*Pn	**Pn**	**02 12 13.0**	**+0.9**
	6.9nm,0.9s						
NLU	**North Lily Min**	**16.02**	**123**	*e*Pn	**Pn**	**02 12 14.3**	**+0.8**
	6.8nm,0.9s						
DAU	**Daniels Canyon**	**16.15**	**120**	*e*Pn	**Pn**	**02 12 16.6**	**+1.4**
ISA	**Isabella**	**16.58**	**146**	*e*P	**Pn**	**02 12 24.1**	**+3.4**
	9.4nm,1.2s						
ARUT	**Antelope Range**	**16.93**	**130**	*e*Pn	**Pn**	**02 12 23.9**	**-1.2**
	4.1nm,0.7s						
MSU	**Marysvale**	**17.02**	**126**	*e*Pn	**Pn**	**02 12 25.9**	**-0.3**
CCUT	**Cedar City**	**17.16**	**131**	*e*Pn	**Pn**	**02 12 29.4**	**+1.4**
	33nm,2.1s						
SHPR	**Sheep Range**	**17.17**	**137**	*e*Pn	**Pn**	**02 12 28.0**	**-0.1**
ILAR	**Eielson Array**	**17.28**	**335**	P	**Pn**	**02 12 31.0**	**+1.7**
	0.0nm,0.3s,baz=150,slow=11,SNR=16						
FFC	**Flin Flon**	**17.46**	**64**	*e*Pn	**Pn**	**02 12 31.0**	**-0.7**
	23nm,0.8s						
SRU	**San Rafael**	**17.46**	**122**	*e*Pn	**Pn**	**02 12 32.3**	**+0.5**
	14nm,1.1s						
INK	**Inuvik**	**18.36**	**355**	*e*Pn	**Pn**	**02 12 43.1**	**+0.5**
INK				LR	LR	02 20 16.1	
INK	**Inuvik**	**18.36**	**355**	P	**Pn**	**02 12 43.8**	**+1.2**
	0.1nm,0.3s,baz=171,slow=8.6,SNR=5.2						
INK				LR	LR	02 20 16.1	
	comp=Z,134nm,21.9s,baz=266,slow=38						
RSSD	**Black Hills**	**18.40**	**99**	*e*Pn	**Pn**	**02 12 50.2**	**+6.9**
	13nm,1.3s						
LDFC	**Landfair**	**18.40**	**139**	*e*Pn	**Pn**	**02 12 42.7**	**-0.6**
PV04	**Paradox Valley**	**18.86**	**120**	*e*P	**Pn**	**02 12 47.9**	**-1.0**
TTA	**Tatalina**	**19.20**	**322**	*e*P	**Pn**	**02 12 53.2**	**+0.4**
	5.9nm,0.6s						
PV01	**Paradox Valley**	**19.23**	**120**	*e*P	**Pn**	**02 12 52.5**	**-0.9**
	4μm,1.5s						
SMCO	**Snowmass**	**19.43**	**116**	*e*P	**Pn**	**02 12 54.4**	**-1.3**
	26nm,1.5s						
WUAZ	**Wupatki**	**19.75**	**131**	*e*P	**Pn**	**02 12 57.1**	**-2.4**
	14nm,1.5s						
ISCO	**Idaho Springs**	**19.82**	**112**	*e*P	**Pn**	**02 12 60.0**	**-0.5**
	66nm,2.6s						
MVCO	**Mesa Verde**	**19.94**	**122**	*e*P	**Pn**	**02 12 59.6**	**-2.3**
	70nm,1.6s						
SDCO	**Great Sand Dun**	**21.24**	**116**	*e*P	**P**	**02 13 14.2**	**-0.1**
	11nm,1.3s,mb4.0						
ULM	**Lac du Bonnet**	**21.55**	**77**	P	**P**	**02 13 18.4**	**+1.0**
	22nm,1.0s,mb4.5,baz=285,slow=11,SNR=9.5						
ULM				LR	LR	02 21 56.0	
	comp=Z,316nm,19.2s,MS3.7,baz=294,slow=38						
TUC	**Tucson**	**22.65**	**135**	*e*P	**P**	**02 13 28.2**	**-1.2**
	14nm,1.5s,mb4.2						
ANMO	**Albuquerque**	**22.72**	**123**	*e*P	**P**	**02 13 30.0**	**-0.1**
	6.1nm,1.0s,mb4.0						
ANMO	**Albuquerque**	**22.72**	**123**	P	**P**	**02 13 29.1**	**-1.0**
	3.6nm,0.9s,mb3.8,baz=320,slow=9.1,SNR=12						
LAZ	**Ladron**	**22.77**	**125**	*e*P	**P**	**02 13 30.8**	**+0.1**
	6.4nm,1.5s,mb3.8						
BNM	**Barren Site**	**23.24**	**125**	*e*P	**P**	**02 13 34.2**	**-1.3**
	34nm,1.8s,mb4.5						
ECSD	**EROS Data Cent**	**23.33**	**93**	*e*P	**P**	**02 13 36.4**	**-0.2**
	21nm,0.9s,mb4.6						
EYMN	**Ely**	**24.95**	**80**	*e*P	**P**	**02 13 51.8**	**+0.2**
	17nm,0.8s,mb4.6						
AMTX	**Amarillo**	**25.45**	**116**	*e*P	**P**	**02 13 55.7**	**-0.5**
	19nm,0.9s,mb4.6						
MNTX	**Cornudas Mount**	**25.80**	**126**	*e*P	**P**	**02 13 58.3**	**-1.0**
	9.3nm,1.4s,mb4.1						
WMOK	**Wichita Mounta**	**27.25**	**113**	*e*P	**P**	**02 14 11.8**	**-0.6**
	3.9nm,0.8s,mb4.0						
TXAR	**Lajitas Array**	**28.57**	**127**	P	**P**	**02 14 23.6**	**-0.6**
	1.3nm,0.8s,mb3.7,baz=324,slow=7.4,SNR=16						
TXAR				LR	LR	02 25 51.3	
	comp=Z,126nm,19.9s,MS3.5,baz=5.0,slow=37						
MIAR	**Mount Ida**	**30.54**	**107**	*e*P	**P**	**02 14 41.5**	**-0.1**
	10nm,1.3s,mb4.5						
OXF	**Oxford**	**33.15**	**103**	*e*P	**P**	**02 15 03.8**	**-0.8**
	20nm,1.0s,mb5.0						
SONM	**Songino Array**	**71.14**	**324**	P	**P**	**02 19 47.3**	**+0.7**
	0.8nm,0.6s,mb3.9,baz=13,slow=1.9,SNR=3.5						
HHC	**Hu-ho-hao-te**	**74.72**	**316**	*e*P	**P**	**02 20 08.5**	**+0.5**
HHC				pP	pP	02 20 12.5	+1.2
HHC				sP	sP	02 20 15.5	+3.0
HHC				PP	PP	02 22 56.0	+1.6
HHC				S	S	02 29 41.0	-3.0
HHC				SS	SS	02 34 30.0	-0.4
HHC				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
HHC				pmax	pmax		
	comp=Z,71nm,4.4s						
HHC				LR	LR		
	comp=N,140nm,14.3s,MS4.5						
HHC				LR	LR		
	comp=E,100nm,15.5s,MS4.5						
HHC				LR	LR		
	comp=Z,120nm,14.3s,MS4.3						
AKASG	**Malin Array Be**	**77.97**	**14**	P	**P**	**02 20 25.5**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.7,baz=347,slow=4.4,SNR=3.0						
MKAR	**Makanchi Array**	**79.60**	**338**	P	**P**	**02 20 33.8**	**-1.4**
	comp=Z,0.3nm,0.7s,mb3.3,baz=334,slow=5.0,SNR=3.3						
WMQ	**Urumqi**	**80.94**	**334**	*e*P	**P**	**02 20 45.3**	**+2.8**
WMQ				pP	pP	02 20 49.8	+4.0
WMQ				sP	sP	02 20 52.3	+5.3
WMQ				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
WMQ				pmax	pmax		
	comp=Z,100nm,4.0s						
WMQ				LR	LR		
	comp=N,120nm,20.0s						
WMQ				LR	LR		
	comp=Z,110nm,22.5s,MS4.2						
LZH	**Lanzhou**	**82.03**	**319**	*e*P	**P**	**02 20 48.5**	**0.0**
LZH				pP	pP	02 20 51.8	0.0
LZH				sP	sP	02 20 53.3	+0.3
LZH				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
LZH				pmax	pmax		
	comp=Z,45nm,5.0s						
CD2	**Chengdu**	**86.48**	**316**	P	**P**	**02 21 11.0**	**-0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.3						
CD2				pmax	pmax		
	comp=Z,11nm,5.0s						
KSH	**Kashi**	**87.94**	**340**	*e*P	**P**	**02 21 21.5**	**+3.4**
KSH				*e*pP	pP	02 21 26.5	+5.1
KSH				*e*sP	sP	02 21 29.0	+6.4
KSH				*e*PP	PP	02 24 51.5	+8.2
KSH				*e*SKS		02 31 48.5	
KSH				*e*S	S	02 32 03.5	+2.3
KSH				*e*SS	SS	02 37 56.0	+9.1
KSH				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.9						
KSH				pmax	pmax		
	comp=Z,38nm,2.7s,mb5.2						
KSH				LR	LR		
	comp=N,29nm,4.9s						
KSH				LR	LR		
	comp=E,24nm,3.9s						
KSH				LR	LR		
	comp=Z,16nm,4.0s						
GYA	**Guiyang**	**88.90**	**312**	*e*P	**P**	**02 21 22.5**	**-0.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.1						

*NEIC **28** 02:15:21.7,16.31N×99.37W,h14km,MD3.5(MEX),After MEX.*

MEX 28 02:15:22.0±0.5,16.32N×99.37W,h29km±14km,MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.72**	**319**	*i* P	Pb	02 15 34.4	-1.7
ACX				*i* S	Sb	02 15 44.0	-1.7
ACX	**Acapulco**	**0.72**	**319**	*i* P	Pb	02 15 34.4	-1.7
ACX				*i* S	Sb	02 15 43.8	-1.9
CAIG	**El Cayaco**	**1.13**	**310**	*i* P	Pn	02 15 39.3	-2.5
CAIG				*i* S	Sn	02 15 53.1	-3.2
CAIG	**El Cayaco**	**1.13**	**310**	*i* P	Pn	02 15 39.3	-2.5
CAIG				*i* S	Sn	02 15 53.1	-3.2
PNIG	**Pinotepa**	**1.19**	**86**	*i* P	Pn	02 15 40.3	-2.4
PNIG				*i* S	Sn	02 15 55.0	-3.0
PNIG	**Pinotepa**	**1.19**	**86**	*i* P	Pn	02 15 40.3	-2.4
PNIG				*i* S	Sn	02 15 55.0	-3.0
UTMO	**Huajuapan**	**2.12**	**45**	*i* P	Pn	02 15 54.4	-1.1
UTMO				*i* S	Sn	02 16 18.1	-2.8

*ISCJB **28** 02:22:49.2±0.4,32.67N±0.02×115.86W±0.02,h14km±2km, Error ellipse: s-maj=3.5km s-min=2.6km az=162.3*

*ECX **28** 02:22:50.8±0.7,32.68N×115.92W,h3km,MD3.0,ML3.1*

*NEIC **28** 02:22:50.5,32.67N×115.92W,h4km,ML3.1(ECX), ML3.0(PAS),After PAS.*

ISC 28 02:22:49.4±0.3,32.67N±0.02×115.89W±0.02,h15km±2km, n46,σ0§77/71,26C-20D,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUH	**Yuha Desert**	**0.03**	**236**	⇓*e*P	**Pg**	**02 22 51.7**	**-0.4**
SGL	**Mount Signal**	**0.14**	**97**	⇑*e*P	**Pg**	**02 22 53.8**	**+0.5**
RMX	**La Rumorosa**	**0.17**	**248**	⇑*e*P	**Pg**	**02 22 53.7**	**0.0**
RMX				*e*S	**Sg**	**02 22 56.1**	**-0.4**
DVTC	**Desert V Tower**	**0.18**	**268**	P	**Pg**	**02 22 53.9**	**+0.1**
	baz=0.1,SNR=336						
DVTC				⇓S	**Sg**	**02 22 56.3**	**-0.4**
	baz=0.1						
COK	**Cook Ranch**	**0.23**	**37**	⇓*e*P	**Pg**	**02 22 55.4**	**+0.8**
CRR	**Carrizo Plain**	**0.23**	**343**	⇓*e*P	**Pg**	**02 22 54.7**	**+0.1**
SWSC	**Sam W. Stewart**	**0.28**	**16**	⇑P	**Pg**	**02 22 55.9**	**+0.4**
	baz=0.3,SNR=1000						
SWSC				⇑S	**Sg**	**02 22 59.9**	**+0.3**
	baz=0.3						
MONP	**Monument Peak**	**0.50**	**297**	P	**Pg**	**02 22 59.5**	**+0.2**
	baz=0.5,SNR=731						
MONP				⇑S	**Sg**	**02 23 05.9**	**-0.2**
	baz=0.5						
CPBX	**Cerro Prieto**	**0.55**	**116**	⇓*e*P	**Pg**	**02 23 01.5**	**+1.1**
BAR	**Barrett**	**0.66**	**271**	*e*Pg	**Pg**	**02 23 02.3**	**-0.1**
BAR				*e*S	**Sg**	**02 23 10.5**	**-0.6**
COA	**Coachella**	**0.68**	**73**	⇑*e*P	**Pg**	**02 23 03.5**	**+0.8**
RDX	**Rancho Dawling**	**0.74**	**183**	⇓*e*P	**Pg**	**02 23 03.8**	**0.0**
RDX				*e*S	**Sg**	**02 23 14.0**	**+0.5**
RDX				⇑*e*		02 23 14.4	
	comp=E,438nm,0.3s						
CBX	**Cerro Bola**	**0.74**	**242**	⇑*e*P	**Pg**	**02 23 04.2**	**+0.3**
CBX				*e*S	**Sg**	**02 23 13.8**	**+0.1**
CBX				*e*		02 23 14.8	
	comp=E,1μm,0.2s						
GLA	**Glamis**	**0.97**	**66**	⇑P	**Pb**	**02 23 07.9**	**-0.1**
	baz=1.0,SNR=135						
GLA				⇓S	**Sb**	**02 23 20.5**	**-0.2**
	baz=1.0						
GLA	**Glamis**	**0.97**	**66**	*e*Pg	**Pg**	**02 23 07.7**	**-0.6**
GLA				*e*S	**Sb**	**02 23 20.8**	**+0.1**
109C	**Camp Elliot, M**	**1.05**	**283**	P	**Pb**	**02 23 08.9**	**-0.4**
	baz=1.0,SNR=54						
109C				⇑S	**Sb**	**02 23 21.9**	**-0.8**
	baz=1.0						
BC3	**Big Chuckawall**	**1.05**	**20**	P	**Pb**	**02 23 08.8**	**-0.6**
	baz=1.1,SNR=139						
PFO	**Pinyon Flat Ob**	**1.05**	**333**	P	**Pb**	**02 23 08.7**	**-0.7**
	baz=1.0,SNR=147						
PFO				⇑S	**Sb**	**02 23 22.5**	**-0.5**
	baz=1.0						
PFO	**Pinyon Flat Ob**	**1.05**	**333**	*e*Pg	**Pg**	**02 23 08.7**	**-1.2**
PFO				*e*S	**Sb**	**02 23 23.2**	**+0.3**
112A	**Yuma**	**1.11**	**96**	⇓P	**Pb**	**02 23 09.6**	**-0.8**
	baz=1.1,SNR=14						
PBX	**Punta Banda**	**1.16**	**218**	*e*P	**Pn**	**02 23 11.5**	**+0.3**
PBX				*e*S	**Sb**	**02 23 26.8**	**+0.7**
PBX				⇓*e*		02 23 28.6	
	comp=N,444nm,0.1s						
ECNX	**Esteban Cantu**	**1.17**	**211**	⇓*e*P	**Pn**	**02 23 11.6**	**+0.3**
ECNX				*e*P		02 23 09.2	
ECNX				*e*S	**Sb**	**02 23 22.9**	**-3.5**
ECNX				*e*S	**Sb**	**02 23 27.0**	**+0.6**
BELC	**Belle Mtn. Jos**	**1.33**	**356**	⇑P	**Pn**	**02 23 12.8**	**-0.7**
	baz=1.3,SNR=34						
MURC	**Murrieta**	**1.44**	**311**	⇓Sb	**Sb**	**02 23 34.1**	**0.0**
	baz=1.4						
Y12C	**Blythe**	**1.57**	**46**	⇓P	**Pn**	**02 23 16.0**	**-0.8**
	baz=1.6						
Y12C				⇓S	**Sn**	**02 23 37.0**	**+0.1**
	baz=1.6						
IRM	**Iron Mountain**	**1.61**	**22**	⇑P	**Pn**	**02 23 16.9**	**-0.5**
	baz=1.6						
113A	**Mohawk Valley,**	**1.79**	**86**	⇑P	**Pn**	**02 23 19.7**	**-0.1**
	baz=1.8,SNR=67						
BBRC	**Big Bear Solar**	**1.81**	**332**	⇑Pb	**Pb**	**02 23 21.5**	**-0.7**
	baz=1.8						
BBRC				⇑Sb	**Sb**	**02 23 46.0**	**+1.3**
	baz=1.8						
Z13A	**Yuma Proving G**	**1.95**	**74**	⇑P	**Pn**	**02 23 21.7**	**-0.3**
	baz=2.0,SNR=32						
Y13A	**Salome**	**2.07**	**56**	⇓Pb	**Pb**	**02 23 27.4**	**+0.7**
	baz=2.1						
BFSC	**Mount Baldy Ra**	**2.15**	**317**	⇓Pb	**Pb**	**02 23 28.3**	**+0.2**
	baz=2.1						
BFSC				⇑Sb	**Sb**	**02 23 55.5**	**+0.8**
	baz=2.1						
MWC	**Mount Wilson**	**2.39**	**311**	*e*Pn	**Pn**	**02 23 32.4**	**+4.4**
MWC				*e*S	**Sn**	**02 24 03.1**	**+6.2**
LDFC	**Landfair**	**2.49**	**15**	*e*Pn	**Pn**	**02 23 30.4**	**+1.0**
LDFC				*e*Pg	**Pg**	**02 23 38.9**	**+1.7**
114A	**Black Gap (USA**	**2.54**	**87**	⇓P	**Pn**	**02 23 30.1**	**+0.1**
	baz=2.6,SNR=11						
114A				⇑S	**Sn**	**02 24 00.3**	**-0.4**
	baz=2.6						
Z14A	**Wintersburg**	**2.57**	**74**	⇓S	**Sn**	**02 24 01.6**	**+0.2**
	baz=2.6						
214A	**Organ Pipe Nat**	**2.70**	**104**	⇑P	**Pn**	**02 23 32.1**	**-0.2**
	baz=2.7,SNR=6.4						
Y14A	**Wickenburg**	**2.73**	**62**	⇑S	**Sn**	**02 24 04.7**	**-0.7**
	baz=2.8						
GSC	**Goldstone**	**2.74**	**344**	*e*Pn	**Pn**	**02 23 35.3**	**+2.5**
GSC				*e*Pg	**Pg**	**02 23 40.7**	**-1.2**
EDW2	**Edwards Air Fo**	**2.82**	**322**	⇓Sb	**Sb**	**02 24 15.6**	**+1.9**
	baz=2.8						
X14A	**Yava**	**3.08**	**54**	⇓S	**Sn**	**02 24 14.1**	**0.0**
	baz=3.1						
Y15A	**Casa Rosa Ranc**	**3.24**	**66**	⇑P	**Pn**	**02 23 39.8**	**0.0**
	baz=3.3,SNR=6.9						
Y15A				⇑S	**Sn**	**02 24 17.4**	**-0.7**
	baz=3.3						
W14A	**Seligman**	**3.45**	**42**	⇓S	**Sn**	**02 24 23.7**	**+0.5**
	baz=3.5						
X15A	**Humboldt**	**3.55**	**58**	⇑S	**Sn**	**02 24 25.3**	**-0.3**
	baz=3.6						
MPMC	**Manual Prospec**	**3.63**	**339**	⇑Sb	**Sb**	**02 24 40.7**	**+3.5**
	baz=3.6						
ISA	**Isabella**	**3.68**	**325**	*e*Pn	**Pn**	**02 23 45.2**	**-0.5**
ISA				*e*Pg	**Pg**	**02 23 57.2**	**-2.7**
ISA				*e*S	**Sg**	**02 24 43.8**	**-3.8**
Y16A	**Circle Bar Ran**	**3.89**	**71**	⇑S	**Sn**	**02 24 33.4**	**-0.7**
	baz=3.9						

*IDC **28** 02:29:16.6±1.3,33.21N×69.29E,h0km,mb3.8/3, mb1 3.8/4,mb1mx3.4/25,mbtmp3.7/4,ML3.3/1,Error ellipse: s-maj=51.8km s-min=34.4km az=4.0*

*ISCJB **28** 02:29:22.5±0.7,33.29N±0.05×70.11E±0.07,h101km±8km, mb3.3/3,Error ellipse: s-maj=12.2km s-min=4.8km az=139.1*

*NNC **28** 02:29:25.5±6.4,33.96N×69.68E,h0km,mb3.5,Error ellipse: s-maj=85.0km s-min=47.5km az=76.0*

*NEIC **28** 02:29:28.0±2.0,33.59N×69.46E,h92km±18km,mb3.2/1, Error ellipse: s-maj=25.7km s-min=18.8km az=154.0*

ISC 28 02:29:23.2±0.7,33.23N±0.05×70.05E±0.07,h92km±10km, n31,σ1§16/41,mb3.3/3,2C-5D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THW	**Thamme Wali**	**1.49**	**106**	⇑P	**Pn**	**02 29 50.7**	**+1.8**
KBL	**Kabul**	**1.55**	**328**	*e*Pn	**Pn**	**02 29 48.7**	**-1.0**
KBL				*e*Sn	**Sn**	**02 30 09.8**	**+0.1**
SARP	**Sargodha**	**2.57**	**120**	P	**Pn**	**02 30 04.4**	**+1.4**
CHCP	**Chirah Chowk**	**2.73**	**80**	P	**Pn**	**02 30 08.0**	**+3.0**
BHK	**Bhakra**	**5.69**	**107**	*e*PKP	**Pn**	**02 30 43.6**	**-1.5**
SDNR	**Sundarnagar**	**6.11**	**105**	*e*PKP	**Pn**	**02 30 50.5**	**-0.3**
SDNR				*e*S	**Sn**	**02 32 01.5**	**+2.2**
KHET	**Khetri**	**7.14**	**134**	*e*S	**Sn**	**02 32 23.3**	**-1.2**
KHET				AML	AML	02 33 29.9	
	comp=E,14nm,0.5s						
KHET				AML	AML	02 33 30.9	
	comp=N,14nm,0.3s						
KLP	**Kalpa**	**7.14**	**101**	*e*PKP	**Pn**	**02 31 06.0**	**+

JFK	**Kawauchi**	**0.79**	**298**	P	**Pg**	**02 38 16.7**	**+0.1**
JHO	**Hitachi**	**1.02**	**248**	P	**Pb**	**02 38 19.0**	**-1.6**
JHO				S	**Sb**	**02 38 32.1**	**-1.7**
JMM	**Marumori**	**1.16**	**319**	⇑P	**Pn**	**02 38 22.1**	**-0.6**
JMM				S	**Sb**	**02 38 37.2**	**-0.3**
JFT	**Otama**	**1.24**	**295**	P	**Pn**	**02 38 23.7**	**-0.2**
JFT				S	**Sb**	**02 38 39.8**	**-0.3**
JIO	**Ouri**	**1.49**	**348**	P	**Pn**	**02 38 26.7**	**-0.6**
JIO				S	**Sn**	**02 38 45.2**	**-1.3**
JOU	**Okura**	**1.61**	**328**	P	**Pn**	**02 38 29.7**	**+0.6**
JOU				*e*S	**Sn**	**02 38 50.4**	**+0.8**
JYS	**Shirataka**	**1.81**	**313**	P	**Pn**	**02 38 32.7**	**+0.9**
JAG	**Ashikaga**	**1.93**	**253**	P	**Pn**	**02 38 32.9**	**-0.5**
MJAR	**Matsushiro Arr**	**2.88**	**262**	P	**Pn**	**02 38 48.1**	**+1.6**
	4.2nm,0.3s,baz=87,slow=16,SNR=19						
MJAR				S	**Sn**	**02 39 21.6**	**+0.8**
	4.1nm,0.3s,baz=88,slow=14,SNR=5.4						
MAJO	**Matsushiro**	**2.88**	**262**	*e*Pn	**Pn**	**02 38 47.4**	**+1.0**
MAT	**Matsushiro**	**2.88**	**262**	P	**Pn**	**02 38 47.1**	**+0.6**
MAT				*e*S	**Sn**	**02 39 12.9**	**-7.9**
ZALV	**Zalesovo Beam**	**42.14**	**312**	P	**P**	**02 45 53.1**	**+0.6**
	0.5nm,0.3s,mb3.5,baz=90,slow=10,SNR=3.1						
MKAR	**Makanchi Array**	**44.37**	**302**	P	**P**	**02 46 10.1**	**-0.5**
	0.3nm,0.6s,mb3.2,baz=86,slow=6.4,SNR=4.2						

ISCJB ***28*** *02:43:59.7±1.8,32.24N±0.03×47.57E±0.06,h9km±13km, Error ellipse: s-maj=8.4km s-min=5.2km az=3.8*
KISR ***28*** *02:44:00.6±0.6,31.96N×46.35E,h16km±999km,ML2.7*
TEH ***28*** *02:44:01.2,32.14N×47.42E,h24km*
SGS ***28*** *02:44:03.6,31.99N×47.57E,h29km*

ISC 28 02:44:00.3±2.2,32.24N±0.03×47.52E±0.06,h7km±16km, n18,σ0s85/24,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**1.93**	**360**	*e*Pn	**Pn**	**02 44 34.3**	**+0.8**
IKOM				*e*		02 45 21.4	
	comp=Z,3μm,0.3s						
IVIS	**Veis**	**2.34**	**346**	*e*Pn	**Pn**	**02 44 39.0**	**-0.3**
IVIS				*e*Sn	**Sn**	**02 45 08.2**	**-0.1**
IVIS				*e*		02 45 27.2	
	comp=Z,663nm,0.2s						
MIB	**Mutribah**	**2.44**	**184**	*e*P	**Pn**	**02 44 40.9**	**+0.3**
MIB				*e*S	**Sn**	**02 45 11.1**	**+0.5**
MIB				AML	AML	02 45 18.4	
	comp=Z,71nm,0.6s						
IDHR	**Dehrash**	**2.63**	**339**	*e*Pn	**Pn**	**02 44 42.4**	**-0.7**
IDHR				*e*		02 45 25.4	
	comp=Z,1μm,0.2s						
ILIN	**Lien**	**2.71**	**350**	*e*Pn	**Pn**	**02 44 44.5**	**+0.2**
ILIN				*e*		02 45 29.5	
	comp=N,631nm,0.2s						
IPIR	**Pirpir**	**2.89**	**80**	*e*Pn	**Pn**	**02 44 47.7**	**+1.0**
IPIR				*e*Sn	**Sn**	**02 45 20.8**	**-0.9**
IPIR				*e*		02 45 44.9	
	comp=Z,986nm,0.4s						
NAY	**Al-Naaiem**	**2.99**	**185**	*e*P	**Pn**	**02 44 48.0**	**-0.2**
NAY				*e*S	**Sn**	**02 45 23.5**	**-0.8**
NAY				AML	AML	02 45 25.4	
	comp=Z,10.0nm,0.5s						
RDF	**Al-Radifah**	**3.31**	**180**	*e*P	**Pn**	**02 44 53.7**	**+1.2**
RDF				*e*S	**Sn**	**02 45 33.5**	**+1.4**
RDF				AML	AML	02 45 34.9	
	comp=Z,32nm,0.4s						
IKLH	**Kolahrood**	**3.58**	**71**	*e*Pn	**Pn**	**02 44 56.9**	**+0.6**
IKLH				*e*		02 45 00.7	
	comp=Z,453nm,0.1s						
IRAZ	**Razeghan**	**3.74**	**32**	*e*Pn	**Pn**	**02 44 59.3**	**+0.9**
IRAZ				*e*		02 45 02.9	
	comp=Z,495nm,0.1s						
IGAR	**Gharneh**	**3.83**	**86**	*e*Pn	**Pn**	**02 44 59.6**	**-0.1**
IGAR				*e*		02 45 01.9	
	comp=Z,503nm,0.1s						
KFJS		**4.06**	**175**	P	**Pn**	**02 45 02.2**	**-0.6**
IZEF	**Zefreh**	**4.11**	**80**	*e*	**Pn**	**02 45 07.1**	**+3.5**
	comp=Z,338nm,0.1s						
IZEF				*e*Pn	**Pn**	**02 45 04.0**	**+0.4**
IDMV	**Damavand**	**5.01**	**47**	*e*Pn	**Pn**	**02 45 16.1**	**+0.1**
IDMV				*e*		02 45 18.1	
	comp=Z,126nm,0.1s						
ISAD	**Sadrabad**	**5.25**	**92**	*e*Pn	**Pn**	**02 45 18.9**	**-0.3**
ISAD				*e*		02 47 08.9	
	comp=Z,128nm,0.4s						
ASYS		**5.47**	**211**	P	**Pn**	**02 45 19.4**	**-2.8**
ISRV	**Sarvestan**	**5.59**	**119**	*e*Pn	**Pn**	**02 45 23.1**	**-0.9**
IMEH	**Mehriz**	**6.10**	**96**	*e*Pn	**Pn**	**02 45 29.9**	**-1.0**
IMEH				*e*		02 45 33.5	
	comp=Z,48nm,0.1s						

ISCJB ***28*** *02:44:02.9±1.1,50.19N±0.06×129.4W±0.2,h10km, mb3.5/5,Error ellipse: s-maj=17.9km s-min=6.7km az=160.6*
IDC ***28*** *02:44:02.6±2.0,50.11N×129.45W,h0km,mb3.4/2, mb1 3.7/8,mb1mx3.5/27,mbtmp3.4/8,ML3.5/6,MS3.2/3, Ms1 3.2/3,ms1mx2.7/22,Error ellipse: s-maj=36.1km s-min=12.0km az=78.0*
NEIC ***28*** *02:44:05.1±1.2,50.25N×129.25W,h10km,mb3.8/2,Error ellipse: s-maj=23.4km s-min=6.9km az=59.0*

ISC 28 02:44:05.0±1.1,50.22N±0.06×129.3W±0.2,h10km,n19, σ0s95/19,mb3.5/5,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**2.10**	**21**	Pn	**Pn**	**02 44 39.3**	**-0.9**
	25nm,0.3s,baz=54,slow=13,SNR=28						
BBB				Sn	**Sn**	**02 45 06.9**	**+0.4**
	6.4nm,0.3s,baz=309,slow=23,SNR=10						
PGC	**Sidney**	**4.14**	**110**	*e*Pn	**Pn**	**02 45 07.1**	**-1.0**
NLWA	**Neilton Lookou**	**4.58**	**126**	*e*Pn	**Pn**	**02 45 12.7**	**-1.5**
LON	**Longmire**	**6.08**	**122**	*e*Pn	**Pn**	**02 45 34.8**	**-0.1**
ETW	**Entiat**	**6.47**	**110**	*e*Pn	**Pn**	**02 45 40.9**	**+0.6**
OD2	**Odessa Site #2**	**7.55**	**108**	*e*Pn	**Pn**	**02 45 54.3**	**-0.7**
	3.5nm,0.4s						
DLBC	**Dease Lake**	**8.24**	**357**	Pn	**Pn**	**02 46 04.5**	**+0.1**
	0.1nm,0.3s,baz=187,slow=9.7,SNR=3.5						
DLBC				LR	LR	02 49 28.4	
	comp=Z,141nm,18.2s,baz=122,slow=39						
NVAR	**Mina Array Bea**	**14.16**	**142**	Pn	**Pn**	**02 47 25.7**	**+0.2**
	0.1nm,0.3s,baz=354,slow=13,SNR=2.7						
MOOW	**Moose Ponds**	**14.21**	**110**	*e*Pn	**Pn**	**02 47 26.0**	**-0.2**
	7.4nm,1.0s						
YKA	**Yellowknife Ar**	**14.70**	**28**	Pn	**Pn**	**02 47 31.5**	**-1.2**
	0.1nm,0.3s,baz=223,slow=12,SNR=3.3						
PDAR	**Pinedale Array**	**15.48**	**111**	Pn	**Pn**	**02 47 45.0**	**+1.7**
	0.2nm,0.3s,baz=314,slow=12,SNR=7.1						
ILAR	**Eielson Array**	**17.27**	**334**	P	**Pn**	**02 48 06.4**	**+0.5**
	0.0nm,0.3s,baz=152,slow=10,SNR=5.5						
INK	**Inuvik**	**18.26**	**355**	LR	LR	02 55 56.7	
	comp=Z,60nm,18.4s,baz=96,slow=39						
SDCO	**Great Sand Dun**	**21.09**	**117**	*e*P	**P**	**02 48 49.4**	**+0.1**
	1.8nm,1.1s,mb3.3						
ULM	**Lac du Bonnet**	**21.29**	**77**	P	**P**	**02 48 54.7**	**+3.3**
ULM	**Lac du Bonnet**	**21.29**	**77**	P	**P**	**02 48 54.7**	**+3.3**
	3.9nm,0.6s,mb3.9,baz=264,slow=11,SNR=3.0						
ANMO	**Albuquerque**	**22.59**	**124**	P	**P**	**02 49 06.4**	**+1.0**
	0.7nm,0.7s,mb3.2,baz=322,slow=12,SNR=5.3						
ECSD	**EROS Data Cent**	**23.10**	**94**	*e*P	**P**	**02 49 12.0**	**+1.1**
	6.8nm,1.0s,mb4.0						
TXAR	**Lajitas Array**	**28.46**	**128**	P	**P**	**02 49 59.1**	**-0.9**
	0.3nm,0.8s,mb3.0,baz=330,slow=5.3,SNR=5.7						
TXAR				LR	LR	03 01 58.1	
	comp=Z,62nm,20.4s,baz=195,slow=38						

NEIC 28 02:49:33.2,51.16N×178.46W,h26km,ML4.2(AEIC), **ML4.1**(PMR)**, After AEIC., Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**1.32**	**56**	*e*Pn	Pn	02 49 55.5	-0.5
ADK				*e*S	Sn	02 50 12.3	-0.5
AMKA	**Amchitka**	**1.42**	**280**	*e*Pn	Pn	02 49 56.4	-1.0
AMKA				*e*S	Sn	02 50 16.3	+1.1
GSTR	**Great Sitkin T**	**1.76**	**57**	*e*Pn	Pn	02 50 03.0	+0.9
ATKA	**Atka Island**	**2.85**	**67**	P	Pn	02 50 17.4	+0.4
ATKA				S	Sn	02 50 52.1	+1.6
SMY	**Shemya**	**4.86**	**292**	*e*P	Pn	02 50 45.8	+1.2
SPIA	**Saint Paul Isl**	**7.71**	**35**	P	Pn	02 51 26.6	+2.9
UNV	**Unalaska Valle**	**7.78**	**65**	P	Pn	02 51 26.7	+2.1

IDC 28 02:56:12.1±1.6,6.58S×154.79E,h0km,mb3.7/5, mb1 3.9/5,mb1mx3.7/16,mbtmp3.7/5,MS3.2/2,Ms1 3.2/2, ms1mx2.8/33,Error ellipse: s-maj=73.6km s-min=24.4km az=118.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.85**	**119**	LR	LR	02 59 46.1	
	comp=Z,220nm,19.7s,baz=271,slow=37						
CTA	**Charters Tower**	**15.78**	**211**	LR	LR	03 04 33.7	
	comp=Z,89nm,21.3s,baz=231,slow=32						
WRA	**Warramunga Arr**	**23.89**	**234**	P	P	03 01 26.7	-1.0
	0.4nm,0.3s,baz=58,slow=9.3,SNR=10						
ASAR	**Alice Springs**	**26.30**	**228**	P	P	03 01 49.6	0.0
	0.8nm,0.7s,baz=63,slow=8.9,SNR=7.0						
STKA	**Stephens Creek**	**28.02**	**204**	P	P	03 02 05.9	+0.9
	1.2nm,0.5s,baz=16,slow=15,SNR=2.5						
MKAR	**Makanchi Array**	**82.95**	**319**	P	P	03 08 40.2	+1.2
	0.6nm,0.8s,baz=107,slow=7.8,SNR=6.2						
ILAR	**Eielson Array**	**83.06**	**22**	P	P	03 08 38.9	-0.4
	0.6nm,0.8s,baz=257,slow=5.8,SNR=8.9						
TORD	**Torodi Ar. Bea**	**152.71**	**286**	PKPbc	PKPbc	03 16 11.6	-0.5
	0.6nm,0.7s,baz=58,slow=2.4,SNR=9.3						

ISCJB ***28*** *02:59:35.8±0.3,8.75S±0.03×119.03E±0.02,h156km±2km, mb5.1/122,Error ellipse: s-maj=4.7km s-min=3.4km az=9.9*
MOS ***28*** *02:59:35.0±1.2,8.49S×119.12E,h138km,mb5.2/35, MS4.4/4,Error ellipse: s-maj=12.2km s-min=6.1km az=117.4*
IDC ***28*** *02:59:36.5±1.0,8.66S×119.12E,h140km±8km,mb4.7/28, mb1 4.7/29,mb1mx4.7/31,mbtmp4.7/29,MS3.8/7, Ms1 3.8/7,ms1mx3.2/38,Error ellipse: s-maj=11.8km s-min=6.8km az=57.0*
GCMT ***28*** *02:59:37.4±0.3,8.74S×118.98E,h143km±2km,MW5.0, Moment Tensor Solution. s32,c38; s83,c118; Moment tensor: Scale 10^16Nm; Mrr2.24±.12; Mθθ-1.30±.17; Mφφ-0.94±.21; Mrθ1.29±.09; Mrφ3.52±.12; Mθφ1.51±.12; Best double couple: M0:4.50000×10^16 NP1:φs98.00000°, δ60.00000°, λ34.00000°. NP2:φs349.00000°, δ61.00000°, λ145.00000°. Principal axes: T 4.3100, Plg44.0000°, Azm313.0000°; N 0.3400, Plg46.0000°, Azm135.0000°; P -4.6500, Plg1.0000°, Azm44.0000°; Data Used: IU II IC G CN.*
DJA ***28*** *02:59:37,8.93S×118.96E,h104km,mb5.2/18*
NEIC ***28*** *02:59:39.1±1.0,8.63S×119.09E,h166km±8km,mb5.1/43, Error ellipse: s-maj=6.9km s-min=4.3km az=59.0*

ISC 28 02:59:36.9±0.3,8.79S±0.03×119.03E±0.02,h152km±2km, h160km±1.3km:pP-P,n376,σ1s26/319,mb5.1/120,21C-7D, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.52**	**125**	P	**Pn**	**03 00 04.9**	**-2.0**
WSI				S	**Sn**	**03 00 25.8**	**+2.3**
MMRI	**Maumere**	**3.17**	**87**	P	**Pn**	**03 00 25.6**	**-1.0**
MMRI				S	**Sn**	**03 01 02.2**	**-1.0**
KHKI	**Kahang-Kahang**	**3.41**	**277**	P	**Pn**	**03 00 28.4**	**-1.2**
KHKI				S	**Sn**	**03 01 06.6**	**-2.3**
BKSI	**Bulukumba**	**3.62**	**18**	P	**Pn**	**03 00 32.6**	**+0.3**
BKSI				S	**Sn**	**03 01 13.6**	**-0.3**
DNP	**Denpasar**	**3.78**	**271**	P	**Pn**	**03 00 34.3**	**-0.1**
DNP				S	**Sn**	**03 01 18.6**	**+0.8**
IGBI	**Denpasar**	**3.84**	**269**	P	**Pn**	**03 00 33.9**	**-1.3**
IGBI				S	**Sn**	**03 01 17.7**	**-1.6**
SRBI	**Singaraja**	**3.84**	**280**	P	**Pn**	**03 00 34.4**	**-0.8**
NBBI	**Negara**	**4.38**	**275**	P	**Pn**	**03 00 40.7**	**-1.6**
NBBI				S	**Sn**	**03 01 29.5**	**-2.8**
BYJI	**Banyuwangi**	**4.66**	**277**	P	**Pn**	**03 00 48.8**	**+2.9**
BYJI				S	**Sn**	**03 01 37.3**	**-1.7**
BBSI	**Bau Bau**	**4.81**	**47**	P	**Pn**	**03 00 48.8**	**+0.9**
JAGI	**Jajag, Banyuwa**	**4.83**	**273**	P	**Pn**	**03 00 46.0**	**-2.2**
JAGI				S	**Sn**	**03 01 39.4**	**-3.8**
SPSI	**Sidrap Palu**	**4.85**	**9**	P	**Pn**	**03 00 49.3**	**+0.8**
	722nm,1.0s						
KMMI	**Kalianget**	**5.31**	**289**	P	**Pn**	**03 00 56.6**	**+2.1**
	0.9nm3μm175nm,0.8s						
GMJI	**Gumukmas**	**5.55**	**275**	P	**Pn**	**03 00 55.4**	**-2.3**
	5.1nm177nm,0.9s						
TTSI	**Tana Toraja**	**5.76**	**8**	P	**Pn**	**03 01 03.0**	**+2.4**
KDI	**Kendari**	**5.98**	**37**	P	**Pn**	**03 01 04.5**	**+1.0**
	1.8nm6μm547nm,1.6s						
KBKI	**Kotabaru**	**6.16**	**332**	P	**Pn**	**03 01 08.3**	**+2.5**
KRKI	**Karangkates**	**6.54**	**275**	P	**Pn**	**03 01 19.3**	**+8.4**
PWJI	**Pagerwojo**	**7.19**	**276**	P	**Pn**	**03 01 20.3**	**+0.7**
	3.7nm119nm,0.6s						
SJI	**Sawahan**	**7.26**	**278**	P	**Pn**	**03 01 22.2**	**+1.6**
	4.3nm158nm,0.2s						
NGJI	**Ngawi**	**7.63**	**280**	P	**Pn**	**03 01 28.0**	**+2.6**
	1.5nm98nm,1.1s						
PCJI	**Pacitan**	**7.79**	**274**	P	**Pn**	**03 01 27.6**	**0.0**
	3.6nm147nm,0.8s						
UGM	**Wanagama**	**8.46**	**275**	P	**Pn**	**03 01 36.7**	**+0.1**
	4μm133nm,1.4s						
UGM				S	**Sn**	**03 03 04.2**	**-6.6**
	4μm133nm,1.4s						
LUWI	**Luwuk**	**8.55**	**26**	P	**Pn**	**03 01 39.0**	**+1.2**
	3μm230nm,0.9s						
SMRI	**Semarang**	**8.68**	**281**	P	**Pn**	**03 01 41.7**	**+2.2**
	113nm,0.8s						
SMRI				S	**Sn**	**03 03 16.6**	**+0.5**
	113nm,0.8s						
YOGI	**Yogyakarta**	**8.70**	**276**	P	**Pn**	**03 01 43.0**	**+3.3**
YOGI				S	**Sn**	**03 03 15.3**	**-1.1**
BJII	**Banjamegara**	**9.34**	**278**	P	**Pn**	**03 01 49.3**	**+1.0**
	44nm,1.6s						
BJII				S	**Sn**	**03 03 31.7**	**-0.3**
	44nm,1.6s						
PBKI	**Pangkalan Bun**	**9.50**	**309**	P	**Pn**	**03 01 53.8**	**+3.5**
MRSI	**Marisa**	**9.65**	**18**	P	**Pn**	**03 01 53.6**	**+1.2**
	137nm,1.1s						
NLAI	**Namlea**	**9.74**	**56**	P	**Pn**	**03 01 56.5**	**+3.0**
	3μm337nm,1.0s						
CLJI	**Cilicap**	**9.97**	**275**	S	**Sn**	**03 03 43.1**	**-4.0**
CMJI	**Cimerak**	**10.52**	**275**	S	**Sn**	**03 03 49.9**	**-10**
CISI	**Cisompet, Garu**	**11.17**	**276**	P	**Pn**	**03 02 15.3**	**+2.9**
	2μm148nm,1.0s						
CISI				S	**Sn**	**03 04 05.4**	**-11**
	2μm148nm,1.0s						
FITZ	**Fitzroy Crossi**	**11.26**	**146**	*e*P	**Pn**	**03 02 11.3**	**-2.3**
	52nm,0.3s						
FITZ				*e*S	**Sn**	**03 04 09.7**	**-8.5**
FITZ	**Fitzroy Crossi**	**11.26**	**146**	*e*Pn	**Pn**	**03 02 11.8**	**-1.8**
FITZ				*e*Sn	**Sn**	**03 04 12.5**	**-5.6**
FITZ	**Fitzroy Crossi**	**11.26**	**146**	P	**Pn**	**03 02 11.5**	**-2.1**
	9.1nm,0.3s,baz=338,slow=8.4,SNR=206						
FITZ				S	**Sn**	**03 04 12.5**	**-5.7**
	26nm,0.3s,baz=189,slow=22,SNR=22						
FITZ				LR	LR	03 07 01.8	
	comp=Z,614nm,20.0s,baz=332,slow=39						
KNA	**Kununurra**	**11.76**	**127**	*e*P	**Pn**	**03 02 17.6**	**-2.5**
	62nm,0.5s						
KNA				*e*S	**Sn**	**03 04 21.7**	**-8.4**
KNA	**Kununurra**	**11.76**	**127**	P	**Pn**	**03 02 17.7**	**-2.4**
	3μm331nm,0.8s						
CBJI	**Citeko**	**12.30**	**280**	P	**Pn**	**03 02 32.1**	**+4.9**
MBWA	**Marble Bar**	**12.31**	**177**	*e*P	**Pn**	**03 02 25.2**	**-2.0**
MBWA				*e*S	**Sn**	**03 04 33.8**	**-10**
MBWA	**Marble Bar**	**12.31**	**177**	*e*Pn	**Pn**	**03 02 25.4**	**-1.8**
MBWA				*e*S	**Sn**	**03 04 32.8**	**-11**
MBWA	**Marble Bar**	**12.31**	**177**	P	**Pn**	**03 02 25.0**	**-2.2**
	36nm,0.6s						
DBJI	**Dramaga**	**12.37**	**279**	P	**Pn**	**03 02 27.2**	**-0.9**
TSM	**Tawau**	**13.05**	**355**	P	**Pn**	**03 02 44.5**	**+7.7**
SBUM	**Sibu**	**13.07**	**328**	P	**Pn**	**03 02 44.1**	**+7.0**
BTM	**Bintulu**	**13.31**	**333**	P	**Pn**	**03 02 47.9**	**+7.8**
KSM	**Kuching**	**13.40**	**319**	*e*Pn	**Pn**	**03 02 43.1**	**+1.8**
KSM	**Kuching**	**13.40**	**319**	P	**Pn**	**03 02 47.9**	**+6.6**
MYLDM	**Lahad Datu**	**13.89**	**358**	P	**Pn**	**03 02 53.9**	**+6.5**
TLE	**Tual**	**13.95**	**78**	S	**Sn**	**03 05 15.2**	**-7.9**
SDKM	**Sandakan**	**14.45**	**353**	P	**Pn**	**03 02 59.7**	**+5.1**
KLSI		**14.77**	**285**	S	**Sn**	**03 05 48.6**	**+5.8**
KASI	**Kota Agung**	**14.78**	**282**	S	**Sn**	**03 05 43.2**	**+0.2**
KKM	**Kota Kinabalu**	**15.00**	**349**	*e*Pn	**Pn**	**03 03 02.6**	**+1.2**
KKM	**Kota Kinabalu**	**15.00**	**349**	P	**Pn**	**03 03 04.4**	**+3.0**
MDSI	**Maura Dua**	**15.36**	**285**	S	**S**	**03 06 02.7**	**+5.5**
KDM	**Kudat**	**15.76**	**352**	P	Px	03 03 23.0	
MNAI	**Manna**	**16.56**	**284**	S	**S**	**03 06 19.5**	**-5.4**
MYKOM	**Kota Tinggi**	**18.42**	**304**	P	**P**	**03 03 41.9**	**+1.0**

WRA	**Warramunga Arr**	**18.50**	**128**	P	**P**	**03 03 42.3**	**+0.8**
WRA				S	**S**	**03 07 02.5**	**-2.3**
WRA				LR	LR	03 11 47.1	
WRA	**Warramunga Arr**	**18.50**	**128**	P	**P**	**03 03 42.3**	**+0.8**
	2.5nm,0.3s,baz=301,slow=14,SNR=94						
WRA				S	**S**	**03 07 02.5**	**-2.3**
	5.2nm,0.3s,baz=305,slow=25,SNR=6.9						
WRA				LR	LR	03 11 47.1	
	comp=Z,277nm,21.0s,baz=305,slow=40						
WRA	**Warramunga Arr**	**18.50**	**128**	P	**P**	**03 03 42.3**	**+0.7**
WRA				S	**S**	**03 07 02.5**	**-2.3**
TBP	**Tagbilaran**	**18.98**	**15**	*e*P	**P**	**03 03 48.3**	**+1.4**
KGM	**Kluang**	**18.99**	**304**	P	**P**	**03 03 48.9**	**+2.0**
ASAR	**Alice Springs**	**20.53**	**138**	P	**P**	**03 04 04.2**	**+0.8**
	12nm,0.7s,baz=318,slow=9.8,SNR=64						
ASAR				S	**S**	**03 07 46.2**	**+1.4**
	3.9nm,0.7s,baz=322,slow=22,SNR=4.7						
ASAR				ScP	ScP	03 11 32.4	+1.2
	17nm,0.7s,baz=342,slow=2.0,SNR=24						
ASAR	**Alice Springs**	**20.53**	**138**	P	**P**	**03 04 04.3**	**+0.8**
ASAR				S	**S**	**03 07 46.2**	**+1.4**
FRIM	**Kepong**	**21.07**	**304**	P	**P**	**03 04 10.6**	**+1.2**
KTGM	**Kuala Trenggan**	**21.16**	**311**	P	**P**	**03 04 13.3**	**+2.9**
IPM	**Ipoh**	**22.27**	**306**	*e*P	**P**	**03 04 21.7**	**-0.4**
	28nm,0.7s,mb4.8						
IPM	**Ipoh**	**22.27**	**306**	P	**P**	**03 04 22.5**	**+0.4**
KLBR	**Kellerberrin**	**22.72**	**183**	*e*P	**P**	**03 04 26.6**	**+0.7**
	10nm,0.4s,mb4.6						
KLBR				*e*S	**S**	**03 08 33.8**	**+11**
TGY	**Tagaytay City**	**22.82**	**5**	P	**P**	**03 04 27.1**	**+0.1**
	344nm,0.4s,mb6.2,baz=224,slow=2.6,SNR=12						
KULM	**Kulim**	**23.05**	**307**	*e*P	**P**	**03 04 28.8**	**-0.4**
	10.0nm,0.6s,mb4.4						
PSI	**Prapat**	**23.12**	**299**	P	**P**	**03 04 29.0**	**-0.8**
	27nm,0.4s,mb5.0,baz=146,slow=7.7,SNR=28						
FORT	**Forrest**	**23.44**	**160**	*e*P	**P**	**03 04 33.7**	**+1.1**
	23nm,0.8s,mb4.7						
FORT	**Forrest**	**23.44**	**160**	*e*P	**P**	**03 04 34.0**	**+1.4**
	60nm,1.2s,mb4.9						
NWAO	**Narrogin (SRO)**	**24.07**	**184**	P	**P**	**03 04 39.8**	**+1.5**
	20nm,0.7s,mb4.8,baz=5.5,slow=10,SNR=21						
NWAO	**Narrogin (SRO)**	**24.07**	**184**	*e*P	**P**	**03 04 40.5**	**+2.2**
COEN	**Coen**	**24.21**	**104**	*e*P	**P**	**03 04 40.7**	**+0.9**
	628nm,0.8s,mb6.2						
COEN				*e*S	**S**	**03 08 45.3**	**-2.0**
CTA	**Charters Tower**	**28.60**	**116**	P	**P**	**03 05 20.3**	**+1.1**
CTA				ScP	ScP	03 11 54.8	+1.0
CTA				LR	LR	03 18 06.4	
CTA	**Charters Tower**	**28.60**	**116**	P	**P**	**03 05 20.3**	**+1.1**
	4.8nm,0.7s,mb4.3,baz=275,slow=15,SNR=3.9						
CTA				ScP	ScP	03 11 54.8	+1.0
	9.8nm,0.6s,baz=351,slow=4.8,SNR=8.8						
CTA				LR	LR	03 18 06.4	
	comp=Z,174nm,21.1s,baz=46,slow=39						
BBOO	**Buckleboo**	**28.63**	**149**	*e*P	**P**	**03 05 20.4**	**+1.2**
	155nm,1.5s,mb5.5						
QIZ	**Qiongzhong**	**29.09**	**342**	*e*P	**P**	**03 05 23.9**	**+0.5**
	30nm,0.8s,mb5.1						
NST	**Nakhon Sawan**	**30.68**	**322**	⇑P	**P**	**03 05 38.5**	**+1.1**
	135nm,0.6s,mb5.8						
STKA	**Stephens Creek**	**31.09**	**141**	*e*P	**P**	**03 05 42.4**	**+1.5**
	7.4nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**31.09**	**141**	*e*P	**P**	**03 05 42.2**	**+1.3**
	1.8nm,0.7s,mb3.9						
STKA				*e*PcP	PcP	03 08 34.4	+1.6
STKA	**Stephens Creek**	**31.09**	**141**	P	**P**	**03 05 42.5**	**+1.5**
	8.6nm,0.6s,mb4.7,baz=311,slow=8.4,SNR=18						
STKA				PcP	PcP	03 08 34.4	+1.6
	4.3nm,0.6s,baz=36,slow=4.3,SNR=4.1						
STKA				ScP	ScP	03 12 02.9	+1.3
	6.2nm,0.7s,baz=292,slow=5.5,SNR=6.8						
STKA				LR	LR	03 20 25.9	
	comp=Z,122nm,19.6s,baz=235,slow=40						
TPUB	**Ta-pu**	**31.93**	**3**	*e*P	**P**	**03 05 48.5**	**+0.2**
	22nm,0.8s,mb4.9						
YULB	**Yu-li**	**32.06**	**4**	*e*P	**P**	**03 05 48.1**	**-1.4**
	16nm,0.6s,mb4.9						
SSLB	**Suanglung**	**32.43**	**3**	*e*P	**P**	**03 05 52.3**	**-0.5**
	30nm,0.9s,mb5.0						
SSLB				*e*PcP	PcP	03 08 36.9	+0.3
BDT	**Bhumibol Dam**	**32.58**	**323**	⇓P	**P**	**03 05 55.0**	**+0.9**
	89nm,0.9s,mb5.5						
YHNB	**Yeheng**	**33.34**	**4**	*e*P	**P**	**03 05 59.6**	**-0.9**
	47nm,1.0s,mb5.2						
CM31	**Chiang Mai Arr**	**33.56**	**324**	*e*P	**P**	**03 06 04.1**

CD2 LR LR
comp=N,3µm,12.2s
CD2 LR LR
comp=E,2µm,14.3s
CD2 LR LR
comp=Z,2µm,18.8s
SHL Shillong 43.18 323⇑ *i*P **P 03 07 22.5 -0.4**
SHL *ex* x 03 09 07.5
XAN Xi'an 43.66 348 P **P 03 07 26.8 +0.2**
XAN pP pP 03 08 02.3 +1.9
XAN sP sP 03 08 20.5 +3.0
XAN PP PP 03 09 11.0 -0.5
XAN S **S 03 13 41.8 -3.1**
XAN SS SS 03 16 55.3 -11
XAN pmax pmax
comp=Z,17nm,1.0s,mb4.6
LSA Lhasa 46.74 326 *e*P **P 03 07 52.4 +1.5**
comp=Z,184nm,1.1s,mb5.6
LSA Lhasa 46.74 326 *e*P **P 03 07 52.4 +1.4**
LSA pmax pmax
comp=Z,184nm,1.1s,mb5.6
KSRS Korea Array 46.75 10 P **P 03 07 51.2 +0.3**
comp=Z,9.1nm,0.7s,mb4.5,baz=188,slow=8.7,SNR=23
KSRS PcP PcP 03 09 22.6 +0.8
comp=Z,4.0nm,0.9s,baz=191,slow=3.2,SNR=5.9
KSRS ScP ScP 03 13 02.1 +0.8
comp=Z,2.4nm,0.6s,baz=178,slow=3.6,SNR=6.0
LZH Lanzhou 46.87 343⇑P **P 03 07 53.5 +1.6**
LZH pP pP 03 08 28.5 +2.4
LZH sP sP 03 08 46.8 +3.8
LZH PcP PcP 03 09 24.0 +1.8
LZH ScP ScP 03 13 02.0 +0.2
LZH S **S 03 14 31.0 0.0**
LZH sS sS 03 15 34.5 +4.0
LZH SS SS 03 17 55.5 -4.5
LZH pmax pmax
comp=Z,79nm,1.3s,mb5.2
LZH pmax pmax
comp=Z,200nm,6.4s
ODAN Odare 46.88 320 *e*P **P 03 07 52.7 +0.6**
comp=Z,398nm,0.9s,mb6.1
TAPN Taplejung 47.03 321 *e*P **P 03 07 53.9 +0.7**
comp=Z,642nm,0.9s,mb6.3
RAMN Ramite 47.45 319 *e*P **P 03 07 56.7 +0.2**
comp=Z,522nm,1.1s,mb6.1
HYB Hyderabad 47.73 303 *i*P **P 03 07 56.5 -2.3**
JIRN Jiri 48.20 320 *e*P **P 03 08 03.0 +0.7**
comp=Z,24nm,0.2s,mb5.5
MAT Matsushiro 48.56 21 P **P 03 08 03.2 -1.7**
MJAR Matsushiro Arr 48.56 21 P **P 03 08 03.1 -1.7**
comp=Z,8.0nm,0.7s,mb4.5,baz=196,slow=8.1,SNR=12
MJAR PcP PcP 03 09 28.3 0.0
comp=Z,3.7nm,0.7s,baz=194,slow=4.4,SNR=4.5
MJAR ScP ScP 03 13 09.4 +0.5
comp=Z,2.3nm,0.6s,baz=194,slow=5.2,SNR=5.4
MJAR Matsushiro Arr 48.56 21 P **P 03 08 03.2 -1.7**
MJAR 03 09 28.3
GUN Gumba 48.58 320 *e*P **P 03 08 05.4 +0.3**
comp=Z,610nm,0.9s,mb6.2
BJT Baijiatuan 48.63 357 *e*P **P 03 08 05.5 +0.2**
comp=Z,20nm,0.4s,mb5.1
BJT Baijiatuan 48.63 357 *e*P **P 03 08 05.5 +0.2**
BJT pmax pmax
comp=Z,20nm,0.4s
PKI Pulchoki 48.65 319 *e*P **P 03 08 05.4 -0.3**
BJI Beijing 48.66 357 P **P 03 08 05.5 0.0**
BJI pP pP 03 08 40.8 +0.8
BJI S **S 03 14 54.5 -1.6**
BJI sS sS 03 15 54.8 -1.0
BJI pmax pmax
comp=Z,66nm,0.9s,mb5.3
PKIN Phulchoki 48.66 319 *e*P **P 03 08 06.0 +0.2**
DMN Daman 48.87 319 *e*P **P 03 08 07.2 -0.2**
comp=Z,413nm,1.1s,mb6.0
GKN Gorkha 49.44 319 *e*P **P 03 08 11.4 -0.3**
HHC Hu-ho-hao-te 49.87 353 *e*P **P 03 08 14.8 +0.1**
HHC pP pP 03 08 51.0 +1.7
HHC sP sP 03 09 09.5 +3.3
HHC PP PP 03 10 12.8 +1.7
HHC S **S 03 15 11.0 -2.0**
HHC sS sS 03 16 15.3 +2.3
HHC ScS ScS 03 17 45.8 -4.7
HHC SS SS 03 18 44.0 -4.0
HHC pmax pmax
comp=Z,36nm,1.0s,mb5.0
HHC pmax pmax
comp=Z,110nm,3.7s
KOLN Koldanda 49.96 318 *e*P **P 03 08 15.3 -0.4**
comp=Z,114nm,0.6s,mb5.7
DANN Dangsing 50.24 319 *e*P **P 03 08 18.1 +0.3**
comp=Z,386nm,0.6s,mb6.2
SNY Shenyang 50.54 4⇑P **P 03 08 19.0 -0.8**
SNY S **S 03 15 19.8 -2.4**
SNY pmax pmax
comp=Z,27nm,0.9s,mb4.9
GTA Gaotai 51.17 341⇑P **P 03 08 26.3 +1.8**
GTA pP pP 03 09 01.0 +1.8
GTA sP sP 03 09 20.5 +4.4
GTA PcP PcP 03 09 39.5 +1.7
GTA ScP ScP 03 13 22.3 +2.2
GTA S **S 03 15 31.0 +0.1**
GTA pmax pmax
comp=Z,210nm,0.8s,mb5.8
GTA pmax pmax
comp=Z,450nm,5.3s
BHPL Bhopal 51.67 309 *e*PKP **P 03 08 26.9 -1.6**
POO Poona 52.19 302 *e*PKP **P 03 08 29.0 -3.4**
CN2 Changchun 52.67 6 *e*P **P 03 08 38.8 +3.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
CN2 pmax pmax
comp=Z,100nm,5.0s
CN2 LR LR
comp=N,300nm,24.0s
CN2 LR LR
comp=E,200nm,24.0s
CN2 LR LR
comp=Z,200nm,24.0s
AGRA Agra 53.54 313 *ex* **P 03 08 40.1 -2.1**
AGRA AMb AMB 03 08 41.3
comp=Z,55nm,0.5s,mb5.5
MDJ Mudanjiang 54.01 9 P **P 03 08 44.8 -0.5**
MDJ pmax pmax
comp=Z,42nm,0.8s,mb5.2
MDJ pmax pmax
comp=Z,54nm,4.2s
MDJ Mudanjiang 54.01 9 *e*P **P 03 08 44.9 -0.4**
comp=Z,28nm,0.6s,mb5.2
JOSI Joshimath 54.45 318 *e*PKP **P 03 08 47.6 -1.1**
SONA Sohna 54.76 314 *e*PKP **P 03 08 49.2 -1.8**
SONA AMb AMB 03 08 50.4
comp=Z,56nm,0.8s,mb5.3
AYAN Aya Nagar 54.86 314 *e*PKP **P 03 08 49.3 -2.5**
AYAN AMb AMB 03 08 50.5
comp=Z,52nm,0.8s,mb5.3
KUDL Kundal 55.12 313 *ex* **P 03 08 47.0 -6.7**
KUDL AMb AMB 03 08 48.7
comp=Z,77nm,1.0s,mb5.4
AJM Ajmer 55.55 311 *e*PKP **P 03 08 55.3 -1.4**
AJM AMb AMB 03 08 56.6
comp=Z,44nm,0.9s,mb5.3
KHET Khetri 55.57 313 *e*PKP **P 03 08 54.8 -2.1**
KHET AMb AMB 03 08 56.3
comp=Z,34nm,0.8s,mb5.2
KLP Kalpa 55.94 318 *e*PKP **P 03 08 59.1 -0.3**
KLP AMb AMB 03 09 02.4
comp=Z,136nm,1.2s,mb5.7
KKR Kurukshetra 55.95 315 *e*PKP **P 03 08 58.3 -1.2**
ASAJ Asahikawa 56.83 20 P **P 03 09 04.9 -0.5**
comp=Z,3.4nm,0.4s,mb4.5,baz=270,slow=30,SNR=5.3
ULN Ulaanbaatar 57.40 350 *e*P **P 03 09 10.1 +0.7**
comp=Z,148nm,1.3s,mb5.7
ULN Ulaanbaatar 57.40 350 *e*P **P 03 09 10.1 +0.7**
ULN pmax pmax
comp=Z,148nm,1.3s,mb5.7
ULN Ulaanbaatar 57.40 350 P **P 03 09 10.3 +1.0**
SNR=36
SONM Songino Array 57.48 350 P **P 03 09 10.8 +0.9**
comp=Z,124nm,0.8s,mb5.8,baz=167,slow=8.5,SNR=211
SONM ScP ScP 03 13 49.0 +1.5
comp=Z,2.3nm,0.9s,baz=158,slow=4.8,SNR=4.3
HIA Hailar 57.81 1 *e*P **P 03 09 12.8 +0.5**
comp=Z,19nm,1.1s,mb4.8
HIA Hailar 57.81 1 *e*P **P 03 09 12.8 +0.6**
HIA pmax pmax
comp=Z,19nm,1.1s
KLR Kul'dur 58.84 10 *e*P **P 03 09 14.8 -4.6**
YSS Yuzh-Sakhalins 59.39 19 *e*P **P 03 09 22.2 -1.0**
WMQ Urumqi 59.58 334 P **P 03 09 25.5 +0.9**
WMQ pP pP 03 10 03.0 +2.7
WMQ PcP PcP 03 10 11.0 +0.7
WMQ sP sP 03 10 20.8 +3.9
WMQ PP PP 03 11 40.5 +2.5
WMQ *e*S **S 03 17 20.5 -2.1**
WMQ ScS ScS 03 18 55.8 -4.1
WMQ SS SS 03 21 19.5 -1.5
WMQ pmax pmax
comp=Z,160nm,0.8s,mb5.9
ZAK Zakamensk 60.50 348⇓ *i*P **P 03 09 30.8 +0.1**
ZAK pmax pmax
comp=Z,24nm,1.1s,mb4.9
TLY Talaya 61.67 349 *e*P **P 03 09 39.5 +1.0**
comp=Z,54nm,0.8s,mb5.4
TLY Talaya 61.67 349 *c i*P **P 03 09 39.2 +0.6**
TLY *e*S **S 03 17 47.7 -1.2**
TLY pmax pmax
comp=Z,72nm,0.9s,mb5.5
TLY Talaya 61.67 349 P **P 03 09 39.0 +0.4**
comp=Z,428nm,0.6s,SNR=22
TLY Talaya 61.67 349 P **P 03 09 39.6 +1.0**
SNR=11
MOY Mondy 62.19 347 *e*P **P 03 09 43.0 +1.0**
MOY pmax pmax
comp=Z,60nm,1.9s,mb5.1
KSH Kashi 62.46 323⇑ *i*P **P 03 09 44.0 -0.1**
KSH *e*pP pP 03 10 21.0 +0.9
KSH *e*PcP PcP 03 10 23.5 +1.5
KSH *e*sP sP 03 10 39.3 +2.7
KSH *e*PP PP 03 12 04.0 +0.5
KSH *e*ScP ScP 03 14 08.0 -1.8
KSH *e*PcS PcS 03 14 25.0 -0.4
KSH *e*S **S 03 17 52.3 -6.9**
KSH *e*ScS ScS 03 19 16.0 -5.7
KSH pmax pmax
comp=Z,45nm,0.9s,mb5.3
KSH pmax pmax
comp=Z,100nm,5.5s
KSH LR LR
comp=N,69nm,5.8s
KSH LR LR
comp=E,73nm,6.2s
KSH LR LR
comp=Z,86nm,5.1s
KBL Kabul 63.97 315 *e*P **P 03 09 53.3 -0.8**
comp=Z,88nm,1.0s,mb5.5
KBL Kabul 63.97 315 *e*P **P 03 09 53.3 -0.8**
KBL pmax pmax
comp=Z,89nm,1.0s,mb5.5
MK31 Makanchi Array 64.29 333 *e*P **P 03 09 56.0 +0.1**
MKAR Makanchi Array 64.29 333 P **P 03 09 56.0 0.0**
MKAR PcP PcP 03 10 29.7 +0.4
MKAR Makanchi Array 64.29 333 P **P 03 09 56.0 0.0**
comp=Z,41nm,0.6s,mb5.4,baz=155,slow=6.2,SNR=170
MKAR PcP PcP 03 10 29.7 +0.4
comp=Z,9.0nm,0.8s,baz=135,slow=5.1,SNR=4.7
MKAR Makanchi Array 64.29 333 *ce*P **P 03 09 56.0 +0.1**
MKAR pmax pmax
comp=Z,41nm,0.6s
TKM2 Tokmak 2 64.90 326 P **P 03 10 00.1 +0.1**
SNR=35
TKM2 Tokmak 2 64.90 326 *e*P **P 03 09 59.9 -0.1**
comp=Z,12nm,0.5s,mb5.0
TKM2 Tokmak 2 64.90 326 *e*P **P 03 09 59.9 -0.1**
TKM2 pmax pmax
comp=Z,12nm,0.5s,mb5.0
UCH Uchtor 65.05 325 P **P 03 10 02.3 +1.2**
SNR=5.3
UCH Uchtor 65.05 325 *e*P **P 03 10 02.1 +1.1**
comp=Z,10nm,0.9s,mb4.7
KBK Karagaybulak 65.09 326 P **P 03 10 01.9 +0.6**
SNR=31
AAK Ala-Archa 65.33 325 P **P 03 10 03.3 +0.6**
SNR=24
AAK Ala-Archa 65.33 325 *e*P **P 03 10 03.2 +0.5**
comp=Z,65nm,0.9s,mb5.5
AAK *e*PP PP 03 12 20.9 -7.7
AAK Ala-Archa 65.33 325 P **P 03 10 03.3 +0.5**
comp=Z,40nm,0.7s,mb5.4,baz=135,slow=4.3,SNR=89
AAK Ala-Archa 65.33 325⇑ *e*P **P 03 10 03.1 +0.3**
AAK pmax pmax
comp=Z,38nm,0.9s,mb5.2
AAK Ala-Archa 65.33 325 P **P 03 10 03.2 +0.4**
comp=Z,477nm,1.0s,mb6.3,SNR=22
AAK Ala-Archa 65.33 325 P **P 03 10 03.4 +0.7**
SNR=34
CHMS Chumysh 65.42 326 P **P 03 10 03.0 -0.3**
SNR=8.9
AML Almayashu 65.46 324 P **P 03 10 04.5 +0.8**
SNR=18
AML Almayashu 65.46 324 *e*P **P 03 10 04.3 +0.7**
comp=Z,125nm,0.8s,mb5.8
USP Ospenovka 65.73 326 P **P 03 10 05.2 -0.1**
SNR=32
EKS2 Erkin-Say 65.75 325 P **P 03 10 05.8 +0.3**
SNR=66
EKS2 Erkin-Say 65.75 325 *e*P **P 03 10 05.7 +0.2**
comp=Z,82nm,0.9s,mb5.6
KK31 Karatay Array 67.91 324 *i*P **P 03 10 18.1 -1.0**
KK31 pmax pmax
comp=Z,51nm,1.0s,mb5.2
KKAR Karatay Array 67.91 324 *e*P **P 03 10 18.1 -1.1**
comp=Z,50nm,1.0s,mb5.2
KKAR Karatay Array 67.91 324 *e*P **P 03 10 18.1 -1.0**
KKAR pmax pmax
comp=Z,50nm,1.0s,mb5.2
KURK Kurchatov 68.82 334 P **P 03 10 24.0 -0.7**
comp=Z,295nm,0.9s,mb6.0,SNR=35
KURK Kurchatov 68.82 334 *e*P **P 03 10 24.5 -0.2**
KURK Kurchatov 68.82 334 P **P 03 10 24.2 -0.5**
comp=Z,16nm,0.5s,mb5.0,baz=141,slow=5.6,SNR=49
KURK PcP PcP 03 10 48.1 0.0
comp=Z,9.3nm,0.8s,baz=138,slow=3.7,SNR=6.8
KURK PP PP 03 12 52.5 -6.4
comp=Z,1.4nm,0.9s,baz=187,slow=15,SNR=3.1
KURK Kurchatov 68.82 334 *c i*P **P 03 10 24.2 -0.5**
KURK pmax pmax
comp=Z,85nm,1.4s,mb5.3
KURK Kurchatov 68.82 334 P **P 03 10 24.6 0.0**
SNR=31
ZAA0 Zalesovo Array 68.86 339 *e*P **P 03 10 23.9 -0.9**
ZALV Zalesovo Beam 68.86 339 P **P 03 10 23.9 -0.9**
comp=Z,27nm,0.3s,mb5.4,baz=141,slow=5.4,SNR=139
MAW Mawson 69.44 200⇑ *i*P **P 03 10 30.9 +2.7**
comp=Z,6.3nm,0.7s,mb4.5
MAW Mawson 69.44 200 *e*P **P 03 10 30.9 +2.7**
comp=Z,4.8nm,1.3s,mb4.1
MAW Mawson 69.44 200 P **P 03 10 30.9 +2.7**
comp=Z,9.7nm,0.8s,mb4.6,baz=70,slow=7.7,SNR=22
MAW LR LR 03 35 00.2
comp=Z,144nm,21.4s,baz=7.0,slow=30
MAW Mawson 69.44 200 *e*P **P 03 10 30.9 +2.7**
MAW pmax pmax
comp=Z,5.0nm,1.3s
PETK Petropavlovsk- 69.87 24 P **P 03 10 31.9 +0.8**
comp=Z,26nm,0.7s,mb5.1,baz=191,slow=5.3,SNR=28
ABPO Ambohimpanom 70.05 253 *e*P **P 03 10 35.0 +2.1**
comp=Z,23nm,1.1s,mb4.8
ABPO Ambohimpanom 70.05 253 *e*P **P 03 10 35.0 +2.1**
ABPO pmax pmax
comp=Z,23nm,1.1s,mb4.8
OPO Ambohidratompo 70.11 253 P **P 03 10 34.8 +1.5**
comp=Z,8.5nm,0.6s,mb4.6,baz=75,slow=4.2,SNR=26
NVS Novosibirsk 70.13 339 *i*P **P 03 10 30.3 -2.3**
NVS pmax pmax
comp=N,14nm,1.4s
NVS pmax pmax
comp=Z,30nm,1.4s,mb4.8
NVS pmax pmax
comp=E,13nm,1.3s
YAK Yakutsk 71.09 5 *e*P **P 03 10 37.7 -0.5**
comp=E,39nm,1.1s,mb5.0
YAK Yakutsk 71.09 5 *e*P **P 03 10 35.4 -2.9**
YAK pmax pmax
comp=Z,33nm,1.2s,mb4.9
YAK pmax pmax
comp=N,21nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.0s
SBA Scott Base 73.19 171 *e*P **P 03 10 53.1 +2.5**
comp=E,168nm,2.7s,mb5.3
SBA Scott Base 73.19 171 *e*P **P 03 10 53.1 +2.5**
SBA pmax pmax
comp=Z,168nm,2.7s,mb5.3
VOSK Vostochnaya 73.66 332 P **P 03 10 52.8 -0.9**
VOSK pmax pmax
comp=Z,26nm,1.3s,mb4.8
BVA0 Borovoye Array 74.13 332 P **P 03 10 55.8 -0.6**
BVA0 pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
BVAR Borovoye Array 74.13 332 P **P 03 10 55.7 -0.7**
comp=Z,8.4nm,0.7s,mb4.6,baz=134,slow=6.7,SNR=27
BRVK Borovoye 74.20 332 P **P 03 10 56.4 -0.4**
comp=Z,82nm,0.5s,mb5.7,SNR=6.5
BRVK Borovoye 74.20 332 *e*P **P 03 10 56.2 -0.6**
comp=Z,16nm,1.2s,mb4.6
BRVK Borovoye 74.20 332 *c i*P **P 03 10 56.3 -0.5**
BRVK pmax pmax
comp=Z,30nm,1.2s,mb4.9
BRVK Borovoye 74.20 332 P **P 03 10 56.7 -0.1**
SNR=13
ZRNK Zerenda 74.73 331 P **P 03 10 59.3 -0.6**
SEY Seymchan 75.96 15‖ *e*P **P 03 11 07.4 +0.7**
AB31 Akbulak array 77.41 325 P **P 03 11 14.6 -0.5**
AB31 pmax pmax
comp=Z,5.0nm,0.5s,mb4.4
ABKAR Akbulak array 77.41 325 *e*P **P 03 11 14.7 -0.4**
comp=Z,11nm,0.6s,mb4.7
QRN Al-Qurain 77.98 302 *e*P **P 03 11 18.2 -0.6**
QRN AMb AMB 03 11 19.8
comp=Z,90nm,0.6s,mb5.6
SYO Syowa Base 78.06 201‖ *e*P **P 03 11 19.2 +0.8**
KBD Kabd 78.29 302 *e*P **P 03 11 20.2 -0.3**
RDF Al-Radifah 78.34 302 *e*P **P 03 11 20.2 -0.5**
RDF AMb AMB 03 11 22.1
comp=Z,94nm,0.6s,mb5.6
ATD Arta Tunnel 78.39 284 P **P 03 11 22.8 +1.4**
ATD Arta Tunnel 78.39 284 P **P 03 11 22.8 +1.4**
comp=Z,21nm,0.8s,mb4.8,baz=81,slow=3.8,SNR=12
NAY Al-Naaiem 78.69 302 *e*P **P 03 11 21.9 -0.8**
NAY AMb AMB 03 11 22.8
comp=Z,40nm,1.1s,mb5.0
MIB Mutribah 78.77 303 *e*P **P 03 11 22.6 -0.5**
MIB AMb AMB 03 11 23.9
comp=Z,76nm,0.9s,mb5.3
AKTK Aktyubinsk 79.07 325 P **P 03 11 23.9 -0.4**
AKTK PP PP 03 14 25.4 -0.3
AKTO Aktyubinsk 79.07 325 P **P 03 11 23.9 -0.4**
comp=Z,18nm,0.8s,mb4.7,baz=108,slow=6.0,SNR=61
AKTO PP PP 03 14 25.4 -0.3
comp=Z,2.6nm,0.8s,baz=146,slow=6.4,SNR=4.4
TIXI Tiksi 80.53 3 *e*P **P 03 11 30.8 -0.9**
comp=Z,19nm,0.9s,mb4.7
TIXI Tiksi 80.53 3 *e*P **P 03 11 30.1 -1.6**
TIXI pmax pmax
comp=Z,27nm,0.9s,mb4.9
SVE Sverdlovsk 80.91 332⇓ *e*P **P 03 11 33.4 -0.6**
SVE pmax pmax
comp=Z,18nm,0.7s,mb4.8
QSPA South Pole Qui 81.20 180 *e*P **P 03 11 37.5 +2.3**
comp=Z,14nm,1.2s,mb4.5
ARU Arti 81.70 331 *e*P **P 03 11 37.1 -1.0**
comp=Z,36nm,1.8s,mb4.7
ARU Arti 81.70 331 *c i*P **P 03 11 37.1 -1.0**
ARU 03 14 44.3
ARU S S 03 21 37.0 -0.9
ARU SS SS 03 26 51.8 -7.4
ARU pmax pmax
comp=Z,27nm,1.7s,mb4.6
KMBO Kilima Mbogo 81.70 270 *e*P **P 03 11 41.2 +2.0**
comp=Z,26nm,0.9s,mb4.9
KMBO Kilima Mbogo 81.70 270 *e*P **P 03 11 41.2 +2.0**
KMBO pmax pmax
comp=Z,26nm,0.9s
KMBO Kilima Mbogo 81.70 270 P **P 03 11 41.6 +2.4**
SNR=8.7
DGRG David-gareji 83.75 313 P **P 03 11 49.9 +0.8**
GNI Garni 83.82 312 *e*P **P 03 11 50.5 +1.0**
comp=Z,33nm,1.1s,mb5.0
GNI Garni 83.82 312 *c i*P **P 03 11 50.6 +1.1**
GNI pmax pmax
comp=Z,51nm,1.6s
GNI Garni 83.82 312 P **P 03 11 51.0 +1.6**
SNR=7.2
MTA Mtatsminda 84.23 314 P **P 03 11 52.5 +1.0**
TBLG Delisi 84.28 314 *e*P **P 03 11 52.5 +0.7**
TBLG Delisi 84.28 314 P **P 03 11 52.5 +0.7**
GOR Gori 84.81 314 P Px 03 12 10.1
ZEI Tsey 85.18 314 *e*P **P 03 11 55.8 -0.5**
ZEI pmax pmax
comp=Z,56nm,1.4s,mb5.1
KIV Kislovodsk 86.36 315 *c i*P **P 03 12 02.4 +0.4**
KIV *e* 03 15 25.1
KIV pmax pmax
comp=Z,19nm,1.7s,mb4.5
MALT Malatya 88.10 309 *e*P **P 03 12 11.3 +0.8**
comp=Z,6.7nm,0.9s,mb4.5
MALT Malatya 88.10 309 *e*P **P 03 12 11.3 +0.8**
MALT pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
MBAR Mbarara 88.22 270‖ *e*P **P 03 12 11.9 +0.2**
VRHR Novokhopersk 88.97 322 *e*P **P 03 12 13.3 -1.0**
VRHR pmax pmax
comp=N,4.0nm,0.5s
VRHR pmax pmax
comp=E,5.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
BOSA Boshof 89.13 241 P **P 03 12 17.2 +1.5**
comp=Z,6.3nm,0.8s,mb4.6,baz=99,slow=3.7,SNR=13
LBTB Lobatse 89.42 245 *e*P **P 03 12 18.6 +1.5**
comp=Z,1.8nm,0.6s,mb4.2
LBTB Lobatse 89.42 245 *e*P **P 03 12 18.6 +1.5**
LBTB pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
ANN Anapa 90.22 315 *e*P **P 03 12 16.6 -3.7**
ANN *e* 03 15 59.9
ANN *e*S SKSac 03 22 31.2 -6.0
ANN pmax pmax
comp=N,42nm,1.1s
ANN pmax pmax
comp=E,26nm,1.1s
ANN pmax pmax
comp=Z,54nm,1.1s,mb5.4
VORD Divnogorie 90.36 322 *e*P **P 03 12 20.2 -0.6**
VORD pmax pmax
comp=N,30nm,0.7s
VORD pmax pmax
comp=E,60nm,0.7s
VORD pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VSR Storozhevoye 90.50 322 *e*P **P 03 12 20.7 -0.7**
VSR *e* 03 23 01.1
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,2.0nm,0.4s
VSR pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
BRTR Keskin Array B 92.03 310 P **P 03 12 28.2 -0.6**
comp=Z,6.9nm,0.8s,mb4.7,baz=121,slow=5.5,SNR=38
BR131 Keskin Array S 92.03 310 *e*P **P 03 12 28.1 -0.7**
comp=Z,5.8nm,0.8s,mb4.7
KLMR Klimovskoe 92.54 331 P **P 03 12 28.0 -2.7**
KLMR pmax pmax
comp=Z,30nm,1.5s,mb5.2
OBN Obninsk 92.85 325 *e*P **P 03 12 31.9 -0.3**
comp=Z,5.7nm,0.4s,mb5.0
OBN Obninsk 92.85 325⇑ *e*P **P 03 12 32.0 -0.2**
OBN *e* 03 16 14.1
OBN *e*PS PS 03 24 56.2 -0.5
OBN pmax pmax
comp=Z,31nm,1.5s,mb5.2
TTA Tatalina 95.47 27 *e*P **P 03 12 44.3 +0.2**
LVZ Lovozero 95.97 338 *i*P **P 03 12 44.4 -1.8**
LVZ pmax pmax
comp=Z,19nm,1.5s,mb5.2
KDAK Kodiak Island 96.51 33 P **P 03 12 48.0 -0.8**
comp=Z,3.4nm,0.7s,mb4.8,baz=348,slow=4.9,SNR=4.8
AKASG Malin Array Be 96.61 320 P **P 03 12 48.7 -0.8**
comp=Z,0.6nm,0.3s,mb4.3,baz=266,slow=28,SNR=6.0
AKASG PP PP 03 16 43.9 -2.1
comp=Z,0.4nm,0.4s,baz=83,slow=6.9,SNR=6.6
RSO Redoubt South 96.70 30 *e*P **P 03 12 48.5 -1.1**
JOF Joensuu 96.72 333 *e*P **P 03 12 47.1 -2.6**
JOF pmax pmax
comp=Z,2.0nm,0.7s,mb4.6

JOF	**Joensuu**	**96.72**	**333**	*ep*		**P**		**03 12 47.1**	**-2.6**
	comp=Z,2.1nm,0.7s,mb4.6								
BPAW	**Bear Paw Mtn.**	**97.83**	**26**	*eP*		**P**		**03 12 54.5**	**-0.2**
	comp=Z,2.1nm,0.6s,mb4.7								
SLKM	**Skilak Lake**	**97.95**	**30**	*eP*		**P**		**03 12 54.4**	**-1.0**
RC01	**Rabbit Creek A**	**98.22**	**29**	*eP*		**P**		**03 12 55.6**	**-0.9**
	comp=Z,11nm,0.8s,mb5.3								
PMR	**Palmer**	**98.54**	**29**	*eP*		**P**		**03 12 56.6**	**-1.3**
	comp=Z,4.4nm,0.6s,mb5.1								
PMR	**Palmer**	**98.54**	**29**	*eP*		**P**		**03 12 56.6**	**-1.3**
PMR					pmax	pmax			
	comp=Z,4.0nm,0.6s,mb5.0								
FINES	**FINES Array B**	**99.07**	**331**	P		**P**		**03 12 59.5**	**-0.8**
	comp=Z,3.4nm,0.8s,mb4.8,baz=132,slow=2.8,SNR=6.8								
FINES					PKiKP	PKiKP		03 17 30.4	+0.5
	comp=Z,1.4nm,0.7s,baz=104,slow=3.9,SNR=5.5								
ARCES	**ARCESS Array B**	**99.41**	**339**	P		Pdif		03 13 00.9	-1.2
	comp=Z,3.3nm,0.9s,baz=92,slow=5.2,SNR=16								
ARCES					PKiKP	PKiKP		03 17 32.2	+1.9
	comp=Z,1.8nm,0.9s,baz=132,slow=1.8,SNR=4.4								
ILAR	**Eielson Array**	**99.64**	**26**	P		Pdif		03 13 01.1	-2.0
	comp=Z,0.7nm,0.6s,baz=242,slow=5.0,SNR=12								
CONA	**Conrad Observa**	**105.30**	**317**	⇑*iPP*		PP		03 17 46.8	-4.7
	comp=Z,4.9nm,1.2s								
NOA	**NORSAR Array B**	**106.25**	**331**	PP		PP		03 17 57.7	-0.3
	comp=Z,2.1nm,0.9s,baz=76,slow=7.6,SNR=4.2								
HINF	**Hinteralfeld**	**111.32**	**318**	*e*PKiKP		PKiKP		03 17 53.6	+0.7
HAU	**Haudompre**	**111.62**	**318**	*e*PKiKP		PKiKP		03 17 53.7	+0.2
	comp=Z,4.2nm,0.5s								
HAU					*e*MLR	MLR			
	comp=Z,103nm,20.0s								
HAU	**Haudompre**	**111.62**	**318**	*e*PKiKP		PKiKP		03 17 53.7	+0.2
HAU					MLR	MLR			
	comp=Z,100nm,20.0s								
LPG	**La Plagne**	**111.81**	**315**	*e*PKiKP		PKiKP		03 17 54.7	+0.8
LPL	**La Plagne**	**111.82**	**316**	*e*PKiKP		PKiKP		03 17 54.6	+0.7
MBDF	**Montbardon**	**111.92**	**315**	*e*PKiKP		PKiKP		03 17 55.1	+1.0
	comp=Z,7.3nm,1.0s								
CABF	**La Chapelle**	**112.06**	**317**	*e*PKiKP		PKiKP		03 17 54.9	+0.6
FRF	**La Foret Royal**	**112.20**	**313**	*e*PKiKP		PKiKP		03 17 55.3	+0.6
	comp=Z,12nm,1.2s								
ORIF	**Oris-en-Rattie**	**112.52**	**315**	*e*PKiKP		PKiKP		03 17 55.7	+0.4
	comp=Z,4.1nm,0.8s								
ORIF					*e*MLR	MLR			
	comp=Z,102nm,20.0s								
SMRF	**Simiane la Rot**	**112.90**	**314**	*e*PKiKP		PKiKP		03 17 56.9	+0.9
	comp=Z,6.7nm,0.9s								
VIVF	**Saint-Julien-l**	**113.37**	**315**	*e*PKiKP		PKiKP		03 17 57.3	+0.4
	comp=Z,8.2nm,1.0s								
LOR	**Lormes**	**113.42**	**318**	*e*PKiKP		PKiKP		03 17 57.4	+0.5
LOR					*e*MLR	MLR			
	comp=Z,114nm,20.8s								
LOR	**Lormes**	**113.42**	**318**	*e*PKiKP		PKiKP		03 17 57.4	+0.5
LOR					MLR	MLR			
	comp=Z,110nm,20.8s								
SMF	**Signal de Mont**	**113.57**	**317**	*e*PKiKP		PKiKP		03 17 57.5	+0.3
SSF	**Saint Saulge**	**113.70**	**318**	*e*PKiKP		PKiKP		03 17 57.9	+0.4
	comp=Z,14nm,0.9s								
AVF	**Avril sur Loir**	**113.87**	**317**	*e*PKiKP		PKiKP		03 17 57.7	-0.1
YKA	**Yellowknife Ar**	**113.99**	**24**	PKiKP		PKiKP		03 17 57.7	+0.2
	comp=Z,1.1nm,0.5s,baz=287,slow=2.0,SNR=20								
LASF	**Ste Croix**	**114.10**	**314**	*e*PKiKP		PKiKP		03 17 59.0	+0.7
	comp=Z,4.3nm,0.7s								
BGF	**Bois d'Agland**	**114.26**	**317**	*e*PKiKP		PKiKP		03 17 59.0	+0.5
	comp=Z,12nm,0.8s								
TCF	**Toulx Ste Croi**	**114.75**	**317**	*e*PKiKP		PKiKP		03 17 59.4	-0.1
CAF	**Calviac**	**115.17**	**316**	*e*PKiKP		PKPdf		03 18 01.2	+0.9
	comp=Z,9.6nm,0.9s								
MTLF	**Montolieu**	**115.41**	**314**	*e*PKiKP		PKPdf		03 18 01.1	+0.2
	comp=Z,5.7nm,0.9s								
RJF	**Les Rejaudoux**	**115.46**	**316**	*e*PKiKP		PKPdf		03 18 01.7	+0.8
RJF					*e*MLR	MLR			
	comp=Z,144nm,22.2s								
RJF	**Les Rejaudoux**	**115.46**	**316**	*e*PKiKP		PKPdf		03 18 01.7	+0.8
RJF					MLR	MLR			
	comp=Z,140nm,22.2s								
LDF	**La Druitiere**	**115.67**	**320**	*e*PKiKP		PKPdf		03 18 01.9	+0.7
	comp=Z,3.4nm,0.6s								
FLN	**La Foliniere**	**115.85**	**320**	*e*PKiKP		PKPdf		03 18 01.8	+0.3
FLN					*e*MLR	MLR			
	comp=Z,110nm,22.8s								
FLN	**La Foliniere**	**115.85**	**320**	*e*PKiKP		PKPdf		03 18 01.8	+0.3
FLN					MLR	MLR			
	comp=Z,110nm,22.8s								
LFF	**La Frestale**	**116.08**	**316**	*e*PKiKP		PKPdf		03 18 03.0	+0.9
MFF	**Saint Martin d**	**116.25**	**318**	*e*PKiKP		PKPdf		03 18 02.7	+0.3
	comp=Z,15nm,0.9s								
YBH	**Yreka Blue Hor**	**116.81**	**48**	PKP		PKPdf		03 18 06.4	+2.8
	comp=Z,2.2nm,1.0s,baz=156,slow=20,SNR=2.7								
EPF	**Esparros**	**116.82**	**314**	*e*PKiKP		PKPdf		03 18 04.0	+0.4
	comp=Z,9.0nm,1.0s								
ETSF	**Etsaut**	**117.49**	**314**	*e*PKiKP		PKPdf		03 18 06.2	+1.3
SJPF	**Ste Jean**	**117.91**	**314**	*e*PKiKP		PKPdf		03 18 06.8	+1.1
	comp=Z,37nm,1.3s								
TORD	**Torodi Ar. Bea**	**118.45**	**280**	PKP		PKPdf		03 18 08.0	+0.5
	comp=Z,10nm,0.7s,baz=40,slow=2.2,SNR=83								
ESDC	**Sonseca Array**	**120.80**	**311**	PKP		PKPdf		03 18 12.2	+0.9
	comp=Z,1.0nm,0.5s,baz=23,slow=3.0,SNR=8.5								
NVAR	**Mina Array Bea**	**120.86**	**50**	PKP		PKPdf		03 18 13.4	+1.9
	comp=Z,1.3nm,0.6s,baz=246,slow=2.1,SNR=14								
NVAR					PKKPbc	PKKPbc		03 28 19.2	+2.5
	comp=Z,0.3nm,0.5s,baz=120,slow=6.4,SNR=4.2								
SLMT	**Seeley Lake**	**121.39**	**39**	PKPdf		PKPdf		03 18 13.7	+1.5
MVO	**Moncorvo**	**122.61**	**314**	*e*PKPdf		PKPdf		03 18 16.5	+1.7
PVRL	**Vila Real**	**123.06**	**314**	*e*PKPdf		PKPdf		03 18 17.1	+1.5
MTE	**Manteigas**	**123.22**	**313**	*e*PKPdf		PKPdf		03 18 17.5	+1.5
PCBR	**Castelo Branco**	**123.34**	**312**	*e*PKPdf		PKPdf		03 18 16.8	+0.6
PVIS	**Viseu**	**123.37**	**313**	*e*PKPdf		PKPdf		03 18 17.6	+1.3
PMRV	**Marv??o**	**123.41**	**312**	*e*PKPdf		PKPdf		03 18 17.4	+1.0
PBAR	**Barrancos**	**123.51**	**310**	*e*PKPdf		PKPdf		03 18 18.1	+1.5
PTOM	**Tomar**	**124.10**	**312**	*e*PKPdf		PKPdf		03 18 19.5	+1.8
EVO	**Evora**	**124.14**	**311**	*e*PKiKP		PKPdf		03 18 17.0	-0.8
	comp=Z,11nm,0.9s								
PVAQ	**Vaqueiros**	**124.25**	**309**	*e*PKPdf		PKPdf		03 18 19.9	+1.9
KIC	**Kosan Boka**	**124.25**	**272**	*e*PKP2		PKPdf		03 18 18.5	-0.2
	comp=Z,22nm,0.8s								
DBIC	**Dimbokro**	**124.40**	**272**	*e*PKPdf		PKPdf		03 18 19.9	+0.9
DBIC					PKP	PKPdf		03 18 20.1	+1.1
DBIC	**Dimbokro**	**124.40**	**272**	PKP		PKPdf		03 18 20.1	+1.1
	comp=Z,12nm,0.8s,baz=108,slow=2.1,SNR=18								
LIC	**Lamto**	**124.52**	**272**	*e*PKP2		PKPdf		03 18 19.6	+0.4
	comp=Z,41nm,0.7s								
TIC	**Toumodi**	**124.56**	**272**	*e*PKP2		PKPdf		03 18 19.7	+0.4
	comp=Z,31nm,0.8s								
REDW	**Red Top Meadow**	**124.64**	**43**	*e*PKPdf		PKPdf		03 18 20.3	+1.7
LOHW	**Long Hollow**	**124.70**	**42**	*e*PKPdf		PKPdf		03 18 20.6	+1.9
PFVI	**Vila Bisbo**	**125.17**	**309**	*e*PKPdf		PKPdf		03 18 21.7	+1.9
MSU	**Marysvale**	**125.45**	**49**	*e*PKPdf		PKPdf		03 18 22.9	+2.6
PDAR	**Pinedale Array**	**125.75**	**43**	PKP		PKPdf		03 18 21.9	+1.2
	comp=Z,1.2nm,1.0s,baz=263,slow=1.2,SNR=9.1								
RSSD	**Black Hills**	**128.71**	**39**	*e*PKPdf		PKPdf		03 18 26.7	+0.3
PLCA	**Paso Flores**	**129.94**	**171**	PKP		PKPdf		03 18 30.9	+2.0
PLCA					SKPbc			03 21 38.7	
PLCA	**Paso Flores**	**129.94**	**171**	PKP		PKPdf		03 18 30.9	+2.0
	comp=Z,5.1nm,1.1s,baz=302,slow=5.0,SNR=3.8								
PLCA					SKPbc			03 21 38.7	
	comp=Z,5.8nm,1.1s,baz=144,slow=5.6,SNR=7.0								
ANMO	**Albuquerque**	**130.98**	**51**	PKP		PKPdf		03 18 32.6	+1.7
	comp=Z,0.9nm,0.6s,baz=308,slow=2.4,SNR=3.8								
ANMO					SKPbc	SKPbc		03 21 42.5	+1.0
	comp=Z,11nm,0.9s,baz=264,slow=3.2,SNR=11								
PMAR	**Madeira**	**132.88**	**307**	*e*PKPdf		PKPdf		03 18 36.8	+2.2
SCHQ	**Schefferville**	**133.85**	**5**	PKP		PKPdf		03 18 36.7	+1.0
	comp=Z,4.9nm,0.6s,baz=22,slow=2.1,SNR=10								
SCHQ					SKPbc	SKPbc		03 21 51.6	+0.9
	comp=Z,14nm,0.9s,baz=34,slow=1.1,SNR=3.3								
TXAR	**Lajitas Array**	**135.10**	**57**	PKhKP		PKPpre		03 18 26.5	
	comp=Z,0.5nm,0.6s,baz=268,slow=1.9,SNR=8.6								
TXAR					PKP	PKPdf		03 18 40.7	+1.8
	comp=Z,1.0nm,0.8s,baz=242,slow=0.5,SNR=7.5								
TXAR					SKPbc	SKPbc		03 21 57.2	+1.6
	comp=Z,2.4nm,0.8s,baz=335,slow=5.5,SNR=9.3								
TXAR	**Lajitas Array**	**135.10**	**57**	PKHKP		PKPpre		03 18 26.5	
TXAR								03 18 40.7	
MIAR	**Mount Ida**	**140.63**	**45**	PKPdf		PKPdf		03 18 43.3	-5.6
WCI	**Wyandotte Cave**	**142.86**	**34**	*e*PKPdf		PKPdf		03 18 48.7	-4.0
NCB	**Newcomb**	**143.10**	**16**	*e*PKPdf		PKPdf		03 18 49.8	-3.2
WVT	**Waverly**	**143.42**	**38**	*e*PKPdf		PKPdf		03 18 50.9	-2.9
OXF	**Oxford**	**143.45**	**41**	*e*PKPdf		PKPdf		03 18 51.4	-2.6
VBMS	**Vicksburg**	**144.04**	**45**	*e*PKPdf		PKPdf		03 18 54.5	-0.6
BINY	**Binghamton**	**144.19**	**19**	*e*PKPdf		PKPdf		03 18 53.3	-1.7
SSPA	**Standing Stone**	**144.90**	**23**	*e*PKPdf		PKPdf		03 18 55.9	-0.4
CPUP	**Villa Florida**	**144.91**	**186**	PKPbc		PKPdf		03 18 58.5	+1.7
	comp=Z,14nm,0.6s,baz=150,slow=2.4,SNR=68								
CPUP					SKPbc	SKPbc		03 22 24.9	+2.7
	comp=Z,3.9nm,0.7s,baz=148,slow=1.0,SNR=6.6								
MCWV	**Mont Chateau**	**144.94**	**26**	*e*PKPdf		PKPdf		03 18 56.4	+0.1
QUA2	**Belchertown**	**145.17**	**15**	*e*PKPdf		PKPdf		03 18 56.8	+0.1
WES	**Weston**	**145.32**	**14**	*e*PKPdf		PKPdf		03 18 57.0	+0.1
WES					*e*PKPbc	PKPbc		03 18 57.5	+0.5
PAL	**Palisades**	**145.93**	**18**	*e*PKPdf		PKPdf		03 18 59.0	+1.0
LRAL	**Lakeview Retre**	**145.94**	**41**	*e*PKPdf		PKPdf		03 18 59.0	+0.8
LRAL					*e*PKPbc	PKPbc		03 18 59.5	+0.3
CMIG	**Matias Romero**	**145.98**	**73**	PKPbc		PKPbc		03 19 00.7	+0.9
	comp=Z,33nm,0.9s,baz=287,slow=3.1,SNR=40								
CPNY	**Central Park**	**146.11**	**18**	*e*PKPdf		PKPdf		03 18 58.0	-0.3
CPNY					*e*PKPbc	PKPbc		03 19 00.1	+0.6
SDMD	**Soldier's Deli**	**146.36**	**22**	*e*PKPbc		PKPbc		03 18 59.2	-0.1
BLA	**Blacksburg**	**146.67**	**29**	*e*PKPdf		PKPdf		03 18 59.4	0.0
BLA					*e*PKPbc	PKPbc		03 19 01.3	0.0
BRAL	**Brewton**	**147.14**	**44**	*e*PKPbc		PKPbc		03 19 03.7	+1.0
JSC	**Jenkinsville**	**148.52**	**33**	*e*PKPdf		PKPdf		03 19 03.2	+0.7
JSC					*e*PKPbc	PKPbc		03 19 07.0	+0.7
CNNC	**Cliffs of the**	**149.46**	**28**	*e*PKPdf		PKPdf		03 19 04.4	+0.4
CNNC					*e*PKPbc	PKPbc		03 19 09.1	+0.5
LPAZ	**La Paz**	**154.09**	**164**	PKP		PKPdf		03 19 14.8	+3.3
LPAZ					PKPbc	PKPbc		03 19 23.8	+4.1
LPAZ					PKPab	PKPab		03 19 35.9	+2.3
LPAZ	**La Paz**	**154.09**	**164**	PKP		PKPdf		03 19 14.8	+3.3
	comp=Z,1.6nm,0.8s,baz=96,slow=3.3,SNR=6.9								
LPAZ					PKPbc	PKPbc		03 19 23.8	+4.1
	comp=Z,8.3nm,1.0s,baz=204,slow=1.5,SNR=17								
LPAZ					PKPab	PKPab		03 19 35.9	+2.3
	comp=Z,5.4nm,0.7s,baz=174,slow=4.9,SNR=7.7								
ROSC	**El Rosal**	**166.17**	**106**	PKP		PKPdf		03 19 27.7	+2.7
	comp=Z,2.0nm,0.4s,baz=274,slow=16,SNR=3.5								
STVI	**Saint Thomas**	**169.74**	**22**	*e*PKPdf		PKPdf		03 19 26.8	-0.4

*IDC **28** 03:09:43.7±1.1, 48.57N×156.12E, h0km, mb3.5/4, mb1 3.8/6, mb1mx3.5/25, mbtmp3.6/6, ML3.5/2, Error ellipse: s-maj=58.6km s-min=22.0km az=126.0*

*MOS **28** 03:09:46.3±1.7, 48.63N×156.01E, h33km, mb4.5/1, Error ellipse: s-maj=45.4km s-min=13.0km az=73.4*

*KRSC **28** 03:09:52.6±0.1, 49.44N×155.92E, h10km±10km, ML4.4*

*ISCJB **28** 03:09:53.5±1.1, 49.7N±0.2×154.9E±0.3, h127km±12km, mb3.2/4, Error ellipse: s-maj=47.6km s-min=10.5km az=44.1*

ISC 28 03:09:54.3±1.1, **49.6N**±0.2×**154.9E**±0.3, **h109**km±14km, **n17**,σ1°**54**/21, **mb3.2**/4, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h	m	s	ISC
SKR	**Severo-Kuril's**	**1.37**	**35**	*eP*		**Pn**	**03**	**10**	**21.0**	**+1.6**
SKR					*eS*	**Sn**	**03**	**10**	**39.5**	**+1.0**
SKR					pmax	pmax				
	comp=E,60nm,0.5s									
SKR					pmax	pmax				
	comp=Z,80nm,0.5s									
SKR	**Severo-Kuril's**	**1.37**	**35**	*e*PN		**Pn**	**03**	**10**	**21.0**	**+1.6**
SKR					pmax	pmax				
	comp=E,60nm,0.5s									
SKR					pmax	pmax				
	comp=Z,80nm,0.5s									
ALID	**Alaid**	**1.37**	**18**	*eP*		**Pn**	**03**	**10**	**19.4**	**0.0**
ALID					S	**Sn**	**03**	**10**	**38.0**	**-0.5**
MIPR	**Malaya Ipel'ka**	**2.96**	**23**	P		**Pn**	**03**	**10**	**40.6**	**+1.0**
PETK	**Petropavlovsk-**	**3.96**	**25**	Pn		**Pn**	**03**	**10**	**56.2**	**+3.3**
	comp=Z,2.2nm,0.3s,baz=184,slow=12,SNR=7.8									
PETK	**Petropavlovsk-**	**3.96**	**25**	PN		**Pn**	**03**	**10**	**56.2**	**+3.3**
PETK					pmax	pmax				
	comp=Z,2.0nm,0.3s									
SDLR	**Sedlovina**	**4.48**	**32**	P		**Pn**	**03**	**11**	**00.7**	**+0.8**
SDLR					S	**Sn**	**03**	**11**	**50.3**	**-0.6**
GNL	**Ganaly**	**4.55**	**24**	P		**Pn**	**03**	**11**	**03.1**	**+2.2**
NLC	**Nalytchevo**	**4.56**	**36**	S		**Sn**	**03**	**11**	**50.7**	**-2.2**
SPN	**Mys Shipunski**	**4.78**	**40**	S		**Sn**	**03**	**11**	**56.2**	**-2.0**
MKZ	**Mys Kozlova**	**6.54**	**38**	P		**Pn**	**03**	**11**	**26.1**	**-1.6**
MKZ					S	**Sn**	**03**	**12**	**37.0**	**-3.7**
ASAJ	**Asahikawa**	**10.03**	**242**	Pn		**Pn**	**03**	**12**	**13.5**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=180,slow=20,SNR=4.1									
ASAJ	**Asahikawa**	**10.03**	**242**	PN		**Pn**	**03**	**12**	**13.5**	**-1.7**
ASAJ					pmax	pmax				
	comp=Z,1.0nm,0.3s									
ILAR	**Eielson Array**	**33.62**	**41**	P		**P**	**03**	**16**	**26.1**	**+2.2**
	comp=Z,0.2nm,0.8s,mb3.0,baz=275,slow=10,SNR=4.3									
WRA	**Warramunga Arr**	**71.57**	**200**	P		**P**	**03**	**21**	**02.7**	**-0.7**
	comp=Z,0.2nm,0.5s,mb3.2,baz=17,slow=6.0,SNR=3.5									
TXAR	**Lajitas Array**	**75.10**	**62**	P		**P**	**03**	**21**	**27.2**	**+2.9**
	comp=Z,0.4nm,0.6s,mb3.3,baz=298,slow=3.7,SNR=3.8									
ASAR	**Alice Springs**	**75.26**	**200**	P		**P**	**03**	**21**	**24.3**	**-0.7**
	comp=Z,0.3nm,0.6s,mb3.2,baz=6.3,slow=4.6,SNR=4.3									

*PGC **28** 03:15:42.3±8.5, 50.01N×130.04W, h10km, ML3.5/11, Mw4.1, 201km Wsw of Pt. Hardy, Bc Vancouver Island Region*

*ISCJB **28** 03:15:43.9±1.2, 50.1N±0.04×129.61W±0.07, h8km±9km, mb4.2/16, MS3.8/21, Error ellipse: s-maj=8.2km s-min=4.8km az=145.9*

*IDC **28** 03:15:44.0±1.6, 50.09N×129.57W, h0km, mb3.7/2, mb1 4.2/9, mb1mx3.8/28, mbtmp3.9/9, ML3.8/7, MS3.8/28, Ms1 3.8/28, ms1mx3.7/45, Error ellipse: s-maj=29.6km s-min=12.0km az=72.0*

*NEIC **28** 03:15:45.5±0.6, 50.14N×129.73W, h10km, mb4.2/23, MW4.7(PGC), Error ellipse: s-maj=11.2km s-min=4.5km az=52.0*

ISC 28 03:15:47.2±1.6, **50.19N**±0.04×**129.60W**±0.07, **h20**km±12km, **n121**, σ1°**25**/108, **mb4.2**/16, **MS3.8**/21, **8D**, **Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h	m	s	ISC
HOLB	**Holberg**	**1.04**	**64**	⇑Pn		**Pn**	**03**	**16**	**05.7**	**-1.0**
BPBC	**Brooks Peninsu**	**1.18**	**91**	⇓Pn		**Pn**	**03**	**16**	**05.8**	**-2.7**
PHC	**Port Hardy**	**1.48**	**69**	⇓Pn		**Pn**	**03**	**16**	**11.6**	**-1.1**
PHC				⇓Sn		**Sn**	**03**	**16**	**32.8**	**+1.4**
MAYB	**Maynard**	**1.57**	**81**	⇓Pn		**Pn**	**03**	**16**	**11.7**	**-2.3**
EDB	**Eliza Dome**	**1.63**	**100**	⇑Pn		**Pn**	**03**	**16**	**11.6**	**-3.2**
EDB				⇑Sn		**Sn**	**03**	**16**	**33.1**	**-2.1**
WOSB	**Woss**	**1.95**	**90**	⇑Pn		**Pn**	**03**	**16**	**17.7**	**-1.4**
BBB	**Bella Bella**	**2.21**	**25**	Pn		**Pn**	**03**	**16**	**21.8**	**-0.9**
	91nm,0.3s,baz=46,slow=13,SNR=134									
BBB					Sn	**Sn**	**03**	**16**	**50.3**	**+0.9**
	54nm,0.3s,baz=129,slow=24,SNR=9.2									
BBB					LR	LR	03	17	23.5	
	comp=Z,895nm,20.1s,baz=196,slow=43									
BBB	**Bella Bella**	**2.21**	**25**	⇓Pn		**Pn**	**03**	**16**	**21.8**	**-0.9**
BBB				⇓Sn		**Sn**	**03**	**16**	**50.4**	**+1.1**
NCRB	**Newcastle Ridg**	**2.28**	**83**	⇑Pn		**Pn**	**03**	**16**	**23.0**	**-0.7**
GDR	**Gold River**	**2.34**	**99**	⇑Pn		**Pn**	**03**	**16**	**22.2**	**-2.3**
CBB	**Campbell River**	**2.73**	**92**	Pn		**Pn**	**03**	**16**	**28.9**	**-1.1**
BTB	**Buttle Lake**	**2.74**	**104**	⇑Pn		**Pn**	**03**	**16**	**27.9**	**-2.1**
BTB				⇑Sn		**Sn**	**03**	**17**	**01.4**	**-1.1**
BNB	**Barry Inlet**	**2.74**	**331**	⇑Pn		**Pn**	**03**	**16**	**24.2**	**-5.9**
BNB				⇑Sn		**Sn**	**03**	**16**	**56.1**	**-6.5**
OZB	**Mount Ozzard**	**2.94**	**113**	⇑Pn		**Pn**	**03**	**16**	**31.2**	**-1.6**
OZB				⇓Sn		**Sn**	**03**	**17**	**05.9**	**-1.7**
PGC	**Sidney**	**4.30**	**109**	*e*Pn		**Pn**	**03**	**16**	**50.9**	**-0.6**
OSD	**Olympics--Snow**	**4.55**	**119**	P		**Pn**	**03**	**16**	**54.7**	**-0.2**
NLWA	**Neilton Lookou**	**4.71**	**124**	*e*Pn		**Pn**	**03**	**16**	**56.9**	**-0.3**
HDW	**Hoodsport**	**5.01**	**118**	P		**Pn**	**03**	**17**	**00.6**	**-0.6**
VDB	**Vedder Mountai**	**5.01**	**101**	P		**Pn**	**03**	**17**	**02.0**	**+0.7**
CMW	**Cultus Mountai**	**5.20**	**107**	P		**Pn**	**03**	**17**	**04.4**	**+0.5**
JCW	**Jim Creek**	**5.41**	**109**	*e*Pn		**Pn**	**03**	**17**	**06.4**	**-0.4**
CRAG	**Craig**	**5.70**	**339**	*e*Pn		**Pn**	**03**	**17**	**07.4**	**-3.3**
FMW	**Mount Fremont**	**6.19**	**119**	P		**Pn**	**03**	**17**	**18.4**	**+1.0**
LON	**Longmire**	**6.22**	**121**	*e*Pn		**Pn**	**03**	**17**	**18.1**	**+0.3**
LON				*e*S		**Sn**	**03**	**18**	**29.3**	**+1.1**
LVP	**Lakeview Peak**	**6.34**	**128**	P		**Pn**	**03**	**17**	**19.7**	**+0.2**
WRAK	**Wrangell Islan**	**6.45**	**346**	*e*Pn		**Pn**	**03**	**17**	**20.9**	**-0.1**
TWW	**Teanaway**	**6.54**	**114**	P		**Pn**	**03**	**17**	**23.2**	**+1.0**
ETW	**Entiat**	**6.63**	**109**	*e*Pn		**Pn**	**03**	**17**	**24.1**	**+0.6**
TBM	**Table Mountain**	**6.68**	**113**	P		**Pn**	**03**	**17**	**24.7**	**+0.5**
HOOD	**Mount Hood Mea**	**7.24**	**129**	Pn		**Pn**	**03**	**17**	**31.7**	**-0.1**
	27nm,0.7s									
MDW	**Midway**	**7.46**	**115**	P		**Pn**	**03**	**17**	**34.8**	**0.0**
RSW	**Rattlesnake Hi**	**7.68**	**116**	*e*Pn		**Pn**	**03**	**17**	**39.3**	**+1.5**
HAWA	**Hanford**	**7.71**	**116**	*e*Pn		**Pn**	**03**	**17**	**37.6**	**-0.7**
OD2	**Odessa Site #2**	**7.72**	**107**	*e*Pn		**Pn**	**03**	**17**	**38.0**	**-0.4**
OD2				*e*S		**Sn**	**03**	**19**	**08.8**	**+3.7**
DLBC	**Dease Lake**	**8.27**	**358**	*e*Pn		**Pn**	**03**	**17**	**46.4**	**+0.5**
DLBC				*e*S		**Sn**	**03**	**19**	**11.5**	**-7.1**
DLBC					LR	LR	03	21	10.8	
DLBC	**Dease Lake**	**8.27**	**358**	Pn		**Pn**	**03**	**17**	**46.5**	**+0.6**
	0.6nm,0.3s,baz=200,slow=13,SNR=11									
DLBC					LR	LR	03	21	10.8	
	comp=Z,608nm,20.7s,baz=153,slow=39									
NEW	**Newport**	**8.39**	**98**	*e*Pn		**Pn**	**03**	**17**	**47.5**	**-0.1**
LNOR	**Lincton Mounta**	**8.72**	**115**	*e*Pn		**Pn**	**03**	**17**	**49.8**	**-2.4**
YBH	**Yreka Blue Hor**	**9.72**	**148**	LR		LR	03	21	33.0	
	comp=Z,274nm,21.3s,baz=329,slow=36									
BSMT	**Bassoo Peak**	**10.01**	**98**	*e*Pn		**Pn**	**03**	**18**	**10.6**	**+0.9**
WALA	**Waterton Lakes**	**10.25**	**90**	*e*Pn		**Pn**	**03**	**18**	**13.6**	**+0.6**
	0.2nm,0.7s									
MSO	**Missoula**	**10.92**	**102**	Pn		**Pn**	**03**	**18**	**12.7**	**-9.5**
LRM	**Limekiln Ridge**	**12.28**	**104**	*e*Pn		**Pn**	**03**	**18**	**43.1**	**+2.2**
DLMT	**Dillon**	**12.41**	**106**	*e*Pn		**Pn**	**03**	**18**	**42.3**	**-0.3**
WCN	**Washoe City**	**12.93**	**144**	Pn		**Pn**	**03**	**18**	**48.9**	**-0.8**
	16nm,1.5s									
YMR	**Madison River**	**13.76**	**107**

4C-2D, Error ellipse: s-maj=9.2km s-min=3.3km az=8.7, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**0.53**	**89**	⇑P	Pg	03 18 58.4	-0.9
JAMA	**Jama**	**1.32**	**53**	S	Sn	03 19 29.9	+0.7
JAMA	**Jama**	**1.32**	**53**	P	Pn	03 19 13.0	+0.9
IGUA	**Igualata**	**2.65**	**99**	P	Pn	03 19 32.0	+1.6
CAMI	**Rancho Maria**	**2.78**	**82**	P	Pn	03 19 37.4	+5.3
JUA2	**San Juan 2**	**2.78**	**72**	P	Pn	03 19 34.7	+2.4
TERV	**Terraza Guagua**	**2.79**	**72**	P	Pn	03 19 36.2	+3.8
GGP	**Refugio Guagua**	**2.80**	**72**	P	Pn	03 19 34.4	+1.8
JUI6	**Juive**	**2.81**	**97**	P	Pn	03 19 38.6	+6.0
BMAS	**Trigal station**	**2.81**	**99**	P	Pn	03 19 34.9	+2.3
BMOR	**Cotopaxi Volca**	**2.81**	**83**	P	Pn	03 19 35.1	+2.4
NAS2	**Nasa**	**2.82**	**82**	P	Pn	03 19 36.5	+3.8
ARRY	**Arrayan**	**2.83**	**99**	P	Pn	03 19 34.6	+1.6
MOV1	**Cotopaxi Vol s**	**2.83**	**83**	P	Pn	03 19 35.9	+2.9
BREF	**Cotopaxi Volca**	**2.84**	**82**	P	Pn	03 19 36.0	+3.0
YANA	**Yana**	**2.84**	**71**	P	Pn	03 19 37.1	+4.1
PAT1	**Patacocha**	**2.85**	**99**	⇑P	Pn	03 19 36.0	+2.8
RUN5	**Runtun**	**2.85**	**97**	P	Pn	03 19 36.5	+3.3
BRUN	**Tungurahua Vol**	**2.86**	**97**	⇑S	Sn	03 20 10.8	+3.4
BRUN	**Tungurahua Vol**	**2.86**	**97**	⇑P	Pn	03 19 36.7	+3.3
PITA	**Cotopaxi Volc**	**2.87**	**80**	P	Pn	03 19 36.6	+3.2
BULB	**Ulba Tungurahu**	**2.87**	**97**	P	Pn	03 19 36.4	+2.9
PISA	**Pisayambo**	**2.87**	**90**	P	Pn	03 19 36.5	+3.1
BVC2	**Cotopaxi Volca**	**2.87**	**82**	P	Pn	03 19 36.3	+2.8
VC1	**Cotopaxi 1**	**2.88**	**82**	P	Pn	03 19 38.3	+4.7
BTAM	**Cotopaxi Volc**	**2.88**	**82**	P	Pn	03 19 37.4	+3.7
TAMB	**Tambo**	**2.91**	**83**	P	Pn	03 19 39.0	+4.9
COV1	**Cotopaxi Volc**	**2.94**	**82**	P	Pn	03 19 37.6	+3.2
OTAV	**Otavalo**	**3.09**	**65**	⇓P	Pn	03 19 40.2	+3.7
ANTI	**Antisana**	**3.15**	**79**	P	Pn	03 19 41.2	+3.8
COTA	**Cotacachi**	**3.23**	**65**	P	Pn	03 19 42.4	+3.9
MACE	**Macas**	**3.28**	**111**	P	Pn	03 19 43.0	+3.9
CAYR	**Refugio Cayamb**	**3.42**	**72**	P	Pn	03 19 46.9	+5.9
CAYA	**Cayambe**	**3.45**	**71**	⇓P	Pn	03 19 46.3	+4.8

*ISCJB **28** 03:26:41.7±0.9, 50°.23N±0°.06×129°.5W±0°.1, h10km, mb3.8/5, Error ellipse: s-maj=14.9km s-min=5.9km az=154.3*

*IDC **28** 03:26:41.3±1.4, 50°.17N×129°.70W, h0km, mb3.9/3, mb1 3.9/10, mb1mx3.7/28, mbtmp3.7/10, ML3.5/7, MS3.2/5, Ms1 3.2/5, ms1mx2.9/40, Error ellipse: s-maj=24.7km s-min=13.6km az=75.0*

*NEIC **28** 03:26:44.2±0.9, 50°.34N×129°.29W, h10km, mb3.9/5, Error ellipse: s-maj=18.5km s-min=5.9km az=57.0*

ISC 28 03:26:43.6±0.9, 50°.26N±0°.06×129°.5W±0°.1, h10km, n31, σ1§18/30, mb3.8/5, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**2.11**	**23**	Pn	**Pn**	**03 27 18.1**	**-0.8**
	78nm,0.3s,baz=43,slow=13,SNR=84						
BBB				Sn	**Sn**	**03 27 46.5**	**+1.3**
	25nm,0.3s,baz=132,slow=22,SNR=11						
DIB	**Dawson Inlet,**	**3.49**	**329**	Pn	**Pn**	**03 27 32.4**	**-5.5**
PGC	**Sidney**	**4.24**	**110**	*e*Pn	**Pn**	**03 27 47.4**	**-0.9**
JCW	**Jim Creek**	**5.35**	**110**	*e*Pn	**Pn**	**03 28 03.2**	**-0.3**
LON	**Longmire**	**6.18**	**122**	*e*Pn	**Pn**	**03 28 13.9**	**-1.0**
	5.0nm,0.8s						
OD2	**Odessa Site #2**	**7.66**	**108**	*e*Pn	**Pn**	**03 28 33.8**	**-1.3**
	14nm,0.7s						
DLBC	**Dease Lake**	**8.20**	**358**	Pn	**Pn**	**03 28 42.6**	**+0.1**
	0.3nm,0.3s,baz=184,slow=13,SNR=5.5						
DLBC				LR	LR	03 31 55.9	
	comp=Z,174nm,19.8s,baz=307,slow=38						
NEW	**Newport**	**8.32**	**99**	*e*Pn	**Pn**	**03 28 43.8**	**-0.4**
YBH	**Yreka Blue Hor**	**9.73**	**149**	LR	LR	03 32 12.4	
	comp=Z,102nm,19.4s,baz=328,slow=34						
NVAR	**Mina Array Bea**	**14.25**	**142**	Pn	**Pn**	**03 30 07.7**	**+2.4**
NVAR	**Mina Array Bea**	**14.25**	**142**	Pn	**Pn**	**03 30 07.7**	**+2.4**
	0.1nm,0.3s,baz=321,slow=9.7,SNR=3.5						
MOOW	**Moose Ponds**	**14.32**	**110**	*e*Pn	**Pn**	**03 30 05.1**	**-1.1**
	9.0nm,0.9s						
TPAW	**Teton Pass**	**14.34**	**111**	Pn	**Pn**	**03 30 04.8**	**-1.7**
	9.4nm,0.8s						
REDW	**Red Top Meadow**	**14.47**	**111**	*e*Pn	**Pn**	**03 30 11.4**	**+3.1**
	10nm,1.0s						
LOHW	**Long Hollow**	**14.48**	**110**	*e*Pn	**Pn**	**03 30 06.6**	**-1.9**
	4.6nm,0.8s						
YKA	**Yellowknife Ar**	**14.71**	**28**	Pn	**Pn**	**03 30 10.3**	**-1.1**
	0.2nm,0.3s,baz=214,slow=13,SNR=4.5						
HWUT	**Hardware Ranch**	**15.14**	**118**	Pn	**Pn**	**03 30 17.9**	**+0.5**
DUG	**Dugway**	**15.42**	**124**	*e*Pn	**Pn**	**03 30 22.8**	**+1.7**
	6.3nm,1.3s						
BW06	**Boulder Array**	**15.59**	**111**	*e*Pn	**Pn**	**03 30 24.7**	**+1.5**
	25nm,2.0s						
PDAR	**Pinedale Array**	**15.59**	**111**	Pn	**Pn**	**03 30 24.7**	**+1.4**
	0.1nm,0.3s,baz=321,slow=13,SNR=10						
ILAR	**Eielson Array**	**17.20**	**334**	P	**Pn**	**03 30 42.9**	**-0.7**
	0.0nm,0.3s,baz=154,slow=10.0,SNR=6.0						
ILAR				LR	LR	03 36 28.0	
	comp=Z,58nm,18.3s,baz=151,slow=34						
SRU	**San Rafael**	**17.43**	**123**	*e*Pn	**Pn**	**03 30 46.5**	**-0.2**
	6.1nm,1.1s						
INK	**Inuvik**	**18.21**	**355**	P	**Pn**	**03 30 57.0**	**+0.8**
	0.0nm,0.3s,baz=159,slow=15,SNR=3.2						
INK				LR	LR	03 38 34.8	
	comp=Z,93nm,18.2s,baz=280,slow=39						
PV10	**Paradox Valley**	**18.77**	**121**	*e*P	**Pn**	**03 31 02.4**	**-0.7**
	115nm,1.0s						
SDCO	**Great Sand Dun**	**21.19**	**117**	*e*P	**P**	**03 31 29.2**	**+0.1**
	4.2nm,1.2s,mb3.6						
ULM	**Lac du Bonnet**	**21.38**	**77**	P	**P**	**03 31 33.9**	**+2.9**
	6.7nm,0.9s,mb4.0,baz=289,slow=11,SNR=5.5						
ECSD	**EROS Data Cent**	**23.21**	**94**	*e*P	**P**	**03 31 50.9**	**+0.4**
	14nm,0.9s,mb4.4						
RES	**Resolute Bay**	**28.39**	**18**	LR	LR	03 44 43.1	
	comp=Z,61nm,19.6s,baz=233,slow=38						
TXAR	**Lajitas Array**	**28.56**	**127**	P	**P**	**03 32 39.7**	**+0.2**
	0.3nm,0.7s,mb3.1,baz=335,slow=5.5,SNR=4.6						
MKAR	**Makanchi Array**	**79.50**	**338**	P	**P**	**03 38 49.7**	**-0.4**
MKAR	**Makanchi Array**	**79.50**	**338**	P	**P**	**03 38 49.7**	**-0.4**
	1.9nm,0.9s,mb4.0,baz=336,slow=2.7,SNR=9.6						

*TIR **28** 03:31:09.9±6.4, 40°.76N×20°.23E, h0km, 999km*

*ATH **28** 03:31:11.8, 40°.76N×20°.77E, h6km±1km, ML4.0*

*ISCJB **28** 03:31:12.5±0.3, 40°.72N±0°.01×20°.67E±0°.02, h6km±2km, mb3.4/5, Error ellipse: s-maj=2.7km s-min=1.8km az=138.2*

*SKO **28** 03:31:12.3, 40°.58N×20°.63E, h0km*

*CSEM **28** 03:31:13.3±0.1, 40°.69N×20°.73E, h2km, ML3.5/10, Error ellipse: s-maj=3.0km s-min=2.2km az=52.0*

*THE **28** 03:31:13.8, 40°.69N×20°.76E, h2km±1km, ML3.5/10, Error ellipse: s-maj=1.3km s-min=0.7km az=294.0*

*NEIC **28** 03:31:14.9, 40°.66N×20°.91E, h13km, ML4.0(ATH), ML3.9(PDG), After PDG.*

*PDG **28** 03:31:14.9±0.6, 40°.66N×20°.91E, h13km±1km, MD4.0/3, ML3.9/9, Error ellipse: s-maj=0.8km s-min=1.3km az=0.0*

*IDC **28** 03:31:17.9±1.0, 40°.71N×20°.80E, h42km±9km, mb3.6/5, mb1 3.7/7, mb1mx3.5/25, mbtmp3.6/7, ML3.3/2, Error ellipse: s-maj=22.5km s-min=18.9km az=111.0*

ISC 28 03:31:13.6±0.3, 40°.70N±0°.01×20°.71E±0°.02, h5km±2km, h42km±1.5km; pP-P, n276, σ1§20/342, mb3.4/5, 31C-12D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.09**	**142**	*i* PG	**Pg**	**03 31 15.8**	**+0.2**
KBN				*i* SG	**Sg**	**03 31 16.9**	**-0.1**
NEST	**Nestorio**	**0.38**	**138**	P	**Pg**	**03 31 20.3**	**-0.7**
NEST				S	**Sg**	**03 31 26.2**	**+0.2**
FNA	**Florina**	**0.51**	**80**	P	**Pg**	**03 31 22.9**	**-0.6**
FNA	**Florina**	**0.51**	**80**	P	**Pg**	**03 31 23.1**	**-0.4**
FNA				S	**Sg**	**03 31 30.5**	**+0.4**
FNA	**Florina**	**0.51**	**80**	P	**Pg**	**03 31 22.9**	**-0.6**
FNA				S	**Sg**	**03 31 30.5**	**+0.4**
LSK	**Leskovik**	**0.55**	**189**	*i* PG	**Pg**	**03 31 23.3**	**-1.0**
LSK	**Leskovik**	**0.55**	**189**	*i* Pg	**Pg**	**03 31 23.3**	**-0.9**
	SNR=91						
BIA	**Bitola**	**0.56**	**55**	P	**Pg**	**03 31 23.8**	**-0.7**
BIA				S	**Sg**	**03 31 32.4**	**+0.6**
BIA	**Bitola**	**0.56**	**55**	*e*Pg	**Pg**	**03 31 24.2**	**-0.3**
BIA				*e*Sg	**Sg**	**03 31 33.9**	**+2.0**
BIA	**Bitola**	**0.56**	**55**	P	**Pg**	**03 31 23.8**	**-0.7**
BIA				S	**Sg**	**03 31 32.4**	**+0.6**
TPE	**Tepelena**	**0.67**	**233**	*i* PG	**Pg**	**03 31 24.5**	**-2.0**
TPE				*i* SG	**Sg**	**03 31 29.3**	**-5.8**
KRUS	**Krusevo**	**0.78**	**31**	*e*Pg	**Pg**	**03 31 27.9**	**-0.7**
KZN	**Kozani**	**0.90**	**115**	*e*Pb	**Pg**	**03 31 29.5**	**-1.3**
KZN				*e*Sb	**Sg**	**03 31 41.5**	**-1.0**
KZN	**Kozani**	**0.90**	**115**	*e*PB	**Pg**	**03 31 29.5**	**-1.3**
KZN				*e*SB	**Sg**	**03 31 41.5**	**-1.0**
KZN	**Kozani**	**0.90**	**115**	P	**Pg**	**03 31 29.3**	**-1.5**
KZN				S	**Sg**	**03 31 42.3**	**-0.2**
KZN	**Kozani**	**0.90**	**115**	P	**Pg**	**03 31 29.3**	**-1.5**
KZN				*e*Sb	**Sg**	**03 31 41.5**	**-1.0**
KZN				S	**Sg**	**03 31 42.3**	**-0.2**
TIR	**Tirane**	**0.91**	**316**	*e*Pg	**Pg**	**03 31 31.5**	**+0.4**
TIR	**Tirane**	**0.91**	**316**	P	**Pg**	**03 31 31.0**	**-0.1**
TIR	**Tirane**	**0.91**	**316**	P	**Pg**	**03 31 31.0**	**-0.1**
TIR	**Tirane**	**0.91**	**316**	*e*Pg	**Pg**	**03 31 31.5**	**+0.4**
SRN	**Sarande**	**0.98**	**214**	*i* PG	**Pg**	**03 31 31.8**	**-0.6**
SRN				*i* SG	**Sg**	**03 31 46.7**	**+1.6**
SRN	**Sarande**	**0.98**	**214**	*i* PG	**Pg**	**03 31 31.8**	**-0.6**
SRN				*i* SG	**Sg**	**03 31 47.5**	**+2.4**
SRN	**Sarande**	**0.98**	**214**	*i* Pg	**Pg**	**03 31 31.8**	**-0.6**
SRN				*i* Sg	**Sg**	**03 31 46.7**	**+1.6**
JAN	**Janina**	**1.04**	**174**	*e*Pg	**Pg**	**03 31 32.3**	**-1.4**
JAN				*e*Sb	**Sb**	**03 31 47.6**	**-0.5**
JAN	**Janina**	**1.04**	**174**	*e*PG	**Pg**	**03 31 32.3**	**-1.4**
JAN				*e*SB	**Sb**	**03 31 47.6**	**-0.5**
JAN	**Janina**	**1.04**	**174**	*e*Pg	**Pg**	**03 31 32.3**	**-1.4**
JAN				*e*Sb	**Sb**	**03 31 47.6**	**-0.5**
IGT	**Igoumenitsa**	**1.20**	**194**	P	**Pg**	**03 31 34.8**	**-1.8**
IGT	**Igoumenitsa**	**1.20**	**194**	P	**Pg**	**03 31 35.6**	**-1.0**
IGT				S	**Sg**	**03 31 53.1**	**+1.0**
IGT	**Igoumenitsa**	**1.20**	**194**	P	**Pg**	**03 31 34.8**	**-1.8**
IGT				S	**Sg**	**03 31 53.1**	**+1.0**
KEK	**Kerkira**	**1.21**	**216**	*e*Pb	**Pb**	**03 31 36.1**	**-0.8**
KEK	**Kerkira**	**1.21**	**216**	*e*PB	**Pb**	**03 31 36.1**	**-0.8**
KEK	**Kerkira**	**1.21**	**216**	P	**Pg**	**03 31 37.0**	**+0.3**
KEK				S	**Sg**	**03 31 54.5**	**+2.1**
KEK	**Kerkira**	**1.21**	**216**	*e*Pb	**Pb**	**03 31 36.1**	**-0.8**
KEK	**Kerkira**	**1.21**	**216**	P	**Pg**	**03 31 37.0**	**+0.3**
KEK				S	**Sg**	**03 31 54.5**	**+2.1**
GRG	**Griva**	**1.31**	**78**	P	**Pn**	**03 31 37.4**	**-1.1**
GRG	**Griva**	**1.31**	**78**	P	**Pn**	**03 31 37.1**	**-1.4**
GRG				S	**Sg**	**03 31 56.4**	**+0.7**
GRG	**Griva**	**1.31**	**78**	P	**Pn**	**03 31 37.1**	**-1.4**
GRG				S	**Sg**	**03 31 56.4**	**+0.7**
SKO	**Skopje**	**1.39**	**23**	*e*Pn	**Pg**	**03 31 41.7**	**+1.5**
PUK	**Puka**	**1.48**	**336**	*i* PG	**Pg**	**03 31 41.6**	**-0.4**
PUK				*i* SG	**Sn**	**03 31 57.9**	**-2.6**
PUK	**Puka**	**1.48**	**336**	*i* PG	**Pg**	**03 31 41.5**	**-0.5**
PUK				*i* SG	**Sg**	**03 32 03.6**	**+2.5**
PUK	**Puka**	**1.48**	**336**	*i* Pg	**Pg**	**03 31 41.6**	**-0.4**
PUK				*i* Sg	**Sg**	**03 32 03.6**	**+2.5**
	SNR=90						
LIT	**Litokhoron**	**1.48**	**113**	*e*Pg	**Pn**	**03 31 39.1**	**-1.8**
LIT	**Litokhoron**	**1.48**	**113**	*e*PG	**Pn**	**03 31 39.1**	**-1.8**
LIT	**Litokhoron**	**1.48**	**113**	P	**Pn**	**03 31 39.0**	**-1.9**
LIT	**Litokhoron**	**1.48**	**113**	P	**Pn**	**03 31 39.0**	**-1.9**
THL	**Klokotos Trika**	**1.51**	**138**	*e*PG	**Pn**	**03 31 39.9**	**-1.4**
THL	**Klokotos Trika**	**1.51**	**138**	P	**Pn**	**03 31 39.9**	**-1.4**
THL				S	**Sn**	**03 32 01.7**	**+0.4**
THL	**Klokotos Trika**	**1.51**	**138**	P	**Pn**	**03 31 39.9**	**-1.4**
THL				S	**Sn**	**03 32 01.7**	**+0.4**
VAY	**Valandovo**	**1.54**	**66**	P	**Pn**	**03 31 40.6**	**-1.1**
VAY				S	**Sn**	**03 32 02.1**	**+0.1**
VAY	**Valandovo**	**1.54**	**66**	*e*Pn	**Pn**	**03 31 41.3**	**-0.4**
VAY				*e*Sn	**Sn**	**03 32 04.9**	**+2.9**
VAY	**Valandovo**	**1.54**	**66**	P	**Pn**	**03 31 40.6**	**-1.1**
VAY				S	**Sn**	**03 32 02.1**	**+0.1**
ULC	**Ulcinj**	**1.68**	**319**	⇑*i*Pn	**Pn**	**03 31 44.9**	**+1.3**
ULC				*e*Sn	**Sg**	**03 32 12.3**	**+4.8**
ULC	**Ulcinj**	**1.68**	**319**	⇑*i*Pn	**Pn**	**03 31 44.9**	**+1.3**
THE	**Thessaloniki**	**1.72**	**91**	P	**Pn**	**03 31 43.4**	**-0.7**
THE	**Thessaloniki**	**1.72**	**91**	P	**Pn**	**03 31 43.1**	**-1.0**
THE	**Thessaloniki**	**1.72**	**91**	P	**Pn**	**03 31 43.1**	**-1.0**
KNT	**Kendrikon**	**1.72**	**74**	P	**Pn**	**03 31 43.8**	**-0.4**
KNT				S	**Sn**	**03 32 06.0**	**-0.5**
KNT	**Kendrikon**	**1.72**	**74**	P	**Pn**	**03 31 43.8**	**-0.4**
KNT				S	**Sn**	**03 32 06.0**	**-0.5**
BCI	**Bajram Curri**	**1.74**	**344**	*i* PG	**Pg**	**03 31 46.4**	**-0.5**
BCI	**Bajram Curri**	**1.74**	**344**	*i* Pg	**Pg**	**03 31 46.4**	**-0.5**
HORT	**Hortiatis**	**1.82**	**92**	P	**Pn**	**03 31 44.6**	**-0.9**
HORT	**Hortiatis**	**1.82**	**92**	P	**Pn**	**03 31 44.8**	**-0.7**
HORT	**Hortiatis**	**1.82**	**92**	P	**Pn**	**03 31 44.6**	**-0.9**
LKD2	**Lefkada island**	**1.91**	**181**	P	**Pn**	**03 31 47.5**	**+0.8**
LKD2	**Lefkada island**	**1.91**	**181**	P	**Pn**	**03 31 47.5**	**+0.8**
EVR	**Evrytania**	**1.97**	**154**	*e*Pn	**Pn**	**03 31 48.6**	**+1.0**
EVR	**Evrytania**	**1.97**	**154**	*e*PN	**Pn**	**03 31 48.6**	**+1.0**
EVR	**Evrytania**	**1.97**	**154**	*e*Pn	**Pn**	**03 31 48.6**	**+1.0**
PVY	**Plav**	**1.98**	**344**	⇑*i*Pn	**Pn**	**03 31 49.9**	**+2.2**
PVY				*e*Sn	**Sg**	**03 32 18.6**	**+1.5**
PVY	**Plav**	**1.98**	**344**	⇑*i*Pn	**Pn**	**03 31 49.9**	**+2.2**
SOH	**Sokhos**	**2.01**	**86**	*e*Pn	**Pn**	**03 31 48.0**	**-0.2**
SOH	**Sokhos**	**2.01**	**86**	*e*PN	**Pn**	**03 31 48.0**	**-0.2**
SOH	**Sokhos**	**2.01**	**86**	P	**Pn**	**03 31 47.7**	**-0.5**
SOH				S	**Sn**	**03 32 14.6**	**+0.9**
SOH	**Sokhos**	**2.01**	**86**	P	**Pn**	**03 31 47.7**	**-0.5**
SOH	**Sokhos**	**2.01**	**86**	*e*Pn	**Pn**	**03 31 48.0**	**-0.2**
SOH				S	**Sn**	**03 32 14.6**	**+0.9**
PDG	**Podgorica**	**2.04**	**328**	⇓*i*Pn	**Pn**	**03 31 50.1**	**+1.5**
TTG	**Podgorica**	**2.04**	**328**	⇓*i*Pn	**Pn**	**03 31 50.1**	**+1.5**
TTG				*e*Sn	**Sg**	**03 32 20.5**	**+1.2**
TTG	**Podgorica**	**2.04**	**328**	⇓*i*Pn	**Pn**	**03 31 50.1**	**+1.5**
AGG	**Agios Georgios**	**2.09**	**143**	*e*Pn	**Pn**	**03 31 49.6**	**+0.4**
AGG	**Agios Georgios**	**2.09**	**143**	*e*PN	**Pn**	**03 31 49.6**	**+0.4**
AGG	**Agios Georgios**	**2.09**	**143**	P	**Pn**	**03 31 48.6**	**-0.6**
AGG				S	**Sn**	**03 32 15.6**	**+0.1**
AGG	**Agios Georgios**	**2.09**	**143**	P	**Pn**	**03 31 48.6**	**-0.6**
AGG	**Agios Georgios**	**2.09**	**143**	*e*Pn	**Pn**	**03 31 49.6**	**+0.4**
AGG				S	**Sn**	**03 32 15.6**	**+0.1**
BUM	**Brajici-Budva**	**2.10**	**320**	⇑*i*Pn	**Pn**	**03 31 50.2**	**+0.8**
BUM				*e*Sn	**Sg**	**03 32 22.8**	**+1.6**
BUM	**Brajici-Budva**	**2.10**	**320**	⇑*i*Pn	**Pn**	**03 31 50.2**	**+0.8**
PLG	**Polygyros**	**2.11**	**98**	*e*Pn	**Pn**	**03 31 49.0**	**-0.5**
PLG	**Polygyros**	**2.11**	**98**	*e*PN	**Pn**	**03 31 49.0**	**-0.5**
PLG	**Polygyros**	**2.11**	**98**	P	**Pn**	**03 31 48.9**	**-0.6**
PLG	**Polygyros**	**2.11**	**98**	P	**Pn**	**03 31 48.9**	**-0.6**
SRS	**Serrai**	**2.22**	**78**	P	**Pn**	**03 31 50.6**	**-0.5**
SRS	**Serrai**	**2.22**	**78**	P	**Pn**	**03 31 50.6**	**-0.5**
BEY	**Berane**	**2.26**	**345**	⇓*i*Pn	**Pn**	**03 31 54.0**	**+2.5**
IVA	**Berane**	**2.26**	**345**	⇓*i*Pn	**Pn**	**03 31 54.0**	**+2.5**
IVA				*e*Sn	**Sg**	**03 32 25.3**	**-0.8**
IVA	**Berane**	**2.26**	**345**	⇓*i*Pn	**Pn**	**03 31 54.0**	**+2.5**
BARS	**Barje**	**2.27**	**21**	*e*Pn	**Pn**	**03 31 51.9**	**+0.1**
XOR	**Xorichti**	**2.32**	**124**	P	**Pn**	**03 31 51.7**	**-0.7**
XOR	**Xorichti**	**2.32**	**124**	P	**Pn**	**03 31 51.5**	**-0.9**
XOR	**Xorichti**	**2.32**	**124**	P	**Pn**	**03 31 51.5**	**-0.9**
NEO	**Neokhori**	**2.38**	**125**	*e*Pn	**Pn**	**03 31 53.6**	**+0.4**
NEO	**Neokhori**	**2.38**	**125**	*e*PN	**Pn**	**03 31 53.6**	**+0.4**
NEO	**Neokhori**	**2.38**	**125**	*e*Pn	**Pn**	**03 31 53.6**	**+0.4**
PAIG	**Paliouri**	**2.40**	**108**	P	**Pn**	**03 31 52.8**	**-0.7**
PAIG	**Paliouri**	**2.40**	**108**	P	**Pn**	**03 31 52.6**	**-0.9**
PAIG	**Paliouri**	**2.40**	**108**	P	**Pn**	**03 31 52.6**	**-0.9**
HCY	**Herceg Novi**	**2.41**	**317**	⇑*i*Pn	**Pn**	**03 31 54.3**	**+0.6**
HCY				*e*Sn	**Sg**	**03 32 29.9**	**-1.2**
HCY	**Herceg Novi**	**2.41**	**317**	⇑*i*Pn	**Pn**	**03 31 54.3**	**+0.6**
EFP	**Efpalio**	**2.45**	**157**	P	**Pn**	**03 31 56.2**	**+2.0**
EFP	**Efpalio**	**2.45**	**157**	P	**Pn**	**03 31 56.2**	**+2.0**
NVR	**Nevrokopi**	**2.47**	**74**	*e*Pn	**Pn**	**03 31 53.9**	**-0.6**
NVR	**Nevrokopi**	**2.47**	**74**	*e*PN	**Pn**	**03 31 53.9**	**-0.6**
NVR	**Nevrokopi**	**2.47**	**74**	*e*Pn	**Pn**	**03 31 53.9**	**-0.6**
NKY	**Niksic**	**2.47**	**329**	⇑*i*Pn	**Pn**	**03 31 56.6**	**+2.1**
NKY				*e*Sn	**Sg**	**03 32 31.0**	**-2.0**
NKY	**Niksic**	**2.47**	**329**	⇑*i*Pn	**Pn**	**03 31 56.6**	**+2.1**
PE1	**Pezze di Greco**	**2.50**	**274**	*e*Pn	**Pn**	**03 31 55.2**	**+0.3**
OUR	**Ouranopolis**	**2.52**	**97**	P	**Pn**	**03 31 55.2**	**0.0**
OUR	**Ouranopolis**	**2.52**	**97**	P	**Pn**	**03 31 54.3**	**-0.9**
OUR				S	**Sn**	**03 32 26.8**	**+0.6**
OUR	**Ouranopolis**	**2.52**	**97**	P	**Pn**	**03 31 54.3**	**-0.9**
OUR				S	**Sn**	**03 32 26.8**	**+0.6**
KALE	**Kalithea**	**2.56**	**154**	P	**Pn**	**03 31 56.8**	**+1.2**
KALE	**Kalithea**	**2.56**	**154**	P	**Pn**	**03 31 56.8**	**+1.2**
TRIZ	**Trizonia**	**2.56**	**155**	P	**Pn**	**03 31 56.8**	**+1.1**
TRIZ	**Trizonia**	**2.56**	**155**	P	**Pn**	**03 31 56.8**	**+1.1**
LAKA	**Lakka**	**2.64**	**158**	P	**Pn**	**03 31 59.2**	**+2.4**
LAKA	**Lakka**	**2.64**	**158**	P	**Pn**	**03 31 59.2**	**+2.4**
VTS	**Vitosha**	**2.66**	**44**	P	**Pn**	**03 31 58.1**	**+1.0**
VTS	**Vitosha**	**2.66**	**44**	P	**Pn**	**03 31 58.0**	**+0.9**
VTS	**Vitosha**	**2.66**	**44**	⇑*i*P	**Pg**	**03 32 12.4**	**+7.8**
VTS	**Vitosha**	**2.66**	**44**	P	**Pn**	**03 31 58.0**	**+0.9**
DSF	**Desfina**	**2.68**	**148**	P	**Pn**	**03 31 57.5**	**+0.1**
DSF	**Desfina**	**2.68**	**148**	P	**Pn**	**03 31 57.5**	**+0.1**
LKR	**Lokris**	**2.70**	**138**	*e*Pn	**Pn**	**03 31 58.3**	**+0.6**
LKR	**Lokris**	**2.70**	**138**	*e*PN	**Pn**	**03 31 58.2**	**+0.5**
LKR	**Lokris**	**2.70**	**138**	P	**Pn**	**03 31 57.0**	**-0.7**
LKR	**Lokris**	**2.70**	**138**	P	**Pn**	**03 31 57.0**	**-0.7**
LKR	**Lokris**	**2.70**	**138**	*e*Pn	**Pn**	**03 31 58.3**	**+0.6**
RLS	**Riolos of Patr**	**2.70**	**167**	P	**Pn**	**03 31 59.7**	**+2.1**
RLS	**Riolos of Patr**	**2.70**	**167**	P	**Pn**	**03 31 59.7**	**+2.1**
BRY	**Bratogost**	**2.73**	**324**	⇑*i*Pn	**Pn**	**03 31 59.0**	**+0.9**
BRY				*e*Sn	**Sg**	**03 32 36.9**	**-4.5**
BRY	**Bratogost**	**2.73**	**324**	⇑*i*Pn	**Pn**	**03 31 59.0**	**+0.9**
PLE	**Pljevlja**	**2.81**	**340**	⇑*i*Pn	**Pn**	**03 32 01.5**	**+2.4**
PLE				*e*Sn	**Sg**	**03 32 39.7**	**-4.1**
PLE	**Pljevlja**	**2.81**	**340**	⇑*i*Pn	**Pn**	**03 32 01.5**	**+2.4**
AOS	**Alonnisos**	**2.87**	**121**	P	**Pn**	**03 31 58.7**	**-1.3**
AOS	**Alonnisos**	**2.87**	**121**	P	**Pn**	**03 31 58.7**	**-1.3**
KAVA	**Kavala**	**2.90**	**83**	P	**Pn**	**03 31 59.9**	**-0.5**
KAVA	**Kavala**	**2.90**	**83**	P	**Pn**	**03 31 59.9**	**-0.5**
BAI	**Bari**	**2.93**	**279**	*e*Pn	**Pn**	**03 32 00.6**	**-0.2**
GUR	**Goura**	**3.03**	**155**	P	**Pn**	**03 32 03.1**	**+0.9**
GUR	**Goura**	**3.03**	**155**	P	**Pn**	**03 32 03.1**	**+0.9**
SG1	**Sgolgore (BA)**	**3.07**	**274**	*e*Pn	**Pn**	**03 32 03.1**	**+0.4**
STON	**Ston**	**3.13**	**315**	*e*Pn	**Pn**	**03 32 02.6**	**-0.9**
STON					Sn	**Sg**	**03 32 51.9**	**-2.2**
STON	**Ston**	**3.13**	**315**	*e*Pn	**Pn**	**03 32 02.6**	**-0.9**
GRUS	**Gruza**	**3.19**	**0**	*e*Pn	**Pn**	**03 32 06.2**	**+1.8**
BOLS	**Boljevac**	**3.26**	**16**	*e*Pn	**Pn**	**03 32 04.1**	**-1.3**
CDT	**Castel del Mon**	**3.39**	**278**	*e*Pn	**Pn**	**03 32 06.7**	**-0.4

LPG	La Plagne	11.28	300	*e*P	Pn	03 33 54.0 -1.3
	6.0nm,0.5s					
LPL	La Plagne	11.29	300	*e*P	Pn	03 33 53.4 -2.1
	5.4nm,0.6s					
LPL	La Plagne	11.29	300	*e*P	Pn	03 33 53.4 -2.1
	2.7nm,0.6s					
ORIF	Oris-en-Rattie	11.68	296	*e*P	Pn	03 34 07.7 +6.9
CABF	La Chapelle	12.12	304	*e*P	Pn	03 34 13.2 +6.3
HINF	Hinteralfeld	12.21	310	*e*P	Pn	03 34 15.9 +7.8
	7.9nm,0.9s					
HINF	Hinteralfeld	12.21	310	*e*P	Pn	03 34 15.9 +7.8
	4.0nm,0.9s					
CDF	Champ du Feu	12.29	313	*e*P	Pn	03 34 14.4 +5.3
HAU	Haudompre	12.60	310	*e*P	Pn	03 34 19.5 +6.1
	12nm,0.8s					
HAU	Haudompre	12.60	310	*e*P	Pn	03 34 19.5 +6.1
	5.8nm,0.8s					
SMF	Signal de Mont	13.57	302	*e*P	Pn	03 34 31.9 +5.3
	7.8nm,0.7s					
SMF	Signal de Mont	13.57	302	*e*P	Pn	03 34 31.9 +5.3
	3.9nm,0.7s					
LOR	Lormes	13.79	304	*e*P	Pn	03 34 35.4 +5.9
LOR	Lormes	13.79	304	*e*P	Pn	03 34 35.4 +5.9
ESDC	Sonseca Array	18.87	275	pP	pP	03 35 45.4 +9.4
	0.0nm,0.3s,baz=68,slow=11,SNR=3.4					
HFS	Hagfors	19.94	350	P	Pn	03 35 45.9 -1.9
	0.1nm,0.3s,baz=164,slow=16,SNR=4.5					
HFS	Hagfors	19.94	350	P	Pn	03 35 45.9 -1.9
FINES	FINESS Array B	21.03	7	P	P	03 35 56.8 -1.1
	5.4nm,1.1s,mb3.8,baz=203,slow=14,SNR=3.7					
FINES	FINESS Array B	21.03	7	P	P	03 35 56.8 -1.1
NB2	NORSAR Subarra	21.19	347	P	P	03 35 59.7 +0.1
	0.8nm,0.7s,mb3.2,baz=160,slow=11,SNR=5.5					
NOA	NORSAR Array B	21.19	347	P	P	03 36 01.4 +1.8
NOA	NORSAR Array B	21.19	347	P	P	03 36 01.4 +1.8
	0.5nm,0.7s,mb2.9,baz=152,slow=10,SNR=2.7					
NOA	NORSAR Array B	21.19	347	P	P	03 36 01.4 +1.8
TORD	Torodi Ar. Bea	32.11	217	P	P	03 37 41.4 -0.4
	0.2nm,0.5s,mb3.2,baz=29,slow=9.5,SNR=3.2					
TORD				pP	pP	03 37 53.0 +10
	1.0nm,0.9s,baz=26,slow=8.8,SNR=5.3					
MKAR	Makanchi Array	43.90	61	P	P	03 39 18.9 -2.1
	0.3nm,0.7s,mb3.2,baz=284,slow=7.3,SNR=2.4					
MKAR				pP	pP	03 39 31.2 +8.7
	1.1nm,0.7s,baz=282,slow=6.1,SNR=2.9					
ZALV	Zalesovo Beam	43.93	50	pP	pP	03 39 30.8 +8.1
	0.6nm,0.4s,baz=269,slow=11,SNR=2.8					
TXAR	Lajitas Array	93.34	314	P	P	03 44 29.9 +0.1
	0.4nm,0.6s,mb4.0,baz=67,slow=4.0,SNR=5.8					
TXAR				pP	pP	03 44 42.1 +11
	0.8nm,0.7s,baz=75,slow=4.1,SNR=8.8					

IDC ***28*** *03:33:28.3±1.9,50.°03N×129.°80W,h0km,mb3.7/3, mb1 3.9/10,mb1mx3.7/29,mbtmp3.6/10,ML3.2/5,Error ellipse: s-maj=32.6km s-min=12.6km az=74.0*
ISCJB ***28*** *03:33:29.4±1.0,50.°09N±0.°06×129.°6W±0.°2,h10km, mb3.9/7,Error ellipse: s-maj=15.4km s-min=6.4km az=158.2*
NEIC ***28*** *03:33:30.8±1.2,50.°12N×129.°65W,h10km,mb4.2/8,Error ellipse: s-maj=21.9km s-min=7.7km az=59.0*

ISC 28 03:33:30.6±3.5,50.°13N±0.°06×129.°6W±0.°2,h7km±26km, n31,σ1°11/32,mb4.0/7,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BBB	Bella Bella	2.27	24	Pn		Pn	03 34 08.2	-0.3
	33nm,0.3s,baz=42,slow=14,SNR=69							
BBB				Sn		Sn	03 34 36.8	+0.2
	24nm,0.3s,baz=125,slow=23,SNR=20							
PGC	Sidney	4.31	108	*e*Pn		Pn	03 34 34.3	-2.1
NLWA	Neilton Lookou	4.70	124	*e*Pn		Pn	03 34 38.1	-3.7
JCW	Jim Creek	5.42	108	*e*Pn		Pn	03 34 51.1	-0.6
	12nm,0.7s							
LON	Longmire	6.21	120	*e*Pn		Pn	03 35 02.7	+0.1
ETW	Entiat	6.64	109	*e*Pn		Pn	03 35 09.3	+0.8
	16nm,0.9s							
OD2	Odessa Site #2	7.73	107	*e*Pn		Pn	03 35 23.1	-0.3
	15nm,0.7s							
DLBC	Dease Lake	8.32	359	Pn		Pn	03 35 30.5	-1.0
DLBC	Dease Lake	8.32	359	Pn		Pn	03 35 30.5	-1.0
	0.1nm,0.3s,baz=202,slow=5.4,SNR=3.1							
NEW	Newport	8.41	98	*e*Pn		Pn	03 35 33.1	+0.4
	4.9nm,0.9s							
LNOR	Lincton Mounta	8.72	115	*e*Pn		Pn	03 35 37.0	0.0
	9.8nm,1.1s							
DLMT	Dillon	12.42	106	*e*Pn		Pn	03 36 27.4	-0.2
	4.3nm,0.8s							
NVAR	Mina Array Bea	14.22	141	Pn		Pn	03 36 54.1	+1.8
	0.1nm,0.3s,baz=310,slow=12,SNR=5.0							
TPAW	Teton Pass	14.40	110	*e*Pn		Pn	03 36 54.9	+0.2
	23nm,1.2s							
REDW	Red Top Meadow	14.53	111	*e*Pn		Pn	03 36 59.4	+2.9
	36nm,1.6s							
LOHW	Long Hollow	14.54	109	*e*Pn		Pn	03 36 57.0	+0.4
	3.1nm,0.7s							
YKA	Yellowknife Ar	14.88	28	Pn		Pn	03 36 59.1	-2.0
	0.1nm,0.3s,baz=221,slow=13,SNR=3.3							
BW06	Boulder Array	15.65	110	*e*Pn		Pn	03 37 10.3	-1.1
	18nm,1.7s							
PDAR	Pinedale Array	15.65	110	Pn		Pn	03 37 13.0	+1.6
	0.1nm,0.3s,baz=308,slow=10,SNR=14							
ILAR	Eielson Array	17.26	335	P		Pn	03 37 33.1	+1.3
	baz=151,slow=11,SNR=4.9							
FFC	Flin Flon	17.43	64	*e*Pn		Pn	03 37 35.9	+2.0
	20nm,1.0s							
INK	Inuvik	18.33	355	P		Pn	03 37 45.3	+0.3
	0.1nm,0.3s,baz=125,slow=12,SNR=2.7							
MVCO	Mesa Verde	19.93	122	*e*P		Pn	03 38 02.4	-2.0
	40nm,1.8s							
SDCO	Great Sand Dun	21.23	116	*e*P		P	03 38 17.2	+0.3
	12nm,1.8s,mb3.9							
ULM	Lac du Bonnet	21.52	77	P		P	03 38 20.6	+0.7
	12nm,1.0s,mb4.3,baz=282,slow=10,SNR=4.4							
ANMO	Albuquerque	22.71	123	*e*P		P	03 38 31.2	-1.6
	2.4nm,0.9s,mb3.6							
ANMO	Albuquerque	22.71	123	P		P	03 38 31.1	-1.6
	1.9nm,0.8s,mb3.5,baz=340,slow=6.8,SNR=7.0							
ECSD	EROS Data Cent	23.31	93	*e*P		P	03 38 39.4	+0.4
	8.6nm,0.8s,mb4.2							
EYMN	Ely	24.92	80	*e*P		P	03 38 54.4	+0.3
	8.6nm,0.9s,mb4.3							
AMTX	Amarillo	25.43	116	*e*P		P	03 38 58.4	-0.3
	6.1nm,0.8s,mb4.2							
TXAR	Lajitas Array	28.57	127	P		P	03 39 26.3	-0.7
	0.5nm,0.9s,mb3.2,baz=322,slow=7.9,SNR=4.8							

IDC 28 03:35:40.0±3.5,50.°13N×129.°70W,h0km,mb3.2/1, mb1 3.6/4,mb1mx3.4/24,mbtmp3.2/4,ML3.4/3,Error ellipse: s-maj=59.6km s-min=22.6km az=71.0, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BBB	Bella Bella	2.29	25	Pn		Pn	03 36 18.0	-0.9
	5.9nm,0.3s,baz=35,slow=16,SNR=4.0							
PDAR	Pinedale Array	15.69	110	Pn		Pn	03 39 24.5	+2.4
	0.0nm,0.3s,baz=313,slow=9.7,SNR=3.8							
ILAR	Eielson Array	17.25	335	P		Pn	03 39 41.2	-0.7
	0.0nm,0.3s,baz=128,slow=12,SNR=3.4							
TXAR	Lajitas Array	28.60	127	P		P	03 41 38.3	+0.5
	0.1nm,0.6s,baz=289,slow=3.8,SNR=2.0							

IDC ***28*** *03:37:07.4±1.2,40.°58N×20.°82E,h0km,mb3.8/7, mb1 3.9/9,mb1mx3.8/28,mbtmp3.8/9,ML3.8/1,MS2.9/1, Ms1 2.9/1,ms1mx1.8/42,Error ellipse: s-maj=27.3km s-min=24.1km az=106.0*
ATH ***28*** *03:37:07.0,40.°70N×20.°66E,h13km,ML4.0*
SKO ***28*** *03:37:07.5,40.°60N×20.°58E,h0km,M3.3,ML3.7*
PDG ***28*** *03:37:08.7±0.9,40.°72N×20.°72E,h7km±2km,MD3.8/3, ML3.6/9,Error ellipse: s-maj=1.1km s-min=1.1km az=0.0*
NEIC ***28*** *03:37:08.7,40.°72N×20.°72E,h7km,ML4.0(ATH), ML3.8(BUC),ML3.6(PDG),After PDG.*
THE ***28*** *03:37:08.9,40.°69N×20.°72E,h0km±1km,ML3.7/10,Error ellipse: s-maj=1.5km s-min=0.6km az=293.0*
ISCJB ***28*** *03:37:08.1±0.3,40.°69N±0.°01×20.°61E±0.°02,h9km±2km, mb3.7/6,Error ellipse: s-maj=2.5km s-min=1.9km az=34.1*
CSEM ***28*** *03:37:08.9±0.1,40.°64N×20.°69E,h5km,ML4.0,Ms3.7, Error ellipse: s-maj=2.4km s-min=1.9km az=38.0*
TIR ***28*** *03:37:08.2±1.4,40.°67N×20.°67E,h13km±6km,ML4.0*
VIE ***28*** *03:37:10.5±0.5,40.°79N×20.°60E,h10km,mb3.7/5,Ms3.7/5,*

Error ellipse: s-maj=7.2km s-min=4.0km az=41.0 88 km SE of Tirana

ISC 28 03:37:09.2±0.3,40.°67N±0.°01×20.°67E±0.°02,h6km±2km, n277,σ1°26/381,mb3.7/6,14C-33D,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBN	Korca	0.10	115	*i* PG		Pg	03 37 11.4	+0.1
KBN				*i* SG		Sg	03 37 13.8	+1.1
KBN	Korca	0.10	115	*i* Pg		Pg	03 37 11.4	+0.1
	SNR=15							
KBN				*i* Sg		Sg	03 37 13.8	+1.1
	SNR=15							
NEST	Nestorio	0.38	131	P		Pg	03 37 15.9	-0.7
NEST				S		Sg	03 37 21.7	+0.2
NEST	Nestorio	0.38	131	P		Pg	03 37 15.9	-0.7
NEST				S		Sg	03 37 21.7	+0.2
LSK	Leskovik	0.52	186	*i* PG		Pg	03 37 17.9	-1.2
LSK				*i* SG		Sg	03 37 26.7	+0.8
LSK	Leskovik	0.52	186	*i* Pg		Pg	03 37 17.9	-1.2
	SNR=9.0							
LSK				*i* Sg		Sg	03 37 26.7	+0.8
	SNR=9.0							
FNA	Florina	0.55	77	*i* PG		Pg	03 37 19.1	-0.6
FNA	Florina	0.55	77	P		Pg	03 37 18.8	-0.9
FNA	Florina	0.55	77	P		Pg	03 37 19.1	-0.6
FNA				S		Sg	03 37 26.5	-0.4
FNA	Florina	0.55	77	P		Pg	03 37 18.8	-0.9
FNA	Florina	0.55	77	*i* Pg		Pg	03 37 19.1	-0.6
	SNR=9.0							
FNA				S		Sg	03 37 26.5	-0.4
BIA	Bitola	0.61	54	P		Pg	03 37 19.7	-1.2
BIA				S		Sg	03 37 28.2	-0.6
BIA	Bitola	0.61	54	*e*Pg		Pg	03 37 20.0	-0.9
BIA				*e*Sg		Sg	03 37 29.8	+1.0
BIA				*e*Lg			03 37 29.9	
	comp=N,2μm,0.5s							
BIA				*e*Lg			03 37 30.1	
	comp=E,3μm,0.6s							
BIA	Bitola	0.61	54	P		Pg	03 37 19.7	-1.2
BIA				S		Sg	03 37 28.2	-0.6
TPE	Tepelena	0.62	234	*i* PG		Pg	03 37 20.9	-0.3
TPE				*i* SG		Sg	03 37 31.2	+1.9
TPE	Tepelena	0.62	234	*i* Pg		Pg	03 37 20.9	-0.3
	SNR=9.0							
TPE				*i* Sg		Sg	03 37 31.2	+1.9
	SNR=9.0							
KRUS	Krusevo	0.83	32	*e*Pg		Pg	03 37 23.7	-1.4
KRUS				*e*Sg		Sg	03 37 36.7	+0.9
KZN	Kozani	0.91	113	*e*Pb		Pg	03 37 25.2	-1.5
KZN				*e*Sb		Sg	03 37 37.9	-0.6
KZN	Kozani	0.91	113	*e*PB		Pg	03 37 25.2	-1.5
KZN				*e*SB		Sg	03 37 37.9	-0.6
KZN	Kozani	0.91	113	P		Pg	03 37 25.2	-1.5
KZN				S		Sg	03 37 39.1	+0.6
KZN	Kozani	0.91	113	P		Pg	03 37 25.2	-1.5
KZN				*e*Sb		Sg	03 37 37.9	-0.6
TIR	Tirane	0.92	318	*i* PG		Pg	03 37 25.7	-1.1
TIR				*i* SG		Sg	03 37 40.1	+1.5
TIR	Tirane	0.92	318	*e*Pg		Pg	03 37 26.3	-0.5
TIR	Tirane	0.92	318	P		Pg	03 37 25.7	-1.1
TIR				S		Sg	03 37 40.1	+1.5
TIR	Tirane	0.92	318	P		Pg	03 37 25.7	-1.1
TIR	Tirane	0.92	318	*e*Pn		Pg	03 37 27.4	+0.6
TIR				S		Sg	03 37 40.1	+1.5
SRN	Sarande	0.94	213	*i* PG		Pg	03 37 27.6	+0.4
SRN				*i* SG		Sg	03 37 40.9	+1.6
SRN	Sarande	0.94	213	*i* Pg		Pg	03 37 27.6	+0.4
	SNR=9.0							
SRN				*i* Sg		Sg	03 37 40.9	+1.6
	SNR=9.0							
JAN	Janina	1.02	172	*e*Pb		Pg	03 37 27.0	-1.7
JAN				*e*Sb		Sg	03 37 40.8	-1.1
JAN	Janina	1.02	172	*e*PB		Pg	03 37 27.0	-1.7
JAN				*e*SB		Sg	03 37 40.8	-1.1
JAN	Janina	1.02	172	*e*Pb		Pg	03 37 27.0	-1.7
JAN				*e*Sb		Sg	03 37 40.8	-1.1
IGT	Igoumenitsa	1.16	193	*i* PG		Pg	03 37 30.8	-0.6
IGT	Igoumenitsa	1.16	193	P		Pg	03 37 30.8	-0.6
IGT				S		Sg	03 37 49.2	+2.7
IGT	Igoumenitsa	1.16	193	P		Pg	03 37 30.8	-0.6
IGT				S		Sg	03 37 49.2	+2.7
KEK	Kerkira	1.16	215	P		Pg	03 37 32.5	+1.0
KEK	Kerkira	1.16	215	P		Pg	03 37 31.4	-0.1
KEK				S		Sg	03 37 49.3	+2.8
KEK	Kerkira	1.16	215	P		Pg	03 37 31.4	-0.1
KEK				S		Sg	03 37 49.3	+2.8
GRG	Griva	1.34	77	P		Pn	03 37 33.2	-1.3
GRG	Griva	1.34	77	P		Pn	03 37 33.1	-1.4
GRG				S		Sb	03 37 52.8	+0.5
GRG	Griva	1.34	77	P		Pn	03 37 33.1	-1.4
GRG				S		Sb	03 37 52.8	+0.5
SKO	Skopje	1.43	24	P		Pn	03 37 35.2	-0.5
SKO				S		Sb	03 37 56.0	+1.3
SKO	Skopje	1.43	24	*e*Pn		Pn	03 37 36.4	+0.8
SKO				*e*Sn		Sn	03 37 55.9	+1.1
SKO				*e*Lg			03 37 56.3	
	comp=E,774nm,0.7s							
SKO				*e*Lg			03 37 57.2	
	comp=N,659nm,0.5s							
SKO	Skopje	1.43	24	P		Pn	03 37 35.2	-0.5
SKO	Skopje	1.43	24	*e*Pn		Pn	03 37 36.4	+0.7
SKO				S		Sb	03 37 56.0	+1.3
PUK	Puka	1.50	337	*i* PG		Pg	03 37 37.6	-0.3
PUK				*i* SG		Sg	03 37 59.6	+2.3
PUK	Puka	1.50	337	*i* Pg		Pg	03 37 37.6	-0.3
	SNR=9.0							
PUK				*i* Sg		Sg	03 37 59.6	+2.3
	SNR=9.0							
LIT	Litokhoron	1.50	112	*e*Pb		Pb	03 37 35.7	-1.7
LIT	Litokhoron	1.50	112	*e*PB		Pb	03 37 35.7	-1.7
LIT	Litokhoron	1.50	112	P		Pn	03 37 34.8	-1.8
LIT				S		Sn	03 37 57.2	+0.7
LIT	Litokhoron	1.50	112	P		Pn	03 37 34.8	-1.8
LIT	Litokhoron	1.50	112	*e*Pb		Pb	03 37 35.7	-1.7
LIT				S		Sn	03 37 57.2	+0.7
THL	Klokotos Trika	1.51	136	*e*PG		Pg	03 37 35.7	-2.4
THL				*e*SB		Sb	03 37 57.1	+0.2
THL	Klokotos Trika	1.51	136	P		Pn	03 37 35.1	-1.1
THL				S		Sn	03 37 57.9	+1.2
THL	Klokotos Trika	1.51	136	P		Pn	03 37 35.6	-1.1
THL				*e*Sb		Sb	03 37 57.1	+0.2
THL				S		Sn	03 37 57.9	+1.2
VAY	Valandovo	1.58	65	P		Pn	03 37 36.6	-1.1
VAY				S		Sn	03 37 58.5	0.0
VAY	Valandovo	1.58	65	*e*Pn		Pn	03 37 36.8	-0.9
VAY				*e*Sn		Sn	03 38 00.6	+2.2
VAY				*e*Lg			03 38 00.8	
	comp=N,2μm,1.2s							
VAY				*e*Lg			03 38 01.4	
	comp=E,1μm,1.2s							
VAY	Valandovo	1.58	65	P		Pn	03 37 36.6	-1.1
VAY				S		Sn	03 37 58.5	0.0
ULC	Ulcinj	1.68	321	*i* Pn		Pn	03 37 39.8	+0.7
ULC				*e*Sn		Sn	03 38 04.1	+3.1
ULC	Ulcinj	1.68	321	*i* Pn		Pn	03 37 39.8	+0.7
ULC				*e*Sn		Sn	03 38 04.1	+3.1
THE	Thessaloniki	1.75	90	P		Pn	03 37 39.1	-0.9
THE	Thessaloniki	1.75	90	P		Pn	03 37 39.1	-0.9
THE	Thessaloniki	1.75	90	P		Pn	03 37 39.1	-0.9
BCI	Bajram Curri	1.76	345	*i* PG		Pg	03 37 42.3	-0.6
BCI				*i* SG		Sg	03 38 09.1	+3.4
BCI	Bajram Curri	1.76	345	*i* Pg		Pg	03 37 42.3	-0.6
	SNR=9.0							
BCI				*i* Sg		Sg	03 38 09.1	+3.4
	SNR=9.0							
KNT	Kendrikon	1.76	73	P		Pn	03 37 39.3	-0.9
KNT				S		Sn	03 38 03.2	+0.3
KNT	Kendrikon	1.76	73	P		Pn	03 37 39.3	-0.9
KNT				S		Sn	03 38 03.2	+0.3
HORT	Hortiatis	1.85	91	P		Pn	03 37 40.4	-1.0
HORT	Hortiatis	1.85	91	P		Pn	03 37 40.4	-1.0
HORT	Hortiatis	1.85	91	P		Pn	03 37 40.4	-1.0
LKD2	Lefkada island	1.87	180	P		Pn	03 37 43.3	+1.5
LKD2				S		Sn	03 38 08.5	+2.8
LKD2	Lefkada island	1.87	180	P		Pn	03 37 43.3	+1.5
LKD2				S		Sn	03 38 08.5	+2.8
EVR	Evrytania	1.95	153	*e*Pn		Pn	03 37 42.6	-0.3
EVR	Evrytania	1.95	153	*e*PN		Pn	03 37 42.6	-0.3
EVR	Evrytania	1.95	153	*e*Pn		Pn	03 37 42.6	-0.3
PVY	Plav	2.00	345	*i* Pn		Pn	03 37 44.4	+0.9
PVY				*e*Sn		Sn	03 38 10.7	+1.9
PVY	Plav	2.00	345	⇓*i* Pn		Pn	03 37 44.4	+0.9
PVY				*e*Sn		Sn	03 38 10.7	+1.9
SOH	Sokhos	2.04	85	*e*Pn		Pn	03 37 43.5	-0.6
SOH	Sokhos	2.04	85	*e*PN		Pn	03 37 43.5	-0.6
SOH	Sokhos	2.04	85	P		Pn	03 37 43.5	-0.6
SOH				S		Sn	03 38 10.3	+0.4
SOH	Sokhos	2.04	85	P		Pn	03 37 43.5	-0.6
SOH				S		Sn	03 38 10.3	+0.4
PDG	Podgorica	2.06	329	*e*Pn		Pn	03 37 45.8	+1.5
PDG				*e*Sn		Sn	03 38 12.5	+2.2
TTG	Podgorica	2.06	329	⇓*i* Pn		Pn	03 37 45.3	+1.0
TTG				*e*Sn		Sn	03 38 12.5	+2.2
TTG	Podgorica	2.06	329	⇓*i* Pn		Pn	03 37 45.3	+1.0
TTG				*e*Sn		Sn	03 38 12.5	+2.2
AGG	Agios Georgios	2.08	142	*e*Pn		Pn	03 37 44.4	-0.2
AGG				*e*Sn		Sn	03 38 11.5	+0.7
AGG	Agios Georgios	2.08	142	*e*PN		Pn	03 37 44.4	-0.2
AGG				*e*SN		Sn	03 38 11.5	+0.7
AGG	Agios Georgios	2.08	142	*e*Pn		Pn	03 37 44.4	-0.2
AGG				*e*Sn		Sn	03 38 11.5	+0.7
BUM	Brajici-Budva	2.11	321	⇓*i* Pn		Pn	03 37 46.0	+1.0
BUM				*e*Sn		Sn	03 38 13.9	+2.4
BUM	Brajici-Budva	2.11	321	⇓*i* Pn		Pn	03 37 46.0	+1.0
BUM				*e*Sn		Sn	03 38 13.9	+2.4
PLG	Polygyros	2.13	97	*e*Pn		Pn	03 37 44.1	-1.3
PLG				*e*Sn		Sn	03 38 11.9	-0.3
PLG	Polygyros	2.13	97	*e*PN		Pn	03 37 44.1	-1.3
PLG				*e*SN		Sn	03 38 11.9	-0.3
PLG	Polygyros	2.13	97	*e*Pn		Pn	03 37 44.1	-1.3
PLG				*e*Sn		Sn	03 38 11.9	-0.3
SRN	Serrai	2.26	78	P		Pn	03 37 48.1	+1.0
SRS	Serrai	2.26	78	P		Pn	03 37 48.1	+1.0
BEY	Berane	2.28	346	⇓*i* Pn		Pn	03 37 48.1	+0.7
BEY				*e*Sn		Sn	03 38 17.3	+1.6
IVA	Berane	2.28	346	⇓*i* Pn		Pn	03 37 48.1	+0.7
IVA				*e*Sn		Sn	03 38 17.3	+1.6
IVA	Berane	2.28	346	⇓*i* Pn		Pn	03 37 48.1	+0.7
IVA				*e*Sn		Sn	03 38 17.3	+1.6
BARS	Barje	2.31	21	*e*Pn		Pn	03 37 47.9	+0.1
XOR	Xorichti	2.33	123	P		Pn	03 37 47.4	-0.6
XOR	Xorichti	2.33	123	P		Pn	03 37 47.4	-0.6
NEO	Neokhori	2.38	124	P		Pn	03 37 48.0	-0.8
NEO	Neokhori	2.38	124	P		Pn	03 37 48.0	-0.8
HCY	Herceg Novi	2.42	318	⇑*i* Pn		Pn	03 37 49.6	+0.4
HCY				*e*Sn		Sn	03 38 21.3	+2.2
HCY	Herceg Novi	2.42	318	⇑*i* Pn		Pn	03 37 49.6	+0.4
HCY				*e*Sn		Sn	03 38 21.3	+2.2
PAIG	Paliouri	2.42	107	P		Pn	03 37 48.4	-0.8
PAIG	Paliouri	2.42	107	P		Pn	03 37 48.4	-0.8
PE1	Pezze di Greco	2.47	274	*e*Pn		Pn	03 37 50.8	+0.8
PE1				*e*Sn		Sn	03 38 24.3	+3.8
NKY	Niksic	2.48	330	*e*Pn		Pn	03 37 51.0	+0.8
NKY				*e*Sn		Sn	03 38 23.1	+2.3
NKY	Niksic	2.48	330	*e*Pn		Pn	03 37 51.0	+0.8
NKY				*e*Sn		Sn	03 38 23.1	+2.3
NVR	Nevrokopi	2.51	73	*e*Pb		Pn	03 37 49.3	-1.2
NVR	Nevrokopi	2.51	73	*e*PB		Pn	03 37 49.3	-1.2
OUR	Ouranopolis	2.55	96	P		Pn	03 37 50.3	-0.7
OUR	Ouranopolis	2.55	96	P		Pn	03 37 50.3	-0.7
RLS	Riolos of Patr	2.68	166	P		Pn	03 37 55.5	+2.7
RLS	Riolos of Patr	2.68	166	P		Pn	03 37 55.5	+2.7
LKR	Lokris	2.70	137	*e*Pb		Pb	03 37 53.0	-4.9
LKR				*e*Sn		Sn	03 38 25.9	-0.2
LKR	Lokris	2.70	137	*e*PB		Pb	03 37 53.0	-4.9
LKR				*e*SN		Sn	03 38 25.9	-0.2
LKR	Lokris	2.70	137	*e*Pb		Pb	03 37 53.0	-4.9
LKR				*e*Sn		Sn	03 38 25.9	-0.2
VTS	Vitosha	2.71	44	⇓P		Pn	03 37 54.1	+0.9
VTS	Vitosha	2.71	44	⇓*i* P		Pn	03 37 54.1	+0.9
VTS	Vitosha	2.71	44	⇓*i* P		Pn	03 37 54.1	+0.9
BRY	Bratogost	2.74	325	⇓*i* Pn		Pn	03 37 54.4	+0.7
BRY				*e*Sn		Sn	03 38 29.8	+2.6
BRY	Bratogost	2.74	325	⇓*i* Pn		Pn	03 37 54.4	+0.7
BRY				*e*Sn		Sn	03 38 29.8	+2.6
PLE	Pljevlja	2.83	341	*e*Pn		Pn	03 37 54.7	-0.2
PLE				*e*Sn		Sn	03 38 31.0	+1.7
PLE	Pljevlja	2.83	341	*e*Pn		Pn	03 37 54.7	-0.2
PLE				*e*Sn		Sn	03 38 31.0	+1.7
AOS	Alonnisos	2.88	120	P		Pn	03 37 57.5	+1.8
AOS	Alonnisos	2.88	120

LJU				*i* Sn		**Sn**	03 40 06.8	-5.1
LJU	**Ljubljana**	**7.00**	**322**	*i* Pn		**Pn**	03 38 51.8	-0.3
JAVS	**Javornik**	**7.11**	**320**	*i* Pn		**Pn**	03 38 53.0	-0.7
JAVS				*i* Sn		**Sn**	03 40 13.0	-1.7
JAVS	**Javornik**	**7.11**	**320**	*i* Pn		**Pn**	03 38 53.0	-0.7
TRI	**Trieste**	**7.13**	**317**	*e*Pn		**Pn**	03 38 52.4	-1.6
TRI	**Trieste**	**7.13**	**317**	*e*Pn		**Pn**	03 38 52.4	-1.6
PERS	**Pernice**	**7.20**	**328**	*i* Pn		**Pn**	03 38 55.3	+0.4
PERS				*i* Sn		**Sn**	03 40 15.9	-1.1
PERS	**Pernice**	**7.20**	**328**	*i* Pn		**Pn**	03 38 55.3	+0.4
SOKA	**Soboth**	**7.27**	**328**	⇑*i* Pn		**Pn**	03 38 55.4	-0.4
SOKA	**Soboth**	**7.27**	**328**	Pn		**Pn**	03 38 55.4	-0.5
PSZ	**Piszkesteto**	**7.27**	**356**	*e*Pn		**Pn**	03 38 54.1	-1.8
PSZ	**Piszkesteto**	**7.27**	**356**	⇑*i* P		**Pn**	03 38 56.1	+0.2
PSZ	**Piszkesteto**	**7.27**	**356**	‖*e*Pn		**Pn**	03 38 54.1	-1.8
PSZ	**Piszkesteto**	**7.27**	**356**	‖*e*Pn		**Pn**	03 38 54.1	-1.8
PSZ	**Piszkesteto**	**7.27**	**356**	⇑*i* P		**Pn**	03 38 56.1	+0.2
VOY	**Vojsko**	**7.29**	**320**	*e*Pn		**Pn**	03 38 56.0	-0.2
VOY				*e*Sn		**Sn**	03 40 17.7	-1.5
VOY	**Vojsko**	**7.29**	**320**	*e*Pn		**Pn**	03 38 56.0	-0.2
OBKA	**Obir**	**7.34**	**325**	⇑*i* Pn		**Pn**	03 38 55.9	-0.9
OBKA				⇑*i* Sn		**Sn**	03 40 18.3	-2.1
OBKA	**Obir**	**7.34**	**325**	Pn		**Pn**	03 38 55.9	-0.9
KECS	**Kecovo**	**7.82**	**359**	*e*Pn		**Pn**	03 39 04.5	+1.1
KECS	**Kecovo**	**7.82**	**359**	*e*PN		**Pn**	03 39 04.4	+1.0
KECS	**Kecovo**	**7.82**	**359**	*e*Pn		**Pn**	03 39 04.5	+1.1
VYHS	**Vyhne**	**7.94**	**351**	*e*Pn		**Pn**	03 39 10.0	+5.0
VYHS				*e*Sn		**Sn**	03 40 32.8	-2.3
VYHS	**Vyhne**	**7.94**	**351**	*e*PN		**Pn**	03 39 10.0	+5.0
VYHS				*e*SN		**Sn**	03 40 32.8	-2.3
STHS	**Stebnicka Huta**	**8.76**	**2**	*e*Pn		**Pn**	03 39 19.4	+3.1
STHS	**Stebnicka Huta**	**8.76**	**2**	*e*PN		**Pn**	03 39 19.4	+3.1
PGF	**Pioggiola** comp=E,1.1nm,0.8s	**8.95**	**286**	*e*P		**Pn**	03 39 19.9	+1.0
PGF	**Pioggiola** comp=E,5.6nm,0.8s	**8.95**	**286**	*e*P		**Pn**	03 39 19.9	+1.0
PGF	**Pioggiola** comp=E,1.1nm,0.8s	**8.95**	**286**	*e*P		**Pn**	03 39 19.9	+1.0
VRAC	**Vranov** comp=E,62nm,18.2s,baz=336,slow=38	**9.11**	**343**	LR		LR	03 43 00.4	
MOTA	**Moosalm** SNR=7.9	**9.59**	**317**	‖*i* Pn		**Pn**	03 39 27.5	-0.2
MOTA				‖*i* Sn		**Sn**	03 41 14.7	-1.0
MOTA	**Moosalm** SNR=7.9	**9.59**	**317**	Pn		**Pn**	03 39 27.5	-0.2
KHC	**Kasperske Hory** comp=E,3.4nm,0.8s	**9.84**	**332**	*e*Pn		**Pn**	03 39 32.7	+1.6
KHC	**Kasperske Hory**	**9.84**	**332**	*e*PN		**Pn**	03 39 32.8	+1.6
KHC				*ex*		x	03 41 43.0	
KHC	**Kasperske Hory** comp=E,3.4nm,0.8s	**9.84**	**332**	*e*Pn		**Pn**	03 39 32.7	+1.5
DAVOX	**Davos/Dischmat** comp=E,0.9nm,0.3s,baz=112,slow=12,SNR=12	**9.91**	**312**	Pn		**Pn**	03 39 32.5	+0.4
DAVOX				Sn		**Sn**	03 41 20.5	-3.2
DAVOX	**Davos/Dischmat** comp=E,0.1nm,0.3s,baz=108,slow=20,SNR=4.5	**9.91**	**312**	Pn		**Pn**	03 39 32.5	+0.4
TUE	**Stuetta** comp=E,9.8nm,0.8s	**10.06**	**309**	*e*Pn		**Pn**	03 39 33.6	-0.5
TUE				*e*S		**Sn**	03 41 25.3	-1.8
TUE	**Stuetta** comp=E,9.8nm,0.8s	**10.06**	**309**	*e*Pn		**Pn**	03 39 33.6	-0.5
SBF	**Sospel** comp=E,6.7nm,0.7s	**10.32**	**292**	*e*P		**Pn**	03 39 37.8	+0.1
SBF	**Sospel** comp=E,3.3nm,0.6s	**10.32**	**292**	*e*P		**Pn**	03 39 37.8	+0.1
SBF	**Sospel** comp=E,6.0nm,0.7s	**10.32**	**292**	*e*P		**Pn**	03 39 37.8	+0.1
FRF	**La Foret Royal** comp=E,6.4nm,0.6s	**10.81**	**290**	*e*P		**Pn**	03 39 46.7	+2.2
FRF	**La Foret Royal** comp=E,3.2nm,0.6s	**10.81**	**290**	*e*P		**Pn**	03 39 46.7	+2.2
FRF	**La Foret Royal** comp=E,6.0nm,0.6s	**10.81**	**290**	*e*P		**Pn**	03 39 46.7	+2.2
LMR	**La Mourre**	**10.87**	**289**	*e*P		**Pn**	03 39 45.3	0.0
LMR	**La Mourre**	**10.87**	**289**	*e*P		**Pn**	03 39 45.3	0.0
MBDF	**Montbardon** comp=E,6.7nm,0.6s	**11.01**	**296**	*e*P		**Pn**	03 39 45.1	-2.0
MBDF	**Montbardon** comp=E,3.3nm,0.6s	**11.01**	**296**	*e*P		**Pn**	03 39 45.1	-2.0
LPG	**La Plagne** comp=E,13nm,0.6s	**11.27**	**300**	*e*P		**Pn**	03 39 48.8	-1.8
LPG	**La Plagne** comp=E,6.4nm,0.6s	**11.27**	**300**	*e*P		**Pn**	03 39 48.8	-1.8
LPL	**La Plagne** comp=E,8.0nm,0.8s	**11.28**	**300**	*e*P		**Pn**	03 39 47.9	-3.0
LPL	**La Plagne** comp=E,4.0nm,0.8s	**11.28**	**300**	*e*P		**Pn**	03 39 47.9	-3.0
SMRF	**Simiane la Rot** comp=E,4.1nm,0.7s	**11.66**	**291**	*e*P		**Pn**	03 39 57.1	+1.1
SMRF	**Simiane la Rot** comp=E,4.1nm,0.7s	**11.66**	**291**	*e*P		**Pn**	03 39 57.1	+1.1
SMRF	**Simiane la Rot** comp=E,4.0nm,0.7s	**11.66**	**291**	*e*P		**Pn**	03 39 57.1	+1.1
ORIF	**Oris-en-Rattie** comp=E,4.4nm,0.6s	**11.67**	**296**	*e*P		**Pn**	03 39 55.2	-0.9
ORIF	**Oris-en-Rattie** comp=E,2.2nm,0.6s	**11.67**	**296**	*e*P		**Pn**	03 39 55.2	-0.9
ORIF	**Oris-en-Rattie** comp=E,4.0nm,0.6s	**11.67**	**296**	*e*P		**Pn**	03 39 55.2	-0.9
CABF	**La Chapelle** comp=E,13nm,0.9s	**12.12**	**304**	*e*P		**Pn**	03 39 59.6	-2.7
CABF	**La Chapelle** comp=E,6.4nm,0.9s	**12.12**	**304**	*e*P		**Pn**	03 39 59.6	-2.7
HINF	**Hinteralfeld** comp=E,7.0nm,0.8s	**12.21**	**310**	*e*P		**Pn**	03 40 03.0	-0.5
HINF	**Hinteralfeld** comp=E,3.5nm,0.8s	**12.21**	**310**	*e*P		**Pn**	03 40 03.0	-0.5
HINF	**Hinteralfeld** comp=E,7.0nm,0.8s	**12.21**	**310**	*e*P		**Pn**	03 40 03.0	-0.5
CDF	**Champ du Feu**	**12.29**	**314**	*e*P		**Pn**	03 40 02.0	-2.6
HAU	**Haudompre** comp=E,9.4nm,0.8s	**12.60**	**310**	*e*P		**Pn**	03 40 06.2	-2.6
HAU	**Haudompre** comp=E,4.7nm,0.8s	**12.60**	**310**	*e*P		**Pn**	03 40 06.2	-2.6
SMF	**Signal de Mont** comp=E,5.5nm,0.6s	**13.56**	**302**	*e*P		**Pn**	03 40 18.6	-3.4
SMF	**Signal de Mont** comp=E,2.8nm,0.6s	**13.56**	**302**	*e*P		**Pn**	03 40 18.6	-3.4
LOR	**Lormes**	**13.78**	**304**	*e*P		**Pn**	03 40 22.0	-3.0
AVF	**Avril sur Loir**	**13.93**	**302**	*e*P		**Pn**	03 40 23.9	-3.1
BGF	**Bois d'Agland**	**14.18**	**300**	*e*P		**Pn**	03 40 27.8	-2.7
ESDC	**Sonseca Array** baz=69,slow=12,SNR=5.1	**18.84**	**275**	P		**Pn**	03 41 30.1	-0.2
HFS	**Hagfors** comp=E,1.8nm,0.5s,baz=156,slow=11,SNR=6.8	**19.97**	**350**	P		**Pn**	03 41 42.7	-0.9
HFS	**Hagfors**	**19.97**	**350**	P		**Pn**	03 41 42.7	-0.9
FINES	**FINESS Array B** comp=E,3.4nm,0.8s,mb3.7,baz=152,slow=8.6,SNR=3.8	**21.07**	**7**	P		**P**	03 41 54.7	+0.9
NB2	**NORSAR Subarra** comp=E,4.4nm,1.1s,mb3.7,SNR=3.9	**21.21**	**347**	P		**P**	03 41 55.0	-0.4
NOA	**NORSAR Array B** comp=E,1.7nm,0.8s,mb3.4,baz=154,slow=9.9,SNR=4.6	**21.21**	**347**	P		**P**	03 41 55.5	+0.1
NOA	**NORSAR Array B**	**21.21**	**347**	P		**P**	03 41 55.5	+0.1
EKA	**Eskdalemuir Ar** comp=E,4.0nm,1.0s,mb3.8,baz=125,slow=10,SNR=4.1	**21.52**	**321**	P		**P**	03 41 58.2	-0.5
TORD	**Torodi Ar. Bea** comp=E,0.6nm,0.7s,mb3.5,baz=26,slow=8.2,SNR=4.9	**32.06**	**217**	P		**P**	03 43 36.3	-0.6
MKAR	**Makanchi Array**	**43.94**	**61**	P		**P**	03 45 14.9	-1.8
MKAR	**Makanchi Array** comp=E,0.5nm,0.6s,mb3.4,baz=272,slow=9.5,SNR=3.7	**43.94**	**61**	P		**P**	03 45 14.9	-1.8
TXAR	**Lajitas Array**	**93.34**	**314**	P		**P**	03 50 25.4	+0.2
TXAR	**Lajitas Array** comp=E,0.7nm,0.7s,mb4.2,baz=60,slow=4.6,SNR=10	**93.34**	**314**	P		**P**	03 50 25.4	+0.2
ASAR	**Alice Springs** comp=E,0.3nm,0.7s,baz=295,slow=2.1,SNR=3.3	**122.29**	**95**	PKP		PKPdf	03 56 03.8	-1.5

*ISK **28** 03:37:18.0,35°.72N×27°.64E,h13km, MD3.5,ML3.5*
*DDA **28** 03:37:20.9,35°.85N×27°.83E,h30km±3km, Md3.3*
*ISCJB **28** 03:37:21.2±0.2,35°.73N±0°.02×27°.85E±0°.03,h73km±7km, Error ellipse: s-maj=4.0km s-min=3.0km az=138.5*
*CSEM **28** 03:37:22.6±0.1,35°.75N×27°.84E,h60km, MD3.5, Error ellipse: s-maj=3.4km s-min=3.0km az=112.0*
*NEIC **28** 03:37:23.3,35°.86N×27°.75E,h47km, MD3.5(ATH), After ATH.*
*ATH **28** 03:37:23.3,35°.86N×27°.75E,h47km±2km, MD3.5/10*
*HLW **28** 03:37:24.5,35°.56N×28°.04E,h35km±3.4km, Ml3.3*
*THE **28** 03:37:24.5,35°.90N×27°.64E,h13km±3km, ML3.3/1, Error ellipse: s-maj=3.8km s-min=0.5km az=95.0*

ISC 28 03:37:22.7±0.2,35.76N±0.02×27.83E±0.02,h57km±9km, n142,σ1§13/199,1C,Dodecanese Islands

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

ARG	**Arkhangelos**	**0.51**	**28**	*e*P		**Pn**	03 37 34.7	+0.1
ARG				*e*S		**Sn**	03 37 43.1	-0.1
ARG	**Arkhangelos**	**0.51**	**28**	*e*P		**Pn**	03 37 34.7	+0.1
ARG				*e*S		**Sn**	03 37 43.1	-0.1
ARG	**Arkhangelos**	**0.51**	**28**	P		**Pn**	03 37 34.7	+0.1
ARG				S		**Sn**	03 37 41.9	-1.3
ARG	**Arkhangelos**	**0.51**	**28**	*e*P		**Pn**	03 37 34.7	+0.1
ARG				*e*S		**Sn**	03 37 43.1	-0.1
KARP	**Karpathos**	**0.58**	**249**	*e*P		**Pn**	03 37 35.7	+0.3
KARP				*e*S		**Sn**	03 37 44.8	+0.2
KARP	**Karpathos**	**0.58**	**249**	*e*P		**Pn**	03 37 35.7	+0.3
KARP				*e*S		**Sn**	03 37 44.8	+0.2
KARP	**Karpathos**	**0.58**	**249**	*e*P		**Pn**	03 37 35.7	+0.3
KARP				*e*S		**Sn**	03 37 44.8	+0.2
DAT	**Datca**	**0.99**	**348**	PG		**Pn**	03 37 37.9	-2.6
DAT				*e*SG		**Sn**	03 37 51.8	-1.8
DAT	**Datca**	**0.99**	**348**	*i* Pg		**Pn**	03 37 37.9	-2.6
DAT				*e*Sg		**Sn**	03 37 51.8	-1.8
NIS1	**Nisyros Isl.**	**0.99**	**328**	P		**Pn**	03 37 39.9	-0.6
NIS1				S		**Sn**	03 37 51.2	-2.5
NIS1	**Nisyros Isl.**	**0.99**	**328**	P		**Pn**	03 37 39.9	-0.6
NIS1				S		**Sn**	03 37 51.2	-2.5
BDRM	**Kayabasi**	**1.34**	**347**	*i* P		**Pn**	03 37 44.7	-0.4
BDRM				*i* S		**Sn**	03 38 01.0	-0.9
BDRM	**Kayabasi**	**1.34**	**347**	*i* P		**Pn**	03 37 44.7	-0.4
BDRM				*i* S		**Sn**	03 38 01.0	-0.9
BODT	**Bodrum**	**1.36**	**342**	*e*PN		**Pn**	03 37 43.5	-1.9
BODT	**Bodrum**	**1.36**	**342**	*e*Pn		**Pn**	03 37 43.6	-1.9
YER	**Yerkesik**	**1.42**	**15**	*e*PN		**Pn**	03 37 46.3	+0.1
YER				*e*SN		**Sn**	03 38 05.0	+1.1
YER	**Yerkesik**	**1.42**	**15**	*e*Pn		**Pn**	03 37 46.3	+0.1
YER				*e*Sn		**Sn**	03 38 05.0	+1.1
ZKR	**Zakros**	**1.47**	**244**	*e*P		**Pn**	03 37 48.4	+1.5
ZKR				*e*S		**Sn**	03 38 06.8	+1.8
ZKR	**Zakros**	**1.47**	**244**	*e*P		**Pn**	03 37 48.4	+1.5
ZKR				*e*S		**Sn**	03 38 06.8	+1.8
ZKR	**Zakros**	**1.47**	**244**	P		**Pn**	03 37 48.0	+1.1
ZKR				S		**Sn**	03 38 06.9	+1.9
ZKR	**Zakros**	**1.47**	**244**	P		**Pn**	03 37 48.0	+1.1
ZKR				*e*S		**Sn**	03 38 06.8	+1.8
AKAS	**Kas**	**1.52**	**71**	*i* P		**Pn**	03 37 47.7	+0.2
AKAS				*i* S		**Sn**	03 38 06.6	+0.4
AKAS	**Kas**	**1.52**	**71**	*i* P		**Pn**	03 37 47.7	+0.2
AKAS				*i* S		**Sn**	03 38 06.6	+0.4
MLSB	**Milas**	**1.53**	**358**	*e*PN		**Pn**	03 37 47.0	-0.7
MLSB	**Milas**	**1.53**	**358**	*e*Pn		**Pn**	03 37 47.0	-0.7
NPS	**Neapolis**	**1.88**	**255**	*e*P		**Pn**	03 37 53.5	+1.1
NPS				*e*S		**Sn**	03 38 15.3	+0.3
NPS	**Neapolis**	**1.88**	**255**	*e*P		**Pn**	03 37 53.5	+1.1
NPS				*e*S		**Sn**	03 38 15.3	+0.3
NPS	**Neapolis**	**1.88**	**255**	*e*P		**Pn**	03 37 53.5	+1.1
NPS				*e*S		**Sn**	03 38 15.3	+0.3
AYDN	**Tasoluk**	**1.90**	**1**	*i* P		**Pn**	03 37 53.2	+0.5
AYDN				*i* S		**Sn**	03 38 16.1	+0.7
AYDN	**Tasoluk**	**1.90**	**1**	*i* P		**Pn**	03 37 53.2	+0.5
AYDN				*i* S		**Sn**	03 38 16.1	+0.7
GLHS	**Glhisar (BURDU**	**1.94**	**44**	*e*PN		**Pn**	03 37 53.8	+0.6
GLHS	**Glhisar (BURDU**	**1.94**	**44**	*e*Pn		**Pn**	03 37 53.8	+0.6
ELL	**Elmali**	**1.95**	**59**	*e*PN		**Pn**	03 37 54.6	+1.2
ELL	**Elmali**	**1.95**	**59**	*e*Pn		**Pn**	03 37 54.6	+1.2
GCAM	**G?zelcaml?**	**1.99**	**346**	*i* P		**Pn**	03 37 54.1	+0.1
GCAM				*i* S		**Sn**	03 38 16.2	-1.6
GCAM	**G?zelcaml?**	**1.99**	**346**	*i* P		**Pn**	03 37 54.1	+0.1
GCAM				*i* S		**Sn**	03 38 16.2	-1.6
LAST	**Lasithi**	**2.01**	**253**	*e*P		**Pn**	03 37 56.0	+1.8
LAST				*e*S		**Sn**	03 38 19.4	+1.2
LAST	**Lasithi**	**2.01**	**253**	*e*P		**Pn**	03 37 56.0	+1.8
LAST				*e*S		**Sn**	03 38 19.4	+1.2
LAST	**Lasithi**	**2.01**	**253**	P		**Pn**	03 37 55.1	+0.9
LAST				S		**Sn**	03 38 19.1	+0.9
LAST	**Lasithi**	**2.01**	**253**	P		**Pn**	03 37 55.1	+0.9
LAST				S		**Sn**	03 38 19.1	+0.9
GOLH	**Golhisar**	**2.03**	**43**	*i* P		**Pn**	03 37 55.0	+0.5
GOLH				*i* S		**Sn**	03 38 20.3	+1.6
GOLH	**Golhisar**	**2.03**	**43**	*i* P		**Pn**	03 37 55.0	+0.5
GOLH				*i* S		**Sn**	03 38 20.3	+1.6
DNZL	**Cakiroluk**	**2.16**	**27**	*i* P		**Pn**	03 37 55.9	-0.3
DNZL				*i* S		**Sn**	03 38 25.8	+4.0
DNZL	**Cakiroluk**	**2.16**	**27**	*i* P		**Pn**	03 37 55.9	-0.4
DNZL				*i* S		**Sn**	03 38 25.8	+3.9
DENT	**Denizli**	**2.21**	**26**	*e*PN		**Pn**	03 37 56.6	-0.3
DENT	**Denizli**	**2.21**	**26**	*e*Pn		**Pn**	03 37 56.6	-0.4
APE	**Apeiranthos**	**2.27**	**306**	*e*PN		**Pn**	03 37 54.3	-3.4
APE	**Apeiranthos**	**2.27**	**306**	*e*P		**Pn**	03 37 58.2	+0.5
APE	**Apeiranthos**	**2.27**	**306**	*e*P		**Pn**	03 37 58.2	+0.5
APE	**Apeiranthos**	**2.27**	**306**	P		**Pn**	03 37 57.2	-0.5
APE				S		**Sn**	03 38 23.1	-1.4
APE	**Apeiranthos**	**2.27**	**306**	⇑*i* P		**Pn**	03 37 57.4	-0.3
APE	**Apeiranthos**	**2.27**	**306**	*e*P		**Pn**	03 37 58.2	+0.5
APE				S		**Sn**	03 38 23.1	-1.4
KORT	**Korkueli**	**2.38**	**58**	*i* P		**Pn**	03 38 01.2	+1.9
KORT				*i* S		**Sn**	03 38 29.9	+2.5
KORT	**Korkueli**	**2.38**	**58**	*i* P		**Pn**	03 38 01.2	+1.9
KORT				*i* S		**Sn**	03 38 29.9	+2.6
IDI	**Anoyia**	**2.44**	**260**	*e*Pn		**Pn**	03 38 00.3	+0.2
IDI				*e*S		**Sn**	03 38 28.9	+0.1
IDI	**Anoyia**	**2.44**	**260**	*e*P		**Pn**	03 38 01.6	+1.5
IDI				*e*S		**Sn**	03 38 29.3	+0.5
IDI	**Anoyia**	**2.44**	**260**	*e*Pn		**Pn**	03 38 00.3	+0.2
IDI	**Anoyia**	**2.44**	**260**	*e*P		**Pn**	03 38 01.6	+1.5
IDI				*e*S		**Sn**	03 38 29.3	+0.5
ANTB	**Antalya**	**2.55**	**63**	*e*PN		**Pn**	03 38 02.9	+1.3
ANTB	**Antalya**	**2.55**	**63**	*e*Pn		**Pn**	03 38 02.9	+1.3
SIVA	**Sivas**	**2.58**	**254**	*e*P		**Pn**	03 38 03.9	+1.9
SIVA	**Sivas**	**2.58**	**254**	*e*P		**Pn**	03 38 03.9	+1.9
SIVA	**Sivas**	**2.58**	**254**	P		**Pn**	03 38 03.2	+1.2
SIVA	**Sivas**	**2.58**	**254**	P		**Pn**	03 38 03.2	+1.2
IZM	**Izmir**	**2.67**	**350**	*e*PN		**Pn**	03 38 02.9	-0.4
IZM	**Izmir**	**2.67**	**350**	*e*Pn		**Pn**	03 38 02.9	-0.3
BLCB	**Balcova**	**2.69**	**347**	*e*PN		**Pn**	03 38 02.5	-1.1
BLCB	**Balcova**	**2.69**	**347**	*e*Pn		**Pn**	03 38 02.5	-1.1
BCK	**Bucak**	**2.79**	**52**	*e*PN		**Pn**	03 38 05.6	+0.7
BCK	**Bucak**	**2.79**	**52**	*e*Pn		**Pn**	03 38 05.6	+0.7
KULA	**Kula-Manisa**	**2.83**	**13**	*e*PN		**Pn**	03 38 04.5	-0.9
KULA	**Kula-Manisa**	**2.83**	**13**	*e*Pn		**Pn**	03 38 04.5	-0.9
KHL	**Karahalli**	**2.89**	**27**	*e*PN		**Pn**	03 38 06.4	+0.1
KHL	**Karahalli**	**2.89**	**27**	*e*Pn		**Pn**	03 38 06.4	+0.1
KHAL	**Karahalli**	**2.92**	**27**	*i* P		**Pn**	03 38 06.2	-0.5
KHAL				*i* S		**Sn**	03 38 44.2	+3.6
KHAL	**Karahalli**	**2.92**	**27**	*i* P		**Pn**	03 38 06.2	-0.5
KHAL				*i* S		**Sn**	03 38 44.2	+3.6
VAM	**Vamos**	**2.98**	**264**	*e*P		**Pn**	03 38 08.8	+1.3
VAM				*e*S		**Sn**	03 38 42.5	+0.5
VAM	**Vamos**	**2.98**	**264**	*e*P		**Pn**	03 38 08.8	+1.3
VAM				*e*S		**Sn**	03 38 42.5	+0.5
VAM	**Vamos**	**2.98**	**264**	*e*P		**Pn**	03 38 08.8	+1.3
VAM				*e*S		**Sn**	03 38 42.5	+0.5
SUTC	**Sutluce-Ispart**	**3.07**	**55**	*e*PN		**Pn**	03 38 10.2	+1.4
SUTC	**Sutluce-Ispart**	**3.07**	**55**	*e*Pn		**Pn**	03 38 10.2	+1.5
AKHS	**Akhisar**	**3.11**	**360**	*i* P		**Pn**	03 38 09.5	+0.2
AKHS				*i* S		**Sn**	03 38 44.1	-1.1
AKHS	**Akhisar**	**3.11**	**360**	*i* P		**Pn**	03 38 09.5	+0.2
AKHS				*i* S		**Sn**	03 38 44.2	-1.0
AKS	**Akhisar**	**3.11**	**360**	*e*PN		**Pn**	03 38 08.7	-0.5
AKS	**Akhisar**	**3.11**	**360**	*e*Pn		**Pn**	03 38 08.7	-0.6
KARN	**Karanos**	**3.21**	**265**	*e*P		**Pn**	03 38 12.3	+1.7
KARN				*e*S		**Sn**	03 38 47.9	+0.3
KARN	**Karanos**	**3.21**	**265**	P		**Pn**	03 38 11.2	+0.6
KARN	**Karanos**	**3.21**	**265**	P		**Pn**	03 38 11.2	+0.6
KARN				*e*S		**Sn**	03 38 47.9	+0.3
DEMI	**Demirci**	**3.35**	**12**	*i* P		**Pn**	03 38 12.6	+0.1
DEMI				*i* S		**Sn**	03 38 48.8	-2.2
DEMI	**Demirci**	**3.35**	**12**	*i* P		**Pn**	03 38 12.6	0.0
DEMI				*i* S		**Sn**	03 38 48.8	-2.3
SHUT	**Suhut-Afyon**	**3.53**	**37**	*e*PN		**Pn**	03 38 15.2	+0.1
SHUT	**Suhut-Afyon**	**3.53**	**37**	*e*Pn		**Pn**	03 38 15.2	+0.1
ALT	**Altintas**	**3.76**	**28**	*e*PN		**Pn**	03 38 18.9	+0.8
ALT	**Altintas**	**3.76**	**28**	*e*Pn		**Pn**	03 38 18.9	+0.8
HDMB	**Hadim**	**3.95**	**71**	*e*PN		**Pn**	03 38 22.3	+1.6
HDMB	**Hadim**	**3.95**	**71**	*e*Pn		**Pn**	03 38 22.3	+1.6
LEF	**Lefka**	**4.18**	**97**	*e*PN		**Pn**	03 38 24.4	+0.4
LEF	**Lefka**	**4.18**	**97**	*e*Pn		**Pn**	03 38 24.4	+0.4
KONT	**Konya--Tatoy**	**4.24**	**58**	*e*PN		**Pn**	03 38 26.3	+1.6
KONT	**Konya--Tatoy**	**4.24**	**58**	*e*Pn		**Pn**	03 38 26.3	+1.6
GONE	**Gonen-Balikesi**	**4.28**	**359**	*e*PN		**Pn**	03 38 25.1	-0.2
GONE	**Gonen-Balikesi**	**4.28**	**359**	*e*Pn		**Pn**	03 38 25.1	-0.2
KIZT	**Kizilcal**	**4.49**	**45**	*e*PN		**Pn**	03 38 28.9	+0.9
KIZT	**Kizilcal**	**4.49**	**45**	*e*Pn		**Pn**	03 38 28.9	+0.8
LFK	**Lefkose**	**4.68**	**94**	*e*PN		**Pn**	03 38 32.7	+2.0
LFK	**Lefkose**	**4.68**	**94**	*e*Pn		**Pn**	03 38 32.7	+2.0
HMAT	**Matruh** baz=191	**4.70**	**188**	P		**Pn**	03 38 31.3	+0.3
HMAT				S		**Sn**	03 39 20.5	-3.6
HMAT	**Matruh** baz=191	**4.70**	**188**	P		**Pn**	03 38 31.3	+0.3
HMAT				S		**Sn**	03 39 20.5	-3.7
IKL	**Isikli**	**4.77**	**83**	*e*PN		**Pn**	03 38 33.4	+1.4
IKL	**Isikli**	**4.77**	**83**	*e*Pn		**Pn**	03 38 33.4	+1.4
SLUM	baz=211	**4.79**	**208**	P		**Pn**	03 38 32.4	+0.2
SLUM		**4.79**	**208**	P		**Pn**	03 38 32.4	+0.2
HNAT	**Natroun** baz=159	**6.55**	**158**	P		**Pn**	03 38 54.2	-2.2
HNAT	**Natroun**	**6.55**	**158**	P		**Pn**	03 38 54.2	-2.2
KOT	**Kottamia** baz=149	**6.72**	**149**	P		**Pn**	03 38 57.6	-1.2
KOT	**Kottamia**	**6.72**	**149**	P		**Pn**	03 38 57.6	-1.2
SWA2	baz=200	**6.80**	**198**	P		**Pn**	03 39 00.1	+0.2
SWA2		**6.80**	**198**	P		**Pn**	03 39 00.1	+0.2
AMAG	**Maghara** baz=137	**6.81**	**137**	P		**Pn**	03 38 58.5	-1.5
AMAG	**Maghara**	**6.81**	**137**	P		**Pn**	03 38 58.5	-1.5
HHAG	**Hagoal** baz=147	**6.82**	**147**	P		**Pn**	03 38 58.8	-1.3
HHAG				AMP			03 40 00.0	
	comp=N,30µm,0.1s,logA/T=5.3,baz=147							
HHAG	**Hagoal**	**6.82**	**147**	P		**Pn**	03 38 58.8	-1.3
RSH		**6.87**	**133**	P		**Pn**	03 38 59.3	-1.5
HSAF	**As Saff** baz=152	**6.88**	**152**	P		**Pn**	03 38 59.5	-1.5
HSAF	**As Saff**	**6.88**	**152**	P		**Pn**	03 38 59.5	-1.5
HRSH	**Kfar Ka'horesh** baz=132	**6.89**	**114**	P		**Pn**	03 38 59.3	-1.7
GLL	**Jalalah** baz=151	**6.98**	**151**	P		**Pn**	03 39 01.4	-1.0
GLL	**Jalalah**	**6.98**	**151**	P		**Pn**	03 39 01.4	-0.9
**SUZ

ANMO				LR	LR	03 53 47.1		
ANMO	**Albuquerque**	**22.71**	**123**	P	**P**	**03 44 14.1**	**+0.9**	
	0.8nm,0.4s,mb3.5,baz=320,slow=13,SNR=4.1							
ANMO				LR	LR	03 53 47.1		
	comp=Z,60nm,18.2s,MS3.1,baz=142,slow=39							
BNM	**Barren Site**	**23.23**	**125**	*e*P	**P**	**03 44 18.8**	**+0.1**	
	15nm,1.7s,mb4.1							
ECSD	**EROS Data Cent**	**23.32**	**93**	*e*P	**P**	**03 44 19.9**	**+0.4**	
	23nm,1.0s,mb4.6							
EYMN	**Ely**	**24.94**	**80**	*e*P	**P**	**03 44 34.8**	**+0.3**	
	14nm,1.0s,mb4.4							
AMTX	**Amarillo**	**25.44**	**116**	*e*P	**P**	**03 44 38.6**	**-0.5**	
	12nm,1.0s,mb4.4							
MNTX	**Cornudas Mount**	**25.80**	**126**	*e*P	**P**	**03 44 42.1**	**-0.3**	
	9.7nm,1.8s,mb4.0							
RES	**Resolute Bay**	**28.56**	**18**	LR	LR	03 56 23.2		
	comp=Z,124nm,18.1s,MS3.5,baz=247,slow=36							
TXAR	**Lajitas Array**	**28.57**	**127**	LR	LR	03 56 57.6		
	comp=Z,71nm,18.2s,MS3.3,baz=205,slow=37							
SADO	**Sadowa**	**34.04**	**79**	LR	LR	04 00 19.8		
	comp=Z,309nm,19.7s,MS4.0,baz=307,slow=37							
TKL	**Tuckaleechee C**	**36.00**	**96**	LR	LR	04 01 18.4		
	comp=Z,242nm,18.6s,MS4.0,baz=65,slow=37							
SCHQ	**Schefferville**	**37.41**	**58**	LR	LR	04 03 21.0		
	comp=Z,44nm,20.7s,MS3.2,baz=59,slow=39							
CMIG	**Matias Romero**	**43.18**	**127**	LR	LR	04 05 22.8		
	comp=Z,61nm,20.7s,MS3.5,baz=208,slow=36							
PETK	**Petropavlovsk-**	**43.42**	**303**	LR	LR	04 03 54.1		
	comp=Z,24nm,19.0s,MS3.1,baz=242,slow=34							
NOA	**NORSAR Array B**	**64.82**	**20**	LR	LR	04 17 46.1		
	comp=Z,36nm,18.8s,MS3.6,baz=0.0,slow=36							
FINES	**FINESS Array B**	**67.10**	**12**	LR	LR	04 18 35.5		
	comp=Z,64nm,19.2s,MS3.9,baz=336,slow=35							
AFI	**Afiamalu**	**73.69**	**223**	LR	LR	04 18 52.2		
	comp=Z,62nm,18.4s,MS3.9,baz=280,slow=32							

*CSEM **28** 03:48:50.8±0.4, 40.°73N×20.°62E, h12km, ML2.6/2, Error ellipse: s-maj=7.7km s-min=3.5km az=121.0*
*ISCJB **28** 03:48:51.1±1.2, 40.°72N×20.°04×20.°62E±0.°08, h6km±8km, Error ellipse: s-maj=10.3km s-min=6.0km az=21.4*
*THE **28** 03:48:51.2, 40.°70N×20.°65E, h13km±1km, ML2.6/2, Error ellipse: s-maj=1.5km s-min=0.8km az=281.0*
*SKO **28** 03:48:52.3, 40.°68N×20.°65E, h5km*

ISC 28 03:48:51.5±1.3, 40.°73N±0.°04×20.°62E±0.°08, h1km±16km, n15, σ0s53/28, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.17**	**128**	*i* PG	**Pg**	**03 48 54.9**	**+0.2**
KBN				*i* SG	**Sg**	**03 48 57.1**	**+0.3**
KBN	**Korca**	**0.17**	**128**	*i* Pg	**Pg**	**03 48 54.9**	**+0.2**
KBN				*i* Sg	**Sg**	**03 48 57.1**	**+0.3**
NEST	**Nestorio**	**0.45**	**133**	P	**Pg**	**03 48 59.3**	**-0.9**
NEST				S	**Sg**	**03 49 05.7**	**-0.3**
NEST	**Nestorio**	**0.45**	**133**	P	**Pg**	**03 48 59.3**	**-0.9**
NEST				S	**Sg**	**03 49 05.7**	**-0.3**
LSK	**Leskovik**	**0.57**	**181**	*i* PG	**Pg**	**03 49 02.5**	**0.0**
LSK				*i* SG	**Sg**	**03 49 10.8**	**+0.9**
LSK	**Leskovik**	**0.57**	**181**	*i* Pg	**Pg**	**03 49 02.5**	**0.0**
LSK				*i* Sg	**Sg**	**03 49 10.8**	**+0.9**
FNA	**Florina**	**0.58**	**84**	P	**Pg**	**03 49 02.4**	**-0.2**
FNA				S	**Sg**	**03 49 10.7**	**+0.6**
FNA	**Florina**	**0.58**	**84**	P	**Pg**	**03 49 02.4**	**-0.2**
FNA				S	**Sg**	**03 49 10.7**	**+0.6**
BIA	**Bitola**	**0.61**	**61**	P	**Pg**	**03 49 02.6**	**-0.6**
BIA				S	**Sg**	**03 49 11.4**	**+0.3**
BIA	**Bitola**	**0.61**	**61**	*e*Pg	**Pg**	**03 49 03.0**	**-0.2**
BIA				*e*Sg	**Sg**	**03 49 12.2**	**+1.1**
BIA				*e*Lg		03 49 12.4		
	comp=E,40nm,0.2s							
BIA				*e*Lg		03 49 12.5		
	comp=N,43nm,0.2s							
BIA	**Bitola**	**0.61**	**61**	P	**Pg**	**03 49 02.6**	**-0.6**
BIA				S	**Sg**	**03 49 11.4**	**+0.3**
KRUS	**Krusevo**	**0.80**	**36**	*e*Pg	**Pg**	**03 49 07.2**	**+0.3**
KZN	**Kozani**	**0.97**	**115**	P	**Pg**	**03 49 09.1**	**-1.1**
KZN				S	**Sg**	**03 49 22.8**	**0.0**
KZN	**Kozani**	**0.97**	**115**	P	**Pg**	**03 49 09.1**	**-1.1**
KZN				S	**Sg**	**03 49 22.8**	**0.0**
VAY	**Valandovo**	**1.59**	**67**	*e*Pn	**Pn**	**03 49 20.9**	**+0.1**

*ISCJB **28** 03:52:35.4±0.5, 40.°70N±0.°03×20.°69E±0.°04, h13km±4km, Error ellipse: s-maj=5.5km s-min=4.7km az=15.2*
*THE **28** 03:52:35.0, 40.°69N×20.°67E, h16km, ML2.8/3, Error ellipse: s-maj=1.0km s-min=0.6km az=45.0*
*CSEM **28** 03:52:35.3±0.2, 40.°66N×20.°70E, h19km±2km, ML2.9, Error ellipse: s-maj=5.9km s-min=4.6km az=62.0*
*TIR **28** 03:52:36.4, 40.°66N×20.°81E, h10km, ML2.9*
*SKO **28** 03:52:37.0, 40.°73N×20.°75E, h11km*

ISC 28 03:52:35.6±0.6, 40.°68N±0.°03×20.°70E±0.°05, h17km±4km, n25, σ0s96/41, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.09**	**130**	*i* PG	**Pg**	**03 52 38.4**	**-0.6**
KBN				*i* SG	**Sg**	**03 52 40.5**	**-0.8**
KBN	**Korca**	**0.09**	**130**	*i* Pg	**Pg**	**03 52 38.4**	**-0.6**
KBN				*i* Sg	**Sg**	**03 52 40.5**	**-0.8**
NEST	**Nestorio**	**0.38**	**135**	P	**Pg**	**03 52 42.9**	**-0.6**
NEST				S	**Sg**	**03 52 49.1**	**+0.4**
NEST	**Nestorio**	**0.38**	**135**	P	**Pg**	**03 52 42.9**	**-0.6**
NEST				S	**Sg**	**03 52 49.1**	**+0.4**
FNA	**Florina**	**0.53**	**79**	P	**Pg**	**03 52 46.0**	**-0.1**
FNA				S	**Sg**	**03 52 54.2**	**+1.0**
FNA	**Florina**	**0.53**	**79**	P	**Pg**	**03 52 46.0**	**-0.1**
FNA				S	**Sg**	**03 52 54.2**	**+1.0**
LSK	**Leskovik**	**0.54**	**188**	*i* PG	**Pg**	**03 52 46.1**	**-0.2**
LSK				*i* SG	**Sg**	**03 52 53.7**	**+0.2**
LSK	**Leskovik**	**0.54**	**188**	*i* Pg	**Pg**	**03 52 46.1**	**-0.2**
LSK				*i* Sg	**Sg**	**03 52 53.7**	**+0.2**
BIA	**Bitola**	**0.58**	**55**	P	**Pg**	**03 52 46.6**	**-0.6**
BIA				S	**Sg**	**03 52 55.4**	**+0.4**
BIA	**Bitola**	**0.58**	**55**	*e*Pg	**Pg**	**03 52 46.6**	**-0.5**
BIA				*e*Sg	**Sg**	**03 52 55.2**	**+0.2**
BIA				*e*Lg		03 52 55.3		
	comp=E,72nm,0.4s							
BIA				*e*Lg		03 52 55.9		
	comp=N,40nm,0.2s							
BIA	**Bitola**	**0.58**	**55**	P	**Pg**	**03 52 46.6**	**-0.6**
BIA				S	**Sg**	**03 52 55.4**	**+0.4**
KRUS	**Krusevo**	**0.80**	**31**	*e*Pg	**Pg**	**03 52 50.4**	**-0.9**
KZN	**Kozani**	**0.90**	**114**	P	**Pb**	**03 52 52.2**	**-0.6**
KZN				S	**Sb**	**03 53 05.5**	**+1.0**
KZN	**Kozani**	**0.90**	**114**	P	**Pb**	**03 52 52.2**	**-0.6**
KZN				S	**Sb**	**03 53 05.5**	**+1.0**
TIR	**Tirane**	**0.91**	**317**	P	**Pb**	**03 52 51.6**	**-1.4**
TIR	**Tirane**	**0.91**	**317**	P	**Pb**	**03 52 51.6**	**-1.4**
SRN	**Sarande**	**0.96**	**214**	*i* PG	**Pg**	**03 52 56.6**	**+2.3**
SRN				*i* SG	**Sg**	**03 53 10.9**	**+4.0**
IGT	**Igoumenitsa**	**1.18**	**194**	P	**Pn**	**03 52 56.4**	**-0.9**
IGT	**Igoumenitsa**	**1.18**	**194**	P	**Pn**	**03 52 56.4**	**-0.9**
PUK	**Puka**	**1.49**	**336**	*i* PG	**Pg**	**03 53 06.2**	**+2.0**
PUK	**Puka**	**1.49**	**336**	*i* Pg	**Pg**	**03 53 06.2**	**+2.0**
LIT	**Litokhoron**	**1.49**	**112**	P	**Pn**	**03 53 00.4**	**-1.1**
LIT				S	**Sn**	**03 53 21.0**	**+0.5**
LIT	**Litokhoron**	**1.49**	**112**	P	**Pn**	**03 53 00.4**	**-1.1**
LIT				S	**Sn**	**03 53 21.0**	**+0.5**
BCI	**Bajram Curri**	**1.75**	**345**	*i* PG	**Pg**	**03 53 09.9**	**+0.7**
BCI	**Bajram Curri**	**1.75**	**345**	*i* Pg	**Pg**	**03 53 09.9**	**+0.7**

BJI 28 03:54:00.8, 30.°92N×103.°46E, h15km, ML3.5/10, Ms3.6/1, Ms7 3.4/1, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.26**	**92**	ǁPg	Pg	03 54 06.0	-0.3
CD2				Sg	Sg	03 54 12.0	+1.9
CD2				smax			
	comp=N,6μm,0.6s						
CD2				smax			
	comp=E,8μm,0.7s						
LZH	**Lanzhou**	**5.16**	**3**	Pg	Pg	03 55 33.5	-6.2
LZH				Sg	Sg	03 56 40.0	-6.5
LZH				smax			
	comp=N,71nm,1.2s						
LZH				smax			
	comp=E,54nm,1.2s						
LZH				LR	LR		
	comp=N,510nm,7.3s						
LZH				LR	LR		
	comp=E,260nm,8.5s						
LZH				LR	LR		
	comp=Z,360nm,9.3s						
GYA	**Guiyang**	**5.26**	**147**	Pn	Pn	03 55 19.5	+0.6
GYA				Pg	Pg	03 55 37.5	-4.1
GYA				Sn	Sn	03 56 24.8	+5.5
GYA				smax			
	comp=N,50nm,0.8s						
GYA				smax			
	comp=E,60nm,0.8s						
XAN	**Xi'an**	**5.56**	**55**	Pn	Pn	03 55 28.5	+5.5
XAN				Pg	Pg	03 55 47.8	+0.4
XAN				Sn	Sn	03 56 23.8	-2.9
XAN				Sg	Sg	03 56 49.8	-10
XAN				smax			
	comp=N,62nm,0.8s						
XAN				smax			
	comp=E,28nm,0.9s						

*ISCJB **28** 03:56:01.3±1.4, 50.°14N±0.°07×129.°8W±0.°2, h10km, mb3.6/2, Error ellipse: s-maj=19.3km s-min=8.4km az=158.6*
*IDC **28** 03:56:01.2±2.7, 50.°12N×129.°86W, h0km, mb3.9/1, mb1 3.6/5, mb1mx3.4/25, mbtmp3.4/5, ML3.4/4, MS2.6/2, Ms1 2.6/2, ms1mx2.1/33, Error ellipse: s-maj=35.6km s-min=19.4km az=65.0*
*NEIC **28** 03:56:03.0±2.0, 50.°14N×129.°76W, h10km, mb3.5/2, Error ellipse: s-maj=38.2km s-min=10.4km az=54.0*

ISC 28 03:56:03.5±1.4, 50.°18N±0.°08×129.°7W±0.°2, h10km, n12, σ1s14/12, mb3.6/2, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBB	**Bella Bella**	**2.25**	**26**	Pn	**Pn**	**03 56 40.2**	**-0.5**
	16nm,0.3s,baz=47,slow=11,SNR=35						
BBB				Sn	**Sn**	**03 57 08.2**	**-0.2**
	23nm,0.3s,baz=134,slow=22,SNR=21						
PGC	**Sidney**	**4.36**	**108**	*e*Pn	**Pn**	**03 57 08.3**	**-1.4**
NLWA	**Neilton Lookou**	**4.76**	**124**	*e*Pn	**Pn**	**03 57 13.7**	**-1.4**
DLBC	**Dease Lake**	**8.28**	**359**	Pn	**Pn**	**03 58 03.0**	**-0.4**
	0.1nm,0.3s,baz=190,slow=18,SNR=2.7						
DLBC				LR	LR	04 01 33.2		
	comp=Z,43nm,19.7s,baz=283,slow=40						
MOOW	**Moose Ponds**	**14.43**	**109**	*e*Pn	**Pn**	**03 59 29.5**	**+1.9**
	2.9nm,0.8s						
BW06	**Boulder Array**	**15.70**	**110**	*e*Pn	**Pn**	**03 59 43.6**	**-1.0**
	7.7nm,1.4s						
PDAR	**Pinedale Array**	**15.70**	**110**	Pn	**Pn**	**03 59 46.6**	**+2.1**
	0.0nm,0.3s,baz=315,slow=12,SNR=6.9						
ILAR	**Eielson Array**	**17.21**	**335**	P	**Pn**	**04 00 04.0**	**+0.5**
	0.0nm,0.3s,baz=145,slow=11,SNR=2.9						
SDCO	**Great Sand Dun**	**21.29**	**116**	*e*P	**P**	**04 00 49.5**	**-0.4**
	1.8nm,1.2s,mb3.3						
ULM	**Lac du Bonnet**	**21.55**	**77**	P	**P**	**04 00 53.9**	**+1.3**
ULM	**Lac du Bonnet**	**21.55**	**77**	P	**P**	**04 00 53.9**	**+1.3**
	4.4nm,0.7s,mb4.0,baz=264,slow=9.2,SNR=2.2						
TGY	**Tagaytay City**	**91.23**	**294**	LR	LR	04 49 37.7		
	comp=Z,2.1nm,19.3s,baz=131,slow=35							

*IDC **28** 03:58:39.0±1.2, 30.°32N×84.°06E, h0km, mb3.9/8, mb1 4.1/9, mb1mx3.7/27, mbtmp3.9/9, ML3.5/1, MS3.5/4, Ms1 3.5/4, ms1mx3.1/30, Error ellipse: s-maj=42.5km s-min=24.4km az=64.0*
*ISCJB **28** 03:58:40.6±1.4, 30.°61N±0.°05×83.°63E±0.°04, h5km±8km, mb3.7/8, MS3.5/3, Error ellipse: s-maj=9.3km s-min=5.7km az=167.7*
*NEIC **28** 03:58:40.3±1.3, 30.°35N×83.°79E, h10km, mb3.7/2, Error ellipse: s-maj=25.1km s-min=18.9km az=46.0*
*NDI **28** 03:58:55.7±2.9, 30.°22N×83.°51E, h10km, ML3.6, mb3.7(NEIC)*

ISC 28 03:58:42.7±1.7, 30.°67N±0.°05×83.°62E±0.°05, h2km±11km, n30, σ1s23/30, mb3.7/8, MS3.5/3, 1D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTH	**Pithoragarh**	**3.15**	**250**	*e*PKP	**Pg**	**03 59 43.3**	**+0.2**
PTH				*ex*	x	04 00 32.1		
KLP	**Kalpa**	**4.69**	**282**	*e*S	**Sb**	**04 00 58.6**	**-3.8**
DDI	**Dehra Dun**	**4.81**	**267**	ǁ *ix*	**Pn**	**03 59 57.0**	**+0.8**
DDI				*ex*	**Sg**	**04 01 21.5**	**+4.2**
NDI	**New Delhi**	**5.91**	**252**	*ex*	**Pn**	**04 00 15.0**	**+3.7**
SONA	**Sohna**	**6.19**	**249**	*e*S	**Sn**	**04 01 26.7**	**+0.3**
LSA	**Lhasa**	**6.59**	**97**	*e*Pn	**Pn**	**04 00 24.2**	**+3.6**
KUDL	**Kundal**	**6.71**	**250**	*ex*	**Sb**	**04 01 59.0**	**-1.7**
KHET	**Khetri**	**7.29**	**251**	*e*S	**Sn**	**04 01 55.1**	**+1.5**
SHL	**Shillong**	**8.89**	**123**	*ex*	**Pn**	**04 00 51.0**	**-1.2**
SHL				*e*S	**Sn**	**04 02 33.0**	**0.0**
KSH	**Kashi**	**10.82**	**327**	*e*P	**Pn**	**04 01 14.3**	**-4.3**
KSH				*ep*P		04 01 17.5		
KSH				*es*P		04 01 20.3		
KSH				*e*PP		04 01 22.5		
KSH				*e*S	**Sn**	**04 03 14.8**	**-5.4**
KSH				*es*S		04 03 19.5		
KSH				*e*SS		04 03 27.5		
KSH				pmax	pmax			
	comp=Z,1.0nm,0.5s							
KSH				pmax	pmax			
	comp=Z,21nm,2.7s							
KSH				LR	LR			
	comp=N,310nm,13.1s							
KSH				LR	LR			
	comp=E,350nm,10.9s							
KSH				LR	LR			
	comp=Z,120nm,6.5s							
KBL	**Kabul**	**12.88**	**291**	*e*Pn	**Pn**	**04 01 45.6**	**-1.2**
	comp=Z,4.8nm,0.4s							
AML	**Almayashu**	**13.94**	**328**	Pn	**Pn**	**04 02 02.8**	**+1.6**
	comp=Z,5.3nm,0.8s							
AAK	**Ala-Archa**	**14.00**	**331**	LR	LR	04 07 53.7		
	comp=Z,156nm,19.4s,baz=138,slow=38							
MK31	**Makanchi Array**	**16.14**	**357**	*e*Pn	**Pn**	**04 02 31.2**	**+0.7**
MKAR	**Makanchi Array**	**16.14**	**357**	Pn	**Pn**	**04 02 29.3**	**-1.2**
MKAR	**Makanchi Array**	**16.14**	**357**	Pn	**Pn**	**04 02 29.3**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=178,slow=12,SNR=12							
KKAR	**Karatay Array**	**16.22**	**324**	*e*Pn	**Pn**	**04 02 27.9**	**-3.7**
	comp=Z,2.7nm,0.7s							
LZH	**Lanzhou**	**17.73**	**67**	*e*P	**Pn**	**04 02 53.5**	**+2.8**
LZH				pP	pP	04 02 58.5	+6.4
LZH				sP	sP	04 03 02.0	+10
LZH				pmax	pmax			
	comp=Z,17nm,1.2s							
KURK	**Kurchatov**	**20.37**	**351**	*e*P	**P**	**04 03 19.4**	**-1.1**
KURK				LR	LR	04 12 09.6		
KURK	**Kurchatov**	**20.37**	**351**	P	**P**	**04 03 18.7**	**-1.7**
	comp=Z,3.9nm,0.8s,baz=171,slow=11,SNR=22							
KURK				LR	LR	04 12 09.6		
	comp=Z,105nm,19.4s,MS3.2,baz=25,slow=39							
ZALV	**Zalesovo Beam**	**23.28**	**2**	P	**P**	**04 03 51.3**	**-0.3**
	comp=Z,0.8nm,0.3s,mb3.6,baz=194,slow=12,SNR=4.8							
BVAR	**Borovoye Array**	**24.34**	**340**	P	**P**	**04 04 02.3**	**+0.7**
	comp=Z,0.3nm,0.3s,mb3.2,baz=113,slow=11,SNR=3.3							
ABKAR	**Akbulak array**	**25.78**	**323**	*e*P	**P**	**04 04 15.4**	**+0.6**
	comp=Z,1.7nm,0.7s,mb3.7							
FINES	**FINESS Array B**	**48.14**	**327**	P	**P**	**04 07 24.4**	**+0.6**
	comp=Z,3.3nm,0.8s,mb4.4,baz=106,slow=12,SNR=6.7							
ARCES	**ARCESS Array B**	**50.57**	**337**	P	**P**	**04 07 43.0**	**+0.7**
	comp=Z,2.5nm,0.9s,mb4.2,baz=96,slow=9.0,SNR=9.5							
NOA	**NORSAR Array B**	**55.24**	**326**	LR	LR	04 33 02.7		
	comp=Z,33nm,18.0s,MS3.5,baz=185,slow=37							
FITZ	**Fitzroy Crossi**	**63.12**	**134**	LR	LR	04 41 30.4		
	comp=Z,66nm,19.6s,MS3.8,baz=71,slow=41							
WRA	**Warramunga Arr**	**70.06**	**129**	P	**P**	**04 09 49.4**	**-7.0**
	comp=Z,0.5nm,0.6s,mb3.6,baz=323,slow=6.4,SNR=5.3							
TORD	**Torodi Ar. Bea**	**76.55**	**277**	P	**P**	**04 10 33.8**	**-1.1**
	comp=Z,0.9nm,1.1s,mb3.6,baz=52,slow=5.6,SNR=4.2							
ILAR	**Eielson Array**	**77.08**	**20**	P	**P**	**04 10 35.8**	**-1.3**
	comp=Z,0.7nm,0.8s,mb3.6,baz=306,slow=4.3,SNR=7.6							

*ISCJB **28** 04:00:00.1±0.7, 34.°83N±0.°02×4.°23W±0.°03, h12km±5km, Error ellipse: s-maj=4.2km s-min=2.9km az=18.6*
*INMG **28** 04:00:00.6±1.2, 34.°83N×4.°26W, h0km, ML2.1, Error ellipse: s-maj=4.5km s-min=2.9km az=110.0*
*CSEM **28** 04:00:00.4±0.2, 34.°78N×4.°13W, h5km, MD3.4, Error ellipse: s-maj=4.6km s-min=3.1km az=117.0*
*MDD **28** 04:00:01.1±0.3, 34.°79N×4.°14W, h0km, mb3.8/12, Error ellipse: s-maj=4.1km s-min=2.9km az=119.0, PRIMO*
*CNRM **28** 04:00:01.9, 34.°78N×4.°05W, h4km, MD3.4*

ISC 28 04:00:00.9±0.6, 34.°81N±0.°02×4.°20W±0.°03, h9km±4km, n125, σ1s33/216, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOU	**Touzarine**	**0.40**	**67**	P	**Pg**	**04 00 07.0**	**-1.7**
TOU				S	**Sg**	**04 00 12.5**	**-1.4**
TOU	**Touzarine**	**0.40**	**67**	P	**Pg**	**04 00 07.0**	**-1.7**
TOU				S	**Sg**	**04 00 12.5**	**-1.4**
TOU	**Touzarine**	**0.40**	**67**	*i* P	**Pg**	**04 00 07.0**	**-1.7**
TOU				*i* S	**Sg**	**04 00 12.5**	**-1.4**
MPAL	**Palemas**	**0.47**	**26**	P	**Pg**	**04 00 10.0**	**0.0**
MPAL				S	**Sg**	**04 00 17.0**	**+0.8**
MPAL	**Palemas**	**0.47**	**26**	P	**Pg**	**04 00 10.0**	**0.0**
MPAL				S	**Sg**	**04 00 17.0**	**+0.8**
MPAL	**Palemas**	**0.47**	**26**	*i* P	**Pg**	**04 00 10.0**	**0.0**
MPAL				*i* S	**Sg**	**04 00 17.0**	**+0.8**
TZK	**Tazeka**	**0.72**	**179**	P	**Pg**	**04 00 13.5**	**-1.2**
TZK				S	**Sg**	**04 00 25.0**	**+0.9**
TZK	**Tazeka**	**0.72**	**179**	P	**Pg**	**04 00 13.5**	**-1.2**
TZK				S	**Sg**	**04 00 25.0**	**+0.9**
TZK	**Tazeka**	**0.72**	**179**	*i* P	**Pg**	**04 00 13.5**	**-1.2**
TZK				*i* S	**Sg**	**04 00 25.0**	**+0.9**
ZAI	**Zaio**	**1.20**	**82**	P	**Pb**	**04 00 22.0**	**-1.9**
ZAI				S	**Sb**	**04 00 36.0**	**-3.5**
ZAI	**Zaio**	**1.20**	**82**	P	**Pb**	**04 00 22.0**	**-1.9**
ZAI				S	**Sb**	**04 00 36.0**	**-3.5**
ZAI	**Zaio**	**1.20**	**82**	*i* P	**Pb**	**04 00 22.0**	**-1.9**
ZAI				*i* S	**Sb**	**04 00 36.0**	**-3.5**
RSA	**Sarsar**	**1.34**	**273**	P	**Pn**	**04 00 27.0**	**+1.1**
RSA				S	**Sb**	**04 00 46.0**	**+2.4**
RSA	**Sarsar**	**1.34**	**273**	P	**Pn**	**04 00 27.0**	**+1.1**
RSA				S	**Sb**	**04 00 46.0**	**+2.4**
RSA	**Sarsar**	**1.34**	**273**	*i* P	**Pn**	**04 00 27.0**	**+1.1**
RSA				*i* S	**Sb**	**04 00 46.0**	**+2.4**
ECEU	**Ceuta**	**1.46**	**319**	P	**Pn**	**04 00 25.5**	**-1.9**
	5.0nm,0.2s,SNR=7.4						
ECEU				S	**Sn**	**04 00 43.3**	**-3.3**
	4.3nm,0.1s						
ECEU	**Ceuta**	**1.46**	**319**	P	**Pn**	**04 00 25.5**	**-1.9**
	5.0nm,0.2s,SNR=7.4						
ECEU				S	**Sn**	**04 00 43.3**	**-3.3**
	4.3nm,0.1s						
ECEU	**Ceuta**	**1.46**	**319**	P	**Pn**	**04 00 25.5**	**-1.9**
	5.0nm,0.2s,SNR=7.4						
EALB	**Alboran**	**1.48**	**40**	P	**Pn**	**04 00 27.1**	**-0.6**
	18nm,0.1s,SNR=7.9						
EALB	**Alboran**	**1.48**	**40**	P	**Pn**	**04 00 27.1**	**-0.6**
	18nm,0.1s,SNR=7.9						
EALB	**Alboran**	**1.48**	**40**	P	**Pn**	**04 00 27.1**	**-0.6**
	18nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**1.82**	**345**	P	**Pn**	**04 00 30.2**	**-2.2**
	0.4nm,0.1s,SNR=12						
EMIJ				S	**Sn**	**04 00 53.1**	**-2.4**
	11nm,0.2s,SNR=6.4

14nm,0.5s
EQES Quesada 3.12 17 P Pn 04 00 51.4 +1.0
5.6nm,0.5s,SNR=23
EQES S Sn 04 01 29.4 +1.6
14nm,0.5s
EHUE Huescar 3.27 23 P Pn 04 00 54.1 +1.8
0.8nm,0.2s,SNR=7.9
EHUE S Sn 04 01 33.1 +1.7
4.2nm,0.4s,SNR=7.9
EHUE Huescar 3.27 23 P Pn 04 00 54.1 +1.8
0.8nm,0.2s,SNR=7.9
EHUE S Sn 04 01 33.1 +1.7
4.2nm,0.4s,SNR=7.9
EHUE Huescar 3.27 23 P Pn 04 00 54.1 +1.8
0.8nm,0.2s,SNR=7.9
EHUE S Sn 04 01 33.1 +1.7
4.2nm,0.4s,SNR=7.9
TZC Tazercounte 3.27 217 P Pn 04 00 53.0 +0.6
TZC S Sn 04 01 31.0 -0.4
TZC Tazercounte 3.27 217 P Pn 04 00 53.0 +0.6
TZC S Sn 04 01 31.0 -0.4
TZC Tazercounte 3.27 217 eP Pn 04 00 53.0 +0.6
TZC iS Sn 04 01 31.0 -0.4
EBAN Banos Encina 3.37 6 P Pn 04 00 54.8 +1.1
0.5nm,0.2s,SNR=7.9
EBAN Banos Encina 3.37 6 P Pn 04 00 54.8 +1.1
0.5nm,0.2s,SNR=7.9
EBAN Banos Encina 3.37 6 P Pn 04 00 54.8 +1.1
0.5nm,0.2s,SNR=7.9
EADA Adamuz 3.37 355 P Pn 04 00 53.7 0.0
0.2nm,0.1s,SNR=7.9
EADA Adamuz 3.37 355 P Pn 04 00 53.7 0.0
0.2nm,0.1s,SNR=7.9
EADA Adamuz 3.37 355 P Pn 04 00 53.7 0.0
0.2nm,0.1s,SNR=7.9
EMIN Mina Concepcio 3.57 327 P Pn 04 00 56.3 -0.1
0.2nm,0.1s,SNR=7.9
EMIN S Sn 04 01 35.3 -3.5
0.4nm,0.1s,SNR=7.9
EMIN Mina Concepcio 3.57 327 P Pn 04 00 56.3 -0.1
0.2nm,0.1s,SNR=7.9
EMIN S Sn 04 01 35.3 -3.5
0.4nm,0.1s,SNR=7.9
EMIN Mina Concepcio 3.57 327 P Pn 04 00 56.3 -0.2
0.2nm,0.1s,SNR=7.9
EGRO El Granado 3.81 317 P Pn 04 00 59.1 -0.6
0.8nm,0.1s,SNR=8.7
EGRO S Sn 04 01 41.4 -3.2
2.8nm,0.2s
EGRO El Granado 3.81 317 P Pn 04 00 59.1 -0.6
0.8nm,0.1s,SNR=8.7
EGRO S Sn 04 01 41.4 -3.2
2.8nm,0.2s
EGRO El Granado 3.81 317 P Pn 04 00 59.1 -0.6
0.8nm,0.1s,SNR=8.7
PVAQ Vaqueiros 3.85 313 ePn Pn 04 01 01.1 +0.7
PVAQ eSn Sn 04 01 43.3 -2.5
PVAQ A 04 01 50.0
4.3nm,0.4s
PVAQ Vaqueiros 3.85 313 Pn Pn 04 01 01.1 +0.7
PVAQ Sn Sn 04 01 43.3 -2.5
4.3nm,0.4s
PVAQ Vaqueiros 3.85 313 Pn Pn 04 01 01.1 +0.7
PVAQ Sn Sn 04 01 43.3 -2.5
4.3nm,0.4s
PVAQ Vaqueiros 3.85 313 ePn Pn 04 01 01.1 +0.7
PVAQ eSn Sn 04 01 43.3 -2.5
4.3nm,0.4s
EMUR La Murta 3.86 37 P Pn 04 01 00.5 +0.1
0.0nm,0.0s,SNR=4.0
EMUR S Sn 04 01 43.9 -1.9
26nm,1.1s,SNR=7.9
EMUR La Murta 3.86 37 P Pn 04 01 00.5 +0.1
0.0nm,0.0s,SNR=4.0
EMUR S Sn 04 01 43.9 -1.9
26nm,1.1s,SNR=7.9
EMUR La Murta 3.86 37 P Pn 04 01 00.5 +0.1
SNR=4.0
PBDV Barranco-do-Ve 3.88 310 ePn Pn 04 01 01.5 +0.7
PBDV eSn Sn 04 01 45.3 -1.2
PBDV Barranco-do-Ve 3.88 310 Pn Pn 04 01 01.5 +0.7
PBDV Sn Sn 04 01 45.3 -1.2
PBDV Barranco-do-Ve 3.88 310 Pn Pn 04 01 01.5 +0.7
PBDV Sn Sn 04 01 45.3 -1.2
PBDV Barranco-do-Ve 3.88 310 ePn Pn 04 01 01.5 +0.7
PBDV eSn Sn 04 01 45.3 -1.2
PBAR Barrancos 4.07 327 ePn Pn 04 01 03.5 +0.2
PBAR eSn Sn 04 01 48.5 -2.5
PBAR A 04 01 54.8
2.8nm,0.5s
PBAR Barrancos 4.07 327 Pn Pn 04 01 03.5 +0.2
PBAR Sn Sn 04 01 48.5 -2.5
2.8nm,0.5s
PBAR Barrancos 4.07 327 Pn Pn 04 01 03.5 +0.2
PBAR Sn Sn 04 01 48.5 -2.5
2.8nm,0.5s
PBAR Barrancos 4.07 327 ePn Pn 04 01 03.5 +0.2
PBAR eSn Sn 04 01 48.5 -2.5
2.8nm,0.5s
PCVE Castro Verde 4.20 313 ePn Pn 04 01 04.2 -0.9
PCVE eSn Sn 04 01 54.0 -0.2
PCVE Castro Verde 4.20 313 Pn Pn 04 01 04.2 -0.9
PCVE Sn Sn 04 01 54.0 -0.2
PCVE Castro Verde 4.20 313 Pn Pn 04 01 04.2 -0.9
PCVE Sn Sn 04 01 54.0 -0.2
PCVE Castro Verde 4.20 313 ePn Pn 04 01 04.2 -0.9
ETOB Tobarra 4.38 28 P Pn 04 01 08.9 +1.3
1.9nm,0.3s,SNR=12
ETOB S Sn 04 01 58.0 -0.8
15nm,1.0s
ETOB Tobarra 4.38 28 P Pn 04 01 08.9 +1.3
1.9nm,0.3s,SNR=12
ETOB S Sn 04 01 58.0 -0.8
15nm,1.0s
ETOB Tobarra 4.38 28 P Pn 04 01 08.9 +1.3
1.9nm,0.3s,SNR=12
ETOB S Sn 04 01 58.0 -0.8
15nm,1.0s
EBAD Badajoz 4.54 331 P Pn 04 01 10.8 +0.9
0.5nm,0.1s,SNR=4.7
EBAD S Sn 04 02 02.2 -0.6
3.2nm,0.2s,SNR=7.9
EBAD Badajoz 4.54 331 P Pn 04 01 10.8 +0.9
0.5nm,0.1s,SNR=4.7
EBAD S Sn 04 02 02.2 -0.6
3.2nm,0.2s,SNR=7.9
EBAD Badajoz 4.54 331 P Pn 04 01 10.8 +0.9
0.5nm,0.1s,SNR=4.7
EBAD S Sn 04 02 02.2 -0.6
3.2nm,0.2s,SNR=7.9
EVO Evora 4.82 322 ePn Pn 04 01 15.3 +1.6
EVO eSn Sn 04 02 07.0 -2.6
EVO Evora 4.82 322 Pn Pn 04 01 15.3 +1.6
EVO Sn Sn 04 02 07.0 -2.6
EVO Evora 4.82 322 Pn Pn 04 01 15.3 +1.6
EVO Sn Sn 04 02 07.0 -2.6
EVO Evora 4.82 322 ePn Pn 04 01 15.3 +1.6
EVO eSn Sn 04 02 07.0 -2.6
ESDC Sonseca Array 4.86 2 P Pn 04 01 14.9 +0.7
1.5nm,0.3s,baz=182,slow=12,SNR=6.3
ESDC S Sn 04 02 11.3 +0.7
0.1nm,0.2s,baz=180,slow=24,SNR=3.6
ESDC Sonseca Array 4.86 2 P Pn 04 01 14.9 +0.7
1.5nm,0.3s,baz=182,slow=12,SNR=6.3
ESDC S Sn 04 02 11.3 +0.7
0.1nm,0.2s,baz=180,slow=24,SNR=3.6
ESDC Sonseca Array 4.86 2 P Pn 04 01 14.9 +0.7
1.5nm,0.3s,baz=182,slow=12,SNR=6.3
ESDC S Sn 04 02 11.3 +0.7
0.1nm,0.2s,slow=24,SNR=3.6
EIBI Ibiza 6.12 45 P Pn 04 01 31.5 0.0
0.4nm,0.2s,SNR=7.9
EIBI Ibiza 6.12 45 P Pn 04 01 31.5 0.0
0.4nm,0.2s,SNR=7.9
EIBI Ibiza 6.12 45 P Pn 04 01 31.5 0.0
0.4nm,0.2s,SNR=7.9
ETOR Torete 6.24 15 P Pn 04 01 33.0 -0.1
2.4nm,0.3s,SNR=7.9
ETOR Torete 6.24 15 P Pn 04 01 33.0 -0.1
2.4nm,0.3s,SNR=7.9
ETOR Torete 6.24 15 P Pn 04 01 33.0 -0.1
2.4nm,0.3s,SNR=7.9
MVO Moncorvo 6.73 341 P Pn 04 01 39.4 -0.4
0.3nm,0.1s,SNR=7.9
MVO S Sn 04 02 50.9 -5.7
0.3nm,0.1s,SNR=7.9
MVO Moncorvo 6.73 341 P Pn 04 01 39.4 -0.4
0.3nm,0.1s,SNR=7.9
MVO S Sn 04 02 50.9 -5.7
0.3nm,0.1s,SNR=7.9
MVO Moncorvo 6.73 341 P Pn 04 01 39.4 -0.5
0.3nm,0.1s,SNR=7.9
ECAL Calabor 7.40 345 P Pn 04 01 51.2 +2.2
1.4nm,0.3s,SNR=4.0
ECAL S Sn 04 03 10.7 -2.3
0.5nm,0.2s,SNR=7.9
ECAL Calabor 7.40 345 P Pn 04 01 51.2 +2.2
1.4nm,0.3s,SNR=4.0
ECAL S Sn 04 03 10.7 -2.3
0.5nm,0.2s,SNR=7.9
ECAL Calabor 7.40 345 P Pn 04 01 51.2 +2.2
1.4nm,0.3s,SNR=4.0
EALK Alkurruntz 8.66 13 P Pn 04 02 07.8 +1.4
6.6nm,0.5s,SNR=4.8
EALK Alkurruntz 8.66 13 P Pn 04 02 07.8 +1.4
6.6nm,0.5s,SNR=4.8
EALK Alkurruntz 8.66 13 P Pn 04 02 07.8 +1.5
6.6nm,0.5s,SNR=4.8

ISCJB 28 04:10:14.1±2.2,20°.9S±0°.1×175°.9W±0°.1,h202km±20km, mb3.9/14,Error ellipse: s-maj=28.8km s-min=14.8km az=137.2
NEIC 28 04:10:14.7±1.5,20°.85S×175°.86W,h196km±14km,mb4.3/3, Error ellipse: s-maj=18.9km s-min=9.7km az=138.0
IDC 28 04:10:15.1±2.9,20°.84S×175°.87W,h197km±27km, mb3.7/12,mb1 3.9/13,mb1mx3.8/22,mbtmp3.7/13,MS3.5/2, Ms1 3.4/2,ms1mx2.8/29,Error ellipse: s-maj=29.1km s-min=12.6km az=143.0
ISC 28 04:10:15.3±2.1,20°.8S±0°.1×175°.9W±0°.1,h199km±19km, n23,σ0°.65/19,mb3.9/14,Tonga Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
MSVF Nonsavu 6.50 297 ePn Pn 04 11 36.2 -13
AFI Afiamalu 7.93 30 ePn Pn 04 12 07.2 -0.5
AFI Afiamalu 7.93 30 P Pn 04 12 08.3 +0.6
7.8nm,0.3s,baz=45,slow=20,SNR=4.3
RPZ Rata Peaks 25.28 203 P P 04 15 22.7 -0.5
6.6nm,0.8s,mb4.3,baz=143,slow=5.1,SNR=3.1
CTA Charters Tower 35.42 264 P P 04 16 53.4 +0.8
7.8nm,0.9s,mb4.2,baz=62,slow=8.9,SNR=3.9
CTA LR LR 04 27 14.3
comp=Z,94nm,21.4s,baz=229,slow=29
STKA Stephens Creek 39.43 245 LR LR 04 33 28.9
comp=Z,40nm,18.3s,baz=192,slow=35
ASAR Alice Springs 46.37 257 P P 04 18 21.4 -0.4
2.9nm,1.0s,mb3.6,baz=93,slow=8.1,SNR=12
ASAR PcP PcP 04 19 54.1 +0.6
1.0nm,0.9s,baz=102,slow=4.8,SNR=5.1
WRA Warramunga Arr 46.51 262 P P 04 18 22.5 -0.4
1.6nm,0.6s,mb3.6,baz=97,slow=5.8,SNR=18
QSPA South Pole Qui 69.24 180 eP P 04 21 00.2 +0.2
8.1nm,1.3s,mb4.2
PETK Petropavlovsk- 77.12 344 P P 04 21 46.4 +0.1
3.5nm,0.9s,mb4.0,baz=124,slow=9.4,SNR=3.5
NVAR Mina Array Bea 79.92 42 P P 04 22 02.3 +0.2
2.0nm,0.9s,mb3.8,baz=229,slow=9.4,SNR=11
KDAK Kodiak Island 80.70 12 P P 04 22 04.3 -1.4
1.8nm,0.4s,mb4.0,baz=207,slow=11,SNR=2.7
MNTX Cornudas Mount 85.34 54 eP P 04 22 29.4 -0.7
8.6nm,1.6s,mb4.2
TXAR Lajitas Array 85.58 57 P P 04 22 31.9 +0.5
TXAR Lajitas Array 85.58 57 P P 04 22 31.9 +0.5
1.4nm,1.0s,mb3.6,baz=224,slow=5.2,SNR=7.0
ANMO Albuquerque 86.08 50 eP P 04 22 34.6 +0.9
6.8nm,1.4s,mb4.2
ANMO Albuquerque 86.08 50 P P 04 22 34.9 +1.1
0.7nm,0.4s,mb3.7,baz=235,slow=6.4,SNR=5.2
PDAR Pinedale Array 87.86 42 P P 04 22 42.2 +0.1
0.2nm,0.3s,mb3.4,baz=305,slow=3.2,SNR=2.7
ILAR Eielson Array 88.22 12 P P 04 22 42.6 -0.5
0.6nm,1.0s,mb3.4,baz=214,slow=6.3,SNR=3.4
CMAR Chiang Mai Arr 92.09 289 P P 04 23 03.1 +0.8
0.6nm,0.4s,mb3.9,baz=102,slow=3.9,SNR=5.1
AKASG Malin Array Be 144.24 332 PKP PKPdf 04 29 26.0 -1.2
AKASG Malin Array Be 144.24 332 PKP PKPdf 04 29 26.0 -1.1
0.6nm,0.4s,baz=31,slow=4.1,SNR=5.5
BRTR Keskin Array B 148.52 313 PKPbc PKPbc 04 29 39.9 +1.3
2.2nm,1.0s,baz=48,slow=1.8,SNR=7.1

IDC 28 04:14:34.9±1.9,50°.05N×129°.64W,h0km,mb3.7/3, mb1 4.0/9,mb1mx3.7/28,mbtmp3.7/9,ML3.6/6,MS3.4/7, Ms1 3.4/7,ms1mx3.0/36,Error ellipse: s-maj=33.2km s-min=12.6km az=73.0
NEIC 28 04:14:36.8±0.7,50°.13N×129°.68W,h10km,mb4.1/12, Error ellipse: s-maj=12.6km s-min=4.4km az=55.0
ISC 28 04:14:38.1±2.0,50°.12N±0°.05×129°.7W±0°.1,h22km±18km, n64,σ0°.95/64,mb3.9/8,MS3.5/3,Vancouver Island region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BBB Bella Bella 2.30 25 Pn Pn 04 15 13.4 -1.2
BBB Sn Sn 04 15 41.9 -0.3
BBB Bella Bella 2.30 25 Pn Pn 04 15 13.4 -1.2
71nm,0.3s,baz=41,slow=13,SNR=39
BBB Sn Sn 04 15 41.9 -0.2
62nm,0.3s,baz=131,slow=22,SNR=18
DIB Dawson Inlet, 3.53 332 Pn Pn 04 15 28.8 -2.7
PGC Sidney 4.35 107 ePn Pn 04 15 41.3 -1.5
NLWA Neilton Lookou 4.74 123 ePn Pn 04 15 47.6 -0.4
JCW Jim Creek 5.46 108 ePn Pn 04 15 57.4 -0.7
15nm,0.6s
JCW eS Sn 04 17 00.3 +0.2
CRAG Craig 5.74 340 ePn Pn 04 16 01.5 -0.4
LON Longmire 6.25 120 ePn Pn 04 16 08.7 -0.2
5.1nm,0.6s
LVP Lakeview Peak 6.36 127 P Pn 04 16 09.4 -1.0
TWW Teanaway 6.58 114 P Pn 04 16 14.2 +0.8
LTY Liberty 6.64 112 P Pn 04 16 14.2 -0.1
ETW Entiat 6.68 109 ePn Pn 04 16 14.7 -0.2
10nm,0.6s
TBM Table Mountain 6.72 113 P Pn 04 16 15.5 +0.1
MDW Midway 7.50 114 P Pn 04 16 25.8 -0.3
HAWA Hanford 7.75 115 ePn Pn 04 16 28.8 -0.7
7.8nm,0.6s
OD2 Odessa Site #2 7.77 106 ePn Pn 04 16 28.5 -1.2
DLBC Dease Lake 8.33 359 ePn Pn 04 16 38.0 +0.6
DLBC LR LR 04 19 41.5
DLBC Dease Lake 8.33 359 Pn Pn 04 16 38.1 +0.7
0.3nm,0.3s,baz=190,slow=13,SNR=9.0
DLBC LR LR 04 19 41.5
comp=Z,181nm,20.2s,baz=134,slow=36
NEW Newport 8.46 98 ePn Pn 04 16 39.0 -0.1
5.4nm,0.8s
YBH Yreka Blue Hor 9.70 147 LR LR 04 20 07.8
comp=Z,222nm,18.7s,baz=333,slow=35
BSMT Bassoo Peak 10.07 97 ePn Pn 04 17 01.7 +0.4
2.3nm,0.7s
JTMT Jette 10.43 97 ePn Pn 04 17 06.2 +0.1
4.4nm,0.6s
SWMT Swartz Lake 10.69 98 ePn Pn 04 17 07.9 -1.9
2.8nm,0.7s
CHMT Chamberlain Mo 11.38 100 ePn Pn 04 17 19.8 +0.6
5.2nm,1.1s
HLID Hailey 12.35 116 ePn Pn 04 17 33.0 +0.6
2.9nm,1.1s
DLMT Dillon 12.46 106 ePn Pn 04 17 33.0 -0.9
3.4nm,0.7s
MCMT McKenzie Canyo 12.57 108 ePn Pn 04 17 34.4 -1.0
1.6nm,0.7s
IMW Indian Meadow 14.23 109 ePn Pn 04 17 59.8 +1.8
9.6nm,0.9s
IMW e 04 18 07.5
NVAR Mina Array Bea 14.24 141 Pn Pn 04 17 57.8 -0.5
0.3nm,0.3s,baz=150,slow=13,SNR=4.6
MOOW Moose Ponds 14.42 109 ePn Pn 04 18 03.1 +2.4
9.4nm,0.8s
MOOW e 04 18 09.8
TPAW Teton Pass 14.44 110 ePn Pn 04 18 01.2 +0.2
41nm,1.4s
TPAW e 04 18 10.0
REDW Red Top Meadow 14.57 110 ePn Pn 04 18 03.3 +0.5
32nm,1.5s
LOHW Long Hollow 14.58 109 ePn Pn 04 18 05.2 +2.3
5.0nm,0.8s
LOHW e 04 18 11.4
RLMT Red Lodge 14.65 102 ePn Pn 04 18 01.1 -2.8
11nm,1.2s
YKA Yellowknife Ar 14.91 28 Pn Pn 04 18 07.6 +0.4
YKA Yellowknife Ar 14.91 28 Pn Pn 04 18 07.6 +0.4
0.2nm,0.3s,baz=216,slow=12,SNR=3.7
HWUT Hardware Ranch 15.21 117 ePn Pn 04 18 13.3 +1.9
6.2nm,1.4s
DUG Dugway 15.48 123 ePn Pn 04 18 15.7 +0.8
BW06 Boulder Array 15.69 110 ePn Pn 04 18 19.1 +1.5
30nm,1.8s
PDAR Pinedale Array 15.69 110 Pn Pn 04 18 18.8 +1.2
0.1nm,0.3s,baz=311,slow=10,SNR=17
EGAK Eagle 15.89 342 ePn Pn 04 18 20.6 +0.7
15nm,1.3s
ARUT Antelope Range 16.96 130 eP Pn 04 18 34.5 +0.7
ILAR Eielson Array 17.25 335 P Pn 04 18 38.5 +1.3
0.0nm,0.3s,baz=148,slow=8.6,SNR=10
ILAR LR LR 04 24 25.3
comp=Z,96nm,19.9s,baz=150,slow=34
FFC Flin Flon 17.47 64 eP Pn 04 18 40.3 +0.2
32nm,0.9s
SRU San Rafael 17.49 122 eP Pn 04 18 40.2 -0.2
3.8nm,0.8s
INK Inuvik 18.34 356 eP Pn 04 18 50.7 +0.1
28nm,1.8s
INK LR LR 04 25 31.2
INK Inuvik 18.34 356 P Pn 04 18 51.4 +0.8
0.1nm,0.3s,baz=182,slow=9.1,SNR=4.9
INK LR LR 04 25 31.2
comp=Z,101nm,20.2s,baz=150,slow=36
PV10 Paradox Valley 18.83 121 eP Pn 04 18 56.5 -0.3
166nm,1.0s
PV01 Paradox Valley 19.26 120 eP Pn 04 19 02.6 +0.6
693nm,1.2s
ISCO Idaho Springs 19.85 112 eP Pn 04 19 07.8 -1.2
MVCO Mesa Verde 19.97 122 eP Pn 04 19 09.5 -0.9
26nm,1.5s
SDCO Great Sand Dun 21.27 116 eP P 04 19 22.6 -0.1
10.0nm,1.5s,mb3.9
ULM Lac du Bonnet 21.57 77 P P 04 19 26.9 +1.0
23nm,1.1s,mb4.5,baz=285,slow=11,SNR=9.2
ULM LR LR 04 28 03.1
comp=Z,205nm,18.8s,MS3.5,baz=329,slow=38
ANMO Albuquerque 22.75 123 eP P 04 19 39.1 +0.6
ANMO Albuquerque 22.75 123 P P 04 19 38.4 -0.1
0.6nm,0.6s,mb3.2,baz=334,slow=15,SNR=3.6
ECSD EROS Data Cent 23.36 93 eP P 04 19 44.9 0.0
13nm,0.7s,mb4.5
EYMN Ely 24.97 80 eP P 04 19 59.3 -0.4
16nm,0.9s,mb4.5
AMTX Amarillo 25.47 116 eP P 04 20 03.9 -0.5
MNTX Cornudas Mount 25.83 126 eP P 04 20 07.5 -0.2
3.8nm,1.4s,mb3.7
WMOK Wichita Mounta 27.28 113 eP P 04 20 19.8 -0.9
1.8nm,0.8s,mb3.6
TXAR Lajitas Array 28.60 127 P P 04 20 32.5 -0.1
TXAR Lajitas Array 28.60 127 P P 04 20 32.5 -0.1
0.4nm,0.8s,mb3.2,baz=323,slow=6.5,SNR=4.1
SCHQ Schefferville 37.44 58 LR LR 04 37 06.3
comp=Z,112nm,18.1s,MS3.7,baz=44,slow=36
GUMO Guam 76.78 275 LR LR 04 55 59.9
comp=Z,18nm,21.6s,MS3.3,baz=158,slow=32

DJA 28 04:24:25,6°.50S×104°.50E,h10km,MLv3.5/7,Sunda Strait

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KASI Kota Agung 0.97 360 P Pg 04 24 43.2 -0.5
KASI S Sg 04 24 57.0 +0.7
BLSI Bandar Lampung 1.35 33 P Pn 04 24 49.3 -0.6
BLSI S Sb 04 25 07.2 -0.5
RBSI Rajabasa 1.40 62 P Pn 04 24 50.3 -0.3
LWLI Liwa 1.54 343 P Pn 04 24 52.5 0.0
KLSI 1.81 7 P Pn 04 24 57.2 +0.9
KLSI S Sn 04 25 21.3 +2.0
MDSI Maura Dua 2.03 351 P Pn 04 24 59.8 +0.6
MNAI Manna 2.62 324 P Pn 04 25 07.4 0.0

DJA 28 04:34:57,0°.20S×99°.61E,h78km,MLv3.6/5,Southern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PPI Padang Panjang 0.83 108 P Pn 04 35 15.0 +1.1
PPI S Sn 04 35 28.7 +2.2
PDSI Padang 1.11 130 P Pn 04 35 17.6 +0.4
PDSI S Sn 04 35 32.8 +0.4
SISI Saibi 1.23 205 P Pn 04 35 19.3 +0.4
TPTI 4.21 325 P Pn 04 35 58.4 -0.4
KSI Kapahiang 4.54 139 P Pn 04 36 03.3 -0.1

IPEC 28 04:36:18.4±0.3,51°.57N×16°.12E,h0km,ML2.2/4,Error ellipse: s-maj=3.4km s-min=1.7km az=65.0
ISCJB 28 04:36:18.1±0.7,51°.48N±0°.03×16°.13E±0°.04,h0km,Error ellipse: s-maj=4.8km s-min=3.1km az=15.3
CSEM 28 04:36:19.1±0.2,51°.52N×16°.12E,h2km,ML3.1/10,Error ellipse: s-maj=4.3km s-min=3.6km az=17.0
PRU 28 04:36:20.7,51°.48N×16°.12E,h0km
WAR 28 04:36:20.4,51°.51N×16°.11E,ML2.5,Mining Induced
VIE 28 04:36:21.4±0.5,51°.33N×16°.17E,h0km,mb2.1/4,ML2.6/4, Error ellipse: s-maj=3.1km s-min=2.9km az=167.0 64 km WNW of Wroclaw Suspected Mining induced.
ISC 28 04:36:19.4±0.7,51°.52N±0°.03×16°.14E±0°.04,h0km,n37, σ0°.95/66,3C-1D,Poland

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KSP Ksiaz 0.68 172 ePg Pg 04 36 32.8 +0.4
KSP eSg Sg 04 36 42.1 +0.9
KSP Ksiaz 0.68 172 i Pg Pg 04 36 32.8 +0.4
KSP eSg Sg 04 36 42.0 +0.8
KSP eL 04 36 48.1
KSP Ksiaz 0.68 172 ePg Pg 04 36 32.7 +0.3
baz=351
KSP eSg Sg 04 36 42.0 +0.8
UPC Upice 1.01 185 ePG Pg 04 36 38.9 +0.1
UPC Upice 1.01 185 Pg Pg 04 36 38.9 +0.1
DPC Dobruska-Polom 1.17 174 ePG Pg 04 36 41.6 -0.2
DPC eSG Sg 04 36 57.6 +0.6
comp=Z,27nm,0.5s
DPC Dobruska-Polom 1.17 174 ePg Pg 04 36 41.6 -0.2
baz=354
DPC eSg Sg 04 36 57.0 0.0
baz=354
PVCC Panska Ves 1.40 226 ePG Pg 04 36 46.3 +0.1
PVCC Panska Ves 1.40 226 ePn Pn 04 36 45.6 -0.5
baz=42
PVCC Panska Ves 1.40 226 Pg Pg 04 36 46.3 +0.1
BRG Berggiesshubel 1.53 246 PG Pg 04 36 48.0 -0.6
BRG SG Sg 04 37 08.6 +0.2
comp=Z,44nm,0.5s
PRU Pruhonice 1.84 214 ePG Pg 04 36 54.3 -0.3
PRU eSG Sg 04 37 18.4 0.0
comp=Z,22nm,0.3s
PRU Pruhonice 1.84 214 Pg Pg 04 36 54.3 -0.3
PRU Sg Sg 04 37 18.4 0.0
comp=Z,22nm,0.3s
MORC Moravsky Berou 1.96 152 ePn Pn 04 36 53.3 -0.4
baz=334
MORC eSg Sg 04 37 21.5 -0.7
comp=Z,15nm,0.3s,baz=334
OKC Ostrava-Krasne 2.11 142 ePG Pg 04 36 59.2 -0.6
OKC eSG Sg 04 37 26.6 -0.5
comp=Z,14nm,0.6s
OKC Ostrava-Krasne 2.11 142 Pg Pg 04 36 59.2 -0.6
OKC Sg Sg 04 37 26.6 -0.5
comp=Z,14nm,0.6s
VRAC Vranov 2.23 172 ePn Pn 04 36 57.6 +0.1
baz=352
VRAC eSg Sg 04 37 29.9 -1.0
comp=Z,15nm,0.4s,baz=352
KRUC Moravsky 2.46 176 ePn Pn 04 37 00.8 +0.1
baz=356
KRUC eSg Sg 04 37 37.1 -1.3
comp=Z,5.5nm,0.3s,baz=356
OJC Ojcow 2.66 118 ePg Pg 04 37 11.0 +0.8
OJC eSg Sg 04 37 45.5 +0.9
OJC Ojcow 2.66 118 ePg Pg 04 37 11.0 +0.8
OJC eSg Sg 04 37 45.5 +0.9
NKC Novy Kostel 2.67 243 ePN Pn 04 37 06.0 +2.4
NKC ePG Pg 04 37 10.2 -0.3
NKC eSG Sg 04 37 47.1 +2.0

	comp=Z,35nm,0.3s							
NKC	**Novy Kostel**	**2.67**	**243**	Pn	**Pn**	**04 37 06.0**	**+2.4**	
NKC	**Novy Kostel**	**2.67**	**243**	Pg	**Pg**	**04 37 10.2**	**-0.3**	
NKC				Sg	**Sg**	**04 37 47.1**	**+2.0**	
	comp=Z,35nm,0.3s							
JAVC	**Velka Javorina**	**2.84**	**159**	*e*Pn	**Pn**	**04 37 07.0**	**+1.2**	
JAVC				*e*Sg	**Sg**	**04 37 52.1**	**+1.7**	
	comp=Z,10nm,0.9s							
KHC	**Kasperske Hory**	**2.90**	**216**	*e*PN	**Pn**	**04 37 06.5**	**-0.2**	
KHC				*e*PG	**Pg**	**04 37 12.6**	**-2.3**	
KHC				*e*SN	**Sn**	**04 37 45.3**	**+3.1**	
KHC				*e*SG	**Sg**	**04 37 52.2**	**-0.3**	
	comp=Z,8.6nm,0.4s							
KHC	**Kasperske Hory**	**2.90**	**216**	Pn	**Pn**	**04 37 06.5**	**-0.2**	
KHC	**Kasperske Hory**	**2.90**	**216**	Pg	**Pg**	**04 37 12.6**	**-2.3**	
KHC				Sg	**Sg**	**04 37 52.2**	**-0.3**	
	comp=Z,8.6nm,0.4s							
MOX	**Moxa**	**2.99**	**255**	*e*PG	**Pg**	**04 37 16.0**	**-0.6**	
MOX				*e*SG	**Sg**	**04 37 55.6**	**+0.4**	
CONA	**Conrad Observa**	**3.60**	**183**	⇑*i*Pn	**Pn**	**04 37 15.5**	**-0.8**	
CONA				⇓*i*Sg	**Sg**	**04 38 13.6**	**-1.2**	
	comp=Z,10nm,0.5s							
CONA	**Conrad Observa**	**3.60**	**183**	Pn	**Pn**	**04 37 15.5**	**-0.8**	
CONA				Sg	**Sg**	**04 38 13.6**	**-1.2**	
	comp=Z,10nm,0.5s							
BSD	**Bornholm Skovb**	**3.68**	**349**	*i* P	**Pn**	**04 37 16.0**	**-1.4**	
BSD				*i* S	**Sn**	**04 37 53.0**	**-8.4**	
BSD	**Bornholm Skovb**	**3.68**	**349**	*i* P	**Pn**	**04 37 16.0**	**-1.4**	
MOA	**Molln**	**3.87**	**199**	⇑*i*Pn	**Pn**	**04 37 20.2**	**+0.2**	
MOA				⇑*i*Sg	**Sg**	**04 38 23.7**	**+0.1**	
	comp=Z,8.3nm,0.5s							
MOA	**Molln**	**3.87**	**199**	Pn	**Pn**	**04 37 20.2**	**+0.2**	
MOA				Sg	**Sg**	**04 38 23.7**	**+0.1**	
	comp=Z,8.3nm,0.5s							
STHS	**Stebnicka Huta**	**3.88**	**121**	*e*	**Pg**	**04 37 34.5**	**+0.9**	
STHS	**Stebnicka Huta**	**3.88**	**121**	*e*SG	**Sg**	**04 38 19.8**	**-4.0**	
STHS	**Stebnicka Huta**	**3.88**	**121**	*e*Sg	**Sg**	**04 38 19.8**	**-4.0**	

ISK ***28*** *04:38:05.5,35°.32N×32°.73E,h7km,ML2.5*
ISCJB ***28*** *04:38:07.2±0.7,35°.16N±0°.07×32°.89E±0°.05,h24km±7km, Error ellipse: s-maj=11.7km s-min=6.2km az=8.1*
CSEM ***28*** *04:38:07.1±0.4,35°.22N×32°.86E,h15km,Mw2.7, Error ellipse: s-maj=11.6km s-min=9.3km az=151.0*
NEIC ***28*** *04:38:08.1,35°.10N×32°.95E,h9km,ML2.9(NIC), After NIC.*
NIC ***28*** *04:38:08.1±0.3,35°.10N×32°.95E,h9km,ML2.9,MW2.7*
ISC 28 04:38:07.3±0.6,35°.14N±0°.07×32°.89E±0°.04,h23km±6km, n22,σ1§25/33,2C,Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LEF	**Lefka**	**0.02**	**176**	PG	**Pb**	**04 38 10.7**	**-0.6**
LEF				*e*SG	**Sb**	**04 38 13.7**	**-0.2**
LEF	**Lefka**	**0.02**	**176**	*i* Pg	**Pb**	**04 38 10.7**	**-0.6**
LEF				*e*Sg	**Sb**	**04 38 13.7**	**-0.3**
ALFC	**Alevga** 30nm,0.1s	**0.24**	**274**	⇑P	**Pb**	**04 38 13.7**	**+0.4**
ALFC				S	**Sb**	**04 38 17.9**	**+0.6**
ALFC	**Alevga** 30nm,0.1s	**0.24**	**274**	⇑P	**Pb**	**04 38 13.7**	**+0.4**
ALFC				S	**Sb**	**04 38 17.9**	**+0.6**
MAMC	**Mammari**	**0.27**	**84**	P	**Pb**	**04 38 13.1**	**-0.7**
MAMC	**Mammari**	**0.27**	**84**	P	**Pb**	**04 38 13.1**	**-0.7**
SZAC	**Souni-Zanaja**	**0.39**	**181**	P	**Pb**	**04 38 15.1**	**-0.5**
SZAC	**Souni-Zanaja**	**0.39**	**181**	P	**Pb**	**04 38 15.1**	**-0.5**
CSS	**Prodhromos** 7.5nm,0.2s	**0.41**	**116**	P	**Pb**	**04 38 14.5**	**-1.4**
CSS				S	**Sb**	**04 38 19.7**	**-2.0**
CSS	**Prodhromos** 7.5nm,0.2s	**0.41**	**116**	P	**Pb**	**04 38 14.5**	**-1.4**
PPCY	**Paphos**	**0.52**	**240**	P	**Pb**	**04 38 18.5**	**+0.8**
PPCY	**Paphos**	**0.52**	**240**	P	**Pb**	**04 38 18.5**	**+0.8**
LFK	**Lefkose**	**0.55**	**75**	*e*PG	**Pb**	**04 38 19.1**	**+0.8**
LFK				*e*SG	**Sb**	**04 38 28.7**	**+3.0**
LFK	**Lefkose**	**0.55**	**75**	*e*Pg	**Pb**	**04 38 19.1**	**+0.9**
LFK				*e*Sg	**Sb**	**04 38 28.7**	**+3.1**
PHNC	**Paralimni** 1.8nm,0.3s	**0.95**	**98**	P	**Pb**	**04 38 27.8**	**+2.7**
PHNC				S	**Sb**	**04 38 37.8**	**+0.6**
PHNC	**Paralimni** 1.8nm,0.3s	**0.95**	**98**	P	**Pb**	**04 38 27.8**	**+2.7**
PHNC				S	**Sb**	**04 38 37.8**	**+0.6**
EREN	**Erenkoy**	**1.12**	**69**	*e*PN	**Pn**	**04 38 29.7**	**+2.1**
EREN	**Erenkoy**	**1.12**	**69**	*e*PN	**Pn**	**04 38 29.7**	**+2.2**
IKL	**Isikli**	**1.27**	**30**	*e*PN	**Pn**	**04 38 29.2**	**-0.4**
IKL				*e*SN	**Sn**	**04 38 45.0**	**-1.0**
IKL	**Isikli**	**1.27**	**30**	*e*Pn	**Pn**	**04 38 29.2**	**-0.5**
IKL				*e*Sn	**Sn**	**04 38 45.0**	**-1.0**
HDMB	**Hadim**	**1.85**	**350**	*e*PN	**Pn**	**04 38 35.8**	**-1.8**
HDMB	**Hadim**	**1.85**	**350**	*e*Pn	**Pn**	**04 38 35.8**	**-1.8**

ISCJB ***28*** *04:42:43.7±0.6,40°.70N±0°.03×20°.69E±0°.05,h12km±4km, Error ellipse: s-maj=6.2km s-min=5.0km az=28.0*
THE ***28*** *04:42:43.5,40°.69N×20°.67E,h8km±2km,ML2.8/2,Error ellipse: s-maj=2.3km s-min=0.6km az=92.0*
CSEM ***28*** *04:42:43.9±0.2,40°.66N×20°.72E,h15km,ML2.8/2,Error ellipse: s-maj=3.9km s-min=3.7km az=74.0*
SKO ***28*** *04:42:44.6,40°.70N×20°.68E,h6km*
TIR ***28*** *04:42:44.9±3.0,40°.65N×20°.71E,h12km±999km*
ISC 28 04:42:44.3±0.6,40°.68N±0°.03×20°.71E±0°.05,h15km±5km, n22,σ0§80/35,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.08**	**136**	*i* PG	**Pg**	**04 42 47.2**	**-0.1**
KBN				*i* SG	**Sg**	**04 42 48.9**	**-0.4**
KBN	**Korca** SNR=92	**0.08**	**136**	*i* Pg	**Pg**	**04 42 47.2**	**-0.1**
KBN	SNR=92			*i* Sg	**Sg**	**04 42 48.9**	**-0.4**
NEST	**Nestorio**	**0.37**	**136**	P	**Pg**	**04 42 51.1**	**-0.7**
NEST				S	**Sg**	**04 42 57.1**	**+0.2**
NEST	**Nestorio**	**0.37**	**136**	P	**Pg**	**04 42 51.1**	**-0.7**
NEST				S	**Sg**	**04 42 57.1**	**+0.2**
FNA	**Florina**	**0.51**	**78**	P	**Pg**	**04 42 54.1**	**-0.3**
FNA				S	**Sg**	**04 43 02.4**	**+1.1**
FNA	**Florina**	**0.51**	**78**	P	**Pg**	**04 42 54.1**	**-0.3**
FNA				S	**Sg**	**04 43 02.4**	**+1.1**
BIA	**Bitola**	**0.57**	**54**	P	**Pg**	**04 42 54.7**	**-0.9**
BIA				S	**Sg**	**04 43 03.6**	**+0.4**
BIA	**Bitola**	**0.57**	**54**	*e*Pg	**Pg**	**04 42 55.4**	**-0.1**
BIA				*e*Sg	**Sg**	**04 43 03.8**	**+0.6**
BIA	comp=E,80nm,0.3s			*e*Lg		04 43 03.9	
BIA	comp=N,87nm,0.2s			*e*Lg		04 43 04.4	
BIA	**Bitola**	**0.57**	**54**	P	**Pg**	**04 42 54.7**	**-0.9**
BIA				S	**Sg**	**04 43 03.6**	**+0.4**
KRUS	**Krusevo**	**0.80**	**30**	*e*Pg	**Pg**	**04 42 58.9**	**-0.8**
KZN	**Kozani**	**0.89**	**115**	P	**Pb**	**04 43 00.6**	**-0.8**
KZN				S	**Sb**	**04 43 14.4**	**+1.4**
KZN	**Kozani**	**0.89**	**115**	P	**Pb**	**04 43 00.6**	**-0.8**
KZN				S	**Sb**	**04 43 14.4**	**+1.4**
SRN	**Sarande**	**0.97**	**215**	*i* PG	**Pg**	**04 43 02.3**	**-0.7**
SRN				*i* SG	**Sg**	**04 43 17.4**	**+1.7**
SRN	**Sarande** SNR=90	**0.97**	**215**	*i* Pg	**Pg**	**04 43 02.3**	**-0.7**
IGT	**Igoumenitsa**	**1.19**	**194**	P	**Pn**	**04 43 05.5**	**-0.8**
IGT	**Igoumenitsa**	**1.19**	**194**	P	**Pn**	**04 43 05.5**	**-0.8**
LIT	**Litokhoron**	**1.48**	**113**	P	**Pn**	**04 43 09.8**	**-0.5**
LIT	**Litokhoron**	**1.48**	**113**	P	**Pn**	**04 43 09.8**	**-0.5**
PUK	**Puka**	**1.49**	**336**	*i* PG	**Pg**	**04 43 13.9**	**+0.9**
PUK				*i* SG	**Sg**	**04 43 36.9**	**+4.5**
PUK	**Puka** SNR=90	**1.49**	**336**	*i* Pg	**Pg**	**04 43 13.9**	**+0.9**
BCI	**Bajram Curri**	**1.75**	**344**	*i* PG	**Pg**	**04 43 18.2**	**+0.3**
BCI	**Bajram Curri** SNR=90	**1.75**	**344**	*i* Pg	**Pg**	**04 43 18.2**	**+0.3**

IDC ***28*** *04:47:51.0±1.0,50°.04N×129°.96W,h0km,mb4.0/8, mb1 4.3/16,mb1mx4.0/32,mbtmp4.0/16,ML3.7/8,MS3.9/32, Ms1 3.9/32,ms1mx3.8/39,Error ellipse: s-maj=20.9km s-min=11.0km az=73.0*
BJI ***28*** *04:47:51.4,50°.10N×129°.70W,h10km,mB4.9/6,mb4.9/10, Ms4.6/5,Ms7 4.3/5*
GCMT ***28*** *04:47:52.4±0.4,49°.76N×130°.13W,h12km,MW4.8, Moment Tensor Solution. s15,c20; s72,c107; Moment tensor: Scale 10¹⁶Nm; Mrr0.31±.07; Mθθ-1.83±.06; Mφφ1.52±.06; Mrθ-0.52±.19; Mrφ0.59±.06; Mθφ-0.01±.19; Best double couple: M₀1.80000×10¹⁶ NP1:φ₁145.00000°, δ78.00000°,λ-175.00000°. NP2:φ₂54.00000°,δ85.00000°, λ-12.00000°. Principal axes: T 1.6300, Plg5.0000°, Azm100.0000°; N 0.4100, Plg77.0000°, Azm211.0000°; P -2.0400, Plg12.0000°, Azm9.0000°; Data Used: II IU G IC CN.*
MOS ***28*** *04:47:52.8±1.1,50°.16N×129°.57W,h17km,mb4.8/13 Error ellipse: s-maj=12.2km s-min=5.3km az=123.9*
NEIC ***28*** *04:47:53.5±0.3,50°.13N×129°.70W,h10km,mb4.4/46, Error ellipse: s-maj=6.7km s-min=2.8km az=47.0*
ISC 28 04:47:56.1±1.1,50°.13N±0°.03×129°.67W±0°.06,h29km±9km, h13km±1.0km:pP-P,n197,σ1§05/179,mb4.5/39,MS4.0/27, 3C-1D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBB	**Bella Bella** 88nm,0.3s,baz=47,slow=11,SNR=110	**2.28**	**25**	Pn	**Pn**	**04 48 30.3**	**-1.4**
BBB	21nm,0.3s,baz=301,slow=23,SNR=10.0			Sn	**Sn**	**04 49 00.1**	**+1.4**
BBB	comp=Z,3μm,20.3s,baz=18,slow=42			LR	LR	04 49 33.4	
DIB	**Dawson Inlet,**	**3.54**	**331**	Pn	**Pn**	**04 48 47.4**	**-1.6**
PGC	**Sidney**	**4.32**	**108**	*e*Pn	**Pn**	**04 48 57.9**	**-1.8**
NLWA	**Neilton Lookou**	**4.71**	**123**	*e*Pn	**Pn**	**04 49 04.1**	**-0.9**
JCW	**Jim Creek**	**5.43**	**108**	*e*Pn	**Pn**	**04 49 14.7**	**-0.3**
JCW				*e*S	**Sn**	**04 50 15.1**	**-1.4**
RPW	**Rockport**	**5.59**	**104**	*e*Pn	**Pn**	**04 49 17.1**	**-0.1**
CRAG	**Craig**	**5.75**	**340**	*e*Pn	**Pn**	**04 49 17.8**	**-1.4**
FMW	**Mount Fremont**	**6.20**	**118**	P	**Pn**	**04 49 25.4**	**0.0**
LON	**Longmire**	**6.22**	**120**	*e*Pn	**Pn**	**04 49 25.6**	**-0.2**
WPW	**White Pass**	**6.40**	**119**	P	**Pn**	**04 49 29.2**	**+1.0**
TWW	**Teanaway**	**6.55**	**114**	P	**Pn**	**04 49 31.1**	**+0.7**
LTY	**Liberty**	**6.61**	**112**	P	**Pn**	**04 49 31.0**	**-0.1**
ETW	**Entiat**	**6.66**	**109**	*e*Pn	**Pn**	**04 49 31.5**	**-0.2**
TBM	**Table Mountain**	**6.70**	**113**	P	**Pn**	**04 49 32.3**	**0.0**
NAC	**Naches**	**6.79**	**117**	P	**Pn**	**04 49 33.8**	**+0.2**
EBG	**Ellensburg**	**6.85**	**115**	P	**Pn**	**04 49 34.4**	**0.0**
WTV	**Waterville**	**6.85**	**107**	P	**Pn**	**04 49 34.2**	**-0.2**
HOOD	**Mount Hood Mea**	**7.23**	**129**	*e*Pn	**Pn**	**04 49 39.7**	**0.0**
HOOD				*e*S	Sx	04 51 19.9	
MDW	**Midway**	**7.47**	**114**	P	**Pn**	**04 49 42.5**	**-0.5**
RSW	**Rattlesnake Hi** 3.3nm,0.3s	**7.69**	**115**	*e*Pn	**Pn**	**04 49 46.3**	**+0.4**
HAWA	**Hanford**	**7.72**	**115**	*e*Pn	**Pn**	**04 49 44.7**	**-1.7**
OD2	**Odessa Site #2**	**7.74**	**107**	*e*Pn	**Pn**	**04 49 45.3**	**-1.3**
DLBC	**Dease Lake**	**8.33**	**359**	*e*Pn	**Pn**	**04 49 55.2**	**+0.5**
DLBC	**Dease Lake** 0.3nm,0.3s,baz=201,slow=13,SNR=8.8	**8.33**	**359**	Pn	**Pn**	**04 49 55.0**	**+0.3**
DLBC	comp=Z,2μm,21.8s,baz=179,slow=37			LR	LR	04 52 58.6	
NEW	**Newport**	**8.43**	**98**	*e*Pn	**Pn**	**04 49 55.3**	**-0.7**
LNOR	**Lincton Mounta**	**8.74**	**115**	*e*Pn	**Pn**	**04 49 59.9**	**-0.4**
YBH	**Yreka Blue Hor** 0.1nm,0.3s,baz=317,slow=17,SNR=3.1	**9.69**	**147**	Pn	**Pn**	**04 50 14.4**	**+1.0**
YBH	comp=Z,364nm,18.9s,baz=329,slow=37			LR	LR	04 53 51.9	
BSMT	**Bassoo Peak**	**10.04**	**97**	*e*Pn	**Pn**	**04 50 18.3**	**+0.1**
WALA	**Waterton Lakes**	**10.29**	**90**	*e*Pn	**Pn**	**04 50 23.5**	**+2.0**
JTMT	**Jette**	**10.40**	**97**	*e*Pn	**Pn**	**04 50 22.7**	**-0.4**
MOD	**Modoc** 10nm,1.3s	**10.48**	**138**	*e*Pn	**Pn**	**04 50 25.1**	**+0.9**
EDM	**Edmonton**	**10.59**	**67**	*e*Pn	**Pn**	**04 50 26.8**	**+1.1**
SWMT	**Swartz Lake**	**10.66**	**98**	*e*Pn	**Pn**	**04 50 26.3**	**-0.3**
WDC	**Whiskeytown Da**	**10.78**	**150**	*e*Pn	**Pn**	**04 50 27.9**	**-0.4**
WVOR	**Wild Horse Val** 12nm,1.2s	**10.83**	**131**	*e*Pn	**Pn**	**04 50 29.0**	**0.0**
WVOR	**Wild Horse Val** comp=Z,12nm,1.2s	**10.83**	**131**	*e*P pmax	**Pn** pmax	**04 50 29.0**	**0.0**
MSO	**Missoula**	**10.95**	**102**	*e*Pn	**Pn**	**04 50 29.0**	**-1.5**
PNL	**Peninsula** comp=Z,12nm,0.7s	**11.07**	**333**	*e*Pn	**Pn**	**04 50 34.0**	**+1.8**
SLMT	**Seeley Lake**	**11.07**	**99**	*e*Pn	**Pn**	**04 50 32.1**	**-0.1**
CHMT	**Chamberlain Mo**	**11.35**	**100**	*e*Pn	**Pn**	**04 50 35.8**	**-0.3**
HYT	**Haines Junctio**	**11.60**	**341**	*e*Pn	**Pn**	**04 50 45.5**	**+6.2**
LRM	**Limekiln Ridge**	**12.31**	**104**	*e*Pn	**Pn**	**04 50 47.7**	**-1.4**
HLID	**Hailey**	**12.32**	**116**	*e*Pn	**Pn**	**04 50 49.9**	**+0.5**
HRY	**Holter Researc** comp=Z,3.9nm,0.8s	**12.33**	**99**	*e*Pn	**Pn**	**04 50 50.2**	**+0.8**
DLMT	**Dillon**	**12.43**	**106**	*e*Pn	**Pn**	**04 50 49.0**	**-1.9**
MCMT	**McKenzie Canyo** comp=Z,3.9nm,0.9s	**12.54**	**109**	*e*Pn	**Pn**	**04 50 51.5**	**-0.9**
PAHR	**Pah Rah Range**	**12.70**	**141**	*e*Pn	**Pn**	**04 50 55.3**	**+0.7**
BOZ	**Bozeman (W)**	**12.90**	**103**	*e*Pn	**Pn**	**04 50 57.1**	**-0.1**
WCN	**Washoe City** comp=Z,32nm,1.8s	**12.90**	**143**	*e*Pn	**Pn**	**04 50 58.1**	**+0.8**
WCN	**Washoe City** comp=Z,32nm,1.8s	**12.90**	**143**	*e*P pmax	**Pn** pmax	**04 50 58.1**	**+0.8**
BMN	**Battle Mountai**	**13.05**	**133**	*e*Pn	**Pn**	**04 51 05.4**	**+6.0**
EGMT	**Eagleton**	**13.22**	**92**	*e*Pn	**Pn**	**04 51 01.7**	**+0.1**
WAKR	**Walker**	**13.72**	**144**	*e*Pn	**Pn**	**04 51 08.1**	**-0.4**
YMR	**Madison River** comp=Z,57nm,1.5s	**13.78**	**106**	*e*Pn	**Pn**	**04 51 09.2**	**-0.1**
YNR	**Norris Junctio**	**13.93**	**106**	*e*Pn	**Pn**	**04 51 10.8**	**-0.6**
YFT	**Old Faithful**	**13.97**	**107**	*e*Pn	**Pn**	**04 51 13.2**	**+1.3**
IMW	**Indian Meadow**	**14.20**	**109**	*e*Pn	**Pn**	**04 51 15.5**	**+0.6**
IMW				*e*		04 51 24.3	
DCID1	**Drake Creek**	**14.21**	**110**	*e*Pn	**Pn**	**04 51 19.5**	**+4.4**
NVAR	**Mina Array Bea** comp=Z,0.1nm,0.3s,baz=317,slow=10.0,SNR=16	**14.23**	**141**	Pn	**Pn**	**04 51 15.2**	**-0.2**
FLWY	**Flagg Ranch**	**14.24**	**108**	*e*Pn	**Pn**	**04 51 16.1**	**+0.5**
RRI2	**Red Ridge**	**14.27**	**111**	*e*Pn	**Pn**	**04 51 17.6**	**+1.7**
HVU	**Hansel Valley**	**14.39**	**119**	*e*Pn	**Pn**	**04 51 17.9**	**+0.3**
MOOW	**Moose Ponds**	**14.40**	**109**	*e*Pn	**Pn**	**04 51 18.4**	**+0.8**
MOOW				*e*		04 51 26.6	
TPAW	**Teton Pass**	**14.41**	**110**	*e*Pn	**Pn**	**04 51 20.5**	**+2.6**
TPAW				*e*		04 51 26.7	
REDW	**Red Top Meadow**	**14.54**	**111**	*e*Pn	**Pn**	**04 51 23.3**	**+3.6**
SNOW	**Snow King Moun**	**14.55**	**110**	*e*Pn	**Pn**	**04 51 23.4**	**+3.6**
LOHW	**Long Hollow**	**14.56**	**109**	*e*Pn	**Pn**	**04 51 22.9**	**+3.0**
RLMT	**Red Lodge** comp=Z,73nm,1.8s	**14.62**	**102**	*e*Pn	**Pn**	**04 51 19.4**	**-1.4**
RLMT				*e*		04 51 29.4	
AHID	**Auburn Hatcher** comp=Z,41nm,0.9s	**14.74**	**113**	*e*Pn	**Pn**	**04 51 24.7**	**+2.3**
BGU	**Big Grassy Mou** comp=Z,14nm,1.2s	**14.82**	**122**	*e*Pn	**Pn**	**04 51 24.9**	**+1.4**
SPUT	**South Promonto**	**14.88**	**120**	*e*Pn	**Pn**	**04 51 26.1**	**+1.8**
YKA	**Yellowknife Ar**	**14.89**	**28**	Pn	**Pn**	**04 51 22.9**	**-1.3**
YKA				LR	LR	04 57 26.8	
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.3s,baz=219,slow=12,SNR=10	**14.89**	**28**	Pn	**Pn**	**04 51 22.9**	**-1.3**
YKA	comp=Z,82nm,21.4s,baz=205,slow=38			LR	LR	04 57 26.8	
DAWY	**Dawson**	**14.91**	**343**	*e*Pn	**Pn**	**04 51 23.7**	**-0.8**
HWUT	**Hardware Ranch** comp=Z,23nm,1.4s	**15.19**	**117**	*e*Pn	**Pn**	**04 51 28.8**	**+0.5**
DUG	**Dugway** comp=Z,22nm,1.1s	**15.46**	**124**	*e*Pn	**Pn**	**04 51 32.4**	**+0.6**
DUG				*e*		04 51 36.8	
DUG	**Dugway** comp=Z,22nm,1.1s	**15.46**	**124**	*e*P pmax	**Pn** pmax	**04 51 32.4**	**+0.6**
KDAK	**Kodiak Island**	**15.46**	**308**	Pn	**Pn**	**04 51 32.7**	**+1.0**
KDAK				LR	LR	04 55 53.0	
KDAK	**Kodiak Island** comp=Z,0.1nm,0.3s,baz=94,slow=9.4,SNR=4.1	**15.46**	**308**	Pn	**Pn**	**04 51 32.7**	**+1.0**
KDAK	comp=Z,816nm,21.5s,baz=127,slow=31			LR	LR	04 55 53.0	
SML	**Sawmill** comp=Z,4.6nm,1.2s	**15.61**	**326**	*e*Pn	**Pn**	**04 51 34.9**	**+1.3**
SML	**Sawmill** comp=Z,5.0nm,1.2s	**15.61**	**326**	*e*P pmax	**Pn** pmax	**04 51 34.9**	**+1.2**
BW06	**Boulder Array** comp=Z,55nm,1.6s	**15.66**	**110**	*e*Pn	**Pn**	**04 51 35.0**	**+0.5**
PDAR	**Pinedale Array** comp=Z,0.2nm,0.3s,baz=305,slow=11,SNR=40	**15.66**	**110**	Pn	**Pn**	**04 51 36.0**	**+1.5**
PDAR	comp=Z,445nm,21.4s,baz=339,slow=38			LR	LR	04 57 46.0	
PMR	**Palmer** comp=Z,29nm,1.7s	**15.77**	**324**	*e*P	**Pn**	**04 51 41.1**	**+5.4**
PMR	**Palmer** comp=Z,29nm,1.7s	**15.77**	**324**	*e*P pmax	**Pn** pmax	**04 51 41.1**	**+5.4**
EGAK	**Eagle** comp=Z,13nm,1.2s	**15.89**	**342**	*e*Pn	**Pn**	**04 51 37.9**	**+0.6**
JLU	**Jordanelle**	**15.92**	**120**	*e*Pn	**Pn**	**04 51 39.1**	**+1.3**
NLU	**North Lily Min**	**16.02**	**123**	*e*Pn	**Pn**	**04 51 39.5**	**+0.3**
DAU	**Daniels Canyon**	**16.16**	**120**	*e*Pn	**Pn**	**04 51 41.2**	**+0.3**
MPU	**Maple Canyon**	**16.22**	**122**	*e*P	**Pn**	**04 51 46.1**	**+4.4**
ISA	**Isabella**	**16.59**	**146**	*e*Pn	**Pn**	**04 51 48.8**	**+2.4**
DGMT	**Dagmar** comp=Z,62nm,1.4s	**16.67**	**86**	*e*Pn	**Pn**	**04 51 48.1**	**+0.7**
ARUT	**Antelope Range** comp=Z,20nm,1.3s	**16.94**	**131**	*e*Pn	**Pn**	**04 51 50.0**	**-0.8**
ARUT	**Antelope Range** comp=Z,20nm,1.3s	**16.94**	**131**	*e*P pmax	**Pn** pmax	**04 51 50.0**	**-0.8**
MSU	**Marysvale** comp=Z,19nm,1.4s	**17.02**	**126**	*e*Pn	**Pn**	**04 51 51.0**	**-0.8**
MSU	**Marysvale** comp=Z,19nm,1.4s	**17.02**	**126**	*e*P pmax	**Pn** pmax	**04 51 51.0**	**-0.8**
CCUT	**Cedar City** comp=Z,14nm,1.4s	**17.17**	**131**	*e*Pn	**Pn**	**04 51 53.4**	**-0.2**
SHPR	**Sheep Range** comp=Z,17nm,1.5s	**17.18**	**137**	*e*Pn	**Pn**	**04 51 53.4**	**-0.4**
ILAR	**Eielson Array** comp=Z,0.0nm,0.3s,baz=147,slow=11,SNR=19	**17.26**	**335**	P	**Pn**	**04 51 54.6**	**0.0**
ILAR	comp=Z,210nm,21.4s,baz=145,slow=34			LR	LR	04 57 44.8	
TRF	**Thorofare Moun** comp=Z,67nm,2.4s	**17.37**	**328**	*e*Pn	**Pn**	**04 51 56.5**	**+0.6**
FFC	**Flin Flon** comp=Z,31nm,0.9s	**17.44**	**64**	*e*P	**Pn**	**04 51 58.8**	**+1.9**
FFC	**Flin Flon**	**17.44**	**64**	*ce*P	**Pn**	**04 52 00.2**	**+3.3**
SRU	**San Rafael** comp=Z,23nm,1.1s	**17.47**	**122**	*e*Pn	**Pn**	**04 51 57.9**	**+0.6**
SRU	**San Rafael** comp=Z,23nm,1.1s	**17.47**	**122**	*e*P pmax	**Pn** pmax	**04 51 57.9**	**+0.6**
GSC	**Goldstone** comp=Z,16nm,1.3s	**17.53**	**143**	*e*P	**Pn**	**04 51 58.9**	**+0.7**
GSC	**Goldstone** comp=Z,16nm,1.3s	**17.53**	**143**	*e*P pmax	**Pn** pmax	**04 51 58.9**	**+0.7**
BPAW	**Bear Paw Mtn.** comp=Z,9.5nm,1.1s	**18.03**	**329**	*e*P	**Pn**	**04 52 04.2**	**+0.2**
SVW2	**Sparrevohn** comp=Z,38nm,2.3s	**18.16**	**317**	*e*P	**Pn**	**04 52 03.2**	**-2.5**
INK	**Inuvik** comp=Z,14nm,1.0s	**18.34**	**355**	*e*P	**Pn**	**04 52 06.6**	**-1.2**
INK				LR	LR	04 58 49.6	
INK	**Inuvik** comp=Z,0.1nm,0.3s,baz=160,slow=9.8,SNR=10	**18.34**	**355**	P	**Pn**	**04 52 08.5**	**+0.7**
INK	comp=Z,617nm,19.8s,baz=341,slow=36			LR	LR	04 58 49.6	
INK	**Inuvik** comp=Z,14nm,1.0s	**18.34**	**355**	*e*P pmax	**Pn** pmax	**04 52 06.6**	**-1.2**
RSSD	**Black Hills** comp=Z,10.0nm,1.0s	**18.40**	**99**	*e*P	**Pn**	**04 52 07.9**	**-0.8**
RSSD	**Black Hills** comp=Z,10.0nm,1.0s	**18.40**	**99**	*e*P pmax	**Pn** pmax	**04 52 07.9**	**-0.8**
PV10	**Paradox Valley** comp=Z,523nm,1.1s	**18.80**	**121**	*e*P	**Pn**	**04 52 14.4**	**+0.7**
PV04	**Paradox Valley**	**18.87**	**121**	*e*P	**Pn**	**04 52 12.9**	**-1.6**
PHWY	**Pilot Hill** comp=Z,14nm,1.0s	**19.00**	**108**	*e*P	**Pn**	**04 52 15.0**	**-1.1**
TTA	**Tatalina**	**19.19**	**322**	*e*P	**Pn**	**04 52 16.5**	**-1.6**
PV01	**Paradox Valley** comp=Z,3μm,1.3s	**19.24**	**121**	*e*P	**Pn**	**04 52 17.6**	**-1.3**
SDPT	**Sand Point** comp=Z,64nm,1.2s	**19.27**	**298**	*e*P	**Pn**	**04 52 17.8**	**-1.4**
SMCO	**Snowmass** comp=Z,30nm,1.3s	**19.43**	**116**	*e*P	**Pn**	**04 52 19.1**	**-2.0**
WUAZ	**Wupatki** comp=Z,5.2nm,1.1s	**19.75**	**131**	*e*P	**Pn**	**04 52 22.1**	**-2.9**
ISCO	**Idaho Springs** comp=Z,11nm,1.2s	**19.82**	**112**	*e*P	**Pn**	**04 52 25.2**	**-0.6**
ISCO	**Idaho Springs** comp=Z,11nm,1.2s	**19.82**	**112**	*e*P pmax	**Pn** pmax	**04 52 25.2**	**-0.7**
MVCO	**Mesa Verde** comp=Z,64nm,1.4s	**19.94**	**122**	*e*P	**Pn**	**04 52 24.9**	**-2.3**
GLA	**Glamis**	**20.29**	**142**	*e*P	**P**	**04 52 28.7**	**-0.6**
SDCO	**Great Sand Dun** comp=Z,20nm,1.2s,mb4.3	**21.24**	**116**	*e*P	**P**	**04 52 39.0**	**-0.6**
OGNE	**Ogallala** comp=Z,29nm,0.8s,mb4.7	**21.32**	**105**	*e*P	**P**	**04 52 40.0**	**-0.4**
ULM	**Lac du Bonnet** comp=Z,37nm,1.1s,mb4.7,baz=282,slow=12,SNR=13	**21.53**	**77**	P	**P**	**04 52 44.3**	**+1.7**
ULM	com

SEY	Seymchan	42.10	318⇑	*e*P		P	04 55 44.6	-0.3
CMIG	Matias Romero	43.19	127	LR		LR	05 13 02.7	
	comp=Z,54nm,20.9s,MS3.4,baz=315,slow=35							
PETK	Petropavlovsk-	43.41	303	LR		LR	05 11 11.5	
	comp=Z,70nm,20.5s,MS3.5,baz=258,slow=32							
TAOE	Nuku Hiva Isla	59.44	192	*e*LR		LR	05 15 17.2	
	comp=Z,368nm,27.1s							
MJAR	Matsushiro Arr	64.25	297	LR		LR	05 20 56.2	
	comp=Z,63nm,21.5s,MS3.8,baz=200,slow=31							
ROSC	El Rosal	64.59	115	LR		LR	05 25 44.4	
	comp=Z,63nm,20.6s,MS3.8,baz=204,slow=35							
NOA	NORSAR Array B	64.81	20	LR		LR	05 26 40.2	
	comp=Z,106nm,20.4s,MS4.0,baz=310,slow=36							
PMOR	Pomariorio Ree	66.81	199	*e*T			06 10 57.0	
FINES	FINESS Array B	67.09	12	LR		LR	05 29 21.9	
	comp=Z,132nm,20.9s,MS4.1,baz=353,slow=37							
KLMR	Klimovskoe	69.03	6	P		P	04 58 58.0	-0.3
KLMR				pmax		pmax		
	comp=Z,25nm,1.8s,mb4.8							
KSRS	Korea Array	69.31	304	LR		LR	05 29 48.7	
	comp=Z,400nm,18.2s,MS3.7,baz=270,slow=36							
PPT	Papeete	69.66	200	*e*LR		LR	05 20 04.4	
	comp=Z,200nm,26.2s,baz=18							
PPT	Papeete	69.66	200	LR		LR	05 24 34.5	
	comp=Z,112nm,19.3s,MS4.1,baz=0.5,slow=32							
SONM	Songino Array	71.13	324	LR		LR	05 33 59.0	
	comp=Z,92nm,18.4s,MS4.1,baz=46,slow=39							
ZALV	Zalesovo Beam	72.32	339	LR		LR	05 33 08.9	
	comp=Z,52nm,18.2s,MS3.8,baz=330,slow=38							
RKT	Rikitea	73.07	185	*e*LR		LR	05 21 47.3	
	comp=Z,313nm,28.0s							
ARU	Arti	73.59	355	*d*	*i*P	P	04 59 26.0	+0.1
ARU							05 02 05.9	
ARU				S		S	05 08 57.5	+3.8
ARU				SS		SS	05 13 37.8	+2.3
ARU				pmax		pmax		
	comp=Z,8.0nm,1.7s,mb4.4							
OBN	Obninsk	74.50	8	*e*P		P	04 59 32.7	+1.5
OBN				*e*			04 59 37.1	
OBN				*e*S		S	05 09 08.5	+4.6
OBN				pmax		pmax		
	comp=Z,6.0nm,0.6s,mb4.7							
HHC	Hu-ho-hao-te	74.71	316	*e*P		P	04 59 33.0	+0.3
HHC				pP		pP	04 59 37.0	-4.9
HHC				PP		PP	05 02 21.5	+2.2
HHC				S		S	05 09 04.8	-2.0
HHC				SS		SS	05 13 54.8	+1.3
HHC				pmax		pmax		
	comp=Z,13nm,0.7s,mb5.0							
HHC				pmax		pmax		
	comp=Z,63nm,3.8s							
HHC				LR		LR		
	comp=N,170nm,15.5s,MS4.7							
HHC				LR		LR		
	comp=E,210nm,14.3s,MS4.7							
HHC				LR		LR		
	comp=Z,60nm,15.5s,MS4.0							
BRVK	Borovoye	75.82	348	*e*P		P	04 59 41.3	+2.4
BRVK				pmax		pmax		
	comp=Z,9.0nm,2.5s,mb4.3							
KURK	Kurchatov	76.67	342	P		P	04 59 43.9	+0.1
	comp=Z,0.3nm,0.3s,mb3.6,baz=18,slow=7.3,SNR=3.5							
KURK				LR		LR	05 38 40.4	
	comp=Z,66nm,19.0s,MS4.0,baz=60,slow=40							
KURK	Kurchatov	76.67	342⇑	*e*P		P	04 59 43.3	-0.5
KURK				pmax		pmax		
	comp=Z,5.0nm,1.5s,mb4.2							
AKASG	Malin Array Be	77.94	14	P		P	04 59 50.8	-0.1
	comp=Z,0.2nm,0.3s,mb3.6,baz=343,slow=4.8,SNR=6.2							
AKASG				LR		LR	05 34 59.8	
	comp=Z,201nm,19.7s,MS4.5,baz=350,slow=36							
MKAR	Makanchi Array	79.58	338	P		P	04 59 59.1	-0.8
	comp=Z,0.5nm,0.8s,mb3.5,baz=46,slow=6.9,SNR=4.9							
MKAR				LR		LR	05 40 48.8	
	comp=Z,59nm,18.2s,MS4.0,baz=360,slow=40							
AKTK	Aktyubinsk	79.60	355	P		P	04 59 59.2	-0.8
AKTK				LR		LR	05 39 54.6	
AKTO	Aktyubinsk	79.60	355	P		P	04 59 59.2	-0.8
	comp=Z,0.6nm,0.5s,mb3.8,baz=326,slow=5.5,SNR=4.5							
AKTO				LR		LR	05 39 54.6	
	comp=Z,90nm,18.6s,MS4.1,baz=13,slow=39							
WMQ	Urumqi	80.92	334	*e*P		P	05 00 10.3	+3.1
WMQ				pP		pP	05 00 15.0	-1.5
WMQ				sP		sP	05 00 17.3	-2.6
WMQ				pmax		pmax		
	comp=Z,6.0nm,1.0s,mb4.5							
WMQ				pmax		pmax		
	comp=Z,52nm,4.2s							
WMQ				LR		LR		
	comp=N,74nm,20.8s							
WMQ				LR		LR		
	comp=Z,62nm,18.8s,MS4.0							
LZH	Lanzhou	82.02	319	*e*P		P	05 00 14.3	+1.1
LZH				pP		pP	05 00 17.5	-5.0
LZH				*e*PP		PP	05 03 23.5	+3.1
LZH				pmax		pmax		
	comp=Z,17nm,1.4s,mb4.8							
LZH				pmax		pmax		
	comp=Z,46nm,7.9s							
LPAZ	La Paz	85.34	122	P		P	05 00 31.8	+1.5
	comp=Z,1.7nm,1.1s,mb4.1,baz=4.7,slow=7.2,SNR=4.2							
LPAZ				LR		LR	05 40 19.9	
	comp=Z,62nm,21.4s,MS4.0,baz=113,slow=37							
CD2	Chengdu	86.47	316	P		P	05 00 36.0	+0.1
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb5.3							
CD2				pmax		pmax		
	comp=Z,130nm,5.0s							
KEST	Kesra	87.15	32	LR		LR	05 42 04.9	
	comp=Z,21nm,19.4s,MS3.5,baz=188,slow=37							
GYA	Guiyang	88.90	312	*e*P		P	05 00 48.0	+0.4
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s,mb5.1							
BRTR	Keskin Array B	89.33	13	LR		LR	05 44 49.6	
	comp=Z,46nm,19.2s,MS3.9,baz=167,slow=38							
KMI	Kunming	91.88	314	P		P	05 01 02.3	+0.8
KMI				pP		pP	05 01 06.0	-4.9
KMI				pmax		pmax		
	comp=Z,10.0nm,1.2s,mb5.0							
KMI				LR		LR		
	comp=N,130nm,22.9s,MS4.4							
KMI				LR		LR		
	comp=E,130nm,25.7s,MS4.4							
KMI				LR		LR		
	comp=Z,99nm,16.7s							
CPUP	Villa Florida	99.34	120	LR		LR	05 50 27.7	
	comp=Z,56nm,18.4s,MS4.1,baz=192,slow=38							
CMAR	Chiang Mai Arr	99.39	314	LR		LR	05 50 17.1	
	comp=Z,51nm,18.6s,MS4.0,baz=278,slow=38							

*KISR **28** 04:48:40.0±0.9, 32°.16N×48°.06E, h34km±365km, ML2.9*
*ISCJB **28** 04:48:41.7±0.5, 32°.40N±0°.03×47°.39E±0°.08, h10km, Error ellipse: s-maj=10.2km s-min=3.5km az=174.5*
*SGS **28** 04:48:45.6, 32°.23N×47°.43E, h53km*
*TEH **28** 04:48:46.2, 32°.46N×47°.45E, h30km*

ISC 28 04:48:42.9±0.5, 32°.38N±0°.03×47°.38E±0°.08, h10km, n14, σ0s94/19, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IKOM	Komasi	1.79	4	*e*Pn		Pn	Pn	04 49 14.1	+0.2
IKOM				*e*Sg		Sg	Sg	04 49 40.1	-0.4
IKOM				*e*				04 49 43.5	
	comp=Z,2μm,0.3s								
IGHG	Ghaleghazi	2.06	341	*e*Pn		Pn	Pn	04 49 18.0	+0.5
IGHG				*e*Sg		Sg	Sg	04 49 49.3	+0.3
IGHG				*e*				04 49 59.2	
	comp=Z,2μm,0.4s								
IVIS	Veis	2.18	348	*e*Pn		Pn	Pn	04 49 21.1	+1.8
IVIS				*e*				04 49 40.7	
	comp=Z,565nm,0.0s								
IDHR	Dehrash	2.45	341	*e*Pn		Pn	Pn	04 49 23.2	+0.2
IDHR				*e*				04 50 02.9	
	comp=Z,1μm,0.1s								
ILIN	Lien	2.55	352	*e*Sg		Sg	Sg	04 50 03.9	-1.0
MIB	Mutribah	2.57	181	*e*P		Pn	Pn	04 49 24.4	-0.3
MIB				*e*S		Sn	Sn	04 49 58.2	+2.2
MIB				AML		AML	AML	04 50 02.8	
	comp=Z,61nm,0.5s								
IPIR	Pirpir	2.98	83	*e*Pn		Pn	Pn	04 49 30.4	+0.1
IPIR				*e*				04 50 11.9	
	comp=Z,542nm,0.3s								
RDF	Al-Radifah	3.45	177	*e*P		Pn	Pn	04 49 36.1	-0.6
RDF				*e*S		Sn	Sn	04 50 18.7	+1.1
RDF				AML		AML	AML	04 50 21.0	
	comp=Z,21nm,0.5s								
IKLH	Kolahrood	3.66	74	*e*Pn		Pn	Pn	04 49 39.7	+0.2
IKLH				*e*				04 50 51.2	
	comp=Z,282nm,0.3s								
QRN	Al-Qurain	3.66	173	*e*P		Pn	Pn	04 49 38.9	-0.6
QRN				*e*S		Sn	Sn	04 50 22.1	-0.7
QRN				AML		AML	AML	04 50 25.4	
	comp=Z,31nm,0.4s								
IRAZ	Razeghan	3.69	34	*e*Pn		Pn	Pn	04 49 40.1	+0.2
IRAZ				*e*				04 50 33.9	
	comp=Z,303nm,0.3s								
IZEF	Zefreh	4.21	82	*e*Pn		Pn	Pn	04 49 47.0	-0.1
IZEF				*e*				04 49 59.0	
	comp=Z,111nm,0.1s								
KFJS		4.21	173	P		Pn	Pn	04 49 46.1	-1.1
ASYS		5.53	209	P		Pn	Pn	04 50 02.3	-3.0

*THE **28** 05:02:38.7, 40°.71N×20°.54E, h13km, ML3.1/2, Error ellipse: s-maj=1.0km s-min=0.6km az=67.0*
*ISCJB **28** 05:02:42.0±0.5, 40°.72N±0°.03×20°.74E±0°.04, h15km±5km, Error ellipse: s-maj=5.6km s-min=5.2km az=17.6*
*SKO **28** 05:02:41.8, 40°.73N×20°.59E, h0km, M2.1, ML2.5*
*TIR **28** 05:02:42.5±2.2, 40°.71N×20°.83E, h8km±63km, ML3.4*
*CSEM **28** 05:02:43.4±0.3, 40°.65N×20°.92E, h2km, ML3.4, Error ellipse: s-maj=7.5km s-min=5.4km az=145.0*

ISC 28 05:02:43.1±0.5, 40°.72N±0°.03×20°.74E±0°.04, h9km±5km, n22, σ1s39/40, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBN	Korca	0.10	158	*i*	PG	Pg	Pg	05 02 44.7	-0.8
KBN				*i*	SG	Sg	Sg	05 02 47.0	-0.3
KBN	Korca	0.10	158	*i*	Pg	Pg	Pg	05 02 44.7	-0.8
	SNR=11								
KBN				*i*	Sg	Sg	Sg	05 02 47.0	-0.3
	SNR=11								
NEST	Nestorio	0.38	142	P		Pg	Pg	05 02 48.0	-2.5
NEST				S		Sg	Sg	05 02 55.5	-0.1
NEST	Nestorio	0.38	142	P		Pg	Pg	05 02 48.0	-2.5
NEST				S		Sg	Sg	05 02 55.5	-0.1
FNA	Florina	0.49	82	P		Pg	Pg	05 02 51.1	-1.5
FNA				S		Sg	Sg	05 03 00.6	+1.6
FNA	Florina	0.49	82	P		Pg	Pg	05 02 51.1	-1.5
FNA				S		Sg	Sg	05 03 00.6	+1.6
BIA	Bitola	0.54	55	P		Pg	Pg	05 02 51.4	-2.1
BIA				S		Sg	Sg	05 03 01.4	+0.8
BIA	Bitola	0.54	55	*e*Pg		Pg	Pg	05 02 53.0	-0.5
BIA				*e*Sg		Sg	Sg	05 03 01.9	+1.3
BIA				*e*Lg				05 03 02.0	
	comp=E,94nm,0.2s								
BIA				*e*Lg				05 03 02.3	
	comp=N,84nm,0.2s								
BIA	Bitola	0.54	55	P		Pg	Pg	05 02 51.4	-2.1
BIA				S		Sg	Sg	05 03 01.4	+0.8
KRUS	Krusevo	0.76	30	*e*Pg		Pg	Pg	05 02 55.8	-1.9
KZN	Kozani	0.89	117	P		Pg	Pg	05 02 57.9	-2.2
KZN				S		Sg	Sg	05 03 12.8	+1.2
KZN	Kozani	0.89	117	P		Pg	Pg	05 02 57.9	-2.2
SRN	Sarande	1.01	214	*i*	PG	Pg	Pg	05 03 04.2	+1.8
SRN				*i*	SG	Sg	Sg	05 03 17.4	+1.9
SRN	Sarande	1.01	214	*i*	Pg	Pg	Pg	05 03 04.2	+1.8
	SNR=9.0								
SRN				*i*	Sg	Sg	Sg	05 03 17.4	+1.9
	SNR=9.0								
PUK	Puka	1.47	335	*i*	PN	Pg	Pg	05 03 12.7	+1.4
PUK				*i*	SN	Sg	Sg	05 03 35.7	+5.2
PUK	Puka	1.47	335	*i*	Pn	Pg	Pg	05 03 12.7	+1.4
	SNR=4.0								
VAY	Valandovo	1.51	66	*e*Pn		Pn	Pn	05 03 11.7	+1.4
VAY				*e*Sn		Sn	Sn	05 03 33.4	+3.3
VAY				*e*Lg				05 03 33.6	
	comp=N,83nm,0.8s								
VAY				*e*Lg				05 03 34.2	
	comp=E,42nm,0.6s								
BCI	Bajram Curri	1.73	343	*i*	PN	Pg	Pg	05 03 16.6	+0.4
BCI				*i*	SN	Sg	Sg	05 03 39.8	+1.2
BCI	Bajram Curri	1.73	343	*i*	Pn	Pg	Pg	05 03 16.6	+0.4
	SNR=4.0								
BCI				*i*	Sn	Sg	Sg	05 03 39.8	+1.2
	SNR=4.0								
STON	Ston	3.13	314	*e*Pn		Pn	Pn	05 03 32.7	+0.1
STON				Sn		Sn	Sn	05 04 09.1	-1.0
STON	Ston	3.13	314	*e*Pn		Pn	Pn	05 03 32.6	0.0
NVLJ	Novalja	5.79	314	*e*Pn		Pn	Pn	05 04 07.8	-1.3
NVLJ				Sn		Sn	Sn	05 05 14.7	-0.8

IDC 28 05:05:51.2±2.0, 50°.04N×129°.66W, h0km, mb3.5/3, mb1 3.8/8, mb1mx3.6/27, mbtmp3.6/8, ML3.4/4, MS3.2/5, Ms1 3.2/5, ms1mx2.8/32, Error ellipse: s-maj=34.4km s-min=13.8km az=73.0, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BBB	Bella Bella	2.36	24	Pn		Pn	Pn	05 06 29.9	-1.3
	34nm,0.3s,baz=46,slow=14,SNR=44								
BBB				Sn		Sn	Sn	05 06 58.8	-2.0
	19nm,0.3s,baz=128,slow=22,SNR=14								
DIB	Dawson Inlet,	3.63	332	Pn		Pn	Pn	05 06 45.3	-3.3
DLBC	Dease Lake	8.42	359	Pn		Pn	Pn	05 07 54.7	+0.3
	0.2nm,0.3s,baz=178,slow=17,SNR=5.9								
DLBC				LR		LR	LR	05 11 19.0	
	comp=Z,155nm,18.1s,baz=130,slow=39								
YBH	Yreka Blue Hor	9.61	147	LR		LR	LR	05 11 24.0	
	comp=Z,127nm,19.8s,baz=329,slow=35								
PDAR	Pinedale Array	15.62	110	Pn		Pn	Pn	05 09 35.6	+3.1
	0.0nm,0.3s,baz=311,slow=12,SNR=6.1								
ILAR	Eielson Array	17.35	335	P		Pn	Pn	05 09 55.1	+0.7
	0.0nm,0.3s,baz=145,slow=10,SNR=7.4								
INK	Inuvik	18.43	355	P		Pn	Pn	05 10 08.6	+0.8
	0.1nm,0.3s,baz=248,slow=18,SNR=3.1								
INK				LR		LR	LR	05 17 00.8	
	comp=Z,49nm,19.8s,baz=60,slow=36								
ULM	Lac du Bonnet	21.55	76	P		P	P	05 10 43.2	+1.4
	11nm,1.0s,baz=292,slow=13,SNR=4.5								
ULM				LR		LR	LR	05 19 28.0	
	comp=Z,88nm,19.0s,baz=29,slow=38								
ANMO	Albuquerque	22.67	123	P		P	P	05 10 54.5	+0.6
	1.4nm,0.9s,baz=302,slow=9.5,SNR=2.2								
TXAR	Lajitas Array	28.52	127	P		P	P	05 11 47.5	-0.8
	0.2nm,0.8s,baz=318,slow=52,SNR=3.2								
SCHQ	Schefferville	37.46	58	LR		LR	LR	05 29 06.3	
	comp=Z,58nm,19.8s,baz=88,slow=37								

*NEIC **28** 05:08:24.8, 40°.85N×20°.67E, h4km, MD3.5(ATH), ML3.7(THE), ML3.2(PDG), After ATH.*
*ATH **28** 05:08:24.8, 40°.85N×20°.67E, h4km±1km, MD3.5/7*
*TIR **28** 05:08:27.4±2.6, 40°.67N×20°.73E, h13km±11km, ML3.4*
*THE **28** 05:08:27.9, 40°.69N×20°.75E, h0km±1km, ML3.2/6, Error ellipse: s-maj=1.4km s-min=0.5km az=298.0*
*SKO **28** 05:08:28.0, 40°.64N×20°.67E, h0km, M2.8, ML3.2*
*PDG **28** 05:08:27.9±0.5, 40°.72N×20°.76E, h6km±1km, ML3.2/9, Error ellipse: s-maj=0.8km s-min=0.8km az=0.0*
*CSEM **28** 05:08:28.0±0.1, 40°.66N×20°.73E, h2km, ML3.4, Error ellipse: s-maj=3.0km s-min=2.3km az=46.0*
*ISCJB **28** 05:08:28.4±0.2, 40°.67N±0°.01×20°.70E±0°.02, h10km, Error ellipse: s-maj=2.2km s-min=1.7km az=142.1*

ISC 28 05:08:28.4±0.3, 40°.68N±0°.01×20°.72E±0°.02, h1km±3km, n141, σ1s23/222, 14C-6D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBN	Korca	0.08	136	*i*	PG	Pg	Pg	05 08 30.1	+0.2
KBN				*i*	SG	Sg	Sg	05 08 32.4	+1.5
KBN	Korca	0.08	136	*i*	Pg	Pg	Pg	05 08 30.1	+0.2
	SNR=15								
NEST	Nestorio	0.37	136	P		Pg	Pg	05 08 34.7	-0.7
NEST				S		Sg	Sg	05 08 40.5	+0.3
NEST	Nestorio	0.37	136	P		Pg	Pg	05 08 34.7	-0.7
NEST				S		Sg	Sg	05 08 40.5	+0.3
FNA	Florina	0.51	78	P		Pg	Pg	05 08 37.5	-0.7
FNA	Florina	0.51	78	P		Pg	Pg	05 08 37.8	-0.4
FNA				S		Sg	Sg	05 08 44.6	-0.3
FNA	Florina	0.51	78	P		Pg	Pg	05 08 37.8	-0.4
FNA				S		Sg	Sg	05 08 44.6	-0.3
LSK	Leskovik	0.54	189	*i*	PG	Pg	Pg	05 08 37.7	-1.0
LSK				*i*	SG	Sg	Sg	05 08 45.5	-0.1
LSK	Leskovik	0.54	189	*i*	Pg	Pg	Pg	05 08 37.7	-1.0
	SNR=9.0								
LSK				*i*	Sg	Sg	Sg	05 08 45.5	-0.1
	SNR=9.0								
BIA	Bitola	0.57	54	P		Pg	Pg	05 08 38.4	-1.0
BIA				S		Sg	Sg	05 08 46.0	-0.8
BIA	Bitola	0.57	54	*e*Pg		Pg	Pg	05 08 38.4	-0.9
BIA				*e*Sg		Sg	Sg	05 08 47.8	+1.0
BIA				*e*Lg				05 08 48.0	
	comp=E,334nm,0.2s								
BIA				*e*Lg				05 08 48.1	
	comp=N,365nm,0.2s								
BIA	Bitola	0.57	54	P		Pg	Pg	05 08 38.4	-1.0
BIA				S		Sg	Sg	05 08 46.0	-0.8
TPE	Tepelena	0.66	235	*i*	PG	Pg	Pg	05 08 42.1	+1.1
TPE				*i*	SG	Sg	Sg	05 08 49.2	-0.4
TPE	Tepelena	0.66	235	*i*	Pg	Pg	Pg	05 08 42.1	+1.1
	SNR=9.0								
TPE				*i*	Sg	Sg	Sg	05 08 49.2	-0.4
	SNR=9.0								
KRUS	Krusevo	0.80	30	*e*Pg		Pg	Pg	05 08 42.3	-1.4
KZN	Kozani	0.89	115	*e*Pg		Pg	Pg	05 08 44.0	-1.4
KZN				*e*Sg		Sg	Sg	05 08 57.4	+0.5
KZN	Kozani	0.89	115	*e*PG		Pg	Pg	05 08 44.0	-1.4
KZN				*e*SG		Sg	Sg	05 08 57.4	+0.5
KZN	Kozani	0.89	115	P		Pg	Pg	05 08 43.9	-1.5
KZN				S		Sg	Sg	05 08 57.3	+0.4
KZN	Kozani	0.89	115	*e*Pg		Pg	Pg	05 08 44.0	-1.4
KZN				S		Sg	Sg	05 08 57.3	+0.4
TIR	Tirane	0.93	316	*i*	PG	Pg	Pg	05 08 46.2	+0.1
TIR	Tirane	0.93	316	P		Pg	Pg	05 08 45.6	-0.5
TIR				S		Sg	Sg	05 08 59.1	+0.9
TIR	Tirane	0.93	316	P		Pg	Pg	05 08 45.6	-0.5
TIR	Tirane	0.93	316	*i*	Pg	Pg	Pg	05 08 46.2	+0.1
	SNR=9.0								
TIR				S		Sg	Sg	05 08 59.1	+0.9
SRN	Sarande	0.97	215	*i*	PG	Pg	Pg	05 08 46.8	-0.1
SRN				*i*	SG	Sg	Sg	05 09 02.1	+2.6
SRN	Sarande	0.97	215	*i*	Pg	Pg	Pg	05 08 46.8	-0.1
	SNR=9.0								
JAN	Janina	1.03	174	*e*Pg		Pg	Pg	05 08 46.9	-1.2
JAN				*e*Sb		Sg	Sg	05 09 03.8	+2.4
JAN	Janina	1.03	174	*e*PG		Pg	Pg	05 08 46.9	-1.2
JAN				*e*SB		Sg	Sg	05 09 03.8	+2.4
JAN	Janina	1.03	174	*e*Pg		Pg	Pg	05 08 46.9	-1.2
JAN				*e*Sb		Sg	Sg	05 09 03.8	+2.4
IGT	Igoumenitsa	1.18	194	P		Pg	Pg	05 08 52.8	+1.7
IGT	Igoumenitsa	1.18	194	P		Pg	Pg	05 08 50.6	-0.5
IGT				S		Sg	Sg	05 09 07.9	+1.5
IGT	Igoumenitsa	1.18	194	P		Pg	Pg	05 08 50.6	-0.5
IGT				S		Sg	Sg	05 09 07.9	+1.5
KEK	Kerkira	1.19	216	*e*Pb		Pg	Pg	05 08 49.7	-1.6
KEK				*e*Sb		Sb	Sb	05 09 07.5	-0.2
KEK	Kerkira	1.19	216	*e*PB		Pg	Pg	05 08 49.7	-1.6
KEK				*e*SB		Sb	Sb	05 09 07.5	-0.2
KEK	Kerkira	1.19	216	P		Pg	Pg	05 08 50.5	-0.8
KEK	Kerkira	1.19	216	*e*Pb		Pg	Pg	05 08 49.7	-1.6
KEK	Kerkira	1.19	216	P		Pg	Pg	05 08 50.5	-0.8
KEK				*e*Sb		Sb	Sb	05 09 07.5	-0.2
GRG	Griva	1.31	77	P		Pn	Pn	05 08 52.2	-1.6
GRG	Griva	1.31	77	P		Pn	Pn	05 08 52.0	-1.8
GRG				S		Sg	Sg	05 09 10.3	-0.2
GRG	Griva	1.31	77	P		Pn	Pn	05 08 52.2	-1.6
GRG				S		Sg	Sg	05 09 10.3	-0.2
SKO	Skopje	1.40	23	*e*Pn		Pn	Pn	05 08 56.3	+1.3
SKO				*e*Sn		Sn	Sn	05 09 15.4	+1.3
SKO				*e*Lg				05 09 15.7	
	comp=N,344nm,0.3s								
SKO				*e*Lg				05 09 15.8	
	comp=E,205nm,0.5s								
LIT	Litokhoron	1.47	113	*e*Pn		Pn	Pn	05 08 53.8	-2.2
LIT				*e*Sb		Sb	Sb	05 09 16.3	+0.5
LIT	Litokhoron	1.47	113	*e*PN		Pn	Pn	05 08 53.8	-2.2
LIT				*e*SB		Sb	Sb	05 09 16.3	+0.5
LIT	Litokhoron	1.47	113	P		Pn	Pn	05 08 54.1	-1.9
LIT				S		Sg	Sg	05 09 15.4	-0.3
LIT	Litokhoron	1.47	113	*e*Pn		Pn	Pn	05 08 53.8	-2.2
LIT	Litokhoron	1.47	113	P		Pn	Pn	05 08 54.1	-1.9
LIT				S		Sg	Sg	05 09 15.4	-0.3
LIT				*e*Sb		Sb	Sb	05 09 16.3	+0.5
PUK	Puka	1.50	336	*i*	PN	Pn	Pn	05 08 57.4	+1.1
PUK				*i*	SN	Sn	Sn	05 09 16.7	+0.2
PUK	Puka	1.50	336	*i*	Pn	Pn	Pn	05 08 57.4	+1.1
	SNR=5.0								
PUK				*i*	Sn	Sn	Sn	05 09 16.7	+0.2
	SNR=5.0								
THL	Klokotos Trika	1.50	138	P		Pn	Pn	05 08 55.2	-1.1
THL	Klokotos Trika	1.50	138	P		Pn	Pn	05 08 55.2	-1.1
VAY	Valandovo	1.54	65	P		Pn	Pn	05 08 55.2	-1.8
VAY	Valandovo	1.54	65	*e*Pn		Pn	Pn	05 08 57.2	+0.2
VAY				*e*Sn		Sn	Sn	05 09 19.1	+1.5
VAY				*e*Lg				05 09 19.4	
	comp=N,357nm,0.8s								
VAY				*e*Lg				05 09 20.3	
	comp=E,164nm,0.7s								
VAY	Valandovo	1.54	65	P		Pn	Pn	05 08 55.2	-1.8
ULC	Ulcinj	1.69	320	*i*	Pn	Pn	Pn	05 08 59.2	+0.2
ULC				*e*Sn		Sg	Sg	05 09 23.7	+1.0
ULC	Ulcinj	1.69	320	*i*	Pn	Pn	P

NKY	**Niksic**	**2.49**	**329**	⇑*i* Pn	**Pn**	**05 09 10.4**	**+0.4**
NKY				*e* Sn	**Sn**	**05 09 42.7**	**+1.7**
NKY	**Niksic**	**2.49**	**329**	⇑*i* Pn	**Pn**	**05 09 10.4**	**+0.4**
NKY				*e* Sn	**Sn**	**05 09 42.7**	**+1.7**
PE1	**Pezze di Greco**	**2.50**	**274**	*e* Pn	**Pn**	**05 09 09.1**	**-1.1**
PE1				*e* Sn	**Sn**	**05 09 38.4**	**-3.0**
KALE	**Kalithea**	**2.54**	**154**	P	**Pn**	**05 09 11.9**	**+1.2**
KALE	**Kalithea**	**2.54**	**154**	P	**Pn**	**05 09 11.9**	**+1.2**
LKR	**Lokris**	**2.69**	**138**	*e* Pb	**Pn**	**05 09 13.6**	**+0.9**
LKR	**Lokris**	**2.69**	**138**	*e* PB	**Pn**	**05 09 13.6**	**+0.9**
LKR	**Lokris**	**2.69**	**138**	*e* Pb	**Pn**	**05 09 13.6**	**+0.9**
BRY	**Bratogost**	**2.75**	**325**	⇓*i* Pn	**Pn**	**05 09 13.6**	**0.0**
BRY				*e* Sn	**Sn**	**05 09 49.0**	**+1.6**
BRY	**Bratogost**	**2.75**	**325**	⇓*i* Pn	**Pn**	**05 09 13.6**	**0.0**
BRY				*e* Sn	**Sn**	**05 09 49.0**	**+1.6**
PLE	**Pljevlja**	**2.82**	**340**	⇓*i* Pn	**Pn**	**05 09 14.7**	**+0.1**
PLE				*e* Sn	**Sn**	**05 09 50.2**	**+0.9**
PLE	**Pljevlja**	**2.82**	**340**	⇓*i* Pn	**Pn**	**05 09 14.7**	**+0.1**
PLE				*e* Sn	**Sn**	**05 09 50.2**	**+0.9**
BAI	**Bari**	**2.94**	**280**	*e* Pn	**Pn**	**05 09 15.1**	**-1.1**
BAI				*e* Sn	**Sn**	**05 09 49.1**	**-3.0**
STON	**Ston**	**3.14**	**315**	*e* Pn	**Pn**	**05 09 17.4**	**-1.6**
STON				Sn	**Sn**	**05 09 55.4**	**-1.8**
STON	**Ston**	**3.14**	**315**	*e* Pn	**Pn**	**05 09 17.3**	**-1.7**
STON				Sn	**Sn**	**05 09 55.3**	**-1.8**
GRUS	**Gruza**	**3.21**	**0**	*e* Pn	**Pn**	**05 09 21.5**	**+1.6**
BBLS	**Lazići**	**3.33**	**343**	*e* Pn	**Pn**	**05 09 22.1**	**+0.6**
CDT	**Castel del Mon**	**3.39**	**278**	*e* Pn	**Pn**	**05 09 21.3**	**-1.1**
TIP	**Timpagrande**	**3.39**	**245**	*e* Pn	**Pn**	**05 09 21.6**	**-0.8**
TIP	**Timpagrande**	**3.39**	**245**	*e* Pn	**Pn**	**05 09 21.6**	**-0.8**
DIVS	**Divibare**	**3.46**	**351**	P	**Pn**	**05 09 22.6**	**-0.7**
DIVS	**Divibare**	**3.46**	**351**	P	**Pn**	**05 09 22.6**	**-0.7**
DIVS	**Divibare**	**3.46**	**351**	*e* Pn	**Pn**	**05 09 23.8**	**+0.5**
ITM	**Ithomi**	**3.62**	**164**	P	**Pn**	**05 09 27.6**	**+2.0**
ITM	**Ithomi**	**3.62**	**164**	P	**Pn**	**05 09 27.6**	**+2.0**
MS1	**Monte Sant'Ang**	**3.74**	**287**	*e* Pn	**Pn**	**05 09 25.7**	**-1.5**
MS1				*e* Sn	**Sn**	**05 10 07.8**	**-4.1**
CUC	**Castrocucco**	**3.81**	**261**	P	**Pn**	**05 09 29.0**	**+0.9**
CUC	**Castrocucco**	**3.81**	**261**	P	**Pn**	**05 09 29.0**	**+0.9**
CEL	**Celeste**	**4.45**	**239**	P	**Pn**	**05 09 38.4**	**+1.5**
CEL	**Celeste**	**4.45**	**239**	P	**Pn**	**05 09 38.4**	**+1.5**
AQU	**L'Aquila**	**5.74**	**289**	*e* Pn	**Pn**	**05 09 53.8**	**-0.8**
	comp=E,15nm,0.7s						
AQU				*e* Sn	**Sn**	**05 11 04.2**	**+3.1**
AQU	**L'Aquila**	**5.74**	**289**	*e* Pn	**Pn**	**05 09 53.8**	**-0.8**
	comp=E,15nm,0.7s						
NVLJ	**Novalja**	**5.80**	**314**	*e* Pn	**Pn**	**05 09 54.0**	**-1.5**
NVLJ				Sn	**Sn**	**05 11 00.6**	**-2.0**
NVLJ	**Novalja**	**5.80**	**314**	*e* Pn	**Pn**	**05 09 54.0**	**-1.5**
NVLJ				Sn	**Sn**	**05 11 00.6**	**-2.0**
BOJS	**Bojanci**	**6.26**	**322**	*i* Pn	**Pn**	**05 10 00.9**	**-0.9**
BOJS				*i* Sn	**Sn**	**05 11 11.6**	**-2.4**
BOJS	**Bojanci**	**6.26**	**322**	*i* Pn	**Pn**	**05 10 00.9**	**-0.9**
VISS	**Visnje**	**6.68**	**322**	*i* Pn	**Pn**	**05 10 08.1**	**+0.5**
VISS				*i* Sn	**Sn**	**05 11 22.9**	**-1.3**
VISS	**Visnje**	**6.68**	**322**	*i* Pn	**Pn**	**05 10 08.1**	**+0.6**
VISS				*i* Sn	**Sn**	**05 11 23.0**	**-1.2**
JAVS	**Javornik**	**7.12**	**319**	*i* Pn	**Pn**	**05 10 12.3**	**-1.3**
JAVS				*i* Sn	**Sn**	**05 11 32.5**	**-2.6**
JAVS	**Javornik**	**7.12**	**319**	*i* Pn	**Pn**	**05 10 12.3**	**-1.3**
PERS	**Pernice**	**7.20**	**328**	*i* Pn	**Pn**	**05 10 14.7**	**0.0**
PERS				*i* Sn	**Sn**	**05 11 35.4**	**-1.8**
PERS	**Pernice**	**7.20**	**328**	*i* Pn	**Pn**	**05 10 14.7**	**0.0**
PERS				*i* Sn	**Sn**	**05 11 35.4**	**-1.7**
KECS	**Kecovo**	**7.80**	**359**	*e* Pn	**Pn**	**05 10 19.8**	**-3.2**
KECS	**Kecovo**	**7.80**	**359**	*e* PN	**Pn**	**05 10 19.8**	**-3.2**
VYHS	**Vyhne**	**7.93**	**351**	*e* P	**Pn**	**05 10 29.0**	**+4.3**
VYHS	**Vyhne**	**7.93**	**351**	*e*	**Pn**	**05 10 29.0**	**+4.3**

*TEH **28** 05:11:26.0, 32°.01N × 47°.28E, h5km*
*ISCJB **28** 05:11:27.8 ± 0.5, 32°.25N ± 0°.03 × 47°.43E ± 0°.07, h10km, Error ellipse: s-maj=9.1km s-min=4.0km az=173.3*
*KISR **28** 05:11:27.1 ± 0.6, 32°.08N × 47°.61E, h6km, ±999km, ML2.5*
*SGS **28** 05:11:31.6, 31°.95N × 47°.58E, h24km*

ISC 28 05:11:29.0 ± 0.5, **32°.23N** ± 0°.03 × **47°.42E** ± 0°.07, **h10**km, **n15, σ 0**s **88**/19, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKOM	**Komasi**	**1.95**	**2**	*e* Pn	**Pn**	**05 12 02.7**	**+0.6**
IKOM				*e*		05 12 38.6	
	comp=Z,1μm,0.3s						
IGHG	**Ghaleghazi**	**2.22**	**341**	*e* Sg	**Sg**	**05 12 41.0**	**+0.8**
IGHG				*e* Pn	**Pn**	**05 12 05.7**	**-0.1**
IGHG				*e*		05 12 46.4	
	comp=Z,918nm,0.3s						
IVIS	**Veis**	**2.34**	**348**	*e* Pn	**Pn**	**05 12 10.8**	**+3.3**
IVIS				*e*		05 12 54.2	
	comp=Z,428nm,0.2s						
MIB	**Mutribah**	**2.42**	**182**	*e* P	**Pn**	**05 12 08.6**	**+0.1**
MIB				*e*S	**Sn**	**05 12 39.2**	**+1.1**
MIB				AML	AML	05 12 41.8	
	comp=Z,44nm,0.4s						
IDHR	**Dehrash**	**2.62**	**341**	*e* Pn	**Pn**	**05 12 10.7**	**-0.6**
IDHR				*e* Sg	**Sg**	**05 12 52.1**	**-0.9**
IDHR				*e*		05 12 53.2	
	comp=Z,543nm,0.2s						
ILIN	**Lien**	**2.71**	**352**	*e* Pn	**Pn**	**05 12 13.0**	**+0.4**
ILIN				*e*		05 12 48.2	
	comp=N,370nm,0.1s						
IPIR	**Pirpir**	**2.97**	**80**	*e* Pn	**Pn**	**05 12 16.0**	**-0.1**
IPIR				*e*		05 13 15.7	
	comp=Z,856nm,0.3s						
NAY	**Al-Naaiem**	**2.97**	**183**	*e* P	**Pn**	**05 12 15.9**	**-0.2**
NAY				*e*S	**Sn**	**05 12 53.0**	**+1.2**
NAY				AML	AML	05 12 53.8	
	comp=Z,10nm,0.5s						
QRN	**Al-Qurain**	**3.50**	**173**	*e* P	**Pn**	**05 12 23.2**	**-0.2**
IKLH	**Kolahrood**	**3.67**	**72**	*e* Pn	**Pn**	**05 12 25.4**	**-0.3**
IKLH				*e*		05 12 40.7	
	comp=Z,383nm,0.2s						
IRAZ	**Razeghan**	**3.80**	**33**	*e* Pn	**Pn**	**05 12 27.8**	**+0.3**
IRAZ				*e*		05 12 37.3	
	comp=Z,422nm,0.2s						
KFJS		**4.05**	**173**	P	**Pn**	**05 12 30.0**	**-1.0**
IZEF	**Zefreh**	**4.20**	**80**	*e* Pn	**Pn**	**05 12 32.4**	**-0.6**
IZEF				*e*		05 12 34.9	
	comp=Z,202nm,0.2s						
IDMV	**Damavand**	**5.09**	**48**	*e* Pn	**Pn**	**05 12 45.6**	**+0.4**
IDMV				*e*		05 13 03.3	
	comp=Z,114nm,0.2s						
ASYS		**5.41**	**210**	P	**Pn**	**05 12 47.2**	**-2.5**

*IDC **28** 05:15:11.6 ± 1.0, 30°.87N × 83°.26E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/25, mbtmp3.6/7, ML4.0/1, Error ellipse: s-maj=33.6km s-min=20.6km az=64.0*
*NEIC **28** 05:15:13.4 ± 0.9, 30°.82N × 83°.61E, h10km, mb4.0/2, Error ellipse: s-maj=20.4km s-min=13.2km az=214.0*

ISC 28 05:15:16.9 ± 4.1, **30°.9N** ± 0°.1 × **83°.6E** ± 0°.1, **h31**km ± 31km, **n15, σ 1**s **30**/15, **mb3.6/8, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.66**	**98**	*e* Pn	**Pn**	**05 16 49.6**	**-3.1**
	10nm,0.8s						
KBL	**Kabul**	**12.76**	**290**	*e* Pn	**Pn**	**05 18 16.5**	**+0.3**
	4.2nm,0.3s						
MK31	**Makanchi Array**	**15.90**	**357**	*e* P	**Pn**	**05 19 01.8**	**+3.5**
MKAR	**Makanchi Array**	**15.90**	**357**	Pn	**Pn**	**05 18 59.9**	**+1.6**
	0.1nm,0.3s,baz=178,slow=11,SNR=7.8						
CMAR	**Chiang Mai Arr**	**18.64**	**128**	P	**Pn**	**05 19 34.6**	**+1.9**
	0.2nm,0.3s,baz=311,slow=9.3,SNR=5.7						
KURK	**Kurchatov**	**20.13**	**351**	P	**P**	**05 19 46.7**	**-1.5**
KURK	**Kurchatov**	**20.13**	**351**	P	**P**	**05 19 46.7**	**-1.5**
	1.8nm,0.9s,baz=171,slow=11,SNR=12						
ZALV	**Zalesovo Beam**	**23.05**	**2**	P	**P**	**05 20 18.6**	**-0.8**
	0.4nm,0.3s,mb3.3,baz=191,slow=11,SNR=3.2						
SONM	**Songino Array**	**24.29**	**39**	P	**P**	**05 20 32.7**	**+1.3**
	0.5nm,0.4s,mb3.3,baz=229,slow=11,SNR=3.7						
TLY	**Talaya**	**25.50**	**30**	*e*P	**P**	**05 20 36.2**	**-6.1**
	3.3nm,0.3s,mb4.3						
ABKAR	**Akbulak array**	**25.57**	**323**	P	**P**	**05 20 43.3**	**+0.3**
	0.8nm,0.6s,mb3.4						
WRA	**Warramunga Arr**	**70.23**	**129**	P	**P**	**05 26 27.5**	**+0.3**
	1.1nm,0.6s,mb3.9,baz=323,slow=6.3,SNR=15						
ASAR	**Alice Springs**	**72.60**	**132**	P	**P**	**05 26 41.9**	**+0.5**
	0.4nm,0.7s,mb3.5,baz=305,slow=4.4,SNR=5.1						
TORD	**Torodi Ar. Bea**	**76.48**	**277**	P	**P**	**05 27 02.5**	**-1.7**
	0.2nm,0.8s,mb3.1,baz=45,slow=4.0,SNR=2.3						
ILAR	**Eielson Array**	**76.86**	**20**	P	**P**	**05 27 05.7**	**+0.1**

2008 AUG

0.6nm,0.8s,mb3.6,baz=304,slow=5.0,SNR=5.2

MEX 28 05:24:27.9 ± 1.3, **19°.18N** × **98°.46W, h1**km ± 13km, **MD3.7, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPM	**Popocatepetl**	**0.20**	**235**	*i* P	Pg	05 24 30.5	-1.2
PPM				*e*P		05 24 31.5	
PPM				*i* S	Sg	05 24 35.0	+0.8
PPM				*i* S	Sg	05 24 35.2	+1.0
IIO	**Organos**	**0.48**	**329**	*i* P	Pg	05 24 37.0	-0.1
IIO				*i* S	Sg	05 24 45.4	+2.1
YAIG	**Yautepec**	**0.66**	**241**	*i* P	Pg	05 24 40.1	-0.4
YAIG				*i* S	Sg	05 24 50.4	+1.4
MZVM		**0.73**	**271**	*e*P	Pg	05 24 40.9	-1.0
MZVM				*i* S	Sg	05 24 51.0	-0.4
PTVM	**Pico Tres Padr**	**0.74**	**304**	*i* P	Pg	05 24 42.4	+0.2
PTVM				*i* S	Sg	05 24 52.1	+0.3
SZVM	**Salazar**	**0.88**	**279**	*i* P	Pg	05 24 47.2	+2.4
SZVM				*i* S	Sg	05 24 58.8	+2.4
UTMO	**Huajuapan**	**1.48**	**155**	*i* P	Pn	05 24 53.2	-2.4
UTMO				*i* S	Sg	05 25 11.1	-4.4
MEIG	**Mezcala**	**1.67**	**222**	*i* P	Pn	05 24 55.5	-2.7
MEIG				*i* S	Sn	05 25 15.0	-5.2
VHO	**Vista Hermosa**	**2.66**	**142**	*i* P	Pn	05 25 14.6	+2.6
VHO				*i* S	Sn	05 25 46.6	+1.8
CAIG	**El Cayaco**	**2.73**	**219**	*i* P	Pn	05 25 12.8	-0.1
CAIG				*i* S	Sn	05 25 44.8	-1.7
PNIG	**Pinotepa**	**2.79**	**173**	*i* P	Pn	05 25 17.7	+4.1
PNIG				*i* S	Sn	05 25 46.9	-1.1

*ISCJB **28** 05:35:54.2 ± 0.4, 42°.94N ± 0°.03 × 46°.05E ± 0°.03, h1km ± 5km, Error ellipse: s-maj=5.6km s-min=2.5km az=24.5*
*CSEM **28** 05:35:54.3 ± 0.2, 42°.89N × 46°.03E, h10km, mb4.0, Error ellipse: s-maj=5.3km s-min=2.3km az=13.0*
*MOS **28** 05:35:54.2 ± 1.3, 42°.86N × 46°.11E, h14km, mb4.0/1, Error ellipse: s-maj=11.6km s-min=6.7km az=20.6*

ISC 28 05:35:55.0 ± 0.3, **42°.93N** ± 0°.03 × **46°.06E** ± 0°.02, **h6**km ± 4km, **n44, σ 1**s **03**/84, **7C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLR	**Botlikh**	**0.29**	**155**	*e*PG	**Pg**	**05 36 00.0**	**-0.6**
BTLR				*i* S	**Sg**	**05 36 05.0**	**+0.6**
BTLR				pmax	pmax		
	comp=Z,416nm,0.3s						
BTLR	**Botlikh**	**0.29**	**155**	*e*Pg	**Pg**	**05 36 00.0**	**-0.6**
	comp=Z,416nm,0.3s						
BTLR				*i* Sg	**Sg**	**05 36 05.0**	**+0.6**
DLMR	**Dylym**	**0.44**	**71**	*e*PG	**Pg**	**05 36 03.0**	**-0.5**
DLMR				*i* S	**Sg**	**05 36 10.0**	**+0.7**
DLMR				pmax	pmax		
	comp=Z,115nm,0.2s						
DLMR	**Dylym**	**0.44**	**71**	*e*Pg	**Pg**	**05 36 03.0**	**-0.5**
	comp=Z,115nm,0.2s						
DLMR				*i* Sg	**Sg**	**05 36 10.0**	**+0.7**
DBC	**Dubki**	**0.57**	**80**	*e*PG	**Pg**	**05 36 06.0**	**0.0**
DBC				*e*S	**Sg**	**05 36 14.5**	**+1.0**
DBC	**Dubki**	**0.57**	**80**	*e*Pg	**Pg**	**05 36 06.0**	**0.0**
DBC				*e*Sg	**Sg**	**05 36 14.5**	**+1.0**
UNCR	**Uncukul**	**0.58**	**111**	⇑*i* PG	**Pg**	**05 36 05.0**	**-1.2**
UNCR				*e*S	**Sg**	**05 36 14.0**	**+0.3**
UNCR	**Uncukul**	**0.58**	**111**	*i* Pg	**Pg**	**05 36 05.0**	**-1.2**
UNCR				*e*Sg	**Sg**	**05 36 14.0**	**+0.3**
KRNR	**Karanay**	**0.63**	**99**	⇓*i* PG	**Pg**	**05 36 06.2**	**-0.9**
KRNR				*i* S	**Sg**	**05 36 16.2**	**+0.9**
KRNR				pmax	pmax		
	comp=Z,57nm,0.2s						
KRNR	**Karanay**	**0.63**	**99**	*i* Pg	**Pg**	**05 36 06.2**	**-0.9**
	comp=Z,57nm,0.2s						
KRNR				*i* Sg	**Sg**	**05 36 16.2**	**+0.9**
GNBR	**Gunib**	**0.86**	**129**	*e*PG	**Pg**	**05 36 07.2**	**-4.2**
GNBR				*e*S	**Sg**	**05 36 21.2**	**-1.4**
GNBR				pmax	pmax		
	comp=Z,71nm,0.2s						
GNBR	**Gunib**	**0.86**	**129**	*e*Pg	**Pg**	**05 36 07.2**	**-4.2**
	comp=Z,71nm,0.2s						
GNBR				*e*Sg	**Sg**	**05 36 21.2**	**-1.4**
VLKR	**Vladikavkaz**	**1.02**	**277**	*e*PG	**Pg**	**05 36 14.0**	**-0.6**
VLKR				*e*S	**Sg**	**05 36 28.8**	**+1.0**
VLKR	**Vladikavkaz**	**1.02**	**277**	*e*Pg	**Pg**	**05 36 14.0**	**-0.6**
VLKR				*e*Sg	**Sg**	**05 36 28.8**	**+1.0**
MAK	**Makhachkala**	**1.06**	**88**	*e*PG	**Pg**	**05 36 17.0**	**+1.6**
MAK				*e*		05 36 34.1	
MAK				pmax	pmax		
	comp=Z,213nm,0.4s						
MAK				smax			
	comp=E,529nm,0.4s						
MAK				smax			
	comp=N,757nm,0.6s						
MAK	**Makhachkala**	**1.06**	**88**	*e*Pg	**Pg**	**05 36 17.0**	**+1.6**
	comp=N,213nm,0.4s						
MAK				*e*Sg	**Sg**	**05 36 34.1**	**+4.9**
	comp=N,757nm,0.6s						
KMKR	**Kumukh**	**1.11**	**136**	⇑*i* PG	**Pg**	**05 36 15.0**	**-1.2**
KMKR				*e*S	**Sg**	**05 36 32.0**	**+1.4**
KMKR				pmax	pmax		
	comp=Z,139nm,0.2s						
KMKR	**Kumukh**	**1.11**	**136**	*i* Pg	**Pg**	**05 36 15.0**	**-1.2**
	comp=Z,139nm,0.2s						
KMKR				*e*Sg	**Sg**	**05 36 32.0**	**+1.4**
BTKR	**Batakoyurt**	**1.20**	**292**	*e*PG	**Pg**	**05 36 17.5**	**-0.4**
BTKR				*i* S	**Sg**	**05 36 35.4**	**+2.0**
BTKR	**Batakoyurt**	**1.20**	**292**	*e*Pg	**Pg**	**05 36 17.5**	**-0.4**
BTKR				*i* Sg	**Sg**	**05 36 35.4**	**+2.0**
TRKR	**Terskaya**	**1.25**	**310**	⇑*i* PG	**Pg**	**05 36 18.2**	**-0.8**
TRKR				*i* S	**Sg**	**05 36 36.5**	**+1.2**
TRKR	**Terskaya**	**1.25**	**310**	*i* Pg	**Pg**	**05 36 18.2**	**-0.8**
TRKR				*i* Sg	**Sg**	**05 36 36.5**	**+1.2**
LACR	**Lac**	**1.30**	**266**	⇓*i* PG	**Pn**	**05 36 17.8**	**-1.9**
LACR				*i* S	**Sg**	**05 36 35.6**	**-1.2**
LACR	**Lac**	**1.30**	**266**	*i* Pg	**Pn**	**05 36 17.8**	**-1.9**
LACR				*i* Sg	**Sg**	**05 36 35.6**	**-1.2**
ARNR	**Ardon**	**1.33**	**282**	⇑*i* PG	**Pn**	**05 36 18.7**	**-1.4**
ARNR				*e*S	**Sg**	**05 36 37.9**	**+0.2**
ARNR	**Ardon**	**1.33**	**282**	*i* Pg	**Pn**	**05 36 18.7**	**-1.4**
ARNR				*e*Sg	**Sg**	**05 36 37.9**	**+0.2**
KMSR	**Komsomolskaya**	**1.37**	**290**	⇑*i* PG	**Pg**	**05 36 20.4**	**-0.8**
KMSR				*e*S	**Sg**	**05 36 39.9**	**+1.0**
KMSR	**Komsomolskaya**	**1.37**	**290**	*i* Pg	**Pg**	**05 36 20.4**	**-0.8**
KMSR				*e*Sg	**Sg**	**05 36 39.9**	**+1.0**
KORR	**Kora**	**1.47**	**277**	*e*PG	**Pn**	**05 36 21.0**	**-1.0**
KORR				*e*S	**Sn**	**05 36 41.7**	**+0.2**
KORR	**Kora**	**1.47**	**277**	*e*Pg	**Pn**	**05 36 21.0**	**-1.0**
KORR				*e*Sg	**Sn**	**05 36 41.7**	**+0.2**
PRTR	**Priterechnaya**	**1.54**	**303**	*e*PG	**Pn**	**05 36 22.9**	**0.0**
PRTR				*i* S	**Sg**	**05 36 44.9**	**+0.6**
PRTR	**Priterechnaya**	**1.54**	**303**	*e*Pg	**Pn**	**05 36 22.9**	**0.0**
PRTR				*i* Sg	**Sg**	**05 36 44.9**	**+0.6**
TBLG	**Delisi**	**1.54**	**220**	PG	**Pn**	**05 36 23.1**	**+0.1**
TBLG				S	**Sg**	**05 36 44.2**	**-0.4**
TBLG	**Delisi**	**1.54**	**220**	P	**Pn**	**05 36 23.1**	**0.0**
TBLG				S	**Sn**	**05 36 44.2**	**+0.8**
TBLG	**Delisi**	**1.54**	**220**	Pg	**Pn**	**05 36 23.1**	**+0.1**
TBLG				Sg	**Sg**	**05 36 44.2**	**-0.4**
MTA	**Mtatsminda**	**1.55**	**218**	P	**Pn**	**05 36 23.0**	**-0.1**
MTA				S	**Sn**	**05 36 44.5**	**+1.0**
DGRG	**David-gareji**	**1.56**	**199**	P	**Pn**	**05 36 23.7**	**+0.4**
DGRG				S	**Sn**	**05 36 47.0**	**+3.2**
ZEI	**Tsey**	**1.60**	**265**	⇑*i* PN	**Pn**	**05 36 22.5**	**-1.2**
ZEI				*e*S	**Sn**	**05 36 43.5**	**-1.2**
ZEI	**Tsey**	**1.60**	**265**	*i* Pn	**Pn**	**05 36 22.5**	**-1.2**
ZEI				*e*Sg	**Sn**	**05 36 43.5**	**-1.2**
LSNR	**Lesken**	**1.68**	**283**	⇑*i* PN	**Pn**	**05 36 24.7**	**-0.2**
LSNR				*e*S	**Sn**	**05 36 47.4**	**+0.7**
LSNR	**Lesken**	**1.68**	**283**	*i* Pn	**Pn**	**05 36 24.7**	**-0.2**
LSNR				*e*Sg	**Sn**	**05 36 47.4**	**+0.7**
GOR	**Gori**	**1.72**	**238**	P	**Sn**	**05 36 50.2**	**+2.4**
DIGR	**Digorskoe uzhe**	**1.82**	**270**	*e*PN	**Pn**	**05 36 25.7**	**-1.1**
DIGR	**Digorskoe uzhe**	**1.82**	**270**	*e*Pn	**Pn**	**05 36 25.7**	**-1.1**

*BJI **28** 05:38:22.9, 50°.10N × 129°.60W, h10km, mB4.8/3, mb4.6/2, Ms7 4.0/1*
*ISCJB **28** 05:38:23.9 ± 0.5, 50°.09N ± 0°.05 × 129°.61W ± 0°.07, h10km, mb4.1/10, MS3.4/2, Error ellipse: s-maj=8.6km s-min=4.0km az=136.6*

*IDC **28** 05:38:23.7 ± 1.9, 50°.07N × 129°.69W, h0km, mb3.8/3, mb1 4.0/9, mb1mx3.7/28, mbtmp3.8/9, ML3.9/6, MS3.3/6, Ms1 3.3/6, ms1mx2.8/42, Error ellipse: s-maj=32.3km s-min=12.3km az=73.0*
*NEIC **28** 05:38:26.0 ± 0.5, 50°.10N × 129°.60W, h10km, mb4.1/20, Error ellipse: s-maj=10.0km s-min=3.6km az=51.0*

ISC 28 05:38:26.4 ± 2.1, **50°.10N** ± 0°.05 × **129°.67W** ± 0°.08, **h16**km ± 14km, **n81, σ 0**s **86**/80, **mb4.1**/10, **MS3.4**/2, **Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBB	**Bella Bella**	**2.31**	**25**	Pn	**Pn**	**05 39 02.4**	**-1.3**
	106nm,0.3s,baz=44,slow=12,SNR=214						
BBB				Sn	**Sn**	**05 39 31.1**	**-0.6**
	87nm,0.3s,baz=132,slow=22,SNR=21						
DIB	**Dawson Inlet,**	**3.56**	**332**	Pn	**Pn**	**05 39 17.7**	**-3.2**
PGC	**Sidney**	**4.32**	**107**	*e*Pn	**Pn**	**05 39 30.0**	**-1.2**
NLWA	**Neilton Lookou**	**4.70**	**123**	*e*Pn	**Pn**	**05 39 36.3**	**-0.2**
BLN	**Blyn Mountain**	**4.88**	**113**	P	**Pn**	**05 39 37.8**	**-1.2**
HDW	**Hoodsport**	**5.01**	**117**	P	**Pn**	**05 39 40.1**	**-0.7**
CMW	**Cultus Mountai**	**5.22**	**106**	P	**Pn**	**05 39 43.8**	**+0.1**
JCW	**Jim Creek**	**5.43**	**108**	P	**Pn**	**05 39 46.2**	**-0.3**
RPW	**Rockport**	**5.59**	**104**	*e*Pn	**Pn**	**05 39 48.8**	**0.0**
CRAG	**Craig**	**5.77**	**340**	*e*Pn	**Pn**	**05 39 53.4**	**+2.2**
FMW	**Mount Fremont**	**6.19**	**118**	P	**Pn**	**05 39 57.4**	**+0.4**
LON	**Longmire**	**6.21**	**120**	*e*Pn	**Pn**	**05 39 57.7**	**+0.4**
TWW	**Teanaway**	**6.54**	**114**	P	**Pn**	**05 40 02.9**	**+1.1**
LTY	**Liberty**	**6.60**	**112**	P	**Pn**	**05 40 03.1**	**+0.5**
ETW	**Entiat**	**6.65**	**108**	P	**Pn**	**05 40 03.6**	**+0.3**
TBM	**Table Mountain**	**6.69**	**113**	P	**Pn**	**05 40 04.4**	**+0.5**
EBG	**Ellensburg**	**6.84**	**114**	P	**Pn**	**05 40 06.5**	**+0.6**
MDW	**Midway**	**7.47**	**114**	P	**Pn**	**05 40 14.5**	**0.0**
GBB	**Gable Butte**	**7.55**	**114**	P	**Pn**	**05 40 15.3**	**-0.3**
RSW	**Rattlesnake Hi**	**7.68**	**115**	*e*Pn	**Pn**	**05 40 17.3**	**-0.2**
HAWA	**Hanford**	**7.72**	**115**	*e*Pn	**Pn**	**05 40 17.3**	**-0.7**
OD2	**Odessa Site #2**	**7.74**	**106**	P	**Pn**	**05 40 17.5**	**-0.7**
DLBC	**Dease Lake**	**8.36**	**359**	*e*Pn	**Pn**	**05 40 27.2**	**+0.6**
DLBC	**Dease Lake**	**8.36**	**359**	*e*Pn	**Pn**	**05 40 26.5**	**-0.1**
	0.5nm,0.3s,baz=190,slow=13,SNR=14						
DLBC				LR	LR	05 43 43.7	
	comp=Z,167nm,21.1s,baz=168,slow=38						
NEW	**Newport**	**8.43**	**98**	*e*Pn	**Pn**	**05 40 27.2**	**-0.4**
LNOR	**Lincton Mounta**	**8.73**	**115**	*e*Pn	**Pn**	**05 40 31.2**	**-0.6**
YBH	**Yreka Blue Hor**	**9.67**	**147**	LR	LR	05 44 05.8	
	comp=Z,142nm,19.9s,baz=336,slow=35						
WALA	**Waterton Lakes**	**10.29**	**90**	*e*Pn	**Pn**	**05 40 54.6**	**+1.5**
JTMT	**Jette**	**10.40**	**97**	*e*Pn	**Pn**	**05 40 54.2**	**-0.5**
SWMT	**Swartz Lake**	**10.66**	**98**	*e*Pn	**Pn**	**05 40 57.8**	**-0.4**
WVOR	**Wild Horse Val**	**10.81**	**131**	*e*Pn	**Pn**	**05 41 00.7**	**+0.3**
	1.6nm,0.4s						
SLMT	**Seeley Lake**	**11.07**	**99**	*e*Pn	**Pn**	**05 41 03.2**	**-0.7**
CHMT	**Chamberlain Mo**	**11.35**	**100**	*e*Pn	**Pn**	**05 41 07.4**	**-0.3**
	3.3nm,0.9s						
DLMT	**Dillon**	**12.43**	**106**	*e*Pn	**Pn**	**05 41 21.8**	**-0.6**
MCMT	**McKenzie Canyo**	**12.54**	**108**	*e*Pn	**Pn**	**05 41 23.4**	**-0.5**
	1.6nm,0.7s					

az=136.3

ISC 28 05:55:19.8±0.8, 15°57'N±0'06×97°44'W±0'06, h10km, n93, σ1§00/114, 42C-24D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**1.05**	**321**	*eP*	**Pg**	**05 55 35.4**	**-4.7**
PNIG				*i* S	**Sg**	**05 55 53.2**	**-0.6**
PNIG	**Pinotepa**	**1.05**	**321**	*eP*	**Pg**	**05 55 35.4**	**-4.7**
PNIG				*i* S	**Sg**	**05 55 53.2**	**-0.6**
HUIG	**Huatulco**	**1.30**	**81**	*eP*	**Pn**	**05 55 33.5**	**-10**
HUIG				*i* S	**Sb**	**05 55 49.5**	**-11**
HUIG	**Huatulco**	**1.30**	**81**	*eP*	**Pn**	**05 55 33.5**	**-10**
HUIG				*i* S	**Sb**	**05 55 49.5**	**-11**
VHO	**Vista Hermosa**	**1.64**	**24**	*eP*	**Pn**	**05 55 45.0**	**-3.7**
VHO				*i* S	**Sn**	**05 56 09.1**	**-0.8**
VHO	**Vista Hermosa**	**1.64**	**24**	*eP*	**Pn**	**05 55 45.0**	**-3.7**
VHO				*i* S	**Sn**	**05 56 09.1**	**-0.8**
OXX	**Oaxaca**	**1.65**	**24**	*iP*	**Pn**	**05 55 46.3**	**-2.6**
OXX				*i* S	**Sn**	**05 56 10.9**	**+0.8**
OXX	**Oaxaca**	**1.65**	**24**	*iP*	**Pn**	**05 55 43.3**	**-5.5**
OXX				*i* S	**Sn**	**05 56 09.6**	**-0.6**
UTMO	**Huajupan**	**2.27**	**351**	*eP*	**Pn**	**05 55 53.6**	**-3.8**
UTMO				*i* S	**Sn**	**05 56 26.9**	**+1.3**
ACX	**Acapulco**	**2.66**	**299**	*iP*	**Pn**	**05 55 59.2**	**-3.6**
ACX				*i* S	**Sn**	**05 56 30.1**	**-5.0**
ACX	**Acapulco**	**2.66**	**299**	*iP*	**Pn**	**05 55 57.2**	**-5.6**
ACX				*i* S	**Sn**	**05 56 30.1**	**-4.9**
TPIG	**Tehuac#an**	**2.83**	**1**	*eP*	**Pn**	**05 56 03.9**	**-1.3**
TPIG				*i* S	**Sn**	**05 56 40.5**	**+1.1**
CAIG	**El Cayaco**	**3.09**	**299**	*iP*	**Pn**	**05 56 03.3**	**-5.4**
CAIG				*i* S	**Sn**	**05 56 40.0**	**-5.7**
CAIG	**El Cayaco**	**3.09**	**299**	*iP*	**Pn**	**05 56 02.0**	**-6.6**
CAIG				*i* S	**Sn**	**05 56 40.0**	**-5.7**
MEIG	**Mezcala**	**3.14**	**319**	*iP*	**Pn**	**05 56 05.5**	**-3.8**
MEIG				*i* S	**Sn**	**05 56 45.6**	**-1.3**
PLIG	**Platanillo**	**3.43**	**325**	*iP*	**Pn**	**05 56 12.6**	**-0.8**
PLIG				*i* S	**Sn**	**05 56 55.0**	**+0.9**
PLIG	**Platanillo**	**3.43**	**325**	*iP*	**Pn**	**05 56 07.9**	**-5.5**
PLIG				*i* S	**Sn**	**05 56 52.5**	**-1.6**
PPM	**Popocatepetl**	**3.66**	**342**	*eP*	**Pn**	**05 56 16.4**	**-0.1**
PPM				*i* S	**Sn**	**05 57 06.3**	**+6.6**
PPM	**Popocatepetl**	**3.66**	**342**	*eP*	**Pn**	**05 56 16.4**	**-0.1**
PPM				*i* S	**Sn**	**05 57 06.3**	**+6.6**
ZIIG	**Zihuatanejo**	**4.36**	**298**	*iP*	**Pn**	**05 56 23.3**	**-2.8**
ZIIG				*i* S	**Sn**	**05 57 11.6**	**-5.5**
ZIIG	**Zihuatanejo**	**4.36**	**298**	*iP*	**Pn**	**05 56 23.3**	**-2.8**
ZIIG				*i* S	**Sn**	**05 57 11.6**	**-5.5**
628A	**Black Gap, Mar** baz=15	**14.73**	**341**	⇑P	**Pn**	**05 58 49.6**	**+1.3**
627A	**Terlingua Ranc** baz=16	**14.87**	**339**	⇓P	**Pn**	**05 58 51.1**	**+1.0**
JCT	**Junction City** baz=16	**15.00**	**352**	⇑P	**Pn**	**05 58 53.1**	**+1.2**
527A	**Woodward Ranch** baz=16	**15.58**	**340**	⇓P	**Pn**	**05 59 00.2**	**+0.7**
526A	**Mary Lane Ranc** baz=16	**15.66**	**338**	⇓P	**Pn**	**05 59 01.4**	**+0.8**
428A	**Kincaid Ranch,** baz=16	**15.83**	**343**	⇑P	**Pn**	**05 59 03.7**	**+0.8**
427A	**Hayter Ranch,** baz=17	**16.16**	**341**	⇓P	**Pn**	**05 59 07.4**	**+0.3**
426A	**McDonald Obser** baz=17	**16.20**	**339**	⇑P	**Pn**	**05 59 08.5**	**+1.0**
328A	**Wristen Ranch,** baz=17	**16.49**	**344**	⇑P	**Pn**	**05 59 11.2**	**-0.1**
425A	**Indio Mountain** baz=17	**16.65**	**337**	⇑P	**Pn**	**05 59 13.6**	**+0.2**
326A	**Caldwell Ranch** baz=17	**16.78**	**340**	⇑P	**Pn**	**05 59 16.5**	**+1.6**
325A	**Bean Ranch, Si** baz=18	**17.17**	**338**	⇑P	**Pn**	**05 59 21.0**	**+1.1**
324A	**Moseley Ranch,** baz=18	**17.43**	**336**	⇑P	**Pn**	**05 59 23.3**	**+0.2**
226A	**Malaga, Loving** baz=18,SNR=6.1	**17.50**	**341**	⇑P	**Pn**	**05 59 24.7**	**+0.7**
MNTX	**Cornudas Mount** baz=18	**17.62**	**337**	⇑P	**Pn**	**05 59 26.1**	**+0.7**
MNTX	**Cornudas Mount** 2.2nm,1.0s	**17.62**	**337**	*eP*	**Pn**	**05 59 25.4**	**0.0**
225A	**Deer Hill, Car** baz=18	**17.79**	**339**	⇓P	**Pn**	**05 59 27.6**	**0.0**
127A	**Arkansas Junct** baz=18	**17.86**	**344**	⇑P	**Pn**	**05 59 27.7**	**-0.7**
224A	**Cornudas Mount** baz=19	**18.01**	**337**	⇑P	**Pn**	**05 59 29.8**	**-0.5**
126A	**Clayton Basin,** baz=19	**18.02**	**342**	⇑P	**Pn**	**05 59 30.0**	**-0.5**
125A	**Gardner Draw,** baz=19	**18.23**	**340**	⇑P	**Pn**	**05 59 32.9**	**-0.2**
Z27A	**Tatum** baz=19	**18.43**	**345**	⇑P	**Pn**	**05 59 33.9**	**-1.5**
124A	**Stringfield Ra** baz=19	**18.54**	**338**	⇑P	**Pn**	**05 59 36.5**	**-0.4**
Z26A	**Caprock** baz=19	**18.59**	**343**	⇑P	**Pn**	**05 59 36.2**	**-1.2**
320A	**Kipp Ranch, An** baz=19	**18.68**	**329**	⇑P	**Pn**	**05 59 37.9**	**-0.6**
Z25A	**Roswell** baz=19,SNR=7.5	**18.82**	**341**	⇓P	**Pn**	**05 59 39.4**	**-0.8**
MSTX	**Muleshoe** baz=20,SNR=7.0	**18.94**	**346**	⇑P	**Pn**	**05 59 40.2**	**-1.5**
Z24A	**Sheeppen Canyo** baz=20,SNR=5.4	**19.08**	**339**	⇑P	**Pn**	**05 59 43.7**	**+0.3**
319A	**Douglas** baz=20	**19.09**	**328**	⇓P	**Pn**	**05 59 42.6**	**-0.9**
220A	**Playas Peak, P** baz=20	**19.14**	**330**	⇓P	**Pn**	**05 59 44.3**	**+0.2**
MIAR	**Mount Ida** 7.5nm,1.1s	**19.21**	**10**	*eP*	**Pn**	**05 59 41.4**	**-3.5**
121A	**Cookes Peak, D** baz=20	**19.33**	**333**	⇑P	**Pn**	**05 59 46.2**	**-0.1**
Y25A	**Mesa, Roswell** baz=20,SNR=6.5	**19.41**	**342**	⇑P	**Pn**	**05 59 47.5**	**+0.2**
AMTX	**Amarillo** baz=20	**19.61**	**350**	⇑P	**Pn**	**05 59 48.0**	**-1.6**
Z22A	**Elephant Butte** baz=20	**19.61**	**336**	⇑P	**Pn**	**05 59 49.3**	**-0.3**
Y24A	**Capitan** baz=20,SNR=6.3	**19.65**	**340**	⇓P	**Pn**	**05 59 49.7**	**-0.5**
X26A	**CR and CF Fran** baz=20	**19.75**	**344**	⇑P	**Pn**	**05 59 49.6**	**-1.7**
Y23A	**Lovelace Mesa,** baz=20,SNR=5.6	**19.87**	**338**	⇓P	**Pn**	**05 59 51.8**	**-0.9**
W27A	**Bowe Ranch, En** baz=21	**20.06**	**346**	⇑P	**P**	**05 59 52.4**	**-0.8**
Y22A	**Socorro** baz=21,SNR=5.9	**20.21**	**337**	⇓P	**P**	**05 59 56.7**	**+1.8**
217A	**Green Valley** baz=21	**20.22**	**325**	⇓P	**P**	**05 59 56.6**	**+1.5**
X24A	**Lazy VL Ranch,** baz=21	**20.24**	**341**	⇓P	**P**	**05 59 57.0**	**+1.9**
BNM	**Barren Site** 9.1nm,1.3s	**20.27**	**338**	*eP*	**P**	**05 59 56.5**	**+1.0**
W25A	**X Bar L Ranch,** baz=21	**20.55**	**343**	⇓P	**P**	**05 59 57.9**	**-0.7**
117A	**Oracle** baz=21	**20.80**	**327**	⇑P	**P**	**06 00 02.0**	**+0.8**
W24A	**Lazy 6 Ranch,** baz=21	**20.82**	**341**	⇓P	**P**	**06 00 02.1**	**+0.6**
V26A	**Tequesquite Ra** baz=22	**20.93**	**345**	⇑P	**P**	**06 00 03.1**	**+0.5**
ANMO	**Albuquerque** 5.9nm,1.1s	**20.93**	**339**	*eP*	**P**	**06 00 06.2**	**+3.5**
X21A	**Alamocita Cree** baz=22	**20.98**	**336**	⇑P	**P**	**06 00 04.1**	**+0.9**
W23A	**Werner Place,** baz=22	**21.02**	**340**	⇓P	**P**	**06 00 03.8**	**+0.2**
V25A	**Rancho No Teng** baz=22	**21.18**	**344**	⇑P	**P**	**06 00 05.5**	**+0.2**
Y19A	**Nutrioso** baz=22	**21.19**	**332**	⇓P	**P**	**06 00 06.5**	**+1.0**
Z17A	**San Carlos Hig** baz=22	**21.23**	**329**	⇑P	**P**	**06 00 05.8**	**-0.2**
V24A	**Rampart Ranch,** baz=22	**21.26**	**342**	⇓P	**P**	**06 00 06.6**	**+0.4**
Y18A	**Canyon Day Jun** baz=22	**21.40**	**330**	⇓P	**P**	**06 00 08.0**	**+0.2**
V23A	**Ortiz Mt. (NFS** baz=22	**21.56**	**340**	⇑P	**P**	**06 00 10.1**	**+0.7**
U25A	**Circle Dot Ran** baz=22	**21.66**	**345**	⇑P	**P**	**06 00 09.8**	**-0.7**
115A	**Sonoran Desert** baz=22	**21.70**	**324**	⇑P	**P**	**06 00 10.7**	**-0.3**
Y17A	**Roosevelt** baz=22	**21.73**	**329**	⇑P	**P**	**06 00 11.6**	**+0.2**
W20A	**Ramah** baz=22	**21.86**	**335**	⇓P	**P**	**06 00 12.7**	**0.0**
V22A	**San Miguel Ran** baz=23	**21.96**	**339**	⇓P	**P**	**06 00 16.4**	**+2.7**
U23A	**El Rito** baz=23,SNR=9.7	**22.10**	**341**	⇑P	**P**	**06 00 15.3**	**0.0**
SWET	**Sewanee**	**22.12**	**26**	*eP*	**P**	**06 00 10.7**	**-4.8**
V19A	**Window Rock** baz=23	**22.59**	**335**	⇓P	**P**	**06 00 19.9**	**-0.5**
X16A	**Lo Mia Camp, P** baz=23	**22.61**	**329**	⇑P	**P**	**06 00 21.4**	**+0.8**
U21A	**Nageezi** baz=23	**22.68**	**338**	⇑P	**P**	**06 00 21.9**	**+0.5**
S25A	**Robets Cordova** baz=24	**22.86**	**346**	⇓P	**P**	**06 00 23.3**	**0.0**
SDCO	**Great Sand Dun** baz=24	**23.21**	**344**	⇑P	**P**	**06 00 24.9**	**-2.1**
WUAZ	**Wupatki** baz=24	**23.46**	**330**	⇑P	**P**	**06 00 29.3**	**-0.4**
WUAZ	**Wupatki** 3.8nm,0.9s	**23.46**	**330**	*eP*	**P**	**06 00 29.3**	**-0.3**
S22A	**4UR Ranch, Cre** baz=24	**23.60**	**341**	⇑P	**P**	**06 00 30.2**	**-0.8**
U16A	**Tuba City** baz=24	**23.86**	**332**	⇓P	**P**	**06 00 34.0**	**+0.7**

*NEIC **28** 06:03:44.4, 22°.25S×68°.68W, h92km, MG3.9(GUC), After GUC.*

GUC 28 06:03:44.4±0.8, 22°.25S×68°.68W, h92km, ML3.9, 2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros** comp=E,334nm,0.5s	**1.81**	**231**	AML	AML	06 04 53.5	
MECH	**Mejillones**	**1.85**	**242**	*eP*	Pn	06 04 17.6	+2.9
MECH				*i* S	Sn	06 04 40.8	+3.1
MECH				AML	AML	06 04 51.0	
	comp=E,796nm,0.5s						
ANCH	**Antofagasta**	**2.15**	**228**	*eP*	Pn	06 04 16.9	-1.7
ANCH				*i* S	Sn	06 04 42.4	-2.2
ANCH	**Antofagasta**	**2.15**	**228**	*eP*	Pn	06 04 16.9	-1.7
ANCH				*i* S	Sn	06 04 42.4	-2.2
ANCH				AML	AML	06 04 50.6	
	comp=E,604nm,0.2s						
HMBC	**Humberston**	**2.26**	**330**	⇓*i*P	Pn	06 04 21.0	+0.9
HMBC				*i* S	Sn	06 04 48.4	+1.0
HMBC				AML	AML	06 04 50.4	
	comp=N,1μm,0.5s						
MNMC	**Miæe Miæ**	**3.22**	**344**	⇓*i*P	Pn	06 04 33.8	+0.9
MNMC				*i* S	Sn	06 05 11.0	+0.7
MNMC				AML	AML	06 05 13.1	
	comp=N,941nm,0.3s						
LPAZ	**La Paz** comp=N,6.0nm,0.9s	**5.95**	**5**	*e*Pn	Pn	06 05 12.5	+2.6
LCO	**Las Campanas**	**6.98**	**195**	*e*Pn	Pn	06 05 23.1	-0.8
LCO				*e*Sn	Sn	06 06 39.3	-2.5
TRQA	**Tornquist**	**16.78**	**161**	*e*Pn	Pn	06 07 34.9	+1.3

*NNC **28** 06:06:08.4±3.0, 40°.19N×71°.91E, h0km, mb4.0, mpv4.1, Error ellipse: s-maj=30.7km s-min=14.8km az=11.0*
*IDC **28** 06:06:08.0±0.8, 40°.18N×71°.93E, h0km, mb4.1/11, mb1 4.2/16, mb1mx4.0/30, mbtmp4.1/16, ML3.6/5, MS2.9/4, Ms1 2.9/4, ms1mx2.5/41, Error ellipse: s-maj=14.7km s-min=10.8km az=146.0*
*ISCJB **28** 06:06:10.1±1.0, 40°.38N±0°.03×71°.44E±0°.04, h6km±6km, mb4.0/14, Error ellipse: s-maj=5.3km s-min=4.2km az=144.6*
*BJI **28** 06:06:11.5, 40°.30N×71°.39E, h33km, mB4.5/1, mb4.1/4, ML4.0/4, Ms3.6/1*
*MOS **28** 06:06:13.1±2.0, 40°.38N×71°.75E, h33km, mb4.3/8, Error ellipse: s-maj=11.2km s-min=6.6km az=89.6*
*NEIC **28** 06:06:16.8±0.9, 40°.48N×71°.80E, h61km±10km, mb4.0/1, Error ellipse: s-maj=11.8km s-min=9.7km az=170.0*

ISC 28 06:06:14.5±1.1, 40°.48N±0°.03×71°.52E±0°.04, h20km±7km, n78, σ1§28/96, mb4.0/14, 18C-7D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=185	**2.32**	**44**	P	**Pn**	**06 06 51.5**	**-0.1**
AML	**Almayashu**	**2.32**	**44**	*e*Pn	**Pn**	**06 06 51.4**	**-0.2**
AML				*e*Sn	**Sn**	**06 07 22.7**	**+3.2**
CHM	**Chimkent**	**2.34**	**322**	*e*Pn	Px	06 07 07.8	
CHM				*e*Sg	Sx	06 07 59.9	
KK31	**Karatay Array** 5.8nm,0.2s,baz=148,slow=11,SNR=628	**2.73**	**344**	⇑Pn	**Pn**	**06 07 00.8**	**+3.6**
KK31				⇓Pg	**Pg**	**06 07 07.5**	**+0.7**
	29nm,0.3s,baz=149,slow=14,SNR=8.2						
KK31				⇑Lg		06 07 44.9	
	612nm,0.6s						
KK31	**Karatay Array**	**2.73**	**344**	*e*PN	**Pn**	**06 07 00.7**	**+3.6**
KK31				pmax	pmax		
	comp=Z,26nm,0.2s						
KKAR	**Karatay Array**	**2.73**	**344**	*e*Pn	**Pb**	**06 07 00.7**	**-1.8**
KKAR				*e*Sn	**Sb**	**06 07 37.3**	**+1.8**
EKS2	**Erkin-Say** SNR=41	**2.76**	**37**	P	**Pn**	**06 06 58.1**	**+0.6**
EKS2	**Erkin-Say**	**2.76**	**37**	*e*Pn	**Pn**	**06 06 58.2**	**+0.7**
EKS2				*e*Sn	**Sb**	**06 07 36.7**	**+0.3**
UCH	**Uchtor** SNR=17	**2.85**	**51**	P	**Pn**	**06 06 58.9**	**+0.1**
UCH	**Uchtor**	**2.85**	**51**	*e*Pn	**Pn**	**06 06 58.9**	**+0.1**
UCH				*e*Sn	**Sb**	**06 07 38.8**	**-0.2**
AAK	**Ala-Archa** SNR=16	**3.10**	**45**	P	**Pn**	**06 07 02.4**	**+0.2**
AAK	**Ala-Archa**	**3.10**	**45**	P	**Pn**	**06 07 02.5**	**+0.3**
	comp=Z,8.0nm,0.3s,baz=190,slow=6.8,SNR=20						
AAK				Lg		06 07 47.0	
	comp=Z,79nm,0.3s,baz=12,slow=20,SNR=7.3						
AAK				LR	LR	06 08 34.0	
	comp=Z,231nm,21.2s,baz=201,slow=47						
AAK	**Ala-Archa**	**3.10**	**45**	*c* iPN	**Pn**	**06 07 02.3**	**+0.1**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KZA	**Kyzart** SNR=22	**3.23**	**59**	P	**Pn**	**06 07 03.6**	**-0.4**
KZA	**Kyzart**	**3.23**	**59**	*e*Pn	**Pn**	**06 07 03.3**	**-0.7**
KZA				*e*Sn	**Sn**	**06 07 44.1**	**+2.3**
FRU	**Bishkek**	**3.30**	**44**	*e*PN	**Pb**	**06 07 11.0**	**-1.3**
FRU				*e*S	**Sb**	**06 07 55.0**	**+3.0**
FRU				pmax	pmax		
	comp=Z,210nm,1.4s						
FRU				smax			
	comp=E,2μm,1.6s						
KBK	**Karagaybulak** SNR=19	**3.36**	**49**	P	**Pn**	**06 07 06.7**	**+0.8**
CHMS	**Chumysh** SNR=14	**3.49**	**43**	P	**Pn**	**06 07 08.0**	**+0.4**
KSH	**Kashi**	**3.55**	**104**	⇑*i*Pn	**Pn**	**06 07 04.0**	**-4.5**
KSH				Sn	**Sn**	**06 07 37.5**	**-12**
KSH				smax			
	comp=N,390nm,0.7s						
KSH				smax			
	comp=E,310nm,0.3s						
USP	**Ospenovka** SNR=80	**3.56**	**38**	P	**Pn**	**06 07 08.9**	**+0.3**
TKM2	**Tokmak 2** comp=E,9.7nm,0.3s	**3.90**	**50**	⇓Pn	**Pn**	**06 07 13.0**	**-0.3**
TKM2				⇓Pg	**Pb**	**06 07 18.6**	**-4.0**
	comp=E,94nm,0.8s						
TKM2				⇓Lg		06 08 10.1	
	comp=E,266nm,0.5s						
TKM2	**Tokmak 2** SNR=35	**3.90**	**50**	P	**Pn**	**06 07 13.3**	**+0.1**
TKM2	**Tokmak 2**	**3.90**	**50**	*e*Pn	**Pn**	**06 07 13.1**	**-0.2**
TKM2				*e*Sg	**Sb**	**06 08 10.8**	**+1.4**
ULHL	**Ulahol** SNR=7.0	**3.96**	**62**	P	**Pn**	**06 07 13.2**	**-0.9**
KNDC	**Almaty** comp=E,322nm,0.6s	**4.90**	**54**	⇓Lg		06 08 42.1	
AAA	**Alma-Ata**	**4.92**	**54**	*i* PN	**Pb**	**06 07 39.5**	**-0.3**
AAA				pmax	pmax		
	comp=Z,120nm,0.4s						
KBL	**Kabul** comp=Z,38nm,0.3s	**6.25**	**199**	*e*Pn	**Pn**	**06 07 48.0**	**+2.4**
KBL				*e*Sn	**Sn**	**06 08 55.7**	**-0.6**
KBL	**Kabul**	**6.25**	**199**	*e*PN	**Pn**	**06 07 48.0**	**+2.4**
KBL				*e*		06 08 55.7	
KBL				pmax	pmax		
	comp=Z,38nm,0.3s						
CEP	**Cherat**	**6.65**	**177**	P	**Pn**	**06 07 52.1**	**+1.0**
CEP				S	**Sn**	**06 09 07.0**	**+0.7**
CHCP	**Chirak Chowk**	**6.95**	**168**	P	**Pn**	**06 07 56.0**	**+0.8**
MK31	**Makanchi Array** comp=Z,0.3nm,0.3s,baz=233,slow=15,SNR=8.6	**10.03**	**47**	Pn	**Pn**	**06 08 35.4**	**-2.0**
MK31				⇑Lg		06 11 18.5	
	comp=Z,6.4nm,0.6s						
MK31	**Makanchi Array**	**10.03**	**47**	*e*Pn	**Pn**	**06 08 35.5**	**-1.8**
MK31				*e*Sn	Sn	06 10 55.8	+27
MK31	**Makanchi Array**	**10.03**	**47**	*i* P	**Pn**	**06 08 35.3**	**-2.0**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array** comp=Z,0.2nm,0.3s,baz=237,slow=15,SNR=7.3	**10.03**	**47**	Pn	**Pn**	**06 08 34.9**	**-2.4**
MKAR				Lg		06 11 22.3	
	comp=Z,0.8nm,0.3s,baz=225,slow=26,SNR=3.9						
KURBB	**Kurchatov Arra** comp=Z,0.7nm,0.4s	**11.26**	**23**	⇑Pn	**Pn**	**06 08 51.4**	**-2.7**
KURBB				⇑Lg		06 12 09.9	
	comp=Z,8.1nm,0.7s						
KURK	**Kurchatov** comp=Z,3.3nm,0.7s	**11.37**	**23**	⇑Pn	**Pn**	**06 08 53.1**	**-2.5**
KURK				⇑Lg		06 12 14.7	
	comp=Z,49nm,1.1s						
KURK	**Kurchatov**	**11.37**	**23**	Pn	**Pn**	**06 08 50.9**	**-4.8**
KURK				Lg		06 12 06.6	
KURK				LR	LR	06 13 40.8	
KURK	**Kurchatov** comp=Z,0.5nm,0.3s,baz=216,slow=13,SNR=41	**11.37**	**23**	Pn	**Pn**	**06 08 50.9**	**-4.8**
KURK				Lg		06 12 06.6	
	comp=Z,0.3nm,0.3s,baz=206,slow=29,SNR=5.1						
KURK				LR	LR	06 13 40.8	
	comp=Z,50nm,21.7s,baz=235,slow=40						
KURK	**Kurchatov**	**11.37**	**23**	⇑*i*P	**Pn**	**06 08 55.4**	**-0.3**
AB31	**Akbulak array** comp=Z,1.1nm,0.3s,baz=131,slow=15,SNR=56	**12.01**	**321**	⇑Pn	**Pn**	**06 09 04.8**	**+0.4**
AB31	**Akbulak array**	**12.01**	**321**	P	**Pn**	**06 09 14.4**	**+10**
AB31				S	**Sn**	**06 11 14.0**	**-3.6**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.2s						
AB31				smax			
	comp=Z,4.0nm,0.4s						
ABKAR	**Akbulak array** comp=Z,0.1nm,0.3s	**12.01**	**321**	*e*Pn	**Pn**	**06 09 04.8**	**+0.4**
ABKAR				*e*Sn	**Sn**	**06 11 11.9**	**-5.7**
BVA0	**Borovoye Array** comp=Z,0.6nm,0.8s,baz=156,slow=13,SNR=5.0	**12.57**	**357**	⇓Pn	**Pn**	**06 09 10.9**	**-1.2**
BVA0				⇑Sn	**Sn**	**06 11 39.1**	**+7.8**
	comp=Z,0.5nm,0.5s						
BVA0				⇑Lg		06 12 57.2	
	comp=Z,2.7nm,0.8s,baz=153,slow=25,SNR=4.0						
BVAR	**Borovoye Array** comp=Z,0.5nm,0.3s,baz=182,slow=10,SNR=5.3	**12.57**	**357**	Pn	**Pn**	**06 09 11.0**	**-1.1**
BVAR				Sn	**Sn**	**06 11 29.9**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=173,slow=26,SNR=2.8						
BVAR				Lg		06 12 58.1	
	comp=Z,0.6nm,0.3s,baz=140,slow=27,SNR=3.0						
BVAR	**Borovoye Array**	**12.57**	**357**	P	**Pn**	**06 09 11.0**	**-1.1**
BVAR						06 11 29.9	
ZRNK	**Zerenda** comp=Z,4.6nm,1.1s	**12.59**	**353**	⇑Pn	**Pn**	**06 09 13.1**	**+0.8**
BRVK	**Borovoye**	**12.61**	**357**	*e*P	**Pn**	**06 09 13.5**	**+0.9**
AKTK	**Aktyubinsk**	**13.72**	**321**	Pn	**Pn**	**06 09 27.7**	**-0.1**
AKTK				Sn	**Sn**	**06 11 60.0**	**+0.5**
AKTO	**Aktyubinsk** comp=Z,0.2nm,0.5s	**13.72**	**321**	⇑Pn	**Pn**	**06 09 28.1**	**+0.3**
AKTO	**Aktyubinsk** comp=Z,0.6nm,0.3s,baz=122,slow=14,SNR=7.1	**13.72**	**321**	Pn	**Pn**	**06 09 27.7**	**-0.1**
AKTO				Sn	**Sn**	**06 11 60.0**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=54,slow=19,SNR=4.6						
ZAA0	**Zalesovo Array**	**16.18**	**29**	Pn	**Pn**	**06 09 57.3**	**-3.2**
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.3s,baz=323,slow=11,SNR=3.3	**16.18**	**29**	Pn	**Pn**	**06 09 53.8**	**-6.6**
ZALV				Sn	**Sn**	**06 13 03.3**	**+4.1**
	comp=Z,0.2nm,0.3s,baz=216,slow=26,SNR=2.4						
ZALV				Lg		06 14 37.8	
	comp=Z,0.3nm,0.3s,baz=225,slow=32,SNR=3.6						
ZALV				LR	LR	06 16 35.4	
	comp=Z,47nm,19.8s,baz=66,slow=38						
ZALV	**Zalesovo Beam**	**16.18**	**29**	P	**Pn**	**06 09 53.8**	**-6.7**
ZALV						06 13 03.3	
NVS	**Novosibirsk**	**16.35**	**25**	*e*P	**Pn**	**06 10 04.6**	**+1.9**
NVS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NVS				pmax	pmax		
	comp=N,4.0nm,0.8s						
ARU	**Arti** comp=N,6.2nm,0.6s	**18.07**	**336**	*e*P	**Pn**	**06 10 24.6**	**+0.5**
ARU	**Arti**	**18.07**	**336**	*d* iP	**Pn**	**06 10 24.8**	**+0.6**
ARU				S	**Sn**	**06 13 44.9**	**-0.2**
ARU				pmax	pmax		
	comp=Z,18nm,2.5s						
GNI	**Garni**	**20.40**	**278**	P	**P**	**06 10 51.4**	**+1.3**
	comp=Z,3.1nm,0.4s,baz=190,slow=12,SNR=2.8						
GNI	**Garni**	**20.40**	**278**	⇑*e*P	**P**	**06 10 54.5**	**+4.4**
GNI				pmax	pmax		
	comp=Z,19nm,1.2s						
ZEI	**Tsey**	**20.74**	**285**	*e*P	**P**	**06 10 52.1**	**-1.7**
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KIV	**Kislovodsk**	**21.59**	**289**	*e*P	**P**	**06 11 04.1**	**+1.2**
KIV				*e**PP		06 11 14.1	
KIV				*e*		06 11 26.6	
KIV				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.2						
GTA	**Gaotai**	**21.68**	**84**	*e*P	**P**	**06 11 03.8**	**-0.1**
GTA				pP		06 11 11.5	
GTA				sP	sP	06 11 14.0	+1.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.5						
ZAK	**Zakamensk**	**24.22**	**55**	*e*P	**P**	**06 11 27.5**	**-2.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.4						
OBN	**Obninsk**	**27.32**	**314**	*e*P	**P**	**06 11 58.9**	**+1.3**
OBN				*e*		06 12 13.6	
OBN				*e*		06 12 43.5	
OBN				*e*		06 15 19.0	
OBN				*e*S	**S**	**06 16 35.5**	**-0.5**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
BRTR	**Keskin Array B** comp=Z,1.6nm,0.6s,mb3.9,baz=84,slow=7.7,SNR=8.2	**28.84**	**281**	P	**P**	**06 12 12.5**	**+1.1**
BRTR	**Keskin Array B**	**28.84**	**281**	*ce*P	**P**	**06 12 13.8**	**+2.4**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be** comp=Z,0.5nm,0.4s,mb3.7,baz=80,slow=7.7,SNR=4.4	**30.93**	**304**	P	**P**	**06 12 29.6**	**-0.1**
AKASG	**Malin Array Be**	**30.93**	**304**	*ce*P	**P**	**06 12 31.0**	**+1

ellipse: s-maj=1.2km s-min=0.4km az=241.0
*DDA **28** 06:15:07.3, 39°.74N×26°.18E, h6km±5km, Md3.0*
ISC 28 06:15:07.4±0.4, 39°.74N±0°.02×26°.10E±0°.03, h4km±3km, n82, σ0°.96/121, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.11**	**338**	*i* P	**Pg**	**06 15 10.9**	**+1.4**
BOZC				*i* S	**Sg**	**06 15 12.8**	**+1.8**
EZN	**Ezine**	**0.19**	**64**	*e*PG	**Pg**	**06 15 11.1**	**0.0**
EZN				*e*SG	**Sg**	**06 15 14.0**	**+0.4**
EZN	**Ezine**	**0.19**	**64**	*e*Pg	**Pg**	**06 15 10.9**	**-0.2**
EZN	**Ezine**	**0.19**	**64**	*e*Pg	**Pg**	**06 15 11.1**	**0.0**
EZN				*e*Sg	**Sg**	**06 15 14.0**	**+0.4**
GADA	**Gvkgeada**	**0.47**	**341**	*e*PG	**Pg**	**06 15 15.4**	**-1.1**
GADA				*e*SG	**Sg**	**06 15 22.5**	**-0.1**
GADA	**Gvkgeada**	**0.47**	**341**	*e*Pg	**Pg**	**06 15 15.4**	**-1.1**
GADA				*e*Sg	**Sg**	**06 15 22.5**	**-0.2**
PRK	**Paraskevi**	**0.51**	**165**	*e*Pb	**Pg**	**06 15 16.9**	**-0.3**
PRK				*e*Sb	**Sg**	**06 15 24.5**	**+0.6**
PRK	**Paraskevi**	**0.51**	**165**	*e*PB	**Pg**	**06 15 16.9**	**-0.3**
PRK				*e*SB	**Sg**	**06 15 24.5**	**+0.6**
PRK	**Paraskevi**	**0.51**	**165**	P	**Pg**	**06 15 17.1**	**-0.1**
PRK				S	**Sg**	**06 15 24.8**	**+0.9**
PRK	**Paraskevi**	**0.51**	**165**	P	**Pg**	**06 15 17.1**	**-0.1**
PRK				*e*Sb	**Sg**	**06 15 24.5**	**+0.6**
PRK				S	**Sg**	**06 15 24.8**	**+0.9**
SIGR	**SIGRI**	**0.56**	**200**	P	**Pg**	**06 15 17.9**	**-0.3**
SIGR				S	**Sg**	**06 15 26.0**	**+0.5**
SIGR	**SIGRI**	**0.56**	**200**	P	**Pg**	**06 15 17.9**	**-0.3**
SIGR				S	**Sg**	**06 15 26.0**	**+0.5**
AYVA	**Ayvalik**	**0.63**	**134**	*i* P	**Pg**	**06 15 18.6**	**-0.9**
AYVA				*i* S	**Sg**	**06 15 27.9**	**+0.3**
AYVA	**Ayvalik**	**0.63**	**134**	*i* P	**Pg**	**06 15 18.6**	**-0.8**
AYVA				*i* S	**Sg**	**06 15 27.9**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.71**	**23**	*e*PG	**Pg**	**06 15 20.6**	**-0.5**
GELI				*e*SG	**Sg**	**06 15 31.1**	**+0.7**
GELI	**Tayfur-Gelibol**	**0.71**	**23**	Pg	**Pg**	**06 15 20.6**	**-0.4**
GELI	**Tayfur-Gelibol**	**0.71**	**23**	*e*Pg	**Pg**	**06 15 20.6**	**-0.5**
GELI				*e*Sg	**Sg**	**06 15 31.1**	**+0.8**
LIA	**Limnos Island**	**0.72**	**283**	*e*Pb	**Pg**	**06 15 21.2**	**-0.1**
LIA				*e*Sb	**Sg**	**06 15 31.8**	**+1.1**
LIA	**Limnos Island**	**0.72**	**283**	*e*PB	**Pg**	**06 15 21.2**	**-0.1**
LIA				*e*SB	**Sg**	**06 15 31.8**	**+1.1**
LIA	**Limnos Island**	**0.72**	**283**	P	**Pg**	**06 15 21.5**	**+0.2**
LIA				S	**Sg**	**06 15 31.6**	**+0.9**
LIA	**Limnos Island**	**0.72**	**283**	*e*Pb	**Pg**	**06 15 21.2**	**-0.1**
LIA	**Limnos Island**	**0.72**	**283**	P	**Pg**	**06 15 21.5**	**+0.2**
LIA				S	**Sg**	**06 15 31.6**	**+0.9**
LPK	**Lapseki**	**0.81**	**39**	*e*PG	**Pg**	**06 15 21.4**	**-1.5**
LPK	**Lapseki**	**0.81**	**39**	*e*Pg	**Pg**	**06 15 21.4**	**-1.5**
ERIK	**Erikli-Kesan**	**0.98**	**19**	*e*PG	**Pg**	**06 15 25.3**	**-0.9**
ERIK	**Erikli-Kesan**	**0.98**	**19**	*e*Pg	**Pg**	**06 15 25.3**	**-0.9**
ENEZ	**Enez**	**0.99**	**2**	*e*PG	**Pg**	**06 15 25.6**	**-0.8**
ENEZ	**Enez**	**0.99**	**2**	*e*Pg	**Pg**	**06 15 25.6**	**-0.8**
ALN	**Alexandroupoli**	**1.15**	**358**	*e*Pb	**Pg**	**06 15 28.8**	**-0.7**
ALN				*e*Sb	**Sb**	**06 15 45.3**	**+0.1**
ALN	**Alexandroupoli**	**1.15**	**358**	*e*PB	**Pg**	**06 15 28.8**	**-0.7**
ALN				*e*SB	**Sb**	**06 15 45.3**	**+0.1**
ALN	**Alexandroupoli**	**1.15**	**358**	P	**Pg**	**06 15 28.8**	**-0.7**
ALN				S	**Sg**	**06 15 45.5**	**+1.0**
ALN	**Alexandroupoli**	**1.15**	**358**	P	**Pg**	**06 15 28.8**	**-0.7**
ALN				*e*Sb	**Sb**	**06 15 45.3**	**+0.1**
BALY	**Balya**	**1.17**	**90**	*i* P	**Pg**	**06 15 29.1**	**-0.7**
BALY				*i* S	**Sg**	**06 15 45.0**	**+0.1**
BALY	**Balya**	**1.17**	**90**	*i* P	**Pg**	**06 15 29.1**	**-0.7**
BALY				*i* S	**Sg**	**06 15 45.0**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.25**	**41**	*e*PN	**Pn**	**06 15 30.8**	**-0.9**
RKY	**Sarkoy-Tekirda**	**1.25**	**41**	*e*Pn	**Pn**	**06 15 30.8**	**-0.9**
GONE	**Gonen-Balikesi**	**1.25**	**76**	*e*PN	**Pn**	**06 15 30.5**	**-1.2**
GONE	**Gonen-Balikesi**	**1.25**	**76**	*e*Pn	**Pn**	**06 15 30.5**	**-1.2**
CHOS	**Chios island**	**1.35**	**182**	*e*PG	**Pg**	**06 15 31.9**	**-1.5**
CHOS				*e*SB	**Sb**	**06 15 51.2**	**+0.2**
CHOS	**Chios island**	**1.35**	**182**	P	**Pn**	**06 15 31.4**	**-1.7**
CHOS				S	**Sg**	**06 15 49.8**	**-1.1**
CHOS	**Chios island**	**1.35**	**182**	P	**Pn**	**06 15 31.4**	**-1.7**
CHOS	**Chios island**	**1.35**	**182**	*e*Pg	**Pg**	**06 15 31.9**	**-1.5**
CHOS				S	**Sg**	**06 15 49.8**	**-1.1**
CHOS				*e*Sb	**Sb**	**06 15 51.2**	**+0.2**
BALB	**Balikesir**	**1.38**	**94**	*e*PN	**Pn**	**06 15 33.4**	**+0.1**
BALB	**Balikesir**	**1.38**	**94**	*e*Pn	**Pn**	**06 15 33.4**	**+0.1**
RDO	**Rodhopi**	**1.47**	**343**	P	**Pn**	**06 15 33.7**	**-0.9**
RDO	**Rodhopi**	**1.47**	**343**	P	**Pn**	**06 15 33.7**	**-0.9**
EDC	**Edincik**	**1.48**	**65**	*e*PN	**Pn**	**06 15 35.5**	**+0.8**
EDC	**Edincik**	**1.48**	**65**	*e*Pn	**Pn**	**06 15 35.6**	**+0.8**
BLCB	**Balcova**	**1.54**	**151**	*e*PN	**Pn**	**06 15 36.4**	**+0.7**
BLCB	**Balcova**	**1.54**	**151**	*e*Pn	**Pn**	**06 15 36.4**	**+0.8**
AKHS	**Akhisar**	**1.58**	**123**	*i* P	**Pn**	**06 15 36.5**	**+0.2**
AKHS				*i* S	**Sn**	**06 15 57.9**	**+0.8**
AKHS	**Akhisar**	**1.58**	**123**	*i* P	**Pn**	**06 15 36.5**	**+0.3**
AKHS				*i* S	**Sn**	**06 15 57.9**	**+0.8**
AKS	**Akhisar**	**1.58**	**123**	*e*PN	**Pn**	**06 15 36.8**	**+0.6**
AKS	**Akhisar**	**1.58**	**123**	*e*Pn	**Pn**	**06 15 36.8**	**+0.6**
TKR	**Tekirdag**	**1.66**	**41**	*e*PN	**Pn**	**06 15 37.1**	**-0.1**
TKR	**Tekirdag**	**1.66**	**41**	*e*Pn	**Pn**	**06 15 37.2**	**0.0**
KAVA	**Kavala**	**1.74**	**316**	P	**Pn**	**06 15 36.8**	**-1.6**
KAVA				S	**Sn**	**06 15 58.6**	**-2.5**
KAVA	**Kavala**	**1.74**	**316**	P	**Pn**	**06 15 36.8**	**-1.6**
KAVA				S	**Sn**	**06 15 58.6**	**-2.5**
KCTX	**Karacabey (Bur**	**1.81**	**73**	*e*PN	**Pn**	**06 15 39.8**	**+0.5**
KCTX	**Karacabey (Bur**	**1.81**	**73**	*e*Pn	**Pn**	**06 15 39.8**	**+0.5**
DURS	**Dursunbey**	**1.83**	**94**	*i* P	**Pn**	**06 15 39.1**	**-0.6**
DURS				*i* S	**Sn**	**06 16 02.2**	**-1.2**
DURS	**Dursunbey**	**1.83**	**94**	*i* P	**Pn**	**06 15 39.1**	**-0.6**
DURS				*i* S	**Sn**	**06 16 02.2**	**-1.2**
SMG	**Samos**	**2.11**	**164**	*e*Pn	**Pn**	**06 15 45.3**	**+1.8**
SMG	**Samos**	**2.11**	**164**	*e*PN	**Pn**	**06 15 45.3**	**+1.8**
SMG	**Samos**	**2.11**	**164**	*e*Pn	**Pn**	**06 15 45.3**	**+1.8**
PLG	**Polygyros**	**2.13**	**288**	*e*Pn	**Pn**	**06 15 45.6**	**+1.8**
PLG				*e*Sn	**Sn**	**06 16 14.9**	**+4.2**
PLG	**Polygyros**	**2.13**	**288**	*e*PN	**Pn**	**06 15 45.6**	**+1.8**
PLG				*e*SN	**Sn**	**06 16 14.9**	**+4.2**
PLG	**Polygyros**	**2.13**	**288**	*e*Pn	**Pn**	**06 15 45.6**	**+1.8**
PLG				*e*Sn	**Sn**	**06 16 14.9**	**+4.2**
EDRB	**Edirne**	**2.16**	**13**	*e*PN	**Pn**	**06 15 43.8**	**-0.3**
EDRB	**Edirne**	**2.16**	**13**	*e*Pn	**Pn**	**06 15 43.8**	**-0.3**
SLVT	**Silivri**	**2.19**	**47**	*e*PN	**Pn**	**06 15 44.8**	**+0.2**
SLVT	**Silivri**	**2.19**	**47**	*e*Pn	**Pn**	**06 15 44.8**	**+0.3**
MDNY	**Mudanya-Bursa**	**2.22**	**73**	*e*PN	**Pn**	**06 15 45.7**	**+0.6**
MDNY	**Mudanya-Bursa**	**2.22**	**73**	*e*Pn	**Pn**	**06 15 45.7**	**+0.7**
ARMT	**Armutlu**	**2.27**	**68**	*e*PN	**Pn**	**06 15 46.6**	**+0.9**
ARMT	**Armutlu**	**2.27**	**68**	*e*Pn	**Pn**	**06 15 46.6**	**+1.0**
KULA	**Kula-Manisa**	**2.34**	**121**	*e*PN	**Pn**	**06 15 48.4**	**+1.8**
KULA	**Kula-Manisa**	**2.34**	**121**	*e*Pn	**Pn**	**06 15 48.4**	**+1.8**
CTKS	**Kestanelik-??a**	**2.36**	**50**	*e*PN	**Pn**	**06 15 47.6**	**+0.7**
CTKS	**Kestanelik-??a**	**2.36**	**50**	*e*Pn	**Pn**	**06 15 47.6**	**+0.7**
BGKT	**Bogazkoy**	**2.49**	**54**	*e*PN	**Pn**	**06 15 49.3**	**+0.6**
BGKT	**Bogazkoy**	**2.49**	**54**	*e*Pn	**Pn**	**06 15 49.3**	**+0.6**

DDA 28 06:16:17.9, 38°.10N×34°.70E, h7km±2km, Md2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AVNT	**Avonos**	**0.69**	**10**	*i* P	Pg	06 16 31.1	-0.1
AVNT				*i* S	Sg	06 16 41.6	+1.3
GULE	**Gulek**	**0.81**	**176**	*i* P	Pg	06 16 34.0	+0.5
GULE				*i* S	Sg	06 16 45.1	+1.1
KOZT	**Kozan**	**1.08**	**124**	*e*PG	Pg	06 16 38.7	+0.1
KOZT				*e*SG	Sg	06 16 52.7	0.0
SARI	**SarD1z-Kayseri**	**1.67**	**69**	*e*PN	Pn	06 16 44.1	-3.4

*UPA **28** 06:22:19.0, 8°.71N×82°.82W, h12km, MW4.0*
*UCR **28** 06:22:19.3, 8°.65N×82°.89W, h10km, MD3.5*
CASC 28 06:22:18.1±2.2, 8°.68N×82°.83W, h10km, MD3.5, 2C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.17**	**50⇓**	*i*P	Pg	06 22 23.7	+1.8
BRU2				*e*S	Sg	06 22 27.7	+3.2
TBS2		**0.20**	**57**	*i* P	Pg	06 22 27.2	+4.9
TBS2				*e*S	Sg	06 22 31.8	+6.6
ACR	**Cerro Adams**	**0.34**	**265⇓**	*e*P	Pg	06 22 25.4	+0.6
ACR				*e*S	Sg	06 22 29.8	+0.4
BUS	**Buena Vista**	**1.26**	**313⇑**	*e*P	Pn	06 22 41.3	-0.5
BUS				*e*S	Sb	06 22 58.5	+0.1
URSC	**Urasca**	**1.48**	**321⇑**	*e*P	Pn	06 22 44.9	+0.1
URSC				*e*S	Sn	06 23 04.4	+0.2
LAJ	**Bijagual**	**1.73**	**313**	*e*P	Pn	06 22 53.0	+4.6
LAJ				*e*S	Sn	06 23 17.8	+7.3
PRS1	**Puriscal**	**1.95**	**312**	*e*P	Pn	06 22 50.9	-0.4
PRS1				*e*S	Sn	06 23 15.5	-0.4
CGA2	**Cerro Gallo 2**	**2.09**	**309**	*e*P	Pn	06 22 54.0	+0.8
CGA2				*e*S	Sn	06 23 19.7	+0.4
BCIP	**Isla Barro Col**	**2.99**	**81**	*e*P	Pn	06 23 05.0	-0.7
BCIP				*e*S	Sn	06 23 39.6	-2.0

*IDC **28** 06:23:46.6±0.9, 8°.19N×137°.66E, h0km, mb4.0/11, mb1 4.1/11, mb1mx4.0/24, mbtmp4.0/11, MS2.9/1, Ms1 2.9/1, ms1mx2.1/39, Error ellipse: s-maj=37.6km s-min=16.4km az=81.0*
*ISCJB **28** 06:23:49.5±0.9, 8°.13N±0°.10×137°.6E±0°.3, h33km, mb4.0/12, Error ellipse: s-maj=36.2km s-min=13.7km az=173.4*
*NEIC **28** 06:23:51.8±0.7, 8°.15N×137°.64E, h35km, mb3.9/1, Error ellipse: s-maj=26.3km s-min=10.0km az=83.0*
ISC 28 06:23:51.9±0.9, 8°.15N±0°.10×137°.6E±0°.3, h35km, n14, σ0°.53/13, mb4.0/12, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.11**	**187**	P	**P**	**06 29 41.3**	**+0.7**
	1.0nm,0.9s,mb3.4,baz=2.3,slow=9.8,SNR=5.0						
WRA				PcP	PcP	06 32 56.0	+1.5
	0.4nm,0.6s,baz=357,slow=2.8,SNR=5.3						
FITZ	**Fitzroy Crossi**	**28.65**	**204**	P	**P**	**06 29 44.5**	**-0.9**
	2.1nm,1.0s,mb3.8,baz=42,slow=13,SNR=3.5						
KSRS	**Korea Array**	**30.47**	**345**	LR	LR	06 41 41.4	
	comp=Z,20nm,18.1s,baz=285,slow=35						
ASAR	**Alice Springs**	**31.83**	**186**	P	**P**	**06 30 13.8**	**+0.2**
	0.5nm,0.6s,mb3.5,baz=19,slow=12,SNR=7.7						
ASAR				PcP	PcP	06 33 04.3	+0.2
	0.4nm,0.6s,baz=12,slow=2.8,SNR=4.5						
CMAR	**Chiang Mai Arr**	**38.94**	**289**	P	**P**	**06 31 14.9**	**+0.1**
	0.9nm,0.3s,mb4.0,baz=97,slow=4.9,SNR=3.2						
SONM	**Songino Array**	**47.59**	**332**	P	**P**	**06 32 24.8**	**+0.6**
	0.8nm,0.6s,mb3.9,baz=141,slow=9.3,SNR=4.6						
MKAR	**Makanchi Array**	**60.72**	**320**	P	**P**	**06 34 00.4**	**+0.5**
	2.2nm,0.6s,mb4.5,baz=102,slow=8.9,SNR=19						
ZALV	**Zalesovo Beam**	**62.14**	**328**	P	**P**	**06 34 08.6**	**-0.8**
	0.5nm,0.4s,mb4.0,baz=108,slow=4.7,SNR=2.8						
KURK	**Kurchatov**	**64.36**	**323**	P	**P**	**06 34 24.4**	**+0.3**
	3.0nm,0.5s,mb4.6,baz=113,slow=5.7,SNR=15						
BVAR	**Borovoye Array**	**69.91**	**324**	P	**P**	**06 34 59.7**	**+0.4**
	3.1nm,0.5s,mb4.5,baz=116,slow=7.4,SNR=11						
ABKAR	**Akbulak array**	**75.84**	**319**	*e*P	**P**	**06 35 34.8**	**+0.2**
	0.9nm,0.6s,mb3.9						
ILAR	**Eielson Array**	**76.49**	**25**	P	**P**	**06 35 37.7**	**-0.3**
	0.6nm,0.8s,mb3.6,baz=244,slow=6.1,SNR=8.2						
AKTK	**Aktyubinsk**	**77.15**	**320**	P	**P**	**06 35 41.5**	**-0.5**
AKTO	**Aktyubinsk**	**77.15**	**320**	P	**P**	**06 35 41.5**	**-0.5**
	0.6nm,0.5s,mb3.8,baz=82,slow=7.1,SNR=2.5						

*IDC **28** 06:27:09.8±0.8, 30°.53N×83°.06E, h0km, mb3.9/11, mb1 4.0/14, mb1mx3.8/29, mbtmp3.9/14, ML3.0/2, MS2.9/6, Ms1 2.9/6, ms1mx2.6/41, Error ellipse: s-maj=25.2km s-min=16.2km az=56.0*
*ISCJB **28** 06:27:10.4±1.2, 30°.65N±0°.05×83°.16E±0°.04, h8km±7km, mb3.7/11, MS2.9/5, Error ellipse: s-maj=8.6km s-min=4.9km az=166.0*
*NDI **28** 06:27:10.1±3.6, 30°.89N×83°.42E, h10km, ML3.6, mb3.6(NEIC)*
*NEIC **28** 06:27:11.8±0.6, 30°.62N×83°.13E, h10km, mb3.6/2, Error ellipse: s-maj=16.6km s-min=8.9km az=224.0*
ISC 28 06:27:12.4±1.2, 30°.69N±0°.05×83°.15E±0°.04, h8km±8km, n35, σ1°.29/39, mb3.7/11, MS2.9/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**2.78**	**247**	*e*PKP	**Pg**	**06 28 04.9**	**-0.9**
PTH				*e*S	**Sg**	**06 28 42.3**	**+0.4**
JOSI	**Joshimath**	**3.10**	**269**	*ex*	**Pb**	**06 28 07.6**	**-0.2**
JOSI				*e*S	**Sn**	**06 28 41.4**	**+2.5**
JOSI				AML	AML	06 29 09.0	
	comp=N,429nm,0.9s						
JOSI				AML	AML	06 29 11.4	
	comp=E,409nm,0.8s						
KLP	**Kalpa**	**4.29**	**283**	*ex*	**Pb**	**06 28 25.1**	**-2.9**
KLP				*e*S	**Sn**	**06 29 09.0**	**+0.8**
KLP				AML	AML	06 30 19.8	
	comp=N,42nm,0.9s						
KLP				AML	AML	06 30 22.2	
	comp=E,44nm,0.6s						
DDI	**Dehra Dun**	**4.41**	**267**	*ex*	**Pn**	**06 28 24.0**	**+4.3**
NDI	**New Delhi**	**5.54**	**250**	*e*PKP	**Pn**	**06 28 36.0**	**+0.9**
NDI				*ex*	**Sn**	**06 29 45.0**	**+6.1**
AGRA	**Agra**	**5.72**	**234**	*e*S	**Sn**	**06 29 45.1**	**+1.7**
AGRA				AML	AML	06 30 40.7	
	comp=E,157nm,0.3s						
AGRA				AML	AML	06 30 41.2	
	comp=N,134nm,0.6s						
SONA	**Sohna**	**5.82**	**247**	*e*PKP	**Pn**	**06 28 39.9**	**+0.9**
SONA				*e*S	**Sn**	**06 29 44.8**	**-1.1**
KHET	**Khetri**	**6.92**	**250**	*ex*	**Pn**	**06 28 50.0**	**-4.1**
KHET				*e*S	**Sn**	**06 30 11.0**	**-2.0**
LSA	**Lhasa**	**6.99**	**96**	*e*Pn	**Pn**	**06 28 57.1**	**+2.1**
	comp=N,22nm,0.8s						
LSA				*e*Sn	**Sn**	**06 30 15.6**	**+0.8**
SHL	**Shillong**	**9.24**	**121**	*e*PKP	**Pn**	**06 29 22.0**	**-3.9**
SHL				*ex*	x	06 30 40.0	
KBL	**Kabul**	**12.50**	**292**	*e*Pn	**Pn**	**06 30 12.1**	**+1.6**
	comp=N,11nm,0.9s						
AAK	**Ala-Archa**	**13.79**	**332**	Pn	**Pn**	**06 30 28.8**	**+0.7**
	comp=N,0.4nm,0.3s,baz=260,slow=12,SNR=1.7						
AAK				LR	LR	06 35 34.4	
	comp=N,39nm,20.6s,baz=143,slow=36						
EKS2	**Erkin-Say**	**14.11**	**330**	*e*Pn	**Pn**	**06 30 34.4**	**+1.9**
	comp=N,2.0nm,0.8s						
EKS2				*e*Sn	**Sn**	**06 33 04.9**	**-4.3**
KKAR	**Karatay Array**	**15.97**	**324**	*e*Pn	**Pn**	**06 30 56.0**	**-1.3**
	comp=N,0.6nm,0.3s						
MKAR	**Makanchi Array**	**16.10**	**358**	Pn	**Pn**	**06 30 58.5**	**-0.4**
	comp=N,0.1nm,0.3s,baz=167,slow=13,SNR=3.2						
GTA	**Gaotai**	**16.17**	**53**	*e*P	**Pn**	**06 31 01.8**	**+1.9**
GTA				pP	pP	06 31 06.5	+1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**18.80**	**127**	P	**Pn**	**06 31 32.4**	**-0.4**
	baz=308,slow=11,SNR=12						
KURK	**Kurchatov**	**20.29**	**352**	P	**P**	**06 31 46.8**	**-1.6**
	comp=Z,5.5nm,1.0s,baz=176,slow=9.6,SNR=14						
ZALV	**Zalesovo Beam**	**23.28**	**2**	P	**P**	**06 32 19.5**	**-0.9**
	comp=Z,1.1nm,0.6s,mb3.5,baz=181,slow=8.5,SNR=5.3						
ZALV				LR	LR	06 41 18.9	
	comp=Z,14nm,20.1s,MS2.4,baz=312,slow=36						
BVAR	**Borovoye Array**	**24.19**	**341**	P	**P**	**06 32 28.6**	**-0.4**
	comp=Z,1.2nm,0.4s,mb3.6,baz=154,slow=8.0,SNR=4.2						
SONM	**Songino Array**	**24.69**	**40**	P	**P**	**06 32 33.5**	**-0.3**
SONM	**Songino Array**	**24.69**	**40**	P	**P**	**06 32 33.5**	**-0.3**
	comp=Z,1.0nm,0.6s,mb3.5,baz=237,slow=10,SNR=3.6						
ABKAR	**Akbulak array**	**25.53**	**323**	*e*P	**P**	**06 32 41.7**	**+0.4**
	comp=Z,2.8nm,0.8s,mb3.8						
GNI	**Garni**	**32.48**	**298**	LR	LR	06 49 02.7	
	comp=Z,24nm,21.9s,MS2.9,baz=287,slow=40						
KSRS	**Korea Array**	**37.42**	**67**	P	**P**	**06 34 27.0**	**+1.1**
	comp=Z,0.9nm,0.6s,mb3.8,baz=274,slow=9.0,SNR=3.7						
KSRS				LR	LR	06 50 33.7	
	comp=Z,20nm,21.0s,MS2.9,baz=285,slow=37						
FINES	**FINESS Array B**	**47.91**	**327**	P	**P**	**06 35 50.1**	**-0.7**
	comp=Z,1.6nm,0.7s,mb4.1,baz=108,slow=8.9,SNR=4.6						
FINES				LR	LR	06 58 38.3	
	comp=Z,18nm,21.9s,MS3.0,baz=342,slow=39						
ARCES	**ARCESS Array B**	**50.40**	**337**	P	**P**	**06 36 10.3**	**+0.6**
ARCES	**ARCESS Array B**	**50.40**	**337**	P	**P**	**06 36 10.3**	**+0.6**
	comp=Z,2.7nm,0.9s,mb4.3,baz=110,slow=9.7,SNR=5.0						
GUMO	**Guam**	**58.97**	**92**	LR	LR	07 02 51.2	
	comp=Z,21nm,20.5s,MS3.2,baz=100,slow=36						
WRA	**Warramunga Arr**	**70.38**	**129**	P	**P**	**06 38 24.5**	**-2.5**
	comp=Z,1.5nm,0.8s,mb4.0,baz=324,slow=6.3,SNR=9.2						
ASAR	**Alice Springs**	**72.72**	**132**	P	**P**	**06 38 40.0**	**-1.1**
	comp=Z,0.5nm,0.9s,mb3.4,baz=309,slow=6.6,SNR=4.5						
TORD	**Torodi Ar. Bea**	**76.15**	**277**	P	**P**	**06 39 00.3**	**-1.1**
	comp=Z,0.9nm,0.8s,mb3.7,baz=53,slow=4.8,SNR=5.3						
ILAR	**Eielson Array**	**77.19**	**20**	P	**P**	**06 39 05.2**	**-1.2**
	comp=Z,0.4nm,0.8s,mb3.4,baz=306,slow=4.4,SNR=6.8						
QSPA	**South Pole Qui**	**120.48**	**180**	PKP	PKPdf	06 46 00.9	-2.4
	comp=Z,0.6nm,0.7s,baz=282,slow=1.7,SNR=3.3						
CPUP	**Villa Florida**	**145.13**	**267**	PKPbc	PKPbc	06 46 48.5	-1.8
	comp=Z,0.4nm,0.3s,baz=146,slow=3.6,SNR=4.0						

*IDC **28** 06:33:44.0±7.1, 34°.09N×71°.29E, h0km, mb4.0/4, mb1 4.1/8, mb1mx3.8/27, mbtmp4.1/8, ML4.1/4, Error ellipse: s-maj=118.2km s-min=38.9km az=151.0*
*ISCJB **28** 06:34:21.8±0.4, 36°.49N±0°.03×71°.16E±0°.05, h209km±7km, mb3.4/4, Error ellipse: s-maj=6.9km s-min=4.2km az=163.5*
*NEIC **28** 06:34:23.6±0.7, 36°.55N×71°.06E, h202km±7km, mb4.4/7, Error ellipse: s-maj=15.4km s-min=7.1km az=137.0*
*NNC **28** 06:34:24.6±12.0, 37°.24N×70°.83E, h0km, mb4.0, mpv4.2, Error ellipse: s-maj=103.1km s-min=76.2km az=2.0*
ISC 28 06:34:22.8±0.4, 36°.49N±0°.03×71°.20E±0°.06, h198km±7km, n58, σ1°.93/77, mb3.4/4, 9C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.63**	**223**	*e*Pn	**Pn**	**06 35 09.1**	**+1.1**
KBL				*e*Sn	**Sn**	**06 35 42.1**	**-1.0**
CEP	**Cherat**	**2.73**	**168**	⇑P	**Pn**	**06 35 12.8**	**+3.7**
CHCP	**Chirah Chowk**	**3.30**	**149**	P	**Pn**	**06 35 20.5**	**+4.7**
THW	**Thamme Wali**	**3.72**	**173**	P	**Pn**	**06 35 24.1**	**+3.1**
KSH	**Kashi**	**4.83**	**50⇓**	*i*Pn	**Pn**	**06 35 33.0**	**-1.8**
KSH				Sn	**Sn**	**06 36 14.0**	**-18**
KSH				smax			
	comp=N,190nm,0.6s						
KSH				smax			
	comp=E,190nm,0.6s						
AML	**Almayashu**	**5.95**	**18**	P	**Pn**	**06 35 50.2**	**+1.0**
	SNR=163						
AML	**Almayashu**	**5.95**	**18**	*e*Pn	**Pn**	**06 35 50.4**	**+1.2**
	comp=E,106nm,0.5s						
AML				*e*Sn	**Sn**	**06 36 55.0**	**-2.7**
UCH	**Uchtor**	**6.27**	**23**	P	**Pn**	**06 35 55.2**	**+1.8**
	SNR=7.6						
UCH	**Uchtor**	**6.27**	**23**	*e*Pn	**Pn**	**06 35 55.1**	**+1.7**
	comp=E,13nm,0.7s						
KZA	**Kyzart**	**6.40**	**28**	P	**Pn**	**06 35 56.2**	**+1.2**
	SNR=15						
KZA	**Kyzart**	**6.40**	**28**	*e*Pn	**Pn**	**06 35 56.0**	**+0.9**
	comp=E,23nm,0.9s						
KZA				*e*Sn	**Sn**	**06 37 04.1**	**-4.0**
EKS2	**Erkin-Say**	**6.47**	**17**	P	**Pn**	**06 35 57.1**	**+1.1**
	SNR=23						
EKS2	**Erkin-Say**	**6.47**	**17**	*e*Pn	**Pn**	**06 35 57.0**	**+1.0**
	comp=E,15nm,0.5s						
EKS2				*e*Sn	**Sn**	**06 37 04.6**	**-5.3**
KK31	**Karatay Array**	**6.62**	**356**	P	**Pn**	**06 35 57.3**	**-0.6**
	comp=E,3.8nm,0.5s,baz=179,slow=12,SNR=38						
KK31				⇑S	**Sn**	**06 37 02.8**	**-11**
	comp=E,32nm,0.6s,baz=182,slow=18,SNR=21						
KKAR	**Karatay Array**	**6.62**	**356**	*e*Pn	**Pn**	**06 35 57.6**	**-0.3**
	comp=E,5.8nm,0.3s						
KKAR				*e*Sn	**Sn**	**06 37 07.6**	**-5.8**
AAK	**Ala-Archa**	**6.64**	**22**	P	**Pn**	**06 35 59.6**	**+1.5**
	SNR=12						
AAK	**

az=52.0

ISC 28 06:42:21.0±0.4, 50°20'N±0°04×129°62'W±0°06, h10km, n118, σ1s17/113, mb4.2/11, MS3.5/6, 9D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.05**	**64**	⇑*e*Pn	**Pn**	**06 42 40.5**	**-1.1**
HOLB				⇓*e*Sn	**Sn**	**06 42 57.3**	**+1.0**
BPBC	**Brooks Peninsu**	**1.19**	**91**	⇓*e*Pn	**Pn**	**06 42 40.8**	**-2.8**
PHC	**Port Hardy**	**1.48**	**69**	⇓*e*Pn	**Pn**	**06 42 46.7**	**-1.0**
PHC				⇑*e*Sn	**Sn**	**06 43 08.1**	**+1.0**
MAYB	**Maynard**	**1.58**	**82**	⇓*e*Pn	**Pn**	**06 42 46.9**	**-2.1**
EDB	**Eliza Dome**	**1.64**	**101**	⇑*e*Pn	**Pn**	**06 42 46.2**	**-3.6**
EDB				⇑*e*Sn	**Sn**	**06 43 07.9**	**-3.0**
WOSB	**Woss**	**1.96**	**90**	⇓*e*Pn	**Pn**	**06 42 52.5**	**-1.7**
BBB	**Bella Bella** 99nm,0.3s,baz=42,slow=15,SNR=154	**2.20**	**25**	*e*Pn	**Pn**	**06 42 57.1**	**-0.4**
BBB				*e*Sn	**Sn**	**06 43 26.0**	**+1.2**
BBB	**Bella Bella** 80nm,0.3s,baz=135,slow=20,SNR=21	**2.20**	**25**	⇓*e*Pn	**Pn**	**06 42 57.5**	**0.0**
BBB				⇓*e*Sn	**Sn**	**06 43 25.9**	**+1.1**
NCRB	**Newcastle Ridg**	**2.29**	**84**	⇓*e*Pn	**Pn**	**06 42 58.0**	**-0.7**
GDR	**Gold River**	**2.35**	**99**	⇓*e*Pn	**Pn**	**06 42 56.8**	**-2.8**
BNB	**Barry Inlet**	**2.73**	**331**	⇑*e*Pn	**Pn**	**06 43 00.4**	**-4.4**
CBB	**Campbell River**	**2.74**	**92**	*e*Pn	**Pn**	**06 43 03.6**	**-1.4**
CBB				⇑*e*Sn	**Sn**	**06 43 38.6**	**+0.5**
BTB	**Buttle Lake**	**2.75**	**104**	⇑*e*Pn	**Pn**	**06 43 03.1**	**-1.9**
OZB	**Mount Ozzard**	**2.96**	**113**	⇑*e*Pn	**Pn**	**06 43 05.8**	**-2.1**
DIB	**Dawson Inlet,**	**3.49**	**330**	*e*Pn	**Pn**	**06 43 13.2**	**-2.1**
PGC	**Sidney**	**4.31**	**109**	*e*Pn	**Pn**	**06 43 25.4**	**-1.2**
NLWA	**Neilton Lookou**	**4.72**	**124**	*e*Pn	**Pn**	**06 43 31.4**	**-0.8**
JCW	**Jim Creek**	**5.42**	**109**	*e*Pn	**Pn**	**06 43 41.6**	**-0.2**
RPW	**Rockport**	**5.58**	**105**	*e*Pn	**Pn**	**06 43 43.7**	**-0.3**
CRAG	**Craig**	**5.69**	**339**	*e*Pn	**Pn**	**06 43 44.2**	**-1.2**
LON	**Longmire**	**6.23**	**121**	*e*Pn	**Pn**	**06 43 53.1**	**+0.2**
TDL	**Tradedollar La**	**6.26**	**125**	P	**Pn**	**06 43 54.2**	**+0.9**
LVP	**Lakeview Peak**	**6.35**	**128**	P	**Pn**	**06 43 55.9**	**+1.3**
TWW	**Teanaway**	**6.55**	**115**	P	**Pn**	**06 43 58.3**	**+1.0**
LTY	**Liberty**	**6.61**	**113**	P	**Pn**	**06 43 58.4**	**+0.4**
ETW	**Entiat**	**6.65**	**109**	*e*Pn	**Pn**	**06 43 58.7**	**+0.1**
TBM	**Table Mountain**	**6.70**	**113**	P	**Pn**	**06 43 59.7**	**+0.5**
ASR	**Mount Adams--S**	**6.72**	**124**	P	**Pn**	**06 44 00.7**	**+1.1**
NAC	**Naches**	**6.79**	**117**	P	**Pn**	**06 44 01.1**	**+0.5**
EBG	**Ellensburg**	**6.85**	**115**	P	**Pn**	**06 44 01.7**	**+0.4**
HOOD	**Mount Hood Mea**	**7.25**	**129**	*e*Pn	**Pn**	**06 44 09.6**	**+2.7**
MDW	**Midway**	**7.47**	**115**	P	**Pn**	**06 44 09.7**	**-0.2**
RSW	**Rattlesnake Hi**	**7.69**	**116**	*e*Pn	**Pn**	**06 44 12.4**	**-0.6**
HAWA	**Hanford**	**7.73**	**116**	*e*Pn	**Pn**	**06 44 12.7**	**-0.8**
OD2	**Odessa Site #2**	**7.73**	**107**	P	**Pn**	**06 44 12.7**	**-0.8**
DLBC	**Dease Lake**	**8.26**	**358**	*e*Pn	**Pn**	**06 44 21.9**	**+1.2**
DLBC	**Dease Lake** 0.5nm,0.3s,baz=182,slow=13,SNR=16	**8.26**	**358**	Pn	**Pn**	**06 44 21.2**	**+0.5**
DLBC				Sn	**Sn**	**06 45 59.3**	**+5.5**
	0.3nm,0.3s,baz=252,slow=20,SNR=2.6						
DLBC				LR	LR	06 47 46.7	
	comp=Z,290nm,18.0s,baz=151,slow=39						
NEW	**Newport**	**8.40**	**99**	*e*Pn	**Pn**	**06 44 22.3**	**-0.4**
LNOR	**Lincton Mounta**	**8.74**	**115**	*e*Pn	**Pn**	**06 44 26.4**	**-0.9**
YBH	**Yreka Blue Hor**	**9.73**	**148**	LR	LR	06 47 51.9	
	comp=Z,227nm,18.5s,baz=226,slow=35						
BSMT	**Bassoo Peak**	**10.02**	**98**	*e*Pn	**Pn**	**06 44 45.6**	**+0.7**
JTMT	**Jette**	**10.38**	**98**	*e*Pn	**Pn**	**06 44 50.3**	**+0.6**
EDM	**Edmonton**	**10.54**	**67**	*e*Pn	**Pn**	**06 44 59.2**	**+7.3**
MSO	**Missoula**	**10.93**	**102**	*e*Pn	**Pn**	**06 44 58.6**	**+1.3**
SLMT	**Seeley Lake**	**11.05**	**99**	*e*Pn	**Pn**	**06 44 58.8**	**-0.2**
CHMT	**Chamberlain Mo**	**11.33**	**101**	*e*Pn	**Pn**	**06 45 03.0**	**+0.3**
MCMT	**McKenzie Canyo** 1.2nm,0.6s	**12.54**	**109**	*e*Pn	**Pn**	**06 45 18.5**	**-0.7**
IMW	**Indian Meadow**	**14.19**	**109**	*e*Pn	**Pn**	**06 45 43.0**	**+1.1**
NVAR	**Mina Array Bea** 0.0nm,0.3s,baz=323,slow=7.3,SNR=6.2	**14.26**	**141**	Pn	**Pn**	**06 45 42.2**	**-0.7**
RRI2	**Red Ridge**	**14.27**	**112**	*e*Pn	**Pn**	**06 45 43.9**	**+1.0**
MOOW	**Moose Ponds** 9.6nm,0.8s	**14.39**	**109**	*e*Pn	**Pn**	**06 45 46.4**	**+1.9**
TPAW	**Teton Pass**	**14.41**	**111**	*e*P	**Pn**	**06 45 53.9**	**+9.1**
REDW	**Red Top Meadow**	**14.54**	**111**	*e*Pn	**Pn**	**06 45 55.3**	**+8.7**
SNOW	**Snow King Moun**	**14.54**	**110**	*e*P	**Pn**	**06 45 55.7**	**+9.1**
LOHW	**Long Hollow**	**14.55**	**110**	*e*Pn	**Pn**	**06 45 51.4**	**+4.7**
RLMT	**Red Lodge**	**14.61**	**103**	*e*P	**Pn**	**06 45 56.0**	**+8.5**
YKA	**Yellowknife Ar** 0.2nm,0.3s,baz=218,slow=12,SNR=4.4	**14.81**	**28**	Pn	**Pn**	**06 45 49.0**	**-1.2**
BW06	**Boulder Array** 22nm,1.8s	**15.66**	**111**	*e*Pn	**Pn**	**06 46 03.9**	**+2.4**
PDAR	**Pinedale Array** 0.2nm,0.3s,baz=313,slow=11,SNR=14	**15.66**	**111**	Pn	**Pn**	**06 46 03.1**	**+1.6**
EGAK	**Eagle** 7.0nm,1.1s	**15.83**	**342**	*e*Pn	**Pn**	**06 46 04.7**	**+1.0**
LAO	**LASA Array** 6.9nm,0.8s	**15.90**	**94**	*e*Pn	**Pn**	**06 46 05.6**	**+1.0**
ISA	**Isabella** 12nm,1.3s	**16.63**	**147**	*e*P	**Pn**	**06 46 17.2**	**+3.2**
DGMT	**Dagmar** 52nm,1.6s	**16.64**	**86**	*e*Pn	**Pn**	**06 46 15.9**	**+1.9**
ARUT	**Antelope Range** 2.7nm,0.9s	**16.96**	**131**	*e*Pn	**Pn**	**06 46 20.0**	**+1.8**
MSU	**Marysvale** 3.3nm,1.2s	**17.04**	**127**	*e*Pn	**Pn**	**06 46 20.3**	**+1.1**
MCK	**McKinley**	**17.06**	**330**	*e*Pn	**Pn**	**06 46 20.4**	**+1.1**
ILAR	**Eielson Array** 0.1nm,0.3s,baz=149,slow=9.3,SNR=14	**17.21**	**335**	Pn	**Pn**	**06 46 23.1**	**+2.0**
FFC	**Flin Flon** 18nm,0.8s	**17.38**	**64**	*e*Pn	**Pn**	**06 46 22.9**	**-0.4**
INK	**Inuvik** comp=Z,117nm,19.6s,baz=232,slow=36	**18.27**	**355**	LR	LR	06 53 16.7	
RSSD	**Black Hills** 3.7nm,0.8s	**18.38**	**99**	*e*P	**Pn**	**06 46 41.3**	**+5.6**
PV04	**Paradox Valley**	**18.88**	**121**	*e*P	**Pn**	**06 46 46.6**	**+4.8**
PHWY	**Pilot Hill** 3.7nm,0.8s	**18.99**	**109**	*e*P	**Pn**	**06 46 42.5**	**-0.7**
TTA	**Tatalina** 8.2nm,1.2s	**19.16**	**322**	*e*P	**Pn**	**06 46 44.5**	**-0.5**
PV01	**Paradox Valley** 505nm,1.1s	**19.25**	**121**	*e*P	**Pn**	**06 46 45.0**	**-1.2**
MVCO	**Mesa Verde** 34nm,1.8s	**19.95**	**123**	*e*P	**Pn**	**06 46 52.6**	**-2.1**
SDCO	**Great Sand Dun** 17nm,2.1s,mb4.0	**21.25**	**117**	*e*P	**P**	**06 47 07.2**	**+0.2**
ULM	**Lac du Bonnet** 7.1nm,0.5s,mb4.2,baz=286,slow=11,SNR=5.8	**21.49**	**77**	P	**P**	**06 47 09.7**	**+0.2**
ULM				LR	LR	06 55 09.4	
	comp=Z,77nm,20.8s,MS3.1,baz=209,slow=36						
AGMN	**Agassiz Nation** 28nm,1.7s,mb4.4	**22.01**	**82**	*e*P	**P**	**06 47 16.5**	**+1.3**
ANMO	**Albuquerque** 2.7nm,1.0s,mb3.6	**22.73**	**123**	*e*P	**P**	**06 47 22.6**	**-0.3**
ANMO	**Albuquerque** 1.4nm,0.9s,mb3.4,baz=324,slow=11,SNR=7.4	**22.73**	**123**	P	**P**	**06 47 22.4**	**-0.5**
BNM	**Barren Site** 8.6nm,1.5s,mb4.0	**23.26**	**125**	*e*P	**P**	**06 47 28.1**	**-0.3**
EYMN	**Ely** 107nm,2.3s,mb5.0	**24.90**	**80**	*e*P	**P**	**06 47 44.5**	**+0.8**
AMTX	**Amarillo** 10nm,0.8s,mb4.4	**25.45**	**116**	*e*P	**P**	**06 47 48.4**	**-0.5**
WMOK	**Wichita Mounta** 2.6nm,0.8s,mb3.8	**27.25**	**113**	*e*P	**P**	**06 48 04.5**	**-0.6**
RES	**Resolute Bay** comp=Z,43nm,19.6s,MS3.1,baz=288,slow=36	**28.48**	**19**	LR	LR	06 59 24.6	
TXAR	**Lajitas Array** 0.6nm,0.7s,mb3.4,baz=329,slow=10,SNR=8.8	**28.60**	**127**	P	**P**	**06 48 16.5**	**-0.7**
SCHQ	**Schefferville** comp=Z,85nm,20.1s,MS3.5,baz=80,slow=36	**37.35**	**58**	LR	LR	07 04 52.3	
FINES	**FINESS Array B** comp=Z,31nm,18.4s,MS3.6,baz=345,slow=36	**67.02**	**12**	LR	LR	07 22 23.9	
BJI	**Beijing**	**73.22**	**313**	P	**P**	**06 53 50.8**	**-1.1**
BJI	comp=Z,5.0nm,0.7s,mb4.5			pmax	pmax		
HHC	**Hu-ho-hao-te**	**74.68**	**316**	*e*P	**P**	**06 54 00.0**	**-0.4**
HHC				PP	PP	06 56 47.5	+0.7
HHC				S	S	07 03 32.0	-4.3
HHC	comp=Z,14nm,1.0s,mb4.8			pmax	pmax		
HHC	comp=N,78nm,14.3s,MS4.5			LR	LR		
HHC	comp=E,140nm,14.3s,MS4.5			LR	LR		
HHC	comp=Z,43nm,15.5s,MS3.9			LR	LR		
AKTO	**Aktyubinsk** comp=Z,39nm,18.2s,MS3.8,baz=43,slow=36	**79.53**	**355**	LR	LR	07 30 14.5	
WMQ	**Urumqi**	**80.87**	**334**	*e*P	**P**	**06 54 36.0**	**+1.1**
CD2	**Chengdu**	**86.44**	**316**	P	**P**	**06 55 03.0**	**-0.7**
CD2	comp=Z,100nm,5.0s			pmax	pmax		
GYA	**Guiyang**	**88.87**	**312**	*e*P	**P**	**06 55 16.0**	**+0.6**

*CSEM **28** 06:54:12.3, 36°98'N×58°57'E, h5km, ML3.6, After TEH*

TEH 28 06:54:12.3, 36°98'N×58°57'E, h5km, 1D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IQHU	**Qucahn**	**0.10**	**347**	⇓*e*Pg	Pg	06 54 14.3	-0.1
IQHU				*e*Sg	Sg	06 54 16.3	+0.4
IQHU				*e*		06 54 16.5	
	comp=Z,1929μm,0.1s						
IKRD	**Kardeh**	**0.20**	**192**	*e*Pg	Pg	06 54 26.6	+10
IKRD				*e*Sg	Sg	06 54 38.3	+19
IKRD				*e*		06 54 44.2	
	comp=Z,40μm,0.1s						
IAKL	**Akhelmad**	**0.40**	**158**	*e*	Pg	06 54 20.9	+0.9
	comp=Z,31μm,0.1s						
IAKL				*e*Sg	Sg	06 54 25.1	-0.2
IEMG	**Emamgholi**	**0.45**	**9**	*e*Pg	Pg	06 54 20.3	-0.6
IEMG				*e*Sg	Sg	06 54 27.3	+0.6
IEMG				*e*		06 54 29.2	
	comp=Z,80μm,0.2s						
IEMG	**Emamgholi**	**0.45**	**9**	*e*Pg	Pg	06 54 20.3	-0.6
IEMG				*e*Sg	Sg	06 54 27.3	+0.6
ISFR	**Sfrayin**	**0.46**	**280**	*e*Pg	Pg	06 54 18.9	-2.3
ISFR				*e*		06 54 25.9	
	comp=Z,20μm,0.1s						
ISFR	**Sfrayin**	**0.46**	**280**	*e*Pg	Pg	06 54 18.9	-2.3
IPAY	**Payeh**	**0.63**	**147**	*e*Pg	Pg	06 54 23.1	-1.2
IPAY				*e*Sg	Sg	06 54 33.5	+1.0
IPAY				*e*		06 54 37.2	
	comp=Z,94μm,0.1s						
IPAY	**Payeh**	**0.63**	**147**	*e*Pg	Pg	06 54 23.1	-1.2
IPAY				*e*Sg	Sg	06 54 33.5	+1.0
ISHV	**Shirvan**	**0.89**	**309**	*e*Pg	Pg	06 54 27.2	-2.1
ISHV				*e*		06 54 44.8	
	comp=Z,39μm,0.2s						
ISHV	**Shirvan**	**0.89**	**309**	*e*Pg	Pg	06 54 27.2	-2.1
ISRO	**Mashad**	**0.98**	**132**	*e*Pg	Pg	06 54 29.8	-1.4
MHI	**Mashad**	**0.98**	**132**	*e*Pg	Pg	06 54 30.6	-0.6
MHI				*e*		06 54 49.0	
	comp=Z,9μm,0.0s						
IMOG	**Moghan**	**1.06**	**144**	*e*Pg	Pg	06 54 31.0	-1.7
IMOG				*e*		06 54 50.0	
	comp=Z,26μm,0.1s						
IMOG	**Moghan**	**1.06**	**144**	*e*Pg	Pg	06 54 31.0	-1.7
IMYA	**Miami**	**1.39**	**117**	*e*Pg	Pg	06 54 37.4	-1.5
IMYA				*e*		06 55 01.3	
	comp=Z,18μm,0.1s						
IMYA	**Miami**	**1.39**	**117**	*e*Pg	Pg	06 54 37.4	-1.5
IGLO	**Ghaloghah**	**3.83**	**264**	*e*Pn	Pn	06 55 17.9	+6.0
IGLO				*e*		06 56 23.4	
	comp=Z,439nm,0.3s						
IGLO	**Ghaloghah**	**3.83**	**264**	*e*Pn	Pn	06 55 17.9	+6.0
IKIA	**Kiasar**	**4.00**	**260**	*e*Pn	Pn	06 55 15.2	+0.9
IKIA				*e*		06 55 36.2	
	comp=Z,176nm,0.3s						
IKIA	**Kiasar**	**4.00**	**260**	*e*Pn	Pn	06 55 15.2	+0.9
IANJ	**Anjilo**	**4.05**	**250**	*e*Pn	Pn	06 55 16.0	+1.1
IANJ				*e*		06 56 33.1	
	comp=Z,145nm,0.3s						
IANJ	**Anjilo**	**4.05**	**250**	*e*Pn	Pn	06 55 16.0	+1.1

*ISCJB **28** 07:07:09.8±0.5, 12°20'N±0°06×92°55'E±0°04, h25km, mb4.0/15, Error ellipse: s-maj=8.2km s-min=6.3km az=3.5*
*NEIC **28** 07:07:11.4±0.7, 12°02'N×92°41'E, mb4.4/1, Error ellipse: s-maj=16.0km s-min=11.2km az=72.0*
*IDC **28** 07:07:12.4±0.9, 12°17'N×92°67'E, h26km±4km, mb3.9/12, mb1 4.1/13, mb1mx3.9/26, mbtmp3.9/13, ML4.1/1, MS3.2/2, Ms1 3.2/2, ms1mx2.5/39, Error ellipse: s-maj=28.7km s-min=13.1km az=64.0*

ISC 28 07:07:11.7±0.6, 12°15N±0°06×92°52E±0°05, h26km, h26km±1.9km; pP-P, n42, σ1s17/44, mb4.0/15, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**0.54**	**156**	*e*PKP	**Pb**	**07 07 28.4**	**+5.8**
PBA				*e*S	x	07 07 40.3	
BDT	**Bhumibol Dam**	**8.06**	**50**	P	**Pn**	**07 09 08.0**	**+0.8**
CM31	**Chiang Mai Arr** 7.8nm,0.6s	**8.82**	**44**	*e*Pn	**Pn**	**07 09 20.0**	**+2.4**
CM31				*e*Sn	**Sn**	**07 10 54.7**	**-1.4**
CMAR	**Chiang Mai Arr** 0.6nm,0.3s,baz=233,slow=15,SNR=13	**8.82**	**44**	Pn	**Pn**	**07 09 17.7**	**+0.2**
CMAR				Sn	**Sn**	**07 10 56.1**	**0.0**
	0.5nm,0.3s,baz=235,slow=28,SNR=6.5						
CHG	**Chiang Mai**	**9.07**	**42**	P	Px	07 09 34.4	
CHTO	**Chiang Mai** 6.9nm,0.8s	**9.07**	**42**	*e*Pn	**Pn**	**07 09 24.8**	**+3.8**
CHTO				*e*Sn	**Sn**	**07 10 58.8**	**-3.5**
BWNR	**Bhubaneshwar**	**10.35**	**322**	*e*S	**Sn**	**07 11 21.0**	**-13**
VIS	**Vishakhapatnam**	**10.47**	**303**	*i* P	**Pn**	**07 09 40.3**	**+0.1**
VIS				*i* S	**Sn**	**07 11 25.7**	**-11**
VIS				*i* Sn	**Sn**	**07 11 26.1**	**-10**
VIS				AML	AML	07 11 30.4	
	comp=N,112nm,0.3s						
VIS				AML	AML	07 11 30.4	
	comp=E,83nm,0.5s						
PSI	**Prapat** comp=E,130nm,19.4s,baz=13,slow=41	**11.25**	**145**	LR	LR	07 14 58.8	
IPM	**Ipoh** comp=E,15nm,1.0s	**11.35**	**131**	*e*Pn	**Pn**	**07 09 57.0**	**+4.7**
SHL	**Shillong**	**13.36**	**358**	*e*S	**Sn**	**07 12 35.0**	**-12**
NGP	**Nagpur**	**15.70**	**307**	*e*PKP	**Pn**	**07 10 50.1**	**-1.1**
NGP				*ex*	x	07 13 31.4	
PKI	**Pulchoki**	**16.73**	**338**	*e*P	**Pn**	**07 11 04.8**	**+0.5**
PKIN	**Phulchoki** comp=E,29nm,0.5s	**16.74**	**338**	*e*P	**Pn**	**07 11 05.2**	**+0.7**
DMN	**Daman** comp=E,13nm,0.4s	**16.88**	**337**	*e*P	**Pn**	**07 11 07.3**	**+1.1**
KKN	**Kakani**	**16.98**	**338**	*e*P	**Pn**	**07 11 06.6**	**-0.8**
AKL	**Akola**	**17.12**	**302**	*e*PKP	**Pn**	**07 11 10.2**	**+0.9**
AKL				*ex*	x	07 14 00.6	
GKN	**Gorkha**	**17.41**	**336**	*e*P	**Pn**	**07 11 09.9**	**-3.0**
LSA	**Lhasa**	**17.51**	**356**	P	**Pn**	**07 11 15.5**	**+1.4**
LSA				S	PcP	07 15 38.0	-16
LSA	comp=E,4μm,7.1s			LR	LR		
LSA	comp=Z,4μm,7.2s			LR	LR		
KOLN	**Koldanda**	**17.64**	**333**	*e*P	**Pn**	**07 11 14.9**	**-0.9**
BHPL	**Bhopal**	**18.11**	**310**	*e*PKP	**Pn**	**07 11 20.0**	**-1.5**
KAD	**Karad**	**18.46**	**288**	*e*PKP	**Pn**	**07 11 25.0**	**-0.8**
NDI	**New Delhi**	**21.78**	**321**	*ex*	**S**	**07 16 12.0**	**+11**
DDI	**Dehra Dun**	**22.51**	**326**	*ex*	PcP	07 15 55.0	-8.0
ENH	**Enshi** comp=Z,9.3nm,0.8s,mb4.3	**23.93**	**38**	*e*P	**P**	**07 12 20.9**	**-2.9**
LZH	**Lanzhou**	**25.93**	**21**	*e*P	**P**	**07 12 50.0**	**+8.1**
LZH				pP	pP	07 12 54.8	+5.2
LZH				sP	sP	07 12 57.0	+4.2
LZH	comp=Z,16nm,1.2s,mb4.4			pmax	pmax		
GTA	**Gaotai**	**27.91**	**12**	*e*P	**P**	**07 13 09.3**	**+10**
GTA				pP	pP	07 13 13.3	+5.9
GTA				sP	sP	07 13 16.0	+5.4
GTA	comp=Z,4.0nm,1.1s,mb4.0			pmax	pmax		
MK31	**Makanchi Array**	**35.60**	**348**	*e*P	**P**	**07 14 07.2**	**+0.2**
MKAR	**Makanchi Array** comp=Z,0.5nm,0.4s,mb3.8,baz=163,slow=7.5,SNR=6.3	**35.60**	**348**	P	**P**	**07 14 07.1**	**+0.1**
MKAR				pP	pP	07 14 15.5	+0.7
	comp=Z,2.3nm,0.9s,baz=152,slow=8.1,SNR=8.7						
SONM	**Songino Array** comp=Z,0.4nm,0.6s,mb3.5,baz=207,slow=12,SNR=2.6	**37.43**	**15**	P	**P**	**07 14 23.1**	**+0.5**
SONM				pP	pP	07 14 30.1	-0.3
	comp=Z,1.8nm,0.8s,baz=203,slow=7.0,SNR=5.7						
KURK	**Kurchatov**	**40.10**	**346**	*e*P	**P**	**07 14 44.5**	**-0.5**
KURK				pP	pP	07 14 52.1	-0.8
KURK	**Kurchatov** comp=Z,1.1nm,0.8s,mb3.7,baz=165,slow=7.7,SNR=4.6	**40.10**	**346**	P	**P**	**07 14 43.9**	**-1.1**
KURK				pP	pP	07 14 52.1	-0.8
	comp=Z,2.0nm,0.7s,baz=163,slow=7.6,SNR=5.6						
KSRS	**Korea Array** comp=Z,0.8nm,0.5s,mb3.7,baz=236,slow=8.2,SNR=3.9	**40.45**	**45**	P	**P**	**07 14 46.2**	**-1.9**
KSRS				pP	pP	07 14 55.8	-0.2
	comp=Z,1.7nm,0.6s,baz=253,slow=8.5,SNR=3.6						
KSRS				LR	LR	07 34 02.5	
	comp=Z,31nm,18.3s,baz=231,slow=40						
ZALV	**Zalesovo Beam** comp=Z,0.6nm,0.3s,mb3.6,baz=162,slow=10.0,SNR=2.9	**42.14**	**353**	P	**P**	**07 15 02.9**	**+1.2**
ZALV				pP	pP	07 15 10.0	+0.4
	comp=Z,2.2nm,0.7s,baz=178,slow=8.7,SNR=4.8						
FITZ	**Fitzroy Crossi** comp=Z,7.0nm,0.7s,mb4.5,baz=327,slow=5.1,SNR=34	**44.41**	**132**	P	**P**	**07 15 20.5**	**0.0**
FITZ				PcP	PcP	07 17 05.0	+0.8
	comp=Z,1.8nm,0.6s,baz=333,slow=5.5,SNR=4.0						
BVAR	**Borovoye Array** comp=Z,0.3nm,0.3s,mb3.4,baz=142,slow=13,SNR=3.3	**44.45**	**341**	P	**P**	**07 15 22.3**	**+1.8**
BVAR				pP	pP	07 15 30.2	+1.8
	comp=Z,0.7nm,0.6s,baz=142,slow=7.3,SNR=3.2						
WRA	**Warramunga Arr** comp=Z,5.1nm,0.7s,mb4.6,baz=304,slow=8.8,SNR=46	**52.07**	**127**	P	**P**	**07 16 19.5**	**-0.2**
WRA				PcP	PcP	07 17 31.8	+0.2
	comp=Z,2.7nm,0.5s,baz=318,slow=3.2,SNR=17						
ASAR	**Alice Springs** comp=Z,3.7nm,0.6s,mb4.5,baz=308,slow=6.5,SNR=74	**53.90**	**131**	P	**P**	**07 16 33.0**	**-0.2**
ASAR				pP	pP	07 17 39.0	+0.5
	comp=Z,1.7nm,0.6s,baz=308,slow=3.6,SNR=10						
STKA	**Stephens Creek**	**64.21**	**134**	P	**P**	**07 17 43.7**	**-0.8**
STKA	**Stephens Creek** comp=Z,2.2nm,0.5s,mb4.5,baz=319,slow=6.1,SNR=9.3	**64.21**	**134**	P	**P**	**07 17 43.7**	**-0.8**
ARCES	**ARCESS Array B** comp=Z,2.0nm,0.8s,mb4.1,baz=97,slow=7.5,SNR=5.5	**70.73**	**340**	P	**P**	**07 18 25.5**	**+0.3**
ARCES				pP	pP	07 18 35.1	+1.7
	comp=Z,0.7nm,0.7s,baz=94,slow=6.4,SNR=1.1						
ILAR	**Eielson Array** comp=Z,0.2nm,0.6s,mb3.6,baz=297,slow=4.0,SNR=3.8	**91.40**	**22**	P	**P**	**07 20 17.0**	**+1.8**
ILAR				pP	pP	07 20 24.1	+0.4
	comp=Z,0.4nm,0.7s,baz=298,slow=4.6,SNR=4.4						

IDC 28 07:11:37.0±11.0, 17°36S×172°12W, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.5/19, mbtmp3.3/3, Error ellipse: s-maj=487.0km s-min=39.9km az=140.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.3nm,0.7s,baz=99,slow=7.2,SNR=2.4	**50.62**	**258**	P	P	07 20 38.0	-0.3
ASAR	**Alice Springs** 0.4nm,0.6s,baz=88,slow=8.0,SNR=7.8	**50.70**	**253**	P	P	07 20 39.0	+0.2
ILAR	**Eielson Array** 0.1nm,0.6s,baz=227,slow=6.6,SNR=4.3	**84.12**	**11**	P	P	07 24 09.5	+0.1

*BJI **28** 07:13:27.2, 30°14N×82°95E, h9km, mB4.2/3, mb3.9/4, Ms3.8/2, Ms7 3.5/2*
*IDC **28** 07:13:32.9±1.4, 30°80N×83°52E, h0km, mb3.9/8, mb1 4.0/10, mb1mx3.8/28, mbtmp3.8/10, ML3.5/2, MS3.1/3, Ms1 3.1/3, ms1mx2.6/43, Error ellipse: s-maj=42.8km s-min=20.7km az=55.0*
*ISCJB **28** 07:13:35.5±2.5, 30°78N±0°07×83°23E±0°07, h30km±20km, mb3.9/10, MS3.1/3, Error ellipse: s-maj=12.9km s-min=8.4km az=37.7*
*NEIC **28** 07:13:36.0±1.0, 30°93N×83°40E, h10km, mb4.2/3, Error ellipse: s-maj=20.8km s-min=10.1km az=217.0*

ISC 28 07:13:37.5±2.5, 30°82N±0°06×83°35E±0°08, h31km±19km, n29, σ1s05/29, mb3.9/10, MS3.1/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa** 19nm,0.8s	**6.84**	**97**	*e*Pn	**Pn**	**07 15 19.8**	**+4.2**
LSA				*e*Sn	**Sn**	**07 16 42.0**	**+10**
KSH	**Kashi**	**10.57**	**327**	P	**Pn**	**07 16 06.0**	**-0.7**
KSH				*e*pP		07 16 09.5	
KSH				*e*sP		07 16 13.3	
KSH				*e*PP		07 16 14.5	
KSH				S	**Sn**	**07 18 01.3**	**-2.7**
KSH				*e*SS		07 18 17.3	
KSH	comp=Z,2.0nm,0.6s			pmax	pmax		
KSH	comp=Z,12nm,4.3s			pmax	pmax		
KSH	comp=N,200nm,6.9s			LR	LR		
KSH	comp=E,260nm,8.1s			LR	LR		
KSH	comp=Z,150nm,6.1s			LR	LR		
KBL	**Kabul**	**12.61**	**291**	*e*Pn	**Pn**	**07 16 36.3**	**+1.6**
KBL				*e*Sn	**Sn**	**07 18 53.2**	**-0.9**
KZA	**Kyzart** comp=Z,8.9nm,1.1s	**12.98**	**332**	*e*Pn	**Pn**	**07 16 39.6**	**-0.1**
UCH	**Uchtor** comp=Z,1.2nm,0.4s	**13.41**	**331**	*e*Pn	**Pn**	**07 16 44.8**	**-0.8**
TKM2	**Tokmak 2** comp=Z,0.7nm,0.4s	**13.57**	**335**	*e*Pn	**Pn**	**07 16 47.4**	**-0.4**
AAK	**Ala-Archa** comp=Z,0.5nm,0.3s,baz=200,slow=12,SNR=2.2	**13.76**	**331**	Pn	**Pn**	**07 16 53.1**	**+2.8**
**

comp=E,4μm,1.0s
ZAK Zakamensk 1.35 197 *e*PG Pg 07 27 50.3 -1.9
ZAK *e* 07 28 08.1
ZAK pmax pmax
comp=Z,143nm,0.5s
ZAK smax
comp=E,1μm,0.7s
ZAK Zakamensk 1.35 197 ⇑ *i*Pg Pg 07 27 50.3 -1.9
ZAK *e*Sg Sg 07 28 08.1 -1.7
ZAK *e*Sb Sb 07 28 10.1 +2.2
ZAK *e* 07 28 12.7
ZAK Pmax
comp=E,157nm,0.8s
ZAK max
comp=E,1μm,0.7s
KAB Kabansk 1.75 77 *e*Sg Sg 07 28 20.6 -2.0
KAB *e* 07 28 22.9
KAB max
comp=E,863nm,1.1s
MOY Mondy 1.80 271 *e*PN Pn 07 28 00.0 +3.6
MOY *e* 07 28 22.3
MOY pmax pmax
comp=Z,76nm,0.6s
MOY smax
comp=N,1μm,0.7s
MOY Mondy 1.80 271 ⇓ *i*Pg Pg 07 27 57.8 -2.9
MOY *i* Sg Sg 07 28 22.3 -1.9
MOY *e* 07 28 25.1
MOY Pmax
comp=N,76nm,0.5s
MOY max
comp=N,1μm,0.7s
TRG Tyrgan 1.86 53 *e*PN Pn 07 27 57.6 +0.5
TRG *e* 07 27 58.8
TRG *e*S Sn 07 28 21.7 +1.5
TRG pmax pmax
comp=Z,145nm,0.6s
TRG smax
comp=E,707nm,0.3s
TRG Tyrgan 1.86 53 *e*Pn Pn 07 27 55.7 -1.4
TRG *e*Pg Pg 07 27 57.8 -4.0
TRG *e*Sg Sg 07 28 22.5 -3.5
TRG Pmax
comp=E,53nm,0.3s
TRG Smax
comp=E,704nm,0.5s
HRMR Khuramsha 1.91 90 ⇑ *i*Pn Pn 07 27 56.2 -1.6
HRMR *e*Pg Pg 07 27 59.1 -3.7
HRMR *i* Sg Sg 07 28 23.9 -3.6
HRMR Pmax
comp=E,161nm,0.5s
HRMR Smax
comp=E,2μm,0.8s
ZRHB Zarechye 2.19 65 Pg Pg 07 28 05.5 -2.7
ZRHB Sg Sg 07 28 33.9 -2.7
ZRHB Pmax
comp=E,507nm,1.0s
ZRHB Smax
comp=E,2μm,1.2s
UUDB Ulan-Yde 2.35 84 ⇓ *i*Pg Pg 07 28 08.1 -3.1
UUDB ⇓ *i* 07 28 13.8
UUDB *e* 07 28 34.6
UUDB *i* Sg Sg 07 28 38.5 -3.2
UUDB max
comp=E,83nm,0.7s
UUDB Smax
comp=E,244nm,1.3s
ORL Orlik 2.66 291 *e*PN Pn 07 28 13.5 +5.4
ORL *e* 07 28 47.2
ORL pmax pmax
comp=Z,74nm,0.4s
ORL smax
comp=N,645nm,1.3s
ORL Orlik 2.66 291 ⇓ *i*Pg Pg 07 28 13.4 -3.7
ORL *e*Sg Sg 07 28 47.4 -4.1
ORL Pmax
comp=N,83nm,0.9s
ORL Smax
comp=N,646nm,1.6s
OGRR Ongureny 2.99 47 *e*PN Pn 07 28 14.4 +1.7
OGRR *e* 07 28 19.6
OGRR *e* 07 28 56.1
OGRR pmax pmax
comp=Z,84nm,0.9s
OGRR smax
comp=E,519nm,0.8s
OGRR Ongureny 2.99 47 *e*Pn Pn 07 28 14.2 +1.5
OGRR *e*Pg Pg 07 28 18.7 -4.7
OGRR *i* Sg Sg 07 28 56.3 -5.9
OGRR *e* 07 29 01.4
OGRR Pmax
comp=E,85nm,0.4s
OGRR max
comp=E,721nm,0.6s
MXMB Maximikha 3.37 60 *e*Pg Pg 07 28 26.7 -3.9
MXMB *e* 07 28 33.0
MXMB *i* Sg Sg 07 29 10.2 -4.0
MXMB max
comp=E,47nm,0.8s
MXMB Smax
comp=E,355nm,1.0s
SYVR Suvo 4.21 60 Pg Pg 07 28 40.9 -5.8
SYVR Sg Sg 07 29 34.6 -6.7
SYVR Pmax
comp=E,11nm,0.1s
SYVR Smax
comp=E,99nm,1.2s
ULN Ulaanbaatar 4.33 151 ⇑ *i*Pg Pg 07 28 43.1 -5.9
ULN *e* 07 29 32.7
ULN *e*Sg Sg 07 29 39.2 -5.9
NIZ Nizh Angarsk 5.30 37 *e*PN Pn 07 28 47.9 +3.5
NIZ *e* 07 29 02.0
NIZ *e*S Sn 07 29 45.1 +0.1
NIZ *e* 07 30 07.4
NIZ pmax pmax
comp=Z,20nm,0.4s
NIZ smax
comp=N,170nm,1.2s
NIZ Nizh Angarsk 5.30 37 *e*Pn Pn 07 28 44.0 -0.4
NIZ *e*Pg Pg 07 29 01.1 -6.4
NIZ *e*Sn Sn 07 29 44.8 -0.2
NIZ *e*Sg Sg 07 30 09.0 -7.1
NIZ Pmax
comp=N,20nm,0.4s
NIZ Smax
comp=N,170nm,1.6s
YLYR Ulyunkhan 5.41 51 *e*PN Pn 07 29 02.5 +17
YLYR *e* 07 30 10.9
YLYR pmax pmax
comp=Z,13nm,1.2s
YLYR smax
comp=N,111nm,1.3s
YLYR Ulyunkhan 5.41 51 *e* Pn 07 28 48.8 +2.9
YLYR *e*Pg Pg 07 29 02.1 -7.5
YLYR *e* 07 29 07.7
YLYR *e* 07 29 51.5
YLYR *i* Sg Sg 07 30 11.6 -8.0
YLYR max
comp=N,10.0nm,1.1s
YLYR Smax
comp=N,111nm,1.4s
CIT Chita 6.00 83 *e* Pn 07 29 34.6 +41
CIT Sg Sg 07 30 27.9 -11
CIT Smax
comp=N,456nm,0.5s
KMO Kumora 6.04 43 *e*PN Pn 07 28 57.8 +3.2
KMO *e* 07 29 14.9
KMO Kumora 6.04 43 *e*Pn Pn 07 28 56.7 +2.1
KMO *e*Pg Pg 07 29 14.8 -6.9
KMO *e* 07 29 47.6
KMO *e*Sg Sg 07 30 33.3 -6.6
KMO Pmax
comp=N,20nm,0.8s
KMO Smax
comp=N,273nm,1.2s
TUP Tupik 10.05 68 Sg Sn 07 32 35.8 +54
TUP Smax
comp=N,40nm,1.2s
KURK Kurchatov 15.85 276 *i* P Pn 07 31 04.1 -4.1
KURK pmax pmax
comp=Z,1.0nm,0.6s
BRVK Borovoye 20.46 287 *i* P P 07 32 02.0 -0.6

*IDC **28** 07:28:48.5±1.0,50°.00N×129°.71W,h0km,mb3.9/7, mb1 4.2/15,mb1mx4.0/31,mbtmp4.0/15,ML3.8/7,MS3.6/14, Ms1 3.6/14,ms1mx3.4/37,Error ellipse: s-maj=21.2km s-min=10.2km az=73.0*
*PGC **28** 07:28:48.5±7.1,49°.94N×129°.89W,h10km,ML3.5/10, Mw4.1, 194km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*BJI **28** 07:28:50.5,50°.20N×129°.50W,h10km,mB4.9/3,mb4.5/2, Ms4.5/4,Ms7 4.2/3*
*NEIC **28** 07:28:52.5±0.4,50°.20N×129°.46W,h10km,mb4.1/44, MW4.5(PGC),Error ellipse: s-maj=8.6km s-min=3.2km az=47.0*
ISC 28 07:28:53.6±1.5,50°.18N±0°.03×129°.45W±0°.05, h19km±11km,n152,σ1§25/151,mb4.2/22,MS3.6/10,5D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**0.96**	**61**	⇑Pn		**Pn**	**07 29 10.8**	**-1.2**
PHC	**Port Hardy**	**1.39**	**67**	⇑Pn		**Pn**	**07 29 17.0**	**-1.0**
PHC				⇑Sn		**Sn**	**07 29 37.5**	**+1.6**
MAYB	**Maynard**	**1.48**	**80**	⇓Pn		**Pn**	**07 29 17.2**	**-1.9**
EDB	**Eliza Dome**	**1.53**	**101**	⇑Pn		**Pn**	**07 29 16.6**	**-3.3**
EDB				⇓Sn		**Sn**	**07 29 37.5**	**-1.8**
WOSB	**Woss**	**1.85**	**89**	Pn		**Pn**	**07 29 22.6**	**-1.7**
BBB	**Bella Bella**	**2.18**	**22**	Pn		**Pn**	**07 29 27.3**	**-1.4**
	79nm,0.3s,baz=44,slow=14,SNR=347							
BBB				Sn		**Sn**	**07 29 55.9**	**+0.7**
	64nm,0.3s,baz=287,slow=19,SNR=16							
BBB	**Bella Bella**	**2.18**	**22**	⇑Pn		**Pn**	**07 29 27.8**	**-1.0**
BBB				⇑Sn		**Sn**	**07 29 55.7**	**+0.6**
NCRB	**Newcastle Ridg**	**2.19**	**83**	⇑Pn		**Pn**	**07 29 28.2**	**-0.7**
GDR	**Gold River**	**2.24**	**99**	⇓Pn		**Pn**	**07 29 27.2**	**-2.5**
CBB	**Campbell River**	**2.63**	**92**	⇑Pn		**Pn**	**07 29 33.9**	**-1.1**
BTB	**Buttle Lake**	**2.64**	**104**	⇓Pn		**Pn**	**07 29 32.8**	**-2.3**
BNB	**Barry Inlet**	**2.80**	**330**	⇓Pn		**Pn**	**07 29 31.6**	**-5.7**
OZB	**Mount Ozzard**	**2.85**	**114**	⇑Pn		**Pn**	**07 29 36.2**	**-1.8**
DIB	**Dawson Inlet,**	**3.56**	**329**	Pn		**Pn**	**07 29 42.5**	**-5.4**
OBC	**Olympics--Boni**	**4.13**	**119**	P		**Pn**	**07 29 54.4**	**-1.2**
PGC	**Sidney**	**4.20**	**109**	*e*Pn		**Pn**	**07 29 55.5**	**-1.1**
NLWA	**Neilton Lookou**	**4.62**	**125**	*e*Pn		**Pn**	**07 30 01.4**	**-1.0**
VDB	**Vedder Mountai**	**4.91**	**101**	P		**Pn**	**07 30 06.6**	**+0.2**
MBW	**Mount Baker**	**5.12**	**103**	P		**Pn**	**07 30 09.5**	**+0.4**
JCW	**Jim Creek**	**5.32**	**109**	*e*Pn		**Pn**	**07 30 11.7**	**-0.2**
RPW	**Rockport**	**5.47**	**105**	*e*Pn		**Pn**	**07 30 13.6**	**-0.4**
CRAG	**Craig**	**5.75**	**339**	*e*Pn		**Pn**	**07 30 14.3**	**-3.4**
LON	**Longmire**	**6.13**	**121**	*e*Pn		**Pn**	**07 30 20.5**	**-2.6**
TWW	**Teanaway**	**6.45**	**115**	P		**Pn**	**07 30 28.6**	**+1.2**
LTY	**Liberty**	**6.50**	**113**	P		**Pn**	**07 30 28.8**	**+0.6**
ETW	**Entiat**	**6.54**	**110**	*e*Pn		**Pn**	**07 30 28.2**	**-0.5**
ASR	**Mount Adams--S**	**6.62**	**125**	P		**Pn**	**07 30 31.0**	**+1.2**
EBG	**Ellensburg**	**6.74**	**116**	P		**Pn**	**07 30 32.1**	**+0.6**
HOOD	**Mount Hood Mea**	**7.16**	**130**	*e*Pn		**Pn**	**07 30 38.0**	**+0.9**
MDW	**Midway**	**7.37**	**115**	P		**Pn**	**07 30 40.2**	**+0.1**
GBB	**Gable Butte**	**7.45**	**115**	P		**Pn**	**07 30 40.9**	**-0.3**
RSW	**Rattlesnake Hi**	**7.59**	**116**	*e*Pn		**Pn**	**07 30 43.2**	**+0.1**
HAWA	**Hanford**	**7.62**	**116**	*e*Pn		**Pn**	**07 30 43.2**	**-0.4**
OD2	**Odessa Site #2**	**7.62**	**107**	P		**Pn**	**07 30 43.2**	**-0.4**
SIT	**Sitka**	**7.72**	**335**	*e*Pn		**Pn**	**07 30 46.9**	**+2.0**
KEBM	**Edson Butte**	**8.11**	**152**	*e*Pn		**Pn**	**07 30 54.8**	**+4.5**
DLBC	**Dease Lake**	**8.28**	**358**	*e*Pn		**Pn**	**07 30 52.6**	**+0.1**
DLBC	**Dease Lake**	**8.28**	**358**	Pn		**Pn**	**07 30 52.4**	**-0.2**
	1.1nm,0.3s,baz=180,slow=16,SNR=37							
DLBC				Sn		**Sn**	**07 32 28.0**	**+2.5**
	0.3nm,0.3s,baz=146,slow=18,SNR=2.0							
DLBC				LR	LR	LR	07 34 07.2	
	comp=Z,541nm,20.5s,baz=155,slow=38							
NEW	**Newport**	**8.29**	**99**	*e*Pn		**Pn**	**07 30 52.9**	**+0.1**
LNOR	**Lincoln Mounta**	**8.63**	**116**	*e*Pn		**Pn**	**07 30 57.1**	**-0.3**
HUMO	**Hull Mountain**	**8.80**	**147**	*e*Pn		**Pn**	**07 31 03.1**	**+3.4**
YBH	**Yreka Blue Hor**	**9.66**	**148**	*e*Pn		**Pn**	**07 31 08.8**	**-2.7**
YBH	**Yreka Blue Hor**	**9.66**	**148**	Pn		**Pn**	**07 31 08.1**	**-3.4**
	0.1nm,0.3s,baz=354,slow=10,SNR=2.7							
YBH				LR	LR	LR	07 34 22.6	
	comp=Z,468nm,18.4s,baz=330,slow=35							
BSMT	**Bassoo Peak**	**9.91**	**98**	*e*Pn		**Pn**	**07 31 15.7**	**+0.8**
WALA	**Waterton Lakes**	**10.15**	**90**	*e*Pn		**Pn**	**07 31 19.9**	**+1.8**
JTMT	**Jette**	**10.27**	**98**	*e*Pn		**Pn**	**07 31 20.2**	**+0.5**
YBMT	**Yellow Bay**	**10.40**	**97**	*e*Pn		**Pn**	**07 31 23.4**	**+1.7**
MOD	**Modoc**	**10.43**	**139**	*e*Pn		**Pn**	**07 31 19.7**	**-2.3**
EDM	**Edmonton**	**10.45**	**67**	*e*Pn		**Pn**	**07 31 25.4**	**+3.2**
SWMT	**Swartz Lake**	**10.53**	**99**	*e*Pn		**Pn**	**07 31 23.6**	**+0.2**
WVOR	**Wild Horse Val**	**10.76**	**132**	*e*Pn		**Pn**	**07 31 26.2**	**-0.3**
	7.3nm,0.9s							
MSO	**Missoula**	**10.82**	**102**	*e*Pn		**Pn**	**07 31 27.2**	**-0.2**
SLMT	**Seeley Lake**	**10.95**	**99**	*e*Pn		**Pn**	**07 31 29.1**	**0.0**
CHMT	**Chamberlain Mo**	**11.22**	**101**	*e*Pn		**Pn**	**07 31 33.5**	**+0.6**
LRM	**Limekiln Ridge**	**12.19**	**104**	*e*Pn		**Pn**	**07 31 46.1**	**0.0**
HRY	**Holter Researc**	**12.20**	**100**	*e*Pn		**Pn**	**07 31 46.2**	**-0.1**
	4.7nm,0.8s							
HLID	**Hailey**	**12.22**	**117**	*e*Pn		**Pn**	**07 31 47.6**	**+1.1**
DLMT	**Dillon**	**12.31**	**107**	*e*Pn		**Pn**	**07 31 47.4**	**-0.4**
MCMT	**McKenzie Canyo**	**12.43**	**109**	*e*Pn		**Pn**	**07 31 48.9**	**-0.5**
	2.0nm,0.7s							
PAHR	**Pah Rah Range**	**12.65**	**142**	*e*Pn		**Pn**	**07 31 53.3**	**+0.8**
BOZ	**Bozeman (W)**	**12.78**	**104**	*e*Pn		**Pn**	**07 31 54.5**	**+0.4**
WCN	**Washoe City**	**12.86**	**144**	*e*Pn		**Pn**	**07 31 53.6**	**-1.6**
	7.6nm,1.0s							
WCN				*e*Sn		**Sn**	**07 34 08.9**	**-8.9**
EGMT	**Eagleton**	**13.08**	**92**	*e*Pn		**Pn**	**07 31 59.6**	**+1.3**
YMR	**Madison River**	**13.66**	**107**	*e*Pn		**Pn**	**07 32 06.4**	**+0.2**
	38nm,1.4s							
IMW	**Indian Meadow**	**14.08**	**109**	*e*Pn		**Pn**	**07 32 13.2**	**+1.3**
DCID1	**Drake Creek**	**14.10**	**111**	*e*Pn		**Pn**	**07 32 16.8**	**+4.6**
FLWY	**Flagg Ranch**	**14.13**	**108**	*e*Pn		**Pn**	**07 32 14.1**	**+1.6**
RRI2	**Red Ridge**	**14.16**	**112**	*e*Pn		**Pn**	**07 32 11.5**	**-1.5**
NVAR	**Mina Array Bea**	**14.18**	**142**	Pn		**Pn**	**07 32 12.3**	**-1.0**
	0.0nm,0.3s,baz=321,slow=13,SNR=13							
HVU	**Hansel Valley**	**14.29**	**120**	*e*Pn		**Pn**	**07 32 17.9**	**+3.1**
REDW	**Red Top Meadow**	**14.43**	**111**	*e*Pn		**Pn**	**07 32 19.9**	**+3.2**
LOHW	**Long Hollow**	**14.44**	**110**	*e*Pn		**Pn**	**07 32 19.6**	**+2.8**
RLMT	**Red Lodge**	**14.50**	**103**	*e*Pn		**Pn**	**07 32 19.8**	**+2.2**
AHID	**Auburn Hatcher**	**14.63**	**113**	*e*Pn		**Pn**	**07 32 19.6**	**+0.1**
BGU	**Big Grassy Mou**	**14.73**	**123**	*e*Pn		**Pn**	**07 32 21.9**	**+1.1**
	6.3nm,1.1s							
YKA	**Yellowknife Ar**	**14.78**	**28**	Pn		**Pn**	**07 32 19.7**	**-1.6**
	0.2nm,0.3s,baz=215,slow=12,SNR=4.9							
DAWY	**Dawson**	**14.90**	**343**	*e*Pn		**Pn**	**07 32 23.5**	**+0.6**
HWUT	**Hardware Ranch**	**15.09**	**118**	*e*Pn		**Pn**	**07 32 27.6**	**+2.0**
	16nm,1.4s							
DUG	**Dugway**	**15.37**	**124**	*e*Pn		**Pn**	**07 32 30.1**	**+0.9**
	20nm,1.5s							
BW06	**Boulder Array**	**15.55**	**111**	*e*Pn		**Pn**	**07 32 33.8**	**+2.2**
	18nm,1.4s							
PDAR	**Pinedale Array**	**15.55**	**111**	Pn		**Pn**	**07 32 33.1**	**+1.4**
	0.1nm,0.3s,baz=309,slow=9.2,SNR=29							
PDAR				LR	LR	LR	07 38 52.5	
	comp=Z,197nm,18.4s,baz=62,slow=39							
SLKM	**Skilak Lake**	**15.63**	**319**	*e*Pn		**Pn**	**07 32 31.0**	**-1.5**
SML	**Sawmill**	**15.65**	**325**	*e*Pn		**Pn**	**07 32 32.2**	**-0.5**
	5.0nm,1.2s							
LAO	**LASA Array**	**15.79**	**94**	*e*Pn		**Pn**	**07 32 34.1**	**-0.6**
	14nm,0.9s							
PMR	**Palmer**	**15.81**	**324**	*e*P		**Pn**	**07 32 36.0**	**+1.1**
	22nm,1.6s							
JLU	**Jordanelle**	**15.82**	**120**	*e*Pn		**Pn**	**07 32 35.8**	**+0.6**
	4.7nm,0.9s							
EGAK	**Eagle**	**15.89**	**341**	*e*Pn		**Pn**	**07 32 35.4**	**-0.4**
	14nm,1.1s							
NLU	**North Lily Min**	**15.94**	**123**	*e*P		**Pn**	**07 32 40.8**	**+4.1**
	8.7nm,0.9s							
DAU	**Daniels Canyon**	**16.06**	**121**	*e*Pn		**Pn**	**07 32 38.9**	**+0.6**
	9.1nm,1.2s							
DGMT	**Dagmar**	**16.53**	**86**	*e*Pn		**Pn**	**07 32 44.6**	**+0.4**
	83nm,1.6s							
ISA	**Isabella**	**16.56**	**147**	*e*Pn		**Pn**	**07 32 46.6**	**+2.0**
	18nm,1.4s							
RSO	**Redoubt South**	**16.69**	**317**	*e*Pn		**Pn**	**07 32 47.4**	**+1.2**
MSU	**Marysvale**	**16.94**	**127**	*e*Pn		**Pn**	**07 32 52.4**	**+3.0**
CCUT	**Cedar City**	**17.10**	**131**	*e*Pn		**Pn**	**07 32 53.9**	**+2.6**
	12nm,1.5s							
SHPR	**Sheep Range**	**17.13**	**138**	*e*Pn		**Pn**	**07 32 52.0**	**+0.2**
MCK	**McKinley**	**17.13**	**330**	*e*Pn		**Pn**	**07 32 52.5**	**+0.8**
	12nm,1.0s							
ILAR	**Eielson Array**	**17.27**	**334**	P		**Pn**	**07 32 53.1**	**-0.3**
	0.0nm,0.3s,baz=146,slow=11,SNR=16							
ILAR				LR	LR	LR	07 38 39.8	
	comp=Z,204nm,21.5s,baz=312,slow=34							
FFC	**Flin Flon**	**17.29**	**64**	*e*Pn		**Pn**	**07 32 53.0**	**-0.7**
	40nm,0.7s							
SRU	**San Rafael**	**17.38**	**122**	*e*Pn		**Pn**	**07 32 56.1**	**+1.2**
	10.0nm,0.9s							
TRF	**Thorofare Moun**	**17.40**	**328**	*e*Pn		**Pn**	**07 32 54.7**	**-0.2**
	66nm,1.8s							
GSC	**Goldstone**	**17.49**	**143**	*e*P		**Pn**	**07 32 59.2**	**+2.9**
	13nm,1.3s							
RWWY	**Rawlins**	**17.59**	**110**	*e*Pn		**Pn**	**07 32 58.6**	**+1.1**
	19nm,1.0s							
PPLA	**Purkeypile**	**17.74**	**324**	*e*Pn		**Pn**	**07 32 59.7**	**+0.5**
	6.8nm,0.9s							
BPAW	**Bear Paw Mtn.**	**18.05**	**329**	*e*Pn		**Pn**	**07 33 01.5**	**-1.6**
	18nm,1.1s							
RSSD	**Black Hills**	**18.27**	**100**	*e*Pn		**Pn**	**07 33 06.2**	**+0.4**
	7.7nm,0.9s							
INK	**Inuvik**	**18.30**	**355**	*e*Pn		**Pn**	**07 33 05.3**	**-0.7**
	14nm,1.1s							
INK	**Inuvik**	**18.30**	**355**	P		**Pn**	**07 33 05.9**	**0.0**
	0.1nm,0.3s,baz=159,slow=8.6,SNR=6.1							
INK				LR	LR	LR	07 40 44.9	
	comp=Z,298nm,18.5s,baz=96,slow=39							
PV04	**Paradox Valley**	**18.77**	**121**	*e*Pn		**Pn**	**07 33 16.0**	**+4.0**
PHWY	**Pilot Hill**	**18.89**	**109**	*e*Pn		**Pn**	**07 33 11.1**	**-2.3**
	13nm,1.0s							
PV01	**Paradox Valley**	**19.14**	**121**	*e*P		**Pn**	**07 33 15.3**	**-1.2**
	666nm,0.9s							
TTA	**Tatalina**	**19.24**	**322**	*e*Pn		**Pn**	**07 33 13.7**	**-3.7**
SMCO	**Snowmass**	**19.32**	**116**	*e*Pn		**Pn**	**07 33 17.2**	**-1.4**
	6.7nm,0.8s							
WUAZ	**Wupatki**	**19.68**	**131**	*e*Pn		**Pn**	**07 33 21.8**	**-1.1**
	12nm,1.1s							
ISCO	**Idaho Springs**	**19.71**	**113**	*e*P		**Pn**	**07 33 23.1**	**-0.2**
	5.6nm,1.0s							
MVCO	**Mesa Verde**	**19.85**	**123**	*e*P		**Pn**	**07 33 22.6**	**-2.3**
	86nm,1.9s							
GLA	**Glamis**	**20.24**	**142**	*e*P		**P**	**07 33 28.8**	**+1.2**
	14nm,1.0s							
SDCO	**Great Sand Dun**	**21.14**	**117**	*e*P		**P**	**07 33 37.6**	**+0.4**
	35nm,1.9s,mb4.4							
OGNE	**Ogallala**	**21.20**	**105**	*e*Pn		**P**	**07 33 37.7**	**-0.2**
	17nm,0.8s,mb4.4							
ULM	**Lac du Bonnet**	**21.39**	**77**	P		**P**	**07 33 40.4**	**+0.6**
ULM					LR	LR	07 41 39.8	
ULM	**Lac du Bonnet**	**21.39**	**77**	P		**P**	**07 33 40.4**	**+0.6**
	28nm,0.9s,mb4.6,baz=286,slow=12,SNR=14							
ULM					LR	LR	07 41 39.8	
	comp=Z,200nm,20.5s,MS3.5,baz=328,slow=36							
AGMN	**Agassiz Nation**	**21.91**	**82**	*e*P		**P**	**07 33 45.8**	**+0.3**
	46nm,1.6s,mb4.7							
TUC	**Tucson**	**22.60**	**135**	*e*P		**P**	**07 33 53.2**	**+0.3**
	6.3nm,1.0s,mb4.0							
ANMO	**Albuquerque**	**22.63**	**124**	*e*P		**P**	**07 33 53.1**	**-0.2**
	40nm,2.3s,mb4.4							
ANMO	**Albuquerque**	**22.63**	**124**	P		**P**	**07 33 52.7**	**-0.6**
	2.7nm,0.9s,mb3.7,baz=319,slow=11,SNR=11							
ANMO					LR	LR	07 42 49.4	
	comp=Z,54nm,18.4s,MS3.0,baz=141,slow=37							
LAZ	**Ladron**	**22.69**	**126**	*e*P		**P**	**07 33 54.5**	**+0.7**
	4.1nm,1.3s,mb3.7							
BNM	**Barren Site**	**23.16**	**125**	*e*P		**P**	**07 33 58.4**	**-0.4**
	6.3nm,1.0s,mb4.0							
EYMN	**Ely**	**24.79**	**80**	*e*P		**P**	**07 34 14.6**	**+0.5**
	18nm,0.8s,mb4.6							
KSU1	**Kansas State U**	**25.65**	**103**	*e*P		**P**	**07 34 20.5**	**-1.5**
	14nm,0.8s,mb4.5							
MNTX	**Cornudas Mount**	**25.73**	**127**	*e*P		**P**	**07 34 21.7**	**-1.0**
	3.9nm,1.0s,mb3.9							
WMOK	**Wichita Mounta**	**27.14**	**113**	*e*P		**P**	**07 34 34.8**	**-0.6**
	4.0nm,0.8s,mb4.0							
JFWS	**Jewell Farm**	**27.67**	**90**	*e*P		**P**	**07 34 40.7**	**+0.7**
	9.3nm,0.8s,mb4.5							
RES	**Resolute Bay**	**28.46**	**18**	LR	LR	LR	07 46 29.6	
	comp=Z,104nm,18.4s,MS3.5,baz=329,slow=37							
TXAR	**Lajitas Array**	**28.50**	**127**	P		**P**	**07 34 45.3**	**-2.3**
	1.4nm,0.8s,mb3.6,baz=327,slow=7.9,SNR=12							
TXAR					LR	LR	07 46 21.3	
	comp=Z,67nm,19.9s,MS3.2,baz=325,slow=37							
JCT	**Junction City**	**29.66**	**120**	*e*P		**P**	**07 34 56.5**	**-1.5**
	5.1nm,0.8s,mb4.3							
MIAR	**Mount Ida**	**30.42**	**107**	*e*P		**P**	**07 35 04.4**	**-0.1**
	12nm,1.4s,mb4.4							
OXF	**Oxford**	**33.02**	**103**	*e*P		**P**	**07 35 25.7**	**-1.8**
	26nm,0.9s,mb5.2							
SCHQ	**Schefferville**	**37.27**	**58**	LR	LR	LR	07 51 55.3	
	comp=Z,236nm,19.9s,MS4.0,baz=293,slow=37							
GOGA	**Godfrey**	**37.49**	**99**	*e*P		**P**	**07 36 04.5**	**-1.4**
	3.7nm,0.8s,mb4.3							
NOA	**NORSAR Array B**	**64.72**	**20**	LR	LR	LR	08 06 07.9	
	comp=Z,30nm,18.2s,MS3.5,baz=355,slow=34							
FINES	**FINESS Array B**	**67.01**	**12**	LR	LR	LR	08 07 01.1	
	comp=Z,66nm,21.9s,MS3.8,baz=14,slow=34							
ZALV	**Zalesovo Beam**	**72.32**	**340**	P		**P**	**07 40 15.5**	**-2.0**
	1.3nm,0.8s,mb3.9,baz=15,slow=6.0,SNR=4.0							
ZALV					LR	LR	08 14 05.4	
	comp=Z,37nm,20.3s,MS3.6,baz=3.6,slow=38							
HHC	**Hu-ho-hao-te**	**74.77**	**317**	*e*P		**P**	**07 40 32.3**	**+0.2**
HHC				sP		sP	07 40 39.3	-1.3
HHC				PP		PP	07 43 20.3	+1.5
HHC				S		S	07 50 04.3	-3.2
HHC				LR	LR			
	comp=N,95nm,16.6s,MS4.3							
HHC				LR	LR			
	comp=E,89nm,14.3s,MS4.3							
HHC				LR	LR			
	comp=Z,80nm,13.1s,MS4.2							
KURK	**Kurchatov**	**76.67**	**342**	P		**P**	**07 40 43.2**	**+0.4**
	comp=Z,1.7nm,1.1s,mb3.9,baz=19,slow=4.9,SNR=4.0							
AKASG	**Malin Array Be**	**77.86**	**14**	P		**P**	**07 40 50.6**	**+1.1**
	comp=Z,0.6nm,0.4s,mb3.8,baz=343,slow=4.8,SNR=2.8							
MKAR	**Makanchi Array**	**79.58**	**338**	P		**P**	**07 40 56.1**	**-2.9**
	comp=Z,0.2nm,0.5s,mb3.3,baz=27,slow=8.6,SNR=3.2							
WMQ	**Urumqi**	**80.94**	**334**	*e*P		**P**	**07 41 08.0**	**+1.6**
LPAZ	**La Paz**	**85.25**	**122**	LR	LR	LR	08 26 25.2	
	comp=Z,38nm,20.1s,MS3.8,baz=244,slow=40							
CD2	**Chengdu**	**86.53**	**316**	P		**P**	**07 41 35.0**	**-0.3**
CD2				pmax	pmax			
	comp=Z,120nm,5.1s							
KSH	**Kashi**	**87.92**	**341**	*e*P		**P**	**07 41 46.0**	**+4.1**
KSH				*e*pP		pP	07 41 51.0	+2.9
KSH				*e*sP		sP	07 41 53.5	+3.1
KSH				*e*PP		PP	07 45 16.0	+8.9
KSH				*e*SKS			07 52 12.0	
KSH				*e*S		S	07 52 28.5	+4.6
KSH				*e*sS		sS	07 52 36.5	+2.3
KSH				*e*SS		SS	07 58 20.0	+10
KSH				pmax	pmax			
	comp=Z,14nm,3.3s							
KSH				LR	LR			
	comp=N,18nm,4.6s							
KSH				LR	LR			
	comp=E,34nm,3.5s							
KSH				LR	LR			
	comp=Z,27nm,3.3s							
GYA	**Guiyang**	**88.97**	**312**	*e*P		**P**	**07 41 47.8**	**+0.8**
VNA1	**Neumayer--Stat**	**146.42**	**149**	*e*PKPdf		PKPdf	07 48 29.6	-0.7
VNA2	**Neumayer--Watz**	**146.67**	**150**	*e*PKPdf		PKPdf	07 48 26.9	-3.9
VNA2	

GELI	**Tayfur-Gelibol**	**0.85**	**243**	*e*Pg		**Pg**	**07 35 41.9**	**-1.0**
KCTX	**Karacabey (Bur**	**0.86**	**127**	*e*PG		**Pg**	**07 35 42.4**	**-0.8**
KCTX	**Karacabey (Bur**	**0.86**	**127**	*e*Pg		**Pg**	**07 35 42.4**	**-0.8**
CTKS	**Kestanelik-??a**	**0.91**	**60**	*e*PG		**Pg**	**07 35 44.2**	**+0.1**
CTKS	**Kestanelik-??a**	**0.91**	**60**	*e*Pg		**Pg**	**07 35 44.2**	**+0.1**
ENEZ	**Enez**	**0.99**	**267**	*e*PG		**Pg**	**07 35 45.3**	**-0.4**
ENEZ	**Enez**	**0.99**	**267**	*e*Pg		**Pg**	**07 35 45.3**	**-0.4**
BALY	**Balya**	**1.06**	**173**	*i* P		**Pb**	**07 35 46.2**	**-0.3**
BALY				*i* S		**Sb**	**07 36 00.2**	**+0.1**
BALY	**Balya**	**1.06**	**173**	*i* P		**Pb**	**07 35 46.2**	**-0.3**
BALY				*i* S		**Sb**	**07 36 00.2**	**+0.1**
DURS	**Dursunbey**	**1.42**	**146**	*i* P		**Pn**	**07 35 52.7**	**+0.9**
DURS				*i* S		**Sn**	**07 36 11.4**	**+1.2**
DURS	**Dursunbey**	**1.42**	**146**	*i* P		**Pn**	**07 35 52.7**	**+0.9**
DURS				*i* S		**Sn**	**07 36 11.4**	**+1.2**
YLV	**Yalova**	**1.47**	**98**	*e*PN		**Pn**	**07 35 51.5**	**-1.0**
YLV	**Yalova**	**1.47**	**98**	*e*Pn		**Pn**	**07 35 51.6**	**-0.9**

*BJI **28** 07:42:09.8,30.68N×83.17E,h8km,mB4.5/5,mb4.2/9, Ms3.9/4,Ms7 3.5/4*

*IDC **28** 07:42:09.9±0.9,30.60N×83.31E,h0km,mb4.1/12, mb1 4.2/15,mb1mx4.0/30,mbtmp4.1/15,ML3.1/2,MS3.4/2, Ms1 3.4/2,ms1mx2.7/34,Error ellipse: s-maj=30.3km s-min=14.9km az=53.0*

*ISCJB **28** 07:42:10.6±1.1,30.58N±0.04×83.20E±0.03,h14km±7km, mb4.2/20,MS3.3/2,Error ellipse: s-maj=7.0km s-min=4.8km az=176.0*

*NEIC **28** 07:42:12.1±0.6,30.64N×83.25E,h10km,mb4.4/5,Error ellipse: s-maj=14.5km s-min=8.5km az=222.0*

*NDI **28** 07:42:12.1±7.5,30.70N×83.30E,h15km±70km,mb4.5, mb4.4(NEIC)*

*MOS **28** 07:42:13.3±1.1,30.62N×83.22E,h33km,mb4.3/5,Error ellipse: s-maj=13.6km s-min=7.6km az=113.3*

ISC 28 07:42:12.6±1.2,30.61N±0.04×83.24E±0.04,h14km±8km, n61,σ1§09/69,mb4.2/20,MS3.3/2,4C-1D,Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
PTH	**Pithoragarh**	**2.82**	**249**	*e*PKP			**Pg**	**07 43 04.9**	**-1.8**
PTH				*e*S			**Sg**	**07 43 43.9**	**+0.6**
JOSI	**Joshimath**	**3.17**	**270**	*ex*			**Pn**	**07 43 05.9**	**+3.9**
JOSI				*e*S			**Sn**	**07 43 38.1**	**-1.6**
KLP	**Kalpa**	**4.38**	**283**	*e*PKP			**Pn**	**07 43 20.2**	**+1.6**
KLP				*e*S			**Sn**	**07 44 07.2**	**-2.2**
DDI	**Dehra Dun**	**4.49**	**268**	⇑ *ix*			**Pn**	**07 43 24.5**	**+4.4**
DDI				*ex*			**Sg**	**07 44 31.5**	**-5.1**
SDNR	**Sundarnagar**	**5.45**	**281**	*ex*			**Pb**	**07 43 43.5**	**-4.1**
NDI	**New Delhi**	**5.58**	**251**	*ex*			**Pn**	**07 43 38.0**	**+2.8**
NDI				*ex*			**Sn**	**07 44 45.0**	**+5.9**
LSA	**Lhasa** 54nm,1.1s	**6.91**	**96**	*e*Pn			**Pn**	**07 43 56.9**	**+3.5**
LSA	**Lhasa**	**6.91**	**96**	*e*P			**Pn**	**07 43 56.9**	**+3.5**
LSA	comp=Z,54nm,1.1s				pmax	pmax			
AJM	**Ajmer**	**8.60**	**244**	*e*PKP			**Pn**	**07 44 16.8**	**+0.1**
BHPL	**Bhopal**	**8.98**	**217**	*e*PKP			**Pn**	**07 44 21.9**	**0.0**
BHPL				*e*S			**Sn**	**07 45 56.0**	**-6.8**
SHL	**Shillong**	**9.13**	**121**	*e*PKP			**Pn**	**07 44 24.0**	**+0.1**
SHL				*i* x			x	07 46 03.0	
KSH	**Kashi**	**10.70**	**328**	*e*P			**Pn**	**07 44 44.0**	**-1.3**
KSH				*e*pP				07 44 47.3	
KSH				*e*sP				07 44 50.3	
KSH				*e*PP				07 44 52.3	
KSH				*e*S			**Sn**	**07 46 44.0**	**-0.8**
KSH				*e*sS				07 46 49.3	
KSH				*e*SS				07 46 57.0	
KSH	comp=Z,4.0nm,0.8s				pmax	pmax			
KSH	comp=Z,49nm,3.5s				pmax	pmax			
KSH	comp=N,320nm,10.1s				LR	LR			
KSH	comp=E,400nm,7.3s				LR	LR			
KSH	comp=Z,200nm,7.2s				LR	LR			
KBL	**Kabul**	**12.60**	**292**	*e*Pn			**Pn**	**07 45 12.8**	**+1.5**
KBL	comp=Z,15nm,0.8s								
KBL				*e*Sn			**Sn**	**07 47 31.3**	**-0.2**
KBL	**Kabul**	**12.60**	**292**	*e*P			**Pn**	**07 45 12.9**	**+1.5**
KBL				*e*				07 47 31.3	
KBL	comp=Z,15nm,0.8s				pmax	pmax			
LATR	**Latur**	**13.57**	**208**	*ex*			x	07 47 44.6	
WMQ	**Urumqi**	**13.66**	**14**	*e*P			**Pn**	**07 45 25.5**	**-0.2**
WMQ				pP				07 45 30.3	
WMQ				sP				07 45 32.5	
WMQ	comp=Z,13nm,0.9s				pmax	pmax			
WMQ	comp=Z,90nm,4.6s				pmax	pmax			
HYB	**Hyderabad**	**13.81**	**199**	*i* P			**Pn**	**07 45 26.5**	**-1.4**
HYB				*e*				07 49 56.0	
AAK	**Ala-Archa**	**13.90**	**332**	Pn			**Pn**	**07 45 30.3**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=207,slow=14,SNR=2.7								
AAK	**Ala-Archa**	**13.90**	**332**	*e*P			**Pn**	**07 45 28.2**	**-0.8**
EKS2	**Erkin-Say**	**14.22**	**330**	*e*Pn			**Pn**	**07 45 34.7**	**+1.4**
	comp=Z,6.9nm,0.8s								
POO	**Poona**	**14.74**	**217**	*e*PKP			**Pn**	**07 45 41.7**	**+1.1**
KAD	**Karad**	**15.60**	**214**	*e*PKP			**Pn**	**07 45 52.1**	**+0.1**
KAD				AMb			AMB	07 46 00.4	
KAD	comp=Z,11nm,1.0s								
				ex			x	07 48 29.8	
KKAR	**Karatay Array**	**16.08**	**324**	*e*Pn			**Pn**	**07 45 56.2**	**-1.9**
KKAR	comp=Z,2.8nm,0.6s								
				*e*Sn			**Sn**	**07 48 59.5**	**+3.3**
KKAR	**Karatay Array**	**16.08**	**324**	*e*P			**Pn**	**07 45 56.3**	**-1.8**
KKAR				*e*				07 48 59.5	
KKAR	comp=Z,3.0nm,0.6s				pmax	pmax			
GTA	**Gaotai**	**16.16**	**53**	*e*P			**Pn**	**07 46 00.0**	**+0.9**
GTA				pP			pP	07 46 03.5	-2.9
GTA				sP			sP	07 46 06.5	-1.7
GTA	comp=Z,12nm,0.8s				pmax	pmax			
MK31	**Makanchi Array**	**16.18**	**358**	*e*Pn			**Pn**	**07 46 00.6**	**+1.2**
MKAR	**Makanchi Array**	**16.18**	**358**	Pn			**Pn**	**07 45 57.6**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=180,slow=12,SNR=18								
MKAR	**Makanchi Array**	**16.18**	**358**	*ce*P			**Pn**	**07 45 59.5**	**+0.1**
MKAR	comp=Z,2.0nm,0.7s				pmax	pmax			
LZH	**Lanzhou**	**18.05**	**67**	*e*P			**Pn**	**07 46 23.5**	**+0.6**
LZH				pP			pP	07 46 28.0	+0.6
LZH				sP			sP	07 46 30.5	+1.2
LZH	comp=Z,15nm,1.3s				pmax	pmax			
CMAR	**Chiang Mai Arr**	**18.69**	**127**	P			**Pn**	**07 46 30.6**	**-0.3**
	baz=315,slow=11,SNR=17								
KURK	**Kurchatov**	**20.39**	**352**	P			**P**	**07 46 46.9**	**-1.9**
	comp=Z,11nm,0.9s,baz=172,slow=10,SNR=59								
KURK	**Kurchatov**	**20.39**	**352**	*d* P			**P**	**07 46 48.2**	**-0.5**
KURK	comp=Z,24nm,1.0s				pmax	pmax			
ZAA0	**Zalesovo Array**	**23.36**	**2**	*e*P			**P**	**07 47 19.9**	**-0.6**
ZALV	**Zalesovo Beam**	**23.36**	**2**	P			**P**	**07 47 19.7**	**-0.8**
	comp=Z,2.2nm,0.7s,mb3.7,baz=184,slow=9.2,SNR=9.5								
BVAR	**Borovoye Array**	**24.29**	**341**	P			**P**	**07 47 29.4**	**+0.2**
	comp=Z,2.4nm,0.6s,mb3.8,baz=145,slow=10,SNR=13								
BRVK	**Borovoye**	**24.35**	**341**	*e*P			**P**	**07 47 30.4**	**+0.6**
	comp=Z,4.7nm,0.9s,mb3.9								
BRVK	**Borovoye**	**24.35**	**341**	⇑ *i* P			**P**	**07 47 30.2**	**+0.4**
BRVK	comp=Z,4.0nm,1.0s,mb3.8				pmax	pmax			
SONM	**Songino Array**	**24.71**	**39**	P			**P**	**07 47 33.4**	**+0.3**
	comp=Z,3.0nm,0.7s,mb3.9,baz=230,slow=11,SNR=11								
SONM					LR		LR	07 58 01.8	
	comp=Z,62nm,22.0s,MS3.1,baz=34,slow=39								
ZAK	**Zakamensk**	**24.81**	**32**	*e*P			**P**	**07 47 33.3**	**-0.7**
ZAK	comp=Z,2.0nm,1.1s,mb3.6				pmax	pmax			
ABKAR	**Akbulak array**	**25.64**	**323**	*e*P			**P**	**07 47 42.5**	**+0.9**
	comp=Z,5.0nm,0.7s,mb4.2								
AKTK	**Aktyubinsk**	**27.34**	**324**	P			**P**	**07 47 56.5**	**-0.5**
AKTO	**Aktyubinsk**	**27.34**	**324**	P			**P**	**07 47 56.5**	**-0.5**
	comp=Z,2.2nm,0.8s,mb3.8,baz=110,slow=8.6,SNR=5.8								
NJ2	**Nanjing**	**30.37**	**78**	*e*P			**P**	**07 48 24.3**	**+0.2**
ZEI	**Tsey**	**33.51**	**302**	*e*P			**P**	**07 48 53.5**	**+2.0**
ZEI	comp=Z,7.0nm,0.4s,mb4.9				pmax	pmax			
KIV	**Kislovodsk**	**34.56**	**304**	*e*P			**P**	**07 49 01.4**	**+0.8**
KIV				*e*				07 50 16.7	
KIV	comp=Z,5.0nm,1.1s,mb4.4				pmax	pmax			
KSRS	**Korea Array**	**37.38**	**67**	P			**P**	**07 49 23.2**	**-1.7**
	comp=Z,1.7nm,0.7s,mb4.0,baz=274,slow=9.7,SNR=6.9								
KSRS					LR		LR	08 06 09.0	
	comp=Z,73nm,18.8s,MS3.5,baz=162,slow=39								
KSRS	**Korea Array**	**37.38**	**67**	P			**P**	**07 49 23.2**	**-1.7**
KSRS	comp=Z,2.0nm,0.7s,mb4.1				pmax	pmax			
KSRS	comp=Z,73nm,18.8s,MS3.5				MLR	MLR			
KLR	**Kul'dur**	**40.80**	**49**	*e*P			**P**	**07 49 49.3**	**-4.0**
OBN	**Obninsk**	**41.02**	**320**	*e*P			**P**	**07 49 54.6**	**-0.4**
OBN				*e*S			**S**	**07 56 08.0**	**+1.3**
OBN				*e*SS			SS	07 59 09.6	+1.0
OBN	comp=Z,5.0nm,0.9s,mb4.1				pmax	pmax			
FINES	**FINESS Array B**	**48.02**	**327**	P			**P**	**07 50 50.7**	**-0.2**
	comp=Z,3.1nm,0.8s,mb4.4,baz=103,slow=9.3,SNR=5.3								
ARCES	**ARCESS Array B**	**50.50**	**337**	P			**P**	**07 51 09.8**	**+0.1**
	comp=Z,2.3nm,0.8s,mb4.3,baz=107,slow=8.6,SNR=20								
SEY	**Seymchan**	**53.78**	**32**	*ce*P			**P**	**07 51 34.3**	**+0.1**
CUC	**Castrocucco**	**54.65**	**300**	*e*P			**P**	**07 51 41.4**	**+0.4**
	comp=Z,7.4nm,0.8s,mb4.8								
CEL	**Celeste**	**54.98**	**297**	*e*P			**P**	**07 51 44.7**	**+1.3**
	comp=Z,23nm,1.0s,mb5.2								
NOA	**NORSAR Array B**	**55.11**	**326**	P			**P**	**07 51 43.2**	**-0.7**
	comp=Z,2.0nm,0.8s,mb4.2,baz=89,slow=7.1,SNR=3.5								
KEST	**Kesra**	**60.72**	**296**	*e*P			**P**	**07 52 24.8**	**+1.1**
SUMG	**Summit**	**69.72**	**344**	*i* P			**P**	**07 53 22.0**	**+0.5**
	comp=Z,9.6nm,0.8s,mb4.8								
WRA	**Warramunga Arr**	**70.27**	**129**	P			**P**	**07 53 24.8**	**-0.7**
	comp=Z,3.4nm,0.6s,mb4.5,baz=324,slow=6.3,SNR=56								
ASAR	**Alice Springs**	**72.61**	**132**	P			**P**	**07 53 39.0**	**-0.6**
	comp=Z,0.6nm,0.7s,mb3.6,baz=315,slow=5.9,SNR=5.8								
ILAR	**Eielson Array**	**77.24**	**20**	P			**P**	**07 54 04.8**	**-1.0**
	comp=Z,1.8nm,0.9s,mb4.0,baz=310,slow=4.6,SNR=19								
CPUP	**Villa Florida**	**145.20**	**267**	PKPbc			PKPbc	08 01 49.2	-0.5
	comp=Z,1.2nm,0.7s,baz=90,slow=2.0,SNR=3.3								

*NEIC **28** 07:44:35.5,31.76S×71.82W,h7km,ML2.8(GUC),After GUC.*

GUC 28 07:44:36.0±0.5,31.75S×71.88W,h15km±15km,MD3.6, ML2.8,7C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
CHNG	**Los Chungos**	**0.35**	**112**	⇓ *i* P			**Pg**	**07 44 41.0**	**-2.1**
CHNG				*i* S			Sg	07 44 46.7	-1.3
CHNG	comp=N,530nm,0.5s				AML		AML	07 44 47.2	
CMCH	**Combarbala**	**0.95**	**53**	⇑ *i* P			**Pb**	**07 44 53.0**	**-1.1**
CMCH				*i* S			**Sb**	**07 45 05.9**	**-0.5**
CMCH	**Combarbala**	**0.95**	**53**	⇓ *i* P			**Pb**	**07 44 53.0**	**-1.1**
CMCH				*i* S			**Sb**	**07 45 05.9**	**-0.5**
CMCH	comp=E,1μm,0.6s				AML		AML	07 45 07.7	
ROCH	**El Roble**	**1.42**	**149**	⇑ *i* P			**Pn**	**07 45 01.0**	**-0.3**
ROCH				*i* S			Sn	07 45 19.5	-0.3
ROCH	**El Roble**	**1.42**	**149**	⇓ *i* P			Pn	07 45 00.9	-0.4
ROCH				⇑ *i* P				07 45 01.0	
ROCH				*i* S			Sn	07 45 19.5	-0.3
ROCH				*i* S			Sn	07 45 20.0	+0.3
ROCH	comp=E,184nm,0.7s				AML		AML	07 45 24.5	
JACH	**Jahuel**	**1.43**	**131**	⇑ *i* P			Pn	07 45 01.6	+0.1
JACH				*i* S			Sn	07 45 20.3	+0.3
JACH	**Jahuel**	**1.43**	**131**	⇑ *i* P			Pn	07 45 01.6	+0.1
JACH				*i* S			Sn	07 45 20.3	+0.3
PEL	**Peldehue**	**1.72**	**144**	⇑ *i* P			Pn	07 45 05.4	0.0
PEL				*i* S			Sn	07 45 27.4	+0.4
PEL	comp=E,249nm,0.3s				AML		AML	07 45 32.1	
LMEL	**Las Melosas**	**2.52**	**146**	*e*P			Pn	07 45 17.8	+1.4
LMEL	**Las Melosas**	**2.52**	**146**	*e*P			Pn	07 45 17.8	+1.4
LMEL	comp=N,65nm,0.2s				AML		AML	07 46 02.9	

IDC 28 07:45:47.3±3.7,30.18N×81.45E,h0km,mb3.5/5, mb1 3.8/7,mb1mx3.6/27,mbtmp3.6/7,ML4.1/2,MS3.2/1, Ms1 3.2/1,ms1mx2.5/26,Error ellipse: s-maj=144.2km s-min=21.0km az=69.0,Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
MKAR	**Makanchi Array**	**16.60**	**2**	Pn			Pn	07 49 40.0	-1.3
	0.2nm,0.3s,baz=190,slow=12,SNR=6.3								
CMAR	**Chiang Mai Arr**	**19.73**	**122**	P			Pn	07 50 18.7	-1.3
	0.5nm,0.3s,baz=306,slow=12,SNR=4.8								
KURK	**Kurchatov**	**20.62**	**355**	P			P	07 50 26.8	-1.3
	2.9nm,0.8s,baz=171,slow=10.0,SNR=8.7								
KURK					LR		LR	07 59 19.1	
	comp=Z,69nm,19.5s,baz=165,slow=40								
ZALV	**Zalesovo Beam**	**23.87**	**5**	P			P	07 51 00.8	-1.5
	0.6nm,0.4s,baz=201,slow=11,SNR=3.3								
WRA	**Warramunga Arr**	**71.22**	**128**	P			P	07 57 08.2	-0.2
	0.5nm,0.8s,baz=326,slow=6.2,SNR=4.1								
ASAR	**Alice Springs**	**73.49**	**131**	P			P	07 57 22.1	+0.1
	0.1nm,0.4s,baz=321,slow=6.4,SNR=2.8								
ILAR	**Eielson Array**	**78.15**	**19**	P			P	07 57 49.7	+1.7
	0.4nm,1.0s,baz=310,slow=6.2,SNR=4.2								

*IDC **28** 07:59:52.2±1.4,50.07N×129.40W,h0km,mb3.8/4, mb1 4.1/11,mb1mx3.9/29,mbtmp3.9/11,ML3.6/6,MS3.5/2, Ms1 3.5/2,ms1mx3.0/30,Error ellipse: s-maj=26.4km s-min=11.3km az=74.0*

*NEIC **28** 07:59:53.8±0.5,50.16N×129.52W,h10km,mb4.0/27, Error ellipse: s-maj=9.4km s-min=4.0km az=56.0*

*BJI **28** 07:59:54.3,50.97N×130.17W,h5km,mB4.8/5,mb4.6/4, Ms4.5/4,Ms7 4.1/4*

ISC 28 07:59:55.6±2.0,50.16N±0.04×129.53W±0.09, h24km±16km,n84,σ1§03/82,mb4.0/12,MS3.0/2, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
BBB	**Bella Bella**	**2.22**	**23**	Pn			**Pn**	**08 00 29.0**	**-1.8**
	53nm,0.3s,baz=40,slow=14,SNR=123								
BBB					Sn		**Sn**	**08 00 57.8**	**+0.4**
	44nm,0.3s,baz=127,slow=20,SNR=15								
DIB	**Dawson Inlet,**	**3.56**	**330**	Pn			**Pn**	**08 00 45.1**	**-4.1**
PGC	**Sidney**	**4.25**	**108**	*e*Pn			**Pn**	**08 00 57.1**	**-1.6**
NLWA	**Neilton Lookou**	**4.66**	**124**	*e*Pn			**Pn**	**08 01 03.2**	**-1.1**
JCW	**Jim Creek**	**5.36**	**109**	*e*Pn			**Pn**	**08 01 13.7**	**-0.3**
RPW	**Rockport**	**5.52**	**105**	*e*Pn			**Pn**	**08 01 16.8**	**+0.6**
CRAG	**Craig**	**5.75**	**339**	*e*Pn			**Pn**	**08 01 22.9**	**+3.6**
LON	**Longmire**	**6.17**	**141**	*e*Pn			**Pn**	**08 01 26.2**	**+1.2**
ETW	**Entiat**	**6.58**	**109**	*e*Pn			**Pn**	**08 01 30.3**	**-0.5**
COR	**Corvallis**	**7.00**	**140**	*e*Pn			**Pn**	**08 01 39.4**	**+3.0**
HOOD	**Mount Hood Mea** 27nm,1.1s	**7.18**	**129**	*e*Pn			**Pn**	**08 01 37.6**	**-1.4**
RSW	**Rattlesnake Hi**	**7.63**	**116**	*e*Pn			**Pn**	**08 01 45.3**	**+0.2**
RSW				*e*Sn			Sb	08 03 42.2	+4.9
HAWA	**Hanford**	**7.66**	**116**	*e*Pn			**Pn**	**08 01 44.8**	**-0.8**
HAWA				*e*Sb				08 03 42.0	
OD2	**Odessa Site #2**	**7.67**	**107**	*e*Pn			**Pn**	**08 01 44.4**	**-1.3**
DLBC	**Dease Lake**	**8.30**	**358**	*e*Pn			**Pn**	**08 01 56.0**	**+1.7**
DLBC	**Dease Lake**	**8.30**	**358**	Pn			**Pn**	**08 01 55.0**	**+0.7**
	0.3nm,0.3s,baz=186,slow=10,SNR=7.4								
NEW	**Newport**	**8.35**	**98**	*e*Pn			**Pn**	**08 01 55.8**	**+0.8**
LNOR	**Lineton Mounta**	**8.67**	**115**	*e*Pn			**Pn**	**08 01 59.5**	**+0.1**
YBH	**Yreka Blue Hor**	**9.67**	**148**	LR			LR	08 05 23.5	
	comp=Z,293nm,19.3s,baz=330,slow=35								
BSMT	**Bassoo Peak**	**9.96**	**98**	*e*Pn			**Pn**	**08 02 17.4**	**+0.3**
JTMT	**Jette** 2.5nm,0.6s	**10.32**	**98**	*e*Pn			**Pn**	**08 02 21.9**	**0.0**
WVOR	**Wild Horse Val** 8.7nm,1.5s	**10.79**	**132**	*e*Pn			**Pn**	**08 02 28.5**	**+0.1**
CHMT	**Chamberlain Mo**	**11.27**	**100**	*e*Pn			**Pn**	**08 02 34.8**	**-0.2**
HLID	**Hailey**	**12.26**	**117**	*e*Pn			**Pn**	**08 02 48.8**	**+0.3**
DLMT	**Dillon** 15nm,1.5s	**12.36**	**106**	*e*Pn			**Pn**	**08 02 48.8**	**-1.1**
MCMT	**McKenzie Canyo** 1.7nm,0.8s	**12.47**	**109**	*e*Pn			**Pn**	**08 02 50.2**	**-1.2**
PAHR	**Pah Rah Range**	**12.67**	**142**	*e*Pn			**Pn**	**08 02 54.0**	**-0.1**
IMW	**Indian Meadow**	**14.13**	**109**	*e*Pn			**Pn**	**08 03 14.6**	**+0.6**
DCID1	**Drake Creek**	**14.14**	**111**	*e*Pn			**Pn**	**08 03 23.9**	**+10**
FLWY	**Flagg Ranch**	**14.17**	**108**	*e*Pn			**Pn**	**08 03 15.3**	**+0.7**
NVAR	**Mina Array Bea** 0.0nm,0.3s,baz=316,slow=11,SNR=11	**14.20**	**141**	Pn			**Pn**	**08 03 13.8**	**-1.2**
RRI2	**Red Ridge**	**14.20**	**112**	*e*Pn			**Pn**	**08 03 19.1**	**+4.1**
MOOW	**Moose Ponds** 14nm,1.0s	**14.33**	**109**	*e*P			**Pn**	**08 03 25.2**	**+8.5**
TPAW	**Teton Pass**	**14.34**	**111**	*e*Pn			**Pn**	**08 03 20.9**	**+3.9**
REDW	**Red Top Meadow** 16nm,1.1s	**14.48**	**111**	*e*P			**Pn**	**08 03 22.1**	**+3.4**
SNOW	**Snow King Moun**	**14.48**	**110**	*e*Pn			**Pn**	**08 03 27.1**	**+8.3**
RLMT	**Red Lodge** 6.4nm,1.0s	**14.55**	**102**	*e*P			**Pn**	**08 03 27.1**	**+7.4**
YKA	**Yellowknife Ar**	**14.82**	**28**	Pn			**Pn**	**08 03 20.8**	**-2.6**
	0.2nm,0.3s,baz=217,slow=12,SNR=5.2								
HWUT	**Hardware Ranch** 6.8nm,1.1s	**15.13**	**118**	*e*Pn			**Pn**	**08 03 28.9**	**+1.3**
DUG	**Dugway** 23nm,1.8s	**15.40**	**124**	*e*P			**Pn**	**08 03 35.2**	**+4.1**
PDAR	**Pinedale Array** 0.1nm,0.3s,baz=305,slow=9.5,SNR=13	**15.59**	**111**	Pn			**Pn**	**08 03 34.4**	**+0.8**
RC01	**Rabbit Creek A** 5.4nm,0.4s	**15.73**	**322**	*e*Pn			**Pn**	**08 03 29.5**	**-5.8**
LAO	**LASA Array** 7.0nm,0.8s	**15.84**	**94**	*e*Pn			**Pn**	**08 03 37.3**	**+0.5**
JLU	**Jordanelle** 4.8nm,1.1s	**15.86**	**120**	*e*Pn			**Pn**	**08 03 38.0**	**+1.0**
EGAK	**Eagle** 5.5nm,0.9s	**15.89**	**342**	*e*Pn			**Pn**	**08 03 37.0**	**-0.3**
NLU	**North Lily Min** 14nm,1.5s	**15.97**	**123**	*e*P			**Pn**	**08 03 42.1**	**+3.6**
ISA	**Isabella** 14nm,1.4s	**16.57**	**147**	*e*Pn			**Pn**	**08 03 47.1**	**+0.9**
DGMT	**Dagmar** 28nm,1.4s	**16.59**	**86**	*e*Pn			**Pn**	**08 03 46.5**	**+0.2**
MSU	**Marysvale**	**16.97**	**127**	*e*Pn			**Pn**	**08 03 50.5**	**-0.7**
CCUT	**Cedar City** 10nm,1.5s	**17.12**	**131**	*e*Pn			**Pn**	**08 03 53.5**	**+0.4**
ILAR	**Eielson Array** 0.1nm,0.3s,baz=146,slow=11,SNR=20	**17.27**	**334**	P			**Pn**	**08 03 56.2**	**+1.5**
FFC	**Flin Flon** 23nm,0.9s	**17.35**	**64**	*e*Pn			**Pn**	**08 03 56.5**	**+0.6**
TRF	**Thorofare Moun** 47nm,2.0s	**17.39**	**328**	*e*Pn			**Pn**	**08 03 56.6**	**+0.4**
SRU	**San Rafael** 6.4nm,0.9s	**17.41**	**122**	*e*Pn			**Pn**	**08 03 57.8**	**+1.1**
GSC	**Goldstone** 73nm,2.6s	**17.51**	**143**	*e*Pn			**Pn**	**08 03 58.6**	**+0.7**
INK	**Inuvik** 0.1nm,0.3s,baz=165,slow=12,SNR=5.5	**18.31**	**355**	P			**Pn**	**08 04 08.7**	**+1.1**
RSSD	**Black Hills** 12nm,1.4s	**18.32**	**99**	*e*Pn			**Pn**	**08 04 06.6**	**-1.3**
PV04	**Paradox Valley**	**18.81**	**121**	*e*Pn			**Pn**	**08 04 14.5**	**+0.7**
PV01	**Paradox Valley** 2μm,1.4s	**19.18**	**121**	*e*P			**Pn**	**08 04 17.4**	**-0.9**
TTA	**Tatalina**	**19.22**	**322**	*e*P			**Pn**	**08 04 16.5**	**-2.1**
SMCO	**Snowmass** 8.1nm,1.3s	**19.36**	**116**	*e*P			**Pn**	**08 04 19.6**	**-0.9**
ISCO	**Idaho Springs** 5.5nm,1.2s	**19.76**	**112**	*e*Pn			**Pn**	**08 04 25.9**	**+0.8**
MVCO	**Mesa Verde** 13nm,1.1s	**19.89**	**123**	*e*Pn			**Pn**	**08 04 26.8**	**+0.1**
SDCO	**Great Sand Dun** 12nm,1.4s,mb4.0	**21.18**	**117**	*e*P			**P**	**08 04 39.0**	**0.0**
ULM	**Lac du Bonnet**	**21.45**	**77**	P			**P**	**08 04 42.7**	**+1.0**
ULM	**Lac du Bonnet**	**21.45**	**77**	P			**P**	**08 04 42.7**	**+1.0**
	23nm,1.0s,mb4.5,baz=286,slow=14,SNR=7.1								
AGMN	**Agassiz Nation** 143nm,2.9s,mb4.9	**21.97**	**82**	*e*P			**P**	**08 04 47.1**	**-0.3**
TUC	**Tucson** 7.9nm,1.3s,mb4.0	**22.62**	**135**	*e*P			**P**	**08 04 54.5**	**0.0**
ANMO	**Albuquerque** 6.2nm,1.3s,mb3.9	**22.67**	**123**	*e*P			**P**	**08 04 55.2**	**+0.3**
ANMO	**Albuquerque** 1.5nm,0.9s,mb3.4,baz=318,slow=12,SNR=5.2	**22.67**	**123**	P			**P**	**08 04 54.6**	**-0.3**
LAZ	**Ladron** 2.7nm,1.3s,mb3.5	**22.73**	**125**	*e*P			**P**	**08 04 52.1**	**-3.4**
BNM	**Barren Site** 5.8nm,1.2s,mb3.9	**23.19**	**125**	*e*P			**P**	**08 05 00.4**	**0.0**
EYMN	**Ely** 18nm,0.9s,mb4.6	**24.85**	**80**	*e*P			**P**	**08 05 16.6**	**+0.7**
AMTX	**Amarillo** 8.0nm,0.8s,mb4.3	**25.38**	**116**	*e*P			**P**	**08 05 19.8**	**-1.0**
WMOK	**Wichita Mounta** 2.7nm,0.9s

IMW	**Indian Meadow**	**14.24**	**109**	*e*Pn	**Pn**	**08 05 03.4**	**+0.3**
	19nm,1.1s						
NVAR	**Mina Array Bea**	**14.26**	**141**	Pn	**Pn**	**08 05 03.6**	**+0.3**
	0.0nm,0.3s,baz=324,slow=12,SNR=4.1						
FLWY	**Flagg Ranch**	**14.29**	**108**	*e*Pn	**Pn**	**08 05 04.7**	**+1.0**
	18nm,1.3s						
RRI2	**Red Ridge**	**14.32**	**111**	*e*Pn	**Pn**	**08 05 07.0**	**+3.0**
	34nm,1.8s						
MOOW	**Moose Ponds**	**14.44**	**109**	*e*Pn	**Pn**	**08 05 06.6**	**+0.9**
	15nm,1.1s						
TPAW	**Teton Pass**	**14.46**	**110**	*e*P	**Pn**	**08 05 15.1**	**+9.1**
REDW	**Red Top Meadow**	**14.59**	**110**	*e*P	**Pn**	**08 05 16.1**	**+8.4**
SNOW	**Snow King Moun**	**14.59**	**110**	*e*P	**Pn**	**08 05 16.3**	**+8.5**
	13nm,1.0s						
LOHW	**Long Hollow**	**14.60**	**109**	*e*P	**Pn**	**08 05 16.3**	**+8.4**
	13nm,1.1s						
YKA	**Yellowknife Ar**	**14.90**	**28**	Pn	**Pn**	**08 05 09.8**	**-2.1**
	0.1nm,0.3s,baz=213,slow=13,SNR=5.3						
YKA				LR	LR	08 11 03.8	
	comp=Z,21nm,18.0s,baz=95,slow=38						
DUG	**Dugway**	**15.50**	**123**	*e*Pn	**Pn**	**08 05 21.1**	**+1.1**
	11nm,1.4s						
PDAR	**Pinedale Array**	**15.71**	**110**	Pn	**Pn**	**08 05 24.7**	**+2.0**
	0.1nm,0.3s,baz=308,slow=11,SNR=9.0						
PDAR				LR	LR	08 11 42.8	
	comp=Z,147nm,19.1s,baz=90,slow=39						
MSU	**Marysvale**	**17.07**	**126**	*e*P	**Pn**	**08 05 43.6**	**+3.6**
	6.1nm,1.5s						
ILAR	**Eielson Array**	**17.23**	**335**	P	**Pn**	**08 05 44.3**	**+2.3**
	0.0nm,0.3s,baz=147,slow=11,SNR=5.5						
ILAR				LR	LR	08 11 18.3	
	comp=Z,154nm,20.5s,baz=131,slow=33						
FFC	**Flin Flon**	**17.48**	**64**	*e*Pn	**Pn**	**08 05 46.0**	**+0.9**
	11nm,0.8s						
SRU	**San Rafael**	**17.51**	**122**	*e*P	**Pn**	**08 05 46.9**	**+1.3**
	7.8nm,1.1s						
INK	**Inuvik**	**18.32**	**356**	P	**Pn**	**08 05 57.0**	**+1.6**
	0.0nm,0.3s,baz=164,slow=9.6,SNR=4.3						
INK				LR	LR	08 13 35.6	
	comp=Z,270nm,18.3s,baz=265,slow=39						
PV04	**Paradox Valley**	**18.91**	**120**	*e*P	**Pn**	**08 06 01.9**	**-0.9**
TTA	**Tatalina**	**19.16**	**322**	*e*P	**Pn**	**08 06 04.3**	**-1.3**
	6.8nm,1.3s						
PV01	**Paradox Valley**	**19.28**	**120**	*e*P	**Pn**	**08 06 06.9**	**-0.4**
SMCO	**Snowmass**	**19.47**	**116**	*e*P	**Pn**	**08 06 09.1**	**-0.4**
	10nm,1.2s						
ISCO	**Idaho Springs**	**19.87**	**112**	*e*P	**Pn**	**08 06 14.5**	**+0.2**
	3.7nm,1.0s						
MVCO	**Mesa Verde**	**19.98**	**122**	*e*P	**Pn**	**08 06 13.8**	**-1.9**
	28nm,1.4s						
SDCO	**Great Sand Dun**	**21.29**	**116**	*e*P	**P**	**08 06 27.9**	**-0.3**
	11nm,1.5s,mb4.0						
ULM	**Lac du Bonnet**	**21.58**	**77**	P	**P**	**08 06 33.3**	**+2.2**
	7.3nm,0.6s,mb4.3,baz=285,slow=11,SNR=5.3						
ULM				LR	LR	08 14 59.7	
	comp=Z,221nm,19.9s,MS3.6,baz=9.6,slow=37						
TUC	**Tucson**	**22.70**	**135**	*e*P	**P**	**08 06 43.3**	**0.0**
	4.9nm,1.4s,mb3.8						
ANMO	**Albuquerque**	**22.77**	**123**	P	**P**	**08 06 43.6**	**-0.3**
	2.1nm,0.9s,mb3.7,baz=322,slow=9.6,SNR=6.2						
LAZ	**Ladron**	**22.82**	**125**	*e*P	**P**	**08 06 45.3**	**+0.7**
	2.7nm,1.3s,mb3.6						
BNM	**Barren Site**	**23.28**	**125**	*e*P	**P**	**08 06 49.5**	**0.0**
	5.6nm,1.1s,mb4.0						
ECSD	**EROS Data Cent**	**23.37**	**93**	*e*P	**P**	**08 06 49.8**	**-0.5**
	12nm,1.0s,mb4.4						
AMTX	**Amarillo**	**25.49**	**116**	*e*P	**P**	**08 07 09.6**	**-0.4**
	14nm,1.0s,mb4.6						
WMOK	**Wichita Mounta**	**27.30**	**113**	*e*P	**P**	**08 07 25.3**	**-1.0**
	4.4nm,1.1s,mb4.1						
RES	**Resolute Bay**	**28.56**	**19**	LR	LR	08 18 55.3	
	comp=Z,164nm,18.4s,MS3.7,baz=137,slow=36						
TXAR	**Lajitas Array**	**28.62**	**127**	P	**P**	**08 07 38.3**	**+0.2**
	0.4nm,0.8s,mb3.3,baz=337,slow=12,SNR=4.2						
TXAR				LR	LR	08 19 46.9	
	comp=Z,114nm,18.7s,MS3.5,baz=245,slow=38						
ROSC	**El Rosal**	**64.63**	**115**	LR	LR	08 42 50.1	
	comp=Z,36nm,21.1s,MS3.5,baz=337,slow=38						
MKAR	**Makanchi Array**	**79.55**	**338**	P	**P**	**08 13 49.3**	**+0.7**
	0.2nm,0.5s,mb3.3,baz=39,slow=4.7,SNR=4.1						

*ISCJB **28** 08:02:17.4±0.7, 17°.7S±0°.3×178°.4W±0°.2, h602km±10km, mb4.2/13, Error ellipse: s-maj=44.8km s-min=9.8km az=150.9*

*IDC **28** 08:02:17.5±1.4, 17°.20S×178°.59W, h573km±21km, mb3.6/9, mb1 3.9/10, mb1mx3.6/20, mbtmp3.6/10, Error ellipse: s-maj=69.5km s-min=10.9km az=153.0*

*NEIC **28** 08:02:19.3±1.0, 17°.67S×178°.43W, h603km±10km, mb4.4/4, Error ellipse: s-maj=45.1km s-min=11.0km az=152.0*

ISC 28 08:02:17.9±0.7, 17°.7S±0°.3×178°.3W±0°.2, h593km±10km, n29, σ0°84/31, mb4.2/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.46**	**268**	*e*P	**P**	**08 03 40.8**	**+1.7**
AFI	**Afiamalu**	**7.32**	**60**	P	**P**	**08 04 09.8**	**-0.7**
AFI				S	**S**	**08 05 41.9**	**-0.9**
AFI	**Afiamalu**	**7.32**	**60**	P	**P**	**08 04 09.8**	**-0.7**
	14nm,0.3s,baz=295,slow=2.2,SNR=25						
AFI				S	**S**	**08 05 41.9**	**-0.9**
	0.8nm,0.3s,baz=68,slow=19,SNR=2.3						
EIDS	**Eidsvold**	**29.43**	**250**	*e*P	**P**	**08 07 34.6**	**-0.6**
EIDS	**Eidsvold**	**29.43**	**250**	*e*P	**P**	**08 07 34.7**	**-0.5**
	6.6nm,0.7s,mb4.4						
ARMA	**Armidale**	**30.14**	**239**	*e*P	**P**	**08 07 41.7**	**+0.5**
	6.0nm,0.5s,mb4.5						
CTA	**Charters Tower**	**33.57**	**260**	*e*P	**P**	**08 08 10.2**	**-0.2**
	7.6nm,0.7s,mb4.4						
CTA	**Charters Tower**	**33.57**	**260**	P	**P**	**08 08 10.3**	**-0.1**
	7.7nm,0.6s,mb4.5,baz=89,slow=9.6,SNR=9.8						
CTAO	**Charters Tower**	**33.57**	**260**	*e*P	**P**	**08 08 10.6**	**+0.2**
	5.9nm,0.6s,mb4.4						
CNB	**Canberra Magne**	**33.65**	**232**	*e*P	**P**	**08 08 11.2**	**+0.4**
CMSA	**Cobar Meteorol**	**35.35**	**240**	*e*P	**P**	**08 08 25.1**	**+0.1**
QLP	**Quilpie**	**35.70**	**249**	*e*P	**P**	**08 08 27.8**	**-0.2**
COEN	**Coen**	**37.19**	**270**	*e*P	**P**	**08 08 41.2**	**+0.9**
	170nm,0.6s						
TOO	**Toolangi**	**37.40**	**231**	*e*P	**P**	**08 08 42.0**	**+0.3**
STKA	**Stephens Creek**	**38.83**	**241**	*e*P	**P**	**08 08 53.9**	**+0.5**
	8.8nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**38.83**	**241**	P	**P**	**08 08 53.8**	**+0.4**
	11nm,0.5s,mb4.7,baz=88,slow=8.9,SNR=33						
BBOO	**Buckleboo**	**43.60**	**241**	*e*P	**P**	**08 09 30.9**	**-0.1**
	10nm,0.4s,mb4.7						
BBOO	**Buckleboo**	**43.60**	**241**	*e*P	**P**	**08 09 30.9**	**-0.1**
	27nm,0.7s,mb4.9						
WRA	**Warramunga Arr**	**44.76**	**259**	P	**P**	**08 09 39.4**	**-0.7**
	8.0nm,0.5s,mb4.5,baz=94,slow=7.4,SNR=232						
ASAR	**Alice Springs**	**44.94**	**254**	P	**P**	**08 09 41.4**	**-0.1**
	53nm,0.7s,mb5.2,baz=87,slow=8.6,SNR=751						
FORT	**Forrest**	**50.19**	**244**	*e*P	**P**	**08 10 19.5**	**-1.0**
	23nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**53.15**	**260**	*e*P	**P**	**08 10 41.7**	**-0.2**
	4.7nm,1.6s,mb3.6						
FITZ	**Fitzroy Crossi**	**53.15**	**260**	P	**P**	**08 10 41.9**	**-0.1**
	1.0nm,0.3s,mb3.6,baz=133,slow=6.1,SNR=12						
MBWA	**Marble Bar**	**58.22**	**256**	*e*P	**P**	**08 11 15.4**	**-1.5**
MEEK	**Meekatharra**	**58.60**	**249**	*e*P	**P**	**08 11 18.5**	**-0.9**
NVAR	**Mina Array Bea**	**79.18**	**44**	P	**P**	**08 13 23.6**	**+1.3**
	1.1nm,0.7s,mb3.3,baz=223,slow=8.5,SNR=11						
ILAR	**Eielson Array**	**85.62**	**13**	P	**P**	**08 13 53.2**	**-0.8**
	0.3nm,0.4s,mb3.3,baz=222,slow=5.3,SNR=11						
TXAR	**Lajitas Array**	**85.79**	**58**	P	**P**	**08 13 57.6**	**+1.9**
	1.6nm,0.7s,mb3.8,baz=222,slow=5.0,SNR=23						
PDAR	**Pinedale Array**	**87.11**	**43**	P	**P**	**08 14 02.3**	**+0.6**
	0.8nm,0.6s,mb3.6,baz=235,slow=2.8,SNR=8.5						

*NEIC **28** 08:02:25.6, 14°.84N×61°.36W, h146km, MD3.7(TRN), After TRN.*

*TRN **28** 08:02:25.1, 14°.88N×61°.18W, h148km, MD3.7, M3.2(FDF)*

*ISCJB **28** 08:02:26.3±0.8, 14°.87N±0°.05×61°.33W±0°.09, h142km±8km, Error ellipse: s-maj=15.8km s-min=5.4km az=160.0*

*RSPR **28** 08:02:26.1,20°.48N×60°.35W, h74km±9km, MD4.6/3*

ISC 28 08:02:26.5±0.8, 14°.86N±0°.05×61°.31W±0°.09, h145km±7km, n32, σ0°78/53, 15C-1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FDF	**Fort de France**	**0.20**	**129**	*e*Pn	**Pn**	**08 02 46.1**	**-0.1**
FDF				*e*Sn	**Sn**	**08 03 02.0**	**+1.0**
FDF	**Fort de France**	**0.20**	**129**	⇑*i*P	**Pn**	**08 02 46.2**	**0.0**
FDF				⇑*e*S	**Sn**	**08 03 01.7**	**+0.6**
BIM	**Bigot**	**0.42**	**146**	⇑*i*P	**Pn**	**08 02 46.9**	**0.0**
DLPL	**La Plaine**	**0.47**	**8**	*e*P	**Pn**	**08 02 48.0**	**+0.8**
DLPL				*e*S	**Sn**	**08 03 02.5**	**-0.4**
MVM	**Montagne Vaucl**	**0.51**	**127**	⇓*i*P	**Pn**	**08 02 47.2**	**-0.2**
SLW	**Petit Monier**	**0.91**	**156**	⇑*i*P	**Pn**	**08 02 49.9**	**-0.2**
SLW	**Petit Monier**	**0.91**	**156**	⇑*i*P	**Pn**	**08 02 50.8**	**+0.7**
SLW				*e*S	**Sn**	**08 03 08.1**	**+0.1**
MGG	**Marie-Galante**	**1.05**	**360**	*e*P	**Pn**	**08 02 50.3**	**-0.9**
SLPE	**Piton Saint Es**	**1.06**	**163**	*e*P	**Pn**	**08 02 52.2**	**+0.8**
SLPE				*e*S	**Sn**	**08 03 10.9**	**+0.6**
SLB	**Belfond**	**1.06**	**166**	*e*P	**Pn**	**08 02 51.5**	**+0.1**
SLB				*e*S	**Sn**	**08 03 11.1**	**+0.7**
SLB	**Belfond**	**1.06**	**166**	*e*P	**Pn**	**08 02 51.5**	**+0.1**
SLB				*e*S	**Sn**	**08 03 11.1**	**+0.7**
PHG	**Guadaloupe-2**	**1.19**	**345**	*e*P	**Pn**	**08 02 52.1**	**-0.5**
MCLT	**Moule a Chique**	**1.20**	**162**	*e*P	**Pn**	**08 02 52.6**	**-0.1**
MCLT				*e*S	**Sn**	**08 03 12.8**	**+0.1**
MCLT	**Moule a Chique**	**1.20**	**162**	*e*P	**Pn**	**08 02 52.6**	**-0.1**
MCLT				*e*S	**Sn**	**08 03 12.8**	**+0.1**
SCG	**Saint Claude**	**1.21**	**343**	*e*P	**Pn**	**08 02 51.6**	**-1.2**
BCG	**Bois Riant Cap**	**1.25**	**346**	*e*P	**Pn**	**08 02 52.6**	**-0.6**
SSV	**Crater Summit**	**1.53**	**176**	*e*P	**Pn**	**08 02 56.1**	**+0.1**
SSV				*e*S	**Sn**	**08 03 18.1**	**-0.6**
SSV	**Crater Summit**	**1.53**	**176**	*e*P	**Pn**	**08 02 56.1**	**+0.1**
SSV				*e*S	**Sn**	**08 03 18.1**	**-0.6**
BHS	**Barnard House**	**1.57**	**173**	⇑*i*P	**Pn**	**08 02 55.8**	**-0.6**
BHS				*e*S	**Sn**	**08 03 19.1**	**-0.3**
BHS	**Barnard House**	**1.57**	**173**	⇑*i*P	**Pn**	**08 02 55.8**	**-0.6**
BHS				*e*S	**Sn**	**08 03 19.1**	**-0.3**
SVB	**Belmont**	**1.58**	**178**	⇑*i*P	**Pn**	**08 02 56.9**	**+0.3**
SVB				*e*S	**Sn**	**08 03 18.7**	**-1.0**
SVB	**Belmont**	**1.58**	**178**	⇑*i*P	**Pn**	**08 02 56.9**	**+0.3**
SVB				*e*S	**Sn**	**08 03 19.5**	**-0.1**
BBGH	**Gun Hill**	**2.41**	**135**	*e*Pn	**Pn**	**08 03 06.9**	**+0.5**
BBGH				*e*Sn	**Sn**	**08 03 37.0**	**+0.1**
SMRT	**St. Maarten**	**3.59**	**332**	*e*S	**Sn**	**08 03 59.3**	**-4.6**
SMRT	**St. Maarten**	**3.59**	**332**	*e*S	**Sn**	**08 03 59.3**	**-4.6**
TOSP	**Speyside**	**3.62**	**168**	*e*P	**Pn**	**08 03 21.8**	**0.0**
TOSP				*e*S	**Sn**	**08 04 01.7**	**-2.9**
STVI	**Saint Thomas**	**4.92**	**315**	⇑*e*P	**Pn**	**08 03 39.0**	**+0.2**
STVI				*e*S	**Sn**	**08 04 34.4**	**-0.8**
STVI	**Saint Thomas**	**4.92**	**315**	⇑*e*P	**Pn**	**08 03 39.0**	**+0.2**
STVI				*e*S	**Sn**	**08 04 34.4**	**-0.8**
MTP	**Monte Pirata**	**5.18**	**309**	⇑*e*P	**Pn**	**08 03 45.5**	**+3.1**
MTP				*e*S	**Sn**	**08 04 47.5**	**+6.0**
MTP	**Monte Pirata**	**5.18**	**309**	⇑*e*P	**Pn**	**08 03 45.5**	**+3.1**
MTP				*e*S	**Sn**	**08 04 47.5**	**+6.0**
CBYP	**Canovanas**	**5.52**	**309**	⇑*e*P	**Pn**	**08 03 48.1**	**+1.3**
CBYP	**Canovanas**	**5.52**	**309**	⇑*e*P	**Pn**	**08 03 48.7**	**+1.9**

IDC 28 08:04:58.9±2.4, 50°.07N×129°.62W, h0km, mb3.5/2, mb1 3.7/6, mb1mx3.5/25, mbtmp3.4/6, ML3.5/3, Error ellipse: s-maj=37.0km s-min=16.3km az=74.0, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBB	**Bella Bella**	**2.32**	**24**	Pn	Pn	08 05 37.3	-0.9
	34nm,0.3s,baz=48,slow=14,SNR=23						
BBB				Sn	Sn	08 06 05.8	-1.7
	29nm,0.3s,baz=132,slow=21,SNR=13						
DIB	**Dawson Inlet,**	**3.60**	**332**	Pn	Pn	08 05 52.6	-3.3
DLBC	**Dease Lake**	**8.39**	**359**	Pn	Pn	08 07 01.6	+0.1
	0.2nm,0.3s,baz=185,slow=16,SNR=4.1						
PDAR	**Pinedale Array**	**15.62**	**110**	Pn	Pn	08 08 43.0	+2.9
	0.1nm,0.3s,baz=312,slow=11,SNR=5.4						
ILAR	**Eielson Array**	**17.32**	**335**	P	Pn	08 09 02.2	+0.5
	0.0nm,0.3s,baz=150,slow=9.4,SNR=5.1						
ULM	**Lac du Bonnet**	**21.52**	**76**	P	P	08 09 48.9	-0.3
	2.6nm,0.5s,baz=289,slow=16,SNR=2.5						
TXAR	**Lajitas Array**	**28.52**	**127**	P	P	08 10 56.1	+0.2
	0.2nm,0.7s,baz=340,slow=7.0,SNR=3.4						

IDC 28 08:10:01.9±3.1, 30°.15S×138°.70E, h0km, mb1 3.0/3, mb1mx3.0/14, mbtmp2.7/3, ML2.2/2, Error ellipse: s-maj=97.4km s-min=15.5km az=45.0, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**3.02**	**125**	Pn	Pn	08 10 51.2	+0.2
	0.2nm,0.3s,baz=311,slow=16,SNR=3.6						
STKA				Pg	Pg	08 10 58.5	-1.3
	0.8nm,0.3s,baz=305,slow=16,SNR=8.6						
STKA				Sn	Sn	08 11 27.5	-0.4
	0.7nm,0.3s,baz=282,slow=21,SNR=3.9						
STKA				Lg		08 11 36.5	
	1.3nm,0.3s,baz=198,slow=22,SNR=7.8						
ASAR	**Alice Springs**	**7.75**	**325**	Pn	Pn	08 11 56.9	+0.9
	0.0nm,0.3s,baz=153,slow=12,SNR=2.9						
ASAR				Sn	Sn	08 13 24.4	0.0
	0.1nm,0.3s,baz=150,slow=22,SNR=4.2						
WRA	**Warramunga Arr**	**10.91**	**338**	Pn	Pn	08 12 38.2	-1.1
	baz=155,slow=12,SNR=2.8						
WRA				Sn	Sn	08 14 36.9	-5.1
	0.0nm,0.3s,baz=164,slow=25,SNR=2.8						

*ISCJB **28** 08:17:32.9±0.1, 17°.59N±0°.02×145°.63E±0°.02, h226km, mb4.8/134, Error ellipse: s-maj=3.8km s-min=2.7km az=143.5*

*MOS **28** 08:17:32.8±1.3, 17°.64N×145°.59E, h233km, mb4.5/24, Error ellipse: s-maj=11.0km s-min=6.8km az=88.0*

*NEIC **28** 08:17:33.2±0.2, 17°.59N×145°.67E, mb4.9/61, Error ellipse: s-maj=5.9km s-min=4.2km az=116.0*

NEIC Felt at Merizo, Guam.

*IDC **28** 08:17:35.4±0.6, 17°.60N×145°.75E, h247km±5km, mb4.3/21, mb1 4.5/21, mb1mx4.4/25, mbtmp4.3/21, Error ellipse: s-maj=11.5km s-min=7.2km az=94.0*

*DJA **28** 08:17:40, 17°.51N×145°.77E, h294km, mb5.3/37*

ISC 28 08:17:34.5±0.1, 17°.59N±0°.03×145°.67E±0°.02, h228km, h228km±2.4km; pP-P, n463, σ0°78/470, mb4.8/134, 85C-111D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.05**	**191**	P	**Pn**	**08 18 37.6**	**-0.5**
	37nm,0.3s,baz=133,slow=3.1,SNR=49						
GUMO				S	**S**	**08 19 26.5**	**-1.8**
	88nm,0.3s,baz=145,slow=24,SNR=3.7						
GUMO	**Guam**	**4.05**	**191**	*e*P	**Pn**	**08 18 37.5**	**-0.6**
CBIJ	**Chichi jima**	**9.99**	**342**	P	**Pn**	**08 19 51.3**	**-1.9**
	15nm,0.3s,baz=284,slow=22,SNR=16						
CBIJ				S	**S**	**08 21 36.8**	**-8.6**
	15nm,0.3s,baz=280,slow=19,SNR=3.1						
JHJ	**Hachijo jima 2**	**16.34**	**342**	P	**P**	**08 21 07.8**	**-2.5**
	7.6nm,0.3s,baz=72,slow=20,SNR=3.6						
JHJ				S	**S**	**08 24 04.5**	**-5.2**
	18nm,0.3s,baz=48,slow=18,SNR=4.8						
MJAR	**Matsushiro Arr**	**20.00**	**342**	P	**P**	**08 21 46.5**	**-3.3**
	1.7nm,0.3s,baz=169,slow=10,SNR=15						
MJAR				S	**S**	**08 25 17.8**	**-4.1**
	0.3nm,0.3s,baz=131,slow=24,SNR=4.1						
MJAR				ScP	ScP	08 29 04.9	-5.5
	0.2nm,0.3s,baz=183,slow=2.7,SNR=7.3						
MJAR	**Matsushiro Arr**	**20.00**	**342**	P	**P**	**08 21 46.5**	**-3.3**
MJAR				S	**S**	**08 25 17.8**	**-4.1**
MAJO	**Matsushiro**	**20.00**	**342**	*e*P	**P**	**08 21 47.5**	**-2.4**
	21nm,0.6s						
MAJO	**Matsushiro**	**20.00**	**342**	*e*P	**P**	**08 21 47.5**	**-2.3**
MAJO				pmax	pmax		
	comp=Z,21nm,0.6s						
MAT	**Matsushiro**	**20.00**	**342**	P	**P**	**08 21 47.3**	**-2.5**
MAT				S	**S**	**08 25 21.0**	**-0.9**
BAKI	**Biak**	**20.91**	**208**	P	**P**	**08 22 01.6**	**+1.9**
	comp=Z,3μm comp=Z,248nm,0.9s						
TBP	**Tagbilaran**	**22.58**	**253**	*e*P	**P**	**08 22 15.9**	**+0.1**
TGY	**Tagaytay City**	**24.04**	**265**	P	**P**	**08 22 30.0**	**+0.9**
	comp=Z,104nm,0.3s,mb5.9,baz=114,slow=10.0,SNR=4.6						
TPUB	**Ta-pu**	**24.12**	**288**	*e*P	**P**	**08 22 29.6**	**-0.1**
	comp=Z,20nm,0.4s,mb5.1						
KSRS	**Korea Array**	**25.20**	**325**	P	**P**	**08 22 38.3**	**-1.0**
	comp=Z,4.2nm,0.5s,mb4.3,baz=141,slow=9.1,SNR=17						
KSRS				ScP	ScP	08 29 20.1	-3.9
	comp=Z,2.5nm,0.7s,baz=140,slow=2.8,SNR=11						
LBMI	**Labuha**	**25.46**	**226**	P	**P**	**08 22 44.4**	**+2.5**
	comp=Z,878nm comp=Z,57nm,0.7s,mb5.3						
ASAJ	**Asahikawa**	**26.57**	**355**	*e*P	**P**	**08 22 51.0**	**-0.5**
	comp=Z,8.3nm,0.6s,mb4.5						
ASAJ	**Asahikawa**	**26.57**	**355**	P	**P**	**08 22 51.2**	**-0.2**
	comp=Z,16nm,0.6s,mb4.9,baz=193,slow=8.8,SNR=15						
PMG	**Port Moresby**	**26.86**	**177**	*e*P	**P**	**08 22 53.4**	**-1.0**
	comp=Z,80nm,0.8s,mb5.4						
PMG	**Port Moresby**	**26.86**	**177**	*c i*P	**P**	**08 22 52.9**	**-1.5**
PMG				pmax	pmax		
	comp=Z,120nm,1.7s						
PMG	**Port Moresby**	**26.86**	**177**	P	**P**	**08 22 54.8**	**+0.4**
	comp=Z,122nm,0.9s,mb5.5						
MRSI	**Marisa**	**28.88**	**236**	P	**P**	**08 23 12.1**	**-0.2**
	comp=Z,698nm comp=Z,39nm,1.3s,mb4.9						
MYLDM	**Lahad Datu**	**29.30**	**248**	P	**P**	**08 23 17.0**	**+1.0**
MYLDM	**Lahad Datu**	**29.30**	**248**	P	**P**	**08 23 16.1**	**+0.1**
	comp=Z,30nm,0.9s,mb4.9						
KDM	**Kudat**	**30.06**	**253**	P	**P**	**08 23 23.5**	**+0.7**
MDJ	**Mudanjiang**	**30.14**	**337**	P	**P**	**08 23 24.0**	**+1.0**
MDJ				pP	pP	08 24 08.3	-0.5
MDJ				sP	sP	08 24 34.0	-1.3
MDJ				S	**S**	**08 28 07.5**	**+2.8**
MDJ				sS	sS	08 29 28.0	+1.3
MDJ				ScS	ScS	08 33 33.5	-1.4
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
MDJ				pmax	pmax		
	comp=Z,35nm,4.8s						
MDJ				LR	LR		
	comp=N,290nm,16.8s						
MDJ				LR	LR		
	comp=E,250nm,18.5s						
MDJ				LR	LR		
	comp=Z,460nm,18.2s						
SDKM	**Sandakan**	**30.26**	**250**	P	**P**	**08 23 25.2**	**+0.7**
TSM	**Tawau**	**30.26**	**247**	P	**P**	**08 23 25.1**	**+0.6**
KKM	**Kota Kinabalu**	**30.98**	**252**	*e*P	**P**	**08 23 31.4**	**+0.6**
	comp=Z,75nm,0.6s,mb5.5						
KKM	**Kota Kinabalu**	**30.98**	**252**	P	**P**	**08 23 31.2**	**+0.4**
KKM	**Kota Kinabalu**	**30.98**	**252**	P	**P**	**08 23 30.4**	**-0.4**
	comp=Z,1μm comp=Z,125nm,0.7s,mb5.7						
CN2	**Changchun**	**31.21**	**331**	*e*P	**P**	**08 23 33.8**	**+1.3**
CN2				*e*S	**S**	**08 28 22.8**	**+1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
CN2				pmax	pmax		
	comp=Z,200nm,11.0s						
KDI	**Kendari**	**31.24**	**229**	P	**P**	**08 23 33.7**	**+0.6**
	comp=Z,39nm,1.2s,mb4.9						
COEN	**Coen**	**31.44**	**185**	*e*P	**P**	**08 23 33.8**	**-1.0**
	comp=Z,208nm,0.8s,mb5.8						
COEN	**Coen**	**31.44**	**185**	P	**P**	**08 23 33.2**	**-1.6**
	comp=Z,119nm,0.7s,mb5.6						
TTSI	**Tana Toraja**	**32.72**	**234**	P	**P**	**08 23 47.0**	**+1.0**
	comp=Z,1μm comp=Z,140nm,1.0s,mb5.5						
SPSI	**Sidrap Palu**	**33.35**	**232**	P	**P**	**08 23 51.0**	**-0.4**
	comp=Z,788nm comp=Z,76nm,0.9s,mb5.2						
KLR	**Kul'dur**	**33.51**	**343**	*e*P	**P**	**08 23 46.8**	**-5.6**
KLR				*e*	pP	08 24 37.3	-1.3
BJI	**Beijing**	**33.92**	**317**	P	**P**	**08 23 54.3**	**-1.7**
BJI				S	**S**	**08 29 04.8**	**+1.4**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
BJI				pmax	pmax		
	comp=Z,21nm,3.4s						
BJI				LR	LR		
	comp=N,140nm,13.6s						
BJI				LR	LR		
	comp=E,130nm,15.3s						
BJI				LR	LR		
	comp=Z,80nm,29.8s						
BKSI	**Bulukumba**	**33.98**	**230**	P	**P**	**08 23 57.3**	**+0.4**
	comp=Z,705nm comp=Z,62nm,0.7s,mb5.3						
QIZ	**Qiongzhong**	**34.01**	**278**	P	**P**	**08 23 57.3**	**+0.2**
QIZ				sP	sP	08 25 06.5	-3.2
QIZ				S	**S**	**08 29 06.0**	**+0.6**
QIZ				pmax	pmax		
	comp=Z,98nm,2.1s,mb5.0						
QIZ	**Qiongzhong**	**34.01**	**278**	*e*P	**P**	**08 23 57.1**	**0.0**
	comp=Z,54nm,1.4s,mb4.9						
MMRI	**Maumere**	**34.86**	**223**	P	**P**	**08 24 04.0**	**-0.4**
	comp=Z,2μm comp=Z,179nm,0.7s,mb5.7

CD2 LR LR
comp=E,290nm,19.2s
CD2 LR LR
comp=Z,280nm,18.6s
JAGI Jajag, Banyuwa 40.50 233 P **P** **08 24 50.7 -0.9**
comp=Z,64nm,1.1s,mb5.0
KMI Kunming 40.55 288 P **P** **08 24 53.0 +1.1**
KMI pmax pmax
comp=Z,16nm,1.0s,mb4.4
KMI LR LR
comp=Z,140nm,12.6s
FITZ Fitzroy Crossi 40.58 210 *e*P **P** **08 24 51.8 -0.3**
comp=Z,134nm,0.8s,mb5.4
FITZ Fitzroy Crossi 40.58 210 *e*P **P** **08 24 51.9 -0.2**
comp=Z,89nm,0.8s,mb5.2
FITZ Fitzroy Crossi 40.58 210 P **P** **08 24 52.0 -0.1**
comp=Z,83nm,0.7s,mb5.2,baz=32,slow=8.3,SNR=272
FITZ Fitzroy Crossi 40.58 210 P **P** **08 24 51.7 -0.4**
comp=Z,2µmcomp=Z,224nm,1.1s,mb5.5
GMJI Gumukmas 40.92 234 P **P** **08 24 55.3 +0.3**
comp=Z,62nm,0.9s,mb5.0
LZH Lanzhou 41.25 305 P **P** **08 25 04.5 +7.1**
LZH pP pP 08 25 51.5 +6.3
LZH sP sP 08 26 16.8 +5.7
LZH PP PP 08 26 46.5 +8.8
LZH S **S** **08 31 00.0 +6.1**
LZH sS sS 08 32 23.5 +4.9
LZH pmax pmax
comp=Z,27nm,1.0s,mb4.6
LZH pmax pmax
comp=Z,120nm,5.5s
LZH LR LR
comp=N,150nm,16.0s
LZH LR LR
comp=E,270nm,15.8s
LZH LR LR
comp=Z,340nm,17.9s
SMY Shemya 41.53 26 *e*P **P** **08 25 00.0 +0.6**
comp=Z,127nm,0.7s,mb5.5
SMY Shemya 41.53 26 *e*P **P** **08 25 00.0 +0.5**
SMY pmax pmax
comp=Z,127nm,0.7s,mb5.5
SJI Sawahan 41.89 236 P **P** **08 25 02.9 0.0**
comp=Z,2µmcomp=Z,154nm,0.8s,mb5.5
PWJI Pagerwojo 42.04 236 P **P** **08 25 03.7 -0.4**
comp=Z,181nm,0.8s,mb5.6
ASAR Alice Springs 42.59 196 P **P** **08 25 07.5 -0.7**
comp=Z,32nm,0.4s,mb5.1,baz=10,slow=6.4,SNR=421
ASAR PcP PcP 08 26 55.4 -0.8
comp=Z,8.7nm,0.6s,baz=27,slow=3.4,SNR=5.5
ASAR ScP ScP 08 30 23.1 -2.0
comp=Z,1.3nm,0.6s,baz=22,slow=3.2,SNR=4.3
ASAR Alice Springs 42.59 196 P **P** **08 25 07.6 -0.7**
ASAR 08 26 55.4
PCJI Pacitan 42.64 236 P **P** **08 25 09.0 +0.1**
comp=Z,138nm,0.7s,mb5.5
AMKA Amchitka 42.96 31 *e*P **P** **08 25 11.5 +0.5**
comp=Z,112nm,1.0s,mb5.2
EIDS Eidsvold 43.02 173 *e*P **P** **08 25 19.5 +7.7**
comp=Z,13nm,1.3s,mb4.2
BJII Banjamegara 43.30 238 P **P** **08 25 19.3 +5.1**
comp=Z,51nm,1.4s,mb4.7
KTGM Kuala Trenggan 43.32 259 P **P** **08 25 15.8 +1.4**
ULN Ulaanbaatar 43.62 322 *e*P **P** **08 25 16.1 -0.2**
comp=Z,16nm,1.0s,mb4.3
ULN *e*pP pP 08 26 10.0 +5.4
ULN Ulaanbaatar 43.62 322 *e*P **P** **08 25 16.1 -0.2**
ULN *e**PP pP 08 26 10.0 +5.4
ULN pmax pmax
comp=Z,16nm,1.0s,mb4.3
MYKOM Kota Tinggi 43.96 254 P **P** **08 25 20.9 +1.4**
MYKOM Kota Tinggi 43.96 254 P **P** **08 25 20.4 +0.9**
comp=Z,633nmcomp=Z,61nm,0.8s,mb5.0
SONM Songino Array 43.99 322 P **P** **08 25 19.2 0.0**
comp=Z,5.9nm,0.6s,mb4.1,baz=134,slow=8.6,SNR=16
SONM pP pP 08 26 09.7 +2.0
comp=Z,5.5nm,0.7s,baz=125,slow=7.5,SNR=4.0
SONM ScP ScP 08 30 26.4 -4.2
comp=Z,3.0nm,0.8s,baz=126,slow=2.9,SNR=6.8
SONM Songino Array 43.99 322 P **P** **08 25 19.2 0.0**
SONM *PP pP 08 26 09.7 +2.1
CHG Chiang Mai 44.31 279 ⇑P **P** **08 25 22.8 +0.6**
comp=Z,18nm,0.7s,mb4.5
CHTO Chiang Mai 44.31 279 *e*P **P** **08 25 22.5 +0.3**
comp=Z,13nm,0.8s,mb4.3
CHTO Chiang Mai 44.31 279 *e*P **P** **08 25 22.5 +0.3**
CHTO pmax pmax
comp=Z,13nm,0.8s,mb4.3
NOUC Port Laguerre 44.32 152 *e*P **P** **08 25 21.8 -0.3**
CM31 Chiang Mai Arr 44.35 279 *e*P **P** **08 25 23.7 +1.2**
CMAR Chiang Mai Arr 44.35 279 P **P** **08 25 23.6 +1.1**
comp=Z,39nm,0.9s,mb4.7,baz=71,slow=6.6,SNR=158
DZM Mont Dzumac 44.35 152 *e*P **P** **08 25 21.0 -1.4**
DZM *e*S PcP 08 27 02.1 -0.2
DZM Mont Dzumac 44.35 152 *e*P **P** **08 25 22.5 +0.1**
comp=Z,116nm,1.1s,mb5.1
KGM Kluang 44.36 254 P **P** **08 25 24.5 +1.8**
CISI Cisompet, Garu 44.98 239 P **P** **08 25 26.7 -0.8**
comp=Z,89nm,0.6s,mb5.3
SNG Songkhla 45.10 263 P **P** **08 25 30.0 +1.5**
comp=Z,140nm,0.8s,mb5.3
GTA Gaotai 45.20 308 *e*P **P** **08 25 32.0 +3.0**
GTA PcP PcP 08 27 04.8 -0.2
GTA pmax pmax
comp=Z,3.0nm,1.1s
GTA LR LR
comp=N,170nm,16.1s
GTA LR LR
comp=E,290nm,16.0s
GTA LR LR
comp=Z,74nm,18.1s
FRIM Kepong 45.46 257 P **P** **08 25 32.8 +1.5**
SEY Seymchan 45.54 4 ⇓*i*P **P** **08 25 31.8 +0.6**
SEY *e**PP pP 08 26 22.6 +2.7
IPM Ipoh 45.58 259 *e*P **P** **08 25 33.3 +1.0**
comp=Z,12nm,0.5s,mb4.5
IPM Ipoh 45.58 259 P **P** **08 25 33.9 +1.6**
IPM Ipoh 45.58 259 P **P** **08 25 33.6 +1.3**
comp=Z,28nm,0.8s,mb4.6
IPM Ipoh 45.58 259 P PcP 08 27 06.9 +0.1
comp=Z,28nm,0.8s
KULM Kulim 45.66 260 P **P** **08 25 34.1 +1.2**
KULM Kulim 45.66 260 P **P** **08 25 34.4 +1.5**
comp=Z,630nmcomp=Z,39nm,1.1s,mb4.7
YAK Yakutsk 45.80 350 *e*P **P** **08 25 30.5 -2.7**
YAK *e*S **S** **08 32 09.4 +10**
YAK *e* 08 35 21.0
YAK pmax pmax
comp=Z,15nm,0.7s,mb4.4
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,1.0s
YAK pmax pmax
comp=Z,7.0nm,0.6s,mb4.2
YAK pmax pmax
comp=N,2.0nm,0.3s
YAK smax
comp=N,6.0nm,0.4s
YAK smax
comp=E,6.0nm,0.6s
YAK MLR MLR
comp=Z,211nm,22.0s
YAK MLR MLR
comp=N,247nm,24.0s
YAK MLR MLR
comp=E,111nm,18.0s
KLSI 46.07 245 P **P** **08 25 35.9 -0.2**
comp=E,2µmcomp=E,153nm,0.9s,mb5.3
MBWA Marble Bar 46.15 214 *e*P **P** **08 25 36.2 -0.3**
MBWA Marble Bar 46.15 214 *e*P **P** **08 25 36.2 -0.3**
comp=E,101nm,0.7s,mb5.3
CGJI Cibinong 46.23 242 P **P** **08 25 35.0 -2.3**
comp=E,8µmcomp=E,150nm,0.7s,mb5.4
MDSI Maura Dua 46.45 246 P **P** **08 25 39.3 +0.2**
comp=E,819nmcomp=E,22nm,0.6s,mb4.6
KASI Kota Agung 46.69 244 P **P** **08 25 39.8 -1.1**
comp=E,2µmcomp=E,164nm,0.8s,mb5.4
ATKA Atka Island 46.72 33 *e*P **P** **08 25 40.6 0.0**
comp=E,132nm,0.6s,mb5.4
LWLI Liwa 46.82 245 P **P** **08 25 41.8 -0.1**
comp=E,274nm,0.5s,mb5.9
KSI Kapahiang 47.45 248 P **P** **08 25 48.7 +2.0**
comp=E,107nm,0.7s,mb5.3
ARMA Armidale 48.07 173 *e*P **P** **08 25 50.3 -0.9**
ARMA Armidale 48.07 173 *e*P **P** **08 25 59.2 +8.0**
comp=E,75nm,2.1s,mb4.7
MNSI Mandailing Nat 48.27 255 P **P** **08 25 53.7 +0.6**
comp=E,89nm,0.8s,mb5.2
STKA Stephens Creek 49.34 185 *e*P **P** **08 25 59.4 -1.4**
comp=E,17nm,0.8s,mb4.4
STKA Stephens Creek 49.34 185 *e*P **P** **08 25 59.6 -1.1**
comp=E,4.3nm,0.6s,mb4.0
STKA Stephens Creek 49.34 185 P **P** **08 25 59.5 -1.3**
comp=E,13nm,0.4s,mb4.6,baz=350,slow=8.5,SNR=49
STKA Stephens Creek 49.34 185 *e*P **P** **08 25 59.6 -1.2**
STKA pmax pmax
comp=Z,4.0nm,0.6s
NIKO Nikolski 49.93 34 *e*P **P** **08 26 04.5 -0.6**
comp=Z,49nm,0.5s,mb5.1
SHL Shillong 50.37 289 *e*PKP **P** **08 26 08.0 -0.7**
BBOO Buckleboo 50.95 190 *e*P **P** **08 26 11.8 -1.0**
comp=Z,197nm,0.6s,mb5.7
LSA Lhasa 50.97 294 P **P** **08 26 15.0 +1.8**
LSA Lhasa 50.97 294 *e*P **P** **08 26 15.1 +1.9**
comp=Z,19nm,0.7s,mb4.6
LSA *e*pP pP 08 27 00.1 -2.9
LSA Lhasa 50.97 294 *e*P **P** **08 26 15.1 +1.9**
LSA pmax pmax
comp=Z,19nm,0.7s,mb4.6
FORT Forrest 50.99 200 *e*P **P** **08 26 12.6 -0.5**
comp=Z,46nm,0.5s,mb5.2
FORT Forrest 50.99 200 *e*P **P** **08 26 12.6 -0.6**
comp=Z,49nm,0.6s,mb5.1
UNV Unalaska Valle 51.58 34 *e*P **P** **08 26 16.9 -0.3**
comp=Z,38nm,0.6s,mb5.0
YNG Young 51.66 177 *e*P **P** **08 26 17.5 -0.6**
comp=Z,9.3nm,0.6s,mb4.4
AKUT Akutan 52.09 34 *e*P **P** **08 26 20.2 -0.9**
comp=Z,34nm,0.5s,mb5.0
TAPN Taplejung 54.03 291 *e*P **P** **08 26 36.1 +0.4**
ARPS Mount Arapiles 54.19 184 *e*P **P** **08 26 35.6 -0.8**
comp=Z,48nm,0.6s,mb5.2
ODAN Odare 54.34 291 *e*P **P** **08 26 38.1 +0.2**
MORW Morawa 54.51 212 *e*P **P** **08 26 38.2 -0.7**
TOO Toolangi 54.87 180 *e*P **P** **08 26 40.9 -0.4**
WMQ Urumqi 55.01 311 P **P** **08 26 43.3 +0.9**
WMQ pP pP 08 27 33.0 0.0
WMQ PcP PcP 08 27 42.0 +0.9
WMQ sP sP 08 27 57.5 -0.7
WMQ PP PP 08 28 50.5 +2.5
WMQ *e*S **S** **08 34 06.0 -0.5**
WMQ ScS ScS 08 36 06.0 -2.1
WMQ pmax pmax
comp=Z,27nm,1.0s,mb4.7
WMQ pmax pmax
comp=Z,130nm,4.4s
RAMN Ramite 55.04 291 *e*P **P** **08 26 43.1 +0.2**
SDPT Sand Point 55.40 34 *e*P **P** **08 26 44.6 -0.3**
comp=Z,79nm,0.7s,mb5.3
GUN Gumba 55.63 292 *e*P **P** **08 26 47.5 +0.4**
KLBR Kellerberrin 55.76 209 *e*P **P** **08 26 46.7 -1.1**
comp=Z,51nm,1.0s,mb5.0
PKI Pulchoki 56.06 292 *e*P **P** **08 26 50.0 -0.2**
comp=Z,27nm,0.7s,mb4.9
KKN Kakani 56.16 292 *e*P **P** **08 26 50.8 -0.1**
DMN Daman 56.33 292 *e*P **P** **08 26 52.0 0.0**
comp=Z,23nm,0.5s,mb5.0
GKN Gorkha 56.72 292 *e*P **P** **08 26 54.8 0.0**
comp=Z,25nm,0.4s,mb5.2
CHGN Chignik 56.81 33 *e*P **P** **08 26 54.3 -0.7**
TNA Tin City 56.85 21 *e*P **P** **08 26 54.8 -0.3**
comp=Z,12nm,0.8s,mb4.6
NWAO Narrogin (SRO) 57.12 208 *e*P **P** **08 26 56.5 -0.8**
comp=Z,48nm,0.7s,mb5.2
NWAO Narrogin (SRO) 57.12 208 P **P** **08 26 56.7 -0.6**
comp=Z,60nm,0.7s,mb5.3,baz=42,slow=7.4,SNR=46
NWAO Narrogin (SRO) 57.12 208 *e*P **P** **08 26 56.5 -0.9**
NWAO pmax pmax
comp=Z,49nm,0.7s
DANN Dangsing 57.47 293 *e*P **P** **08 27 00.3 +0.3**
comp=Z,62nm,0.5s,mb5.5
KOLN Koldanda 57.65 292 *e*P **P** **08 27 01.2 -0.1**
comp=Z,27nm,0.7s,mb5.0
OUZ Omahuta 58.83 153 *e*P **P** **08 27 10.4 +1.2**
comp=Z,32nm,0.9s,mb5.0
ZALV Zalesovo Beam 58.88 323 P **P** **08 27 08.7 -0.6**
comp=Z,6.7nm,0.7s,mb4.4,baz=110,slow=7.8,SNR=1.2
ZALV PcP PcP 08 27 54.0 -2.1
comp=Z,4.8nm,0.7s,baz=122,slow=5.2,SNR=1.8
ZALV ScP ScP 08 31 29.2 -5.4
comp=Z,2.6nm,0.8s,baz=97,slow=4.6,SNR=5.1
ZALV Zalesovo Beam 58.88 323 P **P** **08 27 08.7 -0.6**
ZALV 08 27 54.0
MK31 Makanchi Array 59.21 314 *e*P **P** **08 27 11.3 -0.5**
MKAR Makanchi Array 59.21 314 P **P** **08 27 10.8 -0.9**
comp=Z,2.8nm,0.5s,mb4.1,baz=86,slow=9.0,SNR=27
MKAR pP pP 08 28 05.7 +2.6
comp=Z,2.4nm,0.5s,baz=90,slow=9.6,SNR=2.5
MKAR ScP ScP 08 31 31.9 -4.4
comp=Z,3.4nm,0.9s,baz=101,slow=5.2,SNR=7.0
MKAR S **S** **08 35 00.5 -0.7**
comp=Z,0.9nm,0.9s,baz=90,slow=15,SNR=4.1
MKAR Makanchi Array 59.21 314 P **P** **08 27 10.9 -0.8**
MKAR *PP pP 08 28 05.7 +2.6
MKAR S **S** **08 35 00.5 -0.7**
OHAK Old Harbor 59.78 33 *e*P **P** **08 27 15.2 -0.2**
comp=Z,20nm,0.7s,mb4.8
TTA Tatalina 60.24 27 *e*P **P** **08 27 18.3 -0.1**
TTA *e*pP pP 08 28 12.2 +2.2
KDAK Kodiak Island 60.30 33 *e*P **P** **08 27 18.5 -0.4**
comp=Z,67nm,1.8s,mb5.0
KDAK Kodiak Island 60.30 33 P **P** **08 27 18.2 -0.7**
comp=Z,6.5nm,0.3s,mb4.8,baz=218,slow=1.7,SNR=18
KDAK pP pP 08 28 12.5 +2.0
comp=Z,16nm,1.0s,baz=356,slow=3.0,SNR=3.2
KDAK Kodiak Island 60.30 33 *c**e*P **P** **08 27 18.3 -0.6**
PPLA Purkeypile 61.89 27 *e*P **P** **08 27 29.3 -0.1**
comp=Z,8.0nm,0.6s,mb4.5
KURK Kurchatov 62.08 319 *e*P **P** **08 27 24.7 -6.3**
KURK Kurchatov 62.08 319 *c i*P **P** **08 27 29.8 -1.1**
KURK pmax pmax
comp=Z,8.0nm,0.9s,mb4.3
SLKM Skilak Lake 62.15 30 *e*P **P** **08 27 30.6 -0.7**
SEW Seward 62.43 31 *e*P **P** **08 27 32.5 -0.7**
comp=Z,24nm,1.0s,mb4.8
RC01 Rabbit Creek A 62.52 30 *e*P **P** **08 27 32.9 -0.8**
comp=Z,19nm,0.5s,mb5.0
RC01 *e*pP pP 08 28 27.9 +2.3
BPAW Bear Paw Mtn. 62.76 26 *e*P **P** **08 27 34.7 -0.5**
comp=Z,17nm,0.9s,mb4.7
BPAW *e*pP pP 08 28 26.2 -1.0
BPAW *e*ScP ScP 08 31 53.4 +1.8
TRF Thorofare Moun 62.87 27 *e*P **P** **08 27 35.0 -1.0**
comp=Z,17nm,0.8s,mb4.7
URZ Urewera 62.91 153 *e*P **P** **08 27 35.0 -1.5**
comp=Z,24nm,0.9s,mb4.8
PMR Palmer 62.93 29 *e*P **P** **08 27 35.2 -1.1**
comp=Z,14nm,0.6s,mb4.8
PMR Palmer 62.93 29 *e*P **P** **08 27 35.3 -1.1**
PMR pmax pmax
comp=Z,14nm,0.6s,mb4.8
SML Sawmill 63.34 29 *e*P **P** **08 27 38.3 -0.8**
comp=Z,12nm,0.9s,mb4.5
SML Sawmill 63.34 29 *e*P **P** **08 27 38.3 -0.8**
SML pmax pmax
comp=Z,12nm,0.9s,mb4.5
KSH Kashi 63.49 306 *e*P **P** **08 27 43.0 +2.5**
KSH *e*pP pP 08 28 34.0 +1.4
KSH *e*sP sP 08 28 58.5 +1.2
KSH *e*PP PP 08 30 06.3 +3.3
KSH *e*S **S** **08 35 54.3 -1.0**
KSH *e*ScS ScS 08 37 10.3 -1.0
KSH pmax pmax
comp=Z,3.0nm,0.8s,mb4.0
KSH pmax pmax
comp=Z,110nm,6.2s
KSH LR LR
comp=N,130nm,10.8s
KSH LR LR
comp=E,120nm,15.1s
KSH LR LR
comp=Z,360nm,22.3s
MCK McKinley 63.53 27 *e*P **P** **08 27 39.0 -1.3**
COLA College 64.27 26 *e*P **P** **08 27 43.6 -1.5**
comp=Z,4.4nm,0.8s,mb4.1
COLA College 64.27 26 *e*P **P** **08 27 43.6 -1.5**
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
SNZO South Karori 64.49 156 *e*P **P** **08 27 44.7 -2.0**
comp=Z,140nm,1.4s,mb5.4
ILAR Eielson Array 64.65 26 P **P** **08 27 45.6 -1.9**
comp=Z,6.0nm,0.6s,mb4.4,baz=250,slow=5.8,SNR=133
ILAR pP pP 08 28 42.0 +2.2
comp=Z,5.7nm,0.7s,baz=248,slow=4.8,SNR=6.8
PAX Paxson 64.89 28 *e*P **P** **08 27 48.6 -0.5**
comp=Z,10nm,0.6s,mb4.6
PAX Paxson 64.89 28 *e*P **P** **08 27 48.6 -0.5**
PAX pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
BMRM Bremner River 64.95 30 *e*P **P** **08 27 49.4 -0.1**
comp=Z,27nm,0.8s,mb4.9
KHZ Kahutara 65.01 158 *e*P **P** **08 27 47.3 -2.8**
comp=Z,54nm,0.7s,mb5.3
RPZ Rata Peaks 65.29 160 P **P** **08 27 49.9 -2.0**
comp=Z,29nm,0.7s,mb5.0,baz=357,slow=2.7,SNR=14
DOT Dot Lake 65.64 27 *e*P **P** **08 27 53.1 -0.8**
comp=Z,32nm,0.7s,mb5.0
MENT Mentasta 65.67 28 *e*P **P** **08 27 53.6 -0.6**
EGAK Eagle 67.06 26 *e*P **P** **08 28 02.1 -0.8**
BRVK Borovoye 67.37 321 *e*P **P** **08 28 03.9 -1.1**
comp=Z,7.2nm,0.8s,mb4.3
BRVK Borovoye 67.37 321 *c i*P **P** **08 28 04.1 -1.0**
BRVK pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
KKAR Karatay Array 67.45 310 *e*P **P** **08 28 04.7 -1.1**
comp=Z,3.8nm,0.6s,mb4.2
KKAR *e*PcP PcP 08 28 29.4 -2.1
KKAR Karatay Array 67.45 310 *e*P **P** **08 28 04.7 -1.1**
KKAR *e* 08 28 29.4
KKAR pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
DAWY Dawson 67.74 27 *e*P **P** **08 28 07.1 -0.1**
DAWY *e*pP pP 08 28 59.4 -0.5
POO Poona 67.84 283 *e*PKP **P** **08 28 06.0 -2.6**
HYT Haines Junctio 68.39 31 *e*P **P** **08 28 12.0 +0.8**
HYT *e*pP pP 08 29 05.7 +1.6
SKAG Skagway 69.44 32 *e*P **P** **08 28 18.0 +0.3**
comp=Z,10nm,0.9s,mb4.5
INK Inuvik 70.40 23 *e*P **P** **08 28 22.8 -0.6**
comp=Z,9.9nm,0.9s,mb4.4
INK *e*pP pP 08 29 19.6 +3.0
INK Inuvik 70.40 23 *e*P **P** **08 28 22.8 -0.6**
INK *e**PP pP 08 29 19.6 +3.0
INK pmax pmax
comp=Z,10.0nm,0.9s
DLBC Dease Lake 72.22 33 *e*P **P** **08 28 34.9 +0.4**
DLBC *e*pP pP 08 29 27.8 -0.2
ARU Arti 73.95 325 *d i*P **P** **08 28 43.6 -1.0**
ARU 08 31 27.4
ARU S S 08 37 56.5 -1.0
ARU SS SS 08 42 43.2 -3.3
ARU pmax pmax
comp=Z,10.0nm,1.7s,mb4.2
ABKAR Akbulak array 74.13 317 *e*P **P** **08 28 44.1 -1.7**
comp=Z,2.7nm,0.4s,mb4.2
JCW Jim Creek 78.67 43 *e*P **P** **08 29 11.8 +0.5**
JCW *e*pP pP 08 30 04.8 -0.8
F04A Amboy 78.88 45 ⇑P **P** **08 29 12.7 +0.2**
baz=79
YKA Yellowknife Ar 78.97 28 P **P** **08 29 11.7 -1.0**
comp=Z,3.7nm,0.6s,mb4.2,baz=290,slow=5.2,SNR=12
HUMO Hull Mountain 79.30 49 *e*P **P** **08 29 16.3 +1.4**
H04A Detroit Lake 79.34 47 ⇓P **P** **08 29 14.8 -0.2**
baz=79
ETW Entiat 79.86 43 *e*P **P** **08 29 18.1 +0.3**
ETW *e*pP pP 08 30 12.1 -0.1
B08A Colville Reser 80.31 42 ⇓P **P** **08 29 20.2 +0.1**
baz=80
E07A Sunnyside 80.44 44 ⇓P **P** **08 29 21.2 +0.3**
baz=80
K05A Summer Lake 80.74 48 ⇓P **P** **08 29 23.3 +0.7**
baz=81
D08A Wollman Farm, 80.92 44 ⇓P **P** **08 29 23.2 -0.2**
baz=81
C09A Chrisman Ranch 81.14 43 ⇓P **P** **08 29 24.3 -0.2**
baz=81
I07A Izee 81.35 47 ⇑P **P** **08 29 25.6 -0.1**
baz=81
MOD Modoc 81.38 49 *e*P **P** **08 29 26.1 +0.2**
E09A Wood Farm, Sta 81.59 44 ⇑P **P** **08 29 26.6 -0.4**
baz=82
NEW Newport 81.75 42 ⇑P **P** **08 29 27.9 +0.2**
baz=82
NEW Newport 81.75 42 *e*P **P** **08 29 27.8 +0.1**
NEW *e**PP pP 08 30 20.8 -1.6
J08A Circle Bar Ran 82.27 47 ⇓P **P** **08 29 30.8 +0.2**
baz=82
CMB Columbia Colle 82.39 53 *e*P **P** **08 29 31.2 0.0**
KLMR Klimovskoe 82.41 332 P **P** **08 29 27.1 -3.8**
KLMR pmax pmax
comp=Z,11nm,1.5s,mb4.3
WVOR Wild Horse Val 82.42 48 *e*P **P** **08 29 31.2 -0.1**
comp=Z,2.4nm,0.7s,mb3.9
WVOR *e*PP PP 08 32 43.7 +0.3
WVOR Wild Horse Val 82.42 48 *e*P **P** **08 29 31.2 -0.1**
WVOR *e* 08 32 43.7
WVOR pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
WCN Washoe City 82.50 51 ⇓P **P** **08 29 32.0 +0.2**
baz=82
WAKR Walker 82.97 52 *e*P **P** **08 29 35.1 +0.8**
KEV Kevo 82.97 342 *e*P **P** **08 29 31.0 -2.6**
KEV pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
KEV Kevo 82.97 342 *e*p **P** **08 29 31.0 -2.6**
comp=Z,2.1nm,0.5s,mb4.1
A13A Flathead Natio 83.25 41 ⇓P **P** **08 29 35.5 0.0**
baz=83
D12A Red Ives Fores 83.26 43 ⇓P **P** **08 29 35.3 -0.2**
baz=83
BSMT Bassoo Peak 83.37 42 *e*P **P** **08 29 36.5 +0.4**
BSMT *e*pP pP 08 30 29.9 -1.1
ARCES ARCESS Array B 83.53 342 P **P** **08 29 34.2 -2.3**
comp=Z,3.1nm,0.7s,mb4.1,baz=81,slow=7.5,SNR=15
C13A Hot Springs 83.56 42 ⇑P **P** **08 29 37.1 +0.1**
baz=83
PKM Peak Mountain 83.72 56 ⇓P **P** **08 29 38.8 +0.6**
baz=84
F12A Elk City 83.73 44 ⇑P **P** **08 29 38.6 +0.6**
baz=84
D13A Huson 83.82 43 ⇓P **P** **08 29 37.9 -0.5**
baz=84
NVAR Mina Array Bea 83.84 52 P **P** **08 29 39.1 +0.4**
comp=Z,6.0nm,0.7s,mb4.5,baz=267,slow=6.1,SNR=46
A14A Double T Ranch 83.86 41 ⇓P **P** **08 29 38.8 +0.2**
baz=84
G12A Big Creek, Yel 83.89 45 ⇓P **P** **08 29 38.3 -0.4**
baz=84
SWMT Swartz Lake 83.98 42 *e*P **P** **08 29 39.4 +0.2**
C14A Swan Lake 84.06 42 ⇓P **P** **08 29 39.4 -0.2**
baz=84
MFID Camas Ranch 84.09 46 ⇓P **P** **08 29 39.8 -0.1**
baz=84
B14A Marquette Ranc 84.16 41 ⇓P **P** **08 29 40.4 +0.3**
baz=84
E13A Victor 84.21 43 ⇓P **P** **08 29 39.8 -0.6**
baz=84
MSO Missoula 84.25 43 ⇑P **P** **08 29 40.5 0.0**
baz=84
A15A Johnson Ranch, 84.28 40 ⇓P **P** **08 29 40.8 +0.1**
baz=84,SNR=5.8
F13A Darby 84.33 44 ⇑P **P** **08 29 40.3 -0.7**
baz=84,SNR=8.3
H12A Diamond D Ranc 84.39 45 ⇑P **P** **08 29 40.9 -0.5**
baz=84
D14A Greenough 84.44 42 ⇓P **P** **08 29 41.7 +0.2**
baz=84
I12A Atlanta 84.45 46 ⇓P **P** **08 29 41.6 0.0**
baz=84,SNR=6.9
B15A Bradely Ranch, 84.62 41 ⇑P **P** **08 29 42.2 -0.2**
baz=84,SNR=9.1
G13A Cobalt 84.63 44 ⇑P **P** **08 29 42.4 -0.1**
baz=84,SNR=23
CHMT Chamberlain Mo 84.66 43 *e*P **P** **08 29 41.9 -0.8**
comp=Z,1.2nm,0.5s,mb3.9
C15A Salmond Ranch, 84.78 42 ⇑P **P** **08 29 42.7 -0.4**
baz=85
H13A Challis 84.79 45 ⇓P **P** **08 29 43.2 -0.1**
baz=85
A16A West Butte Ran 84.99 40 ⇓P **P** **08 29 43.8 -0.4**
baz=85
JOF Joensuu 85.01 335 *e*P **P** **08 29 40.6 -3.4**
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
JOF Joensuu 85.01 335 *e*p **P** **08 29 40.6 -3.4**
comp=Z,1.5nm,0.5s,mb4.0
HLID Hailey 85.02 46 ⇑P **P** **08 29 44.4 0.0**

baz=85,SNR=6.0
HLID Hailey 85.02 46 eP P 08 29 44.7 +0.2
D15A Lincoln 85.09 42 ⇑P P 08 29 44.5 -0.2
baz=85
G14A Jackson 85.09 44 ⇓P P 08 29 44.6 -0.2
baz=85
I13A Wildhorse Cree 85.10 46 ⇓P P 08 29 45.5 +0.6
baz=85,SNR=8.4
B16A M & M Farms, S 85.12 41 ⇑P P 08 29 44.7 -0.2
baz=85
MPMC Manual Prospec 85.18 54 ⇑P P 08 29 45.6 +0.2
baz=85,SNR=7.2
LRMC Laurel Mountai 85.21 54 ⇓P P 08 29 45.4 -0.2
baz=85
E15A Deer Lodge 85.22 43 ⇑P P 08 29 45.5 +0.1
baz=85,SNR=18
J13A Cove Ranch, Pi 85.24 46 ⇓P P 08 29 45.9 +0.3
baz=85,SNR=7.6
S10A Tonopah Range, 85.28 52 ⇓P P 08 29 45.9 +0.1
baz=85,SNR=10
C16A Fuhringer Ranc 85.31 41 ⇑P P 08 29 45.4 -0.5
baz=85,SNR=6.4
H14A Leadore 85.37 45 ⇓P P 08 29 46.2 0.0
baz=85,SNR=9.1
R10A Warm Springs 85.38 51 ⇓P P 08 29 46.0 -0.4
baz=85
F15A Butte 85.53 43 ⇑P P 08 29 46.7 -0.2
baz=85,SNR=9.1
A17A Triple J Farms 85.55 40 ⇓P P 08 29 46.7 -0.3
baz=85
I14A Mackay 85.55 45 ⇓P P 08 29 47.7 +0.6
baz=85,SNR=8.0
LRM Limekiln Ridge 85.56 43 eP P 08 29 47.2 +0.1
DLMT Dillon 85.62 44 eP P 08 29 47.7 +0.3
MCMT McKenzie Canyo 85.64 44 eP P 08 29 47.8 +0.3
comp=Z,2.4nm,0.9s,mb3.9
HRY Holter Researc 85.65 42 eP P 08 29 47.7 +0.2
Q11A Duckwater 85.68 51 ⇑P P 08 29 47.8 0.0
baz=86
J14A Carey 85.71 46 ⇓P P 08 29 48.4 +0.5
baz=86,SNR=8.9
D16A Dana Ranch, Ca 85.71 42 ⇓P P 08 29 47.9 0.0
baz=86
B17A L&G Farms, Che 85.72 41 ⇓P P 08 29 47.7 -0.1
baz=86,SNR=12
G15A Dillon 85.77 44 ⇓P P 08 29 47.8 -0.3
baz=86
O12A Currie 85.88 49 ⇓P P 08 29 49.0 +0.2
baz=86,SNR=6.4
R11A Troy Canyon, C 85.89 51 ⇑P P 08 29 49.2 +0.3
baz=86,SNR=6.7
GSC Goldstone 85.95 54 ⇓P P 08 29 49.1 -0.2
baz=86
U10A Ash Meadows, A 85.96 53 ⇓P P 08 29 48.7 -0.6
baz=86
C17A Wharram Farm, 85.99 41 ⇓P P 08 29 49.1 -0.1
baz=86
S11A Rachel 86.00 52 ⇓P P 08 29 49.4 0.0
baz=86
P12A McGill 86.03 50 ⇑P P 08 29 49.6 +0.1
baz=86
A18A Metzger Ranch, 86.08 40 ⇓P P 08 29 49.7 +0.1
baz=86
F16A Kennard Place, 86.11 43 ⇓P P 08 29 50.1 +0.2
baz=86,SNR=7.4
BOZ Bozeman (W) 86.16 43 ⇑P P 08 29 50.1 0.0
baz=86
BOZ Bozeman (W) 86.16 43 eP P 08 29 51.0 +1.0
OBN Obninsk 86.19 327 eP P 08 29 48.1 -1.9
OBN eS SKSac 08 39 50.7 -3.3
OBN pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
G16A Moss Hill, Enn 86.19 44 ⇓P P 08 29 50.3 +0.1
baz=86,SNR=10
K14A Jones Ranch, D 86.22 47 ⇓P P 08 29 50.7 +0.3
baz=86,SNR=5.3
Q12A Willow Creek R 86.22 50 ⇑P P 08 29 51.1 +0.6
baz=86,SNR=6.8
B18A Beardsley Farm 86.32 40 ⇓P P 08 29 50.9 +0.2
baz=86
L14A Malta 86.35 47 ⇓P P 08 29 51.4 +0.4
baz=86
E17A Martinsdale 86.36 42 ⇑P P 08 29 51.7 +0.6
baz=86
J15A Blackfoot 86.43 46 ⇓P P 08 29 52.4 +1.0
baz=86,SNR=6.4
T11A Corn Creek, Al 86.53 52 ⇓P P 08 29 51.7 -0.3
baz=86
ZEI Tsey 86.56 314 eP P 08 29 48.4 -3.7
ZEI pmax pmax
comp=Z,7.0nm,0.4s,mb4.7
R12A Pony Springs, 86.63 51 ⇓P P 08 29 52.7 +0.2
baz=86
P13A Bates Ranch, G 86.68 50 ⇑P P 08 29 53.1 +0.4
baz=86,SNR=7.7
S12A Delamar Landin 86.69 52 ⇓P P 08 29 52.6 -0.2
baz=87
SHPR Sheep Range 86.82 53 eP P 08 29 52.6 -0.8
comp=Z,2.4nm,0.8s,mb4.0
E18A Harlowton 86.93 42 ⇓P P 08 29 54.5 +0.8
baz=87
KIV Kislovodsk 86.96 315 eP P 08 29 52.2 -1.8
KIV pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
BELC Belle Mtn. Jos 87.00 55 ⇓P P 08 29 54.0 -0.3
baz=87
GMRC Granite Mounta 87.01 55 ⇑P P 08 29 54.4 0.0
baz=87
M15A Larsen Ranch, 87.10 47 ⇑P P 08 29 54.9 +0.2
baz=87
R13A O'Grain Ranch, 87.15 51 ⇑P P 08 29 55.3 +0.3
baz=87
RRI2 Red Ridge 87.20 45 eP P 08 29 57.5 +2.3
N15A Stansbury Isla 87.26 48 ⇑P P 08 29 55.6 +0.2
baz=87
IMW Indian Meadow 87.26 45 eP P 08 29 59.0 +3.6
DUG Dugway 87.29 49 ⇓P P 08 29 55.9 +0.3
baz=87,SNR=12
DUG Dugway 87.29 49 eP P 08 29 55.6 0.0
comp=Z,5.1nm,0.5s,mb4.5
DUG epP pP 08 30 48.4 -2.6
DUG Dugway 87.29 49 eP P 08 29 55.6 0.0
DUG e*PP pP 08 30 48.4 -2.7
DUG pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
F18A Big Timber 87.31 43 ⇑P P 08 29 55.9 +0.4
baz=87
V12A Nelson 87.32 53 ⇑P P 08 29 56.1 +0.3
baz=87
U12A Valley of Fire 87.32 53 ⇓P P 08 29 55.9 0.0
baz=87
P14A Drum Mountains 87.32 49 ⇑P P 08 29 56.1 +0.3
baz=87,SNR=7.3
FLWY Flagg Ranch 87.35 45 eP P 08 29 58.5 +2.7
DVTC Desert V Tower 87.35 57 ⇑P P 08 29 55.9 -0.2
baz=87
Q14A Sevier Lake (B 87.38 50 ⇓P P 08 29 56.4 +0.3
baz=87,SNR=9.4
S13A Holt Ranch, En 87.44 51 ⇑P P 08 29 56.8 +0.4
baz=87,SNR=5.0
BC3 Big Chuckawall 87.54 56 ⇑P P 08 29 56.7 -0.2
baz=87
T13A Saint George 87.59 52 ⇓P P 08 29 57.4 +0.3
baz=88
IRM Iron Mountain 87.61 55 ⇓P P 08 29 57.2 -0.1
baz=88
L16A Fish Haven 87.61 47 ⇑P P 08 29 57.7 +0.6
baz=88,SNR=6.8
HWUT Hardware Ranch 87.67 47 eP P 08 29 57.5 +0.1
comp=Z,6.5nm,0.8s,mb4.5
HWUT epP pP 08 30 49.9 -3.0
ARUT Antelope Range 87.68 51 eP P 08 29 57.5 0.0
comp=Z,3.5nm,0.5s,mb4.5
ARUT epP pP 08 30 50.4 -2.6
ARUT Antelope Range 87.68 51 eP P 08 29 57.5 0.0
ARUT e*PP pP 08 30 50.4 -2.6
ARUT pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
U13A Pakoon Wash 87.76 53 ⇓P P 08 29 58.4 +0.5
baz=88,SNR=6.7
CCUT Cedar City 87.82 51 eP P 08 29 59.1 +1.0
D20A Manuel Ranch, 87.85 41 ⇓P P 08 29 58.3 +0.2
baz=88
FINES FINESS Array B 87.87 335 P P 08 29 54.3 -3.6
comp=Z,2.7nm,0.6s,mb4.2,baz=66,slow=4.7,SNR=12
P15A Leamington 87.90 49 ⇑P P 08 29 58.4 -0.1
baz=88
RLMT Red Lodge 87.90 43 ⇑P P 08 29 59.1 +0.7
baz=88
V13A Grand Canyon W 87.94 53 ⇓P P 08 29 59.3 +0.5
baz=88,SNR=6.7
JLU Jordanelle 88.12 48 eP P 08 29 60.0 +0.5
J18A Kendall Valley 88.13 45 ⇓P P 08 29 59.4 -0.2
baz=88
T14A Hurricane 88.20 52 ⇑P P 08 30 00.2 +0.3
baz=88
DAU Daniels Canyon 88.33 48 eP P 08 30 01.4 +0.9
U14A Mt Trumbull 88.35 52 ⇓P P 08 30 01.4 +0.7
baz=88,SNR=5.5
MSU Marysvale 88.35 50 eP P 08 30 01.6 +0.9
X13A Yucca 88.49 54 ⇑P P 08 30 01.4 0.0
baz=88
PDAR Pinedale Array 88.62 45 P P 08 30 01.2 -0.6
comp=Z,0.6nm,0.4s,mb3.8,baz=280,slow=0.4,SNR=9.1
PDAR pP pP 08 31 00.5 +3.0
comp=Z,1.4nm,0.7s,baz=288,slow=2.5,SNR=4.3
PDAR PP PP 08 33 31.9 -1.4
comp=Z,0.9nm,0.9s,baz=284,slow=6.0,SNR=5.3
V14A Boquillas Ranc 88.68 53 ⇑P P 08 30 02.8 +0.5
baz=89
T15A Red Dirt Ranch 88.74 52 ⇑P P 08 30 02.5 0.0
baz=89
O17A Robinson Place 88.77 48 ⇑P P 08 30 02.8 +0.2
baz=89
W14A Seligman 88.85 53 ⇑P P 08 30 03.1 0.0
baz=89
Q16A Castle Valley 88.94 49 ⇓P P 08 30 03.7 +0.3
baz=89
R16A Teasdale 88.94 50 ⇑P P 08 30 04.2 +0.8
baz=89
P17A Butcher Ranch, 89.04 49 ⇓P P 08 30 03.9 0.0
baz=89
S16A Weppner Ranch, 89.07 51 ⇓P P 08 30 04.0 0.0
baz=89
Z13A Yuma Proving G 89.11 55 ⇓P P 08 30 04.4 +0.1
baz=89
I20A Worland 89.11 44 ⇑P P 08 30 03.9 -0.2
baz=89
N18A Larsen Ranch, 89.23 47 ⇓P P 08 30 04.5 -0.2
baz=89
X14A Yava 89.26 54 ⇑P P 08 30 05.2 +0.2
baz=89
O18A Roosevelt 89.26 48 ⇓P P 08 30 05.3 +0.4
baz=89
V15A Kaibab Nationa 89.33 53 ⇑P P 08 30 05.9 +0.6
baz=89
SRU San Rafael 89.33 49 ⇑P P 08 30 05.4 +0.1
baz=89
SRU San Rafael 89.33 49 eP P 08 30 05.4 +0.2
P18A Preston Nutter 89.34 49 ⇑P P 08 30 05.5 +0.3
baz=89
Y14A Wickenburg 89.36 55 ⇓P P 08 30 05.7 +0.2
baz=89
R17A Hanksville Air 89.46 50 ⇓P P 08 30 05.9 0.0
baz=89
K20A Yellowstone Ra 89.48 45 ⇑P P 08 30 05.4 -0.5
baz=89
Q18A Rafter H Ranch 89.62 49 ⇓P P 08 30 06.1 -0.5
baz=90
X15A Humboldt 89.76 54 ⇑P P 08 30 08.0 +0.7
baz=90
Y15A Casa Rosa Ranc 89.87 54 ⇓P P 08 30 08.4 +0.5
baz=90
O19A Miners Draw (B 89.88 48 ⇓P P 08 30 07.6 -0.1
baz=90
T17A Navajo Res., N 89.92 51 ⇓P P 08 30 08.1 +0.1
baz=90
U16A Tuba City 90.00 52 ⇓P P 08 30 08.7 +0.4
baz=90
WUAZ Wupatki 90.04 53 ⇓P P 08 30 08.7 +0.1
baz=90
M20A Sweetwater, Wa 90.06 46 ⇓P P 08 30 08.8 +0.3
baz=90
R18A Canyonlands Na 90.06 50 ⇓P P 08 30 08.5 -0.1
baz=90
214A Organ Pipe Nat 90.21 56 ⇓P P 08 30 09.6 +0.1
baz=90
K21A Alcova 90.23 45 ⇑P P 08 30 09.2 -0.1
baz=90
P19A Cripple Cowboy 90.24 48 ⇑P P 08 30 09.7 +0.3
baz=90
S18A Hurst Farm, Bl 90.26 50 ⇓P P 08 30 09.8 +0.2
baz=90
N20A Spence Gulch, 90.27 47 ⇑P P 08 30 09.8 +0.3
baz=90
Q19A Hogan Spring (90.30 49 ⇓P P 08 30 09.9 +0.1
baz=90
X16A Lo Mia Camp, P 90.39 54 ⇑P P 08 30 10.1 -0.2
baz=90
L21A Rawlins 90.42 46 ⇓P P 08 30 10.6 +0.4
baz=90
V17A Tonalea, Kykot 90.44 52 ⇑P P 08 30 10.9 +0.5
baz=90
T18A Mexican Hat 90.56 51 ⇑P P 08 30 10.7 -0.3
baz=90
R19A Curley Farm, L 90.56 49 ⇑P P 08 30 10.9 -0.1
baz=90
O20A White River Ci 90.56 47 ⇑P P 08 30 10.8 -0.1
baz=90
Y16A Circle Bar Ran 90.56 54 ⇑P P 08 30 11.5 +0.5
baz=90
M21A Separation Pea 90.58 46 ⇓P P 08 30 11.0 0.0
baz=90
P20A De Beque 90.71 48 ⇓P P 08 30 11.5 -0.1
baz=91
PV04 Paradox Valley 90.78 49 eP P 08 30 12.5 +0.5
N21A Black Mountain 90.81 47 ⇑P P 08 30 12.1 0.0
baz=91
U18A Rough Rock, Ch 90.83 51 ⇑P P 08 30 12.2 0.0
baz=91
Q20A Ridgley Place, 90.99 49 ⇑P P 08 30 13.2 +0.2
baz=91
V18A Ganado 91.06 52 ⇓P P 08 30 13.5 +0.2
baz=91
PV01 Paradox Valley 91.12 49 eP P 08 30 13.3 -0.3
comp=Z,393nm,0.7s
PV01 epP pP 08 31 06.6 -2.7
Y17A Roosevelt 91.12 54 ⇑P P 08 30 14.0 +0.3
baz=91
M22A Cedar Creek Ra 91.18 46 ⇑P P 08 30 13.9 +0.1
baz=91
R20A Redvale 91.24 49 ⇑P P 08 30 14.3 +0.2
baz=91
216A Three Points, 91.27 56 ⇓P P 08 30 14.4 +0.1
baz=91
T19A Beclabito 91.30 51 ⇓P P 08 30 14.9 +0.5
baz=91
U19A Dine' College, 91.38 51 ⇑P P 08 30 14.9 +0.1
baz=91
S20A Disappointment 91.39 50 ⇑P P 08 30 14.8 0.0
baz=91
L23A Garrett 91.49 45 ⇓P P 08 30 15.4 +0.2
baz=91
Q21A Lamborn Mesa, 91.56 48 ⇓P P 08 30 16.4 +0.8
baz=91
117A Oracle 91.62 55 ⇑P P 08 30 16.1 0.0
baz=92
Y18A Canyon Day Jun 91.72 54 ⇓P P 08 30 17.1 +0.7
baz=92
O22A Kremmling 91.73 47 ⇓P P 08 30 16.8 +0.5
baz=92
R21A Cimarron 91.76 49 ⇓P P 08 30 17.3 +0.8
baz=92
P22A Eagle 91.82 47 ⇓P P 08 30 17.4 +0.6
baz=92
SMCO Snowmass 91.84 48 eP P 08 30 17.9 +1.0
N23A Red Feather La 91.84 46 ⇑P P 08 30 17.4 +0.6
baz=92
217A Green Valley 91.86 56 ⇓P P 08 30 17.7 +0.5
baz=92
S21A Coal Bank Pass 91.88 50 ⇓P P 08 30 17.5 +0.4
baz=92
Q22A Crested Butte, 92.02 48 ⇓P P 08 30 18.7 +1.0
baz=92
V20A Brimhall 92.12 51 ⇓P P 08 30 18.9 +0.6
baz=92
O23A Lake Granby, G 92.15 47 ⇑P P 08 30 18.7 +0.4
baz=92
118A Homack Ranch, 92.20 55 ⇓P P 08 30 18.8 +0.2
baz=92
Y19A Nutrioso 92.25 53 ⇓P P 08 30 19.7 +0.8
baz=92
W20A Ramah 92.36 52 ⇓P P 08 30 19.5 +0.2
baz=92
218A Dragoon 92.39 56 ⇓P P 08 30 19.6 0.0
baz=92
S22A 4UR Ranch, Cre 92.54 49 ⇓P P 08 30 20.9 +0.8
baz=92
ISCO Idaho Springs 92.54 47 ⇓P P 08 30 20.6 +0.6
baz=92
ISCO Idaho Springs 92.54 47 eP P 08 30 20.5 +0.4
comp=Z,3.8nm,1.1s,mb4.3
ISCO epP pP 08 31 13.6 -2.3
ISCO Idaho Springs 92.54 47 eP P 08 30 20.5 +0.4
ISCO e*PP pP 08 31 13.6 -2.3
ISCO pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
P23A Jefferson 92.56 47 ⇓P P 08 30 21.1 +0.9
baz=92
X20A Quemado 92.59 53 ⇑P P 08 30 21.4 +0.9
baz=92
318A Bisbee 92.64 56 ⇓P P 08 30 21.2 +0.5
baz=92
O25A Wiggins 93.44 46 ⇓P P 08 30 24.1 -0.1
baz=93
U23A El Rito 93.59 50 ⇑P P 08 30 25.4 +0.4
baz=93
Q25A Bedland, Calha 93.88 47 ⇑P P 08 30 26.9 +0.7
baz=94
Z22A Elephant Butte 94.28 53 ⇑P P 08 30 28.4 +0.1
baz=94
W24A Lazy 6 Ranch, 94.64 51 ⇓P P 08 30 29.8 0.0
baz=94
BRTR Keskin Array B 94.86 314 P P 08 30 28.0 -2.7
comp=Z,2.3nm,0.8s,mb4.4,baz=90,slow=4.9,SNR=11
BRTR Keskin Array B 94.86 314 ceP P 08 30 28.2 -2.5
BRTR pmax pmax
comp=Z,2.0nm,0.8s
U25A Circle Dot Ran 94.86 50 ⇓P P 08 30 30.7 -0.2
baz=95
MNTX Cornudas Mount 96.14 54 ⇑P P 08 30 36.7 0.0
baz=96
TXAR Lajitas Array 98.48 56 P P 08 30 46.3 -1.0
TXAR PP PP 08 34 47.1 -3.4
TXAR PKKPbc PKKPbc 08 47 14.8 -1.7
TXAR Lajitas Array 98.48 56 P P 08 30 46.3 -1.0
comp=Z,0.2nm,0.6s,mb3.6,baz=267,slow=3.1,SNR=4.0
TXAR PP PP 08 34 47.1 -3.4
comp=Z,0.4nm,0.8s,baz=292,slow=6.6,SNR=4.0
TXAR PKKPbc PKKPbc 08 47 14.8 -1.7
comp=Z,0.3nm,0.6s,baz=111,slow=2.6,SNR=4.0
TXAR Lajitas Array 98.48 56 P P 08 30 46.3 -1.0
TXAR 08 34 47.1
MAW Mawson 103.39 203 Pdiff Pdif 08 31 08.1 -0.6
comp=Z,1.0nm,0.7s,baz=111,slow=8.6,SNR=4.0
MAW PP PP 08 35 16.7 -10
comp=Z,2.2nm,0.8s,baz=60,slow=8.7,SNR=8.6
SYO Syowa Base 112.05 202 ⇑eX PP 08 36 24.0 -5.7
ESDC Sonseca Array 116.37 334 PKKPab PKKPab 08 46 26.0 -1.9
comp=Z,0.2nm,0.3s,baz=223,slow=5.3,SNR=4.9
TORD Torodi Ar. Bea 133.12 308 PKP PKPdf 08 36 21.6 -2.2
TORD SKPbc SKPbc 08 39 25.3 -5.0
TORD Torodi Ar. Bea 133.12 308 PKP PKPdf 08 36 21.6 -2.2
comp=Z,1.2nm,0.5s,baz=25,slow=0.9,SNR=14
TORD SKPbc SKPbc 08 39 25.3 -5.0
comp=Z,4.1nm,0.7s,baz=61,slow=3.2,SNR=16
PLCA Paso Flores 141.26 134 PKhKP PKPpre 08 36 32.3
comp=Z,1.2nm,0.5s,baz=247,slow=7.7,SNR=3.3
PLCA SKPbc SKPbc 08 39 50.9 -2.4
comp=Z,2.0nm,0.7s,baz=238,slow=5.5,SNR=4.2
DBIC Dimbokro 142.20 307 PKhKP PKPpre 08 36 34.0
comp=Z,3.1nm,0.4s,baz=56,slow=3.5,SNR=14
DBIC SKPbc SKPbc 08 39 52.2 -4.4
comp=Z,3.3nm,0.7s,baz=42,slow=3.6,SNR=3.4
LCO Las Campanas 144.85 116 ePKPbc PKPdf 08 36 44.4 -0.4
LPAZ La Paz 147.66 93 PKPbc PKPbc 08 36 49.9 -3.1
comp=Z,19nm,0.7s,baz=319,slow=2.0,SNR=19
TRQA Tornquist 148.36 136 ePKPbc PKPbc 08 36 53.4 -0.8
CPUP Villa Florida 156.99 116 PKP PKPdf 08 37 02.9 -0.5
comp=Z,1.2nm,0.7s,baz=210,slow=7.8,SNR=3.5
CPUP PKPab PKPab 08 37 34.6 -0.1
comp=Z,3.0nm,0.6s,baz=242,slow=3.3,SNR=13

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*ISCJB **28** 08:28:22.2±0.4,28°.33N±0°.04×139°.77E±0°.09, h456km±4km, mb3.6/17, Error ellipse: s-maj=12.9km s-min=6.2km az=170.2*

*IDC **28** 08:28:22.4±0.6,28°.35N×139°.75E, h444km±6km, mb3.3/17, mb1 3.5/21, mb1mx3.4/28, mbtmp3.3/21, Error ellipse: s-maj=13.6km s-min=8.3km az=90.0*

*NEIC **28** 08:28:23.4±1.0,28°.36N×139°.73E, h457km±12km, MG4.1(JMA), Error ellipse: s-maj=14.2km s-min=8.3km az=110.0*

*JMA **28** 08:28:23.7±0.3,28°.49N×140°.31E, h463km±4km, M4.1*

ISC 28 08:28:23.3±0.4, 28°.35N±0°.04×139°.83E±0°.09, h451km±4km, n43, σ1s11/50, mb3.6/17, 1C, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC h m s	ISC
CBIJ	Chichi jima	2.43	120	P	P	08 29 26.8	+0.3
	58nm,0.3s,baz=74,slow=3.1,SNR=47						
CBIJ				S	S	08 30 16.6	-1.1
	203nm,0.3s,baz=269,slow=22,SNR=36						
CBIJ	Chichi jima	2.43	120	P	P	08 29 26.6	+0.1
CBIJ				eS	S	08 30 16.5	-1.2
JHHJ	Haha-jima-NKT	2.70	129	P	P	08 29 28.8	+0.5
JHHJ				eS	S	08 30 21.0	+0.1
JHJ2	Mitsune	4.75	360	P	P	08 29 46.0	+0.8
JHJ	Hachijo jima 2	4.76	360	P	P	08 29 45.8	+0.5
	13nm,0.3s,baz=79,slow=19,SNR=6.8						
JHJ				S	S	08 30 49.9	-2.2
	12nm,0.3s,baz=270,slow=20,SNR=3.9						
BSO1	Boso 1	6.37	9	P	P	08 30 01.6	+0.4
BSO1				eS	S	08 31 20.0	-1.4
BSO3	Boso 3	6.46	5	eS	S	08 31 20.3	-3.0
JIE	Ise	6.59	337	P	P	08 30 06.3	+2.7
JKN2	Miekihoku	6.62	334	P	P	08 30 06.5	+2.6
BSO4	Boso 4	6.64	4	P	P	08 30 05.1	+1.0
BSO4				eS	S	08 31 25.7	-0.9
JHU	Hanno	7.50	357	P	P	08 30 12.9	-0.3
JHU				eS	S	08 31 37.6	-5.7
JRY	Ryogami san	7.69	354	P	P	08 30 16.3	+1.1
JHO	Hitachi	8.27	4	P	P	08 30 22.2	+0.8
MJAR	Matsushiro Arr	8.29	351	P	P	08 30 20.9	-0.8
	1.7nm,0.3s,baz=163,slow=9.6,SNR=9.8						
MJAR				S	S	08 31 56.8	-2.1
	0.4nm,0.3s,baz=124,slow=16,SNR=4.2						
MAJO	Matsushiro	8.29	351	eP	P	08 30 21.8	+0.2
MAT	Matsushiro	8.29	351	P	P	08 30 23.3	+1.6
MAT				eS	S	08 32 01.8	+2.9
JFK	Kawauchi	9.04	5	P	P	08 30 30.5	+0.7
JOW	Kunigami	10.36	264	P	P	08 30 44.7	+0.4
JOW	Kunigami	10.36	264	P	P	08 30 44.7	+0.4
	baz=121,slow=12						
JOSM	Okushiri--Mats	13.71	359	P	P	08 31 21.6	+1.2
PETK	Petropavlovsk-	28.05	23	P	P	08 33 34.1	-2.1
	1.2nm,0.6s,mb3.5,baz=199,slow=8.4,SNR=3.7						
SONM	Songino Array	32.37	316	P	P	08 34 13.3	-0.6
	1.0nm,0.5s,mb3.5,baz=125,slow=7.5,SNR=4.4						
CMAR	Chiang Mai Arr	38.63	264	P	P	08 35 05.3	-1.3
	0.7nm,0.5s,mb3.3,baz=45,slow=10,SNR=4.6						
MKAR	Makanchi Array	48.07	309	P	P	08 36 19.5	-0.8
	0.9nm,0.4s,mb3.5,baz=87,slow=10.0,SNR=8.3						
FITZ	Fitzroy Crossi	48.17	198	P	P	08 36 20.9	-0.5
	1.3nm,0.5s,mb3.5,baz=43,slow=9.5,SNR=6.3						
WRA	Warramunga Arr	48.30	187	P	P	08 36 21.4	-0.8
WRA	Warramunga Arr	48.30	187	P	P	08 36 21.4	-0.8
	2.6nm,0.4s,mb3.9,baz=4.8,slow=7.7,SNR=32						
CTA	Charters Tower	48.55	172	P	P	08 36 24.5	+0.4
CTA	Charters Tower	48.55	172	P	P	08 36 24.5	+0.4
	1.8nm,0.3s,mb3.9,baz=338,slow=5.4,SNR=3.6						
ASAR	Alice Springs	52.02	187	P	P	08 36 49.0	-0.7
	1.6nm,0.4s,mb3.7,baz=21,slow=12,SNR=31						
KDAK	Kodiak Island	54.63	37	P	P	08 37 08.2	+0.3
	1.7nm,0.3s,mb3.9,baz=349,slow=5.2,SNR=5.9						
ILAR	Eielson Array	57.63	29	P	P	08 37 28.4	-0.3
	0.6nm,0.3s,mb3.4,baz=252,slow=5.3,SNR=23						
MENT	Mentasta	59.04	31	eP	P	08 37 39.2	+1.0
STKA	Stephens Creek	59.91	178	P	P	08 37 44.0	-0.5
	2.8nm,0.8s,mb3.7,baz=348,slow=6.8,SNR=5.9						
ARCES	ARCESS Array B	71.67	340	P	P	08 38 57.8	-0.1
	1.3nm,0.8s,mb3.5,baz=57,slow=8.8,SNR=4.8						
YKA	Yellowknife Ar	72.03	28	P	P	08 38 60.0	-0.1
YKA	Yellowknife Ar	72.03	28	P	P	08 38 60.0	-0.1
	0.7nm,0.5s,mb3.5,baz=299,slow=6.0,SNR=6.3						
FINES	FINESS Array B	75.90	333	P	P	08 39 21.0	-1.1
	1.7nm,0.9s,mb3.6,baz=27,slow=3.4,SNR=4.2						
NVAR	Mina Array Bea	81.38	51	P	P	08 39 53.4	+1.4
	1.0nm,0.7s,mb3.5,baz=295,slow=5.7,SNR=11						
PDAR	Pinedale Array	84.78	44	P	P	08 40 09.4	+0.4

0.4nm,0.7s,mb3.2,baz=333,slow=2.0,SNR=4.0
CONA Conrad Observa 88.95 326 ⇑*i*PP PP 08 44 02.3 -3.0
5.4nm,0.9s
TXAR Lajitas Array 96.51 52 P **P** **08 41 04.3 +0.6**
0.2nm,0.6s,mb3.5,baz=27,slow=36,SNR=2.8
TORD Torodi Ar. Bea 122.19 310 PKP PKPdf 08 46 25.1 -1.6
0.5nm,0.8s,baz=39,slow=3.3,SNR=3.3

NIED ***28*** *08:31:00,36˚.10N×141˚.30E,h20km,Mw4.4 Best double couple: M₀4.50000×10¹⁵ NP1:φ₀36.00000°,δ77.00000°,λ115.00000°. NP2:φ₀152.00000°,δ28.00000°,λ29.00000°.*
IDC ***28*** *08:31:37.0±0.5,35˚.99N×141˚.25E,h0km,mb4.4/21, mb1 4.6/25,mb1mx4.5/29,mbtmp4.5/25,ML4.5/4,MS3.8/15, Ms1 3.8/15,ms1mx3.5/36,Error ellipse: s-maj=15.3km s-min=11.5km az=105.0*
JMA ***28*** *08:31:40.9±0.1,36˚.03N×141˚.24E,h40km±2km,M4.6*
JMA Felt I J1.
ISCJB ***28*** *08:31:41.8±0.4,36˚.05N±0˚.03×141˚.14E±0˚.03,h38km±4km, mb4.7/69,MS3.8/24,Error ellipse: s-maj=4.3km s-min=4.0km az=180.0*
NEIC ***28*** *08:31:42.7±0.3,36˚.08N×141˚.22E,h35km,mb4.8/22, MW4.4(NIED),Error ellipse: s-maj=7.1km s-min=5.0km az=153.0*
NEIC Recorded [1 JMA] in Chiba, Fukushima, Ibaraki and Tochigi.
MOS ***28*** *08:31:43.1±0.8,36˚.52N×141˚.15E,h33km,mb5.0/29,Error ellipse: s-maj=9.2km s-min=6.1km az=105.9*
BJI ***28*** *08:31:44.5,36˚.42N×140˚.82E,h35km,mB4.8/27,mb4.7/40, Ms4.1/30,Ms7 3.8/30*
ISC 28 08:31:41.2±0.7,36˚.08N±0˚.02×141˚.17E±0˚.03,h21km±5km, h36km±1.6km;pP-P,n272,σ0°75/291,mb4.7/69,MS3.8/24, 71C-55D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
CHOJ	**Chosi**	**0.45**	**214**	⇓P	**Pb**	**08 31 50.6**	**+0.1**
CHOJ				S	**Sb**	**08 31 57.9**	**+1.2**
JHO	**Hitachi**	**0.72**	**318**	⇓P	**Pb**	**08 31 55.6**	**+0.6**
JYT	**Yasato**	**0.81**	**281**	P	**Pb**	**08 31 56.6**	**+0.1**
JFK	**Kawauchi**	**1.31**	**350**	P	**Pn**	**08 32 03.7**	**-0.5**
JFK				*e*S	**Sn**	**08 32 20.3**	**-0.7**
BSO3	**Boso 3**	**1.38**	**203**	P	**Pn**	**08 32 04.8**	**-0.4**
BSO3				*e*S	**Sn**	**08 32 22.6**	**-0.2**
BSO1	**Boso 1**	**1.43**	**186**	P	**Pn**	**08 32 05.0**	**-0.8**
BSO1				*e*S	**Sn**	**08 32 21.6**	**-2.4**
JAG	**Ashikaga**	**1.43**	**285**	P	**Pn**	**08 32 06.1**	**+0.2**
JFT	**Otama**	**1.59**	**335**	P	**Pn**	**08 32 09.0**	**+1.0**
JFT				*e*S	**Sn**	**08 32 29.2**	**+1.3**
MJAR	**Matsushiro Arr**	**2.44**	**282**	Pn	**Pn**	**08 32 19.9**	**+0.2**
MJAR				Sn	**Sn**	**08 32 53.8**	**+4.9**
MJAR				LR	LR	08 33 26.3	
MJAR	**Matsushiro Arr**	**2.44**	**282**	Pn	**Pn**	**08 32 19.9**	**+0.2**
	61nm,0.3s,baz=179,slow=16,SNR=213						
MJAR				Sn	**Sn**	**08 32 53.8**	**+4.9**
	41nm,0.3s,baz=106,slow=21,SNR=6.5						
MJAR				LR	LR	08 33 26.3	
	comp=Z,2μm,19.9s,baz=105,slow=44						
MJAR	**Matsushiro Arr**	**2.44**	**282**	P	**Pn**	**08 32 19.9**	**+0.2**
MJAR						08 32 53.8	
MAJO	**Matsushiro**	**2.44**	**282**	*e*P	**Pn**	**08 32 21.4**	**+1.7**
MAT	**Matsushiro**	**2.44**	**282**	P	**Pn**	**08 32 20.6**	**+0.9**
MAT				S	**Sn**	**08 32 49.9**	**+1.0**
JHJ	**Hachijo jima 2**	**3.17**	**202**	Pn	**Pn**	**08 32 29.3**	**-0.4**
	84nm,0.3s,baz=240,slow=9.1,SNR=21						
JHJ				Sn	**Sn**	**08 33 06.0**	**-0.8**
	94nm,0.3s,baz=131,slow=19,SNR=9.2						
ERM	**Erimo**	**6.13**	**14**	*e*Pn	**Pn**	**08 33 08.9**	**-1.5**
ASAJ	**Asahikawa**	**8.10**	**7**	*e*Pn	**Pn**	**08 33 36.0**	**-1.5**
	14nm,0.6s						
ASAJ				*e*Sn	**Sn**	**08 35 10.5**	**+2.0**
ASAJ	**Asahikawa**	**8.10**	**7**	Pn	**Pn**	**08 33 35.6**	**-1.9**
	11nm,0.3s,baz=215,slow=10,SNR=34						
ASAJ				Sn	**Sn**	**08 35 06.2**	**-2.3**
	1.9nm,0.3s,baz=131,slow=19,SNR=3.0						
ASAJ				LR	LR	08 37 20.5	
	comp=Z,321nm,20.5s,baz=179,slow=42						
ASAJ	**Asahikawa**	**8.10**	**7**	P	**Pn**	**08 33 35.6**	**-1.9**
ASAJ						08 35 06.2	
ASAJ				pmax	pmax		
	comp=Z,11nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,321nm,20.5s						
YUK	**Yuzh-Kuril'sk**	**8.72**	**23**	⇓*i*P	**Pn**	**08 33 43.4**	**-2.6**
YUK				*i* S	**Sn**	**08 35 15.6**	**-8.0**
YUK				pmax	pmax		
	comp=Z,139nm,0.6s						
YUK				pmax	pmax		
	comp=N,43nm,0.3s						
YUK				pmax	pmax		
	comp=E,72nm,0.6s						
YUK				pmax	pmax		
	comp=Z,600nm,2.2s						
YUK				smax			
	comp=N,650nm,0.6s						
YUK				smax			
	comp=E,260nm,0.6s						
YUK				smax			
	comp=N,491nm,0.6s						
YUK				smax			
	comp=E,321nm,0.6s						
YUK				MLR	MLR		
	comp=N,900nm,17.0s						
YUK				MLR	MLR		
	comp=Z,400nm,17.0s						
YUK				MLR	MLR		
	comp=N,800nm,8.6s						
JNU	**Nakatsue**	**8.98**	**254**	*e*Pn	**Pn**	**08 33 52.0**	**+2.3**
	comp=N,13nm,1.0s						
CBIJ	**Chichi jima**	**9.00**	**174**	Pn	**Pn**	**08 33 44.9**	**-5.0**
	comp=N,16nm,0.3s,baz=242,slow=13,SNR=5.9						
CBIJ				Sn	**Sn**	**08 35 18.1**	**-12**
	comp=N,5.1nm,0.3s,baz=270,slow=20,SNR=3.1						
KUR	**Kuril'sk**	**10.46**	**27**	P	**Pn**	**08 34 07.3**	**-2.5**
KUR				*e*S	**Sn**	**08 35 57.0**	**-9.3**
KUR				smax			
	comp=N,220nm,0.8s						
KUR				smax			
	comp=E,130nm,0.8s						
KSRS	**Korea Array**	**10.72**	**281**	Pn	**Pn**	**08 34 18.6**	**+5.3**
	comp=E,0.3nm,0.3s,baz=94,slow=13,SNR=13						
KSRS				LR	LR	08 38 23.9	
	comp=E,345nm,19.1s,baz=93,slow=38						
YSS	**Yuzh-Sakhalins**	**10.93**	**6**	*e*Pn	**Pn**	**08 34 14.2**	**-2.1**
YSS	**Yuzh-Sakhalins**	**10.93**	**6**	⇑*e*P	**Pn**	**08 34 14.0**	**-2.2**
YSS				*e*S	**Sn**	**08 36 17.0**	**-0.8**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				smax			
	comp=N,30nm,0.9s						
YSS				MLR	MLR		
	comp=N,400nm,13.0s						
YSS				MLR	MLR		
	comp=Z,400nm,13.0s						
MDJ	**Mudanjiang**	**12.27**	**318**	P	**Pn**	**08 34 33.8**	**-0.7**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,20nm,3.0s						
MDJ	**Mudanjiang**	**12.27**	**318**	*e*Pn	**Pn**	**08 34 40.3**	**+5.8**
	comp=Z,27nm,0.8s						
CN2	**Changchun**	**14.30**	**307**	*e*P	**Pn**	**08 34 59.3**	**-3.0**
CN2				*e*S	**Sn**	**08 37 38.8**	**-1.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,14.0s						
CN2				LR	LR		
	comp=N,200nm,17.0s						
CN2				LR	LR		
	comp=E,300nm,17.0s						
CN2				LR	LR		
	comp=Z,200nm,21.0s						
KLR	**Kul'dur**	**14.84**	**335**	*e*P	**Pn**	**08 35 04.0**	**-5.6**
NJ2	**Nanjing**	**18.91**	**264**	*e*P	**Pn**	**08 36 03.3**	**+2.2**
NJ2				pP	pP	08 36 12.5	+6.1
NJ2				sP	sP	08 36 16.5	+7.4
NJ2				PP		08 36 20.3	
NJ2				S	**Sn**	**08 39 29.0**	**-3.2**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,110nm,4.7s						
NJ2				LR	LR		
	comp=N,260nm,13.1s						
NJ2				LR	LR		
	comp=E,230nm,13.0s						
NJ2				LR	LR		
	comp=Z,310nm,13.5s						
BJI	**Beijing**	**20.05**	**289**	P	**P**	**08 36 12.8**	**-0.1**
BJI				S	**S**	**08 39 53.3**	**-3.9**
BJI				pmax	pmax		
	comp=Z,18nm,1.0s						
BJT	**Baijiatuan**	**20.06**	**289**	*e*P	**P**	**08 36 12.7**	**-0.2**
	comp=Z,21nm,0.6s						
BJT	**Baijiatuan**	**20.06**	**289**	*e*P	**P**	**08 36 12.7**	**-0.2**
BJT				pmax	pmax		
	comp=Z,21nm,0.6s						
PETK	**Petropavlovsk-**	**20.61**	**29**	P	**P**	**08 36 18.2**	**-0.6**
	comp=E,5.1nm,0.8s,baz=188,slow=9.0,SNR=6.7						
PETK				LR	LR	08 44 32.3	
	comp=Z,75nm,18.9s,MS3.1,baz=33,slow=38						
GUMO	**Guam**	**22.64**	**171**	LR	LR	08 43 42.3	
	comp=Z,125nm,20.9s,MS3.3,baz=171,slow=32						
CLNS	**Chul'man**	**23.48**	**337**	*e*P	**P**	**08 36 50.3**	**+1.0**
CLNS				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.5						
CLNS				pmax	pmax		
	comp=N,8.0nm,0.6s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.6s						
CLNS				MLR	MLR		
	comp=Z,204nm,15.0s,MS3.7						
CLNS				MLR	MLR		
	comp=E,88nm,10.0s						
CLNS				MLR	MLR		
	comp=N,178nm,16.0s						
HHC	**Hu-ho-hao-te**	**23.61**	**291**	*e*P	**P**	**08 36 48.5**	**-2.2**
HHC				pP		08 36 57.3	
HHC				sP	sP	08 37 02.0	+2.3
HHC				PP		08 37 20.3	
HHC				S	**S**	**08 40 55.8**	**-7.9**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.4						
HHC				pmax	pmax		
	comp=Z,49nm,3.6s						
HHC				LR	LR		
	comp=N,110nm,12.0s,MS3.8						
HHC				LR	LR		
	comp=E,130nm,10.0s,MS3.8						
HHC				LR	LR		
	comp=Z,180nm,14.9s,MS3.7						
XAN	**Xi'an**	**26.41**	**275**	P	**P**	**08 37 15.8**	**-0.5**
XAN				pP	pP	08 37 25.0	+2.3
XAN				PP		08 37 56.3	
XAN				S	**S**	**08 41 36.0**	**-13**
XAN				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.6						
XAN				pmax	pmax		
	comp=Z,19nm,5.8s						
XAN				LR	LR		
	comp=N,100nm,16.6s,MS3.5						
XAN				LR	LR		
	comp=E,37nm,15.7s,MS3.5						
XAN				LR	LR		
	comp=Z,44nm,18.3s,MS3.0						
YAK	**Yakutsk**	**26.96**	**348**	*e*P	**P**	**08 37 19.7**	**-1.2**
YAK				*e**PP	pP	08 37 34.3	+7.0
YAK				*e*		08 37 56.2	
YAK				*e*S	**S**	**08 41 46.8**	**-10**
YAK				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.7						
YAK				pmax	pmax		
	comp=E,9.0nm,1.4s						
YAK				pmax	pmax		
	comp=N,19nm,1.1s						
YAK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.5						
YAK				pmax	pmax		
	comp=N,16nm,1.3s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.2s						
YAK				smax			
	comp=N,70nm,4.3s						
YAK				smax			
	comp=E,55nm,3.2s						
YAK				MLR	MLR		
	comp=Z,188nm,20.0s,MS3.6						
YAK				MLR	MLR		
	comp=N,219nm,22.0s,MS3.7						
YAK				MLR	MLR		
	comp=E,135nm,22.0s,MS3.7						
ENH	**Enshi**	**27.07**	**267**	*e*P	**P**	**08 37 20.7**	**-1.5**
	comp=E,14nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	**27.74**	**306**	*e*P	**P**	**08 37 27.6**	**-0.4**
	comp=E,5.6nm,0.7s,mb4.3						
ULN	**Ulaanbaatar**	**27.74**	**306**	*e*P	**P**	**08 37 27.6**	**-0.5**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
SEY	**Seymchan**	**27.77**	**11**	⇑*i*P	**P**	**08 37 28.8**	**+0.7**
SONM	**Songino Array**	**28.17**	**306**	P	**P**	**08 37 31.8**	**-0.1**
	comp=Z,4.5nm,0.6s,mb4.3,baz=104,slow=9.5,SNR=12						
SONM				LR	LR	08 49 22.1	
	comp=Z,257nm,18.2s,MS3.9,baz=247,slow=38						
LZH	**Lanzhou**	**30.05**	**281**	*e*P	**P**	**08 37 47.3**	**-1.4**
LZH				pP	pP	08 37 57.0	+1.9
LZH				sP	sP	08 38 01.5	+3.7
LZH				*e*S	**S**	**08 42 41.0**	**-4.8**
LZH				sS	sS	08 42 57.0	+0.6
LZH				*e*SS	SS	08 44 19.5	-34
LZH				pmax	pmax		
	comp=Z,25nm,1.3s,mb4.8						
LZH				pmax	pmax		
	comp=Z,97nm,4.0s						
LZH				LR	LR		
	comp=N,170nm,14.5s,MS4.2						
LZH				LR	LR		
	comp=E,380nm,16.0s,MS4.2						
LZH				LR	LR		
	comp=Z,350nm,17.0s,MS4.1						
GYA	**Guiyang**	**30.88**	**262**	P	**P**	**08 38 01.5**	**+5.4**
GYA				pP	pP	08 38 09.5	+6.9
GYA				sP	sP	08 38 15.0	+10
GYA				PP	PP	08 39 02.5	-3.4
GYA				PcP	PcP	08 40 55.3	+2.7
GYA				S	**S**	**08 43 02.0**	**+3.0**
GYA				ScP	ScP	08 44 34.5	+0.4
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,450nm,16.8s,MS4.3						
GYA				LR	LR		
	comp=E,380nm,18.0s,MS4.3						
GYA				LR	LR		
	comp=Z,420nm,17.9s,MS4.1						
CD2	**Chengdu**	**31.49**	**272**	P	**P**	**08 38 02.5**	**+1.0**
CD2				pP	pP	08 38 12.0	+4.1
CD2				sP	sP	08 38 16.0	+5.4
CD2				PP	PP	08 39 06.5	-6.1
CD2				PcP	PcP	08 40 55.5	+1.3
CD2				S	**S**	**08 43 06.5**	**-2.0**
CD2				sS	sS	08 43 22.5	+3.4
CD2				PcS	PcS	08 44 38.8	+0.2
CD2				SS	SS	08 44 55.0	-28
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				pmax	pmax		
	comp=Z,100nm,4.5s						
CD2				LR	LR		
	comp=N,380nm,19.6s,MS4.2						
CD2				LR	LR		
	comp=E,320nm,19.0s,MS4.2						
CD2				LR	LR		
	comp=Z,420nm,18.0s,MS4.2						
GTA	**Gaotai**	**32.67**	**289**	*e*P	**P**	**08 38 12.5**	**+0.8**
GTA				pP	pP	08 38 24.0	+5.8
GTA				sP	sP	08 38 27.5	+6.7
GTA				S	**S**	**08 43 25.3**	**-1.4**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
GTA				pmax	pmax		
	comp=Z,68nm,4.5s						
GTA				LR	LR		
	comp=N,140nm,23.2s						
GTA				LR	LR		
	comp=E,240nm,16.7s						
GTA				LR	LR		
	comp=Z,170nm,18.4s,MS3.8						
KMI	**Kunming**	**34.63**	**262**	P	**P**	**08 38 33.5**	**+4.5**
KMI				pP	pP	08 38 42.5	+7.1
KMI				sP	sP	08 38 46.5	+8.4
KMI				PP	PP	08 39 49.5	+2.0
KMI				S	**S**	**08 43 58.8**	**+1.4**
KMI				sS	sS	08 44 15.5	+7.4
KMI				SS	SS	08 46 11.0	-17
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
KMI				pmax	pmax		
	comp=Z,98nm,4.0s						
KMI				LR	LR		
	comp=N,160nm,15.2s,MS4.0						
KMI				LR	LR		
	comp=E,170nm,16.7s,MS4.0						
KMI				LR	LR		
	comp=Z,150nm,16.2s,MS3.8						
TIXI	**Tiksi**	**36.22**	**353**	*e*P	**P**	**08 38 41.3**	**-0.7**
	comp=Z,11nm,0.9s,mb4.8						
TIXI	**Tiksi**	**36.22**	**353**	*e*P	**P**	**08 38 41.6**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.7						
CMAR	**Chiang Mai Arr**	**41.07**	**256**	P	**P**	**08 39 22.8**	**-0.6**
	comp=Z,1.3nm,0.4s,mb3.9,baz=45,slow=7.7,SNR=9.1						
WMQ	**Urumqi**	**41.10**	**298**	P	**P**	**08 39 24.5**	**+1.1**
WMQ				pP	pP	08 39 34.5	+4.6
WMQ				sP	sP	08 39 38.5	+5.9
WMQ				PP	PP	08 41 02.8	+4.6
WMQ				PcP	PcP	08 41 25.5	+2.8
WMQ				*e*S	**S**	**08 45 33.8**	**-1.3**
WMQ				SS	SS	08 48 31.3	-6.4
WMQ				ScS	ScS	08 49 24.8	-1.7
WMQ				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.1						
WMQ				pmax	pmax		
	comp=Z,100nm,4.3s						
WMQ				LR	LR		
	comp=N,110nm,20.8s						
WMQ				LR	LR		
	comp=Z,69nm,20.8s,MS3.5						
ZAA0	**Zalesovo Array**	**42.42**	**313**	*e*P	**P**	**08 39 33.8**	**-0.2**
ZALV	**Zalesovo Beam**	**42.42**	**313**	P	**P**	**08 39 34.3**	**+0.3**
	comp=Z,11nm,0.6s,mb4.6,baz=88,slow=6.8,SNR=41						
ZALV				PcP	PcP	08 41 26.3	-0.5
	comp=Z,6.8nm,0.7s,baz=90,slow=3.2,SNR=9.3						
ZALV				LR	LR	08 57 13.6	
	comp=Z,54nm,19.1s,MS3.5,baz=99,slow=36						
ZALV	**Zalesovo Beam**	**42.42**	**313**	P	**P**	**08 39 34.3**	**+0.3**
ZALV						08 41 26.3	
NVS	**Novosibirsk**	**43.36**	**314**	*e*P	**P**	**08 39 40.5**	**-1.1**
NVS				pmax	pmax		
	comp=Z,17nm,1.7s,mb4.5						
NVS				pmax	pmax		
	comp=E,4.0nm,0.7s						
MK31	**Makanchi Array**	**44.47**	**303**	*e*P	**P**	**08 39 51.1**	**+0.5**
MKAR	**Makanchi Array**	**44.47**	**303**	P	**P**	**08 39 51.0**	**+0.4**
	comp=E,16nm,0.7s,mb4.9,baz=90,slow=10.0,SNR=113						
MKAR				LR	LR	08 59 08.5	
	comp=E,111nm,19.5s,MS3.8,baz=36,slow=37						
MKAR	**Makanchi Array**	**44.47**	**303**	*c**e*P	**P**	**08 39 51.0**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,16nm,0.6s						
KURK	**Kurchatov**	**46.37**	**309**	*e*P	**P**	**08 40 05.5**	**-0.1**
	comp=Z,50nm,0.6s,mb5.6						
KURK	**Kurchatov**	**46.37**	**309**	*c i*P	**P**	**08 40 05.5**	**-0.2**
KURK				pmax	pmax		
	comp=Z,45nm,0.6s,mb5.6						
KDAK	**Kodiak Island**	**47.94**	**41**	P	**P**	**08 40 17.3**	**-0.5**
	comp=Z,5.6nm,0.6s,mb4.8,baz=297,slow=4.3,SNR=7.3						
KDAK	**Kodiak Island**	**47.94**	**41**	*c**e*P	**P**	**08 40 17.5**	**-0.3**
PPLA	**Purkeypile**	**48.07**	**34**	*e*P	**P**	**08 40 20.4**	**+1.7**
PMR	**Palmer**	**49.51**	**36**	*e*P	**P**	**08 40 29.3**	**-0.5**
	comp=Z,5.4nm,1.3s,mb4.4						
PMR	**Palmer**	**49.51**	**36**	*e*P	**P**	**08 40 29.3**	**-0.5**
PMR				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
ULHL	**Ulahol**	**49.64**	**298**	P	**P**	**08 40 32.0**	**+0.9**
	SNR=6.6						
TKM2	**Tokmak 2**	**49.92**	**299**	P	**P**	**08 40 34.5**	**+1.3**
	SNR=12						
TKM2	**Tokmak 2**	**49.92**	**299**	*e*P	**P**	**08 40 34.3**	**+1.1**
	comp=Z,7.6nm,0.6s,mb4.9						
TKM2	**Tokmak 2**	**49.92**	**299**	*e*P	**P**	**08 40 34.3**	**+1.1**
TKM2				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
ILAR	**Eielson Array**	**50.41**	**32**	P	**P**	**08 40 36.5**	**0.0**
	comp=Z,3.5nm,0.7s,mb4.5,baz=266,slow=6.3,SNR=45						
KBK	**Karagaybulak**	**50.45**	**299**	P	**P**	**08 40 38.5**	**+1.3**
	SNR=8.5						
USP	**Ospenovka**	**50.60**	**300**	P	**P**	**08 40 38.8**	**+0.4**
	SNR=7.9						
KSH	**Kashi**	**50.62**	**295**	⇑*i*P	**P**	**08 40 42.8**	**+4.2**
KSH				*e*pP	pP	08 40 52.8	+7.6
KSH				*e*sP	sP	08 40 56.5	+8.7
KSH				*e*PcP	PcP	08 41 59.5	+3.6
KSH				*e*PP	PP	08 42 39.5	+5.1
KSH				*e*ScP	ScP	08 45 52.3	+1.5
KSH				*e*PcS	PcS	08 45 56.0	+2.8
KSH				*e*S	**S**	**08 47 54.0**	**+1.9**
KSH				sS	sS	08 48 10.0	+6.9
KSH				*e*ScS	ScS	08 50 28.0	-0.2
KSH				*e*SS	SS	08 51 25.5	-0.6
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
KSH				pmax	pmax		
	comp=Z,26nm,3.9s						
KSH				LR	LR		
	comp=N,62nm,5.7s						
KSH				LR	LR		
	comp=E,75nm,5.4s						
KSH				LR	LR		
	comp=Z,79nm,7.6s						
AAK	**Ala-Archa**	**50.78**	**299**	*e*P	**P**	**08 40 40.2**	**+0.5**
	comp=Z,4.9nm,0.6s,mb4.6						
AAK	**Ala-Archa**	**50.78**	**299**	⇑*i*P	**P**	**08 40 40.5**	**+0.8**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
BRVK	**Borovoye**	**51.13**	**313**	*e*P	**P**	**08 40 42.4**	**+0.3**
	comp=Z,14nm,0.6s,mb5.1						
BRVK	**Borovoye**	**51.13**	**313**	*c i*P	**P**	**08 40 42.3**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
AML	**Almayashu**	**51.49**	**299**	P	**P**	**08 40 47.2**	**+2.1**
	SNR=6.7						
AML	**Almayashu**	**51.49**	**299**	*e*P	**P**	**08 40 46.8**	**+1.7**
	comp=Z,26nm,0.8s,mb5.2						
KK31	**Karatay Array**	**53.44**	**301**	P	**P**	**08 40 59.9**	**+0.4**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
KKAR	**Karatay Array**	**53.44**	**301**	*e*P	**P**	**08 40 59.5**	**+0.1**
	comp=Z,13nm,0.9s,mb4.8						
KKAR	**Karatay Array**	**53.44**	**301**	*e*P	**P**	**08 40 59.5**	**0.0**
KKAR				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
SVE	**Sverdlovsk**	**55.74**	**319**	*e*P	**P**	**08 41 16.3**	**+0.4**
SVE				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.3						
FITZ	**Fitzroy Crossi**	**55.85**	**198**	P	**P**	**08 41 16.5**	**-0.6**
	comp=Z,1.8nm,0.6s,mb4.3,baz=3.1,slow=8.5,SNR=3.9						
CTA	**Charters Tower**	**56.06**	**174**	LR	LR	09 02 02.5	
	comp=Z,108nm,21.6s,MS3.9,baz=48,slow=33						
WRA	**Warramunga Arr**	**56.09**	**188**	P	**P**	**08 41 16.7**	**-2.0**
	comp=Z,3.9nm,0.6s,mb4.6,baz=5.8,slow=7.5,SNR=52						
ARU	**Arti**	**56.95**	**319**	*e*P	**P**	**08 41 24.2**	**-0.3**
	comp=Z,33nm,0.6s,mb5.5						
ARU	**Arti**	**56.95**	**319**	*c i*P	**P**	**08 41 24.5**	**-0.1**
ARU				*e*		08 43 28.2	
ARU				S	**S**	**08 49 13.1**	**-4.1**
ARU				SS	SS	08 52 58.7	-6.5
ARU				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.4						
AB31	**Akbulak array**	**58.41**	**311**	P	**P**	**08 41 34.5**	**-0.5**
AB31				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
ABKAR	**Akbulak array**	**58.41**	**311**	*e*P	**P**	**08 41 34.7**	**-0.2**
	comp=Z,10nm,0.6s,mb5.0						
ASAR	**Alice Springs**	**59.81**	**188**	P	**P**	**08 41 43.5**	**-1.3**
	comp=Z,1.9nm,0.7s,mb4.2,baz=20,slow=9.4,SNR=30						
KBS	**Kingsbay**	**61.56**	**350**	*e*P	**P**	**08 41 56.7**

comp=Z,11nm,1.7s,mb4.7
KLMR Klimovskoe 64.46 328 *e*P **P** **08 42 15.2 -0.5**
KLMR pmax pmax
comp=Z,12nm,0.6s,mb5.1
YKA Yellowknife Ar 64.73 30 P **P** **08 42 16.7 -0.7**
comp=Z,4.4nm,0.7s,mb4.6,baz=300,slow=6.8,SNR=9.8
ARCES ARCESS Array B 64.82 339 P **P** **08 42 17.7 -0.2**
comp=Z,4.9nm,0.7s,mb4.6,baz=46,slow=8.7,SNR=12
STKA Stephens Creek 67.60 180 P **P** **08 42 34.4 -1.6**
STKA Stephens Creek 67.60 180 P **P** **08 42 34.4 -1.6**
comp=Z,0.8nm,0.7s,mb3.8,baz=315,slow=7.2,SNR=2.4
VRHR Novokhopersk 68.27 318 *e*P **P** **08 42 38.8 -1.4**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
OBN Obninsk 68.75 323 ⇓*i*P **P** **08 42 43.1 0.0**
OBN *e* 08 42 59.8
OBN *e* 08 45 10.2
OBN *e*S S 08 51 41.9 -3.2
OBN pmax pmax
comp=Z,15nm,0.9s,mb4.9
F04A Amboy 69.10 48 ⇑P **P** **08 42 45.0 -0.5**
baz=69
G04A Mulino 69.43 49 ⇑P **P** **08 42 47.5 -0.1**
baz=69
VSR Storozhevoye 69.52 319 *e*P **P** **08 42 47.0 -1.0**
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
FINES FINESS Array B 69.57 332 P **P** **08 42 47.6 -0.5**
comp=Z,12nm,0.7s,mb5.0,baz=59,slow=7.4,SNR=27
FINES LR LR 09 15 51.5
comp=Z,87nm,18.4s,MS4.0,baz=359,slow=38
VORD Divnogorie 69.59 319 *e*P **P** **08 42 46.7 -1.7**
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.7s
VORD pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
B08A Colville Reser 69.65 45 ⇓P **P** **08 42 48.8 -0.1**
baz=69
E07A Sunnyside 70.30 46 ⇓P **P** **08 42 53.1 +0.2**
baz=70
D08A Wollman Farm, 70.58 46 ⇓P **P** **08 42 54.2 -0.4**
baz=70
NEW Newport 70.95 44 ⇑P **P** **08 42 56.3 -0.6**
baz=71
KIV Kislovodsk 71.39 311 ⇑*i*P **P** **08 42 59.9 +0.4**
KIV *e**PP pP 08 43 12.0 +5.6
KIV pmax pmax
comp=Z,23nm,1.1s,mb5.0
G08A Pilot Rock 71.50 47 ⇓P **P** **08 43 00.5 +0.3**
baz=71
K05A Summer Lake 71.70 50 ⇑P **P** **08 43 01.9 +0.5**
baz=72
A13A Flathead Natio 72.08 42 ⇑P **P** **08 43 03.4 -0.2**
baz=72
F10A Beach Ranch, E 72.15 46 ⇓P **P** **08 43 03.8 -0.3**
baz=72
B13A Whitefish 72.36 43 ⇑P **P** **08 43 05.6 +0.3**
baz=72
J08A Circle Bar Ran 72.85 49 ⇑P **P** **08 43 08.6 +0.3**
baz=73
A15A Johnson Ranch, 72.96 41 ⇓P **P** **08 43 08.6 -0.2**
baz=73
D13A Huson 73.10 44 ⇓P **P** **08 43 09.5 -0.2**
baz=73
C14A Swan Lake 73.11 43 ⇑P **P** **08 43 09.7 -0.1**
baz=73
IZAR Zarasai 73.11 328 *e*P **P** **08 43 09.7 +0.1**
IZAR AMB AMB 08 43 10.4
comp=Z,9.2nm,0.6s,mb4.9
IDID Didziasalis 73.17 327 *e*P **P** **08 43 10.0 0.0**
IDID AMB AMB 08 43 11.5
comp=Z,4.6nm,0.8s,mb4.5
ISAL Salakas 73.28 328 *e*P **P** **08 43 10.8 +0.2**
ISAL AMB AMB 08 43 11.5
comp=Z,8.6nm,0.8s,mb4.8
IIGN Ignalina 73.38 327 *e*P **P** **08 43 11.1 -0.1**
IIGN AMB AMB 08 43 12.0
comp=Z,4.7nm,0.9s,mb4.4
F12A Elk City 73.41 45 ⇑P **P** **08 43 11.8 +0.2**
baz=73
B15A Bradely Ranch, 73.44 42 ⇑P **P** **08 43 11.8 +0.1**
baz=73
SLMT Seeley Lake 73.55 43 *e*P **P** **08 43 12.5 +0.1**
A16A West Butte Ran 73.58 41 ⇑P **P** **08 43 12.4 -0.1**
baz=73
D14A Greenough 73.64 43 ⇑P **P** **08 43 12.2 -0.7**
baz=73
C15A Salmond Ranch, 73.73 42 ⇓P **P** **08 43 13.8 +0.4**
baz=74,SNR=5.4
B16A M & M Farms, S 73.84 42 ⇑P **P** **08 43 13.8 -0.2**
baz=74
F13A Darby 73.92 45 ⇓P **P** **08 43 14.4 -0.2**
baz=74
E14A Clinton 74.03 44 ⇓P **P** **08 43 15.2 0.0**
baz=74
ANN Anapa 74.05 314 *e*P **P** **08 43 19.6 +4.2**
ANN *e**PP pP 08 43 29.7 +7.4
ANN *e* 08 43 33.7
ANN *e* 08 46 08.0
ANN pmax pmax
comp=Z,30nm,1.2s,mb5.1
A17A Triple J Farms 74.06 41 ⇓P **P** **08 43 15.1 -0.3**
baz=74
C16A Fuhringer Ranc 74.18 42 ⇑P **P** **08 43 15.7 -0.3**
baz=74
H12A Diamond D Ranc 74.33 46 ⇑P **P** **08 43 16.9 -0.1**
baz=74
G13A Cobalt 74.38 45 ⇑P **P** **08 43 17.6 +0.4**
baz=74
B17A L&G Farms, Che 74.40 41 ⇑P **P** **08 43 17.6 +0.3**
baz=74
MFID Camas Ranch 74.41 47 ⇓P **P** **08 43 17.7 +0.2**
baz=74
E15A Deer Lodge 74.51 44 ⇑P **P** **08 43 17.8 -0.2**
baz=74
A18A Metzger Ranch, 74.53 40 ⇑P **P** **08 43 17.9 -0.1**
baz=74,SNR=6.3
I12A Atlanta 74.61 47 ⇑P **P** **08 43 18.9 +0.3**
baz=74
H13A Challis 74.68 46 ⇓P **P** **08 43 19.2 +0.3**
baz=74
D16A Dana Ranch, Ca 74.75 43 ⇓P **P** **08 43 19.4 0.0**
baz=74
HRY Holter Researc 74.78 43 *e*P **P** **08 43 20.0 +0.5**
C17A Wharram Farm, 74.82 42 ⇓P **P** **08 43 19.3 -0.5**
baz=74
B18A Beardsley Farm 74.88 41 ⇑P **P** **08 43 20.1 0.0**
baz=75
AKASG Malin Array Be 74.93 322 P **P** **08 43 19.8 -0.6**
AKASG LR LR 09 18 38.5
AKASG Malin Array Be 74.93 322 P **P** **08 43 19.8 -0.6**
comp=Z,6.9nm,0.6s,mb4.8,baz=47,slow=5.9,SNR=42
AKASG LR LR 09 18 38.5
comp=Z,151nm,20.9s,MS4.3,baz=350,slow=38
AKASG Malin Array Be 74.93 322 *ce*P **P** **08 43 20.1 -0.3**
AKASG pmax pmax
comp=Z,7.0nm,0.6s
AKBB Malin Array Si 74.93 322 *e*P **P** **08 43 19.9 -0.4**
F15A Butte 74.93 44 ⇓P **P** **08 43 20.6 +0.2**
baz=75,SNR=8.6
KIEV Kiev 74.95 322 *e*P **P** **08 43 20.0 -0.4**
comp=Z,7.7nm,0.6s,mb4.8
KIEV Kiev 74.95 322 *e*P **P** **08 43 20.0 -0.4**
KIEV pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
LRM Limekiln Ridge 74.97 44 *e*P **P** **08 43 20.9 +0.2**
NOA NORSAR Array B 74.99 337 P **P** **08 43 20.1 -0.3**
comp=Z,8.1nm,0.7s,mb4.8,baz=39,slow=5.8,SNR=22
NOA LR LR 09 19 29.5
comp=Z,114nm,18.6s,MS4.2,baz=130,slow=38
EGMT Eagleton 75.12 41 ⇑P **P** **08 43 21.4 -0.1**
baz=75
I13A Wildhorse Cree 75.14 46 ⇓P **P** **08 43 22.1 +0.4**
baz=75
DLMT Dillon 75.16 44 *e*P **P** **08 43 22.2 +0.4**
comp=Z,2.7nm,0.7s,mb4.3
G15A Dillon 75.34 45 ⇓P **P** **08 43 22.9 +0.1**
baz=75
F16A Kennard Place, 75.45 44 ⇑P **P** **08 43 23.8 +0.3**
baz=75
E17A Martinsdale 75.47 43 ⇑P **P** **08 43 23.8 +0.3**
baz=75
I14A Mackay 75.52 46 ⇓P **P** **08 43 24.5 +0.7**
baz=75,SNR=7.4
BOZ Bozeman (W) 75.53 44 ⇑P **P** **08 43 24.2 +0.3**
baz=75,SNR=5.9
BOZ Bozeman (W) 75.53 44 *e*P **P** **08 43 24.1 +0.2**
comp=Z,1.9nm,0.8s,mb4.1
BOZ Bozeman (W) 75.53 44 *e*P **P** **08 43 24.1 +0.2**
BOZ pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
D18A Linhart Farms, 75.60 42 ⇓P **P** **08 43 23.9 -0.3**
baz=75
C19A Slack Wire Ran 75.67 41 ⇑P **P** **08 43 24.7 +0.1**
baz=75,SNR=7.1
G16A Moss Hill, Enn 75.69 44 ⇑P **P** **08 43 24.9 +0.2**
baz=75
NVAR Mina Array Bea 75.72 53 P **P** **08 43 25.5 +0.4**
comp=Z,1.6nm,0.8s,mb4.0,baz=290,slow=5.5,SNR=12
J14A Carey 75.84 47 ⇓P **P** **08 43 26.3 +0.7**
baz=76
F17A Fitzpatrick Pl 75.92 43 ⇓P **P** **08 43 26.4 +0.3**
baz=76
E18A Harlowton 75.92 42 ⇑P **P** **08 43 26.6 +0.4**
baz=76
G17A Pierce Place, 76.23 44 ⇑P **P** **08 43 28.3 +0.5**
baz=76
H16A Russell Place, 76.32 44 ⇓P **P** **08 43 28.5 +0.1**
baz=76
J15A Blackfoot 76.42 46 ⇓P **P** **08 43 29.7 +0.6**
baz=76
F18A Big Timber 76.44 43 ⇑P **P** **08 43 29.6 +0.6**
baz=76
D20A Manuel Ranch, 76.56 41 ⇓P **P** **08 43 30.0 +0.3**
baz=76
E19A Rath Farm, Rou 76.60 42 ⇓P **P** **08 43 30.1 +0.1**
baz=76,SNR=5.3
I16A Newdale 76.69 45 ⇑P **P** **08 43 31.7 +1.2**
baz=76,SNR=6.2
F19A Roth Farm, Mol 76.89 42 ⇓P **P** **08 43 31.7 +0.1**
baz=77
O12A Currie 76.90 50 ⇑P **P** **08 43 32.2 +0.4**
baz=77,SNR=6.2
E20A Meyer Farm, Mu 76.93 42 ⇓P **P** **08 43 32.1 +0.3**
baz=77
S10A Tonopah Range, 77.11 52 ⇑P **P** **08 43 33.6 +0.6**
baz=77
D21A La Casta Ranch 77.18 41 ⇓P **P** **08 43 33.0 -0.2**
baz=77
P12A McGill 77.27 50 ⇓P **P** **08 43 34.4 +0.5**
baz=77
R11A Troy Canyon, C 77.51 52 ⇓P **P** **08 43 35.5 +0.3**
baz=77
L17A Cokeville 78.13 46 ⇑P **P** **08 43 38.7 0.0**
baz=78
DUG Dugway 78.13 49 ⇑P **P** **08 43 38.9 +0.2**
baz=78
R12A Pony Springs, 78.14 51 ⇑P **P** **08 43 39.3 +0.5**
baz=78
P14A Drum Mountains 78.34 49 ⇓P **P** **08 43 40.1 +0.3**
baz=78
T11A Corn Creek, Al 78.39 52 ⇑P **P** **08 43 40.4 +0.2**
baz=78
S12A Delamar Landin 78.41 52 ⇓P **P** **08 43 40.4 +0.1**
baz=78
BW06 Boulder Array 78.48 45 ⇓P **P** **08 43 40.5 0.0**
baz=78
PDAR Pinedale Array 78.48 45 P **P** **08 43 40.4 -0.1**
comp=Z,1.4nm,0.6s,mb4.1,baz=289,slow=1.8,SNR=17
I20A Wyand 78.54 44 ⇓P **P** **08 43 41.3 +0.5**
baz=78
Q14A Sevier Lake (B 78.58 50 ⇓P **P** **08 43 41.5 +0.4**
baz=78
KWP Kalwaria Pacla 78.79 324 *e*P **P** **08 43 42.9 +0.7**
comp=Z,23nm,1.0s,mb5.1
KWP Kalwaria Pacla 78.79 324 *e*P **P** **08 43 42.9 +0.8**
KWP pmax pmax
comp=Z,23nm,1.0s,mb5.1
O16A Springville 78.92 48 ⇓P **P** **08 43 43.5 +0.5**
baz=79
BUR08 Bucovina Ar. S 78.93 322 *e*P **P** **08 43 43.1 +0.2**
S13A Holt Ranch, En 79.06 51 ⇑P **P** **08 43 43.9 +0.1**
baz=79
BRTR Keskin Array B 79.34 312 P **P** **08 43 45.5 +0.2**
comp=Z,2.0nm,0.6s,mb4.2,baz=90,slow=5.1,SNR=10
BRTR Keskin Array B 79.34 312 *ce*P **P** **08 43 45.5 +0.2**
BRTR pmax pmax
comp=Z,2.0nm,0.6s
OJC Ojcow 79.72 326 *e*P **P** **08 43 43.7 -3.5**
K21A Alcova 79.88 44 ⇑P **P** **08 43 48.0 -0.1**
baz=80
R16A Teasdale 80.12 50 ⇑P **P** **08 43 50.2 +0.6**
baz=80
N20A Spence Gulch, 80.45 46 ⇑P **P** **08 43 51.5 +0.2**
baz=80
R17A Hanksville Air 80.51 49 ⇓P **P** **08 43 51.8 +0.1**
baz=80
V14A Boquillas Ranc 80.72 53 ⇑P **P** **08 43 52.6 -0.3**
baz=80
P19A Cripple Cowboy 80.79 47 ⇑P **P** **08 43 53.1 0.0**
baz=80
N21A Black Mountain 80.93 46 ⇓P **P** **08 43 53.7 -0.2**
baz=81
W14A Seligman 81.00 53 ⇑P **P** **08 43 54.3 0.0**
baz=81
R18A Canyonlands Na 81.03 49 ⇑P **P** **08 43 54.2 -0.3**
baz=81
Q19A Hogan Spring (81.05 48 ⇓P **P** **08 43 54.8 +0.2**
baz=81
L23A Garrett 81.09 44 ⇓P **P** **08 43 54.3 -0.4**
baz=81
URZ Urewera 81.09 152 LR LR 09 16 33.4
comp=Z,122nm,18.2s,MS4.3,baz=323,slow=33
BRG Berggiesshubel 81.78 329 *e*(P) **P** **08 43 57.9 -0.3**
comp=Z,4.3nm,0.8s,mb4.4
CLL Collm 81.83 330 *i* P **P** **08 43 58.1 -0.3**
comp=Z,6.0nm,0.7s,mb4.6
CLL Collm 81.83 330 *i* P **P** **08 43 58.1 -0.3**
CLL pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
R20A Redvale 82.07 48 ⇑P **P** **08 44 00.2 +0.2**
baz=82
P22A Eagle 82.13 46 ⇑P **P** **08 44 00.8 +0.6**
baz=82
V17A Tonalea, Kykot 82.21 51 ⇑P **P** **08 44 01.3 +0.6**
baz=82
O23A Lake Granby, G 82.21 45 ⇓P **P** **08 44 01.0 +0.3**
baz=82
Y15A Casa Rosa Ranc 82.26 54 ⇓P **P** **08 44 01.3 +0.3**
baz=82
U18A Rough Rock, Ch 82.28 50 ⇑P **P** **08 44 01.7 +0.5**
baz=82
R21A Cimarron 82.45 48 ⇑P **P** **08 44 02.3 +0.3**
baz=82
Q22A Crested Butte, 82.52 47 ⇑P **P** **08 44 02.7 +0.4**
baz=82
214A Organ Pipe Nat 83.18 55 ⇑P **P** **08 44 05.9 +0.1**
baz=83
KHC Kasperske Hory 83.25 328 *e*P **P** **08 44 06.0 +0.1**
comp=Z,3.0nm,0.8s,mb4.4
KHC Kasperske Hory 83.25 328 *e*P **P** **08 44 06.0 +0.1**
KHC pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
S22A 4UR Ranch, Cre 83.29 48 ⇓P **P** **08 44 07.1 +0.7**
baz=83
W19A Sanders 83.42 51 ⇑P **P** **08 44 07.5 +0.4**
baz=83
T22A Edith 83.73 48 ⇓P **P** **08 44 09.1 +0.5**
baz=83
PMOR Pomariorio Ree 83.98 113 *e*T 10 16 27.3
comp=Z,4.8nm,0.2s
X20A Quemado 84.34 51 ⇓P **P** **08 44 12.1 +0.3**
baz=84
PPT Papeete 84.38 116 *e*LR LR 09 10 36.0
comp=Z,75nm,22.0s
PPT *e*T 10 16 57.3
comp=Z,2.6nm,0.3s
PPT Papeete 84.38 116 LR LR 09 21 04.3
comp=Z,163nm,18.6s,MS4.4,baz=340,slow=35
R25A Fountain Ranch 84.53 46 ⇑P **P** **08 44 12.5 -0.2**
baz=84
U23A El Rito 84.61 48 ⇓P **P** **08 44 13.6 +0.5**
baz=84
217A Green Valley 84.61 54 ⇑P **P** **08 44 13.5 +0.3**
baz=84
118A Homack Ranch, 84.62 53 ⇑P **P** **08 44 13.4 +0.1**
baz=84
Y20A Horse Springs, 84.83 51 ⇑P **P** **08 44 14.6 +0.3**
baz=85
Z20A Nine Sixteen R 85.20 52 ⇑P **P** **08 44 16.0 -0.1**
baz=85
318A Bisbee 85.37 54 ⇑P **P** **08 44 16.8 -0.2**
baz=85
219A White Tail Can 85.49 53 ⇓P **P** **08 44 17.7 +0.2**
baz=85
V24A Rampart Ranch, 85.56 48 ⇓P **P** **08 44 18.3 +0.4**
baz=85
U25A Circle Dot Ran 85.63 47 ⇓P **P** **08 44 18.3 +0.1**
baz=85
W24A Lazy 6 Ranch, 85.82 49 ⇓P **P** **08 44 19.6 +0.4**
baz=86
BAIF Baives 86.18 334 *e*P **P** **08 44 20.2 -0.4**
SCHQ Schefferville 86.31 16 P **P** **08 44 20.6 -0.6**
comp=Z,2.2nm,0.6s,mb4.5,baz=316,slow=14,SNR=4.6
CDF Champ du Feu 86.39 331 *e*P **P** **08 44 21.4 -0.3**
comp=Z,5.8nm,0.7s,mb4.6
CDF Champ du Feu 86.39 331 *e*P **P** **08 44 21.4 -0.3**
comp=Z,2.9nm,0.7s,mb4.6
CDF Champ du Feu 86.39 331 *e*P **P** **08 44 21.4 -0.3**
CDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
SFTF Sexfontaines 87.42 332 *e*P **P** **08 44 26.3 -0.4**
CABF La Chapelle 88.33 331 *e*P **P** **08 44 30.5 -0.6**
comp=Z,7.1nm,0.8s,mb4.7
CABF La Chapelle 88.33 331 *e*P **P** **08 44 30.5 -0.6**
comp=Z,3.5nm,0.8s,mb4.6
CABF La Chapelle 88.33 331 *e*P **P** **08 44 30.5 -0.6**
CABF pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
SMF Signal de Mont 89.17 332 *e*P **P** **08 44 35.6 +0.6**
AVF Avril sur Loir 89.23 333 *e*P **P** **08 44 35.1 -0.2**
comp=Z,7.4nm,0.7s,mb4.8
AVF Avril sur Loir 89.23 333 *e*P **P** **08 44 35.1 -0.2**
comp=Z,3.7nm,0.7s,mb4.8
AVF Avril sur Loir 89.23 333 *e*P **P** **08 44 35.1 -0.2**
AVF pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
TCF Toulx Ste Croi 90.08 333 *e*P **P** **08 44 39.0 -0.3**
MFF Saint Martin d 90.65 334 *e*P **P** **08 44 41.9 -0.1**
TXAR Lajitas Array 90.86 52 P **P** **08 44 42.9 -0.4**
comp=Z,0.7nm,0.7s,mb4.1,baz=298,slow=2.8,SNR=10
RJF Les Rejaudoux 91.17 333 *e*P **P** **08 44 44.4 0.0**
RJF *e*MLR MLR
comp=Z,56nm,19.0s,MS3.7
RJF Les Rejaudoux 91.17 333 *e*P **P** **08 44 44.4 0.0**
RJF MLR MLR
comp=Z,60nm,19.0s,MS4.0
KEST Kesra 95.66 322 LR LR 09 34 09.7
comp=Z,31nm,20.9s,MS3.8,baz=326,slow=39
TORD Torodi Ar. Bea 117.86 314 PKP PKPdf 08 50 25.2 -1.4
comp=Z,0.6nm,0.6s,baz=39,slow=1.4,SNR=8.6
DBIC Dimbokro 126.85 316 PKP PKPdf 08 50 42.5 -1.3
comp=Z,3.4nm,1.0s,baz=18,slow=3.2,SNR=3.9
LPAZ La Paz 147.34 61 PKPbc PKPbc 08 51 23.1 -0.5
comp=Z,4.0nm,0.7s,baz=335,slow=3.6,SNR=20

IDC 28 08:46:52.0±0.8, 15°52S×173°24W, h0km, mb3.9/9, mb1 4.2/10, mb1mx4.1/21, mbtmp4.0/10, ML2.4/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/26, Error ellipse: s-maj=42.6km s-min=16.5km az=136.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**2.13**	**42**	Pn		Pn	08 47 28.8	-0.2
	66nm,0.3s,baz=28,slow=2.1,SNR=88							
AFI				Sn		Sn	08 47 50.9	-5.3
	90nm,0.3s,baz=49,slow=21,SNR=8.9							
PAE	**Paea**	**22.77**	**99**	*e*T			09 15 01.2	
	1.4nm,0.4s							
PPT	**Papeete**	**22.77**	**98**	*e*LR		LR	08 57 01.8	
	96nm,28.8s							
PPT	**Papeete**	**22.77**	**98**	LR		LR	08 58 42.0	
	comp=Z,59nm,18.5s,baz=163,slow=31							
TBI	**Tubuai**	**23.71**	**113**	*e*T			09 16 26.2	
	3.5nm,0.3s							
URZ	**Urewera**	**24.20**	**199**	P		P	08 52 10.7	+0.4
	12nm,0.6s,baz=274,slow=9.5,SNR=12							
URZ				S		S	08 56 27.7	-1.9
	3.6nm,0.8s,baz=263,slow=18,SNR=3.0							
STKA	**Stephens Creek**	**44.11**	**240**	P		P	08 55 01.9	-0.5
	1.0nm,0.7s,baz=63,slow=16,SNR=3.3							
WRA	**Warrnunga Arr**	**49.97**	**257**	P		P	08 55 48.1	-0.2
	0.7nm,0.8s,baz=92,slow=7.2,SNR=7.1							
ASAR	**Alice Springs**	**50.23**	**252**	P		P	08 55 50.1	-0.1
	2.6nm,0.6s,baz=87,slow=8.1,SNR=62							
NVAR	**Mina Array Bea**	**74.31**	**42**	P		P	08 58 32.3	+0.9
	0.6nm,0.3s,baz=224,slow=8.8,SNR=5.6							
TXAR	**Lajitas Array**	**80.55**	**56**	P		P	08 59 06.5	-0.1
	0.7nm,0.9s,baz=216,slow=6.2,SNR=6.5							
PDAR	**Pinedale Array**	**82.25**	**42**	P		P	08 59 15.3	0.0
	0.4nm,0.6s,baz=242,slow=1.9,SNR=4.0							
ILAR	**Eielson Array**	**82.53**	**11**	P		P	08 59 16.2	-0.1
	0.2nm,0.6s,baz=228,slow=6.5,SNR=7.0							
MAW	**Mawson**	**87.73**	**199**	P		P	08 59 42.3	-0.2
	1.0nm,0.7s,baz=149,slow=8.6,SNR=4.1							
BRTR	**Keskin Array B**	**146.35**	**321**	PKPbc		PKPbc	09 06 35.5	+0.3
	0.7nm,0.7s,baz=343,slow=4.5,SNR=3.1							

*NEIC **28** 08:48:51.9, 31°.76S×71°.86W, h7km, ML2.9(GUC), After GUC.*

GUC 28 08:48:52.9±0.6, 31°.74S×71°.88W, h26km±8km, MD3.8, ML3.0, 3C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHNG	**Los Chungos**	**0.35**	**113**	⇑*i*P		Pb	08 48 58.1	-2.7
CHNG				*i* S		Sb	08 49 04.0	-2.3
CHNG				AML		AML	08 49 04.4	
	comp=N,656nm,0.5s							
CMCH	**Combarbala**	**0.94**	**53**	⇑*i*P		Pn	08 49 09.9	-0.5
CMCH				*i* S		Sb	08 49 22.9	+0.2
CMCH	**Combarbala**	**0.94**	**53**	⇑*i*P		Pn	08 49 09.9	-0.5
CMCH				*i* S		Sb	08 49 22.9	+0.2
CMCH				AML		AML	08 49 24.1	
	comp=N,2μm,0.6s							
ROCH	**El Roble**	**1.43**	**149**	*e*P		Pn	08 49 18.1	+1.0
ROCH				*e*S		Sn	08 49 37.3	+2.3
ROCH				AML		AML	08 49 40.7	
	comp=N,294nm,0.3s							
PEL	**Peldehue**	**1.72**	**144**	*e*P		Pn	08 49 22.2	+1.0
PEL				*i* S		Sn	08 49 44.3	+2.0
PEL				AML		AML	08 49 50.7	
	comp=E,477nm,0.4s							
TACH	**Talagante**	**2.06**	**158**	*e*P		Pn	08 49 26.8	+0.9
TACH	**Talagante**	**2.06**	**158**	*e*P		Pn	08 49 26.8	+0.9
ANTU	**Antumapu**	**2.10**	**150**	*e*P		Pn	08 49 27.6	+1.3
ANTU	**Antumapu**	**2.10**	**150**	*e*P		Pn	08 49 27.6	+1.3
ANTU				AML		AML	08 50 02.6	
	comp=E,116nm,0.3s							
LMEL	**Las Melosas**	**2.53**	**146**	*e*P		Pn	08 49 34.3	+2.1
LMEL	**Las Melosas**	**2.53**	**146**	*e*P		Pn	08 49 34.3	+2.1
LMEL				AML		AML	08 50 20.2	
	comp=N,91nm,0.2s							

*IDC **28** 08:56:42.4±1.7, 17°.93S×178°.49W, h561km±20km, mb3.9/15, mb1 4.1/16, mb1mx4.0/21, mbtmp3.9/16, Error ellipse: s-maj=17.3km s-min=11.2km az=143.0*
*NEIC **28** 08:56:44.0±0.6, 17°.95S×178°.53W, h578km±6km, mb4.5/30, Error ellipse: s-maj=12.1km s-min=5.2km az=150.0*
*ISCJB **28** 08:56:45.4±0.8, 17°.93S±0°.07×178°.69W±0°.05, h603km±10km, mb4.5/52, Error ellipse: s-maj=12.4km s-min=5.6km az=152.7*

ISC 28 08:56:45.9±0.9, 17°.94S±0°.07×178°.65W±0°.05, h595km±10km, h568km±8.8km; pP-P, n386, σ0s54/381, mb4.5/52, 136C-143D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**3.15**	**273**	*e*P		**P**	**08 58 05.4**	**-0.1**
AFI	**Afiamalu**	**7.73**	**60**	*e*Pn		**P**	**08 58 36.9**	**-5.7**
	60nm,0.6s							
AFI				*e*Sn		**S**	**09 00 09.7**	**-8.4**
AFI	**Afiamalu**	**7.73**	**60**	P		**P**	**08 58 37.1**	**-5.4**
	15nm,0.3s,baz=124,slow=5.9,SNR=21							
AFI				S		**S**	**09 00 08.0**	**-10**
	7.1nm,0.3s,baz=7.5,slow=22,SNR=4.6							
DZM	**Mont Dzumac**	**14.60**	**251**	*i* Pg		**P**	**08 59 49.8**	**-0.8**

DZM **Mont Dzumac** 14.60 251 *e*P P 08 59 50.4 -0.2
27nm,0.7s
NOUC **Port Laguerre** 14.73 251 *e*P P 08 59 51.0 -0.8
URZ **Urewera** 20.58 190 *e*P P 09 00 41.5 -3.3
14nm,0.6s
URZ *e*S S 09 03 57.5 -0.2
URZ **Urewera** 20.58 190 P P 09 00 41.6 -3.2
8.9nm,0.5s,baz=71,slow=3.7,SNR=9.2
URZ S S 09 03 52.3 -5.5
6.1nm,0.8s,baz=217,slow=20,SNR=3.9
EIDS **Eidsvold** 29.04 250 *e*P P 09 01 59.5 -0.2
28nm,0.8s,mb4.9
ARMA **Armidale** 29.72 240 *e*P P 09 02 06.6 +1.1
ARMA **Armidale** 29.72 240 *e*P P 09 02 06.7 +1.2
28nm,0.7s,mb5.0
CTA **Charters Tower** 33.21 261 *e*P P 09 02 35.3 0.0
19nm,0.7s,mb4.8
CTA **Charters Tower** 33.21 261 P P 09 02 35.2 -0.1
CTA **Charters Tower** 33.21 261 P P 09 02 35.2 -0.1
25nm,0.6s,mb5.0,baz=91,slow=10.0,SNR=27
CTAO **Charters Tower** 33.21 261 *e*P P 09 02 35.0 -0.3
27nm,0.7s,mb5.0
CNB **Canberra Magne** 33.22 232 *e*P P 09 02 36.3 +1.2
PMG **Port Moresby** 34.24 280 *e*P P 09 02 44.4 +0.5
94nm,0.8s,mb5.5
MTSU **Mount Surprise** 35.17 264 ⇓*i*P P 09 02 51.6 0.0
44nm,0.9s,mb5.1
QLP **Quilpie** 35.31 249 ⇑*i*P P 09 02 52.7 +0.1
COEN **Coen** 36.87 271 *e*P P 09 03 06.3 +0.7
299nm,0.9s
TOO **Toolangi** 36.97 231 *e*P P 09 03 06.9 +0.8
STKA **Stephens Creek** 38.41 241 *e*P P 09 03 18.9 +1.0
33nm,0.6s,mb5.0
STKA **Stephens Creek** 38.41 241 *e*P P 09 03 19.0 +1.1
14nm,1.0s,mb4.4
STKA **Stephens Creek** 38.41 241 P P 09 03 18.8 +0.9
40nm,0.5s,mb5.2,baz=92,slow=9.7,SNR=94
ARPS **Mount Arapiles** 39.45 234 *e*P P 09 03 26.4 +0.3
34nm,0.8s,mb4.9
BBOO **Buckleboo** 43.19 241 *e*P P 09 03 56.1 +0.4
27nm,0.4s,mb5.1
BBOO **Buckleboo** 43.19 241 *e*P P 09 03 55.8 +0.1
146nm,0.9s,mb5.5
POHA **Pohakuloa** 43.80 32 *e*P P 09 03 59.7 -0.8
WRA **Warramunga Arr** 44.40 260 P P 09 04 04.6 -0.6
23nm,0.5s,mb5.0,baz=95,slow=7.3,SNR=342
WRA PcP PcP 09 05 36.0 +0.2
3.1nm,0.5s,baz=92,slow=3.5,SNR=5.5
ASAR **Alice Springs** 44.56 254 P P 09 04 06.7 +0.3
176nm,0.6s,baz=88,slow=8.6,SNR=2978
ASAR PcP PcP 09 05 36.1 -0.1
4.3nm,0.5s,baz=108,slow=3.8,SNR=4.1
ASAR S S 09 09 59.1 -0.8
3.3nm,1.2s,baz=78,slow=19,SNR=7.5
GUMO **Guam** 47.72 309 *e*P P 09 04 29.5 -0.8
49nm,0.8s,mb5.1
GUMO **Guam** 47.72 309 P P 09 04 30.0 -0.3
53nm,0.7s,mb5.2,baz=178,slow=9.0,SNR=11
FORT **Forrest** 49.78 245 *e*P P 09 04 44.9 -0.5
45nm,0.6s,mb5.1
FORT **Forrest** 49.78 245 *e*P P 09 04 45.0 -0.4
57nm,0.6s,mb5.2
FITZ **Fitzroy Crossi** 52.80 261 *e*P P 09 05 07.4 +0.2
7.8nm,0.3s,mb4.5
FITZ **Fitzroy Crossi** 52.80 261 *e*P P 09 05 07.0 -0.3
4.3nm,0.3s,mb4.3
MBWA **Marble Bar** 57.84 256 *e*P P 09 05 41.8 -0.4
MBWA **Marble Bar** 57.84 256 *e*P P 09 05 41.8 -0.4
20nm,0.7s,mb4.4
KLBR **Kellerberrin** 58.61 244 *e*P P 09 05 46.6 -0.6
25nm,0.5s,mb4.6
MORW **Morawa** 60.26 246 *e*P P 09 05 57.6 -0.6
MJAR **Matsushiro Arr** 67.79 324 P P 09 06 44.6 -1.0
5.8nm,0.7s,mb4.1,baz=159,slow=5.8,SNR=12
MAT **Matsushiro** 67.80 324 P P 09 06 45.1 -0.5
QSPA **South Pole Qui** 72.11 180 *e*P P 09 07 10.8 +0.3
7.3nm,1.1s,mb4.1
KSM **Kuching** 72.46 277 *e*P P 09 07 14.3 +0.6
35nm,0.8s,mb4.9
PETK **Petropavlovsk-** 73.65 345 P P 09 07 18.8 -0.7
2.5nm,0.7s,mb3.8,baz=117,slow=9.0,SNR=3.6
KSRS **Korea Array** 74.57 318 P P 09 07 25.1 0.0
1.2nm,0.6s,mb3.6,baz=129,slow=6.8,SNR=5.9
SMMC **Simmler** 76.77 46 ⇓P P 09 07 37.5 +0.2
baz=77
VES **Vestal, Richgr** 77.68 46 ⇑P P 09 07 41.5 -0.7
baz=78
NJ2 **Nanjing** 77.78 310 *e*P P 09 07 41.3 -1.6
NJ2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
MURC **Murrieta** 77.81 49 ⇑P P 09 07 42.6 -0.4
baz=78
BFSC **Mount Baldy Ra** 77.82 48 ⇑P P 09 07 42.5 -0.5
baz=78
RCTC **Rector, Farmer** 77.83 45 ⇓P P 09 07 42.9 -0.1
baz=78
EDW2 **Edwards Air Fo** 77.92 47 ⇓P P 09 07 43.3 -0.3
baz=78
ISA **Isabella** 78.00 46 ⇑P P 09 07 43.8 -0.2
baz=78
ISA **Isabella** 78.00 46 *e*P P 09 07 43.8 -0.1
comp=Z,11nm,0.9s,mb4.3
MONP **Monument Peak** 78.01 50 ⇓P P 09 07 43.9 -0.1
baz=78
CMB **Columbia Colle** 78.02 43 *e*P P 09 07 43.6 -0.4
comp=Z,7.5nm,1.0s,mb4.1
CMB *e*PcP PcP 09 07 51.8 +0.8
MDJ **Mudanjiang** 78.08 325 P P 09 07 46.3 +2.2
MDJ pmax pmax
comp=Z,7.0nm,1.1s,mb4.0
MDJ pmax pmax
comp=Z,38nm,3.3s
DVTC **Desert V Tower** 78.13 50 ⇑P P 09 07 44.8 +0.1
baz=78
PFO **Pinyon Flat Ob** 78.35 49 ⇓P P 09 07 45.7 -0.2
baz=78
BBRC **Big Bear Solar** 78.35 48 ⇑P P 09 07 45.4 -0.5
baz=78
LRMC **Laurel Mountai** 78.45 47 ⇑P P 09 07 46.1 -0.3
baz=79
KDAK **Kodiak Island** 78.49 14 P P 09 07 44.9 -1.1
comp=Z,4.4nm,0.7s,mb4.0,baz=247,slow=7.7,SNR=3.7
MTUM **Tungsten Hills** 78.85 45 *e*P P 09 07 48.7 +0.3
BELC **Belle Mtn. Jos** 78.88 49 ⇑P P 09 07 48.3 -0.3
baz=79
MPMC **Manual Prospec** 78.89 46 ⇓P P 09 07 48.6 0.0
baz=79
WAKR **Walker** 78.90 43 *e*P P 09 07 48.6 0.0
comp=Z,14nm,1.2s,mb4.2
GSC **Goldstone** 78.97 47 ⇓P P 09 07 49.3 +0.2
baz=79
BC3 **Big Chuckawall** 79.10 49 ⇓P P 09 07 49.9 +0.1
baz=79
WCN **Washoe City** 79.14 43 ⇑P P 09 07 50.0 +0.1
baz=79
WCN **Washoe City** 79.14 43 *e*P P 09 07 50.1 +0.2
comp=Z,5.9nm,0.7s,mb4.0
112A **Yuma** 79.18 51 ⇑P P 09 07 50.4 +0.1
baz=79
GRAC **Grapevine Rang** 79.47 46 ⇑P P 09 07 51.5 -0.2
baz=80,SNR=7.1
GMRC **Granite Mounta** 79.51 48 ⇑P P 09 07 51.9 -0.1
baz=80
FURC **Furnace Creek,** 79.54 46 ⇓P P 09 07 51.9 -0.2
baz=80
IRM **Iron Mountain** 79.57 49 ⇓P P 09 07 52.4 +0.1
baz=80
NVAR **Mina Array Bea** 79.61 44 P P 09 07 52.0 -0.3
comp=Z,6.1nm,0.8s,mb4.0,baz=223,slow=9.0,SNR=47
SHOC **Shoshone** 79.65 47 ⇑P P 09 07 52.9 +0.2
baz=80
TUQ **Turquoise Moun** 79.66 48 ⇑P P 09 07 52.8 +0.1
baz=80
Y12C **Blythe** 79.82 50 ⇓P P 09 07 53.5 -0.1
baz=80
U10A **Ash Meadows, A** 79.88 47 ⇑P P 09 07 54.0 +0.1
baz=80
113A **Mohawk Valley,** 79.89 51 ⇓P P 09 07 53.9 -0.1
baz=80
CN2 **Changchun** 79.91 322 *e*P P 09 07 59.3 +5.5
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.2
CN2 pmax pmax
comp=Z,100nm,14.0s
Z13A **Yuma Proving G** 80.18 50 ⇑P P 09 07 55.3 -0.2
baz=80,SNR=6.8
V11A **Goodsprings** 80.21 47 ⇓P P 09 07 55.4 -0.2
baz=80
214A **Organ Pipe Nat** 80.22 52 ⇑P P 09 07 55.8 +0.1
baz=80
MOD **Modoc** 80.26 40 *e*P P 09 07 55.7 0.0
W12A **Cal Nev Ari** 80.33 48 ⇑P P 09 07 56.3 0.0
baz=80
Y13A **Salome** 80.35 50 ⇑P P 09 07 56.8 +0.4
baz=80
K05A **Summer Lake** 80.37 39 ⇓P P 09 07 56.2 0.0
baz=80,SNR=6.0
S10A **Tonopah Range,** 80.48 45 ⇓P P 09 07 56.8 -0.1
baz=81,SNR=12
114A **Black Gap (USA** 80.54 51 ⇑P P 09 07 57.6 +0.2
baz=81
V12A **Nelson** 80.56 48 ⇓P P 09 07 57.7 +0.3
baz=81
X13A **Yucca** 80.73 49 ⇓P P 09 07 58.0 -0.3
baz=81,SNR=5.2
R10A **Warm Springs** 80.87 45 ⇓P P 09 07 58.9 0.0
baz=81,SNR=15
S11A **Rachel** 80.91 46 ⇑P P 09 07 59.1 -0.1
baz=81,SNR=6.0
Y14A **Wickenburg** 81.01 50 ⇓P P 09 07 59.7 -0.1
baz=81
T11A **Corn Creek, Al** 81.06 46 ⇓P P 09 08 00.0 0.0
baz=81
Q10A **Clear Creek Ra** 81.08 44 ⇑P P 09 08 00.7 +0.7
baz=81
U12A **Valley of Fire** 81.13 47 ⇓P P 09 08 00.9 +0.5
baz=81
T12A **Moapa** 81.16 47 ⇑P P 09 08 00.3 -0.2
baz=81
V13A **Grand Canyon W** 81.23 48 ⇑P P 09 08 01.1 +0.3
baz=81
216A **Three Points,** 81.25 52 ⇑P P 09 08 01.7 +0.6
baz=81
116A **Eloy** 81.33 52 ⇑P P 09 08 01.6 +0.2
baz=81
X14A **Yava** 81.35 50 ⇑P P 09 08 01.8 +0.3
baz=81
R11A **Troy Canyon, C** 81.38 45 ⇓P P 09 08 01.1 -0.4
baz=82,SNR=5.8
S12A **Delamar Landin** 81.50 46 ⇑P P 09 08 02.6 +0.4
baz=82,SNR=20
Y15A **Casa Rosa Ranc** 81.51 50 ⇑P P 09 08 02.4 +0.1
baz=82,SNR=11
U13A **Pakoon Wash** 81.53 47 ⇓P P 09 08 02.5 +0.1
baz=82,SNR=16
W14A **Seligman** 81.57 49 ⇓P P 09 08 03.0 +0.4
baz=82,SNR=11
WVOR **Wild Horse Val** 81.58 40 *e*P P 09 08 02.1 -0.4
comp=Z,12nm,1.0s,mb4.4
Q11A **Duckwater** 81.59 45 ⇑P P 09 08 02.7 +0.1
baz=82,SNR=10
217A **Green Valley** 81.64 53 ⇓P P 09 08 03.5 +0.4
baz=82,SNR=7.3
V14A **Boquillas Ranc** 81.75 49 ⇓P P 09 08 03.8 +0.3
baz=82,SNR=13
X15A **Humboldt** 81.83 50 ⇑P P 09 08 04.3 +0.3
baz=82,SNR=8.5
T13A **Saint George** 81.86 47 ⇓P P 09 08 04.3 +0.2
baz=82,SNR=6.5
P11A **Circle Ranch,** 81.89 44 ⇓P P 09 08 03.8 -0.3
baz=82
Z16A **Peralta Trail,** 81.89 51 ⇑P P 09 08 04.5 +0.2
baz=82,SNR=5.6
TUC **Tucson** 81.90 52 *e*P P 09 08 04.4 +0.1
comp=Z,7.5nm,1.1s,mb4.1
G06A **Carlson Farm,** 81.97 37 ⇑P P 09 08 04.2 -0.2
baz=82
I07A **Izee** 81.98 39 ⇑P P 09 08 04.4 0.0
baz=82
R12A **Pony Springs,** 82.03 46 ⇓P P 09 08 05.1 +0.2
baz=82
117A **Oracle** 82.06 52 ⇑P P 09 08 05.3 +0.1
baz=82,SNR=6.0
U14A **Mt Trumbull** 82.08 48 ⇓P P 09 08 05.8 +0.6
baz=82,SNR=16
Y16A **Circle Bar Ran** 82.10 51 ⇑P P 09 08 05.7 +0.4
baz=82,SNR=6.8
318A **Bisbee** 82.11 53 ⇑P P 09 08 06.0 +0.6
baz=82,SNR=8.7
S13A **Holt Ranch, En** 82.17 47 ⇑P P 09 08 05.9 +0.3
baz=82,SNR=5.1
J08A **Circle Bar Ran** 82.19 40 ⇓P P 09 08 05.4 -0.1
baz=82
IPM **Ipoh** 82.20 277 *e*P P 09 08 06.6 +0.3
comp=Z,5.4nm,0.3s,mb4.6
Q12A **Willow Creek R** 82.24 45 ⇓P P 09 08 06.0 +0.1
baz=82,SNR=6.8
X16A **Lo Mia Camp, P** 82.38 50 ⇓P P 09 08 07.3 +0.6
baz=82,SNR=13
R13A **O'Grain Ranch,** 82.39 46 ⇓P P 09 08 06.7 0.0
baz=82
P12A **McGill** 82.41 44 ⇑P P 09 08 07.2 +0.4
baz=82
T14A **Hurricane** 82.46 47 ⇑P P 09 08 07.6 +0.5
baz=82
Y17A **Roosevelt** 82.49 51 ⇓P P 09 08 07.5 +0.2
baz=83
CCUT **Cedar City** 82.50 47 *e*P P 09 08 07.5 +0.3
comp=Z,6.1nm,1.1s,mb4.0
V15A **Kaibab Nationa** 82.51 49 ⇓P P 09 08 07.8 +0.5
baz=83,SNR=9.0
TTA **Tatalina** 82.55 10 *e*P P 09 08 06.2 -0.7
ARUT **Antelope Range** 82.56 47 *e*P P 09 08 07.8 +0.2
comp=Z,3.0nm,0.9s,mb3.8
W16A **Flagstaff** 82.63 50 ⇓P P 09 08 08.3 +0.3
baz=83,SNR=6.6
319A **Douglas** 82.63 54 ⇑P P 09 08 08.4 +0.4
baz=83,SNR=8.5
118A **Homack Ranch,** 82.67 52 ⇓P P 09 08 08.0 -0.2
baz=83
U15A **North Rim** 82.71 48 ⇑P P 09 08 08.9 +0.6
baz=83,SNR=20
S14A **Cedar City** 82.74 47 ⇑P P 09 08 08.6 +0.2
baz=83
Q13A **Wheeler Ranch,** 82.74 45 ⇑P P 09 08 08.3 -0.2
baz=83,SNR=9.3
X17A **Forest Lakes** 82.81 51 ⇓P P 09 08 09.3 +0.5
baz=83,SNR=7.0
O12A **Currie** 82.92 44 ⇑P P 09 08 09.3 +0.1
baz=83,SNR=6.3
219A **White Tail Can** 82.92 53 ⇓P P 09 08 10.0 +0.5
baz=83
T15A **Red Dirt Ranch** 82.93 48 ⇑P P 09 08 09.8 +0.4
baz=83
WUAZ **Wupatki** 82.94 49 ⇓P P 09 08 09.9 +0.4
baz=83,SNR=6.2
G08A **Pilot Rock** 82.98 38 ⇓P P 09 08 09.1 -0.3
baz=83,SNR=6.3
P13A **Bates Ranch, G** 83.00 45 ⇑P P 09 08 09.8 +0.1
baz=83,SNR=9.8
Y18A **Canyon Day Jun** 83.13 51 ⇑P P 09 08 10.6 +0.2
baz=83,SNR=6.2
320A **Kipp Ranch, An** 83.19 54 ⇓P P 09 08 11.8 +0.9
baz=83,SNR=14
S15A **Panguitch** 83.26 47 ⇑P P 09 08 12.1 +1.0
baz=83
Q14A **Sevier Lake (B** 83.26 46 ⇑P P 09 08 11.4 +0.4
baz=83,SNR=14
U16A **Tuba City** 83.41 49 ⇑P P 09 08 12.2 +0.4
baz=84,SNR=10
V17A **Tonalea, Kykot** 83.41 49 ⇓P P 09 08 12.2 +0.3
baz=84,SNR=8.7
220A **Playas Peak, P** 83.44 54 ⇑P P 09 08 12.4 +0.3
baz=84
ETW **Entiat** 83.52 35 *e*P P 09 08 11.6 -0.5
X18A **Snowflake** 83.53 51 ⇓P P 09 08 12.7 +0.2
baz=84
R15A **Junction** 83.57 47 ⇓P P 09 08 13.3 +0.7
baz=84
BJI **Beijing** 83.64 315 P P 09 08 13.0 +0.1
BJI pmax pmax
comp=Z,7.0nm,0.8s,mb4.2
BJI pmax pmax
comp=Z,51nm,4.1s
P14A **Drum Mountains** 83.70 45 ⇓P P 09 08 13.7 +0.5
baz=84
MAW **Mawson** 83.75 200 *e*P P 09 08 13.1 +0.1
comp=Z,2.6nm,0.4s,mb4.1
MAW **Mawson** 83.75 200 *e*P P 09 08 13.0 0.0
comp=Z,0.5nm,0.7s
MAW **Mawson** 83.75 200 P P 09 08 13.2 +0.2
comp=Z,3.0nm,0.4s,mb4.1,baz=131,slow=6.7,SNR=31
MSU **Marysvale** 83.78 46 *e*P P 09 08 14.5 +0.9
Y19A **Nutrioso** 83.79 52 ⇑P P 09 08 14.2 +0.4
baz=84
S16A **Weppner Ranch,** 83.81 47 ⇑P P 09 08 13.7 -0.1
baz=84
MFID **Camas Ranch** 83.85 41 ⇑P P 09 08 13.9 +0.1
baz=84
Q15A **Fillmore** 83.88 46 ⇑P P 09 08 14.3 +0.2
baz=84
Z20A **Nine Sixteen R** 83.91 53 ⇓P P 09 08 14.6 +0.3
baz=84
D08A **Wollman Farm,** 83.99 36 ⇓P P 09 08 14.2 -0.2
baz=84
T17A **Navajo Res., N** 84.03 48 ⇓P P 09 08 15.2 +0.3
baz=84
V18A **Ganado** 84.07 50 ⇓P P 09 08 15.4 +0.3
baz=84
TRF **Thorofare Moun** 84.09 12 *e*P P 09 08 12.7 -1.8
comp=Z,12nm,0.8s,mb4.5
ENH **Enshi** 84.10 304 *e*P P 09 08 16.2 +0.8
comp=Z,9.1nm,0.7s,mb4.4
R16A **Teasdale** 84.16 47 ⇓P P 09 08 16.1 +0.7
baz=84
W19A **Sanders** 84.20 50 ⇓P P 09 08 15.7 0.0
baz=84
121A **Cookes Peak, D** 84.28 53 ⇑P P 09 08 16.5 +0.3
baz=84
S17A **Black Ridge (B** 84.33 48 ⇓P P 09 08 16.1 -0.2
baz=84
F10A **Beach Ranch, E** 84.37 38 ⇓P P 09 08 15.3 -1.0
baz=84,SNR=8.6
Y20A **Horse Springs,** 84.42 52 ⇑P P 09 08 17.8 +1.0
baz=84
U18A **Rough Rock, Ch** 84.44 49 ⇑P P 09 08 16.7 -0.2
baz=84
I12A **Atlanta** 84.48 41 ⇑P P 09 08 16.7 -0.1
baz=85,SNR=6.5
B08A **Colville Reser** 84.50 35 ⇑P P 09 08 15.9 -0.9
baz=85
X20A **Quemado** 84.61 51 ⇑P P 09 08 18.1 +0.3
baz=85
MCK **McKinley** 84.62 13 *e*P P 09 08 15.8 -1.3
Q16A **Castle Valley** 84.67 46 ⇓P P 09 08 18.8 +0.8
baz=85
N15A **Stansbury Isla** 84.70 44 ⇑P P 09 08 18.5 +0.4
baz=85
R17A **Hanksville Air** 84.76 47 ⇓P P 09 08 18.0 -0.4
baz=85
T18A **Mexican Hat** 84.76 48 ⇓P P 09 08 18.5 +0.1
baz=85,SNR=12
HLID **Hailey** 84.81 41 ⇑P P 09 08 18.6 +0.1
baz=85,SNR=8.6
HLID **Hailey** 84.81 41 *e*P P 09 08 18.6 +0.1
comp=Z,3.2nm,0.8s,mb4.0
HLID *e*PcP PcP 09 08 21.7 +1.1
HLID *e*PP PP 09 11 43.8 -2.7
GYA **Guiyang** 84.85 300 *e*P P 09 08 20.0 +0.9
GYA pP pP 09 10 23.8 -2.4
GYA sP sP 09 11 23.3 -2.7
GYA PP PP 09 11 51.5 +4.3
GYA SKS 09 17 48.0
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
U19A **Dine' College,** 84.86 49 ⇑P P 09 08 18.8 -0.1
baz=85,SNR=5.3
W20A **Ramah** 84.86 51 ⇑P P 09 08 19.2 +0.2
baz=85
J13A **Cove Ranch, Pi** 84.87 41 ⇑P P 09 08 19.0 +0.2
baz=85,SNR=8.4
H12A **Diamond D Ranc** 85.04 40 ⇓P P 09 08 19.3 -0.3
baz=85,SNR=10.0
K14A **Jones Ranch, D** 85.08 42 ⇑P P 09 08 20.0 +0.1
baz=85
I13A **Wildhorse Cree** 85.17 41 ⇑P P 09 08 20.4 +0.2
baz=85
SRU **San Rafael** 85.21 46 ⇑P P 09 08 20.2 -0.3
baz=85
T19A **Beclabito** 85.23 49 ⇑P P 09 08 21.0 +0.3
baz=85
J14A **Carey** 85.25 42 ⇑P P 09 08 21.2 +0.5
baz=85,SNR=6.3
R18A **Canyonlands Na** 85.31 47 ⇑P P 09 08 20.6 -0.5
baz=85
L15A **Malad City** 85.33 43 ⇓P P 09 08 21.1 +0.1
baz=85
H13A **Challis** 85.41 40 ⇓P P 09 08 21.6 +0.2
baz=86
F12A **Elk City** 85.42 39 ⇓P P 09 08 21.1 -0.2
baz=86,SNR=13
Q18A **Rafter H Ranch** 85.47 47 ⇓P P 09 08 21.8 0.0
baz=86
Y22A **Socorro** 85.49 52 ⇓P P 09 08 21.8 -0.3
baz=86
S19A **Harvey Farm, M** 85.56 48 ⇓P P 09 08 22.3 +0.1
baz=86
O17A **Robinson Place** 85.56 45 ⇓P P 09 08 22.3 +0.1
baz=86,SNR=5.7
K15A **Arbon** 85.56 43 ⇓P P 09 08 22.0 -0.2
baz=86
I14A **Mackay** 85.59 41 ⇓P P 09 08 23.5 +1.2
baz=86,SNR=11
324A **Moseley Ranch,** 85.60 55 ⇓P P 09 08 22.6 0.0
baz=86,SNR=5.4
P18A **Preston Nutter** 85.64 46 ⇑P P 09 08 22.5 -0.1
baz=86
NEW **Newport** 85.67 36 ⇓P P 09 08 21.2 -1.3
baz=86
G13A **Cobalt** 85.69 40 ⇑P P 09 08 22.7 0.0
baz=86
R19A **Curley Farm, L** 85.71 48 ⇓P P 09 08 22.6 -0.4
baz=86
425A **Indio Mountain** 85.73 56 ⇓P P 09 08 23.6 +0.3
baz=86,SNR=6.4
MNTX **Cornudas Mount** 85.78 55 ⇓P P 09 08 23.4 -0.1
baz=86,SNR=5.0
224A **Cornudas Mount** 85.83 55 ⇑P P 09 08 23.8 +0.2
baz=86,SNR=6.1
626A **Big Bend Ranch** 85.92 57 ⇓P P 09 08 25.0 +0.8
baz=86,SNR=12
L16A **Fish Haven** 85.95 44 ⇓P P 09 08 23.8 -0.2
baz=86
ILAR **Eielson Array** 85.97 13 P P 09 08 21.6 -1.9
comp=Z,1.4nm,0.5s,mb3.9,baz=221,slow=5.0,SNR=33
325A **Bean Ranch, Si** 85.97 55 ⇓P P 09 08 24.0 -0.4
baz=86
J15A **Blackfoot** 85.97 42 ⇓P P 09 08 24.5 +0.4
baz=86,SNR=8.9
H14A **Leadore** 85.99 41 ⇑P P 09 08 23.9 -0.2
baz=86,SNR=5.6
F13A **Darby** 85.99 39 ⇑P P 09 08 23.7 -0.4
baz=86,SNR=8.6
Q19A **Hogan Spring (** 86.01 47 ⇑P P 09 08 24.0 -0.4
baz=86
D12A **Red Ives Fores** 86.04 38 ⇓P P 09 08 23.8 -0.5
baz=86
U21A **Nageezi** 86.04 50 ⇓P P 09 08 24.3 -0.3
baz=86,SNR=8.7
O18A **Roosevelt** 86.09 46 ⇑P P 09 08 25.4 +0.7
baz=86
XAN **Xi'an** 86.10 307 P P 09 08 25.8 +0.9
XAN pmax pmax
comp=Z,4.0nm,1.0s,mb4.0
PV01 **Paradox Valley** 86.13 48 *e*P P 09 08 24.7 -0.2
comp=Z,118nm,0.7s,mb5.6
124A **Stringfield Ra** 86.13 54 ⇑P P 09 08 25.0 -0.1
baz=86
S20A **Disappointment** 86.14 48 ⇓P P 09 08 25.3 +0.3
baz=86
526A **Mary Lane Ranc** 86.15 57 ⇑P P 09 08 25.7 +0.5
baz=86,SNR=6.1
Y23A **Lovelace Mesa,** 86.18 53 ⇑P P 09 08 25.1 -0.1
baz=86
M17A **Scullys Gap (B** 86.21 44 ⇑P P 09 08 25.7 +0.5
baz=86
TXAR **Lajitas Array** 86.21 58 P P 09 08 26.2 +0.7
comp=Z,5.7nm,0.8s,mb4.3,baz=223,slow=5.3,SNR=64
I15A **Monteview** 86.23 41 ⇓P P 09 08 25.7 +0.4
baz=86
G14A **Jackson** 86.24 40 ⇑P P 09 08 25.6 +0.3
baz=86
K16A **Soda Springs** 86.24 43 ⇓P P 09 08 25.8 +0.5
baz=86
ANMO **Albuquerque** 86.30 52 *e*P P 09 08 25.2 -0.6
C12B **Naegeli Ranch,** 86.31 37 ⇓P P 09 08 25.2 -0.4
baz=86
T21A **Navajo Lake** 86.37 49 ⇑P P 09 08 26.3 +0.1
baz=86
225A **Deer Hill, Car** 86.39 55 ⇓P P 09 08 26.4 +0.1
baz=86
E13A **Victor** 86.41 39 ⇓P P 09 08 24.8 -1.2
baz=86
H15A **Lima** 86.44 41 ⇓P P 09 08 26.7 +0.5

	baz=86,SNR=10							
426A	**McDonald Obser**	86.44	56	⇓P		P	09 08 27.2	+0.6
	baz=86,SNR=6.5							
J16A	**Bone**	86.44	42	⇓P		P	09 08 26.7	+0.4
	baz=86,SNR=15							
Z24A	**Sheeppen Canyo**	86.46	53	⇑P		P	09 08 26.1	-0.6
	baz=86							
627A	**Terlingua Ranc**	86.48	58	⇑P		P	09 08 27.5	+0.7
	baz=86,SNR=18							
S21A	**Coal Bank Pass**	86.48	49	⇓P		P	09 08 27.1	+0.5
	baz=87							
527A	**Woodward Ranch**	86.57	57	⇓P		P	09 08 27.5	+0.3
	baz=87,SNR=7.8							
D13A	**Huson**	86.58	38	⇑P		P	09 08 26.0	-0.8
	baz=87							
F14A	**Wisdom**	86.58	40	⇑P		P	09 08 26.9	0.0
	baz=87							
M18A	**Lyman**	86.58	45	⇑P		P	09 08 27.0	0.0
	baz=87							
U22A	**Llaves**	86.61	50	⇑P		P	09 08 27.3	+0.1
	baz=87							
N18A	**Larsen Ranch,**	86.64	45	⇑P		P	09 08 27.9	+0.6
	baz=87							
Y24A	**Capitan**	86.65	53	⇑P		P	09 08 27.4	-0.1
	baz=87,SNR=10.0							
RRI2	**Red Ridge**	86.66	42	*e*P		P	09 08 27.6	+0.3
Q20A	**Ridgley Place,**	86.68	47	⇓P		P	09 08 27.6	+0.1
	baz=87							
O19A	**Miners Draw (B**	86.71	46	⇓P		P	09 08 27.3	-0.3
	baz=87							
MSO	**Missoula**	86.75	38	⇑P		P	09 08 27.3	-0.3
	baz=87							
BSMT	**Bassoo Peak**	86.78	37	*e*P		P	09 08 27.3	-0.5
G15A	**Dillon**	86.80	40	⇓P		P	09 08 27.8	-0.2
	baz=87,SNR=8.0							
I16A	**Newdale**	86.81	42	⇓P		P	09 08 28.2	+0.3
	baz=87,SNR=9.1							
E14A	**Clinton**	86.81	39	⇓P		P	09 08 27.3	-0.6
	baz=87,SNR=5.7							
DLMT	**Dillon**	86.83	40	*e*P		P	09 08 27.6	-0.4
	comp=Z,8.3nm,1.2s,mb4.3							
V23A	**Ortiz Mt. (NFS**	86.83	51	⇑P		P	09 08 28.6	+0.3
	baz=87							
A12A	**Yaak River Ran**	86.86	36	⇓P		P	09 08 28.0	-0.1
	baz=87							
628A	**Black Gap, Mar**	86.89	58	⇑P		P	09 08 29.0	+0.2
	baz=87							
226A	**Malaga, Loving**	86.93	55	⇑P		P	09 08 28.5	-0.4
	baz=87							
Z25A	**Roswell**	86.93	54	⇓P		P	09 08 28.5	-0.3
	baz=87							
R21A	**Cimarron**	86.95	48	⇓P		P	09 08 29.5	+0.7
	baz=87							
TPAW	**Teton Pass**	86.97	42	*e*P		P	09 08 28.5	-0.3
REDW	**Red Top Meadow**	86.97	43	*e*P		P	09 08 28.7	0.0
	comp=Z,7.9nm,1.0s,mb4.4							
427A	**Hayter Ranch,**	87.01	56	⇓P		P	09 08 29.5	+0.2
	baz=87,SNR=7.2							
J17A	**Brown Place, J**	87.06	43	⇑P		P	09 08 29.4	+0.2
	baz=87							
U23A	**El Rito**	87.07	50	⇓P		P	09 08 29.5	+0.1
	baz=87							
SNOW	**Snow King Moun**	87.08	42	*e*P		P	09 08 29.6	+0.3
F15A	**Butte**	87.13	40	⇓P		P	09 08 29.7	+0.2
	baz=87							
HHC	**Hu-ho-hao-te**	87.13	315	*e*P		P	09 08 32.0	+2.4
HHC				pP		pP	09 10 31.8	-5.8
HHC				PP		PP	09 12 08.0	+3.0
HHC				S		S	09 18 26.3	+6.3
HHC				SS		SS	09 24 30.0	+7.4
HHC				pmax		pmax		
	comp=Z,13nm,0.7s,mb4.8							
HHC				pmax		pmax		
	comp=Z,67nm,4.5s							
D14A	**Greenough**	87.14	38	⇓P		P	09 08 28.7	-0.7
	baz=87							
K18A	**Toltan Ranch,**	87.16	43	⇓P		P	09 08 29.8	+0.1
	baz=87,SNR=9.5							
DAWY	**Dawson**	87.18	16	*e*P		P	09 08 28.7	-0.6
W24A	**Lazy 6 Ranch,**	87.19	52	⇑P		P	09 08 29.8	-0.2
	baz=87							
S22A	**4UR Ranch, Cre**	87.20	49	⇑P		P	09 08 29.8	-0.2
	baz=87							
Y25A	**Mesa, Roswell**	87.21	53	⇑P		P	09 08 30.0	-0.2
	baz=87							
528A	**Cox Ranch, San**	87.23	57	⇓P		P	09 08 30.5	+0.2
	baz=87,SNR=7.3							
O20A	**White River Ci**	87.24	46	⇓P		P	09 08 30.3	+0.2
	baz=87							
LOHW	**Long Hollow**	87.25	42	*e*P		P	09 08 30.0	-0.1
G16A	**Moss Hill, Enn**	87.25	41	⇓P		P	09 08 29.9	-0.2
	baz=87							
EGAK	**Eagle**	87.31	15	*e*P		P	09 08 28.2	-1.6
E15A	**Deer Lodge**	87.33	39	⇑P		P	09 08 30.7	+0.4
	baz=87							
H16A	**Russell Place,**	87.35	41	⇓P		P	09 08 31.2	+0.7
	baz=88,SNR=8.6							
FLWY	**Flagg Ranch**	87.41	42	*e*P		P	09 08 31.6	+0.9
I17A	**Pilgrim Ck.**	87.41	42	⇑P		P	09 08 31.3	+0.5
	baz=88							
J18A	**Kendall Valley**	87.44	43	⇑P		P	09 08 30.9	0.0
	baz=88,SNR=16							
R22A	**Saguache, Gunn**	87.46	49	⇓P		P	09 08 31.7	+0.5
	baz=88							
Z26A	**Caprock**	87.50	54	⇓P		P	09 08 30.9	-0.6
	baz=88,SNR=5.9							
V24A	**Rampart Ranch,**	87.50	51	⇑P		P	09 08 31.1	-0.4
	baz=88							
BW06	**Boulder Array**	87.53	44	⇑P		P	09 08 30.9	-0.5
	baz=88,SNR=6.7							
N20A	**Spence Gulch,**	87.53	46	⇓P		P	09 08 31.2	-0.3
	baz=88							
PDAR	**Pinedale Array**	87.53	44	P		P	09 08 31.1	-0.4
	comp=Z,3.1nm,0.6s,mb4.2,baz=223,slow=3.5,SNR=30							
BOZ	**Bozeman (W)**	87.56	40	⇓P		P	09 08 31.3	-0.2
	baz=88							
BOZ	**Bozeman (W)**	87.56	40	*e*P		P	09 08 30.8	-0.7
Q22A	**Crested Butte,**	87.62	48	⇓P		P	09 08 32.1	+0.2
	baz=88							
F16A	**Kennard Place,**	87.63	40	⇓P		P	09 08 31.7	-0.1
	baz=88							
KMI	**Kunming**	87.64	297	P		P	09 08 34.3	+2.0
KMI				pmax		pmax		
	comp=Z,12nm,1.0s,mb4.6							
328A	**Wristen Ranch,**	87.68	56	⇑P		P	09 08 31.8	-0.6
	baz=88							
D15A	**Lincoln**	87.70	39	⇑P		P	09 08 31.7	-0.4
	baz=88							
SMCO	**Snowmass**	87.71	48	*e*P		P	09 08 32.2	-0.2
I18A	**Diamond G Ranc**	87.79	43	⇓P		P	09 08 32.8	+0.2
	baz=88							
Y26A	**Elida**	87.87	53	⇓P		P	09 08 32.7	-0.6
	baz=88							
M20A	**Sweetwater, Wa**	87.88	45	⇓P		P	09 08 32.9	-0.2
	baz=88							
W25A	**X Bar L Ranch,**	87.90	52	⇑P		P	09 08 33.0	-0.4
	baz=88							
B14A	**Marquette Ranc**	87.91	37	⇑P		P	09 08 32.3	-0.8
	baz=88							
HRY	**Holter Researc**	87.95	39	*e*P		P	09 08 32.7	-0.6
	comp=Z,2.4nm,0.8s,mb4.0							
L20A	**Wamsutter**	88.00	45	⇓P		P	09 08 33.8	+0.2
	baz=88,SNR=8.0							
N21A	**Black Mountain**	88.01	46	⇑P		P	09 08 33.9	+0.2
	baz=88,SNR=5.3							
C15A	**Salmond Ranch,**	88.01	38	⇓P		P	09 08 33.4	-0.1
	baz=88							
K19A	**Absolon Red Bu**	88.03	44	⇑P		P	09 08 32.9	-0.8
	baz=88							
V25A	**Rancho No Teng**	88.03	51	⇑P		P	09 08 33.6	-0.3
	baz=88							
P22A	**Eagle**	88.04	47	⇓P		P	09 08 33.5	-0.4
	baz=88							
Z27A	**Tatum**	88.11	54	⇑P		P	09 08 33.4	-1.0
	baz=88							
A14A	**Double T Ranch**	88.14	37	⇓P		P	09 08 33.8	-0.3
	baz=88							
SDCO	**Great Sand Dun**	88.16	49	⇓P		P	09 08 33.9	-0.6
	baz=88							
F17A	**Fitzpatrick Pl**	88.28	40	⇓P		P	09 08 35.0	+0.2
	baz=88							
K20A	**Yellowstone Ra**	88.29	44	⇓P		P	09 08 34.4	-0.5
	baz=88,SNR=6.8							
Y27A	**Causey**	88.36	54	⇓P		P	09 08 34.7	-0.8
	baz=88							
O22A	**Kremmling**	88.42	47	⇑P		P	09 08 35.7	0.0
	baz=88,SNR=5.4							
M21A	**Separation Pea**	88.48	45	⇓P		P	09 08 35.6	-0.3
	baz=89							
C16A	**Fuhringer Ranc**	88.53	38	⇓P		P	09 08 35.5	-0.5
	baz=89							
A15A	**Johnson Ranch,**	88.53	37	⇓P		P	09 08 35.3	-0.7
	baz=89							
CMAR	**Chiang Mai Arr**	88.68	290	P		P	09 08 38.6	+1.3
	comp=Z,3.5nm,0.8s,mb4.2,baz=104,slow=2.6,SNR=22							
G18A	**Lazy EL Ranch,**	88.69	41	⇓P		P	09 08 37.1	+0.4
	baz=89							
MSTX	**Muleshoe**	88.70	54	⇑P		P	09 08 36.7	-0.3
	baz=89							
N22A	**Wattenberg Ran**	88.76	46	⇓P		P	09 08 37.5	+0.3
	baz=89,SNR=5.7							
D17A	**Six Diamond Ra**	88.85	39	⇓P		P	09 08 37.4	0.0
	baz=89							
F18A	**Big Timber**	88.87	41	⇓P		P	09 08 38.1	+0.5
	baz=89							
O23A	**Lake Granby, G**	88.88	47	⇓P		P	09 08 37.8	0.0
	baz=89							
CD2	**Chengdu**	88.89	303	P		P	09 08 43.0	+5.0
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s,mb4.9							
CD2				pmax		pmax		
	comp=Z,110nm,4.8s							
W27A	**Bowe Ranch, En**	88.90	53	⇑P		P	09 08 37.8	-0.2
	baz=89							
S25A	**Robets Cordova**	88.90	50	⇑P		P	09 08 37.9	0.0
	baz=89							
I20A	**Worland**	89.00	43	⇑P		P	09 08 38.0	-0.2
	baz=89							
K21A	**Alcova**	89.00	44	⇓P		P	09 08 37.9	-0.4
	baz=89,SNR=5.9							
C17A	**Wharram Farm,**	89.03	39	⇑P		P	09 08 38.3	0.0
	baz=89							
E18A	**Harlowton**	89.05	40	⇑P		P	09 08 39.6	+1.2
	baz=89							
SYO	**Syowa Base**	89.07	193	⇑*e*P		P	09 08 36.5	-1.7
N23A	**Red Feather La**	89.15	46	⇓P		P	09 08 39.4	+0.4
	baz=89							
A16A	**West Butte Ran**	89.17	37	⇑P		P	09 08 38.3	-0.6
	baz=89							
R25A	**Fountain Ranch**	89.20	49	⇓P		P	09 08 38.8	-0.5
	baz=89							
L22A	**Ellis Ranch, M**	89.29	45	⇑P		P	09 08 40.2	+0.6
	baz=89							
F19A	**Roth Farm, Mol**	89.33	41	⇓P		P	09 08 39.6	-0.1
	baz=89							
I21A	**Big Trails, Te**	89.48	43	⇓P		P	09 08 40.3	-0.2
	baz=90							
A17A	**Triple J Farms**	89.69	38	⇓P		P	09 08 41.1	-0.2
	baz=90							
E19A	**Rath Farm, Rou**	89.70	40	⇑P		P	09 08 41.3	-0.1
	baz=90							
JCT	**Junction City**	89.75	58	⇑P		P	09 08 41.4	-0.7
	baz=90							
L23A	**Garrett**	89.82	45	⇓P		P	09 08 41.7	-0.3
	baz=90,SNR=6.4							
P25A	**Willow Gulch B**	89.83	48	⇑P		P	09 08 42.6	+0.4
	baz=90							
AMTX	**Amarillo**	89.88	53	⇑P		P	09 08 42.4	-0.1
	baz=90							
B18A	**Beardsley Farm**	89.97	38	⇑P		P	09 08 42.7	+0.1
	baz=90							
C19A	**Slick Wire Ran**	90.11	39	⇓P		P	09 08 43.3	+0.1
	baz=90							
M24A	**Cheyenne**	90.15	46	⇑P		P	09 08 43.6	0.0
	baz=90							
A18A	**Metzger Ranch,**	90.18	38	⇑P		P	09 08 43.2	-0.4
	baz=90							
D20A	**Manuel Ranch,**	90.38	40	⇓P		P	09 08 44.5	0.0
	baz=90							
LZH	**Lanzhou**	90.73	308	P		P	09 08 45.5	-0.9
LZH				pP		pP	09 10 51.8	-3.6
LZH				sP		sP	09 11 48.0	-6.6
LZH				*e*PP		PP	09 12 35.5	+2.2
LZH				pmax		pmax		
	comp=Z,17nm,1.5s,mb4.8							
D21A	**La Casta Ranch**	91.07	40	⇑P		P	09 08 47.7	0.0
	baz=91							
VNA2	**Neumayer--Watz**	91.16	177	*e*P		P	09 08 44.7	-3.1
LAO	**LASA Array**	91.39	41	⇑P		P	09 08 49.5	+0.3
	baz=92							
VNA1	**Neumayer--Stat**	91.39	177	*e*P		P	09 08 46.7	-2.1
DGMT	**Dagmar**	93.37	40	⇓P		P	09 08 58.3	+0.1
	baz=94							
WMQ	**Urumqi**	104.78	312	*e*P		Pdif	09 09 50.5	+1.2
WMQ				pmax		pmax		
	comp=Z,4.0nm,0.8s							
WMQ				pmax		pmax		
	comp=Z,35nm,3.6s							
ZAA0	**Zalesovo Array**	108.12	322	*e*PKPdf		PKiKP	09 14 12.0	+5.3
ZALV	**Zalesovo Beam**	108.12	322	PKiKP		PKiKP	09 14 05.0	-1.7
	comp=Z,0.7nm,0.5s,baz=180,slow=1.4,SNR=3.0							
MKAR	**Makanchi Array**	108.99	314	PKiKP		PKiKP	09 14 07.3	-1.3
	comp=Z,0.7nm,0.5s,baz=206,slow=0.6,SNR=10							
MIV	**Mineville/With**	113.03	49	*e*PKPdf		PKiKP	09 14 11.8	-4.6
BUR08	**Bucovina Ar. S**	144.52	332	*e*PKPbc		PKPdf	09 15 16.5	+1.1
BR131	**Keskin Array S**	144.64	315	*e*PKPdf		PKPdf	09 15 16.1	+0.3
BRTR	**Keskin Array B**	144.64	315	PKP		PKPdf	09 15 15.9	+0.2
	comp=Z,4.6nm,0.8s,baz=129,slow=1.8,SNR=15							
CLL	**Collm**	145.44	347	*i* PKPbc		PKPbc	09 15 17.6	-0.6
	comp=Z,6.0nm,0.6s							
WTTA	**Wattenberg**	149.56	346	⇑*i*PKPbc		PKPbc	09 15 28.7	-0.2
	comp=Z,5.5nm,0.7s							

*ISCJB **28** 09:10:36.5±1.6,33°.46N±0°.08×35°.60E±0°.08,h10km±13km, Error ellipse: s-maj=14.0km s-min=10.8km az=5.1*
*CSEM **28** 09:10:36.6±0.4,33°.43N×35°.60E,h2km,ML3.2, Error ellipse: s-maj=18.3km s-min=7.1km az=89.0*
*GRAL **28** 09:10:36.9±0.3,33°.43N×35°.61E,h7km±8km,MD3.2*
ISC 28 09:10:36.3±1.9,33°.44N±0°.09×35°.61E±0°.09,h15km±13km, n7,σ0s04/11,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCY	**Rachaya**	0.18	76	*e*P	Pg	09 10 40.6	0.0
RCY				*e*S	Sg	09 10 43.5	-0.1
RCY	**Rachaya**	0.18	76	*e*P	Pg	09 10 40.7	+0.1
RCY				*e*S	Sg	09 10 43.5	0.0
MATL	**Matarih**	0.24	281	*e*P	Pg	09 10 41.5	0.0
MATL	**Matarih**	0.24	281	*e*P	Pg	09 10 41.5	0.0
BHL	**Bhannes**	0.46	5	*e*P	Pg	09 10 45.5	-0.1
BHL				*e*S	Sg	09 10 51.8	0.0
BHL	**Bhannes**	0.46	5	*e*P	Pg	09 10 45.5	0.0
BHL				*e*S	Sg	09 10 51.8	+0.1
HWQ	**Hawqa**	0.88	19	*e*P	Pb	09 10 53.2	0.0

*THR **28** 09:13:11.9±0.6,31°.92N×47°.24E,h37km±10km,ML3.6*
*ISCJB **28** 09:13:13.8±1.4,32°.29N±0°.03×47°.44E±0°.06,h8km±10km, Error ellipse: s-maj=9.0km s-min=5.1km az=171.4*
*KISR **28** 09:13:14.0±1.0,32°.36N×47°.66E,h44km±999km,ML3.1*
*TEH **28** 09:13:16.8,32°.31N×47°.43E,h22km*
*SGS **28** 09:13:19.0,32°.15N×47°.61E,h4km*
ISC 28 09:13:14.2±1.5,32°.28N±0°.03×47°.40E±0°.06,h4km±10km, n23,σ0s78/30,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	1.20	98	*e*Pg	Pg	09 13 36.5	-0.8
SHGR				*e*Sg	Sg	09 13 54.4	+1.6
SHGR				AML	AML	09 13 57.3	
	comp=N,4μm,0.4s						
IKOM	**Komasi**	1.89	3	*e*Pn	Pn	09 13 47.5	+0.2
IKOM				*e*Sg	Sg	09 14 15.2	+0.1
IKOM				*e*		09 14 16.9	
	comp=Z,3μm,0.2s						
IGHG	**Ghaleghazi**	2.16	341	*e*Pn	Pn	09 13 51.4	+0.4
IGHG				*e*		09 14 47.6	
	comp=Z,2μm,0.5s						
IVIS	**Veis**	2.29	349	*e*Pn	Pn	09 13 52.6	-0.2
IVIS				*e*		09 14 41.4	
	comp=Z,988nm,0.0s						
MIB	**Mutribah**	2.47	181	*e*P	Pn	09 13 55.6	+0.3
MIB				*e*S	Sn	09 14 26.3	+0.4
MIB				AML	AML	09 14 27.8	
	comp=Z,86nm,0.4s						
ILIN	**Lien**	2.66	352	*e*Pn	Pn	09 13 58.3	+0.5
IPIR	**Pirpir**	2.98	81	*e*Pn	Pn	09 14 02.6	+0.3
IPIR				*e*		09 14 52.0	
	comp=N,2μm,0.2s						
NAY	**Al-Naaiem**	3.02	183	*e*P	Pn	09 14 02.9	+0.1
NAY				*e*S	Sn	09 14 40.2	+0.7
NAY				AML	AML	09 14 43.4	
	comp=Z,30nm,0.5s						
ASAO	**Ashtian**	3.15	43	*e*Pn	Pn	09 14 06.0	+1.3
ASAO				AML	AML	09 14 54.8	
	comp=N,87nm,0.7s						
ASAO				AML	AML	09 15 03.9	
	comp=E,66nm,0.8s						
RDF	**Al-Radifah**	3.34	178	*e*P	Pn	09 14 07.9	+0.6
RDF				*e*S	Sn	09 14 48.4	+0.9
RDF				AML	AML	09 14 49.5	
	comp=Z,37nm,0.4s						
QRN	**Al-Qurain**	3.55	173	*e*P	Pn	09 14 10.1	0.0
QRN				*e*S	Sn	09 14 52.2	-0.4
QRN				AML	AML	09 14 53.6	
	comp=Z,57nm,0.3s						
IKLH	**Kolahrood**	3.67	72	*e*Pn	Pn	09 14 12.1	+0.3
IKLH				*e*		09 14 29.9	
	comp=Z,991nm,0.3s						
IRAZ	**Razeghan**	3.76	33	*e*Pn	Pn	09 14 13.3	+0.3
IRAZ				*e*		09 14 23.4	
	comp=Z,963nm,0.2s						
GHVR	**GHOM**	3.93	55	*e*Pn	Pn	09 14 16.1	+0.8
GHVR				AML	AML	09 15 04.8	
	comp=E,65nm,0.7s						
GHVR				AML	AML	09 15 28.4	
	comp=N,43nm,0.7s						
IGAR	**Gharneh**	3.93	87	*e*Pn	Pn	09 14 15.1	-0.3
IGAR				*e*		09 15 02.4	
	comp=Z,1μm,0.2s						
IZEF	**Zefreh**	4.21	80	*e*Pn	Pn	09 14 18.9	-0.3
IZEF				*e*		09 14 32.4	
	comp=Z,556nm,0.2s						
IVRN	**Varamin**	4.51	52	*e*Pn	Pn	09 14 22.3	-1.1
IVRN				*e*Pn	Pn	09 14 23.2	-0.2
IVRN				*e*		09 14 37.0	
	comp=Z,606nm,0.3s						
ISFB	**Sefidab**	4.55	62	*e*Pn	Pn	09 14 23.3	-0.6
ISFB				*e*		09 14 41.0	
	comp=Z,274nm,0.3s						
NASN	**Na'in**	4.60	82	*e*Pn	Pn	09 14 23.8	-0.7
IDMV	**Damavand**	5.07	48	*e*Pn	Pn	09 14 30.4	-0.5
IDMV				*e*		09 14 51.0	
	comp=Z,234nm,0.3s						
ISHM	**Shahmirzad**	6.03	53	*e*Pn	Pn	09 14 43.2	-0.9
BTHS		8.75	159	P	Pn	09 15 19.4	-2.1
HRDDS		9.49	168	P	Pn	09 15 30.0	-1.8

IDC 28 09:16:05.3±4.7,6°.54S×149°.30E,h0km,mb3.0/1, mb1 3.4/2,mb1mx3.2/15,mbtmp3.1/2,ML3.6/1,Error ellipse: s-maj=198.1km s-min=48.3km az=116.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	19.72	226	P	Pn	09 20 37.5	-0.5
	0.2nm,0.3s,baz=53,slow=11,SNR=6.3						
ASAR	**Alice Springs**	22.57	219	P	P	09 21 06.8	-0.5
	0.6nm,0.7s,baz=48,slow=9.0,SNR=8.0						
TORD	**Torodi Ar. Bea**	147.44	284	PKPbc	PKPbc	09 35 51.6	-0.7
	0.4nm,0.6s,baz=63,slow=2.3,SNR=2.5						

IDC 28 09:16:44.9±3.7,7°.15S×150°.76E,h0km,mb3.0/2, mb1 3.4/2,mb1mx3.2/15,mbtmp3.2/2,Error ellipse: s-maj=149.7km s-min=48.0km az=121.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	20.39	230	P	P	09 21 23.2	-0.3
	0.4nm,0.6s,baz=55,slow=11,SNR=3.6						
ASAR	**Alice Springs**	23.06	223	P	P	09 21 52.0	-0.1
	0.6nm,0.6s,baz=58,slow=9.3,SNR=4.9						
TORD	**Torodi Ar. Bea**	149.00	284	PKPbc	PKPbc	09 36 35.7	-0.3
	0.3nm,0.7s,baz=58,slow=3.8,SNR=2.8						

*IDC **28** 09:20:26.6±0.6,49°.92N×130°.09W,h0km,mb4.2/17, mb1 4.4/24,mb1mx4.4/31,mbtmp4.3/24,ML4.3/6,MS4.1/28, Ms1 4.1/28,ms1mx3.9/40,Error ellipse: s-maj=16.9km s-min=10.6km az=57.0*
*BJI **28** 09:20:27.0,50°.10N×129°.70W,h10km,mB5.1/10, mb5.0/17,Ms4.8/12,Ms7 4.5/12*
*PGC **28** 09:20:27.7±12.0,49°.90N×129°.90W,h10km,ML4.0/10, Mw4.6, 197km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **28** 09:20:28.6±0.2,50°.15N±0°.02×129°.64W±0°.04,h10km, mb4.7/77,MS4.2/32,Error ellipse: s-maj=4.4km s-min=2.0km az=42.7*
*MOS **28** 09:20:28.2±1.1,50°.15N×129°.69W,h10km,mb5.0/25, Error ellipse: s-maj=9.4km s-min=4.3km az=120.1*
*NEIC **28** 09:20:30.5±0.2,50°.15N×129°.68W,h10km,mb4.8/85, MW4.9(PGC),Error ellipse: s-maj=5.7km s-min=2.2km az=45.0*
*GCMT **28** 09:20:31.0±0.2,49°.78N×130°.16W,h17km±1km,MW5.0, Moment Tensor Solution. s36,c41; s87,c130; Moment tensor: Scale 10¹⁶Nm; Mrr=0.64±.13; Mθθ=3.05±.11; Mφφ3.69±.12; Mrθ=0.68±.31; Mrφ=-1.24±.10; Mθφ1.21±.31; Best double couple: M0 3.80000×10¹⁶ NP1 φs36.00000°, δ72.00000°, λ3.00000°. NP2 φs305.00000°, δ87.00000°, λ162.00000°. Principal axes: T 4.2600, Plg15.0000°, Azm259.0000°; N -0.9100, Plg72.0000°, Azm115.0000°; P -3.3600, Plg10.0000°, Azm352.0000°; Data Used: II IU CN IC G.*
ISC 28 09:20:30.5±0.2,50°.18N±0°.02×129°.65W±0°.04,h10km, (h14km±1.1km:pP-P),n297,σ1s17/288,mb4.7/77,MS4.2/32, 4C-4D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	1.07	64	⇑Pn	Pn	09 20 50.5	-1.1
BPBC	**Brooks Peninsu**	1.21	90	⇑Pn	Pn	09 20 50.7	-2.7
PHC	**Port Hardy**	1.51	69	⇑Pn	Pn	09 20 56.6	-1.0
PHC				⇑Sn	Sn	09 21 17.5	+0.2
MAYB	**Maynard**	1.61	81	⇑Pn	Pn	09 20 56.9	-1.9
EDB	**Eliza Dome**	1.66	100	⇑Pn	Pn	09 20 56.2	-3.4
EDB				⇑Sn	Sn	09 21 17.3	-3.7
WOSB	**Woss**	1.98	89	Pn	Pn	09 21 02.3	-1.7
ETB	**Estevan Point**	2.17	111	⇓Pn	Pn	09 21 03.9	-2.8
BBB	**Bella Bella**	2.23	25	Pn	Pn	09 21

YBH **Yreka Blue Hor** 9.73 148 *e*P P 09 22 51.4 +1.0
SKAG **Skagway** 9.85 343 *e*P P 09 22 54.7 +2.7
25nm,1.4s
BSMT **Bassoo Peak** 10.04 98 *e*Pn Pn 09 22 55.7 +1.1
BLMT **Blacktail Moun** 10.26 96 *e*Pn Pn 09 22 58.7 +1.1
WALA **Waterton Lakes** 10.28 90 *e*Pn Pn 09 22 59.3 +1.4
JTMT **Jette** 10.40 98 *e*Pn Pn 09 23 00.2 +0.7
MOD **Modoc** 10.52 138 *e*Pn Pn 09 23 01.9 +0.8
EDM **Edmonton** 10.56 67 *e*Pn Pn 09 23 03.7 +1.9
SWMT **Swartz Lake** 10.66 99 *e*Pn Pn 09 23 03.7 +0.6
WDC **Whiskeytown Da** 10.82 150 *e*Pn Pn 09 23 06.5 +1.1
WVOR **Wild Horse Val** 10.86 131 *e*Pn Pn 09 23 06.4 +0.6
42nm,1.3s
WVOR **Wild Horse Val** 10.86 131 *e*P Pn 09 23 06.4 +0.6
WVOR pmax pmax
comp=Z,42nm,1.3s
MSO **Missoula** 10.95 102 *e*Pn Pn 09 23 06.8 -0.3
SLMT **Seeley Lake** 11.08 99 *e*Pn Pn 09 23 08.8 0.0
CHMT **Chamberlain Mo** 11.35 100 *e*Pn Pn 09 23 12.8 +0.3
HYT **Haines Junctio** 11.55 340 *e*Pn Pn 09 23 20.4 +5.3
OHCM **Honcut** 12.29 149 *e*Pn Pn 09 23 27.1 +1.7
LRM **Limekiln Ridge** 12.31 104 *e*Pn Pn 09 23 25.3 -0.4
HRY **Holter Researc** 12.33 100 *e*Pn Pn 09 23 26.0 +0.1
HLID **Hailey** 12.34 117 *e*Pn Pn 09 23 26.1 0.0
DLMT **Dillon** 12.44 106 *e*Pn Pn 09 23 26.9 -0.6
comp=Z,32nm,0.8s
MCMT **McKenzie Canyo** 12.55 109 *e*Pn Pn 09 23 28.8 -0.1
comp=Z,13nm,0.8s
PAHR **Pah Rah Range** 12.74 141 *e*Pn Pn 09 23 32.6 +1.1
BOZ **Bozeman (W)** 12.91 104 *e*Pn Pn 09 23 34.1 +0.3
WCN **Washoe City** 12.94 143 *e*P Pn 09 23 35.0 +0.7
comp=Z,34nm,1.2s
WCN **Washoe City** 12.94 143 *e*P Pn 09 23 35.0 +0.7
WCN pmax pmax
comp=Z,34nm,1.2s
BMN **Battle Mountai** 13.08 133 *e*Pn Pn 09 23 37.1 +0.9
EGMT **Eagleton** 13.21 92 *e*Pn Pn 09 23 38.0 +0.1
comp=Z,189nm,1.6s
BMRM **Bremner River** 13.68 328 *e*Pn Pn 09 23 43.4 -0.9
comp=Z,45nm,1.5s
WAKR **Walker** 13.76 144 *e*Pn Pn 09 23 50.0 +4.5
YMR **Madison River** 13.79 106 *e*Pn Pn 09 23 46.0 +0.2
comp=Z,226nm,1.4s
CMB **Columbia Colle** 13.83 148 *e*Pn Pn 09 23 46.6 +0.2
YNR **Norris Junctio** 13.94 106 *e*Pn Pn 09 23 48.9 +1.0
YFT **Old Faithful** 13.98 107 *e*Pn Pn 09 23 51.1 +2.7
GCMT **Greycliff** 14.08 101 *e*Pn Pn 09 23 51.6 +1.8
comp=Z,9.7nm,0.7s
LKWY **Lake** 14.19 106 *e*Pn Pn 09 23 53.2 +2.0
DIV **Divide** 14.20 327 *e*Pn Pn 09 23 53.3 +1.9
IMW **Indian Meadow** 14.21 109 *e*Pn Pn 09 23 52.6 +1.1
FLWY **Flagg Ranch** 14.25 108 *e*Pn Pn 09 23 53.6 +1.4
NVAR **Mina Array Bea** 14.27 141 Pn Pn 09 23 52.1 -0.2
comp=Z,0.1nm,0.3s,baz=318,slow=12,SNR=14
RRI2 **Red Ridge** 14.28 112 *e*Pn Pn 09 23 55.0 +2.4
MOOW **Moose Ponds** 14.41 109 *e*Pn Pn 09 23 55.5 +1.2
HVU **Hansel Valley** 14.41 119 *e*Pn Pn 09 23 56.2 +1.9
TPAW **Teton Pass** 14.43 110 *e*Pn Pn 09 23 56.2 +1.6
REDW **Red Top Meadow** 14.56 111 *e*Pn Pn 09 23 57.8 +1.5
SNOW **Snow King Moun** 14.56 110 *e*Pn Pn 09 23 58.2 +1.9
LOHW **Long Hollow** 14.57 110 *e*Pn Pn 09 23 57.5 +1.1
RLMT **Red Lodge** 14.63 102 *e*Pn Pn 09 23 58.6 +1.3
AHID **Auburn Hatcher** 14.76 113 *e*Pn Pn 09 24 02.2 +3.2
YKA **Yellowknife Ar** 14.84 28 Pn Pn 09 24 00.0 0.0
YKA Sn Sn 09 26 41.5 -2.8
YKA LR LR 09 29 08.2
YKA **Yellowknife Ar** 14.84 28 Pn Pn 09 23 60.0 0.0
comp=Z,0.4nm,0.3s,baz=220,slow=12,SNR=12
YKA Sn Sn 09 26 41.5 -2.8
comp=Z,0.2nm,0.3s,baz=216,slow=22,SNR=4.2
YKA LR LR 09 29 08.2
comp=Z,33nm,19.7s,baz=160,slow=34
YKA **Yellowknife Ar** 14.84 28 P Pn 09 24 00.0 0.0
YKA 09 26 41.5
BGU **Big Grassy Mou** 14.85 122 *e*Pn Pn 09 24 00.7 +0.5
comp=Z,17nm,1.0s
DAWY **Dawson** 14.86 343 *e*Pn Pn 09 24 02.6 +2.3
MENT **Mentasta** 14.90 334 *e*P Pn 09 24 01.5 +0.7
SPUT **South Promonto** 14.90 120 *e*Pn Pn 09 24 02.4 +1.3
comp=Z,132nm,1.7s
SEW **Seward** 15.00 319 *e*Pn Pn 09 24 04.1 +1.9
comp=Z,40nm,1.3s
MTUM **Tungsten Hills** 15.10 144 *e*Pn Pn 09 24 03.8 +0.1
HWUT **Hardware Ranch** 15.21 117 *e*Pn Pn 09 24 07.4 +2.3
comp=Z,107nm,1.8s
KDAK **Kodiak Island** 15.43 308 *e*Pn Pn 09 24 08.9 +1.0
comp=Z,65nm,1.4s
KDAK **Kodiak Island** 15.43 308 Pn Pn 09 24 08.1 +0.2
comp=Z,0.2nm,0.3s,baz=124,slow=6.9,SNR=7.5
KDAK LR LR 09 28 25.1
comp=Z,1μm,20.3s,baz=122,slow=31
KDAK **Kodiak Island** 15.43 308 *e*P Pn 09 24 08.9 +1.0
KDAK pmax pmax
comp=Z,65nm,1.4s
PAX **Paxson** 15.43 332 *e*Pn Pn 09 24 08.3 +0.3
comp=Z,21nm,1.3s
PAX **Paxson** 15.43 332 *e*P Pn 09 24 08.3 +0.4
PAX pmax pmax
comp=Z,21nm,1.3s
DUG **Dugway** 15.48 124 *e*Pn Pn 09 24 08.5 -0.2
comp=Z,121nm,1.6s
DUG **Dugway** 15.48 124 *e*P Pn 09 24 08.5 -0.2
DUG pmax pmax
comp=Z,121nm,1.6s
NOQ **North Oquirrh** 15.53 121 *e*P Pn 09 24 14.7 +5.3
comp=Z,49nm,1.1s
SLKM **Skilak Lake** 15.54 320 *e*Pn Pn 09 24 10.0 +0.7
DOT **Dot Lake** 15.56 336 *e*Pn Pn 09 24 10.6 +0.9
comp=Z,140nm,1.3s
SML **Sawmill** 15.57 325 *e*Pn Pn 09 24 09.2 -0.5
comp=Z,16nm,1.3s
SML **Sawmill** 15.57 325 *e*P Pn 09 24 09.2 -0.5
SML pmax pmax
comp=Z,15nm,1.3s
RC01 **Rabbit Creek A** 15.67 322 *e*Pn Pn 09 24 11.2 +0.2
comp=Z,30nm,1.2s
BW06 **Boulder Array** 15.68 111 *e*Pn Pn 09 24 13.2 +2.0
comp=Z,225nm,1.8s
PDAR **Pinedale Array** 15.68 111 Pn Pn 09 24 13.2 +1.9
comp=Z,0.6nm,0.3s,baz=307,slow=8.7,SNR=108
PDAR LR LR 09 30 32.4
comp=Z,513nm,18.7s,baz=311,slow=38
PMR **Palmer** 15.73 324 *e*P Pn 09 24 13.6 +1.8
comp=Z,61nm,1.7s
PMR **Palmer** 15.73 324 *e*P Pn 09 24 13.6 +1.8
PMR pmax pmax
comp=Z,61nm,1.7s
EGAK **Eagle** 15.84 342 *e*Pn Pn 09 24 15.0 +1.7
comp=Z,67nm,1.1s
LAO **LASA Array** 15.92 94 *e*Pn Pn 09 24 14.1 -0.2
comp=Z,75nm,1.0s
JLU **Jordanelle** 15.94 120 *e*Pn Pn 09 24 15.6 +1.0
comp=Z,43nm,1.5s
NLU **North Lily Min** 16.05 123 *e*Pn Pn 09 24 16.4 +0.4
comp=Z,26nm,1.0s
DAU **Daniels Canyon** 16.18 120 *e*Pn Pn 09 24 18.4 +0.7
MPU **Maple Canyon** 16.24 122 *e*Pn Pn 09 24 19.3 +0.7
comp=Z,29nm,1.4s
RSO **Redoubt South** 16.60 317 *e*Pn Pn 09 24 25.7 +2.8
ISA **Isabella** 16.63 147 *e*Pn Pn 09 24 24.5 +1.0
comp=Z,41nm,1.3s
ISA **Isabella** 16.63 147 *e*P Pn 09 24 24.5 +0.9
ISA pmax pmax
comp=Z,41nm,1.3s
DGMT **Dagmar** 16.66 86 *e*Pn Pn 09 24 24.5 +0.6
comp=Z,369nm,1.6s
ARUT **Antelope Range** 16.97 131 *e*Pn Pn 09 24 26.9 -0.9
comp=Z,20nm,1.0s
ARUT **Antelope Range** 16.97 131 *e*P Pn 09 24 26.9 -0.9
ARUT pmax pmax
comp=Z,20nm,1.0s
TMUT **Trail Mountain** 16.98 123 *e*Pn Pn 09 24 28.8 +0.8
comp=Z,125nm,2.1s
MSU **Marysvale** 17.05 127 *e*Pn Pn 09 24 28.4 -0.4
MCK **McKinley** 17.07 330 *e*Pn Pn 09 24 30.2 +1.4
comp=Z,72nm,1.4s
MCK **McKinley** 17.07 330 *e*P Pn 09 24 30.2 +1.4
MCK pmax pmax
comp=Z,72nm,1.4s
CCUT **Cedar City** 17.20 131 *e*Pn Pn 09 24 29.9 -0.8
comp=Z,32nm,1.3s
ILAR **Eielson Array** 17.21 335 P Pn 09 24 30.6 -0.1
comp=Z,0.1nm,0.3s,baz=152,slow=11,SNR=29
ILAR PcP PcP 09 29 12.3 -1.3
comp=Z,0.0nm,0.3s,baz=190,slow=4.2,SNR=3.7
ILAR LR LR 09 30 40.7
comp=Z,759nm,19.4s,baz=10,slow=35
SHPR **Sheep Range** 17.22 137 *e*Pn Pn 09 24 30.4 -0.6
TRF **Thorofare Moun** 17.32 328 *e*P Pn 09 24 34.5 +2.4
comp=Z,138nm,1.7s
FFC **Flin Flon** 17.41 64 *e*Pn Pn 09 24 32.5 -0.7
comp=Z,167nm,0.9s
FFC **Flin Flon** 17.41 64 *ce*P Pn 09 24 33.1 -0.1
SRU **San Rafael** 17.49 122 *e*Pn Pn 09 24 34.7 +0.4
comp=Z,39nm,0.9s
SRU **San Rafael** 17.49 122 *e*P Pn 09 24 34.7 +0.4
SRU pmax pmax
comp=Z,39nm,0.9s
COLA **College** 17.56 334 *e*P Pn 09 24 37.2 +2.2
comp=Z,22nm,1.1s
COLA **College** 17.56 334 *e*P Pn 09 24 37.2 +2.2
COLA pmax pmax
comp=Z,22nm,1.1s
GSC **Goldstone** 17.57 143 *e*P Pn 09 24 36.5 +1.1
comp=Z,41nm,1.4s
GSC **Goldstone** 17.57 143 *e*P Pn 09 24 36.5 +1.2
GSC pmax pmax
comp=Z,41nm,1.4s
PPLA **Purkeypile** 17.66 325 *e*P Pn 09 24 37.6 +1.4
comp=Z,64nm,1.4s
RWWY **Rawlins** 17.72 110 *e*Pn Pn 09 24 36.8 -0.3
comp=Z,78nm,1.4s
BPAW **Bear Paw Mtn.** 17.98 329 *e*P Pn 09 24 40.3 +0.1
comp=Z,63nm,1.3s
MWC **Mount Wilson** 18.08 148 *e*Pn Pn 09 24 41.6 0.0
comp=Z,71nm,1.8s
MWC **Mount Wilson** 18.08 148 *e*P Pn 09 24 41.6 0.0
MWC pmax pmax
comp=Z,71nm,1.8s
PASC **Pasadena Art C** 18.08 148 *e*P Pn 09 24 41.5 -0.1
comp=Z,138nm,1.4s
CHGN **Chignik** 18.18 301 *e*Pn Pn 09 24 44.8 +2.1
INK **Inuvik** 18.28 355 *e*Pn Pn 09 24 44.9 +1.1
comp=Z,56nm,1.1s
INK **Inuvik** 18.28 355 P Pn 09 24 44.9 +1.1
comp=Z,0.2nm,0.3s,baz=164,slow=11,SNR=28
INK LR LR 09 32 33.7
comp=Z,675nm,18.3s,baz=148,slow=39
INK **Inuvik** 18.28 355 *e*P Pn 09 24 44.9 +1.1
INK pmax pmax
comp=Z,56nm,1.1s
RSSD **Black Hills** 18.40 99 *e*P Pn 09 24 43.9 -1.5
comp=Z,59nm,1.3s
RSSD **Black Hills** 18.40 99 *e*P Pn 09 24 43.9 -1.5
RSSD pmax pmax
comp=Z,59nm,1.3s
LDFC **Landfair** 18.45 139 *e*P Pn 09 24 45.1 -1.0
comp=Z,90nm,1.3s
PV04 **Paradox Valley** 18.89 121 *e*P Pn 09 24 50.8 -0.7
PHWY **Pilot Hill** 19.01 109 *e*P Pn 09 24 52.0 -0.9
comp=Z,32nm,1.0s
TTA **Tatalina** 19.15 322 *e*P Pn 09 24 52.9 -1.6
PFO **Pinyon Flat Ob** 19.21 145 *e*Pn Pn 09 24 56.4 +1.1
comp=Z,7.1nm,0.8s
PFO **Pinyon Flat Ob** 19.21 145 *e*P Pn 09 24 56.4 +1.1
PFO pmax pmax
comp=Z,7.0nm,0.8s
SDPT **Sand Point** 19.26 297 *e*P Pn 09 24 54.3 -1.4
comp=Z,532nm,2.2s
PV01 **Paradox Valley** 19.26 121 *e*P Pn 09 24 54.5 -1.4
comp=Z,11μm,1.5s
SMCO **Snowmass** 19.44 116 *e*P Pn 09 24 57.0 -1.1
comp=Z,186nm,2.1s
WUAZ **Wupatki** 19.78 131 *e*P Pn 09 25 00.3 -1.9
comp=Z,29nm,1.1s
ISCO **Idaho Springs** 19.84 112 *e*P Pn 09 25 01.9 -0.9
comp=Z,32nm,1.1s
ISCO **Idaho Springs** 19.84 112 *e*P Pn 09 25 01.9 -0.9
ISCO pmax pmax
comp=Z,32nm,1.1s
BAR **Barrett** 19.96 146 *e*Pn Pn 09 25 04.2 -0.1
comp=Z,28nm,1.2s
MVCO **Mesa Verde** 19.96 122 *e*P Pn 09 25 02.1 -2.3
comp=Z,271nm,1.6s
GLA **Glamis** 20.33 142 *e*P P 09 25 06.0 -0.6
comp=Z,28nm,1.0s
GLA **Glamis** 20.33 142 *e*P P 09 25 06.0 -0.6
GLA pmax pmax
comp=Z,28nm,1.0s
SDCO **Great Sand Dun** 21.26 117 *e*P P 09 25 16.7 0.0
comp=Z,147nm,1.9s,mb5.0
OGNE **Ogallala** 21.32 105 *e*P P 09 25 17.9 +0.5
comp=Z,615nm,2.0s,mb5.6
ULM **Laguna Bonnet** 21.51 77 P P 09 25 20.7 +1.4
comp=Z,99nm,0.9s,mb5.2,baz=286,slow=12,SNR=25
ULM LR LR 09 34 24.8
comp=Z,601nm,21.4s,MS4.0,baz=316,slow=38
AGMN **Agassiz Nation** 22.04 82 *e*P P 09 25 24.3 -0.7
comp=Z,212nm,1.9s,mb5.2
TUC **Tucson** 22.70 135 *e*P P 09 25 30.4 -1.6
comp=Z,48nm,1.5s,mb4.7
TUC **Tucson** 22.70 135 *e*P P 09 25 30.4 -1.6
TUC pmax pmax
comp=Z,47nm,1.5s,mb4.7
ANMO **Albuquerque** 22.75 123 *e*P P 09 25 31.6 -1.0
comp=Z,24nm,1.0s,mb4.6
ANMO **Albuquerque** 22.75 123 P P 09 25 31.7 -0.8
comp=Z,8.2nm,0.9s,mb4.2,baz=319,slow=10.0,SNR=40
ANMO LR LR 09 34 21.5
comp=Z,249nm,18.0s,MS3.7,baz=162,slow=36
ANMO **Albuquerque** 22.75 123 *e*P P 09 25 31.6 -1.0
ANMO pmax pmax
comp=Z,24nm,1.0s
LAZ **Ladron** 22.80 125 *e*P P 09 25 32.7 -0.5
comp=Z,38nm,1.8s,mb4.5
LENM **Lemitar** 23.07 125 *e*P P 09 25 35.9 -0.1
LPM **Los Pinos Moun** 23.14 125 *e*P P 09 25 36.6 -0.2
BNM **Barren Site** 23.27 125 *e*P P 09 25 37.4 -0.7
comp=Z,29nm,1.1s,mb4.6
ECSD **EROS Data Cent** 23.32 93 *e*P P 09 25 37.7 -0.8
comp=Z,112nm,1.0s,mb5.2
CBKS **Cedar Bluff** 24.01 107 *e*P P 09 25 46.0 +0.8
comp=Z,55nm,1.9s,mb5.5
CBKS **Cedar Bluff** 24.01 107 *e*P P 09 25 46.0 +0.8
CBKS pmax pmax
comp=Z,350nm,1.9s,mb5.5
EYMN **Ely** 24.92 80 *e*P P 09 25 53.8 +0.3
comp=Z,70nm,0.8s,mb5.2
AMTX **Amarillo** 25.46 116 *e*P P 09 25 57.8 -0.7
comp=Z,77nm,0.9s,mb5.2
KSU1 **Kansas State U** 25.78 103 *e*P P 09 26 01.6 +0.3
comp=Z,54nm,1.0s,mb5.0
MNTX **Cornudas Mount** 25.83 126 *e*P P 09 26 01.1 -0.7
comp=Z,83nm,1.9s,mb4.9
SCIA **State Center** 26.39 94 *e*P P 09 26 07.5 +0.7
comp=Z,198nm,1.7s,mb5.4
COWI **Conover** 27.10 83 *e*P P 09 26 13.4 +0.3
comp=Z,23nm,0.9s,mb4.7
WMOK **Wichita Mounta** 27.26 113 *e*P P 09 26 13.9 -0.8
comp=Z,20nm,0.9s,mb4.7
WMOK **Wichita Mounta** 27.26 113 *e*P P 09 26 13.9 -0.8
WMOK pmax pmax
comp=Z,20nm,0.9s,mb4.7
JFWS **Jewell Farm** 27.80 90 *e*P P 09 26 20.2 +0.8
comp=Z,58nm,1.0s,mb5.2
JFWS **Jewell Farm** 27.80 90 *e*P P 09 26 20.3 +0.9
JFWS pmax pmax
comp=Z,58nm,1.0s,mb5.2
RES **Resolute Bay** 28.50 19 LR LR 09 38 38.6
comp=Z,153nm,19.1s,MS3.6,baz=275,slow=38
TXAR **Lajitas Array** 28.61 127 P P 09 26 25.4 -1.3
comp=Z,3.2nm,0.8s,mb4.1,baz=328,slow=7.5,SNR=29
TXAR PcP PcP 09 29 37.5 -0.1
comp=Z,0.3nm,0.7s,baz=291,slow=3.8,SNR=3.7
HDIL **Hopedale** 29.62 93 *e*P P 09 26 35.6 0.0
comp=Z,33nm,1.1s,mb5.0
JCT **Junction City** 29.78 120 *e*P P 09 26 35.8 -1.3
comp=Z,18nm,0.9s,mb4.8
JCT **Junction City** 29.78 120 *e*P P 09 26 35.8 -1.4
JCT pmax pmax
comp=Z,18nm,0.9s,mb4.8
CCM **Cathedral Cave** 29.79 99 *e*P P 09 26 36.3 -0.8
comp=Z,26nm,1.3s,mb4.8
CCM **Cathedral Cave** 29.79 99 *e*P P 09 26 36.3 -0.9
CCM pmax pmax
comp=Z,26nm,1.3s,mb4.8
MIAR **Mount Ida** 30.54 107 *e*P P 09 26 43.7 -0.1
comp=Z,56nm,1.4s,mb5.2
MIAR **Mount Ida** 30.54 107 *e*P P 09 26 43.7 -0.2
MIAR pmax pmax
comp=Z,56nm,1.4s,mb5.2
UALR **University of** 31.15 105 *e*P P 09 26 49.2 0.0
comp=Z,15nm,0.9s,mb4.8
SIUC **Southern Illin** 31.28 98 *e*P P 09 26 49.7 -0.7
comp=Z,20nm,1.0s,mb4.9
OLIL **Olney** 31.40 95 *e*P P 09 26 50.8 -0.6
comp=Z,56nm,1.4s,mb5.2
NATX **Nacogdoches** 31.80 112 *e*P P 09 26 57.3 +2.3
comp=Z,31nm,0.5s,mb5.4
BLO **Bloomington** 32.16 93 *e*P P 09 26 58.0 -0.1
comp=Z,14nm,0.8s,mb4.8
BLO **Bloomington** 32.16 93 *e*P P 09 26 58.0 -0.1
BLO pmax pmax
comp=Z,14nm,0.8s,mb4.8
HKT **Hockley** 32.43 116 *e*P P 09 26 60.0 -0.6
comp=Z,41nm,1.5s,mb5.0
HKT **Hockley** 32.43 116 *e*P P 09 27 00.0 -0.6
HKT pmax pmax
comp=Z,41nm,1.5s,mb5.0
WVT **Waverly** 33.12 99 *e*P P 09 27 05.7 -0.9
comp=Z,8.3nm,1.0s,mb4.6
WVT **Waverly** 33.12 99 *e*P P 09 27 05.7 -0.9
WVT pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
OXF **Oxford** 33.15 103 *e*P P 09 27 06.4 -0.4
comp=Z,136nm,1.2s,mb5.8
OXF **Oxford** 33.15 103 *e*P P 09 27 06.4 -0.4
OXF pmax pmax
comp=Z,136nm,1.2s,mb5.8
ACSO **Alum Creek Sta** 33.85 89 *e*P P 09 27 12.4 -0.4
comp=Z,26nm,1.0s,mb5.1
VBMS **Vicksburg** 33.99 107 *e*P P 09 27 13.9 -0.3
comp=Z,28nm,0.9s,mb5.2
LRAL **Lakeview Retre** 35.63 102 *e*P P 09 27 27.3 -1.0
comp=Z,10nm,1.1s,mb4.7
CPCT **Cooper Cave** 35.65 97 *e*P P 09 27 27.8 -0.7
TKL **Tuckaleechee C** 36.00 96 *e*P P 09 27 30.5 -0.9
BINY **Binghamton** 37.28 81 *e*P P 09 27 41.8 -0.6
comp=Z,18nm,1.2s,mb4.8
SCHQ **Schefferville** 37.38 58 LR LR 09 42 39.7
comp=Z,583nm,20.1s,MS4.4,baz=284,slow=35
FRNY **Flat Rock** 37.48 76 *e*P P 09 27 43.6 -0.3
GOGA **Godfrey** 37.62 99 *e*P P 09 27 44.4 -0.8
comp=Z,15nm,0.8s,mb4.8
GOGA **Godfrey** 37.62 99 *e*P P 09 27 44.4 -0.9
GOGA pmax pmax
comp=Z,15nm,0.8s,mb4.8
JSC **Jenkinsville** 38.47 96 *e*P P 09 27 51.9 -0.5
JSRW **J. Sargeant Re** 38.56 89 *e*P P 09 27 53.1 0.0
WES **Weston** 40.14 78 *e*P P 09 28 06.3 0.0
comp=Z,24nm,1.1s,mb4.8
WES **Weston** 40.14 78 *e*P P 09 28 06.3 +0.1
WES pmax pmax
comp=Z,24nm,1.1s,mb4.8
SEY **Seymchan** 42.06 318 ||*i*P P 09 28 20.0 -1.8
CMIG **Matias Romero** 43.21 127 P P 09 28 29.0 -2.7
comp=Z,2.6nm,0.8s,mb4.0,baz=302,slow=5.5,SNR=3.7
PETK **Petropavlovsk-** 43.39 303 P P 09 28 30.1 -2.7
comp=Z,2.5nm,0.8s,mb4.0,baz=81,slow=12,SNR=3.5
PETK LR LR 09 44 08.2
comp=Z,76nm,18.4s,MS3.6,baz=262,slow=33
SUMG **Summit** 43.42 26 *e*P P 09 28 34.4 +1.6
comp=Z,18nm,1.1s,mb4.7
SUMG **Summit** 43.42 26 *e*P P 09 28 34.4 +1.7
SUMG pmax pmax
comp=Z,18nm,1.1s
SUMG **Summit** 43.42 26 *i* P P 09 28 34.8 +2.1
comp=Z,9.5nm,1.1s,mb4.4
BORG **Borgarnes** 52.76 31 LR LR 09 50 28.1
comp=Z,232nm,20.8s,MS4.2,baz=325,slow=34
SJG **San Juan** 59.37 98 LR LR 09 59 18.2
comp=Z,139nm,18.1s,MS4.1,baz=276,slow=39
MDJ **Mudanjiang** 63.23 308 P P 09 30 58.0 -0.7
MDJ S S 09 39 29.3 -0.7
MDJ ScS ScS 09 40 51.0 -0.5
MDJ pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
MDJ pmax pmax
comp=Z,42nm,3.1s
MDJ LR LR
comp=N,68nm,16.8s,MS4.1
MDJ LR LR
comp=E,97nm,18.2s,MS4.1
MDJ LR LR
comp=Z,110nm,18.2s,MS4.1
MJAR **Matsushiro Arr** 64.23 297 P P 09 31 02.2 -3.2
comp=Z,0.7nm,0.5s,mb3.9,baz=50,slow=3.6,SNR=3.0
MJAR LR LR 09 53 45.0
comp=Z,78nm,21.7s,MS3.9,baz=10.0,slow=31
ROSC **El Rosal** 64.60 115 P P 09 31 08.1 0.0
comp=Z,4.7nm,0.7s,mb4.7,baz=288,slow=6.4,SNR=6.1
ROSC LR LR 09 59 35.4
comp=Z,55nm,21.4s,MS3.7,baz=188,slow=36
NOA **NORSAR Array B** 64.76 20 P P 09 31 09.8 +1.3
comp=Z,1.5nm,0.9s,mb4.0,baz=336,slow=5.9,SNR=2.7
NOA LR LR 09 57 38.4
comp=Z,83nm,20.3s,MS3.9,baz=200,slow=34
CN2 **Changchun** 65.88 310 *e*P P 09 31 16.0 0.0
CN2 *e*S S 09 40 00.8 -2.0
CN2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CN2 pmax pmax
comp=Z,200nm,14.0s
CN2 LR LR
comp=N,500nm,20.0s,MS4.8
CN2 LR LR
comp=E,300nm,20.0s,MS4.8
CN2 LR LR
comp=Z,200nm,16.0s,MS4.4
OTAV **Otavalo** 66.05 121 *e*P P 09 31 17.4 0.0
comp=Z,17nm,1.3s,mb4.9
JOF **Joensuu** 66.24 9 *e*P P 09 31 18.5 +0.5
JOF pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
JOF **Joensuu** 66.24 9 *e*p P 09 31 18.5 +0.5
comp=Z,4.5nm,0.9s,mb4.5
PCRV **Puerto La Cruz** 66.31 103 LR LR 10 00 13.5
comp=Z,189nm,18.6s,MS4.3,baz=69,slow=36
PMOR **Pomariorio Ree** 66.86 199 *e*T 10 43 31.0
FINES **FINESS Array B** 67.04 12 P P 09 31 22.8 -0.4
comp=Z,6.4nm,0.9s,mb4.7,baz=0.0,slow=5.7,SNR=6.5
FINES LR LR 10 01 06.3
comp=Z,178nm,19.0s,MS4.3,baz=150,slow=36
CBIJ **Chichi jima** 68.57 287 LR LR 09 55 28.4
comp=Z,101nm,21.4s,MS4.0,baz=35,slow=31
TLY **Talaya** 68.89 328 *e*P P 09 31 35.8 +0.9
TLY *e*S S 09 40 46.7 +8.0
TLY pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
TLY MLR MLR
comp=Z,140nm,18.0s,MS4.2
KLMR **Klimovskoe** 68.97 6 *e*P P 09 31 29.2 -6.1
KLMR pmax pmax
comp=Z,37nm,1.4s,mb5.1
KSRS **Korea Array** 69.28 304 LR LR 10 00 06.9
comp=Z,43nm,19.5s,MS3.7,baz=263,slow=34
PPT **Papeete** 69.71 200 *e*LR LR 09 52 45.0
comp=Z,88nm,23.2s
PPT **Papeete** 69.71 200 LR LR 09 56 23.1
comp=Z,158nm,18.2s,MS4.3,baz=0.3,slow=31
SONM **Songino Array** 71.09 324 P P 09 31 46.7 -1.8
comp=Z,0.5nm,0.7s,mb3.6,baz=58,slow=5.6,SNR=3.1
SONM LR LR 10 03 41.5
comp=Z,199nm,19.0s,MS4.4,baz=240,slow=36
NVS **Novosibirsk** 71.79 341 *i* P P 09 31 49.3 -3.3
NVS pmax pmax
comp=Z,13nm,1.7s,mb4.6
NVS pmax pmax
comp=E,8.0nm,1.6s
ATAH **Atahualpa** 72.26 126 LR LR 10 03 06.7
comp=E,111nm,21.0s,MS4.1,baz=184,slow=35
ZALV **Zalesovo Beam** 72.27 339 P P 09 31 53.5 -2.1
comp=E,1.1nm,0.5s,mb4.0,baz=6.8,slow=4.3,SNR=4.1
ZALV LR LR 10 05 35.9
comp=E,114nm,21.9s,MS4.1,baz=55,slow=37
RKT **Rikitea** 73.13 185 *e*T 09 32 43.7
comp=E,2.4nm,0.3s
RKT **Rikitea** 73.13 185 *e*LR LR 09 54 25.7
comp=E,459nm,29.8s
BJI **Beijing** 73.22 313 P P 09 31 57.8 -3.6
BJI S S 09 41 26.5 -2.8
BJI SS SS 09 46 04.3 -5.5
BJI pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
BJI pmax pmax
comp=Z,43nm,3.8s
BJI LR LR
comp=N,160nm,21.3s,MS4.4
BJI LR LR

comp=E,160nm,20.0s,MS4.4
BJI LR LR
comp=Z,36nm,33.4s
ARU Arti 73.54 355 *d i* P **P** **09 32 01.5 -1.5**
ARU S S 09 41 31.3 -1.1
ARU pmax pmax
comp=Z,17nm,1.7s,mb4.7
MOS Moscow 73.92 7 *e* P **P** **09 32 11.3 +6.1**
OBN Obninsk 74.44 8 ‖ *e* P **P** **09 32 07.7 -0.6**
OBN eSS SS 09 46 24.0 -3.5
OBN pmax pmax
comp=Z,33nm,1.4s,mb5.1
OBN MLR MLR
comp=Z,100nm,19.0s,MS4.1
BRG Berggiesshubel 74.65 23 *e*(P) **P** **09 32 13.1 +3.5**
comp=Z,3.7nm,1.0s,mb4.3
HHC Hu-ho-hao-te 74.68 316 *e* P **P** **09 32 09.5 -0.4**
HHC PP PP 09 34 57.8 +1.6
HHC S S 09 41 41.0 -4.7
HHC pmax pmax
comp=Z,13nm,0.9s,mb4.9
HHC pmax pmax
comp=Z,62nm,4.2s
HHC LR LR
comp=N,160nm,14.8s,MS4.7
HHC LR LR
comp=E,210nm,12.7s,MS4.7
HHC LR LR
comp=Z,170nm,17.0s,MS4.4
BRVK Borovoye 75.77 348 ⇑ *i* P **P** **09 32 13.9 -2.0**
BRVK pmax pmax
comp=Z,9.0nm,1.7s,mb4.4
KURK Kurchatov 76.63 342 P **P** **09 32 19.4 -1.5**
comp=Z,0.9nm,0.5s,mb4.0,baz=18,slow=5.3,SNR=5.7
KURK Kurchatov 76.63 342 ⇑ *i* P **P** **09 32 19.1 -1.8**
KURK pmax pmax
comp=Z,6.0nm,1.7s,mb4.2
AKASG Malin Array Be 77.89 14 P **P** **09 32 28.2 +0.2**
comp=Z,2.9nm,0.8s,mb4.3,baz=346,slow=5.2,SNR=5.9
KIEV Kiev 77.89 14 *e* P **P** **09 32 28.2 +0.2**
comp=Z,6.5nm,1.0s,mb4.5
KIEV Kiev 77.89 14 *e* P **P** **09 32 28.2 +0.2**
KIEV pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
NJ2 Nanjing 78.20 306 *e* P **P** **09 32 29.5 -0.5**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VSR Storozhevoye 78.53 7 *e* P **P** **09 32 29.6 -1.9**
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,3.0nm,0.4s
VSR pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
ESDC Sonseca Array 78.60 40 P **P** **09 32 32.1 0.0**
comp=Z,0.3nm,0.3s,mb3.7,baz=331,slow=10,SNR=2.9
MKAR Makanchi Array 79.53 338 P **P** **09 32 34.7 -2.4**
comp=Z,0.8nm,0.7s,mb3.8,baz=18,slow=4.4,SNR=5.7
MKAR LR LR 10 09 56.7
comp=Z,106nm,20.7s,MS4.2,baz=8.9,slow=37
AKTK Aktyubinsk 79.55 355 P **P** **09 32 34.9 -2.3**
AKTO Aktyubinsk 79.55 355 P **P** **09 32 34.9 -2.3**
comp=Z,2.0nm,0.7s,mb4.2,baz=8.9,slow=6.4,SNR=6.6
ABKAR Akbulak array 80.60 354 *e* P **P** **09 32 41.4 -1.4**
comp=Z,4.6nm,0.9s,mb4.4
WMQ Urumqi 80.88 334 P **P** **09 32 45.0 +0.6**
WMQ pP pP 09 32 49.8 +2.1
WMQ sP sP 09 32 52.0 +3.1
WMQ PP PP 09 35 51.5 +3.6
WMQ S S 09 42 51.8 -0.8
WMQ SKS 09 42 58.5
WMQ SS SS 09 48 08.3 +3.4
WMQ pmax pmax
comp=Z,12nm,0.8s,mb4.9
WMQ pmax pmax
comp=Z,120nm,4.8s
WMQ LR LR
comp=N,110nm,20.1s,MS4.3
WMQ LR LR
comp=E,130nm,24.0s,MS4.3
WMQ LR LR
comp=Z,130nm,22.8s,MS4.2
TKM2 Tokmak 2 84.69 342 *e* P **P** **09 33 04.0 -0.2**
comp=Z,3.0nm,0.5s,mb4.7
TKM2 Tokmak 2 84.69 342 *e* P **P** **09 33 04.0 -0.2**
TKM2 pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
HNR Honiara 84.95 249 LR LR 10 05 54.4
comp=Z,133nm,18.3s,MS4.4,baz=47,slow=32
AAK Ala-Archa 85.18 342 LR LR 10 15 00.6
comp=Z,79nm,20.0s,MS4.1,baz=12,slow=38
EKS2 Erkin-Say 85.29 343 *e* P **P** **09 33 06.8 -0.4**
comp=Z,13nm,1.6s,mb4.8
EKS2 Erkin-Say 85.29 343 *e* P **P** **09 33 06.8 -0.5**
EKS2 pmax pmax
comp=Z,13nm,1.6s,mb4.8
LPAZ La Paz 85.36 122 P **P** **09 33 05.0 -2.7**
comp=Z,1.5nm,0.7s,mb4.2,baz=328,slow=5.6,SNR=4.0
KIV Kislovodsk 86.01 6 *e* P **P** **09 33 09.3 -1.5**
KIV *e* 09 36 25.2
KIV pmax pmax
comp=Z,10.0nm,1.6s,mb4.8
KIV MLR MLR
comp=Z,100nm,17.0s,MS4.3
CD2 Chengdu 86.44 316 P **P** **09 33 12.8 -0.3**
CD2 pP pP 09 33 17.5 +1.0
CD2 sP sP 09 33 19.8 +2.1
CD2 PP PP 09 36 35.3 +1.5
CD2 SKS 09 43 35.3
CD2 S S 09 43 45.5 -3.6
CD2 SS SS 09 49 27.8 0.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.3
CD2 pmax pmax
comp=Z,110nm,5.9s
KSH Kashi 87.88 340 *e* P **P** **09 33 24.3 +4.3**
KSH *e* pP pP 09 33 28.8 +5.5
KSH *e* sP sP 09 33 31.3 +6.8
KSH *e* PP PP 09 36 55.0 +10
KSH *e* SKS 09 43 50.3
KSH *e* S S 09 44 08.0 +5.3
KSH *e* SS SS 09 44 16.0 +7.8
KSH *e* SS SS 09 50 02.0 +14
KSH pmax pmax
comp=Z,2.0nm,0.9s,mb4.3
KSH pmax pmax
comp=Z,48nm,2.6s,mb5.3
KSH LR LR
comp=N,18nm,2.3s
KSH LR LR
comp=E,29nm,3.8s
KSH LR LR
comp=Z,18nm,3.5s
GYA Guiyang 88.86 312 P **P** **09 33 25.0 +0.1**
GYA PP PP 09 36 55.5 +2.1
GYA SKS 09 43 51.3
GYA SS SS 09 50 03.8 +0.3
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
GYA pmax pmax
comp=Z,90nm,5.9s
GYA LR LR
comp=N,480nm,21.8s,MS5.0
GYA LR LR
comp=E,420nm,22.0s,MS5.0
GYA LR LR
comp=Z,470nm,20.9s,MS4.9
BRTR Keskin Array B 89.27 13 P **P** **09 33 29.3 +2.7**
BRTR LR LR 10 17 14.1
BRTR Keskin Array B 89.27 13 P **P** **09 33 29.3 +2.7**
comp=Z,1.2nm,0.9s,mb4.2,baz=304,slow=0.5,SNR=4.4
BRTR LR LR 10 17 14.1
comp=Z,50nm,18.1s,MS4.0,baz=136,slow=38
KMI Kunming 91.85 314 P **P** **09 33 39.3 +0.5**
KMI pP pP 09 33 42.5 +0.4
KMI SKS 09 44 12.8
KMI S S 09 44 36.3 -3.7
KMI SS SS 09 50 47.0 +0.5
KMI pmax pmax
comp=Z,11nm,1.3s
KMI pmax pmax
comp=Z,26nm,3.1s
KMI LR LR
comp=N,78nm,15.0s
KMI LR LR
comp=E,120nm,17.6s
KMI LR LR
comp=Z,120nm,15.6s
CMAR Chiang Mai Arr 99.36 314 LR LR 10 22 01.9
comp=Z,71nm,18.7s,MS4.2,baz=211,slow=37
VNA3 Neumayer Olymp 145.97 150 *e* PKPdf PKPdf 09 40 02.7 -5.2
VNA3 *e* 09 40 16.7
BOSA Boshof 151.26 51 PKPbc PKPbc 09 40 21.7 -2.1
comp=Z,2.7nm,0.9s,baz=287,slow=1.3,SNR=3.0

CASC 28 09:27:08.6±1.5, 7°37.N×82°83.W, h8km±9km, MD3.8, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**1.31**	**345**	*e*P	Pn	09 27 31.3	-2.0
BRU2	**Volcan**	**1.42**	**6**	*e*P	Pn	09 27 33.9	-0.9
BRU2				*e*S	Sn	09 27 54.0	+0.4
TBS2		**1.42**	**7**	*e*P	Pn	09 27 37.1	+2.4
TBS2				*e*S	Sn	09 27 56.9	+3.2
BUS	**Buena Vista**	**2.35**	**337**	*e*P	Pn	09 27 48.4	+0.8
BUS				*e*S	Sn	09 28 19.5	+2.8
QCR	**Quepos**	**2.43**	**327**	*e*P	Pn	09 27 47.4	-1.2
QCR				*e*S	Sn	09 28 18.4	-0.1
URSC	**Urasca**	**2.62**	**339**	*e*P	Pn	09 27 51.9	+0.6
LAJ	**Bijagual**	**2.78**	**333**	*e*P	Pn	09 27 54.1	+0.6
SJS	**Escuela Geolog**	**2.82**	**335**	*e*P	Pn	09 27 54.1	+0.1
SJS				*e*S	Sn	09 28 29.6	+1.4
PRS1	**Puriscal**	**2.98**	**331**	*e*P	Pn	09 27 55.4	-0.8
PRS1				*e*S	Sn	09 28 31.3	-0.8
CGA2	**Cerro Gallo 2**	**3.08**	**329**	*e*P	Pn	09 27 57.8	+0.1
JCR	**Jicaral**	**3.34**	**318**	*e*P	Pn	09 28 01.1	0.0
BCIP	**Isla Barro Col**	**3.46**	**59**	*e*P	Pn	09 28 02.1	-0.7
BCIP				*e*S	Sn	09 28 45.0	+1.0

IDC 28 09:27:29.0±1.5, 11°.295S×162°.47E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.7/18, mbtmp3.7/7, ML4.4/1, MS3.4/2, Ms1 3.4/2, ms1mx2.8/26, Error ellipse: s-maj=37.0km s-min=25.6km az=119.0
ISCJB 28 09:27:32.3±1.1, 11°.45S±0°.1×162°.5E±0°.1, h33km, mb3.5/6, Error ellipse: s-maj=22.1km s-min=12.7km az=142.6
NEIC 28 09:27:34.8±1.1, 11°.255S×162°.35E, h35km, Error ellipse: s-maj=25.2km s-min=17.6km az=105.0

ISC 28 09:27:34.3±1.1, 11°.3S±0°.1×162°.5E±0°.1, h35km, n8, σ0s82/11, mb3.5/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.13**	**307**	Pn	**Pn**	**09 28 19.7**	**-1.5**
HNR				Pn	**Pn**	**09 28 20.9**	**-0.3**
HNR				Sn	**Sn**	**09 28 58.0**	**+0.7**
HNR				LR	LR	09 29 26.2	
HNR	**Honiara**	**3.13**	**307**	Pn	**Pn**	**09 28 19.7**	**-1.5**
	46nm,0.3s,baz=157,slow=16,SNR=9.4						
HNR				Sn	**Sn**	**09 28 58.0**	**+0.7**
	90nm,0.3s,baz=322,slow=20,SNR=7.1						
HNR				LR	LR	09 29 26.2	
	comp=Z,308nm,21.8s,baz=336,slow=38						
STKA	**Stephens Creek**	**28.09**	**220**	P	**P**	**09 33 24.1**	**+1.4**
	1.4nm,0.7s,mb3.7,baz=45,slow=10.0,SNR=3.5						
STKA				LR	LR	09 43 57.6	
	comp=Z,163nm,20.5s,baz=24,slow=35						
WRA	**Warramunga Arr**	**28.38**	**249**	P	**P**	**09 33 24.6**	**-0.8**
	0.9nm,0.7s,mb3.5,baz=78,slow=9.9,SNR=5.9						
ASAR	**Alice Springs**	**29.81**	**242**	P	**P**	**09 33 37.5**	**-0.7**
	0.6nm,0.7s,mb3.4,baz=69,slow=10,SNR=11						
SONM	**Songino Array**	**77.04**	**325**	P	**P**	**09 39 24.0**	**+0.4**
	0.4nm,0.4s,mb3.7,baz=133,slow=6.1,SNR=3.0						
ILAR	**Eielson Array**	**84.83**	**19**	P	**P**	**09 40 04.5**	**-0.3**
	0.1nm,0.6s,mb3.2,baz=264,slow=5.3,SNR=3.0						
MKAR	**Makanchi Array**	**91.56**	**317**	P	**P**	**09 40 37.9**	**+0.5**
	0.2nm,0.7s,mb3.6,baz=93,slow=6.1,SNR=2.3						

ROM 28 09:29:50.4±0.7, 43°.30N×16°.02E, h7km, Md2.6/3, Ml2.5/2, Error ellipse: s-maj=28.7km s-min=5.9km az=92.0
ISCJB 28 09:29:52.2±1.7, 43°.25N±0°.03×16°.1E±0°.1, h9km±13km, Error ellipse: s-maj=15.1km s-min=4.5km az=169.9
CSEM 28 09:29:52.9±0.2, 43°.21N×16°.09E, h10km, MD2.6/3, Error ellipse: s-maj=5.7km s-min=3.5km az=72.0
VIE 28 09:29:54.9±0.6, 43°.37N×16°.20E, h10km, mb2.3/3, ML2.3/3, Error ellipse: s-maj=12.4km s-min=4.6km az=71.0 27 km SW of Split

ISC 28 09:29:52.2±2.1, 43°.22N±0°.03×16°.0E±0°.1, h2km±16km, n21, σ0s57/35, 3C-2D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STON	**Ston**	**1.30**	**105**	*e*Pg	**Pg**	**09 30 16.4**	**-0.7**
STON				Sg	**Sg**	**09 30 34.4**	**+0.5**
STON	**Ston**	**1.30**	**105**	*e*Pg	**Pg**	**09 30 16.3**	**-0.8**
STON				Sg	**Sg**	**09 30 34.3**	**+0.4**
SGRT	**San Giovanni R**	**1.47**	**187**	Pn	**Pn**	**09 30 19.4**	**-0.4**
SGRT				Sn	**Sn**	**09 30 39.8**	**+0.2**
	41nm,0.6s						
SGRT	**San Giovanni R**	**1.47**	**187**	Pn	**Pn**	**09 30 19.4**	**-0.4**
SGRT				Sn	**Sn**	**09 30 39.8**	**+0.2**
	41nm,0.6s						
MSAG	**Monte S. Angel**	**1.50**	**182**	Pn	**Pn**	**09 30 19.7**	**-0.5**
MSAG				Sn	**Sn**	**09 30 40.6**	**+0.2**
	83nm,0.7s						
MSAG	**Monte S. Angel**	**1.50**	**182**	Pn	**Pn**	**09 30 19.7**	**-0.5**
MSAG				Sn	**Sn**	**09 30 40.6**	**+0.2**
	83nm,0.7s						
RGNG	**Rignano Grg**	**1.57**	**191**	Pn	**Pn**	**09 30 20.0**	**-1.1**
RGNG				Sn	**Sn**	**09 30 42.7**	**+0.7**
RGNG	**Rignano Grg**	**1.57**	**191**	Pn	**Pn**	**09 30 20.0**	**-1.1**
RGNG				Sn	**Sn**	**09 30 42.7**	**+0.7**
NVLJ	**Novalja**	**1.57**	**329**	*i* Pn	**Pn**	**09 30 21.4**	**+0.2**
NVLJ				Sn	**Sn**	**09 30 41.7**	**-0.4**
NVLJ	**Novalja**	**1.57**	**329**	*i* Pn	**Pn**	**09 30 21.3**	**+0.2**
NVLJ				Sn	**Sn**	**09 30 41.6**	**-0.5**
BOJS	**Bojanci**	**2.35**	**347**	*i* Pn	**Pn**	**09 30 32.9**	**+1.1**
BOJS	**Bojanci**	**2.35**	**347**	*i* Pn	**Pn**	**09 30 32.9**	**+1.1**
SKDS	**Skadanscina**	**2.73**	**329**	*i* Pn	**Pn**	**09 30 37.0**	**0.0**
VOJS	**Vojsko**	**3.19**	**333**	*i* Pn	**Pn**	**09 30 43.7**	**+0.3**
VOJS	**Vojsko**	**3.19**	**333**	*i* Pn	**Pn**	**09 30 43.7**	**+0.3**
OBKA	**Obir**	**3.45**	**343**	⇓ *i* Pn	**Pn**	**09 30 47.5**	**+0.5**
OBKA				⇑ *i* Sn	**Sn**	**09 31 27.8**	**-0.6**
OBKA	**Obir**	**3.45**	**343**	Pn	**Pn**	**09 30 47.5**	**+0.6**
OBKA				Sn	**Sn**	**09 31 27.8**	**-0.6**
SOKA	**Soboth**	**3.53**	**349**	⇓ *i* Pn	**Pn**	**09 30 48.4**	**+0.4**
SOKA				⇑ *i* Sn	**Sn**	**09 31 29.6**	**-0.7**
SOKA	**Soboth**	**3.53**	**349**	Pn	**Pn**	**09 30 48.4**	**+0.4**
SOKA				Sn	**Sn**	**09 31 29.6**	**-0.7**
MOA	**Molln**	**4.79**	**346**	⇑ *i* Pn	**Pn**	**09 31 05.8**	**+0.5**
MOA	**Molln**	**4.79**	**346**	Pn	**Pn**	**09 31 05.8**	**+0.5**

ATH 28 09:31:00.8, 40°.69N×23°.32E, h25km±1km, MD3.0/6
NEIC 28 09:31:00.8, 40°.69N×23°.32E, h25km, MD3.0(ATH), After ATH.
CSEM 28 09:31:01.7±0.2, 40°.64N×23°.31E, h10km, MD3.0, Error ellipse: s-maj=4.1km s-min=3.1km az=72.0
SKO 28 09:31:01.7, 40°.64N×23°.36E, h0km, M2.4, ML2.7
THE 28 09:31:01.9, 40°.66N×23°.34E, h12km±1km, ML2.7/9, Error ellipse: s-maj=1.5km s-min=0.6km az=276.0
ISCJB 28 09:31:01.6±0.3, 40°.66N±0°.02×23°.33E±0°.03, h11km±3km, Error ellipse: s-maj=3.8km s-min=3.1km az=176.5
BEO 28 09:31:07.4±1.6, 40°.90N×23°.31E, h4km±8km, ML2.5/3

ISC 28 09:31:01.9±0.3, 40°.68N±0°.02×23°.33E±0°.03, h14km±3km, n63, σ0s83/100, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOH	**Sokhos**	**0.15**	**9**	*e*Pb	**Pg**	**09 31 06.3**	**+0.7**
SOH				*e*Sb	**Sg**	**09 31 09.1**	**+0.9**
SOH	**Sokhos**	**0.15**	**9**	*e*PB	**Pg**	**09 31 06.3**	**+0.7**
SOH				*e*SB	**Sg**	**09 31 09.1**	**+0.9**
SOH	**Sokhos**	**0.15**	**9**	P	**Pg**	**09 31 06.3**	**+0.7**
SOH				S	**Sg**	**09 31 08.6**	**+0.4**
SOH	**Sokhos**	**0.15**	**9**	P	**Pg**	**09 31 06.3**	**+0.7**
SOH				S	**Sg**	**09 31 08.6**	**+0.4**
SOH				*e*Sb	**Sg**	**09 31 09.1**	**+0.9**
HORT	**Hortiatis**	**0.19**	**245**	P	**Pg**	**09 31 06.1**	**-0.1**
HORT	**Hortiatis**	**0.19**	**245**	P	**Pg**	**09 31 06.4**	**+0.2**
HORT				S	**Sg**	**09 31 09.3**	**+0.1**
HORT	**Hortiatis**	**0.19**	**245**	P	**Pg**	**09 31 06.4**	**+0.2**
HORT				S	**Sg**	**09 31 09.3**	**+0.1**
THE	**Thessaloniki**	**0.28**	**261**	P	**Pg**	**09 31 07.8**	**+0.1**
THE	**Thessaloniki**	**0.28**	**261**	P	**Pg**	**09 31 07.6**	**-0.1**
THE				S	**Sg**	**09 31 11.8**	**+0.2**
THE	**Thessaloniki**	**0.28**	**261**	P	**Pg**	**09 31 07.6**	**-0.1**
THE				S	**Sg**	**09 31 11.8**	**+0.2**
PLG	**Polygyros**	**0.32**	**163**	*e*Pb	**Pg**	**09 31 08.2**	**-0.2**
PLG				*e*Sb	**Sg**	**09 31 13.0**	**+0.3**
PLG	**Polygyros**	**0.32**	**163**	*e*PB	**Pg**	**09 31 08.2**	**-0.2**
PLG				*e*SB	**Sg**	**09 31 13.0**	**+0.3**
PLG	**Polygyros**	**0.32**	**163**	P	**Pg**	**09 31 08.2**	**-0.2**
PLG				S	**Sg**	**09 31 12.8**	**+0.1**
PLG	**Polygyros**	**0.32**	**163**	P	**Pg**	**09 31 08.2**	**-0.2**
PLG				S	**Sg**	**09 31 12.8**	**+0.1**
SRS	**Serrai**	**0.48**	**25**	P	**Pg**	**09 31 12.8**	**+1.3**
SRS	**Serrai**	**0.48**	**25**	P	**Pg**	**09 31 11.2**	**-0.3**
SRS				S	**Sg**	**09 31 18.5**	**+0.5**
SRS	**Serrai**	**0.48**	**25**	P	**Pg**	**09 31 11.2**	**-0.3**
SRS				S	**Sg**	**09 31 18.5**	**+0.5**
KNT	**Kendrikon**	**0.58**	**326**	P	**Pg**	**09 31 13.5**	**+0.2**
KNT				S	**Sg**	**09 31 21.7**	**+0.6**
OUR	**Ouranopolis**	**0.61**	**124**	P	**Pg**	**09 31 14.4**	**+0.7**
OUR	**Ouranopolis**	**0.61**	**124**	P	**Pg**	**09 31 13.2**	**-0.6**
OUR				S	**Sg**	**09 31 21.6**	**-0.2**
OUR	**Ouranopolis**	**0.61**	**124**	P	**Pg**	**09 31 13.2**	**-0.6**
OUR				S	**Sg**	**09 31 21.6**	**-0.2**
GRG	**Griva**	**0.76**	**292**	P	**Pg**	**09 31 18.5**	**+1.9**
GRG	**Griva**	**0.76**	**292**	P	**Pg**	**09 31 17.2**	**+0.6**
GRG	**Griva**	**0.76**	**292**	P	**Pg**	**09 31 17.2**	**+0.6**
NVR	**Nevrokopi**	**0.79**	**31**	P	**Pg**	**09 31 17.5**	**+0.3**
PAIG	**Paliouri**	**0.80**	**160**	P	**Pg**	**09 31 16.1**	**-1.2**
PAIG	**Paliouri**	**0.80**	**160**	P	**Pg**	**09 31 16.1**	**-1.2**
PAIG				S	**Sg**	**09 31 27.5**	**-0.3**
PAIG	**Paliouri**	**0.80**	**160**	P	**Pg**	**09 31 16.1**	**-1.2**
PAIG				S	**Sg**	**09 31 27.5**	**-0.3**
LIT	**Litokhoron**	**0.86**	**228**	*e*Pn	**Pg**	**09 31 17.3**	**-1.2**
LIT				*e*Sn	**Sg**	**09 31 29.9**	**+0.1**
LIT	**Litokhoron**	**0.86**	**228**	*e*PN	**Pg**	**09 31 17.3**	**-1.2**
LIT				*e*SN	**Sg**	**09 31 29.9**	**+0.1**
LIT	**Litokhoron**	**0.86**	**228**	P	**Pg**	**09 31 17.2**	**-1.3**
LIT				S	**Sg**	**09 31 30.4**	**+0.6**
LIT	**Litokhoron**	**0.86**	**228**	*e*Pn	**Pg**	**09 31 17.3**	**-1.2**
LIT				*e*Sn	**Sg**	**09 31 29.9**	**+0.1**
LIT				S	**Sg**	**09 31 30.4**	**+0.6**
VAY	**Valandovo**	**0.86**	**319**	*e*Pg	**Pg**	**09 31 19.1**	**+0.5**
VAY				*e*Sg	**Sg**	**09 31 30.2**	**+0.3**
VAY	**Valandovo**	**0.86**	**319**	P	**Pg**	**09 31 18.2**	**-0.4**
VAY	**Valandovo**	**0.86**	**319**	*e*Pg	**Pg**	**09 31 18.4**	**-0.2**
VAY				*e*Sg	**Sg**	**09 31 30.1**	**+0.3**
VAY				eLg		09 31 30.2	
	comp=N,187nm,0.5s						
VAY				eLg		09 31 30.5	
	comp=E,147nm,0.3s						
VAY	**Valandovo**	**0.86**	**319**	P	**Pg**	**09 31 18.2**	**-0.4**
VAY	**Valandovo**	**0.86**	**319**	*e*Pg	**Pg**	**09 31 19.1**	**+0.5**
VAY				*e*Sg	**Sg**	**09 31 30.2**	**+0.3**
KAVA	**Kavala**	**0.96**	**70**	P	**Pg**	**09 31 20.2**	**-0.2**
KAVA				S	**Sg**	**09 31 33.3**	**+0.4**
KAVA	**Kavala**	**0.96**	**70**	P	**Pg**	**09 31 20.2**	**-0.2**
KAVA				S	**Sg**	**09 31 33.3**	**+0.4**
XOR	**Xorichti**	**1.31**	**185**	P	**Pn**	**09 31 25.8**	**0.0**
XOR	**Xorichti**	**1.31**	**185**	P	**Pn**	**09 31 25.6**	**-0.2**
XOR	**Xorichti**	**1.31**	**185**	P	**Pn**	**09 31 25.8**	**0.0**
NEO	**Neokhori**	**1.37**	**183**	*e*Pn	**Pn**	**09 31 26.0**	**-0.6**
NEO				*e*Sn	**Sn**	**09 31 45.1**	**+0.5**
NEO	**Neokhori**	**1.37**	**183**	*e*PN	**Pn**	**09 31 26.0**	**-0.6**
NEO				*e*SN	**Sn**	**09 31 45.1**	**+0.5**
NEO	**Neokhori**	**1.37**	**183**	*e*Pn	**Pn**	**09 31 26.0**	**-0.6**
NEO				*e*Sn	**Sn**	**09 31 45.1**	**+0.5**
THL	**Klokotos Trika**	**1.50**	**223**	*e*PN	**Pn**	**09 31 28.2**	**-0.2**
THL	**Klokotos Trika**	**1.50**	**223**	*e*Pn	**Pn**	**09 31 28.2**	**-0.2**
AOS	**Alonnisos**	**1.56**	**164**	P	**Pn**	**09 31 30.2**	**+0.9**
AOS	**Alonnisos**	**1.56**	**164**	P	**Pn**	**09 31 30.2**	**+0.9**
KRUS	**Krusevo**	**1.72**	**294**	*e*Pn	**Pn**	**09 31 32.2**	**+0.8**
AGG	**Agios Georgios**	**1.82**	**205**	*e*Pn	**Pn**	**09 31 32.9**	**+0.1**
AGG	**Agios Georgios**	**1.82**	**205**	*e*PN	**Pn**	**09 31 32.9**	**+0.1**
AGG	**Agios Georgios**	**1.82**	**205**	P	**Pn**	**09 31 33.0**	**+0.2**
AGG	**Agios Georgios**	**1.82**	**205**	P	**Pn**	**09 31 33.0**	**+0.2**
VTS	**Vitosha**	**1.92**	**357**	*e*Pg	**Pg**	**09 31 38.4**	**-0.3**
VTS				*e*Sg	**Sg**	**09 32 00.7**	**-2.8**
LKR	**Lokris**	**2.04**	**187**	*e*Pn	**Pn**	**09 31 35.8**	**0.0**
LKR	**Lokris**	**2.04**	**187**	*e*PN	**Pn**	**09 31 35.8**	**0.0**
LKR	**Lokris**	**2.04**	**187**	*e*Pn	**Pn**	**09 31 35.8**	**0.0**
BARS	**Barje**	**2.42**	**333**	*e*Pn	**Pn**	**09 31 45.3**	**+4.3**
BARS				*e*Sg	**Sg**	**09 32 18.0**	**-1.6**
BARS	**Barje**	**2.42**	**333**	*e*PN	**Pn**	**09 31 45.3**	**+4.3**
BARS				*e*Sg	**Sg**	**09 32 18.0**	**-1.6**
ZAPS	**Zavoj**	**2.65**	**349**	*e*Pn	**Pn**	**09 31 47.4**	**+3.2**
ZAPS				*e*Sg	**Sg**	**09 32 24.3**	**-2.6**
VLS	**Valsamata**	**3.27**	**221**	P	**Pn**	**09 31 52.2**	**-0.6**
VLS	**Valsamata**	**3.27**	**221**	P	**Pn**	**09 31 52.2**	**-0.6**

ISCJB 28 09:40:44.9±1.0, 36°.47N±0°.05×36°.96E±0°.06, h10km, Error ellipse: s-maj=9.2km s-min=3.8km az=137.1
DDA 28 09:40:44.6, 36°.47N×36°.94E, h6km±3km, Md3.0
ISK 28 09:40:46.0, 36°.53N×36°.88E, h7km, MD3.0
CSEM 28 09:40:46.4±0.2, 36°.51N×36°.91E, h2km, MD3.0, Error ellipse: s-maj=5.0km s-min=2.6km az=133.0

ISC 28 09:40:45.6±1.0, 36°.48N±0°.05×36°.95E±0°.06, h8km±8km, n19, σ0s92/32, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUZU	**Kuzuini**	**0.31**	**19**	*e*P	**Pg**	**09 40 51.4**	**-0.4**
KUZU				*e*S	**Sg**	**09 40 55.9**	**0.0**
KUZU	**Kuzuini**	**0.31**	**19**	*e*P	**Pg**	**09 40 51.4**	**-0.4**
KUZU				*e*S	**Sg**	**09 40 55.9**	**0.0**
COBT	**Iskenderun**	**0.56**	**275**	*e*P	**Pg**	**09 40 54.8**	**-1.6**
COBT				*e*S	**Sg**	**09 41 03.2**	**-0.4**
COBT	**Iskenderun**	**0.56**	**275**	*e*P	**Pg**	**09 40 54.8**	**-1.5**
COBT				*e*S	**Sg**	**09 41 03.2**	**-0.4**
GAZ	**Gaziantep**	**0.73**	**17**	*e*PG	**Pg**	**09 40 59.5**	**-0.1**
GAZ				*e*SG	**Sg**	**09 41 09.9**	**+0.8**
GAZ	**Gaziantep**	**0.73**	**17**	*e*Pg	**Pg**	**09 40 59.5**	**-0.1**
GAZ				*e*Sg	**Sg**	**09 41 09.9**	**+0.9**
HTY	**Hatay**	**0.74**	**242**	*e*PG	**Pg**	**09 41 00.6**	**+0.8**
HTY				*e*SG	**Sg**	**09 41 10.6**	**+1.1**
HTY	**Hatay**	**0.74**	**242**	*e*Pg	**Pg**	**09 41 00.6**	**+0.7**
HTY				*e*Sg	**Sg**	**09 41 10.6**	**+1.1**
GZT	**Gaziantep**	**1.01**	**29**	*e*P	**Pg**	**09 41 03.9**	**-1.0**
GZT				*e*S	**Sg**	**09 41 18.5**	**+0.5**
KMRS	**Kahramanmaras**	**1.03**	**358**	*e*PG	**Pg**	**09 41 05.2**	**-0.1**
KMRS				*e*SG	**Sg**	**09 41 19.3**	**+0.6**
KMRS	**Kahramanmaras**	**1.03**	**358**	*e*Pg	**Pg**	**09 41 05.2**	**-0.1**
KMRS				*e*Sg	**Sg**	**09 41 19.3**	**+0.6**
ANDN	**Andirin**	**1.20**	**337**	*e*P	**Pb**	**09 41 08.5**	**-0.1**
ANDN				*e*S	**Sb**	**09 41 24.7**	**+0.4**
ANDN	**Andirin**	**1.20**	**337**	*e*P	**Pb**	**09 41 08.5**	**-0.1**
ANDN				*e*S	**Sb**	**09 41 24.7**	**+0.4**
KOZT	**Kozan**	**1.34**	**319**	*e*PN	**Pb**	**09 41 10.9**	**-0.1**
MALT	**Malatya**	**2.18**	**32**	*e*PN	**Pb**	**09 41 23.8**	**-1.4**
MALT	**Malatya**	**2.18**	**32**	*e*Pn	**Pb**	**09 41 23.8**	**-1.5**
SARI	**SarD1z-Kayseri**	**2.21**	**355**	*e*PN	**Pn**	**09 41 19.1**	**-3.4**
SVRC	**Sivrice-ELAZID**	**2.67**	**44**	*e*PN	**Pn**	**09 41 30.7**	**+1.8**
SVRC	**Sivrice-ELAZID**	**2.67**	**44**	*e*Pn	**Pn**	**

mb3.7/4, MS3.6/2, Error ellipse: s-maj=5.7km s-min=3.4km az=179.6
*NEIC **28** 09:57:40.8, 34.76S×70.25W, h17km, ML4.2(GUC), After GUC.*
*GUC **28** 09:57:40.8±0.6, 34.76S×70.25W, h17km±4km, MD4.2, ML4.2*

ISC 28 09:57:42.0±0.4, 34.73S±0.02×70.25W±0.05, h10km, n47, σ1§30/67, mb3.7/4, MS3.6/2, 15C-12D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CACH	**El Canelo**	**0.68**	**335**	⇑*iP*	**Pg**	**09 57 53.9**	**-1.1**
CACH	**El Canelo**	**0.68**	**335**	⇑*iP*	**Pg**	**09 57 53.9**	**-1.1**
CHCH	**Chadas Angostu**	**0.86**	**337**	⇓*iP*	**Pg**	**09 57 57.5**	**-1.1**
CHCH	**Chadas Angostu**	**0.86**	**337**	⇓*iP*	**Pg**	**09 57 57.5**	**-1.1**
LMEL	**Las Melosas**	**0.88**	**3**	⇑*iP*	**Pg**	**09 57 57.7**	**-1.3**
LMEL				*i* S	**Sg**	**09 58 10.8**	**+0.3**
LMEL	**Las Melosas**	**0.88**	**3**	⇑*iP*	**Pg**	**09 57 57.7**	**-1.3**
LMEL				*i* S	**Sg**	**09 58 10.8**	**+0.3**
LMEL				AML	AML	09 58 11.8	
	comp=E,3μm,0.5s						
SJCH	**San Jose de Ma**	**1.09**	**356**	⇓*iP*	**Pb**	**09 58 01.6**	**-1.3**
SJCH				*i* S	**Sg**	**09 58 17.2**	**+0.1**
SJCH	**San Jose de Ma**	**1.09**	**356**	⇓*iP*	**Pb**	**09 58 01.6**	**-1.3**
SJCH				*i* S	**Sg**	**09 58 17.2**	**+0.1**
SJCH				AML	AML	09 58 21.2	
	comp=N,4μm,0.5s						
PCH	**Pirque**	**1.13**	**349**	⇓*iP*	**Pb**	**09 58 02.0**	**-1.5**
PCH	**Pirque**	**1.13**	**349**	⇓*iP*	**Pb**	**09 58 02.0**	**-1.5**
ANTU	**Antumapu**	**1.20**	**345**	⇑*iP*	**Pb**	**09 58 03.4**	**-1.4**
ANTU				*i* S	**Sb**	**09 58 20.5**	**+0.2**
ANTU	**Antumapu**	**1.20**	**345**	⇑*iP*	**Pb**	**09 58 03.4**	**-1.4**
ANTU				*i* S	**Sb**	**09 58 20.5**	**+0.2**
ANTU				AML	AML	09 58 21.4	
	comp=N,10μm,0.7s						
LNV	**Longovilo**	**1.23**	**309**	⇑*iP*	**Pn**	**09 58 03.2**	**-2.0**
LNV	**Longovilo**	**1.23**	**309**	⇑*iP*	**Pn**	**09 58 03.2**	**-2.0**
LACH	**Col Las Americ**	**1.30**	**350**	⇓*iP*	**Pn**	**09 58 05.0**	**-1.1**
LACH				*i* S	**Sb**	**09 58 23.4**	**+0.3**
LACH				AML	AML	09 58 25.0	
	comp=E,4μm,0.5s						
TALC	**Talca**	**1.31**	**239**	*eP*	**Pn**	**09 58 04.5**	**-1.8**
TALC				*i* S	**Sb**	**09 58 22.2**	**-1.5**
TALC	**Talca**	**1.31**	**239**	*eP*	**Pn**	**09 58 04.5**	**-1.8**
TALC				*i* S	**Sb**	**09 58 22.2**	**-1.5**
SAN	**Santiago**	**1.32**	**345**	⇓*iP*	**Pn**	**09 58 05.3**	**-1.1**
SAN				*i* S	**Sb**	**09 58 23.6**	**-0.2**
SAN	**Santiago**	**1.32**	**345**	⇓*iP*	**Pn**	**09 58 05.3**	**-1.1**
SAN				*i* S	**Sb**	**09 58 23.6**	**-0.2**
FCH	**Farellones**	**1.40**	**359**	⇑*iP*	**Pn**	**09 58 07.0**	**-0.5**
FCH				*i* S	**Sn**	**09 58 27.3**	**+1.2**
FCH	**Farellones**	**1.40**	**359**	⇑*iP*	**Pn**	**09 58 07.0**	**-0.5**
FCH				*i* S	**Sn**	**09 58 27.3**	**+1.2**
PEL	**Peldehue**	**1.62**	**347**	⇓*iP*	**Pn**	**09 58 10.6**	**0.0**
PEL				*i* S	**Sn**	**09 58 33.3**	**+1.8**
PEL				AML	AML	09 58 34.9	
	comp=E,15μm,0.4s						
LCCH	**Las Cruces**	**1.66**	**318**	⇑*iP*	**Pn**	**09 58 11.0**	**-0.2**
LCCH				*i* S	**Sn**	**09 58 33.7**	**+1.2**
LCCH	**Las Cruces**	**1.66**	**318**	⇑*iP*	**Pn**	**09 58 11.0**	**-0.2**
LCCH				*i* S	**Sn**	**09 58 33.7**	**+1.2**
ROCH	**El Roble**	**1.86**	**340**	⇓*iP*	**Pn**	**09 58 14.3**	**+0.3**
ROCH				*i* S	**Sn**	**09 58 40.0**	**+2.5**
ROCH	**El Roble**	**1.86**	**340**	*eP*	**Pn**	**09 58 14.2**	**+0.3**
ROCH				⇓*iP*		09 58 14.3	
ROCH				*i* S	**Sn**	**09 58 39.9**	**+2.4**
ROCH				*i* S	**Sn**	**09 58 40.0**	**+2.5**
ROCH				AML	AML	09 58 46.3	
	comp=N,8μm,0.5s						
COCH	**Cobquecura**	**2.50**	**235**	⇑*iP*	**Pn**	**09 58 23.5**	**+0.8**
COCH				*i* S	**Sn**	**09 58 56.0**	**+2.8**
COCH	**Cobquecura**	**2.50**	**235**	⇑*iP*	**Pn**	**09 58 23.5**	**+0.8**
COCH				*i* S	**Sn**	**09 58 56.0**	**+2.8**
COCH				AML	AML	09 59 00.6	
	comp=E,568nm,0.4s						
CHNG	**Los Chungos**	**3.02**	**339**	⇑*iP*	**Pn**	**09 58 28.8**	**-1.1**
CHNG				*i* S	**Sn**	**09 59 09.2**	**+3.0**
CHNG				AML	AML	09 59 14.2	
	comp=E,2μm,0.5s						
CFAA	**Coronel Fontan**	**3.54**	**29**	Pn	**Pn**	**09 58 40.4**	**+3.3**
CFAA				Pg	**Pg**	**09 58 48.2**	**-1.7**
CFAA				Lg		09 59 40.4	
CFAA	**Coronel Fontan**	**3.54**	**29**	Pn	**Pn**	**09 58 40.4**	**+3.3**
	comp=E,0.4nm,0.3s,baz=210,slow=14,SNR=21						
CFAA				Pg	**Pg**	**09 58 48.2**	**-1.7**
	comp=E,1.3nm,0.3s,baz=210,slow=17,SNR=56						
CFAA				Lg		09 59 40.4	
	comp=E,2.7nm,0.3s,baz=288,slow=5.0,SNR=5.5						
PLCA	**Paso Flores**	**6.00**	**182**	Pn	**Pn**	**09 59 13.1**	**+2.3**
	comp=E,0.6nm,0.3s,baz=343,slow=15,SNR=13						
PLCA				Lg		10 00 46.5	
	comp=E,1.3nm,0.3s,baz=79,slow=19,SNR=2.6						
TRQA	**Tornquist**	**7.45**	**119**	*e*Pn	**Pn**	**09 59 30.0**	**-0.7**
	comp=E,19nm,0.6s						
CPUP	**Villa Florida**	**13.92**	**57**	Pn	**Pn**	**10 00 59.9**	**+0.5**
	comp=E,0.3nm,0.3s,baz=217,slow=6.5,SNR=3.7						
CPUP				Lg		10 05 04.0	
	comp=E,0.3nm,0.3s,baz=131,slow=20,SNR=2.6						
CPUP				LR	LR	10 05 58.1	
	comp=E,116nm,18.7s,baz=43,slow=36						
LPAZ	**La Paz**	**18.46**	**6**	P	**Pn**	**10 02 00.3**	**+2.3**
	comp=E,0.1nm,0.3s,baz=193,slow=8.7,SNR=13						
USHA	**Ushuaia**	**20.14**	**177**	LR	LR	10 10 30.6	
	comp=E,279nm,19.3s,MS3.6,baz=348,slow=39						
SIV	**San Ignacio**	**20.40**	**26**	P	**P**	**10 02 19.6**	**+0.5**
	comp=E,3.9nm,0.9s,baz=216,slow=12,SNR=12						
PCRV	**Puerto La Cruz**	**44.98**	**8**	LR	LR	10 27 49.9	
	comp=E,83nm,21.1s,MS3.6,baz=327,slow=40						
VNA3	**Neumayer Olymp**	**48.13**	**158**	*e*	**P**	**10 06 19.4**	**-2.2**
VNA1	**Neumayer--Stat**	**48.42**	**157**	*e*	**P**	**10 06 24.8**	**+0.9**
VNA2	**Neumayer--Watz**	**48.77**	**157**	*e*	**P**	**10 06 27.6**	**+1.1**
TXAR	**Lajitas Array**	**71.10**	**329**	P	**P**	**10 09 01.6**	**+1.2**
	comp=E,0.5nm,0.6s,mb3.6,baz=158,slow=10,SNR=4.6						
TORD	**Torodi Ar. Bea**	**83.08**	**69**	P	**P**	**10 10 07.6**	**-0.6**
	comp=E,1.0nm,0.8s,mb3.9,baz=252,slow=5.4,SNR=4.9						
PDAR	**Pinedale Array**	**85.09**	**332**	P	**P**	**10 10 18.5**	**+0.8**
	comp=E,0.4nm,0.8s,mb3.6,baz=217,slow=1.5,SNR=3.9						
NVAR	**Mina Array Bea**	**85.33**	**324**	P	**P**	**10 10 20.2**	**+1.1**
	comp=E,0.3nm,0.6s,mb3.6,baz=146,slow=6.6,SNR=3.2						
WRA	**Warramunga Arr**	**120.82**	**207**	PKP	PKPdf	10 16 33.7	-1.2
	comp=E,0.3nm,0.9s,baz=159,slow=1.7,SNR=7.1						
BVAR	**Borovoye Array**	**146.79**	**44**	PKPbc	PKPbc	10 17 23.8	+0.1
	comp=E,0.3nm,0.4s,baz=295,slow=4.4,SNR=2.0						

*ISK **28** 10:09:54.6, 37.32N×28.20E, h13km, ML2.2*
*ISCJB **28** 10:09:56.7±1.1, 37.21N±0.05×28.15E±0.04, h15km±47km, Error ellipse: s-maj=7.6km s-min=5.3km az=173.1*
*CSEM **28** 10:09:56.5±0.1, 37.22N×28.19E, h12km, ML2.2, Error ellipse: s-maj=3.4km s-min=3.1km az=2.0*
*DDA **28** 10:09:58.1, 37.26N×28.11E, h7km±4km, Md2.8*

ISC 28 10:09:57.1±1.2, 37.21N±0.05×28.15E±0.05, h11km±14km, n14, σ1§09/24, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.13**	**124**	*e*PG	**Pg**	**10 09 59.3**	**-0.9**
YER				*e*SG	**Sg**	**10 10 02.7**	**+0.3**
YER	**Yerkesik**	**0.13**	**124**	*e*Pg	**Pg**	**10 09 59.3**	**-0.9**
YER				*e*Sg	**Sg**	**10 10 02.7**	**+0.3**
MLSB	**Milas**	**0.31**	**286**	*e*PG	**Pg**	**10 10 02.0**	**-1.3**
MLSB				*e*SG	**Sg**	**10 10 07.2**	**-0.2**
MLSB	**Milas**	**0.31**	**286**	*e*Pg	**Pg**	**10 10 02.0**	**-1.3**
MLSB				*e*Sg	**Sg**	**10 10 07.3**	**-0.2**
AYDN	**Tasoluk**	**0.50**	**335**	*i* P	**Pg**	**10 10 06.7**	**-0.2**
AYDN				*i* S	**Sg**	**10 10 13.7**	**+0.2**
AYDN	**Tasoluk**	**0.50**	**335**	*i* P	**Pg**	**10 10 06.7**	**-0.2**
AYDN				*i* S	**Sg**	**10 10 13.7**	**+0.2**
BDRM	**Kayabasi**	**0.58**	**256**	*i* P	**Pg**	**10 10 08.8**	**+0.4**
BDRM				*i* S	**Sg**	**10 10 18.4**	**+2.4**
BDRM	**Kayabasi**	**0.58**	**256**	*i* P	**Pg**	**10 10 08.8**	**+0.4**
BDRM				*i* S	**Sg**	**10 10 18.5**	**+2.5**
DAT	**Datca**	**0.66**	**224**	*e*PG	**Pg**	**10 10 10.1**	**+0.2**
DAT	**Datca**	**0.66**	**224**	*e*Pg	**Pg**	**10 10 10.1**	**+0.2**
BODT	**Bodrum**	**0.69**	**258**	*e*PG	**Pg**	**10 10 09.4**	**-1.0**
BODT	**Bodrum**	**0.69**	**258**	*e*Pg	**Pg**	**10 10 09.4**	**-1.0**
DNZL	**Cakiroluk**	**0.86**	**56**	*i* P	**Pg**	**10 10 12.7**	**-1.0**
DNZL				*i* S	**Sg**	**10 10 27.5**	**+2.5**
DNZL	**Cakiroluk**	**0.86**	**56**	*i* P	**Pg**	**10 10 12.7**	**-1.0**
DNZL				*i* S	**Sg**	**10 10 27.5**	**+2.6**

*ISCJB **28** 10:11:56.4±0.5, 37.23N±0.04×71.9E±0.1, h160km±11km, Error ellipse: s-maj=13.7km s-min=5.9km az=10.2*
*NNC **28** 10:12:00.4±9.9, 37.72N×70.98E, h0km, mb3.8, mpv3.9, Error ellipse: s-maj=79.5km s-min=69.9km az=124.0*
*IDC **28** 10:12:01.0±8.3, 37.41N×72.17E, h175km±52km, mb3.0/1, mb1 3.0/7, mb1mx2.8/29, mbtmp2.9/7, Error ellipse: s-maj=75.8km s-min=50.9km az=176.0*
*NEIC **28** 10:12:02.2±7.1, 37.61N×72.00E, h162km±21km, mb3.7/1, Error ellipse: s-maj=86.5km s-min=13.2km az=182.0*

ISC 28 10:11:57.5±0.5, 37.23N±0.04×72.0E±0.1, h151km±11km, n31, σ0§70/42, 4C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.40**	**181**	P	**Pn**	**10 12 50.3**	**+0.4**
CEP				S	**Sn**	**10 13 30.0**	**-0.5**
CHCP	**Chirah Chowk**	**3.71**	**163**	P	**Pn**	**10 12 54.9**	**+0.9**
KSH	**Kashi**	**3.90**	**53**	Pn	**Pn**	**10 12 52.5**	**-3.8**
KSH				Sn	**Sn**	**10 13 30.0**	**-12**
KSH				*s*max			
	comp=N,90nm,0.3s						
KSH				*s*max			
	comp=E,83nm,0.5s						
THW	**Thamme Wali**	**4.42**	**182**	P	**Pn**	**10 13 03.0**	**-0.3**
AML	**Almayashu**	**5.08**	**15**	P	**Pn**	**10 13 12.0**	**+0.2**
	SNR=33						
AML	**Almayashu**	**5.08**	**15**	*e*Pn	**Pn**	**10 13 12.4**	**+0.6**
SARP	**Sargodha**	**5.32**	**173**	P	**Pn**	**10 13 14.2**	**-1.0**
UCH	**Uchtor**	**5.37**	**21**	P	**Pn**	**10 13 16.6**	**+0.9**
	SNR=5.6						
UCH	**Uchtor**	**5.37**	**21**	*e*Pn	**Pn**	**10 13 16.5**	**+0.8**
	comp=E,8.3nm,0.5s						
UCH				*e*Sn	**Sn**	**10 14 10.6**	**-6.2**
KZA	**Kyzart**	**5.47**	**27**	P	**Pn**	**10 13 17.1**	**+0.1**
	SNR=22						
KZA	**Kyzart**	**5.47**	**27**	*e*Pn	**Pn**	**10 13 16.9**	**-0.2**
	comp=E,5.6nm,0.5s						
KZA				*e*Sn	**Sn**	**10 14 18.7**	**-0.5**
EKS2	**Erkin-Say**	**5.61**	**14**	P	**Pn**	**10 13 19.2**	**+0.4**
	SNR=12						
EKS2	**Erkin-Say**	**5.61**	**14**	*e*Pn	**Pn**	**10 13 19.1**	**+0.3**
	comp=E,7.7nm,0.4s						
EKS2				*e*Sn	**Sn**	**10 14 15.8**	**-6.6**
AAK	**Ala-Archa**	**5.74**	**19**	P	**Pn**	**10 13 21.2**	**+0.6**
	SNR=8.1						
AAK	**Ala-Archa**	**5.74**	**19**	P	**Pn**	**10 13 21.3**	**+0.6**
AAK				S	**Sn**	**10 14 25.1**	**-0.6**
AAK	**Ala-Archa**	**5.74**	**19**	P	**Pn**	**10 13 21.3**	**+0.6**
	comp=E,3.4nm,0.3s,baz=184,slow=6.3,SNR=17						
AAK				S	**Sn**	**10 14 25.1**	**-0.6**
	comp=E,0.6nm,0.3s,baz=320,slow=22,SNR=13						
KK31	**Karatay Array**	**5.97**	**350**	⇑P	**Pn**	**10 13 23.4**	**-0.3**
	comp=E,7.0nm,0.4s,baz=170,slow=12,SNR=159						
KK31				⇑S	**Sn**	**10 14 26.7**	**-4.6**
	comp=E,5.3nm,0.2s,baz=171,slow=19						
KKAR	**Karatay Array**	**5.97**	**350**	*e*Pn	**Pn**	**10 13 23.5**	**-0.3**
	comp=E,9.9nm,0.3s						
KKAR				*e*Sn	**Sn**	**10 14 25.8**	**-5.4**
ULHL	**Ulahol**	**6.00**	**32**	P	**Pn**	**10 13 24.4**	**+0.3**
	SNR=7.8						
CHMS	**Chumysh**	**6.15**	**19**	P	**Pn**	**10 13 26.6**	**+0.5**
	SNR=5.2						
MK31	**Makanchi Array**	**12.25**	**35**	*e*Pn	**Pn**	**10 14 47.3**	**+0.5**
MKAR	**Makanchi Array**	**12.25**	**35**	P	**Pn**	**10 14 47.1**	**+0.3**
	comp=E,0.1nm,0.3s,baz=212,slow=11,SNR=3.9						
KURK	**Kurchatov**	**14.30**	**17**	P	**Pn**	**10 15 11.7**	**-1.2**
	comp=E,0.1nm,0.3s,baz=202,slow=10,SNR=3.2						
AB31	**Akbulak array**	**14.85**	**328**	P	**Pn**	**10 15 19.1**	**-0.6**
	comp=E,1.0nm,0.5s,baz=166,slow=12,SNR=25						
AB31				⇑S	**Sn**	**10 17 54.3**	**-10**
	comp=E,2.3nm,0.7s						
ABKAR	**Akbulak array**	**14.85**	**328**	*e*Pn	**Pn**	**10 15 19.2**	**-0.5**
	comp=E,1.7nm,0.4s						
BVAR	**Borovoye Array**	**15.84**	**357**	P	**Pn**	**10 15 32.0**	**+0.1**
	comp=E,0.4nm,0.3s,baz=178,slow=14,SNR=3.3						
AKTK	**Aktyubinsk**	**16.56**	**327**	P	**Pn**	**10 15 42.3**	**+1.6**
AKTO	**Aktyubinsk**	**16.56**	**327**	⇓P	**Pn**	**10 15 41.5**	**+0.7**
	comp=E,0.3nm,0.8s						
AKTO				⇑S	**S**	**10 18 35.2**	**-10**
	comp=E,0.6nm,1.4s						
AKTO	**Aktyubinsk**	**16.56**	**327**	P	**Pn**	**10 15 42.3**	**+1.6**
	comp=E,0.2nm,0.3s,baz=131,slow=13,SNR=5.6						
ZALV	**Zalesovo Beam**	**18.94**	**24**	P	**P**	**10 16 06.6**	**0.0**
	comp=E,0.3nm,0.3s,baz=218,slow=10,SNR=8.7						
ILAR	**Eielson Array**	**73.87**	**16**	P	**P**	**10 23 14.4**	**-0.8**
	comp=E,0.4nm,0.9s,baz=337,slow=5.9,SNR=4.3						

IDC 28 10:16:07.2±14.0, 10.07N×81.28W, h0km, mb3.7/4, mb1 4.1/5, mb1mx3.8/21, mbtmp3.7/5, ML3.5/1, MS3.1/3, Ms1 3.1/3, ms1mx2.4/41, Error ellipse: s-maj=332.3km s-min=71.8km az=1.0, North of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**12.14**	**327**	LR	LR	10 24 05.3	
	comp=Z,72nm,21.9s,baz=60,slow=39						
CMIG	**Matias Romero**	**14.95**	**299**	Pn	Pn	10 19 41.2	+1.4
	0.2nm,0.3s,baz=106,slow=16,SNR=3.4						
TKL	**Tuckaleechee C**	**25.57**	**355**	LR	LR	10 31 53.6	
	comp=Z,49nm,21.6s,baz=80,slow=37						
TXAR	**Lajitas Array**	**28.39**	**316**	P	P	10 22 03.7	+0.3
	0.3nm,0.8s,baz=130,slow=8.4,SNR=4.5						
NVAR	**Mina Array Bea**	**43.53**	**317**	P	P	10 24 12.1	-0.6
	1.0nm,0.7s,baz=124,slow=7.7,SNR=7.3						
YKA	**Yellowknife Ar**	**57.59**	**342**	P	P	10 25 58.7	+0.1
	1.4nm,0.7s,baz=141,slow=7.9,SNR=2.8						
ILAR	**Eielson Array**	**70.66**	**336**	P	P	10 27 24.7	+0.3
	0.7nm,1.0s,baz=112,slow=4.8,SNR=6.4						
NOA	**NORSAR Array B**	**82.48**	**29**	LR	LR	11 00 48.0	
	comp=Z,14nm,21.6s,baz=220,slow=32						

*NEIC **28** 10:23:42.8±1.2, 8.33S×148.40E, h35km, mb3.6/1, Error ellipse: s-maj=31.7km s-min=18.2km az=114.0*

IDC 28 10:23:36.8±1.6, 8.25S×148.45E, h0km, mb3.3/4, mb1 3.7/6, mb1mx3.5/16, mbtmp3.5/6, ML3.6/2, Error ellipse: s-maj=52.7km s-min=25.8km az=121.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**11.96**	**190**	Pn	Pn	10 26 30.4	+1.7
	0.2nm,0.3s,baz=357,slow=15,SNR=2.4						
WRA	**Warramunga Arr**	**17.94**	**228**	P	Pn	10 27 47.9	+0.1
	0.3nm,0.3s,baz=55,slow=11,SNR=19						
ASAR	**Alice Springs**	**20.72**	**221**	P	P	10 28 18.6	-0.2
	0.5nm,0.6s,baz=55,slow=9.9,SNR=11						
FITZ	**Fitzroy Crossi**	**24.24**	**244**	*e*P	P	10 28 57.1	+1.5
	0.7nm,0.4s						
FITZ	**Fitzroy Crossi**	**24.24**	**244**	P	P	10 28 54.5	-1.1
	0.5nm,0.5s,baz=58,slow=11,SNR=4.4						
STKA	**Stephens Creek**	**24.36**	**194**	P	P	10 28 56.5	-0.1
	1.5nm,0.8s,baz=28,slow=11,SNR=5.6						
ILAR	**Eielson Array**	**86.98**	**23**	P	P	10 36 24.4	+0.8
	0.1nm,0.6s,baz=251,slow=5.6,SNR=3.1						

*IDC **28** 10:47:08.6±1.9, 50.05N×129.65W, h0km, mb3.7/3, mb1 4.0/10, mb1mx3.7/29, mbtmp3.7/10, ML3.4/6, MS3.7/8, Ms1 3.7/8, ms1mx3.1/39, Error ellipse: s-maj=32.4km s-min=11.2km az=74.0*
*ISCJB **28** 10:47:09.7±0.6, 50.20N×129.76W±0.10, h10km, mb3.9/9, MS3.8/5, Error ellipse: s-maj=9.8km s-min=4.1km az=151.9*
*NEIC **28** 10:47:11.5±0.8, 50.17N×129.80W, h10km, mb3.8/21, Error ellipse: s-maj=15.3km s-min=6.3km az=54.0*

ISC 28 10:47:11.8±2.8, 50.19N±0.05×129.7W±0.1, h11km±21km, n68, σ1§42/65, mb3.9/9, MS3.8/5, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBB	**Bella Bella**	**2.24**	**26**	Pn	**Pn**	**10 47 46.8**	**-2.0**
	28nm,0.3s,baz=43,slow=13,SNR=56						
BBB				Sn	**Sn**	**10 48 14.9**	**-1.5**
	42nm,0.3s,baz=128,slow=23,SNR=18						
DIB	**Dawson Inlet,**	**3.47**	**332**	Pn	Pn	**10 48 02.3**	**-3.3**
	SNR=19						
JCW	**Jim Creek**	**5.49**	**108**	*e*Pn	**Pn**	**10 48 34.2**	**+0.8**
	7.1nm,0.5s						
RPW	**Rockport**	**5.65**	**105**	*e*Pn	**Pn**	**10 48 37.3**	**+1.7**
	9.2nm,0.6s						
LON	**Longmire**	**6.29**	**120**	*e*Pn	**Pn**	**10 48 44.2**	**-0.2**
ETW	**Entiat**	**6.72**	**109**	*e*Pn	**Pn**	**10 48 49.6**	**-0.6**
RSW	**Rattlesnake Hi**	**7.75**	**115**	*e*Pn	**Pn**	**10 49 02.8**	**-1.7**
	9.3nm,0.6s						
OD2	**Odessa Site #2**	**7.80**	**107**	*e*Pn	**Pn**	**10 49 02.3**	**-2.8**
DLBC	**Dease Lake**	**8.27**	**359**	*e*Pn	**Pn**	**10 49 12.0**	**+0.5**
DLBC	**Dease Lake**	**8.27**	**359**	Pn	**Pn**	**10 49 11.6**	**+0.2**
	0.4nm,0.3s,baz=194,slow=14,SNR=13						
DLBC				Sn	**Sn**	**10 50 47.2**	**+2.5**
	0.1nm,0.3s,baz=348,slow=19,SNR=2.3						
YBH	**Yreka Blue Hor**	**9.76**	**147**	LR	LR	10 52 43.3	
	comp=Z,336nm,20.3s,baz=330,slow=35						
WVOR	**Wild Horse Val**	**10.90**	**131**	*e*Pn	**Pn**	**10 49 48.4**	**+0.8**
	10nm,1.4s						
MSO	**Missoula**	**11.00**	**102**	*e*Pn	**Pn**	**10 49 49.2**	**+0.3**
CHMT	**Chamberlain Mo**	**11.40**	**100**	*e*Pn	**Pn**	**10 49 57.7**	**+3.3**
HLID	**Hailey**	**12.39**	**116**	*e*Pn	**Pn**	**10 50 10.7**	**+2.8**
DLMT	**Dillon**	**12.49**	**106**	*e*Pn	**Pn**	**10 50 12.2**	**+2.9**
MCMT	**McKenzie Canyo**	**12.60**	**109**	*e*Pn	**Pn**	**10 50 08.6**	**-2.3**
	1.0nm,0.7s						
PAHR	**Pah Rah Range**	**12.78**	**141**	*e*Pn	**Pn**	**10 50 12.1**	**-1.1**
WCN	**Washoe City**	**12.98**	**143**	*e*Pn	**Pn**	**10 50 13.8**	**-2.2**
	7.3nm,1.3s						
IMW	**Indian Meadow**	**14.26**	**109**	*e*Pn	**Pn**	**10 50 32.5**	**-0.9**
DCID1	**Drake Creek**	**14.28**	**110**	*e*Pn	**Pn**	**10 50 37.0**	**+3.3**
NVAR	**Mina Array Bea**	**14.30**	**141**	Pn	**Pn**	**10 50 31.9**	**-2.1**
	baz=310,slow=12,SNR=8.1						
FLWY	**Flagg Ranch**	**14.30**	**108**	*e*Pn	**Pn**	**10 50 34.2**	**+0.1**
MOOW	**Moose Ponds**	**14.46**	**109**	*e*Pn	**Pn**	**10 50 36.3**	**+0.2**
TPAW	**Teton Pass**	**14.47**	**110**	*e*Pn	**Pn**	**10 50 38.0**	**+1.6**
REDW	**Red Top Meadow**	**14.61**	**111**	*e*Pn	**Pn**	**10 50 40.4**	**+2.2**
SNOW	**Snow King Moun**	**14.61**	**110**	*e*Pn	**Pn**	**10 50 38.3**	**+0.1**
LOHW	**Long Hollow**	**14.62**	**109**	*e*Pn	**Pn**	**10 50 38.4**	**+0.1**
YKA	**Yellowknife Ar**	**14.86**	**28**	Pn	**Pn**	**10 50 37.8**	**-3.6**
	0.1nm,0.3s,baz=221,slow=10,SNR=2.7						
DUG	**Dugway**	**15.53**	**124**	Pn	**Pn**	**10 50 50.0**	**-0.5**
	5.4nm,1.1s						
BW06	**Boulder Array**	**15.72**	**110**	*e*Pn	**Pn**	**10 50 54.7**	**+1.6**
	4.1nm,1.0s						
PDAR	**Pinedale Array**	**15.72**	**110**	Pn	**Pn**	**10 50 53.1**	**+0.1**
PDAR	**Pinedale Array**	**15.72**	**110**	Pn	**Pn**	**10 50 53.1**	**+0.1**
	0.1nm,0.3s,baz=317,slow=13,SNR=8.3						
EGAK	**Eagle**	**15.82**	**342**	*e*Pn	**Pn**	**10 50 54.9**	**+0.8**
	12nm,1.4s						
ISA	**Isabella**	**16.67**	**146**	*e*Pn	**Pn**	**10 51 05.9**	**+0.8**
	10nm,1.2s						
ARUT	**Antelope Range**	**17.02**	**131**	*e*Pn	**Pn**	**10 51 09.6**	**0.0**
	4.7nm,0.9s						
MSU	**Marysvale**	**17.09**	**126**	*e*Pn	**Pn**	**10 51 10.7**	**+0.1**
	2.5nm,1.0s						
ILAR	**Eielson Array**	**17.19**	**335**	P	**Pn**	**10 51 12.4**	**+1.0**
	0.0nm,0.3s,baz=154,slow=10,SNR=8.4						
ILAR				LR	LR	10 57 09.1	
	comp=Z,153nm,21.8s,baz=148,slow=35						
CCUT	**Cedar City**	**17.24**	**131**	*e*Pn	**Pn**	**10 51 14.4**	**+2.1**
	45nm,2.5s						
SHPR	**Sheep Range**	**17.26**	**137**	*e*Pn	**Pn**	**10 51 11.4**	**-1.2**
	6.4nm,1.5s						
FFC	**Flin Flon**	**17.45**	**64**	*e*Pn	**Pn**	**10 51 13.5**	**-1.4**
SRU	**San Rafael**	**17.54**	**122**	*e*P	**Pn**	**10 51 19.4**	**+3.4**
	7.1nm,0.9s						
BPAW	**Bear Paw Mtn.**	**17.95**	**329**	*e*Pn	**Pn**	**10 51 21.3**	**+0.3**
	8.1nm,1.1s						
INK	**Inuvik**	**18.27**	**356**	P	**Pn**	**10 51 24.0**	**-0.9**
INK				LR	LR	10 59 03.6	
INK	**Inuvik**	**18.27**	**356**	P	**Pn**	**10 51 24.0**	**-0.9**
	0.1nm,0.3s,baz=190,slow=11,SNR=3.2						
INK				LR	LR	10 59 03.6	
	comp=Z,192nm,18.0s

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIB	**Dawson Inlet,** SNR=3.2	**3.59**	**328**	Pn	Pn	11 00 11.0	-0.9
DLBC	**Dease Lake** 0.1nm,0.3s,baz=188,slow=14,SNR=3.2	**8.27**	**357**	Pn	Pn	11 01 16.1	0.0
YBH	**Yreka Blue Hor** comp=Z,75nm,20.4s,baz=337,slow=34	**9.63**	**149**	LR	LR	11 04 47.0	
NVAR	**Mina Array Bea** 0.4nm,0.3s,baz=324,slow=12,SNR=5.0	**14.15**	**142**	Pn	Pn	11 02 39.8	+3.2
PDAR	**Pinedale Array** 0.1nm,0.3s,baz=301,slow=9.3,SNR=4.1	**15.48**	**111**	Pn	Pn	11 02 57.5	+2.9
ILAR	**Eielson Array** 0.0nm,0.3s,baz=149,slow=11,SNR=5.5	**17.29**	**334**	P	Pn	11 03 18.4	+0.9
INK	**Inuvik** comp=Z,56nm,18.3s,baz=64,slow=39	**18.29**	**355**	LR	LR	11 11 08.1	
ULM	**Lac du Bonnet** 6.4nm,0.8s,baz=277,slow=9.5,SNR=3.4	**21.31**	**77**	P	P	11 04 07.4	+4.2
ULM	comp=Z,52nm,18.8s,baz=316,slow=39			LR	LR	11 13 06.6	
TXAR	**Lajitas Array** 0.2nm,0.9s,baz=318,slow=12,SNR=2.3	**28.45**	**127**	P	P	11 05 11.5	0.0

IGQ 28 11:05:17.2,2.94S×78.34W,h28km±4km,Mb4.0,Ms3.8, 3C-2D,Error ellipse: s-maj=16.7km s-min=3.4km az=173.2,Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAT1	**Patacocha**	**1.42**	**356**	⇑P	Pn	11 05 43.7	+2.5
ARRY	**Arrayan**	**1.42**	**356**	S	Sn	11 06 02.2	+3.2
ARRY	**Arrayan**	**1.42**	**356**	P	Pn	11 05 43.1	+1.9
BMAS	**Trigal station**	**1.43**	**355**	⇑P	Pn	11 05 44.0	+2.6
RETU	**Refugio**	**1.48**	**356**	P	Pn	11 05 45.0	+3.0
ULBA	**Ulba**	**1.48**	**358**	P	Pn	11 05 44.5	+2.5
BULB	**Ulba Tungurahu**	**1.49**	**357**	⇑P	Pn	11 05 44.9	+2.8
BRUN	**Tungurahua Vol**	**1.51**	**357**	P	Pn	11 05 44.7	+2.3
JUI6	**Juive**	**1.51**	**355**	P	Pn	11 05 45.1	+2.8
RUN5	**Runtun**	**1.51**	**357**	P	Pn	11 05 44.7	+2.2
PISA	**Pisayambo**	**1.86**	**359**	P	Pn	11 05 50.2	+2.9
BMOR	**Cotopaxi Volca**	**2.19**	**357**	P	Pn	11 05 54.8	+3.0
MOV1	**Cotopaxi Vol s**	**2.21**	**357**	P	Pn	11 05 54.6	+2.6
BTAM	**Cotopaxi Volca**	**2.25**	**359**	⇓P	Pn	11 05 56.1	+3.5
BREF	**Cotopaxi Volca**	**2.25**	**358**	⇓P	Pn	11 05 56.4	+3.7
BVC2	**Cotopaxi Volca**	**2.26**	**358**	P	Pn	11 05 55.9	+3.0
VC1	**Cotopaxi 1**	**2.28**	**359**	P	Pn	11 05 56.5	+3.5

NIED ***28*** *11:06:00,46.60N×152.50E,h38km,Mw4.1 Best double couple: M₀1.86000×10¹⁵ NP1:φ₁123.00000°,δ76.00000°, λ-28.00000°. NP2:φ₂220.00000°,δ63.00000°, λ-164.00000°.*

JMA ***28*** *11:06:08.8±0.5,46.59N×152.51E,h30km,M4.7*

ISCJB ***28*** *11:06:10.7±0.7,46.50N±0.06×152.32E±0.08,h65km±6km, mb4.2/23,Error ellipse: s-maj=12.2km s-min=4.9km az=139.4*

MOS ***28*** *11:06:11.1±1.2,46.56N×152.35E,h70km,mb4.5/5,Error ellipse: s-maj=13.8km s-min=9.2km az=52.8*

IDC ***28*** *11:06:11.8±0.5,46.51N×152.40E,h57km±5km,mb3.6/15, mb1 3.9/18,mb1mx3.8/26,mbtmp3.7/18,MS3.2/6, Ms1 3.2/6,ms1mx2.9/31,Error ellipse: s-maj=18.7km s-min=11.7km az=134.0*

NEIC ***28*** *11:06:13.2±0.8,46.55N×152.35E,h70km±7km,mb4.3/1, Error ellipse: s-maj=12.4km s-min=6.1km az=133.0*

ISC 28 11:06:12.7±0.6,46.47N±0.06×152.35E±0.08,h66km±5km, h57km±1.7km:pP-P,n74,σ1s09/78,mb4.2/23,1C-1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.37**	**250**	*e*PN	**Pn**	**11 07 02.0**	**-0.9**
KUR				*e*S	**Sn**	**11 07 43.0**	**+1.3**
KUR	comp=N,80nm,0.6s			pmax	pmax		
KUR	comp=Z,230nm,0.6s			pmax	pmax		
KUR	comp=N,700nm,0.8s			smax			
KUR	comp=E,320nm,0.8s			smax			
SKR	**Severo-Kuril's**	**4.90**	**29**	*e*Pn	**Pn**	**11 07 26.4**	**+2.7**
SKR				*e*S	**Sn**	**11 08 19.0**	**0.0**
SKR	comp=N,60nm,0.5s			pmax	pmax		
SKR	comp=Z,80nm,0.5s			pmax	pmax		
SKR	comp=N,150nm,0.5s			smax			
SKR	comp=E,150nm,0.5s			smax			
SKR	comp=Z,50nm,0.5s			smax			
YUK	**Yuzh-Kuril'sk**	**5.19**	**244**	⇓*i*PN	**Pn**	**11 07 28.4**	**+0.6**
YUK				*i* S	**Sn**	**11 08 27.2**	**+0.9**
YUK	comp=N,165nm,0.6s			pmax	pmax		
YUK	comp=E,117nm,0.6s			pmax	pmax		
YUK	comp=Z,180nm,0.6s			pmax	pmax		
YUK	comp=Z,500nm,1.3s			pmax	pmax		
YUK	comp=N,1μm,2.2s			smax			
YUK	comp=E,2μm,2.2s			smax			
YUK	comp=N,151nm,0.7s			smax			
YUK	comp=E,262nm,0.7s			smax			
YUK	comp=Z,200nm,16.0s			MLR	MLR		
NEM2	**Nemuro 2**	**5.63**	**239**	P	**Pn**	**11 07 31.7**	**-2.1**
NEM2				*e*S	**Sn**	**11 08 33.2**	**-3.8**
JRA	**Rausu**	**5.70**	**246**	P	**Pn**	**11 07 35.8**	**+1.0**
JNK	**Nakash**	**6.13**	**245**	P	**Pn**	**11 07 40.6**	**0.0**
JNK				*e*S	**Sn**	**11 08 48.8**	**-0.5**
JAK	**Akkeshi**	**6.47**	**240**	P	**Pn**	**11 07 43.2**	**-2.0**
JAK				*e*S	**Sn**	**11 08 53.1**	**-4.4**
JTKR	**Abashiri--Toko**	**6.47**	**250**	P	**Pn**	**11 07 46.1**	**+0.9**
YSS	**Yuzh-Sakhalins** comp=Z,33nm,0.6s	**6.62**	**278**	*e*Pn	**Pn**	**11 07 47.8**	**+0.5**
YSS	**Yuzh-Sakhalins**	**6.62**	**278**	⇑*i*PN	**Pn**	**11 07 49.0**	**+1.7**
YSS				*e*S	**Sn**	**11 09 01.0**	**-0.2**
YSS	comp=Z,30nm,0.8s			pmax	pmax		
YSS	comp=N,30nm,0.5s			smax			
YSS	comp=E,20nm,0.5s			smax			
JMP	**Maruseppu**	**6.81**	**252**	P	**Pn**	**11 07 51.3**	**+1.4**
JAR	**Ashorobuto**	**6.87**	**246**	P	**Pn**	**11 07 50.8**	**0.0**
JAR				*e*S	**Sn**	**11 09 07.1**	**-0.4**
JOB	**Onbets**	**7.04**	**243**	*e*S	**Sn**	**11 09 07.9**	**-3.7**
JKK2	**Kamakawa 2**	**7.27**	**253**	P	**Pn**	**11 07 57.7**	**+1.5**
ASAJ	**Asahikawa** comp=E,31nm,0.8s	**7.27**	**255**	*e*Pn	**Pn**	**11 07 58.2**	**+1.9**
ASAJ	**Asahikawa** comp=E,2.9nm,0.3s,baz=80,slow=18,SNR=25	**7.27**	**255**	P	**Pn**	**11 07 57.9**	**+1.6**
ASAJ	baz=188,slow=21,SNR=1.7			S	**Sn**	**11 09 28.1**	**+11**
ASAJ	**Asahikawa**	**7.27**	**255**	PN	**Pn**	**11 07 57.9**	**+1.7**
ASAJ				S	**Sn**	**11 09 28.1**	**+11**
ASAJ	comp=Z,3.0nm,0.3s			pmax	pmax		
ASAJ	**Asahikawa**	**7.27**	**255**	P	**Pn**	**11 07 58.3**	**+2.1**
PETK	**Petropavlovsk-** comp=Z,1.4nm,0.3s,baz=163,slow=11,SNR=12	**7.49**	**26**	P	**Pn**	**11 07 58.4**	**-0.7**
PETK	baz=252,slow=39,SNR=1.8			S	**Sn**	**11 09 30.3**	**+7.9**
JCH	**Churui**	**7.49**	**242**	*e*S	**Sn**	**11 09 18.2**	**-4.4**
PET	**Petropavlovsk**	**7.72**	**30**	*e*Pn	**Pn**	**11 08 01.7**	**-0.6**
PET	**Petropavlovsk**	**7.72**	**30**	*e*PN	Px	11 08 14.2	
ERM	**Erimo** comp=Z,63nm,0.6s	**7.96**	**239**	*e*Pn	**Pn**	**11 08 05.4**	**-0.3**
ERM	**Erimo**	**7.96**	**239**	*e*PN	**Pn**	**11 08 05.4**	**-0.3**
ERM	comp=Z,63nm,0.6s			pmax	pmax		
JBT2	**Biratori 2**	**8.03**	**246**	P	**Pn**	**11 08 05.7**	**-0.8**
JNBK	**Urakawa-nobuka**	**8.05**	**242**	P	**Pn**	**11 08 04.8**	**-2.1**
JNB	**Noboribetsu**	**9.03**	**248**	P	**Pn**	**11 08 20.0**	**-0.2**
JNB				*e*S	**Sn**	**11 09 58.5**	**-1.7**
JKB	**Kayabe**	**9.33**	**245**	*e*S	**Sn**	**11 09 59.5**	**-8.2**
JSH	**Shimam**	**9.58**	**251**	P	**Pn**	**11 08 27.7**	**-0.1**
JANG	**Nango**	**9.96**	**236**	*e*S	**Sn**	**11 10 12.1**	**-11**
JTH	**Tanohata**	**10.06**	**233**	*e*S	**Sn**	**11 10 11.9**	**-14**
JOSM	**Okushiri--Mats**	**10.22**	**249**	P	**Pn**	**11 08 35.0**	**-1.5**
MAJO	**Matsushiro** comp=Z,6.4nm,0.6s	**14.50**	**232**	*e*Pn	**Pn**	**11 09 34.7**	**+0.5**
MAJO	**Matsushiro**	**14.50**	**232**	*e*P	**Pn**	**11 09 34.7**	**+0.4**
MAJO	comp=Z,6.0nm,0.6s			pmax	pmax		
MAT	**Matsushiro**	**14.50**	**232**	P	**Pn**	**11 09 40.1**	**+5.8**
MJAR	**Matsushiro Arr** comp=Z,1.0nm,0.3s,baz=40,slow=9.0,SNR=8.5	**14.50**	**232**	P	**Pn**	**11 09 36.2**	**+1.9**
MJAR	comp=Z,47nm,19.6s,baz=25,slow=36			LR	LR	11 14 47.5	
KSRS	**Korea Array** comp=Z,5.9nm,0.6s,baz=57,slow=11,SNR=16	**20.21**	**252**	P	**P**	**11 10 42.9**	**+0.7**
KSRS	comp=Z,27nm,20.7s,baz=55,slow=33			LR	LR	11 17 28.1	
KSRS	**Korea Array**	**20.21**	**252**	P	**P**	**11 10 42.9**	**+0.8**
KSRS	comp=Z,6.0nm,0.6s			pmax	pmax		
KSRS	comp=Z,27nm,20.7s			MLR	MLR		
YAK	**Yakutsk**	**20.28**	**328**	*e*P	**P**	**11 10 44.0**	**+1.4**
YAK	comp=Z,16nm,0.9s			pmax	pmax		
YAK	comp=E,5.0nm,1.1s			pmax	pmax		
YAK	comp=N,5.0nm,1.0s			pmax	pmax		
SONM	**Songino Array** comp=N,55nm,20.1s,baz=47,slow=38	**30.93**	**290**	LR	LR	11 25 51.1	
GUMO	**Guam** comp=N,34nm,21.1s,baz=281,slow=33	**33.38**	**193**	LR	LR	11 24 25.6	
KDAK	**Kodiak Island**	**34.68**	**51**	*i* P	**P**	**11 12 55.5**	**-0.2**
ILAR	**Eielson Array** comp=N,0.2nm,0.5s,mb3.3,baz=257,slow=7.6,SNR=4.9	**37.09**	**38**	P	**P**	**11 13 14.2**	**-1.9**
ILAR	comp=N,1.0nm,1.1s,baz=268,slow=5.6,SNR=5.3			pP	pP	11 13 27.2	-5.1
INK	**Inuvik** comp=N,1.0nm,0.4s,mb3.9,baz=288,slow=9.3,SNR=5.4	**42.17**	**32**	P	**P**	**11 13 58.3**	**+0.1**
ZALV	**Zalesovo Beam** comp=N,0.9nm,0.4s,baz=98,slow=3.0,SNR=4.9	**42.35**	**306**	PcP	PcP	11 15 52.0	-0.1
MK31	**Makanchi Array**	**46.60**	**297**	*e*P	**P**	**11 14 32.6**	**-1.3**
MKAR	**Makanchi Array** comp=N,1.9nm,0.7s,mb3.9,baz=68,slow=7.9,SNR=16	**46.60**	**297**	P	**P**	**11 14 32.7**	**-1.2**
MKAR	comp=N,0.7nm,0.5s,baz=74,slow=2.4,SNR=6.6			PcP	PcP	11 16 07.0	+0.1
KURK	**Kurchatov**	**47.08**	**304**	*i* P	**P**	**11 14 37.3**	**-0.3**
KURK	comp=Z,3.0nm,1.0s,mb4.0			pmax	pmax		
CMAR	**Chiang Mai Arr** comp=Z,2.0nm,0.8s,mb4.2,baz=38,slow=7.3,SNR=13	**51.80**	**256**	P	**P**	**11 15 15.2**	**+1.3**
CMAR	comp=Z,0.5nm,0.4s,baz=23,slow=6.8,SNR=1.7			pP	pP	11 15 29.3	-1.5
RAMN	**Ramite** comp=Z,19nm,0.5s,mb5.3	**54.61**	**273**	*e*P	**P**	**11 15 34.9**	**+0.4**
KKN	**Kakani** comp=Z,12nm,0.5s,mb5.2	**54.99**	**275**	*e*P	**P**	**11 15 38.5**	**+1.3**
DMN	**Daman** comp=Z,27nm,0.8s,mb5.3	**55.22**	**275**	*e*P	**P**	**11 15 39.5**	**+0.6**
GKN	**Gorkha** comp=Z,22nm,0.6s,mb5.3	**55.30**	**276**	*e*P	**P**	**11 15 40.1**	**+0.7**
DANN	**Dangsing**	**55.69**	**277**	*e*P	**P**	**11 15 43.4**	**+1.2**
KOLN	**Koldanda** comp=Z,16nm,0.6s,mb5.2	**56.16**	**276**	*e*P	**P**	**11 15 46.3**	**+0.7**
ARCES	**ARCESS Array B** comp=Z,2.0nm,0.9s,mb4.2,baz=27,slow=11,SNR=3.6	**57.94**	**341**	P	**P**	**11 15 57.9**	**+0.3**
ABKAR	**Akbulak array** comp=Z,1.4nm,0.5s,mb4.2	**58.20**	**310**	*e*P	**P**	**11 15 58.6**	**-1.1**
AKTO	**Aktyubinsk** comp=Z,67nm,18.4s,baz=251,slow=38	**58.52**	**312**	LR	LR	11 43 33.9	
NVAR	**Mina Array Bea** comp=Z,0.8nm,0.7s,baz=306,slow=6.6,SNR=4.4	**63.03**	**62**	pP	pP	11 16 48.2	-1.8
FINES	**FINESS Array B** comp=Z,0.8nm,0.4s,mb3.9,baz=53,slow=6.9,SNR=3.8	**64.07**	**334**	P	**P**	**11 16 37.9**	**-1.2**
OBN	**Obninsk**	**65.24**	**325**	*e*P	**P**	**11 16 44.8**	**-2.1**
OBN				*e*		11 19 08.5	
OBN	comp=Z,3.0nm,0.6s,mb4.3			pmax	pmax		
PDAR	**Pinedale Array** comp=Z,0.7nm,0.8s,mb3.5,baz=341,slow=3.1,SNR=6.3	**65.33**	**53**	P	**P**	**11 16 48.1**	**+0.4**
PDAR	comp=Z,0.7nm,0.7s,baz=323,slow=2.2,SNR=5.3			pP	pP	11 17 04.0	-1.3
WRA	**Warramunga Arr** comp=Z,0.9nm,1.0s,mb3.6,baz=13,slow=6.8,SNR=4.9	**68.08**	**198**	P	**P**	**11 17 05.4**	**+0.1**
WRA	comp=Z,0.4nm,0.6s,baz=16,slow=6.9,SNR=2.6			pP	pP	11 17 20.0	-2.9
NOA	**NORSAR Array B** comp=Z,1.5nm,0.5s,mb4.0,baz=28,slow=6.4,SNR=5.3	**68.32**	**341**	P	**P**	**11 17 06.0**	**-0.3**
NOA	comp=Z,15nm,18.4s,baz=20,slow=38			LR	LR	11 49 43.7	
FITZ	**Fitzroy Crossi** comp=Z,1.2nm,0.8s,mb3.8,baz=76,slow=4.2,SNR=3.2	**68.65**	**207**	P	**P**	**11 17 08.5**	**-0.4**
KIV	**Kislovodsk**	**70.62**	**314**	*e*P	**P**	**11 17 19.5**	**-1.3**
KIV				*e*		11 19 53.9	
KIV				*e*S	S	11 26 24.4	-4.9
KIV	comp=Z,4.0nm,0.9s,mb4.2			pmax	pmax		
ASAR	**Alice Springs** comp=Z,0.4nm,0.7s,mb3.4,baz=18,slow=4.7,SNR=4.1	**71.78**	**198**	P	**P**	**11 17 28.2**	**+0.3**
ASAR	comp=Z,0.5nm,0.6s,baz=12,slow=6.8,SNR=4.3			pP	pP	11 17 45.1	-0.5
BUR08	**Bucovina Ar. S**	**75.51**	**326**	*e*P	**P**	**11 17 49.3**	**-0.3**
TXAR	**Lajitas Array** comp=Z,0.6nm,0.6s,mb3.5,baz=308,slow=5.1,SNR=10	**78.08**	**60**	P	**P**	**11 18 05.1**	**+0.6**
TXAR	comp=Z,0.6nm,0.6s,baz=305,slow=4.6,SNR=7.7			pP	pP	11 18 20.9	-1.5
BRTR	**Keskin Array B** comp=Z,1.5nm,0.8s,mb3.8,baz=72,slow=4.0,SNR=6.8	**78.23**	**316**	P	**P**	**11 18 06.0**	**+1.0**
BRTR	**Keskin Array B**	**78.23**	**316**	*e*P	**P**	**11 18 06.0**	**+0.9**
BRTR	comp=Z,2.0nm,0.8s			pmax	pmax		
STKA	**Stephens Creek** comp=Z,0.8nm,0.5s,mb3.8,baz=1.2,slow=22,SNR=3.8	**78.59**	**189**	P	**P**	**11 18 06.9**	**+0.1**
PLCA	**Paso Flores**	**148.70**	**95**	PKPbc	PKPbc	11 25 52.7	+0.8
PLCA				pPKPbc	pPKPbc	11 26 06.9	-3.9
PLCA	**Paso Flores** comp=Z,1.6nm,0.6s,baz=239,slow=4.9,SNR=4.3	**148.70**	**95**	PKPbc	PKPbc	11 25 52.7	+0.8
PLCA	comp=Z,2.6nm,0.9s,baz=210,slow=4.8,SNR=3.2			pPKPbc	pPKPbc	11 26 06.9	-3.9

WEL 28 11:14:23.5±0.5,38.32S×175.37E,h254km±4km,ML3.6/17, Error ellipse: s-maj=6.0km s-min=5.7km az=0.0,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.94**	**210**	PN	Pn	11 14 58.4	-0.1
FWVZ	**Far West T-bar**	**0.95**	**171**	PN	Pn	11 14 59.0	+0.4
FWVZ				SN	S	11 15 26.6	+0.3
WNVZ	**Wahianoa**	**1.03**	**170**	PN	Pn	11 14 59.4	+0.4
WNVZ				SN	S	11 15 27.4	+0.3
BKZ	**Black Stump Fm**	**1.23**	**134**	PN	Pn	11 15 00.3	+0.1
BKZ				SN	S	11 15 28.1	-1.0
BHHZ	**Black Hill Sta**	**1.29**	**155**	PN	Pn	11 15 00.5	-0.1
BHHZ				SN	S	11 15 27.9	-2.1
URZ	**Urewera**	**1.37**	**88**	PN	Pn	11 15 00.9	-0.3
URZ				SN	S	11 15 29.4	-1.5
WAZ	**Wanganui**	**1.47**	**191**	PN	Pn	11 15 01.6	-0.2
RAHZ	**Arahi**	**1.48**	**115**	PN	Pn	11 15 02.7	+0.8
MCHZ	**McNeill Hill**	**1.53**	**138**	PN	Pn	11 15 03.2	+0.8
MCHZ				SN	S	11 15 33.5	+0.5
MWZ	**Matawai**	**1.70**	**91**	PN	Pn	11 15 03.8	+0.1
PNHZ	**Pukenui**	**1.73**	**158**	PN	Pn	11 15 03.7	-0.1
TSZ	**Takapari Road**	**1.80**	**165**	PN	Pn	11 15 04.0	-0.4
KAHZ	**Kahuranaki**	**1.89**	**142**	PN	Pn	11 15 05.5	+0.3
WPHZ	**Waipukurau**	**1.94**	**155**	PN	Pn	11 15 05.3	-0.3
PXZ	**Pawanui**	**2.07**	**146**	PN	Pn	11 15 06.5	-0.3
DVHZ	**Dannevirke**	**2.08**	**163**	PN	Pn	11 15 05.9	-1.0
PRHZ	**Porangahau**	**2.19**	**154**	PN	Pn	11 15 07.3	-0.6
MRZ	**Mangatainoka R**	**2.35**	**176**	PN	Pn	11 15 07.9	-1.5
BFZ	**Birch Farm**	**2.46**	**164**	PN	Pn	11 15 09.2	-1.3
TIWZ	**Tintock**	**2.49**	**171**	PN	Pn	11 15 09.8	-1.0
OGWZ	**Otaki Gorge**	**2.50**	**183**	PN	Pn	11 15 09.3	-1.6
KIW	**Kapiti Island**	**2.57**	**188**	PN	Pn	11 15 09.7	-1.9
HOWZ	**Holdsworth Sta**	**2.58**	**177**	PN	Pn	11 15 09.7	-2.0
DUWZ	**D'Urville Isla**	**2.73**	**204**	PN	Pn	11 15 11.2	-2.0
CAW	**Cannon Point**	**2.80**	**185**	PN	Pn	11 15 11.9	-2.1
MTW	**Mount Morrison**	**2.84**	**178**	PN	Pn	11 15 12.3	-2.1
TCW	**Tory Channel**	**3.01**	**196**	PN	Pn	11 15 14.1	-2.1
SNZO	**South Karori**	**3.04**	**189**	PN	Pn	11 15 14.0	-2.5
MSWZ	**Moikau Station**	**3.10**	**182**	PN	Pn	11 15 14.6	-2.5
BHW	**Baring Head**	**3.11**	**187**	PN	Pn	11 15 15.1	-2.2
PLWZ	**Palliser**	**3.25**	**181**	PN	Pn	11 15 16.2	-2.6
NNZ	**Nelson**	**3.28**	**207**	PN	Pn	11 15 15.0	-4.1
TUWZ	**Tuamarina**	**3.30**	**199**	PN	Pn	11 15 17.0	-2.4
QRZ	**Quartz Range**	**3.33**	**220**	PN	Pn	11 15 16.5	-3.2
BSWZ	**Blackbirch Sta**	**3.58**	**198**	PN	Pn	11 15 20.2	-2.4
THZ	**Tophouse**	**3.93**	**208**	PN	Pn	11 15 23.2	-3.3
KHZ	**Kahutara**	**4.33**	**198**	PN	Pn	11 15 27.9	-3.3
DSZ	**Denniston Nort**	**4.38**	**217**	PN	Pn	11 15 27.8	-4.0
LTZ	**Lake Taylor**	**5.05**	**207**	PN	Pn	11 15 35.6	-4.2

IDC 28 11:17:11.5±2.0,50.08N×129.75W,h0km,mb3.2/2, mb1 3.6/7,mb1mx3.5/26,mbtmp3.3/7,ML3.4/5,MS3.1/6, Ms1 3.1/6,ms1mx2.8/14,Error ellipse: s-maj=35.5km s-min=13.0km az=76.0,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella** 24nm,0.3s,baz=38,slow=14,SNR=18	**2.34**	**25**	Pn	Pn	11 17 50.2	-1.0
BBB	23nm,0.3s,baz=128,slow=22,SNR=10			Sn	Sn	11 18 19.1	-1.6
DLBC	**Dease Lake** 0.1nm,0.3s,baz=249,slow=26,SNR=3.7	**8.38**	**359**	Pn	Pn	11 19 14.0	0.0
DLBC	comp=Z,163nm,18.9s,baz=115,slow=38			LR	LR	11 22 30.2	
YBH	**Yreka Blue Hor** comp=Z,81nm,19.0s,baz=346,slow=35	**9.68**	**147**	LR	LR	11 22 53.4	
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=331,slow=5.8,SNR=3.9	**14.22**	**141**	Pn	Pn	11 20 35.6	+1.6
PDAR	**Pinedale Array** 0.1nm,0.3s,baz=306,slow=12,SNR=6.3	**15.70**	**110**	Pn	Pn	11 20 56.8	+3.0
ILAR	**Eielson Array** 0.0nm,0.3s,baz=148,slow=10,SNR=12	**17.28**	**335**	P	Pn	11 21 15.5	+1.7
ILAR	comp=Z,42nm,20.0s,baz=168,slow=34			LR	LR	11 27 01.6	
INK	**Inuvik** comp=Z,72nm,19.9s,baz=289,slow=36	**18.38**	**356**	LR	LR	11 28 07.2	
ULM	**Lac du Bonnet** 6.9nm,0.9s,baz=303,slow=5.4,SNR=4.7	**21.60**	**76**	P	P	11 22 06.1	+3.5
ULM	comp=Z,40nm,21.6s,baz=238,slow=36			LR	LR	11 30 00.4	
ANMO	**Albuquerque** 0.3nm,0.3s,baz=321,slow=13,SNR=2.1	**22.74**	**123**	P	P	11 22 15.7	+0.8
TXAR	**Lajitas Array** 0.2nm,0.9s,baz=18,slow=20,SNR=3.2	**28.59**	**127**	P	P	11 23 09.5	+0.4
SCHQ	**Schefferville** comp=Z,73nm,19.2s,baz=273,slow=37	**37.48**	**58**	LR	LR	11 40 17.5	

ATH ***28*** *11:24:04.9,35.86N×21.58E,h33km±2km,MD3.7/27, ML3.4*

NEIC ***28*** *11:24:04.9,35.86N×21.58E,h33km,ML3.4(ATH),After ATH.*

ISCJB ***28*** *11:24:06.6±0.5,35.93N±0.04×21.62E±0.04,h72km±6km, mb3.6/7,Error ellipse: s-maj=7.6km s-min=4.0km az=40.3*

CSEM ***28*** *11:24:07.4±0.3,35.90N×21.57E,h40km,ML3.4/5,Error ellipse: s-maj=8.6km s-min=4.4km az=38.0*

IDC ***28*** *11:24:08.8±3.6,35.93N×21.68E,h58km±33km,mb3.6/6, mb1 3.7/9,mb1mx3.5/29,mbtmp3.6/9,ML3.9/3,MS3.1/1, Ms1 3.1/1,ms1mx2.3/42,Error ellipse: s-maj=59.7km s-min=18.9km az=7.0*

THE ***28*** *11:24:09.4,36.03N×21.82E,h42km±24km,ML3.4/5,Error ellipse: s-maj=24.1km s-min=2.0km az=59.0*

PDG ***28*** *11:24:10.0±0.3,36.38N×20.84E,h12km±11km,ML4.0/8, Error ellipse: s-maj=359.1km s-min=90.3km az=90.0*

ISC 28 11:24:07.9±0.5,35.92N±0.04×21.63E±0.04,h53km±7km, n205,σ1s11/247,mb3.7/7,17C-7D,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.98**	**5**	*e*PN	**Pn**	**11 24 24.2**	**-1.2**
PYL				*e*SN	**Sn**	**11 24 39.8**	**+1.5**
PYL	**PYLOS**	**0.98**	**5**	P	**Pn**	**11 24 23.8**	**-1.6**
PYL	**PYLOS**	**0.98**	**5**	P	**Pn**	**11 24 23.8**	**-1.6**
PYL	**PYLOS**	**0.98**	**5**	*e*Pn	**Pn**	**11 24 24.2**	**-1.2**
PYL				*e*Sn	**Sn**	**11 24 39.8**	**+1.5**
KYTH	**Kithira**	**1.19**	**72**	*e*Pn	**Pn**	**11 24 28.1**	**-0.2**
KYTH	**Kithira**	**1.19**	**72**	*e*PN	**Pn**	**11 24 28.1**	**-0.2**
KYTH	**Kithira**	**1.19**	**72**	*e*Pn	**Pn**	**11 24 28.1**	**-0.2**
ITM	**Ithomi**	**1.28**	**11**	P	**Pn**	**11 24 28.5**	**-0.9**
ITM	**Ithomi**	**1.28**	**11**	*e*PB	**Pn**	**11 24 28.8**	**-0.6**
ITM				*e*SN	**Sn**	**11 24 48.0**	**+2.5**
ITM	**Ithomi**	**1.28**	**11**	P	**Pn**	**11 24 28.8**	**-0.6**
ITM	**Ithomi**	**1.28**	**11**	P	**Pn**	**11 24 28.8**	**-0.6**
ITM				*e*Sn	**Sn**	**11 24 48.0**	**+2.5**
VLI	**Veliai**	**1.32**	**53**	P	**Pn**	**11 24 30.2**	**+0.2**
VLI	**Veliai**	**1.32**	**53**	P	**Pn**	**11 24 30.2**	**+0.2**
VLX	**Vlachokerasia**	**1.57**	**22**	*e*PB	**Pn**	**11 24 33.5**	**+0.2**
VLX				*e*SN	**Sn**	**11 24 54.0**	**+1.5**
VLX	**Vlachokerasia**	**1.57**	**22**	P	**Pn**	**11 24 33.5**	**+0.2**
VLX				S	**Sn**	**11 24 49.8**	**-2.7**
VLX	**Vlachokerasia**	**1.57**	**22**	P	**Pn**	**11 24 33.5**	**+0.2**
VLX				*e*Sn	**Sn**	**11 24 54.0**	**+1.5**
KARN	**Karanos**	**1.93**	**105**	*e*PN	**Pn**	**11 24 38.0**	**-0.3**
KARN				*e*SN	**Sn**	**11 25 01.9**	**+0.5**
KARN	**Karanos**	**1.93**	**105**	P	**Pn**	**11 24 37.9**	**-0.4**
KARN				S	**Sn**	**11 25 00.7**	**-0.7**
KARN	**Karanos**	**1.93**	**105**	*e*Pn	**Pn**	**11 24 38.0**	**-0.3**
KARN				S	**Sn**	**11 25 00.7**	**-0.7**
KARN				*e*Sn	**Sn**	**11 25 01.9**	**+0.5**
DID	**Didima**	**2.04**	**39**	*e*PN	**Pn**	**11 24 39.4**	**-0.4**
DID	**Didima**	**2.04**	**39**	P	**Pn**	**11 24 39.3**	**-0.5**
DID				S	**Sn**	**11 25 01.6**	**-2.5**
DID	**Didima**	**2.04**	**39**	*e*Pn	**Pn**	**11 24 39.4**	**-0.4**
GUR	**Goura**	**2.09**	**16**	*e*PN	**Pn**

IDI	Anoyia	2.73	102	P	Pn	11 24 49.8	+0.6	
IDI	Anoyia	2.73	102	*e*PN	Pn	11 24 49.2	0.0	
IDI				*e*SB	Sn	11 25 20.7	-0.3	
IDI	Anoyia	2.73	102	*e*Pn	Pn	11 24 49.2	0.0	
IDI	Anoyia	2.73	102	P	Pn	11 24 49.8	+0.6	
SIVA	Sivas	2.75	108	*e*Pn	Pn	11 24 49.7	+0.3	
SIVA	Sivas	2.75	108	*e*PN	Pn	11 24 49.7	+0.3	
SIVA	Sivas	2.75	108	*e*Pn	Pn	11 24 49.7	+0.3	
PTL	Penteli	2.78	39	*e*Pn	Pn	11 24 49.8	-0.1	
PTL	Penteli	2.78	39	*e*PN	Pn	11 24 49.8	-0.1	
PTL	Penteli	2.78	39	*e*Pn	Pn	11 24 49.8	-0.1	
LKR	Lokris	2.94	21	P	Pn	11 24 51.8	-0.2	
LKR	Lokris	2.94	21	*e*PN	Pn	11 24 52.3	+0.3	
LKR	Lokris	2.94	21	P	Pn	11 24 51.4	-0.6	
LKR	Lokris	2.94	21	P	Pn	11 24 51.8	-0.2	
LKR	Lokris	2.94	21	*e*Pn	Pn	11 24 52.3	+0.3	
LKD2	Lefkada island	2.97	345	P	Pn	11 24 53.9	+1.4	
LKD2	Lefkada island	2.97	345	P	Pn	11 24 53.9	+1.4	
ATAL	Atalanti	2.98	21	P	Pn	11 24 51.9	-0.8	
ATAL	Atalanti	2.98	21	P	Pn	11 24 51.9	-0.8	
EVR	Evrytania	3.00	3	*e*Pn	Pn	11 24 53.0	+0.1	
EVR	Evrytania	3.00	3	*e*PN	Pn	11 24 53.0	+0.1	
EVR	Evrytania	3.00	3	*e*Pn	Pn	11 24 53.0	+0.1	
AGG	Agios Georgios	3.15	10	P	Pn	11 24 56.3	+1.4	
AGG	Agios Georgios	3.15	10	*e*PN	Pn	11 24 55.1	+0.2	
AGG	Agios Georgios	3.15	10	P	Pn	11 24 55.9	+1.0	
AGG	Agios Georgios	3.15	10	*e*Pn	Pn	11 24 55.1	+0.2	
AGG	Agios Georgios	3.15	10	P	Pn	11 24 55.9	+1.0	
LAST	Lasithi	3.23	102	*e*Pn	Pn	11 24 56.4	+0.4	
LAST	Lasithi	3.23	102	*e*PN	Pn	11 24 56.4	+0.4	
LAST	Lasithi	3.23	102	*e*Pn	Pn	11 24 56.4	+0.4	
NEO	Neokhori	3.61	20	P	Pn	11 25 02.6	+0.8	
NEO	Neokhori	3.61	20	*e*PN	Pn	11 25 02.1	+0.8	
NEO	Neokhori	3.61	20	P	Pn	11 25 01.6	+0.3	
NEO	Neokhori	3.61	20	*e*Pn	Pn	11 25 02.1	+0.8	
THL	Klokotos Trika	3.65	5	*e*PN	Pn	11 25 02.2	+0.4	
THL	Klokotos Trika	3.65	5	P	Pn	11 25 02.3	+0.5	
THL	Klokotos Trika	3.65	5	*e*Pn	Pn	11 25 02.2	+0.4	
XOR	Xorichti	3.66	19	P	Pn	11 25 03.0	+1.1	
XOR	Xorichti	3.66	19	P	Pn	11 25 02.6	+0.7	
XOR	Xorichti	3.66	19	P	Pn	11 25 02.6	+0.7	
AOS	Alonnisos	3.71	28	P	Pn	11 25 03.0	+0.4	
AOS	Alonnisos	3.71	28	P	Pn	11 25 02.2	-0.4	
AOS	Alonnisos	3.71	28	P	Pn	11 25 02.2	-0.4	
IGT	Igoumenitsa	3.75	344	P	Pn	11 25 03.2	0.0	
IGT	Igoumenitsa	3.75	344	P	Pn	11 25 03.2	0.0	
JAN	Janina	3.78	351	P	Pn	11 25 05.4	+1.8	
JAN	Janina	3.78	351	*e*PN	Pn	11 25 04.1	+0.5	
JAN				*e*SN	Sn	11 25 47.3	+0.5	
JAN	Janina	3.78	351	*e*Pn	Pn	11 25 04.1	+0.5	
JAN	Janina	3.78	351	P	Pn	11 25 05.4	+1.8	
JAN				*e*Sn	Sn	11 25 47.3	+0.5	
ZKR	Zakros	3.83	101	*e*Pn	Pn	11 25 05.0	+0.8	
ZKR	Zakros	3.83	101	*e*PN	Pn	11 25 05.0	+0.8	
ZKR	Zakros	3.83	101	*e*Pn	Pn	11 25 05.0	+0.8	
KEK	Kerkira	4.06	340	P	Pn	11 25 08.5	+1.1	
KEK	Kerkira	4.06	340	*e*PN	Pn	11 25 07.6	+0.2	
KEK				*e*SN	Sn	11 25 54.4	+0.8	
KEK	Kerkira	4.06	340	*e*Pn	Pn	11 25 07.6	+0.2	
KEK	Kerkira	4.06	340	P	Pn	11 25 08.5	+1.1	
KEK				*e*Sn	Sn	11 25 54.4	+0.8	
LIT	Litokhoron	4.23	9	P	Pn	11 25 09.9	+0.1	
LIT	Litokhoron	4.23	9	*e*PN	Pn	11 25 10.6	+0.8	
LIT	Litokhoron	4.23	9	P	Pn	11 25 08.7	-1.1	
LIT	Litokhoron	4.23	9	P	Pn	11 25 09.9	+0.1	
LIT	Litokhoron	4.23	9	*e*Pn	Pn	11 25 10.6	+0.8	
PAIG	Paliouri	4.32	21	P	Pn	11 25 10.4	-0.3	
PAIG	Paliouri	4.32	21	P	Pn	11 25 10.7	-0.2	
PAIG	Paliouri	4.32	21	P	Pn	11 25 10.7	-0.2	
KZN	Kozani	4.38	1	P	Pn	11 25 12.8	+1.0	
KZN	Kozani	4.38	1	*e*PN	Pn	11 25 12.9	+1.1	
KZN	Kozani	4.38	1	P	Pn	11 25 12.1	+0.3	
KZN	Kozani	4.38	1	P	Pn	11 25 12.1	+0.3	
KZN	Kozani	4.38	1	*e*Pn	Pn	11 25 12.9	+1.1	
NEST	Nestorio	4.51	354	P	Pn	11 25 14.9	+1.3	
NEST	Nestorio	4.51	354	P	Pn	11 25 14.9	+1.3	
PLG	Polygyros	4.67	17	P	Pn	11 25 16.1	+0.3	
PLG	Polygyros	4.67	17	*e*PN	Pn	11 25 16.2	+0.4	
PLG	Polygyros	4.67	17	P	Pn	11 25 16.1	+0.3	
OUR	Ouranopolis	4.78	22	P	Pn	11 25 16.8	-0.5	
OUR	Ouranopolis	4.78	22	P	Pn	11 25 16.8	-0.5	
HORT	Hortiatis	4.81	13	P	Pn	11 25 17.4	-0.3	
HORT	Hortiatis	4.81	13	P	Pn	11 25 17.4	-0.3	
THE	Thessaloniki	4.82	12	P	Pn	11 25 20.8	+2.9	
THE	Thessaloniki	4.82	12	P	Pn	11 25 20.8	+2.9	
FNA	Florina	4.86	358	P	Pn	11 25 18.3	+1.1	
FNA	Florina	4.86	358	P	Pn	11 25 18.5	+0.1	
FNA	Florina	4.86	358	P	Pn	11 25 18.5	+0.1	
TIP	Timpagrande	5.06	311	P	Pn	11 25 20.8	-0.3	
TIP	Timpagrande	5.06	311	P	Pn	11 25 20.8	-0.3	
GRG	Griva	5.07	7	P	Pn	11 25 21.0	-0.2	
GRG	Griva	5.07	7	P	Pn	11 25 21.1	-0.1	
GRG	Griva	5.07	7	P	Pn	11 25 21.1	-0.1	
SOH	Sokhos	5.08	15	P	Pn	11 25 21.6	+0.2	
SOH	Sokhos	5.08	15	P	Pn	11 25 21.6	+0.2	
SOH	Sokhos	5.08	15	P	Pn	11 25 21.6	+0.2	
KNT	Kendrikon	5.33	10	P	Pn	11 25 24.9	+0.1	
KNT	Kendrikon	5.33	10	P	Pn	11 25 24.9	+0.1	
SRS	Serrai	5.41	16	P	Pn	11 25 25.7	-0.3	
SRS	Serrai	5.41	16	P	Pn	11 25 25.7	-0.3	
VAY	Valandovo	5.44	7	⇑*i*Pn	Pn	11 25 25.8	-0.6	
PEZ	Pezze di Greco	5.89	327	*e*Pn	Pn	11 25 31.5	-1.0	
VAE	Valguarnera	6.01	287	P	Pn	11 25 36.3	+2.2	
VAE				S	Sn	11 26 44.3	+2.8	
VAE	Valguarnera	6.01	287	P	Pn	11 25 36.3	+2.2	
4.8nm,0.3s,baz=272,slow=2.3,SNR=2.7								
VAE				S	Sn	11 26 44.3	+2.8	
5.3nm,0.3s,baz=123,slow=2.8,SNR=3.9								
VAE	Valguarnera	6.01	287	P	Pn	11 25 36.3	+2.2	
VAE				S	Sn	11 26 44.3	+2.8	
ULC	Ulcinj	6.32	344	⇑*i*Pn	Pn	11 25 36.0	-2.3	
ULC				*e*Sn	Sn	11 26 41.3	-7.7	
ULC	Ulcinj	6.32	344	⇑*i*Pn	Pn	11 25 36.0	-2.3	
CDT	Castel del Mon	6.65	322	*e*Pn	Pn	11 25 42.2	-0.7	
BUM	Brajici-Buduva	6.72	342	⇑*i*Pn	Pn	11 25 40.9	-2.9	
BUM				*e*Sn	Sn	11 26 51.3	-7.6	
PDG	Podgorica	6.76	345	⇑*i*Pn	Pn	11 25 42.1	-2.3	
TTG	Podgorica	6.76	345	⇑*i*Pn	Pn	11 25 42.1	-2.3	
TTG				*e*Sn	Sn	11 26 52.9	-7.0	
TTG	Podgorica	6.76	345	⇑*i*Pn	Pn	11 25 42.1	-2.3	
VTS	Vitosha	6.78	10	⇑*i*Pn	Pn	11 25 46.0	+1.4	
PVY	Plav	6.79	350	⇑*i*Pn	Pn	11 25 44.0	-0.8	
PVY				*e*Sn	Sn	11 26 54.9	-5.8	
PVY	Plav	6.79	350	⇑*i*Pn	Pn	11 25 44.0	-0.8	
BARS	Barje	6.89	1	⇓*i*Pn	Pn	11 25 45.4	-0.8	
HCY	Herceg Novi	6.96	340	⇑*i*Pn	Pn	11 25 45.0	-2.1	
HCY				*e*Sn	Sn	11 26 55.8	-9.0	
HCY	Herceg Novi	6.96	340	⇑*i*Pn	Pn	11 25 45.0	-2.1	
BEY	Berane	7.07	350	⇓*i*Pn	Pn	11 25 47.1	-1.6	
IVA	Berane	7.07	350	⇓*i*Pn	Pn	11 25 47.1	-1.6	
IVA				*e*Sn	Sn	11 27 00.6	-7.0	
IVA	Berane	7.07	350	⇓*i*Pn	Pn	11 25 47.1	-1.6	
NKY	Niksic	7.18	344	⇑*i*Pn	Pn	11 25 48.8	-1.4	
NKY				*e*Sn	Sn	11 27 02.5	-7.8	
NKY	Niksic	7.18	344	⇑*i*Pn	Pn	11 25 48.8	-1.4	
BRY	Bratogost	7.37	342	⇑*i*Pn	Pn	11 25 50.9	-1.9	
BRY				*e*Sn	Sn	11 27 06.0	-9.0	
BRY	Bratogost	7.37	342	⇑*i*Pn	Pn	11 25 50.9	-1.9	
STON	Ston	7.58	338	*e*Pn	Pn	11 25 52.8	-2.9	
STON				Sn	Sn	11 27 10.0	-10	
PLE	Pljevlja	7.60	348	⇓*i*Pn	Pn	11 25 55.0	-0.9	
PLE				*e*Sn	Sn	11 27 13.2	-7.4	
PLE	Pljevlja	7.60	348	⇓*i*Pn	Pn	11 25 55.0	-0.9	
BBLS	Lazići	8.12	349	⇑*i*Pn	Pn	11 26 00.6	-2.4	
DIVS	Divibare	8.27	352	⇓*i*Pn	Pn	11 26 03.0	-2.0	
NVLJ	Novalja	10.06	331	*e*Pn	Pn	11 26 28.9	-0.6	
NVLJ				Sn	Sn	11 28 11.2	-10	
BRTR	Keskin Array B	10.23	65	P	Pn	11 26 32.4	+0.5	
0.2nm,0.3s,baz=250,slow=14,SNR=4.0								
BOJS	Bojanci	10.72	335	*i*Pn	Pn	11 26 37.4	-1.2	
BOJS				*i*Sn	Sn	11 28 27.1	-10	
VISS	Visnje	11.13	335	*i*Pn	Pn	11 26 43.9	-0.3	
VISS				*i*Sn	Sn	11 28 36.2	-11	
JAVS	Javornik	11.48	332	*i*Pn	Pn	11 26 49.5	+0.5	
JAVS				*i*Sn	Sn	11 28 45.0	-11	
AKASG	Malin Array Be	15.76	18	P	Pn	11 27 48.5	+2.3	
1.6nm,0.3s,baz=217,slow=11,SNR=5.4								
HFS	Hagfors	24.77	351	P	P	11 29 24.3	0.0	
2.5nm,0.8s,mb3.8,baz=167,slow=10,SNR=7.3								
FINES	FINESS Array B	25.70	5	P	P	11 29 32.7	-0.1	
1.0nm,0.5s,mb3.6,baz=186,slow=7.6,SNR=3.1								
EKA	Eskdalemuir Ar	25.79	327	P	P	11 29 36.0	+2.4	
0.9nm,0.7s,mb3.4,baz=126,slow=8.0,SNR=4.0								
NOA	NORSAR Array B	26.00	348	P	P	11 29 35.5	+0.1	
0.7nm,0.6s,mb3.4,baz=154,slow=10.0,SNR=3.0								
TORD	Torodi Ar. Bea	28.91	223	LR	LR	11 43 24.5		
comp=Z,41nm,21.2s,baz=30,slow=40								
ARCES	ARCESS Array B	33.74	2	P	P	11 30 43.9	0.0	
2.5nm,0.9s,mb4.1,baz=186,slow=9.4,SNR=13								
MKAR	Makanchi Array	45.76	57	P	P	11 32 23.8	-0.1	
0.9nm,0.4s,mb4.1,baz=277,slow=7.6,SNR=22								
ZALV	Zalesovo Beam	46.57	47	P	P	11 32 30.1	0.0	
0.5nm,0.4s,mb3.8,baz=281,slow=7.8,SNR=2.0								

*ISCJB **28** 11:34:54.0±0.9,51°.51N±0°.05×16°.19E±0°.04, h0km, Error ellipse: s-maj=6.7km s-min=3.2km az=11.0*
*CSEM **28** 11:34:56.2±0.4, 51°.49N×16°.21E, h2km, ML3.1/7, Error ellipse: s-maj=6.2km s-min=3.4km az=6.0*
*WAR **28** 11:34:56.9, 51°.51N×16°.12E, ML2.6, Mining Induced*
*VIE **28** 11:34:57.9±0.5, 51°.31N×16°.03E, h0km, mb2.1/3, ML2.7/4, Error ellipse: s-maj=3.4km s-min=3.1km az=171.0 72 km WNW of Wroclaw Suspected Mining induced.*
*PRU **28** 11:34:57.1, 51°.49N×16°.18E, h0km*

ISC 28 11:34:55.8±0.9, 51°.51N±0°.04×16°.18E±0°.04, h0km, n30, σ0s85/56, 3C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.67**	**174**	*e*Pg	**Pg**	**11 35 09.3**	**+0.7**
KSP				*e*Sg	**Sg**	**11 35 18.5**	**+1.2**
KSP	**Ksiaz**	**0.67**	**174**	*e*Pg	**Pg**	**11 35 09.3**	**+0.6**
KSP				*i* Sg	**Sg**	**11 35 18.5**	**+1.2**
KSP	**Ksiaz**	**0.67**	**174**	*e*Pg	**Pg**	**11 35 09.3**	**+0.6**
KSP				*i* Sg	**Sg**	**11 35 18.5**	**+1.2**
UPC	**Upice**	**1.01**	**186**	*e*PG	**Pg**	**11 35 15.4**	**+0.3**
UPC	**Upice**	**1.01**	**186**	Pg	**Pg**	**11 35 15.4**	**+0.3**
DPC	**Dobruska-Polom**	**1.16**	**176**	*e*PG	**Pg**	**11 35 18.1**	**0.0**
DPC				*e*SG	**Sg**	**11 35 33.6**	**+0.4**
comp=Z,36nm,0.8s							
DPC	**Dobruska-Polom**	**1.16**	**176**	Pg	**Pg**	**11 35 18.1**	**0.0**
DPC				Sg	**Sg**	**11 35 33.6**	**+0.4**
comp=Z,36nm,0.8s							
PVCC	**Panska Ves**	**1.42**	**227**	*e*PG	**Pg**	**11 35 22.5**	**-0.4**
PVCC	**Panska Ves**	**1.42**	**227**	Pg	**Pg**	**11 35 22.5**	**-0.4**
BRG	**Berggiesshubel**	**1.55**	**247**	PG	**Pg**	**11 35 24.6**	**-0.8**
BRG				SG	**Sg**	**11 35 45.3**	**-0.2**
comp=Z,28nm,0.4s							
PRU	**Pruhonice**	**1.84**	**215**	*e*PG	**Pg**	**11 35 31.2**	**0.0**
PRU				*e*SG	**Sg**	**11 35 55.6**	**+0.6**
comp=Z,20nm,0.4s							
PRU	**Pruhonice**	**1.84**	**215**	Pg	**Pg**	**11 35 31.2**	**0.0**
PRU				Sg	**Sg**	**11 35 55.6**	**+0.6**
comp=Z,20nm,0.4s							
MORC	**Moravsky Berou**	**1.94**	**153**	*e*Pn	**Pn**	**11 35 29.3**	**-0.7**
MORC				*e*Sg	**Sg**	**11 35 57.4**	**-0.6**
OKC	**Ostrava-Krasne**	**2.09**	**142**	*e*PG	**Pg**	**11 35 35.6**	**-0.2**
OKC				*e*SG	**Sg**	**11 36 03.0**	**+0.1**
comp=Z,25nm,0.6s							
OKC	**Ostrava-Krasne**	**2.09**	**142**	Pg	**Pg**	**11 35 35.6**	**-0.2**
OKC				Sg	**Sg**	**11 36 03.0**	**+0.1**
comp=Z,25nm,0.6s							
VRAC	**Vranov**	**2.22**	**173**	*e*Sg	**Sg**	**11 36 06.6**	**-0.5**
OJC	**Ojcow**	**2.63**	**118**	*e*Pg	**Pg**	**11 35 45.7**	**-0.5**
OJC				*e*Sg	**Sg**	**11 36 21.5**	**+1.2**
OJC	**Ojcow**	**2.63**	**118**	*e*Pg	**Pg**	**11 35 45.7**	**-0.5**
OJC				*e*Sg	**Sg**	**11 36 21.5**	**+1.2**
NKC	**Novy Kostel**	**2.69**	**243**	*e*PN	**Pn**	**11 35 42.0**	**+1.7**
NKC				*e*PG	**Pg**	**11 35 47.4**	**+0.1**
NKC				*e*SG	**Sg**	**11 36 23.7**	**+1.6**
comp=Z,22nm,0.4s							
NKC	**Novy Kostel**	**2.69**	**243**	Pn	**Pn**	**11 35 42.0**	**+1.7**
NKC	**Novy Kostel**	**2.69**	**243**	Pg	**Pg**	**11 35 47.4**	**+0.1**
NKC				Sg	**Sg**	**11 36 23.7**	**+1.6**
comp=Z,22nm,0.4s							
KHC	**Kasperske Hory**	**2.91**	**216**	*e*PN	**Pn**	**11 35 43.8**	**+0.5**
KHC				*e*PG	**Pg**	**11 35 49.0**	**-2.5**
KHC				*e*SN	**Sn**	**11 36 20.2**	**+1.3**
KHC				*e*SG	**Sg**	**11 36 29.4**	**+0.2**
comp=Z,7.2nm,0.4s							
KHC	**Kasperske Hory**	**2.91**	**216**	Pn	**Pn**	**11 35 43.8**	**+0.5**
KHC				Sn	**Sn**	**11 36 20.2**	**+1.3**
KHC				Sg	**Sg**	**11 36 29.4**	**+0.2**
comp=Z,7.2nm,0.4s							
MOX	**Moxa**	**3.01**	**255**	*e*PG	**Pg**	**11 35 52.4**	**-1.0**
MOX				*e*SG	**Sg**	**11 36 32.3**	**-0.1**
CONA	**Conrad Observa**	**3.59**	**183**	⇓*i*Pn	**Pn**	**11 35 52.0**	**-0.7**
CONA				⇑*i*Sg	**Sg**	**11 36 50.0**	**-1.1**
comp=Z,9.3nm,0.4s							
CONA	**Conrad Observa**	**3.59**	**183**	Pn	**Pn**	**11 35 52.0**	**-0.7**
CONA				Sg	**Sg**	**11 36 50.0**	**-1.1**
comp=Z,9.3nm,0.4s							
STHS	**Stebnicka Huta**	**3.85**	**121**	*e*SG	**Sg**	**11 36 59.6**	**+0.1**
STHS	**Stebnicka Huta**	**3.85**	**121**	*e*SG	**Sg**	**11 36 59.6**	**+0.1**
MOA	**Molln**	**3.87**	**200**	⇑*i*Pn	**Pn**	**11 35 56.6**	**+0.1**
MOA				⇑*i*Sg	**Sg**	**11 36 58.7**	**-1.3**
comp=Z,5.9nm,0.3s							
MOA	**Molln**	**3.87**	**200**	Pn	**Pn**	**11 35 56.6**	**+0.1**
MOA				Sg	**Sg**	**11 36 58.7**	**-1.3**
comp=Z,5.9nm,0.3s							

*ISCJB **28** 11:37:51.3±0.8, 51°.46N±0°.04×16°.16E±0°.04, h0km, Error ellipse: s-maj=6.1km s-min=3.1km az=17.3*
*PRU **28** 11:37:53.5, 51°.48N×16°.19E, h0km*
*WAR **28** 11:37:53.7, 51°.50N×16°.14E, ML2.4, Mining Induced*
*CSEM **28** 11:37:53.1±0.5, 51°.47N×16°.16E, h2km, ML2.6/4, Error ellipse: s-maj=8.7km s-min=5.0km az=3.0*
*VIE **28** 11:37:54.7±0.5, 51°.30N×16°.17E, h0km, mb1.7/1, ML2.6/4, Error ellipse: s-maj=2.8km s-min=2.5km az=3.0 63 km WNW of Wroclaw Suspected Mining induced.*

ISC 28 11:37:52.5±0.9, 51°.50N±0°.04×16°.19E±0°.04, h0km, n28, σ0s93/52, 4C, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.66**	**174**	*e*Pg	**Pg**	**11 38 06.0**	**+0.9**
KSP				*e*Sg	**Sg**	**11 38 14.7**	**+1.0**
KSP	**Ksiaz**	**0.66**	**174**	*e*Pg	**Pg**	**11 38 05.8**	**+0.7**
KSP				*e*Sg	**Sg**	**11 38 14.6**	**+0.9**
KSP	**Ksiaz**	**0.66**	**174**	*e*Pg	**Pg**	**11 38 05.8**	**+0.7**
KSP				*e*Sg	**Sg**	**11 38 14.6**	**+0.9**
UPC	**Upice**	**1.00**	**186**	*e*PG	**Pg**	**11 38 11.9**	**+0.3**
UPC	**Upice**	**1.00**	**186**	Pg	**Pg**	**11 38 11.9**	**+0.3**
DPC	**Dobruska-Polom**	**1.16**	**176**	*e*PG	**Pg**	**11 38 15.3**	**+0.7**
DPC				*e*SG	**Sg**	**11 38 29.8**	**+0.3**
DPC	**Dobruska-Polom**	**1.16**	**176**	Pg	**Pg**	**11 38 15.3**	**+0.7**
DPC				Sg	**Sg**	**11 38 29.8**	**+0.3**
PVCC	**Panska Ves**	**1.41**	**227**	*e*PG	**Pg**	**11 38 19.4**	**-0.1**
PVCC	**Panska Ves**	**1.41**	**227**	Pg	**Pg**	**11 38 19.4**	**-0.1**
BRG	**Berggiesshubel**	**1.54**	**247**	PG	**Pg**	**11 38 21.4**	**-0.6**
BRG				SG	**Sg**	**11 38 42.2**	**+0.2**
22nm,0.4s							
PRU	**Pruhonice**	**1.84**	**215**	*e*PG	**Pg**	**11 38 27.8**	**+0.1**
PRU				*e*SG	**Sg**	**11 38 52.0**	**+0.5**
PRU	**Pruhonice**	**1.84**	**215**	Pg	**Pg**	**11 38 27.8**	**+0.1**
PRU				Sg	**Sg**	**11 38 52.0**	**+0.5**
MORC	**Moravsky Berou**	**1.93**	**153**	*e*Pn	**Pn**	**11 38 26.5**	**0.0**
MORC				*e*Sg	**Sg**	**11 38 53.3**	**-1.1**
CLL	**Collm**	**2.00**	**266**	*e*Pg	**Pg**	**11 38 29.0**	**-1.8**
CLL				*e*		11 38 33.0	
CLL				*e*Sg	**Sg**	**11 38 57.0**	**+0.2**
OKC	**Ostrava-Krasne**	**2.08**	**142**	*e*PG	**Pg**	**11 38 29.3**	**-3.0**
OKC				*e*SG	**Sg**	**11 38 58.3**	**-1.0**
OKC	**Ostrava-Krasne**	**2.08**	**142**	Sg	**Sg**	**11 38 58.3**	**-1.0**
VRAC	**Vranov**	**2.21**	**173**	*e*Pn	**Pn**	**11 38 31.2**	**+0.9**
VRAC				*e*Sg	**Sg**	**11 39 02.9**	**-0.5**
OJC	**Ojcow**	**2.62**	**118**	*e*Pg	**Pg**	**11 38 43.3**	**+0.6**
OJC				*e*Sg	**Sg**	**11 39 18.0**	**+1.3**
OJC	**Ojcow**	**2.62**	**118**	*e*Pg	**Pg**	**11 38 43.3**	**+0.6**
OJC				*e*Sg	**Sg**	**11 39 18.0**	**+1.3**
NKC	**Novy Kostel**	**2.69**	**243**	*e*PG	**Pg**	**11 38 43.5**	**-0.4**
NKC				*e*SG	**Sg**	**11 39 20.6**	**+1.9**
NKC	**Novy Kostel**	**2.69**	**243**	Pg	**Pg**	**11 38 43.5**	**-0.4**
NKC				Sg	**Sg**	**11 39 20.6**	**+1.9**
KHC	**Kasperske Hory**	**2.90**	**216**	*e*PN	**Pn**	**11 38 41.4**	**+1.6**
KHC				*e*PG	**Pg**	**11 38 45.9**	**-2.1**
KHC				*e*SN	**Sn**	**11 39 16.0**	**+0.6**
KHC				*e*SG	**Sg**	**11 39 25.0**	**-0.6**
KHC	**Kasperske Hory**	**2.90**	**216**	Pn	**Pn**	**11 38 41.4**	**+1.6**
MOX	**Moxa**	**3.01**	**255**	*e*PG	**Pg**	**11 38 49.2**	**-0.9**
MOX				*e*SG	**Sg**	**11 39 29.4**	**+0.4**
CONA	**Conrad Observa**	**3.58**	**183**	⇑*i*Pn	**Pn**	**11 38 48.7**	**-0.5**
CONA				⇑*i*Sg	**Sg**	**11 39 46.7**	**-0.8**
5.0nm,0.3s							
CONA	**Conrad Observa**	**3.58**	**183**	Pn	**Pn**	**11 38 48.7**	**-0.5**
CONA				Sg	**Sg**	**11 39 46.7**	**-0.8**
5.0nm,0.3s							
MOA	**Molln**	**3.86**	**200**	⇑*i*Pn	**Pn**	**11 38 53.4**	**+0.4**
MOA				⇑*i*Sg	**Sg**	**11 39 56.2**	**-0.3**
4.7nm,0.4s							
MOA	**Molln**	**3.86**	**200**	Pn	**Pn**	**11 38 53.4**	**+0.4**
MOA				Sg	**Sg**	**11 39 56.2**	**-0.2**
4.7nm,0.4s							

*ISCJB **28** 11:38:31.5±1.3, 37°.78N±0°.07×21°.32E±0°.04, h6km±9km, Error ellipse: s-maj=11.9km s-min=5.5km az=176.3*
*CSEM **28** 11:38:31.7±0.4, 37°.78N×21°.31E, h10km, MD3.0, Error ellipse: s-maj=7.3km s-min=3.0km az=177.0*
*THE **28** 11:38:32.9, 37°.83N×21°.34E, h2km±19km, ML2.3/5, Error ellipse: s-maj=19.1km s-min=0.5km az=297.0*
*ATH **28** 11:38:32.0, 37°.82N×21°.26E, h4km, MD3.0/4*

ISC 28 11:38:31.9±1.3, 37.79N±0°.08×21.31E±0°.04, h12km±15km, n19, σ0s56/35, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.30**	**24**	*e*PG	**Pg**	**11 38 37.5**	**-0.5**
RLS				*e*SG	**Sg**	**11 38 41.2**	**-0.8**
RLS	**Riolos of Patr**	**0.30**	**24**	*e*Pg	**Pg**	**11 38 37.5**	**-0.5**
RLS				*e*Sg	**Sg**	**11 38 41.2**	**-0.8**
KFL	**Anninata**	**0.52**	**308**	P	**Pg**	**11 38 42.7**	**+0.5**
KFL				S	**Sg**	**11 38 50.1**	**+1.0**
KFL	**Anninata**	**0.52**	**308**	P	**Pg**	**11 38 42.7**	**+0.5**
KFL				S	**Sg**	**11 38 50.1**	**+1.0**
VLS	**Valsamata**	**0.69**	**304**	*e*PG	**Pg**	**11 38 44.5**	**-0.8**
VLS	**Valsamata**	**0.69**	**304**	*e*Pg	**Pg**	**11 38 44.5**	**-0.8**
LAKA	**Lakka**	**0.69**	**49**	P	**Pg**	**11 38 45.1**	**-0.3**
LAKA				S	**Sg**	**11 38 54.5**	**0.0**
LAKA	**Lakka**	**0.69**	**49**	P	**Pg**	**11 38 45.1**	**-0.3**
LAKA				S	**Sg**	**11 38 54.5**	**0.0**
EFP	**Efpalio**	**0.79**	**36**	*e*PB	**Pb**	**11 38 47.4**	**-0.2**
EFP				*e*SG	**Sg**	**11 38 58.6**	**+1.0**
EFP	**Efpalio**	**0.79**	**36**	P	**Pg**	**11 38 46.8**	**-0.4**
EFP				S	**Sg**	**11 38 57.7**	**+0.1**
EFP	**Efpalio**	**0.79**	**36**	P	**Pb

s-min=11.6km az=78.0

ISC 28 11:52:57.1±1.0, 50°21'N±0°05×130°2'W±0°2, h10km, n44, σ0§85/45, mb3.8/5, MS3.5/3, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**2.36**	**32**	Pn	**Pn**	**11 53 36.0**	**+0.1**
BBB				Sn	**Sn**	**11 54 04.7**	**-0.1**
BBB	**Bella Bella**	**2.36**	**32**	Pn	**Pn**	**11 53 36.0**	**+0.1**
	58nm,0.3s,baz=39,slow=11,SNR=22						
BBB				Sn	**Sn**	**11 54 04.7**	**-0.1**
	33nm,0.3s,baz=141,slow=22,SNR=12						
PGC	**Sidney**	**4.65**	**107**	*e*Pn	**Pn**	**11 54 07.1**	**-0.3**
RPW	**Rockport**	**5.93**	**104**	*e*Pn	**Pn**	**11 54 24.2**	**-0.6**
LON	**Longmire**	**6.55**	**119**	*e*Pn	**Pn**	**11 54 33.0**	**-0.3**
ETW	**Entiat**	**6.99**	**108**	*e*Pn	**Pn**	**11 54 38.2**	**-1.2**
	8.8nm,0.6s						
HAWA	**Hanford**	**8.05**	**114**	*e*Pn	**Pn**	**11 54 52.8**	**-1.3**
OD2	**Odessa Site #2**	**8.07**	**106**	*e*Pn	**Pn**	**11 54 51.3**	**-3.0**
DLBC	**Dease Lake**	**8.24**	**1**	*e*Pn	**Pn**	**11 54 57.0**	**+0.5**
DLBC				LR	LR	11 58 16.9	
DLBC	**Dease Lake**	**8.24**	**1**	Pn	**Pn**	**11 55 01.1**	**+4.5**
	0.5nm,0.3s,baz=194,slow=17,SNR=7.3						
DLBC				LR	LR	11 58 17.0	
	comp=Z,772nm,20.1s,baz=178,slow=38						
YBH	**Yreka Blue Hor**	**9.94**	**146**	Pn	**Pn**	**11 55 19.2**	**-0.7**
	0.1nm,0.3s,baz=216,slow=7.8,SNR=2.6						
YBH				LR	LR	11 58 31.7	
	comp=Z,870nm,19.0s,baz=328,slow=34						
BSMT	**Bassoo Peak**	**10.38**	**97**	*e*Pn	**Pn**	**11 55 25.2**	**-0.6**
MCMT	**McKenzie Canyo**	**12.88**	**108**	*e*Pn	**Pn**	**11 55 59.1**	**-0.9**
	1.2nm,0.8s						
NVAR	**Mina Array Bea**	**14.50**	**140**	Pn	**Pn**	**11 56 21.7**	**-0.5**
NVAR	**Mina Array Bea**	**14.50**	**140**	Pn	**Pn**	**11 56 21.7**	**-0.5**
	0.1nm,0.3s,baz=319,slow=12,SNR=4.8						
IMW	**Indian Meadow**	**14.53**	**108**	*e*Pn	**Pn**	**11 56 24.1**	**+1.5**
MOOW	**Moose Ponds**	**14.73**	**109**	*e*Pn	**Pn**	**11 56 25.5**	**+0.2**
TPAW	**Teton Pass**	**14.75**	**110**	*e*Pn	**Pn**	**11 56 26.2**	**+0.6**
REDW	**Red Top Meadow**	**14.88**	**110**	*e*Pn	**Pn**	**11 56 27.1**	**-0.2**
SNOW	**Snow King Moun**	**14.88**	**110**	*e*Pn	**Pn**	**11 56 28.4**	**+1.0**
LOHW	**Long Hollow**	**14.89**	**109**	*e*Pn	**Pn**	**11 56 27.6**	**+0.2**
YKA	**Yellowknife Ar**	**14.97**	**29**	Pn	**Pn**	**11 56 28.2**	**-0.3**
YKA				LR	LR	12 01 36.8	
YKA	**Yellowknife Ar**	**14.97**	**29**	Pn	**Pn**	**11 56 28.2**	**-0.3**
	0.1nm,0.3s,baz=214,slow=13,SNR=4.7						
YKA				LR	LR	12 01 36.8	
	comp=Z,16nm,18.9s,baz=165,slow=35						
AHID	**Auburn Hatcher**	**15.07**	**112**	*e*Pn	**Pn**	**11 56 30.1**	**+0.2**
	10nm,1.1s						
EGAK	**Eagle**	**15.71**	**342**	*e*Pn	**Pn**	**11 56 37.5**	**-0.7**
	20nm,1.6s						
BW06	**Boulder Array**	**16.00**	**110**	*e*Pn	**Pn**	**11 56 43.3**	**+1.3**
	22nm,1.8s						
PDAR	**Pinedale Array**	**16.00**	**110**	Pn	**Pn**	**11 56 43.0**	**+0.9**
	0.2nm,0.3s,baz=310,slow=12,SNR=5.7						
ISA	**Isabella**	**16.84**	**145**	*e*Pn	**Pn**	**11 56 54.3**	**+1.4**
	7.4nm,1.1s						
ILAR	**Eielson Array**	**17.05**	**335**	P	**Pn**	**11 57 02.8**	**+7.5**
	0.0nm,0.3s,baz=148,slow=8.1,SNR=10.0						
ILAR				LR	LR	12 02 58.3	
	comp=Z,345nm,20.7s,baz=354,slow=35						
TMUT	**Trail Mountain**	**17.28**	**122**	*e*Pn	**Pn**	**11 56 59.3**	**+1.0**
	4.7nm,0.8s						
FFC	**Flin Flon**	**17.70**	**64**	*e*Pn	**Pn**	**11 57 04.7**	**+1.3**
	17nm,0.8s						
SRU	**San Rafael**	**17.79**	**121**	*e*Pn	**Pn**	**11 57 04.8**	**+0.1**
	4.3nm,0.8s						
LDFC	**Landfair**	**18.69**	**138**	*e*Pn	**Pn**	**11 57 15.6**	**-0.1**
PV01	**Paradox Valley**	**19.56**	**120**	*e*P	**Pn**	**11 57 25.3**	**-0.9**
	324nm,0.9s						
SMCO	**Snowmass**	**19.75**	**115**	*e*P	**Pn**	**11 57 27.8**	**-0.7**
	7.5nm,1.4s						
MVCO	**Mesa Verde**	**20.26**	**122**	*e*P	**P**	**11 57 33.3**	**+0.8**
	32nm,1.7s						
SDCO	**Great Sand Dun**	**21.57**	**116**	*e*P	**P**	**11 57 45.7**	**-1.0**
	3.4nm,1.1s,mb3.7						
ULM	**Lac du Bonnet**	**21.83**	**77**	P	**P**	**11 57 50.0**	**+0.7**
	11nm,0.8s,mb4.4,baz=288,slow=11,SNR=6.0						
ULM				LR	LR	12 06 53.1	
	comp=Z,211nm,21.4s,MS3.5,baz=266,slow=39						
ANMO	**Albuquerque**	**23.04**	**122**	*e*P	**P**	**11 58 01.6**	**-0.7**
	3.1nm,1.0s,mb3.7						
ANMO				LR	LR	12 06 43.7	
ANMO	**Albuquerque**	**23.04**	**122**	P	**P**	**11 58 02.0**	**-0.3**
	1.6nm,1.1s,mb3.4,baz=330,slow=9.2,SNR=3.6						
ANMO				LR	LR	12 06 43.7	
	comp=Z,47nm,21.9s,MS2.9,baz=143,slow=36						
ECSD	**EROS Data Cent**	**23.65**	**93**	*e*P	**P**	**11 58 08.1**	**-0.4**
	14nm,1.1s,mb4.3						
TXAR	**Lajitas Array**	**28.89**	**126**	P	**P**	**11 58 57.2**	**+1.3**
TXAR	**Lajitas Array**	**28.89**	**126**	P	**P**	**11 58 57.2**	**+1.3**
	0.3nm,0.7s,mb3.1,baz=318,slow=5.0,SNR=4.8						
SCHQ	**Schefferville**	**37.64**	**58**	LR	LR	12 16 04.3	
	comp=Z,336nm,20.1s,MS4.1,baz=282,slow=37						

IDC 28 11:55:35.3±1.9, 5°47S×146°50E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.5/16, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=130.1km s-min=26.4km az=126.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.63**	**218**	P	Pn	11 59 54.5	-0.2
	0.1nm,0.3s,baz=36,slow=11,SNR=7.7						
ASAR	**Alice Springs**	**21.79**	**213**	P	P	12 00 28.8	-0.1
	0.3nm,0.3s,baz=48,slow=8.7,SNR=8.4						
FITZ	**Fitzroy Crossi**	**23.93**	**237**	P	P	12 00 51.1	-0.2
	0.6nm,0.4s,baz=58,slow=12,SNR=6.6						
ILAR	**Eielson Array**	**85.19**	**23**	P	P	12 08 13.5	+0.3
	0.5nm,0.7s,baz=252,slow=5.0,SNR=11						

IDC 28 11:58:51.8±1.2, 39°02N×140°96E, h0km, mb3.3/4, mb1 3.5/6, mb1mx3.4/24, mbtmp3.2/6, ML3.0/2, Error ellipse: s-maj=32.2km s-min=22.4km az=115.0

ISCJB 28 11:58:52.4±0.6, 39°07N±0°03×140°97E±0°05, h13km±4km, mb3.3/4, Error ellipse: s-maj=6.1km s-min=4.9km az=177.8

NEIC 28 11:58:52.7, 39°04N×140°90E, h7km, MG3.2(JMA), After JMA.

JMA 28 11:58:52.6, 39°04N×140°90E, h7km±1km, M3.2 Broadband fault plane solution: P waves. NP1: φs283.00000°, δ45.00000°, λ121.00000°. NP2: φs62.00000°, δ53.00000°, λ62.00000°. Principal axes: T Plg68.0000°, Azm271.0000°; N Plg22.0000°, Azm79.0000°; P Plg4.0000°, Azm171.0000°;

JMA Felt I J1.

ISC 28 11:58:53.0±0.6, 39°06N±0°03×140°95E±0°05, h2km±5km, n16, σ1§07/23, mb3.3/4, 1C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.24**	**116**	⇓P	**Pg**	**11 58 57.8**	**+0.3**
JMK				S	**Sg**	**11 59 01.6**	**+1.0**
JRG	**Rokugo**	**0.42**	**325**	⇓P	**Pg**	**11 59 00.7**	**-0.3**
JRG				*e*S	**Sg**	**11 59 06.7**	**+0.3**
JYK	**Kaneyama**	**0.48**	**253**	⇑P	**Pg**	**11 59 01.3**	**-0.8**
JOM	**Ohasama**	**0.50**	**33**	⇓P	**Pg**	**11 59 02.7**	**+0.2**
JOM				S	**Sg**	**11 59 09.9**	**+1.0**
JIO	**Ouri**	**0.68**	**152**	⇓P	**Pg**	**11 59 05.5**	**-0.5**
JIO				S	**Sg**	**11 59 14.7**	**0.0**
JOU	**Okura**	**0.72**	**198**	⇓P	**Pg**	**11 59 06.1**	**-0.7**
JOU				S	**Sg**	**11 59 15.6**	**-0.6**
MAJO	**Matsushiro**	**3.32**	**222**	*e*Pn	**Pn**	**11 59 45.0**	**-0.8**
MAT	**Matsushiro**	**3.32**	**222**	P	**Pn**	**11 59 47.5**	**+1.7**
MAT				*e*S	**Sn**	**12 00 26.8**	**+1.0**
MJAR	**Matsushiro Arr**	**3.32**	**222**	Pn	**Pn**	**11 59 46.7**	**+0.9**
	0.7nm,0.3s,baz=327,slow=10,SNR=5.3						
MJAR				Sn	**Sn**	**12 00 27.2**	**+1.4**
	0.4nm,0.3s,baz=330,slow=36,SNR=2.9						
ERM	**Erimo**	**3.40**	**29**	*e*Pn	**Pn**	**11 59 44.9**	**-2.1**
YSS	**Yuzh-Sakhalins**	**8.00**	**9**	*e*Pn	**Pn**	**12 00 50.6**	**+0.5**
KSRS	**Korea Array**	**10.37**	**265**	Pn	**Pn**	**12 01 24.4**	**+1.7**
	0.3nm,0.3s,baz=75,slow=14,SNR=5.4						
MKAR	**Makanchi Array**	**42.76**	**300**	P	**P**	**12 06 49.6**	**-1.9**
	0.2nm,0.6s,mb3.0,baz=87,slow=7.9,SNR=3.6						
ILAR	**Eielson Array**	**48.00**	**33**	P	**P**	**12 07 33.3**	**+0.4**
	0.2nm,0.7s,mb3.3,baz=263,slow=7.2,SNR=3.8						
WRA	**Warramunga Arr**	**59.01**	**187**	P	**P**	**12 08 52.3**	**-1.8**
	0.3nm,0.4s,mb3.6,baz=5.0,slow=7.4,SNR=11						
ASAR	**Alice Springs**	**62.74**	**187**	P	**P**	**12 09 18.2**	**-1.2**
	0.2nm,0.5s,mb3.5,baz=3.8,slow=5.1,SNR=4.7						

IDC 28 12:16:46.6±2.1, 50°12N×129°52W, h0km, mb3.3/2, mb1 3.8/7, mb1mx3.6/26, mbtmp3.5/7, ML3.4/5, MS3.4/1, Ms1 3.3/1, ms1mx1.9/23, Error ellipse: s-maj=37.8km s-min=13.1km az=75.0

ISCJB 28 12:16:47.5±1.1, 50°19N±0°06×129°5W±0°2, h10km, mb3.5/3, Error ellipse: s-maj=18.1km s-min=7.4km az=164.7

NEIC 28 12:16:49.4±1.4, 50°21N×129°48W, h10km, Error ellipse: s-maj=26.9km s-min=9.6km az=62.0

ISC 28 12:16:49.5±1.1, 50°22N±0°06×129°5W±0°2, h10km, n13, σ1§19/14, mb3.5/3, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**2.15**	**23**	Pn	**Pn**	**12 17 23.6**	**-1.7**
	20nm,0.3s,baz=35,slow=15,SNR=6.6						
BBB				Sn	**Sn**	**12 17 52.1**	**+0.1**
	9.2nm,0.3s,baz=134,slow=23,SNR=5.2						
PGC	**Sidney**	**4.23**	**109**	Pn	**Pn**	**12 17 54.0**	**0.0**
NLWA	**Neilton Lookou**	**4.66**	**125**	*e*Pn	**Pn**	**12 17 58.3**	**-1.5**
DLBC	**Dease Lake**	**8.24**	**358**	Pn	**Pn**	**12 18 48.4**	**-0.7**
	0.1nm,0.3s,baz=204,slow=19,SNR=4.2						
WAKR	**Walker**	**13.72**	**145**	Pn	**Pn**	**12 20 05.3**	**+1.3**
NVAR	**Mina Array Bea**	**14.22**	**142**	Pn	**Pn**	**12 20 09.6**	**-1.3**
	0.1nm,0.3s,baz=321,slow=12,SNR=5.2						
MOOW	**Moose Ponds**	**14.31**	**110**	Pn	**Pn**	**12 20 11.3**	**-0.7**
LOHW	**Long Hollow**	**14.47**	**110**	*e*Pn	**Pn**	**12 20 15.5**	**+1.3**
	2.6nm,1.0s						
PDAR	**Pinedale Array**	**15.58**	**111**	Pn	**Pn**	**12 20 30.1**	**+1.1**
	0.1nm,0.3s,baz=304,slow=6.4,SNR=5.7						
ILAR	**Eielson Array**	**17.23**	**334**	P	**Pn**	**12 20 51.3**	**+1.3**
	0.0nm,0.3s,baz=147,slow=11,SNR=6.9						
ULM	**Lac du Bonnet**	**21.39**	**77**	P	**P**	**12 21 39.5**	**+2.4**
	16nm,1.1s,mb4.3,baz=277,slow=12,SNR=5.7						
ULM				LR	LR	12 29 48.7	
	comp=Z,109nm,20.9s,baz=329,slow=36						
ANMO	**Albuquerque**	**22.67**	**124**	P	**P**	**12 21 50.9**	**+0.1**
	0.6nm,0.4s,mb3.4,baz=0.7,slow=7.9,SNR=3.7						
TXAR	**Lajitas Array**	**28.53**	**127**	P	**P**	**12 22 44.0**	**-1.1**
	0.2nm,0.8s,mb2.9,baz=7.8,slow=7.3,SNR=3.0						

ISCJB 28 12:24:18.3±1.0, 50°19N±0°06×129°7W±0°2, h10km, mb4.0/5, Error ellipse: s-maj=15.6km s-min=6.5km az=158.5

IDC 28 12:24:18.5±1.8, 50°15N×129°65W, h0km, mb3.6/3, mb1 3.8/9, mb1mx3.6/27, mbtmp3.6/9, ML3.3/5, MS4.3/1, Ms1 4.3/1, ms1mx2.4/46, Error ellipse: s-maj=31.5km s-min=12.4km az=74.0

NEIC 28 12:24:20.5±1.2, 50°25N×129°60W, h10km, mb4.4/4, Error ellipse: s-maj=22.1km s-min=7.6km az=58.0

ISC 28 12:24:20.3±1.0, 50°22N±0°06×129°7W±0°2, h10km, n24, σ1§18/24, mb4.0/5, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**2.19**	**26**	Pn	**Pn**	**12 24 55.8**	**-1.0**
	38nm,0.3s,baz=38,slow=13,SNR=39						
BBB				Sn	**Sn**	**12 25 24.4**	**+0.5**
	63nm,0.3s,baz=131,slow=22,SNR=24						
PGC	**Sidney**	**4.34**	**109**	*e*Pn	**Pn**	**12 25 26.8**	**+0.6**
NLWA	**Neilton Lookou**	**4.75**	**124**	*e*Pn	**Pn**	**12 25 30.4**	**-1.5**
LON	**Longmire**	**6.26**	**121**	*e*Pn	**Pn**	**12 25 53.6**	**+1.0**
	3.4nm,0.6s						
ETW	**Entiat**	**6.67**	**109**	*e*Pn	**Pn**	**12 25 57.6**	**-0.7**
	8.8nm,0.6s						
OD2	**Odessa Site #2**	**7.76**	**107**	*e*Pn	**Pn**	**12 26 11.4**	**-1.8**
	7.5nm,0.5s						
DLBC	**Dease Lake**	**8.24**	**359**	Pn	**Pn**	**12 26 20.4**	**+0.6**
	0.2nm,0.3s,baz=191,slow=14,SNR=6.3						
MCMT	**McKenzie Canyo**	**12.56**	**109**	*e*Pn	**Pn**	**12 27 17.4**	**-1.5**
	0.8nm,0.8s						
NVAR	**Mina Array Bea**	**14.29**	**141**	Pn	**Pn**	**12 27 42.3**	**-0.3**
	0.1nm,0.3s,baz=330,slow=14,SNR=4.2						
TPAW	**Teton Pass**	**14.44**	**111**	*e*Pn	**Pn**	**12 27 47.1**	**+2.6**
	23nm,1.4s						
REDW	**Red Top Meadow**	**14.57**	**111**	*e*Pn	**Pn**	**12 27 47.5**	**+1.2**
	12nm,1.4s						
LOHW	**Long Hollow**	**14.58**	**110**	*e*Pn	**Pn**	**12 27 47.9**	**+1.4**
	5.5nm,1.1s						
RLMT	**Red Lodge**	**14.63**	**103**	*e*Pn	**Pn**	**12 27 49.1**	**+1.9**
	6.6nm,1.1s						
PDAR	**Pinedale Array**	**15.69**	**111**	Pn	**Pn**	**12 28 02.6**	**+1.4**
	0.1nm,0.3s,baz=316,slow=10,SNR=8.0						
ILAR	**Eielson Array**	**17.18**	**335**	Pn	**Pn**	**12 28 21.3**	**+1.1**
	0.0nm,0.3s,baz=142,slow=11,SNR=8.8						
FFC	**Flin Flon**	**17.39**	**64**	*e*Pn	**Pn**	**12 28 22.4**	**-0.5**
	18nm,0.8s						
INK	**Inuvik**	**18.25**	**355**	P	**Pn**	**12 28 32.3**	**-1.0**
	0.0nm,0.3s,baz=162,slow=7.7,SNR=3.8						
MVCO	**Mesa Verde**	**19.98**	**123**	*e*P	**Pn**	**12 28 52.9**	**-1.5**
	42nm,1.9s						
ULM	**Lac du Bonnet**	**21.50**	**77**	P	**P**	**12 29 08.9**	**-0.1**
	12nm,0.8s,mb4.4,baz=290,slow=11,SNR=5.4						
ANMO	**Albuquerque**	**22.76**	**123**	P	**P**	**12 29 21.9**	**-0.7**
	0.4nm,0.3s,mb3.3,baz=312,slow=9.8,SNR=2.7						
ECSD	**EROS Data Cent**	**23.32**	**93**	*e*P	**P**	**12 29 27.4**	**-1.0**
	12nm,1.0s,mb4.3						
TXAR	**Lajitas Array**	**28.63**	**127**	P	**P**	**12 30 18.1**	**+1.3**
	0.4nm,0.8s,mb3.2,baz=331,slow=10,SNR=4.8						
QUA2	**Belchertown**	**39.53**	**79**	*e*P	**P**	**12 31 49.9**	**-1.2**
	13nm,0.5s,mb4.9						
RAR	**Rarotonga**	**75.95**	**209**	LR	LR	13 02 00.3	
	comp=Z,192nm,20.4s,baz=316,slow=30						

ISCJB 28 12:35:57.2±0.8, 50°25N±0°05×129°7W±0°1, h10km, mb3.7/5, Error ellipse: s-maj=13.7km s-min=6.0km az=161.2

IDC 28 12:35:58.4±1.9, 50°26N×129°44W, h0km, mb3.5/3, mb1 3.8/9, mb1mx3.6/27, mbtmp3.5/9, ML3.5/5, Error ellipse: s-maj=32.6km s-min=12.1km az=76.0

NEIC 28 12:35:59.4±0.8, 50°23N×129°61W, h10km, mb3.9/9, Error ellipse: s-maj=18.4km s-min=6.7km az=59.0

ISC 28 12:35:59.3±0.8, 50°26N±0°05×129°6W±0°1, h10km, n26, σ1§23/27, mb3.7/5, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**2.15**	**26**	Pn	**Pn**	**12 36 33.0**	**-2.1**
	20nm,0.3s,baz=40,slow=13,SNR=22						
BBB				Sn	**Sn**	**12 37 00.7**	**-1.0**
	15nm,0.3s,baz=126,slow=23,SNR=8.7						
DLBC	**Dease Lake**	**8.20**	**359**	Pn	**Pn**	**12 37 58.4**	**+0.3**
	0.1nm,0.3s,baz=201,slow=23,SNR=4.1						
WVOR	**Wild Horse Val**	**10.90**	**132**	*e*Pn	**Pn**	**12 38 33.9**	**-1.2**
	8.1nm,1.6s						
NVAR	**Mina Array Bea**	**14.31**	**141**	Pn	**Pn**	**12 39 22.1**	**+0.3**
	0.1nm,0.3s,baz=311,slow=11,SNR=5.6						
MOOW	**Moose Ponds**	**14.42**	**110**	*e*Pn	**Pn**	**12 39 22.1**	**-1.1**
TPAW	**Teton Pass**	**14.44**	**111**	*e*Pn	**Pn**	**12 39 25.1**	**+1.6**
	8.9nm,1.1s						
REDW	**Red Top Meadow**	**14.57**	**111**	*e*Pn	**Pn**	**12 39 24.8**	**-0.5**
	10nm,1.4s						
LOHW	**Long Hollow**	**14.58**	**110**	*e*Pn	**Pn**	**12 39 25.2**	**-0.2**
TPH	**Tonopah**	**15.06**	**139**	*e*Pn	**Pn**	**12 39 30.1**	**-1.9**
	700nm,2.0s						
DUG	**Dugway**	**15.51**	**124**	*e*Pn	**Pn**	**12 39 39.8**	**+2.0**
	1.9nm,0.9s						
BW06	**Boulder Array**	**15.69**	**111**	*e*Pn	**Pn**	**12 39 40.0**	**-0.2**
	24nm,2.1s						
PDAR	**Pinedale Array**	**15.69**	**111**	Pn	**Pn**	**12 39 42.2**	**+2.0**
	0.1nm,0.3s,baz=316,slow=8.3,SNR=6.8						
ISA	**Isabella**	**16.69**	**147**	*e*Pn	**Pn**	**12 39 52.1**	**-1.0**
	8.4nm,1.3s						
MSU	**Marysvale**	**17.08**	**127**	*e*P	**Pn**	**12 39 59.1**	**+1.1**
	6.0nm,1.5s						
ILAR	**Eielson Array**	**17.15**	**334**	P	**Pn**	**12 40 01.3**	**+2.6**
	baz=150,slow=9.9,SNR=8.4						
SRU	**San Rafael**	**17.52**	**122**	*e*P	**Pn**	**12 40 05.0**	**+1.6**
	6.0nm,1.3s						
INK	**Inuvik**	**18.20**	**355**	P	**Pn**	**12 40 13.2**	**+1.5**
	0.1nm,0.3s,baz=164,slow=12,SNR=3.2						
LDFC	**Landfair**	**18.50**	**140**	*e*Pn	**Pn**	**12 40 14.1**	**-1.4**
	14nm,1.3s						
TTA	**Tatalina**	**19.10**	**322**	*e*P	**Pn**	**12 40 21.1**	**-1.5**
PV01	**Paradox Valley**	**19.28**	**121**	*e*P	**Pn**	**12 40 25.1**	**+0.1**
	810nm,1.5s						
MVCO	**Mesa Verde**	**19.99**	**123**	*e*P	**Pn**	**12 40 31.9**	**-1.5**
	12nm,1.5s						
ULM	**Lac du Bonnet**	**21.48**	**77**	P	**P**	**12 40 48.1**	**+0.4**
	11nm,0.9s,mb4.2,baz=303,slow=10,SNR=5.0						
TUC	**Tucson**	**22.74**	**135**	*e*P	**P**	**12 41 00.9**	**-0.3**
	8.6nm,1.5s,mb4.0						
ANMO	**Albuquerque**	**22.77**	**123**	P	**P**	**12 41 02.6**	**+1.0**
	0.4nm,0.4s,mb3.2,baz=338,slow=14,SNR=2.3						
ECSD	**EROS Data Cent**	**23.31**	**93**	*e*P	**P**	**12 41 07.7**	**+0.5**
	9.4nm,1.0s,mb4.2						
TXAR	**Lajitas Array**	**28.64**	**127**	P	**P**	**12 41 55.8**	**0.0**
	0.2nm,0.6s,mb3.0,baz=340,slow=6.8,SNR=3.7						

PGC 28 12:37:30.9±11.0, 49°98N×130°01W, h10km, ML4.8/12, Mw5.9, 201km Wsw of Pt. Hardy, Bc Vancouver Island Region

IDC 28 12:37:32.1±0.5, 50°06N×129°77W, h0km, mb4.6/28, mb1 4.8/37, mb1mx4.8/38, mbtmp4.6/37, ML4.4/7, MS5.5/38, Ms1 5.5/38, ms1mx5.4/42, Error ellipse: s-maj=11.7km s-min=8.5km az=61.0

MOS 28 12:37:33.8±1.1, 50°05N×129°74W, h18km, mb5.5/99, MS5.7/74, Error ellipse: s-maj=5.9km s-min=3.2km az=102.3

ISCJB 28 12:37:33.2±0.1, 50°14N±0°01×129°55W±0°02, h10km, mb5.1/252, MS5.7/267, Error ellipse: s-maj=2.6km s-min=1.2km az=139.0

BJI 28 12:37:34.9, 50°69N×130°59W, h5km, mB5.7/55, mb5.1/50, Ms5.9/61, Ms7 5.6/56

GCMT 28 12:37:35.4±0.1, 49°77N×130°14W, h12km, MW5.9, Moment Tensor Solution. s102,c211; s73,c93; Moment tensor: Scale 10^17 Nm; Mrr0.36±.06; Mθθ-8.72±.06; Mφφ8.37±.07; Mrθ0.57±.17; Mrφ-0.59±.06; Mθφ0.98±.17; Best double couple: M0:8.60000×10^17 NP1:φs313.00000°, δ83.00000°, λ178.00000°. NP2:φs43.00000°, δ88.00000°, λ7.00000°. Principal axes: T 8.5000, Plg7.0000°, Azm268.0000°; N 0.2800, Plg82.0000°, Azm59.0000°; P -8.7800, Plg4.0000°, Azm178.0000°; Data Used: II IU IC G CN. Surface waves: sta=111, comp=246, per= 50.

NEIC 28 12:37:35.1±0.1, 50°17N×129°63W, h12km, mb5.3/204, ME6.1, MS5.6/166, MW5.9, MW5.8, MW5.9(PGC) Error ellipse: s-maj=3.8km s-min=1.5km az=46.0 Broadband fault plane solution: P waves. NP1:φs135.00000°, δ85.00000°, λ175.00000°. NP2:φs225.00000°, δ85.00000°, λ5.00000°. Principal axes: T Plg7.0000°, Azm90.0000°; N Plg0.0000°, Azm0.0000°; P Plg0.0000°, Azm0.0000°; Moment Tensor Solution. s61 Moment tensor: Scale 10^17 Nm; Mrr0.66; Mθθ-5.56; Mφφ4.90; Mrθ-0.83; Mθφ-0.97; Mrr-1.21; Best double couple: M0:5.50000×10^17 NP1:φs220.00000°, δ86.00000°, λ16.00000°. NP2: φs129.00000°, δ74.00000°, λ176.00000°. Principal axes: T 5.2700, Plg13.0000°, Azm85.0000°; N 0.5200, Plg73.0000°, Azm233.0000°; P -5.7900, Plg8.0000°, Azm353.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.

NEIC Felt at Vancouver.

ISC 28 12:37:33.2±0.6, 50°15N±0°01×129°63W±0°02, h0km±4km, n1333, σ0§90/1217, mb5.2/252, MS5.7/267, 256C-226D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.08**	**62**	⇑Pn	**Pn**	**12 37 54.1**	**-1.4**
BPBC	**Brooks Peninsu**	**1.20**	**89**	⇓Pn	**Pn**	**12 37 54.5**	**-2.6**
BPBC				⇓Sn	**Sn**	**12 38 13.3**	**-0.9**
PHC	**Port Hardy**	**1.51**	**67**	⇑Pn	**Pn**	**12 38 00.4**	**-1.1**
PHC				⇓Sn	**Sn**	**12 38 21.6**	**-0.2**
MAYB	**Maynard**	**1.60**	**80**	⇓Pn	**Pn**	**12 38 00.8**	**-1.8**
EDB	**Eliza Dome**	**1.64**	**99**	Pn	**Pn**	**12 38 00.2**	**-3.0**
EDB				⇑Sn	**Sn**	**12 38 21.6**	**-3.4**
WOSB	**Woss**	**1.97**	**88**	⇑Pn	**Pn**	**12 38 06.3**	**-1.4**
ETB	**Estevan Point**	**2.15**	**110**	⇓Pn	**Pn**	**12 38 08.7**	**-1.5**
BBB	**Bella Bella**	**2.25**	**24**	Pn	**Pn**	**12 38 10.5**	**-1.2**
	786nm,0.3s,baz=41,slow=13,SNR=174						
BBB				Sn	**Sn**	**12 38 40.0**	**-0.2**
	251nm,0.3s,baz=110,slow=19,SNR=4.5						
BBB				LR	LR	12 39 12.9	
	comp=Z,55µm,20.0s,baz=207,slow=42						
BBB	**Bella Bella**	**2.25**	**24**	⇓Pn	**Pn**	**12 38 10.6**	**-1.1**
BBB				⇑Sn	**Sn**	**12 38 39.5**	**-0.6**
NCRB	**Newcastle Ridg**	**2.31**	**82**	⇑Pn	**Pn**	**12 38 11.2**	**-1.2**
GDR	**Gold River**	**2.35**	**98**	⇓Pn	**Pn**	**12 38 10.7**	**-2.3**
CBB	**Campbell River**	**2.75**	**91**	⇑Pn	**Pn**	**12 38 17.4**	**-1.1**
CBB				⇑Sn	**Sn**	**12 38 52.9**	**+0.6**
BNB	**Barry Inlet**	**2.77**	**332**	⇓Pn	**Pn**	**12 38 11.3**	**-7.5**
OZB	**Mount Ozzard**	**2.94**	**112**	⇑Pn	**Pn**	**12 38 19.7**	**-1.5**
OZB				⇓Sn	**Sn**	**12 38

DLBC **Dease Lake** 8.31 359 *e*Pn **Pn** 12 39 36.2 +1.4
DLBC **Dease Lake** 8.31 359 Pn **Pn** 12 39 36.1 +1.3
comp=Z,7.7nm,0.3s,baz=195,slow=13,SNR=128
DLBC Sn **Sn** 12 41 10.1 +0.8
comp=Z,1.6nm,0.3s,baz=70,slow=21,SNR=2.2
DLBC LR LR 12 42 51.7
comp=Z,76µm,21.4s,baz=163,slow=38
NEW **Newport** 8.40 98 ⇓P **Pn** 12 39 35.5 -0.7
baz=8.6
NEW **Newport** 8.40 98 *e*Pn **Pn** 12 39 36.8 +0.7
comp=Z,95nm,0.8s
NEW **Newport** 8.40 98 *e*P **Pn** 12 39 36.8 +0.7
NEW pmax pmax
comp=Z,95nm,0.8s
E09A **Wood Farm, Sta** 8.47 111 ⇓P **Pn** 12 39 35.6 -1.4
baz=8.6
G08A **Pilot Rock** 8.68 120 ⇑P **Pn** 12 39 39.2 -0.7
baz=8.8
LNOR **Lincton Mounta** 8.72 115 *e*Pn **Pn** 12 39 40.2 -0.3
comp=Z,2µm,2.4s
LNOR **Lincton Mounta** 8.72 115 *e*P **Pn** 12 39 40.2 -0.3
LNOR pmax pmax
comp=Z,2µm,2.4s
KBO **Bosley Butte** 8.77 153 *e*Pn **Pn** 12 39 43.1 +1.9
comp=Z,160nm,1.2s
HUMO **Hull Mountain** 8.84 146 *e*Pn **Pn** 12 39 45.3 +3.2
comp=Z,217nm,1.5s
A12A **Yaak River Ran** 9.17 92 ⇑P **Pn** 12 39 46.5 -0.2
baz=9.3
I07A **Izee** 9.19 127 ⇑P **Pn** 12 39 47.3 +0.4
baz=9.2
F10A **Beach Ranch, E** 9.29 112 ⇑P **Pn** 12 39 47.5 -0.8
baz=9.4
B12A **Libby** 9.33 95 ⇓P **Pn** 12 39 49.2 +0.5
baz=9.5
KRMB **Red Mountain** 9.50 153 *e*Pn **Pn** 12 39 52.5 +1.3
comp=Z,78nm,1.2s
K05A **Summer Lake** 9.56 138 ⇓P **Pn** 12 39 52.5 +0.6
baz=9.6
C12B **Naegeli Ranch,** 9.63 99 ⇑P **Pn** 12 39 52.3 -0.6
baz=9.8
YBH **Yreka Blue Hor** 9.69 148 *e*Pn **Pn** 12 39 55.8 +2.0
comp=Z,274nm,1.5s
YBH **Yreka Blue Hor** 9.69 148 Pn **Pn** 12 39 53.6 -0.1
comp=Z,0.2nm,0.3s,baz=347,slow=12,SNR=7.3
YBH Sn **Sn** 12 41 45.6 +2.3
baz=24,slow=7.3,SNR=1.1
YBH LR LR 12 43 08.0
comp=Z,52µm,18.6s,baz=329,slow=35
YBH **Yreka Blue Hor** 9.69 148 *e*P **Pn** 12 39 55.8 +2.0
YBH pmax pmax
comp=Z,274nm,1.5s
SKAG **Skagway** 9.89 343 *e*P **Pn** 12 39 58.4 +1.9
comp=Z,20nm,0.8s
D12A **Red Ives Fores** 9.95 103 ⇑P **Pn** 12 39 56.5 -0.8
baz=10
BSMT **Bassoo Peak** 10.02 98 *e*Pn **Pn** 12 39 59.0 +0.7
comp=Z,966nm,0.8s
B13A **Whitefish** 10.07 94 ⇓P **Pn** 12 39 59.1 +0.2
baz=10
KHMM **Horse Mountain** 10.15 154 *e*Pn **Pn** 12 40 00.3 +0.3
comp=Z,82nm,1.3s
C13A **Hot Springs** 10.21 98 ⇓P **Pn** 12 40 00.0 -0.9
baz=10
J08A **Circle Bar Ran** 10.22 127 ⇑P **Pn** 12 40 01.1 +0.1
baz=10
BLMT **Blacktail Moun** 10.24 96 *e*Pn **Pn** 12 40 03.0 +1.7
comp=Z,285nm,0.8s
WALA **Waterton Lakes** 10.26 90 *e*Pn **Pn** 12 40 02.6 +1.0
comp=Z,3.8nm,1.0s
JTMT **Jette** 10.38 97 *e*Pn **Pn** 12 40 03.6 +0.5
comp=Z,69nm,0.7s
MOD **Modoc** 10.48 138 *e*Pn **Pn** 12 40 06.5 +2.0
comp=Z,226nm,1.6s
D13A **Huson** 10.50 101 ⇓P **Pn** 12 40 03.8 -1.0
baz=11
YBMT **Yellow Bay** 10.51 97 *e*Pn **Pn** 12 40 05.9 +0.9
comp=Z,57nm,0.9s
EDM **Edmonton** 10.57 67 *e*Pn **Pn** 12 40 07.8 +2.1
F12A **Elk City** 10.59 109 ⇓P **Pn** 12 40 05.0 -1.1
baz=11
A14A **Double T Ranch** 10.60 90 ⇑P **Pn** 12 40 06.9 +0.8
baz=11
SWMT **Swartz Lake** 10.64 98 *e*Pn **Pn** 12 40 07.1 +0.4
comp=Z,49nm,0.9s
WDC **Whiskeytown Da** 10.78 150 *e*Pn **Pn** 12 40 10.5 +1.8
comp=Z,464nm,1.6s
WDC **Whiskeytown Da** 10.78 150 *e*P **Pn** 12 40 10.5 +1.8
WDC pmax pmax
comp=Z,464nm,1.6s
WVOR **Wild Horse Val** 10.82 131 *e*Pn **Pn** 12 40 09.9 +0.7
comp=Z,172nm,1.1s
WVOR **Wild Horse Val** 10.82 131 *e*P **Pn** 12 40 09.9 +0.6
WVOR pmax pmax
comp=Z,172nm,1.1s
B14A **Marquette Ranc** 10.84 93 ⇓P **Pn** 12 40 08.7 -0.8
baz=11
MSO **Missoula** 10.93 102 ⇓P **Pn** 12 40 09.9 -0.7
baz=11
MSO **Missoula** 10.93 102 *e*Pn **Pn** 12 40 11.0 +0.3
comp=Z,23nm,0.5s
E13A **Victor** 10.93 104 ⇓P **Pn** 12 40 09.8 -1.0
baz=11
A15A **Johnson Ranch,** 11.04 90 ⇑P **Pn** 12 40 12.4 +0.2
baz=11
SLMT **Seeley Lake** 11.05 99 *e*Pn **Pn** 12 40 12.2 -0.2
comp=Z,29nm,0.6s
PNL **Peninsula** 11.06 333 *e*Pn **Pn** 12 40 11.8 -0.6
comp=Z,157nm,1.2s
D14A **Greenough** 11.11 100 ⇓P **Pn** 12 40 12.1 -1.0
baz=11
F13A **Darby** 11.14 107 ⇑P **Pn** 12 40 12.4 -1.2
baz=11
KIPM **Iron Peak** 11.21 155 *e*Pn **Pn** 12 40 16.7 +2.1
comp=Z,768nm,1.8s
KCPM **Cahto Peak** 11.30 155 *e*Pn **Pn** 12 40 18.1 +2.3
comp=Z,3µm,3.5s
B15A **Bradely Ranch,** 11.31 93 ⇓P **Pn** 12 40 16.4 +0.5
baz=12
CHMT **Chamberlain Mo** 11.33 100 *e*Pn **Pn** 12 40 16.3 +0.2
comp=Z,307nm,0.9s
E14A **Clinton** 11.38 103 ⇓P **Pn** 12 40 15.9 -1.0
baz=12
C15A **Salmond Ranch,** 11.44 95 ⇑P **Pn** 12 40 17.5 -0.2
baz=12
H12A **Diamond D Ranc** 11.47 114 ⇓P **Pn** 12 40 17.9 -0.2
baz=12
G13A **Cobalt** 11.55 110 ⇑P **Pn** 12 40 18.2 -1.0
baz=12
MFID **Camas Ranch** 11.60 120 ⇓P **Pn** 12 40 19.6 -0.3
baz=12
F14A **Wisdom** 11.72 105 ⇓P **Pn** 12 40 20.2 -1.3
baz=12
D15A **Lincoln** 11.75 99 ⇑P **Pn** 12 40 21.2 -0.7
baz=12
I12A **Atlanta** 11.76 117 ⇓P **Pn** 12 40 22.1 +0.1
baz=12
A16A **West Butte Ran** 11.78 89 ⇓P **Pn** 12 40 22.2 -0.1
baz=12
H13A **Challis** 11.82 112 ⇑P **Pn** 12 40 22.8 -0.1
baz=12
B16A **M & M Farms, S** 11.84 92 ⇓P **Pn** 12 40 22.9 -0.2
baz=12
E15A **Deer Lodge** 11.91 102 ⇓P **Pn** 12 40 22.7 -1.4
baz=12
G14A **Jackson** 11.94 108 ⇑P **Pn** 12 40 23.9 -0.7
baz=12
C16A **Fuhringer Ranc** 11.98 94 ⇑P **Pn** 12 40 25.2 +0.1
baz=12
HOPS **Hopland** 12.08 155 *e*Pn **Pn** 12 40 27.1 +0.6
comp=Z,2µm,2.3s
F15A **Butte** 12.26 104 ⇓P **Pn** 12 40 28.0 -0.9
baz=12
I13A **Wildhorse Cree** 12.27 115 ⇑P **Pn** 12 40 29.7 +0.7
baz=12
LRM **Limekiln Ridge** 12.29 104 *e*Pn **Pn** 12 40 29.2 -0.1
comp=Z,1µm,0.8s
HRY **Holter Researc** 12.31 99 *e*Pn **Pn** 12 40 30.1 +0.5
comp=Z,204nm,0.7s
HLID **Hailey** 12.31 117 ⇑P **Pn** 12 40 29.3 -0.3
baz=12
HLID **Hailey** 12.31 117 *e*Pn **Pn** 12 40 30.7 +1.1
comp=Z,31nm,0.8s
H14A **Leadore** 12.32 110 ⇑P **Pn** 12 40 29.2 -0.5
baz=12
A17A **Triple J Farms** 12.36 88 ⇓P **Pn** 12 40 30.1 -0.1
baz=12
D16A **Dana Ranch, Ca** 12.37 98 ⇓P **Pn** 12 40 30.0 -0.4
baz=12
DLMT **Dillon** 12.41 106 *e*Pn **Pn** 12 40 30.7 -0.3
comp=Z,48nm,1.6s
B17A **L&G Farms, Che** 12.45 91 ⇑P **Pn** 12 40 31.6 +0.1
baz=13
E16A **East Helena** 12.48 100 ⇓P **Pn** 12 40 31.0 -0.8
baz=13
MCMT **McKenzie Canyo** 12.53 109 *e*Pn **Pn** 12 40 32.5 0.0
comp=Z,16nm,0.4s
J13A **Cove Ranch, Pi** 12.55 117 ⇓P **Pn** 12 40 32.9 +0.1
baz=13
G15A **Dillon** 12.58 107 ⇑P **Pn** 12 40 32.9 -0.4
baz=13
I14A **Mackay** 12.65 113 ⇑P **Pn** 12 40 34.6 +0.3
baz=13
C17A **Wharram Farm,** 12.67 94 ⇑P **Pn** 12 40 34.5 +0.1
baz=13
PAHR **Pah Rah Range** 12.70 141 *e*Pn **Pn** 12 40 37.0 +2.0
comp=Z,317nm,1.3s
F16A **Kennard Place,** 12.82 103 ⇓P **Pn** 12 40 35.9 -0.7
baz=13
D17A **Six Diamond Ra** 12.88 96 ⇑P **Pn** 12 40 36.8 -0.5
baz=13
BOZ **Bozeman (W)** 12.88 104 ⇓P **Pn** 12 40 37.0 -0.4
baz=13
BOZ **Bozeman (W)** 12.88 104 *e*Pn **Pn** 12 40 37.4 0.0
comp=Z,32nm,0.9s
BOZ **Bozeman (W)** 12.88 104 *e*P **Pn** 12 40 37.4 0.0
BOZ pmax pmax
comp=Z,32nm,0.9s
WCN **Washoe City** 12.90 143 ⇓P **Pn** 12 40 39.4 +1.7
baz=13
WCN **Washoe City** 12.90 143 *e*Pn **Pn** 12 40 39.2 +1.5
comp=Z,886nm,2.3s
WCN **Washoe City** 12.90 143 *e*P **Pn** 12 40 39.2 +1.5
WCN pmax pmax
comp=Z,886nm,2.3s
A18A **Metzger Ranch,** 12.91 88 ⇓P **Pn** 12 40 37.5 -0.2
baz=13
G16A **Moss Hill, Enn** 12.97 105 ⇓P **Pn** 12 40 37.8 -0.8
baz=13
J14A **Carey** 12.97 116 ⇓P **Pn** 12 40 39.1 +0.4
baz=13
E17A **Martinsdale** 13.02 99 ⇓P **Pn** 12 40 39.0 -0.4
baz=13
BMN **Battle Mountai** 13.05 133 *e*Pn **Pn** 12 40 41.8 +2.1
comp=Z,68nm,1.0s
BMN **Battle Mountai** 13.05 133 *e*P **Pn** 12 40 41.8 +2.2
BMN pmax pmax
comp=Z,69nm,1.0s
B18A **Beardsley Farm** 13.08 90 ⇑P **Pn** 12 40 40.0 -0.1
baz=13
I15A **Monteview** 13.19 111 ⇑P **Pn** 12 40 41.9 +0.3
baz=13
EGMT **Eagleton** 13.20 92 ⇓P **Pn** 12 40 41.5 -0.2
baz=14
EGMT **Eagleton** 13.20 92 *e*Pn **Pn** 12 40 42.4 +0.7
comp=Z,134nm,0.9s
F17A **Fitzpatrick Pl** 13.38 101 ⇓P **Pn** 12 40 43.5 -0.7
baz=14
D18A **Linhart Farms,** 13.43 95 ⇓P **Pn** 12 40 44.6 -0.2
baz=14
J15A **Blackfoot** 13.56 113 ⇑P **Pn** 12 40 47.1 +0.4
baz=14
H16A **Russell Place,** 13.57 107 ⇑P **Pn** 12 40 46.7 -0.1
baz=14
E18A **Harlowton** 13.59 98 ⇓P **Pn** 12 40 47.1 +0.1
baz=14
G17A **Pierce Place,** 13.59 104 ⇑P **Pn** 12 40 46.4 -0.7
baz=14
K14A **Jones Ranch, D** 13.65 118 ⇓P **Pn** 12 40 49.2 +1.3
baz=14
BMRM **Bremner River** 13.72 328 *e*Pn **Pn** 12 40 49.0 +0.3
comp=Z,113nm,1.3s
WAKR **Walker** 13.72 144 *e*Pn **Pn** 12 40 51.2 +2.4
comp=Z,473nm,2.0s
C19A **Slack Wire Ran** 13.74 92 ⇑P **Pn** 12 40 48.1 -1.0
baz=14
YMR **Madison River** 13.76 106 *e*Pn **Pn** 12 40 50.6 +1.2
comp=Z,206nm,1.2s
CMB **Columbia Colle** 13.79 148 *e*Pn **Pn** 12 40 50.7 +0.8
comp=Z,375nm,1.9s
CMB **Columbia Colle** 13.79 148 *e*P **Pn** 12 40 50.7 +0.8
CMB pmax pmax
comp=Z,375nm,1.9s
I16A **Newdale** 13.86 110 ⇑P **Pn** 12 40 51.4 +0.7
baz=14
YNR **Norris Junctio** 13.92 106 *e*Pn **Pn** 12 40 52.4 +0.9
comp=Z,153nm,1.3s
K15A **Arbon** 13.94 116 ⇑P **Pn** 12 40 53.3 +1.5
baz=14
L14A **Malta** 13.95 119 ⇑P **Pn** 12 40 52.5 +0.6
baz=14
YFT **Old Faithful** 13.95 107 *e*Pn **Pn** 12 40 54.0 +2.0
comp=Z,838nm,2.1s
F18A **Big Timber** 13.98 100 ⇑P **Pn** 12 40 52.1 -0.3
baz=14
GCMT **Greycliff** 14.05 100 *e*Pn **Pn** 12 40 55.7 +2.3
comp=Z,62nm,1.0s
J16A **Bone** 14.12 112 ⇑P **Pn** 12 40 54.8 +0.5
baz=14
LKWY **Lake** 14.16 106 *e*Pn **Pn** 12 40 56.0 +1.2
comp=Z,96nm,1.0s
LKWY **Lake** 14.16 106 *e*P **Pn** 12 40 56.1 +1.2
LKWY pmax pmax
comp=Z,96nm,1.0s
IMW **Indian Meadow** 14.18 109 *e*Pn **Pn** 12 40 56.1 +1.0
comp=Z,291nm,1.0s
DCID1 **Drake Creek** 14.20 110 *e*Pn **Pn** 12 40 56.4 +1.1
comp=Z,442nm,1.1s
NVAR **Mina Array Bea** 14.23 141 Pn **Pn** 12 40 56.0 +0.2
comp=Z,0.1nm,0.3s,baz=319,slow=10.0,SNR=34
NVAR Sn **Sn** 12 43 40.0 +5.8
comp=Z,0.1nm,0.3s,baz=349,slow=33,SNR=2.2
FLWY **Flagg Ranch** 14.23 108 *e*Pn **Pn** 12 40 57.4 +1.6
comp=Z,54nm,1.5s
DIV **Divide** 14.24 327 *e*Pn **Pn** 12 40 53.5 -2.3
comp=Z,209nm,1.4s
RRI2 **Red Ridge** 14.26 111 *e*Pn **Pn** 12 40 58.1 +2.0
comp=Z,157nm,1.1s
G18A **Lac EL Ranch,** 14.33 102 ⇑P **Pn** 12 40 56.8 -0.4
baz=14
E19A **Rath Farm, Rou** 14.34 97 ⇑P **Pn** 12 40 57.5 +0.2
baz=14
HVU **Hansel Valley** 14.38 119 *e*Pn **Pn** 12 40 57.8 0.0
comp=Z,285nm,1.6s
HVU **Hansel Valley** 14.38 119 *e*P **Pn** 12 40 57.8 0.0
HVU pmax pmax
comp=Z,285nm,1.6s
MOOW **Moose Ponds** 14.38 109 *e*Pn **Pn** 12 40 58.1 +0.3
comp=Z,206nm,1.0s
O12A **Currie** 14.38 128 ⇑P **Pn** 12 40 58.2 +0.3
baz=14
I17A **Pilgrim Ck.** 14.39 108 ⇑P **Pn** 12 40 58.5 +0.5
baz=14
K16A **Soda Springs** 14.40 114 ⇓P **Pn** 12 40 59.2 +1.1
baz=14
TPAW **Teton Pass** 14.40 110 *e*Pn **Pn** 12 40 58.5 +0.5
comp=Z,236nm,0.9s
P11A **Circle Ranch,** 14.43 132 ⇑P **Pn** 12 40 59.1 +0.5
baz=14
L15A **Malad City** 14.45 118 ⇓P **Pn** 12 41 00.1 +1.3
baz=14
F19A **Roth Farm, Mol** 14.49 99 ⇑P **Pn** 12 40 58.8 -0.5
baz=15
REDW **Red Top Meadow** 14.53 111 *e*Pn **Pn** 12 41 00.7 +0.8
comp=Z,20nm,0.6s
SNOW **Snow King Moun** 14.53 110 *e*Pn **Pn** 12 40 59.6 -0.2
comp=Z,308nm,1.1s
D20A **Manuel Ranch,** 14.53 94 ⇑P **Pn** 12 40 59.3 -0.6
baz=15
LOHW **Long Hollow** 14.54 109 *e*Pn **Pn** 12 41 00.6 +0.6
comp=Z,182nm,1.1s
RLMT **Red Lodge** 14.60 102 ⇓P **Pn** 12 41 01.0 +0.1
baz=15
RLMT **Red Lodge** 14.60 102 *e*Pn **Pn** 12 41 00.2 -0.7
comp=Z,59nm,1.1s
J17A **Brown Place, J** 14.61 110 ⇓P **Pn** 12 41 01.3 +0.3
baz=15
SAO **San Andreas Ge** 14.62 153 *e*Pn **Pn** 12 40 59.6 -1.6
comp=Z,83nm,1.3s
SAO **San Andreas Ge** 14.62 153 *e*P **Pn** 12 40 59.6 -1.6
SAO pmax pmax
comp=Z,83nm,1.3s
MLAC **Mammoth Lakes** 14.71 144 ⇓P **Pn** 12 41 02.7 +0.3
baz=15
Q10A **Clear Creek Ra** 14.71 135 ⇑P **Pn** 12 41 03.1 +0.7
baz=15
AHID **Auburn Hatcher** 14.73 113 *e*Pn **Pn** 12 41 03.5 +1.0
comp=Z,257nm,1.1s
E20A **Meyer Farm, Mu** 14.75 96 ⇓P **Pn** 12 41 02.6 -0.2
baz=15
M15A **Larsen Ranch,** 14.77 119 ⇓P **Pn** 12 41 04.1 +1.0
baz=15
BGU **Big Grassy Mou** 14.81 122 *e*Pn **Pn** 12 41 03.9 +0.2
comp=Z,63nm,1.0s
K17A **Gardner Place,** 14.84 113 ⇑P **Pn** 12 41 05.2 +1.1
baz=15
YKA **Yellowknife Ar** 14.86 28 Pn **Pn** 12 41 02.8 -1.5
comp=Z,1.9nm,0.3s,baz=222,slow=12,SNR=44
YKA Sn **Sn** 12 43 45.2 -4.3
comp=Z,0.7nm,0.3s,baz=217,slow=22,SNR=5.8
YKA LR LR 12 46 20.3
comp=Z,1µm,18.6s,baz=270,slow=35
YKA **Yellowknife Ar** 14.86 28 P **Pn** 12 41 02.8 -1.5
YKA 12 43 45.2
SPUT **South Promonto** 14.87 120 *e*Pn **Pn** 12 41 05.6 +1.0
comp=Z,124nm,1.2s
O13A **Hicks Ranch, I** 14.88 126 ⇑P **Pn** 12 41 03.6 -1.0
baz=15
DAWY **Dawson** 14.90 343 *e*Pn **Pn** 12 41 04.7 -0.1
MENT **Mentasta** 14.94 334 *e*Pn **Pn** 12 41 05.5 +0.1
I18A **Diamond G Ranc** 14.97 108 ⇓P **Pn** 12 41 06.9 +1.0
baz=15
L16A **Fish Haven** 14.99 116 ⇓P **Pn** 12 41 07.4 +1.3
baz=15
F20A **Billings** 15.02 99 ⇓P **Pn** 12 41 06.0 -0.4
baz=15
SEW **Seward** 15.03 319 *e*Pn **Pn** 12 41 08.7 +2.1
comp=Z,131nm,1.2s
Q11A **Duckwater** 15.04 133 ⇓P **Pn** 12 41 07.0 +0.2
baz=15
J18A **Kendall Valley** 15.12 110 ⇑P **Pn** 12 41 08.5 +0.6
baz=15
N15A **Stansbury Isla** 15.12 121 ⇑P **Pn** 12 41 07.9 0.0
baz=15
HWUT **Hardware Ranch** 15.18 117 *e*Pn **Pn** 12 41 09.4 +0.7
comp=Z,394nm,1.7s
R10A **Warm Springs** 15.20 136 ⇑P **Pn** 12 41 09.3 +0.3
baz=15
G20A **Bridger** 15.22 101 ⇓P **Pn** 12 41 08.9 -0.4
baz=15
L17A **Cokeville** 15.26 115 ⇑P **Pn** 12 41 11.4 +1.6
baz=15
D21A **La Casta Ranch** 15.27 93 ⇑P **Pn** 12 41 09.4 -0.5
baz=15
Q12A **Willow Creek R** 15.28 131 ⇑P **Pn** 12 41 10.2 +0.2
baz=15
M16A **Huntsville** 15.33 118 ⇑P **Pn** 12 41 11.5 +0.8
baz=15
P13A **Bates Ranch, G** 15.36 128 ⇑P **Pn** 12 41 10.2 -1.0
baz=15
S10A **Tonopah Range,** 15.37 138 ⇓P **Pn** 12 41 11.3 +0.1
baz=16
E21A **Keefer Ranch,** 15.41 95 ⇓P **Pn** 12 41 11.5 -0.2
baz=16
K18A **Toltan Ranch,** 15.43 112 ⇑P **Pn** 12 41 13.4 +1.4
baz=16
DUG **Dugway** 15.45 124 ⇓P **Pn** 12 41 12.5 +0.3
baz=16
DUG **Dugway** 15.45 124 *e*Pn **Pn** 12 41 11.6 -0.7
comp=Z,89nm,0.9s
DUG **Dugway** 15.45 124 *e*P **Pn** 12 41 11.6 -0.6
DUG pmax pmax
comp=Z,89nm,0.9s
TIN **Tinemaha** 15.45 144 ⇑P **Pn** 12 41 12.9 +0.6
baz=16
KDAK **Kodiak Island** 15.46 308 Pn **Pn** 12 41 11.4 -0.9
comp=Z,0.4nm,0.3s,baz=108,slow=9.6,SNR=6.9
KDAK LR LR 12 45 31.6
comp=Z,21µm,20.5s,baz=122,slow=31
R11A **Troy Canyon, C** 15.47 134 ⇑P **Pn** 12 41 12.3 -0.2
baz=16
PAX **Paxson** 15.47 332 *e*Pn **Pn** 12 41 11.0 -1.4
comp=Z,86nm,1.2s
PAX **Paxson** 15.47 332 *e*P **Pn** 12 41 11.0 -1.4
PAX pmax pmax
comp=Z,86nm,1.2s
NOQ **North Oquirrh** 15.50 121 *e*Pn **Pn** 12 41 13.4 +0.5
comp=Z,190nm,1.3s
O15A **The Old Anders** 15.57 123 ⇓P **Pn** 12 41 14.0 +0.1
baz=16
SLKM **Skilak Lake** 15.58 320 *e*Pn **Pn** 12 41 15.2 +1.4
DOT **Dot Lake** 15.60 336 *e*Pn **Pn** 12 41 13.4 -0.7
comp=Z,3µm,1.9s
SML **Sawmill** 15.61 326 *e*Pn **Pn** 12 41 14.1 -0.2
comp=Z,239nm,1.8s
SML **Sawmill** 15.61 326 *e*P **Pn** 12 41 14.1 -0.1
SML pmax pmax
comp=Z,239nm,1.8s
BW06 **Boulder Array** 15.65 110 ⇓P **Pn** 12 41 15.6 +0.8
baz=16
BW06 **Boulder Array** 15.65 110 *e*Pn **Pn** 12 41 16.2 +1.3
comp=Z,169nm,0.9s
OHAK **Old Harbor** 15.65 306 *e*Pn **Pn** 12 41 16.2 +1.5
comp=Z,380nm,1.7s
PDAR **Pinedale Array** 15.65 110 Pn **Pn** 12 41 16.3 +1.5
comp=Z,1.0nm,0.3s,baz=303,slow=9.3,SNR=50
PDAR LR LR 12 47 28.0
comp=Z,17µm,21.6s,baz=309,slow=38
F21A **Absaloka Mine,** 15.66 97 ⇑P **Pn** 12 41 14.1 -0.8
baz=16
CTU **Camp Tracy** 15.68 120 *e*Pn **Pn** 12 41 16.5 +1.2
comp=Z,143nm,1.6s
H20A **Greybull** 15.70 103 ⇑P **Pn** 12 41 15.0 -0.5
baz=16
RC01 **Rabbit Creek A** 15.71 322 *e*Pn **Pn** 12 41 15.7 +0.2
comp=Z,90nm,1.0s
N16A **Rees Ranch, Co** 15.72 119 ⇓P **Pn** 12 41 16.4 +0.6
baz=16
Q13A **Wheeler Ranch,** 15.74 129 ⇑P **Pn** 12 41 15.5 -0.6
baz=16
RCTC **Rector, Farmer** 15.74 148 ⇓P **Pn** 12 41 17.3 +1.2
baz=16
P14A **Drum Mountains** 15.75 126 ⇑P **Pn** 12 41 15.8 -0.4
baz=16
PMR **Palmer** 15.77 324 *e*P **Pn** 12 41 14.2 -2.1
comp=Z,900nm,2.0s
PMR **Palmer** 15.77 324 *e*P **Pn** 12 41 14.2 -2.1
PMR pmax pmax
comp=Z,900nm,2.0s
M17A **Scullys Gap (B** 15.78 116 ⇑P **Pn** 12 41 17.0 +0.5
baz=16
GRAC **Grapevine Rang** 15.83 141 ⇓P **Pn** 12 41 18.3 +1.0
baz=16
G21A **Lodge Grass** 15.86 99 ⇓P **Pn** 12 41 16.6 -0.9
baz=16
L18A **Fontenelle, Gr** 15.86 114 ⇓P **Pn** 12 41 18.8 +1.2
baz=16
EGAK **Eagle** 15.88 342 *e*Pn **Pn** 12 41 18.3 +0.6
comp=Z,327nm,1.4s
I20A **Worland** 15.88 105 ⇑P **Pn** 12 41 18.2 +0.3
baz=16
LAO **LASA Array** 15.90 94 ⇓P **Pn** 12 41 17.6 -0.5
baz=16
LAO **LASA Array** 15.90 94 *e*Pn **Pn** 12 41 18.1 0.0
comp=Z,140nm,0.9s
JLU **Jordanelle** 15.91 120 *e*Pn **Pn** 12 41 19.2 +1.0
comp=Z,136nm,1.3s
R12A **Pony Springs,** 15.95 132 ⇓P **Pn** 12 41 18.6 -0.2
baz=16
S11A **Rachel** 15.97 136 ⇑P **Pn** 12 41 19.3 +0.2
baz=16
NLU **North Lily Min** 16.01 123 *e*Pn **Pn** 12 41 22.4 +2.8
comp=Z,114nm,0.9s
N17A **Moffit Pass** 16.03 118 ⇑P **Pn** 12 41 19.5 -0.2
baz=16
CWC **Cottonwood Cre** 16.05 144 ⇓P **Pn** 12 41 20.0 0.0
baz=16
K19A **Absolon Red Bu** 16.05 109 ⇑P **Pn** 12 41 20.7 +0.7
baz=16
Q14A **Sevier Lake (B** 16.09 128 ⇑P **Pn** 12 41 20.0 -0.6
baz=16
DAU **Daniels Canyon** 16.14 120 *e*Pn **Pn** 12 41 22.1 +0.8
comp=Z,131nm,1.3s
DAU **Daniels Canyon** 16.14 120 *e*P **Pn** 12 41 22.2 +0.9
DAU pmax pmax
comp=Z,131nm,1.3s
O16A **Springville** 16.15 121 ⇑P **Pn** 12 41 21.2 -0.2
baz=16
M18A **Lyman** 16.15 115 ⇓P **Pn** 12 41 21.3 -0.2
baz=16
P15A **Leamington** 16.18 124 ⇓P **Pn** 12 41 20.3 -1.5
baz=16
MPU **Maple Canyon** 16.21 122 *e*Pn **Pn** 12 41 23.4 +1.3
comp=Z,59nm,1.1s

VES	Vestal, Richgr	16.22	148	⇑P		Pn	12 41 21.5	-0.8
	baz=16							
H21A	Big Horn, Sher	16.23	101	⇑P		Pn	12 41 21.1	-1.3
	baz=16							
R13A	O'Grain Ranch,	16.37	131	⇑P		Pn	12 41 24.3	+0.1
	baz=16							
SMMC	Simmler	16.41	151	⇓P		Pn	12 41 24.3	-0.4
	baz=16							
S12A	Delamar Landin	16.41	134	⇑P		Pn	12 41 24.7	0.0
	baz=16							
K20A	Yellowstone Ra	16.45	109	⇓P		Pn	12 41 25.8	+0.7
	baz=17							
I21A	Big Trails, Te	16.48	104	⇓P		Pn	12 41 25.1	-0.4
	baz=17							
P16A	Fountain Green	16.48	123	⇑P		Pn	12 41 25.4	-0.3
	baz=17							
FURC	Furnace Creek,	16.49	141	⇓P		Pn	12 41 25.7	-0.1
	baz=16							
Q15A	Fillmore	16.55	126	⇑P		Pn	12 41 25.4	-1.1
	baz=17							
O17A	Robinson Place	16.58	120	⇓P		Pn	12 41 27.1	+0.2
	baz=17							
ISA	Isabella	16.59	147	⇓P		Pn	12 41 27.1	0.0
	baz=17							
ISA	Isabella	16.59	147	*e*Pn		Pn	12 41 27.5	+0.4
	comp=Z,180nm,1.3s							
ISA	Isabella	16.59	147	*e*P		Pn	12 41 27.5	+0.4
ISA				pmax		pmax		
	comp=Z,180nm,1.3s							
MPMC	Manual Prospec	16.60	143	⇑P		Pn	12 41 27.8	+0.6
	baz=17							
RSO	Redoubt South	16.64	317	*e*Pn		Pn	12 41 28.5	+1.0
	comp=Z,244nm,0.9s							
M19A	Rock Springs	16.64	113	⇓P		Pn	12 41 27.5	-0.1
	baz=17							
DGMT	Dagmar	16.65	86	⇓P		Pn	12 41 26.8	-0.9
	baz=17							
DGMT	Dagmar	16.65	86	*e*Pn		Pn	12 41 27.8	+0.1
	comp=Z,872nm,1.7s							
N18A	Larsen Ranch,	16.67	116	⇓P		Pn	12 41 27.2	-0.8
	baz=17							
R14A	James Farms, M	16.75	129	⇑P		Pn	12 41 28.4	-0.6
	baz=17							
U10A	Ash Meadows, A	16.75	140	⇑P		Pn	12 41 30.5	+1.4
	baz=17							
L20A	Wamsutter	16.82	111	⇓P		Pn	12 41 30.3	+0.3
	baz=17							
PKM	Peak Mountain	16.84	151	⇓P		Pn	12 41 29.5	-0.8
	baz=17							
S13A	Holt Ranch, En	16.90	132	⇓P		Pn	12 41 30.5	-0.4
	baz=17							
ARUT	Antelope Range	16.94	131	*e*Pn		Pn	12 41 32.2	+0.8
	comp=Z,85nm,0.9s							
ARUT	Antelope Range	16.94	131	*e*P		Pn	12 41 32.2	+0.8
ARUT				pmax		pmax		
	comp=Z,85nm,0.9s							
O18A	Roosevelt	16.95	118	⇓P		Pn	12 41 32.0	+0.5
	baz=17							
TMUT	Trail Mountain	16.95	123	*e*Pn		Pn	12 41 32.8	+1.2
	comp=Z,989nm,2.4s							
ARVC	Arvin	16.95	148	⇓P		Pn	12 41 30.7	-0.9
	baz=17							
N19A	John Jarvie Ra	17.01	115	⇑P		Pn	12 41 31.3	-1.1
	baz=17							
MSU	Marysvale	17.01	126	*e*Pn		Pn	12 41 32.9	+0.5
	comp=Z,137nm,1.4s							
MSU	Marysvale	17.01	126	*e*P		Pn	12 41 32.9	+0.5
MSU				pmax		pmax		
	comp=Z,137nm,1.4s							
LRMC	Laurel Mountai	17.04	145	⇓P		Pn	12 41 32.6	-0.1
	baz=17							
P17A	Butcher Ranch,	17.08	121	⇓P		Pn	12 41 32.5	-0.7
	baz=17							
S14A	Cedar City	17.09	130	⇓P		Pn	12 41 32.9	-0.5
	baz=17							
MCK	McKinley	17.11	330	*e*Pn		Pn	12 41 33.8	+0.4
	comp=Z,170nm,1.2s							
MCK	McKinley	17.11	330	*e*P		Pn	12 41 33.8	+0.5
MCK				pmax		pmax		
	comp=Z,171nm,1.2s							
K21A	Alcova	17.13	107	⇑P		Pn	12 41 34.2	+0.4
	baz=17							
U11A	Corn Creek	17.15	138	⇑P		Pn	12 41 35.4	+1.3
	baz=17							
CCUT	Cedar City	17.16	131	*e*Pn		Pn	12 41 34.7	+0.5
	comp=Z,376nm,1.9s							
SHPR	Sheep Range	17.18	137	*e*Pn		Pn	12 41 35.0	+0.6
	comp=Z,404nm,1.9s							
R15A	Junction	17.19	127	⇓P		Pn	12 41 34.9	+0.3
	baz=17							
T12A	Moapa	17.20	136	⇓P		Pn	12 41 35.2	+0.5
	baz=17							
SHOC	Shoshone	17.22	141	⇓P		Pn	12 41 36.2	+1.2
	baz=17							
M20A	Sweetwater, Wa	17.22	112	⇑P		Pn	12 41 35.1	+0.1
	baz=17							
Q16A	Castle Valley	17.25	124	⇓P		Pn	12 41 35.1	-0.1
	baz=17							
P18A	Preston Nutter	17.25	120	⇑P		Pn	12 41 35.7	+0.4
	baz=17							
ILAR	Eielson Array	17.25	335	P		Pn	12 41 33.9	-1.3
	comp=Z,0.3nm,0.3s,baz=146,slow=12,SNR=43							
ILAR				LR		LR	12 47 34.9	
	comp=Z,25µm,21.1s,baz=147,slow=35							
SBC	Santa Barbara	17.30	151	⇑P		Pn	12 41 35.4	-0.5
	baz=17							
T13A	Saint George	17.33	133	⇓P		Pn	12 41 36.0	-0.3
	baz=17							
TRF	Thorofare Moun	17.36	328	*e*Pn		Pn	12 41 36.9	+0.3
	comp=Z,1µm,1.9s							
FFC	Flin Flon	17.41	64	Pn		Pn	12 41 37.2	-0.1
	comp=Z,4µm,0.7s,SNR=29							
FFC	Flin Flon	17.41	64	*e*Pn		Pn	12 41 36.9	-0.4
	comp=Z,444nm,0.8s							
FFC	Flin Flon	17.41	64	*e*P		Pn	12 41 36.9	-0.4
FFC				pmax		pmax		
	comp=Z,444nm,0.8s							
O19A	Miners Draw (B	17.43	117	⇓P		Pn	12 41 37.4	-0.2
	baz=18							
L21A	Rawlins	17.43	109	⇑P		Pn	12 41 37.4	-0.2
	baz=18							
OSI	Osito Adit	17.46	149	⇑P		Pn	12 41 37.9	-0.1
	baz=17							
SRU	San Rafael	17.46	122	⇑P		Pn	12 41 38.0	+0.1
	baz=18							
SRU	San Rafael	17.46	122	*e*Pn		Pn	12 41 39.0	+1.1
	comp=Z,164nm,1.1s							
SRU	San Rafael	17.46	122	*e*P		Pn	12 41 39.0	+1.1
SRU				pmax		pmax		
	comp=Z,164nm,1.1s							
EDW2	Edwards Air Fo	17.47	146	⇑P		Pn	12 41 38.2	+0.1
	baz=18							
U12A	Valley of Fire	17.52	136	⇑P		Pn	12 41 38.8	+0.1
	baz=18							
GSC	Goldstone	17.53	143	⇓P		Pn	12 41 39.4	+0.6
	baz=18							
GSC	Goldstone	17.53	143	*e*Pn		Pn	12 41 40.5	+1.6
	comp=Z,270nm,1.5s							
GSC	Goldstone	17.53	143	*e*P		Pn	12 41 40.5	+1.6
GSC				pmax		pmax		
	comp=Z,270nm,1.5s							
R16A	Teasdale	17.55	126	⇑P		Pn	12 41 39.6	+0.5
	baz=18							
S15A	Panguitch	17.56	129	⇑P		Pn	12 41 39.5	+0.4
	baz=18							
K22A	Casper	17.57	106	⇓P		Pn	12 41 39.1	-0.1
	baz=18							
N20A	Spence Gulch,	17.59	114	⇓P		Pn	12 41 40.3	+0.8
	baz=18							
COLA	College	17.60	334	*e*Pn		Pn	12 41 39.9	+0.4
	comp=Z,341nm,1.8s							
COLA	College	17.60	334	*e*P		Pn	12 41 39.9	+0.4
COLA				pmax		pmax		
	comp=Z,341nm,1.8s							
V11A	Goodsprings	17.63	139	⇑P		Pn	12 41 40.6	+0.6
	baz=18							
M21A	Separation Pea	17.65	110	⇑P		Pn	12 41 39.5	-0.8
	baz=18							
Q18A	Rafter H Ranch	17.68	121	⇓P		Pn	12 41 40.9	+0.3
	baz=18							
T14A	Hurricane	17.68	131	⇓P		Pn	12 41 40.0	-0.7
	baz=18							
RWWY	Rawlins	17.69	110	*e*Pn		Pn	12 41 41.5	+0.7
	comp=Z,173nm,1.0s							
PPLA	Purkeypile	17.70	325	*e*Pn		Pn	12 41 42.0	+1.2
	comp=Z,220nm,1.4s							
BSC	Santa Cruz Isl	17.74	152	⇑P		Pn	12 41 40.1	-1.3
	baz=18							
TUQ	Turquoise Moun	17.77	141	⇓P		Pn	12 41 42.9	+1.1
	baz=18							
U13A	Pakoon Wash	17.79	135	⇓P		Pn	12 41 41.9	-0.1
	baz=18							
BLG	Laguna Peak	17.81	150	⇓P		Pn	12 41 42.1	-0.1
	baz=18							
RRX	Edison Barstow	17.83	144	⇓P		Pn	12 41 43.5	+0.9
	baz=18							
R17A	Hanksville Air	17.86	124	⇑P		Pn	12 41 43.5	+0.6
	baz=18							
S16A	Weppner Ranch,	17.91	127	⇓P		Pn	12 41 44.1	+0.6
	baz=18							
DECC	Green Verdugo	17.92	148	⇑P		Pn	12 41 43.6	-0.1
	baz=18							
P19A	Cripple Cowboy	17.95	118	⇑P		Pn	12 41 43.9	-0.1
	baz=18							
L22A	Ellis Ranch, M	17.97	108	⇑P		Pn	12 41 44.7	+0.5
	baz=18							
V12A	Nelson	17.97	138	⇑P		Pn	12 41 44.5	+0.2
	baz=18							
BPAW	Bear Paw Mtn.	18.02	329	*e*Pn		Pn	12 41 44.7	-0.1
	comp=Z,7.9nm,0.9s							
MWC	Mount Wilson	18.04	148	*e*Pn		Pn	12 41 46.1	+1.0
	comp=Z,109nm,1.2s							
MWC	Mount Wilson	18.04	148	*e*P		Pn	12 41 46.1	+1.0
MWC				pmax		pmax		
	comp=Z,109nm,1.2s							
PASC	Pasadena Art C	18.04	148	*e*Pn		Pn	12 41 45.6	+0.4
	comp=Z,36nm,0.9s							
O20A	White River Ci	18.05	116	⇑P		Pn	12 41 45.0	-0.2
	baz=18							
T15A	Red Dirt Ranch	18.06	130	⇓P		Pn	12 41 45.4	0.0
	baz=18							
N21A	Black Mountain	18.07	113	⇑P		Pn	12 41 45.6	+0.1
	baz=18							
HEC	Hector,Ludlow	18.13	143	⇑P		Pn	12 41 46.7	+0.4
	baz=18							
U14A	Mt Trumbull	18.15	133	⇓P		Pn	12 41 46.9	+0.3
	baz=18							
SVW2	Sparrevohn	18.16	317	*e*P		Pn	12 41 44.6	-1.9
	comp=Z,699nm,2.0s							
BFSC	Mount Baldy Ra	18.16	147	⇑P		Pn	12 41 46.6	-0.1
	baz=18							
CHGN	Chignik	18.21	301	*e*Pn		Pn	12 41 44.7	-2.4
M22A	Cedar Creek Ra	18.23	110	⇓P		Pn	12 41 46.9	-0.6
	baz=18							
V13A	Grand Canyon W	18.25	136	⇑P		Pn	12 41 47.6	-0.1
	baz=18							
Q19A	Hogan Spring (	18.26	120	⇑P		Pn	12 41 47.4	-0.5
	baz=18							
INK	Inuvik	18.32	355	*e*Pn		Pn	12 41 48.3	0.0
	comp=Z,151nm,1.0s							
INK	Inuvik	18.32	355	P		Pn	12 41 48.5	+0.2
	comp=Z,0.2nm,0.3s,baz=170,slow=13,SNR=31							
INK				LR		LR	12 49 29.1	
	comp=Z,40µm,18.9s,baz=170,slow=39							
INK	Inuvik	18.32	355	*e*P		Pn	12 41 48.3	0.0
INK				pmax		pmax		
	comp=Z,151nm,1.0s							
R18A	Canyonlands Na	18.32	122	⇑P		Pn	12 41 48.5	0.0
	baz=18							
W12A	Cal Nev Ari	18.32	138	⇑P		Pn	12 41 48.8	+0.2
	baz=18							
L23A	Garrett	18.37	107	⇑P		Pn	12 41 49.0	-0.1
	baz=18							
RSSD	Black Hills	18.38	99	*e*Pn		Pn	12 41 49.4	+0.2
	comp=Z,65nm,0.8s							
RSSD	Black Hills	18.38	99	*e*P		Pn	12 41 49.4	+0.2
RSSD				pmax		pmax		
	comp=Z,65nm,0.8s							
P20A	De Beque	18.38	117	⇑P		Pn	12 41 48.9	-0.4
	baz=18							
S17A	Black Ridge (B	18.39	126	⇓P		Pn	12 41 50.2	+0.8
	baz=18							
BBRC	Big Bear Solar	18.41	145	⇓P		Pn	12 41 50.5	+0.8
	baz=18							
LDFC	Landfair	18.41	139	*e*P		Pn	12 41 50.0	+0.3
	comp=Z,246nm,1.2s							
FMP	Fort Macarthur	18.42	149	⇓P		Pn	12 41 49.1	-0.7
	baz=18							
GMRC	Granite Mounta	18.44	141	⇑P		Pn	12 41 51.3	+1.2
	baz=18							
O21A	Pagoda	18.45	114	⇑P		Pn	12 41 50.6	+0.5
	baz=18							
T16A	Glen Canyon Da	18.52	128	⇑P		Pn	12 41 51.0	0.0
	baz=19							
U15A	North Rim	18.57	131	⇑P		Pn	12 41 52.0	+0.3
	baz=19							
CIS	Catalina Islan	18.67	149	⇑P		Pn	12 41 51.2	-1.6
	baz=19							
N22A	Wattenberg Ran	18.68	111	⇓P		Pn	12 41 53.1	+0.2
	baz=19							
R19A	Cuey Farm, L	18.73	121	⇓P		Pn	12 41 53.7	+0.1
	baz=19							
S18A	Hurst Farm, Bl	18.77	124	⇓P		Pn	12 41 53.6	-0.5
	baz=19							
Q20A	Ridgley Place,	18.81	118	⇑P		Pn	12 41 53.3	-1.2
	baz=19							
V14A	Boquillas Ranc	18.83	134	⇓P		Pn	12 41 54.9	+0.1
	baz=19							
PV04	Paradox Valley	18.86	121	*e*P		Pn	12 41 55.5	+0.4
T17A	Navajo Res., N	18.87	127	⇓P		Pn	12 41 55.0	-0.3
	baz=19							
L24A	Wheatland	18.88	106	⇓P		Pn	12 41 54.8	-0.7
	baz=19							
NEE2	Needles Airpor	18.89	139	⇑P		Pn	12 41 55.0	-0.5
	baz=19							
MURC	Murrieta	18.90	146	⇓P		Pn	12 41 55.2	-0.4
	baz=19							
N23A	Red Feather La	18.93	110	⇑P		Pn	12 41 55.9	-0.1
	baz=19							
PHWY	Pilot Hill	18.98	108	*e*P		Pn	12 41 55.8	-0.8
	comp=Z,95nm,0.8s							
BELC	Belle Mtn. Jos	18.99	143	⇓P		Pn	12 41 57.3	+0.5
	baz=19							
SCI	San Clemente I	19.01	150	⇓P		Pn	12 41 56.8	-0.3
	baz=19							
O22A	Kremmling	19.02	113	⇑P		Pn	12 41 57.1	-0.1
	baz=19							
V15A	Kaibab Nationa	19.12	132	⇑P		Pn	12 41 58.1	-0.1
	baz=19							
PFO	Pinyon Flat Ob	19.17	145	Pn		Pn	12 41 59.8	+0.9
	comp=Z,181nm,2.1s,SNR=21							
PFO	Pinyon Flat Ob	19.17	145	⇓P		Pn	12 41 58.4	-0.5
	baz=19							
PFO	Pinyon Flat Ob	19.17	145	*e*P		Pn	12 41 58.9	0.0
	comp=Z,3µm,3.4s							
PFO	Pinyon Flat Ob	19.17	145	*e*P		Pn	12 41 58.9	0.0
PFO				pmax		pmax		
	comp=Z,4µm,3.4s							
W14A	Seligman	19.19	135	⇑P		Pn	12 41 58.5	-0.6
	baz=19							
IRM	Iron Mountain	19.19	141	⇑P		Pn	12 41 59.5	+0.4
	baz=19							
TTA	Tatalina	19.19	322	*e*P		Pn	12 41 57.0	-2.0
S19A	Harvey Farm, M	19.19	122	⇓P		Pn	12 41 58.3	-0.9
	baz=19							
PV01	Paradox Valley	19.23	121	*e*P		Pn	12 41 59.4	-0.1
	comp=Z,19µm,1.4s							
T18A	Mexican Hat	19.25	125	⇑P		Pn	12 41 58.8	-1.1
	baz=19							
P22A	Eagle	19.26	114	⇓P		Pn	12 41 59.5	-0.5
	baz=19							
M24A	Cheyenne	19.28	107	⇓P		Pn	12 42 00.1	-0.1
	baz=19							
SDPT	Sand Point	19.29	298	*e*P		Pn	12 42 00.6	+0.4
	comp=Z,794nm,2.3s							
R20A	Redvale	19.29	120	⇓P		Pn	12 41 59.7	-0.7
	baz=19							
Q21A	Lamborn Mesa,	19.30	117	⇑P		Pn	12 41 59.5	-0.9
	baz=19							
O23A	Lake Granby, G	19.37	112	⇓P		Pn	12 42 00.9	-0.3
	baz=20							
U16A	Tuba City	19.37	129	⇑P		Pn	12 42 00.5	-0.8
	baz=19							
X13A	Yucca	19.37	137	⇓P		Pn	12 42 00.8	-0.5
	baz=19							
SMCO	Snowmass	19.41	116	*e*P		Pn	12 42 01.2	-0.6
	comp=Z,119nm,1.2s							
BC3	Big Chuckawall	19.51	142	⇓P		Pn	12 42 02.4	-0.6
	baz=20							
S20A	Disappointment	19.56	121	⇓P		Pn	12 42 02.3	-1.2
	baz=20							
109C	Camp Elliot, M	19.58	147	⇓P		Pn	12 42 02.8	-1.0
	baz=20							
W15A	Williams	19.59	133	⇑P		Pn	12 42 03.1	-0.9
	baz=20							
N24A	Carr	19.62	109	⇑P		Pn	12 42 03.3	-0.9
	baz=20							
R21A	Cimarron	19.63	118	⇑P		Pn	12 42 03.3	-1.1
	baz=20							
Q22A	Crested Butte,	19.66	116	⇓P		Pn	12 42 04.0	-0.8
	baz=20							
WUAZ	Wupatki	19.75	131	⇑P		Pn	12 42 04.1	-1.7
	baz=20							
WUAZ	Wupatki	19.75	131	*e*P		Pn	12 42 04.7	-1.2
	comp=Z,112nm,1.0s							
U18A	Rough Rock, Ch	19.80	126	⇓P		Pn	12 42 04.8	-1.6
	baz=20							
Y12C	Blythe	19.80	140	⇓P		Pn	12 42 06.1	-0.4
	baz=20							
ISCO	Idaho Springs	19.81	112	⇑P		Pn	12 42 05.6	-0.9
	baz=20							
ISCO	Idaho Springs	19.81	112	*e*P		Pn	12 42 05.5	-1.0
	comp=Z,629nm,2.3s							
ISCO	Idaho Springs	19.81	112	*e*P		Pn	12 42 05.5	-1.0
ISCO				pmax		pmax		
	comp=Z,629nm,2.3s							
MONP	Monument Peak	19.82	145	⇓P		Pn	12 42 05.7	-1.1
	baz=20							
X14A	Yava	19.89	136	⇑P		Pn	12 42 06.3	-1.2
	baz=20							
BAR	Barrett	19.92	146	*e*P		Pn	12 42 06.6	-1.3
	comp=Z,437nm,2.0s							
O24A	Longmont	19.93	111	⇓P		Pn	12 42 07.5	-0.4
	baz=20							
T19A	Beclabito	19.93	124	⇑P		Pn	12 42 06.1	-1.9
	baz=20							
MVCO	Mesa Verde	19.93	122	⇑P		Pn	12 42 06.3	-1.7
	baz=20							
MVCO	Mesa Verde	19.93	122	*e*P		Pn	12 42 06.3	-1.7
	comp=Z,313nm,1.2s							
P23A	Jefferson	19.95	114	⇑P		Pn	12 42 08.2	0.0
	baz=20							
V17A	Tonalea, Kykot	19.95	130	⇓P		Pn	12 42 06.3	-1.9
	baz=20							
S21A	Coal Bank Pass	19.99	120	⇓P		Pn	12 42 07.3	-1.4
	baz=20							
W16A	Flagstaff	20.01	132	⇓P		P	12 42 07.2	-0.1
	baz=20							
SWSC	Sam W. Stewart	20.01	144	⇓P		P	12 42 07.4	+0.2
	baz=20							
Y13A	Salome	20.04	139	⇓P		P	12 42 07.5	-0.1
	baz=20							
N25A	Grover	20.11	108	⇑P		P	12 42 08.4	+0.1
	baz=20							
DVTC	Desert V Tower	20.15	145	⇑P		P	12 42 09.7	+0.9
	baz=20							
X15A	Humboldt	20.18	134	⇑P		P	12 42 09.2	+0.1
	baz=20							
R22A	Saguache, Gunn	20.18	117	⇓P		P	12 42 09.3	+0.2
	baz=20							
U19A	Dine' College,	20.24	125	⇓P		P	12 42 09.0	-0.8
	baz=20							
Q23A	Hartsel	20.26	115	⇑P		P	12 42 10.4	+0.5
	baz=20							
GLA	Glamis	20.29	142	⇓P		P	12 42 10.5	+0.2
	baz=20							
GLA	Glamis	20.29	142	*e*P		P	12 42 10.8	+0.5
	comp=Z,135nm,1.2s							
GLA	Glamis	20.29	142	*e*P		P	12 42 10.8	+0.5
GLA				pmax		pmax		
	comp=Z,135nm,1.2s							
Y14A	Wickenburg	20.29	137	⇓P		P	12 42 10.4	+0.1
	baz=20							
V18A	Ganado	20.31	128	⇓P		P	12 42 10.4	-0.1
	baz=20							
P24A	Kohler Place,	20.41	112	⇓P		P	12 42 12.4	+0.8
	baz=20							
W17A	Winslow	20.42	130	⇓P		P	12 42 12.1	+0.3
	baz=20							
S22A	4UR Ranch, Cre	20.47	119	⇓P		P	12 42 13.0	+0.7
	baz=21							
O25A	Wiggins	20.51	110	⇓P		P	12 42 13.6	+0.9
	baz=21							
U20A	Newcomb	20.54	124	⇑P		P	12 42 13.2	+0.2
	baz=21							
Y15A	Casa Rosa Ranc	20.58	135	⇑P		P	12 42 13.8	+0.3
	baz=21							
X16A	Lo Mia Camp, P	20.60	133	⇑P		P	12 42 14.0	+0.3
	baz=21							
T21A	Navajo Lake	20.62	121	⇓P		P	12 42 14.3	+0.4
	baz=21							
Q24A	Divide	20.62	113	⇑P		P	12 42 14.7	+0.8
	baz=21							
Z13A	Yuma Proving G	20.64	139	⇑P		P	12 42 14.0	-0.1
	baz=21							
V19A	Window Rock	20.76	126	⇑P		P	12 42 15.3	-0.1
	baz=21							
Z14A	Wintersburg	20.80	137	⇓P		P	12 42 15.4	-0.5
	baz=21							
112A	Yuma	20.84	142	⇑P		P	12 42 17.0	+0.7
	baz=21							
P25A	Willow Gulch B	20.85	111	⇑P		P	12 42 17.6	+1.2
	baz=21							
W18A	Petrified Fore	20.87	128	⇓P		P	12 42 17.1	+0.4
	baz=21							
T22A	Edith	20.95	120	⇑P		P	12 42 18.3	+0.9
	baz=21							
U21A	Nageezi	20.96	122	⇓P		P	12 42 17.6	0.0
	baz=21							
113A	Mohawk Valley,	20.97	140	⇓P		P	12 42 18.0	+0.3
	baz=21							
S23A	Nye Farm, Mont	20.97	117	⇓P		P	12 42 18.6	+0.9
	baz=21							
X17A	Forest Lakes	20.97	132	⇑P		P	12 42 18.1	+0.4
	baz=21							
V20A	Brimhall	21.00	125	⇑P		P	12 42 17.9	-0.2
	baz=21							
Y16A	Circle Bar Ran	21.03	134	⇓P		P	12 42 18.5	+0.2
	baz=21							
W19A	Sanders	21.05	128	⇑P		P	12 42 19.1	+0.5
	baz=21							
R24A	Sanders Place,	21.13	115	⇓P		P	12 42 19.9	+0.5
	baz=21							
Q25A	Bedland, Calha	21.19	112	⇓P		P	12 42 20.1	+0.1
	baz=21							
Z15A	Gila River Ind	21.21	136	⇑P		P	12 42 19.9	-0.4
	baz=21							
SDCO	Great Sand Dun	21.23	117	⇑P		P	12 42 20.8	+0.3
	baz=21							
SDCO	Great Sand Dun	21.23	117	*e*P		P	12 42 20.5	0.0
	comp=Z,132nm,1.3s,mb5.1							
SDCO				LR		LR		
	comp=Z,14µm,19.0s,MS5.4							
X18A	Snowflake	21.23	130	⇑P		P	12 42 20.6	+0.1
	baz=21							
OGNE	Ogallala	21.30	105	⇑P		P	12 42 21.9	+0.7
	baz=21							
OGNE	Ogallala	21.30	105	*e*P		P	12 42 22.2	+1.0
	comp=Z,284n

baz=22
Z17A San Carlos Hig 21.98 133 ⇑P P 12 42 28.5 -0.1
baz=22
AGMN Agassiz Nation 22.03 82 *e*P P 12 42 28.8 -0.2
comp=Z,226nm,1.0s,mb5.5
AGMN LR LR
comp=Z,8μm,19.0s,MS5.2
116A Eloy 22.03 136 ⇑P P 12 42 29.0 -0.1
baz=22
Y19A Nutrioso 22.04 130 ⇓P P 12 42 29.4 +0.2
baz=22
214A Organ Pipe Nat 22.07 139 ⇓P P 12 42 28.8 -0.7
baz=22
FCC Fort Churchill 22.15 53 *e*P P 12 42 31.1 +0.9
comp=Z,5.2nm,0.9s,mb4.0
FCC Fort Churchill 22.15 53 *e*P P 12 42 31.1 +0.9
FCC pmax pmax
comp=Z,5.0nm,0.9s,mb3.9
V23A Ortiz Mt. (NFS 22.27 121 ⇑P P 12 42 32.4 +0.8
baz=22
T25A Trinidad 22.28 116 ⇓P P 12 42 32.0 +0.3
baz=22
U24A Moreno Valley 22.29 119 ⇑P P 12 42 32.3 +0.4
baz=22
Z18A Geronimo 22.36 132 ⇑P P 12 42 32.3 -0.3
baz=22
X21A Alamocita Cree 22.40 126 ⇑P P 12 42 33.0 0.0
baz=22
W22A Albuquerque 22.40 124 ⇓P P 12 42 32.9 -0.2
baz=22
117A Oracle 22.46 134 ⇓P P 12 42 33.6 0.0
baz=22
Y20A Horse Springs, 22.52 128 ⇓P P 12 42 34.4 +0.2
baz=23
Z19A T-Link Ranch, 22.57 131 ⇑P P 12 42 34.7 -0.1
baz=23
216A Three Points, 22.61 136 ⇑P P 12 42 35.0 -0.4
baz=23
TUC Tucson 22.66 135 *e*P P 12 42 36.7 +0.9
comp=Z,144nm,1.3s,mb5.3
TUC LR LR
comp=Z,13μm,21.0s,MS5.3
TUC Tucson 22.66 135 *e*P P 12 42 36.7 +0.9
TUC pmax pmax
comp=Z,144nm,1.3s,mb5.3
TUC MLR MLR
comp=Z,13μm,21.0s,MS5.3
ANMO Albuquerque 22.71 123 *e*P P 12 42 36.6 +0.3
comp=Z,80nm,1.1s,mb5.2
ANMO LR LR
comp=Z,5μm,21.0s,MS4.9
ANMO Albuquerque 22.71 123 P P 12 42 36.1 -0.3
comp=Z,14nm,0.9s,mb4.5,baz=318,slow=11,SNR=25
ANMO Albuquerque 22.71 123 *e*P P 12 42 36.7 +0.3
ANMO pmax pmax
comp=Z,80nm,1.1s
ANMO MLR MLR
comp=Z,5μm,21.0s
W23A Werner Place, 22.72 122 ⇓P P 12 42 36.5 0.0
baz=23
118A Homack Ranch, 22.76 133 ⇑P P 12 42 35.8 -1.1
baz=23
LAZ Ladron 22.77 125 *e*P P 12 42 37.6 +0.7
comp=Z,177nm,1.9s,mb5.3
V24A Rampart Ranch, 22.79 120 ⇓P P 12 42 37.3 +0.1
baz=23
U25A Circle Dot Ran 22.80 117 ⇓P P 12 42 36.9 -0.3
baz=23
Y21A Point of Rocks 22.80 127 ⇓P P 12 42 37.3 0.0
baz=23
UNV Unalaska Valle 22.83 294 *e*P P 12 42 37.8 +0.3
comp=Z,140nm,1.1s,mb5.4
119A Ashpeak Ranch, 22.98 131 ⇑P P 12 42 38.8 -0.4
baz=23
LENM Lemitar 23.04 125 *e*P P 12 42 40.5 +0.6
comp=Z,109nm,1.3s,mb5.2
Z20A Nine Sixteen R 23.04 130 ⇓P P 12 42 39.8 0.0
baz=23
V25A Rancho No Teng 23.08 119 ⇓P P 12 42 39.9 -0.3
baz=23
W24A Lazy 6 Ranch, 23.09 121 ⇓P P 12 42 40.6 +0.2
baz=23
217A Green Valley 23.09 136 ⇑P P 12 42 40.5 +0.1
baz=23
LPM Los Pinos Moun 23.11 125 *e*P P 12 42 41.7 +1.2
comp=Z,38nm,1.1s,mb4.8
Y22D IRIS PASSCAL I 23.14 125 ⇓P P 12 42 40.7 -0.1
baz=23
X23A Hourglass Bar 23.14 123 ⇑P P 12 42 40.5 -0.3
baz=23
Y22A Socorro 23.22 126 ⇑P P 12 42 41.6 -0.1
baz=23
BNM Barren Site 23.23 125 *e*P P 12 42 41.7 -0.2
comp=Z,317nm,1.7s,mb5.6
218A Dragoon 23.28 134 ⇑P P 12 42 42.1 -0.3
baz=23
ECSD EROS Data Cent 23.30 93 *e*P P 12 42 42.2 -0.3
comp=Z,338nm,0.9s,mb5.9
ECSD LR LR
comp=Z,34μm,21.0s,MS5.8
Z21A St. Cloud Mine 23.35 128 ⇑P P 12 42 42.9 -0.2
baz=23
120A U Bar Ranch, L 23.48 131 ⇑P P 12 42 44.0 -0.5
baz=24
X24A Lazy VL Ranch, 23.56 122 ⇑P P 12 42 44.6 -0.7
baz=24
V26A Tequesquite Ra 23.58 118 ⇑P P 12 42 45.1 -0.3
baz=24
W25A X Bar L Ranch, 23.61 120 ⇓P P 12 42 45.5 -0.3
baz=24
219A White Tail Can 23.63 132 ⇓P P 12 42 45.0 -1.0
baz=24
Y23A Lovelace Mesa, 23.70 124 ⇓P P 12 42 46.0 -0.7
baz=24
Z22A Elephant Butte 23.75 127 ⇓P P 12 42 46.7 -0.4
baz=24
318A Bisbee 23.75 135 ⇓P P 12 42 46.7 -0.5
baz=24
121A Cookes Peak, D 23.91 129 ⇑P P 12 42 48.2 -0.3
baz=24
CBKS Cedar Bluff 23.99 107 ⇑P P 12 42 48.5 -0.7
baz=24
CBKS Cedar Bluff 23.99 107 *e*P P 12 42 49.2 0.0
comp=Z,305nm,1.5s,mb5.6
CBKS LR LR
comp=Z,9μm,20.0s,MS5.3
CBKS Cedar Bluff 23.99 107 *e*P P 12 42 49.2 0.0
CBKS pmax pmax
comp=Z,305nm,1.5s,mb5.6
CBKS MLR MLR
comp=Z,9μm,20.0s,MS5.3
X25A Clemmons Ranch 24.01 121 ⇑P P 12 42 49.2 -0.3
baz=24
Y24A Capitan 24.04 123 ⇑P P 12 42 49.6 -0.1
baz=24
220A Playas Peak, P 24.06 131 ⇑P P 12 42 49.5 -0.4
baz=24
W26A Owens Ranch, T 24.10 119 ⇓P P 12 42 50.1 -0.2
baz=24
Z23A Rita Site, Whi 24.13 126 ⇑P P 12 42 50.5 0.0
baz=24
319A Douglas 24.14 133 ⇑P P 12 42 50.5 -0.1
baz=24
122A Conniff Cattle 24.17 128 ⇑P P 12 42 50.8 -0.1
baz=24
221A Mesquite Ranch 24.34 130 ⇑P P 12 42 52.0 -0.4
baz=24
NIKO Nikolski 24.34 292 *e*P P 12 42 51.3 -1.1
comp=Z,184nm,1.3s,mb5.5
Y25A Mesa, Roswell 24.44 122 ⇑P P 12 42 52.9 -0.5
baz=24
X26A CR and CF Fran 24.46 120 ⇓P P 12 42 53.2 -0.4
baz=24
W27A Bowe Ranch, En 24.51 118 ⇓P P 12 42 53.2 -0.8
baz=25
320A Kipp Ranch, An 24.52 132 ⇓P P 12 42 53.9 -0.3
baz=25
Z24A Sheeppen Canyo 24.53 124 ⇓P P 12 42 53.8 -0.4
baz=25
222A Williams Famil 24.60 129 ⇑P P 12 42 54.5 -0.3
baz=25
123A Bell Site, Whi 24.60 127 ⇑P P 12 42 54.9 0.0
baz=25
X27A F and S Farms, 24.79 119 ⇑P P 12 42 56.2 -0.4
baz=25
EYMN Ely 24.91 80 *e*P P 12 42 58.1 +0.5
comp=Z,137nm,0.8s,mb5.7
EYMN LR LR
comp=Z,43μm,21.0s,MS5.9
Z25A Roswell 24.92 123 ⇑P P 12 42 57.1 -0.7
baz=25
Y26A Elida 24.92 121 ⇑P P 12 42 57.3 -0.5
baz=25
124A Stringfield Ra 24.97 125 ⇑P P 12 42 57.6 -0.7
baz=25
TNA Tin City 25.01 322 *e*P P 12 42 59.4 +1.1
comp=Z,150nm,1.6s,mb5.5
223A Chaparral, Ant 25.02 128 ⇓P P 12 42 58.2 -0.5
baz=25
Y27A Causey 25.32 120 ⇓P P 12 43 00.3 -1.0
baz=25
Z26A Caprock 25.32 122 ⇑P P 12 43 00.7 -0.7
baz=25
224A Cornudas Mount 25.43 126 ⇑P P 12 43 02.0 -0.4
baz=26
AMTX Amarillo 25.43 116 ⇓P P 12 43 01.8 -0.6
baz=26
AMTX Amarillo 25.43 116 *e*P P 12 43 01.8 -0.6
comp=Z,199nm,0.9s,mb5.8
AMTX LR LR
comp=Z,13μm,21.0s,MS5.4
MSTX Muleshoe 25.47 119 ⇓P P 12 43 02.2 -0.5
baz=26
CPRX Cap Rock 25.57 122 *e*P P 12 43 02.4 -1.3
comp=Z,67nm,1.0s,mb5.2
KSU1 Kansas State U 25.76 103 *e*P P 12 43 06.0 +0.6
comp=Z,120nm,0.8s,mb5.6
KSU1 LR LR
comp=Z,10μm,19.0s,MS5.4
225A Deer Hill, Car 25.77 125 ⇓P P 12 43 04.9 -0.5
baz=26
126A Clayton Basin, 25.78 123 ⇑P P 12 43 04.4 -1.2
baz=26
MNTX Cornudas Mount 25.80 126 ⇑P P 12 43 05.1 -0.6
baz=26
MNTX Cornudas Mount 25.80 126 *e*P P 12 43 05.6 -0.2
comp=Z,41nm,0.9s,mb5.1
MNTX LR LR
comp=Z,8μm,19.0s,MS5.3
324A Moseley Ranch, 25.95 127 ⇓P P 12 43 06.5 -0.6
baz=26
GAMB Gambell 26.10 317 *e*P P 12 43 09.9 +1.7
comp=Z,205nm,1.7s,mb5.5
226A Malaga, Loving 26.19 124 ⇑P P 12 43 08.7 -0.6
baz=26
325A Bean Ranch, Si 26.27 126 ⇓P P 12 43 09.9 -0.1
baz=26
SCIA State Center 26.38 94 *e*P P 12 43 11.6 +0.7
comp=Z,276nm,1.5s,mb5.7
SCIA LR LR
comp=Z,31μm,20.0s,MS5.8
227A Bennet, Jal 26.66 123 ⇑P P 12 43 12.6 -0.9
baz=27
425A Indio Mountain 26.73 127 ⇑P P 12 43 14.1 -0.1
baz=27
326A Caldwell Ranch 26.83 125 ⇓P P 12 43 14.7 -0.4
baz=27
327A Balmorhea Ranc 27.05 124 ⇓P P 12 43 16.3 -0.8
baz=27
WMOK Wichita Mounta 27.23 113 *e*P P 12 43 17.8 -0.9
comp=Z,55nm,1.1s,mb5.2
WMOK LR LR
comp=Z,18μm,20.0s,MS5.6
WMOK Wichita Mounta 27.23 113 *e*P P 12 43 17.8 -0.9
WMOK pmax pmax
comp=Z,55nm,1.1s,mb5.2
WMOK MLR MLR
comp=Z,18μm,20.0s,MS5.6
426A McDonald Obser 27.32 126 ⇓P P 12 43 18.7 -0.8
baz=27
328A Wristen Ranch, 27.41 123 ⇑P P 12 43 19.2 -1.1
baz=28
427A Hayter Ranch, 27.50 125 ⇓P P 12 43 20.7 -0.4
baz=28
526A Mary Lane Ranc 27.77 127 ⇓P P 12 43 22.8 -0.7
baz=28
JFWS Jewell Farm 27.78 90 *e*P P 12 43 24.3 +0.7
comp=Z,98nm,0.8s,mb5.7
JFWS LR LR
comp=Z,35μm,19.0s,MS6.0
JFWS Jewell Farm 27.78 90 *e*P P 12 43 24.3 +0.8
JFWS pmax pmax
comp=Z,98nm,0.8s,mb5.7
JFWS MLR MLR
comp=Z,35μm,19.0s,MS6.0
527A Woodward Ranch 27.95 126 ⇓P P 12 43 24.5 -0.6
baz=28
626A Big Bend Ranch 28.16 127 ⇓P P 12 43 25.9 -1.1
baz=28
528A Cox Ranch, San 28.37 125 ⇓P P 12 43 28.4 -0.5
baz=28
RES Resolute Bay 28.53 18 P P 12 43 31.4 +1.5
RES LR LR 12 54 38.8
RES Resolute Bay 28.53 18 P P 12 43 31.4 +1.5
comp=Z,7.1nm,0.9s,mb4.5,baz=291,slow=9.6,SNR=2.1
RES LR LR 12 54 38.8
comp=Z,14μm,20.1s,MS5.5,baz=230,slow=36
TXAR Lajitas Array 28.57 127 P P 12 43 30.6 0.0
comp=Z,19nm,1.1s,mb4.8,baz=328,slow=7.1,SNR=27
TXAR LR LR 12 55 41.9
comp=Z,9μm,18.3s,MS5.4,baz=30,slow=38
627A Terlingua Ranc 28.62 126 ⇓P P 12 43 30.9 -0.2
baz=29
628A Black Gap, Mar 28.85 126 ⇑P P 12 43 32.5 -0.7
baz=29
HDIL Hopedale 29.60 93 *e*P P 12 43 40.6 +0.9
comp=Z,134nm,1.2s,mb5.7
HDIL LR LR
comp=Z,34μm,19.0s,MS6.0
JCT Junction City 29.75 120 ⇓P P 12 43 39.6 -1.5
baz=30
JCT Junction City 29.75 120 *e*P P 12 43 39.3 -1.8
comp=Z,48nm,0.8s,mb5.4
JCT LR LR
comp=Z,8μm,22.0s,MS5.3
JCT Junction City 29.75 120 *e*P P 12 43 39.3 -1.8
JCT pmax pmax
comp=Z,48nm,0.8s,mb5.4
JCT MLR MLR
comp=Z,8μm,22.0s,MS5.3
CCM Cathedral Cave 29.77 99 *e*P P 12 43 40.7 -0.5
comp=Z,24nm,0.8s,mb5.1
CCM LR LR
comp=Z,16μm,19.0s,MS5.7
CCM Cathedral Cave 29.77 99 *e*P P 12 43 40.7 -0.5
CCM pmax pmax
comp=Z,24nm,0.8s,mb5.1
CCM MLR MLR
comp=Z,16μm,19.0s,MS5.7
MIAR Mount Ida 30.52 107 *e*P P 12 43 47.7 -0.2
comp=Z,105nm,1.3s,mb5.6
MIAR LR LR
comp=Z,3μm,19.0s,MS5.0
MIAR Mount Ida 30.52 107 *e*P P 12 43 47.7 -0.2
MIAR pmax pmax
comp=Z,105nm,1.3s,mb5.6
MIAR MLR MLR
comp=Z,3μm,19.0s,MS5.0
UALR University of 31.13 105 *e*P P 12 43 53.2 0.0
comp=Z,29nm,0.9s,mb5.2
SIUC Southern Illin 31.26 98 *e*P P 12 43 54.2 -0.2
comp=Z,29nm,0.7s,mb5.3
OLIL Olney 31.38 95 *e*P P 12 43 55.1 -0.3
comp=Z,112nm,1.1s,mb5.7
NATX Nacogdoches 31.78 112 *e*P P 12 43 59.2 +0.2
NATX LR LR
comp=Z,13μm,20.0s,MS5.6
GLAT Glass 32.09 100 *e*P P 12 44 02.3 +0.5
USIN University of 32.10 96 *e*P P 12 44 00.3 -1.5
comp=Z,64nm,0.7s,mb5.7
BLO Bloomington 32.14 93 *e*P P 12 44 02.2 0.0
comp=Z,36nm,0.8s,mb5.3
BLO Bloomington 32.14 93 *e*P P 12 44 02.2 0.0
BLO pmax pmax
comp=Z,36nm,0.8s,mb5.3
AAM Ann Arbor 32.32 86 PFAKE 12 44 10.0 +6.3
AAM LR LR
comp=Z,3μm,22.0s,MS4.9
HKT Hockley 32.40 116 *e*P P 12 44 04.9 +0.4
comp=Z,154nm,1.9s,mb5.6
HKT LR LR
comp=Z,21μm,19.0s,MS5.8
HKT Hockley 32.40 116 *e*P P 12 44 04.9 +0.4
HKT pmax pmax
comp=Z,155nm,1.9s,mb5.6
HKT MLR MLR
comp=Z,21μm,19.0s,MS5.8
WCI Wyandotte Cave 32.83 94 *e*P P 12 44 08.2 0.0
comp=Z,34nm,1.1s,mb5.2
WCI LR LR
comp=Z,25μm,19.0s,MS5.9
WCI Wyandotte Cave 32.83 94 *e*P P 12 44 08.2 0.0
WCI pmax pmax
comp=Z,34nm,1.1s,mb5.2
WCI MLR MLR
comp=Z,25μm,19.0s,MS5.9
KVTX Kingsville 33.07 121 PFAKE 12 44 20.0 +10
KVTX LR LR
comp=Z,9μm,19.0s,MS5.5
WVT Waverly 33.10 99 *e*P P 12 44 09.6 -1.0
comp=Z,31nm,1.0s,mb5.2
WVT LR LR
comp=Z,1μm,19.0s,MS4.7
WVT Waverly 33.10 99 *e*P P 12 44 09.6 -1.0
WVT pmax pmax
comp=Z,31nm,1.0s,mb5.2
WVT MLR MLR
comp=Z,1μm,19.0s,MS4.7
OXF Oxford 33.13 103 *e*P P 12 44 10.3 -0.6
comp=Z,295nm,1.0s,mb6.2
OXF LR LR
comp=Z,9μm,19.0s,MS5.5
OXF Oxford 33.13 103 *e*P P 12 44 10.3 -0.6
OXF pmax pmax
comp=Z,295nm,1.0s,mb6.2
OXF MLR MLR
comp=Z,9μm,19.0s,MS5.5
ACSO Alum Creek Sta 33.84 89 *e*P P 12 44 16.6 -0.4
comp=Z,70nm,1.1s,mb5.5
ACSO LR LR
comp=Z,29μm,19.0s,MS6.0
VBMS Vicksburg 33.97 107 *e*P P 12 44 19.7 +1.5
comp=Z,112nm,1.0s,mb5.8
VBMS LR LR
comp=Z,7μm,22.0s,MS5.3
SADO Sadowa 34.02 79 P P 12 44 18.4 -0.1
comp=Z,27nm,0.9s,mb5.2,baz=307,slow=8.8,SNR=10
SADO LR LR 12 58 44.0
comp=Z,43μm,19.3s,MS6.2,baz=322,slow=37
FRB Frobisher Bay 34.51 43 P P 12 44 23.3 +0.8
comp=Z,17nm,1.1s,mb4.9,baz=280,slow=13,SNR=2.1
ERPA Erie 34.77 84 PFAKE 12 44 40.0 +15
ERPA LR LR
comp=Z,30μm,21.0s,MS6.0
SWET Sewanee 34.88 98 *e*P P 12 44 25.8 -0.3
comp=Z,21nm,1.2s,mb4.9
BILL Bilibino 35.41 324 *e*P P 12 44 30.9 +0.7
comp=Z,10nm,0.4s,mb5.1
BILL LR LR
comp=Z,8μm,21.0s,MS5.5
BILL Bilibino 35.41 324 *c i*P P 12 44 31.5 +1.2
BILL *e*S S 12 50 07.3 +1.8
BILL *e*SS SS 12 52 23.5 -15
BILL pmax pmax
comp=Z,117nm,2.5s,mb5.4
BILL MLR MLR
comp=Z,8μm,16.0s,MS5.5
LRAL Lakeview Retre 35.61 102 *e*P P 12 44 31.6 -0.8
comp=Z,30nm,1.1s,mb5.0
LRAL LR LR
comp=Z,10μm,19.0s,MS5.6
CPCT Cooper Cave 35.63 97 *e*P P 12 44 32.6 +0.1
TKL Tuckaleechee C 35.98 96 P P 12 44 34.9 -0.7
comp=Z,14nm,1.1s,mb4.7,baz=319,slow=7.8,SNR=9.0
TKL LR LR 12 59 52.6
comp=Z,30μm,18.7s,MS6.1,baz=308,slow=37
TKL Tuckaleechee C 35.98 96 *e*P P 12 44 35.3 -0.2
MCWV Mont Chateau 36.17 87 *e*P P 12 44 36.8 -0.2
comp=Z,42nm,1.2s,mb5.2
MCWV LR LR
comp=Z,39μm,21.0s,MS6.2
POHA Pohakuloa 36.65 224 PFAKE 12 44 50.0 +8.7
POHA LR LR
comp=Z,2μm,21.0s,MS4.8
SSPA Standing Stone 36.89 85 *e*P P 12 44 42.1 -1.1
comp=Z,5.9nm,0.6s,mb4.5
BRAL Brewton 36.94 105 PFAKE 12 44 50.0 +6.2
BRAL LR LR
comp=Z,7μm,19.0s,MS5.5
LONY Lake Ozonia 36.95 77 *e*P P 12 44 43.2 -0.5
comp=Z,57nm,1.5s,mb5.1
LONY LR LR
comp=Z,30μm,19.0s,MS6.1
BLA Blacksburg 37.20 91 *e*P P 12 44 45.7 -0.2
comp=Z,76nm,1.4s,mb5.2
BLA LR LR
comp=Z,21μm,19.0s,MS6.0
BLA Blacksburg 37.20 91 *e*P P 12 44 45.7 -0.2
BLA pmax pmax
comp=Z,76nm,1.4s,mb5.2
BLA MLR MLR
comp=Z,21μm,19.0s,MS6.0
BINY Binghamton 37.28 81 *e*P P 12 44 45.8 -0.7
comp=Z,217nm,2.0s,mb5.5
BINY LR LR
comp=Z,13μm,21.0s,MS5.7
SCHQ Schefferville 37.38 58 P P 12 44 47.2 0.0
SCHQ PP PP 12 46 12.6 +0.4
SCHQ LR LR 13 00 38.7
SCHQ Schefferville 37.38 58 P P 12 44 47.2 0.0
comp=Z,21nm,1.0s,mb4.8,baz=292,slow=6.9,SNR=8.1
SCHQ PP PP 12 46 12.6 +0.4
comp=Z,12nm,0.9s,baz=299,slow=10,SNR=3.8
SCHQ LR LR 13 00 38.7
comp=Z,18μm,19.3s,MS5.9,baz=292,slow=37
FRNY Flat Rock 37.47 76 *e*P P 12 44 47.4 -0.7
comp=Z,41nm,1.0s,mb5.1
NCB Newcomb 37.49 78 *e*P P 12 44 47.6 -0.8
comp=Z,53nm,1.5s,mb5.0
NCB LR LR
comp=Z,24μm,19.0s,MS6.0
GOGA Godfrey 37.60 99 *e*P P 12 44 48.5 -0.8
comp=Z,51nm,1.0s,mb5.2
GOGA LR LR
comp=Z,11μm,22.0s,MS5.6
GOGA Godfrey 37.60 99 *e*P P 12 44 48.5 -0.8
GOGA pmax pmax
comp=Z,51nm,1.0s,mb5.2
GOGA MLR MLR
comp=Z,11μm,22.0s,MS5.6
ACCN Adirondack Com 38.14 78 *e*P P 12 44 53.7 -0.1
comp=Z,18nm,1.0s,mb4.8
JSC Jenkinsville 38.45 96 *e*P P 12 44 56.2 -0.3
JSRW J. Sargeant Re 38.55 89 *e*P P 12 44 56.9 -0.4
CBN Corbin 38.58 88 PFAKE 12 45 10.0 +12
CBN LR LR
comp=Z,31μm,22.0s,MS6.1
LBNH Lisbon 38.80 76 *e*P P 12 44 59.5 +0.2
comp=Z,17nm,0.9s,mb4.7
LBNH LR LR
comp=Z,15μm,19.0s,MS5.8
LBNH Lisbon 38.80 76 *e*P P 12 44 59.6 +0.3
LBNH pmax pmax
comp=Z,17nm,0.9s,mb4.7
LBNH MLR MLR
comp=Z,15μm,19.0s,MS5.8
PAL Palisades 39.23 81 *e*P P 12 45 02.0 -1.0
comp=Z,22nm,0.9s,mb4.8
PAL Palisades 39.23 81 *e*P P 12 45 02.0 -1.0
PAL pmax pmax
comp=Z,22nm,0.9s,mb4.8
CPNY Central Park 39.31 82 *e*P P 12 45 03.4 -0.3
QUA2 Belchertown 39.54 79 *e*P P 12 45 05.7 +0.2
comp=Z,38nm,1.0s,mb5.0
NHSC New Hope 39.90 96 PFAKE 12 45 20.0 +11
NHSC LR LR
comp=Z,33μm,20.0s,MS6.2
PKME Peaks-Kenny Pk 39.93 73 *e*P P 12 45 08.9 +0.2
comp=Z,35nm,1.3s,mb4.8
PKME LR LR
comp=Z,26μm,19.0s,MS6.1
CNNC Cliffs of the 40.02 92 PFAKE 12 45 20.0 +10
CNNC LR LR
comp=Z,23μm,19.0s,MS6.0
WVL Waterville 40.05 74 *e*P P 12 45 09.1 -0.6
comp=Z,204nm,1.5s,mb5.5
WVL *e*PP PP 12 46 43.0 +1.5
EMMW East Machias 41.33 73 *e*P P 12 45 19.7 -0.7
comp=Z,23nm,0.8s,mb5.0
SEY Seymchan 42.10 318 ⇑*i*P P 12 45 27.3 +0.9
SEY Seymchan 42.10 318 ⇑*i*P P 12 45 27.2 +0.8
MIDW Midway 42.11 257 PFAKE 12 45 40.0 +13
MIDW LR LR

comp=Z,8µm,22.0s,MS5.6
PET Petropavlovsk 42.95 303 *e*P **P 12 45 33.2 -0.1**
comp=Z,56nm,1.1s,mb5.2
PET LR LR
comp=Z,4µm,21.0s,MS5.3
PET Petropavlovsk 42.95 303 *e*P **P 12 45 33.4 0.0**
PET *e* 12 47 16.7
PET *e*S **S 12 51 56.1 -3.0**
PET pmax pmax
comp=Z,46nm,1.2s,mb5.1
PET pmax pmax
comp=Z,1µm,5.2s
PET pmax pmax
comp=Z,600nm,5.9s
PET pmax pmax
comp=Z,700nm,13.9s
PETK Petropavlovsk- 43.42 303 P **P 12 45 36.5 -0.8**
PETK LR LR 13 01 35.2
PETK Petropavlovsk- 43.42 303 P **P 12 45 36.5 -0.8**
comp=Z,18nm,0.9s,mb4.8,baz=49,slow=4.5,SNR=12
PETK LR LR 13 01 35.2
comp=Z,3µm,19.9s,MS5.1,baz=75,slow=33
SUMG Summit 43.45 26 *e*P **P 12 45 38.4 +1.2**
comp=Z,70nm,1.1s,mb5.3
SUMG Summit 43.45 26 *i* P **P 12 45 38.8 +1.6**
comp=Z,42nm,0.9s,mb5.2
SUMG *i* 12 47 28.1
SUMG *i* S **S 12 52 13.5 +7.5**
SUMG
comp=Z,8µm,13.0s
TEIG Tepich 44.22 117 *e*P **P 12 45 42.5 -1.5**
comp=Z,31nm,0.8s,mb5.1
TEIG LR LR
comp=Z,3µm,20.0s,MS5.2
TEIG Tepich 44.22 117 P **P 12 45 43.0 -1.0**
comp=Z,24nm,1.0s,mb4.9,baz=292,slow=9.6,SNR=6.5
JOHN Johnston Islan 46.21 238 PFAKE 12 46 10.0 +10
JOHN LR LR
comp=Z,5µm,19.0s,MS5.5
TIXI Tiksi 46.73 335 *e*P **P 12 46 04.5 +1.2**
comp=Z,156nm,1.9s,mb5.8
TIXI LR LR
comp=Z,6µm,22.0s,MS5.5
TIXI Tiksi 46.73 335 *e*P **P 12 46 01.1 -2.2**
TIXI *e* 12 47 54.0
TIXI *e*S **S 12 52 56.3 +2.8**
TIXI pmax pmax
comp=Z,82nm,1.9s,mb5.5
TIXI MLR MLR
comp=Z,5µm,18.0s,MS5.5
SCO Scoresbysund 49.05 25 *e*P **P 12 46 24.4 +3.1**
SCO *i* 12 48 19.9
SCO *i* S **S 12 53 34.8 +8.3**
SCO MLR MLR
comp=Z,9µm,12.0s,MS6.0
SCO Scoresbysund 49.05 25 *i* P **P 12 46 24.4 +3.1**
SCO *i* 12 48 19.9
SCO *i* S **S 12 53 34.8 +8.3**
SCO
comp=Z,9µm,12.0s
KBS Kingsbay 49.18 9 *e*P **P 12 46 22.9 +0.6**
KBS AMB AMB 12 46 27.6
comp=Z,75nm,2.0s,mb5.4
KBS *e*S **S 12 53 37.0 +8.8**
KBS *e*SS SS 12 57 12.3 +14
KBS AMS AMS 13 07 54.5
comp=Z,8µm,18.4s,MS5.8
KBS Kingsbay 49.18 9 *e*P **P 12 46 22.6 +0.4**
comp=Z,32nm,1.1s,mb5.3
KBS LR LR
comp=Z,7µm,20.0s,MS5.7
KBS Kingsbay 49.18 9*d i*P **P 12 46 22.9 +0.7**
KBS pmax pmax
comp=Z,72nm,1.6s,mb5.5
KBS MLR MLR
comp=Z,9µm,21.0s,MS5.8
TGUH Tegucigalpa,Un 49.75 121 *e*P **P 12 46 28.8 +1.5**
comp=Z,67nm,1.0s,mb5.5
TGUH LR LR
comp=Z,4µm,20.0s,MS5.5
BBSR BB Station 50.31 85 PFAKE 12 46 40.0 +8.6
BBSR LR LR
comp=Z,11µm,19.0s,MS5.9
YAK Yakutsk 51.77 324 *e*P **P 12 46 41.4 -0.6**
comp=Z,45nm,0.8s,mb5.5
YAK LR LR
comp=Z,6µm,19.0s,MS5.6
YAK Yakutsk 51.77 324*c i*P **P 12 46 42.0 +0.1**
YAK *e* 12 48 39.8
YAK *e*S **S 12 54 02.7 -1.7**
YAK pmax pmax
comp=Z,33nm,0.8s,mb5.3
YAK pmax pmax
comp=N,10.0nm,1.4s
YAK pmax pmax
comp=E,23nm,1.4s
YAK pmax pmax
comp=Z,90nm,2.7s,mb5.2
YAK pmax pmax
comp=N,87nm,2.5s
YAK pmax pmax
comp=E,115nm,2.5s
YAK smax
comp=E,850nm,9.1s
YAK smax
comp=N,2µm,10.7s
YAK MLR MLR
comp=Z,6µm,21.0s,MS5.6
YAK MLR MLR
comp=E,4µm,18.0s,MS5.6
YAK MLR MLR
comp=N,3µm,15.0s,MS5.6
JMIC Jan Mayen 52.10 21 *e*P **P 12 46 41.3 -3.0**
JMIC *e*S **S 12 54 15.4 +6.7**
JMIC AMS AMS 13 09 30.3
comp=Z,6µm,12.2s,MS5.8
JMIC Jan Mayen 52.10 21 LR LR 13 11 44.5
comp=Z,4µm,20.1s,MS5.5,baz=325,slow=39
MTDJ Mount Denham 52.15 108 PFAKE 12 47 00.0 +15
MTDJ LR LR
comp=Z,3µm,22.0s,MS5.2
BORG Borgarnes 52.78 31 PFAKE 12 47 00.0 +11
BORG LR LR
comp=Z,5µm,21.0s,MS5.5
BORG Borgarnes 52.78 31 LR LR 13 07 31.4
comp=Z,5µm,20.6s,MS5.5,baz=312,slow=34
GRTK Grand Turk 53.69 100 PFAKE 12 47 10.0 +13
GRTK LR LR
comp=Z,6µm,20.0s,MS5.6
BJO Bjornoya 53.89 10 *e*S **S 12 54 33.8 +0.7**
BJO AMS AMS 13 12 04.4
comp=Z,6µm,15.6s,MS5.7
JTS JuntasAbangare 54.12 121 PFAKE 12 47 10.0 +10
JTS LR LR
comp=Z,3µm,19.0s,MS5.4
YSS Yuzh-Sakhalins 54.83 303⇑ *i*P **P 12 47 06.0 +1.3**
YSS LR LR
comp=Z,725nm,21.0s,MS4.7
YSS Yuzh-Sakhalins 54.83 303⇑ *e*P **P 12 47 03.0 -1.7**
YSS *e* 12 49 12.0
YSS *e*S **S 12 54 38.0 -8.4**
YSS *e*PS 12 54 50.0
YSS *e*SS SS 12 58 34.0 +5.1
YSS pmax pmax
comp=Z,40nm,1.1s,mb5.4
YSS pmax pmax
comp=Z,500nm,5.0s
YSS MLR MLR
comp=N,2µm,17.0s,MS5.3
YSS MLR MLR
comp=E,2µm,17.0s,MS5.3
YSS MLR MLR
comp=Z,2µm,17.0s,MS5.3
YUK Yuzh-Kuril'sk 54.92 299⇓ *i*P **P 12 47 01.6 -3.8**
YUK *i* S **S 12 54 41.0 -6.8**
YUK *i* SSS 13 00 23.5
YUK MLR MLR
comp=N,1µm,15.0s,MS5.4
YUK MLR MLR
comp=Z,1µm,15.0s,MS5.2
YUK MLR MLR
comp=E,2µm,20.0s,MS5.4
SDDR Presa de Saban 55.45 102 *e*P **P 12 47 08.7 -0.9**
comp=E,33nm,1.0s,mb5.3
SDDR LR LR
comp=Z,5µm,21.0s,MS5.6
ASAJ Asahikawa 56.70 301 P **P 12 47 17.4 -0.7**
comp=Z,12nm,1.1s,mb4.8,baz=81,slow=11,SNR=3.4
CLNS Chul'man 56.96 321 *e*P **P 12 47 19.8 0.0**
CLNS *e**PP 12 47 26.3
CLNS *e* 12 48 16.7
CLNS *e* 12 49 25.2
CLNS *e* 12 56 59.6
CLNS pmax pmax
comp=Z,27nm,1.3s,mb5.1
CLNS pmax pmax
comp=E,17nm,1.0s
CLNS pmax pmax
comp=N,14nm,1.2s
CLNS pmax pmax
comp=Z,14nm,1.5s,mb4.8
CLNS pmax pmax
comp=N,6.0nm,1.9s
CLNS pmax pmax
comp=E,14nm,1.6s
CLNS MLR MLR
comp=Z,3µm,13.0s,MS5.5
CLNS MLR MLR
comp=N,729nm,15.0s,MS5.3
CLNS MLR MLR
comp=E,2µm,16.0s,MS5.3
ERM Erimo 57.74 298 PFAKE 12 47 40.0 +14
ERM LR LR
comp=Z,3µm,21.0s,MS5.4
HABR Khabarovsk 57.88 309 *i* P **P 12 47 25.1 -1.3**
HABR *e**PP 12 47 28.4
HABR *e* 12 48 17.3
HABR 12 49 33.4
HABR *e*S **S 12 55 25.8 -1.0**
HABR *e**SS sS 12 55 31.2 +4.3
HABR *e* 12 57 14.7
HABR *e*SS SS 12 59 17.8 +1.0
HABR pmax pmax
comp=E,38nm,2.1s
HABR pmax pmax
comp=Z,83nm,2.3s,mb5.4
HABR pmax pmax
comp=N,38nm,2.2s
HABR MLR MLR
comp=Z,2µm,18.0s,MS5.2
HABR MLR MLR
comp=N,2µm,16.0s,MS5.5
HABR MLR MLR
comp=E,2µm,12.0s,MS5.5
BCIP Isla Barro Col 57.91 117 *e*P **P 12 47 26.3 -0.8**
comp=E,33nm,1.0s,mb5.3
BCIP LR LR
comp=Z,2µm,20.0s,MS5.2
TRO Tromso 58.34 12 *e*P **P 12 47 30.1 +0.7**
TRO *e*S **S 12 55 36.0 +3.7**
TRO AMS AMS 13 11 34.3
comp=Z,6µm,24.8s,MS5.6
WAKE Wake Island 58.64 263 PFAKE 12 47 40.0 +7.9
WAKE LR LR
comp=Z,5µm,20.0s,MS5.6
LRS Lares 58.78 99 *e*P **P 12 47 32.5 -0.6**
CRPR Cabo Rojo, PR 58.82 99 *e*P **P 12 47 33.2 -0.2**
KLR Kul'dur 59.01 311 *e*P **P 12 47 25.5 -8.8**
KLR *e*S **S 12 55 38.5 -3.1**
KLR smax
comp=N,4µm,9.5s
KLR smax
comp=E,3µm,9.5s
KLR MLR MLR
comp=E,2µm,12.0s
KLR MLR MLR
comp=Z,4µm,12.0s,MS5.7
CELP Cerrillos 59.11 99 *e*P **P 12 47 35.6 +0.2**
OBIP Obispado Ponce 59.11 99 *e*P **P 12 47 35.5 +0.1**
comp=Z,43nm,1.0s,mb5.4
KEV Kevo 59.20 9 *e*P **P 12 47 35.6 +0.3**
comp=Z,21nm,1.4s,mb5.0
KEV LR LR
comp=Z,6µm,20.0s,MS5.7
KEV Kevo 59.20 9 *e*P **P 12 47 35.6 +0.3**
KEV pmax pmax
comp=Z,85nm,1.4s,mb5.6
KEV MLR MLR
comp=Z,6µm,20.0s,MS5.7
KEV Kevo 59.20 9 *e*p **P 12 47 35.2 -0.1**
comp=Z,6.5nm,0.7s,mb4.8
SOFL Sornfelli, Far 59.21 27 AMS AMS 13 11 54.8
comp=Z,11µm,15.6s,MS6.1
ARCES ARCESS Array B 59.25 10 P **P 12 47 34.1 -1.5**
comp=Z,6.4nm,0.9s,mb4.6,baz=332,slow=12,SNR=6.6
ARCES LR LR 13 13 22.0
comp=Z,4µm,20.3s,MS5.6,baz=163,slow=36
ICM Isla Caja Muer 59.28 99 *e*P **P 12 47 36.0 -0.6**
SJG San Juan 59.35 98 PFAKE 12 47 50.0 +13
SJG LR LR
comp=Z,4µm,20.0s,MS5.5
CBYP Canovanas 59.42 98 *e*P **P 12 47 36.0 -1.5**
comp=Z,36nm,1.3s,mb5.2
TAOE Nuku Hiva Isla 59.47 192 *e*S **S 12 55 46.0 -2.0**
comp=Z,5µm,25.3s
TAOE *e*LQ 13 02 27.7
comp=Z,5µm,27.8s
TAOE *e*LR LR 13 04 58.2
comp=Z,14µm,28.7s,baz=16
KTK1 Kautokeino 59.48 11 *e*P **P 12 47 36.7 -0.6**
KTK1 AMB AMB 12 47 40.1
comp=Z,172nm,1.5s,mb5.9
KTK1 *e*S **S 12 55 46.7 -0.4**
KTK1 AMS AMS 13 09 59.0
comp=Z,13µm,29.0s,MS5.9
MTP Monte Pirata 59.74 98 *e*P **P 12 47 38.7 -1.1**
comp=Z,66nm,1.3s,mb5.5
PAYG Puerto Ayora 60.75 133 PFAKE 12 48 00.0 +13
PAYG LR LR
comp=Z,2µm,21.0s,MS5.3
LVZ Lovozero 61.69 7⇑ *e*P **P 12 47 52.1 -0.3**
LVZ LR LR
comp=Z,4µm,20.0s,MS5.6
LVZ Lovozero 61.69 7*c e*P **P 12 47 52.0 -0.4**
LVZ pmax pmax
comp=Z,122nm,1.7s,mb5.9
LVZ MLR MLR
comp=Z,13µm,23.0s,MS6.0
NSS Namsos 61.82 18 *e*S **S 12 56 20.8 +3.7**
NSS AMS AMS 13 14 55.6
comp=Z,5µm,18.8s,MS5.7
APA Apatity 61.92 7⇑ *e*P **P 12 47 54.6 +0.7**
APA *e* 12 50 07.0
APA *e*PPP 12 51 37.0
APA *i* S **S 12 56 21.0 +2.7**
APA *e*PS 12 56 41.0
APA *i* 12 57 49.0
APA *i* SS SS 13 00 23.0 +3.8
APA pmax pmax
comp=Z,160nm,2.0s,mb5.9
APA pmax pmax
comp=Z,600nm,6.8s
APA MLR MLR
comp=Z,6µm,17.0s,MS5.8
LRW Lerwick 62.45 26 AMS AMS 13 14 47.8
comp=Z,5µm,15.5s,MS5.8
ANWB Willy Bob 62.47 95 PFAKE 12 48 10.0 +12
ANWB LR LR
comp=Z,7µm,20.0s,MS5.8
FOO Floro 62.87 22 *e*S **S 12 56 33.9 +3.5**
FOO AMS AMS 13 16 03.5
comp=Z,3µm,19.9s,MS5.5
VLA Vladivostok 63.13 306 *e*P **P 12 48 00.8 -1.6**
VLA pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
MDJ Mudanjiang 63.26 308 P **P 12 48 00.8 -2.4**
MDJ pP 12 48 04.0
MDJ sP sP 12 48 05.3 +2.0
MDJ PcP PcP 12 48 38.8 -1.7
MDJ PP PP 12 50 19.3 -2.5
MDJ S **S 12 56 30.5 -5.3**
MDJ ScS ScS 12 57 53.0 -4.2
MDJ SS SS 13 00 31.5 -10
MDJ pmax pmax
comp=Z,280nm,5.9s
MDJ LR LR
comp=N,2µm,21.6s,MS5.4
MDJ LR LR
comp=E,2µm,22.3s,MS5.4
MDJ LR LR
comp=Z,3µm,20.2s,MS5.5
MDJ Mudanjiang 63.26 308 PFAKE 12 48 10.0 +6.8
MDJ LR LR
comp=Z,3µm,20.0s,MS5.5
KPL Plockton 63.37 30 AMB AMB 12 48 13.5
comp=Z,64nm,2.0s,mb5.4
KPL AMS AMS 13 14 47.4
KPL Plockton 63.37 30 AMB AMB 12 48 13.5
comp=Z,64nm,2.0s,mb5.4
KPL AMS AMS 13 14 47.4
comp=Z,4µm,16.9s
SDV Santo Domingo 63.58 109 PFAKE 12 48 20.0 +14
SDV LR LR
comp=Z,1µm,19.0s,MS5.0
MCD Coleburn Disti 63.93 29 *e*P **P 12 48 04.7 -2.8**
BER Bergen 63.98 23 *e*P **P 12 48 08.4 +0.6**
BER *e*S **S 12 56 51.7 +7.3**
BER AMS AMS 13 16 19.8
comp=Z,4µm,15.3s,MS5.7
MAJO Matsushiro 64.26 297 *e*P **P 12 48 07.7 -2.2**
comp=Z,17nm,1.0s,mb5.2
MAJO LR LR
comp=Z,3µm,22.0s,MS5.5
MAJO Matsushiro 64.26 297 *e*P **P 12 48 07.7 -2.2**
MAJO pmax pmax
comp=Z,17nm,1.0s,mb5.2
MAJO MLR MLR
comp=Z,3µm,22.0s,MS5.5
MAT Matsushiro 64.26 297 P **P 12 48 06.6 -3.3**
MAT S **S 12 56 44.0 -4.5**
MJAR Matsushiro Arr 64.26 297 P **P 12 48 08.4 -1.5**
comp=Z,2.8nm,0.8s,mb4.5,baz=30,slow=6.2,SNR=5.6
MJAR PP PP 12 50 33.7 +2.9
comp=Z,0.3nm,0.4s,baz=43,slow=53,SNR=2.6
MJAR LR LR 13 11 46.5
comp=Z,1µm,20.7s,MS5.1,baz=35,slow=32
MJAR Matsushiro Arr 64.26 297 P **P 12 48 08.4 -1.5**
MJAR 12 50 33.7
HIA Hailar 64.54 317 *e*P **P 12 48 11.7 +0.1**
HIA LR LR
comp=Z,6µm,19.0s,MS5.8
ROSC El Rosal 64.57 115 *e*P **P 12 48 14.2 +2.0**
ROSC El Rosal 64.57 115 P **P 12 48 12.6 +0.4**
comp=Z,4.9nm,0.4s,mb5.1,baz=82,slow=17,SNR=11
ROSC LR LR 13 20 43.1
comp=Z,1µm,18.0s,MS5.2,baz=354,slow=40
NOA NORSAR Array B 64.79 20 P **P 12 48 13.4 +0.5**
comp=Z,8.8nm,0.9s,mb5.0,baz=339,slow=6.3,SNR=11
NOA LR LR 13 17 50.8
comp=Z,4µm,18.0s,MS5.6,baz=330,slow=37
NAO01 NORSAR Array S 64.89 20 PFAKE 12 48 20.0 +6.3
NAO01 LR LR
comp=Z,4µm,20.0s,MS5.6
PGBU Glenifferbraes 64.99 31 AMS AMS 13 15 43.1
comp=Z,5µm,17.9s,MS5.7
FDF Fort de France 65.05 97 *e*P **P 12 48 14.8 -0.5**
FDF LR LR
comp=Z,9µm,21.0s,MS6.0
EDI Edinburgh 65.32 30 AMS AMS 13 16 35.0
comp=Z,4µm,16.6s,MS5.7
ESY Stoneypath 65.50 30 *e*P **P 12 48 14.3 -3.4**
KONO Kongsberg 65.67 21 *e*P **P 12 48 17.9 -0.8**
KONO *e*S S 12 57 07.5 +2.4
KONO AMS AMS 13 16 35.3
comp=Z,3µm,22.8s,MS5.4
KONO Kongsberg 65.67 21⇑ *i*P **P 12 48 20.7 +2.0**
KONO MLR MLR
comp=Z,4µm,21.0s,MS5.5
GAL1 Galloway 65.68 31 AMB AMB 12 48 20.4
comp=Z,60nm,2.5s,mb5.4
GAL1 AMS AMS 13 15 07.9
comp=Z,5µm,17.2s,MS5.8
GAL1 Galloway 65.68 31 AMB AMB 12 48 20.4
comp=Z,60nm,2.5s,mb5.4
GAL1 AMS AMS 13 15 07.9
comp=Z,5µm,17.2s
JHJ Hachijo jima 2 65.75 293 LR LR 13 11 09.1
comp=Z,961nm,21.5s,MS5.0,baz=97,slow=31
ESK Eskdalemuir 65.81 30 AMB AMB 12 48 28.3
comp=Z,56nm,5.2s
ESK AMS AMS 13 16 09.1
comp=Z,5µm,17.3s,MS5.8
ESK Eskdalemuir 65.81 30 PFAKE 12 48 30.0 +10
ESK LR LR
comp=Z,5µm,19.0s,MS5.8
ESK Eskdalemuir 65.81 30 AMB AMB 12 48 28.3
comp=Z,56nm,5.2s
ESK AMS AMS 13 16 09.1
comp=Z,5µm,17.3s
CN2 Changchun 65.92 310 *e*P **P 12 48 20.5 -0.1**
CN2 *e*S S 12 57 07.8 -0.8
CN2 pmax pmax
comp=Z,20nm,0.7s,mb5.5
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1µm,24.0s,MS5.4
CN2 LR LR
comp=E,3µm,24.0s,MS5.4
OTAV Otavalo 66.02 121 *e*P **P 12 48 22.8 +1.3**
comp=E,23nm,1.1s,mb5.3
OTAV LR LR
comp=Z,2µm,22.0s,MS5.2
HFS Hagfors 66.14 19 LR LR 13 17 42.6
comp=Z,6µm,19.8s,MS5.8,baz=334,slow=36
JOF Joensuu 66.28 9 *e*P **P 12 48 20.4 -2.2**
JOF pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
JOF Joensuu 66.28 9 *e*p **P 12 48 20.4 -2.2**
comp=Z,7.2nm,0.9s,mb4.9
KAF Kangasniemi 66.46 12 *e*P **P 12 48 26.9 +3.1**
KAF pmax pmax
comp=Z,5.0nm,0.8s,mb4.8
KAF Kangasniemi 66.46 12 *e*p **P 12 48 26.9 +3.1**
comp=Z,5.3nm,0.8s,mb4.8
GRGR Grenville 66.68 99 PFAKE 12 48 40.0 +14
GRGR LR LR
comp=Z,5µm,22.0s,MS5.7
FINES FINESS Array B 67.07 12 P **P 12 48 26.8 -0.9**
comp=Z,9.4nm,0.9s,mb5.0,baz=347,slow=7.8,SNR=12
FINES LR LR 13 18 52.3
comp=Z,7µm,18.6s,MS5.9,baz=345,slow=37
WLF1 Llynfaes 67.08 32 AMS AMS 13 15 05.5
comp=Z,22µm,17.3s,MS6.4
BBGH Gun Hill 67.26 97 PFAKE 12 48 40.0 +10
BBGH LR LR
comp=Z,9µm,21.0s,MS6.0
HPK Haverah Park 67.45 30 AMS AMS 13 18 13.6
comp=Z,4µm,16.9s,MS5.7
STNC Stoke 67.99 31 AMS AMS 13 16 16.9
comp=Z,5µm,19.3s,MS5.8
IRK Irkutsk 68.25 328 *e*P **P 12 48 34.3 -0.9**
IRK pmax pmax
comp=Z,125nm,2.1s,mb5.8
SNY Shenyang 68.30 310⇑ P **P 12 48 35.0 -0.8**
SNY S S 12 57 39.0 +1.5
SNY pmax pmax
comp=Z,19nm,1.2s,mb5.2
SNY pmax pmax
comp=Z,520nm,3.9s
SNY LR LR
comp=E,4µm,16.2s
SNY LR LR
comp=Z,3µm,19.6s,MS5.5
MUD Monsted U'grnd 68.41 23 *e*P **P 12 48 40.6 +4.4**
MUD MLR MLR
comp=Z,6µm,17.0s,MS5.9
MUD Monsted U'grnd 68.41 23 *i* P **P 12 48 40.6 +4.4**
MUD
comp=Z,5µm,17.0s
HTR Trewern Hill 68.47 32 *e*P **P 12 48 36.5 -0.1**
CWF Charnwood Fore 68.58 31 AMS AMS 13 17 40.4
comp=Z,5µm,16.2s,MS5.9
CBIJ Chichi jima 68.59 287 LR LR 13 11 40.8
comp=Z,2µm,20.4s,MS5.4,baz=43,slow=30
MCH1 Michaelchurch 68.63 32 *e*P **P 12 48 36.9 -0.8**
MCH1 AMB AMB 12 48 47.0
comp=Z,47nm,2.7s,mb5.2
MCH1 AMS AMS 13 16 00.7
comp=Z,7µm,18.3s,MS5.9
TLY Talaya 68.93 328 *e*P **P 12 48 39.2 -0.3**
TLY LR LR
comp=Z,5µm,20.0s,MS5.7
TLY Talaya 68.93 328*d i*P **P 12 48 39.1 -0.4**
TLY *e*S S 12 57 48.5 +3.9
TLY *e*PS 12 58 10.1
TLY *e* 12 58 35.0

TLY eSS SS 13 02 07.2 -1.5
TLY pmax pmax
comp=Z,68nm,2.2s,mb5.5
TLY MLR MLR
comp=Z,4μm,19.0s,MS5.7
TLY Talaya 68.93 328 P **P** **12 48 39.4 -0.1**
comp=Z,99nm,1.4s,mb5.8,SNR=19
TLY Talaya 68.93 328 P **P** **12 48 39.5 0.0**
SNR=28
HTL Hartland 68.95 34 AMS AMS 13 17 15.8
comp=Z,5μm,16.6s,MS5.8
HGH Gray Hill 69.00 32 eP **P** **12 48 36.8 -3.2**
KLMR Klimovskoe 69.01 6 eP **P** **12 48 38.8 -1.1**
KLMR eS S 12 57 45.4 +0.2
KLMR eSS SS 13 02 13.6 +4.1
KLMR pmax pmax
comp=Z,224nm,1.5s,mb6.2
KLMR pmax pmax
comp=Z,258nm,6.1s
KSRS Korea Array 69.32 304 P **P** **12 48 41.2 -1.0**
comp=Z,2.8nm,0.8s,mb4.5,baz=58,slow=6.3,SNR=9.3
KSRS LR LR 13 17 21.0
comp=Z,991nm,19.0s,MS5.1,baz=44,slow=34
CCA1 Carnmenellis 69.34 35 AMS AMS 13 16 24.6
comp=Z,4μm,15.7s,MS5.8
SWN1 Swindon 69.45 32 AMS AMS 13 16 38.1
comp=Z,7μm,18.7s,MS5.9
DYA Yadsworthy 69.61 34 AMS AMS 13 19 35.4
comp=Z,5μm,15.7s,MS5.9
PPT Papeete 69.68 200 eS S 12 57 55.8 +1.8
comp=Z,7μm,27.0s
PPT eSS SS 13 02 19.8 -2.7
comp=Z,1μm,25.8s
PPT eLQ 13 06 16.7
comp=Z,8μm,27.5s
PPT eLR LR 13 09 34.8
comp=Z,8μm,28.8s,baz=12
PPT Papeete 69.68 200 LR LR 13 11 03.6
comp=Z,2μm,20.4s,MS5.4,baz=13,slow=29
WOL Wolverton 69.81 32 AMB AMB 12 48 36.8
comp=Z,70nm,2.0s,mb5.4
WOL AMS AMS 13 16 51.2
comp=Z,7μm,18.0s,MS5.9
WOL Wolverton 69.81 32 AMB AMB 12 48 36.8
comp=Z,70nm,2.0s,mb5.4
WOL AMS AMS 13 16 51.2
comp=Z,7μm,18.0s
MOY Mondy 69.83 329 eP **P** **12 48 46.3 +1.2**
MOY pmax pmax
comp=Z,179nm,2.6s,mb5.7
COP Copenhagen 69.91 22 *i* P **P** **12 48 47.1 +1.6**
COP Copenhagen 69.91 22 *i* P **P** **12 48 47.1 +1.6**
COP Copenhagen 69.91 22 *i* P **P** **12 48 50.2 +4.7**
COP
comp=Z,2μm,17.0s
CMLA Cha da Macela 69.97 55 eS S 12 57 45.1 -12
CMLA eSS SS 13 02 19.7 -5.7
CMLA eLQ 13 05 49.1
CMLA eLR LR 13 11 10.6
CMLA Cha da Macela 69.97 55 PFAKE 12 49 00.0 +14
CMLA LR LR
comp=Z,5μm,20.0s,MS5.7
INCN Inchon 69.98 305 PFAKE 12 49 00.0 +14
INCN LR LR
comp=Z,2μm,20.0s,MS5.3
ZAK Zakamensk 70.14 327 eP **P** **12 48 46.3 -0.7**
ZAK pmax pmax
comp=Z,5.0nm,1.9s,mb4.3
SOKR Solikamsk 70.52 357 *c i* P **P** **12 48 49.7 +0.5**
SOKR S S 12 58 05.8 +2.8
SOKR pmax pmax
comp=Z,140nm,1.9s,mb5.8
SOKR MLR MLR
comp=Z,3μm,20.0s,MS5.6
ULN Ulaanbaatar 70.85 323 eP **P** **12 48 51.1 -0.3**
comp=Z,60nm,1.9s,mb5.4
ULN LR LR
comp=Z,7μm,20.0s,MS5.9
ULN Ulaanbaatar 70.85 323 *i* P **P** **12 48 50.8 -0.6**
ULN Ulaanbaatar 70.85 323 P **P** **12 48 51.0 -0.4**
SNR=14
WIT Witteveen 70.97 26 eP **P** **12 48 51.6 -0.4**
comp=Z,291nm,2.1s,mb6.0
BSD Bornholm Skovb 71.01 21 *i* P **P** **12 48 54.2 +2.0**
BSD MLR MLR
comp=Z,5μm,18.0s,MS5.8
BSD Bornholm Skovb 71.01 21 *i* P **P** **12 48 54.2 +2.0**
BSD
comp=Z,5μm,18.0s
SONM Songino Array 71.13 324 P **P** **12 48 52.8 -0.2**
comp=Z,2.5nm,0.8s,mb4.4,baz=76,slow=6.3,SNR=12
SONM LR LR 13 20 55.8
comp=Z,5μm,19.7s,MS5.8,baz=27,slow=37
JSA Saint Aubin 71.28 33 AMS AMS 13 17 30.8
comp=Z,4μm,18.8s,MS5.8
DL2 Dalian 71.49 309 P **P** **12 48 55.5 +0.1**
DL2 S S 12 58 15.0 +0.1
DL2 pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
DL2 pmax pmax
comp=Z,250nm,5.3s
DL2 LR LR
comp=N,910nm,22.8s,MS5.2
DL2 LR LR
comp=E,1μm,24.6s,MS5.2
DL2 LR LR
comp=Z,2μm,23.1s,MS5.2
MENF Mencas 71.57 30 eP **P** **12 48 56.6 +0.9**
ROSF Rostrenen 71.60 34 eP **P** **12 48 55.6 -0.3**
comp=Z,34nm,1.0s,mb5.1
ROSF Rostrenen 71.60 34 eP **P** **12 48 55.6 -0.3**
comp=Z,17nm,1.0s,mb5.1
ROSF Rostrenen 71.60 34 eP **P** **12 48 55.6 -0.3**
ROSF pmax pmax
comp=Z,17nm,1.0s,mb5.1
WTSB Winterswijk 71.76 27 eP **P** **12 48 56.9 +0.1**
comp=Z,57nm,2.3s,mb5.3
NVS Novosibirsk 71.83 341 eS S 12 58 20.8 +2.5
NVS pmax pmax
comp=Z,132nm,1.9s,mb5.7
NVS pmax pmax
comp=N,32nm,1.8s
NVS pmax pmax
comp=E,35nm,1.8s
NVS smax
comp=N,108nm,4.2s
NVS smax
comp=E,47nm,2.9s
SGMF Saint Gilles 71.92 34 eP **P** **12 48 57.6 -0.3**
comp=E,142nm,1.6s,mb5.5
SGMF Saint Gilles 71.92 34 eP **P** **12 48 57.6 -0.3**
comp=E,71nm,1.6s,mb5.5
SGMF Saint Gilles 71.92 34 eP **P** **12 48 57.6 -0.3**
SGMF pmax pmax
comp=Z,71nm,1.6s,mb5.5
QUIF Quistinic 71.99 35 eP **P** **12 48 58.0 -0.3**
comp=Z,94nm,1.6s,mb5.4
QUIF Quistinic 71.99 35 eP **P** **12 48 58.0 -0.3**
comp=Z,47nm,1.6s,mb5.4
QUIF Quistinic 71.99 35 eP **P** **12 48 58.0 -0.3**
QUIF pmax pmax
comp=Z,47nm,1.6s,mb5.4
FLN La Foliniere 72.23 33 eP **P** **12 48 59.6 -0.1**
comp=Z,69nm,1.3s,mb5.3
FLN eMLR MLR
comp=Z,7μm,22.2s,MS5.6
FLN La Foliniere 72.23 33 eP **P** **12 48 59.6 -0.1**
comp=Z,34nm,1.3s,mb5.3
FLN LR LR
comp=Z,7μm,22.3s,MS5.9
FLN La Foliniere 72.23 33 eP **P** **12 48 59.6 -0.1**
FLN pmax pmax
comp=Z,35nm,1.3s,mb5.3
FLN MLR MLR
comp=Z,7μm,22.3s,MS5.9
SNF Seneffe 72.29 29 P **P** **12 49 00.7 +0.7**
comp=Z,28nm,2.5s,mb4.9
ZAA0 Zalesovo Array 72.31 339 eP **P** **12 48 59.6 -0.5**
ZALV Zalesovo Beam 72.31 339 P **P** **12 48 58.6 -1.5**
comp=Z,6.0nm,0.7s,mb4.8,baz=19,slow=5.3,SNR=27
ZALV LR LR 13 22 40.2
comp=Z,4μm,21.3s,MS5.6,baz=19,slow=37
GRR Gorron 72.42 33 eP **P** **12 49 01.0 +0.2**
comp=Z,199nm,1.6s,mb5.7
GRR Gorron 72.42 33 eP **P** **12 49 01.0 +0.2**
comp=Z,100nm,1.6s,mb5.7
GRR Gorron 72.42 33 eP **P** **12 49 01.0 +0.2**
pmax pmax
comp=Z,100nm,1.6s,mb5.7
BEBN Eben Emael 72.46 28 P **P** **12 49 02.5 +1.5**
LDF La Druitiere 72.50 32 eP **P** **12 49 00.9 -0.4**
comp=Z,14nm,0.8s,mb4.8
LDF La Druitiere 72.50 32 eP **P** **12 49 00.9 -0.4**
comp=Z,6.9nm,0.8s,mb4.8
LDF La Druitiere 72.50 32 eP **P** **12 49 00.9 -0.4**
LDF pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
HGN Heimansgroeve 72.57 28 eP **P** **12 49 01.6 -0.1**
comp=Z,61nm,2.2s,mb5.3
HGN Heimansgroeve 72.57 28 eS S 12 58 30.5 +3.6
IZAR Zarasai 72.58 14 eP **P** **12 49 02.1 +0.4**
IZAR AMB AMB 12 49 04.4
comp=Z,17nm,2.2s,mb4.8
IZAR eS S 12 57 53.6 -33
BAIF Baives 72.66 29 eP **P** **12 49 02.4 +0.2**
comp=Z,37nm,0.9s,mb5.2
BAIF Baives 72.66 29 eP **P** **12 49 02.4 +0.2**
comp=Z,18nm,0.9s,mb5.2
BAIF Baives 72.66 29 eP **P** **12 49 02.4 +0.2**
BAIF pmax pmax
comp=Z,18nm,0.9s,mb5.2
BCLA Clavier 72.68 28 P **P** **12 49 02.8 +0.4**
comp=Z,30nm,2.4s,mb5.0
MEM Membach 72.72 28 P **P** **12 49 04.8 +2.2**
comp=Z,33nm,2.2s,mb5.1
ISAL Salakas 72.73 14 eP **P** **12 49 03.0 +0.5**
ISAL eS S 12 57 56.1 -33
DOU Dourbes 72.75 29 P **P** **12 49 02.6 -0.1**
comp=Z,28nm,2.6s,mb4.9
GIVF Givet 72.81 29 eP **P** **12 49 03.2 +0.1**
comp=Z,200nm,1.7s,mb5.7
GIVF Givet 72.81 29 eP **P** **12 49 03.2 +0.1**
comp=Z,100nm,1.7s,mb5.7
GIVF Givet 72.81 29 eP **P** **12 49 03.2 +0.1**
GIVF pmax pmax
comp=Z,100nm,1.7s,mb5.7
IIGN Ignalina 72.96 14 eP **P** **12 49 04.3 +0.4**
IIGN AMB AMB 12 49 06.6
comp=Z,18nm,2.1s,mb4.8
IIGN eS S 12 57 57.4 -34
SVE Sverdlovsk 73.06 354↓ eP **P** **12 49 05.0 +0.5**
SVE eS S 12 58 34.9 +2.6
SVE *e* 12 59 12.4
SVE eSSS 13 06 31.7
SVE pmax pmax
comp=Z,89nm,1.7s,mb5.6
SVE MLR MLR
comp=Z,3μm,20.0s,MS5.5
RKT Rikitea 73.09 185 eS S 12 58 32.5 -0.7
comp=Z,827nm,29.0s
RKT eSS SS 13 03 04.1 -11
comp=Z,954nm,34.8s
RKT eLQ 13 08 25.2
comp=Z,2μm,30.2s
RKT eLR LR 13 11 31.5
comp=Z,13μm,27.5s,baz=4.9
BJI Beijing 73.26 313 P **P** **12 49 04.8 -1.2**
BJI PP PP 12 51 45.0 -3.4
BJI S S 12 58 34.3 -0.8
BJI pmax pmax
comp=Z,8.0nm,1.8s,mb4.5
BJI pmax pmax
comp=Z,350nm,4.8s
BJI LR LR
comp=N,3μm,18.8s,MS5.7
BJI LR LR
comp=E,2μm,15.1s,MS5.7
BJI LR LR
comp=Z,2μm,19.5s,MS5.5
BJT Baijiatuau 73.28 313 eP **P** **12 49 05.9 -0.2**
BJT LR LR
comp=Z,3μm,20.0s,MS5.6
NACGM Naroch 73.48 14 eP **P** **12 49 03.0 -4.0**
ARU Arti 73.58 355 eP **P** **12 49 06.0 -1.5**
comp=Z,41nm,0.9s,mb5.5
ARU LR LR
comp=Z,4μm,21.0s,MS5.6
ARU Arti 73.58 355 *c i* P **P** **12 49 06.0 -1.5**
ARU 12 49 23.4
ARU *e* 12 51 50.9
ARU ePPP 12 53 34.9
ARU S S 12 58 36.8 -1.4
ARU 12 59 15.5
ARU SS SS 13 03 19.2 -0.3
ARU SSS 13 06 35.4
ARU pmax pmax
comp=Z,85nm,1.7s,mb5.5
ARU MLR MLR
comp=Z,4μm,20.0s,MS5.6
ARU Arti 73.58 355 P **P** **12 49 06.5 -1.0**
comp=Z,220nm,1.6s,mb5.9,SNR=13
WLF Walferdange 73.60 28 P **P** **12 49 08.5 +0.7**
comp=Z,30nm,2.2s,mb4.9
WLF Walferdange 73.60 28 PFAKE 12 49 20.0 +12
WLF LR LR
comp=Z,7μm,20.0s,MS5.9
SUW Suwalki 73.73 16 eP **P** **12 49 10.2 +1.7**
SUW LMZ 13 16 44.4
comp=Z,3μm,28.5s
EMAZ Mazaricos 73.81 41 P **P** **12 49 08.6 -0.6**
comp=Z,1.9nm,0.5s,mb4.4
RUP Ruppelstein 73.84 28 eP **P** **12 49 10.7 +1.5**
MOS Moscow 73.95 7 eP **P** **12 49 07.6 -2.2**
MOS Moscow 73.95 7 eP **P** **12 49 07.7 -2.1**
MOS *e* 12 49 21.4
MOS eS S 12 58 38.5 -4.0
MOS pmax pmax
comp=Z,138nm,1.4s,mb5.8
MOS pmax pmax
comp=Z,600nm,2.5s,mb6.2
MOS smax
comp=E,1μm,5.3s
MOS smax
comp=N,2μm,6.1s
MOS MLR MLR
comp=Z,6μm,16.0s,MS6.0
MOS MLR MLR
comp=N,5μm,19.0s
MNK Minsk 74.03 13 eP **P** **12 49 20.0 +10**
MNK MLR MLR
comp=Z,26μm,16.0s,MS6.6
MICGM Minsk 74.03 13 eP **P** **12 49 20.0 +10**
CLL Collm 74.04 23 eP **P** **12 49 11.0 +0.6**
comp=Z,82nm,2.0s,mb5.4
CLL *i* 12 49 17.5
CLL eS S 12 58 49.0 +5.4
CLL Collm 74.04 23 eP **P** **12 49 11.0 +0.6**
CLL *i* 12 49 17.5
CLL eS S 12 58 49.0 +5.4
CLL pmax pmax
comp=Z,82nm,2.0s,mb5.4
CLL Collm 74.04 23 eP **P** **12 49 11.0 +0.6**
comp=Z,82nm,2.0s,mb5.4
CLL *i* (sP) sP 12 49 17.5 +7.0
comp=Z,111nm,2.3s
CLL *e* 12 49 28.0
CLL ePP PP 12 51 58.0 +3.3
CLL ePPP 12 53 38.0
CLL eS S 12 58 49.0 +5.4
comp=N,1μm,17.8s
CLL eS S 12 58 49.0 +5.4
comp=E,1μm,24.1s
CLL ePPS 12 59 31.0
CLL eSS SS 13 03 29.0 +2.1
CLL e(SSS) 13 07 18.0
CLL eSSSS 13 08 30.0
CLL LV 13 20 00.0
comp=Z,4μm,20.6s
CLL LmH 13 25 00.0
comp=N,4μm,18.1s
CLL LmH 13 25 00.0
comp=E,2μm,20.4s
MFF Saint Martin d 74.19 34 eP **P** **12 49 11.5 +0.2**
comp=E,156nm,1.7s,mb5.5
MFF Saint Martin d 74.19 34 eP **P** **12 49 11.5 +0.2**
comp=E,78nm,1.7s,mb5.5
MFF Saint Martin d 74.19 34 eP **P** **12 49 11.5 +0.2**
MFF pmax pmax
comp=Z,78nm,1.7s,mb5.5
MOX Moxa 74.28 24 eP **P** **12 49 13.6 +1.8**
comp=Z,20nm,1.2s,mb5.0
MOX eS S 12 58 56.0 +10
MOX
comp=Z,4μm,17.0s
MOX Moxa 74.28 24 eP **P** **12 49 13.6 +1.8**
MOX pmax pmax
comp=Z,20nm,1.2s,mb5.0
MOX MLR MLR
comp=Z,4μm,17.0s,MS5.8
MEZF Maizieres J'vi 74.29 29 eP **P** **12 49 12.1 +0.2**
TOD Tromm 74.44 27 eP **P** **12 49 13.7 +1.0**
OBN Obninsk 74.48 8 eP **P** **12 49 13.0 +0.2**
comp=Z,219nm,1.5s,mb6.0
OBN LR LR
comp=Z,6μm,21.0s,MS5.8
OBN Obninsk 74.48 8↑ eP **P** **12 49 12.2 -0.6**
OBN *e* 12 49 24.6
OBN *e* 12 52 02.7
OBN eS S 12 58 53.3 +4.9
OBN eSS SS 13 03 32.7 -0.6
OBN pmax pmax
comp=Z,137nm,1.7s,mb5.7
OBN MLR MLR
comp=Z,6μm,21.0s,MS5.9
OBN Obninsk 74.48 8 P **P** **12 49 14.3 +1.5**
comp=Z,389nm,1.4s,mb6.2,SNR=10
SFTF Sexfontaines 74.55 30 eP **P** **12 49 13.3 -0.1**
BRG Berggiesshubel 74.68 23 eP **P** **12 49 14.3 +0.2**
comp=Z,80nm,1.9s,mb5.4
BRG S S 12 58 55.0 +4.2
BRG SP 12 59 29.0
BRG SS SS 13 03 30.0 -6.5
BRG
comp=N,2μm,16.7s
BRG
comp=E,3μm,15.0s
BRG
comp=Z,5μm,15.4s
LANF Langenberg 74.71 28 eP **P** **12 49 15.5 +1.2**
HHC Hu-ho-hao-te 74.72 316 eP **P** **12 49 14.5 0.0**
HHC pP 12 49 18.5
HHC sP sP 12 49 21.3 +6.7
HHC PP PP 12 52 02.8 +2.0
HHC S S 12 58 47.8 -3.8
HHC sS sS 12 58 54.5 +2.8
HHC pmax pmax
comp=Z,15nm,1.3s,mb4.9
HHC pmax pmax
comp=Z,440nm,4.6s
HHC LR LR
comp=N,4μm,16.6s,MS6.1
HHC LR LR
comp=E,6μm,16.1s,MS6.1
HHC LR LR
comp=Z,4μm,15.3s,MS5.8
THEF They Montfort 74.83 29 eP **P** **12 49 16.1 +1.1**
NKC Novy Kostel 74.88 24 eP **P** **12 49 17.0 +1.7**
NKC *e* 12 52 10.2
NKC eS S 12 58 58.8 +5.8
NKC MLR MLR
comp=Z,4μm,16.9s,MS5.8
NKC Novy Kostel 74.88 24 eP **P** **12 49 17.0 +1.7**
NKC ePP PP 12 52 10.2 +8.3
NKC eS S 12 58 58.8 +5.8
NKC AMS AMS 13 23 10.0
comp=Z,4μm,16.9s
LOR Lormes 74.99 31 eP **P** **12 49 15.9 0.0**
comp=Z,185nm,1.7s,mb5.5
LOR eMLR MLR
comp=Z,7μm,20.2s,MS5.6
LOR Lormes 74.99 31 eP **P** **12 49 15.9 0.0**
comp=Z,93nm,1.7s,mb5.5
LOR LR LR
comp=Z,7μm,20.3s,MS5.9
LOR Lormes 74.99 31 eP **P** **12 49 15.9 0.0**
LOR pmax pmax
comp=Z,93nm,1.7s,mb5.5
LOR MLR MLR
comp=Z,7μm,20.3s,MS5.9
ERUA La Rua 75.03 40 P **P** **12 49 16.3 0.0**
comp=Z,72nm,2.1s,mb5.3
ERUA La Rua 75.03 40 P **P** **12 49 16.3 0.0**
ERUA pmax pmax
comp=Z,72nm,2.1s,mb5.3
SSF Saint Saulge 75.05 31 eP **P** **12 49 16.3 0.0**
comp=Z,90nm,1.5s,mb5.3
SSF Saint Saulge 75.05 31 eP **P** **12 49 16.3 0.0**
comp=Z,45nm,1.5s,mb5.3
SSF Saint Saulge 75.05 31 eP **P** **12 49 16.3 0.0**
SSF pmax pmax
comp=Z,45nm,1.5s,mb5.3
CDF Champ du Feu 75.06 28 eP **P** **12 49 16.4 +0.1**
comp=Z,186nm,1.8s,mb5.5
CDF Champ du Feu 75.06 28 eP **P** **12 49 16.4 +0.1**
comp=Z,93nm,1.8s,mb5.5
CDF Champ du Feu 75.06 28 eP **P** **12 49 16.4 +0.1**
CDF pmax pmax
comp=Z,93nm,1.8s,mb5.5
HAU Haudompre 75.13 29 eP **P** **12 49 16.7 -0.1**
HAU eMLR MLR
comp=Z,5μm,21.8s,MS5.5
HAU Haudompre 75.13 29 eP **P** **12 49 16.7 -0.1**
HAU MLR MLR
comp=Z,5μm,21.8s,MS5.8
PVCC Panska Ves 75.15 23 eP **P** **12 49 18.7 +1.9**
PVCC eS S 12 59 02.8 +6.7
PVCC MLR MLR
comp=Z,5μm,18.0s,MS5.8
PVCC Panska Ves 75.15 23 eP **P** **12 49 18.7 +1.9**
PVCC ex x 12 52 23.7
PVCC eS S 12 59 02.8 +6.7
PVCC AMS AMS 13 22 00.0
comp=Z,5μm,18.0s
ECH Echery 75.20 28 eP **P** **12 49 18.0 +0.9**
ECH Echery 75.20 28 eP **P** **12 49 17.2 +0.1**
comp=Z,20nm,1.3s,mb5.0
ECH LR LR
comp=Z,5μm,21.0s,MS5.8
ECH Echery 75.20 28 eP **P** **12 49 17.3 +0.2**
ECH pmax pmax
comp=Z,20nm,1.3s,mb5.0
ECH MLR MLR
comp=Z,5μm,21.0s,MS5.8
AVF Avril sur Loir 75.24 31 eP **P** **12 49 17.0 -0.4**
comp=Z,88nm,1.5s,mb5.3
AVF Avril sur Loir 75.24 31 eP **P** **12 49 17.0 -0.4**
comp=Z,44nm,1.5s,mb5.3
AVF Avril sur Loir 75.24 31 eP **P** **12 49 17.0 -0.4**
AVF pmax pmax
comp=Z,44nm,1.5s,mb5.3
BGF Bois d'Agland 75.27 32 eP **P** **12 49 17.4 -0.2**
comp=Z,132nm,1.7s,mb5.4
BGF Bois d'Agland 75.27 32 eP **P** **12 49 17.4 -0.2**
comp=Z,66nm,1.7s,mb5.4
BGF Bois d'Agland 75.27 32 eP **P** **12 49 17.4 -0.2**
BGF pmax pmax
comp=Z,66nm,1.7s,mb5.4
KSP Ksiaz 75.28 22 eP **P** **12 49 18.9 +1.3**
KSP eS S 12 59 04.7 +7.3
KSP LMZ 13 18 58.9
comp=Z,6μm,26.1s
BFO Black Forest 75.45 27 P **P** **12 49 19.4 +0.8**
comp=Z,108nm,1.0s,mb5.8,SNR=7.0
BFO Black Forest 75.45 27 eP **P** **12 49 19.4 +0.8**
comp=Z,53nm,1.4s,mb5.4
BFO LR LR
comp=Z,6μm,22.0s,MS5.8
BFO Black Forest 75.45 27 eP **P** **12 49 19.4 +0.8**
BFO pmax pmax
comp=Z,53nm,1.4s,mb5.4
BFO MLR MLR
comp=Z,6μm,22.0s,MS5.8
HINF Hinteralfeld 75.46 29 eP **P** **12 49 18.4 -0.2**
comp=Z,48nm,1.2s,mb5.1
HINF Hinteralfeld 75.46 29 eP **P** **12 49 18.4 -0.2**
comp=Z,24nm,1.2s,mb5.1
HINF Hinteralfeld 75.46 29 eP **P** **12 49 18.4 -0.2**
HINF pmax pmax
comp=Z,24nm,1.2s,mb5.1
MOF Molkenrain 75.51 28 eP **P** **12 49 19.8 +0.8**
UPC Upice 75.52 22 eP **P** **12 49 20.4 +1.4**
UPC Upice 75.52 22 eP **P** **12 49 20.4 +1.4**
SMF Signal de Mont 75.53 31 eP **P** **12 49 18.7 -0.4**
comp=Z,56nm,1.4s,mb5.2
SMF Signal de Mont 75.53 31 eP **P** **12 49 18.7 -0.4**
comp=Z,28nm,1.4s,mb5.2
SMF Signal de Mont 75.53 31 eP **P** **12 49 18.7 -0.4**
SMF pmax pmax

comp=Z,28nm,1.4s,mb5.2
PRA Prague 75.54 23 P **P** **12 49 23.0 +3.9**
PRA PP PP 12 52 11.0 +3.6
PRA S S 12 59 09.0 +8.6
PRA SS SS 13 04 00.0 +10
PRA AMS AMS 13 25 30.0
PRU Pruhonice 75.64 23 *e*P **P** **12 49 22.1 +2.5**
PRU *e* 12 52 10.6
PRU *e*S S 12 59 08.4 +6.9
PRU *e*SS SS 13 03 59.2 +8.0
PRU MLR MLR
comp=Z,4µm,15.3s,MS5.8
PRU Pruhonice 75.64 23 *e*P **P** **12 49 22.1 +2.5**
PRU *e*PP PP 12 52 10.6 +2.3
PRU *e*S S 12 59 08.4 +6.9
PRU *e*SS SS 13 03 59.2 +8.0
PRU *ex* x 13 08 06.2
PRU AMS AMS 13 25 00.0
comp=Z,4µm,15.3s
PVRL Vila Real 75.72 41 *e*P **P** **12 49 21.1 +0.9**
comp=Z,111nm,1.7s,mb5.7
DPC Dobruska-Polom 75.74 22 *e*P **P** **12 49 22.0 +1.8**
DPC *e* 12 52 12.6
DPC *e*S S 12 59 10.0 +7.4
DPC *e*SS SS 13 03 57.2 +4.5
DPC MLR MLR
comp=Z,6µm,16.8s,MS6.0
DPC Dobruska-Polom 75.74 22 *e*P **P** **12 49 22.0 +1.8**
DPC *e*PP PP 12 52 12.6 +3.5
DPC *e*S S 12 59 10.0 +7.4
DPC *e*SS SS 13 03 57.2 +4.5
DPC *ex* x 13 08 10.7
DPC AMS AMS 13 23 50.0
comp=Z,6µm,16.8s
FELD Feldberg im Sc 75.76 28 *e*P **P** **12 49 21.1 +0.8**
SPAK Spaichingen-Ko 75.79 27 *e*P **P** **12 49 21.7 +1.2**
BRVK Borovoye 75.80 348 P **P** **12 49 20.0 -0.5**
comp=Z,131nm,1.3s,mb5.9,SNR=15
BRVK Borovoye 75.80 348 *e*P **P** **12 49 20.5 -0.1**
comp=Z,134nm,1.8s,mb5.8
BRVK LR LR
comp=Z,4µm,19.0s,MS5.8
BRVK Borovoye 75.80 348 *e*P **P** **12 49 20.5 0.0**
BRVK pmax pmax
comp=Z,134nm,1.8s,mb5.8
BRVK MLR MLR
comp=Z,4µm,19.0s,MS5.8
BRVK Borovoye 75.80 348 P **P** **12 49 20.5 -0.1**
SNR=30
AGO Saint Agoulin 75.81 32 *e*P **P** **12 49 21.7 +1.0**
BVA0 Borovoye Array 75.82 348 P **P** **12 49 20.5 -0.1**
BVA0 pmax pmax
comp=Z,28nm,2.0s,mb5.0
BVAR Borovoye Array 75.82 348 P **P** **12 49 18.9 -1.7**
comp=Z,4.0nm,0.9s,mb4.5,baz=33,slow=3.5,SNR=17
TIA Tai'an 75.82 310 P **P** **12 49 20.5 -0.4**
TIA S S 12 59 05.3 +1.3
TIA LR LR
comp=N,4µm,22.8s
TIA LR LR
comp=Z,3µm,19.6s,MS5.6
ELAN Lanestosa 75.83 37 P **P** **12 49 19.3 -1.6**
comp=Z,66nm,1.6s,mb5.5
LOMF Lomont 75.86 29 *e*P **P** **12 49 22.2 +1.2**
RJF Les Rejaudoux 75.90 33 *e*P **P** **12 49 20.8 -0.4**
comp=Z,141nm,1.5s,mb5.6
RJF *e*MLR MLR
comp=Z,9µm,20.5s,MS5.7
RJF Les Rejaudoux 75.90 33 *e*P **P** **12 49 20.8 -0.4**
comp=Z,70nm,1.5s,mb5.6
RJF LR LR
comp=Z,9µm,20.5s,MS6.0
RJF Les Rejaudoux 75.90 33 *e*P **P** **12 49 20.8 -0.4**
RJF pmax pmax
comp=Z,70nm,1.5s,mb5.6
RJF MLR MLR
comp=Z,9µm,20.5s,MS6.0
LFF La Frestale 75.94 34 *e*P **P** **12 49 21.5 0.0**
comp=Z,230nm,1.7s,mb5.7
LFF La Frestale 75.94 34 *e*P **P** **12 49 21.5 0.0**
comp=Z,115nm,1.7s,mb5.7
LFF La Frestale 75.94 34 *e*P **P** **12 49 21.5 0.0**
LFF pmax pmax
comp=Z,115nm,1.7s,mb5.7
BBS Basel-Blauen 75.97 28 *e*P **P** **12 49 22.8 +1.2**
PYM Petit Puy Mans 76.03 32 *e*P **P** **12 49 22.8 +0.8**
PLDF La Plantade 76.05 32 *e*P **P** **12 49 23.2 +1.2**
MVO Moncorvo 76.10 41 *e*P **P** **12 49 23.4 +1.0**
comp=Z,64nm,2.0s,mb5.4
MVO *e*S S 12 59 07.6 +0.7
MVO *e*LQ 13 09 11.8
MVO *e*LR LR 13 14 30.7
comp=Z,2µm,18.0s
KHC Kasperske Hory 76.18 24 *e*P **P** **12 49 23.9 +1.2**
comp=Z,79nm,1.8s,mb5.5
KHC Kasperske Hory 76.18 24 *e*P **P** **12 49 23.1 +0.3**
KHC *e* 12 52 13.1
KHC *e*S S 12 59 13.8 +6.3
KHC *e*SS SS 13 04 04.2 +4.8
KHC MLR MLR
comp=Z,4µm,14.9s,MS5.8
KHC Kasperske Hory 76.18 24 *e*P **P** **12 49 23.1 +0.3**
KHC *e*PP PP 12 52 13.1 +0.2
KHC *e*S S 12 59 13.8 +6.3
KHC *e*SS SS 13 04 04.2 +4.8
KHC *ex* x 13 08 12.1
KHC AMS AMS 13 25 20.0
comp=Z,4µm,14.9s
CABF La Chapelle 76.29 30 *e*P **P** **12 49 23.9 +0.5**
comp=Z,230nm,1.7s,mb5.7
CABF La Chapelle 76.29 30 *e*P **P** **12 49 23.9 +0.5**
comp=Z,115nm,1.7s,mb5.7
CABF La Chapelle 76.29 30 *e*P **P** **12 49 23.9 +0.5**
CABF pmax pmax
comp=Z,115nm,1.7s,mb5.7
CAF Calviac 76.42 33 *e*P **P** **12 49 24.0 -0.2**
comp=Z,184nm,1.7s,mb5.6
CAF Calviac 76.42 33 *e*P **P** **12 49 24.0 -0.2**
comp=Z,92nm,1.7s,mb5.6
CAF Calviac 76.42 33 *e*P **P** **12 49 24.0 -0.2**
CAF pmax pmax
comp=Z,92nm,1.7s,mb5.6
MTE Manteigas 76.51 42 *e*P **P** **12 49 25.5 +0.7**
comp=Z,55nm,1.7s,mb5.4
MTE *e*S S 12 59 14.7 +3.2
MTE *e*LQ 13 09 22.5
MTE *e*LR LR 13 13 10.7
comp=Z,3µm,18.0s
MTE Manteigas 76.51 42 PFAKE 12 49 30.0 +5.2
MTE LR LR
comp=Z,3µm,20.0s,MS5.5
TREC Trest 76.52 23 *e*P **P** **12 49 26.2 +1.5**
TREC *e* 12 52 26.0
TREC *e*SS SS 13 04 13.4 +8.9
TREC MLR MLR
comp=Z,5µm,15.7s,MS5.9
TREC Trest 76.52 23 *e*P **P** **12 49 26.2 +1.5**
TREC *e*PP PP 12 52 26.0 +10
TREC *e*S S 12 59 18.7 +7.5
TREC *e*SS SS 13 04 13.4 +8.9
TREC AMS AMS 13 25 20.0
comp=Z,5µm,15.7s
MORC Moravsky Berou 76.56 21 *e*P **P** **12 49 24.7 -0.2**
comp=Z,63nm,1.9s,mb5.4
MORC *e*PP PP 12 52 16.9 +0.8
MORC Moravsky Berou 76.56 21 *e*P **P** **12 49 24.7 -0.2**
MORC *e* 12 52 16.9
MORC pmax pmax
comp=Z,63nm,1.9s,mb5.4
EALK Alkurruntz 76.58 36 P **P** **12 49 25.2 +0.1**
comp=Z,97nm,1.6s,mb5.7
OKC Ostrava-Krasne 76.65 21 *e*P **P** **12 49 26.8 +1.4**
OKC *e* 12 52 24.0
OKC *e*S S 12 59 19.3 +6.7
OKC *e*SS SS 13 04 11.0 +4.6
OKC MLR MLR
comp=Z,5µm,17.1s,MS5.9
OKC Ostrava-Krasne 76.65 21 *e*P **P** **12 49 26.8 +1.4**
OKC *e*PP PP 12 52 24.0 +7.2
OKC *e*S S 12 59 19.3 +6.7
OKC *e*SS SS 13 04 11.0 +4.6
OKC *e*PKKP PKKPbc 13 08 21.7 -12
OKC AMS AMS 13 25 10.0
comp=Z,5µm,17.1s

OJC Ojcow 76.65 20 *e*P **P** **12 49 24.0 -1.4**
OJC *e*pP 12 49 24.7
OJC *e* 12 59 19.1
OJC *e*SS SS 13 04 04.4 -2.1
OJC L 13 23 52.2
comp=Z,4.8nm,20.2s
OJC Ojcow 76.65 20 *e*P **P** **12 49 24.0 -1.4**
OJC *e**PP 12 49 24.7
OJC *e* 12 59 19.1
OJC *e*SS SS 13 04 04.4 -2.1
OJC MLR MLR
comp=Z,5µm,20.2s,MS5.8
KURK Kurchatov 76.67 342 P **P** **12 49 25.8 +0.3**
comp=Z,154nm,1.4s,mb5.9,SNR=13
KURK Kurchatov 76.67 342 *e*P **P** **12 49 25.3 -0.2**
comp=Z,127nm,1.8s,mb5.8
KURK LR LR
comp=Z,3µm,20.0s,MS5.6
KURK Kurchatov 76.67 342 P **P** **12 49 24.2 -1.3**
comp=Z,3.6nm,0.7s,mb4.6,baz=19,slow=5.4,SNR=19
KURK Kurchatov 76.67 342 *c i*P **P** **12 49 25.6 +0.1**
KURK pmax pmax
comp=Z,57nm,1.7s,mb5.4
KURK MLR MLR
comp=Z,3µm,20.0s,MS5.6
KURK Kurchatov 76.67 342 P **P** **12 49 26.0 +0.5**
SNR=31
SJPF Ste Jean 76.78 36 *e*P **P** **12 49 26.1 -0.2**
comp=Z,105nm,1.8s,mb5.4
SJPF Ste Jean 76.78 36 *e*P **P** **12 49 26.1 -0.2**
comp=Z,53nm,1.8s,mb5.4
SJPF Ste Jean 76.78 36 *e*P **P** **12 49 26.1 -0.2**
SJPF pmax pmax
comp=Z,53nm,1.8s,mb5.4
GUMO Guam 76.83 275 PFAKE 12 49 40.0 +13
GUMO LR LR
comp=Z,2µm,20.0s,MS5.4
GUMO Guam 76.83 275 LR LR 13 15 50.6
comp=Z,2µm,20.7s,MS5.4,baz=45,slow=30
DAVA Damuels 76.84 27⇑ *i*pP pP 12 49 27.3 +0.7
comp=Z,45nm,1.7s
TIY Taiyuan 76.86 314 *e*P **P** **12 49 24.3 -2.5**
TIY PP PP 12 52 16.0 -3.0
TIY S S 12 59 04.3 -11
TIY pmax pmax
comp=Z,370nm,4.7s
TIY LR LR
comp=N,3µm,12.2s,MS5.9
TIY LR LR
comp=E,2µm,12.0s,MS5.9
TIY LR LR
comp=Z,3µm,17.1s
RETA Reutte 76.92 26⇑ *i*pP pP 12 49 27.9 +0.8
comp=Z,21nm,1.9s
PMAFR Mafra 76.94 44 *e*S S 12 59 17.5 +1.3
PMAFR *e*LQ 13 08 47.9
PMAFR *e*LR LR 13 13 59.2
comp=Z,4µm,18.0s
SSB Saint Sauveur 76.96 31 *e*P **P** **12 49 28.3 +1.1**
comp=Z,49nm,1.8s,mb5.3
SSB LR LR
comp=Z,4µm,20.0s,MS5.7
SSB Saint Sauveur 76.96 31 *e*P **P** **12 49 28.3 +1.1**
SSB pmax pmax
comp=Z,49nm,1.8s,mb5.3
SSB MLR MLR
comp=Z,4µm,20.0s,MS5.7
PCBR Castelo Branco 77.00 42 *e*P **P** **12 49 28.5 +0.9**
comp=Z,40nm,1.3s,mb5.4
NNA Nana 77.13 127 PFAKE 12 49 40.0 +12
NNA LR LR
comp=Z,2µm,21.0s,MS5.4
LIS Lisbon 77.20 44 *e*P **P** **12 49 28.9 +0.1**
LIS *e*S S 12 59 18.2 -0.8
LIS *e*S S 12 59 18.4 -0.6
LIS AMS AMS 13 21 35.3
comp=Z,4µm,15.6s,MS5.9
LIS Lisbon 77.20 44 *e*P **P** **12 49 28.9 +0.2**
LIS *e*S S 12 59 18.2 -0.8
LIS A 13 21 35.3
comp=Z,4µm,15.6s
LIS Lisbon 77.20 44 *e*P **P** **12 49 28.8 +0.1**
LIS *e*S S 12 59 18.1 -0.9
ETSF Etsaut 77.22 36 *e*P **P** **12 49 29.3 +0.6**
comp=Z,22nm,0.8s,mb5.0
ETSF Etsaut 77.22 36 *e*P **P** **12 49 29.3 +0.6**
comp=Z,11nm,0.8s,mb5.0
ETSF Etsaut 77.22 36 *e*P **P** **12 49 29.3 +0.6**
ETSF pmax pmax
comp=Z,11nm,0.8s,mb5.0
FETA Feichten 77.33 27⇑ *i*pP pP 12 49 30.3 +1.0
comp=Z,42nm,2.2s,SNR=9.6
WTTA Wattenberg 77.37 26⇑ *i*pP pP 12 49 30.3 +0.7
comp=Z,36nm,1.4s,SNR=6.1
VIVF Saint-Julien-l 77.38 31 *e*P **P** **12 49 29.7 +0.1**
comp=Z,94nm,1.6s,mb5.4
VIVF Saint-Julien-l 77.38 31 *e*P **P** **12 49 29.7 +0.1**
comp=Z,47nm,1.6s,mb5.4
VIVF Saint-Julien-l 77.38 31 *e*P **P** **12 49 29.7 +0.1**
VIVF pmax pmax
comp=Z,47nm,1.6s,mb5.4
PMRV Marv??o 77.38 42 *e*P **P** **12 49 32.2 +2.5**
comp=Z,46nm,1.7s,mb5.3
PMRV *e*S S 12 59 24.0 +3.0
PMRV *e*LQ 13 09 41.6
PMRV *e*LR LR 13 15 40.0
comp=Z,3µm,18.0s
EPLA Plasencia 77.41 41 P **P** **12 49 28.2 -1.7**
comp=Z,12nm,0.9s,mb5.0
EPLA Plasencia 77.41 41 P **P** **12 49 28.2 -1.7**
EPLA pmax pmax
comp=Z,12nm,0.9s,mb5.0
TUE Stuetta 77.42 28 *e*P **P** **12 49 31.1 +1.4**
comp=Z,46nm,1.5s,mb5.4
TUE LR LR
comp=Z,8µm,21.0s,MS6.0
EPF Esparros 77.44 35 *e*P **P** **12 49 29.6 -0.4**
LPL La Plagne 77.47 30 *e*P **P** **12 49 31.1 +1.0**
comp=Z,32nm,1.1s,mb5.1
LPL La Plagne 77.47 30 *e*P **P** **12 49 31.1 +1.0**
comp=Z,16nm,1.1s,mb5.1
LPL La Plagne 77.47 30 *e*P **P** **12 49 31.1 +1.0**
LPL pmax pmax
comp=Z,16nm,1.1s,mb5.1
LPG La Plagne 77.49 30 *e*P **P** **12 49 31.2 +1.0**
comp=Z,114nm,1.5s,mb5.5
LPG La Plagne 77.49 30 *e*P **P** **12 49 31.2 +1.0**
comp=Z,57nm,1.5s,mb5.5
LPG La Plagne 77.49 30 *e*P **P** **12 49 31.2 +1.0**
LPG pmax pmax
comp=Z,57nm,1.5s,mb5.5
NIE Niedzica 77.52 20 *e*P **P** **12 49 30.8 +0.5**
GDM Grand'Maison 77.55 30 *e*P **P** **12 49 31.9 +1.4**
EBIE Bielsa 77.66 35 P **P** **12 49 29.2 -2.0**
comp=Z,3.6nm,0.9s,mb4.5
STHS Stebnicka Huta 77.72 19 *e*P **P** **12 49 36.3 +4.9**
STHS Stebnicka Huta 77.72 19 *e*P **P** **12 49 36.3 +4.9**
ORIF Oris-en-Rattie 77.72 31 *e*P **P** **12 49 31.7 +0.2**
ORIF *e*MLR MLR
comp=Z,8µm,20.2s,MS5.7
GUD Guadarrama 77.73 39 P **P** **12 49 31.0 -0.6**
comp=Z,44nm,2.0s,mb5.2
GUD Guadarrama 77.73 39 P **P** **12 49 31.0 -0.6**
GUD pmax pmax
comp=Z,44nm,2.0s,mb5.2
SSE Sheshan 77.76 304 P **P** **12 49 31.5 -0.4**
SSE pP 12 49 36.0
SSE sP sP 12 49 38.5 +6.5
SSE S S 12 59 23.3 -2.0
SSE sS sS 12 59 30.0 +4.6
SSE pmax pmax
comp=Z,27nm,0.8s,mb5.4
SSE pmax pmax
comp=Z,290nm,5.3s
SSE LR LR
comp=N,1µm,36.9s,MS5.1
SSE LR LR
comp=E,1µm,37.0s,MS5.1
SSE LR LR
comp=Z,2µm,34.8s,MS5.1
LASF Ste Croix 77.79 32 *e*P **P** **12 49 32.2 +0.3**
comp=Z,27nm,1.1s,mb5.0
EVOP Sao Brissos 77.81 43 *e*P **P** **12 49 32.6 +0.5**
EVOP *e*S S 12 59 25.6 0.0
EVOP *e*S S 12 59 25.7 +0.1
EVOP *e*SS SS 13 04 27.2 +2.6
EVOP AMS AMS 13 18 31.5
comp=Z,3µm,14.4s,MS5.7
EVOP Sao Brissos 77.81 43 *e*P **P** **12 49 32.6 +0.5**
EVOP *e*S S 12 59 25.6 0.0
KWP Kalwaria Pacla 77.81 18 *e*P **P** **12 49 32.9 +1.0**
KWP *e*S S 12 59 32.3 +7.0
KWP LMZ 13 22 37.3
comp=Z,6µm,22.6s
KWP Kalwaria Pacla 77.81 18 PFAKE 12 49 40.0 +8.1
KWP LR LR
comp=Z,6µm,21.0s,MS5.9
KWP Kalwaria Pacla 77.81 18 *e*P **P** **12 49 32.9 +1.0**
KWP *e*S S 12 59 32.3 +7.0
OCF Saint Nazaire 77.83 31 *e*P **P** **12 49 33.6 +1.5**
OG26 St.-Nazaire-De 77.83 31 *e*P **P** **12 49 33.6 +1.5**
EVO Evora 77.85 43 *e*P **P** **12 49 32.0 -0.4**
comp=Z,152nm,1.7s,mb5.5
EVO *e*MLR MLR
comp=Z,3µm,17.8s,MS5.4
MTLF Montolieu 77.86 34 *e*P **P** **12 49 32.2 -0.1**
CONA Conrad Observa 77.88 23⇑ *i*pP pP 12 49 32.8 +0.4
comp=Z,25nm,1.9s
LVV L'vov 77.89 17 *e*P **P** **12 49 32.4 0.0**
LVV *e*S S 12 59 23.2 -2.9
LVV MLR MLR
comp=N,3µm,20.0s,MS5.7
LVV MLR MLR
comp=E,2µm,20.0s,MS5.7
LVV MLR MLR
comp=Z,5µm,20.0s,MS5.8
AKASG Malin Array Be 77.92 14 P **P** **12 49 31.2 -1.3**
AKASG LR LR 13 24 40.8
AKASG Malin Array Be 77.92 14 P **P** **12 49 31.2 -1.3**
comp=Z,1.7nm,0.6s,mb4.4,baz=343,slow=5.0,SNR=19
AKASG LR LR 13 24 40.8
comp=Z,7µm,20.7s,MS6.0,baz=0.0,slow=36
AKBB Malin Array Si 77.92 14 *e*P **P** **12 49 32.0 -0.6**
KIEV Kiev 77.93 14 *e*P **P** **12 49 31.9 -0.6**
comp=Z,61nm,1.6s,mb5.5
KIEV LR LR
comp=Z,6µm,21.0s,MS5.9
KIEV Kiev 77.93 14 *e*P **P** **12 49 31.9 -0.6**
KIEV pmax pmax
comp=Z,61nm,1.6s,mb5.5
KIEV MLR MLR
comp=Z,6µm,21.0s,MS5.9
KBA Koelnbreinsper 78.01 25⇑ *i*pP pP 12 49 33.8 +0.7
comp=Z,37nm,1.7s
VYHS Vyhne 78.06 21 *e*P **P** **12 49 31.6 -1.7**
comp=Z,40nm,2.3s,mb5.1
VYHS Vyhne 78.06 21 *e*P **P** **12 49 31.6 -1.7**
VYHS pmax pmax
comp=Z,40nm,2.3s,mb5.1
VYHS Vyhne 78.06 21 *e*P **P** **12 49 31.6 -1.7**
EBAD Badajoz 78.11 42 P **P** **12 49 31.7 -2.1**
comp=Z,7.4nm,1.1s,mb4.7
MBDF Montbardon 78.18 30 *e*P **P** **12 49 34.9 +0.8**
comp=Z,49nm,1.2s,mb5.2
MBDF Montbardon 78.18 30 *e*P **P** **12 49 34.9 +0.8**
comp=Z,25nm,1.2s,mb5.2
MBDF Montbardon 78.18 30 *e*P **P** **12 49 34.9 +0.8**
MBDF pmax pmax
comp=Z,25nm,1.2s,mb5.2
NJ2 Nanjing 78.23 306 *e*P **P** **12 49 34.0 -0.6**
NJ2 pP 12 49 37.5
NJ2 sP sP 12 49 40.3 +5.6
NJ2 PP PP 12 52 33.5 +2.8
NJ2 S S 12 59 29.0 -1.4
NJ2 sS sS 12 59 37.0 +6.5
NJ2 pmax pmax
comp=Z,90nm,1.0s,mb5.8
NJ2 pmax pmax
comp=Z,370nm,4.1s
NJ2 LR LR
comp=N,490nm,25.2s
NJ2 LR LR
comp=E,1µm,19.4s
NJ2 LR LR
comp=Z,380nm,25.6s,MS4.6
CRVS Cervenica-Dubn 78.25 19 *e*P **P** **12 49 35.5 +1.1**
comp=Z,45nm,2.1s,mb5.2
CRVS Cervenica-Dubn 78.25 19 *e*P **P** **12 49 35.5 +1.1**
CRVS pmax pmax
comp=Z,45nm,2.1s,mb5.2
CRVS Cervenica-Dubn 78.25 19 *e*P **P** **12 49 35.5 +1.1**
ESAC San Caprasio 78.26 36 P **P** **12 49 34.5 0.0**
comp=Z,78nm,1.4s,mb5.7
SOP Sopron 78.28 23 *e*P **P** **12 49 35.5 +0.9**
CSOR Sort 78.30 35 P **P** **12 49 33.7 -1.1**
comp=Z,8.1nm,0.9s,mb4.8
MESJ Messejana 78.33 44 *e*P **P** **12 49 35.0 -0.1**
MESJ *e*S S 12 59 31.1 -0.2
MESJ *e*S S 12 59 31.5 +0.2
MESJ AMS AMS 13 21 05.0
comp=Z,5µm,18.2s,MS5.8
MESJ Messejana 78.33 44 *e*P **P** **12 49 34.9 -0.1**
MESJ *e*S S 12 59 31.0 -0.3
PBEJ Beja 78.34 43 *e*P **P** **12 49 37.0 +1.9**
comp=Z,44nm,1.6s,mb5.3
SURF Saint Ours 78.42 30 *e*P **P** **12 49 37.5 +2.1**
ETOR Torete 78.42 38 P **P** **12 49 33.8 -1.6**
comp=Z,4.8nm,0.7s,mb4.7
ETOR Torete 78.42 38 P **P** **12 49 33.8 -1.7**
ETOR pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
ARSA Arzberg 78.42 23⇑ *i*pP pP 12 49 36.1 +0.7
comp=Z,33nm,2.0s,SNR=7.0
KECS Kecovo 78.44 20 *e*P **P** **12 49 37.7 +2.3**
comp=Z,23nm,2.3s,mb4.9
KECS Kecovo 78.44 20 *e*P **P** **12 49 37.7 +2.3**
KECS pmax pmax
comp=Z,23nm,2.3s,mb4.9
KECS Kecovo 78.44 20 *e*P **P** **12 49 37.7 +2.3**
SMRF Simiane la Rot 78.46 31 *e*P **P** **12 49 36.3 +0.7**
comp=Z,124nm,1.6s,mb5.5
SMRF Simiane la Rot 78.46 31 *e*P **P** **12 49 36.3 +0.7**
comp=Z,124nm,1.6s,mb5.8
CLLI Livia 78.52 34 P **P** **12 49 35.0 -1.0**
VSR Storozhevoye 78.57 7 *e*P **P** **12 49 35.3 -0.8**
VSR *e**PP 12 49 43.0
VSR *e*S S 12 59 31.6 -1.7
VSR *e*SS SS 13 04 36.1 +1.0
VSR pmax pmax
comp=N,40nm,1.6s
VSR pmax pmax
comp=E,10.0nm,1.6s
VSR pmax pmax
comp=Z,70nm,1.6s,mb5.4
VSR smax
comp=N,1µm,6.6s
VSR smax
comp=E,550nm,6.6s
VSR smax
comp=Z,340nm,6.6s
VSR MLR MLR
comp=N,4µm,19.0s,MS5.8
VSR MLR MLR
comp=E,1µm,19.0s,MS5.8
VSR MLR MLR
comp=Z,5µm,19.0s,MS5.9
PAB San Pablo 78.57 40 *e*P **P** **12 49 36.2 -0.1**
comp=Z,166nm,2.3s,mb5.7
PAB LR LR
comp=Z,3µm,20.0s,MS5.6
PAB San Pablo 78.57 40 *e*P **P** **12 49 36.2 -0.1**
PAB pmax pmax
comp=Z,166nm,2.3s,mb5.7
PAB MLR MLR
comp=Z,3µm,20.0s,MS5.6
PBAR Barrancos 78.58 43 *e*P **P** **12 49 37.0 +0.6**
comp=Z,43nm,1.7s,mb5.2
PBAR *e*S S 12 59 38.0 +4.1
PBAR *e*LQ 13 09 59.6
PBAR *e*LR LR 13 15 30.2
comp=Z,3µm,20.0s
MORF Marmelete 78.58 44 *e*P **P** **12 49 37.0 +0.6**
comp=Z,103nm,1.6s,mb5.6
MORF *e*S S 12 59 36.8 +2.8
MORF *e*LQ 13 09 44.6
MORF *e*LR LR 13 14 14.3
comp=Z,2µm,20.0s
MORF Marmelete 78.58 44 *e*P **P** **12 49 36.7 +0.3**
MORF *e*S S 12 59 33.9 -0.1
PCVE Castro Verde 78.59 44 *e*S S 12 59 37.6 +3.6
PCVE *e*LQ 13 09 47.6

PCVE eLR LR 13 16 41.7
comp=Z,5µm,18.0s
ESDC Sonseca Array 78.62 40 P **P 12 49 36.4 -0.2**
comp=Z,1.3nm,0.5s,mb4.2,baz=318,slow=5.7,SNR=11
ESDC LR LR 13 21 57.0
comp=Z,2µm,18.1s,MS5.6,baz=340,slow=34
ESLA Sonseca Array 78.62 40 *e*P **P 12 49 36.0 -0.6**
comp=Z,9.4nm,1.4s,mb4.6
ESLA LR LR
comp=Z,11µm,20.0s,MS6.2
PFVI Vila Bisbo 78.65 44 *e*S S 12 59 38.3 +3.6
PFVI *e*LQ 13 09 38.7
PFVI *e*LR LR 13 15 16.2
comp=Z,2µm,18.0s
UZH Uzhgorod 78.68 19⇑*i*P **P 12 49 37.4 +0.6**
UZH *e* 12 49 43.2
UZH *e*S S 12 59 33.4 -1.3
UZH *e*PS 13 00 17.8
UZH *e*SS SS 13 04 36.8 -0.3
UZH MLR MLR
comp=N,4µm,17.0s,MS5.8
UZH MLR MLR
comp=E,2µm,17.0s,MS5.8
UZH MLR MLR
comp=Z,2µm,17.0s,MS5.5
VORD Divnogorie 78.83 7 *e*P **P 12 49 38.2 +0.7**
VORD *e**PP 12 49 44.1
VORD *e*S S 12 59 36.8 +0.7
VORD pmax pmax
comp=N,40nm,1.4s
VORD pmax pmax
comp=Z,50nm,1.4s,mb5.3
VORD pmax pmax
comp=E,20nm,0.7s
VORD smax
comp=N,980nm,6.0s
VORD smax
comp=Z,30nm,2.0s
VORD smax
comp=E,630nm,6.0s
VORD MLR MLR
comp=N,3µm,18.0s,MS5.8
VORD MLR MLR
comp=E,2µm,18.0s,MS5.8
VORD MLR MLR
comp=Z,4µm,18.0s,MS5.8
SOKA Soboth 78.83 24⇓*i*P **P 12 49 37.7 +0.1**
comp=Z,36nm,1.7s,mb5.1
PSZ Piszkesteto 78.84 20 *e*P **P 12 49 38.4 +0.8**
comp=Z,112nm,2.0s,mb5.5
PSZ LR LR
comp=Z,2µm,20.0s,MS5.3
PSZ Piszkesteto 78.84 20⇑P **P 12 49 39.1 +1.4**
PSZ Piszkesteto 78.84 20⇑*i*P **P 12 49 39.0 +1.3**
PSZ Piszkesteto 78.84 20⇓*e*P **P 12 49 39.0 +1.3**
OBKA Obir 78.86 24⇑*i*P **P 12 49 37.6 -0.1**
comp=Z,16nm,1.0s,mb5.0
VRHR Novokhopersk 78.86 6 *e*P **P 12 49 36.7 -1.0**
VRHR *e* 12 49 45.2
VRHR pmax pmax
comp=Z,20nm,0.9s,mb5.2
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,20nm,0.9s
EJON La Jonquera 78.87 34 P **P 12 49 36.8 -1.2**
comp=E,4.4nm,0.7s,mb4.6
PVAQ Vaqueiros 78.92 44 *e*P **P 12 49 39.5 +1.2**
comp=E,95nm,1.8s,mb5.5
PVAQ *e*S S 12 59 41.0 +3.4
PVAQ *e*LQ 13 09 53.6
PVAQ *e*LR LR 13 16 48.8
comp=E,5µm,18.0s
PBDV Barranco-do-Ve 78.96 44 *e*S S 12 59 40.6 +2.6
PBDV *e*LQ 13 09 53.6
PBDV *e*LR LR 13 15 49.0
comp=E,4µm,18.0s
TOUF Mont Tournerai 78.97 30 *e*P **P 12 49 39.7 +1.2**
AUTN L'Aution 79.05 30 *e*P **P 12 49 41.6 +2.7**
MVIF Mont Vial 79.05 30 *e*P **P 12 49 40.3 +1.4**
BUD Budapest 79.06 21 *e*P **P 12 49 40.3 +1.5**
EMIN Mina Concepcio 79.08 43 P **P 12 49 38.6 -0.5**
comp=E,68nm,2.5s,mb5.2
CALN Calern 79.09 31 *e*P **P 12 49 40.0 +0.9**
SAOF Saorge 79.10 30 *e*P **P 12 49 40.3 +1.2**
LUCF Luceram 79.11 30 *e*P **P 12 49 38.6 -0.6**
EPOB Poblet 79.17 36 P **P 12 49 37.3 -2.2**
comp=E,4.6nm,0.9s,mb4.5
SBF Sospel 79.17 30 *e*P **P 12 49 39.0 -0.5**
comp=E,60nm,1.1s,mb5.2
SBF Sospel 79.17 30 *e*P **P 12 49 39.0 -0.5**
comp=E,30nm,1.1s,mb5.2
SBF Sospel 79.17 30 *e*P **P 12 49 39.0 -0.5**
SBF pmax pmax
comp=Z,30nm,1.1s,mb5.2
FRF La Foret Royal 79.18 31 *e*P **P 12 49 39.4 -0.2**
comp=Z,60nm,1.2s,mb5.2
FRF La Foret Royal 79.18 31 *e*P **P 12 49 39.4 -0.2**
comp=Z,30nm,1.2s,mb5.2
FRF La Foret Royal 79.18 31 *e*P **P 12 49 39.4 -0.2**
FRF pmax pmax
comp=Z,30nm,1.2s,mb5.2
ERTA Horta de San J 79.23 36 P **P 12 49 38.2 -1.7**
comp=Z,43nm,1.5s,mb5.3
LJU Ljubljana 79.28 25 *i*P **P 12 49 40.8 +0.7**
LJU *e* 12 49 50.2
LJU *e*S S 12 59 45.5 +4.4
LJU *e*SS SS 13 04 52.0 +5.9
LJU Ljubljana 79.28 25 *i*P **P 12 49 40.8 +0.7**
LJU *e*PcP PcP 12 49 50.2 +1.9
LJU *e*S S 12 59 45.5 +4.4
LJU *e*SKSac SKSac 13 00 07.7 +11
LJU *e*SS SS 13 04 52.0 +5.9
JAVS Javornik 79.29 25 *i*P **P 12 49 40.3 +0.1**
JAVS *e*S S 12 59 45.6 +4.4
CFON Fontmartina 79.31 34 P **P 12 49 39.7 -0.7**
comp=Z,9.3nm,0.9s,mb4.8
LMR La Mourre 79.34 31 *e*P **P 12 49 40.2 -0.3**
comp=Z,156nm,1.7s,mb5.5
LMR La Mourre 79.34 31 *e*P **P 12 49 40.2 -0.3**
comp=Z,78nm,1.7s,mb5.5
LMR La Mourre 79.34 31 *e*P **P 12 49 40.2 -0.3**
LMR pmax pmax
comp=Z,78nm,1.7s,mb5.5
ECAB El Cabril 79.36 42 P **P 12 49 41.2 +0.6**
comp=Z,2.5nm,0.8s,mb4.3
TRI Trieste 79.38 25 PFAKE 12 49 50.0 +9.4
TRI LR LR
comp=Z,5µm,19.0s,MS5.8
EMOS Mosqueruela 79.43 37 P **P 12 49 41.3 +0.3**
comp=Z,7.5nm,0.7s,mb4.8
MK31 Makanchi Array 79.57 338 *e*P **P 12 49 40.7 -1.0**
MKAR Makanchi Array 79.57 338 P **P 12 49 40.4 -1.3**
comp=Z,3.0nm,0.7s,mb4.3,baz=26,slow=3.8,SNR=28
MKAR LR LR 13 27 01.1
comp=Z,3µm,21.9s,MS5.7,baz=16,slow=37
AKTO Aktyubinsk 79.59 355 P **P 12 49 41.8 +0.1**
AKTO pmax pmax
comp=Z,10.0nm,1.9s,mb4.4
SKDS Skadanscina 79.60 25 *i*P **P 12 49 41.3 -0.6**
SKDS *i*PcP PcP 12 49 49.2 -0.6
SKDS S S 12 59 48.5 +4.0
EADA Adamuz 79.64 41 P **P 12 49 42.0 -0.2**
comp=Z,11nm,1.1s,mb4.7
VLC Villacollemand 79.83 28 PFAKE 12 49 50.0 +6.9
VLC LR LR
comp=Z,9µm,19.0s,MS6.1
ECHE Chera 79.90 38 P **P 12 49 44.1 +0.5**
comp=Z,7.7nm,0.8s,mb4.7
ECHE Chera 79.90 38 P **P 12 49 44.1 +0.5**
ECHE pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
BOJS Bojanci 79.97 24 *i*P **P 12 49 44.6 +0.8**
BOJS *i*PcP PcP 12 49 51.4 0.0
BOJS *e*S S 12 59 53.4 +4.9
EVIA Vianos 80.10 39 P **P 12 49 42.8 -1.8**
comp=Z,23nm,1.0s,mb5.1
EVIA Vianos 80.10 39 P **P 12 49 42.8 -1.9**
EVIA pmax pmax
comp=Z,23nm,1.0s,mb5.1
PKSM Moragy 80.16 22⇓P **P 12 49 45.9 +1.0**
PKSM Moragy 80.16 22⇓*i*P **P 12 49 45.9 +1.0**
BUR08 Bucovina Ar. S 80.20 17 *e*P **P 12 49 46.8 +1.8**
BURAR Bucovina Array 80.23 17⇑P **P 12 49 47.1 +1.9**
BURAR Bucovina Array 80.23 17⇑*i*P **P 12 49 47.2 +2.0**

SFS San Fernando 80.37 43 PFAKE 12 50 00.0 +14
SFS LR LR
comp=Z,6µm,19.0s,MS6.0
DRGR 80.52 19 P **P 12 49 48.4 +1.6**
AB31 Akbulak array 80.64 354 *i*P **P 12 49 47.2 -0.2**
AB31 pmax pmax
comp=Z,23nm,0.8s,mb5.3
ABKAR Akbulak array 80.64 354 *e*P **P 12 49 47.1 -0.3**
comp=Z,21nm,0.9s,mb5.2
GTA Gaotai 80.79 323 *e*P **P 12 49 48.5 +0.1**
GTA pP 12 49 52.5
GTA sP sP 12 49 55.0 +6.5
GTA S S 12 59 57.5 +0.2
GTA sS sS 13 00 05.5 +8.1
GTA pmax pmax
comp=Z,9.0nm,2.2s,mb4.4
GTA pmax pmax
comp=Z,310nm,5.9s
GTA LR LR
comp=N,3µm,19.3s,MS5.8
GTA LR LR
comp=E,3µm,21.7s,MS5.8
GTA LR LR
comp=Z,2µm,23.2s,MS5.3
PGF Pioggiola 80.85 30 *e*P **P 12 49 48.6 -0.1**
comp=Z,42nm,1.1s,mb5.1
PGF Pioggiola 80.85 30 *e*P **P 12 49 48.6 -0.1**
comp=Z,21nm,1.1s,mb5.1
PGF Pioggiola 80.85 30 *e*P **P 12 49 48.6 -0.1**
PGF pmax pmax
comp=Z,21nm,1.1s,mb5.1
WMQ Urumqi 80.92 334 P **P 12 49 50.0 +1.0**
WMQ pP 12 49 54.8
WMQ sP sP 12 49 57.0 +7.9
WMQ PP PP 12 52 56.5 +4.0
WMQ S S 12 59 56.8 -1.6
WMQ SKS 13 00 03.5
WMQ pmax pmax
comp=Z,34nm,1.4s,mb5.2
WMQ pmax pmax
comp=Z,710nm,6.2s
WMQ LR LR
comp=N,4µm,21.0s,MS5.9
WMQ LR LR
comp=E,4µm,22.8s,MS5.9
WMQ LR LR
comp=Z,3µm,23.2s,MS5.6
BZS Buzias 81.41 20⇓P **P 12 49 52.0 +0.5**
BZS Buzias 81.41 20 P **P 12 49 53.0 +1.5**
BZS Buzias 81.41 20⇓*i*P **P 12 49 52.0 +0.5**
KIS Kishinev 81.46 15⇓*i*P **P 12 49 51.0 -0.8**
comp=Z,400nm,6.0s
KIS Kishinev 81.46 15 *i*PcP PcP 12 49 58.0 +0.2
KIS Kishinev 81.46 15 *e*PP PP 12 53 04.0 +7.1
KIS *i*S S 13 00 06.0 +2.0
comp=Z,1µm,12.0s
KIS Kishinev 81.46 15^K *i*P **P 12 49 51.0 -0.8**
KIS *i* 12 49 58.0
KIS *e* 12 53 04.0
KIS *i*S S 13 00 06.0 +2.0
KIS *i*PS 13 00 46.0
KIS pmax pmax
comp=Z,400nm,6.0s
KIS smax
comp=N,1µm,12.0s
KIS smax
comp=E,1µm,12.0s
XAN Xi'an 81.50 314 P **P 12 49 51.0 -1.3**
XAN S S 13 00 00.3 -4.5
XAN sS sS 13 00 11.8 +6.8
XAN pmax pmax
comp=Z,5.0nm,1.6s,mb4.4
XAN pmax pmax
comp=Z,80nm,5.9s
XAN LR LR
comp=N,2µm,27.8s,MS5.4
XAN LR LR
comp=E,970nm,25.8s,MS5.4
XAN LR LR
comp=Z,790nm,19.6s
WHN Wuhan 81.74 308 P **P 12 49 52.0 -1.6**
WHN S S 13 00 03.0 -4.5
WHN LR LR
comp=N,4µm,18.5s,MS6.0
WHN LR LR
comp=E,3µm,14.8s,MS6.0
WHN LR LR
comp=Z,5µm,28.0s
MSVF Nonsavu 81.78 230 PFAKE 12 50 00.0 +6.3
MSVF LR LR
comp=Z,2µm,19.0s,MS5.4
LZH Lanzhou 82.03 319⇑P **P 12 49 53.3 -1.7**
LZH pP 12 49 56.5
LZH sP sP 12 49 57.8 +2.7
LZH PP PP 12 53 02.5 +0.6
LZH S S 13 00 04.5 -5.7
LZH sS sS 13 00 11.5 +1.2
LZH SS SS 13 05 24.3 -3.4
LZH pmax pmax
comp=Z,83nm,1.5s,mb5.6
LZH pmax pmax
comp=Z,550nm,6.5s
LZH LR LR
comp=N,4µm,18.0s,MS6.0
LZH LR LR
comp=E,4µm,16.5s,MS6.0
LZH LR LR
comp=Z,5µm,19.8s,MS5.9
VRI Vrincioaia 82.19 16⇑P **P 12 49 56.8 +1.1**
VRI Vrincioaia 82.19 16⇑*i*P **P 12 49 56.8 +1.1**
PLOR Plostina 82.19 16⇑P **P 12 49 56.6 +0.9**
PLOR Plostina 82.19 16⇑*i*P **P 12 49 56.5 +0.8**
VOIR 82.29 18⇑P **P 12 49 58.1 +1.9**
VOIR 82.29 18⇑*i*P **P 12 49 58.1 +1.9**
AQU L'Aquila 82.37 27 PFAKE 12 50 10.0 +13
AQU LR LR
comp=Z,5µm,22.0s,MS5.8
TATO Taipei 82.39 300 PFAKE 12 50 10.0 +13
TATO LR LR
comp=Z,2µm,21.0s,MS5.5
YHNB Yeheng 82.69 300 PFAKE 12 50 10.0 +11
YHNB LR LR
comp=Z,2µm,19.0s,MS5.5
VSL Villasalto 83.73 31 *e*P **P 12 50 04.3 +0.6**
comp=Z,20nm,1.1s,mb5.2
VSL LR LR
comp=Z,3µm,20.0s,MS5.7
QZH Quanzhou 84.01 302⇑*i*P **P 12 50 04.8 -0.6**
QZH S S 13 00 29.0 -1.7
QZH pmax pmax
comp=Z,680nm,5.8s
QZH LR LR
comp=N,3µm,22.1s
QZH LR LR
comp=E,2µm,12.9s
QZH LR LR
comp=Z,3µm,14.1s
MDT Midelt 84.14 44 LR LR 13 24 26.7
comp=Z,1µm,20.5s,MS5.3,baz=162,slow=33
SIM Simferopol' 84.24 12*d*i*P **P 12 50 07.0 +0.7**
SIM *e*S S 13 00 34.0 +1.7
SIM *e*PS 13 01 24.0
SIM *e*SS SS 13 06 09.0 +9.2
SIM pmax pmax
comp=Z,60nm,6.2s
SIM MLR MLR
comp=Z,5µm,18.0s,MS5.9
ENH Enshi 84.36 312 *e*P **P 12 50 06.2 -0.9**
comp=Z,35nm,1.3s,mb5.4
ENH LR LR
comp=Z,3µm,22.0s,MS5.6
USP Ospenovka 84.61 343 P **P 12 50 09.5 +1.3**
SNR=6.1
TKM2 Tokmak 2 84.73 342 P **P 12 50 09.3 +0.5**
SNR=11
TKM2 Tokmak 2 84.73 342 *e*P **P 12 50 08.6 -0.2**
TKM2 MLR MLR
comp=Z,3µm,19.0s,MS5.7
ANN Anapa 84.77 9 *e*P **P 12 50 09.4 +0.4**
ANN *e* 12 50 16.2
ANN *e* 12 53 28.6
ANN *e*S S 13 00 33.6 -4.1
ANN *e*SS SS 13 06 06.6 -1.0
ANN pmax pmax
comp=Z,81nm,2.0s,mb5.6

ANN MLR MLR
comp=N,1µm,18.0s,MS5.5
ANN MLR MLR
comp=E,2µm,18.0s,MS5.5
ANN MLR MLR
comp=Z,4µm,18.0s,MS5.8
HNR Honiara 84.95 249 PFAKE 12 50 20.0 +10
HNR LR LR
comp=Z,3µm,22.0s,MS5.6
FRU Bishkek 85.01 342 *e*P **P 12 50 08.0 -2.2**
FRU *e*S S 13 01 37.0 +57
FRU pmax pmax
comp=Z,190nm,2.0s,mb6.0
FRU pmax pmax
comp=Z,800nm,4.2s
TIR Tirane 85.04 23 PFAKE 12 50 20.0 +10
TIR LR LR
comp=Z,6µm,19.0s,MS6.0
AAK Ala-Archa 85.22 342 *e*P **P 12 50 11.5 +0.2**
comp=Z,83nm,1.8s,mb5.7
AAK LR LR
comp=Z,2µm,20.0s,MS5.6
AAK Ala-Archa 85.22 342*c*i*P **P 12 50 11.8 +0.5**
AAK pmax pmax
comp=Z,16nm,1.7s,mb5.0
AAK MLR MLR
comp=Z,1µm,18.0s,MS5.4
AAK Ala-Archa 85.22 342 P **P 12 50 11.4 +0.1**
comp=Z,81nm,1.0s,mb5.9,SNR=8.3
AAK Ala-Archa 85.22 342 P **P 12 50 12.2 +0.9**
SNR=23
CUC Castrocucco 85.24 26 PFAKE 12 50 20.0 +8.6
CUC LR LR
comp=Z,4µm,20.0s,MS5.8
ULHL Ulahol 85.24 341 P **P 12 50 12.7 +1.4**
SNR=5.2
LPAZ La Paz 85.33 122 *e*P **P 12 50 11.1 -0.9**
comp=Z,19nm,1.1s,mb5.2
LPAZ LR LR
comp=Z,2µm,22.0s,MS5.4
LPAZ La Paz 85.33 122 P **P 12 50 11.5 -0.5**
comp=Z,2.8nm,0.8s,mb4.5,baz=328,slow=7.7,SNR=6.8
LPAZ LR LR 13 31 11.9
comp=Z,2µm,20.8s,MS5.4,baz=327,slow=38
LPAZ La Paz 85.33 122 *e*P **P 12 50 11.1 -0.9**
LPAZ pmax pmax
comp=Z,19nm,1.1s
LPAZ MLR MLR
comp=Z,2µm,22.0s
EKS2 Erkin-Say 85.33 343 P **P 12 50 12.7 +0.8**
SNR=12
EKS2 Erkin-Say 85.33 343 *e*P **P 12 50 12.2 +0.4**
comp=Z,155nm,1.9s,mb5.9
EKS2 LR LR
comp=Z,2µm,21.0s,MS5.6
KK31 Karatay Array 85.48 345 *i*P **P 12 50 12.7 +0.1**
KK31 pmax pmax
comp=Z,22nm,1.0s,mb5.3
KKAR Karatay Array 85.48 345 *e*P **P 12 50 12.7 +0.1**
comp=Z,23nm,1.2s,mb5.3
KKAR Karatay Array 85.48 345 *e*P **P 12 50 12.7 +0.1**
KKAR pmax pmax
comp=Z,23nm,1.2s,mb5.3
KZA Kyzart 85.61 342 P **P 12 50 14.0 +0.8**
SNR=7.4
KZA Kyzart 85.61 342 *e*P **P 12 50 13.2 0.0**
comp=Z,56nm,1.8s,mb5.4
UCH Uchtor 85.61 342 PFAKE 12 50 20.0 +6.8
UCH LR LR
comp=Z,1µm,20.0s,MS5.3
AML Almayashu 85.86 343 *e*P **P 12 50 15.9 +1.5**
comp=Z,166nm,1.9s,mb5.8
AML LR LR
comp=Z,3µm,19.0s,MS5.7
KIV Kislovodsk 86.04 6 *e*P **P 12 50 15.7 +0.4**
comp=Z,36nm,1.0s,mb5.5
KIV LR LR
comp=Z,3µm,20.0s,MS5.7
KIV Kislovodsk 86.04 6⇑*i*P **P 12 50 16.5 +1.2**
KIV *e* 12 53 31.0
KIV *e*S S 13 00 46.9 -3.4
KIV pmax pmax
comp=Z,30nm,1.4s,mb5.2
KIV MLR MLR
comp=Z,4µm,23.0s,MS5.7
KIV Kislovodsk 86.04 6 P **P 12 50 16.6 +1.3**
comp=Z,171nm,1.2s,mb6.0,SNR=5.3
KIV Kislovodsk 86.04 6 P **P 12 50 16.7 +1.4**
SNR=11
SOC Sochi 86.19 8*d*i*P **P 12 50 16.1 0.0**
SOC *e*S S 13 00 41.7 -10
SOC *e*SSS 13 10 02.5
SOC pmax pmax
comp=Z,28nm,0.9s,mb5.4
SOC MLR MLR
comp=Z,4µm,16.0s,MS5.9
CD2 Chengdu 86.47 316 P **P 12 50 17.3 -0.4**
CD2 pP 12 50 22.0
CD2 sP sP 12 50 24.3 +6.5
CD2 PP PP 12 53 39.8 +1.5
CD2 SKS 13 00 39.8
CD2 S S 13 00 50.0 -4.9
CD2 sS sS 13 00 58.0 +3.0
CD2 pmax pmax
comp=Z,20nm,0.6s,mb5.4
CD2 pmax pmax
comp=Z,480nm,6.5s
CD2 LR LR
comp=N,3µm,18.6s,MS6.0
CD2 LR LR
comp=E,4µm,19.2s,MS6.0
CD2 LR LR
comp=Z,2µm,19.8s,MS5.6
CEL Celeste 86.87 27 PFAKE 12 50 30.0 +10
CEL LR LR
comp=Z,2µm,22.0s,MS5.6
KEST Kesra 87.12 32 P **P 12 50 19.4 -1.4**
comp=Z,0.3nm,0.4s,mb3.9,baz=145,slow=7.1,SNR=5.6
KEST LR LR 13 28 24.5
comp=Z,812nm,18.7s,MS5.2,baz=112,slow=35
MAK Makhachkala 87.24 2 *e*P **P 12 50 18.7 -2.5**
MAK Makhachkala 87.24 2 *e*P **P 12 50 19.4 -1.8**
MAK *e* 12 53 43.5
MAK *e*PPP 12 55 48.5
MAK *e*S S 13 00 47.3 -15
MAK *e* 13 01 01.8
MAK *e*SS SS 13 06 51.9 +8.0
MAK pmax pmax
comp=Z,122nm,1.0s,mb6.1
ZEI Tsey 87.29 5 *e*P **P 12 50 20.1 -1.4**
ZEI pmax pmax
comp=Z,57nm,1.9s,mb5.5
KSH Kashi 87.92 340 P **P 12 50 27.0 +2.5**
KSH *e*pP 12 50 31.5
KSH *e*sP sP 12 50 34.5 +10
KSH *e*PP PP 12 53 55.0 +5.4
KSH SKS 13 00 52.0
KSH S S 13 01 08.5 0.0
KSH sS sS 13 01 15.0 +6.3
KSH *e*SS SS 13 06 57.5 +3.5
KSH pmax pmax
comp=Z,3.0nm,0.6s,mb4.8
KSH pmax pmax
comp=Z,320nm,5.9s
KSH LR LR
comp=N,2µm,13.1s,MS5.8
KSH LR LR
comp=E,2µm,17.4s,MS5.8
KSH LR LR
comp=Z,2µm,16.4s,MS5.7
GOR Gori 88.09 5 P **P 12 50 26.8 +1.5**
GZH Guangzhou 88.32 305 P **P 12 50 22.3 -4.4**
GZH S S 13 00 58.0 -15
GZH LR LR
comp=N,780nm,22.7s,MS5.5
GZH LR LR
comp=E,2µm,20.6s,MS5.5
GZH LR LR
comp=Z,2µm,18.4s,MS5.6
TBLG Delisi 88.37 4 P **P 12 50 27.4 +0.7**
TBLG Delisi 88.37 4 P **P 12 50 27.4 +0.8**
MTA Mtatsminda 88.41 4 P **P 12 50 27.1 +0.3**
DGRG David-gareji 88.68 4 P **P 12 50 27.8 -0.3**
WDD Wield Dalam 88.69 28 PFAKE 12 50 40.0 +12
WDD LR LR
comp=Z,3µm,21.0s,MS5.6

GYA	**Guiyang**	**88.90**	**312**	⇑*iP*		**P**		**12 50 28.3**	**-1.1**
GYA				PP		PP		12 54 01.8	+3.8
GYA				SKS				13 00 56.5	
GYA				S		S		13 01 14.8	-3.5
GYA				pmax		pmax			
	comp=Z,60nm,1.0s,mb5.8								
GYA				pmax		pmax			
	comp=Z,210nm,6.5s								
GYA				LR		LR			
	comp=N,2μm,20.8s,MS5.7								
GYA				LR		LR			
	comp=E,1μm,21.0s,MS5.7								
GYA				LR		LR			
	comp=Z,3μm,20.9s,MS5.8								
BR131	**Keskin Array S**	**89.31**	**13**	*eP*		**P**		**12 50 31.9**	**+0.8**
	comp=Z,5.8nm,1.1s,mb4.7								
BR131				LR		LR			
	comp=Z,2μm,19.0s,MS5.5								
BRTR	**Keskin Array B**	**89.31**	**13**	P		**P**		**12 50 30.8**	**-0.3**
	comp=Z,2.6nm,0.8s,mb4.5,baz=333,slow=0.6,SNR=8.4								
BRTR				LR		LR		13 35 51.1	
	comp=Z,2μm,18.4s,MS5.5,baz=347,slow=39								
GNI	**Garni**	**89.95**	**4**	*eP*		**P**		**12 50 35.5**	**+1.4**
	comp=Z,64nm,1.5s,mb5.6								
GNI				LR		LR			
	comp=Z,2μm,20.0s,MS5.5								
GNI	**Garni**	**89.95**	**4**	*eP*		**P**		**12 50 35.5**	**+1.4**
GNI				pmax		pmax			
	comp=Z,65nm,1.5s								
GNI				MLR		MLR			
	comp=Z,2μm,20.0s								
GNI	**Garni**	**89.95**	**4**	P		**P**		**12 50 36.4**	**+2.4**
	SNR=12								
ISP	**Isparta**	**90.67**	**16**	PFAKE				12 50 50.0	+12
ISP				LR		LR			
	comp=Z,3μm,20.0s,MS5.7								
MALT	**Malatya**	**91.29**	**9**	*eP*		**P**		**12 50 40.0**	**-0.4**
	comp=Z,17nm,1.4s,mb5.2								
MALT				LR		LR			
	comp=Z,2μm,22.0s,MS5.6								
MALT	**Malatya**	**91.29**	**9**	*eP*		**P**		**12 50 40.0**	**-0.4**
MALT				pmax		pmax			
	comp=Z,17nm,1.4s,mb5.2								
MALT				MLR		MLR			
	comp=Z,2μm,22.0s,MS5.6								
MALT	**Malatya**	**91.29**	**9**⇑	*iP*		**P**		**12 50 41.5**	**+1.1**
DZM	**Mont Dzumac**	**91.36**	**236**	*e*SKSac		SKSac		13 01 17.5	+3.4
	comp=Z,607nm,29.8s								
DZM				*e*SP		SP		13 02 54.4	+4.9
	comp=Z,638nm,24.8s								
DZM				*e*SS		SS		13 07 43.6	-2.9
	comp=Z,1μm,28.2s								
DZM				*e*LQ				13 15 02.3	
	comp=Z,4μm,30.1s								
DZM				*e*LR		LR		13 19 28.7	
	comp=Z,2μm,22.6s								
KMI	**Kunming**	**91.88**	**314**	P		**P**		**12 50 42.8**	**-0.5**
KMI				PP		PP		12 54 24.3	+2.7
KMI				S		S		13 01 41.5	-4.3
KMI				pmax		pmax			
	comp=Z,190nm,5.3s								
KMI				LR		LR			
	comp=N,1μm,15.9s,MS5.9								
KMI				LR		LR			
	comp=E,3μm,15.2s,MS5.9								
KMI				LR		LR			
	comp=Z,2μm,22.5s								
LSA	**Lhasa**	**92.67**	**325**	*eP*		**P**		**12 50 49.0**	**+2.1**
LSA				LR		LR			
	comp=Z,2μm,21.0s,MS5.6								
PMG	**Port Moresby**	**92.82**	**259**	PFAKE				12 51 00.0	+12
PMG				LR		LR			
	comp=Z,3μm,20.0s,MS5.7								
QIZ	**Qiongzhong**	**93.50**	**305**	P		**P**		**12 50 50.0**	**-0.9**
QIZ				sP		sP		12 50 55.5	+4.5
QIZ				PP		PP		12 54 33.3	-1.3
QIZ				S		S		13 01 58.8	-1.5
QIZ				pmax		pmax			
	comp=Z,150nm,6.6s								
QIZ				LR		LR			
	comp=N,740nm,16.9s								
QIZ				LR		LR			
	comp=Z,1μm,17.8s,MS5.4								
QIZ	**Qiongzhong**	**93.50**	**305**	PFAKE				12 51 00.0	+9.1
QIZ				LR		LR			
	comp=Z,1μm,19.0s,MS5.4								
CSS	**Prodhromos**	**93.93**	**14**	PFAKE				12 51 00.0	+7.4
CSS				LR		LR			
	comp=Z,3μm,22.0s,MS5.8								
DAV	**Davao City (W)**	**93.98**	**286**	PFAKE				12 51 00.0	+6.9
DAV				LR		LR			
	comp=Z,3μm,22.0s,MS5.7								
DAV	**Davao City (W)**	**93.98**	**286**	LR		LR		13 25 37.1	
	comp=Z,3μm,21.8s,MS5.6,baz=230,slow=31								
RCBR	**Riachuelo**	**96.82**	**91**	PFAKE				12 51 20.0	+14
RCBR				LR		LR			
	comp=Z,3μm,19.0s,MS5.8								
TAM	**Tamanrasset**	**97.24**	**41**	PFAKE				12 51 20.0	+12
TAM				LR		LR			
	comp=Z,2μm,19.0s,MS5.6								
CHTO	**Chiang Mai**	**99.08**	**314**	PFAKE				12 51 30.0	+14
CHTO				LR		LR			
	comp=Z,2μm,21.0s,MS5.6								
CM31	**Chiang Mai Arr**	**99.39**	**314**	PFAKE				12 51 30.0	+12
CM31				LR		LR			
	comp=Z,1μm,19.0s,MS5.5								
CMAR	**Chiang Mai Arr**	**99.39**	**314**	P		**P**		**12 51 16.8**	**-0.8**
	comp=Z,1.3nm,0.8s,mb4.7,baz=11,slow=3.8,SNR=10.0								
CMAR				LR		LR		13 39 17.5	
	comp=Z,2μm,20.0s,MS5.5,baz=34,slow=37								
KKM	**Kota Kinabalu**	**100.47**	**293**	PFAKE				12 51 30.0	+7.7
KKM				LR		LR			
	comp=Z,1μm,20.0s,MS5.4								
CTAO	**Charters Tower**	**101.50**	**253**	PFAKE				12 51 40.0	+13
CTAO				LR		LR			
	comp=Z,4μm,22.0s,MS5.9								
SPB	**Sao Paulo**	**102.97**	**111**	PFAKE				12 51 40.0	+6.6
SPB				LR		LR			
	comp=Z,2μm,20.0s,MS5.6								
SNZO	**South Karori**	**103.30**	**220**	PFAKE				12 51 40.0	+5.1
SNZO				LR		LR			
	comp=Z,1μm,19.0s,MS5.4								
TORD	**Torodi Ar. Bea**	**103.94**	**49**	PP		PP		12 55 53.5	-0.8
	comp=Z,1.8nm,1.1s,baz=324,slow=7.1,SNR=2.9								
PLCA	**Paso Flores**	**104.26**	**138**	PFAKE				12 51 50.0	+11
PLCA				LR		LR			
	comp=Z,1μm,21.0s,MS5.4								
DBIC	**Dimbokro**	**106.03**	**58**	PFAKE				12 56 10.0	+11
DBIC				LR		LR			
	comp=Z,4μm,21.0s,MS6.0								
TRQA	**Tornquist**	**106.07**	**131**	PFAKE				12 56 10.0	+11
TRQA				LR		LR			
	comp=Z,2μm,19.0s,MS5.6								
LIC	**Lamto**	**106.31**	**58**	*eP*		Pdif		12 51 46.2	-2.1
	comp=Z,55nm,1.0s								
LIC				*e*MLR		MLR			
	comp=Z,4μm,19.8s,MS5.7								
LIC	**Lamto**	**106.31**	**58**	*eP*		Pdif		12 51 46.2	-2.1
	comp=Z,28nm,1.0s								
LIC				LR		LR			
	comp=Z,2μm,19.8s,MS5.7								
KSM	**Kuching**	**107.62**	**295**	PFAKE				12 56 10.0	+7.7
KSM				LR		LR			
	comp=Z,791nm,22.0s,MS5.2								
WRA	**Warramunga Arr**	**108.85**	**261**	PKPdf		PKiKP		12 56 03.4	-0.9
WRA	**Warramunga Arr**	**108.85**	**261**	PKiKP		PKiKP		12 56 03.4	-0.9
	comp=Z,0.7nm,0.8s,baz=27,slow=1.9,SNR=6.8								
KULM	**Kulim**	**109.83**	**305**	PFAKE				12 56 20.0	+14
KULM				LR		LR			
	comp=Z,1μm,19.0s,MS5.5								
CAN	**Canberra**	**111.20**	**240**	PFAKE				12 56 20.0	+12
CAN				LR		LR			
	comp=Z,1μm,19.0s,MS5.5								
ASAR	**Alice Springs**	**111.84**	**259**	PKiKP		PKiKP		12 56 08.8	-1.0
	comp=Z,0.6nm,0.9s,baz=80,slow=1.0,SNR=4.5								
MBWA	**Marble Bar**	**119.10**	**271**	PFAKE				12 56 30.0	+6.1
MBWA				LR		LR			
	comp=Z,2μm,20.0s,MS5.7								
SHEL	**Horse Pasture**	**123.66**	**74**	PFAKE				12 56 40.0	+7.3
SHEL				LR		LR			
	comp=Z,2μm,20.0s,MS5.9								
PMSA	**Palmer Station**	**125.29**	**151**	PFAKE				12 56 40.0	+5.7
PMSA				LR		LR			
	comp=Z,775nm,19.0s,MS5.4								
COCO	**West Island**	**126.44**	**298**	PFAKE				12 56 50.0	+12
COCO				LR		LR			
	comp=Z,933nm,19.0s,MS5.5								
MBAR	**Mbarara**	**127.88**	**25**	PFAKE				12 56 50.0	+9.0
MBAR				LR		LR			
	comp=Z,515nm,22.0s,MS5.2								
NWAO	**Narrogin (SRO)**	**128.81**	**263**	PFAKE				12 56 50.0	+7.9
NWAO				LR		LR			
	comp=Z,2μm,19.0s,MS5.9								
KMBO	**Kilima Mbogo**	**129.90**	**17**	PFAKE				12 56 50.0	+5.1
KMBO				LR		LR			
	comp=Z,1μm,19.0s,MS5.6								
SBA	**Scott Base**	**133.44**	**195**	PFAKE				12 57 00.0	+10
SBA				LR		LR			
	comp=Z,2μm,19.0s,MS5.8								
DGAR	**Diego Garcia**	**133.58**	**329**	PFAKE				12 57 00.0	+8.2
DGAR				LR		LR			
	comp=Z,3μm,19.0s,MS6.0								
TRIS	**Tristan da Cun**	**134.07**	**98**	PFAKE				12 57 00.0	+8.1
TRIS				LR		LR			
	comp=Z,1μm,19.0s,MS5.7								
MSEY	**Mahe Island**	**134.48**	**353**	PFAKE				12 57 00.0	+6.5
MSEY				LR		LR			
	comp=Z,1μm,22.0s,MS5.6								
TSUM	**Tsumeb**	**139.59**	**52**	PFAKE				12 57 10.0	+7.3
TSUM				LR		LR			
	comp=Z,3μm,20.0s,MS6.0								
QSPA	**South Pole Qui**	**139.95**	**180**	*e*PKPdf		PKPdf		12 56 57.3	-4.3
QSPA				LR		LR			
	comp=Z,4μm,19.0s,MS6.2								
VNA3	**Neumayer Olymp**	**145.93**	**150**	*e*PKPdf		PKPdf		12 57 08.4	-3.9
CASY	**Casey**	**146.06**	**219**	*e*PKPdf		PKPdf		12 57 10.5	-2.1
CASY				LR		LR			
	comp=Z,1μm,20.0s,MS5.7								
VNA1	**Neumayer--Stat**	**146.45**	**149**	*e*PKPdf		PKPdf		12 57 13.7	+0.5
VNA2	**Neumayer--Watz**	**146.70**	**150**	*e*PKPdf		PKPdf		12 57 08.7	-4.9
VNA2				*e*				12 57 19.9	
LBTB	**Lobatse**	**148.42**	**47**	*e*PKPbc		PKPbc		12 57 21.9	+0.5
LBTB				LR		LR			
	comp=Z,2μm,20.0s,MS6.0								
ABPO	**Ambohimpanom**	**148.84**	**6**	*e*PKPbc		PKPbc		12 57 23.5	+0.9
ABPO				LR		LR			
	comp=Z,2μm,21.0s,MS5.8								
RER	**Riviere de l'E**	**150.76**	**350**	PFAKE				12 57 30.0	+8.2
RER				LR		LR			
	comp=Z,1μm,19.0s,MS5.7								
BOSA	**Boshof**	**151.27**	**51**	PKPbc		PKPbc		12 57 28.3	0.0
	comp=Z,13nm,0.8s,baz=340,slow=2.3,SNR=12								
BOSA				PKPab		PKPab		12 57 35.8	-0.4
	comp=Z,15nm,0.9s,baz=358,slow=5.9,SNR=6.4								
BOSA	**Boshof**	**151.27**	**51**	*e*PKIKP		PKPbc		12 57 28.6	+0.3
BOSA				MLR		MLR			
	comp=Z,2μm,22.0s,MS6.0								
SUR	**Sutherland**	**151.83**	**62**	PFAKE				12 57 30.0	+7.0
SUR				LR		LR			
	comp=Z,3μm,20.0s,MS6.0								
SUR	**Sutherland**	**151.83**	**62**	PKPbc		PKPbc		12 57 33.5	+4.1
	comp=Z,19nm,0.9s,baz=42,slow=1.5,SNR=5.2								
SUR				PKPab		PKPab		12 57 40.6	+2.1
	comp=Z,30nm,1.0s,baz=204,slow=1.1,SNR=4.0								
MAIT	**Maitri**	**152.72**	**153**	*e*PKPdif		PKPbc		12 57 30.9	+0.6
NVL	**N'lazarevskaya**	**152.76**	**153**	*e*PKIKP		PKPab		12 57 39.8	-1.5
NVL				*e*				13 04 48.9	
NVL				*e*SSS				13 20 45.8	
MIR	**Mirnyy**	**152.99**	**217**	*e*PKIKP		PKPbc		12 57 32.0	+1.0
MIR				pmax		pmax			
	comp=Z,21nm,1.0s								
SYO	**Syowa Base**	**160.37**	**168**⇑	*e*PKPab		PKPab		12 58 13.0	-1.0
MAW	**Mawson**	**161.41**	**195**	PFAKE				12 57 40.0	+5.8
MAW				LR		LR			
	comp=Z,3μm,20.0s								
MAW	**Mawson**	**161.41**	**195**	PKPab		PKPab		12 58 18.2	-0.4
	comp=Z,1.9nm,0.8s,baz=139,slow=5.8,SNR=4.2								

*IDC **28** 12:38:41.8±0.9, 12°.90N×124°.47E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.9/23, mbtmp3.9/11, ML4.9/1, Error ellipse: s-maj=29.5km s-min=16.3km az=63.0*
*MAN **28** 12:38:43.1°.11N×124°.66E, h24km, mb4.7, ML3.7, MS3.7 MAN INTENSITY II - CATARMAN NORTHERN SAMAR.*
*ISCJB **28** 12:38:45.1±0.9, 13°.02N±0°.04×124°.57E±0°.07, h36km±8km, mb4.0/13, Error ellipse: s-maj=11.8km s-min=6.1km az=157.8*
*NEIC **28** 12:38:47.6±1.5, 12°.88N×124°.42E, h42km±14km, mb4.3/3, Error ellipse: s-maj=22.6km s-min=7.3km az=58.0*
NEIC Felt [II PIVS] at Catarman.

ISC 28 12:38:45.5±1.0, 13°.02N±0°.04×124°.55E±0°.06, h23km±7km, n22, σ0°90/27, mb4.0/13, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
CNP	**Catarman**	**0.51**	**168**	*e*P	**Pb**	**12**	**38**	**55.9**	**+0.1**
CNP				*e*S	**Sb**	**12**	**39**	**05.3**	**+2.4**
PVCP	**Virac**	**0.70**	**326**	*e*P	**Pb**	**12**	**38**	**56.3**	**-2.7**
PVCP				*e*S	**Sb**	**12**	**39**	**08.0**	**-0.1**
GQP	**Guinayangan**	**2.23**	**294**	*e*P	**Sn**	**12**	**39**	**52.7**	**+4.8**
RCP	**Roxas**	**2.28**	**231**	*e*P	**Pn**	**12**	**39**	**21.6**	**-0.2**
RCP				*i* S	**Sn**	**12**	**39**	**48.9**	**-0.3**
TBP	**Tagbilaran**	**3.37**	**192**	*e*P	**Pn**	**12**	**39**	**36.6**	**-0.2**
TBP				*e*S	**Sn**	**12**	**40**	**16.0**	**-0.1**
TGY	**Tagaytay City**	**3.68**	**288**	Pn	**Pn**	**12**	**39**	**41.3**	**+0.3**
	106nm,0.3s,baz=191,slow=12,SNR=3.5								
TGY				Sn	**Sn**	**12**	**40**	**25.4**	**+1.7**
	76nm,0.3s,baz=217,slow=13,SNR=2.6								
DAV	**Davao City (W)**	**5.99**	**170**	Pn	**Pn**	**12**	**40**	**12.1**	**-0.8**
KSRS	**Korea Array**	**24.52**	**6**	P	**P**	**12**	**44**	**04.5**	**+1.2**
	1.3nm,0.6s,mb3.6,baz=177,slow=10,SNR=7.8								
CMAR	**Chiang Mai Arr**	**25.22**	**286**	P	**P**	**12**	**44**	**08.5**	**-1.4**
	0.5nm,0.5s,mb3.3,baz=99,slow=7.6,SNR=7.2								
WRA	**Warramunga Arr**	**34.14**	**163**	P	**P**	**12**	**45**	**27.9**	**-1.0**
	0.7nm,0.6s,mb3.8,baz=343,slow=8.6,SNR=8.6								
ASAR	**Alice Springs**	**37.59**	**166**	P	**P**	**12**	**45**	**57.5**	**-0.9**
	0.5nm,0.4s,mb3.6,baz=341,slow=7.0,SNR=20								
ULN	**Ulaanbaatar**	**37.69**	**341**	*e*P	**P**	**12**	**45**	**59.4**	**+0.3**
	2.7nm,0.6s,mb4.2								
SONM	**Songino Array**	**37.88**	**340**	P	**P**	**12**	**46**	**00.5**	**-0.1**
	1.7nm,0.7s,mb3.9,baz=143,slow=10,SNR=5.2								
MK31	**Makanchi Array**	**48.84**	**322**	*e*P	**P**	**12**	**47**	**29.7**	**+0.6**
MKAR	**Makanchi Array**	**48.84**	**322**	P	**P**	**12**	**47**	**30.1**	**+0.9**
	3.2nm,0.7s,mb4.4,baz=122,slow=8.6,SNR=37								
ZAA0	**Zalesovo Array**	**51.42**	**331**	*e*P	**P**	**12**	**47**	**48.6**	**0.0**
ZALV	**Zalesovo Beam**	**51.42**	**331**	P	**P**	**12**	**47**	**48.2**	**-0.4**
	2.2nm,0.7s,mb4.2,baz=117,slow=8.6,SNR=11								
KURK	**Kurchatov**	**52.87**	**325**	P	**P**	**12**	**47**	**59.4**	**0.0**
	2.2nm,0.6s,mb4.3,baz=121,slow=7.9,SNR=8.8								
BVAR	**Borovoye Array**	**58.47**	**325**	P	**P**	**12**	**48**	**39.7**	**+0.1**
	1.8nm,0.7s,mb4.2,baz=120,slow=11,SNR=8.5								
BRVK	**Borovoye**	**58.54**	**325**	*e*P	**P**	**12**	**48**	**39.5**	**-0.6**
	4.9nm,0.9s,mb4.5								
ABKAR	**Akbulak array**	**63.71**	**319**	*e*P	**P**	**12**	**49**	**15.0**	**-0.2**
	1.9nm,0.7s,mb4.2								
ILAR	**Eielson Array**	**77.72**	**26**	P	**P**	**12**	**50**	**41.5**	**+1.2**
	0.4nm,0.8s,mb3.4,baz=258,slow=7.7,SNR=4.4								

*ISCJB **28** 12:55:10.0±0.6, 37°.01N±0°.03×29°.20E±0°.03, h2km±5km, Error ellipse: s-maj=4.5km s-min=3.8km az=33.2*
*DDA **28** 12:55:09.5, 37°.02N×29°.19E, h5km±1km, Md3.2*
*ISK **28** 12:55:09.7, 37°.00N×29°.21E, h9km, MD3.2*
*CSEM **28** 12:55:10.0±0.2, 36°.99N×29°.21E, h5km, MD3.2, Error ellipse: s-maj=3.7km s-min=2.7km az=11.0*

ISC 28 12:55:10.6±0.5, 37°.00N±0°.03×29°.20E±0°.03, h6km±4km, n53, σ0°91/77, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
GLHS	**Glhisar (BURDU**	**0.28**	**57**	*e*PG	**Pg**	**12**	**55**	**15.8**	**-0.3**
GLHS				*e*SG	**Sg**	**12**	**55**	**19.9**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.28**	**57**	*e*Pg	**Pg**	**12**	**55**	**15.8**	**-0.3**
GLHS				*e*Sg	**Sg**	**12**	**55**	**19.9**	**+0.1**
GOLH	**Golhisar**	**0.37**	**51**	*i* P	**Pg**	**12**	**55**	**16.6**	**-1.1**
GOLH				*i* S	**Sg**	**12**	**55**	**23.2**	**+0.5**
GOLH	**Golhisar**	**0.37**	**51**	*i* P	**Pg**	**12**	**55**	**16.6**	**-1.2**
GOLH				*i* S	**Sg**	**12**	**55**	**23.2**	**+0.6**
ELL	**Elmali**	**0.62**	**114**	*e*PG	**Pg**	**12**	**55**	**21.5**	**-1.0**
ELL				*e*SG	**Sg**	**12**	**55**	**31.3**	**+0.7**
ELL	**Elmali**	**0.62**	**114**	*e*Pg	**Pg**	**12**	**55**	**21.5**	**-1.0**
ELL				*e*Sg	**Sg**	**12**	**55**	**31.3**	**+0.7**
DNZL	**Cakiroluk**	**0.70**	**350**	*i* P	**Pg**	**12**	**55**	**22.4**	**-1.6**
DNZL				*i* S	**Sg**	**12**	**55**	**33.9**	**+0.8**
DNZL	**Cakiroluk**	**0.70**	**350**	*i* P	**Pg**	**12**	**55**	**22.4**	**-1.6**
DNZL				*i* S	**Sg**	**12**	**55**	**33.9**	**+0.8**
YER	**Yerkesik**	**0.75**	**280**	*e*PG	**Pg**	**12**	**55**	**24.9**	**-0.1**
YER	**Yerkesik**	**0.75**	**280**	*e*Pg	**Pg**	**12**	**55**	**24.9**	**0.0**
DENT	**Denizli**	**0.76**	**350**	*e*PG	**Pg**	**12**	**55**	**24.2**	**-1.0**
DENT				*e*SG	**Sg**	**12**	**55**	**36.1**	**+0.9**
DENT	**Denizli**	**0.76**	**350**	*e*Pg	**Pg**	**12**	**55**	**24.2**	**-1.0**
DENT				*e*Sg	**Sg**	**12**	**55**	**36.1**	**+1.0**
AKAS	**Kas**	**0.83**	**157**	*i* P	**Pg**	**12**	**55**	**25.4**	**-1.2**
AKAS				*i* S	**Sg**	**12**	**55**	**39.5**	**+2.2**
AKAS	**Kas**	**0.83**	**157**	*i* P	**Pg**	**12**	**55**	**25.4**	**-1.2**
AKAS				*i* S	**Sg**	**12**	**55**	**39.5**	**+2.1**
KORT	**Korkueli**	**0.92**	**90**	*i* P	**Pg**	**12**	**55**	**28.4**	**+0.2**
KORT				*i* S	**Sg**	**12**	**55**	**43.8**	**+3.7**
KORT	**Korkueli**	**0.92**	**90**	*i* P	**Pg**	**12**	**55**	**28.4**	**+0.2**
KORT				*i* S	**Sg**	**12**	**55**	**43.8**	**+3.7**
ANTB	**Antalya**	**1.17**	**95**	*e*PN	**Pn**	**12**	**55**	**32.7**	**-0.7**
ANTB	**Antalya**	**1.17**	**95**	*e*Pn	**Pn**	**12**	**55**	**32.7**	**-0.7**
MLSB	**Milas**	**1.18**	**285**	*e*PN	**Pn**	**12**	**55**	**33.1**	**-0.4**
MLSB	**Milas**	**1.18**	**285**	*e*Pn	**Pn**	**12**	**55**	**33.1**	**-0.4**
BCK	**Bucak**	**1.20**	**67**	*e*PN	**Pn**	**12**	**55**	**32.8**	**-1.0**
BCK	**Bucak**	**1.20**	**67**	*e*Pn	**Pn**	**12**	**55**	**32.8**	**-1.0**
AYDN	**Tasoluk**	**1.24**	**302**	*i* P	**Pn**	**12**	**55**	**34.1**	**-0.4**
AYDN				*i* S	**Sb**	**12**	**55**	**51.7**	**+1.1**
AYDN	**Tasoluk**	**1.24**	**302**	*i* P	**Pn**	**12**	**55**	**34.1**	**-0.3**
AYDN				*i* S	**Sb**	**12**	**55**	**51.7**	**+1.1**
DAT	**Datca**	**1.33**	**259**	*e*PN	**Pn**	**12**	**55**	**35.0**	**-0.7**
DAT	**Datca**	**1.33**	**259**	*e*Pn	**Pn**	**12**	**55**	**35.0**	**-0.6**
KHL	**Karahalli**	**1.34**	**11**	*e*PN	**Pn**	**12**	**55**	**35.3**	**-0.5**
KHL	**Karahalli**	**1.34**	**11**	*e*Pn	**Pn**	**12**	**55**	**35.3**	**-0.5**
KHAL	**Karahalli**	**1.38**	**9**	*i* P	**Pn**	**12**	**55**	**36.1**	**-0.3**
KHAL				*i* S	**Sb**	**12**	**55**	**56.6**	**+1.9**
KHAL	**Karahalli**	**1.38**	**9**	*i* P	**Pn**	**12**	**55**	**36.1**	**-0.3**
KHAL				*i* S	**Sb**	**12**	**55**	**56.6**	**+1.9**
BDRM	**Kayabasi**	**1.41**	**273**	*i* P	**Pn**	**12**	**55**	**36.8**	**+0.1**
BDRM				*i* S	**Sb**	**12**	**55**	**56.9**	**+1.5**
BDRM	**Kayabasi**	**1.41**	**273**	*i* P	**Pn**	**12**	**55**	**36.8**	**+0.1**
BDRM				*i* S	**Sb**	**12**	**55**	**56.9**	**+1.5**
BODT	**Bodrum**	**1.52**	**273**	*e*PN	**Pn**	**12**	**55**	**37.3**	**-0.9**
BODT	**Bodrum**	**1.52**	**273**	*e*Pn	**Pn**	**12**	**55**	**37.3**	**-0.9**
KULA	**Kula-Manisa**	**1.57**	**344**	*e*PN	**Pn**	**12**	**55**	**38.9**	**0.0**
KULA	**Kula-Manisa**	**1.57**	**344**	*e*Pn	**Pn**	**12**	**55**	**38.9**	**0.0**
SHUT	**Suhut-Afyon**	**1.88**	**34**	*e*PN	**Pn**	**12**	**55**	**42.4**	**-0.8**
SHUT	**Suhut-Afyon**	**1.88**	**34**	*e*Pn	**Pn**	**12**	**55**	**42.4**	**-0.8**
DEMI	**Demirci**	**2.07**	**349**	*i* P	**Pn**	**12**	**55**	**46.0**	**+0.2**
DEMI				*i* S	**Sn**	**12**	**56**	**04.7**	**-7.2**
DEMI	**Demirci**	**2.07**	**349**	*i* P	**Pn**	**12**	**55**	**46.0**	**+0.2**
IZM	**Izmir**	**2.08**	**313**	*e*PN	**Pn**	**12**	**55**	**45.9**	**0.0**
GDZ	**Gediz**	**2.09**	**6**	*i* P	**Pn**	**12**	**55**	**45.6**	**-0.5**
GDZ				*i* S	**Sn**	**12**	**56**	**11.9**	**-0.6**
GDZ	**Gediz**	**2.09**	**6**	*i* P	**Pn**	**12**	**55**	**45.6**	**-0.5**
GDZ				*i* S	**Sn**	**12**	**56**	**11.9**	**-0.6**
ALT	**Altintas**	**2.17**	**19**	*e*PN	**Pn**	**12**	**55**	**47.5**	**+0.4**
ALT	**Altintas**	**2.17**	**19**	*e*Pn	**Pn**	**12**	**55**	**47.5**	**+0.3**
HDMB	**Hadim**	**2.63**	**90**	*e*PN	**Pn**	**12**	**55**	**53.6**	**+0.1**
HDMB	**Hadim**	**2.63**	**90**	*e*Pn	**Pn**	**12**	**55**	**53.6**	**+0.1**
KONT	**Konya--Tatoy**	**2.68**	**69**	*e*PN	**Pn**	**12**	**55**	**54.3**	**+0.1**
KONT	**Konya--Tatoy**	**2.68**	**69**	*e*Pn	**Pn**	**12**	**55**	**54.3**	**+0.1**
KIZT	**Kizilcal**	**2.83**	**48**	*e*PN	**Pn**	**12**	**55**	**57.0**	**+0.8**
KIZT	**Kizilcal**	**2.83**	**48**	*e*Pn	**Pn**	**12**	**55**	**57.0**	**+0.8**
ERMK	**Ermenek**	**3.00**	**96**	*i* P	**Pn**	**12**	**56**	**01.6**	**+3.1**
ERMK				*i* S	**Sn**	**12**	**56**	**41.0**	**+6.3**
ERMK	**Ermenek**	**3.00**	**96**	*i* P	**Pn**	**12**	**56**	**01.6**	**+3.0**

*IDC **28** 13:14:50.9±1.4, 50°.05N×129°.75W, h0km, mb3.6/4, mb1 4.0/12, mb1mx3.8/30, mbtmp3.8/12, ML3.8/7, Error ellipse: s-maj=26.5km s-min=11.4km az=74.0*
*ISCJB **28** 13:14:51.2±0.7, 50°

Error ellipse: s-maj=11.0km s-min=5.0km az=136.0

ISC 28 13:27:57.3±0.8, 40°72'N±0'04×20°68'E±0'05, h8km±3km, n41, σ1ᵗ8ᵗ17/64, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN				*i* PG			
KBN	**Korca**	**0.13**	**139**		**Pg**	**13 27 59.0**	**-1.0**
KBN				*i* SG	**Sg**	**13 28 02.1**	**+0.2**
KBN	**Korca**	**0.13**	**139**	*i* Pg	**Pg**	**13 27 59.0**	**-1.0**
KBN				*i* Sg	**Sg**	**13 28 02.1**	**+0.2**
NEST	**Nestorio**	**0.41**	**137**	P	**Pg**	**13 28 04.2**	**-1.1**
NEST	**Nestorio**	**0.41**	**137**	P	**Pg**	**13 28 04.2**	**-1.1**
FNA	**Florina**	**0.53**	**83**	P	**Pg**	**13 28 07.4**	**-0.2**
FNA				S	**Sg**	**13 28 15.8**	**+1.2**
FNA	**Florina**	**0.53**	**83**	P	**Pg**	**13 28 07.4**	**-0.2**
FNA				S	**Sg**	**13 28 15.8**	**+1.2**
BIA	**Bitola**	**0.57**	**58**	P	**Pg**	**13 28 07.9**	**-0.5**
BIA				S	**Sg**	**13 28 16.8**	**+0.9**
BIA	**Bitola**	**0.57**	**58**	*e*Pg	**Pg**	**13 28 08.1**	**-0.2**
BIA				*e*Sg	**Sg**	**13 28 16.9**	**+1.1**
BIA				*e*Lg		13 28 17.1	
	comp=E,109nm,0.2s						
BIA				*e*Lg		13 28 17.6	
	comp=N,98nm,0.2s						
BIA	**Bitola**	**0.57**	**58**	P	**Pg**	**13 28 07.9**	**-0.5**
BIA				S	**Sg**	**13 28 16.8**	**+0.9**
KRUS	**Krusevo**	**0.78**	**33**	*e*Pg	**Pg**	**13 28 11.8**	**-0.5**
KZN	**Kozani**	**0.93**	**116**	*e*PN	**Pg**	**13 28 13.8**	**-1.3**
KZN				*e*SN	**Sn**	**13 28 27.7**	**-2.5**
KZN	**Kozani**	**0.93**	**116**	P	**Pg**	**13 28 13.8**	**-1.3**
KZN				S	**Sg**	**13 28 27.9**	**+0.7**
KZN	**Kozani**	**0.93**	**116**	P	**Pg**	**13 28 13.8**	**-1.3**
KZN				*e*Sn	**Sn**	**13 28 27.7**	**-2.5**
JAN	**Janina**	**1.07**	**173**	*e*PN	**Pn**	**13 28 16.7**	**-1.9**
JAN				*e*SN	**Sn**	**13 28 16.7**	**-1.9**
JAN	**Janina**	**1.07**	**173**	*e*Pn	**Pn**	**13 28 16.7**	**-1.9**
JAN				*e*Sn	**Sn**	**13 28 31.4**	**-2.2**
KEK	**Kerkira**	**1.21**	**214**	*e*PN	**Pn**	**13 28 20.4**	**-0.1**
KEK	**Kerkira**	**1.21**	**214**	P	**Pb**	**13 28 21.1**	**+0.7**
KEK				S	**Sg**	**13 28 38.5**	**+2.3**
KEK	**Kerkira**	**1.21**	**214**	*e*Pn	**Pn**	**13 28 20.4**	**-0.1**
KEK	**Kerkira**	**1.21**	**214**	P	**Pb**	**13 28 21.1**	**+0.7**
KEK				S	**Sg**	**13 28 38.5**	**+2.3**
GRG	**Griva**	**1.33**	**79**	P	**Pn**	**13 28 21.8**	**-0.3**
GRG	**Griva**	**1.33**	**79**	P	**Pn**	**13 28 21.8**	**-0.3**
LIT	**Litokhoron**	**1.51**	**113**	*e*PN	**Pn**	**13 28 23.9**	**-0.8**
LIT	**Litokhoron**	**1.51**	**113**	P	**Pn**	**13 28 23.4**	**-1.3**
LIT				S	**Sn**	**13 28 46.5**	**+1.9**
LIT	**Litokhoron**	**1.51**	**113**	P	**Pn**	**13 28 23.4**	**-1.3**
LIT	**Litokhoron**	**1.51**	**113**	*e*Pn	**Pn**	**13 28 23.9**	**-0.8**
THL	**Klokotos Trika**	**1.54**	**138**	*e*PN	**Pn**	**13 28 24.7**	**-0.4**
THL	**Klokotos Trika**	**1.54**	**138**	P	**Pn**	**13 28 24.7**	**-0.4**
THL				S	**Sn**	**13 28 46.2**	**+0.9**
THL	**Klokotos Trika**	**1.54**	**138**	P	**Pn**	**13 28 24.7**	**-0.4**
THL				S	**Sn**	**13 28 46.2**	**+0.9**
KNT	**Kendrikon**	**1.74**	**75**	P	**Pn**	**13 28 27.7**	**-0.1**
KNT				S	**Sn**	**13 28 50.1**	**-0.1**
KNT	**Kendrikon**	**1.74**	**75**	P	**Pn**	**13 28 27.7**	**-0.1**
KNT				S	**Sn**	**13 28 50.1**	**-0.1**
LKD2	**Lefkada island**	**1.93**	**180**	P	**Pn**	**13 28 32.8**	**+2.4**
LKD2				S	**Sn**	**13 28 58.3**	**+3.5**
LKD2	**Lefkada island**	**1.93**	**180**	P	**Pn**	**13 28 32.8**	**+2.4**
SOH	**Sokhos**	**2.03**	**86**	*e*PN	**Pn**	**13 28 31.7**	**-0.2**
SOH	**Sokhos**	**2.03**	**86**	P	**Pn**	**13 28 31.8**	**-0.1**
SOH				S	**Sn**	**13 28 59.7**	**+2.3**
SOH	**Sokhos**	**2.03**	**86**	*e*Pn	**Pn**	**13 28 31.7**	**-0.2**
AGG	**Agios Georgios**	**2.12**	**143**	P	**Pn**	**13 28 33.2**	**+0.2**
AGG				S	**Sn**	**13 28 59.2**	**-0.3**
AGG	**Agios Georgios**	**2.12**	**143**	P	**Pn**	**13 28 33.2**	**+0.2**
AGG				S	**Sn**	**13 28 59.2**	**-0.3**
NEO	**Neokhori**	**2.41**	**125**	*e*PN	**Pn**	**13 28 36.6**	**-0.4**
NEO	**Neokhori**	**2.41**	**125**	*e*Pn	**Pn**	**13 28 36.6**	**-0.4**
PAIG	**Paliouri**	**2.43**	**108**	P	**Pn**	**13 28 36.9**	**-0.3**
PAIG	**Paliouri**	**2.43**	**108**	P	**Pn**	**13 28 36.9**	**-0.3**

DJA 28 13:30:39, 1°36N×122°14E, h14km, MLv3.5/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.90**	**193**	P	Pb	13 30 54.2	-2.2
TOLI	**Toli-Toli**	**1.37**	**260**	P	Pn	13 31 02.9	-0.8
TOLI				S	Sn	13 31 20.3	-1.3
KMSI	**Cibinong**	**2.00**	**113**	P	Pn	13 31 12.8	+0.4
KMSI				S	Sn	13 31 35.9	-1.3
LUWI	**Luwuk**	**2.47**	**165**	P	Pn	13 31 19.7	+0.9
LUWI				S	Sn	13 31 49.1	+0.3
MNI	**Manado**	**2.70**	**88**	P	Pn	13 31 24.0	+2.0
TTSI	**Tana Toraja**	**4.95**	**208**	P	Pn	13 31 52.5	-0.5

*KISR **28** 13:31:23.6±1.1, 31°97N×48°15E, h34km±999km, ML2.5*
*TEH **28** 13:31:29.0, 32°32N×47°41E, h27km*

ISC 28 13:31:26.5±2.2, 32°26N±0°05×47°46E±0°08, h9km±18km, n13, σ0ᵗ98/19, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVIS	**Veis**	**2.32**	**347**	*e*Sg	**Sg**	**13 32 39.6**	**-1.3**
IVIS				*e*Pn	**Pn**	**13 32 04.7**	**-0.1**
IVIS				*e*		13 32 44.5	
	comp=Z,916nm,0.2s						
MIB	**Mutribah**	**2.45**	**182**	*e*P	**Pn**	**13 32 06.0**	**-0.7**
MIB				*e*S	**Sn**	**13 32 37.8**	**+1.1**
MIB				AML	AML	13 32 43.5	
	comp=Z,36nm,0.7s						
IDHR	**Dehrash**	**2.59**	**340**	*e*	**Sg**	**13 32 51.0**	**+1.2**
	comp=Z,1μm,0.1s						
IDHR				*e*Pn	**Pn**	**13 32 07.7**	**-0.9**
ILIN	**Lien**	**2.68**	**351**	*e*Pn	**Pn**	**13 32 10.0**	**+0.2**
ILIN				*e*		13 33 08.0	
	comp=N,838nm,0.2s						
IPIR	**Pirpir**	**2.93**	**81**	*e*Pn	**Pn**	**13 32 14.8**	**+1.5**
IPIR				*e*		13 33 15.0	
	comp=Z,1μm,0.5s						
NAY	**Al-Naaiem**	**3.01**	**184**	*e*P	**Pn**	**13 32 13.2**	**-1.1**
NAY				*e*S	**Sn**	**13 32 51.5**	**+1.1**
NAY				AML	AML	13 32 58.9	
	comp=Z,10nm,0.5s						
RDF	**Al-Radifah**	**3.33**	**179**	*e*P	**Pn**	**13 32 17.9**	**-0.8**
RDF				*e*S	**Sn**	**13 32 57.5**	**-0.8**
RDF				AML	AML	13 33 00.9	
	comp=Z,17nm,0.4s						
IKLH	**Kolahrood**	**3.63**	**72**	*e*Pn	**Pn**	**13 32 23.3**	**+0.5**
IKLH				*e*		13 33 16.3	
	comp=Z,313nm,0.2s						
IRAZ	**Razeghan**	**3.75**	**33**	*e*Pn	**Pn**	**13 32 25.8**	**+1.3**
IRAZ				*e*		13 32 27.2	
	comp=Z,755nm,0.2s						
IZEF	**Zefreh**	**4.16**	**80**	*e*Pn	**Pn**	**13 32 30.3**	**+0.2**
IZEF				*e*		13 32 31.8	
	comp=Z,188nm,0.1s						
IZEF				*e*Sn	**Sn**	**13 33 16.8**	**-2.1**
IVRN	**Varamin**	**4.49**	**51**	*e*Pn	**Pn**	**13 32 34.6**	**0.0**
IVRN				*e*		13 32 54.6	
	comp=Z,174nm,0.2s						
ISFB	**Sefidab**	**4.51**	**61**	*e*Pn	**Pn**	**13 32 35.8**	**+0.8**
ISFB				*e*		13 33 29.8	
	comp=Z,88nm,0.2s						
IDMV	**Damavand**	**5.04**	**48**	*e*Pn	**Pn**	**13 32 41.6**	**-0.6**
IDMV				*e*		13 33 10.6	
	comp=Z,95nm,0.1s						

*MOS **28** 13:31:54.6±1.1, 51°11N×179°18E, h33km, mb4.6/25, Error ellipse: s-maj=11.6km s-min=8.4km az=85.6*
*BJI **28** 13:31:54.5, 51°20N×179°10E, h39km, mB5.0/11, mb4.6/21, Ms4.7/8, Ms7 4.5/8*
*ISCJB **28** 13:31:55.8±0.9, 51°12N±0°08×179°10E±0°05, h44km±7km, mb4.4/61, MS4.3/3, Error ellipse: s-maj=13.8km s-min=5.3km az=170.5*
*IDC **28** 13:31:56.9±5.5, 51°23N×179°11E, h35km±43km, mb4.0/19, mb1 4.1/21, mb1mx4.1/30, mbtmp4.0/21, ML3.8/2, MS4.1/2, Ms1 4.1/2, ms1mx3.5/45, Error ellipse: s-maj=23.2km s-min=12.2km az=162.0*
*NEIC **28** 13:31:57.5±0.8, 51°21N×179°06E, h39km±6km, mb4.3/29, ML4.3(AEIC), ML4.2(PMR), Error ellipse: s-maj=12.3km s-min=4.8km az=174.0*

ISC 28 13:31:57.7±0.8, 51°15N±0°08×179°12E±0°06, h43km±6km, n117, σ0ᵗ98/119, mb4.4/61, MS4.3/3, 7C, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.26**	**27**	*e*P	**Pn**	**13 32 03.2**	**-2.6**
GSTR	**Great Sitkin T**	**3.15**	**71**	P	**Pn**	**13 32 45.2**	**+0.4**
SMY	**Shemya**	**3.48**	**299**	*e*P	**Pn**	**13 32 50.5**	**+1.2**
ATKA	**Atka Island**	**4.29**	**73**	P	**Pn**	**13 33 01.2**	**+0.8**
ATKA				S	**Sn**	**13 33 53.6**	**+4.4**
NIKO	**Nikolski**	**7.64**	**71**	*e*Pn	**Pn**	**13 33 46.7**	**+0.5**
	42nm,0.6s						
SPIA	**Saint Paul Isl**	**8.68**	**42**	P	**Pn**	**13 34 04.5**	**+4.0**
SDPT	**Sand Point**	**12.91**	**63**	*e*P	**Pn**	**13 34 58.0**	**-0.3**
	17nm,0.5s						
PETK	**Petropavlovsk-**	**13.30**	**287**	Pn	**Pn**	**13 35 04.6**	**+1.0**
	0.2nm,0.3s,baz=84,slow=15,SNR=6.7						
PETK				LR	LR	13 39 44.3	
	comp=Z,638nm,18.5s,baz=60,slow=35						
GAMB	**Gambell**	**13.57**	**18**	P	**Pn**	**13 35 09.9**	**+2.7**
CHGN	**Chignik**	**14.24**	**60**	*e*P	**Pn**	**13 35 15.4**	**-1.0**
SVW2	**Sparrevohn**	**17.15**	**45**	*e*P	**Pn**	**13 35 54.9**	**+1.1**
	6.7nm,1.0s						
OHAK	**Old Harbor**	**17.18**	**59**	*e*P	**Pn**	**13 35 50.6**	**-3.6**
	20nm,0.6s						
KDAK	**Kodiak Island**	**17.65**	**57**	*e*P	**Pn**	**13 35 56.7**	**-3.2**
	10nm,0.7s						
KDAK	**Kodiak Island**	**17.65**	**57**	P	**Pn**	**13 35 58.4**	**-1.6**
	1.2nm,0.3s,baz=269,slow=8.7,SNR=8.7						
KDAK	**Kodiak Island**	**17.65**	**57**	*ce*P	**Pn**	**13 35 58.0**	**-2.0**
TTA	**Tatalina**	**17.81**	**39**	*e*P	**Pn**	**13 36 03.3**	**+1.4**
BILL	**Bilibino**	**18.07**	**344**	*e*P	**Pn**	**13 36 04.4**	**-0.7**
	16nm,0.8s						
BILL	**Bilibino**	**18.07**	**344**	⇑*e*P	**Pn**	**13 36 07.3**	**+2.2**
BILL				pmax	pmax		
	comp=Z,19nm,1.2s						
BILL				MLR	MLR		
	comp=Z,500nm,15.0s						
RSO	**Redoubt South**	**18.21**	**48**	*e*P	**Pn**	**13 36 07.5**	**+0.6**
PPLA	**Purkeypile**	**19.35**	**42**	*e*P	**Pn**	**13 36 20.1**	**-0.4**
	comp=Z,39nm,1.3s						
SLKM	**Skilak Lake**	**19.43**	**49**	*e*P	**Pn**	**13 36 20.4**	**-1.1**
SEW	**Seward**	**19.70**	**51**	*e*P	**Pn**	**13 36 23.0**	**-1.8**
	comp=Z,5.9nm,0.5s						
RC01	**Rabbit Creek A**	**19.82**	**48**	*e*P	**Pn**	**13 36 25.8**	**-0.3**
BPAW	**Bear Paw Mtn.**	**20.35**	**39**	*e*P	**P**	**13 36 30.6**	**+0.6**
	comp=Z,2nm,0.8s						
TRF	**Thorofare Moun**	**20.36**	**41**	*e*P	**P**	**13 36 30.8**	**+0.6**
	comp=Z,13nm,0.8s						
SML	**Sawmill**	**20.66**	**46**	*e*P	**P**	**13 36 32.5**	**-0.9**
	comp=Z,2.0nm,0.7s						
SML	**Sawmill**	**20.66**	**46**	*e*P	**P**	**13 36 32.5**	**-0.9**
SML				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MCK	**McKinley**	**21.03**	**41**	*e*P	**P**	**13 36 36.1**	**-1.3**
	comp=Z,9.9nm,0.9s,mb4.1						
MCK	**McKinley**	**21.03**	**41**	*e*P	**P**	**13 36 36.1**	**-1.3**
MCK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
COLA	**College**	**21.90**	**39**	*e*P	**P**	**13 36 47.9**	**+1.2**
	comp=Z,11nm,0.9s,mb4.3						
COLA	**College**	**21.90**	**39**	*e*P	**P**	**13 36 47.9**	**+1.2**
COLA				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.3						
ILAR	**Eielson Array**	**22.25**	**39**	P	**P**	**13 36 48.8**	**-1.6**
	comp=Z,1.3nm,0.6s,mb3.5,baz=239,slow=8.4,SNR=24						
ILAR				PcP	PcP	13 40 44.5	-0.3
	comp=Z,0.6nm,0.7s,baz=275,slow=3.3,SNR=5.8						
PAX	**Paxson**	**22.27**	**44**	*e*P	**P**	**13 36 49.4**	**-1.2**
	comp=Z,8.5nm,0.8s,mb4.2						
PAX	**Paxson**	**22.27**	**44**	*e*P	**P**	**13 36 49.4**	**-1.2**
PAX				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
MENT	**Mentasta**	**23.03**	**45**	*e*P	**P**	**13 36 58.8**	**+0.1**
EGAK	**Eagle**	**24.58**	**41**	*e*P	**P**	**13 37 12.9**	**-0.3**
	comp=Z,20nm,1.0s,mb4.6						
DAWY	**Dawson**	**25.17**	**43**	*e*P	**P**	**13 37 17.9**	**-0.6**
ASAJ	**Asahikawa**	**25.39**	**268**	*e*P	**P**	**13 37 19.5**	**-1.3**
	comp=Z,10nm,0.9s,mb4.4						
ASAJ	**Asahikawa**	**25.39**	**268**	P	**P**	**13 37 20.4**	**-0.3**
	comp=Z,22nm,0.9s,mb4.7,baz=52,slow=6.5,SNR=13						
ASAJ	**Asahikawa**	**25.39**	**268**	P	**P**	**13 37 20.4**	**-0.3**
ASAJ				pmax	pmax		
	comp=Z,22nm,0.9s						
INK	**Inuvik**	**28.40**	**35**	P	**P**	**13 37 46.3**	**-1.2**
	comp=Z,5.6nm,0.8s,mb4.2,baz=264,slow=14,SNR=7.0						
KLR	**Kul'dur**	**29.98**	**285**	*e*P	**P**	**13 37 58.0**	**-3.7**
MJAR	**Matsushiro Arr**	**32.45**	**259**	P	**P**	**13 38 24.5**	**+0.8**
	comp=Z,0.4nm,0.3s,mb3.7,baz=71,slow=7.2,SNR=4.2						
YKA	**Yellowknife Ar**	**36.34**	**46**	P	**P**	**13 38 56.7**	**-0.1**
	comp=Z,2.5nm,0.7s,mb4.2,baz=283,slow=7.9,SNR=4.5						
YKA	**Yellowknife Ar**	**36.34**	**46**	P	**P**	**13 38 56.7**	**-0.2**
KSRS	**Korea Array**	**38.33**	**269**	P	**P**	**13 39 14.8**	**+0.8**
	comp=Z,2.9nm,0.9s,mb4.0,baz=59,slow=8.1,SNR=13						
KSRS				PcP	PcP	13 41 27.8	+0.6
	comp=Z,1.2nm,0.8s,baz=70,slow=4.1,SNR=4.7						
KSRS	**Korea Array**	**38.33**	**269**	P	**P**	**13 39 14.9**	**+0.8**
KSRS						13 41 27.8	
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.6						
YBH	**Yreka Blue Hor**	**40.21**	**80**	P	**P**	**13 39 35.1**	**+5.4**
YBH				LR	LR	13 54 32.2	
YBH	**Yreka Blue Hor**	**40.21**	**80**	P	**P**	**13 39 35.1**	**+5.4**
	comp=Z,1.4nm,0.6s,mb3.9,baz=0.0,slow=2.0,SNR=3.1						
YBH				LR	LR	13 54 32.2	
	comp=Z,336nm,20.2s,MS4.2,baz=250,slow=34						
BSMT	**Bassoo Peak**	**41.76**	**68**	P	**P**	**13 39 41.7**	**-0.7**
	comp=Z,4.5nm,0.7s,mb4.2						
HRY	**Holter Researc**	**44.07**	**68**	*e*P	**P**	**13 40 01.6**	**+0.6**
	comp=Z,3.8nm,0.6s,mb4.3						
BJI	**Beijing**	**44.14**	**281**	P	**P**	**13 40 00.5**	**-1.2**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
MCMT	**McKenzie Canyo**	**44.49**	**70**	*e*P	**P**	**13 40 04.3**	**-0.1**
	comp=Z,2.2nm,0.8s,mb3.9						
BOZ	**Boman (W)**	**44.76**	**69**	*e*P	**P**	**13 40 07.1**	**+0.5**
	comp=Z,2.5nm,0.7s,mb4.2						
BOZ	**Bozeman (W)**	**44.76**	**69**	*e*P	**P**	**13 40 07.1**	**+0.5**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
ULN	**Ulaanbaatar**	**45.18**	**295**	*e*P	**P**	**13 40 09.9**	**0.0**
	comp=Z,2.9nm,0.8s,mb4.2						
ULN	**Ulaanbaatar**	**45.18**	**295**	*e*P	**P**	**13 40 09.9**	**0.0**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
SONM	**Songino Array**	**45.57**	**296**	P	**P**	**13 40 12.9**	**-0.1**
	comp=Z,2.4nm,0.8s,mb4.2,baz=54,slow=9.4,SNR=9.4						
ZAK	**Zakamensk**	**45.94**	**300**	*e*P	**P**	**13 40 16.4**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.9						
FLWY	**Flagg Ranch**	**46.18**	**70**	*e*P	**P**	**13 40 19.4**	**+1.5**
	comp=Z,4.3nm,0.8s,mb4.4						
RLMT	**Red Lodge**	**46.44**	**68**	*e*P	**P**	**13 40 20.2**	**+0.3**
	comp=Z,4.8nm,0.9s,mb4.4						
HHC	**Hu-ho-hao-te**	**46.49**	**285**	*e*P	**P**	**13 40 18.5**	**-1.8**
HHC				PP	PP	13 42 07.3	-2.4
HHC				S	**S**	**13 47 05.0**	**-0.3**
HHC				SS	SS	13 50 22.5	-8.5
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
HHC				pmax	pmax		
	comp=Z,360nm,5.6s						
HHC				LR	LR		
	comp=N,200nm,13.1s,MS4.4						
HHC				LR	LR		
	comp=E,220nm,16.7s,MS4.4						
HHC				LR	LR		
	comp=Z,66nm,15.5s,MS3.7						
NJ2	**Nanjing**	**47.51**	**270**	*e*P	**P**	**13 40 25.3**	**-3.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
PDAR	**Pinedale Array**	**47.62**	**71**	P	**P**	**13 40 30.0**	**+0.9**
	comp=Z,7.9nm,0.8s,mb4.8,baz=305,slow=4.2,SNR=49						
DAU	**Daniels Canyon**	**48.01**	**74**	*e*P	**P**	**13 40 34.2**	**+2.0**
	comp=Z,10nm,1.1s,mb4.8						
DAU	**Daniels Canyon**	**48.01**	**74**	*e*P	**P**	**13 40 34.2**	**+2.0**
DAU				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
WHN	**Wuhan**	**51.36**	**272**	P	**P**	**13 40 57.3**	**-0.5**
XAN	**Xi'an**	**52.41**	**280**	P	**P**	**13 41 05.3**	**-0.2**
XAN				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
ZALV	**Zalesovo Beam**	**53.23**	**313**	P	**P**	**13 41 10.9**	**-0.4**
	comp=Z,0.7nm,0.4s,mb3.9,baz=51,slow=7.8,SNR=5.9						
ZALV				PcP	PcP	13 42 19.2	+0.6
	comp=Z,2.8nm,0.9s,baz=32,slow=5.9,SNR=5.7						
NVS	**Novosibirsk**	**53.40**	**314**	⇑*i*P	**P**	**13 41 10.2**	**-2.3**
NVS				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
NVS				pmax	pmax		
	comp=N,3.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.8s						
SUMG	**Summit**	**53.83**	**13**	*e*P	**P**	**13 41 16.0**	**+0.5**
	comp=E,12nm,1.0s,mb4.8						
LZH	**Lanzhou**	**54.18**	**285**	*e*P	**P**	**13 41 19.0**	**+0.5**
LZH				*e*PP	PP	13 43 22.3	+2.1
LZH				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
LZH				pmax	pmax		
	comp=Z,54nm,7.3s						
LZH				LR	LR		
	comp=N,500nm,14.6s,MS4.8						
LZH				LR	LR		
	comp=E,210nm,10.5s,MS4.8						
LZH				LR	LR		
	comp=Z,610nm,18.0s						
LAZ	**Ladron**	**54.37**	**78**	*e*P	**P**	**13 41 20.7**	**+0.8**
	comp=Z,1.0nm,0.8s,mb3.8						
GTA	**Gaotai**	**54.43**	**291**	⇑P	**P**	**13 41 21.0**	**+0.7**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
CD2	**Chengdu**	**57.73**	**280**	P	**P**	**13 41 42.8**	**-1.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
CD2				pmax	pmax		
	comp=Z,110nm,5.2s						
KURK	**Kurchatov**	**58.22**	**313**	*e*P	**P**	**13 41 46.6**	**-0.6**
	comp=Z,13nm,1.0s,mb4.9						
KURK	**Kurchatov**	**58.22**	**313**	*c i*P	**P**	**13 41 47.2**	**+0.1**
KURK				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.9						
WMQ	**Urumqi**	**58.36**	**302**	*e*P	**P**	**13 41 49.0**	**+0.8**
WMQ				PcP	PcP	13 42 39.3	+0.6
WMQ				PP	PP	13 44 00.3	+3.1
WMQ				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
WMQ				pmax	pmax		
	comp=Z,52nm,4.0s						
GYA	**Guiyang**	**59.04**	**275**	*e*P	**P**	**13 41 53.0**	**-0.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
MK31	**Makanchi Array**	**59.14**	**307**	*e*P	**P**	**13 41 52.7**	**-0.9**
MK31	**Makanchi Array**	**59.14**	**307**	*i* P	**P**	**13 41 53.0**	**-0.6**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
MKAR	**Makanchi Array**	**59.14**	**307**	P	**P**	**13 41 53.3**	**-0.3**
	comp=Z,3.1nm,0.8s,mb4.4,baz=56,slow=6.6,SNR=24						
TXAR	**Lajitas Array**	**59.98**	**80**	P	**P**	**13 42 00.6**	**+0.9**
	comp=Z,1.3nm,1.0s,mb3.9,baz=282,slow=6.3,SNR=9.6						
BRVK	**Borovoye**	**60.23**	**319**	*e*P	**P**	**13 42 01.4**	**+0.4**
	comp=Z,3.6nm,0.3s,mb4.9						
BRVK	**Borovoye**	**60.23**	**319**	*e*P	**P**	**13 42 01.4**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.9						
ARU	**Arti**	**62.10**	**327**	*e*P	**P**	**13 42 13.6**	**0.0**
	comp=Z,12nm,0.9s,mb5.0						
ARU	**Arti**	**62.10**	**327**	*c i*P	**P**	**13 42 13.9**	**+0.4**
ARU						13 44 27.8	
ARU				S	**S**	**13 50 41.6**	**+6.6**
ARU				SS	SS	13 54 40.6	+3.4
ARU				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.9						
KMI	**Kunming**	**62.45**	**276**	P	**P**	**13 42 17.0**	**+0.6**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.8						
FINES	**FINESS Array B**	**65.71**	**346**	P	**P**	**13 42 35.5**	**-1.6**
	comp=Z,4.0nm,0.9s,mb4.4,baz=35,slow=4.7,SNR=4.6						
AAK	**Ala-Archa**	**65.99**	**309**	P	**P**	**13 42 39.0**	**-0.4**
	comp=Z,1.9nm,0.5s,mb4.4,baz=101,slow=2.3,SNR=6.3						
AAK	**Ala-Archa**	**65.99**	**309**	*ce*P	**P**	**13 42 40.1**	**+0.8**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
AB31	**Akbulak array**	**67.32**	**322**	*i* P	**P**	**13 42 48.5**	**+0.8**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
ABKAR	**Akbulak array**	**67.32**	**322**	*e*P	**P**	**13 42 48.4**	**+0.7**
	comp=Z,11nm,1.0s,mb4.8						
KK31	**Karatay Array**	**67.56**	**311**	P	**P**	**13 42 49.6**	**+0.3**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
KKAR	**Karatay Array**	**67.56**	**311**	*e*P	**P**	**13 42 49.7**	**+0.4**
	comp=Z,6.0nm,0.9s,mb4.6						
KKAR	**Karatay Array**	**67.56**	**311**	*e*P	**P**	**13 42 49.7**	**+0.4**
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
KSH	**Kashi**	**67.58**	**305**	*e*P	**P**	**13

SAO	**San Andreas Ge**	**0.94**	**353**	*e*Pg	Pg	13 38 21.1	-0.9
SAC	**San Andreas**	**1.96**	**333**	*e*Pn	Pn	13 38 35.1	-2.0
ISA	**Isabella**	**2.31**	**93**	*e*Pn	Pn	13 38 40.6	-1.3
CMB	**Columbia Colle**	**2.32**	**18**	*e*Pn	Pn	13 38 41.4	-0.7
OSI	**Osito Addit**	**2.44**	**119**	P	Pn	13 38 44.4	+0.7
MCCM	**Marconi Confer**	**2.63**	**332**	*e*Pn	Pn	13 38 44.6	-1.7
PASC	**Pasadena Art C**	**3.05**	**122**	*e*Pn	Pn	13 38 51.2	-0.9
WAKR	**Walker**	**3.06**	**29**	*e*Pn	Pn	13 38 53.9	+1.7
MWC	**Mount Wilson**	**3.11**	**120**	*e*Pn	Pn	13 38 52.2	-0.8
HOPS	**Hopland**	**3.46**	**337**	Pn	Pn	13 38 57.2	-0.4
WCN	**Washoe City**	**3.68**	**19**	*e*P	Pn	13 39 00.6	-0.1
GSC	**Goldstone**	**3.71**	**97**	*e*P	Pn	13 39 01.2	0.0
PAHR	**Pah Rah Range**	**4.16**	**21**	*e*P	Pn	13 39 08.1	+0.8
PFO	**Pinyon Flat Ob**	**4.57**	**118**	*e*P	Pn	13 39 11.8	-1.2
SHPR	**Sheep Range** 2.0nm,0.4s	**5.02**	**80**	*e*P	Pn	13 39 20.2	+1.0
LDFC	**Landfair** 8.7nm,0.6s	**5.12**	**97**	P	Pn	13 39 18.3	-2.2

*IDC **28** 13:38:16.0±6.0, 10.°48N×85.°89W, h0km, mb3.5/2, mb1 4.0/2, mb1mx3.6/19, mbtmp3.5/2, Error ellipse: s-maj=354.2km s-min=61.5km az=36.0*
*CASC **28** 13:38:17.5±3.1, 10.°22N×86.°30W, h18km±13km, MD3.9*
*ISCJB **28** 13:38:19.4±1.5, 10.°38N±0.°07×86.°18W±0.°08, h23km±8km, mb3.3/2, Error ellipse: s-maj=17.7km s-min=5.7km az=139.4*

ISC 28 13:38:20.1±1.4**, 10°41N**±0.°06×**86°14W**±0.°06**, h19**km±7km**, n35**, σ0.67/40**, mb3.3**/2**, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCR	**Vista de Mar**	**0.57**	**120**	*e*P	**Pg**	**13 38 31.8**	**+0.2**
NY14	**Universidad de**	**0.64**	**68**	*i* P	**Pg**	**13 38 33.5**	**+0.7**
A490	**San Lazaro**	**0.68**	**102**	*i* P	**Pg**	**13 38 33.7**	**+0.1**
GBS3	**Finca Las lm˜¡**	**0.76**	**61**	*i* P	**Pb**	**13 38 34.6**	**-0.2**
LAPC	**Finca la Perla**	**0.78**	**63**	*i* P	**Pb**	**13 38 34.9**	**-0.2**
LAPC				*i* S	**Sb**	**13 38 52.8**	**+7.6**
GBS2	**Las Lilas**	**0.79**	**58**	*i* P	**Pb**	**13 38 35.3**	**-0.1**
BUEV	**Buena Vista**	**0.81**	**62**	*i* P	**Pb**	**13 38 35.4**	**-0.2**
GB1A	**Borinquen Arri**	**0.83**	**61**	*i* P	**Pb**	**13 38 35.8**	**-0.1**
GB1A				*i* S	**Sb**	**13 38 52.8**	**+6.0**
GPS3	**Bodega del ICE**	**0.83**	**66**	*i* P	**Pb**	**13 38 36.0**	**0.0**
GPS2	**Hotel Rinc˜‡n**	**0.84**	**66**	*i* P	**Pb**	**13 38 36.2**	**+0.1**
GPS1	**Guardaparques**	**0.85**	**65**	*i* P	**Pb**	**13 38 36.2**	**-0.1**
LIM1	**Limonal**	**0.92**	**72**	*i* P	**Pb**	**13 38 37.2**	**-0.2**
SSN	**San Juan del S**	**0.93**	**17**	*e*P	**Pb**	**13 38 37.6**	**0.0**
GUAB	**Guayabo de Bag**	**0.94**	**72**	*i* P	**Pb**	**13 38 37.1**	**-0.7**
MESS	**Mesas**	**0.98**	**71**	*i* P	**Pb**	**13 38 38.1**	**-0.4**
CUI	**Cuipilapa**	**0.99**	**76**	*i* P	**Pb**	**13 38 38.2**	**-0.4**
JCR	**Jicaral**	**1.15**	**119**	*e*P	**Pn**	**13 38 40.1**	**-1.1**
JCR				*e*S	**Sb**	**13 38 55.7**	**-0.4**
CHPA	**Chiripa**	**1.21**	**88**	*i* P	**Pn**	**13 38 42.2**	**+0.2**
CONN	**Concepcion**	**1.25**	**24**	*e*P	**Pn**	**13 38 43.2**	**+0.6**
CONN				*e*S	**Sb**	**13 38 49.9**	**-8.9**
CRUN	**El Crucero**	**1.57**	**354**	*e*P	**Pn**	**13 38 47.3**	**+0.3**
CGA2	**Cerro Gallo 2**	**1.69**	**103**	*e*P	**Pn**	**13 38 49.2**	**+0.6**
TISN	**Laguna Tiscapa**	**1.72**	**356**	*e*P	**Pn**	**13 38 48.6**	**-0.5**
MGAN	**Managua**	**1.73**	**356**	*e*P	**Pn**	**13 38 51.1**	**+2.0**
WILN	**Americas 2**	**1.74**	**358**	*e*P	**Pn**	**13 38 51.6**	**+2.3**
CSAN		**1.78**	**351**	*e*P	**Pn**	**13 38 48.9**	**-1.0**
COPN	**Copaltepe**	**1.81**	**346**	*e*P	**Pn**	**13 38 49.2**	**-1.1**
PRS1	**Puriscal**	**1.85**	**103**	*e*P	**Pn**	**13 38 51.0**	**+0.1**
HUEN		**1.91**	**359**	*e*P	**Pn**	**13 38 51.2**	**-0.5**
LAJ	**Bijagual**	**2.06**	**105**	*e*P	**Pn**	**13 38 47.4**	**-6.3**
LAJ				*e*S	**Sn**	**13 39 08.7**	**-10**
BOAB	**BOACO BROADBAN**	**2.08**	**13**	*e*P	**Pn**	**13 38 53.6**	**-0.3**
URSC	**Urasca**	**2.39**	**104**	*e*P	**Pn**	**13 38 58.6**	**+0.2**
BUS	**Buena Vista**	**2.49**	**110**	*e*P	**Pn**	**13 38 59.8**	**+0.1**
BUS				*e*S	**Sn**	**13 39 30.5**	**+0.9**
TXAR	**Lajitas Array** 0.7nm,0.8s,mb3.3,baz=136,slow=11,SNR=5.1	**24.96**	**321**	P	**P**	**13 43 41.9**	**-0.6**
NVAR	**Mina Array Bea** 0.4nm,0.6s,mb3.3,baz=139,slow=6.9,SNR=3.7	**40.08**	**319**	P	**P**	**13 45 54.8**	**+0.4**
CMAR	**Chiang Mai Arr** 0.6nm,1.0s,baz=331,slow=2.4,SNR=4.3	**150.88**	**350**	PKPbc	PKPbc	13 58 11.5	-0.9
CMAR	0.5nm,0.8s,baz=345,slow=3.0,SNR=4.6			PKPab	PKPab	13 58 17.8	-1.7

*IDC **28** 13:46:18.9±4.6, 38.°16N×73.°67E, h129km±39km, mb3.5/7, mb1 3.4/11, mb1mx3.3/29, mbtmp3.4/11, Error ellipse: s-maj=36.5km s-min=18.0km az=24.0*
*ISCJB **28** 13:46:19.4±0.6, 38.°34N±0.°04×73.°48E±0.°09, h145km±8km, mb3.5/7, Error ellipse: s-maj=11.9km s-min=6.8km az=9.6*
*NEIC **28** 13:46:19.5±0.9, 38.°23N×73.°66E, h132km±8km, mb3.4/3, Error ellipse: s-maj=13.2km s-min=8.9km az=128.0*
*BJI **28** 13:46:25.2, 38.°42N×74.°44E, h131km, mb3.8/2*

ISC 28 13:46:20.5±0.5**, 38°33N**±0.°04×**73°49E**±0.°09**, h141**km±7km**, n30**, σ1.915/36**, mb3.5/7**, **3C, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.27**	**58**	⇑*i*P	**Pn**	**13 46 52.0**	**-6.3**
KSH				S	**Sn**	**13 47 12.8**	**-15**
KSH	comp=N,610nm,0.8s			smax			
KSH	comp=E,690nm,1.1s			smax			
AML	**Almayashu**	**3.80**	**2**	*e*P	**Pn**	**13 47 17.6**	**-0.2**
KZA	**Kyzart**	**3.98**	**19**	*e*P	**Pn**	**13 47 19.1**	**-1.0**
EKS2	**Erkin-Say**	**4.33**	**3**	*e*P	**Pn**	**13 47 25.2**	**+0.4**
AAK	**Ala-Archa**	**4.37**	**10**	P	**Pn**	**13 47 26.0**	**+0.8**
AAK				*e*P		13 47 27.2	
AAK				S	**Sn**	**13 48 16.9**	**+1.3**
AAK	**Ala-Archa** comp=E,1.9nm,0.3s,baz=172,slow=5.3,SNR=6.1	**4.37**	**10**	P	**Pn**	**13 47 26.0**	**+0.8**
AAK	comp=E,3.0nm,0.3s,baz=100,slow=23,SNR=7.8			S	**Sn**	**13 48 16.9**	**+1.3**
CHCP	**Chirah Chowk**	**4.67**	**182**	P	**Pn**	**13 47 30.1**	**+0.8**
CEP	**Cherat**	**4.68**	**196**	P	**Pn**	**13 47 29.7**	**+0.3**
CEP				S	**Sn**	**13 48 10.0**	**-13**
TKM2	**Tokmak 2**	**4.86**	**19**	*e*P	**Pn**	**13 47 31.4**	**-0.4**
CHM	**Chimkent** comp=E,9.8nm,0.8s	**4.97**	**325**	*e*P	**Pn**	**13 47 29.9**	**-3.3**
KBL	**Kabul** comp=E,49nm,0.5s	**5.21**	**225**	*e*P	**Pn**	**13 47 36.6**	**+0.1**
KK31	**Karatay Array** comp=E,4.4nm,0.3s,baz=134,slow=12,SNR=68	**5.28**	**336**	Pn	**Pn**	**13 47 37.3**	**0.0**
KK31	comp=E,13nm,0.4s,baz=147,slow=21,SNR=15			Sn	**Sn**	**13 48 34.0**	**-3.3**
KKAR	**Karatay Array** comp=E,0.2nm,0.3s	**5.28**	**336**	*e*P	**Pn**	**13 47 37.2**	**-0.1**
THW	**Thamme Wali**	**5.70**	**195**	P	**Pn**	**13 47 43.0**	**-0.1**
MKAR	**Makanchi Array** comp=E,0.0nm,0.3s,baz=223,slow=12,SNR=4.2	**10.65**	**35**	P	**Pn**	**13 48 49.4**	**+0.2**
KURK	**Kurchatov** comp=E,0.0nm,0.3s,baz=208,slow=10,SNR=12	**12.91**	**15**	P	**Pn**	**13 49 19.7**	**+1.2**
AB31	**Akbulak array** comp=E,0.5nm,0.5s,baz=116,slow=14,SNR=9.0	**14.64**	**323**	⇑Pn	**Pn**	**13 49 38.7**	**-1.8**
AB31	comp=E,0.7nm,0.4s,baz=170,slow=21,SNR=5.6			⇑Sn	**Sn**	**13 52 11.6**	**-11**
ABKAR	**Akbulak array** comp=E,0.8nm,0.4s	**14.64**	**323**	*e*P	**Pn**	**13 49 38.9**	**-1.7**
BVAR	**Borovoye Array** comp=E,0.2nm,0.3s,baz=223,slow=41,SNR=2.4	**14.85**	**353**	P	**Pn**	**13 49 47.5**	**+4.3**
ZALV	**Zalesovo Beam** comp=E,0.7nm,0.3s,baz=215,slow=10.0,SNR=12	**17.45**	**23**	P	**Pn**	**13 50 13.7**	**-1.2**
GTA	**Gaotai** comp=Z,3.0nm,0.7s	**20.50**	**79**	*e*P	**P**	**13 50 47.3**	**-0.1**
GTA				pmax	pmax		
SONM	**Songino Array** comp=Z,1.5nm,0.8s,mb3.6,baz=271,slow=10.0,SNR=5.7	**25.67**	**58**	P	**P**	**13 51 38.0**	**+0.9**
BRTR	**Keskin Array B** comp=Z,0.9nm,0.7s,mb3.6,baz=58,slow=7.4,SNR=4.1	**30.82**	**285**	P	**P**	**13 52 25.4**	**+2.6**
FINES	**FINESS Array B** comp=Z,6.1nm,1.1s,mb4.1,baz=98,slow=14,SNR=5.1	**37.12**	**324**	P	**P**	**13 53 18.1**	**+1.2**
ARCES	**ARCESS Array B**	**40.24**	**336**	P	**P**	**13 53 43.9**	**+1.0**
ARCES	**ARCESS Array B** comp=Z,1.2nm,0.8s,mb3.6,baz=115,slow=8.2,SNR=4.5	**40.24**	**336**	P	**P**	**13 53 43.9**	**+1.0**
HFS	**Hagfors**	**42.88**	**321**	P	**P**	**13 54 05.3**	**+0.8**
HFS	**Hagfors** comp=Z,2.2nm,0.5s,mb4.1,baz=113,slow=12,SNR=10	**42.88**	**321**	P	**P**	**13 54 05.3**	**+0.8**
WRA	**Warramunga Arr** comp=Z,0.1nm,0.4s,mb2.8,baz=326,slow=4.9,SNR=10.0	**81.31**	**124**	P	**P**	**13 58 19.3**	**-1.9**
ASAR	**Alice Springs** comp=Z,0.2nm,0.9s,mb2.9,baz=335,slow=4.4,SNR=4.6	**83.71**	**127**	P	**P**	**13 58 31.9**	**-1.6**

*ISCJB **28** 13:54:44.1±0.5, 32.°32N±0.°02×47.°40E±0.°09, h10km, Error ellipse: s-maj=10.6km s-min=3.5km az=0.7*
*KISR **28** 13:54:44.8±1.0, 32.°33N×47.°56E, h34km±178km, ML2.6*
*TEH **28** 13:54:47.7, 32.°36N×47.°45E, h21km*

ISC 28 13:54:45.3±0.5**, 32°32N**±0.°02×**47°38E**±0.°09**, h10**km**, n12, σ0.650/18**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**1.86**	**3**	*e*Pn	**Pn**	**13 55 17.6**	**+0.4**
IKOM				*e*Sg	**Sg**	**13 55 44.5**	**-0.5**
IKOM	comp=Z,3µm,0.2s			*e*		13 55 49.1	
IVIS	**Veis**	**2.25**	**349**	*e*Pn	**Pb**	**13 55 25.9**	**-0.1**
IVIS				*e*Sg	**Sg**	**13 55 57.0**	**-0.6**
IVIS	comp=Z,992nm,0.2s			*e*		13 56 01.9	
MIB	**Mutribah**	**2.50**	**181**	*e*P	**Pn**	**13 55 25.8**	**-0.2**
MIB				*e*S	**Sn**	**13 55 56.8**	**+0.2**
MIB	comp=Z,26nm,0.5s			AML	AML	13 56 02.4	
IDHR	**Dehrash**	**2.52**	**341**	*e*Pn	**Pn**	**13 55 27.3**	**+1.1**
IDHR	comp=Z,1µm,0.2s			*e*		13 56 08.2	
IPIR	**Pirpir**	**2.99**	**82**	*e*Pn	**Pn**	**13 55 33.4**	**+0.6**
IPIR	comp=Z,577nm,0.2s			*e*		13 56 24.0	
NAY	**Al-Naaiem**	**3.06**	**182**	*e*P	**Pn**	**13 55 33.4**	**-0.2**
NAY				*e*S	**Sn**	**13 56 10.2**	**-0.1**
NAY	comp=Z,8.2nm,0.5s			AML	AML	13 56 17.2	
RDF	**Al-Radifah**	**3.38**	**177**	*e*P	**Pn**	**13 55 38.4**	**+0.3**
RDF				*e*S	**Sn**	**13 56 18.7**	**+0.4**
RDF	comp=Z,18nm,0.4s			AML	AML	13 56 22.4	
QRN	**Al-Qurain**	**3.59**	**172**	*e*P	**Pn**	**13 55 41.0**	**0.0**
QRN				*e*S	**Sn**	**13 56 22.4**	**-1.0**
IKLH	**Kolahrood**	**3.68**	**73**	*e*Pn	**Pn**	**13 55 42.3**	**+0.1**
IKLH	comp=Z,254nm,0.2s			*e*		13 56 50.1	
IRAZ	**Razeghan**	**3.74**	**34**	*e*Pn	**Pn**	**13 55 43.6**	**+0.5**
IRAZ	comp=Z,317nm,0.2s			*e*		13 55 56.5	
IZEF	**Zefreh**	**4.22**	**81**	*e*Pn	**Pn**	**13 55 49.4**	**-0.2**
IZEF	comp=Z,118nm,0.1s			*e*		13 55 49.9	
IDMV	**Damavand**	**5.06**	**49**	*e*Pn	**Pn**	**13 56 00.4**	**-0.7**
IDMV	comp=Z,96nm,0.1s			*e*		13 56 01.2	

*SKO **28** 13:56:32.4, 40.°63N×20.°59E, h0km*
*ATH **28** 13:56:33.0, 40.°76N×20.°72E, h5km±3km, MD3.2/6*
*THE **28** 13:56:34.3, 40.°68N×20.°74E, h4km±2km, ML2.3/6, Error ellipse: s-maj=2.5km s-min=1.0km az=318.0*
*ISCJB **28** 13:56:35.2±0.4, 40.°66N±0.°02×20.°80E±0.°03, h10km, Error ellipse: s-maj=3.9km s-min=3.2km az=31.4*
*CSEM **28** 13:56:35.0±0.2, 40.°60N×20.°84E, h8km, ML2.8, Error ellipse: s-maj=5.6km s-min=4.5km az=140.0*
*TIR **28** 13:56:43.8, 40.°64N×20.°88E, h2km, ML2.8*

ISC 28 13:56:35.5±0.5**, 40°67N**±0.°02×**20°79E**±0.°03**, h4**km±4km**, n38, σ1.930/66, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.04**	**180**	*i* Pg	**Pg**	**13 56 32.9**	**-0.6**
KBN				*i* Sg	**Sg**	**13 56 38.0**	**+0.8**
KBN	**Korca**	**0.04**	**180**	*i* Pg	**Pg**	**13 56 35.9**	**-0.6**
KBN				*i* Sg	**Sg**	**13 56 38.0**	**+0.8**
NEST	**Nestorio**	**0.32**	**141**	P	**Pg**	**13 56 40.5**	**-1.1**
NEST				S	**Sg**	**13 56 46.1**	**+0.3**
NEST	**Nestorio**	**0.32**	**141**	P	**Pg**	**13 56 40.5**	**-1.1**
NEST				S	**Sg**	**13 56 46.1**	**+0.3**
FNA	**Florina**	**0.46**	**75**	P	**Pg**	**13 56 43.6**	**-0.8**
FNA				S	**Sg**	**13 56 52.0**	**+1.6**
FNA	**Florina**	**0.46**	**75**	P	**Pg**	**13 56 43.6**	**-0.8**
FNA				S	**Sg**	**13 56 52.0**	**+1.6**
BIA	**Bitola**	**0.54**	**49**	P	**Pg**	**13 56 44.3**	**-1.5**
BIA				S	**Sg**	**13 56 53.4**	**+0.6**
BIA	**Bitola**	**0.54**	**49**	*e*Pg	**Pg**	**13 56 44.6**	**-1.2**
BIA				*e*Sg	**Sg**	**13 56 54.1**	**+1.3**
BIA	comp=N,40nm,0.2s			*e*Lg		13 56 54.2	
BIA	comp=E,74nm,0.2s			*e*Lg		13 56 55.0	
BIA	**Bitola**	**0.54**	**49**	P	**Pg**	**13 56 44.3**	**-1.5**
BIA				S	**Sg**	**13 56 53.4**	**+0.6**
KRUS	**Krusevo**	**0.78**	**26**	*e*Pg	**Pg**	**13 56 48.2**	**-2.3**
KZN	**Kozani**	**0.83**	**115**	*e*PB	**Pg**	**13 56 51.0**	**-0.4**
KZN				*e*SB	**Sb**	**13 57 04.3**	**+0.3**
KZN	**Kozani**	**0.83**	**115**	P	**Pg**	**13 56 50.2**	**-1.2**
KZN				S	**Sg**	**13 57 03.6**	**+1.4**
KZN	**Kozani**	**0.83**	**115**	P	**Pg**	**13 56 50.2**	**-1.2**
KZN	**Kozani**	**0.83**	**115**	*e*Pb	**Pg**	**13 56 51.0**	**-0.4**
KZN				S	**Sg**	**13 57 03.6**	**+1.4**
KZN				*e*Sb	**Sb**	**13 57 04.3**	**+0.3**
SRN	**Sarande**	**0.99**	**218**	*i* PG	**Pg**	**13 56 55.1**	**+0.7**
SRN				*i* SG	**Sg**	**13 57 08.1**	**+0.8**
SRN	**Sarande**	**0.99**	**218**	*i* Pg	**Pg**	**13 56 55.1**	**+0.7**
JAN	**Janina**	**1.01**	**177**	*e*PN	**Pg**	**13 56 53.9**	**-0.9**
JAN				*e*SB	**Sg**	**13 57 09.3**	**+1.4**
JAN	**Janina**	**1.01**	**177**	*e*Pn	**Pg**	**13 56 53.9**	**-0.9**
JAN				*e*Sb	**Sg**	**13 57 09.3**	**+1.4**
IGT	**Igoumenitsa**	**1.19**	**197**	P	**Pg**	**13 56 55.7**	**-2.5**
IGT				S	**Sg**	**13 57 14.9**	**+1.4**
IGT	**Igoumenitsa**	**1.19**	**197**	P	**Pg**	**13 56 55.7**	**-2.5**
IGT				S	**Sg**	**13 57 14.9**	**+1.4**
KEK	**Kerkira**	**1.22**	**219**	*e*PB	**Pb**	**13 56 57.3**	**-1.8**
KEK				*e*SB	**Sb**	**13 57 14.6**	**-0.5**
KEK	**Kerkira**	**1.22**	**219**	P	**Pg**	**13 56 56.8**	**-2.0**
KEK				S	**Sg**	**13 57 15.4**	**+0.9**
KEK	**Kerkira**	**1.22**	**219**	P	**Pg**	**13 56 56.8**	**-2.0**
KEK	**Kerkira**	**1.22**	**219**	*e*Pb	**Pb**	**13 56 57.3**	**-1.8**
KEK				*e*Sb	**Sb**	**13 57 14.6**	**-0.5**
KEK				S	**Sg**	**13 57 15.4**	**+0.9**
LIT	**Litokhoron**	**1.42**	**113**	*e*PG	**Pg**	**13 57 01.2**	**-1.4**
LIT	**Litokhoron**	**1.42**	**113**	P	**Pn**	**13 57 00.3**	**-1.7**
LIT				S	**Sb**	**13 57 21.9**	**+1.0**
LIT	**Litokhoron**	**1.42**	**113**	P	**Pn**	**13 57 00.3**	**-1.7**
LIT	**Litokhoron**	**1.42**	**113**	*e*Pg	**Pg**	**13 57 01.3**	**-1.3**
LIT				S	**Sb**	**13 57 21.9**	**+1.0**
PUK	**Puka**	**1.53**	**334**	*i* PN	**Pn**	**13 57 04.2**	**+0.6**
PUK				*i* SG	**Sg**	**13 57 27.4**	**+2.7**
PUK	**Puka**	**1.53**	**334**	*i* Pn	**Pn**	**13 57 04.2**	**+0.6**
PUK				*i* Sg	**Sg**	**13 57 27.4**	**+2.7**
BCI	**Bajram Curri**	**1.78**	**343**	*i* PN	**Pn**	**13 57 08.3**	**+1.2**
BCI	**Bajram Curri**	**1.78**	**343**	*i* Pn	**Pn**	**13 57 08.3**	**+1.2**
EVR	**Evrytania**	**1.92**	**155**	*e*PN	**Pn**	**13 57 10.6**	**+1.7**
EVR	**Evrytania**	**1.92**	**155**	*e*Pn	**Pn**	**13 57 10.6**	**+1.7**
AGG	**Agios Georgios**	**2.03**	**144**	*e*PN	**Pn**	**13 57 12.0**	**+1.6**
AGG	**Agios Georgios**	**2.03**	**144**	P	**Pn**	**13 57 08.5**	**-1.9**
AGG				S	**Sn**	**13 57 35.9**	**-0.3**
AGG	**Agios Georgios**	**2.03**	**144**	P	**Pn**	**13 57 08.5**	**-1.9**
AGG	**Agios Georgios**	**2.03**	**144**	*e*Pn	**Pn**	**13 57 12.0**	**+1.6**
AGG				S	**Sn**	**13 57 35.9**	**-0.3**

*IDC **28** 13:58:17.5±2.1, 50.°22N×129.°63W, h0km, mb3.7/2, mb1 3.8/7, mb1mx3.6/25, mbtmp3.5/7, ML3.6/5, Error ellipse: s-maj=34.7km s-min=13.6km az=78.0*
*ISCJB **28** 13:58:18.2±1.3, 50.°31N±0.°08×129.°5W±0.°2, h10km, mb3.6/2, Error ellipse: s-maj=20.3km s-min=9.1km az=157.0*
*NEIC **28** 13:58:20.7±1.1, 50.°40N×129.°36W, h10km, mb4.0/1, Error ellipse: s-maj=20.7km s-min=8.2km az=59.0*

ISC 28 13:58:20.4±1.3**, 50°34N**±0.°08×**129°5W**±0.°2**, h10**km**, n13, σ1.909/14, mb3.6/2, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella** 39nm,0.3s,baz=42,slow=13,SNR=67	**2.02**	**24**	Pn	**Pn**	**13 58 53.2**	**-1.3**
BBB	34nm,0.3s,baz=134,slow=22,SNR=18			Sn	**Sn**	**13 59 22.4**	**+2.5**
PGC	**Sidney**	**4.26**	**111**	*e*P	**Pn**	**13 59 19.0**	**-6.3**
OD2	**Odessa Site #2** 14nm,0.7s	**7.67**	**109**	*e*P	**Pn**	**14 00 08.6**	**-3.5**
DLBC	**Dease Lake** 0.3nm,0.3s,baz=189,slow=9.5,SNR=4.0	**8.12**	**358**	Pn	**Pn**	**14 00 17.9**	**-0.3**
IMW	**Indian Meadow** 3.4nm,0.9s	**14.14**	**110**	*e*P	**Pn**	**14 01 39.6**	**-1.0**
NVAR	**Mina Array Bea**	**14.31**	**142**	Pn	**Pn**	**14 01 43.4**	**+0.5**
NVAR	**Mina Array Bea** 0.0nm,0.3s,baz=315,slow=11,SNR=3.1	**14.31**	**142**	Pn	**Pn**	**14 01 43.4**	**+0.5**
TPAW	**Teton Pass** 3.9nm,0.8s	**14.36**	**111**	*e*P	**Pn**	**14 01 44.4**	**+0.8**
PDAR	**Pinedale Array** 0.1nm,0.3s,baz=316,slow=10,SNR=4.8	**15.61**	**111**	Pn	**Pn**	**14 02 00.1**	**-0.2**
ILAR	**Eielson Array** 0.0nm,0.3s,baz=157,slow=7.2,SNR=4.9	**17.12**	**334**	P	**Pn**	**14 02 19.7**	**+0.2**
FFC	**Flin Flon** 10nm,0.8s	**17.22**	**65**	*e*P	**Pn**	**14 02 19.9**	**-0.9**
ULM	**Lac du Bonnet** 5.2nm,0.6s,mb4.0,baz=280,slow=9.1,SNR=4.7	**21.35**	**77**	P	**P**	**14 03 08.9**	**+1.4**
TXAR	**Lajitas Array** 0.4nm,0.8s,mb3.2,baz=292,slow=7.6,SNR=2.9	**28.60**	**127**	P	**P**	**14 04 17.1**	**+0.5**

*ISCJB **28** 14:13:10.6±0.5, 50.°11N±0.°05×129.°72W±0.°09, h10km, mb3.9/5, Error ellipse: s-maj=9.5km s-min=4.3km az=142.7*
*BJI **28** 14:13:10.0, 50.°10N×129.°70W, h10km, mB4.9/3, mb4.8/2, Ms4.4/2, Ms7 4.3/2*
*IDC **28** 14:13:11.4±1.8, 50.°05N×129.°69W, h0km, mb3.8/3, mb1 4.0/10, mb1mx3.8/28, mbtmp3.7/10, ML3.7/7, MS3.6/1, Ms1 3.6/1, ms1mx2.7/33, Error ellipse: s-maj=32.1km s-min=11.5km az=75.0*
*NEIC **28** 14:13:13.0±0.8, 50.°14N×129.°68W, h10km, mb4.1/7, Error ellipse: s-maj=14.1km s-min=5.2km az=55.0*

ISC 28 14:13:12.4±0.5**, 50°14N**±0.°05×**129°78W**±0.°09**, h10**km**, n56, σ1.921/58, mb3.9/5, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBB	**Bella Bella**	**2.30**	**27**	Pn	**Pn**	**14 13 50.2**	**-0.2**
BBB				Sn	**Sn**	**14 14 18.4**	**-0.4**
BBB	**Bella Bella** 60nm,0.3s,baz=42,slow=13,SNR=28	**2.30**	**27**	Pn	**Pn**	**14 13 50.2**	**-0.2**
BBB	73nm,0.3s,baz=132,slow=22,SNR=16			Sn	**Sn**	**14 14 18.4**	**-0.4**
DIB	**Dawson Inlet,**	**3.50**	**332**	Pn	**Pn**	**14 14 04.2**	**-2.6**
PGC	**Sidney**	**4.40**	**107**	*e*P	**Pn**	**14 14 16.9**	**-2.2**
JCW	**Jim Creek** 12nm,0.5s	**5.51**	**108**	*e*P	**Pn**	**14 14 33.2**	**-1.1**
FMW	**Mount Fremont**	**6.27**	**118**	P	**Pn**	**14 14 44.9**	**+0.1**
LON	**Longmire** 5.4nm,0.6s	**6.29**	**120**	*e*P	**Pn**	**14 14 45.2**	**+0.1**
TDL	**Tradedollar La**	**6.32**	**124**	P	**Pn**	**14 14 46.4**	**+1.0**
WPW	**White Pass**	**6.47**	**119**	P	**Pn**	**14 14 48.8**	**+1.2**
TWW	**Teanaway**	**6.63**	**114**	P	**Pn**	**14 14 50.6**	**+0.9**
ETW	**Entiat**	**6.73**	**109**	P	**Pn**	**14 14 51.3**	**+0.2**
TBM	**Table Mountain**	**6.77**	**113**	P	**Pn**	**14 14 52.1**	**+0.4**
ASR	**Mount Adams--S**	**6.78**	**123**	P	**Pn**	**14 14 53.0**	**+1.3**
NAC	**Naches**	**6.86**	**116**	P	**Pn**	**14 14 53.6**	**+0.6**
EBG	**Ellensburg**	**6.92**	**114**	P	**Pn**	**14 14 54.1**	**+0.3**
MDW	**Midway**	**7.55**	**114**	P	**Pn**	**14 15 02.1**	**-0.3**
HAWA	**Hanford** 8.8nm,0.6s	**7.80**	**115**	*e*P	**Pn**	**14 15 05.1**	**-0.7**
OD2	**Odessa Site #2** 13nm,0.3s	**7.82**	**106**	*e*P	**Pn**	**14 15 05.0**	**-1.0**
DLBC	**Dease Lake**	**8.32**	**359**	*e*P	**Pn**	**14 15 14.6**	**+1.7**
DLBC	**Dease Lake** 0.5nm,0.3s,baz=188,slow=13,SNR=12	**8.32**	**359**	Pn	**Pn**	**14 15 14.9**	**+2.0**
DLBC	comp=Z,378nm,20.4s,baz=345,slow=37			LR	LR	14 18 18.6	
NEW	**Newport**	**8.50**	**98**	*e*P	**Pn**	**14 15 15.0**	**-0.4**
LNOR	**Lincton Mounta** 3.8nm,0.5s	**8.81**	**115**	*e*P	**Pn**	**14 15 17.6**	**-2.1**
YBH	**Yreka Blue Hor** 0.2nm,0.3s,baz=327,slow=17,SNR=2.7	**9.74**	**147**	Pn	**Pn**	**14 15 31.3**	**-1.1**
BSMT	**Bassoo Peak** 5.2nm,0.9s	**10.12**	**97**	*e*P	**Pn**	**14 15 37.9**	**+0.3**
DLMT	**Dillon** 3.7nm,0.7s	**12.51**	**106**	*e*P	**Pn**	**14 16 08.9**	**-1.4**
MCMT	**McKenzie Canyo** 1.3nm,0.7s	**12.62**	**108**	*e*P	**Pn**	**14 16 11.2**	**-0.6**
BOZ	**Bozeman (W)** 0.9nm,0.3s	**12.98**	**103**	*e*P	**Pn**	**14 16 16.4**	**-0.3**
IMW	**Indian Meadow** 5.1nm,1.3s	**14.27**	**109**	*e*P	**Pn**	**14 16 35.1**	**+0.7**
IMW				*e*		14 16 43.7	
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=324,slow=13,SNR=2.5	**14.28**	**141**	Pn	**Pn**	**14 16 36.2**	**+1.7**

*IDC **28** 14:13:17.2±1.1,50°.21N×73°.75E, h0km, mb3.4/1, mb1 3.5/5, mb1mx3.3/28, mbtmp3.3/5, ML3.0/4, Error ellipse: s-maj=19.4km s-min=8.3km az=17.0*

*NNC **28** 14:13:21.7±0.9,50°.81N×73°.63E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=14.8km s-min=5.9km az=26.0*

ISC 28 14:13:19.3±1.5,50°.4N±0°.1×73.7E±0°.07, h7km±15km, n20, σ1°39/24, 9C-9D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VOSK	**Vostochnaya**	**2.88**	**324**	⇑Pn	**Pn**	**14 14 03.2**	**-2.3**
	7.3nm,0.6s						
VOSK				⇑Sn	**Sn**	**14 14 36.1**	**-4.2**
	50nm,0.8s						
KURBB	**Kurchatov Arra**	**3.07**	**84**	⇓Pn	**Pn**	**14 14 12.6**	**+4.3**
	0.6nm,0.5s,baz=278,slow=13						
KURBB				⇓Pg	**Pg**	**14 14 18.0**	**-0.2**
	2.4nm,0.5s						
KURBB				⇑Lg		14 14 58.2	
	27nm,0.8s,baz=275,slow=37						
KURK	**Kurchatov**	**3.13**	**83**	⇓Pn	**Pn**	**14 14 12.4**	**+3.3**
	2.2nm,0.7s						
KURK				⇓Pg	**Pg**	**14 14 21.0**	**+1.6**
	7.1nm,0.6s						
KURK				⇑Lg		14 14 59.3	
	51nm,0.7s						
KURK	**Kurchatov**	**3.13**	**83**	Pg	**Pg**	**14 14 12.6**	**-6.7**
KURK				Lg		14 14 57.2	
KURK	**Kurchatov**	**3.13**	**83**	Pg	**Pg**	**14 14 12.6**	**-6.7**
	0.3nm,0.3s,baz=278,slow=13,SNR=23						
KURK				Lg		14 14 57.2	
	0.7nm,0.3s,baz=270,slow=30,SNR=8.1						
BVA0	**Borovoye Array**	**3.33**	**323**	Pn	**Pn**	**14 14 13.0**	**+1.2**
	1.1nm,0.6s,baz=135,slow=16,SNR=32						
BVA0				⇑Lg		14 14 53.4	
	11nm,0.8s						
BVAR	**Borovoye Array**	**3.33**	**323**	Pn	**Pn**	**14 14 12.2**	**+0.3**
	2.0nm,0.3s,baz=135,slow=16,SNR=20						
BVAR				Sn	**Sn**	**14 14 53.8**	**+2.1**
	4.8nm,0.3s,baz=119,slow=27,SNR=13						
BRVK	**Borovoye**	**3.40**	**322**	*eP*	**Pn**	**14 14 12.8**	**+0.1**
ZRNK	**Zerenda**	**3.88**	**313**	⇓Pn	**Pn**	**14 14 18.2**	**-1.1**
	4.9nm,0.9s						
ZRNK				⇓Sn	**Sn**	**14 15 02.5**	**-2.7**
	32nm,0.8s						
MK31	**Makanchi Array**	**6.74**	**119**	⇑Pg	**Pg**	**14 15 26.8**	**-1.5**
	0.5nm,0.5s,baz=311,slow=25,SNR=5.2						
MK31				⇓Lg		14 17 01.5	
	11nm,0.8s,baz=320,slow=27,SNR=4.7						
MK31	**Makanchi Array**	**6.74**	**119**	*eP*	**Pn**	**14 14 54.6**	**-3.9**
MKAR	**Makanchi Array**	**6.74**	**119**	Pn	**Pn**	**14 14 53.6**	**-5.0**
	0.1nm,0.3s,baz=302,slow=12,SNR=6.1						
MKAR				Lg		14 16 57.1	
	0.3nm,0.3s,baz=340,slow=20,SNR=5.0						
KK31	**Karatay Array**	**7.64**	**198**	⇓Lg		14 17 35.3	
	3.7nm,0.7s,baz=18,slow=24,SNR=3.7						
ZALV	**Zalesovo Beam**	**7.68**	**58**	Pn	**Pn**	**14 15 12.1**	**+0.7**
	0.3nm,0.3s,baz=254,slow=13,SNR=5.3						
ZALV				Sn	**Sn**	**14 16 36.3**	**-2.4**
	0.2nm,0.3s,baz=259,slow=22,SNR=5.1						
ZALV				Lg		14 17 24.1	
	0.1nm,0.3s,baz=250,slow=27,SNR=4.8						
AAK	**Ala-Archa**	**7.80**	**176**	Lg		14 17 17.4	
	0.0nm,0.3s,baz=115,slow=16,SNR=4.4						
AB31	**Akbulak array**	**8.99**	**268**	⇓Pn	**Pn**	**14 15 30.2**	**+0.8**
	0.1nm,0.3s,baz=75,slow=10,SNR=6.4						
AB31				⇑Lg		14 18 03.5	
	2.7nm,0.8s						
AKTK	**Aktyubinsk**	**10.03**	**276**	Pn	**Pn**	**14 15 43.2**	**-0.5**
AKTK				Lg		14 18 37.6	
AKTO	**Aktyubinsk**	**10.03**	**276**	⇑Pn	**Pn**	**14 15 43.7**	**0.0**
	0.2nm,0.7s						
AKTO				⇑Lg		14 18 36.7	
	0.9nm,1.5s						
AKTO	**Aktyubinsk**	**10.03**	**276**	Pn	**Pn**	**14 15 43.2**	**-0.5**
	0.4nm,0.3s,baz=99,slow=11,SNR=4.6						
AKTO				Lg		14 18 37.6	
	0.2nm,0.3s,baz=149,slow=21,SNR=5.0						
ILAR	**Eielson Array**	**60.90**	**19**	P	**P**	**14 23 32.0**	**-0.1**
	0.3nm,0.5s,baz=327,slow=4.7,SNR=5.8						

IDC 28 14:18:15.4±2.0,6°.65S×149°.93E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.6/16, mbtmp3.7/4, Error ellipse: s-maj=99.1km s-min=27.7km az=129.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.09**	**227**	P	P	14 22 50.9	+0.1
	1.6nm,0.7s,baz=51,slow=10,SNR=18						
ASAR	**Alice Springs**	**22.88**	**221**	P	P	14 23 18.9	-1.8
	1.4nm,0.7s,baz=56,slow=9.0,SNR=20						
FITZ	**Fitzroy Crossi**	**26.27**	**242**	P	P	14 23 53.8	+1.1
	1.3nm,0.7s,baz=41,slow=11,SNR=4.9						
ILAR	**Eielson Array**	**84.95**	**23**	P	P	14 30 52.1	0.0
	0.3nm,0.7s,baz=253,slow=5.2,SNR=4.3						
TORD	**Torodi Ar. Bea**	**148.07**	**284**	PKPbc	PKPbc	14 38 03.9	-0.2
	0.7nm,0.5s,baz=52,slow=2.5,SNR=5.3						

IDC 28 14:26:21.1±7.9,10°.84S×165°.20E, h50km±59km, mb3.3/6, mb1 3.6/7, mb1mx3.4/18, mbtmp3.5/7, ML4.7/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/16, Error ellipse: s-maj=51.5km s-min=32.6km az=119.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.35**	**285**	P	Pn	14 27 39.3	+0.9
	23nm,0.3s,baz=158,slow=7.4,SNR=6.1						
HNR				S	Sn	14 28 38.9	+0.1
	43nm,0.3s,baz=318,slow=18,SNR=7.5						
HNR				LR	LR	14 29 14.9	
	comp=Z,143nm,20.2s,baz=162,slow=32						
WRA	**Warramunga Arr**	**31.05**	**249**	P	P	14 32 34.9	+0.4
	0.2nm,0.7s,baz=88,slow=9.0,SNR=3.3						
ASAR	**Alice Springs**	**32.41**	**243**	P	P	14 32 45.8	-0.6
	0.5nm,0.9s,baz=60,slow=11,SNR=3.5						
CMAR	**Chiang Mai Arr**	**71.53**	**294**	P	P	14 37 38.5	+1.2
	0.5nm,0.7s,baz=109,slow=4.8,SNR=4.2						
SONM	**Songino Array**	**78.18**	**324**	P	P	14 38 15.4	+0.3
	0.6nm,0.6s,baz=132,slow=4.3,SNR=2.8						
ILAR	**Eielson Array**	**83.49**	**19**	P	P	14 38 42.8	-0.2
	0.3nm,0.9s,baz=219,slow=7.0,SNR=4.1						
MKAR	**Makanchi Array**	**93.00**	**317**	P	P	14 39 28.4	-0.7
	0.7nm,0.8s,baz=107,slow=5.3,SNR=6.8						

*NEIC **28** 14:33:49.9, 18°.09N×62°.26W, h121km, MD4.0(RSPR), After RSPR.*

RSPR 28 14:33:49.9, 18°.09N×62°.26W, h121km±1km, MD4.0/4, 6C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	**Willy Bob**	**0.62**	**133**	*eP*	Pn	14 34 05.5	-3.2
SMRT	**St. Maarten**	**0.77**	**267**	⇑*eP*	Pn	14 34 09.7	-0.2
SMRT				*eS*	Sn	14 34 24.9	-0.2
SEG	**Port Louis**	**1.83**	**157**	*eP*	Pn	14 34 11.8	-10
LZG	**Guadaloupe-1**	**2.00**	**166**	*eP*	Pn	14 34 12.8	-11
BCG	**Bois Riant Cap**	**2.09**	**163**	*eP*	Pn	14 34 14.6	-10
DEG	**La Desirade**	**2.11**	**147**	*eP*	Pn	14 34 15.8	-9.1
SCG	**Saint Claude**	**2.13**	**165**	*eP*	Pn	14 34 14.8	-10
PHG	**Guadaloupe-2**	**2.15**	**164**	*eP*	Pn	14 34 15.2	-10
TBG	**Guadaloupe-3**	**2.31**	**165**	⇑*iP*	Pn	14 34 16.6	-11
MGG	**Marie-Galante**	**2.35**	**157**	⇑*iP*	Pn	14 34 18.0	-10
STVI	**Saint Thomas**	**2.57**	**276**	⇑*eP*	Pn	14 34 30.5	-0.1
STVI				*eS*	Sn	14 35 02.4	+0.4
MTP	**Monte Pirata**	**3.13**	**271**	⇑*eP*	Pn	14 34 37.6	-0.3
MTP				*eS*	Sn	14 35 15.8	+0.9
CBYP	**Canovanas**	**3.42**	**274**	⇑*eP*	Pn	14 34 42.4	+0.6
CBYP				*eS*	Sn	14 35 22.2	+0.3

*BJI **28** 14:57:54.3, 7°.46S×129°.38E, h139km, mB4.9/5, mb4.8/9*

*NEIC **28** 14:57:56.4±1.5, 7°.10S×129°.19E, h110km±15km, mb4.5/17, Error ellipse: s-maj=11.1km s-min=7.6km az=57.0*

*IDC **28** 14:57:56.8±2.9, 7°.14S×129°.25E, h113km±26km, mb4.2/12, mb1 4.4/15, mb1mx4.4/19, mbtmp4.3/15, Error ellipse: s-maj=19.6km s-min=11.2km az=77.0*

*ISCJB **28** 14:58:01.9±0.5, 7°.32S±0°.04×129°.25E±0°.04, h189km±5km, mb4.6/35, Error ellipse: s-maj=6.9km s-min=4.9km az=135.6*

*DJA **28** 14:58:03, 7°.36S×129°.26E, h163km, mb4.6/36*

ISC 28 14:58:02.0±0.5, 7°.40S±0°.04×129°.31E±0°.04, h179km±5km, n103, σ1°06/104, mb4.6/35, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.92**	**12**	P	**Pn**	**14 58 49.0**	**-0.7**
NLAI	**Namlea**	**4.68**	**332**	P	**Pn**	**14 59 11.0**	**-0.9**
BBSI	**Bau Bau**	**6.96**	**285**	P	**Pn**	**14 59 41.6**	**0.0**
	0.6nm2μm168nm,1.2s						
MMRI	**Maumere**	**7.11**	**260**	P	**Pn**	**14 59 43.4**	**-0.1**
	0.4nm1μm65nm,0.9s						
MMRI				S	**Sn**	**15 00 59.4**	**-4.3**
	0.4nm1μm65nm,0.9s						
KDI	**Kendari**	**7.48**	**297**	P	**Pn**	**14 59 47.9**	**-0.6**
	0.1nm533nm49nm,1.1s						
KNA	**Kununurra**	**8.31**	**184**	P	**Pn**	**14 59 59.9**	**+0.5**
	9μm471nm,0.7s						
LUWI	**Luwuk**	**9.07**	**314**	P	**Pn**	**15 00 09.9**	**+0.4**
	56nm,1.1s						
BAKI	**Biak**	**9.17**	**48**	P	**Pn**	**15 00 10.4**	**-0.3**
	1μm106nm,0.8s						
WSI	**Waingapu**	**9.19**	**255**	P	**Pn**	**15 00 09.1**	**-1.8**
	5μm266nm,0.4s						
WSI				S	**Sn**	**15 01 44.0**	**-9.5**
	5μm266nm,0.4s						
BKSI	**Bulukumba**	**9.36**	**282**	P	**Pn**	**15 00 12.6**	**-0.6**
	461nm41nm,1.0s						
KMSI	**Cibinong**	**9.54**	**326**	P	**Pn**	**15 00 16.3**	**+0.7**
	116nm,1.0s						
MNI	**Manado**	**9.85**	**333**	P	**Pn**	**15 00 20.1**	**+0.4**
	70nm,0.9s						
APSI	**Ampana**	**9.99**	**310**	P	**Pn**	**15 00 22.1**	**+0.6**
SPSI	**Siapap Palu**	**10.09**	**289**	P	**Pn**	**15 00 24.7**	**+2.0**
	20nm,1.1s						
TTSI	**Tana Toraja**	**10.39**	**294**	P	**Pn**	**15 00 27.6**	**+0.9**
	782nm18nm,0.8s						
MRSI	**Marisa**	**10.73**	**317**	P	**Pn**	**15 00 31.7**	**+0.5**
	838nm94nm,1.1s						
MMPI	**Merauke**	**11.02**	**96**	P	**Pn**	**15 00 36.4**	**+1.5**
	374nm,1.1s						
MMPI				S	**Sn**	**15 02 32.6**	**-4.9**
	374nm,1.1s						
FITZ	**Fitzroy Crossi**	**11.22**	**198**	*eP*	**Pn**	**15 00 36.1**	**-1.3**
	31nm,0.3s						
FITZ				*eS*	**Sn**	**15 02 32.3**	**-10**
FITZ	**Fitzroy Crossi**	**11.22**	**198**	P	**Pn**	**15 00 35.2**	**-2.1**
	2.4nm,0.3s,baz=33,slow=10,SNR=56						
FITZ				S	**Sn**	**15 02 32.3**	**-10**
	12nm,0.3s,baz=90,slow=12,SNR=5.7						
FITZ	**Fitzroy Crossi**	**11.22**	**198**	P	**Pn**	**15 00 35.9**	**-1.5**
	2μm59nm,0.6s						
SGSI	**Sangihe**	**11.64**	**341**	P	**Pn**	**15 00 41.8**	**-1.1**
	3μm360nm,0.7s						
WRA	**Warramunga Arr**	**13.39**	**159**	P	**Pn**	**15 01 04.3**	**-0.7**
WRA				S	**Sn**	**15 03 25.7**	**-8.3**
WRA	**Warramunga Arr**	**13.39**	**159**	P	**Pn**	**15 01 04.3**	**-0.7**
	7.7nm,0.3s,baz=344,slow=13,SNR=123						
WRA				S	**Sn**	**15 03 25.7**	**-8.3**
	14nm,0.3s,baz=333,slow=23,SNR=10						
COEN	**Coen**	**15.10**	**117**	*eP*	**Pn**	**15 01 26.7**	**+0.3**
	139nm,0.6s						
COEN	**Coen**	**15.10**	**117**	P	**Pn**	**15 01 28.9**	**+2.5**
	126nm,1.0s						
GMJI	**Gumukmas**	**15.74**	**266**	P	**Pn**	**15 01 33.0**	**-1.3**
	24nm,1.1s						
MYLDM	**Lahad Datu**	**16.51**	**319**	P	**Pn**	**15 01 45.7**	**+2.1**
	31nm,1.2s						
MBWA	**Marble Bar**	**16.51**	**213**	*eP*	**Pn**	**15 01 50.3**	**+6.8**
MBWA				*eS*	**S**	**15 04 32.7**	**-14**
MBWA	**Marble Bar**	**16.51**	**213**	*eP*	**Pn**	**15 01 44.5**	**+0.9**
	7.3nm,0.4s						
MBWA	**Marble Bar**	**16.51**	**213**	P	**Pn**	**15 01 44.7**	**+1.2**
	16nm,1.2s						
ASAR	**Alice Springs**	**16.76**	**165**	P	**Pn**	**15 01 48.8**	**+2.3**
	4.9nm,0.3s,baz=344,slow=9.4,SNR=277						
ASAR				S	**S**	**15 04 50.7**	**-0.9**
	6.6nm,0.3s,baz=317,slow=16,SNR=7.9						
PWJI	**Pagerwojo**	**17.36**	**267**	P	**Pn**	**15 01 53.0**	**-0.7**
	21nm,1.9s						
SJI	**Sawahan**	**17.39**	**268**	P	**Pn**	**15 01 53.7**	**-0.4**
	1μm22nm,0.5s						
NGJI	**Ngawi**	**17.70**	**269**	P	**Pn**	**15 01 59.9**	**+2.2**
	36nm,1.9s						
PMG	**Port Moresby**	**17.77**	**98**	P	**Pn**	**15 01 58.0**	**-0.6**
	53nm,0.9s						
PCJI	**Pacitan**	**17.98**	**266**	P	**Pn**	**15 01 57.8**	**-3.2**
	36nm,1.6s						
MTSU	**Mount Surprise**	**18.10**	**128**	*eP*	**P**	**15 02 05.1**	**+4.7**
	130nm,0.8s						
MTSU				*eS*	**S**	**15 05 16.0**	**-2.5**
UGM	**Wanagama**	**18.62**	**267**	P	**P**	**15 02 05.2**	**-0.9**
	95nm,1.7s						
KKM	**Kota Kinabalu**	**18.68**	**315**	P	**P**	**15 02 06.5**	**-0.3**
	35nm,1.1s						
SBUM	**Sibu**	**19.66**	**299**	P	**P**	**15 02 18.5**	**+1.2**
	16nm,1.0s						
CTA	**Charters Tower**	**20.71**	**129**	*eP*	**P**	**15 02 33.1**	**+4.6**
	9.9nm,0.6s						
CTA	**Charters Tower**	**20.71**	**129**	P	**P**	**15 02 33.1**	**+4.6**
	18nm,0.8s,baz=303,slow=11,SNR=18						
CTAO	**Charters Tower**	**20.71**	**129**	*eP*	**P**	**15 02 33.3**	**+4.8**
	16nm,0.8s						
CTAO	**Charters Tower**	**20.71**	**129**	P	**P**	**15 02 33.0**	**+4.5**
	23nm,1.1s						
KSM	**Kuching**	**20.90**	**294**	*eP*	**P**	**15 02 29.5**	**-1.2**
	23nm,0.8s						
FORT	**Forrest**	**23.28**	**183**	*eP*	**P**	**15 02 58.2**	**+4.5**
FORT	37nm,0.6s,mb5.0			*eS*	S	15 07 15.1	+23
FORT	**Forrest**	**23.28**	**183**	*eP*	**P**	**15 02 58.1**	**+4.4**
	36nm,0.6s,mb5.0						
GUMO	**Guam**	**25.96**	**37**	P	**P**	**15 03 17.9**	**-0.2**
	7.8nm,0.3s,mb4.8,baz=27,slow=6.8,SNR=4.3						
GUMO	**Guam**	**25.96**	**37**	P	**P**	**15 03 19.1**	**+1.0**
	38nm,1.9s,mb4.7						
BBOO	**Buckleboo**	**26.05**	**167**	*eP*	**P**	**15 03 21.9**	**+3.1**
	39nm,0.6s,mb5.2						
STKA	**Stephens Creek**	**26.91**	**156**	*eP*	**P**	**15 03 30.1**	**+3.6**
	8.0nm,0.4s,mb4.7						
STKA				*eS*	sS	15 08 43.8	-12
STKA	**Stephens Creek**	**26.91**	**156**	*eP*	**P**	**15 03 29.9**	**+3.4**
STKA	**Stephens Creek**	**26.91**	**156**	P	**P**	**15 03 30.3**	**+3.8**
	8.7nm,0.4s,mb4.8,baz=321,slow=10,SNR=24						
MYKOM	**Kota Tinggi**	**26.99**	**289**	P	**P**	**15 03 29.7**	**+2.3**
	14nm,1.3s,mb4.4						
CMSA	**Cobar Meteorol**	**28.47**	**150**	*eP*	**P**	**15 03 44.7**	**+4.4**
ARPS	**Mount Arapiles**	**31.39**	**160**	*eP*	**P**	**15 04 10.5**	**+4.5**
	57nm,0.9s,mb5.3						
PSI	**Prapat**	**31.97**	**287**	P	**P**	**15 04 11.5**	**+0.1**
	9.8nm,0.8s,mb4.6,baz=120,slow=4.6,SNR=7.7						
TOO	**Toolangi**	**33.43**	**156**	*eP*	**P**	**15 04 29.1**	**+5.3**
TPTI		**33.76**	**287**	P	**P**	**15 04 28.2**	**+1.2**
	13nm,1.5s,mb4.5						
CM31	**Chiang Mai Arr**	**39.47**	**311**	*eP*	**P**	**15 05 11.5**	**-3.6**
	4.3nm,0.8s,mb4.1						
CMAR	**Chiang Mai Arr**	**39.47**	**311**	P	**P**	**15 05 15.0**	**-0.1**
	4.6nm,0.7s,mb4.2,baz=141,slow=7.2,SNR=51						
CMAR				PcP	PcP	15 07 21.8	+2.4
	1.7nm,0.7s,baz=166,slow=2.7,SNR=11						
CHTO	**Chiang Mai**	**39.69**	**311**	*eP*	**P**	**15 05 16.5**	**-0.4**
	11nm,0.8s,mb4.5						
CHTO	**Chiang Mai**	**39.69**	**311**	P	**P**	**15 05 16.8**	**-0.1**
MJAR	**Matsushiro Arr**	**44.50**	**10**	P	**P**	**15 05 53.8**	**-1.8**
	6.9nm,0.8s,mb4.4,baz=188,slow=9.3,SNR=19						
MAJO	**Matsushiro**	**44.51**	**10**	*eP*	**P**	**15 05 54.3**	**-1.4**
	6.2nm,0.8s,mb4.3						
MAT	**Matsushiro**	**44.51**	**10**	P	**P**	**15 05 54.5**	**-1.1**
KSRS	**Korea Array**	**44.64**	**358**	P	**P**	**15 05 56.8**	**+0.1**
	9.2nm,0.7s,mb4.1,baz=174,slow=8.8,SNR=20						
BJT	**Baijiatuau**	**48.72**	**347**	*eP*	**P**	**15 06 26.9**	**-1.5**
	6.5nm,0.4s,mb4.6						
LSA	**Lhasa**	**52.02**	**317**	*eP*	**P**	**15 06 54.0**	**+0.7**
	12nm,0.6s,mb4.7						
ODAN	**Odare**	**53.00**	**312**	*eP*	**P**	**15 07 00.4**	**-0.2**
	20nm,0.5s,mb5.1						
TAPN	**Taplejung**	**53.04**	**312**	*eP*	**P**	**15 07 00.9**	**0.0**
	40nm,0.4s,mb5.5						
RAMN	**Ramite**	**53.64**	**311**	*eP*	**P**	**15 07 05.5**	**+0.3**
	34nm,0.6s,mb5.3						
GTA	**Gaotai**	**54.00**	**332**	*eP*	**P**	**15 07 07.5**	**-0.1**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
JIRN	**Jiri**	**54.33**	**312**	*eP*	**P**	**15 07 10.5**	**+0.3**
GUN	**Gumba**	**54.70**	**312**	*eP*	**P**	**15 07 12.8**	**-0.1**
PKI	**Pulchoki**	**54.87**	**311**	*eP*	**P**	**15 07 13.7**	**-0.4**
	comp=Z,9.0nm,0.4s,mb4.8						
PKIN	**Phulchoki**	**54.88**	**311**	*eP*	**P**	**15 07 13.8**	**-0.4**
DMN	**Daman**	**55.11**	**311**	*eP*	**P**	**15 07 15.8**	**0.0**
GKN	**Gorkha**	**55.67**	**311**	*eP*	**P**	**15 07 19.7**	**-0.1**
	comp=Z,27nm,0.3s,mb5.5						
KOLN	**Koldanda**	**56.33**	**310**	*eP*	**P**	**15 07 24.3**	**-0.2**
	comp=Z,23nm,0.5s,mb5.3						
ULN	**Ulaanbaatar**	**58.44**	**343**	*eP*	**P**	**15 07 37.3**	**-1.5**
	comp=Z,4.0nm,0.8s,mb4.3						
SONM	**Songino Array**	**58.61**	**342**	P	**P**	**15 07 41.5**	**+1.5**
	comp=Z,3.1nm,0.8s,mb4.2,baz=164,slow=6.2,SNR=9.7						
SONM				PcP	PcP	15 08 28.5	+0.4
	comp=Z,1.5nm,0.7s,baz=186,slow=3.8,SNR=4.3						
PETK	**Petropavlovsk-**	**64.92**	**18**	P	**P**	**15 08 23.6**	**+1.5**
	comp=Z,9.6nm,0.7s,mb4.8,baz=166,slow=3.1,SNR=23						
PETK				PcP	PcP	15 08 54.1	+0.5
	comp=Z,1.3nm,0.5s,baz=198,slow=2.8,SNR=4.5						
MK31	**Makanchi Array**	**68.19**	**327**	*eP*	**P**	**15 08 43.1**	**+0.2**
MKAR	**Makanchi Array**	**68.19**	**327**	P	**P**	**15 08 43.2**	**+0.3**
	comp=Z,4.4nm,0.6s,mb4.4,baz=126,slow=7.7,SNR=68						
YAK	**Yakutsk**	**69.23**	**0**	*eP*	**P**	**15 08 49.3**	**+0.3**
	comp=Z,36nm,0.8s,mb5.2						
EKS2	**Erkin-Say**	**70.87**	**320**	*eP*	**P**	**15 09 00.3**	**+0.9**
	comp=Z,4.3nm,0.9s,mb4.2						
ZALV	**Zalesovo Beam**	**71.64**	**334**	P	**P**	**15 09 03.1**	**-0.7**
	comp=Z,2.9nm,0.5s,mb4.2,baz=132,slow=5.7,SNR=15						
KURK	**Kurchatov**	**72.50**	**329**	*eP*	**P**	**15 09 09.0**	**0.0**
	comp=Z,4.0nm,0.7s,mb4.3						
KKAR	**Karatay Array**	**73.19**	**319**	*eP*	**P**	**15 09 13.4**	**+0.1**
	comp=Z,0.9nm,0.4s,mb3.9						
MAW	**Mawson**	**74.33**	**201**	P	**P**	**15 09 23.3**	**+3.9**
	comp=Z,1.3nm,0.6s,mb3.9,baz=90,slow=6.3,SNR=8.2						
TIXI	**Tiksi**	**78.89**	**360**	*eP*	**P**	**15 09 44.9**	**+0.1**
ABKAR	**Akbulak array**	**82.40**	**322**	*eP*	**P**	**15 10 04.0**	**0.0**
	comp=Z,0.9nm,0.4s,mb3.8						
ILAR	**Eielson Array**	**94.00**	**25**	P	**P**	**15 10 58.9**	**-0.3**
	comp=Z,0.9nm,0.7s,mb4.0,baz=262,slow=4.5,SNR=8.8						
PDAR	**Pinedale Array**	**117.66**	**45**	PKP	PKPdf	15 16 29.3	+2.3
	comp=Z,0.3nm,0.6s,baz=299,slow=1.9,SNR=3.5						
TXAR	**Ojitas Array**	**125.72**	**59**	PKP	PKPdf	15 16 46.1	+3.2
	comp=Z,0.5nm,0.7s,baz=228,slow=2.0,SNR=5.9						
TORD	**Torodi Ar. Bea**	**128.21**	**281**	PKP	PKPdf	15 16 49.2	+1.2
	comp=Z,1.4nm,0.7s,baz=63,slow=1.8,SNR=7.9						
DBIC	**Dimbokro**	**134.52**	**272**	PKP	PKPdf	15 17 03.1	+3.1
	comp=Z,3.3nm,0.8s,baz=149,slow=5.9,SNR=5.6						
CFAA	**Coronel Fontan**	**137.74**	**158**	PKP	PKPdf	15 17 10.2	+4.6
	comp=Z,0.2nm,0.3s,baz=180,slow=4.2,SNR=3.7						
CPUP	**Villa Florida**	**145.85**	**169**	PKPbc	PKPbc	15 17 24.2	+3.3
	comp=Z,1.6nm,0.5s,baz=139,slow=1.6,SNR=7.6						
ATAH	**Atahualpa**	**148.83**	**117**	PKPbc	PKPbc	15 17 30.9	+1.4
	comp=Z,5.0nm,0.6s,baz=72,slow=6.4,SNR=2.5						
LPAZ	**La Paz**	**150.81**	**144**	PKPbc	PKPbc	15 17 38.6	+4.5
	comp=Z,1.2nm,0.4s,baz=49,slow=3.9,SNR=6.6						
LPAZ				PKPab	PKPab	15 17 47.3	+5.5
	comp=Z,1.0nm,0.6s,baz=170,slow=5.2,SNR=5.6						
SIV	**San Ignacio**	**154.59**	**156**	PKPab	PKPab	15 18 00.9	+3.3
	comp=Z,1.2nm,0.6s,baz=248,slow=5.4,SNR=5.9						

*BJI **28** 15:00:44.8, 43°.10N×126°.30W, h10km, mB5.0/7, mb5.0/12, Ms4.6/5, Ms7 4.3/5*

*ISCJB **28** 15:00:46.5±0.3, 43°.17N±0°.03×126°.27W±0°.04, h10km, mb4.5/31, MS3.9/7, Error ellipse: s-maj=4.3km s-min=3.2km az=144.1*

*IDC **28** 15:00:46.3±1.0, 43°.13N×126°.30W, h0km, mb3.7/8, mb1 4.1/13, mb1mx3.9/28, mbtmp3.9/13, ML3.8/5, MS3.7/9, Ms1 3.7/9, ms1mx3.3/51, Error ellipse: s-maj=28.5km s-min=9.5km az=39.0*

*NEIC **28** 15:00:47.9±0.5, 43°.13N×126°.32W, h10km, mb4.5/28, Error ellipse: s-maj=6.9km s-min=4.1km az=58.0*

ISC 28 15:00:48.2±0.3, 43°.18N±0°.03×126°.36W±0°.04, h10km, (h18km±4.2km: pP-P), n138, σ1°15/145, mb4.5/31, MS3.9/7, 1C, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**1.51**	**101**	⇑*iPn*	**Pn**	**15 01 12.2**	**-3.1**
KBO	**Bosley Butte**	**1.84**	**121**	*ePn*	**Pn**	**15 01 16.3**	**-3.5**
RNO	**Roman Nose**	**2.04**	**68**	P	**Pn**	**15 01 21.3**	**-1.2**
DBO	**Dodson Butte**	**2.28**	**90**	P	**Pn**	**15 01 24.0**	**-1.8**
HSO	**Har

DLMT	**Dillon**	**10.11**	**73**	*e*Pn		**Pn**	**15 03 14.0**	**+0.7**	
	21nm,0.9s								
BGU	**Big Grassy Mou**	**10.17**	**98**	*e*Pn		**Pn**	**15 03 14.9**	**+0.8**	
	43nm,1.4s								
LRM	**Limekiln Ridge**	**10.28**	**70**	*e*Pn		**Pn**	**15 03 15.6**	**-0.1**	
	45nm,0.8s								
WALA	**Waterton Lakes**	**10.45**	**51**	*e*Pn		**Pn**	**15 03 18.9**	**+1.1**	
	0.3nm,0.7s								
DUG	**Dugway**	**10.56**	**102**	*e*Pn		**Pn**	**15 03 20.0**	**+0.5**	
	23nm,1.2s								
GSC	**Goldstone**	**10.80**	**134**	*e*Pn		**Pn**	**15 03 24.5**	**+1.8**	
	5.8nm,0.8s								
BOZ	**Bozeman (W)**	**10.82**	**72**	*e*Pn		**Pn**	**15 03 23.3**	**+0.3**	
	12nm,0.7s								
SHPR	**Sheep Range**	**10.88**	**124**	*e*Pn		**Pn**	**15 03 24.3**	**+0.4**	
	6.1nm,1.0s								
HRY	**Holter Researc**	**10.88**	**66**	*e*Pn		**Pn**	**15 03 24.3**	**+0.4**	
	5.4nm,0.3s								
RRI2	**Red Ridge**	**10.97**	**84**	*e*Pn		**Pn**	**15 03 27.3**	**+2.3**	
	65nm,1.5s								
HWUT	**Hardware Ranch**	**11.05**	**93**	*e*Pn		**Pn**	**15 03 24.1**	**-2.1**	
	8.5nm,1.0s								
ARUT	**Antelope Range**	**11.21**	**114**	*e*Pn		**Pn**	**15 03 30.2**	**+1.8**	
	12nm,0.7s								
IMW	**Indian Meadow**	**11.22**	**81**	*e*Pn		**Pn**	**15 03 30.7**	**+2.3**	
	32nm,1.3s								
TPAW	**Teton Pass**	**11.23**	**83**	*e*Pn		**Pn**	**15 03 30.9**	**+2.3**	
	72nm,1.3s								
REDW	**Red Top Meadow**	**11.31**	**84**	*e*Pn		**Pn**	**15 03 31.4**	**+1.6**	
	66nm,1.5s								
MOOW	**Moose Ponds**	**11.37**	**82**	*e*Pn		**Pn**	**15 03 32.4**	**+2.0**	
	17nm,1.3s								
FLWY	**Flagg Ranch**	**11.39**	**80**	*e*Pn		**Pn**	**15 03 30.3**	**-0.5**	
	66nm,1.7s								
YNR	**Norris Junctio**	**11.41**	**77**	*e*Pn		**Pn**	**15 03 32.2**	**+1.1**	
	62nm,1.5s								
LOHW	**Long Hollow**	**11.47**	**82**	*e*Pn		**Pn**	**15 03 34.3**	**+2.4**	
	68nm,1.5s								
LKWY	**Lake**	**11.61**	**78**	*e*Pn		**Pn**	**15 03 34.8**	**+1.1**	
	73nm,1.4s								
DAU	**Daniels Canyon**	**11.61**	**99**	*e*Pn		**Pn**	**15 03 34.3**	**+0.5**	
	17nm,1.3s								
MSU	**Marysvale**	**11.70**	**109**	*e*Pn		**Pn**	**15 03 36.4**	**+1.3**	
	17nm,1.1s								
LDFC	**Landfair**	**11.89**	**129**	*e*Pn		**Pn**	**15 03 37.9**	**+0.2**	
	37nm,1.3s								
PDAR	**Pinedale Array**	**12.32**	**86**	Pn		**Pn**	**15 03 45.3**	**+1.8**	
	0.1nm,0.3s,baz=286,slow=11,SNR=20								
PDAR				LR		LR	15 08 55.0		
	comp=Z,722nm,18.9s,baz=305,slow=40								
RLMT	**Red Lodge**	**12.43**	**75**	*e*Pn		**Pn**	**15 03 41.5**	**-3.6**	
	8.1nm,1.0s								
EGMT	**Eagleton**	**12.59**	**62**	*e*Pn		**Pn**	**15 03 46.8**	**-0.4**	
	36nm,1.2s								
SRU	**San Rafael**	**12.61**	**103**	*e*Pn		**Pn**	**15 03 46.9**	**-0.5**	
	4.6nm,0.9s								
WUAZ	**Wupatki**	**13.88**	**118**	*e*Pn		**Pn**	**15 04 08.2**	**+3.4**	
	11nm,1.0s								
PV04	**Paradox Valley**	**14.05**	**104**	*e*Pn		**Pn**	**15 04 06.6**	**-0.7**	
PV01	**Paradox Valley**	**14.40**	**104**	*e*Pn		**Pn**	**15 04 11.6**	**-0.4**	
	342nm,0.7s								
LAO	**LASA Array**	**14.68**	**69**	*e*Pn		**Pn**	**15 04 13.9**	**-1.8**	
	15nm,0.8s								
MVCO	**Mesa Verde**	**14.88**	**108**	*e*Pn		**Pn**	**15 04 10.1**	**-8.4**	
	7.1nm,0.8s								
SMCO	**Snowmass**	**15.13**	**99**	*e*Pn		**Pn**	**15 04 22.2**	**+0.4**	
	3.8nm,0.7s								
DLBC	**Dease Lake**	**15.45**	**353**	*e*Pn		**Pn**	**15 04 27.3**	**+1.4**	
DLBC	**Dease Lake**	**15.45**	**353**	Pn		**Pn**	**15 04 27.9**	**+2.0**	
	0.1nm,0.3s,baz=180,slow=19,SNR=2.6								
DLBC				LR		LR	15 08 45.8		
	comp=Z,130nm,21.5s,baz=355,slow=31								
ISCO	**Idaho Springs**	**15.90**	**95**	*e*Pn		**Pn**	**15 04 31.5**	**-0.4**	
	8.5nm,0.9s								
DGMT	**Dagmar**	**16.31**	**63**	*e*Pn		**Pn**	**15 04 36.2**	**-0.9**	
	140nm,1.5s								
TUC	**Tucson**	**16.39**	**126**	*e*Pn		**Pn**	**15 04 40.2**	**+2.0**	
	7.0nm,1.0s								
SDCO	**Great Sand Dun**	**16.76**	**102**	*e*Pn		**Pn**	**15 04 42.8**	**-0.1**	
	259nm,1.2s								
SKAG	**Skagway**	**17.21**	**344**	*e*Pn		**Pn**	**15 04 46.7**	**-1.7**	
LAZ	**Ladron**	**17.33**	**114**	*e*Pn		**Pn**	**15 04 50.2**	**+0.2**	
	4.2nm,1.1s								
ANMO	**Albuquerque**	**17.47**	**111**	*e*Pn		**Pn**	**15 04 51.0**	**-0.8**	
	21nm,1.1s								
ANMO	**Albuquerque**	**17.47**	**111**	P		**Pn**	**15 04 51.2**	**-0.6**	
	0.1nm,0.3s,baz=309,slow=12,SNR=22								
ANMO				LR		LR	15 11 15.7		
	comp=Z,125nm,21.1s,baz=307,slow=36								
LENM	**Lemitar**	**17.58**	**114**	*e*Pn		**Pn**	**15 04 46.0**	**-7.1**	
	12nm,1.2s								
LPM	**Los Pinos Moun**	**17.72**	**113**	*e*Pn		**Pn**	**15 04 53.8**	**-1.1**	
	15nm,1.4s								
BNM	**Barren Site**	**17.82**	**114**	*e*Pn		**Pn**	**15 04 57.2**	**+1.1**	
	55nm,1.5s								
FFC	**Flin Flon**	**19.63**	**45**	*e*P		**Pn**	**15 05 16.4**	**-1.5**	
	26nm,1.0s								
MNTX	**Cornudas Mount**	**20.16**	**118**	*e*P		**P**	**15 05 23.6**	**+1.1**	
	3.8nm,1.0s								
YKA	**Yellowknife Ar**	**20.55**	**16**	P		**P**	**15 05 27.8**	**+1.4**	
YKA				LR		LR	15 14 29.2		
YKA	**Yellowknife Ar**	**20.55**	**16**	P		**P**	**15 05 27.8**	**+1.4**	
	2.1nm,0.8s,baz=205,slow=12,SNR=3.5								
YKA				LR		LR	15 14 29.2		
	comp=Z,11nm,18.6s,baz=15,slow=40								
AMTX	**Amarillo**	**20.83**	**105**	*e*P		**P**	**15 05 29.5**	**-0.3**	
	31nm,1.1s								
ECSD	**EROS Data Cent**	**21.55**	**78**	*e*P		**P**	**15 05 37.2**	**-0.3**	
	36nm,1.4s,mb4.6								
AGMN	**Agassiz Nation**	**21.81**	**66**	*e*P		**P**	**15 05 40.5**	**+0.3**	
	29nm,0.9s,mb4.6								
ULM	**Lac du Bonnet**	**21.95**	**61**	P		**P**	**15 05 42.2**	**+0.4**	
	5.6nm,0.5s,mb4.2,baz=264,slow=9.8,SNR=6.6								
ULM				LR		LR	15 14 22.5		
	comp=Z,255nm,20.0s,MS3.6,baz=186,slow=37								
SEW	**Seward**	**22.00**	**328**	*e*P		**P**	**15 05 41.8**	**-0.3**	
	13nm,1.0s,mb4.3								
DAWY	**Dawson**	**22.22**	**345**	*e*P		**P**	**15 05 45.7**	**+1.3**	
MENT	**Mentasta**	**22.23**	**339**	*e*P		**P**	**15 05 46.0**	**+1.4**	
KSU1	**Kansas State U**	**22.71**	**90**	*e*P		**P**	**15 05 48.9**	**-1.0**	
	63nm,1.4s,mb5.0								
TXAR	**Lajitas Array**	**22.83**	**120**	P		**P**	**15 05 52.1**	**+0.8**	
	1.0nm,0.7s,mb3.4,baz=304,slow=7.6,SNR=14								
WMOK	**Wichita Mounta**	**22.96**	**102**	*e*P		**P**	**15 05 52.4**	**-0.2**	
	19nm,1.2s,mb4.4								
ILAR	**Eielson Array**	**24.55**	**339**	P		**P**	**15 06 08.2**	**+0.6**	
	1.0nm,0.6s,mb3.5,baz=149,slow=8.6,SNR=22								
ILAR				PcP		PcP	15 09 45.2	-0.1	
	0.2nm,0.5s,baz=160,slow=3.7,SNR=3.7								
ILAR				LR		LR	15 14 17.7		
	comp=Z,165nm,20.5s,MS3.5,baz=250,slow=33								
PPLA	**Purkeypile**	**24.81**	**332**	*e*P		**P**	**15 06 09.0**	**-1.0**	
	19nm,1.0s,mb4.6								
BPAW	**Bear Paw Mtn.**	**25.23**	**335**	*e*P		**P**	**15 06 13.7**	**-0.1**	
	16nm,1.6s,mb4.3								
INK	**Inuvik**	**25.47**	**354**	LR		LR	15 15 35.5		
	comp=Z,103nm,18.2s,MS3.4,baz=278,slow=35								
MIAR	**Mount Ida**	**26.81**	**98**	*e*P		**P**	**15 06 28.8**	**+0.4**	
	4.2nm,0.8s,mb4.0								
CCM	**Cathedral Cave**	**27.01**	**89**	*e*P		**P**	**15 06 29.6**	**-0.6**	
	48nm,1.7s,mb4.8								
FVM	**French Village**	**27.64**	**89**	*e*P		**P**	**15 06 33.5**	**-2.3**	
	32nm,1.5s,mb4.7								
WVT	**Waverly**	**30.28**	**90**	*e*P		**P**	**15 06 57.9**	**-1.5**	
	5.8nm,0.8s,mb4.4								
ACSO	**Alum Creek Sta**	**32.25**	**80**	*e*P		**P**	**15 07 16.4**	**-0.3**	
	14nm,0.6s,mb5.0								
SADO	**Sadowa**	**33.65**	**71**	LR		LR	15 21 40.5		
	comp=Z,250nm,20.7s,MS3.9,baz=301,slow=37								
GOGA	**Godfrey**	**34.72**	**92**	*e*P		**P**	**15 07 38.5**	**+0.2**	
	13nm,0.6s,mb5.0								
PETK	**Petropavlovsk-**	**49.38**	**310**	P		**P**	**15 09 36.5**	**-1.0**	
	1.7nm,0.8s,mb4.1,baz=88,slow=13,SNR=3.1								
MTP	**Monte Pirata**	**56.64**	**96**	*e*P		**P**	**15 10 28.4**	**-3.1**	
	5.7nm,0.8s,mb4.7								
ARCES	**ARCESS Array B**	**65.71**	**10**	P		**P**	**15 11 33.6**	**+1.3**	
ARCES	**ARCESS Array B**	**65.71**	**10**	P		**P**	**15 11 33.6**	**+1.3**	
	1.1nm,0.5s,mb4.2,baz=82,slow=6.5,SNR=6.4								
CN2	**Changchun**	**72.25**	**314**	*e*P		**P**	**15 12 14.0**	**+0.6**	
CN2				*e*S		S	15 21 33.0	-3.1	
CN2				pmax		pmax			
	comp=Z,10.0nm,0.7s,mb4.8								
CN2				pmax		pmax			
	comp=Z,60nm,9.0s								
CN2				LR		LR			
	comp=N,100nm,18.0s,MS4.3								
CN2				LR		LR			
	comp=E,100nm,18.0s,MS4.3								
CN2				LR		LR			
	comp=Z,300nm,26.0s								
ZALV	**Zalesovo Beam**	**79.63**	**342**	P		**P**	**15 12 55.6**	**+0.3**	
	comp=Z,0.5nm,0.4s,mb3.8,baz=45,slow=6.3,SNR=2.8								
HHC	**Hu-ho-hao-te**	**81.40**	**319**	*e*P		**P**	**15 13 03.5**	**-1.6**	
HHC				S		S	15 23 11.5	-4.6	
HHC				SKS			15 23 18.0		
HHC				pmax		pmax			
	comp=Z,10.0nm,0.8s,mb4.8								
HHC				pmax		pmax			
	comp=Z,110nm,5.8s								
HHC				LR		LR			
	comp=N,100nm,15.5s,MS4.4								
HHC				LR		LR			
	comp=E,83nm,14.3s,MS4.4								
HHC				LR		LR			
	comp=Z,83nm,15.5s,MS4.2								
AKASG	**Malin Array Be**	**84.11**	**15**	P		**P**	**15 13 19.1**	**+0.1**	
	comp=Z,0.4nm,0.4s,mb3.9,baz=353,slow=4.7,SNR=3.6								
NJ2	**Nanjing**	**84.28**	**309**	*e*P		**P**	**15 13 18.5**	**-1.7**	
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.6s,mb5.1								
MKAR	**Makanchi Array**	**86.89**	**341**	P		**P**	**15 13 33.1**	**+0.2**	
	comp=Z,0.5nm,0.8s,mb3.8,baz=27,slow=6.0,SNR=3.8								
ABKAR	**Akbulak array**	**87.78**	**356**	*e*P		**P**	**15 13 37.1**	**0.0**	
	comp=Z,0.9nm,0.6s,mb4.2								
WMQ	**Urumqi**	**88.18**	**336**	*e*P		**P**	**15 13 39.8**	**+0.6**	
WMQ				pP		pP	15 13 44.5	+2.0	
WMQ				sP		sP	15 13 46.8	+3.1	
WMQ				pmax		pmax			
	comp=Z,6.0nm,1.2s,mb4.7								
WMQ				pmax		pmax			
	comp=Z,58nm,4.6s								
WMQ				LR		LR			
	comp=N,52nm,18.0s,MS4.1								
WMQ				LR		LR			
	comp=E,51nm,19.0s,MS4.1								
WMQ				LR		LR			
	comp=Z,50nm,18.0s,MS4.0								
LZH	**Lanzhou**	**88.82**	**322**	*e*P		**P**	**15 13 43.0**	**+0.7**	
LZH				pP		pP	15 13 46.3	+0.6	
LZH				sP		sP	15 13 49.5	+2.6	
LZH				pmax		pmax			
	comp=Z,16nm,1.3s,mb5.2								
LZH				pmax		pmax			
	comp=Z,47nm,8.2s								
CD2	**Chengdu**	**93.14**	**319**	P		**P**	**15 14 01.8**	**-0.7**	
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s,mb5.5								
CD2				pmax		pmax			
	comp=Z,120nm,5.3s								
GYA	**Guiyang**	**95.30**	**314**	*e*P		**P**	**15 14 12.0**	**-0.5**	
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s,mb5.2								
KMI	**Kunming**	**98.41**	**316**	P		**P**	**15 14 26.0**	**-0.6**	
KMI				pP		pP	15 14 34.3	+4.3	
KMI				sP		sP	15 14 37.0	+5.9	
KMI				pmax		pmax			
	comp=Z,5.0nm,1.1s,mb5.0								
BOSA	**Boshof**	**152.96**	**67**	PKPbc		PKPbc	15 20 45.2	-0.4	
	comp=Z,2.0nm,0.8s,baz=333,slow=4.5,SNR=3.3								

*MOS **28** 15:16:04.6±0.5,52.˚69N×160.˚12E,h58km,mb4.3/1,Error ellipse: s-maj=32.7km s-min=12.0km az=80.2*

KRSC 28 15:16:05.4±0.7,52.˚71N×160.˚07E,h70km±40km,ML4.1, 1D,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
SPN	**Mys Shipunski**	**0.39**	**356**	*i* P	Pn	15 16 17.7		+0.5
SPN				*i* S	Sn	15 16 27.0		+1.1
NLC	**Nalytchevo**	**0.64**	**317**	*i* P	Pn	15 16 19.9		+0.3
NLC				*i* S	Sn	15 16 30.7		+0.7
PET	**Petropavlovsk**	**0.92**	**291**	*i* P	Pn	15 16 22.7		-0.1
PET				*i* S	Sn	15 16 35.7		0.0
PET	**Petropavlovsk**	**0.92**	**291**	*i*PN	Pn	15 16 22.6		-0.2
PET				*e*S	Sn	15 16 35.7		0.0
PET				pmax	pmax			
	comp=Z,99nm,0.2s							
PET				smax				
	comp=E,832nm,0.5s							
PET				smax				
	comp=N,1μm,0.6s							
AVH	**Avacha**	**0.98**	**305**	*i* P	Pn	15 16 24.5		+0.9
AVH				*i* S	Sn	15 16 39.0		+1.9
KII	**Karymskiy**	**1.38**	**345**	*i* P	Pn	15 16 30.0		+1.3
KII				*i* S	Sn	15 16 48.3		+2.1
GNL	**Ganaly**	**1.62**	**308**	*i* P	Pn	15 16 33.1		+1.3
GNL				*i* S	Sn	15 16 53.1		+1.3
MIPR	**Malaya Ipel'ka**	**2.07**	**259**	*i* P	Pn	15 16 37.6		-0.3
MIPR				*e*S	Sn	15 17 01.3		-1.4
MKZ	**Mys Kozlova**	**2.10**	**27**	*i* P	Pn	15 16 38.8		+0.5
MKZ				*i* S	Sn	15 17 03.0		-0.4
SKR	**Severo-Kuril's**	**3.19**	**232**	*e*PN	Pn	15 16 54.5		+1.4
SKR				*e*S	Sn	15 17 28.4		-1.5
SKR				pmax	pmax			
	comp=E,60nm,0.5s							
SKR				pmax	pmax			
	comp=Z,80nm,0.5s							
SKR				smax				
	comp=N,270nm,0.3s							
SKR				smax				
	comp=E,310nm,0.3s							
SKR				smax				
	comp=Z,80nm,0.3s							
KPT	**Kopyto**	**3.26**	**2**	P	Pn	15 16 54.9		+0.8
KOZ	**Kozyrevsk**	**3.36**	**358**	P	Pn	15 16 55.8		+0.4
ALID	**Alaid**	**3.36**	**238**	*i* P	Pn	15 16 54.4		-1.0
ALID				*e*S	Sn	15 17 31.1		-2.9
KOZR	**Kozyr**	**3.37**	**358**	PN	Pn	15 16 55.8		+0.3
SRDR	**Sredinnyy**	**3.62**	**357**	P	Pn	15 17 00.9		+2.0
KLY	**Klyuchi**	**3.63**	**5**	P	Pn	15 17 00.9		+1.9
KLY				*i* S	Sn	15 17 41.3		+0.7
KBTR	**Krutoberegovo**	**3.85**	**23**	*i* P	Pn	15 17 03.4		+1.3
KBTR				*e*S	Sn	15 17 45.5		-0.6
BKI	**Bering**	**4.29**	**52**	*e*P	Pn	15 17 08.4		+0.3
BKI				*i* S	Sn	15 17 53.1		-3.6

*ISCJB **28** 15:19:53.6±1.4,39.˚15N±0.˚08×33.˚24E±0.˚04,h8km±10km, Error ellipse: s-maj=12.9km s-min=5.6km az=1.2*
*ISK **28** 15:19:53.1,39.˚35N×33.˚19E,h9km,MD2.6*
*CSEM **28** 15:19:53.7±0.2,39.˚16N×33.˚23E,h15km,MD2.7, Error ellipse: s-maj=5.0km s-min=2.9km az=172.0*
*DDA **28** 15:19:55.0,39.˚21N×33.˚30E,h7km±1km,Md2.7*

ISC 28 15:19:54.0±1.4,39.˚16N±0.˚08×33.˚25E±0.˚04,h12km±10km, n16,σ0.961/25,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
BBAL	**Bala**	**0.40**	**345**	*i* P	**Pg**	**15 20 02.2**		**+0.3**
BBAL				*i* S	**Sg**	**15 20 08.0**		**+0.7**
BBAL	**Bala**	**0.40**	**345**	*i* P	**Pg**	**15 20 02.2**		**+0.2**
BBAL				*i* S	**Sg**	**15 20 08.0**		**+0.7**
KAMT	**Kaman**	**0.41**	**59**	*e*PG	**Pg**	**15 20 01.7**		**-0.6**
KAMT				*e*SG	**Sg**	**15 20 07.6**		**-0.2**
KAMT	**Kaman**	**0.41**	**59**	*e*Pg	**Pg**	**15 20 01.7**		**-0.5**
KAMT				*e*Sg	**Sg**	**15 20 07.6**		**-0.2**
CDAG	**Cicekdag**	**0.98**	**61**	*i* P	**Pb**	**15 20 13.1**		**+0.1**
CDAG				*i* S	**Sb**	**15 20 26.0**		**+0.1**
CDAG	**Cicekdag**	**0.98**	**61**	*i* P	**Pb**	**15 20 13.1**		**+0.1**
CDAG				*i* S	**Sb**	**15 20 26.0**		**+0.1**
KIZT	**Kizilcal**	**1.11**	**256**	*e*PN	**Pn**	**15 20 14.8**		**-0.5**
KIZT				*e*SN	**Sn**	**15 20 31.2**		**+0.7**
KIZT	**Kizilcal**	**1.11**	**256**	*e*Pn	**Pn**	**15 20 14.8**		**-0.5**
AVNT	**Avonos**	**1.30**	**106**	*i* P	**Pn**	**15 20 19.3**		**+1.3**
AVNT				*i* S	**Sb**	**15 20 35.3**		**+0.2**
AVNT	**Avonos**	**1.30**	**106**	*i* P	**Pn**	**15 20 19.3**		**+1.3**
AVNT				*i* S	**Sb**	**15 20 35.3**		**+0.2**
SVRH	**Sivrihisar-ESK**	**1.37**	**283**	*e*PN	**Pn**	**15 20 17.9**		**-1.1**
SVRH	**Sivrihisar-ESK**	**1.37**	**283**	*e*Pn	**Pn**	**15 20 17.9**		**-1.1**
CORM	**Corum**	**1.47**	**46**	*e*PN	**Pn**	**15 20 19.7**		**-0.7**
CORM	**Corum**	**1.47**	**46**	*e*Pn	**Pn**	**15 20 19.7**		**-0.7**
YOZ	**Yozgat**	**1.67**	**73**	*e*PN	**Pn**	**15 20 22.9**		**-0.2**
YOZ	**Yozgat**	**1.67**	**73**	*e*Pn	**Pn**	**15 20 22.9**		**-0.2**

*BJI **28** 15:20:34.3,50.˚10N×129.˚60W,h10km,mB4.9/4,mb4.6/6, Ms4.4/1,Ms7 4.4/2*
*ISCJB **28** 15:20:35.6±0.4,50.˚14N±0.˚04×129.˚60W±0.˚07,h10km, mb4.2/19,MS3.9/2,Error ellipse: s-maj=7.2km s-min=3.2km az=141.8*
*IDC **28** 15:20:35.5±1.0,50.˚07N×129.˚80W,h0km,mb4.0/7, mb1 4.2/15,mb1mx4.1/31,mbtmp4.0/15,ML3.6/7,MS3.6/9, Ms1 3.6/9,ms1mx3.4/54,Error ellipse: s-maj=20.2km s-min=10.8km az=71.0*
*NEIC **28** 15:20:37.4±0.3,50.˚15N×129.˚62W,h10km,mb4.1/32, Error ellipse: s-maj=7.6km s-min=3.0km az=51.0*

ISC 28 15:20:37.3±0.4,50.˚15N±0.˚04×129.˚66W±0.˚07,h10km, n112,σ1.906/112,mb4.2/19,MS3.9/2,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
BBB	**Bella Bella**	**2.26**	**25**	Pn	**Pn**	**15 21 14.3**		**-0.4**
BBB				Sn	**Sn**	**15 21 42.3**		**-0.2**
BBB				LR	LR	15 22 17.5		
BBB	**Bella Bella**	**2.26**	**25**	Pn	**Pn**	**15 21 14.3**		**-0.4**
	baz=43,slow=15							
BBB				Sn	**Sn**	**15 21 42.3**		**-0.2**
	30nm,0.3s,baz=129,slow=20,SNR=9.2							
BBB				LR	LR	15 22 17.5		
	comp=Z,1μm,20.7s,baz=32,slow=43							
DIB	**Dawson Inlet,**	**3.52**	**331**	Pn	**Pn**	**15 21 29.0**		**-3.0**
PGC	**Sidney**	**4.32**	**108**	*e*Pn	**Pn**	**15 21 41.4**		**-1.6**
NLWA	**Neilton Lookou**	**4.72**	**124**	*e*Pn	**Pn**	**15 21 46.7**		**-1.7**
HDW	**Hoodsport**	**5.02**	**117**	P	**Pn**	**15 21 51.9**		**-0.7**
VDB	**Vedder Mountai**	**5.04**	**100**	P	**Pn**	**15 21 53.3**		**+0.5**
JCW	**Jim Creek**	**5.43**	**108**	*e*Pn	**Pn**	**15 21 57.2**		**-1.0**
	15nm,0.5s							
CRAG	**Craig**	**5.73**	**340**	*e*Pn	**Pn**	**15 22 00.6**		**-1.7**
WRAK	**Wrangell Islan**	**6.49**	**347**	*e*Pn	**Pn**	**15 22 12.9**		**+0.2**
ETW	**Entiat**	**6.66**	**109**	P	**Pn**	**15 22 15.3**		**+0.3**
TBM	**Table Mountain**	**6.70**	**113**	P	**Pn**	**15 22 16.1**		**+0.5**
NAC	**Naches**	**6.80**	**117**	P	**Pn**	**15 22 17.7**		**+0.8**
WTV	**Waterville**	**6.85**	**107**	P	**Pn**	**15 22 17.9**		**+0.2**
EBG	**Ellensburg**	**6.85**	**115**	P	**Pn**	**15 22 18.1**		**+0.4**
EPH	**Ephrata**	**7.22**	**109**	P	**Pn**	**15 22 22.4**		**-0.3**
HOOD	**Mount Hood Mea**	**7.24**	**129**	*e*Pn	**Pn**	**15 22 22.0**		**-1.0**
	18nm,0.9s							
MDW	**Midway**	**7.48**	**114**	P	**Pn**	**15 22 26.3**		**0.0**
RSW	**Rattlesnake Hi**	**7.70**	**115**	*e*Pn	**Pn**	**15 22 29.0**		**-0.3**
	24nm,0.6s							
HAWA	**Hanford**	**7.73**	**115**	*e*Pn	**Pn**	**15 22 27.7**		**-2.1**
	26nm,1.1s							
OD2	**Odessa Site #2**	**7.74**	**107**	*e*Pn	**Pn**	**15 22 29.0**		**-0.9**
	24nm,0.5s							
DLBC	**Dease Lake**	**8.31**	**359**	*e*Pn	**Pn**	**15 22 38.4**		**+0.8**
DLBC	**Dease Lake**	**8.31**	**359**	Pn	**Pn**	**15 22 38.3**		**+0.7**
	0.5nm,0.3s,baz=185,slow=13,SNR=13							
NEW	**Newport**	**8.43**	**98**	*e*Pn	**Pn**	**15 22 38.3**		**-0.9**
	6.4nm,0.8s							
LNOR	**Lincton Mounta**	**8.74**	**115**	*e*Pn	**Pn**	**15 22 42.7**		**-1.0**
	8.5nm,0.8s							
KRMB	**Red Mountain**	**9.51**	**153**	Pn	**Pn**	**15 22 55.5**		**+1.3**
YBH	**Yreka Blue Hor**	**9.71**	**148**	*e*Pn	**Pn**	**15 22 57.9**		**+1.1**
YBH	**Yreka Blue Hor**	**9.71**	**148**	Pn	**Pn**	**15 22 57.1**		**+0.3**
	0.1nm,0.3s,baz=346,slow=19,SNR=3.3							
YBH				LR	LR	15 26 24.4		
	comp=Z,119nm,20.0s,baz=325,slow=36							
BSMT	**Bassoo Peak**	**10.04**	**98**	*e*Pn	**Pn**	**15 23 01.7**		**+0.3**
	5.4nm,0.9s							
WALA	**Waterton Lakes**	**10.28**	**90**	*e*Pn	**Pn**	**15 23 05.1**		**+0.4**
	0.6nm,1.3s							
MOD	**Modoc**	**10.50**	**138**	*e*Pn	**Pn**	**15 23 08.5**		**+0.8**
	4.3nm,1.2s							
WVOR	**Wild Horse Val**	**10.84**	**131**	*e*Pn	**Pn**	**15 23 12.7**		**+0.3**
	8.4nm,1.1s							
MSO	**Missoula**	**10.95**	**102**	*e*Pn	**Pn**	**15 23 13.5**		**-0.3**
	2.3nm,0.6s							
SLMT	**Seeley Lake**	**11.07**	**99**	*e*Pn	**Pn**	**15 23 14.8**		**-0.7**
	8.4nm,0.8s							
CHMT	**Chamberlain Mo**	**11.35**	**100**	*e*Pn	**Pn**	**15 23 19.0**		**-0.3

14nm,1.1s
PV04 Paradox Valley 18.88 121 *e*P **Pn 15 24 58.2 +0.2**
PHWY Pilot Hill 19.00 108 *e*P **Pn 15 24 59.1 -0.5**
13nm,1.0s
TTA Tatalina 19.18 322 *e*P **Pn 15 25 00.6 -0.9**
9.0nm,1.1s
PV01 Paradox Valley 19.24 121 *e*P **Pn 15 25 01.7 -0.8**
2µm,1.3s
SMCO Snowmass 19.43 116 *e*P **Pn 15 25 04.4 -0.4**
16nm,1.0s
WUAZ Wupatki 19.76 131 *e*P **Pn 15 25 06.8 -2.0**
ISCO Idaho Springs 19.83 112 *e*P **Pn 15 25 09.3 -0.2**
7.2nm,1.0s
MVCO Mesa Verde 19.95 122 *e*P **Pn 15 25 09.1 -1.9**
49nm,1.5s
SDCO Great Sand Dun 21.25 116 *e*P **P 15 25 22.6 -0.8**
14nm,1.2s,mb4.2
ULM Lac du Bonnet 21.53 77 P **P 15 25 28.6 +2.4**
25nm,0.9s,mb4.6,baz=286,slow=11,SNR=12
ULM LR LR 15 34 29.2
comp=Z,314nm,20.9s,MS3.7,baz=88,slow=38
AGMN Agassiz Nation 22.05 82 *e*P **P 15 25 31.8 0.0**
13nm,1.0s,mb4.3
TUC Tucson 22.67 135 *e*P **P 15 25 37.3 -1.3**
6.3nm,1.1s,mb4.0
ANMO Albuquerque 22.73 123 *e*P **P 15 25 38.0 -1.2**
7.0nm,1.0s,mb4.0
ANMO Albuquerque 22.73 123 P **P 15 25 40.2 +1.0**
5.0nm,0.9s,mb4.0,baz=317,slow=8.9,SNR=10
LAZ Ladron 22.79 125 *e*P **P 15 25 39.7 -0.1**
5.1nm,1.3s,mb3.8
BNM Barren Site 23.25 125 *e*P **P 15 25 44.5 -0.2**
8.7nm,1.2s,mb4.1
ECSD EROS Data Cent 23.32 93 *e*P **P 15 25 43.8 -1.6**
28nm,1.0s,mb4.7
EYMN Ely 24.93 80 *e*P **P 15 26 00.4 +0.1**
20nm,0.9s,mb4.7
AMTX Amarillo 25.45 116 *e*P **P 15 26 04.0 -1.2**
32nm,0.9s,mb4.8
MNTX Cornudas Mount 25.82 126 *e*P **P 15 26 07.8 -0.7**
8.1nm,1.2s,mb4.1
WMOK Wichita Mounta 27.25 113 *e*P **P 15 26 21.0 -0.4**
6.8nm,1.0s,mb4.1
RES Resolute Bay 28.54 18 LR LR 15 38 16.8
comp=Z,430nm,20.8s,MS4.0,baz=132,slow=37
TXAR Lajitas Array 28.59 127 P **P 15 26 33.9 +0.5**
0.8nm,0.8s,mb3.5,baz=323,slow=6.3,SNR=12
MIAR Mount Ida 30.54 107 *e*P **P 15 26 50.6 0.0**
8.0nm,1.1s,mb4.5
SWET Sewanee 34.90 98 P **P 15 27 30.9 +2.2**
TEIG Tepich 44.24 117 P **P 15 28 46.5 -0.2**
2.3nm,0.3s,mb4.4,baz=332,slow=11,SNR=3.6
SONM Songino Array 71.11 324 P **P 15 31 56.6 +1.1**
0.3nm,0.6s,mb3.4,baz=51,slow=4.6,SNR=2.8
ZALV Zalesovo Beam 72.30 339 P **P 15 32 01.4 -1.1**
0.3nm,0.3s,mb3.7,baz=3.8,slow=4.3,SNR=3.7
HHC Hu-ho-hao-te 74.70 316 *e*P **P 15 32 16.5 -0.3**
HHC PP PP 15 35 04.5 +1.3
HHC S S 15 41 48.0 -4.8
HHC pmax pmax
comp=Z,16nm,1.1s,mb4.9
MKAR Makanchi Array 79.56 338 P **P 15 32 43.3 -0.7**
comp=Z,0.3nm,0.7s,mb3.3,baz=2.9,slow=5.8,SNR=3.8
WMQ Urumqi 80.91 334 *e*P **P 15 32 52.0 +0.7**
WMQ pP pP 15 32 56.8 +2.2
WMQ sP sP 15 32 59.0 +3.2
WMQ pmax pmax
comp=Z,4.0nm,1.2s
WMQ pmax pmax
comp=Z,32nm,4.2s
CD2 Chengdu 86.46 316 P **P 15 33 19.0 -1.0**
KSH Kashi 87.91 340 *e*P **P 15 33 33.0 +6.1**
KSH *e*pP pP 15 33 36.0 +5.8
KSH *e*sP sP 15 33 40.0 +8.6
KSH *e*SKS 15 43 59.0
KSH *e*S S 15 44 17.3 +7.5
KSH *e*sS sS 15 44 25.0 +10
KSH pmax pmax
comp=Z,1.0nm,0.3s
KSH pmax pmax
comp=Z,26nm,3.2s
KSH LR LR
comp=Z,50nm,4.6s

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*ISCJB **28** 15:22:17.3±0.2,0.°11S±0.°04×17.°60W±0.°03,h10km, mb5.3/165,MS5.9/43,Error ellipse: s-maj=6.4km s-min=3.5km az=152.3*
*IDC **28** 15:22:18.0±0.4,0.°11S×17.°44W,h0km,mb4.8/24, mb1 4.9/24,mb1mx4.9/24,mbtmp4.8/24,MS5.9/32, Ms1 5.9/32,ms1mx5.6/48,Error ellipse: s-maj=11.5km s-min=7.8km az=144.0*
*NEIC **28** 15:22:18.9±0.2,0.°13S×17.°63W,h10km,mb5.2/120,Error ellipse: s-maj=6.5km s-min=3.7km az=148.0*
*BJI **28** 15:22:19.9,0.°35N×16.°95W,h10km,Ms5.5/1,Ms7 5.2/1*
*MOS **28** 15:22:19.3±1.2,0.°08S×17.°67W,h10km,mb6.0/98, MS5.9/64,Error ellipse: s-maj=7.8km s-min=2.8km az=65.0*

ISC 28 15:22:19.2±0.2,0.°13S±0.°04×17.°62W±0.°03,h10km, (h16km±2.3km:pP-P),n475,⍺0s93/480,mb5.3/165, MS5.9/43,18C-22D,North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
LIC	**Lamto**	**14.06**	**63**	*e*P		**Pn**	**15 25 38.3**	**-0.4**
3µm,1.2s								
LIC	**Lamto**	**14.06**	**63**	*e*Pn		**Pn**	**15 25 36.7**	**-2.0**
baz=253								
LIC				*e*Sn		**Sn**	**15 28 01.6**	**-13**
794nm,0.5s								
LIC				*e*MLR		MLR		
comp=Z,68µm,22.8s								
TIC	**Toumodi**	**14.26**	**62**	*e*P		**Pn**	**15 25 39.6**	**-1.8**
comp=Z,312nm,0.3s								
TIC	**Toumodi**	**14.26**	**62**	*e*P		**Pn**	**15 25 39.6**	**-1.8**
TIC				pmax		pmax		
comp=Z,312nm,0.3s								
KIC	**Kosan Boka**	**14.38**	**63**	*e*P		**Pn**	**15 25 41.6**	**-1.4**
comp=Z,1µm,0.9s								
DBIC	**Dimbokro**	**14.42**	**62**	*e*Pn		**Pn**	**15 25 40.9**	**-2.6**
comp=Z,42nm,0.4s								
DBIC	**Dimbokro**	**14.42**	**62**	Pn		**Pn**	**15 25 41.3**	**-2.2**
comp=Z,99nm,0.3s,baz=233,slow=14,SNR=161								
DBIC				Sn		**Sn**	**15 28 10.4**	**-13**
comp=Z,66nm,0.3s,baz=144,slow=21,SNR=4.4								
DBIC				LR		LR	15 29 58.8	
comp=Z,66µm,18.8s,baz=221,slow=32								
DBIC	**Dimbokro**	**14.42**	**62**	*e*P		**Pn**	**15 25 40.9**	**-2.6**
DBIC				pmax		pmax		
comp=Z,42nm,0.4s								
BBTS	**Babate**	**14.73**	**4**	Pn		**Pn**	**15 25 48.5**	**+0.7**
BBTS				Sn		**Sn**	**15 28 18.1**	**-13**
BBTS	**Babate**	**14.73**	**4**	Pn		**Pn**	**15 25 48.5**	**+0.7**
comp=Z,61nm,0.3s,baz=227,slow=0.8,SNR=19								
BBTS				Sn		**Sn**	**15 28 18.1**	**-13**
comp=Z,92nm,0.3s,baz=6.2,slow=22,SNR=15								
BBTS				LR		LR	15 30 14.1	
comp=Z,64µm,21.5s,baz=347,slow=32								
RCBR	**Riachuelo**	**19.11**	**252**	*e*Pn		**Pn**	**15 26 43.3**	**+0.1**
SHEL	**Horse Pasture**	**19.61**	**144**	Pn		**Pn**	**15 26 50.8**	**+1.5**
comp=Z,62nm,0.7s								
SHEL	**Horse Pasture**	**19.61**	**144**	P		**Pn**	**15 26 50.8**	**+1.5**
SHEL				pmax		pmax		
comp=Z,62nm,0.7s								
TORD	**Torodi Ar. Bea**	**23.25**	**55**	P		**P**	**15 27 27.0**	**-0.1**
TORD				S		**S**	**15 31 36.3**	**-2.9**
TORD				LR		LR	15 35 05.9	
TORD	**Torodi Ar. Bea**	**23.25**	**55**	P		**P**	**15 27 27.0**	**-0.1**
comp=Z,799nm,1.0s,mb6.1,baz=240,slow=7.2,SNR=52								
TORD				S		**S**	**15 31 36.3**	**-2.9**
comp=Z,101nm,0.9s,baz=240,slow=21,SNR=4.1								
TORD				LR		LR	15 35 05.9	
comp=Z,62µm,21.5s,MS6.0,baz=230,slow=33								
TAM	**Tamanrasset**	**32.04**	**43**	*e*Pn		**P**	**15 28 46.3**	**+0.1**
MDT	**Midelt**	**34.99**	**19**	P		**P**	**15 29 13.0**	**+1.2**
MDT				PP		PP	15 30 22.1	-9.1
MDT				S		**S**	**15 34 49.2**	**+5.4**
MDT				LR		LR	15 42 45.7	
MDT	**Midelt**	**34.99**	**19**	P		**P**	**15 29 13.0**	**+1.2**
comp=Z,12nm,0.9s,mb4.8,baz=218,slow=10,SNR=6.9								
MDT				PP		PP	15 30 22.1	-9.1
comp=Z,91nm,1.1s,baz=226,slow=14,SNR=6.3								
MDT				S		**S**	**15 34 49.2**	**+5.4**
comp=Z,14nm,1.0s,baz=332,slow=9.6,SNR=2.1								
MDT				LR		LR	15 42 45.7	
comp=Z,29µm,19.3s,MS6.0,baz=210,slow=35								
SPB	**Sao Paulo**	**37.16**	**229**	*e*Pn		**P**	**15 29 30.6**	**0.0**
comp=Z,12nm,0.7s,mb4.8								
TSUM	**Tsumeb**	**39.38**	**121**	*e*P		**P**	**15 29 54.9**	**+5.5**
comp=Z,18nm,0.9s,mb4.8								
TSUM	**Tsumeb**	**39.38**	**121**	P		**P**	**15 29 54.1**	**+4.7**
comp=Z,93nm,0.8s,mb5.5,baz=278,slow=8.4,SNR=21								
TSUM				S		**S**	**15 35 53.9**	**+2.8**
comp=Z,0.6nm,0.3s,baz=277,slow=17,SNR=2.4								
ETRT	**Tiaret**	**39.50**	**25**	P		**P**	**15 29 51.0**	**+0.9**
OKGL	**Djebel Kef Gue**	**39.79**	**23**	P		**P**	**15 29 48.0**	**-4.5**
EANR	**'Ain N'Sour**	**39.90**	**24**	P		**P**	**15 29 55.5**	**+2.1**
PAB	**San Pablo**	**41.31**	**16**	*e*P		**P**	**15 30 05.2**	**+0.2**
MTE	**Manteigas**	**41.37**	**12**	*e*P		**P**	**15 30 05.5**	**0.0**
ESDC	**Sonseca Array**	**41.54**	**16**	P		**P**	**15 30 07.8**	**+1.0**
comp=Z,14nm,0.8s,mb4.6,baz=197,slow=9.6,SNR=42								
ESDC				PP		PP	15 31 41.3	-1.6
comp=Z,9.5nm,0.9s,baz=193,slow=8.0,SNR=2.9								
ESDC				S		**S**	**15 36 23.4**	**+0.7**
comp=Z,0.3nm,0.3s,baz=194,slow=16,SNR=2.6								
ESDC				LR		LR	15 48 13.7	
comp=Z,6µm,21.0s,MS5.4,baz=190,slow=38								
ESDC	**Sonseca Array**	**41.54**	**16**	PP		PP	15 31 41.3	-1.6
ESDC				S		**S**	**15 36 23.4**	**+0.7**
ESDC				LR		LR	15 48 13.7	
ESLA	**Sonseca Array**	**41.54**	**16**	*e*P		**P**	**15 30 07.8**	**+0.9**
CTEI	**Djebel Teioual**	**42.38**	**29**	P		**P**	**15 30 12.8**	**-1.0**
DFRA	**Djebel Bou Aff**	**42.51**	**28**	P		**P**	**15 30 13.6**	**-1.2**
CASM	**Ain Smara**	**42.58**	**29**	P		**P**	**15 30 13.8**	**-1.6**
CKFL	**Kef-Lekhel**	**42.80**	**29**	P		**P**	**15 30 15.8**	**-1.4**
CAEH	**'Ain El Ouahch**	**43.16**	**29**	P		**P**	**15 30 18.6**	**-1.6**
CMAH	**Djebel Manchou**	**43.32**	**30**	P		**P**	**15 30 19.5**	**-1.9**
KEST	**Kesra**	**43.63**	**32**	*e*P		**P**	**15 30 23.7**	**-0.2**
KEST	**Kesra**	**43.63**	**32**	P		**P**	**15 30 24.5**	**+0.6**
comp=Z,24nm,0.8s,mb5.0,baz=230,slow=2.8,SNR=31								
KEST				PP		PP	15 32 02.1	-3.4
comp=Z,18nm,0.7s,baz=150,slow=10,SNR=5.5								
KEST				S		**S**	**15 36 56.2**	**+2.6**
comp=Z,1.8nm,1.0s,baz=133,slow=19,SNR=1.7								
KEST				LR		LR	15 49 06.7	
comp=Z,20µm,18.9s,MS6.0,baz=186,slow=37								
KEST	**Kesra**	**43.63**	**32**	PP		PP	15 32 02.1	-3.4
KEST				S		**S**	**15 36 56.2**	**+2.6**
KEST				LR		LR	15 49 06.7	
SJPF	**Ste Jean**	**45.49**	**17**	*e*P		**P**	**15 30 39.4**	**+0.7**
comp=Z,196nm,0.7s,mb5.7								
SJPF	**Ste Jean**	**45.49**	**17**	*e*P		**P**	**15 30 39.4**	**+0.7**
comp=Z,98nm,0.7s,mb5.8								
SJPF	**Ste Jean**	**45.49**	**17**	*e*P		**P**	**15 30 39.4**	**+0.7**
SJPF				pmax		pmax		
comp=Z,98nm,0.7s,mb5.8								
ETSF	**Etsaut**	**45.49**	**18**	*e*P		**P**	**15 30 39.3**	**+0.6**
comp=Z,241nm,1.0s,mb5.7								
ETSF	**Etsaut**	**45.49**	**18**	*e*P		**P**	**15 30 39.3**	**+0.6**
comp=Z,120nm,1.0s,mb5.7								
ETSF	**Etsaut**	**45.49**	**18**	*e*P		**P**	**15 30 39.3**	**+0.6**
ETSF				pmax		pmax		
comp=Z,120nm,1.0s,mb5.7								
LARF	**Larrau**	**45.49**	**17**	*e*P		**P**	**15 30 38.2**	**-0.5**
FDF	**Fort de France**	**45.50**	**291**	*e*P		**P**	**15 30 40.4**	**+1.2**
OSSF	**Osses**	**45.62**	**17**	*e*P		**P**	**15 30 39.6**	**-0.1**
ATE	**Arette**	**45.62**	**17**	*e*P		**P**	**15 30 40.3**	**+0.6**
VIEF	**Viey**	**45.66**	**18**	*e*P		**P**	**15 30 40.5**	**+0.5**
SIV	**San Ignacio**	**45.67**	**248**	P		**P**	**15 30 41.8**	**+1.3**
comp=Z,2.5nm,0.7s,mb4.2,baz=101,slow=9.8,SNR=13								
SIV				S		**S**	**15 37 29.3**	**+5.5**
comp=Z,0.9nm,0.6s,baz=198,slow=20,SNR=1.5								
RESF	**Ens**	**45.69**	**18**	*e*P		**P**	**15 30 40.8**	**+0.5**
REYF	**Montagne du Re**	**45.70**	**18**	*e*P		**P**	**15 30 41.1**	**+0.7**
MELF	**Melles**	**45.88**	**19**	*e*P		**P**	**15 30 42.5**	**+0.7**
VALF	**Valcebollere**	**45.89**	**20**	*e*P		**P**	**15 30 42.7**	**+0.9**
EPF	**Esparros**	**45.89**	**18**	*e*P		**P**	**15 30 42.5**	**+0.6**
comp=Z,211nm,1.1s,mb5.7								
EPF	**Esparros**	**45.89**	**18**	*e*P		**P**	**15 30 42.5**	**+0.6**
comp=Z,105nm,1.1s,mb5.7								
EPF	**Esparros**	**45.89**	**18**	*e*P		**P**	**15 30 42.5**	**+0.6**
EPF				pmax		pmax		
comp=Z,105nm,1.1s,mb5.7								
MLS	**Moulis**	**46.07**	**19**	*e*P		**P**	**15 30 43.9**	**+0.6**
CARF	**Carcanieres**	**46.19**	**20**	*e*P		**P**	**15 30 44.4**	**+0.2**
CPUP	**Villa Florida**	**46.26**	**233**	P		**P**	**15 30 45.7**	**+0.6**
comp=Z,4.2nm,0.9s,mb4.4,baz=44,slow=9.5,SNR=6.3								
CPUP				S		**S**	**15 37 35.0**	**+2.9**
comp=Z,0.3nm,0.4s,baz=93,slow=18,SNR=1.5								
CPUP				LR		LR	15 48 52.9	
comp=Z,14µm,18.4s,MS5.9,baz=312,slow=34								
CPUP	**Villa Florida**	**46.26**	**233**	P		**P**	**15 30 45.7**	**+0.6**
CPUP				S		**S**	**15 37 35.0**	**+2.9**
SJAF	**Saint Jean de**	**46.26**	**21**	*e*P		**P**	**15 30 44.9**	**+0.1**
VSL	**Villasalto**	**46.53**	**29**	*e*P		**P**	**15 30 46.0**	**-1.0**
WDD	**Wield Dalam**	**46.65**	**36**	*e*P		**P**	**15 30 45.7**	**-2.3**
MTLF	**Montolieu**	**46.78**	**20**	*e*P		**P**	**15 30 48.5**	**-0.4**
comp=Z,155nm,1.1s,mb5.5								
MTLF	**Montolieu**	**46.78**	**20**	*e*P		**P**	**15 30 48.5**	**-0.4**
comp=Z,78nm,1.1s,mb5.5								
MTLF	**Montolieu**	**46.78**	**20**	*e*P		**P**	**15 30 48.5**	**-0.4**
MTLF				pmax		pmax		
comp=Z,78nm,1.1s,mb5.5								
ANWB	**Willy Bob**	**46.90**	**295**	P		**P**	**15 30 51.6**	**+1.4**
LFF	**La Frestale**	**47.74**	**18**	*e*P		**P**	**15 30 56.8**	**+0.5**
comp=Z,396nm,1.1s,mb6.1								
LFF	**La Frestale**	**47.74**	**18**	*e*P		**P**	**15 30 56.8**	**+0.5**
comp=Z,198nm,1.1s,mb6.1								
LFF	**La Frestale**	**47.74**	**18**	*e*P		**P**	**15 30 56.8**	**+0.5**
LFF				pmax		pmax		
comp=Z,198nm,1.1s,mb6.1								
LASF	**Ste Croix**	**48.00**	**21**	*e*P		**P**	**15 30 58.5**	**+0.2**
comp=Z,333nm,1.3s,mb5.9								
CAF	**Calviac**	**48.14**	**19**	*e*P		**P**	**15 30 59.5**	**+0.1**
comp=Z,231nm,1.1s,mb5.8								
CAF	**Calviac**	**48.14**	**19**	*e*P		**P**	**15 30 59.5**	**+0.1**
comp=Z,116nm,1.1s,mb5.8								
CAF	**Calviac**	**48.14**	**19**	*e*P		**P**	**15 30 59.5**	**+0.1**
CAF				pmax		pmax		
comp=Z,116nm,1.1s,mb5.8								
RJF	**Les Rejaudoux**	**48.31**	**18**	*e*P		**P**	**15 31 00.7**	**0.0**
comp=Z,402nm,1.4s,mb6.0								
RJF				*e*MLR		MLR		
comp=Z,28µm,20.0s,MS5.9								
RJF	**Les Rejaudoux**	**48.31**	**18**	*e*P		**P**	**15 31 00.7**	**0.0**
comp=Z,201nm,1.4s,mb6.0								
RJF	**Les Rejaudoux**	**48.31**	**18**	*e*P		**P**	**15 31 00.7**	**0.0**
RJF				pmax		pmax		
comp=Z,201nm,1.4s,mb6.0								
LMR	**La Mourre**	**48.37**	**24**	*e*P		**P**	**15 31 01.4**	**+0.2**
comp=Z,328nm,1.0s,mb6.0								
LMR	**La Mourre**	**48.37**	**24**	*e*P		**P**	**15 31 01.4**	**+0.2**
comp=Z,164nm,1.0s,mb6.0								
LMR	**La Mourre**	**48.37**	**24**	*e*P		**P**	**15 31 01.4**	**+0.2**
LMR				pmax		pmax		
comp=Z,164nm,1.0s,mb6.0								
SUR	**Sutherland**	**48.39**	**135**	*e*P		**P**	**15 31 02.4**	**+0.8**
comp=Z,9.2nm,0.8s,mb4.9								
SUR	**Sutherland**	**48.39**	**135**	P		**P**	**15 31 02.7**	**+1.1**
comp=Z,14nm,0.9s,mb5.0,baz=270,slow=8.1,SNR=4.1								
SUR				S		**S**	**15 38 07.8**	**+5.5**
comp=Z,7.9nm,1.0s,baz=229,slow=19,SNR=1.5								
SUR	**Sutherland**	**48.39**	**135**	S		**S**	**15 38 07.8**	**+5.5**
LBTB	**Lobatse**	**48.54**	**124**	*e*P		**P**	**15 31 03.1**	**+0.3**
comp=Z,3.2nm,0.6s,mb4.5								
LBTB	**Lobatse**	**48.54**	**124**	P		**P**	**15 31 03.5**	**+0.7**
comp=Z,2.6nm,0.6s,mb4.4								
LBTB				S		**S**	**15 38 04.0**	**-0.5**
LBTB				LR		LR		
comp=Z,9µm,20.0s,MS5.8								
LBTB	**Lobatse**	**48.54**	**124**	P		**P**	**15 31 03.5**	**+0.7**
comp=Z,10nm,0.7s,mb5.0,baz=259,slow=10,SNR=2.5								
LBTB				S		**S**	**15 38 04.0**	**-0.5**
comp=Z,0.8nm,0.3s,baz=233,slow=5.1,SNR=1.9								
LBTB	**Lobatse**	**48.54**	**124**	*e*P		**P**	**15 31 03.1**	**+0.3**
LBTB				pmax		pmax		
comp=Z,3.0nm,0.6s,mb4.5								
SMRF	**Simiane la Rot**	**48.54**	**22**	*e*P		**P**	**15 31 03.3**	**+0.8**
comp=Z,181nm,1.2s,mb5.7								
SMRF	**Simiane la Rot**	**48.54**	**22**	*e*P		**P**	**15 31 03.3**	**+0.8**
comp=Z,181nm,1.2s,mb6.0								
FRF	**La Foret Royal**	**48.61**	**23**	*e*P		**P**	**15 31 03.1**	**0.0**
comp=Z,210nm,1.1s,mb5.8								
FRF	**La Foret Royal**	**48.61**	**23**	*e*P		**P**	**15 31 03.1**	**0.0**
comp=Z,105nm,1.1s,mb5.8								
FRF	**La Foret Royal**	**48.61**	**23**	*e*P		**P**	**15 31 03.1**	**0.0**
FRF				pmax		pmax		
comp=Z,105nm,1.1s,mb5.8								
FRNF	**Fournols**	**48.71**	**19**	*e*P		**P**	**15 31 04.2**	**+0.4**
PGF	**Pioggiola**	**48.77**	**26**	*e*P		**P**	**15 31 04.3**	**0.0**
comp=Z,270nm,1.5s,mb5.8								
PGF	**Pioggiola**	**48.77**	**26**	*e*P		**P**	**15 31 04.3**	**0.0**
comp=Z,135nm,1.5s,mb5.8								
PGF	**Pioggiola**	**48.77**	**26**	*e*P		**P**	**15 31 04.3**	**0.0**
PGF				pmax		pmax		
comp=Z,135nm,1.5s,mb5.8								
LBL	**Lubilhac**	**48.80**	**20**	*e*P		**P**	**15 31 04.8**	**+0.3**
CALN	**Calern**	**48.87**	**24**	*e*P		**P**	**15 31 05.8**	**+0.8**
OCF	**Saint Nazaire**	**48.96**	**22**	*e*P		**P**	**15 31 06.9**	**+1.2**
OG26	**St.-Nazaire-De**	**48.96**	**22**	*e*P		**P**	**15 31 06.9**	**+1.2**
VIVF	**Saint-Julien-l**	**48.97**	**21**	*e*P		**P**	**15 31 06.0**	**+0.2**
comp=Z,236nm,1.2s,mb5.8								
VIVF	**Saint-Julien-l**	**48.97**	**21**	*e*P		**P**	**15 31 06.0**	**+0.2**
comp=Z,118nm,1.2s,mb5.8								
VIVF	**Saint-Julien-l**	**48.97**	**21**	*e*P		**P**	**15 31 06.0**	**+0.2**
VIVF				pmax		pmax		
comp=Z,118nm,1.2s,mb5.8								
MFF	**Saint Martin d**	**49.00**	**16**	*e*P		**P**	**15 31 06.0**	**0.0**
comp=Z,217nm,0.9s,mb5.9								
MFF	**Saint Martin d**	**49.00**	**16**	*e*P		**P**	**15 31 06.0**	**0.0**
comp=Z,108nm,0.9s,mb5.9								
MFF	**Saint Martin d**	**49.00**	**16**	*e*P		**P**	**15 31 06.0**	**0.0**
MFF				pmax		pmax		
comp=Z,109nm,0.9s,mb5.9								
REVF	**Revere**	**49.05**	**24**	*e*P		**P**	**15 31 07.1**	**+0.7**
CEL	**Celeste**	**49.08**	**35**	*e*P		**P**	**15 31 07.5**	**+0.7**
comp=Z,15nm,0.7s,mb5.1								
MVIF	**Mont Vial**	**49.09**	**24**	*e*P		**P**	**15 31 07.6**	**+0.8**
LUCF	**Luceram**	**49.17**	**24**	*e*P		**P**	**15 31 07.9**	**+0.6**
SBF	**Sospel**	**49.18**	**24**	*e*P		**P**	**15 31 07.6**	**+0.2**
comp=Z,467nm,1.0s,mb6.2								
SBF	**Sospel**	**49.18**	**24**	*e*P		**P**	**15 31 07.6**	**+0.2**
comp=Z,234nm,1.0s,mb6.2								
SBF	**Sospel**	**49.18**	**24**	*e*P		**P**	**15 31 07.6**	**+0.2**
SBF				pmax		pmax		
comp=Z,234nm,1.0s,mb6.2								
PYM	**Petit Puy Mans**	**49.18**	**19**	*e*P		**P**	**15 31 08.3**	**+0.9**
TOUF	**Mont Tournerai**	**49.23**	**24**	*e*P		**P**	**15 31 08.8**	**+1.0**
AUTN	**L'Aution**	**49.29**	**24**	*e*P		**P**	**15 31 09.1**	**+0.9**
SSB	**Saint Sauveur**	**49.29**	**21**	*e*P		**P**	**15 31 08.9**	**+0.7**
SSB	**Saint Sauveur**	**49.29**	**21**	P		**P**	**15 31 08.0**	**-0.2**
comp=Z,4.3nm,0.8s,mb4.5								
SSB	**Saint Sauveur**	**49.29**	**21**	P		**P**	**15 31 08.0**	**-0.2**
SSB				pmax		pmax		
comp=Z,4.0nm,0.8s,mb4.5								
SAOF	**Saorge**	**49.33**	**24**	*e*P		**P**	**15 31 09.2**	**+0.6**
TCF	**Toulx Ste Croi**	**49.41**	**18**	*e*P		**P**	**15 31 09.5**	**+0.4**
comp=Z,242nm,1.4s,mb5.8								
TCF	**Toulx Ste Croi**	**49.41**	**18**	*e*P		**P**	**15 31 09.5**	**+0.4**
comp=Z,121nm,1.4s,mb5.7								
TCF	**Toulx Ste Croi**	**49.41**	**18**	*e*P		**P**	**15 31 09.5**	**+0.4**
TCF				pmax		pmax		
comp=Z,121nm,1.4s,mb5.7								
SURF	**Saint Ours**	**49.45**	**23**	*e*P		**P**	**15 31 11.0**	**+1.5**
ORIF	**Oris-en-Rattie**	**49.46**	**22**	*e*P		**P**	**15 31 10.5**	**+0.9**
comp=Z,239nm,1.2s,mb5.8								
ORIF				*e*MLR		MLR		
comp=Z,20µm,18.5s,MS5.8								
ORIF	**Oris-en-Rattie**	**49.46**	**22**	*e*P		**P**	**15 31 10.5**	**+0.9**
comp=Z,119nm,1.2s,mb5.8								
ORIF	**Oris-en-Rattie**	**49.46**	**22**	*e*P		**P**	**15 31 10.5**	**+0.9**
ORIF				pmax		pmax		
comp=Z,119nm,1.2s,mb5.8								
QUIF	**Quistinic**	**49.48**	**13**	*e*P		**P**	**15 31 09.5**	**-0.1**
comp=Z,76nm,1.0s,mb5.4								
QUIF	**Quistinic**	**49.48**	**13**	*e*P		**P**	**15 31 09.5**	**-0.1**
comp=Z,38nm,1.0s,mb5.4								
QUIF	**Quistinic**	**49.48**	**13**	*e*P		**P**	**15 31 09.5**	**-0.1**
QUIF				pmax		pmax		
comp=Z,38nm,1.0s,mb5.4								
AGO	**Saint Agoulin**	**49.49**	**19**	*e*P		**P**	**15 31 10.6**	**+0.9**
PLDF	**La Plantade**	**49.58**	**19**	*e*P		**P**	**15 31 10.6**	**+0.2**
MBDF	**Montbardon**	**49.64**	**23**	*e*P		**P**	**15 31 12.0**	**+1.1**
comp=Z,404nm,1.0s,mb6.1								
MBDF	**Montbardon**	**49.64**	**23**	*e*P		**P**	**15 31 12.0**	**+1.1**
comp=Z,202nm,1.0s,mb6.1								
MBDF	**Montbardon**	**49.64**	**23**	*e*P		**P**	**15 31 12.0**	**+1.1**
MBDF				pmax		pmax		
comp=Z,202nm,1.0s,mb6.1								
GDM	**Grand'Maison**	**49.79**	**22**	*e*P		**P**	**15 31 13.1**	**+1.0**
BOSA	**Boshof**	**49.81**	**128**	P		**P**	**15 31 12.9**	**+0.4**
comp=Z,8.5nm,0.7s,mb4.9,baz=16,slow=3.4,SNR=4.0								
BOSA				LR		LR	15 48 26.4	
comp=Z,6µm,18.7s,MS5.6,baz=300,slow=32								
BGF	**Bois d'Agland**	**49.84**	**18**	*e*P		**P**	**15 31 13.0**	**+0.6**
comp=Z,206nm,1.1s,mb5.8								
**B

comp=Z,13µm,19.8s,MS5.6
LOR Lormes 50.80 19 *e*P **P 15 31 19.8 +0.2**
comp=Z,122nm,1.1s,mb5.8
LOR Lormes 50.80 19 *e*P **P 15 31 19.8 +0.2**
LOR pmax pmax
comp=Z,122nm,1.1s,mb5.7
LDF La Druitiere 50.84 15 *e*P **P 15 31 19.8 -0.1**
comp=Z,54nm,0.8s,mb5.2
LDF La Druitiere 50.84 15 *e*P **P 15 31 19.8 -0.1**
comp=Z,27nm,0.8s,mb5.2
LDF La Druitiere 50.84 15 *e*P **P 15 31 19.8 -0.1**
LDF pmax pmax
comp=Z,27nm,0.8s,mb5.2
FLN La Foliniere 50.90 15 *e*P **P 15 31 20.3 -0.1**
comp=Z,175nm,0.9s,mb5.7
FLN *e*MLR MLR
comp=Z,17µm,20.0s,MS5.8
FLN La Foliniere 50.90 15 *e*P **P 15 31 20.3 -0.1**
comp=Z,87nm,0.9s,mb5.7
FLN La Foliniere 50.90 15 *e*P **P 15 31 20.3 -0.1**
FLN pmax pmax
comp=Z,87nm,0.9s,mb5.7
CABF La Chapelle 50.98 21 *e*P **P 15 31 21.2 +0.1**
comp=Z,315nm,1.0s,mb5.9
CABF La Chapelle 50.98 21 *e*P **P 15 31 21.2 +0.1**
comp=Z,158nm,1.0s,mb5.9
CABF La Chapelle 50.98 21 *e*P **P 15 31 21.2 +0.1**
CABF pmax pmax
comp=Z,158nm,1.0s,mb5.9
SJG San Juan 51.01 294 P **P 15 31 21.8 0.0**
comp=Z,8.9nm,0.3s,mb5.2,baz=138,slow=22,SNR=4.7
SJG San Juan 51.01 294 P **P 15 31 20.2 -1.6**
ICM Isla Caja Muer 51.30 293 *e*P **P 15 31 22.4 -1.5**
CELP Cerrillos 51.40 293 *e*P **P 15 31 24.1 -0.6**
OBIP Obispado Ponce 51.41 293 *e*P **P 15 31 24.6 -0.2**
LRS Lares 51.70 294 *e*P **P 15 31 26.3 -0.6**
CRPR Cabo Rojo, PR 51.87 293 *e*P **P 15 31 26.9 -1.3**
comp=Z,6.1nm,0.7s,mb4.6
LOMF Lomont 51.88 21 *e*P **P 15 31 27.6 -0.2**
LSP Las Mesas 51.89 293 *e*P **P 15 31 30.7 +2.4**
AGPR Aguadilla, PR 51.99 294 *e*P **P 15 31 27.7 -1.4**
comp=Z,13nm,0.7s,mb5.0
SFTF Sexfontaines 52.00 19 *e*P **P 15 31 28.7 0.0**
comp=Z,315nm,1.3s,mb5.8
SFTF Sexfontaines 52.00 19 *e*P **P 15 31 28.7 0.0**
comp=Z,315nm,1.3s,mb6.1
TUE Stuetta 52.09 23⇑ *e*P **P 15 31 26.2 -3.2**
comp=Z,12nm,1.2s,mb4.7
BBS Basel-Blauen 52.22 21 *e*P **P 15 31 30.2 -0.1**
MEZF Maizieres J'vi 52.27 19 *e*P **P 15 31 30.9 +0.3**
comp=Z,466nm,1.2s,mb6.0
MEZF Maizieres J'vi 52.27 19 *e*P **P 15 31 30.9 +0.3**
comp=Z,466nm,1.2s,mb6.3
HAU Haudompre 52.27 20 *e*P **P 15 31 30.6 -0.1**
comp=Z,383nm,1.1s,mb6.0
HAU *e*MLR MLR
comp=Z,11µm,19.0s,MS5.6
HAU Haudompre 52.27 20 *e*P **P 15 31 30.6 -0.1**
comp=Z,191nm,1.1s,mb5.9
HAU Haudompre 52.27 20 *e*P **P 15 31 30.6 -0.1**
HAU pmax pmax
comp=Z,191nm,1.1s,mb5.9
HINF Hinteralfeld 52.28 21 *e*P **P 15 31 30.3 -0.5**
comp=Z,262nm,1.4s,mb5.7
HINF Hinteralfeld 52.28 21 *e*P **P 15 31 30.3 -0.5**
comp=Z,131nm,1.4s,mb5.7
HINF Hinteralfeld 52.28 21 *e*P **P 15 31 30.3 -0.5**
HINF pmax pmax
comp=Z,131nm,1.4s,mb5.7
LPAZ La Paz 52.31 249 *e*P **P 15 31 31.4 -0.2**
comp=Z,4.0nm,0.9s,mb4.3
LPAZ La Paz 52.31 249 P **P 15 31 32.9 +1.4**
comp=Z,2.6nm,0.8s,mb4.2,baz=94,slow=6.2,SNR=9.3
LPAZ LR LR 15 52 15.8
comp=Z,16µm,19.8s,MS6.0,baz=88,slow=34
LPAZ La Paz 52.31 249 *e*P **P 15 31 31.4 -0.1**
LPAZ pmax pmax
comp=Z,4.0nm,0.9s
RLS Riolos of Patr 52.31 39 *e*P **P 15 31 32.0 +0.8**
THEF They Montfort 52.34 20 *e*P **P 15 31 30.9 -0.2**
MOF Molkenrain 52.41 21 *e*P **P 15 31 31.1 -0.6**
DAVOX Davos/Dischmat 52.56 24 P **P 15 31 32.4 -0.4**
comp=Z,70nm,1.0s,mb5.6,baz=209,slow=18,SNR=8.3
DAVOX S **S 15 39 03.1 +3.4**
comp=Z,0.8nm,0.3s,baz=333,slow=24,SNR=3.3
VAM Vamos 52.59 43 *e*P **P 15 31 30.5 -2.8**
ECH Echery 52.73 21 *e*P **P 15 31 33.7 -0.4**
ECH Echery 52.73 21 *e*P **P 15 31 30.3 -3.8**
comp=Z,6.9nm,0.9s,mb4.6
ECH *e*P pP 15 31 33.7 -3.6
ECH Echery 52.73 21 *e*P **P 15 31 30.3 -3.8**
ECH *e* pP 15 31 33.7 -3.6
ECH pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
FELD Feldberg im Sc 52.75 21 *e*P **P 15 31 34.3 +0.1**
CDF Champ du Feu 52.94 21 *e*P **P 15 31 35.3 -0.3**
comp=Z,303nm,1.1s,mb5.8
CDF Champ du Feu 52.94 21 *e*P **P 15 31 35.3 -0.3**
comp=Z,151nm,1.1s,mb5.8
CDF Champ du Feu 52.94 21 *e*P **P 15 31 35.3 -0.3**
CDF pmax pmax
comp=Z,151nm,1.1s,mb5.8
DAVA Damuels 52.97 23⇓ *i*P **P 15 31 35.2 -0.7**
comp=Z,466nm,1.0s,mb6.4,SNR=89
IDI Anoyia 53.01 44 *e*P **P 15 31 35.2 -1.2**
comp=Z,15nm,0.7s,mb5.0
FETA Feichten 53.10 24⇑ *i*P **P 15 31 36.2 -0.6**
comp=Z,140nm,0.9s,mb5.9,SNR=104
SPAK Spaichingen-Ko 53.23 22 *e*P **P 15 31 37.8 +0.1**
BFO Black Forest 53.25 21 *e*P **P 15 31 37.4 -0.5**
comp=Z,37nm,1.3s,mb5.2
BFO Black Forest 53.25 21 *e*P **P 15 31 37.4 -0.5**
BFO pmax pmax
comp=Z,37nm,1.3s,mb5.2
SKDS Skadanscina 53.37 27 *e*P **P 15 31 40.0 +1.2**
SKDS *e*S **S 15 39 12.9 +2.1**
BAIF Baives 53.37 17 *e*P **P 15 31 38.4 -0.4**
comp=Z,482nm,1.2s,mb6.0
BAIF Baives 53.37 17 *e*P **P 15 31 38.4 -0.4**
comp=Z,241nm,1.2s,mb6.0
BAIF Baives 53.37 17 *e*P **P 15 31 38.4 -0.4**
BAIF pmax pmax
comp=Z,241nm,1.2s,mb6.0
TRI Trieste 53.38 27 *e*P **P 15 31 37.5 -1.4**
comp=Z,23nm,0.9s,mb5.1
TRI Trieste 53.38 27 *e*P **P 15 31 37.5 -1.4**
TRI pmax pmax
comp=Z,23nm,0.9s,mb5.1
ULC Ulcinj 53.48 34⇓ *i*P **P 15 31 40.0 +0.3**
ULC Ulcinj 53.48 34⇓ *i*P **P 15 31 40.1 +0.3**
ULC Ulcinj 53.48 34⇓ *i*P **P 15 31 40.1 +0.4**
RETA Reutte 53.48 24⇑ *i*P **P 15 31 38.9 -0.8**
comp=Z,133nm,1.2s,mb5.7,SNR=9.8
MOTA Mooseilm 53.51 24⇑ *i*P **P 15 31 39.0 -0.9**
comp=Z,122nm,1.1s,mb5.8,SNR=25
BUM Brajici-Budva 53.51 33⇓ *i*P **P 15 31 40.0 +0.1**
BUM Brajici-Budva 53.51 33⇓ *i*P **P 15 31 40.1 +0.1**
SDV Santo Domingo 53.55 281 *e*P **P 15 31 40.5 -0.2**
comp=Z,4.6nm,0.8s,mb4.5
GIVF Givet 53.60 18 *e*P **P 15 31 39.9 -0.5**
comp=Z,401nm,1.1s,mb5.9
GIVF Givet 53.60 18 *e*P **P 15 31 39.9 -0.5**
comp=Z,200nm,1.1s,mb6.0
GIVF Givet 53.60 18 *e*P **P 15 31 39.9 -0.5**
GIVF pmax pmax
comp=Z,200nm,1.1s,mb6.0
LANF Langenberg 53.61 21 *e*P **P 15 31 40.8 +0.3**
ABTA Abfaltersbach 53.62 25 *i*P **P 15 31 41.0 +0.3**
comp=Z,174nm,1.0s,mb5.9,SNR=80
WLF Walferdange 53.63 19 *e*P **P 15 31 39.8 -0.9**
WTTA Wattenberg 53.66 24⇑ *i*P **P 15 31 40.5 -0.5**
comp=Z,181nm,0.9s,mb6.0,SNR=31
WATA Walderalm 53.69 24⇓ *i*P **P 15 31 40.8 -0.4**
comp=Z,87nm,0.9s,mb5.7,SNR=19
BRY Bratogost 53.72 33⇓ *i*P **P 15 31 41.6 +0.1**
BRY Bratogost 53.72 33⇓ *i*P **P 15 31 41.7 +0.2**
BRY Bratogost 53.72 33⇓ *i*P **P 15 31 41.7 +0.2**
TTG Podgorica 53.80 33⇓ *i*P **P 15 31 42.9 +0.9**
TTG Podgorica 53.80 33⇓ *i*P **P 15 31 43.0 +0.9**
TTG Podgorica 53.80 33⇓ *i*P **P 15 31 43.0 +1.0**
NKY Niksic 53.91 33⇓ *i*P **P 15 31 43.0 +0.1**
NKY Niksic 53.91 33⇓ *i*P **P 15 31 43.0 +0.1**
RUP Ruppelstein 53.97 20 *e*P **P 15 31 42.8 -0.3**
DSB Dublin 54.01 8 *e*P **P 15 31 40.7 -2.7**
comp=Z,5.8nm,0.7s,mb4.6
MYKA Terra Mystica 54.02 26⇓ *i*P **P 15 31 44.2 +0.5**
comp=Z,229nm,1.7s,mb5.8
UPM Unac-Piva 54.12 32⇓ *i*P **P 15 31 44.0 -0.4**
UPM Unac-Piva 54.12 32⇓ *i*P **P 15 31 44.0 -0.4**
LIT Litokhoron 54.18 38 *e*P **P 15 31 44.0 -0.9**
KBA Koelnbreinsper 54.24 26⇑ *i*P **P 15 31 45.2 0.0**
comp=Z,129nm,1.2s,mb5.7,SNR=16
OBKA Obir 54.34 27⇑ *i*P **P 15 31 46.3 +0.4**
comp=Z,59nm,0.9s,mb5.5,SNR=19
PLE Pljevlja 54.47 33⇓ *i*P **P 15 31 47.2 +0.2**
PLE Pljevlja 54.47 33⇓ *i*P **P 15 31 47.2 +0.3**
PLE Pljevlja 54.47 33⇓ *i*P **P 15 31 47.3 +0.3**
TOD Tromm 54.49 21 *e*P **P 15 31 46.4 -0.5**
HGN Heimansgroeve 54.52 18 *e*P **P 15 31 48.0 +0.8**
comp=Z,233nm,1.1s,mb6.1
HGN Heimansgroeve 54.52 18 *e*S **S 15 39 25.7 -0.5**
SOKA Soboth 54.68 27⇑ *i*P **P 15 31 48.8 +0.3**
comp=Z,141nm,0.9s,mb6.0
PLG Polygyros 54.93 38 *e*P **P 15 31 51.5 +1.1**
MOA Molln 55.23 26⇑ *i*P **P 15 31 51.4 -1.0**
comp=Z,126nm,1.2s,mb5.8,SNR=20
ARSA Arzberg 55.34 27⇓ *i*P **P 15 31 53.0 -0.1**
comp=Z,100nm,1.0s,mb5.8,SNR=23
GRFO Grafenberg 55.45 22 *e*P **P 15 31 53.1 -0.8**
comp=Z,7.3nm,0.6s,mb4.9
GRFO Grafenberg 55.45 22 *e*P **P 15 31 53.1 -0.8**
GRFO pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
NVR Nevrokopi 55.77 37 *e*P **P 15 31 57.0 +0.6**
WTSB Winterswijk 55.84 18 *e*P **P 15 31 57.3 +0.6**
comp=Z,351nm,1.3s,mb6.2
KHC Kasperske Hory 55.93 24 *e*P **P 15 31 56.5 -0.9**
comp=Z,26nm,1.4s,mb5.1
KHC Kasperske Hory 55.93 24 *e*P **P 15 31 57.0 -0.4**
KHC Kasperske Hory 55.93 24 *e*P **P 15 31 57.0 -0.4**
SDDR Presa de Saban 55.95 293 *e*P **P 15 31 58.2 +0.2**
comp=Z,23nm,0.9s,mb5.2
CONA Conrad Observa 55.99 27⇑ *i*P **P 15 31 57.7 -0.2**
comp=Z,152nm,1.2s,mb5.9,SNR=25
NKC Novy Kostel 56.35 23 *e*P **P 15 32 00.8 +0.4**
NKC Novy Kostel 56.35 23 *e*P **P 15 32 00.8 +0.4**
MOX Moxa 56.37 22 *e*P **P 15 32 00.5 0.0**
MOX *e*pP pP 15 32 04.3 +0.6
comp=Z,257nm,1.6s
MOX *e*PP PP 15 34 13.5 +7.4
MOX *e*S **S 15 39 52.0 +1.0**
MOX
comp=Z,7µm,18.0s
MOX Moxa 56.37 22 *e*P **P 15 32 00.5 0.0**
comp=Z,257nm,1.6s,mb6.0
MOX *e*pP pP 15 32 04.3 +0.6
MOX *e*PP PP 15 34 13.5 +7.4
MOX *e*S **S 15 39 52.0 +1.0**
MOX Moxa 56.37 22 *e*P **P 15 32 00.5 0.0**
MOX *e**PP pP 15 32 04.3 +0.6
MOX *e* 15 34 13.5
MOX *e*S **S 15 39 52.0 +1.0**
MOX pmax pmax
comp=Z,257nm,1.6s,mb6.0
MOX MLR MLR
comp=Z,7µm,18.0s,MS5.8
ESK Eskdalemuir 56.51 10 P **P 15 32 00.6 -0.8**
comp=Z,8.1nm,0.9s,mb4.8
ESK Eskdalemuir 56.51 10 P **P 15 32 00.6 -0.8**
ESK pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
WIT Witteveen 56.53 17 *e*P **P 15 32 03.4 +1.8**
comp=Z,534nm,1.4s,mb6.4
ROSC El Rosal 56.85 276 P **P 15 32 05.5 +0.9**
comp=Z,5.4nm,0.4s,mb5.0,baz=108,slow=20,SNR=2.8
TREC Trest 56.86 25 *e*P **P 15 32 03.6 -0.4**
TREC Trest 56.86 25 *e*P **P 15 32 03.6 -0.4**
PRU Pruhonice 57.00 24 *e*P **P 15 32 05.1 +0.2**
PRU Pruhonice 57.00 24 *e*P **P 15 32 05.1 +0.2**
PRA Prague 57.02 24 P **P 15 32 06.0 +0.9**
CLL Collm 57.42 22 *e*P **P 15 32 08.0 0.0**
comp=Z,113nm,1.0s,mb5.8
CLL *i* 15 32 19.4
CLL *e*S **S 15 40 05.0 +0.1**
CLL Collm 57.42 22 *e*P **P 15 32 08.0 0.0**
CLL *e*S **S 15 40 05.0 +0.1**
CLL pmax pmax
comp=Z,113nm,1.0s,mb5.8
CLL MLR MLR
comp=Z,6µm,18.4s,MS5.8
CLL Collm 57.42 22 *e*P **P 15 32 08.0 0.0**
CLL ⇑*i*P(2) pP 15 32 12.4 +1.2
comp=Z,113nm,1.0s
CLL *i* (sP) sP 15 32 19.4 +7.0
CLL *e*PP PP 15 34 18.0 +2.5
CLL *e*PPP 15 35 35.0
CLL *e*S **S 15 40 05.0 +0.1**
comp=N,11µm,25.7s
CLL *e*S **S 15 40 05.0 +0.1**
comp=E,7µm,24.2s
CLL *e*SS SS 15 44 06.0 +11
CLL *e*SSS 15 46 06.0
CLL LmV 16 01 00.0
comp=Z,6µm,18.4s
PVCC Panska Ves 57.42 24 *e*P **P 15 32 07.7 -0.3**
PVCC Panska Ves 57.42 24 *e*P **P 15 32 07.7 -0.3**
BRG Berggiesshubel 57.45 23 *e*P **P 15 32 07.6 -0.5**
comp=Z,8.9nm,1.4s,mb4.6
BRG *i* pP 15 32 11.9 +0.6
comp=Z,106nm,1.0s
BRG *i* 15 32 14.4
comp=Z,124nm,1.0s
BRG PP PP 15 34 16.3 +0.6
comp=Z,90nm,1.5s
BRG S **S 15 40 06.0 +0.8**
BRG *e*PKPPKP 16 02 13.3
comp=Z,57nm,2.5s
BRG
comp=N,8µm,15.3s
BRG
comp=E,9µm,14.6s
BRG
comp=Z,9µm,15.4s
KHAL Karahalli 57.75 43 *i*P **P 15 32 11.3 +0.8**
PSZ Piszkesteto 57.87 29 *e*P **P 15 32 10.6 -0.6**
comp=Z,40nm,1.4s,mb5.3
PSZ Piszkesteto 57.87 29 *e*P **P 15 32 10.6 -0.5**
PSZ pmax pmax
comp=Z,40nm,1.4s,mb5.3
UPC Upice 58.00 25 *e*P **P 15 32 12.2 +0.2**
UPC Upice 58.00 25 *e*P **P 15 32 12.2 +0.2**
DPC Dobruska-Polom 58.01 25 *e*P **P 15 32 11.7 -0.4**
DPC Dobruska-Polom 58.01 25 *e*P **P 15 32 11.7 -0.4**
MORC Moravsky Berou 58.11 26 *e*P **P 15 32 12.3 -0.5**
comp=Z,8.6nm,0.8s,mb4.8
MORC Moravsky Berou 58.11 26 *e*P **P 15 32 12.3 -0.5**
MORC pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LCO Las Campanas 58.18 235 *e*P **P 15 32 12.2 -1.5**
comp=Z,12nm,1.0s,mb4.9
OKC Ostrava-Krasne 58.42 26 *e*P **P 15 32 14.8 -0.2**
OKC Ostrava-Krasne 58.42 26 *e*P **P 15 32 14.8 -0.2**
SHUT Suhut-Afyon 58.57 43 *e*P **P 15 32 17.2 +1.0**
RAC Raciborz 58.62 26 *e*P **P 15 32 16.9 +0.5**
RAC *e*S **S 15 40 24.0 +3.4**
RAC MLR MLR
comp=N,7µm,15.0s,MS6.1
RAC MLR MLR
comp=Z,7µm,15.0s,MS5.9
RAC MLR MLR
comp=E,8µm,15.0s,MS6.1
RUE Ruedersdorf 58.65 22 P **P 15 32 14.9 -1.6**
ADVT Abdulvahap 58.96 41 *e*P **P 15 32 19.3 +0.4**
HDMB Hadim 59.18 46 *e*P **P 15 32 21.2 +0.7**
ESKT Eskisehir 59.24 42 *i*P **P 15 32 20.5 -0.5**
KDHN Kadinhani 59.63 44 *i*P **P 15 32 23.2 -0.4**
RGN Rugen 60.14 20 *e*P **P 15 32 26.4 -0.4**
comp=E,141nm,1.0s,mb6.0
BUR08 Bucovina Ar. S 60.38 32 *e*P **P 15 32 27.2 -1.3**
KWP Kalwaria Pacla 60.40 29 *e*P **P 15 32 27.8 -0.9**
comp=E,10nm,0.8s,mb4.9
SGKT Sivrigoynuk 60.56 42 *i*P **P 15 32 26.8 -3.2**
GULE Gulek 60.97 46 *i*P **P 15 32 33.4 +0.6**
BR131 Keskin Array S 61.24 43 *e*P **P 15 32 34.6 0.0**
comp=E,2.4nm,0.6s,mb4.5
BRTR Keskin Array B 61.24 43 P **P 15 32 35.0 +0.4**
BRTR LR LR 16 02 11.9
BRTR Keskin Array B 61.24 43 P **P 15 32 35.0 +0.4**
comp=E,89nm,0.8s,mb5.9,baz=236,slow=6.0,SNR=79
BRTR LR LR 16 02 11.9
comp=E,8µm,19.4s,MS5.9,baz=70,slow=39
COBT Iskenderun 61.73 48 *i*P **P 15 32 38.6 +0.5**
KIS Kishinev 61.96 34⇑ *i*P **P 15 32 40.0 +0.7**
comp=E,800nm,1.0s
KIS Kishinev 61.96 34 *e*PcP PcP 15 33 17.0 -2.9
KIS Kishinev 61.96 34 *e*PP PP 15 34 52.0 -3.8
KIS Kishinev 61.96 34α *i*P **P 15 32 40.0 +0.7**
KIS *e* 15 33 17.0
KIS *i*S **S 15 41 03.0 -0.6**
KIS *e*SS ScS 15 42 25.0 -6.4
KIS pmax pmax
comp=Z,800nm,1.0s
KIS pmax pmax
comp=Z,2µm,7.0s
KIS smax
comp=N,2µm,8.0s
KIS smax
comp=E,2µm,14.0s
KIS MLR MLR
comp=N,11µm,18.0s,MS6.1
KIS MLR MLR
comp=Z,12µm,18.0s,MS6.1
KIS MLR MLR
comp=E,5µm,16.0s,MS6.1
KIS MLR MLR
comp=Z,13µm,20.0s
BCIP Isla Barro Col 62.62 280 *e*P **P 15 32 43.4 -1.0**
comp=Z,43nm,1.6s,mb5.3
PLCA Paso Flores 62.64 223 *e*P **P 15 32 44.2 +0.2**
EMMW East Machias 62.72 322 *e*P **P 15 32 44.3 -0.2**
comp=Z,7.3nm,0.6s,mb5.0
MALT Malatya 64.03 47 *e*P **P 15 32 53.6 +0.4**
comp=Z,11nm,0.8s,mb4.9
MALT Malatya 64.03 47 P **P 15 32 54.3 +1.1**
PKME Peaks-Kenny Pk 64.13 322 *e*P **P 15 32 54.5 +0.7**
KIEV Kiev 64.32 31 *e*P **P 15 32 52.0 -2.9**
comp=Z,14nm,0.9s,mb5.0
AKASG Malin Array Be 64.33 31 P **P 15 32 54.2 -0.8**
AKASG S **S 15 41 23.5 -10**
AKASG Malin Array Be 64.33 31 P **P 15 32 54.2 -0.8**
comp=Z,104nm,1.0s,mb5.8,baz=232,slow=8.2,SNR=30
AKASG S **S 15 41 23.5 -10**
comp=Z,0.4nm,0.4s,baz=109,slow=36,SNR=2.8
AKASG LR LR 16 03 16.0
comp=Z,10µm,18.2s,MS6.0,baz=225,slow=38
AKBB Malin Array Si 64.33 31 *e*P **P 15 32 53.5 -1.5**
KEMA Kemaliye 64.44 46⇑ *i*P **P 15 32 56.1 +0.2**
BORG Borgarnes 64.78 358 LR LR 15 55 16.3
comp=Z,5µm,19.2s,MS5.7,baz=145,slow=30
PTK Pertek 64.95 46 *e*P **P 15 32 59.2 0.0**
CPNY Central Park 65.20 316 P **P 15 33 01.0 +0.1**
PAL Palisades 65.25 316 *e*P **P 15 33 00.1 -1.2**
comp=Z,5.3nm,0.7s,mb4.7
PAL Palisades 65.25 316 *e*P **P 15 33 00.1 -1.1**
PAL pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
HNH Hanover 65.30 319 *e*P **P 15 33 00.8 -0.7**
comp=Z,16nm,0.8s,mb5.1
LBNH Lisbon 65.30 320 *e*P **P 15 33 02.6 +1.2**
comp=Z,13nm,1.0s,mb4.9
LBNH Lisbon 65.30 320 *e*P **P 15 33 02.6 +1.1**
LBNH pmax pmax
comp=Z,13nm,1.0s,mb4.9
NACGM Naroch 65.74 26 *e*P **P 15 33 05.0 +0.9**
MNK Minsk 65.96 27 *e*P **P 15 33 08.0 +2.5**
MNK *e*S S 15 41 54.0 +1.0
MNK *e*SS SS 15 46 06.0 -2.3
MNK pmax pmax
comp=Z,670nm,1.0s,mb6.6
MNK MLR MLR
comp=Z,20µm,16.0s,MS6.4
MDV Middlebury 66.01 319 *e*P **P 15 33 06.0 0.0**
comp=Z,83µm,1.3s
ANN Anapa 66.03 40*c* *i*P **P 15 33 08.3 +2.1**
ANN *i**PP pP 15 33 16.3 +6.9
ANN *i* 15 33 39.8
ANN *e* 15 35 31.1
ANN *i*S S 15 41 53.9 -0.3
ANN *i*SS SS 15 46 07.4 -2.4
ANN *e*SSS 15 49 06.7
ANN pmax pmax
comp=Z,494nm,1.4s,mb6.3
ANN pmax pmax
comp=N,174nm,1.5s
ANN pmax pmax
comp=E,99nm,1.5s
ANN pmax pmax
comp=N,251nm,5.9s
ANN pmax pmax
comp=E,216nm,5.9s
ANN pmax pmax
comp=Z,698nm,5.9s
ANN smax
comp=E,2µm,12.3s
ANN MLR MLR
comp=N,3µm,20.0s,MS5.6
ANN MLR MLR
comp=E,3µm,20.0s,MS5.6
ANN MLR MLR
comp=Z,6µm,20.0s,MS5.8
ACCN Adirondack Com 66.07 319 *e*P **P 15 33 06.0 -0.4**
comp=Z,12nm,1.1s,mb4.8
FRNY Flat Rock 66.63 320 *e*P **P 15 33 10.2 +0.2**
comp=Z,12nm,1.1s,mb4.8
NCB Newcomb 66.68 319 *e*P **P 15 33 10.2 -0.1**
comp=Z,11nm,1.1s,mb4.8
SDMD Soldier's Deli 66.73 314 *e*P **P 15 33 11.6 +0.8**
comp=Z,9.7nm,0.7s,mb4.9
JSRW J. Sargeant Re 66.91 312 *e*P **P 15 33 10.4 -1.5**
DWPF Disney 67.12 301 *e*P **P 15 33 14.0 +0.5**
comp=Z,77nm,1.5s,mb5.5
BINY Binghamton 67.16 317 *e*P **P 15 33 13.8 +0.4**
comp=Z,20nm,1.0s,mb5.1
NHSC New Hope 67.32 306 P **P 15 33 16.1 +1.4**
comp=Z,90nm,1.2s,mb5.7
BCA Borcka 67.48 44 *e*P **P 15 33 13.8 -1.7**
SSPA Standing Stone 67.92 315 *e*P **P 15 33 18.4 +0.2**
comp=Z,28nm,1.5s,mb5.1
JSC Jenkinsville 68.51 307 *e*P **P 15 33 21.0 -1.1**
MCWV Mont Chateau 69.00 313 *e*P **P 15 33 25.7 +0.7**
comp=Z,8.7nm,0.6s,mb4.9
KIV Kislovodsk 69.13 42 *e*P **P 15 33 24.8 -1.0**
comp=Z,43nm,1.3s,mb5.2
KIV Kislovodsk 69.13 42 P **P 15 33 26.7 +0.9**
SNR=92
GNI Garni 69.26 47 P **P 15 33 25.3 -1.3**
comp=Z,24nm,1.0s,mb5.1
FINES FINESS Array B 69.79 21 P **P 15 33 29.5 0.0**
FINES LR LR 16 03 53.2
FINES FINESS Array B 69.79 21 P **P 15 33 29.5 0.0**
comp=Z,133nm,0.8s,mb5.9,baz=207,slow=3.8,SNR=95
FINES LR LR 16 03 53.2
comp=Z,11µm,20.3s,MS6.1,baz=238,slow=36
ALLY Alegheny Colle 69.86 315 *e*P **P 15 33 31.5 +1.2**
GOGA Godfrey 70.06 306 *e*P **P 15 33 33.0 +1.3**
comp=Z,4.1nm,0.6s,mb4.5
GOGA Godfrey 70.06 306 *e*P **P 15 33 33.0 +1.3**
GOGA pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
OBN Obninsk 70.47 30 *e*P **P 15 33 33.0 -0.8**
comp=Z,22nm,0.8s,mb5.1
SCO Scoresbysund 70.55 358 *i*P **P 15 33 33.4 -0.6**
SCO pmax pmax
comp=Z,32nm,1.0s,mb5.2
SCO MLR MLR
comp=Z,3µm,16.0s,MS5.7
SCO Scoresbysund 70.55 358 *i*P **P 15 33 33.4 -0.6**
comp=Z,32nm,1.0s,mb5.2
SCO
comp=Z,3µm,16.0s
VNA2 Neumayer--Watz 70.99 176 *e*P **P 15 33 35.3 -1.4**
baz=330,slow=5.7
VNA2 *e* 15 33 40.6
MOS Moscow 71.30 29 *e*P **P 15 33 38.2 -0.6**
MOS *e* 15 36 14.7
MOS *e*S S 15 42 53.7 -2.7
MOS *e*SSS 15 50 44.9
MOS pmax pmax
comp=Z,671nm,1.4s,mb6.4
MOS pmax pmax
comp=Z,1µm,1.6s,mb6.6
MOS smax
comp=N,3µm,5.9s
MOS MLR MLR
comp=Z,11µm,16.0s,MS6.2
MOS MLR MLR
comp=E,8µm,15.0s

ACSO	**Alum Creek Sta**	**71.47**	**313**	*e*P		**P**	**15 33 40.4**	**+0.2**		
	comp=E,7.2nm,0.6s,mb4.8									
SWET	**Sewanee**	**72.46**	**307**	*e*P		**P**	**15 33 46.1**	**-0.2**		
PMSA	**Palmer Station**	**72.70**	**199**	*e*P		**P**	**15 33 49.2**	**+2.2**		
	comp=E,2.5nm,0.7s,mb4.2									
PMSA	**Palmer Station**	**72.70**	**199**	P		**P**	**15 33 48.5**	**+1.5**		
	comp=E,7.5nm,1.1s,mb4.5,baz=37,slow=6.3,SNR=4.3									
LRAL	**Lakeview Retre**	**72.86**	**305**	*e*P		**P**	**15 33 48.4**	**-0.3**		
	comp=E,2.6nm,0.5s,mb4.4									
SUMG	**Summit**	**73.77**	**354**	*e*P		**P**	**15 33 54.9**	**+1.6**		
	comp=E,4.6nm,0.9s,mb4.4									
BLO	**Bloomington**	**73.83**	**311**	*e*P		**P**	**15 33 54.7**	**+0.4**		
GLMI	**Grayling**	**73.95**	**317**	*e*P		**P**	**15 33 52.7**	**-2.1**		
	comp=E,32nm,0.8s,mb5.3									
KLMR	**Klimovskoe**	**74.71**	**25**	*e*P		**P**	**15 34 01.5**	**+2.6**		
KLMR				*i* S		S	15 43 34.6	-0.4		
KLMR				*i* SS		SS	15 48 21.0	-1.6		
KLMR				pmax	pmax					
	comp=Z,373nm,1.6s,mb6.1									
KLMR				pmax	pmax					
	comp=Z,510nm,7.9s									
KLMR				MLR	MLR					
	comp=Z,8μm,22.0s,MS6.0									
ARCES	**ARCESS Array B**	**75.25**	**14**	P		**P**	**15 34 01.7**	**-0.2**		
	comp=Z,7.8nm,0.9s,mb4.6,baz=53,slow=15,SNR=4.0									
ARCES				LR		LR	16 05 59.0			
	comp=Z,7μm,21.6s,MS5.9,baz=51,slow=35									
ARE0	**ARCESS Array S**	**75.25**	**14**	*e*P		**P**	**15 33 58.5**	**-3.4**		
SIUC	**Southern Illin**	**75.58**	**309**	*e*P		**P**	**15 34 03.5**	**-0.9**		
	comp=Z,16nm,0.6s,mb5.1									
FVM	**French Village**	**76.57**	**309**	*e*P		**P**	**15 34 08.3**	**-1.8**		
	comp=Z,6.8nm,0.7s,mb4.7									
FVM	**French Village**	**76.57**	**309**	*e*P		**P**	**15 34 08.3**	**-1.8**		
FVM				pmax	pmax					
	comp=Z,7.0nm,0.7s,mb4.7									
CCM	**Cathedral Cave**	**77.22**	**309**	*e*P		**P**	**15 34 12.5**	**-1.3**		
	comp=Z,10.0nm,0.6s,mb4.9									
JFWS	**Jewell Farm**	**77.42**	**314**	*e*P		**P**	**15 34 15.3**	**+0.5**		
	comp=Z,6.7nm,0.5s,mb4.8									
JFWS	**Jewell Farm**	**77.42**	**314**	*e*P		**P**	**15 34 15.3**	**+0.6**		
JFWS				pmax	pmax					
	comp=Z,7.0nm,0.5s,mb4.8									
BJO	**Bjornoya**	**77.70**	**9**	*e*		**P**	**15 34 10.9**	**-4.8**		
BJO				*e*S		S	15 44 11.8	+4.3		
BJO				AMS		AMS	16 05 01.5			
	comp=Z,4μm,20.3s,MS5.7									
MIAR	**Mount Ida**	**78.52**	**305**	P		**P**	**15 34 20.3**	**-0.7**		
	comp=Z,2.8nm,0.7s,mb4.3									
MIAR	**Mount Ida**	**78.52**	**305**	P		**P**	**15 34 20.3**	**-0.7**		
MIAR				pmax	pmax					
	comp=Z,3.0nm,0.7s,mb4.3									
HUIG	**Huatulco**	**78.96**	**286**	*i* P		**P**	**15 34 21.1**	**-2.7**		
NATX	**Nacogdoches**	**79.06**	**302**	*e*P		**P**	**15 34 23.7**	**-0.3**		
	comp=Z,19nm,0.5s,mb5.3									
HKT	**Hockley**	**79.85**	**300**	P		**P**	**15 34 26.9**	**-1.6**		
	comp=Z,2.3nm,0.8s,mb4.2									
HKT	**Hockley**	**79.85**	**300**	P		**P**	**15 34 26.9**	**-1.6**		
HKT				pmax	pmax					
	comp=Z,2.0nm,0.8s,mb4.1									
KBS	**Kingsbay**	**80.45**	**6**	*e*P		**P**	**15 34 31.6**	**+1.0**		
	comp=Z,4.2nm,0.7s,mb4.5									
KBS	**Kingsbay**	**80.45**	**6**	*e*P		**P**	**15 34 31.6**	**+0.9**		
KBS				pmax	pmax					
	comp=Z,4.0nm,0.7s,mb4.5									
AKTO	**Aktyubinsk**	**80.97**	**39**	LR		LR	16 15 27.7			
	comp=Z,5μm,18.5s,MS5.9,baz=75,slow=40									
AKTO	**Aktyubinsk**	**80.97**	**39**	P		**P**	**15 34 34.3**	**+0.3**		
AKTO				pmax	pmax					
	comp=Z,49nm,1.9s,mb5.1									
KSU1	**Kansas State U**	**81.53**	**309**	*e*P		**P**	**15 34 37.7**	**+0.4**		
ABKAR	**Akbulak array**	**81.99**	**40**	*e*P		**P**	**15 34 38.9**	**-0.5**		
ECSD	**EROS Data Cent**	**82.13**	**314**	*e*P		**P**	**15 34 39.1**	**-1.2**		
	comp=Z,13nm,1.3s,mb4.7									
AGMN	**Agassiz Nation**	**82.28**	**319**	*e*P		**P**	**15 34 39.9**	**-1.1**		
	comp=Z,5.9nm,0.6s,mb4.7									
ARU	**Arti**	**82.48**	**33**	*e*P		**P**	**15 34 41.2**	**-0.6**		
ULM	**Lac du Bonnet**	**82.59**	**321**	P		**P**	**15 34 42.0**	**-0.6**		
ULM	**Lac du Bonnet**	**82.59**	**321**	P		**P**	**15 34 42.0**	**-0.6**		
	comp=Z,4.7nm,0.5s,mb4.8,baz=126,slow=6.8,SNR=3.0									
ULM				LR		LR	16 06 23.4			
	comp=Z,5μm,18.6s,MS5.9,baz=89,slow=32									
JCT	**Junction City**	**83.32**	**301**	*e*P		**P**	**15 34 46.9**	**+0.1**		
	comp=Z,14nm,0.9s,mb5.0									
JCT	**Junction City**	**83.32**	**301**	*e*P		**P**	**15 34 46.9**	**+0.1**		
JCT				pmax	pmax					
	comp=Z,14nm,0.9s,mb5.0									
AMTX	**Amarillo**	**85.19**	**305**	*e*P		**P**	**15 34 55.6**	**-0.6**		
	comp=Z,4.3nm,0.6s,mb4.8									
QUE	**Quetta**	**85.37**	**60**	*e*P		**P**	**15 34 54.0**	**-3.2**		
QUE				*e*S		S	15 45 48.0	+19		
OGNE	**Ogallala**	**85.85**	**311**	P		**P**	**15 34 56.8**	**-2.6**		
	comp=Z,14nm,0.6s,mb5.1									
MAW	**Mawson**	**86.25**	**158**	P		**P**	**15 35 01.4**	**+0.7**		
	comp=Z,1.4nm,0.7s,mb4.3,baz=247,slow=7.7,SNR=2.7									
MAW				LR		LR	16 08 39.9			
	comp=Z,2μm,19.1s,MS5.5,baz=293,slow=32									
TXAR	**Lajitas Array**	**86.61**	**299**	P		**P**	**15 35 03.6**	**+0.2**		
	comp=Z,2.2nm,0.8s,mb4.4,baz=117,slow=5.0,SNR=19									
TXAR				LR		LR	16 13 20.9			
	comp=Z,3μm,19.9s,MS5.7,baz=15,slow=35									
RES	**Resolute Bay**	**86.77**	**345**	LR		LR	16 11 27.0			
	comp=Z,4μm,18.0s,MS5.9,baz=104,slow=34									
GDL2	**Guadalupe Moun**	**87.31**	**302**	*e*P		**P**	**15 35 07.5**	**+0.8**		
	comp=Z,5.9nm,0.8s,mb4.9									
RSSD	**Black Hills**	**87.51**	**314**	*e*P		**P**	**15 35 05.7**	**-1.7**		
MNTX	**Cornudas Mount**	**88.16**	**302**	*e*P		**P**	**15 35 10.9**	**+0.1**		
	comp=Z,1.2nm,1.0s,mb4.1									
SDCO	**Great Sand Dun**	**88.40**	**308**	*e*P		**P**	**15 35 12.1**	**+0.3**		
	comp=Z,15nm,1.2s,mb5.1									
ISCO	**Idaho Springs**	**88.54**	**310**	*e*P		**P**	**15 35 12.6**	**+0.2**		
	comp=Z,6.1nm,1.1s,mb4.8									
ANMO	**Albuquerque**	**89.12**	**305**	P		**P**	**15 35 16.0**	**+0.7**		
	comp=Z,1.0nm,0.6s,mb4.3,baz=113,slow=10,SNR=2.8									
ANMO				LR		LR	16 10 21.1			
	comp=Z,7μm,20.5s,MS6.1,baz=40,slow=32									
ANMO	**Albuquerque**	**89.12**	**305**	*e*P		**P**	**15 35 15.7**	**+0.4**		
LAO	**LASA Array**	**89.13**	**317**	*e*P		**P**	**15 35 14.2**	**-0.8**		
BNM	**Barren Site**	**89.25**	**304**	*e*P		**P**	**15 35 16.7**	**+0.8**		
SMCO	**Snowmass**	**89.58**	**309**	*e*P		**P**	**15 35 18.5**	**+1.2**		
	comp=Z,10nm,1.4s,mb5.0									
LAZ	**Ladron**	**89.67**	**304**	*e*P		**P**	**15 35 18.6**	**+0.7**		
	comp=Z,2.6nm,1.2s,mb4.4									
MVCO	**Mesa Verde**	**90.78**	**307**	*e*P		**P**	**15 35 23.2**	**+0.3**		
	comp=Z,12nm,1.1s,mb5.1									
PV01	**Paradox Valley**	**90.83**	**308**	*e*P		**P**	**15 35 23.9**	**+0.7**		
RLMT	**Red Lodge**	**91.26**	**315**	*e*P		**P**	**15 35 26.3**	**+1.3**		
PDAR	**Pinedale Array**	**91.51**	**313**	P		**P**	**15 35 26.1**	**-0.2**		
PDAR				PP		PP	15 39 09.4	+5.3		
PDAR	**Pinedale Array**	**91.51**	**313**	P		**P**	**15 35 26.1**	**-0.2**		
	comp=Z,0.6nm,0.9s,baz=106,slow=6.7,SNR=2.4									
PDAR				PP		PP	15 39 09.4	+5.3		
	comp=Z,5.5nm,1.1s,baz=69,slow=8.1,SNR=6.2									
PDAR				LR		LR	16 10 50.8			
	comp=Z,5μm,21.7s,MS5.9,baz=101,slow=32									
EGMT	**Eagleton**	**91.53**	**318**	*e*P		**P**	**15 35 24.5**	**-1.7**		
	comp=Z,2.5nm,0.7s,mb4.7									
AAK	**Ala-Archa**	**91.65**	**48**	LR		LR	16 24 45.9			
	comp=Z,6μm,18.2s,MS6.1,baz=260,slow=41									
FLWY	**Flagg Ranch**	**92.31**	**314**	*e*P		**P**	**15 35 30.7**	**+0.8**		
MOOW	**Moose Ponds**	**92.35**	**314**	*e*P		**P**	**15 35 29.3**	**-0.8**		
	comp=Z,1.2nm,1.1s,mb4.1									
REDW	**Red Top Meadow**	**92.44**	**313**	*e*P		**P**	**15 35 30.6**	**0.0**		
	comp=Z,5.6nm,1.1s,mb4.8									
TKM2	**Tokmak 2**	**92.45**	**47**	*e*P		**P**	**15 35 29.4**	**-1.2**		
	comp=Z,1.9nm,0.7s,mb4.5									
TKM2	**Tokmak 2**	**92.45**	**47**	*e*P		**P**	**15 35 29.4**	**-1.2**		
TKM2				pmax	pmax					
	comp=Z,2.0nm,0.7s,mb4.6									
KSH	**Kashi**	**92.86**	**51**	⇑ *i*P		**P**	**15 35 32.0**	**-0.6**		
KSH				pP		pP	15 35 36.8	+0.9		
KSH				sP		sP	15 35 39.0	+1.9		
KSH				SKS			15 46 02.5			
KSH				*e*S		S	15 46 28.3	-10		
YKA	**Yellowknife Ar**	**93.35**	**333**	P		**P**	**15 35 35.0**	**+0.7**		
	comp=Z,6.7nm,1.1s,mb5.0,baz=90,slow=6.8,SNR=3.0									
YKA				LR		LR	16 12 50.9			
	comp=Z,482nm,20.0s,MS5.0,baz=220,slow=32									
KURK	**Kurchatov**	**94.06**	**39**	LR		LR	16 22 27.7			
	comp=Z,4μm,19.1s,MS5.9,baz=280,slow=38									
MSO	**Missoula**	**94.43**	**317**	*e*P		**P**	**15 35 39.0**	**-0.6**		
	comp=Z,0.9nm,0.6s,mb4.4									
WAKR	**Walker**	**99.33**	**309**	*e*Pdif		**P**	**15 36 02.6**	**+0.6**		
	comp=Z,11nm,1.6s,mb5.2									
ILAR	**Eielson Array**	**105.86**	**340**	PKKPbc		PKKPbc	15 52 16.9	+8.3		
	comp=Z,0.8nm,1.0s,baz=255,slow=4.1,SNR=4.7									
TLY	**Talaya**	**108.96**	**34**	*e*P		Pdif	15 36 50.8	+6.4		
TLY				*e*PPP			15 43 36.8			
TLY				*e*			15 47 31.7			
TLY				*e*			15 51 41.6			
TLY				*e*SS		SS	15 56 54.2	+20		
TLY				pmax	pmax					
	comp=Z,8.0nm,0.7s									
TLY				MLR	MLR					
	comp=Z,6μm,20.0s,MS6.1									
TTA	**Tatalina**	**110.13**	**341**	*e*PKPdf		PKiKP	15 40 51.9	+1.0		
TTA	**Tatalina**	**110.13**	**341**	*e*PKiKP		PKiKP	15 40 51.9	+1.0		
LZH	**Lanzhou**	**115.10**	**50**	*e*PKP		PKiKP	15 40 52.0	-9.2		
LZH				pPKP			15 40 55.3			
LZH				sPKP			15 40 56.5			
LZH				PP		PP	15 41 54.0	-6.6		
LZH				SKS		SKSdf	15 48 00.0	-14		
LZH				SKKS		SKKSac	15 48 50.0	-13		
LZH				SS		SS	15 57 49.3	-8.1		
LZH				AMB		AMB				
	comp=Z,540nm,8.2s									
LZH				LR		LR				
	comp=N,4μm,16.5s,MS6.2									
LZH				LR		LR				
	comp=E,3μm,17.0s,MS6.2									
LZH				LR		LR				
	comp=Z,6μm,20.5s,MS6.2									
HHC	**Hu-ho-hao-te**	**118.74**	**42**	*e*PKP		PKPdf	15 41 08.0	-0.1		
HHC				PP		PP	15 42 27.0	+1.3		
HHC				PKS			15 44 43.5			
HHC				SKS		SKSdf	15 48 15.5	-4.9		
HHC				SKKS		SKKSac	15 49 17.5	-9.3		
HHC				SS		SS	15 58 39.8	-4.5		
KLR	**Kul'dur**	**124.46**	**24**	*e*PKIKP		PKPdf	15 41 19.2	+0.4		
KLR				*e*			15 52 58.0			
KLR				MLR	MLR					
	comp=Z,4μm,16.0s,MS6.2									
HABR	**Khabarovsk**	**126.36**	**22**	*e*P		Pdif	15 38 04.0	+2.3		
HABR				*i*			15 41 27.2			
HABR				*e*			15 41 30.3			
HABR				*e*			15 43 18.8			
HABR				PPP			15 45 58.8			
HABR				*e*			15 48 38.1			
HABR				*e*PS		PS	15 53 20.5	+0.2		
HABR				*e*SS		SS	16 00 20.5	+0.5		
HABR				SSS			16 04 58.3			
HABR				pmax	pmax					
	comp=E,12nm,1.3s									
HABR				pmax	pmax					
	comp=Z,7.0nm,1.3s									
HABR				pmax	pmax					
	comp=N,7.0nm,1.1s									
HABR				MLR	MLR					
	comp=Z,2μm,22.0s,MS5.8									
NJ2	**Nanjing**	**128.09**	**48**	*e*PKP		PKPdf	15 41 27.3	+1.0		
NJ2				PP		PP	15 43 32.5	+3.5		
NJ2				LR	LR					
	comp=N,330nm,22.1s,MS5.2									
NJ2				LR	LR					
	comp=E,470nm,23.8s,MS5.2									
NJ2				LR	LR					
	comp=Z,710nm,27.2s,MS5.2									
FITZ	**Fitzroy Crossi**	**139.60**	**119**	*e*PKP		PKPdf	15 41 45.7	-2.5		
	comp=Z,12nm,0.8s									
FITZ	**Fitzroy Crossi**	**139.60**	**119**	PKP		PKPdf	15 41 46.3	-1.9		
	comp=Z,2.5nm,0.8s,baz=187,slow=3.9,SNR=5.9									
STKA	**Stephens Creek**	**142.58**	**150**	*e*PKP		PKPdf	15 41 52.9	-0.3		
	comp=Z,12nm,0.8s									
STKA	**Stephens Creek**	**142.58**	**150**	*e*PKPpre		PKPdf	15 41 52.1	-1.1		
STKA	**Stephens Creek**	**142.58**	**150**	PKP		PKPdf	15 41 52.4	-0.8		
	comp=Z,4.3nm,0.7s,baz=244,slow=1.9,SNR=9.2									
ASAR	**Alice Springs**	**143.62**	**133**	PKP		PKPdf	15 41 56.1	+0.8		
ASAR	**Alice Springs**	**143.62**	**133**	PKP		PKPdf	15 41 56.1	+0.8		
	comp=Z,4.2nm,0.8s,baz=222,slow=2.4,SNR=14									
WRA	**Warramunga Arr**	**146.06**	**128**	PKPbc		PKPbc	15 42 00.9	+0.5		
WRA	**Warramunga Arr**	**146.06**	**128**	PKPbc		PKPbc	15 42 00.9	+0.5		
	comp=Z,4.5nm,0.7s,baz=236,slow=2.7,SNR=41									
CTA	**Charters Tower**	**154.44**	**143**	PKPab		PKPab	15 42 33.7	-1.4		
	comp=Z,11nm,0.8s,baz=272,slow=3.7,SNR=7.1									

ISCJB ***28*** *15:22:22.9±0.1, 0.°01N±0.°03×17.°36W±0.°02, h10km, mb5.7/327, MS5.9/250, Error ellipse: s-maj=4.4km s-min=2.0km az=157.2*

NEIC ***28*** *15:22:23.2±0.2, 0.°25S×17.°36W, h12km, mb5.7/233, ME6.7, MS5.9/196, MW6.3, MW6.2, Error ellipse: s-maj=6.9km s-min=3.2km az=158.0 Broadband fault plane solution: P waves. NP1:φs80.00000°, δ80.00000°, λ175.00000°. NP2:φs171.00000°, δ85.00000°, λ10.00000°. Principal axes: T Plg11.0000°, Azm36.0000°; N Plg0.0000°, Azm0.0000°; P Plg4.0000°, Azm305.0000°; Moment Tensor Solution. s121 Moment tensor: Scale 10¹⁸ Nm; Mrr=0.08; Mθθ=0.92; Mφφ=-1.00; Mrθ=0.13; Mrφ=-2.34; Mθφ=0.42; Best double couple: Mw=2.60000×10¹⁸ NP1: φs169.00000°, δ89.00000°, λ10.00000°. NP2:φs79.00000°, δ80.00000°, λ179.00000°. Principal axes: T 2.5400, Plg7.0000°, Azm34.0000°; N 0.0600, Plg79.0000°, Azm176.0000°; P -2.6000, Plg6.0000°, Azm303.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

BJI ***28*** *15:22:23.8, 0.°21S×17.°38W, h21km, mB6.1/27, mb5.6/4, Ms6.3/31, Ms7 5.9/29*

BGS ***28*** *15:22:29.2±1.9, 0.°84N×17.°76W, h10km, mb5.4, MS5.8*

GCMT ***28*** *15:22:30.5±0.1, 0.°18N×17.°37W, h21km, MW6.3, Moment Tensor Solution. s112,c260; s99,c199; Moment tensor: Scale 10¹⁸Nm; Mrr=0.09±.02; Mθθ=1.25±.02; Mφφ=-1.16±.02; Mrθ=0.11±.04; Mθφ=-3.09±.02; Mrφ=-0.38±.04; Best double couple: Mw=3.30000×10¹⁸ NP1:φs79.00000°, δ83.00000°, λ180.00000°. NP2:φs169.00000°, δ90.00000°, λ7.00000°. Principal axes: T 3.3900, Plg5.0000°, Azm35.0000°; N -0.0900, Plg83.0000°, Azm172.0000°; P -3.2900, Plg5.0000°, Azm304.0000°; Data Used: II IU IC CN G. Mantle waves from 102 sta. Surface waves: sta=116, comp=267, per= 50.*

ISC 28 15:22:23.6±0.7, **0.°02S**±0.°03×**17.°44W**±0.°02, **h5**km±4km, **h11**km±4.2km; **pP-P, n1495, σ0s83**/1397, **mb5.7**/327, **MS5.9**/250, **357C-211D, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**14.21**	**62**	*e*Pn		**Pn**	**15 25 43.6**	**-2.2**
	1μm,0.8s							
DBIC				*e*Sn		**Sn**	**15 28 07.6**	**-16**
RCBR	**Riachuelo**	**19.31**	**252**	*e*Pn		**Pn**	**15 26 54.4**	**+3.5**
RCBR				*e*S		Sn	15 30 07.6	-20
SHEL	**Horse Pasture**	**19.59**	**144**	*e*P		**Pn**	**15 26 54.9**	**+0.7**
	660nm,1.3s							
CHIE	**El Hierro**	**27.60**	**359**	P		**P**	**15 28 13.3**	**+1.3**
	146nm,1.0s,mb5.6							
EOSO	**Osorio**	**27.99**	**4**	P		**P**	**15 28 16.5**	**+0.9**
	631nm,2.1s,mb5.9							
CCAN	**Las Canadas**	**28.10**	**2**	P		**P**	**15 28 17.7**	**+1.2**
	44nm,1.0s,mb5.0							
EHIG	**Higuera**	**28.42**	**359**	P		**P**	**15 28 20.6**	**+1.2**
	798nm,1.3s,mb6.2							
EBAJ	**Bajamar**	**28.42**	**2**	P		**P**	**15 28 20.3**	**+0.9**
	498nm,1.8s,mb5.8							
CFTV	**Fuerteventura**	**28.46**	**6**	P		**P**	**15 28 20.7**	**+1.0**
	107nm,1.2s,mb5.3							
EFAM	**Famara**	**29.23**	**7**	P		**P**	**15 28 27.6**	**+1.0**
	505nm,1.8s,mb6.0							
TAM	**Tamanrasset**	**31.84**	**43**	⇑ *i*P		**P**	**15 28 50.2**	**+0.5**
	265nm,1.3s,mb5.9							
TAM				LR		LR		
	comp=Z,50μm,19.0s,MS6.2							
PMAR	**Madeira**	**32.58**	**1**	*e*P		**P**	**15 28 57.5**	**+1.4**
	comp=Z,234nm,1.3s,mb6.0							
CAM4	**Nova Friburgo**	**33.04**	**226**	⇑ *i*P		**P**	**15 28 58.1**	**-2.1**
CAM4				*i*			15 29 08.3	
CAM4				*i*			15 29 14.4	
CAM4				*i*			15 29 23.4	
CAM4				*i*			15 29 27.5	
CAM4				*i*			15 29 46.7	
CAM4				*i*			15 30 12.1	
CAM4				*i*			15 30 23.4	
CAM4				*i*			15 30 41.9	
CAM4				*i*			15 51 29.1	
CAM4				*i*			15 51 32.9	
CAM4				*i*			15 51 37.6	
CAM4				*i*			15 51 41.0	
CAM4				*i*			15 51 46.5	
CAM4				*i*			15 51 54.3	

TRIS	**Tristan da Cun**	**37.16**	**173**	PFAKE			15 29 40.0	+4.4		
TRIS				LR		LR				
	comp=Z,12μm,20.0s,MS5.7									
SPB	**Sao Paulo**	**37.37**	**229**	PFAKE			15 29 50.0	+12		
SPB				LR		LR				
	comp=Z,22μm,21.0s,MS5.9									
SPB	**Sao Paulo**	**37.37**	**229**	*e*Pn		**P**	**15 29 36.9**	**-0.7**		
PSMN	**Pico do Norte,**	**37.51**	**350**	*e*T			16 08 35.4			
PSMA	**Santa Maria**	**37.52**	**350**	*e*PP		PP	15 30 55.0	-9.3		
PSMA				*e*T			16 08 42.0			
SFS	**San Fernando**	**37.77**	**15**	PFAKE			15 29 50.0	+9.2		
SFS				LR		LR				
	comp=Z,28μm,19.0s,MS6.1									
PFVI	**Vila Bisbo**	**37.82**	**11**	*e*P		**P**	**15 29 41.7**	**+0.5**		
	comp=Z,201nm,1.8s,mb5.5									
PFVI	**Vila Bisbo**	**37.82**	**11**	*e*PP		PP	15 31 08.7	+1.1		
PFVI				*e*S		**S**	**15 35 32.5**	**-0.3**		
PFVI				*e*LR		LR	15 41 48.6			
	comp=Z,14μm,16.0s									
PFVI	**Vila Bisbo**	**37.82**	**11**	P		**P**	**15 29 42.0**	**+0.8**		
EJIF	**Jimena Fronter**	**37.96**	**16**	P		**P**	**15 29 42.4**	**+0.1**		
	comp=Z,134nm,1.4s,mb5.5									
EJIF	**Jimena Fronter**	**37.96**	**16**	P		**P**	**15 29 42.4**	**0.0**		
EJIF				pmax	pmax					
	comp=Z,134nm,1.4s,mb5.5									
MORF	**Marmelete**	**38.02**	**11**	*e*P		**P**	**15 29 42.7**	**-0.2**		
	comp=Z,114nm,1.5s,mb5.4									
MORF				*e*S		**S**	**15 35 35.8**	**-0.1**		
MORF				*e*LR		LR	15 40 48.8			
	comp=Z,11μm,18.0s									
MORF	**Marmelete**	**38.02**	**11**	*e*P		**P**	**15 29 43.6**	**+0.7**		
MORF				*e*S		**S**	**15 35 33.5**	**-2.4**		
PBDV	**Barranco-do-Ve**	**38.11**	**12**	*i* P		**P**	**15 29 44.3**	**+0.6**		
	comp=Z,230nm,1.2s,mb5.8									
PBDV	**Barranco-do-Ve**	**38.11**	**12**	*e*PP		PP	15 31 11.9	+1.1		
PBDV				*e*S		**S**	**15 35 38.0**	**+0.8**		
PBDV				*e*LR		LR	15 41 08.6			
	comp=Z,11μm,18.0s									
EALB	**Alboran**	**38.21**	**19**	P		**P**	**15 29 44.3**	**-0.2**		
	comp=Z,99nm,0.9s,mb5.5									
PTEO	**Sao Teotonio**	**38.24**	**11**	*e*P		**P**	**15 29 46.0**	**+1.2**		
	comp=Z,346nm,1.1s,mb6.0									
ESPR	**Espera**	**38.25**	**15**	P		**P**	**15 29 44.9**	**+0.1**		
	comp=Z,60nm,0.9s,mb5.3									
EMIJ	**Mijas**	**38.26**	**17**	P		**P**	**15 29 45.0**	**+0.1**		
	comp=Z,527nm,2.3s,mb5.9									
BART	**Pico Bartolome**	**38.28**	**350**	*e*PP		PP	15 31 12.6	-0.1		
BART				*e*T			16 09 42.5			
PVAQ	**Vaqueiros**	**38.31**	**13**	*i* P		**P**	**15 29 45.0**	**-0.4**		
	comp=Z,215nm,1.3s,mb5.7									
PVAQ	**Vaqueiros**	**38.31**	**13**	*e*PP		PP	15 31 11.9	-1.1		
PVAQ				*e*S		**S**	**15 35 42.1**	**+1.9**		
PVAQ				*e*LR		LR	15 42 46.0			
	comp=Z,8μm,18.0s									
CMLA	**Cha da Macela**	**38.34**	**350**	*e*PP		PP	15 31 07.9	-5.4		
CMLA				*e*LQ			15 38 04.7			
CMLA				*e*LR		LR	15 40 07.6			
CMLA				*e*T			16 09 43.5			
CMLA	**Cha da Macela**	**38.34**	**350**	PFAKE			15 30 00.0	+14		
CMLA				LR		LR				
	comp=Z,8μm,20.0s,MS5.5									
PDA	**Ponta Delgada**	**38.34**	**349**	*e*T			16 09 40.7			
PSET	**Sete Cidades**	**38.43**	**349**	*e*T			16 09 49.4			
PCVE	**Castro Verde**	**38.46**	**12**	*i* P		**P**	**15 29 46.9**	**+0.3**		
	comp=Z,116nm,1.7s,mb5.3									
PCVE				*e*S		**S**	**15 35 42.2**	**-0.3**		
PCVE				*e*LR		LR	15 42 34.0			
	comp=

comp=Z,2µm,5.1s
ROSA Rosais 39.81 347 *e*T 16 11 16.4
ALMR Almeirim 39.83 11 *e*P **P 15 29 59.2 +1.1**
ALMR *e*PP PP 15 31 30.0 +0.4
ALMR Almeirim 39.83 11 *e*P **P 15 29 59.1 +1.1**
PCED Cedros 39.83 346 *e*T 16 11 22.7
EQES Quesada 39.91 18 P **P 15 29 59.0 +0.3**
comp=Z,1µm,3.8s
ECHA Ech Chlef 40.01 24 P **P 15 29 58.0 -1.6**
EBAN Banos Encina 40.03 17 P **P 15 30 00.2 +0.5**
comp=Z,122nm,0.8s,mb5.7
EBAN Banos Encina 40.03 17 P **P 15 30 00.2 +0.5**
EBAN pmax pmax
comp=Z,122nm,0.8s,mb5.7
EHUE Huescar 40.07 18 P **P 15 30 00.2 +0.1**
comp=Z,34nm,0.8s,mb5.1
EHUE Huescar 40.07 18 P **P 15 30 00.2 +0.2**
EHUE pmax pmax
comp=Z,34nm,0.8s,mb5.1
EBNR Beni Rached 40.20 24 P **P 15 30 00.0 -1.2**
PTOM Tomar 40.31 11 *e*P **P 15 30 01.4 -0.6**
comp=Z,184nm,2.2s,mb5.4
PMRV Marv??o 40.33 12 *i*P **P 15 30 01.9 -0.3**
comp=Z,132nm,2.3s,mb5.3
PMRV Marv??o 40.33 12 *e*PP PP 15 31 34.2 -0.8
PMRV *e*S **S 15 36 10.8 +0.3**
PMRV *e*LR LR 15 43 47.4
comp=Z,10µm,18.0s
CART Cartagena 40.39 20⇑ *e*P **P 15 30 02.3 -0.4**
comp=Z,444nm,1.6s,mb5.9
EMUR La Murta 40.53 20 P **P 15 30 04.1 +0.2**
comp=Z,71nm,1.1s,mb5.2
PCBR Castelo Branco 40.70 12 *e*P **P 15 30 06.4 +1.1**
comp=Z,47nm,1.1s,mb5.0
EMHD Djebel Mahouad 40.72 26 P **P 15 30 06.5 +1.0**
EVIA Vianos 40.85 18 P **P 15 30 06.5 -0.1**
comp=Z,26nm,0.8s,mb4.9
EVIA Vianos 40.85 18 P **P 15 30 06.5 0.0**
EVIA pmax pmax
comp=Z,26nm,0.8s,mb4.9
ETOB Tobarra 41.16 19 P **P 15 30 09.2 +0.2**
comp=Z,71nm,0.9s,mb5.3
PAB San Pablo 41.16 15⇑ *e*P **P 15 30 09.8 +0.7**
comp=Z,110nm,1.0s,mb5.4
PAB LR LR
comp=Z,9µm,20.0s,MS5.7
EPLA Plasencia 41.22 13 P **P 15 30 09.7 +0.2**
comp=Z,366nm,1.8s,mb5.7
EPLA Plasencia 41.22 13 P **P 15 30 09.7 +0.1**
EPLA pmax pmax
comp=Z,366nm,1.8s,mb5.7
MTE Manteigas 41.23 11 *i*P **P 15 30 10.7 +1.1**
comp=Z,250nm,1.0s,mb5.8
MTE Manteigas 41.23 11 *e*PP PP 15 31 43.9 -0.9
MTE *e*S **S 15 36 25.8 +1.9**
MTE *e*LR LR 15 43 39.9
comp=Z,14µm,18.0s
MTE Manteigas 41.23 11⇑ *e*P **P 15 30 09.9 +0.3**
comp=Z,188nm,0.9s,mb5.7
MTE LR LR
comp=Z,14µm,19.0s,MS5.8
ESDC Sonseca Array 41.39 16 P **P 15 30 11.3 +0.4**
ESLA Sonseca Array 41.39 16⇑ *e*P **P 15 30 11.1 +0.2**
comp=Z,53nm,1.5s,mb5.0
ESLA LR LR
comp=Z,55µm,20.0s,MS6.4
PVIS Viseu 41.47 11 *e*P **P 15 30 12.6 +1.0**
comp=Z,146nm,1.1s,mb5.5
EBEN Beniarda 41.66 20 P **P 15 30 13.1 -0.1**
comp=Z,873nm,4.6s
CKHR Kef el Ahmar 41.73 28 P **P 15 30 13.3 -0.5**
PTO Porto 41.75 10 *e*P **P 15 30 15.2 +1.3**
comp=Z,143nm,1.1s,mb5.5
SET Setif 41.83 28 P **P 15 30 13.0 -1.6**
PVRL Vila Real 42.04 11 *e*P **P 15 30 17.2 +0.9**
comp=Z,153nm,1.3s,mb5.5
PVRL Vila Real 42.04 11 *e*PP PP 15 31 52.7 -0.9
MVO Moncorvo 42.07 12 *i*P **P 15 30 17.3 +0.8**
comp=Z,144nm,1.8s,mb5.3
MVO Moncorvo 42.07 12 *e*PP PP 15 31 51.8 -2.1
MVO *e*S **S 15 36 36.9 +0.5**
MVO *e*LR LR 15 44 03.3
comp=Z,11µm,20.0s
MVO Moncorvo 42.07 12 P **P 15 30 17.2 +0.7**
ECHE Chera 42.21 19 P **P 15 30 17.9 +0.3**
comp=Z,42nm,0.8s,mb5.1
ECHE Chera 42.21 19 P **P 15 30 17.9 +0.3**
ECHE pmax pmax
comp=Z,42nm,0.8s,mb5.1
GUD Guadarrama 42.24 15 P **P 15 30 18.6 +0.7**
comp=Z,413nm,1.2s,mb5.9
GUD Guadarrama 42.24 15 P **P 15 30 18.6 +0.7**
GUD pmax pmax
comp=Z,413nm,1.2s,mb5.9
PCAB Cabril 42.41 10 *e*P **P 15 30 19.8 +0.6**
comp=Z,129nm,1.1s,mb5.5
PCAB Cabril 42.41 10 *e*PP PP 15 31 56.5 -1.0
EIBI Ibiza 42.51 22 P **P 15 30 20.1 0.0**
comp=Z,71nm,0.9s,mb5.4
ELOB Lobios 42.55 10 P **P 15 30 20.7 +0.3**
comp=Z,65nm,0.8s,mb5.4
EZAM Zamans 42.72 10 P **P 15 30 21.6 -0.1**
comp=Z,133nm,1.2s,mb5.5
EZAM Zamans 42.72 10 P **P 15 30 21.6 -0.1**
EZAM pmax pmax
comp=Z,133nm,1.2s,mb5.5
ECAL Calabor 42.88 12 P **P 15 30 23.9 +0.8**
comp=Z,635nm,2.9s,mb5.8
ABSA Djebel Ababsia 42.89 30 P **P 15 30 21.5 -1.8**
ETOR Torete 42.99 17 P **P 15 30 23.7 -0.3**
comp=Z,53nm,1.0s,mb5.2
ETOR Torete 42.99 17 P **P 15 30 23.7 -0.3**
ETOR pmax pmax
comp=Z,53nm,1.0s,mb5.2
EMOS Mosqueruela 43.07 19 P **P 15 30 24.3 -0.3**
comp=Z,66nm,0.8s,mb5.4
ERUA La Rua 43.23 11 P **P 15 30 26.6 +0.7**
comp=Z,55nm,1.0s,mb5.2
ERUA La Rua 43.23 11 P **P 15 30 26.6 +0.7**
ERUA pmax pmax
comp=Z,55nm,1.0s,mb5.2
KEST Kesra 43.44 32⇑ *e*P **P 15 30 28.3 +0.6**
EMAZ Mazaricos 43.45 9 P **P 15 30 27.8 +0.1**
comp=Z,68nm,0.9s,mb5.4
STS Santiago 43.46 10 P **P 15 30 28.6 +0.9**
comp=Z,29nm,0.7s,mb5.1
STS Santiago 43.46 10 P **P 15 30 28.6 +0.9**
STS pmax pmax
comp=Z,29nm,0.7s,mb5.1
ETOS Mallorca 43.71 23 P **P 15 30 29.8 0.0**
comp=Z,1µm,4.0s
BBGH Gun Hill 43.74 289 PFAKE 15 30 40.0 +10
BBGH LR LR
comp=Z,11µm,19.0s,MS5.8
ERTA Horta de San J 43.87 19 P **P 15 30 31.2 +0.1**
comp=Z,69nm,0.9s,mb5.4
EPON Pontenova 44.13 11 P **P 15 30 34.2 +1.1**
comp=Z,816nm,2.7s,mb6.0
ESAC San Caprasio 44.30 18 P **P 15 30 34.8 +0.3**
comp=Z,155nm,0.7s,mb5.8
EPOB Poblet 44.47 20 P **P 15 30 36.2 +0.3**
comp=Z,57nm,0.9s,mb5.3
EARI Arriondas 44.50 13 P **P 15 30 36.9 +0.8**
comp=Z,218nm,0.8s,mb6.0
ELAN Lanestosa 44.86 15 P **P 15 30 39.3 +0.4**
comp=Z,124nm,0.8s,mb5.8
EMIR Miracle 45.12 20 P **P 15 30 41.0 -0.1**
comp=Z,76nm,0.7s,mb5.6
ELIZ Elizondo 45.30 16 P **P 15 30 43.2 +0.8**
comp=Z,113nm,0.8s,mb5.8
ELIZ Elizondo 45.30 16 P **P 15 30 43.2 +0.7**
ELIZ pmax pmax
comp=Z,113nm,0.8s,mb5.8
CFON Fontmartina 45.31 21 P **P 15 30 43.0 +0.5**
comp=Z,169nm,0.9s,mb5.9
EALK Alkurruntz 45.36 16 P **P 15 30 43.5 +0.5**
comp=Z,39nm,0.6s,mb5.4
EBIE Bielsa 45.36 18 P **P 15 30 43.6 +0.6**
comp=Z,779nm,3.2s
CSOR Sort 45.40 19 P **P 15 30 42.9 -0.4**
comp=Z,66nm,0.8s,mb5.5
GRGR Grenville 45.51 287 *e*P **P 15 30 45.3 +0.7**
comp=Z,343nm,1.2s,mb6.2
GRGR LR LR
comp=Z,3µm,21.0s,MS5.1
FDF Fort de France 45.63 291⇑ *i*P **P 15 30 46.3 +0.7**
comp=Z,358nm,1.3s,mb6.1
FDF LR LR
comp=Z,5µm,19.0s,MS5.5
FDF Fort de France 45.63 291 *e*P **P 15 30 47.2 +1.6**
CLLI Llivia 45.78 20 P **P 15 30 46.6 +0.3**
EJON La Jonquera 46.07 21 P **P 15 30 48.1 -0.5**
comp=Z,2µm,4.9s
VSL Villasalto 46.35 29⇑ *i*P **P 15 30 51.3 +0.5**
comp=Z,125nm,1.0s,mb5.8
VSL *e*PP PP 15 32 36.2 -3.5
VSL LR LR
comp=Z,33µm,19.0s,MS6.3
WDD Wield Dalam 46.46 36⇑ *i*P **P 15 30 51.7 -0.1**
comp=Z,342nm,1.1s,mb6.2
WDD *e*PP PP 15 32 33.8 -7.1
WDD LR LR
comp=Z,38µm,19.0s,MS6.4
CPUP Villa Florida 46.47 233 PFAKE 15 31 00.0 +8.0
CPUP LR LR
comp=Z,2µm,20.0s,MS5.2
ANWB Willy Bob 47.02 294 *e*P **P 15 30 56.3 -0.2**
comp=Z,388nm,1.3s,mb6.2
ANWB LR LR
comp=Z,4µm,20.0s,MS5.4
VAE Valguarnera 47.51 35 P **P 15 30 58.7 -1.2**
VAE S **S 15 37 57.9 +2.5**
VAE ⇑ *e* 16 02 28.7
VAE Valguarnera 47.51 35 P **P 15 30 58.7 -1.2**
comp=Z,12nm,0.4s,mb5.2,baz=215,slow=9.4,SNR=5.1
VAE S **S 15 37 57.9 +2.5**
comp=Z,5.7nm,0.3s,baz=310,slow=7.9,SNR=1.9
VAE PKP2bc 16 02 28.7
comp=Z,20nm,0.4s,baz=17,slow=3.7,SNR=4.7
PCRV Puerto La Cruz 48.02 284 P **P 15 31 04.3 0.0**
PCRV S **S 15 37 53.4 -10**
PCRV Puerto La Cruz 48.02 284 P **P 15 31 04.3 0.0**
comp=Z,39nm,1.1s,mb5.3,baz=168,slow=4.1,SNR=7.1
PCRV S **S 15 37 53.4 -10**
comp=Z,2.8nm,0.3s,baz=29,slow=11,SNR=1.9
MBAR Mbarara 48.18 91 P **P 15 31 07.8 +2.2**
comp=Z,346nm,1.2s,mb6.3,SNR=20
MBAR Mbarara 48.18 91 P **P 15 31 03.9 -1.7**
MBAR comp=Z,2.4nm,1.1s LR LR
comp=Z,367nm,20.0s
MBAR Mbarara 48.18 91 P **P 15 31 03.9 -1.7**
MBAR pmax pmax
comp=Z,2.0nm,1.1s
MBAR MLR MLR
comp=Z,367nm,20.0s
SUR Sutherland 48.34 135 *e*P **P 15 31 06.5 0.0**
comp=Z,123nm,1.3s,mb5.8
SUR LR LR
comp=Z,6µm,19.0s,MS5.6
CEL Celeste 48.89 35⇑ *i*P **P 15 31 10.8 +0.2**
comp=Z,300nm,1.1s,mb6.2
CEL *e*PP PP 15 32 54.0 -10
CEL LR LR
comp=Z,28µm,20.0s,MS6.3
SSB Saint Sauveur 49.12 20⇑ *i*P **P 15 31 12.5 +0.2**
comp=Z,67nm,1.0s,mb5.6
SSB LR LR
comp=Z,10µm,19.0s,MS5.8
BOSA Boshof 49.73 129 *e*P **P 15 31 19.9 +2.7**
comp=Z,220nm,1.4s,mb6.0
CDVI St. Croix 49.77 293 *e*P **P 15 31 17.9 +0.2**
comp=Z,184nm,0.9s,mb6.1
CUC Castrocucco 50.05 33⇑ *i*P **P 15 31 18.5 -0.9**
comp=Z,68nm,1.0s,mb5.6
CUC *e*PP PP 15 33 12.4 -2.1
CUC LR LR
comp=Z,20µm,19.0s,MS6.2
STVI Saint Thomas 50.11 294 *e*P **P 15 31 18.8 -1.5**
comp=Z,103nm,1.1s,mb5.8
VLC Villacollemand 50.49 26⇑ *i*P **P 15 31 22.3 -0.4**
comp=Z,82nm,1.0s,mb5.7
VLC *e*PP PP 15 33 18.1 -0.4
VLC LR LR
comp=Z,11µm,19.0s,MS5.9
AQU L'Aquila 50.49 30⇓ *i*P **P 15 31 23.2 +0.4**
comp=Z,378nm,1.0s,mb6.4
AQU LR LR
comp=Z,38µm,19.0s,MS6.4
AQU L'Aquila 50.49 30⇓ *i*P **P 15 31 24.1 +1.3**
MTP Monte Pirata 50.59 294 *e*P **P 15 31 23.1 -0.8**
comp=Z,243nm,1.2s,mb6.0
JSA Saint Aubin 50.76 13 P **P 15 31 23.1 -1.5**
JSA AMB AMB 15 31 24.8
comp=Z,125nm,1.2s,mb5.7
JSA AMS AMS 15 55 53.9
comp=Z,8µm,16.7s
JSA Saint Aubin 50.76 13 *e*P **P 15 31 23.1 -1.5**
JSA AMB AMB 15 31 24.8
comp=Z,125nm,1.2s,mb5.7
JSA AMS AMS 15 55 53.9
comp=Z,8µm,16.7s,MS5.8
CBYP Canovanas 50.91 294 *e*P **P 15 31 25.3 -1.0**
comp=Z,110nm,1.3s,mb5.6
CCA1 Carnmenellis 51.10 10 P **P 15 31 26.1 -1.1**
CCA1 AMB AMB 15 31 27.7
comp=Z,115nm,1.1s,mb5.7
CCA1 S **S 15 38 38.4 -7.0**
CCA1 AMS AMS 15 52 47.4
comp=Z,6µm,16.7s
CCA1 Carnmenellis 51.10 10 *e*P **P 15 31 26.1 -1.1**
CCA1 AMB AMB 15 31 27.7
comp=Z,115nm,1.1s,mb5.7
CCA1 *e*S **S 15 38 38.4 -7.0**
CCA1 AMS AMS 15 52 47.4
comp=Z,6µm,16.7s,MS5.7
SJG San Juan 51.14 293 *e*P **P 15 31 27.4 -0.7**
comp=Z,110nm,1.1s,mb5.7
SJG LR LR
comp=Z,9µm,22.0s,MS5.7
LPA La Plata 51.30 223 *de*P **P 15 31 31.0 +2.0**
LPA S **S 15 38 55.0 +6.3**
LPA PKIKP PKiKP 15 39 32.0 +5.2
LPA
comp=Z,9µm,21.0s
ICM Isla Caja Muer 51.42 293 *e*P **P 15 31 29.1 -1.1**
CELP Cerrillos 51.52 293 *e*P **P 15 31 30.0 -1.0**
OBIP Obispado Ponce 51.54 293 *e*P **P 15 31 30.2 -0.9**
comp=Z,173nm,1.3s,mb5.8
DYA Yadsworthy 51.58 11 P **P 15 31 28.6 -2.1**
DYA AMB AMB 15 31 31.1
comp=Z,91nm,1.7s,mb5.4
DYA S **S 15 38 47.3 -4.7**
DYA AMS AMS 15 57 31.2
comp=Z,6µm,15.0s
DYA Yadsworthy 51.58 11 *e*P **P 15 31 28.6 -2.1**
DYA AMB AMB 15 31 31.1
comp=Z,91nm,1.7s,mb5.4
DYA *e*S **S 15 38 47.3 -4.7**
DYA AMS AMS 15 57 31.2
comp=Z,6µm,15.0s,MS5.8
VLS Valsamata 51.64 38 P **P 15 31 31.2 -0.3**
VLS Valsamata 51.64 38 P **P 15 31 31.2 -0.3**
VLS Valsamata 51.64 38 *e*P **P 15 31 31.5 0.0**
VLS Valsamata 51.64 38 P **P 15 31 31.2 -0.3**
LRS Lares 51.82 293 *e*P **P 15 31 32.2 -1.0**
ITM Ithomi 51.89 40 P **P 15 31 33.6 +0.3**
ITM Ithomi 51.89 40 *e*P **P 15 31 33.5 +0.2**
ITM Ithomi 51.89 40 P **P 15 31 33.6 +0.3**
TUE Stuetta 51.93 23⇑ *i*P **P 15 31 32.7 -0.8**
comp=Z,52nm,0.8s,mb5.5
TUE LR LR
comp=Z,14µm,22.0s,MS5.9
CRPR Cabo Rojo, PR 51.99 293⇑ *i*P **P 15 31 33.6 -0.8**
HTL Hartland 52.01 10 P **P 15 31 33.1 -0.8**
HTL AMB AMB 15 31 41.5
comp=Z,108nm,3.8s
HTL S **S 15 38 52.1 -5.8**
HTL AMS AMS 15 53 43.5
comp=Z,6µm,17.7s
HTL Hartland 52.01 10 *e*P **P 15 31 33.1 -0.8**
HTL AMB AMB 15 31 41.5
comp=Z,108nm,3.8s
HTL *e*S **S 15 38 52.1 -5.8**
HTL AMS AMS 15 53 43.5
comp=Z,6µm,17.7s,MS5.7
LSP Las Mesas 52.01 293 *e*P **P 15 31 37.7 +3.1**
LKD2 Lefkada island 52.06 38 P **P 15 31 34.5 -0.1**
KYTH Kithira 52.09 42 *e*P **P 15 31 35.5 +0.6**
AGPR Aguadilla, PR 52.11 294 *e*P **P 15 31 34.6 -0.7**
comp=Z,259nm,1.3s,mb6.0
KEK Kerkira 52.13 36 P **P 15 31 35.2 +0.1**
KEK Kerkira 52.13 36 *e*P **P 15 31 34.5 -0.6**
KEK Kerkira 52.13 36 P **P 15 31 35.2 +0.1**
KARN Karanos 52.20 43 *e*P **P 15 31 36.0 +0.3**
KARN Karanos 52.20 43 P **P 15 31 36.8 +1.1**
VLI Veliai 52.27 41 *e*P **P 15 31 38.0 +1.8**
VLX Vlachokerasia 52.29 40 P **P 15 31 36.6 +0.3**
IGT Igoumenitsa 52.34 37 P **P 15 31 36.2 -0.4**
IGT Igoumenitsa 52.34 37 P **P 15 31 36.2 -0.4**
IGT Igoumenitsa 52.34 37 P **P 15 31 36.2 -0.4**
SRN Sarande 52.36 36 *i* PN **P 15 31 37.2 +0.4**
LPAZ La Paz 52.52 249 *e*P **P 15 31 37.8 -0.6**
comp=Z,124nm,1.5s,mb5.6
LAKA Lakka 52.55 39 P **P 15 31 39.2 +0.9**
ECH Echery 52.57 21⇑ *i*P **P 15 31 37.0 -1.1**
comp=Z,117nm,1.1s,mb5.7
ECH LR LR
comp=Z,10µm,22.0s,MS5.8
SIVA Sivas 52.60 44 P **P 15 31 39.0 +0.3**
SIVA Sivas 52.60 44 *e*P **P 15 31 38.0 -0.7**
SIVA Sivas 52.60 44 P **P 15 31 39.0 +0.3**
EFP Efpalio 52.62 39 *e*P **P 15 31 39.0 +0.3**
TRIZ Trizonia 52.68 39 P **P 15 31 40.1 +0.8**
JAN Janina 52.72 37 *e*P **P 15 31 38.0 -1.5**
KALE Kalithea 52.74 39 P **P 15 31 41.9 +2.2**
IDI Anoyia 52.80 44⇑ *i*P **P 15 31 41.0 +0.8**
comp=Z,124nm,0.8s,mb5.9
IDI Anoyia 52.80 44 *e*P **P 15 31 40.5 +0.3**
EVR Evrytania 52.85 38 *e*P **P 15 31 42.0 +1.5**
DID Didima 52.92 41 P **P 15 31 40.7 -0.3**
HGH Gray Hill 52.94 11 P **P 15 31 41.8 +0.9**
HGH Gray Hill 52.94 11 *e*P **P 15 31 41.8 +0.9**
WOL Wolverton 52.96 13 P **P 15 31 40.9 -0.2**
WOL AMB AMB 15 31 42.6
comp=Z,202nm,1.1s,mb6.0
WOL AMS AMS 15 58 55.1
comp=Z,6µm,13.2s
WOL Wolverton 52.96 13⇑ *e*P **P 15 31 40.9 -0.2**
WOL AMB AMB 15 31 42.6
comp=Z,202nm,1.1s,mb6.0
WOL AMS AMS 15 58 55.1
comp=Z,6µm,13.2s,MS5.8
DSF Desfina 53.00 39 P **P 15 31 41.1 -0.5**
SWN1 Swindon 53.03 12 P **P 15 31 41.0 -0.5**
SWN1 AMB AMB 15 31 43.2
comp=Z,319nm,1.2s,mb6.1
SWN1 S **S 15 39 07.0 -4.8**
SWN1 AMS AMS 15 51 52.0
comp=Z,6µm,17.2s
SWN1 Swindon 53.03 12 *e*P **P 15 31 41.0 -0.5**
SWN1 AMB AMB 15 31 43.2
comp=Z,319nm,1.2s,mb6.1
SWN1 *e*S **S 15 39 07.0 -4.8**
SWN1 AMS AMS 15 51 52.0
comp=Z,6µm,17.2s,MS5.7
BFO Black Forest 53.08 21 P **P 15 31 41.5 -0.5**
comp=Z,1µm,1.0s,mb6.7,SNR=14
BFO Black Forest 53.08 21⇑ *i*P **P 15 31 41.1 -0.9**
comp=Z,189nm,1.0s,mb6.0
BFO LR LR
comp=Z,7µm,20.0s,MS5.7
LAST Lasithi 53.15 44 P **P 15 31 43.0 +0.3**
LAST Lasithi 53.15 44 *e*P **P 15 31 43.0 +0.3**
LAST Lasithi 53.15 44 P **P 15 31 43.0 +0.3**
XRY Khrisi 53.15 45 *e*P **P 15 31 43.0 +0.3**
TRI Trieste 53.20 27⇑ *i*P **P 15 31 42.7 -0.2**
comp=Z,242nm,1.0s,mb6.1
TRI LR LR
comp=Z,13µm,19.0s,MS6.0
HCY Herceg Novi 53.20 33⇓ *i*P **P 15 31 41.4 -1.6**
HCY Herceg Novi 53.20 33⇓ *i*P **P 15 31 41.4 -1.6**
TIR Tirane 53.23 35 P **P 15 31 44.2 +1.0**
TIR Tirane 53.23 35 P **P 15 31 44.2 +1.0**
TIR Tirane 53.23 35 P **P 15 31 44.2 +1.0**
NAIG Nisos Aigina 53.23 40 *e*P **P 15 31 43.0 -0.3**
AGG Agios Georgios 53.24 38 P **P 15 31 42.8 -0.5**
AGG Agios Georgios 53.24 38 P **P 15 31 42.8 -0.5**
AGG Agios Georgios 53.24 38 *e*P **P 15 31 41.5 -1.8**
AGG Agios Georgios 53.24 38 P **P 15 31 42.8 -0.5**
MCH1 Michaelchurch 53.24 11 P **P 15 31 42.4 -0.8**
MCH1 AMB AMB 15 31 44.2
comp=Z,88nm,1.1s,mb5.6
MCH1 AMS AMS 15 53 31.9
comp=Z,6µm,15.3s
MCH1 Michaelchurch 53.24 11⇑ *e*P **P 15 31 42.4 -0.8**
MCH1 AMB AMB 15 31 44.2
comp=Z,88nm,1.1s,mb5.6
MCH1 AMS AMS 15 53 31.9
comp=Z,6µm,15.3s,MS5.7
HTR Trewern Hill 53.27 11 P **P 15 31 42.8 -0.5**
HTR Trewern Hill 53.27 11⇑ *e*P **P 15 31 42.8 -0.5**
NPS Neapolis 53.29 44 *e*P **P 15 31 43.0 -0.8**
KBN Korca 53.30 36 *i* PN **P 15 31 45.0 +1.3**
NEST Nestorio 53.32 36 P **P 15 31 46.1 +2.2**
DOU Dourbes 53.37 18 P **P 15 31 43.6 -0.4**
comp=Z,87nm,1.3s,mb5.5
THL Klokotos Trika 53.37 38 *e*P **P 15 31 44.5 +0.2**
THL Klokotos Trika 53.37 38 P **P 15 31 44.6 +0.3**
LKR Lokris 53.44 39 P **P 15 31 45.1 +0.3**
LKR Lokris 53.44 39 *e*P **P 15 31 43.5 -1.3**
LKR Lokris 53.44 39 P **P 15 31 45.1 +0.3**
JAVS Javornik 53.48 27 *e*P **P 15 31 41.2 -3.7**
JAVS *i* pP pP 15 31 45.9 -0.5
JAVS *e*S **S 15 39 17.2 -0.9**
JAVS Javornik 53.48 27 *e*P **P 15 31 41.2 -3.7**
JAVS *i* pP pP 15 31 45.9 -0.5
WLF Walferdange 53.48 19 P **P 15 31 45.4 +0.6**
comp=Z,73nm,1.8s,mb5.3
WLF Walferdange 53.48 19⇑ *i*P **P 15 31 44.0 -0.8**
comp=Z,93nm,1.2s,mb5.6
WLF LR LR
comp=Z,17µm,21.0s,MS6.1
ATAL Atalanti 53.48 39 P **P 15 31 45.6 +0.5**
VLY Voula,Athens 53.48 40 *e*P **P 15 31 45.5 +0.3**
ATH Athens Observa 53.50 40 P **P 15 31 47.3 +2.0**
ATH Athens Observa 53.50 40 P **P 15 31 47.3 +2.0**
ATH Athens Observa 53.50 40 *e*P **P 15 31 44.5 -0.8**
VOY Vojsko 53.50 27 *e*P **P 15 31 41.3 -3.8**
VOY *e* 15 31 45.3
VOY *e* 15 32 23.5
VOY *e* 15 32 48.2
VOY *e* 15 33 08.4
VOY *e* 15 33 18.1
VOY *e* 15 33 40.8
VOY *e* 15 34 10.5
ATHU Athens Univers 53.54 40 P **P 15 31 47.3 +1.7**
CADS Cadrg 53.58 27 *i*P **P 15 31 41.9 -3.8**
ZKR Zakros 53.64 45 P **P 15 31 46.5 +0.2**
ZKR Zakros 53.64 45 *e*P **P 15 31 45.0 -1.3**
ZKR Zakros 53.64 45 P **P 15 31 46.5 +0.2**
SNF Seneffe 53.64 17 P **P 15 31 46.2 +0.2**
comp=Z,39nm,1.5s,mb5.1
PTL Penteli 53.64 40 *e*P **P 15 31 46.5 +0.2**
KZN Kozani 53.68 37 P **P 15 31 48.5 +1.9**
KZN Kozani 53.68 37 P **P 15 31 48.5 +1.9**
KZN Kozani 53.68 37 *e*P **P 15 31 46.0 -0.6**
KZN Kozani 53.68 37 P **P 15 31 48.5 +1.9**
PUK Puka 53.70 34 *e*PN **P 15 31 47.6 +0.9**
SDV Santo Domingo 53.70 281 *e*P **P 15 31 45.5 -1.7**
comp=Z,44nm,0.9s,mb5.4
SDV LR LR
comp=Z,2µm,20.0s,MS5.2
BOJS Bojanci 53.73 28 *e*P **P 15 31 43.4 -3.4**
BOJS *i* pP pP 15 31 47.9 -0.4
BOJS *e* 15 31 54.4
BOJS *e*S **S 15 39 21.8 +0.1**
BOJS *e* 15 40 03.1
BOJS *e* 15 42 32.9
FNA Florina 53.74 36 P **P 15 31 46.9 -0.1**
FNA Florina 53.74 36 P **P 15 31 46.9 -0.1**
FNA Florina 53.74 36 P **P 15 31 46.9 -0.1**
STU Stuttgart 53.77 22⇑ *i*P **P 15 31 46.3 -0.7**
comp=Z,156nm,0.9s,mb5.9
STU Stuttgart 53.77 22⇑ *i*P **P 15 31 46.3 -0.7**
STU pmax pmax
comp=Z,156nm,0.9s,mb5.9
BIA Bitola 53.86 36 P **P 15 31 48.3 +0.4**
BIA Bitola 53.86 36 P **P 15 31 48.3 +0.4**
BCLA Clavier 53.87 18 P **P 15 31 47.3 -0.4**
comp=Z,60nm,1.1s,mb5.4
DSB Dublin 53.88 8⇑ *i*P **P 15 31 48.1 +0.4**
comp=Z,50nm,1.0s,mb5.4
DLF Lyons Farm 53.91 8⇑ *i*P **P 15 31 47.6 -0.4**
NEO Neokhori 53.97 39 *e*P **P 15 31 46.5 -2.2**
XOR Xorichti 53.98 39 P **P 15 31 48.3 -0.5**

XOR Xorichti 53.98 39 P P 15 31 48.3 -0.5
LIT Litokhoron 53.99 37 P P 15 31 48.6 -0.2
LIT Litokhoron 53.99 37 P P 15 31 48.6 -0.2
LIT Litokhoron 53.99 37 P P 15 31 48.6 -0.2
BCI Bajram Curri 54.01 34 ePN P 15 31 50.8 +1.9
PVY Plav 54.11 34⇓ iP P 15 31 47.6 -2.1
PVY Plav 54.11 34⇓ iP P 15 31 47.6 -2.0
APE Apeiranthos 54.20 42 P P 15 31 50.6 +0.2
APE Apeiranthos 54.20 42⇑ P P 15 31 49.9 -0.5
APE Apeiranthos 54.20 42 eP P 15 31 49.5 -0.9
APE Apeiranthos 54.20 42 P P 15 31 50.6 +0.2
APE Apeiranthos 54.20 42⇑ iP P 15 31 49.9 -0.5
WLF1 Llynfaes 54.23 10 P P 15 31 49.6 -0.7
WLF1 S S 15 39 23.7 -4.4
WLF1 AMS AMS 15 51 28.3
comp=Z,20µm,17.4s
WLF1 Llynfaes 54.23 10 eP P 15 31 49.6 -0.7
WLF1 eS S 15 39 23.7 -4.4
WLF1 AMS AMS 15 51 28.3
comp=Z,20µm,17.4s,MS6.2
IVA Berane 54.25 33⇓ iP P 15 31 48.3 -2.4
IVA Berane 54.25 33⇓ iP P 15 31 48.3 -2.4
MEM Membach 54.25 18 P P 15 31 51.3 +0.8
CWF Charnwood Fore 54.28 12 P P 15 31 49.0 -1.7
CWF AMB AMB 15 31 56.2
comp=Z,83nm,2.8s,mb5.2
CWF AMS AMS 15 55 38.5
comp=Z,6µm,15.4s
CWF Charnwood Fore 54.28 12 eP P 15 31 49.0 -1.7
CWF AMB AMB 15 31 56.2
comp=Z,83nm,2.8s,mb5.2
CWF AMS AMS 15 55 38.5
comp=Z,6µm,15.4s,MS5.8
AOS Alonnisos 54.30 39 P P 15 31 51.0 -0.1
AOS Alonnisos 54.30 39 P P 15 31 51.0 -0.1
BEBN Eben Emael 54.31 18 P P 15 31 51.1 +0.2
comp=Z,65nm,1.3s,mb5.4
HGN Heimansgroeve 54.36 18 ex x 15 31 59.3
HGN Heimansgroeve 54.36 18 ePP PP 15 33 52.3 -1.1
STNC Stoke 54.44 11 P P 15 31 51.0 -0.8
STNC AMB AMB 15 31 58.5
comp=Z,102nm,3.6s
STNC AMS AMS 15 54 00.5
comp=Z,7µm,16.3s
STNC Stoke 54.44 11 eP P 15 31 51.0 -0.8
STNC AMB AMB 15 31 58.5
comp=Z,102nm,3.6s
STNC AMS AMS 15 54 00.5
comp=Z,7µm,16.3s,MS5.8
GRG Griva 54.46 37 P P 15 31 51.6 -0.6
GRG Griva 54.46 37 P P 15 31 51.6 -0.6
GRG Griva 54.46 37 P P 15 31 51.6 -0.6
PERS Pernice 54.52 27 eP P 15 31 50.6 -2.0
PERS eS S 15 39 31.0 -1.2
KARP Karpathos 54.52 45 eP P 15 31 52.5 -0.3
THE Thessaloniki 54.60 37 P P 15 31 52.6 -0.7
THE Thessaloniki 54.60 37 P P 15 31 52.6 -0.7
THE Thessaloniki 54.60 37 P P 15 31 52.6 -0.7
PAIG Paliouri 54.62 38 P P 15 31 53.5 +0.1
PAIG Paliouri 54.62 38 P P 15 31 53.5 +0.1
PAIG Paliouri 54.62 38 P P 15 31 53.5 +0.1
HORT Hortiatis 54.66 37 P P 15 31 53.1 -0.6
HORT Hortiatis 54.66 37 P P 15 31 53.1 -0.6
KMBO Kilima Mbogo 54.70 91 eP P 15 31 56.3 +1.8
comp=Z,142nm,1.1s,mb5.9
KMBO LR LR
comp=Z,20µm,20.0s,MS6.2
KMBO Kilima Mbogo 54.70 91 P P 15 31 57.1 +2.6
comp=Z,14nm,0.4s,mb5.3,baz=180,slow=23,SNR=4.9
KMBO LR LR 15 53 18.1
comp=Z,23µm,18.5s,MS6.3,baz=260,slow=34
KMBO Kilima Mbogo 54.70 91 eP P 15 31 56.3 +1.8
KMBO pmax pmax
comp=Z,142nm,1.1s
KMBO MLR MLR
comp=Z,20µm,20.0s
KMBO Kilima Mbogo 54.70 91 P P 15 31 58.4 +4.0
SNR=50
PLG Polygyros 54.74 38 P P 15 31 53.7 -0.6
PLG Polygyros 54.74 38 P P 15 31 53.7 -0.6
PLG Polygyros 54.74 38 P P 15 31 53.7 -0.6
VAY Valandovo 54.78 36 P P 15 31 53.8 -0.8
VAY Valandovo 54.78 36 P P 15 31 53.8 -0.8
VAY Valandovo 54.78 36 P P 15 31 53.8 -0.8
KNT Kendrikon 54.88 37 P P 15 31 55.6 +0.3
KNT Kendrikon 54.88 37 P P 15 31 55.6 +0.3
KNT Kendrikon 54.88 37 P P 15 31 55.6 +0.3
GMM Mts of Mourne 54.91 8 P P 15 31 54.5 -0.7
GMM Mts of Mourne 54.91 8⇑ eP P 15 31 54.5 -0.7
LHO Holmfirth 54.94 11 P P 15 31 54.9 -0.5
LHO Holmfirth 54.94 11⇑ eP P 15 31 54.9 -0.5
SOH Sokhos 54.95 37 P P 15 31 55.8 0.0
SOH Sokhos 54.95 37 P P 15 31 55.8 0.0
SOH Sokhos 54.95 37 P P 15 31 55.8 0.0
BBSR BB Station 54.96 311 PFAKE 15 32 10.0 +14
BBSR LR LR
comp=Z,5µm,19.0s,MS5.6
OUR Ouranopolis 55.04 38 P P 15 31 57.1 +0.6
OUR Ouranopolis 55.04 38 P P 15 31 57.1 +0.6
OUR Ouranopolis 55.04 38 P P 15 31 57.1 +0.6
NIS1 Nisyros Isl. 55.07 44 P P 15 31 56.3 -0.5
DIVS Divibare 55.12 32 P P 15 31 57.2 +0.2
CHOS Chios island 55.26 41 eP P 15 31 56.2 -2.1
CHOS Chios island 55.26 41 P P 15 31 59.1 +1.0
SRS Serrai 55.27 37 P P 15 31 57.7 -0.4
SRS Serrai 55.27 37 P P 15 31 57.7 -0.4
SRS Serrai 55.27 37 P P 15 31 57.7 -0.4
GRFO Grafenberg 55.28 22⇑ iP P 15 31 57.3 -0.7
comp=Z,126nm,1.0s,mb5.9
HPK Haverah Park 55.37 11 P P 15 31 57.0 -1.5
HPK AMB AMB 15 31 59.7
comp=Z,137nm,1.7s,mb5.7
HPK AMS AMS 16 01 01.7
comp=Z,7µm,12.7s
HPK Haverah Park 55.37 11 eP P 15 31 57.0 -1.5
HPK AMB AMB 15 31 59.7
comp=Z,137nm,1.7s,mb5.7
HPK AMS AMS 16 01 01.7
comp=Z,7µm,12.7s,MS6.0
BODT Bodrum 55.40 43 eP P 15 31 58.5 -0.6
DAT Datca 55.41 44 eP P 15 31 59.6 +0.4
BDRM Kayabasi 55.49 43 iP P 15 31 59.3 -0.5
ARG Arkhangelos 55.53 44 P P 15 31 59.8 -0.3
ARG Arkhangelos 55.53 44 P P 15 31 59.8 -0.3
ARG Arkhangelos 55.53 44 eP P 15 31 58.5 -1.6
ARG Arkhangelos 55.53 44 P P 15 31 59.8 -0.3
LIA Limnos Island 55.54 39 P P 15 32 01.0 +0.9
LIA Limnos Island 55.54 39 eP P 15 32 00.5 +0.4
LIA Limnos Island 55.54 39 P P 15 32 01.0 +0.9
URLA Izmir 55.60 41⇑ iP P 15 31 58.5 -2.1
WTSB Winterswijk 55.68 18 ex x 15 32 09.1
GAL1 Galloway 55.70 9 P P 15 32 00.8 -0.1
GAL1 AMB AMB 15 32 07.7
comp=Z,80nm,3.4s
GAL1 AMS AMS 15 55 26.6
comp=Z,6µm,18.7s
GAL1 Galloway 55.70 9⇑ eP P 15 32 00.8 -0.1
GAL1 AMB AMB 15 32 07.7
comp=Z,80nm,3.4s
GAL1 AMS AMS 15 55 26.6
comp=Z,6µm,18.7s,MS5.7
TRQA Tornquist 55.74 222 PFAKE 15 32 10.0 +8.4
TRQA LR LR
comp=Z,10µm,21.0s,MS5.9
KAVA Kavala 55.76 38 P P 15 32 02.4 +0.8
KHC Kasperske Hory 55.76 24⇑ iP P 15 32 00.8 -0.7
comp=Z,128nm,1.2s,mb5.8
KHC Kasperske Hory 55.76 24 eP P 15 32 02.4 +0.9
KHC ePP PP 15 34 05.0 -1.0
KHC ex x 15 35 16.1
KHC eS S 15 39 47.6 -1.2
KHC AMS AMS 15 59 10.0
comp=Z,8µm,15.8s
GCD Castle Douglas 55.82 9 P P 15 32 01.6 -0.1
GCD Castle Douglas 55.82 9⇑ eP P 15 32 01.6 -0.1
MLSB Milas 55.84 43 eP P 15 32 02.9 +0.7
PRK Paraskevi 55.87 40 P P 15 32 03.5 +1.0
PRK Paraskevi 55.87 40 P P 15 32 03.5 +1.0
PRK Paraskevi 55.87 40 eP P 15 32 00.5 -2.0
PRK Paraskevi 55.87 40 P P 15 32 03.5 +1.0
PKSM Moragy 55.88 30⇑ P P 15 32 01.8 -0.6
PKSM Moragy 55.88 30⇑ P P 15 32 01.8 -0.6
PKSM Moragy 55.88 30⇑ iP P 15 32 01.8 -0.6

BLCB Balcova 55.91 42 eP P 15 32 04.3 +1.5
BLCB Balcova 55.91 42 P P 15 32 03.3 +0.5
BLCB Balcova 55.91 42 P P 15 32 03.3 +0.5
VTS Vitosha 55.94 35 P P 15 32 04.1 +1.2
VTS Vitosha 55.94 35⇑ P P 15 32 04.0 +1.1
VTS Vitosha 55.94 35 P P 15 32 04.1 +1.2
VTS Vitosha 55.94 35⇑ iP P 15 32 04.0 +1.1
SOP Sopron 55.95 27⇑ eP P 15 32 03.5 +0.6
SOP ePP PP 15 33 57.1 -11
SOP s S 15 39 52.1 +0.7
BOZC Bozcaada 56.06 40⇑ iP P 15 32 04.6 +0.8
IZM Izmir 56.07 42 eP P 15 32 05.1 +1.2
KDAG Bornova 56.07 42 iP P 15 32 03.4 -0.5
SDDR Presa de Saban 56.08 293⇓ eP P 15 32 04.5 +0.2
comp=Z,222nm,1.1s,mb6.1
SDDR LR LR
comp=Z,7µm,22.0s,MS5.7
AYDN Tasoluk 56.10 43⇑ iP P 15 32 03.5 -0.7
AYVA Ayvalik 56.18 41⇑ iP P 15 32 05.4 +0.7
NKC Novy Kostel 56.19 23 eP P 15 32 06.1 +1.6
NKC ePP PP 15 34 10.1 +0.3
NKC ex x 15 35 26.6
NKC eS S 15 39 55.0 +0.5
NKC AMS AMS 15 58 40.0
comp=Z,10µm,15.8s
ECK Cauldkaine Hil 56.26 10 P P 15 32 04.7 -0.2
ECK Cauldkaine Hil 56.26 10⇑ eP P 15 32 04.7 -0.2
ESK Eskdalemuir 56.38 10 P P 15 32 05.2 -0.6
comp=Z,397nm,0.9s,mb6.4,SNR=5.1
ESK Eskdalemuir 56.38 10⇑ iP P 15 32 05.0 -0.8
comp=Z,72nm,1.0s,mb5.7
ESK LR LR
comp=Z,7µm,20.0s,MS5.7
WIT Witteveen 56.38 17 ex x 15 32 13.4
RDO Rodhopi 56.48 38 P P 15 32 05.7 -1.1
RDO Rodhopi 56.48 38 eP P 15 32 06.0 -0.8
RDO Rodhopi 56.48 38 P P 15 32 05.7 -1.1
KSL Kastellorizon 56.53 45 eP P 15 32 06.5 -0.7
PLD Plovdiv 56.53 37 P P 15 32 07.0 -0.1
PLD Plovdiv 56.53 37 P P 15 32 07.0 -0.1
GRTK Grand Turk 56.55 296 PFAKE 15 32 20.0 +12
GRTK LR LR
comp=Z,3µm,20.0s,MS5.4
ZST Bratislava 56.58 27 eP P 15 32 07.4 +0.1
comp=Z,135nm,0.9s,mb6.0
ZST eS S 15 39 53.8 -5.9
ZST Bratislava 56.58 27 eP P 15 32 07.4 +0.1
ZST pmax pmax
comp=Z,135nm,0.9s,mb6.0
ZST Bratislava 56.58 27 eP P 15 32 07.4 +0.1
ZST eS S 15 39 53.8 -5.9
AKAS Kas 56.59 45⇑ iP P 15 32 06.0 -1.6
ENEZ Enez 56.63 39 eP P 15 32 09.1 +1.3
GELI Tayfur-Gelibol 56.64 39 eP P 15 32 08.8 +0.8
PGBU Glenifferbraes 56.65 9 P P 15 32 07.5 -0.2
PGBU AMB AMB 15 32 08.5
comp=Z,107nm,1.2s,mb5.7
PGBU AMS AMS 15 55 46.3
comp=Z,7µm,18.4s
PGBU Glenifferbraes 56.65 9 eP P 15 32 07.5 -0.2
PGBU AMB AMB 15 32 08.5
comp=Z,107nm,1.2s,mb5.7
PGBU AMS AMS 15 55 46.3
comp=Z,7µm,18.4s,MS5.8
ALN Alexandroupoli 56.65 39 P P 15 32 07.9 -0.1
ALN Alexandroupoli 56.65 39 eP P 15 32 07.5 -0.5
ALN Alexandroupoli 56.65 39 P P 15 32 07.9 -0.1
AAE Adis Abeba 56.68 79 eP P 15 32 10.4 +1.7
AAE eS S 15 40 04.7 +2.5
AKHS Akhisar 56.69 42⇑ iP P 15 32 07.4 -0.9
TREC Trest 56.69 25 eP P 15 32 07.8 -0.3
TREC ePP PP 15 34 14.2 0.0
TREC ex x 15 35 33.8
TREC eS S 15 40 01.2 +0.1
TREC AMS AMS 15 58 30.0
comp=Z,10µm,15.6s
MODS Modra-Piesok 56.79 27 eP P 15 32 09.3 +0.5
comp=Z,652nm,1.0s,mb6.6
MODS Modra-Piesok 56.79 27 eP P 15 32 09.3 +0.5
MODS pmax pmax
comp=Z,652nm,1.0s,mb6.6
MODS Modra-Piesok 56.79 27 eP P 15 32 09.3 +0.5
LPK Lapseki 56.81 40 eP P 15 32 09.2 0.0
PRU Pruhonice 56.83 24 eP P 15 32 10.8 +1.7
PRU ePP PP 15 34 15.3 -0.2
PRU ex x 15 35 32.1
PRU eS S 15 40 03.2 +0.3
PRU AMS AMS 15 57 00.0
comp=Z,7µm,14.8s
EBL Broad Law 56.84 10 P P 15 32 08.2 -0.9
EBL Broad Law 56.84 10⇑ eP P 15 32 08.2 -0.9
EAU Auchinoon 56.84 9 P P 15 32 09.2 +0.1
EAU Auchinoon 56.84 9⇑ eP P 15 32 09.2 +0.1
DNZL Cakiroluk 56.91 43⇑ iP P 15 32 08.5 -1.4
EDI Edinburgh 56.96 10 AMB AMB 15 32 17.1
comp=Z,96nm,2.4s,mb5.4
EDI AMS AMS 15 56 13.5
comp=Z,8µm,16.8s,MS5.9
EDI Edinburgh 56.96 10 AMB AMB 15 32 17.1
comp=Z,96nm,2.4s,mb5.4
EDI AMS AMS 15 56 13.5
comp=Z,8µm,16.8s
BUD Budapest 56.96 29⇑ eP P 15 32 10.9 +0.8
BUD ePcP PP 15 34 14.6 -2.1
BUD ePPP 15 40 04.8
BZS Buzias 56.99 32⇑ P P 15 32 10.2 -0.2
BZS Buzias 56.99 32⇑ iP P 15 32 10.2 -0.2
BALY Balya 57.02 41⇑ iP P 15 32 10.3 -0.3
ROSC El Rosal 57.02 276 eP P 15 32 11.7 +0.5
ROSC S S 15 40 07.5 +0.7
ROSC LR LR 15 55 21.1
ROSC El Rosal 57.02 276 S S 15 40 07.5 +0.7
comp=Z,7.2nm,0.5s,baz=107,slow=20,SNR=1.5
ROSC LR LR 15 55 21.1
comp=Z,11µm,19.1s,MS6.0,baz=152,slow=35
EAB Aberfoyle 57.03 9 P P 15 32 09.7 -0.7
EAB Aberfoyle 57.03 9⇑ eP P 15 32 09.7 -0.7
GOLH Golhisar 57.04 44⇑ iP P 15 32 10.5 -0.3
ELL Elmali 57.05 45 eP P 15 32 12.9 +2.0
ESY Stoneypath 57.05 10 P P 15 32 10.7 +0.2
ESY Stoneypath 57.05 10⇑ eP P 15 32 10.7 +0.2
KULA Kula-Manisa 57.06 42 eP P 15 32 12.2 +1.2
BALB Balikesir 57.13 41 eP P 15 32 12.6 +1.1
VRAC Vranov 57.17 26⇑ iP P 15 32 10.9 -0.6
GONE Gonen-Balikesi 57.22 40 eP P 15 32 13.0 +0.9
PVCC Panska Ves 57.26 24 eP P 15 32 12.5 +0.4
PVCC ePP PP 15 34 19.5 +0.2
PVCC ex x 15 35 37.0
PVCC eS S 15 40 11.6 +3.0
PVCC AMS AMS 16 00 50.0
comp=Z,9µm,18.2s
CRAR CRAIOVA 57.36 34 P P 15 32 14.9 +2.0
DEMI Demirci 57.37 42⇑ iP P 15 32 12.1 -1.0
KOLL Kolacno 57.45 27 eP P 15 32 14.0 +0.5
KOLL Kolacno 57.45 27 eP P 15 32 14.0 +0.5
KOLL Kolacno 57.45 27 eP P 15 32 14.0 +0.5
GZR Gura Zlata 57.47 33⇓ P P 15 32 14.7 +1.0
GZR Gura Zlata 57.47 33⇓ P P 15 32 14.7 +1.0
GZR Gura Zlata 57.47 33⇓ iP P 15 32 14.7 +1.0
KORT Korkueli 57.48 45⇑ iP P 15 32 14.4 +0.5
DURS Dursunbey 57.50 41⇑ iP P 15 32 13.5 -0.6
KAR1 Arisaig 57.53 8 P P 15 32 13.8 -0.1
KAR1 Arisaig 57.53 8⇑ eP P 15 32 13.8 -0.1
VYHS Vyhne 57.59 28 eP P 15 32 14.8 +0.3
comp=Z,126nm,1.1s,mb5.9
VYHS eS S 15 40 09.2 -3.9
VYHS Vyhne 57.59 28 eP P 15 32 14.8 +0.3
VYHS pmax pmax
comp=Z,126nm,1.1s,mb5.9
VYHS Vyhne 57.59 28 eP P 15 32 14.8 +0.3
VYHS eS S 15 40 09.2 -3.9
EDRB Edirne 57.62 38 eP P 15 32 15.6 +0.8
PSZ Piszkesteto 57.69 29⇑ iP P 15 32 15.1 -0.1
comp=Z,168nm,1.1s,mb6.0
PSZ LR LR
comp=Z,11µm,19.0s,MS6.0
PSZ Piszkesteto 57.69 29⇓ iP P 15 32 15.1 -0.1
PSZ Piszkesteto 57.69 29⇓ eP P 15 32 15.8 +0.6
PSZ e P 15 34 34.8 +12
PSZ S S 15 40 12.0 -2.4
PSZ e 15 43 12.0
DESE Dese 57.77 77 iP P 15 32 20.2 +3.8

DESE i S S 15 40 26.2 +10
UPC Upice 57.83 25 eP P 15 32 16.3 +0.2
DPC Dobruska-Polom 57.84 25 eP P 15 32 16.3 +0.1
DPC ePP PP 15 34 25.3 +0.8
DPC ex x 15 35 43.5
DPC eS S 15 40 15.3 -1.0
DPC AMS AMS 15 59 10.0
comp=Z,10µm,16.1s
KSB Sheil Bridge 57.87 8 P P 15 32 16.0 -0.3
KSB Sheil Bridge 57.87 8⇑ eP P 15 32 16.0 -0.3
JMB Yambol 57.88 37 P P 15 32 16.6 0.0
JMB Yambol 57.88 37 P P 15 32 16.6 0.0
GDZ Gediz 57.91 42⇑ iP P 15 32 15.9 -1.1
MORC Moravsky Berou 57.94 26⇑ iP P 15 32 16.4 -0.5
comp=Z,155nm,1.0s,mb6.0
MORC Moravsky Berou 57.94 26⇑ iP P 15 32 16.3 -0.6
PPCY Paphos 57.96 48 P P 15 32 17.1 -0.3
KPL Plockton 57.96 8 P P 15 32 15.9 -1.0
KPL AMB AMB 15 32 25.2
comp=Z,125nm,2.3s,mb5.5
KPL AMS AMS 15 54 42.0
comp=Z,8µm,18.8s
KPL Plockton 57.96 8 eP P 15 32 15.9 -1.0
KPL AMB AMB 15 32 25.2
comp=Z,125nm,2.3s,mb5.5
KPL AMS AMS 15 54 42.0
comp=Z,8µm,18.8s,MS5.8
SUTC Sutluce-Ispart 58.16 44 eP P 15 32 19.5 +0.7
KAC Achnashellach 58.17 8 P P 15 32 17.0 -1.4
KAC Achnashellach 58.17 8⇑ eP P 15 32 17.0 -1.4
KSP Ksiaz 58.20 24 eP P 15 32 18.2 -0.6
KSP ePP PP 15 34 26.1 -1.6
KSP eS S 15 40 23.1 +2.1
KSP LMZ 15 59 47.7
comp=Z,22µm,18.0s
MDO Dochfour 58.24 8 P P 15 32 17.5 -1.4
MDO Dochfour 58.24 8⇑ eP P 15 32 17.5 -1.4
OKC Ostrava-Krasne 58.25 26 eP P 15 32 19.4 +0.3
OKC ePP PP 15 34 27.5 -0.6
OKC ex x 15 35 50.7
OKC eS S 15 40 21.8 +0.2
OKC AMS AMS 16 01 10.0
comp=Z,7µm,14.3s
ALFC Alevga 58.26 48 P P 15 32 19.2 -0.3
comp=Z,1.8nm,0.8s
ALT Altintas 58.31 42 eP P 15 32 21.1 +1.3
MME1 Meikle Cairn 58.33 9 P P 15 32 18.7 -0.8
MME1 Meikle Cairn 58.33 9 eP P 15 32 18.7 -0.8
DRGR 58.34 31⇑ P P 15 32 20.6 +0.8
DRGR 58.34 31⇑ P P 15 32 20.6 +0.8
DRGR 58.34 31⇑ iP P 15 32 20.6 +0.8
KECS Kecovo 58.36 29 eP P 15 32 20.3 +0.4
comp=Z,59nm,1.3s,mb5.5
KECS ePP PP 15 34 34.6 +5.4
KECS Kecovo 58.36 29 eP P 15 32 20.3 +0.4
KECS pmax pmax
comp=Z,59nm,1.3s,mb5.5
KECS Kecovo 58.36 29 eP P 15 32 20.3 +0.4
KECS ePP PP 15 34 34.6 +5.4
LCO Las Campanas 58.39 236 eP P 15 32 20.0 -0.5
comp=Z,223nm,1.8s,mb5.9
LCO LR LR
comp=Z,11µm,19.0s,MS6.0
RRR Rubha Reidh 58.45 7 P P 15 32 20.1 -0.2
RRR Rubha Reidh 58.45 7⇑ eP P 15 32 20.1 -0.2
LEF Lefka 58.46 48 eP P 15 32 21.2 +0.3
RUE Ruedersdorf 58.48 22⇑ iP P 15 32 20.4 -0.2
comp=Z,277nm,1.0s,mb6.2
MCD Coleburn Disti 58.54 9 P P 15 32 19.8 -1.2
MCD Coleburn Disti 58.54 9 eP P 15 32 19.8 -1.2
YLV Yalova 58.59 41 eP P 15 32 21.3 -0.4
CAVI Cavuskoy 58.71 41 eP P 15 32 23.2 +0.7
BOLV Bolvadin 58.72 43⇑ iP P 15 32 22.9 +0.3
CSS Prodhromos 58.72 48 P P 15 32 22.7 0.0
comp=Z,2.3nm,1.2s
CSS Prodhromos 58.72 48 eP P 15 32 22.0 -0.7
CSS Prodhromos 58.72 48 P P 15 32 22.2 -0.5
MAMC Mammari 58.73 48 P P 15 32 23.4 +0.7
MVH1 Achvaich 58.73 8 P P 15 32 21.6 -0.7
MVH1 Achvaich 58.73 8⇑ eP P 15 32 21.6 -0.7
VOIR 58.74 34⇑ P P 15 32 22.9 +0.2
VOIR 58.74 34⇑ iP P 15 32 22.9 +0.3
MDB Medias 58.81 33 P P 15 32 24.5 +1.4
MDB Medias 58.81 33 P P 15 32 24.5 +1.4
HRT Hereke 58.92 40 eP P 15 32 24.3 +0.4
NIE Niedzica 58.93 28 eP P 15 32 24.3 +0.4
NIE ePP PP 15 34 35.4 +1.2
BORA Eskisehir 58.96 42⇑ iP P 15 32 24.1 -0.1
SULR 58.97 35⇓ P P 15 32 24.4 +0.2
SULR 58.97 35⇓ iP P 15 32 24.4 +0.2
LFK Lefkose 59.01 48 eP P 15 32 25.5 +0.9
CRVS Cervenica-Dubn 59.12 29 eP P 15 32 25.5 +0.4
CRVS ePP PP 15 34 35.8 -0.1
CRVS eS S 15 40 24.8 -8.2
CRVS Cervenica-Dubn 59.12 29 eP P 15 32 25.6 +0.4
CRVS e 15 34 35.8
CRVS eS S 15 40 24.8 -8.2
CRVS Cervenica-Dubn 59.12 29 eP P 15 32 25.6 +0.4
CRVS ePP PP 15 34 35.8 -0.1
CRVS eS S 15 40 24.8 -8.2
TRPA Tarpa 59.13 30⇑ iP P 15 32 24.9 -0.4
ERMK Ermenek 59.14 46⇑ iP P 15 32 24.1 -1.5
PHNC Paralimni 59.26 48 P P 15 32 29.1 +2.6
comp=Z,3.3nm,0.9s,mb4.4
OJC Ojcow 59.26 27 eP P 15 32 25.9 -0.3
OJC epP pP 15 32 32.0 +4.4
OJC ePP PP 15 34 33.9 -3.2
OJC eS S 15 40 26.5 -8.3
OJC eSS SS 15 44 24.0 -5.5
OJC L 15 55 46.2
comp=Z,9.6nm,23.6s
OJC Ojcow 59.26 27 eP P 15 32 25.9 -0.3
OJC e*PP pP 15 32 32.0 +4.4
OJC e 15 34 33.9
OJC eS S 15 40 26.5 -8.3
OJC eSS SS 15 44 24.0 -5.5
GULT Gulveren 59.27 41 eP P 15 32 27.3 +0.9
MLR Muntele Rosu 59.27 34⇑ P P 15 32 26.8 +0.4
MLR Muntele Rosu 59.27 34⇑ P P 15 32 26.8 +0.5
MLR Muntele Rosu 59.27 34⇑ iP P 15 32 26.8 +0.5
BMR Baia Mare 59.32 31⇓ P P 15 32 26.9 +0.3
BMR Baia Mare 59.32 31⇓ P P 15 32 26.9 +0.3
BMR Baia Mare 59.32 31⇓ iP P 15 32 26.9 +0.3
KNT Konya--Tatoy 59.33 45 eP P 15 32 28.3 +1.4
UZH Uzhgorod 59.34 30 eP P 15 32 25.6 -1.2
UZH e 15 33 14.2
UZH e 15 34 35.0
UZH eS S 15 40 29.8 -6.1
UZH ePS 15 40 40.0
UZH MLR MLR
comp=N,5µm,13.0s,MS6.0
UZH MLR MLR
comp=E,6µm,13.0s,MS6.0
UZH MLR MLR
comp=Z,4µm,13.0s,MS5.7
STHS Stebnicka Huta 59.37 28 eP P 15 32 27.2 +0.3
comp=Z,22nm,0.9s,mb5.2
STHS Stebnicka Huta 59.37 28 eP P 15 32 27.2 +0.3
STHS pmax pmax
comp=Z,22nm,0.9s,mb5.2
STHS Stebnicka Huta 59.37 28 eP P 15 32 27.2 +0.3
ISR Istrita 59.39 35⇑ P P 15 32 26.7 -0.4
ISR Istrita 59.39 35⇑ iP P 15 32 26.7 -0.5
ORE Reay 59.40 8 P P 15 32 26.6 -0.3
ORE Reay 59.40 8 eP P 15 32 26.6 -0.3
KIZT Kizilcal 59.44 43 eP P 15 32 25.0 -2.5
SVRH Sivrihisar-ESK 59.46 43 eP P 15 32 28.8 +1.0
IKL Isikli 59.52 47 eP P 15 32 28.3 0.0
AMRR Amara 59.55 36⇑ P P 15 32 28.4 +0.1
AMRR Amara 59.55 36⇑ iP P 15 32 28.4 +0.1
HENT Hendek 59.72 41 iP P 15 32 27.9 -1.6
MDU Mudurnu 59.75 42 eP P 15 32 29.7 -0.1
GRER 59.79 35 P P 15 32 31.0 +1.0
PLOR Plostina 59.89 34⇓ P P 15 32 29.4 -1.2
PLOR Plostina 59.89 34⇓ iP P 15 32 29.4 -1.2
VRI Vrincioaia 59.94 34⇑ P P 15 32 29.6 -1.3
VRI Vrincioaia 59.94 34⇑ iP P 15 32 29.6 -1.3
RGN Rugen 59.98 20⇑ eP P 15 32 31.3 +0.3
comp=Z,191nm,0.9s,mb6.1
RCY Rachaya 60.02 51 eP P 15 32 32.3 +0.6
BHL Bhannes 60.05 50 eP P 15 32 32.3 +0.4
TIRR Tirgusor 60.10 36⇑ iP P 15 32 31.1 -1.0

comp=Z,128nm,1.4s,mb5.8
TIRR Tirgusor 60.10 36⇑ *i*P **P 15 32 31.1 -0.9**
TIRR pmax pmax
comp=Z,128nm,1.4s,mb5.8
TIRR Tirgusor 60.10 36⇑ *i*P **P 15 32 31.2 -0.8**
NNA Nana 60.12 256 PFAKE 15 32 40.0 +7.2
NNA LR LR
comp=Z,18µm,20.0s,MS6.2
PETR 60.14 35⇑ P **P 15 32 31.0 -1.3**
PETR 60.14 35⇑ *i*P **P 15 32 31.0 -1.3**
BUR01 Bucovina Ar. S 60.18 32 P **P 15 32 33.8 +1.3**
BURAR Bucovina Array 60.18 32⇑ P **P 15 32 32.9 +0.4**
BURAR Bucovina Array 60.18 32⇑ P **P 15 32 32.9 +0.4**
BURAR Bucovina Array 60.18 32⇑ *i*P **P 15 32 32.9 +0.4**
BUR08 Bucovina Ar. S 60.19 32⇑ *i*P **P 15 32 33.4 +0.8**
KWP Kalwaria Pacla 60.22 29 *e*P **P 15 32 33.1 +0.4**
KWP *e*S **S 15 40 45.8 -1.4**
KWP LMZ 16 00 54.5
comp=Z,15µm,18.4s
KWP Kalwaria Pacla 60.22 29⇑ *i*P **P 15 32 32.3 -0.4**
comp=Z,189nm,1.1s,mb6.0
KWP LR LR
comp=Z,10µm,20.0s,MS6.0
KWP Kalwaria Pacla 60.22 29⇑ *i*P **P 15 32 32.3 -0.4**
KWP pmax pmax
comp=Z,189nm,1.1s,mb6.0
KWP MLR MLR
comp=Z,10µm,20.0s,MS6.0
KWP Kalwaria Pacla 60.22 29⇑ *i*P **P 15 32 33.1 +0.4**
MUD Monsted U'grnd 60.26 17⇑ *i*P **P 15 32 32.5 -0.4**
MUD *i* S **S 15 40 46.3 -1.2**
MUD pmax pmax
comp=Z,130nm,0.9s,mb6.0
MUD Monsted U'grnd 60.26 17⇑ *i*P **P 15 32 32.5 -0.4**
comp=Z,129nm,0.9s,mb6.0
MUD *i* S **S 15 40 46.3 -1.2**
MUD
comp=Z,10µm,21.0s
TESR 60.28 34⇓ P **P 15 32 32.2 -1.0**
TESR 60.28 34⇓ *i*P **P 15 32 32.2 -1.0**
CFR Carcaliu 60.34 36⇑ P **P 15 32 33.4 -0.3**
CFR Carcaliu 60.34 36⇑ P **P 15 32 33.4 -0.3**
CFR Carcaliu 60.34 36⇑ *i*P **P 15 32 33.4 -0.3**
HWQ Hawqa 60.42 50 *e*P **P 15 32 34.5 0.0**
GKP Gorka Klasztor 60.42 23 *e*P **P 15 32 34.2 +0.1**
GKP *e*pP pP 15 32 35.2 -0.3
GKP *e*S **S 15 40 49.0 -0.6**
GKP LMZ 16 04 10.5
comp=Z,8µm,18.6s
GKP Gorka Klasztor 60.42 23 *e*P **P 15 32 34.2 +0.1**
GKP *e**PP pP 15 32 35.2 -0.3
GKP *e*S **S 15 40 49.0 -0.6**
LOD Lodumlu 60.52 43 *e*P **P 15 32 34.0 -1.0**
BBAL Bala 60.60 43⇑ *i*P **P 15 32 35.4 -0.1**
COP Copenhagen 60.61 19⇑ *i*P **P 15 32 36.2 +0.9**
COP *i* S **S 15 40 55.1 +3.1**
COP pmax pmax
comp=Z,67nm,0.9s,mb5.8
COP MLR MLR
comp=Z,5µm,17.0s,MS5.7
COP Copenhagen 60.61 19⇑ *i*P **P 15 32 36.2 +0.9**
comp=Z,67nm,0.9s,mb5.8
COP *i* S **S 15 40 55.1 +3.1**
COP
comp=Z,5µm,17.0s
KAMT Kaman 60.92 44 *e*P **P 15 32 38.6 +0.8**
KARA Karaisali 60.95 46 *e*P **P 15 32 38.3 +0.3**
LVV L'vov 60.99 29⇓ *i*P **P 15 32 37.6 -0.4**
LVV *e* 15 34 49.2
LVV *e*S **S 15 40 54.2 -2.8**
LVV pmax pmax
comp=Z,700nm,2.0s,mb6.4
LVV MLR MLR
comp=N,7µm,18.0s,MS5.9
LVV MLR MLR
comp=E,5µm,18.0s,MS5.9
LVV MLR MLR
comp=Z,8µm,18.0s,MS5.9
BSD Bornholm Skovb 60.99 21⇑ *i*P **P 15 32 36.8 -1.1**
BSD *e*S **S 15 40 58.2 +1.4**
BSD pmax pmax
comp=Z,29nm,0.9s,mb5.4
BSD MLR MLR
comp=Z,6µm,14.0s,MS5.9
BSD Bornholm Skovb 60.99 21⇑ *i*P **P 15 32 36.8 -1.1**
comp=Z,29nm,0.9s,mb5.4
BSD *e*S **S 15 40 58.2 +1.4**
BSD
comp=Z,6µm,14.0s
OTAV Otavalo 61.01 270 P **P 15 32 35.1 -3.7**
OTAV Otavalo 61.01 270 *e*P **P 15 32 39.2 +0.3**
comp=Z,47nm,1.3s,mb5.5
OTAV LR LR
comp=Z,7µm,21.0s,MS5.8
BR131 Keskin Array S 61.04 43 *e*P **P 15 32 38.5 0.0**
comp=Z,91nm,0.9s,mb5.9
BR131 LR LR
comp=Z,6µm,19.0s,MS5.8
IAS Iasi 61.19 33 P **P 15 32 38.7 -0.7**
ATAH Atahualpa 61.19 262 P **P 15 32 37.0 -3.1**
comp=Z,9.8nm,0.7s,mb5.0,baz=113,slow=4.1,SNR=8.0
YURE YUREGIR 61.20 47⇑ *i*P **P 15 32 39.5 -0.2**
YAYL Yayladag 61.23 48⇑ *i*P **P 15 32 39.7 -0.2**
WAR Warsaw 61.24 26 *e*P **P 15 32 40.6 +0.9**
WAR LMZ 16 01 25.6
comp=Z,8µm,19.2s
ELDT Eldivan 61.24 42⇑ *i*P **P 15 32 39.6 -0.3**
LRW Lerwick 61.31 9 P **P 15 32 38.7 -1.3**
LRW AMB AMB 15 32 46.6
comp=Z,106nm,2.7s,mb5.5
LRW AMS AMS 15 58 35.0
comp=Z,9µm,17.1s
LRW Lerwick 61.31 9 *e*P **P 15 32 38.7 -1.3**
LRW AMB AMB 15 32 46.6
comp=Z,106nm,2.7s,mb5.5
LRW AMS AMS 15 58 35.0
comp=Z,9µm,17.1s,MS6.0
CEYT Ceyhan 61.35 47 *e*P **P 15 32 41.3 +0.6**
WAL1 Walls 61.35 9 P **P 15 32 39.1 -1.1**
WAL1 Walls 61.35 9 *e*P **P 15 32 39.1 -1.1**
AVNT Avonos 61.46 45⇑ *i*P **P 15 32 41.4 -0.1**
CDAG Cicekdag 61.49 44⇑ *i*P **P 15 32 41.1 -0.5**
KOZT Kozan 61.60 46 *e*P **P 15 32 41.0 -1.4**
ILGA Ilgaz 61.70 42⇑ *i*P **P 15 32 41.9 -1.1**
BALT Daday 61.71 41 *i*P **P 15 32 40.7 -2.4**
MTDJ Mount Denham 61.72 291 PFAKE 15 32 50.0 +6.4
MTDJ LR LR
comp=Z,4µm,20.0s,MS5.6
TOS Tosya 61.90 42 *e*P **P 15 32 44.1 -0.2**
CORM Corum 61.92 43 *e*P **P 15 32 45.6 +1.1**
ANDN Andirin 62.02 47⇑ *i*P **P 15 32 45.3 +0.1**
CTKT Corum 62.23 43 *i*P **P 15 32 44.3 -2.2**
KUZU Kuzuini 62.23 48⇑ *i*P **P 15 32 46.5 -0.2**
BZK Bozkurt 62.32 41 *e*P **P 15 32 46.7 -0.4**
KMRS Kahramanmaras 62.40 47 *e*P **P 15 32 49.2 +1.5**
SOFL Sornfelli, Far 62.44 6 AMS AMS 15 55 51.7
comp=Z,8µm,22.3s,MS5.8
GAZ Gaziantep 62.49 47 *e*P **P 15 32 50.2 +1.8**
BOYT Boyabat 62.66 42 *i*P **P 15 32 48.7 -0.8**
SARI SarD1z-Kayseri 62.72 46 *e*P **P 15 32 47.7 -2.2**
EMMW East Machias 62.75 322 *e*P **P 15 32 48.9 -1.1**
comp=Z,86nm,1.1s,mb5.8
BER Bergen 62.77 12 *e*P **P 15 32 48.9 -0.9**
BER AMB AMB 15 32 57.7
comp=Z,142nm,2.6s,mb5.6
BER *e*S **S 15 41 19.0 -0.2**
BER AMS AMS 16 00 07.2
comp=Z,8µm,18.8s,MS5.9
BCIP Isla Barro Col 62.78 280 *e*P **P 15 32 48.6 -2.1**
comp=Z,160nm,1.3s,mb6.0
BCIP LR LR
comp=Z,4µm,19.0s,MS5.5
PLCA Paso Flores 62.84 223 *e*P **P 15 32 50.3 -0.4**
comp=Z,4.2nm,1.0s,mb4.5
PLCA LR LR
comp=Z,8µm,21.0s,MS5.9
PLCA Paso Flores 62.84 223 P **P 15 32 51.3 +0.6**
comp=Z,10nm,1.2s,mb4.8,baz=55,slow=10,SNR=4.8
PLCA S **S 15 41 28.7 +7.9**
comp=Z,0.7nm,0.4s,baz=321,slow=14,SNR=1.9
PLCA LR LR 15 56 21.3
comp=Z,8µm,20.6s,MS5.9,baz=63,slow=32
KONO Kongsberg 63.13 15 *e*P **P 15 32 51.8 -0.4**
KONO AMB AMB 15 33 00.5
comp=Z,86nm,1.5s,mb5.7
KONO *e*S **S 15 41 23.4 -0.3**
KONO AMS AMS 15 59 20.2
comp=Z,9µm,18.8s,MS6.0
KONO Kongsberg 63.13 15 *e*P **P 15 32 50.6 -1.6**
comp=Z,128nm,1.3s,mb5.9
KONO LR LR
comp=Z,11µm,20.0s,MS6.0
KONO Kongsberg 63.13 15 *e*P **P 15 32 50.6 -1.6**
KONO pmax pmax
comp=Z,128nm,1.3s,mb5.9
KONO MLR MLR
comp=Z,11µm,20.0s,MS6.0
TOKA Tokat 63.26 44⇑ *i*P **P 15 32 52.9 -0.5**
KVT Kavak 63.29 43 *e*P **P 15 32 54.4 +0.7**
ATAB Bozova 63.40 47⇑ *i*P **P 15 32 53.7 -0.8**
SUW Suwalki 63.41 25 *e*P **P 15 32 53.5 -0.6**
SUW *e*PP PP 15 35 11.1 -2.6
SUW *e*S **S 15 41 25.2 -2.1**
SUW LMZ 16 02 33.2
comp=Z,8µm,20.1s
SUW Suwalki 63.41 25 *e*P **P 15 32 53.2 -0.9**
comp=Z,558nm,0.9s,mb6.7
SUW *e*PP PP 15 35 11.2 -2.4
SUW Suwalki 63.41 25 *e*P **P 15 32 53.2 -0.9**
SUW *e* 15 35 11.2
SUW pmax pmax
comp=Z,558nm,0.9s,mb6.7
SVSK Karacayir 63.45 44 *e*P **P 15 32 54.9 +0.1**
AKCD Akcadag 63.45 46⇑ *i*P **P 15 32 55.4 +0.6**
SCER sogukcermik 63.52 44⇑ *i*P **P 15 32 54.4 -0.8**
ERBA Erbaa 63.60 44⇑ *i*P **P 15 32 55.0 -0.7**
OSL Oslo 63.67 15 *e*P **P 15 32 56.2 +0.4**
OSL Oslo 63.67 15 *i*P **P 15 32 58.3 +2.5**
FOO Floro 63.80 12⇑ *i*P **P 15 32 56.1 -0.5**
FOO *e*S **S 15 41 31.8 -0.3**
FOO AMS AMS 16 01 31.8
comp=Z,7µm,16.8s,MS5.9
SIM Simferopol' 63.82 38 *c i*P **P 15 32 56.0 -1.1**
SIM *e*PPP 15 36 48.0
SIM *e*S **S 15 41 29.0 -3.9**
SIM pmax pmax
comp=Z,41nm,0.8s,mb5.5
SIM MLR MLR
comp=Z,6µm,18.6s,MS5.8
MALT Malatya 63.82 47 *e*P **P 15 32 58.0 +0.7**
MALT Malatya 63.82 47⇑ *i*P **P 15 32 57.7 +0.4**
comp=Z,221nm,1.0s,mb6.1
MALT LR LR
comp=Z,7µm,19.0s,MS5.9
MYA Malataya 63.83 47 *e*P **P 15 32 59.2 +1.9**
RSDY Resadiye-TOKAT 63.88 44 *e*P **P 15 32 58.3 +0.8**
WVL Waterville 64.05 321 *e*P **P 15 32 57.2 -1.4**
comp=Z,48nm,1.1s,mb5.4
PQI Presque Isle 64.09 324 *e*P **P 15 32 59.1 +0.3**
comp=Z,85nm,1.1s,mb5.7
WES Weston 64.12 318⇑ *e*P **P 15 32 58.6 -0.5**
comp=Z,166nm,1.3s,mb5.9
WES Weston 64.12 318⇑ *e*P **P 15 32 58.6 -0.5**
WES pmax pmax
comp=Z,166nm,1.3s,mb5.9
KIEV Kiev 64.13 31⇑ *i*P **P 15 32 57.0 -2.1**
comp=Z,254nm,1.0s,mb6.2
KIEV LR LR
comp=Z,9µm,20.0s,MS5.9
KIEV Kiev 64.13 31⇑ *i*P **P 15 32 57.0 -2.0**
KIEV pmax pmax
comp=Z,254nm,1.0s,mb6.2
KIEV MLR MLR
comp=Z,9µm,20.0s,MS5.9
AKBB Malin Array Si 64.14 31⇑ *i*P **P 15 32 57.9 -1.2**
PKME Peaks-Kenny Pk 64.16 322 *e*P **P 15 32 58.8 -0.5**
comp=Z,8.0nm,1.0s,mb4.7
PKME LR LR
comp=Z,6µm,19.0s,MS5.8
ELZG Elazig 64.30 47⇑ *i*P **P 15 33 00.6 +0.3**
SVRC Sivrice-ELAZID 64.49 47 *e*P **P 15 33 03.3 +1.7**
NAO01 NORSAR Array S 64.49 15 *e*P **P 15 33 00.8 -0.3**
comp=Z,66nm,1.0s,mb5.6
NAO01 LR LR
comp=Z,7µm,19.0s,MS5.8
BORG Borgarnes 64.69 358 PFAKE 15 33 10.0 +7.7
BORG LR LR
comp=Z,8µm,19.0s,MS5.9
NB2 NORSAR Subarra 64.74 15 P **P 15 33 02.3 -0.5**
comp=Z,5.8nm,0.8s,mb4.7,baz=202,slow=6.9
NOA NORSAR Array B 64.74 15 P **P 15 33 01.7 -1.1**
NOA LR LR 16 00 36.9
NOA NORSAR Array B 64.74 15 P **P 15 33 01.7 -1.1**
comp=Z,59nm,0.9s,mb5.6,baz=209,slow=6.6,SNR=101
NOA LR LR 16 00 36.9
comp=Z,8µm,21.6s,MS5.9,baz=205,slow=36
GRSN GIRESUNGRSN 64.74 44 *i* P **P 15 33 01.4 -1.8**
QUA2 Belchertown 64.77 318 *e*P **P 15 33 03.4 +0.1**
comp=Z,289nm,1.3s,mb6.2
FFD Franklin Falls 64.82 319 *e*P **P 15 33 03.0 -0.6**
comp=Z,365nm,1.3s,mb6.2
DIYA Diyarbakir 64.92 47⇑ *i*P **P 15 33 04.3 -0.1**
EZC Erzincan 65.04 45 *e*P **P 15 33 06.7 +1.5**
KELT Kelkit 65.13 45⇑ *i*P **P 15 33 04.4 -1.4**
MARD Mardin 65.19 48⇑ *i*P **P 15 33 04.5 -1.7**
MOL Molde 65.20 12 *e*P **P 15 33 05.7 -0.1**
MOL AMB AMB 15 33 13.8
comp=Z,77nm,1.7s,mb5.4
MOL *e*S S 15 41 48.0 -1.3
MOL AMS AMS 16 00 07.1
comp=Z,8µm,17.5s,MS6.0
CPNY Central Park 65.26 316 *e*P **P 15 33 07.4 +0.8**
comp=Z,99nm,1.3s,mb5.7
PAL Palades 65.31 316 *e*P **P 15 33 06.8 -0.1**
comp=Z,112nm,1.3s,mb5.7
HNH Hanover 65.34 319 *e*P **P 15 33 06.1 -0.9**
comp=Z,268nm,1.2s,mb6.2
LBNH Lisbon 65.34 320 *e*P **P 15 33 07.4 +0.4**
comp=Z,109nm,1.2s,mb5.8
LBNH LR LR
comp=Z,7µm,19.0s,MS5.9
GUMT Gumushane 65.41 45 *e*P **P 15 33 08.5 +1.0**
BEST Besiri 65.75 48 *i*P **P 15 33 10.5 +0.6**
MICGM Minsk 65.81 27 *e*P **P 15 33 08.0 -1.8**
KOPT Kop Dagi 65.96 45⇑ *i*P **P 15 33 11.1 0.0**
BNGL BINGOL 66.04 47⇑ *i*P **P 15 33 10.7 -1.0**
MDV Middlebury 66.05 319 *e*P **P 15 33 12.4 +0.8**
ACCN Adirondack Com 66.11 318 *e*P **P 15 33 11.8 -0.2**
comp=Z,81nm,1.3s,mb5.6
ABPO Ambohimpanom 66.11 111 *e*P **P 15 33 14.7 +2.2**
comp=Z,63nm,1.3s,mb5.5
ABPO LR LR
comp=Z,5µm,19.0s,MS5.7
ABPO Ambohimpanom 66.11 111 *e*P **P 15 33 14.7 +2.2**
ABPO pmax pmax
comp=Z,63nm,1.3s,mb5.5
ABPO MLR MLR
comp=Z,5µm,19.0s,MS5.7
CNNC Cliffs of the 66.21 309 PFAKE 15 33 20.0 +7.2
CNNC LR LR
comp=Z,7µm,19.0s,MS5.9
EZM Erzurum 66.53 46 *e*P **P 15 33 16.9 +2.1**
ERZM Erzurum 66.54 46 *i*P **P 15 33 14.5 -0.3**
FRNY Flat Rock 66.67 320 *e*P **P 15 33 15.9 +0.4**
comp=Z,63nm,1.3s,mb5.5
NCB Newcomb 66.72 319 *e*P **P 15 33 16.6 +0.6**
comp=Z,108nm,1.8s,mb5.6
NCB LR LR
comp=Z,6µm,20.0s,MS5.8
CBN Corbin 66.77 312 PFAKE 15 33 30.0 +14
CBN LR LR
comp=Z,4µm,20.0s,MS5.7
SDMD Soldier's Deli 66.79 313 *e*P **P 15 33 16.7 +0.2**
comp=Z,97nm,1.2s,mb5.7
SOC Sochi 66.81 42 *i*P **P 15 33 15.5 -1.0**
SOC Sochi 66.81 42 *c i*P **P 15 33 14.8 -1.7**
SOC *e**PP pP 15 33 17.8 -0.2
SOC *e**SP sP 15 33 21.6 +3.1
SOC *e* 15 33 43.8
SOC *e* 15 35 41.6
SOC *e*S S 15 42 08.4 -1.2
SOC pmax pmax
comp=Z,149nm,1.0s,mb6.0
SOC pmax pmax
comp=Z,2µm,4.0s
SOC MLR MLR
comp=Z,4µm,19.0s,MS5.7
HOMI Horasan 66.97 46⇑ *i*P **P 15 33 17.6 0.0**
JSRW J. Sargeant Re 66.98 311 *e*P **P 15 33 17.2 -0.5**
DDEM Demirkent 67.17 45⇑ *i*P **P 15 33 18.2 -0.6**
BINY Binghamton 67.20 317 *e*P **P 15 33 19.6 +0.5**
comp=Z,131nm,1.1s,mb5.9
BINY LR LR
comp=Z,5µm,20.0s,MS5.7
LONY Lake Ozonia 67.22 319 *e*P **P 15 33 19.1 0.0**
comp=Z,64nm,1.3s,mb5.5
LONY LR LR
comp=Z,6µm,20.0s,MS5.8
DWPF Disney 67.22 301 *e*P **P 15 33 19.1 -0.4**
comp=Z,138nm,1.3s,mb5.8
DWPF LR LR
comp=Z,7µm,22.0s,MS5.8
DBOC Borcka 67.27 44⇑ *i*P **P 15 33 18.7 -0.8**
DAGI Agillar 67.35 45⇑ *i*P **P 15 33 19.2 -0.8**
NHSC New Hope 67.40 306 *e*P **P 15 33 20.9 +0.4**
comp=Z,394nm,1.3s,mb6.3
NHSC LR LR
comp=Z,6µm,20.0s,MS5.8
HAKT HAKKARI 67.47 49⇑ *i*P **P 15 33 19.7 -1.1**
HKR Hakkari 67.50 49 *e*P **P 15 33 22.4 +1.4**
AGRB Hanur-Agry 67.60 47 *e*P **P 15 33 22.4 +0.8**
VSU Vasula 67.88 23 *c i*P **P 15 33 21.9 -1.0**
VSU pmax pmax
comp=Z,192nm,0.9s,mb6.1
VSU MLR MLR
comp=Z,12µm,20.0s,MS6.1
JTS JuntasAbangare 67.89 281 *e*P **P 15 33 21.9 -2.1**
JTS LR LR
comp=Z,5µm,21.0s,MS5.7
JTS JuntasAbangare 67.89 281 *e*P **P 15 33 21.9 -2.0**
JTS MLR MLR
comp=Z,5µm,21.0s
NSS Namsos 67.89 13⇑ *i*P **P 15 33 22.5 -0.5**
NSS *e*S S 15 42 22.6 +0.7
NSS AMS AMS 16 02 10.0
comp=Z,8µm,21.6s,MS5.9
SCHQ Schefferville 67.90 332 P **P 15 33 23.4 +0.2**
SCHQ LR LR 15 58 34.5
SCHQ Schefferville 67.90 332 P **P 15 33 23.4 +0.2**
comp=Z,21nm,1.0s,mb5.1,baz=126,slow=6.4,SNR=11
SCHQ LR LR 15 58 34.5
comp=Z,6µm,18.0s,MS5.9,baz=138,slow=32
SSPA Standing Stone 67.97 314 *e*P **P 15 33 23.8 -0.2**
comp=Z,66nm,1.2s,mb5.5
KARS Kars 68.02 46 *e*P **P 15 33 25.4 +1.2**
DYDN Diyadin 68.09 47⇑ *i*P **P 15 33 24.5 -0.3**
CLDR Caldiran 68.13 47 *e*P **P 15 33 25.5 +0.5**
DIGO Kars 68.16 46⇑ *i*P **P 15 33 23.6 -1.5**
RDF Al-Radifah 68.26 59 *e*P **P 15 33 25.2 -0.7**
RDF AMb AMB 15 33 28.4
comp=Z,323nm,1.3s,mb6.2
MIB Mutribah 68.27 58 *e*P **P 15 33 25.0 -1.0**
MIB AMb AMB 15 33 27.7
comp=Z,215nm,1.8s,mb5.9
VWCC Virginia Weste 68.42 310 *e*P **P 15 33 25.3 -1.5**
KBD Kabd 68.44 59 *e*P **P 15 33 26.2 -0.9**
KBD AMb AMB 15 33 37.2
comp=Z,179nm,1.9s,mb5.8
QRN Al-Qurain 68.53 59 *e*P **P 15 33 27.2 -0.5**
QRN AMb AMB 15 33 30.9
comp=Z,353nm,1.9s,mb6.0
UMR Umm Al-Rimmam 68.54 58 *e*P **P 15 33 26.6 -1.1**
UMR AMb AMB 15 33 29.7
comp=Z,351nm,1.4s,mb6.1
JSC Jenkinsville 68.59 307 *e*P **P 15 33 27.9 0.0**
BLA Blacksburg 68.75 310 *e*P **P 15 33 28.5 -0.4**
comp=Z,109nm,1.1s,mb5.7
BLA LR LR
comp=Z,7µm,20.0s,MS5.9
BLA Blacksburg 68.75 310 *e*P **P 15 33 28.5 -0.4**
BLA pmax pmax
comp=Z,109nm,1.1s,mb5.7
BLA MLR MLR
comp=Z,7µm,20.0s,MS5.9
KIV Kislovodsk 68.93 42 *e*P **P 15 33 30.0 +0.1**
comp=Z,235nm,1.2s,mb6.0
KIV LR LR
comp=Z,5µm,21.0s,MS5.8
KIV Kislovodsk 68.93 42 *c i*P **P 15 33 29.6 -0.3**
KIV *e* 15 33 37.3
KIV pmax pmax
comp=Z,269nm,1.2s,mb6.0
KIV MLR MLR
comp=Z,6µm,23.0s,MS5.8
KIV Kislovodsk 68.93 42 P **P 15 33 30.3 +0.4**
comp=Z,912nm,1.1s,mb6.6,SNR=22
GNI Garni 69.06 47 *e*P **P 15 33 30.8 +0.1**
GNI Garni 69.06 47 *e*P **P 15 33 31.2 +0.4**
comp=Z,448nm,1.4s,mb6.2
GNI LR LR
comp=Z,4µm,22.0s,MS5.6
GNI Garni 69.06 47 *c i*P **P 15 33 31.6 +0.9**
GNI pmax pmax
comp=Z,247nm,1.2s
GNI MLR MLR
comp=Z,4µm,25.0s
GNI Garni 69.06 47 P **P 15 33 32.1 +1.4**
SNR=59
MCWV Mont Chateau 69.06 313 *e*P **P 15 33 30.7 -0.1**
comp=Z,39nm,1.0s,mb5.3
MCWV LR LR
comp=Z,5µm,19.0s,MS5.8
GOR Gori 69.21 45 P **P 15 33 31.8 +0.2**
GOR S S 15 42 41.4 +2.9
ZEI Tsey 69.33 44 *e*P **P 15 33 32.0 -0.4**
ZEI *e* 15 36 05.8
ZEI *e*PPP 15 37 42.9
ZEI *e*S S 15 42 39.6 -0.2
ZEI *e* 15 43 26.5
ZEI *e*SS SS 15 47 08.3 +1.5
ZEI pmax pmax
comp=Z,156nm,1.6s,mb5.7
ZEI pmax pmax
comp=N,62nm,1.1s
ZEI pmax pmax
comp=E,88nm,1.1s
ZEI pmax pmax
comp=Z,513nm,6.6s
ZEI smax
comp=E,369nm,7.7s
ZEI smax
comp=N,823nm,10.0s
TBLG Delisi 69.57 45 *i* P **P 15 33 33.9 0.0**
TBLG *e*S S 15 42 43.3 +0.6
TBLG Delisi 69.57 45 P **P 15 33 33.9 0.0**
TBLG S S 15 42 43.3 +0.7
MTA Mtatsminda 69.60 45 P **P 15 33 34.3 +0.2**
MTA S S 15 42 43.1 +0.2
STOK Stokkvaagen 69.66 13 *e*S S S 15 42 46.8 +4.0
VORD Divnogorie 69.72 34 *e*P **P 15 33 33.0 -1.6**
VORD *e* pP 15 33 33.2 -2.9
VORD *e* 15 33 40.8
VORD *e* 15 36 05.7
VORD pmax pmax
comp=N,60nm,0.8s
VORD pmax pmax
comp=E,220nm,0.8s
VORD pmax pmax
comp=Z,170nm,0.8s,mb6.0
VORD pmax pmax
comp=N,80nm,0.9s
VORD pmax pmax
comp=E,250nm,0.9s
VORD pmax pmax
comp=Z,280nm,0.9s,mb6.2
VORD pmax pmax
comp=N,250nm,3.4s
VORD pmax pmax
comp=Z,390nm,3.4s
VORD pmax pmax
comp=E,80nm,0.9s
VORD MLR MLR
comp=N,1µm,21.0s,MS5.9
VORD MLR MLR
comp=E,7µm,21.0s,MS5.9
VORD MLR MLR
comp=Z,10µm,21.0s,MS6.0
FLOS Flostrand 69.74 13 *e*P **P 15 33 36.2 +1.8**
VSR Storozhevoye 69.77 34 *e*P **P 15 33 33.2 -1.7**
VSR *e* pP 15 33 33.3 -3.1
VSR *e**PP pP 15 33 40.5 +4.1
VSR *e* 15 36 04.9
VSR *e*S S 15 42 38.3 -6.3
VSR *e*SS SS 15 47 05.6 -7.5

VSR pmax pmax
comp=N,170nm,1.0s
VSR pmax pmax
comp=E,240nm,1.0s
VSR pmax pmax
comp=Z,290nm,1.0s,mb6.2
VSR pmax pmax
comp=Z,640nm,1.3s,mb6.4
VSR pmax pmax
comp=N,290nm,1.4s
VSR pmax pmax
comp=E,430nm,1.4s
VSR pmax pmax
comp=N,60nm,1.7s
VSR pmax pmax
comp=Z,120nm,1.7s,mb5.5
VSR pmax pmax
comp=E,40nm,0.9s
VSR smax
comp=E,1μm,4.4s
VSR smax
comp=Z,390nm,4.4s
VSR smax
comp=N,150nm,2.2s
VSR MLR MLR
comp=N,2μm,18.0s,MS5.7
VSR MLR MLR
comp=E,3μm,18.0s,MS5.7
VSR MLR MLR
comp=Z,8μm,18.0s,MS6.0
MOR8 Moi Rana 69.84 13 *e*P **P** **15 33 35.7 +0.7**
MOR8 AMB AMB 15 33 44.6
comp=Z,101nm,1.5s,mb5.5
ALLY Alegheny Colle 69.92 315 *e*P **P** **15 33 35.8 -0.2**
comp=Z,160nm,1.2s,mb5.8
DGRG David-gareji 69.93 45 P **P** **15 33 36.0 -0.1**
DGRG S S 15 42 52.5 +5.6
ERPA Erie 69.96 315 *e*P **P** **15 33 36.6 +0.3**
comp=Z,143nm,1.3s,mb5.7
ERPA LR LR
comp=Z,5μm,19.0s,MS5.8
VOR Voronezh 70.02 34⇓ *i*P **P** **15 33 36.0 -0.4**
VOR pmax pmax
comp=Z,520nm,1.4s,mb6.3
PUL Pulkovo 70.13 23⇑ *e*P **P** **15 33 37.1 +0.2**
PUL Pulkovo 70.13 23⇑ *e*P **P** **15 33 37.0 +0.1**
PUL pmax pmax
comp=Z,217nm,0.9s,mb6.1
PUL MLR MLR
comp=Z,10μm,20.0s,MS6.1
GOGA Godfrey 70.15 306 *e*P **P** **15 33 37.0 -0.6**
comp=Z,50nm,1.3s,mb5.3
GOGA LR LR
comp=Z,8μm,21.0s,MS6.0
KAF Kangasniemi 70.17 20 *e*P **P** **15 33 36.0 -1.1**
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.7
KAF Kangasniemi 70.17 20 *e*p **P** **15 33 36.0 -1.1**
comp=Z,4.1nm,0.4s,mb4.7
SADO Sadowa 70.28 318 P **P** **15 33 37.4 -0.8**
SADO LR LR 15 59 32.4
SADO Sadowa 70.28 318 P **P** **15 33 37.4 -0.8**
comp=Z,48nm,1.1s,mb5.3,baz=124,slow=7.3,SNR=12
SADO LR LR 15 59 32.4
comp=Z,9μm,19.3s,MS6.0,baz=288,slow=32
OBN Obninsk 70.29 30⇑ *i*P **P** **15 33 37.1 -0.9**
OBN pmax pmax
comp=Z,472nm,1.8s,mb6.1
OBN LR LR
comp=Z,12μm,19.0s,MS6.2
OBN Obninsk 70.29 30*c i*P **P** **15 33 37.4 -0.6**
OBN *e* PcP 15 33 59.1 -0.6
OBN *e* PP 15 36 12.1 -1.5
OBN *e*SS SS 15 47 18.8 -2.2
OBN pmax pmax
comp=Z,271nm,1.6s,mb5.9
OBN MLR MLR
comp=Z,11μm,17.0s,MS6.2
OBN Obninsk 70.29 30 P **P** **15 33 37.1 -0.9**
comp=Z,748nm,0.9s,mb6.6,SNR=8.8
TGUH Tegucigalpa,Un 70.46 285 *e*P **P** **15 33 39.0 -0.9**
comp=Z,230nm,1.2s,mb6.0
TGUH LR LR
comp=Z,3μm,21.0s,MS5.6
VNA1 Neumayer--Stat 70.76 177 *e*P **P** **15 33 38.9 -1.7**
TKL Tuckaleechee C 70.94 308 *e*P **P** **15 33 42.1 -0.2**
TKL Tuckaleechee C 70.94 308 P **P** **15 33 40.4 -2.0**
comp=Z,55nm,1.2s,mb5.4,baz=126,slow=8.0,SNR=13
TKL S S 15 42 49.9 -9.0
comp=Z,0.9nm,0.3s,baz=156,slow=20,SNR=1.9
TKL Tuckaleechee C 70.94 308 *e*P **P** **15 33 42.2 -0.2**
VRHR Novokhopersk 71.11 35 *e*P **P** **15 33 42.7 -0.4**
VRHR *e* 15 33 50.0
VRHR pmax pmax
comp=N,70nm,1.4s
VRHR pmax pmax
comp=E,130nm,1.4s
VRHR pmax pmax
comp=Z,130nm,1.4s,mb5.7
MOS Moscow 71.12 29 *i*P **P** **15 33 43.7 +0.6**
JMIC Jan Mayen 71.13 3 *e*P **P** **15 33 43.9 +1.0**
JMIC *e*S S 15 43 00.1 +0.2
JMIC AMS AMS 15 57 34.4
comp=Z,3μm,22.0s,MS5.5
VNA3 Neumayer Olymp 71.28 177 *e*P **P** **15 33 41.0 -2.7**
LOF Lofoten 71.29 12 *i*P **P** **15 33 52.7 +8.9**
ACSO Alum Creek Sta 71.54 313 *e*P **P** **15 33 45.5 -0.4**
comp=Z,150nm,1.2s,mb5.8
ACSO LR LR
comp=Z,5μm,19.0s,MS5.8
MAK Makhachkala 71.90 44*c i*P **P** **15 33 48.4 +0.3**
MAK *e* 15 34 01.2
MAK *e* 15 36 24.2
MAK *e*PPP 15 38 15.3
MAK *i*S S 15 43 08.5 -1.3
MAK *i* 15 43 49.3
MAK pmax pmax
comp=Z,603nm,1.7s,mb6.2
MAK pmax pmax
comp=E,164nm,1.0s
MAK pmax pmax
comp=N,216nm,0.9s
MAK pmax pmax
comp=Z,2μm,3.0s
MAK smax
comp=N,2μm,5.6s
MAK smax
comp=E,4μm,7.8s
TEIG Tepich 72.05 291 *e*P **P** **15 33 47.5 -2.0**
comp=E,104nm,1.3s,mb5.6
TEIG LR LR
comp=Z,4μm,22.0s,MS5.6
TEIG Tepich 72.05 291 P **P** **15 33 47.6 -1.8**
comp=Z,60nm,1.1s,mb5.4,baz=68,slow=6.0,SNR=11
JOF Joensuu 72.46 21 *e*P **P** **15 33 48.9 -2.1**
JOF pmax pmax
comp=Z,112nm,0.9s,mb5.8
JOF Joensuu 72.46 21 *e*p **P** **15 33 48.9 -2.1**
comp=Z,112nm,0.9s,mb5.8
RBK Rabkut 72.52 72 P **P** **15 33 53.7 +1.5**
SNR=7.0
SWET Sewanee 72.55 307 *e*P **P** **15 33 51.6 -0.5**
comp=Z,130nm,1.3s,mb5.7
AAM Ann Arbor 72.61 315 *e*P **P** **15 33 52.5 +0.1**
comp=Z,149nm,1.1s,mb5.8
AAM LR LR
comp=Z,5μm,19.0s,MS5.8
AAM Ann Arbor 72.61 315 *e*P **P** **15 33 52.5 +0.2**
AAM pmax pmax
comp=Z,149nm,1.1s,mb5.8
AAM MLR MLR
comp=Z,5μm,19.0s,MS5.8
BRAL Brewton 72.61 303 PFAKE 15 34 00.0 +7.4
BRAL LR LR
comp=Z,4μm,20.0s,MS5.7
PAYG Puerto Ayora 72.85 269 PFAKE 15 34 00.0 +5.7
PAYG LR LR
comp=Z,5μm,22.0s,MS5.8
PMSA Palmer Station 72.86 199 *e*P **P** **15 33 54.2 +0.9**
comp=Z,200nm,1.4s,mb5.9
PMSA LR LR
comp=Z,4μm,19.0s,MS5.7
LRAL Lakeview Retre 72.95 305 *e*P **P** **15 33 52.4 -2.1**
comp=Z,18nm,0.7s,mb5.1
LRAL LR LR
comp=Z,6μm,20.0s,MS5.9
MSEY Mahe Island 72.97 95 PFAKE 15 34 00.0 +4.9
MSEY LR LR
comp=Z,6μm,20.0s,MS5.9
MAIT Maitri 73.17 170 *e*P **P** **15 33 56.0 +1.0**
NVL N'lazarevskaya 73.17 170⇑ *i*P **P** **15 34 00.1 +5.0**
NVL *e**PP PcP 15 34 16.1 +4.5
NVL *i* S S 15 43 24.7 +1.4
NVL *e* 15 44 06.4
NVL *e*SSS 15 51 14.8
NVL pmax pmax
comp=Z,26nm,0.9s,mb5.2
NVL MLR MLR
comp=Z,1μm,17.0s,MS5.2
WCI Wyandotte Cave 73.51 310 *e*P **P** **15 33 57.5 -0.3**
comp=Z,50nm,0.9s,mb5.5
WCI LR LR
comp=Z,6μm,21.0s,MS5.9
WCI Wyandotte Cave 73.51 310 *e*P **P** **15 33 57.5 -0.2**
WCI pmax pmax
comp=Z,50nm,0.9s,mb5.4
WCI MLR MLR
comp=Z,6μm,21.0s,MS5.9
TRO Tromso 73.65 12 *e*P **P** **15 33 57.9 0.0**
TRO *e*S S 15 43 29.3 +0.5
TRO AMS AMS 16 07 45.7
comp=Z,8μm,19.6s,MS6.0
SUMG Summit 73.69 354 *e*P **P** **15 33 59.1 +1.0**
comp=Z,65nm,1.3s,mb5.4
SUMG Summit 73.69 354 *i*P **P** **15 33 59.3 +1.2**
comp=Z,28nm,1.0s,mb5.1
SUMG
comp=Z,3μm,19.0s
BLO Bloomington 73.90 311 *e*P **P** **15 34 00.1 +0.1**
comp=Z,135nm,1.1s,mb5.8
GLMI Grayling 74.00 317 *e*P **P** **15 34 00.7 +0.3**
comp=Z,285nm,1.5s,mb6.0
GLMI LR LR
comp=Z,5μm,19.0s,MS5.9
KTK1 Kautokeino 74.17 14⇑ *i*P **P** **15 34 01.2 +0.3**
KTK1 *e*S S 15 43 34.4 -0.2
KTK1 AMS AMS 16 05 17.1
comp=Z,10μm,21.7s,MS6.1
KTK1 Kautokeino 74.17 14 *i*P **P** **15 34 01.0 +0.1**
WVT Waverly 74.25 308 *e*P **P** **15 34 00.7 -1.5**
comp=Z,86nm,1.2s,mb5.5
WVT LR LR
comp=Z,5μm,19.0s,MS5.8
WVT Waverly 74.25 308 *e*P **P** **15 34 00.7 -1.4**
WVT pmax pmax
comp=Z,86nm,1.2s,mb5.6
WVT MLR MLR
comp=Z,5μm,19.0s,MS5.8
RER Riviere de l'E 74.33 112 PFAKE 15 34 10.0 +7.1
RER LR LR
comp=Z,7μm,21.0s,MS5.9
ASUD Al Ashush, Dub 74.37 65 P **P** **15 34 04.8 +1.7**
SNR=7.4
USIN University of 74.51 309 *e*P **P** **15 34 02.6 -1.0**
comp=Z,129nm,1.2s,mb5.7
NAZ Nazwa, Dubai 74.72 64 P **P** **15 34 05.8 +0.7**
SNR=12
OLIL Olney 75.00 310 *e*P **P** **15 34 05.6 -0.9**
comp=Z,309nm,1.2s,mb6.1
ASHO Ashiyiah 75.03 65 P **P** **15 34 08.0 +1.1**
SNR=14
ARE0 ARCESS Array S 75.10 14 *e*P **P** **15 34 05.0 -1.3**
HATD Hatta, Dubai 75.12 64 P **P** **15 34 08.2 +0.8**
SNR=19
OXF Oxford 75.20 306 *e*P **P** **15 34 05.7 -2.0**
comp=Z,130nm,1.1s,mb5.8
OXF LR LR
comp=Z,8μm,22.0s,MS6.0
OXF Oxford 75.20 306 *e*P **P** **15 34 05.7 -2.0**
OXF pmax pmax
comp=Z,130nm,1.1s,mb5.8
OXF MLR MLR
comp=Z,8μm,22.0s,MS6.0
ARQ Araqi 75.30 66 P **P** **15 34 09.5 +1.0**
SNR=33
GLAT Glass 75.43 307 *e*P **P** **15 34 08.4 -0.6**
KEV Kevo 75.64 15 *e*P **P** **15 34 08.0 -1.4**
comp=Z,37nm,1.1s,mb5.2
KEV LR LR
comp=Z,7μm,22.0s,MS5.9
KEV Kevo 75.64 15 *e*P **P** **15 34 08.0 -1.4**
KEV pmax pmax
comp=Z,147nm,1.1s,mb5.8
KEV MLR MLR
comp=Z,7μm,22.0s,MS5.9
KEV Kevo 75.64 15 *e*p **P** **15 34 08.3 -1.1**
comp=Z,3.5nm,0.5s,mb4.5
SIUC Southern Illin 75.66 309 *e*P **P** **15 34 09.1 -1.1**
comp=Z,134nm,1.1s,mb5.8
VBMS Vicksburg 75.73 303 PFAKE 15 34 20.0 +9.2
VBMS LR LR
comp=Z,3μm,20.0s,MS5.6
BSY Bisya 75.86 67 P **P** **15 34 11.6 -0.1**
SNR=33
PARMO Parma 75.88 308 P **P** **15 34 10.7 -0.8**
GNAR Gosnell 75.96 307 *e*P **P** **15 34 11.0 -1.0**
APA Apatity 76.00 18*α i*P **P** **15 34 11.6 +0.1**
APA *i* 15 34 17.0
APA *i* 15 34 24.7
APA *e* 15 36 56.0
APA *e*PPP 15 38 42.0
APA *i*S S 15 43 56.0 +1.0
APA *i*PS 15 44 28.0
APA *e*SS SS 15 48 44.0 -3.7
APA pmax pmax
comp=Z,84nm,1.1s,mb5.6
APA pmax pmax
comp=Z,1μm,10.0s
HOQ Hoqain 76.05 66 P **P** **15 34 12.2 -0.5**
SNR=20
HDIL Hopedale 76.29 312 *e*P **P** **15 34 12.7 -1.0**
comp=Z,66nm,0.8s,mb5.6
HDIL LR LR
comp=Z,6μm,20.0s,MS5.9
HBAR Harrisburg 76.40 307 *e*P **P** **15 34 13.6 -0.9**
LVZ Lovozero 76.58 18 P **P** **15 34 20.0 +5.2**
LVZ LR LR
comp=Z,7μm,21.0s,MS5.9
LVZ Lovozero 76.58 18*c e*P **P** **15 34 14.9 +0.1**
LVZ pmax pmax
comp=Z,154nm,0.9s,mb5.9
LVZ MLR MLR
comp=Z,6μm,19.0s,MS5.9
LVZ Lovozero 76.58 18 P **P** **15 34 15.2 +0.4**
comp=Z,1μm,1.1s,mb6.7,SNR=16
SLM Saint Louis 76.62 310 *e*P **P** **15 34 14.2 -1.5**
comp=Z,145nm,1.2s,mb5.8
SLM Saint Louis 76.62 310 *e*P **P** **15 34 14.3 -1.4**
SLM pmax pmax
comp=Z,145nm,1.2s,mb5.8
FVM French Village 76.65 309 *e*P **P** **15 34 14.6 -1.3**
comp=Z,60nm,0.8s,mb5.6
JMDO Jabal Madar 76.65 67 P **P** **15 34 15.4 -0.8**
SNR=16
SMDO Samad 76.67 66 P **P** **15 34 16.5 +0.3**
SNR=45
CCM Cathedral Cave 77.30 309 *e*P **P** **15 34 18.1 -1.4**
comp=Z,76nm,0.8s,mb5.7
CCM LR LR
comp=Z,6μm,19.0s,MS5.9
CCM Cathedral Cave 77.30 309 *e*P **P** **15 34 18.1 -1.4**
CCM pmax pmax
comp=Z,76nm,0.8s,mb5.7
CCM MLR MLR
comp=Z,6μm,19.0s,MS5.9
WBK Wadi Bani Khal 77.47 67 P **P** **15 34 21.6 +0.8**
SNR=17
JFWS Jewell Farm 77.48 314 *e*P **P** **15 34 20.0 -0.4**
comp=Z,86nm,0.9s,mb5.7
JFWS LR LR
comp=Z,4μm,21.0s,MS5.7
UALR University of 77.63 306 *e*P **P** **15 34 20.1 -1.3**
comp=Z,110nm,1.2s,mb5.7
MIAR Mount Ida 78.60 305 *e*P **P** **15 34 26.2 -0.7**
comp=Z,50nm,1.2s,mb5.3
MIAR LR LR
comp=Z,6μm,20.0s,MS5.9
ABKT Ailbek 78.64 51 P **P** **15 34 26.4 -0.6**
comp=Z,347nm,1.0s,mb6.2,SNR=26
SYO Syowa Base 78.67 162⇓ *e*P **P** **15 34 26.6 +0.1**
SYO Syowa Base 78.67 162⇓ *i*pP pP 15 34 31.0 +3.0
NATX Nacogdoches 79.15 302 *e*P **P** **15 34 28.5 -1.5**
comp=Z,128nm,0.9s,mb5.8
NATX LR LR
comp=Z,3μm,19.0s,MS5.6
EYMN Ely 79.38 319 *e*P **P** **15 34 28.9 -1.9**
comp=Z,57nm,1.3s,mb5.3
EYMN LR LR
comp=Z,7μm,19.0s,MS6.0
SCIA State Center 79.45 313 *e*P **P** **15 34 31.1 -0.3**
comp=Z,140nm,1.4s,mb5.7
SCIA LR LR
comp=Z,5μm,19.0s,MS5.9
VHO Vista Hermosa 79.77 287 *e*P **P** **15 34 33.2 -0.4**
HKT Hockley 79.96 300 *e*P **P** **15 34 33.5 -0.8**
comp=Z,64nm,1.5s,mb5.3
HKT LR LR
comp=Z,4μm,20.0s,MS5.7
KBS Kingsbay 80.33 6 *e*P **P** **15 34 36.9 +1.6**
KBS AMB AMB 15 34 45.1
comp=Z,52nm,3.5s
KBS *e*S S 15 44 42.5 +1.2
KBS AMS AMS 16 06 26.3
comp=Z,4μm,20.7s,MS5.8
KBS Kingsbay 80.33 6 *e*P **P** **15 34 36.4 +1.0**
comp=Z,48nm,1.1s,mb5.3
KBS LR LR
comp=Z,5μm,20.0s,MS5.8
PNIG Pinotepa 81.07 286 *e*P **P** **15 34 39.4 -1.2**
KVTX Kingsville 81.54 298 PFAKE 15 34 50.0 +7.1
KVTX LR LR
comp=Z,3μm,20.0s,MS5.7
KSU1 Kansas State U 81.61 309 *e*P **P** **15 34 41.9 -1.1**
comp=Z,44nm,0.9s,mb5.4
KSU1 LR LR
comp=Z,6μm,19.0s,MS6.0
AB31 Akbulak array 81.79 40⇑ *e*P **P** **15 34 43.3 -0.4**
AB31 Akbulak array 81.79 40 *i*P **P** **15 34 43.3 -0.4**
AB31 pmax pmax
comp=Z,537nm,2.1s,mb6.1
ABKAR Akbulak array 81.79 40 *e*P **P** **15 34 43.0 -0.7**
comp=Z,70nm,0.8s,mb5.6
ABKAR *e*PP PP 15 37 51.8 +1.0
SOKR Solikamsk 82.07 30*c i*P **P** **15 34 45.3 +0.3**
SOKR S S 15 44 55.8 -4.2
SOKR pmax pmax
comp=Z,220nm,1.2s,mb6.0
SOKR MLR MLR
comp=Z,6μm,20.0s,MS6.0
ECSD EROS Data Cent 82.19 314⇓ *i*P **P** **15 34 45.2 -0.8**
comp=Z,88nm,1.1s,mb5.6
ECSD LR LR
comp=Z,4μm,19.0s,MS5.8
ARU Arti 82.30 33⇑ *e*P **P** **15 34 45.7 -0.5**
comp=Z,234nm,1.3s,mb6.0
ARU LR LR
comp=Z,8μm,19.0s,MS6.1
ARU Arti 82.30 33*c i*P **P** **15 34 45.3 -0.9**
ARU *e* 15 37 50.0
ARU *e*PPP 15 39 41.5
ARU S S 15 44 58.7 -3.8
ARU SSS 15 53 41.1
ARU pmax pmax
comp=Z,201nm,1.4s,mb5.9
ARU MLR MLR
comp=Z,8μm,17.0s,MS6.2
ARU Arti 82.30 33 P **P** **15 34 46.3 +0.1**
comp=Z,777nm,1.1s,mb6.5,SNR=25
AGMN Agassiz Nation 82.32 319 *e*P **P** **15 34 46.0 -0.5**
comp=Z,110nm,1.0s,mb5.7
AGMN LR LR
comp=Z,7μm,20.0s,MS6.0
WMOK Wichita Mounta 82.89 305 *e*P **P** **15 34 49.0 -0.8**
comp=Z,128nm,1.2s,mb5.8
WMOK LR LR
comp=Z,9μm,22.0s,MS6.1
WMOK Wichita Mounta 82.89 305 *e*P **P** **15 34 49.0 -0.8**
WMOK pmax pmax
comp=Z,128nm,1.2s,mb5.8
WMOK MLR MLR
comp=Z,9μm,22.0s,MS6.1
JCT Junction City 83.42 301 ⇓P **P** **15 34 52.3 -0.4**
baz=84,SNR=18
JCT ⇓S S 15 45 13.1 -2.0
baz=84
JCT Junction City 83.42 301 *e*P **P** **15 34 52.2 -0.5**
comp=Z,173nm,1.3s,mb5.9
JCT LR LR
comp=Z,3μm,20.0s,MS5.7
SVE Sverdlovsk 83.50 33⇓ *e*P **P** **15 34 53.1 +0.6**
SVE *e*S S 15 45 11.1 -3.6
SVE pmax pmax
comp=Z,141nm,1.1s,mb5.9
SVE MLR MLR
comp=Z,8μm,18.0s,MS6.2
CBKS Cedar Bluff 84.00 309 ⇑P **P** **15 34 55.8 +0.3**
baz=84
CBKS Cedar Bluff 84.00 309 *e*P **P** **15 34 55.3 -0.1**
comp=Z,220nm,1.2s,mb6.2
CBKS LR LR
comp=Z,6μm,19.0s,MS6.0
CBKS Cedar Bluff 84.00 309 *e*P **P** **15 34 55.3 -0.2**
CBKS pmax pmax
comp=Z,220nm,1.2s,mb6.2
CBKS MLR MLR
comp=Z,6μm,19.0s,MS6.0
ALE Alert 84.69 355 P **P** **15 35 00.2 +2.1**
comp=Z,114nm,1.6s,mb5.8,SNR=5.1
AMTX Amarillo 85.28 305 ⇑P **P** **15 35 01.7 -0.3**
baz=86
AMTX ⇑S S 15 45 24.8 -8.6
baz=86
AMTX Amarillo 85.28 305 *e*P **P** **15 35 02.1 +0.1**
comp=Z,70nm,1.2s,mb5.7
AMTX LR LR
comp=Z,7μm,21.0s,MS6.1
OGNE Ogallala 85.92 311 ⇑P **P** **15 35 05.1 0.0**
baz=86
OGNE Ogallala 85.92 311 *e*P **P** **15 35 05.8 +0.7**
comp=Z,594nm,1.5s,mb6.6
OGNE LR LR
comp=Z,8μm,20.0s,MS6.1
528A Cox Ranch, San 85.98 300 ⇑P **P** **15 35 05.7 0.0**
baz=86
628A Black Gap, Mar 86.05 299 ⇓P **P** **15 35 05.9 -0.1**
baz=86,SNR=44
328A Wristen Ranch, 86.05 301 ⇑P **P** **15 35 05.6 -0.3**
baz=86
MSTX Muleshoe 86.14 304 ⇓P **P** **15 35 06.8 +0.5**
baz=86,SNR=31
MAW Mawson 86.28 158 *e*P **P** **15 35 08.2 +2.0**
comp=Z,17nm,0.9s,mb5.3
MAW *e*S ScS 15 45 51.9 +1.3
MAW Mawson 86.28 158 *e*P **P** **15 35 03.3 -2.9**
comp=Z,14nm,1.3s,mb5.0
W27A Bowe Ranch, En 86.42 305 ⇓P **P** **15 35 07.9 +0.2**
baz=87,SNR=9.4
X27A F and S Farms, 86.44 305 ⇓P **P** **15 35 07.6 -0.2**
baz=87
Y27A Causey 86.46 304 ⇓P **P** **15 35 07.8 0.0**
baz=87,SNR=19
627A Terlingua Ranc 86.48 299 ⇑P **P** **15 35 07.9 -0.2**
baz=87
227A Bennet, Jal 86.49 302 ⇑P **P** **15 35 08.2 +0.1**
baz=87,SNR=8.8
427A Hayter Ranch, 86.54 301 ⇓P **P** **15 35 08.4 0.0**
baz=87
327A Balmorhea Ranc 86.64 301 ⇓P **P** **15 35 08.7 -0.1**
baz=87
527A Woodward Ranch 86.70 300 ⇑P **P** **15 35 09.3 +0.2**
baz=87,SNR=37
FFC Flin Flon 86.86 325 *e*P **P** **15 35 08.9 -0.4**
comp=Z,24nm,1.3s,mb5.3
FFC LR LR
comp=Z,7μm,19.0s,MS6.1
FFC Flin Flon 86.86 325 *e*P **P** **15 35 08.9 -0.4**
FFC pmax pmax
comp=Z,24nm,1.3s,mb5.3
FFC MLR MLR
comp=Z,7μm,19.0s,MS6.1
W26A Owens Ranch, T 87.00 305 ⇑P **P** **15 35 11.3 +0.8**
baz=87,SNR=10
Y26A Elida 87.01 304 ⇑P **P** **15 35 11.4 +0.8**
baz=87,SNR=27
X26A CR and CF Fran 87.02 304 ⇓P **P** **15 35 10.4 -0.2**
baz=87,SNR=30
V26A Tequesquite Ra 87.05 306 ⇑P **P** **15 35 10.5 -0.2**
baz=87,SNR=23
326A Caldwell Ranch 87.05 301 ⇑P **P** **15 35 11.3 +0.5**
baz=87,SNR=24

426A	McDonald Obser	87.07	301	⇑P		P		15 35 11.0	+0.1		
	baz=87,SNR=17										
526A	Mary Lane Ranc	87.11	300	⇓P		P		15 35 11.3	+0.1		
	baz=87,SNR=35										
KBL	Kabul	87.11	56	*e*P		P		15 35 10.6	-0.5		
	comp=Z,40nm,1.2s,mb5.5										
KBL	Kabul	87.11	56	*e*P		P		15 35 10.6	-0.5		
KBL					pmax	pmax					
	comp=Z,40nm,1.2s,mb5.5										
Z26A	Caprock	87.11	303	⇑P		P		15 35 10.8	-0.3		
	baz=87,SNR=14										
126A	Clayton Basin,	87.13	303	⇓P		P		15 35 11.0	-0.2		
	baz=87,SNR=17										
626A	Big Bend Ranch	87.13	299	⇓P		P		15 35 11.0	-0.2		
	baz=87,SNR=19										
226A	Malaga, Loving	87.18	302	⇑P		P		15 35 11.8	+0.4		
	baz=87,SNR=29										
GDL2	Guadalupe Moun	87.41	302	*e*P		P		15 35 13.0	+0.5		
	comp=Z,79nm,1.2s,mb5.8										
O25A	Wiggins	87.47	310	⇑P		P		15 35 13.4	+0.7		
	baz=88										
N25A	Grover	87.47	311	⇑P		P		15 35 12.8	+0.1		
	baz=88										
P25A	Willow Gulch B	87.48	309	⇑P		P		15 35 13.1	+0.4		
	baz=88,SNR=8.4										
Q25A	Bedland, Calha	87.53	309	⇓P		P		15 35 13.6	+0.7		
	baz=88,SNR=19										
R25A	Fountain Ranch	87.53	308	⇑P		P		15 35 13.5	+0.5		
	baz=88,SNR=19										
RSSD	Black Hills	87.57	314	⇓*e*P		P		15 35 13.1	0.0		
	comp=Z,31nm,1.2s,mb5.4										
RSSD					LR	LR					
	comp=Z,4µm,19.0s,MS5.8										
U25A	Circle Dot Ran	87.57	306	⇓P		P		15 35 13.3	+0.1		
	baz=88,SNR=19										
W25A	X Bar L Ranch,	87.58	305	⇓P		P		15 35 13.4	+0.1		
	baz=88,SNR=14										
T25A	Trinidad	87.59	307	⇑P		P		15 35 14.1	+0.8		
	baz=88,SNR=12										
S25A	Robets Cordova	87.63	308	⇑P		P		15 35 14.3	+0.8		
	baz=88,SNR=28										
V25A	Rancho No Teng	87.72	306	⇑P		P		15 35 14.3	+0.4		
	baz=88,SNR=12										
X25A	Clemmons Ranch	87.72	304	⇓P		P		15 35 14.1	+0.1		
	baz=88,SNR=6.8										
Y25A	Mesa, Roswell	87.73	304	⇓P		P		15 35 14.3	+0.2		
	baz=88,SNR=17										
Z25A	Roswell	87.73	303	⇑P		P		15 35 13.9	-0.2		
	baz=88										
225A	Deer Hill, Car	87.79	302	⇑P		P		15 35 14.0	-0.4		
	baz=88,SNR=5.5										
DGMT	Dagmar	87.86	318	⇓P		P		15 35 14.9	+0.6		
	baz=88,SNR=7.5										
DGMT	Dagmar	87.86	318	*e*P		P		15 35 13.2	-1.1		
	comp=Z,123nm,1.2s,mb6.0										
DGMT					LR	LR					
	comp=Z,8µm,21.0s,MS6.1										
ZRNK	Zerenda	87.87	37	P		P		15 35 14.7	+0.4		
ZRNK					pmax	pmax					
	comp=Z,1.0nm,1.9s										
325A	Bean Ranch, Si	87.90	301	⇑P		P		15 35 15.0	0.0		
	baz=88,SNR=26										
425A	Indio Mountain	87.90	301	⇑P		P		15 35 15.1	+0.2		
	baz=88,SNR=43										
M24A	Cheyenne	88.05	311	⇓P		P		15 35 16.8	+1.4		
	baz=88,SNR=25										
P24A	Kohler Place,	88.06	309	⇓P		P		15 35 16.2	+0.7		
	baz=88										
N24A	Carr	88.08	311	⇓P		P		15 35 15.9	+0.4		
	baz=88										
T24A	Torres, Weston	88.11	307	⇑P		P		15 35 17.4	+1.6		
	baz=88,SNR=9.1										
L24A	Wheatland	88.15	312	⇓P		P		15 35 16.4	+0.5		
	baz=88,SNR=6.0										
R24A	Sanders Place,	88.18	308	⇑P		P		15 35 17.3	+1.2		
	baz=88,SNR=16										
O24A	Longmont	88.20	310	⇓P		P		15 35 17.2	+1.1		
	baz=88										
Q24A	Divide	88.23	309	⇑P		P		15 35 17.4	+1.1		
	baz=88,SNR=31										
S24A	Houchin Ranch,	88.25	307	⇑P		P		15 35 17.1	+0.7		
	baz=88,SNR=31										
V24A	Rampart Ranch,	88.25	306	⇑P		P		15 35 17.7	+1.2		
	baz=88,SNR=32										
MNTX	Cornudas Mount	88.26	302	⇑P		P		15 35 16.9	+0.3		
	baz=88,SNR=18										
MNTX	Cornudas Mount	88.26	302	*e*P		P		15 35 15.9	-0.8		
	comp=Z,33nm,1.4s,mb5.4										
MNTX					LR	LR					
	comp=Z,3µm,20.0s,MS5.8										
U24A	Moreno Valley	88.27	306	⇑P		P		15 35 16.8	+0.2		
	baz=88										
Z24A	Sheeppen Canyo	88.28	303	⇓P		P		15 35 17.1	+0.5		
	baz=88,SNR=11										
124A	Stringfield Ra	88.34	303	⇓P		P		15 35 17.6	+0.6		
	baz=89,SNR=20										
324A	Moseley Ranch,	88.34	301	⇑P		P		15 35 16.8	-0.2		
	baz=89										
Y24A	Capitan	88.35	304	⇑P		P		15 35 17.5	+0.5		
	baz=89										
W24A	Lazy 6 Ranch,	88.35	305	⇑P		P		15 35 17.7	+0.8		
	baz=89,SNR=23										
X24A	Lazy VL Ranch,	88.36	304	⇑P		P		15 35 17.4	+0.4		
	baz=89,SNR=8.4										
224A	Cornudas Mount	88.39	302	⇓P		P		15 35 16.7	-0.5		
	baz=89,SNR=17										
PAF	Port-aux-Franc	88.45	139		PFAKE			15 35 20.0	+2.9		
PAF					LR	LR					
	comp=Z,4µm,20.0s,MS5.8										
SDCO	Great Sand Dun	88.48	308	⇑P		P		15 35 18.6	+1.1		
	baz=89,SNR=21										
SDCO	Great Sand Dun	88.48	308	⇓*e*P		P		15 35 18.5	+1.0		
	comp=Z,83nm,1.2s,mb5.8										
SDCO					LR	LR					
	comp=Z,4µm,19.0s,MS5.8										
KK31	Karatay Array	88.52	47	⇑*e*P		P		15 35 17.5	-0.1		
KKAR	Karatay Array	88.52	47	*e*P		P		15 35 17.0	-0.6		
	comp=Z,58nm,1.1s,mb5.8										
KKAR				*e*PP		PP		15 38 44.4	-1.2		
KKAR	Karatay Array	88.52	47	*e*P		P		15 35 17.0	-0.6		
KKAR				*e*				15 38 44.4			
KKAR					pmax	pmax					
	comp=Z,57nm,1.1s,mb5.8										
PHWY	Pilot Hill	88.52	311	*e*P		P		15 35 18.2	+0.5		
	comp=Z,32nm,1.1s,mb5.6										
ISCO	Idaho Springs	88.61	310	⇑P		P		15 35 19.3	+1.2		
	baz=89,SNR=24										
ISCO	Idaho Springs	88.61	310	⇓*e*P		P		15 35 19.3	+1.2		
	comp=Z,84nm,1.3s,mb5.9										
ISCO					LR	LR					
	comp=Z,5µm,19.0s,MS6.0										
ISCO	Idaho Springs	88.61	310	⇓*e*P		P		15 35 19.3	+1.2		
ISCO					pmax	pmax					
	comp=Z,84nm,1.3s,mb5.9										
ISCO					MLR	MLR					
	comp=Z,5µm,19.0s,MS6.0										
BRVK	Borovoye	88.64	37	P		P		15 35 18.3	+0.4		
	comp=Z,248nm,1.1s,mb6.5,SNR=25										
BRVK	Borovoye	88.64	37	*e*P		P		15 35 18.1	+0.1		
	comp=Z,49nm,1.0s,mb5.8										
BRVK					LR	LR					
	comp=Z,6µm,21.0s,MS6.0										
BRVK	Borovoye	88.64	37	*e*P		P		15 35 18.1	+0.2		
BRVK					pmax	pmax					
	comp=Z,49nm,1.0s,mb5.8										
BRVK					MLR	MLR					
	comp=Z,6µm,21.0s,MS6.0										
BRVK	Borovoye	88.64	37	P		P		15 35 18.8	+0.8		
	SNR=52										
BVA0	Borovoye Array	88.71	37	*i* P		P		15 35 17.7	-0.5		
BVA0					pmax	pmax					
	comp=Z,35nm,2.4s,mb5.3										
L23A	Garrett	88.72	312	⇑P		P		15 35 19.0	+0.4		
	baz=89,SNR=11										
Q23A	Hartsel	88.76	309	⇑P		P		15 35 19.5	+0.6		
	baz=89,SNR=19										
P23A	Jefferson	88.78	309	⇓P		P		15 35 20.0	+1.1		
	baz=89,SNR=25										
O23A	Lake Granby, G	88.85	310	⇓P		P		15 35 20.3	+1.1		
	baz=89,SNR=19										
Y23A	Lovelace Mesa,	88.86	304	⇑P		P		15 35 20.2	+0.7		
	baz=89,SNR=19										
S23A	Nye Farm, Mont	88.88	308	⇑P		P		15 35 20.3	+0.9		
	baz=89										
N23A	Red Feather La	88.88	311	⇑P		P		15 35 20.2	+0.8		
	baz=89,SNR=25										
T23A	Casias Ranch,	88.89	307	⇑P		P		15 35 21.0	+1.5		
	baz=89,SNR=9.6										
W23A	Werner Place,	88.96	305	⇑P		P		15 35 21.0	+1.2		
	baz=89,SNR=17										
X23A	Hourglass Bar	88.98	304	⇓P		P		15 35 20.3	+0.3		
	baz=89										
V23A	Ortiz Mt. (NFS	88.99	306	⇓P		P		15 35 20.3	+0.3		
	baz=89,SNR=13										
Z23A	Rita Site, Whi	89.00	303	⇓P		P		15 35 21.0	+0.9		
	baz=89										
U23A	El Rito	89.01	306	⇑P		P		15 35 21.0	+0.9		
	baz=89										
123A	Bell Site, Whi	89.02	302	⇓P		P		15 35 20.2	0.0		
	baz=89										
VOSK	Vostochnaya	89.06	37	P		P		15 35 19.6	-0.3		
VOSK					pmax	pmax					
	comp=Z,180nm,1.2s,mb6.3										
223A	Chaparral, Ant	89.15	302	⇑P		P		15 35 21.3	+0.4		
	baz=89										
LAO	LASA Array	89.18	317	⇓P		P		15 35 20.7	+0.1		
	baz=89,SNR=11										
LAO	LASA Array	89.18	317	⇓*i*P		P		15 35 20.6	0.0		
	comp=Z,110nm,1.4s,mb6.0										
LAO					LR	LR					
	comp=Z,6µm,19.0s,MS6.0										
ANMO	Albuquerque	89.21	305	⇓*e*P		P		15 35 21.7	+0.6		
	comp=Z,34nm,1.3s,mb5.5										
N22A	Wattenberg Ran	89.27	311	⇓P		P		15 35 22.0	+0.8		
	baz=90,SNR=23										
O22A	Kremling	89.33	310	⇑P		P		15 35 22.0	+0.5		
	baz=90,SNR=25										
BNM	Barren Site	89.34	304	*e*P		P		15 35 23.0	+1.3		
	comp=Z,58nm,1.4s,mb5.7										
K22A	Casper	89.34	312	⇑P		P		15 35 21.3	-0.2		
	baz=90										
LPM	Los Pinos Moun	89.34	304	*e*P		P		15 35 19.4	-2.3		
	comp=Z,41nm,1.3s,mb5.6										
M22A	Cedar Creek Ra	89.38	311	⇑P		P		15 35 22.5	+0.8		
	baz=90,SNR=9.0										
R22A	Saguache, Gunn	89.48	308	⇑P		P		15 35 23.4	+1.2		
	baz=90,SNR=35										
P22A	Eagle	89.49	309	⇓P		P		15 35 22.7	+0.5		
	baz=90,SNR=15										
S22A	4UR Ranch, Cre	89.53	308	⇑P		P		15 35 23.0	+0.5		
	baz=90,SNR=30										
U22A	Llaves	89.54	306	⇑P		P		15 35 24.0	+1.5		
	baz=90,SNR=26										
W22A	Albuquerque	89.55	305	⇓P		P		15 35 23.3	+0.7		
	baz=90										
Y22D	IRIS PASSCAL I	89.58	304	⇓P		P		15 35 23.3	+0.4		
	baz=90										
V22A	San Miguel Ran	89.58	306	⇑P		P		15 35 23.4	+0.6		
	baz=90										
T22A	Edith	89.58	307	⇓P		P		15 35 23.8	+1.0		
	baz=90,SNR=24										
Q22A	Crested Butte,	89.60	309	⇑P		P		15 35 23.5	+0.8		
	baz=90,SNR=19										
Z22A	Elephant Butte	89.61	303	⇑P		P		15 35 23.6	+0.6		
	baz=90,SNR=20										
Y22A	Socorro	89.62	304	⇑P		P		15 35 23.9	+0.9		
	baz=90,SNR=16										
LENM	Lemitar	89.63	304	*e*P		P		15 35 22.6	-0.4		
	comp=Z,55nm,1.4s,mb5.7										
122A	Conniff Cattle	89.64	303	⇑P		P		15 35 23.8	+0.7		
	baz=90										
SMCO	Snemmass	89.65	309	*e*P		P		15 35 24.3	+1.3		
	comp=Z,71nm,1.3s,mb5.8										
D21A	La Casta Ranch	89.71	317	⇓P		P		15 35 23.2	+0.1		
	baz=90										
222A	Williams Famil	89.73	302	⇑P		P		15 35 23.7	+0.2		
	baz=90										
H21A	Big Horn, Sher	89.73	314	⇑P		P		15 35 23.4	+0.1		
	baz=90										
LAZ	Ladron	89.77	304	*e*P		P		15 35 24.9	+1.3		
	comp=Z,37nm,1.4s,mb5.5										
E21A	Keefer Ranch,	89.77	316	⇓P		P		15 35 23.5	+0.1		
	baz=90,SNR=6.0										
F21A	Absaloka Mine,	89.80	316	⇑P		P		15 35 23.1	-0.5		
	baz=90										
RWWY	Rawlins	89.84	311	*e*P		P		15 35 24.5	+0.6		
	comp=Z,163nm,1.8s,mb6.1										
G21A	Lodge Grass	89.85	315	⇓P		P		15 35 23.8	0.0		
	baz=90										
K21A	Alcova	89.88	312	⇓P		P		15 35 23.9	-0.1		
	baz=90,SNR=22										
DGAR	Diego Garcia	89.89	97		PFAKE			15 35 30.0	+5.3		
DGAR					LR	LR					
	comp=Z,6µm,22.0s,MS6.0										
I21A	Big Trails, Te	89.91	314	⇓P		P		15 35 24.1	0.0		
	baz=90,SNR=28										
M21A	Separation Pea	89.96	311	⇑P		P		15 35 24.7	+0.3		
	baz=90,SNR=10										
L21A	Rawlins	89.96	312	⇓P		P		15 35 24.5	+0.1		
	baz=90,SNR=19										
O21A	Pagoda	90.04	310	⇑P		P		15 35 25.0	+0.2		
	baz=90										
QSPA	South Pole Qui	90.05	180	*e*P		P		15 35 20.4	-3.6		
	comp=Z,75nm,1.0s,mb6.0										
QSPA					LR	LR					
	comp=Z,2µm,20.0s,MS5.6										
N21A	Black Mountain	90.08	311	⇓P		P		15 35 25.0	+0.1		
	baz=90,SNR=8.6										
T21A	Navajo Lake	90.09	307	⇑P		P		15 35 25.4	+0.3		
	baz=90										
R21A	Cimarron	90.10	308	⇓P		P		15 35 24.8	-0.4		
	baz=90,SNR=13										
Q21A	Lamborn Mesa,	90.12	309	⇓P		P		15 35 26.2	+1.0		
	baz=90,SNR=18										
V21A	Milan	90.17	306	⇓P		P		15 35 25.7	+0.1		
	baz=90										
W21A	San Fidel	90.19	305	⇓P		P		15 35 25.9	+0.3		
	baz=90,SNR=5.1										
U21A	Nagezi	90.19	306	⇓P		P		15 35 25.9	+0.3		
	baz=90,SNR=28										
Z21A	St. Cloud Mine	90.21	303	⇑P		P		15 35 26.7	+1.0		
	baz=90,SNR=6.5										
Y21A	Point of Rocks	90.21	304	⇑P		P		15 35 26.6	+0.9		
	baz=90,SNR=11										
S21A	Coal Bank Pass	90.29	307	⇓P		P		15 35 26.2	+0.2		
	baz=90,SNR=24										
X21A	Alamcita Cree	90.30	304	⇓P		P		15 35 27.0	+0.9		
	baz=90,SNR=30										
221A	Mesquite Ranch	90.30	302	⇑P		P		15 35 27.1	+0.8		
	baz=90,SNR=7.5										
121A	Cookes Peak, D	90.31	302	⇑P		P		15 35 26.6	+0.4		
	baz=90,SNR=10										
H20A	Greybull	90.42	314	⇑P		P		15 35 25.9	-0.5		
	baz=91,SNR=7.2										
D20A	Manuel Ranch,	90.49	317	⇓P		P		15 35 27.1	+0.4		
	baz=91										
E20A	Meyer Farm, Mu	90.50	316	⇑P		P		15 35 27.1	+0.4		
	baz=91										
I20A	Worland	90.51	314	⇓P		P		15 35 26.3	-0.7		
	baz=91										
G20A	Bridger	90.56	315	⇓P		P		15 35 26.3	-0.8		
	baz=91										
M20A	Sweetwater, Wa	90.58	311	⇓P		P		15 35 27.8	+0.5		
	baz=91,SNR=6.1										
O20A	White River Ci	90.63	310	⇑P		P		15 35 27.3	-0.2		
	baz=91										
N20A	Spence Gulch,	90.64	311	⇑P		P		15 35 27.5	-0.1		
	baz=91,SNR=10.0										
K20A	Yellowstone Ra	90.68	312	⇓P		P		15 35 27.4	-0.4		
	baz=91,SNR=22										
Q20A	Ridgley Place,	90.68	309	⇑P		P		15 35 28.3	+0.5		
	baz=91,SNR=14										
L20A	Wamsutter	90.69	312	⇓P		P		15 35 28.0	+0.2		
	baz=91										
S20A	Disappointment	90.74	308	⇑P		P		15 35 28.7	+0.6		
	baz=91,SNR=13										
P20A	De Beque	90.75	309	⇓P		P		15 35 29.0	+0.9		
	baz=91										
R20A	Redvale	90.75	308	⇓P		P		15 35 29.3	+1.2		
	baz=91,SNR=10										
Y20A	Horse Springs,	90.79	304	⇓P		P		15 35 29.2	+0.7		
	baz=91,SNR=13										
V20A	Brimhall	90.85	306	⇑P		P		15 35 29.0	+0.3		
	baz=91,SNR=10										
AML	Almayashu	90.86	48	P		P		15 35 30.1	+1.5		
	SNR=5.5										
AML	Almayashu	90.86	48	*e*P		P		15 35 29.8	+1.2		
	comp=Z,261nm,1.8s,mb6.3										
AML					LR	LR					
	comp=Z,8µm,19.0s,MS6.2										
MVCO	Mesa Verde	90.86	307	⇓P		P		15 35 29.6	+0.9		
	baz=91,SNR=20										
MVCO	Mesa Verde	90.86	307	*e*P		P		15 35 29.7	+1.0		
	comp=Z,115nm,1.4s,mb6.0										
MVCO					LR	LR					
	comp=Z,3µm,19.0s,MS5.8										
W20A	Ramah	90.88	305	⇓P		P		15 35 29.1	+0.2		
	baz=91										
U20A	Newcomb	90.89	306	⇑P		P		15 35 29.8	+1.0		
	baz=91										
X20A	Quemado	90.89	304	⇑P		P		15 35 29.3	+0.4		
	baz=91,SNR=23										
PV01	Paradox Valley	90.91	308	*e*P		P		15 35 30.0	+1.1		
EKS2	Erkin-Say	90.91	48	P		P		15 35 29.6	+0.8		
	SNR=30										
EKS2	Erkin-Say	90.91	48	*e*P		P		15 35 29.0	+0.2		
	comp=Z,42nm,1.2s,mb5.7										
EKS2					LR	LR					
	comp=Z,5µm,20.0s,MS5.9										
220A	Playas Peak, P	90.94	302	⇓P		P		15 35 29.9	+0.7		
	baz=91,SNR=18										
320A	Kipp Ranch, An	90.94	301	⇓P		P		15 35 29.9	+0.7		
	baz=91,SNR=20										
E19A	Rath Farm, Rou	90.95	316	⇓P		P		15 35 28.7	-0.2		
	baz=91										
Z20A	Nine Sixteen R	90.98	303	⇓P		P		15 35 30.3	+0.9		
	baz=91,SNR=24										
120A	U Bar Ranch, L	91.02	302	⇓P		P		15 35 30.2	+0.7		
	baz=91,SNR=23										
K19A	Absolon Red Bu	91.05	313	⇑P		P		15 35 29.0	-0.5		
	baz=91										
F19A	Roth Farm, Mol	91.07	316	⇓P		P		15 35 29.1	-0.3		
	baz=91										
C19A	Slack Wire Ran	91.10	318	⇓P		P		15 35 29.2	-0.4		
	baz=91										
PV04	Paradox Valley	91.17	308	*e*P		P		15 35 30.1	0.0		
P19A	Cripple Cowboy	91.21	309	⇓P		P		15 35 30.7	+0.4		
	baz=92,SNR=14										
POO	Poona	91.23	72	*e*PKP		P		15 35 27.0	-3.8		
POO					AMb	AMB		15 35 41.3			
	comp=Z,112nm,1.7s,mb5.9										
T19A	Beclabito	91.29	307	⇑P		P		15 35 31.0	+0.3		
	baz=92,SNR=8.9										
O19A	Miners Draw (B	91.30	310	⇑P		P		15 35 31.1	+0.4		
	baz=92										
RLMT	Red Lodge	91.31	315	⇓P		P		15 35 30.8	+0.2		
	baz=92										
RLMT	Red Lodge	91.31	315	⇓*e*P		P		15 35 30.4	-0.2		
	comp=Z,39nm,1.3s,mb5.6										
RLMT					LR	LR					
	comp=Z,5µm,19.0s,MS6.0										
V19A	Window Rock	91.32	306	⇑P		P		15 35 31.0	+0.1		
	baz=92										
N19A	John Jarvie Ra	91.33	311	⇓P		P		15 35 30.8	0.0		
	baz=92										
S19A	Harvey Farm, M	91.36	308	⇑P		P		15 35 31.4	+0.4		
	baz=92,SNR=16										
USP	Ospenovka	91.43	47	P		P		15 35 31.8	+0.5		
	SNR=19										
Q19A	Hogan Spring (	91.44	309	⇓P		P		15 35 32.1	+0.7		
	baz=92,SNR=19										
AAK	Ala-Archa	91.44	48	P		P		15 35 32.1	+0.8		
	SNR=25										
AAK	Ala-Archa	91.44	48	*e*P		P		15 35 31.6	+0.3		
	comp=Z,73nm,1.1s,mb5.9										
AAK					LR	LR					
	comp=Z,5µm,20.0s,MS6.0										
AAK	Ala-Archa	91.44	48	*ce*P		P		15 35 31.8	+0.5		
AAK					pmax	pmax					
	comp=Z,44nm,1.4s,mb5.6										
AAK					MLR	MLR					
	comp=Z,2µm,24.0s,MS5.5										
AAK	Ala-Archa	91.44	48	P		P		15 35 32.4	+1.1		
	comp=Z,315nm,1.1s,mb6.6,SNR=18										
AAK	Ala-Archa	91.44	48	P		P		15 35 32.6	+1.3		
	SNR=56										
U19A	Dine' College,	91.44	306	⇓P		P		15 35 31.6	+0.1		
	baz=92,SNR=9.3										
R19A	Curley Farm, L	91.45	308	⇑P		P		15 35 32.0	+0.6		
	baz=92,SNR=9.9										
UCH	Uchtor	91.47	48	*e*P		P		15 35 29.9	-1.5		
	comp=Z,13nm,1.1s,mb5.2										
UCH					LR	LR					
	comp=Z,4µm,19.0s,MS5.8										
G18A	Lazy EL Ranch,	91.52	315	⇓P		P		15 35 31.2	-0.4		
	baz=92										
Y19A	Nutrioso	91.52	304	⇑P		P		15 35 32.8	+1.0		
	baz=92,SNR=20										
FRU	Bishkek	91.53	47	*e*P		P		15 35 30.5	-1.2		
FRU				*e*				15 39 04.0			
FRU				*e*S		SKSac		15 46 04.5	-0.7		
FRU				*e*				15 46 34.0			
FRU				

LKWY Lake 92.13 314 PFAKE 15 35 40.0 +5.6
LKWY LR LR
comp=Z,7µm,19.0s,MS6.1
118A Homack Ranch, 92.15 302 ⇓P **P** 15 35 35.2 +0.4
baz=92,SNR=20
A17A Triple J Farms 92.17 319 ⇓P **P** 15 35 34.3 -0.2
baz=92
Y18A Canyon Day Jun 92.17 304 ⇓P **P** 15 35 35.0 +0.1
baz=92,SNR=11
P18A Preston Nutter 92.18 309 ⇑P **P** 15 35 35.2 +0.4
baz=92,SNR=19
318A Bisbee 92.19 301 ⇓P **P** 15 35 35.7 +0.7
baz=92
Z18A Geronimo 92.19 303 ⇑P **P** 15 35 35.2 +0.2
baz=92
218A Dragoon 92.23 302 ⇑P **P** 15 35 35.5 +0.4
baz=92,SNR=11
D17A Six Diamond Ra 92.23 317 ⇑P **P** 15 35 34.9 +0.1
baz=92
TKM2 Tokmak 2 92.25 47 P **P** 15 35 35.2 +0.2
SNR=29
TKM2 Tokmak 2 92.25 47 *e*P **P** 15 35 34.9 -0.1
comp=Z,39nm,1.0s,mb5.7
TKM2 LR LR
comp=Z,4µm,19.0s,MS5.9
B17A L&G Farms, Che 92.26 318 ⇑P **P** 15 35 34.7 -0.2
baz=92
C17A Wharram Farm, 92.27 317 ⇑P **P** 15 35 34.5 -0.5
baz=92
F17A Fitzpatrick Pl 92.27 316 ⇑P **P** 15 35 34.8 -0.2
baz=92
I17A Pilgrim Ck. 92.28 314 ⇓P **P** 15 35 35.4 +0.3
baz=92
LOHW Long Hollow 92.31 313 *e*P **P** 15 35 34.4 -0.8
comp=Z,23nm,1.3s,mb5.3
G17A Pierce Place, 92.34 315 ⇑P **P** 15 35 35.3 -0.1
baz=93
FLWY Flagg Ranch 92.37 314 *e*P **P** 15 35 35.2 -0.3
comp=Z,65nm,1.7s,mb5.7
E17A Martinsdale 92.38 316 ⇑P **P** 15 35 35.0 -0.5
baz=93
J17A Brown Place, J 92.40 313 ⇑P **P** 15 35 36.0 +0.3
baz=93
MOOW Moose Ponds 92.41 314 *e*P **P** 15 35 35.4 -0.3
comp=Z,48nm,1.9s,mb5.5
SRU San Rafael 92.42 309 ⇑P **P** 15 35 36.0 +0.1
baz=93,SNR=12
SRU San Rafael 92.42 309 ⇓*e*P **P** 15 35 35.4 -0.5
comp=Z,33nm,1.3s,mb5.5
SRU San Rafael 92.42 309 ⇓*e*P **P** 15 35 35.4 -0.5
SRU pmax pmax
comp=Z,33nm,1.3s,mb5.5
SNOW Snow King Moun 92.43 313 *e*P **P** 15 35 36.2 +0.4
comp=Z,16nm,0.6s,mb5.6
M17A Scullys Gap (B 92.44 311 ⇑P **P** 15 35 36.5 +0.6
baz=93,SNR=9.5
REDW Red Top Meadow 92.50 313 *e*P **P** 15 35 36.1 -0.1
comp=Z,49nm,1.3s,mb5.8
O17A Robinson Place 92.54 310 ⇓P **P** 15 35 36.7 +0.3
baz=93,SNR=22
IMW Indian Meadow 92.55 314 *e*P **P** 15 35 36.2 -0.1
comp=Z,20nm,1.3s,mb5.4
Z17A San Carlos Hig 92.55 303 ⇓P **P** 15 35 37.3 +0.7
baz=93,SNR=6.2
P17A Butcher Ranch, 92.57 309 ⇑P **P** 15 35 36.0 -0.6
baz=93
L17A Cokeville 92.57 312 ⇑P **P** 15 35 36.7 +0.1
baz=93
TPAW Teton Pass 92.57 313 *e*P **P** 15 35 35.6 -0.9
comp=Z,21nm,1.2s,mb5.5
K17A Gardner Place, 92.58 313 ⇑P **P** 15 35 36.5 0.0
baz=93
R17A Hanksville Air 92.58 308 ⇑P **P** 15 35 36.5 -0.2
baz=93
N17A Moffit Pass 92.59 311 ⇑P **P** 15 35 36.7 +0.1
baz=93
S17A Black Ridge (B 92.68 307 ⇓P **P** 15 35 38.1 +1.0
baz=93,SNR=13
W17A Winslow 92.70 305 ⇑P **P** 15 35 37.4 +0.1
baz=93
T17A Navajo Res., N 92.71 307 ⇓P **P** 15 35 38.1 +0.8
baz=93,SNR=13
AHID Auburn Hatcher 92.71 313 PFAKE 15 35 50.0 +13
AHID LR LR
comp=Z,7µm,21.0s,MS6.1
H16A Russell Place, 92.73 315 ⇑P **P** 15 35 37.6 +0.4
baz=93
V17A Tonalea, Kykot 92.75 305 ⇓P **P** 15 35 38.4 +1.0
baz=93,SNR=26
ULHL Ulahol 92.75 48 P **P** 15 35 38.2 +0.9
SNR=23
A16A West Butte Ran 92.76 319 ⇑P **P** 15 35 36.8 -0.4
baz=93
117A Oracle 92.80 302 ⇓P **P** 15 35 37.9 +0.1
baz=93
X17A Forest Lakes 92.80 304 ⇓P **P** 15 35 38.7 +0.9
baz=93
D16A Dana Ranch, Ca 92.83 317 ⇑P **P** 15 35 37.6 0.0
baz=93
TUC Tucson 92.84 302 *e*P **P** 15 35 38.2 +0.2
comp=Z,21nm,1.4s,mb5.4
TUC LR LR
comp=Z,3µm,19.0s,MS5.7
TUC Tucson 92.84 302 *e*P **P** 15 35 38.2 +0.2
TUC pmax pmax
comp=Z,21nm,1.4s,mb5.4
TUC MLR MLR
comp=Z,3µm,19.0s,MS5.7
RRI2 Red Ridge 92.85 313 *e*P **P** 15 35 37.3 -0.5
comp=Z,62nm,1.5s,mb5.8
Y17A Roosevelt 92.85 304 ⇑P **P** 15 35 38.1 +0.1
baz=93,SNR=9.9
B16A M & M Farms, S 92.86 318 ⇓P **P** 15 35 37.4 -0.2
baz=93
KHET Khetri 92.88 62 *e*PKP **P** 15 35 36.5 -1.8
KHET AMb AMB 15 35 41.1
comp=Z,30nm,1.2s,mb5.6
217A Green Valley 92.89 302 ⇑P **P** 15 35 38.0 -0.3
baz=93
Q16A Castle Valley 92.93 309 ⇓P **P** 15 35 38.5 +0.3
baz=93
E16A East Helena 92.94 316 ⇑P **P** 15 35 38.3 +0.2
baz=93
I16A Newdale 92.94 314 ⇓P **P** 15 35 38.6 +0.4
baz=93
F16A Kennard Place, 92.95 316 ⇑P **P** 15 35 37.6 -0.5
baz=93
BOZ Bozeman (W) 92.95 316 ⇑P **P** 15 35 38.4 +0.2
baz=93
BOZ Bozeman (W) 92.95 316 PFAKE 15 35 50.0 +12
BOZ LR LR
comp=Z,5µm,19.0s,MS6.0
L16A Fish Haven 92.99 312 ⇓P **P** 15 35 37.9 -0.6
baz=93,SNR=5.5
U16A Tuba City 93.00 306 ⇑P **P** 15 35 38.6 0.0
baz=93,SNR=11
HRY Holter Researc 93.04 317 *e*P **P** 15 35 38.4 -0.1
comp=Z,2.1nm,0.4s,mb4.9
N16A Rees Ranch, Co 93.05 311 ⇑P **P** 15 35 38.6 -0.2
baz=93
J16A Bone 93.06 313 ⇓P **P** 15 35 38.7 0.0
baz=93
K16A Soda Springs 93.07 313 ⇑P **P** 15 35 38.8 0.0
baz=93
G16A Moss Hill, Enn 93.10 315 ⇑P **P** 15 35 39.0 +0.2
baz=93
HWUT Hardware Ranch 93.11 311 *e*P **P** 15 35 37.9 -1.1
comp=Z,20nm,1.2s,mb5.4
HWUT LR LR
comp=Z,8µm,21.0s,MS6.1
O16A Springville 93.13 310 ⇑P **P** 15 35 39.7 +0.5
baz=93
M16A Huntsville 93.17 311 ⇓P **P** 15 35 38.9 -0.4
baz=93,SNR=8.6
R16A Teasdale 93.20 308 ⇑P **P** 15 35 40.3 +0.8
baz=93
WUAZ Wupatki 93.22 305 ⇑P **P** 15 35 39.9 +0.2
baz=94,SNR=11
WUAZ Wupatki 93.22 305 *e*P **P** 15 35 40.0 +0.4
comp=Z,40nm,1.4s,mb5.7
WUAZ LR LR
comp=Z,4µm,22.0s,MS5.8
MPU Maple Canyon 93.23 310 *e*P **P** 15 35 40.3 +0.7
comp=Z,37nm,1.3s,mb5.7
T16A Glen Canyon Da 93.27 307 ⇓P **P** 15 35 40.4 +0.5
baz=94
P16A Fountain Green 93.27 309 ⇑P **P** 15 35 39.6 -0.2
baz=94
S16A Weppner Ranch, 93.31 308 ⇑P **P** 15 35 40.4 +0.4
baz=94,SNR=7.3
X16A Lo Mia Camp, P 93.32 304 ⇑P **P** 15 35 41.1 +0.9
baz=94,SNR=9.3
Z16A Peralta Trail, 93.35 303 ⇓P **P** 15 35 40.7 +0.4
baz=94
W16A Flagstaff 93.37 305 ⇓P **P** 15 35 41.4 +1.1
baz=94,SNR=7.2
Y16A Circle Bar Ran 93.37 304 ⇑P **P** 15 35 41.0 +0.6
baz=94,SNR=8.1
216A Three Points, 93.43 302 ⇑P **P** 15 35 41.0 +0.4
baz=94,SNR=8.4
B15A Bradely Ranch, 93.44 318 ⇓P **P** 15 35 40.4 0.0
baz=94
KUDL Kundal 93.48 62 *e*PKP **P** 15 35 37.2 -3.8
KUDL AMb AMB 15 35 38.9
comp=Z,32nm,1.6s,mb5.5
D15A Lincoln 93.49 317 ⇓P **P** 15 35 40.6 0.0
baz=94
C15A Salmond Ranch, 93.50 318 ⇓P **P** 15 35 40.8 +0.2
baz=94
A15A Johnson Ranch, 93.50 319 ⇑P **P** 15 35 40.4 -0.3
baz=94
LRM Limekiln Ridge 93.52 316 *e*P **P** 15 35 40.9 +0.1
comp=Z,38nm,1.0s,mb5.8
F15A Butte 93.55 316 ⇑P **P** 15 35 40.8 -0.1
baz=94
EDM Edmonton 93.57 323 *e*P **P** 15 35 38.6 -2.2
EDM Edmonton 93.57 323 *e*P **P** 15 35 38.6 -2.2
NOQ North Oquirrh 93.58 311 *e*P **P** 15 35 39.6 -1.5
comp=Z,93nm,1.4s,mb6.0
G15A Dillon 93.59 315 ⇓P **P** 15 35 41.4 +0.3
baz=94
116A Eloy 93.61 302 ⇓P **P** 15 35 41.5 -0.1
baz=94,SNR=7.1
E15A Deer Lodge 93.61 316 ⇓P **P** 15 35 41.2 0.0
baz=94
DLMT Dillon 93.65 315 P **P** 15 35 40.6 -0.8
comp=Z,27nm,1.4s,mb5.5
J15A Blackfoot 93.66 313 ⇑P **P** 15 35 41.6 +0.1
baz=94
I15A Monteview 93.66 314 ⇑P **P** 15 35 41.7 +0.3
baz=94
L15A Malad City 93.70 312 ⇓P **P** 15 35 41.7 0.0
baz=94,SNR=6.1
KKR Kurukshetra 93.71 60 *e*PKP **P** 15 35 41.0 -1.0
P15A Lemington 93.75 309 ⇑P **P** 15 35 42.0 0.0
baz=94
K15A Arbon 93.77 313 ⇑P **P** 15 35 42.0 0.0
baz=94
M15A Larsen Ranch, 93.78 311 ⇑P **P** 15 35 41.5 -0.6
baz=94
SDNR Sundarnagar 93.78 59 *ex* x 15 35 47.5
R15A Junction 93.82 308 ⇓P **P** 15 35 42.5 +0.1
baz=94
V15A Kaibab Nationa 93.86 306 ⇑P **P** 15 35 42.7 +0.1
baz=94,SNR=9.4
O15A The Old Anders 93.86 310 ⇓P **P** 15 35 41.5 -1.0
baz=94
MCMT McKenzie Canyo 93.86 315 *e*P **P** 15 35 41.3 -1.1
comp=Z,2.9nm,1.0s,mb4.7
KURK Kurchatov 93.87 39 P **P** 15 35 42.8 +0.5
comp=Z,116nm,1.1s,mb6.2,SNR=10
KURK Kurchatov 93.87 39 *e*P **P** 15 35 41.7 -0.5
comp=Z,23nm,1.0s,mb5.6
KURK LR LR
comp=Z,4µm,19.0s,MS5.9
KURK Kurchatov 93.87 39 *e*P **P** 15 35 41.7 -0.6
KURK pmax pmax
comp=Z,23nm,1.0s,mb5.6
KURK MLR MLR
comp=Z,4µm,19.0s,MS5.9
KURK Kurchatov 93.87 39 P **P** 15 35 43.0 +0.7
SNR=15
S15A Panguitch 93.92 308 ⇓P **P** 15 35 42.1 -0.7
baz=94
U15A North Rim 93.93 306 ⇑P **P** 15 35 43.1 +0.2
baz=94,SNR=6.9
A14A Double T Ranch 93.96 319 ⇓P **P** 15 35 42.0 -0.7
baz=94
T15A Red Dirt Ranch 93.97 307 ⇑P **P** 15 35 42.6 -0.5
baz=94
X15A Humboldt 93.97 304 ⇓P **P** 15 35 43.8 +0.6
baz=94,SNR=6.9
SONA Sohna 94.00 62 *e*PKP **P** 15 35 41.9 -1.5
SONA AMb AMB 15 35 58.6
comp=Z,32nm,0.8s,mb5.8
AYAN Aya Nagar 94.03 62 *e*PKP **P** 15 35 42.8 -0.8
AYAN AMb AMB 15 35 45.6
comp=Z,29nm,1.2s,mb5.6
115A Sonoran Desert 94.05 303 ⇓P **P** 15 35 43.3 -0.3
baz=94
Y15A Casa Rosa Ranc 94.08 304 ⇓P **P** 15 35 43.7 +0.1
baz=94
NDI New Delhi 94.10 61 *e*PKP **P** 15 35 42.0 -1.9
DUG Dugway 94.13 310 ⇓P **P** 15 35 43.7 -0.1
baz=94,SNR=9.4
DUG Dugway 94.13 310 *e*P **P** 15 35 42.1 -1.7
comp=Z,22nm,1.2s,mb5.5
DUG LR LR
comp=Z,7µm,19.0s,MS6.1
DUG Dugway 94.13 310 *e*P **P** 15 35 42.1 -1.6
DUG pmax pmax
comp=Z,22nm,1.2s,mb5.5
DUG MLR MLR
comp=Z,7µm,19.0s,MS6.1
D14A Greenough 94.16 317 ⇑P **P** 15 35 44.3 +0.6
baz=94
F14A Wisdom 94.16 316 ⇓P **P** 15 35 43.7 0.0
baz=94
H14A Leadore 94.25 315 ⇓P **P** 15 35 44.6 +0.4
baz=94
BGU Big Grassy Mou 94.25 311 *e*P **P** 15 35 42.5 -1.7
comp=Z,27nm,1.2s,mb5.5
K14A Jones Ranch, D 94.25 312 ⇓P **P** 15 35 43.5 -0.7
baz=94
C14A Swan Lake 94.27 318 ⇓P **P** 15 35 44.2 0.0
baz=94
L14A Malta 94.33 312 ⇓P **P** 15 35 45.0 +0.4
baz=95
I14A Mackay 94.36 314 ⇓P **P** 15 35 44.5 -0.2
baz=95
P14A Drum Mountains 94.36 310 ⇓P **P** 15 35 44.8 0.0
baz=95
J14A Carey 94.45 313 ⇓P **P** 15 35 44.8 -0.3
baz=95
MSO Missoula 94.48 317 ⇓P **P** 15 35 45.1 0.0
baz=95
MSO Missoula 94.48 317 *e*P **P** 15 35 44.8 -0.3
comp=Z,11nm,1.2s,mb5.2
MSO LR LR
comp=Z,4µm,19.0s,MS5.9
BHPL Bhopal 94.48 67 *e*PKP **P** 15 35 42.9 -2.9
BHPL AMb AMB 15 35 48.4
comp=Z,17nm,1.2s,mb5.4
X14A Yava 94.52 304 ⇑P **P** 15 35 45.8 +0.2
baz=95
T14A Hurricane 94.53 307 ⇑P **P** 15 35 45.7 +0.1
baz=95
Q14A Sevier Lake (B 94.56 309 ⇑P **P** 15 35 45.7 -0.1
baz=95,SNR=9.9
214A Organ Pipe Nat 94.58 302 ⇑P **P** 15 35 46.3 +0.3
baz=95
114A Black Gap (USA 94.60 303 ⇓P **P** 15 35 46.4 +0.3
baz=95
A13A Flathead Natio 94.61 319 ⇑P **P** 15 35 45.9 +0.1
baz=95
Z14A Wintersburg 94.62 303 ⇓P **P** 15 35 46.2 +0.1
baz=95
V14A Boquillas Ranc 94.63 306 ⇑P **P** 15 35 46.5 +0.3
baz=95,SNR=7.8
W14A Seligman 94.63 305 ⇓P **P** 15 35 46.1 -0.1
baz=95
Y14A Wickenburg 94.64 304 ⇑P **P** 15 35 46.4 +0.2
baz=95
U14A Mt Trumbull 94.64 306 ⇑P **P** 15 35 46.1 -0.1
baz=95,SNR=6.7
E13A Victor 94.68 316 ⇓P **P** 15 35 45.8 -0.3
baz=95
B13A Whitefish 94.70 318 ⇑P **P** 15 35 46.3 +0.1
baz=95
CCUT Cedar City 94.72 308 *e*P **P** 15 35 47.1 +0.6
comp=Z,11nm,1.1s,mb5.2
AGRA Agra 94.80 63 *e*PKP **P** 15 35 45.4 -1.7
D13A Huson 94.81 317 ⇓P **P** 15 35 46.9 +0.2
baz=95
G13A Cobalt 94.82 315 ⇓P **P** 15 35 46.9 +0.1
baz=95
C13A Hot Springs 94.83 318 ⇓P **P** 15 35 46.9 +0.1
baz=95
F13A Darby 94.83 316 ⇓P **P** 15 35 46.3 -0.6
baz=95
I13A Wildhorse Cree 94.84 314 ⇑P **P** 15 35 46.4 -0.5
baz=95
KLP Kalpa 94.87 59 *e*PKP **P** 15 35 45.9 -1.4
KLP AMb AMB 15 36 01.5
comp=Z,65nm,1.0s,mb6.0
H13A Challis 94.88 315 ⇑P **P** 15 35 46.9 -0.2
baz=95
J13A Cove Ranch, Pi 94.92 313 ⇓P **P** 15 35 46.7 -0.6
baz=95
HLID Hailey 95.08 314 ⇓P **P** 15 35 48.4 +0.4
baz=95
HLID Hailey 95.08 314 *e*P **P** 15 35 47.5 -0.5
comp=Z,8.9nm,1.0s,mb5.2
HLID LR LR
comp=Z,3µm,20.0s,MS5.7
P13A Bates Ranch, G 95.10 309 ⇑P **P** 15 35 48.5 +0.3
baz=95
S13A Holt Ranch, En 95.11 308 ⇓P **P** 15 35 48.1 -0.2
baz=95
Q13A Wheeler Ranch, 95.14 309 ⇑P **P** 15 35 48.3 -0.1
baz=95,SNR=5.8
R13A O'Grain Ranch, 95.16 308 ⇓P **P** 15 35 48.7 +0.2
baz=95
T13A Saint George 95.19 307 ⇓P **P** 15 35 48.6 -0.1
baz=95
Z13A Yuma Proving G 95.22 303 ⇓P **P** 15 35 49.1 +0.2
baz=95
U13A Pakoon Wash 95.27 306 ⇓P **P** 15 35 48.7 -0.4
baz=96,SNR=8.0
X13A Yucca 95.28 305 ⇓P **P** 15 35 49.7 +0.6
baz=96
H12A Diamond D Ranc 95.31 315 ⇑P **P** 15 35 48.5 -0.5
baz=96,SNR=9.7
V13A Grand Canyon W 95.33 306 ⇓P **P** 15 35 49.3 -0.1
baz=96
113A Mohawk Valley, 95.34 303 ⇑P **P** 15 35 49.9 +0.4
baz=96
D12A Red Ives Fores 95.42 317 ⇓P **P** 15 35 48.9 -0.6
baz=96
A12A Yaak River Ran 95.42 319 ⇓P **P** 15 35 49.1 -0.3
baz=96
F12A Elk City 95.48 316 ⇑P **P** 15 35 49.6 -0.2
baz=96
I12A Atlanta 95.58 314 ⇓P **P** 15 35 51.0 +0.8
baz=96
G12A Big Creek, Yel 95.59 315 ⇑P **P** 15 35 49.5 -0.8
baz=96
O12A Currie 95.60 310 ⇓P **P** 15 35 50.6 +0.2
baz=96,SNR=10.0
E12A Beaver Dam Sad 95.63 317 ⇓P **P** 15 35 50.2 -0.2
baz=96
R12A Pony Springs, 95.65 308 ⇑P **P** 15 35 50.6 -0.1
baz=96
HYB Hyderabad 95.73 73 *i* P **P** 15 35 52.0 +0.5
HYB *e*PP PP 15 39 46.0 +2.8
HYB *e* 15 43 26.0
HYB *e*SKS 15 46 28.0
HYB *e*S S 15 47 08.0 -2.4
HYB *e*PS PS 15 48 28.0 -0.9
HYB *e*SS SS 15 53 44.0 +4.3
Q12A Willow Creek R 95.77 309 ⇑P **P** 15 35 51.5 +0.2
baz=96
P12A McGill 95.79 310 ⇑P **P** 15 35 51.2 -0.1
baz=96,SNR=9.4
S12A Delamar Landin 95.89 308 ⇓P **P** 15 35 51.9 0.0
baz=96
C11A Tepee Creek (N 95.94 318 ⇑P **P** 15 35 51.9 +0.1
baz=96
V12A Nelson 96.04 306 ⇑P **P** 15 35 52.2 -0.3
baz=96
JOSI Joshimath 96.05 59 *ex* **P** 15 35 53.6 +0.9
JOSI AMb AMB 15 36 08.3
comp=Z,298nm,1.0s,mb6.7
MFID Camas Ranch 96.12 314 ⇓P **P** 15 35 52.0 -0.8
baz=96
NVS Novosibirsk 96.17 35 ⇑*i*P **P** 15 35 52.2 -0.5
NVS *i* 15 46 30.7
NVS pmax pmax
comp=N,9.0nm,1.9s
NVS pmax pmax
comp=E,8.0nm,1.7s
NVS pmax pmax
comp=Z,34nm,1.7s,mb5.5
NVS pmax pmax
comp=N,12nm,2.4s
NVS pmax pmax
comp=E,16nm,1.8s
T11A Corn Creek, Al 96.22 307 ⇑P **P** 15 35 53.5 +0.1
baz=96
SHPR Sheep Range 96.23 307 *e*P **P** 15 35 54.0 +0.6
comp=E,4.6nm,0.9s,mb4.9
LDFC Landfair 96.30 305 *e*P **P** 15 35 54.1 +0.4
comp=E,14nm,1.2s,mb5.3
IRM Iron Mountain 96.40 304 ⇑P **P** 15 35 53.8 -0.5
baz=97
R11A Troy Canyon, C 96.41 308 ⇑P **P** 15 35 53.9 -0.3
baz=97
Q11A Duckwater 96.42 309 ⇑P **P** 15 35 54.8 +0.6
baz=97
NEW Newport 96.47 318 ⇓P **P** 15 35 54.4 +0.2
baz=97
NEW Newport 96.47 318 PFAKE 15 36 00.0 +5.8
NEW LR LR
comp=Z,10µm,19.0s,MS6.3
V11A Goodsprings 96.50 306 ⇓P **P** 15 35 54.7 0.0
baz=97
MK31 Makanchi Array 96.69 43 *e*P **P** 15 35 54.1 -1.2
MK31 Makanchi Array 96.69 43 *i* P **P** 15 35 54.1 -1.1
MK31 pmax pmax
comp=Z,21nm,1.1s,mb5.5
MKAR Makanchi Array 96.69 43 P **P** 15 35 54.0 -1.2
MKAR PP PP 15 39 51.1 +1.4
MKAR LR LR 16 26 32.8
MKAR Makanchi Array 96.69 43 P **P** 15 35 54.0 -1.2
comp=Z,6.9nm,0.8s,mb5.1,baz=275,slow=3.0,SNR=44
MKAR PP PP 15 39 51.1 +1.4
comp=Z,7.8nm,0.9s,baz=292,slow=6.4,SNR=4.9
MKAR LR LR 16 26 32.8
comp=Z,6µm,18.8s,MS6.1,baz=272,slow=40
MKAR Makanchi Array 96.69 43 P **P** 15 35 54.0 -1.2
MKAR 15 39 51.2
BC3 Big Chuckawall 96.69 304 ⇑P **P** 15 35 55.7 +0.1
baz=97
GMRC Granite Mounta 96.77 305 ⇑P **P** 15 35 56.2 +0.2
baz=97
F10A Beach Ranch, E 96.83 316 ⇓P **P** 15 35 56.0 +0.1
baz=97
TUQ Turquoise Moun 96.93 306 ⇓P **P** 15 35 56.7 +0.1
baz=97
R10A Warm Springs 96.98 308 ⇓P **P** 15 35 56.5 -0.2
baz=97
BELC Belle Mtn. Jos 97.12 304 ⇑P **P** 15 35 57.6 +0.1
baz=97
U10A Ash Meadows, A 97.17 307 ⇑P **P** 15 35 57.8 +0.1
baz=97
ZAA0 Zalesovo Array 97.23 36 *e*P **P** 15 35 57.0 -0.5
ZALV Zalesovo Beam 97.23 36 P **P** 15 35 57.5 0.0
ZALV PP PP 15 39 56.5 +2.9
ZALV LR LR 16 24 03.5
ZALV Zalesovo Beam 97.23 36 P **P** 15 35 57.5 0.0
comp=Z,2.3nm,0.8s,mb4.6,baz=286,slow=5.5,SNR=10
ZALV PP PP 15 39 56.5 +2.9
comp=Z,8.3nm,0.9s,baz=275,slow=7.3,SNR=5.6
ZALV LR LR 16 24 03.5
comp=Z,4µm,18.2s,MS5.9,baz=298,slow=38
ZALV Zalesovo Beam 97.23 36 P **P** 15 35 57.6 +0.1
ZALV 15 39 56.6
S10A Tonopah Range, 97.24 308 ⇓P **P** 15 35 58.4 +0.4
baz=98
BMN Battle Mountai 97.47 311 PFAKE 15 36 10.0 +11
BMN LR LR
comp=Z,4µm,20.0s,MS6.0
PFO Pinyon Flat Ob 97.53 304 ⇓P **P** 15 35 59.2 -0.2
baz=98
PFO Pinyon Flat Ob 97.53 304 PFAKE 15 36 10.0 +11
PFO LR LR
comp=Z,4µm,21.0s,MS5.9
OD2 Odessa Site #2 97.65 318 *e*P **P** 15 35 56.5 -3.1
comp=Z,45nm,1.4s,mb5.8
GSC Goldstone 97.66 305 ⇑P **P** 15 35 59.7 -0.2
baz=98
TPH Tonopah 97.72 308 PFAKE 15 36 10.0 +10
TPH LR LR

comp=Z,3μm,19.0s,MS5.8
B08A Colville Reser 97.92 319 ⇓P **P 15 36 00.4 -0.3**
baz=98
J08A Circle Bar Ran 98.04 314 ⇓P **P 15 36 01.5 +0.1**
baz=98
G08A Pilot Rock 98.12 316 ⇓P **P 15 36 01.4 -0.4**
baz=98
MPMC Manual Prospec 98.14 306 ⇓P **P 15 36 01.8 -0.3**
baz=98
DAC Darwin (Calif) 98.20 307 PFAKE 15 36 10.0 +7.6
DAC LR LR
comp=Z,3μm,21.0s,MS5.8
WVOR Wild Horse Val 98.28 313 *e*P **P 15 36 01.3 -1.2**
comp=Z,17nm,1.3s,mb5.4
WVOR LR LR
comp=Z,6μm,21.0s,MS6.1
WVOR Wild Horse Val 98.28 313 *e*P **P 15 36 01.3 -1.3**
WVOR pmax pmax
comp=Z,17nm,1.3s,mb5.4
WVOR MLR MLR
comp=Z,6μm,21.0s,MS6.1
HAWA Hanford 98.36 317 PFAKE 15 36 10.0 +7.2
HAWA LR LR
comp=Z,4μm,19.0s,MS6.0
LRMC Laurel Mountai 98.36 306 ⇓P **P 15 36 02.9 -0.2**
baz=99
NVAR Mina Array Bea 98.53 309 P **P 15 36 03.7 0.0**
NVAR Mina Array Bea 98.53 309 P **P 15 36 03.7 0.0**
comp=Z,2.8nm,1.0s,mb4.7,baz=101,slow=4.8,SNR=12
EDW2 Edwards Air Fo 98.67 305 ⇑P **P 15 36 04.8 +0.3**
baz=99
ISA Isabella 98.98 306 ⇓P **P 15 36 05.6 -0.2**
baz=99
G06A Carlson Farm, 99.30 316 ⇓P **P 15 36 07.3 +0.3**
baz=100
INK Inuvik 99.43 340 P **P 15 36 07.7 +0.6**
INK LR LR 16 15 36.8
INK Inuvik 99.43 340 P **P 15 36 07.7 +0.6**
comp=Z,4.1nm,1.1s,mb4.9,baz=90,slow=4.0,SNR=3.6
INK LR LR 16 15 36.8
comp=Z,5μm,19.1s,MS6.1,baz=254,slow=32
MOD Modoc 99.58 312 *e*Pdif **P 15 36 07.7 -0.7**
comp=Z,14nm,1.4s,mb5.2
MOD LR LR
comp=Z,5μm,19.0s,MS6.0
CMB Columbia Colle 100.21 309 PFAKE 15 36 20.0 +9.2
CMB LR LR
comp=Z,3μm,20.0s,MS5.8
VIS Vishakhapatnam 100.27 72 *e*PKP Pdif 15 36 10.6 -0.4
VIS AMb AMB 15 36 20.1
comp=Z,30nm,1.0s
WMQ Urumqi 100.91 45 P Pdif 15 36 14.3 +0.3
WMQ pP 15 36 19.0
WMQ PP PP 15 40 24.5 +2.4
WMQ SKS 15 46 51.3
WMQ S Sdif 15 47 47.8 -5.0
WMQ SS SS 15 54 48.3 -2.8
WMQ pmax pmax
comp=Z,16nm,1.3s
WMQ pmax pmax
comp=Z,300nm,5.2s
WMQ LR LR
comp=N,5μm,21.8s,MS6.1
WMQ LR LR
comp=E,4μm,20.8s,MS6.1
WMQ LR LR
comp=Z,3μm,18.5s,MS5.9
NLWA Neilton Lookou 101.10 318 PFAKE 15 36 20.0 +5.2
NLWA LR LR
comp=Z,8μm,19.0s,MS6.2
SAO San Andreas Ge 101.22 307 PFAKE 15 36 30.0 +15
SAO LR LR
comp=Z,4μm,19.0s,MS5.9
COR Corvallis 101.28 316 PFAKE 15 36 30.0 +14
COR LR LR
comp=Z,2μm,19.0s,MS5.7
YBH Yreka Blue Hor 101.39 313 PFAKE 15 36 30.0 +14
YBH LR LR
comp=Z,5μm,22.0s,MS6.0
HUMO Hull Mountain 101.41 313 PFAKE 15 36 30.0 +14
HUMO LR LR
comp=Z,6μm,20.0s,MS6.1
WDC Whiskeytown Da 101.46 311 PFAKE 15 36 30.0 +14
WDC LR LR
comp=Z,4μm,19.0s,MS6.0
MCCM Marconi Confer 102.13 309 PFAKE 15 36 30.0 +11
MCCM LR LR
comp=Z,4μm,19.0s,MS5.9
HOPS Hopland 102.14 310 PFAKE 15 36 30.0 +11
HOPS LR LR
comp=Z,6μm,19.0s,MS6.1
SBA Scott Base 102.17 181 *e*Pdif Pdif 15 36 21.4 +1.9
SBA LR LR
comp=Z,1μm,20.0s,MS5.5
SBA Scott Base 102.17 181 *e*P Pdif 15 36 21.4 +1.8
SBA MLR MLR
comp=Z,1μm,20.0s,MS5.5
WRAK Wrangell Islan 103.56 329 PFAKE 15 36 30.0 +4.3
WRAK LR LR
comp=Z,5μm,21.0s,MS6.0
EGAK Eagle 103.78 338 *e*Pdif Pdif 15 36 28.7 +2.0
comp=Z,8.4nm,0.7s
EGAK LR LR
comp=Z,5μm,21.0s,MS6.0
CASY Casey 104.39 161 PFAKE 15 36 40.0 +11
CASY LR LR
comp=Z,3μm,21.0s,MS5.7
CAL Calcutta 104.56 67⇑ *i*x PP 15 40 48.4 -1.8
TIXI Tiksi 105.30 10 PFAKE 15 41 00.0 +13
TIXI LR LR
comp=Z,4μm,20.0s,MS5.9
COLA College 106.09 340 PFAKE 15 41 00.0 +11
COLA LR LR
comp=Z,5μm,19.0s,MS6.0
LSA Lhasa 106.11 59 PFAKE 15 41 00.0 +10
LSA LR LR
comp=Z,3μm,20.0s,MS5.9
TLY Talaya 108.77 34 PFAKE 15 41 00.0 +5.9
TLY LR LR
comp=Z,6μm,22.0s,MS6.1
ZAK Zakamensk 109.11 36 *e*P Pdif 15 36 57.0 +6.6
ZAK pmax pmax
comp=Z,1.0nm,1.6s
DRV Dumont d'Urvil 111.56 171 SS SS 15 57 15.0 +0.8
DRV SS SS 15 57 15.0 +0.8
DRV L 16 09 00.0
DRV L 16 09 00.0
SONM Songino Array 112.05 37 Pdif Pdif 15 37 04.8 +1.3
SONM PKKPab PKKPab 15 52 07.6 +6.1
SONM Songino Array 112.05 37 Pdiff Pdif 15 37 04.8 +1.3
comp=Z,0.3nm,0.4s,baz=289,slow=4.4,SNR=2.9
SONM PKKPab PKKPab 15 52 07.6 +6.1
comp=Z,0.3nm,0.6s,baz=48,slow=2.1,SNR=4.2
BILL Bilibino 112.07 358 PFAKE 15 41 10.0 +10
BILL LR LR
comp=Z,3μm,20.0s,MS5.9
KDAK Kodiak Island 112.34 336 PFAKE 15 41 10.0 +9.4
KDAK LR LR
comp=Z,5μm,19.0s,MS6.1
ULN Ulaanbaatar 112.44 37 *e*PKPdf PKiKP 15 41 01.0 -0.1
ULN LR LR
comp=Z,4μm,19.0s,MS6.1
ULN Ulaanbaatar 112.44 37 *e*PKIKP PKiKP 15 41 01.0 -0.1
ULN MLR MLR
comp=Z,4μm,19.0s,MS6.1
YAK Yakutsk 113.35 16 PFAKE 15 41 10.0 +7.6
YAK LR LR
comp=Z,4μm,19.0s,MS6.0
COCO West Island 113.69 103 PFAKE 15 41 10.0 +5.6
COCO LR LR
comp=Z,4μm,20.0s,MS6.0
CHTO Chiang Mai 114.90 69 *e*PKPdf PKiKP 15 41 03.6 -3.0
CHTO LR LR
comp=Z,2μm,21.0s,MS5.7
CHTO Chiang Mai 114.90 69 *e*PKIKP PKiKP 15 41 03.7 -2.9
CHTO MLR MLR
comp=Z,2μm,21.0s,MS5.7
CM31 Chiang Mai Arr 114.96 70 PFAKE 15 41 20.0 +13
CM31 LR LR
comp=Z,2μm,19.0s,MS5.7
CMAR Chiang Mai Arr 114.96 70 PKP PKiKP 15 41 04.5 -2.2
CMAR Chiang Mai Arr 114.96 70 PKP PKiKP 15 41 04.5 -2.2
comp=Z,1.3nm,0.6s,baz=282,slow=4.8,SNR=8.1
RKT Rikitea 115.18 244 *e*SKSac SKSac 15 47 54.3 -2.5
comp=Z,634nm,42.8s
RKT *e*SP SP 15 51 44.2 -2.2
comp=Z,1μm,27.2s
RKT *e*SS SS 15 58 08.9 +3.6
comp=Z,5μm,30.2s
RKT *e*LQ 16 10 03.3
comp=Z,5μm,33.5s
RKT *e*LR LR 16 15 57.3
comp=Z,3μm,24.8s
RKT Rikitea 115.18 244 *e*SKSac SKSac 15 47 54.3 -2.5
RKT *e*SP SP 15 51 44.2 -2.2
RKT *e*SS SS 15 58 08.9 +3.6
RKT *e*LQ 16 10 03.3
CD2 Chengdu 116.45 55 PKP PKPdf 15 41 09.5 +0.2
CD2 PP PP 15 42 19.5 +3.9
CD2 PKS 15 44 44.8
CD2 SS SS 15 58 19.5 -1.9
CD2 AMB AMB
comp=Z,310nm,7.8s
CD2 LR LR
comp=N,4μm,19.6s,MS6.1
CD2 LR LR
comp=E,3μm,22.5s,MS6.1
CD2 LR LR
comp=Z,4μm,21.6s,MS6.0
KMI Kunming 117.12 62 Pdif Pdif 15 37 28.0 +2.0
KMI PKP PKPdf 15 41 09.0 -1.8
KMI PP PP 15 42 23.5 +2.9
KMI PKS 15 44 44.5
KMI SKS SKSdf 15 48 10.8 -13
KMI SKKS SKKSac 15 49 13.5 -9.3
KMI SS SS 15 58 26.3 -4.3
KMI LR LR
comp=N,1μm,19.0s,MS5.7
KMI LR LR
comp=E,2μm,20.4s,MS5.7
KMI LR LR
comp=Z,2μm,19.0s,MS5.8
KULM Kulim 117.96 84 PFAKE 15 41 20.0 +7.3
KULM LR LR
comp=Z,4μm,22.0s,MS6.0
HIA Hailar 118.74 31 PFAKE 15 41 20.0 +6.8
HIA LR LR
comp=Z,6μm,19.0s,MS6.2
XAN Xi'an 119.51 50 PKP PKPdf 15 41 15.0 -0.1
GYA Guiyang 120.19 59 Pdif Pdif 15 37 39.0 -0.6
GYA PKP PKPdf 15 41 14.8 -1.9
GYA PKS 15 44 51.3
GYA SKKS SKKSac 15 49 34.5 -8.5
GYA AMB AMB
comp=Z,480nm,7.9s
GYA LR LR
comp=N,12μm,22.8s,MS6.6
GYA LR LR
comp=E,11μm,23.0s,MS6.6
GYA LR LR
comp=Z,15μm,21.9s,MS6.6
ENH Enshi 121.33 54 PFAKE 15 41 30.0 +11
ENH LR LR
comp=Z,4μm,22.0s,MS6.0
BJI Beijing 122.00 41 PKP PKPdf 15 41 19.0 -0.7
BJI PP PP 15 42 53.0 -0.3
BJI SS SS 15 59 34.5 +2.5
BJI AMB AMB
comp=Z,450nm,10.1s
BJI LR LR
comp=N,3μm,25.2s,MS6.0
BJI LR LR
comp=E,2μm,21.2s,MS6.0
BJI LR LR
comp=Z,3μm,21.8s,MS5.9
BJT Baijiatuan 122.00 41 PFAKE 15 41 30.0 +10
BJT LR LR
comp=Z,5μm,19.0s,MS6.2
TAOE Nuku Hiva Isla 122.27 260 *e*LQ 16 13 38.5
comp=Z,8μm,33.9s
TAOE *e*LR LR 16 19 06.8
comp=Z,3μm,24.0s
QIZ Qiongzhong 124.97 67 PKP PKPdf 15 41 24.5 -1.5
QIZ PP PP 15 43 13.5 -0.9
QIZ LR LR
comp=N,2μm,18.3s
QIZ LR LR
comp=Z,2μm,20.3s,MS5.8
QIZ Qiongzhong 124.97 67 PFAKE 15 41 30.0 +4.0
QIZ LR LR
comp=Z,2μm,20.0s,MS5.9
WHN Wuhan 125.11 52 PKP PKPdf 15 41 25.5 -0.5
WHN PP PP 15 43 11.8 -3.0
WHN LR LR
comp=N,5μm,21.8s,MS6.3
WHN LR LR
comp=E,5μm,18.9s,MS6.3
WHN LR LR
comp=Z,7μm,24.4s
CN2 Changchun 125.29 32 *e*PKP PKPdf 15 41 30.0 +4.1
CN2 PP PP 15 43 22.3 +7.1
CN2 SKKS SKKSac 15 50 14.8 -0.3
CN2 SS SS 16 00 01.0 -12
CN2 AMB AMB
comp=Z,100nm,8.0s
CN2 LR LR
comp=N,3μm,20.0s,MS6.1
CN2 LR LR
comp=E,3μm,20.0s,MS6.1
CN2 LR LR
comp=Z,200nm,18.0s,MS4.8
DL2 Dalian 126.14 39 PKP PKPdf 15 41 28.0 +0.3
DL2 AMB AMB
comp=Z,140nm,6.7s
DL2 LR LR
comp=E,2μm,18.0s
DL2 LR LR
comp=Z,2μm,24.7s
NWAO Narrogin (SRO) 126.23 132 PFAKE 15 41 40.0 +12
NWAO LR LR
comp=Z,3μm,19.0s,MS6.0
MDJ Mudanjiang 126.83 29 PKP PKPdf 15 41 28.3 -0.6
MDJ sPKP 15 41 33.0
MDJ PP PP 15 43 25.0 -0.3
MDJ PKS 15 45 05.0
MDJ SS SS 16 00 32.3 +0.2
MDJ LR LR
comp=N,3μm,18.1s,MS6.3
MDJ LR LR
comp=E,4μm,18.8s,MS6.3
MDJ LR LR
comp=Z,6μm,17.5s,MS6.3
MDJ Mudanjiang 126.83 29 PFAKE 15 41 40.0 +11
MDJ LR LR
comp=Z,4μm,20.0s,MS6.1
PETK Petropavlovsk- 126.95 4 PKP PKPdf 15 41 27.0 -1.8
PETK Petropavlovsk- 126.95 4 PKP PKPdf 15 41 27.0 -1.8
comp=Z,4.1nm,1.0s,baz=96,slow=6.0,SNR=4.4
PET Petropavlovsk 127.08 3 PFAKE 15 41 40.0 +11
PET LR LR
comp=Z,2μm,19.0s,MS5.9
PET Petropavlovsk 127.08 3 *e*PKIKP PKPdf 15 41 32.4 +3.3
PET *e* 15 43 30.2
PET *e*PPP 15 46 04.9
PET *e*PPS 15 54 59.0
PET *e*SS SS 16 00 31.2 -3.1
PET *e*SSS 16 05 11.6
KSM Kuching 127.73 88 PFAKE 15 41 40.0 +8.5
KSM LR LR
comp=Z,3μm,19.0s,MS6.0
PPT Papeete 129.78 247 *e*SS SS 16 01 11.4 0.0
comp=Z,6μm,29.0s
PPT *e*LQ 16 16 42.4
comp=Z,15μm,33.5s
PPT *e*LR LR 16 22 39.4
comp=Z,4μm,23.0s
SSE Sheshan 130.09 48 PKP PKPdf 15 41 35.0 -0.5
SSE PP PP 15 43 49.3 +1.9
SSE SS SS 16 01 14.0 +0.1
SSE AMB AMB
comp=Z,510nm,7.4s
SSE LR LR
comp=N,2μm,24.4s,MS5.8
SSE LR LR
comp=E,2μm,24.4s,MS5.8
SSE LR LR
comp=Z,2μm,19.0s
INCN Inchon 130.12 38 PFAKE 15 41 40.0 +4.6
INCN LR LR
comp=Z,5μm,21.0s,MS6.2
YSS Yuzh-Sakhalins 130.15 18 PFAKE 15 41 40.0 +4.9
YSS LR LR
comp=Z,915nm,19.0s,MS5.5
QZH Quanzhou 130.81 56 *e*PKP PKPdf 15 41 36.8 -0.2
QZH PP PP 15 43 51.0 -1.5
QZH SS SS 16 01 18.0 -5.4
QZH AMB AMB
comp=Z,770nm,6.5s
QZH LR LR
comp=N,4μm,19.2s,MS6.2
QZH LR LR
comp=E,3μm,17.6s,MS6.2
QZH LR LR
comp=Z,4μm,19.6s,MS6.1
KSRS Korea Array 130.92 37 PKP PKPdf 15 41 37.5 +0.7
comp=Z,0.7nm,0.6s,baz=318,slow=1.7,SNR=4.3
KSRS PP PP 15 43 50.8 -1.6
comp=Z,6.5nm,1.2s,baz=318,slow=5.8,SNR=9.8
MBWA Marble Bar 133.19 120 *e*PKP PKPdf 15 41 42.9 +1.3
MBWA Marble Bar 133.19 120 *e*PKPdf PKPdf 15 41 40.3 -1.3
MBWA LR LR
comp=Z,4μm,21.0s,MS6.1
TATO Taipei 133.19 55 PFAKE 15 41 50.0 +8.5
TATO LR LR
comp=Z,2μm,20.0s,MS5.9
YHNB Yeheng 133.23 55 PFAKE 15 41 50.0 +8.4
YHNB LR LR
comp=Z,3μm,19.0s,MS6.0
KKM Kota Kinabalu 133.36 82 PFAKE 15 41 50.0 +7.9
KKM LR LR
comp=Z,2μm,21.0s,MS5.8
YUK Yuzh-Kuril'sk 133.72 17 *e*PKIKP PKPdf 15 41 47.1 +5.1
YUK *i* PPP 15 47 00.0
YUK *e* 15 48 49.4
YUK *i* PS PS 15 54 25.0 -4.3
POHA Pohakuloa 134.51 298 PFAKE 15 41 50.0 +5.9
POHA LR LR
comp=Z,2μm,20.0s,MS5.8
ERM Erimo 134.68 20 PFAKE 15 41 50.0 +6.2
ERM LR LR
comp=Z,3μm,19.0s,MS6.1
KIP Kipapa 136.04 302 PFAKE 15 42 00.0 +13
KIP LR LR
comp=Z,2μm,19.0s,MS5.8
MAJO Matsushiro 137.22 29 *e*PKPdf PKPdf 15 41 49.0 +0.3
MAJO LR LR
comp=Z,3μm,19.0s,MS6.1
MAJO Matsushiro 137.22 29 *e*PKIKP PKPdf 15 41 49.1 +0.4
MAJO MLR MLR
comp=Z,3μm,19.0s,MS6.1
MAT Matsushiro 137.22 29 PKP PKPdf 15 41 49.9 +1.2
MJAR Matsushiro Arr 137.22 29 PKP PKPdf 15 41 48.9 +0.2
MJAR PP PP 15 44 30.9 -1.2
MJAR Matsushiro Arr 137.22 29 PKP PKPdf 15 41 48.9 +0.2
comp=Z,4.1nm,0.9s,baz=311,slow=2.5,SNR=11
MJAR PP PP 15 44 30.9 -1.2
comp=Z,5.1nm,1.0s,baz=318,slow=9.1,SNR=9.1
SNZO South Karori 137.41 194 PFAKE 15 42 00.0 +11
SNZO LR LR
comp=Z,2μm,20.0s,MS5.7
FITZ Fitzroy Crossi 139.49 118 *e*PKPdf PKPdf 15 41 50.5 -2.9
XMAS Kiritimati 139.96 273 PFAKE 15 42 00.0 +5.6
XMAS LR LR
comp=Z,3μm,20.0s,MS6.0
DAV Davao City (W) 142.46 78 PFAKE 15 42 10.0 +11
DAV LR LR
comp=Z,2μm,21.0s,MS5.8
CAN Canberra 142.63 162 PFAKE 15 42 10.0 +11
CAN LR LR
comp=Z,2μm,22.0s,MS5.8
KNA Kununurra 143.14 117 *e*PKP PKPdf 15 41 56.7 -3.3
comp=Z,38nm,1.0s
YNG Young 143.37 160 *e*PKP PKPdf 15 41 57.5 -2.4
comp=Z,17nm,0.8s
CMSA Cobar Meteorol 144.78 155 *e*P PKPdf 15 42 00.7 -1.8
MIDW Midway 146.01 327 PKPdf PKPdf 15 42 01.3 -3.3
MIDW LR LR
comp=Z,2μm,21.0s,MS5.9
JOHN Johnston Islan 147.87 303 PFAKE 15 42 20.0 +12
JOHN LR LR
comp=Z,3μm,19.0s,MS6.0
ARMA Armidale 147.99 162 *e*PKP PKPab 15 42 14.9 +1.4
ARMA Armidale 147.99 162 *e*PKPbc PKPbc 15 42 11.2 +0.2
AFI Afiamalu 151.06 240 *e*PKPdf PKPdf 15 42 11.6 -1.6
AFI *e*PKPbc PKPbc 15 42 19.5 +0.5
AFI *e*PKPab PKPab 15 42 24.9 -1.6
AFI LR LR
comp=Z,2μm,20.0s,MS6.0
AFI Afiamalu 151.06 240 *e*PKIKP PKPdf 15 42 11.6 -1.6
AFI *e* 15 42 19.5
AFI MLR MLR
comp=Z,2μm,20.0s,MS6.0
EIDS Eidsvold 152.43 157 *e*PKPbc PKPbc 15 42 21.3 -0.6
CTA Charters Tower 154.42 142 *e*PKP PKPab 15 42 33.1 -7.3
comp=Z,9.9nm,0.9s
CTAO Charters Tower 154.42 142 PFAKE 15 42 30.0 +12
CTAO LR LR
comp=Z,3μm,20.0s,MS6.1
MSVF Nonsavu 156.68 220 PFAKE 15 42 30.0 +8.9
MSVF LR LR
comp=Z,2μm,20.0s,MS5.9
DZM Mont Dzumac 157.72 190 *e*PP PP 15 46 29.5 -2.5
comp=Z,391nm,27.2s
DZM *e*SS SS 16 06 34.9 +5.7
comp=Z,4μm,27.6s
DZM *e*LR LR 16 35 34.4
comp=Z,5μm,23.4s
GUMO Guam 157.89 52 PFAKE 15 42 30.0 +7.3
GUMO LR LR
comp=Z,2μm,20.0s,MS5.8
WAKE Wake Island 160.44 348 PFAKE 15 42 30.0 +4.4
WAKE LR LR
comp=Z,2μm,21.0s
PMG Port Moresby 162.03 122 PFAKE 15 42 40.0 +13
PMG LR LR
comp=Z,3μm,19.0s
TARA Tarawa 169.56 277 PFAKE 15 42 40.0 +6.4
TARA LR LR
comp=Z,5.0nm,19.0s
HNR Honiara 170.25 165 PFAKE 15 42 40.0 +6.1
HNR LR LR
comp=Z,3μm,22.0s

MEX 28 15:29:11.4±0.4, 16°19N×97°58W, h6km±4km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.57**	**291**	*i* P	Pg	15 29 21.8	-0.5
PNIG				*i* S	Sg	15 29 30.2	+0.5
VHO	**Vista Hermosa**	**1.19**	**42**	*e*P	Pg	15 29 30.9	-3.4
VHO				*i* S	Sg	15 29 46.2	-3.6
HUIG	**Huatulco**	**1.47**	**106**	*i* P	Pn	15 29 35.0	-3.4
HUIG				*i* S	Sn	15 29 53.0	-5.0
UTMO	**Huajuapan**	**1.65**	**352**	*e*P	Pn	15 29 37.9	-3.0
UTMO				*i* S	Sn	15 29 58.0	-4.4

BJI ***28*** *15:36:23.4, 49°.80N×130°.60W, h10km, mB4.9/7, mb4.5/3, Ms4.8/3, Ms7 4.7/4*
ISCJB ***28*** *15:36:24.3±0.7, 49°.71N±0°.07×130°.5W±0°.1, h10km, mb3.9/4, Error ellipse: s-maj=12.8km s-min=6.2km az=42.1*
NEIC ***28*** *15:36:25.4±1.1, 49°.80N×130°.63W, h10km, mb4.0/4, Error ellipse: s-maj=15.8km s-min=10.0km az=67.0*
IDC ***28*** *15:36:32.6±2.2, 50°.12N×129°.59W, h0km, mb3.8/3, mb1 4.1/7, mb1mx3.7/26, mbtmp3.8/7, ML3.9/4, MS3.0/2, Ms1 3.0/2, ms1mx2.3/47, Error ellipse: s-maj=38.8km s-min=12.5km az=77.0*
ISC 28 15:36:26.1±0.7, 49.77N±0°.08×130°.6W±0°.1, h10km, (h15km±.9km:pP-P), n43, σ1°30/44, mb3.9/4, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBB	**Bella Bella**	**2.88**	**32**	Pn	**Pn**	**15 37 09.8**	**-2.2**
BBB				Sn	**Sn**	**15 37 38.0**	**-8.7**
BBB				LR	LR	15 38 08.8	
BBB	**Bella Bella**	**2.88**	**32**	Pn	**Pn**	**15 37 09.8**	**-2.2**
	48nm,0.3s,baz=48,slow=10,SNR=158						
BBB				Sn	**Sn**	**15 37 38.0**	**-8.7**
	83nm,0.3s,baz=125,slow=22,SNR=28						
BBB				LR	LR	15 38 08.8	
	comp=Z,262nm,19.9s,baz=322,slow=42						

DIB	Dawson Inlet,	3.64	342	Pn		Pn	15 37 26.4	+4.0
PGC	Sidney	4.81	101	*e*Pn		Pn	15 37 38.1	-0.4
NLWA	Neilton Lookou	5.05	116	*e*Pn		Pn	15 37 43.9	+2.0
JCW	Jim Creek 11nm,0.4s	5.92	102	*e*Pn		Pn	15 37 51.7	-2.0
LON	Longmire 8.9nm,0.7s	6.59	114	*e*Pn		Pn	15 38 00.8	-2.2
ETW	Entiat 15nm,0.6s	7.13	104	*e*Pn		Pn	15 38 11.1	+0.8
HAWA	Hanford 6.3nm,0.5s	8.14	110	*e*Pn		Pn	15 38 23.8	-0.3
OD2	Odessa Site #2 22nm,0.6s	8.23	102	*e*Pn		Pn	15 38 25.1	-0.3
DLBC	Dease Lake	8.69	2	*e*Pn		Pn	15 38 34.1	+2.3
DLBC	Dease Lake 0.6nm,0.3s,baz=189,slow=14,SNR=7.1	8.69	2	Pn		Pn	15 38 35.2	+3.4
DLBC	comp=Z,120nm,18.7s,baz=316,slow=37			LR		LR	15 41 37.8	
HUMO	Hull Mountain	8.90	141	Pn		Pn	15 38 35.8	+1.1
NEW	Newport 4.3nm,0.6s	8.98	95	*e*Pn		Pn	15 38 34.3	-1.4
LNOR	Lincton Mounta 9.6nm,0.9s	9.15	111	*e*Pn		Pn	15 38 39.1	+1.1
YBH	Yreka Blue Hor	9.74	143	*e*Pn		Pn	15 38 44.8	-1.3
BSMT	Bassoo Peak	10.60	94	*e*Pn		Pn	15 38 58.4	+0.5
WALA	Waterton Lakes	10.89	87	*e*Pn		Pn	15 39 01.8	-0.1
WVOR	Wild Horse Val 7.0nm,1.1s	11.07	127	Pn		Pn	15 39 02.9	-1.4
MSO	Missoula	11.47	98	*e*Pn		Pn	15 39 10.4	+0.5
HLID	Hailey	12.72	113	*e*Pn		Pn	15 39 27.9	+1.1
MCMT	McKenzie Canyo	13.01	106	*e*Pn		Pn	15 39 31.2	+0.4
NVAR	Mina Array Bea	14.34	138	Pn		Pn	15 39 56.9	+7.9
NVAR	Mina Array Bea 0.1nm,0.3s,baz=13,slow=9.3,SNR=3.4	14.34	138	Pn		Pn	15 39 56.9	+7.9
IMW	Indian Meadow	14.66	106	*e*Pn		Pn	15 39 55.4	+2.1
MOOW	Moose Ponds	14.86	106	*e*Pn		pP	15 40 05.9	+1.2
YKA	Yellowknife Ar	15.49	29	Pn		Pn	15 40 09.9	+5.6
YKA	Yellowknife Ar 0.2nm,0.3s,baz=220,slow=11,SNR=6.9	15.49	29	Pn		Pn	15 40 09.9	+5.6
EGAK	Eagle 7.4nm,1.1s	16.06	343	*e*Pn		Pn	15 40 12.6	+0.9
PDAR	Pinedale Array 0.1nm,0.3s,baz=316,slow=10,SNR=6.0	16.11	108	Pn		Pn	15 40 16.9	+4.4
FFC	Flin Flon 19nm,0.9s	18.14	63	*e*P		Pn	15 40 36.5	-1.3
ULM	Lac du Bonnet 11nm,0.7s,mb4.4,baz=285,slow=11,SNR=7.1	22.20	75	P		P	15 41 23.4	+1.2
ANMO	Albuquerque 3.4nm,1.0s,mb3.7	23.04	121	*e*P		P	15 41 35.1	+3.9
ANMO	Albuquerque 1.3nm,0.6s,mb3.5,baz=350,slow=5.5,SNR=4.2	23.04	121	P		P	15 41 35.5	+4.2
ECSD	EROS Data Cent 13nm,0.8s,mb4.4	23.91	92	*e*P		P	15 41 41.0	+1.1
AMTX	Amarillo	25.83	114	*e*P		P	15 41 54.9	-2.5
TXAR	Lajitas Array 0.3nm,0.7s,mb3.1,baz=321,slow=7.0,SNR=3.6	28.85	125	P		P	15 42 29.9	+5.4
HHC	Hu-ho-hao-te	74.56	316	*e*P		P	15 48 04.8	-0.1
HHC					pP	pP	15 48 08.8	+0.7
HHC					sP	sP	15 48 11.8	+2.5
HHC					PP	PP	15 50 53.0	+2.2
HHC					S	S	15 57 36.5	-3.5
HHC					SS	SS	16 02 25.5	-0.3
HHC	comp=Z,170nm,5.9s				pmax	pmax		
WMQ	Urumqi	80.98	333	*e*P		P	15 48 41.3	+0.8
WMQ					pP	pP	15 48 46.0	+2.1
WMQ					sP	sP	15 48 48.3	+3.2
WMQ	comp=Z,5.0nm,1.0s				pmax	pmax		
WMQ	comp=Z,38nm,4.0s				pmax	pmax		
LZH	Lanzhou	81.90	318	*e*P		P	15 48 43.5	-2.1
LZH	comp=Z,47nm,7.5s				pmax	pmax		
LZH	comp=E,210nm,17.5s				LR	LR		
LZH	comp=Z,310nm,19.0s				LR	LR		
CD2	Chengdu	86.31	316	P		P	15 49 07.5	-0.7
CD2	comp=Z,120nm,5.2s				pmax	pmax		
KSH	Kashi	88.06	340	*e*P		P	15 49 21.3	+4.8
KSH					*e*pP	pP	15 49 26.5	+6.7
KSH					*e*sP	sP	15 49 28.0	+7.0
KSH					*e*PP	PP	15 52 53.0	+11
KSH					*e*SKS		15 59 48.0	
KSH					*e*S	S	16 00 07.0	+6.9
KSH					*e*sS	sS	16 00 15.0	+9.4
KSH	comp=Z,150nm,4.3s				pmax	pmax		
KSH	comp=N,140nm,3.5s				LR	LR		
KSH	comp=E,130nm,11.0s				LR	LR		
KSH	comp=Z,92nm,5.2s				LR	LR		
GYA	Guiyang	88.69	311	*e*P		P	15 49 20.0	+0.4

DJA 28 15:40:11.0±0.59N×120.32E, h53km, MLv3.8/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOLI	Toli-Toli	0.71	42	P	Pn	15 40 25.7	+0.7
TOLI				S	Sn	15 40 38.3	+3.1
MRSI	Marisa	1.62	94	P	Pn	15 40 37.8	+0.5
APSI	Ampana	2.00	138	P	Pn	15 40 42.6	+0.2
APSI				S	Sn	15 41 08.7	+2.5
LUWI	Luwuk	2.94	123	P	Pn	15 40 57.5	+2.2
TTSI	Tana Toraja	3.65	188	P	Pn	15 41 05.6	+0.6
MYLDM	Lahad Datu	4.91	338	P	Pn	15 41 23.5	+1.2
TNTI	Ternate	7.05	88	P	Px	15 42 08.3	
NLAI	Namlea	7.77	119	P	Pn	15 42 00.8	-0.8

*ISCJB **28** 15:50:10.3±0.4, 43.47N±0.03×127.09W±0.04, h10km, mb3.9/13, Error ellipse: s-maj=5.1km s-min=3.7km az=138.5*
*NEIC **28** 15:50:10.9±0.4, 43.35N×127.18W, h10km, mb4.2/7, Error ellipse: s-maj=5.6km s-min=3.7km az=215.0*
*IDC **28** 15:50:10.2±1.1, 43.59N×127.04W, h0km, mb3.7/8, mb1 3.9/13, mb1mx3.7/31, mbtmp3.7/13, ML3.8/4, MS3.4/1, Ms1 3.4/1, ms1mx3.1/39, Error ellipse: s-maj=33.4km s-min=10.6km az=38.0*
*BJI **28** 15:50:11.4, 43.93N×128.17W, h5km, mB4.5/2, mb4.5/3, Ms4.4/1, Ms7 4.1/1*

ISC 28 15:50:11.6±0.4, 43.43N±0.03×127.15W±0.04, h10km, n83, σ1§11/92, mb3.9/13, 1C, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	Edson Butte	2.14	104	*i* P	Pn	15 50 45.1	-2.2
KEBM				*e*Sn	Sn	15 51 10.8	-3.0
KBO	Bosley Butte	2.47	119	*e*Pn	Pn	15 50 50.4	-1.5
RNO	Roman Nose	2.52	78	P	Pn	15 50 51.5	-1.0
MPOR	Mary's Peak	2.81	66	P	Pn	15 50 55.5	-1.1
COR	Corvallis	3.01	66	*e*Pn	Pn	15 50 58.1	-1.1
EUO	Eugene	3.02	77	P	Pn	15 50 58.8	-0.7
HEBO	Mount Hebo	3.02	53	*e*Pn	Pn	15 50 58.5	-1.0
KRMB	Red Mountain	3.06	127	*e*Pn	Pn	15 50 58.4	-1.7
HUMO	Hull Mountain	3.18	104	*e*Pn	Pn	15 50 59.9	-1.9
HUMO				*e*Sn	Sn	15 51 39.0	-0.7
IRO	Indian Ridge	3.59	79	P	Pn	15 51 07.2	-0.1
KHMM	Horse Mountain	3.60	134	*e*Pn	Pn	15 51 06.4	-1.1
YBH	Yreka Blue Hor	3.69	116	*e*Pn	Pn	15 51 08.7	0.0
YBH				*e*Sn	Sn	15 51 52.4	+0.1
YBH	Yreka Blue Hor 2.3nm,0.3s,baz=292,slow=14,SNR=27	3.69	116	Pn	Pn	15 51 08.9	+0.2
YBH	0.8nm,0.3s,baz=129,slow=14,SNR=4.1			Sn	Sn	15 51 54.3	+2.0
YBH	comp=Z,556nm,20.9s,baz=123,slow=39			LR	LR	15 52 35.3	
FRIS	Frissel Point	3.74	76	P	Pn	15 51 09.8	+0.5
WIFE	Three Sisters-	3.92	79	P	Pn	15 51 11.1	-0.7
BMW	Boistfort Moun	4.12	41	P	Pn	15 51 14.3	-0.4
TDH	Tom, Dick, Har	4.27	62	P	Pn	15 51 17.4	+0.8
LVP	Lakeview Peak	4.28	50	P	Pn	15 51 17.6	+0.7
MTMW	Mount Mitchell	4.37	52	P	Pn	15 51 18.6	+0.6
HOOD	Mount Hood Mea	4.37	63	*e*Pn	Pn	15 51 18.8	+0.8
WDC	Whiskeytown Da	4.46	128	Pn	Pn	15 51 21.4	+2.1
NLWA	Neilton Lookou	4.58	29	*e*Pn	Pn	15 51 20.7	-0.3
NLWA				*e*Sn	Sn	15 52 12.2	-2.0
LON	Longmire	5.03	47	P	Pn	15 51 27.8	+0.8
RCM	Mount Rainier-	5.12	47	P	Pn	15 51 29.5	+1.1
WPW	White Pass	5.14	49	P	Pn	15 51 29.6	+1.0
GL2	New Goldendale	5.17	59	P	Pn	15 51 29.8	+0.8
FMW	Mount Fremont	5.22	46	P	Pn	15 51 30.7	+1.0
MOD	Modoc 4.8nm,0.6s	5.28	105	*e*Pn	Pn	15 51 29.3	-1.1
PGC	Sidney 2.3nm,0.3s	5.82	25	*e*Pn	Pn	15 51 37.6	-0.3
PGC				*e*Sn	Sn	15 52 42.0	-2.6
JCW	Jim Creek 54nm,0.3s	6.00	36	*e*Pn	Pn	15 51 40.4	0.0
JCW				*e*Sn	Sn	15 52 47.9	-1.1
RSW	Rattlesnake Hi 51nm,0.4s	6.13	59	*e*Pn	Pn	15 51 42.9	+0.7
HAWA	Hanford 23nm,0.6s	6.17	59	*e*Pn	Pn	15 51 43.2	+0.5
WVOR	Wild Horse Val 3.8nm,0.4s	6.33	96	*e*Pn	Pn	15 51 43.9	-1.1
ETW	Entiat 38nm,0.4s	6.35	47	*e*Pn	Pn	15 51 46.2	+1.0
ETW				*e*Sn	Sn	15 53 01.8	+4.0
RPW	Rockport 53nm,0.3s	6.37	36	*e*Pn	Pn	15 51 45.8	+0.3
RPW				*e*Sn	Sn	15 52 57.9	-0.3
LNOR	Lincton Mounta 9.3nm,0.5s	6.78	66	*e*Pn	Pn	15 51 50.1	-0.9
PAHR	Pah Rah Range	6.91	120	*e*Pn	Pn	15 51 47.7	-5.3
OD2	Odessa Site #2 16nm,0.5s	7.14	53	*e*Pn	Pn	15 51 56.1	+0.1
CMB	Columbia Colle 40nm,1.5s	7.45	134	*e*Pn	Pn	15 52 02.2	+1.9
NVAR	Mina Array Bea 0.1nm,0.3s,baz=301,slow=14,SNR=4.0	8.35	124	Pn	Pn	15 52 15.9	+3.2
NEW	Newport 7.2nm,0.4s	8.50	52	*e*Pn	Pn	15 52 15.0	+0.3
HLID	Hailey 2.4nm,0.6s	9.26	85	*e*Pn	Pn	15 52 27.8	+2.7
BSMT	Bassoo Peak	9.72	59	*e*P	Pn	15 52 33.1	+1.7
MSO	Missoula 6.6nm,1.1s	9.93	65	*e*Pn	Pn	15 52 34.5	+0.2
JTMT	Jette	10.00	60	*e*Pn	Pn	15 52 35.5	+0.3
SWMT	Swartz Lake	10.10	62	*e*Pn	Pn	15 52 37.1	+0.5
ISA	Isabella 11nm,1.3s	10.25	136	*e*Pn	Pn	15 52 42.2	+3.6
MCMT	McKenzie Canyo 1.3nm,0.5s	10.38	77	*e*Pn	Pn	15 52 42.1	+1.7
CHMT	Chamberlain Mo 1.5nm,0.5s	10.41	66	*e*Pn	Pn	15 52 40.7	-0.2
DLMT	Dillon 2.9nm,0.4s	10.60	74	*e*Pn	Pn	15 52 43.8	+0.4
LRM	Limekiln Ridge 21nm,0.5s	10.75	72	*e*Pn	Pn	15 52 46.0	+0.5
WALA	Waterton Lakes 0.4nm,0.4s	10.75	54	Pn	Pn	15 52 47.2	+1.7
BOZ	Bozeman (W) 4.9nm,0.8s	11.30	73	*e*Pn	Pn	15 52 53.4	+0.3
TPAW	Teton Pass 9.7nm,1.1s	11.78	84	*e*Pn	Pn	15 53 02.0	+2.4
CCUT	Cedar City	12.02	115	Pn	Pn	15 53 02.4	-0.5
MSU	Marysvale	12.34	108	*e*Pn	Pn	15 53 07.4	+0.1
LDFC	Landfair 62nm,1.5s	12.51	128	*e*Pn	Pn	15 53 09.5	-0.1
PDAR	Pinedale Array 0.1nm,0.3s,baz=280,slow=12,SNR=8.7	12.88	87	Pn	Pn	15 53 17.2	+2.6
DLBC	Dease Lake 0.2nm,0.3s,baz=187,slow=17,SNR=2.3	15.13	354	Pn	Pn	15 53 45.1	-0.1
ANMO	Albuquerque 3.2nm,1.1s	18.10	111	P	Pn	15 54 22.0	-1.1
ANMO	Albuquerque 0.1nm,0.3s,baz=305,slow=12,SNR=3.3	18.10	111	P	Pn	15 54 23.1	0.0
FFC	Flin Flon 16nm,1.0s	19.87	47	*e*P	Pn	15 54 43.5	-0.7
KDAK	Kodiak Island 7.1nm,0.8s,mb4.0,baz=180,slow=8.1,SNR=5.4	21.42	321	P	P	15 54 60.0	+0.5
MENT	Mentasta	21.79	339	*e*P	P	15 55 04.8	+1.5
DAWY	Dawson	21.82	345	*e*P	P	15 55 04.5	+0.8
AGMN	Agassiz Nation 38nm,1.4s,mb4.6	22.23	66	*e*P	P	15 55 07.8	-0.4
ULM	Lac du Bonnet	22.34	61	P	P	15 55 07.3	-2.0
ULM	Lac du Bonnet 8.1nm,1.1s,mb4.1,baz=310,slow=8.1,SNR=2.9	22.34	61	P	P	15 55 07.3	-2.0
PMR	Palmer	22.38	332	P	P	15 55 10.2	+0.6
TXAR	Lajitas Array 0.5nm,0.6s,mb3.1,baz=300,slow=7.0,SNR=5.9	23.46	119	P	P	15 55 22.3	+0.9
WMOK	Wichita Mounta 3.2nm,0.6s,mb3.9	23.58	102	*e*P	P	15 55 22.4	-0.2
MCK	McKinley	23.86	336	*e*P	P	15 55 25.4	+0.6
ILAR	Eielson Array 2.3nm,0.8s,mb3.6,baz=153,slow=8.7,SNR=27	24.10	339	P	P	15 55 27.3	+0.3
PPLA	Purkeypile 5.3nm,1.0s,mb3.9	24.32	332	*e*P	P	15 55 29.7	+0.7
BPAW	Bear Paw Mtn. 4.3nm,0.8s,mb4.0	24.75	335	*e*P	P	15 55 31.6	-1.4
INK	Inuvik 1.6nm,0.7s,mb3.6,baz=179,slow=15,SNR=3.4	25.16	354	P	P	15 55 35.5	-1.2
UNV	Unalaska Valle 13nm,0.8s,mb4.6	27.67	306	*e*P	P	15 55 59.0	-0.4
PETK	Petropavlovsk- 0.9nm,0.8s,mb4.0,baz=75,slow=12,SNR=3.6	48.77	309	P	P	15 58 55.0	-1.3
SONM	Songino Array 0.5nm,0.6s,mb3.7,baz=56,slow=3.6,SNR=3.6	77.61	326	P	P	16 02 06.9	-0.9
HHC	Hu-ho-hao-te	80.83	319	*e*P	P	16 02 21.8	-3.7
HHC					pP	pP	16 02 26.3	-2.5
HHC					sP	sP	16 02 28.8	-1.2
HHC					PP	PP	16 05 26.0	-3.0
HHC					S	S	16 12 27.3	-6.3
HHC					sS	sS	16 12 34.3	-4.8
HHC					SS	SS	16 17 40.0	-6.0
HHC	comp=Z,200nm,8.8s				pmax	pmax		
KURK	Kurchatov	83.58	344	P	P	16 02 39.7	-0.1
WMQ	comp=Z,0.3nm,0.5s,mb3.7,baz=15,slow=4.6,SNR=2.6 Urumqi	87.71	336	*e*P	P	16 03 00.5	+0.1
GYA	Guiyang	94.70	313	*e*P	P	16 03 32.3	-0.9
GYA	comp=Z,10.0nm,1.0s				pmax	pmax		

IDC 28 15:53:13.3±4.7, 30.53N×82.09E, h0km, mb3.2/2, mb1 3.4/4, mb1mx3.2/27, mbtmp3.2/4, ML3.3/2, Error ellipse: s-maj=173.5km s-min=28.7km az=66.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	16.24	0	Pn	Pn	15 57 01.7	-0.9
CMAR	Chiang Mai Arr 0.1nm,0.3s,baz=306,slow=11,SNR=4.3	19.46	124	P	Pn	15 57 42.3	-0.4
KURK	Kurchatov 0.8nm,0.8s,baz=171,slow=11,SNR=6.2	20.33	354	P	P	15 57 49.6	-1.2
WRA	Warramunga Arr 0.2nm,0.7s,baz=322,slow=6.5,SNR=5.7	71.00	128	P	P	16 04 32.9	-0.1

*DDA **28** 15:55:32.9, 37.36N×37.12E, h10km±2km, Md3.0*
*ISK **28** 15:55:32.7, 37.31N×37.04E, h12km, MD2.9*
*ISCJB **28** 15:55:33.5±0.6, 37.36N±0.03×37.11E±0.04, h6km±5km, Error ellipse: s-maj=5.1km s-min=4.5km az=175.9*
*CSEM **28** 15:55:33.6±0.1, 37.36N×37.12E, h5km, MD2.9, Error ellipse: s-maj=2.2km s-min=1.9km az=56.0*

ISC 28 15:55:33.8±0.5, 37.36N±0.03×37.11E±0.03, h8km±5km, n23, σ0§91/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.20	157	*e*PG	Pg	15 55 37.2	-0.6
GAZ				*e*SG	Sg	15 55 40.8	+0.1
GAZ	Gaziantep	0.20	157	*e*Pg	Pg	15 55 37.2	-0.7
GAZ				*e*Sg	Sg	15 55 40.8	+0.2
KMRS	Kahramanmaras	0.22	311	*e*PG	Pg	15 55 38.2	-0.1
KMRS				*e*SG	Sg	15 55 41.8	+0.5
KMRS	Kahramanmaras	0.22	311	*e*Pg	Pg	15 55 38.2	-0.1
KMRS				*e*Sg	Sg	15 55 41.8	+0.5
KUZU	Kuzuini	0.58	183	*i* P	Pg	15 55 45.4	+0.3
KUZU				*i* S	Sg	15 55 54.0	+1.4
KUZU	Kuzuini	0.58	183	*i* P	Pg	15 55 45.3	+0.3
KUZU				*i* S	Sg	15 55 54.0	+1.3
ANDN	Andirin	0.65	290	*i* P	Pg	15 55 46.0	-0.2
ANDN				*i* S	Sg	15 55 55.1	+0.3
ANDN	Andirin	0.65	290	*i* P	Pg	15 55 46.0	-0.3
ANDN				*i* S	Sg	15 55 55.1	+0.3
ATAB	Bozova	0.95	83	*i* P	Pg	15 55 50.5	-1.5
ATAB				*i* S	Sg	15 56 03.6	-0.7
ATAB	Bozova	0.95	83	*i* P	Pg	15 55 50.5	-1.5
ATAB				*i* S	Sg	15 56 03.6	-0.7
KOZT	Kozan	1.03	277	*e*PG	Pg	15 55 52.1	-1.4
KOZT	Kozan	1.03	277	*e*Pg	Pg	15 55 52.1	-1.5
COBT	Iskenderun	1.08	220	*i* P	Pg	15 55 53.5	-1.0
COBT				*i* S	Sg	15 56 09.2	+0.6
COBT	Iskenderun	1.08	220	*i* P	Pg	15 55 53.5	-1.0
COBT				*i* S	Sg	15 56 09.2	+0.6
AKCD	Akcadag	1.14	34	*i* P	Pb	15 55 56.3	+0.7
AKCD				*i* S	Sg	15 56 12.2	+1.9
AKCD	Akcadag	1.14	34	*i* P	Pb	15 55 56.3	+0.7
AKCD				*i* S	Sg	15 56 12.1	+1.8
SARI	SarD1z-Kayseri	1.36	346	*e*PN	Pn	15 55 55.8	-3.1
MALT	Malatya	1.41	47	*e*PN	Pn	15 56 00.0	+0.3
MALT	Malatya	1.41	47	*e*Pn	Pn	15 56 00.0	+0.3
MYA	Malatya	1.42	47	*e*PN	Pn	15 56 00.1	+0.3
MYA	Malataya	1.42	47	*e*Pn	Pn	15 56 00.1	+0.3
YAYL	Yayladag	1.55	212	*i* P	Pn	15 56 02.0	+0.5
YAYL				*i* S	Sn	15 56 21.8	0.0
YAYL	Yayladag	1.55	212	*i* P	Pn	15 56 02.0	+0.5
YAYL				*i* S	Sn	15 56 21.8	0.0

*ISCJB **28** 15:59:33.8±0.7, 50.19N±0.05×129.6W±0.1, h10km, mb4.0/3, Error ellipse: s-maj=11.1km s-min=5.0km az=150.0*
*IDC **28** 15:59:34.0±1.9, 50.06N×129.84W, h0km, mb3.9/2, mb1 4.0/9, mb1mx3.7/28, mbtmp3.7/9, ML3.6/6, MS3.2/1, Ms1 3.2/1, ms1mx2.9/38, Error ellipse: s-maj=32.2km s-min=13.4km az=74.0*
*NEIC **28** 15:59:35.5±0.7, 50.25N×129.67W, h10km, mb3.8/10, Error ellipse: s-maj=12.6km s-min=5.5km az=59.0*

ISC 28 15:59:35.6±0.7, 50.21N±0.04×129.7W±0.1, h10km, n49, σ1§11/51, mb4.0/3, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBB	Bella Bella	2.21	26	Pn	Pn	16 00 13.2	+0.8
BBB				Sn	Sn	16 00 41.4	+1.8
BBB				LR	LR	16 01 07.9	
BBB	Bella Bella baz=41,slow=14	2.21	26	Pn	Pn	16 00 13.2	+0.8
BBB	102nm,0.3s,baz=131,slow=23,SNR=11			Sn	Sn	16 00 41.4	+1.8
BBB	comp=Z,410nm,18.4s,baz=283,slow=39			LR	LR	16 01 07.9	
DIB	Dawson Inlet,	3.46	331	Pn	Pn	16 00 28.3	-1.2
NLWA	Neilton Lookou	4.77	124	*e*Pn	Pn	16 00 46.3	-1.2
LON	Longmire 6.5nm,0.6s	6.28	120	*e*Pn	Pn	16 01 08.5	+0.2
WRAK	Wrangell Islan	6.42	347	*e*Pn	Pn	16 01 04.8	-5.3
ETW	Entiat 12nm,0.6s	6.70	109	*e*Pn	Pn	16 01 14.1	+0.1
HAWA	Hanford 10nm,0.9s	7.78	116	Pn	Pn	16 01 28.6	-0.2
OD2	Odessa Site #2 16nm,0.7s	7.78	107	*e*Pn	Pn	16 01 28.2	-0.6
DLBC	Dease Lake	8.24	359	*e*Pn	Pn	16 01 36.1	+1.0
DLBC	Dease Lake 0.5nm,0.3s,baz=189,slow=14,SNR=7.9	8.24	359	Pn	Pn	16 01 37.6	+2.5
NEW	Newport 4.7nm,0.8s	8.45	99	*e*Pn	Pn	16 01 37.7	-0.3
BSMT	Bassoo Peak 2.5nm,0.6s	10.07	98	*e*Pn	Pn	16 02 00.5	+0.3
WALA	Waterton Lakes	10.30	90	*e*Pn	Pn	16 02 01.9	-1.4
EDM	Edmonton	10.57	67	*e*Pn	Pn	16 02 05.4	-1.6
WDC	Whiskeytown Da	10.86	150	*e*Pn	Pn	16 02 11.7	+0.7
WVOR	Wild Horse Val	10.90	131	*e*Pn	Pn	16 02 11.8	+0.3
MSO	Missoula	10.98	102	*e*Pn	Pn	16 02 12.4	-0.2
CHMT	Chamberlain Mo	11.38	101	*e*Pn	Pn	16 02 17.8	-0.4
HLID	Hailey	12.38	117	*e*Pn	Pn	16 02 32.5	+0.8
MCMT	McKenzie Canyo 1.9nm,0.9s	12.59	109	*e*Pn	Pn	16 02 34.0	-0.5
PAHR	Pah Rah Range	12.78	141	*e*Pn	Pn	16 02 34.7	-2.5
IMW	Indian Meadow 9.8nm,0.9s	14.24	109	*e*Pn	Pn	16 02 59.0	+1.8
NVAR	Mina Array Bea 0.1nm,0.3s,baz=344,slow=13,SNR=3.5	14.30	141	Pn	Pn	16 02 59.5	+1.5
MOOW	Moose Ponds 11nm,0.9s	14.44	109	*e*Pn	Pn	16 02 58.4	-1.5
TPAW	Teton Pass 19nm,1.1s	14.46	111	Pn	Pn	16 02 58.7	-1.5
REDW	Red Top Meadow 3.5nm,0.4s	14.59	111	*e*Pn	Pn	16 03 06.1	+4.1
LOHW	Long Hollow 7.9nm,1.1s	14.60	110	*e*Pn	Pn	16 03 06.3	+4.2
RLMT	Red Lodge 25nm,1.6s	14.66	102	Pn	Pn	16 03 02.9	0.0
YKA	Yellowknife Ar	14.82	28	Pn	Pn	16 03 04.6	-0.4
YKA	Yellowknife Ar 0.2nm,0.3s,baz=215,slow=12,SNR=3.1	14.82	28	Pn	Pn	16 03 04.6	-0.4
DUG	Dugway 3.8nm,0.9s	15.52	124	Pn	Pn	16 03 13.8	-0.6
PDAR	Pinedale Array 0.1nm,0.3s,baz=316,slow=12,SNR=11	15.71	111	Pn	Pn	16 03 19.1	+2.3
LAO	LASA Array 11nm,0.7s	15.95	94	*e*Pn	Pn	16 03 19.9	0.0
ISA	Isabella 5.9nm,1.1s	16.67	146	*e*Pn	Pn	16 03 30.6	+1.4
MSU	Marysvale 7.7nm,1.5s	17.09	127	*e*Pn	Pn	16 03 37.0	+2.5
ILAR	Eielson Array 0.1nm,0.3s,baz=144,slow=11,SNR=9.4	17.18	335	P	Pn	16 03 35.9	+0.5
CCUT	Cedar City 3.9nm,1.2s	17.23	131	*e*Pn	Pn	16 03 37.6	+1.3
FFC	Flin Flon 25nm,0.8s	17.42	64	*e*Pn	Pn	16 03 37.4	-1.1
BPAW	Bear Paw Mtn. 6.3nm,1.0s	17.95	329	*e*Pn	Pn	16 03 44.1	-0.8
INK	Inuvik 0.1nm,0.3s,baz=106,slow=7.4,SNR=2.3	18.25	355	P	Pn	16 03 47.9	-0.7
PV01	Paradox Valley 489nm,1.1s	19.29	121	*e*P	Pn	16 04 00.9	-0.6
ISCO	Idaho Springs 4.3nm,0.9s	19.87	112	*e*P	Pn	16 04 08.2	-0.2
MVCO	Mesa Verde 10.0nm,1.1s	20.00	122	*e*P	P	16 04 06.9	-1.3
ULM	Lac du Bonnet 18nm,0.9s,mb4.5,baz=289,slow=9.7,SNR=8.7	21.53	77	P	P	16 04 26.4	+1.7
ECSD	EROS Data Cent 16nm,0.9s,mb4.5	23.34	93	*e*P	P	16 04 43.9	-0.1
TXAR	Lajitas Array	28.64	127	P	P	16 05 32.2	-0.1
TXAR	Lajitas Array 0.4nm,0.9s,mb3.1,baz=292,slow=7.3,SNR=2.4	28.64	127	P	P	16 05 32.2	-0.1
HHC	Hu-ho-hao-te	74.64	316	*e*P	P	16 11 10.3	-4.6
HHC					pP	pP	16 11 14.3	-3.9
HHC					sP	sP	16 11 17.3	-2.1
HHC					PP	PP	16 13 57.8	-3.3

DBIC	**Dimbokro**	**14.23**	**62**	*e*Pn		**Pn**	16 08 11.0	-1.6		
DBIC				Sn		**Sn**	16 10 37.5	-13		
DBIC				*e*Sn		**Sn**	16 10 39.2	-11		
DBIC	**Dimbokro**	**14.23**	**62**	Pn		**Pn**	16 08 11.2	-1.4		
	7.1nm,0.3s,baz=233,slow=16,SNR=75									
DBIC				Sn		**Sn**	16 10 37.5	-13		
	1.9nm,0.3s,baz=142,slow=17,SNR=2.7									
BBTS	**Babate**	**14.67**	**3**	Pn		**Pn**	16 08 15.0	-3.6		
	7.5nm,0.3s,baz=203,slow=1.3,SNR=13									
BBTS				Sn		**Sn**	16 10 44.3	-17		
	8.7nm,0.3s,baz=28,slow=22,SNR=9.8									
RCBR	**Riachuelo**	**19.30**	**252**	*e*P		**Pn**	16 09 16.2	-0.8		
TORD	**Torodi Ar. Bea**	**23.07**	**55**	P		**P**	16 09 56.0	-0.7		
	33nm,0.8s,mb4.8,baz=240,slow=9.8,SNR=77									
TAM	**Tamanrasset**	**31.88**	**43**	*e*P		**P**	16 11 17.4	+1.1		
	6.4nm,0.8s,mb4.5									
MDT	**Midelt**	**34.88**	**19**	P		**P**	16 11 42.1	-0.4		
	1.6nm,0.7s,mb4.0,baz=187,slow=8.1,SNR=3.2									
PSMN	**Pico do Norte,**	**37.57**	**350**	*e*T			16 51 03.1			
PSMA	**Santa Maria**	**37.57**	**350**	*e*T			16 51 04.7			
BART	**Pico Bartolome**	**38.34**	**350**	*e*T			16 52 06.2			
TSUM	**Tsumeb**	**39.25**	**121**	*e*P		**P**	16 12 20.9	+1.1		
	4.6nm,1.0s,mb4.2									
TSUM	**Tsumeb**	**39.25**	**121**	P		**P**	16 12 22.0	+2.2		
	2.1nm,0.9s,mb3.9,baz=312,slow=11,SNR=3.6									
EVO	**Evora**	**39.39**	**12**	*e*P		**P**	16 12 19.8	-0.9		
	26nm,1.2s,mb4.5									
PID	**Ribeirinha**	**39.57**	**347**	*e*T			16 53 36.0			
PICO	**Pico**	**39.70**	**346**	*e*T			16 53 48.3			
PMAN	**Manadas**	**39.75**	**347**	*e*T			16 53 48.3			
MTE	**Manteigas**	**41.28**	**11**	*e*P		**P**	16 12 37.7	+1.4		
	23nm,1.1s,mb4.7									
PVIS	**Viseu**	**41.52**	**11**	*e*P		**P**	16 12 39.2	+0.9		
	21nm,1.5s,mb4.5									
KEST	**Kesra**	**43.49**	**32**	P		**P**	16 12 55.0	+0.6		
	2.1nm,0.9s,mb3.9,baz=248,slow=2.1,SNR=9.0									
ETSF	**Etsaut**	**45.39**	**17**	*e*P		**P**	16 13 10.0	+0.5		
	12nm,0.8s,mb4.5									
ETSF	**Etsaut**	**45.39**	**17**	*e*P		**P**	16 13 10.0	+0.5		
	5.8nm,0.8s,mb4.5									
SJPF	**Ste Jean**	**45.39**	**17**	*e*P		**P**	16 13 10.1	+0.6		
	14nm,0.6s,mb4.6									
SJPF	**Ste Jean**	**45.39**	**17**	*e*P		**P**	16 13 10.1	+0.6		
	6.9nm,0.6s,mb4.7									
EPF	**Esparros**	**45.79**	**18**	*e*P		**P**	16 13 13.3	+0.7		
SIV	**San Ignacio**	**45.85**	**248**	P		**P**	16 13 13.9	+0.3		
	0.9nm,0.8s,mb3.8,baz=78,slow=9.4,SNR=5.1									
MTLF	**Montolieu**	**46.67**	**20**	*e*P		**P**	16 13 19.2	-0.4		
	4.6nm,0.8s,mb4.2									
MTLF	**Montolieu**	**46.67**	**20**	*e*P		**P**	16 13 19.2	-0.4		
	2.3nm,0.8s,mb4.2									
LFF	**La Frestale**	**47.64**	**17**	*e*P		**P**	16 13 27.5	+0.4		
	29nm,0.8s,mb5.0									
LFF	**La Frestale**	**47.64**	**17**	*e*P		**P**	16 13 27.5	+0.4		
	15nm,0.8s,mb5.1									
LASF	**Ste Croix**	**47.89**	**21**	*e*P		**P**	16 13 29.2	+0.2		
	20nm,1.2s,mb4.8									
CAF	**Calviac**	**48.03**	**19**	*e*P		**P**	16 13 30.2	0.0		
	13nm,0.9s,mb4.7									
CAF	**Calviac**	**48.03**	**19**	*e*P		**P**	16 13 30.2	0.0		
	6.6nm,0.9s,mb4.7									
MBAR	**Mbarara**	**48.18**	**91**	⇑*i*P		**P**	16 13 39.1	+7.2		
RJF	**Les Rejaudoux**	**48.20**	**18**	*e*P		**P**	16 13 31.5	0.0		
	33nm,1.3s,mb4.9									
RJF	**Les Rejaudoux**	**48.20**	**18**	*e*P		**P**	16 13 31.5	0.0		
	16nm,1.3s,mb4.9									
LMR	**La Mourre**	**48.25**	**23**	*e*P		**P**	16 13 32.1	+0.3		
	39nm,1.1s,mb5.0									
LMR	**La Mourre**	**48.25**	**23**	*e*P		**P**	16 13 32.1	+0.3		
	20nm,1.1s,mb5.0									
LBTB	**Lobatse**	**48.41**	**124**	P		**P**	16 13 34.3	+0.8		
	2.8nm,0.8s,mb4.3,baz=307,slow=5.1,SNR=2.9									
LBTB	**Lobatse**	**48.41**	**124**	P		**P**	16 13 34.3	+0.8		
LBTB				pmax	pmax					
	comp=Z,3.0nm,0.8s,mb4.4									
SMRF	**Simiane la Rot**	**48.43**	**22**	*e*P		**P**	16 13 34.0	+0.8		
	comp=Z,11nm,1.0s,mb4.5									
SMRF	**Simiane la Rot**	**48.43**	**22**	*e*P		**P**	16 13 34.0	+0.8		
	comp=Z,11nm,1.0s,mb4.8									
FRF	**La Foret Royal**	**48.49**	**23**	*e*P		**P**	16 13 33.8	+0.1		
	comp=Z,14nm,1.0s,mb4.7									
FRF	**La Foret Royal**	**48.49**	**23**	*e*P		**P**	16 13 33.8	+0.1		
	comp=Z,7.2nm,1.0s,mb4.7									
PGF	**Pioggiola**	**48.64**	**26**	*e*P		**P**	16 13 35.0	+0.1		
	comp=Z,9.6nm,0.8s,mb4.6									
PGF	**Pioggiola**	**48.64**	**26**	*e*P		**P**	16 13 35.0	+0.1		
	comp=Z,4.8nm,0.8s,mb4.6									
VIVF	**Saint-Julien-l**	**48.85**	**21**	*e*P		**P**	16 13 36.7	+0.2		
	comp=Z,8.2nm,0.8s,mb4.5									
VIVF	**Saint-Julien-l**	**48.85**	**21**	*e*P		**P**	16 13 36.7	+0.2		
	comp=Z,4.1nm,0.8s,mb4.5									
MFF	**Saint Martin d**	**48.90**	**16**	*e*P		**P**	16 13 36.7	-0.1		
	comp=Z,10.0nm,0.7s,mb4.7									
MFF	**Saint Martin d**	**48.90**	**16**	*e*P		**P**	16 13 36.7	-0.1		
	comp=Z,5.0nm,0.7s,mb4.7									
SBF	**Sospel**	**49.06**	**24**	*e*P		**P**	16 13 38.5	+0.4		
TCF	**Toulx Ste Croi**	**49.30**	**18**	*e*P		**P**	16 13 40.2	+0.3		
	comp=Z,18nm,1.3s,mb4.6									
TCF	**Toulx Ste Croi**	**49.30**	**18**	*e*P		**P**	16 13 40.2	+0.3		
	comp=Z,8.9nm,1.3s,mb4.6									
ORIF	**Oris-en-Rattie**	**49.35**	**22**	*e*P		**P**	16 13 41.2	+0.9		
	comp=Z,9.8nm,0.8s,mb4.6									
ORIF	**Oris-en-Rattie**	**49.35**	**22**	*e*P		**P**	16 13 41.2	+0.9		
	comp=Z,4.9nm,0.8s,mb4.6									
MBDF	**Montbardon**	**49.52**	**23**	*e*P		**P**	16 13 42.8	+1.2		
	comp=Z,27nm,1.0s,mb4.9									
MBDF	**Montbardon**	**49.52**	**23**	*e*P		**P**	16 13 42.8	+1.2		
	comp=Z,14nm,1.0s,mb4.9									
BOSA	**Boshof**	**49.70**	**129**	*e*P		**P**	16 13 47.6	+4.4		
	comp=Z,10nm,1.1s,mb4.8									
SGMF	**Saint Gilles**	**49.84**	**13**	*e*P		**P**	16 13 43.8	-0.2		
	comp=Z,21nm,1.0s,mb4.8									
SGMF	**Saint Gilles**	**49.84**	**13**	*e*P		**P**	16 13 43.8	-0.2		
	comp=Z,10nm,1.0s,mb4.8									
AVF	**Avril sur Loir**	**50.10**	**19**	*e*P		**P**	16 13 46.4	+0.4		
	comp=Z,12nm,1.1s,mb4.5									
AVF	**Avril sur Loir**	**50.10**	**19**	*e*P		**P**	16 13 46.4	+0.4		
	comp=Z,6.1nm,1.1s,mb4.5									
LPG	**La Plagne**	**50.16**	**22**	*e*P		**P**	16 13 47.8	+1.3		
	comp=Z,26nm,1.0s,mb4.9									
LPG	**La Plagne**	**50.16**	**22**	*e*P		**P**	16 13 47.8	+1.3		
	comp=Z,13nm,1.0s,mb4.9									
LPL	**La Plagne**	**50.17**	**22**	*e*P		**P**	16 13 47.7	+1.2		
	comp=Z,22nm,0.9s,mb4.9									
LPL	**La Plagne**	**50.17**	**22**	*e*P		**P**	16 13 47.7	+1.2		
	comp=Z,11nm,0.9s,mb4.9									
GRR	**Gorron**	**50.37**	**14**	*e*P		**P**	16 13 47.8	-0.2		
	comp=Z,25nm,1.0s,mb4.9									
GRR	**Gorron**	**50.37**	**14**	*e*P		**P**	16 13 47.8	-0.2		
	comp=Z,13nm,1.0s,mb4.9									
SSF	**Saint Saulge**	**50.39**	**18**	*e*P		**P**	16 13 48.5	+0.3		
	comp=Z,20nm,1.1s,mb4.7									
SSF	**Saint Saulge**	**50.39**	**18**	*e*P		**P**	16 13 48.5	+0.3		
	comp=Z,9.9nm,1.1s,mb4.8									
AQU	**L'Aquila**	**50.54**	**29**	*e*P		**P**	16 13 46.5	-2.9		
	comp=Z,39nm,1.0s,mb5.3									
LOR	**Lormes**	**50.69**	**19**	*e*P		**P**	16 13 50.5	+0.1		
	comp=Z,16nm,0.8s,mb4.7									
LOR	**Lormes**	**50.69**	**19**	*e*P		**P**	16 13 50.5	+0.1		
	comp=Z,7.8nm,0.8s,mb4.7									
LDF	**La Druitiere**	**50.74**	**15**	*e*P		**P**	16 13 50.5	-0.3		
FLN	**La Foliniere**	**50.81**	**14**	*e*P		**P**	16 13 51.0	-0.3		
	comp=Z,9.4nm,0.9s,mb4.4									
FLN	**La Foliniere-l**	**50.81**	**14**	*e*P		**P**	16 13 51.0	-0.3		
	comp=Z,4.7nm,0.9s,mb4.4									
CABF	**La Chapelle**	**50.87**	**21**	*e*P		**P**	16 13 51.8	0.0		
	comp=Z,13nm,0.8s,mb4.7									
CABF	**La Chapelle**	**50.87**	**21**	*e*P		**P**	16 13 51.8	0.0		
	comp=Z,6.7nm,0.8s,mb4.6									
HAU	**Haudompre**	**52.16**	**20**	*e*P		**P**	16 14 01.2	-0.2		
	comp=Z,21nm,0.8s,mb4.8									
HAU	**Haudompre**	**52.16**	**20**	*e*P		**P**	16 14 01.2	-0.2		
	comp=Z,10nm,0.8s,mb4.8									
MEZF	**Maizieres J'vi**	**52.16**	**19**	*e*P		**P**	16 14 01.5	+0.1		
HINF	**Hinteralfeld**	**52.17**	**21**	*e*P		**P**	16 14 01.0	-0.5		
	comp=Z,20nm,1.2s,mb4.6									
HINF	**Hinteralfeld**	**52.17**	**21**	*e*P		**P**	16 14 01.0	-0.5		
	comp=Z,10nm,1.2s,mb4.6									
LPAZ	**La Paz**	**52.50**	**249**	P		**P**	16 14 05.0	+0.5		
	comp=Z,0.4nm,0.5s,mb3.6,baz=79,slow=5.2,SNR=2.2									
CDF	**Champ du Feu**	**52.83**	**20**	*e*P		**P**	16 14 06.1	-0.3		
	comp=Z,14nm,0.8s,mb4.6									
CDF	**Champ du Feu**	**52.83**	**20**	*e*P		**P**	16 14 06.1	-0.3		
	comp=Z,6.9nm,0.8s,mb4.6									
DAVA	**Damuels**	**52.85**	**23**	⇑*i*P		**P**	16 14 06.3	-0.3		
	comp=Z,22nm,0.7s,mb5.2									
FETA	**Feichten**	**52.98**	**24**	⇑*i*P		**P**	16 14 07.2	-0.3		
	comp=Z,8.6nm,0.7s,mb4.8									
BAIF	**Baives**	**53.27**	**17**	*e*P		**P**	16 14 09.1	-0.5		
RETA	**Reutte**	**53.37**	**24**	⇓*i*P		**P**	16 14 09.7	-0.6		
	comp=Z,6.5nm,0.8s,mb4.6									
GIVF	**Givet**	**53.49**	**18**	*e*P		**P**	16 14 10.8	-0.5		
ABTA	**Abfaltersbach**	**53.50**	**25**	⇑*i*P		**P**	16 14 11.2	-0.2		
	comp=Z,9.5nm,0.7s,mb4.8									
WTTA	**Wattenberg**	**53.54**	**24**	⇓*i*P		**P**	16 14 11.5	-0.1		
	comp=Z,13nm,0.8s,mb4.9									
VOY	**Vojsko**	**53.55**	**27**	*e*(P)		**P**	16 14 12.3	+0.5		
VOY				*e*			16 14 17.7			
KBA	**Koelnbreinsper**	**54.12**	**26**	⇓*i*P		**P**	16 14 16.0	+0.1		
	comp=Z,6.5nm,1.0s,mb4.5									
SOKA	**Soboth**	**54.56**	**27**	⇑*i*P		**P**	16 14 19.6	+0.5		
	comp=Z,13nm,1.0s,mb4.9									
KMBO	**Kilima Mbogo**	**54.70**	**91**	*e*P		**P**	16 14 28.1	+7.3		
	comp=Z,7.9nm,1.2s,mb4.6									
KMBO	**Kilima Mbogo**	**54.70**	**91**	*e*P		**P**	16 14 30.7	+10		
MOA	**Molln**	**55.11**	**26**	⇑*i*P		**P**	16 14 22.2	-0.8		
	comp=Z,8.3nm,1.1s,mb4.7									
KHC	**Kasperske Hory**	**55.81**	**24**	*e*P		**P**	16 14 26.4	-1.7		
	comp=Z,5.6nm,0.8s,mb4.7									
KHC	**Kasperske Hory**	**55.81**	**24**	*e*P		**P**	16 14 28.2	+0.1		
CONA	**Conrad Observa**	**55.87**	**26**	⇑*i*P		**P**	16 14 28.7	+0.2		
	comp=Z,11nm,1.4s,mb4.7									
VTS	**Vitosha**	**55.99**	**35**	⇑P		**P**	16 14 31.2	+1.7		
VTS	**Vitosha**	**55.99**	**35**	⇑*i*P		**P**	16 14 31.2	+1.7		
NKC	**Novy Kostel**	**56.24**	**23**	*e*P		**P**	16 14 31.2	+0.1		
NKC	**Novy Kostel**	**56.24**	**23**	*e*P		**P**	16 14 31.2	+0.1		
PRU	**Pruhonice**	**56.88**	**24**	*e*P		**P**	16 14 36.0	+0.3		
PRU	**Pruhonice**	**56.88**	**24**	*e*P		**P**	16 14 36.0	+0.3		
BZS	**Buzias**	**57.04**	**32**	⇑P		**P**	16 14 37.7	+0.7		
BZS	**Buzias**	**57.04**	**32**	⇑*i*P		**P**	16 14 37.7	+0.8		
VRAC	**Vranov**	**57.22**	**26**	⇓P		**P**	16 14 38.2	+0.1		
VRAC	**Vranov**	**57.22**	**26**	⇓*i*P		**P**	16 14 38.2	0.0		
PVCC	**Panska Ves**	**57.30**	**24**	*e*P		**P**	16 14 39.0	+0.3		
PVCC	**Panska Ves**	**57.30**	**24**	*e*P		**P**	16 14 39.0	+0.3		
CLL	**Collm**	**57.31**	**22**	*e*P		**P**	16 14 39.0	+0.3		
	comp=Z,6.0nm,1.1s,mb4.5									
CLL	**Collm**	**57.31**	**22**	*e*P		**P**	16 14 39.0	+0.3		
CLL				pmax	pmax					
	comp=Z,6.0nm,1.1s,mb4.5									
CLL	**Collm**	**57.31**	**22**	*e*P		**P**	16 14 39.0	+0.3		
	comp=Z,6.0nm,1.1s,mb4.5									
BRG	**Berggiesshubel**	**57.33**	**23**	*e*P		**P**	16 14 38.6	-0.2		
	comp=Z,6.7nm,1.0s,mb4.6									
GZR	**Gura Zlata**	**57.51**	**33**	⇑P		**P**	16 14 41.5	+1.2		
GZR	**Gura Zlata**	**57.51**	**33**	⇑*i*P		**P**	16 14 41.5	+1.2		
VYHS	**Vyhne**	**57.64**	**28**	*e*P		**P**	16 14 41.1	0.0		
	comp=Z,7.5nm,1.0s,mb4.7									
VYHS	**Vyhne**	**57.64**	**28**	*e*P		**P**	16 14 41.1	0.0		
VYHS				pmax	pmax					
	comp=Z,8.0nm,1.0s,mb4.7									
VYHS	**Vyhne**	**57.64**	**28**	*e*P		**P**	16 14 41.1	0.0		
PSZ	**Piszkesteto**	**57.73**	**29**	⇓P		**P**	16 14 42.1	+0.3		
PSZ	**Piszkesteto**	**57.73**	**29**	⇓*i*P		**P**	16 14 42.1	+0.3		
UPC	**Upice**	**57.88**	**25**	*e*P		**P**	16 14 43.0	+0.2		
UPC	**Upice**	**57.88**	**25**	*e*P		**P**	16 14 43.0	+0.2		
DPC	**Dobruska-Polom**	**57.89**	**25**	*e*P		**P**	16 14 42.8	0.0		
DPC	**Dobruska-Polom**	**57.89**	**25**	*e*P		**P**	16 14 42.8	0.0		
MORC	**Moravsky Berou**	**57.98**	**26**	⇑P		**P**	16 14 43.6	0.0		
MORC	**Moravsky Berou**	**57.98**	**26**	⇑*i*P		**P**	16 14 43.6	+0.1		
OKC	**Ostrava-Krasne**	**58.30**	**26**	*e*P		**P**	16 14 45.8	+0.1		
OKC	**Ostrava-Krasne**	**58.30**	**26**	*e*P		**P**	16 14 45.8	+0.1		
DRGR		**58.39**	**31**	⇑P		**P**	16 14 46.6	+0.2		
DRGR		**58.39**	**31**	⇑*i*P		**P**	16 14 46.6	+0.2		
VOIR		**58.79**	**34**	⇓P		**P**	16 14 49.7	+0.5		
VOIR		**58.79**	**34**	⇓*i*P		**P**	16 14 49.7	+0.5		
CRVS	**Cervenica-Dubn**	**59.17**	**29**	*e*P		**P**	16 14 51.8	0.0		
	comp=Z,6.4nm,1.3s,mb4.5									
CRVS	**Cervenica-Dubn**	**59.17**	**29**	*e*P		**P**	16 14 51.8	0.0		
CRVS				pmax	pmax					
	comp=Z,6.0nm,1.3s,mb4.5									
CRVS	**Cervenica-Dubn**	**59.17**	**29**	*e*P		**P**	16 14 51.8	0.0		
TRPA	**Tarpa**	**59.18**	**30**	⇑*i*P		**P**	16 14 52.4	+0.5		
OJC	**Ojcow**	**59.31**	**27**	*e*P		**P**	16 14 52.8	+0.1		
MLR	**Muntele Rosu**	**59.32**	**34**	⇓P		**P**	16 14 53.4	+0.5		
MLR	**Muntele Rosu**	**59.32**	**34**	⇓*i*P		**P**	16 14 53.4	+0.5		
UZH	**Uzhgorod**	**59.39**	**30**	⇑*i*P		**P**	16 14 53.8	+0.5		
UZH				*e*			16 15 01.7			
PLOR	**Plostina**	**59.93**	**34**	⇓P		**P**	16 14 57.1	0.0		
PLOR	**Plostina**	**59.93**	**34**	⇓*i*P		**P**	16 14 57.1	0.0		
VRI	**Vrincioaia**	**59.98**	**34**	⇓P		**P**	16 14 57.2	-0.3		
VRI	**Vrincioaia**	**59.98**	**34**	⇓*i*P		**P**	16 14 57.2	-0.3		
BURAR	**Bucovina Array**	**60.23**	**32**	⇑P		**P**	16 14 59.4	+0.3		
BURAR	**Bucovina Array**	**60.23**	**32**	⇑*i*P		**P**	16 14 59.4	+0.3		
BUR08	**Bucovina Ar. S**	**60.23**	**32**	*e*P		**P**	16 14 59.4	+0.2		
BR131	**Keskin Array S**	**61.08**	**43**	*e*P		**P**	16 15 05.4	+0.3		
	comp=Z,3.9nm,0.8s,mb4.6									
BRTR	**Keskin Array B**	**61.08**	**43**	P		**P**	16 15 05.8	+0.8		
	comp=Z,5.5nm,0.8s,mb4.7,baz=246,slow=6.3,SNR=20									
BRTR	**Keskin Array B**	**61.08**	**43**	P		**P**	16 15 05.9	+0.8		
BRTR				pmax	pmax					
	comp=Z,6.0nm,0.8s									
MALT	**Malatya**	**63.86**	**46**	*e*P		**P**	16 15 24.6	+0.9		
	comp=Z,2.6nm,0.5s,mb4.5									
MALT	**Malatya**	**63.86**	**46**	⇓P		**P**	16 15 24.8	+1.1		
MALT	**Malatya**	**63.86**	**46**	⇓*i*P		**P**	16 15 24.8	+1.1		
AKASG	**Malin Array Be**	**64.19**	**31**	P		**P**	16 15 24.5	-1.2		
	comp=Z,3.5nm,0.7s,mb4.5,baz=231,slow=8.2,SNR=15									
AKASG	**Malin Array Be**	**64.19**	**31**	P		**P**	16 15 24.5	-1.1		
AKASG				pmax	pmax					
	comp=Z,4.0nm,0.7s									
AKBB	**Malin Array Si**	**64.19**	**31**	*e*P		**P**	16 15 24.4	-1.2		
NOA	**NORSAR Array B**	**64.79**	**15**	P		**P**	16 15 29.9	+0.5		
	comp=Z,2.7nm,0.9s,mb4.3,baz=213,slow=6.5,SNR=4.9									
NOA	**NORSAR Array B**	**64.79**	**15**	P		**P**	16 15 29.9	+0.5		
NOA				pmax	pmax					
	comp=Z,3.0nm,0.9s									
DWPF	**Disney**	**67.25**	**301**	P		**P**	16 15 45.3	-0.6		
KIV	**Kislovodsk**	**68.97**	**42**	*e*P		**P**	16 15 56.9	+0.5		
KIV				*e*			16 16 24.7			
KIV				*e*			16 18 29.1			
KIV				*e*SS		SS	16 29 21.3	-5.7		
KIV				pmax	pmax					
	comp=Z,9.0nm,1.1s,mb4.6									
FINES	**FINESS Array B**	**69.68**	**21**	P		**P**	16 16 00.6	+0.2		
	comp=Z,3.5nm,0.6s,mb4.5,baz=212,slow=3.7,SNR=20									
FINES	**FINESS Array B**	**69.68**	**21**	P		**P**	16 16 00.6	+0.2		
FINES				pmax	pmax					
	comp=Z,4.0nm,0.6s									
VSR	**Storozhevoye**	**69.81**	**34**	*e*P		**P**	16 16 00.9	-0.5		
VSR				pmax	pmax					
	comp=N,4.0nm,0.4s									
VSR				pmax	pmax					
	comp=E,5.0nm,0.4s									
VSR				pmax	pmax					
	comp=Z,9.0nm,0.4s,mb5.0									
OBN	**Obninsk**	**70.33**	**30**	*i*P		**P**	16 16 02.5	-2.0		
OBN				*e*			16 16 23.9			
OBN				*e*SS		SS	16 29 39.3	-8.1		
OBN				pmax	pmax					
	comp=Z,7.0nm,1.1s,mb4.5									
VNA2	**Neumayer--Watz**	**71.03**	**177**	*e*P		**P**	16 16 07.2	-1.3		
	baz=336,slow=7.5									
VNA2				*e*			16 16 17.7			
JOF	**Joensuu**	**72.51**	**21**	*e*P		**P**	16 16 15.8	-1.7		
JOF				pmax	pmax					
	comp=Z,3.0nm,0.6s,mb4.4									
JOF	**Joensuu**	**72.51**	**21**	*e*p		**P**	16 16 15.8	-1.7		
	comp=Z,3.3nm,0.6s,mb4.4									
AKTK	**Aktyubinsk**	**80.82**	**39**	P		**P**	16 17 04.4	-0.4		
AKTO	**Aktyubinsk**	**80.82**	**39**	P		**P**	16 17 04.4	-0.4		
	comp=Z,2.3nm,0.8s,mb4.2,baz=255,slow=6.4,SNR=11									
AKTO	**Aktyubinsk**	**80.82**	**39**	P		**P**	16 17 04.4	-0.4		
AKTO				pmax	pmax					
	comp=Z,2.0nm,0.8s,mb4.1									
ABKAR	**Akbulak array**	**81.83**	**40**	*e*P		**P**	16 17 09.6	-0.5		
	comp=Z,2.7nm,0.8s,mb4.2									
WMOK	**Wichita Mounta**	**82.92**	**305**	*e*P		**P**	16 17 15.2	-1.0		
	comp=Z,5.3nm,1.1s,mb4.5									
TXAR	**Lajitas Array**	**86.75**	**299**	P		**P**	16 17 35.5	-0.2		
TXAR	**Lajitas Array**	**86.75**	**299**	P		**P**	16 17 35.5	-0.1		
	comp=Z,1.8nm,1.0s,mb4.3,baz=115,slow=5.9,SNR=11									
TXAR	**Lajitas Array**	**86.75**	**299**	P		**P**	16 17 35.5	-0.1		
TXAR				pmax	pmax					
	comp=Z,2.0nm,1.0s									
SDCO	**Great Sand Dun**	**88.51**	**308**	*e*P		**P**	16 17 43.3	-0.6		
	comp=Z,4.1nm,1.2s,mb4.6									
BRVK	**Borovoye**	**88.69**	**37**	⇑*i*P		**P**	16 17 48.4	+4.0		
BRVK				pmax	pmax					
	comp=Z,9.0nm,3.1s									
BVAR	**Borovoye Array**	**88.75**	**37**	P		**P**	16 17 43.7	-1.0		
	comp=Z,0.5nm,0.5s,mb4.1,baz=260,slow=8.3,SNR=4.0									
BVAR	**Borovoye Array**	**88.75**	**37**	P		**P**	16 17 43.7	-1.0		
BVAR				pmax	pmax					
	comp=Z,1.0nm,0.5s									
QSPA	**South Pole Qui**	**89.99**	**180**	*e*P		**P**	16 17 56.6	+6.7		
	comp=Z,3.5nm,0.9s,mb4.7									
PDAR	**Pinedale Array**	**91.61**	**313**	P		**P**	16 17 58.2	-0.1		
	comp=Z,0.4nm,0.9s,mb3.7,baz=99,slow=5.7,SNR=2.7									
TKM2	**Tokmak 2**	**92.28**	**47**	P		**P**	16 18 01.2	-0.2		
	comp=Z,1.4nm,0.9s,mb4.3									
BILL	**Bilibino**	**112.12**	**358**	*e*P		Pdif	16 19 29.9	-0.1		
BILL				pmax	pmax					
	comp=Z,2.0nm,0.8s									
NJ2	**Nanjing**	**127.92**	**48**	*e*P		PKPdf	16 23 56.3	-1.2		
NJ2				pmax	pmax					
	comp=Z,10.0nm,0.6s									
ASAR	**Alice Springs**	**143.52**	**132**	PKP		PKPdf	16 24 28.8	+2.1		
	comp=Z,0.7nm,0.7s,baz=220,slow=2.2,SN

	24nm,1.3s						
MSU	**Marysvale**	**17.04**	**127**	Pn	**Pn**	**16 24 40.8**	**+1.3**
	10nm,1.4s						
MCK	**McKinley**	**17.07**	**330**	*e*Pn	**Pn**	**16 24 41.4**	**+1.6**
	14nm,1.2s						
CCUT	**Cedar City**	**17.19**	**131**	*e*Pn	**Pn**	**16 24 43.5**	**+2.1**
	12nm,1.3s						
SHPR	**Sheep Range**	**17.21**	**137**	*e*Pn	**Pn**	**16 24 42.4**	**+0.7**
	19nm,1.7s						
ILAR	**Eielson Array**	**17.21**	**335**	P	**Pn**	**16 24 42.9**	**+1.3**
	0.0nm,0.3s,baz=148,slow=9.0,SNR=21						
FFC	**Flin Flon**	**17.38**	**64**	*e*Pn	**Pn**	**16 24 43.4**	**-0.4**
	24nm,0.8s						
COLA	**College**	**17.56**	**334**	Pn	**Pn**	**16 24 45.8**	**-0.1**
GSC	**Goldstone**	**17.57**	**143**	*e*Pn	**Pn**	**16 24 46.0**	**-0.2**
	16nm,1.1s						
INK	**Inuvik**	**18.27**	**355**	*e*Pn	**Pn**	**16 24 54.7**	**+0.1**
	20nm,1.2s						
INK	**Inuvik**	**18.27**	**355**	P	**Pn**	**16 24 54.9**	**+0.3**
	0.3nm,0.3s,baz=169,slow=11,SNR=8.7						
RSSD	**Black Hills**	**18.38**	**99**	*e*P	**Pn**	**16 24 57.4**	**+1.4**
	9.7nm,1.0s						
LDFC	**Landfair**	**18.44**	**140**	*e*P	**Pn**	**16 24 56.0**	**-1.0**
	34nm,1.3s						
TTA	**Tatalina**	**19.16**	**322**	*e*P	**Pn**	**16 25 04.3**	**-1.1**
	18nm,1.2s						
PV01	**Paradox Valley**	**19.24**	**121**	*e*P	**Pn**	**16 25 04.7**	**-1.9**
	2µm,1.3s						
WUAZ	**Wupatki**	**19.77**	**131**	*e*P	**Pn**	**16 25 11.7**	**-1.3**
	9.4nm,0.9s						
ISCO	**Idaho Springs**	**19.82**	**112**	*e*P	**Pn**	**16 25 10.8**	**-2.6**
	4.3nm,0.9s						
GLA	**Glamis**	**20.32**	**142**	*e*P	**P**	**16 25 15.4**	**-2.1**
ULM	**Lac du Bonnet**	**21.49**	**77**	P	**P**	**16 25 31.0**	**+1.1**
ULM	**Lac du Bonnet**	**21.49**	**77**	P	**P**	**16 25 31.0**	**+1.1**
	44nm,1.1s,mb4.7,baz=284,slow=12,SNR=11						
TUC	**Tucson**	**22.69**	**135**	*e*P	**P**	**16 25 42.2**	**-0.7**
	18nm,1.4s,mb4.3						
ANMO	**Albuquerque**	**22.73**	**123**	*e*P	**P**	**16 25 42.9**	**-0.5**
	5.3nm,1.1s,mb3.9						
ANMO	**Albuquerque**	**22.73**	**123**	P	**P**	**16 25 42.3**	**-1.0**
	0.6nm,0.3s,mb3.5,baz=346,slow=8.3,SNR=3.9						
LAZ	**Ladron**	**22.79**	**125**	*e*P	**P**	**16 25 44.9**	**+1.0**
	10nm,1.6s,mb4.0						
LPM	**Los Pinos Moun**	**23.13**	**125**	P	**P**	**16 25 46.2**	**-1.2**
	10nm,1.6s,mb4.0						
BNM	**Barren Site**	**23.25**	**125**	*e*P	**P**	**16 25 48.2**	**-0.6**
	21nm,1.7s,mb4.3						
ECSD	**EROS Data Cent**	**23.30**	**93**	*e*P	**P**	**16 25 48.2**	**-1.0**
	28nm,0.9s,mb4.7						
AMTX	**Amarillo**	**25.45**	**116**	*e*P	**P**	**16 26 08.4**	**-0.8**
	8.1nm,0.6s,mb4.4						
WMOK	**Wichita Mounta**	**27.24**	**113**	*e*P	**P**	**16 26 24.4**	**-1.0**
	6.8nm,0.9s,mb4.2						
TXAR	**Lajitas Array**	**28.59**	**127**	P	**P**	**16 26 37.4**	**-0.2**
	1.6nm,1.0s,mb3.7,baz=324,slow=7.8,SNR=13						
KSRS	**Korea Array**	**69.30**	**304**	P	**P**	**16 31 48.4**	**-0.2**
	0.7nm,0.8s,mb3.7,baz=45,slow=6.3,SNR=3.2						
ZALV	**Zalesovo Beam**	**72.27**	**339**	P	**P**	**16 32 09.4**	**+3.0**
	0.9nm,0.7s,mb3.8,baz=15,slow=6.2,SNR=4.3						
HHC	**Hu-ho-hao-te**	**74.69**	**316**	*e*P	**P**	**16 32 20.5**	**-0.4**
HHC				pP	pP	16 32 25.0	+0.8
HHC				sP	sP	16 32 27.8	+2.4
HHC				PP	PP	16 35 08.0	+0.8
HHC				S	S	16 41 52.0	-4.7
HHC				SS	SS	16 46 41.8	-1.2
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,460nm,7.4s						
HHC				LR	LR		
	comp=Z,430nm,14.3s						
KURK	**Kurchatov**	**76.62**	**342**	P	**P**	**16 32 31.1**	**-0.7**
	comp=Z,0.4nm,0.3s,mb3.9,baz=14,slow=5.3,SNR=3.7						
MKAR	**Makanchi Array**	**79.53**	**338**	P	**P**	**16 32 46.2**	**-1.7**
	comp=Z,0.2nm,0.7s,mb3.2,baz=20,slow=4.6,SNR=2.1						
WMQ	**Urumqi**	**80.88**	**334**	*e*P	**P**	**16 32 56.0**	**+0.7**
WMQ				pP	pP	16 33 00.8	+2.2
WMQ				sP	sP	16 33 03.0	+3.2
WMQ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,38nm,4.6s						
CD2	**Chengdu**	**86.45**	**316**	P	**P**	**16 33 23.0**	**-1.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
KSH	**Kashi**	**87.88**	**340**	*e*P	**P**	**16 33 37.0**	**+6.1**
KSH				*ep*P	pP	16 33 41.8	+7.6
KSH				*es*P	sP	16 33 44.0	+8.6
KSH				*e*SKS		16 44 04.0	
KSH				*e*S	S	16 44 22.3	+8.7
KSH				sS	sS	16 44 31.0	+12
KSH				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,87nm,4.3s						
KSH				LR	LR		
	comp=N,61nm,6.7s						
KSH				LR	LR		
	comp=E,53nm,4.8s						
KSH				LR	LR		
	comp=Z,95nm,5.1s						

*ISCJB **28** 16:29:14.3±0.7,50°.29N±0°.05×18°.78E±0°.04,h0km, Error ellipse: s-maj=7.9km s-min=3.3km az=2.5*
*CSEM **28** 16:29:15.2±0.3,50°.31N×18°.81E,h2km,ML2.5/4, Error ellipse: s-maj=8.4km s-min=3.7km az=4.0*
*PRU **28** 16:29:16.0,50°.25N×18°.81E,h0km*

ISC 28 16:29:15.4±0.7,50°.27N±0°.05×18°.83E±0°.04,h0km,n17, σ1§09/30,1C,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.61**	**226**	*e*PG	**Pg**	**16 29 27.9**	**+0.7**
OKC				*e*SG	**Sg**	**16 29 37.3**	**+2.2**
	comp=Z,15nm,0.6s						
OKC	**Ostrava-Krasne**	**0.61**	**226**	Pg	**Pg**	**16 29 27.9**	**+0.7**
OKC				Sg	**Sg**	**16 29 37.3**	**+2.2**
	comp=Z,15nm,0.6s						
OJC	**Ojcow**	**0.62**	**94**	*e*Pg	**Pg**	**16 29 27.1**	**-0.3**
OJC				*e*Sg	**Sg**	**16 29 35.4**	**0.0**
OJC	**Ojcow**	**0.62**	**94**	*e*Pg	**Pg**	**16 29 27.1**	**-0.3**
OJC				*e*Sg	**Sg**	**16 29 35.4**	**0.0**
MORC	**Moravsky Berou**	**0.96**	**240**	*e*Pg	**Pg**	**16 29 33.6**	**-0.3**
MORC				*e*Sg	**Sg**	**16 29 46.6**	**+0.3**
DPC	**Dobruska-Polom**	**1.61**	**274**	*e*PG	**Pg**	**16 29 44.5**	**-1.7**
DPC				*e*SG	**Sg**	**16 30 07.1**	**0.0**
	comp=Z,11nm,0.5s						
DPC	**Dobruska-Polom**	**1.61**	**274**	Pg	**Pg**	**16 29 44.5**	**-1.7**
DPC				Sg	**Sg**	**16 30 07.1**	**0.0**
	comp=Z,11nm,0.5s						
KSP	**Ksiaz**	**1.72**	**291**	*e*Pg	**Pg**	**16 29 47.9**	**-0.4**
KSP				*e*Sg	**Sg**	**16 30 12.3**	**+1.7**
KSP	**Ksiaz**	**1.72**	**291**	⇑*i*Pg	**Pg**	**16 29 47.9**	**-0.4**
KSP				*e*Sg	**Sg**	**16 30 11.6**	**+1.0**
VRAC	**Vranov**	**1.74**	**237**	*e*Sg	**Sg**	**16 30 09.7**	**-1.5**
STHS	**Stebnicka Huta**	**1.78**	**118**	*e*PN	**Pn**	**16 29 48.1**	**+0.7**
STHS				*e*SN	**Sn**	**16 30 12.1**	**+1.4**
STHS	**Stebnicka Huta**	**1.78**	**118**	*e*Pn	**Pn**	**16 29 48.1**	**+0.7**
STHS				*e*Sn	**Sn**	**16 30 12.1**	**+1.4**
KECS	**Kecovo**	**2.09**	**148**	*e*PN	**Pn**	**16 29 51.3**	**-0.3**
KECS				*e*SN	**Sn**	**16 30 15.7**	**-2.5**
PRU	**Pruhonice**	**2.77**	**266**	*e*SG	**Sg**	**16 30 44.4**	**0.0**
	comp=Z,4.8nm,0.8s						
PRU	**Pruhonice**	**2.77**	**266**	Sg	**Sg**	**16 30 44.4**	**0.0**
	comp=Z,4.8nm,0.8s						
KHC	**Kasperske Hory**	**3.59**	**254**	*e*PG	**Pg**	**16 30 20.4**	**-3.8**
KHC				*e*SG	**Sg**	**16 31 10.7**	**-0.1**
	comp=Z,4.5nm,0.5s						
KHC	**Kasperske Hory**	**3.59**	**254**	Sg	**Sg**	**16 31 10.7**	**-0.1**
	comp=Z,4.5nm,0.5s						

IDC 28 16:32:39.8±4.6,28°.69S×177°.11W,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.7/15,mbtmp3.9/3,Error ellipse: s-maj=195.3km s-min=55.9km az=153.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**35.65**	**254**	P	P	16 39 40.0	+0.4
	1.3nm,0.5s,baz=92,slow=9.8,SNR=5.2						
ASAR	**Alice Springs**	**44.01**	**265**	P	P	16 40 49.0	-0.2
	1.0nm,0.6s,baz=103,slow=7.0,SNR=27						
WRA	**Warramunga Arr**	**44.84**	**270**	P	P	16 40 55.7	-0.2
	0.8nm,0.5s,baz=109,slow=8.1,SNR=18						
AKASG	**Malin Array Be**	**150.38**	**325**	PKPbc	PKPbc	16 52 32.5	-0.3
	0.5nm,0.4s,baz=45,slow=2.4,SNR=4.2						

IDC 28 16:37:25.3±5.8,15°.68S×173°.26W,h102km±28km, mb3.0/3,mb1 3.3/4,mb1mx3.2/20,mbtmp3.0/4,Error ellipse: s-maj=238.7km s-min=25.1km az=137.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.27**	**39**	P	Pn	16 38 03.4	+2.0
	3.9nm,0.3s,baz=242,slow=19,SNR=16						
AFI				S	Sn	16 38 29.4	+0.3
	8.3nm,0.3s,baz=54,slow=22,SNR=9.6						
WRA	**Warramunga Arr**	**49.91**	**257**	P	P	16 46 08.8	-0.2
	0.3nm,0.8s,baz=98,slow=8.0,SNR=3.0						
ASAR	**Alice Springs**	**50.15**	**252**	P	P	16 46 10.4	-0.3
	0.4nm,0.6s,baz=88,slow=7.8,SNR=13						
ILAR	**Eielson Array**	**82.69**	**11**	P	P	16 49 37.5	+0.4
	0.2nm,0.5s,baz=194,slow=7.2,SNR=2.9						

*ISCJB **28** 16:52:26.2±0.5,56°.21S±0°.08×30°.5W±0°.2,h10km, mb4.5/13,MS4.4/10, Error ellipse: s-maj=13.7km s-min=9.4km az=141.7*
*IDC **28** 16:52:26.8±0.7,56°.16S×30°.40W,h0km,mb4.0/9, mb1 4.1/10,mb1mx4.0/19,mbtmp4.0/10,ML3.2/1,MS4.4/11, Ms1 4.4/11,ms1mx4.3/23, Error ellipse: s-maj=22.5km s-min=18.3km az=48.0*
*NEIC **28** 16:52:32.5±4.9,56°.21S×30°.60W,h44km±45km,mb4.8/9, Error ellipse: s-maj=19.7km s-min=12.9km az=49.0*

ISC 28 16:52:28.1±0.5,56°.23S±0°.08×30°.5W±0°.2,h10km,n41, σ1§18/24,mb4.5/13,MS4.4/10,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA3	**Neumayer Olymp**	**17.48**	**158**	*e*P	**Pn**	**16 56 29.8**	**-1.8**
VNA3				*e*		16 56 40.3	
VNA2	**Neumayer--Watz**	**17.76**	**155**	*e*P	**Pn**	**16 56 33.5**	**-1.5**
	baz=313,slow=12						
VNA2				*e*		16 56 44.6	
PMSA	**Palmer Station**	**18.39**	**229**	*e*P	**Pn**	**16 56 41.5**	**-1.3**
	60nm,1.5s						
PMSA				LR	LR	17 02 41.2	
PMSA	**Palmer Station**	**18.39**	**229**	P	**Pn**	**16 56 44.2**	**+1.4**
	0.0nm,0.3s,baz=71,slow=14,SNR=5.2						
PMSA				LR	LR	17 02 41.2	
	comp=Z,890nm,18.6s,baz=70,slow=33						
USHA	**Ushuaia**	**21.35**	**258**	P	**P**	**16 57 16.7**	**+1.6**
	3.8nm,0.7s,mb3.8,baz=61,slow=8.1,SNR=2.7						
MAIT	**Maitri**	**23.12**	**145**	*e*P	**P**	**16 57 34.9**	**+1.2**
PLCA	**Paso Flores**	**30.24**	**284**	*e*P	**P**	**16 58 36.9**	**-1.8**
	15nm,1.3s,mb4.6						
PLCA	**Paso Flores**	**30.24**	**284**	LR	LR	17 10 18.8	
	comp=Z,923nm,18.7s,MS4.5,baz=130,slow=35						
QSPA	**South Pole Qui**	**34.02**	**180**	P	**P**	**16 59 12.5**	**+1.0**
	15nm,1.0s,mb4.8,baz=184,slow=2.2,SNR=13						
QSPA				LR	LR	17 12 38.4	
	comp=Z,773nm,18.6s,MS4.5,baz=188,slow=36						
CPUP	**Villa Florida**	**35.60**	**316**	*e*P	**P**	**16 59 21.0**	**-4.6**
	19nm,0.7s,mb5.1						
CPUP				LR	LR	17 12 42.2	
CPUP	**Villa Florida**	**35.60**	**316**	P	**P**	**16 59 24.3**	**-1.3**
	0.4nm,0.3s,mb3.8,baz=119,slow=9.3,SNR=3.1						
CPUP				LR	LR	17 12 42.2	
	comp=Z,524nm,18.9s,MS4.3,baz=122,slow=34						
CFAA	**Coronel Fontan**	**35.97**	**297**	P	**P**	**16 59 28.6**	**-0.1**
CFAA				LR	LR	17 14 15.3	
CFAA	**Coronel Fontan**	**35.97**	**297**	P	**P**	**16 59 28.6**	**-0.1**
	0.1nm,0.5s,baz=66,slow=10.0,SNR=2.1						
CFAA				LR	LR	17 14 15.3	
	comp=Z,110nm,18.5s,MS3.7,baz=150,slow=36						
LCO	**Las Campanas**	**39.31**	**297**	P	**P**	**16 59 55.4**	**-1.7**
	22nm,1.2s,mb4.8						
MAW	**Mawson**	**41.09**	**144**	*e*P	**P**	**17 00 11.7**	**+0.4**
	1.2nm,1.1s,mb3.4						
MAW				LR	LR	17 14 27.3	
MAW	**Mawson**	**41.09**	**144**	P	**P**	**17 00 12.2**	**+0.9**
	0.6nm,0.6s,mb3.4,baz=270,slow=14,SNR=2.6						
MAW				LR	LR	17 14 27.3	
	comp=Z,712nm,19.8s,MS4.5,baz=275,slow=32						
SUR	**Sutherland**	**42.47**	**78**	LR	LR	17 12 08.2	
	comp=Z,770nm,21.6s,MS4.5,baz=87,slow=28						
SBA	**Scott Base**	**45.75**	**185**	*e*P	**P**	**17 00 49.6**	**+0.7**
	14nm,1.2s,mb4.8						
SIV	**San Ignacio**	**46.41**	**317**	P	**P**	**17 00 54.7**	**+0.1**
	1.0nm,0.7s,mb3.9,baz=172,slow=8.8,SNR=4.8						
LPAZ	**La Paz**	**49.02**	**309**	*e*P	**P**	**17 01 15.5**	**+0.6**
	4.6nm,0.9s,mb4.5						
LPAZ	**La Paz**	**49.02**	**309**	P	**P**	**17 01 16.9**	**+2.0**
	1.7nm,0.6s,mb4.2,baz=124,slow=5.4,SNR=5.6						
LBTB	**Lobatse**	**50.83**	**76**	*e*P	**P**	**17 01 28.1**	**-0.6**
	15nm,1.2s,mb4.8						
DBIC	**Dimbokro**	**66.14**	**28**	*e*P	**P**	**17 03 16.0**	**+0.6**
	23nm,1.4s,mb5.0						
DBIC	**Dimbokro**	**66.14**	**28**	P	**P**	**17 03 16.6**	**+1.1**
	5.0nm,0.9s,mb4.5,baz=183,slow=11,SNR=3.3						
ROSC	**El Rosal**	**70.64**	**313**	LR	LR	17 35 45.6	
	comp=Z,221nm,19.0s,MS4.4,baz=275,slow=37						
PAYG	**Puerto Ayora**	**73.11**	**295**	*e*P	**P**	**17 04 03.0**	**+4.5**
	26nm,0.9s,mb5.2						
TORD	**Torodi Ar. Bea**	**74.16**	**33**	P	**P**	**17 04 05.0**	**+0.4**
	2.2nm,0.4s,mb4.4,baz=200,slow=5.2,SNR=7.5						
TORD				LR	LR	17 29 32.8	
	comp=Z,494nm,18.8s,MS4.8,baz=220,slow=30						
MDT	**Midelt**	**91.39**	**22**	LR	LR	17 40 48.4	
	comp=Z,191nm,19.0s,MS4.6,baz=168,slow=32						
KEST	**Kesra**	**97.66**	**32**	LR	LR	17 44 20.6	
	comp=Z,208nm,20.8s,MS4.6,baz=181,slow=32						
CMAR	**Chiang Mai Arr**	**126.70**	**114**	PKP	PKPdf	17 11 36.4	+4.9
	0.4nm,0.3s,baz=237,slow=2.8,SNR=2.6						
AKTK	**Aktyubinsk**	**128.93**	**55**	PKP	PKPdf	17 11 40.4	+5.6
AKTO	**Aktyubinsk**	**128.93**	**55**	PKP	PKPdf	17 11 40.4	+5.6
	0.4nm,0.4s,baz=146,slow=3.6,SNR=2.4						
MKAR	**Makanchi Array**	**138.70**	**74**	PKP	PKPdf	17 11 55.6	+2.4
	0.2nm,0.7s,baz=188,slow=5.5,SNR=2.9						
GTA	**Gaotai**	**143.54**	**96**	*e*P	PKPdf	17 12 00.0	-2.2
GTA				pP		17 12 04.5	
GTA				sP		17 12 08.5	
GTA				pmax	pmax		
	comp=Z,3.0nm,2.0s						
ZAA0	**Zalesovo Array**	**144.11**	**66**	*e*PKPdf	PKPdf	17 12 00.7	-2.0
ZALV	**Zalesovo Beam**	**144.11**	**66**	PKP	PKPdf	17 12 00.8	-1.8
ZALV	**Zalesovo Beam**	**144.11**	**66**	PKP	PKPdf	17 12 00.8	-1.8
	comp=Z,0.5nm,0.3s,baz=264,slow=4.3,SNR=2.6						
INK	**Inuvik**	**144.78**	**321**	PKP	PKPdf	17 12 09.2	+5.8
	comp=Z,4.0nm,1.0s,baz=167,slow=3.1,SNR=4.2						
ILAR	**Eielson Array**	**148.86**	**312**	PKPbc	PKPbc	17 12 13.8	-0.5
	comp=Z,3.6nm,1.2s,baz=117,slow=1.6,SNR=12						
BPAW	**Bear Paw Mtn.**	**150.43**	**310**	*e*PKPbc	PKPbc	17 12 17.7	-0.4
SONM	**Songino Array**	**152.57**	**89**	PKPbc	PKPbc	17 12 24.6	+1.0
	comp=Z,0.2nm,0.3s,baz=264,slow=2.6,SNR=2.5						
SONM				PKPab	PKPab	17 12 31.9	-2.3
	comp=Z,1.4nm,0.9s,baz=211,slow=1.7,SNR=4.9						

*ISCJB **28** 17:00:01.9±0.4,43°.97N±0°.03×17°.61E±0°.05,h10km, Error ellipse: s-maj=6.0km s-min=2.3km az=138.2*
*CSEM **28** 17:00:02.7±0.3,44°.02N×17°.65E,h2km,ML2.7/9, Error ellipse: s-maj=9.3km s-min=3.9km az=48.0*
*NEIC **28** 17:00:05.5,43°.61N×17°.56E,h0km,ML2.7(PDG), After PDG.*
*PDG **28** 17:00:05.5±0.3,43°.61N×17°.56E,h0km±11km,ML2.7/9, Error ellipse: s-maj=1.3km s-min=2.0km az=0.0*
*VIE **28** 17:00:06.2±0.4,44°.13N×17°.48E,h10km,mb2.6/6,ML2.5/7, Error ellipse: s-maj=4.0km s-min=3.1km az=65.0 81 km WNW of Sarajevo*

ISC 28 17:00:02.0±0.8,43°.93N±0°.03×17°.54E±0°.06,h4km±5km, n38,σ1§06/67,20C-11D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UPM	**Unac-Piva**	**1.23**	**126**	⇓*i*Pg	**Pn**	**17 00 24.6**	**-1.4**
UPM				*e*Sg	**Sg**	**17 00 42.2**	**+0.6**
UPM	**Unac-Piva**	**1.23**	**126**	⇓*i*Pg	**Pn**	**17 00 24.6**	**-1.4**
UPM				*e*Sg	**Sg**	**17 00 42.2**	**+0.6**
BRY	**Bratogost**	**1.26**	**144**	⇑*i*Pg	**Pn**	**17 00 23.4**	**-3.0**
BRY				*e*Sg	**Sn**	**17 00 40.7**	**-3.1**
BBLS	**Lazići**	**1.35**	**92**	*e*Sg	**Sg**	**17 00 46.2**	**+0.8**
PLE	**Pljevlja**	**1.47**	**113**	⇑*i*Pg	**Pg**	**17 00 30.3**	**+0.1**
PLE				*e*Sg	**Sg**	**17 00 51.4**	**+2.1**
PLE	**Pljevlja**	**1.47**	**113**	⇑*i*Pg	**Pg**	**17 00 30.3**	**+0.1**
PLE				*e*Sg	**Sg**	**17 00 51.4**	**+2.1**
NKY	**Niksic**	**1.54**	**136**	⇑*i*Pg	**Pn**	**17 00 29.6**	**-0.7**
NKY				*e*Sg	**Sn**	**17 00 50.6**	**-0.1**
HCY	**Herceg Novi**	**1.64**	**154**	⇑*i*Pg	**Pn**	**17 00 30.2**	**-1.4**
HCY				*e*Sg	**Sn**	**17 00 51.5**	**-1.6**
DIVS	**Divibare**	**1.78**	**84**	*e*Pg	**Pg**	**17 00 35.1**	**-1.0**
DIVS				*e*Sg	**Sg**	**17 00 57.4**	**-1.7**
BUM	**Brajici-Budva**	**1.91**	**148**	⇑*i*Pn	**Pn**	**17 00 35.9**	**+0.6**
BUM				*e*Sn	**Sn**	**17 01 00.8**	**+1.0**
BUM	**Brajici-Budva**	**1.91**	**148**	⇑*i*Pn	**Pn**	**17 00 35.9**	**+0.6**
BUM				*e*Sn	**Sn**	**17 01 00.8**	**+1.0**
PDG	**Podgorica**	**1.96**	**139**	*e*Pg	**Pn**	**17 00 36.9**	**+0.9**
PDG	**Podgorica**	**1.96**	**139**	⇑*i*Pn	**Pn**	**17 00 37.2**	**+1.2**
PDG				*e*Sn	**Sn**	**17 01 02.5**	**+1.5**
PDG				*e*Sg	**Sg**	**17 01 04.3**	**-0.5**
TTG	**Podgorica**	**1.96**	**139**	⇑*i*Pn	**Pn**	**17 00 37.2**	**+1.2**
TTG				*e*Sn	**Sn**	**17 01 02.5**	**+1.5**
TTG	**Podgorica**	**1.96**	**139**	⇑*i*Pn	**Pn**	**17 00 37.2**	**+1.2**
TTG				*e*Sn	**Sn**	**17 01 02.5**	**+1.5**
BEY	**Berane**	**2.02**	**121**	⇓*i*Pn	**Pg**	**17 00 39.7**	**-1.0**
IVA	**Berane**	**2.02**	**121**	⇓*i*Pn	**Pg**	**17 00 39.7**	**-1.0**
IVA				*e*Sn	**Sg**	**17 01 06.7**	**-0.1**
IVA	**Berane**	**2.02**	**121**	⇓*i*Pn	**Pg**	**17 00 39.7**	**-1.0**
IVA				*e*Sn	**Sg**	**17 01 06.7**	**-0.1**
RHK3	**Tenkes**	**2.02**	**14**	⇑*e*Pg	**Pn**	**17 00 38.2**	**+1.3**
PVY	**Plav**	**2.22**	**126**	⇑*i*Pn	**Pn**	**17 00 42.8**	**+0.1**
PVY				*e*Sn	**Sb**	**17 01 09.9**	**-0.7**
PVY	**Plav**	**2.22**	**126**	⇑*i*Pn	**Pn**	**17 00 42.8**	**+0.1**
PVY				*e*Sn	**Sb**	**17 01 09.9**	**-0.7**
GRUS	**Gruza**	**2.29**	**90**	*e*Pg	**Pb**	**17 00 43.4**	**-0.6**
ULC	**Ulcinj**	**2.33**	**147**	⇑*i*Pn	**Pn**	**17 00 42.5**	**+1.4**
ULC				*e*Sn	**Sn**	**17 01 10.9**	**+0.7**
ULC	**Ulcinj**	**2.33**	**147**	⇑*i*Pn	**Pn**	**17 00 42.5**	**+1.4**
ULC				*e*Sn	**Sn**	**17 01 10.9**	**+0.7**
PKSM	**Moragy**	**2.41**	**18**	⇓*e*Pg	**Pn**	**17 00 43.4**	**+1.1**
SOKA	**Soboth**	**3.27**	**328**	⇑*i*Pn	**Pn**	**17 00 54.9**	**+0.8**
SOKA				⇑*i*Sn	**Sn**	**17 01 32.7**	**-0.7**
SOKA	**Soboth**	**3.27**	**328**	Pn	**Pn**	**17 00 54.9**	**+0.8**
SOKA				Sn	**Sn**	**17 01 32.7**	**-0.7**
VOY	**Vojsko**	**3.33**	**310**	*e*Pn	**Pg**	**17 01 05.4**	**-0.5**
VOY				*e*Sn	**Sb**	**17 01 41.7**	**-0.9**
VOY				*e*		17 01 51.0	
OBKA	**Obir**	**3.34**	**322**	⇓*i*Pn	**Pn**	**17 00 55.8**	**+0.8**
OBKA	**Obir**	**3.34**	**322**	Pn	**Pn**	**17 00 55.8**	**+0.8**
ARSA	**Arzberg**	**3.61**	**338**	⇑*i*Pn	**Pn**	**17 00 59.6**	**+0.8**
ARSA				⇑*i*Sn	**Sn**	**17 01 41.4**	**-0.4**
ARSA	**Arzberg**	**3.61**	**338**	Pn	**Pn**	**17 00 59.6**	**+0.8**
ARSA				Sn	**Sn**	**17 01 41.4**	**-0.4**
CONA	**Conrad Observa**	**4.17**	**344**	⇓*i*Pn	**Pn**	**17 01 07.4**	**+1.0**
CONA				⇓*i*Sn	**Sn**	**17 01 54.4**	**-1.1**
CONA	**Conrad Observa**	**4.17**	**344**	Pn	**Pn**	**17 01 07.4**	**+1.0**
CONA				Sn	**Sn**	**17 01 54.4**	**-1.2**
MOA	**Molln**	**4.54**	**331**	⇓*i*Pn	**Pn**	**17 01 12.2**	**+0.8**
MOA				⇓*i*Sn	**Sn**	**17 02 04.0**	**-0.7**
MOA	**Molln**	**4.54**	**331**	Pn	**Pn**	**17 01 12.2**	**+0.7**
MOA				Sn	**Sn**	**17 02 04.0**	**-0.7**
MOTA	**Moosalm**	**5.66**	**309**	⇑*i*Pn	**Pn**	**17 01 27.8**	**+0.9**
MOTA	**Moosalm**	**5.66**	**309**	Pn	**Pn**	**17 01 27.8**	**+0.9**

IDC 28 17:10:48.7±4.6,30°.38N×82°.70E,h0km,mb3.4/2, mb1 3.5/4,mb1mx3.2/27,mbtmp3.3/4,ML2.9/1,Error ellipse: s-maj=176.5km s-min=27.9km az=65.0,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**16.39**	**359**	Pn	Pn	17 14 39.9	-0.2
	0.0nm,0.3s,baz=183,slow=12,SNR=2.5						
CMAR	**Chiang Mai Arr**	**18.94**	**125**	P	Pn	17 15 11.9	0.0
	baz=310,slow=12,SNR=5.2						
KURK	**Kurchatov**	**20.54**	**353**	P	P	17 15 27.4	-1.3
	1.5nm,0.8s,baz=175,

ASAR				S		**S**		**17 57 26.2**	**-0.8**
	0.3nm,0.5s,baz=351,slow=21,SNR=5.5								
ASAR				PcP		PcP		17 57 51.1	+1.1
	0.4nm,0.5s,baz=24,slow=1.8,SNR=5.3								
STKA	**Stephens Creek**	**30.66**	**158**	P		**P**		**17 55 18.5**	**+1.0**
	1.1nm,0.6s,baz=343,slow=9.3,SNR=3.8								

IDC 28 18:00:16.4±53.0, 19°46S×178°58W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.9/16, mbtmp4.1/3, MS2.9/1, Ms1 2.9/1, ms1mx2.5/24, Error ellipse: s-maj=964.0km s-min=154.4km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**17.73**	**99**	LR	LR	18 08 37.9	
	comp=Z,36nm,19.6s,baz=174,slow=28						
STKA	**Stephens Creek**	**37.76**	**243**	P	P	18 07 34.2	0.0
	0.7nm,0.4s,baz=104,slow=14,SNR=4.4						
WRA	**Warramunga Arr**	**44.21**	**261**	P	P	18 08 27.6	0.0
	1.6nm,0.3s,baz=97,slow=7.5,SNR=67						
ASAR	**Alice Springs**	**44.23**	**256**	P	P	18 08 27.6	-0.2
	2.9nm,0.5s,baz=94,slow=8.0,SNR=63						

MAN 28 18:00:57, 16°41N×121°85E, h17km, mb3.9, ML2.7, MS2.3, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAUP	**Cauayan**	**0.53**	**358**	*e*P	Pg	18 01 08.1	+0.5
BALP	**Baler**	**0.71**	**201**	*e*P	Pb	18 01 11.5	+0.6
PALP	**Palanan**	**0.85**	**40**	*e*P	Pb	18 01 13.5	+0.1
APYP	**Conner**	**1.56**	**338**	*e*P	Pn	18 01 24.4	+0.4

*ISCJB **28** 18:03:23.2±0.8, 67°3S×112°1E±0°.5, h10km, mb4.3/4, Error ellipse: s-maj=29.3km s-min=12.3km az=30.0*
*IDC **28** 18:03:25.0±1.1, 67°.02S×111°.52E, h0km, mb4.2/4, mb1 4.3/5, mb1mx4.1/12, mbtmp4.2/5, ML3.6/1, Error ellipse: s-maj=53.6km s-min=21.4km az=115.0*
*NEIC **28** 18:03:26.5±0.6, 67°.04S×111°.53E, h10km, mb3.5/1, Error ellipse: s-maj=25.0km s-min=12.6km az=126.0*
ISC 28 18:03:24.9±0.8, 67°4S×112°2E±0°.6, h10km, n15, σ0§65/11, mb4.3/4, Antarctica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**18.41**	**147**	*e*P	**Pn**	**18 07 34.9**	**-4.9**
MAW	**Mawson**	**18.50**	**246**	P	**Pn**	**18 07 41.1**	**+0.3**
	0.2nm,0.3s,baz=116,slow=16,SNR=8.0						
MAW				S	**Sn**	**18 10 55.1**	**-12**
	0.1nm,0.3s,baz=357,slow=23,SNR=1.9						
MAW				Lg		18 12 59.1	
	baz=264,slow=14,SNR=1.5						
QSPA	**South Pole Qui**	**22.69**	**180**	P	**P**	**18 08 30.7**	**+4.7**
	19nm,1.0s,mb4.5,baz=324,slow=2.9,SNR=15						
QSPA				S	**S**	**18 12 30.4**	**-3.7**
	3.7nm,0.9s,baz=178,slow=22,SNR=3.4						
QSPA				Lg		18 15 14.0	
	2.2nm,0.9s,baz=188,slow=23,SNR=1.3						
VNA2	**Neumayer--Watz**	**36.09**	**209**	*e*	**P**	**18 10 26.1**	**0.0**
VNA3	**Neumayer Olymp**	**36.24**	**208**	*e*	**P**	**18 10 27.0**	**-0.4**
VNA3				*e*		18 11 31.8	
STKA	**Stephens Creek**	**39.53**	**41**	*e*P	**P**	**18 10 56.7**	**+1.2**
	1.2nm,1.0s,mb3.6						
STKA	**Stephens Creek**	**39.53**	**41**	P	**P**	**18 10 56.3**	**+0.7**
	4.4nm,0.9s,mb4.2,baz=166,slow=10,SNR=7.0						
ASAR	**Alice Springs**	**45.77**	**28**	P	**P**	**18 11 46.0**	**-0.3**
	3.6nm,0.9s,mb4.3,baz=192,slow=6.3,SNR=24						
WRA	**Warramunga Arr**	**49.48**	**28**	P	**P**	**18 12 14.5**	**-0.6**
	3.6nm,0.9s,mb4.4,baz=192,slow=6.5,SNR=12						
NVAR	**Mina Array Bea**	**139.81**	**110**	PKP	PKPdf	18 22 56.3	+4.3
	0.3nm,0.4s,baz=193,slow=3.7,SNR=2.7						
ISCO	**Idaho Springs**	**145.41**	**124**	*e*PKPbc	PKPbc	18 23 05.4	+3.5
PDAR	**Pinedale Array**	**146.75**	**117**	PKPbc	PKPbc	18 23 09.4	+3.5
	1.1nm,0.6s,baz=171,slow=5.3,SNR=13						
RSSD	**Black Hills**	**149.81**	**122**	*e*PKPbc	PKPbc	18 23 16.5	+2.6
ILAR	**Eielson Array**	**149.83**	**57**	PKPbc	PKPbc	18 23 14.7	+1.4
ILAR				PKPab	PKPab	18 23 21.4	+2.5
ILAR	**Eielson Array**	**149.83**	**57**	PKPbc	PKPbc	18 23 14.7	+1.4
	1.8nm,0.9s,baz=279,slow=3.3,SNR=9.3						
ILAR				PKPab	PKPab	18 23 21.4	+2.5
	1.5nm,0.9s,baz=242,slow=4.6,SNR=8.0						

*ISCJB **28** 18:03:27.9±0.6, 10°.77N±0°.05×62°.47W±0°.03, h81km±7km, Error ellipse: s-maj=8.4km s-min=4.8km az=174.4*
*FUNV **28** 18:03:30.3, 10°.77N×62°.46W, h67km, MW2.9*
*NEIC **28** 18:03:31.1, 10°.98N×62°.34W, h64km, MD2.8(TRN), After TRN.*
*TRN **28** 18:03:31.1, 10°.98N×62°.34W, h64km, MD2.8*
ISC 28 18:03:28.9±0.7, 10°78N±0°.05×62°47W±0°.03, h75km±7km, n21, σ0§86/36, 2C-7D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.27**	**118**	↓*e*P	**Pn**	**18 03 41.0**	**+0.5**
GUIV				*e*S	**Sn**	**18 03 48.8**	**-0.1**
TCE	**Chacachacare**	**0.71**	**96**	↓*e*P	**Pn**	**18 03 45.2**	**+1.0**
TCE				*e*S	**Sn**	**18 03 55.2**	**-0.5**
TCE	**Chacachacare**	**0.71**	**96**	↓*e*P	**Pn**	**18 03 45.2**	**+1.0**
TCE				*e*S	**Sn**	**18 03 55.2**	**-0.5**
CRUV	**Carupano**	**0.76**	**263**	↑*i*P	**Pn**	**18 03 45.6**	**+0.7**
CRUV				*e*S	**Sn**	**18 03 56.2**	**-0.5**
GUNV	**Guanoco**	**0.77**	**217**	↑*e*P	**Pn**	**18 03 46.4**	**+1.4**
GUNV				*e*S	**Sn**	**18 03 56.6**	**-0.2**
ITEV	**Isla Los Testi**	**0.87**	**312**	↓*i*P	**Pn**	**18 03 46.4**	**+0.3**
ITEV				*e*S	**Sn**	**18 03 58.7**	**-0.2**
TRN	**Trinidad (W)**	**1.05**	**97**	↓*e*P	**Pn**	**18 03 49.0**	**+0.6**
TRN				*e*S	**Sn**	**18 04 02.2**	**-0.6**
TRN	**Trinidad (W)**	**1.05**	**97**	↓*e*P	**Pn**	**18 03 49.0**	**+0.6**
TRN				*e*S	**Sn**	**18 04 02.2**	**-0.6**
TBH	**Brigand Hill**	**1.41**	**102**	*e*P	**Pn**	**18 03 53.7**	**+0.9**
TBH				*e*S	**Sn**	**18 04 11.7**	**+0.8**
TBH	**Brigand Hill**	**1.41**	**102**	*e*P	**Pn**	**18 03 53.7**	**+0.9**
TBH				*e*S	**Sn**	**18 04 11.7**	**+0.8**
GRW	**Mount Saint Ca**	**1.59**	**30**	*e*P	**Pn**	**18 03 54.8**	**-0.4**
GRW				*e*S	**Sn**	**18 04 10.9**	**-4.2**
GRW	**Mount Saint Ca**	**1.59**	**30**	*e*P	**Pn**	**18 03 54.8**	**-0.4**
GRW				*e*S	**Sn**	**18 04 10.9**	**-4.2**
ORIV	**Oritupano**	**1.93**	**209**	*e*S	**Sn**	**18 04 22.0**	**-1.3**
TOSP	**Speyside**	**1.97**	**74**	*e*P	**Pn**	**18 03 59.7**	**-0.5**
TOSP				*e*S	**Sn**	**18 04 21.5**	**-2.7**
PCRV	**Puerto La Cruz**	**2.21**	**255**	*e*P	**Pn**	**18 04 04.5**	**+0.9**
IBAV	**Isla La Blanqu**	**2.31**	**297**	↓*e*P	**Pn**	**18 04 05.0**	**+0.1**
RIOV	**Rio Grande**	**2.77**	**166**	*e*P	**Pn**	**18 04 11.4**	**+0.4**
CUPV	**Cœpira**	**3.34**	**258**	*e*P	**Pn**	**18 04 19.9**	**+1.1**
CUPV				*e*S	**Sn**	**18 04 55.8**	**-1.7**
LUEV	**Luepa**	**5.00**	**168**	*e*P	**Pn**	**18 04 40.7**	**-0.8**
CAOV	**Caicara del Or**	**5.12**	**228**	*e*P	**Pn**	**18 04 43.1**	**-0.1**
CAOV				*e*S	**Sn**	**18 05 36.4**	**-4.6**
BAUV	**El Baul**	**5.79**	**252**	*e*P	**Pn**	**18 04 52.1**	**-0.1**

*IDC **28** 18:23:28.7±1.3, 6°.44S×152°.20E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.9/16, mbtmp3.9/8, Error ellipse: s-maj=48.9km s-min=19.6km az=113.0*
*ISCJB **28** 18:23:31.6±1.4, 6°.5S×152°.3E±0°.3, h33km, mb3.9/9, Error ellipse: s-maj=45.7km s-min=16.8km az=24.3*
*NEIC **28** 18:23:33.4±1.1, 6°.54S×152°.30E, h35km, mb4.2/1, Error ellipse: s-maj=38.5km s-min=14.5km az=115.0*
ISC 28 18:23:33.5±1.4, 6°6S±0°.2×152°3E±0°.3, h35km, n10, σ0§87/9, mb3.9/9, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.94**	**231**	P	**P**	**18 28 24.4**	**+0.2**
	3.8nm,0.7s,mb4.0,baz=55,slow=11,SNR=20						
WRA				PcP	PcP	18 32 25.1	+2.6
	1.1nm,0.8s,baz=51,slow=2.2,SNR=7.4						
ASAR	**Alice Springs**	**24.54**	**224**	P	**P**	**18 28 51.3**	**+1.3**
	5.3nm,0.9s,mb4.1,baz=59,slow=8.9,SNR=68						
STKA	**Stephens Creek**	**27.11**	**200**	P	**P**	**18 29 12.1**	**-1.1**
	1.4nm,0.8s,mb3.6,baz=344,slow=15,SNR=2.1						
FITZ	**Fitzroy Crossi**	**28.41**	**244**	P	**P**	**18 29 24.9**	**-0.1**
	4.9nm,0.7s,mb4.3,baz=76,slow=5.8,SNR=33						
MBWA	**Marble Bar**	**34.69**	**242**	*e*P	**P**	**18 30 20.0**	**-0.2**
	2.2nm,0.7s,mb4.2						
SONM	**Songino Array**	**67.53**	**328**	P	**P**	**18 34 25.5**	**-0.7**
	0.3nm,0.5s,mb3.6,baz=146,slow=4.9,SNR=2.5						
MKAR	**Makanchi Array**	**81.31**	**319**	P	**P**	**18 35 47.4**	**+1.1**
	0.3nm,0.6s,mb3.4,baz=104,slow=6.9,SNR=2.9						
ZALV	**Zalesovo Beam**	**82.32**	**327**	P	**P**	**18 35 50.2**	**-1.3**
	0.5nm,0.5s,mb3.7,baz=101,slow=4.6,SNR=3.4						
ILAR	**Eielson Array**	**83.95**	**22**	P	**P**	**18 36 00.5**	**+0.8**
	1.2nm,0.9s,mb4.0,baz=254,slow=5.3,SNR=12						
TORD	**Torodi Ar. Bea**	**150.32**	**285**	PKPbc	PKPbc	18 43 22.3	+0.1
	0.8nm,0.7s,baz=75,slow=3.1,SNR=5.1						

*KISR **28** 18:25:53.8±0.3, 32°.00N×46°.29E, h34km, ML2.4*
*CSEM **28** 18:25:54.9, 32°.69N×47°.33E, h57km, ML3.2, After SNSN*
*SGS **28** 18:25:54.9, 32°.69N×47°.33E, h57km*
*ISCJB **28** 18:25:55.1±0.6, 32°.25N±0°.03×47°.31E±0°.09, h10km, Error ellipse: s-maj=11.3km s-min=4.6km az=4.9*
*TEH **28** 18:25:56.6, 32°.28N×47°.36E, h9km*
ISC 28 18:25:55.9±0.5, 32°27N±0°.03×47°27E±0°.09, h10km, n18, σ1§12/24, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IKOM	**Komasi**	**1.91**	**6**	*e*Pn	**Pn**	**18 26 29.3**	**+0.8**
IKOM				*e*		18 27 01.9	
	comp=Z,2μm,0.2s						
IVIS	**Veis**	**2.28**	**351**	*e*Pn	**Pn**	**18 26 34.2**	**+0.6**
IVIS				*e*Sg	**Sg**	**18 27 07.7**	**-1.5**
IVIS				*e*		18 27 19.6	
	comp=Z,528nm,0.2s						
MIB	**Mutribah**	**2.46**	**179**	*e*P	**Pn**	**18 26 37.4**	**+1.4**
MIB				AML	AML	18 27 10.1	
	comp=Z,35nm,0.5s						
MIB				*e*S	**Sb**	**18 27 10.2**	**-0.3**
IDHR	**Dehrash**	**2.54**	**343**	*e*Pn	**Pn**	**18 26 37.8**	**+0.7**
IDHR				*e*		18 27 19.3	
	comp=Z,951nm,0.2s						
ILIN	**Lien**	**2.66**	**354**	*e*Pn	**Pn**	**18 26 39.9**	**+1.1**
NAY	**Al-Naaiem**	**3.01**	**181**	*e*P	**Pn**	**18 26 44.5**	**+0.9**
NAY				*e*S	**Sn**	**18 27 22.5**	**+2.8**
NAY				AML	AML	18 27 25.1	
	comp=Z,7.3nm,0.5s						
IPIR	**Pirpir**	**3.08**	**81**	*e*Pn	**Pn**	**18 26 44.7**	**0.0**
IPIR				*e*		18 26 55.2	
	comp=Z,287nm,0.2s						
IRAZ	**Razeghan**	**3.83**	**35**	*e*Pn	**Pn**	**18 26 54.7**	**-0.2**
IRAZ				*e*		18 26 58.7	
	comp=Z,278nm,0.1s						
KFJS		**4.11**	**172**	P	**Pn**	**18 26 59.5**	**+0.8**
KFJS		**4.11**	**172**	P	**Pn**	**18 26 59.5**	**+0.8**
KFJS				S	**Sn**	**18 27 47.4**	**+0.5**
IZEF	**Zefreh**	**4.31**	**80**	*e*Pn	**Pn**	**18 27 00.9**	**-0.6**
IZEF				*e*		18 27 01.3	
	comp=Z,123nm,0.1s						
ASYS		**5.39**	**209**	P	**Pn**	**18 27 16.3**	**0.0**
ASYS		**5.39**	**209**	P	**Pn**	**18 27 16.3**	**0.0**
ASYS				S	**Sn**	**18 28 17.2**	**-1.2**
BTHS		**8.78**	**158**	P	**Pn**	**18 28 01.8**	**-1.1**
BTHS		**8.78**	**158**	P	**Pn**	**18 28 01.8**	**-1.1**
HRDDS		**9.51**	**168**	P	**Pn**	**18 28 11.1**	**-1.8**
LYLS		**10.19**	**180**	P	**Pn**	**18 28 19.9**	**-2.3**
LYLS		**10.19**	**180**	P	**Pn**	**18 28 20.0**	**-2.3**
LYLS				S	**Sn**	**18 30 10.8**	**-5.8**

*NEIC **28** 18:52:10.4, 32°.82S×70°.02W, h123km, MD3.1(GUC), After GUC.*
GUC 28 18:52:10.4±0.8, 32°82S×70°02W, h123km±6km, MD3.1, ML3.7, 9C-19D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JACH	**Jahuel**	**0.50**	**286**	↓↓*i*P	Pn	18 52 29.0	+0.4
JACH				*i* S	Sn	18 52 43.4	+1.0
JACH	**Jahuel**	**0.50**	**286**	↓↓*i*P	Pn	18 52 29.0	+0.4
JACH				*i* S	Sn	18 52 43.4	+1.0
FCH	**Farellones**	**0.55**	**204**	↑↑*i*P	Pn	18 52 29.4	+0.4
FCH	**Farellones**	**0.55**	**204**	↑↑*i*P	Pn	18 52 29.4	+0.4
PEL	**Peldehue**	**0.65**	**240**	↓↓*i*P	Pn	18 52 30.0	+0.4
PEL				*i* S	Sn	18 52 44.6	+0.5
PEL				AML	AML	18 52 45.6	
	comp=E,3μm,0.3s						
SAN	**Santiago**	**0.83**	**221**	↑↑*i*P	Pn	18 52 31.5	+0.5
SAN				*i* S	Sn	18 52 47.6	+0.8
SAN	**Santiago**	**0.83**	**221**	↑↑*i*P	Pn	18 52 31.5	+0.5
SAN				*i* S	Sn	18 52 47.6	+0.8
ROCH	**El Roble**	**0.85**	**260**	↓↓*i*P	Pn	18 52 32.0	+0.8
ROCH				*i* S	Sn	18 52 48.3	+1.3
ROCH	**El Roble**	**0.85**	**260**	↑↑*i*P	Pn	18 52 31.9	+0.7
ROCH				↓↓*i*P		18 52 32.0	
ROCH				*i* S	Sn	18 52 48.3	+1.3
ROCH				*i* S	Sn	18 52 48.3	+1.3
ROCH				AML	AML	18 52 50.0	
	comp=N,3μm,0.3s						
SJCH	**San Jose de Ma**	**0.86**	**199**	↓↓*i*P	Pn	18 52 31.9	+0.5
SJCH	**San Jose de Ma**	**0.86**	**199**	↓↓*i*P	Pn	18 52 31.9	+0.5
SJCH				AML	AML	18 52 48.7	
	comp=E,832nm,0.4s						
PCH	**Pirque**	**0.90**	**207**	↓↓*i*P	Pn	18 52 32.2	+0.5
PCH				*i* S	Sn	18 52 48.5	+0.7
PCH	**Pirque**	**0.90**	**207**	↓↓*i*P	Pn	18 52 32.2	+0.5
PCH				*i* S	Sn	18 52 48.5	+0.7
ANTU	**Antumapu**	**0.91**	**215**	↓↓*i*P	Pn	18 52 32.2	+0.5
ANTU				*i* S	Sn	18 52 49.0	+1.1
ANTU	**Antumapu**	**0.91**	**215**	↓↓*i*P	Pn	18 52 32.2	+0.5
ANTU				*i* S	Sn	18 52 49.0	+1.1
ANTU				AML	AML	18 52 49.4	
	comp=N,2μm,0.4s						
LMEL	**Las Melosas**	**1.03**	**189**	↓↓*i*P	Pn	18 52 33.2	+0.2
LMEL				*i* S	Sn	18 52 52.8	+2.6
LMEL	**Las Melosas**	**1.03**	**189**	↓↓*i*P	Pn	18 52 33.2	+0.2
LMEL				*i* S	Sn	18 52 52.8	+2.6
LMEL				AML	AML	18 52 58.7	
	comp=N,605nm,0.2s						
TACH	**Talagante**	**1.13**	**223**	↓↓*i*P	Pn	18 52 34.4	+0.5
TACH				*i* S	Sn	18 52 52.9	+1.0
TACH	**Talagante**	**1.13**	**223**	↓↓*i*P	Pn	18 52 34.4	+0.5
TACH				*i* S	Sn	18 52 52.9	+1.0
CHCH	**Chadas Angostu**	**1.23**	**205**	*i* P	Pn	18 52 35.6	+0.7
CHCH	**Chadas Angostu**	**1.23**	**205**	*i* P	Pn	18 52 35.6	+0.7
CACH	**El Canelo**	**1.38**	**200**	↑↑*i*P	Pn	18 52 37.9	+1.2
CACH				*i* S	Sn	18 52 58.9	+2.3
CACH	**El Canelo**	**1.38**	**200**	↑↑*i*P	Pn	18 52 37.9	+1.2
CACH				*i* S	Sn	18 52 58.9	+2.3
CHNG	**Los Chungos**	**1.57**	**306**	*e*P	Pn	18 52 36.6	-2.1
CHNG				*i* S	Sn	18 52 58.2	-2.2
CHNG				AML	AML	18 53 01.4	
	comp=N,475nm,0.2s						
LNV	**Longovilo**	**1.62**	**226**	↓↓*i*P	Pn	18 52 39.2	-0.2
LNV				*i* S	Sn	18 53 01.7	+0.1
LNV	**Longovilo**	**1.62**	**226**	↓↓*i*P	Pn	18 52 39.2	-0.2
LNV				*i* S	Sn	18 53 01.7	+0.1
CMCH	**Combarbala**	**1.84**	**333**	↓↓*i*P	Pn	18 52 42.9	+0.8
CMCH				*i* S	Sn	18 53 07.3	+1.0
CMCH	**Combarbala**	**1.84**	**333**	↓↓*i*P	Pn	18 52 42.9	+0.8
CMCH				*i* S	Sn	18 53 07.3	+1.0
CMCH				AML	AML	18 53 08.9	
	comp=N,5μm,0.7s						
TLL	**Tololo Astrono**	**2.73**	**346**	↑↑*i*P	Pn	18 52 54.5	+1.2
TLL				*i* S	Sn	18 53 26.7	+0.4
TLL	**Tololo Astrono**	**2.73**	**346**	↑↑*i*P	Pn	18 52 54.5	+1.2
TLL				*i* S	Sn	18 53 26.7	+0.4
TLL				AML	AML	18 53 31.6	
	comp=N,176nm,0.6s						
LCO	**Las Campanas**	**3.84**	**351**	*e*P	Pn	18 53 08.0	0.0
LCO	**Las Campanas**	**3.84**	**351**	AML	AML	18 53 55.4	
	comp=E,89nm,0.3s						

*IDC **28** 19:11:53.6±1.5, 22°.28S×174°.96W, h0km, mb4.1/7, mb1 4.2/7, mb1mx3.9/18, mbtmp4.0/7, Error ellipse: s-maj=51.8km s-min=29.7km az=138.0*
*NEIC **28** 19:11:54.8±0.8, 22°.35S×174°.89W, h10km, mb4.5/1, Error ellipse: s-maj=25.7km s-min=21.1km az=121.0*
*ISCJB **28** 19:11:57.0±1.0, 22°.4S±0°.2×175°.0W±0°.2, h33km, mb4.1/8, Error ellipse: s-maj=29.6km s-min=25.8km az=26.6*
ISC 28 19:11:59.0±1.0, 22°4S±0°.2×175°0W±0°.2, h35km, n13, σ0§84/10, mb4.1/8, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**14.16**	**88**	Pn	**Pn**	**19 15 02.9**	**-14**
	2.5nm,0.3s,baz=260,slow=11,SNR=4.5						
CTA	**Charters Tower**	**36.16**	**266**	P	**P**	**19 18 57.7**	**-0.6**
CTA	**Charters Tower**	**36.16**	**266**	P	**P**	**19 18 57.7**	**-0.6**
	4.0nm,0.8s,mb4.4,baz=139,slow=9.3,SNR=3.8						
ASAR	**Alice Springs**	**46.88**	**258**	P	**P**	**19 20 26.2**	**+0.1**
	0.8nm,0.7s,mb3.8,baz=104,slow=7.5,SNR=17						
WRA	**Warramunga Arr**	**47.17**	**263**	P	**P**	**19 20 27.6**	**-0.7**
	0.9nm,0.7s,mb3.8,baz=92,slow=8.5,SNR=41						
QSPA	**South Pole Qui**	**67.73**	**180**	*e*P	**P**	**19 22 51.9**	**-0.5**
	2.8nm,0.9s,mb4.3						
PETK	**Petropavlovsk-**	**78.80**	**344**	P	**P**	**19 23 57.9**	**+0.2**
	3.1nm,0.9s,mb4.3,baz=140,slow=3.3,SNR=3.9						
MAW	**Mawson**	**80.78**	**199**	P	**P**	**19 24 09.1**	**+0.6**
	1.8nm,0.7s,mb4.1,baz=148,slow=7.4,SNR=4.5						
ILAR	**Eielson Array**	**89.51**	**12**	P	**P**	**19 24 51.1**	**-0.8**
	0.5nm,0.7s,mb4.0,baz=224,slow=6.7,SNR=4.9						
CMAR	**Chiang Mai Arr**	**93.39**	**288**	P	**P**	**19 25 13.0**	**+2.0**
	0.6nm,0.7s,mb4.2,baz=135,slow=2.5,SNR=4.8						
AKASG	**Malin Array Be**	**145.97**	**332**	PKPbc	PKPbc	19 31 34.2	-0.5
	1.6nm,0.7s,baz=39,slow=3.8,SNR=8.5						
BRTR	**Keskin Array B**	**150.17**	**312**	PKPbc	PKPbc	19 31 46.1	-0.2
	0.9nm,0.8s,baz=316,slow=3.4,SNR=4.7						
CLL	**Collm**	**150.44**	**350**	*i* PKPbc	PKPbc	19 31 46.4	-0.1
	comp=Z,5.0nm,0.8s						
CLL				*i* PKPab	PKPab	19 31 50.7	-2.3

*BJI **28** 19:17:35.6, 22°.50S×175°.00W, h10km, mB5.2/9, mb5.0/13*
*IDC **28** 19:17:35.2±0.7, 22°.49S×175°.06W, h0km, mb4.5/13, mb1 4.7/14, mb1mx4.6/21, mbtmp4.5/14, ML4.1/1, MS4.0/6, Ms1 4.0/6, ms1mx3.6/24, Error ellipse: s-maj=26.9km s-min=18.2km az=143.0*
*NEIC **28** 19:17:36.6±0.4, 22°.54S×175°.03W, h10km, mb5.1/11, Error ellipse: s-maj=17.3km s-min=10.7km az=129.0*
*ISCJB **28** 19:17:38.8±0.5, 22°.60S±0°.09×175°.0W±0°.1, h33km, mb4.7/26, MS4.0/5, Error ellipse: s-maj=16.2km s-min=10.4km az=40.1*
ISC 28 19:17:40.7±0.5, 22°57S±0°.09×175°0W±0°.1, h35km, n67, σ1§07/45, mb4.7/26, MS4.0/5, 4C, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**8.09**	**305**	*e*P	**Pn**	**19 19 41.1**	**+5.4**
	103nm,1.0s						
AFI	**Afiamalu**	**9.15**	**20**	Pn	**Pn**	**19 19 40.4**	**-10**
AFI				Sn	**Sn**	**19 21 13.9**	**-18**
AFI	**Afiamalu**	**9.15**	**20**	Pn	**Pn**	**19 19 40.4**	**-10**
	4.6nm,0.3s,baz=203,slow=15,SNR=3.0						
AFI				Sn	**Sn**	**19 21 13.9**	**-18**
	3.3nm,0.3s,baz=36,slow=19,SNR=1.8						
RAR	**Rarotonga**	**14.22**	**87**	Pn	**Pn**	**19 20 46.8**	**-13**
	21nm,0.3s,baz=257,slow=7.9,SNR=15						
RAR				Sn	Sn	19 23 04.4	-32
	0.8nm,0.3s,baz=106,slow=17,SNR=1.6						
RAR				LR	LR	19 25 25.9	
	comp=Z,780nm,19.2s,baz=302,slow=33						
URZ	**Urewera**	**17.03**	**202**	Pn	**Pn**	**19 21 36.8**	**+0.7**
	0.7nm,0.3s,baz=30,slow=14,SNR=3.5						
URZ				Sn	**Sn**	**19 24 29.3**	**-15**
	0.6nm,0.3s,baz=327,slow=22,SNR=2.8						
DZM	**Mont Dzumac**	**17.16**	**268**	*e*P	**Pn**	**19 21 44.8**	**+7.1**
	57nm,1.1s						
DZM				*e*LR	LR	19 25 56.1	
	403nm,21.4s						
PPT	**Papeete**	**24.40**	**83**	*e*LQ		19 27 25.3	
	832nm,27.8s						
PPT				*e*LR	LR	19 28 28.1	
	337nm,21.8s						
PPT	**Papeete**	**24.40**	**83**	LR	LR	19 30 34.9	
	comp=Z,433nm,18.0s,MS4.0,baz=6.0,slow=32						
ARMA	**Armidale**	**30.77**	**248**	*e*P	**P**	**19 23 53.9**	**+1.0**
CMSA	**Cobar Meteorol**	**35.95**	**247**	*e*P	**P**	**19 24 37.9**	**-0.1**
CTA	**Charters Tower**	**36.09**	**267**	P	**P**	**19 24 38.9**	**-0.4**
	3.3nm,0.4s,mb4.6,baz=122,slow=10,SNR=3.5						
STKA	**Stephens Creek**	**39.46**	**247**	*e*P	**P**	**19 25 07.8**	**+0.1**
	1.9nm,0.4s,mb4.2						
STKA	**Stephens Creek**	**39.46**	**247**	*e*P	**P**	**19 25 07.6**	**0.0**
STKA	**Stephens Creek**	**39.46**	**247**	P	**P**	**19 25 08.0**	**+0.3**
	2.0nm,0.4s,mb4.2,baz=78,slow=14,SNR=14						
ASAR	**Alice Springs**	**46.78**	**258**	P	**P**	**19 26 05.4**	**-1.6**
	18nm,1.0s,mb4.9,baz=92,slow=8.1,SNR=64						
WRA	**Warramunga Arr**	**47.09**	**263**	P	**P**	**19 26 07.3**	**-2.1**
	5.5nm,0.9s,mb4.5,baz=91,slow=8.5,SNR=61						
KNA	**Kununurra**	**53.28**	**267**	*e*P	**P**	**19 26 55.3**	**-1.1**
	9.7nm,0.9s,mb4.7						
FITZ	**Fitzroy Crossi**	**55.51**	**263**	*e*P	**P**	**19 27 11.1**	**-1.5**
	7.1n

comp=Z,9.4nm,1.0s
PVCC Panska Ves 151.10 347 ⇑ePKP PKPbc 19 37 30.9 +1.1
MOX Moxa 151.50 351 e(P) PKPbc 19 37 30.5 -0.2
comp=Z,19nm,2.0s
PRU Pruhonice 151.62 347 ⇑ePKP PKPbc 19 37 32.1 +1.1
NKC Novy Kostel 151.77 350 ePKPAB PKPab 19 37 37.1 -3.2
KHC Kasperske Hory 152.63 348 ePKPAB PKPab 19 37 44.1 +0.2
TORD Torodi Ar. Bea 170.12 161 PKPab PKPab 19 39 02.4 +1.6
comp=Z,0.8nm,1.1s,baz=242,slow=6.1,SNR=3.2

*NEIC **28** 19:26:27.0, 37.54N×112.32W, h0km, ML3.3(SLC), After SLC.*
*ISCJB **28** 19:26:28.4±0.2, 37.517N±0.010×112.31W±0.01, h10km, Error ellipse: s-maj=1.5km s-min=1.4km az=38.9*
*IDC **28** 19:26:28.4±0.9, 37.66N×112.30W, h0km, mb1 3.4/4, mb1mx3.3/26, mbtmp3.0/4, ML3.1/4, Error ellipse: s-maj=12.0km s-min=9.2km az=25.0*

ISC 28 19:26:28.3±0.2, 37.515N±0.010×112.31W±0.01, h10km, n101, σ1§07/150, 51C-56D, Utah

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
S15A	**Panguitch**	**0.17**	**344**	⇓P	**Pg**	**19 26 31.7**	**-0.3**
	baz=0.1,SNR=494						
S15A				⇓S	**Sg**	**19 26 34.6**	**+0.1**
	baz=0.1						
T15A	**Red Dirt Ranch**	**0.50**	**187**	⇓P	**Pg**	**19 26 37.6**	**-0.4**
	baz=0.5						
T15A				⇓S	**Sg**	**19 26 44.7**	**+0.1**
	baz=0.5						
S16A	**Weppner Ranch,**	**0.60**	**70**	⇑P	**Pg**	**19 26 39.5**	**-0.5**
	baz=0.6						
S16A				⇑S	**Sg**	**19 26 47.4**	**-0.4**
	baz=0.6						
R15A	**Junction**	**0.69**	**2**	⇓P	**Pg**	**19 26 41.1**	**-0.7**
	baz=0.7,SNR=93						
R15A				⇓S	**Sg**	**19 26 50.7**	**-0.1**
	baz=0.7						
S14A	**Cedar City**	**0.73**	**290**	⇓P	**Pg**	**19 26 41.8**	**-0.5**
	baz=0.7,SNR=31						
S14A				⇑S	**Sg**	**19 26 51.4**	**-0.5**
	baz=0.7						
T14A	**Hurricane**	**0.77**	**234**	⇑P	**Pg**	**19 26 42.5**	**-0.7**
	baz=0.8						
T14A				⇓S	**Sg**	**19 26 52.3**	**-0.9**
	baz=0.8						
T16A	**Glen Canyon Da**	**0.83**	**129**	⇓P	**Pg**	**19 26 43.6**	**-0.7**
	baz=0.8,SNR=42						
T16A				⇑S	**Sg**	**19 26 54.6**	**-0.5**
	baz=0.8						
ARUT	**Antelope Range**	**0.94**	**287**	ePg	**Pg**	**19 26 44.9**	**-1.5**
R14A	**James Farms, M**	**0.97**	**324**	⇑P	**Pg**	**19 26 46.2**	**-0.7**
	baz=0.9,SNR=48						
R14A				⇓S	**Sg**	**19 26 59.4**	**-0.1**
	baz=0.9						
MSU	**Marysvale**	**1.00**	**6**	ePg	**Pg**	**19 26 46.2**	**-1.3**
R16A	**Teasdale**	**1.01**	**40**	⇓P	**Pg**	**19 26 46.6**	**-1.1**
	baz=1.0,SNR=15						
R16A				⇓S	**Sg**	**19 27 00.0**	**-0.8**
	baz=1.0						
U15A	**North Rim**	**1.08**	**179**	⇓P	**Pb**	**19 26 48.2**	**-1.0**
	baz=1.1						
U15A				⇑S	**Sg**	**19 27 02.4**	**-0.8**
	baz=1.1						
S17A	**Black Ridge (B**	**1.20**	**84**	⇓P	**Pb**	**19 26 50.3**	**-0.8**
	baz=1.2						
S17A				⇑S	**Sb**	**19 27 05.7**	**-1.0**
	baz=1.2						
S13A	**Holt Ranch, En**	**1.24**	**274**	⇑P	**Pn**	**19 26 50.7**	**-1.0**
	baz=1.2						
S13A				⇑S	**Sb**	**19 27 07.1**	**-0.7**
	baz=1.2						
U14A	**Mt Trumbull**	**1.30**	**213**	⇓P	**Pn**	**19 26 51.2**	**-1.3**
	baz=1.3						
U14A				⇓S	**Sb**	**19 27 09.3**	**-0.2**
	baz=1.3						
T17A	**Navajo Res., N**	**1.30**	**113**	⇑Pg	**Pg**	**19 26 52.5**	**-0.9**
	baz=1.3						
T17A				⇓S	**Sb**	**19 27 09.3**	**-0.3**
	baz=1.3						
T13A	**Saint George**	**1.37**	**249**	⇑Pg	**Pg**	**19 26 53.4**	**-1.2**
	baz=1.4,SNR=48						
T13A				⇓S	**Sb**	**19 27 10.6**	**-1.0**
	baz=1.4						
R13A	**O'Grain Ranch,**	**1.48**	**297**	⇓Pg	**Pg**	**19 26 55.7**	**-0.9**
	baz=1.5,SNR=62						
R13A				⇓Sb	**Sb**	**19 27 15.0**	**+0.4**
	baz=1.5						
Q15A	**Fillmore**	**1.48**	**358**	⇑Pb	**Pb**	**19 26 55.3**	**-0.7**
	baz=1.5,SNR=11						
Q15A				⇑S	**Sn**	**19 27 14.3**	**-0.2**
	baz=1.5						
R17A	**Hanksville Air**	**1.55**	**54**	⇑Pb	**Pb**	**19 26 56.3**	**-0.8**
	baz=1.5,SNR=39						
R17A				⇑S	**Sn**	**19 27 15.8**	**-0.3**
	baz=1.5						
Q14A	**Sevier Lake (B**	**1.66**	**333**	⇓Pb	**Pb**	**19 26 58.2**	**-0.7**
	baz=1.6						
Q14A				⇓Sb	**Sb**	**19 27 20.0**	**+0.2**
	baz=1.6						
Q16A	**Castle Valley**	**1.66**	**32**	⇓Pb	**Pb**	**19 26 58.2**	**-0.8**
	baz=1.6,SNR=12						
Q16A				⇓Sb	**Sb**	**19 27 20.2**	**+0.3**
	baz=1.6						
U16A	**Tuba City**	**1.66**	**145**	⇓Pg	**Pg**	**19 26 58.8**	**-1.4**
	baz=1.7						
U16A				⇓Sb	**Sb**	**19 27 20.1**	**+0.1**
	baz=1.7						
V15A	**Kaibab Nationa**	**1.70**	**176**	⇓Pb	**Pb**	**19 26 58.8**	**-0.8**
	baz=1.7						
V15A				⇑Sb	**Sb**	**19 27 20.9**	**0.0**
	baz=1.7						
U13A	**Pakoon Wash**	**1.72**	**231**	⇓Pb	**Pb**	**19 26 59.3**	**-0.7**
	baz=1.7						
U13A				⇓Sb	**Sb**	**19 27 21.8**	**0.0**
	baz=1.7						
S18A	**Hurst Farm, Bl**	**1.84**	**84**	⇑Pb	**Pb**	**19 27 01.4**	**-0.7**
	baz=1.8						
S18A				⇑Sb	**Sb**	**19 27 25.4**	**+0.2**
	baz=1.8						
Q13A	**Wheeler Ranch,**	**1.97**	**317**	⇓Pb	**Pb**	**19 27 03.7**	**-0.6**
	baz=2.0						
Q13A				⇑Sb	**Sb**	**19 27 29.8**	**+0.9**
	baz=2.0						
T18A	**Mexican Hat**	**1.98**	**100**	⇑Pb	**Pb**	**19 27 03.0**	**-1.3**
	baz=2.0						
T18A				⇑Sb	**Sb**	**19 27 29.0**	**0.0**
	baz=2.0						
TMUT	**Trail Mountain**	**1.98**	**26**	ePn	**Pn**	**19 27 02.9**	**+1.1**
V14A	**Boquillas Ranc**	**1.98**	**199**	⇑Pb	**Pb**	**19 27 03.6**	**-0.9**
	baz=2.0						
V14A				⇓Sb	**Sb**	**19 27 28.9**	**-0.4**
	baz=2.0						
R12A	**Pony Springs,**	**1.99**	**295**	⇓Pb	**Pb**	**19 27 04.4**	**-0.3**
	baz=2.0						
R12A				⇓Sb	**Sb**	**19 27 30.7**	**+1.2**
	baz=2.0						
S12A	**Delamar Landin**	**2.02**	**273**	⇓Sb	**Sb**	**19 27 31.5**	**+1.1**
	baz=2.0						
P15A	**Leamington**	**2.05**	**1**	⇑Pg	**Pg**	**19 27 06.1**	**-1.5**
	baz=2.0						
P15A				⇓Sb	**Sb**	**19 27 32.2**	**+0.9**
	baz=2.0						
T12A	**Moapa**	**2.08**	**248**	⇑Sb	**Sb**	**19 27 32.1**	**+0.1**
	baz=2.1						
U12A	**Valley of Fire**	**2.09**	**240**	⇓Pg	**Pg**	**19 27 06.8**	**-1.6**
	baz=2.1						
U12A				⇑Sb	**Sb**	**19 27 32.9**	**+0.6**
	baz=2.1						
R18A	**Canyonlands Na**	**2.10**	**65**	⇑Pb	**Pb**	**19 27 05.7**	**-0.7**
	baz=2.1						
R18A				⇓Sb	**Sb**	**19 27 32.0**	**-0.5**
	baz=2.1						
SRU	**San Rafael**	**2.12**	**41**	⇓Pb	**Pb**	**19 27 06.5**	**-0.4**
	baz=2.1						
SRU				⇓Sb	**Sb**	**19 27 34.1**	**+0.8**
	baz=2.1						
SRU	**San Rafael**	**2.12**	**41**	eP	**Pn**	**19 27 06.7**	**+2.9**
WUAZ	**Wupatki**	**2.13**	**159**	⇑Pb	**Pb**	**19 27 06.3**	**-0.7**
	baz=2.2						
WUAZ				⇑Sb	**Sb**	**19 27 34.1**	**+0.6**
	baz=2.2						
WUAZ	**Wupatki**	**2.13**	**159**	eP	**Pn**	**19 27 05.9**	**+2.0**
V13A	**Grand Canyon W**	**2.14**	**220**	⇑Pb	**Pb**	**19 27 06.1**	**-1.0**
	baz=2.1						
V13A				⇑Sb	**Sb**	**19 27 33.7**	**0.0**
	baz=2.1						
P16A	**Fountain Green**	**2.15**	**13**	⇑Pb	**Pb**	**19 27 07.2**	**-0.2**
	baz=2.1						
P16A				⇑Sb	**Sb**	**19 27 35.7**	**+1.6**
	baz=2.1						
P14A	**Drum Mountains**	**2.16**	**344**	⇑Pg	**Pg**	**19 27 08.3**	**-1.3**
	baz=2.1,SNR=6.9						
U18A	**Rough Rock, Ch**	**2.24**	**119**	⇓Pb	**Pb**	**19 27 08.0**	**-0.8**
	baz=2.3						
U18A				⇑Sb	**Sb**	**19 27 37.0**	**+0.5**
	baz=2.3						
P17A	**Butcher Ranch,**	**2.31**	**32**	⇑Pb	**Pb**	**19 27 09.6**	**-0.4**
	baz=2.3						
P17A				⇓Sb	**Sb**	**19 27 39.2**	**+0.5**
	baz=2.3						
Q18A	**Rafter H Ranch**	**2.33**	**46**	⇑Pb	**Pb**	**19 27 09.8**	**-0.6**
	baz=2.3						
Q18A				⇑Sb	**Sb**	**19 27 39.7**	**+0.4**
	baz=2.3						
W15A	**Williams**	**2.33**	**179**	⇑Pb	**Pb**	**19 27 10.0**	**-0.4**
	baz=2.4						
W15A				⇓Sb	**Sb**	**19 27 39.6**	**+0.4**
	baz=2.4						
T11A	**Corn Creek, Al**	**2.34**	**264**	⇓Sb	**Sb**	**19 27 40.3**	**+0.8**
	baz=2.3						
P13A	**Bates Ranch, G**	**2.36**	**326**	⇓Sb	**Sb**	**19 27 41.0**	**+1.1**
	baz=2.3						
W14A	**Seligman**	**2.38**	**196**	⇓Pb	**Pb**	**19 27 10.7**	**-0.6**
	baz=2.4						
W14A				⇑Sb	**Sb**	**19 27 41.0**	**+0.4**
	baz=2.4						
NLU	**North Lily Min**	**2.44**	**4**	ePg	**Pg**	**19 27 11.6**	**-3.5**
W16A	**Flagstaff**	**2.49**	**165**	⇑Pb	**Pb**	**19 27 12.4**	**-0.8**
	baz=2.5						
W16A				⇑Sb	**Sb**	**19 27 44.6**	**+0.6**
	baz=2.5						
SHPR	**Sheep Range**	**2.50**	**247**	eP	**Pn**	**19 27 10.1**	**+1.1**
Q12A	**Willow Creek R**	**2.50**	**308**	⇓Sb	**Sb**	**19 27 45.7**	**+1.5**
	baz=2.5						
S19A	**Harvey Farm, M**	**2.53**	**84**	⇓Sb	**Sb**	**19 27 45.6**	**+0.7**
	baz=2.5						
R19A	**Curley Farm, L**	**2.53**	**71**	⇓Pb	**Pb**	**19 27 13.3**	**-0.5**
	baz=2.5						
R19A				⇓Sb	**Sb**	**19 27 45.8**	**+0.8**
	baz=2.5						
V18A	**Ganado**	**2.62**	**133**	⇑Pb	**Pb**	**19 27 14.8**	**-0.6**
	baz=2.6						
V18A				⇓Sb	**Sb**	**19 27 48.4**	**+0.7**
	baz=2.6						
P18A	**Preston Nutter**	**2.66**	**37**	⇑Sb	**Sb**	**19 27 50.1**	**+1.5**
	baz=2.6						
U11A	**Corn Creek**	**2.69**	**247**	⇑Sb	**Sb**	**19 27 50.4**	**+0.7**
	baz=2.7						
DUG	**Dugway**	**2.71**	**352**	⇓Sb	**Sb**	**19 27 51.9**	**+1.8**
	baz=2.7						
DUG	**Dugway**	**2.71**	**352**	ePg	**Pg**	**19 27 17.1**	**-3.1**
T19A	**Beclabito**	**2.71**	**104**	⇓Sb	**Sb**	**19 27 50.9**	**+0.8**
	baz=2.7						
V12A	**Nelson**	**2.72**	**230**	⇑Sb	**Sb**	**19 27 51.3**	**+1.0**
	baz=2.7						
R11A	**Troy Canyon, C**	**2.72**	**289**	⇑Sb	**Sb**	**19 27 52.3**	**+1.7**
	baz=2.7						
W17A	**Winslow**	**2.75**	**152**	⇓Sb	**Sb**	**19 27 51.5**	**+0.2**
	baz=2.8						
U19A	**Dine' College,**	**2.77**	**115**	⇑Sb	**Sb**	**19 27 52.4**	**+0.7**
	baz=2.8						
PV04	**Paradox Valley**	**2.83**	**71**	eP	**Pn**	**19 27 15.6**	**+2.1**
DAU	**Daniels Canyon**	**3.01**	**15**	ePg	**Pg**	**19 27 23.1**	**-2.8**
V11A	**Goodsprings**	**3.02**	**237**	⇑Sb	**Sb**	**19 27 59.7**	**+0.7**
	baz=3.0						
PV01	**Paradox Valley**	**3.02**	**77**	ePn	**Pn**	**19 27 18.1**	**+1.9**
X15A	**Humboldt**	**3.02**	**179**	⇑Sb	**Sb**	**19 28 00.8**	**+1.6**
	baz=3.0						
MVCO	**Mesa Verde**	**3.05**	**95**	ePg	**Pg**	**19 27 24.4**	**-2.4**
X14A	**Yava**	**3.08**	**189**	⇓Sb	**Sb**	**19 28 02.4**	**+1.7**
	baz=3.1						
NOQ	**North Oquirrh**	**3.14**	**3**	P	**Pn**	**19 27 18.3**	**+0.5**
S20A	**Disappointment**	**3.15**	**83**	⇓Sb	**Sb**	**19 28 04.2**	**+1.5**
	baz=3.1						
JLU	**Jordanelle**	**3.15**	**12**	ePg	**Pg**	**19 27 25.6**	**-3.1**
W18A	**Petrified Fore**	**3.17**	**138**	⇓Sb	**Sb**	**19 28 04.8**	**+1.5**
	baz=3.2						
X13A	**Yucca**	**3.17**	**203**	⇑Sb	**Sb**	**19 28 04.7**	**+1.5**
	baz=3.2						
CTU	**Camp Tracy**	**3.20**	**8**	ePg	**Pg**	**19 27 25.9**	**-3.8**
LDFC	**Landfair**	**3.32**	**224**	ePn	**Pn**	**19 27 19.9**	**-0.4**
LDFC				ePg	**Pg**	**19 27 28.1**	**-3.9**
BGU	**Big Grassy Mou**	**3.45**	**351**	P	**Pn**	**19 27 20.8**	**-1.3**
SPUT	**South Promonto**	**3.79**	**358**	eP	**Pn**	**19 27 28.7**	**+2.0**
HWUT	**Hardware Ranch**	**4.13**	**8**	ePn	**Pn**	**19 27 32.7**	**+1.3**
GSC	**Goldstone**	**4.25**	**240**	ePn	**Pn**	**19 27 32.9**	**-0.2**
HVU	**Hansel Valley**	**4.28**	**355**	ePn	**Pn**	**19 27 33.6**	**+0.2**
SMCO	**Snowmass**	**4.51**	**67**	ePn	**Pn**	**19 27 36.6**	**0.0**
NVAR	**Mina Array Bea**	**4.83**	**283**	Pn	**Pn**	**19 27 42.2**	**+1.2**
	0.5nm,0.3s,baz=92,slow=14,SNR=3.6						
NVAR				Pg	**Pg**	**19 27 54.1**	**-6.7**
	1.2nm,0.3s,baz=102,slow=18,SNR=8.4						
NVAR				Lg		19 28 58.9	
	5.0nm,0.3s,baz=111,slow=32,SNR=11						
PFO	**Pinyon Flat Ob**	**5.16**	**222**	Pn	**Pn**	**19 27 48.5**	**+3.0**
LAZ	**Ladron**	**5.22**	**125**	ePn	**Pn**	**19 27 48.6**	**+2.2**
	8.7nm,0.7s						
TUC	**Tucson**	**5.34**	**166**	ePn	**Pn**	**19 27 54.6**	**+6.5**
	9.1nm,0.8s						
ANMO	**Albuquerque**	**5.37**	**117**	Pn	**Pn**	**19 27 50.5**	**+1.9**
ANMO				Pg	**Pg**	**19 28 07.9**	**-3.3**
ANMO				Lg		19 29 14.0	
ANMO	**Albuquerque**	**5.37**	**117**	Pn	**Pn**	**19 27 50.5**	**+1.9**
	0.7nm,0.3s,baz=308,slow=9.7,SNR=6.1						
ANMO				Pg	**Pg**	**19 28 07.9**	**-3.3**
	1.3nm,0.3s,baz=309,slow=8.1,SNR=3.7						
ANMO				Lg		19 29 14.0	
	2.1nm,0.3s,baz=218,slow=21,SNR=6.7						
SDCO	**Great Sand Dun**	**5.41**	**85**	ePg	**Pg**	**19 28 07.9**	**-4.0**
	3.7nm,0.6s						
LENM	**Lemitar**	**5.47**	**126**	ePg	**Pg**	**19 28 08.1**	**-4.9**
	20nm,0.8s						
LPM	**Los Pinos Moun**	**5.60**	**123**	ePg	**Pg**	**19 28 10.1**	**-5.6**
	19nm,0.8s						
PDAR	**Pinedale Array**	**5.65**	**21**	Pn	**Pn**	**19 27 54.1**	**+1.8**
PDAR				Pg	**Pg**	**19 28 03.9**	**-13**
PDAR				Lg		19 29 24.0	
PDAR	**Pinedale Array**	**5.65**	**21**	Pn	**Pn**	**19 27 54.2**	**+1.8**
	0.1nm,0.3s,baz=189,slow=10.0,SNR=2.9						
PDAR				Pg	**Pg**	**19 28 03.9**	**-13**
	0.1nm,0.3s,baz=196,slow=12,SNR=3.8						
PDAR				Lg		19 29 24.0	
	0.4nm,0.3s,baz=201,slow=28,SNR=3.0						
BNM	**Barren Site**	**5.70**	**124**	ePg	**Pg**	**19 28 13.3**	**-4.3**
	10nm,0.4s						
ISCO	**Idaho Springs**	**5.71**	**64**	Pn	**Pn**	**19 27 55.8**	**+2.6**
	3.8nm,0.6s						
TXAR	**Lajitas Array**	**10.89**	**136**	Pn	**Pn**	**19 29 12.2**	**+8.0**
TXAR				Pg	Pn	19 29 48.7	+45
TXAR				Lg		19 32 11.1	
TXAR	**Lajitas Array**	**10.89**	**136**	Pn	**Pn**	**19 29 12.2**	**+8.0**
	0.0nm,0.3s,baz=308,slow=13,SNR=3.8						
TXAR				Pg	Pn	19 29 48.7	+45
	0.1nm,0.3s,baz=309,slow=16,SNR=4.7						
TXAR				Lg		19 32 11.1	
	0.1nm,0.3s,baz=322,slow=28,SNR=2.8						

*IDC **28** 20:08:42.4±2.2, 50.06N×129.78W, h0km, mb3.6/2, mb1 3.8/7, mb1mx3.6/27, mbtmp3.6/7, ML3.5/4, MS3.2/3, Ms1 3.2/3, ms1mx2.6/38, Error ellipse: s-maj=34.0km s-min=14.3km az=73.0*
*ISCJB **28** 20:08:44.8±1.3, 50.13N±0.07×129.4W±0.2, h10km, mb3.5/2, Error ellipse: s-maj=18.9km s-min=7.9km az=160.5*
*NEIC **28** 20:08:48.1±1.8, 50.35N×129.07W, h10km, Error ellipse: s-maj=33.4km s-min=11.1km az=60.0*

ISC 28 20:08:47.1±1.3, 50.17N±0.07×129.4W±0.2, h10km, n18, σ1§00/17, mb3.5/2, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBB	**Bella Bella**	**2.17**	**21**	Pn	**Pn**	**20 09 21.6**	**-1.6**
	54nm,0.3s,baz=43,slow=13,SNR=397						
BBB				Sn	**Sn**	**20 09 50.8**	**+0.8**
	20nm,0.3s,baz=131,slow=21,SNR=12						
DIB	**Dawson Inlet,**	**3.60**	**329**	Pn	**Pn**	**20 09 37.1**	**-5.8**
JCW	**Jim Creek**	**5.26**	**109**	P	**Pn**	**20 10 05.7**	**-0.1**
ETW	**Entiat**	**6.49**	**110**	P	**Pn**	**20 10 22.8**	**+0.3**
	7.5nm,0.5s						
OD2	**Odessa Site #2**	**7.57**	**107**	eP	**Pn**	**20 10 37.0**	**-0.4**
	7.0nm,0.5s						
DLBC	**Dease Lake**	**8.29**	**358**	Pn	**Pn**	**20 10 46.9**	**-0.4**
	0.3nm,0.3s,baz=204,slow=12,SNR=4.7						
DLBC				LR	LR	20 13 48.9	
	comp=Z,151nm,18.2s,baz=121,slow=36						
NVAR	**Mina Array Bea**	**14.14**	**142**	Pn	**Pn**	**20 12 06.3**	**-1.0**
	0.2nm,0.3s,baz=312,slow=11,SNR=3.2						
MOOW	**Moose Ponds**	**14.23**	**110**	eP	**Pn**	**20 12 17.0**	**+8.5**
TPAW	**Teton Pass**	**14.25**	**111**	eP	**Pn**	**20 12 18.4**	**+10**
	12nm,1.0s						
LOHW	**Long Hollow**	**14.39**	**110**	eP	**Pn**	**20 12 19.4**	**+8.7**
	5.0nm,0.9s						
YKA	**Yellowknife Ar**	**14.76**	**28**	Pn	**Pn**	**20 12 10.0**	**-5.7**
	0.1nm,0.3s,baz=220,slow=12,SNR=3.1						
PDAR	**Pinedale Array**	**15.50**	**111**	Pn	**Pn**	**20 12 27.7**	**+2.1**
	0.1nm,0.3s,baz=307,slow=9.1,SNR=10						
ILAR	**Eielson Array**	**17.30**	**334**	P	**Pn**	**20 12 49.4**	**+0.9**
	0.0nm,0.3s,baz=149,slow=11,SNR=4.7						
INK	**Inuvik**	**18.31**	**355**	LR	LR	20 20 31.4	
	comp=Z,59nm,18.6s,baz=42,slow=38						
ULM	**Lac du Bonnet**	**21.34**	**77**	P	**P**	**20 13 32.8**	**-1.2**
	2.1nm,0.6s,mb3.6,baz=252,slow=6.4,SNR=2.4						
ANMO	**Albuquerque**	**22.59**	**124**	P	**P**	**20 13 48.2**	**+0.7**
ANMO	**Albuquerque**	**22.59**	**124**	P	**P**	**20 13 48.2**	**+0.7**
	1.1nm,0.7s,mb3.4,baz=304,slow=11,SNR=2.9						
TXAR	**Lajitas Array**	**28.45**	**127**	LR	LR	20 26 29.7	
	comp=Z,41nm,18.5s,baz=180,slow=37						

WEL 28 20:11:45.3±0.9, 38.02S×178.78E, h33km, ML3.5/4, 1C, Error ellipse: s-maj=10.1km s-min=3.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**0.41**	**262**	PN	Pn	20 11 52.8	-2.1
PUZ				SN	Sb	20 12 01.0	+0.1
PUZ				SN	Sb	20 12 01.8	+0.8
MXZ	**Matakaoa Point**	**0.59**	**321**	PN	Pn	20 11 57.0	-0.4
MXZ				SN	Sn	20 12 07.3	+1.6
CNGZ	**Carnagh Statio**	**0.65**	**224**	PN	Pn	20 11 58.0	-0.1
CNGZ				eSN	Sn	20 12 08.9	+1.7
MWZ	**Matawai**	**1.03**	**252**	⇑PN	Pn	20 12 03.1	-0.4
MWZ				SN	Sn	20 12 18.1	+1.3
KNZ	**Kokohu**	**1.32**	**220**	PN	Pn	20 12 06.4	-1.1
URZ	**Urewera**	**1.33**	**259**	PN	Pn	20 12 07.7	+0.1
BKZ	**Black Stump Fm**	**2.12**	**237**	PN	Pn	20 12 18.3	-0.2
PXZ	**Pawanui**	**2.50**	**216**	SN	Sn	20 12 51.2	-1.8
BFZ	**Birch Farm**	**3.30**	**216**	PN	Pn	20 12 32.5	-2.2
MRZ	**Mangatainoka R**	**3.62**	**222**	PN	Pn	20 12 36.6	-2.5

IDC 28 20:36:10.7±8.3, 16.71S×176.29W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/18, mbtmp3.9/4, Error ellipse: s-maj=215.6km s-min=44.0km az=27.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.98**	**240**	P	P	20 43 55.5	0.0
	1.3nm,0.9s,baz=117,slow=16,SNR=3.2						
WRA	**Warramunga Arr**	**46.85**	**258**	P	P	20 44 42.9	0.0
	0.9nm,0.6s,baz=94,slow=7.1,SNR=15						
ASAR	**Alice Springs**	**47.07**	**253**	P	P	20 44 44.4	-0.2
	1.2nm,0.4s,baz=92,slow=8.0,SNR=25						
QSPA	**South Pole Qui**	**73.34**	**180**	P	P	20 47 44.4	+0.6
	0.4nm,0.5s,baz=72,slow=8.0,SNR=5.9						

*BJI **28** 20:36:39.1, 49.36N×128.93W, h12km, mB5.0/2, mb4.2/6, Ms4.3/2, Ms7 4.2/2*
*PGC **28** 20:36:41.6±10.0, 49.02N×129.46W, h10km, ML3.2/10, Mw3.8, 238km southwest of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **28** 20:36:42.5±1.6, 49.21N±0.03×129.30W±0.07, h17km±13km, mb4.1/8, MS3.5/5, Error ellipse: s-maj=7.4km s-min=5.1km az=159.1*
*IDC **28** 20:36:42.4±1.9, 49.24N×129.20W, h0km, mb3.8/3, mb1 4.0/9, mb1mx3.7/27, mbtmp3.8/9, ML3.6/6, MS3.4/9, Ms1 3.4/9, ms1mx3.0/43, Error ellipse: s-maj=35.8km s-min=11.7km az=73.0*
*NEIC **28** 20:36:43.9±0.5, 49.28N×129.28W, h10km, mb4.0/11, MW3.8(PGC), Error ellipse: s-maj=10.1km s-min=5.1km az=52.0*

ISC 28 20:36:44.7±2.0, 49.29N±0.04×129.26W±0.06, h18km±14km, n92, σ1§18/85, mb4.1/8, MS3.5/5, 3D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BPBC	**Brooks Peninsu**	**1.30**	**47**	⇑Pn	**Pn**	**20 37 07.5**	**-0.4**
EDB	**Eliza Dome**	**1.51**	**66**	⇑Pn	**Pn**	**20 37 09.3**	**-1.5**
EDB				⇑Sn	**Sn**	**20 37 30.2**	**+0.2**
HOLB	**Holberg**	**1.54**	**28**	⇓Pn	**Pn**	**20 37 11.1**	**-0.1**
MAYB	**Maynard**	**1.75**	**50**	⇑Pn	**Pn**	**20 37 13.9**	**-0.2**
ETB	**Estevan Point**	**1.78**	**86**	⇑Pn	**Pn**	**20 37 12.8**	**-1.8**
PHC	**Port Hardy**	**1.84**	**39**	⇑Pn	**Pn**	**20 37 15.4**	**0.0**
PHC				⇓Sn	**Sn**	**20 37 40.0**	**+1.8**
WOSB	**Woss**	**1.95**	**62**	⇑Pn	**Pn**	**20 37 16.6**	**-0.2**
GDR	**Gold River**	**2.16**	**76**	⇑Pn	**Pn**	**20 37 18.5**	**-1.2**
NCRB	**Newcastle Ridg**	**2.35**	**61**	⇓Pn	**Pn**	**20 37 22.8**	**+0.4**
OZB	**Mount Ozzard**	**2.50**	**96**	⇑Pn	**Pn**	**20 37 21.4**	**-3.0**
OZB				⇑Sn	**Sn**	**20 37 51.4**	**-2.9**
CBB	**Campbell River**	**2.64**	**72**	⇑Pn	**Pn**	**20 37 25.9**	**-0.4**
BBB	**Bella Bella**	**2.99**	**14**	Pn	**Pn**	**20 37 31.4**	**+0.2**

0.1nm,0.3s,baz=316,slow=12,SNR=9.9
YKA Yellowknife Ar 15.52 26 Pn **Pn 20 40 17.5 -4.8**
0.1nm,0.3s,baz=217,slow=12,SNR=2.6
ISA Isabella 15.75 146 P **Pn 20 40 24.3 -1.2**
5.5nm,1.0s
SRU San Rafael 16.81 120 P **Pn 20 40 43.0 +4.0**
FFC Flin Flon 17.59 62 P **Pn 20 40 46.3 -2.3**
16nm,0.7s
ILAR Eielson Array 18.13 335 P **Pn 20 40 56.4 +1.2**
0.1nm,0.3s,baz=151,slow=11,SNR=8.3
ILAR LR LR 20 47 00.2
comp=Z,94nm,21.3s,baz=165,slow=34
PV04 Paradox Valley 18.22 119 P **Pn 20 40 54.2 -2.3**
PHWY Pilot Hill 18.50 107 P **Pn 20 40 57.5 -2.4**
7.3nm,0.8s
PV01 Paradox Valley 18.59 119 *eP* **Pn 20 41 01.4 +0.4**
80.1nm,1.0s
BPAW Bear Paw Mtn. 18.88 330 *eP* **Pn 20 41 02.0 -2.3**
4.1nm,1.1s
INK Inuvik 19.19 355 LR LR 20 47 56.6
comp=Z,90nm,19.3s,baz=130,slow=35
MVCO Mesa Verde 19.28 121 P **Pn 20 41 08.0 -1.3**
7.5nm,0.9s
TTA Tatalina 20.02 323 *eP* **P 20 41 17.4 +1.3**
8.2nm,1.2s
COLD Coldfoot 20.89 337 *eP* **P 20 41 26.4 +0.8**
7.0nm,1.1s
ULM Lac du Bonnet 21.49 75 P **P 20 41 33.3 +1.2**
20nm,0.8s,mb4.5,baz=283,slow=12,SNR=12
ULM LR LR 20 50 16.9
comp=Z,192nm,18.2s,MS3.5,baz=241,slow=38
AGMN Agassiz Nation 21.93 80 P **P 20 41 37.5 +0.7**
14nm,1.0s,mb4.3
ANMO Albuquerque 22.05 122 *eP* **P 20 41 39.9 +1.7**
3.2nm,1.0s,mb3.7
ANMO Albuquerque 22.05 122 P **P 20 41 40.0 +1.7**
1.8nm,0.8s,mb3.6,baz=307,slow=13,SNR=4.4
EYMN Ely 24.84 79 *eP* **P 20 42 07.4 +1.7**
9.3nm,0.7s,mb4.4
WMOK Wichita Mounta 26.69 112 *eP* **P 20 42 23.4 +0.8**
5.2nm,1.0s,mb4.0
TXAR Lajitas Array 27.87 126 P **P 20 42 32.9 -0.3**
0.4nm,0.8s,mb3.1,baz=304,slow=7.2,SNR=5.0
TXAR LR LR 20 54 57.1
comp=Z,46nm,20.1s,MS3.0,baz=185,slow=39
SCHQ Schefferville 37.64 57 LR LR 20 59 50.3
comp=Z,240nm,18.7s,MS4.0,baz=262,slow=37
ZALV Zalesovo Beam 73.20 340 LR LR 21 20 49.1
comp=Z,18nm,18.7s,MS3.4,baz=68,slow=36
BJI Beijing 74.02 313 P **P 20 48 16.3 -2.7**
BJI pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
HHC Hu-ho-hao-te 75.50 317 *eP* **P 20 48 27.0 -0.6**
HHC pP pP 20 48 31.5 -1.9
HHC sP sP 20 48 34.0 -1.6
HHC PP PP 20 51 16.8 +0.6
DAVOX Davos/Dischmat 77.95 27 LR LR 21 21 48.8
comp=Z,35nm,19.3s,MS3.7,baz=92,slow=35
WMQ Urumqi 81.79 334 *eP* **P 20 49 02.8 +0.6**
CD2 Chengdu 87.26 317 P **P 20 49 29.0 -1.1**
CD2 pmax pmax
comp=Z,90nm,5.2s
KSH Kashi 88.81 341 *eP* **P 20 49 36.0 -1.3**
KSH *e*pP pP 20 49 40.8 -2.4
KSH *e*sP sP 20 49 42.3 -3.0
KSH *e*PP PP 20 53 06.3 +0.9
KSH *e*SKS 21 00 02.3
KSH *e*S S 21 00 18.5 -5.1
KSH pmax pmax
comp=Z,1.0nm,0.7s,mb4.2

*IDC **28** 20:37:24.5±1.2, 12°.66N×144°.05E, h0km, mb3.6/7, mb1 3.9/7, mb1mx3.6/24, mbtmp3.7/7, Error ellipse: s-maj=29.9km s-min=18.6km az=132.0*
*NEIC **28** 20:37:26.1±0.8, 12°.65N×144°.05E, h10km, mb4.2/1, Error ellipse: s-maj=21.4km s-min=14.7km az=128.0*
ISC 28 20:37:25.4±2.3, 12°.7N±0°.1×144°.1E±0°.1, h5km±14km, n11, σ0°68/13, mb3.6/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.22**	**41**	*e*P	**Pg**	**20 37 48.8**	**-0.1**
GUMO				Sn	**Sn**	**20 38 05.6**	**-0.4**
GUMO	**Guam**	**1.22**	**41**	Pn	**Pn**	**20 37 49.1**	**0.0**
GUMO	656nm,0.3s,baz=199,slow=9.4,SNR=606			Sn	**Sn**	**20 38 05.6**	**-0.4**
MJAR	343nm,0.3s,baz=52,slow=21,SNR=7.0 **Matsushiro Arr 24.35 349**			P	**P**	**20 42 44.3**	**+0.1**
WRA	0.4nm,0.4s,mb3.2,baz=131,slow=15,SNR=2.9 **Warramunga Arr 33.78 197**			P	**P**	**20 44 08.3**	**-0.1**
WRA	**Warramunga Arr 33.78 197** 0.5nm,0.5s,mb3.7,baz=20,slow=9.6,SNR=7.6			P	**P**	**20 44 08.3**	**-0.1**
CMAR	**Chiang Mai Arr 43.75 283** 0.3nm,0.8s,mb3.1,baz=90,slow=4.9,SNR=4.3			P	**P**	**20 45 31.3**	**-0.9**
SONM	**Songino Array 47.03 326** 0.5nm,0.3s,mb3.9,baz=96,slow=5.1,SNR=2.6			P	**P**	**20 45 59.5**	**+1.6**
KURK	**Kurchatov 64.78 320** 1.5nm,0.8s,mb4.1			*e*P	**P**	**20 48 04.9**	**0.0**
KURK	**Kurchatov 64.78 320** 0.5nm,0.6s,mb3.7,baz=104,slow=7.0,SNR=4.2			P	**P**	**20 48 04.7**	**-0.3**
BVAR	**Borovoye Array 70.15 322** 0.4nm,0.5s,mb3.6,baz=85,slow=6.4,SNR=3.4			P	**P**	**20 48 38.2**	**-0.8**
NVAR	**Mina Array Bea 88.12 51** 0.2nm,0.4s,mb3.7,baz=273,slow=6.0,SNR=3.9			P	**P**	**20 50 18.3**	**+0.7**

IDC 28 20:56:07.8±2.1, 13°.88N×145°.48E, h89km±14km, mb3.3/4, mb1 3.5/4, mb1mx3.2/22, mbtmp3.3/4, Error ellipse: s-maj=50.3km s-min=27.5km az=99.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.66**	**244**	P	Pn	20 56 25.0	+1.3
GUMO	302nm,0.3s,baz=125,slow=1.3,SNR=189			S	Sn	20 56 37.1	+1.5
WRA	383nm,0.3s,baz=186,slow=22,SNR=16 **Warramunga Arr 35.35 198**			P	P	21 02 54.8	0.0
MKAR	0.4nm,0.8s,baz=20,slow=9.3,SNR=3.3 **Makanchi Array 61.69 316**			P	P	21 06 17.2	+0.6
ILAR	0.1nm,0.4s,baz=89,slow=8.3,SNR=5.1 **Eielson Array 68.06 25**			P	P	21 06 57.2	-0.3
FINES	0.3nm,0.4s,baz=258,slow=5.5,SNR=4.3 **FINESS Array B 91.15 335**			P	P	21 09 01.8	-0.8
	5.7nm,1.1s,baz=103,slow=4.4,SNR=3.5						

*DDA **28** 21:02:08.7, 36°.99N×29°.13E, h8km±5km, Md3.2*
*ISK **28** 21:02:08.2, 36°.98N×29°.07E, h6km, MD3.1*
*CSEM **28** 21:02:08.2±0.2, 36°.96N×29°.06E, h2km, MD3.1, Error ellipse: s-maj=4.3km s-min=2.7km az=13.0*
*ISCJB **28** 21:02:09.0±0.4, 36°.98N±0°.03×29°.08E±0°.03, h10km, Error ellipse: s-maj=5.0km s-min=3.1km az=10.4*
ISC 28 21:02:09.0±0.6, 36°.98N±0°.03×29°.07E±0°.03, h5km±4km, n55, σ0°96/74, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.39**	**63**	P*g*	**Pg**	**21 02 15.3**	**-1.1**
GLHS				*e*SG	**Sg**	**21 02 22.6**	**+1.1**
GLHS	**Glhisar (BURDU**	**0.39**	**63**	*i* P*g*	**Pg**	**21 02 15.3**	**-1.1**
GLHS				*e*S*g*	**Sg**	**21 02 22.6**	**+1.2**
GOLH	**Golhisar**	**0.47**	**57**	*i* P	**Pg**	**21 02 16.4**	**-1.6**
GOLH				*i* S	**Sg**	**21 02 23.5**	**-0.6**
GOLH	**Golhisar**	**0.47**	**57**	*i* P	**Pg**	**21 02 16.4**	**-1.6**
GOLH				*i* S	**Sg**	**21 02 23.5**	**-0.6**
YER	**Yerkesik**	**0.65**	**284**	*e*PG	**Pg**	**21 02 21.2**	**-0.3**
YER	**Yerkesik**	**0.65**	**284**	*e*P*g*	**Pg**	**21 02 21.2**	**-0.2**
DNZL	**Cakiroluk**	**0.71**	**358**	*i* P	**Pg**	**21 02 20.1**	**-2.5**
DNZL				*i* S	**Sg**	**21 02 32.5**	**+0.6**
DNZL	**Cakiroluk**	**0.71**	**358**	*i* P	**Pg**	**21 02 20.0**	**-2.6**
DNZL				*i* S	**Sg**	**21 02 32.5**	**+0.7**
ELL	**Elmali**	**0.71**	**109**	*e*PG	**Pg**	**21 02 22.1**	**-0.5**
ELL				*e*SG	**Sg**	**21 02 32.7**	**+0.9**
ELL	**Elmali**	**0.71**	**109**	*e*P*g*	**Pg**	**21 02 22.1**	**-0.5**
ELL				*e*S*g*	**Sg**	**21 02 32.7**	**+0.9**
DENT	**Denizli**	**0.77**	**358**	*e*PG	**Pg**	**21 02 23.4**	**-0.4**
DENT	**Denizli**	**0.77**	**358**	*e*P*g*	**Pg**	**21 02 23.4**	**-0.4**
AKAS	**Kas**	**0.86**	**150**	*i* P	**Pg**	**21 02 24.2**	**-1.2**
AKAS				*i* S	**Sg**	**21 02 41.8**	**+5.2**
AKAS	**Kas**	**0.86**	**150**	*i* P	**Pg**	**21 02 24.2**	**-1.2**
KORT	**Korkueli**	**1.02**	**88**	*i* P	**Pg**	**21 02 28.2**	**-0.4**
KORT				*i* S	**Sg**	**21 02 43.2**	**+1.3**
KORT	**Korkueli**	**1.02**	**88**	*i* P	**Pg**	**21 02 28.2**	**-0.4**
KORT				*i* S	**Sg**	**21 02 43.2**	**+1.3**
MLSB	**Milas**	**1.08**	**287**	*e*PN	**Pn**	**21 02 29.9**	**-0.9**
MLSB	**Milas**	**1.08**	**287**	*e*Pn	**Pn**	**21 02 29.9**	**-0.8**
AYDN	**Tasoluk**	**1.17**	**306**	*i* P	**Pg**	**21 02 32.0**	**+0.7**
AYDN				*i* S	**Sg**	**21 02 49.7**	**+3.1**
AYDN	**Tasoluk**	**1.17**	**306**	*i* P	**Pg**	**21 02 32.0**	**+0.6**
AYDN				*i* S	**Sg**	**21 02 49.7**	**+3.2**
DAT	**Datca**	**1.22**	**259**	*e*PN	**Pn**	**21 02 31.9**	**-0.8**
DAT	**Datca**	**1.22**	**259**	*e*Pn	**Pn**	**21 02 31.9**	**-0.8**
ANTB	**Antalya**	**1.27**	**93**	*e*PN	**Pn**	**21 02 33.1**	**-0.2**
ANTB	**Antalya**	**1.27**	**93**	*e*Pn	**Pn**	**21 02 33.1**	**-0.2**
BCK	**Bucak**	**1.30**	**68**	*e*PN	**Pn**	**21 02 33.5**	**-0.2**
BCK	**Bucak**	**1.30**	**68**	*e*Pn	**Pn**	**21 02 33.6**	**-0.2**
BDRM	**Kayabasi**	**1.30**	**274**	*i* P	**Pn**	**21 02 35.3**	**+1.6**
BDRM				*i* S	**Sg**	**21 02 53.0**	**+2.1**
BDRM	**Kayabasi**	**1.30**	**274**	*i* P	**Pn**	**21 02 35.3**	**+1.5**
BDRM				*i* S	**Sg**	**21 02 53.0**	**+2.1**
KHL	**Karahalli**	**1.39**	**15**	*e*PN	**Pn**	**21 02 34.9**	**0.0**
KHL	**Karahalli**	**1.39**	**15**	*e*Pn	**Pn**	**21 02 34.9**	**-0.1**
BODT	**Bodrum**	**1.41**	**274**	*e*PN	**Pn**	**21 02 34.5**	**-0.8**
BODT	**Bodrum**	**1.41**	**274**	*e*Pn	**Pn**	**21 02 34.5**	**-0.8**
KHAL	**Karahalli**	**1.43**	**13**	*i* P	**Pn**	**21 02 35.1**	**-0.4**
KHAL				*i* S	**Sb**	**21 02 55.5**	**+0.9**
KHAL	**Karahalli**	**1.43**	**13**	*i* P	**Pn**	**21 02 35.2**	**-0.3**
KHAL				*i* S	**Sb**	**21 02 55.5**	**+1.0**
KULA	**Kula-Manisa**	**1.57**	**348**	*e*PN	**Pn**	**21 02 37.4**	**0.0**
KULA	**Kula-Manisa**	**1.57**	**348**	*e*Pn	**Pn**	**21 02 37.4**	**0.0**
SUTC	**Sutluce-Ispart**	**1.62**	**72**	*e*PN	**Pn**	**21 02 38.3**	**+0.2**
SUTC	**Sutluce-Ispart**	**1.62**	**72**	*e*Pn	**Pn**	**21 02 38.3**	**+0.2**
SHUT	**Suhut-Afyon**	**1.96**	**36**	*e*PN	**Pn**	**21 02 43.2**	**+0.4**
SHUT	**Suhut-Afyon**	**1.96**	**36**	*e*Pn	**Pn**	**21 02 43.2**	**+0.4**
IZM	**Izmir**	**2.02**	**315**	*e*PN	**Pn**	**21 02 43.6**	**+0.1**
BLCB	**Balcova**	**2.14**	**312**	*e*PN	**Pn**	**21 02 45.3**	**0.0**
BLCB	**Balcova**	**2.14**	**312**	*e*Pn	**Pn**	**21 02 45.3**	**+0.1**
AKHS	**Akhisar**	**2.14**	**333**	*e*P	**Pn**	**21 02 44.6**	**-0.7**
AKHS				*e*S	**Sn**	**21 03 11.2**	**-1.0**
AKHS	**Akhisar**	**2.14**	**333**	*e*P	**Pn**	**21 02 44.6**	**-0.7**
AKHS				*e*S	**Sn**	**21 03 11.2**	**-1.0**
AKS	**Akhisar**	**2.14**	**333**	*e*PN	**Pn**	**21 02 45.0**	**-0.3**
AKS	**Akhisar**	**2.14**	**333**	*e*Pn	**Pn**	**21 02 45.1**	**-0.2**
ALT	**Altintas**	**2.23**	**21**	*e*PN	**Pn**	**21 02 46.0**	**-0.5**
ALT	**Altintas**	**2.23**	**21**	*e*Pn	**Pn**	**21 02 46.0**	**-0.5**
HDMB	**Hadim**	**2.73**	**89**	*e*PN	**Pn**	**21 02 54.7**	**+1.2**
HDMB	**Hadim**	**2.73**	**89**	*e*Pn	**Pn**	**21 02 54.7**	**+1.2**
KONT	**Konya--Tatoy**	**2.79**	**69**	*e*PN	**Pn**	**21 02 55.6**	**+1.4**
KONT	**Konya--Tatoy**	**2.79**	**69**	*e*Pn	**Pn**	**21 02 55.6**	**+1.4**
KIZT	**Kizilcal**	**2.92**	**49**	*e*PN	**Pn**	**21 02 56.5**	**+0.5**
KIZT	**Kizilcal**	**2.92**	**49**	*e*Pn	**Pn**	**21 02 56.5**	**+0.5**

*ISCJB **28** 21:07:00.9±0.5, 37°.04N±0°.04×29°.11E±0°.03, h10km, Error ellipse: s-maj=5.8km s-min=3.7km az=178.5*
*DDA **28** 21:07:00.1, 36°.99N×29°.16E, h6km±3km, Md2.9*
*ISK **28** 21:07:00.7, 37°.12N×29°.11E, h7km, MD3.0*
*CSEM **28** 21:07:01.1±0.2, 37°.11N×29°.12E, h5km, MD3.0, Error ellipse: s-maj=5.6km s-min=3.5km az=5.0*
ISC 28 21:07:01.5±0.5, 37°.07N±0°.04×29°.11E±0°.03, h5km±6km, n32, σ1°20/44, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.32**	**75**	*e*P*g*	**Pg**	**21 07 06.6**	**-1.1**
GLHS				*e*S*g*	**Sg**	**21 07 12.7**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.32**	**75**	*e*P*g*	**Pg**	**21 07 06.6**	**-1.1**
GLHS				*e*S*g*	**Sg**	**21 07 12.7**	**+0.7**
GOLH	**Golhisar**	**0.40**	**66**	*i* P	**Pg**	**21 07 07.6**	**-1.5**
GOLH				*i* S	**Sg**	**21 07 15.0**	**+0.7**
GOLH	**Golhisar**	**0.40**	**66**	*i* P*g*	**Pg**	**21 07 07.6**	**-1.5**
GOLH				*i* S	**Sg**	**21 07 15.0**	**+0.7**
DNZL	**Cakiroluk**	**0.62**	**355**	*i* P	**Pg**	**21 07 11.8**	**-1.6**
DNZL				*i* S	**Sg**	**21 07 24.0**	**+2.6**
DNZL	**Cakiroluk**	**0.62**	**355**	*i* P	**Pg**	**21 07 11.8**	**-1.6**
YER	**Yerkesik**	**0.66**	**276**	*e*PG	**Pg**	**21 07 13.8**	**-0.4**
YER				*e*SG	**Sg**	**21 07 23.4**	**+0.6**
YER	**Yerkesik**	**0.66**	**276**	*e*P*g*	**Pg**	**21 07 13.8**	**-0.4**
YER				*e*S*g*	**Sg**	**21 07 23.4**	**+0.6**
DENT	**Denizli**	**0.68**	**355**	*e*PG	**Pg**	**21 07 13.2**	**-1.4**
DENT	**Denizli**	**0.68**	**355**	*e*P*g*	**Pg**	**21 07 13.2**	**-1.4**
ELL	**Elmali**	**0.72**	**117**	*e*PG	**Pg**	**21 07 15.6**	**+0.3**
ELL	**Elmali**	**0.72**	**117**	*e*P*g*	**Pg**	**21 07 15.6**	**+0.3**
AKAS	**Kas**	**0.93**	**154**	*i* P	**Pg**	**21 07 15.9**	**-3.3**
AKAS				*i* S	**Sg**	**21 07 33.2**	**+1.8**
AKAS	**Kas**	**0.93**	**154**	*i* P	**Pg**	**21 07 15.9**	**-3.4**
AKAS				*i* S	**Sg**	**21 07 33.2**	**+1.9**
MLSB	**Milas**	**1.09**	**282**	*e*PG	**Pg**	**21 07 21.8**	**-0.5**
MLSB	**Milas**	**1.09**	**282**	*e*P*g*	**Pg**	**21 07 21.8**	**-0.5**
AYDN	**Tasoluk**	**1.14**	**301**	*i* P	**Pg**	**21 07 23.5**	**+0.1**
AYDN				*i* S	**Sg**	**21 07 41.2**	**+3.0**
AYDN	**Tasoluk**	**1.14**	**301**	*i* P	**Pg**	**21 07 23.5**	**+0.1**
AYDN				*i* S	**Sg**	**21 07 41.2**	**+3.0**
DAT	**Datca**	**1.27**	**255**	*e*PN	**Pn**	**21 07 25.3**	**-0.6**
DAT	**Datca**	**1.27**	**255**	*e*Pn	**Pn**	**21 07 25.3**	**-0.6**
KHL	**Karahalli**	**1.29**	**15**	*e*PN	**Pn**	**21 07 25.4**	**-0.8**
KHL	**Karahalli**	**1.29**	**15**	*e*Pn	**Pn**	**21 07 25.4**	**-0.7**
KHAL	**Karahalli**	**1.33**	**13**	*i* P	**Pn**	**21 07 27.3**	**+0.6**
KHAL				*i* S	**Sb**	**21 07 46.6**	**+2.4**
KHAL	**Karahalli**	**1.33**	**13**	*i* P	**Pn**	**21 07 27.3**	**+0.6**
BODT	**Bodrum**	**1.44**	**270**	*e*PN	**Pn**	**21 07 28.5**	**+0.3**
BODT	**Bodrum**	**1.44**	**270**	*e*Pn	**Pn**	**21 07 28.5**	**+0.3**
KULA	**Kula-Manisa**	**1.48**	**346**	*e*PN	**Pn**	**21 07 28.0**	**-0.7**
KULA	**Kula-Manisa**	**1.48**	**346**	*e*Pn	**Pn**	**21 07 28.0**	**-0.8**
SUTC	**Sutluce-Ispart**	**1.56**	**75**	*e*PN	**Pn**	**21 07 29.2**	**-0.6**
SUTC	**Sutluce-Ispart**	**1.56**	**75**	*e*Pn	**Pn**	**21 07 29.2**	**-0.7**
HDMB	**Hadim**	**2.71**	**91**	*e*PN	**Pn**	**21 07 45.9**	**+0.4**
HDMB	**Hadim**	**2.71**	**91**	*e*Pn	**Pn**	**21 07 45.9**	**+0.3**

*ISCJB **28** 21:09:19.7±0.6, 52°.12N±0°.05×158°.69E±0°.09, h78km±5km, mb3.7/13, Error ellipse: s-maj=11.2km s-min=4.7km az=43.8*
*MOS **28** 21:09:20.2±1.0, 52°.21N×158°.61E, h81km, mb4.3/3, Error ellipse: s-maj=20.0km s-min=8.7km az=72.8*
*KRSC **28** 21:09:20.5±0.8, 52°.13N×158°.68E, h61km±40km, ML4.2*
*NEIC **28** 21:09:22.1±0.9, 52°.23N×158°.48E, h80km±18km, mb4.3/5, Error ellipse: s-maj=16.1km s-min=7.5km az=139.0*
*IDC **28** 21:09:22.3±2.2, 52°.15N×158°.54E, h82km±18km, mb3.2/8, mb1 3.6/9, mb1mx3.3/26, mbtmp3.3/9, Error ellipse: s-maj=30.6km s-min=16.6km az=138.0*
ISC 28 21:09:20.7±0.6, 52°.10N±0°.05×158°.69E±0°.08, h68km±5km, n40, σ1°06/54, mb3.7/13, 1C-1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRL	**Gorelyy**	**0.59**	**321**	*i* P	**Pn**	**21 09 33.9**	**-0.3**
GRL				*i* S	**Sn**	**21 09 44.3**	**+0.2**
PET	**Petropavlovsk**	**0.93**	**359**	*e*Pn	**Pn**	**21 09 37.7**	**-0.4**
PET				*e*Sn	**Sn**	**21 09 51.5**	**+0.5**
PET	**Petropavlovsk**	**0.93**	**359**	*i* Pn	**Pn**	**21 09 37.4**	**-0.7**
PET				*i* S	**Sn**	**21 09 50.7**	**-0.4**
PET	**Petropavlovsk**	**0.93**	**359**	*i*PN	**Pn**	**21 09 37.5**	**-0.6**
PET				*e*S	**Sn**	**21 09 49.2**	**-1.9**
PET				pmax	pmax		
	comp=Z,162nm,0.3s						
PET				smax			
	comp=E,745nm,0.6s						
PET				smax			
	comp=N,1μm,0.3s						
NLC	**Nalytchevo**	**1.15**	**20**	*i* P	**Pn**	**21 09 39.0**	**-1.9**
NLC				*i* S	**Sn**	**21 09 52.9**	**-3.1**
AVH	**Avacha**	**1.17**	**2**	*i* P	**Pn**	**21 09 41.4**	**+0.2**
AVH				*i* S	**Sn**	**21 09 56.4**	**-0.1**
PETK	**Petropavlovsk-**	**1.18**	**330**	P	**Pn**	**21 09 41.7**	**+0.5**
	comp=N,32nm,0.3s,baz=127,slow=17,SNR=144						
PETK				S	**Sn**	**21 09 58.0**	**+1.3**
	comp=N,21nm,0.3s,baz=145,slow=16,SNR=13						
MIPR	**Malaya Ipel'ka**	**1.20**	**279**	*i* P	**Pn**	**21 09 41.2**	**-0.4**
SPN	**Mys Shipunski**	**1.29**	**39**	P	**Pn**	**21 09 42.3**	**-0.4**
SPN				*i* S	**Sn**	**21 09 58.9**	**-0.4**
GNL	**Ganaly**	**1.66**	**345**	*i* P	**Pn**	**21 09 48.5**	**+0.8**
GNL				*i* S	**Sn**	**21 10 08.7**	**+0.6**
KII	**Karymskiy**	**2.00**	**13**	*e*P	**Pn**	**21 09 53.3**	**+1.2**
KII				*i* S	**Sn**	**21 10 17.3**	**+1.2**
SKR	**Severo-Kuril's**	**2.15**	**230**	*e*PN	**Pn**	**21 09 56.4**	**+2.2**
SKR				*e*S	**Sn**	**21 10 20.0**	**+0.3**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,590nm,0.3s						
SKR				smax			
	comp=E,410nm,0.3s						
SKR				smax			
	comp=Z,90nm,0.5s						
ALID	**Alaid**	**2.32**	**239**	*i* P	**Pn**	**21 09 55.0**	**-1.5**
ALID				*i* S	**Sn**	**21 10 20.7**	**-3.2**
MKZ	**Mys Kozlova**	**3.06**	**35**	*i* P	**Pn**	**21 10 07.0**	**+0.4**
MKZ				*i* S	**Sn**	**21 10 40.5**	**-1.6**
KBTR	**Krutoberegovo**	**4.78**	**29**	*e*P	**Pn**	**21 10 31.5**	**+1.5**
KBTR				*i* S	**Sn**	**21 11 23.2**	**-0.8**
SEY	**Seymchan**	**11.37**	**345**	*i*PN	**Pn**	**21 12 00.5**	**+0.5**
ASAJ	**Asahikawa**	**13.37**	**240**	*e*Pn	**Pn**	**21 12 29.8**	**+2.5**
ASAJ	**Asahikawa**	**13.37**	**240**	P	**Pn**	**21 12 28.8**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=82,slow=13,SNR=9.4						
MDJ	**Mudanjiang**	**20.63**	**260**	P	**P**	**21 13 53.2**	**-1.0**
MAJO	**Matsushiro**	**21.25**	**231**	*e*P	**P**	**21 14 01.1**	**0.0**
	comp=Z,4.6nm,0.7s,mb3.9						
MAJO	**Matsushiro**	**21.25**	**231**	*e*P	**P**	**21 14 01.1**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
MJAR	**Matsushiro Arr**	**21.25**	**231**	P	**P**	**21 14 01.5**	**+0.5**
	comp=Z,1.8nm,0.7s,mb3.5,baz=21,slow=12,SNR=6.8						
BPAW	**Bear Paw Mtn.**	**28.35**	**45**	P	**P**	**21 15 08.3**	**+0.6**
ILAR	**Eielson Array**	**30.13**	**44**	P	**P**	**21 15 23.5**	**+0.1**
	comp=Z,0.8nm,0.7s,mb3.5,baz=259,slow=7.5,SNR=12						
TATO	**Taipei**	**39.06**	**241**	Pn	**P**	**21 16 40.3**	**-0.5**
GUMO	**Guam**	**39.98**	**201**	P	**P**	**21 16 49.7**	**+1.2**
YULB	**Yu-li**	**40.45**	**239**	*e*P	**P**	**21 16 52.1**	**-0.2**
ENH	**Enshi**	**41.97**	**258**	*e*P	**P**	**21 17 04.5**	**-0.3**
	comp=Z,2.6nm,0.5s,mb4.2						
MKAR	**Makanchi Array**	**47.81**	**296**	P	**P**	**21 17 49.3**	**-1.6**
	comp=Z,0.3nm,0.7s,mb3.2,baz=51,slow=8.0,SNR=3.9						
TKM2	**Tokmak 2**	**53.95**	**296**	*e*P	**P**	**21 18 36.7**	**-0.3**
AAK	**Ala-Archa**	**54.75**	**296**	*e*P	**P**	**21 18 41.8**	**-1.1**
	comp=Z,1.4nm,0.3s,mb4.5						
AAK	**Ala-Archa**	**54.75**	**296**	*e*P	**P**	**21 18 41.8**	**-1.0**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
CHTO	**Chiang Mai**	**56.86**	**258**	*e*P	**P**	**21 18 58.1**	**-0.1**
	comp=Z,0.9nm,0.4s,mb4.2						
CHTO	**Chiang Mai**	**56.86**	**258**	*e*P	**P**	**21 18 58.1**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
CMAR	**Chiang Mai Arr**	**57.13**	**257**	P	**P**	**21 19 00.8**	**+0.6**
	comp=Z,0.4nm,0.7s,mb3.5,baz=19,slow=6.5,SNR=4.4						
PDAR	**Pinedale Array**	**58.76**	**59**	P	**P**	**21 19 13.3**	**+2.0**
	comp=Z,0.4nm,0.6s,mb3.6,baz=353,slow=2.8,SNR=1.8						
KULM	**Kulim**	**66.59**	**247**	*e*P	**P**	**21 20 01.6**	**-2.1**
	comp=Z,8.2nm,0.9s,mb4.6						
TXAR	**Lajitas Array**	**71.83**	**66**	P	**P**	**21 20 36.9**	**+1.0**
	comp=Z,0.3nm,0.6s,mb3.3,baz=287,slow=3.3,SNR=5.5						
TXAR				pP	pP	21 20 52.7	-1.5
	comp=Z,0.2nm,0.5s,baz=301,slow=4.9,SNR=3.9						
EKA	**Eskdalemuir Ar**	**71.88**	**349**	P	**P**	**21 20 35.8**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.6,baz=18,slow=5.3,SNR=5.2						
WRA	**Warramunga Arr**	**74.82**	**204**	P	**P**	**21 20 52.7**	**-0.6**
	comp=Z,0.2nm,0.7s,mb3.0,baz=16,slow=5.9,SNR=3.1						

*IDC **28** 21:16:41.3±1.6, 0°.79S×101°.27E, h117km±14km, mb3.7/10, mb1 3.7/12, mb1mx3.6/24, mbtmp3.6/12, Error ellipse: s-maj=32.9km s-min=9.4km az=59.0*
*NEIC **28** 21:16:42.5±0.8, 0°.79S×101°.26E, h132km±7km, mb4.0/12, Error ellipse: s-maj=8.9km s-min=5.4km az=61.0*
*DJA **28** 21:16:42, 1°.06S×100°.74E, h68km, MLv4.2/14*
ISC 28 21:16:42.0±0.4, 0°.88S±0°.04×101°.02E±0°.07, h129km±3km, n57, σ1°14/62, mb3.9/19, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDSI	**Sungai Dareh**	**0.42**	**98**	P	**Pn**	**21 16 59.4**	**-1.1**
PDSI	**Padang**	**0.56**	**266**	P	**Pn**	**21 16 56.6**	**-4.6**
PDSI				S	**Sn**	**21 17 03.9**	**-12**
PPI	**Padang Panjang**	**0.75**	**304**	P	**Pn**	**21 16 59.2**	**-3.4**
BKNI	**Bangkinang**	**1.19**	**1**	P	**Pn**	**21 17 06.9**	**+0.2**
BKNI				S	**Sn**	**21 17 25.7**	**+0.1**
KRJI	**Kerinci**	**1.29**	**160**	P	**Pn**	**21 17 06.2**	**-1.5**
KRJI				S	**Sn**	**21 17 21.8**	**-5.5**
RGRI	**

ARCES	**ARCESS Array B**	**85.77**	**340**	P		**P**	**21 29 06.7**	**+0.3**
	1.6nm,0.9s,mb3.8,baz=99,slow=5.6,SNR=3.3							
TXAR	**Lajitas Array**	**143.20**	**37**	PKP		PKPdf	21 36 00.1	-1.4
	0.1nm,0.3s,baz=273,slow=1.1,SNR=4.8							
TXAR				SKPbc		SKPbc	21 39 29.2	+1.0
	0.4nm,0.7s,baz=259,slow=0.9,SNR=6.3							
CPUP	**Villa Florida**	**145.82**	**216**	PKPbc		PKPbc	21 36 08.2	+1.2
	1.1nm,0.4s,baz=73,slow=4.1,SNR=6.3							

IDC 28 21:26:31.6±2.2,5.76S×152.58E,h0km,mb3.5/4, mb1 3.8/4,mb1mx3.5/17,mbtmp3.6/4,Error ellipse: s-maj=133.1km s-min=28.4km az=131.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.65**	**230**	P		P	21 31 33.6	-0.9
	0.3nm,0.5s,baz=55,slow=10,SNR=6.1							
ASAR	**Alice Springs**	**25.30**	**223**	P		P	21 32 00.1	+0.2
	0.7nm,0.9s,baz=42,slow=10.0,SNR=5.9							
FITZ	**Fitzroy Crossi**	**29.02**	**243**	P		P	21 32 34.3	+0.8
	1.4nm,0.7s,baz=80,slow=8.2,SNR=3.7							
ILAR	**Eielson Array**	**83.13**	**22**	P		P	21 38 59.1	+0.1
	0.5nm,0.8s,baz=241,slow=5.5,SNR=6.0							

*ATH **28** 21:56:41.5,38.96N×23.79E,h19km±2km,MD2.8/12, ML2.1*
*ISCJB **28** 21:56:42.2±0.4,38.92N±0.02×23.70E±0.03,h12km±3km, Error ellipse: s-maj=4.3km s-min=2.9km az=9.7*
*CSEM **28** 21:56:42.3±0.1,38.90N×23.71E,h12km,ML1.9/8,Error ellipse: s-maj=3.2km s-min=1.9km az=99.0*
*THE **28** 21:56:43.6,38.96N×23.61E,h11km,ML1.9/8,Error ellipse: s-maj=1.5km s-min=0.7km az=144.0*

ISC 28 21:56:42.8±0.4,38.92N±0.02×23.70E±0.03,h14km±3km, n51,σ0964/90,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AOS	**Alonnisos**	**0.29**	**30**	P		**Pg**	**21 56 49.0**	**+0.1**
AOS				S		**Sg**	**21 56 53.3**	**+0.3**
AOS	**Alonnisos**	**0.29**	**30**	P		**Pg**	**21 56 49.0**	**+0.1**
AOS				S		**Sg**	**21 56 53.3**	**+0.3**
NEO	**Neokhori**	**0.53**	**317**	*e*PN		**Pg**	**21 56 53.7**	**+0.4**
NEO				*e*SN		**Sg**	**21 57 00.5**	**0.0**
NEO	**Neokhori**	**0.53**	**317**	*e*Pn		**Pg**	**21 56 53.7**	**+0.4**
ATAL	**Atalanti**	**0.57**	**247**	P		**Pg**	**21 56 53.4**	**-0.7**
ATAL				S		**Sg**	**21 57 01.7**	**0.0**
ATAL	**Atalanti**	**0.57**	**247**	P		**Pg**	**21 56 53.4**	**-0.7**
ATAL				S		**Sg**	**21 57 01.7**	**0.0**
XOR	**Xorichti**	**0.59**	**319**	P		**Pg**	**21 56 53.7**	**-0.8**
XOR				S		**Sg**	**21 57 02.2**	**-0.2**
XOR	**Xorichti**	**0.59**	**319**	P		**Pg**	**21 56 53.7**	**-0.8**
XOR				S		**Sg**	**21 57 02.2**	**-0.2**
LKR	**Lokris**	**0.61**	**244**	*e*PB		**Pg**	**21 56 54.0**	**-0.7**
LKR	**Lokris**	**0.61**	**244**	P		**Pg**	**21 56 54.0**	**-0.7**
LKR				S		**Sg**	**21 57 02.4**	**-0.3**
LKR	**Lokris**	**0.61**	**244**	P		**Pg**	**21 56 54.0**	**-0.7**
LKR				S		**Sg**	**21 57 02.4**	**-0.3**
PTL	**Penteli**	**0.88**	**171**	*e*PN		**Pg**	**21 56 59.4**	**-0.4**
PTL	**Penteli**	**0.88**	**171**	*e*Pn		**Pg**	**21 56 59.4**	**-0.4**
ATH	**Athens Observa**	**0.95**	**179**	*e*PN		**Pg**	**21 57 00.6**	**-0.5**
ATH	**Athens Observa**	**0.95**	**179**	*e*Pn		**Pg**	**21 57 00.6**	**-0.5**
PAIG	**Paliouri**	**1.01**	**359**	P		**Pg**	**21 57 02.1**	**-0.2**
PAIG				S		**Sg**	**21 57 15.9**	**+0.5**
PAIG	**Paliouri**	**1.01**	**359**	P		**Pg**	**21 57 02.1**	**-0.2**
PAIG				S		**Sg**	**21 57 15.9**	**+0.5**
LTK	**Loutraki**	**1.06**	**213**	*e*PN		**Pg**	**21 57 03.0**	**-0.3**
LTK				*e*SN		**Sg**	**21 57 19.7**	**+2.5**
LTK	**Loutraki**	**1.06**	**213**	*e*Pn		**Pg**	**21 57 03.0**	**-0.3**
LTK				*e*Sn		**Sg**	**21 57 19.7**	**+2.5**
VLY	**Voula,Athens**	**1.07**	**176**	*e*PN		**Pg**	**21 57 02.2**	**-1.2**
VLY				*e*SN		**Sg**	**21 57 17.5**	**+0.1**
VLY	**Voula,Athens**	**1.07**	**176**	*e*Pn		**Pg**	**21 57 02.2**	**-1.2**
VLY				*e*Sn		**Sg**	**21 57 17.5**	**+0.1**
AGG	**Agios Georgios**	**1.07**	**276**	*e*PN		**Pg**	**21 57 02.5**	**-1.0**
AGG				*e*SN		**Sn**	**21 57 18.7**	**+0.8**
AGG	**Agios Georgios**	**1.07**	**276**	P		**Pg**	**21 57 02.5**	**-1.0**
AGG				S		**Sg**	**21 57 17.4**	**0.0**
AGG	**Agios Georgios**	**1.07**	**276**	P		**Pg**	**21 57 02.5**	**-1.0**
AGG				S		**Sg**	**21 57 17.4**	**0.0**
AGG				*e*Sn		**Sn**	**21 57 18.7**	**+0.8**
NAIG	**Nisos Aigina**	**1.17**	**188**	*e*PN		**Pn**	**21 57 05.1**	**+0.4**
NAIG	**Nisos Aigina**	**1.17**	**188**	*e*Pn		**Pn**	**21 57 05.1**	**+0.4**
OUR	**Ouranopolis**	**1.43**	**9**	P		**Pn**	**21 57 08.1**	**-0.2**
OUR				S		**Sn**	**21 57 26.4**	**-0.5**
OUR	**Ouranopolis**	**1.43**	**9**	P		**Pn**	**21 57 08.1**	**-0.2**
OUR				S		**Sn**	**21 57 26.4**	**-0.5**
GUR	**Goura**	**1.45**	**228**	*e*PB		**Pb**	**21 57 09.0**	**-0.5**
GUR	**Goura**	**1.45**	**228**	*e*Pb		**Pb**	**21 57 09.0**	**-0.5**
DID	**Didima**	**1.46**	**195**	*e*PB		**Pb**	**21 57 08.7**	**-1.0**
DID				*e*SN		**Sg**	**21 57 31.1**	**+1.4**
DID	**Didima**	**1.46**	**195**	*e*Pb		**Pb**	**21 57 08.7**	**-1.0**
DID				*e*Sn		**Sg**	**21 57 31.1**	**+1.4**
THL	**Klokotos Trika**	**1.46**	**297**	*e*PN		**Pn**	**21 57 09.4**	**+0.8**
THL				*e*SN		**Sg**	**21 57 30.8**	**+1.1**
THL	**Klokotos Trika**	**1.46**	**297**	*e*Pn		**Pn**	**21 57 09.4**	**+0.8**
THL				*e*Sn		**Sg**	**21 57 30.8**	**+1.1**
PLG	**Polygyros**	**1.47**	**353**	*e*PN		**Pn**	**21 57 08.6**	**-0.2**
PLG				*e*SN		**Sn**	**21 57 27.0**	**-0.7**
PLG	**Polygyros**	**1.47**	**353**	P		**Pn**	**21 57 08.7**	**-0.1**
PLG				S		**Sn**	**21 57 27.1**	**-0.6**
PLG	**Polygyros**	**1.47**	**353**	P		**Pn**	**21 57 08.7**	**-0.1**
PLG				S		**Sn**	**21 57 27.1**	**-0.6**
LIT	**Litokhoron**	**1.50**	**322**	P		**Pn**	**21 57 09.4**	**+0.1**
LIT				S		**Sn**	**21 57 28.1**	**-0.6**
LIT	**Litokhoron**	**1.50**	**322**	P		**Pn**	**21 57 09.4**	**+0.1**
LIT				S		**Sn**	**21 57 28.1**	**-0.6**
LIA	**Limnos Island**	**1.51**	**49**	P		**Pn**	**21 57 10.6**	**+1.2**
LIA				S		**Sg**	**21 57 31.8**	**+0.3**
LIA	**Limnos Island**	**1.51**	**49**	P		**Pn**	**21 57 10.6**	**+1.2**
HORT	**Hortiatis**	**1.74**	**345**	P		**Pn**	**21 57 12.8**	**+0.3**
HORT				S		**Sn**	**21 57 34.3**	**-0.1**
HORT	**Hortiatis**	**1.74**	**345**	P		**Pn**	**21 57 12.8**	**+0.3**
HORT				S		**Sn**	**21 57 34.3**	**-0.1**
SOH	**Sokhos**	**1.92**	**352**	P		**Pn**	**21 57 15.3**	**+0.3**
SOH				S		**Sn**	**21 57 38.5**	**-0.4**
SOH	**Sokhos**	**1.92**	**352**	P		**Pn**	**21 57 15.3**	**+0.3**
SOH				S		**Sn**	**21 57 38.5**	**-0.4**
SRS	**Serrai**	**2.20**	**358**	P		**Pn**	**21 57 19.1**	**+0.3**
SRS				S		**Sn**	**21 57 45.4**	**-0.4**
SRS	**Serrai**	**2.20**	**358**	P		**Pn**	**21 57 19.1**	**+0.3**
SRS				S		**Sn**	**21 57 45.4**	**-0.4**
GRG	**Griva**	**2.27**	**334**	P		**Pn**	**21 57 19.7**	**-0.1**
GRG	**Griva**	**2.27**	**334**	P		**Pn**	**21 57 19.7**	**-0.1**
KNT	**Kendrikon**	**2.32**	**345**	P		**Pn**	**21 57 20.8**	**+0.3**
KNT				S		**Sn**	**21 57 49.4**	**+0.6**
KNT	**Kendrikon**	**2.32**	**345**	P		**Pn**	**21 57 20.8**	**+0.3**
KNT				S		**Sn**	**21 57 49.4**	**+0.6**

IDC 28 22:03:29.5±4.9,4.18S×151.58E,h0km,mb3.5/4, mb1 3.7/4,mb1mx3.5/16,mbtmp3.5/4,Error ellipse: s-maj=106.9km s-min=38.1km az=81.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.97**	**226**	P		P	22 08 36.3	+0.5
	1.4nm,0.8s,baz=51,slow=10.0,SNR=5.6							
ASAR	**Alice Springs**	**25.81**	**220**	P		P	22 09 02.3	-0.3
	0.1nm,0.3s,baz=54,slow=9.2,SNR=2.8							
STKA	**Stephens Creek**	**29.10**	**198**	P		P	22 09 32.2	+0.2
	1.4nm,0.9s,baz=343,slow=15,SNR=3.0							
CMAR	**Chiang Mai Arr**	**56.51**	**295**	P		P	22 13 13.8	-0.2
	0.3nm,0.4s,baz=96,slow=4.2,SNR=5.2							

IDC 28 22:09:47.1±1.9,3.82S×149.54E,h0km,mb3.3/4, mb1 3.6/4,mb1mx3.5/15,mbtmp3.3/4,MS3.6/9,Ms1 3.7/9, ms1mx3.3/24,Error ellipse: s-maj=63.1km s-min=30.3km az=118.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**11.74**	**119**	LR		LR	22 15 58.6	
	comp=Z,834nm,21.6s,baz=351,slow=32							
GUMO	**Guam**	**17.91**	**345**	LR		LR	22 20 21.5	
	comp=Z,96nm,18.4s,baz=277,slow=35							
WRA	**Warramunga Arr**	**21.83**	**222**	P		P	22 14 41.2	0.0
	0.5nm,0.9s,baz=52,slow=10,SNR=3.4							
ASAR	**Alice Springs**	**24.84**	**216**	P		P	22 15 12.3	+0.9
	0.7nm,0.9s,baz=54,slow=9.3,SNR=4.5							
STKA	**Stephens Creek**	**28.89**	**194**	LR		LR	22 27 22.9	
	comp=Z,139nm,18.2s,baz=24,slow=37							
MJAR	**Matsushiro Arr**	**41.52**	**346**	LR		LR	22 34 07.5	
	comp=Z,39nm,18.9s,baz=95,slow=35							
RPZ	**Rata Peaks**	**44.06**	**158**	LR		LR	22 34 02.9	
	comp=Z,244nm,18.6s,baz=200,slow=33							
KSRS	**Korea Array**	**45.72**	**336**	LR		LR	22 33 47.6	
	comp=Z,35nm,20.7s,baz=144,slow=32							
RAR	**Rarotonga**	**52.15**	**114**	LR		LR	22 36 05.5	
	comp=Z,117nm,20.7s,baz=323,slow=30							
CMAR	**Chiang Mai Arr**	**54.52**	**296**	P		P	22 19 15.8	-1.4
	0.4nm,0.3s,baz=131,slow=4.0,SNR=4.0							
CMAR				LR		LR	22 41 59.7	
	comp=Z,45nm,18.4s,baz=200,slow=35							
PETK	**Petropavlovsk-**	**57.13**	**6**	LR		LR	22 38 57.0	
	comp=Z,43nm,21.7s,baz=345,slow=31							
ILAR	**Eielson Array**	**82.50**	**23**	P		P	22 22 11.9	+0.7
ILAR	**Eielson Array**	**82.50**	**23**	P		P	22 22 11.9	+0.7
	0.3nm,0.7s,baz=242,slow=4.3,SNR=5.4							

IDC 28 22:14:23.7±1.7,3.98S×152.18E,h0km,mb3.7/6, mb1 3.9/6,mb1mx3.7/16,mbtmp3.7/6,Error ellipse: s-maj=58.3km s-min=25.6km az=109.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.54**	**226**	P		P	22 19 35.3	-0.7
	2.3nm,1.0s,baz=49,slow=9.7,SNR=11							
ASAR	**Alice Springs**	**26.35**	**220**	P		P	22 20 01.9	+0.2
	0.7nm,1.0s,baz=49,slow=9.3,SNR=3.7							
STKA	**Stephens Creek**	**29.48**	**199**	P		P	22 20 29.9	+0.3
	1.1nm,0.7s,baz=344,slow=15,SNR=3.3							
CMAR	**Chiang Mai Arr**	**56.97**	**295**	P		P	22 24 12.8	+1.4
	0.6nm,0.7s,baz=116,slow=6.0,SNR=4.3							
ZALV	**Zalesovo Beam**	**80.13**	**326**	P		P	22 26 33.9	-1.7
	0.4nm,0.4s,baz=105,slow=7.2,SNR=3.7							
ILAR	**Eielson Array**	**81.64**	**22**	P		P	22 26 44.1	+0.7
	0.2nm,0.5s,baz=252,slow=5.6,SNR=3.4							

*IDC **28** 22:18:09.0±1.4,50.02N×129.93W,h0km,mb3.9/4, mb1 4.2/10,mb1mx3.9/28,mbtmp3.9/10,ML3.7/5,MS3.6/16, Ms1 3.6/16,ms1mx3.4/30,Error ellipse: s-maj=24.5km s-min=12.6km az=73.0*
*ISCJB **28** 22:18:10.4±0.6,50.12N±0.04×129.75W±0.09,h10km, mb4.0/11,MS3.6/12,Error ellipse: s-maj=9.8km s-min=4.4km az=149.3*
*NEIC **28** 22:18:12.0±0.5,50.09N×129.80W,h10km,mb4.0/19, Error ellipse: s-maj=11.6km s-min=4.4km az=51.0*

ISC 28 22:18:12.0±0.6,50.14N±0.04×129.78W±0.09,h10km,n75, σ1822/66,mb4.0/11,MS3.6/12,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BBB	**Bella Bella**	**2.30**	**27**	Pn		**Pn**	**22 18 48.9**	**-1.1**
	107nm,0.3s,baz=210,slow=20,SNR=478							
BBB				Sn		**Sn**	**22 19 18.4**	**0.0**
	26nm,0.3s,baz=136,slow=22,SNR=12							
BBB				LR		LR	22 20 00.9	
	comp=Z,962nm,18.1s,baz=21,slow=46							
DIB	**Dawson Inlet,**	**3.50**	**332**	Pn		**Pn**	**22 19 04.2**	**-2.1**
	SNR=27							
NLWA	**Neilton Lookou**	**4.78**	**123**	*e*Pn		**Pn**	**22 19 22.1**	**-2.0**
NLWA				Sn		**Sn**	**22 20 17.5**	**-2.0**
LON	**Longmire**	**6.29**	**120**	*e*Pn		**Pn**	**22 19 43.9**	**-1.0**
ETW	**Entiat**	**6.73**	**109**	*e*Pn		**Pn**	**22 19 49.7**	**-1.1**
HAWA	**Hanford**	**7.80**	**115**	*e*Pn		**Pn**	**22 20 05.3**	**-0.2**
OD2	**Odessa Site #2**	**7.82**	**106**	*e*Pn		**Pn**	**22 20 03.9**	**-1.8**
DLBC	**Dease Lake**	**8.32**	**359**	Pn		**Pn**	**22 20 13.7**	**+1.2**
	0.3nm,0.3s,baz=209,slow=13,SNR=5.3							
NEW	**Newport**	**8.50**	**98**	*e*Pn		**Pn**	**22 20 16.0**	**+0.9**
LNOR	**Lincton Mounta**	**8.81**	**115**	*e*Pn		**Pn**	**22 20 20.2**	**+0.9**
WALA	**Waterton Lakes**	**10.36**	**90**	*e*Pn		**Pn**	**22 20 43.5**	**+2.9**
WVOR	**Wild Horse Val**	**10.89**	**131**	*e*Pn		**Pn**	**22 20 46.2**	**-1.6**
	8.0nm,1.4s							
CHMT	**Chamberlain Mo**	**11.43**	**100**	*e*Pn		**Pn**	**22 20 54.9**	**-0.2**
HLID	**Hailey**	**12.40**	**116**	*e*Pn		**Pn**	**22 21 08.6**	**+0.2**
DLMT	**Dillon**	**12.51**	**106**	*e*Pn		**Pn**	**22 21 08.7**	**-1.2**
MCMT	**McKenzie Canyo**	**12.62**	**108**	*e*Pn		**Pn**	**22 21 09.6**	**-1.8**
	2.5nm,0.9s							
PAHR	**Pah Rah Range**	**12.76**	**141**	*e*Pn		**Pn**	**22 21 14.8**	**+1.5**
IMW	**Indian Meadow**	**14.27**	**109**	*e*Pn		**Pn**	**22 21 34.9**	**+0.9**
	7.9nm,1.4s							
NVAR	**Mina Array Bea**	**14.28**	**141**	Pn		**Pn**	**22 21 34.0**	**-0.1**
	0.1nm,0.3s,baz=316,slow=12,SNR=8.4							
FLWY	**Flagg Ranch**	**14.32**	**108**	*e*Pn		**Pn**	**22 21 32.0**	**-2.7**
	14nm,1.0s							
RRI2	**Red Ridge**	**14.35**	**111**	*e*Pn		**Pn**	**22 21 35.5**	**+0.5**
MOOW	**Moose Ponds**	**14.47**	**109**	*e*Pn		**Pn**	**22 21 38.0**	**+1.3**
TPAW	**Teton Pass**	**14.49**	**110**	*e*Pn		**Pn**	**22 21 39.3**	**+2.4**
REDW	**Red Top Meadow**	**14.62**	**110**	*e*Pn		**Pn**	**22 21 38.7**	**-0.1**
SNOW	**Snow King Moun**	**14.62**	**110**	*e*Pn		**Pn**	**22 21 39.6**	**+0.9**
	15nm,0.6s							
LOHW	**Long Hollow**	**14.63**	**109**	*e*Pn		**Pn**	**22 21 40.8**	**+1.9**
RLMT	**Red Lodge**	**14.70**	**102**	*e*Pn		**Pn**	**22 21 41.4**	**+1.6**
YKA	**Yellowknife Ar**	**14.92**	**28**	Pn		**Pn**	**22 21 40.1**	**-2.5**
	0.2nm,0.3s,baz=220,slow=12,SNR=3.1							
YKA				LR		LR	22 27 34.3	
	comp=Z,18nm,21.2s,baz=50,slow=38							
MTUM	**Tungsten Hills**	**15.11**	**144**	*e*Pn		**Pn**	**22 21 54.2**	**+8.8**
HWUT	**Hardware Ranch**	**15.26**	**117**	*e*Pn		**Pn**	**22 21 48.0**	**+0.6**
DUG	**Dugway**	**15.53**	**123**	*e*Pn		**Pn**	**22 21 51.8**	**+0.9**
RC01	**Rabbit Creek A**	**15.65**	**322**	*e*Pn		**Pn**	**22 21 58.7**	**+6.4**
	10nm,0.6s							
BW06	**Boulder Array**	**15.74**	**110**	*e*Pn		**Pn**	**22 21 56.3**	**+2.7**
	15nm,1.3s							
PDAR	**Pinedale Array**	**15.74**	**110**	Pn		**Pn**	**22 21 53.9**	**+0.3**
	0.1nm,0.3s,baz=302,slow=8.8,SNR=30							
PDAR				LR		LR	22 28 04.2	
	comp=Z,172nm,20.5s,baz=350,slow=38							
EGAK	**Eagle**	**15.86**	**342**	*e*Pn		**Pn**	**22 21 56.1**	**+1.1**
	5.0nm,0.9s							
NLU	**North Lily Min**	**16.09**	**122**	*e*Pn		**Pn**	**22 22 02.5**	**+4.3**
	5.0nm,1.0s							
ISA	**Isabella**	**16.64**	**146**	*e*Pn		**Pn**	**22 22 06.5**	**+1.3**
	7.7nm,1.3s							
DGMT	**Dagmar**	**16.75**	**86**	*e*Pn		**Pn**	**22 22 07.3**	**+0.8**
	27nm,1.0s							
MSU	**Marysvale**	**17.09**	**126**	*e*Pn		**Pn**	**22 22 14.7**	**+3.8**
ILAR	**Eielson Array**	**17.22**	**335**	LR		LR	22 28 21.7	
	comp=Z,122nm,18.6s,baz=200,slow=35							
CCUT	**Cedar City**	**17.23**	**131**	*e*Pn		**Pn**	**22 22 15.0**	**+2.3**
	14nm,1.7s							
FFC	**Flin Flon**	**17.51**	**64**	*e*Pn		**Pn**	**22 22 16.7**	**+0.8**
	16nm,0.9s							
SRU	**San Rafael**	**17.54**	**122**	*e*Pn		**Pn**	**22 22 16.7**	**+0.3**
	9.3nm,1.1s							
GSC	**Goldstone**	**17.59**	**143**	*e*Pn		**Pn**	**22 22 18.5**	**+1.4**
	76nm,2.8s							
BPAW	**Bear Paw Mtn.**	**17.98**	**329**	*e*Pn		**Pn**	**22 22 23.0**	**+1.3**
	6.1nm,1.1s							
INK	**Inuvik**	**18.32**	**356**	P		**Pn**	**22 22 26.6**	**+0.8**
	baz=162,slow=8.8,SNR=7.0							
INK				LR		LR	22 30 06.4	
	comp=Z,272nm,18.0s,baz=265,slow=39							
RSSD	**Black Hills**	**18.47**	**99**	*e*P		**Pn**	**22 22 35.3**	**+7.3**
PV04	**Paradox Valley**	**18.94**	**120**	*e*P		**Pn**	**22 22 32.0**	**-1.6**
PHWY	**Pilot Hill**	**19.08**	**108**	*e*Pn		**Pn**	**22 22 35.1**	**-0.2**
PV01	**Paradox Valley**	**19.31**	**120**	*e*P		**Pn**	**22 22 36.1**	**-2.0**
	2μm,1.4s							
SMCO	**Snowmass**	**19.50**	**115**	*e*Pn		**Pn**	**22 22 40.2**	**-0.1**
ISCO	**Idaho Springs**	**19.90**	**112**	*e*P		**Pn**	**22 22 44.4**	**-0.7**
COLD	**Coldfoot**	**19.97**	**337**	*e*P		**Pn**	**22 22 45.1**	**-0.6**
	15nm,1.5s							
MVCO	**Mesa Verde**	**20.01**	**122**	*e*P		**P**	**22 22 45.0**	**+0.3**
ULM	**Lac du Bonnet**	**21.61**	**77**	P		**P**	**22 23 01.9**	**0.0**
	14nm,0.9s,mb4.4,baz=282,slow=12,SNR=8.1							
ULM				LR		LR	22 32 04.1	
	comp=Z,148nm,21.6s,MS3.4,baz=282,slow=38							
ANMO	**Albuquerque**	**22.79**	**123**	P		**P**	**22 23 14.6**	**-0.1**
	2.1nm,0.8s,mb3.6,baz=330,slow=11,SNR=5.2							
ANMO				LR		LR	22 32 09.5	
	comp=Z,59nm,18.6s,MS3.0,baz=63,slow=37							
LAZ	**Ladron**	**22.85**	**125**	*e*P		**P**	**22 23 15.0**	**-0.2**
	3.0nm,1.1s,mb3.6							
BNM	**Barren Site**	**23.31**	**124**	*e*P		**P**	**22 23 18.8**	**-1.3**
	3.5nm,1.0s,mb3.7							
ECSD	**EROS Data Cent**	**23.40**	**93**	*e*P		**P**	**22 23 20.9**	**0.0**
	26nm,1.2s,mb4.5							
EYMN	**Ely**	**25.01**	**80**	*e*P		**P**	**22 23 36.4**	**+0.6**
	14nm,0.9s,mb4.5							
AMTX	**Amarillo**	**25.52**	**116**	*e*P		**P**	**22 23 40.3**	**-0.3**
	18nm,0.9s,mb4.6							
MNTX	**Cornudas Mount**	**25.88**	**126**	*e*P		**P**	**22 23 43.1**	**-0.6**
	2.4nm,0.8s,mb3.8							
WMOK	**Wichita Mounta**	**27.32**	**112**	*e*P		**P**	**22 23 55.9**	**-1.0**
	3.0nm,1.0s,mb3.8							
RES	**Resolute Bay**	**28.57**	**19**	LR		LR	22 36 20.7	
	comp=Z,102nm,19.7s,MS3.4,baz=273,slow=38							
TXAR	**Lajitas Array**	**28.65**	**127**	P		**P**	**22 24 08.0**	**-0.7**
	0.6nm,0.8s,mb3.4,baz=325,slow=8.4,SNR=8.9							
TXAR				LR		LR	22 36 09.2	
	comp=Z,101nm,19.6s,MS3.4,baz=355,slow=38							
SADO	**Sadowa**	**34.11**	**79**	LR		LR	22 39 20.5	
	comp=Z,310nm,18.4s,MS4.1,baz=348,slow=37							
TKL	**Tuckaleechee C**	**36.08**	**96**	LR		LR	22 40 46.9	
	comp=Z,77nm,20.0s,MS3.5,baz=259,slow=38							
SCHQ	**Schefferville**	**37.47**	**58**	LR		LR	22 40 50.4	
	comp=Z,115nm,21.3s,MS3.6,baz=110,slow=36							
NOA	**NORSAR Array B**	**64.83**	**20**	LR		LR	22 58 27.9	
	comp=Z,41nm,18.2s,MS3.7,baz=0.0,slow=37							
PMOR	**Pomariorio Ree**	**66.79**	**199**	*e*T			23 41 14.6	
	3.7nm,0.2s							
FINES	**FINESS Array B**	**67.10**	**12**	LR		LR	22 56 48.7	
	comp=Z,72nm,21.3s,MS3.9,baz=357,slow=34							
KSRS	**Korea Array**	**69.24**	**304**	LR		LR	22 59 23.3	
	comp=Z,16nm,18.0s,MS3.3,baz=61,slow=36							
PPT	**Papeete**	**69.64**	**200**	*e*LR		LR	22 50 09.2	
	62nm,24.8s							
MKAR	**Makanchi Array**	**79.54**	**338**	P		**P**	**22 30 17.3**	**-1.4**
	0.7nm,0.9s,mb3.6,baz=25,slow=4.8,SNR=3.0							
MKAR				LR		LR	23 07 02.9	
	comp=Z,31nm,20.8s,MS3.6,baz=352,slow=37							
CPUP	**Villa Florida**	**99.42**	**120**	LR		LR	23 21 48.7	
	comp=Z,52nm,20.9s,MS4.0,baz=357,slow=38							

IDC 28 22:20:30.3±1.9,4.01S×152.41E,h0km,mb3.7/6, mb1 4.0/6,mb1mx3.8/16,mbtmp3.7/6,MS3.1/1,Ms1 3.1/1, ms1mx2.5/23,Error ellipse: s-maj=61.2km s-min=25.9km az=117.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTA	**Charters Tower**	**17.07**	**200**	LR		LR	22 28 56.1	
	comp=Z,70nm,21.9s,baz=52,slow=30							
WRA	**Warramunga Arr**	**23.69**	**227**	P		P	22 25 43.7	-0.4
	3.1nm,0.8s,baz=50,slow=9.7,SNR=21							
ASAR	**Alice Springs**	**26.48**	**221**	P		P	22 26 09.8	+0.3
	0.5nm,0.8s,baz=54,slow=7.8,SNR=4.9							
CMAR	**Chiang Mai Arr**	**57.19**	**295**	P		P	22 30 20.0	+0.4
	1.1nm,0.6s,baz=114,slow=5.9,SNR=9.3							
MKAR	**Makanchi Array**	**79.47**	**319**	P		P	22 32 38.8	0.0
	0.2nm,0.5s,baz=103,slow=7.5,SNR=3.0							
ZALV	**Zalesovo Beam**	**80.28**	**326**	P		P	22 32 42.5	-0.5
	0.9nm,0.7s,baz=90,slow=6.1,SNR=3.7							
ILAR	**Eielson Array**	**81.57**	**22**	P		P	22 32 50.0	+0.3
	0.8nm,0.9s,baz=258,slow=4.9,SNR=6.3							

*ISCJB **28** 22:23:02.3±0.3,35.18S±0.03×71.01W±0.06,h121km±3km, mb4.0/9,Error ellipse: s-maj=7.8km s-min=4.0km az=16.8*
*NEIC **28** 22:23:03.2,35.15S×71.07W,h119km,mb4.2/6,After GUC.*
*GUC **28** 22:23:03.2±0.6,35.15S×71.

	comp=N,1.6nm,0.9s,mb4.0,baz=154,slow=3.4,SNR=4.8							
TEIG	**Tepich**	**57.48**	**341**	P	**P**	22 32 41.6	**+1.3**
	comp=N,6.7nm,0.5s,mb5.0,baz=29,slow=2.7,SNR=4.6							
TXAR	**Lajitas Array**	**71.16**	**330**	P	**P**	22 34 11.5	**+2.1**
	comp=N,0.7nm,0.6s,mb3.7,baz=160,slow=9.7,SNR=12							
TXAR				pP	pP	22 34 38.5	+0.2	
	comp=N,0.2nm,0.5s,baz=152,slow=7.9,SNR=3.8							
MAW	**Mawson**	**71.82**	**163**	*eP*	**P**	22 34 13.1	**+0.2**	
	comp=N,0.2nm,0.4s,mb3.3							
MAW	**Mawson**	**71.82**	**163**	P	**P**	22 34 13.2	**+0.3**	
	comp=N,1.0nm,0.5s,mb3.9,baz=211,slow=5.9,SNR=2.7							
WVT	**Waverly**	**72.64**	**346**	*eP*	**P**	22 34 16.7	**-1.4**	
WMOK	**Wichita Mounta**	**74.23**	**337**	*eP*	**P**	22 34 26.6	**-0.8**	
BRNJ	**Basking Ridge**	**75.55**	**357**	P	**P**	22 34 33.7	**-1.2**	
ANMO	**Albuquerque**	**77.21**	**331**	*eP*	**P**	22 34 44.1	**-0.3**	
TSUM	**Tsumeb**	**78.10**	**105**	*eP*	**P**	22 34 47.6	**-2.3**	
LBTB	**Lobatse**	**81.06**	**114**	*eP*	**P**	22 35 05.1	**-0.7**	
	comp=N,13nm,0.4s,mb5.1							
TORD	**Torodi Ar. Bea**	**83.83**	**69**	P	**P**	22 35 20.5	**+0.2**	
	comp=N,0.9nm,0.9s,mb3.6,baz=238,slow=2.7,SNR=3.2							
HWUT	**Hardware Ranch**	**84.97**	**331**	P	**P**	22 35 24.9	**-0.5**	
PDAR	**Pinedale Array**	**85.18**	**333**	P	**P**	22 35 28.3	**+2.0**	
	comp=N,0.5nm,0.6s,mb3.6,baz=142,slow=3.4,SNR=4.4							
NVAR	**Mina Array Bea**	**85.32**	**325**	P	**P**	22 35 29.5	**+2.3**	
	comp=N,0.4nm,0.6s,mb3.5,baz=180,slow=5.3,SNR=3.1							
NEW	**Newport**	**92.69**	**331**	*eP*	**P**	22 36 00.8	**-1.0**	

IDC 28 22:27:11.8±1.1, 43°32S×41°38E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.7/17, mbtmpb3.9/5, ML3.9/1, Error ellipse: s-maj=62.5km s-min=22.9km az=45.0, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**19.59**	**313**	P	Pn	22 31 40.8	-1.9
	0.2nm,0.3s,baz=159,slow=12,SNR=5.5						
MAW	**Mawson**	**26.92**	**162**	P	P	22 32 54.3	+0.1
	0.8nm,0.4s,baz=315,slow=7.1,SNR=6.9						
TORD	**Torodi Ar. Bea**	**66.88**	**317**	P	P	22 38 06.2	+0.5
	2.0nm,0.9s,baz=152,slow=6.8,SNR=7.3						
ASAR	**Alice Springs**	**75.91**	**109**	P	P	22 39 00.5	+0.1
	0.2nm,0.6s,baz=232,slow=4.6,SNR=3.5						
WRA	**Warramunga Arr**	**78.68**	**107**	P	P	22 39 16.0	0.0
	0.5nm,0.7s,baz=216,slow=4.8,SNR=7.0						

*ISCJB **28** 22:28:53.0±0.7, 37°81N×21°30E±0°05, h10km, Error ellipse: s-maj=5.5km s-min=5.1km az=12.7*
*ATH **28** 22:28:53.4, 37°89N×21°32E, h18km±3km, MD3.2/7*
*NEIC **28** 22:28:53.4, 37°89N×21°32E, h18km, MD3.2(ATH), After ATH.*
*CSEM **28** 22:28:54.3, 37°86N×21°32E, h18km, MD3.2, After ATH*
*THE **28** 22:28:54.6, 37°86N×21°33E, h0km±5km, ML2.1/4, Error ellipse: s-maj=6.0km s-min=2.2km az=195.0*

ISC 28 22:28:53.7±0.8, 37°84N±0°04×21°28E±0°05, h2km±8km, n42, σ0s97/63, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.27**	**35**	*e*Pb	**Pg**	**22 28 58.5**	**-0.3**
RLS				*e*Sb	**Sg**	**22 29 02.2**	**-0.1**
RLS	**Riolos of Patr**	**0.27**	**35**	*e*PB	**Pg**	**22 28 58.5**	**-0.3**
RLS				*e*SB	**Sg**	**22 29 02.2**	**-0.1**
RLS	**Riolos of Patr**	**0.27**	**35**	*e*Pb	**Pg**	**22 28 58.5**	**-0.3**
RLS				*e*Sb	**Sg**	**22 29 02.2**	**-0.1**
UPR	**University Cam**	**0.60**	**42**	*e*PN	**Pg**	**22 29 05.3**	**+0.1**
UPR	**University Cam**	**0.60**	**42**	*e*Pn	**Pg**	**22 29 05.3**	**+0.1**
VLS	**Valsamata**	**0.64**	**302**	*e*Pn	**Pg**	**22 29 06.2**	**+0.3**
VLS	**Valsamata**	**0.64**	**302**	*e*PN	**Pg**	**22 29 06.2**	**+0.3**
VLS	**Valsamata**	**0.64**	**302**	*e*Pn	**Pg**	**22 29 06.2**	**+0.3**
LAKA	**Lakka**	**0.69**	**54**	P	**Pg**	**22 29 06.1**	**-0.7**
LAKA				S	**Sg**	**22 29 16.1**	**+0.4**
LAKA	**Lakka**	**0.69**	**54**	P	**Pg**	**22 29 06.1**	**-0.7**
LAKA				S	**Sg**	**22 29 16.1**	**+0.4**
LAKA	**Lakka**	**0.69**	**54**	P	**Pg**	**22 29 06.1**	**-0.7**
LAKA				S	**Sg**	**22 29 16.1**	**+0.4**
EFP	**Efpalio**	**0.77**	**40**	*e*PN	**Pg**	**22 29 07.9**	**-0.5**
EFP	**Efpalio**	**0.77**	**40**	*e*Pn	**Pg**	**22 29 07.9**	**-0.5**
TRIZ	**Trizonia**	**0.82**	**50**	P	**Pg**	**22 29 08.4**	**-1.0**
TRIZ				S	**Sg**	**22 29 21.2**	**+1.2**
TRIZ	**Trizonia**	**0.82**	**50**	P	**Pg**	**22 29 08.4**	**-1.0**
TRIZ				S	**Sg**	**22 29 21.2**	**+1.2**
TRIZ	**Trizonia**	**0.82**	**50**	P	**Pg**	**22 29 08.4**	**-1.0**
TRIZ				S	**Sg**	**22 29 21.2**	**+1.2**
ITM	**Ithomi**	**0.84**	**142**	P	**Pg**	**22 29 10.6**	**+0.9**
ITM	**Ithomi**	**0.84**	**142**	P	**Pg**	**22 29 11.0**	**+1.3**
ITM	**Ithomi**	**0.84**	**142**	P	**Pg**	**22 29 11.0**	**+1.3**
GUR	**Goura**	**0.85**	**83**	*e*PN	**Pg**	**22 29 08.8**	**-1.2**
GUR	**Goura**	**0.85**	**83**	*e*Pn	**Pg**	**22 29 08.8**	**-1.2**
KALE	**Kalithea**	**0.88**	**51**	P	**Pg**	**22 29 09.5**	**-1.0**
KALE				S	**Sg**	**22 29 22.7**	**+0.8**
KALE	**Kalithea**	**0.88**	**51**	P	**Pg**	**22 29 09.5**	**-1.0**
KALE				S	**Sg**	**22 29 22.7**	**+0.8**
KALE	**Kalithea**	**0.88**	**51**	P	**Pg**	**22 29 09.5**	**-1.0**
KALE				S	**Sg**	**22 29 22.7**	**+0.8**
PYL	**PYLOS**	**1.01**	**158**	*e*PN	**Pg**	**22 29 13.5**	**+0.4**
PYL	**PYLOS**	**1.01**	**158**	*e*Pn	**Pg**	**22 29 13.5**	**+0.4**
LKD2	**Lefkada island**	**1.06**	**333**	P	**Pg**	**22 29 13.3**	**-0.8**
LKD2				S	**Sg**	**22 29 31.2**	**+3.3**
LKD2	**Lefkada island**	**1.06**	**333**	P	**Pg**	**22 29 13.3**	**-0.8**
LKD2				S	**Sg**	**22 29 31.2**	**+3.3**
LKD2	**Lefkada island**	**1.06**	**333**	P	**Pg**	**22 29 13.3**	**-0.8**
LKD2				S	**Sg**	**22 29 31.2**	**+3.3**
EVR	**Evrytania**	**1.16**	**21**	*e*Pn	**Pn**	**22 29 14.3**	**-2.5**
EVR	**Evrytania**	**1.16**	**21**	*e*PN	**Pn**	**22 29 14.3**	**-2.5**
EVR	**Evrytania**	**1.16**	**21**	*e*Pn	**Pn**	**22 29 14.3**	**-2.5**
AGG	**Agios Georgios**	**1.44**	**35**	*e*Pn	**Pn**	**22 29 21.3**	**+0.5**
AGG	**Agios Georgios**	**1.44**	**35**	*e*PN	**Pn**	**22 29 21.2**	**+0.4**
AGG	**Agios Georgios**	**1.44**	**35**	P	**Pn**	**22 29 21.0**	**+0.2**
AGG				S	**Sg**	**22 29 40.7**	**+0.6**
AGG	**Agios Georgios**	**1.44**	**35**	P	**Pn**	**22 29 21.0**	**+0.2**
AGG				S	**Sg**	**22 29 40.7**	**+0.6**
AGG	**Agios Georgios**	**1.44**	**35**	P	**Pn**	**22 29 21.0**	**+0.2**
AGG	**Agios Georgios**	**1.44**	**35**	*e*Pn	**Pn**	**22 29 21.3**	**+0.5**
AGG				S	**Sg**	**22 29 40.7**	**+0.6**
THL	**Klokotos Trika**	**1.82**	**18**	*e*PN	**Pg**	**22 29 28.0**	**-0.5**
THL	**Klokotos Trika**	**1.82**	**18**	P	**Pn**	**22 29 27.7**	**+1.8**
THL				S	**Sn**	**22 29 49.3**	**-0.2**
THL	**Klokotos Trika**	**1.82**	**18**	P	**Pg**	**22 29 27.9**	**-0.6**
THL				S	**Sg**	**22 29 57.0**	**+4.9**
THL	**Klokotos Trika**	**1.82**	**18**	P	**Pg**	**22 29 27.9**	**-0.6**
THL				S	**Sg**	**22 29 57.0**	**+4.9**

*IDC **28** 22:39:32.8±2.1, 1°31S×102°62E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.7/21, mbtmpb3.8/6, ML3.6/1, Error ellipse: s-maj=131.9km s-min=18.0km az=51.0*
*ISCJB **28** 22:39:38.9±1.3, 1°48S±0°10×102°34E±0°08, h76km±15km, mb3.8/5, Error ellipse: s-maj=16.9km s-min=12.0km az=159.0*
*DJA **28** 22:39:44, 1°26S×101°51E, h176km, MLv3.9/13*

ISC 28 22:39:39.9±1.4, 1°52S±0°10×102°33E±0°08, h64km±16km, n26, σ1s23/24, mb3.8/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDSI	**Sungai Dareh**	**1.07**	**303**	P	**Sn**	**22 40 09.6**	**-3.7**
SDSI	**Sungai Dareh**	**1.07**	**303**	P	**Sn**	**22 40 09.0**	**-4.3**
	3.4nm634nm,0.7s						
RGRI	**Rengat**	**1.16**	**360**	P	**Sn**	**22 40 15.3**	**+0.1**
PDSI	**Padang**	**1.97**	**288**	P	**Pn**	**22 40 14.0**	**+3.1**
PDSI				S	**Sn**	**22 40 35.5**	**+0.9**
PDSI	**Padang**	**1.97**	**288**	P	**Pn**	**22 40 13.5**	**+2.6**
	1µm,0.5s						
PPI	**Padang Panjang**	**2.20**	**298**	P	**Pn**	**22 40 16.0**	**+1.8**
PPI				S	**Sn**	**22 40 39.6**	**-0.8**
PPI	**Padang Panjang**	**2.20**	**298**	P	**Pn**	**22 40 15.6**	**+1.4**
	5µm193nm,0.7s						
BKNI	**Bangkinang**	**2.24**	**325**	P	**Pn**	**22 40 18.1**	**+3.4**
BKNI	**Bangkinang**	**2.24**	**325**	P	**Pn**	**22 40 17.8**	**+3.1**
	1µm,0.8s						
MNAI	**Manna**	**2.89**	**168**	P	Px	22 40 38.1	
MNAI				S	Sx	22 41 22.5	
SISI	**Saibi**	**3.25**	**273**	P	**Pn**	**22 40 27.3**	**-1.1**
SISI	**Saibi**	**3.25**	**273**	P	**Pn**	**22 40 27.4**	**-1.0**
MDSI	**Maura Dua**	**3.48**	**148**	P	Px	22 40 48.1	
MNSI	**Mandailing Nat**	**3.58**	**310**	P	**Pn**	**22 40 31.3**	**-1.7**
MNSI	**Mandailing Nat**	**3.58**	**310**	P	**Pn**	**22 40 31.2**	**-1.8**
	3µm87nm,0.4s						
MYKOM	**Kota Tinggi**	**3.62**	**25**	P	Px	22 40 43.9	

KLSI			**3.96**	**143**	P	Px	22 40 54.3	
PSI	**Prapat**		**5.48**	**322**	Pn	**Pn**	**22 40 55.4**	**-3.5**
	1.8nm,0.3s,baz=131,slow=11,SNR=7.2							
IPM	**Ipoh**		**6.10**	**348**	P	**Pn**	**22 41 08.0**	**+0.6**
	0.1nm13nm,1.4s							
KULM	**Kulim**		**6.97**	**346**	P	**Pn**	**22 41 18.7**	**-0.6**
TPTI			**7.00**	**313**	P	**Pn**	**22 41 13.9**	**-5.9**
	0.2nm1µm58nm,1.0s							
WRA	**Warramunga Arr**		**36.25**	**123**	P	**P**	**22 46 37.5**	**+0.4**
	1.2nm,0.6s,mb4.0,baz=303,slow=8.9,SNR=18							
ASAR	**Alice Springs**		**37.68**	**128**	P	**P**	**22 46 49.5**	**+0.2**
	1.2nm,0.5s,mb3.9,baz=303,slow=7.8,SNR=16							
STKA	**Stephens Creek**		**47.76**	**133**	P	**P**	**22 48 09.8**	**-0.9**
	1.3nm,0.5s,mb4.2,baz=312,slow=7.2,SNR=4.8							
MKAR	**Makanchi Array**		**51.23**	**342**	P	**P**	**22 48 38.1**	**+1.2**
	1.1nm,1.1s,mb3.7,baz=164,slow=9.7,SNR=3.5							
KURK	**Kurchatov**		**55.84**	**342**	P	**P**	**22 49 09.9**	**-0.6**
	0.2nm,0.5s,mb3.4,baz=155,slow=7.2,SNR=2.6							

*ISCJB **28** 22:40:50.8±0.5, 32°25N±0°03×47°35E±0°07, h10km, Error ellipse: s-maj=9.0km s-min=3.8km az=0.0*
*KISR **28** 22:40:50.2±0.5, 31°87N×46°45E, h34km±999km, ML2.2*
*TEH **28** 22:40:52.0, 32°18N×47°38E, h8km*
*CSEM **28** 22:40:55.9, 32°15N×47°59E, h40km, ML3.3, After SNSN*
*SGS **28** 22:40:55.9, 32°15N×47°59E, h40km*

ISC 28 22:40:51.8±0.4, 32°21N±0°03×47°33E±0°07, h10km, n22, σ1s00/28, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**1.96**	**4**	*e*Pn	**Pn**	**22 41 26.4**	**+1.3**
IKOM				*e*Sg	**Sg**	**22 41 54.1**	**-0.8**
IKOM				*e*		22 41 56.5	
	comp=Z,2µm,0.2s						
IGHG	**Ghaleghazi**	**2.21**	**343**	*e*Pn	**Pn**	**22 41 29.1**	**+0.6**
IGHG				*e*		22 42 06.7	
	comp=Z,959nm,0.2s						
MIB	**Mutribah**	**2.40**	**180**	*e*P	**Pn**	**22 41 31.8**	**+0.6**
MIB				*e*S	**Sn**	**22 42 02.5**	**+1.9**
MIB				AML	AML	22 42 04.7	
	comp=Z,20nm,0.7s						
IDHR	**Dehrash**	**2.60**	**343**	*e*Pn	**Pn**	**22 41 34.3**	**+0.4**
IDHR				*e*Sg	**Sg**	**22 42 14.9**	**-0.6**
IDHR				*e*		22 42 18.6	
	comp=Z,1µm,0.2s						
ILIN	**Lien**	**2.71**	**354**	*e*Pn	**Pn**	**22 41 36.4**	**+0.9**
ILIN				*e*		22 42 11.6	
	comp=N,920nm,0.1s						
NAY	**Al-Naaiem**	**2.96**	**182**	*e*P	**Pn**	**22 41 38.8**	**0.0**
NAY				*e*S	**Sn**	**22 42 15.1**	**+0.8**
NAY				AML	AML	22 42 17.1	
	comp=Z,6.9nm,0.5s						
IPIR	**Pirpir**	**3.04**	**80**	*e*Pn	**Pn**	**22 41 40.7**	**+0.7**
IPIR				*e*		22 41 50.9	
	comp=Z,634nm,0.3s						
RDF	**Al-Radifah**	**3.28**	**177**	*e*P	**Pn**	**22 41 43.9**	**+0.6**
IKLH	**Kolahrood**	**3.74**	**72**	*e*Pn	**Pn**	**22 41 49.1**	**-0.5**
IKLH				*e*		22 42 03.9	
	comp=Z,346nm,0.2s						
IRAZ	**Razeghan**	**3.85**	**33**	*e*Pn	**Pn**	**22 41 51.6**	**+0.6**
IRAZ				*e*		22 41 55.2	
	comp=Z,544nm,0.2s						
KFJS		**4.05**	**172**	P	**Pn**	**22 41 53.7**	**-0.1**
KFJS		**4.05**	**172**	P	**Pn**	**22 41 53.7**	**-0.1**
IZEF	**Zefreh**	**4.27**	**80**	*e*Pn	**Pn**	**22 41 56.2**	**-0.7**
IZEF				*e*		22 41 58.6	
	comp=Z,186nm,0.1s						
IVRN	**Varamin**	**4.60**	**52**	*e*Pn	**Pn**	**22 42 00.5**	**-0.9**
IDMV	**Damavand**	**5.15**	**48**	*e*	**Pg**	**22 42 26.7**	**-3.8**
	comp=Z,124nm,0.2s						
IDMV				*e*Pn	**Pn**	**22 42 08.7**	**-0.3**
ASYS		**5.36**	**210**	P	**Pn**	**22 42 11.0**	**-1.0**
ASYS		**5.36**	**210**	P	**Pn**	**22 42 11.0**	**-0.9**
ASYS				S	**Sn**	**22 43 11.3**	**-2.5**
IHRS	**Heris**	**6.09**	**358**	*e*Pn	**Pn**	**22 42 22.8**	**+0.9**
IHRS				*e*		22 42 24.9	
	comp=Z,50nm,0.1s						
BTHS		**8.71**	**158**	S	**Sn**	**22 44 27.0**	**-9.1**
BTHS		**8.71**	**158**	S	**Sn**	**22 44 27.0**	**-9.1**
HRDDS		**9.44**	**168**	S	**Sn**	**22 44 47.3**	**-6.8**
HRDDS		**9.44**	**168**	P	**Pn**	**22 43 05.7**	**-2.2**

*NEIC **28** 22:53:44.4, 39°47S×174°40E, h222km, MG3.8(WEL), After WEL.*

WEL 28 22:53:45.6±0.4, 39°49S×174°44E, h212km±3km, ML3.7/6, Error ellipse: s-maj=2.6km s-min=1.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAEZ	**Rainy Point**	**0.20**	**350**	PN	Pn	22 54 13.1	-0.2
DFE	**Dawson Falls**	**0.30**	**301**	PN	Pn	22 54 13.4	-0.1
DFE	**Dawson Falls**	**0.30**	**301**	P	Pn	22 54 13.4	-0.1
NEZ	**North Egmont**	**0.34**	**309**	PN	Pn	22 54 13.6	+0.1
NEZ	**North Egmont**	**0.34**	**309**	P	Pn	22 54 13.6	0.0
VRZ	**Vera Road**	**0.44**	**35**	PN	Pn	22 54 13.1	-0.8
VRZ				SN	S	22 54 34.5	-1.3
VRZ	**Vera Road**	**0.44**	**35**	P	Pn	22 54 13.1	-0.8
PKE	**Pukeiti**	**0.45**	**310**	PN	Pn	22 54 13.7	-0.2
PKE	**Pukeiti**	**0.45**	**310**	P	Pn	22 54 13.7	-0.2
WAZ	**Wanganui**	**0.50**	**123**	PN	Pn	22 54 14.6	+0.6
WAZ				SN	S	22 54 36.1	-0.1
WAZ	**Wanganui**	**0.50**	**123**	P	Pn	22 54 14.6	+0.6
WAZ				S	S	22 54 36.3	+0.1
PKVZ	**Pokaka**	**0.73**	**75**	PN	Pn	22 54 14.3	-0.7
MTVZ	**Mangateitei**	**0.81**	**83**	PN	Pn	22 54 15.5	+0.1
MTVZ				SN	S	22 54 37.4	-1.1
TWVZ	**Taurewa**	**0.88**	**62**	PN	Pn	22 54 15.4	-0.4
TWVZ	**Taurewa**	**0.88**	**62**	P	Pn	22 54 15.4	-0.4
WPVZ	**Whakapapa**	**0.90**	**72**	PN	Pn	22 54 15.9	-0.1
WNVZ	**Wahianoa**	**0.91**	**81**	PN	Pn	22 54 16.2	+0.2
WNVZ	**Wahianoa**	**0.91**	**81**	P	Pn	22 54 16.2	+0.2
NGZ	**Ngauruhoe**	**0.95**	**72**	PN	Pn	22 54 16.2	0.0
NGZ	**Ngauruhoe**	**0.95**	**72**	P	Pn	22 54 16.2	-0.1
TUVZ	**Tukino**	**0.97**	**78**	PN	Pn	22 54 16.7	+0.3
TUVZ	**Tukino**	**0.97**	**78**	P	Pn	22 54 16.7	+0.4
WTVZ	**West Tongariro**	**0.97**	**68**	PN	Pn	22 54 16.3	-0.1
WTVZ	**West Tongariro**	**0.97**	**68**	P	Pn	22 54 16.3	0.0
KRVZ	**Karewarewa**	**1.01**	**68**	PN	Pn	22 54 16.1	-0.5
HIZ	**Hauiti**	**1.02**	**19**	PN	Pn	22 54 15.7	-1.0
BHHZ	**Black Hill Sta**	**1.26**	**91**	PN	Pn	22 54 17.9	-0.4
TSZ	**Takapari Road**	**1.31**	**117**	PN	Pn	22 54 18.9	+0.2
POWZ	**Post Office Ro**	**1.37**	**132**	PN	Pn	22 54 19.2	0.0
DUWZ	**D'Urville Isla**	**1.38**	**197**	PN	Pn	22 54 19.1	-0.1
KIW	**Kapiti Island**	**1.42**	**165**	PN	Pn	22 54 19.5	-0.1
KIW	**Kapiti Island**	**1.42**	**165**	P	Pn	22 54 19.5	-0.1
PNHZ	**Pukenui**	**1.43**	**108**	PN	Pn	22 54 19.8	+0.2
OGWZ	**Otaki Gorge**	**1.45**	**157**	PN	Pn	22 54 19.9	+0.1
MRZ	**Mangatainoka R**	**1.47**	**144**	PN	Pn	22 54 19.9	-0.1
MRZ				SN	S	22 54 44.7	-2.2
MRZ	**Mangatainoka R**	**1.47**	**144**	P	Pn	22 54 19.9	-0.1
MRZ				S	S	22 54 45.2	-1.7
DVHZ	**Dannevirke**	**1.56**	**122**	PN	Pn	22 54 20.8	0.0
BKZ	**Black Stump Fm**	**1.62**	**79**	PN	Pn	22 54 21.3	-0.1
BKZ				SN	S	22 54 46.7	-2.6
BKZ	**Black Stump Fm**	**1.62**	**79**	P	Pn	22 54 21.3	-0.1
HOWZ	**Holdsworth Sta**	**1.64**	**150**	PN	Pn	22 54 21.2	-0.2
WPHZ	**Waipukurau**	**1.65**	**111**	PN	Pn	22 54 21.7	+0.1
CAW	**Cannon Point**	**1.69**	**164**	PN	Pn	22 54 21.7	-0.2
CAW	**Cannon Point**	**1.69**	**164**	P	Pn	22 54 21.7	-0.3
TIWZ	**Tintock**	**1.70**	**140**	PN	Pn	22 54 22.0	0.0
TCW	**Tory Channel**	**1.73**	**184**	PN	Pn	22 54 22.2	-0.1
TCW	**Tory Channel**	**1.73**	**184**	P	Pn	22 54 22.2	-0.1
MCHZ	**McNeill Hill**	**1.75**	**89**	PN	Pn	22 54 23.2	+0.7
BFZ	**Birch Farm**	**1.83**	**131**	PN	Pn	22 54 23.1	-0.1
BFZ	**Birch Farm**	**1.83**	**131**	P	Pn	22 54 23.1	-0.2
SNZO	**South Karori**	**1.83**	**174**	PN	Pn	22 54 22.8	-0.5
SNZO	**South Karori**	**1.83**	**174**	P	Pn	22 54 22.8	-0.5
MTW	**Mount Morrison**	**1.86**	**154**	PN	Pn	22 54 23.1	-0.4
MTW	**Mount Morrison**	**1.86**	**154**	P	Pn	22 54 23.1	-0.4
NMHZ	**Naumai**	**1.88**	**79**	PN	Pn	22 54 24.4	+0.6
KAHZ	**Kahuranaki**	**1.91**	**100**	PN	Pn	22 54 24.6	+0.6
NNZ	**Nelson**	**1.91**	**205**	PN	Pn	22 54 23.5	-0.6
NNZ	**Nelson**	**1.91**	**205**	P	Pn	22 54 23.5	-0.5
PXZ	**Pawanui**	**1.95**	**107**	PN	Pn	22 54 24.7	+0.3
BHW	**Baring Head**	**1.95**	**170**	PN	Pn	22 54 23.8	-0.6
BHW	**Baring Head**	**1.95**	**170**	P	Pn	22 54 23.8	-0.6
TMWZ	**Te Maipa**	**1.97**	**146**	PN	Pn	22 54 24.4	-0.2
TUWZ	**Tuamarina**	**1.98**	**191**	PN	Pn	22 54 24.3	-0.4
QRZ	**Quartz Range**	**1.98**	**227**	PN	Pn	22 54 23.4	-1.4
QRZ	**Quartz Range**	**1.98**	**227**	P	Pn	22 54 23.4	-1.3
MSWZ	**Moikau Station**	**2.03**	**162**	PN	Pn	22 54 24.6	-0.5
MSWZ	**Moikau Station**	**2.03**	**162**	P	Pn	22 54 24.6	-0.6
PAWZ	**Paruwai Farm**	**2.04**	**159**	PN	Pn	22 54 24.9	-0.4
PAWZ	**Paruwai Farm**	**2.04**	**159**	P	Pn	22 54 24.9	-0.4
TRWZ	**Traveller**	**2.14**	**154**	PN	Pn	22 54 25.9	-0.3
PLWZ	**Palliser**	**2.17**	**164**	PN	Pn	22 54 26.0	-0.7
BSWZ	**Blackbirch Sta**	**2.27**	**191**	PN	Pn	22 54 27.7	0.0
BSWZ	**Blackbirch Sta**	**2.27**	**191**	P	Pn	22 54 27.7	+0.1
URZ	**Urewera**	**2.42**	**60**	PN	Pn	22 54 27.7	-1.7
URZ	**Urewera**	**2.42**	**60**	P	Pn	22 54 27.7	-1.6
MWZ	**Matawai**	**2.67**	**66**	PN	Pn	22 54 30.8	-1.2
MWZ	**Matawai**	**2.67**	**66**	P	Pn	22 54 30.8	-1.3
MHGZ	**Mahia Peninsul**	**2.71**	**84**	PN	Pn	22 54 32.6	+0.1
KHZ	**Kahutara**	**3.01**	**193**	PN	Pn	22 54 35.2	-0.7
KHZ	**Kahutara**	**3.01**	**193**	P	Pn	22 54 35.2	-0.6
MXZ	**Matakaoa Point**	**3.59**	**59**	PN	Pn	22 54 41.2	-1.6
MXZ	**Matakaoa Point**	**3.59**	**59**	P	Pn	22 54 41.2	-1.6
LTZ	**Lake Taylor**	**3.68**	**206**	PN	Pn	22 54 42.5	-1.2
LTZ	**Lake Taylor**	**3.68**	**206**	P	Pn	22 54 42.5	-1.3
ODZ	**Otahua Downs**	**6.23**	**206**	PN	Pn	22 55 14.2	-1.6
ODZ	**Otahua Downs**	**6.23**	**206**	P	Pn	22 55 14.2	-1.6

*ISCJB **28** 22:55:22.6±0.5, 37°72N±0°03×37°46E±0°03, h8km±9km, Error ellipse: s-maj=5.8km s-min=3.9km az=145.4*
*ISK **28** 22:55:22.4, 37°70N×37°48E, h10km, MD2.8*
*DDA **28** 22:55:23.2, 37°70N×37°49E, h5km±4km, Md3.1*
*CSEM **28** 22:55:23.1±0.1, 37°72N×37°45E, h15km, MD2.8, Error ellipse: s-maj=4.6km s-min=1.9km az=148.0*

ISC 28 22:55:23.3±0.5, 37°71N±0°03×37°46E±0°04, h11km±8km, n20, σ0s61/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GZT	**Gaziantep**	**0.37**	**167**	*i* P	**Pg**	**22 55 30.0**	**-0.5**
GZT				*i* S	**Sg**	**22 55 34.8**	**-0.6**
KMRS	**Kahramanmaras**	**0.49**	**245**	PG	**Pg**	**22 55 32.7**	**-0.1**
KMRS				*e*SG	**Sg**	**22 55 39.7**	**+0.3**
KMRS	**Kahramanmaras**	**0.49**	**245**	*i* Pg	**Pg**	**22 55 32.7**	**-0.1**
KMRS				*e*Sg	**Sg**	**22 55 39.7**	**+0.4**
AKCD	**Akcadag**	**0.69**	**32**	*i* P	**Pg**	**22 55 36.5**	**-0.1**
AKCD				*i* S	**Sg**	**22 55 46.7**	**+1.1**
AKCD	**Akcadag**	**0.69**	**32**	*i* P	**Pg**	**22 55 36.5**	**-0.1**
AKCD				*i* S	**Sg**	**22 55 46.7**	**+1.1**
ATAB	**Bozova**	**0.71**	**110**	*i* P	**Pg**	**22 55 36.2**	**-0.8**
ATAB				*i* S	**Sg**	**22 55 46.3**	**+0.1**
ATAB	**Bozova**	**0.71**	**110**	*i* P	**Pg**	**22 55 36.2**	**-0.7**
ATAB				*i* S	**Sg**	**22 55 46.3**	**+0.1**
ANDN	**Andirin**	**0.90**	**262**	*i* P	**Pg**	**22 55 40.2**	**-0.3**
ANDN				*i* S	**Sg**	**22 55 52.1**	**-0.0**
ANDN	**Andirin**	**0.90**	**262**	*i* P	**Pg**	**22 55 40.2**	**-0.3**
ANDN				*i* S	**Sg**	**22 55 52.1**	**-0.1**
MALT	**Malatya**	**0.97**	**52**	*e*PG	**Pg**	**22 55 42.2**

DSZ	**Denniston Nort**	**2.30**	**235**	PN	Pn	22 56 01.1	-0.7
NMHZ	**Naumai**	**2.34**	**55**	PN	Pn	22 56 01.1	-1.2
LTZ	**Lake Taylor**	**2.79**	**213**	PN	Pn	22 56 07.2	-1.2
KNZ	**Kokohu**	**2.95**	**62**	PN	Pn	22 56 07.8	-2.9
KNZ	**Kokohu**	**2.95**	**62**	P	Pn	22 56 07.8	-2.9
MHGZ	**Mahia Peninsul**	**3.05**	**66**	PN	Pn	22 56 09.4	-2.6
URZ	**Urewera**	**3.08**	**45**	*e*Pn	Pn	22 56 11.8	-0.6
URZ				*e*Sn	Sn	22 56 47.3	-0.7
MKAZ	**Moumakai**	**3.41**	**11**	PN	Pn	22 56 16.0	-0.8
MQZ	**McQueen's Vall**	**3.48**	**200**	PN	Pn	22 56 14.8	-3.0
MQZ	**McQueen's Vall**	**3.48**	**200**	P	Pn	22 56 14.8	-3.0
WCZ	**Waipu Caves**	**4.51**	**0**	PN	Pn	22 56 31.3	-0.6
WCZ	**Waipu Caves**	**4.51**	**0**	P	Pn	22 56 31.3	-0.6
FOZ	**Fox Glacier**	**4.64**	**227**	PN	Pn	22 56 30.8	-2.9
FOZ	**Fox Glacier**	**4.64**	**227**	P	Pn	22 56 30.8	-2.9
LBZ	**Lake Benmore**	**4.98**	**217**	PN	Pn	22 56 35.8	-2.5
LBZ	**Lake Benmore**	**4.98**	**217**	P	Pn	22 56 35.8	-2.5
JCZ	**Jackson Bay**	**5.49**	**227**	PN	Pn	22 56 43.4	-1.8
JCZ	**Jackson Bay**	**5.49**	**227**	P	Pn	22 56 43.4	-1.9

*NNC **28** 23:12:40.0₀7.7, 36°.81N×69°.54E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=69.8km s-min=52.5km az=125.0*

ISC 28 23:12:41.6±3.1, 36°.7N±0°.2×71°.5E±0°.2, h239km±27km, n4, σ0°55/8, 1C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**4.47**	**50**	Pn	**Pn**	**23 13 50.0**	**-0.5**
KSH				Sn	**S**	**23 14 45.5**	**+0.3**
KSH				smax			
	comp=N,100nm,0.8s						
KSH				smax			
	comp=E,54nm,0.6s						
KK31	**Karatay Array**	**6.41**	**353**	P	**Pn**	**23 14 14.3**	**-0.3**
	comp=E,1.6nm,0.3s,baz=173,slow=12,SNR=146						
KK31				⇓S	**S**	**23 15 28.9**	**0.0**
	comp=E,5.9nm,0.3s						
AB31	**Akbulak array**	**15.10**	**330**	P	**Pn**	**23 16 03.8**	**+0.6**
	comp=E,0.9nm,0.3s,baz=164,slow=11,SNR=37						
AB31				S	**S**	**23 18 42.8**	**-6.9**
	comp=E,1.7nm,0.5s,baz=164,slow=22,SNR=17						
AKTO	**Aktyubinsk**	**16.80**	**329**	⇑P	**P**	**23 16 26.3**	**+4.8**
	comp=E,0.3nm,0.8s						
AKTO				⇓S	**S**	**23 19 24.2**	**-0.2**
	comp=E,0.7nm,1.1s						

*ISCJB **28** 23:14:17.0₀0.2, 62°.14N±0°.02×149°.62W±0°.05, h56km±3km, mb3.9/16, MS3.0/2, Error ellipse: s-maj=3.8km s-min=3.3km az=160.0*

*IDC **28** 23:14:17.4₀0.9, 62°.18N×149°.83W, h46km±8km, mb3.5/8, mb1 3.9/14, mb1mx3.7/28, mbtmp3.8/14, ML4.0/6, MS3.1/5, Ms1 3.1/5, ms1mx2.5/35, Error ellipse: s-maj=15.7km s-min=11.4km az=107.0*

*NEIC **28** 23:14:18.6, 62°.12N×149°.60W, h43km, mb4.1/7, ML4.3(PMR), ML4.1(AEIC), After AEIC.*

NEIC Felt [III] at Talkeetna and [II] at Anchorage. Also felt at Palmer.

ISC 28 23:14:18.2±0.2, 62°.12N±0°.02×149°.65W±0°.05, h46km±4km, h49km±2.9km; pP-P, n80, σ0°81/93, mb3.9/16, MS3.0/2, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GHO	**Glory Hole Cre**	**0.49**	**135**	P	**Pn**	**23 14 28.8**	**-0.2**
PMR	**Palmer**	**0.58**	**155**	*e*P	**Pn**	**23 14 29.6**	**-0.5**
SML	**Sawmill**	**0.69**	**116**	P	**Pn**	**23 14 30.6**	**-1.0**
SML				S	**Sn**	**23 14 42.0**	**+0.7**
KNK	**Knik Glacier**	**0.91**	**141**	P	**Pn**	**23 14 34.1**	**-0.4**
FIB	**Fire Island**	**0.99**	**195**	P	**Pn**	**23 14 36.2**	**+0.7**
FIB				S	**Sn**	**23 14 50.3**	**+2.0**
RC01	**Rabbit Creek A**	**1.03**	**182**	P	**Pn**	**23 14 36.0**	**-0.2**
RC01				S	**Sn**	**23 14 50.4**	**+1.0**
SCM	**Sheep Creek Mo**	**1.13**	**104**	P	**Pn**	**23 14 37.1**	**-0.4**
RND	**Reindeer**	**1.34**	**15**	P	**Pn**	**23 14 40.2**	**-0.2**
RND				S	**Sn**	**23 14 57.0**	**0.0**
TRF	**Thorofare Moun**	**1.37**	**348**	P	**Pn**	**23 14 40.8**	**0.0**
TRF				S	**Sn**	**23 14 58.3**	**+0.6**
PPLA	**Purkeypile**	**1.41**	**305**	P	**Pn**	**23 14 41.6**	**+0.3**
PPLA				S	**Sn**	**23 15 00.3**	**+1.5**
DHY	**Denali Highway**	**1.43**	**47**	P	**Pn**	**23 14 40.9**	**-0.6**
DHY				S	**Sn**	**23 15 00.6**	**+1.5**
SLKM	**Skilak Lake**	**1.64**	**190**	P	**Pn**	**23 14 44.2**	**-0.2**
MCK	**McKinley**	**1.65**	**11**	P	**Pn**	**23 14 44.7**	**+0.1**
SEW	**Seward**	**2.02**	**177**	P	**Pn**	**23 14 50.7**	**+1.0**
BPAW	**Bear Paw Mtn.**	**2.08**	**344**	P	**Pn**	**23 14 50.1**	**-0.4**
DIV	**Divide**	**2.10**	**116**	P	**Pn**	**23 14 50.3**	**-0.5**
DIV				*e*Sn	**Sn**	**23 15 16.7**	**+1.1**
PAX	**Paxson**	**2.12**	**64**	P	**Pn**	**23 14 51.7**	**+0.7**
PAX				*e*Sn	**Sn**	**23 15 16.6**	**+0.6**
CHUM	**Lake Minchumin**	**2.15**	**327**	P	**Pn**	**23 14 51.5**	**+0.1**
RSO	**Redoubt South**	**2.24**	**223**	*e*Pn	**Pn**	**23 14 53.5**	**+0.9**
BRLK	**Bradley Lake**	**2.44**	**195**	P	**Pn**	**23 14 55.0**	**-0.4**
BMRM	**Bremner River**	**2.68**	**113**	P	**Pn**	**23 14 57.8**	**-0.9**
BMRM				*e*Sn	**Sn**	**23 15 30.0**	**+0.2**
MENT	**Mentasta**	**2.87**	**71**	*e*Pn	**Pn**	**23 15 01.3**	**0.0**
MENT				*e*Sn	**Sn**	**23 15 35.3**	**+0.8**
COLA	**College**	**2.88**	**15**	P	**Pn**	**23 15 01.1**	**-0.3**
MDM	**Murphy Dome**	**2.92**	**12**	P	**Pn**	**23 15 01.9**	**-0.2**
ILAR	**Eielson Array**	**2.94**	**24**	P	**Pn**	**23 15 01.7**	**-0.5**
	19nm,0.3s,baz=208,slow=14,SNR=740						
ILAR				S	**Sn**	**23 15 35.2**	**-1.0**
	47nm,0.3s,baz=203,slow=23,SNR=17						
RAGM	**Ragged Mountai**	**2.96**	**124**	P	**Pn**	**23 15 02.5**	**-0.2**
DOT	**Dot Lake**	**2.98**	**57**	P	**Pn**	**23 15 03.3**	**+0.4**
SVW2	**Sparrevohn**	**3.01**	**253**	*e*P	**Pn**	**23 15 03.2**	**-0.1**
TT01	**Tatalina**	**3.06**	**288**	P	**Pn**	**23 15 03.4**	**-0.5**
TTA	**Tatalina**	**3.06**	**288**	*e*P	**Pn**	**23 15 03.6**	**-0.3**
MID	**Middleton Isla**	**3.15**	**147**	*e*P	**Pn**	**23 15 06.3**	**+1.2**
BCA3	**Beaver Creek A**	**3.76**	**72**	P	**Pn**	**23 15 13.3**	**-0.2**
GCSA	**Galena City Sc**	**4.18**	**312**	P	**Pn**	**23 15 19.6**	**+0.3**
IM3	**Indian Mountai**	**4.28**	**337**	P	**Pn**	**23 15 20.4**	**-0.1**
KDAK	**Kodiak Island**	**4.59**	**200**	P	**Pn**	**23 15 23.6**	**-1.3**
KDAK	**Kodiak Island**	**4.59**	**200**	P	**Pn**	**23 15 23.8**	**-1.2**
	16nm,0.3s,baz=40,slow=9.0,SNR=102						
KDAK				S	**Sn**	**23 16 14.2**	**-2.7**
	12nm,0.3s,baz=322,slow=19,SNR=3.2						
EGAK	**Eagle**	**4.65**	**51**	P	**Pn**	**23 15 25.7**	**-0.1**
DAWY	**Dawson**	**5.05**	**63**	P	**Pn**	**23 15 31.0**	**-0.2**
COLD	**Coldfoot**	**5.14**	**358**	P	**Pn**	**23 15 32.5**	**+0.1**
COLD				*e*Sn	**Sn**	**23 16 29.2**	**-1.0**
OHAK	**Old Harbor**	**5.24**	**202**	*e*P	**Pn**	**23 15 32.8**	**-1.5**
PNL	**Peninsula**	**5.58**	**112**	P	**Pn**	**23 15 37.8**	**-0.6**
BM3	**Burnt Mountain**	**5.74**	**20**	P	**Pn**	**23 15 40.6**	**-0.1**
DHAK	**Deception Hill**	**6.39**	**113**	P	**Pn**	**23 15 49.0**	**-0.7**
WHY	**Whitehorse**	**7.24**	**95**	P	**Pn**	**23 16 00.7**	**-0.5**
SKAG	**Skagway**	**7.50**	**104**	*e*P	**Pn**	**23 16 04.4**	**-0.3**
BESE	**Bessie Mountai**	**8.14**	**109**	P	**Pn**	**23 16 13.2**	**-0.4**
TNA	**Tin City**	**8.77**	**301**	P	**Pn**	**23 16 22.6**	**+0.6**
INK	**Inuvik**	**9.16**	**40**	P	**Pn**	**23 16 27.7**	**+0.2**
INK				S	**Sn**	**23 18 08.8**	**-0.2**
INK				LR	LR	23 20 25.7	
INK	**Inuvik**	**9.16**	**40**	P	**Pn**	**23 16 27.7**	**+0.2**
	1.2nm,0.3s,baz=229,slow=15,SNR=16						
INK				S	**Sn**	**23 18 08.8**	**-0.2**
	2.4nm,0.3s,baz=300,slow=17,SNR=9.7						
INK				LR	LR	23 20 25.7	
	comp=Z,89nm,18.8s,baz=334,slow=40						
DLBC	**Dease Lake**	**10.40**	**102**	P	**Pn**	**23 16 43.7**	**-0.8**
DLBC				LR	LR	23 21 05.2	
DLBC	**Dease Lake**	**10.40**	**102**	P	**Pn**	**23 16 43.7**	**-0.8**
	0.6nm,0.3s,baz=310,slow=13,SNR=5.8						
DLBC				LR	LR	23 21 05.2	
	comp=Z,133nm,19.3s,baz=261,slow=39						
BBB	**Bella Bella**	**15.27**	**121**	P	**Pn**	**23 17 50.2**	**0.0**
BBB				LR	LR	23 22 55.1	
BBB	**Bella Bella**	**15.27**	**121**	P	**Pn**	**23 17 50.2**	**0.0**
	0.7nm,0.3s,baz=78,slow=16,SNR=32						
BBB				LR	LR	23 22 55.1	
	comp=Z,71nm,18.1s,baz=182,slow=34						
YKA	**Yellowknife Ar**	**16.18**	**73**	P	**Pn**	**23 18 02.7**	**+0.8**
	0.4nm,0.3s,baz=283,slow=11,SNR=7.9						
NEW	**Newport**	**22.85**	**112**	*e*P	**P**	**23 19 17.1**	**0.0**
	13nm,1.1s,mb4.3						
MSO	**Missoula**	**25.34**	**111**	P	**P**	**23 19 40.2**	**-0.1**
	5.0nm,1.2s,mb3.9						
PETK	**Petropavlovsk-**	**28.82**	**276**	LR	LR	23 30 52.0	
	comp=Z,19nm,18.4s,MS2.7,baz=144,slow=35						
MOOW	**Moose Ponds**	**29.16**	**111**	*e*P	**P**	**23 20 15.9**	**+1.3**
	1.2nm,0.6s,mb3.8						
TPAW	**Teton Pass**	**29.27**	**111**	P	**P**	**23 20 14.9**	**-0.7**
NVAR	**Mina Array Bea**	**30.50**	**126**	P	**P**	**23 20 27.2**	**+0.8**
	2.7nm,0.7s,mb4.1,baz=312,slow=8.6,SNR=14						
YAK	**Yakutsk**	**35.48**	**307**	P	**P**	**23 21 10.5**	**+0.9**
WUAZ	**Wupatki**	**35.75**	**120**	*e*P	**P**	**23 21 13.0**	**+0.7**
	2.2nm,0.8s,mb4.1						
WMOK	**Wichita Mounta**	**41.84**	**107**	P	**P**	**23 22 02.7**	**-0.6**
	3.1nm,0.9s,mb3.9						
TXAR	**Lajitas Array**	**44.32**	**116**	P	**P**	**23 22 23.3**	**-0.1**
TXAR	**Lajitas Array**	**44.32**	**116**	P	**P**	**23 22 23.3**	**-0.1**
	1.0nm,0.7s,mb3.7,baz=330,slow=6.1,SNR=17						
KEV	**Kevo**	**48.39**	**2**	P	**P**	**23 22 54.9**	**+0.2**
ARCES	**ARCESS Array B**	**48.59**	**2**	P	**P**	**23 22 55.9**	**-0.4**
	1.1nm,0.6s,mb4.1,baz=25,slow=9.3,SNR=4.1						
ARCES				pP	pP	23 23 07.3	-1.6
	1.4nm,0.6s,baz=12,slow=8.7,SNR=1.7						
KTK1	**Kautokeino**	**49.06**	**3**	*i* P	**P**	**23 23 02.0**	**+2.1**
KSRS	**Korea Array**	**54.28**	**284**	LR	LR	23 48 03.5	
	comp=Z,23nm,18.7s,MS3.3,baz=64,slow=37						
SONM	**Songino Array**	**54.84**	**307**	P	**P**	**23 23 42.8**	**-0.4**
	0.9nm,0.7s,mb3.9,baz=27,slow=8.1,SNR=3.4						
FINES	**FINESS Array B**	**56.72**	**2**	P	**P**	**23 23 57.7**	**+1.4**
	5.0nm,1.1s,mb4.5,baz=3.8,slow=6.3,SNR=3.0						
BRVK	**Borovoye**	**60.92**	**334**	*e*P	**P**	**23 24 26.3**	**+0.7**
	1.9nm,0.8s,mb4.3						
BVAR	**Borovoye Array**	**60.92**	**334**	P	**P**	**23 24 23.0**	**-2.7**
	0.3nm,0.4s,mb3.8,baz=1.3,slow=6.3,SNR=3.2						
KURK	**Kurchatov**	**61.16**	**327**	P	**P**	**23 24 26.2**	**-1.1**
KURK	**Kurchatov**	**61.16**	**327**	P	**P**	**23 24 27.5**	**+0.2**
	0.3nm,0.5s,mb3.7,baz=27,slow=7.3,SNR=2.9						
MKAR	**Makanchi Array**	**63.76**	**323**	P	**P**	**23 24 42.1**	**-2.6**
	0.4nm,0.6s,mb3.6,baz=32,slow=7.3,SNR=5.0						
MKAR				pP	pP	23 24 56.1	-1.6
	0.3nm,0.4s,baz=34,slow=6.9,SNR=2.5						
ABKAR	**Akbulak array**	**66.49**	**339**	*e*P	**P**	**23 25 03.6**	**+1.2**
	1.4nm,0.7s,mb4.1						
ESDC	**Sonseca Array**	**74.84**	**27**	P	**P**	**23 25 52.1**	**-1.2**
	0.2nm,0.5s,mb3.4,baz=344,slow=6.4,SNR=3.4						
ESDC				pP	pP	23 26 06.7	+0.1
	1.0nm,0.7s,baz=345,slow=5.7,SNR=5.0						
GNI	**Garni**	**77.42**	**349**	P	**P**	**23 26 08.1**	**+0.2**
BOSA	**Boshof**	**146.32**	**8**	PKPbc	PKPbc	23 33 51.5	-1.6
	4.9nm,1.1s,baz=50,slow=1.8,SNR=4.5						

*NEIC **28** 23:26:13.9₀1.8, 7°.01S×129°.52E, h70km±18km, mb4.1/7, Error ellipse: s-maj=15.9km s-min=10.6km az=48.0*

*IDC **28** 23:26:19.2₀3.6, 7°.15S×129°.22E, h113km±30km, mb3.7/5, mb1 4.0/7, mb1mx3.7/16, mbtmp3.9/7, Error ellipse: s-maj=62.7km s-min=16.1km az=65.0*

ISC 28 23:26:20.1±2.4, 7°.45S±0°.09×129°.47E±0°.08, h143km±25km, n30, σ0°96/36, mb3.8/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.23**	**199**	*e*Pn	**Pn**	**23 28 58.5**	**+1.9**
FITZ				*e*Sn	**Sn**	**23 30 58.8**	**-1.9**
FITZ	**Fitzroy Crossi**	**11.23**	**199**	P	**Pn**	**23 28 58.2**	**+1.7**
	5.4nm,0.3s,baz=36,slow=10,SNR=84						
FITZ				S	**Sn**	**23 30 59.3**	**-1.4**
	6.0nm,0.3s,baz=79,slow=19,SNR=6.9						
WRA	**Warramunga Arr**	**13.29**	**160**	P	**Pn**	**23 29 23.5**	**+0.1**
WRA				S	**Sn**	**23 31 45.5**	**-4.9**
WRA	**Warramunga Arr**	**13.29**	**160**	P	**Pn**	**23 29 23.5**	**+0.1**
	4.1nm,0.3s,baz=346,slow=13,SNR=68						
WRA				S	**Sn**	**23 31 45.5**	**-4.8**
	3.4nm,0.3s,baz=329,slow=23,SNR=9.9						
WB2	**Warramunga Arr**	**13.29**	**160**	*e*Pn	**Pn**	**23 29 23.1**	**-0.3**
WB2				*e*Sn	**Sn**	**23 31 45.1**	**-5.3**
COEN	**Coen**	**14.94**	**117**	*e*Pn	**Pn**	**23 29 43.5**	**-0.7**
COEN				*e*Sn	**Sn**	**23 32 19.0**	**-11**
MBWA	**Marble Bar**	**16.57**	**214**	*e*Pn	**Pn**	**23 30 07.0**	**+2.7**
	4.6nm,0.5s						
MBWA				*e*Sn	**Sn**	**23 33 09.2**	**0.0**
ASAR	**Alice Springs**	**16.68**	**166**	P	**Pn**	**23 30 09.8**	**+4.2**
	2.1nm,0.3s,baz=341,slow=9.5,SNR=82						
ASAR				S	**S**	**23 33 10.7**	**-0.6**
	0.9nm,0.3s,baz=351,slow=27,SNR=7.3						
ASAR				ScP	ScP	23 38 12.9	+4.9
	0.1nm,0.3s,baz=3.8,slow=1.7,SNR=6.0						
CTAO	**Charters Tower**	**20.55**	**129**	P	**P**	**23 30 53.4**	**+5.7**
STKA	**Stephens Creek**	**26.81**	**157**	*e*P	**P**	**23 31 51.8**	**+4.7**
	0.3nm,0.4s,mb3.3						
STKA	**Stephens Creek**	**26.81**	**157**	P	**P**	**23 31 52.1**	**+5.1**
	1.6nm,0.5s,mb3.9,baz=312,slow=13,SNR=6.9						
CMAR	**Chiang Mai Arr**	**39.62**	**311**	P	**P**	**23 33 37.5**	**-0.5**
	1.7nm,0.6s,mb3.9,baz=139,slow=7.3,SNR=11						
CHTO	**Chiang Mai**	**39.84**	**311**	*e*P	**P**	**23 33 39.7**	**-0.2**
	1.9nm,0.5s,mb4.0						
ULN	**Ulaanbaatar**	**58.52**	**342**	*e*P	**P**	**23 36 00.5**	**-0.9**
	1.8nm,0.6s,mb4.1						
SONM	**Songino Array**	**58.70**	**342**	P	**P**	**23 36 02.9**	**+0.3**
	0.8nm,0.7s,mb3.7,baz=165,slow=6.0,SNR=4.0						
MK31	**Makanchi Array**	**68.31**	**327**	*e*P	**P**	**23 37 05.7**	**-0.1**
MKAR	**Makanchi Array**	**68.31**	**327**	P	**P**	**23 37 06.0**	**+0.2**
	2.0nm,0.5s,mb4.1,baz=114,slow=8.1,SNR=28						
TKM2	**Tokmak 2**	**69.99**	**321**	P	**P**	**23 37 15.6**	**-0.7**
AAK	**Ala-Archa**	**70.54**	**320**	P	**P**	**23 37 19.8**	**+0.2**
ZALV	**Zalesovo Beam**	**71.75**	**334**	P	**P**	**23 37 25.5**	**-1.1**
	0.6nm,0.4s,mb3.6,baz=123,slow=5.5,SNR=5.4						
KURK	**Kurchatov**	**72.62**	**329**	*e*P	**P**	**23 37 31.4**	**-0.5**
	0.7nm,0.5s,mb3.6						
ABKAR	**Akbulak array**	**82.53**	**322**	*e*P	**P**	**23 38 26.3**	**-0.6**
	0.7nm,0.5s,mb3.6						
QSPA	**South Pole Qui**	**82.53**	**180**	*e*P	**P**	**23 38 31.1**	**+4.6**
ARU	**Arti**	**85.80**	**328**	*e*P	**P**	**23 38 42.5**	**-0.8**
	1.4nm,0.5s,mb4.0						
GNI	**Garni**	**90.74**	**310**	P	**P**	**23 39 07.0**	**-0.1**
PMR	**Palmer**	**92.41**	**28**	*e*P	**P**	**23 39 16.1**	**+1.7**
KIV	**Kislovodsk**	**92.80**	**314**	P	**P**	**23 39 17.6**	**+1.0**
MCK	**McKinley**	**92.91**	**26**	P	**P**	**23 39 18.0**	**+1.4**
CPUP	**Villa Florida**	**145.78**	**169**	PKPbc	PKPbc	23 45 47.5	+4.2
	0.6nm,0.3s,baz=124,slow=6.5,SNR=4.0						
LPAZ	**La Paz**	**150.68**	**144**	PKPbc	PKPbc	23 46 01.1	+4.7
	1.2nm,0.4s,baz=146,slow=3.6,SNR=9.4						

*ISCJB **28** 23:41:40.3₀0.5, 56°.33S±0°.07×30°.6W±0°.1, h10km, mb4.4/13, MS4.5/16, Error ellipse: s-maj=12.3km s-min=8.8km az=137.1*

*IDC **28** 23:41:41.2₀1.1, 56°.27S×30°.78W, h0km, mb4.2/6, mb1 4.3/7, mb1mx4.1/18, mbtmp4.3/7, ML4.5/1, MS4.4/17, Ms1 4.4/17, ms1mx4.3/26, Error ellipse: s-maj=31.5km s-min=24.0km az=87.0*

*NEIC **28** 23:41:42.4₀0.4, 56°.28S×30°.62W, h10km, mb4.7/8, Error ellipse: s-maj=11.9km s-min=10.4km az=186.0*

*GCMT **28** 23:41:45.6₀0.2, 56°.41S×30°.47W, h19km±1km, MW5.2, Moment Tensor Solution. s40,c49; s77,c133; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.49±.21; $M_{\theta\theta}$-1.41±.19; $M_{\phi\phi}$1.90±.20; $M_{r\theta}$1.90±.40; $M_{r\phi}$6.70±.18; $M_{\theta\phi}$1.28±.38; Best double couple: $M_0$7.20000×10^{16} NP1:ϕ_s352.00000°, δ75.00000°, λ174.00000°. NP2:ϕ_s84.00000°, δ84.00000°, λ15.00000°. Principal axes: T 7.7300, Plg15.0000°, Azm309.0000°; N -0.9800, Plg74.0000°, Azm103.0000°; P -6.7400, Plg7.0000°, Azm217.0000°; Data Used: II IU IC G CN.*

ISC 28 23:41:42.2±0.5, 56°.35S±0°.07×30°.6W±0°.1, h10km, n40, σ1°05/25, mb4.4/13, MS4.5/16, 1C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA3	**Neumayer Olymp**	**17.39**	**157**	*e*	**Pn**	**23 45 42.8**	**-1.7**
VNA2	**Neumayer--Watz**	**17.67**	**155**	*e*	**Pn**	**23 45 47.0**	**-1.1**
PMSA	**Palmer Station**	**18.29**	**229**	*e*Pn	**Pn**	**23 45 56.2**	**+0.5**
	54nm,1.3s						
PMSA				LR	LR	23 51 55.0	
PMSA	**Palmer Station**	**18.29**	**229**	P	**Pn**	**23 45 56.2**	**+0.5**
	0.2nm,0.3s,baz=71,slow=13,SNR=9.4						
PMSA				LR	LR	23 51 55.0	
	comp=Z,1μm,18.5s,baz=71,slow=34						
USHA	**Ushuaia**	**21.29**	**258**	P	**P**	**23 46 28.2**	**-0.4**
	20nm,1.2s,mb4.3,baz=139,slow=20,SNR=2.5						
MAIT	**Maitri**	**23.04**	**145**	*e*P	**P**	**23 46 48.1**	**+1.0**
TRQA	**Tornquist**	**27.76**	**298**	*e*P	**P**	**23 47 30.0**	**-0.8**
	4.3nm,1.0s,mb4.0						
PLCA	**Paso Flores**	**30.23**	**284**	*e*P	**P**	**23 47 54.1**	**+1.4**
	9.8nm,1.1s,mb4.5						
PLCA	**Paso Flores**	**30.23**	**284**	LR	LR	23 58 49.8	
	comp=Z,858nm,21.2s,MS4.4,baz=126,slow=34						
SYO	**Syowa Base**	**32.54**	**141**	⇑P	**P**	**23 48 12.0**	**-0.8**
QSPA	**South Pole Qui**	**33.90**	**180**	P	**P**	**23 48 25.7**	**+1.1**
	20nm,1.2s,mb4.9,baz=197,slow=3.4,SNR=19						
CPUP	**Villa Florida**	**35.66**	**316**	*e*P	**P**	**23 48 38.7**	**-1.6**
	12nm,0.3s,mb5.3						
CPUP				LR	LR	00 01 36.7	
CPUP	**Villa Florida**	**35.66**	**316**	P	**P**	**23 48 37.7**	**-2.6**
	0.5nm,0.3s,mb4.0,baz=146,slow=8.6,SNR=4.6						
CPUP				LR	LR	00 01 36.7	
	comp=Z,487nm,21.1s,MS4.2,baz=143,slow=34						
MAW	**Mawson**	**41.01**	**144**	*e*P	**P**	**23 49 16.8**	**-8.0**
	0.8nm,0.8s,mb3.4						
MAW	**Mawson**	**41.01**	**144**	LR	LR	00 03 51.6	
	comp=Z,809nm,20.6s,MS4.6,baz=255,slow=32						
SHEL	**Horse Pasture**	**44.51**	**35**	*e*P	**P**	**23 49 45.2**	**-8.5**
SBA	**Scott Base**	**45.63**	**185**	*e*P	**P**	**23 50 03.4**	**+1.3**
	34nm,1.6s,mb5.0						
SIV	**San Ignacio**	**46.48**	**318**	P	**P**	**23 50 10.1**	**+0.8**
	1.4nm,0.6s,mb4.1,baz=167,slow=9.3,SNR=3.9						
BOSA	**Boshof**	**47.87**	**79**	*e*P	**P**	**23 50 19.6**	**-0.4**
	20nm,1.4s,mb5.0						
BOSA	**Boshof**	**47.87**	**79**	LR	LR	00 06 37.7	
	comp=Z,345nm,19.0s,MS4.3,baz=222,slow=31						
LPAZ	**La Paz**	**49.06**	**309**	*e*P	**P**	**23 50 29.5**	**+0.1**
LPAZ				LR	LR	00 10 30.7	
LPAZ	**La Paz**	**49.06**	**309**	P	**P**	**23 50 29.4**	**0.0**
	1.0nm,0.7s,mb4.0,baz=144,slow=16,SNR=3.7						
LPAZ				LR	LR	00 10 30.7	
	comp=Z,244nm,22.0s,MS4.2,baz=344,slow=35						
LBTB	**Lobatse**	**50.90**	**76**	*e*P	**P**	**23 50 45.4**	**+2.1**
	6.8nm,1.0s,mb4.5						
TSUM	**Tsumeb**	**51.48**	**64**	P	**P**	**23 50 47.3**	**-0.4**
CASY	**Casey**	**54.24**	**162**	*e*P	**P**	**23 51 07.1**	**-0.4**
	4.5nm,1.0s,mb4.3						
NNA	**Nana**	**56.78**	**302**	LR	LR	00 14 27.0	
	comp=Z,504nm,21.7s,MS4.6,baz=134,slow=35						
ATAH	**Atahualpa**	**61.75**	**303**	LR	LR	00 16 41.7	
	comp=Z,380nm,19.2s,MS4.6,baz=6.6,slow=34						
DBIC	**Dimbokro**	**66.26**	**28**	LR	LR	00 15 32.5	
	comp=Z,90nm,18.2s,MS4.0,baz=181,slow=31						
OTAV	**Otavalo**	**68.30**	**307**	P	**P**	**23 52 43.3**	**0.0**
ROSC	**El Rosal**	**70.69**	**313**	LR	LR	00 25 01.1	
	comp=Z,227nm,18.5s,MS4.5,baz=181,slow=37						
PCRV	**Puerto La Cruz**	**72.06**	**325**	LR	LR	00 23 29.9	
	comp=Z,466nm,21.1s,MS4.7,baz=355,slow=35						
SDV	**Santo Domingo**	**72.94**	**318**	*e*P	**P**	**23 53 10.4**	**-1.2**
TORD	**Torodi Ar. Bea**	**74.28**	**33**	P	**P**	**23 53 20.1**	**+0.7**
	4.0nm,0.6s,mb4.5,baz=200,slow=6.8,SNR=5.7						
TORD				LR	LR	00 18 47.8	
	comp=Z,623nm,21.9s,MS4.9,baz=185,slow=30						
SJG	**San Juan**	**79.99**	**326**	LR	LR	00 30 45.3	
	comp=Z,322nm,18.7s,MS4.7,baz=136,slow=37						
ATD	**Arta Tunnel**	**90.52**	**70**	LR	LR	00 32 47.0	
	comp=Z,227nm,19.8s,MS4.6,baz=21,slow=34						
MDT	**Midelt**	**91.52**	**22**	LR	LR	00 29 51.0	
	comp=Z,177nm,18.1s,MS4.5,baz=37,slow=32						
KEST	**Kesra**	**97.78**	**32**	LR	LR	00 33 56.7	
	comp=Z,236nm,21.3s,MS4.7,baz=179,slow=32						
ESDC	**Sonseca Array**	**98.28**	**20**	LR	LR	00 34 33.1	
	comp=Z,146

comp=Z,3µm,18.7s,MS4.9,baz=39,slow=36
WB2 Warramunga Arr 28.08 248 *e*P **P** **00 02 38.1 -0.4**
WRA Warramunga Arr 28.09 248 P **P** **00 02 37.3 -1.2**
comp=Z,6.7nm,1.0s,mb4.2,baz=77,slow=9.8,SNR=20
WRA ScP ScP 00 09 34.0 +2.1
comp=Z,2.0nm,1.0s,baz=80,slow=3.2,SNR=5.4
ASAR Alice Springs 29.57 241 P **P** **00 02 50.0 -1.7**
comp=Z,5.3nm,0.8s,mb4.3,baz=72,slow=9.9,SNR=42
ASAR ScP ScP 00 09 38.4 +2.0
comp=Z,1.7nm,0.9s,baz=71,slow=4.0,SNR=6.9
GUMO Guam 29.91 325 LR LR 00 13 48.1
comp=Z,671nm,20.4s,MS4.3,baz=264,slow=34
URZ Urewera 30.18 156 P **P** **00 02 54.8 -2.1**
comp=Z,8.6nm,0.8s,mb4.6,baz=338,slow=7.6,SNR=4.9
TOO Toolangi 30.25 207 *e*P **P** **00 02 58.0 +0.4**
BBOO Buckleboo 32.20 224 *e*P **P** **00 03 14.1 -0.8**
comp=Z,8.7nm,0.5s,mb4.8
BBOO Buckleboo 32.20 224 *e*P **P** **00 03 14.1 -0.8**
comp=Z,250nm,1.7s,mb5.8
FITZ Fitzroy Crossi 35.89 255 *e*P **P** **00 03 45.3 -1.7**
comp=Z,11nm,0.6s,mb5.0
FITZ Fitzroy Crossi 35.89 255 P **P** **00 03 45.3 -1.7**
comp=Z,5.7nm,0.5s,mb4.7,baz=79,slow=9.2,SNR=31
FORT Forrest 37.08 233 *e*P **P** **00 03 55.9 -1.2**
comp=Z,30nm,0.8s,mb5.2
FORT Forrest 37.08 233 *e*P **P** **00 03 56.5 -0.5**
comp=Z,283nm,1.8s,mb5.8
MBWA Marble Bar 41.77 251 *e*P **P** **00 04 35.5 -0.8**
MBWA Marble Bar 41.77 251 *e*P **P** **00 04 35.8 -0.4**
comp=Z,16nm,1.0s,mb4.6
MEEK Meekatharra 43.69 243 *e*P **P** **00 04 50.8 -1.0**
PPT Papeete 47.17 104 *e*S **S** **00 12 15.6 +4.9**
comp=Z,180nm,25.5s
PPT *e*LQ 00 16 56.8
comp=Z,2µm,27.5s
PPT *e*LR LR 00 18 50.2
comp=Z,1µm,25.5s,baz=276
PPT Papeete 47.17 104 LR LR 00 20 37.8
comp=Z,637nm,19.5s,MS4.6,baz=170,slow=30
KIP Kipapa 50.82 50 *e*P **P** **00 05 44.7 -2.7**
MJAR Matsushiro Arr 52.48 336 P **P** **00 05 59.1 -0.3**
comp=Z,1.7nm,0.3s,mb4.5,baz=161,slow=6.3,SNR=2.4
TAOE Nuku Hiva Isla 56.87 93 *e*LR LR 00 23 21.7
comp=Z,892nm,26.1s
KSRS Korea Array 57.98 328 P **P** **00 06 38.6 -0.6**
comp=Z,1.0nm,0.4s,mb4.2,baz=134,slow=7.2,SNR=4.9
KSRS LR LR 00 29 30.7
comp=Z,324nm,18.8s,MS4.5,baz=129,slow=34
QIZ Qiongzhong 59.57 300 P **P** **00 06 52.5 +1.9**
QIZ sP sP 00 07 01.5 -1.5
QIZ S **S** **00 15 01.8 +2.7**
QIZ sS sS 00 15 13.3 -0.6
QIZ pmax pmax
comp=Z,60nm,3.4s
QIZ LR LR
comp=E,130nm,24.2s
QIZ LR LR
comp=Z,480nm,25.9s,MS4.5
YSS Yuzh-Sakhalins 60.35 345 *e*P sP 00 07 06.7 -1.1
YSS *e* 00 07 21.2
YSS *e* 00 15 12.0
RKT Rikitea 60.94 110 *e*LR LR 00 25 11.3
comp=Z,917nm,25.2s,baz=290
IPM Ipoh 62.70 281 *e*P **P** **00 07 11.1 -0.8**
comp=Z,33nm,1.1s,mb5.4
MDJ Mudanjiang 62.80 334 P **P** **00 07 15.0 +3.0**
MDJ pP pP 00 07 21.5 +0.5
MDJ sP sP 00 07 24.0 -0.5
MDJ PP PP 00 09 35.5 +4.9
MDJ S **S** **00 15 38.0 -1.3**
MDJ ScS ScS 00 17 03.3 +0.7
MDJ pmax pmax
comp=Z,5.0nm,1.1s,mb4.6
MDJ pmax pmax
comp=Z,68nm,5.1s
MDJ LR LR
comp=N,290nm,19.1s,MS4.6
MDJ LR LR
comp=E,310nm,22.3s,MS4.6
MDJ LR LR
comp=Z,170nm,21.7s,MS4.2
PET Petropavlovsk 63.96 358 *e*P **P** **00 07 17.3 -2.2**
PET *e*S **S** **00 15 55.2 +1.8**
PET *e*PS 00 16 20.3
PET *e*SS SS 00 20 06.9 +4.2
PET pmax pmax
comp=Z,200nm,4.8s
PETK Petropavlovsk- 64.09 357 P **P** **00 07 20.1 -0.3**
comp=Z,4.8nm,0.8s,mb4.6,baz=159,slow=8.6,SNR=7.8
GYA Guiyang 65.52 306 P **P** **00 07 31.5 +1.3**
GYA pP pP 00 07 42.0 +2.7
GYA PP PP 00 09 59.0 +4.2
GYA ScP 00 12 03.3
GYA S S 00 16 14.8 +1.2
GYA SKS 00 17 22.0
GYA SS SS 00 20 29.8 +1.9
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,480nm,18.8s,MS4.8
GYA LR LR
comp=E,320nm,19.0s,MS4.8
GYA LR LR
comp=Z,470nm,17.9s,MS4.7
KLR Kul'dur 65.76 339 *e*P **P** **00 07 29.3 -2.0**
BJI Beijing 66.33 323 P **P** **00 07 37.5 +2.3**
BJI S S 00 16 25.0 +1.9
BJI pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
BJI LR LR
comp=N,290nm,20.3s
BJI LR LR
comp=E,290nm,26.3s
SBA Scott Base 66.76 179 *e*P **P** **00 07 40.2 +2.8**
comp=E,137nm,2.6s,mb5.5
SBA Scott Base 66.76 179 *e*P **P** **00 07 40.2 +2.8**
SBA pmax pmax
comp=Z,137nm,2.6s,mb5.5
KMI Kunming 68.11 303 P **P** **00 07 49.5 +2.7**
KMI pP pP 00 07 58.5 +2.6
KMI sP sP 00 08 02.0 +2.7
KMI PP PP 00 10 21.8 +4.3
KMI S S 00 16 43.5 -1.6
KMI sS sS 00 17 01.0 +0.9
KMI SKS 00 17 41.5
KMI pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
KMI pmax pmax
comp=Z,43nm,4.1s
KMI LR LR
comp=N,200nm,22.6s,MS4.5
KMI LR LR
comp=E,230nm,19.2s,MS4.5
KMI LR LR
comp=Z,310nm,19.2s,MS4.5
CMAR Chiang Mai Arr 68.86 295 P **P** **00 07 51.8 +0.2**
comp=Z,1.8nm,0.4s,mb4.4,baz=116,slow=4.5,SNR=12
CMAR LR LR 00 37 06.3
comp=Z,152nm,22.0s,MS4.2,baz=125,slow=35
CHTO Chiang Mai 68.98 295 *e*P **P** **00 07 51.6 -0.7**
HHC Hu-ho-hao-te 69.61 321 *e*P **P** **00 07 57.3 +1.6**
HHC pP pP 00 08 07.5 +2.6
HHC sP sP 00 08 11.5 +3.2
HHC PP PP 00 10 33.3 +3.2
HHC *e*S S 00 17 02.3 +0.1
HHC sS sS 00 17 18.5 +1.3
HHC pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
HHC pmax pmax
comp=Z,76nm,4.4s
HHC LR LR
comp=N,380nm,19.0s,MS4.8
HHC LR LR
comp=E,280nm,17.1s,MS4.8
HHC LR LR
comp=Z,400nm,20.7s,MS4.6
CD2 Chengdu 69.82 309 P **P** **00 07 57.8 +0.5**
CD2 pP pP 00 08 08.0 +1.6
CD2 sP sP 00 08 12.0 +2.2
CD2 PP PP 00 10 34.0 +1.9
CD2 S S 00 17 03.5 -1.6
CD2 sS sS 00 17 20.5 +0.3
CD2 ScS ScS 00 17 53.5 -4.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
CD2 pmax pmax
comp=Z,90nm,4.5s
CD2 LR LR
comp=N,270nm,15.7s,MS4.8
CD2 LR LR
comp=E,350nm,20.6s,MS4.8
CD2 LR LR
comp=Z,420nm,21.1s,MS4.7
LZH Lanzhou 72.18 314 *e*P **P** **00 08 12.3 +0.8**
LZH pP pP 00 08 22.5 +1.8
LZH sP sP 00 08 26.5 +2.4
LZH *e*S S 00 17 31.5 -0.8
LZH sS sS 00 17 47.0 -0.4
LZH pmax pmax
comp=Z,21nm,1.3s,mb4.9
LZH pmax pmax
comp=Z,130nm,9.4s
LZH LR LR
comp=N,250nm,17.2s,MS4.8
LZH LR LR
comp=E,350nm,16.7s,MS4.8
LZH LR LR
comp=Z,540nm,18.0s,MS4.9
SEY Seymchan 74.21 355 ⇑ *i*P **P** **00 08 21.8 -1.1**
ULN Ulaanbaatar 76.29 325 *e*P **P** **00 08 34.4 -0.8**
comp=Z,9.8nm,1.1s,mb4.7
ULAN Ulaanbaatar 76.29 325 *e*P **P** **00 08 34.4 -0.8**
ULN pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
GTA Gaotai 76.55 315 *e*P **P** **00 08 40.5 +3.6**
GTA pP pP 00 08 49.3 +3.2
GTA sP sP 00 08 52.8 +3.3
GTA pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
SONM Songino Array 76.64 325 P **P** **00 08 37.5 +0.3**
comp=Z,3.0nm,0.6s,mb4.4,baz=132,slow=5.8,SNR=7.5
YAK Yakutsk 77.20 345 *e*P **P** **00 08 39.9 -0.1**
YAK *e**PP pP 00 08 47.7 -1.5
YAK *e* 00 08 51.6
YAK *e*S S 00 18 26.4 -0.9
YAK *e* 00 18 56.1
YAK pmax pmax
comp=Z,15nm,0.9s,mb4.9
YAK pmax pmax
comp=E,2.0nm,1.0s
YAK pmax pmax
comp=N,5.0nm,1.2s
YAK smax
comp=E,26nm,2.3s
YAK smax
comp=N,25nm,2.3s
OHAK Old Harbor 77.35 23 *e*P **P** **00 08 40.7 -0.3**
comp=N,19nm,1.2s,mb4.9
KDAK Kodiak Island 78.02 23 *e*P **P** **00 08 44.9 +0.3**
comp=N,13nm,1.0s,mb4.8
KDAK Kodiak Island 78.02 23 P **P** **00 08 44.5 -0.1**
comp=N,9.5nm,0.9s,mb4.7,baz=138,slow=4.9,SNR=5.0
KDAK Kodiak Island 78.02 23 *e*P **P** **00 08 44.9 +0.2**
KDAK pmax pmax
comp=Z,13nm,1.0s,mb4.8
QSPA South Pole Qui 78.88 180 *e*P **P** **00 08 49.7 +0.5**
comp=Z,28nm,1.1s,mb5.1
BILL Bilibino 79.02 2⇑ *e*P **P** **00 08 49.9 -0.1**
BILL *e* pP 00 08 57.2 -2.0
BILL pmax pmax
comp=Z,19nm,1.0s,mb5.0
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.5
ZAK Zakamensk 79.73 326 *e*P **P** **00 08 53.4 -0.9**
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
TTA Tatalina 80.58 18 *e*P **P** **00 08 59.2 +0.6**
comp=Z,13nm,1.2s,mb4.7
TTA Tatalina 80.58 18 *e*P **P** **00 08 59.2 +0.7**
TTA pmax pmax
comp=Z,13nm,1.2s,mb4.7
PPLA Purkeypile 81.76 19 *e*P **P** **00 09 04.2 -0.7**
comp=Z,16nm,1.4s,mb4.8
TRF Thorofare Moun 82.77 20 *e*P **P** **00 09 09.2 -0.9**
BPAW Bear Paw Mtn. 82.99 19 *e*P **P** **00 09 11.9 +0.7**
comp=Z,7.9nm,1.3s,mb4.6
MAW Mawson 83.28 202 *e*P **P** **00 09 13.8 +1.0**
comp=Z,5.9nm,0.9s,mb4.6
MAW Mawson 83.28 202 *e*P **P** **00 09 14.0 +1.2**
comp=Z,2.2nm,1.0s,mb4.1
MAW Mawson 83.28 202 P **P** **00 09 12.0 -0.8**
comp=Z,6.8nm,1.0s,mb4.6,baz=92,slow=5.3,SNR=11
MAW LR LR 00 41 01.8
comp=Z,130nm,19.9s,MS4.3,baz=86,slow=32
MAW Mawson 83.28 202 *e*P **P** **00 09 14.0 +1.2**
MAW pmax pmax
comp=Z,2.0nm,1.0s
MCK McKinley 83.41 20 *e*P **P** **00 09 13.7 +0.4**
comp=Z,14nm,1.0s,mb5.0
MCK McKinley 83.41 20 *e*P **P** **00 09 13.7 +0.3**
MCK pmax pmax
comp=Z,14nm,1.0s,mb5.0
COLA College 84.52 19 *e*P **P** **00 09 18.3 -0.7**
comp=Z,10.0nm,0.9s,mb5.0
COLA College 84.52 19 *e*P **P** **00 09 18.3 -0.7**
COLA pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
DIB Dawson Inlet, 84.71 33 T 01 42 29.4
SNR=84
MENT Mentasta 84.72 22 *e*P **P** **00 09 20.7 +0.6**
ILAR Eielson Array 84.77 20 P **P** **00 09 19.5 -0.8**
comp=Z,1.0nm,0.6s,mb4.1,baz=250,slow=4.3,SNR=20
WMQ Urumqi 86.62 316 P **P** **00 09 29.5 -0.5**
WMQ pP pP 00 09 40.0 +0.7
WMQ sP sP 00 09 44.0 +1.3
WMQ PP PP 00 12 53.5 +1.1
WMQ SKS 00 19 50.8
WMQ S S 00 20 02.0 -3.1
WMQ pmax pmax
comp=Z,22nm,0.8s,mb5.4
WMQ pmax pmax
comp=Z,150nm,4.4s
WMQ LR LR
comp=N,300nm,24.2s,MS4.7
WMQ LR LR
comp=E,220nm,23.6s,MS4.7
WMQ LR LR
comp=Z,250nm,22.9s,MS4.5
EGAK Eagle 86.72 21 *e*P **P** **00 09 30.6 +0.6**
comp=Z,13nm,0.9s,mb5.2
DAWY Dawson 86.96 22 *e*P **P** **00 09 32.6 +1.4**
CMB Columbia Colle 87.16 51 *e*P **P** **00 09 33.2 +0.5**
comp=Z,5.0nm,1.0s,mb4.7
CMB Columbia Colle 87.16 51 *e*P **P** **00 09 33.3 +0.6**
CMB pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
MOD Modoc 88.31 47 *e*P **P** **00 09 37.5 -0.7**
NVAR Mina Array Bea 88.84 51 P **P** **00 09 41.5 +0.7**
comp=Z,1.7nm,0.9s,mb4.4,baz=240,slow=7.4,SNR=8.5
WVOR Wild Horse Val 89.65 47 *e*P **P** **00 09 44.1 -0.3**
comp=Z,16nm,1.4s,mb5.2
WVOR Wild Horse Val 89.65 47 *e*P **P** **00 09 44.2 -0.2**
WVOR pmax pmax
comp=Z,16nm,1.4s,mb5.2
SYO Syowa Base 90.63 198 ⇑ *e*P **P** **00 09 46.8 -1.8**
SYO Syowa Base 90.63 198 ⇓ *e*X 00 09 54.6
SHPR Sheep Range 90.80 53 *e*P **P** **00 09 51.0 +1.0**
MKAR Makanchi Array 91.13 317 P **P** **00 09 50.3 -0.9**
comp=Z,1.2nm,0.6s,mb4.4,baz=91,slow=5.2,SNR=8.1
MKAR Makanchi Array 91.13 317 *ce*P **P** **00 09 51.2 -0.1**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 91.53 325 P **P** **00 09 51.3 -1.6**
comp=Z,0.7nm,0.6s,mb4.2,baz=107,slow=7.7,SNR=2.6
NEW Newport 92.17 41 *e*P **P** **00 09 55.8 -0.2**
CCUT Cedar City 92.43 52 *e*P **P** **00 09 59.2 +1.7**
comp=Z,51nm,2.8s,mb5.4
HLID Hailey 92.92 46 *e*P **P** **00 10 01.3 +1.6**
comp=Z,3.1nm,0.9s,mb4.7
KURK Kurchatov 94.41 321 *e*P **P** **00 10 04.5 -1.8**
DLMT Dillon 94.57 45 *e*PP PP 00 13 46.9 -8.5
PDAR Pinedale Array 96.26 48 LR LR 00 49 38.0
comp=Z,266nm,19.6s,MS4.7,baz=231,slow=33
VNA2 Neumayer--Watz 97.82 183 *e* **P** **00 10 18.3 -3.2**
VNA2 *e* 00 10 24.2
SDCO Great Sand Dun 98.61 53 *e*pP pP 00 10 32.8 -2.3
SDCO *e*PP PP 00 14 32.0 +5.2
TXAR Lajitas Array 99.04 62 PP PP 00 14 28.0 -2.4
comp=Z,0.4nm,0.9s,baz=224,slow=5.2,SNR=3.8
TXAR LR LR 00 45 53.9
comp=Z,402nm,21.1s,MS4.9,baz=75,slow=30
ARCES ARCESS Array B 115.48 344 PKP PKPdf 00 15 26.7 -1.1
comp=Z,2.7nm,0.7s,baz=73,slow=2.2,SNR=6.7
KIV Kislovodsk 118.72 314 *e*PKIKP PKPdf 00 15 35.2 +0.5
KIV *e* 00 16 52.5
KIV pmax pmax
comp=Z,2.0nm,0.6s
OBN Obninsk 118.98 328 *i* PKIKP PKPdf 00 15 34.0 -0.9
OBN *e*PS PS 00 26 41.8 -0.5
OBN pmax pmax
comp=Z,2.0nm,1.0s
FINES FINESS Array B 120.49 337 PKP PKPdf 00 15 36.9 -0.7
comp=Z,6.3nm,1.0s,baz=92,slow=4.2,SNR=4.5
BOSA Boshof 122.54 226 PKP PKPdf 00 15 40.9 -1.8
comp=Z,3.8nm,0.9s,baz=100,slow=9.2,SNR=4.3
LPAZ La Paz 123.35 118 PKP PKPdf 00 15 44.8 +0.3
comp=Z,1.1nm,0.6s,baz=274,slow=10,SNR=5.2
AKASG Malin Array Be 124.92 325 *i* PKIKP PKPdf 00 15 45.6 -0.8
comp=Z,2.1nm,0.8s,baz=68,slow=1.7,SNR=6.1
AKASG Malin Array Be 124.92 325 *c i* PKIKP PKPdf 00 15 45.7 -0.7
AKASG pmax pmax
comp=Z,2.0nm,0.7s
NOA NORSAR Array B 125.78 343 PKP PKPdf 00 15 46.8 -1.0
comp=Z,3.3nm,0.8s,baz=36,slow=2.0,SNR=12
BRTR Keskin Array B 126.34 311 PKP PKPdf 00 15 47.9 -1.7
comp=Z,0.8nm,0.8s,baz=25,slow=4.1,SNR=3.6
BRTR Keskin Array B 126.34 311 *c i* PKIKP PKPdf 00 15 48.9 -0.6
BRTR pmax pmax
comp=Z,1.0nm,0.8s
CPUP Villa Florida 126.58 135 PKP PKPdf 00 15 49.9 -0.5
comp=Z,1.6nm,0.5s,baz=246,slow=4.1,SNR=7.0
FOO Floro 126.91 347 *i* P PKPdf 00 15 58.4 +8.5
SDV Santo Domingo 128.10 87 *e*PKPdf PKPdf 00 15 53.3 -0.3
SIV San Ignacio 129.51 122 PKP PKPdf 00 15 56.0 -0.2
comp=Z,1.6nm,0.9s,baz=295,slow=2.2,SNR=4.9
BRG Berggiesshubel 132.57 333 *e*P PKPdf 00 16 00.7 -0.3
comp=Z,3.8nm,0.8s
BRG Berggiesshubel 132.57 333 *e*PKIKP PKPdf 00 16 00.6 -0.4
BRG pmax pmax
comp=Z,2.0nm,0.8s
HUMP Col San Antoni 133.21 76 *e*PKPdf PKPdf 00 16 02.5 -0.7
MOTA Moosalm 136.40 331 ⇑ *i* PKPdf PKPdf 00 16 07.6 -0.6
comp=Z,2.1nm,0.6s
FETA Feichten 136.81 331 ⇑ *i* PKPdf PKPdf 00 16 08.4 -0.7
comp=Z,5.6nm,1.1s
SFTF Sexfontaines 138.34 337 *e*PKIKP PKPdf 00 16 08.4 -3.4
LOR Lormes 139.56 337 *e*PKIKP PKPdf 00 16 10.3 -3.8
SSF Saint Saulge 139.87 337 *e*PKIKP PKPdf 00 16 11.5 -3.2
comp=Z,10nm,1.1s
TCF Toulx Ste Croi 141.00 338 *e*PKIKP PKPdf 00 16 13.2 -3.5
comp=Z,5.5nm,0.9s
MFF Saint Martin d 141.56 340 *e*PKIKP PKPdf 00 16 13.7 -4.0
comp=Z,11nm,0.8s
LASF Ste Croix 142.17 334 *e*PKIKP PKPdf 00 16 15.2 -3.7
comp=Z,12nm,1.0s
MTLF Montolieu 143.46 335 *e*PKIKP PKPdf 00 16 17.5 -3.7
comp=Z,15nm,1.3s
ETSF Etsaut 144.93 338 *e*PKIKP PKPdf 00 16 23.5 -0.3
comp=Z,40nm,1.0s
KEST Kesra 145.21 319 PKPbc PKPbc 00 16 23.4 -0.8
comp=Z,3.0nm,0.9s,baz=141,slow=6.2,SNR=11
PBRG Braganca 147.91 344 *e*PKP PKPbc 00 16 31.6 -0.2
MVO Moncorvo 148.58 344 *e*PKP PKPbc 00 16 34.0 +0.4
PVRL Vila Real 148.66 345 *e*PKP PKPbc 00 16 34.1 +0.3
ESDC Sonseca Array 148.99 339 PKP PKPdf 00 16 30.8 +0.1
comp=Z,1.6nm,0.8s,baz=32,slow=2.2,SNR=4.9
ESDC PKPbc PKPbc 00 16 34.4 -0.3
comp=Z,1.4nm,0.8s,baz=30,slow=2.0,SNR=12
PVIS Viseu 149.23 345 *e*PKP PKPbc 00 16 35.6 +0.3
MTE Manteigas 149.44 344 *e*PKP PKPbc 00 16 36.4 +0.6
MTE Manteigas 149.44 344 *e*PKPdf PKPbc 00 16 35.2 -0.6
PCBR Castelo Branco 149.94 344 *e*PKP PKPdf 00 16 32.8 +0.6
PMRV Marv??o 150.30 343 *e*PKP PKPbc 00 16 37.9 -0.1
PTOM Tomar 150.40 345 *e*PKP PKPbc 00 16 38.1 -0.1
EVO Evora 151.31 344 *e*PKIKP PKPdf 00 16 31.0 -3.4
comp=Z,35nm,1.1s
EVO Evora 151.31 344 *e*PKP PKPbc 00 16 40.4 0.0
PBAR Barrancos 151.36 342 *e*PKP PKPbc 00 16 41.0 +0.5
PBEJ Beja 151.74 343 *e*PKP PKPbc 00 16 41.8 +0.4
PCVE Castro Verde 152.16 343 *e*PKP PKPbc 00 16 43.3 +1.0
PBDV Barranco-do-Ve 152.49 343 *e*PKP PKPbc 00 16 44.1 +1.0

IDC ***29*** *00:18:22.1±1.1, 11.°13S×162.°16E, h0km, mb3.9/7, mb1 4.1/9, mb1mx4.0/19, mbtmp4.0/9, ML4.3/2, MS4.2/3, Ms1 4.2/3, ms1mx3.5/25, Error ellipse: s-maj=36.9km s-min=22.7km az=134.0*

ISCJB ***29*** *00:18:26.3±0.7, 10.°9S±0.°1×161.°9E±0.°1, h33km, mb3.9/9, MS4.1/3, Error ellipse: s-maj=17.7km s-min=12.7km az=136.9*

NEIC ***29*** *00:18:28.0±0.5, 10.°84S×161.°89E, h35km, mb4.1/4, Error ellipse: s-maj=12.5km s-min=9.2km az=134.0*

ISC 29 00:18:28.2±3.4, 10.°9S±0.°1×161.°9E±0.°2, h37km±27km, n31, σ0.°75/25, mb3.9/9, MS4.1/3, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.40**	**307**	Pn	**Pn**	**00 19 03.3**	**-1.7**
HNR				Sn	**Sn**	**00 19 46.2**	**+13**
HNR	**Honiara**	**2.40**	**307**	Pn	**Pn**	**00 19 09.3**	**+4.3**
	43nm,0.3s,baz=195,slow=14,SNR=3.0						
HNR				Sn	**Sn**	**00 19 46.2**	**+13**
	164nm,0.3s,baz=140,slow=23,SNR=7.1						
DZM	**Mont Dzumac**	**11.95**	**159**	*e*LR	LR	00 23 51.1	
	334nm,20.6s						
PMG	**Port Moresby**	**14.58**	**274**	*e*Pn	**Pn**	**00 21 52.7**	**+0.5**
CTA	**Charters Tower**	**17.63**	**237**	P	**Pn**	**00 22 31.4**	**+0.3**
	0.7nm,0.3s,baz=45,slow=9.1,SNR=7.7						
CTAO	**Charters Tower**	**17.63**	**237**	*e*Pn	**Pn**	**00 22 31.0**	**-0.1**
	21nm,1.2s						
AFI	**Afiamalu**	**25.88**	**99**	LR	LR	00 31 34.6	
	comp=Z,409nm,19.6s,MS4.0,baz=109,slow=31						
WRA	**Warramunga Arr**	**28.02**	**248**	P	**P**	**00 24 15.8**	**-0.3**
WRA	**Warramunga Arr**	**28.02**	**248**	P	**P**	**00 24 15.8**	**-0.3**
	2.7nm,1.0s,mb3.8,baz=78,slow=9.4,SNR=4.8						
STKA	**Stephens Creek**	**28.08**	**219**	*e*P	**P**	**00 24 16.3**	**-0.2**
STKA				LR	LR	00 34 29.5	
STKA	**Stephens Creek**	**28.08**	**219**	P	**P**	**00 24 16.0**	**-0.5**
	1.6nm,0.6s,mb3.8,baz=52,slow=9.2,SNR=4.5						
STKA				LR	LR	00 34 29.5	
	comp=Z,600nm,20.9s,MS4.2,baz=137,slow=34						
ASAR	**Alice Springs**	**29.53**	**241**	P	**P**	**00 24 28.0**	**-1.5**
	1.9nm,0.9s,mb3.8,baz=73,slow=9.7,SNR=8.1						
FITZ	**Fitzroy Crossi**	**35.78**	**254**	*e*P	**P**	**00 25 24.2**	**0.0**
	1.5nm,0.6s,mb4.1						
MBWA	**Marble Bar**	**41.68**	**250**	*e*P	**P**	**00 26 14.8**	**+1.1**
PPT	**Papeete**	**47.40**	**104**	*e*LR	LR	00 41 02.7	
	174nm,23.0s						
PPT	**Papeete**	**47.40**	**104**	LR	LR	00 42 51.5	
	comp=Z,221nm,18.2s,MS4.2,baz=309,slow=31						
NACB	**Ninganchiao**	**52.57**	**312**	*e*P	**P**	**00 27 37.7**	**-0.8**
TAOE	**Nuku Hiva Isla**	**57.06**	**94**	*e*LR	LR	00 45 38.4	
	608nm,27.7s						
RKT	**Rikitea**	**61.19**	**110**	*e*LR	LR	00 47 19.7	
	148nm,25.8s						
QSPA	**South Pole Qui**	**79.13**	**180**	*e*P	**P**	**00 30 29.3**	**+0.7**
	9.7nm,1.2s,mb4.6						
MCK	**McKinley**	**83.23**	**20**	P	**P**	**00 30 50.3**	**-0.2**
MAW	**Mawson**	**83.45**	**202**	*e*P	**P**	**00 30 51.6**	**-0.1**
	1.0nm,1.1s,mb3.8						
MAW	**Mawson**	**83.45**	**202**	P	**P**	**00 30 51.6**	**-0.1**
	0.9nm,0.3s,mb4.3,baz=75,slow=10,SNR=4.6						
ILAR	**Eielson Array**	**84.59**	**20**	P	**P**	**00 30 56.8**	**-0.6**
	0.5nm,1.0s,mb3.6,baz=231,slow=5.4,SNR=4.4						
DIB	**Dawson Inlet,**	**84.60**	**33**	T		02 04 08.8	
	SNR=27						
NVAR	**Mina Array Bea**	**88.82**	**51**	P	**P**	**00 31 18.8**	**+0.1**
	0.1nm,0.3s,mb3.6,baz=221,slow=3.5,SNR=2.3						
MKAR	**Makanchi Array**	**90.83**	**317**	P	**P**	**00 31 29.3**	**+1.5**
	0.3nm,0.6s,mb3.8,baz=107,slow=5.5,SNR=3.0						
KURK	**Kurchatov**	**94.11**	**321**	P	**P**	**00 31 42.2**	**-0.7**
TKM2	**Tokmak 2**	**94.63**	**313**	P	**P**	**00 31 46.0**	**+0.6**
EKS2	**Erkin-Say**	**95.90**	**312**	P	**P**	**00 31 51.4**	**+0.1**
FOO	**Floro**	**126.62**	**346**	*i* P	PKPdf	00 37 34.6	+7.3

DJA 29 00:18:36, 0.°73N×125.°24E, h17km, MLv4.1/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**0.81**	**331**	P	Pb	00 18 49.3	-2.4

MNI			S	Sb	00 19 02.9	+0.5
KMSI	**Cibinong**	**1.27 263**	P	Pn	00 18 59.2	+0.2
KMSI			S	Sb	00 19 14.3	-1.2
TNTI	**Ternate**	**2.13 89**	P	Pn	00 19 10.0	-0.8
LBMI	**Labuha**	**2.64 121**	P	Pn	00 19 19.2	+1.4
SGSI	**Sangihe**	**2.95 6**	P	Pn	00 19 22.5	+0.4
LUWI	**Luwuk**	**3.03 235**	P	Pn	00 19 23.5	+0.3
LUWI			S	Sn	00 19 58.4	-0.8
NLAI	**Namlea**	**4.36 155**	P	Pn	00 19 41.1	-0.4
KDI	**Kendari**	**5.34 209**	P	Pn	00 19 53.4	-1.6
TTSI	**Tana Toraja**	**6.59 235**	P	Pn	00 20 11.7	-0.5

IDC ***29*** *00:50:35.8±1.0,54.42N×161.35E, h0km, mb3.8/10, mb1 4.0/11, mb1mx3.7/25, mbtmp3.7/11, Error ellipse: s-maj=29.8km s-min=19.4km az=123.0*

NEIC ***29*** *00:50:38.2±0.7,54.42N×161.87E, h35km, mb4.3/2, Error ellipse: s-maj=21.0km s-min=9.6km az=132.0*

MOS ***29*** *00:50:41.3±1.9,54.31N×161.28E, h56km, mb4.4/5, Error ellipse: s-maj=20.6km s-min=8.9km az=80.5*

ISCJB ***29*** *00:50:42.1±0.7,54.25N±0.03×161.37E±0.10, h67km±5km, mb4.0/18, Error ellipse: s-maj=10.0km s-min=3.6km az=23.0*

KRSC ***29*** *00:50:43.2±0.0,54.29N×161.25E, h30km±13km, ML4.3*

ISC 29 00:50:43.3±0.7,**54.26N**±0.03×**161.3E**±0.1,**h61**km±5km, **n58**,σ1**§18**/75,**mb4.1**/18,**Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.39**	**38**	*i* P	**Pn**	**00 50 50.3**	**-3.9**
MKZ				*e*S	**Sn**	**00 50 54.7**	**-7.4**
KII	**Karymskiy**	**1.12**	**259**	*i* P	**Pn**	**00 51 02.8**	**-0.1**
KII				*e*S	**Sn**	**00 51 16.8**	**-0.7**
SPN	**Mys Shipunski**	**1.39**	**214**	P	**Pn**	**00 51 04.2**	**-2.3**
SPN				*e*S	**Sn**	**00 51 20.0**	**-3.9**
NLC	**Nalytchevo**	**1.60**	**228**	S	**Sn**	**00 51 27.1**	**-1.8**
BZGR	**Bezymyannyi-Gr**	**1.73**	**348**	P	**Pn**	**00 51 12.1**	**+1.1**
BZGR				*e*S	**Sn**	**00 51 32.8**	**+0.8**
ZLN	**Zelenaya**	**1.79**	**351**	*e*P	**Pn**	**00 51 12.9**	**+1.1**
ZLN				*e*S	**Sn**	**00 51 33.8**	**+0.3**
AVH	**Avacha**	**1.82**	**238**	*i* P	**Pn**	**00 51 12.9**	**+0.6**
AVH				*e*S	**Sn**	**00 51 34.0**	**-0.3**
KPT	**Kopyto**	**1.83**	**340**	P	**Pn**	**00 51 13.9**	**+1.6**
KPT				S	**Sn**	**00 51 35.5**	**+1.1**
KOZ	**Kozyrevsk**	**1.99**	**336**	P	**Pn**	**00 51 14.5**	**0.0**
KOZ				S	**Sn**	**00 51 36.9**	**-1.4**
KOZR	**Kozyr**	**1.99**	**336**	PN	**Pn**	**00 51 14.5**	**-0.1**
KOZR				S	**Sn**	**00 51 36.9**	**-1.5**
PET	**Petropavlovsk**	**2.01**	**233**	*e*Pn	**Pn**	**00 51 14.5**	**-0.3**
PET				*e*Sn	**Sn**	**00 51 41.4**	**+2.6**
PET	**Petropavlovsk**	**2.01**	**233**	*i* P	**Pn**	**00 51 14.9**	**+0.1**
PET				*e*S	**Sn**	**00 51 37.7**	**-1.1**
PET	**Petropavlovsk**	**2.01**	**233**	*e*PN	**Pn**	**00 51 14.7**	**-0.1**
PET				*e*S	**Sn**	**00 51 39.3**	**+0.5**
PET	comp=Z,256nm,0.3s			pmax	pmax		
PET	comp=N,1μm,0.7s			smax			
PET	comp=E,940nm,0.4s			smax			
KRSR	**Krestovskiy**	**2.01**	**348**	P	**Pn**	**00 51 15.9**	**+1.0**
KRSR				S	**Sn**	**00 51 39.4**	**+0.5**
GNL	**Ganaly**	**2.07**	**256**	*i* P	**Pn**	**00 51 16.9**	**+1.2**
GNL				*e*S	**Sn**	**00 51 41.0**	**+0.7**
KBTR	**Krutoberegovo**	**2.14**	**23**	*i* P	**Pn**	**00 51 16.4**	**-0.2**
KBTR				*e*S	**Sn**	**00 51 39.8**	**-2.1**
SRDR	**Sredinnyy**	**2.26**	**337**	*e*P	**Pn**	**00 51 19.2**	**+1.0**
SRDR				S	**Sn**	**00 51 44.5**	**-0.4**
PETK	**Petropavlovsk-**	**2.44**	**243**	Pn	**Pn**	**00 51 19.9**	**-0.8**
PETK	comp=E,24nm,0.3s,baz=75,slow=19,SNR=223			Sn	**Sn**	**00 51 52.2**	**+2.8**
	comp=E,31nm,0.3s,baz=277,slow=23,SNR=13						
GRL	**Gorelyy**	**2.58**	**230**	P	**Pn**	**00 51 22.7**	**0.0**
GRL				S	**Sn**	**00 51 50.8**	**-2.1**
MIPR	**Malaya Ipel'ka**	**3.38**	**236**	P	**Pn**	**00 51 34.9**	**+1.4**
SKR	**Severo-Kuril's**	**4.79**	**224**	*e*PN	Px	00 52 10.0	
SKR				*e*		00 52 54.0	
ALID	**Alaid**	**4.89**	**228**	P	**Pn**	**00 51 55.5**	**+1.4**
ASAJ	**Asahikawa**	**15.85**	**238**	Pn	**Pn**	**00 54 23.3**	**+1.1**
MAJO	**Matsushiro**	**23.84**	**231**	*e*P	**P**	**00 55 50.7**	**+0.1**
MAJO	comp=E,3.8nm,0.4s,mb4.2			pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.2						
MJAR	**Matsushiro Arr**	**23.84**	**231**	P	**P**	**00 55 51.0**	**+0.5**
	comp=Z,1.0nm,0.4s,mb3.6,baz=38,slow=6.2,SNR=4.0						
MCK	**McKinley**	**26.64**	**49**	P	**P**	**00 56 09.2**	**-6.5**
COLA	**College**	**27.07**	**47**	P	**P**	**00 56 12.7**	**-6.8**
INCN	**Inchon**	**29.02**	**249**	*e*P	**P**	**00 56 37.1**	**0.0**
TATO	**Taipei**	**41.50**	**241**	*e*P	**P**	**00 58 24.0**	**-0.2**
	comp=Z,170nm,1.6s						
YHNB	**Yeheng**	**41.81**	**241**	P	**P**	**00 58 26.6**	**-0.2**
GUMO	**Guam**	**42.59**	**204**	*e*P	**P**	**00 58 33.4**	**+0.3**
GUMO	comp=Z,10.0nm,0.4s,mb4.9			pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.9						
ENH	**Enshi**	**43.96**	**258**	*e*P	**P**	**00 58 43.7**	**-0.4**
	comp=Z,4.4nm,0.3s,mb4.7						
MKAR	**Makanchi Array**	**48.31**	**295**	P	**P**	**00 59 16.1**	**-1.9**
	comp=Z,0.3nm,0.6s,mb3.5,baz=47,slow=6.6,SNR=3.2						
BRVK	**Borovoye**	**50.27**	**308**	*e*P	**P**	**00 59 32.3**	**-0.6**
	comp=Z,1.4nm,0.3s,mb4.5						
BRVK	**Borovoye**	**50.27**	**308**	*e*P	**P**	**00 59 32.3**	**-0.6**
BRVK	comp=Z,1.0nm,0.3s,mb4.3			pmax	pmax		
KMI	**Kunming**	**51.74**	**260**	P	**P**	**00 59 40.5**	**-3.8**
KMI	comp=Z,15nm,1.1s,mb4.8			pmax	pmax		
ARU	**Arti**	**53.04**	**317**	P	**P**	**00 59 50.4**	**-3.0**
ARU	**Arti**	**53.04**	**317**	P	**P**	**00 59 50.4**	**-3.1**
TKM2	**Tokmak 2**	**54.44**	**296**	P	**P**	**00 59 58.2**	**-5.7**
AML	**Almayashu**	**55.99**	**296**	*e*P	**P**	**01 00 12.8**	**-2.3**
JOF	**Joensuu**	**56.82**	**335**	*e*P	**P**	**01 00 20.6**	**-0.1**
JOF	comp=Z,2.0nm,0.6s,mb4.3			pmax	pmax		
JOF	**Joensuu**	**56.82**	**335**	*e*p	**P**	**01 00 20.6**	**-0.1**
	comp=Z,1.5nm,0.6s,mb4.2						
KAF	**Kangasniemi**	**58.70**	**337**	*e*P	**P**	**01 00 32.6**	**-1.3**
KAF	comp=Z,2.0nm,0.7s,mb4.3			pmax	pmax		
KAF	**Kangasniemi**	**58.70**	**337**	*e*p	**P**	**01 00 32.6**	**-1.3**
	comp=Z,2.2nm,0.7s,mb4.3						
CMAR	**Chiang Mai Arr**	**59.13**	**258**	P	**P**	**01 00 39.7**	**+2.3**
	comp=Z,0.4nm,0.4s,mb3.8,baz=23,slow=7.1,SNR=2.9						
FINES	**FINESS Array B**	**59.34**	**337**	P	**P**	**01 00 38.2**	**-0.1**
	comp=Z,1.1nm,0.4s,mb4.2,baz=42,slow=7.2,SNR=10						
OBN	**Obninsk**	**61.93**	**328**	*e*P	**P**	**01 00 53.9**	**-2.1**
	comp=Z,6.8nm,0.5s,mb5.0						
NOA	**NORSAR Array B**	**62.63**	**344**	P	**P**	**01 01 00.2**	**-0.3**
	comp=Z,0.4nm,0.5s,mb3.8,baz=23,slow=6.7,SNR=3.8						
AKASG	**Malin Array Be**	**67.99**	**329**	P	**P**	**01 01 36.0**	**+0.6**
AKASG	**Malin Array Be**	**67.99**	**329**	P	**P**	**01 01 36.0**	**+0.6**
	comp=Z,0.6nm,0.3s,mb4.1,baz=31,slow=6.4,SNR=2.9						
TXAR	**Lajitas Array**	**69.52**	**68**	P	**P**	**01 01 46.5**	**+1.2**
	comp=Z,0.2nm,0.7s,mb3.1,baz=297,slow=5.4,SNR=4.4						
BRTR	**Keskin Array B**	**76.18**	**321**	P	**P**	**01 02 24.7**	**+0.2**
	comp=Z,0.5nm,0.5s,mb3.8,baz=18,slow=4.4,SNR=4.9						
BRTR	**Keskin Array B**	**76.18**	**321**	*e*P	**P**	**01 02 26.2**	**+1.7**
BRTR	comp=Z,1.0nm,0.4s			pmax	pmax		
WRA	**Warramunga Arr**	**77.44**	**206**	P	**P**	**01 02 32.5**	**+0.9**
	comp=Z,0.4nm,0.3s,mb3.8,baz=20,slow=6.1,SNR=4.9						
ASAR	**Alice Springs**	**81.12**	**205**	P	**P**	**01 02 53.5**	**+1.9**
	comp=Z,0.2nm,0.7s,mb3.2,baz=15,slow=3.9,SNR=5.5						
ASAR	**Alice Springs**	**81.12**	**205**	*e*P	**P**	**01 02 55.3**	**+3.7**

ISCJB ***29*** *01:15:29.7±1.0,31.55N±0.03×103.76E±0.05, h11km±7km, mb3.8/7, Error ellipse: s-maj=7.6km s-min=5.5km az=16.7*

IDC ***29*** *01:15:29.9±1.0,31.67N×103.58E, h0km, mb3.7/6, mb1 3.9/8, mb1mx3.7/26, mbtmp3.8/8, ML3.9/2, Error ellipse: s-maj=35.2km s-min=18.2km az=59.0*

BJI ***29*** *01:15:30.7,31.55N×103.78E, h15km, ML3.7/13, Ms3.6/1, Ms7 3.5/1*

NEIC ***29*** *01:15:31.1±0.5,31.66N×103.59E, h10km, mb3.8/3, Error ellipse: s-maj=14.1km s-min=8.5km az=59.0*

ISC 29 01:15:31.2±1.0,**31.53N**±0.03×**103.66E**±0.05,**h8**km±8km, **n22**,σ1**§25**/30,**mb3.8**/7,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.62**	**172**	Pg	**Pg**	**01 15 42.5**	**-0.6**
CD2				Sg	**Sg**	**01 15 51.5**	**+0.3**
CD2	comp=N,3μm,0.7s			smax			
CD2	comp=E,3μm,0.6s			smax			
LZH	**Lanzhou**	**4.55**	**2**	*e*Pn	**Pn**	**01 16 41.5**	**+1.1**
LZH				Pg	**Pb**	**01 16 51.5**	**+0.2**
LZH				Sn	**Sn**	**01 17 34.0**	**+0.5**
LZH				Sg	**Sb**	**01 17 49.3**	**+2.9**
LZH	comp=N,35nm,1.0s			smax			
LZH	comp=E,78nm,1.0s			smax			
LZH	comp=N,490nm,6.0s			LR	LR		
LZH	comp=E,240nm,5.5s			LR	LR		
LZH	comp=Z,390nm,7.1s			LR	LR		
XAN	**Xi'an**	**5.09**	**59**	Pn	**Pn**	**01 16 47.3**	**-0.5**
XAN				Sg	**Sg**	**01 18 15.0**	**+0.4**
XAN	comp=N,65nm,0.7s			smax			
XAN	comp=E,33nm,0.6s			smax			
ENH	**Enshi**	**5.16**	**103**	*e*Pn	**Pn**	**01 16 49.6**	**+0.9**
	comp=E,48nm,0.7s						
GYA	**Guiyang**	**5.69**	**152**	Pn	**Pb**	**01 17 05.0**	**-5.8**
GYA				Pg	**Pg**	**01 17 28.8**	**+8.6**
GYA				Sn	**Sn**	**01 18 01.5**	**-0.1**
GYA				Sg	**Sg**	**01 18 33.0**	**-0.9**
GYA	comp=N,30nm,0.6s			smax			
GYA	comp=E,50nm,0.7s			smax			
CMAR	**Chiang Mai Arr**	**13.69**	**199**	Pn	**Pn**	**01 18 46.0**	**+0.2**
	comp=E,0.3nm,0.3s,baz=352,slow=17,SNR=2.2						
GUN	**Gumba**	**15.87**	**261**	*e*P	**Pn**	**01 19 18.3**	**+3.4**
PKI	**Pulchoki**	**16.36**	**261**	*e*P	**Pn**	**01 19 23.2**	**+1.9**
	comp=E,24nm,0.8s						
SONM	**Songino Array**	**16.42**	**7**	Pn	**Pn**	**01 19 19.0**	**-3.0**
	comp=E,0.3nm,0.3s,baz=194,slow=9.6,SNR=3.4						
DMN	**Daman**	**16.61**	**261**	*e*P	**Pn**	**01 19 26.0**	**+1.5**
	comp=E,21nm,0.8s						
GKN	**Gorkha**	**16.89**	**263**	*e*P	**Pn**	**01 19 28.4**	**+0.4**
	comp=E,30nm,0.9s						
KSRS	**Korea Array**	**20.83**	**67**	P	**P**	**01 20 12.8**	**-0.3**
	comp=E,2.0nm,0.6s,baz=258,slow=10,SNR=9.2						
MK31	**Makanchi Array**	**22.42**	**319**	*e*P	**P**	**01 20 28.3**	**-1.8**
MKAR	**Makanchi Array**	**22.42**	**319**	P	**P**	**01 20 28.4**	**-1.8**
	comp=E,1.2nm,0.8s,mb3.4,baz=131,slow=12,SNR=5.4						
ZALV	**Zalesovo Beam**	**26.18**	**334**	P	**P**	**01 21 04.3**	**-1.7**
ZALV	**Zalesovo Beam**	**26.18**	**334**	P	**P**	**01 21 04.3**	**-1.7**
	comp=E,2.6nm,0.8s,mb3.8,baz=138,slow=9.5,SNR=9.4						
KURK	**Kurchatov**	**26.68**	**323**	*e*P	**P**	**01 21 09.9**	**-0.6**
	comp=E,2.7nm,1.3s,mb3.6						
KURK	**Kurchatov**	**26.68**	**323**	P	**P**	**01 21 09.5**	**-1.1**
	comp=E,2.7nm,0.8s,mb3.8,baz=128,slow=9.1,SNR=10						
ABKAR	**Akbulak array**	**37.11**	**311**	*e*P	**P**	**01 22 39.7**	**-2.3**
	comp=E,0.6nm,0.6s,mb3.6						
ARU	**Arti**	**39.87**	**322**	*e*P	**P**	**01 23 04.5**	**-0.6**
	comp=E,3.9nm,0.9s,mb4.1						
WRA	**Warramunga Arr**	**59.03**	**146**	P	**P**	**01 25 32.8**	**+1.1**
	comp=E,1.1nm,0.8s,mb4.0,baz=340,slow=7.5,SNR=4.7						
ASAR	**Alice Springs**	**62.05**	**148**	P	**P**	**01 25 53.6**	**+1.3**
	comp=E,0.4nm,0.7s,mb3.7,baz=339,slow=7.4,SNR=4.4						

NDI ***29*** *01:26:34.0±3.6,30.97N×83.74E, h10km, ML3.8, mb4.0(NEIC)*

IDC ***29*** *01:26:39.9±0.9,30.57N×83.25E, h0km, mb3.9/13, mb1 4.0/15, mb1mx3.9/30, mbtmp3.9/15, ML3.9/2, Error ellipse: s-maj=28.3km s-min=16.1km az=50.0*

NEIC ***29*** *01:26:41.7±0.5,30.55N×83.25E, h10km, mb4.0/4, Error ellipse: s-maj=12.8km s-min=6.5km az=220.0*

ISCJB ***29*** *01:26:42.6±1.6,30.56N±0.06×83.27E±0.04, h30km±12km, mb3.8/16, Error ellipse: s-maj=10.0km s-min=6.4km az=173.4*

ISC 29 01:26:42.8±1.2,**30.57N**±0.05×**83.28E**±0.04,**h17**km±7km, **n38**,σ1**§01**/43,**mb3.8**/16,**Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTH	**Pithoragarh**	**2.84**	**250**	*e*PKP	**Pg**	**01 27 34.2**	**-3.1**
PTH				*e*S	**Sg**	**01 28 13.9**	**-0.2**
JOSI	**Joshimath**	**3.21**	**271**	*e*S	**Sn**	**01 28 10.1**	**-0.3**
JOSI				AML	AML	01 28 29.4	
JOSI	comp=E,383nm,0.9s			AML	AML	01 28 33.8	
	comp=N,389nm,1.0s						
KLP	**Kalpa**	**4.42**	**284**	*ex*	**Pg**	**01 28 09.5**	**+2.0**
KLP				*e*S	**Sn**	**01 28 38.8**	**-1.5**
DDI	**Dehra Dun**	**4.51**	**268**	*ex*	**Pn**	**01 27 53.0**	**+2.5**
DDI				*ex*	**Sg**	**01 29 02.0**	**-5.8**
SDNR	**Sundarnagar**	**5.49**	**281**	*ex*	**Pg**	**01 28 27.5**	**-0.5**
NDI	**New Delhi**	**5.60**	**252**	*e*PKP	**Pn**	**01 28 05.0**	**-0.4**
NDI				*ex*	x	01 29 15.0	
SONA	**Sohna**	**5.88**	**248**	*e*PKP	**Pn**	**01 28 07.2**	**-1.9**
SONA				*ex*	x	01 29 22.8	
KUDL	**Kundal**	**6.40**	**250**	*e*PKP	**Pb**	**01 28 37.2**	**+3.4**
KUDL				*e*S	**Sb**	**01 29 50.6**	**+0.7**
LSA	**Lhasa**	**6.87**	**95**	*e*Pn	**Pn**	**01 28 24.1**	**+1.2**
	comp=N,18nm,1.0s						
KHET	**Khetri**	**6.98**	**251**	*e*PKP	**Pn**	**01 28 23.7**	**-0.6**
KHET				*ex*	**Sn**	**01 29 46.0**	**+2.7**
KBL	**Kabul**	**12.64**	**292**	*e*Pn	**Pn**	**01 29 42.9**	**+1.0**
	comp=N,5.0nm,0.7s						
AML	**Almayashu**	**13.87**	**329**	*e*Pn	**Pn**	**01 29 58.3**	**-0.4**
EKS2	**Erkin-Say**	**14.27**	**330**	*e*Pn	**Pn**	**01 30 04.3**	**+0.3**
	comp=N,3.4nm,0.9s						
KKAR	**Karatay Array**	**16.13**	**324**	*e*Pn	**Pn**	**01 30 27.6**	**-1.2**
MK31	**Makanchi Array**	**16.22**	**358**	*e*Pn	**Pn**	**01 30 31.5**	**+1.7**
MKAR	**Makanchi Array**	**16.22**	**358**	Pn	**Pn**	**01 30 25.2**	**-4.7**
MKAR	**Makanchi Array**	**16.22**	**358**	Pn	**Pn**	**01 30 25.2**	**-4.7**
	comp=N,0.1nm,0.3s,baz=182,slow=14,SNR=4.3						
CMAR	**Chiang Mai Arr**	**18.64**	**127**	P	**Pn**	**01 30 59.7**	**-0.5**
	comp=N,0.6nm,0.3s,baz=312,slow=10,SNR=9.2						
KURK	**Kurchatov**	**20.43**	**351**	*e*P	**P**	**01 31 18.7**	**-0.4**
	comp=N,1.4nm,1.0s						
KURK	**Kurchatov**	**20.43**	**351**	P	**P**	**01 31 18.1**	**-1.0**
	comp=N,2.6nm,0.6s,baz=173,slow=9.6,SNR=16						
ZALV	**Zalesovo Beam**	**23.39**	**2**	P	**P**	**01 31 50.8**	**0.0**
	comp=N,0.7nm,0.5s,mb3.4,baz=196,slow=11,SNR=5.4						
BVAR	**Borovoye Array**	**24.34**	**341**	P	**P**	**01 32 00.1**	**+0.6**
	comp=N,1.1nm,0.5s,mb3.6,baz=152,slow=9.3,SNR=6.2						
BRVK	**Borovoye**	**24.40**	**341**	*e*P	**P**	**01 32 00.7**	**+0.6**
	comp=N,1.8nm,0.6s,mb3.7						
SONM	**Songino Array**	**24.72**	**39**	P	**P**	**01 32 02.6**	**-0.5**
	comp=N,2.0nm,0.8s,mb3.7,baz=213,slow=11,SNR=4.3						
ABKAR	**Akbulak array**	**25.69**	**323**	*e*P	**P**	**01 32 12.8**	**+1.0**
	comp=N,0.9nm,0.4s,mb3.6						
AKTK	**Aktyubinsk**	**27.39**	**324**	P	**P**	**01 32 27.2**	**-0.1**
AKTO	**Aktyubinsk**	**27.39**	**324**	P	**P**	**01 32 27.2**	**-0.1**
	comp=N,0.8nm,0.5s,mb3.5,baz=98,slow=5.2,SNR=4.5						
KSRS	**Korea Array**	**37.37**	**67**	P	**P**	**01 33 54.0**	**-0.6**
	comp=N,0.6nm,0.5s,mb3.8,baz=270,slow=9.0,SNR=3.5						
FINES	**FINESS Array B**	**48.07**	**327**	P	**P**	**01 35 20.2**	**-0.9**
	comp=N,3.0nm,0.9s,mb4.3,baz=126,slow=14,SNR=4.5						
KWP	**Kalwaria Pacla**	**48.70**	**311**	*e*P	**P**	**01 35 26.8**	**+0.6**
	comp=N,5.8nm,1.0s,mb4.6						
HFS	**Hagfors**	**53.94**	**325**	P	**P**	**01 36 04.2**	**-1.1**
	comp=N,1.7nm,0.7s,mb4.1,baz=87,slow=7.6,SNR=4.5						
NOA	**NORSAR Array B**	**55.16**	**326**	P	**P**	**01 36 13.8**	**-0.3**
	comp=N,0.6nm,0.7s,mb3.7,baz=254,slow=9.8,SNR=2.7						
LPG	**La Plagne**	**59.93**	**308**	*e*P	**P**	**01 36 48.2**	**+0.2**
LPL	**La Plagne**	**59.94**	**308**	*e*P	**P**	**01 36 47.9**	**-0.2**
	comp=N,7.2nm,1.1s,mb4.3						
WRA	**Warramunga Arr**	**70.22**	**129**	P	**P**	**01 37 54.8**	**-0.3**
	comp=N,1.3nm,0.5s,mb4.1,baz=324,slow=6.4,SNR=12						
ASAR	**Alice Springs**	**72.56**	**132**	P	**P**	**01 38 09.9**	**+0.8**
	comp=N,0.1nm,0.4s,mb3.1,baz=298,slow=5.5,SNR=4.1						
TORD	**Torodi Ar. Bea**	**76.27**	**277**	P	**P**	**01 38 30.6**	**-0.4**
	comp=N,0.4nm,0.7s,mb3.5,baz=62,slow=5.1,SNR=5.0						
ILAR	**Eielson Array**	**77.27**	**20**	P	**P**	**01 38 35.7**	**-0.2**
	comp=N,0.9nm,0.9s,mb3.7,baz=295,slow=4.9,SNR=10						

SKHL 29 01:32:40.0±0.1,**55.20N**×**124.05E**,**h8**km±1km,**mb3.9**/7, **Southeastern Siberia**

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

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLNS	**Chul'man**	**1.71**	**16**	*e*Pg	Pg	01 33 14.0	+1.3
CLNS	53nm,0.1s			AMB	AMB	01 33 14.3	
CLNS	169nm,0.3s			*e*Sg	Sg	01 33 36.6	+1.8
CLNS	84nm,0.3s			A		01 33 37.4	
CLNS				A		01 33 37.4	
KROS	**Kirovskiy**	**1.86**	**113**	*e*Pn	Pn	01 33 11.7	-0.4
KROS				*i* Pg	Pg	01 33 12.9	-2.7
KROS	15nm,0.4s			AMB	AMB	01 33 14.0	
KROS	33nm,0.4s			AMB	AMB	01 33 14.0	
KROS	38nm,0.4s			AMB	AMB	01 33 14.0	
KROS				pPg		01 33 15.4	
KROS				*e*Sg	Sg	01 33 37.0	-2.6
KROS	56nm,0.4s			A		01 33 39.8	
KROS	160nm,0.4s			A		01 33 39.8	
KROS	120nm,0.4s			A		01 33 39.8	
ZEA	**Zeya**	**2.37**	**127**	*e*Pg	Pg	01 33 22.9	-2.5
ZEA	30nm,0.3s			AMB	AMB	01 33 24.3	
ZEA	160nm,0.4s			*e*Sg	Sg	01 33 54.2	-2.0
ZEA				A		01 33 56.8	
ZEA	100nm,0.5s			A		01 33 57.0	
TUP	**Tupik**	**2.50**	**254**	*e*Pg	Pg	01 33 28.0	+0.2
TUP	25nm,0.5s			AMB	AMB	01 33 29.0	
TUP				*e*Sn	Sn	01 33 54.8	+3.4
TUP				*e*Sg	Sg	01 34 00.0	-0.1
TUP	46nm,0.8s			A		01 34 02.4	
BMKR	**Bomnak**	**2.81**	**98**	*e*Pn	Pn	01 33 25.5	+0.4
BMKR				*e*Pg	Pg	01 33 29.5	-4.2
BMKR	35nm,0.5s			AMB	AMB	01 33 29.7	
BMKR				pPg		01 33 32.5	
BMKR				*e*Sn	Sn	01 33 59.0	-0.1
BMKR				*e*Sg	Sg	01 34 07.0	-3.1
BMKR	81nm,0.5s			A		01 34 15.0	
CRS	**Chara**	**3.66**	**300**	*e*Pn	Pn	01 33 41.3	+4.4
CRS				*e*Pg	Pg	01 33 45.3	-4.8
CRS	13nm,1.0s			AMB	AMB	01 33 50.1	
CRS				*e*Sg	Sg	01 34 34.6	-2.9
CRS	36nm,1.0s			A		01 34 40.1	
EKMR	**Ekimchan**	**5.65**	**109**	*e*Pg	Pg	01 34 21.9	-6.2
EKMR	3.0nm,0.4s			AMB	AMB	01 34 25.8	
EKMR				*e*Sg	Sg	01 35 38.0	-3.3
EKMR	4.0nm,0.6s			A		01 35 46.5	
EKMR	3.0nm,0.6s			A		01 35 46.5	

IDC ***29*** *01:46:37.4±3.2,7.16S×108.41E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.7/20, mbtmp3.7/6, Error ellipse: s-maj=181.0km s-min=19.9km az=52.0*

ISCJB ***29*** *01:46:42.7±0.6,7.14S±0.09×108.45E±0.05, h60km±8km, mb3.7/5, Error ellipse: s-maj=16.3km s-min=7.2km az=16.2*

DJA ***29*** *01:46:42, 7.07S×108.53E, h14km, MLv4.0/12*

NEIC ***29*** *01:46:43.1±2.8, 7.02S×108.61E, h35km, Error ellipse: s-maj=160.0km s-min=14.3km az=51.0*

NEIC Felt [II] at Ciamis.

ISC 29 01:46:43.6±0.6,**7.14S**±0.09×**108.46E**±0.05,**h49**km±9km, **n18**,σ0**§76**/19,**mb3.7**/5,**Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**0.76**	**237**	P	**Pn**	**01 46 56.9**	**-1.2**
CISI				S	**Sn**	**01 47 09.2**	**+0.6**
CLJI	**Cilicap**	**0.80**	**136**	S	**Sn**	**01 47 10.5**	**+1.0**
LEM	**Lembang**	**0.89**	**290**	P	**Pn**	**01 46 59.8**	**0.0**
BJII	**Banjamegara**	**1.26**	**99**	P	**Pn**	**01 47 04.3**	**-0.5**
SKJI	**Sukabumi**	**1.89**	**274**	P	**Pn**	**01 47 17.9**	**+4.4**
YOGI	**Yogyakarta**	**1.94**	**110**	P	**Pn**	**01 47 13.5**	**-0.7**
SMRI	**Semarang**	**1.97**	**88**	P	**Pn**	**01 47 15.0**	**+0.4**
UGM	**Wanagama**	**2.19**	**111**	P	**Pn**	**01 47 17.1**	**-0.4**
SBJI	**Serang**	**2.52**	**294**	P	**Pn**	**01 47 27.8**	**+5.7**
PCJI	**Pacitan**	**2.89**	**111**	P	**Pn**	**01 47 27.2**	**0.0**
RBSI	**Rajabasa**	**2.99**	**295**	P	**Pn**	**01 47 28.4**	**-0.1**
PWJI	**Pagerwojo**	**3.43**	**105**	P	**Pn**	**01 47 35.4**	**+0.8**
FITZ	**Fitzroy Crossi**	**19.97**	**125**	P	**Pn**	**01 51 12.7**	**-1.4**
	1.0nm,0.7s,baz=298,slow=4.7,SNR=4.0						
CMAR	**Chiang Mai Arr**	**27.11**	**340**	P	**P**	**01 52 23.4**	**+1.3**
	0.7nm,0.4s,mb3.5,baz=177,slow=7.2,SNR=6.8						
WRA	**Warramunga Arr**	**28.14**	**119**	P	**P**	**01 52 30.6**	**-0.8**
	0.5nm,0.3s,mb3.6,baz=294,slow=9.9,SNR=3.2						
ASAR	**Alice Springs**	**29.44**	**127**	P	**P**	**01 52 43.4**	**+0.5**
	0.5nm,0.7s,mb3.4

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**4.80**	**351**	P	**Pn**	**02 07 46.4**	**+0.1**
MMRI	**Maumere**	**5.62**	**263**	P	**Pn**	**02 07 57.2**	**0.0**
	1.5nm4μm397nm,0.8s						
BBSI	**Bau Bau**	**5.84**	**295**	P	**Pn**	**02 08 00.3**	**+0.2**
	0.5nm1μm162nm,0.7s						
KDI	**Kendari**	**6.60**	**307**	P	**Pn**	**02 08 08.9**	**-1.5**
	0.1nm389nm30nm,0.8s						
LBMI	**Labuha**	**7.33**	**357**	P	**Pn**	**02 08 21.6**	**+1.4**
	2μm38nm,0.9s						
KNA	**Kununurra**	**7.74**	**174**	*e*P	**Pn**	**02 08 23.9**	**-1.8**
	18nm,0.2s						
KNA				*e*S	**Sn**	**02 09 51.1**	**-0.9**
KNA	**Kununurra**	**7.74**	**174**	P	**Pn**	**02 08 24.2**	**-1.5**
	6μm197nm,0.8s						
BKSI	**Bulukumba**	**8.15**	**289**	P	**Pn**	**02 08 32.0**	**+0.7**
	36nm,0.8s						
SPSI	**Sidrap Palu**	**9.01**	**296**	P	**Pn**	**02 08 41.9**	**-0.9**
	22nm,1.1s						
TTSI	**Tana Toraja**	**9.41**	**301**	P	**Pn**	**02 08 49.9**	**+1.7**
	2μm23nm,1.1s						
FITZ	**Fitzroy Crossi**	**10.27**	**192**	*e*P	**Pn**	**02 09 00.1**	**+0.6**
	12nm,0.6s						
FITZ				*e*S	**Sn**	**02 10 44.0**	**-9.0**
FITZ	**Fitzroy Crossi**	**10.27**	**192**	P	**Pn**	**02 08 57.2**	**-2.3**
	1.3nm,0.3s,baz=24,slow=9.1,SNR=18						
FITZ				S	**Sn**	**02 10 49.9**	**-3.1**
	7.2nm,0.3s,baz=73,slow=12,SNR=14						
FITZ	**Fitzroy Crossi**	**10.27**	**192**	P	**Pn**	**02 08 59.8**	**+0.3**
	19nm,0.6s						
WRA	**Warramunga Arr**	**13.41**	**153**	P	**Pn**	**02 09 40.2**	**-0.5**
WRA				S	**Sn**	**02 12 03.6**	**-5.4**
WRA	**Warramunga Arr**	**13.41**	**153**	P	**Pn**	**02 09 40.2**	**-0.5**
	1.8nm,0.3s,baz=318,slow=14,SNR=16						
WRA				S	**Sn**	**02 12 03.6**	**-5.4**
	3.2nm,0.3s,baz=331,slow=23,SNR=11						
WB2	**Warramunga Arr**	**13.42**	**153**	*e*Pn	**Pn**	**02 09 42.9**	**+2.1**
MBWA	**Marble Bar**	**15.26**	**210**	*e*P	**Pn**	**02 10 05.4**	**+1.4**
MBWA				*e*S	**S**	**02 12 43.9**	**-16**
MBWA	**Marble Bar**	**15.26**	**210**	*e*Pn	**Pn**	**02 10 05.7**	**+1.6**
	13nm,0.7s						
MBWA	**Marble Bar**	**15.26**	**210**	P	**Pn**	**02 10 05.7**	**+1.7**
	21nm,1.0s						
MYLDM	**Lahad Datu**	**16.10**	**324**	P	**Pn**	**02 10 18.4**	**+4.0**
COEN	**Coen**	**16.13**	**113**	*e*P	**Pn**	**02 10 15.2**	**+0.4**
ASAR	**Alice Springs**	**16.61**	**160**	P	**Pn**	**02 10 22.5**	**+1.9**
	0.6nm,0.3s,baz=330,slow=8.9,SNR=16						
ASAR				S	**S**	**02 13 21.8**	**-3.8**
	1.3nm,0.3s,baz=342,slow=25,SNR=6.2						
MEEK	**Meekatharra**	**20.51**	**204**	*e*P	**P**	**02 11 07.5**	**+4.3**
MEEK				*e*S	**S**	**02 14 47.5**	**+2.3**
TGY	**Tagaytay City**	**23.02**	**343**	P	**P**	**02 11 27.7**	**-1.2**
	144nm,0.3s,baz=102,slow=2.1,SNR=8.1						
MORW	**Morawa**	**23.73**	**207**	*e*P	**P**	**02 11 40.2**	**+4.8**
STKA	**Stephens Creek**	**26.96**	**154**	*e*P	**P**	**02 12 10.0**	**+5.4**
	2.2nm,0.5s,mb4.0						
STKA	**Stephens Creek**	**26.96**	**154**	P	**P**	**02 12 09.2**	**+4.7**
	2.1nm,0.4s,mb4.1,baz=320,slow=9.8,SNR=7.3						
STKA				PcP	PcP	02 15 25.6	+2.6
	1.7nm,0.4s,baz=331,slow=6.6,SNR=4.0						
CMSA	**Cobar Meteorol**	**28.70**	**147**	*e*P	**P**	**02 12 26.1**	**+6.1**
YNG	**Young**	**32.27**	**147**	*e*P	**P**	**02 12 58.3**	**+6.8**
	4.6nm,0.7s,mb4.3						
CMAR	**Chiang Mai Arr**	**38.82**	**313**	P	**P**	**02 13 46.7**	**-0.8**
	2.0nm,0.5s,mb4.0,baz=138,slow=6.7,SNR=12						
CMAR				PcP	PcP	02 15 58.0	+1.8
	0.7nm,0.3s,baz=172,slow=1.8,SNR=5.3						
CHTO	**Chiang Mai**	**39.05**	**313**	*e*P	**P**	**02 13 49.0**	**-0.5**
	2.4nm,0.7s,mb3.9						
KSRS	**Korea Array**	**45.22**	**0**	P	**P**	**02 14 38.2**	**-1.0**
	3.8nm,0.5s,mb4.2,baz=177,slow=9.5,SNR=17						
MJAR	**Matsushiro Arr**	**45.36**	**12**	P	**P**	**02 14 38.7**	**-1.6**
	1.1nm,0.3s,mb3.9,baz=194,slow=24,SNR=3.5						
ULN	**Ulaanbaatar**	**58.60**	**344**	*e*P	**P**	**02 16 18.4**	**+0.3**
	4.2nm,0.7s,mb4.4						
SONM	**Songino Array**	**58.76**	**343**	P	**P**	**02 16 19.1**	**-0.1**
	2.4nm,0.7s,mb4.2,baz=160,slow=5.3,SNR=6.1						
PETK	**Petropavlovsk-**	**65.94**	**19**	P	**P**	**02 17 07.7**	**+0.7**
	1.4nm,0.6s,mb4.0,baz=194,slow=3.7,SNR=3.2						
MK31	**Makanchi Array**	**67.94**	**328**	*e*P	**P**	**02 17 19.9**	**+0.2**
MKAR	**Makanchi Array**	**67.94**	**328**	P	**P**	**02 17 19.9**	**+0.2**
	2.5nm,0.7s,mb4.0,baz=120,slow=8.1,SNR=19						
TKM2	**Tokmak 2**	**69.44**	**322**	*e*P	**P**	**02 17 29.1**	**-0.1**
	1.7nm,0.6s,mb4.0						
AML	**Almayashu**	**70.21**	**320**	*e*P	**P**	**02 17 34.7**	**+0.8**
	2.9nm,0.7s,mb4.1						
EKS2	**Erkin-Say**	**70.43**	**321**	*e*P	**P**	**02 17 35.4**	**+0.2**
	1.8nm,0.7s,mb3.9						
ZALV	**Zalesovo Beam**	**71.57**	**335**	P	**P**	**02 17 41.1**	**-0.7**
	2.9nm,0.6s,mb4.2,baz=136,slow=4.9,SNR=8.8						
KURK	**Kurchatov**	**72.30**	**330**	P	**P**	**02 17 46.2**	**0.0**
KURK	**Kurchatov**	**72.30**	**330**	P	**P**	**02 17 46.2**	**0.0**
	3.2nm,0.5s,mb4.3,baz=135,slow=4.9,SNR=14						
BVAR	**Borovoye Array**	**77.81**	**329**	P	**P**	**02 18 18.0**	**+0.2**
	1.3nm,0.4s,mb3.9,baz=100,slow=7.7,SNR=8.4						
ABKAR	**Akbulak array**	**82.00**	**322**	*e*P	**P**	**02 18 40.1**	**-0.3**
	0.6nm,0.4s,mb3.6						
AKTK	**Aktyubinsk**	**83.59**	**323**	P	**P**	**02 18 48.6**	**0.0**
AKTO	**Aktyubinsk**	**83.59**	**323**	P	**P**	**02 18 48.6**	**0.0**
	2.3nm,0.8s,mb4.0,baz=115,slow=5.1,SNR=7.4						
ARU	**Arti**	**85.45**	**329**	*e*P	**P**	**02 18 57.6**	**-0.3**
	2.9nm,0.4s,mb4.4						
PDAR	**Pinedale Array**	**119.09**	**45**	PKP	PKPdf	02 25 11.1	+2.5
	0.4nm,0.6s,baz=0.0,slow=1.6,SNR=4.1						
MNTX	**Cornudas Mount**	**125.26**	**57**	*e*PKPdf	PKPdf	02 25 23.7	+2.8
TORD	**Torodi Ar. Bea**	**126.93**	**280**	PKP	PKPdf	02 25 26.1	+1.6
	0.4nm,0.5s,baz=57,slow=1.8,SNR=5.2						
TXAR	**Lajitas Array**	**127.25**	**59**	PKP	PKPdf	02 25 27.8	+3.1
	0.2nm,0.5s,baz=343,slow=0.9,SNR=6.3						
JCT	**Junction City**	**130.20**	**57**	*e*PKPdf	PKPdf	02 25 32.3	+2.0
CPUP	**Villa Florida**	**145.50**	**172**	*e*PKPbc	PKPbc	02 26 02.4	+3.7
CPUP	**Villa Florida**	**145.50**	**172**	PKPbc	PKPbc	02 26 02.5	+3.8
	1.7nm,0.4s,baz=174,slow=2.2,SNR=15						
LPAZ	**La Paz**	**151.12**	**147**	*e*PKPbc	PKPbc	02 26 18.2	+4.4
LPAZ	**La Paz**	**151.12**	**147**	PKPbc	PKPbc	02 26 18.6	+4.8
	3.4nm,0.4s,baz=225,slow=1.4,SNR=33						

*MOS **29** 02:07:51.3±0.8,36°.46N×70°.88E,h188km,mb3.9/2,Error ellipse: s-maj=20.6km s-min=7.4km az=86.9*
*ISCJB **29** 02:07:51.7±0.3,36°.49N±0°.03×70°.81E±0°.05,h188km±5km, mb3.7/7,Error ellipse: s-maj=7.2km s-min=3.9km az=167.6*
*NEIC **29** 02:07:52.0±0.6,36°.44N×70°.84E,h183km±6km,mb3.9/5, Error ellipse: s-maj=10.7km s-min=7.2km az=120.0*
*IDC **29** 02:07:53.0±2.3,36°.48N×70°.94E,h192km±21km,mb3.6/6, mb1 3.7/12,mb1mx3.4/29,mbtmp3.6/12,Error ellipse: s-maj=18.9km s-min=14.7km az=115.0*
*BJI **29** 02:07:53.1,37°.14N×70°.36E,h187km,mB4.5/3,mb4.1/3*
*NNC **29** 02:07:56.4±3.5,36°.85N×70°.66E,h156km±33km,mb3.3, mpv4.4,Error ellipse: s-maj=28.0km s-min=16.7km az=17.0*

ISC 29 02:07:52.7±0.3,36°51N±0°.02×70°85E±0°.05,h184km±5km, n75,σ1°07/99,mb3.7/7,11C-10D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.45**	**217**	*e*Pn	**Pn**	**02 08 34.6**	**-0.4**
KBL				*e*Sn	**Sn**	**02 09 07.0**	**-0.9**
CEP	**Cherat**	**2.81**	**162**	⇑P	**Pn**	**02 08 40.3**	**+1.0**
CEP				S	**Sn**	**02 09 16.0**	**+0.5**
CHCP	**Chirah Chowk**	**3.46**	**144**	⇑P	**Pn**	**02 08 48.7**	**+1.5**
THW	**Thamme Wali**	**3.77**	**168**	⇑P	**Pn**	**02 08 51.5**	**+0.4**
KSH	**Kashi**	**5.04**	**52**	P	**Pn**	**02 09 04.0**	**-3.2**
KSH				S	**Sn**	**02 09 56.8**	**-8.9**
KSH				smax			
	comp=N,300nm,1.1s						
KSH				smax			
	comp=E,140nm,0.7s						
AML	**Almayashu**	**6.04**	**21**	P	**Pn**	**02 09 20.5**	**+0.4**
	SNR=102						
AML	**Almayashu**	**6.04**	**21**	*e*Pn	**Pn**	**02 09 20.3**	**+0.3**
	comp=E,1.3nm,0.9s						
AML				*e*Sn	**Sn**	**02 10 24.3**	**-4.7**
UCH	**Uchtor**	**6.38**	**25**	P	**Pn**	**02 09 25.3**	**+0.7**
	SNR=5.3						
UCH	**Uchtor**	**6.38**	**25**	*e*Pn	**Pn**	**02 09 25.0**	**+0.5**
	comp=E,9.1nm,0.6s						
EKS2	**Erkin-Say**	**6.55**	**19**	P	**Pn**	**02 09 27.2**	**+0.4**
	SNR=32						
EKS2	**Erkin-Say**	**6.55**	**19**	*e*Pn	**Pn**	**02 09 26.7**	**-0.1**
EKS2				*e*Sn	**Sn**	**02 10 36.9**	**-4.3**
KK31	**Karatay Array**	**6.59**	**358**	⇓P	**Pn**	**02 09 27.0**	**-0.3**
	comp=E,5.3nm,0.2s,baz=190,slow=17,SNR=375						
KK31				⇑S	**Sn**	**02 10 37.7**	**-4.5**
	comp=E,39nm,0.4s						
KK31	**Karatay Array**	**6.59**	**358**	*i* PN	**Pn**	**02 09 27.0**	**-0.4**
KK31				pmax	pmax		
	comp=Z,34nm,0.2s						
KKAR	**Karatay Array**	**6.59**	**358**	*e*Pn	**Pn**	**02 09 26.9**	**-0.5**
	comp=Z,30nm,0.2s						
KKAR				*e*Sn	**Sn**	**02 10 34.6**	**-7.6**
KKAR	**Karatay Array**	**6.59**	**358**	*e*PN	**Pn**	**02 09 26.9**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,30nm,0.2s						
AAK	**Ala-Archa**	**6.74**	**24**	P	**Pn**	**02 09 29.9**	**+0.6**
	SNR=13						
AAK	**Ala-Archa**	**6.74**	**24**	P	**Pn**	**02 09 30.0**	**+0.7**
	comp=Z,5.8nm,0.3s,baz=172,slow=5.7,SNR=19						
AAK				S	**Sn**	**02 10 44.0**	**-1.5**
	comp=Z,3.5nm,0.3s,baz=321,slow=20,SNR=20						
AAK	**Ala-Archa**	**6.74**	**24**	*d* PN	**Pn**	**02 09 29.7**	**+0.5**
KBK	**Karagaybulak**	**6.91**	**26**	P	**Pn**	**02 09 32.9**	**+1.3**
	SNR=10						
ULHL	**Ulahol**	**7.09**	**34**	P	**Pn**	**02 09 34.9**	**+1.0**
	SNR=5.5						
SDNR	**Sundarnagar**	**7.12**	**133**	*e*PKP	**Pn**	**02 09 34.5**	**+0.1**
SDNR				*e*S	**Sn**	**02 10 48.5**	**-6.4**
CHMS	**Chumysh**	**7.15**	**24**	P	**Pn**	**02 09 34.9**	**+0.3**
	SNR=9.8						
USP	**Ospenovka**	**7.31**	**21**	P	**Pn**	**02 09 36.4**	**-0.4**
	SNR=35						
TKM2	**Tokmak 2**	**7.38**	**28**	⇑P	**Pn**	**02 09 38.0**	**+0.3**
	comp=Z,16nm,0.5s						
TKM2				⇑S	**Sn**	**02 10 58.8**	**-2.0**
	comp=Z,15nm,0.7s						
TKM2	**Tokmak 2**	**7.38**	**28**	P	**Pn**	**02 09 38.1**	**+0.5**
	SNR=35						
TKM2	**Tokmak 2**	**7.38**	**28**	*e*PN	**Pn**	**02 09 37.8**	**+0.2**
SMLA	**Simla**	**7.51**	**134**	*i* P	**Pn**	**02 09 37.9**	**-1.6**
SMLA				*i* S	**Sn**	**02 10 58.0**	**-6.1**
SMLA						02 11 00.1	
	comp=E,670nm,0.3s						
SMLA						02 11 00.5	
	comp=N,716nm,0.3s						
KLP	**Kalpa**	**7.89**	**127**	*e*S	**Sn**	**02 11 06.6**	**-6.6**
KLP				AML	AML	02 11 12.2	
	comp=E,149nm,0.4s						
KLP				AML	AML	02 11 13.0	
	comp=N,249nm,0.5s						
JOSI	**Joshimath**	**9.38**	**127**	*e*PKP	**Pn**	**02 10 03.7**	**-0.4**
JOSI				*ex*	x	02 11 37.7	
JOSI				AML	AML	02 11 46.3	
	comp=E,111nm,0.4s						
JOSI				AML	AML	02 11 47.1	
	comp=N,154nm,0.4s						
KHET	**Khetri**	**9.39**	**152**	*e*PKP	**Pn**	**02 10 02.6**	**-1.6**
KHET				*e*S	**Sn**	**02 11 38.2**	**-11**
KHET				AML	AML	02 11 43.5	
	comp=N,27nm,0.4s						
KHET				AML	AML	02 11 44.7	
	comp=E,29nm,0.5s						
NDI	**New Delhi**	**9.47**	**144**	*e*PKP	**Pn**	**02 10 02.5**	**-2.7**
KUDL	**Kundal**	**9.60**	**149**	*e*PKP	**Pn**	**02 10 00.8**	**-6.2**
KUDL				*e*S	**Sn**	**02 11 40.0**	**-14**
KUDL				AML	AML	02 11 42.3	
	comp=E,20nm,0.6s						
KUDL				AML	AML	02 11 46.2	
	comp=N,17nm,0.6s						
SONA	**Sohna**	**9.77**	**146**	*e*PKP	**Pn**	**02 10 08.3**	**-0.8**
SONA				*e*S	**Sn**	**02 11 46.2**	**-12**
SONA				AML	AML	02 11 53.3	
	comp=E,34nm,0.5s						
SONA				AML	AML	02 11 54.7	
	comp=N,18nm,0.5s						
MK31	**Makanchi Array**	**13.36**	**36**	P	**Pn**	**02 10 57.2**	**+2.2**
	comp=N,7.7nm,0.7s,baz=217,slow=11,SNR=38						
MK31	**Makanchi Array**	**13.36**	**36**	*e*Pn	**Pn**	**02 10 55.0**	**0.0**
MK31				*e*P		02 10 58.9	
MKAR	**Makanchi Array**	**13.36**	**36**	P	**Pn**	**02 10 55.3**	**+0.2**
	comp=N,0.6nm,0.3s,baz=214,slow=9.0,SNR=17						
MKAR	**Makanchi Array**	**13.36**	**36**	*ce*P	**Pn**	**02 10 57.7**	**+2.7**
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DANN	**Dangsing**	**13.59**	**123**	*e*P	**Pn**	**02 10 58.1**	**-0.1**
KOLN	**Koldanda**	**13.87**	**125**	*e*P	**Pn**	**02 11 00.4**	**-1.2**
	comp=Z,11nm,0.3s						
BHPL	**Bhopal**	**14.39**	**155**	*ex*	**Pn**	**02 11 08.3**	**+0.3**
GKN	**Gorkha**	**14.41**	**122**	*e*P	**Pn**	**02 11 08.2**	**-0.1**
	comp=Z,34nm,0.4s						
DMN	**Daman**	**14.98**	**122**	*e*P	**Pn**	**02 11 15.8**	**+0.5**
	comp=Z,23nm,0.5s						
KKN	**Kakani**	**14.98**	**121**	*e*P	**Pn**	**02 11 15.6**	**+0.2**
AB31	**Akbulak array**	**15.02**	**331**	⇓P	**Pn**	**02 11 14.5**	**-1.1**
	comp=Z,2.1nm,0.3s,baz=162,slow=12,SNR=113						
AB31				⇓S	**S**	**02 13 57.0**	**-5.5**
	comp=Z,1.7nm,0.6s,baz=158,slow=23,SNR=4.6						
AB31	**Akbulak array**	**15.02**	**331**	P	**Pn**	**02 11 16.9**	**+1.3**
AB31				S	**S**	**02 13 52.1**	**-10**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AB31				smax			
	comp=Z,1.0nm,0.4s						
ABKAR	**Akbulak array**	**15.02**	**331**	*e*P	**Pn**	**02 11 14.4**	**-1.2**
	comp=Z,5.1nm,0.3s						
KURBB	**Kurchatov Arra**	**15.16**	**19**	⇓P	**Pn**	**02 11 19.2**	**+1.9**
	comp=Z,0.8nm,0.7s						
PKI	**Pulchoki**	**15.21**	**122**	*e*P	**Pn**	**02 11 19.2**	**+1.0**
	comp=Z,52nm,0.4s						
KURK	**Kurchatov**	**15.27**	**19**	⇑P	**Pn**	**02 11 19.8**	**+1.2**
	comp=Z,3.6nm,0.8s						
KURK	**Kurchatov**	**15.27**	**19**	*e*P	**Pn**	**02 11 19.4**	**+0.8**
	comp=Z,2.4nm,0.8s						
KURK				S	**S**	**02 14 06.5**	**-1.6**
KURK	**Kurchatov**	**15.27**	**19**	P	**Pn**	**02 11 17.9**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=210,slow=10,SNR=16						
KURK				S	**S**	**02 14 06.5**	**-1.6**
	comp=Z,0.0nm,0.3s,baz=205,slow=19,SNR=2.7						
KURK	**Kurchatov**	**15.27**	**19**	*e*P	**Pn**	**02 11 19.4**	**+0.8**
KURK				S	**S**	**02 14 06.5**	**-1.6**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
JIRN	**Jiri**	**15.70**	**120**	*e*P	**Pn**	**02 11 26.1**	**+2.0**
VOSK	**Vostochnaya**	**16.22**	**0**	⇑P	**Pn**	**02 11 31.4**	**+1.3**
	comp=Z,2.2nm,0.8s						
RAMN	**Ramite**	**16.42**	**121**	*e*P	**Pn**	**02 11 32.8**	**-0.1**
	comp=Z,15nm,0.4s						
ZRNK	**Zerenda**	**16.50**	**356**	⇑P	**Pn**	**02 11 34.3**	**+0.9**
	comp=Z,1.0nm,0.4s						
BVA0	**Borovoye Array**	**16.52**	**359**	⇓P	**Pn**	**02 11 35.7**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=225,slow=35,SNR=9.3						
BVAR	**Borovoye Array**	**16.52**	**359**	P	**Pn**	**02 11 33.5**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=161,slow=9.8,SNR=9.4						
BVAR				S	**S**	**02 14 34.0**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=168,slow=24,SNR=3.7						
BRVK	**Borovoye**	**16.56**	**359**	⇓P	**Pn**	**02 11 36.5**	**+2.3**
	comp=Z,6.3nm,0.7s						
BRVK	**Borovoye**	**16.56**	**359**	*e*P	**Pn**	**02 11 34.1**	**-0.1**
	comp=Z,3.7nm,0.6s						
BRVK	**Borovoye**	**16.56**	**359**	*c i*P	**Pn**	**02 11 34.3**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
AKTK	**Aktyubinsk**	**16.71**	**330**	P	**Pn**	**02 11 36.0**	**-0.1**
AKTO	**Aktyubinsk**	**16.71**	**330**	⇓P	**Pn**	**02 11 36.0**	**-0.1**
	comp=Z,1.5nm,0.8s						
AKTO	**Aktyubinsk**	**16.71**	**330**	P	**Pn**	**02 11 36.0**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=142,slow=12,SNR=32						
AKTO	**Aktyubinsk**	**16.71**	**330**	P	**Pn**	**02 11 36.0**	**-0.1**
AKTO				S	**S**	**02 14 32.2**	**-8.0**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKTO				smax			
	comp=Z,1.0nm,1.1s						
ODAN	**Odare**	**17.03**	**120**	*e*P	**Pn**	**02 11 40.9**	**+0.8**
	comp=Z,12nm,0.5s						
ZALV	**Zalesovo Beam**	**19.96**	**25**	P	**P**	**02 12 11.3**	**+0.9**
	comp=Z,3.5nm,0.3s,baz=221,slow=11,SNR=76						
ZALV				S	**S**	**02 15 43.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=220,slow=18,SNR=3.6						
NVS	**Novosibirsk**	**20.22**	**21**	⇓*i*P	**P**	**02 12 13.2**	**0.0**
NVS				*e*S	**S**	**02 15 42.8**	**-6.8**
NVS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NVS				pmax	pmax		
	comp=N,4.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,3.0nm,1.0s						
ARU	**Arti**	**21.59**	**341**	*d* iP	**P**	**02 12 28.6**	**+0.9**
ARU				*e*		02 12 56.8	
ARU				S	**S**	**02 16 14.6**	**+0.2**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb3.8						
FINES	**FINESS Array B**	**37.41**	**326**	P	**P**	**02 14 48.2**	**+0.7**
	comp=Z,2.2nm,0.9s,mb3.8,baz=116,slow=8.7,SNR=6.0						
ARCES	**ARCESS Array B**	**41.09**	**338**	P	**P**	**02 15 18.9**	**+1.0**
	comp=Z,4.1nm,1.0s,mb4.0,baz=110,slow=10,SNR=7.5						
NOA	**NORSAR Array B**	**44.30**	**323**	P	**P**	**02 15 43.6**	**-0.2**
	comp=Z,1.6nm,0.7s,mb3.8,baz=97,slow=7.8,SNR=5.6						
TORD	**Torodi Ar. Bea**	**65.59**	**269**	P	**P**	**02 18 15.3**	**-1.8**
	comp=Z,0.5nm,0.6s,mb3.5,baz=46,slow=5.5,SNR=3.8						
WRA	**Warramunga Arr**	**82.10**	**122**	P	**P**	**02 19 51.9**	**-0.8**
	comp=Z,0.5nm,0.5s,mb3.4,baz=326,slow=4.9,SNR=5.5						
ASAR	**Alice Springs**	**84.36**	**125**	P	**P**	**02 20 03.2**	**-1.0**
	comp=Z,0.4nm,0.5s,mb3.4,baz=292,slow=4.5,SNR=4.6						

*ISCJB **29** 02:46:17.8±0.8,36°.93N±0°.04×29°.13E±0°.05,h10km,Error ellipse: s-maj=6.3km s-min=5.3km az=11.1*
*CSEM **29** 02:46:17.9±0.3,36°.96N×29°.11E,h2km,MD2.8,Error ellipse: s-maj=7.0km s-min=5.3km az=25.0*
*DDA **29** 02:46:20.1,37°.07N×29°.14E,h7km±7km,Md2.8*

ISC 29 02:46:18.2±0.8,36°94N±0°.04×29°11E±0°.05,h10km,n16, σ0°95/27,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.38**	**55**	*e*PG	**Pg**	**02 46 24.9**	**-0.8**
GLHS				*e*SG	**Sg**	**02 46 31.4**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.38**	**55**	*e*Pg	**Pg**	**02 46 24.9**	**-0.7**
GLHS				*e*Sg	**Sg**	**02 46 31.4**	**+0.7**
GOLH	**Golhisar**	**0.47**	**50**	*i* P	**Pg**	**02 46 25.8**	**-1.5**
GOLH				*i* S	**Sg**	**02 46 33.3**	**-0.2**
GOLH	**Golhisar**	**0.47**	**50**	*i* P	**Pg**	**02 46 25.8**	**-1.5**
GOLH				*i* S	**Sg**	**02 46 33.3**	**-0.2**
ELL	**Elmali**	**0.67**	**106**	*e*PG	**Pg**	**02 46 31.4**	**+0.4**
ELL	**Elmali**	**0.67**	**106**	*e*Pg	**Pg**	**02 46 31.4**	**+0.4**
DNZL	**Cakiroluk**	**0.75**	**356**	*i* P	**Pg**	**02 46 31.0**	**-1.7**
DNZL				*i* S	**Sg**	**02 46 42.6**	**0.0**
DNZL	**Cakiroluk**	**0.75**	**356**	*i* P	**Pg**	**02 46 31.0**	**-1.7**
DNZL				*i* S	**Sg**	**02 46 42.6**	**0.0**
AKAS	**Kas**	**0.81**	**150**	*i* P	**Pg**	**02 46 34.1**	**+0.4**
AKAS				*i* S	**Sg**	**02 46 52.1**	**+8.0**
AKAS	**Kas**	**0.81**	**150**	*i* P	**Pg**	**02 46 34.1**	**+0.4**
MLSB	**Milas**	**1.13**	**289**	*e*PG	**Pg**	**02 46 38.6**	**-1.2**
MLSB	**Milas**	**1.13**	**289**	*e*Pg	**Pg**	**02 46 38.6**	**-1.2**
AYDN	**Tasoluk**	**1.22**	**307**	*i* P	**Pn**	**02 46 41.8**	**+0.5**
AYDN				*i* S	**Sb**	**02 46 57.9**	**+0.8**
AYDN	**Tasoluk**	**1.22**	**307**	*i* P	**Pn**	**02 46 41.8**	**+0.5**
AYDN				*i* S	**Sb**	**02 46 57.9**	**+0.8**
KHAL	**Karahalli**	**1.46**	**12**	*i* P	**Pn**	**02 46 45.6**	**+1.0**
KHAL				*i* S	**Sn**	**02 47 05.2**	**+1.3**
KHAL	**Karahalli**	**1.46**	**12**	*i* P	**Pn**	**02 46 45.7**	**+1.1**
KHAL				*i* S	**Sn**	**02 47 05.2**	**+1.4**

CASC 29 02:59:26.8±1.5,12°11N×87°21W,h56km±67km,MD3.6, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.61**	**83**	*e*P	Pn	02 59 39.6	-0.1
CRIN	**San Cristobal**	**0.61**	**15**	*i* P	Pn	02 59 40.1	+0.4
CNGN	**Cerro Negro**	**0.64**	**52**	*e*P	Pn	02 59 39.7	-0.3
CNGN				*e*S	Sn	02 59 50.9	+1.2
MOMN	**Momotombo**	**0.72**	**65**	*e*P	Pn	02 59 41.5	+0.4
CSAN		**0.77**	**84**	*e*P	Pn	02 59 42.2	+0.4
TISN	**Laguna Tiscapa**	**0.92**	**88**	*e*P	Pn	02 59 42.6	-1.0
CNCH	**Conchagua**	**1.31**	**332**	*e*P	Pn	02 59 49.4	+0.5
SSN	**San Juan del S**	**1.55**	**121**	*e*P	Pn	02 59 52.0	-0.1
BLLM	**Bellamira**	**1.66**	**323**	*e*P	Pn

LIT	**Litokhoron**	**2.07**	**91**	*e*Pg	**Pg**	**03 04 06.7**	**-2.0**
LIT	**Litokhoron**	**2.07**	**91**	*e*PG	**Pg**	**03 04 06.7**	**-2.0**
LIT	**Litokhoron**	**2.07**	**91**	*e*Pg	**Pg**	**03 04 06.7**	**-2.0**
AGG	**Agios Georgios**	**2.27**	**120**	*e*Pn	**Pn**	**03 04 09.6**	**+2.6**
AGG	**Agios Georgios**	**2.27**	**120**	*e*PN	**Pn**	**03 04 09.6**	**+2.6**
AGG	**Agios Georgios**	**2.27**	**120**	*e*Pn	**Pn**	**03 04 09.6**	**+2.6**
STON	**Ston**	**3.12**	**330**	*e*Pn	**Pn**	**03 04 18.1**	**-0.6**
STON				Sn	**Sn**	**03 04 55.4**	**-0.9**

*ISCJB **29** 03:04:07.7±0.8, 29°.16N±0'.02×34°.73E±0'.08, h2km±5km, Error ellipse: s-maj=12.1km s-min=3.6km az=170.9*
*CSEM **29** 03:04:08.3±0.6, 29°.18N×34°.78E, h10km, ML2.8, Error ellipse: s-maj=12.6km s-min=4.8km az=108.0*
*SGS **29** 03:04:09.7, 29°.10N×34°.83E, h4km*
*GII **29** 03:04:09.9±1.2, 29°.36N×34°.69E, h1km, Md2.5/4, Mm2.3/4*

ISC 29 03:04:08.2±0.9, **29°.16N**±0'.02×**34°.71E**±0'.08, **h3**km±5km, **n21**, σ0**°67**/31, **Egypt**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAQS	**Haql**	**0.21**	**120**	P	**Pg**	**03 04 13.3**	**+1.0**
HAQS	**Haql**	**0.21**	**120**	P	**Pg**	**03 04 13.3**	**+1.0**
EIL	**Elat**	**0.55**	**22**	Pg	**Pg**	**03 04 19.5**	**+0.7**
EIL				Sg	**Sg**	**03 04 26.4**	**+0.4**
MBRI	**Mt Berech**	**0.66**	**15**	Pg	**Pg**	**03 04 21.7**	**+0.8**
MBRI				Sg	**Sg**	**03 04 29.8**	**+0.3**
BDAS	**Al Bad'**	**0.80**	**155**	P	**Pg**	**03 04 23.9**	**+0.3**
BDAS	**Al Bad'**	**0.80**	**155**	P	**Pg**	**03 04 23.9**	**+0.3**
BDAS				S	**Sg**	**03 04 34.2**	**+0.3**
JLOS		**0.80**	**121**	P	**Pg**	**03 04 23.3**	**-0.3**
JLOS		**0.80**	**121**	P	**Pg**	**03 04 23.3**	**-0.3**
JLOS				S	**Sg**	**03 04 33.4**	**-0.6**
RSHS		**0.86**	**175**	P	**Pg**	**03 04 25.1**	**+0.4**
RSHS		**0.86**	**175**	P	**Pg**	**03 04 25.1**	**+0.4**
HRFI	**Mount Harif**	**0.92**	**18**	Pg	**Pg**	**03 04 25.6**	**-0.3**
HRFI				Sg	**Sg**	**03 04 37.7**	**-0.2**
KRMI	**Paran Flat**	**0.96**	**1**	Pg	**Pg**	**03 04 26.7**	**+0.1**
KRMI				Sg	**Sg**	**03 04 39.0**	**0.0**
ZFRI	**Zfri**	**1.45**	**16**	Pg	**Pg**	**03 04 34.8**	**-1.2**
ZFRI				Sg	**Sg**	**03 04 53.6**	**-1.3**
KZIT	**Kziot**	**1.77**	**351**	Pn	**Pn**	**03 04 39.4**	**-0.3**
KZIT				Sn	**Sn**	**03 05 02.8**	**+0.1**
TBKS	**Tabuk**	**1.86**	**120**	P	**Pn**	**03 04 41.5**	**+0.5**
TBKS	**Tabuk**	**1.86**	**120**	P	**Pn**	**03 04 41.5**	**+0.6**
RTMI	**Retamim**	**1.89**	**359**	Pn	**Pn**	**03 04 40.7**	**-0.7**
RTMI				Sn	**Sn**	**03 05 06.2**	**+0.4**
MZDA	**Masada**	**2.22**	**15**	Sn	**Sn**	**03 05 14.4**	**+0.5**
DBAS	**Duba**	**2.23**	**150**	P	**Pn**	**03 04 44.2**	**-1.9**
DBAS	**Duba**	**2.23**	**150**	P	**Pn**	**03 04 44.2**	**-1.9**
DSI	**Dead Sea**	**2.47**	**13**	Pn	**Pn**	**03 04 49.7**	**+0.3**
DSI				Sn	**Sn**	**03 05 20.6**	**+0.4**

CASC 29 03:47:05.5±2.3, **10°.99N**×**87°.99W**, **h9**km, **MD3.9, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**1.81**	**49**	*e*P	Pn	03 47 36.1	-0.8
COPN				*e*S	Sn	03 48 01.0	+1.1
CRIN	**San Cristobal**	**1.93**	**28**	*e*P	Pn	03 47 37.6	-1.0
CRIN				*e*S	Sn	03 48 04.5	+1.6
CSAN		**1.94**	**52**	*e*P	Pn	03 47 37.9	-0.8
CNGN	**Cerro Negro**	**1.96**	**40**	*e*P	Pn	03 47 37.8	-1.1
XAVN	**Gruta Xavier**	**2.00**	**55**	*e*P	Pn	03 47 39.1	-0.4
MOMN	**Momotombo**	**2.00**	**45**	*e*P	Pn	03 47 39.4	-0.1
MOMN				*e*S	Sn	03 48 06.3	+1.7
SSN	**San Juan del S**	**2.12**	**81**	*e*P	Pn	03 47 40.7	-0.5
SSN				*e*S	Sn	03 48 08.3	+0.8
CNCH	**Conchagua**	**2.28**	**4**	*e*P	Pn	03 47 42.2	-1.1
CONN	**Concepcion**	**2.39**	**76**	*e*P	Pn	03 47 43.6	-1.2
NY14	**Universidad de**	**2.44**	**98**	*i* P	Pn	03 47 44.6	-0.8
NY14				*i* S	Sn	03 48 13.8	-1.6
VCR	**Vista de Mar**	**2.47**	**110**	*e*P	Pn	03 47 44.0	-2.0
BUEV	**Buena Vista**	**2.54**	**94**	*i* P	Pn	03 47 46.0	-0.9
GB1A	**Borinquen Arri**	**2.55**	**94**	*i* P	Pn	03 47 46.2	-0.9
A494	**Palo Verde**	**2.67**	**104**	*i* P	Pn	03 47 47.2	-1.5
LIM1	**Limonal**	**2.70**	**96**	*i* P	Pn	03 47 48.1	-1.0
CUI	**Cuipilapa**	**2.79**	**97**	*i* P	Pn	03 47 49.7	-0.7
JCR	**Jicaral**	**3.05**	**112**	*e*P	Pn	03 47 54.3	+0.4
CHPA	**Chiripa**	**3.08**	**100**	*i* P	Pn	03 47 54.3	0.0
CGA2	**Cerro Gallo 2**	**3.60**	**105**	*e*P	Pn	03 48 03.0	+1.5
PRS1	**Puriscal**	**3.75**	**105**	*e*P	Pn	03 48 04.5	+0.9
LAJ	**Bijagual**	**3.97**	**106**	*e*P	Pn	03 48 02.4	-4.2
SJS	**Escuela Geolog**	**4.01**	**105**	*e*P	Pn	03 48 09.2	+2.1
URSC	**Urasca**	**4.30**	**105**	*e*P	Pn	03 48 13.3	+2.2
BUS	**Buena Vista**	**4.40**	**109**	*e*P	Pn	03 48 14.4	+1.9
ACR	**Cerro Adams**	**5.29**	**116**	*e*P	Pn	03 48 26.5	+1.7

*DMN **29** 03:52:14.0±0.3, 31°.33N×83°.09E, h2km, Ml4.8/7, Error ellipse: s-maj=8.4km s-min=6.6km az=68.0*
*IDC **29** 03:52:16.7±0.6, 30°.62N×83°.42E, h0km, mb4.2/20, mb1 4.3/23, mb1mx4.3/30, mbtmp4.2/23, ML3.8/3, MS3.8/16, Ms1 3.8/16, ms1mx3.5/35, Error ellipse: s-maj=18.5km s-min=13.9km az=41.0*
*NDI **29** 03:52:16.5±6.6, 30°.83N×83°.56E, h10km, ML4.2, mb4.5(NEIC)*
*BJI **29** 03:52:17.1, 30°.61N×83°.26E, h20km, mB4.6/21, mb4.4/32, Ms4.3/33, Ms7 4.1/30*
*NEIC **29** 03:52:18.8±0.3, 30°.63N×83°.32E, h10km, mb4.5/21, Error ellipse: s-maj=8.1km s-min=5.2km az=46.0*
*ISCJB **29** 03:52:19.2±0.6, 30°.75N±0'.02×83°.28E±0'.03, h19km±5km, mb4.3/53, MS3.7/22, Error ellipse: s-maj=4.6km s-min=2.9km az=38.5*
*MOS **29** 03:52:20.4±1.4, 30°.69N×83°.34E, h33km, mb4.6/23, Error ellipse: s-maj=10.5km s-min=5.3km az=116.0*

ISC 29 03:52:20.9±1.1, **30°.72N**±0'.02×**83°.29E**±0'.03, **h19**km±7km, **n158**, σ1**°32**/179, **mb4.3**/53, **MS3.7**/22, **6C-2D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.40**	**170**	*e*Pn	**Pn**	**03 53 01.2**	**+2.0**
DANN				*e*Sn	**Sb**	**03 53 36.2**	**+3.5**
	6μm,1.0s						
PTH	**Pithoragarh**	**2.91**	**247**	*e*PKP	**Pb**	**03 53 11.1**	**-1.0**
PTH				*e*S	**Sg**	**03 53 52.3**	**-2.0**
GKN	**Gorkha**	**2.96**	**156**	*e*Pn	**Pn**	**03 53 08.7**	**+1.9**
GKN				*e*Sn	**Sb**	**03 53 49.4**	**+0.7**
	944nm,0.6s						
KOLN	**Koldanda**	**2.96**	**175**	*e*Pn	**Pn**	**03 53 08.8**	**+2.0**
KOLN				*e*Sn	**Sb**	**03 53 49.5**	**+0.8**
	1μm,0.7s						
JOSI	**Joshimath**	**3.22**	**268**	*e*PKP	**Pb**	**03 53 16.1**	**-1.3**
JOSI				*e*S	**Sb**	**03 53 54.1**	**-2.1**
JOSI				AML	AML	03 54 01.2	
	comp=N,1μm,0.8s						
JOSI				AML	AML	03 54 02.4	
	comp=E,1μm,0.9s						
KKN	**Kakani**	**3.40**	**149**	*e*Pn	**Pn**	**03 53 14.5**	**+1.6**
KKN				*e*Sn	**Sb**	**03 53 59.4**	**-2.2**
DMN	**Daman**	**3.49**	**152**	*e*Pn	**Pn**	**03 53 15.8**	**+1.7**
DMN				*e*Sn	**Sb**	**03 54 02.4**	**-1.6**
	comp=E,1μm,0.9s						
GUN	**Gumba**	**3.60**	**140**	*e*Pn	**Pn**	**03 53 17.2**	**+1.5**
GUN				*e*Sn	**Sb**	**03 54 03.3**	**-4.0**
PKIN	**Phulchoki**	**3.64**	**149**	*e*Pn	**Pn**	**03 53 17.7**	**+1.5**
PKIN				*e*Sn	**Sb**	**03 54 04.7**	**-3.6**
PKI	**Pulchoki**	**3.65**	**149**	*e*Pn	**Pn**	**03 53 17.8**	**+1.5**
PKI				*e*Sn	**Sb**	**03 54 04.7**	**-3.9**
	comp=E,1μm,1.2s						
JIRN	**Jiri**	**3.97**	**140**	*e*Pn	**Pn**	**03 53 22.7**	**+2.0**
DDI	**Dehra Dun**	**4.53**	**266**	*e*PKP	**Pn**	**03 53 30.5**	**+2.0**
DDI				*ex*	x	03 54 39.5	
RAMN	**Ramite**	**4.75**	**141**	*e*Pn	**Pn**	**03 53 31.9**	**+0.4**
RAMN				*e*Sn	**Sn**	**03 54 30.2**	**+4.1**
	comp=E,587nm,0.9s						
TAPN	**Taplejung**	**5.13**	**130**	*e*Pn	**Pn**	**03 53 37.7**	**+1.0**
TAPN				*e*Sn	**Sn**	**03 54 39.2**	**+3.9**
	comp=E,608nm,1.2s						
ODAN	**Odare**	**5.27**	**136**	*e*Pn	**Pn**	**03 53 39.4**	**+0.8**
SDNR	**Sundarnagar**	**5.47**	**280**	*ex*	**Pn**	**03 53 48.5**	**+7.1**
ALBI	**Allahabad**	**5.55**	**194**	*ex*	**Pb**	**03 54 01.0**	**+3.8**
NDI	**New Delhi**	**5.66**	**250**	*e*PKP	**Pn**	**03 53 45.0**	**+1.0**
NDI				*ex*	x	03 54 42.0	
AYAN	**Aya Nagar**	**5.81**	**249**	*e*PKP	**Pn**	**03 53 45.8**	**-0.2**
BHK	**Bhakra**	**5.94**	**278**	*ex*	**Pn**	**03 53 54.4**	**+6.7**
SONA	**Sohna**	**5.94**	**247**	*e*PKP	**Pn**	**03 53 48.6**	**+0.7**
SONA				*ex*	x	03 55 30.2	
KUDL	**Kundal**	**6.46**	**248**	*e*PKP	**Pn**	**03 53 53.4**	**-1.6**
LSA	**Lhasa**	**6.88**	**97**	Pg	**Pn**	**03 54 02.3**	**+1.6**
LSA				Sg	**Sn**	**03 55 23.8**	**+5.3**
LSA				smax			
	comp=N,10.0nm,1.0s						
LSA				smax			
	comp=E,40nm,1.2s						
LSA	**Lhasa**	**6.88**	**97**	*e*Pn	**Pn**	**03 54 02.3**	**+1.6**
	comp=E,115nm,0.8s						
LSA	**Lhasa**	**6.88**	**97**	*e*P	**Pn**	**03 54 02.3**	**+1.6**
LSA				pmax	pmax		
	comp=Z,115nm,0.8s						
KHET	**Khetri**	**7.04**	**250**	*e*PKP	**Pn**	**03 54 02.7**	**-0.3**
KHET				*ex*	x	03 54 55.7	
AJM	**Ajmer**	**8.70**	**243**	*e*PKP	**Pn**	**03 54 24.8**	**-0.8**
AJM				*ex*	x	03 55 51.3	
CHCP	**Chirah Chowk**	**8.98**	**292**	P	**Pn**	**03 54 32.3**	**+2.7**
BHPL	**Bhopal**	**9.10**	**216**	*e*PKP	**Pn**	**03 54 29.5**	**-1.8**
BHPL				*e*S	**Sn**	**03 56 06.9**	**-6.3**
SHL	**Shillong**	**9.16**	**122**	*e*PKP	**Pn**	**03 54 28.0**	**-4.0**
SHL				*ex*	x	03 56 08.0	
AGT	**Agartala**	**9.82**	**132**	*i* x	x	03 54 33.0	
THW	**Thamme Wali**	**10.04**	**285**	P	**Pn**	**03 54 45.0**	**+0.9**
CEP	**Cherat**	**10.12**	**291**	P	**Pn**	**03 54 46.5**	**+1.4**
NGP	**Nagpur**	**10.27**	**203**	*e*PKP	**Pn**	**03 54 44.7**	**-2.5**
NGP				*ex*	x	03 56 34.3	
KSH	**Kashi**	**10.62**	**328**	P	**Pn**	**03 54 51.3**	**-0.6**
KSH				*ep*P		03 54 54.5	
KSH				*es*P		03 54 57.3	
KSH				*ep*P		03 54 59.5	
KSH				S	**Sn**	**03 56 46.3**	**-4.0**
KSH				*es*S		03 56 59.5	
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,37nm,2.9s						
KSH				LR	LR		
	comp=N,870nm,11.5s						
KSH				LR	LR		
	comp=E,1μm,8.4s						
KSH				LR	LR		
	comp=Z,560nm,6.2s						
AKL	**Akola**	**11.47**	**211**	*e*PKP	**Pn**	**03 55 01.4**	**-2.2**
AKL				*i* x	x	03 57 06.8	
KBL	**Kabul**	**12.59**	**291**	*e*Pn	**Pn**	**03 55 20.5**	**+1.5**
VIS	**Vishakhapatnam**	**12.95**	**180**	*i* P	Px	03 55 35.1	
VIS				*i* S	**Sn**	**03 57 51.7**	**+4.2**
VIS				*i* S	**Sn**	**03 57 53.1**	**+5.6**
KZA	**Kyzart**	**13.04**	**333**	*e*Pn	**Pn**	**03 55 25.8**	**+0.7**
	comp=Z,8.6nm,1.1s						
UCH	**Uchtor**	**13.47**	**331**	*e*Pn	**Pn**	**03 55 31.7**	**+0.8**
	comp=Z,3.6nm,0.6s						
WMQ	**Urumqi**	**13.53**	**14**	P	**Pn**	**03 55 33.0**	**+1.2**
WMQ				*p*P		03 55 36.3	
WMQ				*s*P		03 55 39.5	
WMQ				*p*P		03 55 44.0	
WMQ				S	**Sn**	**03 58 05.0**	**+3.5**
WMQ				*s*S		03 58 20.5	
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.2s						
WMQ				LR	LR		
	comp=N,550nm,12.8s						
WMQ				LR	LR		
	comp=E,720nm,12.3s						
WMQ				LR	LR		
	comp=Z,550nm,13.2s						
TKM2	**Tokmak 2**	**13.63**	**335**	*e*Pn	**Pn**	**03 55 34.0**	**+0.9**
	comp=Z,3.0nm,0.6s						
TKM2	**Tokmak 2**	**13.63**	**335**	*e*P	**Pn**	**03 55 34.0**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LATR	**Latur**	**13.69**	**208**	*ex*	**Pn**	**03 55 30.0**	**-4.0**
LATR				*ex*	x	03 57 56.5	
AML	**Almayashu**	**13.74**	**329**	*e*Pn	**Pn**	**03 55 35.5**	**+0.8**
	comp=Z,8.6nm,0.6s						
AAK	**Ala-Archa**	**13.81**	**332**	*e*Pn	**Pn**	**03 55 35.9**	**+0.4**
AAK	**Ala-Archa**	**13.81**	**332**	Pn	**Pn**	**03 55 35.7**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=174,slow=9.2,SNR=4.1						
AAK				LR	LR	04 01 04.5	
	comp=Z,282nm,19.5s,baz=239,slow=38						
AAK	**Ala-Archa**	**13.81**	**332**	*e*P	**Pn**	**03 55 36.3**	**+0.7**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FRU	**Bishkek**	**13.93**	**333**	*e*P	**Pn**	**03 55 36.0**	**-1.2**
HYB	**Hyderabad**	**13.93**	**199**	*i* P	**Pn**	**03 55 32.5**	**-4.9**
HYB				*e*		03 57 55.0	
HYB				*e*S	**Sn**	**03 58 02.0**	**-10**
EKS2	**Erkin-Say**	**14.13**	**330**	*e*Pn	**Pn**	**03 55 40.5**	**+0.5**
	comp=Z,8.0nm,0.9s						
POO	**Poona**	**14.86**	**217**	*ex*	**Pn**	**03 55 44.0**	**-6.0**
KAD	**Karad**	**15.72**	**214**	*ex*	**Sn**	**03 58 57.0**	**+1.8**
KK31	**Karatay Array**	**16.01**	**324**	P	**Pn**	**03 56 02.5**	**-2.4**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KKAR	**Karatay Array**	**16.01**	**324**	*e*Pn	**Pn**	**03 56 03.2**	**-1.7**
	comp=Z,3.6nm,0.5s						
KKAR	**Karatay Array**	**16.01**	**324**	*e*P	**Pn**	**03 56 03.2**	**-1.7**
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GTA	**Gaotai**	**16.05**	**53**	⇓P	**Pn**	**03 56 07.5**	**+2.0**
GTA				*p*P	*p*P	03 56 12.0	-2.1
GTA				*s*P	*s*P	03 56 14.5	-2.1
GTA				S	**Sn**	**03 59 08.0**	**+5.1**
GTA				*s*S	*s*S	03 59 13.8	-11
GTA				pmax	pmax		
	comp=Z,12nm,1.4s						
GTA				pmax	pmax		
	comp=Z,48nm,5.4s						
GTA				LR	LR		
	comp=N,890nm,13.8s						
GTA				LR	LR		
	comp=E,380nm,15.0s						
GTA				LR	LR		
	comp=Z,260nm,12.9s						
MK31	**Makanchi Array**	**16.06**	**358**	*e*Pn	**Pn**	**03 56 07.8**	**+2.2**
MKAR	**Makanchi Array**	**16.06**	**358**	Pn	**Pn**	**03 56 03.9**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=171,slow=12,SNR=14						
MKAR				LR	LR	04 03 16.6	
	comp=Z,348nm,19.7s,baz=174,slow=41						
LZH	**Lanzhou**	**17.97**	**67**	*e*P	**Pn**	**03 56 28.5**	**-1.1**
LZH				*p*P	*p*P	03 56 31.5	-3.9
LZH				*s*P	*s*P	03 56 34.5	-3.4
LZH				*e*S	**Sn**	**03 59 48.0**	**-1.5**
LZH				*s*S	*s*S	03 59 52.3	-12
LZH				SS		04 00 11.3	
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,90nm,4.7s						
LZH				LR	LR		
	comp=N,650nm,7.8s						
LZH				LR	LR		
	comp=E,1μm,10.0s						
LZH				LR	LR		
	comp=Z,1μm,11.9s						
KMI	**Kunming**	**18.07**	**103**	P	**Pn**	**03 56 30.8**	**-0.1**
KMI				*p*P	*p*P	03 56 33.0	-3.6
KMI				*s*P	*s*P	03 56 34.5	-4.5
KMI				PP		03 56 46.0	
KMI				S	**Sn**	**03 59 48.0**	**-4.0**
KMI				*s*S	*s*S	03 59 52.5	-14
KMI				SS		04 00 12.0	
KMI				PcP	PcP	04 01 07.0	+2.1
KMI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,52nm,3.1s						
KMI				LR	LR		
	comp=N,900nm,18.4s						
KMI				LR	LR		
	comp=E,580nm,14.4s						
KMI				LR	LR		
	comp=Z,780nm,15.4s						
CHTO	**Chiang Mai**	**18.49**	**126**	*e*P	**Pn**	**03 56 33.4**	**-2.6**
	comp=Z,8.2nm,0.9s						
CHTO	**Chiang Mai**	**18.49**	**126**	*e*P	**Pn**	**03 56 33.4**	**-2.6**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**18.73**	**127**	P	**Pn**	**03 56 36.3**	**-2.7**
	comp=Z,0.5nm,0.3s,baz=308,slow=12,SNR=16						
KURK	**Kurchatov**	**20.27**	**351**	*e*P	**P**	**03 56 55.0**	**-0.2**
	comp=Z,11nm,0.8s						
KURK	**Kurchatov**	**20.27**	**351**	P	**P**	**03 56 54.1**	**-1.0**
	comp=Z,6.3nm,0.8s,baz=173,slow=10.0,SNR=21						
KURK				LR	LR	04 05 37.8	
	comp=Z,401nm,18.8s,MS3.8,baz=175,slow=39						
KURK	**Kurchatov**	**20.27**	**351**	*c* *i*P	**P**	**03 56 54.6**	**-0.6**
KURK				pmax	pmax		
	comp=Z,23nm,1.2s						
GYA	**Guiyang**	**20.95**	**96**	*e*P	**P**	**03 57 01.5**	**-1.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN	**Xi'an**	**21.88**	**75**	P	**P**	**03 57 10.0**	**-2.7**
XAN				pP		03 57 18.5	
XAN				sP	sP	03 57 24.0	+3.4
XAN				PcP	PcP	04 01 05.8	-5.9
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
XAN				LR	LR		
	comp=N,170nm,10.8s,MS3.8						
XAN				LR	LR		
	comp=E,200nm,15.3s,MS3.8						
XAN				LR	LR		
	comp=Z,170nm,13.8s,MS3.6						
ZAA0	**Zalesovo Array**	**23.23**	**2**	*e*P	**P**	**03 57 27.2**	**+0.4**
ZALV	**Zalesovo Beam**	**23.23**	**2**	P	**P**	**03 57 25.7**	**-1.1**
	comp=Z,5.1nm,0.7s,mb4.1,baz=197,slow=10,SNR=11						
ZALV				LR	LR	04 08 14.4	
	comp=Z,61nm,19.1s,MS3.1,baz=84,slow=41						
VOSK	**Vostochnaya**	**23.76**	**341**	P	**P**	**03 57 31.7**	**-0.3**
VOSK				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.5						
NVS	**Novosibirsk**	**24.10**	**360**	*e*P	**P**	**03 57 34.1**	**-1.0**
NVS				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb3.8						
NVS				pmax	pmax		
	comp=N,4.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,3.0nm,1.3s						
BVA0	**Borovoye Array**	**24.19**	**341**	P	**P**	**03 57 36.1**	**+0.2**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
BVAR	**Borovoye Array**	**24.19**	**341**	P	**P**	**03 57 36.3**	**+0.4**
	comp=Z,3.3nm,0.6s,mb4.0,baz=153,slow=10.0,SNR=11						
BRVK	**Borovoye**	**24.25**	**341**	*e*P	**P**	**03 57 36.2**	**-0.2**
	comp=Z,5.5nm,0.7s,mb4.1						
BRVK	**Borovoye**	**24.25**	**341**	*c* *i*P	**P**	**03 57 38.2**	**+1.7**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
ZRNK	**Zerenda**	**24.54**	**339**	P	**P**	**03 57 39.1**	**0.0**
ZRNK				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.6						
SONM	**Songino Array**	**24.59**	**39**	P	**P**	**03 57 39.5**	**-0.2**
	comp=Z,2.7nm,0.7s,mb3.9,baz=229,slow=9.7,SNR=7.8						
SONM				LR	LR	04 07 42.0	
	comp=Z,122nm,19.2s,MS3.4,baz=42,slow=38						
HHC	**Hu-ho-hao-te**	**24.97**	**58**	*e*P	**P**	**03 57 42.3**	**-0.8**
HHC				pP		03 57 46.3	
HHC				sP	sP	03 57 50.0	-1.3
HHC				PP		03 58 18.8	
HHC				PcP	PcP	04 01 19.5	+1.4
HHC				*e*S	**S**	**04 02 02.0**	**-3.9**
HHC				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.7						
HHC				pmax	pmax		
	comp=Z,69nm,3.7s						
HHC				LR	LR		
	comp=N,260nm,11.8s,MS4.1						
HHC				LR	LR		
	comp=E,220nm,10.4s,MS4.1						
HHC				LR	LR		
	comp=Z,170nm,10.9s,MS3.8						
ULN	**Ulaanbaatar**	**24.97**	**40**	*e*P	**P**	**03 57 42.6**	**-0.5**
	comp=Z,8.2nm,1.1s,mb4.2						
ULN	**Ulaanbaatar**	**24.97**	**40**	*e*P	**P**	**03 57 42.6**	**-0.5**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.2						
AB31	**Akbulak array**	**25.57**	**323**	P	**P**	**03 57 49.2**	**+0.7**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.1						
ABKAR	**Akbulak array**	**25.57**	**323**	*e*P	**P**	**03 57 48.9**	**+0.4**
	comp=Z,4.3nm,0.5s,mb4.2						
TLY	**Talaya**	**25.78**	**30**	*e*P	**P**	**03 57 54.0**	**+3.6**
TLY				*e*		03 58 41.1	
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
TLY				MLR	MLR		
	comp=Z,92nm,13.0s,MS3.5						
QIZ	**Qiongzhong**	**26.69**	**110**	P	**P**	**03 57 57.8**	**-1.1**
QIZ				S	**S**	**04 02 36.5**	**+3.1**
QIZ				LR	LR		
	comp=N,180nm,13.5s						
QIZ				LR	LR		
	comp=Z,180nm,11.1s,MS3.9						
AKTK	**Aktyubinsk**	**27.27**	**323**	P	**P**	**03 58 04.1**	**+0.2**
AKTK				LR	LR	04 09 43.4	
AKTO	**Aktyubinsk**	**27.27**	**323**	P	**P**	**03 58 04.1**	**+0.2**
	comp=Z,1.8nm,0.5s,mb3.9,baz=122,slow=9.4,SNR=7.1						
AKTO				LR	LR	04 09 43.4	
	comp=Z,162nm,19.8s,MS3.6,baz=292,slow=38						
BJI	**Beijing**	**28.25**	**62**	P	**P**	**03 58 11.5**	**-1.2**
BJI				LR	LR		
	comp=N,380nm,19.3s						
BJI				LR	LR		
	comp=E,98nm,14.1s						
NJ2	**Nanjing**	**30.31**	**78**	*e*P	**P**	**03 58 31.8**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				LR	LR		
	comp=Z,230nm,13.9s,MS4.0						
ARU	**Arti**	**30.99**	**333**	*d* *i*P	**P**	**03 58 37.7**	**+0.9**
ARU						03 59 35.9	
ARU				S	**S**	**04 03 45.7**	**+5.3**
ARU				SS	SS	04 05 24.3	-29
ARU				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.3						
GNI	**Garni**	**32.57**	**297**	*e*P	**P**	**03 58 52.1**	**+1.2**
GNI				pmax	pmax		

KLMR	**Klimovskoe**	**41.61**	**329**	*e*P		**P**	**04 00 04.9**	**-2.4**
KLMR				pmax		pmax			
	comp=Z,16nm,1.4s,mb4.5								
AKASG	**Malin Array Be**	**44.46**	**313**	P		**P**	**04 00 30.0**	**-0.6**
	comp=Z,2.9nm,0.6s,mb4.2,baz=86,slow=7.0,SNR=11								
AKASG	**Malin Array Be**	**44.46**	**313**	*c*e P		**P**	**04 00 31.6**	**+1.0**
AKASG				pmax		pmax			
	comp=Z,3.0nm,0.6s								
MJAR	**Matsushiro Arr**	**45.58**	**67**	LR		LR	04 21 00.6		
	comp=Z,104nm,19.7s,MS3.8,baz=305,slow=38								
FINES	**FINESS Array B**	**47.94**	**327**	P		**P**	**04 00 57.8**	**0.0**
	comp=Z,3.1nm,0.6s,mb4.5,baz=115,slow=8.6,SNR=6.0								
FINES				LR		LR	04 22 20.7		
	comp=Z,133nm,18.9s,MS3.9,baz=189,slow=38								
ARCES	**ARCESS Array B**	**50.41**	**337**	P		**P**	**04 01 16.6**	**+0.1**
	comp=Z,2.4nm,0.6s,mb4.4,baz=91,slow=6.4,SNR=9.9								
ARCES				PcP		PcP	04 02 35.0	+0.3	
	comp=Z,3.0nm,0.9s,baz=108,slow=4.0,SNR=3.8								
MORC	**Moravsky Berou**	**51.95**	**311**	*e*P		**P**	**04 01 29.2**	**+0.8**
	comp=Z,2.2nm,0.7s,mb4.2								
MORC	**Moravsky Berou**	**51.95**	**311**	*e*P		**P**	**04 01 29.2**	**+0.8**
MORC				pmax		pmax			
	comp=Z,2.0nm,0.7s,mb4.2								
SEY	**Seymchan**	**53.66**	**32**	⇑*i* P		**P**	**04 01 40.0**	**-0.8**
KMBO	**Kilima Mbogo**	**54.00**	**243**	*e*P		**P**	**04 01 44.8**	**+0.7**
	comp=Z,6.2nm,1.0s,mb4.5								
KMBO	**Kilima Mbogo**	**54.00**	**243**	*e*P		**P**	**04 01 44.8**	**+0.8**
KMBO				pmax		pmax			
	comp=Z,6.0nm,1.0s								
CEL	**Celeste**	**54.97**	**297**	*e*P		**P**	**04 01 51.7**	**+0.9**
	comp=Z,19nm,1.0s,mb5.1								
NOA	**NORSAR Array B**	**55.03**	**326**	P		**P**	**04 01 50.7**	**-0.2**
NOA				LR		LR	04 27 32.8		
NOA	**NORSAR Array B**	**55.03**	**326**	P		**P**	**04 01 50.7**	**-0.2**
	comp=Z,1.4nm,0.6s,mb4.2,baz=88,slow=7.1,SNR=5.9								
NOA				LR		LR	04 27 32.8		
	comp=Z,54nm,20.1s,MS3.6,baz=95,slow=38								
SBF	**Sospel**	**59.78**	**306**	*e*P		**P**	**04 02 24.1**	**-0.6**
	comp=Z,13nm,0.8s,mb4.7								
SBF	**Sospel**	**59.78**	**306**	*e*P		**P**	**04 02 24.1**	**-0.6**
	comp=Z,6.4nm,0.8s,mb4.7								
SBF	**Sospel**	**59.78**	**306**	*e*P		**P**	**04 02 24.1**	**-0.6**
SBF				pmax		pmax			
	comp=Z,6.0nm,0.8s,mb4.7								
LPG	**La Plagne**	**59.84**	**308**	*e*P		**P**	**04 02 24.9**	**-0.2**
	comp=Z,6.9nm,0.7s,mb4.5								
LPG	**La Plagne**	**59.84**	**308**	*e*P		**P**	**04 02 24.9**	**-0.2**
	comp=Z,3.5nm,0.7s,mb4.5								
LPG	**La Plagne**	**59.84**	**308**	*e*P		**P**	**04 02 24.9**	**-0.2**
LPG				pmax		pmax			
	comp=Z,3.0nm,0.7s,mb4.4								
LPL	**La Plagne**	**59.85**	**308**	*e*P		**P**	**04 02 25.7**	**+0.6**
	comp=Z,8.9nm,0.8s,mb4.5								
LPL	**La Plagne**	**59.85**	**308**	*e*P		**P**	**04 02 25.7**	**+0.6**
	comp=Z,4.4nm,0.8s,mb4.5								
LPL	**La Plagne**	**59.85**	**308**	*e*P		**P**	**04 02 25.7**	**+0.6**
LPL				pmax		pmax			
	comp=Z,4.0nm,0.8s,mb4.5								
MBDF	**Montbardon**	**60.02**	**307**	*e*P		**P**	**04 02 25.0**	**-1.3**
KEST	**Kesra**	**60.70**	**296**	*e*P		**P**	**04 02 32.6**	**+1.5**
KEST	**Kesra**	**60.70**	**296**	P		**P**	**04 02 31.3**	**+0.2**
	comp=Z,3.0nm,0.8s,mb4.5,baz=9.9,slow=2.2,SNR=6.6								
KEST				LR		LR	04 35 57.2		
	comp=Z,26nm,19.6s,MS3.4,baz=342,slow=43								
LDF	**La Druitiere**	**63.53**	**313**	*e*P		**P**	**04 02 48.4**	**-1.4**
ESDC	**Sonseca Array**	**69.20**	**304**	P		**P**	**04 03 25.3**	**-1.0**
	comp=Z,0.3nm,0.4s,mb3.6,baz=58,slow=6.2,SNR=6.9								
SUMG	**Summit**	**69.62**	**344**	*e*P		**P**	**04 03 30.3**	**+2.0**
	comp=Z,9.4nm,0.8s,mb4.8								
SUMG	**Summit**	**69.62**	**344**	*i* P		**P**	**04 03 28.8**	**+0.4**
	comp=Z,8.7nm,0.8s,mb4.7								
WRA	**Warramunga Ar**	**70.31**	**129**	P		**P**	**04 03 30.8**	**-2.6**
	comp=Z,5.8nm,0.7s,mb4.6,baz=326,slow=6.0,SNR=7.2								
WB2	**Warramunga Ar**	**70.32**	**129**	*e*P		**P**	**04 03 31.8**	**-1.6**
ASAR	**Alice Springs**	**72.66**	**132**	P		**P**	**04 03 45.2**	**-2.2**
	comp=Z,1.4nm,0.8s,mb4.0,baz=316,slow=6.2,SNR=8.7								
COEN	**Coen**	**72.69**	**118**	*e*P		**P**	**04 03 46.6**	**-1.2**
	comp=Z,35nm,0.7s,mb5.4								
PMG	**Port Moresby**	**73.04**	**112**	*e*P		**P**	**04 03 48.8**	**-1.2**
	comp=Z,21nm,0.9s,mb5.1								
PMG	**Port Moresby**	**73.04**	**112**	*e*P		**P**	**04 03 48.8**	**-1.1**
PMG				pmax		pmax			
	comp=Z,21nm,0.9s								
COLD	**Coldfoot**	**74.41**	**19**	*e*P		**P**	**04 03 56.7**	**-0.4**
	comp=Z,5.1nm,0.9s,mb4.5								
TORD	**Torodi Ar. Bea**	**76.26**	**277**	P		**P**	**04 04 08.0**	**-0.7**
TORD				LR		LR	04 43 17.8		
TORD	**Torodi Ar. Bea**	**76.26**	**277**	P		**P**	**04 04 08.0**	**-0.7**
	comp=Z,1.4nm,0.6s,mb4.1,baz=44,slow=5.4,SNR=15								
TORD				LR		LR	04 43 17.8		
	comp=Z,99nm,18.2s,MS4.2,baz=160,slow=40								
BPAW	**Bear Paw Mtn.**	**76.36**	**22**	*e*P		**P**	**04 04 09.2**	**+0.9**
	comp=Z,5.9nm,1.1s,mb4.4								
ILAR	**Eielson Array**	**77.12**	**20**	P		**P**	**04 04 11.7**	**-1.0**
ILAR				LR		LR	04 42 33.9		
ILAR	**Eielson Array**	**77.12**	**20**	P		**P**	**04 04 11.7**	**-1.0**
	comp=Z,1.3nm,0.6s,mb4.1,baz=313,slow=4.9,SNR=31								
ILAR				LR		LR	04 42 33.9		
	comp=Z,52nm,19.0s,MS3.9,baz=335,slow=39								
INK	**Inuvik**	**77.55**	**13**	*e*P		**P**	**04 04 15.2**	**+0.2**
	comp=Z,5.3nm,1.1s,mb4.4								
INK	**Inuvik**	**77.55**	**13**	*e*P		**P**	**04 04 15.2**	**+0.2**
INK				pmax		pmax			
	comp=Z,5.0nm,1.1s								
LBTB	**Lobatse**	**78.24**	**232**	*e*P		**P**	**04 04 18.9**	**-0.6**
	comp=Z,12nm,1.2s,mb4.7								
LBTB	**Lobatse**	**78.24**	**232**	*e*P		**P**	**04 04 18.9**	**-0.6**
LBTB				pmax		pmax			
	comp=Z,12nm,1.2s,mb4.7								
EGAK	**Eagle**	**78.70**	**18**	*e*P		**P**	**04 04 22.5**	**+1.0**
	comp=Z,3.4nm,0.9s,mb4.3								
PMR	**Palmer**	**78.74**	**23**	*e*P		**P**	**04 04 23.0**	**+1.2**
	comp=Z,7.4nm,1.0s,mb4.6								
PMR	**Palmer**	**78.74**	**23**	*e*P		**P**	**04 04 23.0**	**+1.3**
PMR				pmax		pmax			
	comp=Z,7.0nm,1.0s,mb4.5								
KDAK	**Kodiak Island**	**80.19**	**27**	*c*e P		**P**	**04 04 30.7**	**+1.0**
BOSA	**Boshof**	**80.87**	**229**	P		**P**	**04 04 32.8**	**-0.9**
	comp=Z,2.8nm,0.8s,mb4.3,baz=71,slow=15,SNR=4.5								
BOSA				LR		LR	04 36 01.9		
	comp=Z,73nm,19.8s,MS4.0,baz=174,slow=32								
HYT	**Haines Junctio**	**82.89**	**19**	*e*P		**P**	**04 04 45.6**	**+1.7**
DBIC	**Dimbokro**	**85.05**	**275**	P		**P**	**04 04 55.8**	**0.0**
	comp=Z,3.5nm,0.7s,mb4.6,baz=189,slow=1.0,SNR=5.0								
DBIC				LR		LR	04 47 19.8		
	comp=Z,80nm,18.8s,MS4.1,baz=239,slow=39								
YKA	**Yellowknife Ar**	**86.00**	**8**	P		**P**	**04 04 59.4**	**-0.2**
	comp=Z,1.7nm,0.6s,mb4.5,baz=338,slow=5.0,SNR=5.4								
YKA	**Yellowknife Ar**	**86.00**	**8**	P		**P**	**04 04 59.4**	**-0.3**
TXAR	**Lajitas Array**	**119.91**	**7**	PKP		PKPdf	04 11 10.1	-0.4	
	comp=Z,0.3nm,0.7s,baz=189,slow=0.6,SNR=5.1								
CPUP	**Villa Florida**	**145.25**	**267**	PKPbc		PKPbc	04 11 57.9	+0.6	
	comp=Z,3.5nm,0.9s,baz=50,slow=6.1,SNR=5.2								

IDC 29 03:57:41.2±2.2, 6.01S×130.51E, h0km, mb3.8/1, mb1 4.1/4, mb1mx3.8/16, mbtmp3.9/4, ML4.1/3, Error ellipse: s-maj=91.2km s-min=28.2km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
FITZ	**Fitzroy Crossi**	**12.93**	**201**	Pn		Pn	04 00 46.5		+0.3
	1.8nm,0.3s,baz=30,slow=11,SNR=38								
FITZ				Sn		Sn	04 02 56.7		-14
	0.2nm,0.3s,baz=311,slow=20,SNR=3.3								
WRA	**Warramunga Ar**	**14.34**	**165**	Pn		Pn	04 01 04.2		-1.4
	0.6nm,0.3s,baz=348,slow=13,SNR=25								
ASAR	**Alice Springs**	**17.86**	**170**	P		Pn	04 01 51.8		+0.7
	0.5nm,0.3s,baz=348,slow=11,SNR=26								
ASAR				S		Sn	04 04 57.6		-13
	0.3nm,0.3s,baz=354,slow=29,SNR=5.5								
MKAR	**Makanchi Array**	**67.68**	**326**	P		P	04 08 40.3		+0.1
	0.4nm,0.5s,baz=116,slow=7.9,SNR=6.4								

*IDC **29** 04:00:36.1±0.6, 30.65S×177.55W, h0km, mb4.3/12, mb1 4.4/13, mb1mx4.3/20, mbtmp4.2/13, ML4.0/1, MS4.0/7, Ms1 4.0/7, ms1mx3.5/26, Error ellipse: s-maj=22.6km s-min=18.8km az=165.0*
*ISCJB **29** 04:00:40.3±0.6, 30.94S±0.08×177.7W±0.1, h33km, mb4.2/13, MS4.0/7, Error ellipse: s-maj=15.9km s-min=9.6km az=29.2*
*NEIC **29** 04:00:42.3±0.5, 30.77S×177.56W, h35km, mb4.6/2, Error ellipse: s-maj=17.2km s-min=13.8km az=148.0*

ISC 29 04:00:42.2±0.6, 30.85S±0.08×177.6W±0.1, h35km, n33, σ0.81/18, mb4.2/13, MS4.0/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
OUZ	**Omahuta**	**8.55**	**237**	*e*Pn		**Pn**	**04 02 50.2**	**+6.8**
	17nm,0.7s								
URZ	**Urewera**	**8.56**	**209**	Pn		Pn	**04 02 43.4**	**-0.2**
	1.6nm,0.3s,baz=24,slow=3.8,SNR=7.1								
URZ				Sn		**Sn**	**04 04 18.4**	**-0.6**	
	3.6nm,0.3s,baz=122,slow=23,SNR=13								
DZM	**Mont Dzumac**	**16.71**	**298**	*e*LR		LR	04 08 51.2		
	869nm,23.3s								
PPT	**Papeete**	**28.71**	**69**	*e*LR		LR	04 13 53.6		
	207nm,25.0s,baz=233								
PPT	**Papeete**	**28.71**	**69**	LR		LR	04 15 58.2		
	comp=Z,175nm,18.9s,MS3.7,baz=136,slow=32								
CTA	**Charters Tower**	**34.18**	**280**	P		**P**	**04 07 25.1**	**+0.8**
	4.2nm,0.7s,mb4.5,baz=114,slow=12,SNR=5.1								
CTA				LR		LR	04 19 15.4		
	comp=Z,366nm,19.6s,MS4.1,baz=48,slow=33								
CTAO	**Charters Tower**	**34.18**	**280**	*e*P		**P**	**04 07 25.6**	**+1.3**
	6.2nm,0.7s,mb4.7								
STKA	**Stephens Creek**	**34.68**	**257**	P		**P**	**04 07 29.9**	**+1.4**
	14nm,1.0s,mb4.9,baz=97,slow=7.8,SNR=17								
STKA				LR		LR	04 20 04.8		
	comp=Z,271nm,20.8s,MS4.0,baz=92,slow=34								
RKT	**Rikitea**	**38.61**	**89**	*e*LR		LR	04 18 36.0		
	215nm,27.0s								
ASAR	**Alice Springs**	**43.40**	**267**	P		**P**	**04 08 41.7**	**+0.2**
	1.9nm,0.8s,mb3.9,baz=102,slow=7.3,SNR=13								
ASAR				ScP		ScP	04 14 22.3		+4.0
	0.4nm,0.7s,baz=109,slow=3.2,SNR=4.1								
WB2	**Warramunga Arr**	**44.42**	**272**	*e*P		**P**	**04 08 48.6**	**-1.1**
WRA	**Warramunga Arr**	**44.43**	**272**	P		**P**	**04 08 48.9**	**-0.9**
	4.2nm,0.5s,mb4.4,baz=112,slow=7.9,SNR=29								
WRA				LR		LR	04 27 49.9		
	comp=Z,460nm,18.8s,MS4.4,baz=105,slow=37								
FITZ	**Fitzroy Crossi**	**52.67**	**270**	P		**P**	**04 09 52.6**	**-0.7**
	2.2nm,0.8s,mb4.1,baz=212,slow=2.6,SNR=4.3								
CASY	**Casey**	**54.89**	**208**	*e*P		**P**	**04 10 08.8**	**0.0**
	4.5nm,0.7s,mb4.6								
QSPA	**South Pole Qui**	**59.26**	**180**	P		**P**	**04 10 41.0**	**+1.5**
	4.6nm,1.0s,mb4.5,baz=62,slow=2.0,SNR=9.9								
MAW	**Mawson**	**72.00**	**201**	P		**P**	**04 12 02.7**	**+0.9**
	0.9nm,0.6s,mb3.9,baz=78,slow=9.3,SNR=4.3								
PLCA	**Paso Flores**	**81.97**	**133**	P		**P**	**04 12 57.5**	**-1.0**
	2.9nm,1.0s,mb4.2,baz=254,slow=3.1,SNR=3.3								
KSRS	**Korea Array**	**84.89**	**319**	P		**P**	**04 13 13.2**	**-0.1**
	0.4nm,0.3s,mb4.0,baz=159,slow=5.0,SNR=3.4								
KSRS				LR		LR	04 49 33.5		
	comp=Z,24nm,19.2s,MS3.6,baz=145,slow=35								
NVAR	**Mina Array Bea**	**88.36**	**43**	P		**P**	**04 13 30.6**	**+0.5**
	2.2nm,0.9s,mb4.4,baz=217,slow=8.5,SNR=13								
TXAR	**Lajitas Array**	**92.37**	**57**	P		**P**	**04 13 48.6**	**-0.5**
	0.4nm,1.0s,mb3.7,baz=212,slow=4.4,SNR=4.2								
PDAR	**Pinedale Array**	**96.25**	**43**	P		**P**	**04 14 06.1**	**-0.4**
	0.3nm,0.9s,mb3.7,baz=296,slow=4.6,SNR=4.0								
PDAR				LR		LR	04 52 13.9		
	comp=Z,56nm,18.5s,MS4.1,baz=183,slow=32								
CPUP	**Villa Florida**	**99.46**	**128**	LR		LR	04 56 06.8		
	comp=Z,54nm,18.8s,MS4.1,baz=184,slow=34								
KURK	**Kurchatov**	**121.58**	**314**	PKP		PKPdf	04 19 29.8		-1.7
	0.2nm,0.2s,baz=97,slow=2.0,SNR=2.5								
BVAR	**Borovoye Array**	**126.94**	**316**	PKP		PKPdf	04 19 40.5		-1.3
	0.4nm,0.4s,baz=46,slow=4.2,SNR=2.3								
JOF	**Joensuu**	**142.95**	**338**	*e*pkp		PKPdf	04 20 06.7		-4.6
KAF	**Kangasniemi**	**145.08**	**341**	*e*pkp		PKPdf	04 20 11.4		-3.6
FINES	**FINESS Array B**	**145.67**	**340**	PKPbc		PKPbc	04 20 15.0		-1.4
	10nm,0.7s,baz=64,slow=4.5,SNR=15								
NOA	**NORSAR Array B**	**149.24**	**352**	PKPbc		PKPbc	04 20 24.6		-1.7
	1.7nm,0.8s,baz=15,slow=4.2,SNR=5.9								
MALT	**Malatya**	**149.53**	**294**	*e*PKPbc		PKPbc	04 20 27.7		0.0
AKASG	**Malin Array Be**	**151.85**	**322**	PKPbc		PKPbc	04 20 31.5		-1.3
AKASG	**Malin Array Be**	**151.85**	**322**	PKPbc		PKPbc	04 20 31.5		-1.3
	0.5nm,0.4s,baz=44,slow=1.1,SNR=6.3								
BRTR	**Keskin Array B**	**153.09**	**298**	PKPbc		PKPbc	04 20 33.8		-2.1
	0.9nm,0.8s,baz=284,slow=5.0,SNR=3.7								
BRTR				PKPab		PKPab	04 20 44.7		-2.9
	0.7nm,0.5s,baz=142,slow=6.2,SNR=5.6								
TORD	**Torodi Ar. Bea**	**162.37**	**178**	PKPab		PKPab	04 21 28.6		+0.7
	0.5nm,0.5s,baz=168,slow=3.2,SNR=8.1								

CASC 29 04:17:07.5±2.5, 10.62N×85.90W, h8km, MD3.7, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
VCR	**Vista de Mar**	**0.55**	**152**	*e*P		Pg	04 17 19.7		+1.5
SSN	**San Juan del S**	**0.68**	**4**	*e*P		Pg	04 17 21.8		+1.2
SSN				*e*S		Sg	04 17 33.1		+3.5
CONN	**Concepcion**	**0.98**	**16**	*i* P		Pg	04 17 26.5		+0.2
JTS	**JuntasAbangare**	**0.98**	**109**	*e*P		Pg	04 17 25.0		-1.4
JTS				*e*S		Sg	04 17 38.6		-0.6
JCR	**Jicaral**	**1.09**	**135**	*e*P		Pg	04 17 27.5		-0.9
JCR				*e*S		Sg	04 17 43.5		+1.1
CRUN	**El Crucero**	**1.41**	**344**	*e*P		Pn	04 17 34.1		+0.5
CRUN				*e*S		Sb	04 17 53.3		+0.9
CGA2	**Cerro Gallo 2**	**1.53**	**113**	*e*P		Pn	04 17 34.2		-0.9
CGA2				*e*S		Sn	04 17 55.4		+0.2
CSAN		**1.64**	**342**	*e*P		Pn	04 17 36.4		-0.3
CSAN				*e*S		Sn	04 17 56.4		-1.5
PRS1	**Puriscal**	**1.68**	**112**	*e*P		Pn	04 17 38.0		+0.8
PRS1				*e*S		Sn	04 17 59.8		+0.8
COPN	**Copaltepe**	**1.70**	**336**	*e*P		Pn	04 17 36.9		-0.5
COPN				*e*S		Sn	04 17 57.8		-1.5
BOAB	**BOACO BROADBAN**	**1.83**	**7**	*i* P		Pn	04 17 38.0		-1.3
MOMN	**Momotombo**	**1.89**	**341**	*e*P		Pn	04 17 39.8		-0.2
MOMN				*e*S		Sn	04 18 04.4		+0.3
LAJ	**Bijagual**	**1.90**	**113**	*e*P		Pn	04 17 35.1		-5.1
LEON	**Leon**	**2.04**	**331**	*e*P		Pn	04 17 41.6		-0.6
LEON				*e*S		Sn	04 18 08.2		+0.5
BUS	**Buena Vista**	**2.35**	**116**	*e*P		Pn	04 17 46.9		+0.4

*IDC **29** 04:20:40.7±1.4, 7.14S×129.12E, h0km, mb4.2/3, mb1 4.4/6, mb1mx4.0/17, mbtmp4.2/6, ML4.4/3, Error ellipse: s-maj=84.6km s-min=21.7km az=71.0*
*NEIC **29** 04:20:51.0±2.5, 7.49S×128.73E, h81km±25km, mb4.3/2, Error ellipse: s-maj=33.3km s-min=19.2km az=64.0*
*ISCJB **29** 04:20:51.4±3.2, 7.75S±0.1×128.6E±0.2, h104km±35km, mb4.0/5, Error ellipse: s-maj=29.4km s-min=18.4km az=21.9*

ISC 29 04:20:51.5±2.5, 7.65S±0.1×128.7E±0.1, h84km±26km, n11, σ18.25/13, mb4.0/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
KAKA	**Kakadu**	**6.29**	**144**	*e*Pn		**Pn**	**04 22 22.8**	**+1.1**
	81nm,0.4s								
KAKA				*e*Sn		**Sn**	**04 23 29.3**	**-2.8**	
FITZ	**Fitzroy Crossi**	**10.84**	**195**	Pn		**Pn**	**04 23 24.8**	**+1.0**
	1.8nm,0.3s,baz=27,slow=8.6,SNR=63								
FITZ				Sn		**Sn**	**04 25 22.1**	**-1.3**	
	4.8nm,0.3s,baz=276,slow=20,SNR=9.9								
WRA	**Warramunga Arr**	**13.44**	**156**	Pn		**Pn**	**04 23 57.6**	**-1.2**
	1.9nm,0.3s,baz=334,slow=13,SNR=72								
WRA				Sn		Sx	04 26 16.9		
	4.4nm,0.3s,baz=332,slow=23,SNR=13								
WB2	**Warramunga Arr**	**13.45**	**156**	*e*P		**Pn**	**04 24 09.6**	**+11**	
WB2				*e*Sn		Sx	04 26 15.8		
ASAR	**Alice Springs**	**16.74**	**163**	P		**Pn**	**04 24 41.9**	**+1.0**
	1.0nm,0.3s,baz=339,slow=9.6,SNR=61								
ASAR				S		Sx	04 27 39.8		
	0.8nm,0.3s,baz=352,slow=25,SNR=7.9								
FORT	**Forrest**	**23.06**	**181**	*e*P		**P**	**04 25 51.9**	**+2.1**
	16nm,0.6s,mb4.5								
STKA	**Stephens Creek**	**26.99**	**155**	P		**P**	**04 26 25.6**	**+0.1**
	1.3nm,0.7s,mb3.5,baz=328,slow=13,SNR=3.1								
MK31	**Makanchi Array**	**68.01**	**328**	*e*P		**P**	**04 31 42.0**	**+0.3**
MKAR	**Makanchi Array**	**68.01**	**328**	P		**P**	**04 31 41.6**	**-0.1**
	2.1nm,0.4s,mb4.3,baz=114,slow=8.8,SNR=15								
ZALV	**Zalesovo Beam**	**71.54**	**334**	P		**P**	**04 32 01.2**	**-2.1**
	1.1nm,0.6s,mb3.9,baz=122,slow=5.2,SNR=3.0								
ABKAR	**Akbulak array**	**82.16**	**322**	*e*P		**P**	**04 33 03.1**	**0.0**
	0.9nm,0.5s,mb3.9								

IDC 29 04:28:16.3±2.1, 22.85S×66.40W, h217km±21km, mb3.9/1, mb1 3.4/4, mb1mx3.1/17, mbtmp3.2/4, Error ellipse: s-maj=36.7km s-min=19.4km az=77.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
LPAZ	**La Paz**	**6.73**	**346**	P		Pn	04 29 55.3		+2.1
	0.8nm,0.3s,baz=168,slow=7.3,SNR=32								
LPAZ				S		S	04 31 09.9		-0.5
	0.2nm,0.3s,baz=69,slow=24,SNR=8.5								
CPUP	**Villa Florida**	**8.95**	**115**	P		Pn	04 30 22.7		+0.9
	0.2nm,0.3s,baz=276,slow=18,SNR=2.4								
PLCA	**Paso Flores**	**18.17**	**190**	P		P	04 32 12.1		-0.6
	0.1nm,0.3s,baz=18,slow=6.4,SNR=3.4								
TORD	**Torodi Ar. Bea**	**75.64**	**69**	P		P	04 39 37.4		-0.5
	0.7nm,0.4s,baz=254,slow=5.4,SNR=18								
MKAR	**Makanchi Array**	**145.29**	**39**	PKPbc		PKPbc	04 47 28.8		+0.5
	0.7nm,0.6s,baz=294,slow=3.3,SNR=5.7								

IDC 29 04:32:22.9±2.7, 2.07N×129.50E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.6/19, mbtmp3.8/4, Error ellipse: s-maj=219.2km s-min=23.0km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
WRA	**Warramunga Arr**	**22.38**	**168**	P		P	04 37 24.1		+1.2
	2.1nm,0.6s,baz=345,slow=10,SNR=18								
ASAR	**Alice Springs**	**25.93**	**171**	P		P	04 37 57.4		+0.3
	0.5nm,0.5s,baz=348,slow=7.7,SNR=8.5								
STKA	**Stephens Creek**	**35.66**	**162**	P		P	04 39 21.4		-1.4
	1.0nm,0.4s,baz=321,slow=13,SNR=5.2								
MKAR	**Makanchi Array**	**60.50**	**325**	P		P	04 42 35.0		+0.2
	0.6nm,0.4s,baz=113,slow=8.3,SNR=9.3								

*MOS **29** 04:32:23.0±1.1, 51.48N×104.22E, h12km, mb4.3/1, Error ellipse: s-maj=24.1km s-min=15.2km az=85.5*

BYKL 29 04:32:23.2±0.3, 51.48N×104.16E, h20km±5km, 8C-3D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
TLY	**Talaya**	**0.38**	**302**	*e*PG		Pb	04 32 30.7		-0.5
TLY				*e*			04 32 36.3		
TLY				pmax		pmax			
	comp=Z,749nm,0.1s								
TLY				smax					
	comp=N,3μm,0.1s								
TLY	**Talaya**	**0.38**	**302**	⇓*i* Pg		Pb	04 32 30.8		-0.4
TLY				*e*Sg		Sb	04 32 36.3		-0.4
TLY				Pmax					
	comp=N,693nm,0.1s								
TLY				Smax					
	comp=N,4μm,0.1s								
LSTR	**Listvyanka**	**0.57**	**47**	⇑*i* Pg		Pb	04 32 34.2		-0.3
	comp=N,90nm,0.2s								
LSTR				⇑*i* Pg		Pb	04 32 34.2		-0.3
	comp=N,222nm,0.2s								
LSTR				⇑*i* Pg		Pb	04 32 34.2		-0.3
	comp=N,264nm,0.2s								
LSTR				*i* Sg		Sb	04 32 42.0		-0.2
LSTR				Pmax					
	comp=N,258nm,0.1s								
LSTR				Smax					
	comp=N,1μm,0.2s								
IRK	**Irkutsk**	**0.77**	**5**	*e*PG		Pb	04 32 37.8		0.0
IRK				*e*			04 32 48.1		
IRK				pmax		pmax			
	comp=Z,371nm,0.3s								
IRK

OGRR				*e*			04 33 54.4		
OGRR				pmax		pmax			
	comp=Z,27nm,0.2s								
OGRR				smax					
	comp=E,142nm,0.8s								
OGRR	**Ongureny**	**3.02**	**43**	*e*Pn		Pn	04 33 12.1	+2.4	
OGRR				*e*Pg		Pn	04 33 16.5	+6.8	
OGRR				⇑*i*			04 33 18.1		
OGRR				*e*Sg		Sn	04 33 54.2	+9.0	
OGRR				max					
	comp=E,27nm,0.5s								
OGRR				Smax					
	comp=E,127nm,0.3s								
MXMB	**Maximikha**	**3.33**	**56**	*e*Sg		Sn	04 34 06.5	+14	
MXMB				Smax					
	comp=E,128nm,0.8s								
ULN	**Ulaanbaatar**	**4.08**	**151**	*e*		Pn	04 33 29.1	+4.8	
ULN				*e*Pg		Pn	04 33 36.0	+12	
ULN				*e*Sg		Sn	04 34 28.6	+17	
SYVR	**Suvo**	**4.18**	**56**	*e*Pg		Pn	04 33 38.8	+13	
SYVR				*e*Sg		Sn	04 34 32.3	+18	
NIZ	**Nizh Angarsk**	**5.36**	**35**	*e*		Sn	04 34 44.4	+1.4	
NIZ				*e*Sg		Sn	04 35 09.0	+26	
NIZ				Smax					
	comp=E,26nm,0.5s								
YLYR	**Ulyunkhan**	**5.41**	**48**	*e*Pg		Pn	04 33 59.2	+17	
YLYR				*e*Sg		Sn	04 35 09.6	+25	
YLYR				Pmax					
	comp=E,2.0nm,0.3s								
YLYR				Smax					
	comp=E,19nm,1.5s								
KMO	**Kumora**	**6.08**	**41**	*e*Pg		Pn	04 34 11.7	+20	
KMO				*e*Sn		Sn	04 35 00.3	-0.4	
KMO				*e*Sg		Sn	04 35 30.7	+30	
KMO				Pmax					
	comp=E,4.0nm,0.5s								
KMO				Smax					
	comp=E,32nm,1.0s								

*ISCJB **29** 04:32:42.6±1.9,50°.10N±0°.06×129°.8W±0°.1, h4km±17km, mb3.8/4, Error ellipse: s-maj=14.1km s-min=7.4km az=138.7*

*PGC **29** 04:32:43.3±1.1,49°.92N×129°.99W, h10km, ML3.0/11, Mw3.6, 202km Wsw of Pt. Hardy, Bc Vancouver Island Region*

*IDC **29** 04:32:44.9±3.5,49°.83N×129°.78W, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.5/23, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=79.3km s-min=33.3km az=46.0*

*NEIC **29** 04:32:44.3±1.1,50°.13N×129°.82W, h10km, mb4.0/4, MW3.6(PGC), Error ellipse: s-maj=19.9km s-min=8.0km az=225.0*

ISC 29 04:32:44.1±2.4,50°.15N±0°.07×129°.8W±0°.1, h4km±21km, n54, σ1°45/53, mb3.8/4, 7D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.16**	**64**	Pn	**Pn**	**04 33 06.8**	**-0.2**
HOLB				⇑Sn	**Sn**	**04 33 23.1**	**-0.1**
BPBC	**Brooks Peninsu**	**1.28**	**89**	⇓Pn	**Pn**	**04 33 07.0**	**-1.8**
BPBC				⇓Sn	**Sn**	**04 33 24.9**	**-1.5**
PHC	**Port Hardy**	**1.59**	**69**	⇓Pn	**Pn**	**04 33 12.9**	**-0.1**
PHC				⇓Sn	**Sn**	**04 33 33.7**	**-0.4**
MAYB	**Maynard**	**1.68**	**80**	⇑Pn	**Pn**	**04 33 13.2**	**-1.0**
EDB	**Eliza Dome**	**1.73**	**98**	Pn	**Pn**	**04 33 12.6**	**-2.4**
EDB				⇑Sn	**Sn**	**04 33 34.5**	**-3.0**
WOSB	**Woss**	**2.06**	**89**	Pn	**Pn**	**04 33 18.8**	**-0.6**
BBB	**Bella Bella**	**2.29**	**26**	Pn	**Pn**	**04 33 23.7**	**+1.2**
BBB				⇓Sn	**Sn**	**04 33 52.3**	**+1.2**
GDR	**Gold River**	**2.44**	**97**	⇑Pn	**Pn**	**04 33 23.2**	**-1.5**
BNB	**Barry Inlet**	**2.73**	**334**	⇑Pn	**Pn**	**04 33 26.8**	**-1.8**
OZB	**Mount Ozzard**	**3.03**	**112**	⇓Pn	**Pn**	**04 33 31.7**	**-1.0**
MOBC	**Moresby Island**	**3.29**	**336**	⇓Pn	**Pn**	**04 33 35.3**	**-1.1**
DIB	**Dawson Inlet,**	**3.49**	**332**	Pn	**Pn**	**04 33 37.8**	**-1.3**
DIB	**Dawson Inlet,**	**3.49**	**332**	⇓Pn	**Pn**	**04 33 38.9**	**-0.2**
PGC	**Sidney**	**4.39**	**108**	*e*Pn	**Pn**	**04 33 51.0**	**-0.4**
OD2	**Odessa Site #2** 8.8nm,0.6s	**7.81**	**106**	*e*Pn	**Pn**	**04 34 38.8**	**+0.4**
NEW	**Newport**	**8.49**	**98**	*e*Pn	**Pn**	**04 34 48.8**	**+1.0**
JTMT	**Jette**	**10.47**	**97**	*e*Pn	**Pn**	**04 35 15.8**	**+1.0**
WVOR	**Wild Horse Val**	**10.89**	**131**	*e*Pn	**Pn**	**04 35 18.1**	**-2.5**
BOZ	**Bozeman (W)**	**12.97**	**103**	*e*Pn	**Pn**	**04 35 50.5**	**+1.4**
IMW	**Indian Meadow**	**14.27**	**109**	*e*Pn	**Pn**	**04 36 08.9**	**+2.2**
IMW				*e*P		04 36 17.6	
TPAW	**Teton Pass** 17nm,1.4s	**14.48**	**110**	*e*P	**Pn**	**04 36 19.3**	**+10**
REDW	**Red Top Meadow** 15nm,1.5s	**14.62**	**110**	*e*P	**Pn**	**04 36 20.1**	**+8.6**
LOHW	**Long Hollow** 1.5nm,0.8s	**14.63**	**109**	*e*P	**Pn**	**04 36 21.3**	**+10**
BW06	**Boulder Array** 10.0nm,1.8s	**15.73**	**110**	*e*P	**Pn**	**04 36 29.6**	**+3.2**
PDAR	**Pinedale Array** 0.1nm,0.3s,baz=311,slow=10,SNR=9.0	**15.73**	**110**	Pn	**Pn**	**04 36 28.9**	**+2.5**
ILAR	**Eielson Array** 0.0nm,0.3s,baz=142,slow=7.2,SNR=4.3	**17.21**	**335**	P	**P**	**04 36 49.6**	**+4.6**
FFC	**Flin Flon** 9.4nm,0.8s	**17.49**	**64**	*e*P	**Pn**	**04 36 51.5**	**+2.9**
ULM	**Lac du Bonnet** 3.2nm,0.6s,mb4.0,baz=273,slow=12,SNR=2.7	**21.59**	**77**	P	**P**	**04 37 37.6**	**+3.0**
ECSD	**EROS Data Cent** 6.4nm,0.9s,mb4.0	**23.39**	**93**	*e*P	**P**	**04 37 56.0**	**+2.2**
AMTX	**Amarillo** 3.2nm,0.7s,mb4.0	**25.52**	**116**	*e*P	**P**	**04 38 14.2**	**+0.7**
TXAR	**Lajitas Array** 0.3nm,0.8s,mb3.1,baz=332,slow=5.0,SNR=3.6	**28.65**	**127**	P	**P**	**04 38 41.5**	**-0.1**

*NEIC **29** 04:45:02.8, 17°.21N×100°.41W, h27km, MD3.5(MEX), After MEX.*

MEX 29 04:45:03.0±0.6,17°.21N×100°.40W, h27km±10km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.21**	**142**	*i* P	Pb	04 45 07.3	-1.6
CAIG				*i* S	Sb	04 45 11.8	-1.2
CAIG	**El Cayaco**	**0.21**	**142**	*i* P	Pb	04 45 07.3	-1.6
CAIG				*i* S	Sb	04 45 11.8	-1.2
ACX	**Acapulco**	**0.62**	**123**	*i* P	Pb	04 45 12.9	-2.4
ACX				*i* S	Sb	04 45 20.2	-3.5
ACX	**Acapulco**	**0.62**	**123**	*i* P	Pb	04 45 12.9	-2.4
ACX				*i* S	Sb	04 45 20.2	-3.5
ZIIG	**Zihuatanejo**	**1.09**	**291**	*i* P	Pn	04 45 19.5	-2.9
ZIIG				*i* S	Sn	04 45 33.9	-2.8
ZIIG	**Zihuatanejo**	**1.09**	**291**	*i* P	Pn	04 45 19.5	-2.9
ZIIG				*i* S	Sn	04 45 33.9	-2.8
PNIG	**Pinotepa**	**2.33**	**110**	*e*P	Pn	04 45 37.6	-1.9
PNIG				*i* S	Sn	04 46 04.5	-2.7
PNIG	**Pinotepa**	**2.33**	**110**	*e*P	Pn	04 45 37.6	-1.9
PNIG				*i* S	Sn	04 46 04.5	-2.7
PPM	**Popocatepetl**	**2.50**	**42**	*i* P	Pn	04 45 39.0	-2.9
PPM				*i* S	Sn	04 46 11.1	-0.4
PPM	**Popocatepetl**	**2.50**	**42**	*i* P	Pn	04 45 40.9	-1.0
PPM				*i* S	Sn	04 46 09.1	-2.4
UTMO	**Huajuapan**	**2.55**	**76**	*i* P	Pn	04 45 41.7	-0.9
UTMO				*i* S	Sn	04 46 10.2	-2.7

IDC 29 04:48:49.9±46.0,16°.78S×178°.13W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/17, mbtmp4.1/3, MS3.5/1, Ms1 3.5/1, ms1mx2.5/33, Error ellipse: s-maj=843.1km s-min=150.7km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**21.80**	**190**	LR	LR	05 00 45.9	
	comp=Z,130nm,19.2s,baz=212,slow=33						
STKA	**Stephens Creek** 1.5nm,0.5s,baz=88,slow=7.8,SNR=6.7	**39.41**	**240**	P	P	04 56 22.5	+0.8
WRA	**Warramunga Arr** 0.6nm,0.5s,baz=96,slow=7.7,SNR=18	**45.11**	**258**	P	P	04 57 08.0	-0.4
ASAR	**Alice Springs** 5.8nm,0.6s,baz=89,slow=8.3,SNR=68	**45.36**	**253**	P	P	04 57 09.8	-0.5

*ISCJB **29** 04:52:52.5±1.0,8°.9S±0°.2×67°.5E±0°.1, h10km, mb4.0/12, MS3.6/9, Error ellipse: s-maj=25.9km s-min=14.6km az=31.8*

*IDC **29** 04:52:52.3±2.3,9°.03S×67°.24E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.7/24, mbtmp3.9/7, MS3.6/9, Ms1 3.6/9, ms1mx3.3/32, Error ellipse: s-maj=71.0km s-min=26.1km az=57.0*

*NEIC **29** 04:52:54.9±0.8,8°.89S×67°.51E, h10km, mb4.0/5, Error ellipse: s-maj=22.7km s-min=13.1km az=209.0*

ISC 29 04:52:54.9±1.0,8°.9S±0°.2×67°.5E±0°.1, h10km, n26, σ0°85/16, mb4.0/12, MS3.6/9, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSEY	**Mahe Island** 56nm,0.5s	**12.66**	**289**	*e*Pn	**Pn**	**04 55 55.9**	**+0.7**
ATD	**Arta Tunnel** comp=Z,88nm,19.5s,MS3.5,baz=136,slow=31	**31.84**	**309**	LR	LR	05 09 29.2	
PSI	**Prapat** comp=Z,108nm,19.0s,MS3.6,baz=106,slow=32	**33.40**	**71**	LR	LR	05 10 36.6	
CMAR	**Chiang Mai Arr** 0.6nm,0.4s,mb3.6,baz=236,slow=10,SNR=4.1	**41.24**	**49**	P	**P**	**05 00 42.7**	**+2.3**
EKS2	**Erkin-Say** 0.9nm,0.7s,mb3.8	**51.62**	**6**	*e*P	**P**	**05 02 01.6**	**0.0**
AAK	**Ala-Archa** comp=Z,61nm,21.1s,MS3.6,baz=297,slow=33	**51.67**	**7**	LR	LR	05 21 01.3	
TKM2	**Tokmak 2** 1.1nm,0.6s,mb4.0	**52.09**	**8**	*e*P	**P**	**05 02 05.3**	**+0.3**
MKAR	**Makanchi Array**	**56.98**	**12**	P	**P**	**05 02 39.5**	**-1.1**
MKAR				LR	LR	05 26 39.1	
MKAR	**Makanchi Array** 0.6nm,0.7s,mb3.8,baz=202,slow=9.2,SNR=4.3	**56.98**	**12**	P	**P**	**05 02 39.5**	**-1.1**
MKAR				LR	LR	05 26 39.1	
	comp=Z,27nm,18.9s,MS3.4,baz=352,slow=36						
FITZ	**Fitzroy Crossi** 14nm,1.8s,mb4.7	**57.06**	**106**	*e*P	**P**	**05 02 40.7**	**-1.1**
ABKAR	**Akbulak array** 0.7nm,0.6s,mb3.9	**58.28**	**354**	*e*P	**P**	**05 02 49.1**	**-0.5**
MAW	**Mawson** comp=Z,30nm,20.0s,MS3.4,baz=131,slow=31	**58.71**	**182**	LR	LR	05 22 50.7	
AKTK	**Aktyubinsk**	**59.66**	**353**	P	**P**	**05 02 58.8**	**-0.4**
AKTO	**Aktyubinsk** 0.9nm,0.3s,mb4.3,baz=200,slow=12,SNR=2.7	**59.66**	**353**	P	**P**	**05 02 58.8**	**-0.4**
KURK	**Kurchatov** 1.5nm,0.7s,mb4.1	**60.14**	**8**	*e*P	**P**	**05 03 02.0**	**-0.6**
KURK	**Kurchatov** comp=Z,19nm,19.5s,MS3.2,baz=350,slow=34	**60.14**	**8**	LR	LR	05 26 45.7	
BVAR	**Borovoye Array** 0.5nm,0.4s,mb4.0,baz=132,slow=8.8,SNR=4.6	**61.73**	**2**	P	**P**	**05 03 12.8**	**-0.4**
ASAR	**Alice Springs** 0.6nm,0.6s,mb3.8,baz=278,slow=5.8,SNR=8.7	**64.90**	**112**	P	**P**	**05 03 35.0**	**0.0**
WRA	**Warramunga Arr**	**65.30**	**108**	P	**P**	**05 03 38.0**	**+0.4**
WRA	**Warramunga Arr** 0.7nm,1.0s,mb3.6,baz=278,slow=5.9,SNR=5.3	**65.30**	**108**	P	**P**	**05 03 38.0**	**+0.4**
SONM	**Songino Array** 0.6nm,0.4s,mb3.9,baz=201,slow=7.9,SNR=5.1	**66.12**	**28**	P	**P**	**05 03 43.7**	**+1.3**
TORD	**Torodi Ar. Bea** comp=Z,65nm,19.1s,MS3.9,baz=140,slow=33	**68.93**	**288**	LR	LR	05 31 04.0	
DBIC	**Dimbokro** comp=Z,40nm,19.1s,MS3.7,baz=104,slow=33	**73.77**	**280**	LR	LR	05 33 08.5	
URZ	**Urewera** comp=Z,152nm,18.5s,MS4.5,baz=29,slow=31	**99.56**	**131**	LR	LR	05 44 31.7	
NVAR	**Mina Array Bea**	**150.13**	**9**	PKPbc	PKPbc	05 12 47.4	+1.0
NVAR	**Mina Array Bea** 0.4nm,0.6s,baz=243,slow=1.7,SNR=4.7	**150.13**	**9**	PKPbc	PKPbc	05 12 47.4	+1.0

WEL 29 05:11:46.0±0.9,37°.64S×179°.79E, h33km, ML3.5/5, Error ellipse: s-maj=7.8km s-min=6.7km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.18**	**273**	PN	Pn	05 12 05.4	-0.6
MXZ				SN	Sn	05 12 21.1	+0.1
PUZ	**Puketiti**	**1.28**	**250**	PN	Pn	05 12 06.7	-0.8
PUZ				SN	Sn	05 12 22.1	-1.5
CNGZ	**Carnagh Statio**	**1.50**	**235**	PN	Pn	05 12 10.8	+0.2
MWZ	**Matawai**	**1.91**	**248**	PN	Pn	05 12 15.3	-0.9
URZ	**Urewera**	**2.20**	**253**	PN	Pn	05 12 19.9	-0.3
BKZ	**Black Stump Fm**	**3.00**	**238**	PN	Pn	05 12 30.6	-0.6
BHHZ	**Black Hill Sta**	**3.45**	**237**	PN	Pn	05 12 36.7	-0.7

*ISCJB **29** 05:15:38.4±0.6,18°.15S±0°.05×69°.9W±0°.1, h134km±6km, mb3.7/4, Error ellipse: s-maj=17.4km s-min=7.3km az=16.9*

*IDC **29** 05:15:38.2±1.9,18°.24S×69°.78W, h117km±17km, mb3.6/4, mb1 3.9/7, mb1mx3.6/18, mbtmp3.8/7, Error ellipse: s-maj=22.8km s-min=19.3km az=127.0*

*GUC **29** 05:15:40.0±0.3,18°.33S×69°.89W, h138km±3km, ML3.8*

ISC 29 05:15:39.4±0.6,18°.15S±0°.05×69°.9W±0°.1, h130km±6km, n12, σ0°95/19, mb3.7/4, 2C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Miæe Miæ**	**1.00**	**166**	⇓*i* P	**Pn**	**05 16 03.0**	**+0.6**
MNMC				*i* S	**Sn**	**05 16 20.6**	**+0.8**
MNMC				AML	AML	05 16 21.2	
	comp=E,3μm,0.2s						
PSGC	**Pisagua**	**1.46**	**190**	⇑*i* P	**Pn**	**05 16 07.0**	**0.0**
PSGC				*i* S	**Sn**	**05 16 27.4**	**-0.7**
PSGC				AML	AML	05 16 28.7	
	comp=E,1μm,0.9s						
HMBC	**Humberston**	**2.11**	**181**	⇑*i* P	**Pn**	**05 16 14.6**	**-0.2**
HMBC				*i* S	**Sn**	**05 16 41.0**	**-1.0**
HMBC				AML	AML	05 16 48.4	
	comp=N,647nm,0.5s						
LPAZ	**La Paz** comp=N,30nm,0.3s,baz=232,slow=7.7,SNR=1071	**2.48**	**42**	P	**Pn**	**05 16 20.4**	**+1.0**
LPAZ				S	**Sn**	**05 16 49.7**	**-0.4**
	comp=N,2.2nm,0.3s,baz=62,slow=17,SNR=3.1						
CEN1	**Los Morros**	**5.22**	**183**	*e*P	**Pn**	**05 16 55.8**	**+0.3**
CEN1				*i* S	**Sn**	**05 17 55.9**	**+1.2**
SIV	**San Ignacio** comp=N,1.9nm,0.3s,baz=262,slow=12,SNR=34	**8.67**	**77**	P	**Pn**	**05 17 38.3**	**-3.7**
SIV				S	**Sn**	**05 19 09.9**	**-8.2**
	comp=N,0.1nm,0.3s,baz=168,slow=22,SNR=3.1						
NNA	**Nana** comp=N,6.6nm,0.3s,baz=134,slow=12,SNR=14	**9.12**	**311**	P	**Pn**	**05 17 47.3**	**-0.7**
NNA				S	**Sn**	**05 19 24.0**	**-4.9**
	comp=N,2.5nm,0.3s,baz=308,slow=19,SNR=3.3						
CFAA	**Coronel Fontan** comp=N,0.1nm,0.3s,baz=354,slow=15,SNR=4.3	**13.47**	**174**	P	**Pn**	**05 18 42.1**	**-3.3**
PLCA	**Paso Flores** comp=N,0.8nm,0.7s,mb3.3,baz=8.2,slow=14,SNR=3.8	**22.51**	**181**	P	**P**	**05 20 28.3**	**-0.1**
TXAR	**Lajitas Array** comp=N,0.2nm,0.7s,mb3.0,baz=141,slow=5.8,SNR=2.6	**57.39**	**325**	P	**P**	**05 25 15.4**	**+1.0**
DBIC	**Dimbokro** comp=N,5.0nm,0.7s,mb4.4,baz=236,slow=5.0,SNR=7.6	**68.69**	**75**	P	**P**	**05 26 28.1**	**-1.3**
TORD	**Torodi Ar. Bea** comp=N,3.1nm,0.7s,mb4.1,baz=261,slow=5.5,SNR=7.1	**77.11**	**71**	P	**P**	**05 27 20.3**	**+1.2**

*IDC **29** 05:15:29.1±1.1,3°.18S×140°.09E, h0km, mb4.0/9, mb1 4.2/10, mb1mx4.0/16, mbtmp4.0/10, ML4.1/1, MS3.0/3, Ms1 3.0/3, ms1mx2.6/23, Error ellipse: s-maj=42.4km s-min=18.1km az=93.0*

*ISCJB **29** 05:15:38.3±2.4,3°.34S±0°.08×139°.6E±0°.1, h78km±23km, mb3.8/8, Error ellipse: s-maj=19.1km s-min=12.4km az=11.4*

*NEIC **29** 05:15:39.0±2.8,3°.27S×139°.74E, h73km±26km, mb4.1/1, Error ellipse: s-maj=24.0km s-min=17.2km az=56.0*

ISC 29 05:15:41.1±1.8,3°.39S±0°.08×139°.6E±0°.1, h89km±17km, n18, σ1°08/19, mb3.8/8, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**11.07**	**162**	*e*Pn	**Pn**	**05 18 16.4**	**0.0**
KAKA	**Kakadu** 85nm,0.4s	**11.68**	**217**	*e*Pn	**Pn**	**05 18 24.9**	**+0.1**
KAKA				*e*Sn	**Sn**	**05 20 32.4**	**-0.9**
WRA	**Warramunga Arr**	**17.25**	**197**	P	**Pn**	**05 19 35.0**	**-1.3**
WRA				S	**S**	**05 22 38.5**	**-13**
WRA	**Warramunga Arr** 0.7nm,0.3s,baz=16,slow=13,SNR=26	**17.25**	**197**	P	**Pn**	**05 19 35.0**	**-1.3**
WRA				S	**S**	**05 22 38.5**	**-13**
	0.1nm,0.3s,baz=20,slow=22,SNR=4.7						
GUMO	**Guam** comp=Z,30nm,21.9s,baz=291,slow=30	**17.65**	**17**	LR	LR	05 24 05.1	
FITZ	**Fitzroy Crossi** 5.6nm,1.1s,baz=34,slow=15,SNR=5.7	**20.04**	**222**	P	**P**	**05 20 08.6**	**+1.4**
FITZ				S	**S**	**05 23 48.1**	**+0.4**
	6.5nm,0.8s,baz=168,slow=9.5,SNR=7.2						
FITZ				LR	LR	05 28 42.3	
	comp=Z,109nm,21.4s,baz=234,slow=39						
ASAR	**Alice Springs** 3.7nm,0.8s,baz=28,slow=9.1,SNR=19	**20.91**	**195**	P	**P**	**05 20 17.1**	**+0.7**
ASAR				S	**S**	**05 24 01.2**	**-3.3**
EIDS	**Eidsvold** 5.0nm,0.6s,mb4.0	**24.47**	**154**	*e*P	**P**	**05 20 52.9**	**+1.0**
STKA	**Stephens Creek** 0.6nm,0.4s,mb3.5,baz=349,slow=10,SNR=2.8	**28.40**	**176**	P	**P**	**05 21 28.0**	**+0.9**
DZM	**Mont Dzumac** 262nm,21.0s	**31.96**	**128**	*e*LR	LR	05 30 46.3	
KSRS	**Korea Array** 2.3nm,0.6s,mb4.1,baz=158,slow=8.8,SNR=14	**42.07**	**346**	P	**P**	**05 23 23.9**	**-0.2**
KSRS				LR	LR	05 37 40.4	
	comp=Z,20nm,21.1s,baz=150,slow=32						
CMAR	**Chiang Mai Arr** 1.0nm,0.7s,mb3.6,baz=105,slow=6.0,SNR=5.4	**45.57**	**300**	P	**P**	**05 23 53.8**	**+1.3**
PPT	**Papeete** 108nm,22.8s	**70.67**	**107**	*e*LR	LR	05 48 44.6	
MKAR	**Makanchi Array** 0.6nm,0.6s,mb3.6,baz=94,slow=8.6,SNR=6.2	**70.89**	**322**	P	**P**	**05 26 49.0**	**+0.6**
ZALV	**Zalesovo Beam** 0.4nm,0.3s,mb3.7,baz=114,slow=6.5,SNR=2.6	**72.98**	**330**	P	**P**	**05 26 59.5**	**-1.4**
BVAR	**Borovoye Array** 1.4nm,0.9s,mb3.8,baz=104,slow=6.1,SNR=4.2	**80.39**	**325**	P	**P**	**05 27 42.7**	**+0.1**
RKT	**Rikitea** 119nm,37.0s	**84.45**	**113**	*e*LR	LR	05 55 06.9	
ILAR	**Eielson Array** 2.1nm,0.7s,mb4.2,baz=260,slow=4.8,SNR=28	**86.06**	**24**	P	**P**	**05 28 09.1**	**-2.5**

*PGC **29** 05:16:08.1±2.9,61°.58N×141°.07W, h1km, ML3.2/4, 211km Wnw of Haines Jct., Yt Southern Alaska*

NEIC 29 05:16:07.5,61°.52N×141°.08W, h12km, ML3.3(PMR), ML3.0(AEIC), 3D, After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCA3	**Beaver Creek A**	**1.59**	**348**	P	Pn	05 16 36.2	+0.8
BMRM	**Bremner River**	**1.79**	**254**	P	Pn	05 16 39.7	+1.6
HYT	**Haines Junctio**	**1.87**	**110**	⇓Pn	Pn	05 16 40.8	+1.6
HYT				⇑Sg	Sg	05 17 06.1	-1.3
MENT	**Mentasta**	**1.89**	**320**	*e*Pn	Pn	05 16 41.1	+1.6
MENT				*e*Sg	Sg	05 17 07.5	-0.6
PNL	**Peninsula**	**2.03**	**155**	P	Pn	05 16 44.0	+2.6
YKU2	**Yakutat**	**2.13**	**160**	P	Pn	05 16 46.3	+3.5
DIV	**Divide**	**2.29**	**262**	P	Pn	05 16 48.4	+3.3
PAX	**Paxson**	**2.52**	**307**	P	Pn	05 16 52.0	+3.9
DOT	**Dot Lake**	**2.55**	**329**	P	Pn	05 16 50.5	+1.9
DAWY	**Dawson**	**2.68**	**16**	P	Pn	05 16 51.5	+1.1
DAWY	**Dawson**	**2.68**	**16**	⇑Pn	Pn	05 16 51.1	+0.8
DAWY				⇑Pg	Pg	05 16 55.7	-3.0
DAWY				⇑Sg	Sg	05 17 28.1	-5.2
DHAK	**Deception Hill**	**2.82**	**148**	P	Pn	05 16 54.8	+2.6
SCM	**Sheep Creek Mo**	**3.00**	**279**	P	Pn	05 16 58.4	+3.7
PLBC	**Pleasant Camp**	**3.12**	**129**	⇓Pn	Pn	05 16 58.7	+2.3
PLBC				⇑Pg	Pg	05 17 04.1	-3.0
PLBC				⇑Sg	Sg	05 17 45.5	-1.9
WHY	**Whitehorse**	**3.13**	**103**	P	Pn	05 16 59.3	+2.7
WHY	**Whitehorse**	**3.13**	**103**	⇑Pn	Pn	05 16 57.3	+0.8
WHY				⇑Pg	Pg	05 17 04.6	-2.8
WHY				⇑Sn	Sn	05 17 35.6	+1.7
WHY				⇓Sg	Sg	05 17 46.1	-1.8
EGAK	**Eagle**	**3.28**	**359**	P	Pn	05 17 00.2	+1.6
MID	**Middleton Isla**	**3.34**	**234**	*e*P	Pn	05 17 04.2	+4.8
SML	**Sawmill**	**3.47**	**278**	*e*Pn	Pn	05 17 08.0	+6.8
SML				*e*Sg	Sg	05 17 53.6	-5.2
SKAG	**Skagway**	**3.51**	**123**	*e*Pn	Pn	05 17 04.7	+2.9
PMR	**Palmer**	**3.85**	**275**	*e*Pg	Pg	05 17 15.0	-6.1
RND	**Reindeer**	**4.08**	**301**	P	Pn	05 17 14.2	+4.7
MCK	**McKinley**	**4.25**	**305**	*e*Pn	Pn	05 17 16.6	+4.6
TRF	**Thorofare Moun**	**4.69**	**298**	P	Pn	05 17 22.0	+4.0
BPAW	**Bear Paw Mtn.**	**5.23**	**304**	P	Pn	05 17 29.2	+3.8
BM3	**Burnt Mountain**	**6.12**	**347**	P	Pn	05 17 39.4	+1.8
COLD	**Coldfoot** 2.5nm,0.5s	**6.96**	**329**	*e*Pn	Pn	05 17 50.0	+0.9
IM3	**Indian Mountai**	**7.18**	**314**	P	Pn	05 17 53.9	+1.8

*IDC **29** 05:24:07.4±1.7,11°.33S×162°.15E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.9/19, mbtmp3.9/7, ML4.2/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/23, Error ellipse: s-maj=36.6km s-min=26.1km az=115.0*

*ISCJB **29** 05:24:10.8±1.2,11°.22S±0°.09×162°.2E±0°.1, h33km, mb3.9/7, MS3.7/1, Error ellipse: s-maj=19.6km s-min=10.3km az=154.5*

ISC 29 05:24:12.6±1.2,11°.20S±0°.09×162°.2E±0°.1, h35km, n16, σ1°30/16, mb3.9/7, MS3.7/1, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara** 35nm,0.3s,baz=146,slow=3.6,SNR=3.6	**2.86**	**308**	Pn	**Pn**	**05 24 55.4**	**-0.3**
HNR				Sn	**Sn**	**05 25 29.7**	**+0.8**
	84nm,0.3s,baz=0.0,slow=20,SNR=4.0						
CTA	**Charters Tower** 4.3nm,1.2s	**17.74**	**238**	*e*P	**Pn**	**05 28 18.3**	**+1.4**
CTA	**Charters Tower** 0.8nm,0.3s,baz=73,slow=13,SNR=9.6	**17.74**	**238**	P	**Pn**	**05 28 18.0**	**+1.1**
COEN	**Coen** 36nm,1.1s	**18.81**	**260**	*e*P	**Pn**	**05 28 30.6**	**+0.6**
RMQ	**Roma**	**19.82**	**218**	*e*P	**Pn**	**05 28 42.4**	**+0.4**
ARMA	**Armidale**	**21.51**	**206**	*e*P	**P**	**05 29 00.3**	**+1.7**
CMSA	**Cobar Meteorol**	**25.37**	**215**	*e*P	**P**	**05 29 36.9**	**+0.3**
STKA	**Stephens Creek** 1.3nm,0.5s,mb3.8,baz=42,slow=14,SNR=5.6	**28.04**	**220**	P	**P**	**05 30 00.7**	**+0.1**
WRA	**Warramunga Arr** 0.9nm,0.5s,mb3.6,baz=77,slow=10,SNR=8.2	**28.21**	**249**	P	**P**	**05 30 00.1**	**-2.2**
KAKA	**Kakadu** 11nm,0.5s,mb4.9	**29.18**	**264**	*e*P	**P**	**05 30 09.5**	**-1.

comp=Z,62nm,19.9s,MS3.2,baz=248,slow=33
FITZ Fitzroy Crossi 35.83 255 P **P** **05 33 12.9 -1.3**
2.5nm,0.9s,mb4.2,baz=104,slow=9.0,SNR=5.1
NWAO Narrogin (SRO) 46.38 235 LR LR 05 53 50.3
comp=Z,216nm,20.9s,MS4.1,baz=187,slow=36
PPT Papeete 47.21 104 LR LR 05 50 55.2
comp=Z,132nm,20.4s,MS3.9,baz=246,slow=31
KSRS Korea Array 58.00 328 LR LR 05 58 56.6
comp=Z,55nm,18.8s,MS3.7,baz=130,slow=34
PETK Petropavlovsk- 64.14 357 LR LR 06 02 54.9
comp=Z,30nm,18.8s,MS3.5,baz=16,slow=34
CMAR Chiang Mai Arr 68.84 295 P **P** **05 37 19.4 +0.3**
0.8nm,0.3s,mb4.1,baz=116,slow=5.2,SNR=4.8
SONM Songino Array 76.65 325 P **P** **05 38 05.2 +0.3**
1.6nm,0.8s,mb4.0,baz=94,slow=5.8,SNR=4.4
MAW Mawson 83.22 202 P **P** **05 38 39.9 -0.2**
1.6nm,0.7s,mb4.1,baz=99,slow=8.2,SNR=5.4
ILAR Eielson Array 84.83 20 P **P** **05 38 47.5 -0.7**
0.4nm,0.7s,mb3.6,baz=259,slow=1.8,SNR=2.7
YBH Yreka Blue Hor 86.61 46 LR LR 06 11 35.9
comp=Z,41nm,18.2s,MS3.9,baz=346,slow=31
NVAR Mina Array Bea 88.91 51 P **P** **05 39 09.3 +0.6**
0.2nm,0.6s,mb3.6,baz=232,slow=4.4,SNR=2.7

DJA ***29*** *05:33:52.6˚27.5S×119˚.18E,h650km,MLv3.8/5*
IDC ***29*** *05:34:23.4±2.0,7˚.96S×118˚.58E,h0km,mb3.8/3,*
mb1 4.0/5,mb1mx3.7/20,mbtmp3.8/5,ML3.4/2,Error
ellipse: s-maj=203.1km s-min=22.6km az=54.0
ISCJB ***29*** *05:34:26.0±0.7,7˚.86S±0˚.10×118˚.83E±0˚.05,h33km,*
mb3.9/3,Error ellipse: s-maj=14.0km s-min=6.9km az=9.2
ISC 29 05:34:28.0±0.7,7˚.81S±0˚.10×118˚.84E±0˚.05,h35km,n9,
σ0s96/11,mb3.9/3,Flores Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.34**	**142**	P			Px	05 35 19.7	
BKSI	**Bulukumba**	**2.79**	**27**	P			**Pn**	**05 35 09.5**	**-0.6**
MMRI	**Maumere**	**3.46**	**104**	P			**Pn**	**05 35 18.7**	**-0.7**
MMRI				S			**Sn**	**05 35 59.1**	**-0.2**
SRBI	**Singaraja**	**3.60**	**265**	P			**Pn**	**05 35 22.8**	**+1.5**
SRBI				S			**Sn**	**05 36 01.0**	**-1.6**
FITZ	**Fitzroy Crossi**	**12.18**	**148**	Pn			**Pn**	**05 37 18.4**	**-0.7**
	0.1nm,0.3s,baz=326,slow=3.6,SNR=2.5								
FITZ				Sn			**Sn**	**05 39 28.1**	**-5.7**
	0.1nm,0.3s,baz=184,slow=19,SNR=3.1								
WRA	**Warramunga Arr**	**19.26**	**130**	P			**Pn**	**05 38 50.3**	**-0.5**
	0.3nm,0.3s,baz=307,slow=12,SNR=7.0								
ASAR	**Alice Springs**	**21.38**	**139**	P			**P**	**05 39 13.8**	**+1.1**
	3.8nm,0.7s,mb3.8,baz=309,slow=8.8,SNR=31								
STKA	**Stephens Creek**	**31.97**	**142**	P			**P**	**05 40 51.6**	**+0.8**
	2.2nm,0.8s,mb4.0,baz=320,slow=13,SNR=2.7								
MKAR	**Makanchi Array**	**63.33**	**333**	P			**P**	**05 44 54.4**	**+0.9**
	0.5nm,0.6s,mb3.6,baz=143,slow=11,SNR=3.6								

IDC 29 05:36:31.9±15.0,1˚.46N×128˚.20E,h0km,mb3.8/3,
mb1 4.0/3,mb1mx3.6/18,mbtmp3.9/3,MS3.2/1,Ms1 3.2/1,
ms1mx2.7/32,Error ellipse: s-maj=244.5km
s-min=166.1km az=156.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.11**	**164**	P			P	05 41 28.5	-0.5
	1.6nm,0.4s,baz=342,slow=12,SNR=28								
ASAR	**Alice Springs**	**25.59**	**168**	P			P	05 42 05.0	+2.0
	0.9nm,0.5s,baz=347,slow=12,SNR=14								
CBIJ	**Chichi jima**	**28.81**	**27**	LR			LR	05 50 47.8	
	comp=Z,56nm,21.9s,baz=208,slow=30								
STKA	**Stephens Creek**	**35.51**	**160**	P			P	05 43 28.9	-1.7
	2.5nm,0.9s,baz=324,slow=8.7,SNR=3.1								

ISCJB ***29*** *05:40:57.5±1.1,50˚.06N±0˚.08×129˚.71W±0˚.09,h10km,*
mb3.7/2,Error ellipse: s-maj=12.3km s-min=6.8km
az=24.5
PGC ***29*** *05:40:57.6±3.9,49˚.95N×129˚.94W,h10km,ML2.8/9,*
Mw3.4, 197km Wsw of Pt. Hardy, Bc Vancouver Island
Region
IDC ***29*** *05:41:04.5±1.9,50˚.41N×129˚.54W,h0km,mb3.8/2,*
mb1 3.8/7,mb1mx3.6/26,mbtmp3.4/7,ML3.3/5,MS3.2/2,
Ms1 3.2/2,ms1mx2.4/36,Error ellipse: s-maj=31.3km
s-min=13.3km az=78.0
ISC 29 05:41:00.3±1.2,50˚.04N±0˚.08×129˚.5W±0˚.1,h10km,n20,
σ0s89/24,mb3.6/2,8D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.04**	**54**	Pn			**Pn**	**05 41 20.4**	**-0.5**
HOLB				↑Sn			**Sn**	**05 41 36.3**	**+0.7**
BPBC	**Brooks Peninsu**	**1.09**	**83**	↑Pn			**Pn**	**05 41 20.9**	**-0.7**
BPBC				↓Sn			**Sn**	**05 41 38.0**	**+1.3**
PHC	**Port Hardy**	**1.46**	**62**	Pn			**Pn**	**05 41 26.6**	**-0.1**
PHC				↓Sn			**Sn**	**05 41 46.7**	**+0.9**
MAYB	**Maynard**	**1.51**	**75**	Pn			**Pn**	**05 41 27.2**	**-0.2**
EDB	**Eliza Dome**	**1.52**	**95**	↑Pn			**Pn**	**05 41 26.7**	**-0.8**
WOSB	**Woss**	**1.86**	**85**	↓Pn			**Pn**	**05 41 32.5**	**+0.3**
GDR	**Gold River**	**2.23**	**95**	↓Pn			**Pn**	**05 41 36.5**	**-0.8**
BBB	**Bella Bella**	**2.31**	**21**	Pn			**Pn**	**05 41 37.4**	**-1.0**
	12nm,0.3s,baz=42,slow=13,SNR=84								
BBB				Sn			**Sn**	**05 42 04.9**	**-2.0**
	15nm,0.3s,baz=307,slow=20,SNR=15								
BBB	**Bella Bella**	**2.31**	**21**	↓Pn			**Pn**	**05 41 37.3**	**-1.1**
BBB				↓Sn			**Sn**	**05 42 05.2**	**-1.7**
BNB	**Barry Inlet**	**2.92**	**331**	↓Pn			**Pn**	**05 41 42.0**	**-4.8**
MOBC	**Moresby Island**	**3.48**	**334**	↓Pn			**Pn**	**05 41 49.6**	**-4.9**
DIB	**Dawson Inlet,**	**3.69**	**330**	Pn			**Pn**	**05 41 52.2**	**-5.1**
DLBC	**Dease Lake**	**8.43**	**358**	Pn			**Pn**	**05 43 03.0**	**+0.7**
	0.2nm,0.3s,baz=189,slow=13,SNR=5.0								
DLBC				LR			LR	05 46 15.8	
	comp=Z,123nm,20.9s,baz=144,slow=39								
NVAR	**Mina Array Bea**	**14.07**	**141**	Pn			**Pn**	**05 44 32.0**	**+12**
	0.4nm,0.3s,baz=0.9,slow=11,SNR=9.8								
PDAR	**Pinedale Array**	**15.51**	**110**	Pn			**Pn**	**05 44 48.3**	**+9.5**
	0.1nm,0.3s,baz=310,slow=7.2,SNR=3.5								
ILAR	**Eielson Array**	**17.40**	**335**	P			**P**	**05 45 04.0**	**+1.1**
	0.0nm,0.3s,baz=139,slow=9.8,SNR=3.4								
INK	**Inuvik**	**18.44**	**355**	P			**Pn**	**05 45 16.5**	**+0.9**
	0.1nm,0.3s,baz=192,slow=12,SNR=3.3								
ULM	**Lac du Bonnet**	**21.43**	**76**	P			**P**	**05 45 53.8**	**+5.6**
	5.6nm,0.7s,mb4.0,baz=286,slow=12,SNR=4.1								
TXAR	**Lajitas Array**	**22.77**					**P**	**05 47 04.8**	**+10**
	0.6nm,1.0s,mb3.2,baz=332,slow=12,SNR=4.0								
SCHQ	**Schefferville**	**37.35**	**58**	LR			LR	06 03 18.9	
	comp=Z,49nm,18.4s,baz=13,slow=36								

IDC 29 05:50:13.6±1.2,27˚.04N×141˚.25E,h90km±12km,mb3.3/7,
mb1 3.6/7,mb1mx3.3/21,mbtmp3.3/7,Error ellipse:
s-maj=27.1km s-min=20.0km az=114.0,Bonin Islands
region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.84**	**86**	P			Pn	05 50 32.7	+1.2
	489nm,0.3s,baz=260,slow=1.1,SNR=237								
CBIJ				S			Sn	05 50 45.6	+0.8
	1µm,0.3s,baz=287,slow=20,SNR=67								
CMAR	**Chiang Mai Arr**	**39.79**	**267**	P			P	05 57 39.6	+1.6
	0.5nm,0.6s,baz=68,slow=5.0,SNR=3.4								
WRA	**Warramunga Arr**	**47.18**	**189**	P			P	05 58 36.7	-0.5
	2.7nm,0.4s,baz=10,slow=8.7,SNR=13								
ASAR	**Alice Springs**	**50.91**	**189**	P			P	05 59 05.3	-0.3
	0.2nm,0.4s,baz=7.2,slow=5.5,SNR=4.8								
KURK	**Kurchatov**	**52.43**	**315**	P			P	05 59 15.9	-0.8
	0.5nm,0.5s,baz=92,slow=7.9,SNR=3.1								
ILAR	**Eielson Array**	**58.16**	**29**	P			P	05 59 58.0	+0.3
	0.4nm,0.6s,baz=269,slow=4.5,SNR=2.6								
FINES	**FINESS Array B**	**77.63**	**334**	P			P	06 01 58.5	-1.3
	1.6nm,0.8s,baz=72,slow=6.2,SNR=3.7								
NVAR	**Mina Array Bea**	**81.21**	**51**	P			P	06 02 20.8	+1.1
	0.1nm,0.3s,baz=280,slow=5.4,SNR=2.5								
PDAR	**Pinedale Array**	**84.84**	**44**	P			P	06 02 39.1	+0.9
	0.4nm,0.8s,baz=318,slow=2.0,SNR=3.7								
LPAZ	**La Paz**	**150.75**	**75**	PKPbc			PKPbc	06 09 56.8	+0.7
	1.0nm,0.6s,baz=352,slow=3.9,SNR=5.4								

IGQ 29 06:05:38.4,2˚.34S×79˚.21W,h5km±2km,Mb4.3,Ms4.1,
25C-11D,Error ellipse: s-maj=2.5km s-min=1.6km
az=129.4,Near coast of Ecuador

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

RIOE	**Riobamba**	**0.82**	**44**	↑P			Pg	06 05 55.0	+0.9
RIOE	**Riobamba**	**0.82**	**44**	↑S			Sg	06 06 05.2	+0.4
MACE	**Macas**	**1.01**	**85**	↓S			Sg	06 06 10.2	-0.6
MACE	**Macas**	**1.01**	**85**	↓P			Pg	06 05 58.0	+0.2
IGUA	**Igualata**	**1.02**	**34**	↑P			Pg	06 05 58.3	+0.4
BMAS	**Trigal station**	**1.11**	**41**	↑P			Pg	06 05 59.8	+0.2
ARRY	**Arrayan**	**1.12**	**42**	↑P			Pg	06 05 59.5	-0.3
BIL2	**Estacion Bilba**	**1.13**	**39**	P			Pg	06 06 00.6	+0.6
PAT1	**Patacocha**	**1.13**	**43**	↓P			Pg	06 06 00.2	+0.1
BBIL	**Ulba Tungurahu**	**1.14**	**39**	↓P			Pg	06 06 01.0	+0.7
RETU	**Refugio**	**1.17**	**41**	↓P			Pg	06 06 01.1	+0.3
RETU	**Refugio**	**1.17**	**41**	↓S			Sg	06 06 15.2	-0.7
JUI6	**Juive**	**1.17**	**39**	S			Sg	06 06 16.7	+0.6
JUI6	**Juive**	**1.17**	**39**	P			Pg	06 06 01.1	+0.2
ULBA	**Ulba**	**1.19**	**42**	S			Sg	06 06 16.0	-0.8
ULBA	**Ulba**	**1.19**	**42**	P			Pg	06 06 01.4	+0.1
BULB	**Ulba Tungurahu**	**1.20**	**42**	↑P			Pg	06 06 01.6	+0.1
RUN5	**Runtun**	**1.21**	**40**	P			Pg	06 06 01.6	0.0
BRUN	**Tungurahua Vol**	**1.21**	**41**	↑P			Pg	06 06 01.6	-0.1
PISA	**Pisayambo**	**1.52**	**33**	↓P			Pn	06 06 07.5	+1.3
BMOR	**Cotopaxi Volca**	**1.77**	**25**	↑P			Pn	06 06 12.4	+2.8
PECV	**Mancha de Ca P**	**1.77**	**332**	P			Pn	06 06 12.9	+3.2
MOV1	**Cotopaxi Vol s**	**1.79**	**25**	↑P			Pn	06 06 12.3	+2.4
CAMI	**Rancho Maria**	**1.80**	**23**	↓P			Pn	06 06 13.1	+3.1
BREF	**Cotopaxi Volca**	**1.83**	**25**	↑P			Pn	06 06 13.8	+3.4
TAMB	**Tambo**	**1.84**	**27**	↑S			Sn	06 06 38.2	+4.0
TAMB	**Tambo**	**1.84**	**27**	↑P			Pn	06 06 13.4	+2.8
NAS2	**Nasa**	**1.84**	**24**	↑S			Sn	06 06 38.0	+3.7
NAS2	**Nasa**	**1.84**	**24**	↑P			Pn	06 06 14.0	+3.3
BTAM	**Cotopaxi Volca**	**1.84**	**26**	↑P			Pn	06 06 13.8	+3.1
BVC2	**Cotopaxi Volca**	**1.85**	**25**	↑S			Sn	06 06 37.1	+2.5
BVC2	**Cotopaxi Volca**	**1.85**	**25**	↑P			Pn	06 06 14.0	+3.2
VC1	**Cotopaxi 1**	**1.87**	**25**	↑P			Pn	06 06 14.0	+3.0
VC1	**Cotopaxi 1**	**1.87**	**25**	↑S			Sn	06 06 38.5	+3.5
COV1	**Cotopaxi Volc**	**1.88**	**27**	↓P			Pn	06 06 13.8	+2.7
PITA	**Cotopaxi Volc**	**1.93**	**24**	↑P			Pn	06 06 15.2	+3.3
CHIS	**Cerro-Chispas-**	**1.99**	**310**	P			Pn	06 06 12.5	-0.2
ANTI	**Antisana**	**2.15**	**29**	↑P			Pn	06 06 18.5	+3.6
JUA2	**San Juan 2**	**2.20**	**16**	↑P			Pn	06 06 19.9	+4.4
TERV	**Terraza Guagua**	**2.24**	**16**	S			Sn	06 06 51.3	+7.2
TERV	**Terraza Guagua**	**2.24**	**16**	P			Pn	06 06 20.7	+4.6
GGP	**Refugio Guagua**	**2.24**	**16**	↑P			Pn	06 06 20.6	+4.5
PINO	**Pino**	**2.25**	**15**	↓P			Pn	06 06 21.0	+4.8
JAMA	**Jama**	**2.30**	**334**	P			Pn	06 06 17.6	+0.7
YANA	**Yana**	**2.30**	**16**	P			Pn	06 06 21.4	+4.4
GOLV	**Golondrinas**	**2.53**	**2**	P			Pn	06 06 24.4	+4.2
CAYR	**Refugio Cayamb**	**2.63**	**27**	P			Pn	06 06 29.0	+7.5
OTAV	**Otavalo**	**2.67**	**16**	↑S			Sn	06 07 03.0	+8.2
OTAV	**Otavalo**	**2.67**	**16**	↑P			Pn	06 06 27.6	+5.5
CAYA	**Cayambe**	**2.69**	**27**	↓P			Pn	06 06 29.0	+6.7
LAV4	**Lava4-Reventad**	**2.73**	**35**	P			Pn	06 06 29.0	+6.1

IDC ***29*** *06:09:34.2±1.4,0˚.94S×127˚.46E,h0km,mb3.7/5,*
mb1 3.8/6,mb1mx3.6/20,mbtmp3.7/6,ML3.3/1,Error
ellipse: s-maj=104.2km s-min=19.4km az=68.0
DJA ***29*** *06:09:37.0,97S×126˚.98E,h30km,MLv3.9/4*
ISCJB ***29*** *06:09:38.2±1.2,1˚.03S±0˚.06×127˚.1E±0˚.2,h43km±14km,*
mb3.8/4,Error ellipse: s-maj=27.8km s-min=8.7km az=7.9
ISC 29 06:09:38.4±3.1,1˚.04S±0˚.06×127˚.1E±0˚.2,h27km±26km,n9,
σ1s90/11,mb3.8/4,Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LBMI	**Labuha**	**0.59**	**48**	P			**Pb**	**06 09 49.3**	**-1.0**
LBMI				S			**Sb**	**06 09 59.7**	**+1.4**
TNTI	**Ternate**	**1.82**	**10**	P			**Pn**	**06 10 06.4**	**-1.6**
NLAI	**Namlea**	**2.19**	**179**	P			**Pn**	**06 10 13.1**	**+0.1**
NLAI				S			**Sn**	**06 10 39.7**	**+0.6**
FITZ	**Fitzroy Crossi**	**17.01**	**185**	P			**Pn**	**06 13 35.0**	**+0.5**
	0.1nm,0.3s,baz=354,slow=10.0,SNR=3.7								
WRA	**Warramunga Arr**	**20.09**	**160**	P			**P**	**06 14 08.8**	**-1.2**
	0.9nm,0.7s,baz=340,slow=11,SNR=9.6								
ASAR	**Alice Springs**	**23.45**	**164**	P			**P**	**06 14 44.6**	**-1.3**
	0.8nm,0.4s,mb3.5,baz=347,slow=12,SNR=18								
STKA	**Stephens Creek**	**33.60**	**157**	P			**P**	**06 16 17.0**	**+0.5**
	2.0nm,0.7s,mb4.1,baz=315,slow=10.0,SNR=3.2								
MKAR	**Makanchi Array**	**61.67**	**327**	P			**P**	**06 19 54.5**	**+0.6**
	0.5nm,0.5s,mb3.9,baz=117,slow=8.1,SNR=5.8								
KURK	**Kurchatov**	**65.94**	**329**	P			**P**	**06 20 23.2**	**+1.3**
	0.3nm,0.3s,mb3.7,baz=124,slow=5.7,SNR=6.5								

BJI ***29*** *06:18:11.7,30˚.43N×83˚.20E,h26km,mB4.9/5,mb4.3/15,*
Ms4.1/11,Ms7 3.8/8
IDC ***29*** *06:18:13.4±0.6,30˚.78N×83˚.51E,h0km,mb4.1/19,*
mb1 4.2/22,mb1mx4.2/30,mbtmp4.1/22,ML3.8/3,MS3.6/17,
Ms1 3.7/17,ms1mx3.4/34,Error ellipse: s-maj=19.3km
s-min=13.2km az=46.0
DMN ***29*** *06:18:14.8±0.4,31˚.25N×83˚.39E,h10km,Ml4.7/4,Error*
ellipse: s-maj=9.4km s-min=7.6km az=125.0
ISCJB ***29*** *06:18:14.5±0.2,30˚.87N±0˚.02×83˚.34E±0˚.03,h10km,*
mb4.1/25,MS3.6/14,Error ellipse: s-maj=3.9km
s-min=2.7km az=139.1
NDI ***29*** *06:18:16.2±3.5,30˚.89N×83˚.54E,h23km±48km,ML4.2,*
mb4.2(NEIC)
NEIC ***29*** *06:18:17.2±2.4,30˚.77N×83˚.43E,h24km±17km,mb4.2/9,*
Error ellipse: s-maj=11.4km s-min=6.4km az=216.0
ISC 29 06:18:16.3±0.2,30˚.87N±0˚.02×83˚.40E±0˚.03,h10km,n86,
σ1s37/90,mb4.1/25,MS3.6/14,1D,Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.53**	**173**	*e*Pn			**Pn**	**06 18 59.6**	**-2.1**
DANN				*e*Sn			**Sb**	**06 19 33.4**	**+0.5**
PTH	**Pithoragarh**	**3.05**	**245**	*ex*			**Pn**	**06 19 07.9**	**+3.3**
PTH				*ex*			x	06 19 56.1	
GKN	**Gorkha**	**3.05**	**159**	*e*Pn			**Pn**	**06 19 06.5**	**+1.9**
GKN				*e*Sn			**Sb**	**06 19 45.1**	**-2.9**
	980nm,0.7s								
KOLN	**Koldanda**	**3.09**	**177**	*e*Pn			**Pn**	**06 19 07.2**	**+2.1**
KOLN				*e*Sn			**Sb**	**06 19 46.2**	**-2.9**
	1µm,0.8s								
JOSI	**Joshimath**	**3.32**	**266**	*e*PKP			**Pn**	**06 19 12.2**	**+3.9**
JOSI				*e*S			**Sn**	**06 19 51.0**	**+3.2**
JOSI				AML			AML	06 20 02.8	
	comp=N,1µm,0.7s								
JOSI				AML			AML	06 20 04.4	
	comp=E,1µm,0.6s								
KKN	**Kakani**	**3.48**	**151**	*e*Pn			**Pn**	**06 19 12.0**	**+1.5**
DMN	**Daman**	**3.57**	**155**	*e*Pn			**Pn**	**06 19 13.5**	**+1.7**
GUN	**Gumba**	**3.66**	**143**	*e*Pn			**Pn**	**06 19 14.4**	**+1.5**
GUN				*e*Sn			**Sn**	**06 19 57.4**	**+1.3**
	comp=E,991nm,0.8s								
PKIN	**Phulchoki**	**3.71**	**151**	*e*Pn			**Pn**	**06 19 15.1**	**+1.4**
PKI	**Pulchoki**	**3.72**	**151**	*e*Pn			**Pn**	**06 19 15.3**	**+1.5**
JIRN	**Jiri**	**4.02**	**142**	*e*Pn			**Pn**	**06 19 19.6**	**+1.7**
KLP	**Kalpa**	**4.46**	**280**	*e*PKP			**Pn**	**06 19 23.0**	**-1.0**
KLP				*i* x			x	06 19 42.3	
DDI	**Dehra Dun**	**4.64**	**265**	↓*i*P			**Pn**	**06 19 28.0**	**+1.6**
DDI				*ex*			x	06 20 26.0	
RAMN	**Ramite**	**4.81**	**143**	*e*Pn			**Pn**	**06 19 29.1**	**+0.4**
RAMN				*e*Sn			**Sn**	**06 20 24.8**	**+0.3**
	comp=E,410nm,0.8s								
TAPN	**Taplejung**	**5.15**	**132**	*e*Pn			**Pn**	**06 19 34.2**	**+0.8**
ODAN	**Odare**	**5.31**	**138**	*e*Pn			**Pn**	**06 19 36.5**	**+0.9**
SMLA	**Simla**	**5.36**	**274**	*i* P			**Pn**	**06 19 36.1**	**-0.1**
SDNR	**Sundarnagar**	**5.54**	**278**	*ex*			x	06 19 48.5	
NDI	**New Delhi**	**5.80**	**250**	*e*PKP			**Pn**	**06 19 42.0**	**-0.3**
AYAN	**Aya Nagar**	**5.95**	**248**	*e*PKP			**Pn**	**06 19 45.0**	**+0.5**
SONA	**Sohna**	**6.09**	**246**	*e*PKP			**Pn**	**06 19 46.3**	**-0.1**
SONA				*ex*			x	06 21 35.0	
KUDL	**Kundal**	**6.60**	**247**	*e*PKP			**Pn**	**06 19 51.3**	**-2.1**
KUDL				*e*S			**Sn**	**06 21 01.6**	**-7.1**
LSA	**Lhasa**	**6.80**	**98**	Pg			**Pn**	**06 19 57.5**	**+1.3**
LSA				Sg			**Sn**	**06 21 15.8**	**+2.1**
LSA				*smax*					
	comp=N,30nm,1.2s								
LSA				*smax*					
	comp=E,60nm,1.0s								
LSA	**Lhasa**	**6.80**	**98**	*e*Pn			**Pn**	**06 19 57.5**	**+1.3**
	comp=E,52nm,0.8s								
KHET	**Khetri**	**7.18**	**249**	*e*PKP			**Pn**	**06 20 01.1**	**-0.2**
KHET				*ex*			x	06 21 30.1	
AJM	**Ajmer**	**8.84**	**243**	*e*PKP			**Pn**	**06 20 24.0**	**-0.2**
AJM				*ex*			x	06 22 56.5	
CHCP	**Chirah Chowk**	**9.02**	**291**	P			**Pn**	**06 20 27.8**	**+1.2**
SHL	**Shillong**	**9.16**	**123**	*e*PKP			**Pn**	**06 20 25.0**	**-3.5**
SHL				*ex*			x	06 22 05.0	
BHPL	**Bhopal**	**9.27**	**216**	*e*PKP			**Pn**	**06 20 27.9**	**-2.2**

BHPL				*ex*			x	06 22 10.1	
THW	**Thamme Wali**	**10.10**	**284**	P			**Pn**	**06 20 42.3**	**+0.9**
CEP	**Cherat**	**10.15**	**290**	P			**Pn**	**06 20 44.0**	**+1.9**
KSH	**Kashi**	**10.55**	**327**	*e*P			**Pn**	**06 20 46.3**	**-1.2**
KSH				*e*pP				06 20 50.3	
KSH				*e*PP				06 20 54.3	
KSH				*e*S			**Sn**	**06 22 45.5**	**-0.2**
KSH				SS				06 22 59.0	
KSH				*pmax*	*pmax*				
	comp=Z,4.0nm,0.3s								
KSH				*pmax*	*pmax*				
	comp=Z,120nm,3.9s								
KSH				LR	LR				
	comp=N,990nm,13.1s								
KSH				LR	LR				
	comp=E,1µm,11.8s								
KSH				LR	LR				
	comp=Z,370nm,7.7s								
KBL	**Kabul**	**12.63**	**291**	*e*Pn			**Pn**	**06 21 15.7**	**-0.4**
	comp=Z,20nm,0.6s								
KBL				*e*Sn			**Sn**	**06 23 37.3**	**+0.5**
KZA	**Kyzart**	**12.96**	**332**	*e*Pn			**Pn**	**06 21 21.8**	**+1.4**
	comp=Z,9.4nm,0.8s								
WMQ	**Urumqi**	**13.37**	**14**	*e*P			**Pn**	**06 21 29.0**	**+2.9**
WMQ				pP				06 21 32.3	
WMQ				sP				06 21 35.5	
WMQ				PP				06 21 39.3	
WMQ				*pmax*	*pmax*				
	comp=Z,9.0nm,0.6s								
WMQ				*pmax*	*pmax*				
	comp=Z,82nm,4.0s								
WMQ				LR	LR				
	comp=N,360nm,12.3s								
WMQ				LR	LR				
	comp=E,590nm,14.6s								
WMQ				LR	LR				
	comp=Z,310nm,10.8s								
AAK	**Ala-Archa**	**13.73**	**331**	*e*Pn			**Pn**	**06 21 32.0**	**+1.0**
	comp=Z,11nm,0.8s								
AAK	**Ala-Archa**	**13.73**	**331**	Pn			**Pn**	**06 21 32.6**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=252,slow=2.4,SNR=4.7								
AAK				LR			LR	06 27 25.3	
	comp=Z,537nm,19.6s,baz=288,slow=40								
EKS2	**Erkin-Say**	**14.06**	**330**	*e*Pn			**Pn**	**06 21 37.3**	**+1.8**
	comp=Z,7.4nm,0.8s								
HYB	**Hyderabad**	**14.10**	**199**	*i* P			**Pn**	**06 21 36.0**	**-0.1**
HYB				*e*S			**Sn**	**06 24 02.5**	**-10**
POO	**Poona**	**15.03**	**217**	*e*PKP			**Pn**	**06 21 49.0**	**+0.2**
GTA	**Gaotai**	**15.89**	**53**	*e*P			**Pn**	**06 22 04.0**	**+4.0**
GTA				pP			pP	06 22 08.8	+2.3
GTA				sP			sP	06 22 11.3	+3.5
GTA				*pmax*	*pmax*				
	comp=Z,4.0nm,1.4s								
KAD	**Karad**	**15.89**	**214**	*ex*			**Sn**	**06 24 49.0**	**-7.4**
MK31	**Makanchi Array**	**15.93**	**357**	*e*P			**Pn**	**06 22 02.0**	**+1.6**
MKAR	**Makanchi Array**	**15.93**	**357**	Pn			**Pn**	**06 22 00.1**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=181,slow=12,SNR=15								
MKAR				LR			LR	06 29 09.6	
	comp=Z,275nm,19.2s,baz=183,slow=41								
KKAR	**Karatay Array**	**15.95**	**324**	*e*P			**Pn**	**06 21 59.0**	**-1.7**
	comp=Z,19nm,1.1s								
LZH	**Lanzhou**	**17.83**	**68**	*e*P			**Pn**	**06 22 25.8**	**+1.4**

comp=Z,55nm,20.1s,MS3.9,baz=304,slow=39
BOSA Boshof 81.03 229 P P 06 30 31.3 -0.2
comp=Z,2.6nm,0.9s,mb4.2,baz=101,slow=5.2,SNR=4.1
BOSA LR LR 07 02 33.7
comp=Z,58nm,19.7s,MS3.9,baz=166,slow=33
STKA Stephens Creek 83.27 133 P P **06 30 40.1 -3.0**
comp=Z,1.7nm,0.8s,mb4.1,baz=270,slow=5.1,SNR=3.5
DBIC Dimbokro 85.13 275 P P **06 30 51.6 -1.5**
comp=Z,7.3nm,1.0s,mb4.8,baz=97,slow=8.1,SNR=3.0
YKA Yellowknife Ar 85.85 8 LR LR 07 10 46.1
comp=Z,3.8nm,18.1s,MS2.8,baz=245,slow=37
SCHQ Schefferville 90.89 343 LR LR 07 15 06.4
comp=Z,45nm,19.1s,MS3.9,baz=343,slow=38
TXAR Lajitas Array 119.76 7 PKP PKPdf 06 37 05.7 -1.4
TXAR Lajitas Array 119.76 7 PKP PKPdf 06 37 05.7 -1.4
comp=Z,0.2nm,0.6s,baz=68,slow=5.9,SNR=4.4
CPUP Villa Florida 145.34 269 PKPbc PKPbc 06 37 52.3 -2.3
comp=Z,1.4nm,0.7s,baz=122,slow=7.8,SNR=3.1
LPAZ La Paz 150.25 293 PKPbc PKPbc 06 38 09.5 +1.2
comp=Z,1.1nm,1.0s,baz=225,slow=1.4,SNR=3.1

IDC 29 06:32:27.2±6.0, 18°.94N×144°.93E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/22, mbtmp3.7/5, Error ellipse: s-maj=245.1km s-min=22.9km az=80.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.01**	**196**	P	P	06 40 04.8	+0.8
	0.5nm,0.3s,baz=15,slow=8.2,SNR=7.5						
ASAR	**Alice Springs**	**43.69**	**195**	P	P	06 40 33.0	-1.1
	0.2nm,0.4s,baz=17,slow=7.4,SNR=4.4						
ZALV	**Zalesovo Beam**	**57.38**	**323**	P	P	06 42 16.5	-0.8
	0.5nm,0.4s,baz=115,slow=6.8,SNR=3.1						
MKAR	**Makanchi Array**	**57.77**	**314**	P	P	06 42 21.6	+1.5
	0.8nm,0.7s,baz=94,slow=9.8,SNR=4.4						
BVAR	**Borovoye Array**	**65.83**	**320**	P	P	06 43 14.1	-0.2
	0.6nm,0.3s,baz=90,slow=7.4,SNR=5.4						

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*ISCJB **29** 06:40:10.6±0.8, 25°.71N±0°.07×141°.4E±0°.2, h177km±10km, mb3.9/12, Error ellipse: s-maj=29.5km s-min=9.7km az=168.8*
*IDC **29** 06:40:11.2±1.1, 25°.62N×141°.25E, h164km±12km, mb3.7/11, mb1 3.8/12, mb1mx3.5/25, mbtmp3.6/12, Error ellipse: s-maj=28.8km s-min=12.1km az=85.0*
*JMA **29** 06:40:12.8±0.2, 25°.72N×140°.67E, h93km, M4.5*
ISC 29 06:40:11.6±0.9, 25°.72N±0°.07×141°.3E±0°.2, h169km±11km, n22, σ0°.89/30, mb3.9/12, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**1.22**	**42**	P	**Pn**	**06 40 40.6**	**+0.6**
JHHJ				*e*S	**Sn**	**06 41 01.3**	**-0.6**
CBIJ	**Chichi jima**	**1.60**	**31**	P	**Pn**	**06 40 44.8**	**+1.2**
	228nm,0.3s,baz=172,slow=2.8,SNR=165						
CBIJ				S	**Sn**	**06 41 09.1**	**+0.7**
	202nm,0.3s,baz=118,slow=23,SNR=28						
CBIJ	**Chichi jima**	**1.60**	**31**	P	**Pn**	**06 40 44.7**	**+1.1**
CBIJ				*e*S	**Sn**	**06 41 08.7**	**+0.4**
BSO1	**Boso 1**	**8.91**	**358**	P	**Pn**	**06 42 16.9**	**0.0**
BSO1				*e*S	**Sn**	**06 43 50.7**	**-5.4**
BSO3	**Boso 3**	**9.08**	**356**	P	**Pn**	**06 42 18.7**	**-0.4**
BSO3				*e*S	**Sn**	**06 43 56.1**	**-4.0**
BSO4	**Boso 4**	**9.28**	**355**	P	**Pn**	**06 42 22.1**	**+0.4**
BSO4				*e*S	**Sn**	**06 44 02.9**	**-2.0**
JRY	**Ryogami san**	**10.46**	**349**	P	**Pn**	**06 42 37.3**	**0.0**
JAG	**Ashikaga**	**10.79**	**352**	P	**Pn**	**06 42 40.5**	**-1.0**
JAG				*e*S	**Sn**	**06 44 33.5**	**-7.6**
JHO	**Hitachi**	**10.88**	**357**	P	**Pn**	**06 42 42.5**	**-0.2**
JHO				*e*S	**Sn**	**06 44 34.7**	**-8.5**
KSRS	**Korea Array**	**16.30**	**319**	P	**Pn**	**06 43 52.9**	**+2.0**
	0.5nm,0.3s,baz=143,slow=10.0,SNR=4.3						
WRA	**Warramunga Arr**	**45.88**	**189**	P	**P**	**06 48 16.7**	**-0.5**
	4.4nm,0.3s,mb4.5,baz=11,slow=8.7,SNR=97						
FITZ	**Fitzroy Crossi**	**46.13**	**201**	P	**P**	**06 48 18.4**	**-0.8**
	0.8nm,0.7s,mb3.5,baz=34,slow=7.3,SNR=5.2						
ASAR	**Alice Springs**	**49.61**	**189**	P	**P**	**06 48 44.3**	**-1.5**
	0.2nm,0.3s,mb3.2,baz=12,slow=5.8,SNR=6.9						
MKAR	**Makanchi Array**	**50.73**	**310**	P	**P**	**06 48 54.8**	**+0.7**
	0.3nm,0.3s,mb3.4,baz=88,slow=11,SNR=3.2						
KURK	**Kurchatov**	**53.37**	**315**	P	**P**	**06 49 14.2**	**+0.7**
	2.2nm,0.5s,mb4.2,baz=92,slow=8.3,SNR=6.8						
STKA	**Stephens Creek**	**57.27**	**180**	P	**P**	**06 49 41.1**	**-0.4**
	1.5nm,0.4s,mb4.1,baz=346,slow=7.3,SNR=6.7						
BVAR	**Borovoye Array**	**58.51**	**318**	P	**P**	**06 49 50.4**	**+0.4**
	1.5nm,0.4s,mb4.2,baz=101,slow=7.7,SNR=6.4						
ILAR	**Eielson Array**	**59.31**	**28**	P	**P**	**06 49 56.6**	**+1.3**
	0.6nm,0.8s,mb3.5,baz=255,slow=5.7,SNR=8.0						
ARCES	**ARCESS Array B**	**74.57**	**341**	P	**P**	**06 51 32.5**	**+1.0**
	3.3nm,1.1s,mb3.9,baz=62,slow=7.7,SNR=4.0						
KAF	**Kangasniemi**	**78.35**	**334**	*e*p	**P**	**06 51 52.7**	**-0.2**
	1.1nm,0.4s,mb3.8						
FINES	**FINESS Array B**	**78.81**	**334**	P	**P**	**06 51 55.5**	**0.0**
	2.8nm,0.4s,mb4.3,baz=62,slow=4.2,SNR=17						
NOA	**NORSAR Array B**	**84.58**	**338**	P	**P**	**06 52 25.1**	**-0.5**
	1.5nm,0.5s,mb4.0,baz=45,slow=4.9,SNR=4.1						

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*BJI **29** 06:43:02.1, 10°.44N×91°.80E, h10km, mB4.8/11, mb4.7/31, Ms4.2/13, Ms7 3.9/14*
*ISCJB **29** 06:43:05.3±1.5, 10°.88N±0°.05×91°.78E±0°.04, h4km±9km, mb4.5/44, MS3.6/9, Error ellipse: s-maj=8.3km s-min=6.6km az=17.2*
*NEIC **29** 06:43:08.2±0.4, 10°.92N×91°.80E, h10km, mb4.5/14, Error ellipse: s-maj=8.6km s-min=6.9km az=224.0*
*MOS **29** 06:43:09.2±0.9, 10°.94N×91°.92E, h32km, mb4.7/15, Error ellipse: s-maj=14.8km s-min=7.2km az=104.6*
*IDC **29** 06:43:11.9±0.7, 10°.98N×91°.86E, h34km±5km, mb4.2/20, mb1 4.2/21, mb1mx4.1/29, mbtmp4.2/21, ML4.6/1, MS3.4/6, Ms1 3.4/6, ms1mx3.0/36, Error ellipse: s-maj=23.6km s-min=11.7km az=58.0*
ISC 29 06:43:08.7±1.8, 10°.93N±0°.05×91°.81E±0°.04, h13km±11km, h32km±3.4km; pP-P, n108, σ0°.91/109, mb4.5/44, MS3.6/9, 4C-7D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**1.17**	**52**	*e*PKP	**Pn**	**06 43 30.4**	**-0.4**
CMAR	**Chiang Mai Arr**	**10.18**	**42**	Pn	**Pn**	**06 45 34.1**	**-0.5**
	1.4nm,0.3s,baz=237,slow=15,SNR=12						
CHTO	**Chiang Mai**	**10.44**	**40**	*e*Pn	**Pn**	**06 45 38.6**	**+0.4**
	3.1nm,0.4s						
CHTO	**Chiang Mai**	**10.44**	**40**	*e*P	**Pn**	**06 45 38.6**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.4s						
VIS	**Vishakhapatnam**	**10.63**	**310**	*i* P	**Pn**	**06 45 39.9**	**-1.0**
VIS				*i* S	**Sn**	**06 47 26.8**	**-13**
VIS				*ex*	x	06 47 29.1	
	comp=E,144nm,0.6s						
VIS				*ex*	x	06 47 30.9	
	comp=N,187nm,0.7s						
PSI	**Prapat**	**10.72**	**138**	LR	LR	06 50 41.3	
	comp=N,285nm,19.5s,baz=178,slow=42						
PALK	**Pallekele**	**11.55**	**253**	*e*Pn	**Pn**	**06 45 53.6**	**0.0**
	comp=N,58nm,1.0s						
PALK				*e*Sn	**Sn**	**06 47 52.3**	**-10**
PALK	**Pallekele**	**11.55**	**253**	*e*P	**Pn**	**06 45 53.6**	**+0.1**
PALK				pmax	pmax		
	comp=Z,58nm,1.0s						
HYB	**Hyderabad**	**14.38**	**298**	*i* P	**Pn**	**06 46 32.0**	**-0.1**
HYB				*e*		06 48 54.0	
HYB				*e*S	**Sn**	**06 49 07.0**	**-4.6**
NGP	**Nagpur**	**15.91**	**311**	*e*PKP	**Pn**	**06 46 51.9**	**-0.7**
ODAN	**Odare**	**16.39**	**346**	*e*P	**Pn**	**06 46 58.2**	**-0.4**
LATR	**Latur**	**16.52**	**299**	*e*PKP	**Pn**	**06 46 59.9**	**-0.4**
RAMN	**Ramite**	**16.68**	**344**	*e*P	**Pn**	**06 47 01.1**	**-1.2**
	comp=Z,51nm,0.5s						
AKL	**Akola**	**17.22**	**306**	*ex*	x	06 47 16.4	
KMI	**Kunming**	**17.51**	**35**	P	**Pn**	**06 47 16.0**	**+3.2**
KMI				pmax	pmax		
	comp=Z,11nm,0.8s						
PKI	**Pulchoki**	**17.61**	**341**	*e*P	**Pn**	**06 47 13.9**	**-0.1**
	comp=Z,32nm,0.4s						
PKIN	**Phulchoki**	**17.62**	**341**	*e*P	**Pn**	**06 47 13.6**	**-0.5**
DMN	**Daman**	**17.75**	**340**	*e*P	**Pn**	**06 47 15.4**	**-0.3**
	comp=Z,30nm,0.5s						
GUN	**Gumba**	**17.79**	**343**	*e*P	**Pn**	**06 47 17.0**	**+0.8**
	comp=Z,19nm,0.5s						
KKN	**Kakani**	**17.86**	**341**	*e*P	**Pn**	**06 47 16.7**	**-0.4**
GKN	**Gorkha**	**18.27**	**339**	*e*P	**Pn**	**06 47 22.1**	**0.0**
BHPL	**Bhopal**	**18.39**	**314**	*e*PKP	**Pn**	**06 47 24.9**	**+1.2**
BHPL				*ex*	x	06 50 32.1	

KOLN Koldanda 18.44 336 *e*P **Pn 06 47 25.1 +0.9**
comp=Z,31nm,0.5s
LSA Lhasa 18.69 358 *e*P **Pn 06 47 27.3 +0.2**
comp=Z,49nm,1.1s
LSA Lhasa 18.69 358 *e*P **Pn 06 47 27.3 +0.1**
LSA pmax pmax
comp=Z,49nm,1.1s
POO Poona 18.93 296 *e*PKP **Pn 06 47 29.0 -1.2**
QIZ Qiongzhong 19.18 63 P **Pn 06 47 32.8 -0.4**
QIZ S **Sn 06 51 08.5 +0.4**
QIZ pmax pmax
comp=Z,32nm,2.0s
QIZ LR LR
comp=N,180nm,8.5s
QIZ LR LR
comp=Z,190nm,11.6s
KSM Kuching 20.63 116 *e*P **P 06 47 50.4 +2.2**
comp=Z,9.7nm,0.7s
GYA Guiyang 20.86 40 P **P 06 47 50.3 -0.2**
GYA PP 06 48 15.5
GYA S **S 06 51 41.8 -1.3**
GYA PcP PcP 06 52 00.5 +1.5
GYA SS 06 52 12.3
GYA pmax pmax
comp=Z,20nm,1.0s
GYA LR LR
comp=N,430nm,12.8s,MS4.2
GYA LR LR
comp=E,400nm,13.0s,MS4.2
GYA LR LR
comp=Z,450nm,14.9s,MS4.0
SONA Sohna 22.08 323 *e*PKP **P 06 48 04.3 +0.6**
AYAN Aya Nagar 22.23 324 *e*PKP **P 06 48 06.6 +1.3**
KUDL Kundal 22.36 322 *ex* **P 06 48 01.8 -4.8**
KHET Khetri 22.72 321 *e*PKP **P 06 48 10.8 +0.3**
CD2 Chengdu 22.76 27 P **P 06 48 11.0 +0.1**
CD2 pP 06 48 15.3
CD2 PP 06 48 40.0
CD2 PcP PcP 06 52 03.5 +0.8
CD2 S **S 06 52 15.0 -4.9**
CD2 SS 06 52 58.0
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.5
CD2 pmax pmax
comp=Z,100nm,5.2s
CD2 LR LR
comp=N,1μm,18.2s,MS4.5
CD2 LR LR
comp=E,1μm,18.0s,MS4.5
CD2 LR LR
comp=Z,2μm,20.3s,MS4.5
KLP Kalpa 24.04 331 *e*PKP **P 06 48 24.4 +0.8**
KLP *ex* x 06 52 56.1
ENH Enshi 25.31 38 *e*P **P 06 48 34.4 -0.9**
comp=Z,24nm,0.7s,mb4.8
LZH Lanzhou 27.32 22 *e*P **P 06 48 55.0 +1.7**
LZH pP pP 06 49 00.0 +2.8
LZH sP sP 06 49 02.8 +4.0
LZH PP 06 49 42.3
LZH *e*S **S 06 53 33.5 +0.8**
LZH sS sS 06 53 43.5 +4.4
LZH SS 06 54 52.0
LZH pmax pmax
comp=Z,16nm,1.1s,mb4.5
LZH pmax pmax
comp=Z,86nm,4.2s
XAN Xi'an 27.82 32 P **P 06 48 56.0 -1.9**
GTA Gaotai 29.25 13 *e*P **P 06 49 11.5 +1.0**
GTA pP pP 06 49 16.0 +1.6
GTA pmax pmax
comp=Z,13nm,1.1s,mb4.6
KSH Kashi 31.76 336 P **P 06 49 32.0 -0.7**
KSH *e*S **S 06 54 48.3 +5.9**
KSH pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
KSH pmax pmax
comp=Z,46nm,2.9s,mb4.8
KSH LR LR
comp=N,230nm,15.6s
KSH LR LR
comp=E,100nm,9.2s
KSH LR LR
comp=Z,110nm,4.8s
NJ2 Nanjing 32.62 46 *e*P **P 06 49 36.8 -3.6**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
WMQ Urumqi 32.96 355 *e*P **P 06 49 44.8 +1.6**
WMQ sP sP 06 49 51.8 +3.1
WMQ pmax pmax
comp=Z,14nm,1.0s,mb4.8
WMQ pmax pmax
comp=Z,70nm,3.2s
WMQ LR LR
comp=Z,29nm,20.8s,MS3.0
HHC Hu-ho-hao-te 34.52 27 *e*P **P 06 49 57.5 +0.7**
HHC pP pP 06 50 01.8 +1.1
HHC PP PP 06 51 14.0 -1.1
HHC S **S 06 55 25.5 +0.2**
HHC SS SS 06 57 36.8 -18
HHC ScS ScS 07 00 16.0 -3.6
HHC pmax pmax
comp=Z,16nm,0.9s,mb5.0
HHC pmax pmax
comp=Z,56nm,5.2s
HHC LR LR
comp=N,91nm,16.7s,MS4.0
HHC LR LR
comp=E,240nm,16.7s,MS4.0
HHC LR LR
comp=Z,100nm,14.7s,MS3.7
TKM2 Tokmak 2 34.86 339 *e*P **P 06 50 00.3 +0.7**
comp=Z,3.4nm,0.8s,mb4.3
TKM2 Tokmak 2 34.86 339 *e*P **P 06 50 00.3 +0.6**
TKM2 pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
AML Almayashu 34.89 336 *e*P **P 06 50 01.4 +1.4**
comp=Z,15nm,1.0s,mb4.9
AML Almayashu 34.89 336 *e*P **P 06 50 01.4 +1.4**
AML pmax pmax
comp=Z,15nm,1.0s,mb4.9
AAK Ala-Archa 35.01 337 *e*P **P 06 50 02.6 +1.6**
comp=Z,2.2nm,0.5s,mb4.3
AAK Ala-Archa 35.01 337 P **P 06 50 01.7 +0.7**
comp=Z,1.5nm,0.3s,mb4.5,baz=228,slow=6.9,SNR=11
AAK LR LR 07 07 04.1
comp=Z,77nm,18.1s,MS3.5,baz=160,slow=41
AAK Ala-Archa 35.01 337 *d i*P **P 06 50 02.4 +1.4**
AAK pmax pmax
comp=Z,7.0nm,1.4s,mb4.4
EKS2 Erkin-Say 35.31 337 *e*P **P 06 50 05.1 +1.6**
comp=Z,6.9nm,0.8s,mb4.6
EKS2 Erkin-Say 35.31 337 *e*P **P 06 50 05.1 +1.5**
EKS2 pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
BJT Baijiatuao 36.12 32 *e*P **P 06 50 10.4 -0.2**
comp=Z,0.6nm,0.3s,mb4.0
BJT Baijiatuao 36.12 32 *e*P **P 06 50 10.4 -0.2**
BJT pmax pmax
comp=Z,1.0nm,0.3s
MK31 Makanchi Array 36.65 349 *e*P **P 06 50 15.3 +0.4**
MK31 Makanchi Array 36.65 349 *e*P **P 06 50 15.3 +0.4**
MKAR Makanchi Array 36.65 349 P **P 06 50 15.2 +0.2**
comp=Z,10nm,0.6s,mb4.9,baz=168,slow=8.3,SNR=84
MKAR PcP PcP 06 52 37.8 0.0
comp=Z,0.5nm,0.5s,baz=204,slow=3.2,SNR=4.4
MKAR Makanchi Array 36.65 349 *ce*P **P 06 50 15.1 +0.2**
MKAR pmax pmax
comp=Z,10.0nm,0.6s
KKAR Karatay Array 37.02 334 *e*P **P 06 50 18.8 +0.6**
comp=Z,6.3nm,0.8s,mb4.5
KKAR Karatay Array 37.02 334 *e*P **P 06 50 18.8 +0.6**
KKAR pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
SONM Songino Array 38.78 16 P **P 06 50 33.6 +0.6**
comp=Z,2.7nm,0.6s,mb4.2,baz=197,slow=8.6,SNR=13
ZAK Zakamensk 40.46 11 *e*P **P 06 50 43.2 -3.7**
ZAK pmax pmax
comp=Z,2.0nm,1.5s,mb3.6
KURK Kurchatov 41.12 347 *e*P **P 06 50 52.4 0.0**
comp=Z,16nm,1.1s,mb4.6
KURK Kurchatov 41.12 347 P **P 06 50 51.7 -0.8**
comp=Z,8.9nm,0.9s,mb4.4,baz=164,slow=7.2,SNR=7.2
KURK LR LR 07 09 55.8
comp=Z,54nm,19.4s,MS3.4,baz=160,slow=39
KURK Kurchatov 41.12 347 *d i*P **P 06 50 52.2 -0.2**
KURK pmax pmax
comp=Z,17nm,1.4s,mb4.5
KSRS Korea Array 41.80 45 P **P 06 50 57.0 -1.2**
comp=Z,0.5nm,0.3s,mb3.7,baz=235,slow=13,SNR=4.5
KSRS LR LR 07 10 57.7
comp=Z,59nm,18.1s,MS3.5,baz=222,slow=40
ZAA0 Zalesovo Array 43.27 354 *e*P **P 06 51 09.5 -0.4**
ZALV Zalesovo Beam 43.27 354 P **P 06 51 09.7 -0.2**
comp=Z,10nm,0.5s,mb4.8,baz=175,slow=9.4,SNR=33
ZALV LR LR 07 10 18.7
comp=Z,20nm,20.5s,MS3.0,baz=309,slow=38
FITZ Fitzroy Crossi 44.13 130 *e*P **P 06 51 16.6 -0.7**
comp=Z,13nm,0.6s,mb4.8
FITZ *e*pP pP 06 51 27.0 +5.7
FITZ Fitzroy Crossi 44.13 130 *e*P **P 06 51 16.0 -1.3**
comp=Z,13nm,1.0s,mb4.6
FITZ Fitzroy Crossi 44.13 130 P **P 06 51 16.7 -0.6**
comp=Z,11nm,0.8s,mb4.6,baz=313,slow=4.0,SNR=29
FITZ pP pP 06 51 27.1 +5.8
comp=Z,9.3nm,0.8s,baz=296,slow=4.6,SNR=8.7
VOSK Vostochnaya 44.94 342 P **P 06 51 22.1 -1.2**
VOSK pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
BVAR Borovoye Array 45.38 342 P **P 06 51 26.8 0.0**
comp=Z,1.7nm,0.5s,mb4.1,baz=142,slow=7.5,SNR=10
BVAR PcP PcP 06 53 05.9 -0.2
comp=Z,0.6nm,0.5s,baz=160,slow=4.6,SNR=2.4
BRVK Borovoye 45.44 342 *e*P **P 06 51 27.3 0.0**
comp=Z,2.9nm,0.6s,mb4.3
BRVK Borovoye 45.44 342 *d i*P **P 06 51 27.0 -0.3**
BRVK pmax pmax
comp=Z,6.0nm,1.3s,mb4.3
ZRNK Zerenda 45.75 341 P **P 06 51 29.3 -0.4**
ZRNK pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
AB31 Akbulak array 46.47 332 *e*P **P 06 51 35.8 +0.4**
AB31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
ABKAR Akbulak array 46.47 332 *e*P **P 06 51 35.8 +0.4**
comp=Z,4.2nm,0.7s,mb4.5
AKTK Aktyubinsk 48.18 331 P **P 06 51 48.8 0.0**
AKTO Aktyubinsk 48.18 331 P **P 06 51 48.8 0.0**
comp=Z,2.8nm,0.5s,mb4.6,baz=116,slow=8.0,SNR=9.9
GNI Garni 50.68 313 *e*P **P 06 52 10.0 +2.0**
GNI pmax pmax
comp=Z,13nm,1.4s
WRA Warramunga Arr 51.90 126 P **P 06 52 16.9 -0.6**
comp=Z,1.9nm,0.3s,mb4.5,baz=300,slow=10.0,SNR=73
WRA pP pP 06 52 27.3 +5.7
comp=Z,5.7nm,0.7s,baz=306,slow=8.7,SNR=19
ARU Arti 52.20 337 *d i*P **P 06 52 18.8 -0.3**
ARU 06 54 20.0
ARU S **S 06 59 53.5 +10**
ARU pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
KIV Kislovodsk 53.53 317 *de*P **P 06 52 29.4 +0.2**
KIV pmax pmax
comp=Z,15nm,1.2s,mb4.8
ASAR Alice Springs 53.63 130 P **P 06 52 30.1 -0.2**
comp=Z,2.2nm,0.6s,mb4.3,baz=305,slow=6.7,SNR=35
ASAR pP pP 06 52 40.2 +6.0
comp=Z,2.4nm,0.5s,baz=307,slow=7.2,SNR=11
YSS Yuzh-Sakhalins 55.87 40 *e*P **pP 06 52 57.0 +6.8**
BRTR Keskin Array B 58.71 310 P **P 06 53 05.5 -0.9**
comp=Z,1.8nm,0.7s,mb4.2,baz=116,slow=8.1,SNR=11
OBN Obninsk 61.58 328 *e*P **P 06 53 25.6 -0.2**
OBN pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
QLP Quilpie 63.10 127 *e*P **P 06 53 37.1 +0.7**
QLP *e*pP pP 06 53 48.1 +7.6
STKA Stephens Creek 63.87 134 *e*P **P 06 53 41.7 +0.4**
comp=Z,3.6nm,1.5s,mb4.2
STKA *e*pP pP 06 53 52.9 +7.4
STKA Stephens Creek 63.87 134 P **P 06 53 41.5 +0.2**
comp=Z,1.2nm,0.6s,mb4.1,baz=306,slow=11,SNR=4.2
STKA pP pP 06 53 52.9 +7.4
comp=Z,3.4nm,0.6s,baz=340,slow=6.2,SNR=4.4
AKASG Malin Array Be 64.35 321 P **P 06 53 43.0 -1.3**
comp=Z,0.5nm,0.4s,mb3.9,baz=86,slow=5.7,SNR=5.1
AKASG Malin Array Be 64.35 321 *ce*P **P 06 53 43.7 -0.5**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
CMSA Cobar Meteorol 66.66 131 *e*P **P 06 54 00.2 +0.7**
CMSA *e*pP pP 06 54 11.2 +7.6
LVZ Lovozero 67.92 340 *e*P **P 06 54 05.3 -1.5**
LVZ pmax pmax
comp=Z,53nm,1.7s,mb5.3
FINES FINESS Array B 68.95 332 P **P 06 54 13.0 -0.4**
comp=Z,3.1nm,0.6s,mb4.4,baz=76,slow=8.8,SNR=6.6
ARCES ARCESS Array B 71.63 340 P **P 06 54 29.9 +0.2**
comp=Z,2.3nm,0.5s,mb4.3,baz=94,slow=6.5,SNR=16
HFS Hagfors 74.67 329 LR LR 07 32 00.3
comp=Z,36nm,21.0s,MS3.6,baz=113,slow=39
NOA NORSAR Array B 75.96 330 P **P 06 54 53.7 -1.5**
comp=Z,1.3nm,0.7s,mb4.0,baz=92,slow=6.1,SNR=5.3
TORD Torodi Ar. Bea 87.67 283 P **P 06 55 58.5 +0.7**
comp=Z,0.8nm,0.9s,mb3.9,baz=85,slow=3.3,SNR=2.9
BPAW Bear Paw Mtn. 91.60 23 *e*P **P 06 56 15.3 0.0**
comp=Z,20nm,1.9s,mb5.1
ILAR Eielson Array 92.78 22 P **P 06 56 19.1 -1.7**
comp=Z,0.8nm,0.7s,mb4.3,baz=298,slow=4.3,SNR=14
INK Inuvik 94.69 15 P **P 06 56 27.5 -1.9**
comp=Z,1.0nm,0.7s,mb4.3,baz=243,slow=4.5,SNR=2.1
PDAR Pinedale Array 123.10 19 PKP PKPdf 07 02 05.2 -0.2
comp=Z,0.3nm,0.5s,baz=79,slow=1.4,SNR=3.7
NVAR Mina Array Bea 123.41 28 PKP PKPdf 07 02 07.1 +0.9
comp=Z,0.6nm,0.6s,baz=315,slow=3.0,SNR=8.6
TXAR Lajitas Array 137.28 20 PKP PKPdf 07 02 33.0 +0.3
comp=Z,0.2nm,0.5s,baz=68,slow=0.6,SNR=5.1
PLCA Paso Flores 146.48 205 PKPbc PKPbc 07 02 50.1 +0.1
comp=Z,1.7nm,0.9s,baz=211,slow=5.9,SNR=2.5
CPUP Villa Florida 147.11 238 PKPbc PKPbc 07 02 51.9 -0.4
comp=Z,0.3nm,0.4s,baz=105,slow=3.6,SNR=2.7

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*SGS **29** 06:44:31.2, 32°.75N×47°.35E, h63km*
*TEH **29** 06:44:31.4, 32°.22N×47°.21E, h9km*
*KISR **29** 06:44:31.7±1.1, 32°.36N×48°.17E, h37km±999km, ML2.7*
ISC 29 06:44:33.9±2.7, 32°.33N±0°.04×47°.26E±0°.07, h18km±20km, n17, σ1°.02/23, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IKOM	**Komasi**	**1.85**	**6**	*e*	**Pn**	**06 45 06.7**	**+2.0**
	comp=Z,4μm,0.1s						
IKOM				*e*Pn	**Pn**	**06 45 05.1**	**+0.5**
IGHG	**Ghaleghazi**	**2.07**	**344**	*e*	Sx	06 45 52.8	
	comp=Z,2μm,0.3s						
IGHG				*e*Pn	**Pn**	**06 45 08.1**	**+0.4**
IVIS	**Veis**	**2.21**	**351**	*e*	**Pn**	**06 45 13.2**	**+3.6**
	comp=Z,1μm,0.1s						
IVIS				*e*Pn	**Pn**	**06 45 09.9**	**+0.2**
IDHR	**Dehrash**	**2.47**	**343**	*e*Pn	**Pn**	**06 45 12.8**	**-0.4**
IDHR				*e*		06 45 52.4	
	comp=Z,2μm,0.2s						
IDHR				*e*		06 45 53.1	
	comp=N,3μm,0.2s						
MIB	**Mutribah**	**2.52**	**178**	*e*P	**Pn**	**06 45 14.7**	**+0.8**
MIB				*e*S	**Sn**	**06 45 47.3**	**+3.1**
MIB				AML	AML	06 45 50.1	
	comp=Z,31nm,0.5s						
NAY	**Al-Naaiem**	**3.07**	**180**	*e*P	**Pn**	**06 45 22.2**	**+0.7**
NAY				*e*S	**Sn**	**06 46 01.3**	**+3.6**
NAY				AML	AML	06 46 05.6	
	comp=Z,13nm,0.6s						
IPIR	**Pirpir**	**3.09**	**83**	*e*Pn	**Pn**	**06 45 21.7**	**0.0**
IPIR				*e*Sn	**Sn**	**06 45 58.0**	**-0.1**
IPIR				*e*		06 46 01.7	
	comp=Z,607nm,0.3s						
RDF	**Al-Radifah**	**3.40**	**176**	*e*P	**Pn**	**06 45 26.7**	**+0.7**
QRN	**Al-Qurain**	**3.62**	**171**	*e*P	**Pn**	**06 45 28.9**	**-0.1**
QRN				*e*S	**Sn**	**06 46 10.8**	**-0.5**
QRN				AML	AML	06 46 11.7	
	comp=Z,18nm,0.3s						
IKLH	**Kolahrood**	**3.77**	**74**	*e*Pn	**Pn**	**06 45 30.2**	**-0.8**
IKLH				*e*		06 46 20.5	
	comp=Z,348nm,0.2s						
KFJS		**4.17**	**172**	S	**Sn**	**06 46 25.5**	**+0.6**
KFJS		**4.17**	**172**	P	**Pn**	**06 45 36.1**	**-0.5**
IZEF	**Zefreh**	**4.32**	**81**	*e*Pn	**Pn**	**06 45 37.6**	**-1.0**
IZEF				*e*		06 45 38.3	
	comp=Z,219nm,0.1s						
ASYS		**5.44**	**208**	S	**Sn**	**06 46 54.2**	**-1.8**
ASYS		**5.44**	**208**	P	**Pn**	**06 45 52.9**	**-1.0**
LYLS		**10.25**	**180**	S	**Sn**	**06 48 46.7**	**-7.9**
LYLS		**10.25**	**180**	P	**Pn**	**06 46 56.4**	**-3.7**

*IDC **29** 06:47:51.9±0.9,31°.03N×103°.59E,h0km,mb3.8/8, mb1 3.9/9,mb1mx3.7/25,mbtmp3.8/9,Error ellipse: s-maj=39.4km s-min=16.8km az=55.0*
*BJI **29** 06:47:55.2,31°.17N×103°.68E,h20km,ML3.8/6,Ms3.7/1, Ms? 3.7/1*
ISC 29 06:47:54.9±0.9,31°.07N±0°.05×103°.6E±0°.1,h19km±6km, n12,σ0°97/18,mb3.8/8,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.20**	**144**	Pg	**Pg**	**06 47 59.3**	**-0.6**
CD2				Sg	**Sg**	**06 48 04.3**	**+0.9**
CD2	comp=N,44μm,0.4s			smax			
CD2	comp=E,26μm,0.6s			smax			
LZH	**Lanzhou**	**5.00**	**2**	*e*Pn	**Pn**	**06 49 10.5**	**+1.6**
LZH				Pg	**Pb**	**06 49 21.0**	**-0.8**
LZH				Sn	**Sn**	**06 50 04.5**	**-1.7**
LZH				Sg	**Sb**	**06 50 22.8**	**+1.2**
LZH	comp=N,100nm,1.2s			smax			
LZH	comp=E,46nm,1.0s			smax			
LZH	comp=N,520nm,7.4s			LR	LR		
LZH	comp=E,480nm,7.5s			LR	LR		
LZH	comp=Z,710nm,8.9s			LR	LR		
GYA	**Guiyang**	**5.32**	**149**	Pn	**Pg**	**06 49 34.8**	**-1.9**
GYA				Pg	Px	06 49 55.5	
GYA				Sn	**Sb**	**06 50 31.5**	**+0.9**
GYA				Sg	**Sg**	**06 50 52.0**	**+6.4**
GYA	comp=N,130nm,0.8s			smax			
GYA	comp=E,100nm,0.8s			smax			
SONM	**Songino Array**	**16.88**	**6**	Pn	**Pn**	**06 51 50.0**	**+0.1**
KSRS	**Korea Array**	**21.04**	**66**	comp=E,0.3nm,0.3s,baz=181,slow=12,SNR=2.9 P	**P**	**06 52 37.4**	**-0.2**
MKAR	**Makanchi Array**	**22.73**	**320**	comp=E,2.2nm,0.8s,mb3.6,baz=258,slow=11,SNR=8.3 P	**P**	**06 52 57.0**	**+1.4**
ZALV	**Zalesovo Beam**	**26.57**	**335**	comp=E,0.8nm,0.8s,mb3.2,baz=126,slow=11,SNR=3.7 P	**P**	**06 53 31.2**	**-0.3**
KURK	**Kurchatov**	**27.03**	**324**	comp=E,1.4nm,0.3s,mb4.0,baz=160,slow=10,SNR=4.2 P	**P**	**06 53 35.8**	**+0.2**
AKTO	**Aktyubinsk**	**38.86**	**313**	comp=E,0.4nm,0.2s,mb3.5,baz=125,slow=11,SNR=3.1 P	**P**	**06 55 17.8**	**-0.9**
WRA	**Warramunga Arr**	**58.68**	**146**	comp=E,0.7nm,0.2s,mb4.0,baz=74,slow=7.4,SNR=2.3 P	**P**	**06 57 51.4**	**+0.2**
ASAR	**Alice Springs**	**61.68**	**148**	comp=E,2.1nm,0.6s,mb4.4,baz=338,slow=7.9,SNR=37 P	**P**	**06 58 11.2**	**-0.5**
STKA	**Stephens Creek**	**72.21**	**147**	comp=E,0.4nm,0.6s,mb3.8,baz=343,slow=6.2,SNR=5.8 P	**P**	**06 59 18.8**	**+0.3**
				comp=E,0.5nm,0.4s,mb3.8,baz=346,slow=4.2,SNR=2.7			

*ISCJB **29** 07:05:29.1±1.1,14°.64S±0°.07×73°.43W±0°.09,h78km±10km, mb4.2/26,Error ellipse: s-maj=17.2km s-min=7.2km az=141.1*
*NEIC **29** 07:05:31.6±1.0,14°.63S×73°.45W,h82km±10km,mb4.4/18, Error ellipse: s-maj=15.3km s-min=7.5km az=54.0*
*IDC **29** 07:05:33.6±0.7,14°.62S×73°.31W,h102km±5km,mb3.8/11, mb1 4.0/16,mb1mx3.9/20,mbtmp3.8/16,MS3.7/3, Ms1 3.7/3,ms1mx3.0/25,Error ellipse: s-maj=24.2km s-min=12.8km az=46.0*
ISC 29 07:05:30.0±1.0,14°.64S±0°.07×73°.38W±0°.09,h70km±9km, h101km±1.8km:pP-P,n58,σ0°98/46,mb4.2/26,Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.28**	**308**	P	**Pn**	**07 06 32.9**	**+0.1**
NNA	48nm,0.3s,baz=138,slow=9.9,SNR=29			S	**Sn**	**07 07 20.1**	**-1.4**
	31nm,0.3s,baz=232,slow=22,SNR=4.3						
LPAZ	**La Paz**	**5.32**	**109**	*e*Pn	**Pn**	**07 06 52.5**	**+5.6**
LPAZ	**La Paz**	**5.32**	**109**	P	**Pn**	**07 06 51.9**	**+5.0**
ATAH	**Atahualpa**	**8.94**	**326**	26nm,0.3s,baz=296,slow=10,SNR=310 P	**Pn**	**07 07 39.9**	**+3.4**
ATAH	0.3nm,0.3s,baz=180,slow=6.1,SNR=2.9			S	**Sn**	**07 09 15.1**	**-0.5**
SIV	**San Ignacio**	**11.95**	**98**	0.7nm,0.3s,baz=3.8,slow=15,SNR=2.4 P	**Pn**	**07 08 18.0**	**+0.5**
OTAV	**Otavalo**	**15.61**	**341**	2.3nm,0.3s,baz=280,slow=14,SNR=59 P	**Pn**	**07 09 11.4**	**+5.4**
CFAA	**Coronel Fontan**	**17.53**	**165**	11nm,1.2s P	**Pn**	**07 09 31.6**	**+1.8**
CPUP	**Villa Florida**	**18.98**	**130**	0.0nm,0.3s,baz=328,slow=14,SNR=2.6 *e*P	**Pn**	**07 09 46.8**	**-0.5**
CPUP	**Villa Florida**	**18.98**	**130**	20nm,1.0s P	**Pn**	**07 09 47.0**	**-0.3**
ROSC	**El Rosal**	**19.39**	**357**	0.5nm,0.3s,baz=318,slow=12,SNR=5.9 *e*P	**Pn**	**07 09 52.3**	**0.0**
ROSC	**El Rosal**	**19.39**	**357**	P	**Pn**	**07 09 51.2**	**-1.1**
SDV	**Santo Domingo**	**23.53**	**7**	0.5nm,0.3s,baz=102,slow=20,SNR=2.0 *e*P	**P**	**07 10 34.6**	**+0.5**
PLCA	**Paso Flores**	**26.11**	**175**	7.1nm,0.6s,mb4.2 P	**P**	**07 10 57.6**	**+0.2**
PCRV	**Puerto La Cruz**	**26.13**	**20**	4.0nm,1.0s,mb3.8,baz=274,slow=1.6,SNR=2.9 LR	LR	07 23 06.8	
SWET	**Sewanee**	**50.99**	**347**	comp=Z,108nm,20.6s,baz=21,slow=40 *e*P	**P**	**07 14 24.5**	**-0.3**
MIAR	**Mount Ida**	**52.55**	**339**	*e*P	**P**	**07 14 36.4**	**-0.1**
TXAR	**Lajitas Array**	**52.60**	**326**	2.6nm,0.6s,mb4.4 P	**P**	**07 14 36.8**	**-0.1**
TXAR	0.5nm,0.5s,mb3.8,baz=155,slow=8.7,SNR=19			pP	pP	07 15 02.0	+7.3
WCI	**Wyandotte Cave**	**53.97**	**347**	0.9nm,0.8s,baz=141,slow=8.1,SNR=4.5 *e*P	**P**	**07 14 45.8**	**-0.9**
WMOK	**Wichita Mounta**	**54.72**	**334**	4.2nm,0.4s,mb4.8 *e*P	**P**	**07 14 51.7**	**-0.5**
ACSO	**Alum Creek Sta**	**55.31**	**351**	1.8nm,0.3s,mb4.8 *e*P	**P**	**07 14 55.7**	**-0.8**
LAZ	**Ladron**	**58.39**	**327**	4.9nm,0.6s,mb4.7 *e*P	**P**	**07 15 18.7**	**+0.3**
SDCO	**Great Sand Dun**	**60.22**	**331**	0.7nm,0.8s,mb3.7 *e*P	**P**	**07 15 31.7**	**+0.8**
ECSD	**EROS Data Cent**	**61.85**	**341**	8.4nm,1.3s,mb4.6 *e*P	**P**	**07 15 41.3**	**-0.6**
RSSD	**Black Hills**	**64.82**	**336**	13nm,1.4s,mb4.8 *e*P	**P**	**07 16 02.9**	**+1.4**
DUG	**Dugway**	**65.72**	**328**	1.9nm,0.8s,mb4.0 *e*P	**P**	**07 16 08.2**	**+0.8**
AGMN	**Agassiz Nation**	**65.78**	**344**	3.4nm,1.2s,mb4.0 *e*P	**P**	**07 16 07.4**	**-0.2**
PDAR	**Pinedale Array**	**66.08**	**332**	7.0nm,0.8s,mb4.5 P	**P**	**07 16 11.0**	**+1.4**
RRI2	**Red Ridge**	**67.35**	**331**	0.3nm,0.6s,mb3.3,baz=116,slow=10,SNR=3.1 *e*P	**P**	**07 16 18.3**	**+0.5**
NVAR	**Mina Array Bea**	**67.49**	**323**	8.6nm,1.4s,mb4.4 P	**P**	**07 16 19.9**	**+1.1**
NVAR	0.5nm,0.9s,mb3.4,baz=180,slow=5.9,SNR=5.9			pP	pP	07 16 44.2	+7.0
ULM	**Lac du Bonnet**	**67.57**	**345**	0.3nm,0.5s,mb4.5,baz=107,slow=5.0,SNR=3.0 P	**P**	**07 16 17.7**	**-1.3**
VNA1	**Neumayer--Stat**	**68.13**	**161**	4.1nm,0.5s,mb4.5,baz=147,slow=5.5,SNR=3.4 *e*P	**P**	**07 16 20.7**	**-1.6**
VNA2	**Neumayer--Watz**	**68.49**	**161**	*e*P	**P**	**07 16 22.4**	**-2.1**
DGMT	**Dagmar**	**68.55**	**339**	*e*P	**P**	**07 16 25.8**	**+0.7**
HLID	**Hailey**	**69.00**	**329**	22nm,1.2s,mb4.9 *e*P	**P**	**07 16 30.1**	**+2.1**
DBIC	**Dimbokro**	**71.15**	**78**	4.3nm,1.4s,mb4.1 P	**P**	**07 16 40.9**	**-1.0**
DBIC	3.9nm,0.9s,mb4.2,baz=221,slow=9.1,SNR=5.3			LR	LR	07 47 22.1	
ETW	**Entiat**	**74.80**	**329**	comp=Z,59nm,19.1s,baz=142,slow=35 *e*P	**P**	**07 17 03.9**	**+1.2**
EDM	**Edmonton**	**75.80**	**337**	*e*P	**P**	**07 17 07.3**	**-1.0**
TORD	**Torodi Ar. Bea**	**79.27**	**73**	P	**P**	**07 17 27.9**	**-0.6**
TORD	1.5nm,0.4s,mb4.2,baz=250,slow=4.3,SNR=7.6			pP	pP	07 17 53.5	+6.1
YKA	**Yellowknife Ar**	**83.36**	**342**	3.4nm,0.8s,baz=257,slow=4.9,SNR=5.1 P	**P**	**07 17 48.6**	**-0.5**
ESDC	**Sonseca Array**	**84.09**	**47**	3.5nm,0.9s,mb4.2,baz=140,slow=5.3,SNR=7.6 P	**P**	**07 17 53.6**	**+0.2**
ESDC	0.2nm,0.3s,mb3.5,baz=248,slow=4.1,SNR=7.1			pP	pP	07 18 20.5	+8.1
DLBC	**Dease Lake**	**86.20**	**334**	0.4nm,0.3s,baz=255,slow=5.8,SNR=1.9 *e*P	**P**	**07 18 04.3**	**+0.9**
SUMG	**Summit**	**90.02**	**10**	*e*P	**P**	**07 18 22.1**	**+0.8**
BOSA	**Boshof**	**90.46**	**120**	9.0nm,1.0s,mb4.8 LR	LR	07 55 14.9	

	comp=Z,54nm,22.0s,baz=75,slow=33						
MAW	**Mawson**	**92.06**	**165**	*e*P	**P**	**07 18 30.7**	**-0.4**
MAW	**Mawson**	**92.06**	**165**	0.9nm,1.1s,mb3.9 P	**P**	**07 18 29.7**	**-1.5**
ILAR	**Eielson Array**	**96.27**	**336**	1.5nm,0.8s,mb4.3,baz=202,slow=9.1,SNR=7.0 P	**P**	**07 18 49.2**	**-1.1**
ASAR	**Alice Springs**	**133.51**	**215**	0.3nm,0.8s,mb3.8,baz=169,slow=1.7,SNR=4.7 PKP	PKPdf	07 24 39.0	-0.3
WRA	**Warramunga Arr**	**136.14**	**219**	0.5nm,0.4s,baz=115,slow=1.9,SNR=9.2 PKP	PKPdf	07 24 44.0	-0.3
ZALV	**Zalesovo Beam**	**137.21**	**19**	1.8nm,0.7s,baz=127,slow=2.1,SNR=27 PKP	PKPdf	07 24 45.2	+0.1
KURK	**Kurchatov**	**137.49**	**26**	2.3nm,0.8s,baz=282,slow=2.9,SNR=7.8 PKP	PKPdf	07 24 46.2	+0.4
MJAR	**Matsushiro Arr**	**144.38**	**314**	0.4nm,0.5s,baz=303,slow=2.2,SNR=3.7 PKP	PKPdf	07 24 55.9	-2.8
WMQ	**Urumqi**	**146.72**	**25**	2.8nm,0.8s,baz=52,slow=1.8,SNR=8.5 *e*PKPbc	PKPbc	07 25 00.5	-3.7
CN2	**Changchun**	**146.78**	**335**	*e*PKPbc	PKPbc	07 24 59.0	-5.3
ULN	**Ulaanbaatar**	**146.87**	**359**	*e*PKPbc	PKPbc	07 25 04.4	-0.1
SONM	**Songino Array**	**146.90**	**0**	PKPbc	PKPbc	07 25 05.4	+0.8
SONM	2.0nm,0.5s,baz=343,slow=2.1,SNR=9.9			pPKPbc	pPKPbc	07 25 31.9	+7.5
KSRS	**Korea Array**	**150.43**	**324**	1.3nm,0.6s,baz=352,slow=3.0,SNR=2.6 PKPbc	PKPbc	07 25 14.3	+0.3
HHC	**Hu-ho-hao-te**	**153.53**	**352**	5.3nm,1.0s,baz=25,slow=1.0,SNR=14 *e*PKPbc	PKPdf	07 25 12.0	-1.2
HHC				pPKP	pPKPdf	07 25 35.3	+2.0
HHC				PKS		07 28 45.5	
HHC				PP	PP	07 29 10.0	+3.6
HHC	comp=Z,37nm,5.2s			AMB	AMB		
NJ2	**Nanjing**	**159.38**	**329**	*e*PKP	PKPdf	07 25 16.5	-4.6

*BJI **29** 07:09:13.3,40°.25N×76°.72E,h10km,ML2.8/4*
ISC 29 07:09:16.1±1.6,40°.26N±0°.08×77°.1E±0°.1,h10km,n13, σ1°27/17,2C-3D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.13**	**229**	Pg	**Pg**	**07 09 38.3**	**+0.5**
KSH				Sg	**Sg**	**07 09 57.8**	**+5.3**
ULHL	**Ulahol**	**2.08**	**343**	P	**Pn**	**07 09 49.9**	**-1.2**
KZA	SNR=169 **Kyzart**	**2.29**	**323**	P	**Pn**	**07 09 51.7**	**-2.2**
UCH	SNR=17 **Uchtor**	**2.76**	**316**	P	**Pn**	**07 09 59.7**	**-0.8**
KBK	SNR=8.5 **Karagaybulak**	**2.88**	**327**	P	**Pn**	**07 10 03.1**	**+1.0**
TKM2	SNR=14 **Tokmak 2**	**2.88**	**338**	⇓Pn	**Pn**	**07 10 03.5**	**+1.4**
TKM2	24nm,0.5s			⇓Pg	**Pb**	**07 10 09.1**	**+1.4**
TKM2	33nm,0.5s			⇓Sn	**Sn**	**07 10 41.4**	**+4.6**
TKM2	27nm,0.8s **Tokmak 2**	**2.88**	**338**	P	**Pn**	**07 10 02.5**	**+0.4**
AAK	SNR=64 **Ala-Archa**	**3.07**	**321**	P	**Pn**	**07 10 05.7**	**+1.1**
AML	SNR=24 **Almayashu**	**3.17**	**307**	P	**Pn**	**07 10 02.8**	**-3.3**
CHMS	SNR=6.9 **Chumysh**	**3.25**	**328**	P	**Pn**	**07 10 06.6**	**-0.5**
EKS2	SNR=9.4 **Erkin-Say**	**3.46**	**315**	P	**Pn**	**07 10 09.1**	**-0.8**
USP	SNR=8.8 **Ospenovka**	**3.57**	**328**	P	**Pn**	**07 10 14.8**	**+3.2**
KK31	SNR=9.8 **Karatay Array**	**5.68**	**302**	⇑Pn	**Pb**	**07 10 49.4**	**-5.9**
KK31	1.2nm,0.5s,baz=114,slow=15,SNR=8.8			⇑Sn	**Sb**	**07 12 03.6**	**+0.1**
	4.9nm,0.7s,baz=119,slow=25,SNR=4.1						

IDC 29 07:32:27.0±3.7,5°.03S×128°.99E,h276km±37km,mb3.1/2, mb1 3.1/5,mb1mx2.9/19,mbtmp2.9/5,Error ellipse: s-maj=70.6km s-min=12.4km az=71.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.40**	**194**	P	Pn	07 35 27.0	-0.1
FITZ	0.3nm,0.3s,baz=37,slow=5.9,SNR=13			S	S	07 37 54.5	-1.0
WRA	0.1nm,0.3s,baz=73,slow=20,SNR=2.3 **Warramunga Arr**	**15.71**	**161**	P	Pn	07 35 52.4	-2.3
WRA	0.2nm,0.3s,baz=352,slow=13,SNR=10			S	S	07 38 42.7	-1.8
ASAR	0.3nm,0.3s,baz=336,slow=21,SNR=6.7 **Alice Springs**	**19.12**	**166**	P	P	07 36 30.6	+0.4
ASAR	0.3nm,0.3s,baz=352,slow=12,SNR=30			S	S	07 39 53.1	+1.2
MKAR	0.1nm,0.3s,baz=346,slow=15,SNR=9.7 **Makanchi Array**	**66.04**	**327**	P	P	07 42 44.5	+0.1
KURK	0.4nm,0.5s,baz=124,slow=7.7,SNR=4.8 **Kurchatov**	**70.33**	**329**	P	P	07 43 10.8	0.0
	0.5nm,0.6s,baz=132,slow=5.3,SNR=2.3						

*ISCJB **29** 07:48:04.3±0.8,22°.52N±0°.06×100°.2E±0°.1,h10km, mb3.5/4,Error ellipse: s-maj=19.1km s-min=4.4km az=23.1*
*IDC **29** 07:48:07.1±1.2,22°.72N×99°.77E,h0km,mb3.6/4, mb1 3.7/5,mb1mx3.5/23,mbtmp3.6/5,ML3.4/1,MS4.6/1, Ms1 4.6/1,ms1mx2.6/33,Error ellipse: s-maj=28.5km s-min=16.6km az=84.0*
*BJI **29** 07:48:08.3,22°.81N×99°.53E,h19km,ML4.0/5,Ms3.9/2, Ms? 3.6/1*
ISC 29 07:48:07.1±0.8,22°.57N±0°.06×100°.1E±0°.1,h10km,n11, σ1°02/14,mb3.5/4,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHRT	**Chiangrai**	**2.70**	**186**	PN	**Pb**	**07 48 56.5**	**+0.9**
CHRT	**Chiangrai**	**2.70**	**186**	PG	**Pg**	**07 48 58.0**	**-1.0**
CHRT				SG	**Sg**	**07 49 34.5**	**+0.5**
KMI	**Kunming**	**3.50**	**43**	Pg	**Pg**	**07 49 14.8**	**+0.6**
KMI				Sg	**Sg**	**07 49 59.0**	**-0.7**
KMI	comp=N,250nm,0.8s			smax			
KMI	comp=E,160nm,1.0s			smax			
KMI	comp=N,1μm,6.6s			LR	LR		
KMI	comp=E,1μm,7.3s			LR	LR		
CHG	**Chiang Mai**	**3.89**	**196**	PG	**Pg**	**07 49 18.7**	**-3.1**
CHG				SG	**Sg**	**07 50 12.3**	**+0.1**
CMAR	**Chiang Mai Arr**	**4.24**	**195**	Pn	**Pn**	**07 49 13.1**	**+1.3**
CMAR	comp=E,0.5nm,0.3s,baz=5.0,slow=12,SNR=18			Pg	**Pg**	**07 49 27.6**	**-0.7**
CMAR	comp=E,14nm,0.3s,baz=4.3,slow=17,SNR=113			Lg		07 50 23.3	
BDT	comp=E,14nm,0.3s,baz=1.8,slow=31,SNR=7.4 **Bhumibol Dam**	**5.40**	**191**	P	**Pg**	**07 49 50.0**	**-0.6**
SONM	**Songino Array**	**25.71**	**10**	P	**P**	**07 53 36.9**	**-0.5**
	comp=E,0.6nm,0.6s,mb3.3,baz=205,slow=6.4,SNR=2.3						
JOW	**Kunigami**	**25.91**	**75**	LR	LR	08 03 37.4	
MKAR	comp=E,1μm,19.0s,baz=117,slow=36 **Makanchi Array**	**28.13**	**334**	P	**P**	**07 53 59.6**	**+0.4**
	comp=E,0.3nm,0.4s,mb3.3,baz=160,slow=9.2,SNR=2.7						
WRA	**Warramunga Arr**	**53.88**	**139**	P	**P**	**07 57 34.9**	**+4.2**
	comp=E,0.7nm,0.8s,mb3.6,baz=328,slow=7.8,SNR=6.3						
ASAR	**Alice Springs**	**56.50**	**142**	P	**P**	**07 57 53.0**	**+3.4**
	comp=E,0.7nm,0.8s,mb3.7,baz=325,slow=7.5,SNR=8.2						

IDC 29 07:51:17.6±1.7,50°.83N×28°.28E,h0km,mb1 3.8/2, mb1mx3.2/23,mbtmp3.8/2,ML2.9/2,Error ellipse: s-maj=12.5km s-min=8.5km az=75.0,Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**0.61**	**102**	Pg	Pg	07 51 29.0	-0.3
AKASG	26nm,0.3s,baz=281,slow=19,SNR=137			Lg		07 51 39.0	
AKASG	45nm,0.3s,baz=284,slow=36,SNR=71			Rg		07 51 42.4	
FINES	433nm,0.6s,baz=284,slow=37,SNR=20 **FINESS Array B**	**10.71**	**354**	Pn	Pn	07 53 46.8	-5.3
ARCES	0.3nm,0.3s,baz=171,slow=13,SNR=4.0 **ARCESS Array B**	**18.81**	**357**	Pn	Pn	07 55 32.4	-6.4
	0.1nm,0.3s,baz=171,slow=12,SNR=3.1						

*NEIC **29** 07:55:55.0,45°.51N×26°.33E,h170km,MD3.9(BUC),After BUC.*
*ISCJB **29** 07:55:56.9±0.7,45°.50N±0°.04×26°.40E±0°.05,h142km±6km, Error ellipse: s-maj=5.9km s-min=5.4km az=16.8*
*BUC **29** 07:55:56.9±1.2,45°.56N×26°.37E,h146km±11km,MD4.4/2, Error ellipse: s-maj=9.0km s-min=7.2km az=77.0*
*CSEM **29** 07:55:57.2±0.3,45°.51N×26°.38E,h143km±3km,MD4.4/2, Error ellipse: s-maj=5.2km s-min=4.5km az=2.0*
ISC 29 07:55:57.4±0.7,45°.50N±0°.04×26°.41E±0°.05,h144km±5km, n98,σ0°70/135,48C-24D,Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.32**	**268**	⇑P	**Pn**	**07 56 17.3**	**+0.1**
MLR				S	**Sn**	**07 56 31.9**	**-0.3**
MLR	**Muntele Rosu**	**0.32**	**268**	⇑*i*P	**Pn**	**07 56 17.3**	**+0.1**
MLR	**Muntele Rosu**	**0.32**	**268**	*i* S	**Sn**	**07 56 31.9**	**-0.3**
MLR	**Muntele Rosu**	**0.32**	**268**	⇑*i*P	**Pn**	**07 56 17.3**	**+0.1**
MLR				*i* S	**Sn**	**07 56 31.9**	**-0.3**
GRER		**0.42**	**107**	⇓P	**Pn**	**07 56 18.7**	**+1.1**
GRER		**0.42**	**107**	⇑*i*P	**Pn**	**07 56 18.7**	**+1.1**
GRER		**0.42**	**107**	S	**Sn**	**07 56 33.4**	**+0.5**
GRER		**0.42**	**107**	⇑*i*P	**Pn**	**07 56 18.7**	**+1.1**
GRER				*i* S	**Sn**	**07 56 33.4**	**+0.5**
VRI	**Vrincioaia**	**0.43**	**32**	⇑P	**Pn**	**07 56 17.6**	**0.0**
VRI				S	**Sn**	**07 56 32.8**	**-0.3**
VRI	**Vrincioaia**	**0.43**	**32**	⇑*i*P	**Pn**	**07 56 17.6**	**0.0**
VRI	**Vrincioaia**	**0.43**	**32**	S	**Sn**	**07 56 32.8**	**-0.2**
VRI	**Vrincioaia**	**0.43**	**32**	⇑*i*P	**Pn**	**07 56 17.6**	**0.0**
VRI				*i* S	**Sn**	**07 56 32.8**	**-0.2**
VRI	**Vrincioaia**	**0.43**	**32**	⇑*i*P	**Pn**	**07 56 17.6**	**0.0**
VRI				*i* S	**Sn**	**07 56 32.8**	**-0.2**
ODB	**Odobesti**	**0.53**	**59**	P	**Pn**	**07 56 19.3**	**+1.2**
ODB	**Odobesti**	**0.53**	**59**	⇓*i*P	**Pn**	**07 56 19.3**	**+1.2**
ODB	**Odobesti**	**0.53**	**59**	P	**Pn**	**07 56 19.3**	**+1.2**
PETR		**0.62**	**69**	⇑P	**Pn**	**07 56 19.2**	**+0.6**
PETR				S	**Sn**	**07 56 35.4**	**+0.6**
PETR		**0.62**	**69**	⇑*i*P	**Pn**	**07 56 19.3**	**+0.7**
PETR		**0.62**	**69**	S	**Sn**	**07 56 35.4**	**+0.6**
PETR		**0.62**	**69**	⇑*i*P	**Pn**	**07 56 19.3**	**+0.7**
PETR				*i* S	**Sn**	**07 56 35.4**	**+0.6**
PETR		**0.62**	**69**	⇑P	**Pn**	**07 56 19.2**	**+0.6**
PETR				*i* S	**Sn**	**07 56 35.4**	**+0.6**
PGOR	**Pogoanele**	**0.72**	**145**	⇑*i*P	**Pn**	**07 56 20.0**	**+0.7**
PGOR	**Pogoanele**	**0.72**	**145**	S	**Sn**	**07 56 36.0**	**0.0**
PGOR	**Pogoanele**	**0.72**	**145**	⇑*i*P	**Pn**	**07 56 20.0**	**+0.7**
PGOR				*i* S	**Sn**	**07 56 36.0**	**0.0**
PGOR	**Pogoanele**	**0.72**	**145**	⇑*i*P	**Pn**	**07 56 20.0**	**+0.7**
PGOR				*i* S	**Sn**	**07 56 36.0**	**0.0**
SULR		**0.83**	**187**	⇑P	**Pn**	**07 56 20.1**	**-0.1**
SULR				S	**Sn**	**07 56 37.9**	**+0.5**
SULR		**0.83**	**187**	⇑*i*P	**Pn**	**07 56 20.0**	**-0.1**
SULR		**0.83**	**187**	S	**Sn**	**07 56 37.9**	**+0.5**
SULR		**0.83**	**187**	⇑*i*P	**Pn**	**07 56 20.0**	**-0.1**
SULR				*i* S	**Sn**	**07 56 37.9**	**+0.5**
SULR		**0.83**	**187**	⇑*i*P	**Pn**	**07 56 20.0**	**-0.1**
SULR				*i* S	**Sn**	**07 56 37.9**	**+0.5**
VOIR		**0.96**	**267**	⇓P	**Pn**	**07 56 20.9**	**-0.2**
VOIR				S	**Sn**	**07 56 38.4**	**-0.8**
VOIR		**0.96**	**267**	⇓*i*P	**Pn**	**07 56 20.9**	**-0.2**
VOIR		**0.96**	**267**	S	**Sn**	**07 56 38.4**	**-0.8**
VOIR		**0.96**	**267**	⇓*i*P	**Pn**	**07 56 20.9**	**-0.2**
VOIR				*i* S	**Sn**	**07 56 38.4**	**-0.8**
VOIR		**0.96**	**267**	⇓*i*P	**Pn**	**07 56 20.9**	**-0.2**
VOIR				*i* S	**Sn**	**07 56 38.4**	**-0.8**
TESR		**1.02**	**9**	⇑P	**Pn**	**07 56 21.2**	**-0.5**
TESR				S	**Sn**	**07 56 38.8**	**-1.5**
TESR		**1.02**	**9**	⇑*i*P	**Pn**	**07 56 21.2**	**-0.5**
TESR		**1.02**	**9**	S	**Sn**	**07 56 38.5**	**-1.8**
TESR		**1.02**	**9**	⇑*i*P	**Pn**	**07 56 21.2**	**-0.5**
TESR				*i* S	**Sn**	**07 56 38.5**	**-1.8**
TESR		**1.02**	**9**	⇑*i*P	**Pn**	**07 56 21.2**	**-0.5**
TESR				S	**Sn**	**07 56 38.8**	**-1.5**
AMRR	**Amara**	**1.11**	**143**	⇑P	**Pn**	**07 56 23.1**	**+0.6**
AMRR				S	**Sn**	**07 56 42.2**	**+0.6**
AMRR	**Amara**	**1.11**	**143**	⇑*i*P	**Pn**	**07 56 23.1**	**+0.6**
AMRR	**Amara**	**1.11**	**143**	S	**Sn**	**07 56 42.2**	**+0.6**
AMRR	**Amara**	**1.11**	**143**	⇑*i*P	**Pn**	**07 56 23.1**	**+0.6**
AMRR				*i* S	**Sn**	**07 56 42.2**	**+0.6**
AMRR	**Amara**	**1.11**	**143**	⇑*i*P	**Pn**	**07 56 23.1**	**+0.6**
AMRR				*i* S	**Sn**	**07 56 42.2**	**+0.6**
BUC1	**Bucharest**	**1.19**	**193**	S	**Sn**	**07 56 43.2**	**+0.3**
BUC1	**Bucharest**	**1.19**	**193**	⇑*i*P	**Pn**	**07 56 28.4**	**+5.2**
BUC1	**Bucharest**	**1.19**	**193**	*i* S	**Sn**	**07 56 43.2**	**+0.3**
BUC1	**Bucharest**	**1.19**	**193**	*i* S	**Sn**	**07 56 43.2**	**+0.3**
CFR	**Carcaliu**	**1.26**	**104**	⇑P	**Pn**	**07 56 23.9**	**0.0**
CFR	**Carcaliu**	**1.26**	**104**	⇑*i*P	**Pn**	**07 56 23.9**	**0.0**
CFR	**Carcaliu**	**1.26**	**104**	S	**Sn**	**07 56 43.9**	**-0.3**
CFR	**Carcaliu**	**1.26**	**104**	⇑*i*P	**Pn**	**07 56 23.9**	**0.0**
CFR				*i* S	**Sn**	**07 56 43.9**	**-0.3**
CFR	**Carcaliu**	**1.26**	**104**	⇑*i*P	**Pn**	**07 56 23.9**	**0.0**
CFR				*i* S	**Sn**	**07 56 43.9**	**-0.3**
MDB	**Medias**	**1.55**	**295**	⇓P	**Pn**	**07 56 27.0**	**0.0**
MDB	**Medias**	**1.55**	**295**	⇓*i*P	**Pn**	**07 56 27.0**	**0.0**
MDB	**Medias**	**1.55**	**295**	⇓*i*P	**Pn**	**07 56 27.0**	**0.0**
MDB	**Medias**	**1.55**	**295**	⇓*i*P	**Pn**	**07 56 27.0**	**0.0**
CVD	**Cernavoda**	**1.66**	**135**	S	**Sn**	**07 56 50.7**	**-1.0**
TLCR		**1.73**	**100**	⇑P	**Pn**	**07 56 29.3**	**+0.4**
TLCR				S	**Sn**	**07 56 53.0**	**-0.1**
**TLCR

CAIG				*i* S	Sb	08 18 46.8	-4.4
MMIG	**Aquila**	**2.44**	**304**	*i* P	Pn	08 18 56.4	-4.3
MMIG				*i* S	Sn	08 19 25.2	-5.0
PNIG	**Pinotepa**	**3.01**	**100**	*i* P	Pn	08 19 05.0	-3.6
PNIG				*e*S	Sn	08 19 41.2	-3.3
PPM	**Popocatepetl**	**3.26**	**49**	*i* P	Pn	08 19 09.6	-2.4
PPM				*i* S	Sn	08 19 46.2	-4.3
UTMO	**Huajuapan**	**3.38**	**74**	*i* P	Pn	08 19 10.1	-3.6
UTMO				*i* S	Sn	08 19 49.1	-4.5

NEIC ***29*** *08:26:20.6, 32.89S×69.18W, h22km, MD3.8(SJA), MD3.4(GUC), After GUC.*
NEIC Felt [III] at Mendoza.
GUC 29 08:26:20.6±0.6, 32.89S×69.18W, h22km±5km, MD3.4, ML2.6, 6C-4D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JACH	**Jahuel**	**1.21**	**280**	*i* P	Pn	08 26 41.7	-0.4
JACH				*i* S	Sn	08 26 58.1	+0.3
JACH	**Jahuel**	**1.21**	**280**	*i* P	Pn	08 26 41.7	-0.4
JACH				*i* S	Sn	08 26 58.1	+0.3
LMEL	**Las Melosas**	**1.28**	**222**	*i* P	Pn	08 26 42.1	-1.0
LMEL				*i* S	Sn	08 26 59.4	-0.3
LMEL	**Las Melosas**	**1.28**	**222**	*i* P	Pn	08 26 42.1	-1.0
LMEL				*i* S	Sn	08 26 59.4	-0.3
LMEL				AML	AML	08 27 00.9	
	comp=N,107nm,0.3s						
PEL	**Peldehue**	**1.29**	**258**	*i* P	Pn	08 26 42.4	-0.9
PEL				*i* S	Sn	08 26 59.3	-0.5
PEL				AML	AML	08 27 01.5	
	comp=N,268nm,0.5s						
PCH	**Pirque**	**1.33**	**237**	*i* P	Pn	08 26 43.5	-0.3
PCH				*i* S	Sn	08 27 01.2	+0.3
PCH	**Pirque**	**1.33**	**237**	*i* P	Pn	08 26 43.5	-0.3
PCH				*i* S	Sn	08 27 01.2	+0.3
ANTU	**Antumapu**	**1.39**	**241**	*i* P	Pn	08 26 44.3	-0.3
ANTU				*i* S	Sn	08 27 02.6	+0.2
ANTU	**Antumapu**	**1.39**	**241**	*i* P	Pn	08 26 44.3	-0.3
ANTU				*i* S	Sn	08 27 02.6	+0.2
ANTU				AML	AML	08 27 06.1	
	comp=E,341nm,0.4s						
ROCH	**El Roble**	**1.54**	**266**	*i* P	Pn	08 26 47.7	+1.0
ROCH				*i* S	Sn	08 27 08.0	+1.9
CHCH	**Chadas Angostu**	**1.61**	**229**	*i* P	Pn	08 26 48.3	+0.6
CHCH				*i* S	Sn	08 27 09.2	+1.5
CHCH	**Chadas Angostu**	**1.61**	**229**	*i* P	Pn	08 26 48.3	+0.6
CHCH				*i* S	Sn	08 27 09.2	+1.5
TACH	**Talagante**	**1.66**	**242**	*i* P	Pn	08 26 48.6	+0.3
TACH				*i* S	Sn	08 27 10.1	+1.2
TACH	**Talagante**	**1.66**	**242**	*i* P	Pn	08 26 48.6	+0.3
TACH				*i* S	Sn	08 27 10.1	+1.2
CACH	**El Canelo**	**1.70**	**224**	*i* P	Pn	08 26 50.1	+1.1
CACH				*i* S	Sn	08 27 12.5	+2.4
CACH	**El Canelo**	**1.70**	**224**	*i* P	Pn	08 26 50.1	+1.1
CACH				*i* S	Sn	08 27 12.5	+2.4
CHNG	**Los Chungos**	**2.20**	**296**	*i* P	Pn	08 26 56.9	+1.1
CHNG				*i* S	Sn	08 27 24.6	+2.2

NEIC ***29*** *08:36:33.0, 36.18N×21.22E, h18km, MD3.5(ATH), After ATH.*
ATH ***29*** *08:36:33.0, 36.18N±21.22E, h18km±1km, MD3.5/7*
CSEM ***29*** *08:36:34.8±0.7, 36.23N×21.34E, h2km, ML2.6/3, Error ellipse: s-maj=14.2km s-min=10.8km az=44.0*
THE ***29*** *08:36:35.5, 36.17N×21.51E, h0km±6km, ML2.6/3, Error ellipse: s-maj=11.3km s-min=2.7km az=235.0*
ISC 29 08:36:30.9±1.6, 36.15N±0.07×21.10E±0.09, h4km±8km, n38, σ0.87/54, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.91**	**35**	*e*PB	**Pg**	**08 36 48.5**	**+0.2**
PYL				*e*SN	**Sg**	**08 37 00.1**	**0.0**
PYL	**PYLOS**	**0.91**	**35**	P	**Pg**	**08 36 48.8**	**+0.5**
PYL	**PYLOS**	**0.91**	**35**	*e*Pb	**Pg**	**08 36 48.8**	**+0.2**
PYL	**PYLOS**	**0.91**	**35**	P	**Pg**	**08 36 48.8**	**+0.5**
ITM	**Ithomi**	**1.23**	**33**	*e*Pn	**Pn**	**08 36 55.1**	**+0.3**
ITM				*e*SN	**Sn**	**08 37 11.2**	**-0.6**
ITM	**Ithomi**	**1.23**	**33**	*e*PN	**Pn**	**08 36 55.1**	**+0.3**
ITM				*e*SN	**Sn**	**08 37 11.2**	**-0.6**
ITM	**Ithomi**	**1.23**	**33**	P	**Pg**	**08 36 55.0**	**+0.6**
ITM	**Ithomi**	**1.23**	**33**	P	**Pg**	**08 36 55.0**	**+0.6**
ITM				*e*Sn	**Sn**	**08 37 11.2**	**-0.6**
KYTH	**Kithira**	**1.57**	**85**	*e*Pn	**Pb**	**08 37 01.2**	**+0.7**
KYTH	**Kithira**	**1.57**	**85**	*e*PN	**Pb**	**08 37 01.2**	**+0.7**
KYTH	**Kithira**	**1.57**	**85**	*e*Pn	**Pb**	**08 37 01.2**	**+0.7**
VLI	**Veliai**	**1.59**	**69**	*e*Pn	**Pb**	**08 37 01.0**	**+0.2**
VLI				*e*Sn	**Sb**	**08 37 21.2**	**0.0**
VLI	**Veliai**	**1.59**	**69**	*e*PN	**Pb**	**08 37 01.0**	**+0.2**
VLI				*e*SN	**Sb**	**08 37 21.2**	**0.0**
VLI	**Veliai**	**1.59**	**69**	*e*Pn	**Pb**	**08 37 01.0**	**+0.2**
VLI				*e*Sn	**Sb**	**08 37 21.2**	**0.0**
VLX	**Vlachokerasia**	**1.60**	**40**	*e*PN	**Pb**	**08 37 01.2**	**+0.3**
VLX				*e*SN	**Sb**	**08 37 22.5**	**+1.1**
VLX	**Vlachokerasia**	**1.60**	**40**	P	**Pb**	**08 37 01.1**	**+0.2**
VLX				S	**Sb**	**08 37 22.6**	**+1.2**
VLX	**Vlachokerasia**	**1.60**	**40**	P	**Pb**	**08 37 01.1**	**+0.2**
VLX				*e*Sn	**Sb**	**08 37 22.5**	**+1.1**
RLS	**Riolos of Patr**	**1.93**	**9**	*e*Pb	**Pb**	**08 37 05.9**	**-0.7**
RLS	**Riolos of Patr**	**1.93**	**9**	*e*PB	**Pb**	**08 37 05.9**	**-0.7**
RLS	**Riolos of Patr**	**1.93**	**9**	*e*Pb	**Pb**	**08 37 05.9**	**-0.7**
GUR	**Goura**	**2.04**	**29**	*e*PN	**Pb**	**08 37 08.1**	**-0.5**
GUR	**Goura**	**2.04**	**29**	P	**Pb**	**08 37 08.5**	**-0.1**
GUR				S	**Sb**	**08 37 34.5**	**+0.2**
GUR	**Goura**	**2.04**	**29**	*e*Pn	**Pb**	**08 37 08.1**	**-0.5**
GUR	**Goura**	**2.04**	**29**	P	**Pb**	**08 37 08.5**	**-0.1**
GUR				S	**Sb**	**08 37 34.5**	**+0.2**
VLS	**Valsamata**	**2.06**	**349**	*e*Pn	**Pb**	**08 37 09.9**	**+1.0**
VLS	**Valsamata**	**2.06**	**349**	*e*PN	**Pb**	**08 37 09.9**	**+1.0**
VLS	**Valsamata**	**2.06**	**349**	*e*Pn	**Pb**	**08 37 09.9**	**+1.0**
DID	**Didima**	**2.19**	**51**	*e*PB	**Pb**	**08 37 08.9**	**-2.1**
DID	**Didima**	**2.19**	**51**	P	**Pb**	**08 37 08.7**	**-2.3**
DID				S	**Sb**	**08 37 34.5**	**-4.0**
DID	**Didima**	**2.19**	**51**	P	**Pb**	**08 37 08.7**	**-2.3**
DID				S	**Sb**	**08 37 34.5**	**-4.0**
TRIZ	**Trizonia**	**2.35**	**19**	P	**Pb**	**08 37 13.7**	**0.0**
TRIZ	**Trizonia**	**2.35**	**19**	P	**Pb**	**08 37 13.7**	**0.0**
KALE	**Kalithea**	**2.39**	**20**	P	**Pb**	**08 37 13.9**	**-0.5**
KALE	**Kalithea**	**2.39**	**20**	P	**Pb**	**08 37 13.9**	**-0.5**
LTK	**Loutraki**	**2.40**	**38**	P	**Pn**	**08 37 11.9**	**+1.0**
LTK	**Loutraki**	**2.40**	**38**	P	**Pn**	**08 37 11.9**	**+1.0**
LKR	**Lokris**	**2.92**	**31**	P	**Pb**	**08 37 21.0**	**-2.5**
LKR				S	**Sn**	**08 37 54.0**	**+0.4**
LKR	**Lokris**	**2.92**	**31**	P	**Pb**	**08 37 21.0**	**-2.5**
LKR				S	**Sn**	**08 37 54.0**	**+0.4**

IDC 29 08:39:40.0±0.8, 8.06S×68.24E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.8/23, mbtmp3.9/7, MS3.8/4, Ms1 3.8/4, ms1mx3.3/27, Error ellipse: s-maj=25.2km s-min=23.5km az=120.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**22.97**	**241**	P	P	08 44 45.8	-0.5
	0.7nm,0.3s,baz=63,slow=14,SNR=3.4						
CMAR	**Chiang Mai Arr**	**40.15**	**49**	P	P	08 47 19.0	+0.9
	0.7nm,0.6s,baz=243,slow=10,SNR=6.1						
CMAR				LR	LR	09 01 44.4	
	comp=Z,48nm,19.2s,baz=35,slow=33						
BOSA	**Boshof**	**45.31**	**237**	LR	LR	09 05 01.6	
	comp=Z,96nm,19.8s,baz=256,slow=34						
MMAI	**Mount Meron Ar**	**51.42**	**324**	LR	LR	09 06 44.6	
	comp=Z,99nm,18.4s,baz=75,slow=32						
MKAR	**Makanchi Array**	**56.02**	**12**	P	P	08 49 19.9	-0.5
	0.5nm,0.7s,baz=194,slow=5.5,SNR=3.9						
MAW	**Mawson**	**59.57**	**182**	P	P	08 49 46.2	+1.0
	1.1nm,0.7s,baz=7.7,slow=10,SNR=6.7						
ASAR	**Alice Springs**	**64.55**	**112**	P	P	08 50 18.9	-0.5
	1.3nm,0.7s,baz=276,slow=6.2,SNR=16						
WRA	**Warramunga Arr**	**64.87**	**108**	P	P	08 50 21.1	-0.5
	2.3nm,0.8s,baz=280,slow=6.5,SNR=18						
AKASG	**Malin Array Be**	**67.56**	**334**	P	P	08 50 37.3	-0.8
	0.1nm,0.3s,baz=128,slow=5.5,SNR=3.4						
STKA	**Stephens Creek**	**71.67**	**121**	LR	LR	09 17 27.4	
	comp=Z,134nm,20.4s,baz=26,slow=32						
PDAR	**Pinedale Array**	**145.38**	**357**	PKPbc	PKPbc	08 59 20.2	+0.1
	0.3nm,0.8s,baz=45,slow=2.7,SNR=3.4						
NVAR	**Mina Array Bea**	**149.19**	**10**	PKPbc	PKPbc	08 59 32.2	+1.3
	0.7nm,0.8s,baz=354,slow=0.9,SNR=4.5						

DDA ***29*** *08:48:04.8, 40.80N×31.90E, h7km±4km, Md3.0*
ISK ***29*** *08:48:04.9, 40.79N×31.94E, h10km, MD2.8*
ISCJB ***29*** *08:48:05.2±0.6, 40.81N±0.04×31.91E±0.04, h6km±6km, Error ellipse: s-maj=6.5km s-min=4.5km az=150.5*
CSEM ***29*** *08:48:05.5±0.2, 40.80N×31.93E, h10km, MD3.0, Error ellipse: s-maj=6.1km s-min=4.2km az=157.0*
ISC 29 08:48:05.7±0.6, 40.81N±0.04×31.93E±0.04, h9km±5km, n33, σ0.97/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGKT	**Sivrigoynuk**	**0.25**	**157**	*i* P	**Pg**	**08 48 10.4**	**-0.3**
SGKT				*i* S	**Sg**	**08 48 14.4**	**+0.2**
SGKT	**Sivrigoynuk**	**0.25**	**157**	*i* P	**Pg**	**08 48 10.4**	**-0.3**
SGKT				*i* S	**Sg**	**08 48 14.4**	**+0.3**
KDZE	**Karadeniz Ereo**	**0.62**	**324**	*e*PG	**Pg**	**08 48 17.7**	**-0.1**
KDZE	**Karadeniz Ereo**	**0.62**	**324**	*e*Pg	**Pg**	**08 48 17.7**	**-0.1**
MDU	**Mudurnu**	**0.64**	**238**	*e*PG	**Pg**	**08 48 17.4**	**-0.6**
MDU				*e*SG	**Sg**	**08 48 27.3**	**+0.9**
MDU	**Mudurnu**	**0.64**	**238**	*e*Pg	**Pg**	**08 48 17.4**	**-0.6**
MDU				*e*Sg	**Sg**	**08 48 27.3**	**+0.9**
SAFT	**Safranbolu**	**0.72**	**53**	*e*PG	**Pg**	**08 48 19.8**	**+0.2**
SAFT				*e*SG	**Sg**	**08 48 29.7**	**+0.7**
SAFT	**Safranbolu**	**0.72**	**53**	*e*Pg	**Pg**	**08 48 19.8**	**+0.2**
SAFT				*e*Sg	**Sg**	**08 48 29.7**	**+0.7**
LOD	**Lodumlu**	**1.12**	**145**	*e*PN	**Pg**	**08 48 26.4**	**-0.7**
LOD	**Lodumlu**	**1.12**	**145**	*e*Pn	**Pg**	**08 48 26.4**	**-0.7**
GULT	**Gulveren**	**1.14**	**251**	*e*PN	**Pg**	**08 48 27.2**	**-0.3**
GULT	**Gulveren**	**1.14**	**251**	*e*Pn	**Pg**	**08 48 27.2**	**-0.3**
ELDT	**Eldivan**	**1.19**	**105**	*i* P	**Pb**	**08 48 27.1**	**-1.2**
ELDT				*i* S	**Sb**	**08 48 43.0**	**-0.8**
ELDT	**Eldivan**	**1.19**	**105**	*i* P	**Pb**	**08 48 27.1**	**-1.2**
ELDT				*i* S	**Sb**	**08 48 43.0**	**-0.8**
BALT	**Daday**	**1.32**	**56**	*i* P	**Pn**	**08 48 29.9**	**-0.5**
BALT				*i* S	**Sb**	**08 48 45.0**	**-2.7**
BALT	**Daday**	**1.32**	**56**	*i* P	**Pn**	**08 48 29.9**	**-0.4**
BALT				*i* S	**Sb**	**08 48 45.0**	**-2.7**
ILGA	**Ilgaz**	**1.38**	**79**	*i* P	**Pn**	**08 48 32.5**	**+1.3**
ILGA				*i* S	**Sb**	**08 48 51.2**	**+1.8**
ILGA	**Ilgaz**	**1.38**	**79**	*i* P	**Pn**	**08 48 32.5**	**+1.4**
ILGA				*i* S	**Sb**	**08 48 51.2**	**+1.8**
SVRH	**Sivrihisar-ESK**	**1.39**	**193**	*e*PN	**Pn**	**08 48 30.8**	**-0.6**
SVRH	**Sivrihisar-ESK**	**1.39**	**193**	*e*Pn	**Pn**	**08 48 30.8**	**-0.5**
ESKT	**Eskisehir**	**1.53**	**213**	*i* P	**Pn**	**08 48 33.0**	**-0.1**
SEYT	**Eskypehyr**	**1.53**	**213**	*i* P	**Pn**	**08 48 33.0**	**-0.2**
BBAL	**Bala**	**1.56**	**144**	*i* P	**Pn**	**08 48 35.0**	**+1.3**
BBAL	**Bala**	**1.56**	**144**	*i* P	**Pn**	**08 48 35.0**	**+1.4**
HRT	**Hereke**	**1.71**	**271**	*e*PN	**Pn**	**08 48 35.8**	**0.0**
HRT	**Hereke**	**1.71**	**271**	*e*Pn	**Pn**	**08 48 35.8**	**+0.1**
KIZT	**Kizilcal**	**1.92**	**181**	*e*PN	**Pn**	**08 48 38.8**	**+0.2**
KIZT	**Kizilcal**	**1.92**	**181**	*e*Pn	**Pn**	**08 48 38.8**	**+0.2**
KAMT	**Kaman**	**1.98**	**136**	*e*PN	**Pn**	**08 48 38.8**	**-0.7**
KAMT	**Kaman**	**1.98**	**136**	*e*Pn	**Pn**	**08 48 38.8**	**-0.7**
CORM	**Corum**	**2.15**	**106**	*e*PN	**Pn**	**08 48 41.1**	**-0.7**
CORM	**Corum**	**2.15**	**106**	*e*Pn	**Pn**	**08 48 41.1**	**-0.7**
CDAG	**Cicekdag**	**2.21**	**121**	*i* P	**Pn**	**08 48 44.9**	**+2.3**

IDC ***29*** *08:48:38.2±9.4, 31.04S×179.25W, h302km±101km, mb2.6/2, mb1 3.1/3, mb1mx3.0/16, mbtmp3.0/3, Error ellipse: s-maj=99.5km s-min=45.4km az=0.0*
ISC 29 08:48:43.8±1.3, 31.5S±0.1×179.4W±0.3, h357km±18km, n22, σ1.9/07/31, mb2.6/2, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**6.33**	**197**	PN	**Pn**	**08 50 19.7**	**+1.4**
PUZ	**Puketiti**	**6.82**	**196**	PN	**Pn**	**08 50 24.1**	**0.0**
PUZ				SN	**S**	**08 51 45.5**	**-0.2**
MWZ	**Matawai**	**7.26**	**200**	PN	**Pn**	**08 50 29.1**	**-0.1**
MWZ				SN	**S**	**08 51 54.6**	**-0.5**
URZ	**Urewera**	**7.32**	**202**	P	**Pn**	**08 50 30.7**	**+0.9**
	5.1nm,0.3s,baz=283,slow=3.8,SNR=36						
URZ				S	**S**	**08 51 56.7**	**+0.4**
	5.2nm,0.3s,baz=95,slow=22,SNR=11						
URZ	**Urewera**	**7.32**	**202**	PN	**Pn**	**08 50 28.8**	**-1.1**
URZ				SN	**S**	**08 51 57.0**	**+0.7**
KNZ	**Kokohu**	**7.86**	**197**	PN	**Pn**	**08 50 37.9**	**+1.7**
BKZ	**Black Stump Fm**	**8.34**	**203**	PN	**Pn**	**08 50 41.3**	**-0.6**
BKZ				SN	**S**	**08 52 19.5**	**+1.1**
PXZ	**Pawanui**	**9.03**	**199**	PN	**Pn**	**08 50 50.3**	**+0.3**
PXZ				SN	**S**	**08 52 33.2**	**-0.1**
WPHZ	**Waipukurau**	**9.18**	**200**	PN	**Pn**	**08 50 53.7**	**+2.0**
WPHZ				SN	**S**	**08 52 37.6**	**+1.0**
WAZ	**Wanganui**	**9.41**	**208**	PN	**Pn**	**08 50 55.4**	**+0.9**
BFZ	**Birch Farm**	**9.80**	**200**	PN	**Pn**	**08 50 59.1**	**-0.1**
BFZ				SN	**S**	**08 52 48.7**	**-1.6**
MRZ	**Mangatainoka R**	**9.99**	**203**	PN	**Pn**	**08 50 57.8**	**-3.6**
KIW	**Kapiti Island**	**10.40**	**205**	PN	**Pn**	**08 51 04.6**	**-1.6**
KIW				SN	**S**	**08 53 02.4**	**-0.9**
NNZ	**Nelson**	**11.30**	**209**	*e*PN	**Pn**	**08 51 15.7**	**-1.2**
QRZ	**Quartz Range**	**11.35**	**213**	*e*PN	**Pn**	**08 51 13.0**	**-1.2**
QRZ				SN	**S**	**08 53 24.8**	**+0.6**
THZ	**Tophouse**	**11.95**	**209**	PN	**Pn**	**08 51 24.4**	**-0.2**
KHZ	**Kahutara**	**12.26**	**205**	PN	**Pn**	**08 51 27.7**	**-0.5**
LTZ	**Lake Taylor**	**13.06**	**208**	PN	**Pn**	**08 51 35.8**	**-1.9**
MQZ	**McQueen's Vall**	**13.70**	**205**	SN	**S**	**08 54 13.6**	**+1.0**
ASAR	**Alice Springs**	**41.87**	**269**	P	**P**	**08 56 02.3**	**+1.9**
	0.5nm,1.0s,mb2.6,baz=103,slow=8.0,SNR=3.0						
WRA	**Warramunga Arr**	**42.96**	**274**	P	**P**	**08 56 08.4**	**-0.8**
	0.2nm,0.4s,mb2.6,baz=110,slow=7.9,SNR=7.1						
FINES	**FINESS Array B**	**145.76**	**338**	PKPbc	PKPbc	09 07 38.9	-1.6
	4.9nm,0.6s,baz=57,slow=3.8,SNR=9.2						

IDC ***29*** *08:58:34.8±0.8, 32.67N×48.63E, h0km, mb4.0/17, mb1 4.1/23, mb1mx4.0/32, mbtmp4.0/23, ML3.6/5, MS3.7/18, Ms1 3.8/18, ms1mx3.4/39, Error ellipse: s-maj=18.8km s-min=13.4km az=174.0*
ISCJB ***29*** *08:58:35.9±0.2, 32.54N±0.02×48.52E±0.03, h10km, mb4.1/29, MS3.7/18, Error ellipse: s-maj=3.7km s-min=2.9km az=22.7*
THR ***29*** *08:58:37.7±1.0, 32.56N×48.59E, h18km±8km, ML3.9*
SGS ***29*** *08:58:37.9, 32.46N×48.58E, h0km*
MOS ***29*** *08:58:38.8±1.9, 32.63N×48.47E, h33km, mb4.4/11, Error ellipse: s-maj=10.2km s-min=5.8km az=114.6*
CSEM ***29*** *08:58:38.6±0.2, 32.58N×48.63E, h15km, mb4.3/11, Error ellipse: s-maj=6.9km s-min=4.6km az=2.0*
TEH ***29*** *08:58:39.5, 32.56N×48.59E, h17km*
NEIC ***29*** *08:58:39.0, 32.60N×48.70E, h6km, mb4.4/7, ML3.9(THR), MN4.0(TEH), After TEH.*
ISC 29 08:58:37.7±0.2, 32.57N±0.02×48.55E±0.02, h10km, n230, σ1.39/232, mb4.1/29, MS3.7/18, 18C-16D, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**0.51**	**155**	*e*Pg	**Pg**	**08 58 47.4**	**-0.2**
IKOM	**Komasi**	**1.82**	**332**	*e*Pn	**Pn**	**08 59 10.0**	**+0.9**
IKOM				*e*		08 59 46.6	
	comp=Z,68μm,0.2s						
IKOM	**Komasi**	**1.82**	**332**	*e*Pn	**Pn**	**08 59 10.0**	**+0.9**
IPIR	**Pirpir**	**1.98**	**86**	Pn	**Pn**	**08 59 13.2**	**+1.9**
IPIR				Sn	**Sn**	**08 59 35.6**	**-0.6**
IPIR	**Pirpir**	**1.98**	**86**	*e*Pn	**Pg**	**08 59 13.7**	**-2.0**
IPIR				*e*		08 59 48.6	
	comp=Z,12μm,0.3s						
IPIR	**Pirpir**	**1.98**	**86**	Pn	**Pn**	**08 59 13.2**	**+1.9**
ASAO	**Ashtian**	**2.33**	**32**	*e*Pn	**Pn**	**08 59 17.2**	**+1.1**
ASAO				*e*Sg	**Sg**	**08 59 50.6**	**-2.0**
ASAO				AML	AML	08 59 58.0	
	comp=N,670nm,0.6s						
ASAO				AML	AML	09 00 03.0	
	comp=E,846nm,0.7s						
IGHG	**Ghaleghazi**	**2.41**	**317**	*e*Pn	**Pn**	**08 59 19.3**	**+2.1**
IGHG				*e*Sg	**Sg**	**08 59 55.9**	**+0.7**
IGHG				*e*		09 00 27.4	
	comp=Z,78μm,0.5s						
IGHG	**Ghaleghazi**	**2.41**	**317**	*e*Pn	**Pn**	**08 59 19.3**	**+2.1**
IGHG				*e*Sg	**Sg**	**08 59 55.9**	**+0.7**
IVIS	**Veis**	**2.41**	**324**	*e*Pn	**Pn**	**08 59 18.9**	**+1.7**
IVIS				*e*		09 00 08.2	
	comp=Z,21μm,0.5s						
IVIS	**Veis**	**2.41**	**324**	*e*Pn	**Pn**	**08 59 18.9**	**+1.7**
IKLH	**Kolahrood**	**2.66**	**73**	Pn	**Pn**	**08 59 21.8**	**+1.2**
IKLH				Sn	**Sn**	**08 59 53.0**	**+0.2**
IKLH	**Kolahrood**	**2.66**	**73**	*e*Pn	**Pn**	**08 59 21.5**	**+0.9**
IKLH				*e*		09 00 34.5	
	comp=Z,4μm,0.3s						
IKLH	**Kolahrood**	**2.66**	**73**	*e*Pn	**Pn**	**08 59 21.5**	**+0.9**
IKLH				Sn	**Sn**	**08 59 53.0**	**+0.2**
ILIN	**Lien**	**2.69**	**331**	*e*Pn	**Pn**	**08 59 21.8**	**+0.8**
ILIN				*e*		09 00 11.9	
	comp=N,20μm,0.2s						
ILIN	**Lien**	**2.69**	**331**	*e*Pn	**Pn**	**08 59 21.8**	**+0.8**
IDHR	**Dehrash**	**2.79**	**320**	*e*Pn	**Pn**	**08 59 23.5**	**+1.1**
IDHR	**Dehrash**	**2.79**	**320**	*e*Pn	**Pn**	**08 59 23.5**	**+1.1**
MIB	**Mutribah**	**2.95**	**201**	*e*P	**Pn**	**08 59 26.4**	**+1.8**
MIB				AML	AML	09 00 22.1	
	comp=Z,300nm,0.5s						
IGAR	**Gharneh**	**2.96**	**92**	*e*Pn	**Pn**	**08 59 25.4**	**+0.7**
IGAR				*e*		09 00 35.1	
	comp=Z,3μm,0.3s						
GHVR	**GHOM**	**2.98**	**50**	*e*Pn	**Pn**	**08 59 25.9**	**+0.8**
GHVR				AML	AML	09 00 18.2	
	comp=N,298nm,0.6s						
GHVR				AML	AML	09 00 21.7	
	comp=E,285nm,0.6s						
IRAZ	**Razeghan**	**3.05**	**22**	Pn	**Pn**	**08 59 27.8**	**+1.8**
IRAZ	**Razeghan**	**3.05**	**22**	*e*Pn	**Pn**	**08 59 27.3**	**+1.3**
IRAZ				*e*		09 00 29.9	
	comp=Z,7μm,0.3s						
IRAZ	**Razeghan**	**3.05**	**22**	*e*Pn	**Pn**	**08 59 27.3**	**+1.3**
UMR	**Umm Al-Rimmam**	**3.09**	**194**	*e*P	**Pn**	**08 59 27.8**	**+1.2**
IZEF	**Zefreh**	**3.20**	**83**	Pn	**Pn**	**08 59 28.6**	**+0.5**
IZEF	**Zefreh**	**3.20**	**83**	*e*Pn	**Pn**	**08 59 28.7**	**+0.6**
IZEF				*e*		08 59 47.3	
	comp=Z,2μm,0.2s						
IZEF	**Zefreh**	**3.20**	**83**	Pn	**Pn**	**08 59 28.6**	**+0.5**
KBD	**Kabd**	**3.46**	**192**	*e*P	**Pn**	**08 59 33.3**	**+1.6**
NAY	**Al-Naaiem**	**3.50**	**199**	*e*P	**Pn**	**08 59 33.4**	**+1.3**
IR3	**Iran Long-Peri**	**3.56**	**35**	*e*Pn	**Pn**	**08 59 32.4**	**-0.5**
IMHD	**Mahdasht**	**3.57**	**29**	Pn	**Pn**	**08 59 33.5**	**+0.3**
IMHD	**Mahdasht**	**3.57**	**29**	*e*Pn	**Pn**	**08 59 33.7**	**+0.5**
IMHD				*e*		08 59 51.2	
	comp=Z,2μm,0.3s						
IMHD	**Mahdasht**	**3.57**	**29**	*e*Pn	**Pn**	**08 59 33.7**	**+0.5**
IVRN	**Varamin**	**3.59**	**47**	Pn	**Pn**	**08 59 34.1**	**+0.7**
IVRN	**Varamin**	**3.59**	**47**	*e*Pn	**Pn**	**08 59 34.1**	**+0.7**
IVRN				*e*Pn	**Pn**	**08 59 34.2**	**+0.8**
IVRN				*e*		09 00 52.7	
	comp=Z,3μm,0.3s						
IVRN	**Varamin**	**3.59**	**47**	*e*Pn	**Pn**	**08 59 34.2**	**+0.8**
NASN	**Na'in**	**3.60**	**85**	*e*Pn	**Pn**	**08 59 34.6**	**+1.0**
RDF	**Al-Radifah**	**3.73**	**194**	*e*P	**Pn**	**08 59 37.2**	**+1.8**
QRN	**Al-Qurain**	**3.85**	**188**	*e*P	**Pn**	**08 59 38.4**	**+1.4**
QRN				AML	AML	09 00 30.7	
	comp=Z,159nm,0.5s						
THKV	**Tehran--Karaj**	**3.86**	**29**	*e*Pn	**Pn**	**08 59 38.6**	**+1.5**
IDMV	**Damavand**	**4.17**	**43**	Pn	**Pn**	**08 59 41.6**	**+0.2**
IDMV	**Damavand**	**4.17**	**43**	*e*Pn	**Pn**	**08 59 41.6**	**+0.2**
IDMV				*e*		09 01 09.2	
	comp=Z,2μm,0.4s						
IDMV	**Damavand**	**4.17**	**43**	*e*Pn	**Pn**	**08 59 41.6**	**+0.2**
DAMV	**Damavand**	**4.17**	**42**	*e*Pn	**Pn**	**08 59 41.6**	**+0.3**
ISAD	**Sadrabad**	**4.40**	**97**	Pn	**Pn**	**08 59 45.1**	**+0.5**
ISAD	**Sadrabad**	**4.40**	**97**	*e*Pn	**Pn**	**08 59 45.2**	**+0.6**
ISAD				*e*		09 01 05.0	
	comp=Z,2μm,0.4s						
ISAD	**Sadrabad**	**4.40**	**97**	Pn	**Pn**	**08 59 45.1**	**+0.5**
ILAS

ZEI pmax pmax
comp=Z,9.0nm,0.4s
ZEI MLR MLR
comp=Z,602nm,9.0s
MMAI Mount Meron Ar 11.07 276 Pn **Pn 09 01 16.5 +0.4**
comp=Z,0.8nm,0.3s,baz=99,slow=15,SNR=2.8
MMAI Lg 09 04 44.0
comp=Z,2.2nm,0.3s,baz=89,slow=29,SNR=2.7
EIL Elat 12.00 260 Pn **Pn 09 01 29.9 +1.0**
comp=Z,0.6nm,0.3s,baz=75,slow=16,SNR=3.6
EIL Lg 09 05 10.0
comp=Z,1.2nm,0.3s,baz=127,slow=20,SNR=5.2
EIL Elat 12.00 260 Pn **Pn 09 01 29.9 +1.0**
KIV Kislovodsk 12.26 340⇓*eP* **Pn 09 01 30.0 -2.3**
KIV pmax pmax
comp=Z,3.0nm,0.7s
KIV MLR MLR
comp=Z,400nm,14.0s
SOC Sochi 13.00 330 *eP* **Pn 09 01 37.8 -4.6**
SOC MLR MLR
comp=Z,665nm,16.0s
BR131 Keskin Array S 13.99 305 *e*Pn **Pn 09 01 59.5 +3.5**
comp=Z,1.6nm,0.5s
BR131 Keskin Array S 13.99 305 *e*Pn **Pn 09 01 59.5 +3.5**
comp=Z,1.6nm,0.5s
BRTR Keskin Array B 13.99 305 Pn **Pn 09 01 54.0 -1.9**
comp=Z,0.1nm,0.3s,baz=123,slow=16,SNR=4.3
BRTR Lg 09 06 19.4
comp=Z,0.0nm,0.3s,baz=151,slow=33,SNR=2.4
BRTR Keskin Array B 13.99 305 Pn **Pn 09 01 54.0 -2.0**
ANN Anapa 14.96 328 *eP* **Pn 09 02 06.6 -2.6**
ANN *eS* **Sn 09 04 47.1 -7.8**
ANN pmax pmax
comp=Z,21nm,1.2s
ANN MLR MLR
comp=Z,238nm,15.0s
ABKAR Akbulak array 18.73 24 *eP* **Pn 09 02 56.6 -0.1**
comp=Z,1.8nm,0.5s
ABKAR Akbulak array 18.73 24 *eP* **Pn 09 02 56.7 -0.1**
comp=Z,1.8nm,0.5s
AKTK Aktyubinsk 19.18 19 P **Pn 09 02 59.5 -2.7**
AKTK Aktyubinsk 19.18 19 P **Pn 09 02 59.5 -2.7**
AKTO Aktyubinsk 19.18 19 P **Pn 09 02 59.5 -2.7**
comp=Z,0.2nm,0.3s,baz=202,slow=7.1,SNR=6.5
VRHR Novokhopersk 19.20 347 *eP* **Pn 09 03 02.2 -0.3**
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,20nm,0.6s
VRHR Novokhopersk 19.20 347 *eP* **Pn 09 03 02.2 -0.3**
TIRR Tirgusor 19.67 313⇑P **Pn 09 03 05.4 -2.7**
TIRR Tirgusor 19.67 313⇑*iP* **Pn 09 03 05.4 -2.7**
TIRR Tirgusor 19.67 313⇑P **Pn 09 03 05.4 -2.7**
VSR Storozhevoye 19.87 342 *eP* **Pn 09 03 07.7 -2.7**
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,8.0nm,0.6s
VSR pmax pmax
comp=Z,7.0nm,0.6s
VSR Storozhevoye 19.87 342 *eP* **Pn 09 03 07.7 -2.7**
VRI Vrincioaia 21.41 315⇓P **P 09 03 24.7 -0.9**
VRI Vrincioaia 21.41 315⇓*iP* **P 09 03 24.7 -0.9**
VRI Vrincioaia 21.41 315⇓P **P 09 03 24.7 -0.9**
PLOR Plostina 21.45 315⇓*iP* **P 09 03 25.6 -0.4**
PLOR Plostina 21.45 315⇓*iP* **P 09 03 25.6 -0.4**
ATD Arta Tunnel 21.59 195 LR LR 09 12 37.1
comp=Z,344nm,19.5s,MS3.8,baz=354,slow=39
MLR Muntele Rosu 21.70 313 P **P 09 03 27.9 -0.8**
comp=Z,3.9nm,0.8s,mb3.9,baz=194,slow=17,SNR=2.7
MLR Muntele Rosu 21.70 313⇑*iP* **P 09 03 30.4 +1.7**
MLR Muntele Rosu 21.70 313 P **P 09 03 27.9 -0.8**
TESR 21.79 316⇓P **P 09 03 28.3 -1.4**
TESR 21.79 316⇓*iP* **P 09 03 28.3 -1.4**
TESR 21.79 316⇓*iP* **P 09 03 28.3 -1.4**
VOIR 22.23 312⇑P **P 09 03 35.2 +0.8**
VOIR 22.23 312⇑*iP* **P 09 03 35.2 +0.8**
VOIR 22.23 312⇑P **P 09 03 35.2 +0.8**
EKS2 Erkin-Say 22.31 56 *eP* **P 09 03 36.5 +1.3**
comp=Z,1.5nm,0.6s,mb3.6
EKS2 Erkin-Say 22.31 56 *eP* **P 09 03 36.5 +1.3**
comp=Z,1.5nm,0.6s,mb3.6
VTS Vitosha 22.36 304⇑P Px 09 03 47.2
VTS Vitosha 22.36 304⇑*iP* Px 09 03 47.2
AAK Ala-Archa 22.80 56 LR LR 09 13 54.3
comp=Z,444nm,18.6s,MS3.9,baz=257,slow=40
AAK Ala-Archa 22.80 56⇓*iP* **P 09 03 43.0 +2.5**
AAK pmax pmax
comp=Z,3.0nm,1.7s,mb3.5
AAK Ala-Archa 22.80 56 *i* P **P 09 03 43.0 +2.5**
comp=Z,3.0nm,1.7s,mb3.5
AKASG Malin Array Be 23.05 327 P **P 09 03 41.4 -1.6**
comp=Z,0.9nm,0.4s,mb3.5,baz=136,slow=9.4,SNR=6.4
AKASG S **S 09 07 49.8 -3.9**
comp=Z,0.1nm,0.3s,baz=132,slow=18,SNR=2.1
AKASG Malin Array Be 23.05 327 P **P 09 03 41.4 -1.6**
AKASG S **S 09 07 49.8 -3.9**
AKBB Malin Array Si 23.05 327 *eP* **P 09 03 42.5 -0.5**
AKBB Malin Array Si 23.05 327 *eP* **P 09 03 42.5 -0.5**
KIEV Kiev 23.05 327 *eP* **P 09 03 41.9 -1.2**
comp=Z,7.7nm,0.9s,mb4.1
KIEV Kiev 23.05 327 *eP* **P 09 03 41.9 -1.1**
KIEV pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
KIEV Kiev 23.05 327 *eP* **P 09 03 41.9 -1.1**
comp=Z,7.7nm,0.9s,mb4.1
KSH Kashi 23.18 65 *eP* **P 09 03 43.3 -1.2**
KSH *ep*P 09 03 52.8
KSH *es*P sP 09 03 56.3 +7.6
KSH *e*PP 09 04 11.5
KSH *e*PcP PcP 09 07 36.5 +3.9
KSH *e*S **S 09 07 42.8 -13**
KSH *es*S sS 09 07 58.5 -2.5
KSH *e*SS 09 08 26.5
KSH *e*ScP ScP 09 11 10.3 -0.4
KSH *e*PcS PcS 09 11 13.5 +1.8
KSH pmax pmax
comp=Z,2.0nm,0.4s,mb3.9
KSH pmax pmax
comp=Z,38nm,2.7s,mb4.3
KSH LR LR
comp=N,670nm,18.9s
KSH LR LR
comp=E,360nm,11.6s
KSH LR LR
comp=Z,300nm,13.8s
BURAR Bucovina Array 23.21 317⇓P **P 09 03 49.0 +4.2**
BURAR Bucovina Array 23.21 317⇓*iP* **P 09 03 49.0 +4.3**
BUR08 Bucovina Ar. S 23.23 317 *eP* **P 09 03 48.8 +3.8**
OBN Obninsk 24.07 343⇑*eP* **P 09 03 54.4 +1.4**
OBN pmax pmax
comp=Z,29nm,1.5s,mb4.5
OBN MLR MLR
comp=Z,200nm,22.0s,MS3.5
OBN Obninsk 24.07 343 *eP* **P 09 03 54.4 +1.4**
comp=Z,200nm,22.0s
DRGR 24.30 313⇑P **P 09 03 55.0 -0.1**
DRGR 24.30 313⇑*iP* **P 09 03 55.0 -0.1**
DRGR 24.30 313⇑P **P 09 03 55.0 -0.1**
MOS Moscow 24.39 345 *eP* **P 09 03 54.5 -1.4**
MOS pmax pmax
comp=Z,39nm,0.7s,mb5.0
MOS Moscow 24.39 345 *eP* **P 09 03 54.5 -1.4**
comp=Z,39nm,0.7s,mb5.0
ARU Arti 24.85 13*d*⇓*iP* **P 09 04 00.3 +0.2**
ARU S **S 09 08 19.0 -3.7**
ARU pmax pmax
comp=Z,14nm,1.2s,mb4.4
ARU Arti 24.85 13 *i* P **P 09 04 00.3 +0.2**
comp=Z,14nm,1.2s,mb4.4
TRPA Tarpa 25.02 316⇑*iP* **P 09 04 04.8 +3.1**
BRVK Borovoye 25.77 31⇑*iP* **P 09 04 10.1 +1.7**
BRVK pmax pmax
comp=Z,10.0nm,2.1s,mb4.0
BRVK Borovoye 25.77 31 *i* P **P 09 04 10.1 +1.7**
comp=Z,10.0nm,2.1s,mb4.0
BVAR Borovoye Array 25.79 31 P **P 09 04 06.6 -2.0**
comp=Z,2.1nm,0.6s,mb3.8,baz=222,slow=8.9,SNR=9.1
BVAR Borovoye Array 25.79 31 P **P 09 04 06.6 -2.0**
PSZ Piszkesteto 26.51 314⇓P **P 09 04 21.2 +6.0**
PSZ Piszkesteto 26.51 314⇓*iP* **P 09 04 21.2 +6.0**
PSZ Piszkesteto 26.51 314⇓*ep*P pP 09 04 21.2 +2.9
CEL Celeste 27.12 291 *eP* **P 09 04 28.0 +7.1**
comp=Z,19nm,0.9s,mb4.6
KURK Kurchatov 28.59 42 P **P 09 04 31.9 -1.9**
comp=Z,1.2nm,0.6s,mb3.8,baz=244,slow=9.5,SNR=11
KURK LR LR 09 17 20.8
comp=Z,176nm,19.1s,MS3.7,baz=250,slow=40
KURK Kurchatov 28.59 42⇑*eP* **P 09 04 36.2 +2.4**
KURK pmax pmax
comp=Z,6.0nm,2.2s,mb3.9
KURK Kurchatov 28.59 42 P **P 09 04 31.9 -1.9**
VRAC Vranov 29.08 315 LR LR 09 18 58.4
comp=Z,126nm,18.8s,MS3.6,baz=95,slow=42
MK31 Makanchi Array 29.34 51 *eP* **P 09 04 39.8 -0.8**
MK31 Makanchi Array 29.34 51 *eP* **P 09 04 39.8 -0.8**
MKAR Makanchi Array 29.34 51 P **P 09 04 39.1 -1.5**
comp=Z,1.8nm,0.6s,mb4.0,baz=247,slow=8.1,SNR=10
MKAR LR LR 09 17 48.5
comp=Z,131nm,21.5s,MS3.5,baz=82,slow=40
MKAR Makanchi Array 29.34 51*ce*P **P 09 04 42.4 +1.8**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 29.34 51 P **P 09 04 39.1 -1.5**
FINES FINESS Array B 32.35 340 P **P 09 05 04.7 -2.3**
comp=Z,2.2nm,0.6s,mb4.2,baz=149,slow=6.5,SNR=5.9
FINES LR LR 09 18 56.6
comp=Z,160nm,18.6s,MS3.7,baz=155,slow=38
ZALV Zalesovo Beam 33.43 39 P **P 09 05 13.6 -2.9**
comp=Z,1.5nm,0.5s,mb4.2,baz=257,slow=5.8,SNR=3.6
ZALV LR LR 09 20 05.6
comp=Z,57nm,20.3s,MS3.3,baz=241,slow=39
MBDF Montbardon 34.45 303 *eP* **P 09 05 26.1 +0.7**
comp=Z,12nm,0.7s,mb4.7
MBDF Montbardon 34.45 303 *eP* **P 09 05 26.1 +0.7**
comp=Z,5.8nm,0.7s,mb4.6
MBDF Montbardon 34.45 303 *eP* **P 09 05 26.1 +0.7**
MBDF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
MBDF Montbardon 34.45 303 *eP* **P 09 05 26.1 +0.7**
comp=Z,5.8nm,0.7s,mb4.6
LPG La Plagne 34.55 304 *eP* **P 09 05 27.3 +1.0**
LPG La Plagne 34.55 304 *eP* **P 09 05 27.3 +1.0**
LPL La Plagne 34.57 304 *eP* **P 09 05 27.1 +0.6**
comp=Z,9.0nm,0.6s,mb4.6
LPL La Plagne 34.57 304 *eP* **P 09 05 27.1 +0.6**
comp=Z,4.5nm,0.6s,mb4.6
LPL La Plagne 34.57 304 *eP* **P 09 05 27.1 +0.6**
LPL pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
LPL La Plagne 34.57 304 *eP* **P 09 05 27.1 +0.6**
comp=Z,4.5nm,0.6s,mb4.6
CABF La Chapelle 35.16 306 *eP* **P 09 05 32.1 +0.6**
comp=Z,23nm,1.0s,mb4.8
CABF La Chapelle 35.16 306 *eP* **P 09 05 32.1 +0.6**
comp=Z,12nm,1.0s,mb4.8
CABF La Chapelle 35.16 306 *eP* **P 09 05 32.1 +0.6**
CABF pmax pmax
comp=Z,12nm,1.0s,mb4.8
CABF La Chapelle 35.16 306 *eP* **P 09 05 32.1 +0.6**
comp=Z,12nm,1.0s,mb4.8
SSF Saint Saulge 36.98 306 *eP* **P 09 05 47.1 0.0**
SSF Saint Saulge 36.98 306 *eP* **P 09 05 47.1 0.0**
NOA NORSAR Array B 37.37 331 P **P 09 05 47.1 -3.1**
comp=Z,1.3nm,0.7s,mb3.9,baz=129,slow=7.5,SNR=4.6
NOA PP PP 09 07 14.3 -1.0
comp=Z,0.8nm,0.7s,baz=126,slow=11,SNR=3.9
NOA LR LR 09 22 30.5
comp=Z,160nm,19.9s,MS3.8,baz=90,slow=38
NOA NORSAR Array B 37.37 331 P **P 09 05 47.1 -3.1**
NOA 09 07 14.3
NOA NORSAR Array B 37.37 331 PP PP
ARCES ARCESS Array B 39.21 347 P **P 09 06 03.3 -2.3**
comp=Z,0.5nm,0.5s,mb3.5,baz=150,slow=7.3,SNR=5.4
SGMF Saint Gilles 41.16 308 *eP* **P 09 06 22.2 +0.1**
SGMF Saint Gilles 41.16 308 *eP* **P 09 06 22.2 +0.1**
ESDC Sonseca Array 42.50 295 P **P 09 06 33.2 0.0**
comp=Z,0.4nm,0.3s,mb3.5,baz=78,slow=9.4,SNR=4.5
ESDC Sonseca Array 42.50 295 P **P 09 06 33.2 0.0**
SONM Songino Array 45.68 53 LR LR 09 29 05.7
comp=Z,42nm,18.5s,MS3.4,baz=257,slow=40
TORD Torodi Ar. Bea 46.87 257 P **P 09 07 07.0 -1.3**
comp=Z,1.8nm,1.0s,mb4.0,baz=61,slow=6.8,SNR=7.0
CMAR Chiang Mai Arr 47.19 95 P **P 09 07 09.4 -1.4**
comp=Z,0.9nm,0.3s,mb4.2,baz=266,slow=13,SNR=4.7
CMAR LR LR 09 31 01.7
comp=Z,58nm,18.5s,MS3.6,baz=48,slow=41
CMAR Chiang Mai Arr 47.19 95 P **P 09 07 09.4 -1.4**
DBIC Dimbokro 55.82 255 LR LR 09 35 10.4
comp=Z,121nm,18.1s,MS4.0,baz=30,slow=39
KSRS Korea Array 63.37 61 P **P 09 09 04.3 -2.9**
comp=Z,0.8nm,0.4s,mb4.2,baz=286,slow=6.5,SNR=4.1
KSRS LR LR 09 39 45.2
comp=Z,50nm,20.3s,MS3.7,baz=78,slow=39
KSRS Korea Array 63.37 61 P **P 09 09 04.3 -3.0**
KSRS pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
KSRS MLR MLR
comp=Z,50nm,20.3s,MS3.7
BOSA Boshof 64.74 203 P **P 09 09 15.9 -0.3**
comp=Z,2.3nm,0.8s,mb4.3,baz=8.1,slow=7.1,SNR=3.3
BOSA LR LR 09 38 55.8
comp=Z,174nm,18.9s,MS4.3,baz=14,slow=37
BOSA Boshof 64.74 203 P **P 09 09 15.9 -0.3**
FRB Frobisher Bay 72.01 335 LR LR 09 40 25.6
comp=Z,50nm,21.8s,MS3.8,baz=347,slow=35
PETK Petropavlovsk- 74.91 36 LR LR 09 46 00.7
comp=Z,37nm,18.3s,MS3.7,baz=148,slow=38
ILAR Eielson Array 82.23 7 P **P 09 10 55.8 -2.9**
comp=Z,0.3nm,0.8s,mb3.3,baz=330,slow=5.2,SNR=4.6
ILAR LR LR 09 52 53.9
comp=Z,38nm,19.2s,MS3.8,baz=293,slow=40
KDAK Kodiak Island 88.25 11 LR LR 09 52 55.9
comp=Z,46nm,19.9s,MS3.9,baz=183,slow=37
WRA Warramunga Arr 97.09 109 P **P 09 12 08.0 -2.4**
comp=Z,0.5nm,1.1s,mb3.9,baz=311,slow=4.0,SNR=3.0
WRA Warramunga Arr 97.09 109 P **P 09 12 08.0 -2.4**
WRA pmax pmax
comp=Z,1.0nm,1.1s
WRA Warramunga Arr 97.09 109 P **P 09 12 08.0 -2.4**
comp=Z,1.0nm,1.1s,mb4.2
ASAR Alice Springs 98.69 112 P **P 09 12 16.9 -0.7**
comp=Z,0.3nm,0.9s,mb3.8,baz=303,slow=5.1,SNR=3.2
ASAR Alice Springs 98.69 112 P **P 09 12 16.9 -0.6**

*NEIC **29** 09:03:35.7,34.76S×70.28W,h18km,ML3.2(GUC),After GUC.*

GUC 29 09:03:35.7±0.5,34.76S×70.28W,h18km±2km,MD3.5, ML3.2,5C-13D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
CACH	**El Canelo**	**0.69**	**338**⇑*iP*		Pb	09 03 48.5	-0.7
CACH				*i* S	Sb	09 03 58.4	0.0
CACH	**El Canelo**	**0.69**	**338**⇑P		Pb	09 03 48.5	-0.7
CACH				*i* S	Sb	09 03 58.4	0.0
CHCH	**Chadas Angostu**	**0.88**	**340**⇓*iP*		Pb	09 03 51.9	-0.6
CHCH				*i* S	Sb	09 04 04.3	+0.5
CHCH	**Chadas Angostu**	**0.88**	**340**⇓*iP*		Pb	09 03 51.9	-0.6
CHCH				*i* S	Sb	09 04 04.3	+0.5
LMEL	**Las Melosas**	**0.91**	**4**⇑*iP*		Pb	09 03 52.3	-0.7
LMEL				*i* S	Sb	09 04 05.1	+0.4
LMEL	**Las Melosas**	**0.91**	**4**⇑*iP*		Pb	09 03 52.3	-0.7
LMEL				*i* S	Sb	09 04 05.1	+0.4
SJCH	**San Jose de Ma**	**1.12**	**357** *i* P		Pn	09 03 56.1	-0.3
SJCH				*i* S	Sb	09 04 11.9	+1.2
SJCH	**San Jose de Ma**	**1.12**	**357** *i* P		Pn	09 03 56.1	-0.3
SJCH				*i* S	Sb	09 04 11.9	+1.2
SJCH				AML	AML	09 04 14.8	
	comp=E,312nm,0.3s						
PCH	**Pirque**	**1.15**	**350**⇓*iP*		Pn	09 03 56.7	-0.2
PCH				*i* S	Sb	09 04 12.8	+1.2
PCH	**Pirque**	**1.15**	**350**⇓*iP*		Pn	09 03 56.7	-0.2
PCH				*i* S	Sb	09 04 12.8	+1.2
ANTU	**Antumapu**	**1.22**	**346**⇓*iP*		Pn	09 03 58.0	+0.1
ANTU				*i* S	Sb	09 04 15.1	+1.4
ANTU	**Antumapu**	**1.22**	**346**⇓*iP*		Pn	09 03 58.0	+0.1
ANTU				*i* S	Sb	09 04 15.1	+1.4
ANTU				AML	AML	09 04 16.4	
	comp=E,766nm,0.4s						
LNV	**Longovilo**	**1.23**	**310**⇓*iP*		Pn	09 03 58.0	0.0
LNV				*i* S	Sb	09 04 14.9	+1.0
LNV	**Longovilo**	**1.23**	**310**⇓*iP*		Pn	09 03 58.0	0.0
LNV				*i* S	Sb	09 04 14.9	+1.0
TACH	**Talagante**	**1.23**	**334**⇓*iP*		Pn	09 03 58.1	+0.1
TACH				*i* S	Sb	09 04 15.1	+1.2
TACH	**Talagante**	**1.23**	**334**⇓*iP*		Pn	09 03 58.1	+0.1
TACH				*i* S	Sb	09 04 15.1	+1.2
SAN	**Santiago**	**1.34**	**346**⇓*iP*		Pn	09 04 00.1	+0.6
SAN				*i* S	Sn	09 04 18.4	+1.5
SAN	**Santiago**	**1.34**	**346**⇓*iP*		Pn	09 04 00.1	+0.6
SAN				*i* S	Sn	09 04 18.4	+1.5
SAN				AML	AML	09 04 19.1	
	comp=N,815nm,0.4s						
PEL	**Peldehue**	**1.65**	**348**⇓*iP*		Pn	09 04 05.2	+1.5
PEL				*i* S	Sn	09 04 27.8	+3.4
PEL				AML	AML	09 04 29.2	
	comp=E,1μm,0.3s						
ROCH	**El Roble**	**1.88**	**341**⇑*iP*		Pn	09 04 09.9	+2.9
ROCH				*i* S	Sn	09 04 35.1	+4.8
ROCH				AML	AML	09 04 38.7	
	comp=E,413nm,0.2s						

KRSC 29 09:19:49.0±2.1,49.90N×155.47E,h72km±78km,ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
ALID	**Alaid**	**0.97**	**3**	P		Pn	09 20 09.3	+2.1
ALID				S		Sn	09 20 24.5	+3.8
MIPR	**Malaya Ipel'ka**	**2.51**	**18**	P		Pn	09 20 29.8	+2.3
SDLR	**Sedlovina**	**4.00**	**31**	P		Pn	09 20 50.2	+2.5
SDLR				S		Sn	09 21 34.8	+1.6
GNL	**Ganaly**	**4.10**	**21**	P		Pn	09 20 52.3	+3.2
SPN	**Mys Shipunski**	**4.28**	**40**	S		Sn	09 21 42.9	+2.7

*CASC **29** 09:22:07.0±3.0, 12.92N×89.14W, h13km, MD4.0, ML4.6, mb4.0(NEIC)*
*ISCJB **29** 09:22:08.2±0.4, 13.00N±0.05×89.09W±0.04, h67km±5km, mb3.7/10, Error ellipse: s-maj=9.3km s-min=3.2km az=33.8*
*IDC **29** 09:22:08.4±0.9, 13.22N×88.82W, h59km±6km, mb3.3/6, mb1 3.8/7, mb1mx3.6/21, mbtmp3.4/7, MS3.0/1, Ms1 3.0/1, ms1mx2.4/16, Error ellipse: s-maj=49.9km s-min=16.4km az=47.0*
*NEIC **29** 09:22:09.1±0.7, 13.01N×89.04W, mb4.0/4, MD4.5(SNET), Error ellipse: s-maj=15.5km s-min=9.5km az=210.0*
NEIC Felt [II] at San Salvador.

ISC 29 09:22:09.5±0.4, 13.05N±0.05×89.07W±0.03, h62km±5km, h64km±1.1km:pP-P,n63,σ1.14/73,mb3.8/10,2C-5D,El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
LFRS	**El Faro**	**0.57**	**0**⇓*iP*			Pn	09 22 21.2	-1.3
SNVI	**San Vicente**	**0.60**	**21**	*eP*		Pn	09 22 21.9	-0.9
SNET	**Serv Nac Est T**	**0.66**	**346**	*eP*		Pn	09 22 22.1	-1.3
SNET				*eS*		Sn	09 22 32.8	-0.7
SNET				AML		AML	09 22 35.4	
	comp=Z,19μm,0.2s							
LFU	**La Fuente**	**0.70**	**356**	*eP*		Pn	09 22 23.1	-0.8
BOQS	**Boqueron**	**0.72**	**343**	*eP*		Pn	09 22 23.1	-1.0
BOQS				*eS*		Sn	09 22 34.7	0.0
VSM	**San Miguel**	**0.86**	**64**	*eP*		Pn	09 22 25.8	0.0
VSM				⇑*eP*			09 22 25.9	
BLLM	**Bellamira**	**0.90**	**64**	*eP*		Pn	09 22 26.1	-0.1
BLLM				*eS*		Sn	09 22 39.2	+0.6
SBLS	**San Blas**	**0.96**	**325**⇓*iP*			Pn	09 22 26.1	-1.0
SNJE	**San Jose**	**0.97**	**327**⇓*eP*			Pn	09 22 26.4	-0.9
RTR	**El Retiro**	**1.02**	**326**⇓*iP*			Pn	09 22 27.2	-0.7
CAHU	**Cacaocatique**	**1.10**	**49**	*eP*		Pn	09 22 28.9	0.0
CAHU				*eS*		Sn	09 22 45.5	+2.1
RBDL	**Robledal**	**1.22**	**330**	*eP*		Pn	09 22 30.2	-0.4
CNCH	**Conchagua**	**1.22**	**79**	*eP*		Pn	09 22 30.0	-0.5
CNCH				*eS*		Sn	09 22 47.1	+0.9
MTO2	**Montecristo 2**	**1.38**	**348**	*eP*		Pn	09 22 32.4	-0.2
NBG	**Las Nubes**	**1.97**	**321**	*eP*		Pn	09 22 41.7	+1.0
CRIN	**San Cristobal**	**2.00**	**100**	*eP*		Pn	09 22 40.3	-0.6
PCG	**Pacaya**	**2.01**	**312**	*eP*		Pn	09 22 42.0	+0.8
PCG				*eS*		Sn	09 23 07.0	+1.8
TGUH	**Tegucigalpa,Un**	**2.01**	**60**	*ePn*		Pn	09 22 41.2	+0.1
TGUH	**Tegucigalpa,Un**	**2.01**	**60**	*eP*		Pn	09 22 41.4	+0.2
MRL	**Marmol**	**2.10**	**343**⇑*eP*			Pn	09 22 43.8	+1.4
LEON	**Leon**	**2.21**	**106**	*eP*		Pn	09 22 42.2	-1.7
TELN	**Telica**	**2.22**	**101**	*eP*		Pn	09 22 43.6	-0.5
FG6		**2.32**	**311**⇓*eP*			Pn	09 22 45.7	+0.3
FG6				*eS*		Sn	09 23 12.2	-0.6
MOMN	**Momotombo**	**2.54**	**104**	*eP*		Pn	09 22 48.3	-0.1
COPN	**Copaltepe**	**2.56**	**109**	*eP*		Pn	09 22 47.3	-1.4
TP2	**Tecpan 2**	**2.57**	**312**	*eP*		Pn	09 22 49.8	+1.1
TP2				*eS*		Sn	09 23 21.8	+3.0
CSAN		**2.72**	**108**	*eP*		Pn	09 22 50.8	0.0
TISN	**Laguna Tiscapa**	**2.87**	**108**	*eP*		Pn	09 22 51.1	-1.8
MGAN	**Managua**	**2.89**	**108**	*eP*		Pn	09 22 53.0	-0.2
CRUN	**El Crucero**	**2.90**	**111**	*eP*		Pn	09 22 54.2	+0.9
BOAB	**BOACO BROADBAN**	**3.37**	**100**	*eP*		Pn	09 22 58.5	-1.2
VCR	**Vista de Mar**	**4.44**	**130**	*eP*		Pn	09 23 14.4	0.0
JTS	**JuntasAbangare**	**4.87**	**124**	*ePn*		Pn	09 23 20.6	+0.3
JTS				*eSn*		Sn	09 24 15.2	-0.2
JCR	**Jicaral**	**5.01**	**129**	*eP*		Pn	09 23 22.6	+0.4
CGA2	**Cerro Gallo 2**	**5.42**	**123**	*eP*		Pn	09 23 30.0	+2.2
PRS1	**Puriscal**	**5.56**	**123**	*eP*		Pn	09 23 31.8	+2.1
LAJ	**Bijagual**	**5.79**	**123**	*eP*		Pn	09 23 30.6	-2.2
URSC	**Urasca**	**6.09**	**121**	*eP*		Pn	09 23 38.6	+1.7
BUS	**Buena Vista**	**6.25**	**123**	*eP*		Pn	09 23 41.4	+2.1
CMIG	**Matias Romero**	**6.91**	**306**	P		Pn	09 23 48.5	+0.3
CMIG				*eP*			09 23 49.7	
CMIG				S		Sn	09 25 04.3	-1.1
CMIG				*eS*		Sn	09 25 06.5	+1.1
CMIG	**Matias Romero**	**6.91**	**306**	P		Pn	09 23 48.5	+0.3
	comp=Z,1.5nm,0.3s,baz=133,slow=13,SNR=57							
CMIG				S		Sn	09 25 04.3	-1.1
	comp=Z,3.7nm,0.3s,baz=137,slow=19,SNR=7.4							
TEIG	**Tepich**	**7.18**	**6**	*ePn*		Pn	09 23 53.6	+1.8
	comp=Z,19nm,0.6s							
HUIG	**Huatulco**	**7.34**	**292**	*iP*		Pn	09 23 55.7	+1.6
HUIG				*iS*		Sn	09 25 05.3	-11
VHO	**Vista Hermosa**	**8.42**	**299**	*eP*		Pn	09 24 11.4	+2.5
VHO				*iS*		Sn	09 25 41.0	-1.5
PNIG	**Pinotepa**	**9.38**	**292**	*eP*		Pn	09 24 20.9	-1.0
TXAR	**Lajitas Array**	**21.13**	**322**	P		P	09 26 49.8	+0.4
	comp=Z,1.2nm,0.5s,mb3.5,baz=140,slow=9.8,SNR=32							
TXAR				pP			09 27 03.4	
	comp=Z,1.8nm,0.8s,baz=138,slow=9.6,SNR=9.2							
MIAR	**Mount Ida**	**21.79**	**350**	*eP*		P	09 26 57.7	+1.4
	comp=Z,4.2nm,0.6s,mb4.0							
TKL	**Tuckaleechee C**	**23.01**	**11**	LR		LR	09 36 13.9	
	comp=Z,36nm,20.0s,baz=11,slow=37							
WMOK	**Wichita Mounta**	**23.32**	**339**	*eP*		P	09 27 12.1	-0.2
	comp=Z,1.6nm,0.7s,mb3.6							
CCM	**Cathedral Cave**	**24.98**	**356**	*eP*		P	09 27 26.7	-0.7
	comp=Z,11nm,1.1s,mb4.3							
PDAR	**Pinedale Array**	**34.52**	**333**	P		P	09 28 52.0	+0.1
	comp=Z,0.4nm,0.6s,mb3.5,baz=131,slow=9.7,SNR=4.5							
PDAR				PcP		PcP	09 31 24.1	-1.5
	comp=Z,0.5nm,0.6s,baz=141,slow=4.4,SNR=5.7							
TPAW	**Teton Pass**	**35.71**	**332**	*eP*		P	09 29 02.6	+0.5
	comp=Z,1.1nm,0.5s,mb4.0							
LPAZ	**La Paz**	**35.75**	**144**	P		P	09 29 02.7	+0.1
LPAZ	**La Paz**	**35.75**	**144**	P		P	09 29 02.7	+0.1
	comp=Z,1.0nm,0.6s,mb3.9,baz=323,slow=13,SNR=4.2							
NVAR	**Mina Array Bea**	**36.22**	**320**	P		P	09 29 07.2	+0.7
NVAR				pP		pP	09 29 22.5	+0.6
NVAR				PcP		PcP	09 31 30.8	+0.1
NVAR	**Mina Array Bea**	**36.22**	**320**	P		P	09 29 07.2	+0.7
	comp=Z,0.4nm,0.7s,mb3.5,baz=126,slow=9.3,SNR=3.9							
NVAR				pP		pP	09 29 22.5	+0.6
	comp=Z,0.9nm,0.6s,baz=134,slow=7.7,SNR=7.4							
NVAR				PcP		PcP	09 31 30.8	+0.1
	comp=Z,0.6nm,0.7s,baz=138,slow=4.2,SNR=5.6	

CMAR	**Chiang Mai Arr**	**147.72**	**346**	PKPbc	PKPbc	09 41 46.5	-1.6
	comp=Z,0.7nm,0.5s,baz=337,slow=3.7,SNR=5.1						
CMAR				pPKPbc	pPKPbc	09 42 02.2	-3.8
	comp=Z,0.8nm,0.5s,baz=327,slow=2.5,SNR=2.2						

*NEIC **29** 09:22:41.8, 19.59N×64.51W, h66km, MD3.5(RSPR), After RSPR.*

RSPR 29 09:22:41.8, 19.59N×64.51W, h66km±19km, MD3.5/5, 8C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBVI	**Tortola**	**1.17**	**185**⇑	*e*P	Pn	09 23 01.5	-0.8
TBVI	**Tortola**	**1.17**	**185**⇓	*e*P	Pn	09 23 01.5	-0.8
STVI	**Saint Thomas**	**1.30**	**199**⇓	*e*P	Pn	09 23 03.2	-0.8
STVI				*e*S	Sn	09 23 20.1	-0.6
STVI	**Saint Thomas**	**1.30**	**199**⇓	*e*P	Pn	09 23 03.2	-0.8
STVI				*e*S	Sn	09 23 20.5	-0.1
MTP	**Monte Pirata**	**1.78**	**214**⇑	*e*P	Pn	09 23 10.3	-0.2
MTP				*e*S	Sn	09 23 31.8	-0.3
MTP	**Monte Pirata**	**1.78**	**214**⇓	*e*P	Pn	09 23 10.3	-0.2
MTP				*e*S	Sn	09 23 31.8	-0.3
CBYP	**Canovanas**	**1.82**	**224**	*e*Pn	Pn	09 23 09.7	-1.3
CBYP				*e*Sn	Sn	09 23 34.1	+0.9
CDVI	**St. Croix**	**1.84**	**188**	*e*Pn	Pn	09 23 13.8	+2.5
HUMP	**Col San Antoni**	**1.92**	**222**⇑	*e*P	Pn	09 23 11.2	-1.1
HUMP				*e*S	Sn	09 23 35.0	-0.4
HUMP	**Col San Antoni**	**1.92**	**222**⇓	*e*P	Pn	09 23 11.2	-1.1
HUMP				*e*S	Sn	09 23 35.0	-0.4
CELP	**Cerrillos**	**2.47**	**233**⇓	*e*P	Pn	09 23 19.0	-0.8
CELP	**Cerrillos**	**2.47**	**233**⇓	*e*P	Pn	09 23 19.0	-0.8
ICM	**Isla Caja Muer**	**2.54**	**229**⇓	*e*P	Pn	09 23 20.5	-0.2
ICM				*e*S	Sn	09 23 49.9	-0.7
ICM	**Isla Caja Muer**	**2.54**	**229**⇓	*e*P	Pn	09 23 20.5	-0.2
ICM				*e*S	Sn	09 23 49.9	-0.7
CRPR	**Cabo Rojo, PR**	**2.92**	**238**⇑	*e*P	Pn	09 23 25.7	-0.2
CRPR	**Cabo Rojo, PR**	**2.92**	**238**⇓	*e*P	Pn	09 23 25.7	-0.2
SDDR	**Presa de Saban**	**6.43**	**266**	*e*Pn	Pn	09 24 13.9	+0.1
	11nm,0.4s						
SDDR				*e*Sn	Sn	09 25 27.0	+1.1

*DMN **29** 09:43:11.9±0.8, 31°.27N×83°.12E, h2km, Ml5.3/2, Error ellipse: s-maj=18.1km s-min=10.4km az=123.0*

*BJI **29** 09:43:12.6, 30°.63N×83°.13E, h16km, mB4.8/38, mb4.7/46, Ms4.6/50, Ms7 4.4/44*

*IDC **29** 09:43:12.9±0.5, 30°.76N×83°.47E, h0km, mb4.5/28, mb1 4.5/31, mb1mx4.5/35, mbtmp4.4/31, ML3.6/2, MS4.1/22, Ms1 4.1/22, ms1mx3.8/42, Error ellipse: s-maj=14.3km s-min=11.0km az=21.0*

*ISCJB **29** 09:43:14.0±0.1, 30°.78N±0°.02×83°.31E±0°.02, h10km, mb4.7/87, MS4.2/39, Error ellipse: s-maj=2.8km s-min=2.3km az=9.8*

*NEIC **29** 09:43:15.1±0.2, 30°.73N×83°.39E, h10km, mb5.0/32, Error ellipse: s-maj=6.7km s-min=4.9km az=34.0*

*MOS **29** 09:43:16.8±1.2, 30°.75N×83°.36E, h33km, mb5.0/35, MS4.0/10, Error ellipse: s-maj=7.6km s-min=4.5km az=117.4*

*GCMT **29** 09:43:20.2±0.3, 30°.58N×83°.52E, h18km±1km, MW4.9, Moment Tensor Solution. s22,c27; s51,c83; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.05±.16; $M_{\theta\theta}$-0.97±.12; $M_{\phi\phi}$3.02±.12; $M_{r\theta}$0.08±.31; $M_{\theta\phi}$-0.67±.08; $M_{\phi r}$-0.53±.23; Best double couple: $M_0$2.60000×10^{16} NP1:$\phi_8$171.00000°, δ39.00000°, λ-90.00000°. NP2:ϕ_{NP2}351.00000°, δ51.00000°, λ-90.00000°. Principal axes: T 3.1800, Plg6.0000°, Azm81.0000°; N -1.0800, Plg0.0000°, Azm171.0000°; P -2.1000, Plg84.0000°, Azm263.0000°; Data Used: II IU IC G CN.*

*NDI **29** 09:43:20.6±7.2, 30°.35N×83°.26E, h15km±66km, mb5.0, mb5.0(NEIC)*

ISC 29 09:43:15.8±0.1, 30°.80N±0°.02×83°.38E±0°.02, h10km, (h30km±5.5km: pP-P), n268, σ1829/288, mb4.7/87, MS4.2/39, 18C-11D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DANN	**Dangsing**	**2.46**	**172**	*e*Pn	**Pn**	**09 43 58.3**	**+2.2**
DANN				*e*Sn	**Sb**	**09 44 31.8**	**+1.2**
	9μm,0.9s						
GKN	**Gorkha**	**3.00**	**158**	*e*Pn	**Pn**	**09 44 05.7**	**+2.3**
GKN				*e*Sn	**Sb**	**09 44 45.8**	**-0.2**
	4μm,0.9s						
PTH	**Pithoragarh**	**3.01**	**246**	*e*PKP	**Pn**	**09 44 05.9**	**+2.4**
PTH				*ex*	**Sg**	**09 44 50.1**	**-2.4**
KOLN	**Koldanda**	**3.03**	**176**	*e*Pn	**Pn**	**09 44 06.0**	**+2.2**
KOLN				*e*Sn	**Sb**	**09 44 45.8**	**-1.0**
JOSI	**Joshimath**	**3.30**	**267**	*e*PKP	**Pn**	**09 44 11.0**	**+3.4**
KKN	**Kakani**	**3.43**	**151**	*e*Pn	**Pn**	**09 44 11.5**	**+2.2**
DMN	**Daman**	**3.52**	**154**	*e*Pn	**Pn**	**09 44 13.1**	**+2.5**
GUN	**Gumba**	**3.61**	**142**	*e*Pn	**Pn**	**09 44 14.4**	**+2.5**
PKIN	**Phulchoki**	**3.67**	**151**	*e*Pn	**Pn**	**09 44 14.7**	**+2.1**
PKI	**Pulchoki**	**3.68**	**151**	*e*Pn	**Pn**	**09 44 14.9**	**+2.2**
JIRN	**Jiri**	**3.98**	**141**	*e*Pn	**Pn**	**09 44 20.0**	**+3.1**
KLP	**Kalpa**	**4.46**	**281**	*e*PKP	**Pn**	**09 44 27.5**	**+4.1**
DDI	**Dehra Dun**	**4.61**	**265**	*e*PKP	**Pn**	**09 44 28.0**	**+2.4**
DDI				*ex*	**Sg**	**09 45 45.5**	**+1.5**
RAMN	**Ramite**	**4.76**	**143**	*e*Pn	**Pn**	**09 44 28.8**	**+1.1**
TAPN	**Taplejung**	**5.12**	**131**	*e*Pn	**Pn**	**09 44 34.5**	**+1.9**
ODAN	**Odare**	**5.27**	**137**	*e*Pn	**Pn**	**09 44 36.5**	**+1.8**
ASOR	**Ausora**	**5.28**	**249**	*e*PKP	**Pn**	**09 44 34.5**	**-0.3**
SMLA	**Simla**	**5.34**	**275**	*i* P	**Pn**	**09 44 37.8**	**+2.1**
SDNR	**Sundarnagar**	**5.54**	**279**	*ex*	**Pn**	**09 44 42.5**	**+4.2**
SDNR				*ex*	x	09 46 23.5	
ALBI	**Allahabad**	**5.64**	**195**	*e*PKP	**Pn**	**09 44 39.5**	**-0.3**
KKR	**Kurukshetra**	**5.73**	**263**	*e*PKP	**Pn**	**09 44 42.5**	**+1.6**
NDI	**New Delhi**	**5.76**	**250**	*e*PKP	**Pn**	**09 44 42.0**	**+0.7**
NDI				*ex*	**Sn**	**09 45 52.0**	**+4.5**
AYAN	**Aya Nagar**	**5.91**	**249**	*e*PKP	**Pn**	**09 44 43.3**	**-0.2**
AGRA	**Agra**	**5.94**	**235**	*e*PKP	**Pn**	**09 44 43.3**	**-0.5**
BHK	**Bhakra**	**6.00**	**278**	*ex*	**Pn**	**09 44 49.2**	**+4.5**
SONA	**Sohna**	**6.04**	**247**	*e*PKP	**Pn**	**09 44 46.6**	**+1.3**
KUDL	**Kundal**	**6.56**	**248**	*ex*	**Pn**	**09 44 48.4**	**-4.0**
KUDL				*ex*	x	09 46 38.4	
LSA	**Lhasa**	**6.81**	**97**	*e*P	**Pn**	**09 44 59.2**	**+3.3**
	204nm,1.0s						
LSA	**Lhasa**	**6.81**	**97**	*e*P	**Pn**	**09 44 59.2**	**+3.3**
LSA				pmax	pmax		
	comp=Z,204nm,1.0s						
KHET	**Khetri**	**7.14**	**250**	*e*PKP	**Pn**	**09 45 01.1**	**+0.7**
KHET				AMb	AMB	09 45 10.8	
	comp=Z,39nm,1.1s						
KHET				*ex*	**Sn**	**09 46 23.3**	**+1.8**
AJM	**Ajmer**	**8.80**	**243**	*e*PKP	**Pn**	**09 45 22.6**	**-0.5**
AJM				AMb	AMB	09 45 30.2	
	comp=Z,109nm,1.1s						
AJM				*ex*	**Sn**	**09 47 01.0**	**-1.3**
SHL	**Shillong**	**9.14**	**123**	*e*PKP	**Pn**	**09 45 27.0**	**-0.8**
SHL				*ex*	**Sn**	**09 47 06.0**	**-4.7**
BHPL	**Bhopal**	**9.21**	**217**	*e*PKP	**Pn**	**09 45 28.2**	**-0.5**
BHPL				AMb	AMB	09 45 32.4	
	comp=Z,61nm,1.2s						
BHPL				*ex*	**Sn**	**09 47 06.5**	**-6.0**
AGT	**Agartala**	**9.82**	**133**	*i* x	**Pn**	**09 45 33.0**	**-4.1**
AGT				*i* x	x	09 46 31.0	
THW	**Thamme Wali**	**10.10**	**284**	P	**Pn**	**09 45 41.9**	**+1.0**
CEP	**Cherat**	**10.16**	**290**	P	**Pn**	**09 45 42.5**	**+0.7**
KSH	**Kashi**	**10.59**	**327**	*e*P	**Pn**	**09 45 46.3**	**-1.4**
KSH				*e*pP		09 45 53.0	
KSH				*e*PP		09 45 54.8	
KSH				*e*sP		09 45 58.0	
KSH				S	**Sn**	**09 47 43.0**	**-3.4**
KSH				*e*sS		09 47 54.5	
KSH				pmax	pmax		
	comp=Z,78nm,2.1s						
KSH				LR	LR		
	comp=N,2μm,11.3s						
KSH				LR	LR		
	comp=E,3μm,13.8s						
KSH				LR	LR		
	comp=Z,1μm,7.4s						
BWNR	**Bhubaneshwar**	**10.69**	**168**	*e*PKP	**Pn**	**09 45 46.0**	**-3.0**
BWNR				*ex*	x	09 47 42.0	
IMP	**Imphal**	**11.10**	**120**	*e*PKP	**Pn**	**09 45 54.0**	**-0.7**
IMP				*e*S	**Sn**	**09 47 50.0**	**-8.9**
AKL	**Akola**	**11.57**	**211**⇑	*i*P	**Pn**	**09 45 59.3**	**-1.9**
AKL				*i* x	**Sn**	**09 48 03.6**	**-6.8**
KBL	**Kabul**	**12.64**	**291**	*e*Pn	**Pn**	**09 46 15.4**	**-0.3**
KBL				*e*Sn	**Sn**	**09 48 37.1**	**+0.7**
KZA	**Kyzart**	**13.01**	**332**	*e*Pn	**Pn**	**09 46 20.9**	**+0.2**
	comp=Z,45nm,1.1s						
VIS	**Vishakhapatnam**	**13.02**	**180**	*e*PKP	**Pn**	**09 46 18.3**	**-2.7**
VIS				*i* x	x	09 48 35.4	
UCH	**Uchtor**	**13.44**	**330**	*e*Pn	**Pn**	**09 46 27.8**	**+1.3**
	comp=Z,21nm,1.1s						
WMQ	**Urumqi**	**13.44**	**14**	P	**Pn**	**09 46 28.5**	**+1.9**
WMQ				pP		09 46 31.8	
WMQ				sP		09 46 35.0	
WMQ				PP		09 46 39.5	
WMQ				*e*S	**Sn**	**09 49 00.5**	**+4.5**
WMQ				sS		09 49 05.8	
WMQ				SS		09 49 16.0	
WMQ				pmax	pmax		
	comp=Z,36nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.8s						
WMQ				LR	LR		
	comp=N,650nm,14.0s						
WMQ				LR	LR		
	comp=E,1μm,13.6s						
WMQ				LR	LR		
	comp=E,450nm,13.8s						
BHV	**Bhavnagar**	**13.51**	**231**	*ex*	x	09 48 46.0	
AML	**Almayashu**	**13.72**	**328**	*e*P	**Pn**	**09 46 30.2**	**-0.2**
	comp=Z,33nm,1.2s						
AAK	**Ala-Archa**	**13.78**	**331**	Pn	**Pn**	**09 46 31.7**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=198,slow=6.4,SNR=5.9						
AAK				LR	LR	09 52 03.4	
	comp=Z,493nm,21.1s,baz=307,slow=38						
AAK	**Ala-Archa**	**13.78**	**331**⇓	*e*P	**Pn**	**09 46 33.9**	**+2.7**
AAK				pmax	pmax		
	comp=Z,15nm,1.1s						
AAK	**Ala-Archa**	**13.78**	**331**	Pn	**Pn**	**09 46 31.5**	**+0.3**
	comp=Z,101nm,1.0s,SNR=5.1						
AAK	**Ala-Archa**	**13.78**	**331**	P	Px	09 46 43.5	
	SNR=9.7						
LATR	**Latur**	**13.79**	**208**	*ex*	**Pn**	**09 46 27.4**	**-4.1**
LATR				*ex*	**Sn**	**09 48 57.8**	**-7.0**
FRU	**Bishkek**	**13.90**	**332**	*e*P	**Pn**	**09 46 32.0**	**-0.8**
HYB	**Hyderabad**	**14.03**	**199**	*i* P	**Pn**	**09 46 30.0**	**-4.7**
HYB				*e*S	**Sn**	**09 48 56.5**	**-14**
EKS2	**Erkin-Say**	**14.11**	**330**	*e*Pn	**Pn**	**09 46 37.0**	**+1.4**
	comp=Z,14nm,0.9s						
POO	**Poona**	**14.96**	**217**⇑	*i* x	**Pn**	**09 46 40.0**	**-7.5**
	comp=Z,40nm,1.0s						
KAD	**Karad**	**15.83**	**214**	*e*PKP	**Pn**	**09 46 58.0**	**-0.8**
KAD				AMb	AMB	09 47 04.5	
	comp=Z,27nm,1.7s						
GTA	**Gaotai**	**15.94**	**53**	*e*P	**Pn**	**09 47 03.5**	**+3.3**
GTA				pP	pP	09 47 08.0	+1.4
GTA				sP	sP	09 47 10.5	+2.6
GTA				S	**Sn**	**09 50 03.0**	**+6.0**
GTA				sS	sS	09 50 09.0	-6.6
GTA				pmax	pmax		
	comp=Z,13nm,1.8s						
GTA				pmax	pmax		
	comp=Z,140nm,4.8s						
GTA				LR	LR		
	comp=N,2μm,14.1s						
GTA				LR	LR		
	comp=E,630nm,15.0s						
GTA				LR	LR		
	comp=Z,1μm,16.8s						
KK31	**Karatay Array**	**15.99**	**324**	*i* P	**Pn**	**09 46 58.7**	**-2.1**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KKAR	**Karatay Array**	**15.99**	**324**	*e*Pn	**Pn**	**09 46 59.1**	**-1.7**
	comp=Z,14nm,0.9s						
KKAR	**Karatay Array**	**15.99**	**324**	*e*P	**Pn**	**09 46 59.1**	**-1.7**
KKAR				pmax	pmax		
	comp=Z,14nm,0.9s						
MK31	**Makanchi Array**	**15.99**	**357**	*e*P	**Pn**	**09 47 00.5**	**-0.3**
MKAR	**Makanchi Array**	**15.99**	**357**	Pn	**Pn**	**09 46 59.2**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=178,slow=11,SNR=12						
CD2	**Chengdu**	**17.50**	**84**	P	**Pn**	**09 47 22.0**	**+2.0**
CD2				pP	pP	09 47 25.5	+1.5
CD2				sP	sP	09 47 29.0	+3.7
CD2				PP		09 47 36.8	
CD2				S	**Sn**	**09 50 36.0**	**+1.0**
CD2				sS	sS	09 50 41.5	-6.0
CD2				SS		09 50 58.0	
CD2				pmax	pmax		
	comp=Z,90nm,0.5s						
CD2				pmax	pmax		
	comp=Z,420nm,5.2s						
CD2				LR	LR		
	comp=N,10μm,18.2s						
CD2				LR	LR		
	comp=E,10μm,17.8s						
CD2				LR	LR		
	comp=Z,12μm,20.2s						
LZH	**Lanzhou**	**17.87**	**67**	*e*P	**Pn**	**09 47 27.0**	**+2.5**
LZH				pP	pP	09 47 29.5	+1.5
LZH				sP	sP	09 47 32.0	+2.7
LZH				PP		09 47 45.3	
LZH				*e*S	**Sn**	**09 50 46.0**	**+2.3**
LZH				sS	sS	09 50 51.3	-3.6
LZH				SS		09 51 10.3	
LZH				pmax	pmax		
	comp=Z,49nm,1.2s						
LZH				pmax	pmax		
	comp=Z,150nm,4.9s						
LZH				LR	LR		
	comp=N,1μm,7.6s						
LZH				LR	LR		
	comp=E,2μm,10.6s						
LZH				LR	LR		
	comp=Z,3μm,13.0s						
KMI	**Kunming**	**18.01**	**104**	P	**Pn**	**09 47 25.0**	**-1.3**
KMI				pP	pP	09 47 27.0	-2.6
KMI				PP		09 47 41.3	
KMI				S	**Sn**	**09 50 44.5**	**-2.8**
KMI				SS		09 51 08.0	
KMI				pmax	pmax		
	comp=Z,15nm,0.9s						
KMI				pmax	pmax		
	comp=Z,200nm,5.1s						
KMI				LR	LR		
	comp=N,2μm,14.4s						
KMI				LR	LR		
	comp=E,2μm,15.6s						
KMI				LR	LR		
	comp=Z,2μm,14.1s						
CHRT	**Chiangrai**	**18.37**	**122**	⇑P	**Pn**	**09 47 29.5**	**-1.3**
	comp=Z,132nm,1.0s						
CHG	**Chiang Mai**	**18.47**	**127**	⇑P	**Pn**	**09 47 31.2**	**-0.8**
	comp=Z,22nm,1.1s						
CHTO	**Chiang Mai**	**18.47**	**127**	*e*P	**Pn**	**09 47 30.2**	**-1.7**
	comp=Z,18nm,0.9s						
CHTO	**Chiang Mai**	**18.47**	**127**	*e*P	**Pn**	**09 47 30.3**	**-1.7**
CHTO				pmax	pmax		
	comp=Z,18nm,0.9s						
CHTO	**Chiang Mai**	**18.47**	**127**	P	**Pn**	**09 47 30.7**	**-1.3**
	SNR=13						
CM31	**Chiang Mai Arr**	**18.71**	**127**	*e*Pn	**Pn**	**09 47 36.2**	**+1.3**
CMAR	**Chiang Mai Arr**	**18.71**	**127**	P	**Pn**	**09 47 32.9**	**-2.1**
	baz=313,slow=12,SNR=31						
CMAR				LR	LR	09 54 33.5	
	comp=Z,412nm,21.4s,baz=323,slow=37						
BDT	**Bhumibol Dam**	**19.61**	**130**	P	**Pn**	**09 47 45.0**	**-0.8**
KURK	**Kurchatov**	**20.21**	**351**	P	**P**	**09 47 50.1**	**-0.6**
	comp=Z,239nm,0.9s,SNR=12						
KURK	**Kurchatov**	**20.21**	**351**	*e*P	**P**	**09 47 49.6**	**-1.1**
	comp=Z,51nm,1.1s						
KURK	**Kurchatov**	**20.21**	**351**	P	**P**	**09 47 49.1**	**-1.6**
	comp=Z,29nm,1.1s,baz=174,slow=9.5,SNR=63						
KURK	**Kurchatov**	**20.21**	**351**	*d* iP	**P**	**09 47 49.9**	**-0.8**
KURK				pmax	pmax		
	comp=Z,72nm,1.4s						
KURK	**Kurchatov**	**20.21**	**351**	P	**P**	**09 47 50.6**	**-0.1**
	SNR=32						
GYA	**Guiyang**	**20.88**	**96**	P	**P**	**09 48 01.0**	**+2.8**
GYA				PP		09 48 21.5	
GYA				S	**S**	**09 51 47.8**	**-3.3**
GYA				SS		09 52 20.8	
GYA				ScP	ScP	09 55 43.5	+0.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,4.3s						
GYA				LR	LR		
	comp=N,3μm,12.8s,MS5.0						
GYA				LR	LR		
	comp=E,2μm,13.0s,MS5.0						
GYA				LR	LR		
	comp=Z,4μm,14.9s,MS5.0						
XAN	**Xi'an**	**21.79**	**75**	P	**P**	**09 48 06.5**	**-1.4**
XAN				pP		09 48 16.3	
XAN				sP	sP	09 48 21.5	+9.4
XAN				S	**S**	**09 52 13.8**	**+5.0**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.1						
XAN				pmax	pmax		
	comp=Z,33nm,16.4s						
XAN				LR	LR		
	comp=N,400nm,20.8s,MS4.0						
XAN				LR	LR		
	comp=E,440nm,16.4s,MS4.0						
XAN				LR	LR		
	comp=Z,390nm,15.2s,MS3.9						
ZAA0	**Zalesovo Array**	**23.16**	**2**	*e*P	**P**	**09 48 22.5**	**+0.3**
ZALV	**Zalesovo Beam**	**23.16**	**2**	P	**P**	**09 48 22.2**	**0.0**
	comp=Z,8.2nm,0.9s,mb4.2,baz=193,slow=9.9,SNR=16						
NVS	**Novosibirsk**	**24.03**	**360**	*e*P	**P**	**09 48 29.7**	**-1.0**
BVAR	**Borovoye Array**	**24.14**	**341**	P	**P**	**09 48 31.3**	**-0.5**
	comp=Z,7.2nm,0.8s,mb4.1,baz=147,slow=9.6,SNR=14						
BRVK	**Borovoye**	**24.20**	**341**	P	**P**	**09 48 33.4**	**+1.0**
	comp=Z,74nm,0.6s,mb5.3,SNR=5.6						
BRVK	**Borovoye**	**24.20**	**341**	*e*P	**P**	**09 48 33.1**	**+0.7**
	comp=Z,16nm,1.1s,mb4.3						
BRVK	**Borovoye**	**24.20**	**341**⇑	*e*P	**P**	**09 48 31.4**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.4						
BRVK	**Borovoye**	**24.20**	**341**	P	**P**	**09 48 32.5**	**+0.1**
	SNR=9.5						
SONM	**Songino Array**	**24.48**	**39**	P	**P**	**09 48 33.4**	**-1.5**
	comp=Z,8.2nm,1.0s,mb4.1,baz=235,slow=5.1,SNR=14						
SONM				LR	LR	09 59 03.5	
	comp=Z,662nm,20.5s,MS4.1,baz=254,slow=39						
MOY	**Mondy**	**24.58**	**27**	*e*P	**P**	**09 48 37.8**	**+2.0**
MOY				pmax	pmax		
	comp=Z,29nm,2.1s,mb4.4						
ZAK	**Zakamensk**	**24.58**	**32**	*e*P	**P**	**09 48 35.9**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb3.8						
ULN	**Ulaanbaatar**	**24.86**	**40**	*e*P	**P**	**09 48 39.8**	**+1.3**
	comp=Z,21nm,1.0s,mb4.6						
ULN	**Ulaanbaatar**	**24.86**	**40**	*e*P	**P**	**09 48 39.8**	**+1.4**
ULN				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.6						
ULN	**Ulaanbaatar**	**24.86**	**40**	P	**P**	**09 48 39.9**	**+1.5**
	SNR=14						
HHC	**Hu-ho-hao-te**	**24.86**	**58**	*e*P	**P**	**09 48 39.3**	**+0.8**
HHC				pP		09 48 43.5	
HHC				sP	sP	09 48 47.3	+4.5
HHC				PP		09 49 16.5	
HHC				S	**S**	**09 52 58.5**	**-2.9**
HHC				SS		09 53 55.5	
HHC				PcS	PcS	09 55 55.3	+0.9
HHC				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.5						
HHC				pmax	pmax		
	comp=Z,210nm,6.1s						
HHC				LR	LR		
	comp=N,420nm,8.1s						
HHC				LR	LR		
	comp=E,440nm,8.0s						
HHC				LR	LR		
	comp=Z,630nm,16.3s,MS4.2						
ASHO	**Ashiyiah**	**24.90**	**263**	P	**P**	**09 48 42.3**	**+3.3**
	SNR=7.7						
TIY	**Taiyuan**	**24.92**	**66**	*e*P	**P**	**09 48 38.8**	**-0.3**
TIY				S	**S**	**09 52 58.0**	**-4.4**
TIY				pmax	pmax		
	comp=Z,160nm,6.6s						
TIY				LR	LR		
	comp=N,410nm,8.4s						
TIY				LR	LR		
	comp=E,860nm,10.6s						
TIY				LR	LR		
	comp=Z,1μm,13.0s,MS4.6						
ARQ	**Araqi**	**25.00**	**259**	P	**P**	**09 48 42.5**	**+2.6**
	SNR=11						
AB31	**Akbulak array**	**25.55**	**323**	*e*P	**P**	**09 48 45.1**	**+0.4**
AB31				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.4						
ABKAR	**Akbulak array**	**25.55**	**323**	*e*P	**P**	**09 48 45.4**	**+0.7**
	comp=Z,6.4nm,0.5s,mb4.4						
TLY	**Talaya**	**25.67**	**30**	*e*P	**P**	**09 48 48.5**	**+2.8**
	comp=Z,13nm,1.2s,mb4.3						
TLY	**Talaya**	**25.67**	**30**	*e*P	**P**	**09 48 46.9**	**+1.1**
TLY				*e*S	**S**	**09 53 16.9**	**+2.8**
TLY				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.3						
TLY				MLR	MLR		
	comp=Z,218nm,15.0s,MS3.8						
TLY	**Talaya**	**25.67**	**30**	P	**P**	**09 48 48.0**	**+2.3**
	SNR=6.8						
IRK	**Irkutsk**	**26.35**	**30**	*e*P	**P**	**09 48 53.7**	**+1.8**
IRK				*e*		09 49 09.1	
IRK				pmax	pmax		
	comp=Z,54nm,1.6s,mb4.8						
WHN	**Wuhan**	**26.60**	**83**	P	**P**	**09 48 52.5**	**-1.9**
WHN				S	**S**	**09 53 27.0**	**-2.2**
WHN				LR	LR		
	comp=N,1μm,10.4s,MS4.8						
WHN				LR	LR		
	comp=E,840nm,13.6s,MS4.8						
WHN				LR	LR		
	comp=Z,2μm,31.0s						
QIZ	**Qiongzhong**	**26.64**	**110**	P	**P**	**09 48 54.5**	**-0.3**
QIZ				S	**S**	**09 53 31.8**	**+1.9**
QIZ				pmax	pmax		
	comp=Z,56nm,4.3s						
QIZ				LR	LR		
	comp=N,340nm,14.7s						
QIZ				LR	LR		
	comp=Z,500nm,14.6s,MS4.2						
AKTK	**Aktyubinsk**	**27.26**	**323**	P	**P**	**09 48 59.4**	**-0.7**
AKTK				LR	LR	10 00 39.3	
AKTO	**Aktyubinsk**	**27.26**	**323**	P	**P**	**09 48 59.4**	**-0.7**
	comp=Z,2.0nm,0.4s,mb4.0,baz=114,slow=11,SNR=8.8						
AKTO				LR	LR	10 00 39.3	
	comp=Z,230nm,20.5s,MS3.7,baz=294,slow=38						
AKTO	**Aktyubinsk**	**27.26**	**323**	P	**P**	**09 48 59.1**	**-1.0**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
BJI	**Beijing**	**28.14**	**62**	P	**P**	**09 49 09.0**	**+0.9**
BJI				S	**S**	**09 53 55.0**	**+1.7**
BJI				LR	LR		
	comp=N,870nm,24.0s						
BJI				LR	LR		
	comp=E,220nm,11.1s						
NJ2	**Nanjing**	**30.22**	**78**	*e*P	**P**	**09 49 29.0**	**+2.4**
NJ2				pP	pP	09 49 33.5	+3.8
NJ2				sP	sP	09 49 36.0	+5.0
NJ2				PP	PP	09 50 28.5	-6.3
NJ2				S	**S**	**09 54 27.0**	**+0.9**
NJ

PSI Prapat 31.49 149 LR LR 10 02 42.8
comp=Z,160nm,19.9s,MS3.7,baz=20,slow=37

SSE Sheshan 32.33 80 *e*P **P** **09 49 43.5 -1.7**
SSE pP pP 09 49 52.5 +4.2
SSE sP sP 09 49 56.5 +7.0
SSE S **S** **09 54 53.3 -5.8**
SSE sS sS 09 55 07.8 +3.6
SSE pmax pmax
comp=Z,26nm,0.7s,mb5.2
SSE pmax pmax
comp=Z,33nm,4.6s
SSE LR LR
comp=N,460nm,14.1s,MS4.3
SSE LR LR
comp=E,160nm,14.1s,MS4.3
SSE LR LR
comp=Z,390nm,22.9s

GNI Garni 32.60 297⇓ *e*P **P** **09 49 48.0 +0.5**
GNI pmax pmax
comp=Z,16nm,1.2s

ZEI Tsey 33.51 302 *e*P **P** **09 49 55.8 +0.4**
ZEI pmax pmax
comp=Z,11nm,0.5s,mb5.0

SOKR Solikamsk 33.88 336*c i*P **P** **09 49 59.3 +0.9**
SOKR pmax pmax
comp=Z,40nm,1.0s,mb5.3
SOKR MLR MLR
comp=Z,220nm,19.0s,MS3.9

CN2 Changchun 35.52 57 *e*P **P** **09 50 15.0 +2.2**
CN2 *e*SP sP 09 50 22.0 +4.8
CN2 *e*S **S** **09 55 49.8 +1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,15.0s,MS4.6
CN2 LR LR
comp=E,800nm,15.0s,MS4.6
CN2 LR LR
comp=Z,200nm,16.0s,MS4.0

SOC Sochi 36.64 303 *e*P **P** **09 50 22.9 +0.5**
SOC *e*S **S** **09 55 57.1 -8.3**
SOC *e*SSS 09 59 04.5
SOC pmax pmax
comp=Z,12nm,0.6s,mb4.9
SOC MLR MLR
comp=Z,305nm,16.0s,MS4.2

KSRS Korea Array 37.20 67 P **P** **09 50 25.6 -1.6**
comp=Z,3.4nm,0.9s,mb4.2,baz=270,slow=7.5,SNR=14
KSRS LR LR 10 07 10.3
comp=Z,632nm,19.3s,MS4.4,baz=280,slow=39

KSRS Korea Array 37.20 67 P **P** **09 50 25.6 -1.6**
KSRS pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
KSRS MLR MLR
comp=Z,632nm,19.3s,MS4.4

MALT Malatya 37.48 294 *e*P **P** **09 50 31.7 +2.1**
comp=Z,9.5nm,1.2s,mb4.5

MALT Malatya 37.48 294 *e*P **P** **09 50 31.7 +2.1**
MALT pmax pmax
comp=Z,9.0nm,1.2s,mb4.5

VORD Divnogorie 38.23 315 *e*P **P** **09 50 35.5 -0.3**
VORD pmax pmax
comp=N,20nm,1.0s
VORD pmax pmax
comp=E,30nm,1.0s
VORD pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
VORD MLR MLR
comp=N,290nm,17.0s,MS4.4
VORD MLR MLR
comp=E,470nm,17.0s,MS4.4
VORD MLR MLR
comp=Z,390nm,17.0s,MS4.3

VSR Storozhevoye 38.37 315 *e*P **P** **09 50 36.1 -0.9**
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
VSR MLR MLR
comp=N,410nm,14.0s,MS4.4
VSR MLR MLR
comp=E,180nm,14.0s,MS4.4
VSR MLR MLR
comp=Z,320nm,14.0s,MS4.3

ANN Anapa 38.39 305 *e*P **P** **09 50 35.3 -1.9**
ANN *e* 09 52 04.1
ANN pmax pmax
comp=Z,34nm,1.2s,mb5.0

JOW Kunigami 39.34 84 LR LR 10 07 47.2
comp=Z,558nm,20.9s,MS4.4,baz=165,slow=38

ASF Jabal al Asfar 39.42 284 P **P** **09 50 47.1 +1.0**
comp=Z,2.4nm,0.9s,mb3.9,baz=211,slow=5.9,SNR=3.7

OBN Obninsk 40.94 320⇓ *i*P **P** **09 50 58.5 +0.2**
OBN *i* 09 52 35.4
OBN *e* 09 52 56.4
OBN pmax pmax
comp=Z,28nm,1.2s,mb4.8
OBN MLR MLR
comp=Z,200nm,18.0s,MS4.0

BRTR Keskin Array B 41.13 297 P **P** **09 51 00.0 -0.1**
comp=Z,3.4nm,1.1s,mb3.9,baz=95,slow=12,SNR=11
BRTR LR LR 10 10 54.7
comp=Z,196nm,21.9s,MS3.9,baz=222,slow=40

KLMR Klimovskoe 41.58 329 *e*P **P** **09 51 02.6 -0.9**
KLMR 09 52 40.4
KLMR pmax pmax
comp=Z,40nm,1.3s,mb4.9

EIL Elat 41.59 281 P **P** **09 51 04.2 +0.2**
comp=Z,14nm,1.0s,mb4.6,baz=72,slow=7.1,SNR=5.9

ATD Arta Tunnel 42.08 252 P **P** **09 51 08.6 +0.4**
baz=246,slow=20

YAK Yakutsk 43.15 30 *e*P **P** **09 51 14.2 -2.0**
YAK *e**PP pP 09 51 24.8 +5.4
YAK *e* 09 53 00.1
YAK *e*S **S** **09 57 40.8 -1.6**
YAK *e* 10 01 11.5
YAK *e*SSS 10 01 33.5
YAK pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=N,2.0nm,1.3s
YAK smax
comp=N,20nm,2.4s
YAK smax
comp=E,21nm,2.5s
YAK MLR MLR
comp=Z,80nm,14.0s,MS3.8
YAK MLR MLR
comp=N,85nm,13.0s,MS3.9
YAK MLR MLR
comp=E,46nm,15.0s,MS3.9

AKASG Malin Array Be 44.47 313 P **P** **09 51 25.6 -1.4**
comp=E,1.3nm,0.4s,mb4.0,baz=82,slow=7.1,SNR=8.0
AKASG LR LR 10 13 25.0
comp=E,182nm,18.2s,MS4.0,baz=135,slow=41

MJAR Matsushiro Arr 45.48 67 P **P** **09 51 33.9 -1.4**
MJAR PcP PcP 09 53 12.4 -1.8
MJAR LR LR 10 11 56.3

MJAR Matsushiro Arr 45.48 67 P **P** **09 51 33.9 -1.4**
comp=E,3.7nm,1.0s,mb4.2,baz=290,slow=9.0,SNR=8.5
MJAR PcP PcP 09 53 12.4 -1.8
comp=E,0.5nm,0.4s,baz=242,slow=4.6,SNR=4.1
MJAR LR LR 10 11 56.3
comp=E,350nm,20.2s,MS4.3,baz=280,slow=38

MJAR Matsushiro Arr 45.48 67 P **P** **09 51 33.9 -1.4**
MJAR 09 53 12.4

JOF Joensuu 45.96 330 *e*P **P** **09 51 38.1 -0.6**
JOF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5

JOF Joensuu 45.96 330 *e*p **P** **09 51 38.1 -0.6**
comp=Z,3.6nm,0.7s,mb4.4

VRI Vrincioaia 45.97 306⇑ P **P** **09 51 40.4 +1.3**
VRI Vrincioaia 45.97 306⇑ *i*P **P** **09 51 40.4 +1.4**
PLOR Plostina 46.03 306⇑ P **P** **09 51 40.8 +1.3**
PLOR Plostina 46.03 306⇑ *i*P **P** **09 51 40.8 +1.3**
MLR Muntele Rosu 46.53 305⇓ P **P** **09 51 45.0 +1.5**
MLR Muntele Rosu 46.53 305⇓ *i*P **P** **09 51 45.0 +1.6**
LVZ Lovozero 46.65 337*de*P **P** **09 51 44.3 +0.2**
LVZ pmax pmax
comp=Z,67nm,2.1s,mb5.2

BURAR Bucovina Array 46.98 308⇑ P **P** **09 51 47.6 +0.7**
BURAR Bucovina Array 46.98 308⇑ *i*P **P** **09 51 47.6 +0.7**
BUR08 Bucovina Ar. S 46.99 308 *e*P **P** **09 51 47.5 +0.5**
VOIR 47.16 305⇑ P **P** **09 51 49.8 +1.4**
VOIR 47.16 305⇑ *i*P **P** **09 51 49.8 +1.4**

JHJ Hachijo jima 2 47.42 72 LR LR 10 13 19.1
comp=Z,431nm,21.8s,MS4.4,baz=251,slow=38

TIXI Tiksi 47.60 18 *e*P **P** **09 51 54.4 +3.0**
comp=Z,50nm,1.7s,mb5.3

TIXI Tiksi 47.60 18 *e*P **P** **09 51 53.2 +1.8**
TIXI pmax pmax
comp=Z,28nm,1.6s,mb5.0
TIXI MLR MLR
comp=Z,98nm,12.0s,MS4.0

YSS Yuzh-Sakhalins 47.82 53 *e*P **P** **09 51 53.0 -0.5**
YSS MLR MLR
comp=E,500nm,14.0s
YSS MLR MLR
comp=Z,500nm,14.0s,MS4.6

ASAJ Asahikawa 47.89 57 *e*P **P** **09 51 55.0 +0.9**
comp=Z,7.8nm,1.1s,mb4.7

ASAJ Asahikawa 47.89 57 P **P** **09 51 52.7 -1.3**
comp=Z,7.0nm,1.0s,mb4.6,baz=221,slow=11,SNR=3.1

ASAJ Asahikawa 47.89 57 P **P** **09 51 52.7 -1.3**
ASAJ pmax pmax
comp=Z,7.0nm,1.0s

FINES FINESS Array B 47.92 327 P **P** **09 51 52.0 -2.0**
comp=Z,2.6nm,0.5s,mb4.5,baz=108,slow=7.9,SNR=11
FINES LR LR 10 12 46.0
comp=Z,191nm,18.0s,MS4.1,baz=170,slow=37

IDI Anoyia 48.63 292 *e*P **P** **09 51 59.9 0.0**
CRVS Cervenica-Dubn 49.45 310 *e*P **P** **09 52 05.8 -0.2**
CRVS Cervenica-Dubn 49.45 310 *e*P **P** **09 52 05.8 -0.2**
KEV Kevo 49.95 338 *e*P **P** **09 52 08.5 -0.9**
KEV pmax pmax
comp=Z,5.0nm,0.6s,mb4.7

KEV Kevo 49.95 338 *ep* **P** **09 52 08.5 -0.9**
comp=Z,4.8nm,0.6s,mb4.7

ARCES ARCESS Array B 50.37 337 P **P** **09 52 12.0 -0.6**
comp=Z,4.0nm,0.7s,mb4.5,baz=99,slow=8.3,SNR=16

CBIJ Chichi jima 51.09 79 LR LR 10 14 03.1
comp=Z,151nm,21.6s,MS4.0,baz=136,slow=36

VYHS Vyhne 51.21 310 *e*P **P** **09 52 19.0 -0.3**
VYHS Vyhne 51.21 310 *e*P **P** **09 52 19.0 -0.3**
MORC Moravsky Berou 51.95 311 *e*P **P** **09 52 23.9 -0.9**
MORC Moravsky Berou 51.95 311⇓ *i*P **P** **09 52 24.4 -0.5**
ZST Bratislava 52.39 309 *e*P **P** **09 52 28.5 +0.4**
ZST Bratislava 52.39 309 *e*P **P** **09 52 28.5 +0.4**
SEY Seymchan 53.55 32⇓ *e*P **P** **09 52 36.7 +0.2**
SOKA Soboth 53.98 308⇑ *i*P **P** **09 52 39.0 -0.9**
comp=Z,4.6nm,1.0s,mb4.4

KMBO Kilima Mbogo 54.10 243 *e*P **P** **09 52 41.5 +0.3**
comp=Z,11nm,1.0s,mb4.7

KMBO Kilima Mbogo 54.10 243 *e*P **P** **09 52 41.5 +0.3**
KMBO pmax pmax
comp=Z,11nm,1.0s

CUC Castrocucco 54.66 299 *e*P **P** **09 52 45.5 +0.6**
comp=Z,18nm,1.2s,mb5.0

CEL Celeste 55.00 297 *e*P **P** **09 52 46.7 -0.7**
comp=Z,45nm,1.1s,mb5.4

NOA NORSAR Array B 55.02 326 P **P** **09 52 45.4 -1.8**
comp=Z,3.5nm,0.9s,mb4.4,baz=88,slow=7.0,SNR=5.2
NOA LR LR 10 18 09.4
comp=Z,163nm,18.0s,MS4.2,baz=90,slow=38

FETA Feichten 56.83 309⇑ *i*P **P** **09 52 59.3 -1.1**
comp=Z,5.0nm,1.0s,mb4.5

PETK Petropavlovsk- 56.86 44 P **P** **09 52 58.6 -1.9**
comp=Z,3.7nm,0.8s,mb4.5,baz=225,slow=1.8,SNR=6.7
PETK LR LR 10 18 23.7
comp=Z,117nm,20.0s,MS4.0,baz=277,slow=37

DAVA Damuels 57.34 309⇑ *i*P **P** **09 53 03.0 -1.0**
comp=Z,9.6nm,1.4s,mb4.7

GUMO Guam 58.78 92 LR LR 10 19 47.9
comp=Z,140nm,19.4s,MS4.1,baz=87,slow=37

MBAR Mbarara 58.88 248⇑ *e*P **P** **09 53 14.4 -0.8**
PGF Pioggiola 59.04 304 *e*P **P** **09 53 14.7 -1.3**
comp=Z,11nm,0.9s,mb4.6

PGF Pioggiola 59.04 304 *e*P **P** **09 53 14.7 -1.3**
comp=Z,5.3nm,0.9s,mb4.6

PGF Pioggiola 59.04 304 *e*P **P** **09 53 14.7 -1.3**
PGF pmax pmax
comp=Z,5.0nm,0.9s,mb4.5

BILL Bilibino 59.20 26⇓ *i*P **P** **09 53 18.1 +1.5**
BILL *e* 09 54 05.7
BILL *e* 09 55 28.4
BILL pmax pmax
comp=Z,26nm,1.2s,mb5.1
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.0

SBF Sospel 59.80 306 *e*P **P** **09 53 20.7 -0.5**
comp=Z,28nm,0.9s,mb5.0

SBF Sospel 59.80 306 *e*P **P** **09 53 20.7 -0.5**
comp=Z,14nm,0.9s,mb5.0

SBF Sospel 59.80 306 *e*P **P** **09 53 20.7 -0.5**
SBF pmax pmax
comp=Z,14nm,0.9s,mb5.0

LPG La Plagne 59.86 308 *e*P **P** **09 53 21.5 -0.1**
LPL La Plagne 59.86 308 *e*P **P** **09 53 21.5 -0.1**
comp=Z,16nm,0.9s,mb4.8

LPL La Plagne 59.86 308 *e*P **P** **09 53 21.5 -0.1**
comp=Z,8.3nm,0.9s,mb4.8

LPL La Plagne 59.86 308 *e*P **P** **09 53 21.5 -0.1**
LPL pmax pmax
comp=Z,8.0nm,0.9s,mb4.8

GIVF Givet 60.02 313 *e*P **P** **09 53 22.3 -0.3**
BAIF Baives 60.41 313 *e*P **P** **09 53 25.0 -0.3**
LMR La Mourre 60.59 305 *e*P **P** **09 53 25.9 -0.7**
KEST Kesra 60.74 296 P **P** **09 53 27.6 -0.1**
comp=Z,11nm,1.2s,mb4.9,baz=76,slow=3.1,SNR=13
KEST LR LR 10 24 35.6
comp=Z,41nm,18.8s,MS3.6,baz=228,slow=41

SMRF Simiane la Rot 61.07 306 *e*P **P** **09 53 30.7 +0.8**
SMF Signal de Mont 61.51 310 *e*P **P** **09 53 31.7 -1.1**
SSF Saint Saulge 61.62 310 *e*P **P** **09 53 32.6 -1.0**
AVF Avril sur Loir 61.80 310 *e*P **P** **09 53 33.6 -1.2**
TCF Toulx Ste Croi 62.70 310 *e*P **P** **09 53 40.3 -0.5**
comp=Z,27nm,1.4s,mb4.9

TCF Toulx Ste Croi 62.70 310 *e*P **P** **09 53 40.3 -0.5**
comp=Z,13nm,1.4s,mb4.9

TCF Toulx Ste Croi 62.70 310 *e*P **P** **09 53 40.3 -0.5**
TCF pmax pmax
comp=Z,13nm,1.4s,mb4.9

MTLF Montolieu 63.58 306 *e*P **P** **09 53 46.1 -0.6**
KNA Kununurra 63.61 130 *e*P **P** **09 53 46.1 -1.1**
comp=Z,21nm,1.1s,mb5.1

KAKA Kakadu 63.97 125 *e*P **P** **09 53 48.0 -1.6**
comp=Z,12nm,0.9s,mb4.9

ETSF Etsaut 65.65 307 *e*P **P** **09 53 59.9 -0.3**
QUIF Quistinic 65.68 313 *e*P **P** **09 53 58.7 -1.6**
ESDC Sonseca Array 69.22 304 P **P** **09 54 21.3 -1.6**
comp=Z,0.3nm,0.3s,mb3.7,baz=47,slow=7.3,SNR=6.5

SUMG Summit 69.57 344 *e*P **P** **09 54 25.3 +0.9**
comp=Z,38nm,1.3s,mb5.2

SUMG Summit 69.57 344 *i* P **P** **09 54 25.4 +0.9**
comp=Z,14nm,1.0s,mb4.8

WRA Warramunga Arr 70.30 129 P **P** **09 54 28.0 -1.7**
comp=Z,13nm,1.0s,mb4.8,baz=325,slow=6.4,SNR=35

ASAR Alice Springs 72.65 132 P **P** **09 54 41.8 -2.1**
comp=Z,2.8nm,1.0s,mb4.2,baz=315,slow=5.9,SNR=14

COLD Coldfoot 74.31 19 *e*P **P** **09 54 53.9 +0.8**
comp=Z,26nm,1.2s,mb5.0

QIS Mount Isa 74.31 126 *e*P **P** **09 54 52.9 -0.8**
TTA Tatalina 75.37 24 *e*P **P** **09 55 00.0 +0.8**
comp=Z,41nm,1.4s,mb5.2

TTA Tatalina 75.37 24 *e*P **P** **09 55 00.0 +0.8**
TTA pmax pmax
comp=Z,41nm,1.4s,mb5.2

BPAW Bear Paw Mtn. 76.26 22 *e*P **P** **09 55 04.3 0.0**
comp=Z,25nm,1.2s,mb5.0

TORD Torodi Ar. Bea 76.33 277 P **P** **09 55 03.5 -2.0**
comp=Z,4.2nm,0.9s,mb4.4,baz=85,slow=4.9,SNR=18
TORD LR LR 10 33 57.3
comp=Z,275nm,18.7s,MS4.6,baz=55,slow=40

COLA College 76.66 20 *e*P **P** **09 55 06.9 +0.4**
comp=Z,31nm,1.4s,mb5.0

COLA College 76.66 20 *e*P **P** **09 55 06.9 +0.3**
COLA pmax pmax
comp=Z,31nm,1.4s,mb5.0

PPLA Purkeypile 76.70 23 *e*P **P** **09 55 07.6 +0.8**
comp=Z,52nm,1.6s,mb5.2

ILAR Eielson Array 77.02 20 P **P** **09 55 07.4 -1.2**
comp=Z,14nm,1.2s,mb4.8,baz=308,slow=4.9,SNR=62
ILAR LR LR 10 30 42.7
comp=Z,100nm,21.4s,MS4.1,baz=334,slow=37

INK Inuvik 77.46 13 *e*P **P** **09 55 11.3 +0.3**
comp=Z,25nm,1.3s

RSO Redoubt South 78.17 25 *e*P **P** **09 55 18.4 +3.3**
EGAK Eagle 78.61 18 *e*P **P** **09 55 17.7 +0.3**
comp=Z,33nm,1.6s,mb5.0

PMR Palmer 78.64 23 *e*P **P** **09 55 17.5 -0.1**
comp=Z,30nm,1.3s,mb5.1

PMR Palmer 78.64 23 *e*P **P** **09 55 17.5 -0.1**
PMR pmax pmax
comp=Z,31nm,1.3s,mb5.1

SML Sawmill 78.75 22 *e*P **P** **09 55 18.6 +0.4**
comp=Z,16nm,1.2s,mb4.8

SML Sawmill 78.75 22 *e*P **P** **09 55 18.7 +0.5**
SML pmax pmax
comp=Z,16nm,1.2s,mb4.8

CTA Charters Tower 78.77 121 *e*P **P** **09 55 18.2 -0.7**
comp=Z,8.4nm,1.1s,mb4.6

CTA Charters Tower 78.77 121 P **P** **09 55 17.0 -1.9**
comp=Z,10.0nm,1.0s,mb4.7,baz=315,slow=5.7,SNR=4.0

PAX Paxson 78.78 21 *e*P **P** **09 55 19.1 +0.7**
comp=Z,18nm,1.4s,mb4.8

PAX Paxson 78.78 21 *e*P **P** **09 55 19.1 +0.7**
PAX pmax pmax
comp=Z,17nm,1.4s,mb4.8

RC01 Rabbit Creek A 78.80 23 *e*P **P** **09 55 18.7 +0.2**
comp=Z,47nm,1.3s,mb5.3

SEW Seward 79.60 24 *e*P **P** **09 55 22.8 -0.1**
comp=Z,41nm,1.2s,mb5.2

DAWY Dawson 79.64 18 *e*P **P** **09 55 23.0 0.0**
KDAK Kodiak Island 80.08 27 P **P** **09 55 24.3 -1.3**
comp=Z,28nm,1.2s,mb5.1,baz=183,slow=2.3,SNR=6.2

BMRM Bremner River 80.57 22 *e*P **P** **09 55 28.8 +0.6**
comp=Z,30nm,1.3s,mb5.1

BOSA Boshof 80.98 229 P **P** **09 55 29.6 -1.1**
comp=Z,5.2nm,0.8s,mb4.5,baz=38,slow=5.2,SNR=6.0
BOSA LR LR 10 28 11.5
comp=Z,200nm,18.3s,MS4.5,baz=29,slow=33

QLP Quilpie 81.46 128 *e*P **P** **09 55 32.9 -0.5**
STKA Stephens Creek 83.23 133 *e*P **P** **09 55 40.6 -1.9**
comp=Z,4.1nm,1.1s,mb4.4

STKA Stephens Creek 83.23 133 P **P** **09 55 40.8 -1.7**
comp=Z,6.0nm,1.1s,mb4.6,baz=319,slow=9.3,SNR=4.6

RMQ Roma 84.53 125 *e*P **P** **09 55 49.2 -0.1**
comp=Z,22nm,1.1s,mb5.2

DBIC Dimbokro 85.12 275 P **P** **09 55 51.6 -1.0**
comp=Z,4.0nm,0.8s,mb4.6,baz=51,slow=4.2,SNR=7.9
DBIC LR LR 10 37 47.8
comp=Z,261nm,18.7s,MS4.7,baz=41,slow=38

EIDS Eidsvold 85.51 123 *e*P **P** **09 55 53.5 -0.7**
CMSA Cobar Meteorol 85.63 131 *e*P **P** **09 55 53.4 -1.3**
YKA Yellowknife Ar 85.92 8 P **P** **09 55 54.5 -1.2**
comp=Z,1.5nm,0.6s,mb4.4,baz=335,slow=5.6,SNR=4.6

TOO Toolangi 89.40 135 *e*P **P** **09 56 12.6 -0.1**
MAW Mawson 99.31 188 LR LR 10 38 10.2
comp=Z,49nm,20.3s,MS4.0,baz=121,slow=33

TXAR Lajitas Array 119.83 7 PKP PKPdf 10 02 04.9 -1.9
comp=Z,0.5nm,0.9s,baz=248,slow=0.5,SNR=5.3

QSPA South Pole Qui 120.60 180 *e*PKPdf PKPdf 10 02 05.6 -1.0
SIV San Ignacio 144.37 286 PKP PKPdf 10 02 51.5 -1.3
comp=Z,2.7nm,1.2s,baz=54,slow=8.7,SNR=3.8

OTAV Otavalo 144.63 327 *e*PKPdf PKPdf 10 02 53.6 +0.1
CPUP Villa Florida 145.32 267 PKPbc PKPbc 10 02 53.4 -0.8
comp=Z,13nm,1.1s,baz=58,slow=4.6,SNR=7.7

LPAZ La Paz 150.26 293 PKPbc PKPbc 10 03 06.9 -0.9
comp=Z,1.6nm,0.3s,baz=16,slow=5.0,SNR=27

TRQA Tornquist 150.65 246 *e*PKPdf PKPdf 10 03 02.1 -0.6
TRQA *e*PKPbc PKPbc 10 03 08.2 +0.1
TRQA *e*PKPab PKPab 10 03 14.8 -0.2

IDC ***29*** *09:47:29.5±0.7, 16°.30N×119°.94E, h0km, mb4.0/11, mb1 4.2/11, mb1mx4.0/23, mbtmp4.0/11, Error ellipse: s-maj=31.7km s-min=14.6km az=66.0*

ISCJB ***29*** *09:47:36.2±0.7, 16°.31N±0°.06×119°.65E±0°.08, h63km±8km, mb4.0/11, Error ellipse: s-maj=13.0km s-min=9.1km az=166.7*

MAN ***29*** *09:47:36, 16°.30N×119°.72E, h25km, mb4.4, ML3.3, MS3.1*

NEIC ***29*** *09:47:37.9±1.0, 16°.34N×119°.91E, h65km±11km, mb4.0/1, Error ellipse: s-maj=17.6km s-min=8.0km az=69.0*

ISC 29 09:47:37.2±0.7, 16°.30N±0°.06×119°.65E±0°.08, h55km±8km, n26, σ1$06/27, mb4.0/11, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOLP	**Bolinao**	**0.27**	**72**	*e*P	**Pn**	**09 47 44.2**	**-2.2**
SCZP	**Santa Cruz**	**0.58**	**154**	*e*P	**Pn**	**09 47 48.6**	**-1.0**
BCPH	**Baguio City Da**	**0.90**	**85**⇑	*i*P	**Pn**	**09 47 52.8**	**-0.9**
BCPH				*i* S	**Sn**	**09 48 05.5**	**-0.2**
PCPH	**Palayan**	**1.57**	**118**	*e*P	**Pn**	**09 48 03.0**	**+0.3**
PCPH				*e*S	**Sn**	**09 48 22.2**	**+0.2**
BALP	**Baler**	**1.93**	**106**	*e*P	**Pn**	**09 48 09.6**	**+2.0**
APYP	**Conner**	**2.18**	**44**	*e*P	**Pn**	**09 48 11.5**	**+0.5**
CAUP	**Cauayan**	**2.18**	**73**	*e*P	**Pn**	**09 48 13.7**	**+2.7**
TGY	**Tagaytay City**	**2.51**	**150**	Pn	**Pn**	**09 48 16.2**	**+0.7**
	58nm,0.3s,baz=239,slow=5.9,SNR=2.2						
TGY				Lg		09 48 53.7	
	302nm,0.3s,baz=158,slow=19,SNR=8.2						
LUBP	**Lubang**	**2.61**	**167**	*e*P	**Pn**	**09 48 17.7**	**+0.7**
POLP	**Polilio Island**	**2.70**	**125**	*e*P	**Pn**	**09 48 19.5**	**+1.3**
YULB	**Yu-li**	**7.22**	**12**	*e*Pn	**Pn**	**09 49 19.2**	**-0.9**
	16nm,0.9s						
CMAR	**Chiang Mai Arr**	**19.88**	**279**	P	**Pn**	**09 52 06.7**	**+0.5**
	1.7nm,0.7s,baz=93,slow=8.2,SNR=10						
KSRS	**Korea Array**	**22.30**	**18**	P	**P**	**09 52 28.9**	**-1.1**
	1.2nm,0.5s,mb3.6,baz=205,slow=11,SNR=6.2						
SONM	**Songino Array**	**33.29**	**344**	P	**P**	**09 54 09.3**	**-0.1**
	2.5nm,0.6s,mb4.3,baz=166,slow=9.4,SNR=4.8						
WRA	**Warramunga Arr**	**38.80**	**158**	P	**P**	**09 54 55.1**	**-1.7**
	4.5nm,0.7s,mb4.3,baz=339,slow=9.2,SNR=21						
ASAR	**Alice Springs**	**42.09**	**160**	P	**P**	**09 55 22.6**	**-1.3**
	3.6nm,0.6s,mb4.2,baz=338,slow=6.7,SNR=26						
MKAR	**Makanchi Array**	**43.36**	**323**	P	**P**	**09 55 34.7**	**+0.7**
	1.9nm,0.8s,mb3.9,baz=130,slow=9.0,SNR=11						
KURK	**Kurchatov**	**47.48**	**326**	P	**P**	**09 56 07.5**	**+0.9**
KURK	**Kurchatov**	**47.48**	**326**	P	**P**	**09 56 07.5**	**+0.9**
	3.1nm,0.6s,mb4.4,baz=120,slow=8.7,SNR=17						
STKA	**Stephens Creek**	**52.32**	**156**	P	**P**	**09 56 42.4**	**-1.1**
	4.7nm,0.7s,mb4.5,baz=339,slow=9.2,SNR=11						
BVAR	**Borovoye Array**	**53.07**	**325**	P	**P**	**09 56 49.7**	**+0.9**
	0.4nm,0.5s,mb3.6,baz=124,slow=7.2,SNR=3.9						
ABKAR	**Akbulak array**	**58.12**	**318**	*e*P	**P**	**09 57 26.1**	**+1.0**
	0.6nm,0.6s,mb3.8						
AKTK	**Aktyubinsk**	**59.59**	**319**	P	**P**	**09 57 35.2**	**0.0**
AKTO	**Aktyubinsk**	**59.59**	**319**	P	**P**	**09 57 35.2**	**0.0**
	0.9nm,0.4s,mb4.1,baz=117,slow=2.3,SNR=3.7						
ILAR	**Eielson Array**	**76.87**	**26**	P	**P**	**09 59 22.1**	**-1.1**
	0.4nm,0.4s,mb3.7,baz=268,slow=5.4,SNR=12						
TXAR	**Lajitas Array**	**118.30**	**43**	PKP	PKPdf	10 06 20.0	+1.0
	0.4nm,0.8s,baz=338,slow=1.0,SNR=4.1						

DJA ***29*** *09:54:29, 30°.02N×138°.88E, h411km, mb4.9/14*

JMA ***29*** *09:54:31.5±0.3, 30°.05N×139°.07E, h46°1km±4km, M4.3*

IDC ***29*** *09:54:31.6±0.5, 29°.98N×138°.71E, h433km±5km, mb4.0/24, mb1 4.1/30, mb1mx4.1/34, mbtmp4.0/30, Error ellipse: s-maj=9.2km s-min=6.4km az=80.0*

MOS ***29*** *09:54:31.5±0.8, 30°.04N×138°.56E, h440km, mb4.5/44, Error ellipse: s-maj=9.7km s-min=5.7km az=100.7*

ISCJB ***29*** *09:54:32.5±0.3, 30°.12N±0°.03×138°.56E±0°.02, h437km±3km, mb4.5/146, Error ellipse: s-maj=5.0km s-min=3.0km az=159.6*

BJI ***29*** *09:54:32.5, 30°.01N×138°.68E, h455km, mB4.6/24, mb4.9/50*

NEIC ***29*** *09:54:33.6±0.5, 30°.05N×138°.62E, h444km±5km, mb4.5/94, Error ellipse: s-maj=5.3km s-min=3.4km az=139.0*

ISC 29 09:54:33.3±0.3, 30°.09N±0°.03×138°.62E±0°.03, h435km±3km, h447km±1.7km; pP-P, n612, σ0$65/633, mb4.5/146, 177C-158D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**3.18**	**18**	P	**P**	**09 55 40.8**	**+0.3**
	411nm,0.3s,baz=247,slow=20,SNR=331						
JHJ				S	**S**	**09 56 33.3**	**-1.9**
	181nm,0.3s,baz=253,slow=19,SNR=14						
JHJ2	**Mitsune**	**3.19**	**18**	P	**P**	**09 55 41.1**	**+0.6**
JHJ2				*e*S	**S**	**09 56 34.6**	**-0.6**
JWZ	**Kozaga**	**4.23**	**325**	P	**P**	**09 55 52.3**	**+2.8**
JWZ				S	**S**	**09 56 55.3**	**+3.7**
CBIJ	**Chichi jima**	**4.33**	**133**	P	**P**	**09 55 48.0**	**-2.5**
	105nm,0.3s,baz=293,slow=17,SNR=43						
CBIJ				S	**S**	**09 56 47.3**	**-6.0**

536nm,0.3s,baz=287,slow=19,SNR=26
CBIJ Chichi jima 4.33 133 P **P** **09 55 47.4 -3.1**
CBIJ eS **S** **09 56 47.4 -5.9**
JIE Ise 4.59 340 P **P** **09 55 55.9 +3.1**
JIE eS **S** **09 57 01.2 +3.5**
BSO1 Boso 1 4.97 23 P **P** **09 55 55.9 -0.6**
BSO1 eS **S** **09 57 01.0 -3.5**
JOD2 Odawara 2 5.18 4 eS **S** **09 57 07.5 -0.7**
JTO Tosashimizu 5.69 301 P **P** **09 56 07.2 +3.5**
JRY Ryogami san 5.92 2 P **P** **09 56 06.4 +0.3**
JRY eS **S** **09 57 19.0 -2.9**
MJAR Matsushiro Arr 6.45 357 P **P** **09 56 10.9 -0.7**
3.3nm,0.3s,baz=177,slow=11,SNR=34
MJAR S **S** **09 57 29.5 -2.6**
1.5nm,0.3s,baz=181,slow=14,SNR=7.6
MAJO Matsushiro 6.45 357 *e*Pn **P** **09 56 11.3 -0.3**
MAT Matsushiro 6.45 357 P **P** **09 56 11.6 0.0**
MAT S **S** **09 57 30.6 -1.5**
MAT Matsushiro 6.45 357 P **P** **09 56 11.1 -0.5**
MAT eS **S** **09 57 30.5 -1.6**
JHS Saijyo 6.75 318 P **P** **09 56 17.8 +3.0**
JHS eS **S** **09 57 41.7 +3.7**
JNU Nakatsue 7.26 297 *e*Pn **P** **09 56 23.6 +3.2**
31nm,1.1s
JSJ Shimokoshiki 7.81 284 P **P** **09 56 29.6 +3.2**
JTU Tsushima 8.97 302 P **P** **09 56 41.6 +2.6**
JMK Ichinoseki 9.10 13 P **P** **09 56 40.7 +0.4**
JMK eS **S** **09 58 21.0 -3.9**
JOW Kunigami 9.66 253 *e*Pn **P** **09 56 49.8 +3.1**
27nm,0.6s
JOW Kunigami 9.66 253 P **P** **09 56 48.5 +1.8**
10nm,0.3s,baz=77,slow=6.6,SNR=27
JOW Kunigami 9.66 253 P **P** **09 56 50.2 +3.5**
JKE Kume jima 2 11.09 253 P **P** **09 57 04.1 +1.8**
JOT Ohata 11.44 9 P **P** **09 57 07.1 +1.1**
KSRS Korea Array 11.54 312 P **P** **09 57 08.8 +1.7**
6.1nm,0.3s,baz=128,slow=11,SNR=205
KSRS S **S** **09 59 14.3 +0.3**
baz=122,slow=19,SNR=4.9
KSRS ScP ScP 10 05 08.2 -1.1
0.2nm,0.3s,baz=308,slow=0.4,SNR=8.1
JKB Kayabe 11.94 9 P **P** **09 57 12.0 +0.6**
JKB eS **S** **09 59 18.6 -3.3**
JOSM Okushiri--Mats 11.99 3 P **P** **09 57 12.7 +0.7**
INCN Inchon 12.39 310 *e*Pn **P** **09 57 16.8 +0.3**
16nm,0.4s
ERM Erimo 12.46 16 *e*Pn **P** **09 57 17.9 +0.9**
53nm,0.8s
ERM Erimo 12.46 16 *d iP* **P** **09 57 17.7 +0.7**
ASAJ Asahikawa 14.36 12 *e*Pn **P** **09 57 38.6 +1.0**
13nm,0.9s
ASAJ Asahikawa 14.36 12 P **P** **09 57 38.8 +1.2**
4.1nm,0.3s,baz=194,slow=9.4,SNR=40
ASAJ Asahikawa 14.36 12 P **P** **09 57 38.8 +1.2**
ASAJ pmax pmax
comp=Z,4.0nm,0.3s
NEM2 Nemuro 2 14.42 21 P **P** **09 57 38.9 +0.6**
JTKR Abashiri--Toko 14.48 15 P **P** **09 57 40.1 +1.2**
MDJ Mudanjiang 16.17 336 P **P** **09 57 57.5 +0.6**
MDJ pmax pmax
comp=Z,13nm,0.6s
MDJ pmax pmax
comp=Z,45nm,6.5s
MDJ Mudanjiang 16.17 336 *e*P **P** **09 57 57.8 +0.8**
comp=Z,11nm,0.7s
YHNB Yeheng 16.23 255 *e*P **P** **09 57 56.8 -1.1**
comp=Z,12nm,0.5s
NACB Ninganchiao 16.25 253 *e*P **P** **09 57 56.5 -1.6**
comp=Z,16nm,0.5s
DL2 Dalian 16.52 307 P **P** **09 58 00.5 -0.3**
DL2 pmax pmax
comp=Z,50nm,0.6s
YULB Yu-li 16.84 251 *e*P **P** **09 58 03.1 -1.3**
comp=Z,16nm,0.6s
SSLB Suanglung 16.95 252 *e*P **P** **09 58 05.2 -0.3**
comp=Z,23nm,0.6s
NJ2 Nanjing 17.05 282 *e*P **P** **09 58 07.8 +1.4**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
YSS Yuzh-Sakhalins 17.15 10 *e*P **P** **09 58 07.7 +0.5**
comp=Z,29nm,0.5s
YSS Yuzh-Sakhalins 17.15 10⇑ *iP* **P** **09 58 07.0 -0.2**
YSS pmax pmax
comp=Z,30nm,0.5s
CN2 Changchun 17.24 326 *e*P **P** **09 58 07.8 -0.5**
CN2 eS **S** **10 01 00.0 -5.9**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
GUMO Guam 17.40 159 P **P** **09 58 09.5 -0.8**
comp=Z,1.9nm,0.3s,baz=146,slow=20,SNR=3.9
TPUB Ta-pu 17.43 251 *e*P **P** **09 58 11.5 +1.0**
comp=Z,12nm,0.4s
QZH Quanzhou 18.48 259⇓ *iP* **P** **09 58 20.3 -1.2**
QZH pmax pmax
comp=Z,80nm,0.8s
HABR Khabarovsk 18.57 353 *e*P **P** **09 58 20.9 -1.1**
HABR eS **S** **10 01 27.4 -1.7**
HABR pmax pmax
comp=Z,16nm,0.9s
HABR pmax pmax
comp=N,7.0nm,0.9s
HABR pmax pmax
comp=E,14nm,0.9s
HABR MLR MLR
comp=Z,152nm,20.0s
BJI Beijing 20.83 305 P **P** **09 58 43.3 +0.3**
WHN Wuhan 20.95 277 P **P** **09 58 44.3 +0.2**
HIA Hailar 23.92 328 *e*P **P** **09 59 11.1 +0.4**
comp=Z,17nm,0.6s,mb4.7
HIA Hailar 23.92 328 *e*P **P** **09 59 11.1 +0.4**
HIA pmax pmax
comp=Z,17nm,0.6s
HHC Hu-ho-hao-te 24.42 303 *e*P **P** **09 59 15.5 +0.2**
HHC sP sP 10 01 22.8 +2.1
HHC PcP PcP 10 02 40.5 +0.4
HHC S **S** **10 03 02.5 -0.5**
HHC PcS PcS 10 06 19.8 -0.6
HHC ScS ScS 10 09 23.0 -2.2
HHC pmax pmax
comp=Z,21nm,0.9s,mb4.6
HHC pmax pmax
comp=Z,300nm,4.2s
ENH Enshi 25.16 278 *e*P **P** **09 59 21.8 -0.2**
comp=Z,38nm,0.5s,mb5.1
XAN Xi'an 25.43 287 P **P** **09 59 24.3 -0.1**
XAN pP 09 59 32.8
XAN pmax pmax
comp=Z,19nm,0.9s,mb4.5
XAN pmax pmax
comp=Z,58nm,13.6s
PETK Petropavlovsk- 26.90 26 P **P** **09 59 37.0 -0.1**
comp=Z,6.9nm,0.6s,mb4.2,baz=183,slow=5.8,SNR=29
PET Petropavlovsk 27.21 27 *e*P **P** **09 59 39.5 -0.3**
comp=Z,26nm,1.1s,mb4.6
PET Petropavlovsk 27.21 27 *e*P **P** **09 59 39.7 -0.1**
PET pmax pmax
comp=Z,19nm,0.6s,mb4.7
PET pmax pmax
comp=Z,200nm,5.9s
GYA Guiyang 28.32 271⇓ *iP* **P** **09 59 49.8 -0.2**
GYA sP sP 10 02 02.3 +4.5
GYA PcP PcP 10 02 50.0 +0.3
GYA S **S** **10 04 03.5 -1.1**
GYA ScP ScP 10 05 47.8 -1.1
GYA PcS PcS 10 06 31.3 -1.4
GYA ScS ScS 10 09 41.0 -1.9
GYA pmax pmax
comp=Z,60nm,0.6s,mb5.1
LZH Lanzhou 29.64 291 *e*P **P** **10 00 01.5 +0.1**
LZH pP 10 01 23.8
LZH sP sP 10 02 10.0 +0.4
LZH pmax pmax
comp=Z,55nm,1.2s,mb4.8
LZH pmax pmax
comp=Z,110nm,4.0s
CD2 Chengdu 29.98 281 ⇓P **P** **10 00 04.3 -0.1**
CD2 pP 10 01 23.5
CD2 sP sP 10 02 14.5 +1.9
CD2 PcP PcP 10 02 54.3 +0.4
CD2 S **S** **10 04 29.5 -0.8**
CD2 PcS PcS 10 06 37.0 -1.0
CD2 ScS ScS 10 09 48.3 -2.3
CD2 pmax pmax
comp=Z,20nm,0.4s,mb4.8
CD2 pmax pmax
comp=Z,160nm,4.8s
ULN Ulaanbaatar 30.00 315 *e*P **P** **10 00 05.1 +0.8**
comp=Z,18nm,0.5s,mb4.7
ULN Ulaanbaatar 30.00 315 *e*P **P** **10 00 05.1 +0.7**
ULN pmax pmax
comp=Z,18nm,0.5s,mb4.7
ULN Ulaanbaatar 30.00 315 P **P** **10 00 05.0 +0.6**
comp=Z,28nm,1.1s,mb4.5
SONM Songino Array 30.39 315 P **P** **10 00 08.2 +0.5**
KMI Kunming 32.09 270 P **P** **10 00 23.0 +0.2**
KMI pmax pmax
comp=Z,15nm,0.8s,mb4.4
GTA Gaotai 33.00 297 ⇓P **P** **10 00 30.5 +0.1**
GTA sP sP 10 02 41.5 +2.2
GTA pmax pmax
comp=Z,35nm,0.8s,mb4.7
ZAK Zakamensk 33.30 318 *e*P **P** **10 00 31.9 -0.8**
ZAK pmax pmax
comp=Z,8.0nm,1.1s,mb4.0
TLY Talaya 33.65 320 *e*P **P** **10 00 36.4 +0.7**
comp=Z,13nm,0.7s,mb4.4
TLY Talaya 33.65 320 *e*P **P** **10 00 36.5 +0.9**
TLY pmax pmax
comp=Z,17nm,0.8s,mb4.4
SEY Seymchan 34.04 11⇓ *iP* **P** **10 00 39.4 +0.6**
MOY Mondy 35.14 319 *e*P **P** **10 00 48.4 +0.1**
TLE Tual 35.96 190 P **P** **10 01 04.3 +8.7**
CHTO Chiang Mai 37.65 262 *e*P **P** **10 01 09.8 +0.3**
comp=Z,43nm,0.6s,mb5.0
CHTO Chiang Mai 37.65 262 *e*P **P** **10 01 09.8 +0.2**
CHTO pmax pmax
comp=Z,43nm,0.6s,mb5.0
CHTO Chiang Mai 37.65 262 P **P** **10 01 09.8 +0.2**
comp=Z,594nmcomp=Z,74nm,0.7s,mb5.1
CM31 Chiang Mai Arr 37.80 261 *e*P **P** **10 01 11.3 +0.5**
comp=Z,17nm,0.6s,mb4.5
CMAR Chiang Mai Arr 37.80 261 P **P** **10 01 10.9 +0.1**
comp=Z,10nm,0.5s,mb4.4,baz=60,slow=6.3,SNR=75
CMAR ScP ScP 10 06 21.8 -0.4
comp=Z,0.4nm,0.4s,baz=46,slow=5.2,SNR=6.3
NST Nakhon Sawan 38.05 257 P **P** **10 01 13.0 +0.1**
comp=Z,38nm,0.9s,mb4.7
KSM Kuching 39.14 229 *e*P **P** **10 01 22.8 +0.9**
comp=Z,25nm,0.7s,mb4.7
KSM Kuching 39.14 229 P **P** **10 01 22.9 +1.0**
comp=Z,36nm,0.8s,mb4.8
BILL Bilibino 41.33 15*c iP* **P** **10 01 38.6 -0.2**
BILL pmax pmax
comp=Z,23nm,1.2s,mb4.4
WMQ Urumqi 42.30 303 *e*P **P** **10 01 48.3 +1.4**
WMQ pP pP 10 03 13.3 +3.8
WMQ PcP PcP 10 03 32.5 +1.5
WMQ PP PP 10 03 37.3 +1.3
WMQ sP sP 10 04 02.3 +3.4
WMQ pmax pmax
comp=Z,25nm,0.7s,mb4.7
WMQ pmax pmax
comp=Z,96nm,4.4s
KAKA Kakadu 42.96 189 *e*P **P** **10 01 52.1 -0.3**
MYKOM Kota Tinggi 43.35 236 P **P** **10 01 56.4 +0.8**
comp=Z,22nm,0.8s,mb4.6
IPM Ipoh 43.66 242 *e*P **P** **10 01 57.5 -0.5**
comp=Z,26nm,0.6s,mb4.8
IPM Ipoh 43.66 242 P **P** **10 01 57.7 -0.3**
comp=Z,52nm,0.7s,mb5.0
NIKO Nikolski 44.27 43 *e*P **P** **10 02 00.7 -1.5**
comp=Z,61nm,0.4s,mb5.3
TAPN Taplejung 44.43 280 *e*P **P** **10 02 04.5 +0.6**
comp=Z,15nm,0.3s,mb4.8
ODAN Odare 44.84 279 *e*P **P** **10 02 07.5 +0.4**
comp=Z,80nm,0.7s,mb5.2
ZALV Zalesovo Beam 45.18 318 P **P** **10 02 08.1 -1.2**
comp=Z,8.7nm,0.4s,mb4.5,baz=100,slow=7.7,SNR=30
ZALV PcP PcP 10 03 39.4 -1.3
comp=Z,1.8nm,0.3s,baz=111,slow=3.2,SNR=4.3
ZALV ScP ScP 10 06 48.5 -2.6
comp=Z,3.8nm,0.6s,baz=108,slow=4.7,SNR=12
ZALV Zalesovo Beam 45.18 318 P **P** **10 02 08.1 -1.1**
ZALV 10 03 39.4
RAMN Ramite 45.49 279 *e*P **P** **10 02 12.6 +0.5**
SJI Sawahan 45.60 219 P **P** **10 02 12.0 -1.0**
comp=Z,35nm,0.6s,mb4.9
JIRN Jiri 45.65 281 *e*P **P** **10 02 14.4 +1.1**
comp=Z,100nm,0.3s,mb5.6
PWJI Pagerwojo 45.82 219 P **P** **10 02 13.1 -1.6**
comp=Z,36nm,0.7s,mb4.8
GUN Gumba 45.84 281 *e*P **P** **10 02 15.5 +0.7**
MK31 Makanchi Array 46.17 308 *e*P **P** **10 02 16.7 -0.2**
MK31 epP pP 10 03 44.0 +2.6
MK31 eScP ScP 10 06 53.1 -2.2
MK31 Makanchi Array 46.17 308 *e*P **P** **10 02 16.7 -0.2**
MK31 *e**PP pP 10 03 44.0 +2.7
MKAR Makanchi Array 46.17 308 P **P** **10 02 16.4 -0.5**
MKAR ScP ScP 10 06 53.3 -2.0
MKAR Makanchi Array 46.17 308 P **P** **10 02 16.4 -0.5**
comp=Z,6.1nm,0.5s,mb4.2,baz=92,slow=9.4,SNR=70
MKAR ScP ScP 10 06 53.3 -2.0
comp=Z,2.2nm,0.6s,baz=88,slow=3.8,SNR=10.0
NVS Novosibirsk 46.24 319 *e*P **P** **10 02 15.6 -1.7**
PKI Pulchoki 46.34 281 *e*P **P** **10 02 18.6 0.0**
PSI Prapat 46.34 242 P **P** **10 02 18.2 -0.5**
comp=Z,9.0nm,0.4s,mb4.4,baz=45,slow=10.0,SNR=13
KKN Kakani 46.38 281 *e*P **P** **10 02 19.2 +0.3**
DMN Daman 46.58 281 *e*P **P** **10 02 20.8 +0.4**
comp=Z,34nm,0.5s,mb5.0
GKN Gorkha 46.87 281 *e*P **P** **10 02 22.9 +0.3**
comp=Z,32nm,0.3s,mb5.2
MNSI Mandailing Nat 47.15 239 P **P** **10 02 24.5 -0.4**
comp=Z,44nm,0.5s,mb5.0
LEM Lembang 47.25 224 P **P** **10 02 25.7 +0.1**
comp=Z,96nm,0.8s,mb5.2
KLSI 47.42 229 P **P** **10 02 26.6 -0.3**
comp=Z,1μmcomp=Z,106nm,0.8s,mb5.2
DANN Dangsing 47.52 282 *e*P **P** **10 02 28.4 +0.8**
MDSI Maura Dua 47.63 230 P **P** **10 02 28.1 -0.4**
comp=Z,732nmcomp=Z,83nm,0.9s,mb5.0
KOLN Koldanda 47.82 282 *e*P **P** **10 02 30.5 +0.7**
TNA Tin City 48.07 27 *e*P **P** **10 02 30.9 -0.2**
comp=Z,11nm,0.9s,mb4.2
KURK Kurchatov 48.66 313 *e*P **P** **10 02 35.3 -0.5**
comp=Z,44nm,1.4s,mb4.6
KURK Kurchatov 48.66 313 P **P** **10 02 35.4 -0.4**
comp=Z,13nm,0.3s,mb4.7,baz=92,slow=7.5,SNR=54
KURK Kurchatov 48.66 313*d iP* **P** **10 02 35.1 -0.7**
KURK *i* *PP pP 10 04 02.0 +0.7
KURK pmax pmax
comp=Z,27nm,1.5s,mb4.4
FITZ Fitzroy Crossi 49.51 196 *e*P **P** **10 02 42.1 -0.4**
comp=Z,2.5nm,0.8s,mb3.6
WRA Warramunga Arr 49.91 185 P **P** **10 02 43.8 -1.5**
comp=Z,4.0nm,0.6s,mb3.9,baz=2.9,slow=7.8,SNR=88
WRA PcP PcP 10 03 57.0 -1.1
comp=Z,0.6nm,0.3s,baz=358,slow=4.1,SNR=5.5
WRA ScP ScP 10 07 08.9 -2.6
comp=Z,0.5nm,0.8s,baz=351,slow=3.3,SNR=4.4
WRA S **S** **10 09 16.8 -5.3**
comp=Z,1.3nm,0.9s,baz=2.9,slow=14,SNR=7.3
WRA Warramunga Arr 49.91 185 P **P** **10 02 43.8 -1.6**
WRA 10 03 57.0
WRA S **S** **10 09 16.8 -5.3**
WRA pmax pmax
comp=Z,4.0nm,0.6s
WRA smax
comp=N,1.0nm,0.9s
CHGN Chignik 50.68 40 *e*P **P** **10 02 49.3 -1.3**
ULHL Ulahol 50.77 302 P **P** **10 02 52.1 +0.6**
SNR=8.6
TKM2 Tokmak 2 51.15 303 P **P** **10 02 55.2 +0.9**
SNR=6.8
KSH Kashi 51.38 298⇓ *iP* **P** **10 02 59.5 +3.4**
KSH *e*PcP PcP 10 04 07.3 +3.7
KSH *e*pP pP 10 04 28.3 +5.5
KSH *e*PP PP 10 05 04.3 +5.8
KSH *e*sP sP 10 05 16.3 +5.4
KSH *e*ScP ScP 10 07 19.5 +1.7
KSH *e*PcS PcS 10 08 04.0 +1.9
KSH *e*S **S** **10 09 44.0 +2.2**
KSH *e*ScS ScS 10 12 00.5 +0.8
KSH *e*sS sS 10 12 21.8 +4.2
KSH *e*SS SS 10 13 28.0 +3.7
KSH pmax pmax
comp=Z,13nm,0.8s,mb4.2
KSH pmax pmax
comp=Z,64nm,9.1s
KZA Kyzart 51.52 302 P **P** **10 02 58.7 +1.6**
SNR=9.1
KZA Kyzart 51.52 302 *e*P **P** **10 02 58.4 +1.4**
comp=Z,11nm,0.8s,mb4.1
KBK Karagaybulak 51.66 303 P **P** **10 02 58.7 +0.7**
SNR=12
USP Ospenovka 51.90 303 P **P** **10 02 59.9 +0.1**
SNR=6.9
AAK Ala-Archa 51.99 303 P **P** **10 03 00.7 +0.3**
SNR=5.6
AAK Ala-Archa 51.99 303 *e*P **P** **10 03 00.6 +0.2**
comp=Z,7.5nm,0.5s,mb4.2
AAK Ala-Archa 51.99 303 P **P** **10 03 00.4 0.0**
comp=Z,5.7nm,0.4s,mb4.1,baz=118,slow=4.8,SNR=12
AAK Ala-Archa 51.99 303*d iP* **P** **10 03 00.3 -0.2**
AAK *i* *PP pP 10 04 29.3 +1.9
AAK pmax pmax
comp=Z,4.0nm,0.7s,mb3.8
AAK Ala-Archa 51.99 303 P **P** **10 03 00.5 0.0**
comp=Z,3.2nm,0.8s,mb3.6
TTA Tatalina 52.50 32 *e*P **P** **10 03 03.9 +0.1**
EKS2 Erkin-Say 52.51 303 P **P** **10 03 04.4 +0.2**
SNR=8.8
EKS2 Erkin-Say 52.51 303 *e*P **P** **10 03 04.0 -0.2**
comp=Z,2.9nm,0.5s,mb3.8
SVW2 Sparrevohn 52.52 34 *e*P **P** **10 03 04.8 +0.9**
comp=Z,19nm,0.9s,mb4.3
AML Almayashu 52.66 302 P **P** **10 03 06.6 +1.3**
SNR=23
AML Almayashu 52.66 302 *e*P **P** **10 03 06.4 +1.2**
comp=Z,20nm,0.6s,mb4.5
VOSK Vostochnaya 53.38 316 P **P** **10 03 09.3 -1.0**
VOSK pmax pmax
comp=Z,17nm,0.5s,mb4.5
OHAK Old Harbor 53.53 39 *e*P **P** **10 03 10.8 -0.4**
ASAR Alice Springs 53.63 185 P **P** **10 03 10.9 -1.5**
comp=Z,1.9nm,0.4s,mb3.7,baz=2.1,slow=6.0,SNR=95
ASAR ScP ScP 10 07 25.0 -2.6
comp=Z,0.2nm,0.4s,baz=4.3,slow=5.0,SNR=5.0
ASAR S **S** **10 10 06.9 -5.2**
comp=Z,0.1nm,0.3s,baz=280,slow=22,SNR=4.5
BVAR Borovoye Array 53.73 316 P **P** **10 03 12.3 -0.4**
comp=Z,31nm,0.4s,mb4.9,baz=94,slow=8.3,SNR=138
BVAR PcP PcP 10 04 11.7 -0.5
comp=Z,2.2nm,0.5s,baz=90,slow=7.2,SNR=4.8
BVAR ScP ScP 10 07 24.9 -2.8
comp=Z,1.1nm,0.5s,baz=90,slow=5.8,SNR=3.6
BVAR Borovoye Array 53.73 316 P **P** **10 03 12.3 -0.4**
BVAR 10 04 11.7
BRVK Borovoye 53.79 316 *e*P **P** **10 03 12.9 -0.3**
comp=Z,15nm,0.6s,mb4.4
BRVK Borovoye 53.79 316*d iP* **P** **10 03 12.8 -0.4**
BRVK pmax pmax
comp=Z,17nm,0.7s,mb4.4
RSO Redoubt South 53.86 35 *e*P **P** **10 03 13.8 +0.2**
KDAK Kodiak Island 53.91 38 P **P** **10 03 13.1 -0.8**
comp=Z,3nm,0.3s,mb4.4,baz=307,slow=5.1,SNR=23
KDAK Kodiak Island 53.91 38 *i* P **P** **10 03 13.1 -0.8**
PPLA Purkeypile 54.24 32 *e*P **P** **10 03 16.8 +0.5**
comp=Z,16nm,0.7s,mb4.3
ZRNK Zerenda 54.56 316 P **P** **10 03 18.1 -0.6**
ZRNK pmax pmax
comp=Z,16nm,0.4s,mb4.6
KK31 Karatay Array 54.81 304 *e*P **P** **10 03 20.3 -0.3**
KK31 pmax pmax
comp=Z,11nm,0.4s,mb4.4
KKAR Karatay Array 54.81 304 *e*P **P** **10 03 20.4 -0.2**
comp=Z,15nm,0.5s,mb4.5
KKAR Karatay Array 54.81 304 *e*P **P** **10 03 20.5 -0.1**
KKAR pmax pmax
comp=Z,15nm,0.5s,mb4.5
BPAW Bear Paw Mtn. 54.84 30 *e*P **P** **10 03 20.4 -0.1**
comp=Z,12nm,0.6s,mb4.3
TRF Thorofare Moun 55.13 31 *e*P **P** **10 03 22.6 +0.2**
comp=Z,7.9nm,0.5s,mb4.2
RC01 Rabbit Creek A 55.35 34 *e*P **P** **10 03 23.6 -0.5**
comp=Z,20nm,1.0s,mb4.3
COLD Coldfoot 55.37 27 *e*P **P** **10 03 24.4 +0.3**
comp=Z,10nm,1.3s,mb3.9
SEW Seward 55.51 35 *e*P **P** **10 03 24.1 -1.1**
comp=Z,18nm,0.8s,mb4.5
PMR Palmer 55.64 33 *e*P **P** **10 03 25.5 -0.6**
comp=Z,22nm,0.8s,mb4.5
PMR Palmer 55.64 33 *e*P **P** **10 03 25.5 -0.6**
PMR pmax pmax
comp=Z,22nm,0.8s,mb4.5
MCK McKinley 55.74 31 *e*P **P** **10 03 26.2 -0.6**
comp=Z,32nm,1.0s,mb4.6
MCK McKinley 55.74 31 *e*P **P** **10 03 26.2 -0.6**
MCK pmax pmax
comp=Z,32nm,1.0s,mb4.6
SML Sawmill 56.02 33 *e*P **P** **10 03 28.1 -0.6**
comp=Z,6.4nm,0.9s,mb4.0
SML Sawmill 56.02 33 *e*P **P** **10 03 28.1 -0.6**
SML pmax pmax
comp=Z,6.0nm,0.9s,mb3.9
COLA College 56.23 30 *e*P **P** **10 03 29.5 -0.6**
comp=Z,11nm,0.8s,mb4.2
COLA College 56.23 30 *e*P **P** **10 03 29.5 -0.6**
COLA pmax pmax
comp=Z,11nm,0.8s,mb4.2
ILAR Eielson Array 56.64 30 P **P** **10 03 31.3 -1.6**
comp=Z,5.8nm,0.6s,mb4.1,baz=262,slow=5.0,SNR=119
ILAR Eielson Array 56.64 30 P **P** **10 03 31.3 -1.7**
PAX Paxson 57.31 32 *e*P **P** **10 03 37.3 -0.4**
comp=Z,8.7nm,0.8s,mb4.1
PAX Paxson 57.31 32 *e*P **P** **10 03 37.3 -0.4**
PAX pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
BMRM Bremner River 57.85 34 *e*P **P** **10 03 41.3 -0.1**
comp=Z,14nm,0.4s,mb4.6
DOT Dot Lake 57.91 31 *e*P **P** **10 03 41.2 -0.6**
comp=Z,72nm,0.8s,mb5.0
KBL Kabul 57.91 294 *e*P **P** **10 03 42.0 -0.3**
comp=Z,9.0nm,0.8s,mb4.2
KBL Kabul 57.91 294 *e*P **P** **10 03 42.0 -0.3**
KBL pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
MENT Mentasta 58.11 32 *e*P **P** **10 03 43.6 +0.4**
SVE Sverdlovsk 58.95 321 *e*P **P** **10 03 48.4 -0.5**
SVE pmax pmax
comp=Z,19nm,0.9s,mb4.4
EGAK Eagle 59.09 29 *e*P **P** **10 03 48.9 -0.9**
comp=Z,8.1nm,0.6s,mb4.2
DAWY Dawson 59.93 30 *e*P **P** **10 03 55.1 -0.3**
ARU Arti 60.14 321 *e*P **P** **10 03 56.3 -0.6**
comp=Z,22nm,0.6s,mb4.8
ARU Arti 60.14 321*d iP* **P** **10 03 56.4 -0.6**
ARU *e* 10 06 12.3
ARU S **S** **10 11 35.2 -0.3**
ARU SS SS 10 15 36.5 -4.5
ARU pmax pmax
comp=Z,20nm,0.6s,mb4.7
PNL Peninsula 60.59 35 *e*P **P** **10 03 59.9 +0.1**
comp=Z,12nm,0.8s,mb4.4
AB31 Akbulak array 60.77 313 *e*P **P** **10 04 00.3 -1.0**
AB31 pmax pmax
comp=Z,20nm,0.4s,mb4.9
ABKAR Akbulak array 60.77 313 *e*P **P** **10 04 00.9 -0.4**
comp=Z,20nm,0.4s,mb4.9
FORT Forrest 61.35 190 *e*P **P** **10 04 04.7 -0.5**
comp=Z,16nm,0.6s,mb4.6
INK Inuvik 61.64 25 *e*P **P** **10 04 06.0 -0.7**
comp=Z,4.0nm,0.4s,mb4.3
INK Inuvik 61.64 25 *e*P **P** **10 04 06.0 -0.7**
INK pmax pmax
comp=Z,4.0nm,0.4s
STKA Stephens Creek 61.69 177 P **P** **10 04 06.0 -1.4**
comp=Z,1.0nm,0.4s,mb3.7,baz=0.0,slow=4.0,SNR=4.0
AKTK Aktyubinsk 61.71 314 P **P** **10 04 06.3 -1.1**
AKTO Aktyubinsk 61.71 314 P **P** **10 04 06.3 -1.1**
comp=Z,14nm,0.6s,mb4.7,baz=84,slow=13,SNR=32
AKTO Aktyubinsk 61.71 314 P **P** **10 04 06.6 -0.9**
AKTO pmax pmax
comp=Z,2.0nm,0.6s,mb3.8
SKAG Skagway 62.66 35 *e*P **P** **10 04 13.9 +0.4**
comp=Z,6.6nm,0.5s,mb4.4
DLBC Dease Lake 65.58 35 *e*P **P** **10 04 32.4 +0.1**
NWAO Narrogin (SRO) 65.86 200 P **P** **10 04 33.0 -1.3**
comp=Z,9.2nm,0.6s,mb4.8,baz=26,slow=6.9,SNR=6.6
ARCES ARCESS Array B 69.68 340 P **P** **10 04 57.1 -0.2**
comp=Z,3.9nm,0.5s,mb4.2,baz=72,slow=8.6,SNR=35
YKA Yellowknife Ar 71.00 28 P **P** **10 05 04.1 -1.1**
comp=Z,4.7nm,0.6s,mb4.2,baz=297,slow=6.1,SNR=10
JOF Joensuu 71.01 332 *e*P **P** **10 05 03.8 -1.5**

JOF pmax pmax
comp=Z,10.0nm,0.5s,mb4.6
JOF Joensuu 71.01 332 *ep* **P 10 05 03.8 -1.5**
comp=Z,10nm,0.5s,mb4.6
VRHR Novokhopersk 71.30 319 *eP* **P 10 05 05.7 -1.6**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
VRHR pmax pmax
comp=E,4.0nm,0.3s
OBN Obninsk 72.29 324 ⇑ *iP* **P 10 05 12.4 -0.6**
OBN pmax pmax
comp=Z,14nm,0.8s,mb4.5
VSR Storozhevoye 72.65 319 *eP* **P 10 05 14.2 -0.9**
VSR pmax pmax
comp=N,2.0nm,0.5s
VSR pmax pmax
comp=E,7.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb4.6
VORD Divnogorie 72.69 319 *eP* **P 10 05 14.5 -0.9**
VORD pmax pmax
comp=N,80nm,0.7s
VORD pmax pmax
comp=E,120nm,0.7s
VORD pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
KAF Kangasniemi 73.41 333 *eP* **P 10 05 15.9 -3.4**
KAF pmax pmax
comp=Z,6.0nm,0.4s,mb4.5
KAF Kangasniemi 73.41 333 *ep* **P 10 05 15.9 -3.4**
comp=Z,6.1nm,0.4s,mb4.5
ZEI Tsey 73.44 310 *eP* **P 10 05 18.3 -1.6**
ZEI pmax pmax
comp=Z,10.0nm,0.4s,mb4.7
A05A Maple Falls 73.56 43 ⇓ P **P 10 05 20.7 +0.3**
baz=73
E03A Lebam 73.77 45 ⇑ P **P 10 05 21.5 -0.2**
baz=74
FINES FINESS Array B 73.87 332 P **P 10 05 21.1 -0.9**
comp=Z,6.2nm,0.3s,mb4.7,baz=63,slow=5.0,SNR=30
GNI Garni 74.01 307 ⇑ *eP* **P 10 05 23.8 +0.6**
GNI pmax pmax
comp=Z,10.0nm,1.2s
F03A Seaside 74.05 46 ⇓ P **P 10 05 23.5 +0.2**
baz=74
B06A Marblemount 74.13 43 ⇓ P **P 10 05 23.8 +0.1**
baz=74
D05A Enumclaw 74.44 44 ⇓ P **P 10 05 26.2 +0.7**
baz=74
TDL Tradedollar La 74.69 45 P **P 10 05 27.6 +0.6**
ETW Entiat 75.24 43 *eP* **P 10 05 29.9 -0.1**
comp=Z,11nm,0.5s,mb4.7
TDH Tom, Dick, Har 75.44 46 P **P 10 05 31.6 +0.4**
B08A Colville Reser 75.47 42 ⇑ P **P 10 05 31.1 -0.2**
baz=75,SNR=16
H04A Detroit Lake 75.48 47 ⇓ P **P 10 05 31.7 +0.3**
baz=75
HOOD Mount Hood Mea 75.52 46 *eP* **P 10 05 32.0 +0.4**
comp=Z,12nm,0.7s,mb4.6
IRO Indian Ridge 75.75 47 P **P 10 05 33.2 +0.3**
E07A Sunnyside 76.03 44 ⇓ P **P 10 05 35.0 +0.5**
baz=76
G06A Carlson Farm, 76.19 46 ⇑ P **P 10 05 35.6 +0.3**
baz=76
HAWA Hanford 76.30 44 *eP* **P 10 05 34.6 -1.3**
comp=Z,6.2nm,1.0s,mb4.2
OD2 Odessa Site #2 76.31 43 P **P 10 05 35.7 -0.3**
D08A Wollman Farm, 76.34 43 ⇑ P **P 10 05 36.0 -0.2**
baz=76,SNR=9.5
C09A Chrisman Ranch 76.36 43 ⇑ P **P 10 05 36.0 -0.2**
baz=76,SNR=8.4
UMR Umm Al-Rimmam 76.53 296 *eP* **P 10 05 36.5 -1.1**
UMR AMb AMB 10 05 37.2
comp=Z,46nm,0.5s,mb5.4
VIPM Ingram Point 76.55 46 P **P 10 05 37.7 +0.4**
ANN Anapa 76.67 314 *eP* **P 10 05 36.3 -1.7**
ANN *eS* S 10 14 43.3 -5.0
ANN pmax pmax
comp=Z,32nm,1.3s,mb4.8
MIB Mutribah 76.71 297 *eP* **P 10 05 37.5 -1.0**
MIB AMb AMB 10 05 38.5
comp=Z,62nm,0.7s,mb5.3
QRN Al-Qurain 76.74 296 *eP* **P 10 05 37.5 -1.2**
QRN AMb AMB 10 05 38.6
comp=Z,31nm,0.5s,mb5.2
NEW Newport 76.80 42 ⇑ P **P 10 05 38.4 -0.3**
baz=76,SNR=14
NEW Newport 76.80 42 *eP* **P 10 05 38.2 -0.5**
comp=Z,12nm,1.1s,mb4.4
NEW Newport 76.80 42 *eP* **P 10 05 38.2 -0.5**
NEW pmax pmax
comp=Z,12nm,1.1s
NAY Al-Naaiem 77.04 296 *eP* **P 10 05 39.4 -1.0**
NAY AMb AMB 10 05 40.0
comp=Z,31nm,0.9s,mb4.9
E09A Wood Farm, Sta 77.08 44 ⇓ P **P 10 05 40.2 0.0**
baz=77,SNR=5.9
G08A Pilot Rock 77.19 45 ⇓ P **P 10 05 40.8 -0.1**
baz=77
K05A Summer Lake 77.24 48 ⇑ P **P 10 05 41.9 +0.7**
baz=77
A12A Yaak River Ran 77.29 41 ⇓ P **P 10 05 41.8 +0.4**
baz=77
I07A Izee 77.45 46 ⇓ P **P 10 05 42.6 +0.3**
baz=77
B12A Libby 77.57 41 ⇓ P **P 10 05 43.1 +0.2**
baz=77
SUMG Summit 77.60 359 *eP* **P 10 05 43.0 +0.5**
comp=Z,4.6nm,0.7s,mb4.2
F10A Beach Ranch, E 77.90 44 ⇑ P **P 10 05 44.5 -0.3**
baz=78
A13A Flathead Natio 77.99 40 ⇑ P **P 10 05 45.3 +0.1**
baz=78
MOD Modoc 78.02 48 *eP* **P 10 05 45.2 -0.3**
comp=Z,5.2nm,0.8s,mb4.2
C12B Naegeli Ranch, 78.03 42 ⇑ P **P 10 05 45.5 +0.1**
baz=78
WALA Waterton Lakes 78.20 40 *eP* **P 10 05 46.0 -0.2**
comp=Z,0.3nm,0.7s
BSMT Bassoo Peak 78.35 41 P **P 10 05 47.5 +0.4**
AKASG Malin Array Be 78.35 322 P **P 10 05 45.7 -1.3**
comp=Z,3.4nm,0.4s,mb4.3,baz=52,slow=5.4,SNR=17
AKASG Malin Array Be 78.35 322 *ceP* **P 10 05 46.0 -1.1**
AKASG pmax pmax
comp=Z,3.0nm,0.4s
KIEV Kiev 78.36 322 *eP* **P 10 05 46.0 -1.1**
comp=Z,4.2nm,0.6s,mb4.2
KIEV Kiev 78.36 322 *eP* **P 10 05 46.0 -1.1**
KIEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
D12A Red Ives Fores 78.45 42 ⇓ P **P 10 05 47.4 -0.3**
baz=78
J08A Circle Bar Ran 78.46 47 ⇑ P **P 10 05 48.3 +0.5**
baz=78
A14A Double T Ranch 78.52 40 ⇓ P **P 10 05 48.0 -0.1**
baz=78,SNR=8.7
C13A Hot Springs 78.56 41 ⇑ P **P 10 05 48.5 +0.2**
baz=78
WVOR Wild Horse Val 78.83 47 *eP* **P 10 05 50.0 +0.1**
comp=Z,6.3nm,0.8s,mb4.3
WVOR Wild Horse Val 78.83 47 *eP* **P 10 05 50.0 +0.2**
WVOR pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
A15A Johnson Ranch, 78.90 40 ⇓ P **P 10 05 49.6 -0.4**
baz=79,SNR=18
B14A Marquette Ranc 78.93 40 ⇓ P **P 10 05 50.5 +0.2**
baz=79
D13A Huson 78.94 42 ⇓ P **P 10 05 49.8 -0.5**
baz=79
SWMT Swartz Lake 78.98 41 *eP* **P 10 05 50.5 0.0**
comp=Z,3.5nm,0.6s,mb4.2
F12A Elk City 79.19 43 ⇑ P **P 10 05 51.6 -0.1**
baz=79,SNR=17
MALT Malatya 79.20 308 P **P 10 05 52.7 +0.8**
B15A Bradely Ranch, 79.36 40 ⇓ P **P 10 05 52.4 -0.1**
baz=79,SNR=8.4
MSO Missoula 79.38 42 ⇓ P **P 10 05 52.9 +0.2**
baz=79
SLMT Seeley Lake 79.42 41 *eP* **P 10 05 52.6 -0.2**
comp=Z,19nm,0.5s,mb5.0
E13A Victor 79.45 42 ⇓ P **P 10 05 53.1 +0.1**
baz=79
D14A Greenough 79.50 41 ⇓ P **P 10 05 52.7 -0.6**
baz=79,SNR=7.4
A16A West Butte Ran 79.54 39 ⇑ P **P 10 05 53.3 -0.2**
baz=79
C15A Salmond Ranch, 79.63 40 ⇑ P **P 10 05 54.0 +0.1**
baz=79,SNR=20
NOA NORSAR Array B 79.66 337 P **P 10 05 52.5 -1.4**
comp=Z,3.3nm,0.5s,mb4.2,baz=46,slow=5.0,SNR=12
WCN Washoe City 79.68 51 ⇑ P **P 10 05 54.7 +0.2**
baz=80
F13A Darby 79.72 43 ⇑ P **P 10 05 53.6 -0.9**
baz=80,SNR=7.7
CHMT Chamberlain Mo 79.73 41 *eP* **P 10 05 54.2 -0.4**
comp=Z,2.3nm,0.6s,mb4.0
B16A M & M Farms, S 79.78 40 ⇑ P **P 10 05 54.4 -0.3**
baz=80
E14A Clinton 79.87 42 ⇑ P **P 10 05 55.0 -0.3**
baz=80
CMB Columbia Colle 79.89 52 *eP* **P 10 05 55.0 -0.6**
comp=Z,7.7nm,0.9s,mb4.3
CMB Columbia Colle 79.89 52 *eP* **P 10 05 55.0 -0.6**
CMB pmax pmax
comp=Z,8.0nm,0.9s,mb4.3
A17A Triple J Farms 80.03 39 ⇑ P **P 10 05 55.8 -0.3**
baz=80,SNR=13
H12A Diamond D Ranc 80.07 44 ⇓ P **P 10 05 56.2 -0.2**
baz=80,SNR=10
D15A Lincoln 80.08 41 ⇓ P **P 10 05 55.7 -0.7**
baz=80
MFID Camas Ranch 80.08 45 ⇓ P **P 10 05 56.4 0.0**
baz=80,SNR=6.6
C16A Fuhringer Ranc 80.10 40 ⇓ P **P 10 05 56.0 -0.4**
baz=80,SNR=19
G13A Cobalt 80.15 43 ⇑ P **P 10 05 56.0 -0.8**
baz=80,SNR=5.3
F14A Wisdom 80.27 42 ⇑ P **P 10 05 57.0 -0.4**
baz=80
WAKR Walker 80.30 51 *eP* **P 10 05 57.7 0.0**
comp=Z,6.2nm,0.9s,mb4.2
I12A Atlanta 80.31 45 ⇑ P **P 10 05 57.6 0.0**
baz=80,SNR=7.1
B17A L&G Farms, Che 80.34 39 ⇓ P **P 10 05 57.6 -0.1**
baz=80,SNR=29
E15A Deer Lodge 80.36 42 ⇑ P **P 10 05 57.7 -0.1**
baz=80,SNR=12
H13A Challis 80.43 44 ⇑ P **P 10 05 58.1 -0.1**
baz=80,SNR=14
A18A Metzger Ranch, 80.50 38 ⇑ P **P 10 05 58.3 -0.3**
baz=80
D16A Dana Ranch, Ca 80.64 41 ⇑ P **P 10 05 59.0 -0.3**
baz=80,SNR=5.6
C17A Wharram Farm, 80.74 40 ⇑ P **P 10 05 59.0 -0.8**
baz=80,SNR=7.8
F15A Butte 80.77 42 ⇑ P **P 10 06 00.1 +0.1**
baz=80,SNR=22
LRM Limekiln Ridge 80.80 42 *eP* **P 10 06 00.3 +0.1**
comp=Z,100nm,0.9s,mb5.5
FFC Flin Flon 80.83 31 *i P* **P 10 05 59.7 -0.4**
B18A Beardsley Farm 80.84 39 ⇓ P **P 10 06 00.2 -0.2**
baz=81,SNR=13
E16A East Helena 80.85 41 ⇓ P **P 10 06 00.5 +0.1**
baz=81,SNR=6.7
I13A Wildhorse Cree 80.86 44 ⇑ P **P 10 06 01.1 +0.5**
baz=81,SNR=11
HLID Hailey 80.87 45 ⇑ P **P 10 06 01.0 +0.4**
baz=81,SNR=7.5
HLID Hailey 80.87 45 *eP* **P 10 06 00.7 0.0**
comp=Z,3.8nm,0.9s,mb4.1
DLMT Dillon 80.97 43 *eP* **P 10 06 00.8 -0.2**
comp=Z,12nm,0.9s,mb4.6
D17A Six Diamond Ra 81.06 40 ⇓ P **P 10 06 01.5 0.0**
baz=81,SNR=11
EGMT Eagleton 81.07 39 ⇑ P **P 10 06 01.3 -0.2**
baz=81,SNR=10
EGMT Eagleton 81.07 39 *eP* **P 10 06 01.3 -0.2**
comp=Z,16nm,1.0s,mb4.7
NVAR Mina Array Bea 81.10 51 P **P 10 06 01.9 0.0**
comp=Z,3.7nm,0.5s,mb4.4,baz=294,slow=5.8,SNR=54
J13A Cove Ranch, Pi 81.11 45 ⇑ P **P 10 06 02.1 +0.2**
baz=81,SNR=13
G15A Dillon 81.14 43 ⇑ P **P 10 06 01.8 -0.2**
baz=81,SNR=15
FOO Floro 81.23 339 *i P* **P 10 05 58.1 -4.0**
I14A Mackay 81.26 44 ⇑ P **P 10 06 03.1 +0.5**
baz=81,SNR=36
F16A Kennard Place, 81.30 42 ⇑ P **P 10 06 02.8 +0.1**
baz=81,SNR=18
E17A Martinsdale 81.35 41 ⇓ P **P 10 06 03.4 +0.4**
baz=81,SNR=15
H15A Lima 81.36 43 ⇓ P **P 10 06 02.8 -0.3**
baz=81
BOZ Bozeman (W) 81.38 42 ⇓ P **P 10 06 03.2 +0.1**
baz=81,SNR=15
BOZ Bozeman (W) 81.38 42 *eP* **P 10 06 03.0 -0.1**
comp=Z,4.8nm,0.7s,mb4.3
BOZ Bozeman (W) 81.38 42 *eP* **P 10 06 03.0 -0.2**
BOZ pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
G16A Moss Hill, Enn 81.51 42 ⇓ P **P 10 06 03.9 0.0**
baz=81,SNR=9.1
D18A Linhart Farms, 81.52 40 ⇑ P **P 10 06 03.8 -0.1**
baz=81,SNR=6.6
J14A Carey 81.55 45 ⇑ P **P 10 06 04.9 +0.8**
baz=81,SNR=13
C19A Slack Wire Ran 81.63 39 ⇑ P **P 10 06 04.4 0.0**
baz=81,SNR=10
BR131 Keskin Array S 81.68 311 *eP* **P 10 06 04.5 -0.4**
BRTR Keskin Array B 81.68 311 P **P 10 06 04.3 -0.5**
comp=Z,11nm,0.9s,mb4.6,baz=97,slow=3.7,SNR=44
BRTR Keskin Array B 81.68 311 *ceP* **P 10 06 04.8 -0.1**
BRTR pmax pmax
comp=Z,11nm,0.9s
F17A Fitzpatrick Pl 81.79 41 ⇑ P **P 10 06 05.4 +0.2**
baz=82,SNR=8.6
I15A Monteview 81.80 44 ⇑ P **P 10 06 05.8 +0.4**
baz=82
E18A Harlowton 81.83 40 ⇑ P **P 10 06 05.7 +0.3**
baz=82,SNR=15
PKM Peak Mountain 81.88 54 ⇑ P **P 10 06 06.0 0.0**
baz=82
VES Vestal, Richgr 81.91 53 ⇑ P **P 10 06 05.3 -0.8**
baz=82
G17A Pierce Place, 82.08 42 ⇓ P **P 10 06 07.2 +0.5**
baz=82,SNR=8.0
H16A Russell Place, 82.13 43 ⇓ P **P 10 06 07.6 +0.5**
baz=82,SNR=8.0
J15A Blackfoot 82.17 44 ⇑ P **P 10 06 07.9 +0.6**
baz=82,SNR=6.8
K14A Jones Ranch, D 82.19 45 ⇑ P **P 10 06 07.9 +0.5**
baz=82,SNR=6.2
P11A Circle Ranch, 82.19 49 ⇓ P **P 10 06 07.9 +0.4**
baz=82
CWC Cottonwood Cre 82.29 52 ⇑ P **P 10 06 07.6 -0.4**
baz=82
F18A Big Timber 82.32 41 ⇓ P **P 10 06 08.0 0.0**
baz=82,SNR=16
ISA Isabella 82.42 53 ⇑ P **P 10 06 08.1 -0.7**
baz=82
ISA Isabella 82.42 53 *eP* **P 10 06 08.0 -0.8**
comp=Z,2.8nm,0.6s,mb4.2
ISA Isabella 82.42 53 *eP* **P 10 06 08.0 -0.8**
ISA pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
L14A Malta 82.44 46 ⇓ P **P 10 06 09.1 +0.5**
baz=82,SNR=9.3
ARVC Arvin 82.46 54 ⇓ P **P 10 06 08.6 -0.3**
baz=82
O12A Currie 82.46 48 ⇓ P **P 10 06 09.3 +0.4**
baz=82,SNR=20
I16A Newdale 82.46 43 ⇓ P **P 10 06 09.7 +0.9**
baz=82,SNR=9.2
GRAC Grapevine Rang 82.48 52 ⇓ P **P 10 06 09.0 -0.1**
baz=82,SNR=8.4
D20A Manuel Ranch, 82.51 39 ⇓ P **P 10 06 08.9 -0.1**
baz=82,SNR=13
K15A Arbon 82.51 45 ⇑ P **P 10 06 09.4 +0.4**
baz=82
R10A Warm Springs 82.51 50 ⇑ P **P 10 06 09.1 -0.1**
baz=82,SNR=7.4
S10A Tonopah Range, 82.51 50 ⇓ P **P 10 06 09.1 0.0**
baz=82,SNR=15
YFT Old Faithful 82.52 43 *eP* **P 10 06 11.5 +2.4**
comp=Z,12nm,0.8s,mb4.7
E19A Rath Farm, Rou 82.52 40 ⇑ P **P 10 06 08.8 -0.2**
baz=82,SNR=14
Q11A Duckwater 82.64 49 ⇑ P **P 10 06 09.5 -0.3**
baz=82,SNR=5.3
G18A Lazy EL Ranch, 82.75 41 ⇑ P **P 10 06 10.1 -0.1**
baz=82
IMW Indian Meadow 82.78 43 *eP* **P 10 06 11.0 +0.7**
comp=Z,7.7nm,0.7s,mb4.5
F19A Roth Farm, Mol 82.79 41 ⇑ P **P 10 06 10.4 0.0**
baz=82
FLWY Flagg Ranch 82.81 43 *eP* **P 10 06 11.7 +1.1**
comp=Z,10nm,0.9s,mb4.5
BLG Laguna Peak 82.82 55 ⇓ P **P 10 06 10.6 -0.2**
baz=83
E20A Meyer Farm, Mu 82.86 40 ⇑ P **P 10 06 10.4 -0.4**
baz=83,SNR=5.0
RRI2 Red Ridge 82.86 44 *eP* **P 10 06 11.3 +0.5**
comp=Z,4.9nm,0.7s,mb4.3
MPMC Manual Prospec 82.90 52 ⇑ P **P 10 06 10.9 -0.2**
baz=83,SNR=14
R11A Troy Canyon, C 82.95 50 ⇓ P **P 10 06 11.3 -0.1**
baz=83,SNR=9.5
MOOW Moose Ponds 82.98 43 *eP* **P 10 06 11.7 +0.3**
comp=Z,2.2nm,0.7s,mb4.0
I17A Pilgrim Ck. 82.98 43 ⇑ P **P 10 06 12.0 +0.6**
baz=83
L15A Malad City 82.98 45 ⇓ P **P 10 06 11.7 +0.3**
baz=83,SNR=12
K16A Soda Springs 83.00 44 ⇓ P **P 10 06 12.3 +0.8**
baz=83,SNR=8.9
TPAW Teton Pass 83.00 43 *eP* **P 10 06 12.0 +0.5**
comp=Z,6.2nm,0.7s,mb4.5
O13A Hicks Ranch, I 83.02 47 ⇓ P **P 10 06 11.9 +0.2**
baz=83
RLMT Red Lodge 83.04 41 ⇑ P **P 10 06 12.2 +0.5**
baz=83,SNR=12
RLMT Red Lodge 83.04 41 *eP* **P 10 06 12.0 +0.4**
comp=Z,4.6nm,0.4s,mb4.6
Q12A Willow Creek R 83.08 49 ⇑ P **P 10 06 12.2 +0.2**
baz=83,SNR=5.2
FURC Furnace Creek, 83.11 52 ⇑ P **P 10 06 12.0 -0.2**
baz=83,SNR=18
REDW Red Top Meadow 83.14 43 *eP* **P 10 06 12.4 +0.2**
comp=Z,3.8nm,1.0s,mb4.1
SNOW Snow King Moun 83.14 43 *eP* **P 10 06 12.8 +0.6**
comp=Z,4.2nm,0.6s,mb4.3
LOHW Long Hollow 83.14 43 *eP* **P 10 06 12.7 +0.4**
comp=Z,3.3nm,0.7s,mb4.2
D21A La Casta Ranch 83.14 39 ⇓ P **P 10 06 11.9 -0.3**
baz=83,SNR=5.1
EDW2 Edwards Air Fo 83.17 54 ⇓ P **P 10 06 12.4 -0.1**
baz=83,SNR=11
J17A Brown Place, J 83.22 43 ⇑ P **P 10 06 12.9 +0.3**
baz=83
S11A Rachel 83.23 50 ⇑ P **P 10 06 13.0 +0.2**
baz=83,SNR=7.2
M15A Larsen Ranch, 83.25 46 ⇑ P **P 10 06 12.9 +0.2**
baz=83,SNR=7.7
F20A Billings 83.27 40 ⇑ P **P 10 06 13.4 +0.6**
baz=83
P13A Bates Ranch, G 83.38 48 ⇓ P **P 10 06 13.6 +0.1**
baz=83,SNR=6.2
E21A Keefer Ranch, 83.42 39 ⇓ P **P 10 06 13.3 -0.3**
baz=83
U10A Ash Meadows, A 83.50 52 ⇑ P **P 10 06 14.5 +0.3**
baz=83,SNR=8.2
N15A Stansbury Isla 83.52 46 ⇑ P **P 10 06 14.5 +0.3**
baz=83,SNR=12
I18A Diamond G Ranc 83.55 43 ⇓ P **P 10 06 14.5 +0.2**
baz=83
L16A Fish Haven 83.56 45 ⇑ P **P 10 06 14.6 +0.3**
baz=83,SNR=8.9
G20A Bridger 83.58 41 ⇓ P **P 10 06 13.8 -0.6**
baz=83,SNR=5.0
R12A Pony Springs, 83.61 49 ⇑ P **P 10 06 14.6 -0.1**
baz=83
Q13A Wheeler Ranch, 83.65 48 ⇑ P **P 10 06 15.0 +0.1**
baz=83
CIS Catalina Islan 83.66 55 ⇓ P **P 10 06 14.8 -0.2**
baz=84
HWUT Hardware Ranch 83.71 45 *eP* **P 10 06 15.5 +0.3**
comp=Z,15nm,0.8s,mb4.8
J18A Kendall Valley 83.72 43 ⇑ P **P 10 06 15.3 +0.2**
baz=84,SNR=20
DUG Dugway 83.73 47 ⇑ P **P 10 06 15.5 +0.2**
baz=84,SNR=15
DUG Dugway 83.73 47 *eP* **P 10 06 15.2 -0.1**
comp=Z,4.3nm,0.5s,mb4.4
DUG Dugway 83.73 47 *eP* **P 10 06 15.2 -0.1**
DUG pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
BFSC Mount Baldy Ra 83.74 54 ⇑ P **P 10 06 15.1 -0.3**
baz=84
GSC Goldstone 83.77 53 ⇑ P **P 10 06 15.3 -0.2**
baz=84,SNR=11
GSC Goldstone 83.77 53 *eP* **P 10 06 15.2 -0.4**
comp=Z,12nm,0.9s,mb4.6
GSC Goldstone 83.77 53 *eP* **P 10 06 15.2 -0.4**
GSC pmax pmax
comp=Z,12nm,0.9s,mb4.6
LAO LASA Array 83.80 39 ⇓ P **P 10 06 15.5 +0.1**
baz=84
LAO LASA Array 83.80 39 *eP* **P 10 06 15.1 -0.4**
comp=Z,6.3nm,1.0s,mb4.3
SHOC Shoshone 83.81 52 ⇑ P **P 10 06 15.4 -0.3**
baz=84
M16A Huntsville 83.84 45 ⇑ P **P 10 06 15.8 +0.1**
baz=84,SNR=10
O15A The Old Anders 83.90 47 ⇓ P **P 10 06 16.0 -0.1**
baz=84
P14A Drum Mountains 83.91 48 ⇑ P **P 10 06 16.3 +0.2**
baz=84,SNR=18
K18A Toltan Ranch, 84.04 44 ⇑ P **P 10 06 17.0 +0.3**
baz=84,SNR=10
Q14A Sevier Lake (B 84.11 48 ⇑ P **P 10 06 17.3 +0.1**
baz=84,SNR=14
R13A O'Grain Ranch, 84.11 49 ⇓ P **P 10 06 17.3 +0.1**
baz=84
H20A Greybull 84.14 41 ⇑ P **P 10 06 17.2 0.0**
baz=84
G21A Lodge Grass 84.14 40 ⇓ P **P 10 06 16.7 -0.5**
baz=84
N16A Rees Ranch, Co 84.20 46 ⇑ P **P 10 06 17.6 0.0**
baz=84
SHPR Sheep Range 84.24 51 *eP* **P 10 06 18.5 +0.6**
comp=Z,7.3nm,1.1s,mb4.3
BBRC Big Bear Solar 84.25 54 ⇑ P **P 10 06 17.6 -0.3**
baz=84
BW06 Boulder Array 84.25 43 ⇓ P **P 10 06 17.5 -0.3**
baz=84,SNR=7.7
BW06 Boulder Array 84.25 43 *eP* **P 10 06 17.4 -0.4**
comp=Z,4.3nm,0.8s,mb4.2
PDAR Pinedale Array 84.25 43 P **P 10 06 17.2 -0.6**
comp=Z,3.7nm,0.8s,mb4.2,baz=306,slow=3.1,SNR=31
TUQ Turquoise Moun 84.31 52 ⇑ P **P 10 06 18.0 -0.2**
baz=84,SNR=7.4
M17A Scullys Gap (B 84.34 45 ⇑ P **P 10 06 18.3 +0.1**
baz=84,SNR=9.9
HEC Hector,Ludlow 84.35 53 ⇑ P **P 10 06 18.2 -0.3**
baz=84,SNR=9.8
JLU Jordanelle 84.36 46 *eP* **P 10 06 18.7 +0.4**
comp=Z,4.6nm,0.7s,mb4.3
I20A Worland 84.39 42 ⇓ P **P 10 06 18.5 +0.1**
baz=84,SNR=10
MURC Murrieta 84.41 54 ⇓ P **P 10 06 18.3 -0.4**
baz=84
T12A Moapa 84.42 51 ⇓ P **P 10 06 18.3 -0.5**
baz=84
V11A Goodsprings 84.42 52 ⇓ P **P 10 06 18.9 +0.1**
baz=84,SNR=5.8
L18A Fontenelle, Gr 84.46 44 ⇑ P **P 10 06 18.9 0.0**
baz=84,SNR=6.1
S13A Holt Ranch, En 84.52 50 ⇓ P **P 10 06 19.3 +0.1**
baz=84,SNR=11
N17A Moffit Pass 84.54 45 ⇑ P **P 10 06 19.2 0.0**
baz=84,SNR=6.7
O16A Springville 84.55 46 ⇑ P **P 10 06 19.4 +0.1**
baz=84
DAU Daniels Canyon 84.59 46 *eP* **P 10 06 20.3 +0.8**
comp=Z,11nm,0.7s,mb4.7
DAU Daniels Canyon 84.59 46 *eP* **P 10 06 20.3 +0.8**
DAU pmax pmax
comp=Z,11nm,0.7s,mb4.7
H21A Big Horn, Sher 84.60 41 ⇑ P **P 10 06 19.2 -0.2**
baz=84,SNR=5.8
K19A Absolon Red Bu 84.64 43 ⇑ P **P 10 06 19.1 -0.6**
baz=84
ARUT Antelope Range 84.68 49 *eP* **P 10 06 22.8 +2.8**
comp=Z,1.5nm,0.6s,mb3.9
ARUT Antelope Range 84.68 49 *eP* **P 10 06 22.8 +2.8**
ARUT pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
Q15A Fillmore 84.68 48 ⇓ P **P 10 06 19.9 -0.1**
baz=84
U12A Valley of Fire 84.70 51 ⇓ P **P 10 06 20.3 +0.1**
baz=84

M18A	Lyman baz=84,SNR=5.3	84.73	45	⇓P		P		10 06 20.1	-0.1
P16A	Fountain Green baz=84	84.79	47	⇑P		P		10 06 20.5	0.0
T13A	Saint George baz=85,SNR=5.6	84.80	50	⇓P		P		10 06 20.9	+0.3
GMRC	Granite Mounta baz=85,SNR=5.1	84.84	53	⇓P		P		10 06 20.7	-0.1
S14A	Cedar City baz=85	84.87	49	⇑P		P		10 06 20.7	-0.2
V12A	Nelson baz=85	84.88	52	⇑P		P		10 06 21.2	+0.2
PFO	Pinyon Flat Ob baz=85,SNR=8.5	84.92	54	⇓P		P		10 06 20.9	-0.4
I21A	Big Trails, Te baz=85,SNR=7.6	84.95	42	⇑P		P		10 06 20.8	-0.4
BELC	Belle Mtn. Jos baz=85	85.03	54	⇓P		P		10 06 21.7	-0.1
O17A	Robinson Place baz=85,SNR=8.4	85.03	46	⇓P		P		10 06 22.0	+0.3
K20A	Yellowstone Ra baz=85	85.04	43	⇓P		P		10 06 21.5	-0.2
U13A	Pakoon Wash baz=85,SNR=8.4	85.09	51	⇓P		P		10 06 22.2	+0.1
R15A	Junction baz=85,SNR=5.9	85.20	48	⇑P		P		10 06 23.0	+0.4
T14A	Hurricane baz=85,SNR=5.9	85.32	50	⇑P		P		10 06 23.4	+0.2
MONP	Monument Peak baz=85	85.34	55	⇑P		P		10 06 23.1	-0.2
V13A	Grand Canyon W baz=85,SNR=5.7	85.39	51	⇓P		P		10 06 24.0	+0.4
L20A	Wamsutter baz=85	85.43	43	⇓P		P		10 06 24.0	+0.5
S15A	Panguitch baz=85	85.44	49	⇓P		P		10 06 24.2	+0.5
O18A	Roosevelt baz=85,SNR=7.7	85.45	46	⇑P		P		10 06 24.1	+0.4
P17A	Butcher Ranch, baz=85	85.45	47	⇑P		P		10 06 24.2	+0.5
Q16A	Castle Valley baz=85,SNR=6.1	85.50	47	⇓P		P		10 06 24.4	+0.4
N19A	John Jarvie Ra baz=85	85.59	45	⇓P		P		10 06 24.0	-0.4
BC3	Big Chuckawall baz=85	85.60	54	⇓P		P		10 06 24.5	-0.1
U14A	Mt Trumbull baz=85	85.62	50	⇑P		P		10 06 24.9	+0.3
R16A	Teasdale baz=85,SNR=6.6	85.67	48	⇓P		P		10 06 25.1	+0.3
P18A	Preston Nutter baz=85,SNR=8.1	85.67	46	⇓P		P		10 06 25.1	+0.3
K21A	Alcova baz=85,SNR=20	85.69	42	⇑P		P		10 06 24.9	0.0
SRU	San Rafael baz=86,SNR=8.8	85.80	47	⇑P		P		10 06 25.4	0.0
T15A	Red Dirt Ranch baz=86,SNR=6.2	85.81	49	⇑P		P		10 06 25.7	+0.2
M20A	Sweetwater, Wa baz=86	85.83	44	⇓P		P		10 06 25.6	+0.1
S16A	Weppner Ranch, baz=86	85.92	48	⇑P		P		10 06 26.0	0.0
O19A	Miners Draw (B baz=86	85.97	45	⇑P		P		10 06 26.1	-0.2
L21A	Rawlins baz=86,SNR=5.8	86.03	43	⇑P		P		10 06 26.2	-0.3
Q18A	Rafter H Ranch baz=86	86.05	47	⇓P		P		10 06 26.4	-0.3
R17A	Hanksville Air baz=86,SNR=7.3	86.08	47	⇓P		P		10 06 26.6	-0.2
K22A	Casper baz=86,SNR=6.4	86.11	42	⇓P		P		10 06 26.4	-0.4
V14A	Boquillas Ranc baz=86	86.11	51	⇑P		P		10 06 27.1	+0.1
N20A	Spence Gulch, baz=86,SNR=10	86.18	44	⇑P		P		10 06 27.5	+0.2
Y12C	Blythe baz=86	86.19	53	⇓P		P		10 06 27.6	+0.1
U15A	North Rim baz=86,SNR=5.7	86.20	50	⇓P		P		10 06 27.2	-0.3
X13A	Yucca baz=86	86.20	52	⇑P		P		10 06 27.9	+0.4
M21A	Separation Pea baz=86,SNR=5.5	86.25	43	⇑P		P		10 06 27.5	-0.1
W14A	Seligman baz=86	86.36	51	⇑P		P		10 06 28.3	+0.1
GLA	Glamis baz=86	86.37	54	⇓P		P		10 06 28.7	+0.4
P19A	Cripple Cowboy baz=86	86.46	46	⇑P		P		10 06 29.3	+0.7
S17A	Black Ridge (B baz=86	86.48	48	⇑P		P		10 06 28.3	-0.4
RSSD	Black Hills comp=Z,4.0nm,0.8s,mb4.2	86.60	40	eP		P		10 06 28.7	-0.5
RSSD	Black Hills comp=Z,4.0nm,0.8s,mb4.2	86.60	40	eP	pmax	P	pmax	10 06 28.7	-0.5
O20A	White River Ci baz=86	86.61	45	⇓P		P		10 06 29.1	-0.2
R18A	Canyonlands Na baz=86	86.62	47	⇓P		P		10 06 29.2	-0.2
V15A	Kaibab Nationa baz=86	86.63	50	⇓P		P		10 06 29.8	+0.4
Y13A	Salome baz=86	86.64	53	⇓P		P		10 06 29.4	-0.1
N21A	Black Mountain baz=86	86.67	44	⇑P		P		10 06 29.5	-0.1
Q19A	Hogan Spring (baz=86	86.69	46	⇓P		P		10 06 30.1	+0.5
M22A	Cedar Creek Ra baz=87	86.83	43	⇑P		P		10 06 30.5	+0.2
T17A	Navajo Res., N baz=87	86.85	49	⇑P		P		10 06 30.5	0.0
P20A	De Beque baz=87	86.90	46	⇓P		P		10 06 30.6	-0.1
L23A	Garrett baz=87,SNR=13	86.92	42	⇑P		P		10 06 30.2	-0.5
S18A	Hurst Farm, Bl baz=87	86.97	48	⇓P		P		10 06 31.0	0.0
R19A	Curley Farm, L baz=87	87.08	47	⇓P		P		10 06 31.5	0.0
Z13A	Yuma Proving G baz=87	87.10	53	⇑P		P		10 06 31.4	-0.4
U16A	Tuba City baz=87	87.13	49	⇑P		P		10 06 31.7	-0.2
Y14A	Wickenburg baz=87	87.14	52	⇑P		P		10 06 31.8	-0.1
PV04	Paradox Valley	87.24	47	eP		P		10 06 32.6	+0.3
113A	Mohawk Valley, baz=87	87.27	54	⇓P		P		10 06 32.3	-0.2
N22A	Wattenberg Ran baz=87	87.29	44	⇑P		P		10 06 32.8	+0.3
Q20A	Ridgley Place, baz=87,SNR=7.3	87.29	46	⇑P		P		10 06 32.4	-0.2
WUAZ	Wupatki baz=87	87.33	50	⇑P		P		10 06 32.5	-0.3
X15A	Humboldt baz=87,SNR=5.1	87.35	51	⇑P		P		10 06 33.2	+0.3
T18A	Mexican Hat baz=87	87.37	48	⇑P		P		10 06 32.9	0.0
L24A	Wheatland baz=87	87.41	42	⇑P		P		10 06 32.9	-0.1
S19A	Harvey Farm, M baz=87	87.48	47	⇑P		P		10 06 33.5	+0.1
N23A	Red Feather La baz=87,SNR=7.1	87.53	43	⇑P		P		10 06 34.1	+0.5
Y15A	Casa Rosa Ranc baz=87	87.58	52	⇑P		P		10 06 34.1	+0.1
PV01	Paradox Valley	87.61	47	eP		P		10 06 33.9	-0.2
O22A	Kremmling baz=87,SNR=5.8	87.63	44	⇑P		P		10 06 34.0	-0.1
V17A	Tonalea, Kykot baz=87	87.66	50	⇓P		P		10 06 34.5	+0.2
R20A	Redvale baz=87	87.70	47	⇓P		P		10 06 34.6	+0.2
Q21A	Lamborn Mesa, baz=88	87.81	46	⇓P		P		10 06 35.6	+0.7
M24A	Cheyenne baz=88,SNR=6.9	87.83	42	⇑P		P		10 06 35.5	+0.4
P22A	Eagle baz=88,SNR=9.8	87.85	45	⇓P		P		10 06 35.4	+0.3
X16A	Lo Mia Camp, P baz=88	87.92	51	⇓P		P		10 06 36.1	+0.5
T19A	Beclabito baz=88	88.10	48	⇑P		P		10 06 36.2	-0.2
R21A	Cimarron baz=88	88.11	46	⇑P		P		10 06 36.3	-0.1
Q22A	Crested Butte, baz=88,SNR=12	88.20	45	⇓P		P		10 06 37.4	+0.6
U19A	Dine' College, baz=88	88.30	48	⇓P		P		10 06 37.4	+0.1
S21A	Coal Bank Pass baz=88	88.39	47	⇑P		P		10 06 37.7	0.0
X17A	Forest Lakes baz=88	88.40	51	⇑P		P		10 06 38.3	+0.5
ISCO	Idaho Springs baz=88	88.41	44	⇑P		P		10 06 37.9	+0.2
ISCO	Idaho Springs comp=Z,3.7nm,0.8s,mb4.2	88.41	44	eP		P		10 06 38.0	+0.2
ISCO	Idaho Springs comp=Z,4.0nm,0.8s,mb4.2	88.41	44	eP	pmax	P	pmax	10 06 38.0	+0.2
O24A	Longmont baz=88	88.53	43	⇓P		P		10 06 38.7	+0.4
P23A	Jefferson baz=88	88.54	44	⇑P		P		10 06 38.8	+0.4
R22A	Saguache, Gunn baz=88,SNR=5.2	88.69	46	⇑P		P		10 06 39.8	+0.7
U20A	Newcomb baz=88	88.70	48	⇓P		P		10 06 39.2	+0.1
Y17A	Roosevelt baz=88	88.75	51	⇑P		P		10 06 39.5	+0.1
Q23A	Hartsel baz=89	88.84	45	⇑P		P		10 06 40.7	+0.9
W19A	Sanders baz=89	88.89	49	⇓P		P		10 06 40.0	-0.1
S22A	4UR Ranch, Cre baz=89	88.94	46	⇓P		P		10 06 40.8	+0.5
T21A	Navajo Lake baz=89	88.96	47	⇓P		P		10 06 40.3	-0.1
O25A	Wiggins baz=89,SNR=8.5	89.11	43	⇓P		P		10 06 41.1	+0.1
Q24A	Divide baz=89	89.22	44	⇑P		P		10 06 41.3	-0.2
U21A	Nageezi baz=89	89.22	48	⇑P		P		10 06 41.4	-0.2
Z17A	San Carlos Hig baz=89	89.23	51	⇑P		P		10 06 42.3	+0.6
Y18A	Canyon Day Jun baz=89,SNR=5.8	89.24	51	⇓P		P		10 06 42.2	+0.4
T22A	Edith baz=89	89.34	47	⇓P		P		10 06 42.3	+0.2
X19A	St. Johns baz=89	89.36	50	⇓P		P		10 06 42.3	+0.1
P25A	Willow Gulch B baz=89	89.46	43	⇑P		P		10 06 42.4	-0.2
W20A	Ramah baz=89	89.46	49	⇑P		P		10 06 42.5	-0.2
Y19A	Nutrioso baz=89	89.66	50	⇑P		P		10 06 43.8	+0.1
R24A	Sanders Place, baz=89,SNR=9.9	89.70	45	⇑P		P		10 06 44.1	+0.3
U22A	Llaves baz=90	89.76	47	⇑P		P		10 06 44.4	+0.3
SDCO	Great Sand Dun baz=90,SNR=8.7	89.76	45	⇓P		P		10 06 44.4	+0.3
SDCO	Great Sand Dun comp=Z,3.2nm,0.8s,mb4.2	89.76	45	eP		P		10 06 44.0	-0.1
OGNE	Ogallala baz=90	89.78	41	⇑P		P		10 06 43.7	-0.4
Q25A	Bedland, Calha baz=90	89.79	44	⇓P		P		10 06 44.1	-0.1
X20A	Quemado baz=90	89.81	50	⇓P		P		10 06 44.4	0.0
T23A	Casias Ranch, baz=90	89.87	46	⇑P		P		10 06 44.6	0.0
217A	Green Valley baz=90	89.88	53	⇓P		P		10 06 45.0	+0.2
S24A	Houchin Ranch, baz=90	90.01	45	⇓P		P		10 06 45.5	+0.3
V22A	San Miguel Ran baz=90	90.01	48	⇓P		P		10 06 45.6	+0.3
W21A	San Fidel baz=90	90.02	49	⇑P		P		10 06 46.0	+0.7
U23A	El Rito baz=90,SNR=6.5	90.21	47	⇑P		P		10 06 46.6	+0.4
R25A	Fountain Ranch baz=90	90.26	45	⇓P		P		10 06 46.4	0.0
Y20A	Horse Springs, baz=90,SNR=9.3	90.27	50	⇓P		P		10 06 47.2	+0.6
218A	Dragoon baz=90	90.30	52	⇓P		P		10 06 47.3	+0.6
119A	Ashpeak Ranch, baz=90	90.33	51	⇑P		P		10 06 47.5	+0.7
X21A	Alamocita Cree baz=90,SNR=6.9	90.34	49	⇓P		P		10 06 47.3	+0.5
T24A	Torres, Weston baz=90,SNR=7.6	90.46	46	⇓P		P		10 06 48.1	+0.8
S25A	Rets Cordova baz=90	90.47	45	⇓P		P		10 06 47.5	+0.1
Z20A	Nine Sixteen R baz=90,SNR=18	90.61	51	⇓P		P		10 06 48.5	+0.4
318A	Bisbee baz=90,SNR=7.4	90.65	53	⇓P		P		10 06 48.7	+0.4
Y21A	Point of Rocks baz=90	90.68	50	⇑P		P		10 06 48.7	+0.3
T25A	Trinidad baz=91	90.82	45	⇑P		P		10 06 49.5	+0.5
219A	White Tail Can baz=91,SNR=7.9	90.82	52	⇑P		P		10 06 49.5	+0.4
ANMO	Albuquerque comp=Z,6.0nm,1.0s,mb4.4	90.89	48	eP		P		10 06 50.2	+0.8
ANMO	Albuquerque comp=Z,6.0nm,1.0s	90.89	48	eP	pmax	P	pmax	10 06 50.2	+0.8
120A	U Bar Ranch, L baz=91	90.92	51	⇑P		P		10 06 50.1	+0.5
W23A	Werner Place, baz=91,SNR=5.4	90.96	48	⇑P		P		10 06 50.2	+0.5
Z21A	St. Cloud Mine baz=91	91.10	50	⇓P		P		10 06 51.0	+0.6
V24A	Rampart Ranch, baz=91	91.17	47	⇑P		P		10 06 51.0	+0.4
319A	Douglas baz=91	91.18	52	⇓P		P		10 06 50.9	+0.2
Y22A	Socorro baz=91	91.19	49	⇓P		P		10 06 50.8	0.0
U25A	Circle Dot Ran baz=91,SNR=11	91.29	46	⇑P		P		10 06 51.5	+0.3
220A	Playas Peak, P baz=91,SNR=5.8	91.38	52	⇓P		P		10 06 52.1	+0.4
W24A	Lazy 6 Ranch, baz=91,SNR=8.6	91.41	47	⇓P		P		10 06 52.3	+0.5
121A	Cookes Peak, D baz=91	91.50	51	⇓P		P		10 06 52.7	+0.5
V25A	Rancho No Teng baz=91	91.52	47	⇑P		P		10 06 52.5	+0.2
Z22A	Elephant Butte baz=91,SNR=7.8	91.61	50	⇓P		P		10 06 52.9	+0.2
320A	Kipp Ranch, An baz=92	91.72	52	⇓P		P		10 06 53.5	+0.3
Y23A	Lovelace Mesa, baz=92	91.79	49	⇓P		P		10 06 53.8	+0.2
W25A	X Bar L Ranch, baz=92	92.00	47	⇑P		P		10 06 54.4	-0.2
V26A	Tequesquite Ra baz=92	92.06	46	⇑P		P		10 06 54.3	-0.4
Z23A	Rita Site, Whi baz=92	92.08	49	⇓P		P		10 06 55.0	+0.1
X25A	Clemmons Ranch baz=92	92.31	48	⇑P		P		10 06 56.2	+0.2
CBKS	Cedar Bluff baz=92	92.52	42	⇓P		P		10 06 56.1	-0.7
Z24A	Sheeppen Canyo baz=92	92.61	49	⇑P		P		10 06 57.3	0.0
Y25A	Mesa, Roswell baz=92	92.67	48	⇑P		P		10 06 57.3	-0.3
X26A	CR and CF Fran baz=93	92.84	47	⇑P		P		10 06 58.1	-0.3
124A	Stringfield Ra baz=93	92.94	49	⇑P		P		10 06 58.8	0.0
W27A	Bowe Ranch, En baz=93	92.98	46	⇓P		P		10 06 59.2	+0.2
Z25A	Roswell baz=93	93.06	49	⇑P		P		10 06 59.6	+0.2
224A	Cornudas Mount baz=93,SNR=5.0	93.29	50	⇓P		P		10 07 00.9	+0.4
Z26A	Caprock baz=93	93.55	48	⇓P		P		10 07 01.9	+0.3
MNTX	Cornudas Mount baz=93	93.62	50	⇑P		P		10 07 02.7	+0.7
324A	Moseley Ranch, baz=94	93.71	50	⇓P		P		10 07 02.5	+0.1
AMTX	Amarillo baz=94	93.96	46	⇑P		P		10 07 03.1	-0.4
325A	Bean Ranch, Si baz=94	94.09	50	⇑P		P		10 07 04.3	+0.2
425A	Indio Mountain baz=94	94.45	51	⇓P		P		10 07 05.9	0.0
526A	Mary Lane Ranc baz=95	95.51	51	⇓P		P		10 07 10.9	+0.3
626A	Big Bend Ranch baz=96	95.80	51	⇓P		P		10 07 12.4	+0.5
TXAR	Lajitas Array comp=Z,1.5nm,0.6s,mb4.3,baz=311,slow=3.5,SNR=31	96.25	51	P		P		10 07 12.9	-1.0
QSPA	South Pole Qui	119.85	180	ePKPdf		PKPdf		10 12 30.5	-1.2
TORD	Torodi Ar. Bea comp=Z,0.5nm,0.4s,baz=50,slow=1.3,SNR=12	120.27	310	PKP		PKPdf		10 12 32.5	-2.0
LPAZ	La Paz comp=Z,1.8nm,0.6s,baz=268,slow=3.8,SNR=7.6	151.93	67	PKPbc		PKPbc		10 13 38.8	+0.3
SIV	San Ignacio comp=Z,3.9nm,0.9s,baz=300,slow=7.9,SNR=12	157.14	57	PKPab		PKPab		10 14 10.4	-1.6

*ISCJB **29** 10:02:37.1±0.5, 23°.92N±0'.03×122°.53E±0'.02, h16km±5km, Error ellipse: s-maj=4.4km s-min=2.7km az=162.0*
*TAP **29** 10:02:38.4, 23°.99N×122°.47E, h26km, ML3.1, C*
*JMA **29** 10:02:38.1±0.2, 24°.04N×122°.54E, h19km, M2.8*

ISC 29 10:02:36.6±0.6, 23°.93N±0'.02×122°.52E±0'.02, h11km±4km, n36, σ0°72/63, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.69	40	P		Pg		10 02 49.8	-0.2
YOJ				eS		Sg		10 02 57.9	-1.2
TWD	Chiawan baz=276	0.85	280	eP		Pg		10 02 53.3	+0.2
TWD	baz=276			eS		Sg		10 03 04.4	+0.2
ENA	Nanau baz=303	0.86	305	P		Pg		10 02 53.4	+0.1
ENA	baz=303			eS		Sg		10 03 05.0	+0.5
ESL	Shilin baz=259	1.00	263	P		Pg		10 02 55.3	-0.6
ESL	baz=259			eS		Sg		10 03 07.9	-0.9
TWE	Neicheng baz=315	1.10	315	P		Pb		10 02 57.7	0.0
TWE	baz=315			S		Sb		10 03 11.5	-0.6
ENTT	Nioudou baz=293	1.12	309	P		Pb		10 02 57.9	0.0
ENTT	baz=293			S		Sb		10 03 12.6	+0.1
WHF	Hehuan Shan baz=264	1.16	281	eP		Pb		10 02 58.4	-0.4
WHF	baz=264			eS		Sb		10 03 13.5	-0.4
TWB1	Santiao Chiao baz=353	1.17	336	eP		Pb		10 02 58.8	-0.1
TWB1	baz=353			eS		Sb		10 03 14.4	+0.3
EHY	Hungye baz=244	1.18	249	P		Pb		10 02 58.3	-0.7
EHY	baz=244			S		Sb		10 03 13.7	-0.4
IRIF	Iriomote-Funau	1.18	70	P		Pb		10 02 58.7	-0.3
IRIF				eS		Sb		10 03 13.4	-0.8
HATJ	Hateruma jima	1.18	84	P		Pb		10 02 58.9	-0.2
TWF1	Yuli baz=238	1.26	243	*i* P		Pn		10 02 59.8	-0.3
TWF1	baz=238			eS		Sb		10 03 16.5	-0.1
NSK	Sanguang baz=290	1.29	305	eP		Pn		10 03 00.6	0.0
NSK	baz=290			eS		Sb		10 03 17.3	-0.2
NWF	Wu-fen Shan baz=330	1.32	330	eP		Pn		10 03 01.0	+0.1
NWF	baz=330			eS		Sb		10 03 18.1	-0.1
TWA	Mucha baz=321	1.34	321	eP		Pn		10 03 00.9	-0.4
TWA	baz=321			eS		Sb		10 03 19.1	0.0
JKRS	Kuro-shima	1.40	77	P		Pn		10 03 02.3	+0.3
JKRS				eS		Sn		10 03 19.9	-0.6
YUS	Yu-Shan baz=249	1.50	253	eP		Pn		10 03 03.9	+0.4
YUS	baz=249			eS		Sn		10 03 21.1	-2.0
TYC	Yuchr baz=266	1.52	269	eP		Pn		10 03 03.4	-0.3
TWS1	Kuangyinshan baz=337	1.53	319	eP		Pn		10 03 04.8	+0.9
TWS1	baz=337			eS		Sn		10 03 24.1	+0.2
JIJ	Ishigaki jima	1.54	74	P		Pn		10 03 03.7	-0.4
JIJ				eS		Sn		10 03 23.6	-0.6
ELDTW	Lidau baz=238	1.56	242	eP		Pn		10 03 03.6	-0.7
ELDTW	baz=238			eS		Sn		10 03 22.6	-1.9
TWY	Chenhua baz=328	1.58	328	eP		Pn		10 03 05.5	+1.0
TWY	baz=328			eS		Sn		10 03 24.8	-0.1
ALS	Alishan baz=252	1.62	255	P		Pn		10 03 05.7	+0.5
ALS	baz=252			eS		Sn		10 03 25.7	-0.4
TWQ1	Liyutan baz=282	1.65	285	eP		Pn		10 03 06.0	+0.5
CHN5	Tsauling baz=245	1.72	259	eP		Pn		10 03 07.2	+0.7
CHN5	baz=245			eS		Sn		10 03 28.5	+0.1
TWG	Pinlang baz=240	1.73	230	eP		Pn		10 03 05.9	-0.7
TWG	baz=240			eS		Sn		10 03 26.9	-1.8
STYT	Tauyuan baz=232	1.79	245	eP		Pn		10 03 07.8	+0.4
STYT	baz=232			eS		Sn		10 03 29.7	-0.5
CHN4	Tsaushan baz=249	1.86	252	eP		Pn		10 03 09.7	+1.3
CHN4	baz=249			eS		Sn		10 03 32.5	+0.6
WTP	Ta-pu baz=235	1.88	249	eP		Pn		10 03 09.2	+0.6
ECL	Taimali baz=235	1.96	228	eP		Pn		10 03 10.7	+0.9
SGST	Jiashian baz=232	1.97	245	eP		Pn		10 03 11.2	+1.3
SGST	baz=232			eS		Sn		10 03 35.2	+0.7
CHN1	Nanshi baz=245	1.97	248	eP		Pn		10 03 10.6	+0.6
SSD	Sandimen baz=225	2.10	236	eP		Pn		10 03 12.5	+0.8
JTJ	Tarama	2.11	70	P		Pn		10 03 13.2	+1.3
JTJ				eS		Sn		10 03 38.7	+0.5
EAST	Anshuo baz=222	2.18	225	eP		Pn		10 03 13.2	+0.4
SCZT	Fangliau baz=218	2.34	229	eP		Pn		10 03 17.0	+2.0

*ISCJB **29** 10:13:32.1±0.5, 33°.76N±0'.04×86°.40E±0'.09, h10km, mb3.5/6, Error ellipse: s-maj=10.4km s-min=6.0km az=1.3*
*IDC **29** 10:13:33.6±1.1, 33°.94N×86°.43E, h0km, mb3.6/7, mb1 3.8/10, mb1mx3.7/27, mbtmp3.7/10, ML3.9/3, Error ellipse: s-maj=32.9km s-min=18.3km az=58.0*
*NEIC **29** 10:13:35.0±0.5, 33°.92N×86°.42E, h10km, Error ellipse: s-maj=13.9km s-min=6.9km az=54.0*

ISC 29 10:13:33.7±0.5, 33°.71N±0'.04×86°.21E±0'.09, h10km, n25, σ1s44/25, mb3.5/6, Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DANN	Dangsing 38nm,0.5s	5.74	202	eP		Pb		10 15 15.4	+1.5
GUN	Gumba	5.79	183	eP		Pb		10 15 13.5	-1.2
LSA	Lhasa 33nm,0.8s	5.80	132	ePg		Pg		10 15 25.6	+0.8
GKN	Gorkha	5.84	194	eP		Pb		10 15 14.9	-0.8
DMN	Daman 28nm,0.4s	6.15	189	eP		Pb		10 15 19.6	-1.3
PKI	Pulchoki	6.16	187	eP		Pb		10 15 19.0	-2.0
KOLN	Koldanda	6.33	201	eP		Pb		10 15 23.4	-0.5

34nm,0.8s
TAPN Taplejung 6.47 168 *e*P **Pb 10 15 19.7 -6.6**
30nm,0.8s
RAMN Ramite 6.74 177 *e*P **Pb 10 15 24.7 -6.3**
11nm,0.5s
ODAN Odare 6.90 171 *e*P **Pb 10 15 26.1 -7.6**
23nm,0.6s
MK31 Makanchi Array 13.41 348 Pn **Pn 10 16 43.6 -0.3**
MKAR Makanchi Array 13.41 348 Pn **Pn 10 16 41.7 -2.2**
MKAR Makanchi Array 13.41 348 Pn **Pn 10 16 41.7 -2.2**
0.2nm,0.3s,baz=155,slow=14,SNR=4.4
KBL Kabul 14.25 278 *e*Pn **Pn 10 16 58.7 +3.3**
7.2nm,0.8s
KURK Kurchatov 17.88 344 *e*Pn **Pn 10 17 41.8 -0.6**
KURK Kurchatov 17.88 344 P **Pn 10 17 41.2 -1.2**
0.1nm,0.3s,baz=157,slow=11,SNR=12
CMAR Chiang Mai Arr 18.98 140 P **Pn 10 17 58.5 +2.5**
0.6nm,0.3s,baz=323,slow=11,SNR=10
SONM Songino Array 20.72 41 P **P 10 18 13.1 -1.0**
2.5nm,0.9s,baz=231,slow=15,SNR=6.1
BVAR Borovoye Array 22.38 334 P **P 10 18 33.1 +1.2**
0.6nm,0.4s,mb3.4,baz=138,slow=8.8,SNR=3.9
KSRS Korea Array 33.93 72 P **P 10 20 16.4 -0.5**
0.4nm,0.4s,mb3.7,baz=274,slow=9.3,SNR=4.6
BRTR Keskin Array B 42.07 294 P **P 10 21 27.8 +2.2**
0.3nm,0.4s,mb3.2,baz=91,slow=6.1,SNR=3.4
WRA Warramunga Arr 70.36 132 P **P 10 24 49.4 +1.6**
WRA Warramunga Arr 70.36 132 P **P 10 24 49.4 +1.6**
0.7nm,0.6s,mb3.8,baz=327,slow=6.5,SNR=11
ASAR Alice Springs 72.90 135 P **P 10 25 05.0 +2.0**
0.4nm,0.8s,mb3.4,baz=333,slow=6.3,SNR=7.1
ILAR Eielson Array 73.47 21 P **P 10 25 04.8 -1.1**
0.7nm,0.9s,mb3.6,baz=308,slow=4.6,SNR=7.5

BJI **29** *10:20:51.4*, *0.65*N*×121.22*E*, *h566*km*, *mB4.7/26, mb5.0/51*
ISCJB **29** *10:20:54.6*±*0.2, 0.95*N*±*0.02*×*121.06*E*±*0.02, h575*km*±*2*km, mb4.8/148, Error ellipse: s-maj=3.8km s-min=2.9km az=178.2*
NEIC **29** *10:20:55.5*±*0.4, 1.02*N*×*121.02*E*, h567*km*±*4*km, mb4.9/81, Error ellipse: s-maj=5.4km s-min=3.5km az=64.0*
MOS **29** *10:20:55.6*±*1.2, 1.13*N*×*121.05*E, h578*km*, mb4.8/35, Error ellipse: s-maj=9.8km s-min=5.8km az=114.0*
IDC **29** *10:20:56.2*±*0.7, 1.00*N*×*121.11*E, h580*km*±*8*km, mb4.2/32, mb1 4.3/34, mb1mx4.2/36, mbtmp4.2/34, Error ellipse: s-maj=9.8km s-min=4.7km az=68.0*
DJA **29** *10:20:56, 0.83*N*×*121.00*E, h551*km*, Mw5.3/32*
GCMT **29** *10:20:57.3*±*0.3, 1.03*N*×*121.20*E, h560*km*±*2*km, MW5.2, Moment Tensor Solution. s64,c89; Moment tensor: Scale 10*16*Nm; Mrr 7.17*±*.35; Mθθ -7.63*±*.46; Mφφ 0.47*±*.63; Mrθ 0.15*±*.58; Mθφ 0.41*±*.50; Mφr -4.11*±*.59; Best double couple: Mo8.40000×10*16* NP1:*φ*250.00000°, δ49.00000°, λ55.00000°. NP2:φ*116.00000°, δ52.00000°, λ123.00000°. Principal axes: T 9.1200, Plg65.0000°, Azm90.0000°; N -1.4600, Plg25.0000°, Azm274.0000°; P -7.6600, Plg2.0000°, Azm184.0000°; Data Used: II IU IC G CN.*
ISC 29 10:20:55.3±**0.2, 0.93**N**±0.02×121.05E±0.02, h567**km**±2km, h546**km**±3.1km; pP-P, n771, σ1s08/408, mb4.8/147, 171C-179D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TOLI	**Toli-Toli**	**0.32**	**306**	P		**P**	**10 22 01.2**	**-1.0**
TOLI				S		**S**	**10 22 53.4**	**-3.2**
MRSI	**Marisa**	**1.00**	**117**	P		**P**	**10 22 01.5**	**-1.8**
MRSI				S		**S**	**10 22 54.8**	**-3.7**
LUWI	**Luwuk**	**2.61**	**139**	P		**P**	**10 22 07.3**	**-2.2**
KMSI	**Cibinong**	**2.95**	**97**	P		**P**	**10 22 12.1**	**+0.7**
MNI	**Manado**	**3.82**	**82**	P		**P**	**10 22 18.4**	**+1.3**
TTSI	**Tana Toraja**	**4.14**	**197**	P		**P**	**10 22 18.5**	**-0.9**
TSM	**Tawau**	**4.61**	**312**	P		**P**	**10 22 22.7**	**-0.3**
MYLDM	**Lahad Datu**	**4.93**	**329**	P		**P**	**10 22 27.6**	**+2.0**
MYLDM	**Lahad Datu**	**4.93**	**329**	P		**P**	**10 22 27.0**	**+1.4**
SPSI	**Sidrap Palu**	**5.03**	**195**	P		**P**	**10 22 25.2**	**-1.2**
KDI	**Kendari**	**5.10**	**162**	P		**P**	**10 22 26.3**	**-0.7**
	2.0nm7μm635nm,0.8s							
SGSI	**Sangihe**	**5.24**	**58**	P		**P**	**10 22 28.5**	**+0.3**
	7.4nm835nm,0.4s							
SDKM	**Sandakan**	**6.06**	**321**	P		**P**	**10 22 35.3**	**0.0**
BKSI	**Bulukumba**	**6.28**	**188**	P		**P**	**10 22 36.2**	**-1.1**
	1.4nm4μm450nm,0.6s							
TNTI	**Ternate**	**6.32**	**91**	P		**P**	**10 22 36.2**	**-1.4**
	13nm291nm,0.5s							
KBKI	**Kotabaru**	**6.44**	**229**	P		**P**	**10 22 38.8**	**0.0**
	1.5nm4μm496nm,0.9s							
BBSI	**Bau Bau**	**6.55**	**167**	P		**P**	**10 22 40.2**	**+0.4**
	1.9nm6μm573nm,0.9s							
LBMI	**Labuha**	**6.64**	**104**	P		**P**	**10 22 40.4**	**-0.2**
	20nm547nm,0.9s							
IPIL	**Ipil**	**6.98**	**13**	*e*P		**P**	**10 22 44.2**	**+0.5**
KKM	**Kota Kinabalu**	**7.00**	**317**	*e*Pn		**P**	**10 22 43.1**	**-0.9**
KKM				*e*Sn		**S**	**10 24 07.4**	**-5.5**
KKM	**Kota Kinabalu**	**7.00**	**317**	P		**P**	**10 22 44.3**	**+0.3**
KKM	**Kota Kinabalu**	**7.00**	**317**	P		**P**	**10 22 43.2**	**-0.8**
	0.9nm2μm214nm,0.8s							
CTBH	**Cotabato--PC H**	**7.01**	**27**	*e*P		**P**	**10 22 44.3**	**+0.2**
PAGZ	**Pagadian**	**7.25**	**19**	*e*P		**P**	**10 22 47.2**	**+0.8**
KCP	**Kidapawan**	**7.26**	**34**↑	*e*P		**P**	**10 22 47.2**	**+0.8**
KCP				*e*S		**S**	**10 24 24.9**	**+7.5**
KDM	**Kudat**	**7.28**	**325**	P		**P**	**10 22 47.0**	**+0.4**
NLAI	**Namlea**	**7.33**	**124**	P		**P**	**10 22 48.5**	**+1.4**
	1.7nm5μm519nm,0.9s							
DMPH	**Davao City--Mi**	**7.55**	**36**↑	*e*P		**P**	**10 22 48.9**	**-0.4**
DAV	**Davao City (W)**	**7.59**	**36**	P		**P**	**10 22 51.3**	**+1.8**
	133nm,0.3s,baz=254,slow=6.3,SNR=18							
DAV				S		**S**	**10 24 23.7**	**+0.6**
	64nm,0.3s,baz=246,slow=20,SNR=2.3							
MATI	**Mati**	**7.92**	**41**	*e*P		**P**	**10 22 53.7**	**+0.9**
BUKP	**Musuan**	**7.97**	**30**	*e*P		**P**	**10 22 54.2**	**+0.9**
BTM	**Bintulu**	**8.27**	**286**	P		**P**	**10 22 57.4**	**+1.2**
BATP	**Bataraza**	**8.46**	**338**	*e*P		**P**	**10 22 58.0**	**0.0**
SNPH	**Sibulan**	**8.63**	**15**↓	*e*P		**P**	**10 22 59.6**	**-0.2**
SBUM	**Sibu**	**8.95**	**280**	P		**P**	**10 23 04.2**	**+1.2**
SBUM	**Sibu**	**8.95**	**280**	P		**P**	**10 23 03.2**	**+0.2**
	920nm113nm,0.8s							
TBP	**Tagbilaran**	**9.14**	**18**↓	*e*P		**P**	**10 23 05.6**	**+0.8**
MMRI	**Maumere**	**9.58**	**173**	P		**P**	**10 23 08.8**	**-0.4**
	6μm649nm,0.7s							
GUIM	**Jordan**	**9.75**	**9**	*e*P		**P**	**10 23 11.0**	**0.0**
CUYO	**Cuyo Island**	**9.85**	**360**	*e*P		**P**	**10 23 12.4**	**+0.4**
PBKI	**Pangkalan Bun**	**10.05**	**249**	P		**P**	**10 23 14.0**	**0.0**
ENPP	**El Nido**	**10.33**	**351**	*e*P		**P**	**10 23 17.1**	**+0.2**
BNDI	**Bandanaira**	**10.37**	**122**	P		**P**	**10 23 17.8**	**+0.5**
	1μm,0.8s							
WSI	**Waingapu**	**10.56**	**184**	P		**P**	**10 23 17.4**	**-1.8**
	2μm,0.7s							
KMMI	**Kalianget**	**10.62**	**222**	P		**P**	**10 23 19.7**	**-0.1**
	4μm514nm,0.8s							
SRBI	**Singaraja**	**10.68**	**213**	P		**P**	**10 23 19.7**	**-0.7**
	6μm855nm,0.8s							
KSM	**Kuching**	**10.75**	**273**	*e*Pn		**P**	**10 23 21.1**	**-0.1**
KSM	**Kuching**	**10.75**	**273**	P		**P**	**10 23 22.1**	**+0.9**
KSM	**Kuching**	**10.75**	**273**	P		**P**	**10 23 21.4**	**+0.2**
	1μm215nm,0.9s							
BUSP	**Coron**	**11.03**	**356**	*e*P		**P**	**10 23 24.1**	**+0.1**
DNP	**Denpasar**	**11.18**	**211**	P		**P**	**10 23 25.9**	**+0.4**
	612nm,0.9s							
NBBI	**Negara**	**11.25**	**215**	P		**P**	**10 23 25.1**	**-1.1**
	364nm,0.7s							
BYJI	**Banyuwangi**	**11.27**	**216**	P		**P**	**10 23 23.6**	**-2.9**
	1μm,0.7s							
IGBI	**Denpasar**	**11.33**	**211**	P		**P**	**10 23 26.8**	**-0.3**
	7μm934nm,0.8s							
OTRP	**Odiongan**	**11.40**	**5**	*e*P		**P**	**10 23 27.7**	**0.0**
JAGI	**Jajag, Banyuwa**	**11.60**	**216**	P		**P**	**10 23 28.8**	**-1.0**
	3μm230nm,1.1s							
GMJI	**Gumukmas**	**11.88**	**220**	P		**P**	**10 23 31.2**	**-1.5**
	2μm77nm,1.2s							
CNP	**Catarman**	**12.05**	**17**	*e*P		**P**	**10 23 34.3**	**-0.1**
AUQP	**San Andres**	**12.41**	**7**	*e*P		**P**	**10 23 39.8**	**+1.6**
KRKI	**Karangkates**	**12.45**	**223**	P		**P**	**10 23 37.6**	**-0.9**
BOAC	**Boac**	**12.47**	**4**	*e*P		**P**	**10 23 38.9**	**+0.2**
NGJI	**Ngawi**	**12.63**	**229**	P		**P**	**10 23 40.9**	**+0.5**
	253nm,0.8s							
SJI	**Sawahan**	**12.64**	**227**	P		**P**	**10 23 39.1**	**-1.4**
	7μm155nm,0.9s							
LUBP	**Lubang**	**12.74**	**356**	*e*P		**P**	**10 23 41.6**	**+0.1**
PWJI	**Pagerwojo**	**12.81**	**226**	P		**P**	**10 23 40.6**	**-1.6**
	56nm,0.7s							
TGY	**Tagaytay City**	**13.09**	**360**	P		**P**	**10 23 44.6**	**-0.4**
	795nm,0.3s,baz=162,slow=7.1,SNR=188							
TGY				S		**S**	**10 26 06.5**	**+1.9**
	baz=223,slow=19,SNR=3.1							
TGY	**Tagaytay City**	**13.09**	**360**↑	*i*P		**P**	**10 23 45.8**	**+0.8**
SMRI	**Semarang**	**13.23**	**233**	P		**P**	**10 23 46.8**	**+0.3**
	278nm,1.0s							
TLE	**Tual**	**13.37**	**119**	P		**P**	**10 23 48.9**	**+0.9**
	314nm,0.8s							
PCJI	**Pacitan**	**13.38**	**227**	P		**P**	**10 23 46.8**	**-1.3**
	13nm,0.9s							
UGM	**Wanagama**	**13.69**	**230**	P		**P**	**10 23 50.4**	**-0.8**
	273nm,0.8s							
POLP	**Polilio Island**	**13.73**	**4**	*e*P		**P**	**10 23 50.6**	**-1.1**
YOGI	**Yogyakarta**	**13.80**	**231**	P		**P**	**10 23 51.9**	**-0.5**
	638nm,0.8s							
TPI	**Tanjungpandan**	**13.88**	**255**	P		**P**	**10 23 53.1**	**-0.2**
	822nm93nm,0.7s							
BJII	**Banjamegara**	**13.98**	**234**	P		**P**	**10 23 53.5**	**-0.7**
	2μm112nm,0.9s							
BALP	**Baler**	**14.72**	**2**	*e*P		**P**	**10 24 00.8**	**-1.0**
SCZP	**Santa Cruz**	**14.79**	**356**	*e*P		**P**	**10 24 00.2**	**-2.2**
BAKI	**Biak**	**15.20**	**98**	P		**P**	**10 24 07.6**	**+0.9**
	2μm218nm,1.0s							
PPBI	**Pangkal Pinang**	**15.22**	**258**	P		**P**	**10 24 07.3**	**+0.4**
BCPH	**Baguio City Da**	**15.36**	**358**	*i* P		**P**	**10 24 05.5**	**-2.6**
BOLP	**Bolinao**	**15.39**	**356**	*e*P		**P**	**10 24 06.8**	**-1.6**
LEM	**Lembang**	**15.46**	**240**	P		**P**	**10 24 08.7**	**-0.5**
	2μm149nm,0.8s							
CAUP	**Cauayan**	**15.93**	**3**	*e*P		**P**	**10 24 13.0**	**-0.4**
CBJI	**Citeko**	**15.95**	**243**	P		**P**	**10 24 14.7**	**+1.1**
	452nm,0.8s							
DBJI	**Dramaga**	**16.09**	**242**	P		**P**	**10 24 20.5**	**+5.5**
SBJI	**Serang**	**16.46**	**245**	P		**P**	**10 24 19.6**	**+1.2**
	168nm,1.0s							
RBSI	**Rajabasa**	**16.70**	**246**	P		**P**	**10 24 21.5**	**+0.9**
	2μm275nm,0.9s							
BLSI	**Bandar Lampung**	**16.98**	**248**	P		**P**	**10 24 25.3**	**+2.2**
	524nm,0.8s							
CGJI	**Cibinong**	**17.06**	**244**	P		**P**	**10 24 23.6**	**-0.3**
	9μm149nm,0.9s							
MYKOM	**Kota Tinggi**	**17.22**	**273**	P		**P**	**10 24 27.7**	**+2.4**
MYKOM	**Kota Tinggi**	**17.22**	**273**	P		**P**	**10 24 24.1**	**-1.2**
	22nm,0.9s							
KLSI		**17.23**	**251**	P		**P**	**10 24 26.3**	**+0.8**
	3μm358nm,0.8s							
KAKA	**Kakadu**	**17.65**	**141**	*e*P		**P**	**10 24 29.5**	**+0.3**
	135nm,0.6s							
KAKA				*e*S		**S**	**10 27 22.2**	**-1.2**
KAKA	**Kakadu**	**17.65**	**141**	*e*P		**P**	**10 24 29.7**	**+0.5**
	396nm,0.6s							
KAKA				*e*S		**S**	**10 27 28.8**	**+5.5**
MDSI	**Maura Dua**	**17.70**	**252**	P		**P**	**10 24 30.6**	**+0.9**
	796nm62nm,0.9s							
KASI	**Kota Agung**	**17.73**	**249**	P		**P**	**10 24 31.0**	**+1.0**
	115nm,1.0s							
KGM	**Kluang**	**17.76**	**274**	P		**P**	**10 24 32.9**	**+2.6**
KNA	**Kununurra**	**18.25**	**156**	P		**P**	**10 24 35.5**	**+0.9**
	2μm,0.8s							
KTGM	**Kuala Trenggan**	**18.41**	**284**	P		**P**	**10 24 38.1**	**+1.9**
FITZ	**Fitzroy Crossi**	**19.45**	**167**	*e*P		**P**	**10 24 45.6**	**+0.1**
	753nm,1.0s							
FITZ				*e*S		**S**	**10 27 50.7**	**-1.6**
FITZ	**Fitzroy Crossi**	**19.45**	**167**	*e*P		**P**	**10 24 46.0**	**+0.5**
	156nm,0.6s							
FITZ				S		**S**	**10 27 49.7**	**-2.5**
FITZ	**Fitzroy Crossi**	**19.45**	**167**	P		**P**	**10 24 46.4**	**+0.8**
	28nm,0.3s,baz=360,slow=6.2,SNR=410							
FITZ				S		**S**	**10 27 49.7**	**-2.5**
	baz=336,slow=20,SNR=5.3							
FITZ	**Fitzroy Crossi**	**19.45**	**167**	P		**P**	**10 24 46.2**	**+0.7**
FRIM	**Kepong**	**19.55**	**277**	P		**P**	**10 24 47.9**	**+1.4**
IPM	**Ipoh**	**20.31**	**280**	*e*P		**P**	**10 24 54.4**	**+1.0**
	22nm,0.6s							
IPM	**Ipoh**	**20.31**	**280**	P		**P**	**10 24 54.6**	**+1.2**
IPM	**Ipoh**	**20.31**	**280**	P		**P**	**10 24 54.1**	**+0.6**
KULM	**Kulim**	**20.82**	**282**	P		**P**	**10 24 59.3**	**+1.2**
QIZ	**Qiongzhong**	**21.08**	**329**	P		**P**	**10 24 59.8**	**-0.5**
QIZ				sP		sP	10 27 21.5	-5.9
QIZ				S		**S**	**10 28 16.3**	**-1.8**
QIZ				ScP		ScP	10 31 23.3	-2.7
QIZ				pmax		pmax		
	comp=Z,39nm,1.0s,mb5.0							
QIZ				pmax		pmax		
	comp=Z,94nm,8.6s							
QIZ	**Qiongzhong**	**21.08**	**329**	*e*P		**P**	**10 24 59.9**	**-0.3**
	comp=Z,38nm,0.9s,mb5.0							
TWG	**Pinang**	**21.76**	**0**	*e*P		**P**	**10 25 05.2**	**-1.1**
	comp=Z,30nm,0.4s,mb5.3							
MBWA	**Marble Bar**	**21.99**	**183**	*e*P		**P**	**10 25 08.1**	**-0.4**
MBWA	**Marble Bar**	**21.99**	**183**	*e*P		**P**	**10 25 08.3**	**-0.2**
	comp=Z,82nm,0.6s,mb5.5							
PSI	**Prapat**	**22.19**	**275**	P		**P**	**10 25 10.6**	**+0.2**
PSI				PcP		PcP	10 28 44.8	+0.1
PSI				ScP		ScP	10 31 27.1	-1.9
PSI	**Prapat**	**22.19**	**275**	P		**P**	**10 25 10.6**	**+0.2**
	comp=Z,3.7nm,0.3s,mb4.4,baz=313,slow=20,SNR=4.0							
PSI				PcP		PcP	10 28 44.8	+0.1
	comp=Z,1.7nm,0.3s,baz=188,slow=6.1,SNR=4.8							
PSI				ScP		ScP	10 31 27.1	-1.9
	comp=Z,1.7nm,0.4s,baz=142,slow=7.7,SNR=3.8							
PSI	**Prapat**	**22.19**	**275**	P		**P**	**10 25 10.6**	**+0.2**
PSI							10 28 44.8	
TPUB	**Ta-pu**	**22.24**	**359**	*e*P		**P**	**10 25 10.4**	**-0.3**
	comp=Z,62nm,0.8s,mb5.3							
YULB	**Yu-li**	**22.33**	**1**	*e*P		**P**	**10 25 09.2**	**-2.3**
	comp=Z,32nm,0.6s,mb5.1							
SSLB	**Suanglung**	**22.72**	**360**	*e*P		**P**	**10 25 13.6**	**-1.3**
	comp=Z,55nm,0.8s,mb5.2							
SSLB				*e*S		**S**	**10 28 41.8**	**-2.1**
NACB	**Ninganchiao**	**23.11**	**1**	*e*P		**P**	**10 25 17.7**	**-0.6**
	comp=Z,13nm,0.4s,mb4.9							
YHNB	**Yeheng**	**23.60**	**1**	*e*P		**P**	**10 25 21.9**	**-0.8**
	comp=Z,116nm,0.8s,mb5.6							
TATO	**Taipei**	**23.91**	**1**	*e*P		**P**	**10 25 24.4**	**-1.0**
	comp=Z,194nm,0.9s,mb5.7							
QZH	**Quanzhou**	**23.99**	**355**↓	*i*P		**P**	**10 25 25.8**	**-0.4**
WRA	**Warramunga Arr**	**24.50**	**149**	P		**P**	**10 25 30.1**	**-0.6**
WRA				PcP		PcP	10 28 48.6	-0.9
WRA				S		**S**	**10 29 09.2**	**-2.8**
WRA				ScP		ScP	10 31 33.2	-1.9
WRA	**Warramunga Arr**	**24.50**	**149**	P		**P**	**10 25 30.1**	**-0.6**
	comp=Z,29nm,0.4s,mb5.2,baz=330,slow=9.6,SNR=399							
WRA				PcP		PcP	10 28 48.6	-0.9
	comp=Z,6.9nm,0.7s,baz=324,slow=2.3,SNR=5.7							
WRA				S		**S**	**10 29 09.2**	**-2.8**
	comp=Z,30nm,1.0s,baz=330,slow=16,SNR=11							
WRA				ScP		ScP	10 31 33.2	-1.9
	comp=Z,2.0nm,0.3s,baz=324,slow=2.7,SNR=4.6							
WRA				PKiKP		PKiKP	10 36 29.1	-1.8
	comp=Z,0.6nm,0.5s,baz=309,slow=1.3,SNR=5.1							
WRA	**Warramunga Arr**	**24.50**	**149**	P		**P**	**10 25 30.1**	**-0.6**
WRA							10 28 48.6	
WRA				S		**S**	**10 29 09.2**	**-2.8**
COEN	**Coen**	**26.44**	**125**	*e*P		**P**	**10 25 48.8**	**+0.8**
	comp=Z,67nm,0.8s,mb5.3							
JOW	**Kunigami**	**26.67**	**14**	P		**P**	**10 25 49.2**	**-0.6**
JOW	**Kunigami**	**26.67**	**14**	P		**P**	**10 25 49.2**	**-0.6**
	comp=Z,30nm,0.6s,mb5.1,baz=195,slow=9.2,SNR=14							
GUMO	**Guam**	**26.72**	**61**	*e*P		**P**	**10 25 50.0**	**-0.4**
	comp=Z,62nm,0.7s,mb5.3							
GUMO	**Guam**	**26.72**	**61**	P		**P**	**10 25 49.4**	**-1.0**
	comp=Z,51nm,0.4s,mb5.5,baz=173,slow=4.1,SNR=16							
GUMO	**Guam**	**26.72**	**61**	*e*P		**P**	**10 25 50.0**	**-0.4**
GUMO				pmax		pmax		
	comp=Z,62nm,0.7s,mb5.3							
ASAR	**Alice Springs**	**27.46**	**154**	P		**P**	**10 25 57.0**	**+0.3**
	comp=Z,16nm,0.4s,mb5.0,baz=326,slow=7.8,SNR=220							
ASAR				PcP		PcP	10 28 56.1	-0.3
	comp=Z,18nm,0.6s,baz=345,slow=2.5,SNR=16							
ASAR				S		**S**	**10 29 56.7**	**-1.5**
	comp=Z,32nm,0.9s,baz=325,slow=14,SNR=25							
ASAR				ScP		ScP	10 31 42.7	-1.1
	comp=Z,5.3nm,0.6s,baz=343,slow=3.2,SNR=6.6							
ASAR	**Alice Springs**	**27.46**	**154**	P		**P**	**10 25 57.0**	**+0.2**
ASAR							10 28 56.1	
ASAR				S		**S**	**10 29 56.7**	**-1.6**
MEEK	**Meekatharra**	**27.51**	**185**↓	*i*P		**P**	**10 25 57.3**	**+0.1**
MEEK				*e*S		**S**	**10 29 57.8**	**-1.2**
CM31	**Chiang Mai Arr**	**27.82**	**310**	*e*P		**P**	**10 26 00.9**	**+0.9**
	comp=Z,16nm,0.7s,mb4.8							
CMAR	**Chiang Mai Arr**	**27.82**	**310**	P		**P**	**10 26 00.7**	**+0.7**
CMAR				PcP		PcP	10 28 56.6	-0.9
CMAR				ScP		ScP	10 31 44.0	-1.0
CMAR	**Chiang Mai Arr**	**27.82**	**310**	P		**P**	**10 26 00.7**	**+0.7**
	comp=Z,24nm,0.8s,mb4.9,baz=135,slow=7.1,SNR=124							
CMAR				PcP		PcP	10 28 56.6	-0.9
	comp=Z,3.4nm,0.8s,baz=132,slow=1.3,SNR=6.2							
CMAR				ScP		ScP	10 31 44.0	-1.0
	comp=Z,9.5nm,1.0s,baz=160,slow=2.2,SNR=21							
CMAR				PKiKP		PKiKP	10 36 32.0	-0.9
	comp=Z,0.5nm,0.4s,baz=193,slow=3.2,SNR=4.3							
CMAR	**Chiang Mai Arr**	**27.82**	**310**	P		**P**	**10 26 00.7**	**+0.7**
CMAR							10 28 56.6	
PMG	**Port Moresby**	**27.96**	**112**	*e*P		**P**	**10 26 01.6**	**+0.4**
	comp=Z,79nm,0.7s,mb5.5							
PMG	**Port Moresby**	**27.96**	**112**	*c i*P		**P**	**10 26 01.4**	**+0.1**
PMG				pmax		pmax		
	comp=Z,115nm,1.0s							
CHG	**Chiang Mai**	**28.03**	**311**	↓P		**P**	**10 26 02.5**	**+0.6**
	comp=Z,60nm,1.0s,mb5.2							
CHTO	**Chiang Mai**	**28.03**	**311**	*e*P		**P**	**10 26 03.1**	**+1.2**
	comp=Z,51nm,0.9s,mb5.2							
CHTO	**Chiang Mai**	**28.03**	**311**	*e*P		**P**	**10 26 03.1**	**+1.2**
CHTO				pmax		pmax		
	comp=Z,51nm,0.9s,mb5.2							
CHRT	**Chiangrai**	**28.06**	**313**	P		**P**	**10 26 00.0**	**-2.1**
	comp=Z,237nm,1.0s,mb5.8							
GYA	**Guiyang**	**28.91**	**333**	P		**P**	**10 26 11.0**	**+1.6**
GYA				sP		sP	10 28 44.5	-3.0
GYA				PcP		PcP	10 29 02.3	+2.2
GYA				S		**S**	**10 30 23.8**	**+3.1**
GYA				ScP		ScP	10 31 51.0	+2.7
GYA				PcS		PcS	10 32 45.5	+1.8
GYA				ScS		ScS	10 35 44.8	+1.2
GYA				pmax		pmax		
	comp=Z,20nm,0.8s,mb4.8							
GYA				pmax		pmax		
	comp=Z,120nm,4.8s							
KMI	**Kunming**	**29.85**	**325**	P		**P**	**10 26 19.5**	**+2.0**
KMI				sP		sP	10 28 54.8	-1.2
KMI				S		**S**	**10 30 37.3**	**+2.0**
KMI				pmax		pmax		
	comp=Z,26nm,1.0s,mb4.7							
KMI				pmax		pmax		
	comp=Z,110nm,4.8s							
WHN	**Wuhan**	**30.13**	**348**	P		**P**	**10 26 21.0**	**+1.2**
WHN				S		**S**	**10 30 42.3**	**+2.9**
WHN				pmax		pmax		
	comp=Z,290nm,1.2s,mb5.7							
MORW	**Morawa**	**30.21**	**189**	*e*P		**P**	**10 26 20.9**	**+0.3**
NJ2	**Nanjing**	**31.02**	**356**	*e*P		**P**	**10 26 28.5**	**+1.1**
NJ2				pmax		pmax		
	comp=Z,90nm,1.0s,mb5.2							
ENH	**Enshi**	**31.18**	**340**	*e*P		**P**	**10 26 29.3**	**+0.5**
	comp=Z,117nm,0.8s,mb5.5							
FORT	**Forrest**	**32.23**	**169**	*e*P		**P**	**10 26 38.5**	**+0.7**
	comp=Z,122nm,0.7s,mb5.5							
FORT				*e*PCP		PcP	10 29 09.9	+0.9
FORT				*e*S		**S**	**10 31 09.6**	**-2.0**
FORT	**Forrest**	**32.23**	**169**	*e*P		**P**	**10 26 38.6**	**+0.8**
	comp=Z,136nm,0.7s,mb5.6							
CTA	**Charters Tower**	**32.35**	**132**	*e*P		**P**	**10 26 40.3**	**+1.4**
	comp=Z,20nm,0.8s,mb4.7							
CTA				*e*PCP		PcP	10 29 11.2	+1.7
CTA				*e*S		**S**	**10 31 16.9**	**+3.2**
CTA	**Charters Tower**	**32.35**	**132**	P		**P**	**10 26 40.5**	**+1.5**
	comp=Z,28nm,0.8s,mb4.8,baz=306,slow=12,SNR=20							
CTA				PcP		PcP	10 29 10.8	+1.3
	comp=Z,28nm,0.8s,baz=300,slow=5.1,SNR=12							
CTAO	**Charters Tower**	**32.35**	**132**	*e*P		**P**	**10 26 40.4**	**+1.5**
	comp=Z,29nm,0.9s,mb4.8							
CTAO				*e*PcP		PcP	10 29 10.9	+1.3
CTAO	**Charters Tower**	**32.35**	**132**	*e*P		**P**	**10 26 40.4**	**+1.5**
CTAO				*e*			10 29 10.9	
CTAO				pmax		pmax		
	comp=Z,29nm,0.9s,mb4.8							
KLBR	**Kellerberrin**	**32.50**	**185**	*e*P		**P**	**10 26 39.7**	**-0.3**
	comp=Z,42nm,0.5s,mb5.2							
KLBR				*e*S		**S**	**10 31 14.8**	**-0.8**
**

comp=Z,36nm,0.6s,mb5.1
HHC Hu-ho-hao-te 40.65 349 *e*P **P** **10 27 46.5 -0.3**
HHC pP pP 10 29 24.0 -1.8
HHC PP PP 10 29 34.5 -1.9
HHC S **S** **10 33 17.5 +1.1**
HHC SS SS 10 36 39.5 -1.8
HHC ScS ScS 10 36 48.5 +1.0
HHC pmax pmax
comp=Z,14nm,0.8s,mb4.5
HHC pmax pmax
comp=Z,58nm,4.4s
ODAN Odare 41.35 311 *e*P **P** **10 27 53.2 +0.6**
comp=Z,100nm,0.8s,mb5.4
TAPN Taplejung 41.38 312 *e*P **P** **10 27 53.6 +0.8**
comp=Z,97nm,0.9s,mb5.3
RAMN Ramite 41.99 311 *e*P **P** **10 27 58.4 +0.8**
ARMA Armidale 42.65 140 *e*P **P** **10 28 05.5 +2.7**
ARMA *e*PCP PcP 10 29 43.0 +1.4
ARMA *e*S **S** **10 33 51.9 +6.4**
ARMA Armidale 42.65 140 *e*P **P** **10 28 05.6 +2.8**
comp=Z,29nm,0.8s,mb4.9
JIRN Jiri 42.68 312 *e*P **P** **10 28 03.6 +0.6**
CN2 Changchun 42.86 5 *e*P **P** **10 28 08.0 +3.9**
CN2 *e*pP pP 10 29 46.3 +1.7
CN2 *e*S **S** **10 33 55.0 +7.0**
CN2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
CN2 pmax pmax
comp=Z,200nm,3.0s
GTA Gaotai 42.93 336 ⇓*e*P **P** **10 28 05.8 +1.1**
GTA pP pP 10 29 43.8 -1.5
GTA ScP ScP 10 32 41.8 +2.0
GTA S **S** **10 33 52.3 +3.2**
GTA pmax pmax
comp=Z,53nm,0.9s,mb5.1
GTA pmax pmax
comp=Z,160nm,5.7s
GUN Gumba 43.04 312 *e*P **P** **10 28 06.7 +0.9**
PKI Pulchoki 43.22 311 *e*P **P** **10 28 07.7 +0.5**
KKN Kakani 43.43 311 *e*P **P** **10 28 09.4 +0.6**
comp=Z,62nm,0.7s,mb5.3
YNG Young 43.43 146 *e*P **P** **10 28 10.7 +2.0**
comp=Z,6.6nm,0.9s,mb4.2
YNG *e*PCP PcP 10 29 45.0 +0.8
DMN Daman 43.47 311 *e*P **P** **10 28 09.8 +0.7**
comp=Z,106nm,0.9s,mb5.4
GKN Gorkha 44.02 311 *e*P **P** **10 28 14.0 +0.6**
comp=Z,119nm,0.6s,mb5.6
MDJ Mudanjiang 44.15 9 P **P** **10 28 13.8 -0.3**
MDJ PcP PcP 10 29 47.5 +1.1
MDJ pP pP 10 29 53.0 -2.5
MDJ PP PP 10 30 09.0 +0.7
MDJ sP sP 10 30 54.5 -4.4
MDJ ScP ScP 10 32 45.3 +0.6
MDJ PcS PcS 10 33 41.5 +1.0
MDJ S **S** **10 34 04.5 -1.8**
MDJ sS sS 10 37 08.0 -2.7
MDJ pmax pmax
comp=Z,26nm,0.8s,mb4.8
MDJ pmax pmax
comp=Z,31nm,4.5s
MDJ Mudanjiang 44.15 9 *e*P **P** **10 28 13.9 -0.2**
comp=Z,16nm,0.6s,mb4.7
CAN Canberra 44.52 147 *e*P **P** **10 28 18.8 +1.7**
comp=Z,39nm,0.8s,mb5.0
CAN *e*PcP PcP 10 29 48.6 +0.7
CAN Canberra 44.52 147 *e*P **P** **10 28 18.8 +1.7**
CAN *e* 10 29 48.6
CAN pmax pmax
comp=Z,39nm,0.8s,mb5.0
KOLN Koldanda 44.69 310 *e*P **P** **10 28 19.4 +0.8**
comp=Z,143nm,0.7s,mb5.6
CNB Canberra Magne 44.72 147 *e*P **P** **10 28 21.1 +2.5**
DANN Dangsing 44.87 311 *e*P **P** **10 28 20.6 +0.7**
comp=Z,252nm,0.6s,mb5.9
ERM Erimo 45.48 23*c i*P **P** **10 28 24.4 0.0**
ERM *i* *PP pP 10 30 04.4 -2.2
ERM pmax pmax
comp=Z,13nm,0.7s,mb4.6
ASAJ Asahikawa 47.07 21 *e*P **P** **10 28 36.1 -0.2**
comp=Z,19nm,0.9s,mb4.6
ULN Ulaanbaatar 48.30 347 *e*P **P** **10 28 46.0 +0.5**
comp=Z,10nm,0.6s,mb4.5
ULN Ulaanbaatar 48.30 347 *e*P **P** **10 28 46.0 +0.6**
ULN pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
SONM Songino Array 48.42 347 P **P** **10 28 46.3 0.0**
comp=Z,7.7nm,0.5s,mb4.5,baz=163,slow=8.0,SNR=19
SONM PcP PcP 10 30 00.7 -1.0
comp=Z,7.4nm,0.9s,baz=155,slow=4.5,SNR=6.6
SONM ScP ScP 10 33 01.5 -1.1
comp=Z,3.5nm,0.8s,baz=162,slow=3.9,SNR=4.1
SONM Songino Array 48.42 347 P **P** **10 28 46.3 0.0**
SONM 10 30 00.7
HABR Khabarovsk 48.88 12 *e*P **P** **10 28 47.8 -1.9**
HABR *e* 10 30 02.1
HABR *e**PP pP 10 30 29.4 -4.8
HABR *e* 10 30 48.2
HABR *e*S **S** **10 35 10.9 -0.8**
HABR *e* 10 37 40.4
HABR *e*SS SS 10 38 51.4 -1.1
HABR pmax pmax
comp=N,16nm,2.5s
HABR pmax pmax
comp=Z,11nm,1.0s,mb4.3
HABR pmax pmax
comp=E,36nm,2.6s
POO Poona 49.48 294⇓ *i*P **P** **10 28 52.0 -2.7**
comp=E,40nm,1.0s,mb4.9
YSS Yuzh-Sakhalins 49.60 19 *e*P **P** **10 28 54.8 -0.2**
comp=E,28nm,0.5s,mb4.9
YSS Yuzh-Sakhalins 49.60 19 *e*P **P** **10 28 54.3 -0.7**
YSS pmax pmax
comp=Z,30nm,0.5s,mb5.0
ZAK Zakamensk 51.54 346 *e*P **P** **10 29 08.5 -0.6**
ZAK *e* 10 30 09.1
ZAK pmax pmax
comp=Z,2.0nm,0.8s
WMQ Urumqi 52.00 330 *e*P **P** **10 29 14.3 +1.8**
WMQ PcP PcP 10 30 17.3 +2.2
WMQ pP pP 10 30 57.5 -1.5
WMQ PP PP 10 31 21.5 +2.6
WMQ sP sP 10 31 55.3 -5.5
WMQ pmax pmax
comp=Z,23nm,0.6s,mb4.7
WMQ pmax pmax
comp=Z,88nm,3.8s
TLY Talaya 52.65 346 *e*P **P** **10 29 18.6 +1.6**
TLY *e*S **S** **10 36 03.0 +0.7**
TLY pmax pmax
comp=Z,4.0nm,0.6s,mb3.9
MOY Mondy 53.30 345 *e*P **P** **10 29 22.2 +0.6**
KSH Kashi 56.19 319⇑ *i*P **P** **10 29 43.3 +1.2**
KSH *e*pP pP 10 31 32.5 +1.5
KSH *e*sP sP 10 32 28.5 -3.6
KSH *e*S **S** **10 36 46.8 -2.3**
KSH pmax pmax
comp=Z,46nm,2.3s,mb4.3
MK31 Makanchi Array 56.81 329 *e*P **P** **10 29 46.4 +0.3**
MK31 *e*PcP PcP 10 30 33.5 -0.3
MKAR Makanchi Array 56.81 329 P **P** **10 29 46.2 0.0**
MKAR PcP PcP 10 30 33.1 -0.6
MKAR ScP ScP 10 33 37.5 -1.8
MKAR S **S** **10 36 55.4 -1.3**
MKAR ⇑*e* 10 59 37.5
MKAR Makanchi Array 56.81 329 P **P** **10 29 46.2 0.0**
comp=Z,14nm,0.6s,mb4.4,baz=130,slow=7.8,SNR=55
MKAR PcP PcP 10 30 33.1 -0.6
comp=Z,9.4nm,0.5s,baz=126,slow=5.1,SNR=12
MKAR ScP ScP 10 33 37.5 -1.8
comp=Z,3.6nm,0.8s,baz=129,slow=5.9,SNR=4.0
MKAR S **S** **10 36 55.3 -1.3**
comp=Z,3.2nm,0.9s,baz=135,slow=14,SNR=6.9
MKAR PKP2bc 10 59 37.5
comp=Z,0.2nm,0.4s,baz=220,slow=1.1,SNR=4.2
MKAR Makanchi Array 56.81 329 P **P** **10 29 46.2 +0.1**
MKAR 10 30 33.1
MKAR 10 33 37.5
MKAR S **S** **10 36 55.4 -1.3**
KZA Kyzart 58.01 321 *e*P **P** **10 29 54.8 +0.4**
comp=Z,13nm,0.8s,mb4.2
KZA *e*PcP PcP 10 30 40.0 +1.3
KZA Kyzart 58.01 321 *e*P **P** **10 29 54.8 +0.4**
KZA *e* 10 30 40.0
KZA pmax pmax
comp=Z,13nm,0.8s,mb4.2
TKM2 Tokmak 2 58.25 322 P **P** **10 29 57.2 +1.2**
SNR=9.9
TKM2 Tokmak 2 58.25 322 *e*P **P** **10 29 57.0 +1.0**
comp=Z,9.0nm,0.6s,mb4.2
TKM2 Tokmak 2 58.25 322 *e*P **P** **10 29 57.0 +1.0**
TKM2 pmax pmax
comp=Z,9.0nm,0.6s,mb4.2
KBK Karagaybulak 58.51 321 P **P** **10 29 59.9 +2.1**
SNR=6.7
AAK Ala-Archa 58.78 321 P **P** **10 30 01.0 +1.4**
SNR=6.4
AAK Ala-Archa 58.78 321 *e*P **P** **10 30 00.7 +1.1**
comp=Z,14nm,0.7s,mb4.3
AAK Ala-Archa 58.78 321 P **P** **10 30 00.4 +0.8**
comp=Z,9.5nm,0.6s,mb4.2,baz=128,slow=5.2,SNR=22
AAK Ala-Archa 58.78 321*c i*P **P** **10 30 00.4 +0.8**
AAK pmax pmax
comp=Z,6.0nm,0.7s,mb3.9
KBL Kabul 58.85 311 *e*P **P** **10 30 00.1 -0.2**
comp=Z,37nm,0.5s,mb4.9
KBL Kabul 58.85 311 *e*P **P** **10 30 00.1 -0.2**
KBL pmax pmax
comp=Z,37nm,0.5s,mb4.9
AML Almayashu 59.02 320 P **P** **10 30 02.5 +1.3**
SNR=20
AML Almayashu 59.02 320 *e*P **P** **10 30 02.1 +0.8**
comp=Z,21nm,0.7s,mb4.5
AML *e*PcP PcP 10 30 44.4 +1.7
AML Almayashu 59.02 320 *e*P **P** **10 30 02.1 +0.8**
AML *e* 10 30 44.4
AML pmax pmax
comp=Z,21nm,0.7s,mb4.5
MSVF Nonsavu 59.06 111 P **P** **10 30 04.0 +2.1**
comp=Z,375nm,0.8s,mb5.7,SNR=7.1
MSVF Nonsavu 59.06 111 *e*P **P** **10 30 03.8 +1.8**
comp=Z,49nm,0.8s,mb4.8
MSVF Nonsavu 59.06 111 *e*P **P** **10 30 03.8 +1.9**
MSVF pmax pmax
comp=Z,49nm,0.8s,mb4.8
USP Ospenovka 59.11 322 P **P** **10 30 02.2 +0.4**
SNR=18
EKS2 Erkin-Say 59.25 321 P **P** **10 30 03.8 +1.1**
SNR=12
EKS2 Erkin-Say 59.25 321 *e*P **P** **10 30 03.4 +0.6**
comp=Z,14nm,0.9s,mb4.2
EKS2 *e*PcP PcP 10 30 44.6 +1.0
EKS2 Erkin-Say 59.25 321 *e*P **P** **10 30 03.4 +0.7**
EKS2 *e* 10 30 44.6
EKS2 pmax pmax
comp=Z,15nm,0.9s,mb4.2
PETK Petropavlovsk- 60.23 24 P **P** **10 30 09.2 +0.2**
comp=Z,32nm,0.8s,mb4.7,baz=199,slow=3.4,SNR=49
PETK PcP PcP 10 30 46.7 -0.6
comp=Z,5.7nm,0.5s,baz=218,slow=2.0,SNR=12
PET Petropavlovsk 60.57 25 *e*P **P** **10 30 11.0 -0.2**
comp=Z,41nm,1.1s,mb4.7
PET Petropavlovsk 60.57 25 *e*P **P** **10 30 11.4 +0.2**
PET pmax pmax
comp=Z,33nm,1.1s,mb4.6
ZALV Zalesovo Beam 60.67 336 P **P** **10 30 10.6 -1.3**
comp=Z,10nm,0.7s,mb4.3,baz=132,slow=4.8,SNR=15
ZALV S **S** **10 37 41.0 -4.2**
comp=Z,12nm,1.2s,baz=116,slow=12,SNR=8.0
ZALV PKPPKP 10 59 24.9
comp=Z,0.8nm,0.4s,baz=5.7,slow=1.4,SNR=4.3
ZALV Zalesovo Beam 60.67 336 P **P** **10 30 10.6 -1.3**
ZALV S **S** **10 37 41.0 -4.1**
KURK Kurchatov 61.21 331 P **P** **10 30 15.0 -0.5**
comp=Z,442nm,0.6s,mb6.0,SNR=17
KURK Kurchatov 61.21 331 *e*P **P** **10 30 15.0 -0.5**
comp=Z,37nm,0.5s,mb5.0
KURK PcP PcP 10 30 50.1 -1.2
KURK Kurchatov 61.21 331 P **P** **10 30 15.1 -0.4**
comp=Z,26nm,0.8s,mb4.6,baz=135,slow=6.1,SNR=41
KURK PcP PcP 10 30 50.1 -1.2
comp=Z,9.8nm,0.9s,baz=132,slow=3.5,SNR=8.6
KURK Kurchatov 61.21 331 *e*P **P** **10 30 15.0 -0.5**
KURK 10 30 50.1
KURK pmax pmax
comp=Z,37nm,0.5s,mb5.0
YAK Yakutsk 61.29 5 *e*P **P** **10 30 15.6 -0.2**
comp=Z,58nm,0.6s,mb5.1
YAK Yakutsk 61.29 5*c i*P **P** **10 30 15.5 -0.3**
YAK *e* 10 30 52.0
YAK *e*S **S** **10 37 50.0 -2.5**
YAK *e* 10 39 07.3
YAK *e*SSS 10 45 09.4
YAK pmax pmax
comp=Z,56nm,0.9s,mb4.9
YAK pmax pmax
comp=N,13nm,1.0s
YAK pmax pmax
comp=E,2.0nm,0.9s
YAK pmax pmax
comp=Z,13nm,0.8s,mb4.3
YAK smax
comp=N,122nm,1.5s
YAK smax
comp=E,81nm,1.5s
KKAR Karatay Array 61.55 320 *e*P **P** **10 30 17.6 -0.3**
comp=E,5.6nm,0.7s,mb4.1
KKAR Karatay Array 61.55 320 *e*P **P** **10 30 17.6 -0.3**
KKAR pmax pmax
comp=Z,6.0nm,0.7s,mb4.1
NVS Novosibirsk 61.96 336 *e*P **P** **10 30 17.8 -2.5**
NVS *e*S **S** **10 37 54.5 -6.4**
NVS *e*PS 10 38 19.1
NVS pmax pmax
comp=Z,6.0nm,0.9s,mb4.0
NVS pmax pmax
comp=N,4.0nm,0.8s
NVS pmax pmax
comp=E,4.0nm,0.9s
NVS smax
comp=E,13nm,1.5s
RPZ Rata Peaks 62.95 141 *e*P **P** **10 30 27.7 +0.8**
comp=E,75nm,0.7s,mb5.2
RPZ Rata Peaks 62.95 141 P **P** **10 30 27.8 +0.9**
comp=E,98nm,0.8s,mb5.3,baz=303,slow=4.6,SNR=28
URZ Urewera 64.56 134 P **P** **10 30 37.1 -0.3**
comp=E,18nm,0.4s,mb4.9,baz=304,slow=3.6,SNR=22
SEY Seymchan 66.10 15*c i*P **P** **10 30 46.9 +0.5**
BVAR Borovoye Array 66.69 329 P **P** **10 30 49.6 -0.6**
comp=E,8.8nm,0.5s,mb4.5,baz=131,slow=10,SNR=42
BVAR S S 10 38 55.4 -2.3
comp=E,3.2nm,0.8s,baz=133,slow=13,SNR=8.9
BRVK Borovoye 66.76 329 *e*P **P** **10 30 50.3 -0.4**
comp=E,22nm,1.0s,mb4.6
BRVK Borovoye 66.76 329*c i*P **P** **10 30 49.8 -0.9**
BRVK pmax pmax
comp=Z,17nm,1.0s,mb4.5
CASY Casey 67.48 185 *e*P **P** **10 30 55.3 +0.4**
CASY Casey 67.48 185 *e*P **P** **10 30 55.5 +0.7**
comp=Z,6.5nm,0.6s,mb4.3
AFI Afiamalu 68.11 105 *e*P **P** **10 31 02.3 +2.6**
comp=Z,111nm,0.9s,mb5.4
AFI Afiamalu 68.11 105 *e*P **P** **10 31 02.3 +2.6**
AFI pmax pmax
comp=Z,111nm,0.9s,mb5.4
AMKA Amchitka 69.98 35 *e*P **P** **10 31 10.8 +0.6**
comp=Z,28nm,0.8s,mb4.8
TIXI Tiksi 70.79 3 *e*P **P** **10 31 13.3 -1.2**
comp=Z,44nm,0.8s,mb5.0
TIXI Tiksi 70.79 3*c i*P **P** **10 31 13.4 -1.2**
TIXI *e* 10 39 40.3
TIXI pmax pmax
comp=Z,42nm,0.9s,mb5.0
ABKAR Akbulak array 70.81 323 *e*P **P** **10 31 14.4 -0.7**
AKTK Aktyubinsk 72.40 323 P **P** **10 31 23.8 -0.6**
AKTO Aktyubinsk 72.40 323 P **P** **10 31 23.8 -0.6**
comp=Z,8.6nm,0.5s,mb4.4,baz=104,slow=8.3,SNR=35
SVE Sverdlovsk 73.45 330 *e*P **P** **10 31 29.2 -1.0**
SVE pmax pmax
comp=Z,35nm,1.0s,mb4.7
BILL Bilibino 73.75 16⇓ *i*P **P** **10 31 31.3 -0.4**
BILL *i* 10 31 44.2
BILL pmax pmax
comp=Z,10.0nm,1.0s,mb4.2
ARU Arti 74.33 329 *e*P **P** **10 31 34.5 -0.7**
comp=Z,19nm,0.8s,mb4.6
ARU Arti 74.33 329 *e*P **P** **10 31 34.5 -0.7**
ARU pmax pmax
comp=Z,19nm,0.8s,mb4.6
QRN Al-Qurain 74.78 299 *e*P **P** **10 31 37.1 -1.3**
QRN AMb AMB 10 31 38.9
comp=Z,71nm,0.4s,mb5.4
UMR Umm Al-Rimmam 75.06 300 *e*P **P** **10 31 39.0 -0.9**
UMR AMb AMB 10 31 40.5
comp=Z,34nm,0.6s,mb4.9
MIB Mutribah 75.42 300 *e*P **P** **10 31 40.7 -1.2**
MIB AMb AMB 10 31 42.8
comp=Z,56nm,0.7s,mb5.1
NAY Al-Naaiem 75.43 300 *e*P **P** **10 31 40.4 -1.6**
NAY AMb AMB 10 31 42.9
comp=Z,14nm,0.5s,mb4.6
GNI Garni 78.94 311 *e*P **P** **10 32 01.8 +1.0**
comp=Z,15nm,0.8s,mb4.4
GNI Garni 78.94 311⇑ *e*P **P** **10 32 02.4 +1.6**
GNI pmax pmax
comp=Z,13nm,1.0s
UNV Unalaska Valle 78.95 35 *e*P **P** **10 31 59.9 -0.6**
comp=Z,61nm,0.9s,mb4.9
MAW Mawson 79.22 199 *e*P **P** **10 32 02.4 +0.8**
comp=Z,3.9nm,0.7s,mb3.9
MAW Mawson 79.22 199 P **P** **10 32 02.1 +0.5**
comp=Z,6.8nm,0.9s,mb4.0,baz=49,slow=8.4,SNR=16
GAMB Gambell 79.27 25 *e*P **P** **10 32 02.9 +0.9**
comp=Z,26nm,0.8s,mb4.6
AKUT Akutan 79.44 35 *e*P **P** **10 32 03.6 +0.5**
comp=Z,98nm,0.4s,mb5.5
ZEI Tsey 79.94 313 *e*P **P** **10 32 05.9 -0.1**
ZEI pmax pmax
comp=Z,29nm,0.9s,mb4.6
KIV Kislovodsk 80.98 314⇑ *e*P **P** **10 32 12.9 +1.6**
KIV *e* 10 35 25.9
KIV pmax pmax
comp=Z,11nm,0.8s,mb4.3
SBA Scott Base 82.41 171 *e*P **P** **10 32 19.2 +1.3**
comp=Z,5.2nm,0.9s,mb4.0
SBA Scott Base 82.41 171 *e*P **P** **10 32 19.2 +1.2**
SBA pmax pmax
comp=Z,5.0nm,0.9s,mb3.9
SDPT Sand Point 82.68 34 *e*P **P** **10 32 19.8 +0.1**
comp=Z,196nm,0.6s,mb5.8
MALT Malatya 83.63 308 *e*P **P** **10 32 25.4 +0.5**
comp=Z,7.6nm,0.9s,mb4.2
MALT Malatya 83.63 308 *e*P **P** **10 32 25.4 +0.5**
MALT pmax pmax
comp=Z,8.0nm,0.9s,mb4.2
KMBO Kilima Mbogo 83.82 269 P **P** **10 32 28.1 +1.8**
comp=Z,10nm,0.9s,mb4.4,baz=0.3,slow=24,SNR=3.8
VORD Divnogorie 84.08 321 *e*P **P** **10 32 26.0 -0.8**
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,30nm,0.6s
VORD pmax pmax
comp=Z,70nm,0.6s,mb5.4
VSR Storozhevoye 84.18 321 *e*P **P** **10 32 26.1 -1.2**
VSR pmax pmax
comp=Z,70nm,0.6s,mb5.4
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,20nm,0.6s
ANN Anapa 84.81 315 *e*P **P** **10 32 29.2 -1.3**
ANN *e*S SKSac 10 41 59.0 -2.0
ANN pmax pmax
comp=Z,53nm,0.9s,mb5.1
KLMR Klimovskoe 85.06 331 P **P** **10 32 29.8 -1.5**
KLMR pmax pmax
comp=Z,16nm,0.5s,mb4.8
MMAI Mount Meron Ar 85.84 303 P **P** **10 32 36.0 +0.2**
comp=Z,4.9nm,0.6s,mb4.3,baz=97,slow=7.4,SNR=8.5
TTA Tatalina 85.95 27 *e*P **P** **10 32 35.8 +0.2**
SVW2 Sparrevohn 85.97 29 *e*P **P** **10 32 36.5 +0.8**
comp=Z,10nm,0.6s,mb4.6
OBN Obninsk 86.07 325⇑ *e*P **P** **10 32 34.0 -2.3**
OBN *e*S SKSac 10 42 02.3 -6.0
OBN pmax pmax
comp=Z,22nm,0.6s,mb5.0
OHAK Old Harbor 86.86 33 *e*P **P** **10 32 40.6 +0.6**
comp=Z,28nm,0.9s,mb4.9
KDAK Kodiak Island 87.27 32 P **P** **10 32 41.5 -0.4**
comp=Z,16nm,0.8s,mb4.7,baz=274,slow=4.9,SNR=11
KDAK Kodiak Island 87.27 32 *i* P **P** **10 32 41.9 0.0**
BR131 Keskin Array S 87.41 310 *e*P **P** **10 32 42.1 -0.9**
comp=Z,11nm,0.8s,mb4.5
BRTR Keskin Array B 87.41 310 P **P** **10 32 41.6 -1.4**
comp=Z,12nm,0.9s,mb4.5,baz=120,slow=5.7,SNR=44
BRTR Keskin Array B 87.41 310 *i* P **P** **10 32 42.2 -0.8**
BRTR pmax pmax
comp=Z,12nm,0.9s
PPLA Purkeypile 87.69 27 *e*P **P** **10 32 43.4 -0.3**
comp=Z,15nm,1.2s,mb4.6
LVZ Lovozero 87.78 338⇓ *e*P **P** **10 32 43.6 -0.5**
LVZ pmax pmax
comp=Z,20nm,1.2s,mb4.7
SYO Syowa Base 87.80 201⇑ *e*X 10 32 43.4
BPAW Bear Paw Mtn. 88.27 26 *e*P **P** **10 32 46.1 -0.4**
comp=Z,5.4nm,0.7s,mb4.4
TRF Thorofare Moun 88.57 27 *e*P **P** **10 32 47.2 -0.7**
comp=Z,12nm,1.0s,mb4.7
COLD Coldfoot 88.66 23 *e*P **P** **10 32 48.7 +0.5**
comp=Z,8.4nm,0.8s,mb4.6
RC01 Rabbit Creek A 88.81 29 *e*P **P** **10 32 48.3 -0.7**
comp=Z,24nm,0.9s,mb5.0
SEW Seward 88.95 30 *e*P **P** **10 32 48.8 -0.9**
comp=Z,20nm,0.8s,mb5.0
PMR Palmer 89.10 29 *e*P **P** **10 32 49.8 -0.5**
comp=Z,8.9nm,0.6s,mb4.8
PMR Palmer 89.10 29 *e*P **P** **10 32 49.8 -0.5**
PMR pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
MCK McKinley 89.18 26 *e*P **P** **10 32 49.9 -0.7**
comp=Z,15nm,0.8s,mb4.9
MCK McKinley 89.18 26 *e*P **P** **10 32 49.9 -0.8**
MCK pmax pmax
comp=Z,15nm,0.8s,mb4.9
SML Sawmill 89.48 28 *e*P **P** **10 32 51.9 -0.2**
comp=Z,10nm,0.9s,mb4.7
SML Sawmill 89.48 28 *e*P **P** **10 32 51.9 -0.2**
SML pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
COLA College 89.63 25 *e*P **P** **10 32 52.1 -0.6**
comp=Z,7.3nm,0.9s,mb4.5
COLA College 89.63 25 *e*P **P** **10 32 52.2 -0.5**
COLA pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
ILAR Eielson Array 90.05 25 P **P** **10 32 52.4 -2.2**
comp=Z,1.6nm,0.5s,mb4.1,baz=268,slow=4.5,SNR=38
ILAR PKKPbc PKKPbc 10 50 21.3 -3.8
comp=Z,0.7nm,0.8s,baz=75,slow=1.8,SNR=8.5
AKASG Malin Array Be 90.45 321 P **P** **10 32 55.0 -1.8**
AKASG PKKPbc PKKPbc 10 50 20.5 -3.1
AKASG Malin Array Be 90.45 321 P **P** **10 32 55.0 -1.8**
comp=Z,6.2nm,0.6s,mb4.6,baz=76,slow=4.3,SNR=23
AKASG PKKPbc PKKPbc 10 50 20.5 -3.1
comp=Z,0.8nm,0.5s,baz=257,slow=4.5,SNR=4.4
AKBB Malin Array Si 90.45 321 *e*P **P** **10 32 54.9 -1.9**
KIEV Kiev 90.46 321 *e*P **P** **10 32 54.8 -2.1**
comp=Z,8.3nm,0.8s,mb4.6
KIEV Kiev 90.46 321 *e*P **P** **10 32 54.8 -2.1**
KIEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
PAX Paxson 90.77 27 *e*P **P** **10 32 57.6 -0.5**
comp=Z,9.9nm,1.0s,mb4.7
PAX Paxson 90.77 27 *e*P **P** **10 32 57.6 -0.4**
PAX pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
QSPA South Pole Qui 90.86 180 *e*P **P** **10 32 58.8 +0.7**
comp=Z,9.6nm,0.8s,mb4.8
ARCES ARCESS Array B 91.08 340 P **P** **10 32 57.6 -1.7**
comp=Z,2.8nm,0.5s,mb4.4,baz=97,slow=7.4,SNR=22
ARCES PKiKP PKiKP 10 37 48.4 +0.3
comp=Z,1.7nm,0.9s,baz=70,slow=1.1,SNR=4.2
ARCES PKKPbc PKKPbc 10 50 19.4 -3.3
comp=Z,1.7nm,0.8s,baz=251,slow=2.8,SNR=8.0
BMRM Bremner River 91.31 29 *e*P **P** **10 33 00.7 +0.1**
comp=Z,20nm,0.9s,mb5.1
DOT Dot Lake 91.35 26 *e*P **P** **10 33 00.7 0.0**
comp=Z,23nm,1.0s,mb5.1
MENT Mentasta 91.56 27 *e*P **P** **10 33 02.5 +0.8**
FINES FINESS Array B 91.57 331 P **P** **10 33 00.2 -1.6**
comp=Z,8.7nm,0.9s,mb4.8,baz=73,slow=6.1,SNR=9.3
FINES PKiKP PKiKP 10 37 48.5 -0.6
comp=Z,4.2nm,1.0s,baz=98,slow=4.2,SNR=4.0
IZAR Zarasai 91.95 326 *e*P **P** **10 33 03.2 -0.4**
IZAR AMB AMB 10 33 03.8
comp=Z,8.2nm,0.7s,mb4.9

IZAR	Zarasai	91.95	326	eP		P		10 33 02.9	-0.7
IZAR					AMB	AMB		10 33 03.8	
	comp=Z,8.0nm,0.8s,mb4.8								
IIGN	Ignalina	91.99	325	eP		P		10 33 03.5	-0.3
IIGN					AMB	AMB		10 33 05.7	
	comp=Z,8.9nm,0.9s,mb4.8								
IIGN	Ignalina	91.99	325	eP		P		10 33 03.2	-0.6
IIGN					AMB	AMB		10 33 04.8	
	comp=Z,7.2nm,0.8s,mb4.7								
ISAL	Salakas	92.03	326	eP		P		10 33 03.6	-0.4
ISAL					AMB	AMB		10 33 05.0	
	comp=Z,6.1nm,1.3s,mb4.5								
ISAL	Salakas	92.03	326	eP		P		10 33 03.3	-0.7
ISAL					AMB	AMB		10 33 04.0	
	comp=Z,4.7nm,0.6s,mb4.7								
EGAK	Eagle	92.49	25	eP		P		10 33 05.9	0.0
	comp=Z,6.8nm,0.9s,mb4.7								
BUR08	Bucovina Ar. S	93.27	318	eP		P		10 33 09.6	-0.2
DAWY	Dawson	93.35	26	eP		P		10 33 10.1	+0.2
PNL	Peninsula	94.03	30	eP		P		10 33 13.4	+0.4
	comp=Z,25nm,0.8s,mb5.4								
KWP	Kalwaria Pacla	94.71	320	eP		P		10 33 16.1	-0.3
	comp=Z,9.6nm,0.8s,mb5.0								
KWP	Kalwaria Pacla	94.71	320	eP		P		10 33 16.1	-0.3
KWP					pmax	pmax			
	comp=Z,10.0nm,0.8s,mb5.0								
INK	Inuvik	94.81	21	eP		P		10 33 15.7	-0.7
	comp=Z,9.6nm,0.6s,mb5.1								
INK	Inuvik	94.81	21	eP		P		10 33 15.7	-0.7
INK					pmax	pmax			
	comp=Z,10.0nm,0.6s								
SKAG	Skagway	96.11	30	eP		P		10 33 23.2	+0.8
	comp=Z,16nm,0.8s,mb5.3								
NOA	NORSAR Array B	98.69	332	P		Pdif		10 33 31.9	-2.2
	comp=Z,3.3nm,0.9s,baz=74,slow=4.5,SNR=5.7								
VNA2	Neumayer--Watz	102.69	195	ePKiKP		PKiKP		10 38 07.3	-1.3
	baz=71,slow=1.3								
YKA	Yellowknife Ar	104.33	23	PKiKP		PKiKP		10 38 11.5	-0.2
	comp=Z,1.5nm,0.5s,baz=302,slow=1.8,SNR=7.8								
A05A	Maple Falls	106.58	38	⇓P		PKiKP		10 38 16.8	+0.4
	baz=106								
H04A	Detroit Lake	108.05	42	⇓P		PKiKP		10 38 19.6	+0.4
	baz=108								
B08A	Colville Reser	108.51	38	⇓P		PKiKP		10 38 20.3	+0.3
	baz=108								
G06A	Carlson Farm,	108.88	41	⇑P		PKiKP		10 38 21.2	+0.4
	baz=109								
K05A	Summer Lake	109.61	44	⇑P		PKiKP		10 38 23.1	+0.9
	baz=110								
NEW	Newport	109.90	37	⇑P		PKiKP		10 38 23.6	+1.0
	baz=110								
I07A	Izee	110.06	42	⇓P		PKiKP		10 38 24.1	+1.1
	baz=110								
MOD	Modoc	110.31	44	ePKPdf		PKiKP		10 38 23.9	+0.3
F10A	Beach Ranch, E	110.80	39	⇑P		PKiKP		10 38 24.7	+0.3
	baz=111								
J08A	Circle Bar Ran	111.03	42	⇑P		PKiKP		10 38 25.2	+0.3
	baz=111								
C12B	Naegeli Ranch,	111.13	37	⇓P		PKiKP		10 38 25.7	+0.8
	baz=111								
A13A	Flathead Natio	111.20	36	⇓P		PKiKP		10 38 25.8	+0.8
	baz=111								
D12A	Red Ives Fores	111.50	38	⇑P		PKiKP		10 38 26.1	+0.4
	baz=111								
WCN	Washoe City	111.61	47	⇓P		PKiKP		10 38 26.0	-0.1
	baz=112								
C13A	Hot Springs	111.69	37	⇑P		PKiKP		10 38 26.5	+0.4
	baz=112								
A14A	Double T Ranch	111.76	35	⇓P		PKiKP		10 38 26.7	+0.6
	baz=112								
D13A	Huson	112.03	37	⇓P		PKiKP		10 38 26.8	+0.1
	baz=112								
F12A	Elk City	112.14	39	⇑P		PKiKP		10 38 27.3	+0.4
	baz=112								
B14A	Marquette Ranc	112.14	36	⇑P		PKiKP		10 38 27.3	+0.4
	baz=112								
A15A	Johnson Ranch,	112.15	35	⇑P		PKiKP		10 38 27.1	+0.2
	baz=112								
MSO	Missoula	112.47	37	⇓P		PKiKP		10 38 28.1	+0.6
	baz=112								
MSO	Missoula	112.47	37	ePKPdf		PKiKP		10 38 27.9	+0.4
E13A	Victor	112.49	38	⇓P		PKiKP		10 38 28.0	+0.4
	baz=112								
B15A	Bradely Ranch,	112.58	36	⇓P		PKiKP		10 38 27.6	-0.1
	baz=112,SNR=8.0								
D14A	Greenough	112.61	37	⇓P		PKiKP		10 38 27.8	0.0
	baz=112								
F13A	Darby	112.70	39	⇑P		PKiKP		10 38 28.1	+0.1
	baz=112								
MFID	Camas Ranch	112.77	41	⇓P		PKiKP		10 38 28.7	+0.4
	baz=113,SNR=5.8								
C15A	Salmond Ranch,	112.81	36	⇓P		PKiKP		10 38 27.9	-0.2
	baz=113,SNR=9.5								
A16A	West Butte Ran	112.82	35	⇓P		PKiKP		10 38 28.5	+0.3
	baz=113								
H12A	Diamond D Ranc	112.92	40	⇓P		PKiKP		10 38 28.9	+0.4
	baz=113								
E14A	Clinton	112.93	38	⇑P		PKiKP		10 38 29.0	+0.6
	baz=113								
NVAR	Mina Array Bea	112.97	47	Pdif		Pdif		10 34 39.5	+1.8
NVAR				PKPdf		PKiKP		10 38 29.8	+1.0
NVAR				PKKPbc		PKKPbc		10 49 15.3	-3.2
NVAR				PKKPab		PKKPab		10 49 27.0	-0.8
NVAR				SKKPbc				10 52 08.6	
NVAR	Mina Array Bea	112.97	47	Pdiff		Pdif		10 34 39.5	+1.8
	comp=Z,0.4nm,0.8s,baz=266,slow=7.1,SNR=3.3								
NVAR				PKiKP		PKiKP		10 38 29.8	+1.0
	comp=Z,1.4nm,0.6s,baz=256,slow=3.4,SNR=17								
NVAR				PKKPbc		PKKPbc		10 49 15.3	-3.2
	comp=Z,0.6nm,0.8s,baz=100,slow=4.7,SNR=6.4								
NVAR				PKKPab		PKKPab		10 49 27.0	-0.8
	comp=Z,0.4nm,0.5s,baz=134,slow=2.6,SNR=5.8								
NVAR				SKKPbc				10 52 08.6	
	comp=Z,0.5nm,0.8s,baz=174,slow=3.6,SNR=3.7								
B16A	M & M Farms, S	113.02	35	⇑P		PKiKP		10 38 29.2	+0.6
	baz=113								
I12A	Atlanta	113.07	41	⇓P		PKiKP		10 38 29.2	+0.4
	baz=113,SNR=8.0								
G13A	Cobalt	113.08	39	⇑P		PKiKP		10 38 28.5	-0.2
	baz=113								
D15A	Lincoln	113.22	37	⇓P		PKiKP		10 38 29.4	+0.4
	baz=113								
F14A	Wisdom	113.29	38	⇓P		PKiKP		10 38 29.6	+0.5
	baz=113								
H13A	Challis	113.30	40	⇑P		PKiKP		10 38 29.4	+0.2
	baz=113,SNR=8.4								
C16A	Fuhringer Ranc	113.31	36	⇑P		PKiKP		10 38 29.1	0.0
	baz=113,SNR=7.0								
A17A	Triple J Farms	113.33	34	⇑P		PKiKP		10 38 29.2	+0.1
	baz=113,SNR=14								
E15A	Deer Lodge	113.45	37	⇑P		PKiKP		10 38 29.9	+0.5
	baz=113								
B17A	L&G Farms, Che	113.61	35	⇓P		PKiKP		10 38 29.6	-0.1
	baz=113,SNR=9.3								
HLID	Hailey	113.64	41	⇓P		PKiKP		10 38 30.9	+1.1
	baz=114,SNR=9.9								
HLID	Hailey	113.64	41	ePKPdf		PKiKP		10 38 31.2	+1.3
I13A	Wildhorse Cree	113.68	40	⇓P		PKiKP		10 38 30.8	+0.8
	baz=114,SNR=9.0								
ISA	Isabella	113.80	50	⇑P		PKiKP		10 38 31.0	+0.6
	baz=114								
ISA	Isabella	113.80	50	ePKIKP		PKiKP		10 38 31.0	+0.6
D16A	Dana Ranch, Ca	113.81	36	⇓P		PKiKP		10 38 30.2	+0.1
	baz=114,SNR=7.2								
F15A	Butte	113.81	38	⇑P		PKiKP		10 38 30.5	+0.4
	baz=114								
A18A	Metzger Ranch,	113.82	34	⇑P		PKiKP		10 38 30.2	+0.1
	baz=114,SNR=7.2								
CWC	Cottonwood Cre	113.84	49	⇑P		PKiKP		10 38 31.0	+0.5
	baz=114								
LRM	Limekiln Ridge	113.85	38	ePKPdf		PKiKP		10 38 30.9	+0.7
C17A	Wharram Farm,	113.97	36	⇓P		PKiKP		10 38 30.2	-0.1
	baz=114,SNR=7.6								
E16A	East Helena	113.98	37	⇓P		PKiKP		10 38 31.0	+0.6
	baz=114								
DLMT	Dillon	113.98	38	ePKPdf		PKiKP		10 38 31.2	+0.8
B18A	Beardsley Farm	114.14	34	⇓P		PKiKP		10 38 30.7	0.0
	baz=114								
G15A	Dillon	114.14	39	⇓P		PKiKP		10 38 31.2	+0.4
	baz=114								
D17A	Six Diamond Ra	114.25	36	⇑P		PKiKP		10 38 30.7	-0.3
	baz=114,SNR=5.3								
H15A	Lima	114.30	39	⇓P		PKiKP		10 38 31.8	+0.6
	baz=114,SNR=5.2								
J14A	Carey	114.33	41	⇓P		PKiKP		10 38 32.1	+0.8
	baz=114								
EGMT	Eagleton	114.34	35	⇑P		PKiKP		10 38 31.5	+0.4
	baz=114,SNR=12								
EGMT	Eagleton	114.34	35	ePKPdf		PKiKP		10 38 31.3	+0.2
F16A	Kennard Place,	114.37	38	⇑P		PKiKP		10 38 31.8	+0.6
	baz=114,SNR=7.8								
S10A	Tonopah Range,	114.41	47	⇑P		PKiKP		10 38 32.4	+0.8
	baz=114								
MPMC	Manual Prospec	114.42	49	⇑P		PKiKP		10 38 32.7	+1.1
	baz=114								
EDW2	Edwards Air Fo	114.44	51	⇓P		PKiKP		10 38 32.4	+0.7
	baz=114								
BOZ	Bozeman (W)	114.44	38	⇑P		PKiKP		10 38 32.3	+1.0
	baz=114,SNR=9.7								
BOZ	Bozeman (W)	114.44	38	ePKIKP		PKiKP		10 38 32.3	+0.9
E17A	Martinsdale	114.50	37	⇓P		PKPdf		10 38 32.0	+0.5
	baz=114								
G16A	Moss Hill, Enn	114.53	38	⇓P		PKPdf		10 38 32.2	+0.7
	baz=114,SNR=16								
CIS	Catalina Islan	114.60	52	⇓P		PKPdf		10 38 32.4	+0.4
	baz=114								
SCI	San Clemente I	114.62	53	⇓P		PKPdf		10 38 32.6	+0.5
	baz=114								
I15A	Monteview	114.69	40	⇑P		PKPdf		10 38 32.4	+0.5
	baz=114								
Q11A	Duckwater	114.74	46	⇑P		PKPdf		10 38 32.9	+0.7
	baz=115								
FURC	Furnace Creek,	114.75	49	⇑P		PKPdf		10 38 32.9	+0.7
	baz=115								
D18A	Linart Farms,	114.75	36	⇑P		PKPdf		10 38 32.3	+0.4
	baz=115,SNR=6.0								
O12A	Currie	114.81	44	⇓P		PKPdf		10 38 33.1	+0.9
	baz=115								
C19A	Slack Wire Ran	114.90	35	⇑P		PKPdf		10 38 32.8	+0.6
	baz=115,SNR=12								
F17A	Fitzpatrick Pl	114.90	37	⇓P		PKPdf		10 38 32.9	+0.7
	baz=115,SNR=5.9								
K14A	Jones Ranch, D	114.90	41	⇑P		PKPdf		10 38 33.7	+1.3
	baz=115,SNR=7.3								
BFSC	Mount Baldy Ra	114.91	51	⇓P		PKPdf		10 38 33.0	+0.4
	baz=115								
R11A	Troy Canyon, C	114.98	46	⇑P		PKPdf		10 38 33.5	+0.8
	baz=115								
J15A	Blackfoot	115.00	40	⇓P		PKPdf		10 38 33.0	+0.5
	baz=115,SNR=7.8								
E18A	Harlowton	115.01	36	⇑P		PKPdf		10 38 32.7	+0.3
	baz=115								
L14A	Malta	115.09	42	⇑P		PKPdf		10 38 33.8	+1.1
	baz=115,SNR=7.8								
H16A	Russell Place,	115.13	39	⇑P		PKPdf		10 38 33.5	+0.7
	baz=115								
S11A	Rachel	115.14	47	⇓P		PKPdf		10 38 33.2	+0.2
	baz=115								
G17A	Pierce Place,	115.14	38	⇑P		PKPdf		10 38 33.6	+0.9
	baz=115,SNR=7.3								
U10A	Ash Meadows, A	115.16	49	⇑P		PKPdf		10 38 33.9	+0.9
	baz=115,SNR=6.1								
GSC	Goldstone	115.20	50	⇑P		PKPdf		10 38 33.8	+0.6
	baz=115								
Q12A	Willow Creek R	115.25	45	⇓P		PKPdf		10 38 33.5	+0.4
	baz=115								
K15A	Arbon	115.26	41	⇓P		PKPdf		10 38 33.7	+0.7
	baz=115,SNR=10								
I16A	Newdale	115.38	39	⇑P		PKPdf		10 38 33.7	+0.5
	baz=115								
F18A	Big Timber	115.47	37	⇓P		PKPdf		10 38 34.0	+0.6
	baz=115,SNR=11								
MURC	Murrieta	115.48	52	⇑P		PKPdf		10 38 34.4	+0.6
	baz=115								
P13A	Bates Ranch, G	115.66	45	⇓P		PKPdf		10 38 34.0	+0.1
	baz=116								
L15A	Malad City	115.67	42	⇓P		PKPdf		10 38 34.0	+0.1
	baz=116,SNR=6.5								
R12A	Pony Springs,	115.70	46	⇑P		PKPdf		10 38 34.2	+0.2
	baz=115								
BGU	Big Grassy Mou	115.72	43	ePKPdf		PKPdf		10 38 34.5	+0.5
IMW	Indian Meadow	115.72	39	ePKPdf		PKPdf		10 38 35.0	+1.2
E19A	Rath Farm, Rou	115.73	36	⇑P		PKPdf		10 38 34.3	+0.4
	baz=116,SNR=5.9								
HEC	Hector,Ludlow	115.73	50	⇓P		PKPdf		10 38 34.7	+0.5
	baz=116								
RRI2	Red Ridge	115.74	40	ePKPdf		PKPdf		10 38 35.1	+1.2
D20A	Manuel Ranch,	115.77	35	⇓P		PKPdf		10 38 34.1	+0.2
	baz=116,SNR=5.1								
S12A	Delamar Landin	115.81	47	⇑P		PKPdf		10 38 35.4	+1.1
	baz=116,SNR=5.4								
K16A	Soda Springs	115.81	41	⇓P		PKPdf		10 38 35.0	+0.9
	baz=116,SNR=5.6								
TUQ	Turquoise Moun	115.83	50	⇑P		PKPdf		10 38 34.6	+0.3
	baz=116								
Q13A	Wheeler Ranch,	115.86	45	⇓P		PKPdf		10 38 35.1	+0.8
	baz=116								
M15A	Larsen Ranch,	115.87	42	⇑P		PKPdf		10 38 34.8	+0.5
	baz=116,SNR=5.4								
TPAW	Teton Pass	115.91	40	ePKPdf		PKPdf		10 38 35.4	+1.2
MOOW	Moose Ponds	115.91	39	ePKPdf		PKPdf		10 38 34.4	+0.2
F19A	Roth Farm, Mol	115.96	37	⇑P		PKPdf		10 38 34.3	0.0
	baz=116								
REDW	Red Top Meadow	116.03	40	ePKPdf		PKPdf		10 38 35.2	+0.7
SNOW	Snow King Moun	116.05	40	ePKPdf		PKPdf		10 38 36.0	+1.5
V11A	Goodsprings	116.05	49	⇓P		PKPdf		10 38 35.2	+0.4
	baz=116								
PFO	Pinyon Flat Ob	116.06	52	⇓P		PKPdf		10 38 35.3	+0.5
	baz=116								
LOHW	Long Hollow	116.07	39	ePKPdf		PKPdf		10 38 35.3	+0.7
N15A	Stansbury Isla	116.08	43	⇑P		PKPdf		10 38 35.2	+0.5
	baz=116,SNR=12								
E20A	Meyer Farm, Mu	116.09	36	⇓P		PKPdf		10 38 34.7	+0.2
	baz=116,SNR=5.6								
J17A	Brown Place, J	116.12	40	⇓P		PKPdf		10 38 35.5	+0.8
	baz=116,SNR=12								
RLMT	Red Lodge	116.14	37	⇓P		PKPdf		10 38 35.2	+0.6
	baz=116								
RLMT	Red Lodge	116.14	37	ePKPdf		PKPdf		10 38 35.7	+1.0
DUG	Dugway	116.19	44	⇓P		PKPdf		10 38 35.6	+0.7
	baz=116								
DUG	Dugway	116.19	44	ePKIKP		PKPdf		10 38 36.0	+1.1
R13A	O'Grain Ranch,	116.22	46	⇑P		PKPdf		10 38 35.7	+0.7
	baz=116								
GMRC	Granite Mounta	116.27	50	⇑P		PKPdf		10 38 36.2	+1.0
	baz=116								
P14A	Drum Mountains	116.27	44	⇑P		PKPdf		10 38 35.7	+0.6
	baz=116								
L16A	Fish Haven	116.30	41	⇑P		PKPdf		10 38 35.7	+0.7
	baz=116,SNR=6.3								
MONP	Monument Peak	116.34	52	⇑P		PKPdf		10 38 35.9	+0.5
	baz=116								
Q14A	Sevier Lake (B	116.38	45	⇓P		PKPdf		10 38 35.9	+0.6
	baz=116								
O15A	The Old Anders	116.38	43	⇑P		PKPdf		10 38 35.8	+0.5
	baz=116								
HWUT	Hardware Ranch	116.40	42	ePKPdf		PKPdf		10 38 36.0	+0.7
D21A	La Casta Ranch	116.44	35	⇑P		PKPdf		10 38 35.8	+0.7
	baz=116								
F20A	Billings	116.46	36	⇑P		PKPdf		10 38 35.6	+0.4
	baz=116								
M16A	Huntsville	116.49	42	⇓P		PKPdf		10 38 36.1	+0.6
	baz=116,SNR=5.1								
U12A	Valley of Fire	116.50	48	⇓P		PKPdf		10 38 36.4	+0.8
	baz=116								
I18A	Diamond G Ranc	116.52	39	⇑P		PKPdf		10 38 36.1	+0.7
	baz=116,SNR=5.9								
V12A	Nelson	116.53	49	⇓P		PKPdf		10 38 36.4	+0.7
	baz=116,SNR=7.6								
S13A	Holt Ranch, En	116.54	47	⇓P		PKPdf		10 38 36.7	+1.1
	baz=116,SNR=10								
LDFC	Landfair	116.58	50	ePKPdf		PKPdf		10 38 37.4	+1.5
J18A	Kendall Valley	116.64	40	⇑P		PKPdf		10 38 36.4	+0.8
	baz=116,SNR=6.8								
DVTC	Desert V Tower	116.67	52	⇑P		PKPdf		10 38 36.7	+0.7
	baz=116								
E21A	Keefer Ranch,	116.68	35	⇓P		PKPdf		10 38 36.4	+0.7
	baz=116,SNR=8.5								
G20A	Bridger	116.73	37	⇑P		PKPdf		10 38 36.2	+0.4
	baz=116,SNR=12								
T13A	Saint George	116.73	47	⇓P		PKPdf		10 38 36.7	+0.7
	baz=117								
ARUT	Antelope Range	116.76	46	ePKPdf		PKPdf		10 38 34.4	-1.7
N16A	Rees Ranch, Co	116.81	42	⇑P		PKPdf		10 38 37.0	+0.9
	baz=117								
BC3	Big Chuckawall	116.83	51	⇑P		PKPdf		10 38 36.9	+0.6
	baz=117								
K18A	Toltan Ranch,	116.91	40	⇑P		PKPdf		10 38 36.7	+0.5
	baz=117,SNR=13								
U13A	Pakoon Wash	116.93	48	⇓P		PKPdf		10 38 37.7	+1.3
	baz=117								
S14A	Cedar City	116.97	46	⇑P		PKPdf		10 38 37.5	+1.0
	baz=117,SNR=12								
Q15A	Fillmore	117.01	45	⇓P		PKPdf		10 38 37.6	+1.1
	baz=117								
F21A	Absaloka Mine,	117.05	36	⇓P		PKPdf		10 38 36.8	+0.5
	baz=117								
M17A	Scullys Gap (B	117.06	41	⇓P		PKPdf		10 38 36.8	+0.3
	baz=117,SNR=11								
LAO	LASA Array	117.08	35	⇑P		PKPdf		10 38 37.6	+1.2
	baz=117								
LAO	LASA Array	117.08	35	ePKPdf		PKPdf		10 38 37.7	+1.3
V13A	Grand Canyon W	117.14	48	⇓P		PKPdf		10 38 37.9	+1.0
	baz=117								
BW06	Boulder Array	117.15	40	⇑P		PKPdf		10 38 37.2	+0.5
	baz=117								
PDAR	Pinedale Array	117.15	40	PKP		PKPdf		10 38 36.0	-0.6
	comp=Z,2.2nm,0.8s,baz=276,slow=2.6,SNR=19								
PDAR				PKKPbc		PKKPbc		10 49 02.8	-1.7
	comp=Z,0.5nm,0.5s,baz=90,slow=2.7,SNR=7.1								
PDAR				PKKPab		PKKPab		10 49 08.4	-1.0
	comp=Z,1.3nm,0.8s,baz=108,slow=5.8,SNR=12								
DGMT	Dagmar	117.16	32	⇓P		PKPdf		10 38 37.0	+0.5
	baz=117								
N17A	Moffit Pass	117.19	42	⇓P		PKPdf		10 38 37.5	+0.7
	baz=117,SNR=7.4								
H20A	Greybull	117.24	37	⇓P		PKPdf		10 38 37.4	+0.6
	baz=117								
L18A	Fontenelle, Gr	117.25	41	⇓P		PKPdf		10 38 37.6	+0.7
	baz=117,SNR=19								
T14A	Hurricane	117.32	47	⇓P		PKPdf		10 38 38.3	+1.1
	baz=117								
MSU	Marysvale	117.36	45	ePKPdf		PKPdf		10 38 39.5	+2.3
I20A	Worland	117.45	38	⇑P		PKPdf		10 38 38.0	+0.8
	baz=117,SNR=16								
M18A	Lyman	117.47	41	⇑P		PKPdf		10 38 37.8	+0.5
	baz=117								
U14A	Mt Trumbull	117.51	48	⇑P		PKPdf		10 38 38.3	+0.7
	baz=117,SNR=6.5								
Y12C	Blythe	117.52	51	⇑P		PKPdf		10 38 38.4	+0.7
	baz=117								
GLA	Glamis	117.53	52	⇑P		PKPdf		10 38 38.9	+1.2
	baz=117								
K19A	Absolon Red Bu	117.58	39	⇑P		PKPdf		10 38 37.9	+0.4
	baz=117,SNR=18								
S15A	Panguitch	117.58	46	⇓P		PKPdf		10 38 39.7	+2.0
	baz=117								
O17A	Robinson Place	117.61	43	⇑P		PKPdf		10 38 38.5	+0.9
	baz=117,SNR=8.0								
X13A	Yucca	117.74	50	⇑P		PKPdf		10 38 38.9	+0.9
	baz=118,SNR=8.9								
H21A	Big Horn, Sher	117.75	37	⇓P		PKPdf		10 38 38.3	+0.5
	baz=118								
T15A	Red Dirt Ranch	117.85	47	⇓P		PKPdf		10 38 39.3	+1.2
	baz=118,SNR=6.2								
V14A	Boquillas Ranc	117.88	48	⇓P		PKPdf		10 38 39.7	+1.4
	baz=118,SNR=11								
P17A	Butcher Ranch,	117.94	44	⇓P		PKPdf		10 38 39.0	+0.7
	baz=118,SNR=6.2								
R16A	Teasdale	117.95	45	⇓P		PKPdf		10 38 39.6	+1.3
	baz=118,SNR=6.8								
K20A	Yellowstone Ra	117.98	39	⇓P		PKPdf		10 38 38.4	+0.1
	baz=118,SNR=7.8								
PCBR	Castelo Branco	117.98	317	ePKPdf		PKPdf		10 38 39.2	+0.8
Y13A	Salome	118.03	50	⇓P		PKPdf		10 38 39.5	+0.8
	baz=118								
I21A	Big Trails, Te	118.03	38	⇑P		PKPdf		10 38 38.1	-0.2
	baz=118,SNR=6.7								
M19A	Rock Springs	118.03	41	⇓P		PKPdf		10 38 39.3	+0.8
	baz=118								
W14A	Seligman	118.06	49	⇑P		PKPdf		10 38 39.1	+0.5
	baz=118,SNR=8.0								
O18A	Roosevelt	118.07	42	⇑P		PKPdf		10 38 39.2	+0.7
	baz=118,SNR=7.0								
S16A	Weppner Ranch,	118.11	46	⇓P		PKPdf		10 38 39.0	+0.3
	baz=118,SNR=14								
U15A	North Rim	118.16	47	⇓P		PKPdf		10 38 40.2	+1.3
	baz=118,SNR=20								
P18A	Preston Nutter	118.20	43	⇓P		PKPdf		10 38 39.7	+0.9
	baz=118,SNR=9.1								
SRU	San Rafael	118.25	44	⇓P		PKPdf		10 38 39.6	+0.7
	baz=118,SNR=14								
SRU	San Rafael	118.25

RSSD	Black Hills	119.82	36	*e*PKPdf	PKPdf	10 38 41.6	-0.2
S19A	Harvey Farm, M baz=120,SNR=6.4	119.84	45	⇓P	PKPdf	10 38 42.9	+0.9
Q20A	Ridgley Place, baz=120,SNR=12	119.85	43	⇓P	PKPdf	10 38 43.0	+1.0
PTEO	Sao Teotonio	119.91	315	*e*PKPdf	PKPdf	10 38 43.6	+1.5
L23A	Garrett baz=120	119.93	39	⇓P	PKPdf	10 38 42.1	+0.1
ULM	Lac du Bonnet comp=Z,9.1nm,0.8s,baz=307,slow=1.1,SNR=5.1	120.05	26	PKP	PKPdf	10 38 41.0	-1.0
PV01	Paradox Valley	120.06	44	*e*PKPdf	PKPdf	10 38 44.1	+1.6
Z16A	Peralta Trail, baz=120,SNR=6.0	120.06	50	⇓P	PKPdf	10 38 43.4	+0.8
X17A	Forest Lakes baz=120,SNR=17	120.13	49	⇓P	PKPdf	10 38 44.4	+1.7
N22A	Wattenberg Ran baz=120,SNR=7.8	120.15	40	⇑P	PKPdf	10 38 43.5	+1.0
116A	Eloy baz=120	120.16	51	⇑P	PKPdf	10 38 43.5	+0.7
R20A	Redvale baz=120,SNR=8.6	120.16	44	⇓P	PKPdf	10 38 43.6	+1.0
T19A	Beclabito baz=120,SNR=7.3	120.35	45	⇑P	PKPdf	10 38 43.9	+0.9
S20A	Disappointment baz=120,SNR=17	120.35	44	⇓P	PKPdf	10 38 44.2	+1.2
Y17A	Roosevelt baz=120	120.36	49	⇑P	PKPdf	10 38 44.0	+0.8
Q21A	Lamborn Mesa, baz=120	120.40	43	⇓P	PKPdf	10 38 44.3	+1.2
O22A	Kremmling baz=120,SNR=6.3	120.42	41	⇓P	PKPdf	10 38 43.5	+0.4
U19A	Dine' College, baz=120	120.46	46	⇑P	PKPdf	10 38 44.2	+0.9
MVCO	Mesa Verde baz=120,SNR=7.4	120.54	45	⇓P	PKPdf	10 38 44.3	+0.9
MVCO	Mesa Verde	120.54	45	*e*PKPdf	PKPdf	10 38 44.8	+1.4
216A	Three Points, baz=120	120.57	52	⇑P	PKPdf	10 38 44.4	+0.8
P22A	Eagle baz=120,SNR=8.0	120.57	42	⇓P	PKPdf	10 38 44.5	+1.1
SMCO	Snowmass	120.64	42	*e*PKPdf	PKPdf	10 38 45.0	+1.5
R21A	Cimarron baz=120	120.65	43	⇑P	PKPdf	10 38 44.3	+0.7
X18A	Snowflake baz=120	120.69	48	⇓P	PKPdf	10 38 44.5	+0.8
Z17A	San Carlos Hig baz=121	120.81	50	⇓P	PKPdf	10 38 45.1	+1.1
S21A	Coal Bank Pass baz=121,SNR=42	120.82	44	⇑P	PKPdf	10 38 45.3	+1.4
V19A	Window Rock baz=121	120.84	47	⇓P	PKPdf	10 38 45.2	+1.2
Q22A	Crested Butte, baz=121,SNR=13	120.84	42	⇑P	PKPdf	10 38 45.0	+1.1
117A	Oracle baz=121	120.90	51	⇓P	PKPdf	10 38 45.1	+0.9
U20A	Newcomb baz=121	120.92	46	⇑P	PKPdf	10 38 45.2	+1.1
Y18A	Canyon Day Jun baz=121,SNR=8.2	120.94	49	⇑P	PKPdf	10 38 45.0	+0.7
TUC	Tucson	120.97	51	*e*PKPdf	PKPdf	10 38 45.5	+1.1
217A	Green Valley baz=121,SNR=11	121.16	52	⇑P	PKPdf	10 38 45.4	+0.7
V20A	Brimhall baz=121,SNR=6.2	121.22	46	⇑P	PKPdf	10 38 45.7	+1.0
ISCO	Idaho Springs baz=121,SNR=7.8	121.22	41	⇓P	PKPdf	10 38 45.3	+0.7
ISCO	Idaho Springs	121.22	41	*e*PKIKP	PKPdf	10 38 45.1	+0.5
X19A	St. Johns baz=121,SNR=13	121.22	48	⇓P	PKPdf	10 38 45.5	+0.7
R22A	Saguache, Gunn baz=121,SNR=6.5	121.26	43	⇓P	PKPdf	10 38 46.3	+1.5
P23A	Jefferson baz=121,SNR=7.5	121.30	41	⇓P	PKPdf	10 38 45.9	+1.1
T21A	Navajo Lake baz=121,SNR=17	121.33	45	⇑P	PKPdf	10 38 46.4	+1.5
S22A	4UR Ranch, Cre baz=121,SNR=8.9	121.45	44	⇓P	PKPdf	10 38 46.6	+1.5
AGMN	Agassiz Nation	121.45	28	*e*PKPdf	PKPdf	10 38 43.8	-1.0
Y19A	Nutrioso baz=121,SNR=17	121.46	49	⇑P	PKPdf	10 38 46.6	+1.3
W20A	Ramah baz=121,SNR=17	121.50	47	⇑P	PKPdf	10 38 46.6	+1.4
U21A	Nageezi baz=121,SNR=22	121.51	45	⇓P	PKPdf	10 38 46.5	+1.3
Q23A	Hartsel baz=121,SNR=14	121.54	42	⇑P	PKPdf	10 38 46.6	+1.3
218A	Dragoon baz=122,SNR=5.7	121.68	51	⇑P	PKPdf	10 38 46.8	+1.1
T22A	Edith baz=122,SNR=5.8	121.76	44	⇓P	PKPdf	10 38 47.1	+1.4
X20A	Quemado baz=122	121.76	48	⇑P	PKPdf	10 38 46.7	+0.9
P24A	Kohler Place, baz=122	121.83	41	⇓P	PKPdf	10 38 46.6	+0.8
119A	Ashpeak Ranch, baz=122	121.92	50	⇓P	PKPdf	10 38 47.3	+1.1
318A	Bisbee baz=122	121.94	52	⇑P	PKPdf	10 38 47.2	+0.9
Q24A	Divide baz=122	121.97	42	⇑P	PKPdf	10 38 47.1	+1.1
O25A	Wiggins baz=122	122.02	40	⇓P	PKPdf	10 38 47.2	+1.1
U22A	Llaves baz=122,SNR=17	122.10	45	⇑P	PKPdf	10 38 48.1	+1.7
W21A	San Fidel baz=122,SNR=5.9	122.12	47	⇑P	PKPdf	10 38 47.9	+1.5
Y20A	Horse Springs, baz=122,SNR=6.8	122.13	48	⇑P	PKPdf	10 38 47.5	+1.0
219A	White Tail Can baz=122,SNR=5.9	122.28	51	⇓P	PKPdf	10 38 47.8	+1.0
V22A	San Miguel Ran baz=122,SNR=10.0	122.28	45	⇓P	PKPdf	10 38 47.9	+1.1
P25A	Willow Gulch B baz=122	122.32	41	⇓P	PKPdf	10 38 47.7	+1.0
Z20A	Nine Sixteen R baz=122,SNR=16	122.32	49	⇑P	PKPdf	10 38 48.5	+1.6
X21A	Alamocita Cree baz=122,SNR=19	122.33	47	⇓P	PKPdf	10 38 48.1	+1.2
T23A	Casias Ranch, baz=122,SNR=11	122.35	44	⇑P	PKPdf	10 38 48.3	+1.5
SDCO	Great Sand Dun baz=122	122.36	43	⇓P	PKPdf	10 38 47.9	+1.1
SDCO	Great Sand Dun	122.36	43	*e*PKPdf	PKPdf	10 38 48.1	+1.2
R24A	Sanders Place, baz=122	122.38	42	⇑P	PKPdf	10 38 48.1	+1.2
120A	U Bar Ranch, L baz=122,SNR=12	122.53	50	⇑P	PKPdf	10 38 48.8	+1.5
Q25A	Bedland, Calha baz=122	122.59	41	⇑P	PKPdf	10 38 48.1	+0.9
U23A	El Rito baz=122,SNR=11	122.59	45	⇑P	PKPdf	10 38 49.3	+2.0
S24A	Houchin Ranch, baz=122	122.61	43	⇓P	PKPdf	10 38 48.5	+1.2
Y21A	Point of Rocks baz=122,SNR=13	122.61	48	⇓P	PKPdf	10 38 49.2	+1.7
LAZ	Ladron	122.83	47	*e*PKPdf	PKPdf	10 38 49.9	+2.1
OGNE	Ogallala baz=123	122.86	38	⇑P	PKPdf	10 38 47.9	+0.2
V23A	Ortiz Mt. (NFS baz=123,SNR=6.1	122.88	45	⇑P	PKPdf	10 38 49.5	+1.6
220A	Playas Peak, P baz=123,SNR=7.1	122.88	50	⇑P	PKPdf	10 38 49.3	+1.3
R25A	Fountain Ranch baz=123	122.97	42	⇑P	PKPdf	10 38 49.0	+1.0
T24A	Torres, Weston baz=123	123.01	43	⇓P	PKPdf	10 38 49.5	+1.4
ANMO	Albuquerque	123.06	46	*e*PKPdf	PKPdf	10 38 49.8	+1.5
320A	Kipp Ranch, An baz=123,SNR=12	123.12	51	⇑P	PKPdf	10 38 49.7	+1.2
S25A	Robets Cordova baz=123	123.13	43	⇓P	PKPdf	10 38 49.4	+1.1
Y22A	Socorro baz=123,SNR=17	123.17	48	⇑P	PKPdf	10 38 49.7	+1.2
121A	Cookes Peak, D baz=123,SNR=7.4	123.18	49	⇓P	PKPdf	10 38 49.5	+1.0
W23A	Werner Place, baz=123,SNR=6.2	123.19	46	⇓P	PKPdf	10 38 49.5	+1.0
BNM	Barren Site	123.32	47	*e*PKPdf	PKPdf	10 38 50.9	+2.1
221A	Mesquite Ranch baz=123	123.41	50	⇑P	PKPdf	10 38 49.6	+0.6
T25A	Trinidad baz=123	123.42	43	⇑P	PKPdf	10 38 49.8	+0.9
X23A	Hourglass Bar baz=123	123.44	47	⇓P	PKPdf	10 38 50.4	+1.3
Z22A	Elephant Butte baz=123,SNR=26	123.48	48	⇓P	PKPdf	10 38 50.4	+1.3
V24A	Rampart Ranch, baz=123,SNR=19	123.54	45	⇓P	PKPdf	10 38 50.9	+1.8
EYMN	Ely	123.69	26	*e*PKPdf	PKPdf	10 38 48.8	-0.2
W24A	Lazy 6 Ranch, baz=124,SNR=14	123.69	46	⇓P	PKPdf	10 38 50.8	+1.3
122A	Conniff Cattle baz=124	123.70	49	⇓P	PKPdf	10 38 50.9	+1.3
U25A	Circle Dot Ran baz=124	123.80	44	⇑P	PKPdf	10 38 51.0	+1.4
Y23A	Lovelace Mesa, baz=124,SNR=7.0	123.84	47	⇓P	PKPdf	10 38 50.8	+1.0
222A	Williams Famil baz=124	123.89	50	⇓P	PKPdf	10 38 51.4	+1.4
V25A	Rancho No Teng baz=124,SNR=19	123.94	44	⇑P	PKPdf	10 38 51.4	+1.4
Z23A	Rita Site, Whi baz=124	124.02	48	⇓P	PKPdf	10 38 51.6	+1.4
SCHQ	Schefferville comp=Z,8.5nm,0.5s,baz=342,slow=4.5,SNR=24	124.05	5	PKP	PKPdf	10 38 49.1	-0.5
ECSD	EROS Data Cent	124.24	32	*e*PKPdf	PKPdf	10 38 50.0	-0.2
123A	Bell Site, Whi baz=124	124.29	49	⇓P	PKPdf	10 38 51.7	+1.0
Y24A	Capitan baz=124,SNR=23	124.30	47	⇑P	PKPdf	10 38 51.7	+1.1
W25A	X Bar L Ranch, baz=124,SNR=8.5	124.36	45	⇓P	PKPdf	10 38 52.0	+1.2
V26A	Tequesquite Ra baz=124	124.54	44	⇓P	PKPdf	10 38 51.8	+0.7
X25A	Clemmons Ranch baz=124	124.56	46	⇓P	PKPdf	10 38 52.2	+1.1
Z24A	Sheeppen Canyo baz=124,SNR=16	124.63	47	⇓P	PKPdf	10 38 52.7	+1.4
Y25A	Mesa, Roswell baz=125,SNR=26	124.84	47	⇑P	PKPdf	10 38 53.1	+1.4
124A	Stringfield Ra baz=125,SNR=7.8	124.86	48	⇓P	PKPdf	10 38 53.2	+1.4
W26A	Owens Ranch, T baz=125	124.92	45	⇑P	PKPdf	10 38 52.8	+0.9
224A	Cornudas Mount baz=125	125.10	49	⇑P	PKPdf	10 38 53.9	+1.6
Z25A	Roswell baz=125,SNR=7.2	125.13	47	⇑P	PKPdf	10 38 53.5	+1.3
X26A	CR and CF Fran baz=125	125.16	45	⇓P	PKPdf	10 38 53.2	+0.9
MNTX	Cornudas Mount baz=125,SNR=12	125.38	49	⇓P	PKPdf	10 38 53.8	+1.0
MNTX	Cornudas Mount	125.38	49	*e*PKPdf	PKPdf	10 38 54.0	+1.2
KIC	Kosan Boka comp=Z,35nm,0.9s	125.41	278	*e*PKP1	PKPdf	10 38 53.3	-0.1
324A	Moseley Ranch, baz=125,SNR=14	125.42	50	⇓P	PKPdf	10 38 53.8	+0.9
W27A	Bowe Ranch, En baz=125	125.43	44	⇑P	PKPdf	10 38 53.9	+1.1
Y26A	Elida baz=125	125.47	46	⇓P	PKPdf	10 38 53.7	+0.8
DBIC	Dimbokro comp=Z,8.2nm,0.8s,baz=87,slow=2.7,SNR=8.2	125.49	279	PKP	PKPdf	10 38 53.4	-0.2
CBKS	Cedar Bluff baz=125	125.55	39	⇑P	PKPdf	10 38 53.5	+0.6
X27A	F and S Farms, baz=125	125.62	45	⇑P	PKPdf	10 38 53.9	+0.7
TIC	Toumodi comp=Z,9.1nm,0.2s	125.66	279	*e*PKP1	PKPdf	10 38 53.9	+0.1
Z26A	Caprock baz=126	125.67	47	⇑P	PKPdf	10 38 54.0	+0.7
LIC	Lamto comp=Z,50nm,1.0s	125.71	278	*e*PKP1	PKPdf	10 38 54.0	+0.1
325A	Bean Ranch, Si baz=126,SNR=5.8	125.84	49	⇓P	PKPdf	10 38 54.2	+0.5
126A	Clayton Basin, baz=126	125.95	48	⇓P	PKPdf	10 38 54.6	+0.8
Y27A	Causey baz=126	125.96	46	⇑P	PKPdf	10 38 54.5	+0.7
425A	Indio Mountain baz=126,SNR=5.8	126.09	50	⇓P	PKPdf	10 38 55.0	+0.8
226A	Malaalaa, Loving baz=126,SNR=8.5	126.17	48	⇓P	PKPdf	10 38 55.0	+0.7
MSTX	Muleshoe baz=126	126.20	45	⇓P	PKPdf	10 38 55.1	+0.8
127A	Arkansas Junct baz=126	126.42	47	⇑P	PKPdf	10 38 55.9	+1.1
AMTX	Amarillo baz=126	126.48	44	⇑P	PKPdf	10 38 55.7	+0.9
326A	Caldwell Ranch baz=126,SNR=6.0	126.61	49	⇑P	PKPdf	10 38 55.6	+0.4
426A	McDonald Obser baz=127	126.88	50	⇑P	PKPdf	10 38 57.0	+1.3
526A	Mary Lane Ranc baz=127,SNR=6.4	127.11	50	⇓P	PKPdf	10 38 57.2	+1.1
427A	Hayter Ranch, baz=127,SNR=9.5	127.27	49	⇓P	PKPdf	10 38 57.5	+1.1
KSU1	Kansas State U	127.28	37	*e*PKPdf	PKPdf	10 38 56.8	+0.5
626A	Big Bend Ranch baz=127,SNR=7.1	127.31	51	⇓P	PKPdf	10 38 57.3	+0.7
527A	Woodard Ranch baz=127,SNR=9.9	127.44	50	⇑P	PKPdf	10 38 58.0	+1.2
328A	Wristen Ranch, baz=127	127.46	48	⇑P	PKPdf	10 38 58.0	+1.2
TXAR	Lajitas Array	127.77	51	PKP	PKPdf	10 38 57.9	+0.4
TXAR				SKPbc		10 41 23.1	
TXAR	Lajitas Array comp=Z,0.1nm,0.5s,baz=348,slow=1.0,SNR=3.8	127.77	51	PKhKP	PKPpre	10 38 43.8	
TXAR				PKP	PKPdf	10 38 57.9	+0.4
	comp=Z,2.6nm,0.6s,baz=228,slow=3.5,SNR=29						
TXAR				SKPbc		10 41 23.1	
	comp=Z,1.5nm,0.8s,baz=284,slow=2.3,SNR=6.3						
428A	Kincaid Ranch, baz=128	127.87	49	⇓P	PKPdf	10 38 59.2	+1.6
627A	Terlingua Ranc baz=128,SNR=12	127.93	51	⇓P	PKPdf	10 38 58.8	+1.0
528A	Cox Ranch, San baz=128,SNR=6.4	128.06	50	⇓P	PKPdf	10 38 59.4	+1.5
JFWS	Jewell Farm	128.07	29	*e*PKPdf	PKPdf	10 38 57.7	+0.1
628A	Black Gap, Mar baz=128,SNR=6.6	128.30	50	⇑P	PKPdf	10 38 59.6	+1.1
WMOK	Wichita Mounta	128.55	42	*e*PKPdf	PKPdf	10 38 59.4	+0.6
JCT	Junction City baz=130	130.15	48	⇑P	PKPdf	10 39 02.9	+1.0
JCT	Junction City	130.15	48	*e*PKIKP	PKPdf	10 39 02.6	+0.7
CCM	Cathedral Cave	131.09	34	*e*PKPdf	PKPdf	10 39 03.6	+0.1
FVM	French Village	131.60	33	*e*PKPdf	PKPdf	10 39 04.5	+0.1
MIAR	Mount Ida	132.07	39	*e*PKPdf	PKPdf	10 39 05.8	+0.4
MIAR				*e*SKPbc	SKPbc	10 41 39.5	+0.1
OLIL	Olney	132.29	31	*e*PKPdf	PKPdf	10 39 06.3	+0.5
OLIL				*e*SKPbc	SKPbc	10 41 40.6	+0.7
MDV	Middlebury	133.49	14	*e*PKPdf	PKPdf	10 39 09.4	+1.5
ACSO	Alum Creek Sta	133.53	25	*e*PKPdf	PKPdf	10 39 08.3	+0.3
ACSO				*e*		10 41 43.9	
LBNH	Lisbon	133.56	13	*e*PKPdf	PKPdf	10 39 09.3	+1.3
WVT	Waverly	134.37	33	*e*PKPdf	PKPdf	10 39 10.8	+1.1
BINY	Binghamton	134.39	18	*e*PKPdf	PKPdf	10 39 10.1	+0.5
BINY				*e*SKPbc	SKPbc	10 41 47.6	+0.9
SSPA	Standing Stone	135.17	21	*e*PKPdf	PKPdf	10 39 12.4	+1.3
TKL	Tuckaleechee C	136.86	30	*e*PKPdf	PKPdf	10 39 14.8	+0.5
PLCA	Paso Flores comp=Z,3.6nm,0.8s,baz=206,slow=4.4,SNR=6.1	139.01	167	PKP	PKPdf	10 39 18.8	+0.7
TRQA	Tornquist	142.95	176	*e*PKPdf	PKPdf	10 39 23.6	-1.7
TEIG	Tepich	144.40	52	*e*PKPdf	PKPdf	10 39 28.2	-0.1
TGUH	Tegucigalpa,Un	148.24	61	*e*PKPbc	PKbc	10 39 39.8	+0.8
LCO	Las Campanas	149.91	159	*e*PKPbc	PKbc	10 39 43.5	+0.9
CPUP	Villa Florida comp=Z,1.5nm,0.5s,baz=180,slow=3.0,SNR=8.2	154.70	183	PKP	PKPdf	10 39 44.7	+0.5
CPUP				PKPbc	PKPdf	10 39 53.5	+9.3
	comp=Z,2.7nm,0.6s,baz=111,slow=3.7,SNR=7.6						
ICM	Isla Caja Muer	159.86	21	*e*PKPdf	PKPdf	10 39 50.2	-0.5
ICM				*e*PKPab	PKPab	10 40 33.9	+0.3
OTAV	Otavalo	160.47	87	*e*PKPdf	PKPdf	10 39 53.2	+1.6
OTAV				*e*PKPab	PKPab	10 40 38.8	+2.0
LPAZ	La Paz comp=Z,5.6nm,0.9s,baz=221,slow=1.1,SNR=17	162.26	150	PKP	PKPdf	10 39 54.8	+1.5
LPAZ				PKPab	PKPab	10 40 46.5	+2.4
	comp=Z,8.8nm,0.8s,baz=176,slow=5.1,SNR=15						
ROSC	El Rosal	163.59	69	PKP	PKPdf	10 39 55.5	+0.8
	comp=Z,3.2nm,0.3s,baz=107,slow=16,SNR=3.8						
ROSC				PKPab	PKPab	10 40 50.9	+0.5
	comp=Z,9.2nm,0.8s,baz=91,slow=21,SNR=3.6						

KISR ***29*** *10:24:02.1±1.0,32.2°27N×49.2°11E,h34km±413km, ML2.7*
ISCJB ***29*** *10:24:05.6±0.5,32.2°57N±0.04×48.2°60E±0.2°07,h10km, Error ellipse: s-maj=9.1km s-min=5.2km az=11.2*
TEH ***29*** *10:24:07.4,32.2°68N×48.2°62E,h9km*
ISC 29 10:24:06.4±0.5,32.2°61N±0.03×48.2°56E±0.2°07,h10km,n11,
σ1s15/16,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IKOM	**Komasi**	**1.79**	**331**	*e*Pn	**Pn**	**10 24 37.3**	**0.0**
IKOM				*e*Sg	**Sg**	**10 25 02.1**	**-1.8**
IKOM				*e*		10 25 09.2	
	comp=Z,4μm,0.2s						
IPIR	**Pirpir**	**1.97**	**87**	*e*Pn	**Pn**	**10 24 40.3**	**+0.4**
IPIR				*e*		10 25 21.6	
	comp=E,2μm,0.3s						
IVIS	**Veis**	**2.38**	**324**	*e*Pn	**Pn**	**10 24 46.3**	**+0.8**
IVIS				*e*		10 25 25.5	
	comp=Z,780nm,0.2s						
IGHG	**Ghaleghazi**	**2.38**	**316**	*e*Pn	**Pn**	**10 24 46.6**	**+1.0**
IGHG				*e*		10 25 30.0	
	comp=Z,2μm,0.3s						
IDHR	**Dehrash**	**2.76**	**320**	*e*Pn	**Pn**	**10 24 51.8**	**+1.1**
IDHR				*e*		10 25 36.3	
	comp=Z,1μm,0.2s						
MIB	**Mutribah**	**2.99**	**201**	*e*P	**Pn**	**10 24 53.0**	**-0.9**
MIB				*e*S	**Sn**	**10 25 31.8**	**+2.0**
MIB				AML	AML	10 25 32.5	
	comp=Z,36nm,0.6s						
IRAZ	**Razeghan**	**3.01**	**22**	*e*Pn	**Pn**	**10 24 54.6**	**+0.5**
IRAZ				*e*		10 25 04.8	
	comp=Z,784nm,0.2s						
IZEF	**Zefreh**	**3.19**	**84**	*e*Pn	**Pn**	**10 24 57.1**	**+0.4**
IZEF				*e*		10 25 54.0	
	comp=N,336nm,0.3s						
NAY	**Al-Naaiem**	**3.54**	**199**	*e*P	**Pn**	**10 25 00.3**	**-1.1**
NAY				*e*S	**Sn**	**10 25 44.6**	**+1.3**
NAY				AML	AML	10 25 50.8	
	comp=Z,9.8nm,0.7s						
IVRN	**Varamin**	**3.55**	**47**	*e*Pn	**Pn**	**10 25 00.9**	**-0.7**
IVRN				*e*Pn	**Pn**	**10 25 01.1**	**-0.5**
IVRN				*e*		10 25 12.2	
	comp=Z,268nm,0.3s						
QRN	**Al-Qurain**	**3.90**	**188**	*e*P	**Pn**	**10 25 04.7**	**-1.7**
QRN				*e*S	**Sn**	**10 25 50.4**	**-1.7**
QRN				AML	AML	10 25 50.9	
	comp=Z,14nm,0.4s						

IDC 29 10:57:08.2±2.7,4.2°07N×125.2°44E,h0km,mb3.5/3,
mb1 3.6/3,mb1mx3.4/20,mbtmp3.5/3,Error ellipse:
s-maj=287.5km s-min=27.0km az=65.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.41**	**160**	P	P	11 02 37.6	-0.1
	0.9nm,1.1s,baz=339,slow=9.9,SNR=8.0						
ASAR	**Alice Springs**	**28.78**	**164**	P	P	11 03 08.1	+0.2
	0.2nm,0.5s,baz=346,slow=14,SNR=6.2						
MKAR	**Makanchi Array**	**56.55**	**326**	P	P	11 06 52.5	0.0
	0.6nm,0.7s,baz=111,slow=7.0,SNR=4.9						

IDC ***29*** *11:17:11.3±1.8,11.2°14S×162.2°14E,h0km,mb3.8/4,*
mb1 4.1/6,mb1mx3.8/19,mbtmp4.0/6,ML4.3/1,MS3.5/5,
Ms1 3.5/5,ms1mx3.2/25,Error ellipse: s-maj=36.1km
s-min=27.7km az=112.0
ISCJB ***29*** *11:17:21.4±3.3,11.2°0S±0.2°1×161.2°7E±0.2°2,h86km±26km,*
mb3.6/6,Error ellipse: s-maj=38.0km s-min=19.9km
az=13.0
NEIC ***29*** *11:17:21.3±3.8,10.2°94S×161.2°80E,h71km±28km,mb3.9/1,*
Error ellipse: s-maj=45.4km s-min=16.9km az=120.0
ISC 29 11:17:21.0±3.2,11.2°0S±0.2°1×161.2°8E±0.2°2,h68km±25km,n18,
σ0s76/19,mb3.6/6,Bougainville - Solomon Islands
region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.40**	**309**	Pn	**Pn**	**11 17 57.9**	**-0.2**
HNR				*e*Pn	**Pn**	**11 17 58.9**	**+0.9**
HNR				LR	LR	11 18 21.5	
HNR				*e*Sn	**Sn**	**11 18 25.8**	**-0.6**
HNR				Sn	**Sn**	**11 18 33.4**	**+7.0**
HNR	**Honiara**	**2.40**	**309**	Pn	**Pn**	**11 17 57.8**	**-0.2**
	48nm,0.3s,baz=139,slow=9.3,SNR=6.8						
HNR				LR	LR	11 18 21.5	
	comp=Z,406nm,19.3s,baz=331,slow=26						
HNR				Sn	**Sn**	**11 18 33.4**	**+7.0**
	48nm,0.3s,baz=177,slow=18,SNR=6.1						
CTA	**Charters Tower**	**17.52**	**237**	*e*P	**Pn**	**11 21 22.8**	**+1.9**
	5.1nm,0.6s						
CTA	**Charters Tower**	**17.52**	**237**	P	**Pn**	**11 21 21.1**	**+0.3**
	0.6nm,0.3s,baz=65,slow=14,SNR=9.2						
COEN	**Coen**	**18.46**	**259**	*e*P	**Pn**	**11 21 36.7**	**+4.5**
COEN	**Coen**	**18.46**	**259**	*e*P	**Pn**	**11 21 36.8**	**+4.5**
RMQ	**Roma**	**19.76**	**217**	*e*P	**Pn**	**11 21 46.7**	**-1.0**
	22nm,0.9s						
CMSA	**Cobar Meteorol**	**25.34**	**214**	*e*P	**P**	**11 22 41.0**	**-0.6**
AFI	**Afiamalu**	**25.93**	**99**	LR	LR	11 31 31.2	
	comp=Z,101nm,18.4s,baz=234,slow=34						
YNG	**Young**	**26.27**	**206**	*e*P	**P**	**11 22 50.8**	**+0.8**
	2.9nm,0.7s,mb3.8						
WRA	**Warramunga Arr**	**27.92**	**248**	P	**P**	**11 23 04.3**	**-0.7**
	1.0nm,0.6s,mb3.5,baz=76,slow=9.9,SNR=9.3						
STKA	**Stephens Creek**	**27.97**	**219**	P	**P**	**11 23 05.8**	**+0.5**
	1.6nm,0.5s,mb3.8,baz=64,slow=12,SNR=4.1						
STKA				LR	LR	11 32 28.3	
	comp=Z,237nm,19.9s,baz=26,slow=33						
KAKA	**Kakadu**	**28.81**	**264**	*e*P	**P**	**11 23 13.9**	**+0.9**
ASAR	**Alice Springs**	**29.43**	**241**	P	**P**	**11 23 17.6**	**-0.8**
	1.0nm,0.7s,mb3.5,baz=68,slow=9.7,SNR=22						
FITZ	**Fitzroy Crossi**	**35.70**	**254**	*e*P	**P**	**11 24 13.2**	**0.0**
	0.8nm,0.5s,mb3.9						
ILAR	**Eielson Array**	**84.69**	**20**	P	**P**	**11 29 47.0**	**0.0**
	0.2nm,0.6s,mb3.2,baz=228,slow=5.2,SNR=5.3						
MKAR	**Makanchi Array**	**90.85**	**317**	LR	LR	12 10 06.6	
	comp=Z,15nm,18.0s,baz=178,slow=35						
TXAR	**Lajitas Array**	**99.17**	**62**	LR	LR	12 10 54.5	
	comp=Z,31nm,18.4s,baz=0.0,slow=33					

TXAR	**Lajitas Array**	**85.84**	**57**	P		**P**		**11 35 08.3**	**+3.8**
	0.5nm,0.8s,mb3.2,baz=235,slow=4.0,SNR=6.1								
ILAR	**Eielson Array**	**86.77**	**13**	P		**P**		**11 35 09.2**	**+1.1**
	0.1nm,0.6s,baz=213,slow=6.5,SNR=3.8								
VNA3	**Neumayer Olymp**	**89.58**	**176**	*e*		**P**		**11 35 20.7**	**-0.6**
VNA2	**Neumayer--Watz**	**90.03**	**177**	*e*		**P**		**11 35 22.9**	**-0.5**
	baz=190,slow=3.4								
CMAR	**Chiang Mai Arr**	**90.10**	**289**	P		**P**		**11 35 26.2**	**+1.5**
	1.0nm,0.4s,mb4.0,baz=108,slow=2.9,SNR=10.0								
MKAR	**Makanchi Array**	**110.55**	**314**	PKiKP	PKiKP			11 40 54.1	+0.6
	0.2nm,0.5s,baz=130,slow=1.8,SNR=4.0								
BRTR	**Keskin Array B**	**146.20**	**314**	PKPbc	PKPbc			11 42 03.0	+0.6
	1.0nm,0.6s,baz=73,slow=2.0,SNR=4.1								

IDC 29 11:30:14.0±5.0, 30.52N×83.22E, h0km, mb3.4/3, mb1 3.7/5, mb1mx3.4/26, mbtmp3.5/5, ML4.1/1, Error ellipse: s-maj=183.7km s-min=26.7km az=68.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MKAR	**Makanchi Array**	**16.26**	**358**	Pn		Pn	11 34 02.0	-1.7
	0.1nm,0.3s,baz=171,slow=10,SNR=6.2							
CMAR	**Chiang Mai Arr**	**18.66**	**126**	P		Pn	11 34 35.5	+1.7
	0.2nm,0.3s,baz=307,slow=12,SNR=4.1							
ZALV	**Zalesovo Beam**	**23.44**	**2**	P		P	11 35 25.2	+0.4
	0.5nm,0.4s,baz=199,slow=7.6,SNR=3.2							
WRA	**Warramunga Arr**	**70.23**	**129**	P		P	11 41 28.5	-0.6
	0.2nm,0.4s,baz=326,slow=6.1,SNR=6.8							
ILAR	**Eielson Array**	**77.33**	**20**	P		P	11 42 10.1	0.0
	0.3nm,0.8s,baz=298,slow=5.4,SNR=4.9							

*KISR **29** 12:01:59.4±1.0, 32.35N×47.60E, h5km±999km, ML3.0*
*ISCJB **29** 12:02:02.0±0.5, 32.44N±0.02×47.39E±0.07, h10km, Error ellipse: s-maj=8.4km s-min=3.6km az=179.0*
*TEH **29** 12:02:07.1, 32.58N×47.46E, h28km*
ISC 29 12:02:03.1±0.5, 32.45N±0.02×47.34E±0.07, h10km, n15, σ0.85/22, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IKOM	**Komasi**	**1.73**	**5**	*e*Pn		**Pn**	**12 02 34.1**	**+0.8**
IKOM				*e*Sg		**Sg**	**12 02 56.7**	**-2.1**
IKOM				*e*			12 03 01.7	
	comp=Z,6μm,0.4s							
IGHG	**Ghaleghazi**	**1.98**	**341**	*e*Pn		**Pn**	**12 02 37.9**	**+1.1**
IGHG				*e*			12 03 19.0	
	comp=Z,4μm,0.4s							
IVIS	**Veis**	**2.11**	**349**	*e*Pn		**Pn**	**12 02 39.3**	**+0.8**
IVIS				*e*Sg		**Sg**	**12 03 11.3**	**+0.2**
IVIS				*e*			12 03 13.3	
	comp=Z,1μm,0.4s							
IDHR	**Dehrash**	**2.38**	**341**	*e*Pn		**Pn**	**12 02 42.3**	**+0.1**
IDHR				*e*			12 03 21.9	
	comp=Z,2μm,0.1s							
ILIN	**Lien**	**2.48**	**353**	*e*Pn		**Pn**	**12 02 44.1**	**+0.5**
MIB	**Mutribah**	**2.63**	**180**	*e*P		**Pn**	**12 02 45.0**	**-0.7**
MIB				*e*S		**Sn**	**12 03 19.0**	**+1.2**
MIB				AML		AML	12 03 21.3	
	comp=Z,85nm,0.6s							
UMR	**Umm Al-Rimmam**	**2.90**	**173**	*e*P		**Pn**	**12 02 48.6**	**-0.8**
IPIR	**Pirpir**	**3.01**	**85**	*e*Pn		**Pn**	**12 02 51.5**	**+0.6**
IPIR				*e*			12 03 44.9	
	comp=N,2μm,0.2s							
NAY	**Al-Naaiem**	**3.19**	**181**	*e*P		**Pn**	**12 02 52.1**	**-1.2**
NAY				*e*S		**Sn**	**12 03 32.3**	**+0.9**
NAY				AML		AML	12 03 36.1	
	comp=Z,28nm,0.7s							
KBD	**Kabd**	**3.27**	**175**	*e*P		**Pn**	**12 02 53.2**	**-1.3**
KBD				*e*S		**Sn**	**12 03 33.7**	**+0.2**
KBD				AML		AML	12 03 36.8	
	comp=Z,25nm,0.6s							
IKLH	**Kolahrood**	**3.67**	**75**	*e*Pn		**Pn**	**12 03 00.0**	**0.0**
IKLH				*e*			12 04 11.0	
	comp=Z,522nm,0.2s							
QRN	**Al-Qurain**	**3.72**	**172**	*e*P		**Pn**	**12 02 59.5**	**-1.2**
QRN				*e*S		**Sn**	**12 03 44.9**	**+0.3**
QRN				AML		AML	12 03 45.7	
	comp=Z,42nm,0.3s							
IZEF	**Zefreh**	**4.24**	**83**	*e*		**Pg**	**12 03 25.2**	**+0.9**
	comp=Z,188nm,0.2s							
IZEF				*e*Pn		**Pn**	**12 03 07.6**	**-0.1**
ISFB	**Sefidab**	**4.52**	**64**	*e*Pn		**Pn**	**12 03 11.2**	**-0.4**
IDMV	**Damavand**	**5.00**	**50**	*e*Pn		**Pn**	**12 03 18.0**	**-0.2**
IDMV				*e*			12 04 17.3	
	comp=Z,175nm,0.2s							

WEL 29 12:02:50.5±0.4, 37.87S×176.67E, h134km±3km, ML3.5/13, 1C, Error ellipse: s-maj=2.8km s-min=2.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OPRZ	**Ohinepanea**	**0.09**	**283**	↑Pn		Pn	12 03 08.7	+0.1
OPRZ				SN		Sn	12 03 22.1	-0.2
TARZ	**Mount Tarawera**	**0.39**	**199**	PN		Pn	12 03 10.1	+0.6
RRRZ	**Republican Roa**	**0.49**	**194**	PN		Pn	12 03 10.2	+0.2
URZ	**Urewera**	**0.53**	**138**	PN		Pn	12 03 10.0	-0.2
URZ				SN		Sn	12 03 25.4	+0.3
PRRZ	**Plateau Road**	**0.67**	**199**	PN		Pn	12 03 11.1	0.0
MWZ	**Matawai**	**0.83**	**125**	PN		Pn	12 03 12.1	-0.2
MWZ				SN		Sn	12 03 28.7	-0.1
RAHZ	**Arahi**	**1.10**	**163**	PN		Pn	12 03 15.2	+0.4
NMHZ	**Naumai**	**1.23**	**175**	PN		Pn	12 03 16.7	+0.6
PUZ	**Puketiti**	**1.27**	**100**	PN		Pn	12 03 16.3	-0.2
BKZ	**Black Stump Fm**	**1.31**	**186**	PN		Pn	12 03 16.2	-0.6
BKZ				SN		Sn	12 03 35.8	-1.0
MXZ	**Matakaoa Point**	**1.34**	**77**	PN		Pn	12 03 17.6	+0.5
KNZ	**Kokohu**	**1.40**	**146**	PN		Pn	12 03 17.7	-0.1
PRGZ	**Paritu Road**	**1.43**	**138**	PN		Pn	12 03 18.1	0.0
MCHZ	**McNeill Hill**	**1.58**	**179**	PN		Pn	12 03 19.6	-0.2
MHGZ	**Mahia Peninsul**	**1.61**	**143**	PN		Pn	12 03 20.3	+0.1
WNVZ	**Wahianoa**	**1.68**	**209**	PN		Pn	12 03 20.7	-0.2
BHHZ	**Black Hill Sta**	**1.69**	**196**	PN		Pn	12 03 20.2	-0.8
MTVZ	**Mangateitei**	**1.78**	**211**	PN		Pn	12 03 21.9	-0.2
KAHZ	**Kahuranaki**	**1.93**	**175**	PN		Pn	12 03 23.3	-0.6
PNHZ	**Pukenui**	**2.08**	**190**	PN		Pn	12 03 24.4	-1.2
PXZ	**Pawanui**	**2.17**	**176**	PN		Pn	12 03 25.6	-1.1
WPHZ	**Waipukurau**	**2.20**	**184**	PN		Pn	12 03 25.8	-1.4
PRHZ	**Porangahau**	**2.40**	**181**	PN		Pn	12 03 28.1	-1.5
DVHZ	**Dannevirke**	**2.46**	**189**	PN		Pn	12 03 28.3	-2.0
TIWZ	**Tintock**	**2.97**	**192**	PN		Pn	12 03 34.5	-2.4
HOWZ	**Holdsworth Sta**	**3.16**	**196**	PN		Pn	12 03 36.3	-3.0
OGWZ	**Otaki Gorge**	**3.17**	**201**	PN		Pn	12 03 36.8	-2.6
KIW	**Kapiti Island**	**3.29**	**204**	PN		Pn	12 03 38.0	-2.9
MTW	**Mount Morrison**	**3.41**	**195**	PN		Pn	12 03 39.0	-3.5
CAW	**Cannon Point**	**3.47**	**200**	PN		Pn	12 03 39.9	-3.3

*PGC **29** 12:07:50.0±1.1, 49.92N×130.04W, h10km, ML3.0/11, Mw3.6, 205km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **29** 12:07:53.6±1.0, 50.12N±0.06×129.5W±0.1, h10km, mb3.7/3, Error ellipse: s-maj=10.9km s-min=6.7km az=146.9*
*IDC **29** 12:07:53.6±2.1, 50.12N×129.52W, h0km, mb3.6/2, mb1 3.6/7, mb1mx3.5/26, mbtmp3.3/7, ML3.5/4, MS2.9/4, Ms1 2.9/4, ms1mx2.5/35, Error ellipse: s-maj=36.0km s-min=14.1km az=76.0*
*NEIC **29** 12:07:56.5±1.3, 50.22N×129.22W, h10km, MW3.6(PGC), Mw3.6(PGC), Error ellipse: s-maj=20.1km s-min=10.1km az=57.0*
ISC 29 12:07:56.1±1.0, 50.18N±0.06×129.3W±0.1, h10km, n31, σ1.16/36, mb3.7/3, 4D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HOLB	**Holberg**	**0.88**	**58**	*e*Pn		**Pn**	**12 08 13.8**	**-0.7**
HOLB	**Holberg**	**0.88**	**58**	Pn		**Pn**	**12 08 13.8**	**-0.7**
BPBC	**Brooks Peninsu**	**0.99**	**91**	*e*Pn		**Pn**	**12 08 14.1**	**-1.9**
BPBC	**Brooks Peninsu**	**0.99**	**91**	↑Pn		**Pn**	**12 08 14.1**	**-1.9**
PHC	**Port Hardy**	**1.31**	**66**	*e*Pn		**Pn**	**12 08 20.0**	**-0.4**
PHC				*e*Sn		**Sn**	**12 08 41.4**	**+3.5**
PHC	**Port Hardy**	**1.31**	**66**	Pn		**Pn**	**12 08 20.0**	**-0.4**
PHC				↑Sn		**Sn**	**12 08 41.4**	**+3.5**
MAYB	**Maynard**	**1.39**	**80**	↑Pn		**Pn**	**12 08 20.4**	**-1.1**
EDB	**Eliza Dome**	**1.45**	**101**	*e*Pn		**Pn**	**12 08 19.9**	**-2.3**
EDB				*e*Sn		**Sn**	**12 08 41.8**	**+0.6**
EDB	**Eliza Dome**	**1.45**	**101**	↓Pn		**Pn**	**12 08 19.9**	**-2.3**
EDB				↓Sn		**Sn**	**12 08 41.8**	**+0.6**
WOSB	**Woss**	**1.76**	**90**	↑Pn		**Pn**	**12 08 25.9**	**-0.7**
BBB	**Bella Bella**	**2.14**	**20**	Pn		**Pn**	**12 08 30.6**	**-1.2**
BBB				Sn		**Sn**	**12 08 58.9**	**+0.5**
BBB	**Bella Bella**	**2.14**	**20**	Pn		**Pn**	**12 08 30.6**	**-1.2**
	22nm,0.3s,baz=31,slow=16,SNR=384							
BBB				Sn		**Sn**	**12 08 58.9**	**+0.5**
	28nm,0.3s,baz=132,slow=22,SNR=16							
BBB	**Bella Bella**	**2.14**	**20**	↓Pn		**Pn**	**12 08 30.7**	**-1.1**
BBB				↓Sn		**Sn**	**12 08 59.3**	**+0.8**
GDR	**Gold River**	**2.15**	**99**	Pn		**Pn**	**12 08 30.8**	**-1.2**
OZB	**Mount Ozzard**	**2.77**	**115**	↑Sn		**Sn**	**12 09 13.5**	**-0.4**
BNB	**Barry Inlet**	**2.84**	**328**	↓Pn		**Pn**	**12 08 33.5**	**-8.0**
MOBC	**Moresby Island**	**3.40**	**332**	↑Pn		**Pn**	**12 08 42.3**	**-6.8**
DIB	**Dawson Inlet,**	**3.61**	**328**	Pn		**Pn**	**12 08 45.9**	**-6.1**
	SNR=24							
DIB	**Dawson Inlet,**	**3.61**	**328**	↑Pn		**Pn**	**12 08 45.6**	**-6.4**
OD2	**Odessa Site #2**	**7.54**	**108**	*e*Pn		**Pn**	**12 09 46.5**	**+0.5**
	5.3nm,0.7s							
DLBC	**Dease Lake**	**8.29**	**357**	Pn		**Pn**	**12 09 55.6**	**-0.5**
	0.2nm,0.3s,baz=191,slow=10,SNR=4.2							
YBH	**Yreka Blue Hor**	**9.61**	**149**	LR		LR	12 13 56.9	
	comp=Z,33nm,18.4s,baz=326,slow=38							
NVAR	**Mina Array Bea**	**14.13**	**142**	Pn		**Pn**	**12 11 16.5**	**+0.4**
	0.1nm,0.3s,baz=325,slow=16,SNR=3.0							
PDAR	**Pinedale Array**	**15.47**	**111**	Pn		**Pn**	**12 11 37.3**	**+3.2**
	0.0nm,0.3s,baz=322,slow=12,SNR=3.7							
FFC	**Flin Flon**	**17.21**	**64**	*e*Pn		**Pn**	**12 11 57.6**	**+1.3**
	11nm,0.8s							
ILAR	**Eielson Array**	**17.31**	**334**	P		**Pn**	**12 11 57.9**	**+0.4**
ILAR				LR		LR	12 17 41.2	
ILAR	**Eielson Array**	**17.31**	**334**	P		**Pn**	**12 11 57.9**	**+0.4**
	baz=149,slow=11,SNR=5.4							
ILAR				LR		LR	12 17 41.2	
	comp=Z,40nm,21.9s,baz=337,slow=34							
INK	**Inuvik**	**18.30**	**355**	LR		LR	12 19 47.7	
	comp=Z,48nm,19.3s,baz=344,slow=39							
ULM	**Lac du Bonnet**	**21.30**	**77**	P		**P**	**12 12 44.0**	**+1.4**
	7.6nm,0.8s,mb4.1,baz=295,slow=11,SNR=3.4							
ULM				LR		LR	12 21 46.4	
	comp=Z,46nm,20.6s,baz=336,slow=39							
ECSD	**EROS Data Cent**	**23.10**	**94**	*e*P		**P**	**12 13 03.3**	**+1.5**
	5.4nm,0.9s,mb4.0							
TXAR	**Lajitas Array**	**28.43**	**127**	P		**P**	**12 13 51.7**	**+0.9**
	0.3nm,0.8s,mb3.0,baz=336,slow=5.8,SNR=2.7							

*KISR **29** 12:15:58.4±1.0, 32.35N×47.65E, h16km±999km, ML2.7*
*ISCJB **29** 12:15:59.9±0.5, 32.40N±0.03×47.45E±0.07, h10km, Error ellipse: s-maj=9.1km s-min=4.4km az=10.3*
*SGS **29** 12:16:02.6, 32.24N×47.46E, h27km*
*TEH **29** 12:16:03.4, 32.54N×47.47E, h18km*
ISC 29 12:16:00.3±0.5, 32.42N±0.03×47.34E±0.07, h10km, n16, σ1.12/23, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IGHG	**Ghaleghazi**	**2.01**	**342**	*e*Pn		**Pn**	**12 16 35.7**	**+1.4**
IGHG				*e*			12 17 27.5	
	comp=Z,3μm,0.3s							
IVIS	**Veis**	**2.14**	**349**	*e*Pn		**Pn**	**12 16 37.8**	**+1.7**
IVIS				*e*			12 17 15.0	
	comp=Z,2μm,0.3s							
IDHR	**Dehrash**	**2.41**	**341**	*e*Pn		**Pn**	**12 16 40.6**	**+0.8**
IDHR				*e*			12 17 23.9	
	comp=Z,3μm,0.2s							
ILIN	**Lien**	**2.51**	**353**	*e*Pn		**Pn**	**12 16 41.5**	**+0.3**
ILIN				*e*			12 16 51.9	
	comp=N,1μm,0.2s							
ILIN				*e*Sg		**Sg**	**12 17 18.7**	**-2.3**
MIB	**Mutribah**	**2.61**	**180**	*e*P		**Pn**	**12 16 42.3**	**-0.2**
MIB				*e*S		**Sn**	**12 17 15.7**	**+1.5**
MIB				AML		AML	12 17 16.0	
	comp=Z,51nm,0.5s							
IPIR	**Pirpir**	**3.02**	**84**	*e*Pn		**Pn**	**12 16 48.9**	**+0.8**
IPIR				*e*			12 17 01.4	
	comp=N,1μm,0.1s							
NAY	**Al-Naaiem**	**3.16**	**181**	*e*P		**Pn**	**12 16 49.9**	**-0.2**
NAY				*e*S		**Sn**	**12 17 28.6**	**+0.6**
NAY				AML		AML	12 17 29.5	
	comp=Z,8.4nm,0.6s							
RDF	**Al-Radifah**	**3.49**	**177**	*e*P		**Pn**	**12 16 54.5**	**-0.1**
IKLH	**Kolahrood**	**3.68**	**75**	*e*Pn		**Pn**	**12 16 57.6**	**+0.3**
IKLH				*e*			12 16 58.7	
	comp=Z,607nm,0.1s							
QRN	**Al-Qurain**	**3.70**	**172**	*e*P		**Pn**	**12 16 57.3**	**-0.2**
QRN				*e*S		**Sn**	**12 17 41.0**	**-0.2**
QRN				AML		AML	12 17 41.9	
	comp=Z,27nm,0.4s							
IZEF	**Zefreh**	**4.24**	**82**	*e*		**Pn**	**12 17 05.9**	**+1.0**
	comp=Z,415nm,0.1s							
IZEF				*e*Pn		**Pn**	**12 17 04.8**	**-0.2**
IVRN	**Varamin**	**4.47**	**54**	*e*		**Sn**	**12 18 00.0**	**-0.2**
	comp=Z,225nm,0.3s							
IVRN				*e*Pn		**Pn**	**12 17 07.8**	**-0.3**
IVRN				*e*Pn		**Pn**	**12 17 08.2**	**+0.1**
IDMV	**Damavand**	**5.01**	**50**	*e*Pn		**Pn**	**12 17 14.6**	**-1.0**
IDMV				*e*			12 18 24.9	
	comp=Z,140nm,0.3s							
ASYS		**5.54**	**209**	P		**Pn**	**12 17 20.6**	**-2.3**
BTHS		**8.90**	**159**	P		**Pn**	**12 18 05.5**	**-3.5**
HRDDS		**9.64**	**168**	P		**Pn**	**12 18 16.0**	**-3.2**

*ISCJB **29** 12:22:16.6±0.5, 38.42N±0.04×22.20E±0.04, h25km±4km, Error ellipse: s-maj=6.3km s-min=5.3km az=166.6*
*ATH **29** 12:22:16.0, 38.41N×22.17E, h32km±2km, MD2.9/6*
*NEIC **29** 12:22:16.0, 38.41N×22.17E, h32km, MD2.9(ATH), After ATH.*
*CSEM **29** 12:22:16.1±0.2, 38.38N×22.19E, h28km±1km, ML1.6/7, Error ellipse: s-maj=6.2km s-min=5.3km az=132.0*
*THE **29** 12:22:18.3, 38.41N×22.26E, h2km±31km, ML1.6/7, Error ellipse: s-maj=31.1km s-min=0.5km az=254.0*
ISC 29 12:22:16.7±0.5, 38.41N±0.03×22.22E±0.04, h24km±4km, n28, σ0.96/53, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KALE	**Kalithea**	**0.06**	**249**	P		**Pb**	**12 22 20.1**	**-0.8**
KALE				S		**Sb**	**12 22 22.2**	**-1.6**
KALE	**Kalithea**	**0.06**	**249**	P		**Pb**	**12 22 20.1**	**-0.8**
TRIZ	**Trizonia**	**0.12**	**247**	P		**Pb**	**12 22 21.3**	**0.0**
TRIZ				S		**Sb**	**12 22 24.0**	**-0.5**
TRIZ	**Trizonia**	**0.12**	**247**	P		**Pb**	**12 22 21.3**	**0.0**
TRIZ				S		**Sb**	**12 22 24.0**	**-0.5**
EFP	**Efpalio**	**0.24**	**273**	*e*PB		**Pb**	**12 22 22.0**	**-0.8**
EFP				*e*SB		**Sb**	**12 22 27.9**	**+1.0**
EFP	**Efpalio**	**0.24**	**273**	P		**Pb**	**12 22 23.2**	**+0.4**
EFP				S		**Sb**	**12 22 27.5**	**+0.6**
EFP	**Efpalio**	**0.24**	**273**	*e*Pb		**Pb**	**12 22 22.0**	**-0.8**
EFP	**Efpalio**	**0.24**	**273**	P		**Pb**	**12 22 23.2**	**+0.4**
EFP				S		**Sb**	**12 22 27.5**	**+0.6**
EFP				*e*Sb		**Sb**	**12 22 27.9**	**+1.0**
DSF	**Desfina**	**0.24**	**90**	P		**Pb**	**12 22 22.2**	**-0.6**
DSF				S		**Sb**	**12 22 25.3**	**-1.6**
DSF	**Desfina**	**0.24**	**90**	P		**Pb**	**12 22 22.2**	**-0.6**
LAKA	**Lakka**	**0.25**	**227**	P		**Pb**	**12 22 23.7**	**+0.8**
LAKA				S		**Sb**	**12 22 28.5**	**+1.4**
LAKA	**Lakka**	**0.25**	**227**	P		**Pb**	**12 22 23.7**	**+0.8**
LAKA				S		**Sb**	**12 22 28.5**	**+1.4**
GUR	**Goura**	**0.49**	**168**	*e*PB		**Pb**	**12 22 26.1**	**-0.5**
GUR				*e*SB		**Sb**	**12 22 35.0**	**+1.7**
GUR	**Goura**	**0.49**	**168**	*e*Pb		**Pb**	**12 22 26.1**	**-0.5**
GUR				*e*Sb		**Sb**	**12 22 35.0**	**+1.7**
EVR	**Evrytania**	**0.59**	**328**	*e*Pn		**Pn**	**12 22 29.0**	**-0.6**
EVR				*e*Sn		**Sb**	**12 22 36.6**	**+0.2**
EVR	**Evrytania**	**0.59**	**328**	*e*PN		**Pn**	**12 22 29.0**	**-0.6**
EVR				*e*SN		**Sb**	**12 22 36.6**	**+0.2**
EVR	**Evrytania**	**0.59**	**328**	*e*Pn		**Pn**	**12 22 29.0**	**-0.6**
EVR				*e*Sn		**Sb**	**12 22 36.6**	**+0.2**
AGG	**Agios Georgios**	**0.61**	**8**	*e*Pn		**Pn**	**12 22 29.2**	**-0.7**
AGG				*e*Sn		**Sn**	**12 22 38.5**	**-0.5**
AGG	**Agios Georgios**	**0.61**	**8**	*e*PN		**Pn**	**12 22 29.2**	**-0.7**
AGG				*e*SN		**Sn**	**12 22 38.5**	**-0.5**
AGG	**Agios Georgios**	**0.61**	**8**	P		**Pb**	**12 22 29.1**	**+0.3**
AGG				S		**Sb**	**12 22 39.1**	**+2.1**
AGG	**Agios Georgios**	**0.61**	**8**	P		**Pb**	**12 22 29.1**	**+0.3**
AGG				*e*Sn		**Sn**	**12 22 38.5**	**-0.5**
AGG				S		**Sb**	**12 22 39.1**	**+2.1**
LKR	**Lokris**	**0.66**	**69**	*e*Pn		**Pn**	**12 22 29.6**	**-0.9**
LKR				*e*Sn		**Sn**	**12 22 40.7**	**+0.6**
LKR	**Lokris**	**0.66**	**69**	*e*PN		**Pn**	**12 22 29.6**	**-0.9**
LKR				*e*SN		**Sn**	**12 22 40.7**	**+0.6**
LKR	**Lokris**	**0.66**	**69**	P		**Pb**	**12 22 29.8**	**+0.3**
LKR				S		**Sb**	**12 22 39.6**	**+1.4**
LKR	**Lokris**	**0.66**	**69**	P		**Pb**	**12 22 29.8**	**+0.3**
LKR				S		**Sb**	**12 22 39.6**	**+1.4**
LKR				*e*Sn		**Sn**	**12 22 40.7**	**+0.6**
RLS	**Riolos of Patr**	**0.69**	**239**	*e*Pn		**Pn**	**12 22 30.0**	**-0.9**
RLS	**Riolos of Patr**	**0.69**	**239**	*e*PN		**Pn**	**12 22 30.0**	**-0.9**
RLS	**Riolos of Patr**	**0.69**	**239**	*e*Pn		**Pn**	**12 22 30.0**	**-0.9**

*IDC **29** 12:26:44.6±1.0, 1.47N×127.56E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/18, mbtmp3.9/4, Error ellipse: s-maj=79.0km s-min=8.2km az=66.0*
*ISCJB **29** 12:26:54.4±0.6, 0.54N±0.06×125.68E±0.04, h81km±9km, mb3.8/4, Error ellipse: s-maj=9.7km s-min=6.6km az=20.3*
*DJA **29** 12:26:55, 0.55N×125.71E, h63km, MLv3.8/4*
ISC 29 12:26:55.4±0.6, 0.53N±0.06×125.69E±0.04, h71km±9km, n11, σ0.92/15, mb3.8/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MNI	**Manado**	**1.24**	**317**	P		**Pn**	**12 27 15.3**	**-1.8**
MNI				S		**Sn**	**12 27 34.3**	**+1.0**
TNTI	**Ternate**	**1.69**	**82**	P		**Pn**	**12 27 23.4**	**+0.4**
TNTI				S		**Sn**	**12 27 44.1**	**+0.2**
KMSI	**Cibinong**	**1.71**	**271**	P		**Pn**	**12 27 21.6**	**-1.6**
LBMI	**Labuha**	**2.15**	**123**	P		**Pn**	**12 27 28.6**	**-0.6**
LBMI				S		**Sn**	**12 27 54.9**	**0.0**
SGSI	**Sangihe**	**3.13**	**357**	S		**Sn**	**12 28 19.4**	**+0.6**
LUWI	**Luwuk**	**3.31**	**242**	P		**Pn**	**12 27 52.2**	**+7.3**
LUWI				S		**Sn**	**12 28 24.0**	**+0.8**
MRSI	**Marisa**	**3.75**	**269**	P		**Pn**	**12 27 51.5**	**+0.6**
WRA	**Warramunga Arr**	**22.04**	**158**	P		**P**	**12 31 43.5**	**-0.8**
	2.3nm,0.9s,mb3.5,baz=337,slow=11,SNR=40							
ASAR	**Alice Springs**	**25.34**	**162**	P		**P**	**12 32 17.3**	**+1.5**
	1.5nm,0.5s,mb3.7,baz=344,slow=11,SNR=40							
ASAR				PcP		PcP	12 35 48.6	+1.5
	0.4nm,0.9s,baz=350,slow=1.6,SNR=4.4							
STKA	**Stephens Creek**	**35.58**	**156**	P		**P**	**12 33 46.4**	**+0.3**
	0.9nm,0.4s,mb4.0,baz=334,slow=9.2,SNR=3.9							
MKAR	**Makanchi Array**	**59.61**	**327**	P		**P**	**12 36 51.1**	**-0.8**
	0.4nm,0.4s,mb3.9,baz=126,slow=8.2,SNR=6.8							

IDC 29 12:33:16.4±6.4, 17.98S×179.72E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.6/16, mbtmp3.5/4, Error ellipse: s-maj=262.7km s-min=36.9km az=143.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**42.86**	**260**	P		P	12 41 17.4	+0.7
	0.3nm,0.6s,baz=93,slow=7.9,SNR=18							
ASAR	**Alice Springs**	**43.05**	**254**	P		P	12 41 17.0	-1.2
	0.2nm,0.7s,baz=91,slow=8.9,SNR=5.4							
ILAR	**Eielson Array**	**86.37**	**14**	P		P	12 45 59.9	-0.1
	0.3nm,0.7s,baz=227,slow=6.1,SNR=5.8							
CMAR	**Chiang Mai Arr**	**87.23**	**290**	P		P	12 46 05.7	+0.4
	0.3nm,0.3s,baz=120,slow=3.6,SNR=4.4							

DJA 29 12:42:32, 2.13S×100.75E, h14km, MLv3.7/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KRJI	**Kerinci**	**0.71**	**87**	P		Pg	12 42 46.0	+0.1
KRJI				S		Sg	12 42 54.9	-0.4
SDSI	**Sungai Dareh**	**1.37**	**30**	P		Pn	12 42 55.5	-1.2
SDSI				S		Sn	12 43 13.8	-0.9
PPI	**Padang Panjang**	**1.70**	**348**	P		Pn	12 42 59.3	-2.0
PPI				S		Sn	12 43 21.2	-1.6
SISI	**Saibi**	**1.84**	**296**	P		Pn	12 43 01.7	-1.5
RGRI	**Rengat**	**2.37**	**42**	P		Pn	12 43 21.7	+11
KSI	**Kapahiang**	**2.38**	**129**	P		Pn	12 43 11.4	+0.8
BKNI	**Bangkinang**	**2.46**	**7**	P		Pn	12 43 14.6	+2.9
**

EKS2 eSn **Sn** **13 09 18.7 0.0**
AAK **Ala-Archa** **4.43 9** P **Pn** **13 08 29.4 +1.1**
SNR=16
AAK **Ala-Archa** **4.43 9** *e*Pn **Pn** **13 08 29.0 +0.8**
AAK **Ala-Archa** **4.43 9** P **Pn** **13 08 29.4 +1.1**
comp=E,7.4nm,0.3s,baz=163,slow=6.4,SNR=26
AAK S **Sn** **13 09 19.6 +0.3**
comp=E,3.9nm,0.3s,baz=322,slow=17,SNR=7.6
ULHL **Ulahol** **4.48 26** P **Pn** **13 08 30.1 +1.2**
SNR=15
KBK **Karagaybulak** **4.52 13** P **Pn** **13 08 30.8 +1.4**
SNR=7.0
CHMS **Chumysh** **4.82 10** P **Pn** **13 08 34.4 +0.9**
SNR=5.5
TKM2 **Tokmak 2** **4.91 18** ⇓Pn **Pn** **13 08 35.9 +1.2**
comp=E,6.0nm,0.3s
TKM2 ⇑Pg **Pn** **13 08 48.3 +14**
comp=E,1.5nm,0.3s
TKM2 ⇑Sn **Sn** **13 09 25.8 -5.0**
comp=E,7.6nm,0.5s
TKM2 **Tokmak 2** **4.91 18** P **Pn** **13 08 36.0 +1.3**
SNR=21
TKM2 **Tokmak 2** **4.91 18** *e*Pn **Pn** **13 08 35.9 +1.2**
USP **Ospenovka** **5.06 8** P **Pn** **13 08 37.4 +0.8**
SNR=15
CHM **Chimkent** **5.07 325** *e*Pn **Pn** **13 08 34.0 -2.8**
KBL **Kabul** **5.20 226** *e*Pn **Pn** **13 08 39.2 +0.7**
KBL eSn **Sn** **13 09 37.9 +0.2**
KK31 **Karatay Array** **5.37 335** ⇓Pn **Pn** **13 08 40.2 -0.6**
comp=E,15nm,0.3s,baz=144,slow=12,SNR=214
KK31 Sn **Sn** **13 09 35.8 -6.0**
comp=E,48nm,0.5s,baz=154,slow=22,SNR=24
KKAR **Karatay Array** **5.37 335** ⇓*i*Pn **Pn** **13 08 40.0 -0.7**
KKAR eSn **Sn** **13 09 35.7 -6.0**
SDNR **Sundarnagar** **7.29 156** *e*PKP **Pn** **13 09 06.5 -0.2**
SDNR eS **Sn** **13 10 21.5 -6.6**
SMLA **Simla** **7.70 156** *i* P **Pn** **13 09 12.9 +0.8**
SMLA *i* S **Sn** **13 10 33.0 -4.9**
SMLA ⇓ 13 10 33.4
comp=E,807nm,0.3s
SMLA ⇓ 13 10 33.4
comp=N,1μm,0.4s
KLP **Kalpa** **7.73 149** *e*PKP **Pn** **13 09 13.4 +0.8**
KLP eS **Sn** **13 10 34.3 -4.3**
KLP AML AML 13 10 39.3
comp=N,82nm,0.3s
KLP AML AML 13 10 39.5
comp=E,87nm,0.4s
JOSI **Joshimath** **9.13 145** *ex* **Pn** **13 09 39.0 +7.6**
JOSI eS **Sn** **13 11 06.4 -6.1**
JOSI AML AML 13 11 07.9
comp=E,231nm,0.7s
JOSI AML AML 13 11 14.9
comp=N,220nm,0.5s
KHET **Khetri** **10.32 169** eS **Sn** **13 11 31.6 -10**
KHET AML AML 13 11 37.5
comp=N,9.7nm,0.1s
KHET AML AML 13 11 38.8
comp=E,6.4nm,0.2s
SONA **Sohna** **10.40 163** eS **Sn** **13 11 33.5 -10**
MK31 **Makanchi Array** **10.68 34** *e*Pn **Pn** **13 09 52.9 +1.2**
MKAR **Makanchi Array** **10.68 34** P **Pn** **13 09 53.4 +1.6**
comp=E,0.2nm,0.3s,baz=215,slow=14,SNR=10
KURK **Kurchatov** **12.97 14** *e*Pn **Pn** **13 10 19.7 -1.9**
comp=E,3.2nm,0.6s
KURK *i* 13 10 28.0
KURK **Kurchatov** **12.97 14** P **Pn** **13 10 18.2 -3.3**
comp=E,0.1nm,0.3s,baz=199,slow=12,SNR=4.8
DANN **Dangsing** **13.04 136** *e*P **Pn** **13 10 20.8 -1.9**
KOLN **Koldanda** **13.41 138** *e*P **Pn** **13 10 27.2 -0.3**
GKN **Gorkha** **13.79 135** *e*P **Pn** **13 10 31.3 -1.1**
comp=E,33nm,0.4s
PKI **Pulchoki** **14.56 134** *e*P **Pn** **13 10 41.3 -0.8**
AB31 **Akbulak array** **14.73 323** ⇓P **Pn** **13 10 44.2 +0.2**
comp=E,0.9nm,0.4s,baz=192,slow=14,SNR=37
AB31 ⇓S **Sn** **13 13 18.4 -8.8**
comp=E,3.1nm,0.7s,baz=152,slow=20,SNR=7.1
ABKAR **Akbulak array** **14.73 323** *e*Pn **Pn** **13 10 41.4 -2.7**
comp=E,2.1nm,0.5s
ABKAR eSn **Sn** **13 13 10.0 -17**
BVAR **Borovoye Array** **14.94 353** P **Pn** **13 10 45.1 -1.4**
comp=E,1.2nm,0.3s,baz=169,slow=8.9,SNR=12
JIRN **Jiri** **14.95 131** *e*P **Pn** **13 10 46.1 -0.8**
comp=E,15nm,0.3s
RAMN **Ramite** **15.72 132** *e*P **Pn** **13 10 57.1 +0.6**
comp=E,11nm,0.4s
AKTK **Aktyubinsk** **16.45 323** P **Pn** **13 11 04.1 -1.1**
AKTK S **S** **13 13 55.3 -13**
AKTO **Aktyubinsk** **16.45 323** ⇓P **Pn** **13 11 07.7 +2.4**
comp=E,0.3nm,0.4s
AKTO ⇑S **S** **13 14 00.9 -7.4**
comp=E,0.5nm,0.8s
AKTO **Aktyubinsk** **16.45 323** P **Pn** **13 11 04.1 -1.1**
comp=E,0.7nm,0.3s,baz=112,slow=15,SNR=8.6
AKTO S **S** **13 13 55.3 -13**
comp=E,0.3nm,0.3s,baz=295,slow=23,SNR=6.4
ZALV **Zalesovo Beam** **17.49 23** P **Pn** **13 11 17.9 +0.1**
ZALV **Zalesovo Beam** **17.49 23** P **Pn** **13 11 17.9 +0.1**
comp=E,1.0nm,0.3s,baz=210,slow=11,SNR=29
HHC **Hu-ho-hao-te** **29.26 73** *e*P **P** **13 13 12.5 +0.9**
HHC pP pP 13 13 45.8 +4.6
HHC PP PP 13 14 14.0 -6.2
HHC S **S** **13 17 51.5 -2.7**
HHC sS sS 13 18 50.3 +4.2
ARCES **ARCESS Array B** **40.34 336** P **P** **13 14 47.6 +1.6**
comp=E,1.4nm,0.5s,mb3.9,baz=108,slow=8.4,SNR=12
NOA **NORSAR Array B** **44.24 322** P **P** **13 15 18.6 +0.8**
comp=E,0.9nm,0.7s,mb3.5,baz=93,slow=7.6,SNR=3.5

*NEIC **29** 14:02:25.8, 31.°04S×71.°57W, h38km, MD4.0(GUC), After GUC.*

GUC 29 14:02:25.8±0.6, 31.°04S×71.°57W, h38km±2km, MD4.0, ML3.9, 4C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMCH	**Combarbala**	**0.51**	**105**	⇓*i*P	Pn	14 02 37.0	+0.5
CMCH				*i* S	Sn	14 02 45.1	+0.9
CMCH	**Combarbala**	**0.51**	**105**	⇓*i*P	Pn	14 02 37.0	+0.5
CMCH				*i* S	Sn	14 02 45.1	+0.9
CMCH				AML	AML	14 02 46.2	
	comp=N,22μm,0.7s						
OVCH	**Ovalle**	**0.54**	**37**	⇑*i*P	Pn	14 02 37.1	+0.1
OVCH				eS	Sn	14 02 45.2	+0.3
OVCH	**Ovalle**	**0.54**	**37**	⇑*i*P	Pn	14 02 37.1	+0.1
OVCH				eS	Sn	14 02 45.2	+0.3
OVCH				AML	AML	14 02 45.5	
	comp=N,54μm,0.3s						
CHNG	**Los Chungos**	**0.84**	**176**	*i* P	Pn	14 02 41.2	+0.1
CHNG				*i* S	Sn	14 02 53.0	+0.8
TLL	**Tololo Astrono**	**1.10**	**37**	AML	AML	14 03 03.5	
	comp=N,3μm,0.6s						
ROCH	**El Roble**	**1.98**	**166**	*i* P	Pn	14 02 58.9	+2.1
ROCH				*i* S	Sn	14 03 23.8	+3.4
ROCH				AML	AML	14 03 35.2	
	comp=N,698nm,0.4s						
LCO	**Las Campanas**	**2.16**	**21**	*e*Pn	Pn	14 02 58.8	-0.5
LCO				eSn	Sn	14 03 23.4	-1.4
LCO	**Las Campanas**	**2.16**	**21**	AML	AML	14 03 25.6	
	comp=E,750nm,0.3s						
PEL	**Peldehue**	**2.23**	**160**	AML	AML	14 03 38.2	
	comp=E,1μm,0.3s						
FCH	**Farellones**	**2.52**	**155**	AML	AML	14 03 54.7	
	comp=E,382nm,0.1s						
ANTU	**Antumapu**	**2.64**	**163**	AML	AML	14 03 49.6	
	comp=E,443nm,0.8s						
TACH	**Talagante**	**2.66**	**168**	⇑*i*P	Pn	14 03 07.6	+1.5
TACH				*i* S	Sn	14 03 38.9	+1.8
TACH	**Talagante**	**2.66**	**168**	⇑*i*P	Pn	14 03 07.6	+1.5
TACH				*i* S	Sn	14 03 38.9	+1.8
PCH	**Pirque**	**2.72**	**161**	*i* P	Pn	14 03 08.7	+1.7
PCH				*i* S	Sn	14 03 40.8	+2.1
PCH	**Pirque**	**2.72**	**161**	*i* P	Pn	14 03 08.7	+1.7
PCH				*i* S	Sn	14 03 40.8	+2.1
LMEL	**Las Melosas**	**3.03**	**158**	*i* P	Pn	14 03 14.0	+2.8
LMEL				*i* S	Sn	14 03 49.7	+3.5
LMEL	**Las Melosas**	**3.03**	**158**	*i* P	Pn	14 03 14.0	+2.8
LMEL				*i* S	Sn	14 03 49.7	+3.5
LMEL				AML	AML	14 04 03.1	
	comp=N,346nm,0.2s						

*NIED **29** 14:41:00, 42.°90N×144.°00E, h95km, Mw4.3 Best double couple: M₀3.60000×10¹⁵ NP1:ϕs310.00000°, δ87.00000°, λ-56.00000°. NP2:ϕs43.00000°, δ34.00000°, λ-175.00000°.*
*MOS **29** 14:41:03.1±1.0, 42.°97N×144.°00E, h102km, mb4.7/21, Error ellipse: s-maj=8.9km s-min=5.8km az=81.8*
*BJI **29** 14:41:03.1, 43.°04N×144.°06E, h99km, mB4.6/21, mb4.8/39*
*ISCJB **29** 14:41:03.8±0.2, 42.°96N±0.°03×143.°94E±0.°03, h99km±1km, mb4.5/75, Error ellipse: s-maj=4.4km s-min=2.7km az=156.3*
*NEIC **29** 14:41:04.4±0.3, 43.°00N×144.°00E, mb4.6/32, MW4.3(NIED), Error ellipse: s-maj=7.4km s-min=4.6km az=140.0*
NEIC Recorded [2 JMA] in southeastern Hokkaido and [1 JMA] in Aomori, Honshu.
*JMA **29** 14:41:04.4±0.1, 42.°94N×144.°04E, h96km±1km, M4.1 Broadband fault plane solution: P waves. NP1: ϕs42.00000°, δ36.00000°, λ-174.00000°. NP2: ϕs307.00000°, δ87.00000°, λ-54.00000°. Principal axes: T Plg32.0000°, Azm8.0000°; N Plg36.0000°, Azm125.0000°; P Plg38.0000°, Azm249.0000°;*
JMA Felt II J1.
*IDC **29** 14:41:04.8±0.6, 42.°94N×144.°01E, h100km±4km, mb4.1/28, mb1 4.2/30, mb1mx4.2/35, mbtmp4.1/30, MS2.8/2, Ms1 2.8/2, ms1mx2.3/35 Error ellipse: s-maj=9.2km s-min=6.9km az=61.0*

ISC 29 14:41:04.8±0.2, 42.°95N±0.°02×143.°95E±0.°03, h94km±1km, h97km±1.4km:pP-P, n371, σ0.°66/402, mb4.5/75, 119C-116D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOB	**Onbets**	**0.10**	**244**	⇑P	**Pn**	**14 41 18.4**	**+0.5**
JOB				eS	**Sn**	**14 41 28.6**	**+0.9**
JAR	**Ashorobuto**	**0.38**	**339**	⇓P	**Pn**	**14 41 19.1**	**+0.1**
JAR				eS	**Sn**	**14 41 29.9**	**+0.3**
JAK	**Akkeshi**	**0.55**	**85**	⇓P	**Pn**	**14 41 19.5**	**-0.7**
JAK				eS	**Sn**	**14 41 30.9**	**-0.9**
JCH	**Churui**	**0.55**	**233**	⇑P	**Pn**	**14 41 20.5**	**+0.2**
JCH				eS	**Sn**	**14 41 32.0**	**+0.2**
JNK	**Nakash**	**0.85**	**41**	⇓P	**Pn**	**14 41 22.4**	**-0.7**
JNK				eS	**Sn**	**14 41 35.8**	**-1.0**
JFR	**Furan**	**1.02**	**283**	P	**Pn**	**14 41 25.3**	**+0.4**
JFR				eS	**Sn**	**14 41 41.1**	**+1.0**
JTKR	**Abashiri--Toko**	**1.02**	**358**	P	**Pn**	**14 41 25.4**	**+0.4**
JTKR				eS	**Sn**	**14 41 40.5**	**+0.3**
JEM	**Erimo**	**1.10**	**213**	⇑P	**Pn**	**14 41 25.5**	**-0.4**
ERM	**Erimo**	**1.10**	**213**	*e*Pn	**Pn**	**14 41 25.2**	**-0.7**
ERM	**Erimo**	**1.10**	**213**	*e*PN	**Pn**	**14 41 25.4**	**-0.5**
JNBK	**Urakawa-nobuka**	**1.11**	**233**	⇑P	**Pn**	**14 41 26.0**	**+0.1**
JNBK				eS	**Sn**	**14 41 41.7**	**-0.2**
JMP	**Maruseppu**	**1.15**	**338**	⇑P	**Pn**	**14 41 26.7**	**+0.3**
JMP				eS	**Sn**	**14 41 42.9**	**+0.3**
JBT2	**Biratori 2**	**1.18**	**262**	P	**Pn**	**14 41 27.3**	**+0.5**
JBT2				eS	**Sn**	**14 41 44.4**	**+1.0**
JKK2	**Kamakawa 2**	**1.28**	**317**	⇑P	**Pn**	**14 41 28.7**	**+0.8**
JKK2				eS	**Sn**	**14 41 45.9**	**+0.5**
JRA	**Rausu**	**1.31**	**40**	⇓P	**Pn**	**14 41 28.1**	**-0.2**
JRA				eS	**Sn**	**14 41 45.8**	**-0.2**
NEM2	**Nemuro 2**	**1.37**	**72**	⇓P	**Pn**	**14 41 27.6**	**-1.5**
NEM2				eS	**Sn**	**14 41 44.7**	**-2.8**
JAB	**Ashibetsu**	**1.38**	**294**	⇓P	**Pn**	**14 41 30.6**	**+1.4**
ASAJ	**Asahikawa**	**1.53**	**320**	⇑*i*Pn	**Pn**	**14 41 32.3**	**+1.2**
ASAJ	**Asahikawa**	**1.53**	**320**	P	**Pn**	**14 41 32.2**	**+1.2**
	31nm,0.3s,baz=162,slow=13,SNR=398						
ASAJ				S	**Sn**	**14 41 52.6**	**+1.7**
	89nm,0.3s,baz=136,slow=23,SNR=23						
ASAJ	**Asahikawa**	**1.53**	**320**	PN	**Pn**	**14 41 32.3**	**+1.2**
ASAJ				S	**Sn**	**14 41 52.7**	**+1.7**
ASAJ				pmax	pmax		
	comp=Z,31nm,0.3s						
ASAJ				smax			
	comp=N,89nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.76**	**51**	⇓*i*PN	**Pn**	**14 41 33.8**	**-0.2**
YUK				*i* S	**Sn**	**14 41 55.9**	**-0.3**
YUK				pmax	pmax		
	comp=Z,5μm,0.2s						
YUK				pmax	pmax		
	comp=N,789nm,0.2s						
YUK				pmax	pmax		
	comp=E,714nm,0.2s						
YUK				pmax	pmax		
	comp=Z,850nm,0.2s						
YUK				smax			
	comp=N,11μm,0.4s						
YUK				smax			
	comp=E,5μm,0.4s						
YUK				smax			
	comp=N,6μm,0.4s						
YUK				smax			
	comp=E,3μm,0.4s						
KUR	**Kuril'sk**	**3.63**	**50**	*e*PN	**Pn**	**14 41 59.5**	**+0.7**
KUR				eS	**Sn**	**14 42 41.8**	**+1.2**
KUR				pmax	pmax		
	comp=N,1μm,1.0s						
KUR				pmax	pmax		
	comp=E,1μm,1.0s						
KUR				pmax	pmax		
	comp=Z,2μm,1.0s						
KUR				pmax	pmax		
	comp=N,90nm,0.5s						
KUR				pmax	pmax		
	comp=E,110nm,0.5s						
KUR				pmax	pmax		
	comp=Z,340nm,0.5s						
KUR				smax			
	comp=N,4μm,2.0s						
KUR				smax			
	comp=E,4μm,2.0s						
KUR				smax			
	comp=N,970nm,0.8s						
KUR				smax			
	comp=E,540nm,0.8s						
YSS	**Yuzh-Sakhalins**	**4.10**	**348**	⇑*i*Pn	**Pn**	**14 42 05.5**	**+0.4**
YSS				eSn	**Sn**	**14 42 50.7**	**-1.2**
YSS	**Yuzh-Sakhalins**	**4.10**	**348**	⇑*i*PN	**Pn**	**14 42 05.0**	**-0.1**
YSS				*i* S	**Sn**	**14 42 51.0**	**-0.9**
YSS				pmax	pmax		
	comp=N,110nm,0.6s						
YSS				pmax	pmax		
	comp=E,50nm,0.6s						
YSS				pmax	pmax		
	comp=Z,110nm,0.6s						
YSS				smax			
	comp=N,240nm,1.0s						
YSS				smax			
	comp=E,240nm,0.8s						
MAJO	**Matsushiro**	**7.78**	**217**	*e*Pn	**Pn**	**14 42 55.0**	**-0.2**
MAT	**Matsushiro**	**7.78**	**217**	P	**Pn**	**14 42 54.5**	**-0.7**
MAT				S	**Sn**	**14 44 20.3**	**-1.3**
MJAR	**Matsushiro Arr**	**7.78**	**217**	P	**Pn**	**14 42 55.1**	**-0.1**
	comp=E,2.6nm,0.3s,baz=30,slow=14,SNR=36						
MJAR				S	**Sn**	**14 44 20.9**	**-0.7**
	comp=E,0.9nm,0.3s,baz=203,slow=6.2,SNR=3.9						
MJAR				LR	LR	14 46 41.2	
	comp=E,104nm,20.3s,baz=45,slow=43						
MJAR	**Matsushiro Arr**	**7.78**	**217**	PN	**Pn**	**14 42 55.1**	**-0.1**
MJAR				S	**Sn**	**14 44 20.9**	**-0.7**
HABR	**Khabarovsk**	**8.32**	**315**	*e*PN	**Pn**	**14 43 02.1**	**-0.4**
HABR				S	**Sn**	**14 44 35.2**	**+0.4**
HABR				pmax	pmax		
	comp=E,5.0nm,0.7s						
HABR				pmax	pmax		
	comp=N,5.0nm,0.7s						
HABR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
JHJ	**Hachijo jima 2**	**10.35**	**200**	P	**Pn**	**14 43 27.1**	**-3.1**
	comp=Z,28nm,0.3s,baz=85,slow=19,SNR=12						
JHJ				S	**Sn**	**14 45 14.3**	**-10**
	comp=Z,41nm,0.3s,baz=265,slow=23,SNR=8.7						
MDJ	**Mudanjiang**	**10.52**	**284**	P	**Pn**	**14 43 33.0**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,37nm,4.8s						
SKR	**Severo-Kuril's**	**11.36**	**43**	*e*PN	**Pn**	**14 43 40.5**	**-3.3**
KSRS	**Korea Array**	**13.42**	**251**	P	**Pn**	**14 44 10.2**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=63,slow=13,SNR=8.7						
KSRS				S	**Sn**	**14 46 48.6**	**+10**
	comp=Z,0.4nm,0.3s,baz=67,slow=24,SNR=20						
KSRS				LR	LR	14 49 07.1	
	comp=Z,24nm,19.2s,baz=30,slow=36						

CN2 **Changchun** **13.49** **280** *e*P **Pn** **14 44 12.3 +0.1**
CN2 *e*pP 14 44 25.0
CN2 eS **Sn** **14 46 39.3 -1.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,14.0s
CN2 LR LR
comp=E,300nm,14.0s
CN2 LR LR
comp=Z,300nm,15.0s
PETK **Petropavlovsk-** **13.68** **37** P **Pn** **14 44 11.0 -3.6**
comp=Z,1.3nm,0.3s,baz=218,slow=6.2,SNR=30
PET **Petropavlovsk** **14.06** **39** *e*Pn **Pn** **14 44 15.2 -4.3**
comp=Z,3.7nm,0.4s
PET **Petropavlovsk** **14.06** **39** *e*P **Pn** **14 44 15.8 -3.7**
PET pmax pmax
comp=Z,7.0nm,0.9s
DL2 **Dalian** **17.34** **264** P **Pn** **14 45 01.0 +0.3**
DL2 pmax pmax
comp=Z,20nm,0.6s
JOW **Kunigami** **20.53** **224** P **P** **14 45 35.8 +0.1**
comp=Z,23nm,0.8s,baz=75,slow=17,SNR=4.2
SEY **Seymchan** **20.62** **11***c* *i*P **P** **14 45 33.1 -3.1**
YAK **Yakutsk** **20.91** **341** P **P** **14 45 35.7 -3.6**
comp=Z,20nm,0.4s
YAK **Yakutsk** **20.91** **341** *e*P **P** **14 45 35.1 -4.2**
YAK eS **S** **14 49 20.1 -6.7**
YAK *e**SS sS 14 49 44.2 -13
YAK pmax pmax
comp=Z,16nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=E,2.0nm,1.2s
YAK smax
comp=N,55nm,1.8s
YAK smax
comp=E,57nm,1.8s
BJI **Beijing** **20.97** **272** P **P** **14 45 39.5 -0.7**
BJI pP 14 45 56.3
BJI S **S** **14 49 28.5 -0.1**
BJI pmax pmax
comp=Z,44nm,0.9s
BJT **Baijiatuan** **20.98** **271** *e*P **P** **14 45 39.6 -0.8**
comp=Z,33nm,0.8s
BJT **Baijiatuan** **20.98** **271** *e*P **P** **14 45 39.6 -0.8**
BJT pmax pmax
comp=Z,33nm,0.8s
NJ2 **Nanjing** **22.61** **250** *e*P **P** **14 45 58.0 +0.3**
NJ2 pmax pmax
comp=Z,30nm,0.5s,mb4.9
HHC **Hu-ho-hao-te** **24.12** **276** *e*P **P** **14 46 10.8 -0.9**
HHC pP 14 46 32.0
HHC sP sP 14 46 44.0 +0.5
HHC PP 14 46 49.5
HHC *e*S **S** **14 50 18.0 -4.7**
HHC sS sS 14 50 54.0 -4.8
HHC SS 14 51 16.5
HHC pmax pmax
comp=Z,14nm,0.7s,mb4.4
HHC pmax pmax
comp=Z,60nm,4.2s
HHC LR LR
comp=N,100nm,9.5s
HHC LR LR
comp=E,94nm,9.5s
HHC LR LR
comp=Z,52nm,9.7s
BTO **Baotou** **25.32** **276** *e*P **P** **14 46 22.8 +0.2**
WHN **Wuhan** **26.61** **252** P **P** **14 46 35.0 +0.6**
SONM **Songino Array** **26.64** **294** P **P** **14 46 34.9 +0.4**
comp=Z,2.7nm,0.6s,mb4.0,baz=89,slow=9.7,SNR=6.2
ZAK **Zakamensk** **28.59** **299** *e*P **P** **14 46 52.0 +0.2**
ZAK pmax pmax
comp=Z,1.0nm,1.1s,mb3.4
XAN **Xi'an** **28.66** **264** P **P** **14 46 52.8 +0.2**
XAN pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
XAN pmax pmax
comp=Z,13nm,6.7s
LZH **Lanzhou** **31.46** **271** *e*P **P** **14 47 19.0 +1.7**
LZH pP pP 14 47 40.5 +2.0
LZH sP sP 14 47 53.5 +4.1
LZH PcP PcP 14 50 09.8 +1.5
LZH pmax pmax
comp=Z,20nm,1.0s,mb4.8
LZH pmax pmax
comp=Z,63nm,5.6s
GTA **Gaotai** **33.12** **279** *e*P **P** **14 47 32.8 +1.0**
GTA pP pP 14 47 54.8 +1.7
GTA sP sP 14 48 06.5 +2.5
GTA pmax pmax
comp=Z,3.0nm,1.1s,mb4.0
CD2 **Chengdu** **34.00** **263** P **P** **14 47 40.5 +1.0**
CD2 pP pP 14 48 02.5 +1.7
CD2 sP sP 14 48 14.3 +2.6
CD2 PP PP 14 48 57.0 -1.1
CD2 PcP PcP 14 50 16.5 +1.1
CD2 S **S** **14 52 57.5 -0.3**
CD2 sS sS 14 53 36.0 +1.2
CD2 PcS PcS 14 54 01.5 -0.2
CD2 SS SS 14 55 11.0 -17
CD2 pmax pmax
comp=Z,30nm,0.5s,mb5.4
CD2 pmax pmax
comp=Z,80nm,7.0s
GYA **Guiyang** **34.46** **254** P **P** **14 47 43.5 0.0**
GYA pP pP 14 48 07.0 +2.1
GYA sP sP 14 48 18.5 +2.8
GYA PP PP 14 49 02.5 -0.7
GYA PcP PcP 14 50 17.8 +1.0
GYA S **S** **14 53 03.3 -1.7**
GYA sS sS 14 53 43.8 +1.8
GYA ScP ScP 14 53 51.0 -2.3
GYA ScS ScS 14 57 53.5 -2.9
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
GYA pmax pmax
comp=Z,80nm,4.8s
TNA **Tin City** **34.79** **33** *e*P **P** **14 47 45.0 -0.9**
comp=Z,14nm,1.0s,mb4.8
TGY **Tagaytay City** **34.91** **222** P **P** **14 47 50.4 +2.9**
comp=Z,43nm,0.4s,baz=296,slow=3.2,SNR=4.0
KMI **Kunming** **38.06** **256** P **P** **14 48 14.8 +0.6**
KMI pmax pmax
comp=Z,12nm,0.9s,mb4.7
TTA **Tatalina** **39.52** **39** *e*P **P** **14 48 25.0 -0.9**
comp=Z,7.9nm,0.8s,mb4.6
TTA *e* 14 48 40.5
TTA **Tatalina** **39.52** **39** *e*P **P** **14 48 25.0 -0.9**
TTA pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
ZALV **Zalesovo Beam** **39.63** **307** P **P** **14 48 26.2 -0.7**
comp=Z,5.5nm,0.7s,mb4.5,baz=85,slow=8.2,SNR=12
WMQ **Urumqi** **40.22** **291** *e*P **P** **14 48 32.3 +0.4**
WMQ pP pP 14 48 55.0 +1.2
WMQ sP sP 14 49 06.5 +2.0
WMQ PP PP 14 50 10.0 +4.0
WMQ PcP PcP 14 50 35.3 +1.2
WMQ pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
WMQ pmax pmax
comp=Z,99nm,4.1s
WMQ LR LR
comp=N,13nm,16.0s
WMQ LR LR
comp=Z,22nm,16.0s
NVS **Novosibirsk** **40.41** **309** *e*P **P** **14 48 30.8 -2.5**
OHAK **Old Harbor** **41.20** **47** *e*P **P** **14 48 38.5 -1.3**
comp=Z,18nm,1.1s,mb4.8
PPLA **Purkeypile** **41.27** **39** *e*P **P** **14 48 40.5 +0.2**
comp=Z,7.1nm,0.8s,mb4.5
KDAK **Kodiak Island** **41.50** **46** P **P** **14 48 40.7 -1.5**
KDAK **Kodiak Island** **41.50** **46** P **P** **14 48 40.7 -1.5**
comp=Z,3.4nm,0.4s,mb4.5,baz=297,slow=3.7,SNR=5.1
KDAK **Kodiak Island** **41.50** **46** *i*P **P** **14 48 41.1 -1.2**
BPAW **Bear Paw Mtn.** **41.77** **37**⇑*e*P **P** **14 48 44.2 -0.2**
comp=Z,6.1nm,0.7s,mb4.4
COLD **Coldfoot** **42.08** **32** *e*P **P** **14 48 45.7 -1.1**
comp=Z,14nm,1.1s,mb4.6
TRF **Thorofare Moun** **42.10** **38** *e*P **P** **14 48 46.5 -0.6**
comp=Z,7.7nm,0.7s,mb4.5

RC01 Rabbit Creek A 42.55 41 eP P 14 48 49.5 -1.2
comp=Z,9.8nm,1.0s,mb4.5
MCK McKinley 42.69 37 eP P 14 48 50.8 -1.0
comp=Z,11nm,0.9s,mb4.6
MCK McKinley 42.69 37 eP P 14 48 50.8 -1.1
MCK pmax pmax
comp=Z,11nm,0.9s,mb4.6
PMR Palmer 42.79 40 eP P 14 48 51.7 -1.0
comp=Z,6.5nm,0.7s,mb4.5
PMR Palmer 42.79 40 eP P 14 48 51.7 -1.0
PMR pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
SEW Seward 42.81 43 eP P 14 48 52.1 -0.8
comp=Z,11nm,0.8s,mb4.6
MK31 Makanchi Array 42.89 297 eP P 14 48 53.7 0.0
MKAR Makanchi Array 42.89 297 P P 14 48 53.7 0.0
MKAR Makanchi Array 42.89 297 P P 14 48 53.7 0.0
comp=Z,1.1nm,0.4s,mb3.9,baz=82,slow=9.6,SNR=22
MKAR Makanchi Array 42.89 297 i P P 14 48 53.7 0.0
MKAR pmax pmax
comp=Z,1.0nm,0.4s
COLA College 43.09 35 eP P 14 48 53.9 -1.1
comp=Z,44nm,1.1s,mb5.1
COLA College 43.09 35 eP P 14 48 53.9 -1.1
COLA pmax pmax
comp=Z,44nm,1.1s,mb5.1
SML Sawmill 43.14 40 eP P 14 48 55.1 -0.5
comp=Z,3.2nm,0.7s,mb4.2
SML Sawmill 43.14 40 eP P 14 48 55.1 -0.4
SML pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
ILAR Eielson Array 43.51 36 P P 14 48 57.4 -1.0
comp=Z,8.3nm,0.5s,mb4.8,baz=257,slow=5.4,SNR=141
KURK Kurchatov 44.04 304 P P 14 49 02.8 -0.1
comp=Z,8.8nm,0.8s,mb4.5,baz=72,slow=9.0,SNR=31
KURK Kurchatov 44.04 304 d i P P 14 49 02.2 -0.7
KURK pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
PAX Paxson 44.32 38 eP P 14 49 05.5 +0.6
comp=Z,2.7nm,0.8s,mb4.0
PAX Paxson 44.32 38 eP P 14 49 05.5 +0.5
PAX pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
BMRM Bremner River 45.04 41 eP P 14 49 10.1 -0.6
comp=Z,12nm,0.9s,mb4.6
CMAR Chiang Mai Arr 45.06 252 P P 14 49 12.2 +0.8
comp=Z,1.9nm,0.6s,mb4.0,baz=42,slow=7.3,SNR=15
MENT Mentasta 45.12 38 eP P 14 49 10.5 -0.8
EGAK Eagle 45.94 35 eP P 14 49 16.6 -1.2
comp=Z,11nm,1.0s,mb4.5
DAWY Dawson 46.83 36 eP P 14 49 23.9 -0.7
BVAR Borovoye Array 48.20 309 P P 14 49 35.5 +0.1
comp=Z,3.1nm,0.4s,mb4.5,baz=76,slow=8.9,SNR=14
BRVK Borovoye 48.25 309 deP P 14 49 35.9 0.0
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
INK Inuvik 48.26 30 eP P 14 49 34.9 -0.8
comp=Z,9.2nm,0.7s,mb4.7
INK Inuvik 48.26 30 P P 14 49 35.1 -0.6
comp=Z,5.3nm,0.4s,mb4.7,baz=303,slow=9.0,SNR=26
INK Inuvik 48.26 30 P P 14 49 35.1 -0.6
INK pmax pmax
comp=Z,5.0nm,0.4s
AAK Ala-Archa 49.59 295 ⇑eP P 14 49 47.9 +1.6
AAK pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
SVE Sverdlovsk 52.12 316 eP P 14 50 05.0 0.0
ARU Arti 53.33 316 eP P 14 50 12.9 -1.0
comp=Z,5.6nm,0.4s,mb5.0
ARU Arti 53.33 316 c i P P 14 50 13.0 -0.9
ARU e 14 51 17.2
ARU e 14 52 13.0
ARU S S 14 57 40.8 +2.7
ARU SS SS 15 01 12.3 -6.2
ARU pmax pmax
comp=Z,20nm,1.7s,mb4.9
SPITS Spitsbergen Ar 55.12 349 P P 14 50 25.1 -1.4
comp=Z,5.7nm,0.7s,mb4.7,baz=42,slow=9.1,SNR=13
ABKAR Akbulak array 55.73 308 eP P 14 50 31.1 -0.3
comp=Z,3.4nm,0.5s,mb4.6
AKTK Aktyubinsk 56.28 310 P P 14 50 34.4 -0.9
AKTO Aktyubinsk 56.28 310 P P 14 50 34.4 -0.9
comp=Z,1.6nm,0.3s,mb4.5,baz=43,slow=2.9,SNR=8.1
RES Resolute Bay 56.39 16 P P 14 50 35.1 -0.6
comp=Z,57nm,0.7s,baz=308,slow=6.1,SNR=7.8
YKA Yellowknife Ar 57.75 33 P P 14 50 44.4 -1.0
comp=Z,1.9nm,0.6s,mb4.3,baz=304,slow=7.0,SNR=5.3
YKA Yellowknife Ar 57.75 33 P P 14 50 44.4 -1.0
KEV Kevo 58.63 339 eP P 14 50 49.9 -1.6
KEV pmax pmax
comp=Z,14nm,0.8s,mb5.0
KEV Kevo 58.63 339 ep P 14 50 49.9 -1.6
comp=Z,14nm,0.8s,mb5.0
ARCES ARCESS Array B 59.17 339 P P 14 50 54.1 -1.1
comp=Z,6.1nm,0.8s,mb4.7,baz=57,slow=7.8,SNR=16
JOF Joensuu 61.69 331 eP P 14 51 11.2 -1.3
JOF pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
JOF Joensuu 61.69 331 ep P 14 51 11.2 -1.3
comp=Z,5.0nm,0.5s,mb4.8
CTA Charters Tower 62.75 178 P P 14 51 18.6 -1.4
comp=Z,3.9nm,0.9s,mb4.3,baz=338,slow=11,SNR=6.5
F04A Amboy 63.02 51 ⇑P P 14 51 21.6 +0.1
baz=63
WRA Warramunga Arr 63.20 190 P P 14 51 22.2 -0.7
comp=Z,1.3nm,0.8s,mb3.9,baz=7.0,slow=6.9,SNR=21
WRA pP pP 14 51 47.4 +1.0
comp=Z,1.9nm,0.6s,baz=7.6,slow=6.8,SNR=8.9
B08A Colville Reser 63.35 48 ⇑P P 14 51 23.5 -0.2
baz=63
H04A Detroit Lake 63.87 52 ⇓P P 14 51 27.4 +0.2
baz=64
KAF Kangasniemi 63.97 332 eP P 14 51 25.8 -1.7
KAF pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
KAF Kangasniemi 63.97 332 ep P 14 51 25.8 -1.7
comp=Z,5.4nm,0.5s,mb4.6
C09A Chrisman Ranch 64.25 48 ⇓P P 14 51 29.3 -0.4
baz=64
D08A Wollman Farm, 64.33 49 ⇓P P 14 51 30.3 +0.1
baz=64
G06A Carlson Farm, 64.44 51 ⇓P P 14 51 31.4 +0.4
baz=64
FINES FINESS Array B 64.51 332 P P 14 51 30.0 -1.1
comp=Z,12nm,0.5s,mb5.0,baz=46,slow=6.9,SNR=64
OBN Obninsk 64.56 323 ⇓eP P 14 51 30.7 -0.8
OBN pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
NEW Newport 64.60 47 ⇓P P 14 51 32.2 +0.3
baz=64
VRHR Novokhopersk 64.66 317 eP P 14 51 27.0 -5.3
VRHR pmax pmax
comp=N,7.0nm,0.4s
VRHR pmax pmax
comp=E,7.0nm,0.4s
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb5.0
SUMG Summit 64.77 1 eP P 14 51 32.4 -0.2
comp=Z,24nm,0.6s,mb5.2
SUMG Summit 64.77 1 i P P 14 51 33.6 +1.0
comp=Z,25nm,0.7s,mb5.2
E09A Wood Farm, Sta 65.09 49 ⇓P P 14 51 35.0 -0.1
baz=65
YBH Yreka Blue Hor 65.28 55 P P 14 51 37.2 +0.8
comp=Z,1.8nm,0.7s,mb4.0,baz=4.5,slow=7.3,SNR=3.7
C11A Tepee Creek (N 65.32 47 ⇓P P 14 51 36.7 +0.1
baz=65
G08A Pilot Rock 65.36 50 ⇑P P 14 51 37.4 +0.5
baz=65
A13A Flathead Natio 65.63 45 ⇑P P 14 51 38.8 +0.3
baz=65
I07A Izee 65.77 52 ⇓P P 14 51 40.0 +0.4
baz=66
K05A Summer Lake 65.78 54 ⇑P P 14 51 40.1 +0.5
baz=66
VSR Storozhevoye 65.80 318 eP P 14 51 38.8 -0.8
VSR pmax pmax
comp=Z,10.0nm,0.5s,mb4.9
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,3.0nm,0.5s
F10A Beach Ranch, E 65.92 49 ⇓P P 14 51 40.4 -0.1
baz=66
B13A Whitefish 65.94 46 ⇑P P 14 51 40.5 -0.1
baz=66
A14A Double T Ranch 66.12 45 ⇓P P 14 51 41.7 0.0
baz=66
D12A Red Ives Fores 66.28 47 ⇑P P 14 51 42.1 -0.7
baz=66
C13A Hot Springs 66.31 46 ⇓P P 14 51 42.6 -0.3
baz=66
A15A Johnson Ranch, 66.47 44 ⇑P P 14 51 43.3 -0.6
baz=66
E12A Beaver Dam Sad 66.56 48 ⇓P P 14 51 45.0 +0.4
baz=66,SNR=9.1
C14A Swan Lake 66.70 46 ⇓P P 14 51 45.4 0.0
baz=66
SWMT Swartz Lake 66.73 46 eP P 14 51 45.4 -0.2
comp=E,4.4nm,0.9s,mb4.3
D13A Huson 66.74 47 ⇑P P 14 51 45.7 0.0
baz=66
J08A Circle Bar Ran 66.81 52 ⇓P P 14 51 46.6 +0.4
baz=67
ASAR Alice Springs 66.92 190 P P 14 51 46.5 -0.5
comp=E,1.4nm,0.9s,mb3.8,baz=3.8,slow=4.9,SNR=20
ASAR pP pP 14 52 12.2 +1.5
comp=E,0.9nm,0.8s,baz=10.0,slow=7.4,SNR=4.8
B15A Bradely Ranch, 66.97 45 ⇓P P 14 51 46.9 -0.2
baz=67
A16A West Butte Ran 67.07 44 ⇑P P 14 51 47.3 -0.5
baz=67
F12A Elk City 67.14 48 ⇓P P 14 51 48.4 +0.1
baz=67,SNR=7.0
MSO Missoula 67.18 47 ⇑P P 14 51 48.1 -0.4
baz=67
D14A Greenough 67.25 46 ⇑P P 14 51 48.8 -0.1
baz=67,SNR=5.1
WVOR Wild Horse Val 67.28 53 eP P 14 51 48.5 -0.7
comp=E,2.1nm,0.9s,mb4.0
WVOR Wild Horse Val 67.28 53 eP P 14 51 48.5 -0.7
WVOR pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
C15A Salmond Ranch, 67.29 45 ⇑P P 14 51 49.4 +0.3
baz=67,SNR=9.7
G12A Big Creek, Yel 67.49 49 ⇓P P 14 51 50.0 -0.5
baz=67
A17A Triple J Farms 67.52 43 ⇑P P 14 51 50.3 -0.3
baz=67,SNR=6.2
F13A Darby 67.62 48 ⇑P P 14 51 51.2 -0.1
baz=67
E14A Clinton 67.68 47 ⇑P P 14 51 51.5 -0.1
baz=67
C16A Fuhringer Ranc 67.72 45 ⇓P P 14 51 51.8 -0.1
baz=68
D15A Lincoln 67.80 46 ⇑P P 14 51 52.5 +0.1
baz=68
A18A Metzger Ranch, 67.97 43 ⇑P P 14 51 53.0 -0.4
baz=68
H12A Diamond D Ranc 68.12 49 ⇑P P 14 51 54.2 -0.3
baz=68,SNR=8.1
G13A Cobalt 68.12 48 ⇓P P 14 51 54.3 -0.1
baz=68
E15A Deer Lodge 68.13 46 ⇑P P 14 51 54.4 -0.1
baz=68,SNR=5.2
MFID Camas Ranch 68.29 51 ⇓P P 14 51 55.8 +0.3
baz=68
C17A Wharram Farm, 68.34 45 ⇑P P 14 51 55.5 -0.2
baz=68
B18A Beardsley Farm 68.35 44 ⇓P P 14 51 55.9 +0.1
baz=68
I12A Atlanta 68.44 50 ⇑P P 14 51 56.5 0.0
baz=68,SNR=11
H13A Challis 68.44 49 ⇑P P 14 51 56.3 -0.1
baz=68,SNR=6.9
KIV Kislovodsk 68.54 310 ⇓eP P 14 51 57.5 +0.4
KIV pmax pmax
comp=Z,14nm,1.2s,mb4.7
WCN Washoe City 68.54 56 ⇑P P 14 51 57.3 +0.1
baz=68
E16A East Helena 68.57 46 ⇓P P 14 51 57.4 +0.1
baz=68
F15A Butte 68.58 47 ⇓P P 14 51 57.5 +0.1
baz=68,SNR=5.3
EGMT Eagleton 68.60 44 ⇑P P 14 51 57.4 +0.1
baz=68
LRM Limekiln Ridge 68.62 47 eP P 14 51 57.5 -0.1
comp=Z,38nm,0.9s,mb5.2
D17A Six Diamond Ra 68.69 45 ⇓P P 14 51 58.1 +0.1
baz=68
DLMT Dillon 68.84 47 eP P 14 51 59.2 +0.3
comp=Z,14nm,1.1s,mb4.7
DLMT epP pP 14 52 22.4 -0.3
H14A Leadore 68.90 48 ⇑P P 14 51 59.2 -0.1
baz=69
I13A Wildhorse Cree 68.93 49 ⇓P P 14 51 59.9 +0.4
baz=69
HLID Hailey 68.99 50 ⇓P P 14 52 00.0 +0.2
baz=69
G15A Dillon 69.02 47 ⇓P P 14 52 00.4 +0.4
baz=69,SNR=11
E17A Martinsdale 69.05 46 ⇑P P 14 52 00.5 +0.3
baz=69,SNR=5.9
F16A Kennard Place, 69.08 47 ⇑P P 14 52 00.4 0.0
baz=69
C19A Slack Wire Ran 69.15 44 ⇑P P 14 52 00.9 +0.1
baz=69
BOZ Bozeman (W) 69.17 47 ⇑P P 14 52 01.3 +0.3
baz=69,SNR=12
BOZ Bozeman (W) 69.17 47 eP P 14 52 01.2 +0.3
comp=Z,9.4nm,1.1s,mb4.5
BOZ ePcP PcP 14 52 25.4 +1.2
BOZ Bozeman (W) 69.17 47 eP P 14 52 01.2 +0.2
BOZ e pP 14 52 25.4 +0.6
BOZ pmax pmax
comp=Z,9.0nm,1.1s,mb4.5
J13A Cove Ranch, Pi 69.23 50 ⇓P P 14 52 01.9 +0.5
baz=69
I14A Mackay 69.29 49 ⇑P P 14 52 02.5 +0.8
baz=69
G16A Moss Hill, Enn 69.35 47 ⇓P P 14 52 02.4 +0.3
baz=69,SNR=5.1
NOA NORSAR Array B 69.48 338 P P 14 52 01.9 -0.7
comp=Z,7.1nm,0.7s,mb4.6,baz=35,slow=6.2,SNR=42
HFS Hagfors 69.50 336 P P 14 52 01.0 -1.7
comp=Z,10nm,0.6s,mb4.8,baz=50,slow=7.9,SNR=39
F17A Fitzpatrick Pl 69.52 46 ⇓P P 14 52 02.9 -0.2
baz=69
J14A Carey 69.64 49 ⇑P P 14 52 04.8 +0.9
baz=69,SNR=8.3
C20A Veseth Ranch, 69.69 43 ⇑P P 14 52 04.2 +0.1
baz=69
G17A Pierce Place, 69.86 46 ⇑P P 14 52 05.3 +0.1
baz=70
NVAR Mina Array Bea 69.97 56 P P 14 52 06.5 +0.5
comp=Z,3.1nm,0.7s,mb4.3,baz=294,slow=6.1,SNR=23
NVAR pP pP 14 52 29.5 -0.4
comp=Z,1.4nm,0.7s,baz=288,slow=5.1,SNR=4.7
F18A Big Timber 70.02 45 ⇑P P 14 52 06.2 0.0
baz=70
E19A Rath Farm, Rou 70.13 45 ⇓P P 14 52 07.2 +0.4
baz=70
J15A Blackfoot 70.20 49 ⇓P P 14 52 08.1 +0.8
baz=70
K14A Jones Ranch, D 70.34 50 ⇓P P 14 52 09.0 +0.8
baz=70
I16A Newdale 70.41 48 ⇓P P 14 52 09.1 +0.5
baz=70
E20A Meyer Farm, Mu 70.44 44 ⇓P P 14 52 09.1 +0.4
baz=70
F19A Roth Farm, Mol 70.45 45 ⇓P P 14 52 09.1 +0.3
baz=70
L14A Malta 70.63 50 ⇑P P 14 52 10.7 +0.7
baz=70
IMW Indian Meadow 70.69 48 eP P 14 52 10.9 +0.7
comp=Z,2.0nm,0.7s,mb4.1
J16A Bone 70.73 49 ⇓P P 14 52 10.7 +0.2
baz=70
RLMT Red Lodge 70.77 46 ⇑P P 14 52 10.9 +0.2
baz=70
AKASG Malin Array Be 70.82 322 P P 14 52 10.1 -0.9
AKASG Malin Array Be 70.82 322 P P 14 52 10.1 -0.9
comp=Z,3.4nm,0.5s,mb4.4,baz=40,slow=5.7,SNR=20
AKASG Malin Array Be 70.82 322 i P P 14 52 10.1 -0.8
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKBB Malin Array Si 70.82 322 eP P 14 52 09.6 -1.4
KIEV Kiev 70.83 322 eP P 14 52 09.5 -1.5
comp=Z,3.3nm,0.6s,mb4.3
KIEV Kiev 70.83 322 eP P 14 52 09.5 -1.5
KIEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
H18A Shoshone NF, C 70.86 46 ⇓P P 14 52 11.3 0.0
baz=71
MOOW Moose Ponds 70.89 48 eP P 14 52 12.3 +0.8
comp=Z,5.2nm,1.2s,mb4.2
MOOW e pP 14 52 36.1 +0.7
O12A Currie 70.92 53 ⇓P P 14 52 12.4 +0.7
baz=71
K16A Soda Springs 71.03 49 ⇑P P 14 52 12.9 +0.5
baz=71
DGMT Dagmar 71.05 41 ⇑P P 14 52 12.1 -0.3
baz=71
L15A Malad City 71.14 50 ⇑P P 14 52 13.3 +0.3
baz=71
S10A Tonopah Range, 71.33 55 ⇓P P 14 52 14.6 +0.4
baz=71
P12A McGill 71.33 53 ⇑P P 14 52 14.4 +0.1
baz=71
CWC Cottonwood Cre 71.37 57 ⇑P P 14 52 14.9 +0.4
baz=71
GRAC Grapevine Rang 71.45 57 ⇑P P 14 52 15.7 +0.7
baz=71
M15A Larsen Ranch, 71.46 50 ⇑P P 14 52 15.4 +0.4
baz=71
I19A Meeteetse 71.64 47 ⇓P P 14 52 15.7 -0.4
baz=71
R11A Troy Canyon, C 71.66 55 ⇑P P 14 52 16.6 +0.3
baz=71,SNR=5.9
P13A Bates Ranch, G 71.87 53 ⇑P P 14 52 17.1 -0.4
baz=72
MPMC Manual Prospec 71.98 57 ⇑P P 14 52 18.5 +0.3
baz=72,SNR=5.3
K18A Toltan Ranch, 72.02 48 ⇑P P 14 52 18.6 +0.3
baz=72
M16A Huntsville 72.02 50 ⇓P P 14 52 18.1 -0.2
baz=72
S11A Rachel 72.02 55 ⇓P P 14 52 18.9 +0.5
baz=72
DUG Dugway 72.08 52 ⇓P P 14 52 19.0 +0.2
baz=72
FURC Furnace Creek, 72.11 57 ⇓P P 14 52 19.4 +0.5
baz=72
J19A Crowheart 72.13 47 ⇑P P 14 52 19.0 0.0
baz=72
TPNV Topopah Spring 72.17 56 ⇑P P 14 52 19.3 0.0
baz=72
BW06 Boulder Array 72.19 48 ⇑P P 14 52 19.3 -0.1
baz=72,SNR=7.6
PDAR Pinedale Array 72.19 48 P P 14 52 19.3 -0.1
comp=Z,3.0nm,0.5s,mb4.4,baz=269,slow=1.1,SNR=20
PDAR pP pP 14 52 43.0 -0.4
comp=Z,1.0nm,0.5s,baz=316,slow=4.1,SNR=3.7
Q13A Wheeler Ranch, 72.19 53 ⇑P P 14 52 19.8 +0.4
baz=72
LRMC Laurel Mountai 72.23 58 ⇓P P 14 52 19.8 +0.1
baz=72
H21A Big Horn, Sher 72.27 45 ⇓P P 14 52 19.5 -0.3
baz=72
EDW2 Edwards Air Fo 72.43 59 ⇓P P 14 52 20.9 0.0
baz=72
M17A Scullys Gap (B 72.45 49 ⇓P P 14 52 21.0 +0.1
baz=72
L18A Fontenelle, Gr 72.50 49 ⇓P P 14 52 21.1 -0.1
baz=72
K19A Absolon Red Bu 72.54 47 ⇑P P 14 52 20.8 -0.6
baz=72
J20A Shoshoni 72.59 47 ⇓P P 14 52 21.7 0.0
baz=72
T11A Corn Creek, Al 72.60 55 ⇓P P 14 52 22.0 +0.1
baz=72
Q14A Sevier Lake (B 72.61 53 ⇑P P 14 52 22.2 +0.3
baz=72
I21A Big Trails, Te 72.70 46 ⇓P P 14 52 22.5 +0.2
baz=72
GSC Goldstone 72.90 58 ⇑P P 14 52 23.6 -0.1
baz=73
K20A Yellowstone Ra 72.93 47 ⇑P P 14 52 22.8 -0.9
baz=73
TUQ Turquoise Moun 73.35 57 ⇓P P 14 52 26.3 -0.1
baz=73
J22A Midwest 73.40 46 ⇑P P 14 52 26.0 -0.5
baz=73
K21A Alcova 73.53 47 ⇓P P 14 52 27.3 +0.1
baz=73
M20A Sweetwater, Wa 73.81 48 ⇑P P 14 52 28.9 0.0
baz=74
U13A Pakoon Wash 73.90 55 ⇑P P 14 52 30.0 +0.4
baz=74
GMRC Granite Mounta 73.95 57 ⇑P P 14 52 30.3 +0.4
baz=74
SRU San Rafael 74.12 51 ⇑P P 14 52 31.2 +0.4
baz=74
R16A Teasdale 74.12 52 ⇓P P 14 52 31.1 +0.3
baz=74
N20A Spence Gulch, 74.22 49 ⇑P P 14 52 31.7 +0.4
baz=74
BELC Belle Mtn. Jos 74.25 58 ⇑P P 14 52 31.3 -0.3
baz=74
V13A Grand Canyon W 74.27 56 ⇓P P 14 52 31.8 +0.1
baz=74
U14A Mt Trumbull 74.37 55 ⇓P P 14 52 32.3 0.0
baz=74
L22A Ellis Ranch, M 74.38 47 ⇑P P 14 52 32.2 0.0
baz=74
S16A Weppner Ranch, 74.44 53 ⇑P P 14 52 33.1 +0.5
baz=74
IRM Iron Mountain 74.67 58 ⇑P P 14 52 33.8 -0.2
baz=74
N21A Black Mountain 74.68 48 ⇓P P 14 52 33.7 -0.2
baz=74
L23A Garrett 74.72 46 ⇓P P 14 52 33.4 -0.7
baz=74
BUR08 Bucovina Ar. S 74.86 322 eP P 14 52 34.6 -0.2
U15A North Rim 74.90 54 ⇓P P 14 52 35.5 +0.2
baz=75
V14A Boquillas Ranc 74.94 55 ⇑P P 14 52 36.1 +0.6
baz=75,SNR=5.9
Q19A Hogan Spring (74.94 51 ⇑P P 14 52 35.6 0.0
baz=75
S17A Black Ridge (B 74.96 52 ⇓P P 14 52 35.5 -0.2
baz=75
X13A Yucca 75.20 57 ⇓P P 14 52 37.4 +0.3
baz=75
OJC Ojcow 75.20 327 eP P 14 52 36.9 +0.1
W14A Seligman 75.24 56 ⇑P P 14 52 37.4 +0.1
baz=75
Y12C Blythe 75.33 58 ⇑P P 14 52 37.8 -0.1
baz=75
V15A Kaibab Nationa 75.38 55 ⇓P P 14 52 37.9 -0.1
baz=75
S18A Hurst Farm, Bl 75.39 52 ⇑P P 14 52 38.3 +0.2
baz=75
N23A Red Feather La 75.44 47 ⇑P P 14 52 38.2 -0.1
baz=75
O22A Kremmling 75.62 48 ⇓P P 14 52 39.4 0.0
baz=75
M24A Cheyenne 75.64 46 ⇓P P 14 52 39.9 +0.4
baz=75
U16A Tuba City 75.78 54 ⇑P P 14 52 40.8 +0.4
baz=76
T18A Mexican Hat 75.84 52 ⇓P P 14 52 40.2 -0.5
baz=76
S19A Harvey Farm, M 75.85 51 ⇑P P 14 52 41.1 +0.3
baz=76
P22A Eagle 75.90 49 ⇑P P 14 52 40.9 -0.1
baz=76
O23A Lake Granby, G 75.93 48 ⇑P P 14 52 41.4 +0.3
baz=76
Y14A Wickenburg 76.14 57 ⇓P P 14 52 42.7 +0.2
baz=76
S20A Disappointment 76.23 51 ⇑P P 14 52 43.1 +0.2
baz=76
Z13A Yuma Proving G 76.24 57 ⇑P P 14 52 43.4 +0.4
baz=76
X15A Humboldt 76.24 56 ⇓P P 14 52 43.7 +0.7
baz=76
R21A Cimarron 76.32 50 ⇓P P 14 52 44.0 +0.6
baz=76
Q22A Crested Butte, 76.33 49 ⇑P P 14 52 43.7 +0.2
baz=76
V17A Tonalea, Kykot 76.33 54 ⇓P P 14 52 44.0 +0.5
baz=76
BRTR Keskin Array B 76.38 312 P P 14 52 43.1 -0.6
comp=Z,0.5nm,0.7s,mb3.4,baz=60,slow=5.1,SNR=3.0
T19A Beclabito 76.54 52 ⇓P P 14 52 44.5 -0.2
baz=76
Y15A Casa Rosa Ranc 76.54 56 ⇓P P 14 52 45.3 +0.6
baz=76
S21A Coal Bank Pass 76.67 51 ⇑P P 14 52 46.0 +0.6
baz=76
X16A Lo Mia Camp, P 76.77 55 ⇓P P 14 52 46.7 +0.7
baz=76

R22A	Saguache, Gunn baz=77	76.86	50	⇓P		P	14 52 47.3	+0.8
CLL	Collm comp=Z,7.0nm,0.6s,mb4.6	76.92	331	*e*P		P	14 52 48.0	+1.5
CLL	Collm comp=Z,7.0nm,0.6s,mb4.6	76.92	331	*e*P pmax		P pmax	14 52 48.0	+1.5
CLL	Collm	76.92	331	*e*P		P	14 52 46.0	-0.5
Y16A	Circle Bar Ran baz=77	77.11	56	⇓P		P	14 52 48.4	+0.5
S22A	4UR Ranch, Cre baz=77	77.16	50	⇓P		P	14 52 48.7	+0.5
Q24A	Divide baz=77	77.23	48	⇓P		P	14 52 49.2	+0.7
214A	Organ Pipe Nat baz=77	77.61	58	⇓P		P	14 52 51.1	+0.4
U21A	Nageezi baz=77	77.61	52	⇑P		P	14 52 51.0	+0.3
Y17A	Roosevelt baz=77	77.62	55	⇓P		P	14 52 51.4	+0.6
T22A	Edith baz=77	77.63	51	⇓P		P	14 52 51.3	+0.5
Q25A	Bedland, Calha baz=78	77.76	48	⇑P		P	14 52 51.3	-0.1
R24A	Sanders Place, baz=78	77.78	49	⇓P		P	14 52 51.8	+0.3
SDCO	Great Sand Dun baz=78	77.91	49	⇑P		P	14 52 52.1	-0.2
U22A	Llaves baz=78	78.11	51	⇑P		P	14 52 53.2	-0.2
S24A	Houchin Ranch, baz=78	78.14	49	⇓P		P	14 52 53.7	+0.2
EKA	Eskdalemuir Ar comp=Z,2.3nm,0.5s,mb4.1,baz=23,slow=5.1,SNR=20	78.18	342	P		P	14 52 52.8	-0.7
X20A	Quemado baz=78	78.44	53	⇓P		P	14 52 56.1	+0.8
117A	Oracle baz=78	78.46	56	⇑P		P	14 52 55.7	+0.3
KHC	Kasperske Hory comp=Z,1.6nm,0.4s,mb4.1	78.50	329	*e*P		P	14 52 54.4	-1.0
KHC	Kasperske Hory comp=Z,2.0nm,0.4s,mb4.2	78.50	329	*e*P pmax		P pmax	14 52 54.4	-0.9
U23A	El Rito baz=78	78.52	51	⇓P		P	14 52 56.3	+0.6
S25A	Robets Cordova baz=78	78.56	49	⇓P		P	14 52 56.2	+0.3
T24A	Torres, Weston baz=78	78.63	50	⇑P		P	14 52 57.2	+0.9
118A	Homack Ranch, baz=79	78.88	56	⇑P		P	14 52 58.2	+0.4
X21A	Alamocita Cree baz=79	78.93	53	⇓P		P	14 52 58.8	+0.9
T25A	Trinidad baz=79	78.94	49	⇑P		P	14 52 58.3	+0.3
Y20A	Horse Springs, baz=79	78.95	54	⇓P		P	14 52 58.8	+0.7
217A	Green Valley baz=79	78.96	57	⇑P		P	14 52 58.7	+0.5
SCHQ	Schefferville comp=Z,2.1nm,0.5s,mb4.2,baz=250,slow=10,SNR=3.9	79.12	18	P		P	14 52 56.6	-2.0
119A	Ashpeak Ranch, baz=79	79.20	55	⇓P		P	14 53 00.1	+0.7
218A	Dragoon baz=79	79.30	56	⇑P		P	14 53 00.9	+0.8
Z20A	Nine Sixteen R baz=79	79.38	55	⇓P		P	14 53 01.3	+0.9
V24A	Rampart Ranch, baz=79	79.47	51	⇑P		P	14 53 01.9	+1.0
U25A	Circle Dot Ran baz=79	79.48	50	⇑P		P	14 53 01.0	+0.1
318A	Bisbee baz=80	79.70	57	⇑P		P	14 53 02.7	+0.5
120A	U Bar Ranch, L baz=80	79.75	55	⇑P		P	14 53 03.4	+0.9
219A	White Tail Can baz=80	79.76	56	⇓P		P	14 53 03.0	+0.5
V25A	Rancho No Teng baz=80	79.76	50	⇓P		P	14 53 02.6	+0.1
W24A	Lazy 6 Ranch, baz=80	79.76	51	⇑P		P	14 53 02.9	+0.4
Z21A	St. Cloud Mine baz=80	79.79	54	⇓P		P	14 53 02.8	+0.1
319A	Douglas baz=80	80.18	56	⇑P		P	14 53 05.1	+0.3
Z22A	Elephant Butte baz=80	80.25	53	⇑P		P	14 53 05.5	+0.4
220A	Playas Peak, P baz=80	80.27	55	⇓P		P	14 53 05.4	+0.1
121A	Cookes Peak, D baz=80	80.27	54	⇓P		P	14 53 05.6	+0.3
W25A	X Bar L Ranch, baz=80	80.30	51	⇓P		P	14 53 05.7	+0.3
Y23A	Lovelace Mesa, baz=80	80.30	52	⇑P		P	14 53 05.6	+0.2
Y25A	Mesa, Roswell baz=81	81.10	52	⇓P		P	14 53 10.3	+0.7
W27A	Bowe Ranch, En baz=81	81.20	50	⇓P		P	14 53 10.3	+0.2
124A	Stringfield Ra baz=81	81.53	53	⇑P		P	14 53 12.2	+0.2
Y26A	Elida baz=81	81.59	51	⇑P		P	14 53 12.8	+0.5
224A	Cornudas Mount baz=82	81.94	53	⇑P		P	14 53 14.2	+0.1
AMTX	Amarillo baz=82	82.10	49	⇓P		P	14 53 14.9	0.0
MNTX	Cornudas Mount baz=82	82.29	54	⇓P		P	14 53 16.1	+0.1
226A	Malaga, Loving baz=83	82.78	53	⇑P		P	14 53 18.3	-0.2
328A	Wristen Ranch, baz=84	84.03	52	⇑P		P	14 53 25.1	+0.2
427A	Hayter Ranch, baz=84	84.07	53	⇓P		P	14 53 25.4	+0.2
526A	Mary Lane Ranc baz=84	84.24	54	⇓P		P	14 53 26.4	+0.4
428A	Kincaid Ranch, baz=84	84.58	53	⇑P		P	14 53 28.2	+0.5
626A	Big Bend Ranch baz=84	84.58	54	⇑P		P	14 53 27.7	-0.1
TXAR	Lajitas Array comp=Z,1.8nm,0.7s,mb4.1,baz=295,slow=3.5,SNR=24	85.02	54	P		P	14 53 30.1	+0.1
627A	Terlingua Ranc baz=85	85.10	54	⇓P		P	14 53 30.3	0.0
628A	Black Gap, Mar baz=85	85.37	54	⇓P		P	14 53 31.7	0.0
JCT	Junction City baz=86	86.43	51	⇑P		P	14 53 36.6	-0.3
QSPA	South Pole Qui comp=Z,1.2nm,1.0s,baz=196,slow=0.9,SNR=3.4	132.68	180	PKP		PKPdf	15 00 05.8	-1.2

*ISCJB **29** 14:46:40.9±0.7,50°.26N±0°.05×130°.06W±0°.07,h10km, mb3.7/3,MS3.0/3,Error ellipse: s-maj=8.3km s-min=5.4km az=42.8*

*PGC **29** 14:46:40.5±1.3,50°.05N×130°.30W,h10km,ML3.2/12, Mw3.9,217km Wsw of Pt. Hardy, Bc Vancouver Island Region*

*IDC **29** 14:46:43.9±2.0,50°.21N×129°.77W,h0km, mb3.7/2, mb1 3.9/7,mb1mx3.6/26,mbtmp3.6/7,ML4.0/3,MS3.0/6, Ms1 2.9/6,ms1mx2.6/35,Error ellipse: s-maj=32.8km s-min=13.6km az=76.0*

*NEIC **29** 14:46:43.0±0.9,50°.41N×129°.91W,h10km,mb3.8/2, MW3.9(PGC),Error ellipse: s-maj=17.7km s-min=6.8km az=46.0*

ISC 29 14:46:42.8±0.7,50°.37N±0°.06×129°.99W±0°.08,h10km,n61, σ1§35/57,mb3.7/3,MS3.0/3,6D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	Holberg	1.22	76	⇓Pn	Pn	14 47 05.7	-0.1
HOLB				Sn	Sn	14 47 23.4	+1.0
HOLB	Holberg	1.22	76	⇓Pn	Pn	14 47 05.6	-0.3
HOLB				⇑Sn	Sn	14 47 23.4	+1.0
BPBC	Brooks Peninsu	1.44	98	⇑Pn	Pn	14 47 06.7	-2.2
BPBC				⇑Sn	Sn	14 47 25.7	-2.1
PHC	Port Hardy	1.67	77	Pn	Pn	14 47 11.9	-0.1
PHC				⇓Sn	Sn	14 47 33.7	+0.3
MAYB	Maynard	1.81	88	Pn	Pn	14 47 12.9	-1.0
EDB	Eliza Dome	1.91	104	⇑Pn	Pn	14 47 12.8	-2.6
BBB	Bella Bella 48nm,0.3s,baz=48,slow=13,SNR=351	2.17	32	Pn	Pn	14 47 20.9	+2.0
BBB				Sn	Sn	14 47 48.4	+2.6
BBB	Bella Bella 48nm,0.3s,baz=141,slow=23,SNR=12	2.17	32	⇑Pn	Pn	14 47 21.0	+2.1
BBB				⇓Sn	Sn	14 47 48.8	+3.1
WOSB	Woss	2.21	94	Pn	Pn	14 47 18.4	-1.0
BNB	Barry Inlet	2.47	334	⇓Pn	Pn	14 47 22.1	-0.9
GDR	Gold River	2.62	101	Pn	Pn	14 47 24.2	-0.9
MOBC	Moresby Island	3.04	337	⇑Pn	Pn	14 47 30.5	-0.3
DIB	Dawson Inlet,	3.23	332	Pn	Pn	14 47 31.5	-2.0
DIB	Dawson Inlet,	3.23	332	⇑Pn	Pn	14 47 32.7	-0.7
OZB	Mount Ozzard	3.25	114	⇑Sn	Sn	14 48 09.2	-3.1
NDB	Naden	4.02	334	⇓Pn	Pn	14 47 43.9	-0.5
LON	Longmire	6.53	121	*e*Pn	Pn	14 48 18.1	-0.6
DLBC	Dease Lake 0.3nm,0.3s,baz=192,slow=13,SNR=7.5	8.09	360	Pn	Pn	14 48 45.1	+5.0
DLBC	comp=Z,103nm,19.1s,baz=205,slow=36			LR	LR	14 51 44.2	
BSMT	Bassoo Peak	10.28	98	*e*Pn	Pn	14 49 10.5	+0.3
WVOR	Wild Horse Val	11.14	131	*e*Pn	Pn	14 49 24.0	+1.9
NVAR	Mina Array Bea	14.55	141	Pn	Pn	14 50 10.1	+1.5
NVAR	Mina Array Bea baz=324,slow=12,SNR=1.9	14.55	141	Pn	Pn	14 50 10.1	+1.5
TPAW	Teton Pass 19nm,1.0s	14.69	111	*e*P	Pn	14 50 20.0	+10
REDW	Red Top Meadow 17nm,1.3s	14.83	111	*e*Pn	Pn	14 50 12.8	+0.6
REDW				*e*		14 50 21.8	
LOHW	Long Hollow 10nm,1.3s	14.83	110	Pn	Pn	14 50 11.4	-1.0
LOHW				*e*		14 50 21.7	
RLMT	Red Lodge 6.1nm,1.0s	14.88	103	*e*P	Pn	14 50 21.5	+8.5
DUG	Dugway 7.0nm,1.2s	15.76	124	*e*P	Pn	14 50 30.2	+5.5
PDAR	Pinedale Array 0.2nm,0.3s,baz=306,slow=10,SNR=14	15.94	111	Pn	Pn	14 50 30.6	+3.5
ILAR	Eielson Array baz=147,slow=12,SNR=4.7	16.95	335	P	Pn	14 50 45.4	+5.7
ILAR				LR	LR	14 57 33.6	
INK	Inuvik comp=Z,30nm,21.0s,baz=43,slow=36	18.08	356	LR	LR	14 57 36.2	
PV01	Paradox Valley 664nm,1.0s	19.54	121	*e*P	Pn	14 51 13.7	+2.1
SDCO	Great Sand Dun 6.8nm,1.4s,mb3.9	21.54	116	*e*P	P	14 51 33.1	+1.1
ULM	Lac du Bonnet 2.8nm,0.5s,mb4.0,baz=306,slow=3.5,SNR=2.5	21.68	77	P	P	14 51 34.5	+1.0
ULM				LR	LR	14 59 57.8	
ULM	Lac du Bonnet comp=Z,27nm,20.9s,MS2.6,baz=1.1,slow=37	21.68	77	P	P	14 51 34.5	+1.0
TXAR	Lajitas Array 0.5nm,0.8s,mb3.3,baz=313,slow=9.6,SNR=5.3	28.89	127	P	P	14 52 42.2	+0.6
TXAR				LR	LR	15 04 47.1	
KSRS	Korea Array comp=Z,19nm,18.9s,MS3.4,baz=311,slow=35	69.00	304	LR	LR	15 26 59.4	

IDC 29 14:47:39.4±5.4,27°.96S×178°.28W,h0km,mb3.4/2, mb1 3.7/2,mb1mx3.5/15,mbtmp3.4/2,Error ellipse: s-maj=251.0km s-min=60.7km az=157.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs 0.3nm,0.5s,baz=101,slow=6.6,SNR=7.5	43.04	264	P	P	14 55 40.7	-0.3
WRA	Warramunga Arr 0.3nm,0.5s,baz=110,slow=8.0,SNR=9.0	43.81	270	P	P	14 55 47.5	+0.2
AKASG	Malin Array Be 1.6nm,0.6s,baz=43,slow=3.5,SNR=5.1	149.19	325	PKPbc	PKPbc	15 07 29.0	-0.5

*ISCJB **29** 15:01:28.2±0.6,15°.44N±0°.07×94°.71W±0°.03,h33km, mb3.5/2,Error ellipse: s-maj=9.9km s-min=3.6km az=12.1*

*MEX **29** 15:01:28.9±0.9,15°.29N×94°.73W,h20km±55km, MD4.4*

*NEIC **29** 15:01:29.0,15°.30N×94°.73W,h16km,mb3.5/4,After MEX.*

ISC 29 15:01:28.8±0.7,15°.38N±0°.07×94°.71W±0°.03,h35km,n23, σ1§45/37,mb3.5/2,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.41	286	*i* P	Pn	15 01 50.6	-1.4
HUIG				*i* S	Sn	15 02 06.3	-3.0
HUIG	Huatulco	1.41	286	*i* P	Pn	15 01 50.6	-1.4
HUIG				*i* S	Sn	15 02 06.3	-3.0
PCIG		1.47	77	*i* P	Pn	15 01 52.1	-0.7
PCIG				*i* S	Sn	15 02 09.0	-1.8
TGIG		2.06	47	*i* P	Pn	15 02 01.3	+0.3
TGIG				*e*S	Sn	15 02 25.2	-0.4
THIG		2.40	101	*i* P	Pn	15 02 03.8	-1.8
THIG				*e*S	Sn	15 02 32.9	-1.0
SCX	San Cristobal	2.41	56	*i* P	Pn	15 02 06.5	+0.8
SCX				*i* S	Sn	15 02 34.5	+0.5
SCX	San Cristobal	2.41	56	*i* P	Pn	15 02 06.5	+0.8
SCX				*i* S	Sn	15 02 34.5	+0.5
OXX	Oaxaca	2.58	311	*i* P	Pn	15 02 08.2	+0.2
OXX				*i* S	Sn	15 02 38.8	+0.6
OXX	Oaxaca	2.58	311	*i* P	Pn	15 02 08.2	+0.2
OXX				*i* S	Sn	15 02 37.8	-0.4
VHO	Vista Hermosa	2.58	311	*i* P	Pn	15 02 09.7	+1.6
VHO				*e*S	Sn	15 02 38.5	+0.3
VHO	Vista Hermosa	2.58	311	*i* P	Pn	15 02 09.7	+1.6
VHO				*e*S	Sn	15 02 38.5	+0.3
PNIG	Pinotepa	3.44	288	*i* P	Pn	15 02 19.9	-0.1
PNIG				*e*S	Sn	15 02 56.8	-2.8
PNIG	Pinotepa	3.44	288	*i* P	Pn	15 02 19.9	-0.1
PNIG				*e*S	Sn	15 02 56.8	-2.8
TP2	Tecpan 2	3.61	99	*e*P	Pn	15 02 25.8	+3.5
FG6		3.78	102	*e*P	Pn	15 02 28.3	+3.7
UTMO	Huajuapan	3.84	310	*i* P	Pn	15 02 27.1	+1.6
UTMO				*i* S	Sn	15 03 09.6	+0.1
IXG	Ixpaco	4.28	106	*e*P	Pn	15 02 34.6	+3.1
MRL	Marmol	4.85	93	*e*P	Pn	15 02 43.3	+3.9
TEIG	Tepich	7.79	51	*e*Pn	Pn	15 03 19.5	-0.3
MIAR	Mount Ida 1.8nm,0.6s	19.12	3	P	Pn	15 05 48.5	-1.2
WMOK	Wichita Mounta 2.2nm,0.9s	19.63	350	*e*P	Pn	15 05 53.4	-2.5
BNM	Barren Site 2.8nm,0.8s,mb3.7	21.57	332	*e*P	P	15 06 17.6	+2.3
MCMT	McKenzie Canyo 0.3nm,0.7s,mb3.3	33.13	336	*e*P	P	15 08 04.7	+3.1

*IDC **29** 15:12:09.1±4.3,6°.49S×148°.91E,h0km,mb3.7/3, mb1 3.8/4,mb1mx3.5/16,mbtmp3.7/4,Error ellipse: s-maj=110.9km s-min=31.5km az=107.0*

*ISCJB **29** 15:12:17.0±2.5,6°.2S±0°.1×147°.9E±0°.4,h33km,mb3.6/3, Error ellipse: s-maj=57.2km s-min=20.2km az=5.1*

*NEIC **29** 15:12:18.7±2.1,6°.25S×148°.01E,h35km,mb3.8/1,Error ellipse: s-maj=52.7km s-min=16.2km az=96.0*

ISC 29 15:12:19.3±2.5,6°.3S±0°.1×147°.9E±0°.4,h35km,n7,σ0§23/8, mb3.6/3,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.20	194	*e*Pn	Pn	15 13 07.2	0.0
PMG				*e*S	Sn	15 13 50.4	+6.2
WB2	Warramunga Arr	18.93	223	*e*P	Pn	15 16 37.8	-0.3
WRA	Warramunga Arr 0.2nm,0.3s,baz=51,slow=11,SNR=19	18.94	223	P	Pn	15 16 38.3	0.0
ASAR	Alice Springs 0.3nm,0.4s,mb3.1,baz=57,slow=9.6,SNR=20	21.93	216	P	P	15 17 09.8	0.0
FITZ	Fitzroy Crossi 1.1nm,0.4s,mb3.7	24.71	240	*e*P	P	15 17 37.3	-0.1
FITZ	Fitzroy Crossi 1.0nm,0.4s,mb3.7,baz=76,slow=7.7,SNR=14	24.71	240	P	P	15 17 38.0	+0.6
SONM	Songino Array 1.5nm,0.7s,mb4.2,baz=124,slow=7.2,SNR=3.6	65.09	330	P	P	15 22 56.2	-0.1

*ISCJB **29** 15:24:02.5±0.3,44°.57N±0°.02×7°.26E±0°.03,h15km±2km, Error ellipse: s-maj=3.4km s-min=2.3km az=153.4*

*NEIC **29** 15:24:03.1,44°.57N×7°.33E,h2km,ML2.5(LDG), ML2.3(STR),After LDG.*

*LDG **29** 15:24:03.1±0.1,44°.57N×7°.33E,h2km,Md2.6/1,Ml2.5/9, Error ellipse: s-maj=1.8km s-min=0.9km az=64.0*

*CSEM **29** 15:24:03.1±0.1,44°.56N×7°.27E,h15km,ML2.6/19,Error ellipse: s-maj=1.9km s-min=1.3km az=68.0*

*ROM **29** 15:24:03.2±0.2,44°.57N×7°.22E,h13km±4km,Md2.3/9, Ml2.1/8,Error ellipse: s-maj=2.6km s-min=2.1km az=101.0*

*STR **29** 15:24:03.4±0.4,44°.56N×7°.31E,h5km,Ml2.3,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 29 15:24:03.3±0.3,44°.56N±0°.02×7°.27E±0°.03,h15km±3km, n52,σ0§54/106,2C,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOI	San Damiano	0.06	193	Pg	Pg	15 24 06.6	+0.5
DOI	3µm,0.2s			Sg	Sg	15 24 08.2	+0.1
DOI	San Damiano 3µm,0.2s	0.06	193	Pg	Pg	15 24 06.6	+0.5
DOI				Sg	Sg	15 24 08.2	+0.1
PZZ	Stroppo 1µm,0.3s	0.12	242	⇑*i*Pg	Pg	15 24 07.0	+0.3
PZZ				Sg	Sg	15 24 09.1	-0.1
PZZ	Stroppo 1µm,0.3s	0.12	242	⇑*i*Pg	Pg	15 24 07.0	+0.3
PZZ				Sg	Sg	15 24 09.1	-0.1
STV	Sant Anna di V 198nm,0.2s	0.32	172	Pg	Pg	15 24 10.1	+0.2
STV				Sg	Sg	15 24 14.4	0.0
STV	Sant Anna di V 198nm,0.2s	0.32	172	Pg	Pg	15 24 10.1	+0.2
STV				Sg	Sg	15 24 14.4	0.0
SURF	Saint Ours	0.34	256	Pg	Pg	15 24 10.3	+0.1
SURF	Saint Ours	0.34	256	Pg	Pg	15 24 10.3	+0.1
MBDF	Montbardon SNR=1.0	0.39	295	*e*Pg	Pg	15 24 11.5	+0.4
MBDF				*e*Sg	Sg	15 24 16.6	+0.2
MBDF	Montbardon SNR=1.0	0.39	295	*e*Pg	Pg	15 24 11.5	+0.4
MBDF				*e*Sg	Sg	15 24 16.6	+0.2
TOUF	Mont Tournerai	0.55	181	Pg	Pg	15 24 14.2	+0.1
TOUF				Sg	Sg	15 24 21.1	-0.3
TOUF	Mont Tournerai	0.55	181	Pg	Pg	15 24 14.2	+0.1
TOUF				Sg	Sg	15 24 21.1	-0.3
AUTN	L'Aution	0.58	168	Pg	Pg	15 24 14.5	-0.1
AUTN				Sg	Sg	15 24 22.2	-0.1
AUTN	L'Aution	0.58	168	Pg	Pg	15 24 14.5	-0.1
AUTN				Sg	Sg	15 24 22.2	-0.1
RSP	Reno Superiore 25nm,0.2s	0.58	360	Pg	Pg	15 24 14.2	-0.6
RSP				Sg	Sg	15 24 22.1	-0.4
RSP	Reno Superiore 25nm,0.2s	0.58	360	Pg	Pg	15 24 14.2	-0.6
RSP				Sg	Sg	15 24 22.1	-0.4
SAOF	Saorge	0.61	160	Pg	Pg	15 24 14.3	-1.0
SAOF				Sg	Sg	15 24 22.9	-0.5
SAOF	Saorge	0.61	160	Pg	Pg	15 24 14.3	-1.0
SAOF				Sg	Sg	15 24 22.9	-0.5
MVIF	Mont Vial	0.67	187	Pg	Pg	15 24 16.5	+0.1
MVIF				Sg	Sg	15 24 25.5	+0.2
MVIF	Mont Vial	0.67	187	Pg	Pg	15 24 16.5	+0.1
MVIF				Sg	Sg	15 24 25.5	+0.2
LUCF	Luceram	0.67	175	Pg	Pg	15 24 16.1	-0.3
LUCF				Sg	Sg	15 24 25.8	+0.5
LUCF	Luceram	0.67	175	Pg	Pg	15 24 16.1	-0.3
LUCF				Sg	Sg	15 24 25.8	+0.5
SBF	Sospel 25nm,0.2s,SNR=1.0	0.71	170	*e*Pg	Pg	15 24 16.8	-0.3
SBF				*e*Sg	Sg	15 24 26.0	-0.5
SBF	Sospel 12nm,0.2s,SNR=1.0	0.71	170	*e*Pg	Pg	15 24 16.8	-0.3
SBF				*e*Sg	Sg	15 24 26.0	-0.5
IMI	Imperia	0.79	145	Pg	Pg	15 24 19.3	+0.6
IMI				Sg	Sg	15 24 29.3	+0.2
IMI	Imperia	0.79	145	Pg	Pg	15 24 19.3	+0.6
IMI				Sg	Sg	15 24 29.3	+0.2
QLNO	Quiliano 25nm,0.3s	0.81	107	Pg	Pg	15 24 19.8	+0.8
QLNO				Sg	Sg	15 24 30.6	+1.0
QLNO	Quiliano 25nm,0.3s	0.81	107	Pg	Pg	15 24 19.8	+0.8
QLNO				Sg	Sg	15 24 30.6	+1.0
LSD	Lago del Serru 31nm,0.2s	0.90	354	Pg	Pg	15 24 20.7	0.0
LSD				Sg	Sg	15 24 32.4	-0.1
LSD	Lago del Serru 31nm,0.2s	0.90	354	Pg	Pg	15 24 20.7	0.0
LSD				Sg	Sg	15 24 32.4	-0.1
PCP	Piancastagn 35nm,0.3s	0.92	91	Pg	Pg	15 24 21.0	0.0
PCP				Sg	Sg	15 24 33.8	+0.8
PCP	Piancastagn 35nm,0.3s	0.92	91	Pg	Pg	15 24 21.0	0.0
PCP				Sg	Sg	15 24 33.8	+0.8
LPG	La Plagne 10nm,0.2s,SNR=1.0	1.00	339	*e*Pg	Pg	15 24 22.6	-0.1
LPG				*e*Sg	Sg	15 24 35.6	-0.2
LPG	La Plagne 5.1nm,0.2s,SNR=1.0	1.00	339	*e*Pg	Pg	15 24 22.6	-0.1
LPG				*e*Sg	Sg	15 24 35.6	-0.2
LPL	La Plagne SNR=1.0	1.02	339	*e*Pg	Pg	15 24 23.1	0.0
LPL	8.7nm,0.2s,SNR=1.0			*e*Sg	Sg	15 24 35.8	-0.7
LPL	La Plagne SNR=1.0	1.02	339	*e*Pg	Pg	15 24 23.1	0.0
LPL	4.3nm,0.2s,SNR=1.0			*e*Sg	Sg	15 24 35.8	-0.7
ORIF	Oris-en-Rattie 11nm,0.2s	1.05	290	*e*Pg	Pg	15 24 23.2	-0.3
ORIF				*e*Sg	Sg	15 24 36.5	-0.7
ORIF	Oris-en-Rattie 5.3nm,0.2s	1.05	290	*e*Pg	Pg	15 24 23.2	-0.3
ORIF				*e*Sg	Sg	15 24 36.5	-0.7
FRF	La Foret Royal 28nm,0.2s	1.10	204	*e*Pg	Pg	15 24 23.9	-0.5
FRF				*e*Sg	Sg	15 24 38.0	-0.8
FRF				*e*Sn	Sn	15 24 39.7	+0.7
FRF	La Foret Royal 14nm,0.2s	1.10	204	*e*Pg	Pg	15 24 23.9	-0.5
FRF				*e*Sg	Sg	15 24 38.0	-0.8
FRF				*e*Sn	Sn	15 24 39.7	+0.7
LMR	La Mourre 24nm,0.2s,SNR=1.0	1.34	204	*e*Pg	Pg	15 24 28.5	-0.7
LMR				*e*Sn	Sn	15 24 45.5	+0.4
LMR	La Mourre 12nm,0.2s,SNR=1.0	1.34	204	*e*Pg	Pg	15 24 28.5	-0.7
LMR				*e*Sn	Sn	15 24 45.5	+0.4
SMRF	Simiane la Rot SNR=1.0	1.35	245	*e*Pg	Pg	15 24 29.4	+0.2
SMRF	21nm,0.4s,SNR=1.0			*e*Sg	Sg	15 24 47.6	+0.8
SMRF	Simiane la Rot	1.35	245	*e*Pn	Pn	15 24 28.1	+0.5
SMRF				*e*Pg	Pg	15 24 29.4	+0.2
SMRF				*e*Sg	Sg	15 24 47.6	+0.8
SMRF	Simiane la Rot SNR=1.0	1.35	245	*e*Pn	Pn	15 24 28.1	+0.5
SMRF	Simiane la Rot SNR=1.0	1.35	245	*e*Pg	Pg	15 24 29.4	+0.2
SMRF				*e*Sg	Sg	15 24 47.6	+0.8
VIVF	Saint-Julien-l SNR=1.0	1.87	280	*e*Pn	Pn	15 24 35.9	+1.1
VIVF				*e*Sn	Sn	15 24 58.5	+0.4
VIVF	SNR=1.0			*e*Sg	Sg	15 25 03.8	+0.3
VIVF	2.9nm,0.2s,SNR=1.0			*e*Sg	Sg	15 25 03.8	+0.3
VIVF	Saint-Julien-l SNR=1.0	1.87	280	*e*Pn	Pn	15 24 35.9	+1.1
VIVF				*e*Sn	Sn	15 24 58.5	+0.4
VIVF	SNR=1.0			*e*Sg	Sg	15 25 03.8	+0.3
VIVF	1.5nm,0.2s,SNR=1.0			*e*Sg	Sg	15 25 03.8	+0.3
PGF	Pioggiola SNR=1.0	2.38	147	*e*Pn	Pn	15 24 40.9	-0.8
PGF	4.8nm,0.6s,SNR=1.0			*e*Sn	Sn	15 25 08.7	-1.9
PGF	Pioggiola SNR=1.0	2.38	147	*e*Pn	Pn	15 24 40.9	-0.8
PGF	2.4nm,0.6s,SNR=1.0			*e*Sn	Sn	15 25 08.7	-1.9
LASF	Ste Croix SNR=1.0	2.50	260	*e*Pn	Pn	15 24 43.6	+0.3
LASF	0.4nm,0.2s			*e*Sg	Sg	15 25 23.3	-0.1
LASF	Ste Croix SNR=1.0	2.50	260	*e*Pn	Pn	15 24 43.6	+0.3
LASF	0.2nm,0.2s			*e*Sg	Sg	15 25 23.3	-0.1

JMA ***29*** *16:06:13.3±0.1, 37˚.73N×142˚.28E, h32km±3km, M3.1*
NEIC ***29*** *16:06:21.4±3.4, 38˚.26N×141˚.61E, h35km, MG3.2(JMA), Error ellipse: s-maj=78.7km s-min=12.2km az=126.0*
IDC ***29*** *16:06:22.6±3.0, 38˚.65N×140˚.70E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.3/23, mbtmp3.5/3, MS3.0/1, Ms1 3.0/1, ms1mx2.1/30, Error ellipse: s-maj=72.8km s-min=32.0km az=73.0*

ISC 29 16:06:13.1±1.6, 37˚.74N±0˚.04×142˚.20E±0˚.07, h12km±8km, n17, σ0$72/24, mb3.5/2, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**0.98**	**317**	P	**Pb**	**16 06 31.9**	**-0.2**
JIO				S	**Sg**	**16 06 45.1**	**+0.2**
JFK	**Kawauchi**	**1.12**	**251**	P	**Pb**	**16 06 33.9**	**-0.5**
JFK				S	**Sb**	**16 06 48.3**	**-0.6**
JMM	**Marumori**	**1.12**	**277**	P	**Pb**	**16 06 34.0**	**-0.5**
JMM				S	**Sb**	**16 06 49.0**	**0.0**
ONAJ	**Iwakimizuishiy**	**1.29**	**241**	P	**Pn**	**16 06 36.0**	**-0.9**
ONAJ				*e*S	**Sb**	**16 06 52.9**	**-0.8**
JOU	**Okura**	**1.37**	**298**	P	**Pn**	**16 06 38.4**	**+0.4**
JOU				S	**Sn**	**16 06 56.6**	**+0.6**
JMK	**Ichinoseki**	**1.44**	**328**	P	**Pn**	**16 06 38.7**	**-0.2**
JMK				*e*S	**Sn**	**16 06 56.9**	**-0.8**
JFT	**Otama**	**1.50**	**262**	P	**Pn**	**16 06 40.3**	**+0.5**
JFT				S	**Sn**	**16 07 00.2**	**+1.0**
JYK	**Kaneyama**	**1.87**	**310**	P	**Pn**	**16 06 45.4**	**+0.5**
JYK				*e*S	**Sn**	**16 07 08.8**	**+0.4**
JOM	**Ohasama**	**1.87**	**338**	P	**Pn**	**16 06 44.9**	**0.0**
JOM				*e*S	**Sn**	**16 07 07.6**	**-0.9**
MJAR	**Matsushiro Arr**	**3.41**	**251**	Pn	**Pn**	**16 07 10.2**	**+4.1**
	0.4nm,0.3s,baz=38,slow=15,SNR=5.2						
MAJO	**Matsushiro**	**3.41**	**251**	*e*Pn	**Pn**	**16 07 08.5**	**+2.5**
ERM	**Erimo**	**4.33**	**9**	*e*Pn	**Pn**	**16 07 19.2**	**+0.5**
CBIJ	**Chichi jima**	**10.61**	**180**	LR	LR	16 12 20.8	
	comp=Z,76nm,21.4s,baz=162,slow=31						
MKAR	**Makanchi Array**	**44.28**	**302**	P	**P**	**16 14 22.3**	**-0.2**
MKAR	**Makanchi Array**	**44.28**	**302**	P	**P**	**16 14 22.3**	**-0.2**
	0.2nm,0.6s,mb3.0,baz=83,slow=9.6,SNR=4.7						
KURK	**Kurchatov**	**46.00**	**308**	P	**P**	**16 14 35.6**	**-0.5**
	0.6nm,0.2s,mb4.1,baz=83,slow=8.4,SNR=1.5						
WRA	**Warramunga Arr**	**57.85**	**189**	P	Px	16 16 20.8	
	0.2nm,0.8s,baz=1.9,slow=7.9,SNR=3.3						

NIED ***29*** *16:10:00, 30˚.70N×142˚.60E, h11km, Mw4.1 Best double couple: M0 1.74000×10^15 NP1: ϕs 18.00000°, δ63.00000°, λ-85.00000°. NP2: ϕs 188.00000°, δ28.00000°, λ-99.00000°.*
IDC ***29*** *16:10:38.6±0.5, 30˚.75N×142˚.59E, h0km, mb4.3/24, mb1 4.4/29, mb1mx4.4/35, mbtmp4.3/29, ML4.2/4, MS3.4/10, Ms1 3.5/10, ms1mx3.1/38, Error ellipse: s-maj=15.8km s-min=12.0km az=70.0*
ISCJB ***29*** *16:10:39.2±1.0, 30˚.80N±0˚.03×142˚.54E±0˚.05, h15km±7km, mb4.5/62, MS3.7/17, Error ellipse: s-maj=7.5km s-min=4.1km az=156.7*
JMA ***29*** *16:10:40.7±0.2, 30˚.72N×142˚.57E, h45km, M4.7*
MOS ***29*** *16:10:41.7±0.9, 30˚.77N×142˚.60E, h33km, mb4.8/28, Error ellipse: s-maj=14.4km s-min=6.3km az=122.0*
NEIC ***29*** *16:10:43.7±0.3, 30˚.75N×142˚.58E, h35km, mb4.8/25, MW4.1(NIED), Error ellipse: s-maj=7.3km s-min=6.8km az=62.0*
BJI ***29*** *16:10:45.3, 30˚.98N×142˚.21E, h35km, mB4.6/24, mb4.5/40, Ms4.0/27, Ms7 3.7/25*

ISC 29 16:10:42.0±1.0, 30˚.77N±0˚.03×142˚.54E±0˚.05, h22km±7km, h34km±1.5km; pP-P, n149, σ1$16/175, mb4.5/62, MS3.7/17, 7C-6D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**3.29**	**316**	P	**Pn**	**16 11 31.7**	**-0.4**
JHJ2				S	**Sn**	**16 12 09.2**	**-1.4**
JHJ	**Hachijo jima 2**	**3.31**	**316**	Pn	**Pn**	**16 11 31.8**	**-0.7**
	17nm,0.3s,baz=207,slow=11,SNR=28						
JHJ				Sn	**Sn**	**16 12 08.7**	**-2.5**
	64nm,0.3s,baz=60,slow=22,SNR=4.1						
JHJ				LR	LR	16 12 13.0	
	comp=Z,207nm,20.6s,baz=8.9,slow=28						
CBIJ	**Chichi jima**	**3.68**	**185**	Pn	**Pn**	**16 11 35.2**	**-2.3**
	31nm,0.3s,baz=100,slow=23,SNR=19						
CBIJ				Sn	**Sn**	**16 12 13.2**	**-7.1**
	125nm,0.3s,baz=272,slow=24,SNR=10.0						
CBIJ	**Chichi jima**	**3.68**	**185**	P	**Pn**	**16 11 35.9**	**-1.7**
CBIJ				S	**Sn**	**16 12 14.3**	**-6.0**
BSO1	**Boso 1**	**4.09**	**342**	P	**Pn**	**16 11 41.4**	**-1.7**
BSO1				S	**Sn**	**16 12 27.7**	**-2.6**
JHHJ	**Haha-jima-NKT**	**4.14**	**185**	P	**Pn**	**16 11 43.0**	**-0.9**
JHHJ				S	**Sn**	**16 12 28.8**	**-2.9**
BSO2	**Boso 2**	**4.24**	**340**	S	**Sn**	**16 12 34.3**	**+0.2**
BSO3	**Boso 3**	**4.37**	**337**	P	**Pn**	**16 11 47.7**	**+0.7**
BSO3				S	**Sn**	**16 12 40.9**	**+3.7**
JKO	**Kozu shima**	**4.46**	**321**	P	**Pn**	**16 11 48.9**	**+0.7**
JKO				S	**Sn**	**16 12 39.4**	**0.0**
BSO4	**Boso 4**	**4.59**	**337**	P	**Pn**	**16 11 51.8**	**+1.7**
BSO4				S	**Sn**	**16 12 44.2**	**+1.4**
JOD2	**Odawara 2**	**5.33**	**328**	P	**Pn**	**16 11 59.8**	**-0.5**
JOD2				S	**Sn**	**16 12 59.9**	**-1.1**
JHU	**Hanno**	**5.75**	**333**	P	**Pn**	**16 12 05.6**	**-0.4**
JHU				S	**Sn**	**16 13 07.5**	**-3.8**
JYT	**Yasato**	**5.78**	**341**	P	**Pn**	**16 12 06.6**	**+0.2**
JYT				S	**Sn**	**16 13 11.4**	**-0.7**
MJAR	**Matsushiro Arr**	**6.79**	**329**	Pn	**Pn**	**16 12 20.3**	**0.0**
	7.1nm,0.3s,baz=149,slow=11,SNR=89						
MJAR				Sn	**Sn**	**16 13 36.1**	**-0.8**
	3.8nm,0.3s,baz=138,slow=21,SNR=6.2						
MJAR				LR	LR	16 15 09.3	
	comp=Z,114nm,18.3s,baz=140,slow=40						
MJAR	**Matsushiro Arr**	**6.79**	**329**	P	**Pn**	**16 12 20.3**	**0.0**
MJAR						16 13 36.1	
MAJO	**Matsushiro**	**6.79**	**329**	*e*Pn	**Pn**	**16 12 20.8**	**+0.4**
MAJO				*e*Sn	**Sn**	**16 13 35.1**	**-1.9**
MAT	**Matsushiro**	**6.79**	**329**	P	**Pn**	**16 12 18.7**	**-1.6**
MAT				S	**Sn**	**16 13 35.8**	**-1.2**
MAT	**Matsushiro**	**6.79**	**329**	P	**Pn**	**16 12 20.5**	**+0.2**
MAT				S	**Sn**	**16 13 35.8**	**-1.2**
ERM	**Erimo**	**11.23**	**2**	*e*Pn	**Pn**	**16 13 16.1**	**-5.0**
ERM	**Erimo**	**11.23**	**2**	*d iP*	**Pn**	**16 13 16.3**	**-4.8**
ASAJ	**Asahikawa**	**13.32**	**0**	*e*Pn	**Pn**	**16 13 45.7**	**-3.9**
	3.5nm,0.4s						
ASAJ	**Asahikawa**	**13.32**	**0**	Pn	**Pn**	**16 13 45.8**	**-3.9**
	4.3nm,0.3s,baz=213,slow=8.4,SNR=35						
ASAJ				Sn	**Sn**	**16 16 06.0**	**-11**
	0.5nm,0.3s,baz=73,slow=20,SNR=4.4						
YUK	**Yuzh-Kuril'sk**	**13.49**	**10**	*e*P	**Pn**	**16 13 46.9**	**-5.2**
YUK				pmax	pmax		
	comp=N,20nm,0.4s						
YUK				pmax	pmax		
	comp=Z,66nm,0.4s						
YUK				pmax	pmax		
	comp=E,21nm,0.2s						
KSRS	**Korea Array**	**13.81**	**303**	Pn	**Pn**	**16 13 58.2**	**+1.8**
	comp=E,0.2nm,0.3s,baz=112,slow=12,SNR=35						
KSRS				LR	LR	16 19 15.5	
	comp=E,125nm,19.4s,baz=308,slow=37						
INCN	**Inchon**	**14.77**	**301**	P	**Pn**	**16 14 12.3**	**+2.8**
	comp=E,38nm,1.0s						
YSS	**Yuzh-Sakhalins**	**16.16**	**1**	*e*Pn	**Pn**	**16 14 24.7**	**-2.9**
	comp=E,27nm,1.0s						
YSS	**Yuzh-Sakhalins**	**16.16**	**1**	*i*P	**Pn**	**16 14 24.5**	**-3.1**
YSS				MLR	MLR		
	comp=Z,300nm,14.0s						
MDJ	**Mudanjiang**	**17.17**	**327**	P	**Pn**	**16 14 38.8**	**-1.6**
MDJ				pP	pP	16 14 48.5	+0.6
MDJ				sP	sP	16 14 51.8	+1.0
MDJ				S	**Sn**	**16 17 53.0**	**+2.3**
MDJ				PcS	PcS	16 22 58.3	-1.4
MDJ				ScS	ScS	16 26 36.0	-1.0
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,41nm,4.6s						
MDJ				LR	LR		
	comp=N,74nm,9.2s						
MDJ				LR	LR		
	comp=E,43nm,6.8s						
MDJ				LR	LR		
	comp=Z,120nm,11.2s						
MDJ	**Mudanjiang**	**17.17**	**327**	*e*P	**Pn**	**16 14 38.9**	**-1.5**
	comp=Z,8.2nm,0.8s						
GUMO	**Guam**	**17.24**	**172**	P	**Pn**	**16 14 37.9**	**-3.6**
	comp=Z,228nm,1.8s						
GUMO	**Guam**	**17.24**	**172**	P	**Pn**	**16 14 42.0**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=36,slow=19,SNR=2.7						
GUMO	**Guam**	**17.24**	**172**	P	**Pn**	**16 14 37.9**	**-3.5**
GUMO				pmax	pmax		
	comp=Z,228nm,1.8s						
HABR	**Khabarovsk**	**18.58**	**344**	*ce*P	**Pn**	**16 14 54.0**	**-3.7**
HABR				*e*S	**Sn**	**16 18 15.1**	**-10**
HABR				MLR	MLR		
	comp=Z,43nm,14.0s						
CN2	**Changchun**	**18.77**	**319**	*e*P	**Pn**	**16 15 02.5**	**+2.4**
CN2				*ep*P	pP	16 15 10.5	+4.9
CN2				*e*S	**Sn**	**16 18 25.5**	**-3.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,14.0s						
CN2				LR	LR		
	comp=E,100nm,14.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
SNY	**Shenyang**	**18.81**	**311**	⇑P	**Pn**	**16 15 01.0**	**+0.5**
SNY				pmax	pmax		
	comp=Z,15nm,0.5s						
SNY				LR	LR		
	comp=N,180nm,13.7s						
SNY				LR	LR		
	comp=E,120nm,12.9s						
SNY				LR	LR		
	comp=Z,170nm,16.1s						
YHNB	**Yeheng**	**19.69**	**257**	*e*P	**Pn**	**16 15 11.1**	**-0.2**
KLR	**Kul'dur**	**20.16**	**339**	*e*P	**P**	**16 15 11.2**	**-3.5**
NJ2	**Nanjing**	**20.25**	**280**	*e*P	**P**	**16 15 16.5**	**+0.6**
NJ2				pP		16 15 25.5	
NJ2				sP	sP	16 15 29.8	+5.0
NJ2				PP		16 15 37.5	
NJ2				S	**S**	**16 19 02.0**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
NJ2				LR	LR		
	comp=N,340nm,26.7s						
NJ2				LR	LR		
	comp=E,240nm,16.8s						
NJ2				LR	LR		
	comp=Z,170nm,19.9s						
YULB	**Yu-li**	**20.28**	**254**	*e*P	**P**	**16 15 16.8**	**+0.6**
	comp=Z,13nm,0.8s						
SSLB	**Suanglung**	**20.39**	**255**	*e*P	**P**	**16 15 17.1**	**-0.3**
	comp=Z,31nm,1.1s						
BJI	**Beijing**	**23.33**	**301**	P	**P**	**16 15 47.0**	**-1.7**
BJI				S	**S**	**16 20 00.0**	**+0.2**
BJI				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.2						
BJI				LR	LR		
	comp=N,110nm,15.5s,MS3.6						
BJI				LR	LR		
	comp=E,140nm,18.9s,MS3.6						
BJI				LR	LR		
	comp=Z,87nm,20.8s,MS3.2						
BJT	**Baijiatuan**	**23.33**	**301**	*e*P	**P**	**16 15 46.9**	**-1.8**
PETK	**Petropavlovsk-**	**24.90**	**22**	LR	LR	16 25 45.9	
	comp=Z,62nm,18.8s,MS3.1,baz=220,slow=36						
HHC	**Hu-ho-hao-te**	**26.94**	**300**	*e*P	**P**	**16 16 24.3**	**+2.6**
HHC				pP	pP	16 16 33.3	+5.1
HHC				sP	sP	16 16 37.5	+6.6
HHC				PP		16 17 09.3	
HHC				S	**S**	**16 20 56.5**	**-1.0**
HHC				sS	sS	16 21 11.0	+2.7
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.3						
HHC				pmax	pmax		
	comp=Z,82nm,4.6s						
HHC				LR	LR		
	comp=N,86nm,12.4s,MS3.9						
HHC				LR	LR		
	comp=E,230nm,14.1s,MS3.9						
HHC				LR	LR		
	comp=Z,160nm,14.0s,MS3.7						
GYA	**Guiyang**	**31.70**	**271**	P	**P**	**16 17 04.8**	**+0.6**
GYA				pP	pP	16 17 15.5	+4.8
GYA				PP	PP	16 18 10.0	-5.8
GYA				PcP	PcP	16 19 55.5	-0.1
GYA				S	**S**	**16 22 11.8**	**-0.9**
GYA				sS	sS	16 22 29.0	+5.5
GYA				ScP	ScP	16 23 35.5	-2.2
GYA				ScS	ScS	16 27 31.3	-4.6
GYA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=N,480nm,16.8s,MS4.4						
GYA				LR	LR		
	comp=E,440nm,17.0s,MS4.4						
GYA				LR	LR		
	comp=Z,470nm,16.9s,MS4.2						
ULN	**Ulaanbaatar**	**31.97**	**312**	*e*P	**P**	**16 17 08.8**	**+2.5**
	comp=Z,13nm,1.0s,mb4.7						
ULN	**Ulaanbaatar**	**31.97**	**312**	*e*P	**P**	**16 17 08.8**	**+2.5**
ULN				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
YAK	**Yakutsk**	**32.37**	**349**	*e*P	**P**	**16 17 09.7**	**+0.1**
	comp=Z,16nm,0.7s,mb5.0						
YAK	**Yakutsk**	**32.37**	**349**	*e*P	**P**	**16 17 09.0**	**-0.6**
YAK				*e**PP	pP	16 17 16.4	+0.2
YAK				*e*		16 18 15.2	
YAK				*e*		16 19 55.5	
YAK				*e*S	**S**	**16 22 24.1**	**+1.8**
YAK				*e*SSS		16 24 34.6	
YAK				*e*		16 27 38.7	
YAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.7						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.5						
YAK				pmax	pmax		
	comp=E,9.0nm,1.5s						
YAK				pmax	pmax		
	comp=N,12nm,1.4s						
YAK				smax			
	comp=N,40nm,3.2s						
YAK				smax			
	comp=E,19nm,3.3s						
YAK				MLR	MLR		
	comp=Z,54nm,15.0s,MS3.4						
SONM	**Songino Array**	**32.38**	**312**	P	**P**	**16 17 11.1**	**+1.2**
	comp=Z,4.4nm,0.7s,mb4.4,baz=111,slow=8.3,SNR=11						
LZH	**Lanzhou**	**32.58**	**290**	*e*P	**P**	**16 17 11.0**	**-0.7**
LZH				pP	pP	16 17 20.3	+2.0
LZH				sP	sP	16 17 23.5	+2.5
LZH				*e*S	**S**	**16 22 22.0**	**-4.1**
LZH				sS	sS	16 22 38.0	+1.0
LZH				SS	SS	16 24 21.0	-25
LZH				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
LZH				pmax	pmax		
	comp=Z,78nm,4.0s						
SEY	**Seymchan**	**32.79**	**8**	⇑*e*P	**P**	**16 17 12.1**	**-1.1**
CD2	**Chengdu**	**33.19**	**280**	P	**P**	**16 17 18.0**	**+0.9**
CD2				pP	pP	16 17 27.5	+3.8
CD2				sP	sP	16 17 31.5	+5.1
CD2				PP	PP	16 18 29.5	-2.8
CD2				PcP	PcP	16 20 00.3	+0.6
CD2				S	**S**	**16 22 34.5**	**-1.2**
CD2				sS	sS	16 22 50.5	+3.9
CD2				PcS	PcS	16 23 44.8	-0.5
CD2				SS	SS	16 24 36.8	-22
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
CD2				pmax	pmax		
	comp=Z,110nm,5.2s						
CD2				LR	LR		
	comp=N,140nm,13.2s,MS4.1						
CD2				LR	LR		
	comp=E,220nm,13.7s,MS4.1						
CD2				LR	LR		
	comp=Z,350nm,21.1s						
ZAK	**Zakamensk**	**35.14**	**315**	*e*P	**P**	**16 17 33.8**	**0.0**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
TLY	**Talaya**	**35.37**	**318**	*e*P	**P**	**16 17 37.6**	**+1.8**
	comp=Z,9.5nm,0.5s,mb5.0						
TLY	**Talaya**	**35.37**	**318**	*e*P	**P**	**16 17 38.1**	**+2.3**
TLY				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
TLY				MLR	MLR		
	comp=Z,45nm,14.0s,MS3.4						
KMI	**Kunming**	**35.48**	**271**	P	**P**	**16 17 41.5**	**+4.5**
KMI				pP	pP	16 17 52.5	+8.9
KMI				sP	sP	16 17 56.5	+10
KMI				S	**S**	**16 23 16.5**	**+5.3**
KMI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
KMI				pmax	pmax		
	comp=Z,65nm,5.2s						
KMI				LR	LR		
	comp=N,79nm,8.2s						
KMI				LR	LR		
	comp=E,80nm,8.8s						
KMI				LR	LR		
	comp=Z,140nm,18.9s,MS3.7						
GTA	**Gaotai**	**35.73**	**296**	*e*P	**P**	**16 17 39.5**	**+0.4**
GTA				S	**S**	**16 23 13.0**	**-1.8**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
GTA				pmax	pmax		
	comp=Z,42nm,6.0s						
GTA				LR	LR		
	comp=N,88nm,14.4s,MS3.9						
GTA				LR	LR		
	comp=E,120nm,16.8s,MS3.9						
GTA				LR	LR		
	comp=Z,170nm,16.5s,MS3.9						
MOY	**Mondy**	**36.92**	**317**	*e*P	**P**	**16 17 49.7**	**+0.7**
BILL	**Bilibino**	**39.82**	**14**	⇓*e*P	**P**	**16 18 13.6**	**+0.4**
BILL				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.5						
CHTO	**Chiang Mai**	**41.09**	**264**	*e*P	**P**	**16 18 23.5**	**-0.9**
	comp=Z,3.0nm,0.9s,mb3.9						
CHTO	**Chiang Mai**	**41.09**	**264**	*e*P	**P**	**16 18 23.5**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
CMAR	**Chiang Mai Arr**	**41.25**	**263**	P	**P**	**16 18 25.4**	**-0.3**
	comp=Z,0.6nm,0.7s,mb3.3,baz=49,slow=7.4,SNR=6.9						
CMAR				LR	LR	16 36 39.9	
	comp=Z,74nm,18.9s,MS3.6,baz=245,slow=38						
TIXI	**Tiksi**	**41.60**	**354**	*e*P	**P**	**16 18 27.2**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
KAKA	**Kakadu**	**44.31**	**194**	*e*P	**P**	**16 18 48.9**	**-1.5**
	comp=Z,25nm,0.7s,mb5.1						
WMQ	**Urumqi**	**44.77**	**303**	P	**P**	**16 18 56.0**	**+2.2**
WMQ				pP	pP	16 19 05.8	+5.2
WMQ				sP	sP	16 19 09.8	+6.6
WMQ				PcP	PcP	16 20 37.5	+1.8
WMQ				PP	PP	16 20 41.8	+3.4
WMQ				*e*S	**S**	**16 25 31.0**	**+1.4**
WMQ				ScS	ScS	16 28 48.0	-2.1
WMQ				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.9						
WMQ				pmax	pmax		
	comp=Z,170nm,4.4s						
WMQ				LR	LR		
	comp=N,96nm,23.5s,MS3.7						
WMQ				LR	LR		
	comp=E,54nm,23.4s,MS3.7						
WMQ				LR	LR		
	comp=Z,34nm,19.5s,MS3.3						
ZALV	**Zalesovo Beam**	**46.97**	**317**	P	**P**	**16 19 10.9**	**-0.1**
	comp=Z,2.7nm,0.8s,mb4.2,baz=97,slow=7.2,SNR=8.1						
ZALV				PcP	PcP	16 20 43.5	+0.3
	comp=Z,4.4nm,0.9s,baz=112,slow=3.6,SNR=6.2						
NVS	**Novosibirsk**	**47.98**	**318**	*e*P	**P**	**16 19 17.8**	**-1.1**
NVS				pmax	pmax		
	comp=E,6.0nm,1.3s						
NVS				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.6						
MK31	**Makanchi Array**	**48.45**	**307**	*e*P	**P**	**16 19 23.8**	**+1.2**
MKAR	**Makanchi Array**	**48.45**	**307**	P	**P**	**16 19 23.8**	**+1.1**
	comp=Z,11nm,0.8s,mb4.9,baz=92,slow=9.4,SNR=49						
MKAR				LR	LR	16 40 30.1	
	comp=Z,35nm,18.8s,MS3.4,baz=218,slow=37						
MKAR	**Makanchi Array**	**48.45**	**307**	*i* P	**P**	**16 19 23.7**	**+1.1**
MKAR				pmax	pmax		
	comp=Z,11nm,0.8s						
KURK	**Kurchatov**	**50.69**	**312**	*e*P	**P**	**16 19 40.2**	**+0.6**
	comp=Z,7.2nm,1.0s,mb4.6						
KURK	**Kurchatov**	**50.69**	**312**	P	**P**	**16 19 40.6**	**+1.0**
	comp=Z,8.4nm,0.8s,mb4.8,baz=88,slow=7.1,SNR=20						
KURK	**Kurchatov**	**50.69**	**312**	*de*P	**P**	**16 19 40.3**	**+0.6**
KURK				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
WRA	**Warramunga Arr**	**51.04**	**190**	P	**P**	**16 19 41.9**	**-0.6**
	comp=Z,10.0nm,0.6s,mb5.0,baz=7.1,slow=7.6,SNR=144						
WRA				PcP	PcP	16 20 59.8	+1.4
	comp=Z,4.4nm,1.0s,baz=2.1,slow=3.7,SNR=5.1						
FITZ	**Fitzroy Crossi**	**51.24**	**201**	*e*P	**P**	**16 19 44.0**	**-0.1**
	comp=Z,12nm,1.2s,mb4.7						
KDAK	**Kodiak Island**	**51.27**	**38**	P	**P**	**16 19 43.9**	**0.0**
	comp=Z,4.7nm,0.8s,mb4.5,baz=280,slow=6.1,SNR=3.4						
TKM2	**Tokmak 2**	**53.63**	**303**	*e*P	**P**	**16 20 03.4**	**+1.7**
	comp=Z,14nm,1.1s,mb4.8						
TKM2	**Tokmak 2**	**53.63**	**303**	*e*P	**P**	**16 20 03.4**	**+1.8**
TKM2				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
KZA	**Kyzart**	**54.04**	**302**	*e*P	**P**	**16 20 07.0**	**+2.4**
	comp=Z,22nm,1.4s,mb4.9						
ILAR	**Eielson Array**	**54.36**	**30**	P	**P**	**16 20 05.8**	**-0.9**
	comp=Z,2.0nm,0.9s,mb4.0,baz=262,slow=6.1,SNR=20						
AAK	**Ala-Archa**	**54.48**	**303**	P	**P**	**16 20 09.2**	**+1.3**
	comp=Z,0.9nm,0.3s,mb4.2,baz=82,slow=3.3,SNR=5.3						
AAK	**Ala-Archa**	**54.48**	**303**	*c iP*	**P**	**16 20 09.4**	**+1.5**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
ASAR	**Alice Springs**	**54.76**	**190**	P	**P**	**16 20 09.3**	**-0.7**
	comp=Z,2.2nm,0.5s,mb4.4,baz=7.9,slow=6.6,SNR=81						
ASAR				PcP	PcP	16 21 13.9	+1.6
	comp=Z,1.7nm,0.8s,baz=12,slow=4.1,SNR=5.8						
AML	**Almayashu**	**55.16**	**302**	*e*P	**P**	**16 20 14.9**	**+2.0**
	comp=Z,22nm,1.1s,mb5.1						
BVAR	**Borovoye Array**	**55.59**	**316**	P	**P**	**16 20 16.7**	**+0.9**
	comp=Z,4.1nm,0.8s,mb4.5,baz=93,slow=8.9,SNR=15						
BVAR				PcP	PcP	16 21 15.5	+0.2
	comp=Z,2.0nm,0.8s,baz=90,slow=4.3,SNR=4.1						
BRVK	**Borovoye**	**55.65**	**316**	⇑*e*P	**P**	**16 20 16.9**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
KKAR	**Karatay Array**	**57.24**	**304**	*e*P	**P**	**16 20 28.9**	**+1.2**
	comp=Z,15nm,1.0s,mb5.0						
KKAR	**Karatay Array**	**57.24**	**304**	*e*P	**P**	**16 20 28.9**	**+1.2**
KKAR				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
DAWY	**Dawson**	**57.62**	**31**	*e*P	**P**	**16 20 29.9**	**-0.1**
INK	**Inuvik**	**59.58**	**25**	P	**P**	**16 20 44.0**	**

VRHR					pmax	pmax			
	comp=E,1.0nm,0.5s								
VRHR					pmax	pmax			
	comp=Z,6.0nm,0.5s,mb4.8								
YBH	**Yreka Blue Hor**	**73.48**	**51**		LR	LR	16 55 18.1		
	comp=Z,50nm,18.0s,MS3.8,baz=259,slow=36								
OBN	**Obninsk**	**73.70**	**325**ǁ	*eP*		**P**	**16 22 14.6**	**+0.7**	
OBN					pmax	pmax			
	comp=Z,3.0nm,1.0s,mb4.2								
OBN					MLR	MLR			
	comp=Z,100nm,18.0s,MS4.1								
VSR	**Storozhevoye**	**74.30**	**321**	*eP*		**P**	**16 22 17.9**	**+0.4**	
VSR					pmax	pmax			
	comp=Z,8.0nm,0.9s,mb4.7								
VSR					pmax	pmax			
	comp=N,3.0nm,0.4s								
VSR					pmax	pmax			
	comp=E,3.0nm,0.4s								
KAF	**Kangasniemi**	**74.31**	**334**	*eP*		**P**	**16 22 14.3**	**-3.0**	
KAF					pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.3								
KAF	**Kangasniemi**	**74.31**	**334**	*ep*		**P**	**16 22 14.3**	**-3.0**	
	comp=Z,2.9nm,0.8s,mb4.3								
VORD	**Divnogorie**	**74.36**	**320**	*eP*		**P**	**16 22 17.4**	**-0.4**	
VORD					pmax	pmax			
	comp=N,10.0nm,0.5s								
VORD					pmax	pmax			
	comp=E,3.0nm,0.5s								
VORD					pmax	pmax			
	comp=Z,4.0nm,0.5s,mb4.6								
FINES	**FINESS Array B**	**74.80**	**334**		P	**P**	**16 22 20.4**	**+0.3**	
	comp=Z,3.7nm,0.8s,mb4.3,baz=53,slow=7.4,SNR=6.2								
KIV	**Kislovodsk**	**75.78**	**313**ǁ	*eP*		**P**	**16 22 28.1**	**+2.0**	
KIV					pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.8								
GNI	**Garni**	**76.27**	**309**ĥ	*eP*		**P**	**16 22 31.0**	**+2.0**	
GNI					pmax	pmax			
	comp=Z,12nm,1.7s								
LRM	**Limekiln Ridge**	**77.99**	**44**	*eP*		**P**	**16 22 38.9**	**+0.3**	
	comp=Z,20nm,0.9s,mb5.0								
NVAR	**Mina Array Bea**	**78.02**	**52**	P		**P**	**16 22 39.7**	**+0.8**	
NVAR	**Mina Array Bea**	**78.02**	**52**	P		**P**	**16 22 39.7**	**+0.8**	
	comp=Z,1.4nm,0.7s,mb4.0,baz=290,slow=5.7,SNR=12								
RPZ	**Rata Peaks**	**78.59**	**159**	P		**P**	**16 22 41.7**	**+0.1**	
	comp=Z,11nm,0.9s,mb4.8,baz=34,slow=3.6,SNR=2.8								
AKASG	**Malin Array Be**	**79.85**	**324**	P		**P**	**16 22 48.8**	**+0.1**	
	comp=Z,1.9nm,0.6s,mb4.2,baz=47,slow=4.6,SNR=10								
AKBB	**Malin Array Si**	**79.85**	**324**	*eP*		**P**	**16 22 48.2**	**-0.5**	
NOA	**NORSAR Array B**	**80.32**	**338**	P		**P**	**16 22 51.0**	**-0.1**	
NOA					LR	LR	17 04 28.5		
NOA	**NORSAR Array B**	**80.32**	**338**	P		**P**	**16 22 51.0**	**-0.1**	
	comp=Z,2.3nm,0.8s,mb4.2,baz=41,slow=5.4,SNR=7.6								
NOA					LR	LR	17 04 28.5		
	comp=Z,29nm,18.2s,MS3.7,baz=285,slow=40								
PDAR	**Pinedale Array**	**81.39**	**45**	P		**P**	**16 22 57.1**	**0.0**	
	comp=Z,0.5nm,0.8s,mb3.5,baz=277,slow=3.9,SNR=4.6								
BR131	**Keskin Array S**	**83.74**	**313**	*eP*		**P**	**16 23 09.8**	**+0.4**	
	comp=Z,5.1nm,0.9s,mb4.7								
BRTR	**Keskin Array B**	**83.74**	**313**	P		**P**	**16 23 10.1**	**+0.6**	
	comp=Z,6.7nm,0.9s,mb4.8,baz=98,slow=3.7,SNR=30								
BRTR	**Keskin Array B**	**83.74**	**313**	*i* P		**P**	**16 23 10.5**	**+1.1**	
BRTR					pmax	pmax			
	comp=Z,7.0nm,0.9s								
ULM	**Lac du Bonnet**	**84.21**	**33**		LR	LR	17 03 37.8		
	comp=Z,39nm,19.5s,MS3.8,baz=53,slow=38								
DPC	**Dobruska-Polom**	**86.27**	**329**	*eP*		**P**	**16 23 21.8**	**-0.1**	
DPC	**Dobruska-Polom**	**86.27**	**329**	*eP*		**P**	**16 23 21.8**	**-0.1**	
MMAI	**Mount Meron Ar**	**86.39**	**306**	P		**P**	**16 23 22.2**	**-0.6**	
	comp=Z,1.5nm,0.7s,mb4.4,baz=112,slow=6.4,SNR=3.0								
CLL	**Collm**	**87.00**	**331**	*i* P		**P**	**16 23 25.5**	**+0.1**	
	comp=Z,5.0nm,0.9s,mb4.7								
CLL				*e*			16 23 43.0		
CLL	**Collm**	**87.00**	**331**	*i* P		**P**	**16 23 25.5**	**+0.1**	
CLL				*e*			16 23 43.0		
CLL					pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.7								
CLL	**Collm**	**87.00**	**331**	*i* P		**P**	**16 23 25.5**	**+0.1**	
	comp=Z,5.0nm,0.9s,mb4.7								
CLL				*es*	P	sP	16 23 43.0	+7.8	
KHC	**Kasperske Hory**	**88.38**	**329**	*eP*		**P**	**16 23 33.2**	**+1.1**	
KHC	**Kasperske Hory**	**88.38**	**329**	*eP*		**P**	**16 23 33.2**	**+1.1**	
CDF	**Champ du Feu**	**91.59**	**332**	*eP*		**P**	**16 23 46.2**	**-0.9**	
TXAR	**Lajitas Array**	**93.16**	**53**	P		**P**	**16 23 55.0**	**+0.3**	
	comp=Z,2.0nm,1.0s,mb4.5,baz=303,slow=4.2,SNR=12								
TXAR					LR	LR	17 04 16.3		
	comp=Z,47nm,18.1s,MS4.0,baz=180,slow=34								
LOR	**Lormes**	**93.87**	**333**	*eP*		**P**	**16 23 56.7**	**-1.0**	
LPL	**La Plagne**	**94.12**	**331**	*eP*		**P**	**16 23 58.1**	**-0.8**	
	comp=Z,13nm,1.1s,mb5.0								
LPL	**La Plagne**	**94.12**	**331**	*eP*		**P**	**16 23 58.1**	**-0.8**	
	comp=Z,6.6nm,1.1s,mb5.0								
LPL	**La Plagne**	**94.12**	**331**	*eP*		**P**	**16 23 58.1**	**-0.8**	
LPL					pmax	pmax			
	comp=Z,7.0nm,1.1s,mb5.0								
LPG	**La Plagne**	**94.13**	**331**	*eP*		**P**	**16 23 58.3**	**-0.6**	
	comp=Z,6.7nm,0.8s,mb4.8								
LPG	**La Plagne**	**94.13**	**331**	*eP*		**P**	**16 23 58.3**	**-0.6**	
	comp=Z,3.3nm,0.8s,mb4.8								
LPG	**La Plagne**	**94.13**	**331**	*eP*		**P**	**16 23 58.3**	**-0.6**	
LPG					pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.8								
SSF	**Saint Saulge**	**94.17**	**333**	*eP*		**P**	**16 23 58.0**	**-1.1**	
	comp=Z,9.4nm,1.0s,mb4.9								
SSF	**Saint Saulge**	**94.17**	**333**	*eP*		**P**	**16 23 58.0**	**-1.1**	
	comp=Z,4.7nm,1.0s,mb4.9								
SSF	**Saint Saulge**	**94.17**	**333**	*eP*		**P**	**16 23 58.0**	**-1.1**	
SSF					pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.9								
SMF	**Signal de Mont**	**94.39**	**333**	*eP*		**P**	**16 23 58.9**	**-1.1**	
AVF	**Avril sur Loir**	**94.46**	**333**	*eP*		**P**	**16 23 59.4**	**-1.0**	
LPAZ	**La Paz**	**148.52**	**70**	PKPbc		PKPbc	16 30 28.9	+1.2	
	comp=Z,2.3nm,0.6s,baz=344,slow=7.0,SNR=4.9								
PLCA	**Paso Flores**	**151.51**	**120**	PKPbc		PKPbc	16 30 35.4	+1.2	
	comp=Z,1.9nm,0.8s,baz=288,slow=6.4,SNR=3.0								

*NDI **29** 16:14:52.8±2.3,31°.02N×83°.67E,h10km,mb3.8, mb3.8(NEIC)*
*IDC **29** 16:14:53.7±0.9,30°.60N×83°.26E,h0km,mb3.8/10, mb1 3.9/12,mb1mx3.7/29,mbtmpg3.7/12,ML3.1/2,MS3.0/2, Ms1 3.1/2,ms1mx2.4/32,Error ellipse: s-maj=27.2km s-min=16.6km az=55.0*
*NEIC **29** 16:14:55.5±0.8,30°.64N×83°.17E,h10km,mb3.8/3,Error ellipse: s-maj=19.6km s-min=10.7km az=49.0*

ISC 29 16:14:56.9±2.5,30°.75N±0°.05×83°.34E±0°.04,h16km±15km, n28,σ1t9'14/33,mb3.5/11,MS3.0/2,Xizang

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
					Op	ISC	h m s	ISC
PTH	**Pithoragarh**	**2.96**	**247**	*ex*		**Pn**	**16 15 39.1**	**-4.1**
PTH				*eS*		**Sb**	**16 16 24.2**	**-0.9**
KLP	**Kalpa**	**4.43**	**281**	*ePKP*		**Pb**	**16 16 15.2**	**+0.8**
KLP				*eS*		**Sb**	**16 17 06.9**	**-0.8**
NDI	**New Delhi**	**5.71**	**250**	*ex*		**Pn**	**16 16 18.0**	**-3.0**
NDI				*eS*		**Sn**	**16 17 28.0**	**+1.7**
SONA	**Sohna**	**6.00**	**247**	*ePKP*		**Pn**	**16 16 26.5**	**+1.6**
SONA				*eS*		**Sn**	**16 17 34.9**	**+1.6**
KUDL	**Kundal**	**6.51**	**248**	*ex*		**Pn**	**16 16 28.0**	**-4.1**
KUDL				*eS*		**Sn**	**16 17 44.9**	**-1.2**
LSA	**Lhasa**	**6.84**	**97**	*ePn*		**Pn**	**16 16 40.4**	**+3.8**
KHET	**Khetri**	**7.09**	**250**	AMb		AMB	16 16 36.4	
	comp=Z,3.8nm,1.2s							
KHET				*eS*		**Sn**	**16 18 00.7**	**+0.3**
KSH	**Kashi**	**10.62**	**327**	*eP*		**Pn**	**16 17 28.5**	**+0.1**
KSH				*epP*			16 17 32.0	
KSH				*esP*			16 17 34.3	
KSH				*ePP*			16 17 36.8	
KSH				*eS*		**Sn**	**16 19 24.8**	**-2.2**
KSH				*esS*			16 19 30.3	
KSH				*eSS*			16 19 38.5	
KSH					pmax	pmax		
	comp=Z,1.0nm,0.7s							
KSH					pmax	pmax		
	comp=Z,41nm,2.3s							
KSH					LR	LR		
	comp=N,150nm,5.8s							
KSH					LR	LR		
	comp=E,190nm,7.4s							
KSH					LR	LR		
	comp=Z,140nm,5.0s							
GTA	**Gaotai**	**16.00**	**53**	*eP*		**Pn**	**16 18 46.3**	**+5.1**
GTA					pP	pP	16 18 50.8	+1.8
GTA					sP	sP	16 18 53.5	+2.4
GTA					pmax	pmax		

	comp=Z,7.0nm,1.6s								
MKAR	**Makanchi Array**	**16.04**	**357**		Pn	**Pn**	**16 18 40.5**	**-1.2**	
	comp=Z,0.0nm,0.3s,baz=182,slow=11,SNR=2.4								
CMAR	**Chiang Mai Arr**	**18.71**	**127**		P	**Pn**	**16 19 14.0**	**-1.2**	
	comp=Z,0.1nm,0.3s,baz=311,slow=10,SNR=12								
KURK	**Kurchatov**	**20.26**	**351**	*eP*		**P**	**16 19 32.4**	**+1.0**	
	comp=Z,7.2nm,1.0s								
KURK	**Kurchatov**	**20.26**	**351**	*eP*		**P**	**16 19 31.6**	**+0.2**	
	comp=Z,1.7nm,0.2s,baz=174,slow=9.5,SNR=14								
ZALV	**Zalesovo Beam**	**23.21**	**2**		P	**P**	**16 20 03.6**	**+0.6**	
	comp=Z,0.6nm,0.5s,mb3.3,baz=166,slow=8.8,SNR=2.1								
BVAR	**Borovoye Array**	**24.18**	**341**		P	**P**	**16 20 12.9**	**+0.5**	
BVAR	**Borovoye Array**	**24.18**	**341**		P	**P**	**16 20 12.9**	**+0.5**	
	comp=Z,1.9nm,0.7s,mb3.6,baz=155,slow=10,SNR=7.3								
SONM	**Songino Array**	**24.54**	**39**		P	**P**	**16 20 17.3**	**+1.6**	
	comp=Z,1.0nm,0.7s,mb3.5,baz=251,slow=7.5,SNR=2.4								
ULN	**Ulaanbaatar**	**24.92**	**40**	*eP*		**P**	**16 20 20.1**	**+1.0**	
	comp=Z,2.7nm,1.2s,mb3.6								
ABKAR	**Akbulak array**	**25.57**	**323**	*eP*		**P**	**16 20 26.4**	**+1.3**	
	comp=Z,0.7nm,0.6s,mb3.4								
AKTK	**Aktyubinsk**	**27.28**	**323**	P		**P**	**16 20 40.7**	**+0.3**	
AKTO	**Aktyubinsk**	**27.28**	**323**	P		**P**	**16 20 40.7**	**+0.3**	
	comp=Z,0.3nm,0.3s,mb3.3,baz=90,slow=10,SNR=2.6								
KSRS	**Korea Array**	**37.25**	**67**	P		**P**	**16 22 07.6**	**-0.2**	
	comp=Z,0.5nm,0.5s,mb3.6,baz=279,slow=9.1,SNR=3.8								
KSRS					LR	LR	16 38 43.3		
	comp=Z,33nm,19.7s,MS3.1,baz=10.0,slow=38								
NOA	**NORSAR Array B**	**55.04**	**326**		LR	LR	16 50 59.1		
	comp=Z,11nm,19.6s,MS2.9,baz=180,slow=39								
WRA	**Warramunga Arr**	**70.29**	**129**		P	**P**	**16 26 08.9**	**-0.9**	
	comp=Z,1.3nm,0.6s,mb4.0,baz=325,slow=6.3,SNR=25								
ASAR	**Alice Springs**	**72.64**	**132**		P	**P**	**16 26 23.3**	**-0.6**	
	comp=Z,0.5nm,1.0s,mb3.4,baz=330,slow=6.6,SNR=4.8								
TORD	**Torodi Ar. Bea**	**76.30**	**277**		P	**P**	**16 26 44.6**	**-0.9**	
TORD	**Torodi Ar. Bea**	**76.30**	**277**		P	**P**	**16 26 44.6**	**-0.9**	
	comp=Z,0.6nm,0.8s,mb3.6,baz=49,slow=4.4,SNR=3.5								
ILAR	**Eielson Array**	**77.08**	**20**		P	**P**	**16 26 48.4**	**-0.7**	
	comp=Z,0.6nm,0.9s,mb3.5,baz=303,slow=4.9,SNR=5.9								

IDC 29 16:36:13.6±2.9,0°.06S×29°.68E,h0km,mb4.0/2,mb1 3.9/3, mb1mx3.5/21,mbtmpg3.9/3,ML3.5/1,MS3.3/2,Ms1 3.3/2, ms1mx2.7/27,Error ellipse: s-maj=78.0km s-min=24.4km az=14.0,Zaire

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
					Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**7.64**	**98**		Pn	Pn	16 38 08.4	+2.1
	0.7nm,0.3s,baz=354,slow=19,SNR=3.5							
KMBO					Sn	Sn	16 39 25.6	-8.1
	1.7nm,0.3s,baz=0.0,slow=20,SNR=2.5							
KMBO					Lg		16 40 13.5	
	2.9nm,0.3s,baz=29,slow=18,SNR=6.0							
ATD	**Arta Tunnel**	**17.42**	**48**		LR	LR	16 46 22.6	
	comp=Z,64nm,21.4s,baz=267,slow=35							
BOSA	**Boshof**	**28.71**	**188**		LR	LR	16 53 33.7	
	comp=Z,87nm,18.0s,baz=154,slow=36							
TORD	**Torodi Ar. Bea**	**30.68**	**296**		P	P	16 42 30.0	-0.3
	0.7nm,0.5s,baz=109,slow=7.3,SNR=6.3							
BRTR	**Keskin Array B**	**39.76**	**5**		P	P	16 43 48.3	+0.3
	0.7nm,0.8s,baz=168,slow=8.8,SNR=3.8							

*ISCJB **29** 16:36:43.0±1.5,35°.69N±0°.06×27°.48E±0°.06,h1km±11km, Error ellipse: s-maj=12.1km s-min=4.1km az=143.1*
*ATH **29** 16:36:43.2,35°.42N×27°.60E,h19km±2km,MD3.4/6*
*NEIC **29** 16:36:43.2,35°.42N×27°.60E,h19km,MD3.4(ATH),After ATH.*
*ISK **29** 16:36:43.4,35°.53N×27°.36E,h32km,MD3.3*
*CSEM **29** 16:36:45.4±0.3,35°.70N×27°.42E,h20km,MD3.4, Error ellipse: s-maj=11.8km s-min=4.7km az=139.0*

ISC 29 16:36:45.2±0.9,35°.68N±0°.06×27°.48E±0°.06,h16km±6km, n33,σ1t9'13/52,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
					Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.29**	**242**	*ePb*		**Pg**	**16 36 51.4**	**-0.1**
KARP				*eSb*		**Sg**	**16 36 57.1**	**+1.3**
KARP	**Karpathos**	**0.29**	**242**	*ePB*		**Pg**	**16 36 51.4**	**-0.1**
KARP				*eSB*		**Sg**	**16 36 57.1**	**+1.3**
KARP	**Karpathos**	**0.29**	**242**	*ePb*		**Pg**	**16 36 51.4**	**-0.1**
KARP				*eSb*		**Sg**	**16 36 57.1**	**+1.3**
ARG	**Arkhangelos**	**0.75**	**44**	*ePn*		**Pn**	**16 37 01.1**	**0.0**
ARG				*eSn*		**Sn**	**16 37 12.8**	**+0.7**
ARG	**Arkhangelos**	**0.75**	**44**	*ePN*		**Pn**	**16 37 01.1**	**0.0**
ARG				*eSN*		**Sn**	**16 37 12.8**	**+0.7**
ARG	**Arkhangelos**	**0.75**	**44**	*ePn*		**Pn**	**16 37 01.1**	**0.0**
ARG				*eSn*		**Sn**	**16 37 12.8**	**+0.7**
DAT	**Datca**	**1.05**	**4**	*ePN*		**Pn**	**16 37 05.0**	**-0.2**
DAT				*eSN*		**Sn**	**16 37 20.3**	**+0.8**
DAT	**Datca**	**1.05**	**4**	*ePn*		**Pn**	**16 37 05.0**	**-0.2**
DAT				*eSn*		**Sn**	**16 37 20.3**	**+0.8**
ZKR	**Zakros**	**1.18**	**242**	*ePn*		**Pn**	**16 37 04.8**	**-2.2**
ZKR				*eSn*		**Sn**	**16 37 21.5**	**-1.2**
ZKR	**Zakros**	**1.18**	**242**	*ePN*		**Pn**	**16 37 04.8**	**-2.2**
ZKR				*eSN*		**Sn**	**16 37 21.5**	**-1.2**
ZKR	**Zakros**	**1.18**	**242**	*ePn*		**Pn**	**16 37 04.8**	**-2.2**
ZKR				*eSn*		**Sn**	**16 37 21.5**	**-1.2**
BODT	**Bodrum**	**1.38**	**354**	*ePN*		**Pn**	**16 37 08.6**	**-1.2**
BODT				*eSN*		**Sn**	**16 37 27.6**	**-0.1**
BODT	**Bodrum**	**1.38**	**354**	*ePn*		**Pn**	**16 37 08.6**	**-1.2**
BODT				*eSn*		**Sn**	**16 37 27.7**	**0.0**
NPS	**Neapolis**	**1.58**	**255**	*ePn*		**Pn**	**16 37 13.3**	**+0.8**
NPS	**Neapolis**	**1.58**	**255**	*ePN*		**Pn**	**16 37 13.3**	**+0.8**
NPS	**Neapolis**	**1.58**	**255**	*ePn*		**Pn**	**16 37 13.3**	**+0.8**
YER	**Yerkesik**	**1.59**	**24**	*ePN*		**Pn**	**16 37 12.9**	**+0.2**
YER	**Yerkesik**	**1.59**	**24**	*ePn*		**Pn**	**16 37 12.9**	**+0.3**
MLSB	**Milas**	**1.63**	**8**	*ePN*		**Pn**	**16 37 13.0**	**-0.2**
MLSB	**Milas**	**1.63**	**8**	*ePn*		**Pn**	**16 37 13.0**	**-0.2**
LAST	**Lasithi**	**1.71**	**253**	*ePn*		**Pn**	**16 37 14.3**	**-0.1**
LAST				*eSn*		**Sn**	**16 37 37.8**	**+1.9**
LAST	**Lasithi**	**1.71**	**253**	*ePN*		**Pn**	**16 37 14.3**	**-0.1**
LAST				*eSN*		**Sn**	**16 37 37.8**	**+1.9**
LAST	**Lasithi**	**1.71**	**253**	*ePn*		**Pn**	**16 37 14.3**	**-0.1**
APE	**Apeiranthos**	**2.09**	**312**	*ePN*		**Pn**	**16 37 17.3**	**-2.3**
APE	**Apeiranthos**	**2.09**	**312**	*ePn*		**Pn**	**16 37 17.3**	**-2.3**
IDI	**Anoyia**	**2.15**	**260**	*ePb*		**Pb**	**16 37 20.9**	**-2.9**
IDI				*eSn*		**Sn**	**16 37 49.2**	**+2.5**
IDI	**Anoyia**	**2.15**	**260**	*ePB*		**Pb**	**16 37 20.9**	**-2.9**
IDI				*eSN*		**Sn**	**16 37 49.2**	**+2.5**
GLHS	**Gihisar (BURDU**	**2.19**	**47**	*ePN*		**Pn**	**16 37 21.1**	**+0.1**
GLHS	**Gihisar (BURDU**	**2.19**	**47**	*ePn*		**Pn**	**16 37 21.1**	**+0.1**
ELL	**Elmali**	**2.23**	**61**	*ePN*		**Pn**	**16 37 21.5**	**0.0**
ELL				*eSN*		**Sn**	**16 37 48.9**	**+0.2**
ELL	**Elmali**	**2.23**	**61**	*ePn*		**Pn**	**16 37 21.5**	**0.0**
ELL				*eSn*		**Sn**	**16 37 48.9**	**+0.2**
DENT	**Denizli**	**2.41**	**31**	*ePN*		**Pn**	**16 37 24.7**	**+0.7**
DENT	**Denizli**	**2.41**	**31**	*ePn*		**Pn**	**16 37 24.7**	**+0.7**

*ISCJB **29** 16:42:11.6±1.4,37°.79N±0°.08×35°.40E±0°.07,h10km, Error ellipse: s-maj=12.6km s-min=7.5km az=163.6*
*DDA **29** 16:42:14.3,37°.43N×35°.53E,h6km±1km,Md2.8*

ISC 29 16:42:11.9±1.5,37°.80N±0°.09×35°.41E±0°.07,h10km,n4, σ1t9'34/6,Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
					Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.46**	**134**	*ePG*		**Pg**	**16 42 21.2**	**+0.2**
KOZT				*eSG*		**Sg**	**16 42 27.3**	**+0.2**
KARA	**Karaisali**	**0.61**	**207**	*ePG*		**Pg**	**16 42 21.2**	**-2.5**
GULE	**Gulek**	**0.72**	**224**	*iP*		**Pg**	**16 42 26.5**	**+0.7**
GULE				*iS*		**Sg**	**16 42 35.8**	**+0.6**
SARI	**SarD1z-Kayseri**	**1.34**	**49**	*ePN*		**Pn**	**16 42 36.8**	**0.0**

*BJI **29** 16:48:44.7,10°.91N×91°.64E,h10km,mB4.5/1,mb4.4/5, Ms3.9/1*
*NEIC **29** 16:48:46.2±0.5,10°.73N×91°.73E,h10km,mb4.1/6,Error ellipse: s-maj=12.0km s-min=8.0km az=50.0*
*IDC **29** 16:48:48.8±1.0,10°.70N×91°.63E,h28km±4km,mb3.8/13, mb1 3.8/14,mb1mx3.7/26,mbtmpg3.7/14,ML3.8/1,MS3.3/5, Ms1 3.3/5,ms1mx2.9/34,Error ellipse: s-maj=33.0km s-min=12.9km az=56.0*

ISC 29 16:48:46.3±4.1,10°.75N±0°.07×91°.73E±0°.07,h10km±26km, h30km±1.1km:pP-P,n29,σ0s62/31,mb4.1/18,MS3.4/6,1C, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
					Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.37**	**41**		Pn	**Pn**	**16 51 15.2**	**0.0**
CMAR					Sn	**Sn**	**16 53 11.0**	**-0.5**
	0.2nm,0.3s,baz=236,slow=14,SNR=7.3							
CMAR					Sn	**Sn**	**16 53 11.0**	**-0.5**
	0.2nm,0.3s,baz=245,slow=27,SNR=2.9							
CHTO	**Chiang Mai**	**10.63**	**40**	*ePn*		**Pn**	**16 51 18.1**	**-0.7**
VIS	**Vishakhapatnam**	**10.69**	**311**	*i* P		**Pn**	**16 51 18.7**	**-1.0**
VIS				*i* S		**Sn**	**16 53 06.6**	**-13**
VIS				*ex*		x	16 53 13.6	
	comp=N,41nm,0.5s							
VIS				*ex*		x	16 53 19.0	
	comp=E,42nm,0.6s							
LSA	**Lhasa**	**18.87**	**358**	*eP*		**Pn**	**16 53 09.0**	**+1.6**
	comp=E,6.5nm,0.6s							
KSM	**Kuching**	**20.62**	**115**	*eP*		**P**	**16 53 25.8**	**-0.3**
	comp=E,4.4nm,0.7s							
GYA	**Guiyang**	**21.05**	**40**ĥ	*iP*		**P**	**16 53 30.8**	**+0.2**
GYA					pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5							
ENH	**Enshi**	**25.50**	**38**	*eP*		**P**	**16 54 14.3**	**-0.8**
	comp=Z,18nm,0.6s,mb4.8							
AAK	**Ala-Archa**	**35.15**	**338**	P		**P**	**16 55 40.7**	**+0.4**
	comp=Z,1.0nm,0.3s,mb4.2,baz=237,slow=11,SNR=3.5							
AAK					LR	LR	17 10 43.7	
	comp=Z,66nm,20.5s,MS3.4,baz=195,slow=37							
BJI	**Beijing**	**36.34**	**32**		P	**P**	**16 55 50.8**	**+0.3**
BJI					pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5							
BJI					LR	LR		
	comp=N,99nm,20.6s,MS3.8							
BJI					LR	LR		
	comp=E,110nm,17.2s,MS3.8							
MKAR	**Makanchi Array**	**36.81**	**349**		P	**P**	**16 55 54.6**	**+0.2**
MKAR					pP	pP	16 56 02.7	+5.4
MKAR					LR	LR	17 13 52.6	
MKAR	**Makanchi Array**	**36.81**	**349**		P	**P**	**16 55 54.6**	**+0.2**
	comp=E,1.0nm,0.6s,mb3.8,baz=165,slow=8.0,SNR=11							
MKAR					pP	pP	16 56 02.7	+5.4
	comp=E,4.7nm,0.9s,baz=159,slow=8.1,SNR=16							
MKAR					LR	LR	17 13 52.6	
	comp=E,29nm,19.7s,MS3.1,baz=173,slow=41							
KKAR	**Karatay Array**	**37.15**	**334**	*eP*		**P**	**16 55 58.1**	**+0.8**
	comp=E,3.2nm,0.8s,mb4.2							
SONM	**Songino Array**	**38.98**	**16**	P		**P**	**16 56 13.5**	**+0.8**
	comp=E,1.6nm,0.8s,mb3.8,baz=170,slow=9.0,SNR=4.8							
KURK	**Kurchatov**	**41.29**	**347**	*eP*		**P**	**16 56 31.3**	**-0.5**
	comp=E,5.4nm,1.0s,mb4.1							
KURK					pP	pP	16 56 39.5	+4.7
KURK					LR	LR	17 16 48.2	
KURK	**Kurchatov**	**41.29**	**347**	P		**P**	**16 56 31.7**	**-0.1**
	comp=E,1.1nm,0.9s,mb3.5,baz=169,slow=6.7,SNR=9.1							
KURK					pP	pP	16 56 39.5	+4.7
	comp=E,3.0nm,1.0s,baz=171,slow=6.3,SNR=15							
KURK					LR	LR	17 16 48.2	
	comp=E,40nm,20.2s,MS3.3,baz=130,slow=41							
KSRS	**Korea Array**	**41.99**	**45**	P		**P**	**16 56 38.2**	**+0.4**
	comp=E,0.5nm,0.5s,mb3.5,baz=233,slow=8.6,SNR=4.1							
ZALV	**Zalesovo Beam**	**43.44**	**354**	P		**P**	**16 56 49.3**	**0.0**
	comp=E,0.9nm,0.4s,mb3.8,baz=182,slow=10,SNR=7.3							
ZALV					pP	pP	16 56 57.8	+5.4
	comp=E,3.8nm,0.9s,baz=171,slow=10,SNR=5.8							
FITZ	**Fitzroy Crossi**	**44.07**	**130**		LR	LR	17 18 26.3	
	comp=E,71nm,18.3s,MS3.6,baz=215,slow=40							
ABKAR	**Akbulak array**	**46.59**	**332**	*eP*		**P**	**16 57 14.7**	**+0.2**
	comp=E,0.8nm,0.5s,mb3.9							
AKTK	**A

BUEV	**Buena Vista**	**0.70**	**75**	*i* P		Pg	17 20 32.3	+2.0
GB1A	**Borinquen Arri**	**0.71**	**74**	*i* P		Pg	17 20 32.6	+2.1
GB1A				*i* S		Sg	17 20 49.2	+9.5
SSN	**San Juan del S**	**0.72**	**19**	*e*P		Pg	17 20 34.4	+3.6
CUI	**Cuipilapa**	**0.91**	**87**	*i* P		Pg	17 20 34.9	+0.4
CONN	**Concepcion**	**1.05**	**26**	*e*P		Pg	17 20 39.8	+2.8
CONN				*e*S		Sg	17 20 46.7	-3.9
CONN				AML		AML	17 20 47.6	
	comp=Z,101nm,0.5s							
JCR	**Jicaral**	**1.23**	**128**	*e*P		Pg	17 20 36.5	-4.0
CSAN		**1.59**	**348**	*e*P		Pn	17 20 45.9	-0.4
CONN	**Copaltepe**	**1.63**	**343**	*e*P		Pn	17 20 46.1	-0.8
CGA2	**Cerro Gallo 2**	**1.71**	**110**	*e*P		Pn	17 20 45.8	-2.1
HUEN		**1.71**	**357**	*e*P		Pn	17 20 48.0	0.0
MOMN	**Momotombo**	**1.83**	**346**	*e*P		Pn	17 20 49.6	-0.1
PRS1	**Puriscal**	**1.86**	**110**	⇓*e*P		Pn	17 20 48.1	-1.9
CNGN	**Cerro Negro**	**1.96**	**342**	*e*P		Pn	17 20 53.5	+2.0
LAJ	**Bijagual**	**2.08**	**111**	*e*P		Pn	17 20 45.8	-7.2
LAJ				*e*S		Sn	17 21 20.0	+0.4
CRIN	**San Cristobal**	**2.27**	**336**	*e*P		Pn	17 20 55.1	-0.6
URSC	**Urasca**	**2.41**	**109**	*e*P		Pn	17 20 54.3	-3.2
BUS	**Buena Vista**	**2.53**	**114**	*e*P		Pn	17 20 55.1	-4.1

NEIC ***29*** *17:20:52.3, 18.16N×67.61W, h67km, MD3.1(RSPR), After RSPR.*

RSPR 29 17:20:52.3, 18.16N×67.61W, h67km±1km, MD3.1/16, 36C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
IMO	**Isla Mona**	**0.29**	**260**	⇑*e*P		Pn	17 21 02.2	-0.8
IMO	**Isla Mona**	**0.29**	**260**	⇓*e*P		Pn	17 21 02.1	-1.0
IMO				⇑*e*P			17 21 02.2	
LSP	**Las Mesas**	**0.49**	**88**	⇑*e*P		Pn	17 21 03.8	-0.9
LSP	**Las Mesas**	**0.49**	**88**	⇓*e*P		Pn	17 21 03.8	-0.9
CRPR	**Cabo Rojo, PR**	**0.50**	**108**	*e*S		Sn	17 21 13.6	-0.3
CRPR	**Cabo Rojo, PR**	**0.50**	**108**	⇑*e*P		Pn	17 21 04.6	-0.2
CRPR	**Cabo Rojo, PR**	**0.50**	**108**	⇑*e*P		Pn	17 21 04.6	-0.2
CRPR	**Cabo Rojo, PR**	**0.50**	**108**	⇑*e*P		Pn	17 21 04.6	-0.2
CRPR				*e*S		Sn	17 21 13.6	-0.3
AGPR	**Aguadilla, PR**	**0.56**	**57**	*e*S		Sn	17 21 14.7	-0.4
AGPR	**Aguadilla, PR**	**0.56**	**57**	⇑*e*P		Pn	17 21 04.9	-0.6
AGPR	**Aguadilla, PR**	**0.56**	**57**	*e*S		Sn	17 21 14.9	-0.2
AGPR	**Aguadilla, PR**	**0.56**	**57**	⇑*e*P		Pn	17 21 04.9	-0.5
AGPR	**Aguadilla, PR**	**0.56**	**57**	⇑*e*P		Pn	17 21 04.9	-0.5
AGPR				*e*S		Sn	17 21 14.7	-0.4
AGPR				*e*S		Sn	17 21 14.9	-0.2
GBPR	**Guanica, Bosqu**	**0.71**	**105**	⇑*i*P		Pn	17 21 06.7	-0.4
GBPR				*e*S		Sn	17 21 17.8	-0.3
GBPR	**Guanica, Bosqu**	**0.71**	**105**	⇑*e*P		Pn	17 21 06.7	-0.4
LRS	**Lares**	**0.73**	**80**	⇓*i*P		Pn	17 21 06.7	-0.7
LRS	**Lares**	**0.73**	**80**	⇑*e*P		Pn	17 21 06.5	-0.9
LRS	**Lares**	**0.73**	**80**	⇑*e*P		Pn	17 21 06.5	-0.9
LRS				⇓*i*P			17 21 06.7	
AOPR	**Arecibo Observ**	**0.83**	**77**	*e*S		Sn	17 21 20.3	-0.2
AOPR	**Arecibo Observ**	**0.83**	**77**	⇑*e*P		Pn	17 21 07.8	-0.7
AOPR	**Arecibo Observ**	**0.83**	**77**	*e*S		Sn	17 21 20.9	+0.4
AOPR	**Arecibo Observ**	**0.83**	**77**	⇑*e*P		Pn	17 21 07.8	-0.7
AOPR	**Arecibo Observ**	**0.83**	**77**	⇑*e*P		Pn	17 21 07.8	-0.7
AOPR				*e*S		Sn	17 21 20.3	-0.2
AOPR				*e*S		Sn	17 21 20.9	+0.4
OBIP	**Obispado Ponce**	**0.96**	**97**	*e*S		Sn	17 21 23.3	0.0
OBIP	**Obispado Ponce**	**0.96**	**97**	⇑*e*P		Pn	17 21 09.5	-0.6
OBIP	**Obispado Ponce**	**0.96**	**97**	⇑*e*P		Pn	17 21 09.5	-0.6
OBIP	**Obispado Ponce**	**0.96**	**97**	⇑*e*P		Pn	17 21 09.5	-0.6
OBIP				*e*S		Sn	17 21 23.3	0.0
CELP	**Cerrillos**	**0.98**	**95**	⇑*e*P		Pn	17 21 09.7	-0.6
CELP				*e*S		Sn	17 21 23.0	-0.8
CELP	**Cerrillos**	**0.98**	**95**	⇑*e*P		Pn	17 21 09.7	-0.7
CELP				*e*S		Sn	17 21 23.6	-0.1
CELP	**Cerrillos**	**0.98**	**95**	⇑*e*P		Pn	17 21 09.7	-0.6
CELP				*e*S		Sn	17 21 23.0	-0.8
CELP				*e*S		Sn	17 21 23.6	-0.1
ICM	**Isla Caja Muer**	**1.06**	**104**	⇑*i*P		Pn	17 21 10.6	-0.9
ICM	**Isla Caja Muer**	**1.06**	**104**	*e*S		Sn	17 21 25.4	-0.3
ICM	**Isla Caja Muer**	**1.06**	**104**	⇑*i*P		Pn	17 21 10.4	-1.1
ICM				⇑*i*P			17 21 10.6	
ICM				*e*S		Sn	17 21 25.2	-0.6
ICM				*e*S		Sn	17 21 25.4	-0.3
SJG	**San Juan**	**1.39**	**92**	*e*Pn		Pn	17 21 10.3	-5.4
SJG				*e*Sn		Sn	17 21 29.5	-3.7
CBYP	**Canovanas**	**1.67**	**86**	⇑*e*P		Pn	17 21 18.9	-0.5
CBYP	**Canovanas**	**1.67**	**86**	*e*S		Sn	17 21 40.0	+0.2
CBYP	**Canovanas**	**1.67**	**86**	⇓*e*P		Pn	17 21 18.7	-0.6
CBYP				⇑*e*P			17 21 18.9	
CBYP				*e*S		Sn	17 21 38.7	-1.1
CBYP				*e*S		Sn	17 21 40.0	+0.2
HUMP	**Col San Antoni**	**1.67**	**90**	⇓*e*P		Pn	17 21 19.4	-0.1
HUMP	**Col San Antoni**	**1.67**	**90**	*e*S		Sn	17 21 39.0	-1.0
HUMP	**Col San Antoni**	**1.67**	**90**	⇑*e*P		Pn	17 21 19.3	-0.1
HUMP	**Col San Antoni**	**1.67**	**90**	*e*S		Sn	17 21 39.7	-0.2
HUMP	**Col San Antoni**	**1.67**	**90**	⇑*e*P		Pn	17 21 19.3	-0.1
HUMP				*e*S		Sn	17 21 39.0	-1.0
HUMP				*e*S		Sn	17 21 39.7	-0.2
SMN1	**Samana, DR**	**1.88**	**303**	⇑*e*P		Pn	17 21 21.9	-0.3
MTP	**Monte Pirata**	**1.95**	**92**	⇑*e*P		Pn	17 21 23.0	-0.2
MTP	**Monte Pirata**	**1.95**	**92**	*e*S		Sn	17 21 46.6	-0.2
MTP	**Monte Pirata**	**1.95**	**92**	⇑*e*P		Pn	17 21 22.7	-0.5
MTP	**Monte Pirata**	**1.95**	**92**	⇑*e*P		Pn	17 21 22.7	-0.5
MTP				⇑*e*P			17 21 23.0	
MTP				*e*S		Sn	17 21 46.6	-0.2
STVI	**Saint Thomas**	**2.53**	**85**	⇑*e*P		Pn	17 21 30.7	-0.3
STVI	**Saint Thomas**	**2.53**	**85**	*e*S		Sn	17 21 59.7	-1.0
STVI	**Saint Thomas**	**2.53**	**85**	⇑*e*P		Pn	17 21 30.6	-0.4
STVI	**Saint Thomas**	**2.53**	**85**	*e*S		Sn	17 22 00.6	-0.1
STVI	**Saint Thomas**	**2.53**	**85**	⇑*e*P		Pn	17 21 30.6	-0.4
STVI				*e*S		Sn	17 21 59.7	-1.0
STVI				*e*S		Sn	17 22 00.6	-0.1
TBVI	**Tortola**	**2.85**	**84**	⇑*e*P		Pn	17 21 34.3	-1.1
SDDR	**Presa de Saban**	**3.59**	**284**	*e*Pn		Pn	17 21 47.7	+2.2
SDDR				*e*Sn		Sn	17 22 31.9	+5.2

NEIC ***29*** *17:31:13.1±1.2, 22.66N×92.55E, h35km, Error ellipse: s-maj=47.5km s-min=8.1km az=55.0*
ISCJB ***29*** *17:31:17.9±1.0, 23.5N±0.1×94.0E±0.2, h74km±11km, mb3.4/4, Error ellipse: s-maj=28.7km s-min=7.0km az=144.1*
IDC ***29*** *17:31:18.9±4.4, 23.35N×93.79E, h68km±37km, mb3.2/4, mb1 3.4/5, mb1mx3.1/25, mbtmp3.2/5, ML4.0/1, Error ellipse: s-maj=82.3km s-min=17.6km az=58.0*

ISC 29 17:31:19.7±0.9, 23.5N±0.1×94.0E±0.2, h69km±10km, n12, σ0s88/16, mb3.4/4, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
IMP	**Imphal**	**1.25**	**357**	*e*PKP		**Pn**	**17 31 42.0**	**+0.6**
IMP				*e*S		**Sn**	**17 31 57.0**	**-0.6**
SHL	**Shillong**	**2.81**	**317**	*i* PN		**Pn**	**17 32 04.0**	**+1.7**
SHL				*i* SN		**Sn**	**17 32 33.0**	**-2.0**
CHTO	**Chiang Mai**	**6.57**	**135**	*e*Pn		**Pn**	**17 32 54.0**	**+0.3**
LSA	**Lhasa**	**6.66**	**338**	Pg		**Pn**	**17 32 55.0**	**+0.1**
LSA				Sg		Px	17 33 27.5	
LSA				smax				
	comp=N,40nm,0.7s							
LSA				smax				
	comp=E,10.0nm,0.6s							
LSA	**Lhasa**	**6.66**	**338**	*e*Pn		**Pn**	**17 32 55.5**	**+0.6**
	comp=E,7.3nm,0.4s							
LSA				*e*Sn		**Sn**	**17 33 51.0**	**-18**
CMAR	**Chiang Mai Arr**	**6.83**	**137**	P		**Pn**	**17 32 57.9**	**+0.6**
	comp=E,0.7nm,0.3s,baz=310,slow=14,SNR=21							
CMAR				S		**Sn**	**17 34 12.7**	**-0.9**
	comp=E,0.1nm,0.3s,baz=310,slow=18,SNR=2.7							
MK31	**Makanchi Array**	**25.06**	**341**	P		**P**	**17 36 37.9**	**+0.5**
MKAR	**Makanchi Array**	**25.06**	**341**	P		**P**	**17 36 38.0**	**+0.6**
MKAR	**Makanchi Array**	**25.06**	**341**	P		**P**	**17 36 38.0**	**+0.6**
	comp=E,0.4nm,0.6s,mb3.0,baz=151,slow=8.9,SNR=5.0							
KURK	**Kurchatov**	**29.66**	**340**	P		**P**	**17 37 18.0**	**-0.6**
	comp=E,0.2nm,0.5s,mb3.0,baz=156,slow=7.1,SNR=3.1							
WRA	**Warramunga Arr**	**58.42**	**134**	P		**P**	**17 41 07.7**	**-0.7**
	comp=E,0.2nm,0.3s,mb3.6,baz=322,slow=7.5,SNR=11							
ASAR	**Alice Springs**	**60.84**	**138**	P		**P**	**17 41 24.9**	**-0.1**
	comp=E,0.5nm,0.4s,mb3.9,baz=318,slow=6.6,SNR=30							

IDC ***29*** *17:39:47.8±3.2, 23.68S×179.82W, h443km±38km, mb3.4/7, mb1 3.7/9, mb1mx3.4/18, mbtmp3.4/9, Error ellipse: s-maj=27.8km s-min=17.6km az=153.0*

ISCJB ***29*** *17:39:48.7±1.9, 23.70S±0.08×179.85W±0.10, h473km, 24km, mb4.1/19, Error ellipse: s-maj=14.3km s-min=12.2km az=18.0*
NEIC ***29*** *17:39:49.1±1.4, 23.69S×179.84W, h461km±18km, mb4.1/8, Error ellipse: s-maj=16.3km s-min=12.8km az=148.0*

ISC 29 17:39:49.4±1.5, 23.77S±0.08×179.8W±0.1, h468km±20km, n31, σ0s95/31, mb4.1/19, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
AFI	**Afiamalu**	**12.41**	**39**	P		**P**	**17 42 31.9**	**-0.7**
AFI	**Afiamalu**	**12.41**	**39**	P		**P**	**17 42 31.9**	**-0.7**
	2.1nm,0.3s,baz=218,slow=17,SNR=3.6							
URZ	**Urewera**	**14.68**	**190**	P		**P**	**17 42 57.2**	**+0.6**
	0.8nm,0.3s,baz=23,slow=7.4,SNR=5.5							
URZ				S		**S**	**17 45 29.5**	**-1.7**
	0.8nm,0.3s,baz=167,slow=9.8,SNR=10							
RPZ	**Rata Peaks**	**21.27**	**199**	P		**P**	**17 44 02.1**	**+1.0**
	6.6nm,0.7s,mb4.3,baz=38,slow=12,SNR=3.8							
EIDS	**Eidsvold**	**26.50**	**261**	*e*P		**P**	**17 44 49.5**	**+1.4**
EIDS	**Eidsvold**	**26.50**	**261**	*e*P		**P**	**17 44 49.5**	**+1.4**
	5.5nm,0.6s,mb4.2							
CMSA	**Cobar Meteorol**	**31.43**	**248**	*e*P		**P**	**17 45 31.9**	**+0.9**
CTA	**Charters Tower**	**31.65**	**270**	*e*P		**P**	**17 45 34.3**	**+1.2**
	11nm,0.3s,mb4.8							
CTAO	**Charters Tower**	**31.65**	**270**	*e*P		**P**	**17 45 34.1**	**+1.0**
	16nm,0.4s,mb4.8							
MTSU	**Mount Surprise**	**33.91**	**273**	*e*P		**P**	**17 45 53.5**	**+1.2**
	18nm,0.6s,mb4.7							
PMG	**Port Moresby**	**34.62**	**289**	*e*P		**P**	**17 45 58.7**	**+0.3**
	35nm,1.0s,mb4.8							
STKA	**Stephens Creek**	**34.93**	**248**	*e*P		**P**	**17 46 01.8**	**+1.0**
	1.7nm,0.6s,mb3.6							
STKA	**Stephens Creek**	**34.93**	**248**	*e*P		**P**	**17 46 01.1**	**+0.3**
	0.5nm,0.7s,mb3.0							
STKA	**Stephens Creek**	**34.93**	**248**	P		**P**	**17 46 01.6**	**+0.8**
	1.9nm,0.6s,mb3.7,baz=104,slow=10,SNR=6.8							
ASAR	**Alice Springs**	**42.23**	**260**	P		**P**	**17 47 00.3**	**-0.1**
	4.9nm,0.8s,mb4.0,baz=96,slow=7.3,SNR=132							
WB2	**Warramunga Arr**	**42.58**	**266**	*e*P		**P**	**17 47 02.5**	**-0.7**
WRA	**Warramunga Arr**	**42.59**	**266**	P		**P**	**17 47 02.8**	**-0.6**
	8.1nm,0.4s,mb4.5,baz=96,slow=8.4,SNR=374							
KAKA	**Kakadu**	**46.47**	**275**	*e*P		**P**	**17 47 32.6**	**-0.9**
	4.5nm,0.4s,mb4.2							
FORT	**Forrest**	**46.52**	**249**	*e*P		**P**	**17 47 32.9**	**-0.7**
	26nm,0.6s,mb4.8							
KNA	**Kununurra**	**48.84**	**270**	*e*P		**P**	**17 47 50.9**	**-0.4**
	3.2nm,0.2s,mb4.3							
FITZ	**Fitzroy Crossi**	**51.01**	**265**	*e*P		**P**	**17 48 07.3**	**0.0**
	7.4nm,0.7s,mb4.1							
MBWA	**Marble Bar**	**55.57**	**260**	*e*P		**P**	**17 48 38.2**	**-1.6**
	8.2nm,0.8s,mb4.1							
MORW	**Morawa**	**57.08**	**250**	*e*P		**P**	**17 48 49.4**	**-0.8**
QSPA	**South Pole Qui**	**66.31**	**180**	*e*P		**P**	**17 49 49.8**	**0.0**
	1.0nm,0.7s,mb3.5							
KSM	**Kuching**	**72.26**	**280**	*e*P		**P**	**17 50 25.5**	**-1.3**
	1.4nm,0.5s,mb3.8							
PMSA	**Palmer Station**	**78.96**	**157**	*e*P		**P**	**17 51 05.8**	**+2.5**
	7.4nm,0.8s,mb4.3							
NVAR	**Mina Array Bea**	**84.54**	**44**	P		**P**	**17 51 32.4**	**+0.1**
NVAR	**Mina Array Bea**	**84.54**	**44**	P		**P**	**17 51 32.4**	**+0.1**
	0.2nm,0.4s,mb3.1,baz=215,slow=6.0,SNR=3.2							
CMAR	**Chiang Mai Arr**	**89.65**	**290**	P		**P**	**17 51 57.5**	**+0.5**
	0.6nm,0.8s,mb3.5,baz=124,slow=3.1,SNR=5.8							
TXAR	**Lajitas Array**	**90.22**	**58**	P		**P**	**17 51 59.1**	**-0.2**
	0.6nm,0.7s,mb3.5,baz=215,slow=6.5,SNR=7.5							
BRTR	**Keskin Array B**	**147.64**	**307**	PKPbc		PKPbc	17 58 43.0	+2.4
	0.9nm,0.6s,baz=85,slow=4.5,SNR=5.4							

IDC ***29*** *17:44:44.6±2.1, 13.54N×93.30E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.4/24, mbtmp3.7/4, ML4.0/1, Error ellipse: s-maj=61.1km s-min=26.6km az=61.0*
NEIC ***29*** *17:44:46.2±1.2, 13.57N×93.34E, h10km, mb4.0/1, Error ellipse: s-maj=18.5km s-min=17.1km az=116.0*
ISCJB ***29*** *17:44:50.5±1.2, 13.75N±0.10×93.88E±0.06, h33km, mb3.7/4, Error ellipse: s-maj=14.6km s-min=7.6km az=168.3*

ISC 29 17:44:52.4±1.2, 13.72N±0.10×93.81E±0.06, h35km, n16, σ1s27/19, mb3.7/4, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
CM31	**Chiang Mai Arr**	**6.82**	**46**	*e*Pn		**Pn**	**17 46 32.2**	**+2.2**
	3.2nm,0.4s							
CM31				*e*Sn		**Sn**	**17 47 46.0**	**-0.5**
CMAR	**Chiang Mai Arr**	**6.82**	**46**	Pn		**Pn**	**17 46 32.8**	**+2.8**
	0.6nm,0.3s,baz=237,slow=15,SNR=32							
CMAR				Sn		**Sn**	**17 47 46.5**	**0.0**
	0.4nm,0.3s,baz=239,slow=26,SNR=4.8							
CHTO	**Chiang Mai**	**7.07**	**44**	*e*Pn		**Pn**	**17 46 35.5**	**+2.1**
CHTO				*e*Sn		**Sn**	**17 47 50.3**	**-2.3**
KULM	**Kulim**	**10.75**	**141**	Pn		**Pn**	**17 47 16.2**	**-7.7**
ODAN	**Odare**	**14.39**	**336**	*e*P		**Pn**	**17 48 13.8**	**+0.2**
	21nm,0.2s							
TAPN	**Taplejung**	**14.71**	**338**	*e*P		**Pn**	**17 48 17.9**	**-0.1**
	17nm,0.4s							
RAMN	**Ramite**	**14.79**	**334**	*e*P		**Pn**	**17 48 19.1**	**0.0**
	9.2nm,0.2s							
JIRN	**Jiri**	**15.59**	**334**	*e*P		**Pn**	**17 48 29.5**	**0.0**
	19nm,0.2s							
PKI	**Pulchoki**	**15.86**	**332**	*e*P		**Pn**	**17 48 33.7**	**+0.7**
	17nm,0.3s							
PKIN	**Phulchoki**	**15.87**	**332**	*e*P		**Pn**	**17 48 32.9**	**-0.2**
GKN	**Gorkha**	**16.59**	**330**	*e*P		**Pn**	**17 48 42.7**	**+0.4**
	10nm,0.3s							
KOLN	**Koldanda**	**16.91**	**327**	*e*P		**Pn**	**17 48 47.1**	**+0.7**
	7.6nm,0.3s							
KKM	**Kota Kinabalu**	**23.34**	**107**	P		**P**	**17 50 06.0**	**+8.1**
	2.0nm,0.5s,mb3.8							
MKAR	**Makanchi Array**	**34.36**	**346**	P		**P**	**17 51 33.7**	**-2.2**
	0.5nm,0.7s,mb3.5,baz=152,slow=6.5,SNR=4.2							
ZALV	**Zalesovo Beam**	**40.76**	**352**	P		**P**	**17 52 27.9**	**-2.0**
	0.6nm,0.3s,mb3.7,baz=161,slow=9.2,SNR=4.3							
FITZ	**Fitzroy Crossi**	**44.55**	**134**	P		**P**	**17 53 00.4**	**-0.7**
	1.0nm,0.8s,mb3.7,baz=311,slow=9.6,SNR=5.4							

IDC ***29*** *17:45:45.0±0.9, 19.19N×146.34E, h0km, mb3.8/12, mb1 3.9/13, mb1mx3.8/24, mbtmp3.7/13, ML3.2/1, Error ellipse: s-maj=27.9km s-min=15.9km az=90.0*
ISCJB ***29*** *17:45:50.5±2.4, 19.18N±0.07×146.2E±0.2, h55km±22km, mb3.9/17, Error ellipse: s-maj=25.6km s-min=11.3km az=0.7*
NEIC ***29*** *17:45:53.3±1.5, 19.19N×146.23E, h64km±14km, mb4.3/4, Error ellipse: s-maj=15.7km s-min=8.1km az=93.0*

ISC 29 17:45:51.4±1.7, 19.24N±0.05×146.2E±0.2, h43km±14km, n23, σ0s80/24, mb3.9/17, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
GUMO	**Guam**	**5.76**	**193**	Pn		**Pn**	**17 47 16.0**	**+1.6**
	10.0nm,0.3s,baz=311,slow=1.4,SNR=12							
GUMO				Sn		**Sn**	**17 48 18.8**	**-0.4**
	baz=211,slow=19,SNR=2.2							
CBIJ	**Chichi jima**	**8.64**	**336**	Sn		**Sn**	**17 49 28.9**	**-1.2**
	3.9nm,0.3s,baz=288,slow=19,SNR=3.4							
MJAR	**Matsushiro Arr**	**18.61**	**340**	P		**Pn**	**17 50 05.2**	**-0.6**
	0.1nm,0.3s,baz=171,slow=11,SNR=2.2							
KSRS	**Korea Array**	**24.16**	**322**	P		**P**	**17 51 04.5**	**+0.9**
	0.9nm,0.7s,mb3.3,baz=148,slow=8.7,SNR=5.4							
KMI	**Kunming**	**40.52**	**286**	P		**P**	**17 53 32.3**	**+5.7**
KMI				pmax		pmax		
	comp=Z,14nm,0.5s,mb4.8							
WRA	**Warramunga Arr**	**40.63**	**197**	P		**P**	**17 53 26.8**	**-0.7**
WRA	**Warramunga Arr**	**40.63**	**197**	P		**P**	**17 53 26.8**	**-0.7**
	comp=Z,0.6nm,0.3s,mb3.7,baz=16,slow=8.2,SNR=28							
FITZ	**Fitzroy Crossi**	**42.24**	**210**	P		**P**	**17 53 40.6**	**-0.1**
	comp=Z,0.8nm,0.3s,mb3.8,baz=36,slow=8.8,SNR=19							
SONM	**Songino Array**	**43.01**	**321**	P		**P**	**17 53 47.5**	**+0.9**
	comp=Z,0.6nm,0.6s,mb3.5,baz=134,slow=8.4,SNR=2.4							
ASAR	**Alice Springs**	**44.30**	**196**	P		**P**	**17 53 56.4**	**-0.7**
	comp=Z,0.3nm,0.4s,mb3.4,baz=15,slow=6.6,SNR=16							
CMAR	**Chiang Mai Arr**	**44.61**	**277**	P		**P**	**17 54 00.6**	**+0.7**
	comp=Z,0.1nm,0.4s,mb3.0,baz=73,slow=7.0,SNR=2.2							
MBWA	**Marble Bar**	**47.78**	**214**	*e*P		**P**	**17 54 23.9**	**-0.7**
	comp=Z,10nm,1.2s,mb4.7							
ZALV	**Zalesovo Beam**	**57.87**	**322**	P		**P**	**17 55 39.5**	**+0.8**
	comp=Z,0.5nm,0.4s,mb3.9,baz=96,slow=6.0,SNR=4.9							
MKAR	**Makanchi Array**	**58.42**	**314**	P		**P**	**17 55 44.1**	**+1.4**
	comp=Z,1.1nm,0.7s,mb4.0,baz=92,slow=9.1,SNR=10							
NWAO	**Narrogin (SRO)**	**58.79**	**208**	P		**P**	**17 55 44.4**	**-1.0**
BPAW	**Bear Paw Mtn.**	**61.07**	**27**	*e*P		**P**	**17 56 00.7**	**+0.1**
	comp=Z,0.8nm,0.5s,mb4.1							
KURK	**Kurchatov**	**61.18**	**318**	P		**P**	**17 56 01.1**	**-0.6**
KURK	**Kurchatov**	**61.18**	**318**	P		**P**	**17 56 02.5**	**+0.9**
	comp=Z,3.2nm,0.5s,mb4.7,baz=93,slow=7.6,SNR=14							
ILAR	**Eielson Array**	**62.96**	**26**	P		**P**	**17 56 12.9**	**-0.3**
	comp=Z,0.2nm,0.4s,mb3.6,baz=248,slow=5.9,SNR=5.5							
BRVK	**Borovoye**	**66.42**	**320**	*e*P		**P**	**17 56 35.6**	**-0.4**
	comp=Z,2.9nm,0.8s,mb4.4							
ABKAR	**Akbulak array**	**73.26**	**317**	*e*P		**P**	**17 57 18.2**	**+0.1**
	comp=Z,3.0nm,0.8s,mb4.3							
NVAR	**Mina Array Bea**	**82.45**	**52**	P		**P**	**17 58 10.0**	**+0.5**
	comp=Z,0.4nm,0.7s,mb3.5,baz=263,slow=7.0,SNR=3.3							
FINES	**FINESS Array B**	**86.59**	**335**	P		**P**	**17 58 29.0**	**-0.9**
	comp=Z,0.8nm,0.4s,mb4.3,baz=68,slow=3.9,SNR=12							

IDC 29 18:21:12.9±4.6, 30.66N×83.17E, h0km, mb3.1/2, mb1 3.4/4, mb1mx3.1/27, mbtmp3.1/4, ML2.7/2, MS2.7/1, Ms1 2.7/1, ms1mx2.1/21, Error ellipse: s-maj=182.4km s-min=28.3km az=65.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op		ISC	h m s	ISC
AAK	**Ala-Archa**	**13.82**	**332**	LR		LR	18 31 14.8	
	comp=Z,30nm,20.3s,baz=187,slow=44							
MKAR	**Makanchi Array**	**16.13**	**358**	Pn		Pn	18 25 00.0	-0.8
	0.0nm,0.3s,baz=170,slow=11,SNR=3.4							
CMAR	**Chiang Mai Arr**	**18.77**	**127**	P		Pn	18 25 34.7	+0.7
	0.0nm,0.3s,baz=310,slow=12,SNR=3.9							
KURK	**Kurchatov**	**20.32**	**352**	P		P	18 25 49.5	-0.9
	0.4nm,0.8s,baz=172,slow=10,SNR=5.0							
WRA	**Warramunga Arr**	**70.35**	**129**	P		P	18 32 28.3	-0.3
	0.7nm,0.9s,baz=324,slow=6.4,SNR=6.4							

IDC ***29*** *18:24:53.6±1.1, 10.26N×125.57E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.6/21, mbtmp3.5/7, MS3.2/3, Ms1 3.2/3, ms1mx2.6/22, Error ellipse: s-maj=46.3km s-min=20.4km az=65.0*
MAN ***29*** *18:24:57, 10.19N×125.22E, h1km, mb4.9, ML3.8, MS3.9*
ISCJB ***29*** *18:24:58.2±0.9, 10.17N±0.07×125.4E±0.1, h45km±9km, mb3.4/7, MS3.4/2, Error ellipse: s-maj=18.3km s-min=9.2km az=158.3*

ISC 29 18:24:58.1±1.6, 10.19N±0.07×125.4E±0.1, h26km±12km, n21, σ1s31/20, mb3.4/7, MS3.4/2, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
SCPH	**Surigao**	**0.41**	**172**	*e*P		**Pn**	**18 25 06.5**	**-0.4**
OCLP	**Ormoc**	**1.18**	**317**	*e*P		**Pn**	**18 25 17.8**	**-1.0**
BUTP	**Butuan**	**1.23**	**171**	*e*P		**Pn**	**18 25 20.6**	**+1.0**
TBP	**Tagbilaran**	**1.62**	**252**	*e*

PTEO eSg **Sg** **18 26 20.8 -1.3**
PTEO A 18 26 24.1
1µm,0.5s
PTEO Sao Teotonio 0.59 199 ⇓Pg **Pg** **18 26 13.8 -0.4**
PTEO Lg 18 26 20.8
539nm,0.5s
PTEO Sao Teotonio 0.59 199 ⇓Pg **Pg** **18 26 13.8 -0.4**
PTEO Lg 18 26 20.8
539nm,0.5s
LIS Lisbon 0.80 320 eP **Pb** **18 26 18.1 +0.5**
LIS eS **Sb** **18 26 29.2 +1.1**
LIS eS **Sb** **18 26 29.2 +1.1**
LIS AML AML 18 26 30.6
comp=E,565nm,0.2s
LIS Lisbon 0.80 320 eP **Pg** **18 26 18.1 +0.1**
LIS eS **Sb** **18 26 29.2 +1.1**
LIS Lisbon 0.80 320 Pg **Pg** **18 26 18.1 +0.1**
LIS Lg 18 26 29.2
LIS Lisbon 0.80 320 Pg **Pg** **18 26 18.1 +0.1**
LIS Lg 18 26 29.2
LIS Lisbon 0.80 320 eP **Pg** **18 26 18.1 +0.1**
LIS eS **Sb** **18 26 29.2 +1.1**
MORF Marmelete 0.81 189 ePg **Pg** **18 26 17.8 -0.4**
MORF eSg **Sg** **18 26 27.6 -1.4**
MORF A 18 26 29.4
comp=E,1µm,0.1s
MORF Marmelete 0.81 189 Pg **Pg** **18 26 17.8 -0.4**
MORF Lg 18 26 27.6
comp=E,1µm,0.1s
MORF Marmelete 0.81 189 Pg **Pg** **18 26 17.8 -0.4**
MORF Lg 18 26 27.6
comp=E,1µm,0.1s
MORF Marmelete 0.81 189 ePg **Pg** **18 26 17.8 -0.4**
MORF eSg **Sg** **18 26 27.6 -1.4**
comp=E,1µm,0.1s
INMG Instituto de M 0.83 323 *i* P **Pg** **18 26 19.7 +1.1**
INMG Instituto de M 0.83 323 ⇓Pg **Pg** **18 26 19.7 +1.1**
INMG Instituto de M 0.83 323 ⇓Pg **Pg** **18 26 19.7 +1.1**
PVAQ Vaqueiros 0.93 139 eP **Pb** **18 26 19.9 0.0**
PVAQ eS **Sb** **18 26 32.3 +0.4**
PVAQ A 18 26 33.9
comp=E,358nm,0.4s
PVAQ Vaqueiros 0.93 139 Pg **Pb** **18 26 19.9 0.0**
PVAQ Lg 18 26 32.3
comp=E,358nm,0.4s
PVAQ Vaqueiros 0.93 139 Pg **Pb** **18 26 19.9 0.0**
PVAQ Lg 18 26 32.3
comp=E,358nm,0.4s
PVAQ Vaqueiros 0.93 139 eP **Pb** **18 26 19.9 0.0**
PVAQ eS **Sb** **18 26 32.3 +0.4**
comp=E,358nm,0.4s
PBDV Barranco-do-Ve 0.97 153 eP **Pb** **18 26 20.7 +0.1**
PBDV eS **Sb** **18 26 32.6 -0.4**
PBDV A 18 26 35.5
comp=E,137nm,0.2s
PBDV Barranco-do-Ve 0.97 153 Pg **Pb** **18 26 20.7 +0.1**
PBDV Lg 18 26 32.6
comp=E,137nm,0.2s
PBDV Barranco-do-Ve 0.97 153 Pg **Pb** **18 26 20.7 +0.1**
PBDV Lg 18 26 32.6
comp=E,137nm,0.2s
PBDV Barranco-do-Ve 0.97 153 eP **Pb** **18 26 20.7 +0.1**
PBDV eS **Sb** **18 26 32.6 -0.4**
comp=E,137nm,0.2s
EGRO El Granado 0.98 126 Pg **Pg** **18 26 20.9 -0.6**
EGRO Lg 18 26 34.6
EGRO El Granado 0.98 126 Pg **Pg** **18 26 20.9 -0.6**
comp=E,40nm,0.2s,SNR=245
EGRO Lg 18 26 34.6
comp=E,395nm,0.2s
EGRO El Granado 0.98 126 Pg **Pg** **18 26 20.9 -0.6**
comp=E,40nm,0.2s,SNR=245
EGRO Lg 18 26 34.6
comp=E,395nm,0.2s
EGRO El Granado 0.98 126 Pg **Pg** **18 26 20.9 -0.5**
comp=E,40nm,0.2s,SNR=245
EGRO Lg 18 26 34.6
comp=E,395nm,0.2s
PFVI Vila Bisbo 1.01 196 eP **Pb** **18 26 20.5 -0.8**
PFVI eS **Sb** **18 26 33.4 -0.8**
PFVI A 18 26 35.2
comp=E,348nm,0.1s
PFVI Vila Bisbo 1.01 196 Pg **Pg** **18 26 20.5 -1.5**
PFVI Lg 18 26 33.3
PFVI Vila Bisbo 1.01 196 Pg **Pg** **18 26 20.5 -1.5**
comp=E,20nm,0.2s,SNR=53
PFVI Lg 18 26 33.3
comp=E,259nm,0.5s,SNR=30
PFVI Vila Bisbo 1.01 196 Pg **Pg** **18 26 20.5 -1.5**
comp=E,20nm,0.2s,SNR=53
PFVI Lg 18 26 33.3
comp=E,259nm,0.5s,SNR=30
PFVI Vila Bisbo 1.01 196 eP **Pb** **18 26 20.5 -0.8**
PFVI Lg 18 26 33.3
comp=E,259nm,0.5s,SNR=30
PFVI eS **Sb** **18 26 33.4 -0.8**
comp=E,348nm,0.1s
ALMR Almeirim 1.05 356 eP **Pg** **18 26 23.0 +0.3**
ALMR eS **Sb** **18 26 36.8 +1.5**
ALMR eS **Sb** **18 26 36.8 +1.5**
ALMR AML AML 18 26 37.4
comp=E,173nm,0.2s
ALMR Almeirim 1.05 356 eP **Pg** **18 26 23.0 +0.3**
ALMR eS **Sb** **18 26 36.8 +1.6**
ALMR Almeirim 1.05 356 Pg **Pg** **18 26 23.0 +0.3**
ALMR Lg 18 26 36.8
ALMR Almeirim 1.05 356 Pg **Pg** **18 26 23.0 +0.3**
ALMR Lg 18 26 36.8
ALMR Almeirim 1.05 356 eP **Pg** **18 26 23.0 +0.3**
ALMR eS **Sb** **18 26 36.8 +1.6**
PMAFR Mafra 1.05 324 eP **Pb** **18 26 22.5 +0.5**
PMAFR eS **Sb** **18 26 36.0 +0.7**
PMAFR A 18 26 40.1
comp=E,267nm,0.2s
PMAFR Mafra 1.05 324 ⇓Pg **Pg** **18 26 22.6 -0.2**
comp=E,74nm,0.3s,SNR=18
PMAFR Lg 18 26 35.7
comp=E,113nm,0.3s,SNR=11
PMAFR Mafra 1.05 324 ⇓Pg **Pg** **18 26 22.6 -0.2**
comp=E,74nm,0.3s,SNR=18
PMAFR Lg 18 26 35.7
comp=E,113nm,0.3s,SNR=11
PMAFR Mafra 1.05 324 Pg **Pg** **18 26 22.6 -0.2**
comp=E,74nm,0.3s,SNR=26
PMAFR Lg 18 26 35.7
comp=E,113nm,0.3s,SNR=11
PMAFR eS **Sb** **18 26 36.0 +0.7**
comp=E,267nm,0.2s
PBAR Barrancos 1.14 86 eP **Pn** **18 26 23.7 +0.4**
PBAR eS **Sb** **18 26 38.9 +0.9**
PBAR A 18 26 41.0
comp=E,216nm,0.2s
PBAR Barrancos 1.14 86 Pg **Pn** **18 26 23.7 +0.4**
PBAR Lg 18 26 38.9
comp=E,216nm,0.2s
PBAR Barrancos 1.14 86 Pg **Pn** **18 26 23.7 +0.4**
PBAR Lg 18 26 38.9
comp=E,216nm,0.2s
PBAR Barrancos 1.14 86 eP **Pn** **18 26 23.7 +0.4**
PBAR eS **Sb** **18 26 38.9 +0.9**
comp=E,216nm,0.2s
EBAD Badajoz 1.32 60 Pg **Pg** **18 26 26.8 -1.2**
EBAD Lg 18 26 45.6
EBAD Badajoz 1.32 60 Pn **Pn** **18 26 26.0 +0.1**
comp=E,1.3nm,0.1s,SNR=7.9
EBAD Pg **Pg** **18 26 27.9 -0.1**
comp=E,75nm,0.1s,SNR=289
EBAD Lg 18 26 45.6
comp=E,130nm,0.2s,SNR=5.0
EBAD Badajoz 1.32 60 Pn **Pn** **18 26 26.0 +0.1**
comp=E,1.3nm,0.1s,SNR=7.9
EBAD Pg **Pg** **18 26 27.9 -0.1**
comp=E,75nm,0.1s,SNR=289
EBAD Lg 18 26 45.6
comp=E,130nm,0.2s,SNR=5.0
EBAD Badajoz 1.32 60 Pg **Pg** **18 26 26.8 -1.1**
comp=E,47nm,0.2s,SNR=289
EBAD Lg 18 26 45.7
comp=E,130nm,0.2s,SNR=5.0
EMIN Mina Concepcio 1.47 103 Pn **Pn** **18 26 28.1 +0.1**
EMIN Pg **Pg** **18 26 29.7 -1.1**
EMIN Lg 18 26 49.7
EMIN Mina Concepcio 1.47 103 Pn **Pn** **18 26 28.0 +0.1**
comp=E,2.1nm,0.3s,SNR=7.9
EMIN Pg **Pg** **18 26 29.7 -1.1**
comp=E,15nm,0.4s,SNR=12
EMIN Lg 18 26 49.7
comp=E,141nm,0.3s,SNR=5.0
EMIN Mina Concepcio 1.47 103 Pn **Pn** **18 26 28.0 +0.1**
comp=E,2.1nm,0.3s,SNR=7.9
EMIN Pg **Pg** **18 26 29.7 -1.1**
comp=E,15nm,0.4s,SNR=12
EMIN Lg 18 26 49.7
comp=E,141nm,0.3s,SNR=5.0
PTOM Tomar 1.51 2 ePn **Pn** **18 26 28.8 +0.4**
PTOM Tomar 1.51 2 ePg **Pg** **18 26 31.0 -0.4**
PTOM eSg **Sg** **18 26 50.4 -0.7**
PTOM A 18 26 53.8
comp=E,235nm,0.3s
PTOM Tomar 1.51 2 Pn **Pn** **18 26 28.8 +0.4**
PTOM Pg **Pg** **18 26 31.0 -0.4**
PTOM Lg 18 26 50.4
comp=E,118nm,0.3s
PTOM Tomar 1.51 2 Pn **Pn** **18 26 28.8 +0.4**
PTOM Pg **Pg** **18 26 31.0 -0.4**
PTOM Lg 18 26 50.4
comp=E,118nm,0.3s
PTOM Tomar 1.51 2 ePn **Pn** **18 26 28.8 +0.4**
PTOM Tomar 1.51 2 ePg **Pg** **18 26 31.0 -0.4**
PTOM eSg **Sg** **18 26 50.4 -0.7**
comp=E,235nm,0.3s
PMRV Marv??o 1.57 33 ePn **Pn** **18 26 29.9 +0.7**
PMRV Marv??o 1.57 33 ePg **Pg** **18 26 32.9 +0.3**
PMRV eSn **Sn** **18 26 50.0 +0.9**
PMRV eSg **Sg** **18 26 53.4 +0.3**
PMRV A 18 26 54.9
comp=E,130nm,0.2s
PMRV Marv??o 1.57 33 Pn **Pn** **18 26 29.9 +0.7**
PMRV Pg **Pg** **18 26 32.9 +0.3**
PMRV Sn **Sn** **18 26 50.0 +0.9**
PMRV Lg 18 26 53.4
comp=E,130nm,0.2s
PMRV Marv??o 1.57 33 Pn **Pn** **18 26 29.9 +0.7**
PMRV Pg **Pg** **18 26 32.9 +0.3**
PMRV Sn **Sn** **18 26 50.0 +0.9**
PMRV Lg 18 26 53.4
comp=E,130nm,0.2s
PMRV Marv??o 1.57 33 ePn **Pn** **18 26 29.9 +0.7**
PMRV Marv??o 1.57 33 ePg **Pg** **18 26 32.9 +0.3**
PMRV eSn **Sn** **18 26 50.0 +0.9**
PMRV eSg **Sg** **18 26 53.4 +0.3**
comp=E,130nm,0.2s
PCBR Castelo Branco 1.90 24 ePn **Pn** **18 26 34.0 +0.2**
PCBR Castelo Branco 1.90 24 ePg **Pg** **18 26 39.1 +0.2**
PCBR eSg **Sg** **18 27 01.7 -1.9**
PCBR A 18 27 03.8
comp=E,151nm,0.3s
PCBR Castelo Branco 1.90 24 Pn **Pn** **18 26 34.0 +0.2**
PCBR Pg **Pg** **18 26 39.1 +0.2**
PCBR Lg 18 27 01.7
comp=E,75nm,0.3s
PCBR Castelo Branco 1.90 24 Pn **Pn** **18 26 34.0 +0.2**
PCBR Pg **Pg** **18 26 39.1 +0.2**
PCBR Lg 18 27 01.7
comp=E,75nm,0.3s
PCBR Castelo Branco 1.90 24 ePn **Pn** **18 26 34.0 +0.2**
PCBR Castelo Branco 1.90 24 ePg **Pg** **18 26 39.1 +0.2**
PCBR eSg **Sg** **18 27 01.7 -1.9**
comp=E,151nm,0.3s
MTE Manteigas 2.40 17 ePn **Pn** **18 26 41.2 +0.5**
MTE eSn **Sn** **18 27 09.2 -0.4**
MTE eSg **Sg** **18 27 17.8 -1.8**
MTE A 18 27 24.5
comp=E,114nm,0.5s
MTE Manteigas 2.40 17 Pn **Pn** **18 26 41.2 +0.5**
MTE Sn **Sn** **18 27 09.2 -0.4**
MTE Lg 18 27 17.8
comp=E,57nm,0.5s
MTE Manteigas 2.40 17 Pn **Pn** **18 26 41.2 +0.5**
MTE Sn **Sn** **18 27 09.2 -0.4**
MTE Lg 18 27 17.8
comp=E,57nm,0.5s
MTE Manteigas 2.40 17 ePn **Pn** **18 26 41.2 +0.5**
MTE eSn **Sn** **18 27 09.2 -0.4**
MTE eSg **Sg** **18 27 17.8 -1.8**
comp=E,114nm,0.5s
ECAB El Cabril 2.42 90 Pn **Pn** **18 26 42.2 +1.2**
ECAB Pg **Pg** **18 26 46.9 -1.9**
ECAB Sn **Sn** **18 27 11.1 +1.1**
ECAB Lg 18 27 19.7
ECAB El Cabril 2.42 90 Pn **Pn** **18 26 42.2 +1.2**
comp=E,2.1nm,0.2s,SNR=8.5
ECAB Pg **Pg** **18 26 46.9 -1.9**
comp=E,4.3nm,0.3s,SNR=7.8
ECAB Sn **Sn** **18 27 11.1 +1.1**
comp=E,8.4nm,0.3s,SNR=40
ECAB Lg 18 27 19.7
comp=E,57nm,0.4s,SNR=5.0
ECAB El Cabril 2.42 90 Pn **Pn** **18 26 42.2 +1.2**
comp=E,2.1nm,0.2s,SNR=8.5
ECAB Pg **Pg** **18 26 46.9 -1.9**
comp=E,4.3nm,0.3s,SNR=7.8
ECAB Sn **Sn** **18 27 11.1 +1.1**
comp=E,8.4nm,0.3s,SNR=40
ECAB Lg 18 27 19.7
comp=E,57nm,0.4s,SNR=5.0
ECAB El Cabril 2.42 90 Pn **Pn** **18 26 42.2 +1.3**
comp=E,2.1nm,0.2s,SNR=8.5
ESPR Espera 2.43 120 Pn **Pn** **18 26 42.3 +1.3**
ESPR Pg **Pg** **18 26 46.8 -2.2**
ESPR Sn **Sn** **18 27 11.9 +1.6**
ESPR Lg 18 27 20.2
ESPR Espera 2.43 120 Pn **Pn** **18 26 42.1 +1.1**
comp=E,7.6nm,0.3s,SNR=18
ESPR Pg **Pg** **18 26 46.8 -2.2**
comp=E,6.7nm,0.3s,SNR=13
ESPR Sn **Sn** **18 27 11.9 +1.6**
comp=E,10nm,0.3s,SNR=4.7
ESPR Lg 18 27 20.2
comp=E,30nm,0.3s,SNR=5.0
ESPR Espera 2.43 120 Pn **Pn** **18 26 42.1 +1.1**
comp=E,7.6nm,0.3s,SNR=18
ESPR Pg **Pg** **18 26 46.8 -2.2**
comp=E,6.7nm,0.3s,SNR=13
ESPR Sn **Sn** **18 27 11.9 +1.6**
comp=E,10nm,0.3s,SNR=4.7
ESPR Lg 18 27 20.2
comp=E,30nm,0.3s,SNR=5.0
ESPR Espera 2.43 120 Pn **Pn** **18 26 42.3 +1.2**
comp=E,7.6nm,0.3s,SNR=18
EPLA Plasencia 2.71 43 Pn **Pn** **18 26 44.4 -0.4**
EPLA Pg **Pg** **18 26 52.2 -2.0**
EPLA Lg 18 27 28.8
EPLA Plasencia 2.71 43 Pn **Pn** **18 26 44.4 -0.4**
comp=E,2.0nm,0.3s,SNR=14
EPLA Pg **Pg** **18 26 52.2 -2.0**
comp=E,4.9nm,0.3s,SNR=8.0
EPLA Sn **Sn** **18 27 16.8 -0.2**
comp=E,5.0nm,0.1s,SNR=7.9
EPLA Lg 18 27 27.6
comp=E,22nm,0.2s,SNR=14
EPLA Plasencia 2.71 43 Pn **Pn** **18 26 44.4 -0.4**
comp=E,2.0nm,0.3s,SNR=14
EPLA Pg **Pg** **18 26 52.2 -2.0**
comp=E,4.9nm,0.3s,SNR=8.0
EPLA Sn **Sn** **18 27 16.8 -0.2**
comp=E,5.0nm,0.1s,SNR=7.9
EPLA Lg 18 27 27.6
comp=E,22nm,0.2s,SNR=14
EPLA Plasencia 2.71 43 Pn **Pn** **18 26 44.4 -0.4**
comp=E,2.0nm,0.3s,SNR=14
EPLA Plasencia 2.71 43 Pg **Pg** **18 26 52.2 -2.0**
comp=E,4.9nm,0.3s,SNR=8.0
EPLA Lg 18 27 28.8
comp=E,68nm,0.4s,SNR=14
LIJA Lijar 2.73 115 Sn **Sn** **18 27 17.0 -0.6**
LIJA Lijar 2.73 115 Sn **Sn** **18 27 17.0 -0.6**
LIJA Lijar 2.73 115 eS **Sn** **18 27 17.0 -0.6**
EJIF Jimena Fronter 2.92 124 Pn **Pn** **18 26 47.8 0.0**
comp=E,1.1nm,0.2s,SNR=7.9
EJIF Pg **Pg** **18 26 56.0 -2.4**
comp=E,2.5nm,0.2s,SNR=7.9
EJIF Lg 18 27 36.6
comp=E,12nm,0.3s,SNR=7.9
EJIF Jimena Fronter 2.92 124 Pn **Pn** **18 26 47.8 0.0**
comp=E,1.1nm,0.2s,SNR=7.9
EJIF Pg **Pg** **18 26 56.0 -2.4**
comp=E,2.5nm,0.2s,SNR=7.9
EJIF Lg 18 27 36.6
comp=E,12nm,0.3s,SNR=7.9
PTO Porto 3.03 358 eSn **Sn** **18 27 23.9 -1.1**
PTO eSg **Sg** **18 27 39.3 -0.3**
PTO Porto 3.03 358 Sn **Sn** **18 27 23.9 -1.1**
PTO Lg 18 27 39.3
PTO Porto 3.03 358 Sn **Sn** **18 27 23.9 -1.1**
PTO Lg 18 27 39.3
PTO Porto 3.03 358 eSn **Sn** **18 27 23.9 -1.1**
PTO eSg **Sg** **18 27 39.3 -0.3**
EADA Adamuz 3.08 88 Pn **Pn** **18 26 50.4 +0.4**
EADA Pg **Pg** **18 26 59.3 -2.1**
EADA Sn **Sn** **18 27 26.3 -0.1**
EADA Lg 18 27 41.3
EADA Adamuz 3.08 88 Pn **Pn** **18 26 50.3 +0.2**
comp=E,2.5nm,0.3s,SNR=4.8
EADA Pg **Pg** **18 26 59.3 -2.1**
comp=E,5.2nm,0.3s,SNR=15
EADA Sn **Sn** **18 27 26.3 -0.1**
comp=E,6.1nm,0.3s,SNR=5.9
EADA Lg 18 27 41.3
comp=E,34nm,0.5s,SNR=7.0
EADA Adamuz 3.08 88 Pn **Pn** **18 26 50.3 +0.2**
comp=E,2.5nm,0.3s,SNR=4.8
EADA Pg **Pg** **18 26 59.3 -2.1**
comp=E,5.2nm,0.3s,SNR=15
EADA Sn **Sn** **18 27 26.3 -0.1**
comp=E,6.1nm,0.3s,SNR=5.9
EADA Lg 18 27 41.3
comp=E,34nm,0.5s,SNR=7.0
EADA Adamuz 3.08 88 Pn **Pn** **18 26 50.4 +0.4**
comp=E,2.5nm,0.3s,SNR=4.8
PVRL Vila Real 3.22 10 ePn **Pn** **18 26 52.4 +0.5**
PVRL eSn **Sn** **18 27 28.1 -1.6**
PVRL eSg **Sg** **18 27 45.1 -0.6**
PVRL A 18 27 51.1
comp=E,34nm,0.3s
PVRL Vila Real 3.22 10 Pn **Pn** **18 26 52.4 +0.5**
PVRL Sn **Sn** **18 27 28.1 -1.6**
PVRL Lg 18 27 45.1
comp=E,17nm,0.3s
PVRL Vila Real 3.22 10 Pn **Pn** **18 26 52.4 +0.5**
PVRL Sn **Sn** **18 27 28.1 -1.6**
PVRL Lg 18 27 45.1
comp=E,17nm,0.3s
PVRL Vila Real 3.22 10 ePn **Pn** **18 26 52.4 +0.5**
PVRL eSn **Sn** **18 27 28.1 -1.6**
PVRL eSg **Sg** **18 27 45.1 -0.6**
comp=E,34nm,0.3s
MVO Moncorvo 3.25 20 ePn **Pn** **18 26 52.7 +0.3**
MVO eSn **Sn** **18 27 29.4 -1.1**
MVO eSg **Sg** **18 27 45.1 -1.7**
MVO A 18 27 50.3
comp=E,59nm,0.6s
MVO Moncorvo 3.25 20 Pn **Pn** **18 26 53.0 +0.7**
MVO Pg **Pg** **18 27 02.1 -2.5**
MVO Sn **Sn** **18 27 30.2 -0.3**
MVO Lg 18 27 46.2
MVO Moncorvo 3.25 20 Pn **Pn** **18 26 53.0 +0.7**
comp=E,2.1nm,0.3s,SNR=17
MVO Sn **Sn** **18 27 30.2 -0.3**
comp=E,3.0nm,0.3s,SNR=5.9
MVO Lg 18 27 46.2
comp=E,73nm,0.6s,SNR=5.0
MVO Moncorvo 3.25 20 Pn **Pn** **18 26 53.0 +0.7**
comp=E,2.1nm,0.3s,SNR=17
MVO Sn **Sn** **18 27 30.2 -0.3**
comp=E,3.0nm,0.3s,SNR=5.9
MVO Lg 18 27 46.2
comp=E,73nm,0.6s,SNR=5.0
MVO Moncorvo 3.25 20 Pn **Pn** **18 26 53.0 +0.7**
comp=E,2.1nm,0.3s,SNR=17
MVO Moncorvo 3.25 20 Pg **Pg** **18 27 02.1 -2.6**
comp=E,3.1nm,0.3s,SNR=5.5
MVO Sn **Sn** **18 27 30.2 -0.3**
comp=E,3.0nm,0.3s,SNR=5.9
MVO eSg **Sg** **18 27 45.1 -1.7**
comp=E,59nm,0.6s
MVO Lg 18 27 46.2
comp=E,73nm,0.6s,SNR=5.0
EMIJ Mijas 3.34 116 Pn **Pn** **18 26 54.0 +0.4**
EMIJ Sn **Sn** **18 27 33.6 +1.0**
EMIJ Lg 18 27 49.0
EMIJ Mijas 3.34 116 Pn **Pn** **18 26 54.0 +0.4**
comp=E,0.1nm,0.2s,SNR=7.9
EMIJ Sn **Sn** **18 27 33.6 +1.0**
comp=E,9.8nm,1.1s,SNR=7.9
EMIJ Lg 18 27 49.0
comp=E,20nm,0.6s,SNR=5.7
EMIJ Mijas 3.34 116 Pn **Pn** **18 26 54.0 +0.4**
comp=E,0.1nm,0.2s,SNR=7.9
EMIJ Sn **Sn** **18 27 33.6 +1.0**
comp=E,9.8nm,1.1s,SNR=7.9
EMIJ Lg 18 27 49.0
comp=E,20nm,0.6s,SNR=5.7
EMIJ Mijas 3.34 116 Pn **Pn** **18 26 54.0 +0.5**
comp=E,0.1nm,0.2s,SNR=7.9
EMIJ Sn **Sn** **18 27 33.6 +1.0**
comp=E,9.8nm,1.1s,SNR=7.9
EMIJ Lg 18 27 49.0
comp=E,20nm,0.6s,SNR=5.7
ELUQ Luque 3.38 98 Pn **Pn** **18 26 55.3 +1.1**
ELUQ Sn **Sn** **18 27 34.4 +0.6**
ELUQ Lg 18 27 51.6
ELUQ Luque 3.38 98 Pn **Pn** **18 26 55.3 +1.1**
comp=E,4.3nm,1.2s,SNR=7.9
ELUQ Sn **Sn** **18 27 34.4 +0.6**
comp=E,8.6nm,0.7s,SNR=7.9
ELUQ Lg 18 27 51.6
comp=E,16nm,0.2s,SNR=7.9
ELUQ Luque 3.38 98 Pn **Pn** **18 26 55.3 +1.1**
comp=E,4.3nm,1.2s,SNR=7.9
ELUQ Sn **Sn** **18 27 34.4 +0.6**
comp=E,8.6nm,0.7s,SNR=7.9
ELUQ Lg 18 27 51.6
comp=E,16nm,0.2s,SNR=7.9
ELUQ Luque 3.38 98 Pn **Pn** **18 26 55.3 +1.1**
comp=E,4.3nm,1.2s,SNR=7.9
ELUQ Sn **Sn** **18 27 34.4 +0.6**
comp=E,8.6nm,0.7s,SNR=7.9
ELUQ Lg 18 27 51.6
comp=E,16nm,0.2s,SNR=7.9
PAB San Pablo 3.54 65 ePn **Pn** **18 26 56.4 +0.1**
PAB eSb **Sb** **18 27 51.1 +4.2**
PAB eSg **Sg** **18 27 57.6 +1.7**
PAB San Pablo 3.54 65 ePn **Pn** **18 26 56.4 +0.2**
PAB eSb **Sb** **18 27 51.1 +4.3**
ELOJ Sierra Loja 3.57 104 Sn **Sn** **18 27 39.4 +0.9**
comp=E,8.4nm,0.4s,SNR=6.6
ELOJ Lg 18 27 57.6
comp=E,7.3nm,0.2s,SNR=7.4
ELOJ Sierra Loja 3.57 104 Sn **Sn** **18 27 39.4 +0.9**
comp=E,8.4nm,0.4s,SNR=6.6
ELOJ Lg 18 27 57.6
comp=E,7.3nm,0.2s,SNR=7.4
ELOJ Sierra Loja 3.57 104 Sn **Sn** **18 27 39.4 +1.0**
comp=E,8.4nm,0.4s,SNR=6.6
ELOJ Lg 18 27 57.6
comp=E,7.3nm,0.2s,SNR=7.4
PCAB Cabril 3.61 5 *i* Pn **Pn** **18 26 57.8 +0.5**
PCAB eSn **Sn** **18 27 38.0 -1.5**
PCAB eSg **Sg** **18 27 57.6 -0.8**
PCAB A 18 28 03.2
comp=E,31nm,0.4s
PCAB Cabril 3.61 5 ⇑Pn **Pn** **18 26 57.8 +0.5**
PCAB Sn **Sn** **18 27 38.0 -1.5**
PCAB Lg 18 27 57.6
comp=E,16nm,0.4s
PCAB Cabril 3.61 5 ⇑Pn **Pn** **18 26 57.8 +0.5**
PCAB Sn **Sn** **18 27 38.0 -1.5**
PCAB Lg 18 27 57.6
comp=E,16nm,0.4s
EBAN Banos Encina 3.71 88 Pn **Pn** **18 26 59.8 +1.2**
EBAN Pg **Pg** **18 27 05.8 -7.6**
EBAN Lg 18 28 01.5
EBAN Banos Encina 3.71 88 Pn **Pn** **18 26 59.8 +1.2**
comp=E,0.8nm,0.4s,SNR=7.9
EBAN Pg **Pg** **18 27 05.8 -7.6**
comp=E,3.9nm,0.2s,SNR=7.9
EBAN Lg 18 28 01.5
comp=E,25nm,0.3s,SNR=7.4
EBAN Banos Encina 3.71 88 Pn **Pn** **18 26 59.8 +1.2**

comp=E,0.8nm,0.4s,SNR=7.9
EBAN Pg **Pg** **18 27 05.8 -7.6**
comp=E,3.9nm,0.2s,SNR=7.9
EBAN Lg 18 28 01.5
comp=E,25nm,0.3s,SNR=7.4
EBAN Banos Encina 3.71 88 Pn **Pn** **18 26 59.8 +1.2**
comp=E,0.8nm,0.4s,SNR=7.9
EBAN Lg 18 28 01.5
comp=E,25nm,0.3s,SNR=7.4
ELOB Lobios 3.77 5 Pn **Pn** **18 26 59.8 +0.4**
ELOB Sn **Sn** **18 27 41.6 -1.6**
ELOB Lobios 3.77 5 Pn **Pn** **18 26 59.8 +0.4**
comp=E,2.6nm,0.2s,SNR=18
ELOB Sn **Sn** **18 27 41.6 -1.6**
comp=E,5.7nm,0.4s,SNR=5.0
ELOB Lg 18 28 01.2
comp=E,22nm,0.3s,SNR=7.9
ELOB Lobios 3.77 5 Pn **Pn** **18 26 59.8 +0.4**
comp=E,2.6nm,0.2s,SNR=18
ELOB Sn **Sn** **18 27 41.6 -1.6**
comp=E,5.7nm,0.4s,SNR=5.0
ELOB Lg 18 28 01.2
comp=E,22nm,0.3s,SNR=7.9
ELOB Lobios 3.77 5 Pn **Pn** **18 26 59.8 +0.4**
comp=E,2.6nm,0.2s,SNR=18
ELOB Sn **Sn** **18 27 41.6 -1.6**
comp=E,5.7nm,0.4s,SNR=5.0
ESDC Sonseca Array 3.86 65 Pn **Pn** **18 27 01.3 +0.6**
ESDC Sn **Sn** **18 27 43.5 -2.0**
ESDC Lg 18 28 06.8
ESDC Sonseca Array 3.86 65 Pn **Pn** **18 27 01.3 +0.6**
comp=E,0.7nm,0.2s,baz=248,slow=14,SNR=6.1
ESDC Sn **Sn** **18 27 43.5 -2.0**
comp=E,1.5nm,0.2s,baz=248,slow=24,SNR=7.2
ESDC Lg 18 28 03.3
comp=E,3.3nm,0.3s,baz=248,slow=30,SNR=14
ESDC Sonseca Array 3.86 65 Pn **Pn** **18 27 01.3 +0.6**
comp=E,0.7nm,0.2s,baz=248,slow=14,SNR=6.1
ESDC Sn **Sn** **18 27 43.5 -2.0**
comp=E,1.5nm,0.2s,baz=248,slow=24,SNR=7.2
ESDC Lg 18 28 03.3
comp=E,3.3nm,0.3s,baz=248,slow=30,SNR=14
ESDC Sonseca Array 3.86 65 Pn **Pn** **18 27 01.3 +0.6**
comp=E,0.7nm,0.2s,baz=249,slow=13,SNR=6.1
ESDC Sn **Sn** **18 27 43.5 -2.0**
comp=E,1.5nm,0.2s,SNR=7.2
ESDC Lg 18 28 06.8
comp=E,3.3nm,0.3s,SNR=14
PBRG Braganca 3.93 19 *e*Pn **Pn** **18 27 02.2 +0.6**
PBRG *e*Sn **Sn** **18 27 45.3 -1.9**
PBRG *e*Sg **Sg** **18 28 07.0 -1.4**
PBRG A 18 28 13.7
comp=E,24nm,0.5s
PBRG Braganca 3.93 19 Pn **Pn** **18 27 02.2 +0.6**
PBRG Sn **Sn** **18 27 45.3 -1.9**
PBRG Lg 18 28 07.0
comp=E,12nm,0.5s
PBRG Braganca 3.93 19 Pn **Pn** **18 27 02.2 +0.6**
PBRG Sn **Sn** **18 27 45.3 -1.9**
PBRG Lg 18 28 07.0
comp=E,12nm,0.5s
PBRG Braganca 3.93 19 *e*Pn **Pn** **18 27 02.2 +0.6**
PBRG *e*Sg **Sg** **18 28 07.0 -1.4**
comp=E,24nm,0.5s
EZAM Zamans 4.04 358 Pn **Pn** **18 27 03.7 +0.5**
EZAM Zamans 4.04 358 Pn **Pn** **18 27 03.7 +0.5**
comp=E,1.9nm,0.2s,SNR=7.9
EZAM Lg 18 28 11.2
comp=E,18nm,0.4s,SNR=7.9
EZAM Zamans 4.04 358 Pn **Pn** **18 27 03.7 +0.5**
comp=E,1.9nm,0.2s,SNR=7.9
EZAM Lg 18 28 11.2
comp=E,18nm,0.4s,SNR=7.9
EZAM Zamans 4.04 358 Pn **Pn** **18 27 03.7 +0.5**
comp=E,1.9nm,0.2s,SNR=7.9
ECAL Calabor 4.06 19 Pn **Pn** **18 27 04.3 +0.9**
ECAL Sn **Sn** **18 27 51.0 +0.7**
ECAL Lg 18 28 12.6
ECAL Calabor 4.06 19 Pn **Pn** **18 27 04.3 +0.9**
comp=E,2.9nm,0.4s,SNR=11
ECAL Sn **Sn** **18 27 49.3 -1.1**
comp=E,3.4nm,0.3s,SNR=5.8
ECAL Lg 18 28 12.6
comp=E,35nm,0.4s,SNR=5.0
ECAL Calabor 4.06 19 Pn **Pn** **18 27 04.3 +0.9**
comp=E,2.9nm,0.4s,SNR=11
ECAL Sn **Sn** **18 27 49.3 -1.1**
comp=E,3.4nm,0.3s,SNR=5.8
ECAL Lg 18 28 12.6
comp=E,35nm,0.4s,SNR=5.0
ECAL Calabor 4.06 19 Pn **Pn** **18 27 04.3 +0.9**
comp=E,2.9nm,0.4s,SNR=11
ECAL Sn **Sn** **18 27 51.0 +0.6**
comp=E,3.4nm,0.3s,SNR=5.8
ECAL Lg 18 28 12.6
comp=E,35nm,0.4s,SNR=5.0
EQUE Quentar 4.11 101 Pn **Pn** **18 27 05.1 +1.0**
comp=E,1.7nm,0.3s,SNR=7.7
EQUE Sn **Sn** **18 27 51.8 +0.2**
comp=E,5.4nm,0.3s,SNR=7.9
EQUE Lg 18 28 13.6
comp=E,6.2nm,0.3s,SNR=7.9
EQUE Quentar 4.11 101 Pn **Pn** **18 27 05.1 +1.0**
comp=E,1.7nm,0.3s,SNR=7.7
EQUE Sn **Sn** **18 27 51.8 +0.2**
comp=E,5.4nm,0.3s,SNR=7.9
EQUE Lg 18 28 13.6
comp=E,6.2nm,0.3s,SNR=7.9
EQUE Quentar 4.11 101 Pn **Pn** **18 27 05.6 +1.5**
comp=E,1.7nm,0.3s,SNR=7.7
EQUE Sn **Sn** **18 27 51.8 +0.2**
comp=E,5.4nm,0.3s,SNR=7.9
EQUE Lg 18 28 13.6
comp=E,6.2nm,0.3s,SNR=7.9
EGUA Guajares 4.12 107 Pn **Pn** **18 27 04.8 +0.6**
EGUA Sn **Sn** **18 27 51.5 -0.3**
EGUA Guajares 4.12 107 Pn **Pn** **18 27 04.8 +0.6**
comp=E,6.8nm,0.4s,SNR=7.9
EGUA Lg 18 28 17.8
comp=E,179nm,1.0s,SNR=7.9
EGUA Guajares 4.12 107 Pn **Pn** **18 27 04.8 +0.6**
comp=E,6.8nm,0.4s,SNR=7.9
EGUA Lg 18 28 17.8
comp=E,179nm,1.0s,SNR=7.9
EGUA Guajares 4.12 107 Pn **Pn** **18 27 04.8 +0.6**
comp=E,6.8nm,0.4s,SNR=7.9
EGUA Sn **Sn** **18 27 51.5 -0.4**
comp=E,12nm,0.4s,SNR=7.9
GUD Guadarrama 4.20 52 Pn **Pn** **18 27 06.1 +0.6**
GUD Sn **Sn** **18 27 54.0 0.0**
GUD Lg 18 28 15.6
GUD Guadarrama 4.20 52 Pn **Pn** **18 27 06.1 +0.6**
comp=E,0.3nm,0.4s,SNR=7.9
GUD Sn **Sn** **18 27 54.0 0.0**
comp=E,8.1nm,0.2s,SNR=7.9
GUD Lg 18 28 15.6
comp=E,24nm,0.4s,SNR=7.9
GUD Guadarrama 4.20 52 Pn **Pn** **18 27 06.1 +0.6**
comp=E,0.3nm,0.4s,SNR=7.9
GUD Sn **Sn** **18 27 54.0 0.0**
comp=E,8.1nm,0.2s,SNR=7.9
GUD Lg 18 28 15.6
comp=E,24nm,0.4s,SNR=7.9
GUD Guadarrama 4.20 52 Pn **Pn** **18 27 06.1 +0.7**
comp=E,0.3nm,0.4s,SNR=7.9
GUD Sn **Sn** **18 27 54.0 0.0**
comp=E,8.1nm,0.2s,SNR=7.9
GUD Lg 18 28 15.6
comp=E,24nm,0.4s,SNR=7.9
EBER Berja 4.61 103 Pn **Pn** **18 27 13.0 +1.9**
EBER Sn **Sn** **18 28 04.4 +0.3**
EBER Lg 18 28 30.7
EBER Berja 4.61 103 Pn **Pn** **18 27 12.1 +1.0**
comp=E,2.8nm,0.4s,SNR=7.9
EBER Sn **Sn** **18 28 04.4 +0.3**
comp=E,1.2nm,0.4s,SNR=7.9
EBER Lg 18 28 30.7
comp=E,22nm,0.5s,SNR=7.9
EBER Berja 4.61 103 Pn **Pn** **18 27 12.1 +1.0**
comp=E,2.8nm,0.4s,SNR=7.9
EBER Sn **Sn** **18 28 04.4 +0.3**
comp=E,1.2nm,0.4s,SNR=7.9
EBER Lg 18 28 30.7
comp=E,22nm,0.5s,SNR=7.9
EBER Berja 4.61 103 Pn **Pn** **18 27 13.0 +2.0**
comp=E,2.8nm,0.4s,SNR=7.9
EBER Sn **Sn** **18 28 04.4 +0.3**
comp=E,1.2nm,0.4s,SNR=7.9
EBER Lg 18 28 30.7
comp=E,22nm,0.5s,SNR=7.9
EHUE Huescar 4.67 92 Pn **Pn** **18 27 08.7 -3.1**
EHUE Sn **Sn** **18 28 05.1 -0.3**
EHUE Huescar 4.67 92 Pn **Pn** **18 27 08.7 -3.1**
comp=E,1.9nm,0.5s,SNR=7.9
EHUE Sn **Sn** **18 28 05.1 -0.3**
comp=E,0.5nm,0.4s,SNR=7.9
EHUE Huescar 4.67 92 Pn **Pn** **18 27 08.7 -3.1**
comp=E,1.9nm,0.5s,SNR=7.9
EHUE Sn **Sn** **18 28 05.1 -0.3**
comp=E,0.5nm,0.4s,SNR=7.9
EHUE Huescar 4.67 92 Pn **Pn** **18 27 08.7 -3.1**
comp=E,1.9nm,0.5s,SNR=7.9
EHUE Sn **Sn** **18 28 05.1 -0.3**
comp=E,0.5nm,0.4s,SNR=7.9
EVIA Vianos 4.73 82 Sn **Sn** **18 28 04.5 -2.6**
comp=E,5.1nm,0.4s,SNR=7.9
EVIA Lg 18 28 33.4
comp=E,21nm,0.8s,SNR=7.9
EVIA Vianos 4.73 82 Sn **Sn** **18 28 04.5 -2.6**
comp=E,5.1nm,0.4s,SNR=7.9
EVIA Lg 18 28 33.4
comp=E,21nm,0.8s,SNR=7.9
EVIA Vianos 4.73 82 Sn **Sn** **18 28 04.5 -2.5**
comp=E,5.1nm,0.4s,SNR=7.9
EVIA Lg 18 28 33.4
comp=E,21nm,0.8s,SNR=7.9
EMAZ Mazaricos 4.85 356 Pn **Pn** **18 27 14.3 +0.1**
EMAZ Sn **Sn** **18 28 08.7 -1.2**
EMAZ Mazaricos 4.85 356 Pn **Pn** **18 27 14.3 +0.1**
comp=E,2.2nm,0.4s,SNR=5.6
EMAZ Sn **Sn** **18 28 08.2 -1.6**
comp=E,30nm,1.1s,SNR=5.0
EMAZ Mazaricos 4.85 356 Pn **Pn** **18 27 14.3 +0.1**
comp=E,2.2nm,0.4s,SNR=5.6
EMAZ Sn **Sn** **18 28 08.2 -1.6**
comp=E,30nm,1.1s,SNR=5.0
EMAZ Mazaricos 4.85 356 Pn **Pn** **18 27 14.4 +0.1**
EMAZ Sn **Sn** **18 28 08.7 -1.2**
comp=E,30nm,1.1s,SNR=5.0
ETOB Tobarra 5.48 82 Pn **Pn** **18 27 23.7 +0.8**
ETOB Sn **Sn** **18 28 24.0 -1.4**
ETOB Lg 18 28 58.3
ETOB Tobarra 5.48 82 Pn **Pn** **18 27 23.7 +0.8**
comp=E,1.0nm,0.4s,SNR=4.0
ETOB Sn **Sn** **18 28 24.0 -1.4**
comp=E,0.8nm,0.3s,SNR=7.9
ETOB Lg 18 28 58.3
comp=E,11nm,0.5s,SNR=7.9
ETOB Tobarra 5.48 82 Pn **Pn** **18 27 23.7 +0.8**
comp=E,1.0nm,0.4s,SNR=4.0
ETOB Sn **Sn** **18 28 24.0 -1.4**
comp=E,0.8nm,0.3s,SNR=7.9
ETOB Lg 18 28 58.3
comp=E,11nm,0.5s,SNR=7.9
ETOB Tobarra 5.48 82 Pn **Pn** **18 27 23.7 +0.8**
comp=E,1.0nm,0.4s,SNR=7.9
ETOB Sn **Sn** **18 28 24.0 -1.4**
comp=E,0.8nm,0.3s,SNR=7.9
ETOR Torete 5.66 59 Pn **Pn** **18 27 25.1 -0.4**
ETOR Sn **Sn** **18 28 25.8 -4.2**
ETOR Lg 18 29 03.9
ETOR Torete 5.66 59 Pn **Pn** **18 27 25.1 -0.4**
comp=E,3.6nm,0.3s,SNR=6.6
ETOR Sn **Sn** **18 28 25.8 -4.2**
comp=E,0.5nm,0.4s,SNR=5.6
ETOR Lg 18 29 03.9
comp=E,14nm,0.3s,SNR=7.9
ETOR Torete 5.66 59 Pn **Pn** **18 27 25.1 -0.4**
comp=E,3.6nm,0.3s,SNR=6.6
ETOR Sn **Sn** **18 28 25.8 -4.2**
comp=E,0.5nm,0.4s,SNR=5.6
ETOR Lg 18 29 03.9
comp=E,14nm,0.3s,SNR=7.9
ETOR Torete 5.66 59 Pn **Pn** **18 27 25.1 -0.4**
comp=E,3.6nm,0.3s,SNR=6.6
EARI Arriondas 5.75 25 Pn **Pn** **18 27 29.1 +2.4**
EARI Sn **Sn** **18 28 29.7 -2.5**
EARI Arriondas 5.75 25 Pn **Pn** **18 27 29.1 +2.4**
comp=E,1.8nm,0.5s,SNR=7.9
EARI Sn **Sn** **18 28 29.7 -2.5**
comp=E,0.5nm,0.3s,SNR=7.9
EARI Lg 18 29 06.3
comp=E,18nm,0.8s,SNR=7.9
EARI Arriondas 5.75 25 Pn **Pn** **18 27 29.1 +2.4**
comp=E,1.8nm,0.5s,SNR=7.9
EARI Sn **Sn** **18 28 29.7 -2.5**
comp=E,0.5nm,0.3s,SNR=7.9
EARI Lg 18 29 06.3
comp=E,18nm,0.8s,SNR=7.9
EARI Arriondas 5.75 25 Pn **Pn** **18 27 29.1 +2.4**
comp=E,1.8nm,0.5s,SNR=7.9
SJPF Ste Jean 7.45 46 *e*Pn **Pn** **18 27 50.5 +0.5**
SJPF *e*Sg Sn 18 29 56.5 +43
comp=E,1.0nm,0.3s
SJPF Ste Jean 7.45 46 Pn **Pn** **18 27 50.5 +0.5**
SJPF Lg 18 29 56.5
comp=E,0.0nm,0.3s
SJPF Ste Jean 7.45 46 Pn **Pn** **18 27 50.5 +0.5**
SJPF Lg 18 29 56.5
comp=E,0.0nm,0.3s
SJPF Ste Jean 7.45 46 *e*Pn **Pn** **18 27 50.5 +0.5**
ETSF Etsaut 7.70 49 *e*Pn **Pn** **18 27 54.0 +0.5**
ETSF *e*Sg Sn 18 30 05.3 +45
comp=E,0.9nm,0.3s
ETSF Etsaut 7.70 49 Pn **Pn** **18 27 54.0 +0.5**
ETSF Lg 18 30 05.3
comp=E,0.4nm,0.3s
ETSF Etsaut 7.70 49 Pn **Pn** **18 27 54.0 +0.5**
ETSF Lg 18 30 05.3
comp=E,0.4nm,0.3s
ETSF Etsaut 7.70 49 *e*Pn **Pn** **18 27 54.0 +0.5**
EPF Esparros 8.32 51 *e*Pn **Pn** **18 28 01.5 -0.5**
EPF Esparros 8.32 51 Pn **Pn** **18 28 01.5 -0.5**
EPF Esparros 8.32 51 Pn **Pn** **18 28 01.5 -0.5**
EPF Esparros 8.32 51 *e*Pn **Pn** **18 28 01.5 -0.5**
MTLF Montolieu 9.66 54 *e*Pn **Pn** **18 28 20.0 -0.3**
MTLF Montolieu 9.66 54 Pn **Pn** **18 28 20.0 -0.3**
MTLF Montolieu 9.66 54 Pn **Pn** **18 28 20.0 -0.3**
MTLF Montolieu 9.66 54 *e*Pn **Pn** **18 28 20.0 -0.3**

*IDC **29** 18:39:40.8±6.1,36°09N×71°05E,h89$^{km}_{\pm 54}$,mb3.5/7, mb1 3.6/12,mb1mx3.3/29,mbtmp3.5/12,ML3.6/5, Error ellipse: s-maj=43.8km s-min=23.1km az=29.0*
*ISCJB **29** 18:39:44.2±0.4,36°38N±0°03×71°26E±0°05,h134$^{km}_{\pm 6}$, mb3.7/9, Error ellipse: s-maj=6.4km s-min=4.2km az=166.3*
*NEIC **29** 18:39:44.7±0.9,36°32N×71°23E,h126$^{km}_{\pm 9}$,mb4.1/6, Error ellipse: s-maj=11.9km s-min=9.9km az=109.0*

ISC 29 18:39:45.3±0.4,36°35N±0°03×71°30E±0°05,h129$^{km}_{\pm 6}$km, n57,σ1°17/74,mb3.7/9,2C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.57**	**169**	⇑P	**Pn**	**18 40 28.4**	**+2.0**
CEP				S	**Sn**	**18 41 01.0**	**+3.0**
KBL	**Kabul**	**2.58**	**226**	*e*Pn	**Pn**	**18 40 26.0**	**-0.5**
KBL				*e*Sn	**Sn**	**18 40 56.8**	**-1.4**
CHCP	**Chirah Chowk**	**3.13**	**149**	⇑P	**Pn**	**18 40 36.1**	**+2.5**
THW	**Thamme Wali**	**3.57**	**174**	P	**Pn**	**18 40 40.5**	**+1.2**
THW				S	**Sn**	**18 41 22.0**	**+0.9**
SARP	**Sargodha**	**4.56**	**165**	P	**Pn**	**18 40 53.0**	**+0.4**
KSH	**Kashi**	**4.86**	**48**	Pn	**Pn**	**18 40 54.8**	**-1.6**
KSH				Sn	**Sn**	**18 41 43.5**	**-8.2**
KSH				smax			
	comp=N,220nm,0.4s						
KSH				smax			
	comp=E,120nm,0.4s						
AML	**Almayashu** SNR=98	**6.06**	**17**	P	**Pn**	**18 41 13.1**	**+0.6**
AML	**Almayashu** comp=E,30nm,0.4s	**6.06**	**17**	*e*Pn	**Pn**	**18 41 12.9**	**+0.4**
AML				*e*Sn	**Sn**	**18 42 14.8**	**-5.7**
UCH	**Uchtor** SNR=21	**6.37**	**22**	P	**Sn**	**18 42 26.4**	**-1.6**
EKS2	**Erkin-Say** SNR=18	**6.58**	**16**	P	**Pn**	**18 41 21.0**	**+1.4**
EKS2	**Erkin-Say**	**6.58**	**16**	*e*Pn	**Pn**	**18 41 20.1**	**+0.6**
EKS2				*e*Sn	**Sn**	**18 42 23.9**	**-9.3**
AAK	**Ala-Archa** SNR=8.0	**6.74**	**20**	P	**Pn**	**18 41 23.3**	**+1.7**
AAK	**Ala-Archa**	**6.74**	**20**	*e*Pn	**Pn**	**18 41 22.4**	**+0.7**
AAK				*e*Sn	**Sn**	**18 42 25.4**	**-11**
AAK				S	**Sn**	**18 42 35.3**	**-1.6**
AAK	**Ala-Archa** comp=E,3.0nm,0.3s,baz=198,slow=6.6,SNR=13	**6.74**	**20**	P	**Pn**	**18 41 22.6**	**+1.0**
AAK				S	**Sn**	**18 42 35.3**	**-1.6**
	comp=E,3.8nm,0.3s,baz=94,slow=19,SNR=19						
SDNR	**Sundarnagar**	**6.75**	**134**	*e*PKP	**Pn**	**18 41 21.5**	**-0.4**
SDNR				*e*S	**Sn**	**18 42 34.5**	**-3.0**
KKAR	**Karatay Array** comp=E,37nm,0.5s	**6.77**	**355**	*e*Pn	**Pn**	**18 41 21.5**	**-0.6**
KKAR				*e*Sn	**Sn**	**18 42 27.7**	**-10**
SMLA	**Simla**	**7.14**	**135**	*i* P	**Pn**	**18 41 26.3**	**-0.8**
SMLA				*i* S	**Sn**	**18 42 44.4**	**-2.4**
SMLA				*i* S	**Sn**	**18 42 44.8**	**-2.0**
SMLA				⇓		18 42 47.4	
	comp=E,917nm,0.2s						
SMLA						18 42 47.7	
	comp=N,964nm,0.2s						
CHMS	**Chumysh** SNR=7.8	**7.15**	**21**	P	**Pn**	**18 41 28.7**	**+1.5**
USP	**Ospenovka** SNR=12	**7.33**	**19**	P	**Pn**	**18 41 30.6**	**+1.0**
TKM2	**Tokmak 2** SNR=7.5	**7.35**	**25**	P	**Pn**	**18 41 34.9**	**+5.1**
TKM2	**Tokmak 2**	**7.35**	**25**	*e*Pn	**Pn**	**18 41 30.6**	**+0.7**
KLP	**Kalpa**	**7.51**	**128**	*e*PKP	**Pn**	**18 41 33.0**	**+0.8**
KLP				*e*S	**Sn**	**18 42 52.2**	**-3.6**
DDI	**Dehra Dun**	**8.25**	**135**	*e*x	**Pn**	**18 41 41.0**	**-1.1**
JOSI	**Joshimath**	**9.00**	**128**	*e*x	x	18 41 41.2	
JOSI				*e*S	**Sn**	**18 43 25.3**	**-6.4**
JOSI				AML	AML	18 43 36.1	
	comp=N,136nm,0.8s						
JOSI				AML	AML	18 43 37.5	
	comp=E,73nm,0.7s						
KHET	**Khetri**	**9.09**	**154**	*e*S	**Sn**	**18 43 28.7**	**-5.4**
DANN	**Dangsing**	**13.20**	**124**	*e*P	**Pn**	**18 42 47.1**	**-0.7**
MK31	**Makanchi Array**	**13.27**	**35**	*e*Pn	**Pn**	**18 42 50.0**	**+1.6**
MKAR	**Makanchi Array** comp=E,0.1nm,0.3s,baz=225,slow=15,SNR=3.3	**13.27**	**35**	P	**Pn**	**18 42 50.3**	**+1.8**
KOLN	**Koldanda** comp=E,10nm,0.2s	**13.48**	**126**	*e*P	**Pn**	**18 42 50.9**	**-0.4**
GKN	**Gorkha** comp=E,66nm,0.7s	**14.02**	**123**	*e*P	**Pn**	**18 42 57.2**	**-1.0**
DMN	**Daman** comp=E,17nm,0.3s	**14.59**	**123**	*e*P	**Pn**	**18 43 05.4**	**-0.1**
PKI	**Pulchoki**	**14.82**	**122**	*e*P	**Pn**	**18 43 08.0**	**-0.4**
GUN	**Gumba** comp=E,28nm,0.4s	**14.93**	**120**	*e*P	**Pn**	**18 43 10.2**	**+0.4**
KURK	**Kurchatov** comp=E,5.0nm,1.3s	**15.29**	**18**	Pn	**Pn**	**18 43 11.4**	**-2.6**
KURK	**Kurchatov** comp=E,0.1nm,0.3s,baz=208,slow=10,SNR=4.7	**15.29**	**18**	P	**Pn**	**18 43 14.7**	**+0.6**
JIRN	**Jiri** comp=E,49nm,0.3s	**15.30**	**120**	*e*P	**Pn**	**18 43 14.8**	**+0.4**
ABKAR	**Akbulak array** comp=E,6.4nm,0.4s	**15.33**	**331**	*e*Pn	**Pn**	**18 43 12.9**	**-1.6**
ABKAR				*e*Sn	**Sn**	**18 45 48.9**	**-15**
RAMN	**Ramite** comp=E,26nm,0.5s	**16.03**	**121**	*e*P	**Pn**	**18 43 23.6**	**+0.2**
TAPN	**Taplejung** comp=E,20nm,0.3s	**16.56**	**118**	*e*P	**Pn**	**18 43 30.4**	**+0.5**
ODAN	**Odare** comp=E,20nm,0.5s	**16.64**	**120**	*e*P	**Pn**	**18 43 31.8**	**+1.0**
BVAR	**Borovoye Array** comp=E,0.7nm,0.3s,baz=172,slow=12,SNR=12	**16.68**	**358**	P	**Pn**	**18 43 30.1**	**-1.0**
BRVK	**Borovoye**	**16.72**	**358**	*e*Pn	**Pn**	**18 43 32.1**	**+0.6**
AKTK	**Aktyubinsk**	**17.03**	**330**	P	**Pn**	**18 43 34.2**	**-1.1**
AKTK				S	**S**	**18 46 35.3**	**-10**
AKTO	**Aktyubinsk** comp=E,1.0nm,0.3s,baz=142,slow=12,SNR=16	**17.03**	**330**	P	**Pn**	**18 43 34.2**	**-1.1**
AKTO				S	**S**	**18 46 35.3**	**-10**
	comp=E,0.6nm,0.3s,baz=311,slow=21,SNR=5.6						
LSA	**Lhasa** comp=E,3.8nm,0.9s	**17.90**	**106**	*e*Pn	**Pn**	**18 43 44.9**	**-1.2**
ZALV	**Zalesovo Beam** comp=E,1.5nm,0.3s,baz=215,slow=11,SNR=6.3	**19.95**	**24**	P	**P**	**18 44 07.9**	**+1.1**
MIB	**Mutribah**	**21.09**	**259**	*e*P	**P**	**18 44 19.4**	**+0.1**
MIB				AMb	AMB	18 44 22.7	
	comp=Z,18nm,0.7s,mb4.5						
NAY	**Al-Naaiem**	**21.40**	**258**	*e*P	**P**	**18 44 22.4**	**-0.2**
NAY				AMb	AMB	18 44 23.4	
	comp=Z,7.8nm,1.0s,mb4.0						
ARU	**Arti** comp=Z,5.3nm,1.1s,mb3.9	**21.85**	**341**	*e*P	**P**	**18 44 27.2**	**+0.1**
FINES	**FINESS Array B** comp=Z,3.7nm,1.0s,mb4.0,baz=144,slow=11,SNR=5.5	**37.74**	**326**	P	**P**	**18 46 49.0**	**+0.9**
ARCES	**ARCESS Array B** comp=Z,3.2nm,1.1s,mb3.9,baz=112,slow=9.3,SNR=3.6	**41.37**	**338**	P	**P**	**18 47 19.7**	**+1.6**
NOA	**NORSAR Array B**	**44.64**	**323**	P	**P**	**18 47 44.5**	**0.0**
NOA	**NORSAR Array B** comp=Z,0.7nm,0.6s,mb3.5,baz=95,slow=7.9,SNR=6.2	**44.64**	**323**	P	**P**	**18 47 44.5**	**0.0**
TORD	**Torodi Ar. Bea**	**65.96**	**269**	P	**P**	**18 50 16.2**	**-1.7**
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.4s,mb3.5,baz=54,slow=5.5,SNR=5.8	**65.96**	**269**	P	**P**	**18 50 16.2**	**-1.7**
WRA	**Warramunga Arr** comp=Z,0.2nm,0.7s,mb2.9,baz=313,slow=6.2,SNR=2.6	**81.71**	**122**	P	**P**	**18 51 49.6**	**+0.2**
ASAR	**Alice Springs** comp=Z,0.2nm,0.7s,mb3.0,baz=309,slow=4.7,SNR=3.9	**83.97**	**125**	P	**P**	**18 52 01.9**	**+0.8**

GUC 29 18:42:07.5±0.4,20°46S×69°12W,h96$^{km}_{\pm 12}$km,ML3.7,2C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HMBC	**Humberston**	**0.74**	**284**	⇑*i*P	Pn	18 42 25.2	+0.3
HMBC				*e*S	Sn	18 42 39.0	+1.0
HMBC				AML	AML	18 42 40.8	
	comp=E,2μm,0.2s						
MNMC	**Miæe Miæ**	**1.39**	**341**	⇑*i*P	Pn	18 42 33.1	+0.8
MNMC				*i* S	Sn	18 42 52.8	+1.9
MNMC				AML	AML	18 42 58.3	
	comp=N,2μm,0.2s						
MACH	**Maria Elena**	**1.83**	**199**	*e*P	Pn	18 42 38.9	+1.2
MACH				*i* S	Sn	18 43 02.8	+2.0
TOCH	**Tocopilla**	**1.92**	**212**	*e*P	Pn	18 42 39.4	+0.5
TOCH				*i* S	Sn	18 43 03.9	+1.2
TOCH				AML	AML	18 43 09.3	
	comp=E,956nm,0.3s						

*IDC **29** 18:48:14.7±1.1,31°23N×103°62E,h0^{km},mb3.4/6, mb1 3.4/8,mb1mx3.3/25,mbtmp3.4/8,ML3.3/2,Error ellipse: s-maj=37.5km s-min=19.0km az=60.0*
*NEIC **29** 18:48:16.2±0.5,31°23N×103°66E,h10^{km},Error ellipse: s-maj=12.7km s-min=8.1km az=63.0*
*ISCJB **29** 18:48:17.8±0.5,31°27N±0°04×103°74E±0°09,h33^{km}, mb3.4/5,Error ellipse: s-maj=10.8km s-min=5.4km az=169.8*
*BJI **29** 18:48:17.7,31°37N×103°76E,h22^{km},ML3.3/11*

ISC 29 18:48:17.8±1.0,31°33N±0°05×103°77E±0°07,h17$^{km}_{\pm 8}$km, n14,σ0°93/21,mb3.4/5,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.42**	**181**	Pg	**Pg**	**18 48 26.0**	**-0.4**
CD2				Sg	**Sg**	**18 48 33.0**	**+0.9**
CD2				smax			
	comp=N,4μm,0.8s						
CD2				smax			
	comp=E,1μm,0.5s						
LZH	**Lanzhou**	**4.74**	**1**	*e*Pg	**Pb**	**18 49 41.3**	**+0.9**
LZH				Sg	**Sb**	**18 50 42.0**	**+4.9**
LZH				smax			
	comp=N,18nm,0.7s						
LZH				smax			
	comp=E,34nm,0.5s						
ENH	**Enshi** comp=E,33nm,0.8s	**5.03**	**101**	*e*Pn	**Pn**	**18 49 32.9**	**+0.5**
ENH				*e*Pg	**Pg**	**18 49 50.0**	**-4.2**
XAN	**Xi'an**	**5.12**	**57**	Pn	**Pn**	**18 49 34.0**	**+0.5**
XAN				Sn	**Sn**	**18 50 31.3**	**-0.9**
XAN				Sg	**Sg**	**18 50 54.8**	**-7.1**
XAN				smax			
	comp=N,41nm,0.9s						
XAN				smax			
	comp=E,21nm,0.8s						
GYA	**Guiyang**	**5.48**	**152**	Pn	**Pg**	**18 49 56.5**	**-6.2**
GYA				Pg	Px	18 50 18.5	
GYA				Sn	**Sn**	**18 50 43.0**	**+1.8**
GYA				Sg	**Sg**	**18 51 08.3**	**-5.4**
GYA				smax			
	comp=N,40nm,0.7s						

GYA smax
comp=E,50nm,0.8s
CMAR Chiang Mai Arr 13.54 200 Pn **Pn 18 51 26.4 -2.8**
comp=E,0.1nm,0.3s,baz=3.3,slow=8.2,SNR=2.8
SONM Songino Arrav 16.60 6 Pn **Pn 18 52 10.2 +0.6**
comp=E,0.1nm,0.3s,baz=178,slow=12,SNR=3.8
KSRS Korea Array 20.82 66 P **P 18 52 59.4 +1.1**
comp=E,0.4nm,0.5s,baz=254,slow=8.7,SNR=3.0
MK31 Makanchi Array 22.62 319 P **P 18 53 17.8 +0.3**
MKAR Makanchi Array 22.62 319 P **P 18 53 17.6 0.0**
comp=E,0.5nm,0.5s,mb3.2,baz=115,slow=13,SNR=6.6
ZALV Zalesovo Beam 26.39 334 P **P 18 53 52.5 -0.6**
comp=E,0.7nm,0.4s,mb3.5,baz=134,slow=11,SNR=5.9
KURK Kurchatov 26.89 323 P **P 18 53 57.0 -0.6**
comp=E,0.7nm,0.5s,mb3.5,baz=126,slow=9.2,SNR=6.0
WRA Warramunga Arr 58.82 146 P **P 18 58 14.7 -0.7**
comp=E,0.6nm,0.7s,mb3.8,baz=339,slow=7.7,SNR=7.2
ASAR Alice Springs 61.84 149 P **P 18 58 35.9 0.0**
comp=E,0.2nm,0.9s,mb3.3,baz=354,slow=6.5,SNR=3.1

KISR 29 18:50:27.4±0.5, 32°.12N×45°.34E, h8km±999km, ML2.5, Iraq

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIB	**Mutribah**	**2.88**	**143**	*e*P		Pn	18 51 16.8	+3.2
MIB				*e*S		Sn	18 51 53.9	+5.4
MIB				AML	AML	18 51 55.7	
	comp=Z,30nm,0.5s						
MIB	**Mutribah**	**2.88**	**143**	*e*P		Pn	18 51 16.8	+3.1
MIB				*e*S		Sn	18 51 54.0	+5.4
MIB				AML	AML	18 51 55.7	
	comp=Z,30nm,0.5s						
NAY	**Al-Naaiem**	**3.30**	**150**	*e*P		Pn	18 51 23.9	+4.5
NAY	**Al-Naaiem**	**3.30**	**150**	*e*P		Pn	18 51 22.7	+3.2
NAY				AML	AML	18 52 07.5	
	comp=Z,5.0nm,0.6s						
RDF	**Al-Radifah**	**3.72**	**149**	*e*P		Pn	18 51 29.0	+3.9
RDF	**Al-Radifah**	**3.72**	**149**	*e*P		Pn	18 51 28.9	+3.7

IDC 29 18:58:27.5±1.1, 4°.16N×126°.48E, h0km, mb3.4/7, mb1 3.6/7, mb1mx3.5/22, mbtmp3.5/7, Error ellipse: s-maj=51.2km s-min=17.1km az=71.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.14**	**182**	P		P	19 03 24.8	-0.1
	1.3nm,0.8s,baz=4.1,slow=14,SNR=2.8						
WRA	**Warramunga Arr**	**25.17**	**162**	P		P	19 03 53.5	-1.2
	0.9nm,0.6s,baz=341,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**28.59**	**166**	P		P	19 04 26.9	+1.4
	0.3nm,0.6s,baz=344,slow=9.9,SNR=3.5						
CMAR	**Chiang Mai Arr**	**30.44**	**300**	P		P	19 04 43.2	+1.1
	0.3nm,0.5s,baz=135,slow=10,SNR=4.0						
KSRS	**Korea Array**	**33.16**	**2**	P		P	19 05 06.3	+0.5
	0.4nm,0.5s,baz=183,slow=8.5,SNR=3.3						
MKAR	**Makanchi Array**	**57.06**	**325**	P		P	19 08 15.2	-0.2
	0.2nm,0.5s,baz=112,slow=7.8,SNR=5.4						
KURK	**Kurchatov**	**61.25**	**327**	P		P	19 08 43.3	-1.0
	0.4nm,0.3s,baz=122,slow=6.5,SNR=3.5						

*NEIC **29** 19:05:29.8, 19°.38N×70°.51W, h83km, MD3.5(RSPR), After RSPR.*
RSPR 29 19:05:29.8, 19°.38N×70°.50W, h83km±5km, MD3.5/3, 3C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDDR	**Presa de Saban**	**0.84**	**242**⇑	*e*P		Pn	19 05 46.5	-0.7
SDDR				*e*S		Sn	19 05 60.0	-0.2
SMN1	**Samana, DR**	**1.18**	**99**⇓	*e*P		Pn	19 05 50.1	-1.1
SMN1				*e*S		Sn	19 06 07.3	0.0
GRTK	**Grand Turk**	**2.20**	**345**⇑	*e*P		Pn	19 06 04.5	0.0
GRTK				*e*S		Sn	19 06 30.4	-0.5
MTP	**Monte Pirata**	**4.86**	**104**⇑	*e*P		Pn	19 06 43.4	+2.9

*ISCJB **29** 19:09:53.2±3.0, 25°.5S±0°.3×179°.8E±0°.1, h554km±37km, mb3.7/6, Error ellipse: s-maj=48.2km s-min=20.1km az=3.4*
*NEIC **29** 19:09:54.6±1.3, 24°.91S×179°.68E, h550km, Error ellipse: s-maj=73.6km s-min=17.7km az=159.0*
*IDC **29** 19:09:54.1±2.6, 24°.34S×179°.58E, h538km±33km, mb3.1/6, mb1 3.3/6, mb1mx3.1/17, mbtmp3.1/6, Error ellipse: s-maj=92.0km s-min=19.7km az=166.0*
ISC 29 19:09:53.8±3.1, 25°.5S±0°.3×179°.9E±0°.1, h550km±36km, n9, s0 59/10, mb3.7/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**31.40**	**273**	P		**P**	**19 15 29.9**	**-0.5**
	4.7nm,0.6s,mb4.2,baz=102,slow=12,SNR=5.4						
STKA	**Stephens Creek**	**34.05**	**250**	P		**P**	**19 15 53.7**	**+1.1**
	1.5nm,0.6s,mb3.7,baz=96,slow=14,SNR=4.6						
ASAR	**Alice Springs**	**41.68**	**262**	P		**P**	**19 16 54.9**	**0.0**
	0.6nm,0.3s,mb3.6,baz=92,slow=7.3,SNR=23						
ASAR				S		**S**	**19 22 33.3**	**+1.0**
	0.2nm,0.7s,baz=99,slow=13,SNR=4.5						
WRA	**Warramunga Arr**	**42.21**	**268**	P		**P**	**19 16 58.3**	**-0.7**
	1.5nm,0.3s,mb4.0,baz=100,slow=6.9,SNR=46						
WRA				S		**S**	**19 22 39.2**	**-0.8**
	0.6nm,0.7s,baz=100,slow=15,SNR=6.2						
FITZ	**Fitzroy Crossi**	**50.61**	**267**	P		**P**	**19 18 02.8**	**+0.2**
	1.3nm,0.6s,mb3.5,baz=125,slow=8.4,SNR=7.7						
VNA3	**Neumayer Olymp**	**83.29**	**177**	*e*		**P**	**19 21 22.0**	**-0.5**
VNA2	**Neumayer–Watz**	**83.70**	**178**	*e*		**P**	**19 21 24.5**	**-0.1**
TXAR	**Lajitas Array**	**91.37**	**58**	P		**P**	**19 22 01.9**	**+0.4**
	0.3nm,0.8s,mb3.2,baz=218,slow=7.8,SNR=3.6						
HFS	**Hagfors**	**144.09**	**348**	PKP		PKPdf	19 28 24.6	-1.9
	4.3nm,1.0s,baz=40,slow=2.5,SNR=6.5						

*IDC **29** 19:30:26.3±3.9, 26°.29S×178°.50E, h564km±42km, mb3.4/8, mb1 3.5/9, mb1mx3.3/19, mbtmp3.4/9, Error ellipse: s-maj=30.4km s-min=19.7km az=48.0*
*NEIC **29** 19:30:29.1±2.3, 26°.38S×178°.45E, h604km±28km, mb4.5/4, Error ellipse: s-maj=33.6km s-min=19.8km az=209.0*
*ISCJB **29** 19:30:30.3±1.8, 26°.4S±0°.1×178°.3E±0°.2, h629km±19km, mb4.1/12, Error ellipse: s-maj=29.7km s-min=15.7km az=149.0*
ISC 29 19:30:29.6±1.8, 26°.3S±0°.1×178°.4E±0°.2, h603km±17km, n32, s0 71/28, mb4.1/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUZ	**Omahuta**	**9.79**	**204**	*e*P		**P**	**19 32 47.4**	**+1.4**
	35nm,1.0s						
DZM	**Mont Dzumac**	**11.71**	**289**	*e*P		**P**	**19 33 05.5**	**+0.1**
NOUC	**Port Laguerre**	**11.81**	**288**	*e*P		**P**	**19 33 06.2**	**-0.3**
URZ	**Urewera**	**11.96**	**185**	P		**P**	**19 33 04.3**	**-3.3**
	1.6nm,0.3s,baz=360,slow=13,SNR=9.1						
URZ	**Urewera**	**11.96**	**185**	PN		**P**	**19 33 04.6**	**-3.0**
QRZ	**Quartz Range**	**15.27**	**197**	PN		**P**	**19 33 40.1**	**+0.3**
NNZ	**Nelson**	**15.43**	**194**	PN		**P**	**19 33 40.4**	**-0.9**
EIDS	**Eidsvold**	**24.59**	**266**	*e*P		**P**	**19 35 04.2**	**+0.1**
EIDS	**Eidsvold**	**24.59**	**266**	*e*P		**P**	**19 35 03.6**	**-0.5**
	10nm,0.6s,mb4.6						
RMQ	**Roma**	**26.53**	**263**	*e*P		**P**	**19 35 21.8**	**+0.7**
	14nm,0.8s,mb4.7						
YNG	**Young**	**27.03**	**246**	*e*P		**P**	**19 35 26.3**	**+1.0**
	5.7nm,0.9s,mb4.2						
CMSA	**Cobar Meteorol**	**29.03**	**252**	*e*P		**P**	**19 35 42.7**	**-0.1**
CTA	**Charters Tower**	**30.14**	**275**	*e*P		**P**	**19 35 52.8**	**+0.4**
	7.7nm,0.4s,mb4.7						
CTA	**Charters Tower**	**30.14**	**275**	P		**P**	**19 35 52.8**	**+0.4**
	9.5nm,0.5s,mb4.7,baz=105,slow=11,SNR=24						
CTAO	**Charters Tower**	**30.14**	**275**	*e*P		**P**	**19 35 52.5**	**+0.1**
	11nm,0.6s,mb4.7						
QLP	**Quilpie**	**30.54**	**262**	*e*P		**P**	**19 35 55.4**	**-0.4**
STKA	**Stephens Creek**	**32.53**	**251**	*e*P		**P**	**19 36 12.6**	**0.0**
	3.1nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**32.53**	**251**	*e*P		**P**	**19 36 12.3**	**-0.3**
	1.0nm,0.6s,mb3.6						
STKA	**Stephens Creek**	**32.53**	**251**	P		**P**	**19 36 12.6**	**0.0**
	4.1nm,0.5s,mb4.3,baz=96,slow=9.9,SNR=22						
ASAR	**Alice Springs**	**40.27**	**264**	P		**P**	**19 37 15.6**	**-0.5**
	3.7nm,0.5s,mb4.2,baz=91,slow=7.1,SNR=80						
WRA	**Warramunga Arr**	**40.87**	**269**	P		**P**	**19 37 19.9**	**-0.9**
WRA	**Warramunga Arr**	**40.87**	**269**	P		**P**	**19 37 19.9**	**-0.9**
	2.6nm,0.4s,mb4.2,baz=104,slow=7.8,SNR=48						
KNA	**Kununurra**	**47.26**	**273**	*e*P		**P**	**19 38 10.3**	**+0.3**
	7.8nm,0.9s,mb4.2						
FITZ	**Fitzroy Crossi**	**49.25**	**268**	*e*P		**P**	**19 38 24.4**	**-0.3**
	5.6nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**49.25**	**268**	P		**P**	**19 38 24.5**	**-0.2**
	2.5nm,0.5s,mb3.9,baz=123,slow=6.8,SNR=16						
QSPA	**South Pole Qui**	**63.77**	**180**	P		**P**	**19 40 03.5**	**+0.5**
	1.0nm,0.9s,mb3.1,baz=0.0,slow=9.1,SNR=4.7						
MJAR	**Matsushiro Arr**	**73.10**	**327**	P		**P**	**19 40 59.4**	**-0.3**
	0.7nm,0.4s,mb3.5,baz=156,slow=5.8,SNR=3.6						
PETK	**Petropavlovsk-**	**81.12**	**348**	P		**P**	**19 41 43.3**	**+0.6**
	1.8nm,0.9s,mb3.5,baz=109,slow=7.7,SNR=3.0						
NOA	**NORSAR Array B**	**144.21**	**349**	PKP	PKPdf		19 48 56.2	-0.9
NOA	**NORSAR Array B**	**144.21**	**349**	PKP	PKPdf		19 48 56.2	-0.9
	0.8nm,0.8s,baz=17,slow=3.3,SNR=3.5						
HFS	**Hagfors**	**144.60**	**347**	PKP	PKPdf		19 48 57.6	-0.2
	1.4nm,0.4s,baz=48,slow=2.2,SNR=10						
MMAI	**Mount Meron Ar**	**147.29**	**291**	PKPbc	PKPbc		19 49 07.4	+0.9
	0.7nm,0.5s,baz=62,slow=3.4,SNR=2.8						

*ISCJB **29** 19:33:12.8±0.4, 40°.30N±0°.02×27°.17E±0°.03, h3km±5km, Error ellipse: s-maj=3.9km s-min=3.5km az=30.0*
*ISK **29** 19:33:12.4, 40°.25N×27°.14E, h8km, MD2.8*
*CSEM **29** 19:33:13.0±0.1, 40°.30N×27°.16E, h5km, MD2.8, Error ellipse: s-maj=2.8km s-min=2.4km az=33.0*
*DDA **29** 19:33:13.1, 40°.28N×27°.17E, h16km±2km, Md3.1*
ISC 29 19:33:13.3±0.3, 40°.30N±0°.02×27°.17E±0°.03, h8km±4km, n51, s0 79/73, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPK	**Lapseki**	**0.32**	**283**	PG		**Pg**	**19 33 18.5**	**-1.0**
LPK				*e*SG		**Sg**	**19 33 24.4**	**+0.6**
LPK	**Lapseki**	**0.32**	**283**	*i* Pg		**Pg**	**19 33 18.5**	**-1.1**
LPK				*e*Sg		**Sg**	**19 33 24.4**	**+0.6**
RKY	**Sarkoy-Tekirda**	**0.39**	**1**	*e*PG		**Pg**	**19 33 20.9**	**+0.5**
RKY	**Sarkoy-Tekirda**	**0.39**	**1**	*e*Pg		**Pg**	**19 33 21.3**	**+0.5**
SART	**Tekirdag**	**0.39**	**1**	*i* P		**Pg**	**19 33 20.9**	**+0.1**
SART				*i* S		**Sg**	**19 33 26.9**	**+1.0**
SART	**Tekirdag**	**0.39**	**1**	*i* P		**Pg**	**19 33 20.9**	**+0.1**
SART				*i* S		**Sg**	**19 33 26.9**	**+1.0**
GONE	**Gonen-Balikesi**	**0.47**	**123**	*e*PG		**Pg**	**19 33 22.2**	**-0.1**
GONE				*e*SG		**Sg**	**19 33 28.7**	**+0.2**
GONE	**Gonen-Balikesi**	**0.47**	**123**	*e*Pg		**Pg**	**19 33 22.2**	**-0.2**
GONE				*e*Sg		**Sg**	**19 33 28.7**	**+0.2**
MFT	**Murefte**	**0.49**	**10**	*e*PG		**Pg**	**19 33 23.8**	**+0.9**
MFT	**Murefte**	**0.49**	**10**	*e*Pg		**Pg**	**19 33 23.8**	**+1.0**
EDC	**Edincik**	**0.53**	**85**	*e*PG		**Pg**	**19 33 23.9**	**+0.4**
EDC	**Edincik**	**0.53**	**85**	*e*Pg		**Pg**	**19 33 23.9**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.54**	**280**	*e*PG		**Pg**	**19 33 23.4**	**-0.3**
GELI	**Tayfur-Gelibol**	**0.54**	**280**	*e*Pg		**Pg**	**19 33 23.4**	**-0.3**
BNT	**Bandirma**	**0.58**	**84**	*e*PG		**Pg**	**19 33 23.9**	**-0.5**
ERIK	**Erikli-Kesan**	**0.62**	**307**	*e*PG		**Pg**	**19 33 25.1**	**-0.2**
ERIK	**Erikli-Kesan**	**0.62**	**307**	*e*Pg		**Pg**	**19 33 25.1**	**-0.2**
BALY	**Balya**	**0.66**	**148**	*i* P		**Pg**	**19 33 25.9**	**-0.1**
BALY				*i* S		**Sg**	**19 33 35.0**	**+0.5**
BALY	**Balya**	**0.66**	**148**	*i* P		**Pg**	**19 33 25.9**	**0.0**
BALY				*i* S		**Sg**	**19 33 35.0**	**+0.5**
EZN	**Ezine**	**0.80**	**234**	*e*PG		**Pg**	**19 33 27.6**	**-1.1**
EZN	**Ezine**	**0.80**	**234**	*e*Pg		**Pg**	**19 33 27.6**	**-1.1**
BALB	**Balikesir**	**0.86**	**140**	*e*PG		**Pg**	**19 33 28.8**	**-0.9**
BALB	**Balikesir**	**0.86**	**140**	*e*Pg		**Pg**	**19 33 28.8**	**-0.9**
ENEZ	**Enez**	**0.89**	**300**	*e*PG		**Pg**	**19 33 29.9**	**-0.5**
ENEZ	**Enez**	**0.89**	**300**	*e*Pg		**Pg**	**19 33 29.9**	**-0.4**
KCTX	**Karacabey (Bur**	**0.91**	**92**	*e*PG		**Pg**	**19 33 30.6**	**-0.1**
KCTX	**Karacabey (Bur**	**0.91**	**92**	*e*Pg		**Pg**	**19 33 30.6**	**-0.1**
CRLT	**Corlu**	**0.93**	**27**	*e*PG		**Pg**	**19 33 31.9**	**+0.7**
CRLT	**Corlu**	**0.93**	**27**	*e*Pg		**Pg**	**19 33 31.9**	**+0.7**
BOZC	**Bozcaada**	**0.97**	**242**	*i* P		**Pg**	**19 33 31.9**	**0.0**
BOZC				*i* P			19 33 32.4	
BOZC				*i* S		**Sg**	**19 33 45.0**	**+0.4**
BOZC				*i* S		**Sg**	**19 33 45.4**	**+0.8**
GADA	**Gvkgeada**	**0.98**	**264**	*e*PG		**Pg**	**19 33 31.4**	**-0.7**
GADA	**Gvkgeada**	**0.98**	**264**	*e*Pg		**Pg**	**19 33 31.4**	**-0.7**
AYVA	**Ayvalik**	**1.06**	**201**	*i* P		**Pg**	**19 33 33.3**	**-0.3**
AYVA				*i* S		**Sg**	**19 33 47.5**	**+0.2**
AYVA	**Ayvalik**	**1.06**	**201**	*i* P		**Pg**	**19 33 33.3**	**-0.3**
AYVA				*i* S		**Sg**	**19 33 47.5**	**+0.2**
SLVT	**Silivri**	**1.22**	**40**	*e*PN		**Pn**	**19 33 36.4**	**-0.2**
SLVT	**Silivri**	**1.22**	**40**	*e*Pn		**Pn**	**19 33 36.4**	**-0.2**
DURS	**Dursunbey**	**1.22**	**124**	*i* P		**Pb**	**19 33 35.9**	**-0.7**
DURS				*i* S		**Sb**	**19 33 52.8**	**+0.3**
DURS	**Dursunbey**	**1.22**	**124**	*i* P		**Pb**	**19 33 35.9**	**-0.7**
DURS				*i* S		**Sb**	**19 33 52.8**	**+0.3**
ELBA	**Catalca**	**1.28**	**48**	*i* P		**Pn**	**19 33 36.2**	**-1.2**
ELBA				*i* S		**Sb**	**19 33 53.0**	**-1.1**
ELBA	**Catalca**	**1.28**	**48**	*i* P		**Pn**	**19 33 36.2**	**-1.2**
ELBA				*i* S		**Sb**	**19 33 53.0**	**-1.1**
ARMT	**Armutlu**	**1.32**	**78**	*e*PN		**Pn**	**19 33 38.1**	**+0.2**
ARMT	**Armutlu**	**1.32**	**78**	*e*Pn		**Pn**	**19 33 38.1**	**+0.2**
CTKS	**Kestanelik-??a**	**1.38**	**47**	*e*PN		**Pn**	**19 33 38.2**	**-0.5**
CTKS	**Kestanelik-??a**	**1.38**	**47**	*e*Pn		**Pn**	**19 33 38.2**	**-0.6**
AKHS	**Akhisar**	**1.50**	**160**	*i* P		**Pn**	**19 33 40.8**	**+0.3**
AKHS				*i* S		**Sn**	**19 34 02.7**	**+2.4**
AKHS	**Akhisar**	**1.50**	**160**	*i* P		**Pn**	**19 33 40.8**	**+0.3**
AKHS				*i* S		**Sn**	**19 34 02.7**	**+2.4**
EDRB	**Edirne**	**1.58**	**348**	*e*PN		**Pn**	**19 33 42.2**	**+0.7**
DEMI	**Demirci**	**1.73**	**136**	*i* P		**Pn**	**19 33 45.2**	**+1.6**
DEMI				*i* S		**Sn**	**19 34 04.5**	**-1.4**
DEMI	**Demirci**	**1.73**	**136**	*i* P		**Pn**	**19 33 45.2**	**+1.6**
DEMI				*i* S		**Sn**	**19 34 04.5**	**-1.4**
GDZ	**Gediz**	**2.16**	**123**	*i* P		**Pn**	**19 33 53.1**	**+3.6**
GDZ				*i* S		**Sn**	**19 34 21.4**	**+5.1**
GDZ	**Gediz**	**2.16**	**123**	*i* P		**Pn**	**19 33 53.1**	**+3.6**
GDZ				*i* S		**Sn**	**19 34 21.5**	**+5.2**

*MOS **29** 19:34:32.5±1.0, 3°.32S×101°.80E, h33km, mb5.2/30, Error ellipse: s-maj=11.0km s-min=5.4km az=113.5*
*BJI **29** 19:34:34.8, 3°.50S×101°.60E, h50km, mB4.8/29, mb4.9/41, Ms4.5/34, Ms7 4.2/31*
*ISCJB **29** 19:34:34.7±0.2, 3°.58S±0°.03×101°.49E±0°.03, h54km, mb4.9/106, MS3.9/22, Error ellipse: s-maj=4.8km s-min=2.4km az=40.8*
*NEIC **29** 19:34:35.8±0.2, 3°.50S×101°.63E, mb4.9/37, Error ellipse: s-maj=6.5km s-min=5.0km az=55.0*
NEIC Felt [III] at Bengkulu, Kapahiang and Lais.
*IDC **29** 19:34:36.3±0.6, 3°.43S×101°.81E, h53km±5km, mb4.5/24, mb1 4.5/25, mb1mx4.5/27, mbtmp4.4/25, MS3.7/12, Ms1 3.7/12, ms1mx3.4/35, Error ellipse: s-maj=15.7km s-min=8.8km az=47.0*
*DJA **29** 19:34:37, 3°.57S×101°.51E, h52km, mb4.9/39*
ISC 29 19:34:36.7±0.2, 3°.56S±0°.03×101°.52E±0°.02, h56km, h56km±2.9km; pP-P, n312, s1 811/322, mb4.9/106, MS3.9/22, 23C-11D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.08**	**95**	P		**Pn**	**19 34 54.8**	**-0.9**
KSI				S		**Sn**	**19 35 08.9**	**-0.9**
KRJI	**Kerinci**	**1.46**	**358**	P		**Pn**	**19 35 01.0**	**+0.2**
KRJI				S		**Sn**	**19 35 20.5**	**+1.6**
MNAI	**Manna**	**1.64**	**119**	P		**Pn**	**19 35 03.2**	**-0.1**
MNAI				S		**Sn**	**19 35 22.5**	**-0.9**
LHSI	**Lahat**	**2.02**	**98**	P		**Pn**	**19 35 10.1**	**+1.7**
SDSI	**Sungai Dareh**	**2.61**	**358**	P		**Pn**	**19 35 16.9**	**+0.4**
MDSI	**Maura Dua**	**2.81**	**109**	P		**Pn**	**19 35 20.0**	**+0.8**
MDSI				S		**Sn**	**19 35 52.7**	**+0.7**
PDSI	**Padang**	**2.83**	**338**	P		**Pn**	**19 35 19.7**	**+0.2**
PDSI				S		**Sn**	**19 35 52.6**	**+0.1**
LWLI	**Liwa**	**2.92**	**120**	P		**Pn**	**19 35 21.5**	**+0.8**
PPI	**Padang Panjang**	**3.28**	**340**	P		**Pn**	**19 35 26.6**	**+1.0**
SISI	**Saibi**	**3.28**	**312**	P		**Pn**	**19 35 26.6**	**+0.9**
RGRI	**Rengat**	**3.29**	**14**	P		**Pn**	**19 35 26.5**	**+0.7**
KLSI		**3.40**	**109**	P		**Pn**	**19 35 29.2**	**+1.9**
BKNI	**Bangkinang**	**3.89**	**353**	P		**Pn**	**19 35 35.1**	**+1.1**
BLSI	**Bandar Lampung**	**4.13**	**116**	P		**Pn**	**19 35 42.2**	**+4.9**
MNSI	**Mandailing Nat**	**4.74**	**336**	P		**Pn**	**19 35 46.4**	**+0.7**
RBSI	**Rajabasa**	**4.79**	**118**	P		**Pn**	**19 35 51.0**	**+4.7**
CGJI	**Cibinong**	**5.15**	**126**	P		**Pn**	**19 35 51.1**	**-0.2**
	1.9nm7μm286nm,0.8s						
MYKOM	**Kota Tinggi**	**5.80**	**24**	P		**Pn**	**19 36 01.2**	**+1.0**
MYKOM	**Kota Tinggi**	**5.80**	**24**	P		**Pn**	**19 36 01.0**	**+0.7**
	0.9nm3μm263nm,1.1s						
KGM	**Kluang**	**5.82**	**18**	P		**Pn**	**19 36 01.3**	**+0.7**
DBJI	**Dramaga**	**6.00**	**120**	P		**Pn**	**19 36 05.4**	**+2.4**
	0.9nm3μm163nm,0.6s						
CBJI	**Citeko**	**6.03**	**118**	P		**Pn**	**19 36 08.7**	**+5.4**
	2.6nm7μm706nm,0.8s						

SKJI Sukabumi 6.08 125 P **Pn 19 36 05.0 +1.0**
1.6nm5μm204nm,0.6s
TPI Tanjungpandan 6.18 83 P **Pn 19 36 04.5 -0.9**
0.5nm810nm36nm,1.0s
FRIM Kepong 6.75 1 P **Pn 19 36 15.2 +1.9**
PSI Prapat 6.83 338 P **Pn 19 36 12.5 -1.8**
4.0nm,0.3s,baz=176,slow=13,SNR=8.9
PSI S **Sn 19 37 35.9 +5.2**
1.4nm,0.3s,baz=120,slow=20,SNR=2.3
PSI LR LR 19 39 11.5
comp=Z,1μm,21.9s,baz=141,slow=41
LEM Lembang 6.89 118 P **Pn 19 36 21.7 +6.5**
CISI Cisompet, Garu 7.42 123 P **Pn 19 36 21.5 -1.0**
1.3nm3μm152nm,0.5s
IPM Ipoh 8.00 356 *e*Pn **Pn 19 36 32.0 +1.6**
28nm,0.4s
IPM Ipoh 8.00 356 P **Pn 19 36 33.3 +3.0**
IPM Ipoh 8.00 356 P **Pn 19 36 32.5 +2.1**
718nm60nm,1.1s
TPTI 8.04 327 P **Pn 19 36 31.2 +0.3**
30nm,1.0s
KULM Kulim 8.83 354 *e*Pn **Pn 19 36 42.1 +0.4**
40nm,0.8s
KULM Kulim 8.83 354 P **Pn 19 36 43.8 +2.0**
KULM Kulim 8.83 354 P **Pn 19 36 42.9 +1.1**
585nm44nm,1.1s
KTGM Kuala Trenggan 8.97 10 P **Pn 19 36 46.4 +2.7**
SMRI Semarang 9.54 112 P **Pn 19 36 52.9 +1.4**
94nm,0.8s
COCO West Island 9.75 208 *e*Pn **Pn 19 36 53.2 -1.1**
225nm,0.5s
COCO West Island 9.75 208 *e*P **Pn 19 36 53.2 -1.1**
COCO pmax pmax
comp=Z,225nm,0.5s
UGM Wanagama 9.95 116 P **Pn 19 36 57.1 0.0**
comp=Z,97nm,1.1s
KSM Kuching 10.11 61 *e*Pn **Pn 19 36 57.8 -1.5**
comp=Z,13nm,0.6s
KSM Kuching 10.11 61 P **Pn 19 36 59.4 +0.1**
comp=Z,21nm,0.7s
PCJI Pacitan 10.66 116 P **Pn 19 37 06.0 -0.7**
comp=Z,51nm,0.9s
BSI Banda Aceh 10.93 325 P **Pn 19 37 09.2 -1.3**
comp=Z,77nm,1.0s
SJI Sawahan 11.01 113 P **Pn 19 37 12.5 +0.9**
comp=Z,1μmcomp=Z,94nm,0.7s
PWJI Pagerwojo 11.15 114 P **Pn 19 37 13.5 0.0**
comp=Z,770nmcomp=Z,43nm,0.8s
SBUM Sibu 12.25 61 P **Pn 19 37 32.6 +4.1**
SBUM Sibu 12.25 61 P **Pn 19 37 32.2 +3.7**
GMJI Gumukmas 12.75 112 P **Pn 19 37 35.8 +0.4**
comp=Z,28nm,1.2s
KMMI Kalianget 12.87 106 P **Pn 19 37 38.0 +1.0**
comp=Z,57nm,1.4s
SRBI Singaraja 14.35 109 P **Pn 19 37 56.6 -0.3**
comp=Z,43nm,0.6s
IGBI Denpasar 14.52 112 P **Pn 19 37 55.5 -3.7**
comp=Z,86nm,0.9s
KKM Kota Kinabalu 17.51 57 *e*Pn **Pn 19 38 37.7 +0.6**
TSM Tawau 18.11 65 P **Pn 19 38 47.3 +2.8**
SDKM Sandakan 18.13 60 P **Pn 19 38 46.2 +1.5**
SPSI Sidrap Palu 18.22 92 P **Pn 19 38 45.5 -0.3**
comp=Z,38nm,1.2s
TTSI Tana Toraja 18.28 89 P **Pn 19 38 46.6 +0.1**
comp=Z,439nmcomp=Z,48nm,1.0s
KDM Kudat 18.49 56 P **Pn 19 38 50.8 +1.7**
BKSI Bulukumba 18.63 96 P **Pn 19 38 50.0 -0.8**
comp=Z,742nmcomp=Z,78nm,1.0s
MYLDM Lahad Datu 19.06 63 P **Pn 19 38 57.0 +1.1**
MYLDM Lahad Datu 19.06 63 P **Pn 19 38 56.8 +0.9**
comp=Z,870nmcomp=Z,72nm,1.1s
WSI Waingapu 19.61 109 P **Pn 19 39 59.7 -2.8**
comp=Z,2μmcomp=Z,167nm,0.5s
MRSI Marisa 20.80 79 P **P 19 39 13.4 -0.2**
comp=Z,580nmcomp=Z,73nm,0.8s
KDI Kendari 21.06 92 P **P 19 39 17.4 +1.0**
comp=Z,40nm,1.0s,mb4.7
BBSI Bau Bau 21.08 96 P **P 19 39 15.8 -0.7**
comp=Z,58nm,1.0s,mb4.9
MMRI Maumere 21.21 105 P **P 19 39 16.8 -1.1**
comp=Z,30nm,1.0s,mb4.6
LUWI Luwuk 21.38 84 P **P 19 39 21.3 +1.5**
comp=Z,906nmcomp=Z,111nm,1.2s,mb5.1
CM31 Chiang Mai Arr 22.02 353 *e*P **P 19 39 26.3 -0.2**
comp=Z,5.4nm,0.5s,mb4.2
CMAR Chiang Mai Arr 22.02 353 P **P 19 39 24.2 -2.4**
CMAR PcP PcP 19 43 23.9 +0.8
CMAR LR LR 19 48 24.7
CMAR Chiang Mai Arr 22.02 353 P **P 19 39 24.2 -2.4**
comp=Z,8.3nm,0.5s,mb4.4,baz=185,slow=8.2,SNR=47
C

GYA LR LR
comp=E,460nm,17.6s,MS4.4
GYA LR LR
comp=Z,490nm,16.6s,MS4.2
ODAN Odare 33.18 337 *eP* **P 19 41 08.2 +0.1**
comp=Z,66nm,0.8s,mb5.6
TAPN Taplejung 33.49 337 *eP* **P 19 41 11.1 +0.3**
comp=Z,111nm,0.8s,mb5.8
RAMN Ramite 33.58 335 *eP* **P 19 41 11.5 -0.1**
comp=Z,24nm,0.5s,mb5.4
YHNB Yeheng 34.06 33 *eP* **P 19 41 16.0 +0.3**
CD2 Chengdu 34.34 3 P **P 19 41 19.5 +1.4**
CD2 pP pP 19 41 34.8 +2.4
CD2 sP sP 19 41 42.0 +2.9
CD2 PP PP 19 42 37.0 +0.1
CD2 PcP PcP 19 43 53.8 +0.6
CD2 S **S** **19 46 43.0 +1.2**
CD2 sS sS 19 47 08.3 +2.3
CD2 PcS PcS 19 47 39.0 -0.6
CD2 SS SS 19 48 57.0 -16
CD2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CD2 pmax pmax
comp=Z,80nm,4.9s
CD2 LR LR
comp=N,330nm,21.4s,MS4.2
CD2 LR LR
comp=E,420nm,22.0s,MS4.2
CD2 LR LR
comp=Z,360nm,21.2s,MS4.1
JIRN Jiri 34.37 335 *eP* **P 19 41 18.4 -0.1**
ENH Enshi 34.49 12 *eP* **P 19 41 17.8 -1.6**
comp=Z,25nm,0.4s,mb5.5
LSA Lhasa 34.53 344 *eP* **P 19 41 18.8 -1.0**
comp=Z,12nm,0.8s,mb4.9
LSA Lhasa 34.53 344 *eP* **P 19 41 18.8 -1.0**
LSA pmax pmax
comp=Z,12nm,0.8s,mb4.9
PKI Pulchoki 34.63 334 *eP* **P 19 41 20.7 +0.1**
comp=Z,24nm,0.7s,mb5.2
PKIN Phulchoki 34.64 334 *eP* **P 19 41 20.7 0.0**
comp=Z,29nm,0.7s,mb5.3
GUN Gumba 34.72 335 *eP* **P 19 41 20.7 -0.8**
comp=Z,140nm,0.7s,mb6.0
DMN Daman 34.79 334 *eP* **P 19 41 22.4 +0.3**
comp=Z,60nm,0.9s,mb5.5
GKN Gorkha 35.34 334 *eP* **P 19 41 26.9 +0.1**
comp=Z,121nm,1.0s,mb5.8
KOLN Koldanda 35.61 332 *eP* **P 19 41 29.5 +0.4**
comp=Z,103nm,0.8s,mb5.8
WRA Warramunga Arr 35.91 120 P **P 19 41 30.9 -0.9**
WRA PcP PcP 19 43 58.1 +0.1
WRA pPcP 19 44 16.6
WRA S **S** **19 46 60.0 -6.2**
WRA Warramunga Arr 35.91 120 P **P 19 41 30.9 -0.9**
comp=Z,9.1nm,0.3s,mb5.2,baz=298,slow=11,SNR=177
WRA PcP PcP 19 43 58.1 +0.1
comp=Z,1.1nm,0.8s,baz=302,slow=4.8,SNR=3.4
WRA pPcP 19 44 16.6
comp=Z,2.9nm,0.8s,baz=298,slow=2.3,SNR=5.4
WRA S **S** **19 46 60.0 -6.2**
comp=Z,2.9nm,1.0s,baz=295,slow=16,SNR=5.7
WRA Warramunga Arr 35.91 120 P **P 19 41 30.9 -0.9**
WRA 19 43 58.1
WRA S **S** **19 47 00.0 -6.2**
WB2 Warramunga Arr 35.92 120 *eP* **P 19 41 30.8 -1.1**
DANN Dangsing 36.03 333 *eP* **P 19 41 33.1 +0.4**
comp=Z,136nm,0.9s,mb5.9
ASAR Alice Springs 37.12 126 P **P 19 41 41.9 -0.2**
comp=Z,7.4nm,0.3s,mb4.9,baz=299,slow=7.6,SNR=173
ASAR PcP PcP 19 44 02.1 +0.4
comp=Z,0.7nm,0.5s,baz=308,slow=3.2,SNR=3.1
ASAR pPcP 19 44 21.6
comp=Z,2.6nm,0.9s,baz=330,slow=2.7,SNR=5.9
ASAR S **S** **19 47 21.3 -3.3**
comp=Z,2.0nm,0.9s,baz=298,slow=16,SNR=9.8
ASAR Alice Springs 37.12 126 P **P 19 41 41.9 -0.2**
ASAR 19 44 02.1
ASAR S **S** **19 47 21.3 -3.3**
XAN Xi'an 38.04 10 P **P 19 41 48.5 -1.2**
XAN S **S** **19 47 40.8 +2.6**
XAN pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
XAN pmax pmax
comp=Z,9.0nm,3.5s
XAN LR LR
comp=N,100nm,15.6s
XAN LR LR
comp=E,62nm,32.5s
XAN LR LR
comp=Z,62nm,21.2s
NJ2 Nanjing 39.06 24 *eP* **P 19 41 59.0 +0.7**
NJ2 pmax pmax
comp=Z,20nm,0.5s,mb5.1
LZH Lanzhou 39.50 3 *eP* **P 19 42 01.5 -0.3**
LZH pP pP 19 42 18.0 +1.7
LZH PP PP 19 43 33.5 0.0
LZH PcP PcP 19 44 07.5 -1.2
LZH pmax pmax
comp=Z,23nm,1.1s,mb4.8
LZH pmax pmax
comp=Z,55nm,4.2s
LZH LR LR
comp=N,230nm,14.1s,MS4.2
LZH LR LR
comp=E,140nm,12.6s,MS4.2
LZH LR LR
comp=Z,370nm,16.6s,MS4.3
DDI Dehra Dun 40.47 328 *ex* **P 19 42 08.0 -2.0**
SDNR Sundarnagar 41.97 328 *e*PKP **P 19 42 23.5 +1.2**
GTA Gaotai 42.78 358 ⇑P **P 19 42 27.8 -1.0**
GTA pP pP 19 42 43.5 +0.1
GTA sP sP 19 42 50.8 +0.8
GTA PcP PcP 19 44 18.8 -0.5
GTA S **S** **19 48 47.0 -1.8**
GTA sS sS 19 49 13.5 0.0
GTA SS SS 19 51 53.0 -8.7
GTA pmax pmax
comp=Z,7.0nm,1.1s,mb4.3
GTA pmax pmax
comp=Z,78nm,6.9s
GTA LR LR
comp=N,210nm,19.2s,MS4.1
GTA LR LR
comp=E,120nm,20.7s,MS4.1
GTA LR LR
comp=Z,290nm,20.4s,MS4.2
HHC Hu-ho-hao-te 45.14 11 *eP* **P 19 42 47.3 -0.3**
HHC pP pP 19 42 59.3 -3.1
HHC sP sP 19 43 05.0 -3.9
HHC PP PP 19 44 33.0 -1.2
HHC PcS PcS 19 48 19.0 -2.1
HHC S **S** **19 49 23.5 +0.4**
HHC sS sS 19 49 43.5 -4.4
HHC SS SS 19 52 37.5 -10
HHC pmax pmax
comp=Z,13nm,1.0s,mb4.7
HHC pmax pmax
comp=Z,46nm,4.2s
HHC LR LR
comp=N,120nm,12.3s,MS4.1
HHC LR LR
comp=E,80nm,14.3s,MS4.1
HHC LR LR
comp=Z,120nm,14.1s,MS4.0
BJT Baijiatuau 45.41 16 *eP* **P 19 42 49.2 -0.5**
comp=Z,7.5nm,0.5s,mb4.8
BJT Baijiatuau 45.41 16 *eP* **P 19 42 49.2 -0.6**
BJT pmax pmax
comp=Z,8.0nm,0.5s
GUMO Guam 46.27 67 *eP* **P 19 42 53.0 -4.0**
comp=Z,10nm,0.4s,mb5.1
GUMO Guam 46.27 67 P **P 19 42 53.5 -3.5**
comp=Z,15nm,0.4s,mb5.3,baz=0.0,slow=4.0,SNR=7.5
GUMO Guam 46.27 67 *eP* **P 19 42 53.0 -4.0**
GUMO pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
CTA Charters Tower 46.57 114 *eP* **P 19 42 59.0 -0.3**
comp=Z,15nm,1.0s,mb4.9
CTA Charters Tower 46.57 114 P **P 19 42 57.9 -1.4**
comp=Z,18nm,0.9s,mb5.0,baz=288,slow=7.8,SNR=10
CTA pP pP 19 43 11.1 -3.0
comp=Z,6.2nm,0.7s,baz=287,slow=14,SNR=2.7
CTA LR LR 20 03 59.4
comp=Z,99nm,21.0s,MS3.7,baz=247,slow=38
CTA Charters Tower 46.57 114 P **P 19 42 57.9 -1.4**
CTA *PP pP 19 43 11.1 -3.0
CTAO Charters Tower 46.57 114 *eP* **P 19 42 58.5 -0.9**
CTAO Charters Tower 46.57 114 P **P 19 42 58.9 -0.5**
comp=Z,28nm,1.1s,mb5.1
QLP Quilpie 46.84 124 *eP* **P 19 43 01.7 +0.4**
STKA Stephens Creek 46.99 131 *eP* **P 19 43 03.2 +0.8**
comp=Z,12nm,0.7s,mb4.9
STKA Stephens Creek 46.99 131 *eP* **P 19 43 02.8 +0.4**
comp=Z,3.2nm,0.8s,mb4.3
STKA Stephens Creek 46.99 131 P **P 19 43 02.9 +0.5**
comp=Z,14nm,0.6s,mb5.0,baz=311,slow=8.1,SNR=32
STKA Stephens Creek 46.99 131 *eP* **P 19 43 02.8 +0.4**
STKA pmax pmax
comp=Z,3.0nm,0.8s
KSRS Korea Array 47.62 29 P **P 19 43 06.0 -1.1**
comp=Z,2.0nm,0.8s,mb4.2,baz=225,slow=8.9,SNR=8.4
KBL Kabul 48.68 324 *eP* **P 19 43 15.1 -0.3**
WMQ Urumqi 48.78 347 P **P 19 43 17.0 +1.0**
WMQ pP pP 19 43 32.5 +1.6
WMQ sP sP 19 43 39.5 +2.1
WMQ PcP PcP 19 44 41.3 +1.2
WMQ PP PP 19 45 11.0 +1.3
WMQ *eS* **S** **19 50 14.5 -0.3**
WMQ ScS ScS 19 53 00.8 -2.5
WMQ SS SS 19 53 41.0 -5.2
WMQ pmax pmax
comp=Z,290nm,3.6s
WMQ LR LR
comp=N,69nm,22.8s,MS3.6
WMQ LR LR
comp=E,37nm,22.2s,MS3.6
WMQ LR LR
comp=Z,64nm,21.2s,MS3.6
KSH Kashi 48.89 334 P **P 19 43 15.8 -1.1**
KSH *e*pP pP 19 43 28.0 -3.8
KSH *e*sP sP 19 43 32.8 -5.5
KSH *e*PcP PcP 19 44 42.3 +1.6
KSH *e*PP PP 19 45 08.3 -2.5
KSH *e*ScP ScP 19 48 31.5 +0.4
KSH *e*PcS PcS 19 48 36.3 -0.6
KSH *e*S **S** **19 50 12.0 -4.6**
KSH *e*ScS ScS 19 53 01.0 -3.3
KSH *e*SS SS 19 53 37.0 -11
KSH pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
KSH pmax pmax
comp=Z,71nm,3.7s
KSH LR LR
comp=N,84nm,5.1s
KSH LR LR
comp=E,97nm,5.2s
KSH LR LR
comp=Z,81nm,4.7s
CBIJ Chichi jima 49.69 50 LR LR 20 02 39.0
comp=Z,79nm,21.9s,MS3.7,baz=248,slow=34
CMSA Cobar Meteorol 49.96 129 *eP* **P 19 43 26.0 +0.7**
RMQ Roma 50.61 122 *eP* **P 19 43 30.5 +0.2**
comp=Z,9.8nm,1.0s,mb4.7
SONM Songino Array 51.36 4 P **P 19 43 35.8 +0.4**
comp=Z,16nm,0.5s,mb5.2,baz=186,slow=8.8,SNR=69
ULN Ulaanbaatar 51.44 5 *eP* **P 19 43 35.6 -0.4**
comp=Z,19nm,1.0s,mb5.0
ULN Ulaanbaatar 51.44 5 *eP* **P 19 43 35.7 -0.3**
ULN pmax pmax
comp=Z,19nm,1.0s,mb5.0
ULN Ulaanbaatar 51.44 5 P **P 19 43 36.3 +0.3**
comp=Z,20nm,1.1s,mb5.0
CN2 Changchun 51.83 22 *eP* **P 19 43 42.3 +3.3**
CN2 *ep*P pP 19 43 58.0 +3.9
CN2 *e*S **S** **19 50 59.8 +2.5**
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,14.0s,MS4.7
CN2 LR LR
comp=E,400nm,14.0s,MS4.7
CN2 LR LR
comp=Z,200nm,16.0s,MS4.2
TKM2 Tokmak 2 51.86 336 P **P 19 43 39.4 +0.1**
SNR=21
TKM2 Tokmak 2 51.86 336 *eP* **P 19 43 39.2 -0.1**
comp=Z,20nm,0.7s,mb5.2
TKM2 Tokmak 2 51.86 336 *eP* **P 19 43 39.2 -0.1**
TKM2 pmax pmax
comp=Z,20nm,0.7s,mb5.2
KBK Karagaybulak 51.91 335 P **P 19 43 40.4 +0.7**
SNR=7.1
AML Almayashu 52.02 334 P **P 19 43 41.4 +0.9**
SNR=12
AML Almayashu 52.02 334 *eP* **P 19 43 40.4 -0.1**
comp=Z,17nm,0.8s,mb5.0
AML Almayashu 52.02 334 *eP* **P 19 43 40.4 -0.1**
AML pmax pmax
comp=Z,17nm,0.8s,mb5.0
AAK Ala-Archa 52.08 335 *eP* **P 19 43 40.6 -0.3**
comp=Z,8.0nm,0.8s,mb4.7
AAK Ala-Archa 52.08 335 LR LR 20 09 54.6
comp=Z,57nm,20.5s,MS3.6,baz=154,slow=41
AAK Ala-Archa 52.08 335 *ci*P **P 19 43 41.0 +0.1**
AAK pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
AAK Ala-Archa 52.08 335 P **P 19 43 41.6 +0.7**
FRU Bishkek 52.19 335 *eP* **P 19 43 41.0 -0.8**
FRU *e* pP 19 43 59.0 +2.2
CHMS Chumysh 52.27 335 P **P 19 43 42.4 0.0**
SNR=8.4
EIDS Eidsvold 52.27 119 *eP* **P 19 43 42.1 -0.6**
comp=Z,20nm,1.2s,mb4.9
EKS2 Erkin-Say 52.41 334 P **P 19 43 44.2 +0.8**
SNR=27
EKS2 Erkin-Say 52.41 334 *eP* **P 19 43 43.2 -0.2**
comp=Z,31nm,0.8s,mb5.3
EKS2 Erkin-Say 52.41 334 *eP* **P 19 43 43.2 -0.2**
EKS2 pmax pmax
comp=Z,31nm,0.8s,mb5.3
MAT Matsushiro 52.56 37 P **P 19 43 42.6 -2.0**
MJAR Matsushiro Arr 52.56 37 P **P 19 43 42.9 -1.7**
comp=Z,2.1nm,0.5s,mb4.3,baz=211,slow=7.4,SNR=10
USP Ospenovka 52.60 335 P **P 19 43 44.9 +0.1**
SNR=6.9
MK31 Makanchi Array 52.93 344 *eP* **P 19 43 46.3 -0.9**
MK31 Makanchi Array 52.93 344 *eP* **P 19 43 46.8 -0.4**
MK31 pmax pmax
comp=Z,24nm,0.4s,mb5.5
MKAR Makanchi Array 52.93 344 P **P 19 43 47.0 -0.2**
comp=Z,44nm,0.6s,mb5.6,baz=156,slow=8.9,SNR=346
YNG Young 53.17 131 *eP* **P 19 43 50.0 +0.7**
comp=Z,9.5nm,1.1s,mb4.6
ZAK Zakamensk 53.75 1 *eP* **P 19 43 52.2 -0.9**
ZAK pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
MDJ Mudanjiang 54.14 25 P **P 19 43 55.0 -1.1**
MDJ pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
MDJ pmax pmax
comp=Z,24nm,3.9s
MDJ Mudanjiang 54.14 25 *eP* **P 19 43 53.3 -2.8**
comp=Z,14nm,1.1s,mb4.8
KKAR Karatay Array 54.22 332 *eP* **P 19 43 55.1 -1.6**
comp=Z,3.5nm,0.7s,mb4.4
KKAR Karatay Array 54.22 332 *eP* **P 19 43 55.1 -1.6**
KKAR pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
ARMA Armidale 54.27 125 *eP* **P 19 43 59.1 +1.8**
HIA Hailar 54.94 14 *eP* **P 19 44 00.1 -1.6**
MOY Mondy 55.02 360 *eP* **P 19 44 01.7 -0.6**
TLY Talaya 55.06 2 *eP* **P 19 44 02.2 -0.3**
comp=Z,6.9nm,0.8s,mb4.7
TLY Talaya 55.06 2 *eP* **P 19 44 02.7 +0.1**
TLY pmax pmax
comp=Z,13nm,0.9s,mb5.0
TLY MLR MLR
comp=Z,110nm,17.0s,MS4.0
KURK Kurchatov 57.52 343 *eP* **P 19 44 19.2 -1.0**
comp=Z,25nm,0.9s,mb5.2
KURK Kurchatov 57.52 343 *ci*P **P 19 44 19.0 -1.2**
KURK pmax pmax
comp=Z,26nm,1.0s,mb5.2
HNR Honiara 58.29 99 LR LR 20 08 14.6
comp=Z,73nm,20.5s,MS3.8,baz=261,slow=35
ZALV Zalesovo Beam 58.98 349 P **P 19 44 29.1 -1.2**
comp=Z,20nm,0.5s,mb5.4,baz=165,slow=5.7,SNR=150
HABR Khabarovsk 59.49 25 *eP* **P 19 44 31.1 -2.8**
HABR *e*PP pP 19 44 40.0 -9.2
HABR *e*S **S** **19 52 36.8 -2.4**
HABR *e* 19 52 48.1
HABR *e*SS SS 19 56 31.9 -3.5
HABR pmax pmax
comp=E,5.0nm,0.7s
HABR pmax pmax
comp=Z,11nm,1.1s,mb4.8
HABR pmax pmax
comp=N,4.0nm,0.8s
HABR MLR MLR
comp=Z,101nm,23.0s,MS3.9
NVS Novosibirsk 60.14 348 *eP* **P 19 44 34.9 -3.3**
NVS *e*S **S** **19 52 42.1 -5.2**
NVS pmax pmax
comp=Z,12nm,1.5s,mb4.7
NVS pmax pmax
comp=N,5.0nm,1.2s
NVS pmax pmax
comp=E,3.0nm,1.3s
NVS smax
comp=E,5.0nm,1.8s
YSS Yuzh-Sakhalins 62.02 31 *eP* **P 19 44 49.8 -1.3**
comp=E,34nm,0.9s,mb5.5
YSS Yuzh-Sakhalins 62.02 31 *eP* **P 19 44 49.8 -1.3**
YSS pmax pmax
comp=Z,34nm,0.9s,mb5.5
BVA0 Borovoye Array 62.16 339 *i* P **P 19 44 50.3 -1.7**
BVA0 pmax pmax
comp=Z,1.0nm,0.3s,mb4.4
BRVK Borovoye 62.23 339 *eP* **P 19 44 50.8 -1.6**
comp=Z,5.6nm,0.4s,mb5.0
BRVK Borovoye 62.23 339 *ce*P **P 19 44 51.0 -1.4**
BRVK pmax pmax
comp=Z,3.0nm,0.4s,mb4.8
AB31 Akbulak array 63.73 331 *i* P **P 19 45 01.2 -1.2**
AB31 pmax pmax
comp=Z,12nm,0.7s,mb5.0
ABKAR Akbulak array 63.73 331 *eP* **P 19 45 01.1 -1.3**
comp=Z,13nm,0.6s,mb5.1
ABKAR *e* pP 19 45 15.2 -2.7
AKTO Aktyubinsk 65.44 331 P **P 19 45 12.3 -1.3**
AKTO pmax pmax
comp=Z,1.0nm,1.0s,mb3.8
GNI Garni 67.69 316 *eP* **P 19 45 28.9 +0.7**
comp=Z,6.3nm,0.8s,mb4.7
GNI Garni 67.69 316 LR LR 20 14 49.2
comp=Z,28nm,21.9s,MS3.4,baz=257,slow=36
GNI Garni 67.69 316 *di*P **P 19 45 29.3 +1.1**
GNI pmax pmax
comp=Z,4.0nm,0.8s
DGRG David-gareji 67.83 318 P **P 19 45 29.5 +0.5**
MTA Mtatsminda 68.33 318 P **P 19 45 32.8 +0.6**
TBLG Delisi 68.38 318 *eP* **P 19 45 33.1 +0.6**
TBLG Delisi 68.38 318 P **P 19 45 33.1 +0.6**
SVE Sverdlovsk 68.69 337 ⇑*eP* **P 19 45 33.9 -0.2**
SVE *e* 19 48 05.9
SVE *e*PPP 19 49 44.3
SVE *e*S S 19 54 24.3 -8.5
SVE pmax pmax
comp=Z,17nm,0.9s,mb5.0
YAK Yakutsk 68.87 14 *eP* **P 19 45 32.8 -2.3**
comp=Z,38nm,0.9s,mb5.3
YAK Yakutsk 68.87 14 *ci*P **P 19 45 32.7 -2.4**
YAK *e*PP pP 19 45 59.2 +8.5
YAK *e*S S 19 54 30.8 -3.9
YAK *e*SS sS 19 55 13.7 +13
YAK *e* 19 55 26.5
YAK pmax pmax
comp=Z,34nm,0.9s,mb5.3
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=Z,32nm,3.4s
YAK pmax pmax
comp=N,40nm,4.1s
YAK pmax pmax
comp=E,39nm,4.7s
YAK smax
comp=N,22nm,2.5s
YAK smax
comp=E,40nm,2.7s
MAW Mawson 69.17 195 LR LR 20 09 01.9
comp=E,150nm,20.7s,MS4.2,baz=208,slow=30
ARU Arti 69.23 336 *eP* **P 19 45 36.1 -1.3**
comp=E,6.3nm,0.7s,mb4.7
ARU Arti 69.23 336 *ci*P **P 19 45 36.3 -1.1**
ARU *e* 19 48 07.9
ARU S S 19 54 40.2 +1.0
ARU SS SS 19 59 01.8 -5.0
ARU pmax pmax
comp=Z,11nm,1.0s,mb4.7
ZEI Tsey 69.39 318 *eP* **P 19 45 38.7 -0.1**
ZEI pmax pmax
comp=Z,26nm,0.9s,mb5.2
KIV Kislovodsk 70.70 319 *eP* **P 19 45 47.1 +0.4**
comp=Z,18nm,1.0s,mb5.0
KIV Kislovodsk 70.70 319 *ce*P **P 19 45 46.7 -0.1**
KIV pmax pmax
comp=Z,22nm,1.0s,mb5.0
ASF Jabal al Asfar 70.72 306 LR LR 20 13 58.8
comp=Z,32nm,21.3s,MS3.5,baz=155,slow=33
MALT Malatya 71.50 312 *eP* **P 19 45 52.4 +0.7**
comp=Z,11nm,1.2s,mb4.7
MALT Malatya 71.50 312 ⇓*i*P **P 19 45 53.1 +1.4**
MALT Malatya 71.50 312 ⇓*i*P **P 19 45 53.1 +1.4**
EIL Elat 71.63 303 LR LR 20 14 08.1
comp=Z,50nm,20.4s,MS3.8,baz=279,slow=33
PETK Petropavlovsk- 73.40 32 P **P 19 46 01.4 -1.3**
comp=Z,3.5nm,0.5s,mb4.5,baz=231,slow=2.4,SNR=6.6
PET Petropavlovsk 73.86 32 *eP* **P 19 46 01.3 -4.1**
BR131 Keskin Array S 75.48 312 *eP* **P 19 46 14.3 -0.8**
comp=Z,5.0nm,0.6s,mb4.6
BRTR Keskin Array B 75.48 312 P **P 19 46 14.6 -0.5**
comp=Z,8.1nm,0.8s,mb4.7,baz=136,slow=7.1,SNR=45
LBTB Lobatse 75.74 245 P **P 19 46 18.8 +1.9**
comp=Z,2.2nm,0.8s,mb4.2,baz=144,slow=4.6,SNR=3.4
BOSA Boshof 76.24 242 P **P 19 46 21.8 +2.1**
comp=Z,2.3nm,0.6s,mb4.3,baz=110,slow=11,SNR=4.6
BOSA pP pP 19 46 36.5 +1.0
comp=Z,3.3nm,0.7s,baz=115,slow=5.0,SNR=3.8
BOSA LR LR 20 13 40.5
comp=Z,109nm,18.6s,MS4.2,baz=160,slow=31
BOSA Boshof 76.24 242 P **P 19 46 21.8 +2.1**
BOSA *PP pP 19 46 36.6 +1.1
SEY Seymchan 76.50 21 ⇑*eP* **P 19 46 19.4 -1.0**
TIXI Tiksi 77.15 9 *eP* **P 19 46 21.3 -2.6**
TIXI pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
MOS Moscow 78.60 329 *eP* **P 19 46 31.5 -0.7**
MOS pmax pmax
comp=Z,37nm,1.0s,mb5.3
OBN Obninsk 78.91 328 *eP* **P 19 46 33.8 -0.1**
comp=Z,18nm,0.8s,mb5.0
OBN Obninsk 78.91 328 *ci*P **P 19 46 33.4 -0.5**
OBN *e* 19 49 32.6
OBN pmax pmax
comp=Z,19nm,1.2s,mb4.9
KLMR Klimovskoe 79.88 334 *eP* **P 19 46 36.8 -2.3**
KLMR pmax pmax
comp=Z,30nm,2.2s,mb4.8
AKASG Malin Array Be 81.63 322 P **P 19 46 48.2 -0.5**
comp=Z,3.1nm,0.6s,mb4.4,baz=92,slow=4.8,SNR=8.0
VRI Vrincioaia 82.02 317 ⇑P **P 19 46 51.8 +0.9**
VRI Vrincioaia 82.02 317 ⇑*i*P **P 19 46 51.8 +1.0**
TESR 82.22 318 ⇑P **P 19 46 52.6 +0.7**
TESR 82.22 318 ⇑*i*P **P 19 46 52.6 +0.7**
MLR Muntele Rosu 82.47 317 ⇓P **P 19 46 53.5 +0.4**
MLR Muntele Rosu 82.47 317 ⇓*i*P **P 19 46 53.5 +0.3**
VOIR 83.07 316 ⇓P **P 19 46 56.5 +0.2**
VOIR 83.07 316 ⇓*i*P **P 19 46 56.5 +0.2**
BURAR Bucovina Array 83.42 319 ⇓P **P 19 46 59.4 +1.3**
BURAR Bucovina Array 83.42 319 ⇓*i*P **P 19 46 59.4 +1.3**
BUR08 Bucovina Ar. S 83.44 319 *eP* **P 19 46 59.1 +0.9**
VTS Vitosha 83.81 313 ⇑P **P 19 47 00.6 +0.4**
VTS Vitosha 83.81 313 ⇑*i*P **P 19 47 00.6 +0.4**
BILL Bilibino 84.09 20 *eP* **P 19 46 58.4 -2.7**
comp=Z,9.4nm,0.4s,mb5.3
BILL Bilibino 84.09 20 *eP* **P 19 46 58.4 -2.6**
BILL pmax pmax
comp=Z,9.0nm,0.4s,mb5.2
JOF Joensuu 84.27 334 *eP* **P 19 46 59.2 -2.8**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8

JOF	**Joensuu**	**84.27**	**334**	*ep*		**P**		**19 46 59.2**	**-2.8**
	comp=Z,4.7nm,0.7s,mb4.7								
IDID	**Didziasalis**	**84.30**	**326**	*eP*		**P**		**19 47 02.5**	**+0.1**
IDID					AMB	AMB		19 47 04.4	
	comp=Z,6.3nm,1.2s,mb4.6								
IIGN	**Ignalina**	**84.60**	**326**	*eP*		**P**		**19 47 04.0**	**+0.1**
IIGN					AMB	AMB		19 47 05.0	
	comp=Z,5.3nm,0.7s,mb4.8								
IZAR	**Zarasai**	**84.68**	**327**		AMB	AMB		19 47 05.2	
	comp=Z,5.6nm,0.9s,mb4.7								
ISAL	**Salakas**	**84.71**	**326**	*eP*		**P**		**19 47 04.6**	**+0.1**
ISAL					AMB	AMB		19 47 05.4	
	comp=Z,3.8nm,0.8s,mb4.6								
BZS	**Buzias**	**85.47**	**316**	⇓P		**P**		**19 47 09.0**	**+0.5**
BZS	**Buzias**	**85.47**	**316**	⇓*i*P		**P**		**19 47 09.0**	**+0.5**
SUW	**Suwalki**	**86.02**	**325**	*eP*		**P**		**19 47 11.2**	**+0.2**
SUW	**Suwalki**	**86.02**	**325**	*eP*		**P**		**19 47 10.0**	**-1.0**
	comp=Z,22nm,1.0s,mb5.3								
CRVS	**Cervenica-Dubn**	**86.13**	**319**	*eP*		**P**		**19 47 12.4**	**+0.7**
	comp=Z,38nm,2.6s,mb5.2								
CRVS	**Cervenica-Dubn**	**86.13**	**319**	*eP*		**P**		**19 47 12.4**	**+0.7**
CRVS					pmax	pmax			
	comp=Z,39nm,2.6s,mb5.2								
CRVS	**Cervenica-Dubn**	**86.13**	**319**	*eP*		**P**		**19 47 12.4**	**+0.7**
FINES	**FINESS Array B**	**86.19**	**332**	P		**P**		**19 47 11.9**	**+0.2**
	comp=Z,1.6nm,0.5s,mb4.5,baz=112,slow=4.2,SNR=11								
KAF	**Kangasniemi**	**86.25**	**333**	*eP*		**P**		**19 47 10.3**	**-1.7**
KAF					pmax	pmax			
	comp=Z,6.0nm,0.6s,mb5.0								
KAF	**Kangasniemi**	**86.25**	**333**	*ep*		**P**		**19 47 10.3**	**-1.7**
	comp=Z,5.7nm,0.6s,mb5.0								
STHS	**Stebnicka Huta**	**86.36**	**320**	*eP*		**P**		**19 47 13.6**	**+0.8**
STHS	**Stebnicka Huta**	**86.36**	**320**	*eP*		**P**		**19 47 13.6**	**+0.8**
QSPA	**South Pole Qui**	**86.41**	**180**	*eP*		**P**		**19 47 13.9**	**+1.4**
	comp=Z,7.4nm,1.2s,mb4.8								
QSPA	**South Pole Qui**	**86.41**	**180**	P		**P**		**19 47 14.4**	**+1.8**
	comp=Z,0.8nm,0.7s,mb4.1,baz=285,slow=2.4,SNR=5.4								
QSPA					pP	pP		19 47 29.1	+0.5
	comp=Z,2.8nm,0.8s,baz=349,slow=2.1,SNR=6.3								
KECS	**Kecovo**	**86.70**	**319**	*eP*		**P**		**19 47 14.3**	**-0.2**
	comp=Z,3.0nm,1.0s,mb4.5								
KECS	**Kecovo**	**86.70**	**319**	*eP*		**P**		**19 47 14.3**	**-0.2**
KECS					pmax	pmax			
	comp=Z,3.0nm,1.0s,mb4.5								
KECS	**Kecovo**	**86.70**	**319**	*eP*		**P**		**19 47 14.3**	**-0.2**
PSZ	**Piszkesteto**	**87.01**	**318**	*eP*		**P**		**19 47 16.1**	**+0.1**
	comp=Z,2.8nm,0.8s,mb4.5								
PSZ	**Piszkesteto**	**87.01**	**318**	⇑P		**P**		**19 47 15.8**	**-0.2**
PSZ	**Piszkesteto**	**87.01**	**318**	⇑*i*P		**P**		**19 47 15.8**	**-0.2**
PKSM	**Moragy**	**87.61**	**316**	⇑P		**P**		**19 47 19.2**	**+0.2**
PKSM	**Moragy**	**87.61**	**316**	⇑*i*P		**P**		**19 47 19.2**	**+0.2**
VYHS	**Vyhne**	**87.79**	**319**	*eP*		**P**		**19 47 19.8**	**+0.1**
VYHS	**Vyhne**	**87.79**	**319**	*eP*		**P**		**19 47 19.8**	**+0.1**
KEV	**Kevo**	**87.99**	**340**	*eP*		**P**		**19 47 17.7**	**-2.6**
KEV					pmax	pmax			
	comp=Z,5.0nm,0.7s,mb4.8								
KEV	**Kevo**	**87.99**	**340**	*ep*		**P**		**19 47 17.7**	**-2.6**
	comp=Z,5.0nm,0.7s,mb4.8								
OKC	**Ostrava-Krasne**	**88.42**	**320**	*eP*		**P**		**19 47 23.5**	**+0.8**
OKC	**Ostrava-Krasne**	**88.42**	**320**	*eP*		**P**		**19 47 23.5**	**+0.8**
ARCES	**ARCESS Array B**	**88.44**	**340**	P		**P**		**19 47 22.5**	**+0.1**
	comp=Z,9.5nm,0.8s,mb5.1,baz=99,slow=5.6,SNR=16								
ARE0	**ARCESS Array S**	**88.44**	**340**	*eP*		**P**		**19 47 21.9**	**-0.5**
MORC	**Moravsky Berou**	**88.80**	**320**	*eP*		**P**		**19 47 24.3**	**-0.2**
MORC	**Moravsky Berou**	**88.80**	**320**	⇑P		**P**		**19 47 24.9**	**+0.4**
MORC	**Moravsky Berou**	**88.80**	**320**	⇑*i*P		**P**		**19 47 24.9**	**+0.4**
ZST	**Bratislava**	**88.90**	**318**	*eP*		**P**		**19 47 26.1**	**+1.1**
	comp=Z,5.5nm,0.6s,mb5.1								
ZST	**Bratislava**	**88.90**	**318**	*eP*		**P**		**19 47 26.1**	**+1.1**
ZST					pmax	pmax			
	comp=Z,6.0nm,0.6s,mb5.1								
ZST	**Bratislava**	**88.90**	**318**	*eP*		**P**		**19 47 26.1**	**+1.1**
KOGS	**Kog**	**89.29**	**316**	*i* P		**P**		**19 47 27.6**	**+0.7**
DPC	**Dobruska-Polom**	**89.64**	**320**	*eP*		**P**		**19 47 29.6**	**+1.2**
DPC				*e*		pP		19 47 40.5	-4.1
DPC	**Dobruska-Polom**	**89.64**	**320**	*eP*		**P**		**19 47 29.6**	**+1.2**
DPC				*ep*		pP		19 47 40.5	-4.1
GROS	**Grobnik**	**89.80**	**316**	*i* P		**P**		**19 47 29.9**	**+0.6**
UPC	**Upice**	**89.86**	**320**	*eP*		**P**		**19 47 30.5**	**+1.1**
UPC	**Upice**	**89.86**	**320**	*eP*		**P**		**19 47 30.5**	**+1.1**
BOJS	**Bojanci**	**89.89**	**315**	*i* P		**P**		**19 47 30.5**	**+0.8**
TREC	**Trest**	**90.08**	**319**	*eP*		**P**		**19 47 31.4**	**+0.9**
TREC	**Trest**	**90.08**	**319**	*eP*		**P**		**19 47 31.4**	**+0.9**
LJU	**Ljubljana**	**90.44**	**316**	*i* P		**P**		**19 47 33.3**	**+1.0**
PRU	**Pruhonice**	**90.75**	**320**	*eP*		**P**		**19 47 35.2**	**+1.6**
PRU	**Pruhonice**	**90.75**	**320**	*eP*		**P**		**19 47 35.2**	**+1.6**
PVCC	**Panska Ves**	**90.78**	**320**	*eP*		**P**		**19 47 34.9**	**+1.2**
PVCC	**Panska Ves**	**90.78**	**320**	*eP*		**P**		**19 47 34.9**	**+1.2**
BRG	**Berggiesshubel**	**91.20**	**321**	*eP*		**P**		**19 47 36.4**	**+0.7**
	comp=Z,4.2nm,0.7s,mb4.8								
BRG	**Berggiesshubel**	**91.20**	**321**	*eP*		**P**		**19 47 36.3**	**+0.6**
BRG					pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.7								
KHC	**Kasperske Hory**	**91.31**	**319**	*eP*		**P**		**19 47 36.8**	**+0.6**
KHC				*e*				19 47 44.4	
KHC	**Kasperske Hory**	**91.31**	**319**	*eP*		**P**		**19 47 36.8**	**+0.6**
KHC				*ex*		x		19 47 44.4	
HFS	**Hagfors**	**91.97**	**330**	P		**P**		**19 47 39.2**	**+0.2**
	comp=Z,7.0nm,0.9s,mb5.0,baz=113,slow=7.1,SNR=7.7								
NOA	**NORSAR Array B**	**93.23**	**331**	P		**P**		**19 47 44.5**	**-0.4**
	comp=Z,2.2nm,0.9s,mb4.6,baz=90,slow=4.8,SNR=5.5								
DAVOX	**Davos/Dischmat**	**93.69**	**316**	P		**P**		**19 47 47.5**	**+0.3**
	comp=Z,4.4nm,1.0s,mb4.9,baz=35,slow=9.1,SNR=4.8								
KEST	**Kesra**	**93.82**	**305**	P		**P**		**19 47 49.1**	**+1.0**
	comp=Z,1.6nm,1.0s,mb4.4,baz=83,slow=8.1,SNR=4.6								
NVAR	**Mina Array Bea**	**129.81**	**41**	PKP		PKPdf		19 53 41.3	+1.1
	comp=Z,0.8nm,0.6s,baz=279,slow=2.3,SNR=8.0								
NVAR					pPKP	pPKPdf		19 53 54.7	-2.3
	comp=Z,0.3nm,0.5s,baz=318,slow=1.2,SNR=3.4								
NVAR					SKPbc			19 56 57.9	
	comp=Z,0.4nm,0.7s,baz=274,slow=4.5,SNR=5.5								
PDAR	**Pinedale Array**	**132.16**	**31**	PKP		PKPdf		19 53 44.3	-0.2
	comp=Z,0.4nm,0.4s,baz=60,slow=2.2,SNR=3.3								
CPUP	**Villa Florida**	**143.92**	**213**	PKP		PKPdf		19 54 05.8	-0.8
	comp=Z,1.0nm,0.5s,baz=135,slow=4.4,SNR=5.0								
TXAR	**Lajitas Array**	**144.96**	**40**	PKP		PKPdf		19 54 07.5	-0.8
	comp=Z,13nm,0.6s,baz=278,slow=1.0,SNR=195								
TXAR					pPKP	pPKPdf		19 54 21.6	-3.5
	comp=Z,2.8nm,0.5s,baz=268,slow=1.1,SNR=6.2								
TXAR					SKPbc	SKPbc		19 57 42.9	-0.3
	comp=Z,0.2nm,0.6s,baz=222,slow=1.2,SNR=2.8								
TXAR	**Lajitas Array**	**144.96**	**40**	PKIKP		PKPdf		19 54 07.5	-0.8
TXAR								19 54 21.6	

*ISCJB **29** 19:41:39.9±0.8, 35°.98N±0°.04×0°.58W±0°.05, h10km, Error ellipse: s-maj=6.3km s-min=5.3km az=43.5*
*MDD **29** 19:41:40.5±0.5, 35°.89N×0°.61W, h0km, mb3.6/10, Error ellipse: s-maj=8.8km s-min=4.5km az=54.0, PRIMO*
*CSEM **29** 19:41:40.3±0.4, 35°.90N×0°.60W, h10km, mb3.6/8, Error ellipse: s-maj=9.0km s-min=7.4km az=135.0*
*NEIC **29** 19:41:41.0, 35°.93N×0°.64W, h0km, MG3.1(MDD), After MDD.*

ISC 29 19:41:40.6±0.8, 35°.95N±0°.04×0°.60W±0°.05, h10km, n60, σ1°09/109, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
USTO	**Oran**	**0.22**	**170**	P		**Pg**	**19 41 44.0**	**-1.1**
USTO	**Oran**	**0.22**	**170**	P		**Pg**	**19 41 44.0**	**-1.1**
USTO	**Oran**	**0.22**	**170**	P		**Pg**	**19 41 44.0**	**-1.1**
ENIJ	**Nijar**	**1.65**	**309**	P		**Pn**	**19 42 09.6**	**0.0**
ENIJ				S		**Sn**	**19 42 29.5**	**-1.4**
ENIJ	**Nijar**	**1.65**	**309**	P		**Pn**	**19 42 09.6**	**0.0**
	2.4nm,0.1s,SNR=7.9							
ENIJ				S		**Sn**	**19 42 29.5**	**-1.4**
	3.3nm,0.1s,SNR=7.9						

comp=Z,75nm,0.3s
YUK pmax pmax
comp=Z,280nm,1.3s
YUK smax
comp=N,231nm,0.6s
YUK smax
comp=E,261nm,0.6s
YUK smax
comp=N,70nm,0.6s
YUK smax
comp=E,100nm,0.6s
YUK MLR MLR
comp=N,765nm,19.5s
YUK MLR MLR
comp=E,377nm,19.5s
YUK MLR MLR
comp=Z,413nm,19.5s
KUR Kuril'sk 8.57 27 *e*P **Pn 19 57 42.0 +1.3**
KUR *e*S **Sn 19 59 09.5 -6.8**
KUR pmax pmax
comp=N,40nm,0.6s
KUR pmax pmax
comp=Z,60nm,0.6s
KUR smax
comp=N,190nm,1.0s
KUR smax
comp=E,150nm,1.0s
YSS Yuzh-Sakhalins 9.22 2 *e*Pn **Pn 19 57 48.7 -1.0**
comp=E,32nm,0.9s
YSS Yuzh-Sakhalins 9.22 2|| *e*P **Pn 19 57 50.0 +0.3**
YSS pmax pmax
comp=Z,30nm,1.0s
VLA Vladivostok 9.61 307 *de*P **Pn 19 57 57.4 +2.4**
VLA *e*S **Sn 19 59 43.3 +1.4**
VLA pmax pmax
comp=Z,57nm,1.5s
CBIJ Chichi jima 10.60 181 Pn **Pn 19 58 07.2 -1.6**
comp=Z,9.6nm,0.3s,baz=295,slow=21,SNR=5.7
CBIJ Sn **Sn 19 59 58.0 -8.4**
comp=Z,7.2nm,0.3s,baz=307,slow=20,SNR=4.1
KSRS Korea Array 11.44 273 Pn **Pn 19 58 21.6 +1.5**
comp=Z,0.6nm,0.3s,baz=88,slow=13,SNR=21
KSRS Korea Array 11.44 273 P **Pn 19 58 21.7 +1.6**
KSRS pmax pmax
comp=Z,1.0nm,0.3s
MDJ Mudanjiang 11.81 310 P **Pn 19 58 27.3 +2.2**
MDJ pmax pmax
comp=Z,20nm,1.0s
MDJ pmax pmax
comp=Z,50nm,4.9s
MDJ LR LR
comp=N,210nm,13.5s
MDJ LR LR
comp=E,310nm,14.1s
MDJ LR LR
comp=Z,540nm,15.0s
MDJ Mudanjiang 11.81 310 *e*Pn **Pn 19 58 27.0 +2.0**
comp=Z,26nm,1.0s
HABR Khabarovsk 11.98 336 *e*P **Pn 19 58 26.2 -1.2**
HABR 20 00 35.6
HABR pmax pmax
comp=N,14nm,1.4s
HABR pmax pmax
comp=E,19nm,1.1s
HABR pmax pmax
comp=Z,24nm,1.1s
HABR MLR MLR
comp=Z,352nm,15.0s
KLR Kul'dur 13.81 330 *e*P **Pn 19 58 47.4 -5.0**
CN2 Changchun 14.15 301 *e*P **Pn 19 58 57.3 +0.2**
CN2 *e*S **Sn 20 01 33.5 +0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,14.0s
CN2 LR LR
comp=E,400nm,14.0s
CN2 LR LR
comp=Z,200nm,16.0s
DL2 Dalian 16.30 281 P **Pn 19 59 25.5 +0.1**
DL2 *e*S **Sn 20 02 27.3 +2.1**
DL2 pmax pmax
comp=Z,20nm,0.9s
DL2 LR LR
comp=N,70nm,17.1s
DL2 LR LR
comp=E,90nm,19.6s
DL2 LR LR
comp=Z,160nm,19.0s
PET Petropavlovsk 19.04 31 P **Pn 20 00 00.0 +0.8**
comp=Z,11nm,0.4s
PET Petropavlovsk 19.04 31 P **Pn 20 00 00.0 +0.8**
PET pmax pmax
comp=Z,11nm,0.4s
HIA Hailar 19.96 312 P **Pn 20 00 05.2 -4.9**
comp=Z,20nm,1.3s
HIA Hailar 19.96 312 P **Pn 20 00 05.2 -5.0**
HIA pmax pmax
comp=Z,20nm,1.3s
NJ2 Nanjing 20.06 261 *e*P **P 20 00 11.8 +2.2**
NJ2 pP 20 00 15.8
NJ2 sP sP 20 00 18.8 -2.7
NJ2 PP 20 00 31.0
NJ2 S **S 20 03 48.0 -5.4**
NJ2 pmax pmax
comp=Z,210nm,1.0s
NJ2 pmax pmax
comp=Z,20nm,3.7s
NJ2 LR LR
comp=N,310nm,15.3s,MS3.8
NJ2 LR LR
comp=E,200nm,16.4s,MS3.8
NJ2 LR LR
comp=Z,2μm,16.4s,MS4.5
BJI Beijing 20.48 285 P **P 20 00 12.3 -1.7**
BJI S **S 20 04 02.3 +0.7**
BJI pmax pmax
comp=Z,16nm,0.9s
BJI pmax pmax
comp=Z,44nm,3.5s
BJT Baijiatuau 20.48 285 *e*P **P 20 00 12.2 -1.9**
comp=Z,17nm,0.4s
BJT Baijiatuau 20.48 285 *e*P **P 20 00 12.2 -1.9**
BJT pmax pmax
comp=Z,17nm,0.4s
YHNB Yeheng 22.10 240 *e*P **P 20 00 31.4 -0.2**
comp=Z,12nm,0.6s,mb4.5
SSLB Suanglung 22.97 239 *e*P **P 20 00 37.9 -2.9**
comp=Z,14nm,1.0s,mb4.3
TPUB Ta-pu 23.51 238 *e*P **P 20 00 44.5 -1.9**
comp=Z,14nm,0.6s,mb4.6
HHC Hu-ho-hao-te 23.96 287 *e*P **P 20 00 50.5 +0.1**
HHC pP 20 00 54.8
HHC PP 20 01 24.0
HHC S **S 20 05 02.0 -3.1**
HHC SS 20 05 52.0
HHC PcS PcS 20 08 14.0 +2.4
HHC pmax pmax
comp=Z,13nm,0.8s,mb4.4
HHC pmax pmax
comp=Z,86nm,4.6s
HHC LR LR
comp=N,89nm,10.0s,MS4.0
HHC LR LR
comp=E,270nm,12.0s,MS4.0
HHC LR LR
comp=Z,290nm,12.2s,MS4.0
GUMO Guam 24.15 174 LR LR 20 09 30.1
comp=Z,48nm,19.6s,MS3.0,baz=271,slow=35
WHN Wuhan 24.19 261 P **P 20 00 52.5 -0.1**
WHN LR LR
comp=N,280nm,10.7s
WHN LR LR
comp=E,890nm,16.9s
WHN LR LR
comp=Z,650nm,14.4s,MS4.2
CIT Chita 24.70 315 *e*P **P 20 00 58.1 +1.1**
CIT *e* 20 01 05.8
CIT pmax pmax
comp=Z,208nm,1.2s,mb5.5
YAK Yakutsk 25.56 346 *e*P **P 20 01 04.4 -0.3**
comp=Z,52nm,0.9s,mb5.1
YAK Yakutsk 25.56 346 *e*P **P 20 01 04.2 -0.5**
YAK *e**PP pP 20 01 14.7 +1.2
YAK *e*PPP 20 01 49.6
YAK *e* 20 04 35.1
YAK *e*S **S 20 05 25.7 -4.6**
YAK *e**SS sS 20 05 40.0 -4.8
YAK *e*SSS 20 06 35.1
YAK *e* 20 11 58.8
YAK pmax pmax
comp=Z,30nm,0.9s,mb4.8
YAK pmax pmax
comp=E,5.0nm,1.0s
YAK pmax pmax
comp=N,15nm,1.1s
YAK pmax pmax
comp=Z,19nm,1.1s,mb4.5
YAK pmax pmax
comp=N,10.0nm,0.9s
YAK pmax pmax
comp=E,14nm,1.3s
YAK smax
comp=N,47nm,2.8s
YAK smax
comp=E,15nm,2.5s
YAK MLR MLR
comp=Z,218nm,15.0s,MS3.8
YAK MLR MLR
comp=N,153nm,13.0s,MS3.7
YAK MLR MLR
comp=E,90nm,17.0s,MS3.7
ULN Ulaanbaatar 27.59 303 *e*P **P 20 01 23.4 +0.2**
comp=E,4.6nm,0.8s,mb4.2
ULN Ulaanbaatar 27.59 303 *e*P **P 20 01 23.4 +0.3**
ULN pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
SONM Songino Array 28.02 303 P **P 20 01 27.9 +0.9**
comp=Z,16nm,0.7s,mb4.8,baz=100,slow=8.3,SNR=45
ENH Enshi 28.13 265 *e*P **P 20 01 27.5 -0.7**
comp=Z,63nm,1.1s,mb5.2
ZAK Zakamensk 30.43 307 *e*P **P 20 01 48.3 0.0**
ZAK pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
TLY Talaya 30.44 310 *e*P **P 20 01 48.9 +0.4**
TLY pmax pmax
comp=Z,10.0nm,1.5s,mb4.3
TLY MLR MLR
comp=Z,239nm,15.0s,MS4.0
LZH Lanzhou 30.68 279 *e*P **P 20 01 50.3 -0.5**
LZH PP PP 20 02 47.5 -13
LZH *e*S **S 20 06 48.3 -3.1**
LZH SS SS 20 08 33.3 -29
LZH pmax pmax
comp=Z,18nm,1.0s,mb4.9
LZH pmax pmax
comp=Z,88nm,4.4s
LZH LR LR
comp=N,240nm,13.5s,MS4.2
LZH LR LR
comp=E,290nm,12.4s,MS4.2
LZH LR LR
comp=Z,300nm,15.3s,MS4.1
MOY Mondy 32.06 309 *e*P **P 20 02 02.4 -0.3**
GYA Guiyang 32.06 260↑ *i*P **P 20 02 01.8 -1.2**
GYA PP PP 20 03 09.0 -6.7
GYA PcP PcP 20 04 53.5 +1.4
GYA S **S 20 07 12.3 -0.9**
GYA ScP ScP 20 08 34.5 +1.1
GYA ScS ScS 20 12 31.0 -1.2
GYA pmax pmax
comp=Z,20nm,0.8s,mb5.0
GYA pmax pmax
comp=Z,90nm,4.6s
CD2 Chengdu 32.41 270 P **P 20 02 07.8 +1.8**
CD2 pP pP 20 02 12.3 -2.6
CD2 PP PP 20 03 15.0 -4.5
CD2 PcP PcP 20 04 56.5 +3.5
CD2 S **S 20 07 19.3 +0.8**
CD2 PcS PcS 20 08 40.0 +2.0
CD2 SS SS 20 09 13.0 -25
CD2 pmax pmax
comp=Z,20nm,0.8s,mb5.0
CD2 pmax pmax
comp=Z,100nm,5.9s
CD2 LR LR
comp=N,180nm,16.7s,MS4.0
CD2 LR LR
comp=E,200nm,14.2s,MS4.0
CD2 LR LR
comp=Z,320nm,17.6s,MS4.1
GTA Gaotai 33.07 286 *e*P **P 20 02 11.8 +0.1**
GTA S **S 20 07 29.3 +0.7**
GTA SS SS 20 09 28.0 -23
GTA pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
GTA pmax pmax
comp=Z,180nm,4.2s
GTA LR LR
comp=N,100nm,18.6s,MS3.8
GTA LR LR
comp=E,140nm,18.9s,MS3.8
GTA LR LR
comp=Z,200nm,20.1s,MS3.8
KMI Kunming 35.80 261 P **P 20 02 36.0 +0.6**
KMI pP pP 20 02 40.8 -3.5
KMI PP PP 20 03 54.3 -2.7
KMI PcP PcP 20 05 04.5 +1.8
KMI S **S 20 08 10.5 -0.4**
KMI ScP ScP 20 08 48.8 +2.2
KMI PcS PcS 20 08 50.5 +0.3
KMI SS SS 20 10 30.0 -17
KMI ScS ScS 20 12 52.0 +0.2
KMI pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
KMI pmax pmax
comp=Z,46nm,3.7s
KMI LR LR
comp=N,120nm,11.1s,MS4.1
KMI LR LR
comp=E,170nm,13.5s,MS4.1
KMI LR LR
comp=Z,170nm,17.4s,MS3.9
WMQ Urumqi 41.19 296 *e*P **P 20 03 22.0 +1.5**
WMQ pP pP 20 03 26.5 -3.0
WMQ PP PP 20 05 00.0 +4.3
WMQ PcP PcP 20 05 22.0 +2.8
WMQ pmax pmax
comp=Z,47nm,0.8s,mb5.2
WMQ pmax pmax
comp=Z,120nm,4.8s
WMQ LR LR
comp=N,84nm,18.8s,MS3.7
WMQ LR LR
comp=E,85nm,22.4s,MS3.7
WMQ LR LR
comp=Z,93nm,24.1s,MS3.6
ZALV Zalesovo Beam 42.00 312 P **P 20 03 27.0 0.0**
comp=Z,8.1nm,0.6s,mb4.5,baz=86,slow=7.0,SNR=30
ZALV PcP PcP 20 05 21.7 0.0
comp=Z,1.9nm,0.6s,baz=104,slow=3.5,SNR=3.9
CHTO Chiang Mai 42.18 256 *e*P **P 20 03 29.4 +0.5**
comp=Z,0.9nm,0.5s,mb3.7
CHTO Chiang Mai 42.18 256 *e*P **P 20 03 29.4 +0.5**
CHTO pmax pmax
comp=Z,1.0nm,0.5s,mb3.7
CMAR Chiang Mai Arr 42.38 255 P **P 20 03 30.8 +0.2**
comp=Z,0.7nm,0.7s,mb3.4,baz=55,slow=4.9,SNR=6.3
LSA Lhasa 42.88 275 *e*P **P 20 03 35.4 +0.8**
comp=Z,5.3nm,0.6s,mb4.5
LSA Lhasa 42.88 275 *e*P **P 20 03 35.4 +0.9**
LSA pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
NVS Novosibirsk 42.90 313 *e*P **P 20 03 32.2 -2.1**
NVS pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
NVS pmax pmax
comp=E,5.0nm,1.2s
MK31 Makanchi Array 44.38 302 *e*P **P 20 03 46.4 +0.1**
MK31 Makanchi Array 44.38 302 *i*P **P 20 03 46.7 +0.4**
MK31 pmax pmax
comp=Z,5.0nm,0.4s,mb4.6
MKAR Makanchi Array 44.38 302 P **P 20 03 46.5 +0.2**
comp=Z,5.6nm,0.5s,mb4.5,baz=83,slow=10.0,SNR=39
KURK Kurchatov 46.09 308 *e*P **P 20 03 59.5 -0.3**
comp=Z,27nm,0.8s,mb5.2
KURK Kurchatov 46.09 308 P **P 20 04 00.3 +0.5**
comp=Z,16nm,0.6s,mb5.1,baz=81,slow=7.9,SNR=24
KURK Kurchatov 46.09 308 *c i*P **P 20 03 59.3 -0.5**
KURK pmax pmax
comp=Z,27nm,0.8s,mb5.2
KDAK Kodiak Island 46.09 42 P **P 20 03 59.5 -0.3**
comp=Z,7.7nm,1.0s,mb4.6,baz=204,slow=5.9,SNR=4.9
KSM Kuching 46.56 227 *e*P **P 20 04 03.9 -0.1**
comp=Z,7.2nm,1.0s,mb4.6
ILAR Eielson Array 48.51 33 P **P 20 04 18.1 -0.4**
comp=Z,1.2nm,0.8s,mb4.0,baz=263,slow=6.1,SNR=10
TKM2 Tokmak 2 49.95 298 *e*P **P 20 04 30.1 +0.3**
comp=Z,11nm,0.6s,mb5.1
TKM2 Tokmak 2 49.95 298 *e*P **P 20 04 30.1 +0.3**
TKM2 pmax pmax
comp=Z,11nm,0.6s,mb5.1
BVAR Borovoye Array 50.65 312 P **P 20 04 35.1 +0.1**
comp=Z,1.9nm,0.6s,mb4.2,baz=77,slow=7.8,SNR=12
BRVK Borovoye 50.71 312 *e*P **P 20 04 35.1 -0.3**
comp=Z,4.4nm,0.8s,mb4.4
BRVK Borovoye 50.71 312 *c i*P **P 20 04 35.3 -0.1**
BRVK pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KSH Kashi 50.80 294 P **P 20 04 40.5 +4.2**
KSH *e*pP pP 20 04 53.5 +8.0
KSH *e*sP sP 20 04 59.3 +10
KSH *e*PcP PcP 20 05 57.0 +4.1
KSH *e*PP PP 20 06 38.0 +5.6
KSH *e*ScP ScP 20 09 48.0 +1.2
KSH *e*PcS PcS 20 09 53.0 +2.7
KSH *e*S **S 20 11 52.5 +2.4**
KSH *e*sS sS 20 12 13.3 +8.1
KSH *e*ScS ScS 20 14 24.5 -0.3
KSH *e*SS SS 20 15 24.5 0.0
KSH pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
KSH pmax pmax
comp=Z,43nm,3.9s
KSH LR LR
comp=N,80nm,5.2s
KSH LR LR
comp=E,91nm,5.0s
KSH LR LR
comp=Z,110nm,8.7s
AAK Ala-Archa 50.81 298 *e*P **P 20 04 37.1 +0.7**
comp=Z,3.7nm,0.6s,mb4.5
AAK Ala-Archa 50.81 298 P **P 20 04 36.1 -0.2**
comp=Z,3.1nm,0.5s,mb4.5,baz=90,slow=1.0,SNR=3.0
AAK Ala-Archa 50.81 298|| *e*P **P 20 04 36.9 +0.6**
AAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
EKS2 Erkin-Say 51.30 298 *e*P **P 20 04 38.4 -1.6**
ZRNK Zerenda 51.48 312 *i*P **P 20 04 41.1 -0.1**
ZRNK pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
AML Almayashu 51.53 298 *e*P **P 20 04 42.5 +0.7**
comp=Z,14nm,0.8s,mb4.9
KKAR Karatay Array 53.41 300 *e*P **P 20 04 55.9 +0.2**
comp=Z,6.2nm,0.8s,mb4.6
KKAR Karatay Array 53.41 300 *e*P **P 20 04 55.9 +0.2**
KKAR pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
SVE Sverdlovsk 55.12 318↑ *e*P **P 20 05 08.7 +0.9**
SVE *e*S **S 20 12 54.2 +5.8**
SVE pmax pmax
comp=Z,18nm,0.9s,mb5.1
SVE MLR MLR
comp=Z,253nm,15.0s,MS4.4
ARU Arti 56.33 318 *e*P **P 20 05 16.2 -0.4**
comp=Z,13nm,0.8s,mb5.0
ARU Arti 56.33 318 *c i*P **P 20 05 16.5 -0.1**
ARU *e* 20 06 12.7
ARU *e* 20 07 21.0
ARU S **S 20 13 05.1 +0.5**
ARU SS SS 20 16 47.2 -3.9
ARU pmax pmax
comp=Z,26nm,1.7s,mb5.0
WB2 Warramunga Arr 57.85 189 *e*P **P 20 05 26.8 -0.9**
WRA Warramunga Arr 57.85 189 P **P 20 05 27.1 -0.5**
comp=Z,3.4nm,0.7s,mb4.5,baz=6.5,slow=7.2,SNR=15
KBL Kabul 57.85 291 *e*P **P 20 05 27.1 -0.6**
comp=Z,11nm,1.1s,mb4.8
KBL Kabul 57.85 291 *e*P **P 20 05 27.1 -0.6**
KBL pmax pmax
comp=Z,11nm,1.1s,mb4.8
AB31 Akbulak array 58.06 310 *i*P **P 20 05 28.5 -0.4**
AB31 pmax pmax
comp=Z,1.0nm,0.2s,mb4.5
ABKAR Akbulak array 58.06 310 *e*P **P 20 05 28.6 -0.3**
comp=Z,2.4nm,0.5s,mb4.5
AKTO Aktyubinsk 58.76 312 *i*P **P 20 05 33.1 -0.7**
AKTO pmax pmax
comp=Z,1.0nm,0.8s,mb3.9
ASAR Alice Springs 61.58 189 P **P 20 05 52.0 -1.2**
comp=Z,1.2nm,0.7s,mb4.1,baz=15,slow=7.4,SNR=11
KEV Kevo 63.05 339 *e*P **P 20 05 59.3 -3.3**
KEV Kevo 63.05 339 *ep* **P 20 05 59.3 -3.3**
ARCES ARCESS Array B 63.61 339 P **P 20 06 06.6 +0.3**
comp=Z,3.8nm,0.9s,mb4.4,baz=58,slow=9.1,SNR=5.8
JOF Joensuu 65.70 332 *e*P **P 20 06 19.0 -1.0**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
JOF Joensuu 65.70 332 *ep* **P 20 06 19.0 -1.0**
comp=Z,1.7nm,0.4s,mb4.4
OBN Obninsk 67.98 323|| *e*P **P 20 06 35.8 +1.1**
OBN pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
OBN MLR MLR
comp=Z,100nm,15.0s,MS4.2
KAF Kangasniemi 68.03 333 *e*P **P 20 06 34.1 -0.8**
KAF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
KAF Kangasniemi 68.03 333 *ep* **P 20 06 34.1 -0.8**
comp=Z,3.5nm,0.5s,mb4.7
FINES FINESS Array B 68.54 332 P **P 20 06 38.1 +0.1**
comp=Z,5.9nm,0.7s,mb4.7,baz=33,slow=8.9,SNR=20
VSR Storozhevoye 68.89 319 *e*P **P 20 06 40.0 -0.5**
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,4.0nm,0.4s
VSR pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
VORD Divnogorie 68.97 319 *e*P **P 20 06 40.4 -0.5**
VORD pmax pmax
comp=N,7.0nm,0.5s
VORD pmax pmax
comp=E,5.0nm,0.5s
VORD pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
VORD MLR MLR
comp=N,300nm,17.0s,MS4.7
VORD MLR MLR
comp=E,230nm,17.0s,MS4.7
VORD MLR MLR
comp=Z,230nm,17.0s,MS4.5
KIV Kislovodsk 71.01 311 *e*P **P 20 06 54.6 +1.0**
comp=Z,13nm,0.8s,mb4.9
KIV Kislovodsk 71.01 311|| *i*P **P 20 06 54.3 +0.7**
KIV *e* pP 20 07 02.9 -0.2
KIV pmax pmax
comp=Z,17nm,1.0s,mb4.9
HFS Hagfors 73.76 336 P **P 20 07 10.1 +0.4**
comp=Z,1.5nm,0.4s,mb4.2,baz=54,slow=7.5,SNR=13
NOA NORSAR Array B 73.83 338 P **P 20 07 10.5 +0.4**
comp=Z,2.8nm,0.8s,mb4.3,baz=39,slow=5.8,SNR=9.2
NVAR Mina Array Bea 73.98 54 P **P 20 07 12.5 +1.1**
NVAR Mina Array Bea 73.98 54 P **P 20 07 12.5 +1.1**
comp=Z,0.3nm,0.6s,mb3.4,baz=280,slow=5.5,SNR=3.7
AKASG Malin Array Be 74.20 323 P **P 20 07 12.5 +0.1**
comp=Z,3.1nm,0.5s,mb4.5,baz=43,slow=5.7,SNR=16
KIEV Kiev 74.21 323 *e*P **P 20 07 11.8 -0.7**
comp=Z,4.7nm,0.8s,mb4.5
KIEV Kiev 74.21 323 *e*P **P 20 07 11.8 -0.7**
KIEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SUW Suwalki 74.70 328 *e*P **P 20 07 15.5 +0.2**
comp=Z,23nm,1.0s,mb5.1
SUW Suwalki 74.70 328 *e*P **P 20 07 15.5 +0.2**
SUW pmax pmax
comp=Z,23nm,1.0s,mb5.1
PDAR Pinedale Array 76.66 46 P **P 20 07 27.5 +0.8**
comp=Z,0.6nm,0.6s,mb3.7,baz=330,slow=2.7,SNR=4.2
MALT Malatya 76.92 308 *e*P **P 20 07 29.6 +1.3**
comp=Z,3.1nm,0.8s,mb4.3
MALT Malatya 76.92 308 *e*P **P 20 07 29.6 +1.3**
MALT pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BUR08 Bucovina Ar. S 78.21 322 *e*P **P 20 07 35.5 +0.3**
STHS Stebnicka Huta 78.81 325 *e*P **P 20 07 39.5 +0.9**

comp=Z,3.6nm,0.9s,mb4.3
STHS **Stebnicka Huta 78.81 325** *e*P **P** **20 07 39.5 +0.9**
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
STHS Stebnicka Huta 78.81 325 *e*P **P** **20 07 39.5 +0.9**
OJC Ojcow 78.87 326 *e*P **P** **20 07 39.4 +0.5**
BR131 Keskin Array S 78.94 312 *e*P **P** **20 07 39.3 -0.1**
comp=Z,0.5nm,0.5s,mb3.7
BRTR Keskin Array B 78.94 312 P **P** **20 07 39.5 +0.1**
comp=Z,2.1nm,1.1s,mb4.0,baz=71,slow=4.2,SNR=9.8
BRTR Keskin Array B 78.94 312 *i* P **P** **20 07 40.0 +0.5**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
CRVS Cervenica-Dubn 79.08 325 *e*P **P** **20 07 39.8 -0.3**
comp=Z,29nm,2.5s,mb4.8
CRVS Cervenica-Dubn 79.08 325 *e*P **P** **20 07 39.8 -0.3**
CRVS pmax pmax
comp=Z,29nm,2.5s,mb4.8
CRVS Cervenica-Dubn 79.08 325 *e*P **P** **20 07 39.8 -0.3**
OKC Ostrava-Krasne 79.87 327 *e*P **P** **20 07 44.8 +0.5**
OKC Ostrava-Krasne 79.87 327 *e*P **P** **20 07 44.8 +0.5**
MORC Moravsky Berou 80.18 327 *e*P **P** **20 07 46.1 +0.1**
comp=Z,2.8nm,0.8s,mb4.2
MORC Moravsky Berou 80.18 327 *e*P **P** **20 07 46.1 +0.1**
MORC pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
DPC Dobruska-Polom 80.26 328 *e*P **P** **20 07 47.7 +1.3**
DPC *e* 20 07 54.3
DPC Dobruska-Polom 80.26 328 *e*P **P** **20 07 47.7 +1.3**
DPC *e*pP pP 20 07 54.3 -1.8
UPC Upice 80.27 329 *e*P **P** **20 07 47.0 +0.5**
UPC *e* pP 20 07 55.4 -0.7
UPC Upice 80.27 329 *e*P **P** **20 07 47.0 +0.5**
UPC *e*pP pP 20 07 55.4 -0.7
PSZ Piszkesteto 80.52 325 *e*P **P** **20 07 48.2 +0.3**
comp=Z,4.6nm,0.9s,mb4.4
PSZ Piszkesteto 80.52 325 *e*P **P** **20 07 48.2 +0.3**
PSZ pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
VYHS Vyhne 80.57 326 *e*P **P** **20 07 49.0 +0.9**
comp=Z,1.5nm,0.9s,mb3.9
VYHS Vyhne 80.57 326 *e*P **P** **20 07 49.0 +0.9**
VYHS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
VYHS Vyhne 80.57 326 *e*P **P** **20 07 49.0 +0.9**
BRG Berggiesshubel 80.83 330 *e*(P) **P** **20 07 58.6 +9.2**
comp=Z,3.2nm,0.7s,mb4.4
BRG Berggiesshubel 80.83 330 *e*P **P** **20 07 58.7 +9.2**
BRG pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
PVCC Panska Ves 80.84 329 AMS AMS 20 46 10.0
comp=Z,200nm,20.2s
CLL Collm 80.86 331 *i* P **P** **20 07 49.8 +0.2**
comp=Z,5.0nm,0.9s,mb4.4
CLL *i* pP 20 07 58.4 -0.9
CLL Collm 80.86 331 *i* P **P** **20 07 49.8 +0.2**
CLL *i* pP 20 07 58.4 -0.9
CLL pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
CLL Collm 80.86 331 *i* P **P** **20 07 49.8 +0.2**
comp=Z,5.0nm,0.9s,mb4.4
CLL *i* pP pP 20 07 58.4 -0.9
CLL *i* (sP) sP 20 08 01.3 -1.5
CLL *e*PP PP 20 10 52.0 -1.4
CLL Lm 20 46 00.0
comp=Z,100nm,18.8s
PRU Pruhonice 81.27 329 *e*P **P** **20 07 52.7 +0.8**
PRU *e* pP 20 08 01.7 +0.2
PRU Pruhonice 81.27 329 *e*P **P** **20 07 52.7 +0.8**
PRU *e*pP pP 20 08 01.7 +0.2
TREC Trest 81.42 328 *e*P **P** **20 07 53.2 +0.6**
TREC Trest 81.42 328 *e*P **P** **20 07 53.2 +0.6**
MMAI Mount Meron Ar 82.16 306 P **P** **20 07 57.6 +0.8**
comp=Z,2.5nm,0.7s,mb4.2,baz=46,slow=4.8,SNR=4.5
KHC Kasperske Hory 82.33 329 *e*P **P** **20 07 57.4 -0.1**
comp=Z,4.3nm,0.9s,mb4.4
KHC Kasperske Hory 82.33 329 *e*P **P** **20 07 57.3 -0.2**
KHC *e* pP 20 08 06.2 -0.9
KHC MLR MLR
comp=Z,200nm,14.6s,MS4.6
KHC Kasperske Hory 82.33 329 *e*P **P** **20 07 57.3 -0.2**
KHC *e*pP pP 20 08 06.2 -0.9
KHC AMS AMS 20 46 00.0
comp=Z,200nm,14.6s
BAIF Baives 85.11 334 *e*P **P** **20 08 11.2 -0.4**
CDF Champ du Feu 85.39 332 *e*P **P** **20 08 11.8 -1.3**
comp=Z,6.3nm,0.8s,mb4.5
CDF Champ du Feu 85.39 332 *e*P **P** **20 08 11.8 -1.3**
comp=Z,3.2nm,0.8s,mb4.5
CDF Champ du Feu 85.39 332 *e*P **P** **20 08 11.8 -1.3**
CDF pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
LOR Lormes 87.60 333 *e*P **P** **20 08 23.4 -0.5**
FLN La Foliniere 87.77 336 *e*P **P** **20 08 24.1 -0.6**
SSF Saint Saulge 87.90 333 *e*P **P** **20 08 26.0 +0.6**
comp=Z,12nm,1.2s,mb4.7
SSF Saint Saulge 87.90 333 *e*P **P** **20 08 26.0 +0.6**
comp=Z,5.9nm,1.2s,mb4.7
SSF Saint Saulge 87.90 333 *e*P **P** **20 08 26.0 +0.6**
SSF pmax pmax
comp=Z,6.0nm,1.2s,mb4.7
LPL La Plagne 88.00 331 *e*P **P** **20 08 25.9 0.0**
comp=Z,7.1nm,1.0s,mb4.5
LPL La Plagne 88.00 331 *e*P **P** **20 08 25.9 0.0**
comp=Z,3.5nm,1.0s,mb4.5
LPL La Plagne 88.00 331 *e*P **P** **20 08 25.9 0.0**
LPL pmax pmax
comp=Z,4.0nm,1.0s,mb4.6
LPG La Plagne 88.00 330 *e*P **P** **20 08 25.9 0.0**
comp=Z,5.5nm,0.9s,mb4.5
LPG La Plagne 88.00 330 *e*P **P** **20 08 25.9 0.0**
comp=Z,2.8nm,0.9s,mb4.5
LPG La Plagne 88.00 330 *e*P **P** **20 08 25.9 0.0**
LPG pmax pmax
comp=Z,3.0nm,0.9s,mb4.5
AVF Avril sur Loir 88.19 333 *e*P **P** **20 08 26.6 -0.1**
comp=Z,15nm,1.2s,mb4.8
AVF Avril sur Loir 88.19 333 *e*P **P** **20 08 26.6 -0.1**
comp=Z,7.7nm,1.2s,mb4.8
AVF Avril sur Loir 88.19 333 *e*P **P** **20 08 26.6 -0.1**
AVF pmax pmax
comp=Z,8.0nm,1.2s,mb4.8
ORIF Oris-en-Rattie 88.83 331 *e*P **P** **20 08 29.0 -0.8**
TXAR Lajitas Array 89.12 53 P **P** **20 08 31.9 +0.4**
comp=Z,0.3nm,0.6s,mb3.8,baz=291,slow=3.2,SNR=4.9
VIVF Saint-Julien-l 89.34 331 *e*P **P** **20 08 32.2 0.0**
SMRF Simiane la Rot 89.74 330 *e*P **P** **20 08 33.7 -0.4**
LPAZ La Paz 145.71 60 PKPbc PKPbc 20 15 16.0 +0.9
comp=Z,1.4nm,0.7s,baz=231,slow=0.7,SNR=4.2

NIED **29** *20:04:00,37.˚70N×142.˚30E,h23km,Mw4.1 Best double couple: M₀1.67000×10¹⁵ NP1:φ₈10.00000°,δ84.00000°, λ92.00000°. NP2:φ₈171.00000°,δ6.00000°,λ71.00000°.*
BJI **29** *20:04:39.0,37.˚41N×143.˚18E,h30km,mB4.6/19,mb4.6/35, Ms3.9/16,Ms7 3.8/17*
IDC **29** *20:04:42.9±0.6,37.˚70N×142.˚41E,h0km,mb4.1/19, mb1 4.2/24,mb1mx4.2/32,mbtmp4.1/24,ML3.7/4,MS3.4/7, Ms1 3.4/7,ms1mx3.0/39,Error ellipse: s-maj=15.8km s-min=13.6km az=132.0*
MOS **29** *20:04:45.7±0.8,37.˚78N×142.˚39E,h31km,mb4.7/17,Error ellipse: s-maj=10.3km s-min=7.1km az=111.0*
JMA **29** *20:04:45.8±0.2,37.˚73N×142.˚32E,h30km±3km,M4.4*
JMA Felt I J1.
NEIC **29** *20:04:47.6±2.1,37.˚77N×142.˚33E,h30km±14km,mb4.4/16, Error ellipse: s-maj=9.5km s-min=5.7km az=140.0*
NEIC Recorded [1 JMA] in Miyagi.
ISC 29 20:04:45.1±1.4,37.76N±0.˚03×142.˚34E±0.˚04,h12km,8km, h32km±3.0km:pP-P,n112,σ1s02/128,mb4.3/47,MS3.7/9, 9C-3D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
JIO	**Ouri**	**1.04**	**312**	⇓P		**Pb**	**20 05 04.7**	**-0.3**
JIO				S		**Sb**	**20 05 17.9**	**-0.7**
JMM	**Marumori**	**1.23**	**275**	P		**Pn**	**20 05 07.1**	**-0.9**
JMM				*e*S		**Sb**	**20 05 22.2**	**-1.7**
JFK	**Kawauchi**	**1.23**	**252**	⇑P		**Pn**	**20 05 06.7**	**-1.3**
JFK				*e*S		**Sb**	**20 05 21.4**	**-2.6**
JOU	**Okura**	**1.45**	**295**	⇑P		**Pn**	**20 05 11.1**	**0.0**
JOU				*e*S		**Sn**	**20 05 29.5**	**-0.5**
JMK	**Ichinoseki**	**1.48**	**324**	⇑P		**Pn**	**20 05 11.3**	**-0.2**
JMK				*e*S		**Sn**	**20 05 29.5**	**-1.2**
JFT	**Otama**	**1.60**	**262**	⇑P		**Pn**	**20 05 13.3**	**0.0**
JFT				*e*S		**Sn**	**20 05 33.1**	**-0.8**
JYS	**Shirataka**	**1.85**	**285**	P		**Pn**	**20 05 16.9**	**+0.3**
JYS				*e*S		**Sn**	**20 05 40.7**	**+0.8**
JOM	**Ohasama**	**1.89**	**335**	P		**Pn**	**20 05 17.5**	**+0.3**
JOM				*e*S		**Sn**	**20 05 40.1**	**-0.9**
JYK	**Kaneyama**	**1.93**	**307**	P		**Pn**	**20 05 18.0**	**+0.2**
JYK				*e*S		**Sn**	**20 05 42.7**	**+0.7**
JFY	**Yanaizu**	**2.12**	**261**	P		**Pn**	**20 05 21.4**	**+1.1**
JFY				*e*S		**Sn**	**20 05 47.5**	**+0.9**
JYA	**Atsumi**	**2.23**	**293**	P		**Pn**	**20 05 22.2**	**+0.4**
JNS	**Sasagawa**	**2.39**	**272**	P		**Pn**	**20 05 25.6**	**+1.5**
MJAR	**Matsushiro Arr**	**3.52**	**251**	Pn		**Pn**	**20 05 40.6**	**+1.1**
MJAR	6.9nm,0.3s,baz=64,slow=10,SNR=88			Sn		**Sn**	**20 06 27.2**	**+6.2**
MJAR	5.4nm,0.3s,baz=87,slow=18,SNR=4.2			LR		LR	20 07 16.8	
MJAR	comp=Z,766nm,18.6s,baz=75,slow=44 **Matsushiro Arr**	**3.52**	**251**	P		**Pn**	**20 05 40.7**	**+1.2**
MJAR							20 06 27.2	
MAJO	**Matsushiro**	**3.52**	**251**	*e*Pn		**Pn**	**20 05 41.7**	**+2.1**
MAT	**Matsushiro**	**3.52**	**251**	P		**Pn**	**20 05 41.7**	**+2.2**
MAT				*e*S		**Sn**	**20 06 22.2**	**+1.2**
ERM	**Erimo**	**4.29**	**8**	*e*Pn		**Pn**	**20 05 49.4**	**-0.8**
ERM				*e*Sn		**Sn**	**20 06 36.4**	**-3.7**
ERM	**Erimo**	**4.29**	**8**	*e*P		**Pn**	**20 05 49.4**	**-0.8**
JHJ	**Hachijo jima 2**	**5.08**	**205**	Pn		**Pn**	**20 05 59.9**	**-1.2**
JHJ	18nm,0.3s,baz=203,slow=18,SNR=17			Sn		**Sn**	**20 06 55.0**	**-4.7**
JHJ	22nm,0.3s,baz=53,slow=20,SNR=4.2			LR		LR	20 08 17.1	
ASAJ	comp=Z,174nm,18.7s,baz=274,slow=42 **Asahikawa**	**6.35**	**2**	*e*Pn		**Pn**	**20 06 18.3**	**-0.1**
ASAJ	7.0nm,0.6s							
ASAJ	**Asahikawa**	**6.35**	**2**	Pn		**Pn**	**20 06 19.1**	**+0.7**
ASAJ	1.0nm,0.3s,baz=197,slow=10.0,SNR=10			Sn		**Sn**	**20 07 32.0**	**+1.2**
ASAJ	1.1nm,0.3s,baz=118,slow=17,SNR=2.8			LR		LR	20 09 29.5	
ASAJ	comp=Z,109nm,18.6s,baz=19,slow=45 **Asahikawa**	**6.35**	**2**	P		**Pn**	**20 06 19.2**	**+0.8**
ASAJ							20 07 32.0	
ASAJ	comp=Z,1.0nm,0.3s			pmax	pmax			
ASAJ	comp=N,1.0nm,0.3s			smax				
ASAJ	comp=Z,109nm,18.6s			MLR	MLR			
YSS	**Yuzh-Sakhalins**	**9.19**	**2**	*e*Pn		**Pn**	**20 06 58.5**	**+1.1**
YSS	**Yuzh-Sakhalins**	**9.19**	**2**	*e*P		**Pn**	**20 06 58.7**	**+1.3**
KSRS	**Korea Array**	**11.44**	**273**	Pn		**Pn**	**20 07 30.9**	**+2.7**
KSRS	comp=Z,0.3nm,0.3s,baz=88,slow=14,SNR=21			LR		LR	20 11 52.5	
MDJ	comp=Z,187nm,18.4s,baz=348,slow=37 **Mudanjiang**	**11.78**	**310**	P		**Pn**	**20 07 38.8**	**+5.9**
MDJ				pmax	pmax			
MDJ	comp=Z,8.0nm,1.1s			pmax	pmax			
MDJ	comp=Z,57nm,7.5s **Mudanjiang**	**11.78**	**310**	*e*P		**Pn**	**20 07 39.0**	**+6.1**
HABR	comp=Z,19nm,1.1s **Khabarovsk**	**11.95**	**336**	P		**Pn**	**20 07 40.6**	**+5.5**
HABR				pmax	pmax			
HABR	comp=E,16nm,1.5s			pmax	pmax			
HABR	comp=N,8.0nm,1.2s			pmax	pmax			
HABR	comp=Z,13nm,1.3s			MLR	MLR			
CN2	comp=Z,89nm,13.0s **Changchun**	**14.14**	**301**	*e*P		**Pn**	**20 08 11.0**	**+6.0**
CN2				*es*P		sP	20 08 21.0	+3.3
CN2				*e*S		**Sn**	**20 10 57.3**	**+16**
CN2				pmax	pmax			
CN2	comp=Z,10.0nm,0.6s			pmax	pmax			
DL2	comp=Z,200nm,3.0s **Dalian**	**16.29**	**280**	P		**Pn**	**20 08 36.3**	**+2.7**
DL2				*e*S		**Sn**	**20 11 45.5**	**+11**
DL2	comp=Z,10.0nm,0.9s			pmax	pmax			
DL2	comp=N,60nm,14.4s			LR	LR			
DL2	comp=E,70nm,17.4s			LR	LR			
DL2	comp=Z,70nm,15.7s			LR	LR			
PETK	**Petropavlovsk-**	**18.69**	**30**	P		**Pn**	**20 09 02.9**	**-0.5**
HIA	comp=Z,0.2nm,0.3s,baz=218,slow=9.0,SNR=4.1 **Hailar**	**19.93**	**312**	*e*P		**Pn**	**20 09 19.0**	**+0.6**
HIA	comp=Z,8.8nm,0.8s							
HIA	**Hailar**	**19.93**	**312**	*e*P		**Pn**	**20 09 19.0**	**+0.7**
HIA	comp=Z,9.0nm,0.8s			pmax	pmax			
NJ2	**Nanjing**	**20.06**	**261**	*e*P		**P**	**20 09 22.3**	**+4.1**
NJ2	comp=Z,30nm,0.5s			pmax	pmax			
BJI	**Beijing**	**20.46**	**285**	P		**P**	**20 09 21.0**	**-1.5**
BJI	comp=Z,10.0nm,0.8s			pmax	pmax			
BJI	comp=Z,130nm,9.0s			pmax	pmax			
BJT	**Baijiatuan**	**20.47**	**284**	*e*P		**P**	**20 09 21.1**	**-1.5**
HHC	**Hu-ho-hao-te**	**23.95**	**287**	*e*P		**P**	**20 09 58.5**	**-0.6**
HHC				PP			20 10 36.0	
HHC				S		**S**	**20 14 18.8**	**+3.5**
HHC				pmax	pmax			
HHC	comp=Z,11nm,0.9s,mb4.3			pmax	pmax			
HHC	comp=Z,150nm,5.5s			LR	LR			
HHC	comp=N,92nm,9.0s			LR	LR			
HHC	comp=E,110nm,8.4s			LR	LR			
HHC	comp=Z,130nm,12.4s,MS3.6							
WHN	**Wuhan**	**24.19**	**261**	P		**P**	**20 10 01.3**	**-0.1**
WHN	comp=Z,350nm,13.0s,MS4.0			LR	LR			
CIT	**Chita**	**24.67**	**315**	*e*P		**P**	**20 10 06.6**	**+1.0**
CIT				*e*			20 10 14.7	
CIT				*e*			20 10 35.0	
CIT				pmax	pmax			
YAK	comp=Z,89nm,1.1s,mb5.2 **Yakutsk**	**25.53**	**346**	*e*P		**P**	**20 10 12.3**	**-0.9**
YAK				*e**PP		pP	20 10 20.6	+3.7
YAK				*e*			20 10 49.9	
YAK				*e*PPP			20 11 00.1	
YAK				*e*S		**S**	**20 14 43.9**	**+3.7**
YAK				*e*SS			20 15 41.2	
YAK				*e*			20 21 04.0	
YAK	comp=Z,13nm,1.1s,mb4.4			pmax	pmax			
YAK	comp=E,2.0nm,1.0s			pmax	pmax			
YAK	comp=N,4.0nm,1.1s			pmax	pmax			
YAK	comp=Z,11nm,0.9s,mb4.4			smax				
YAK	comp=N,38nm,2.0s			smax				
YAK	comp=E,48nm,3.1s			MLR	MLR			
YAK	comp=Z,79nm,16.0s,MS3.3			MLR	MLR			
YAK	comp=E,38nm,15.0s,MS3.3			MLR	MLR			
ULN	comp=N,59nm,16.0s,MS3.3 **Ulaanbaatar**	**27.56**	**303**	*e*P		**P**	**20 10 32.0**	**+0.3**
ULN	comp=N,3.2nm,0.7s,mb4.1							
ULN	**Ulaanbaatar**	**27.56**	**303**	*e*P		**P**	**20 10 32.0**	**+0.2**
ULN	comp=Z,3.0nm,0.7s,mb4.0			pmax	pmax			
SONM	**Songino Array**	**28.00**	**303**	P		**P**	**20 10 36.6**	**+1.0**
ENH	comp=Z,7.9nm,0.7s,mb4.4,baz=101,slow=8.6,SNR=30 **Enshi**	**28.13**	**264**	*e*P		**P**	**20 10 34.9**	**-2.1**
ZAK	comp=Z,21nm,0.9s,mb4.8 **Zakamensk**	**30.40**	**307**	*i* P		**P**	**20 10 53.8**	**-3.1**
ZAK				pmax	pmax			
TLY	comp=Z,3.0nm,1.0s,mb4.0 **Talaya**	**30.42**	**310**	P		**P**	**20 10 57.8**	**+0.7**
TLY	comp=Z,4.0nm,0.8s,mb4.2 **Talaya**	**30.42**	**310**	P		**P**	**20 10 57.8**	**+0.7**
TLY				pmax	pmax			
GYA	comp=Z,4.0nm,0.8s,mb4.2 **Guiyang**	**32.07**	**260**	P		**P**	**20 11 10.5**	**-1.4**
GYA				pmax	pmax			
CD2	comp=Z,20nm,0.9s,mb5.0 **Chengdu**	**32.41**	**270**	P		**P**	**20 11 14.3**	**-0.5**
CD2				pP	pP		20 11 24.0	+5.4
CD2				sP	sP		20 11 27.8	+7.7
CD2				PP	PP		20 12 26.0	-2.0
CD2				PcP	PcP		20 13 56.5	-5.6
CD2				S	**S**		**20 16 30.8**	**+1.8**
CD2				sS	sS		20 16 46.8	+12
CD2				PcS	PcS		20 17 41.0	-6.2
CD2				SS	SS		20 18 33.0	-15
CD2	comp=Z,10.0nm,0.6s,mb4.8			pmax	pmax			
CD2	comp=Z,60nm,6.5s			pmax	pmax			
CD2	comp=N,180nm,16.0s,MS4.0			LR	LR			
CD2	comp=E,200nm,14.6s,MS4.0			LR	LR			
CD2	comp=Z,280nm,13.5s,MS4.1			LR	LR			
GTA	**Gaotai**	**33.06**	**286**	*e*P		**P**	**20 11 20.0**	**-0.4**
GTA				pP	pP		20 11 27.3	+3.1
GTA				sP	sP		20 11 30.5	+4.8
GTA	comp=Z,4.0nm,1.4s,mb4.2			pmax	pmax			
BILL	**Bilibino**	**33.12**	**16**	⇓*e*P		**P**	**20 11 11.8**	**-8.8**
BILL				pmax	pmax			
KMI	comp=Z,2.0nm,0.4s,mb4.4 **Kunming**	**35.80**	**261**	P		**P**	**20 11 43.5**	**-0.8**
KMI				pmax	pmax			
WMQ	comp=Z,9.0nm,0.9s,mb4.7 **Urumqi**	**41.17**	**296**	*e*P		**P**	**20 12 31.5**	**+2.3**
WMQ				pP	pP		20 12 39.0	+6.0
WMQ				sP	sP		20 12 42.3	+7.7
WMQ				PP	PP		20 14 12.5	+8.4
WMQ				PcP	PcP		20 14 26.0	-2.3
WMQ	comp=Z,19nm,0.7s,mb4.8			pmax	pmax			
WMQ	comp=Z,110nm,4.6s			pmax	pmax			
WMQ	comp=N,38nm,18.0s			LR	LR			
WMQ	comp=E,36nm,24.2s			LR	LR			
WMQ	comp=Z,47nm,21.6s,MS3.3			LR	LR			
ZALV	**Zalesovo Beam**	**41.97**	**312**	P		**P**	**20 12 35.6**	**-0.1**
CMAR	comp=Z,4.5nm,0.8s,mb4.2,baz=89,slow=7.2,SNR=16 **Chiang Mai Arr**	**42.39**	**255**	P		**P**	**20 12 40.0**	**+0.5**
NVS	comp=Z,0.5nm,0.7s,mb3.2,baz=40,slow=6.4,SNR=5.7 **Novosibirsk**	**42.87**	**313**	*e*P		**P**	**20 12 41.8**	**-1.2**
LSA	**Lhasa**	**42.88**	**275**	*e*P		**P**	**20 12 47.2**	**+3.9**
LSA	comp=Z,3.7nm,0.6s,mb4.3 **Lhasa**	**42.88**	**275**	*e*P		**P**	**20 12 47.2**	**+3.8**
LSA				pmax	pmax			
MK31	comp=Z,4.0nm,0.6s,mb4.3 **Makanchi Array**	**44.36**	**302**	*e*P		**P**	**20 12 54.6**	**-0.5**
MKAR	**Makanchi Array**	**44.36**	**302**	P		**P**	**20 12 55.3**	**+0.2**
KURK	comp=Z,5.2nm,0.8s,mb4.3,baz=85,slow=10,SNR=27 **Kurchatov**	**46.06**	**308**	*e*P		**P**	**20 13 07.9**	**-0.6**
KURK	comp=Z,12nm,0.8s,mb4.9 **Kurchatov**	**46.06**	**308**	P		**P**	**20 13 09.0**	**+0.4**
KURK	comp=Z,7.8nm,0.8s,mb4.7,baz=83,slow=8.0,SNR=26			LR	LR		20 33 09.8	
KURK	comp=Z,35nm,19.2s,MS3.3,baz=60,slow=37 **Kurchatov**	**46.06**	**308**	*ce*P		**P**	**20 13 08.0**	**-0.6**
KURK				pmax	pmax			
KDAK	comp=Z,13nm,0.8s,mb4.9 **Kodiak Island**	**46.07**	**42**	P		**P**	**20 13 08.6**	**+0.1**
KSM	comp=Z,3.6nm,0.7s,mb4.4,baz=270,slow=7.1,SNR=3.7 **Kuching**	**46.59**	**227**	P		**P**	**20 13 12.8**	**-0.2**
ILAR	comp=Z,6.7nm,1.1s,mb4.5 **Eielson Array**	**48.49**	**33**	P		**P**	**20 13 27.4**	**+0.1**
TKM2	comp=Z,1.1nm,0.6s,mb4.1,baz=265,slow=6.4,SNR=17 **Tokmak 2**	**49.93**	**298**	P		**P**	**20 13 39.5**	**+0.9**
TKM2	comp=Z,9.7nm,0.8s,mb4.9 **Tokmak 2**	**49.93**	**298**	P		**P**	**20 13 39.5**	**+0.9**
TKM2				pmax	pmax			
BVAR	comp=Z,10.0nm,0.8s,mb4.9 **Borovoye Array**	**50.63**	**312**	P		**P**	**20 13 43.6**	**-0.2**
BRVK	comp=Z,1.6nm,0.9s,mb4.0,baz=64,slow=6.8,SNR=8.2 **Borovoye**	**50.68**	**312**	*e*P		**P**	**20 13 44.0**	**-0.1**
BRVK	comp=Z,3.1nm,0.8s,mb4.3 **Borovoye**	**50.68**	**312**	*e*P		**P**	**20 13 44.0**	**-0.1**
BRVK				pmax	pmax			
KSH	comp=Z,3.0nm,0.8s,mb4.3 **Kashi**	**50.78**	**294**	*e*P		**P**	**20 13 49.0**	**+3.9**
KSH				*e*pP	pP		20 14 01.5	+13
KSH				*e*PcP	PcP		20 14 57.0	-4.9
KSH				*e*PP	PP		20 15 51.3	+10
KSH				*e*ScP	ScP		20 18 48.0	-10
KSH				*e*PcS	PcS		20 18 54.3	-5.0
KSH				*e*S	**S**		**20 21 14.5**	**+14**
KSH				*e*ScS	ScS		20 23 31.0	-4.7
KSH	comp=Z,3.0nm,1.1s,mb4.1			pmax	pmax			
KSH	comp=Z,61nm,3.4s			pmax	pmax			
KSH	comp=N,67nm,9.4s			LR	LR			
KSH	comp=E,91nm,10.6s			LR	LR			
KSH	comp=Z,220nm,14.7s,MS4.3			LR	LR			
AAK	**Ala-Archa**	**50.79**	**298**	*e*P		**P**	**20 13 44.5**	**-0.6**
AAK	comp=Z,5.2nm,0.8s,mb4.5 **Ala-Archa**	**50.79**	**298**	P		**P**	**20 13 46.0**	**+0.9**
AAK	comp=Z,1.4nm,0.3s,mb4.4,baz=84,slow=1.3,SNR=4.3			LR	LR		20 36 52.2	
AAK	comp=Z,69nm,18.2s,MS3.7,baz=280,slow=38 **Ala-Archa**	**50.79**	**298**	*e*P		**P**	**20 13 44.5**	**-0.6**
AAK				pmax	pmax			
EKS2	comp=Z,5.0nm,0.8s,mb4.5 **Erkin-Say**	**51.28**	**298**	*e*P		**P**	**20 13 48.8**	**0.0**
AML	comp=Z,2.7nm,0.7s,mb4.3 **Almayashu**	**51.52**	**298**	*e*P		**P**	**20 13 51.3**	**+0.7**
KKAR	comp=Z,5.6nm,0.7s,mb4.6 **Karatay Array**	**53.40**	**300**	*e*P		**P**	**20 14 04.4**	**-0.1**
KKAR	comp=Z,2.0nm,0.7s,mb4.2 **Karatay Array**	**53.40**	**300**	*e*P		**P**	**20 14 04.4**	**-0.1**
KKAR				pmax	pmax			
SVE	comp=Z,2.0nm,0.7s,mb4.2 **Sverdlovsk**	**55.09**	**318**	⇑*e*P		**P**	**20 14 17.5**	**+0.9**
SVE				pmax	pmax			
ARU	comp=Z,8.0nm,0.8s,mb4.8 **Arti**	**56.30**	**318**	*e*P		**P**	**20 14 24.6**	**-0.7**
ARU	comp=Z,6.9nm,0.8s,mb4.7 **Arti**	**56.30**	**318**	*c i*P		**P**	**20 14 25.2**	**-0.1**
ARU				*e*			20 16 31.3	
ARU				S		**S**	**20 22 26.5**	**+12**
ARU				pmax	pmax			
DLBC	comp=Z,13nm,2.5s,mb4.5 **Dease Lake**	**57.60**	**38**	P		**P**	**20 14 35.8**	**+1.3**
DLBC	comp=Z,0.7nm,0.4s,mb4.0,baz=166,slow=21,SNR=3.1			LR	LR		20 41 24.9	
KBL	comp=Z,36nm,19.0s,MS3.5,baz=238,slow=38 **Kabul**	**57.84**	**291**	*e*P		**P**	**20 14 35.2**	**-1.4**
KBL	comp=Z,3.8nm,0.8s,mb4.5 **Kabul**	**57.84**	**291**	*e*P		**P**	**20 14 35.2**	**-1.4**
KBL				pmax	pmax			
WRA	comp=Z,4.0nm,0.8s,mb4.5 **Warramunga Arr**	**57.89**	**189**	P		**P**	**20 14 35.8**	**-1.1**
ABKAR	comp=Z,2.0nm,0.7s,mb4.3,baz=6.0,slow=7.2,SNR=37 **Akbulak array**	**58.03**	**310**	*e*P		**P**	**20 14 36.7**	**-1.0**
ASAR	comp=Z,1.6nm,0.5s,mb4.3 **Alice Springs**	**61.61**	**189**	P		**P**	**20 15 01.9**	**-0.6**
ARCES	comp=Z,0.9nm,0.7s,mb4.0,baz=16,slow=6.5,SNR=19 **ARCESS Array B**	**63.57**	**339**	P		**P**	**20 15 15.5**	**+0.4**
JOF	comp=Z,3.1nm,1.0s,mb4.3,baz=62,slow=9.4,SNR=3.1 **Joensuu**	**65.67**	**332**	*e*P		**P**	**20 15 28.4**	**-0.4**
JOF	**Joensuu**	**65.67**	**332**	*e*p		**P**	**20 15 28.4**	**-0.4**
OBN	**Obninsk**	**67.95**	**323**	⇑*e*P		**P**	**20 15 42.6**	**-0.9**
OBN				pmax	pmax			
KAF	comp=Z,4.0nm,0.6s,mb4.6 **Kangasniemi**	**68.00**	**333**	*e*P		**P**	**20 15 36.0**	**-7.7**
KAF				pmax	pmax			
KAF	comp=Z,3.0nm,0.8s,mb4.4 **Kangasniemi**	**68.00**	**333**	*e*p		**P**	**20 15 36.0**	**-7.7**
FINES	comp=Z,2.9nm,0.8s,mb4.4 **FINESS Array B**	**68.51**	**332**	P		**P**	**20 15 46.8**	**-0.1**
KIV	comp=Z,3.2nm,0.7s,mb4.4,baz=32,slow=7.6,SNR=7.0 **Kislovodsk**	**70.98**	**311**	*de*P		**P**	**20 16 02.0**	**-0.5**

KIV				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
NOA	**NORSAR Array B**	**73.80**	**338**	P	**P**	**20 16 19.3**	**+0.3**
	comp=Z,1.1nm,0.8s,mb3.9,baz=40,slow=5.8,SNR=5.6						
NVAR	**Mina Array Bea**	**73.97**	**54**	P	**P**	**20 16 20.1**	**-0.3**
	comp=Z,0.3nm,0.6s,mb3.4,baz=284,slow=5.3,SNR=2.7						
AKASG	**Malin Array Be**	**74.17**	**323**	P	**P**	**20 16 21.4**	**+0.1**
	comp=Z,2.5nm,0.6s,mb4.3,baz=48,slow=5.4,SNR=5.7						
PDAR	**Pinedale Array**	**76.63**	**46**	P	**P**	**20 16 35.8**	**+0.2**
	comp=Z,0.5nm,0.6s,mb3.6,baz=291,slow=1.3,SNR=4.5						
BUR08	**Bucovina Ar. S**	**78.18**	**322**	P	**P**	**20 16 39.9**	**-4.3**
BRTR	**Keskin Array B**	**78.92**	**312**	*i* P	**P**	**20 16 42.5**	**-5.9**
DPC	**Dobruska-Polom**	**80.23**	**328**	*e*P	PcP	20 17 06.6	+4.1
DPC	**Dobruska-Polom**	**80.23**	**328**	*e*pP	PcP	20 17 06.6	+4.1
CLL	**Collm**	**80.83**	**331**	*e*P	PcP	20 17 07.0	+1.9
CLL	**Collm**	**80.83**	**331**	*e*P	**P**	**20 16 59.0**	**+0.5**
CLL				*e*pP	PcP	20 17 07.0	+1.9
CLL				Lm		21 02 00.0	
	comp=Z,100nm,18.1s						
PRU	**Pruhonice**	**81.24**	**329**	*e*P	PcP	20 17 08.2	+1.2
PRU	**Pruhonice**	**81.24**	**329**	*e*pP	PcP	20 17 08.2	+1.2
KHC	**Kasperske Hory**	**82.30**	**329**	*e*P	**P**	**20 17 11.8**	**+5.4**
KHC	**Kasperske Hory**	**82.30**	**329**	*e*P	**P**	**20 17 11.8**	**+5.4**
TXAR	**Lajitas Array**	**89.10**	**53**	P	**P**	**20 17 40.6**	**+0.2**
	comp=Z,0.3nm,0.7s,mb3.7,baz=296,slow=2.9,SNR=5.5						
LPAZ	**La Paz**	**145.69**	**60**	PKPbc	PKPbc	20 24 23.9	-0.3
	comp=Z,0.9nm,0.5s,baz=279,slow=4.5,SNR=5.4						

DJA 29 20:06:23.0±0.5N×122.1±0.8E, h178km, MLv3.9/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**0.49**	**331**	P	Pn	20 06 48.0	+0.5
MRSI				S	Sn	20 07 09.1	+2.7
APSI	**Ampana**	**1.09**	**209**	P	Pn	20 06 51.8	+0.6
LUWI	**Luwuk**	**1.23**	**151**	P	Pn	20 06 51.7	-0.7
LUWI				S	Sn	20 07 15.2	+0.1
TOLI	**Toli-Toli**	**1.75**	**308**	P	Pn	20 06 57.6	+0.3
TOLI				S	Sn	20 07 24.2	+0.5
MNI	**Manado**	**3.00**	**62**	P	Pn	20 07 10.8	-0.8
TNTI	**Ternate**	**5.24**	**82**	P	Pn	20 07 40.9	+0.9

IDC 29 20:06:47.1±2.3, 3.2°N×127.9°E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/20, mbtmp3.2/3, Error ellipse: s-maj=161.3km s-min=26.6km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.85**	**165**	P	P	20 12 02.5	+0.2
	0.2nm,0.3s,baz=344,slow=10,SNR=6.6						
ASAR	**Alice Springs**	**27.34**	**168**	P	P	20 12 33.4	-0.6
	0.2nm,0.7s,baz=359,slow=8.0,SNR=3.2						
MKAR	**Makanchi Array**	**58.69**	**325**	P	P	20 16 46.8	+0.3
	0.2nm,0.3s,baz=117,slow=8.2,SNR=5.8						

NIED ***29*** *20:13:00,37.70N×142.30E,h26km,Mw3.5 Best double couple: M0=2.20000×10^14 NP1:φ=202.00000°,δ=80.00000°, λ=-104.00000°. NP2:φ=78.00000°,δ=17.00000°, λ=-35.00000°.*

IDC ***29*** *20:13:20.9±1.7,37.86N×142.63E,h0km,mb3.6/5, mb1 3.6/8,mb1mx3.4/25,mbtmp3.6/8,ML2.9/3,MS4.2/1, Ms1 4.2/1,ms1mx2.5/35,Error ellipse: s-maj=43.3km s-min=19.8km az=82.0*

ISCJB ***29*** *20:13:24.8±0.8,37.75N±0.05×142.45E±0.07,h33km, mb3.6/6,Error ellipse: s-maj=7.7km s-min=6.7km az=178.5*

NEIC ***29*** *20:13:25.9±1.0,37.92N×142.63E,h35km,mb4.4/2,Error ellipse: s-maj=18.1km s-min=14.0km az=79.0*

JMA ***29*** *20:13:25.7±0.2,37.72N×142.30E,h34km±4km,M3.6*

ISC 29 20:13:26.8±0.7, 37.80N±0.04×142.36E±0.07, h35km, n23, σ1°22/29, mb3.6/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**1.03**	**310**	P	**Pn**	**20 13 44.5**	**-0.3**
JIO				*e*S	**Sn**	**20 13 57.7**	**-0.3**
JMM	**Marumori**	**1.25**	**273**	P	**Pn**	**20 13 46.7**	**-1.0**
JMM				*e*S	**Sn**	**20 14 01.2**	**-2.0**
JFK	**Kawauchi**	**1.26**	**250**	P	**Pn**	**20 13 46.5**	**-1.4**
JFK				*e*S	**Sn**	**20 14 01.2**	**-2.4**
JOU	**Okura**	**1.45**	**293**	P	**Pn**	**20 13 51.0**	**+0.4**
JOU				*e*S	**Sn**	**20 14 09.1**	**+0.7**
JMK	**Ichinoseki**	**1.46**	**322**	P	**Pn**	**20 13 51.3**	**+0.7**
JMK				*e*S	**Sn**	**20 14 09.7**	**+1.2**
JFT	**Otama**	**1.63**	**261**	P	**Pn**	**20 13 52.8**	**-0.2**
JFT				*e*S	**Sn**	**20 14 12.1**	**-0.7**
JOM	**Ohasama**	**1.87**	**334**	P	**Pn**	**20 13 57.3**	**+1.0**
JYK	**Kaneyama**	**1.93**	**306**	P	**Pn**	**20 13 57.9**	**+0.8**
MJAR	**Matsushiro Arr**	**3.55**	**251**	Pn	**Pn**	**20 14 21.7**	**+2.3**
	1.4nm,0.3s,baz=215,slow=10,SNR=11						
MAJO	**Matsushiro**	**3.55**	**251**	*e*Pn	**Pn**	**20 14 21.9**	**+2.5**
MAT	**Matsushiro**	**3.55**	**251**	P	**Pn**	**20 14 22.2**	**+2.8**
MAT				S	**Sn**	**20 15 03.0**	**+2.9**
JHJ	**Hachijo jima 2**	**5.12**	**205**	Pn	**Pn**	**20 14 40.0**	**-1.0**
	7.6nm,0.3s,baz=226,slow=19,SNR=9.9						
JHJ				Sn	**Sn**	**20 15 33.2**	**-5.8**
	11nm,0.3s,baz=280,slow=24,SNR=6.3						
ASAJ	**Asahikawa**	**6.31**	**2**	Pn	**Pn**	**20 14 55.9**	**-1.5**
	0.1nm,0.3s,baz=200,slow=15,SNR=1.7						
ASAJ				Sn	**Sn**	**20 16 06.8**	**-1.3**
	0.3nm,0.3s,baz=192,slow=19,SNR=2.1						
JOW	**Kunigami**	**16.15**	**231**	LR	LR	20 22 30.0	
	comp=Z,986nm,21.7s,baz=200,slow=34						
ULN	**Ulaanbaatar**	**27.56**	**303**	P	pP	20 19 19.8	-0.5
SONM	**Songino Array**	**28.00**	**303**	P	**P**	**20 19 14.0**	**-0.1**
	1.1nm,0.7s,mb3.6,baz=112,slow=10,SNR=5.0						
ENH	**Enshi**	**28.16**	**264**	P	pP	20 19 23.9	-1.9
	9.3nm,0.7s						
ZALV	**Zalesovo Beam**	**41.96**	**312**	P	**P**	**20 21 14.4**	**+0.3**
	0.9nm,0.8s,mb3.4,baz=106,slow=11,SNR=2.7						
MKAR	**Makanchi Array**	**44.36**	**302**	P	**P**	**20 21 33.5**	**0.0**
MKAR	**Makanchi Array**	**44.36**	**302**	P	**P**	**20 21 33.5**	**0.0**
	0.5nm,0.5s,mb3.5,baz=73,slow=9.7,SNR=6.9						
KURK	**Kurchatov**	**46.06**	**308**	*e*P	**P**	**20 21 46.8**	**-0.2**
	3.7nm,1.0s,mb4.3						
WRA	**Warramunga Arr**	**57.93**	**189**	P	**P**	**20 23 15.5**	**0.0**
	0.3nm,0.7s,mb3.5,baz=5.9,slow=7.1,SNR=7.4						
ASAR	**Alice Springs**	**61.66**	**189**	P	**P**	**20 23 41.4**	**+0.3**
	0.2nm,0.8s,mb3.3,baz=14,slow=9.0,SNR=3.4						

PGC ***29*** *20:16:29.9±1.4,49.93N×129.90W,h10km,ML3.3/13, Mw3.9, 195km Wsw of Pt. Hardy, Bc Vancouver Island Region*

IDC ***29*** *20:16:29.4±1.2,49.99N×129.82W,h0km,mb3.7/5, mb1 4.1/12,mb1mx3.8/30,mbtmp3.8/12,ML3.5/5,MS3.7/19, Ms1 3.8/19,ms1mx3.6/35,Error ellipse: s-maj=23.1km s-min=12.1km az=73.0*

ISCJB ***29*** *20:16:30.7±0.3,50.14N±0.03×129.64W±0.05,h10km, mb4.1/13,MS3.8/14,Error ellipse: s-maj=5.4km s-min=2.9km az=41.9*

NEIC ***29*** *20:16:34.4±1.9,50.19N×129.61W,h24km±17km,mb4.0/29, MW3.9(PGC),Error ellipse: s-maj=8.9km s-min=3.5km az=49.0*

ISC 29 20:16:33.6±1.5, 50.19N±0.03×129.60W±0.05, h17km±11km, n114, σ1°19/109, mb4.1/13, MS3.8/14, 8D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.04**	**64**	↑Pn	**Pn**	**20 16 52.4**	**-1.0**
BPBC	**Brooks Peninsu**	**1.17**	**91**	↓Pn	**Pn**	**20 16 52.4**	**-2.8**
BPBC				↑Sn	**Sn**	**20 17 10.3**	**-0.5**
PHC	**Port Hardy**	**1.48**	**69**	↓Pn	**Pn**	**20 16 58.5**	**-0.9**
PHC				↓Sn	**Sn**	**20 17 19.1**	**+0.9**
MAYB	**Maynard**	**1.57**	**81**	↑Pn	**Pn**	**20 16 58.9**	**-1.7**
EDB	**Eliza Dome**	**1.63**	**100**	↓Pn	**Pn**	**20 16 57.8**	**-3.7**
EDB				↑Sn	**Sn**	**20 17 20.1**	**-1.9**
WOSB	**Woss**	**1.95**	**90**	↑Pn	**Pn**	**20 17 04.5**	**-1.3**
BBB	**Bella Bella**	**2.20**	**25**	Pn	**Pn**	**20 17 09.2**	**-0.1**
	52nm,0.3s,baz=194,slow=18,SNR=491						
BBB				Sn	**Sn**	**20 17 39.0**	**+2.9**
	37nm,0.3s,baz=135,slow=22,SNR=10						
BBB				LR	LR	20 18 12.8	
	comp=Z,1μm,21.4s,baz=28,slow=42						
BBB	**Bella Bella**	**2.20**	**25**	↑Pn	**Pn**	**20 17 09.3**	**0.0**
BBB				↓Sn	**Sn**	**20 17 38.3**	**+2.2**
NCRB	**Newcastle Ridg**	**2.28**	**83**	↑Pn	**Pn**	**20 17 10.2**	**-0.2**
GDR	**Gold River**	**2.34**	**99**	↓Pn	**Pn**	**20 17 09.2**	**-2.0**
CBB	**Campbell River**	**2.73**	**92**	↑Pn	**Pn**	**20 17 15.3**	**-1.3**
CBB				↓Sn	**Sn**	**20 17 49.7**	**+0.5**
BNB	**Barry Inlet**	**2.74**	**331**	↑Pn	**Pn**	**20 17 12.7**	**-4.1**
OZB	**Mount Ozzard**	**2.94**	**113**	↑Pn	**Pn**	**20 17 17.0**	**-2.5**
ALB	**Alberni**	**3.23**	**105**	↑Pn	**Pn**	**20 17 20.7**	**-2.7**
MOBC	**Moresby Island**	**3.30**	**334**	↓Pn	**Pn**	**20 17 22.8**	**-1.7**
DIB	**Dawson Inlet,**	**3.50**	**330**	Pn	**Pn**	**20 17 24.2**	**-3.0**
	SNR=19						
JCW	**Jim Creek**	**5.41**	**109**	*e*Pn	**Pn**	**20 17 52.9**	**-0.6**
	14nm,0.8s						
CRAG	**Craig**	**5.70**	**339**	*e*Pn	**Pn**	**20 17 57.8**	**+0.4**
LON	**Longmire**	**6.22**	**121**	*e*Pn	**Pn**	**20 18 03.8**	**-0.7**
ETW	**Entiat**	**6.63**	**109**	*e*Pn	**Pn**	**20 18 09.2**	**-1.0**
	15nm,0.8s						
HAWA	**Hanford**	**7.71**	**116**	*e*Pn	**Pn**	**20 18 24.3**	**-0.7**
	8.6nm,0.9s						
OD2	**Odessa Site #2**	**7.72**	**107**	*e*Pn	**Pn**	**20 18 24.1**	**-1.0**
	27nm,0.9s						
DLBC	**Dease Lake**	**8.26**	**358**	*e*Pn	**Pn**	**20 18 31.8**	**-0.7**
DLBC	**Dease Lake**	**8.26**	**358**	Pn	**Pn**	**20 18 33.5**	**+1.0**
	0.2nm,0.3s,baz=202,slow=13,SNR=6.9						
DLBC				LR	LR	20 22 14.5	
	comp=Z,492nm,18.1s,baz=150,slow=41						
NEW	**Newport**	**8.39**	**99**	*e*Pn	**Pn**	**20 18 34.5**	**+0.2**
	6.8nm,1.0s						
LNOR	**Lincton Mounta**	**8.72**	**115**	*e*Pn	**Pn**	**20 18 38.5**	**-0.4**
	12nm,1.1s						
YBH	**Yreka Blue Hor**	**9.72**	**148**	Pn	**Pn**	**20 18 54.0**	**+1.4**
YBH	**Yreka Blue Hor**	**9.72**	**148**	LR	LR	20 22 21.0	
	comp=Z,141nm,21.1s,baz=150,slow=36						
BSMT	**Bassoo Peak**	**10.01**	**98**	*e*Pn	**Pn**	**20 18 56.0**	**-0.4**
WALA	**Waterton Lakes**	**10.24**	**90**	Pn	**Pn**	**20 19 00.6**	**+0.9**
MOD	**Modoc**	**10.50**	**139**	*e*Pn	**Pn**	**20 19 03.5**	**+0.2**
WDC	**Whiskeytown Da**	**10.81**	**150**	*e*Pb	**Pn**	**20 19 08.1**	**+0.6**
WVOR	**Wild Horse Val**	**10.84**	**132**	*e*Pn	**Pn**	**20 19 08.6**	**+0.8**
	23nm,1.7s						
SLMT	**Seeley Lake**	**11.04**	**99**	*e*Pn	**Pn**	**20 19 11.2**	**+0.6**
	7.3nm,1.0s						
CHMT	**Chamberlain Mo**	**11.32**	**101**	*e*Pn	**Pn**	**20 19 14.6**	**+0.2**
	9.5nm,1.3s						
LRM	**Limekiln Ridge**	**12.28**	**104**	*e*Pn	**Pn**	**20 19 28.2**	**+0.7**
	31nm,1.2s						
HLID	**Hailey**	**12.31**	**117**	*e*Pn	**Pn**	**20 19 29.2**	**+1.2**
	7.5nm,0.2s						
DLMT	**Dillon**	**12.41**	**106**	*e*Pn	**Pn**	**20 19 25.9**	**-3.4**
	11nm,1.3s						
MCMT	**McKenzie Canyo**	**12.52**	**109**	*e*Pn	**Pn**	**20 19 30.8**	**-0.1**
	2.0nm,0.9s						
PAHR	**Pah Rah Range**	**12.72**	**142**	*e*Pn	**Pn**	**20 19 33.6**	**0.0**
	20nm,1.4s						
IMW	**Indian Meadow**	**14.18**	**109**	*e*Pn	**Pn**	**20 19 55.3**	**+1.8**
	13nm,1.6s						
FLWY	**Flagg Ranch**	**14.22**	**108**	*e*Pn	**Pn**	**20 19 56.2**	**+2.1**
	21nm,1.3s						
NVAR	**Mina Array Bea**	**14.25**	**141**	Pn	**Pn**	**20 19 53.9**	**-0.6**
	baz=317,slow=13,SNR=11						
RRI2	**Red Ridge**	**14.26**	**112**	*e*Pn	**Pn**	**20 19 54.2**	**-0.3**
	17nm,1.4s						
MOOW	**Moose Ponds**	**14.38**	**109**	*e*Pn	**Pn**	**20 19 58.2**	**+2.0**
	19nm,0.9s						
TPAW	**Teton Pass**	**14.39**	**111**	*e*Pn	**Pn**	**20 19 59.4**	**+3.0**
	32nm,1.0s						
REDW	**Red Top Meadow**	**14.53**	**111**	*e*Pn	**Pn**	**20 20 01.0**	**+2.8**
	31nm,1.3s						
REDW				*e*P		20 20 08.0	
LOHW	**Long Hollow**	**14.54**	**110**	*e*Pn	**Pn**	**20 20 00.5**	**+2.2**
	22nm,1.2s						
RLMT	**Red Lodge**	**14.59**	**103**	*e*Pn	**Pn**	**20 20 00.5**	**+1.4**
	7.8nm,1.4s						
AHID	**Auburn Hatcher**	**14.73**	**113**	Pn	**Pn**	**20 20 03.6**	**+2.7**
YKA	**Yellowknife Ar**	**14.81**	**28**	Pn	**Pn**	**20 20 00.9**	**-1.1**
	0.1nm,0.3s,baz=217,slow=12,SNR=2.9						
YKA				LR	LR	20 25 18.6	
	comp=Z,20nm,21.4s,baz=110,slow=35						
BGU	**Big Grassy Mou**	**14.82**	**122**	*e*Pn	**Pn**	**20 20 04.0**	**+1.7**
	5.9nm,1.0s						
DAWY	**Dawson**	**14.86**	**343**	*e*Pn	**Pn**	**20 20 00.7**	**-1.9**
SPUT	**South Promonto**	**14.88**	**120**	*e*Pn	**Pn**	**20 20 02.3**	**-0.7**
MENT	**Mentasta**	**14.90**	**334**	*e*Pn	**Pn**	**20 20 05.2**	**+1.9**
HWUT	**Hardware Ranch**	**15.18**	**118**	*e*Pn	**Pn**	**20 20 06.5**	**-0.5**
	8.1nm,1.3s						
KDAK	**Kodiak Island**	**15.45**	**308**	*e*Pn	**Pn**	**20 20 10.8**	**+0.4**
DUG	**Dugway**	**15.46**	**124**	*e*Pn	**Pn**	**20 20 10.7**	**+0.1**
	13nm,1.2s						
SLKM	**Skilak Lake**	**15.55**	**319**	Pn	**Pn**	**20 20 12.7**	**+0.9**
SML	**Sawmill**	**15.58**	**325**	*e*Pn	**Pn**	**20 20 10.8**	**-1.3**
	3.1nm,1.3s						
PDAR	**Pinedale Array**	**15.64**	**111**	Pn	**Pn**	**20 20 14.5**	**+1.4**
	0.1nm,0.3s,baz=317,slow=11,SNR=31						
PDAR				LR	LR	20 26 24.7	
	comp=Z,234nm,21.4s,baz=348,slow=38						
EGAK	**Eagle**	**15.84**	**342**	*e*Pn	**Pn**	**20 20 17.4**	**+1.9**
	7.5nm,1.2s						
LAO	**LASA Array**	**15.88**	**94**	*e*Pn	**Pn**	**20 20 17.1**	**+1.0**
	12nm,1.0s						
DAU	**Daniels Canyon**	**16.15**	**120**	*e*Pn	**Pn**	**20 20 20.6**	**+1.0**
	22nm,1.6s						
ISA	**Isabella**	**16.62**	**147**	*e*Pn	**Pn**	**20 20 26.4**	**+0.7**
	14nm,1.4s						
MSU	**Marysale**	**17.03**	**127**	*e*Pn	**Pn**	**20 20 30.2**	**-0.5**
	9.9nm,1.4s						
CCUT	**Cedar City**	**17.18**	**131**	*e*Pn	**Pn**	**20 20 31.9**	**-0.8**
	4.0nm,1.1s						
ILAR	**Eielson Array**	**17.22**	**335**	P	**Pn**	**20 20 33.1**	**+0.1**
	0.0nm,0.3s,baz=146,slow=9.7,SNR=3.5						
ILAR				LR	LR	20 26 42.3	
	comp=Z,180nm,18.2s,baz=137,slow=35						
FFC	**Flin Flon**	**17.37**	**64**	*e*Pn	**Pn**	**20 20 37.2**	**+2.3**
	24nm,1s						
SRU	**San Rafael**	**17.46**	**122**	*e*Pn	**Pn**	**20 20 37.6**	**+1.4**
	16nm,1.2s						
GSC	**Goldstone**	**17.56**	**143**	*e*Pn	**Pn**	**20 20 37.6**	**+0.1**
	11nm,1.3s						
BPAW	**Bear Paw Mtn.**	**17.99**	**329**	*e*Pn	**Pn**	**20 20 42.3**	**-0.3**
	6.8nm,1.0s						
INK	**Inuvik**	**18.27**	**355**	*e*Pn	**Pn**	**20 20 48.6**	**+2.6**
	14nm,1.1s						
INK	**Inuvik**	**18.27**	**355**	P	**Pn**	**20 20 46.2**	**+0.3**
	0.4nm,0.3s,baz=168,slow=11,SNR=6.3						
INK				LR	LR	20 28 26.8	
	comp=Z,425nm,18.1s,baz=96,slow=39						
RSSD	**Black Hills**	**18.36**	**99**	*e*Pn	**Pn**	**20 20 48.6**	**+1.3**
	6.4nm,1.0s						
LDFC	**Landfair**	**18.44**	**140**	*e*Pn	**Pn**	**20 20 48.1**	**-0.1**
	5.5nm,0.4s						
PV04	**Paradox Valley**	**18.86**	**121**	*e*P	**Pn**	**20 20 53.1**	**-0.3**
PHWY	**Pilot Hill**	**18.98**	**109**	*e*P	**Pn**	**20 20 54.8**	**+0.1**
	17nm,1.3s						
TTA	**Tatalina**	**19.17**	**322**	*e*P	**Pn**	**20 20 55.9**	**-0.9**
	11nm,1.3s						
PV01	**Paradox Valley**	**19.23**	**121**	*e*P	**Pn**	**20 20 57.4**	**-0.4**
	1μm,1.1s						
SMCO	**Snowmass**	**19.41**	**116**	*e*P	**Pn**	**20 20 59.8**	**-0.2**
	12nm,1.1s						
WUAZ	**Wupatki**	**19.76**	**131**	*e*P	**Pn**	**20 21 03.5**	**-0.6**
ISCO	**Idaho Springs**	**19.81**	**112**	*e*P	**Pn**	**20 21 04.1**	**-0.5**
	5.8nm,1.1s						
MVCO	**Mesa Verde**	**19.94**	**123**	*e*P	**Pn**	**20 21 04.8**	**-1.5**
	34nm,1.4s						
COLD	**Coldfoot**	**19.97**	**336**	*e*P	**Pn**	**20 21 07.2**	**+0.8**
	10nm,1.2s						
SDCO	**Great Sand Dun**	**21.23**	**117**	*e*P	**P**	**20 21 18.4**	**-0.1**
	8.9nm,1.3s,mb3.9						
ULM	**Lac du Bonnet**	**21.48**	**77**	P	**P**	**20 21 21.6**	**+0.5**
	7.3nm,1.2s,mb3.9,baz=288,slow=14,SNR=2.1						
ULM				LR	LR	20 29 51.1	
	comp=Z,341nm,21.4s,MS3.7,baz=242,slow=37						
AGMN	**Agassiz Nation**	**22.00**	**82**	*e*P	**P**	**20 21 27.0**	**+0.4**
	13nm,1.2s,mb4.2						
ANMO	**Albuquerque**	**22.72**	**123**	*e*P	**P**	**20 21 34.2**	**-0.2**
	5.1nm,1.0s,mb3.9						
ANMO	**Albuquerque**	**22.72**	**123**	P	**P**	**20 21 34.3**	**-0.1**
	3.8nm,0.9s,mb3.8,baz=325,slow=8.3,SNR=7.3						
ANMO				LR	LR	20 30 59.7	
	comp=Z,140nm,19.5s,MS3.4,baz=198,slow=38						
ECSD	**EROS Data Cent**	**23.28**	**93**	*e*P	**P**	**20 21 39.5**	**-0.9**
	16nm,1.0s,mb4.4						
EYMN	**Ely**	**24.89**	**80**	*e*P	**P**	**20 21 55.5**	**+0.4**
	7.8nm,0.8s,mb4.3						
AMTX	**Amarillo**	**25.44**	**116**	*e*P	**P**	**20 22 00.2**	**-0.1**
	20nm,1.0s,mb4.6						
WMOK	**Wichita Mounta**	**27.23**	**113**	*e*P	**P**	**20 22 15.6**	**-1.0**
	6.6nm,1.1s,mb4.1						
RES	**Resolute Bay**	**28.48**	**18**	LR	LR	20 33 47.4	
	comp=Z,240nm,20.4s,MS3.8,baz=185,slow=36						
TXAR	**Lajitas Array**	**28.58**	**127**	P	**P**	**20 22 26.3**	**-2.4**
TXAR				LR	LR	20 34 29.9	
TXAR	**Lajitas Array**	**28.58**	**127**	P	**P**	**20 22 26.3**	**-2.4**
	0.6nm,0.8s,mb3.4,baz=305,slow=7.2,SNR=7.8						
TXAR				LR	LR	20 34 29.9	
	comp=Z,144nm,19.4s,MS3.6,baz=5.0,slow=38						
SADO	**Sadowa**	**33.98**	**79**	LR	LR	20 37 41.7	
	comp=Z,459nm,19.6s,MS4.2,baz=188,slow=37						
TKL	**Tuckaleechee C**	**35.97**	**96**	LR	LR	20 38 40.2	
	comp=Z,394nm,18.2s,MS4.2,baz=1.3,slow=37						
SCHQ	**Schefferville**	**37.34**	**58**	LR	LR	20 39 10.9	
	comp=Z,214nm,20.4s,MS3.9,baz=228,slow=36						
CMIG	**Matias Romero**	**43.19**	**127**	LR	LR	20 42 13.7	
	comp=Z,63nm,21.2s,MS3.5,baz=191,slow=36						
CN2	**Changchun**	**65.90**	**310**	*e*P	**P**	**20 27 21.8**	**+3.6**
KSRS	**Korea Array**	**69.31**	**304**	LR	LR	20 58 48.5	
	comp=Z,24nm,18.4s,MS3.5,baz=40,slow=37						
SONM	**Songino Array**	**71.10**	**324**	LR	LR	20 58 20.9	
	comp=Z,83nm,21.9s,MS4.0,baz=51,slow=35						
ZALV	**Zalesovo Beam**	**72.27**	**339**	P	**P**	**20 27 57.5**	**0.0**
	0.2nm,0.4s,mb3.4,baz=42,slow=6.7,SNR=2.7						
HHC	**Hu-ho-hao-te**	**74.69**	**316**	*e*P	**P**	**20 28 11.5**	**-0.5**
HHC				PP	PP	20 30 59.0	+0.6
HHC				S	S	20 37 44.0	-3.2
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
HHC				pmax	pmax		
	comp=Z,36nm,4.0s						
HHC				LR	LR		
	comp=N,55nm,14.3s,MS4.2						
HHC				LR	LR		
	comp=E,58nm,13.1s,MS4.2						
HHC				LR	LR		
	comp=Z,69nm,14.3s,MS4.1						
KURK	**Kurchatov**	**76.63**	**342**	P	**P**	**20 28 22.6**	**-0.3**
	comp=Z,0.4nm,0.7s,mb3.4,baz=27,slow=5.5,SNR=2.4						
NJ2	**Nanjing**	**78.22**	**306**	*e*P	**P**	**20 28 34.0**	**+1.8**
MKAR	**Makanchi Array**	**79.53**	**338**	LR	LR	21 09 36.1	
	comp=Z,38nm,18.1s,MS3.8,baz=355,slow=40						
WMQ	**Urumqi**	**80.88**	**334**	*e*P	**P**	**20 28 47.0**	**+0.6**
LZH	**Lanzhou**	**82.00**	**319**	*e*P	**P**	**20 28 51.5**	**-1.0**
LZH				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
LPAZ	**La Paz**	**85.33**	**122**	LR	LR	21 09 04.1	
	comp=Z,56nm,21.0s,MS3.9,baz=124,slow=37						
CD2	**Chengdu**	**86.45**	**316**	P	**P**	**20 29 14.0**	**-1.2**
CD2				pmax	pmax		
	comp=Z,110nm,5.0s						
CMAR	**Chiang Mai Arr**	**99.37**	**314**	LR	LR	21 18 44.0	
	comp=Z,23nm,20.2s,MS3.7,baz=0.0,slow=38						

IDC ***29*** *20:26:05.8±1.0,55.04N×165.66E,h0km,mb3.6/6, mb1 3.9/7,mb1mx3.6/26,mbtmp3.6/7,ML3.7/1,Error ellipse: s-maj=46.4km s-min=19.2km az=158.0*

ISCJB ***29*** *20:26:07.3±0.8,54.98N±0.05×165.66E±0.05,h24km±6km, mb3.7/9,Error ellipse: s-maj=8.6km s-min=4.7km az=169.7*

KRSC ***29*** *20:26:07.3±0.2,54.98N×165.72E,h26km±16km,ML3.9*

MOS ***29*** *20:26:08.7±0.7,54.99N×165.69E,h33km,mb4.1/1,Error ellipse: s-maj=59.7km s-min=22.4km az=137.9*

NEIC ***29*** *20:26:10.5±0.5,54.98N×165.70E,h35km,mb4.0/3,Error ellipse: s-maj=21.1km s-min=8.7km az=155.0*

ISC 29 20:26:08.5±0.8, 55.00N±0.05×165.67E±0.06, h19km±5km, n30, σ1°08/42, mb3.7/9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.27**	**41**	*i* P	**Pg**	**20 26 13.9**	**-0.5**
BKI				*i* S	**Sg**	**20 26 18.1**	**-0.4**
KBTR	**Krutoberegovo**	**2.02**	**308**	*e*P	**Pn**	**20 26 39.6**	**-1.9**
KBTR				*i* S	**Sn**	**20 27 02.5**	**-3.7**
MKZ	**Mys Kozlova**	**2.33**	**260**	*e

0.4nm,0.7s,baz=211,slow=6.4,SNR=4.5

*LDG **29** 21:55:25.5±0.3, 43°.41N×84°.40E, h10km, Mb4.2/7, Ms2.6/1, Error ellipse: s-maj=13.1km s-min=6.7km az=135.0*
*IDC **29** 21:55:25.9±0.9, 43°.64N×84°.73E, h0km, mb3.6/8, mb1 3.7/15, mb1mx3.6/31, mbtmp3.6/15, ML3.2/7, MS2.5/1, Ms1 2.5/1, ms1mx2.1/33, Error ellipse: s-maj=19.1km s-min=10.7km az=56.0*
*ISCJB **29** 21:55:26.3±1.3, 43°.86N±0°.05×84°.69E±0°.07, h9km±7km, mb3.9/15, Error ellipse: s-maj=8.5km s-min=7.6km az=39.0*
*BJI **29** 21:55:29.1, 43°.53N×84°.64E, h20km, mB4.6/1, mb4.2/3, ML3.6/9, Ms3.4/1, Ms7 3.3/1*
*NEIC **29** 21:55:30.3±1.8, 43°.73N×84°.83E, h30km±12km, mb4.1/6, Error ellipse: s-maj=8.9km s-min=6.9km az=186.0*
*NNC **29** 21:55:30.3±6.7, 43°.76N×84°.63E, h10km±27km, mb3.5, mpv4.5, Error ellipse: s-maj=46.2km s-min=19.6km az=124.0*

ISC 29 21:55:28.1±1.3, **43°.79N**±0°.05×**84°.70E**±0°.06, **h9**km±7km, **n58**, σ0s**99**/68, **mb3.9**/15, **7C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**2.17**	**88**	Pn	**Pn**	**21 56 08.0**	**+3.7**
WMQ				Sg	**Sg**	**21 56 33.5**	**-4.3**
WMQ				smax			
	comp=N,250nm,0.6s						
WMQ				smax			
	comp=E,290nm,0.6s						
MK31	**Makanchi Array**	**3.45**	**331**	⇓Pn	**Pn**	**21 56 25.1**	**+3.1**
	comp=E,0.7nm,0.2s,baz=146,slow=14,SNR=420						
MK31				⇑Pg	**Pg**	**21 56 33.6**	**-0.6**
	comp=E,9.8nm,0.4s,baz=143,slow=15,SNR=43						
MK31				⇓Lg		21 57 19.8	
	comp=E,39nm,0.6s,baz=143,slow=29,SNR=8.6						
MK31	**Makanchi Array**	**3.45**	**331**	*e*Pn	**Pn**	**21 56 24.5**	**+2.5**
MK31				*e*Pg	**Pg**	**21 56 33.2**	**-1.0**
MK31				*e*Sg	**Sg**	**21 57 19.8**	**+0.8**
MKAR	**Makanchi Array**	**3.45**	**331**	Pn	**Pn**	**21 56 25.1**	**+3.2**
	comp=E,1.5nm,0.3s,baz=149,slow=17,SNR=46						
MKAR				Pg	**Pg**	**21 56 33.1**	**-1.1**
	comp=E,11nm,0.3s,baz=146,slow=18,SNR=117						
MKAR				Lg		21 57 18.4	
	comp=E,38nm,0.3s,baz=151,slow=31,SNR=11						
TKM2	**Tokmak 2**	**6.69**	**266**	⇑Pn	**Pn**	**21 57 09.4**	**+3.0**
	comp=E,3.6nm,0.5s						
TKM2				⇓Lg		21 58 59.6	
	comp=E,25nm,0.8s						
TKM2	**Tokmak 2**	**6.69**	**266**	*e*Pn	**Pn**	**21 57 09.6**	**+3.1**
	comp=E,6.2nm,0.5s						
AAK	**Ala-Archa**	**7.54**	**265**	Pn	**Pn**	**21 57 19.4**	**+1.2**
AAK				Lg		21 59 24.6	
AAK				LR	LR	22 00 16.7	
AAK	**Ala-Archa**	**7.54**	**265**	Pn	**Pn**	**21 57 19.4**	**+1.2**
	comp=E,0.4nm,0.3s,baz=58,slow=9.5,SNR=2.3						
AAK				Lg		21 59 24.6	
	comp=E,0.6nm,0.3s,baz=172,slow=14,SNR=3.1						
AAK				LR	LR	22 00 16.7	
	comp=E,36nm,19.0s,baz=198,slow=38						
KURBB	**Kurchatov Array**	**8.02**	**331**	⇓Pn	**Pn**	**21 57 26.0**	**+1.3**
	comp=E,0.3nm,0.3s						
KURBB				⇑Lg		21 59 43.8	
	comp=E,20nm,0.8s						
KURK	**Kurchatov**	**8.07**	**331**	⇑Pn	**Pn**	**21 57 26.6**	**+1.3**
	comp=E,74μm,0.1s						
KURK				⇑Lg		21 59 45.7	
	comp=E,44nm,0.7s						
KURK	**Kurchatov**	**8.07**	**331**	*e*Pn	**Pn**	**21 57 26.5**	**+1.2**
KURK				Sn	**Sn**	**21 58 55.5**	**-1.1**
KURK				Lg		21 59 42.9	
KURK	**Kurchatov**	**8.07**	**331**	Pn	**Pn**	**21 57 26.1**	**+0.8**
	comp=E,0.2nm,0.3s,baz=146,slow=13,SNR=8.7						
KURK				Sn	**Sn**	**21 58 55.5**	**-1.1**
	comp=E,0.3nm,0.3s,baz=150,slow=16,SNR=3.5						
KURK				Lg		21 59 42.9	
	comp=E,0.7nm,0.3s,baz=146,slow=32,SNR=7.1						
ZALV	**Zalesovo Beam**	**10.17**	**0**	Pn	**Pn**	**21 57 54.4**	**+0.3**
	comp=E,0.3nm,0.3s,baz=180,slow=13,SNR=3.9						
ZALV				Sn	**Sn**	**21 59 46.9**	**-1.2**
	comp=E,4.4nm,0.3s,baz=170,slow=25,SNR=27						
ZALV				Lg		22 00 53.9	
	comp=E,0.4nm,0.3s,baz=185,slow=30,SNR=5.2						
KK31	**Karatay Array**	**10.34**	**271**	⇓Pn	**Pn**	**21 57 56.3**	**-0.3**
	comp=E,0.4nm,0.4s,baz=74,slow=14,SNR=10						
KK31				⇑Lg		22 00 55.5	
	comp=E,3.2nm,0.6s,baz=68,slow=28,SNR=3.6						
BVAR	**Borovoye Array**	**13.23**	**319**	Pn	**Pn**	**21 58 35.9**	**-0.1**
	comp=E,0.1nm,0.3s,baz=131,slow=11,SNR=3.4						
BVAR				Sn	**Sn**	**22 01 00.0**	**-3.1**
	comp=E,0.2nm,0.3s,baz=136,slow=26,SNR=4.1						
BVAR				Lg		22 02 30.3	
	comp=E,0.2nm,0.3s,baz=148,slow=26,SNR=3.8						
SONM	**Songino Array**	**15.65**	**67**	Pn	**Pn**	**21 59 07.5**	**-1.2**
	comp=E,0.1nm,0.3s,baz=263,slow=10,SNR=2.4						
SONM				Sn	**Sn**	**22 02 04.5**	**+2.5**
	comp=E,0.2nm,0.3s,baz=251,slow=26,SNR=3.7						
LZH	**Lanzhou**	**16.55**	**111**	*e*P	**P**	**21 59 20.5**	**+0.2**
LZH				pP	pP	21 59 23.0	-2.6
LZH				pmax	pmax		
	comp=Z,14nm,1.2s						
AB31	**Akbulak array**	**17.85**	**297**	⇑P	**Pn**	**21 59 36.0**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=93,slow=14,SNR=8.0						
ABKAR	**Akbulak array**	**17.85**	**297**	*e*P	**Pn**	**21 59 35.8**	**-0.7**
	comp=Z,1.1nm,0.6s						
AKTK	**Aktyubinsk**	**19.27**	**300**	P	**Pn**	**21 59 52.1**	**-1.7**
AKTO	**Aktyubinsk**	**19.27**	**300**	P	**Pn**	**21 59 52.1**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=94,slow=14,SNR=2.2						
ARU	**Arti**	**20.84**	**317**	*e*P	**P**	**22 00 10.9**	**+1.1**
	comp=Z,2.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**27.96**	**150**	P	**P**	**22 01 16.9**	**-2.0**
	comp=Z,0.1nm,0.3s,mb2.9,baz=339,slow=9.7,SNR=2.4						
BRTR	**Keskin Array B**	**37.81**	**282**	P	**P**	**22 02 45.5**	**+0.9**
BRTR	**Keskin Array B**	**37.81**	**282**	P	**P**	**22 02 45.5**	**+0.9**
	comp=Z,0.6nm,0.7s,mb3.4,baz=105,slow=9.2,SNR=4.7						
FINES	**FINESS Array B**	**38.19**	**318**	P	**P**	**22 02 48.1**	**+0.5**
	comp=Z,1.2nm,0.7s,mb3.8,baz=79,slow=7.4,SNR=3.9						
ARCES	**ARCESS Array B**	**39.11**	**331**	P	**P**	**22 02 55.5**	**+0.4**
	comp=Z,1.6nm,0.8s,mb3.8,baz=93,slow=6.6,SNR=4.4						
BUR08	**Bucovina Ar. S**	**40.84**	**297**	*e*P	**P**	**22 03 10.1**	**+0.3**
KWP	**Kalwaria Pacla**	**41.84**	**301**	*e*P	**P**	**22 03 18.8**	**+0.8**
	comp=Z,5.0nm,0.5s,mb4.4						
NOA	**NORSAR Array B**	**45.37**	**319**	P	**P**	**22 03 45.5**	**-0.8**
	comp=Z,0.7nm,0.6s,mb3.7,baz=77,slow=7.9,SNR=5.1						
CLL	**Collm**	**47.19**	**306**	*i* P	**P**	**22 04 01.1**	**+0.4**
	comp=Z,3.0nm,0.7s,mb4.3						
BAIF	**Baives**	**52.82**	**307**	*e*P	**P**	**22 04 43.8**	**+0.3**
	comp=Z,3.6nm,0.7s,mb4.1						
BAIF	**Baives**	**52.82**	**307**	*e*P	**P**	**22 04 43.8**	**+0.3**
	comp=Z,1.8nm,0.7s,mb4.1						
PGF	**Pioggiola**	**53.36**	**297**	*e*P	**P**	**22 04 47.6**	**0.0**
LPG	**La Plagne**	**53.38**	**301**	*e*P	**P**	**22 04 48.5**	**+0.8**
	comp=Z,8.3nm,0.6s,mb4.5						
LPG	**La Plagne**	**53.38**	**301**	*e*P	**P**	**22 04 48.5**	**+0.8**
	comp=Z,4.2nm,0.6s,mb4.5						
LPL	**La Plagne**	**53.38**	**301**	*e*P	**P**	**22 04 48.5**	**+0.8**
	comp=Z,11nm,0.6s,mb4.7						
LPL	**La Plagne**	**53.38**	**301**	*e*P	**P**	**22 04 48.5**	**+0.8**
	comp=Z,5.4nm,0.6s,mb4.7						
SBF	**Sospel**	**53.73**	**299**	*e*P	**P**	**22 04 50.3**	**0.0**
ORIF	**Oris-en-Rattie**	**54.20**	**301**	*e*P	**P**	**22 04 53.4**	**-0.3**
	comp=Z,3.7nm,0.7s,mb4.1						
ORIF	**Oris-en-Rattie**	**54.20**	**301**	*e*P	**P**	**22 04 53.4**	**-0.3**
	comp=Z,1.9nm,0.7s,mb4.1						
LOR	**Lormes**	**54.31**	**304**	*e*P	**P**	**22 04 54.7**	**+0.3**
FRF	**La Foret Royal**	**54.37**	**299**	*e*P	**P**	**22 04 54.6**	**-0.4**
LMR	**La Mourre**	**54.57**	**299**	*e*P	**P**	**22 04 56.0**	**-0.4**
SMF	**Signal de Mont**	**54.61**	**303**	*e*P	**P**	**22 04 57.0**	**+0.3**
VIVF	**Saint-Julien-l**	**54.98**	**301**	*e*P	**P**	**22 04 59.1**	**-0.2**
TCF	**Toulx Ste Croi**	**55.77**	**304**	*e*P	**P**	**22 05 05.0**	**-0.1**
LDF	**La Druitiere**	**56.01**	**307**	*e*P	**P**	**22 05 06.1**	**-0.6**
	comp=Z,1.6nm,0.5s,mb4.0						
LDF	**La Druitiere**	**56.01**	**307**	*e*P	**P**	**22 05 06.1**	**-0.6**
	comp=Z,0.8nm,0.5s,mb4.0						
GRR	**Gorron**	**56.53**	**307**	*e*P	**P**	**22 05 10.6**	**+0.1**
MTLF	**Montolieu**	**57.27**	**301**	*e*P	**P**	**22 05 15.9**	**+0.2**
ROSF	**Rostrenen**	**57.95**	**308**	*e*P	**P**	**22 05 20.3**	**-0.1**
QUIF	**Quistinic**	**58.10**	**308**	*e*P	**P**	**22 05 21.3**	**-0.3**
EPF	**Esparros**	**58.60**	**301**	*e*P	**P**	**22 05 24.9**	**-0.2**
ETSF	**Etsaut**	**59.22**	**302**	*e*P	**P**	**22 05 29.7**	**+0.3**
ESDC	**Sonseca Array**	**63.16**	**300**	P	**P**	**22 05 55.9**	**-0.3**
	comp=Z,0.3nm,0.4s,mb3.8,baz=50,slow=6.9,SNR=6.1						
ILAR	**Eielson Array**	**64.52**	**22**	P	**P**	**22 06 04.8**	**0.0**
	comp=Z,0.4nm,0.8s,mb3.5,baz=297,slow=4.7,SNR=4.9						
WRA	**Warramunga Arr**	**78.03**	**133**	P	**P**	**22 07 25.6**	**-1.3**
	comp=Z,0.3nm,0.6s,mb3.4,baz=333,slow=5.1,SNR=8.1						

*DDA **29** 22:02:44.7, 39°.38N×33°.11E, h5km±1km, Md2.9*
*ISCJB **29** 22:02:45.8±0.3, 39°.40N±0°.02×33°.11E±0°.03, h10km, Error ellipse: s-maj=3.1km s-min=3.0km az=145.9*
*ISK **29** 22:02:45.2, 39°.43N×33°.13E, h4km, MD3.2*
*CSEM **29** 22:02:45.9±0.2, 39°.39N×33°.11E, h2km, MD2.9, Error ellipse: s-maj=4.5km s-min=4.3km az=167.0*

ISC 29 22:02:45.9±0.5, **39°.38N**±0°.03×**33°.10E**±0°.03, **h4**km±5km, **n53**, σ1s**09**/70, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBAL	**Bala**	**0.16**	**6**	*i* P	**Pg**	**22 02 48.9**	**-0.2**
BBAL				*i* S	**Sg**	**22 02 51.7**	**+0.4**
BBAL	**Bala**	**0.16**	**6**	*i* P	**Pg**	**22 02 48.9**	**-0.2**
BBAL				*i* S	**Sg**	**22 02 51.7**	**+0.4**
KAMT	**Kaman**	**0.47**	**91**	PG	**Pg**	**22 02 54.7**	**-0.3**
KAMT				*e*SG	**Sg**	**22 03 01.3**	**+0.2**
KAMT	**Kaman**	**0.47**	**91**	*i* Pg	**Pg**	**22 02 54.7**	**-0.3**
KAMT				*e*Sg	**Sg**	**22 03 01.3**	**+0.1**
LOD	**Lodumlu**	**0.57**	**333**	*e*Pg	**Pg**	**22 02 55.3**	**-1.6**
LOD				*e*SG	**Sg**	**22 03 04.0**	**-0.4**
LOD	**Lodumlu**	**0.57**	**333**	*e*Pg	**Pg**	**22 02 55.3**	**-1.6**
LOD				*e*Sg	**Sg**	**22 03 04.0**	**-0.3**
DAD	**Ankara**	**0.59**	**333**	*i* P	x	22 02 42.8	
DAD				*i* S	**Sg**	**22 03 05.8**	**+0.8**
CDAG	**Cicekdag**	**1.01**	**76**	*i* P	**Pg**	**22 03 04.6**	**-0.7**
CDAG				*i* S	**Sg**	**22 03 18.9**	**+0.5**
CDAG	**Cicekdag**	**1.01**	**76**	*i* P	**Pg**	**22 03 04.6**	**-0.7**
CDAG				*i* S	**Sg**	**22 03 18.9**	**+0.5**
KIZT	**Kizilcal**	**1.07**	**243**	*e*PN	**Pg**	**22 03 07.1**	**+0.6**
KIZT	**Kizilcal**	**1.07**	**243**	*e*Pn	**Pg**	**22 03 07.1**	**+0.6**
ELDT	**Eldivan**	**1.14**	**13**	*i* P	**Pg**	**22 03 08.0**	**+0.3**
ELDT				*i* S	**Sg**	**22 03 24.5**	**+2.1**
ELDT	**Eldivan**	**1.14**	**13**	*i* P	**Pg**	**22 03 08.0**	**+0.3**
ELDT				*i* S	**Sg**	**22 03 24.5**	**+2.0**
SULT	**Sultanhani-AKS**	**1.22**	**165**	*e*PN	**Pn**	**22 03 09.1**	**-0.7**
SULT	**Sultanhani-AKS**	**1.22**	**165**	*e*Pn	**Pn**	**22 03 09.1**	**-0.7**
SVRH	**Sivrihisar-ESK**	**1.23**	**274**	*e*PN	**Pn**	**22 03 08.9**	**-0.9**
SVRH	**Sivrihisar-ESK**	**1.23**	**274**	*e*Pn	**Pn**	**22 03 08.9**	**-1.0**
CANT	**Cankiri**	**1.29**	**18**	*e*PN	**Pn**	**22 03 09.4**	**-1.3**
CORM	**Corum**	**1.42**	**55**	*e*PN	**Pn**	**22 03 11.8**	**-0.8**
CORM	**Corum**	**1.42**	**55**	*e*Pn	**Pn**	**22 03 11.8**	**-0.8**
AVNT	**Avonos**	**1.49**	**113**	*i* P	**Pn**	**22 03 13.9**	**+0.4**
AVNT				*i* S	**Sg**	**22 03 35.6**	**+1.8**
AVNT	**Avonos**	**1.49**	**113**	*i* P	**Pn**	**22 03 13.9**	**+0.4**
AVNT				*i* S	**Sg**	**22 03 35.6**	**+1.8**
KONT	**Konya--Tatoy**	**1.54**	**202**	*e*PN	**Pn**	**22 03 14.5**	**+0.2**
KONT	**Konya--Tatoy**	**1.54**	**202**	*e*Pn	**Pn**	**22 03 14.5**	**+0.2**
ILGA	**Ilgaz**	**1.73**	**16**	*i* P	**Pg**	**22 03 17.7**	**-1.5**
ILGA				*i* S	**Sg**	**22 03 42.6**	**+0.9**
ILGA	**Ilgaz**	**1.73**	**16**	*i* P	**Pg**	**22 03 17.7**	**-1.5**
ILGA				*i* S	**Sg**	**22 03 42.6**	**+0.9**
YOZ	**Yozgat**	**1.73**	**81**	*e*PN	**Pn**	**22 03 16.9**	**+0.1**
YOZ	**Yozgat**	**1.73**	**81**	*e*Pn	**Pn**	**22 03 16.9**	**0.0**
CTKT	**Corum**	**1.79**	**46**	*i* P	**Pn**	**22 03 18.0**	**+0.3**
CTKT				*i* S	**Sg**	**22 03 44.3**	**+0.7**
CTKT	**Corum**	**1.79**	**46**	*i* P	**Pn**	**22 03 18.0**	**+0.3**
TOS	**Tosya**	**1.80**	**23**	*e*PN	**Pn**	**22 03 17.7**	**-0.1**
TOS	**Tosya**	**1.80**	**23**	*e*Pn	**Pn**	**22 03 17.7**	**0.0**
BOLV	**Bolvadin**	**1.80**	**249**	*i* P	**Pn**	**22 03 18.1**	**+0.3**
BOLV				*i* S	**Sg**	**22 03 45.5**	**+1.8**
BOLV	**Bolvadin**	**1.80**	**249**	*i* P	**Pn**	**22 03 18.1**	**+0.3**
MDU	**Mudurnu**	**1.81**	**307**	*e*PN	**Pn**	**22 03 18.5**	**+0.6**
MDU	**Mudurnu**	**1.81**	**307**	*e*Pn	**Pn**	**22 03 18.5**	**+0.6**
SAFT	**Safranbolu**	**1.89**	**350**	*e*PN	**Pn**	**22 03 19.2**	**+0.3**
SAFT	**Safranbolu**	**1.89**	**350**	*e*Pn	**Pn**	**22 03 19.2**	**+0.3**
BALT	**Daday**	**2.16**	**6**	*i* P	**Pg**	**22 03 24.8**	**-2.6**
BALT				*i* S	**Sg**	**22 03 54.9**	**-0.6**
BALT	**Daday**	**2.16**	**6**	*i* P	**Pg**	**22 03 24.8**	**-2.6**
GULT	**Gulveren**	**2.25**	**299**	*e*PN	**Pn**	**22 03 24.9**	**+1.0**
GULT	**Gulveren**	**2.25**	**299**	*e*Pn	**Pn**	**22 03 24.9**	**+0.9**
ALT	**Altintas**	**2.35**	**263**	*e*PN	**Pn**	**22 03 26.7**	**+1.4**
ALT	**Altintas**	**2.35**	**263**	*e*Pn	**Pn**	**22 03 26.7**	**+1.4**
HDMB	**Hadim**	**2.46**	**192**	*e*PN	**Pb**	**22 03 28.6**	**-2.1**
HDMB	**Hadim**	**2.46**	**192**	*e*Pn	**Pb**	**22 03 28.6**	**-2.1**
SUTC	**Sutluce-Ispart**	**2.52**	**222**	*e*PN	**Pb**	**22 03 29.5**	**-2.2**
SUTC	**Sutluce-Ispart**	**2.52**	**222**	*e*Pn	**Pb**	**22 03 29.5**	**-2.2**
KARA	**Karaisali**	**2.61**	**143**	*e*PN	**Pn**	**22 03 30.2**	**+1.2**
KARA	**Karaisali**	**2.61**	**143**	*e*Pn	**Pn**	**22 03 30.2**	**+1.2**
SVSK	**Karacayir**	**3.06**	**79**	*e*PN	**Pn**	**22 03 35.6**	**+0.6**
SVSK	**Karacayir**	**3.06**	**79**	*e*Pn	**Pn**	**22 03 35.6**	**+0.6**
ERBA	**Erbaa**	**3.09**	**64**	*i* S	**Pg**	**22 03 42.5**	**-2.6**

*ISK **29** 22:05:05.2, 37°.42N×36°.33E, h5km, MD3.1*
*DDA **29** 22:05:05.6, 37°.36N×36°.36E, h5km±1km, Md3.0*
*ISCJB **29** 22:05:06.6±0.4, 37°.39N±0°.03×36°.31E±0°.03, h10km, Error ellipse: s-maj=4.6km s-min=3.6km az=164.3*
*CSEM **29** 22:05:06.5±0.2, 37°.39N×36°.33E, h5km, MD3.0, Error ellipse: s-maj=6.4km s-min=4.0km az=163.0*

ISC 29 22:05:06.7±0.5, **37°.37N**±0°.03×**36°.33E**±0°.03, **h2**km±6km, **n30**, σ1s**04**/44, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	**0.21**	**3**	*i* P	**Pg**	**22 05 10.9**	**+0.2**
ANDN				*i* S	**Sg**	**22 05 14.8**	**+1.4**
ANDN	**Andirin**	**0.21**	**3**	*i* P	**Pg**	**22 05 10.9**	**+0.2**
ANDN				*i* S	**Sg**	**22 05 14.8**	**+1.3**
KOZT	**Kozan**	**0.42**	**285**	*e*PG	**Pg**	**22 05 13.5**	**-1.2**
KOZT				*e*SG	**Sg**	**22 05 19.6**	**-0.5**
KOZT	**Kozan**	**0.42**	**285**	*e*Pg	**Pg**	**22 05 13.5**	**-1.2**
KOZT				*e*Sg	**Sg**	**22 05 19.6**	**-0.5**
KMRS	**Kahramanmaras**	**0.47**	**73**	*e*PG	**Pg**	**22 05 14.6**	**-1.1**
KMRS				*e*SG	**Sg**	**22 05 20.9**	**-1.0**
KMRS	**Kahramanmaras**	**0.47**	**73**	*e*Pg	**Pg**	**22 05 14.6**	**-1.1**
KMRS				*e*Sg	**Sg**	**22 05 20.9**	**-1.0**
CEYT	**Ceyhan**	**0.59**	**232**	*e*PG	**Pg**	**22 05 18.1**	**+0.2**
CEYT	**Ceyhan**	**0.59**	**232**	*e*Pg	**Pg**	**22 05 18.1**	**+0.2**
KUZU	**Kuzuini**	**0.84**	**135**	*i* P	**Pg**	**22 05 22.7**	**-0.1**
KUZU				*i* S	**Sg**	**22 05 35.6**	**+1.9**
KUZU	**Kuzuini**	**0.84**	**135**	*i* P	**Pg**	**22 05 22.7**	**-0.1**
KUZU				*i* S	**Sg**	**22 05 35.6**	**+1.9**
GZT	**Gaziantep**	**0.98**	**91**	*i* P	**Pg**	**22 05 24.3**	**-1.2**
GZT				*i* S	**Sg**	**22 05 39.6**	**+1.4**
KARA	**Karaisali**	**1.02**	**264**	*e*PG	**Pg**	**22 05 24.9**	**-1.4**
KARA	**Karaisali**	**1.02**	**264**	*e*Pg	**Pg**	**22 05 24.9**	**-1.4**
GULE	**Gulek**	**1.24**	**266**	*i* P	**Pg**	**22 05 31.4**	**+0.9**
GULE				*i* S	**Sg**	**22 05 49.1**	**+2.6**
GULE	**Gulek**	**1.24**	**266**	*i* P	**Pg**	**22 05 31.4**	**+0.9**
GULE				*i* S	**Sg**	**22 05 49.1**	**+2.5**
HTY	**Hatay**	**1.26**	**187**	*e*PN	**Pn**	**22 05 31.0**	**-0.2**
HTY	**Hatay**	**1.26**	**187**	*e*Pn	**Pn**	**22 05 31.0**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.34**	**12**	*e*PG	**Pg**	**22 05 25.5**	**-6.8**
YAYL	**Yayladag**	**1.35**	**188**	*i* P	**Pg**	**22 05 32.5**	**0.0**
YAYL				*i* S	**Sg**	**22 05 49.6**	**-0.3**
YAYL	**Yayladag**	**1.35**	**188**	*i* P	**Pg**	**22 05 32.5**	**0.0**
YAYL				*i* S	**Sg**	**22 05 49.6**	**-0.3**
AKCD	**Akcadag**	**1.56**	**53**	*i* P	**Pn**	**22 05 36.7**	**+1.3**
AKCD				*i* S	**Sn**	**22 05 57.4**	**+1.1**
AKCD	**Akcadag**	**1.56**	**53**	*i* P	**Pn**	**22 05 36.7**	**+1.3**
MALT	**Malatya**	**1.91**	**60**	*e*PN	**Pn**	**22 05 39.7**	**-0.5**
MALT	**Malatya**	**1.91**	**60**	*e*Pn	**Pn**	**22 05 39.7**	**-0.5**
MYA	**Malatya**	**1.91**	**59**	*e*PN	**Pn**	**22 05 39.6**	**-0.7**
MYA	**Malatya**	**1.91**	**59**	*e*Pn	**Pn**	**22 05 39.6**	**-0.6**
SVRC	**Sivrice-ELAZID**	**2.56**	**66**	*e*PN	**Pn**	**22 05 48.5**	**-0.7**
SVRC	**Sivrice-ELAZID**	**2.56**	**66**	*e*Pn	**Pn**	**22 05 48.5**	**-0.7**
PTK	**Pertek**	**2.85**	**57**	*e*PN	**Pn**	**22 05 52.2**	**-1.0**
PTK	**Pertek**	**2.85**	**57**	*e*Pn	**Pn**	**22 05 52.2**	**-1.0**

*ISCJB **29** 22:18:47.9±0.7, 51°.47N±0°.03×16°.10E±0°.04, h0km, Error ellipse: s-maj=4.9km s-min=2.9km az=19.5*
*IPEC **29** 22:18:48.4±0.3, 51°.56N×16°.20E, h0km, ML2.0/3, Error ellipse: s-maj=1.9km s-min=1.5km az=41.0*
*CSEM **29** 22:18:49.1±0.2, 51°.49N×16°.09E, h2km, ML3.0/7, Error ellipse: s-maj=4.1km s-min=3.2km az=16.0*
*PRU **29** 22:18:50.4, 51°.46N×16°.10E, h0km*
*WAR **29** 22:18:50.5, 51°.49N×16°.09E, ML2.4, Mining Induced*

ISC 29 22:18:49.0±0.7, **51°.50N**±0°.03×**16°.12E**±0°.04, **h0**km, **n28**, σ0s**71**/54, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.67**	**170**	*e*Pg	**Pg**	**22 19 02.5**	**+0.7**
KSP				*e*Sg	**Sg**	**22 19 11.2**	**+0.8**
KSP	**Ksiaz**	**0.67**	**170**	*e*Pg	**Pg**	**22 19 02.3**	**+0.5**
	baz=356						
KSP				*e*Sg	**Sg**	**22 19 11.1**	**+0.7**
	baz=356						
UPC	**Upice**	**0.99**	**184**	*e*PG	**Pg**	**22 19 08.5**	**+0.4**
UPC	**Upice**	**0.99**	**184**	Pg	**Pg**	**22 19 08.5**	**+0.4**
DPC	**Dobruska-Polom**	**1.16**	**173**	*e*PG	**Pg**	**22 19 11.3**	**+0.1**
DPC				*e*SG	**Sg**	**22 19 25.8**	**-0.4**
	comp=Z,17nm,0.3s						
DPC	**Dobruska-Polom**	**1.16**	**173**	*e*Pg	**Pg**	**22 19 11.2**	**0.0**
	baz=356						
DPC				Sg	**Sg**	**22 19 25.8**	**-0.4**
	comp=Z,17nm,0.3s						
PVCC	**Panska Ves**	**1.38**	**226**	*e*PG	**Pg**	**22 19 15.7**	**+0.3**
PVCC				*e*SG	**Sg**	**22 19 34.3**	**+1.0**
	comp=Z,79nm,0.2s						
PVCC	**Panska Ves**	**1.38**	**226**	*e*Pn	**Pn**	**22 19 15.9**	**+0.4**
	baz=44						
PVCC				*e*Sg	**Sg**	**22 19 34.2**	**+0.9**
	baz=44						
BRG	**Berggiesshubel**	**1.50**	**246**	PG	**Pg**	**22 19 17.5**	**-0.3**
BRG				SG	**Sg**	**22 19 37.9**	**+0.6**
	comp=Z,24nm,0.4s						
PRU	**Pruhonice**	**1.81**	**214**	*e*PG	**Pg**	**22 19 23.4**	**-0.3**
PRU				*e*SG	**Sg**	**22 19 47.4**	**+0.2**
	comp=Z,8.4nm,0.3s						
PRU	**Pruhonice**	**1.81**	**214**	Pg	**Pg**	**22 19 23.4**	**-0.3**
PRU				Sg	**Sg**	**22 19 47.4**	**+0.2**
	comp=Z,8.4nm,0.3s						
MORC	**Moravsky Berou**	**1.95**	**152**	*e*Pn	**Pn**	**22 19 23.1**	**-0.2**
	baz=335						
MORC				*e*Sg	**Sg**	**22 19 50.4**	**-1.2**
	comp=Z,15nm,0.4s,baz=335						
CLL	**Collm**	**1.96**	**266**	*e*Pn	**Pn**	**22 19 23.0**	**-0.5**
CLL				*i* Pg	**Pg**	**22 19 26.1**	**-0.5**
CLL				*e*		22 19 29.0	
CLL				*e*Sg	**Sg**	**22 19 52.0**	**+0.1**
	comp=Z,7.0nm,0.7s						
OKC	**Ostrava-Krasne**	**2.11**	**141**	*e*PG	**Pg**	**22 19 29.1**	**-0.3**
OKC				*e*SG	**Sg**	**22 19 55.6**	**-1.0**
OKC	**Ostrava-Krasne**	**2.11**	**141**	Pg	**Pg**	**22 19 29.1**	**-0.3**
OKC				Sg	**Sg**	**22 19 55.6**	**-1.0**
VRAC	**Vranov**	**2.21**	**172**	*e*Pn	**Pn**	**22 19 27.2**	**+0.3**
	baz=354						
VRAC				*e*Sg	**Sg**	**22 19 59.4**	**-0.7**
	comp=Z,7.9nm,0.4s,baz=354						
KRUC	**Moravsky**	**2.45**	**176**	*e*Pn	**Pn**	**22 19 30.6**	**+0.5**
	baz=357						
KRUC				*e*Sg	**Sg**	**22 20 07.0**	**-0.6**
	comp=Z,5.1nm,0.3s,baz=357

MNSI	**Mandailing Nat**	**3.18**	**117**	P		**Pn**	**22 47 40.2**	**-0.6**
BSI	**Banda Aceh**	**3.54**	**336**	P		**Pn**	**22 47 43.3**	**-2.6**
BSI				S		**Sn**	**22 48 23.6**	**-2.9**
PPI	**Padang Panjang**	**4.53**	**126**	P		**Pn**	**22 47 59.8**	**+0.4**
BKNI	**Bangkinang**	**4.70**	**114**	P		**Pn**	**22 48 02.7**	**+1.0**
IPM	**Ipoh**	**4.82**	**62**	*e*Pn		**Pn**	**22 48 03.3**	**-0.1**
IPM	**Ipoh**	**4.82**	**62**	P		**Pn**	**22 48 03.6**	**+0.2**
IPM	**Ipoh**	**4.82**	**62**	P		**Pn**	**22 48 03.1**	**-0.3**
	0.4nm1µm76nm,0.7s							
PDSI	**Padang**	**4.86**	**130**	P		**Pn**	**22 48 06.0**	**+2.1**
	0.5nm2µm118nm,0.9s							
KULM	**Kulim**	**4.94**	**52**	*e*Pn		**Pn**	**22 48 04.5**	**-0.6**
	165nm,0.6s							
KULM	**Kulim**	**4.94**	**52**	P		**Pn**	**22 48 04.8**	**-0.3**
KULM	**Kulim**	**4.94**	**52**	P		**Pn**	**22 48 04.9**	**-0.1**
	0.9nm2µm252nm,0.8s							
FRIM	**Kepong**	**4.98**	**78**	P		**Pn**	**22 48 06.3**	**+0.8**
SDSI	**Sungai Dareh**	**5.64**	**124**	P		**Pn**	**22 48 15.2**	**+0.5**
	0.2nm30nm,0.7s							
KGM	**Kluang**	**6.58**	**92**	P		**Pn**	**22 48 28.9**	**+1.4**
KTGM	**Kuala Trenggan**	**7.08**	**64**	P		**Pn**	**22 48 34.3**	**-0.1**
MYKOM	**Kota Tinggi**	**7.12**	**93**	P		**Pn**	**22 48 36.7**	**+1.8**
MYKOM	**Kota Tinggi**	**7.12**	**93**	P		**Pn**	**22 48 34.2**	**-0.7**
	0.1nm25nm,0.9s							
MDSI	**Maura Dua**	**9.99**	**132**	P		**Pn**	**22 49 13.2**	**-1.1**
	19nm,0.7s							
KLSI		**10.54**	**131**	P		**Pn**	**22 49 21.2**	**-0.6**
	26nm,0.9s							
KSM	**Kuching**	**13.58**	**93**	*e*Pn		**Pn**	**22 50 01.0**	**-2.4**
KSM	**Kuching**	**13.58**	**93**	P		**Pn**	**22 50 04.6**	**+1.2**
KSM	**Kuching**	**13.58**	**93**	P		**Pn**	**22 50 04.4**	**+1.0**
	11nm,1.3s							
CM31	**Chiang Mai Arr**	**16.26**	**7**	*e*Pn		**Pn**	**22 50 40.1**	**+1.6**
	15nm,0.8s							
CMAR	**Chiang Mai Arr**	**16.26**	**7**	Pn		**Pn**	**22 50 37.1**	**-1.3**
	0.8nm,0.3s,baz=196,slow=12,SNR=82							
CMAR					ScP	ScP	22 59 04.4	+3.2
	baz=210,slow=4.0,SNR=4.4							
CHG	**Chiang Mai**	**16.61**	**7**	P		**Pn**	**22 50 38.1**	**-4.8**
CHTO	**Chiang Mai**	**16.61**	**7**	*e*P		**Pn**	**22 50 41.2**	**-1.7**
	7.7nm,1.0s							
CHTO	**Chiang Mai**	**16.61**	**7**	*e*P		**Pn**	**22 50 41.2**	**-1.7**
CHTO					pmax	pmax		
	comp=Z,8.0nm,1.0s							
CHRT	**Chiangrai**	**17.78**	**9**	P		**Pn**	**22 50 56.0**	**-1.3**
	comp=Z,105nm,1.0s							
KKM	**Kota Kinabalu**	**19.78**	**78**	*e*P		**Pn**	**22 51 19.9**	**-1.7**
	comp=Z,18nm,0.6s							
KKM	**Kota Kinabalu**	**19.78**	**78**	P		**Pn**	**22 51 19.4**	**-2.1**
KDM	**Kudat**	**20.55**	**76**	P		**P**	**22 51 28.1**	**0.0**
SDKM	**Sandakan**	**20.68**	**80**	P		**P**	**22 51 29.6**	**+0.2**
QIZ	**Qiongzhong**	**21.05**	**37**	P		**P**	**22 51 26.0**	**-7.3**
QIZ				S		**S**	**22 55 07.0**	**-18**
QIZ					pmax	pmax		
	comp=Z,7.0nm,1.1s,mb3.9							
QIZ					pmax	pmax		
	comp=Z,31nm,3.2s							
QIZ					LR	LR		
	comp=N,230nm,18.5s,MS3.6							
QIZ					LR	LR		
	comp=E,100nm,18.5s,MS3.6							
QIZ					LR	LR		
	comp=Z,330nm,16.2s,MS3.8							
MYLDM	**Lahad Datu**	**21.91**	**82**	P		**P**	**22 51 43.1**	**+0.5**
MYLDM	**Lahad Datu**	**21.91**	**82**	P		**P**	**22 51 43.3**	**+0.7**
HYB	**Hyderabad**	**23.38**	**311**	*i* P		**P**	**22 51 59.5**	**+1.5**
HYB				*e*			22 52 05.0	
KMI	**Kunming**	**23.48**	**14**	P		**P**	**22 51 59.3**	**+0.6**
KMI				pP			22 52 07.8	
KMI				sP		sP	22 52 12.0	-4.9
KMI				pmax	pmax			
	comp=Z,17nm,0.9s,mb4.5							
KMI				pmax	pmax			
	comp=Z,53nm,3.1s							
KMI				LR	LR			
	comp=N,200nm,16.7s,MS3.8							
KMI				LR	LR			
	comp=E,160nm,14.9s,MS3.8							
KMI				LR	LR			
	comp=Z,220nm,14.3s,MS3.8							
ODAN	**Odare**	**26.07**	**341**	*e*P		**P**	**22 52 23.3**	**+0.9**
	comp=Z,26nm,0.6s,mb5.0							
RAMN	**Ramite**	**26.43**	**339**	*e*P		**P**	**22 52 26.6**	**+1.1**
	comp=Z,46nm,0.9s,mb5.0							
TAPN	**Taplejung**	**26.43**	**342**	*e*P		**P**	**22 52 27.0**	**+1.5**
PKI	**Pulchoki**	**27.43**	**338**	*e*P		**P**	**22 52 34.5**	**0.0**
GUN	**Gumba**	**27.56**	**339**	*e*P		**P**	**22 52 36.6**	**+0.9**
	comp=Z,49nm,0.7s,mb5.2							
DMN	**Daman**	**27.58**	**337**	*e*P		**P**	**22 52 35.9**	**0.0**
	comp=Z,15nm,0.8s,mb4.7							
LSA	**Lhasa**	**27.82**	**350**	*e*P		**P**	**22 52 39.0**	**+0.9**
LSA	**Lhasa**	**27.82**	**350**	*e*P		**P**	**22 52 38.8**	**+0.7**
	comp=Z,17nm,1.0s,mb4.6							
LSA	**Lhasa**	**27.82**	**350**	*e*P		**P**	**22 52 38.8**	**+0.7**
LSA					pmax	pmax		
	comp=Z,17nm,1.0s,mb4.6							
GKN	**Gorkha**	**28.11**	**337**	*e*P		**P**	**22 52 40.3**	**-0.3**
KOLN	**Koldanda**	**28.33**	**335**	*e*P		**P**	**22 52 42.6**	**0.0**
	comp=Z,15nm,0.6s,mb4.8							
LZH	**Lanzhou**	**34.32**	**10**	*e*P		**P**	**22 53 31.0**	**-4.2**
LZH				pP		pP	22 53 49.0	+0.9
LZH				sP		sP	22 53 55.0	+1.1
LZH				pmax	pmax			
	comp=Z,19nm,1.5s,mb4.8							
GTA	**Gaotai**	**37.10**	**4**	⇑P		**P**	**22 53 59.0**	**0.0**
GTA				pmax	pmax			
	comp=Z,24nm,1.0s,mb5.0							
KBL	**Kabul**	**41.22**	**324**	*e*P		**P**	**22 54 33.2**	**-0.2**
	comp=Z,1.2nm,0.4s,mb3.9							
KBL	**Kabul**	**41.22**	**324**	*e*P		**P**	**22 54 33.2**	**-0.2**
KBL				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb3.8							
BJT	**Baijiatuau**	**41.54**	**23**	*e*P		**P**	**22 54 36.9**	**+1.0**
	comp=Z,13nm,0.6s,mb4.7							
BJT	**Baijiatuau**	**41.54**	**23**	*e*P		**P**	**22 54 36.9**	**+0.9**
BJT				pmax	pmax			
	comp=Z,13nm,0.6s							
KSH	**Kashi**	**41.64**	**336**	*e*P		**P**	**22 54 36.0**	**-0.8**
KSH				epP		pP	22 54 45.5	-4.5
KSH				esP		sP	22 54 50.0	-5.8
KSH				*e*PP		PP	22 56 13.0	-0.9
KSH				*e*S		**S**	**23 00 40.5**	**-9.4**
KSH				*e*ScS		ScS	23 04 38.3	+2.4
KSH				pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.1							
KSH				pmax	pmax			
	comp=Z,53nm,3.1s							
KSH				LR	LR			
	comp=N,74nm,8.7s							
KSH				LR	LR			
	comp=E,66nm,6.5s							
KSH				LR	LR			
	comp=Z,57nm,8.3s							
WRA	**Warramunga Arr**	**42.97**	**123**	P		**P**	**22 54 47.5**	**-0.5**
	comp=Z,3.6nm,0.6s,mb4.3,baz=300,slow=9.2,SNR=43							
ASAR	**Alice Springs**	**44.38**	**128**	P		**P**	**22 54 59.1**	**-0.1**
	comp=Z,2.8nm,0.8s,mb4.0,baz=301,slow=8.1,SNR=24							
ASAR					PcP	PcP	22 56 43.1	+0.6
	comp=Z,0.6nm,0.7s,baz=297,slow=2.6,SNR=4.6							
TKM2	**Tokmak 2**	**44.69**	**338**	*e*P		**P**	**22 55 02.2**	**+0.8**
	comp=Z,11nm,0.9s,mb4.7							
TKM2	**Tokmak 2**	**44.69**	**338**	*e*P		**P**	**22 55 02.2**	**+0.8**
TKM2					pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7							
AML	**Almayashu**	**44.77**	**336**	*e*P		**P**	**22 55 03.6**	**+1.5**
	comp=Z,18nm,1.1s,mb4.8							
AML	**Almayashu**	**44.77**	**336**	*e*P		**P**	**22 55 03.6**	**+1.5**
AML					pmax	pmax		
	comp=Z,18nm,1.1s,mb4.8							
AAK	**Ala-Archa**	**44.87**	**337**	*e*P		**P**	**22 55 05.3**	**+2.5**
	comp=Z,8.6nm,1.1s,mb4.5							
AAK	**Ala-Archa**	**44.87**	**337**	P		**P**	**22 55 04.1**	**+1.2**
	comp=Z,1.6nm,0.3s,mb4.3,baz=199,slow=5.8,SNR=6.9							
AAK	**Ala-Archa**	**44.87**	**337**	*de*P		**P**	**22 55 04.8**	**+2.0**
AAK					pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2							
EKS2	**Erkin-Say**	**45.18**	**336**	*e*P		**P**	**22 55 06.9**	**+1.6**
	comp=Z,5.0nm,0.7s,mb4.5							
EKS2	**Erkin-Say**	**45.18**	**336**	*e*P		**P**	**22 55 06.9**	**+1.6**
EKS2					pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5							
KSRS	**Korea Array**	**45.27**	**35**	P		**P**	**22 55 04.3**	**-1.8**
	comp=Z,3.5nm,0.6s,mb4.3,baz=229,slow=8.6,SNR=16							
KSRS					LR	LR	23 16 01.5	
	comp=Z,102nm,18.4s,MS3.8,baz=49,slow=39							
MK31	**Makanchi Array**	**46.13**	**346**	*e*P		**P**	**22 55 13.1**	**+0.4**
MK31	**Makanchi Array**	**46.13**	**346**	*i* P		**P**	**22 55 12.7**	**0.0**
MK31					pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8							
MKAR	**Makanchi Array**	**46.13**	**346**	P		**P**	**22 55 12.8**	**0.0**
MKAR					LR	LR	23 18 27.8	
MKAR	**Makanchi Array**	**46.13**	**346**	P		**P**	**22 55 12.8**	**0.0**
	comp=Z,13nm,0.7s,mb5.0,baz=161,slow=7.9,SNR=95							
MKAR					LR	LR	23 18 27.8	
	comp=Z,45nm,18.8s,MS3.4,baz=265,slow=41							
MKAR	**Makanchi Array**	**46.13**	**346**	*ce*P		**P**	**22 55 13.1**	**+0.4**
MKAR					pmax	pmax		
	comp=Z,13nm,0.7s							
SONM	**Songino Array**	**46.18**	**9**	P		**P**	**22 55 13.6**	**+0.4**
	comp=Z,7.4nm,0.8s,mb4.7,baz=188,slow=9.0,SNR=26							
SONM					PcP	PcP	22 56 49.1	+0.8
	comp=Z,1.3nm,0.6s,baz=183,slow=4.3,SNR=3.5							
SONM					ScP	ScP	23 00 44.8	+7.1
	comp=Z,0.3nm,0.3s,baz=147,slow=2.9,SNR=2.5							
SONM					LR	LR	23 17 07.0	
	comp=Z,80nm,19.3s,MS3.7,baz=43,slow=39							
SONM	**Songino Array**	**46.18**	**9**	P		**P**	**22 55 13.6**	**+0.5**
SONM							22 56 49.1	
ULN	**Ulaanbaatar**	**46.32**	**10**	*e*P		**P**	**22 55 14.6**	**+0.5**
	comp=Z,6.3nm,1.0s,mb4.5							
ULN	**Ulaanbaatar**	**46.32**	**10**	*e*P		**P**	**22 55 14.6**	**+0.4**
ULN					pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5							
KKAR	**Karatay Array**	**46.93**	**334**	*e*P		**P**	**22 55 20.1**	**+1.0**
	comp=Z,2.9nm,0.6s,mb4.4							
KKAR	**Karatay Array**	**46.93**	**334**	*e*P		**P**	**22 55 20.1**	**+1.0**
KKAR					pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4							
ZAK	**Zakamensk**	**48.29**	**6**	*e*P		**P**	**22 55 28.2**	**-1.3**
ZAK					pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1							
COEN	**Coen**	**48.75**	**111**	*e*P		**P**	**22 55 32.5**	**-1.1**
	comp=Z,86nm,1.0s,mb5.7							
TLY	**Talaya**	**49.61**	**6**	*e*P		**P**	**22 55 40.8**	**+1.2**
TLY					pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7							
TLY					MLR	MLR		
	comp=Z,130nm,19.0s,MS4.0							
KURK	**Kurchatov**	**50.68**	**345**	*e*P		**P**	**22 55 47.9**	**+0.2**
	comp=Z,10.0nm,0.8s,mb4.8							
KURK	**Kurchatov**	**50.68**	**345**	*e*P		**P**	**22 55 47.9**	**+0.2**
KURK					pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8							
HIA	**Hailar**	**50.81**	**19**	*e*P		**P**	**22 55 49.1**	**+0.3**
	comp=Z,6.3nm,0.7s,mb4.7							
HIA	**Hailar**	**50.81**	**19**	*e*P		**P**	**22 55 49.1**	**+0.4**
HIA					pmax	pmax		
	comp=Z,6.0nm,0.7s							
MDJ	**Mudanjiang**	**51.20**	**30**	P		**P**	**22 55 52.0**	**+0.3**
MDJ					pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6							
MDJ					pmax	pmax		
	comp=Z,42nm,4.9s							
MJAR	**Matsushiro Arr**	**51.24**	**43**	P		**P**	**22 55 52.3**	**+0.1**
	comp=Z,2.3nm,0.9s,mb4.1,baz=218,slow=6.2,SNR=5.7							
MJAR					LR	LR	23 19 48.3	
	comp=Z,54nm,18.2s,MS3.6,baz=260,slow=39							
ZALV	**Zalesovo Beam**	**52.47**	**351**	P		**P**	**22 56 01.0**	**0.0**
	comp=Z,18nm,0.7s,mb5.1,baz=179,slow=6.5,SNR=88							
NVS	**Novosibirsk**	**53.58**	**350**	*e*P		**P**	**22 56 07.0**	**-2.2**
NVS					pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6							
NVS					pmax	pmax		
	comp=N,4.0nm,0.9s							
NVS					pmax	pmax		
	comp=E,2.0nm,0.6s							
STKA	**Stephens Creek**	**54.39**	**132**	P		**P**	**22 56 13.8**	**-1.7**
	comp=E,3.2nm,1.0s,mb4.2,baz=333,slow=9.0,SNR=2.7							
STKA					LR	LR	23 22 06.2	
	comp=E,76nm,18.4s,MS3.8,baz=206,slow=39							
BRVK	**Borovoye**	**55.19**	**341**	*e*P		**P**	**22 56 20.3**	**-0.6**
	comp=E,4.7nm,0.7s,mb4.6							
BRVK	**Borovoye**	**55.19**	**341**	*ce*P		**P**	**22 56 20.6**	**-0.3**
BRVK					pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7							
ZRNK	**Zerenda**	**55.53**	**340**	*i* P		**P**	**22 56 22.1**	**-1.2**
ZRNK					pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6							
AB31	**Akbulak array**	**56.39**	**332**	*i* P		**P**	**22 56 29.2**	**-0.4**
AB31					pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3							
ABKAR	**Akbulak array**	**56.39**	**332**	*e*P		**P**	**22 56 29.3**	**-0.2**
	comp=Z,9.8nm,1.0s,mb4.8							
GNI	**Garni**	**60.23**	**316**	⇓*e*P		**P**	**22 57 02.3**	**+5.7**
GNI					pmax	pmax		
	comp=Z,5.0nm,1.0s							
SVE	**Sverdlovsk**	**61.56**	**338**	⇑*e*P		**P**	**22 57 05.8**	**+0.5**
SVE					pmax	pmax		
	comp=Z,11nm,0.9s,mb5.0							
ARU	**Arti**	**62.06**	**337**	*e*P		**P**	**22 57 08.6**	**0.0**
	comp=Z,6.1nm,0.9s,mb4.7							
ARU	**Arti**	**62.06**	**337**	*c i*P		**P**	**22 57 08.3**	**-0.3**
ARU					S	**S**	**23 05 23.0**	**-6.6**
ARU					pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8							
KIV	**Kislovodsk**	**63.23**	**319**	⇓*e*P		**P**	**22 57 22.7**	**+6.0**
KIV					pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7							
YAK	**Yakutsk**	**64.56**	**16**	*e*P		**P**	**22 57 24.5**	**-0.6**
	comp=Z,27nm,0.7s,mb5.4							
YAK	**Yakutsk**	**64.56**	**16**	*e*P		**P**	**22 57 23.7**	**-1.4**
YAK					pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1							
BRTR	**Keskin Array B**	**68.08**	**312**	P		**P**	**22 57 47.9**	**-0.2**
	comp=Z,0.4nm,0.5s,mb3.7,baz=105,slow=9.1,SNR=3.6							
VORD	**Divnogorie**	**68.28**	**325**	*e*P		**P**	**22 57 48.6**	**-0.5**
VORD					pmax	pmax		
	comp=N,2.0nm,0.5s							
VORD					pmax	pmax		
	comp=E,1.0nm,0.5s							
VORD					pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7							
VSR	**Storozhevoye**	**68.46**	**325**	*e*P		**P**	**22 57 54.8**	**+4.6**
VSR					pmax	pmax		
	comp=N,2.0nm,0.6s							
VSR					pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5							
VSR					pmax	pmax		
	comp=E,1.0nm,0.3s							
PETK	**Petropavlovsk-**	**71.13**	**34**	LR		LR	23 33 18.8	
	comp=E,42nm,18.5s,MS3.7,baz=50,slow=39							
OBN	**Obninsk**	**71.50**	**328**	⇑*e*P		**P**	**22 58 14.3**	**+5.5**
OBN					pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2							
SEY	**Seymchan**	**72.99**	**23**	⇓*e*P		**P**	**22 58 18.1**	**+0.6**
MAW	**Mawson**	**73.61**	**193**	LR		LR	23 23 58.9	
	comp=Z,66nm,19.3s,MS3.9,baz=283,slow=30							
BOSA	**Boshof**	**74.90**	**240**	LR		LR	23 28 02.4	
	comp=Z,91nm,18.8s,MS4.1,baz=77,slow=33							
FINES	**FINESS Array B**	**78.87**	**332**	P		**P**	**22 58 50.5**	**-0.6**
	comp=Z,2.5nm,0.8s,mb4.2,baz=134,slow=8.2,SNR=5.9							
KAF	**Kangasniemi**	**78.96**	**333**	*e*P		**P**	**22 58 49.8**	**-1.7**
KAF					pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0							
KAF	**Kangasniemi**	**78.96**	**333**	*ep*		**P**	**22 58 49.8**	**-1.7**
	comp=Z,1.1nm,0.5s,mb4.0							
ARCES	**ARCESS Array B**	**81.41**	**340**	P		**P**	**22 59 03.0**	**-1.6**
	comp=Z,4.1nm,0.9s,mb4.4,baz=85,slow=7.4,SNR=7.2							
NOA	**NORSAR Array B**	**85.88**	**331**	P		**P**	**22 59 28.4**	**+0.7**
	comp=Z,0.3nm,0.6s,mb3.7,baz=68,slow=6.2,SNR=2.8							
NOA					LR	LR	23 42 19.7	
	comp=Z,29nm,18.1s,MS3.7,baz=295,slow=39							
PDAR	**Pinedale Array**	**129.31**	**25**	PKP		PKPdf	23 05 57.4	+0.8
	comp=Z,0.3nm,0.5s,baz=344,slow=3.0,SNR=3.2							
TXAR	**Lajitas Array**	**143.02**	**30**	PKP		PKPdf	23 06 20.0	-2.4
	comp=Z,0.1nm,0.3s,baz=226,slow=3.6,SNR=5.2							

*IDC **29** 23:08:18.4±2.9, 2°.05S×99°.75E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.7/20, mbtmp3.8/6, MS3.0/1, Ms1 3.0/1, ms1mx2.3/28, Error ellipse: s-maj=121.6km s-min=20.1km az=58.0*

*NEIC **29** 23:08:22.9±1.2, 2°.13S×99°.60E, h35km, mb4.0/3, Error ellipse: s-maj=50.0km s-min=12.1km az=55.0*

*DJA **29** 23:08:22, 2°.20S×99°.37E, h38km, MLv3.5/5*

ISC 29 23:08:20.2±2.2, 2°.29S±0°.08×99°.38E±0°.08, h21km±14km, n18, σ0°64/18, mb3.9/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**1.00**	**343**	P		P	**Pb**	**23 08 39.0**	**+0.1**
PDSI	**Padang**	**1.74**	**38**	P		P	**Pn**	**23 08 48.7**	**-0.6**
PDSI				S		S	**Sn**	**23 09 11.2**	**+0.3**
PPI	**Padang Panjang**	**2.08**	**29**	P		P	**Pn**	**23 08 53.5**	**-0.5**
PPI				S		S	**Sn**	**23 09 19.2**	**-0.1**
SDSI	**Sungai Dareh**	**2.45**	**57**	P		P	**Pn**	**23 09 00.0**	**+1.0**
MNSI	**Mandailing Nat**	**3.07**	**4**	P		P	**Pn**	**23 09 07.7**	**+0.1**
CMAR	**Chiang Mai Arr**	**20.62**	**359**	P		P	**P**	**23 12 57.4**	**-0.9**
	0.4nm,0.3s,baz=191,slow=11,SNR=3.6								
WRA	**Warramunga Arr**	**38.38**	**120**	P		P	**P**	**23 15 39.7**	**-0.6**
WRA	**Warramunga Arr**	**38.38**	**120**	P		P	**P**	**23 15 39.7**	**-0.6**
	0.8nm,0.6s,mb3.6,baz=300,slow=8.9,SNR=8.4								
ASAR	**Alice Springs**	**39.59**	**125**	P		P	**P**	**23 15 50.7**	**+0.3**
	0.3nm,0.5s,mb3.3,baz=298,slow=7.5,SNR=4.6								
KSRS	**Korea Array**	**47.58**	**31**	LR		LR		23 37 53.4	
	comp=Z,15nm,18.3s,baz=295,slow=38								
SONM	**Songino Array**	**50.29**	**6**	P		P	**P**	**23 17 14.6**	**-0.6**
	1.3nm,0.7s,mb4.1,baz=176,slow=8.8,SNR=4.0								
EKS2	**Erkin-Say**	**50.37**	**336**	*e*P		P	**P**	**23 17 17.2**	**+1.4**
	2.3nm,1.0s,mb4.2								
MK31	**Makanchi Array**	**51.14**	**345**	*e*P		P	**P**	**23 17 22.0**	**+0.5**
MKAR	**Makanchi Array**	**51.14**	**345**	P		P	**P**	**23 17 22.3**	**+0.8**
	1.1nm,0.7s,mb3.9,baz=153,slow=8.4,SNR=9.9								
KURK	**Kurchatov**	**55.71**	**344**	*e*P		P	**P**	**23 17 55.1**	**0.0**
	1.3nm,0.9s,mb4.0								
ZALV	**Zalesovo Beam**	**57.34**	**350**	P		P	**P**	**23 18 06.5**	**-0.1**
	0.8nm,0.3s,mb4.2,baz=186,slow=5.7,SNR=7.6								
ABKAR	**Akbulak array**	**61.60**	**332**	*e*P		P	**P**	**23 18 35.1**	**-1.0**
	0.6nm,0.6s,mb3.9								
TXAR	**Lajitas Array**	**145.31**	**37**	PKP		PKPdf		23 27 57.9	+0.6
	0.9nm,0.7s,baz=283,slow=1.0,SNR=14								

*NIED **29** 23:10:00, 38°.30N×144°.80E, h8km, Mw3.7 Best double couple: M0 4.59000×10^14 NP1:φ=207.00000°, δ=68.00000°, λ=-94.00000°. NP2:φ=38.00000°, δ=23.00000°, λ=-79.00000°.*

JMA 29 23:10:21.3±0.2, 38°.35N×144°.76E, h50km, M3.9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.53**	**288**	P		P	Pn	23 11 01.2	+1.4
OFUJ						*e*S	Sn	23 11 30.9	+1.6
MIYJ	**Miyakonagasawa**	**2.60**	**299**	P		P	Pn	23 11 01.9	+1.1
MIYJ						*e*S	Sn	23 11 31.8	+0.7
JIO	**Ouri**	**2.68**	**273**	P		P	Pn	23 11 03.2	+1.3
JIO						*e*S	Sn	23 11 34.2	+1.0
JMK	**Ichinoseki**	**2.84**	**283**	P		P	Pn	23 11 05.6	+1.5
JMK						*e*S	Sn	23 11 38.9	+1.9
JOM	**Ohasama**	**2.93**	**294**	P		P	Pn	23 11 07.0	+1.7
JOM						S	Sn	23 11 41.6	+2.4
JMM	**Marumori**	**3.17**	**262**	P		P	Pn	23 11 10.5	+1.9
JMM						S	Sn	23 11 46.4	+1.3
JANG	**Nango**	**3.23**	**310**	S		S	Sn	23 11 47.3	+0.7
JOT	**Ohata**	**4.16**	**318**	P		P	Pn	23 11 23.9	+1.7
JOT						S	Sn	23 12 09.6	0.0
JCH	**Churui**	**4.39**	**346**	P		P	Pn	23 11 25.2	-0.2
JCH						*e*S	Sn	23 12 13.5	-1.7
JKB	**Kayabe**	**4.54**	**322**	*e*S		S	Sn	23 12 18.5	-0.5
BSO1	**Boso 1**	**4.78**	**221**	S		S	Sn	23 12 25.4	+0.5
NEM2	**Nemuro 2**	**5.07**	**8**	P		P	Pn	23 11 32.0	-2.6
NEM2						*e*S	Sn	23 12 26.2	-5.6
JRY	**Ryogami san**	**5.22**	**245**	P		P	Pn	23 11 38.2	+1.4
JRY						*e*S	Sn	23 12 35.0	-0.8
JOSM	**Okushiri--Mats**	**5.50**	**314**	P		P	Pn	23 11 43.0	+2.4
MAT	**Matsushiro**	**5.52**	**253**	P		P	Pn	23 11 44.1	+3.3
MAT						*e*S	Sn	23 12 49.0	+6.1
MAT	**Matsushiro**	**5.52**	**253**	P		P	Pn	23 11 44.0	+3.2
JTKR	**Abashiri--Toko**	**5.65**	**354**	*e*S		S	Sn	23 12 43.0	-3.2
JHR	**Hokuryu**	**5.86**	**338**	*e*S		S	Sn	23 12 54.2	+3.0

*ISCJB **29** 23:15:19.3±0.4, 8°.28S±0°.04×119°.70E±0°.05, h179km±4km, mb4.4/29, Error ellipse: s-maj=8.3km s-min=4.9km az=150.1*

*BJI **29** 23:15:19.2, 8°.20S×119°.80E, h175km, mB4.9/2, mb4.5/7*

*IDC **29** 23:15:19.7±

KSRS	**Korea Array**	**46.18**	**9**	P		**P**		**23 23 25.8**	**-1.9**	
	0.7nm,0.4s,mb3.6,baz=185,slow=8.7,SNR=2.9									
KSRS				pP		pP		23 24 04.7	-1.7	
	0.5nm,0.4s,baz=173,slow=11,SNR=1.5									
KSRS				PcP		PcP		23 25 00.7	0.0	
	0.4nm,0.3s,baz=188,slow=3.4,SNR=6.0									
LZH	**Lanzhou**	**46.63**	**342**	*e*P		**P**		**23 23 32.5**	**+1.2**	
LZH				pmax		pmax				
	comp=Z,17nm,1.4s,mb4.5									
LSA	**Lhasa**	**46.74**	**325**	P		**P**		**23 23 27.5**	**-4.8**	
LSA	**Lhasa**	**46.74**	**325**	*e*P		**P**		**23 23 32.6**	**+0.3**	
	comp=Z,2.8nm,0.6s,mb4.1									
GTA	**Gaotai**	**50.96**	**340**	⇑P		**P**		**23 24 05.3**	**+1.1**	
GTA				pmax		pmax				
	comp=Z,9.0nm,1.3s,mb4.2									
ULN	**Ulaanbaatar**	**57.05**	**350**	*e*P		**P**		**23 24 47.9**	**-0.2**	
	comp=Z,3.3nm,0.7s,mb4.3									
SONM	**Songino Array**	**57.14**	**349**	P		**P**		**23 24 48.9**	**+0.2**	
	comp=Z,4.5nm,0.5s,mb4.5,baz=167,slow=7.9,SNR=13									
CASY	**Casey**	**58.22**	**184**	*e*P		**P**		**23 24 57.3**	**+1.3**	
	comp=Z,2.8nm,0.6s,mb4.3									
KBL	**Kabul**	**64.12**	**315**	*e*P		**P**		**23 25 34.7**	**-1.6**	
	comp=Z,2.2nm,0.6s,mb4.2									
MK31	**Makanchi Array**	**64.19**	**332**	*e*P		**P**		**23 25 35.7**	**-0.7**	
MKAR	**Makanchi Array**	**64.19**	**332**	P		**P**		**23 25 35.7**	**-0.7**	
MKAR	**Makanchi Array**	**64.19**	**332**	P		**P**		**23 25 35.7**	**-0.7**	
	comp=Z,8.3nm,0.5s,mb4.8,baz=153,slow=7.4,SNR=96									
TKM2	**Tokmak 2**	**64.90**	**326**	*e*P		**P**		**23 25 40.2**	**-1.0**	
	comp=Z,2.2nm,0.6s,mb4.2									
EKS2	**Erkin-Say**	**65.77**	**324**	*e*P		**P**		**23 25 45.4**	**-1.4**	
	comp=Z,2.8nm,1.0s,mb4.0									
ZALV	**Zalesovo Beam**	**68.67**	**339**	P		**P**		**23 26 03.1**	**-1.7**	
	comp=Z,7.6nm,0.4s,mb4.8,baz=142,slow=5.0,SNR=42									
KURK	**Kurchatov**	**68.71**	**333**	*e*P		**P**		**23 26 03.9**	**-1.2**	
	comp=Z,9.1nm,0.9s,mb4.5									
KURK	**Kurchatov**	**68.71**	**333**	P		**P**		**23 26 03.9**	**-1.2**	
	comp=Z,3.1nm,0.5s,mb4.3,baz=143,slow=5.6,SNR=13									
PETK	**Petropavlovsk-**	**69.1**	**23**	P		**P**		**23 26 06.9**	**-0.9**	
	comp=Z,0.9nm,0.5s,mb3.8,baz=120,slow=2.4,SNR=3.7									
MAW	**Mawson**	**70.11**	**200**	pP		pP		23 26 54.6	-0.7	
	comp=Z,3.5nm,1.1s,baz=29,slow=5.1,SNR=4.5									
BVAR	**Borovoye Array**	**74.04**	**332**	P		**P**		**23 26 35.9**	**-1.1**	
	comp=Z,0.8nm,0.6s,mb3.6,baz=163,slow=6.0,SNR=5.6									
ABKAR	**Akbulak array**	**77.42**	**325**	*e*P		**P**		**23 26 54.3**	**-2.0**	
	comp=Z,0.8nm,0.5s,mb3.6									
QSPA	**South Pole Qui**	**81.67**	**180**	P		**P**		**23 27 20.4**	**+1.8**	
QSPA				pP		pP		23 28 00.8	-0.9	
QSPA	**South Pole Qui**	**81.67**	**180**	P		**P**		**23 27 20.4**	**+1.8**	
	comp=Z,0.5nm,0.6s,mb3.3,baz=36,slow=3.9,SNR=5.2									
QSPA				pP		pP		23 28 00.8	-0.9	
	comp=Z,2.5nm,1.0s,baz=19,slow=0.5,SNR=4.1									
KMBO	**Kilima Mbogo**	**82.39**	**270**	*e*P		**P**		**23 27 24.6**	**+0.9**	
	comp=Z,1.7nm,0.8s,mb3.7									
KMBO	**Kilima Mbogo**	**82.39**	**270**	P		**P**		**23 27 24.4**	**+0.7**	
	comp=Z,2.5nm,0.4s,mb4.2,baz=360,slow=24,SNR=3.3									
BOSA	**Boshof**	**89.96**	**241**	P		**P**		**23 28 01.6**	**+1.1**	
BOSA	**Boshof**	**89.96**	**241**	P		**P**		**23 28 01.6**	**+1.1**	
	comp=Z,1.4nm,0.8s,mb4.0,baz=127,slow=10,SNR=3.7									
NVAR	**Mina Array Bea**	**120.03**	**50**	PKP		PKPdf		23 33 50.5	-0.2	
	comp=Z,0.2nm,0.5s,baz=232,slow=4.4,SNR=3.4									
HLID	**Hailey**	**121.34**	**44**	*e*PKPdf		PKPdf		23 33 53.4	+0.3	
BOZ	**Bozeman (W)**	**122.41**	**40**	*e*PKPdf		PKPdf		23 33 54.8	-0.3	
TPAW	**Teton Pass**	**123.71**	**43**	*e*PKPdf		PKPdf		23 33 57.9	+0.3	
LOHW	**Long Hollow**	**123.89**	**42**	*e*PKPdf		PKPdf		23 33 57.9	-0.1	
HWUT	**Hardware Ranch**	**124.00**	**45**	*e*PKPdf		PKPdf		23 33 58.3	+0.1	
PDAR	**Pinedale Array**	**124.93**	**43**	PKP		PKPdf		23 33 59.3	-0.7	
	comp=Z,0.4nm,0.7s,baz=134,slow=2.6,SNR=3.1									
RSSD	**Black Hills**	**127.91**	**39**	*e*PKPdf		PKPdf		23 34 05.4	-0.3	
SDCO	**Great Sand Dun**	**129.80**	**47**	*e*PKPdf		PKPdf		23 34 10.0	+0.5	
TXAR	**Lajitas Array**	**134.26**	**57**	PKP		PKPdf		23 34 10.6	+0.5	
TXAR				pPKP		pPKPdf		23 35 00.8	-3.3	
TXAR	**Lajitas Array**	**134.26**	**57**	PKP		PKPdf		23 34 18.6	+0.5	
	comp=Z,0.2nm,0.6s,baz=243,slow=1.1,SNR=5.4									
TXAR				pPKP		pPKPdf		23 35 00.8	-3.3	
	comp=Z,0.2nm,0.8s,baz=232,slow=4.4,SNR=2.1									
JCT	**Junction City**	**137.01**	**54**	*e*PKPdf		PKPdf		23 34 23.8	+0.6	
HKT	**Hockley**	**140.37**	**52**	*e*PKPdf		PKPdf		23 34 29.1	-0.3	
WVT	**Waverly**	**142.62**	**38**	*e*PKPpre		PKPpre		23 34 28.1		
SSPA	**Standing Stone**	**144.20**	**23**	*e*PKPdf		PKPdf		23 34 33.1	-2.8	
MCWV	**Mont Chateau**	**144.21**	**26**	*e*PKPdf		PKPdf		23 34 33.6	-2.3	
CPCT	**Cooper Cave**	**145.06**	**36**	*e*PKPdf		PKPdf		23 34 36.1	-1.4	
LRAL	**Lakeview Retre**	**145.13**	**41**	*e*PKPdf		PKPdf		23 34 36.3	-1.4	
PAL	**Palisades**	**145.27**	**18**	*e*PKPbc		PKPbc		23 34 37.0	-0.8	
TKL	**Tuckaleechee C**	**145.34**	**35**	*e*PKPbc		PKPbc		23 34 37.1	-1.0	
CPUP	**Villa Florida**	**145.44**	**185**	pPKPbc		pPKPbc		23 35 22.5	-1.4	
	comp=Z,2.8nm,0.7s,baz=181,slow=6.5,SNR=3.4									
GOGA	**Godfrey**	**147.10**	**37**	*e*PKPbc		PKPbc		23 34 42.3	-1.1	

*ISCJB **29** 23:34:59.3±0.5, 34°.21N±0°.04×26°.95E±0°.06, h94km±21km, Error ellipse: s-maj=9.2km s-min=5.9km az=161.4*
*CSEM **29** 23:35:00.9±0.2, 34°.24N×26°.99E, h60km, MD3.5, Error ellipse: s-maj=9.0km s-min=4.4km az=56.0*
*HLW **29** 23:35:02.8, 34°.20N×27°.07E, h31km±37km, Ml3.2*
*ATH **29** 23:35:09.1, 35°.21N×26°.58E, h59km±3km, MD3.5/8*
*NEIC **29** 23:35:09.1, 35°.21N×26°.58E, h59km, MD3.5(ATH), After ATH.*

ISC 29 23:35:00.9±0.6, 34°.22N±0°.04×26°.96E±0°.06, h65km±40km, n54, σ0°95/60, Crete

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZKR	**Zakros**	**1.08**	**326**	*e*P		**Pn**	**23 35 19.8**	**-0.4**
ZKR	**Zakros**	**1.08**	**326**	*e*P		**Pn**	**23 35 19.8**	**-0.4**
ZKR	**Zakros**	**1.08**	**326**	*e*P		**Pn**	**23 35 19.8**	**-0.4**
KARP	**Karpathos**	**1.34**	**7**	*e*P		**Pn**	**23 35 22.4**	**-1.1**
KARP	**Karpathos**	**1.34**	**7**	*e*P		**Pn**	**23 35 22.4**	**-1.1**
KARP	**Karpathos**	**1.34**	**7**	*e*P		**Pn**	**23 35 22.4**	**-1.1**
NPS	**Neapolis**	**1.52**	**314**	*e*P		**Pn**	**23 35 25.2**	**-0.8**
NPS	**Neapolis**	**1.52**	**314**	*e*P		**Pn**	**23 35 25.2**	**-0.8**
NPS	**Neapolis**	**1.52**	**314**	*e*P		**Pn**	**23 35 25.2**	**-0.8**
LAST	**Lasithi**	**1.54**	**308**	*e*P		**Pn**	**23 35 26.8**	**+0.6**
LAST	**Lasithi**	**1.54**	**308**	*e*P		**Pn**	**23 35 26.8**	**+0.6**
LAST	**Lasithi**	**1.54**	**308**	*e*P		**Pn**	**23 35 26.8**	**+0.6**
IDI	**Anoyia**	**2.01**	**303**	*e*P		**Pn**	**23 35 33.6**	**+1.0**
IDI	**Anoyia**	**2.01**	**303**	*e*P		**Pn**	**23 35 33.6**	**+1.0**
IDI	**Anoyia**	**2.01**	**303**	*e*P		**Pn**	**23 35 33.6**	**+1.0**
ARG	**Arkhangelos**	**2.21**	**25**	*e*P		**Pn**	**23 35 36.6**	**+1.4**
ARG	**Arkhangelos**	**2.21**	**25**	*e*P		**Pn**	**23 35 36.6**	**+1.4**
ARG	**Arkhangelos**	**2.21**	**25**	*e*P		**Pn**	**23 35 36.6**	**+1.4**
VAM	**Vamos**	**2.56**	**298**	*e*P		**Pn**	**23 35 41.2**	**+1.2**
VAM	**Vamos**	**2.56**	**298**	*e*P		**Pn**	**23 35 41.2**	**+1.2**
VAM	**Vamos**	**2.56**	**298**	*e*P		**Pn**	**23 35 41.2**	**+1.2**
KARN	**Karanos**	**2.77**	**296**	*e*P		**Pn**	**23 35 44.4**	**+1.6**
KARN	**Karanos**	**2.77**	**296**	*e*P		**Pn**	**23 35 44.4**	**+1.6**
SLUM		**3.09**	**209**	P		**Pn**	**23 35 48.5**	**+1.2**
	baz=211							
SLUM				S		**Sn**	**23 36 23.0**	**0.0**
	baz=211							
SLUM		**3.09**	**209**	P		**Pn**	**23 35 48.5**	**+1.2**
SLUM				S		**Sn**	**23 36 23.0**	**0.0**
HMAT	**Matruh**	**3.12**	**178**	P		**Pn**	**23 35 49.0**	**+1.3**
	baz=179							
HMAT				S		**Sn**	**23 36 22.4**	**-1.3**
	baz=179							
HMAT	**Matruh**	**3.12**	**178**	P		**Pn**	**23 35 49.0**	**+1.4**
HMAT				S		**Sn**	**23 36 22.4**	**-1.2**
KYTH	**Kithira**	**3.81**	**304**	*e*P		**Pn**	**23 35 56.4**	**-0.7**
KYTH	**Kithira**	**3.81**	**304**	*e*P		**Pn**	**23 35 56.4**	**-0.7**
KYTH	**Kithira**	**3.81**	**304**	*e*P		**Pn**	**23 35 56.4**	**-0.7**
VLI	**Veliai**	**4.12**	**308**	*e*P		**Pn**	**23 36 00.0**	**-1.4**
VLI	**Veliai**	**4.12**	**308**	*e*P		**Pn**	**23 36 00.0**	**-1.4**
VLI	**Veliai**	**4.12**	**308**	*e*P		**Pn**	**23 36 00.0**	**-1.4**
HBRG	**Burj al 'Arab**	**4.37**	**145**	P		**Pn**	**23 36 04.8**	**+0.1**
	baz=146							
DID	**Didima**	**4.46**	**318**	*e*P		**Pn**	**23 36 04.8**	**-1.2**
DID	**Didima**	**4.46**	**318**	*e*P		**Pn**	**23 36 04.8**	**-1.2**
VLX	**Vlachokerasia**	**4.88**	**311**	*e*P		**Pn**	**23 36 10.8**	**-0.8**
VLX	**Vlachokerasia**	**4.88**	**311**	*e*P		**Pn**	**23 36 10.8**	**-0.8**
SWA2		**5.12**	**195**	P		**Pn**	**23 36 16.3**	**+1.3**
	baz=196							
SWA2				S		**Sn**	**23 37 11.3**	**-1.5**
	baz=196							
SWA2		**5.12**	**195**	P		**Pn**	**23 36 16.3**	**+1.3**
SWA2				S		**Sn**	**23 37 11.4**	**-1.4**
HNAT	**Natroun**	**5.53**	**145**	P		**Pn**	**23 36 20.8**	**+0.2**
	baz=145							
HNAT	**Natroun**	**5.53**	**145**	P		**Pn**	**23 36 20.8**	**+0.2**
SQR		**5.62**	**139**	P		**Pn**	**23 36 20.9**	**-1.0**
	baz=139							
SQR		**5.62**	**139**	P		**Pn**	**23 36 20.9**	**-1.0**
AYT	**Al 'Ayyat**	**5.74**	**141**	P		**Pn**	**23 36 23.8**	**+0.3**
	baz=141							
AYT	**Al 'Ayyat**	**5.74**	**141**	P		**Pn**	**23 36 23.8**	**+0.3**
KOT	**Kottamia**	**5.95**	**135**	P		**Pn**	**23 36 26.0**	**-0.3**
	baz=135							
KOT	**Kottamia**	**5.95**	**135**	P		**Pn**	**23 36 26.0**	**-0.3**
HHAG	**Hagoal**	**6.09**	**133**	P		**Pn**	**23 36 28.6**	**+0.4**
	baz=133							
HHAG	**Hagoal**	**6.09**	**133**	P		**Pn**	**23 36 28.7**	**+0.4**
GLL	**Jalalah**	**6.14**	**138**	P		**Pn**	**23 36 28.6**	**-0.3**
	baz=138							
GLL	**Jalalah**	**6.14**	**138**	P		**Pn**	**23 36 28.6**	**-0.3**
HFRF	**Wahat Farafira**	**7.14**	**170**	P		**Pn**	**23 36 42.9**	**+0.2**
	baz=171							
HFRF	**Wahat Farafira**	**7.14**	**170**	P		**Pn**	**23 36 42.9**	**+0.2**

IDC 29 23:35:21.8±2.5, 11°.97S×166°.83E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/17, mbtmp3.8/4, Error ellipse: s-maj=115.9km s-min=29.7km az=134.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**30.53**	**226**	P		P	23 41 37.2	+0.2
	0.7nm,0.4s,baz=59,slow=5.9,SNR=2.5							
WRA	**Warramunga Arr**	**32.18**	**252**	P		P	23 41 52.0	+0.3
	0.6nm,0.5s,baz=85,slow=9.2,SNR=8.1							
ASAR	**Alice Springs**	**33.35**	**245**	P		P	23 42 01.6	-0.3
	0.7nm,0.4s,baz=70,slow=9.8,SNR=11							
ILAR	**Eielson Array**	**64.05**	**18**	P		P	23 47 53.9	0.0
	0.5nm,0.5s,baz=239,slow=5.4,SNR=7.2							

IDC 30 00:19:25.0±12.0, 18°.17S×178°.05W, h565km±129km, mb3.1/5, mb1 3.3/5, mb1mx3.0/18, mbtmp3.1/5, Error ellipse: s-maj=136.3km s-min=58.1km az=137.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTA	**Charters Tower**	**33.74**	**261**	P		P	00 25 21.2	+0.7
	1.8nm,0.4s,baz=109,slow=11,SNR=4.5							
STKA	**Stephens Creek**	**38.80**	**242**	P		P	00 26 01.8	-0.3
	1.3nm,0.5s,baz=108,slow=6.4,SNR=3.2							
WRA	**Warramunga Arr**	**44.92**	**260**	P		P	00 26 49.4	-0.9
	0.9nm,0.3s,baz=96,slow=7.8,SNR=13							
ASAR	**Alice Springs**	**45.05**	**254**	P		P	00 26 51.6	+0.4
	1.4nm,0.5s,baz=88,slow=8.2,SNR=22							
ILAR	**Eielson Array**	**86.06**	**13**	P		P	00 31 05.7	-0.1
	0.2nm,0.3s,baz=226,slow=3.8,SNR=4.9							

*BJI **30** 00:43:09.7, 3°.58N×62°.92E, h10km, mB4.9/18, mb4.6/30, Ms4.4/15, Ms7 4.1/16*
*MOS **30** 00:43:12.6±0.9, 3°.57N×63°.33E, h10km, mb4.9/59, Error ellipse: s-maj=10.4km s-min=4.8km az=117.3*
*SZGRF **30** 00:43:13.7, 3°.29N×63°.94E, h33km, mb5.1, Carlsberg Ridge*
*ISCJB **30** 00:43:13.9±1.7, 3°.63N±0°.06×63°.37E±0°.04, h15km±11km, mb4.6/113, MS3.8/25, Error ellipse: s-maj=10.1km s-min=6.1km az=0.4*
*IDC **30** 00:43:13.9±0.6, 3°.81N×63°.54E, h0km, mb4.2/19, mb1 4.4/19, mb1mx4.2/28, mbtmp4.2/19, MS3.6/12, Ms1 3.6/12, ms1mx3.4/27, Error ellipse: s-maj=17.3km s-min=13.8km az=12.0*
*NEIC **30** 00:43:15.2±0.3, 3°.70N×63°.45E, h10km, mb4.8/61, Error ellipse: s-maj=9.5km s-min=6.5km az=196.0*

ISC 30 00:43:17.8±1.6, 3°.65N±0°.06×63°.42E±0°.04, h27km±11km, h18km±1.7km; pP-P, n283, σ0s96/281, mb4.6/113, MS3.8/25, 17C-13D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAD	**Karad**	**17.19**	**37**	*e*PKP		**Pn**	**00 47 16.3**	**+0.1**
KAD				AMb		AMB	00 47 20.4	
	comp=Z,63nm,1.1s							
POO	**Poona**	**17.96**	**34**	*e*PKP		**Pn**	**00 47 25.3**	**-0.5**
LATR	**Latur**	**19.51**	**40**	*e*PKP		**Pn**	**00 47 42.5**	**-2.0**
BSY	**Bisya**	**19.91**	**343**	P		**Pn**	**00 47 49.3**	**0.0**
	SNR=7.6							
HYB	**Hyderabad**	**20.18**	**46**	*i* P		**P**	**00 47 50.0**	**-0.5**
HOQ	**Hoqain**	**20.68**	**344**	P		**P**	**00 47 57.2**	**+1.4**
	SNR=6.2							
ARQ	**Araqi**	**20.68**	**342**	P		**P**	**00 47 57.5**	**+1.7**
	SNR=13							
AKL	**Akola**	**21.50**	**37**	*e*PKP		**P**	**00 48 04.5**	**-0.3**
AKL				AMb		AMB	00 48 09.9	
	comp=Z,60nm,1.5s,mb4.8							
ATD	**Arta Tunnel**	**21.83**	**292**	P		**P**	**00 48 10.1**	**+1.7**
ATD				LR		LR	00 54 38.3	
ATD	**Arta Tunnel**	**21.83**	**292**	P		**P**	**00 48 10.1**	**+1.7**
	comp=Z,1.8nm,0.3s,mb3.9,baz=144,slow=18,SNR=2.1							
ATD				LR		LR	00 54 38.3	
	comp=Z,92nm,21.3s,MS3.2,baz=213,slow=31							
ASHO	**Ashiyiah**	**22.08**	**342**	P		**P**	**00 48 12.8**	**+1.9**
	SNR=8.4							
NAZ	**Nazwa, Dubai**	**22.49**	**341**	P		**P**	**00 48 18.9**	**+3.7**
	SNR=7.7							
BHPL	**Bhopal**	**23.72**	**34**	*e*PKP		**P**	**00 48 28.0**	**+0.1**
BHPL				AMb		AMB	00 48 35.7	
	comp=Z,41nm,1.7s,mb4.6							
AJM	**Ajmer**	**25.11**	**24**	*e*PKP		**P**	**00 48 41.7**	**+1.1**
AJM				AMb		AMB	00 48 43.9	
	comp=Z,28nm,1.4s,mb4.6							
KMBO	**Kilima Mbogo**	**26.58**	**260**	*e*P		**P**	**00 48 57.9**	**+3.8**
	comp=Z,30nm,1.6s,mb4.6							
KMBO	**Kilima Mbogo**	**26.58**	**260**	P		**P**	**00 48 55.9**	**+1.8**
	comp=Z,2.9nm,0.7s,mb3.9,baz=181,slow=24,SNR=5.1							
KMBO	**Kilima Mbogo**	**26.58**	**260**	*e*P		**P**	**00 48 57.9**	**+3.8**
KMBO				pmax		pmax		
	comp=Z,30nm,1.6s							
OPO	**Ambohidratompo**	**27.27**	**215**	P		**P**	**00 49 03.0**	**+2.9**
	comp=Z,3.3nm,1.0s,mb3.8,baz=35,slow=9.4,SNR=3.2							
KBL	**Kabul**	**31.17**	**9**	*e*P		**P**	**00 49 37.0**	**+2.3**
	comp=Z,7.6nm,1.0s,mb4.5							
KBL	**Kabul**	**31.17**	**9**	*e*P		**P**	**00 49 37.0**	**+2.4**
KBL				pmax		pmax		
	comp=Z,8.0nm,1.0s,mb4.5							
PSI	**Prapat**	**35.45**	**90**	P		**P**	**00 50 12.6**	**+0.3**
	comp=Z,3.4nm,0.4s,mb4.6,baz=196,slow=4.1,SNR=4.3							
LSA	**Lhasa**	**36.89**	**42**	P		**P**	**00 50 20.3**	**-4.0**
LSA	**Lhasa**	**36.89**	**42**	*e*P		**P**	**00 50 25.5**	**+1.2**
	comp=Z,19nm,0.9s,mb4.9							
LSA	**Lhasa**	**36.89**	**42**	*e*P		**P**	**00 50 25.5**	**+1.2**
LSA				pmax		pmax		
	comp=Z,19nm,0.9s,mb4.9							
KULM	**Kulim**	**37.15**	**86**	*e*P		**P**	**00 50 26.1**	**-0.6**
	comp=Z,4.7nm,0.8s,mb4.4							
KSH	**Kashi**	**37.47**	**16**	P		**P**	**00 50 25.5**	**-3.6**
KSH				*e*pP		pP	00 50 29.8	-7.3
KSH				*e*sP		sP	00 50 33.0	-7.3
KSH				*e*PP		PP	00 51 50.5	-4.4
KSH				*e*PcP		PcP	00 52 48.3	+1.0
KSH				*e*S		**S**	**00 56 08.8**	**-7.4**
KSH				*e*sS		sS	00 56 15.8	-14
KSH				*e*ScP		ScP	00 56 33.0	0.0
KSH				*e*PcS		PcS	00 56 35.5	-0.2
KSH				*e*SS		SS	00 58 36.0	-25
KSH				*e*ScS		ScS	01 00 38.5	-2.6
KSH				pmax		pmax		
	comp=Z,10.0nm,1.3s,mb4.5							
KSH				pmax		pmax		
	comp=Z,48nm,5.7s							
KSH				LR		LR		
	comp=N,370nm,14.3s,MS4.4							
KSH				LR		LR		
	comp=E,140nm,10.8s,MS4.4							
KSH				LR		LR		
	comp=Z,120nm,6.9s							
CMAR	**Chiang Mai Arr**	**37.73**	**64**	P		**P**	**00 50 32.1**	**+0.5**
	comp=Z,3.3nm,0.9s,mb4.0,baz=261,slow=8.8,SNR=24							
CMAR				LR		LR	01 05 05.7	
	comp=Z,59nm,19.1s,MS3.4,baz=65,slow=35							
CHTO	**Chiang Mai**	**37.84**	**64**	*e*P		**P**	**00 50 32.2**	**-0.4**
	comp=Z,11nm,1.1s,mb4.5							
CHTO	**Chiang Mai**	**37.84**	**64**	*e*P		**P**	**00 50 32.2**	**-0.4**
CHTO				pmax		pmax		
	comp=Z,11nm,1.1s,mb4.5							
CHTO	**Chiang Mai**	**37.84**	**64**	P		**P**	**00 50 33.4**	**+0.8**
	SNR=6.9							
KKAR	**Karatay Array**	**39.79**	**8**	*e*P		**P**	**00 50 48.7**	**+0.3**
	comp=Z,12nm,1.3s,mb4.5							
KKAR	**Karatay Array**	**39.79**	**8**	*e*P		**P**	**00 50 48.7**	**+0.2**
KKAR				pmax		pmax		
	comp=Z,12nm,1.3s,mb4.5							
EKS2	**Erkin-Say**	**39.92**	**12**	*e*P		**P**	**00 50 50.2**	**+0.6**
	comp=Z,26nm,1.1s,mb4.9							
EKS2	**Erkin-Say**	**39.92**	**12**	*e*P		**P**	**00 50 50.2**	**+0.6**
EKS2				pmax		pmax		
	comp=Z,26nm,1.1s,mb4.9							
AAK	**Ala-Archa**	**40.05**	**13**	*e*P		**P**	**00 50 51.6**	**+0.9**
	comp=Z,9.7nm,1.2s,mb4.4							
AAK	**Ala-Archa**	**40.05**	**13**	LR		LR	01 07 12.6	
	comp=Z,84nm,21.1s,MS3.6,baz=190,slow=36							
AAK	**Ala-Archa**	**40.05**	**13**	⇓*e*P		**P**	**00 50 51.4**	**+0.7**
AAK				pmax		pmax		
	comp=Z,3.0nm,1.0s,mb4.0							
GNI	**Garni**	**40.07**	**338**	*e*P		**P**	**00 50 52.7**	**+1.8**
	comp=Z,16nm,1.0s,mb4.7							
GNI	**Garni**	**40.07**	**338**	P		**P**	**00 50 51.9**	**+1.0**
	comp=Z,2.5nm,0.5s,mb4.2,baz=143,slow=10,SNR=12							
GNI	**Garni**	**40.07**	**338**	*de*P		**P**	**00 50 51.6**	**+0.7**
GNI				pmax		pmax		
	comp=Z,29nm,1.4s							
GNI	**Garni**	**40.07**	**338**	P		**P**	**00 50 53.8**	**+3.0**
	SNR=5.3							
FRU	**Bishkek**	**40.27**	**13**	*e*P		**P**	**00 50 53.0**	**+0.5**
TKM2	**Tokmak 2**	**40.58**	**14**	*e*P		**P**	**00 50 55.1**	**+0.1**
	comp=Z,4.4nm,1.0s,mb4.0							
TKM2	**Tokmak 2**	**40.58**	**14**	*e*P		**P**	**00 50 55.1**	**+0.1**
TKM2				pmax		pmax		
	comp=Z,4.0nm,1.0s,mb4.0							
MALT	**Malatya**	**41.36**	**330**	*e*P		**P**	**00 51 04.4**	**+2.8**
	comp=Z,6.9nm,1.3s,mb4.1							
MALT	**Malatya**	**41.36**	**330**	*e*P		**P**	**00 51 04.4**	**+2.8**
MALT				pmax		pmax		
	comp=Z,7.0nm,1.3s,mb4.1							
CSS	**Prodhromos**	**41.81**	**322**	*e*P		**P**	**00 51 06.0**	**+0.6**
	comp=Z,6.3nm,1.0s,mb4.2							
KMI	**Kunming**	**43.40**	**57**	P		**P**	**00 51 19.0**	**+0.6**
KMI				pP		pP	00 51 22.8	-3.6
KMI				sP		sP	00 51 24.0	-5.7
KMI				PP		PP	00 53 03.0	+3.4
KMI				S		**S**	**00 57 47.8**	**+2.7**
KMI				SS		SS	01 00 53.8	-5.9
KMI				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.4							
KMI				pmax		pmax		
	comp=Z,67nm,3.2s							
KMI				LR		LR		
	comp=N,81nm,12.9s,MS3.9							
KMI				LR		LR		
	comp=E,78nm,15.0s,MS3.9							
KMI				LR		LR		
	comp=Z,93nm,20.4s							
KIV	**Kislovodsk**	**44.12**	**338**	*e*P		**P**	**00 51 23.9**	**0.0**
	comp=Z,4.4nm,0.8s,mb4.2							
KIV	**Kislovodsk**	**44.12**	**338**	P		**P**	**00 51 24.0**	**+0.1**
KIV				*e*			00 51 28.9	
KIV							00 53 10.0	
KIV				pmax		pmax		
	comp=Z,13nm,1.6s,mb4.4							
KIV				MLR		MLR		
	comp=Z,100nm,18.0s,MS3.8							
BR131	**Keskin Array S**	**44.90**	**327**	*e*P		**P**	**00 51 29.9**	**-0.4**
BRTR	**Keskin Array B**	**44.90**	**327**	P		**P**	**00 51 30.5**	**+0.3**
BRTR	

comp=Z,18nm,1.4s,mb4.8
ARU Arti 52.77 357 *c iP* **P 00 52 30.2 -0.1**
ARU 00 54 26.8
ARU S **S 00 59 59.3 +2.5**
ARU SS SS 01 03 36.1 +0.4
ARU pmax pmax
comp=Z,14nm,1.2s,mb4.8
VRI Vrincioaia 52.81 328 ⇑P **P 00 52 33.2 +2.4**
VRI Vrincioaia 52.81 328 ⇑*iP* **P 00 52 33.2 +2.4**
PLOR Plostina 52.84 328 ⇓P **P 00 52 33.5 +2.4**
PLOR Plostina 52.84 328 ⇓*iP* **P 00 52 33.5 +2.4**
MLR Muntele Rosu 52.98 328 ⇓P **P 00 52 34.5 +2.4**
MLR Muntele Rosu 52.98 328 ⇓*iP* **P 00 52 34.5 +2.4**
SVE Sverdlovsk 53.07 358⇓ *eP* **P 00 52 32.4 -0.1**
SVE pmax pmax
comp=Z,13nm,1.5s,mb4.6
ZALV Zalesovo Beam 53.11 16 P **P 00 52 30.9 -2.0**
comp=Z,8.7nm,1.0s,mb4.6,baz=217,slow=7.2,SNR=25
ZALV LR LR 01 15 01.9
comp=Z,44nm,21.8s,MS3.5,baz=239,slow=36
TESR 53.28 329 ⇓P **P 00 52 35.4 +1.1**
TESR 53.28 329 ⇓*iP* **P 00 52 35.4 +1.1**
VOIR 53.43 327 ⇑P **P 00 52 36.8 +1.4**
VOIR 53.43 327 ⇑*iP* **P 00 52 36.8 +1.4**
NVS Novosibirsk 53.51 14 *eP* **P 00 52 33.0 -2.8**
NVS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
NVS pmax pmax
comp=N,5.0nm,1.3s
BZS Buzias 55.45 325 ⇑P **P 00 52 50.6 +0.5**
BZS Buzias 55.45 325 ⇑*iP* **P 00 52 50.6 +0.5**
OBN Obninsk 55.71 342⇓ *eP* **P 00 52 52.1 +0.3**
OBN *e* 00 52 57.2
OBN *e* 00 55 02.6
OBN pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
HHC Hu-ho-hao-te 56.88 42 *eP* **P 00 53 01.8 +1.4**
HHC pP pP 00 53 06.0 -2.7
HHC sP sP 00 53 08.8 -3.0
HHC PP PP 00 55 09.8 +2.8
HHC S **S 01 00 51.8 -0.7**
HHC ScS ScS 01 02 46.5 -1.6
HHC SS SS 01 04 41.0 -0.1
HHC pmax pmax
comp=Z,12nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,76nm,3.6s
HHC LR LR
comp=N,89nm,14.5s,MS4.1
HHC LR LR
comp=E,71nm,14.7s,MS4.1
HHC LR LR
comp=Z,140nm,15.0s,MS4.2
UZH Uzhgorod 56.90 329⇓ *iP* **P 00 53 01.1 +0.7**
KWP Kalwaria Pacla 57.32 330 *eP* **P 00 53 03.9 +0.6**
comp=Z,18nm,1.1s,mb5.0
KWP Kalwaria Pacla 57.32 330 *eP* **P 00 53 03.9 +0.6**
KWP pmax pmax
comp=Z,18nm,1.1s,mb5.0
SONM Songino Array 57.40 33 P **P 00 53 04.1 +0.1**
comp=Z,2.8nm,0.9s,mb4.3,baz=226,slow=7.3,SNR=13
SONM LR LR 01 17 32.9
comp=Z,125nm,21.2s,MS4.0,baz=305,slow=36
PKSM Moragy 57.49 325 ⇓P **P 00 53 05.2 +0.6**
PKSM Moragy 57.49 325 ⇓*iP* **P 00 53 05.2 +0.6**
CRVS Cervenica-Dubn 57.51 328 *eP* **P 00 53 05.5 +0.8**
comp=Z,8.5nm,1.3s,mb4.6
CRVS Cervenica-Dubn 57.51 328 *eP* **P 00 53 05.5 +0.8**
CRVS pmax pmax
comp=Z,9.0nm,1.3s,mb4.6
CRVS Cervenica-Dubn 57.51 328 *eP* **P 00 53 05.5 +0.8**
STHS Stebnicka Huta 57.93 329 *eP* **P 00 53 09.1 +1.4**
comp=Z,5.3nm,1.3s,mb4.4
STHS Stebnicka Huta 57.93 329 *eP* **P 00 53 09.1 +1.4**
STHS pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
STHS Stebnicka Huta 57.93 329 *eP* **P 00 53 09.1 +1.4**
VYHS Vyhne 58.66 327 *eP* **P 00 53 12.8 0.0**
comp=Z,77nm,3.9s
VYHS Vyhne 58.66 327 *eP* **P 00 53 12.8 0.0**
VYHS pmax pmax
comp=Z,77nm,3.9s
VYHS Vyhne 58.66 327 *eP* **P 00 53 12.8 0.0**
NJ2 Nanjing 59.05 55 *eP* **P 00 53 17.5 +1.7**
NJ2 pmax pmax
comp=Z,20nm,0.7s,mb5.3
BJI Beijing 59.72 45 P **P 00 53 19.5 -0.7**
BJI S **S 01 01 30.0 +0.4**
BJI pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
BJI LR LR
comp=N,70nm,22.2s,MS4.0
BJI LR LR
comp=E,85nm,17.6s,MS4.0
BJI LR LR
comp=Z,33nm,19.5s,MS3.5
OKC Ostrava-Krasne 59.80 328 *eP* **P 00 53 20.1 -0.6**
OKC Ostrava-Krasne 59.80 328 *eP* **P 00 53 20.1 -0.6**
SOKA Soboth 59.85 323⇑ *iP* **P 00 53 21.4 +0.4**
comp=Z,6.8nm,1.3s,mb4.5
KLMR Klimovskoe 59.88 347 P **P 00 53 18.3 -2.6**
KLMR pmax pmax
comp=Z,39nm,1.4s,mb5.2
CONA Conrad Observa 60.02 325⇑ *iP* **P 00 53 22.4 +0.3**
comp=Z,15nm,1.6s,mb4.8
OBKA Obir 60.06 323⇑ *iP* **P 00 53 23.0 +0.6**
comp=Z,8.5nm,1.4s,mb4.6
MORC Moravsky Berou 60.09 328 *eP* **P 00 53 22.9 +0.2**
comp=Z,7.4nm,1.1s,mb4.6
MORC Moravsky Berou 60.09 328 *eP* **P 00 53 22.9 +0.3**
MORC pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
MOA Molln 60.90 324⇑ *iP* **P 00 53 28.4 +0.2**
comp=Z,13nm,1.1s,mb5.0
TREC Trest 60.95 326 *eP* **P 00 53 28.6 +0.1**
TREC *e* pP 00 53 35.1 -1.7
TREC Trest 60.95 326 *eP* **P 00 53 28.6 +0.1**
TREC *epP* pP 00 53 35.1 -1.7
DPC Dobruska-Polom 61.07 328 *eP* **P 00 53 29.0 -0.3**
DPC *e* pP 00 53 35.1 -2.5
DPC Dobruska-Polom 61.07 328 *eP* **P 00 53 29.0 -0.3**
DPC *epP* pP 00 53 35.1 -2.5
UPC Upice 61.32 328 *eP* **P 00 53 31.2 +0.2**
UPC *e* pP 00 53 37.1 -2.2
UPC Upice 61.32 328 *eP* **P 00 53 31.2 +0.2**
UPC *epP* pP 00 53 37.1 -2.2
ABTA Abfaltersbach 61.40 323⇑ *iP* **P 00 53 31.6 -0.1**
comp=Z,11nm,1.3s,mb4.8
TORD Torodi Ar. Bea 61.66 283 LR LR 01 18 56.3
comp=Z,61nm,18.0s,MS3.8,baz=150,slow=35
PRU Pruhonice 61.84 327 *eP* **P 00 53 32.5 -2.0**
PRU *e* pP 00 53 41.2 -1.6
PRU Pruhonice 61.84 327 *eP* **P 00 53 32.5 -2.0**
PRU *epP* pP 00 53 41.2 -1.6
PGF Pioggiola 61.86 317 *eP* **P 00 53 34.5 -0.3**
KHC Kasperske Hory 61.94 325 *eP* **P 00 53 34.1 -1.1**
comp=Z,11nm,1.6s,mb4.8
KHC Kasperske Hory 61.94 325 *eP* **P 00 53 34.2 -1.0**
KHC *e* pP 00 53 40.5 -3.0
KHC Kasperske Hory 61.94 325 *eP* **P 00 53 34.2 -1.0**
KHC *epP* pP 00 53 40.5 -3.0
PVCC Panska Ves 62.11 327 *eP* **P 00 53 27.1 -9.2**
FETA Feichten 62.61 322⇑ *iP* **P 00 53 39.4 -0.3**
comp=Z,5.6nm,1.1s,mb4.6
BRG Berggiesshubel 62.63 327 *eP* **P 00 53 40.0 +0.2**
comp=Z,20nm,1.9s,mb4.9
BRG Berggiesshubel 62.63 327 *eP* **P 00 53 40.2 +0.5**
comp=Z,9.9nm,1.4s,mb4.7
BRG Berggiesshubel 62.63 327 *eP* **P 00 53 40.2 +0.4**
BRG pmax pmax
comp=Z,6.0nm,1.4s,mb4.5
FUR Furstenfeldbru 62.81 324 *eP* **P 00 53 40.8 -0.2**
comp=Z,12nm,1.1s,mb4.9
FUR Furstenfeldbru 62.81 324 *eP* **P 00 53 40.8 -0.2**
FUR pmax pmax
comp=Z,12nm,1.1s,mb4.9
NKC Novy Kostel 63.12 326 *eP* **P 00 53 43.3 +0.2**
NKC *e* pP 00 53 49.7 -1.7
NKC Novy Kostel 63.12 326 *eP* **P 00 53 43.3 +0.2**
NKC *epP* pP 00 53 49.7 -1.7
WERN Wernitzgruen 63.19 326 *eP* **P 00 53 44.2 +0.7**
comp=Z,14nm,1.1s,mb5.0
DAVA Damuels 63.25 322⇑ *iP* **P 00 53 44.2 +0.2**
comp=Z,14nm,1.2s,mb5.0
GUNZ Gunzen 63.25 326 *eP* **P 00 53 44.5 +0.6**
comp=Z,12nm,1.4s,mb4.8
CLL Collm 63.36 327 *eP* **P 00 53 45.1 +0.5**
comp=Z,9.0nm,1.3s,mb4.7
CLL Collm 63.36 327 *i P* **P 00 53 44.4 -0.2**
comp=Z,12nm,1.3s,mb4.9
CLL *i* pP 00 53 51.0 -2.0
CLL Collm 63.36 327 *i P* **P 00 53 44.4 -0.2**
CLL *i* pP 00 53 51.0 -2.0
CLL pmax pmax
comp=Z,12nm,1.3s,mb4.9
CLL Collm 63.36 327 *i P* **P 00 53 44.4 -0.2**
comp=Z,12nm,1.3s,mb4.9
CLL *i* (sP) sP 00 53 51.0 -5.1
SBF Sospel 63.42 318 *eP* **P 00 53 44.8 -0.4**
comp=Z,23nm,1.1s,mb4.9
SBF Sospel 63.42 318 *eP* **P 00 53 44.8 -0.4**
comp=Z,11nm,1.1s,mb4.9
SBF Sospel 63.42 318 *eP* **P 00 53 44.8 -0.4**
SBF pmax pmax
comp=Z,11nm,1.1s,mb4.9
GRA1 Grafenberg Arr 63.55 325 *eP* **P 00 53 45.7 -0.2**
comp=Z,14nm,1.2s,mb4.9
GRF Grafenberg Arr 63.55 325 *eP* **P 00 53 45.7 -0.2**
comp=Z,14nm,1.2s,mb4.9
GRF Grafenberg Arr 63.55 325 *eP* **P 00 53 45.7 -0.2**
GRF pmax pmax
comp=Z,14nm,1.2s,mb4.9
GRF Grafenberg Arr 63.55 325 *eP* **P 00 53 45.7 -0.2**
GRF pmax pmax
comp=Z,14nm,1.2s,mb4.9
GRFO Grafenberg 63.55 325 *eP* **P 00 53 45.3 -0.6**
comp=Z,6.6nm,0.8s,mb4.7
GRFO Grafenberg 63.55 325 *eP* **P 00 53 45.3 -0.6**
GRFO pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
MOX Moxa 63.79 326 *eP* **P 00 53 47.9 +0.4**
MOX Moxa 63.79 326 *eP* **P 00 53 47.8 +0.3**
comp=Z,5.0nm,1.3s,mb4.4
FRF La Foret Royal 63.84 317 *eP* **P 00 53 47.4 -0.5**
comp=Z,17nm,1.3s,mb4.6
FRF La Foret Royal 63.84 317 *eP* **P 00 53 47.4 -0.5**
comp=Z,8.4nm,1.3s,mb4.6
FRF La Foret Royal 63.84 317 *eP* **P 00 53 47.4 -0.5**
FRF pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
LMR La Mourre 63.84 317 *eP* **P 00 53 47.6 -0.4**
comp=Z,21nm,1.4s,mb4.7
LMR La Mourre 63.84 317 *eP* **P 00 53 47.6 -0.4**
comp=Z,10nm,1.4s,mb4.7
LMR La Mourre 63.84 317 *eP* **P 00 53 47.6 -0.4**
LMR pmax pmax
comp=Z,11nm,1.4s,mb4.7
NEUB Neuenburg 63.98 327 *eP* **P 00 53 49.2 +0.5**
comp=Z,11nm,1.0s,mb4.8
MBDF Montbardon 64.19 319 *eP* **P 00 53 49.4 -0.8**
comp=Z,13nm,1.3s,mb4.5
MBDF Montbardon 64.19 319 *eP* **P 00 53 49.4 -0.8**
comp=Z,6.3nm,1.3s,mb4.5
MBDF Montbardon 64.19 319 *eP* **P 00 53 49.4 -0.8**
MBDF pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
LPG La Plagne 64.49 319 *eP* **P 00 53 51.4 -0.8**
comp=Z,25nm,1.2s,mb4.8
LPG La Plagne 64.49 319 *eP* **P 00 53 51.4 -0.8**
comp=Z,12nm,1.2s,mb4.8
LPG La Plagne 64.49 319 *eP* **P 00 53 51.4 -0.8**
LPG pmax pmax
comp=Z,12nm,1.2s,mb4.8
LPL La Plagne 64.51 319 *eP* **P 00 53 51.5 -0.8**
comp=Z,26nm,1.3s,mb4.8
LPL La Plagne 64.51 319 *eP* **P 00 53 51.5 -0.8**
comp=Z,13nm,1.3s,mb4.8
LPL La Plagne 64.51 319 *eP* **P 00 53 51.5 -0.8**
LPL pmax pmax
comp=Z,13nm,1.3s,mb4.8
BFO Black Forest 64.64 323 *eP* **P 00 53 53.6 +0.5**
comp=Z,18nm,1.2s,mb5.0
BFO Black Forest 64.64 323 *eP* **P 00 53 53.6 +0.5**
BFO pmax pmax
comp=Z,18nm,1.2s,mb5.0
SMRF Simiane la Rot 64.71 317 *eP* **P 00 53 52.6 -1.0**
comp=Z,19nm,1.4s,mb4.6
SMRF Simiane la Rot 64.71 317 *eP* **P 00 53 52.6 -1.0**
comp=Z,19nm,1.4s,mb4.9
ORIF Oris-en-Rattie 64.85 319 *eP* **P 00 53 54.0 -0.5**
comp=Z,10nm,1.2s,mb4.4
ORIF *e*MLR MLR
comp=Z,74nm,22.2s,MS3.5
ORIF Oris-en-Rattie 64.85 319 *eP* **P 00 53 54.0 -0.5**
comp=Z,5.2nm,1.2s,mb4.4
ORIF Oris-en-Rattie 64.85 319 *eP* **P 00 53 54.0 -0.5**
ORIF pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
RGN Rugen 64.89 330 *eP* **P 00 53 53.9 -0.7**
comp=Z,92nm,1.1s,mb5.7
FITZ Fitzroy Crossi 64.98 112 *eP* **P 00 53 55.7 -0.2**
comp=Z,11nm,1.3s,mb4.7
FITZ Fitzroy Crossi 64.98 112 P **P 00 53 55.6 -0.3**
comp=Z,3.1nm,0.9s,mb4.3,baz=226,slow=5.5,SNR=5.0
CLZ Clausthal 65.05 327 *eP* **P 00 53 56.4 +0.7**
comp=Z,17nm,1.2s,mb5.0
CLZ Clausthal 65.05 327 *eP* **P 00 53 56.4 +0.7**
CLZ pmax pmax
comp=Z,17nm,1.2s,mb5.0
ECH Echery 65.31 322 *eP* **P 00 53 57.4 -0.1**
comp=Z,5.4nm,1.0s,mb4.5
ECH Echery 65.31 322 *eP* **P 00 53 57.4 -0.1**
ECH pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
CDF Champ du Feu 65.32 322 *eP* **P 00 53 57.0 -0.5**
comp=Z,12nm,0.9s,mb4.6
CDF Champ du Feu 65.32 322 *eP* **P 00 53 57.0 -0.5**
comp=Z,6.2nm,0.9s,mb4.6
CDF Champ du Feu 65.32 322 *eP* **P 00 53 57.0 -0.5**
CDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
HINF Hinteralfeld 65.33 322 *eP* **P 00 53 56.6 -1.0**
CABF La Chapelle 65.34 320 *eP* **P 00 53 57.7 0.0**
comp=Z,63nm,1.1s,mb5.2
CABF La Chapelle 65.34 320 *eP* **P 00 53 57.7 0.0**
comp=Z,31nm,1.1s,mb5.3
CABF La Chapelle 65.34 320 *eP* **P 00 53 57.7 0.0**
CABF pmax pmax
comp=Z,31nm,1.1s,mb5.2
TNS Taunus Mts 65.39 325 *eP* **P 00 53 58.5 +0.6**
comp=Z,27nm,1.5s,mb5.1
TNS Taunus Mts 65.39 325 *eP* **P 00 53 58.5 +0.6**
TNS pmax pmax
comp=Z,27nm,1.5s,mb5.1
NRDL Niedersach Rie 65.51 327 *eP* **P 00 53 58.4 -0.2**
comp=Z,10.0nm,1.3s,mb4.7
VIVF Saint-Julien-l 65.62 318 *eP* **P 00 53 59.0 -0.6**
HAU Haudompre 65.72 322 *eP* **P 00 53 59.2 -0.9**
HAU *e*MLR MLR
comp=Z,93nm,20.2s,MS3.7
HAU Haudompre 65.72 322 *eP* **P 00 53 59.2 -0.9**
HAU MLR MLR
comp=Z,90nm,20.3s,MS4.0
SSB Saint Sauveur 65.86 319 *eP* **P 00 54 01.0 -0.1**
comp=Z,9.6nm,1.1s,mb4.7
SSB Saint Sauveur 65.86 319 *eP* **P 00 54 01.0 -0.1**
SSB pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
LASF Ste Croix 65.91 317 *eP* **P 00 54 01.4 0.0**
comp=Z,31nm,1.3s,mb4.9
WLF Walferdange 66.50 323 P **P 00 54 05.3 +0.2**
comp=Z,8.3nm,1.6s,mb4.5
WLF Walferdange 66.50 323 *eP* **P 00 54 05.4 +0.3**
comp=Z,17nm,1.6s,mb4.8
WLF Walferdange 66.50 323 *eP* **P 00 54 05.3 +0.2**
comp=Z,3.7nm,0.6s,mb4.6
WLF Walferdange 66.50 323 *eP* **P 00 54 05.3 +0.2**
WLF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
SFTF Sexfontaines 66.61 322 *eP* **P 00 54 05.1 -0.7**
comp=Z,37nm,1.2s,mb5.0
SFTF Sexfontaines 66.61 322 *eP* **P 00 54 05.1 -0.7**
comp=Z,37nm,1.2s,mb5.3
MEZF Maizieres J'vi 66.71 322 *eP* **P 00 54 05.9 -0.6**
comp=Z,24nm,1.1s,mb4.8
MEZF Maizieres J'vi 66.71 322 *eP* **P 00 54 05.9 -0.6**
comp=Z,24nm,1.1s,mb5.2
MTLF Montolieu 66.80 316 *eP* **P 00 54 05.4 -1.7**
SMF Signal de Mont 66.80 320 *eP* **P 00 54 06.0 -1.1**
comp=Z,23nm,1.2s,mb4.8
SMF Signal de Mont 66.80 320 *eP* **P 00 54 06.0 -1.1**
comp=Z,11nm,1.2s,mb4.8
SMF Signal de Mont 66.80 320 *eP* **P 00 54 06.0 -1.1**
SMF pmax pmax
comp=Z,11nm,1.2s,mb4.8
LOR Lormes 67.01 320 *eP* **P 00 54 07.4 -1.0**
comp=Z,27nm,1.4s,mb4.8
LOR *e*MLR MLR
comp=Z,56nm,19.2s,MS3.5
LOR Lormes 67.01 320 *eP* **P 00 54 07.4 -1.0**
comp=Z,13nm,1.4s,mb4.8
LOR LR LR
comp=Z,60nm,19.3s,MS3.8
LOR Lormes 67.01 320 *eP* **P 00 54 07.4 -1.0**
LOR pmax pmax
comp=Z,13nm,1.4s,mb4.8
LOR MLR MLR
comp=Z,60nm,19.3s,MS3.8
SSF Saint Saulge 67.16 320 *eP* **P 00 54 08.5 -0.8**
comp=Z,15nm,1.1s,mb4.6
SSF Saint Saulge 67.16 320 *eP* **P 00 54 08.5 -0.8**
comp=Z,7.7nm,1.1s,mb4.7
SSF Saint Saulge 67.16 320 *eP* **P 00 54 08.5 -0.8**
SSF pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
AVF Avril sur Loir 67.16 320 *eP* **P 00 54 08.2 -1.2**
BCLA Clavier 67.31 324 P **P 00 54 10.5 +0.3**
CAF Calviac 67.40 318 *eP* **P 00 54 10.6 -0.3**
comp=Z,11nm,1.3s,mb4.5
CAF Calviac 67.40 318 *eP* **P 00 54 10.6 -0.3**
comp=Z,5.7nm,1.3s,mb4.4
CAF Calviac 67.40 318 *eP* **P 00 54 10.6 -0.3**
CAF pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
BGF Bois d'Agland 67.41 319 *eP* **P 00 54 10.5 -0.5**
comp=Z,28nm,1.0s,mb5.0
BGF Bois d'Agland 67.41 319 *eP* **P 00 54 10.5 -0.5**
comp=Z,14nm,1.0s,mb5.0
BGF Bois d'Agland 67.41 319 *eP* **P 00 54 10.5 -0.5**
BGF pmax pmax
comp=Z,14nm,1.0s,mb5.0
GIVF Givet 67.47 323 *eP* **P 00 54 10.7 -0.5**
CN2 Changchun 67.50 44 *eP* **P 00 54 12.5 +0.9**
CN2 *eS* S 01 03 07.0 +0.5
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
CN2 pmax pmax
comp=Z,200nm,4.0s
KSRS Korea Array 67.65 51 P **P 00 54 11.3 -1.3**
comp=Z,1.0nm,0.6s,mb4.0,baz=253,slow=8.7,SNR=5.0
KSRS LR LR 01 22 17.7
comp=Z,29nm,19.4s,MS3.5,baz=248,slow=35
TCF Toulx Ste Croi 67.74 319 *eP* **P 00 54 12.5 -0.5**
comp=Z,15nm,1.2s,mb4.6
TCF Toulx Ste Croi 67.74 319 *eP* **P 00 54 12.5 -0.5**
comp=Z,7.4nm,1.2s,mb4.6
TCF Toulx Ste Croi 67.74 319 *eP* **P 00 54 12.5 -0.5**
TCF pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
BAIF Baives 67.81 323 *eP* **P 00 54 12.9 -0.5**
comp=Z,14nm,1.1s,mb4.6
BAIF Baives 67.81 323 *eP* **P 00 54 12.9 -0.5**
comp=Z,6.9nm,1.1s,mb4.6
BAIF Baives 67.81 323 *eP* **P 00 54 12.9 -0.5**
BAIF pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
RJF Les Rejaudoux 67.88 318 *eP* **P 00 54 13.8 -0.2**
comp=Z,23nm,1.2s,mb4.8
RJF *e*MLR MLR
comp=Z,75nm,17.5s,MS3.7
RJF Les Rejaudoux 67.88 318 *eP* **P 00 54 13.8 -0.2**
comp=Z,12nm,1.2s,mb4.8
RJF LR LR
comp=Z,80nm,17.5s,MS4.0
RJF Les Rejaudoux 67.88 318 *eP* **P 00 54 13.8 -0.2**
RJF pmax pmax
comp=Z,12nm,1.2s,mb4.8
RJF MLR MLR
comp=Z,80nm,17.5s,MS4.0
LFF La Frestale 68.30 317 *eP* **P 00 54 16.5 -0.1**
comp=Z,25nm,1.1s,mb4.8
LFF La Frestale 68.30 317 *eP* **P 00 54 16.5 -0.1**
comp=Z,12nm,1.1s,mb4.8
LFF La Frestale 68.30 317 *eP* **P 00 54 16.5 -0.1**
LFF pmax pmax
comp=Z,12nm,1.1s,mb4.8
ETSF Etsaut 68.62 315 *eP* **P 00 54 18.9 +0.3**
comp=Z,19nm,1.3s,mb4.6
ETSF Etsaut 68.62 315 *eP* **P 00 54 18.9 +0.3**
comp=Z,9.6nm,1.3s,mb4.6
ETSF Etsaut 68.62 315 *eP* **P 00 54 18.9 +0.3**
ETSF pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
NOA NORSAR Array B 69.33 336 P **P 00 54 21.9 -0.8**
comp=Z,3.1nm,1.0s,mb4.2,baz=113,slow=6.9,SNR=5.1
NOA LR LR 01 26 05.2
comp=Z,46nm,20.7s,MS3.7,baz=0.0,slow=37
MFF Saint Martin d 69.38 319 *eP* **P 00 54 22.7 -0.6**
comp=Z,34nm,1.6s,mb4.7
MFF Saint Martin d 69.38 319 *eP* **P 00 54 22.7 -0.6**
comp=Z,17nm,1.6s,mb4.7
MFF Saint Martin d 69.38 319 *eP* **P 00 54 22.7 -0.6**
MFF pmax pmax
comp=Z,17nm,1.6s,mb4.7
LDF La Druitiere 69.97 321 *eP* **P 00 54 25.8 -1.1**
comp=Z,4.3nm,0.7s,mb4.2
LDF La Druitiere 69.97 321 *eP* **P 00 54 25.8 -1.1**
comp=Z,2.2nm,0.7s,mb4.2
LDF La Druitiere 69.97 321 *eP* **P 00 54 25.8 -1.1**
LDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
FLN La Foliniere 70.25 321 *eP* **P 00 54 27.7 -0.9**
FLN *e*MLR MLR
comp=Z,73nm,17.2s,MS3.7
FLN La Foliniere 70.25 321 *eP* **P 00 54 27.7 -0.9**
FLN MLR MLR
comp=Z,70nm,17.3s,MS4.0
ESDC Sonseca Array 70.34 311 P **P 00 54 29.0 -0.4**
comp=Z,51nm,1.1s,mb4.4,baz=87,slow=5.7,SNR=16
ESLA Sonseca Array 70.34 311 *eP* **P 00 54 29.4 +0.1**
comp=Z,4.4nm,1.7s,mb4.1
ARCES ARCESS Array B 70.36 347 P **P 00 54 28.4 -0.5**
comp=Z,2.9nm,1.0s,mb4.2,baz=115,slow=4.1,SNR=3.4
GRR Gorron 70.38 320 *eP* **P 00 54 28.2 -1.2**
MDJ Mudanjiang 70.59 44 P **P 00 54 31.0 +0.2**
MDJ pP pP 00 54 33.5 -5.7
MDJ S S 01 03 46.0 +3.0
MDJ pmax pmax
comp=Z,9.0nm,1.6s,mb4.5
MDJ pmax pmax
comp=Z,43nm,4.4s
MDJ LR LR
comp=E,28nm,23.3s
MDJ LR LR
comp=Z,32nm,21.6s,MS3.5
MAW Mawson 71.10 180 LR LR 01 19 21.5
comp=Z,63nm,19.9s,MS3.9,baz=157,slow=30
SGMF Saint Gilles 71.42 320 *eP* **P 00 54 34.9 -0.8**
QUIF Quistinic 71.73 319 *eP* **P 00 54 36.5 -1.1**
ROSF Rostrenen 71.91 320 *eP* **P 00 54 37.4 -1.2**
comp=Z,39nm,1.4s,mb4.9
ROSF Rostrenen 71.91 320 *eP* **P 00 54 37.4 -1.2**
comp=Z,20nm,1.4s,mb4.8
ROSF Rostrenen 71.91 320 *eP* **P 00 54 37.4 -1.2**
ROSF pmax pmax
comp=Z,20nm,1.4s,mb4.8
WRA Warramunga Arr 73.41 112 P **P 00 54 48.0 -0.1**
comp=Z,6.5nm,1.0s,mb4.5,baz=287,slow=5.5,SNR=19
WB2 Warramunga Arr 73.42 112 *eP* **P 00 54 47.8 -0.4**
ASAR Alice Springs 73.71 116 P **P 00 54 50.0 +0.1**
comp=Z,5.9nm,1.1s,mb4.5,baz=285,slow=5.7,SNR=22
MJAR Matsushiro Arr 75.62 53 P **P 00 54 59.0 -1.7**
comp=Z,2.2nm,0.8s,mb4.1,baz=263,slow=8.4,SNR=5.8
TIXI Tiksi 78.97 17 *eP* **P 00 55 20.5 +1.8**
TIXI pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
CMSA Cobar Meteorol 85.31 122 *eP* **P 00 55 53.1 +0.3**
SEY Seymchan 86.30 27⇑ *eP* **P 00 55 56.7 -0.3**
VNA2 Neumayer--Watz 87.25 198 *eP* **P 00 56 02.3 +0.8**
VNA3 Neumayer Olymp 88.05 198 *eP* **P 00 56 05.3 0.0**
BILL Bilibino 91.42 22 P **P 00 56 22.0 +0.8**
BILL pmax pmax
comp=Z,3.0nm,0.4s,mb5.0
PDAR Pinedale Array 133.36 353 PKP PKPdf 01 02 32.4 +0.6
comp=Z,0.3nm,0.6s,baz=321,slow=1.2,SNR=3.7
NVAR Mina Array Bea 138.10 2 PKP PKPdf 01 02 41.4 +0.6
NVAR Mina Array Bea 138.10 2 PKP PKPdf 01 02 41.4 +0.6
comp=Z,1.2nm,0.9s,baz=342,slow=1.0,SNR=6.3

TXAR	**Lajitas Array**	**144.94**	**340**	PKP	PKPdf	01 02 52.9	-0.4	
	comp=Z,4.0nm,1.1s,baz=95,slow=1.4,SNR=19							

*IDC **30** 00:51:09.8±4.7,6°.07S×112°.80E,h516km±72km,mb3.1/7, mb1 3.3/8,mb1mx3.1/20,mbtmp3.2/8,Error ellipse: s-maj=61.7km s-min=12.8km az=56.0*
*ISCJB **30** 00:51:12.9±0.5,5°.95S±0°.09×113°.14E±0°.06,h567km±5km, mb3.6/7,Error ellipse: s-maj=14.7km s-min=8.5km az=11.3*
*DJA **30** 00:52:42,7°.30S×113°.11E,h300km,MLv3.5/13*
ISC 30 00:51:14.0±0.6,**5°.93S**±0°.08×**113°.23E**±0°.06,**h554**km±4km, **n30,σ1°07/33,mb3.6/7,Java Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NGJI	**Ngawi**	**2.27**	**231**	P	**S**	**00 53 26.9**	**+3.6**
SJI	**Sawahan**	**2.31**	**219**	P	**S**	**00 53 24.9**	**+1.2**
GMJI	**Gumukmas**	**2.34**	**175**	P	**S**	**00 52 28.3**	**+2.6**
KRKI	**Karangkates**	**2.35**	**199**	P	**S**	**00 53 23.2**	**-0.9**
KRKI				S	Sx	00 53 34.4	
PWJI	**Pagerwojo**	**2.52**	**214**	P	**S**	**00 53 25.5**	**-0.2**
BYJI	**Banyuwangi**	**2.53**	**154**	P	**S**	**00 53 25.5**	**-0.4**
NBBI	**Negara**	**2.79**	**150**	P	**S**	**00 53 27.8**	**-0.7**
SRBI	**Singaraja**	**2.91**	**138**	P	**S**	**00 53 31.3**	**+1.5**
PCJI	**Pacitan**	**3.04**	**222**	P	**S**	**00 53 30.3**	**-0.8**
UGM	**Wanagama**	**3.33**	**234**	P	**S**	**00 53 34.9**	**+0.3**
DNP	**Denpasar**	**3.37**	**144**	P	**S**	**00 53 33.8**	**-1.2**
IGBI	**Denpasar**	**3.45**	**147**	P	**S**	**00 53 34.1**	**-1.9**
YOGI	**Yogyakarta**	**3.46**	**237**	P	**S**	**00 53 36.7**	**+0.5**
BJII	**Banjamegara**	**3.76**	**248**	P	**S**	**00 53 42.4**	**+2.4**
TGJI	**Tegal**	**4.19**	**257**	P	**S**	**00 53 42.3**	**-3.4**
CISI	**Cisompet, Garu**	**5.61**	**253**	P	**S**	**00 54 03.1**	**-4.2**
SPSI	**Sidrap Palu**	**6.80**	**74**	P	**S**	**00 54 27.9**	**+0.6**
FITZ	**Fitzroy Crossi**	**17.12**	**136**	*e*P	**P**	**00 54 43.5**	**-0.3**
	9.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**17.12**	**136**	P	**P**	**00 54 43.7**	**-0.1**
	0.6nm,0.3s,baz=337,slow=6.9,SNR=22						
FITZ				S	**S**	**00 57 36.0**	**+1.3**
	0.1nm,0.3s,baz=343,slow=18,SNR=3.2						
KNA	**Kununurra**	**18.10**	**124**	*e*P	**P**	**00 54 52.6**	**-0.1**
	17nm,0.5s						
KAKA	**Kakadu**	**20.11**	**111**	*e*P	**P**	**00 55 11.3**	**+0.2**
	9.3nm,0.6s						
WRA	**Warramunga Arr**	**24.80**	**126**	P	**P**	**00 55 53.2**	**+0.3**
	5.2nm,0.7s,mb4.2,baz=307,slow=9.4,SNR=17						
WRA				S	**S**	**00 59 32.7**	**-4.3**
	1.1nm,0.9s,baz=296,slow=17,SNR=4.0						
ASAR	**Alice Springs**	**26.59**	**134**	P	**P**	**00 56 08.4**	**-0.2**
	3.1nm,0.5s,mb4.2,baz=313,slow=8.8,SNR=37						
ASAR				S	**S**	**01 00 00.4**	**-4.5**
	0.2nm,0.5s,baz=313,slow=15,SNR=4.0						
CMAR	**Chiang Mai Arr**	**28.03**	**330**	P	**P**	**00 56 17.6**	**-3.6**
	1.1nm,0.7s,mb3.6,baz=158,slow=10.0,SNR=7.7						
FORT	**Forrest**	**28.38**	**152**	*e*P	**P**	**00 56 24.0**	**-0.2**
	26nm,0.6s						
STKA	**Stephens Creek**	**37.01**	**138**	*e*P	**P**	**00 57 36.7**	**-0.5**
	2.3nm,0.5s,mb4.0						
STKA	**Stephens Creek**	**37.01**	**138**	P	**P**	**00 57 36.9**	**-0.3**
	2.9nm,0.5s,mb4.1,baz=326,slow=10,SNR=7.9						
KSRS	**Korea Array**	**45.28**	**17**	P	**P**	**00 58 42.7**	**+0.1**
	0.7nm,0.6s,mb3.4,baz=199,slow=6.5,SNR=4.2						
SONM	**Songino Array**	**53.87**	**354**	P	**P**	**00 59 45.1**	**-0.3**
	0.7nm,0.6s,mb3.2,baz=177,slow=11,SNR=4.8						
MKAR	**Makanchi Array**	**59.22**	**336**	P	**P**	**01 00 21.7**	**-0.5**
	0.3nm,0.7s,mb2.7,baz=128,slow=9.3,SNR=3.0						

*ISCJB **30** 00:54:51.2±0.7,42°.95N±0°.04×46°.03E±0°.04,h3km±6km, Error ellipse: s-maj=6.6km s-min=4.1km az=28.2*
*MOS **30** 00:54:52.0±1.4,42°.80N×46°.08E,h28km,mb3.7/1,Error ellipse: s-maj=20.5km s-min=10.9km az=18.0*
ISC 30 00:54:51.8±0.7,**42°.95N**±0°.04×**46°.07E**±0°.04,**h10**km±5km, **n14,σ1°11/26,2C,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLR	**Botlikh**	**0.31**	**158**	*e*PG	**Pg**	**00 54 56.8**	**-1.1**
BTLR				*e*S	**Sg**	**00 55 01.7**	**-0.4**
DBC	**Dubki**	**0.57**	**83**	PG	**Pg**	**00 55 06.0**	**+3.3**
DBC				*e*S	**Sg**	**00 55 11.5**	**+1.3**
VLKR	**Vladikavkaz**	**1.02**	**276**	*e*PG	**Pg**	**00 55 10.1**	**-1.3**
VLKR				*e*S	**Sg**	**00 55 25.7**	**+1.0**
BTKR	**Batakoyurt**	**1.19**	**291**	*e*PG	**Pg**	**00 55 13.4**	**-1.2**
BTKR				*i* S	**Sb**	**00 55 31.8**	**+1.9**
ARNR	**Ardon**	**1.33**	**281**	*e*PG	**Pn**	**00 55 15.7**	**-0.7**
ARNR				*e*S	**Sg**	**00 55 35.2**	**+0.7**
KMSR	**Komsomolskaya**	**1.36**	**289**	⇑*i*PG	**Pn**	**00 55 16.8**	**-0.1**
KMSR				*e*S	**Sg**	**00 55 37.6**	**+2.0**
KORR	**Kora**	**1.47**	**276**	*e*PG	**Pn**	**00 55 17.5**	**-0.8**
KORR				*e*S	**Sg**	**00 55 38.5**	**-0.6**
TBLG	**Delisi**	**1.57**	**219**	*e*PG	**Pn**	**00 55 19.4**	**-0.3**
TBLG				*e*S	**Sn**	**00 55 40.7**	**+0.7**
TBLG	**Delisi**	**1.57**	**219**	P	**Pn**	**00 55 19.4**	**-0.2**
TBLG				S	**Sn**	**00 55 40.7**	**+0.7**
MTA	**Mtatsminda**	**1.57**	**217**	P	**Pn**	**00 55 19.5**	**-0.3**
MTA				S	**Sn**	**00 55 41.4**	**+1.3**
DGRG	**David-gareji**	**1.58**	**199**	P	**Pn**	**00 55 20.6**	**+0.6**
DGRG				S	**Sg**	**00 55 43.4**	**+0.7**
ZEI	**Tsey**	**1.60**	**264**	*e*PG	**Pn**	**00 55 18.1**	**-2.1**
LSNR	**Lesken**	**1.68**	**282**	⇑*i*PN	**Pn**	**00 55 21.3**	**+0.1**
LSNR				*e*S	**Sg**	**00 55 45.2**	**-0.5**
DIGR	**Digorskoe uzhe**	**1.82**	**269**	*e*PN	**Pn**	**00 55 21.6**	**-1.6**

*IDC **30** 01:18:39.7±2.1,21°.67S×177°.99W,h504km±23km, mb3.4/11,mb1 3.6/13,mb1mx3.5/20,mbtmp3.4/13,Error ellipse: s-maj=23.4km s-min=12.9km az=144.0*
*ISCJB **30** 01:18:40.4±1.0,21°.6S±0°.1×178°.0W±0°.1,h515km±13km, mb3.8/11,Error ellipse: s-maj=21.5km s-min=10.0km az=140.9*
*NEIC **30** 01:18:40.6±0.9,21°.71S×177°.99W,h522km±9km,mb4.1/1, Error ellipse: s-maj=17.0km s-min=10.1km az=135.0*
ISC 30 01:18:41.0±1.0,**21°.6S**±0°.1×**178°.0W**±0°.1,**h513**km±13km, **n43,σ1°35/31,mb3.8/11,2C-2D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.35**	**315**	*e*Pn	**P**	**01 20 12.9**	**+1.1**
	29nm,0.8s						
AFI	**Afiamalu**	**9.62**	**39**	P	**P**	**01 20 55.5**	**+0.9**
AFI				S	**S**	**01 22 42.8**	**-1.5**
AFI	**Afiamalu**	**9.62**	**39**	P	**P**	**01 20 55.5**	**+0.9**
	16nm,0.3s,baz=138,slow=2.8,SNR=10						
AFI				S	**S**	**01 22 42.8**	**-1.5**
	6.3nm,0.3s,baz=59,slow=22,SNR=4.8						
URZ	**Urewera**	**17.18**	**193**	P	**P**	**01 22 09.9**	**-3.1**
	0.5nm,0.3s,baz=18,slow=6.4,SNR=9.4						
RPZ	**Rata Peaks**	**23.91**	**200**	P	**P**	**01 23 11.5**	**-2.3**
	5.1nm,0.9s,mb4.2,baz=17,slow=14,SNR=1.7						
ARMA	**Armidale**	**28.65**	**246**	*e*P	**P**	**01 23 57.4**	**+1.6**
CNB	**Canberra Magne**	**31.67**	**237**	*e*P	**P**	**01 24 24.3**	**+2.4**
CTA	**Charters Tower**	**33.43**	**266**	P	**P**	**01 24 35.8**	**-1.3**
	2.5nm,0.5s,mb4.0,baz=71,slow=11,SNR=5.9						
CTAO	**Charters Tower**	**33.43**	**266**	*e*P	**P**	**01 24 36.0**	**-1.1**
	3.3nm,0.5s,mb4.1						
CMSA	**Cobar Meteorol**	**33.86**	**245**	*e*P	**P**	**01 24 41.4**	**+0.9**
STKA	**Stephens Creek**	**37.37**	**245**	*e*P	**P**	**01 25 10.4**	**+0.7**
	1.7nm,0.4s,mb3.9						
STKA	**Stephens Creek**	**37.37**	**245**	P	**P**	**01 25 09.8**	**+0.1**
STKA				PcP	PcP	01 27 16.4	+1.1
STKA	**Stephens Creek**	**37.37**	**245**	P	**P**	**01 25 09.8**	**+0.1**
	1.8nm,0.3s,mb4.0,baz=92,slow=13,SNR=8.3						
STKA				PcP	PcP	01 27 16.4	+1.1
	2.2nm,0.8s,baz=27,slow=4.5,SNR=2.6						
ASAR	**Alice Springs**	**44.32**	**258**	P	**P**	**01 26 04.1**	**-1.1**
	1.2nm,0.4s,mb3.8,baz=92,slow=8.2,SNR=24						
ASAR				PcP	PcP	01 27 38.5	+0.1
	1.8nm,0.6s,baz=106,slow=3.9,SNR=15						
ASAR				S	**S**	**01 31 53.9**	**-7.9**
	0.2nm,0.5s,baz=90,slow=16,SNR=6.5						
WRA	**Warramunga Arr**	**44.50**	**263**	P	**P**	**01 26 04.9**	**-1.7**
WRA				PcP	PcP	01 27 39.0	-0.1
WRA				S	**S**	**01 31 54.5**	**-10**
WRA	**Warramunga Arr**	**44.50**	**263**	P	**P**	**01 26 04.9**	**-1.7**
	0.5nm,0.3s,mb3.6,baz=96,slow=7.5,SNR=11						
WRA				PcP	PcP	01 27 39.0	-0.1
	0.6nm,0.6s,baz=99,slow=2.9,SNR=3.6						
WRA				S	**S**	**01 31 54.5**	**-10**
	0.6nm,0.9s,baz=100,slow=9.3,SNR=3.1						
MAW	**Mawson**	**80.59**	**200**	P	**P**	**01 29 57.7**	**-1.6**
	2.1nm,0.7s,mb3.7,baz=79,slow=5.2,SNR=6.5						

NVAR	**Mina Array Bea**	**81.77**	**43**	P	**P**	**01 30 06.6**	**+0.8**
	1.0nm,0.6s,mb3.4,baz=223,slow=8.2,SNR=10						
VNA3	**Neumayer Olymp**	**87.09**	**176**	*e*	**P**	**01 30 32.3**	**+0.9**
VNA2	**Neumayer--Watz**	**87.53**	**177**	*e*	**P**	**01 30 34.6**	**+1.1**
TXAR	**Lajitas Array**	**87.59**	**57**	P	**P**	**01 30 35.9**	**+1.4**
TXAR	**Lajitas Array**	**87.59**	**57**	P	**P**	**01 30 35.9**	**+1.4**
	0.8nm,0.8s,mb3.5,baz=222,slow=5.0,SNR=9.8						
VNA1	**Neumayer--Stat**	**87.76**	**177**	*e*	**P**	**01 30 35.8**	**+1.2**
ILAR	**Eielson Array**	**89.33**	**13**	P	**P**	**01 30 40.0**	**-1.7**
	0.5nm,0.4s,mb3.7,baz=222,slow=5.7,SNR=12						
PDAR	**Pinedale Array**	**89.70**	**43**	P	**P**	**01 30 44.3**	**+0.2**
	1.3nm,0.7s,mb3.9,baz=202,slow=3.5,SNR=13						
CMAR	**Chiang Mai Arr**	**90.50**	**290**	P	**P**	**01 30 48.1**	**-0.1**
	0.9nm,0.5s,mb3.9,baz=127,slow=3.8,SNR=8.1						
BRVK	**Borovoye**	**119.97**	**320**	*e*PKPdf	PKPdf	01 36 31.1	-1.5
ARU	**Arti**	**126.08**	**325**	*e*PKPdf	PKPdf	01 36 43.2	-1.1
ARCES	**ARCESS Array B**	**129.96**	**349**	PKP	PKPdf	01 36 50.3	-1.0
	1.5nm,0.6s,baz=48,slow=1.8,SNR=9.2						
FINES	**FINESS Array B**	**136.79**	**343**	PKP	PKPdf	01 37 02.7	-1.6
FINES	**FINESS Array B**	**136.79**	**343**	PKP	PKPdf	01 37 02.7	-1.6
	1.9nm,0.9s,baz=113,slow=4.4,SNR=4.9						
NOA	**NORSAR Array B**	**140.03**	**353**	PKhKP	PKPpre	01 37 02.8	
	0.6nm,0.8s,baz=45,slow=1.3,SNR=3.5						
AKASG	**Malin Array Be**	**143.95**	**330**	PKP	PKPdf	01 37 14.6	-3.0
	8.6nm,0.5s,baz=43,slow=4.3,SNR=22						
KIEV	**Kiev**	**143.96**	**330**	*e*PKPdf	PKPdf	01 37 14.5	-3.0
MALT	**Malatya**	**144.59**	**306**	*e*PKPdf	PKPdf	01 37 18.9	-0.2
BR131	**Keskin Array S**	**147.56**	**311**	*e*PKPbc	PKPbc	01 37 26.5	-0.9
BRTR	**Keskin Array B**	**147.56**	**311**	PKPbc	PKPbc	01 37 26.4	-1.1
	2.1nm,0.6s,baz=139,slow=5.0,SNR=14						
BUR08	**Bucovina Ar. S**	**147.98**	**330**	*e*PKPbc	PKPbc	01 37 28.3	0.0
CLL	**Collm**	**149.10**	**347**	⇓*i*PKP	PKPbc	01 37 30.4	-0.5
CLL				⇑*i*PKP	PKPab	01 37 35.6	-1.6
CLL	**Collm**	**149.10**	**347**	⇓*i*PKPbc	PKPbc	01 37 30.4	-0.5
	comp=Z,5.0nm,0.9s						
CLL				⇑*i*PKPab	PKPab	01 37 35.6	-1.6
	comp=Z,4.0nm,0.6s						
CSS	**Prodhromos**	**149.51**	**303**	*e*PKPbc	PKPbc	01 37 31.4	-1.1
VYHS	**Vyhne**	**149.95**	**337**	*e*P	PKPbc	01 37 32.0	-1.0
VYHS	**Vyhne**	**149.95**	**337**	*e*PKP	PKPbc	01 37 32.0	-1.0

*IDC **30** 02:01:14.4±1.0,7°.93S×156°.47E,h0km,mb4.2/6, mb1 4.3/7,mb1mx4.1/18,mbtmp4.2/7,ML4.5/1,MS3.2/3, Ms1 3.2/3,ms1mx2.8/23,Error ellipse: s-maj=26.5km s-min=22.5km az=144.0*
*ISCJB **30** 02:01:17.9±0.6,8°.02S±0°.09×156°.48E±0°.06,h33km, mb4.0/7,Error ellipse: s-maj=13.1km s-min=8.5km az=10.3*
*NEIC **30** 02:01:19.9±0.7,8°.04S×156°.50E,h35km,mb4.4/1,Error ellipse: s-maj=19.2km s-min=15.5km az=163.0*
NEIC Felt at Gizo.
ISC 30 02:01:19.9±0.6,**8°.04S**±0°.09×**156°.48E**±0°.06,**h35**km,**n19, σ0s84/17,mb4.0/7,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.70**	**112**	Pn	**Pn**	**02 02 13.9**	**-0.7**
	33nm,0.3s,baz=291,slow=3.8,SNR=6.3						
HNR				Sn	**Sn**	**02 02 57.6**	**+0.6**
	50nm,0.3s,baz=232,slow=20,SNR=5.7						
HNR				LR	LR	02 03 28.7	
	comp=Z,291nm,21.3s,baz=288,slow=36						
CTA	**Charters Tower**	**15.54**	**219**	LR	LR	02 09 12.6	
	comp=Z,75nm,22.0s,baz=51,slow=31						
RMQ	**Roma**	**19.76**	**201**	*e*P	**Pn**	**02 05 48.2**	**-0.4**
	16nm,1.2s						
QLP	**Quilpie**	**21.80**	**211**	*e*P	**P**	**02 06 09.5**	**+0.5**
ARMA	**Armidale**	**22.72**	**191**	*e*P	**P**	**02 06 18.7**	**-0.1**
WB2	**Warramunga Arr**	**24.47**	**239**	*e*P	**P**	**02 06 36.1**	**+0.3**
WRA	**Warramunga Arr**	**24.48**	**239**	P	**P**	**02 06 36.4**	**+0.5**
WRA				PcP	PcP	02 10 13.6	-0.6
WRA	**Warramunga Arr**	**24.48**	**239**	P	**P**	**02 06 36.4**	**+0.4**
	12nm,0.7s,mb4.4,baz=64,slow=9.5,SNR=60						
WRA				PcP	PcP	02 10 13.6	-0.6
	0.4nm,0.5s,baz=64,slow=2.6,SNR=5.5						
CMSA	**Cobar Meteorol**	**25.45**	**202**	*e*P	**P**	**02 06 44.0**	**-0.6**
ASAR	**Alice Springs**	**26.63**	**232**	P	**P**	**02 06 54.0**	**-1.4**
	0.5nm,0.7s,mb3.2,baz=61,slow=7.7,SNR=6.2						
STKA	**Stephens Creek**	**27.47**	**208**	*e*P	**P**	**02 07 04.3**	**+1.5**
	6.8nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**27.47**	**208**	P	**P**	**02 07 04.7**	**+1.9**
	7.5nm,0.8s,mb4.3,baz=37,slow=10,SNR=12						
STKA				LR	LR	02 16 31.2	
	comp=Z,74nm,20.1s,baz=28,slow=33						
FITZ	**Fitzroy Crossi**	**31.61**	**248**	P	**P**	**02 07 38.9**	**-0.8**
	0.9nm,0.6s,mb3.8,baz=77,slow=8.3,SNR=7.2						
ULN	**Ulaanbaatar**	**70.67**	**327**	*e*P	**P**	**02 12 32.6**	**+0.7**
	0.9nm,0.2s,mb4.3						
SONM	**Songino Array**	**71.00**	**327**	P	**P**	**02 12 34.7**	**+0.6**
	3.7nm,0.8s,mb4.3,baz=128,slow=6.4,SNR=15						
ILAR	**Eielson Array**	**83.81**	**21**	P	**P**	**02 13 43.8**	**-1.5**
	0.5nm,0.9s,mb3.6,baz=256,slow=3.6,SNR=3.9						
MK31	**Makanchi Array**	**85.15**	**318**	*e*P	**P**	**02 13 53.1**	**+0.6**
CLL	**Collm**	**127.42**	**332**	*i* P	PKPdf	02 20 23.1	+2.1
CLL	**Collm**	**127.42**	**332**	*i* PKPdf	PKPdf	02 20 23.1	+2.1

*NDI **30** 02:09:47.5±3.7,30°.69N×83°.99E,h10km,ML4.2, mb4.3(NEIC)*
*BJI **30** 02:09:50.4,30°.35N×83°.16E,h15km,mB4.3/4,mb4.2/15, Ms4.3/12,Ms7 4.0/7*
*IDC **30** 02:09:53.4±0.7,30°.59N×83°.45E,h0km,mb3.9/16, mb1 4.1/19,mb1mx4.0/29,mbtmp3.9/19,ML3.3/2,MS3.8/20, Ms1 3.8/20,ms1mx3.6/38,Error ellipse: s-maj=19.1km s-min=14.6km az=39.0*
*DMN **30** 02:09:53.5±0.4,31°.43N×83°.27E,h10km,Ml4.7/9,Error ellipse: s-maj=8.5km s-min=6.6km az=73.0*
*NEIC **30** 02:09:55.6±0.5,30°.56N×83°.31E,h10km,mb4.3/14,Error ellipse: s-maj=13.1km s-min=7.4km az=39.0*
*MOS **30** 02:09:56.7±1.5,30°.50N×83°.27E,h33km,mb4.5/14,Error ellipse: s-maj=12.0km s-min=6.4km az=114.9*
*ISCJB **30** 02:09:56.1±1.0,30°.95N±0°.02×83°.37E±0°.03,h7km±6km, mb4.1/40,MS3.8/22,Error ellipse: s-maj=4.2km s-min=3.1km az=42.6*
ISC 30 02:09:57.0±1.1,**31°.00N**±0°.02×**83°.45E**±0°.03,**h1**km±7km, **n122,σ1°34/139,mb4.2/40,MS3.8/22,2C-4D,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DANN	**Dangsing**	**2.65**	**174**	*e*Pn	**Pn**	**02 10 40.6**	**-0.4**
DANN				*e*Sn	**Sn**	**02 11 15.6**	**+1.8**
	2um,0.9s						
PTH	**Pithoragarh**	**3.15**	**244**	*ex*	**Pn**	**02 10 49.9**	**+2.1**
PTH				*ex*	**Sg**	**02 11 37.9**	**-0.2**
GKN	**Gorkha**	**3.16**	**161**	*e*Pn	**Pn**	**02 10 47.7**	**-0.2**
GKN				*e*Sn	**Sn**	**02 11 27.6**	**+1.3**
	4µm,1.4s						
KOLN	**Koldanda**	**3.22**	**178**	*e*Pn	**Pn**	**02 10 48.2**	**-0.6**
KOLN				*e*Sn	**Sn**	**02 11 28.4**	**+0.6**
	727nm,0.7s						
JOSI	**Joshimath**	**3.38**	**263**	*e*PKP	**Pn**	**02 10 52.9**	**+2.0**
JOSI				*e*S	**Sb**	**02 11 36.5**	**-2.8**
JOSI				AML	AML	02 11 44.5	
	comp=N,814nm,0.9s						
JOSI				AML	AML	02 11 50.2	
	comp=E,839nm,0.6s						
KKN	**Kakani**	**3.57**	**153**	*e*Pn	**Pn**	**02 10 53.1**	**-0.5**
KKN				*e*Sn	**Sn**	**02 11 38.3**	**+1.8**
	comp=E,428nm,1.0s						
DMN	**Daman**	**3.67**	**156**	*e*Pn	**Pn**	**02 10 54.6**	**-0.4**
DMN				*e*Sn	**Sn**	**02 11 40.9**	**+1.9**
	comp=E,2µm,1.3s						
GUN	**Gumba**	**3.74**	**145**	*e*Pn	**Pn**	**02 10 55.4**	**-0.5**
GUN				*e*Sn	**Sn**	**02 11 41.0**	**+0.5**
	comp=E,737nm,0.8s						
PKIN	**Phulchoki**	**3.81**	**153**	*e*Pn	**Pn**	**02 10 57.1**	**+0.2**
PKIN				*e*Sn	**Sn**	**02 11 43.4**	**+1.0**
	comp=E,362nm,0.7s						
PKI	**Pulchoki**	**3.82**	**153**	*e*Pn	**Pn**	**02 10 56.6**	**-0.4**
PKI				*e*Sn	**Sn**	**02 11 43.1**	**+0.5**
	comp=E,2µm,1.5s						
JIRN	**Jiri**	**4.10**	**144**	*e*Pn	**Pn**	**02 11 01.2**	**+0.3**
KLP	**Kalpa**	**4.48**	**278**	*e*PKP	**Pn**	**02 11 02.9**	**-3.2**
KLP				*e*S	**Sn**	**02 11 56.4**	**-2.5**
DDI	**Dehra Dun**	**4.70**	**263**	*e*PKP	**Pn**	**02 11 10.0**	**+0.9**
DDI				*e*S	**Sn**	**02 12 09.0**	**+4.8**
RAMN	**Ramite**	**4.89**	**145**	*e*Pn	**Pn**	**02 11 10.7**	**-1.0**
RAMN				*e*Sn	**Sn**	**02 12 09.3**	**+0.3**
	comp=E,350nm,1.1s						

TAPN	**Taplejung**	**5.21**	**133**	*e*Pn	**Pn**	**02 11 15.3**	**-0.8**
ODAN	**Odare**	**5.38**	**139**	*e*Pn	**Pn**	**02 11 17.3**	**-1.2**
ODAN				*e*Sn	**Sn**	**02 12 19.0**	**-2.1**
SMLA	**Simla**	**5.39**	**273**	*i* x	**Pn**	**02 11 21.0**	**+2.4**
SDNR	**Sundarnagar**	**5.57**	**277**	*ex*	**Pn**	**02 11 25.5**	**+4.4**
NDI	**New Delhi**	**5.88**	**248**	*e*PKP	**Pn**	**02 11 20.0**	**-5.4**
NDI				*ex*	**Sn**	**02 12 35.0**	**+1.5**
AYAN	**Aya Nagar**	**6.04**	**247**	*e*PKP	**Pn**	**02 11 21.4**	**-6.2**
AYAN				*ex*	x	02 12 27.3	
AGRA	**Agra**	**6.11**	**233**	*e*PKP	**Pn**	**02 11 27.8**	**-0.7**
AGRA				*e*S	**Sn**	**02 12 34.4**	**-4.6**
SONA	**Sohna**	**6.18**	**245**	*e*PKP	**Pn**	**02 11 24.1**	**-5.4**
SONA				*ex*	**Sn**	**02 12 39.9**	**-0.9**
KUDL	**Kundal**	**6.69**	**247**	*e*PKP	**Pn**	**02 11 29.8**	**-6.8**
KUDL				*e*S	**Sn**	**02 12 43.5**	**-10**
LSA	**Lhasa**	**6.78**	**99**	Pg	**Pn**	**02 11 39.0**	**+1.3**
LSA				Sg	**Sn**	**02 12 55.5**	**-0.1**
LSA				smax			
	comp=E,30nm,4.6s						
LSA	**Lhasa**	**6.78**	**99**	*e*Pn	**Pn**	**02 11 38.9**	**+1.1**
	comp=E,34nm,0.6s						
LSA	**Lhasa**	**6.78**	**99**	*e*P	**Pn**	**02 11 38.9**	**+1.2**
LSA				pmax	pmax		
	comp=Z,35nm,0.6s						
KHET	**Khetri**	**7.27**	**248**	*e*PKP	**Pn**	**02 11 37.6**	**-6.8**
AJM	**Ajmer**	**8.94**	**242**	*e*PKP	**Pn**	**02 12 00.3**	**-7.1**
CHCP	**Chirah Chowk**	**9.02**	**290**	P	**Pn**	**02 12 10.3**	**+1.9**
CEP	**Cherat**	**10.15**	**289**	P	**Pn**	**02 12 24.5**	**+0.5**
CEP				S	**Sn**	**02 14 20.0**	**+1.5**
KSH	**Kashi**	**10.46**	**326**	*e*P	**Pn**	**02 12 27.0**	**-1.2**
KSH				*e*pP		02 12 34.3	
KSH				*e*PP		02 12 35.8	
KSH				*e*sP		02 12 39.3	
KSH				pmax	pmax		
	comp=Z,88nm,2.1s						
KSH				LR	LR		
	comp=N,1µm,12.1s						
KSH				LR	LR		
	comp=E,2µm,11.7s						
KSH				LR	LR		
	comp=Z,530nm,7.6s						
KBL	**Kabul**	**12.63**	**290**	*e*Pn	**Pn**	**02 12 56.9**	**-0.9**
	comp=Z,17nm,0.6s						
KBL	**Kabul**	**12.63**	**290**	*e*P	**Pn**	**02 12 56.9**	**-0.9**
KBL				pmax	pmax		
	comp=Z,17nm,0.6s						
UCH	**Uchtor**	**13.30**	**330**	*e*Pn	**Pn**	**02 13 09.0**	**+2.1**
TKM2	**Tokmak 2**	**13.45**	**334**	*e*Pn	**Pn**	**02 13 10.4**	**+1.5**
	comp=Z,2.7nm,0.9s						
TKM2	**Tokmak 2**	**13.45**	**334**	*e*P	**Pn**	**02 13 10.4**	**+1.5**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AML	**Almayashu**	**13.59**	**328**	*e*Pn	**Pn**	**02 13 11.7**	**+0.8**
AAK	**Ala-Archa**	**13.64**	**331**	Pn	**Pn**	**02 13 13.5**	**+1.9**
AAK				LR	LR	02 19 06.8	
AAK	**Ala-Archa**	**13.64**	**331**	Pn	**Pn**	**02 13 13.5**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=201,slow=8.6,SNR=3.5						
AAK				LR	LR	02 19 06.8	
	comp=Z,672nm,20.6s,baz=128,slow=40						
AAK	**Ala-Archa**	**13.64**	**331**	⇓*e*P	**Pn**	**02 13 11.7**	**+0.1**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
FRU	**Bishkek**	**13.75**	**332**	*e*P	**Pn**	**02 13 15.0**	**+1.9**
EKS2	**Erkin-Say**	**13.97**	**329**	*e*Pn	**Pn**	**02 13 18.8**	**+2.7**
	comp=Z,14nm,1.4s						
HYB	**Hyderabad**	**14.23**	**199**	*i* P	**Pn**	**02 13 14.0**	**-5.9**
HYB				*e*S	**Sn**	**02 15 46.5**	**-12**
POO	**Poona**	**15.16**	**217**	*ex*	**Pn**	**02 13 29.0**

ABKAR Akbulak array 25.43 323 *e*P **P** **02 15 25.5 -0.7**
comp=Z,1.9nm,0.6s,mb4.0
TLY Talaya 25.47 30 *e*P **P** **02 15 27.3 +0.8**
comp=Z,6.0nm,0.7s,mb4.4
TLY Talaya 25.47 30 *e*P **P** **02 15 30.7 +4.2**
TLY pmax pmax
comp=Z,4.0nm,0.7s,mb4.3
TLY MLR MLR
comp=Z,136nm,14.0s,MS3.6
WHN Wuhan 26.52 83 P **P** **02 15 42.5 +6.3**
AKTK Aktyubinsk 27.14 323 P **P** **02 15 43.0 +1.4**
AKTK LR LR 02 27 45.8
AKTO Aktyubinsk 27.14 323 P **P** **02 15 43.0 +1.4**
comp=Z,0.9nm,0.6s,mb3.7,baz=124,slow=11,SNR=3.6
AKTO LR LR 02 27 45.8
comp=Z,247nm,19.3s,MS3.8,baz=292,slow=39
BJI Beijing 28.00 62 P **P** **02 15 47.8 -1.6**
BJI pmax pmax
comp=Z,4.0nm,1.3s,mb4.1
BJI LR LR
comp=N,450nm,17.1s
BJI LR LR
comp=E,170nm,11.1s
BJI LR LR
comp=Z,180nm,24.1s
NJ2 Nanjing 30.12 79 *e*P **P** **02 16 16.5 +8.1**
NJ2 pP 02 16 26.0
NJ2 sP sP 02 16 30.0 +21
NJ2 PP PP 02 17 16.3 +0.1
NJ2 S **S** **02 21 15.5 +7.4**
NJ2 sS sS 02 21 30.0 +22
NJ2 pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
NJ2 pmax pmax
comp=Z,60nm,4.6s
NJ2 LR LR
comp=N,290nm,10.8s,MS4.3
NJ2 LR LR
comp=E,240nm,12.2s,MS4.3
NJ2 LR LR
comp=Z,280nm,18.1s
ARU Arti 30.81 333 *e*P **P** **02 16 14.2 0.0**
ARU Arti 30.81 333 *d*P **P** **02 16 14.2 0.0**
ARU *e* 02 17 10.7
ARU S **S** **02 21 12.4 -6.0**
ARU pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
PSI Prapat 31.63 149 LR LR 02 28 45.6
comp=Z,183nm,20.5s,MS3.7,baz=182,slow=36
ZEI Tsey 33.46 302 *e*P **P** **02 16 37.2 -0.4**
ZEI pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
KIV Kislovodsk 34.49 304 P **P** **02 16 49.0 +2.4**
KIV 02 18 02.0
KIV pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
KIV MLR MLR
comp=Z,100nm,15.0s,MS3.7
KSRS Korea Array 37.07 68 P **P** **02 17 06.5 -2.2**
comp=Z,0.4nm,0.3s,mb3.7,baz=334,slow=6.7,SNR=3.1
KSRS LR LR 02 33 34.1
comp=Z,201nm,19.9s,MS3.9,baz=65,slow=38
OBN Obninsk 40.83 320‖ *e*P **P** **02 17 40.1 +0.1**
OBN *e* 02 17 52.3
OBN pmax pmax
comp=Z,21nm,1.2s,mb4.7
OBN MLR MLR
comp=Z,100nm,18.0s,MS3.7
BRTR Keskin Array B 41.10 296 P **P** **02 17 40.9 -1.6**
BRTR LR LR 02 37 30.3
BRTR Keskin Array B 41.10 296 P **P** **02 17 40.9 -1.6**
comp=Z,0.6nm,0.5s,mb3.6,baz=132,slow=3.7,SNR=9.7
BRTR LR LR 02 37 30.3
comp=Z,69nm,21.9s,MS3.5,baz=224,slow=40
BRTR Keskin Array B 41.10 296 *ce*P **P** **02 17 42.7 +0.2**
BRTR pmax pmax
comp=Z,1.0nm,0.5s
KLMR Klimovskoe 41.44 329 *e*P **P** **02 17 44.3 -0.7**
KLMR pmax pmax
comp=Z,30nm,1.7s,mb4.8
MJAR Matsushiro Arr 45.35 68 LR LR 02 38 30.3
comp=Z,65nm,19.1s,MS3.6,baz=230,slow=38
JOF Joensuu 45.82 330 *e*P **P** **02 18 18.9 -1.4**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
JOF Joensuu 45.82 330 *e*p **P** **02 18 18.9 -1.4**
comp=Z,5.2nm,0.7s,mb4.7
FINES FINESS Array B 47.79 327 P **P** **02 18 34.2 -1.5**
FINES LR LR 02 40 06.3
FINES FINESS Array B 47.79 327 P **P** **02 18 34.2 -1.5**
comp=Z,4.0nm,0.7s,mb4.6,baz=116,slow=8.9,SNR=9.2
FINES LR LR 02 40 06.3
comp=Z,210nm,18.5s,MS4.1,baz=311,slow=38
ARCES ARCESS Array B 50.21 337 P **P** **02 18 54.8 +0.7**
comp=Z,3.4nm,0.9s,mb4.3,baz=106,slow=8.9,SNR=8.0
MORC Moravsky Berou 51.87 311 *e*P **P** **02 19 05.4 -1.5**
comp=Z,1.2nm,0.7s,mb3.9
MORC Moravsky Berou 51.87 311 *e*P **P** **02 19 05.4 -1.5**
MORC pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
KMBO Kilima Mbogo 54.25 243 P **P** **02 19 18.5 -6.4**
comp=Z,0.9nm,0.5s,mb4.1,baz=180,slow=20,SNR=2.6
NOA NORSAR Array B 54.89 325 P **P** **02 19 27.1 -1.8**
comp=Z,2.0nm,0.9s,mb4.1,baz=88,slow=7.4,SNR=4.4
NOA LR LR 02 44 34.0
comp=Z,105nm,20.1s,MS3.9,baz=95,slow=38
KEST Kesra 60.70 296 *e*P **P** **02 20 09.4 -0.8**
KEST Kesra 60.70 296 P **P** **02 20 08.8 -1.4**
comp=Z,1.4nm,1.0s,mb4.0,baz=350,slow=6.3,SNR=5.1
ESDC Sonseca Array 69.16 304 P **P** **02 21 02.4 -2.8**
comp=Z,0.1nm,0.3s,mb3.5,baz=56,slow=6.6,SNR=4.2
WRA Warramunga Arr 70.38 129 P **P** **02 21 07.8 -5.1**
comp=Z,2.0nm,0.8s,mb4.3,baz=324,slow=6.2,SNR=10.0
ASAR Alice Springs 72.74 132 P **P** **02 21 22.2 -4.9**
comp=Z,0.8nm,0.9s,mb3.9,baz=306,slow=5.7,SNR=5.2
COLD Coldfoot 74.10 19 *e*P **P** **02 21 35.6 +1.1**
comp=Z,3.2nm,0.9s,mb4.3
BPAW Bear Paw Mtn. 76.05 22 *e*P **P** **02 21 46.7 +0.9**
comp=Z,3.1nm,0.9s,mb4.4
TORD Torodi Ar. Bea 76.36 277 P **P** **02 21 46.4 -2.0**
TORD LR LR 03 00 56.9
TORD Torodi Ar. Bea 76.36 277 P **P** **02 21 46.4 -2.0**
comp=Z,2.5nm,1.1s,mb4.2,baz=50,slow=5.1,SNR=8.2
TORD LR LR 03 00 56.9
comp=Z,106nm,18.1s,MS4.2,baz=130,slow=40
COLA College 76.46 20 *e*P **P** **02 21 49.5 +1.4**
comp=Z,4.0nm,0.8s,mb4.6
COLA College 76.46 20 *e*P **P** **02 21 49.5 +1.4**
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
ILAR Eielson Array 76.81 20 P **P** **02 21 47.3 -2.8**
comp=Z,2.1nm,0.8s,mb4.3,baz=307,slow=4.6,SNR=22
ILAR LR LR 02 57 16.2
comp=Z,43nm,18.5s,MS3.8,baz=306,slow=37
INK Inuvik 77.25 13 *e*P **P** **02 21 53.6 +1.1**
comp=Z,5.5nm,1.0s,mb4.6
INK Inuvik 77.25 13 *e*P **P** **02 21 53.6 +1.1**
INK pmax pmax
comp=Z,6.0nm,1.0s
EGAK Eagle 78.40 18 *e*P **P** **02 21 59.7 +0.7**
comp=Z,2.5nm,0.8s,mb4.4
PMR Palmer 78.43 23 *e*P **P** **02 21 58.1 -1.1**
comp=Z,2.3nm,0.5s,mb4.6
PMR Palmer 78.43 23 *e*P **P** **02 21 58.1 -1.1**
PMR pmax pmax
comp=Z,2.0nm,0.5s,mb4.5
SML Sawmill 78.54 22 *e*P **P** **02 22 01.1 +1.3**
comp=Z,2.3nm,0.8s,mb4.3
SML Sawmill 78.54 22 *e*P **P** **02 22 01.1 +1.3**
SML pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
BOSA Boshof 81.15 229 LR LR 02 57 27.7
comp=Z,48nm,18.1s,MS3.9,baz=259,slow=35
DBIC Dimbokro 85.16 275 LR LR 03 04 24.8
comp=Z,102nm,20.2s,MS4.2,baz=207,slow=38
YKA Yellowknife Ar 85.71 8 LR LR 02 59 30.8
comp=Z,7.1nm,20.5s,MS3.0,baz=275,slow=35
DLBC Dease Lake 86.61 17 LR LR 03 07 54.6
comp=Z,59nm,18.5s,MS4.0,baz=301,slow=40
ULM Lac du Bonnet 99.11 360 LR LR 03 10 13.8
comp=Z,72nm,18.8s,MS4.2,baz=61,slow=36
MAW Mawson 99.51 188 LR LR 03 02 33.0
comp=Z,42nm,19.6s,MS4.0,baz=288,slow=32

*ISCJB **30** 02:59:23.6±1.7,21°.7N±0°.1×143°.2E±0°.2,h308km±14km,*
mb3.4/10,Error ellipse: s-maj=34.6km s-min=17.8km az=176.9
*NEIC **30** 02:59:24.8±2.9,21°.69N×143°.18E,h303km±28km,mb3.7/1, Error ellipse: s-maj=20.6km s-min=11.4km az=84.0*
*IDC **30** 02:59:24.5±1.9,21°.71N×143°.15E,h298km±18km,mb3.1/9, mb1 3.3/12,mb1mx3.1/27,mbtmp3.2/12,Error ellipse: s-maj=28.4km s-min=14.6km az=87.0*

ISC 30 02:59:24.3±1.7,21.7N±0°.1×143.2E±0°.2,h300km±14km, n16,σ0°37/14,mb3.4/10,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.45**	**350**	P	**Pn**	**03 00 47.4**	**+0.3**
	11nm,0.3s,baz=268,slow=22,SNR=5.9						
CBIJ				S	**S**	**03 01 53.5**	**-0.1**
	13nm,0.3s,baz=243,slow=23,SNR=7.9						
JHJ	**Hachijo jima 2**	**11.77**	**346**	P	**Pn**	**03 02 04.2**	**+0.3**
	5.1nm,0.3s,baz=66,slow=19,SNR=5.4						
MJAR	**Matsushiro Arr**	**15.41**	**345**	P	**Pn**	**03 02 46.6**	**-0.9**
	0.7nm,0.3s,baz=163,slow=9.6,SNR=4.9						
WRA	**Warramunga Arr**	**42.30**	**192**	P	**P**	**03 06 49.1**	**-0.2**
	0.5nm,0.5s,mb3.0,baz=20,slow=9.9,SNR=5.7						
ASAR	**Alice Springs**	**46.00**	**192**	P	**P**	**03 07 18.5**	**0.0**
	0.2nm,0.6s,mb2.6,baz=14,slow=9.2,SNR=3.5						
MKAR	**Makanchi Array**	**54.72**	**313**	P	**P**	**03 08 23.2**	**+0.1**
	0.1nm,0.3s,mb2.7,baz=89,slow=8.8,SNR=2.8						
KURK	**Kurchatov**	**57.50**	**317**	P	**P**	**03 08 42.8**	**+0.2**
	0.9nm,0.3s,mb3.6,baz=94,slow=7.6,SNR=3.4						
ILAR	**Eielson Array**	**62.01**	**27**	P	**P**	**03 09 13.1**	**+0.2**
	0.3nm,0.7s,mb3.0,baz=255,slow=5.8,SNR=4.4						
BVAR	**Borovoye Array**	**62.69**	**319**	P	**P**	**03 09 18.4**	**+0.8**
	0.8nm,0.3s,mb3.8,baz=96,slow=8.3,SNR=4.2						
ABKAR	**Akbulak array**	**69.57**	**316**	*e*P	**P**	**03 10 00.9**	**-0.3**
	0.7nm,0.5s,mb3.6						
ARCES	**ARCESS Array B**	**78.93**	**342**	P	**P**	**03 10 54.1**	**-0.4**
	2.7nm,0.8s,mb4.0,baz=72,slow=8.0,SNR=5.6						
NVAR	**Mina Array Bea**	**83.11**	**51**	P	**P**	**03 11 17.0**	**0.0**
	0.3nm,0.5s,mb3.3,baz=285,slow=6.9,SNR=3.9						
FINES	**FINESS Array B**	**83.19**	**334**	P	**P**	**03 11 16.9**	**-0.1**
	0.7nm,0.4s,mb3.8,baz=70,slow=5.5,SNR=12						
PLCA	**Paso Flores**	**145.73**		PKPbc	PKPbc	03 18 29.3	+1.0
	1.4nm,0.7s,baz=273,slow=3.5,SNR=3.6						
LPAZ	**La Paz**	**149.90**	**85**	PKPbc	PKPbc	03 18 41.9	+2.0
LPAZ	**La Paz**	**149.90**	**85**	PKPbc	PKPbc	03 18 41.9	+2.0
	0.9nm,0.6s,baz=239,slow=2.4,SNR=5.6						

*IDC **30** 03:41:07.3±2.4,12°.45S×165°.79E,h0km,mb4.0/6, mb1 4.2/6,mb1mx3.9/18,mbtmp4.0/6,MS3.6/2,Ms1 3.6/2, ms1mx2.8/24,Error ellipse: s-maj=104.2km s-min=25.1km az=134.0*
*ISCJB **30** 03:41:11.2±1.5,12°.4S±0°.2×165°.7E±0°.3,h33km,mb4.0/6, MS3.5/2,Error ellipse: s-maj=50.2km s-min=18.1km az=31.3*

ISC 30 03:41:12.7±1.5,12°.4S±0°.2×165°.8E±0°.3,h35km,n14, σ0°.95/11,mb4.0/6,MS3.5/2,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
EIDS	**Eidsvold**	**18.95**	**225**	*e*P	**Pn**	**03 45 32.8**	**+1.1**
CTA	**Charters Tower**	**20.25**	**245**	*e*P	**P**	**03 45 48.4**	**+3.3**
	5.5nm,0.8s						
CTA	**Charters Tower**	**20.25**	**245**	P	**P**	**03 45 44.8**	**-0.3**
	5.6nm,0.7s,baz=90,slow=12,SNR=4.4						
RMQ	**Roma**	**21.27**	**226**	*e*P	**P**	**03 45 57.3**	**+1.1**
	13nm,0.7s,mb4.4						
AFI	**Afiamalu**	**21.88**	**96**	LR	LR	03 53 10.9	
	comp=Z,76nm,19.4s,MS3.1,baz=208,slow=33						
ARMA	**Armidale**	**22.20**	**214**	*e*P	**P**	**03 46 05.3**	**-0.8**
CMSA	**Cobar Meteorol**	**26.55**	**221**	*e*P	**P**	**03 46 47.1**	**-0.3**
STKA	**Stephens Creek**	**29.50**	**225**	P	**P**	**03 47 12.6**	**-1.1**
	3.6nm,0.7s,mb4.2,baz=52,slow=12,SNR=5.6						
WRA	**Warramunga Arr**	**31.09**	**252**	P	**P**	**03 47 28.1**	**+0.2**
	0.5nm,0.6s,mb3.5,baz=82,slow=9.3,SNR=6.8						
ASAR	**Alice Springs**	**32.25**	**245**	P	**P**	**03 47 37.7**	**-0.4**
	2.8nm,0.8s,mb4.2,baz=75,slow=9.7,SNR=24						
RAR	**Rarotonga**	**34.03**	**110**	LR	LR	03 58 12.9	
	comp=Z,244nm,21.6s,MS3.9,baz=88,slow=30						
ILAR	**Eielson Array**	**84.79**	**18**	P	**P**	**03 53 44.1**	**+1.1**
	0.6nm,0.7s,mb3.9,baz=240,slow=5.4,SNR=11						
MKAR	**Makanchi Array**	**94.56**	**317**	P	**P**	**03 54 28.6**	**-1.1**
	0.3nm,0.5s,mb4.0,baz=101,slow=6.0,SNR=4.2						
KEST	**Kesra**	**148.53**	**322**	PKPbc	PKPbc	04 00 55.8	-0.5
	1.0nm,0.9s,baz=319,slow=2.3,SNR=4.2						

*NEIC **30** 03:46:49.2,19°.41N×65°.81W,h94km,MD3.5(RSPR), After RSPR.*

RSPR 30 03:46:49.2,19°.41N×65°.81W,h94km±10km,MD3.5/7, 6C-1D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
CBYP	**Canovanas**	**1.14**	**182**	*e*Pn	Pn	03 47 08.4	-2.3
CBYP				*e*Sn	Sn	03 47 24.8	-2.1
STVI	**Saint Thomas**	**1.33**	**142**‖	*e*P	Pn	03 47 12.8	-0.3
STVI				*e*S	Sn	03 47 31.3	+0.2
MTP	**Monte Pirata**	**1.33**	**169**‖	*e*P	Pn	03 47 11.9	-1.2
MTP				*e*S	Sn	03 47 30.6	-0.5
SJG	**San Juan**	**1.33**	**194**‖	*e*P	Pn	03 47 12.1	-1.0
SJG				*e*S	Sn	03 47 30.7	-0.4
SJG	**San Juan**	**1.33**	**194**‖	*e*P	Pn	03 47 12.8	-0.3
SJG				*e*S	Sn	03 47 30.6	-0.5
AOPR	**Arecibo Observ**	**1.39**	**220**‖	*e*P	Pn	03 47 13.5	-0.3
AOPR				*e*S	Sn	03 47 32.0	-0.3
CELP	**Cerrillos**	**1.52**	**209**‖	*e*P	Pn	03 47 15.3	-0.1
ICM	**Isla Caja Muer**	**1.65**	**204**‖	*e*P	Pn	03 47 17.0	-0.1
ICM				*e*S	Sn	03 47 38.7	+0.4
CRPR	**Cabo Rojo, PR**	**1.86**	**222**	*e*Pn	Pn	03 47 20.9	+1.1

IDC 30 03:58:20.8±1.9,5°.02S×152°.53E,h0km,mb3.7/5, mb1 4.0/5,mb1mx3.8/17,mbtmp3.8/5,Error ellipse: s-maj=86.8km s-min=23.5km az=126.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.10**	**228**	P	P	04 03 27.5	-1.1
	0.9nm,0.5s,baz=55,slow=10,SNR=8.4						
ASAR	**Alice Springs**	**25.81**	**222**	P	P	04 03 55.0	+1.1
	0.7nm,0.4s,baz=59,slow=9.0,SNR=17						
FITZ	**Fitzroy Crossi**	**29.32**	**241**	P	P	04 04 25.4	-0.1
	1.5nm,0.6s,baz=84,slow=10,SNR=12						
MKAR	**Makanchi Array**	**80.31**	**319**	P	P	04 10 34.1	+0.2
	0.2nm,0.5s,baz=91,slow=7.4,SNR=3.2						
ILAR	**Eielson Array**	**82.46**	**22**	P	P	04 10 45.0	+0.2
	1.0nm,0.6s,baz=256,slow=5.6,SNR=15						
TORD	**Torodi Ar. Bea**	**150.12**	**288**	PKPbc	PKPbc	04 18 13.8	-0.9
	3.4nm,0.5s,baz=73,slow=2.4,SNR=4.0						

*ISCJB **30** 03:59:40.7±0.2,48°.32N±0°.01×6°.58E±0°.02,h14km±2km, Error ellipse: s-maj=2.5km s-min=2.0km az=5.5*
*CSEM **30** 03:59:41.9±0.1,48°.32N×6°.60E,h15km,ML2.4/19,Error ellipse: s-maj=1.6km s-min=1.4km az=177.0*
*STR **30** 03:59:42.5±0.2,48°.32N×6°.63E,h10km,Ml2.3,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **30** 03:59:42.9±0.1,48°.32N×6°.61E,h10km,Md2.7/3,Ml2.4/18, Error ellipse: s-maj=1.1km s-min=0.8km az=4.0*
*BGR **30** 03:59:43.0±0.3,48°.34N×6°.67E,h10km,ML2.1/5,Error ellipse: s-maj=3.3km s-min=2.2km az=71.0*
*ZUR **30** 03:59:43.5,48°.32N×6°.71E,h6km,ML1.9/4*

ISC 30 03:59:41.8±0.2,48°.32N±0°.01×6°.60E±0°.02,h17km±2km, n125,σ0°.89/197,France

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
HAU	**Haudompre**	**0.36**	**208**	*e*Pg	**Pg**	**03 59 50.1**	**+0.8**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**03 59 54.8**	**+0.5**
	53nm,0.2s						
HAU	**Haudompre**	**0.36**	**208**	*e*Pg	**Pg**	**03 59 50.1**	**+0.8**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**03 59 54.8**	**+0.5**
	26nm,0.2s						
ECH	**Echery**	**0.39**	**105**	*e*Pg	**Pg**	**03 59 49.8**	**0.0**
	SNR=7.2						
ECH	**Echery**	**0.39**	**105**	Pg	**Pg**	**03 59 49.7**	**-0.1**
ECH				Sg	**Sg**	**03 59 54.6**	**-0.6**
ECH	**Echery**	**0.39**	**105**	Pg	**Pg**	**03 59 49.7**	**-0.1**
ECH				Sg	**Sg**	**03 59 54.6**	**-0.6**
THEF	**They Montfort**	**0.42**	**257**	*e*Pg	**Pg**	**03 59 51.1**	**+0.8**
	SNR=10						
THEF	**They Montfort**	**0.42**	**257**	Pg	**Pg**	**03 59 51.0**	**+0.6**
THEF				Sg	**Sg**	**03 59 57.3**	**+1.2**
THEF	**They Montfort**	**0.42**	**257**	Pg	**Pg**	**03 59 51.0**	**+0.6**
THEF				Sg	**Sg**	**03 59 57.3**	**+1.2**
CDF	**Champ du Feu**	**0.46**	**78**	*e*Pg	**Pg**	**03 59 51.0**	**-0.1**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**03 59 57.3**	**-0.1**
	35nm,0.3s,SNR=1.0						
CDF	**Champ du Feu**	**0.46**	**78**	*e*Pg	**Pg**	**03 59 51.0**	**-0.1**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**03 59 57.3**	**-0.1**
	17nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**0.53**	**161**	*e*Pg	**Pg**	**03 59 52.8**	**+0.4**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**03 59 59.7**	**+0.1**
HINF				*e*Sn	**Sg**	**04 00 03.2**	**+3.6**
	34nm,0.2s,SNR=1.0						
HINF	**Hinteralfeld**	**0.53**	**161**	*e*Pg	**Pg**	**03 59 52.8**	**+0.4**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**03 59 59.7**	**+0.1**
MOF	**Molkenrain**	**0.59**	**142**	*e*Pg	**Pg**	**03 59 53.8**	**+0.4**
	SNR=39						
MOF	**Molkenrain**	**0.59**	**142**	Pg	**Pg**	**03 59 53.8**	**+0.3**
MOF	**Molkenrain**	**0.59**	**142**	Pg	**Pg**	**03 59 53.8**	**+0.3**
	SNR=39						
RFYF	**Reffroy**	**0.81**	**293**	*e*Pg	**Pg**	**03 59 58.4**	**+0.8**
RFYF	**Reffroy**	**0.81**	**293**	*e*P	**Pb**	**03 59 59.7**	**+2.3**
RFYF				*e*Sg	**Sg**	**04 00 09.0**	**+0.7**
RFYF				*e*Sn	**Sn**	**04 00 10.6**	**+0.6**
	63nm,0.2s						
RFYF	**Reffroy**	**0.81**	**293**	*e*Pg	**Pg**	**03 59 58.4**	**+0.8**
RFYF	**Reffroy**	**0.81**	**293**	*e*P	**Pb**	**03 59 59.7**	**+2.3**
RFYF				*e*Sg	**Sg**	**04 00 09.0**	**+0.7**
RFYF				*e*Sn	**Sn**	**04 00 10.6**	**+0.6**
	32nm,0.2s						
LOMF	**Lomont**	**0.98**	**171**	*e*Pg	**Pg**	**04 00 01.9**	**+1.0**
	SNR=15						
LOMF	**Lomont**	**0.98**	**171**	Pg	**Pg**	**04 00 01.8**	**+0.9**
LOMF				Sg	**Sg**	**04 00 14.8**	**+1.1**
LOMF	**Lomont**	**0.98**	**171**	Pg	**Pg**	**04 00 01.8**	**+0.9**
LOMF				Sg	**Sg**	**04 00 14.8**	**+1.1**
BOURR	**Bourrignon**	**1.02**	**155**	*e*Pg	**Pg**	**04 00 02.2**	**+0.6**
	SNR=16						
BOURR				*e*Sg	**Sg**	**04 00 15.7**	**+0.8**
BOURR	**Bourrignon**	**1.02**	**155**	*e*Pn	**Pn**	**04 00 02.3**	**+1.0**
	36nm,0.2s						
BOURR	**Bourrignon**	**1.02**	**155**	*e*Pn	**Pn**	**04 00 02.3**	**+1.0**
	36nm,0.2s						
BOURR				Sg	**Sg**	**04 00 15.7**	**+0.8**
LANF	**Langenberg**	**1.04**	**50**	*e*Pg	**Pg**	**04 00 01.6**	**-0.3**
	SNR=8.5						
LANF	**Langenberg**	**1.04**	**50**	Pg	**Pg**	**04 00 01.3**	**-0.6**
LANF				Sg	**Sg**	**04 00 16.9**	**+1.3**
LANF	**Langenberg**	**1.04**	**50**	Pg	**Pg**	**04 00 01.6**	**-0.3**
	SNR=8.5						
LANF				Sg	**Sg**	**04 00 16.9**	**+1.3**
FELD	**Feldberg im Sc**	**1.04**	**115**	*e*Pg	**Pg**	**04 00 02.3**	**+0.3**
	SNR=6.4						
FELD	**Feldberg im Sc**	**1.04**	**115**	Pg	**Pg**	**04 00 02.3**	**+0.3**
	SNR=6.4						
FELD				Sg	**Sg**	**04 00 15.8**	**+0.2**
MEZF	**Maizieres J'vi**	**1.05**	**281**	*e*Pg	**Pg**	**04 00 02.8**	**+0.7**
	baz=102						
MEZF				*e*Sg	**Sg**	**04 00 16.7**	**+0.9**
	20nm,0.3s,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.05**	**281**	*e*Pg	**Pg**	**04 00 02.8**	**+0.7**
	baz=102						
MEZF				*e*Sg	**Sg**	**04 00 16.7**	**+0.9**
	9.8nm,0.3s,SNR=1.0						
SFTF	**Sexfontaines**	**1.05**	**264**	*e*Pn	**Pn**	**04 00 02.2**	**+0.5**
	baz=88						
SFTF	**Sexfontaines**	**1.05**	**264**	*e*Pg	**Pg**	**04 00 02.5**	**+0.4**
SFTF				*e*Sg	**Sg**	**04 00 16.8**	**+0.9**
	12nm,0.2s						
SFTF	**Sexfontaines**	**1.05**	**264**	*e*Pn	**Pn**	**04 00 02.2**	**+0.5**
	baz=88						
SFTF	**Sexfontaines**	**1.05**	**264**	*e*Pg	**Pg**	**04 00 02.5**	**+0.4**
SFTF				*e*Sg	**Sg**	**04 00 16.8**	**+0.9**
	6.1nm,0.2s						
BBS	**Basel-Blauen**	**1.05**	**144**	*e*Pg	**Pg**	**04 00 02.8**	**+0.6**
	SNR=7.2						
BBS	**Basel-Blauen**	**1.05**	**144**	Pg	**Pg**	**04 00 02.6**	**+0.4**
BBS				Sg	**Sg**	**04 00 16.6**	**+0.6**
BFO	**Black Forest**	**1.16**	**89**	*e*Pg	**Pg**	**04 00 03.3**	**-0.9**
	SNR=4.7						
BFO				*e*Sg	**Sg**	**04 00 17.1**	**-2.1**
BFO	**Black Forest**	**1.16**	**89**	Pg	**Pg**	**04 00 03.3**	**-0.9**
	SNR=4.7						
BFO				Sg	**Sg**	**04 00 17.1**	**-2.2**
BALST	**Balsthal**	**1.23**	**143**	*e*Pg	**Pg**	**04 00 05.8**	**+0.2**
	SNR=6.6						
BALST	**Balsthal**	**1.23**	**143**	*e*Pn	**Pn**	**04 00 05.0**	**+0.8**
	36nm,0.1s						
BALST	**Balsthal**	**1.23**	**143**	*e*Pn	**Pn**	**04 00 05.0**	**+0.8**
	36nm,0.1s						
BALST	**Balsthal**	**1.23**	**143**	Pg	**Pg**	**04 00 05.8**	**+0.2**
	SNR=6.6						
SULZ	**Cheisacher**	**1.29**	**127**	*e*Pg	**Pg**	**04 00 06.5**	**-0.2**
	SNR=5.0						
SULZ				*e*Sg	**Sg**	**04 00 23.4**	**-0.1**
SULZ	**Cheisacher**	**1.29**	**127**	*e*Pn	**Pn**	**04 00 05.7**	**+0.7**
	56nm,0.5s						
SULZ	**Cheisacher**	**1.29**	**127**	*e*Pn	**Pn**	**04 00 05.7**	**+0.7**
	56nm,0.5s						
SULZ	**Cheisacher**	**1.29**	**127**	Pg	**Pg**	**04 00 06.5**	**-0.2**
	SNR=5.0						
SULZ				Sg	**Sg**	**04 00 23.4**	**-0.1**
WLF	**Walferdange**	**1.38**	**348**	*e*Pg	**Pg**	**04 00 09.0**	**+0.6**
	SNR=2.8						
WLF				*e*Sg	**Sg**	**04 00 26.3**	**0.0**
WLF	**Walferdange**	**1.38**	**348**	Pg	**Pg**	**04 00 09.0**	**+0.6**
	SNR=2.8						
WLF				Sg	**Sg**	**04 00 26.3**	**0.0**
SLE	**Schleitheim**	**1.39**	**113**	*e*Pn	**Pn**	**04 00 06.8**	**+0.5**
	SNR=1.1						
SLE				*e*Pg	**Pg**	**04 00 08.8**	**+0.2**
	SNR=6.3						
SLE				*e*Sn	**Sn**	**04 00 23.0**	**-1.3**
SLE				*e*Sg	**Sg**	**04 00 26.0**	**-0.6**
SLE	**Schleitheim**	**1.39**	**113**	*i* Pn	**Pn**	**04 00 06.8**	**+0.4**
	71nm,0.3s						
SLE	**Schleitheim**	**1.39**	**113**	*i* Pn	**Pn**	**04 00 06.8**	**+0.4**
	71nm,0.3s						
SLE	**Schleitheim**	**1.39**	**113**	Pg	**Pg**	**04 00 08.8**	**+0.2**
	SNR=6.3						
SLE				Sn	**Sn**	**04 00 23.0**	**-1.2**
SLE				Sg	**Sg**	**04 00 26.0**	**-0.6**
KTD	**Kalmit**	**1.40**	**44**	*e*Pg	**Pg**	**04 00 08.7**	**-0.2**
	SNR=2.6						
KTD	**Kalmit**	**1.40**	**44**	Pg	**Pg**	**04 00 08.7**	**-0.1**
	SNR=2.6						
RUP	**Ruppelstein**	**1.42**	**12**	*e*Pg	**Pg**	**04 00 09.8**	**+0.7**
	SNR=2.5						
RUP	**Ruppelstein**	**1.42**	**12**	Pg	**Pg**	**04 00 09.5**	**+0.4**
SPAK	**Spaichingen-Ko**	**1.48**	**98**	*e*Pg	**Pg**	**04 00 10.6**	**+0.3**
	SNR=1.8						
SPAK	**Spaichingen-Ko**	**1.48**	**98**	Pg	**Pg**	**04 00 10.5**	**+0.2**
**ZU

	SNR=3.7								
WILA					Sg	Sg	04 00 39.5	-0.3	
TOD	**Tromm**	**1.94**	**48**	*e*Pg	**Pg**	**Pg**	04 00 18.7	-0.4	
	SNR=2.8								
TOD	**Tromm**	**1.94**	**48**	Pg	Pg	**Pg**	04 00 18.7	-0.4	
	SNR=2.8								
LOR	**Lormes**	**2.13**	**241**	*e*Pn	**Pn**	**Pn**	04 00 17.3	+0.8	
	baz=63,SNR=1.0								
LOR	**Lormes**	**2.13**	**241**	*e*Pg	**Pg**	**Pg**	04 00 22.9	+0.3	
	baz=65								
LOR				*e*Sg	**Sg**	**Sg**	04 00 50.1	-0.1	
	4.7nm,0.2s,baz=60,SNR=1.0								
LOR	**Lormes**	**2.13**	**241**	*e*Pn	**Pn**	**Pn**	04 00 17.3	+0.8	
	baz=63,SNR=1.0								
LOR	**Lormes**	**2.13**	**241**	*e*Pg	**Pg**	**Pg**	04 00 22.9	+0.3	
	baz=65								
LOR				*e*Sg	**Sg**	**Sg**	04 00 50.1	-0.1	
	2.3nm,0.2s,baz=60,SNR=1.0								
GIVF	**Givet**	**2.13**	**328**	*e*P	**Pn**	**Pn**	04 00 19.1	+2.5	
GIVF	**Givet**	**2.13**	**328**	*e*Pg	**Pg**	**Pg**	04 00 22.4	-0.3	
GIVF				*e*Sg	**Sg**	**Sg**	04 00 49.6	-0.7	
	4.1nm,0.2s								
GIVF	**Givet**	**2.13**	**328**	*e*P	**Pn**	**Pn**	04 00 19.1	+2.5	
GIVF	**Givet**	**2.13**	**328**	*e*Pg	**Pg**	**Pg**	04 00 22.4	-0.3	
GIVF				*e*Sg	**Sg**	**Sg**	04 00 49.6	-0.7	
	2.0nm,0.2s								
LIENZ	**Kamor/St.Gall**	**2.20**	**117**	*e*Pn	**Pn**	**Pn**	04 00 19.4	+1.8	
	SNR=1.4								
LIENZ				*e*Sn	**Sn**	**Sn**	04 00 44.4	0.0	
LIENZ	**Kamor/St.Gall**	**2.20**	**117**	Pn	**Pn**	**Pn**	04 00 19.4	+1.8	
	SNR=1.4								
LIENZ				Sn	**Sn**	**Sn**	04 00 44.4	0.0	
TNS	**Taunus Mts**	**2.26**	**32**	*e*Pg	**Pg**	**Pg**	04 00 26.5	+1.4	
	SNR=2.0								
TNS				*e*Sg	**Sg**	**Sg**	04 00 52.9	-1.5	
TNS	**Taunus Mts**	**2.26**	**32**	Pg	**Pg**	**Pg**	04 00 26.5	+1.4	
	SNR=2.0								
TNS				Sg	**Sg**	**Sg**	04 00 52.9	-1.5	
BAIF	**Baives**	**2.34**	**319**	*e*Pg	**Pg**	**Pg**	04 00 26.1	-0.7	
	SNR=1.0								
BAIF				*e*Sg	**Sg**	**Sg**	04 00 55.6	-1.5	
	2.3nm,0.3s,SNR=1.0								
BAIF	**Baives**	**2.34**	**319**	*e*Pg	**Pg**	**Pg**	04 00 26.1	-0.7	
	SNR=1.0								
BAIF				*e*Sg	**Sg**	**Sg**	04 00 55.6	-1.5	
	1.1nm,0.3s,SNR=1.0								
SSF	**Saint Saulge**	**2.44**	**240**	*e*Pn	**Pn**	**Pn**	04 00 21.4	+0.6	
	SNR=1.0								
SSF	**Saint Saulge**	**2.44**	**240**	*e*Pg	**Pg**	**Pg**	04 00 28.0	-0.6	
	SNR=1.0								
SSF				*e*Sn	**Sn**	**Sn**	04 00 48.6	-1.6	
	SNR=1.0								
SSF				*e*Sg	**Sg**	**Sg**	04 01 00.0	-0.2	
	4.2nm,0.4s,SNR=1.0								
SSF	**Saint Saulge**	**2.44**	**240**	*e*Pn	**Pn**	**Pn**	04 00 21.4	+0.6	
	SNR=1.0								
SSF	**Saint Saulge**	**2.44**	**240**	*e*Pg	**Pg**	**Pg**	04 00 28.0	-0.6	
	SNR=1.0								
SSF				*e*Sn	**Sn**	**Sn**	04 00 48.6	-1.6	
	SNR=1.0								
SSF				*e*Sg	**Sg**	**Sg**	04 01 00.0	-0.2	
	2.1nm,0.4s,SNR=1.0								
SMF	**Signal de Mont**	**2.51**	**229**	*e*Pn	**Pn**	**Pn**	04 00 22.1	+0.3	
	SNR=1.0								
SMF	**Signal de Mont**	**2.51**	**229**	*e*Pg	**Pg**	**Pg**	04 00 30.0	0.0	
SMF				*e*Sn	**Sn**	**Sn**	04 00 50.9	-1.1	
	SNR=1.0								
SMF				*e*Sg	**Sg**	**Sg**	04 01 02.2	-0.3	
	4.5nm,0.2s,SNR=1.0								
SMF	**Signal de Mont**	**2.51**	**229**	*e*Pn	**Pn**	**Pn**	04 00 22.1	+0.3	
	SNR=1.0								
SMF	**Signal de Mont**	**2.51**	**229**	*e*Pg	**Pg**	**Pg**	04 00 30.0	0.0	
SMF				*e*Sn	**Sn**	**Sn**	04 00 50.9	-1.1	
	SNR=1.0								
SMF				*e*Sg	**Sg**	**Sg**	04 01 02.2	-0.3	
	2.2nm,0.2s,SNR=1.0								
AVF	**Avril sur Loir**	**2.68**	**236**	*e*Pn	**Pn**	**Pn**	04 00 24.6	+0.5	
	SNR=1.0								
AVF	**Avril sur Loir**	**2.68**	**236**	*e*Pg	**Pg**	**Pg**	04 00 33.0	-0.2	
	SNR=1.0								
AVF				*e*Sg	**Sg**	**Sg**	04 01 07.3	-0.6	
	1.3nm,0.2s,SNR=1.0								
AVF	**Avril sur Loir**	**2.68**	**236**	*e*Pn	**Pn**	**Pn**	04 00 24.6	+0.5	
	SNR=1.0								
AVF	**Avril sur Loir**	**2.68**	**236**	*e*Pg	**Pg**	**Pg**	04 00 33.0	-0.2	
	SNR=1.0								
AVF				*e*Sg	**Sg**	**Sg**	04 01 07.3	-0.6	
	0.6nm,0.2s,SNR=1.0								
LPL	**La Plagne**	**2.81**	**178**	*e*Sg	**Sg**	**Sg**	04 01 11.5	-0.5	
	1.3nm,0.3s								
LPL	**La Plagne**	**2.81**	**178**	*e*Sg	**Sg**	**Sg**	04 01 11.5	-0.5	
	0.6nm,0.3s								
LPG	**La Plagne**	**2.83**	**178**	*e*P	**Pn**	**Pn**	04 00 29.5	+3.4	
	SNR=1.0								
LPG	**La Plagne**	**2.83**	**178**	*e*Pg	**Pg**	**Pg**	04 00 36.1	+0.1	
	SNR=1.0								
LPG				*e*Sg	**Sg**	**Sg**	04 01 11.7	-0.9	
	2.9nm,0.4s,SNR=1.0								
LPG	**La Plagne**	**2.83**	**178**	*e*P	**Pn**	**Pn**	04 00 29.5	+3.4	
	SNR=1.0								
LPG	**La Plagne**	**2.83**	**178**	*e*Pg	**Pg**	**Pg**	04 00 36.1	+0.1	
	SNR=1.0								
LPG				*e*Sg	**Sg**	**Sg**	04 01 11.7	-0.9	
	1.5nm,0.4s,SNR=1.0								
HYF	**Humbligny**	**2.87**	**250**	*e*Sg	**Sg**	**Sg**	04 01 13.2	-0.8	
HYF	**Humbligny**	**2.87**	**250**	*e*Sg	**Sg**	**Sg**	04 01 13.2	-0.8	
BGF	**Bois d'Agland**	**3.10**	**237**	*e*Pn	**Pn**	**Pn**	04 00 30.2	+0.3	
	SNR=1.0								
BGF	**Bois d'Agland**	**3.10**	**237**	*e*Pg	**Pg**	**Pg**	04 00 41.0	-0.2	
	SNR=1.0								
BGF				*e*Sn	**Sn**	**Sn**	04 01 05.1	-1.3	
	SNR=1.0								
BGF				*e*Sg	**Sg**	**Sg**	04 01 20.4	-0.9	
	8.2nm,0.4s,SNR=1.0								
BGF	**Bois d'Agland**	**3.10**	**237**	*e*Pn	**Pn**	**Pn**	04 00 30.2	+0.3	
	SNR=1.0								
BGF	**Bois d'Agland**	**3.10**	**237**	*e*Pg	**Pg**	**Pg**	04 00 41.0	-0.2	
	SNR=1.0								
BGF				*e*Sn	**Sn**	**Sn**	04 01 05.1	-1.3	
	SNR=1.0								
BGF				*e*Sg	**Sg**	**Sg**	04 01 20.4	-0.9	
	4.1nm,0.4s,SNR=1.0								
BUG	**Bochum–Univer**	**3.15**	**8**	*e*Sg	**Sg**	**Sg**	04 01 21.4	-1.7	
ORIF	**Oris-en-Rattie**	**3.44**	**189**	*e*Sg	**Sg**	**Sg**	04 01 30.8	-1.4	
	2.1nm,0.3s,SNR=1.0								
ORIF	**Oris-en-Rattie**	**3.44**	**189**	*e*Sg	**Sg**	**Sg**	04 01 30.8	-1.4	
	1.0nm,0.3s,SNR=1.0								
MBDF	**Montbardon**	**3.60**	**178**	*e*Sg	**Sg**	**Sg**	04 01 36.1	-1.2	
	0.5nm,0.2s								
MBDF	**Montbardon**	**3.60**	**178**	*e*Sg	**Sg**	**Sg**	04 01 36.1	-1.2	
	0.2nm,0.2s								
TCF	**Toulx Ste Croi**	**3.61**	**237**	*e*Pn	**Pn**	**Pn**	04 00 36.5	-0.4	
	SNR=1.0								
TCF				*e*Sg	**Sg**	**Sg**	04 01 35.8	-2.0	
	1.9nm,0.4s,SNR=1.0								
TCF	**Toulx Ste Croi**	**3.61**	**237**	*e*Pn	**Pn**	**Pn**	04 00 36.5	-0.4	
	SNR=1.0								
TCF				*e*Sg	**Sg**	**Sg**	04 01 35.8	-2.0	
	0.9nm,0.4s,SNR=1.0								
VIVF	**Saint-Julien-l**	**3.71**	**202**	*e*Sg	**Sg**	**Sg**	04 01 38.5	-2.4	
	2.1nm,0.3s,SNR=1.0								
VIVF	**Saint-Julien-l**	**3.71**	**202**	*e*Sg	**Sg**	**Sg**	04 01 38.5	-2.4	
	1.0nm,0.3s,SNR=1.0								
WET	**Wettzell**	**4.24**	**76**	*e*Sn	**Sn**	**Sn**	04 01 33.5	-1.1	
WET	**Wettzell**	**4.24**	**76**	Sn	**Sn**	**Sn**	04 01 33.5	-1.0	
LDF	**La Druitiere**	**4.48**	**276**	*e*Sg	**Sg**	**Sg**	04 02 03.6	-2.0	
	2.6nm,0.4s								
LDF	**La Druitiere**	**4.48**	**276**	*e*Sg	**Sg**	**Sg**	04 02 03.6	-2.0	
	1.3nm,0.4s								

*IDC **30** 04:03:50.9±19.0, 19°32'S×177°63'W, h370km±207km, mb3.4/7, mb1 3.7/7, mb1mx3.4/19, mbtmp3.4/7, Error ellipse: s-maj=85.1km s-min=44.6km az=158.0*
*ISCJB **30** 04:03:52.3±1.2, 19°5'S±0°5'×177°7'W±0°3, h400km, mb3.7/8, Error ellipse: s-maj=77.0km s-min=17.6km az=151.9*

ISC 30 04:03:53.4±1.2, 19°6'S±0°5'×177°6'W±0°3, h400km, n12, σ0°92/12, mb3.7/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARMA	**Armidale**	**29.81**	**243**	*e*P		**P**		**04 09 26.3**	**+0.8**
CTA	**Charters Tower**	**33.96**	**263**	*e*P		**P**		**04 10 02.4**	**+1.0**
	3.8nm,0.4s,mb4.1								
CTA	**Charters Tower**	**33.96**	**263**	P		**P**		**04 10 02.0**	**+0.5**
	4.8nm,0.5s,mb4.1,baz=87,slow=8.7,SNR=10								
CMSA	**Cobar Meteorol**	**35.03**	**243**	*e*P		**P**		**04 10 10.0**	**-0.4**
STKA	**Stephens Creek**	**38.53**	**243**	*e*P		**P**		**04 10 39.3**	**-0.2**
	2.8nm,0.5s,mb3.9								
STKA	**Stephens Creek**	**38.53**	**243**	P		**P**		**04 10 39.6**	**+0.1**
	3.2nm,0.5s,mb3.9,baz=105,slow=9.3,SNR=15								
BBOO	**Buckleboo**	**43.30**	**243**	*e*P		**P**		**04 11 16.8**	**-1.0**
	5.0nm,0.4s,mb4.2								
ASAR	**Alice Springs**	**45.10**	**256**	P		**P**		**04 11 31.9**	**-0.1**
	6.5nm,0.6s,mb4.1,baz=94,slow=8.3,SNR=116								
WRA	**Warramunga Arr**	**45.10**	**261**	P		**P**		**04 11 31.8**	**-0.4**
	1.2nm,0.3s,mb3.7,baz=96,slow=6.9,SNR=24								
FITZ	**Fitzroy Crossi**	**53.52**	**262**	P		**P**		**04 12 35.3**	**+0.3**
	1.1nm,0.5s,mb3.4,baz=84,slow=5.2,SNR=12								
NVAR	**Mina Array Bea**	**80.10**	**43**	P		**P**		**04 15 18.6**	**-1.5**
	0.2nm,0.4s,mb3.1,baz=244,slow=9.9,SNR=2.9								
TXAR	**Lajitas Array**	**86.24**	**57**	P		**P**		**04 15 53.4**	**+2.0**
	0.3nm,0.8s,mb3.1,baz=215,slow=7.7,SNR=2.5								

IDC 30 04:09:33.3±0.8, 13°84'N×144°93'E, h149km±3km, mb3.2/5, mb1 3.4/5, mb1mx3.2/23, mbtmp3.2/5, Error ellipse: s-maj=43.6km s-min=17.5km az=98.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.26**	**194**	P		P	Pn	04 09 55.0	+1.4
	605nm,0.3s,baz=260,slow=1.2,SNR=317								
GUMO				S			Sn	04 10 10.2	+1.2
	461nm,0.3s,baz=326,slow=23,SNR=66								
WRA	**Warramunga Arr**	**35.15**	**197**	P		P		04 16 12.8	0.0
	0.9nm,0.8s,baz=21,slow=9.3,SNR=6.8								
FITZ	**Fitzroy Crossi**	**37.00**	**211**	P		P		04 16 28.4	-0.2
	1.5nm,0.7s,baz=26,slow=10,SNR=4.1								
ASAR	**Alice Springs**	**38.80**	**196**	P		P		04 16 43.5	-0.1
	0.2nm,0.4s,baz=20,slow=6.2,SNR=8.8								
MKAR	**Makanchi Array**	**61.35**	**316**	P		P		04 19 33.2	0.0
	1.1nm,0.5s,baz=91,slow=8.5,SNR=16								
ILAR	**Eielson Array**	**68.32**	**25**	P		P		04 20 17.6	-0.4
	0.2nm,0.4s,baz=250,slow=5.7,SNR=5.7								

*IDC **30** 04:22:38.2±0.9, 15°.85S×173°.12W, h0km, mb4.0/8, mb1 4.3/8, mb1mx4.1/20, mbtmp4.1/8, MS3.2/1, Ms1 3.2/1, ms1mx2.8/23, Error ellipse: s-maj=41.5km s-min=19.5km az=138.0*
*NEIC **30** 04:22:40.1±0.5, 15°.83S×173°.11W, h10km, mb4.3/6, Error ellipse: s-maj=23.1km s-min=10.7km az=141.0*
*ISCJB **30** 04:22:41.9±0.6, 15°.8S±0°.2×173°.2W±0°.2, h33km, mb4.1/14, Error ellipse: s-maj=29.1km s-min=13.5km az=139.8*
*SZGRF **30** 04:22:45.0, 17°.93S×176°.13E, h33km, Fiji Islands region*

ISC 30 04:22:43.7±0.6, 15°.9S±0°.2×173°.1W±0°.2, h35km, n23, σ0°71/17, mb4.1/14, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.34**	**35**	Pn		**Pn**		**04 23 13.6**	**-6.1**
	102nm,0.3s,baz=122,slow=1.3,SNR=32								
AFI				Sn			**Sn**	**04 23 35.0**	**-12**
	133nm,0.3s,baz=113,slow=12,SNR=6.2								
AFI				LR		LR		04 24 10.0	
	comp=Z,486nm,19.2s,baz=14,slow=40								
URZ	**Urewera**	**23.92**	**199**	P		**P**		**04 27 54.7**	**+0.3**
	4.9nm,0.4s,mb4.3,baz=0.0,slow=4.0,SNR=5.3								
COEN	**Coen**	**42.20**	**267**	*e*P		**P**		**04 30 34.8**	**+1.1**
	124nm,1.2s								
WRA	**Warramunga Arr**	**49.98**	**257**	P		**P**		**04 31 34.0**	**-0.9**
	0.8nm,0.7s,mb3.9,baz=93,slow=7.0,SNR=17								
ASAR	**Alice Springs**	**50.21**	**252**	P		**P**		**04 31 36.0**	**-0.5**
	2.7nm,0.5s,mb4.5,baz=89,slow=7.7,SNR=52								
PETK	**Petropavlovsk-**	**73.13**	**342**	P		**P**		**04 34 11.2**	**+0.8**
	3.5nm,0.8s,mb4.3,baz=119,slow=9.0,SNR=5.4								
NVAR	**Mina Array Bea**	**74.50**	**42**	P		**P**		**04 34 19.7**	**+1.0**
	2.3nm,0.8s,mb4.2,baz=228,slow=11,SNR=16								
WVOR	**Wild Horse Val**	**76.63**	**38**	*e*P		**P**		**04 34 30.9**	**0.0**
	2.2nm,0.9s,mb4.1								
DUG	**Dugway**	**79.02**	**43**	*e*P		**P**		**04 34 44.7**	**+0.5**
	3.1nm,1.2s,mb4.1								
HLID	**Hailey**	**79.82**	**39**	*e*P		**P**		**04 34 49.1**	**+0.6**
	1.9nm,0.9s,mb4.0								
TXAR	**Lajitas Array**	**80.66**	**56**	P		**P**		**04 34 52.6**	**-0.7**
	0.5nm,0.9s,mb3.4,baz=232,slow=7.4,SNR=4.8								
MCK	**McKinley**	**81.52**	**11**	*e*P		**P**		**04 34 56.6**	**-0.5**
	3.5nm,0.8s,mb4.3								
PDAR	**Pinedale Array**	**82.44**	**42**	P		**P**		**04 35 01.4**	**-1.0**
	0.8nm,0.8s,mb3.7,baz=219,slow=1.9,SNR=6.6								
COLA	**College**	**82.76**	**11**	*e*P		**P**		**04 35 03.0**	**-0.6**
	3.9nm,0.9s,mb4.4								
SDCO	**Great Sand Dun**	**82.83**	**48**	*e*P		**P**		**04 35 05.2**	**+0.6**
	3.2nm,1.4s,mb4.2								
ILAR	**Eielson Array**	**82.84**	**11**	P		**P**		**04 35 03.5**	**-0.5**
	0.5nm,0.6s,mb3.7,baz=233,slow=6.5,SNR=11								
BUR08	**Bucovina Ar. S**	**144.86**	**338**	*e*PKPdf		PKPdf		04 42 17.2	+0.2
MORC	**Moravsky Berou**	**145.07**	**348**	*e*PKPbc		PKPbc		04 42 16.8	0.0
GRA1	**Grafenberg Arr**	**146.06**	**355**	*e*PKPbc		PKPbc		04 42 20.9	+1.0
GRF	**Grafenberg Arr**	**146.06**	**355**	*e*PKPbc		PKPbc		04 42 20.9	+1.0
GRF	**Grafenberg Arr**	**146.06**	**355**	PKP		PKPdf		04 42 20.9	+1.8
BR131	**Keskin Array S**	**146.66**	**321**	*e*PKPbc		PKPbc		04 42 21.7	-0.3
BRTR	**Keskin Array B**	**146.66**	**321**	PKPbc		PKPbc		04 42 22.8	+0.8
	2.1nm,0.8s,baz=93,slow=2.5,SNR=11								

*ISCJB **30** 04:50:43.6±0.5, 40°.64N±0°.03×23°.75E±0°.04, h14km±7km, Error ellipse: s-maj=4.9km s-min=4.5km az=161.5*
*NEIC **30** 04:50:43.6, 40°.66N×23°.63E, h29km, MD3.0(ATH), After ATH.*
*ATH **30** 04:50:43.6, 40°.66N×23°.63E, h29km±2km, MD3.0/3*
*CSEM **30** 04:50:43.6±0.2, 40°.63N×23°.74E, h15km, MD3.0, Error ellipse: s-maj=5.3km s-min=4.6km az=86.0*
*THE **30** 04:50:44.3, 40°.64N×23°.76E, h3km±14km, ML2.2/6, Error ellipse: s-maj=14.8km s-min=0.4km az=213.0*

ISC 30 04:50:43.9±0.5, 40°.63N±0°.03×23°.75E±0°.04, h16km±6km, n31, σ0°59/49, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.34**	**149**	P		**Pg**		**04 50 51.0**	**0.0**
OUR				S		**Sg**		**04 50 56.2**	**+0.4**
OUR	**Ouranopolis**	**0.34**	**149**	P		**Pg**		**04 50 51.0**	**0.0**
OUR				S		**Sg**		**04 50 56.2**	**+0.4**
PLG	**Polygyros**	**0.34**	**222**	*e*Pb		**Pg**		**04 50 51.2**	**+0.1**
PLG				*e*Sb		**Sg**		**04 50 56.2**	**+0.3**
PLG	**Polygyros**	**0.34**	**222**	*e*PB		**Pg**		**04 50 51.2**	**+0.1**
PLG				*e*SB		**Sg**		**04 50 56.2**	**+0.3**
PLG	**Polygyros**	**0.34**	**222**	P		**Pg**		**04 50 51.2**	**+0.1**
PLG				S		**Sg**		**04 50 56.2**	**+0.3**
PLG	**Polygyros**	**0.34**	**222**	P		**Pg**		**04 50 51.2**	**+0.1**
PLG				S		**Sg**		**04 50 56.2**	**+0.3**
SOH	**Sokhos**	**0.36**	**303**	*e*Pb		**Pg**		**04 50 51.0**	**-0.3**
SOH				*e*Sb		**Sg**		**04 50 56.0**	**-0.3**
SOH	**Sokhos**	**0.36**	**303**	*e*PB		**Pg**		**04 50 51.0**	**-0.3**
SOH				*e*SB		**Sg**		**04 50 56.0**	**-0.3**
SOH	**Sokhos**	**0.36**	**303**	P		**Pg**		**04 50 51.1**	**-0.2**
SOH				S		**Sg**		**04 50 56.4**	**+0.1**
SOH	**Sokhos**	**0.36**	**303**	*e*Pb		**Pg**		**04 50 51.0**	**-0.3**
SOH				*e*Sb		**Sg**		**04 50 56.0**	**-0.3**
SOH				S		**Sg**		**04 50 56.4**	**+0.1**
HORT	**Hortiatis**	**0.50**	**267**	P		**Pg**		**04 50 53.6**	**-0.2**
HORT				S		**Sg**		**04 51 00.9**	**+0.4**
HORT	**Hortiatis**	**0.50**	**267**	P		**Pg**		**04 50 53.6**	**-0.2**
SRS	**Serrai**	**0.50**	**346**	P		**Pg**		**04 50 53.4**	**-0.5**
SRS				S		**Sg**		**04 51 00.9**	**+0.2**
SRS	**Serrai**	**0.50**	**346**	P		**Pg**		**04 50 53.4**	**-0.5**
SRS				S		**Sg**		**04 51 00.9**	**+0.2**
KAVA	**Kavala**	**0.69**	**57**	P		**Pg**		**04 50 57.0**	**-0.4**
KAVA				S		**Sg**		**04 51 06.4**	**-0.1**
KAVA	**Kavala**	**0.69**	**57**	P		**Pg**		**04 50 57.0**	**-0.4**
KAVA				S		**Sg**		**04 51 06.4**	**-0.1**
PAIG	**Paliouri**	**0.70**	**184**	P		**Pg**		**04 50 57.6**	**-0.1**
PAIG	**Paliouri**	**0.70**	**184**	P		**Pg**		**04 50 57.6**	**-0.1**
NVR	**Nevrokopi**	**0.73**	**7**	*e*Pn		**Pg**		**04 50 57.5**	**-0.6**
NVR	**Nevrokopi**	**0.73**	**7**	*e*PN		**Pg**		**04 50 57.5**	**-0.6**
NVR	**Nevrokopi**	**0.73**	**7**	*e*Pn		**Pg**		**04 50 57.5**	**-0.6**
KNT	**Kendrikon**	**0.84**	**310**	P		**Pg**		**04 51 00.0**	**-0.2**
KNT				S		**Sg**		**04 51 12.1**	**+0.9**
KNT	**Kendrikon**	**0.84**	**310**	P		**Pg**		**04 51 00.0**	**-0.2**
KNT				S		**Sg**		**04 51 12.1**	**+0.9**
NEO	**Neokhori**	**1.38**	**197**	*e*Pb		**Pb**		**04 51 08.4**	**-1.0**
NEO	**Neokhori**	**1.38**	**197**	*e*PB		**Pb**		**04 51 08.4**	**-1.0**
NEO	**Neokhori**	**1.38**	**197**	*e*Pb		**Pb**		**04 51 08.4**	**-1.0**
RDO	**Rodhopi**	**1.45**	**69**	*e*Pn		**Pn**		**04 51 11.4**	**+1.9**
RDO	**Rodhopi**	**1.45**	**69**	*e*PN		**Pn**		**04 51 11.4**	**+1.9**
RDO	**Rodhopi**	**1.45**	**69**	*e*Pn		**Pn**		**04 51 11.4**	**+1.9**
THL	**Klokotos Trika**	**1.70**	**232**	*e*Pn		**Pn**		**04 51 12.5**	**-0.5**
THL	**Klokotos Trika**	**1.70**	**232**	*e*Pn		**Pn**		**04 51 12.5**	**-0.5**

FUNV 30 04:51:41.6, 5°.00N×73°.73W, h19km, MW4.1, 1C, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**3.18**	**26**	*e*P		**P**	Pn	04 52 30.7	0.0
CAPV				*e*S			Sn	04 53 06.5	-1.5
SOCV	**Socops**	**4.34**	**41**	*e*P		**P**	Pn	04 52 46.1	-0.5
SOCV				*e*S			Sn	04 53 32.7	-4.0
VIGV	**El Vigia**	**4.48**	**32**	*e*P		**P**	Pn	04 52 47.1	-1.5
VIGV				*e*S			Sn	04 53 35.7	-4.5
ELOV	**Elorza**	**4.67**	**65**	*e*P		**P**	Pn	04 52 50.4	-0.8
VIRV	**Villa del Rosa**	**5.62**	**13**	*e*P		**P**	Pn	04 53 02.1	-2.2
VIRV				*e*S			Sn	04 54 02.3	-6.2
QARV	**Quebrada Arrib**	**6.07**	**31**	*e*P		**P**	Pn	04 53 08.9	-1.6
QARV				*e*S			Sn	04 54 13.6	-5.9
SANV	**Sanarito**	**6.11**	**43**	*e*P		**P**	Pn	04 53 09.7	-1.3
SANV				*e*S			Sn	04 54 14.5	-5.9
CURV	**Curarigua**	**6.23**	**37**	*e*P		**P**	Pn	04 53 10.7	-1.9
CURV				*e*S			Sn	04 54 15.9	-7.4
TEPV	**Terepaima**	**6.68**	**42**	*e*P		**P**	Pn	04 53 16.7	-2.1
TEPV				*e*S			Sn	04 54 26.9	-7.5
SIQV	**Siquisique**	**6.83**	**34**	*e*P		**P**	Pn	04 53 18.9	-1.9
SIQV				*e*S			Sn	04 54 30.7	-7.5
BAUV	**El Baul**	**6.87**	**55**	*e*P		**P**	Pn	04 53 18.5	-3.0
BAUV				*e*S			Sn	04 54 31.4	-7.8
MAPV	**Macapo**	**7.10**	**47**	*e*P		**P**	Pn	04 53 22.8	-1.8
CAOV	**Caicara del Or**	**7.72**	**72**	*e*P		**P**	Pn	04 53 30.5	-2.6
CAOV				*e*S			Sn	04 54 51.8	-8.4
MONV	**Montecano**	**7.85**	**28**	*e*P		**P**	Pn	04 53 31.8	-3.1
TURV	**Turiamo**	**7.96**	**47**	*e*P		**P**	Pn	04 53 33.8	-2.6
TURV				*e*S			Sn	04 54 56.5	-10
BIRV	**Birongo**	**9.18**	**53**	*e*P		**P**	Pn	04 53 49.9	-3.3

IDC 30 04:56:22.8±7.1, 21°.02S×178°.91W, h658km±88km, mb2.9/6, mb1 3.1/6, mb1mx3.0/16, mbtmp2.9/6, Error ellipse: s-maj=69.2km s-min=35.3km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.79**	**245**	P		P		05 02 38.8	+0.8
	4.1nm,1.0s,baz=96,slow=10,SNR=3.0								
ASAR	**Alice Springs**	**43.57**	**257**	P		P		05 03 31.9	+0.2
	1.2nm,0.7s,baz=94,slow=7.9,SNR=23								
WRA	**Warramunga Arr**	**43.68**	**263**	P		P		05 03 32.3	-0.3
	0.5nm,0.3s,baz=97,slow=7.7,SNR=13								
PETK	**

comp=Z,21nm,0.7s
TSUM Tsumeb 15.09 277 *e*S **Sn** 05 16 31.5 **-8.3**
SUR Sutherland 15.43 224 *e*P **Pn** 05 13 57.9 **+1.1**
SUR *e*S **Sn** **05 16 44.3 -3.5**
SUR AML AML 05 18 48.4
comp=Z,17nm,0.8s
TORD Torodi Ar. Bea 46.65 315 P **P** **05 18 41.3 -6.7**
comp=Z,1.0nm,0.7s,mb3.9,baz=133,slow=6.0,SNR=8.9
MAW Mawson 49.39 166 P **P** **05 19 09.8 +1.3**
comp=Z,1.6nm,0.7s,mb4.2,baz=342,slow=9.1,SNR=9.5
MKAR Makanchi Array 81.23 32 P **P** **05 22 29.0 -6.1**
comp=Z,0.5nm,0.7s,mb3.6,baz=215,slow=6.5,SNR=5.4
ASAR Alice Springs 90.42 116 P **P** **05 23 20.6 -0.8**
comp=Z,0.2nm,0.7s,mb3.5,baz=235,slow=2.7,SNR=4.3
NVAR Mina Array Bea 150.63 311 PKPbc PKPbc 05 30 09.9 -1.6
comp=Z,1.2nm,0.7s,baz=82,slow=3.9,SNR=5.8

IDC 30 05:10:38.5±3.9, 29°.61S×138°.54E, h0km, mb1 3.0/3, mb1mx3.0/14, mbtmp2.8/3, ML2.7/3, Error ellipse: s-maj=151.8km s-min=17.0km az=49.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.47**	**131**	Pn	Pn	05 11 32.7	-1.0
	0.2nm,0.3s,baz=315,slow=17,SNR=2.1						
STKA				Sn	Sn	05 12 14.7	-0.9
	0.5nm,0.3s,baz=295,slow=13,SNR=2.9						
STKA				Lg		05 12 30.5	
	1.7nm,0.3s,baz=37,slow=12,SNR=6.6						
ASAR	**Alice Springs**	**7.22**	**324**	Pn	Pn	05 12 25.8	+0.4
	0.1nm,0.3s,baz=176,slow=8.5,SNR=8.1						
ASAR				Sn	Sn	05 13 45.3	-2.8
	0.2nm,0.3s,baz=152,slow=23,SNR=6.0						
WRA	**Warramunga Arr**	**10.35**	**337**	Pn	Pn	05 13 09.0	+0.8
	0.1nm,0.3s,baz=157,slow=11,SNR=7.7						
WRA				Sn	Sn	05 15 05.0	0.0
	0.1nm,0.3s,baz=165,slow=24,SNR=2.5						

CASC 30 05:16:32.4±1.3, 13°.27N×89°.54W, h57km±11km, MD3.8, ML3.3, 1C-3D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	**Serv Nac Est T**	**0.51**	**36**	*e*P	Pn	05 16 44.4	+0.1
SNET				*e*S	Sn	05 16 54.0	+1.2
SNET				AML	AML	05 16 54.2	
	comp=Z,3μm,0.2s						
BOQS	**Boqueron**	**0.52**	**28**↑	*e*P	Pn	05 16 44.9	+0.5
BOQS				*e*S	Sn	05 16 54.6	+1.6
SBLS	**San Blas**	**0.57**	**351**	*e*P	Pn	05 16 45.5	+0.6
LFRS	**El Faro**	**0.58**	**53**↓	*i*P	Pn	05 16 45.2	+0.2
SNJE	**San Jose**	**0.60**	**353**	*e*P	Pn	05 16 45.8	+0.6
SNJE				*e*S	Sn	05 16 55.4	+0.8
LFU	**La Fuente**	**0.63**	**41**	*e*P	Pn	05 16 46.2	+0.6
SNVI	**San Vicente**	**0.76**	**63**↓	*e*P	Pn	05 16 47.4	+0.2
RBDL	**Robledal**	**0.85**	**350**	*e*P	Pn	05 16 49.1	+0.7
MTO2	**Montecristo 2**	**1.13**	**9**	*e*P	Pn	05 16 52.9	+0.8
MTO2				*e*S	Sn	05 17 08.4	+1.7
VSM	**San Miguel**	**1.24**	**83**	*e*P	Pn	05 16 53.6	+0.1
VSM				*e*P		05 16 53.9	
BLLM	**Bellamira**	**1.27**	**82**	*e*P	Pn	05 16 54.0	+0.1
BLLM				*e*S	Sn	05 17 10.4	+0.3
CAHU	**Cacacuatique**	**1.38**	**69**	*e*P	Pn	05 16 55.7	+0.3
CNCH	**Conchagua**	**1.66**	**90**	*e*P	Pn	05 16 59.3	+0.2
CNCH				*e*S	Sn	05 17 21.8	+2.4
CRIN	**San Cristobal**	**2.49**	**103**	*e*P	Pn	05 17 10.6	+0.1
CRIN				AML	AML	05 18 00.7	
	comp=Z,354nm,0.5s						
LEON	**Leon**	**2.71**	**108**	*e*P	Pn	05 17 12.1	-1.5
TELN	**Telica**	**2.72**	**104**	*e*P	Pn	05 17 13.7	+0.1
TELN				AML	AML	05 17 53.2	
	comp=Z,18nm,0.4s						
MOMN	**Momotombo**	**3.04**	**106**	*e*P	Pn	05 17 18.8	+0.7
COPN	**Copaltepe**	**3.07**	**110**	*e*P	Pn	05 17 18.6	+0.1
COPN				AML	AML	05 18 05.6	
	comp=Z,206nm,0.3s						
CSAN		**3.22**	**109**	*e*P	Pn	05 17 20.8	+0.3
JCR	**Jicaral**	**5.51**	**128**	*e*P	Pn	05 17 52.7	+0.8
CGA2	**Cerro Gallo 2**	**5.93**	**123**↓	*e*P	Pn	05 18 00.0	+2.4
PRS1	**Puriscal**	**6.07**	**122**	*e*P	Pn	05 18 01.9	+2.2
LAJ	**Bijagual**	**6.29**	**122**	*e*P	Pn	05 18 00.2	-2.5
BUS	**Buena Vista**	**6.76**	**123**	*e*P	Pn	05 18 11.5	+2.4
ACR	**Cerro Adams**	**7.75**	**126**	*e*P	Pn	05 18 24.1	+1.4

*BJI **30** 06:02:54.4, 7°.69S×131°.11E, h53km, mB4.8/15, mb4.7/25, Ms4.6/5, Ms7 4.0/8*
*MOS **30** 06:02:59.4±1.0, 6°.77S×130°.43E, h33km, mb4.7/12, Error ellipse: s-maj=19.9km s-min=8.0km az=114.8*
*IDC **30** 06:03:01.1±5.8, 6°.74S×130°.53E, h33km±43km, mb4.4/10, mb1 4.6/12, mb1mx4.4/16, mbtmp4.5/12, ML5.2/3, MS3.3/5, Ms1 3.3/5, ms1mx3.0/20, Error ellipse: s-maj=27.7km s-min=15.3km az=73.0*
*NEIC **30** 06:03:03.7±1.5, 6°.82S×130°.45E, h54km±16km, mb4.6/17, Error ellipse: s-maj=13.5km s-min=8.8km az=224.0*
*ISCJB **30** 06:03:04.5±0.7, 6°.99S±0°.03×130°.40E±0°.05, h84km±7km, mb4.6/40, Error ellipse: s-maj=9.1km s-min=5.4km az=163.0*
*DJA **30** 06:03:05, 6°.82S×130°.33E, h62km, MLv4.8/5*

ISC 30 06:03:05.7±0.6, 6°.93S±0°.04×130°.41E±0°.05, h74km±6km, h63km±1.0km: pP-P, n106, σ116/114, mb4.6/40, 3C-3D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.45**	**348**	P	**Pn**	**06 03 45.0**	**+1.5**
TLE	**Tual**	**2.65**	**61**	P	**Pn**	**06 03 47.0**	**+0.9**
TLE				S	Px	06 04 03.0	
NLAI	**Namlea**	**4.93**	**318**	P	**Pn**	**06 04 16.6**	**-0.7**
KAKA	**Kakadu**	**6.08**	**161**	*e*P	**Pn**	**06 04 34.0**	**+1.0**
	109nm,0.2s						
KAKA				*e*S	**Sn**	**06 05 40.0**	**-1.1**
KAKA	**Kakadu**	**6.08**	**161**	*e*Pn	**Pn**	**06 04 33.9**	**+0.9**
	556nm,0.4s						
KAKA				*e*Sn	**Sn**	**06 05 41.8**	**+0.6**
KAKA	**Kakadu**	**6.08**	**161**	P	**Pn**	**06 04 33.8**	**+0.8**
	12nm552nm,0.6s						
KNA	**Kununurra**	**8.91**	**190**	*e*P	**Pn**	**06 05 12.6**	**+1.0**
	93nm,0.2s						
KNA				*e*S	**Sn**	**06 06 48.3**	**-2.1**
KNA	**Kununurra**	**8.91**	**190**	P	**Pn**	**06 05 12.9**	**+1.3**
WSI	**Waingapu**	**10.37**	**254**	P	**Pn**	**06 05 32.8**	**+1.2**
	818nm,0.5s						
SPSI	**Sidrap Palu**	**10.99**	**285**	P	**Pn**	**06 05 39.0**	**-1.2**
	48nm,0.9s						
FITZ	**Fitzroy Crossi**	**12.04**	**202**	*e*P	**Pn**	**06 05 52.9**	**-1.4**
	73nm,0.3s						
FITZ				*e*S	**Sn**	**06 07 56.6**	**-10**
FITZ	**Fitzroy Crossi**	**12.04**	**202**	*e*Pn	**Pn**	**06 05 53.1**	**-1.2**
	3.8nm,0.4s						
FITZ				*e*Sn	**Sn**	**06 08 01.2**	**-5.6**
FITZ	**Fitzroy Crossi**	**12.04**	**202**	Pn	**Pn**	**06 05 53.0**	**-1.3**
	17nm,0.3s,baz=33,slow=10,SNR=186						
FITZ				Sn	**Sn**	**06 08 00.4**	**-6.4**
	8.2nm,0.3s,baz=198,slow=15,SNR=7.7						
FITZ				LR	LR	06 10 33.3	
	comp=Z,122nm,20.2s,baz=63,slow=37						
FITZ	**Fitzroy Crossi**	**12.04**	**202**	P	**Pn**	**06 05 53.5**	**-0.8**
WRA	**Warramunga Arr**	**13.48**	**164**	Pn	**Pn**	**06 06 10.9**	**-2.9**
	8.8nm,0.3s,baz=349,slow=13,SNR=156						
WRA				Sn	**Sn**	**06 08 33.7**	**-8.3**
	16nm,0.3s,baz=348,slow=22,SNR=12						
COEN	**Coen**	**14.36**	**120**	*e*P	**Pn**	**06 06 23.2**	**-2.1**
COEN				*e*S	**Sn**	**06 08 47.0**	**-16**
COEN	**Coen**	**14.36**	**120**	*e*Pn	**Pn**	**06 06 24.3**	**-1.0**
	94nm,0.5s						
COEN				*e*Sn	**Sn**	**06 08 50.3**	**-13**
ASAR	**Alice Springs**	**16.97**	**169**	P	**Pn**	**06 06 57.8**	**-0.6**
	12nm,0.3s,baz=0.4,slow=12,SNR=391						
ASAR				S	**S**	**06 09 58.3**	**-14**
	4.0nm,0.3s,baz=348,slow=25,SNR=6.7						
MBWA	**Marble Bar**	**17.51**	**215**	*e*P	**Pn**	**06 07 05.7**	**+0.7**
MBWA				*e*S	**S**	**06 10 08.6**	**-15**
MBWA	**Marble Bar**	**17.51**	**215**	*e*P	**Pn**	**06 07 05.6**	**+0.6**
	17nm,0.6s						
MBWA				*e*S	**S**	**06 10 08.7**	**-15**
KKM	**Kota Kinabalu**	**19.15**	**312**	*e*P	**Pn**	**06 07 24.4**	**-0.4**
	64nm,0.7s						
CTA	**Charters Tower**	**20.18**	**132**	*e*P	**P**	**06 07 36.5**	**+2.1**
	8.4nm,0.6s						
CTA	**Charters Tower**	**20.18**	**132**	P	**P**	**06 07 36.7**	**+2.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA				LR	LR	06 15 52.2	
CTA	**Charters Tower**	**20.18**	**132**	P	**P**	**06 07 36.7**	**+2.3**
	11nm,0.7s,baz=306,slow=12,SNR=12						
CTA				LR	LR	06 15 52.3	
	comp=Z,120nm,19.8s,baz=50,slow=38						
CTAO	**Charters Tower**	**20.18**	**132**	*e*P	**P**	**06 07 36.2**	**+1.9**
	11nm,0.6s						
CTAO	**Charters Tower**	**20.18**	**132**	*e*P	**P**	**06 07 36.2**	**+1.8**
CTAO				pmax	pmax		
	comp=Z,11nm,0.6s						
KSM	**Kuching**	**21.73**	**292**	*e*P	**P**	**06 07 52.4**	**+1.2**
	comp=Z,15nm,0.6s,mb4.5						
FORT	**Forrest**	**23.82**	**185**	*e*P	**P**	**06 08 14.1**	**+2.2**
	comp=Z,32nm,0.5s,mb4.9						
FORT	**Forrest**	**23.82**	**185**	*e*P	**P**	**06 08 13.8**	**+1.8**
	comp=Z,43nm,0.6s,mb5.0						
KMBL	**Kambalda**	**25.58**	**197**	*e*P	**P**	**06 08 29.8**	**+1.9**
	comp=Z,65nm,0.6s,mb5.2						
STKA	**Stephens Creek**	**26.92**	**159**	*e*P	**P**	**06 08 40.9**	**+0.9**
	comp=Z,5.8nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**26.92**	**159**	*e*P	**P**	**06 08 40.6**	**+0.6**
	comp=Z,2.0nm,0.7s,mb3.8						
STKA	**Stephens Creek**	**26.92**	**159**	P	**P**	**06 08 41.3**	**+1.3**
	comp=Z,4.2nm,0.6s,mb4.2,baz=336,slow=6.8,SNR=7.4						
STKA				LR	LR	06 18 41.7	
	comp=Z,117nm,22.0s,baz=26,slow=35						
STKA	**Stephens Creek**	**26.92**	**159**	*e*P	**P**	**06 08 40.6**	**+0.6**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CMSA	**Cobar Meteorol**	**28.34**	**152**	*e*P	**P**	**06 08 54.1**	**+1.4**
HNR	**Honiara**	**29.34**	**97**	LR	LR	06 20 58.4	
	comp=Z,88nm,19.6s,baz=124,slow=37						
PSI	**Prapat**	**32.88**	**286**	P	**P**	**06 09 32.3**	**-0.7**
	comp=Z,16nm,0.9s,mb4.8,baz=146,slow=4.9,SNR=11						
BDT	**Bhumibol Dam**	**39.25**	**308**	P	**P**	**06 10 27.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**40.00**	**310**	P	**P**	**06 10 32.9**	**-0.7**
	comp=Z,1.1nm,0.4s,mb4.0,baz=142,slow=7.7,SNR=4.2						
CMAR				PcP	PcP	06 12 36.6	-0.9
	comp=Z,0.8nm,0.4s,baz=170,slow=2.3,SNR=4.8						
CHG	**Chiang Mai**	**40.21**	**310**	↑P	**P**	**06 10 35.2**	**-0.1**
	comp=Z,11nm,0.7s,mb4.8						
CHTO	**Chiang Mai**	**40.21**	**310**	*e*P	**P**	**06 10 35.2**	**-0.1**
	comp=Z,4.8nm,0.8s,mb4.4						
CHTO	**Chiang Mai**	**40.21**	**310**	*e*P	**P**	**06 10 35.2**	**-0.1**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
NJ2	**Nanjing**	**40.30**	**345**	*e*P	**P**	**06 10 37.0**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
WHN	**Wuhan**	**40.32**	**338**	P	**P**	**06 10 43.8**	**+7.8**
GYA	**Guiyang**	**40.41**	**326**	*e*P	**P**	**06 10 39.0**	**+2.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
KMI	**Kunming**	**41.72**	**321**	P	**P**	**06 10 49.0**	**+1.4**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
MJAR	**Matsushiro Arr**	**43.86**	**9**	P	**P**	**06 11 02.7**	**-2.0**
	comp=Z,0.8nm,0.4s,mb3.8,baz=190,slow=10,SNR=4.3						
KSRS	**Korea Array**	**44.22**	**357**	LR	LR	06 28 07.7	
	comp=Z,19nm,20.2s,baz=261,slow=34						
CD2	**Chengdu**	**45.47**	**327**	P	**P**	**06 11 19.8**	**+2.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
CD2				pmax	pmax		
	comp=Z,70nm,4.9s						
XAN	**Xi'an**	**45.55**	**335**	P	**P**	**06 11 16.3**	**-1.9**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
XAN				pmax	pmax		
	comp=Z,110nm,4.6s						
BJT	**Baijiatuan**	**48.53**	**345**	*e*P	**P**	**06 11 40.2**	**-1.1**
	comp=Z,9.5nm,0.6s,mb4.9						
BJT	**Baijiatuan**	**48.53**	**345**	*e*P	**P**	**06 11 40.2**	**-1.1**
BJT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BJI	**Beijing**	**48.55**	**345**	P	**P**	**06 11 40.3**	**-1.2**
BJI				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.2						
LZH	**Lanzhou**	**49.54**	**332**	*e*P	**P**	**06 11 49.5**	**+0.4**
LZH				pP	pP	06 12 06.0	-1.6
LZH				sP	sP	06 12 12.0	-3.9
LZH				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
HHC	**Hu-ho-hao-te**	**50.61**	**342**	*e*P	**P**	**06 11 59.5**	**+2.4**
HHC				pP	pP	06 12 15.0	-0.6
HHC				sP	sP	06 12 22.0	-2.0
HHC				PP	PP	06 13 56.8	+3.0
HHC				S	**S**	**06 19 07.0**	**+0.7**
HHC				sS	sS	06 19 34.8	-3.0
HHC				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.3						
HHC				pmax	pmax		
	comp=Z,64nm,3.6s						
HHC				LR	LR		
	comp=N,140nm,16.6s						
HHC				LR	LR		
	comp=E,120nm,14.3s						
HHC				LR	LR		
	comp=Z,69nm,17.8s						
CN2	**Changchun**	**50.70**	**355**	*e*P	**P**	**06 12 01.0**	**+3.3**
CN2				*e*S	**S**	**06 19 10.5**	**+3.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
LSA	**Lhasa**	**52.43**	**316**	*e*P	**P**	**06 12 11.9**	**+1.0**
	comp=Z,7.2nm,0.6s,mb4.9						
LSA	**Lhasa**	**52.43**	**316**	*e*P	**P**	**06 12 11.9**	**+1.0**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
ODAN	**Odare**	**53.52**	**311**	*e*P	**P**	**06 12 18.7**	**-0.3**
	comp=Z,65nm,0.5s						
TAPN	**Taplejung**	**53.55**	**311**	*e*P	**P**	**06 12 19.0**	**-0.2**
	comp=Z,57nm,0.4s						
GTA	**Gaotai**	**54.11**	**331**	*e*P	**P**	**06 12 23.3**	**+0.2**
GTA				pP	pP	06 12 40.0	-1.8
GTA				sP	sP	06 12 46.5	-3.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
RAMN	**Ramite**	**54.17**	**310**	*e*P	**P**	**06 12 23.9**	**+0.2**
	comp=Z,170nm,0.5s						
JIRN	**Jiri**	**54.85**	**311**	*e*P	**P**	**06 12 28.7**	**0.0**
GUN	**Gumba**	**55.22**	**311**	*e*P	**P**	**06 12 31.2**	**-0.1**
	comp=Z,106nm,0.5s						
PKI	**Pulchoki**	**55.39**	**310**	*e*P	**P**	**06 12 31.9**	**-0.7**
	comp=Z,41nm,0.6s,mb5.7						
KKN	**Kakani**	**55.60**	**310**	*e*P	**P**	**06 12 33.7**	**-0.4**
	comp=Z,52nm,0.6s,mb5.7						
DMN	**Daman**	**55.64**	**310**	*e*P	**P**	**06 12 33.9**	**-0.5**
GKN	**Gorkha**	**56.20**	**310**	*e*P	**P**	**06 12 38.1**	**-0.2**
	comp=Z,85nm,0.4s						
KOLN	**Koldanda**	**56.87**	**310**	*e*P	**P**	**06 12 43.0**	**-0.1**
DANN	**Dangsing**	**57.04**	**310**	*e*P	**P**	**06 12 44.2**	**-0.1**
ULN	**Ulaanbaatar**	**58.33**	**342**	*e*P	**P**	**06 12 53.1**	**+0.2**
	comp=Z,13nm,0.7s,mb5.1						
ULN	**Ulaanbaatar**	**58.33**	**342**	*e*P	**P**	**06 12 53.2**	**+0.3**
ULN				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.1						
SONM	**Songino Array**	**58.51**	**341**	P	**P**	**06 12 54.2**	**0.0**
	comp=Z,4.7nm,0.6s,mb4.7,baz=162,slow=7.1,SNR=23						
ZAK	**Zakamensk**	**61.74**	**341**	↑*i*P	**P**	**06 13 15.6**	**-0.6**
ZAK				*e*		06 13 53.2	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
TLY	**Talaya**	**62.74**	**342**	*e*P	**P**	**06 13 23.1**	**+0.2**
	comp=Z,1.7nm,0.4s,mb4.3						
TLY	**Talaya**	**62.74**	**342**	*e*P	**P**	**06 13 22.9**	**0.0**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
WMQ	**Urumqi**	**63.56**	**327**	*e*P	**P**	**06 13 30.0**	**+1.5**
WMQ				pP	pP	06 13 46.3	-1.4
WMQ				sP	sP	06 13 53.3	-2.6
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.5						
WMQ				pmax	pmax		
	comp=Z,100nm,4.3s						
MOY	**Mondy**	**63.59**	**340**	*e*P	**P**	**06 13 28.9**	**+0.4**
PETK	**Petropavlovsk-**	**64.14**	**18**	P	**P**	**06 13 31.4**	**-0.6**
	comp=Z,3.5nm,0.6s,mb4.3,baz=135,slow=2.5,SNR=9.0						
KSH	**Kashi**	**68.25**	**317**	*e*P	**P**	**06 13 59.5**	**+0.8**
KSH				*e*pP	pP	06 14 16.0	-2.1
KSH				*e*sP	sP	06 14 23.0	-3.2
KSH				*e*PcP	PcP	06 14 26.0	+2.0
KSH				*e*PP	PP	06 16 31.5	+1.2
KSH				*e*ScP		06 18 23.0	
KSH				*e*PcS		06 18 29.3	
KSH				*e*S	S	06 22 51.5	-2.2
KSH				*e*sS	sS	06 23 20.3	-6.4
KSH				*e*ScS	ScS	06 23 49.5	-2.2
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
KSH				pmax	pmax		
	comp=Z,15nm,6.5s						
KSH				LR	LR		
	comp=Z,190nm,5.1s						
MK31	**Makanchi Array**	**68.39**	**327**	*e*P	**P**	**06 13 59.3**	**-0.2**
MKAR	**Makanchi Array**	**68.39**	**327**	P	**P**	**06 13 59.4**	**0.0**
	comp=Z,12nm,0.5s,mb5.0,baz=116,slow=7.9,SNR=90						
AAK	**Ala-Archa**	**70.75**	**320**	*e*P	**P**	**06 14 14.9**	**+0.8**
	comp=Z,6.8nm,0.7s,mb4.6						
AAK	**Ala-Archa**	**70.75**	**320**	*e*P	**P**	**06 14 14.9**	**+0.8**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
SEY	**Seymchan**	**71.67**	**10**↓	*i*P	**P**	**06 14 18.4**	**-0.8**
ZAA0	**Zalesovo Array**	**71.70**	**334**	*e*P	**P**	**06 14 18.4**	**-1.2**
ZALV	**Zalesovo Beam**	**71.70**	**334**	P	**P**	**06 14 18.3**	**-1.3**
	comp=Z,6.5nm,0.6s,mb4.6,baz=124,slow=5.4,SNR=17						
KURK	**Kurchatov**	**72.67**	**328**	*e*P	**P**	**06 14 24.5**	**-0.9**
	comp=Z,6.2nm,0.8s,mb4.5						
KURK	**Kurchatov**	**72.67**	**328**↓	*e*P	**P**	**06 14 24.6**	**-0.8**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
NVS	**Novosibirsk**	**72.99**	**334**	*e*P	**P**	**06 14 24.6**	**-2.6**
KKAR	**Karatay Array**	**73.56**	**319**	*e*P	**P**	**06 14 30.4**	**-0.4**
	comp=Z,0.7nm,0.4s,mb3.7						
KKAR	**Karatay Array**	**73.56**	**319**	*e*P	**P**	**06 14 30.4**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
MAW	**Mawson**	**75.16**	**201**	*e*P	**P**	**06 14 41.4**	**+1.7**
	comp=Z,0.4nm,0.7s						
MAW	**Mawson**	**75.16**	**201**	P	**P**	**06 14 41.7**	**+2.0**
	comp=Z,1.5nm,0.6s,mb3.9,baz=92,slow=7.7,SNR=12						
BRVK	**Borovoye**	**78.30**	**328**	*e*P	**P**	**06 14 57.0**	**-0.5**
	comp=Z,3.3nm,0.5s,mb4.3						
BRVK	**Borovoye**	**78.30**	**328**↓	*e*P	**P**	**06 14 56.4**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.1						
BILL	**Bilibino**	**78.96**	**13**	P	**P**	**06 15 00.0**	**-0.9**
BILL				*e*		06 15 07.4	
ABKAR	**Akbulak array**	**82.71**	**321**	*e*P	**P**	**06 15 21.5**	**+0.2**
	comp=Z,2.8nm,0.9s,mb4.1						
ARU	**Arti**	**85.86**	**328**	*c i*P	**P**	**06 15 35.5**	**-1.6**
ARU						06 18 53.8	
ARU				S	SKSac	06 25 51.5	-4.7
ARU				SS	SS	06 31 38.4	-4.8
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.5						
TTA	**Tatalina**	**88.75**	**26**	*e*P	**P**	**06 15 51.3**	**+0.5**
	comp=Z,5.7nm,1.3s,mb4.4						
TTA	**Tatalina**	**88.75**	**26**	*e*P	**P**	**06 15 51.3**	**+0.4**
TTA				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.5						
ILAR	**Eielson Array**	**93.11**	**25**	P	**P**	**06 16 08.4**	**-2.7**
	comp=Z,0.9nm,0.8s,mb4.1,baz=276,slow=4.0,SNR=11						
TXAR	**Lajitas Array**	**124.55**	**59**	PKP	PKPdf	06 21 56.2	-1.0
	comp=Z,0.3nm,0.8s,baz=63,slow=4.0,SNR=2.9						
TORD	**Torodi Ar. Bea**	**129.20**	**281**	PKP	PKPdf	06 22 06.5	+0.1
	comp=Z,1.8nm,0.6s,baz=74,slow=1.8,SNR=13						
CPUP	**Villa Florida**	**146.09**	**167**	PKPbc	PKPbc	06 22 37.6	-0.5
	comp=Z,2.4nm,0.8s,baz=177,slow=4.9,SNR=4.8						
LPAZ	**La Paz**	**150.52**	**142**	PKPbc	PKPbc	06 22 51.7	+1.7
	comp=Z,2.6nm,0.4s,baz=72,slow=2.0,SNR=32						

*ATH **30** 06:27:24.9, 37°.87N×21°.43E, h28km±1km, MD2.8/5*
*ISCJB **30** 06:27:25.5±0.5, 37°.91N±0°.04×21°.39E±0°.04, h27km±4km, Error ellipse: s-maj=5.9km s-min=4.7km az=176.6*
*CSEM **30** 06:27:25.5±0.2, 37°.92N×21°.40E, h30km, MD2.8, Error ellipse: s-maj=4.6km s-min=4.3km az=162.0*
*THE **30** 06:27:25.5, 37°.90N×21°.41E, h12km±1km, ML2.4/7, Error ellipse: s-maj=1.8km s-min=0.7km az=352.0*

ISC 30 06:27:25.5±0.6, 37°.90N±0°.04×21°.39E±0°.04, h27km±4km, n37, σ0°81/63, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.17**	**21**	*e*PB	**Pb**	**06 27 30.5**	**-0.5**
RLS				*e*SB	**Sb**	**06 27 35.0**	**+0.2**
RLS	**Riolos of Patr**	**0.17**	**21**	*e*Pb	**Pb**	**06 27 30.5**	**-0.5**
RLS				*e*Sb	**Sb**	**06 27 35.0**	**+0.2**
UPR	**University Cam**	**0.49**	**39**	*e*PN	**Pn**	**06 27 35.6**	**-1.2**
UPR				*e*SN	**Sb**	**06 27 43.3**	**+0.7**
UPR	**University Cam**	**0.49**	**39**	P	**Pb**	**06 27 35.2**	**-0.5**
UPR				S	**Sb**	**06 27 42.1**	**-0.5**
UPR	**University Cam**	**0.49**	**39**	P	**Pb**	**06 27 35.2**	**-0.5**
UPR	**University Cam**	**0.49**	**39**	*e*Pn	**Pn**	**06 27 35.6**	**-1.2**
UPR				S	**Sb**	**06 27 42.1**	**-0.5**
UPR				*e*Sn	**Sb**	**06 27 43.3**	**+0.7**
KFL	**Anninata**	**0.52**	**294**	P	**Pb**	**06 27 35.1**	**-1.0**
KFL	**Anninata**	**0.52**	**294**	P	**Pb**	**06 27 35.1**	**-1.0**

OXX	**Oaxaca**	**1.08**	**17**	*i* P		Pn	06 35 30.1	-1.9
OXX				*i* S		Sn	06 35 43.1	-2.9
PNIG	**Pinotepa**	**1.09**	**289**	*i* P		Pn	06 35 29.1	-3.0
PNIG				*i* S		Sn	06 35 43.5	-2.8
PNIG	**Pinotepa**	**1.09**	**289**	*i* P		Pn	06 35 29.1	-3.0
PNIG				*i* S		Sn	06 35 43.5	-2.8
UTMO	**Huajuapan**	**1.92**	**338**	*i* P		Pn	06 35 41.5	-2.0
UTMO				*i* S		Sn	06 36 04.5	-2.3
CMIG	**Matias Romero**	**2.32**	**63**	*i* P		Pn	06 35 47.5	-1.6
CMIG				*i* S		Sn	06 36 13.8	-3.0
CMIG	**Matias Romero**	**2.32**	**63**	*i* P		Pn	06 35 47.5	-1.6
CMIG				*i* S		Sn	06 36 13.8	-3.0
TPIG	**Tehuac#an**	**2.38**	**353**	*e*P		Pn	06 35 48.0	-1.8
TPIG				*i* S		Sn	06 36 15.9	-2.3
CAIG	**El Cayaco**	**3.24**	**288**	*e*P		Pn	06 35 57.2	-4.5
CAIG				*i* S		Sn	06 36 34.3	-5.2
CAIG	**El Cayaco**	**3.24**	**288**	*e*P		Pn	06 35 58.5	-3.3
CAIG				*i* S		Sn	06 36 36.8	-2.7
PPM	**Popocatepetl**	**3.36**	**334**	*e*P		Pn	06 36 05.1	+1.8
PPM				*i* S		Sn	06 36 45.4	+3.0
PPM	**Popocatepetl**	**3.36**	**334**	*i* P		Pn	06 36 02.1	-1.3
PPM				*e*P			06 36 05.1	
PPM				*i* S		Sn	06 36 45.4	+3.0
PCIG		**3.70**	**95**	*i* P		Pn	06 36 05.0	-3.1
PCIG				*i* S		Sn	06 36 48.3	-2.6
TGIG		**3.84**	**79**	*e*P		Pn	06 36 12.0	+2.0
TGIG				*i* S		Sn	06 36 58.1	+3.8

IDC ***30*** *06:37:06.7±2.1, 10°.50S×161°.47E, h127km±14km, mb4.3/15, mb1 4.5/15, mb1mx4.4/18, mbtmp4.3/15, MS3.6/1, Ms1 3.6/1, ms1mx3.2/30, Error ellipse: s-maj=23.3km s-min=13.8km az=116.0*

BJI ***30*** *06:37:07.9, 9°.95S×161°.52E, h137km, mB4.9/21, mb4.8/38*

MOS ***30*** *06:37:07.4±1.1, 10°.38S×161°.43E, h144km, mb4.8/12, Error ellipse: s-maj=11.0km s-min=10.7km az=144.2*

ISCJB ***30*** *06:37:08.1±0.8, 10°.42S±0°.05×161°.29E±0°.04, h147km±6km, mb4.7/63, Error ellipse: s-maj=8.6km s-min=5.9km az=140.0*

NEIC ***30*** *06:37:08.2±1.3, 10°.42S×161°.41E, h138km±10km, mb4.8/34, Error ellipse: s-maj=12.8km s-min=7.0km az=118.0*

ISC 30 06:37:08.4±0.8, 10°.45S±0°.05×161°.38E±0°.04, h136km±6km, h138km±2.0km: pP-P, n191, s0°.72/192, mb4.7/63, 51C-31D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
HNR	**Honiara**	**1.74**	**305**	*e*Pn	**Pn**	**06 37 38.5**	**-1.2**
HNR				eSn	**Sn**	**06 38 04.0**	**+0.4**
HNR	**Honiara**	**1.74**	**305**	P	**Pn**	**06 37 39.0**	**-0.7**
	679nm,0.3s,baz=157,slow=5.6,SNR=132						
HNR				S	**Sn**	**06 38 03.3**	**-0.3**
	987nm,0.3s,baz=101,slow=24,SNR=12						
PMG	**Port Moresby**	**14.05**	**273**	*e*Pn	**Pn**	**06 40 28.3**	**+6.6**
PMG	**Port Moresby**	**14.05**	**273**	*ce*P	**Pn**	**06 40 23.3**	**+1.6**
PMG				pmax	pmax		
	comp=Z,58nm,1.0s						
CTA	**Charters Tower**	**17.45**	**235**	*e*P	**Pn**	**06 41 05.3**	**+1.8**
	comp=Z,28nm,0.7s						
CTA	**Charters Tower**	**17.45**	**235**	P	**Pn**	**06 41 05.5**	**+1.9**
	comp=Z,1.6nm,0.3s,baz=63,slow=12,SNR=28						
CTA				LR	LR	06 47 08.7	
	comp=Z,178nm,18.4s,baz=51,slow=34						
CTAO	**Charters Tower**	**17.45**	**235**	*e*P	**Pn**	**06 41 04.8**	**+1.4**
	comp=Z,47nm,0.9s						
CTAO	**Charters Tower**	**17.45**	**235**	*e*P	**Pn**	**06 41 04.9**	**+1.4**
CTAO				pmax	pmax		
	comp=Z,47nm,0.9s						
EIDS	**Eidsvold**	**17.77**	**212**	*e*P	**Pn**	**06 41 08.1**	**+0.8**
	comp=Z,32nm,1.4s						
COEN	**Coen**	**18.14**	**257**	*e*P	**P**	**06 41 13.8**	**+3.5**
	comp=Z,349nm,1.1s						
MTSU	**Mount Surprise**	**18.21**	**243**	⇓*i*P	**P**	**06 41 14.4**	**+3.4**
	comp=Z,195nm,0.7s						
ARMA	**Armidale**	**21.85**	**203**	*e*P	**P**	**06 41 49.6**	**-0.5**
ARMA	**Armidale**	**21.85**	**203**	*e*P	**P**	**06 41 49.3**	**-0.8**
	comp=Z,30nm,1.1s,mb4.6						
CMSA	**Cobar Meteorol**	**25.53**	**212**	*e*P	**P**	**06 42 24.0**	**-0.4**
YNG	**Young**	**26.55**	**205**	*e*P	**P**	**06 42 33.5**	**-0.1**
	comp=Z,9.5nm,1.1s,mb4.3						
WRA	**Warramunga Arr**	**27.72**	**247**	P	**P**	**06 42 43.6**	**-0.5**
	comp=Z,41nm,0.7s,mb5.2,baz=75,slow=9.0,SNR=269						
WRA				ScP	ScP	06 49 28.0	+2.0
	comp=Z,0.9nm,0.8s,baz=75,slow=3.6,SNR=6.8						
STKA	**Stephens Creek**	**28.10**	**218**	*e*P	**P**	**06 42 47.4**	**0.0**
	comp=Z,3.6nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**28.10**	**218**	*e*P	**P**	**06 42 48.0**	**+0.6**
	comp=Z,0.9nm,0.6s,mb3.7						
STKA	**Stephens Creek**	**28.10**	**218**	P	**P**	**06 42 47.6**	**+0.2**
	comp=Z,5.4nm,0.7s,mb4.4,baz=39,slow=14,SNR=7.7						
STKA	**Stephens Creek**	**28.10**	**218**	*e*P	**P**	**06 42 48.1**	**+0.7**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KAKA	**Kakadu**	**28.44**	**263**	*e*P	**P**	**06 42 49.0**	**-1.6**
	comp=Z,12nm,0.6s,mb4.8						
KAKA	**Kakadu**	**28.44**	**263**	*e*P	**P**	**06 42 49.1**	**-1.5**
	comp=Z,37nm,0.8s,mb5.2						
ASAR	**Alice Springs**	**29.30**	**240**	P	**P**	**06 42 57.2**	**-1.0**
	comp=Z,7.7nm,0.8s,mb4.5,baz=71,slow=9.5,SNR=54						
TOO	**Toolangi**	**30.56**	**205**	*e*P	**P**	**06 43 09.1**	**0.0**
KNA	**Kununurra**	**32.18**	**257**	*e*P	**P**	**06 43 23.8**	**+0.2**
	comp=Z,77nm,1.0s,mb5.4						
BBOO	**Buckleboo**	**32.23**	**222**	*e*P	**P**	**06 43 23.7**	**-0.2**
	comp=Z,15nm,0.9s,mb4.7						
BBOO	**Buckleboo**	**32.23**	**222**	*e*P	**P**	**06 43 23.4**	**-0.4**
	comp=Z,42nm,0.8s,mb5.2						
FITZ	**Fitzroy Crossi**	**35.42**	**253**	*e*P	**P**	**06 43 51.0**	**-0.6**
	comp=Z,93nm,0.6s,mb5.6						
FITZ	**Fitzroy Crossi**	**35.42**	**253**	*e*P	**P**	**06 43 51.0**	**-0.6**
	comp=Z,46nm,0.6s,mb5.3						
FORT	**Forrest**	**36.96**	**232**	*e*P	**P**	**06 44 04.6**	**+0.1**
	comp=Z,28nm,0.8s,mb5.0						
FORT	**Forrest**	**36.96**	**232**	*e*P	**P**	**06 44 04.3**	**-0.2**
	comp=Z,44nm,0.9s,mb5.1						
MBWA	**Marble Bar**	**41.35**	**250**	*e*P	**P**	**06 44 41.2**	**0.0**
MBWA	**Marble Bar**	**41.35**	**250**	*e*P	**P**	**06 44 41.0**	**-0.2**
	comp=Z,56nm,0.6s,mb5.4						
KMBL	**Kambalda**	**42.05**	**234**	*e*P	**P**	**06 44 47.0**	**+0.2**
	comp=Z,197nm,0.9s,mb5.7						
MEEK	**Meekatharra**	**43.40**	**242**	*e*P	**P**	**06 44 58.1**	**+0.4**
KLBR	**Kellerberrin**	**45.45**	**236**	*e*P	**P**	**06 45 13.3**	**-0.7**
	comp=Z,15nm,0.7s,mb4.7						
MORW	**Morawa**	**46.19**	**240**	*e*P	**P**	**06 45 19.8**	**0.0**
NWAO	**Narrogin (SRO)**	**46.29**	**234**	*e*P	**P**	**06 45 20.1**	**-0.4**
	comp=Z,11nm,0.7s,mb4.6						
NWAO	**Narrogin (SRO)**	**46.29**	**234**	*e*P	**P**	**06 45 20.1**	**-0.4**
NWAO				pmax	pmax		
	comp=Z,11nm,0.7s						
KKM	**Kota Kinabalu**	**47.87**	**288**	*e*P	**P**	**06 45 32.7**	**-0.3**
	comp=Z,79nm,1.0s,mb5.3						
MJAR	**Matsushiro Arr**	**51.58**	**336**	P	**P**	**06 45 59.7**	**-1.0**
	comp=Z,4.6nm,0.8s,mb4.2,baz=169,slow=8.6,SNR=7.3						
NACB	**Ninganchiao**	**51.91**	**312**	*e*P	**P**	**06 46 05.7**	**+2.4**
	comp=Z,18nm,0.7s,mb4.8						
KSM	**Kuching**	**52.18**	**280**	*e*P	**P**	**06 46 04.9**	**-0.7**
	comp=Z,12nm,0.7s,mb4.6						
YHNB	**Yeheng**	**52.36**	**312**	*e*P	**P**	**06 46 07.0**	**+0.3**
	comp=Z,12nm,0.8s,mb4.6						
ASAJ	**Asahikawa**	**56.92**	**344**	*e*P	**P**	**06 46 39.7**	**+0.5**
	comp=Z,9.0nm,1.0s,mb4.5						
KSRS	**Korea Array**	**57.05**	**328**	P	**P**	**06 46 40.8**	**+0.5**
	comp=Z,14nm,0.9s,mb4.8,baz=142,slow=7.2,SNR=43						
NJ2	**Nanjing**	**58.64**	**318**	*e*P	**P**	**06 46 52.0**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.1						
QIZ	**Qiongzhong**	**58.64**	**300**	P	**P**	**06 46 51.8**	**+0.1**
QIZ	**Qiongzhong**	**58.64**	**300**	*e*P	**P**	**06 46 52.0**	**+0.2**
	comp=Z,16nm,0.8s,mb4.9						
YSS	**Yuzh-Sakhalins**	**59.52**	**345**	*e*P	**P**	**06 46 57.0**	**-0.2**
IPM	**Ipoh**	**61.90**	**281**	*e*P	**P**	**06 47 13.7**	**-0.4**
	comp=Z,22nm,1.1s,mb4.9						
MDJ	**Mudanjiang**	**61.90**	**335**	P	**P**	**06 47 14.0**	**+0.6**
MDJ				pP	pP	06 47 45.5	-0.5
MDJ				PP	PP	06 49 31.8	+0.4
MDJ				S	**S**	**06 55 30.5**	**+4.1**
MDJ				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.6						
MDJ				pmax	pmax		
	comp=Z,30nm,5.0s						
MDJ				LR	LR		
	comp=N,510nm,16.1s						
MDJ				LR	LR		
	comp=E,320nm,17.6s						
MDJ				LR	LR		
	comp=Z,510nm,21.3s						
MDJ	**Mudanjiang**	**61.90**	**335**	*e*P	**P**	**06 47 12.9**	**-0.5**
	comp=Z,12nm,0.9s,mb4.7						
KULM	**Kulim**	**62.46**	**282**	*e*P	**P**	**06 47 17.8**	**+0.1**
	comp=Z,13nm,0.9s,mb4.8						
CN2	**Changchun**	**63.10**	**332**	*e*P	**P**	**06 47 21.8**	**+0.4**
CN2				*e*S	**S**	**06 55 40.5**	**-1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
HABR	**Khabarovsk**	**63.12**	**341**	*e*P	**P**	**06 47 21.0**	**-0.4**
HABR				*e**PP	pP	06 47 52.4	-1.7
HABR					pP	06 47 56.1	+2.0
HABR				*e*		06 49 43.7	
HABR				*e*S	**S**	**06 55 48.6**	**+7.1**
HABR				*e*		06 56 24.8	
HABR				*e*		06 57 02.3	
HABR				pmax	pmax		
	comp=E,10.0nm,0.8s						
HABR				pmax	pmax		
	comp=N,8.0nm,0.7s						
HABR				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.7						
HABR				MLR	MLR		
	comp=Z,2μm,18.0s						
PETK	**Petropavlovsk-**	**63.38**	**358**	P	**P**	**06 47 23.1**	**+0.1**
	comp=Z,5.5nm,0.7s,mb4.5,baz=149,slow=6.9,SNR=8.6						
GYA	**Guiyang**	**64.57**	**306**	P	**P**	**06 47 32.8**	**+1.4**
GYA				pP	pP	06 48 06.3	+2.1
GYA				sP	sP	06 48 21.5	+2.5
GYA				PP	PP	06 49 58.0	+2.8
GYA				ScP		06 51 53.3	
GYA				PcS		06 52 08.0	
GYA				S	**S**	**06 56 01.5**	**+1.2**
GYA				sS	sS	06 56 58.5	+1.5
GYA				ScS	ScS	06 57 11.0	-2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
BJI	**Beijing**	**65.38**	**323**	P	**P**	**06 47 35.0**	**-1.3**
BJI				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.5						
BJI				pmax	pmax		
	comp=Z,62nm,3.9s						
CASY	**Casey**	**65.42**	**200**	*e*P	**P**	**06 47 35.1**	**-1.0**
	comp=Z,7.4nm,0.9s,mb4.5						
XAN	**Xi'an**	**66.59**	**314**	P	**P**	**06 47 43.8**	**-0.4**
XAN				pP	pP	06 48 15.8	-1.5
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
KMI	**Kunming**	**67.17**	**303**	P	**P**	**06 47 49.0**	**+0.9**
KMI				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
CMAR	**Chiang Mai Arr**	**67.96**	**295**	P	**P**	**06 47 53.8**	**+0.6**
	comp=Z,7.7nm,0.7s,mb4.5,baz=124,slow=4.8,SNR=40						
CHTO	**Chiang Mai**	**68.08**	**295**	*e*P	**P**	**06 47 53.7**	**-0.2**
	comp=Z,3.9nm,0.6s,mb4.3						
CHTO	**Chiang Mai**	**68.08**	**295**	*e*P	**P**	**06 47 53.7**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
HHC	**Hu-ho-hao-te**	**68.65**	**322**	*e*P	**P**	**06 47 57.0**	**0.0**
HHC				pP	pP	06 48 31.3	+1.1
HHC				sP	sP	06 48 46.5	+1.6
HHC				PP	PP	06 50 33.5	+3.0
HHC				S	S	06 56 47.8	-1.2
HHC				ScS	ScS	06 57 40.3	-4.0
HHC				sS	sS	06 57 47.8	+1.5
HHC				SS	SS	07 01 17.8	+1.3
HHC				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.8						
HHC				pmax	pmax		
	comp=Z,73nm,3.7s						
CD2	**Chengdu**	**68.86**	**309**	P	**P**	**06 47 59.3**	**+0.8**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
CD2				pmax	pmax		
	comp=Z,110nm,5.8s						
HIA	**Hailar**	**69.79**	**332**	*e*P	**P**	**06 48 04.2**	**+0.4**
	comp=Z,8.1nm,0.6s,mb4.6						
HIA	**Hailar**	**69.79**	**332**	*e*P	**P**	**06 48 04.2**	**+0.4**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LZH	**Lanzhou**	**71.22**	**314**	*e*P	**P**	**06 48 14.0**	**+1.2**
LZH				pP	pP	06 48 47.5	+1.3
LZH				sP	sP	06 49 03.0	+2.1
LZH				pmax	pmax		
	comp=Z,45nm,1.2s,mb5.1						
LZH				pmax	pmax		
	comp=Z,220nm,5.0s						
SEY	**Seymchan**	**73.49**	**356**	*ce*P	**P**	**06 48 25.7**	**+0.1**
ULN	**Ulaanbaatar**	**75.34**	**326**	*e*P	**P**	**06 48 37.5**	**+0.8**
	comp=Z,35nm,1.0s,mb4.9						
ULN	**Ulaanbaatar**	**75.34**	**326**	*e*P	**P**	**06 48 37.5**	**+0.8**
ULN				pmax	pmax		
	comp=Z,35nm,1.0s,mb4.9						
GTA	**Gaotai**	**75.59**	**315**	P	**P**	**06 48 39.3**	**+1.0**
GTA				pP	pP	06 49 13.8	+1.7
GTA				sP	sP	06 49 29.3	+2.6
GTA				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.7						
SONM	**Songino Array**	**75.69**	**325**	P	**P**	**06 48 39.3**	**+0.5**
	comp=Z,22nm,0.8s,mb4.9,baz=139,slow=5.9,SNR=90						
YAK	**Yakutsk**	**76.37**	**345**	*e*P	**P**	**06 48 41.3**	**-0.9**
YAK				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=N,6.0nm,0.9s						
KDAK	**Kodiak Island**	**77.66**	**23**	P	**P**	**06 48 48.8**	**-0.8**
	comp=N,5.9nm,0.9s,mb4.2,baz=235,slow=4.3,SNR=4.5						
BILL	**Bilibino**	**78.36**	**2**	*e*P	**P**	**06 48 53.1**	**-0.1**
	comp=N,7.8nm,0.4s,mb4.7						
BILL	**Bilibino**	**78.36**	**2**	*ce*P	**P**	**06 48 53.4**	**+0.2**
BILL						06 48 58.0	
BILL				*PP	pP	06 49 26.0	-1.2
BILL						06 51 49.0	
BILL				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.7						
ZAK	**Zakamensk**	**78.79**	**326**	⇓*i*P	**P**	**06 48 56.0**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.3						
TLY	**Talaya**	**79.28**	**328**	*e*P	**P**	**06 48 58.5**	**-0.1**
	comp=Z,17nm,0.9s,mb4.7						
TLY	**Talaya**	**79.28**	**328**	*e*P	**P**	**06 48 58.5**	**-0.1**
TLY				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.7						
TTA	**Tatalina**	**80.15**	**18**	*e*P	**P**	**06 49 03.3**	**+0.3**
	comp=Z,20nm,1.1s,mb4.7						
TTA	**Tatalina**	**80.15**	**18**	*e*P	**P**	**06 49 03.3**	**+0.3**
TTA				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.7						
MOY	**Mondy**	**80.69**	**327**	*e*P	**P**	**06 49 06.3**	**+0.1**
PALK	**Pallekele**	**82.22**	**279**	*i* P	**P**	**06 49 17.0**	**+1.9**
TRF	**Thorofare Moun**	**82.36**	**20**	*e*P	**P**	**06 49 13.3**	**-1.4**
	comp=Z,8.2nm,1.1s,mb4.3						
BPAW	**Bear Paw Mtn.**	**82.57**	**19**	*e*P	**P**	**06 49 14.3**	**-1.4**
	comp=Z,12nm,1.5s,mb4.4						
BMRM	**Bremner River**	**82.84**	**23**	*e*P	**P**	**06 49 16.3**	**-0.9**
	comp=Z,8.5nm,1.1s,mb4.4						
MCK	**McKinley**	**83.00**	**20**	*e*P	**P**	**06 49 17.0**	**-1.0**
	comp=Z,30nm,1.1s,mb4.9						
MCK	**McKinley**	**83.00**	**20**	*e*P	**P**	**06 49 17.0**	**-1.0**
MCK				pmax	pmax		
	comp=Z,30nm,1.1s,mb4.9						
MAW	**Mawson**	**83.65**	**202**	*e*P	**P**	**06 49 20.7**	**-0.7**
	comp=Z,3.8nm,0.8s,mb4.2						
MAW	**Mawson**	**83.65**	**202**	*e*P	**P**	**06 49 20.8**	**-0.5**
	comp=Z,1.3nm,0.8s,mb3.7						
MAW	**Mawson**	**83.65**	**202**	P	**P**	**06 49 20.7**	**-0.6**
	comp=Z,4.3nm,0.7s,mb4.3,baz=98,slow=12,SNR=16						
MAW	**Mawson**	**83.65**	**202**	*e*P	**P**	**06 49 20.8**	**-0.6**
MAW				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**84.36**	**20**	P	**P**	**06 49 23.7**	**-1.2**
	comp=Z,3.0nm,0.9s,mb4.0,baz=246,slow=5.0,SNR=25						
WMQ	**Urumqi**	**85.66**	**316**	*e*P	**P**	**06 49 31.3**	**-0.6**
WMQ				pP	pP	06 50 06.8	+0.4
WMQ				sP	sP	06 50 22.0	+1.2
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
WMQ				pmax	pmax		
	comp=Z,100nm,3.8s						
EGAK	**Eagle**	**86.33**	**21**	*e*P	**P**	**06 49 35.4**	**+0.7**
	comp=Z,19nm,1.1s,mb4.7						
DAWY	**Dawson**	**86.59**	**22**	*e*P	**P**	**06 49 36.3**	**+0.4**
PKM	**Peak Mountain**	**86.88**	**54**	⇓P	**P**	**06 49 38.0**	**0.0**
	baz=87						
WCN	**Washoe City**	**88.06**	**50**	⇓P	**P**	**06 49 43.8**	**+0.2**
	baz=88						
ISA	**Isabella**	**88.13**	**53**	⇑P	**P**	**06 49 44.0**	**0.0**
	baz=88						
K05A	**Summer Lake**	**88.15**	**46**	⇑P	**P**	**06 49 44.5**	**+0.6**
	baz=88						
EDW2	**Edwards Air Fo**	**88.33**	**54**	⇑P	**P**	**06 49 45.0**	**0.0**
	baz=88						
LRMC	**Laurel Mountai**	**88.71**	**54**	⇑P	**P**	**06 49 47.7**	**+1.0**
	baz=89						
NVAR	**Mina Array Bea**	**88.94**	**51**	P	**P**	**06 49 48.0**	**+0.2**
NVAR	**Mina Array Bea**	**88.94**	**51**	P	**P**	**06 49 48.0**	**+0.2**
	comp=Z,2.1nm,0.8s,mb4.1,baz=235,slow=6.9,SNR=15						
MPMC	**Manual Prospec**	**89.00**	**53**	⇑P	**P**	**06 49 48.6**	**+0.5**
	baz=89						
A05A	**Maple Falls**	**89.12**	**40**	⇑P	**P**	**06 49 47.8**	**-0.5**
	baz=89						
MONP	**Monument Peak**	**89.14**	**56**	⇑P	**P**	**06 49 48.9**	**+0.1**
	baz=89						
I07A	**Izee**	**89.48**	**45**	⇑P	**P**	**06 49 50.3**	**+0.1**
	baz=90						
FURC	**Furnace Creek,**	**89.59**	**53**	⇑P	**P**	**06 49 51.1**	**+0.3**
	baz=90,SNR=9.4						
HEC	**Hector,Ludlow**	**89.64**	**55**	⇓P	**P**	**06 49 51.1**	**0.0**
	baz=90						
SWSC	**Sam W. Stewart**	**89.66**	**57**	⇑P	**P**	**06 49 50.8**	**-0.4**
	baz=90						
BELC	**Belle Mtn. Jos**	**89.73**	**55**	⇓P	**P**	**06 49 51.8**	**+0.2**
	baz=90						
SHOC	**Shoshone**	**89.92**	**54**	⇓P	**P**	**06 49 51.6**	**-0.8**
	baz=90						
U10A	**Ash Meadows, A**	**90.00**	**53**	⇓P	**P**	**06 49 53.2**	**+0.4**
	baz=90,SNR=5.2						
J08A	**Circle Bar Ran**	**90.02**	**46**	⇑P	**P**	**06 49 53.3**	**+0.6**
	baz=90						
BC3	**Big Chuckawall**	**90.10**	**56**	⇑P	**P**	**06 49 52.8**	**-0.5**
	baz=90						
S10A	**Tonopah Range,**	**90.13**	**52**	⇑P	**P**	**06 49 53.7**	**+0.3**
	baz=90,SNR=7.5						
GMRC	**Granite Mounta**	**90.17**	**55**	⇑P	**P**	**06 49 53.7**	**+0.1**
	baz=90						
MK31	**Makanchi Array**	**90.17**	**318**	*e*P	**P**	**06 49 52.5**	**-0.8**
MKAR	**Makanchi Array**	**90.17**	**318**	P	**P**	**06 49 52.4**	**-0.9**
	comp=Z,5.4nm,0.6s,mb4.7,baz=96,slow=6.1,SNR=80						
R10A	**Warm Springs**	**90.44**	**51**	⇑P	**P**	**06 49 55.2**	**+0.4**
	baz=90						
IRM	**Iron Mountain**	**90.45**	**55**	⇓P	**P**	**06 49 54.8**	**-0.1**
	baz=90						
GLA	**Glamis**	**90.48**	**57**	⇓P	**P**	**06 49 54.8**	**-0.3**
	baz=90						
Q10A	**Clear Creek Ra**	**90.48**	**51**	⇑P	**P**	**06 49 55.6**	**+0.7**
	baz=90						
V11A	**Goodsprings**	**90.58**	**54**	⇑P	**P**	**06 49 55.7**	**+0.2**
	baz=91						
ZALV	**Zalesovo Beam**	**90.58**	**325**	P	**P**	**06 49 53.3**	**-1.7**
	comp=Z,1.0nm,0.3s,mb4.3,baz=104,slow=4.7,SNR=4.6						
D08A	**Wollman Farm,**	**90.64**	**42**	⇑P	**P**	**06 49 55.7**	**+0.2**
	baz=91						
B08A	**Colville Reser**	**90.70**	**41**	⇓P	**P**	**06 49 55.4**	**-0.3**
	baz=91						
SHPR	**Sheep Range**	**90.94**	**53**	*e*P	**P**	**06 49 57.8**	**+0.7**
SHPR				*e*		06 50 26.3	
R11A	**Troy Canyon, C**	**91.00**	**51**	⇓P	**P**	**06 49 57.2**	**-0.2**
	baz=91,SNR=6.8						
T11A	**Corn Creek, Al**	**91.05**	**52**	⇑P	**P**	**06 49 58.1**	**+0.5**
	baz=91						
Q11A	**Duckwater**	**91.06**	**51**	⇓P	**P**	**06 49 58.2**	**+0.6**
	baz=91,SNR=5.2						
P11A	**Circle Ranch,**	**91.13**	**50**	⇑P	**P**	**06 49 58.6**	**+0.6**
	baz=91						
S12A	**Delamar Landin**	**91.41**	**52**	⇑P	**P**	**06 50 00.0**	**+0.8**
	baz=92,SNR=5.2						
Y13A	**Salome**	**91.45**	**56**	⇓P	**P**	**06 49 59.5**	**-0.1**
	baz=92						
F10A	**Beach Ranch, E**	**91.51**	**44**	⇑P	**P**	**06 49 59.4**	**-0.2**
	baz=92						
Q12A	**Willow Creek R**	**91.72**	**51**	⇑P	**P**	**06 50 01.1**	**+0.4**
	baz=92						
NVS	**Novosibirsk**	**91.72**	**326**	*e*P	**P**	**06 49 57.7**	**-2.6**
V13A	**Grand Canyon W**	**91.73**	**54**	⇑P	**P**	**06 50 00.4**	**-0.4**
	baz=92						
R12A	**Pony Springs,**	**91.75**	**51**	⇓P	**P**	**06 50 01.5**	**+0.7**
	baz=92,SNR=6.4						
P12A	**McGill**	**91.75**	**50**	⇓P	**P**	**06 50 01.6**	**+0.8**
	baz=92						
U13A	**Pakoon Wash**	**91.86**	**53**	⇓P	**P**	**06 50 01.8**	**+0.4**
	baz=92						
MFID	**Camas Ranch**	**91.91**	**46**	⇑P	**P**	**06 50 01.9**	**+0.4**
	baz=92						
T13A	**Saint George**	**92.03**	**53**	⇑P	**P**	**06 50 02.6**	**+0.4**
	baz=92						
O12A	**Currie**	**92.04**	**50**	⇑P	**P**	**06 50 01.9**	**-0.3**
	baz=92,SNR=8.2						
**N

E19A	**Rath Farm, Rou**	**97.36**	**44**	⇓P	**P**	**06 50 25.6**	**-0.7**
	baz=97						
D19A	**Cripps Ranch,**	**97.39**	**43**	⇑P	**P**	**06 50 26.3**	**-0.1**
	baz=97						
E20A	**Meyer Farm, Mu**	**97.82**	**44**	⇑P	**P**	**06 50 27.9**	**-0.4**
	baz=98						
VNA2	**Neumayer--Watz**	**98.46**	**184**	*e*P	**P**	**06 50 26.5**	**-4.3**
VNA2				*e*		06 50 28.3	
ARCES	**ARCESS Array B**	**114.64**	**344**	PKP	PKiKP	06 55 31.1	-0.9
	comp=Z,10nm,1.2s,baz=38,slow=3.4,SNR=3.1						
KEST	**Kesra**	**144.25**	**319**	*e*PKPdf	PKPdf	06 56 26.1	-2.6
KEST	**Kesra**	**144.25**	**319**	PKP	PKPdf	06 56 26.4	-2.2
	comp=Z,2.0nm,0.9s,baz=285,slow=2.9,SNR=8.6						
ESDC	**Sonseca Array**	**148.11**	**338**	PKPbc	PKPbc	06 56 37.0	-1.4
	comp=Z,0.8nm,0.6s,baz=336,slow=3.5,SNR=5.1						
TORD	**Torodi Ar. Bea**	**159.94**	**280**	PKP	PKPdf	06 56 50.2	-2.1
	comp=Z,1.7nm,1.0s,baz=7.0,slow=1.0,SNR=5.7						
TORD				PKPab	PKPab	06 57 31.4	-1.0
	comp=Z,2.5nm,1.0s,baz=77,slow=3.9,SNR=8.7						

BJI ***30*** *06:54:02.7,6.˚19S×147.˚91E,h75km,mB6.3/53,mb5.9/61, Ms6.1/73,Ms7 6.0/66*

MOS ***30*** *06:54:02.0±1.2,5.˚99S×147.˚25E,h33km,mb6.3/65, MS5.9/35,Error ellipse: s-maj=7.4km s-min=5.0km az=94.6*

ISCJB ***30*** *06:54:03.6±0.6,6.˚13S±0.˚02×147.˚33E±0.˚02,h51km±5km, mb6.2/265,MS5.9/109,Error ellipse: s-maj=3.9km s-min=3.0km az=15.0*

DJA ***30*** *06:54:04,6.˚12S×147.˚79E,h44km,Mw6.8/70*

IDC ***30*** *06:54:06.0±0.9,6.˚12S×147.˚27E,h56km±6km,mb5.7/21, mb1 5.8/25,mb1mx5.8/25,mbtmp5.8/25,MS5.7/23, Ms1 5.7/23,ms1mx5.7/25,Error ellipse: s-maj=10.2km s-min=7.5km az=82.0*

TEH ***30*** *06:54:06.0,6.˚19S×147.˚26E,h56km*

NEIC ***30*** *06:54:07.6±0.1,6.˚15S×147.˚26E,h75km,mb6.1/194, ME6.0,MW6.3,MW6.3,Error ellipse: s-maj=4.6km s-min=4.1km az=87.0,Moment Tensor Solution. s95 Moment tensor: Scale 10¹⁸Nm; Mrr=1.15; Mθθ=1.17; Mϕϕ=-2.32; Mrθ=2.24; Mθϕ=-1.19; Mϕr=0.06; Best double couple: M=3.20000×10¹⁸ NP1:ϕ=56.00000°,δ=72.00000°, λ=137.00000°. NP2:ϕ=162.00000°,δ=50.00000°,λ=24.00000°. Principal axes: T 3.5100, Plg=42.0000°, Azm=10.0000°; N -0.6500, Plg=44.0000°, Azm=217.0000°; P -2.8600, Plg=13.0000°, Azm=113.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Felt at Goroka, Lae, Madang, Mount Hagen and Port Moresby.

GCMT ***30*** *06:54:14.2±0.1,6.˚33S×147.˚49E,h88km,MW6.4,Moment Tensor Solution. s117,c294; s91,c155; Moment tensor: Scale 10¹⁸Nm; Mrr=0.59±.03; Mθθ=3.18±.03; Mϕϕ=-3.77±.03; Mrθ=2.87±.02; Mθϕ=-2.24±.02; Mϕr=0.26±.02; Best double couple: M=5.00000×10¹⁸ NP1:ϕ=156.00000°,δ=59.00000°, λ=13.00000°. NP2:ϕ=59.00000°,δ=79.00000°,λ=148.00000°. Principal axes: T 5.3800, Plg=30.0000°, Azm=13.0000°; N -0.6900, Plg=57.0000°, Azm=222.0000°; P -4.6800, Plg=13.0000°, Azm=111.0000°; Data Used: II IU CN IC G. Surface waves: sta=117, comp=288, per= 50.*

ISC 30 06:54:07.2±0.6,6.˚14S±0.˚02×147.˚37E±0.˚02,h68km±5km, h64km±2.0km:pP-P,n1627,σ1.926/675,mb6.1/263, 218C-196D,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.25**	**184**	*e*Pn	**Pn**	**06 54 53.9**	**-1.9**
PMG				*e*Sn	**Sn**	**06 55 29.9**	**-3.5**
PMG	**Port Moresby**	**3.25**	**184**	P	**Pn**	**06 54 53.4**	**-2.4**
MMPI	**Merauke**	**7.31**	**251**	P	**Pn**	**06 55 54.7**	**+3.4**
	54nm8μm,0.8s						
COEN	**Coen**	**8.80**	**208**	*e*Pn	**Pn**	**06 56 10.1**	**-1.6**
	1μm,0.6s						
COEN				*e*Sn	**Sn**	**06 57 45.8**	**-3.6**
COEN	**Coen**	**8.80**	**208**	P	**Pn**	**06 56 09.7**	**-2.0**
	4μm,1.6s						
BAKI	**Biak**	**12.27**	**293**	P	**Pn**	**06 57 03.1**	**+4.0**
	2μm,0.9s						
HNR	**Honiara**	**12.88**	**106**	*e*Pn	**Pn**	**06 57 08.3**	**+0.9**
	16μm,1.3s						
HNR	**Honiara**	**12.88**	**106**	P	**Pn**	**06 57 07.0**	**-0.4**
	51nm,0.3s,baz=209,slow=3.6,SNR=49						
HNR				S	**Sn**	**06 59 31.9**	**+2.8**
	22nm,0.3s,baz=201,slow=14,SNR=1.6						
HNR	**Honiara**	**12.88**	**106**	P	**Pn**	**06 57 07.0**	**-0.4**
HNR				S	**Sn**	**06 59 31.9**	**+2.8**
HNR				pmax	pmax		
	comp=Z,51nm,0.3s						
HNR				smax			
	comp=N,22nm,0.3s						
CTA	**Charters Tower**	**13.91**	**184**	*e*P	**Pn**	**06 57 20.2**	**-0.9**
	comp=N,396nm,0.8s						
CTA				*e*S	**Sn**	**06 59 51.9**	**-2.1**
CTA	**Charters Tower**	**13.91**	**184**	P	**Pn**	**06 57 19.0**	**-2.1**
	comp=N,16nm,0.3s,baz=1.2,slow=14,SNR=88						
CTA				S	**Sn**	**06 59 58.2**	**+4.2**
	comp=N,2.6nm,0.3s,baz=108,slow=20,SNR=2.1						
CTA				LR	LR	07 02 56.6	
	comp=N,24μm,18.1s,baz=6.6,slow=38						
CTA	**Charters Tower**	**13.91**	**184**	P	**Pn**	**06 57 19.0**	**-2.1**
CTA				S	**Sn**	**06 59 58.2**	**+4.2**
CTAO	**Charters Tower**	**13.91**	**184**	*e*Pn	**Pn**	**06 57 20.4**	**-0.8**
CTAO	**Charters Tower**	**13.91**	**184**	P	**Pn**	**06 57 19.9**	**-1.2**
	comp=N,773nm,1.5s						
TLE	**Tual**	**14.57**	**271**	P	**Pn**	**06 57 32.0**	**+2.2**
	comp=N,2μm,1.4s						
KAKA	**Kakadu**	**16.11**	**245**	*e*P	**Pn**	**06 57 47.1**	**-2.4**
	comp=N,756nm,0.6s						
KAKA				*e*S	**Sn**	**07 00 41.7**	**-5.8**
KAKA	**Kakadu**	**16.11**	**245**	*e*P	**Pn**	**06 57 47.8**	**-1.8**
	comp=N,5μm,0.7s						
KAKA	**Kakadu**	**16.11**	**245**	P	**Pn**	**06 57 47.5**	**-2.0**
	comp=N,4μm,0.7s						
BNDI	**Bandanaira**	**17.47**	**274**	P	**Pn**	**06 58 09.5**	**+3.1**
	comp=N,6μm,1.1s						
WRA	**Warramunga Arr**	**18.67**	**222**	P	**Pn**	**06 58 18.1**	**-2.9**
WRA				S	**S**	**07 01 39.5**	**-10**
WRA				ScP	ScP	07 06 18.4	+2.5
WRA	**Warramunga Arr**	**18.67**	**222**	P	**Pn**	**06 58 18.1**	**-2.9**
	comp=N,20nm,0.3s,baz=46,slow=12,SNR=225						
WRA				S	**S**	**07 01 39.5**	**-10**
	comp=N,5.2nm,0.3s,baz=52,slow=24,SNR=3.2						
WRA				ScP	ScP	07 06 18.4	+2.5
	comp=N,3.4nm,0.3s,baz=34,slow=2.4,SNR=10						
WRA				PKiKP	PKiKP	07 10 36.7	-0.3
	comp=N,0.2nm,0.3s,baz=319,slow=1.2,SNR=8.7						
WRA				P3KP		07 33 25.5	
	comp=N,0.1nm,0.3s,baz=112,slow=1.8,SNR=6.6						
WRA	**Warramunga Arr**	**18.67**	**222**	P	**Pn**	**06 58 18.1**	**-2.9**
WRA				S	**S**	**07 01 39.5**	**-10**
EIDS	**Eidsvold**	**19.45**	**170**	*e*P	**Pn**	**06 58 27.0**	**-3.1**
	comp=N,2μm,1.0s						
GUMO	**Guam**	**19.76**	**353**	*e*P	**Pn**	**06 58 32.5**	**-1.3**
	comp=N,3μm,1.0s						
GUMO	**Guam**	**19.76**	**353**	P	**Pn**	**06 58 31.8**	**-2.0**
	comp=N,64nm,0.3s,baz=184,slow=6.2,SNR=31						
GUMO				S	**S**	**07 02 14.2**	**+3.3**
	comp=N,3.7nm,0.3s,baz=180,slow=20,SNR=1.8						
GUMO				LR	LR	07 05 00.3	
	comp=N,21μm,20.9s,baz=177,slow=33						
GUMO	**Guam**	**19.76**	**353**	P	**Pn**	**06 58 31.8**	**-2.0**
GUMO				pmax	pmax		
	comp=Z,64nm,0.3s						
GUMO				MLR	MLR		
	comp=Z,21μm,20.9s						
NLAI	**Namlea**	**20.41**	**277**	P	**P**	**06 58 40.8**	**+1.9**
	comp=Z,1μm,1.6s						
LBMI	**Labuha**	**20.57**	**285**	P	**P**	**06 58 42.7**	**+2.1**
	comp=Z,2μm,2.1s						
KNA	**Kununurra**	**20.59**	**241**	P	**P**	**06 58 39.2**	**-1.7**
TNTI	**Ternate**	**21.12**	**288**	P	**P**	**06 58 49.2**	**+2.6**
	comp=Z,1μm,1.6s,mb6.0						
ASAR	**Alice Springs**	**21.72**	**215**	P	**P**	**06 58 51.2**	**-1.6**
ASAR				S	**S**	**07 02 49.7**	**+0.2**
ASAR				ScP	ScP	07 06 26.2	+3.1
ASAR	**Alice Springs**	**21.72**	**215**	P	**P**	**06 58 51.2**	**-1.6**
	comp=Z,432nm,0.7s,mb5.9,baz=51,slow=8.6,SNR=586						
ASAR				S	**S**	**07 02 49.7**	**+0.2**
	comp=Z,490nm,0.9s,baz=29,slow=22,SNR=10						
ASAR				ScP	ScP	07 06 26.2	+3.1
	comp=Z,214nm,1.0s,baz=46,slow=3.4,SNR=14						
ASAR				P3KPbc		07 32 42.5	
	comp=Z,3.5nm,1.2s,baz=215,slow=4.2,SNR=8.2						
ASAR	**Alice Springs**	**21.72**	**215**	P	**P**	**06 58 51.3**	**-1.5**
ASAR				S	**S**	**07 02 49.7**	**+0.3**
MNI	**Manado**	**23.73**	**288**	P	**P**	**06 59 14.3**	**+1.0**
	comp=Z,2μm,1.5s,mb6.3						
SGSI	**Sangihe**	**23.90**	**294**	P	**P**	**06 59 19.4**	**+4.5**
	comp=Z,2μm,1.1s,mb6.4						
NOUC	**Port Laguerre**	**24.21**	**133**	*e*P	**P**	**06 59 13.7**	**-3.9**
KMSI	**Cibinong**	**24.29**	**285**	P	**P**	**06 59 21.4**	**+3.0**
	comp=Z,5μm,1.0s,mb6.8						
DZM	**Mont Dzumac**	**24.30**	**133**	*e*P	**P**	**06 59 14.9**	**-3.5**
	comp=Z,2μm,1.5s,mb6.3						
DZM				*e*S	**S**	**07 03 17.7**	**-15**
	comp=Z,27μm,27.8s						
DZM				*e*LR	LR	07 04 51.7	
	comp=Z,75μm,24.1s						
DZM	**Mont Dzumac**	**24.30**	**133**	*e*P	**P**	**06 59 13.6**	**-4.8**
FITZ	**Fitzroy Crossi**	**24.31**	**239**	*e*P	**P**	**06 59 17.4**	**-1.2**
	comp=Z,4μm,1.1s,mb6.7						
FITZ				*e*S	**S**	**07 03 30.0**	**-3.2**
FITZ	**Fitzroy Crossi**	**24.31**	**239**	*e*P	**P**	**06 59 17.8**	**-0.9**
	comp=Z,8.7nm,0.5s						
FITZ	**Fitzroy Crossi**	**24.31**	**239**	P	**P**	**06 59 17.4**	**-1.2**
	comp=Z,1μm,0.8s,mb6.3,baz=66,slow=8.2,SNR=262						
FITZ				S	**S**	**07 03 26.8**	**-6.4**
	comp=Z,79nm,0.9s,baz=112,slow=8.6,SNR=1.8						
FITZ				LR	LR	07 09 20.5	
	comp=Z,26μm,18.2s,baz=63,slow=38						
FITZ				P3KPbc		07 32 33.4	
	comp=Z,2.7nm,0.9s,baz=271,slow=4.3,SNR=6.1						
FITZ	**Fitzroy Crossi**	**24.31**	**239**	P	**P**	**06 59 16.9**	**-1.7**
	comp=Z,4μm,1.0s,mb6.7						
ARMA	**Armidale**	**24.48**	**171**	*e*P	**P**	**06 59 18.4**	**-1.6**
ARMA				*e*S	**S**	**07 03 35.8**	**+0.2**
ARMA				*e*SCP	ScP	07 06 33.9	+3.6
ARMA	**Armidale**	**24.48**	**171**	*e*P	**P**	**06 59 18.6**	**-1.5**
	comp=Z,4μm,1.9s,mb6.5						
BBSI	**Bau Bau**	**24.68**	**270**	P	**P**	**06 59 27.3**	**+5.2**
	comp=Z,2μm,1.2s,mb6.4						
KDI	**Kendari**	**24.75**	**274**	P	**P**	**06 59 25.9**	**+3.2**
	comp=Z,447nm,1.4s,mb5.7						
KWAJ	**Kwajalein Atol**	**25.05**	**54**	*e*P	**P**	**06 59 26.4**	**+1.1**
	comp=Z,2μm,1.5s,mb6.3						
MMRI	**Maumere**	**25.05**	**263**	P	**P**	**06 59 26.6**	**+1.2**
	comp=Z,2μm,1.2s,mb6.5						
LUWI	**Luwuk**	**25.06**	**281**	P	**P**	**06 59 26.4**	**+0.9**
	comp=Z,4μm,1.6s,mb6.6						
DAV	**Davao City (W)**	**25.40**	**301**	P	**P**	**06 59 27.1**	**-1.4**
	comp=Z,141nm,0.3s,mb5.8,baz=268,slow=6.0,SNR=3.9						
DAV				P3KP		07 33 22.7	
	comp=Z,394nm,0.4s,baz=37,slow=2.9,SNR=4.2						
DAV	**Davao City (W)**	**25.40**	**301**	⇑*e*P	**P**	**06 59 26.8**	**-1.7**
STKA	**Stephens Creek**	**26.17**	**191**	*e*P	**P**	**06 59 33.2**	**-2.1**
	comp=Z,966nm,1.0s,mb6.2						
STKA				*e*S	**S**	**07 03 59.8**	**-2.6**
STKA				*e*SCP	ScP	07 06 37.8	+2.7
STKA	**Stephens Creek**	**26.17**	**191**	*e*P	**P**	**06 59 33.5**	**-1.8**
	comp=Z,224nm,0.9s,mb5.6						
STKA	**Stephens Creek**	**26.17**	**191**	P	**P**	**06 59 33.3**	**-2.0**
	comp=Z,512nm,0.9s,mb6.0,baz=354,slow=8.4,SNR=110						
STKA				S	**S**	**07 03 58.0**	**-4.4**
	comp=Z,67nm,1.1s,baz=204,slow=10.0,SNR=1.4						
STKA				LR	LR	07 11 29.4	
	comp=Z,25μm,18.6s,baz=6.7,slow=40						
MRSI	**Marisa**	**26.22**	**284**	P	**P**	**06 59 35.8**	**-0.2**
	comp=Z,621nm,0.8s,mb6.1						
BUKP	**Musuan**	**26.25**	**302**	*e*P	**P**	**06 59 40.8**	**+4.5**
WSI	**Waingapu**	**27.04**	**261**	P	**P**	**06 59 48.1**	**+4.7**
	comp=Z,6μm,1.2s,mb7.0						
BKSI	**Bulukumba**	**27.13**	**270**	P	**P**	**06 59 46.4**	**+2.2**
	comp=Z,9μmcomp=Z,264nm,1.1s,mb5.7						
TOLI	**Toli-Toli**	**27.50**	**284**	P	pP	07 00 00.6	-3.1
TTSI	**Tana Toraja**	**27.63**	**275**	P	**P**	**06 59 50.7**	**+2.0**
	comp=Z,405nm,1.4s,mb5.8						
PAGZ	**Pagadian**	**27.67**	**300**	*e*P	**P**	**06 59 55.9**	**+6.9**
TBP	**Tagbilaran**	**28.21**	**304**	*e*P	**P**	**06 59 54.6**	**+0.7**
TBP				*e*S	sP	07 00 24.4	+6.4
BBOO	**Buckleboo**	**28.55**	**200**	*e*P	**P**	**06 59 55.0**	**-1.6**
	comp=Z,1μm,0.8s,mb6.6						
CAN	**Canberra**	**29.08**	**177**	*e*P	**P**	**07 00 01.6**	**+0.3**
	comp=Z,312nm,1.1s,mb5.8						
CAN	**Canberra**	**29.08**	**177**	*e*P	**P**	**07 00 01.6**	**+0.3**
CAN				pmax	pmax		
	comp=Z,312nm,1.1s,mb5.8						
CNB	**Canberra Magne**	**29.09**	**177**	*e*P	**P**	**07 00 01.6**	**+0.2**
CNP	**Catarman**	**29.20**	**309**	*e*P	**P**	**07 00 03.5**	**+0.9**
MBWA	**Marble Bar**	**30.65**	**238**	*e*P	**P**	**07 00 14.1**	**-1.3**
	comp=Z,0.2nm,0.6s						
MBWA	**Marble Bar**	**30.65**	**238**	P	**P**	**07 00 16.9**	**+1.6**
	SNR=27						
MYLDM	**Lahad Datu**	**30.94**	**291**	P	**P**	**07 00 20.0**	**+2.0**
MYLDM	**Lahad Datu**	**30.94**	**291**	P	**P**	**07 00 20.9**	**+2.9**
	comp=Z,572nm,1.3s,mb6.1						
KBKI	**Kotabaru**	**31.22**	**274**	P	**P**	**07 00 22.8**	**+2.3**
	comp=Z,176nm,1.1s,mb5.7						
TSM	**Tawau**	**31.23**	**289**	P	**P**	**07 00 22.7**	**+2.2**
TOO	**Toolangi**	**31.33**	**183**	*e*P	**P**	**07 00 20.9**	**-0.3**
TOO				*e*S	**S**	**07 05 23.8**	**+0.4**
TOO				*e*SCP	ScP	07 06 56.8	+5.6
WAKE	**Wake Island**	**31.60**	**37**	*e*P	**P**	**07 00 23.8**	**0.0**
	comp=Z,249nm,1.1s,mb5.8						
DNP	**Denpasar**	**31.99**	**263**	P	**P**	**07 00 34.7**	**+7.5**
	comp=Z,943nm,1.2s,mb6.4						
MSVF	**Nonsavu**	**32.09**	**114**	*e*P	**P**	**07 00 29.3**	**+1.2**
	comp=Z,536nm,1.2s,mb6.2						
MSVF				*e*ScP	ScP	07 06 56.5	+2.4
MSVF	**Nonsavu**	**32.09**	**114**	P	**P**	**07 00 30.3**	**+2.2**
	comp=Z,1μm,1.2s,mb6.6,SNR=16						
SDKM	**Sandakan**	**32.32**	**291**	P	**P**	**07 00 31.0**	**+0.9**
NBBI	**Negara**	**32.56**	**264**	P	**P**	**07 00 35.8**	**+3.5**
	comp=Z,9μmcomp=Z,576nm,1.0s,mb6.4						
POLP	**Polilio Island**	**32.65**	**310**	*e*P	**P**	**07 00 36.1**	**+3.1**
ENPP	**El Nido**	**32.72**	**302**	*e*P	**P**	**07 00 34.8**	**+1.2**
BYJI	**Banyuwangi**	**32.82**	**264**	P	**P**	**07 00 39.5**	**+5.0**
	comp=Z,999nm,1.3s,mb6.5						
BATP	**Bataraza**	**33.00**	**296**	*e*P	**P**	**07 00 37.7**	**+1.6**
JAGI	**Jajag, Banyuwa**	**33.03**	**264**	P	**P**	**07 00 36.5**	**+0.2**
	comp=Z,5μmcomp=Z,410nm,1.0s,mb6.2						
KDM	**Kudat**	**33.12**	**293**	P	**P**	**07 00 39.9**	**+2.8**
KMMI	**Kalianget**	**33.19**	**267**	P	**P**	**07 00 43.9**	**+6.1**
	comp=Z,5μmcomp=Z,189nm,1.5s,mb5.7						
KKM	**Kota Kinabalu**	**33.37**	**291**	*e*P	**P**	**07 00 39.9**	**+0.5**
	comp=Z,490nm,1.3s,mb6.2						
KKM	**Kota Kinabalu**	**33.37**	**291**	P	**P**	**07 00 40.9**	**+1.6**
LUBP	**Lubang**	**33.39**	**306**	*e*P	**P**	**07 00 30.4**	**-9.1**
GMJI	**Gumukmas**	**33.72**	**264**	P	**P**	**07 00 46.1**	**+3.7**
	comp=Z,4μmcomp=Z,168nm,1.1s,mb5.8						
KRKI	**Karangkates**	**34.70**	**265**	P	**P**	**07 00 52.8**	**+1.9**
	comp=Z,532nm,0.8s,mb6.5						
APYP	**Conner**	**35.13**	**313**	*e*P	**P**	**07 00 52.2**	**-2.2**
BOLP	**Bolinao**	**35.20**	**310**	*e*P	**P**	**07 00 54.4**	**-0.7**
PWJI	**Pagerwojo**	**35.34**	**265**	P	**P**	**07 00 56.8**	**+0.4**
	comp=Z,5μmcomp=Z,219nm,0.9s,mb6.0						
SJI	**Sawahan**	**35.38**	**265**	P		**07 00 57.5**	**+0.8**
	comp=Z,7μmcomp=Z,351nm,0.8s,mb6.2						
NGJI	**Ngawi**	**35.68**	**266**	P	**P**	**07 01 06.4**	**+7.1**
	comp=Z,6μmcomp=Z,226nm,0.9s,mb6.1						
PBKI	**Pangkalan Bun**	**35.75**	**274**	P	**P**	**07 01 03.5**	**+3.6**
	comp=Z,1μm,1.1s,mb6.8						
PCJI	**Pacitan**	**35.96**	**265**	P	**P**	**07 01 04.0**	**+2.3**
	comp=Z,10μmcomp=Z,920nm,1.1s,mb6.6						
SBUM	**Sibu**	**36.12**	**283**	P	**P**	**07 01 04.0**	**+0.9**
SBUM	**Sibu**	**36.12**	**283**	P	**P**	**07 01 03.3**	**+0.2**
	comp=Z,8μmcomp=Z,260nm,1.3s,mb6.0						
MOO	**Moorlands**	**36.15**	**180**	*e*P	**P**	**07 01 04.3**	**+1.4**
UGM	**Wanagama**	**36.61**	**265**	P	**P**	**07 01 10.7**	**+3.5**
	comp=Z,741nm,1.7s,mb6.3						
SMRI	**Semarang**	**36.69**	**266**	P	**P**	**07 01 10.8**	**+2.8**
	comp=Z,498nm,1.0s,mb6.4						
YOGI	**Yogyakarta**	**36.83**	**265**	P	**P**	**07 01 14.0**	**+4.8**
	comp=Z,1μm,1.2s,mb6.8						
BJII	**Banjamegara**	**37.42**	**266**	P	**P**	**07 01 17.2**	**+3.1**
	comp=Z,315nm,0.9s,mb6.2						
KLBR	**Kellerberrin**	**37.53**	**224**	*e*P	**P**	**07 01 13.1**	**-1.7**
	comp=Z,403nm,0.7s,mb6.4						
JOW	**Kunigami**	**37.64**	**331**	*e*P	**P**	**07 01 15.2**	**-0.5**
	comp=Z,504nm,1.3s,mb6.2						
JOW				*e*		07 01 40.5	
JOW	**Kunigami**	**37.64**	**331**	LR	LR	07 13 31.5	
	comp=Z,17μm,20.6s,baz=222,slow=31						
OUZ	**Omahuta**	**37.69**	**144**	*e*P		**07 01 15.7**	**-0.4**
	comp=Z,106nm,0.8s,mb5.7						
KSM	**Kuching**	**37.77**	**280**	*e*P	**P**	**07 01 16.9**	**-0.2**
	comp=Z,423nm,1.1s,mb6.2						
KSM				*e*S	**S**	**07 07 03.0**	**-0.2**
KSM	**Kuching**	**37.77**	**280**	P	**P**	**07 01 17.3**	**+0.2**
KSM	**Kuching**	**37.77**	**280**	P	**P**	**07 01 16.9**	**-0.2**
	comp=Z,375nm,1.2s,mb6.1						
TWG	**Pinlang**	**38.60**	**319**	*e*P	**P**	**07 01 23.6**	**-0.4**
	comp=Z,121nm,0.7s,mb5.8						
NWAO	**Narrogin (SRO)**	**38.68**	**223**	*e*P	**P**	**07 01 24.0**	**-0.4**
	comp=Z,486nm,1.4s,mb6.1						
NWAO	**Narrogin (SRO)**	**38.68**	**223**	P	**P**	**07 01 25.6**	**+1.1**
	comp=Z,108nm,0.8s,mb5.7,baz=57,slow=7.8,SNR=17						
NWAO				S	**S**	**07 07 11.2**	**-5.2**
	comp=Z,25nm,0.9s,baz=45,slow=20,SNR=2.1						
NWAO				LR	LR	07 18 21.8	
	comp=Z,22μm,18.4s,baz=155,slow=38						
NWAO	**Narrogin (SRO)**	**38.68**	**223**	P	**P**	**07 01 25.6**	**+1.2**
NWAO				S	**S**	**07 07 11.2**	**-5.2**
NWAO				pmax	pmax		
	comp=Z,108nm,0.8s						
NWAO				smax			
	comp=N,25nm,0.9s						
NWAO				MLR	MLR		
	comp=Z,22μm,18.4s						
NWAO	**Narrogin (SRO)**	**38.68**	**223**	P	**P**	**07 01 28.3**	**+3.9**
	SNR=5.8						
JCJI	**Jatiwangi**	**38.86**	**267**	P	**P**	**07 01 31.5**	**+5.2**
	comp=Z,785nm,0.8s,mb6.6						
YULB	**Yu-li**	**38.86**	**320**	*e*P	**P**	**07 01 24.9**	**-1.1**
	comp=Z,115nm,0.6s,mb5.9						
TPUB	**Ta-pu**	**39.23**	**319**	*e*P	**P**	**07 01 27.7**	**-1.5**
	comp=Z,263nm,0.8s,mb6.1						
NACB	**Ninganchiao**	**39.24**	**321**	*e*P	**P**	**07 01 28.9**	**-0.3**
	comp=Z,1μm,1.2s,mb6.5						
CISI	**Cisompet, Garu**	**39.29**	**266**	P	**P**	**07 01 31.0**	**+1.1**
	comp=Z,1μm,0.8s,mb6.8						
SSLB	**Suanglung**	**39.36**	**320**	*e*P	**P**	**07 01 30.1**	**-0.2**
	comp=Z,232nm,0.9s,mb6.0						
LEM	**Lembang**	**39.50**	**267**	P	**P**	**07 01 33.6**	**+2.0**
	comp=Z,793nm,0.9s,mb6.6						
YHNB	**Yeheng**	**39.73**	**321**	*e*P	**P**	**07 01 32.8**	**-0.5**
	comp=Z,818nm,1.0s,mb6.5						
YHNB				*e*ScP	ScP	07 07 23.1	+1.2
TATO	**Taipei**	**39.89**	**322**	*e*P	**P**	**07 01 33.9**	**-0.7**
	comp=Z,1μm,0.9s,mb6.8						
TATO	**Taipei**	**39.89**	**322**	P	**P**	**07 01 34.7**	**+0.1**
	SNR=38						
CBJI	**Citeko**	**40.27**	**267**	P	**P**	**07 01 39.9**	**+1.9**
	comp=Z,1μm,0.7s,mb6.9						
DBJI	**Dramaga**	**40.37**	**267**	P	**P**	**07 01 40.4**	**+1.6**
	comp=Z,444nm,0.9s,mb6.3						
SKJI	**Sukabumi**	**40.55**	**266**	P	**P**	**07 01 43.9**	**+3.6**
	comp=Z,1μm,0.6s,mb6.9						
AFI	**Afiamalu**	**40.91**	**104**	*e*P	**P**	**07 01 42.9**	**-0.3**
	comp=Z,525nm,1.0s,mb6.3						
AFI	**Afiamalu**	**40.91**	**104**	P	**P**	**07 01 44.6**	**+1.4**
	comp=Z,226nm,1.0s,mb6.0,baz=245,slow=1.9,SNR=14						
AFI	**Afiamalu**	**40.91**	**104**	P	**P**	**07 01 44.6**	**+1.4**
AFI				pmax	pmax		
	comp=Z,227nm,1.0s,mb6.0						
SBJI	**Serang**	**41.00**	**268**	P	pP	07 01 55.9	-4.9
QRZ	**Quartz Range**	**41.22**	**151**	*e*PN	**P**	**07 01 45.1**	**-0.3**
PPBI	**Pangkal Pinang**	**41.31**	**274**	P	**P**	**07 01 47.7**	**+1.2**
	comp=Z,430nm,1.1s,mb6.2						
RBSI	**Rajabasa**	**41.40**	**268**	P	**P**	**07 01 49.8**	**+2.5**
	comp=Z,5μmcomp=Z,327nm,1.2s,mb6.0						
QZH	**Quanzhou**	**41.70**	**319**	⇑*i*P	**P**	**07 01 50.3**	**+0.8**
QZH				sP	sP	07 02 12.0	-2.2
QZH				S	**S**	**07 08 01.3**	**-0.4**
QZH				pmax	pmax		
	comp=Z,1μm,1.3s,mb6.4						
QZH				pmax	pmax		
	comp=Z,5μm,5.9s						
QZH				LR	LR		
	comp=N,10μm,11.3s						
QZH				LR	LR		
	comp=E,14μm,16.4s						
QZH				LR	LR		
	comp=Z,72μm,36.5s						
URZ	**Urewera**	**41.82**	**144**	*e*P	**P**	**07 01 50.3**	**0.0**
	comp=Z,83nm,0.7s,mb5.6						
URZ	**Urewera**	**41.82**

SSE pmax pmax
comp=Z,560nm,1.2s,mb6.2
SSE LR LR
comp=Z,2μm,12.0s
SSE LR LR
comp=N,8μm,22.9s
SSE LR LR
comp=E,9μm,23.0s
SSE LR LR
comp=Z,16μm,20.4s
KGM Kluang 44.73 279 P **P** **07 02 14.7 +0.5**
RGRI Rengat 45.31 276 P **P** **07 02 22.7 +3.9**
comp=Z,2μm,1.2s,mb6.6
KTGM Kuala Trenggan 45.61 284 P **P** **07 02 21.7 +0.6**
KRJI Kerinci 45.95 273 P **P** **07 02 27.2 +3.3**
comp=Z,2μm,1.0s,mb6.7
SDSI Sungai Dareh 46.13 275 P **P** **07 02 26.4 +1.1**
comp=Z,704nm,1.1s,mb6.3
FRIM Kepong 46.62 280 P **P** **07 02 29.3 +0.2**
BKNI Bangkinang 46.69 276 P **P** **07 02 30.2 +0.5**
comp=Z,10μmcomp=Z,1μm,1.2s,mb6.5
NJ2 Nanjing 46.70 326 *e*P **P** **07 02 29.3 -0.1**
NJ2 pP pP 07 02 44.3 -2.2
NJ2 sP sP 07 02 52.0 -2.2
NJ2 S **S** **07 09 15.5 +1.3**
NJ2 SS SS 07 12 31.0 -11
NJ2 pmax pmax
comp=Z,670nm,1.0s,mb6.3
NJ2 pmax pmax
comp=Z,3μm,10.8s
NJ2 LR LR
comp=N,29μm,25.4s
NJ2 LR LR
comp=E,15μm,26.0s
NJ2 LR LR
comp=Z,33μm,23.5s
KSRS Korea Array 47.01 339 P **P** **07 02 31.2 -0.5**
comp=Z,180nm,0.8s,mb5.9,baz=157,slow=8.3,SNR=81
KSRS ScP ScP 07 07 49.5 -1.7
comp=Z,14nm,1.1s,baz=155,slow=4.4,SNR=5.9
KSRS S **S** **07 09 19.4 +0.9**
comp=Z,1.5nm,0.8s,baz=143,slow=4.3,SNR=2.1
KSRS LR LR 07 19 21.6
comp=Z,11μm,20.8s,baz=156,slow=32
KSRS Korea Array 47.01 339 P **P** **07 02 31.3 -0.4**
KSRS S **S** **07 09 19.4 +0.9**
KSRS pmax pmax
comp=Z,180nm,0.8s,mb5.8
KSRS smax
comp=N,2.0nm,0.9s
PDSI Padang 47.09 274 P **P** **07 02 32.1 -0.7**
PDSI Padang 47.09 274 P PcP 07 04 06.3 +2.4
PPI Padang Panjang 47.21 275 P **P** **07 02 32.8 -1.0**
IPM Ipoh 47.46 282 *e*P **P** **07 02 35.3 -0.4**
comp=N,473nm,1.0s,mb6.2
IPM *e*ScP ScP 07 07 56.4 +2.8
IPM Ipoh 47.46 282 P **P** **07 02 35.9 +0.3**
IPM Ipoh 47.46 282 P **P** **07 02 35.5 -0.2**
comp=N,8μmcomp=N,449nm,1.0s,mb6.1
INCN Inchon 47.52 338 *e*P **P** **07 02 35.4 -0.3**
comp=N,571nm,1.1s,mb6.3
INCN Inchon 47.52 338 P **P** **07 02 37.9 +2.3**
SNR=32
KULM Kulim 48.01 283 *e*P **P** **07 02 39.4 -0.5**
comp=N,448nm,1.1s,mb6.2
KULM Kulim 48.01 283 P **P** **07 02 40.0 +0.2**
KULM Kulim 48.01 283 P **P** **07 02 39.9 0.0**
comp=N,6μmcomp=N,386nm,1.1s,mb6.1
ERM Erimo 48.08 356 P **P** **07 02 42.4 +2.5**
comp=N,1μm,1.2s,mb6.7,SNR=24
ERM Erimo 48.08 356 *e*P **P** **07 02 42.1 +2.3**
comp=N,590nm,1.4s,mb6.2
ERM Erimo 48.08 356 *d i*P **P** **07 02 41.1 +1.2**
MIDW Midway 48.20 43 *e*P **P** **07 02 42.1 +1.0**
comp=N,457nm,1.0s,mb6.3
MNSI Mandailing Nat 48.20 277 P **P** **07 02 40.5 -0.9**
WHN Wuhan 48.27 321 ⇓P **P** **07 02 41.5 -0.2**
WHN sP sP 07 03 05.5 -1.0
WHN S **S** **07 09 35.3 -1.3**
WHN sS sS 07 10 05.3 -0.4
WHN LR LR
comp=N,8μm,12.3s
WHN LR LR
comp=E,16μm,15.0s
WHN LR LR
comp=Z,56μm,32.2s
SISI Saibi 48.40 274 P **P** **07 02 45.0 +2.1**
comp=Z,6μmcomp=Z,611nm,1.0s,mb6.4
MCQ Macquarie Isla 49.12 171 *e*P **P** **07 02 48.8 +1.1**
MCQ Macquarie Isla 49.12 171 *e*P **P** **07 02 48.7 +1.0**
PSI Prapat 49.19 279 S **S** **07 09 46.8 -3.2**
comp=Z,4.0nm,0.7s,baz=162,slow=20,SNR=2.0
YUK Yuzh-Kuril'sk 49.96 359 ⇑*i*P **P** **07 02 46.5 -7.7**
YUK *i* S **S** **07 09 53.4 -6.3**
YUK *i* SS SS 07 13 33.4 -0.3
YUK pmax pmax
comp=N,2μm,6.0s
YUK pmax pmax
comp=E,260nm,6.0s
YUK pmax pmax
comp=Z,1μm,6.0s
YUK pmax pmax
comp=Z,23nm,0.4s,mb5.5
YUK smax
comp=N,5μm,9.0s
YUK smax
comp=E,1μm,9.0s
COCO West Island 50.19 259 *e*P **P** **07 03 02.0 +5.4**
comp=E,622nm,1.1s,mb6.5
COCO West Island 50.19 259 *e*P **P** **07 03 02.0 +5.4**
COCO pmax pmax
comp=Z,622nm,1.1s,mb6.5
ASAJ Asahikawa 50.21 356 *e*P **P** **07 02 56.3 +0.1**
comp=Z,428nm,1.3s,mb6.2
ASAJ Asahikawa 50.21 356 LR LR 07 21 10.6
comp=Z,9μm,21.8s,baz=185,slow=32
DL2 Dalian 50.77 334 P **P** **07 03 01.3 +0.8**
DL2 sP sP 07 03 29.8 +4.3
DL2 S **S** **07 10 12.0 +0.7**
DL2 pmax pmax
comp=Z,200nm,1.2s,mb6.0
DL2 pmax pmax
comp=Z,2μm,9.1s
DL2 LR LR
comp=N,6μm,23.1s
DL2 LR LR
comp=E,3μm,21.6s
DL2 LR LR
comp=Z,10μm,22.7s
TIA Tai'an 50.79 328 ⇑P **P** **07 02 58.8 -1.9**
TIA LR LR
comp=N,25μm,27.4s
TIA LR LR
comp=E,32μm,32.1s
TIA LR LR
comp=Z,11μm,32.1s
TPTI 50.98 279 P **P** **07 03 02.0 -0.6**
comp=Z,6μmcomp=Z,752nm,1.1s,mb6.7
VLA Vladivostok 51.00 345 *d i*P **P** **07 02 57.8 -4.3**
VLA *e* 07 04 13.4
VLA *e*S **S** **07 10 08.6 -5.6**
VLA pmax pmax
comp=Z,37nm,1.3s,mb5.2
GYA Guiyang 51.05 311 ⇑*i*P **P** **07 03 04.3 +1.5**
GYA pP pP 07 03 20.5 +0.4
GYA sP sP 07 03 27.3 -0.5
GYA PP PP 07 05 05.5 +5.4
GYA S **S** **07 10 18.0 +2.5**
GYA SS SS 07 13 51.0 -0.6
GYA pmax pmax
comp=Z,150nm,1.0s,mb6.0
GYA pmax pmax
comp=Z,12μm,8.1s
GYA LR LR
comp=N,15μm,17.4s
GYA LR LR
comp=E,12μm,18.0s
GYA LR LR
comp=Z,18μm,17.8s
ENH Enshi 51.27 317 *e*P **P** **07 03 05.5 +1.1**
comp=Z,408nm,1.4s,mb6.3
NST Nakhon Sawan 51.55 295 P **P** **07 03 06.0 -0.8**
SNY Shenyang 52.45 338 ⇑P **P** **07 03 12.8 -0.2**
SNY S **S** **07 10 31.8 -2.5**
SNY pmax pmax
comp=Z,4μm,8.4s
SNY LR LR
comp=N,11μm,23.7s
SNY LR LR
comp=E,9μm,21.6s
SNY LR LR
comp=Z,26μm,34.3s
MDJ Mudanjiang 53.00 344 P **P** **07 03 16.3 -0.6**
MDJ pP pP 07 03 29.5 -4.8
MDJ ScP ScP 07 08 16.0 -0.6
MDJ PcS PcS 07 08 21.5 -2.0
MDJ S **S** **07 10 41.0 -0.5**
MDJ pmax pmax
comp=Z,260nm,1.3s,mb6.1
MDJ Mudanjiang 53.00 344 *e*P **P** **07 03 16.5 -0.5**
comp=Z,334nm,1.1s,mb6.3
YSS Yuzh-Sakhalins 53.02 356 *e*P **P** **07 03 16.6 -0.4**
comp=Z,1μm,1.3s,mb6.7
YSS Yuzh-Sakhalins 53.02 356 *αe*P **P** **07 03 16.3 -0.7**
YSS *e* 07 04 25.0
YSS *e* 07 05 16.0
YSS *e*PPP 07 06 24.0
YSS *e*S **S** **07 10 42.0 +0.2**
YSS *e*PS 07 10 52.0
YSS pmax pmax
comp=N,320nm,1.1s
YSS pmax pmax
comp=E,210nm,1.1s
YSS pmax pmax
comp=Z,600nm,1.1s,mb6.5
YSS MLR MLR
comp=N,6μm,18.0s
YSS MLR MLR
comp=Z,5μm,18.0s
BDT Bhumibol Dam 53.13 297 P **P** **07 03 19.0 +0.5**
comp=Z,53nm,1.1s,mb5.5
RAR Rarotonga 53.24 112 *e*P **P** **07 03 19.8 +0.5**
comp=Z,396nm,1.4s,mb6.2
RAR Rarotonga 53.24 112 *e*P **P** **07 03 19.8 +0.6**
RAR pmax pmax
comp=Z,396nm,1.4s
BSI Banda Aceh 53.26 281 P **P** **07 03 19.6 +0.1**
comp=Z,5μmcomp=Z,460nm,1.1s,mb6.4
KMI Kunming 53.38 307 P **P** **07 03 20.8 +0.7**
KMI pP pP 07 03 37.0 -0.5
KMI sP sP 07 03 43.8 -1.4
KMI PcP PcP 07 04 29.0 +2.2
KMI PP PP 07 05 24.5 +3.3
KMI S **S** **07 10 48.8 +1.4**
KMI ScS ScS 07 13 03.5 -0.3
KMI SS SS 07 14 25.0 -3.4
KMI pmax pmax
comp=Z,110nm,1.6s,mb5.6
KMI pmax pmax
comp=Z,2μm,6.7s
KMI LR LR
comp=N,5μm,19.7s
KMI LR LR
comp=E,8μm,20.9s
KMI LR LR
comp=Z,18μm,26.9s
CN2 Changchun 53.51 340 ⇑P **P** **07 03 22.0 +1.2**
CN2 *e*pP pP 07 03 37.8 -0.4
CN2 PcP PcP 07 04 27.5 +0.7
CN2 PP PP 07 05 24.8 +2.7
CN2 *e*S **S** **07 10 48.8 +0.2**
CN2 SS SS 07 14 30.5 +0.5
CN2 pmax pmax
comp=Z,40nm,1.0s,mb5.4
CN2 pmax pmax
comp=Z,500nm,3.0s
CN2 LR LR
comp=N,11μm,17.0s
CN2 LR LR
comp=E,7μm,17.0s
CMAR Chiang Mai Arr 53.64 298 P **P** **07 03 21.6 -0.6**
comp=E,48nm,0.9s,mb5.5,baz=121,slow=5.5,SNR=48
CMAR ScP ScP 07 08 21.5 +1.4
comp=E,11nm,1.0s,baz=139,slow=2.0,SNR=4.1
CMAR S **S** **07 10 53.8 +2.6**
comp=E,0.8nm,0.5s,baz=139,slow=4.8,SNR=2.7
CMAR LR LR 07 24 49.7
comp=E,4μm,19.9s,baz=321,slow=34
CMAR Chiang Mai Arr 53.64 298 P **P** **07 03 21.6 -0.6**
CMAR S **S** **07 10 53.8 +2.6**
CHG Chiang Mai 53.78 299 ⇓P **P** **07 03 22.4 -0.8**
comp=E,246nm,1.0s,mb6.2
CHTO Chiang Mai 53.78 299 *e*P **P** **07 03 22.9 -0.2**
comp=E,62nm,1.1s,mb5.5
CHTO Chiang Mai 53.78 299 *e*P **P** **07 03 22.9 -0.3**
CHTO pmax pmax
comp=Z,63nm,1.1s,mb5.6
CHTO Chiang Mai 53.78 299 P **P** **07 03 23.1 -0.1**
comp=Z,5μmcomp=Z,282nm,1.1s,mb6.2
CHTO Chiang Mai 53.78 299 P **P** **07 03 25.1 +1.9**
SNR=36
XAN Xi'an 54.02 320 P **P** **07 03 23.3 -1.4**
XAN PP PP 07 05 25.0 -1.9
XAN S **S** **07 10 52.5 -3.4**
XAN SS SS 07 14 33.0 -5.4
XAN pmax pmax
comp=Z,700nm,9.7s
XAN LR LR
comp=N,9μm,30.2s
XAN LR LR
comp=E,4μm,28.3s
XAN LR LR
comp=Z,5μm,37.0s
BJT Baijiatuao 54.19 331 *e*P **P** **07 03 24.3 -1.4**
comp=Z,1μm,1.4s,mb6.7
BJT Baijiatuao 54.19 331 *e*P **P** **07 03 24.3 -1.5**
BJT pmax pmax
comp=Z,1μm,1.4s
BJI Beijing 54.20 331 P **P** **07 03 24.5 -1.4**
BJI sP sP 07 03 56.0 +5.0
BJI S **S** **07 10 55.0 -3.1**
BJI pmax pmax
comp=Z,490nm,1.4s,mb6.3
BJI pmax pmax
comp=Z,4μm,5.9s
BJI LR LR
comp=N,8μm,28.3s
BJI LR LR
comp=E,13μm,22.7s
BJI LR LR
comp=Z,17μm,24.8s
TIY Taiyuan 54.43 326 *e*P **P** **07 03 28.5 +1.0**
TIY pP pP 07 03 44.5 -0.5
TIY sP sP 07 03 51.3 -1.4
TIY S **S** **07 10 58.0 -3.2**
TIY SS SS 07 14 37.8 -6.8
TIY pmax pmax
comp=Z,2μm,5.3s
TIY LR LR
comp=N,7μm,14.8s
TIY LR LR
comp=E,4μm,12.0s
TIY LR LR
comp=Z,31μm,32.5s
HABR Khabarovsk 55.45 350 *i* P **P** **07 03 34.5 -0.2**
HABR *e**PP pP 07 03 41.6 -11
HABR *e* 07 04 31.5
HABR *e* 07 05 35.6
HABR PPP 07 06 48.6
HABR *e*S **S** **07 11 17.4 +3.0**
HABR *e**SS sS 07 11 31.1 -13
HABR *e* 07 13 18.2
HABR *e*SS SS 07 15 00.9 +0.6
HABR SSS 07 17 08.2
HABR pmax pmax
comp=N,499nm,1.6s
HABR pmax pmax
comp=Z,1μm,1.4s,mb6.8
HABR pmax pmax
comp=E,432nm,1.3s
HABR pmax pmax
comp=Z,2μm,1.5s,mb7.0
HABR MLR MLR
comp=Z,3μm,19.0s
CD2 Chengdu 55.64 314 ⇓P **P** **07 03 38.5 +2.1**
CD2 pP pP 07 03 54.5 +0.6
CD2 sP sP 07 04 01.5 -0.1
CD2 PP PP 07 05 45.0 +3.6
CD2 S **S** **07 11 18.5 +0.9**
CD2 ScS ScS 07 13 18.5 -1.2
CD2 SS SS 07 15 04.5 +0.6
CD2 pmax pmax
comp=Z,190nm,0.8s,mb6.2
CD2 pmax pmax
comp=Z,3μm,11.2s
CD2 LR LR
comp=N,10μm,20.6s
CD2 LR LR
comp=E,8μm,24.5s
CD2 LR LR
comp=Z,12μm,33.3s
XMAS Kiritimati 55.69 83 *e*P **P** **07 03 36.3 -0.9**
comp=Z,790nm,1.1s,mb6.7
KLR Kul'dur 56.80 348 ⇓*i*P **P** **07 03 42.0 -2.3**
KLR *e* 07 05 56.5
KLR *e*S **S** **07 11 28.5 -3.9**
KLR pmax pmax
comp=N,3μm,9.0s
KLR pmax pmax
comp=Z,6μm,9.0s
KLR smax
comp=N,2μm,12.0s
KLR smax
comp=E,4μm,12.0s
KLR MLR MLR
comp=N,2μm,14.0s
KLR MLR MLR
comp=Z,4μm,14.0s
SKR Severo-Kuril's 57.09 7 ⇑*i*P **P** **07 03 54.0 +7.6**
SKR *e* 07 04 41.0
SKR *e* 07 05 58.0
SKR *e*PPP 07 07 14.0
SKR *i* S **S** **07 11 45.0 +8.8**
SKR pmax pmax
comp=N,220nm,1.0s
SKR pmax pmax
comp=E,220nm,1.0s
SKR pmax pmax
comp=Z,900nm,1.0s,mb6.8
SKR pmax pmax
comp=N,3μm,12.0s
SKR pmax pmax
comp=E,3μm,12.0s
SKR pmax pmax
comp=Z,6μm,12.0s
SKR pmax pmax
comp=Z,2μm,16.0s
SKR pmax pmax
comp=N,2μm,12.0s
SKR pmax pmax
comp=E,1μm,12.0s
SKR smax
comp=N,8μm,16.0s
SKR smax
comp=E,4μm,16.0s
SKR MLR MLR
comp=N,4μm,16.0s
SKR MLR MLR
comp=Z,6μm,16.0s
SKR pmax pmax
comp=N,4μm,16.0s
HHC Hu-ho-hao-te 57.15 328 *e*P **P** **07 03 46.3 -0.6**
HHC pP pP 07 04 02.0 -2.5
HHC sP sP 07 04 09.8 -2.3
HHC PP PP 07 05 53.3 -1.3
HHC S **S** **07 11 37.5 +0.3**
HHC ScS ScS 07 13 25.5 -4.7
HHC SS SS 07 15 26.0 -1.3
HHC pmax pmax
comp=Z,290nm,1.0s,mb6.3
HHC pmax pmax
comp=Z,2μm,9.0s
HHC LR LR
comp=N,10μm,18.8s
HHC LR LR
comp=E,6μm,17.1s
HHC LR LR
comp=Z,25μm,28.4s
BTO Baotou 57.80 327 *e*P **P** **07 03 50.3 -1.2**
BTO S **S** **07 11 35.3 -10**
LZH Lanzhou 58.56 319 *e*P **P** **07 03 59.0 +2.1**
LZH pP pP 07 04 17.5 +2.9
LZH sP sP 07 04 24.5 +2.3
LZH PP PP 07 06 13.0 +5.7
LZH *e*S **S** **07 11 57.3 +1.4**
LZH SS SS 07 15 46.0 -3.7
LZH pmax pmax
comp=Z,180nm,1.3s,mb5.9
LZH pmax pmax
comp=Z,880nm,5.2s
LZH LR LR
comp=N,6μm,17.6s
LZH LR LR
comp=E,5μm,16.0s
LZH LR LR
comp=Z,7μm,18.6s
PEA0B Petropavlovsk- 59.67 7 *e*P **P** **07 04 04.0 -0.2**
PETK Petropavlovsk- 59.67 7 P **P** **07 04 03.9 -0.4**
PETK ScP ScP 07 08 45.0 -0.8
PETK LR LR 07 25 59.4
PETK ⇑*e* 07 33 43.0
PETK Petropavlovsk- 59.67 7 P **P** **07 04 03.9 -0.4**
comp=Z,456nm,0.9s,mb6.5,baz=159,slow=4.6,SNR=102
PETK ScP ScP 07 08 45.0 -0.8
comp=Z,11nm,1.0s,baz=199,slow=4.0,SNR=3.2
PETK LR LR 07 25 59.4
comp=Z,10μm,21.9s,baz=196,slow=32
PETK PKP2bc 07 33 43.0
comp=Z,23nm,1.1s,baz=45,slow=2.3,SNR=17
PET Petropavlovsk 59.71 8 *e*P **P** **07 04 04.3 -0.2**
comp=Z,440nm,1.0s,mb6.4
PET Petropavlovsk 59.71 8 *e*P **P** **07 04 04.1 -0.4**
PET *e* 07 04 49.1
PET *e*S **S** **07 12 14.3 +4.2**
PET *e*PS 07 12 31.9
PET *e*SS SS 07 16 12.8 +5.6
PET pmax pmax
comp=Z,5μm,7.1s
PET pmax pmax
comp=Z,493nm,1.2s,mb6.4
PET pmax pmax
comp=Z,4μm,14.0s
PET MLR MLR
comp=Z,6μm,18.0s
PET MLR MLR
comp=Z,5μm,19.0s
HON Honolulu 60.11 61 *e*P **P** **07 04 06.3 -1.7**
KIP Kipapa 60.14 61 *e*P **P** **07 04 09.3 +1.2**
comp=Z,206nm,1.0s,mb6.1
KIP Kipapa 60.14 61 ⇓*i*P **P** **07 04 09.5 +1.4**
HIA Hailar 60.21 340 *e*P **P** **07 04 07.5 -0.5**
comp=Z,1μm,1.1s,mb6.9
HIA Hailar 60.21 340 *e*P **P** **07 04 07.5 -0.6**
HIA pmax pmax
comp=Z,1μm,1.1s
IMP Imphal 60.39 303 *e*PKP **P** **07 04 10.0 +0.2**
IMP *ex* x 07 05 34.0
DRV Dumont d'Urvil 60.64 183 P pP 07 04 22.0 -6.5
DRV S **S** **07 12 36.0 +14**
DRV L 07 19 00.0
DRV R 07 23 00.0
POHA Pohakuloa 61.77 64 *e*P **P** **07 04 20.6 +1.4**
comp=Z,185nm,1.0s,mb6.1
AGT Agartala 62.32 301 *i* P **P** **07 04 20.0 -2.8**
AGT *i* x x 07 04 48.0
SHL Shillong 62.41 303 *e*PKP **P** **07 04 21.5 -1.9**
SHL *e*S **S** **07 12 45.5 +0.1**
PAE Paea 62.50 107 *e*P **P** **07 04 25.1 +0.9**
comp=Z,110nm,1.4s,mb5.7
PAE Paea 62.50 107 *e*P **P** **07 04 25.1 +0.9**
PAE pmax pmax
comp=Z,110nm,1.4s,mb5.7
PPT Papeete 62.50 107 *e*P **P** **07 04 25.0 +0.8**
comp=Z,272nm,1.4s,mb6.1
PPT *e*S **S** **07 12 41.1 -5.8**
comp=Z,14μm,23.0s
PPT *e*LQ 07 19 59.8
comp=Z,21μm,29.0s
PPT *e*LR LR 07 22 36.7
comp=Z,11μm,25.2s,baz=274
PPT Papeete 62.50 107 *e*P'P' 07 33 39.6
comp=Z,203nm,1.8s
PPT Papeete 62.50 107 P **P** **07 04 26.6 +2.4**
comp=Z,62nm,0.7s,mb5.8,baz=241,slow=6.2,SNR=5.2
PPT LR LR 07 25 36.4
comp=Z,4μm,20.9s,baz=114,slow=30
TIAR Tiarei 62.72 107 *e*P **P** **07 04 26.9 +1.3**
comp=Z,730nm,1.3s,mb6.5

SMY **Shemya** 62.88 18 *e*P P 07 04 27.2 +1.2
comp=Z,2μm,1.6s,mb6.8
SMY **Shemya** 62.88 18 *e*P P 07 04 27.2 +1.2
SMY pmax pmax
comp=Z,2μm,1.6s,mb6.8
TBI **Tubuai** 62.97 113 *e*P P 07 04 28.0 +0.8
comp=Z,1μm,1.4s,mb6.6
GTA **Gaotai** 63.09 320 ⇑P P 07 04 26.8 -0.8
GTA pP pP 07 04 42.8 -2.7
GTA S S 07 12 52.3 -1.2
GTA SS SS 07 17 01.5 +0.9
GTA pmax pmax
comp=Z,96nm,1.6s,mb5.5
GTA pmax pmax
comp=Z,3μm,7.8s
GTA LR LR
comp=N,8μm,18.6s
GTA LR LR
comp=E,3μm,18.3s
GTA LR LR
comp=Z,5μm,18.9s
AMKA **Amchitka** 63.50 22 *e*P P 07 04 32.7 +2.6
comp=Z,293nm,1.9s,mb5.8
MEH **Mehetia** 63.95 107 *e*P P 07 04 34.6 +0.8
comp=Z,548nm,1.1s,mb6.3
PMOR **Pomariorio Ree** 64.06 104 *e*P'P' 07 33 36.2
comp=Z,886nm,1.5s
PMOR **Pomariorio Ree** 64.06 104 *e*P P 07 04 34.9 +0.4
comp=Z,1μm,1.3s,mb6.6
PMOR *e*P'P' 07 33 36.2
CAL **Calcutta** 64.38 298 *e*PKP P 07 04 34.0 -2.5
CAL *ex* x 07 13 12.6
ULN **Ulaanbaatar** 64.41 331 *e*P P 07 04 35.9 -0.2
comp=Z,375nm,0.9s,mb6.2
ULN **Ulaanbaatar** 64.41 331 ⇑*i*P P 07 04 35.5 -0.6
ULN **Ulaanbaatar** 64.41 331 P P 07 04 35.4 -0.7
comp=Z,6μmcomp=Z,429nm,1.1s,mb6.2
ULN **Ulaanbaatar** 64.41 331 P P 07 04 35.2 -1.0
SNR=322
LSA **Lhasa** 64.62 307 P P 07 04 37.5 -0.4
LSA pP pP 07 04 54.8 -1.0
LSA pmax pmax
comp=Z,140nm,1.1s,mb5.7
LSA pmax pmax
comp=Z,2μm,12.9s
LSA LR LR
comp=E,5μm,29.8s
LSA LR LR
comp=Z,10μm,30.3s
LSA **Lhasa** 64.62 307 *e*P P 07 04 37.5 -0.4
comp=Z,125nm,0.7s,mb5.8
LSA **Lhasa** 64.62 307 *e*P P 07 04 37.5 -0.4
LSA pmax pmax
comp=Z,125nm,0.7s,mb5.8
SONM **Songino Array** 64.70 331 P P 07 04 37.6 -0.5
SONM ⇑*e* 07 33 31.1
SONM LR LR 07 33 54.6
SONM **Songino Array** 64.70 331 P P 07 04 37.6 -0.5
comp=Z,459nm,1.2s,mb6.2,baz=148,slow=6.6,SNR=72
SONM PKP2bc 07 33 31.1
comp=Z,7.8nm,1.1s,baz=285,slow=2.4,SNR=9.8
SONM LR LR 07 33 54.7
comp=Z,8μm,19.3s,baz=140,slow=37
CIT **Chita** 64.73 338 *e*P P 07 04 37.9 -0.2
CIT *e* 07 04 48.2
CIT *e*S S 07 13 15.2 +1.9
CIT pmax pmax
comp=Z,2μm,1.4s,mb6.8
CASY **Casey** 65.22 195 *e*P P 07 04 40.2 -0.9
CASY *e*S S 07 13 21.6 +2.6
CASY **Casey** 65.22 195 *e*P P 07 04 40.3 -0.9
comp=Z,124nm,0.8s,mb5.8
CLNS **Chul'man** 65.40 347 *e*P P 07 04 42.1 -0.3
CLNS *e**PP pP 07 05 00.0 -0.4
CLNS *e* 07 05 08.7
CLNS *e* 07 07 07.2
CLNS *e*PPP 07 08 41.3
CLNS *e*S S 07 13 25.3 +3.9
CLNS *e* 07 13 52.2
CLNS *e*SSS 07 20 26.9
CLNS pmax pmax
comp=Z,846nm,1.2s,mb6.5
CLNS pmax pmax
comp=N,320nm,1.1s
CLNS pmax pmax
comp=E,115nm,1.1s
CLNS pmax pmax
comp=E,54nm,1.1s
CLNS pmax pmax
comp=N,115nm,1.2s
CLNS pmax pmax
comp=Z,41nm,1.3s,mb5.1
CLNS smax
comp=E,2μm,11.1s
CLNS smax
comp=N,3μm,11.1s
CLNS MLR MLR
comp=E,1μm,13.0s
CLNS MLR MLR
comp=Z,2μm,13.0s
CLNS MLR MLR
comp=N,2μm,15.0s
ADK **Adak** 65.44 24 *e*P P 07 04 44.3 +1.5
comp=N,1μm,1.5s,mb6.4
ADK **Adak** 65.44 24 *e*P P 07 04 44.3 +1.5
ADK pmax pmax
comp=Z,1μm,1.5s,mb6.4
BWNR **Bhubaneshwar** 65.94 295 *e*PKP P 07 04 46.0 -0.6
TAPN **Taplejung** 66.54 303 *e*P P 07 04 49.5 -0.8
ODAN **Odare** 66.63 303 *e*P P 07 04 49.5 -1.5
comp=Z,435nm,1.1s,mb6.2
RAMN **Ramite** 67.33 302 *e*P P 07 04 53.7 -1.7
comp=Z,197nm,1.0s,mb5.9
VIS **Vishakhapatnam** 67.50 292 *e*PKP P 07 04 54.2 -2.4
VIS AMb AMB 07 05 28.2
comp=Z,286nm,1.1s,mb6.0
VIS *i* x x 07 13 49.8
PALK **Pallekele** 67.83 280 P P 07 04 59.3 +0.5
comp=Z,1μm,1.1s,mb6.7,SNR=14
PALK **Pallekele** 67.83 280 *e*P P 07 04 59.7 +0.8
comp=Z,333nm,1.1s,mb6.1
PALK **Pallekele** 67.83 280 *i* P P 07 05 01.8 +3.0
PALK **Pallekele** 67.83 280 P P 07 05 01.9 +3.1
SNR=11
ZAK **Zakamensk** 67.94 331 *e*P P 07 04 57.8 -0.9
ZAK *e* 07 05 25.6
ZAK pmax pmax
comp=Z,294nm,1.1s,mb6.0
GUN **Gumba** 68.25 303 *e*P P 07 05 00.1 -1.1
PKI **Pulchoki** 68.53 303 *e*P P 07 05 01.7 -1.2
comp=Z,282nm,1.1s,mb6.0
PKIN **Phulchoki** 68.55 303 *e*P P 07 05 02.1 -0.9
comp=Z,127nm,0.8s,mb5.8
TLY **Talaya** 68.64 332 *e*P P 07 05 02.3 -0.8
comp=Z,437nm,1.4s,mb6.1
TLY **Talaya** 68.64 332*c* *i*P P 07 05 02.0 -1.1
TLY *e*S S 07 13 55.8 -4.8
TLY *e* 07 14 33.3
TLY pmax pmax
comp=Z,272nm,1.1s,mb6.0
TLY MLR MLR
comp=Z,4μm,17.0s
TLY **Talaya** 68.64 332 P P 07 05 02.5 -0.6
comp=Z,1μm,1.2s,mb6.5,SNR=30
TLY **Talaya** 68.64 332 P P 07 05 02.5 -0.5
SNR=170
KKN **Kakani** 68.71 303 *e*P P 07 05 02.4 -1.6
comp=Z,197nm,0.8s,mb6.0
IRK **Irkutsk** 68.74 333 ⇑*i*P P 07 05 02.0 -1.6
IRK *e* pP 07 05 24.7 +3.0
IRK *e*S S 07 14 06.0 +4.3
IRK *e* 07 14 58.2
IRK pmax pmax
comp=Z,520nm,1.3s,mb6.2
DMN **Daman** 68.80 303 *e*P P 07 05 03.2 -1.4
comp=Z,504nm,0.9s,mb6.3
SEY **Seymchan** 68.98 2 ⇑*i*P P 07 05 03.9 -1.0
SEY **Seymchan** 68.98 2 ⇑*i*P P 07 05 03.8 -1.1
GKN **Gorkha** 69.32 303 *e*P P 07 05 05.9 -1.9
comp=Z,273nm,0.7s,mb6.2
YAK **Yakutsk** 69.33 351 *e*P P 07 05 06.4 -0.7
comp=Z,2μm,1.3s,mb6.7
YAK **Yakutsk** 69.33 351*c* *i*P P 07 05 08.9 +1.8
YAK *e* pP 07 05 30.7 +5.5
YAK *e* 07 07 41.9
YAK *e*PPP 07 09 27.2
YAK *e*S S 07 14 09.9 +1.5
YAK *e**SS sS 07 14 47.8 +8.7
YAK *e* 07 15 01.4
YAK pmax pmax
comp=Z,866nm,1.3s,mb6.4
YAK pmax pmax
comp=N,477nm,1.3s
YAK pmax pmax
comp=E,104nm,1.4s
YAK pmax pmax
comp=Z,163nm,1.3s,mb5.7
YAK pmax pmax
comp=N,162nm,1.5s
YAK pmax pmax
comp=E,122nm,1.4s
YAK smax
comp=E,1μm,3.5s
YAK smax
comp=N,2μm,4.4s
MDRS **Chennai** 69.34 286 ⇑*e*PKP pP 07 05 26.2 -0.1
MDRS *e*S 07 14 26.7
NIKO **Nikolski** 69.54 27 *e*P P 07 05 09.2 +0.6
comp=N,429nm,1.4s,mb6.1
MOY **Mondy** 69.87 331 *e*P P 07 05 10.7 0.0
MOY pmax pmax
comp=Z,657nm,1.6s,mb6.2
KOLN **Koldanda** 70.11 302 *e*P P 07 05 11.0 -1.7
comp=Z,235nm,0.6s,mb6.2
DANN **Dangsing** 70.17 303 *e*P P 07 05 11.0 -2.0
MIR **Mirnyy** 70.78 200 ⇓*i*P P 07 05 17.0 +1.0
MIR *i* pP 07 05 39.0 +4.9
MIR pmax pmax
comp=Z,675nm,2.0s,mb6.1
MIR pmax pmax
comp=Z,1μm,3.0s
MIR pmax pmax
comp=N,455nm,2.0s
MIR pmax pmax
comp=E,606nm,2.2s
MIR MLR MLR
comp=N,3μm,18.0s
MIR MLR MLR
comp=E,4μm,18.0s
ALBI **Allahabad** 70.91 299 *e*PKP P 07 05 15.0 -2.6
UNV **Unalaska Valle** 71.17 27 *e*P P 07 05 18.2 -0.3
comp=E,145nm,1.1s,mb5.7
AKUT **Akutan** 71.68 27 *e*P P 07 05 21.4 -0.2
comp=E,370nm,1.3s,mb6.0
TRD **Trivandrum** 71.69 281 *e*PKP P 07 05 19.8 -2.7
TRD AMb AMB 07 05 28.1
comp=Z,738nm,1.5s,mb6.3
TAOE **Nuku Hiva Isla** 71.81 97 *e*P P 07 05 24.3 +1.0
comp=Z,554nm,1.2s,mb6.3
TAOE *e*S S 07 14 34.3 -4.8
comp=Z,8μm,27.1s
TAOE *e*LR LR 07 26 59.2
comp=Z,5μm,22.4s,baz=264
TAOE **Nuku Hiva Isla** 71.81 97 *e*P P 07 05 24.3 +1.0
comp=Z,554nm,1.2s,mb6.3
TAOE *e*S S 07 14 34.3 -4.8
HYB **Hyderabad** 71.86 290 *i* P P 07 05 24.0 +0.6
comp=Z,111nm,0.5s,mb6.0
HYB *e* 07 05 49.0
HYB *e*S S 07 14 38.0 -1.4
HYB *e* 07 15 06.0
HYB *e* 07 15 16.0
SBA **Scott Base** 72.39 176 *e*P P 07 05 26.7 +1.1
comp=Z,450nm,1.6s,mb6.0
SBA **Scott Base** 72.39 176 *e*P P 07 05 26.7 +1.2
SBA pmax pmax
comp=Z,451nm,1.6s,mb6.0
WMQ **Urumqi** 73.14 319 P P 07 05 31.3 +0.8
WMQ pP pP 07 05 47.8 -1.0
WMQ sP sP 07 05 54.8 -1.4
WMQ PP PP 07 08 16.8 +2.5
WMQ S S 07 14 52.8 -0.3
WMQ ScS ScS 07 15 30.5 -2.5
WMQ SS SS 07 19 37.3 +1.5
WMQ pmax pmax
comp=Z,170nm,1.0s,mb5.8
WMQ pmax pmax
comp=Z,3μm,5.6s
WMQ LR LR
comp=N,11μm,19.1s
WMQ LR LR
comp=E,7μm,24.0s
WMQ LR LR
comp=Z,9μm,19.6s
PTH **Pithoragarh** 73.49 303 *e*PKP P 07 05 31.3 -1.6
PTH *ex* x 07 06 01.2
LATR **Latur** 73.92 291 *ex* P 07 05 37.2 +1.5
AKL **Akola** 74.00 293 ⇑*i*x P 07 05 35.3 -0.8
AKL AMP 07 05 39.8
comp=Z,336nm,1.2s
AKL *i* S S 07 15 00.8 -3.0
BHPL **Bhopal** 74.22 296 *e*PKP P 07 05 34.4 -2.9
BHPL AMb AMB 07 06 06.5
comp=Z,340nm,1.8s,mb5.8
DGAR **Diego Garcia** 74.33 264 *e*P P 07 05 39.5 +1.4
comp=Z,780nm,1.0s,mb6.4
DGAR **Diego Garcia** 74.33 264 *d*iP P 07 05 41.5 +3.4
DGAR **Diego Garcia** 74.33 264 P P 07 05 41.9 +3.7
SNR=7.3
SDPT **Sand Point** 74.85 28 *e*P P 07 05 40.5 +0.2
comp=Z,330nm,1.3s,mb5.9
HMDM **Hanimaadhoo** 75.13 279 P P 07 05 47.2 +4.4
comp=Z,8μmcomp=Z,421nm,1.6s,mb5.9
BILL **Bilibino** 75.20 7 *e*P P 07 05 42.0 0.0
comp=Z,440nm,1.2s,mb6.1
BILL **Bilibino** 75.20 7*c* *e*P P 07 05 41.7 -0.3
BILL *e* 07 05 54.5
BILL *e* pP 07 05 58.7 -1.6
BILL *i* 07 08 30.6
BILL *i*S S 07 15 16.9 +1.6
BILL *i*PS 07 16 05.9
BILL pmax pmax
comp=Z,447nm,1.2s,mb6.1
BILL MLR MLR
comp=Z,3μm,19.0s
NDI **New Delhi** 75.77 302 *e*PKP P 07 05 42.0 -4.1
NDI *e*S S 07 15 17.0 -6.1
GOA **Goa** 75.92 288 ⇓*e*PKP P 07 05 49.4 +2.2
GOA *e*S S 07 15 28.1 +2.9
KAD **Karad** 75.92 289 *e*PKP P 07 05 45.1 -2.1
KAD AMb AMB 07 06 14.2
comp=Z,300nm,1.4s,mb5.8
GAMB **Gambell** 76.20 17 *e*P P 07 05 49.1 +1.3
comp=Z,229nm,1.4s,mb5.7
RKT **Rikitea** 76.28 112 *e*P P 07 05 50.7 +1.5
comp=Z,480nm,1.2s,mb6.1
RKT *e*S S 07 15 23.5 -5.5
comp=Z,4μm,26.0s
RKT *e*LQ 07 25 48.5
comp=Z,5μm,33.2s
RKT *e*LR LR 07 28 57.2
comp=Z,21μm,36.2s,baz=271
RKT **Rikitea** 76.28 112 *e*P P 07 05 50.7 +1.5
comp=Z,480nm,1.2s,mb6.1
RKT *e*S S 07 15 23.5 -5.5
RKT *e*LQ 07 25 48.5
RKT **Rikitea** 76.28 112 *e*P P 07 05 50.7 +1.5
RKT *e*S S 07 15 23.5 -5.5
RKT pmax pmax
comp=Z,480nm,1.2s,mb6.1
CHGN **Chignik** 76.35 28 *e*P P 07 05 47.4 -1.4
POO **Poona** 76.47 291 *e*PKP P 07 05 47.3 -3.0
POO AMb AMB 07 05 53.6
comp=Z,253nm,0.8s,mb6.0
SDNR **Sundarnagar** 76.72 304 *ex* P 07 05 58.5 +7.0
PAF **Port-aux-Franc** 77.00 221 *e*P P 07 05 54.1 +1.4
comp=Z,409nm,1.4s,mb6.0
PAF **Port-aux-Franc** 77.00 221 *e*P P 07 05 54.1 +1.4
PAF pmax pmax
comp=Z,409nm,1.4s,mb6.0
BHK **Bhakra** 77.16 304 *ex* P 07 05 50.2 -3.7
AJM **Ajmer** 77.44 299 *e*PKP P 07 05 53.2 -2.4
AJM AMb AMB 07 06 24.8
comp=Z,475nm,2.1s,mb5.9
MK31 **Makanchi Array** 77.84 320 *e*P P 07 05 55.7 -1.7
MKAR **Makanchi Array** 77.84 320 P P 07 05 55.5 -1.9
comp=Z,118nm,0.8s,mb5.7,baz=98,slow=7.3,SNR=75
MKAR S S 07 15 43.4 -1.6
comp=Z,5.4nm,1.0s,baz=104,slow=10,SNR=6.9
MKAR PKKPbc PKKPbc 07 25 00.7 -0.1
comp=Z,3.3nm,0.9s,baz=312,slow=2.0,SNR=8.6
MKAR PKP2ab 07 32 51.6
comp=Z,1.5nm,0.9s,baz=325,slow=1.9,SNR=6.5
MKAR LR LR 07 40 54.1
comp=Z,2μm,21.3s,baz=234,slow=36
MKAR **Makanchi Array** 77.84 320 P P 07 05 55.5 -1.9
MKAR S S 07 15 43.4 -1.6
TIXI **Tiksi** 78.58 354 *e*P P 07 06 00.5 -0.4
comp=Z,383nm,1.4s,mb6.0
TIXI **Tiksi** 78.58 354*c* *i*P P 07 06 00.8 -0.2
TIXI *e*S S 07 15 48.4 -3.6
TIXI pmax pmax
comp=Z,300nm,1.6s,mb5.9
TIXI pmax pmax
comp=Z,1μm,7.8s
TIXI MLR MLR
comp=Z,2μm,18.0s
TNA **Tin City** 78.61 17 *e*P P 07 06 01.8 +0.6
comp=Z,218nm,1.5s,mb5.8
BHV **Bhavnagar** 78.67 294 *e*PKP P 07 06 00.5 -2.0
OHAK **Old Harbor** 79.24 28 *e*P P 07 06 05.7 +0.9
comp=Z,322nm,1.6s,mb5.9
ZAA0 **Zalesovo Array** 79.33 328 *e*P P 07 06 02.8 -2.6
ZALV **Zalesovo Beam** 79.33 328 P P 07 06 02.6 -2.7
ZALV S S 07 15 57.0 -3.5
ZALV PKKPbc PKKPbc 07 24 57.2 -0.6
ZALV P'P'ab 07 32 47.5
ZALV **Zalesovo Beam** 79.33 328 P P 07 06 02.6 -2.7
comp=Z,175nm,0.6s,mb6.1,baz=112,slow=6.1,SNR=50
ZALV S S 07 15 57.0 -3.5
comp=Z,4.6nm,1.0s,baz=118,slow=8.9,SNR=4.5
ZALV PKKPbc PKKPbc 07 24 57.2 -0.6
comp=Z,2.9nm,0.5s,baz=302,slow=2.4,SNR=6.2
ZALV PKP2ab 07 32 47.5
comp=Z,2.6nm,0.7s,baz=294,slow=2.8,SNR=5.3
ZALV LR LR 07 38 55.7
comp=Z,5μm,21.6s,baz=121,slow=34
ZALV **Zalesovo Beam** 79.33 328 P P 07 06 02.7 -2.7
ZALV S S 07 15 57.1 -3.4
KSH **Kashi** 79.75 312 *e*P P 07 06 07.8 -0.2
KSH *e*PcP PcP 07 06 16.0 +0.5
KSH *e*pP pP 07 06 24.5 -2.0
KSH *e*PP PP 07 09 09.0 -1.1
KSH S S 07 16 00.8 -4.8
KSH *e*SKS 07 16 13.0
KSH *e*ScS ScS 07 16 21.5 -5.1
KSH pmax pmax
comp=Z,2μm,5.5s
KSH LR LR
comp=N,3μm,18.5s
KSH LR LR
comp=E,4μm,23.6s
KSH LR LR
comp=Z,2μm,13.5s
KDAK **Kodiak Island** 79.85 28 P P 07 06 08.2 +0.1
comp=Z,564nm,1.4s,mb6.2,SNR=15
KDAK **Kodiak Island** 79.85 28 *e*P P 07 06 07.9 -0.2
comp=Z,183nm,1.3s,mb5.8
KDAK **Kodiak Island** 79.85 28 PKKPbc PKKPbc 07 24 56.8 -0.1
comp=Z,3.9nm,1.0s,baz=143,slow=5.7,SNR=4.6
KDAK LR LR 07 39 45.9
comp=Z,3μm,18.5s,baz=241,slow=34
AAA **Alma-Ata** 80.17 316 *i* P P 07 06 11.4 +1.2
AAA *e*S S 07 16 06.5 -3.4
AAA pmax pmax
comp=Z,3μm,8.3s
AAA smax
comp=E,4μm,12.4s
SVW2 **Sparrevohn** 80.22 24 *e*P P 07 06 11.3 +1.3
comp=E,195nm,1.2s,mb5.8
ULHL **Ulahol** 80.35 315 P P 07 06 12.7 +1.5
SNR=42
NVS **Novosibirsk** 80.55 328 *e*P P 07 06 08.5 -3.5
NVS *e*S S 07 16 08.8 -4.6
NVS pmax pmax
comp=N,52nm,1.2s
NVS pmax pmax
comp=E,98nm,1.2s
NVS pmax pmax
comp=Z,188nm,1.2s,mb5.8
NVS smax
comp=N,175nm,2.9s
NVS smax
comp=E,802nm,3.5s
TKM2 **Tokmak 2** 81.00 315 P P 07 06 16.3 +1.6
SNR=90
TKM2 **Tokmak 2** 81.00 315 *e*P P 07 06 13.1 -1.6
comp=E,146nm,1.1s,mb5.7
TKM2 **Tokmak 2** 81.00 315 *e*P P 07 06 13.1 -1.6
TKM2 pmax pmax
comp=Z,146nm,1.1s,mb5.7
KZA **Kyzart** 81.01 314 P P 07 06 16.4 +1.7
SNR=7.4
KZA **Kyzart** 81.01 314 *e*P P 07 06 14.5 -0.2
comp=Z,387nm,0.9s,mb6.2
TTA **Tatalina** 81.03 23 *e*P P 07 06 13.4 -1.0
RSO **Redoubt South** 81.08 26 *e*P P 07 06 15.1 +0.4
KBK **Karagaybulak** 81.39 315 P P 07 06 18.2 +1.4
SNR=32
KURK **Kurchatov** 81.54 323 P P 07 06 17.9 +0.5
comp=Z,1μm,1.1s,mb6.7,SNR=35
KURK **Kurchatov** 81.54 323 *e*P P 07 06 15.2 -2.1
comp=Z,344nm,1.1s,mb6.1
KURK **Kurchatov** 81.54 323 S S 07 16 22.1 -1.8
comp=Z,0.9nm,0.3s,baz=90,slow=28,SNR=4.6
KURK PKKPbc PKKPbc 07 24 52.3 -0.3
comp=Z,7.3nm,0.9s,baz=296,slow=2.8,SNR=14
KURK PKPPKP 07 32 56.1
comp=Z,6.2nm,0.8s,baz=283,slow=2.5,SNR=6.5
KURK LR LR 07 41 12.6
comp=Z,5μm,21.3s,baz=100,slow=35
KURK **Kurchatov** 81.54 323*c* *i*P P 07 06 15.1 -2.3
KURK pmax pmax
comp=Z,504nm,1.7s,mb6.1
KURK **Kurchatov** 81.54 323 P P 07 06 15.4 -1.9
SNR=202
UCH **Uchtor** 81.58 314 P P 07 06 20.5 +2.7
SNR=24
UCH **Uchtor** 81.58 314 *e*P P 07 06 18.7 +0.9
comp=Z,65nm,0.9s,mb5.5
CHMS **Chumysh** 81.62 315 P P 07 06 19.4 +1.4
SNR=54
FRU **Bishkek** 81.67 315 ⇑*i*P P 07 06 18.0 -0.2
FRU *e* 07 16 23.0
FRU pmax pmax
comp=Z,310nm,1.8s,mb5.8
AAK **Ala-Archa** 81.70 315 P P 07 06 20.3 +2.0
SNR=39
AAK **Ala-Archa** 81.70 315 *e*P P 07 06 17.4 -1.0
comp=Z,287nm,1.5s,mb5.9
AAK **Ala-Archa** 81.70 315 S S 07 16 25.2 -0.6
comp=Z,1.5nm,0.3s,baz=198,slow=19,SNR=5.1
AAK PKKPbc PKKPbc 07 24 53.1 +1.3
comp=Z,3.7nm,0.5s,baz=168,slow=1.1,SNR=8.0
AAK PKPPKP 07 32 40.6
comp=Z,1.2nm,0.4s,baz=203,slow=7.7,SNR=2.9
AAK **Ala-Archa** 81.70 315*c* *i*P P 07 06 17.3 -1.1
AAK pmax pmax
comp=Z,118nm,1.7s,mb5.4
AAK **Ala-Archa** 81.70 315 P P 07 06 19.5 +1.1
comp=Z,591nm,1.0s,mb6.4,SNR=28
AAK **Ala-Archa** 81.70 315 P P 07 06 17.4 -1.0
comp=Z,630nmcomp=Z,29nm,1.3s,mb4.9
AAK **Ala-Archa** 81.70 315 P P 07 06 17.6 -0.7
SNR=99
USP **Ospenovka** 81.87 315 P P 07 06 17.7 -1.6
SNR=152
AML **Almayashu** 82.13 314 P P 07 06 23.2 +2.6
SNR=117
AML **Almayashu** 82.13 314 *e*P P 07 06 20.3 -0.4
comp=Z,362nm,1.1s,mb6.1
SLKM **Skilak Lake** 82.21 26 *e*P P 07 06 20.2 -0.4
EKS2 **Erkin-Say** 82.22 314 P P 07 06 20.2 -0.8
SNR=108
EKS2 **Erkin-Say** 82.22 314 *e*P P 07 06 20.4 -0.7
comp=Z,202nm,1.1s,mb5.9
MAW **Mawson** 82.26 203 *e*P P 07 06 20.0 -0.9
comp=Z,39nm,0.7s,mb5.3
MAW *e*S S 07 16 18.9 -12
MAW **Mawson** 82.26 203 *e*P P 07 06 21.5 +0.6
comp=Z,36nm,1.2s,mb5.1
MAW **Mawson** 82.26 203 P P 07 06 21.2 +0.3
comp=Z,14nm,0.6s,mb5.0,baz=88,slow=7.4,SNR=49
MAW S S 07 16 23.5 -7.2
comp=Z,3.1nm,1.1s,baz=41,slow=12,SNR=1.9
MAW PKKPbc PKKPbc 07 24 49.0 -2.2
comp=Z,7.4nm,0.9s,baz=272,slow=4.6,SNR=12
MAW LR LR 07 42 31.2

comp=Z,4µm,19.8s,baz=80,slow=35
SEW Seward 82.37 27 *e*P P 07 06 21.2 -0.3
comp=Z,246nm,1.1s,mb6.0
PPLA Purkeypile 82.52 24 *e*P P 07 06 21.5 -0.6
comp=Z,436nm,1.6s,mb6.0
RC01 Rabbit Creek A 82.68 26 *e*P P 07 06 22.3 -0.8
comp=Z,424nm,1.4s,mb6.1
PMR Palmer 83.17 26 *e*P P 07 06 25.4 -0.2
comp=Z,303nm,1.5s,mb5.9
PMR Palmer 83.17 26 *e*P P 07 06 25.4 -0.2
PMR pmax pmax
comp=Z,303nm,1.5s,mb5.9
MID Middleton Isla 83.51 28 *e*P P 07 06 28.0 +0.6
comp=Z,319nm,1.3s,mb6.0
MID Middleton Isla 83.51 28 *e*P P 07 06 28.0 +0.6
MID pmax pmax
comp=Z,319nm,1.3s,mb6.0
TRF Thorofare Moun 83.54 24 *e*P P 07 06 25.6 -1.9
comp=Z,28nm,0.9s,mb5.1
BPAW Bear Paw Mtn. 83.57 23 *e*P P 07 06 25.4 -2.2
comp=Z,46nm,1.2s,mb5.2
SML Sawmill 83.61 26 *e*P P 07 06 26.1 -1.8
comp=Z,142nm,1.3s,mb5.6
SML Sawmill 83.61 26 *e*P P 07 06 26.1 -1.7
SML pmax pmax
comp=Z,143nm,1.3s,mb5.6
QSPA South Pole Qui 83.83 180 P P 07 06 29.2 +0.5
comp=Z,76nm,0.5s,mb5.8,baz=336,slow=1.4,SNR=108
QSPA S S 07 16 42.0 -4.3
comp=Z,4.8nm,1.3s,baz=46,slow=23,SNR=6.2
QSPA PKKPbc PKKPbc 07 24 44.7 -3.2
comp=Z,7.7nm,0.9s,baz=223,slow=0.2,SNR=11
KBL Kabul 83.91 306 *e*P P 07 06 29.6 -0.5
comp=Z,120nm,1.1s,mb5.6
KBL Kabul 83.91 306 *e*P P 07 06 29.6 -0.4
KBL pmax pmax
comp=Z,120nm,1.1s,mb5.6
MCK McKinley 84.20 24 *e*P P 07 06 28.1 -2.7
comp=Z,426nm,1.2s,mb6.2
MCK McKinley 84.20 24 *e*P P 07 06 28.1 -2.7
MCK pmax pmax
comp=Z,427nm,1.2s,mb6.2
DIV Divide 84.44 27 *e*P P 07 06 32.1 0.0
comp=Z,427nm,1.4s,mb6.1
KK31 Karatay Array 84.65 314 *i*P P 07 06 31.6 -2.0
KK31 pmax pmax
comp=Z,519nm,1.3s,mb6.3
KKAR Karatay Array 84.65 314 *e*P P 07 06 31.7 -1.9
comp=Z,292nm,1.1s,mb6.1
KKAR Karatay Array 84.65 314 *e*P P 07 06 31.7 -1.9
KKAR pmax pmax
comp=Z,292nm,1.1s,mb6.1
BMRM Bremner River 84.91 27 *e*P P 07 06 32.7 -1.7
comp=Z,505nm,1.5s,mb6.2
COLA College 85.13 23 *e*P P 07 06 32.7 -2.8
comp=Z,180nm,1.1s,mb5.9
COLA College 85.13 23 *e*P P 07 06 32.7 -2.8
COLA pmax pmax
comp=Z,180nm,1.1s,mb5.9
PAX Paxson 85.30 25 *e*P P 07 06 35.4 -1.0
comp=Z,251nm,1.6s,mb5.9
PAX Paxson 85.30 25 *e*P P 07 06 35.4 -1.0
PAX pmax pmax
comp=Z,251nm,1.6s,mb5.9
COLD Coldfoot 85.33 20 *e*P P 07 06 35.4 -1.0
comp=Z,24nm,1.0s,mb5.1
ILAR Eielson Array 85.46 23 P P 07 06 36.1 -1.0
comp=Z,75nm,0.9s,mb5.6,baz=259,slow=4.4,SNR=113
ILAR PP PP 07 09 52.1 -4.2
comp=Z,9.6nm,1.0s,baz=239,slow=6.2,SNR=4.2
ILAR S SKSac 07 16 48.6 -7.5
comp=Z,0.6nm,0.9s,baz=246,slow=5.4,SNR=2.6
ILAR PKKP PKKPbc 07 24 35.9 -8.2
comp=Z,0.7nm,0.6s,baz=358,slow=0.7,SNR=7.8
ILAR PKKPbc PKKPbc 07 24 42.5 -1.5
comp=Z,3.1nm,0.7s,baz=6.2,slow=1.0,SNR=7.8
ILAR PKPPKP 07 32 38.0
comp=Z,1.3nm,1.1s,baz=44,slow=4.0,SNR=5.7
ILAR LR LR 07 40 08.2
comp=Z,3µm,20.6s,baz=241,slow=32
ILAR Eielson Array 85.46 23 P P 07 06 36.1 -1.0
ILAR 07 09 52.2
MENT Mentasta 86.03 25 *e*P P 07 06 38.8 -1.2
DOT Dot Lake 86.15 25 *e*P P 07 06 38.9 -1.7
comp=Z,1µm,1.3s,mb6.7
VOSK Vostochnaya 86.68 324 P P 07 06 39.6 -3.8
VOSK pmax pmax
comp=Z,96nm,1.0s,mb5.7
PNL Peninsula 86.90 29 *e*P P 07 06 43.8 -0.5
comp=Z,604nm,1.4s,mb6.3
BVA0 Borovoye Array 87.10 324 *i*P P 07 06 42.6 -2.8
BVA0 pmax pmax
comp=Z,42nm,1.0s,mb5.3
BVAR Borovoye Array 87.10 324 S SKSac 07 17 03.1 -3.7
comp=Z,7.4nm,1.1s,baz=157,slow=4.2,SNR=6.2
BVAR PKKPbc PKKPbc 07 24 38.8 -0.9
comp=Z,2.0nm,0.6s,baz=273,slow=2.7,SNR=8.2
BVAR PKPPKP 07 32 44.0
comp=Z,1.4nm,0.8s,baz=242,slow=3.2,SNR=6.0
BRVK Borovoye 87.17 324 P P 07 06 43.5 -2.3
comp=Z,1µm,0.8s,mb6.8,SNR=20
BRVK Borovoye 87.17 324 *e*P P 07 06 42.7 -3.1
comp=Z,187nm,0.9s,mb6.0
BRVK Borovoye 87.17 324*c i*P P 07 06 43.2 -2.6
BRVK pmax pmax
comp=Z,197nm,1.0s,mb6.0
BRVK Borovoye 87.17 324 P P 07 06 43.3 -2.4
SNR=78
EGAK Eagle 87.74 24 *e*P P 07 06 46.4 -1.9
comp=Z,396nm,1.3s,mb6.3
DAWY Dawson 88.24 25 *e*P P 07 06 49.3 -1.4
SIT Sitka 88.25 32 *e*P P 07 06 51.2 +0.4
comp=Z,296nm,1.6s,mb6.1
SIT Sitka 88.25 32 *e*P P 07 06 51.3 +0.4
SIT pmax pmax
comp=Z,296nm,1.6s,mb6.1
SKAG Skagway 88.83 30 *e*P P 07 06 54.1 +0.6
comp=Z,417nm,1.4s,mb6.3
CRAG Craig 89.09 34 *e*P P 07 06 55.4 +0.5
comp=Z,186nm,1.5s,mb5.9
RER Riviere de l'E 89.33 249 *e*P P 07 06 57.2 +0.5
comp=Z,295nm,0.9s,mb6.3
WRAK Wrangell Islan 89.72 33 *e*P P 07 06 57.9 +0.2
comp=Z,284nm,1.5s,mb6.2
SYO Syowa Base 90.59 200⇓ *e*P P 07 07 01.0 -0.7
SYO Syowa Base 90.59 200 ⇓ *i*PcP PcP 07 07 02.5 -0.2
WBK Wadi Bani Khal 90.86 293 P P 07 07 05.2 +1.4
SNR=18
DLBC Dease Lake 91.32 31 *e*P P 07 07 05.0 -0.2
DLBC Dease Lake 91.32 31 PKKP PKKPbc 07 24 24.8 -4.5
comp=Z,3.5nm,1.0s,baz=194,slow=13,SNR=3.2
DLBC PKKPbc PKKPbc 07 24 31.7 +2.4
comp=Z,5.4nm,0.9s,baz=120,slow=3.2,SNR=9.5
DLBC LR LR 07 42 05.0
comp=Z,3µm,18.9s,baz=276,slow=32
MSEY Mahe Island 91.38 265 *e*P P 07 07 04.6 -1.9
comp=Z,68nm,1.1s,mb5.7
MSEY Mahe Island 91.38 265 *e*P P 07 07 04.6 -1.9
MSEY pmax pmax
comp=Z,68nm,1.1s,mb5.7
IMYA Miami 91.40 306 *e*P P 07 07 03.2 -2.9
BBB Bella Bella 91.44 38 LR LR 07 46 08.2
comp=Z,4µm,18.9s,baz=82,slow=34
JMDO Jabal Madar 91.63 292 P P 07 07 08.2 +0.7
SNR=5.9
INK Inuvik 91.65 21 *e*P P 07 07 05.0 -1.5
comp=Z,205nm,1.3s,mb6.2
INK Inuvik 91.65 21 PKKP PKKPbc 07 24 25.3 -3.5
comp=Z,3.5nm,0.5s,baz=70,slow=2.4,SNR=12
INK LR LR 07 50 31.9
comp=Z,3µm,19.1s,baz=241,slow=37
INK Inuvik 91.65 21 *e*P P 07 07 05.0 -1.5
INK pmax pmax
comp=Z,205nm,1.3s
SMDO Samad 91.75 293 P P 07 07 09.4 +1.4
SNR=10
ISRO Mashad 91.91 306 *e*P P 07 07 03.0 -5.4
IMOG Moghan 91.99 306 *e*P P 07 07 07.9 -0.9
HOQ Hoqain 92.48 293 P P 07 07 11.9 +0.6
SNR=12
BSY Bisya 92.50 292 P P 07 07 12.1 +0.6
SNR=6.9
IAKL Akhelmad 92.51 306 *e*P P 07 07 09.0 -2.2
IEMG Emamgholi 92.67 307 *e*P P 07 07 11.4 -0.5
AB31 Akbulak array 92.93 319 *i*P P 07 07 09.3 -3.5
AB31 pmax pmax
comp=Z,153nm,0.9s,mb6.3
ABKAR Akbulak array 92.93 319 *e*P P 07 07 09.5 -3.3
comp=Z,138nm,0.9s,mb6.3
KRMB Red Mountain 93.06 49 *e*P P 07 07 15.5 +1.9
comp=Z,250nm,1.7s,mb6.3
KHMM Horse Mountain 93.14 49 *e*P P 07 07 15.5 +1.5
comp=Z,179nm,1.4s,mb6.2
ABKT Aibek 93.14 308 P P 07 07 14.1 0.0
comp=Z,619nm,0.9s,mb6.9,SNR=7.9
ISFR Sfrayin 93.16 307 *e*P P 07 07 11.5 -2.7
ARQ Araqi 93.18 293 P P 07 07 15.1 +0.5
SNR=9.8
KIPM Iron Peak 93.23 50 *e*P P 07 07 15.7 +1.3
comp=Z,238nm,1.6s,mb6.3
SVE Sverdlovsk 93.30 327 *e*P P 07 07 13.5 -0.9
SVE *e* 07 11 01.9
SVE *e*S SKSac 07 17 39.7 -2.9
SVE *e* 07 18 17.4
SVE pmax pmax
comp=Z,134nm,1.3s,mb6.1
SVE MLR MLR
comp=Z,5µm,18.0s
ISHV Shirvan 93.43 307 *e*P P 07 07 14.9 -0.5
NLWA Neilton Lookou 93.63 43 *e*P P 07 07 16.7 +0.6
comp=Z,125nm,1.7s,mb6.0
HATD Hatta, Dubai 93.67 294 P P 07 07 17.6 +0.8
SNR=5.5
F03A Seaside 93.71 44 ⇓P P 07 07 18.1 +1.6
baz=94
ASHO Ashiyiah 93.72 294 P P 07 07 17.5 +0.5
SNR=6.0
E03A Lebam 93.76 44 ⇑P P 07 07 16.9 +0.2
baz=94
HUMO Hull Mountain 93.87 48 *e*P P 07 07 18.4 +1.0
comp=Z,72nm,1.2s,mb5.9
YBH Yreka Blue Hor 93.98 49 *e*P P 07 07 17.6 -0.2
comp=Z,101nm,1.4s,mb6.0
YBH Yreka Blue Hor 93.98 49 LR LR 07 42 23.0
comp=Z,8µm,21.5s,baz=263,slow=31
YBH Yreka Blue Hor 93.98 49 *e*P P 07 07 17.6 -0.2
YBH pmax pmax
comp=Z,101nm,1.4s
WDC Whiskeytown Da 94.01 50 *e*P P 07 07 16.7 -1.4
comp=Z,173nm,1.5s,mb6.2
WDC Whiskeytown Da 94.01 50 *e*P P 07 07 16.7 -1.3
WDC pmax pmax
comp=Z,173nm,1.5s,mb6.2
AKTO Aktyubinsk 94.27 320 P P 07 07 16.6 -2.4
AKTO pmax pmax
comp=Z,15nm,1.2s,mb5.2
ARU Arti 94.41 326 *e*P P 07 07 15.7 -3.8
comp=Z,123nm,1.0s,mb6.2
ARU Arti 94.41 326 P P 07 07 16.2 -3.3
ARU PPP 07 13 06.7
ARU S SKSac 07 17 48.4 -0.2
ARU SP SP 07 19 56.6 +15
ARU MLR MLR
comp=Z,6µm,21.0s
ARU Arti 94.41 326 P P 07 07 18.2 -1.3
comp=Z,598nm,0.9s,mb6.9,SNR=16
G04A Mulino 94.41 45 ⇑P P 07 07 20.9 +1.1
baz=94
F04A Amboy 94.51 44 ⇓P P 07 07 21.6 +1.4
baz=95
H04A Detroit Lake 94.58 46 ⇑P P 07 07 20.7 +0.1
baz=95
IBAF Bafgh 94.71 301 *e*P P 07 07 20.4 -1.1
D05A Enumclaw 94.89 43 ⇑P P 07 07 22.7 +0.8
baz=95
A05A Maple Falls 94.94 41 ⇓P P 07 07 22.9 +0.8
baz=95
LON Longmire 94.98 44 *e*P P 07 07 21.8 -0.6
comp=Z,40nm,1.5s,mb5.6
LON Longmire 94.98 44 *e*P P 07 07 21.8 -0.5
LON pmax pmax
comp=Z,40nm,1.5s,mb5.6
JCW Jim Creek 94.99 42 P P 07 07 23.5 +1.2
HOOD Mount Hood Mea 95.00 45 *e*P P 07 07 23.4 +1.0
comp=Z,108nm,1.7s,mb6.0
RPW Rockport 95.28 42 *e*P P 07 07 23.6 -0.1
comp=Z,53nm,1.5s,mb5.7
B06A Marblemount 95.31 42 ⇓P P 07 07 24.1 +0.3
baz=95
K05A Summer Lake 95.39 48 ⇓P P 07 07 24.7 +0.4
baz=96
CMB Columbia Colle 95.50 52 *e*P P 07 07 24.4 -0.5
comp=Z,57nm,1.4s,mb5.8
CMB Columbia Colle 95.50 52 *e*P P 07 07 24.4 -0.5
CMB pmax pmax
comp=Z,57nm,1.4s,mb5.8
SOKR Solikamsk 95.54 329*c i*P P 07 07 23.5 -1.1
SOKR 07 11 16.4
SOKR S SKSac 07 17 51.7 -2.8
SOKR SS SS 07 25 11.0 +5.8
SOKR pmax pmax
comp=Z,80nm,1.3s,mb6.0
SOKR MLR MLR
comp=Z,3µm,17.0s
SMMC Simmler 95.65 55 ⇑P P 07 07 25.6 -0.1
baz=96,SNR=13
NAC Naches 95.66 44 P P 07 07 26.3 +0.9
VIPM Ingram Point 95.69 46 P P 07 07 26.6 +1.0
G06A Carlson Farm, 95.72 45 ⇑P P 07 07 25.7 0.0
baz=96
PKM Peak Mountain 95.77 56 ⇓P P 07 07 25.5 -0.8
baz=96,SNR=16
MOD Modoc 95.78 49 *e*P P 07 07 26.2 +0.1
comp=Z,1µm,1.6s,mb7.2
BSC Santa Cruz Isl 95.87 57 ⇓P P 07 07 28.2 +1.5
baz=96
ETW Entiat 96.04 43 *e*P P 07 07 27.3 +0.2
comp=Z,100nm,1.3s,mb6.1
WCN Washoe City 96.06 51 ⇓P P 07 07 28.1 +0.7
baz=96
WCN Washoe City 96.06 51 *e*P P 07 07 27.2 -0.2
comp=Z,68nm,1.5s,mb5.8
WCN Washoe City 96.06 51 *e*P P 07 07 27.3 -0.1
WCN pmax pmax
comp=Z,68nm,1.5s,mb5.9
WAKR Walker 96.27 52 *e*P P 07 07 29.2 +0.8
comp=Z,42nm,1.5s,mb5.6
E07A Sunnyside 96.32 44 ⇑P P 07 07 29.2 +0.8
baz=96
RCTC Rector, Farmer 96.32 54 ⇑P P 07 07 29.1 +0.5
baz=96
IANJ Anjilo 96.33 305 *e*P P 07 07 26.3 -2.5
PAHR Pah Rah Range 96.37 51 *e*P P 07 07 29.6 +0.8
comp=Z,92nm,1.6s,mb6.0
PAHR *e*PP PP 07 11 20.6 -2.7
VES Vestal, Richgr 96.42 55 ⇓P P 07 07 28.4 -0.8
baz=96,SNR=12
I07A Izee 96.47 46 ⇑P P 07 07 28.9 -0.3
baz=96
RSW Rattlesnake Hi 96.50 44 *e*P P 07 07 30.2 +0.9
comp=Z,158nm,1.6s,mb6.2
HAWA Hanford 96.53 44 *e*P P 07 07 30.2 +0.8
comp=Z,68nm,1.3s,mb5.9
ARVC Arvin 96.59 55 P P 07 07 31.5 +1.6
baz=97,SNR=7.4
H2OWA Water 96.61 44 P P 07 07 31.0 +1.2
ISRV Sarvestan 96.68 299 *e*P P 07 07 30.5 0.0
SCI San Clemente I 96.72 58 ⇓P P 07 07 31.4 +0.8
baz=97
B08A Colville Reser 96.73 42 ⇑P P 07 07 30.5 +0.2
baz=97
IPAR Pars 96.76 299 *e*P P 07 07 27.3 -3.5
WRD Warden 96.82 44 P P 07 07 31.6 +0.9
ISHM Shahmirzad 96.86 305 *e*P P 07 07 29.9 -1.2
CIS Catalina Islan 96.86 57 ⇑P P 07 07 32.6 +1.4
baz=97,SNR=8.7
G08A Pilot Rock 96.90 45 ⇑P P 07 07 31.3 +0.2
baz=97
ISA Isabella 96.91 55 ⇓P P 07 07 31.5 +0.1
baz=97,SNR=24
ISA Isabella 96.91 55 *e*P P 07 07 31.9 +0.6
comp=Z,34nm,1.3s,mb5.6
ISA Isabella 96.91 55 *e*P P 07 07 31.9 +0.5
ISA pmax pmax
comp=Z,34nm,1.3s,mb5.6
D08A Wollman Farm, 96.98 43 ⇓P P 07 07 31.2 -0.2
baz=97
WVOR Wild Horse Val 97.04 48 *e*P P 07 07 32.5 +0.7
comp=Z,86nm,1.7s,mb5.9
WVOR *e*PP PP 07 11 25.1 -3.3
WVOR Wild Horse Val 97.04 48 *e*P P 07 07 32.5 +0.7
WVOR *e* 07 11 25.1
WVOR pmax pmax
comp=Z,86nm,1.7s,mb5.9
PASC Pasadena Art C 97.08 56 *e*P P 07 07 33.4 +1.2
comp=Z,428nm,1.5s,mb6.7
OD2 Odessa Site #2 97.13 43 P P 07 07 32.8 +0.8
NVAR Mina Array Bea 97.16 52 P P 07 07 32.9 +0.5
NVAR PKKP PKKPbc 07 24 16.2 +3.2
NVAR P'P' 07 32 23.8
NVAR Mina Array Bea 97.16 52 P P 07 07 32.9 +0.5
comp=Z,8.2nm,0.8s,mb5.2,baz=255,slow=4.3,SNR=58
NVAR PKKP PKKPbc 07 24 16.2 +3.2
comp=Z,1.5nm,0.7s,baz=75,slow=3.5,SNR=5.1
NVAR PKPPKP 07 32 23.8
comp=Z,1.4nm,0.9s,baz=90,slow=2.8,SNR=7.0
MWC Mount Wilson 97.19 56 *e*P P 07 07 34.0 +1.4
comp=Z,134nm,1.4s,mb6.2
MWC Mount Wilson 97.19 56 *e*P P 07 07 34.0 +1.3
MWC pmax pmax
comp=Z,134nm,1.4s,mb6.2
J08A Circle Bar Ran 97.19 47 ⇑P P 07 07 32.1 -0.4
baz=97
CWC Cottonwood Cre 97.26 54 ⇓P P 07 07 33.2 +0.3
baz=97,SNR=18
EDW2 Edwards Air Fo 97.27 56 ⇑P P 07 07 32.3 -0.7
baz=97,SNR=25
LNOR Lincton Mounta 97.39 45 *e*P P 07 07 33.8 +0.6
comp=Z,24nm,1.6s,mb5.4
LNOR Lincton Mounta 97.39 45 *e*P P 07 07 33.8 +0.5
LNOR pmax pmax
comp=Z,24nm,1.6s,mb5.4
C09A Chrisman Ranch 97.43 43 ⇑P P 07 07 33.9 +0.4
baz=98
E09A Wood Farm, Sta 97.50 44 ⇓P P 07 07 33.3 -0.4
baz=98
BFSC Mount Baldy Ra 97.52 56 ⇓P P 07 07 34.0 -0.1
baz=98,SNR=12
LRMC Laurel Mountai 97.54 55 ⇓P P 07 07 33.7 -0.5
baz=98,SNR=27
ABPO Ambohimpanom 97.55 250 *e*P P 07 07 35.9 +1.3
comp=Z,41nm,0.9s,mb6.0
ABPO Ambohimpanom 97.55 250 *e*P P 07 07 35.9 +1.3
ABPO pmax pmax
comp=Z,41nm,0.9s,mb6.0
OPO Ambohidratompo 97.65 250 P P 07 07 35.2 +0.1
comp=Z,42nm,0.9s,mb6.0,baz=109,slow=4.8,SNR=12
OPO PKKP PKKPbc 07 24 12.8 +1.8
comp=Z,4.9nm,1.0s,baz=300,slow=12,SNR=4.8
MPMC Manual Prospec 97.72 55 ⇓P P 07 07 34.9 -0.1
baz=98,SNR=45
NVL N'lazarevskaya 97.76 194 ⇓ *i*P P 07 07 35.8 +1.3
NVL *e**PP pP 07 07 47.6 -5.7
NVL *e* 07 11 29.7
NVL *e*S SKSac 07 18 03.6 -2.2
NVL pmax pmax
comp=Z,31nm,1.2s,mb5.7
NVL MLR MLR
comp=Z,7µm,19.0s
MAIT Maitri 97.77 194 *e*P P 07 07 35.4 +0.9
GRAC Grapevine Rang 97.85 54 P P 07 07 37.0 +1.4
baz=98,SNR=5.2
IDMV Damavand 97.87 305 *e*P P 07 07 30.6 -5.1
MURC Murrieta 97.87 57 ⇓P P 07 07 35.5 -0.3
baz=98
109C Camp Elliot, M 97.93 58 ⇑P P 07 07 36.1 +0.1
baz=98,SNR=6.1
BMN Battle Mountai 98.06 50 *e*P P 07 07 37.3 +0.9
comp=Z,21nm,1.3s,mb5.5
BMN Battle Mountai 98.06 50 *e*P P 07 07 37.3 +0.9
BMN pmax pmax
comp=Z,21nm,1.3s,mb5.5
IVRN Varamin 98.10 304 *e*P P 07 07 34.9 -1.9
F10A Beach Ranch, E 98.13 45 ⇓P P 07 07 35.2 -1.4
baz=98,SNR=22
NEW Newport 98.21 42 ⇓P P 07 07 35.5 -1.4
baz=98,SNR=32
NEW Newport 98.21 42 *e*P P 07 07 35.7 -1.2
comp=Z,64nm,1.2s,mb6.0
NEW *e*PP PP 07 11 34.0 -3.2
NEW Newport 98.21 42 *e*P P 07 07 35.7 -1.2
NEW *e* 07 11 34.0
NEW pmax pmax
comp=Z,64nm,1.2s
FURC Furnace Creek, 98.25 54 ⇑P P 07 07 36.3 -1.0
baz=98,SNR=31
GSC Goldstone 98.26 55 ⇑P P 07 07 38.1 +0.7
baz=98,SNR=14
GSC Goldstone 98.26 55 *e*P P 07 07 38.6 +1.2
comp=Z,42nm,1.4s,mb5.8
GSC Goldstone 98.26 55 *e*P P 07 07 38.6 +1.2
GSC pmax pmax
comp=Z,42nm,1.4s,mb5.8
S10A Tonopah Range, 98.49 53 ⇑P P 07 07 38.5 +0.1
baz=99,SNR=20
PFO Pinyon Flat Ob 98.50 57 ⇑P P 07 07 39.5 +0.9
baz=99,SNR=12
PFO Pinyon Flat Ob 98.50 57 *e*P P 07 07 40.0 +1.5
comp=Z,17nm,1.1s,mb5.5
PFO Pinyon Flat Ob 98.50 57 *e*P P 07 07 40.0 +1.4
PFO pmax pmax
comp=Z,17nm,1.1s,mb5.5
MONP Monument Peak 98.50 58 ⇓P P 07 07 38.3 -0.3
baz=99,SNR=21
P10A Eureka 98.62 51 ⇑P P 07 07 39.2 +0.3
baz=99
HEC Hector,Ludlow 98.63 56 ⇓P P 07 07 39.4 +0.3
baz=99,SNR=14
Q10A Clear Creek Ra 98.66 52 ⇓P P 07 07 39.3 +0.2
baz=99,SNR=7.2
U10A Ash Meadows, A 98.67 54 ⇓P P 07 07 39.5 +0.2
baz=99,SNR=11
SHOC Shoshone 98.70 55 ⇑P P 07 07 39.8 +0.4
baz=99,SNR=10
IPIR Pirpir 98.73 302 *e*P P 07 07 39.7 +0.1
R10A Warm Springs 98.73 52 ⇓P P 07 07 41.0 +1.5
baz=99
C11A Tepee Creek (N 98.79 43 ⇓P P 07 07 39.4 -0.1
baz=99
BELC Belle Mtn. Jos 98.89 57 ⇓P P 07 07 40.4 +0.1
baz=99,SNR=23
TUQ Turquoise Moun 98.98 55 ⇓P P 07 07 41.3 +0.7
baz=99,SNR=10
SWSC Sam W. Stewart 99.03 58 ⇑P P 07 07 41.2 +0.3
baz=99,SNR=9.3
YKA Yellowknife Ar 99.12 28 P P 07 07 40.7 +0.1
YKA PP PP 07 11 41.0 -2.7
YKA PKKPbc PKKPbc 07 24 07.5 -1.1
YKA LR LR 07 50 31.8
YKA Yellowknife Ar 99.12 28 P P 07 07 40.7 +0.1
comp=Z,17nm,0.9s,mb5.6,baz=274,slow=4.5,SNR=21
YKA PP PP 07 11 41.0 -2.7
comp=Z,31nm,1.2s,baz=273,slow=7.4,SNR=10
YKA PKKPbc PKKPbc 07 24 07.4 -1.1
comp=Z,7.0nm,0.8s,baz=81,slow=3.0,SNR=7.1
YKA LR LR 07 50 31.8
comp=Z,235nm,21.0s,baz=60,slow=34
YKA Yellowknife Ar 99.12 28 P P 07 07 40.7 +0.1
YKA 07 11 41.0
YKA pmax pmax
comp=Z,17nm,0.9s
YKA pmax pmax
comp=Z,31nm,1.2s
YKA pmax pmax
comp=Z,7.0nm,0.9s
YKA MLR MLR
comp=Z,235nm,21.0s
MFID Camas Ranch 99.12 47 ⇓P P 07 07 41.6 +0.5
baz=99,SNR=9.0
S11A Rachel 99.16 53 ⇑P P 07 07 42.8 +1.4
baz=99
P11A Circle Ranch, 99.17 51 ⇑P P 07 07 42.2 +0.7
baz=99,SNR=9.4
A12A Yaak River Ran 99.18 42 ⇓P P 07 07 42.2 +0.9
baz=99,SNR=9.9
GMRC Granite Mounta 99.18 56 ⇓P P 07 07 40.7 -0.9
baz=99,SNR=18
B12A Libby 99.23 42 ⇑P P 07 07 41.6 +0.2
baz=99,SNR=5.7
Q11A Duckwater 99.24 52 ⇑P P 07 07 41.2 -0.6
baz=99,SNR=23
E12A Beaver Dam Sad 99.28 44 ⇑P P 07 07 41.5 -0.3
baz=99
R11A Troy Canyon, C 99.29 52 ⇓P P 07 07 42.1 +0.1
baz=99,SNR=16
C12B Naegeli Ranch, 99.32 43 ⇑P P 07 07 42.2 +0.3
baz=99,SNR=12
BC3 Big Chuckawall 99.33 57 ⇓P P 07 07 42.2 -0.1
baz=99,SNR=20
V11A Goodsprings 99.39 55 ⇑P P 07 07 43.0 +0.5

baz=100,SNR=16
D12A Red Ives Fores 99.42 43 ⇓P **P 07 07 41.2 -1.1**
baz=100
G12A Big Creek, Yel 99.47 45 ⇓P Pdif 07 07 42.0 -0.4
baz=100,SNR=36
F12A Elk City 99.51 45 ⇑P Pdif 07 07 41.8 -0.8
baz=100,SNR=13
T11A Corn Creek, Al 99.57 53 ⇑P Pdif 07 07 43.3 +0.4
baz=100
IRM Iron Mountain 99.59 56 ⇓P Pdif 07 07 43.4 +0.4
baz=100,SNR=28
SHPR Sheep Range 99.61 54 *e*Pdif Pdif 07 07 44.1 +1.0
comp=Z,43nm,1.6s
I12A Atlanta 99.62 47 ⇑P Pdif 07 07 41.8 -1.4
baz=100,SNR=12
LDFC Landfair 99.64 56 *e*Pdif Pdif 07 07 44.1 +1.0
BSMT Bassoo Peak 99.78 43 *e*P Pdif 07 07 43.8 0.0
comp=Z,37nm,1.3s
H12A Diamond D Ranc 99.81 46 ⇓P Pdif 07 07 43.6 -0.4
baz=100,SNR=7.0
P12A McGill 99.83 51 ⇑P Pdif 07 07 44.6 +0.6
baz=100
W12A Cal Nev Ari 99.84 55 ⇑P Pdif 07 07 45.0 +0.9
baz=100,SNR=5.4
GLA Glamis 99.85 58 *e*Pdif Pdif 07 07 45.8 +1.7
comp=Z,26nm,1.3s
GLA Glamis 99.85 58 *e*P Pdif 07 07 45.8 +1.7
GLA pmax pmax
comp=Z,26nm,1.3s,mb5.7
V12A Nelson 99.86 55 ⇑P Pdif 07 07 44.6 +0.5
baz=100,SNR=16
S12A Delamar Landin 99.87 53 ⇓P Pdif 07 07 45.4 +1.2
baz=100,SNR=13
Q12A Willow Creek R 99.89 52 ⇑P Pdif 07 07 44.2 -0.1
baz=100,SNR=30
C13A Hot Springs 99.93 43 ⇓P Pdif 07 07 45.0 +0.5
baz=100,SNR=7.3
O12A Currie 99.95 50 ⇓P Pdif 07 07 44.6 +0.1
baz=100,SNR=22
B13A Whitefish 99.98 42 ⇑P Pdif 07 07 43.9 -0.8
baz=100,SNR=47
A13A Flathead Natio 99.99 42 ⇑P Pdif 07 07 45.4 +0.6
baz=100
D13A Huson 100.03 43 ⇓P Pdif 07 07 44.7 -0.2
baz=100,SNR=11
R12A Pony Springs, 100.06 52 ⇑P Pdif 07 07 45.5 +0.5
baz=100,SNR=25
Y12C Blythe 100.11 57 ⇓P Pdif 07 07 46.1 +0.8
baz=100
U12A Valley of Fire 100.11 54 ⇑P Pdif 07 07 45.5 +0.2
baz=100,SNR=7.3
JTMT Jette 100.12 43 *e*Pdif Pdif 07 07 45.8 +0.5
comp=Z,18nm,1.5s
JTMT *e*PP PP 07 11 46.6 -5.1
HLID Hailey 100.15 47 ⇑P Pdif 07 07 44.8 -0.6
baz=100,SNR=24
HLID Hailey 100.15 47 *e*Pdif Pdif 07 07 45.4 0.0
comp=Z,28nm,1.4s
F13A Darby 100.15 45 ⇑P Pdif 07 07 44.8 -0.6
baz=100,SNR=40
E13A Victor 100.23 44 ⇑P Pdif 07 07 45.8 0.0
baz=100,SNR=11
H13A Challis 100.24 46 ⇑P Pdif 07 07 46.0 +0.1
baz=100,SNR=19
G13A Cobalt 100.24 45 ⇑P Pdif 07 07 46.1 +0.3
baz=100,SNR=18
WALA Waterton Lakes 100.32 41 *e*Pdif Pdif 07 07 46.9 +0.7
comp=Z,3.4nm,1.6s
WALA *e*PP PP 07 11 53.8 +0.6
SWMT Swartz Lake 100.32 43 *e*Pdif Pdif 07 07 46.2 0.0
comp=Z,8.5nm,1.1s
SWMT *e*PP PP 07 11 47.4 -5.9
J13A Cove Ranch, Pi 100.33 47 ⇑P Pdif 07 07 47.1 +0.9
baz=100,SNR=16
I13A Wildhorse Cree 100.36 47 ⇓P Pdif 07 07 47.7 +1.3
baz=100,SNR=20
MSO Missoula 100.39 44 ⇓P Pdif 07 07 47.0 +0.5
baz=100
MSO Missoula 100.39 44 *e*Pdif Pdif 07 07 49.5 +3.0
comp=Z,3.7nm,1.0s
MSO *e*PP PP 07 11 51.8 -1.9
EDM Edmonton 100.44 37 *e*Pdif Pdif 07 07 47.4 +0.6
EDM *e*PP PP 07 11 52.7 -1.3
C14A Swan Lake 100.48 43 ⇑P Pdif 07 07 46.8 -0.1
baz=100
P13A Bates Ranch, G 100.52 51 ⇑P Pdif 07 07 47.7 +0.6
baz=101,SNR=18
Q13A Wheeler Ranch, 100.52 52 ⇓P Pdif 07 07 47.3 +0.2
baz=101,SNR=17
O13A Hicks Ranch, I 100.53 50 ⇓P Pdif 07 07 49.0 +1.9
baz=101,SNR=7.3
V13A Grand Canyon W 100.56 55 ⇓P Pdif 07 07 48.2 +0.9
baz=101,SNR=25
R13A O'Grain Ranch, 100.56 52 ⇑P Pdif 07 07 48.8 +1.6
baz=101,SNR=14
U13A Pakoon Wash 100.58 54 ⇓P Pdif 07 07 48.2 +0.9
baz=101,SNR=11
T13A Saint George 100.62 54 ⇓P Pdif 07 07 48.4 +0.9
baz=101,SNR=20
A14A Double T Ranch 100.64 41 ⇑P Pdif 07 07 48.2 +0.6
baz=101,SNR=14
S13A Holt Ranch, En 100.66 53 ⇑P Pdif 07 07 48.6 +0.9
baz=101,SNR=11
D14A Greenough 100.68 43 ⇓P Pdif 07 07 46.5 -1.3
baz=101,SNR=9.7
SLMT Seeley Lake 100.68 43 *e*Pdif Pdif 07 07 47.6 -0.2
comp=Z,42nm,1.8s
SLMT *e*PP PP 07 11 56.3 +0.3
X13A Yucca 100.69 56 ⇓P Pdif 07 07 49.5 +1.6
baz=101,SNR=16
E14A Clinton 100.71 44 ⇓P Pdif 07 07 48.4 +0.4
baz=101
113A Mohawk Valley, 100.73 58 ⇑P Pdif 07 07 48.9 +0.8
baz=101
B14A Marquette Ranc 100.77 42 ⇑P Pdif 07 07 48.5 +0.3
baz=101,SNR=18
J14A Carey 100.81 47 ⇓P Pdif 07 07 49.0 +0.6
baz=101,SNR=8.5
Z13A Yuma Proving G 100.83 57 ⇑P Pdif 07 07 48.5 +0.1
baz=101,SNR=10
I14A Mackay 100.84 47 ⇓P Pdif 07 07 49.6 +1.1
baz=101,SNR=8.8
CHMT Chamberlain Mo 100.86 44 *e*Pdif Pdif 07 07 49.3 +0.7
comp=Z,28nm,1.4s
H14A Leadore 100.87 46 ⇑P Pdif 07 07 49.7 +1.0
baz=101,SNR=10
ARUT Antelope Range 100.99 53 *e*Pdif Pdif 07 07 50.2 +1.0
comp=Z,9.3nm,1.1s
ARUT Antelope Range 100.99 53 *e*P Pdif 07 07 50.2 +1.0
ARUT pmax pmax
comp=Z,9.0nm,1.1s
L14A Malta 101.05 48 ⇑P Pdif 07 07 50.0 +0.5
baz=101,SNR=18
CCUT Cedar City 101.05 53 *e*Pdif Pdif 07 07 51.3 +1.9
comp=Z,30nm,0.9s
K14A Jones Ranch, D 101.08 48 ⇑P Pdif 07 07 49.0 -0.5
baz=101,SNR=26
Q14A Sevier Lake (B 101.10 52 ⇑P Pdif 07 07 50.0 +0.3
baz=101,SNR=17
A15A Johnson Ranch, 101.10 41 ⇑P Pdif 07 07 50.3 +0.7
baz=101,SNR=29
S14A Cedar City 101.20 53 ⇑P Pdif 07 07 51.3 +1.1
baz=101
U14A Mt Trumbull 101.21 54 ⇓P Pdif 07 07 50.8 +0.6
baz=101,SNR=16
MCMT McKenzie Canyo 101.23 46 *e*Pdif Pdif 07 07 51.3 +1.0
comp=Z,6.8nm,1.2s
BGU Big Grassy Mou 101.24 50 *e*Pdif Pdif 07 07 51.3 +1.0
comp=Z,22nm,1.4s
P14A Drum Mountains 101.25 51 ⇑P Pdif 07 07 51.2 +0.9
baz=101,SNR=24
B15A Bradely Ranch, 101.25 42 ⇓P Pdif 07 07 49.7 -0.7
baz=101,SNR=11
C15A Salmond Ranch, 101.25 43 ⇑P Pdif 07 07 51.0 +0.7
baz=101,SNR=18
VNA2 Neumayer--Watz 101.27 188 *e*P Pdif 07 07 48.8 -1.6
VNA2 *e* 07 12 14.2
T14A Hurricane 101.28 54 ⇑P Pdif 07 07 51.7 +1.2
baz=101,SNR=12
V14A Boquillas Ranc 101.28 55 ⇓P Pdif 07 07 49.5 -0.9
baz=101,SNR=16
W14A Seligman 101.30 55 ⇑P Pdif 07 07 51.1 +0.6
baz=101,SNR=6.0
E15A Deer Lodge 101.30 44 ⇑P Pdif 07 07 50.2 -0.4
baz=101,SNR=30
D15A Lincoln 101.35 43 ⇓P Pdif 07 07 51.5 +0.7
baz=101,SNR=10
MAK Makhachkala 101.38 312 *i* P Pdif 07 07 48.6 -2.3
MAK *e* 07 11 56.6
DLMT Dillon 101.39 45 *e*Pdif Pdif 07 07 51.8 +0.8
comp=Z,24nm,1.4s
H15A Lima 101.39 46 ⇓P Pdif 07 07 50.8 -0.1
baz=101,SNR=9.1
ISRB Sarab 101.40 307 *e*P Pdif 07 07 50.8 -0.2
HVU Hansel Valley 101.41 49 *e*Pdif Pdif 07 07 52.1 +1.1
comp=Z,37nm,1.2s
HVU Hansel Valley 101.41 49 *e*P Pdif 07 07 52.1 +1.1
HVU pmax pmax
comp=Z,37nm,1.2s
DUG Dugway 101.43 50 ⇓P Pdif 07 07 50.2 -1.0
baz=102,SNR=14
DUG Dugway 101.43 50 *e*Pdif Pdif 07 07 50.5 -0.6
comp=Z,27nm,1.4s
DUG Dugway 101.43 50 *e*P Pdif 07 07 50.5 -0.6
DUG pmax pmax
comp=Z,27nm,1.4s
F15A Butte 101.44 45 ⇓P Pdif 07 07 50.9 -0.2
baz=102,SNR=9.9
X14A Yava 101.47 56 ⇓P Pdif 07 07 51.8 +0.5
baz=102
LRM Limekiln Ridge 101.47 45 *e*Pdif Pdif 07 07 51.9 +0.6
comp=Z,109nm,1.5s
LRM *e*PP PP 07 12 03.3 +1.4
G15A Dillon 101.47 45 ⇑P Pdif 07 07 52.3 +0.9
baz=102,SNR=20
I15A Monteview 101.53 46 ⇓P Pdif 07 07 52.8 +1.2
baz=102
214A Organ Pipe Nat 101.54 59 ⇓P Pdif 07 07 52.3 +0.7
baz=102
K15A Arbon 101.55 48 ⇑P Pdif 07 07 52.1 +0.4
baz=102,SNR=17
J15A Blackfoot 101.59 47 ⇑P Pdif 07 07 52.6 +0.7
baz=102,SNR=11
N15A Stansbury Isla 101.63 50 ⇓P Pdif 07 07 53.5 +1.4
baz=102
VNA1 Neumayer--Stat 101.64 188 *e*P Pdif 07 07 50.5 -1.6
VNA1 *e* 07 12 24.5
M15A Larsen Ranch, 101.66 49 ⇓P Pdif 07 07 51.7 -0.5
baz=102,SNR=24
SPUT South Promonto 101.67 49 *e*Pdif Pdif 07 07 52.8 +0.7
comp=Z,22nm,1.2s
O15A The Old Anders 101.69 50 ⇑P Pdif 07 07 52.1 -0.2
baz=102,SNR=7.2
L15A Malad City 101.69 49 ⇑P Pdif 07 07 52.9 +0.6
baz=102,SNR=11
Q15A Fillmore 101.80 52 ⇓P Pdif 07 07 54.5 +1.7
baz=102
B16A M & M Farms, S 101.81 42 ⇑P Pdif 07 07 53.3 +0.5
baz=102
C16A Fuhringer Ranc 101.83 43 ⇓P Pdif 07 07 51.0 -1.9
baz=102,SNR=14
T15A Red Dirt Ranch 101.84 54 ⇑P Pdif 07 07 53.8 +0.8
baz=102,SNR=7.6
HRY Holter Researc 101.84 44 *e*Pdif Pdif 07 07 53.2 +0.2
comp=Z,4.9nm,0.8s
S15A Panguitch 101.84 53 ⇓P Pdif 07 07 55.2 +2.2
baz=102
A16A West Butte Ran 101.85 41 ⇑P Pdif 07 07 53.4 +0.4
baz=102
P15A Leamington 101.86 51 ⇑P Pdif 07 07 52.8 -0.2
baz=102,SNR=5.7
U15A North Rim 101.93 54 ⇓P Pdif 07 07 55.2 +1.9
baz=102,SNR=12
Y15A Casa Rosa Ranc 101.93 57 ⇑P Pdif 07 07 55.5 +2.1
baz=102
G16A Moss Hill, Enn 101.95 45 ⇑P Pdif 07 07 52.8 -0.7
baz=102,SNR=5.7
E16A East Helena 101.96 44 ⇑P Pdif 07 07 54.3 +0.8
baz=102,SNR=8.4
MSU Marysvale 101.97 52 *e*Pdif Pdif 07 07 54.0 +0.4
comp=Z,7.9nm,1.2s
MSU *e*PP PP 07 12 00.8 -5.2
MSU *e*PKPdf PKiKP 07 12 18.7 +2.3
MSU Marysvale 101.97 52 *e*P Pdif 07 07 54.0 +0.5
MSU *e* 07 12 00.8
MSU pmax pmax
comp=Z,8.0nm,1.2s
W15A Williams 101.97 55 ⇑P Pdif 07 07 56.4 +2.9
baz=102
NLU North Lily Min 102.00 51 *e*Pdif Pdif 07 07 55.0 +1.3
comp=Z,35nm,1.5s
X15A Humboldt 102.00 56 ⇑P Pdif 07 07 55.7 +2.0
baz=102,SNR=14
D16A Dana Ranch, Ca 102.02 43 ⇓P Pdif 07 07 53.8 +0.1
baz=102,SNR=9.0
115A Sonoran Desert 102.03 58 ⇑P Pdif 07 07 55.0 +1.2
baz=102
V15A Kaibab Nationa 102.04 55 ⇑P Pdif 07 07 53.5 -0.4
baz=102,SNR=12
F16A Kennard Place, 102.04 45 ⇓P Pdif 07 07 54.5 +0.7
baz=102,SNR=8.1
BOZ Bozeman (W) 102.05 45 ⇓P Pdif 07 07 53.4 -0.5
baz=102,SNR=18
BOZ Bozeman (W) 102.05 45 *e*Pdif Pdif 07 07 54.1 +0.2
comp=Z,100nm,0.2s
BOZ Bozeman (W) 102.05 45 *e*P Pdif 07 07 54.1 +0.2
BOZ pmax pmax
comp=Z,100nm,0.2s
J16A Bone 102.20 47 ⇑P Pdif 07 07 54.0 -0.6
baz=102,SNR=18
K16A Soda Springs 102.24 48 ⇑P Pdif 07 07 55.4 +0.7
baz=102,SNR=5.6
I16A Newdale 102.26 47 ⇓P Pdif 07 07 54.2 -0.6
baz=102,SNR=9.8
M16A Huntsville 102.28 49 ⇑P Pdif 07 07 54.4 -0.6
baz=102,SNR=7.2
HWUT Hardware Ranch 102.32 49 *e*Pdif Pdif 07 07 56.0 +1.0
comp=Z,18nm,1.2s
P16A Fountain Green 102.33 51 P Pdif 07 07 57.9 +2.8
baz=102,SNR=5.5
MPU Maple Canyon 102.34 51 *e*Pdif Pdif 07 07 56.5 +1.3
comp=Z,26nm,1.4s
H16A Russell Place, 102.38 46 ⇑P Pdif 07 07 56.5 +1.2
baz=102,SNR=9.4
L16A Fish Haven 102.40 48 ⇓P Pdif 07 07 55.7 +0.3
baz=102,SNR=13
RRI2 Red Ridge 102.41 47 *e*Pdif Pdif 07 07 57.1 +1.6
comp=Z,11nm,0.9s
B17A L&G Farms, Che 102.43 42 ⇑P Pdif 07 07 53.0 -2.6
baz=102,SNR=17
O16A Springville 102.43 50 ⇑P Pdif 07 07 55.8 +0.3
baz=102
A17A Triple J Farms 102.44 41 ⇑P Pdif 07 07 55.3 -0.4
baz=102,SNR=19
N16A Rees Ranch, Co 102.45 50 ⇑P Pdif 07 07 56.4 +0.8
baz=102,SNR=9.7
S16A Weppner Ranch, 102.45 53 ⇓P Pdif 07 07 57.0 +1.4
baz=102,SNR=24
JLU Jordanelle 102.45 50 *e*Pdif Pdif 07 07 55.8 +0.2
comp=Z,41nm,1.5s
DCID1 Drake Creek 102.49 47 *e*Pdif Pdif 07 07 57.5 +1.6
comp=Z,30nm,1.3s
C17A Wharram Farm, 102.50 43 ⇓P Pdif 07 07 56.3 +0.4
baz=103,SNR=18
R16A Teasdale 102.52 52 ⇑P Pdif 07 07 56.3 +0.4
baz=103,SNR=24
E17A Martinsdale 102.53 44 ⇓P Pdif 07 07 55.1 -0.9
baz=103,SNR=7.8
YMR Madison River 102.58 46 *e*Pdif Pdif 07 07 58.6 +2.3
comp=Z,62nm,1.7s
D17A Six Diamond Ra 102.59 43 ⇓P Pdif 07 07 55.0 -1.3
baz=103,SNR=22
DAU Daniels Canyon 102.61 50 *e*Pdif Pdif 07 07 57.1 +0.7
comp=Z,8.3nm,0.9s
DAU *e*PKPdf PKiKP 07 12 18.1 +0.6
DAU Daniels Canyon 102.61 50 *e*P Pdif 07 07 57.1 +0.7
DAU *e* 07 12 18.1
DAU pmax pmax
comp=Z,8.0nm,0.9s
Y16A Circle Bar Ran 102.64 57 ⇓P Pdif 07 07 59.3 +2.8
baz=103
IMW Indian Meadow 102.65 47 *e*Pdif Pdif 07 07 58.3 +1.7
comp=Z,24nm,1.6s
X16A Lo Mia Camp, P 102.66 56 ⇑P Pdif 07 07 58.1 +1.5
baz=103
TPAW Teton Pass 102.67 47 *e*Pdif Pdif 07 07 57.9 +1.3
comp=Z,22nm,1.4s
216A Three Points, 102.69 59 ⇓P Pdif 07 08 00.0 +3.3
baz=103,SNR=6.4
TMUT Trail Mountain 102.69 51 *e*Pdif Pdif 07 07 58.5 +1.7
comp=Z,59nm,1.5s
G17A Pierce Place, 102.70 45 ⇓P Pdif 07 07 58.7 +1.9
baz=103
F17A Fitzpatrick Pl 102.71 44 ⇓P Pdif 07 07 57.3 +0.5
baz=103,SNR=12
K17A Gardner Place, 102.74 48 ⇑P Pdif 07 07 58.1 +1.2
baz=103
Q16A Castle Valley 102.74 52 ⇓P Pdif 07 07 56.5 -0.5
baz=103,SNR=12
REDW Red Top Meadow 102.75 47 *e*Pdif Pdif 07 07 58.1 +1.1
comp=Z,31nm,1.5s
YNR Norris Junctio 102.78 46 *e*Pdif Pdif 07 07 58.0 +0.9
comp=Z,50nm,1.7s
MOOW Moose Ponds 102.80 47 *e*Pdif Pdif 07 07 58.0 +0.8
comp=Z,10nm,1.3s
FLWY Flagg Ranch 102.81 46 *e*Pdif Pdif 07 07 58.2 +1.0
comp=Z,41nm,1.7s
SNOW Snow King Moun 102.81 47 *e*Pdif Pdif 07 07 58.2 +0.9
comp=Z,20nm,1.5s
J17A Brown Place, J 102.85 47 ⇓P Pdif 07 07 57.9 +0.4
baz=103,SNR=9.2
U16A Tuba City 102.87 54 ⇑P Pdif 07 07 57.3 -0.2
baz=103,SNR=11
N17A Moffit Pass 102.90 50 ⇓P Pdif 07 07 57.9 +0.2
baz=103,SNR=7.1
LOHW Long Hollow 102.91 47 *e*Pdif Pdif 07 07 58.2 +0.5
comp=Z,20nm,1.6s
A18A Metzger Ranch, 103.00 41 ⇑P Pdif 07 07 56.7 -1.5
baz=103,SNR=10
M17A Scullys Gap (B 103.00 49 ⇓P Pdif 07 07 58.4 +0.2
baz=103,SNR=7.0
ISHB Shabestar 103.00 308 *e*P Pdif 07 07 57.6 -0.5
O17A Robinson Place 103.02 50 ⇑P Pdif 07 07 57.7 -0.5
baz=103,SNR=18
DGRG David-gareji 103.03 311 P Pdif 07 07 57.5 -0.7
S17A Black Ridge (B 103.08 53 ⇓P Pdif 07 07 59.1 +0.6
baz=103,SNR=12
B18A Beardsley Farm 103.09 42 ⇓P Pdif 07 07 59.1 +0.5
baz=103,SNR=6.2
T17A Navajo Res., N 103.11 54 ⇓P Pdif 07 07 59.5 +0.9
baz=103,SNR=8.1
R17A Hanksville Air 103.12 52 ⇑P Pdif 07 07 58.7 0.0
baz=103,SNR=13
EGMT Eagleton 103.15 42 ⇓P Pdif 07 07 59.2 +0.5
baz=103,SNR=7.8
EGMT Eagleton 103.15 42 *e*Pdif Pdif 07 07 59.8 +1.0
comp=Z,36nm,1.4s
EGMT *e*PP PP 07 12 14.9 +0.5
V17A Tonalea, Kykot 103.16 55 ⇑P Pdif 07 07 59.9 +1.1
baz=103
E18A Harlowton 103.17 44 ⇓P Pdif 07 07 59.3 +0.5
baz=103,SNR=12
X17A Forest Lakes 103.19 56 ⇑P Pdif 07 08 01.1 +2.2
baz=103
D18A Linhart Farms, 103.19 43 ⇓P Pdif 07 07 58.9 -0.1
baz=103,SNR=6.0
SRU San Rafael 103.23 51 ⇑P Pdif 07 07 57.9 -1.2
baz=103,SNR=8.3
SRU San Rafael 103.23 51 *e*Pdif Pdif 07 08 00.2 +1.1
comp=Z,24nm,1.4s
SRU San Rafael 103.23 51 *e*P Pdif 07 08 00.2 +1.0
SRU pmax pmax
comp=Z,24nm,1.4s
217A Green Valley 103.24 59 ⇓P Pdif 07 08 01.0 +1.9
baz=103,SNR=9.4
TUC Tucson 103.26 58 *e*Pdif Pdif 07 08 01.5 +2.2
comp=Z,4.8nm,1.1s
TUC Tucson 103.26 58 *e*P Pdif 07 08 01.5 +2.2
TUC pmax pmax
comp=Z,5.0nm,1.1s
J18A Kendall Valley 103.36 47 ⇑P Pdif 07 08 00.3 +0.6
baz=103,SNR=7.0
F18A Big Timber 103.37 44 ⇓P Pdif 07 08 00.2 +0.5
baz=103,SNR=14
K18A Toltan Ranch, 103.39 48 ⇑P Pdif 07 08 00.2 +0.4
baz=103,SNR=13
GCMT Greycliff 103.41 45 *e*Pdif Pdif 07 08 00.7 +0.7
comp=Z,15nm,1.5s
P18A Preston Nutter 103.42 51 ⇓P Pdif 07 08 00.4 +0.4
baz=104,SNR=10.0
L18A Fontenelle, Gr 103.44 48 ⇑P Pdif 07 08 00.7 +0.6
baz=104,SNR=12
MTA Mtatsminda 103.45 311 P Pdif 07 07 59.7 -0.4
M18A Lyman 103.45 49 ⇓P Pdif 07 08 00.4 +0.3
baz=104,SNR=7.2
I18A Diamond G Ranc 103.47 47 ⇓P Pdif 07 08 00.5 +0.2
baz=104,SNR=6.6
TBLG Delisi 103.49 311 *e*P Pdif 07 07 59.2 -1.1
TBLG Delisi 103.49 311 P Pdif 07 07 59.2 -1.1
H18A Shoshone NF, C 103.51 46 ⇓P Pdif 07 08 02.2 +1.8
baz=104
G18A Lazy EL Ranch, 103.52 45 ⇓P Pdif 07 08 00.3 -0.1
baz=104,SNR=6.5
Q18A Rafter H Ranch 103.54 51 ⇑P Pdif 07 08 00.3 -0.2
baz=104,SNR=16
O18A Roosevelt 103.57 50 ⇓P Pdif 07 08 01.3 +0.7
baz=104,SNR=14
C19A Slack Wire Ran 103.65 42 ⇑P Pdif 07 08 00.9 -0.1
baz=104,SNR=12
S18A Hurst Farm, Bl 103.72 53 ⇑P Pdif 07 08 02.4 +1.1
baz=104,SNR=17
BW06 Boulder Array 103.73 48 ⇓P Pdif 07 07 59.9 -1.5
baz=104,SNR=15
PDAR Pinedale Array 103.74 48 Pdiff Pdif 07 08 00.6 -0.8
comp=Z,5.9nm,0.9s,baz=256,slow=2.4,SNR=42
PDAR PKiKP PKiKP 07 12 19.6 +0.1
comp=Z,2.3nm,0.9s,baz=242,slow=1.9,SNR=3.6
PDAR PKKPbc PKKPbc 07 23 56.0 +1.6
comp=Z,1.0nm,0.5s,baz=108,slow=5.0,SNR=7.8
PDAR PKPPKP 07 32 12.5
comp=Z,2.2nm,1.1s,baz=90,slow=3.8,SNR=5.7
RLMT Red Lodge 103.75 45 ⇓P Pdif 07 08 02.2 +0.8
baz=104
RLMT Red Lodge 103.75 45 *e*Pdif Pdif 07 08 01.8 +0.3
comp=Z,11nm,1.4s
R18A Canyonlands Na 103.76 52 ⇓P Pdif 07 08 01.6 +0.1
baz=104,SNR=13
N18A Larsen Ranch, 103.78 49 ⇑P Pdif 07 08 02.2 +0.7
baz=104,SNR=14
D19A Cripps Ranch, 103.82 43 ⇑P Pdif 07 08 00.6 -1.2
baz=104
T18A Mexican Hat 103.84 53 ⇑P Pdif 07 08 03.3 +1.4
baz=104
Y18A Canyon Day Jun 103.85 57 ⇑P Pdif 07 08 03.8 +1.9
baz=104,SNR=8.2
V18A Ganado 103.86 55 ⇓P Pdif 07 08 03.8 +1.8
baz=104,SNR=6.7
U18A Rough Rock, Ch 103.88 54 ⇑P Pdif 07 08 03.2 +1.2
baz=104
218A Dragoon 103.89 59 ⇑P Pdif 07 08 04.7 +2.6
baz=104
X18A Snowflake 103.89 56 ⇑P Pdif 07 08 04.8 +2.7
baz=104,SNR=7.1
F19A Roth Farm, Mol 103.91 44 ⇓P Pdif 07 08 03.4 +1.2
baz=104,SNR=13
KBS Kingsbay 103.96 352 *e* Pdif 07 07 57.5 -4.9
KBS *e*PP PP 07 12 20.2 +0.6
KBS *e*SKS SKSac 07 18 34.5
KBS AMS AMS 07 47 31.8
comp=Z,4μm,25.9s
E19A Rath Farm, Rou 103.96 44 ⇑P Pdif 07 08 03.3 +0.9
baz=104,SNR=10
H19A Powell 103.99 46 ⇓P Pdif 07 08 04.2 +1.7
baz=104
KLMR Klimovskoe 104.00 331 *ce*P Pdif 07 08 00.4 -2.1
KLMR *i* 07 12 17.3
KLMR *i* S SKSac 07 18 31.7 -4.5
KLMR *i* SP SP 07 21 24.0 +0.1
KLMR *e*SS SS 07 27 00.8 -2.1
KLMR pmax pmax
comp=Z,226nm,1.5s
KLMR MLR MLR
comp=Z,5μm,22.0s
ZEI Tsey 104.03 312 *e*P Pdif 07 07 59.6 -3.1
ZEI *e*S SKSac 07 18 38.3 +1.1
ZEI pmax pmax
comp=Z,41nm,1.5s
I19A Meeteetse 104.04 46 ⇑P Pdif 07 08 02.5 -0.2
baz=104
J19A Crowheart 104.06 47 ⇓P Pdif 07 08 03.9 +1.0
baz=104,SNR=8.4
M19A Rock Springs 104.13 49 ⇑P Pdif 07 08 04.3 +1.1
baz=104
N19A John Jarvie Ra 104.16 50 ⇑P Pdif 07 08 04.2 +0.9
baz=104
Q19A Hogan Spring (104.22 51 ⇓P Pdif 07 08 04.2 +0.7
baz=104,SNR=11
O19A Miners Draw (B 104.24 50 ⇑P Pdif 07 08 03.8 +0.1
baz=104,SNR=20
K19A Absolon Red Bu 104.25 47 ⇑P Pdif 07 08 04.2 +0.5
baz=104,SNR=14
R19A Curley Farm, L 104.27 52 ⇑P Pdif 07 08 04.1 +0.3
baz=104,SNR=8.3

W19A	**Sanders**	**104.33**	**55**	⇑P		Pdif	07 08 05.9	+1.9	
	baz=104,SNR=6.6								
D20A	**Manuel Ranch,**	**104.33**	**43**	⇑P		Pdif	07 08 04.1	0.0	
	baz=104,SNR=9.7								
C20A	**Veseth Ranch,**	**104.35**	**42**	⇓P		Pdif	07 08 05.0	+0.8	
	baz=104,SNR=12								
P19A	**Cripple Cowboy**	**104.40**	**51**	⇑P		Pdif	07 08 05.2	+0.9	
	baz=104,SNR=15								
S19A	**Harvey Farm, M**	**104.40**	**53**	⇑P		Pdif	07 08 05.6	+1.3	
	baz=104,SNR=13								
E20A	**Meyer Farm, Mu**	**104.40**	**44**	⇑P		Pdif	07 08 04.9	+0.5	
	baz=104,SNR=8.1								
U19A	**Dine' College,**	**104.42**	**54**	⇓P		Pdif	07 08 06.5	+2.1	
	baz=104,SNR=8.1								
X19A	**St. Johns**	**104.44**	**56**	⇓P		Pdif	07 08 07.9	+3.4	
	baz=104								
GOF	**Gofitskoye**	**104.45**	**315**	*e*P		Pdif	07 08 19.9	+15	
GOF				pmax		pmax			
	comp=Z,30nm,1.0s								
F20A	**Billings**	**104.47**	**44**	⇑P		Pdif	07 08 06.4	+1.8	
	baz=104								
G20A	**Bridger**	**104.48**	**45**	⇑P		Pdif	07 08 06.1	+1.4	
	baz=104								
Y19A	**Nutrioso**	**104.49**	**57**	⇑P		Pdif	07 08 07.0	+2.2	
	baz=105,SNR=8.5								
T19A	**Beclabito**	**104.54**	**54**	⇑P		Pdif	07 08 06.9	+2.0	
	baz=105,SNR=10								
PV04	**Paradox Valley**	**104.54**	**52**	*e*Pdif		Pdif	07 08 06.6	+1.7	
219A	**White Tail Can**	**104.56**	**59**	⇓P		Pdif	07 08 08.4	+3.4	
	baz=105								
VRHR	**Novokhopersk**	**104.63**	**321**	*e*P		Pdif	07 08 04.1	-1.3	
VRHR				*i*			07 12 25.3		
VRHR				pmax		pmax			
	comp=Z,10.0nm,0.7s								
VRHR				pmax		pmax			
	comp=N,8.0nm,0.5s								
VRHR				pmax		pmax			
	comp=E,20nm,0.8s								
VRHR				pmax		pmax			
	comp=Z,40nm,1.2s								
VRHR				pmax		pmax			
	comp=N,20nm,0.7s								
VRHR				pmax		pmax			
	comp=E,40nm,0.9s								
K20A	**Yellowstone Ra**	**104.64**	**48**	⇓P		Pdif	07 08 05.5	+0.1	
	baz=105,SNR=20								
APA	**Apatity**	**104.66**	**339**	⇑*i*P		Pdif	07 08 04.2	-1.3	
APA				*i*			07 12 25.0		
APA				*i*			07 18 36.0		
APA				*i* SS		SS	07 27 21.0	+9.4	
APA				pmax		pmax			
	comp=Z,400nm,9.7s								
APA				pmax		pmax			
	comp=Z,210nm,1.5s								
APA				MLR		MLR			
	comp=Z,6μm,22.0s								
L20A	**Wamsutter**	**104.70**	**48**	⇑P		Pdif	07 08 05.0	-0.6	
	baz=105,SNR=6.8								
H20A	**Greybull**	**104.71**	**46**	⇑P		Pdif	07 08 06.3	+0.6	
	baz=105								
J20A	**Shoshoni**	**104.76**	**47**	⇓P		Pdif	07 08 05.7	-0.2	
	baz=105								
KIV	**Kislovodsk**	**104.81**	**314**	P		Pdif	07 08 04.0	-2.1	
KIV				*i*			07 12 28.2		
KIV				*i*			07 18 42.7		
KIV				*e*			07 19 26.2		
KIV				*i* PS		PS	07 21 38.8	-3.3	
KIV				*i* SS		SS	07 27 21.2	+6.2	
KIV				pmax		pmax			
	comp=Z,4.0nm,1.0s								
KIV				MLR		MLR			
	comp=Z,3μm,21.0s								
KIV	**Kislovodsk**	**104.81**	**314**	P		PKiKP	07 12 29.3	+7.8	
	SNR=5.7								
PV01	**Paradox Valley**	**104.82**	**52**	*e*Pdif		Pdif	07 08 07.6	+1.4	
	comp=Z,1μm,1.4s								
N20A	**Spence Gulch,**	**104.86**	**50**	⇓P		Pdif	07 08 06.3	0.0	
	baz=105,SNR=9.4								
M20A	**Sweetwater, Wa**	**104.86**	**49**	⇑P		Pdif	07 08 07.0	+0.6	
	baz=105								
P20A	**De Beque**	**104.86**	**51**	⇑P		Pdif	07 08 06.5	+0.1	
	baz=105,SNR=13								
O20A	**White River Ci**	**104.93**	**50**	P		Pdif	07 08 08.1	+1.4	
	baz=105,SNR=16								
MVCO	**Mesa Verde**	**104.94**	**53**	P		Pdif	07 08 09.1	+2.3	
	baz=105,SNR=7.4								
MVCO	**Mesa Verde**	**104.94**	**53**	*e*Pdif		Pdif	07 08 08.8	+2.0	
	comp=Z,23nm,1.4s								
R20A	**Redvale**	**104.97**	**52**	P		Pdif	07 08 09.3	+2.4	
	baz=105,SNR=7.9								
Q20A	**Ridgley Place,**	**104.98**	**51**	P		Pdif	07 08 08.6	+1.6	
	baz=105,SNR=21								
S20A	**Disappointment**	**105.00**	**53**	⇓P		Pdif	07 08 08.3	+1.3	
	baz=105								
X20A	**Quemado**	**105.09**	**56**	P		Pdif	07 08 11.2	+3.8	
	baz=105,SNR=12								
D21A	**La Casta Ranch**	**105.11**	**43**	⇓P		Pdif	07 08 08.4	+0.9	
	baz=105								
E21A	**Keefer Ranch,**	**105.12**	**44**	⇓P		Pdif	07 08 09.1	+1.6	
	baz=105								
F21A	**Absaloka Mine,**	**105.18**	**44**	⇑P		Pdif	07 08 09.5	+1.7	
	baz=105								
220A	**Playas Peak, P**	**105.18**	**59**	⇓P		Pdif	07 08 12.0	+4.2	
	baz=105								
320A	**Kipp Ranch, An**	**105.20**	**59**	⇑P		Pdif	07 08 11.7	+3.8	
	baz=105								
Y20A	**Horse Springs,**	**105.22**	**57**	⇑P		Pdif	07 08 10.1	+2.1	
	baz=105								
J21A	**Lysite**	**105.22**	**47**	⇓P		Pdif	07 08 09.1	+1.0	
	baz=105,SNR=7.6								
I21A	**Big Trails, Te**	**105.29**	**46**	⇓P		Pdif	07 08 08.3	+0.1	
	baz=105,SNR=8.0								
H21A	**Big Horn, Sher**	**105.37**	**46**	⇓P		Pdif	07 08 10.4	+1.7	
	baz=105								
ATD	**Arta Tunnel**	**105.40**	**280**	PKKPbc		PKKPbc	07 23 52.1	+3.7	
	comp=Z,7.9nm,0.8s,baz=249,slow=8.6,SNR=10								
L21A	**Rawlins**	**105.42**	**48**	⇑P		Pdif	07 08 08.3	-0.5	
	baz=106								
N21A	**Black Mountain**	**105.42**	**50**	⇑P		Pdif	07 08 08.9	0.0	
	baz=106,SNR=16								
K21A	**Alcova**	**105.44**	**48**	P		Pdif	07 08 10.2	+1.2	
	baz=106,SNR=13								
M21A	**Separation Pea**	**105.46**	**49**	⇑P		Pdif	07 08 08.7	-0.4	
	baz=106,SNR=9.5								
S21A	**Coal Bank Pass**	**105.47**	**53**	P		Pdif	07 08 11.6	+2.5	
	baz=106,SNR=8.6								
O21A	**Pagoda**	**105.51**	**50**	⇑P		Pdif	07 08 10.3	+1.1	
	baz=106								
BJO	**Bjornoya**	**105.52**	**347**	*e*PP		PP	07 12 30.6	-0.7	
BJO				AMS		AMS	07 53 49.3		
	comp=Z,5μm,25.3s								
Q21A	**Lamborn Mesa,**	**105.55**	**52**	P		Pdif	07 08 11.8	+2.4	
	baz=106,SNR=30								
RWWY	**Rawlins**	**105.57**	**49**	*e*Pdif		Pdif	07 08 10.7	+1.2	
	comp=Z,45nm,1.4s								
R21A	**Cimarron**	**105.60**	**52**	⇓P		Pdif	07 08 11.3	+1.6	
	baz=106,SNR=18								
U21A	**Nageezi**	**105.66**	**54**	⇓P		Pdif	07 08 12.5	+2.6	
	baz=106,SNR=5.3								
X21A	**Alamocita Cree**	**105.68**	**56**	⇑P		Pdif	07 08 12.8	+2.8	
	baz=106,SNR=6.2								
LAO	**LASA Array**	**105.69**	**43**	P		Pdif	07 08 12.0	+1.9	
	baz=106,SNR=6.9								
LAO	**LASA Array**	**105.69**	**43**	*e*Pdif		Pdif	07 08 11.6	+1.5	
	comp=Z,88nm,1.7s								
W21A	**San Fidel**	**105.75**	**55**	P		Pdif	07 08 13.8	+3.4	
	baz=106,SNR=7.8								
J22A	**Midwest**	**105.92**	**47**	⇑P		Pdif	07 08 11.5	+0.4	
	baz=106,SNR=12								
KEV	**Kevo**	**105.94**	**342**	*e*Pdif		Pdif	07 08 10.3	-0.9	
	comp=Z,160nm,1.4s								
KEV	**Kevo**	**105.94**	**342**	*e*P		Pdif	07 08 10.3	-0.9	
KEV				pmax		pmax			
	comp=Z,161nm,1.4s								
KEV	**Kevo**	**105.94**	**342**	*e*p		Pdif	07 08 08.9	-2.3	
	comp=Z,22nm,0.8s								
KEV	**Kevo**	**105.94**	**342**	*e*pkp		PKiKP	07 12 23.9	+1.1	
K22A	**Casper**	**105.97**	**48**	⇑P		Pdif	07 08 11.6	+0.3	
	baz=106,SNR=13								
SMCO	**Snowmass**	**105.98**	**51**	*e*Pdif		Pdif	07 08 12.9	+1.5	
	comp=Z,25nm,1.4s								
M22A	**Cedar Creek Ra**	**106.06**	**49**	⇓P		Pdif	07 08 12.3	+0.6	
	baz=106								
Q22A	**Crested Butte,**	**106.06**	**51**	⇑P		Pdif	07 08 12.6	+0.9	
	baz=106,SNR=20								
VORD	**Divnogorie**	**106.11**	**321**	*e*P		Pdif	07 08 10.2	-1.7	
VORD				*e*			07 12 33.8		
VORD				*e*		Sdif	07 18 42.4		
VORD				*e*S		Sdif	07 20 00.0	-4.8	
VORD				*e*SS		SS	07 27 30.5	-1.8	
VORD				pmax		pmax			
	comp=Z,20nm,0.4s								
VORD				pmax		pmax			
	comp=N,40nm,0.5s								
VORD				pmax		pmax			
	comp=E,50nm,0.6s								
VORD				pmax		pmax			
	comp=Z,20nm,0.4s								
VORD				pmax		pmax			
	comp=N,30nm,0.3s								
VORD				pmax		pmax			
	comp=E,40nm,0.4s								
VORD				pmax		pmax			
	comp=Z,20nm,1.4s								
VORD				pmax		pmax			
	comp=N,20nm,0.7s								
VORD				pmax		pmax			
	comp=E,30nm,0.9s								
VORD				smax					
	comp=N,800nm,12.6s								
VORD				smax					
	comp=Z,120nm,12.5s								
VORD				smax					
	comp=E,70nm,7.3s								
VORD				MLR		MLR			
	comp=Z,6μm,25.0s								
VORD				MLR		MLR			
	comp=N,1μm,18.0s								
VORD				MLR		MLR			
	comp=E,2μm,19.0s								
L22A	**Ellis Ranch, M**	**106.11**	**48**	P		Pdif	07 08 13.4	+1.5	
	baz=106,SNR=8.5								
P22A	**Eagle**	**106.11**	**51**	⇓P		Pdif	07 08 12.6	+0.7	
	baz=106,SNR=12								
MOS	**Moscow**	**106.12**	**326**	*e*P		Pdif	07 08 10.4	-1.6	
MOS				*e*			07 12 36.6		
MOS				*e*PPP			07 14 46.9		
MOS				*e*SS		SS	07 27 53.7	+22	
MOS				*e*SSS			07 31 32.5		
MOS				pmax		pmax			
	comp=Z,56nm,1.1s								
MOS				pmax		pmax			
	comp=Z,100nm,1.4s								
VSR	**Storozhevoye**	**106.14**	**322**	*e*P		Pdif	07 08 11.0	-1.1	
VSR				*e*			07 12 32.1		
VSR				*e*			07 18 42.4		
VSR				*e*S		Sdif	07 19 55.2	-10	
VSR				*e*SS		SS	07 27 29.5	-3.2	
VSR				pmax		pmax			
	comp=Z,20nm,1.3s								
VSR				pmax		pmax			
	comp=N,6.0nm,0.5s								
VSR				pmax		pmax			
	comp=E,10.0nm,1.0s								
VSR				pmax		pmax			
	comp=Z,50nm,1.5s								
VSR				pmax		pmax			
	comp=N,10.0nm,1.1s								
VSR				pmax		pmax			
	comp=E,10.0nm,0.9s								
VSR				pmax		pmax			
	comp=Z,30nm,1.3s								
VSR				pmax		pmax			
	comp=N,10.0nm,1.0s								
VSR				pmax		pmax			
	comp=E,30nm,1.2s								
VSR				pmax		pmax			
	comp=Z,20nm,1.0s								
VSR				pmax		pmax			
	comp=N,20nm,1.3s								
VSR				pmax		pmax			
	comp=E,20nm,0.9s								
VSR				MLR		MLR			
	comp=Z,6μm,22.0s								
VSR				MLR		MLR			
	comp=N,2μm,19.0s								
VSR				MLR		MLR			
	comp=E,4μm,26.0s								
LAZ	**Ladron**	**106.22**	**56**	*e*Pdif		Pdif	07 08 14.4	+2.0	
	comp=E,5.1nm,1.5s								
O22A	**Kremmling**	**106.22**	**50**	⇑P		Pdif	07 08 13.6	+1.1	
	baz=106,SNR=14								
S22A	**4UR Ranch, Cre**	**106.22**	**53**	⇑P		Pdif	07 08 13.7	+1.3	
	baz=106,SNR=19								
T22A	**Edith**	**106.22**	**53**	⇑P		Pdif	07 08 14.3	+1.9	
	baz=106								
N22A	**Wattenberg Ran**	**106.22**	**49**	⇑P		Pdif	07 08 13.6	+1.2	
	baz=106,SNR=5.9								
R22A	**Saguache, Gunn**	**106.24**	**52**	⇑P		Pdif	07 08 14.8	+2.2	
	baz=106								
U22A	**Llaves**	**106.31**	**54**	⇓P		Pdif	07 08 13.8	+1.0	
	baz=106,SNR=6.7								
ARCES	**ARCESS Array B**	**106.50**	**342**	Pdiff		Pdif	07 08 13.4	-0.3	
	comp=E,73nm,0.9s,baz=56,slow=4.7,SNR=49								
ARCES				PKiKP		PKiKP	07 12 22.9	-1.0	
	comp=E,11nm,0.9s,baz=91,slow=1.4,SNR=15								
ARCES				PKKPbc		PKKPbc	07 23 45.5	-1.3	
	comp=E,2.8nm,0.5s,baz=235,slow=3.2,SNR=13								
ARCES	**ARCESS Array B**	**106.50**	**342**	P		Pdif	07 08 13.4	-0.3	
ARCES				pmax		pmax			
	comp=Z,73nm,0.9s								
ARCES				pmax		pmax			
	comp=Z,11nm,0.9s								
ARCES				pmax		pmax			
	comp=Z,3.0nm,0.5s								
ARE0	**ARCESS Array S**	**106.50**	**342**	*e*Pdif		Pdif	07 08 13.2	-0.5	
N23A	**Red Feather La**	**106.60**	**49**	⇓P		Pdif	07 08 14.6	+0.5	
	baz=107,SNR=18								
L23A	**Garrett**	**106.64**	**48**	⇑P		Pdif	07 08 14.3	0.0	
	baz=107,SNR=11								
BNM	**Barren Site**	**106.66**	**56**	*e*Pdif		Pdif	07 08 15.9	+1.5	
BNM				*e*PKPdf		PKiKP	07 12 25.1	0.0	
O23A	**Lake Granby, G**	**106.69**	**50**	⇓P		Pdif	07 08 14.9	+0.4	
	baz=107								
ANMO	**Albuquerque**	**106.74**	**55**	PKKPab		PKKPab	07 24 02.4	+2.8	
	comp=Z,10nm,0.9s,baz=121,slow=7.0,SNR=22								
P23A	**Jefferson**	**106.84**	**51**	⇓P		Pdif	07 08 16.0	+0.8	
	baz=107								
U23A	**El Rito**	**106.85**	**54**	⇑P		Pdif	07 08 16.3	+1.1	
	baz=107,SNR=5.8								
OBN	**Obninsk**	**106.85**	**326**	⇓*e*P		Pdif	07 08 14.6	-0.6	
OBN				*i*			07 12 41.6		
OBN				*i*			07 18 47.7		
OBN				*i*			07 19 36.5		
OBN				*e*PPS			07 23 05.7		
OBN				*e*SS		SS	07 27 36.2	-5.9	
OBN				pmax		pmax			
	comp=Z,32nm,1.0s								
OBN				MLR		MLR			
	comp=Z,4μm,20.0s								
V23A	**Ortiz Mt. (NFS**	**106.90**	**55**	⇓P		Pdif	07 08 17.6	+2.1	
	baz=107,SNR=5.3								
T23A	**Casias Ranch,**	**106.91**	**53**	⇓P		Pdif	07 08 17.7	+2.2	
	baz=107								
PHWY	**Pilot Hill**	**106.92**	**49**	*e*Pdif		Pdif	07 08 17.2	+1.6	
	comp=Z,27nm,1.5s								
ISCO	**Idaho Springs**	**106.97**	**50**	⇓P		Pdif	07 08 16.9	+1.2	
	baz=107,SNR=6.9								
ISCO	**Idaho Springs**	**106.97**	**50**	*e*Pdif		Pdif	07 08 17.4	+1.7	
	comp=Z,12nm,1.5s								
ISCO				*e*PKPdf		PKiKP	07 12 26.6	+1.0	
ISCO	**Idaho Springs**	**106.97**	**50**	*e*P		Pdif	07 08 17.4	+1.6	
ISCO				pmax		pmax			
	comp=Z,12nm,1.5s								
SOC	**Sochi**	**106.99**	**314**	*e*P		Pdif	07 08 10.5	-5.3	
SOC				*e*			07 12 42.6		
SOC				*e*			07 19 29.0		
SOC				pmax		pmax			
	comp=Z,55nm,1.6s								
SOC				MLR		MLR			
	comp=Z,3μm,19.0s								
JOF	**Joensuu**	**107.12**	**335**	*e*P		Pdif	07 08 14.2	-2.2	
JOF				pmax		pmax			
	comp=Z,8.0nm,0.7s								
JOF	**Joensuu**	**107.12**	**335**	*e*p		Pdif	07 08 14.2	-2.2	
	comp=Z,7.8nm,0.7s								
JOF	**Joensuu**	**107.12**	**335**	*e*pkp		PKiKP	07 12 24.5	-0.7	
Y23A	**Lovelace Mesa,**	**107.15**	**57**	⇓P		Pdif	07 08 17.9	+1.3	
	baz=107								
SDCO	**Great Sand Dun**	**107.27**	**52**	⇑P		Pdif	07 08 18.2	+1.1	
	baz=107,SNR=8.6								
O24A	**Longmont**	**107.35**	**50**	⇓P		Pdif	07 08 18.4	+0.9	
	baz=107								
Q24A	**Divide**	**107.42**	**51**	⇓P		Pdif	07 08 19.3	+1.6	
	baz=108								
KTK1	**Kautokeino**	**107.47**	**342**	*e*		Pdif	07 08 17.4	-0.6	
KTK1				*e*PP		PP	07 12 44.0	-1.6	
KTK1				*e*SKS		SKSac	07 18 48.8	-2.6	
KTK1				AMS		AMS	07 47 20.1		
	comp=Z,28μm,46.3s								
S24A	**Houchin Ranch,**	**107.51**	**53**	⇑P		Pdif	07 08 18.7	+0.5	
	baz=108,SNR=5.8								
R24A	**Sanders Place,**	**107.53**	**52**	⇑P		Pdif	07 08 19.9	+1.6	
	baz=108								
P24A	**Kohler Place,**	**107.54**	**51**	⇑P		Pdif	07 08 20.6	+2.3	
	baz=108								
U24A	**Moreno Valley**	**107.58**	**54**	⇑P		Pdif	07 08 20.7	+2.3	
	baz=108								
RSSD	**Black Hills**	**107.58**	**46**	*e*Pdif		Pdif	07 08 19.1	+0.6	
	comp=Z,19nm,1.5s								
RSSD	**Black Hills**	**107.58**	**46**	*e*P		Pdif	07 08 19.1	+0.6	
RSSD				pmax		pmax			
	comp=Z,19nm,1.5s								
V24A	**Rampart Ranch,**	**107.64**	**55**	⇓P		Pdif	07 08 21.3	+2.5	
	baz=108								
T24A	**Torres, Weston**	**107.69**	**53**	⇓P		Pdif	07 08 21.4	+2.4	
	baz=108								
MNTX	**Cornudas Mount**	**107.87**	**59**	⇓P		Pdif	07 08 20.9	+1.1	
	baz=108								
P25A	**Willow Gulch B**	**108.11**	**51**	⇓P		Pdif	07 08 21.6	+0.7	
	baz=108								
S25A	**Rebets Cordova**	**108.12**	**52**	⇑P		Pdif	07 08 22.4	+1.5	
	baz=108								
Q25A	**Bedland, Calha**	**108.12**	**51**	⇑P		Pdif	07 08 22.7	+1.8	
	baz=108								
V25A	**Rancho No Teng**	**108.16**	**54**	⇑P		Pdif	07 08 22.8	+1.7	
	baz=108								
R25A	**Fountain Ranch**	**108.18**	**52**	⇓P		Pdif	07 08 23.0	+1.9	
	baz=108								
T25A	**Trinidad**	**108.19**	**53**	⇑P		Pdif	07 08 22.9	+1.7	
	baz=108								
U25A	**Circle Dot Ran**	**108.28**	**54**	⇓P		Pdif	07 08 23.9	+2.4	
	baz=108								
Y25A	**Mesa, Roswell**	**108.28**	**56**	⇓P		Pdif	07 08 23.2	+1.6	
	baz=108								
W25A	**X Bar L Ranch,**	**108.35**	**55**	⇓P		Pdif	07 08 23.8	+1.9	
	baz=108								
TRO	**Tromso**	**108.42**	**343**	*e*PP		PP	07 12 51.1	-1.5	
TRO				*e*SKS		SKSac	07 18 52.4	-3.1	
TRO				AMS		AMS	07 58 18.5		
	comp=Z,7μm,20.0s								
ANN	**Anapa**	**108.42**	**315**	*i* P		Pdif	07 08 19.4	-2.8	
ANN				*i*			07 12 51.2		
ANN				*e*PPP			07 15 14.2		
ANN				*e*			07 19 36.4		
ANN				*e*SS		SS	07 28 01.5	-2.6	
ANN				pmax		pmax			
	comp=Z,28nm,1.0s								
ANN				pmax		pmax			
	comp=Z,187nm,8.4s								
MALT	**Malatya**	**108.64**	**308**	*e*Pdif		Pdif	07 08 23.7	+0.6	
	comp=Z,4.2nm,0.8s								
MALT	**Malatya**	**108.64**	**308**	*e*P		Pdif	07 08 23.7	+0.5	
MALT				pmax		pmax			
	comp=Z,4.0nm,0.8s								
MALT	**Malatya**	**108.64**	**308**	P		Pdif	07 08 24.3	+1.1	
V26A	**Tequesquite Ra**	**108.84**	**54**	⇓P		Pdif	07 08 25.6	+1.5	
	baz=109								
DAG	**Danmarks Havn**	**109.00**	**357**	*i* P		PKiKP	07 12 24.0	-4.4	
TXAR	**Lajitas Array**	**109.50**	**61**	Pdif		Pdif	07 08 32.3	+5.2	
TXAR				PKPdf		PKiKP	07 12 31.8	+1.1	
TXAR				PKKPbc		PKKPbc	07 23 35.1	-1.0	
TXAR				PKKP		PKKPdf	07 23 50.7	-1.3	
TXAR				P'P'			07 32 00.8		
TXAR	**Lajitas Array**	**109.50**	**61**	Pdiff		Pdif	07 08 32.3	+5.2	
	comp=Z,0.9nm,0.9s,baz=274,slow=4.9,SNR=6.9								
TXAR				PKiKP		PKiKP	07 12 31.8	+1.1	
	comp=Z,3.7nm,1.0s,baz=215,slow=3.2,SNR=16								
TXAR				PKKPbc		PKKPbc	07 23 35.1	-1.0	
	comp=Z,1.5nm,0.7s,baz=105,slow=4.9,SNR=8.3								
TXAR				PKKP		PKKPdf	07 23 50.7	-1.3	
	comp=Z,8.9nm,0.8s,baz=96,slow=5.6,SNR=24								
TXAR				PKPPKP			07 32 00.8		
	comp=Z,0.9nm,1.0s,baz=113,slow=2.9,SNR=5.4								
TXAR	**Lajitas Array**	**109.50**	**61**	P		Pdif	07 08 32.3	+5.3	
TXAR							07 23 35.1		
TXAR				pmax		pmax			
	comp=Z,1.0nm,0.9s								
TXAR				pmax		pmax			
	comp=Z,4.0nm,1.0s								
TXAR				pmax		pmax			
	comp=Z,2.0nm,0.7s								
TXAR				pmax		pmax			
	comp=Z,9.0nm,0.8s								
TXAR				pmax		pmax			
	comp=Z,1.0nm,1.0s								
KAF	**Kangasniemi**	**109.57**	**335**	*e*P		Pdif	07 08 25.1	-2.2	
KAF				pmax		pmax			
	comp=Z,7.0nm,0.6s								
KAF	**Kangasniemi**	**109.57**	**335**	*e*p		Pdif	07 08 25.1	-2.2	
	comp=Z,6.9nm,0.6s								
KAF	**Kangasniemi**	**109.57**	**335**	*e*pkp		PKiKP	07 12 28.4	-1.4	
KMBO	**Kilima Mbogo**	**109.87**	**267**	*e*Pdif		Pdif	07 08 31.9	+3.2	
KMBO				*e*PKPdf		PKiKP	07 12 32.4	+0.6	
KMBO				PKPdf		PKiKP	07 12 34.3	+2.5	
KMBO				PKKPbc		PKKPbc	07 23 36.6	+2.2	
KMBO				PKKP		PKKPdf	07 23 50.5	-0.5	
KMBO	**Kilima Mbogo**	**109.87**	**267**	Pdiff		Pdif	07 08 33.0	+4.3	
	comp=Z,9.4nm,1.0s,baz=180,slow=24,SNR=12								
KMBO				PKiKP		PKiKP	07 12 34.3	+2.5	
	comp=Z,11nm,1.0s,baz=181,slow=24,SNR=10								
KMBO				PKKPbc		PKKPbc	07 23 36.6	+2.2	
	comp=Z,5.8nm,1.0s,baz=180,slow=24,SNR=6.7								
KMBO				PKKP		PKKPdf	07 23 50.5	-0.5	
	comp=Z,3.0nm,0.8s,baz=180,slow=24,SNR=4.4								
KMBO	**Kilima Mbogo**	**109.87**	**267**	*e*P		Pdif	07 08 31.9	+3.2	
KMBO							07 23 36.6		
FINES	**FINESS Array B**	**109.96**	**334**	Pdif		Pdif	07 08 28.0	-1.0	
FINES				PKP

AKASG	**Malin Array Be**	**112.35**	**323**		Pdiff	Pdif	07 08 37.8	-1.9
	comp=Z,0.6nm,0.4s,baz=62,slow=4.2,SNR=7.2							
AKASG					PKiKP	PKiKP	07 12 35.6	+0.3
	comp=Z,5.7nm,0.5s,baz=58,slow=2.6,SNR=17							
AKASG					PP	PP	07 13 22.5	+1.0
	comp=Z,26nm,1.0s,baz=60,slow=6.6,SNR=18							
AKASG					PKKPbc	PKKPbc	07 23 26.5	-1.0
	comp=Z,1.3nm,0.5s,baz=258,slow=4.4,SNR=4.2							
AKASG	**Malin Array Be**	**112.35**	**323**	*i*	PKIKP	PKiKP	07 12 35.6	+0.2
AKASG							07 13 22.5	
AKASG					pmax	pmax		
	comp=Z,6.0nm,0.5s							
AKASG					pmax	pmax		
	comp=Z,26nm,1.0s							
AKASG					pmax	pmax		
	comp=Z,1.0nm,0.5s							
AKBB	**Malin Array Si**	**112.35**	**323**	*e*	PKPdf	PKiKP	07 12 34.9	-0.5
AKBB				*e*	PP	PP	07 13 22.1	+0.6
ISAL	**Salakas**	**112.36**	**328**	*e*	P	PKiKP	07 12 34.7	-0.5
ISAL					AMB	AMB	07 12 37.2	
	comp=Z,12nm,1.1s							
ISAL				*e*	PP	PP	07 13 19.9	-1.5
KIEV	**Kiev**	**112.36**	**323**	*e*	Pdif	Pdif	07 08 39.2	-0.6
KIEV				*e*	PKPdf	PKiKP	07 12 32.1	-3.3
KIEV				*e*	PP	PP	07 13 22.1	+0.5
IIGN	**Ignalina**	**112.39**	**328**	*e*	P	PKiKP	07 12 35.1	-0.2
IIGN					AMB	AMB	07 12 37.3	
	comp=Z,17nm,1.0s							
EIL	**Elat**	**112.48**	**299**		PKKPbc	PKKPbc	07 23 29.1	+2.7
	comp=Z,4.9nm,0.5s,baz=304,slow=3.7,SNR=5.8							
JCT	**Junction City**	**112.74**	**60**	*e*	PKPdf	PKiKP	07 12 36.9	+0.2
ECSD	**EROS Data Cent**	**112.91**	**45**	*e*	PKPdf	PKiKP	07 12 35.5	-1.2
WMOK	**Wichita Mounta**	**113.04**	**55**	*e*	PKPdf	PKiKP	07 12 37.2	0.0
JMIC	**Jan Mayen**	**113.44**	**352**	*e*	PP	PP	07 13 29.6	+1.1
SUMG	**Summit**	**113.54**	**2**	*e*	PKPdf	PKiKP	07 12 38.0	+0.9
SUMG	**Summit**	**113.54**	**2**	*i*	P	PKiKP	07 12 38.2	+1.2
SUMG				*i*			07 13 40.6	
SUMG	**Summit**	**113.54**	**2**	*i*	P	PKKPbc	07 23 23.3	-0.8
	comp=Z,16nm,1.0s							
SUMG								
	comp=Z,4μm,28.0s							
NSS	**Namsos**	**113.70**	**341**	*e*	PP	PP	07 13 29.3	-1.2
KIS	**Kishinev**	**113.75**	**319**	*e*	PKP	x	07 13 03.0	
KIS				*e*	SKKS	Sdif	07 21 06.0	-2.6
KIS	**Kishinev**	**113.75**	**319**	*i*	PS	PS	07 23 23.0	+15
KSU1	**Kansas State U**	**113.96**	**50**	*e*	PKPdf	PKiKP	07 12 39.3	+0.5
BOSA	**Boshof**	**114.47**	**235**	*e*	PKPdf	PKiKP	07 12 41.7	+1.6
BOSA	**Boshof**	**114.47**	**235**		PKP	PKiKP	07 12 40.7	+0.5
	comp=Z,12nm,0.6s,baz=121,slow=1.7,SNR=17							
BOSA					PKKPab	PKKPab	07 23 22.7	-3.6
	comp=Z,3.8nm,0.8s,baz=296,slow=13,SNR=4.3							
BOSA	**Boshof**	**114.47**	**235**		PKIKP	PKiKP	07 12 40.7	+0.6
BOSA					pmax	pmax		
	comp=Z,12nm,0.6s							
BOSA					pmax	pmax		
	comp=Z,4.0nm,0.8s							
SUW	**Suwalki**	**114.55**	**328**	*e*	Pdiff	Pdif	07 08 49.7	+0.2
SUW				*e*	PKiKP	PKiKP	07 12 40.0	+0.5
SUW					LMZ		07 56 35.2	
	comp=Z,12μm,29.5s							
SUW	**Suwalki**	**114.55**	**328**	*e*	PKPdf	PKiKP	07 12 39.2	-0.3
SUW	**Suwalki**	**114.55**	**328**	*i*	PKIKP	PKiKP	07 12 40.0	+0.5
CFR	**Carcaliu**	**114.75**	**317**	⇓	P	PKiKP	07 12 39.9	-0.2
CFR	**Carcaliu**	**114.75**	**317**	⇓	*i*P	PKiKP	07 12 39.9	-0.2
TIRR	**Tirgusor**	**114.77**	**316**	⇓	P	PKiKP	07 12 40.4	+0.2
TIRR	**Tirgusor**	**114.77**	**316**	⇓	*i*P	PKiKP	07 12 40.4	+0.2
EYMN	**Ely**	**115.10**	**39**	*e*	PKPdf	PKiKP	07 12 39.6	-1.1
TESR		**115.32**	**319**	⇑	P	PKiKP	07 12 41.6	+0.4
TESR		**115.32**	**319**	⇑	*i*P	PKiKP	07 12 41.6	+0.4
VRI	**Vrincioaia**	**115.48**	**318**	⇑	P	PKiKP	07 12 42.2	+0.6
VRI	**Vrincioaia**	**115.48**	**318**	⇑	*i*P	PKiKP	07 12 42.2	+0.7
LBTB	**Lobatse**	**115.49**	**239**	*e*	PKPdf	PKPdf	07 13 43.0	+0.8
LBTB	**Lobatse**	**115.49**	**239**		PKP	PKPdf	07 13 43.2	+1.0
	comp=Z,28nm,1.1s,baz=146,slow=3.5,SNR=21							
LBTB					PKKPab	PKKPab	07 23 17.1	-4.6
	comp=Z,6.2nm,0.9s,baz=318,slow=6.6,SNR=6.7							
LBTB	**Lobatse**	**115.49**	**239**		PKIKP	PKPdf	07 12 43.2	+1.0
LBTB							07 23 17.1	
LBTB					pmax	pmax		
	comp=Z,28nm,1.1s							
LBTB					pmax	pmax		
	comp=Z,6.0nm,0.9s							
LVV	**L'vov**	**115.78**	**323**	*e*	PKIKP	PKPdf	07 12 41.0	-1.0
LVV				*i*			07 13 48.0	
LVV				*e*	PPP		07 16 13.0	
LVV				*i*			07 23 23.0	
SCIA	**State Center**	**115.80**	**46**	*e*	PKPdf	PKPdf	07 12 43.5	+1.2
SCIA				*e*	PP	PP	07 13 44.8	-1.4
HFS	**Hagfors**	**115.83**	**336**		PKKPbc	PKKPbc	07 23 14.1	-1.8
	comp=Z,1.5nm,0.6s,baz=188,slow=4.1,SNR=4.3							
BUR08	**Bucovina Ar. S**	**115.87**	**320**	*e*	PKPdf	PKPdf	07 12 42.0	-0.2
BURAR	**Bucovina Array**	**115.87**	**320**	⇓	P	PKiKP	07 12 43.0	+0.8
BURAR	**Bucovina Array**	**115.87**	**320**	⇓	*i*P	PKiKP	07 12 43.0	+0.8
BURAR	**Bucovina Array**	**115.87**	**320**	⇑	*i*P	PKKPbc	07 23 16.3	+0.9
MLR	**Muntele Rosu**	**116.12**	**318**	⇓	P	PKPdf	07 12 43.1	+0.3
MLR	**Muntele Rosu**	**116.12**	**318**	⇓	*i*P	PKPdf	07 12 43.1	+0.3
MLR	**Muntele Rosu**	**116.12**	**318**	⇑	*i*P	PKKPbc	07 23 14.8	+0.4
HKT	**Hockley**	**116.22**	**60**	*e*	PKPdf	PKPdf	07 12 43.5	0.0
NB2	**NORSAR Subarra**	**116.22**	**338**		PKPdf	PKPdf	07 12 41.8	-0.7
	baz=44,slow=1.9							
NOA	**NORSAR Array B**	**116.22**	**338**		PKP	PKPdf	07 12 41.8	-0.7
	comp=Z,27nm,1.0s,baz=53,slow=2.0,SNR=38							
NOA					PP	PP	07 13 47.5	-0.8
	comp=Z,13nm,1.0s,baz=50,slow=6.3,SNR=5.7							
NOA					SKP		07 16 11.4	
	comp=Z,3.6nm,1.0s,baz=51,slow=2.1,SNR=4.0							
NOA					PKKPbc	PKKPbc	07 23 14.4	-0.1
	comp=Z,3.1nm,0.9s,baz=232,slow=3.6,SNR=9.3							
NOA					PKKP	PKKPdf	07 23 35.3	-4.6
	comp=Z,1.4nm,1.0s,baz=230,slow=3.5,SNR=4.9							
NOA	**NORSAR Array B**	**116.22**	**338**		PKIKP	PKPdf	07 12 41.8	-0.7
NOA							07 13 47.6	
NOA							07 23 35.3	
NOA					pmax	pmax		
	comp=Z,27nm,1.0s							
NOA					pmax	pmax		
	comp=Z,13nm,1.0s							
NOA					pmax	pmax		
	comp=N,4.0nm,1.0s							
NOA					pmax	pmax		
	comp=Z,3.0nm,0.9s							
NOA					pmax	pmax		
	comp=Z,1.0nm,1.0s							
DOPR	**Dopca**	**116.33**	**319**	⇓	*i*P	PKPdf	07 12 44.5	+1.3
SUR	**Sutherland**	**116.40**	**229**	*e*	PKPdf	PKPdf	07 12 45.5	+1.8
SUR	**Sutherland**	**116.40**	**229**		PKP	PKPdf	07 12 44.1	+0.4
	comp=Z,37nm,1.0s,baz=140,slow=5.4,SNR=6.4							
NAO01	**NORSAR Array S**	**116.47**	**338**	*e*	PKPdf	PKPdf	07 12 42.4	-0.5
MOL	**Molde**	**116.49**	**340**	*e*	PP	PP	07 13 49.5	-0.6
WAR	**Warsaw**	**116.50**	**326**	*e*	PKiKP	PKiKP	07 12 43.7	+0.4
WAR				*e*	PP	PP	07 13 54.3	+3.7
WAR					LMZ		07 57 02.2	
	comp=Z,9μm,30.5s							
WAR	**Warsaw**	**116.50**	**326**	*i*	PKIKP	PKPdf	07 12 43.7	+0.4
WAR				*e*			07 13 54.3	
KWP	**Kalwaria Pacla**	**116.64**	**323**	*e*	PKiKP	PKiKP	07 12 44.7	+1.0
KWP					LMZ		08 00 16.5	
	comp=Z,10μm,27.4s							
KWP	**Kalwaria Pacla**	**116.64**	**323**	⇑	P	PKPdf	07 12 44.5	+0.9
KWP	**Kalwaria Pacla**	**116.64**	**323**	*i*	PKIKP	PKPdf	07 12 44.7	+1.1
KWP					MLR	MLR		
	comp=Z,10μm,27.4s							
KWP	**Kalwaria Pacla**	**116.64**	**323**	⇑	*i*P	PKPdf	07 12 44.5	+0.9
KWP	**Kalwaria Pacla**	**116.64**	**323**	⇑	*i*P	PKKPbc	07 23 06.6	-6.1
VOIR		**116.73**	**318**	⇓	P	PKPdf	07 12 44.7	+0.8
VOIR		**116.73**	**318**	⇓	*i*P	PKPdf	07 12 44.7	+0.8
VOIR		**116.73**	**318**	⇓	*i*P	PKKPbc	07 23 11.4	-0.9
BMR	**Baia Mare**	**116.93**	**321**		P	PKPdf	07 12 45.4	+1.2
COWI	**Conover**	**117.26**	**41**	*e*	PKPdf	PKPdf	07 12 44.0	-0.9
MIAR	**Mount Ida**	**117.29**	**54**	*e*	PKPdf	PKPdf	07 12 43.9	-1.5
UZH	**Uzhgorod**	**117.30**	**322**	*e*	P	Pdif	07 09 00.8	-0.9
UZH				*i*			07 12 44.8	
UZH				*i*			07 13 54.0	
UZH					MLR	MLR		
	comp=N,2μm,22.0s							
UZH					MLR	MLR		
	comp=E,2μm,22.0s							
UZH					MLR	MLR		
	comp=Z,1μm,22.0s							
TRPA	**Tarpa**	**117.35**	**322**	⇑	*i*P	PKPdf	07 12 45.3	+0.3
ALN	**Alexandroupoli**	**117.46**	**313**		P	PKPdf	07 12 44.4	-1.1
JFWS	**Jewell Farm**	**117.60**	**44**	*e*	PKPdf	PKPdf	07 12 43.4	-2.3
STHS	**Stebnicka Huta**	**117.60**	**323**	*e*	PKP	PKPdf	07 12 46.8	+1.3
STHS	**Stebnicka Huta**	**117.60**	**323**	*e*	PKP	PKPdf	07 12 46.8	+1.3
CRVS	**Cervenica-Dubn**	**117.69**	**323**	*e*	PKP	PKPdf	07 12 45.9	+0.2
CRVS	**Cervenica-Dubn**	**117.69**	**323**	*e*	PKP	PKPdf	07 12 45.9	+0.2
KONO	**Kongsberg**	**117.74**	**337**	*e*	PP	PP	07 13 58.0	-0.9
KONO					AMS	AMS	08 05 15.0	
	comp=Z,5μm,16.4s							
KONO	**Kongsberg**	**117.74**	**337**	*e*	PKPdf	PKPdf	07 12 45.1	-0.4
DRGR		**117.76**	**320**	⇑	P	PKPdf	07 12 46.0	+0.1
DRGR		**117.76**	**320**	⇑	*i*P	PKPdf	07 12 46.0	+0.1
FOO	**Floro**	**118.01**	**341**	*e*	PP	PP	07 13 59.3	-1.3
FOO					AMS	AMS	07 56 46.8	
	comp=Z,4μm,38.5s							
GKP	**Gorka Klasztor**	**118.03**	**329**	*e*	PKiKP	PKiKP	07 12 46.5	+0.3
GKP				*e*	PP	PP	07 14 04.5	+3.3
GKP					LMZ		08 02 10.1	
	comp=Z,13μm,24.0s							
GKP	**Gorka Klasztor**	**118.03**	**329**	*i*	PKIKP	PKPdf	07 12 46.5	+0.3
GKP				*e*			07 14 04.5	
GKP					MLR	MLR		
	comp=Z,13μm,24.0s							
OJC	**Ojcow**	**118.09**	**325**	*e*	PKPdf	PKPdf	07 12 46.2	-0.2
OJC				*e*	PP	PP	07 14 00.9	-0.9
OJC				*e*	SKKSac	SKKSac	07 20 53.8	-2.6
OJC					L		08 06 29.9	
	comp=Z,4.4nm,20.7s							
OJC	**Ojcow**	**118.09**	**325**	*e*	PKIKP	PKPdf	07 12 46.2	-0.2
OJC				*e*			07 14 00.9	
NIE	**Niedzica**	**118.15**	**324**	*e*	PKP	PKPdf	07 12 47.5	+0.9
CHOS	**Chios island**	**118.16**	**310**		P	PKPdf	07 12 46.1	-0.8
BSD	**Bornholm Skovb**	**118.20**	**331**	*i*	PKIKP	PKPdf	07 12 47.5	+1.0
BSD				*i*			07 14 00.3	
BSD					pmax	pmax		
	comp=Z,43nm,0.9s							
BSD					MLR	MLR		
	comp=Z,5μm,24.0s							
BSD	**Bornholm Skovb**	**118.20**	**331**	*i*	P	PKPdf	07 12 47.5	+1.0
	comp=Z,43nm,0.9s							
BSD				*i*			07 14 00.3	
BSD								
	comp=Z,5μm,24.0s							
UALR	**University of**	**118.23**	**54**	*e*	PKPdf	PKPdf	07 12 46.8	-0.4
GZR	**Gura Zlata**	**118.24**	**319**	⇓	P	PKPdf	07 12 47.9	+1.0
GZR	**Gura Zlata**	**118.24**	**319**	⇓	*i*P	PKPdf	07 12 47.9	+1.0
GZR	**Gura Zlata**	**118.24**	**319**	⇓	*i*P	PKKPbc	07 23 03.9	-3.0
CMIG	**Matias Romero**	**118.28**	**74**		PKP	PKPdf	07 12 48.0	+0.3
	comp=Z,15nm,0.9s							
CCM	**Cathedral Cave**	**118.29**	**50**	*e*	PKPdf	PKPdf	07 12 44.6	-2.6
KECS	**Kecovo**	**118.45**	**323**	*e*	PKP	PKPdf	07 12 47.4	+0.2
KECS	**Kecovo**	**118.45**	**323**	*e*	PKP	PKPdf	07 12 47.4	+0.2
BER	**Bergen**	**118.79**	**340**	*e*	PP	PP	07 14 05.5	-0.6
BER				*e*	SKS	SKSac	07 19 35.5	-0.9
BER					AMS	AMS	08 03 27.0	
	comp=Z,4μm,20.5s							
APE	**Apeiranthos**	**118.91**	**309**	⇓	P	PKPdf	07 12 47.0	-1.4
APE	**Apeiranthos**	**118.91**	**309**	⇓	*i*P	PKPdf	07 12 47.0	-1.4
BZS	**Buzias**	**118.91**	**319**	⇓	P	PKPdf	07 12 45.6	-2.5
BZS	**Buzias**	**118.91**	**319**	⇓	*i*P	PKPdf	07 12 45.7	-2.4
BZS	**Buzias**	**118.91**	**319**	⇑	*i*P	PKKPbc	07 23 06.6	+2.1
FVM	**French Village**	**118.93**	**50**	*e*	PKPdf	PKPdf	07 12 47.0	-1.4
VTS	**Vitosha**	**118.95**	**316**	⇓	P	PKPdf	07 12 48.7	+0.4
VTS	**Vitosha**	**118.95**	**316**		P	PKPdf	07 12 45.7	-2.6
VTS	**Vitosha**	**118.95**	**316**	⇓	*i*P	PKPdf	07 12 48.7	+0.4
HDIL	**Hopedale**	**119.02**	**47**	*e*	PKPdf	PKPdf	07 12 47.7	-0.8
COP	**Copenhagen**	**119.03**	**333**	*i*	PKIKP	PKPdf	07 12 48.8	+0.7
COP					MLR	MLR		
	comp=Z,2μm,24.0s							
COP	**Copenhagen**	**119.03**	**333**	*i*	P	PKPdf	07 12 48.8	+0.7
COP				*i*			07 14 00.8	
COP								
	comp=Z,2μm,24.0s							
PSZ	**Piszkesteto**	**119.05**	**322**	*e*	PKPdf	PKPdf	07 12 48.0	-0.3
PSZ	**Piszkesteto**	**119.05**	**322**	⇓	PKIKP	PKPdf	07 12 48.5	+0.2
PSZ	**Piszkesteto**	**119.05**	**322**		PKIKP	PKPdf	07 12 49.3	+1.0
PSZ	**Piszkesteto**	**119.05**	**322**	⇓	*i*P	PKPdf	07 12 48.5	+0.2
PSZ	**Piszkesteto**	**119.05**	**322**	⇑	*e*PKP	PKPdf	07 12 47.7	-0.6
PSZ					*ep*PKP	pPKPdf	07 13 13.9	+6.0
PSZ					*s*PP		07 14 21.8	
OKC	**Ostrava-Krasne**	**119.22**	**325**	*e*	PKIKP	PKPdf	07 12 48.8	+0.2
OKC					MLR	MLR		
	comp=Z,4μm,24.2s							
OKC	**Ostrava-Krasne**	**119.22**	**325**	*e*	PKPdf	PKPdf	07 12 48.8	+0.2
OKC				*e*	SP	SP	07 23 42.7	-7.2
OKC					AMS	AMS	08 01 20.0	
	comp=Z,4μm,24.2s							
RGN	**Rugen**	**119.28**	**331**	*e*	PKPdf	PKPdf	07 12 49.1	+0.5
HBAR	**Harrisburg**	**119.39**	**53**	*e*	PKPdf	PKPdf	07 12 50.7	+1.3
LAST	**Lasithi**	**119.43**	**307**		P	PKPdf	07 12 49.0	-0.5
VYHS	**Vyhne**	**119.43**	**323**	*e*	PKP	PKPdf	07 12 49.1	+0.1
VYHS	**Vyhne**	**119.43**	**323**	*e*	PKP	PKPdf	07 12 49.1	+0.1
MORC	**Moravsky Berou**	**119.59**	**325**	*e*	PKPdf	PKPdf	07 12 49.1	-0.2
MORC				*e*	PP	PP	07 14 14.6	+2.5
MORC	**Moravsky Berou**	**119.59**	**325**	⇓	PKIKP	PKPdf	07 12 49.7	+0.4
MORC	**Moravsky Berou**	**119.59**	**325**	⇓	*i*P	PKPdf	07 12 49.7	+0.4
MORC	**Moravsky Berou**	**119.59**	**325**	⇑	*i*P	PKKPbc	07 23 03.2	+1.1
KOLL	**Kolacno**	**119.65**	**324**	*e*	PKP	PKPdf	07 12 49.9	+0.4
KOLL	**Kolacno**	**119.65**	**324**	*e*	PKP	PKPdf	07 12 49.9	+0.4
KSP	**Ksiaz**	**119.76**	**327**	*e*	Pdiff	Pdif	07 09 14.0	+1.3
KSP				*e*	PKiKP	PKiKP	07 12 50.5	+0.8
KSP					LMZ		08 00 10.0	
	comp=Z,18μm,30.0s							
BUD	**Budapest**	**119.77**	**322**	*e*	pPKP	pPKPdf	07 13 14.2	+5.0
GNAR	**Gosnell**	**119.79**	**52**	*e*	PKPdf	PKPdf	07 12 51.8	+1.7
PARMO	**Parma**	**119.81**	**51**	*e*	PKPdf	PKPdf	07 12 50.3	+0.2
IDI	**Anoyia**	**119.86**	**307**	*e*	PKPdf	PKPdf	07 12 50.6	+0.3
IDI				*e*	SKPdf	SKPdf	07 16 18.4	-1.7
SIUC	**Southern Illin**	**119.93**	**50**	*e*	PKPdf	PKPdf	07 12 49.8	-0.5
MUD	**Monsted U'grnd**	**119.99**	**335**	*i*	PKIKP	PKPdf	07 12 50.6	+0.7
MUD					pmax	pmax		
	comp=Z,29nm,0.9s							
MUD	**Monsted U'grnd**	**119.99**	**335**	*i*	P	PKPdf	07 12 50.6	+0.7
	comp=Z,29nm,0.9s							
MUD				*e*			07 14 08.0	
DPC	**Dobruska-Polom**	**119.99**	**326**	*e*	PKIKP	PKPdf	07 12 49.1	-1.0
DPC				*e*			07 23 56.4	
DPC					MLR	MLR		
	comp=Z,7μm,26.3s							
DPC	**Dobruska-Polom**	**119.99**	**326**	*e*	PKPdf	PKPdf	07 12 49.1	-1.0
DPC				*ex*		x	07 12 50.8	
DPC				*ep*	PKP	pPKPdf	07 13 15.2	+5.6
DPC				*e*	SP	SP	07 23 56.4	-0.4
DPC				*e*	SS	SS	07 30 40.0	+4.4
DPC					AMS	AMS	07 59 10.0	
	comp=Z,7μm,26.3s							
SIVA	**Sivas**	**120.00**	**307**		P	PKPdf	07 12 49.3	-1.3
UPC	**Upice**	**120.09**	**326**	*e*	PKIKP	PKPdf	07 12 49.3	-0.9
UPC	**Upice**	**120.09**	**326**	*e*	PKPdf	PKPdf	07 12 49.3	-0.9
UPC				*ex*		x	07 12 51.0	
RUE	**Ruedersdorf**	**120.22**	**329**	*e*	PKPdf	PKPdf	07 12 50.8	+0.4
RUE	**Ruedersdorf**	**120.22**	**329**	*e*	PKPdf	PKPdf	07 12 50.8	+0.3
VBMS	**Vicksburg**	**120.29**	**56**	*e*	PKPdf	PKPdf	07 12 52.3	+1.1
HALT	**Halls**	**120.33**	**52**	*e*	PKPdf	PKPdf	07 12 50.7	-0.5
ATAL	**Atalanti**	**120.35**	**312**		P	PKPdf	07 12 50.3	-0.8
VRAC	**Vranov**	**120.36**	**325**	⇑	P	PKPdf	07 12 51.3	+0.5
VRAC	**Vranov**	**120.36**	**325**	⇑	*i*P	PKPdf	07 12 51.3	+0.5
OLIL	**Olney**	**120.46**	**48**	*e*	PKPdf	PKPdf	07 12 49.4	-2.0
OLIL				*e*	PKKP	PKKPbc	07 22 59.6	+1.0
DID	**Didima**	**120.54**	**310**		P	PKPdf	07 12 50.5	-1.0
PKSM	**Moragy**	**120.56**	**321**	⇓	P	PKPdf	07 12 48.9	-2.4
PKSM	**Moragy**	**120.56**	**321**	⇓	*i*P	PKPdf	07 12 48.9	-2.4
DIVS	**Divibare**	**120.57**	**318**		P	PKPdf	07 12 51.7	+0.3
UTMT	**University of**	**120.59**	**51**	*e*	PKPdf	PKPdf	07 12 52.2	+0.6
LTK	**Loutraki**	**120.59**	**311**		P	PKPdf	07 12 50.6	-1.0
ZST	**Bratislava**	**120.60**	**324**	*e*	PKP	PKPdf	07 12 51.8	+0.5
ZST	**Bratislava**	**120.60**	**324**	*e*	PKP	PKPdf	07 12 51.8	+0.5
KARN	**Karanos**	**120.60**	**308**		P	PKPdf	07 12 52.3	+0.6
OXF	**Oxford**	**120.65**	**53**	*e*	PKPdf	PKPdf	07 12 50.0	-1.8
AGG	**Agios Georgios**	**120.75**	**312**		P	PKPdf	07 12 51.1	-0.8
DSF	**Desfina**	**120.80**	**311**		P	PKPdf	07 12 50.9	-1.1
FNA	**Florina**	**120.86**	**314**		P	PKPdf	07 12 51.6	-0.4
PVCC	**Panska Ves**	**120.86**	**327**	*e*	PKIKP	PKPdf	07 12 52.2	+0.5
PVCC				*e*			07 14 23.4	
PVCC				*e*			07 24 04.8	
PVCC					MLR	MLR		
	comp=Z,10μm,28.6s							
PVCC	**Panska Ves**	**120.86**	**327**	*e*	PKPdf	PKPdf	07 12 52.2	+0.5
PVCC				*ep*	PKP	pPKPdf	07 13 17.5	+6.2
PVCC				*e*	PP	PP	07 14 23.4	+2.7
PVCC				*e*	SP	SP	07 24 04.8	+0.3
PVCC					AMS	AMS	08 00 10.0	
	comp=Z,10μm,28.6s							
TREC	**Trest**	**120.99**	**325**	*e*	PKIKP	PKPdf	07 12 50.7	-1.3
TREC				*e*			07 30 54.4	
TREC					MLR	MLR		
	comp=Z,6μm,24.1s							
TREC	**Trest**	**120.99**	**325**	*e*	PKPdf	PKPdf	07 12 50.7	-1.3
TREC				*ex*		x	07 12 52.3	
TREC				*ep*	PKP	pPKPdf	07 13 16.9	+5.4
TREC				*e*	PP	PP	07 14 24.3	+2.6
TREC				*e*	SS	SS	07 30 54.4	+5.9
TREC					AMS	AMS	08 02 10.0	
	comp=Z,6μm,24.1s							
BRG	**Berggiesshubel**	**121.02**	**328**	*e*	PKPdf	PKPdf	07 12 52.3	+0.3
BRG	**Berggiesshubel**	**121.02**	**328**	*e*	PDIF	Pdif	07 09 20.1	+1.9
	comp=Z,7.0nm,1.4s							
BRG	**Berggiesshubel**	**121.02**	**328**	*e*	PKP	PKPdf	07 12 49.1	-2.9
	comp=Z,10nm,1.2s							
BRG				*i*			07 12 52.3	
	comp=Z,75nm,0.9s							
BRG				*i*			07 13 17.0	
	comp=Z,74nm,1.3s							
BRG					PP	PP	07 14 21.0	-0.8
BRG					SKS	SKSac	07 19 46.0	+1.4
BRG				*e*	PKKP	PKKPbc	07 23 00.1	+3.2
	comp=Z,6.2nm,1.2s							
BRG					PS	PS	07 24 10.0	-4.8
BRG					SS	SS	07 30 59.0	+10
BRG								
	comp=N,7μm,24.6s							
BRG								
	comp=E,6μm,21.6s							
BRG								
	comp=Z,9μm,21.9s							
BRG	**Berggiesshubel**	**121.02**	**328**	*e*	PKIKP	PKPdf	07 12 49.1	-2.9
BRG							07 14 21.0	
BRG							07 19 46.0	
BRG					PS	PS	07 24 10.0	-4.8
BRG					pmax	pmax		
	comp=Z,6.0nm,1.2s							
BRG					pmax	pmax		
	comp=Z,45nm,0.9s							
BRG					pmax	pmax		
	comp=Z,44nm,1.3s							
BRG					pmax	pmax		
	comp=Z,4.0nm,1.2s							
BRG					MLR	MLR		
	comp=N,4μm,24.6s							
BRG					MLR	MLR		
	comp=E,3μm,21.6s							
BRG					MLR	MLR		
	comp=Z,6μm,21.9s							
USIN	**University of**	**121.03**	**49**	*e*	PKPdf	PKPdf	07 12 51.9	-0.6
BSEG	**Bad Segeberg**	**121.07**	**332**	*e*	PKPdf	PKPdf	07 12 52.6	+0.6
GUR	**Goura**	**121.09**	**311**		P	PKPdf	07 12 51.5	-1.1
KALE	**Kalithea**	**121.10**	**311**		P	PKPdf	07 12 52.9	+0.3
LRW	**Lerwick**	**121.10**	**342**		P	PKPdf	07 12 49.4	-2.5
LRW					AMS	AMS	07 53 44.6	
	comp=Z,4μm,48.6s							
LRW	**Lerwick**	**121.10**	**342**	*e*	P	PKPdf	07 12 49.4

CLZ	Clausthal	122.31	330	ePKPdf	PKPdf	07 12 55.2	+0.7	
SISC	Sisak	122.31	321	iPKPd	PKPdf	07 12 56.0	+1.3	
VLS	Valsamata	122.32	312	P	PKPdf	07 12 54.8	-0.1	
AAM	Ann Arbor	122.36	43	ePKPdf	PKPdf	07 12 54.6	-0.2	
MOX	Moxa	122.38	328	ePKP	PKPdf	07 12 54.6	0.0	
	comp=Z,54nm,1.1s							
MOX				e		07 13 19.3		
MOX				eS	PS	07 24 28.0	+1.2	
MOX								
	comp=Z,3µm,22.0s							
MOX	Moxa	122.38	328	ePKPdf	PKPdf	07 12 54.8	+0.2	
MOX	Moxa	122.38	328	ePKIKP	PKPdf	07 12 54.6	0.0	
MOX				eS	PS	07 24 28.0	+1.2	
MOX				pmax	pmax			
	comp=Z,54nm,1.1s							
MOX				MLR	MLR			
	comp=Z,3µm,22.0s							
MOA	Molln	122.43	324	⇑iPKiKP	PKiKP	07 12 54.5	-0.5	
	comp=Z,21nm,0.8s,SNR=8.9							
WET	Wettzell	122.53	326	ePKPdf	PKPdf	07 12 55.4	+0.4	
ROTZ	Rotzenmuhle	122.56	327	ePKPdf	PKPdf	07 12 55.4	+0.4	
SOKA	Soboth	122.56	323	⇓iPKiKP	PKiKP	07 12 54.8	-0.5	
	comp=Z,50nm,1.0s							
STON	Ston	122.59	318	iPKP	PKPdf	07 12 53.0	-2.3	
OBKA	Obir	122.93	323	⇑iPKiKP	PKiKP	07 12 55.6	-0.5	
	SNR=6.9							
LRAL	Lakeview Retre	122.97	54	ePKPdf	PKPdf	07 12 55.5	-0.9	
BOJS	Bojanci	122.99	322	ePdiff	Pdif	07 09 26.3	-0.7	
BOJS				iPKPdf	PKPdf	07 12 56.1	+0.1	
BOJS				ipPKPdf	pPKPdf	07 13 20.8	+5.3	
BOJS				iSdiff	Sdif	07 22 26.5	+0.8	
VISS	Visnje	123.10	322	iPKPdf	PKPdf	07 12 56.3	+0.1	
VISS				ipPKPdf	pPKPdf	07 13 20.0	+4.3	
VISS				iSdiff	Sdif	07 22 28.2	+1.7	
GRA1	Grafenberg Arr	123.13	328	ePKPdf	PKPdf	07 12 56.3	+0.2	
GRF	Grafenberg Arr	123.13	328	ePKPdf	PKPdf	07 12 56.3	+0.2	
GRFO	Grafenberg	123.13	328	ePKPdf	PKPdf	07 12 56.4	+0.3	
GRFO	Grafenberg	123.13	328	ePKIKP	PKPdf	07 12 56.1	0.0	
ORE	Reay	123.17	342	eP	PKPdf	07 12 55.1	-0.8	
LJU	Ljubljana	123.17	322	ePdif	Pdif	07 09 25.2	-2.6	
LJU				iPKPdf	PKPdf	07 12 56.5	+0.2	
LJU				epPKPdf	pPKPdf	07 13 21.8	+5.9	
LJU				e		07 13 56.1		
LJU				ePP	PP	07 14 35.9	-0.7	
LJU				eSKSac	SKSac	07 19 50.0	-2.0	
LJU				eSdif	Sdif	07 22 29.5	+2.4	
LJU	Ljubljana	123.17	322	eP	Pdif	07 09 25.2	-2.6	
LJU				i		07 12 56.5		
LJU				e		07 14 35.9		
LJU	Ljubljana	123.17	322	ePdiff	Pdif	07 09 25.2	-2.6	
LJU				iPKPdf	PKPdf	07 12 56.5	+0.2	
LJU				epPKPdf	pPKPdf	07 13 21.8	+5.9	
LJU				e		07 13 56.1		
LJU				ePP	PP	07 14 35.9	-0.7	
LJU				eSKSac	SKSac	07 19 50.0	-2.0	
LJU				eSdiff	Sdif	07 22 29.5	+2.4	
LJU				eSP	SP	07 24 19.1	-6.2	
IBBN	Ibbenburen	123.29	332	ePKPdf	PKPdf	07 12 56.8	+0.5	
RJOB	Jochberg	123.33	325	ePKPdf	PKPdf	07 12 56.2	-0.4	
KBA	Koelnbreinsper	123.36	324	⇓iPKiKP	PKiKP	07 12 56.0	-0.9	
	comp=Z,51nm,1.1s,SNR=13							
MYKA	Terra Mystica	123.41	323	⇓iPKiKP	PKiKP	07 12 56.3	-0.7	
	comp=Z,25nm,0.6s							
WIT	Witteveen	123.47	333	ePKP	PKPdf	07 12 57.6	+0.9	
	comp=Z,427nm,1.1s							
JAVS	Javornik	123.53	322	iPKPdf	PKPdf	07 12 56.5	-0.5	
VOY	Vojsko	123.56	323	ePKPdf	PKPdf	07 12 56.8	-0.3	
VOY				e		07 13 21.2		
VOY				e		07 13 43.3		
VOY	Vojsko	123.56	323	e	ePKPdf	07 12 54.7	-2.4	
VOY				ePKPdf	PKPdf	07 12 56.8	-0.3	
VOY				e		07 13 21.2		
VOY				e		07 13 43.3		
ACSO	Alum Creek Sta	123.64	45	ePKPdf	PKPdf	07 12 56.6	-0.8	
NVLJ	Novalja	123.68	321	iPKP	PKPdf	07 12 56.0	-1.4	
RSC	Scourie	123.75	343	eP	PKPdf	07 12 56.7	-0.4	
MCD	Coleburn Disti	123.80	341	eP	PKPdf	07 12 54.4	-2.7	
TRI	Trieste	123.80	322	ePKPdf	PKPdf	07 12 57.0	-0.5	
MVH1	Achvaich	123.81	342	eP	PKPdf	07 12 55.8	-1.4	
MME1	Meikle Cairn	123.92	341	eP	PKPdf	07 12 55.5	-1.9	
FUR	Furstenfeldbru	123.95	326	ePKPdf	PKPdf	07 12 57.9	+0.1	
WTSB	Winterswijk	123.96	332	ePKP	PKPdf	07 12 57.8	+0.1	
	comp=Z,61nm,1.6s							
WTSB	Winterswijk	123.96	332	ex		07 13 24.2		
	comp=Z,73nm,1.1s							
BUG	Bochum--Univer	124.08	331	ePKPdf	PKPdf	07 12 58.1	+0.2	
CPCT	Cooper Cave	124.22	51	ePKPdf	PKPdf	07 12 57.9	-0.7	
SCHQ	Schefferville	124.22	23	PKP	PKPdf	07 12 58.2	+0.2	
SCHQ				PKKPbc	PKKPbc	07 22 45.8	+1.2	
SCHQ	Schefferville	124.22	23	PKP	PKPdf	07 12 58.2	+0.2	
	comp=Z,28nm,0.9s,baz=320,slow=2.2,SNR=20							
SCHQ				PKKPbc	PKKPbc	07 22 45.8	+1.2	
	comp=Z,10nm,0.9s,baz=164,slow=3.6,SNR=11							
WATA	Walderalm	124.24	325	⇑iPKPdf	PKPdf	07 12 56.4	-1.9	
	comp=Z,35nm,0.7s,SNR=25							
WTTA	Wattenberg	124.25	325	⇑iPKiKP	PKiKP	07 12 58.5	-0.2	
	comp=Z,134nm,1.0s,SNR=35							
TNS	Taunus Mts	124.26	329	ePKPdf	PKPdf	07 12 58.6	+0.3	
MDO	Dochfour	124.26	342	eP	PKPdf	07 12 55.8	-2.2	
TEIG	Tepich	124.29	70	ePKPdf	PKPdf	07 12 59.2	0.0	
RRR	Rubha Reidh	124.34	343	eP	PKPdf	07 12 56.9	-1.3	
TOD	Tromm	124.45	329	PKIKP	PKPdf	07 12 58.7	0.0	
MOTA	Moosalm	124.51	325	⇓iPKPdf	PKPdf	07 12 56.6	-2.3	
	comp=Z,96nm,0.8s,SNR=59							
TSUM	Tsumeb	124.52	242	ePKPdf	PKPdf	07 13 01.1	+1.4	
TSUM	Tsumeb	124.52	242	PKP	PKPdf	07 13 00.9	+1.3	
	comp=Z,58nm,0.9s,baz=93,slow=2.1,SNR=44							
RETA	Reutte	124.62	326	iPKiKP	PKiKP	07 12 59.0	-0.4	
	comp=Z,32nm,0.9s,SNR=16							
TKL	Tuckaleechee C	124.72	50	ePKPdf	PKPdf	07 12 58.5	-1.2	
KPL	Plockton	124.73	343	eP	PKPdf	07 12 58.6	-0.4	
KPL				AMS	AMS	08 01 54.3		
	comp=Z,4µm,30.2s							
STU	Stuttgart	124.74	328	ePKPdf	PKPdf	07 12 59.5	+0.3	
STU	Stuttgart	124.74	328	ePKIKP	PKPdf	07 12 59.2	0.0	
ERPA	Erie	124.90	42	ePKPdf	PKPdf	07 12 59.5	-0.3	
FETA	Feichten	124.90	325	⇑iPKiKP	PKiKP	07 12 59.9	0.0	
	comp=Z,100nm,0.9s,SNR=48							
ABH	Alteburg	124.92	329	PKP	PKPdf	07 12 59.8	+0.2	
ESY	Stoneypath	124.93	340	eP	PKPdf	07 12 56.9	-2.4	
EBH	Black Hill	124.96	341	eP	PKPdf	07 12 56.4	-3.0	
CUC	Castrocucco	125.08	315	ePKPdf	PKPdf	07 12 58.0	-2.2	
EDI	Edinburgh	125.12	340	eP	PKPdf	07 12 57.3	-2.4	
EDI				AMS	AMS	08 02 41.1		
	comp=Z,4µm,25.0s							
KAR1	Arisaig	125.14	342	eP	PKPdf	07 12 59.7	-0.1	
HGN	Heimansgroeve	125.16	331	ePKP	PKPdf	07 13 00.0	0.0	
	comp=Z,61nm,1.2s							
HGN	Heimansgroeve	125.16	331	ex		07 13 25.1		
	comp=Z,57nm,1.3s							
EBL	Broad Law	125.19	340	eP	PKPdf	07 12 58.6	-1.2	
MEM	Membach	125.22	331	PKP	PKPdf	07 12 59.3	-0.8	
DAVA	Damuels	125.23	326	⇑iPKiKP	PKiKP	07 13 00.5	-0.1	
	comp=Z,89nm,0.8s,SNR=20							
BEBN	Eben Emael	125.26	331	PKP	PKPdf	07 13 01.1	+0.9	
EAU	Auchinoon	125.27	340	eP	PKPdf	07 12 57.7	-2.3	
EAB	Aberfoyle	125.28	341	eP	PKPdf	07 12 58.5	-1.6	
RUP	Ruppelstein	125.28	329	PKIKP	PKPdf	07 13 00.9	+0.7	
LANF	Langenberg	125.35	328	PKP	PKPdf	07 13 00.8	+0.4	
SPAK	Spaichingen-Ko	125.36	327	PKP	PKPdf	07 13 00.2	-0.2	
BFO	Black Forest	125.47	328	ePKPdf	PKPdf	07 13 00.3	-0.3	
ESK	Eskdalemuir	125.61	340	eP	PKPdf	07 12 58.2	-2.5	
ESK				AMS	AMS	08 02 56.2		
	comp=Z,5µm,26.3s							
ESK	Eskdalemuir	125.61	340	ePKPdf	PKPdf	07 13 00.8	+0.1	
ESK	Eskdalemuir	125.61	340	iPKIKP	PKPdf	07 13 01.5	+0.8	
XAL	Allendale	125.62	339	eP	PKPdf	07 13 00.7	-0.1	
PGBU	Glenifferbraes	125.64	341	P	PKPdf	07 12 59.7	-1.0	
PGBU				AMS	AMS	08 04 34.9		
	comp=Z,4µm,26.7s							
PGBU	Glenifferbraes	125.64	341	eP	PKPdf	07 12 59.7	-1.0	
PGBU				AMS	AMS	08 04 34.9		
	comp=Z,4µm,26.7s							
AQU	L'Aquila	125.67	319	ePKPdf	PKPdf	07 13 02.9	+1.7	
AQU	L'Aquila	125.67	319	⇑PKIKP	PKPdf	07 13 03.8	+2.6	
AQU	L'Aquila	125.67	319	⇑iP	PKPdf	07 13 03.8	+2.6	
BCLA	Clavier	125.69	331	PKP	PKPdf	07 13 00.4	-0.6	
BCLA				APKP		07 13 25.2		
ECK	Cauldkaine Hil	125.69	340	eP	PKPdf	07 12 58.6	-2.2	
GOGA	Godfrey	125.69	53	ePKPdf	PKPdf	07 13 00.5	-1.1	
CEL	Celeste	125.73	313	ePKPdf	PKPdf	07 13 01.6	+0.2	
TGUH	Tegucigalpa,Un	125.73	77	ePKPdf	PKPdf	07 13 03.1	+1.0	

WLF	Walferdange	125.76	330	PKP	PKPdf	07 13 02.2	+1.0	
WLF				APKP		07 13 25.2		
WLF	Walferdange	125.76	330	ePKPdf	PKPdf	07 13 02.2	+1.0	
WLF	Walferdange	125.76	330	ePKIKP	PKPdf	07 13 02.1	+0.9	
FELD	Feldberg im Sc	125.92	327	PKP	PKPdf	07 13 01.5	0.0	
CDF	Champ du Feu	125.98	328	ePKIKP	PKPdf	07 12 58.9	-2.7	
	comp=Z,79nm,1.1s							
TUE	Stuetta	125.99	325	ePKPdf	PKPdf	07 13 00.1	-1.7	
MCWV	Mont Chateau	126.08	45	ePKPdf	PKPdf	07 13 01.8	-0.3	
HPK	Haverah Park	126.11	338	eP	PKPdf	07 13 00.6	-1.1	
HPK				AMS	AMS	08 07 31.9		
	comp=Z,3µm,24.9s							
SNF	Seneffe	126.11	332	PKP	PKPdf	07 13 01.8	-0.1	
SNF				APKP		07 13 22.9		
GIVF	Givet	126.13	331	ePKIKP	PKPdf	07 12 59.8	-2.1	
	comp=Z,209nm,0.9s							
ECH	Echery	126.16	328	ePKIKP	PKPdf	07 13 01.1	-0.9	
GCD	Castle Douglas	126.23	340	eP	PKPdf	07 13 00.6	-1.3	
DOU	Dourbes	126.24	331	PKP	PKPdf	07 13 02.4	+0.3	
DOU				APKP		07 13 27.5		
XDE	Dent Fell	126.36	339	eP	PKPdf	07 13 02.2	+0.1	
MOF	Molkenrain	126.40	328	PKP	PKPdf	07 13 02.3	-0.1	
BBS	Basel-Blauen	126.43	327	PKIKP	PKPdf	07 13 01.9	-0.6	
BAIF	Baives	126.45	331	ePKIKP	PKPdf	07 13 00.4	-2.1	
	comp=Z,103nm,0.9s							
GAL1	Galloway	126.48	340	eP	PKPdf	07 12 59.9	-2.5	
GAL1				AMS	AMS	08 01 03.3		
	comp=Z,4µm,27.6s							
LHO	Holmfirth	126.52	338	eP	PKPdf	07 13 00.4	-2.1	
HINF	Hinteralfeld	126.57	328	ePKIKP	PKPdf	07 13 00.2	-2.6	
	comp=Z,185nm,1.0s							
KBI1	Birley Grange	126.62	337	eP	PKPdf	07 13 01.1	-1.6	
LMEL	Las Melosas	126.65	141	eP	PKPdf	07 13 06.7	+3.3	
MSNY	Massena	126.67	36	ePKPdf	PKPdf	07 13 03.0	-0.1	
BLA	Blacksburg	126.67	48	ePKPdf	PKPdf	07 13 02.5	-0.8	
HAU	Haudompre	126.72	328	ePKIKP	PKPdf	07 13 00.6	-2.4	
	comp=Z,178nm,0.9s							
HAU				eMLR	MLR			
	comp=Z,7µm,21.8s							
HAU	Haudompre	126.72	328	ePKIKP	PKPdf	07 13 00.6	-2.4	
HAU				MLR	MLR			
	comp=Z,7µm,21.8s							
THEF	They Montfort	126.76	329	PKP	PKPdf	07 13 03.2	+0.1	
LOMF	Lomont	126.87	327	PKP	PKPdf	07 13 03.5	+0.1	
CWF	Charnwood Fore	126.93	337	eP	PKPdf	07 13 01.3	-2.0	
CWF				AMS	AMS	08 04 07.2		
	comp=Z,3µm,21.6s							
SSPA	Standing Stone	126.98	43	ePKPdf	PKPdf	07 13 02.9	-0.9	
VWCC	Virginia Weste	126.98	47	ePKPdf	PKPdf	07 13 04.3	+0.4	
STNC	Stoke	127.00	338	AMS	AMS	08 07 12.6		
	comp=Z,3µm,20.8s							
LONY	Lake Ozonia	127.04	37	ePKPdf	PKPdf	07 13 02.2	-1.5	
MENF	Mencas	127.07	333	PKP	PKPdf	07 13 04.1	+0.5	
MEZF	Maizieres J'vi	127.07	329	ePKIKP	PKPdf	07 13 01.8	-1.9	
	comp=Z,168nm,1.2s							
SFTF	Sexfontaines	127.27	329	ePKIKP	PKPdf	07 13 01.8	-2.3	
	comp=Z,88nm,1.1s							
BINY	Binghamton	127.47	40	ePKPdf	PKPdf	07 13 04.0	-0.6	
FRNY	Flat Rock	127.51	36	ePKPdf	PKPdf	07 13 03.5	-1.1	
NCB	Newcomb	127.62	37	ePKPdf	PKPdf	07 13 03.9	-1.0	
WLF1	Llynfaes	127.66	339	AMS	AMS	08 02 43.6		
	comp=Z,12µm,29.1s							
CABF	La Chapelle	127.72	327	ePKIKP	PKPdf	07 13 03.2	-1.8	
	comp=Z,143nm,0.9s							
WOL	Wolverton	127.98	335	P	PKPdf	07 13 05.4	+0.1	
WOL				AMS	AMS	08 02 07.9		
	comp=Z,7µm,33.8s							
WOL	Wolverton	127.98	335	eP	PKPdf	07 13 05.4	+0.1	
WOL				AMS	AMS	08 02 07.9		
	comp=Z,7µm,33.8s							
LPL	La Plagne	128.03	326	ePKIKP	PKPdf	07 13 03.8	-1.8	
	comp=Z,96nm,0.9s							
LPG	La Plagne	128.03	325	ePKIKP	PKPdf	07 13 03.8	-1.8	
	comp=Z,91nm,0.9s							
SWN1	Swindon	128.06	336	P	PKPdf	07 13 05.4	-0.1	
SWN1				AMS	AMS	08 02 11.6		
	comp=Z,5µm,27.6s							
SWN1	Swindon	128.06	336	eP	PKPdf	07 13 05.4	-0.1	
SWN1				AMS	AMS	08 02 11.6		
	comp=Z,5µm,27.6s							
JTS	JuntasAbangare	128.09	82	ePKPdf	PKPdf	07 13 07.4	+0.7	
MCH1	Michaelchurch	128.16	337	eP	PKPdf	07 13 05.2	-0.5	
MCH1				AMS	AMS	08 07 43.9		
	comp=Z,4µm,23.8s							
HTR	Trewern Hill	128.20	337	eP	PKPdf	07 13 03.7	-2.0	
MDV	Middlebury	128.23	37	ePKPdf	PKPdf	07 13 05.1	-0.9	
TRQA	Tornquist	128.24	150	ePKPdf	PKPdf	07 13 06.4	+0.1	
SDMD	Soldier's Deli	128.26	43	ePKPdf	PKPdf	07 13 05.6	-0.7	
ACCN	Adirondack Com	128.28	38	ePKPdf	PKPdf	07 13 05.5	-0.7	
JSRW	J. Sargeant Re	128.31	46	ePKPdf	PKPdf	07 13 05.1	-1.3	
HGH	Gray Hill	128.37	337	eP	PKPdf	07 13 04.0	-2.1	
PGF	Pioggiola	128.38	321	ePKIKP	PKPdf	07 13 04.1	-2.3	
	comp=Z,53nm,0.5s							
DSB	Dublin	128.38	340	ePKPdf	PKPdf	07 13 06.0	-0.1	
DLF	Lyons Farm	128.39	340	iP	PKPdf	07 13 06.1	0.0	
NHSC	New Hope	128.39	52	ePKPdf	PKPdf	07 13 07.2	+0.5	
CBN	Corbin	128.45	45	ePKPdf	PKPdf	07 13 06.4	-0.3	
SAOF	Saorge	128.45	324	PKP	PKPdf	07 13 06.6	+0.1	
MBDF	Montbardon	128.48	325	ePKIKP	PKPdf	07 13 04.1	-2.4	
	comp=Z,46nm,0.7s							
LOR	Lormes	128.48	329	ePKIKP	PKPdf	07 13 04.2	-2.2	
	comp=Z,89nm,1.0s							
LOR				eMLR	MLR			
	comp=Z,6µm,21.5s							
LOR	Lormes	128.48	329	ePKIKP	PKPdf	07 13 04.2	-2.2	
LOR				MLR	MLR			
	comp=Z,6µm,21.5s							
AUTN	L'Aution	128.52	324	PKP	PKPdf	07 13 06.7	+0.1	
SBF	Sospel	128.59	323	ePKIKP	PKPdf	07 13 04.2	-2.6	
	comp=Z,116nm,0.8s							
TLL	Tololo Astrono	128.59	137	eP	PKPdf	07 13 11.1	+3.9	
SURF	Saint Ours	128.60	324	PKP	PKPdf	07 13 07.6	+0.8	
TOUF	Mont Tournerai	128.62	324	PKP	PKPdf	07 13 07.1	+0.3	
LUCF	Luceram	128.63	324	PKP	PKPdf	07 13 07.0	+0.2	
TRY	Troy	128.64	38	ePKPdf	PKPdf	07 13 06.5	-0.4	
REVF	Revere	128.71	323	PKP	PKPdf	07 13 07.3	+0.3	
MVIF	Mont Vial	128.74	324	PKP	PKPdf	07 13 07.3	+0.3	
SSF	Saint Saulge	128.80	329	ePKIKP	PKPdf	07 13 05.0	-2.0	
	comp=Z,96nm,1.0s							
LBNH	Lisbon	128.82	36	ePKPdf	PKPdf	07 13 06.8	-0.4	
ORIF	Oris-en-Rattie	128.87	325	ePKIKP	PKPdf	07 13 05.0	-2.3	
	comp=Z,61nm,0.9s							
ORIF				eMLR	MLR			
	comp=Z,2µm,21.2s							
SMF	Signal de Mont	128.90	328	ePKIKP	PKPdf	07 13 05.0	-2.2	
	comp=Z,169nm,1.1s							
DWPF	Disney	128.92	59	ePKPdf	PKPdf	07 13 08.5	+0.6	
HNH	Hanover	128.93	37	ePKPdf	PKPdf	07 13 06.5	-0.9	
CALN	Calern	128.98	324	PKP	PKPdf	07 13 08.1	+0.6	
AVF	Avril sur Loir	129.06	329	ePKIKP	PKPdf	07 13 05.0	-2.5	
	comp=Z,59nm,1.0s							
HYF	Humbligny	129.10	330	ePKIKP	PKPdf	07 13 05.9	-1.7	
BRNJ	Basking Ridge	129.16	41	ePKPdf	PKPdf	07 13 08.8	+0.8	
FRF	La Foret Royal	129.24	324	ePKIKP	PKPdf	07 13 05.6	-2.4	
	comp=Z,94nm,0.9s							
CNNC	Cliffs of the	129.34	49	ePKPdf	PKPdf	07 13 09.2	+0.7	
CFAA	Coronel Fontan	129.37	140	PKP	PKPdf	07 13 07.9	-0.7	
CFAA				SKPbc		07 16 29.3		
CFAA	Coronel Fontan	129.37	140	PKhKP	PKPpre	07 12 59.5		
	comp=Z,0.3nm,0.9s,baz=284,slow=6.4,SNR=4.0							
CFAA				PKP	PKPdf	07 13 07.9	-0.7	
	comp=Z,9.8nm,0.8s,baz=249,slow=2.2,SNR=26							
CFAA				SKPbc		07 16 29.3		
	comp=Z,7.9nm,1.1s,baz=226,slow=2.5,SNR=9.0							
LCO	Las Campanas	129.37	136	ePKPdf	PKPdf	07 13 10.1	+1.4	
LCO	Las Campanas	129.37	136	eP	PKPdf	07 13 09.0	+0.2	
SSB	Saint Sauveur	129.40	326	PKP	PKPdf	07 13 08.2	0.0	
SSB	Saint Sauveur	129.40	326	ePKIKP	PKPdf	07 13 08.1	-0.1	
OCF	Saint Nazaire	129.41	325	PKP	PKPdf	07 13 09.0	+0.7	
OG26	St.-Nazaire-De	129.41	325	PKP	PKPdf	07 13 09.0	+0.7	
PAL	Palisades	129.42	40	ePKPdf	PKPdf	07 13 08.6	+0.2	
FFD	Franklin Falls	129.44	36	ePKPdf	PKPdf	07 13 08.4	+0.1	
PQI	Presque Isle	129.44	31	ePKPdf	PKPdf	07 13 08.2	0.0	
LMR	La Mourre	129.45	323	ePKIKP	PKPdf	07 13 06.1	-2.3	
	comp=Z,138nm,1.0s							
PLDF	La Plantade	129.45	328	PKP	PKPdf	07 13 08.8	+0.5	
BGF	Bois d'Agland	129.47	329	ePKIKP	PKPdf	07 13 06.4	-1.9	
	comp=Z,64nm,0.8s							
CPNY	Central Park	129.50	41	ePKPdf	PKPdf	07 13 09.3	+0.7	
LDF	La Druitiere	129.51	332	ePKIKP	PKPdf	07 13 07.0	-1.3	
	comp=Z,36nm,0.9s							
HTL	Hartland	129.53	337	eP	PKPdf	07 13 07.0	-1.3	
HTL				AMS	AMS	08 05 39.4		
	comp=Z,3µm,28.0s							

FLN	La Foliniere	129.55	333	ePKIKP	PKPdf	07 13 06.1	-2.3	
	comp=Z,162nm,1.2s							
FLN				eMLR	MLR			
	comp=Z,3µm,20.0s							
FLN	La Foliniere	129.55	333	ePKIKP	PKPdf	07 13 06.1	-2.3	
FLN				MLR	MLR			
	comp=Z,3µm,20.0s							
VIVF	Saint-Julien-l	129.59	326	ePKIKP	PKPdf	07 13 06.5	-2.1	
	comp=Z,105nm,1.2s							
SMRF	Simiane la Rot	129.62	325	ePKIKP	PKPdf	07 13 06.8	-1.9	
	comp=Z,84nm,0.9s							
AGO	Saint Agoulin	129.66	328	PKP	PKPdf	07 13 09.1	+0.4	
PKME	Peaks-Kenny Pk	129.68	33	ePKPdf	PKPdf	07 13 09.4	+0.6	
QUA2	Belchertown	129.70	38	ePKPdf	PKPdf	07 13 08.9	0.0	
COLF	Collangettes	129.70	327	PKP	PKPdf	07 13 09.3	+0.5	
VSL	Villasalto	129.72	318	ePKPdf	PKPdf	07 13 10.0	+0.9	
DYA	Yadsworthy	129.75	336	AMS	AMS	08 08 20.9		
	comp=Z,4µm,23.7s							
YLE	Yale	129.87	39	ePKPdf	PKPdf	07 13 09.9	+0.6	
PYM	Petit Puy Mans	129.92	328	PKP	PKPdf	07 13 09.6	+0.4	
WVL	Waterville	129.92	34	ePKPdf	PKPdf	07 13 07.8	-1.5	
TCF	Toulx Ste Croi	129.98	329	ePKIKP	PKPdf	07 13 07.2	-2.1	
	comp=Z,94nm,0.8s							
JSA	Saint Aubin	129.98	334	AMS	AMS	08 03 08.4		
	comp=Z,6µm,32.2s							
GRR	Gorron	129.99	333	ePKIKP	PKPdf	07 13 07.4	-1.9	
	comp=Z,90nm,0.9s							
WES	Weston	130.26	37	ePKPdf	PKPdf	07 13 10.1	+0.1	
CCA1	Carnmenellis	130.46	337	eP	PKPdf	07 13 09.1	-1.0	
LASF	Ste Croix	130.53	326	ePKIKP	PKPdf	07 13 08.4	-2.0	
	comp=Z,46nm,0.8s							
VAL	Valentia	130.74	342	eP	Pdif	07 10 02.3	+0.9	
VAL				ePP	PP	07 15 27.2	+1.3	
SGMF	Saint Gilles	130.85	334	ePKIKP	PKPdf	07 13 08.6	-2.3	
	comp=Z,94nm,0.8s							
MFF	Saint Martin d	130.94	331	ePKIKP	PKPdf	07 13 09.3	-1.8	
	comp=Z,63nm,0.9s							
CAF	Calviac	130.96	328	ePKIKP	PKPdf	07 13 09.8	-1.4	
	comp=Z,63nm,1.1s							
RJF	Les Rejaudoux	131.00	328	ePKIKP	PKPdf	07 13 09.3	-2.0	
	comp=Z,29nm,0.8s							
RJF				eMLR	MLR			
	comp=Z,4µm,21.0s							
RJF	Les Rejaudoux	131.00	328	ePKIKP	PKPdf	07 13 09.3	-2.0	
RJF				MLR	MLR			
	comp=Z,4µm,21.0s							
ROSF	Rostrenen	131.10	334	ePKIKP	PKPdf	07 13 10.2	-1.2	
	comp=Z,57nm,0.9s							
QUIF	Quistinic	131.38	334	eP

CPUP							07 13 30.4		
CPUP					pmax	pmax			
	comp=Z,8.0nm,0.7s								
CPUP					pmax	pmax			
	comp=Z,79nm,1.0s								
PMRV	**Marv??o**	**139.80**	**329**	*e*PKPdf	PKPpre	07 13 19.9			
PMRV	**Marv??o**	**139.80**	**329**	*e*PP	PP	07 16 25.4	+1.9		
PMRV				*e*SS	SS	07 34 50.9	+12		
PMRV				*e*LR	LR	08 01 38.8			
	comp=Z,4µm,22.0s								
PTOM	**Tomar**	**140.17**	**330**	*e*PKPdf	PKPpre	07 13 21.3			
PTOM	**Tomar**	**140.17**	**330**	*e*PP	PP	07 16 26.6	+0.9		
BBSR	**BB Station**	**140.32**	**45**	*e*PKPdf	PKPdf	07 13 28.4	-0.7		
PESTR	**Estremoz**	**140.33**	**329**	*e*PKPdf	PKPpre	07 13 21.3			
PESTR	**Estremoz**	**140.33**	**329**	*e*PP	PP	07 16 29.1	+2.4		
PESTR				*e*SS	SS	07 34 54.6	+10		
PESTR				*e*LR	LR	08 01 50.6			
	comp=Z,3µm,22.0s								
PBAR	**Barrancos**	**140.55**	**328**	*e*PKPdf	PKPpre	07 13 22.8			
PBAR	**Barrancos**	**140.55**	**328**	*e*PP	PP	07 16 31.2	+3.1		
PBAR				*e*SS	SS	07 34 59.0	+11		
PBAR				*e*LR	LR	08 01 24.9			
	comp=Z,3µm,22.0s								
EVO	**Evora**	**140.80**	**329**	*e*PKIKP	PKPpre	07 13 22.5			
	comp=Z,104nm,1.2s								
EVO				*e*MLR	MLR				
	comp=Z,5µm,23.0s								
EVOP	**Sao Brissos**	**140.86**	**329**	*e*P	PKPpre	07 13 22.8			
EVOP				*e*PP	PP	07 16 29.3	-0.6		
EVOP				*e*SS	SS	07 34 53.7	+2.6		
EVOP				*e*SS	SS	07 34 54.3	+3.1		
EVOP				AMS	AMS	08 09 39.2			
	comp=E,4µm,22.1s								
EVOP	**Sao Brissos**	**140.86**	**329**	*e*PKHKP	PKPpre	07 13 22.7			
PBEJ	**Beja**	**141.10**	**328**	*e*PKPdf	PKPdf	07 13 26.7	-4.6		
PBEJ	**Beja**	**141.10**	**328**	*e*PP	PP	07 16 37.0	+5.6		
PBEJ				*i* P		07 17 02.0			
PMAFR	**Mafra**	**141.11**	**331**	*e*PKPdf	PKPdf	07 13 25.0	-5.3		
PMAFR	**Mafra**	**141.11**	**331**	*e*PP	PP	07 16 32.3	+0.9		
PMAFR				*e*SS	SS	07 35 07.9	+14		
PMAFR				*e*LR	LR	07 59 58.8			
	comp=E,4µm,22.0s								
LIS	**Lisbon**	**141.23**	**330**	*e*P	PKPdf	07 13 24.1	-6.4		
LIS				*e*PP	PP	07 16 33.0	+0.8		
LIS				AMS	AMS	08 18 41.2			
	comp=Z,5µm,27.5s								
LIS	**Lisbon**	**141.23**	**330**	*e*PP	PP	07 16 33.0	+0.9		
LIS				A		08 18 41.2			
	comp=Z,5µm,27.5s								
LIS	**Lisbon**	**141.23**	**330**	*e*PKHKP	PKPpre	07 13 24.0			
MESJ	**Messejana**	**141.42**	**328**	*e*P	PKPpre	07 13 23.7			
MESJ				*e*PP	PP	07 16 34.0	+0.6		
MESJ				*e*SS	SS	07 34 58.5	+0.7		
MESJ				*e*SS	SS	07 34 58.5	+0.7		
MESJ				AMS	AMS	08 09 56.9			
	comp=E,3µm,19.6s								
PVAQ	**Vaqueiros**	**141.48**	**327**	*e*PKPdf	PKPpre	07 13 23.2			
PVAQ	**Vaqueiros**	**141.48**	**327**	*e*PP	PP	07 16 36.1	+2.3		
PVAQ				*e*SS	SS	07 35 05.4	+6.8		
PVAQ				*e*LR	LR	08 03 13.5			
	comp=E,2µm,24.0s								
PCVE	**Castro Verde**	**141.49**	**328**	*e*PKPdf	PKPdf	07 13 26.3	-4.7		
PCVE	**Castro Verde**	**141.49**	**328**	*e*PP	PP	07 16 36.9	+3.1		
PCVE				*e*SS	SS	07 35 08.6	+10		
PCVE				*e*LR	LR	08 02 51.5			
	comp=E,2µm,20.0s								
PBDV	**Barranco-do-Ve**	**141.72**	**327**	*e*PKPdf	PKPdf	07 13 28.1	-3.3		
PBDV	**Barranco-do-Ve**	**141.72**	**327**	*e*PP	PP	07 16 38.6	+3.4		
PBDV				*e*SS	SS	07 35 17.5	+16		
PBDV				*e*LR	LR	08 03 49.1			
	comp=E,2µm,18.0s								
PTEO	**Sao Teotonio**	**141.91**	**329**	*e*PKPdf	PKPdf	07 13 27.7	-4.0		
PTEO	**Sao Teotonio**	**141.91**	**329**	*e*PP	PP	07 16 40.7	+4.4		
MORF	**Marmelete**	**142.05**	**328**	*e*PKPdf	PKPpre	07 13 27.9			
MORF	**Marmelete**	**142.05**	**328**	*e*PP	PP	07 16 41.5	+4.3		
MORF				*e*SS	SS	07 35 12.7	+7.6		
MORF				*e*LR	LR	08 03 59.5			
	comp=E,2µm,20.0s								
MORF	**Marmelete**	**142.05**	**328**	*e*PKHKP	PKPpre	07 13 26.7			
SDV	**Santo Domingo**	**142.23**	**83**	*e*PKPdf	PKPdf	07 13 29.4	-3.6		
SDV				*e*SKPbc	SKPbc	07 17 05.0	0.0		
PFVI	**Vila Bisbo**	**142.27**	**328**	*e*PKPdf	PKPdf	07 13 29.1	-3.3		
PFVI	**Vila Bisbo**	**142.27**	**328**	*e*PP	PP	07 16 42.8	+4.2		
PFVI				*e*SS	SS	07 35 15.3	+7.6		
PFVI				*e*LR	LR	08 03 23.0			
	comp=E,2µm,20.0s								
MDT	**Midelt**	**142.80**	**319**	PKhKP	PKPpre	07 13 28.2			
	baz=47,slow=3.7								
MDT				PKP	PKPdf	07 13 31.8	-1.7		
	comp=E,25nm,0.9s,baz=76,slow=4.8								
MDT				SKP		07 17 02.9			
	comp=E,22nm,1.0s,baz=82,slow=2.7,SNR=4.0								
AGPR	**Aguadilla, PR**	**144.23**	**67**	*e*PKPdf	PKPdf	07 13 34.3	-2.1		
SIV	**San Ignacio**	**144.27**	**128**	PKP	PKPdf	07 13 34.0	-2.5		
	comp=E,73nm,0.5s,baz=245,slow=4.1,SNR=48								
SIV				SKPbc	SKPbc	07 17 08.7	-1.1		
	comp=E,64nm,1.0s,baz=264,slow=1.8,SNR=5.6								
LSP	**Las Mesas**	**144.33**	**67**	*e*PKPdf	PKPdf	07 13 34.1	-2.4		
CRPR	**Cabo Rojo, PR**	**144.35**	**68**	*e*PKPdf	PKPdf	07 13 32.8	-3.7		
LRS	**Lares**	**144.52**	**67**	*e*PKPdf	PKPdf	07 13 34.8	-2.0		
OBIP	**Obispado Ponce**	**144.81**	**67**	*e*PKPdf	PKPdf	07 13 35.9	-1.5		
CELP	**Cerrillos**	**144.82**	**67**	*e*PKPdf	PKPdf	07 13 34.9	-2.5		
ICM	**Isla Caja Muer**	**144.92**	**68**	*e*PKPdf	PKPdf	07 13 36.5	-1.1		
SJG	**San Juan**	**145.21**	**67**	*e*PKPdf	PKPdf	07 13 35.5	-2.5		
SJG	**San Juan**	**145.21**	**67**	PKPbc	PKPbc	07 13 35.7	-2.1		
	comp=E,183nm,0.6s,baz=5.9,slow=2.0,SNR=70								
SJG				SKPbc	SKPbc	07 17 12.7	+0.7		
	comp=E,25nm,0.8s,baz=285,slow=3.7,SNR=2.6								
CBYP	**Canovanas**	**145.43**	**67**	*e*PKPdf	PKPdf	07 13 37.2	-1.2		
TORD	**Torodi Ar. Bea**	**145.49**	**284**	PKPbc	PKPbc	07 13 36.9	-1.8		
	comp=E,121nm,0.5s,baz=67,slow=4.2,SNR=187								
TORD				SKPbc	SKPbc	07 17 11.8	-0.8		
	comp=E,41nm,1.1s,baz=88,slow=1.4,SNR=3.6								
TORD				SKKPbc		07 25 08.9			
	comp=E,14nm,1.0s,baz=272,slow=4.2,SNR=7.1								
SHEL	**Horse Pasture**	**145.50**	**230**	*e*PKPdf	PKPdf	07 13 40.8	+2.2		
MTP	**Monte Pirata**	**145.76**	**67**	*e*PKPdf	PKPdf	07 13 39.3	+0.3		
STVI	**Saint Thomas**	**146.23**	**66**	*e*PKPdf	PKPdf	07 13 39.3	-0.5		
CDVI	**St. Croix**	**146.57**	**67**	*e*PKPdf	PKPdf	07 13 40.6	+0.2		
SPB	**Sao Paulo**	**147.10**	**154**	*e*PKPbc	PKPbc	07 13 44.2	+0.9		
ADH	**Angra Heroismo**	**147.26**	**352**	*e*PKP	PKPab	07 13 44.6	-0.5		
ROSA	**Rosais**	**147.32**	**354**	*e*PKP	PKPab	07 13 44.9	-0.5		
PMAN	**Manadas**	**147.39**	**353**	*e*PKP	PKPab	07 13 44.8	-0.8		
PCED	**Cedros**	**147.46**	**354**	*e*PKP	PKPbc	07 13 44.5	+0.6		
CALA	**Caldeira**	**147.51**	**354**	*e*PKP	PKPbc	07 13 43.7	-0.3		
PICO	**Pico**	**147.56**	**354**	*e*PKP	PKPab	07 13 46.7	+0.4		
PID	**Ribeirinha**	**147.59**	**353**	*e*PKP	PKPbc	07 13 44.5	+0.3		
PCAN	**Candelaria**	**147.60**	**354**	*e*PKP	PKPbc	07 13 44.6	+0.3		
PSET	**Sete Cidades**	**147.84**	**350**	*e*PKP	PKPab	07 13 47.1	-0.3		
GRON	**Grota Negra**	**147.86**	**349**	*e*PKP	PKPbc	07 13 44.4	-0.6		
CMLA	**Cha da Macela**	**147.86**	**349**	*e*PKP	PKPbc	07 13 45.0	0.0		
CMLA	**Cha da Macela**	**147.86**	**349**	*e*PKP2	PKPbc	07 13 43.5	-1.5		
PDA	**Ponta Delgada**	**147.91**	**350**	*e*PKP	PKPdf	07 13 43.2	+1.1		
PCRV	**Puerto La Cruz**	**148.07**	**81**	PKP	PKPdf	07 13 42.4	-0.6		
	comp=E,323nm,1.0s,baz=358,slow=2.1,SNR=26								
PCRV				PKPbc	PKPbc	07 13 46.0	-0.2		
	comp=E,404nm,1.0s,baz=342,slow=6.0,SNR=99								
PSMN	**Pico do Norte,**	**148.51**	**348**	*e*PKP	PKPbc	07 13 46.3	-0.4		
PSMA	**Santa Maria**	**148.53**	**348**	*e*PKP	PKPdf	07 13 44.6	+1.5		
SKI	**Saint Kitts**	**148.54**	**67**	*e*P	PKPdf	07 13 45.5	+1.9		
SKI	**Saint Kitts**	**148.54**	**67**	*e*P	PKPdf	07 13 45.5	+1.9		
PMPS	**Porto Santo**	**149.22**	**333**	*e*PKPdf	PKPdf	07 13 45.8	+1.4		
ANWB	**Willy Bob**	**149.31**	**66**	*e*PKPbc	PKPbc	07 13 49.7	+0.5		
PMAR	**Madeira**	**149.77**	**333**	*e*PKPdf	PKPdf	07 13 46.9	+1.7		
FUL	**Funchal**	**149.84**	**333**	*e*PKPbc	PKPbc	07 13 51.2	+1.0		
CAM4	**Nova Friburgo**	**150.06**	**161**	*i* P		PKPbc	07 13 48.9	-2.1	
CAM4				*i*			07 13 55.0		
CAM4				*i*			07 13 57.5		
CAM4				*i*			07 14 00.1		
MDN	**Morne-Daniel**	**150.34**	**70**	*e*P	PKPdf	07 13 46.7	+0.1		
MDN	**Morne-Daniel**	**150.34**	**70**	*e*P	PKPdf	07 13 46.7	+0.1		
DPMT	**Pointe Michel**	**150.37**	**70**	*e*P	PKPbc	07 13 51.2	-0.7		
DPMT	**Pointe Michel**	**150.37**	**70**	*e*P	PKPbc	07 13 51.2	-0.7		
DSHT	**Scott's Head**	**150.38**	**70**	*e*P	PKPbc	07 13 52.6	+0.7		
DFBT	**Forest Bistro**	**150.39**	**70**	*e*P	PKPdf	07 13 47.7	+1.1		
DFBT	**Forest Bistro**	**150.39**	**70**	*e*P	PKPdf	07 13 47.7	+1.1		
DSTT	**Stowe**	**150.44**	**70**	*e*P	PKPbc	07 13 52.1	+0.1		
DLPL	**La Plaine**	**150.47**	**70**	*e*P	PKPbc	07 13 52.7	+0.5		
FDF	**Fort de France**	**150.71**	**71**	*e*PKPdf	PKPdf	07 13 47.8	+0.7		
FDF				*e*PKPbc	PKPbc	07 13 54.8	+2.1		
FDF	**Fort de France**	**150.71**	**71**	*e*P	PKPdf	07 13 48.1	+1.0		
GRW	**Mount Saint Ca**	**150.73**	**76**	*e*P	PKPbc	07 13 50.6	-2.2		
GRW	**Mount Saint Ca**	**150.73**	**76**	*e*	PKPbc	07 13 50.6	-2.2		
GRGR	**Grenville**	**150.75**	**76**	*e*PKPdf	PKPdf	07 13 46.3	-0.9		
GRGR				*e*PKPbc	PKPbc	07 13 51.1	-1.7		
BIM	**Bigot**	**150.83**	**71**	*e*P	PKPdf	07 13 48.2	+0.9		
TCE	**Chacachacare**	**150.84**	**79**	*e*P	PKPbc	07 13 52.1	-0.9		
TCE	**Chacachacare**	**150.84**	**79**	*e*P	PKPbc	07 13 52.1	-0.9		
SVB	**Belmont**	**150.93**	**74**	*e*P	PKPdf	07 13 48.0	+0.5		
SVB	**Belmont**	**150.93**	**74**	*e*P	PKPdf	07 13 48.0	+0.5		
SVV	**Soufriere Volc**	**150.96**	**74**	*e*P	PKPbc	07 13 53.3	0.0		
FCV	**Fort Charlotte**	**150.96**	**74**	*e*P	PKPdf	07 13 49.1	+1.6		
FCV	**Fort Charlotte**	**150.96**	**74**	*e*P	PKPdf	07 13 49.1	+1.6		
SLB	**Belfond**	**151.02**	**73**	*e*P	PKPbc	07 13 50.1	-3.3		
SLB	**Belfond**	**151.02**	**73**	*e*P	PKPbc	07 13 50.1	-3.3		
BHS	**Barnard House**	**151.04**	**74**	*e*P	PKPbc	07 13 50.5	-3.0		
BHS	**Barnard House**	**151.04**	**74**	*e*P	PKPbc	07 13 50.5	-3.0		
MCLT	**Moule a Chique**	**151.14**	**73**	*e*P	PKPbc	07 13 51.8	-2.0		
MCLT	**Moule a Chique**	**151.14**	**73**	*e*P	PKPbc	07 13 51.8	-2.0		
TPP	**Pointe-a-Pierr**	**151.18**	**80**	*e*P	PKPbc	07 13 50.9	-3.0		
TPP	**Pointe-a-Pierr**	**151.18**	**80**	*e*P	PKPbc	07 13 50.9	-3.0		
TPP	**Pointe-a-Pierr**	**151.18**	**80**	*e*	PKPbc	07 13 55.9	+2.1		
TRN	**Trinidad (W)**	**151.19**	**79**	*e*P	PKPdf	07 13 48.7	+0.7		
TRN	**Trinidad (W)**	**151.19**	**79**	*e*P	PKPdf	07 13 48.7	+0.7		
TRN	**Trinidad (W)**	**151.19**	**79**	*e*	PKPbc	07 13 54.8	+0.9		
TBH	**Brigand Hill**	**151.54**	**79**	*e*P	PKPbc	07 13 50.9	-3.8		
TBH	**Brigand Hill**	**151.54**	**79**	*e*P	PKPbc	07 13 50.9	-3.8		
TBH	**Brigand Hill**	**151.54**	**79**	*e*	PKPbc	07 13 56.7	+2.0		
TPR	**Prospect**	**151.73**	**78**	*e*P	PKPdf	07 13 50.3	+1.6		
TPR	**Prospect**	**151.73**	**78**	*e*P	PKPdf	07 13 50.3	+1.6		
TPR	**Prospect**	**151.73**	**78**	*e*	PKPbc	07 13 56.2	+1.1		
BOT	**Bacolet**	**151.79**	**78**	*e*	PKPbc	07 13 56.9	+1.6		
TOSP	**Speyside**	**151.95**	**78**	*e*P	PKPdf	07 13 50.2	+1.1		
KIC	**Kosan Boka**	**152.28**	**272**	*e*PKIKP	PKPdf	07 13 50.1	+0.5		
	comp=E,1µm,1.1s								
DBIC	**Dimbokro**	**152.40**	**273**	*e*PKPdf	PKPdf	07 13 50.4	+0.6		
DBIC				*e*PKPbc	PKPbc	07 13 58.2	+1.5		
DBIC	**Dimbokro**	**152.40**	**273**	PKP	PKPdf	07 13 50.3	+0.5		
	comp=E,101nm,1.1s,baz=69,slow=1.7,SNR=23								
DBIC				PKPbc	PKPbc	07 13 57.2	+0.5		
	comp=E,344nm,1.1s,baz=84,slow=2.4,SNR=49								
DBIC				PKPab	PKPab	07 14 07.8	+0.8		
	comp=E,306nm,1.0s,baz=81,slow=5.7,SNR=14								
DBIC	**Dimbokro**	**152.40**	**273**	PKIKP	PKPdf	07 13 50.3	+0.5		
DBIC						07 13 57.2			
DBIC						07 14 07.9			
DBIC				pmax	pmax				
	comp=Z,101nm,1.1s								
DBIC				pmax	pmax				
	comp=Z,344nm,1.1s								
DBIC				pmax	pmax				
	comp=Z,306nm,1.0s								
LIC	**Lamto**	**152.56**	**272**	*e*PKIKP	PKPdf	07 13 50.5	+0.5		
	comp=Z,1µm,1.2s								
LIC	**Lamto**	**152.56**	**272**	*e*PKIKP	PKPdf	07 13 46.4	-3.6		
	comp=Z,1µm,1.2s								
LIC				*e*MLR	MLR				
	comp=Z,5µm,20.5s								
LIC	**Lamto**	**152.56**	**272**	*e*PKPdf	PKPdf	07 13 46.4	-3.6		
LIC				*e*PKPdf	PKPdf	07 13 50.5	+0.5		
LIC				LR	LR				
	comp=Z,2µm,20.5s								
TIC	**Toumodi**	**152.56**	**273**	*e*PKIKP	PKPdf	07 13 50.4	+0.4		
	comp=Z,1µm,1.2s								
BBTS	**Babate**	**162.06**	**299**	PKP	PKPdf	07 14 03.2	+1.4		
BBTS				PKPab	PKPab	07 14 49.0	+0.5		
BBTS	**Babate**	**162.06**	**299**	PKP	PKPdf	07 14 03.2	+1.4		
	comp=Z,129nm,1.1s,baz=8.2,slow=0.7,SNR=9.3								
BBTS				PKPab	PKPab	07 14 49.0	+0.5		
	comp=Z,95nm,1.0s,baz=84,slow=1.3,SNR=5.3								
RCBR	**Riachuelo**	**167.67**	**165**	*e*PKPdf	PKPdf	07 14 07.0	+0.2		

IDC 30 07:06:00.0± 1.2, 31°.57S × 58°.12E, h0km, mb4.5/5, mb1 4.7/5, mb1mx4.2/22, mbtmp4.5/5, MS5.4/4, Ms1 5.4/4, ms1mx4.4/35, Error ellipse: s-maj=53.1km s-min=23.2km az=17.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
KMBO	**Kilima Mbogo**	**36.13**	**323**	P	P	07 13 03.0		-1.0
	4.8nm,0.9s,baz=180,slow=24,SNR=3.9							
TSUM	**Tsumeb**	**38.42**	**279**	P	P	07 13 24.2		+0.7
	50nm,1.2s,baz=117,slow=6.8,SNR=8.0							
QSPA	**South Pole Qui**	**58.60**	**180**	LR	LR	07 38 04.0		
	comp=Z,4µm,21.1s,baz=8.4,slow=33							
CMAR	**Chiang Mai Arr**	**63.31**	**44**	P	P	07 16 31.8		+0.8
	1.6nm,0.7s,baz=224,slow=7.3,SNR=5.9							
ASAR	**Alice Springs**	**66.42**	**104**	P	P	07 16 51.2		0.0
	1.6nm,0.8s,baz=232,slow=5.5,SNR=6.1							
WRA	**Warramunga Arr**	**68.42**	**101**	P	P	07 17 03.7		-0.3
	1.8nm,0.8s,baz=244,slow=5.4,SNR=4.5							
USHA	**Ushuaia**	**82.48**	**208**	LR	LR	07 45 09.6		
	comp=Z,775nm,21.4s,baz=75,slow=28							
PLCA	**Paso Flores**	**93.82**	**216**	LR	LR	07 56 11.5		
	comp=Z,3µm,21.1s,baz=221,slow=32							
NOA	**NORSAR Array B**	**99.86**	**339**	LR	LR	08 04 32.1		
	comp=Z,2µm,21.6s,baz=45,slow=35							

IDC 30 07:07:42.4± 3.7, 6°.10S × 147°.66E, h36km ± 21km, mb4.5/3, mb1 4.5/4, mb1mx3.9/16, mbtmp4.4/4, ML4.3/1, Error ellipse: s-maj=54.7km s-min=24.1km az=118.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
WRA	**Warramunga Arr**	**18.89**	**222**	P	Pn	07 11 59.6		-1.1
	1.1nm,0.3s,baz=50,slow=11,SNR=26							
WRA				ScP	ScP	07 19 55.6		-3.0
	0.0nm,0.3s,baz=42,slow=2.5,SNR=5.1							
ASAR	**Alice Springs**	**21.91**	**216**	P	P	07 12 33.1		+0.5
	7.5nm,0.4s,baz=52,slow=8.9,SNR=45							
ASAR				S	S	07 16 33.2		+0.4
	5.6nm,1.1s,baz=34,slow=20,SNR=7.1							
ASAR				ScP	ScP	07 20 04.7		-1.1
	0.6nm,1.1s,baz=38,slow=2.2,SNR=4.1							
FITZ	**Fitzroy Crossi**	**24.58**	**239**	P	P	07 12 59.0		-0.2
	19nm,0.5s,baz=68,slow=7.1,SNR=49							
STKA	**Stephens Creek**	**26.27**	**192**	P	P	07 13 16.2		+1.9
	12nm,0.9s,baz=15,slow=11,SNR=6.4							
TORD	**Torodi Ar. Bea**	**145.75**	**284**	PKPbc	PKPbc	07 27 17.9		-0.7
	2.5nm,0.4s,baz=76,slow=3.9,SNR=3.4							

*ISCJB **30** 07:21:17.2± 2.5, 56°.18S ± 0°.08 × 26°.9W ± 0°.1, h68km ± 22km, mb4.6/25, Error ellipse: s-maj=14.2km s-min=11.4km az=139.4*

*IDC **30** 07:21:22.9± 1.2, 56°.18S × 26°.95W, h107km ± 9km, mb4.3/17, mb1 4.4/18, mb1mx4.3/22, mbtmp4.4/18, Error ellipse: s-maj=14.4km s-min=10.0km az=32.0*

*NEIC **30** 07:21:24.5± 2.0, 56°.19S × 26°.93W, h124km ± 17km, mb4.8/13, Error ellipse: s-maj=9.0km s-min=6.8km az=46.0*

ISC 30 07:21:19.4± 2.3, 56°.25S ± 0°.08 × 27°.0W ± 0°.1, h74km ± 21km, n95, σ0 91/40, mb4.6/25, 1C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
VNA1	**Neumayer--Stat**	**16.56**	**158**	*e*	**Pn**	**07 25 06.1**		**-0.5**
VNA2	**Neumayer--Watz**	**16.96**	**158**	*e*	**Pn**	**07 25 10.7**		**-0.8**
VNA2				*e*		07 26 00.3		
PMSA	**Palmer Station**	**19.88**	**229**	*e*P	**Pn**	**07 25 45.8**		**-0.7**
	66nm,0.7s							
PMSA	**Palmer Station**	**19.88**	**229**	P	**Pn**	**07 25 46.7**		**+0.2**
	5.5nm,0.3s,baz=65,slow=6.6,SNR=37							
USHA	**Ushuaia**	**23.27**	**256**	P	**P**	**07 26 22.2**		**+2.0**
	11nm,0.9s,mb4.2,baz=140,slow=7.9,SNR=4.9							
SYO	**Syowa Base**	**31.35**	**141**	*e*P	**P**	**07 27 28.4**		**-3.9**
PLCA	**Paso Flores**	**32.17**	**280**	PcP	PcP	07 30 26.0		-1.0
	2.0nm,0.7s,baz=122,slow=8.1,SNR=5.8							
PLCA				ScP	ScP	07 33 58.0		-5.7
	1.9nm,0.7s,baz=50,slow=1.9,SNR=6.6							
QSPA	**South Pole Qui**	**34.01**	**180**	*e*P	**P**	**07 27 56.2**		**+0.8**
	19nm,0.7s,mb5.0							
QSPA				PcP	PcP	07 30 31.2		-0.2
QSPA				ScP	ScP	07 34 05.5		-3.9
QSPA	**South Pole Qui**	**34.01**	**180**	P	**P**	**07 27 56.4**		**+1.0**
	14nm,0.6s,mb5.0,baz=203,slow=4.2,SNR=32							
QSPA				PcP	PcP	07 30 31.2		-0.2
	8.3nm,0.6s,baz=22,slow=0.8,SNR=3.6							
QSPA				ScP	ScP	07 34 05.5		-3.9
	8.5nm,0.9s,baz=198,slow=2.7,SNR=7.3							
CPUP	**Villa Florida**	**37.04**	**311**	*e*P	**P**	**07 28 21.0**		**-1.0**
	9.5nm,0.6s,mb4.9							
CPUP				PcP	PcP	07 30 40.7		-0.5
CPUP				ScP	ScP	07 34 16.2		-5.1
CPUP	**Villa Florida**	**37.04**	**311**	P	**P**	**07 28 21.4**		**-0.5**
	2.2nm,0.6s,mb4.3,baz=129,slow=8.0,SNR=9.8							
CPUP				PcP	PcP	07 30 40.7		-0.5
	4.0nm,0.6s,baz=118,slow=1.4,SNR=11							
CPUP				ScP	ScP	07 34 16.2		-5.1
	1.9nm,0.8s,baz=56,slow=3.1,SNR=3.4							
CFAA	**Coronel Fontan**	**37.76**	**293**	P	**P**	**07 28 26.3**		**-1.7**
	0.5nm,0.5s,mb3.6,baz=147,slow=9.8,SNR=6.4							
CFAA				PcP	PcP	07 30 42.6		-0.8
	1.2nm,0.5s,baz=141,slow=3.1,SNR=11							
MAW	**Mawson**	**39.91**	**143**	*e*P	**P**	**07 28 46.1**		**+0.5**
	12nm,0.7s,mb4.8							
MAW	**Mawson**	**39.91**	**143**	*e*P	**P**	**07 28 46.0**		**+0.4**
	4.0nm,0.8s,mb4.3							
MAW				PcP	PcP	07 30 49.3		-0.2
MAW				ScP	ScP	07 34 28.6		-3.1
MAW	**Mawson**	**39.91**	**143**	P	**P**	**07 28 46.2**		**+0.6**
	12nm,0.6s,mb4.9,baz=234,slow=8.0,SNR=38							
MAW				PcP	PcP	07 30 49.3		-0.2
	3.0nm,0.7s,baz=205,slow=5.1,SNR=3.8							
MAW				ScP	ScP	07 34 28.6		-3.1
	2.9nm,0.9s,baz=228,slow=5.2,SNR=2.7							
BOSA	**Boshof**	**45.89**	**75**	P	**P**	**07 29 34.0**		**-0.3**
	3.1nm,1.0s,mb4.0,baz=213,slow=13,SNR=3.7							
SBA	**Scott Base**	**45.90**	**184**	*e*P	**P**	**07 29 34.8**		**+1.0**
	25nm,1.0s,mb4.9							
SIV	**San Ignacio**	**47.81**	**313**	P	**P**	**07 29 48.8**		**-0.6**
	1.2nm,0.6s,mb3.9,baz=24,slow=19,SNR=5.7							
SIV				PcP	PcP	07 31 16.7		-0.5
	4.2nm,0.8s,baz=125,slow=7.5,SNR=6.4							
SIV				ScP	ScP	07 35 00.0		-4.5
	5.1nm,0.9s,baz=156,slow=4.1,SNR=14							
LBTB	**Lobatse**	**48.94**	**73**	*e*P	**P**	**07 29 58.0**		**0.0**
	3.9nm,0.6s,mb4.5							
LBTB	**Lobatse**	**48.94**	**73**	P	**P**	**07 29 58.4**		**+0.5**
	4.0nm,0.6s,mb4.5,baz=210,slow=6.8,SNR=7.1							
TSUM	**Tsumeb**	**49.66**	**60**	P	**P**	**07 30 02.6**		**-1.0**
	3.4nm,0.9s,m

BMRM	**Bremner River**	**148.28**	**305**	*e*PKPbc	PKPbc	07 40 55.2	-0.4
MENT	**Mentasta**	**148.52**	**309**	*e*PKPbc	PKPbc	07 40 55.2	-0.9
DOT	**Dot Lake**	**148.87**	**310**	*e*PKPbc	PKPbc	07 40 56.5	-0.5
DOT				*e*PKPab	PKPab	07 41 01.0	-0.3
DIV	**Divide**	**148.88**	**305**	*e*PKPbc	PKPbc	07 40 56.8	-0.3
SML	**Sawmill**	**150.25**	**305**	*e*PKPbc	PKPbc	07 40 59.6	-0.8
SML				*e*PKPab	PKPab	07 41 06.7	-0.3
SEW	**Seward**	**150.26**	**302**	*e*PKPbc	PKPbc	07 40 59.6	-0.9
SEW				*e*PKPab	PKPab	07 41 06.5	-0.6
ILAR	**Eielson Army**	**150.35**	**311**	PKP	PKPdf	07 40 51.5	-3.8
	0.8nm,0.8s,baz=276,slow=0.8,SNR=12						
ILAR				PKPbc	PKPbc	07 40 59.8	-0.8
	15nm,0.8s,baz=80,slow=0.2,SNR=133						
SONM	**Songino Array**	**150.60**	**87**	PKPbc	PKPbc	07 41 01.0	-0.7
	11nm,0.6s,baz=229,slow=3.1,SNR=40						
RC01	**Rabbit Creek A**	**150.70**	**303**	*e*PKPbc	PKPbc	07 41 01.1	-0.4
RC01				*e*PKPab	PKPab	07 41 08.3	-0.6
SLKM	**Skilak Lake**	**150.75**	**302**	*e*PKPbc	PKPbc	07 41 00.6	-1.1
SLKM				*e*PKPab	PKPab	07 41 08.9	-0.3
COLA	**College**	**150.77**	**311**	*e*PKPbc	PKPbc	07 41 00.1	-1.5
COLA				*e*PKPab	PKPab	07 41 08.5	-0.6
BJT	**Baijiatuau**	**150.96**	**108**	*e*PKPbc	PKPbc	07 41 02.2	-0.7
MCK	**McKinley**	**151.00**	**309**	*e*PKPbc	PKPbc	07 41 01.4	-0.7
KDAK	**Kodiak Island**	**151.02**	**296**	*e*PKPbc	PKPbc	07 41 01.6	-0.8
KDAK	**Kodiak Island**	**151.02**	**296**	PKPbc	PKPbc	07 41 01.8	-0.6
	16nm,0.4s,baz=133,slow=1.8,SNR=47						
TLY	**Talaya**	**151.09**	**78**	*e*PKPbc	PKPbc	07 41 02.1	-0.6
TRF	**Thorofare Moun**	**151.53**	**308**	*e*PKPbc	PKPbc	07 41 02.7	-0.7
TRF				*e*PKPab	PKPab	07 41 11.5	-0.7
BPAW	**Bear Paw Mtn.**	**151.96**	**309**	*e*PKPbc	PKPbc	07 41 03.5	-0.8
BPAW				*e*PKPab	PKPab	07 41 13.1	-0.9
PPLA	**Purkeypile**	**152.26**	**307**	*e*PKPbc	PKPbc	07 41 03.9	-1.1
PPLA				*e*PKPab	PKPab	07 41 15.0	-0.4
KSRS	**Korea Array**	**154.77**	**128**	PKPab	PKPab	07 41 26.2	-0.5
	1.3nm,0.6s,baz=228,slow=5.5,SNR=5.4						
MJAR	**Matsushiro Arr**	**157.88**	**147**	PKPab	PKPab	07 41 39.7	-0.4
	1.1nm,0.6s,baz=222,slow=4.4,SNR=3.9						

BJI **30** *07:45:03.6, 10°.65N×91°.80E, h10km, mB5.3/23, mb4.9/45, Ms4.6/23, Ms7 4.6/23*

IDC **30** *07:45:06.9±0.4, 11°.04N×91°.81E, h0km, mb4.6/30, mb1 4.6/31, mb1mx4.6/35, mbtmp4.6/31, ML4.3/1, Error ellipse: s-maj=15.9km s-min=10.7km az=55.0*

ISCJB **30** *07:45:08.2±1.1, 11°.02N±0°.03×91°.72E±0°.03, h19km±7km, mb4.7/124, MS4.4/11, Error ellipse: s-maj=5.5km s-min=4.4km az=23.0*

NEIC **30** *07:45:08.7±0.2, 11°.05N×91°.67E, h10km, mb4.8/59, Error ellipse: s-maj=6.9km s-min=4.7km az=216.0*

MOS **30** *07:45:10.0±0.9, 11°.01N×91°.78E, h33km, mb5.1/58, Error ellipse: s-maj=8.1km s-min=4.6km az=118.5*

SZGRF **30** *07:45:16.9, 11°.52N×91°.14E, h34km, mb4.6, Andaman Islands, India, region*

DJA **30** *07:45:29, 11°.82N×92°.45E, h147km, mb4.4/9*

ISC 30 07:45:12.7±0.5, 11°.07N±0°.03×91°.73E±0°.03, h37km±4km, h28km±3.2km; pP-P, n316, σ1s 00/313, mb4.7/124, MS4.4/11, 13C-12D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BDT	**Bhumibol Dam**	**9.35**	**48**	P	**Pn**	**07 47 24.0**	**-1.1**
	22nm,0.9s						
NST	**Nakhon Sawan**	**9.37**	**60**	P	Px	07 47 35.0	
CMAR	**Chiang Mai Arr**	**10.13**	**43**	Pn	**Pn**	**07 47 34.9**	**-0.9**
	0.7nm,0.3s,baz=237,slow=14,SNR=21						
CMAR				Sn	**Sn**	**07 49 32.1**	**+4.0**
	0.2nm,0.3s,baz=236,slow=29,SNR=6.3						
CHTO	**Chiang Mai**	**10.39**	**41**	*e*Pn	**Pn**	**07 47 39.5**	**+0.2**
CHTO	**Chiang Mai**	**10.39**	**41**	P	**Pn**	**07 47 39.9**	**+0.7**
	23nm,1.2s						
VIS	**Vishakhapatnam**	**10.48**	**310**	*e*PKP	**Pn**	**07 47 38.5**	**-2.0**
VIS				*i* S	**Sn**	**07 49 26.7**	**-10**
KULM	**Kulim**	**10.53**	**122**	*e*Pn	**Pn**	**07 47 42.2**	**+1.0**
BWNR	**Bhubaneshwar**	**10.80**	**329**	*e*PKP	**Pn**	**07 47 41.0**	**-3.9**
BWNR				*ex*	x	07 49 31.0	
PSI	**Prapat**	**10.88**	**138**	Pn	**Pn**	**07 47 47.6**	**+1.5**
	0.7nm,0.3s,baz=354,slow=16,SNR=2.9						
IPM	**Ipoh**	**11.30**	**125**	*e*Pn	**Pn**	**07 47 52.4**	**+0.6**
	17nm,0.9s						
IPM	**Ipoh**	**11.30**	**125**	P	Px	07 48 03.8	
	22nm,1.0s						
MDRS	**Chennai**	**11.40**	**281**	*ex*	**Pn**	**07 47 54.2**	**+1.0**
MDRS				*ex*	x	07 48 09.4	
PALK	**Pallekele**	**11.52**	**252**	Pn	**Pn**	**07 47 54.8**	**0.0**
	176nm,0.5s,SNR=8.9						
PALK	**Pallekele**	**11.52**	**252**	*e*Pn	**Pn**	**07 47 53.5**	**-1.3**
	99nm,1.2s						
PALK				*e*Sn	**Sn**	**07 49 54.0**	**-8.2**
PALK	**Pallekele**	**11.52**	**252**	*e*P	**Pn**	**07 47 53.5**	**-1.3**
PALK				pmax	pmax		
	comp=Z,99nm,1.2s						
HYB	**Hyderabad**	**14.24**	**298**	*i* P	**Pn**	**07 48 30.0**	**-1.9**
HYB				*e*		07 48 41.5	
HYB				*eS*	**Sn**	**07 51 09.0**	**+0.3**
PDSI	**Padang**	**14.73**	**143**	P	pP	07 48 51.8	-1.8
	comp=Z,7μmcomp=Z,60nm,0.7s						
MYKOM	**Kota Tinggi**	**15.16**	**127**	P	pP	07 48 57.5	-0.9
	comp=Z,16nm,0.7s						
ODAN	**Odare**	**16.23**	**346**	*e*P	**Pn**	**07 48 56.4**	**-1.7**
LATR	**Latur**	**16.38**	**298**	*e*PKP	**Pn**	**07 48 59.7**	**-0.3**
LATR				*ex*	x	07 51 47.6	
RAMN	**Ramite**	**16.52**	**344**	*e*P	**Pn**	**07 49 01.2**	**-0.5**
	comp=Z,55nm,0.5s						
TAPN	**Taplejung**	**16.63**	**347**	*e*P	**Pn**	**07 49 02.1**	**-1.0**
KMI	**Kunming**	**17.45**	**35**	P	**Pn**	**07 49 14.5**	**+1.2**
KMI				pP	pP	07 49 18.0	-5.7
KMI				sP	sP	07 49 19.3	-9.1
KMI				PP		07 49 30.0	
KMI				S	**S**	**07 52 31.3**	**-2.5**
KMI				SS		07 52 50.5	
KMI				pmax	pmax		
	comp=Z,27nm,1.0s						
KMI				LR	LR		
	comp=N,1μm,13.7s						
KMI				LR	LR		
	comp=E,750nm,13.7s						
KMI				LR	LR		
	comp=Z,1μm,15.8s						
PKI	**Pulchoki**	**17.46**	**341**	*e*P	**Pn**	**07 49 13.6**	**+0.2**
DMN	**Daman**	**17.59**	**340**	*e*P	**Pn**	**07 49 13.6**	**-1.5**
GUN	**Gumba**	**17.63**	**343**	*e*P	**Pn**	**07 49 14.7**	**-0.9**
KKN	**Kakani**	**17.70**	**341**	*e*P	**Pn**	**07 49 15.8**	**-0.6**
	comp=Z,56nm,0.7s						
KAD	**Karad**	**18.10**	**292**	*e*PKP	**Pn**	**07 49 21.1**	**-0.3**
KAD				AMb	AMB	07 49 43.3	
	comp=Z,40nm,1.6s						
GKN	**Gorkha**	**18.11**	**339**	*e*P	**Pn**	**07 49 21.6**	**+0.1**
BHPL	**Bhopal**	**18.23**	**313**	*e*PKP	**Pn**	**07 49 22.6**	**-0.4**
BHPL				AMb	AMB	07 49 37.9	
	comp=Z,47nm,1.0s						
KOLN	**Koldanda**	**18.28**	**336**	*e*P	**Pn**	**07 49 24.0**	**+0.4**
	comp=Z,89nm,0.5s						
DANN	**Dangsing**	**18.74**	**338**	*e*P	**Pn**	**07 49 29.7**	**+0.5**
POO	**Poona**	**18.80**	**295**	*e*PKP	**Pn**	**07 49 30.0**	**+0.1**
QIZ	**Qiongzhong**	**19.19**	**64**	P	**Pn**	**07 49 30.8**	**-3.8**
PPBI	**Pangkal Pinang**	**19.45**	**132**	P	**Pn**	**07 49 44.8**	**+7.1**
KSM	**Kuching**	**20.77**	**116**	*e*P	**P**	**07 49 52.1**	**+1.4**
	comp=Z,38nm,1.1s						
KSM	**Kuching**	**20.77**	**116**	P	**P**	**07 49 53.0**	**+2.3**
	comp=Z,36nm,1.3s						
GYA	**Guiyang**	**20.81**	**41**	⇑*i*P	**P**	**07 49 50.8**	**-0.2**
GYA				PP		07 50 15.5	
GYA				S	**S**	**07 53 41.0**	**-0.3**
GYA				SS		07 54 12.0	
GYA				ScP	ScP	07 57 35.8	+2.6
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,160nm,5.8s						
GYA				LR	LR		
	comp=N,560nm,12.5s,MS4.3						
GYA				LR	LR		
	comp=E,470nm,11.8s,MS4.3						
GYA				LR	LR		
	comp=Z,540nm,13.8s,MS4.1						
PTH	**Pithoragarh**	**21.29**	**331**	*e*PKP	**P**	**07 49 56.4**	**+0.2**
SBUM	**Sibu**	**22.06**	**111**	P	**P**	**07 50 09.8**	**+5.2**
	comp=Z,3μmcomp=Z,27nm,1.3s,mb4.5						
NDI	**New Delhi**	**22.17**	**324**	*e*PKP	**P**	**07 50 06.0**	**+0.4**
NDI				*eS*	**S**	**07 54 11.0**	**+3.1**
AJM	**Ajmer**	**22.24**	**316**	*e*PKP	**P**	**07 50 05.0**	**-1.5**
AJM				AMb	AMB	07 50 11.7	
	comp=Z,35nm,1.0s,mb4.8						
CD2	**Chengdu**	**22.68**	**28**	P	**P**	**07 50 12.3**	**+1.3**
CD2				pP		07 50 16.5	
CD2				sP	sP	07 50 19.3	-6.0
CD2				PP		07 50 41.3	
CD2				PcP	PcP	07 54 04.8	+2.0
CD2				S	**S**	**07 54 16.3**	**-0.9**
CD2				sS	sS	07 54 23.0	-10
CD2				SS		07 54 59.3	
CD2				pmax	pmax		
	comp=Z,60nm,1.2s,mb4.9						
CD2				pmax	pmax		
	comp=Z,1μm,9.3s						
CD2				LR	LR		
	comp=N,460nm,17.6s,MS4.2						
CD2				LR	LR		
	comp=E,710nm,17.6s,MS4.2						
CD2				LR	LR		
	comp=Z,1μm,15.7s,MS4.5						
KKM	**Kota Kinabalu**	**24.72**	**100**	*e*P	**P**	**07 50 25.5**	**-5.3**
	comp=Z,98nm,1.3s,mb5.2						
ENH	**Enshi**	**25.25**	**38**	*e*P	**P**	**07 50 34.4**	**-1.1**
	comp=Z,89nm,0.7s,mb5.4						
DGAR	**Diego Garcia**	**26.55**	**227**	*e*P	**P**	**07 50 47.0**	**-0.4**
	comp=Z,217nm,1.0s,mb5.6						
DGAR	**Diego Garcia**	**26.55**	**227**	*e*P	**P**	**07 50 47.0**	**-0.4**
DGAR				pmax	pmax		
	comp=Z,217nm,1.0s,mb5.6						
LZH	**Lanzhou**	**27.22**	**22**	*e*P	**P**	**07 50 54.0**	**+0.8**
LZH				pP	pP	07 50 59.0	-4.5
LZH				sP	sP	07 51 02.0	-6.0
LZH				PP		07 51 42.8	
LZH				*e*S	**S**	**07 55 30.0**	**+0.3**
LZH				sS	sS	07 55 39.0	-7.9
LZH				SS		07 56 47.5	
LZH				pmax	pmax		
	comp=Z,38nm,1.3s,mb4.8						
LZH				pmax	pmax		
	comp=Z,170nm,5.0s						
LZH				LR	LR		
	comp=N,670nm,12.6s,MS4.5						
LZH				LR	LR		
	comp=E,250nm,10.6s,MS4.5						
LZH				LR	LR		
	comp=Z,1μm,14.0s,MS4.6						
XAN	**Xi'an**	**27.75**	**32**	P	**P**	**07 50 56.3**	**-1.7**
XAN				pP	pP	07 51 01.0	-7.3
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.0						
XAN				pmax	pmax		
	comp=Z,95nm,11.4s						
WHN	**Wuhan**	**28.58**	**44**	P	**P**	**07 51 11.5**	**+6.1**
GTA	**Gaotai**	**29.13**	**13**	⇓P	**P**	**07 51 11.3**	**+1.1**
GTA				pP	pP	07 51 16.0	-4.6
GTA				sP	sP	07 51 18.3	-6.7
GTA				S	**S**	**07 56 02.3**	**+2.6**
GTA				sS	sS	07 56 09.8	-7.2
GTA				SS	SS	07 57 33.5	-31
GTA				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.0						
GTA				pmax	pmax		
	comp=Z,360nm,5.7s						
GTA				LR	LR		
	comp=N,420nm,18.3s,MS4.3						
GTA				LR	LR		
	comp=E,630nm,19.2s,MS4.3						
GTA				LR	LR		
	comp=Z,950nm,19.8s,MS4.4						
KBL	**Kabul**	**31.20**	**322**	*e*P	**P**	**07 51 29.6**	**+1.0**
	comp=Z,8.7nm,0.9s,mb4.6						
KBL	**Kabul**	**31.20**	**322**	*e*P	**P**	**07 51 29.6**	**+1.0**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
YHNB	**Yeheng**	**31.20**	**60**	*e*P	**P**	**07 51 29.4**	**+0.6**
	comp=Z,30nm,1.1s,mb5.0						
TTSI	**Tana Toraja**	**31.27**	**115**	P	**P**	**07 51 32.2**	**+2.8**
	comp=Z,32nm,1.1s,mb5.1						
KSH	**Kashi**	**31.60**	**336**	P	**P**	**07 51 31.5**	**-0.5**
KSH				*e*pP	pP	07 51 35.5	-7.0
KSH				*e*sP	sP	07 51 38.5	-8.4
KSH				*e*PP	PP	07 52 34.8	-9.1
KSH				*e*PcP	PcP	07 54 25.5	+1.7
KSH				*e*S	**S**	**07 56 36.8**	**-1.7**
KSH				*e*ScP	ScP	07 58 07.3	+2.9
KSH				*e*PcS	PcS	07 58 09.0	+0.8
KSH				*e*ScS	ScS	08 02 03.0	+0.7
KSH				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.0						
KSH				pmax	pmax		
	comp=Z,210nm,6.5s						
KSH				LR	LR		
	comp=N,280nm,11.1s,MS4.4						
KSH				LR	LR		
	comp=E,400nm,13.6s,MS4.4						
KSH				LR	LR		
	comp=Z,340nm,10.0s,MS4.3						
NJ2	**Nanjing**	**32.58**	**46**	*e*P	**P**	**07 51 41.5**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.1						
BKSI	**Bulukumba**	**32.62**	**119**	P	**P**	**07 51 41.3**	**0.0**
WMQ	**Urumqi**	**32.82**	**355**	*e*P	**P**	**07 51 44.3**	**+1.7**
WMQ				pP	pP	07 51 48.8	-4.3
WMQ				sP	sP	07 51 51.3	-6.2
WMQ				PP	PP	07 52 54.8	-2.5
WMQ				PcP	PcP	07 54 28.0	+0.9
WMQ				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0						
WMQ				pmax	pmax		
	comp=Z,630nm,9.0s						
HHC	**Hu-ho-hao-te**	**34.44**	**27**	*e*P	**P**	**07 51 57.0**	**+0.2**
HHC				pP	pP	07 52 01.3	-5.9
HHC				sP	sP	07 52 04.5	-7.2
HHC				PP	PP	07 53 12.0	-3.2
HHC				S	**S**	**07 57 23.0**	**+0.5**
HHC				SS	SS	07 59 33.0	-20
HHC				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
HHC				pmax	pmax		
	comp=Z,450nm,3.9s						
HHC				LR	LR		
	comp=N,300nm,14.3s,MS4.5						
HHC				LR	LR		
	comp=E,620nm,14.5s,MS4.5						
HHC				LR	LR		
	comp=Z,420nm,15.5s,MS4.3						
TKM2	**Tokmak 2**	**34.70**	**339**	P	**P**	**07 52 00.9**	**+1.9**
	SNR=7.3						
AML	**Almayashu**	**34.73**	**336**	P	**P**	**07 52 01.7**	**+2.4**
	SNR=8.9						
AML	**Almayashu**	**34.73**	**336**	*e*P	**P**	**07 52 01.4**	**+2.1**
	comp=Z,45nm,1.1s,mb5.3						
AML	**Almayashu**	**34.73**	**336**	*e*P	**P**	**07 52 01.4**	**+2.1**
AML				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.3						
AAK	**Ala-Archa**	**34.85**	**338**	P	**P**	**07 52 02.9**	**+2.5**
	SNR=8.9						
AAK	**Ala-Archa**	**34.85**	**338**	*e*P	**P**	**07 52 02.3**	**+2.0**
	comp=Z,38nm,1.3s,mb5.2						
AAK	**Ala-Archa**	**34.85**	**338**	*d i*P	**P**	**07 52 02.2**	**+1.9**
AAK				pmax	pmax		
	comp=Z,21nm,1.6s,mb4.8						
AAK	**Ala-Archa**	**34.85**	**338**	P	**P**	**07 52 02.6**	**+2.3**
	comp=Z,5.2nm,1.3s,mb4.3						
FRU	**Bishkek**	**34.98**	**338**	*e*P	**P**	**07 52 02.6**	**+1.2**
FRU				pmax	pmax		
	comp=Z,58nm,1.2s,mb5.4						
CHMS	**Chumysh**	**35.07**	**338**	P	**P**	**07 52 03.6**	**+1.4**
	SNR=5.3						
EKS2	**Erkin-Say**	**35.15**	**337**	P	**P**	**07 52 05.2**	**+2.3**
	SNR=9.2						
USP	**Ospenovka**	**35.40**	**338**	P	**P**	**07 52 06.3**	**+1.3**
	SNR=21						
BJI	**Beijing**	**36.07**	**33**	P	**P**	**07 52 10.5**	**-0.4**
BJI				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
BJI				pmax	pmax		
	comp=Z,170nm,8.3s						
MK31	**Makanchi Array**	**36.49**	**349**	*e*P	**P**	**07 52 15.0**	**+0.7**
MK31	**Makanchi Array**	**36.49**	**349**	*i* P	**P**	**07 52 14.9**	**+0.6**
MK31				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2						
MKAR	**Makanchi Array**	**36.49**	**349**	P	**P**	**07 52 15.0**	**+0.7**
	comp=Z,17nm,0.8s,mb5.0,baz=167,slow=8.5,SNR=124						
MKAR				PcP	PcP	07 54 36.9	-0.7
	comp=Z,2.5nm,0.9s,baz=201,slow=3.4,SNR=5.0						
KK31	**Karatay Array**	**36.86**	**334**	*i* P	**P**	**07 52 18.8**	**+1.3**
KK31				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.1						
KKAR	**Karatay Array**	**36.86**	**334**	*e*P	**P**	**07 52 18.4**	**+0.8**
	comp=Z,22nm,0.9s,mb5.0						
KKAR	**Karatay Array**	**36.86**	**334**	*e*P	**P**	**07 52 18.4**	**+0.9**
KKAR				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.0						
SONM	**Songino Array**	**38.67**	**16**	P	**P**	**07 52 33.4**	**+0.6**
	comp=Z,19nm,1.0s,mb4.8,baz=198,slow=8.6,SNR=66						
ULN	**Ulaanbaatar**	**38.88**	**16**	*e*P	**P**	**07 52 34.9**	**+0.5**
	comp=Z,12nm,1.0s,mb4.6						
ULN	**Ulaanbaatar**	**38.88**	**16**	*e*P	**P**	**07 52 34.9**	**+0.4**
ULN				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
ULN	**Ulaanbaatar**	**38.88**	**16**	P	**P**	**07 52 34.4**	**-0.1**
ZAK	**Zakamensk**	**40.34**	**11**	⇑*i*P	**P**	**07 52 46.6**	**0.0**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
KURK	**Kurchatov**	**40.97**	**347**	P	**P**	**07 52 52.7**	**+0.9**
	comp=Z,135nm,1.2s,mb5.5,SNR=15						
KURK	**Kurchatov**	**40.97**	**347**	*e*P	**P**	**07 52 52.5**	**+0.7**
	comp=Z,32nm,1.1s,mb4.9						
KURK	**Kurchatov**	**40.97**	**347**	P	**P**	**07 52 51.8**	**0.0**
	comp=Z,16nm,0.9s,mb4.6,baz=162,slow=7.5,SNR=58						
KURK	**Kurchatov**	**40.97**	**347**	*d i*P	**P**	**07 52 52.4**	**+0.6**
KURK				pmax	pmax		
	comp=Z,53nm,1.7s,mb4.9						
TLY	**Talaya**	**41.65**	**11**	*e*P	**P**	**07 52 59.4**	**+2.0**
TLY				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.6						
KSRS	**Korea Array**	**41.76**	**45**	P	**P**	**07 52 57.6**	**-0.9**
	comp=Z,7.2nm,1.1s,mb4.2,baz=247,slow=8.6,SNR=14						
ZAA0	**Zalesovo Array**	**43.12**	**354**	*e*P	**P**	**07 53 09.3**	**-0.1**
ZALV	**Zalesovo Beam**	**43.12**	**354**	P	**P**	**07 53 09.6**	**+0.3**
	comp=Z,5.9nm,0.3s,mb4.8,baz=170,slow=9.8,SNR=36						
CN2	**Changchun**	**43.72**	**36**	*e*P	**P**	**07 53 15.8**	**+1.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,1μm,19.0s,MS4.7						
NVS	**Novosibirsk**	**44.18**	**353**	*e*P	**P**	**07 53 14.4**	**-3.4**
FITZ	**Fitzroy Crossi**	**44.28**	**131**	*e*P	**P**	**07 53 17.3**	**-1.8**
	comp=Z,25nm,0.6s,mb5.1						
FITZ				*e*pP	pP	07 53 26.7	-3.2
FITZ	**Fitzroy Crossi**	**44.28**	**131**	*e*P	**P**	**07 53 17.3**	**-1.9**
	comp=Z,46nm,1.0s,mb5.2						
FITZ	**Fitzroy Crossi**	**44.28**	**131**	P	**P**	**07 53 17.8**	**-1.3**
	comp=Z,15nm,0.5s,mb4.9,baz=321,slow=6.2,SNR=86						
BVAR	**Borovoye Array**	**45.22**	**342**	P	**P**	**07 53 25.8**	**-0.4**
	comp=Z,5.9nm,0.8s,mb4.5,baz=146,slow=8.2,SNR=23						
BVAR				PcP	PcP	07 55 06.2	+0.4
	comp=Z,1.2nm,0.7s,baz=143,slow=5.0,SNR=2.6						
BRVK	**Borovoye**	**45.28**	**342**	*e*P	**P**	**07 53 26.7**	**+0.1**
	comp=Z,13nm,1.1s,mb4.7						
BRVK	**Borovoye**	**45.28**	**342**	⇓*e*P	**P**	**07 53 26.6**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.7						
AB31	**Akbulak array**	**46.30**	**331**	*i* P	**P**	**07 53 35.4**	**+0.6**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
ABKAR	**Akbulak array**	**46.30**	**331**	*e*P	**P**	**07 53 35.8**	**+1.0**
	comp=Z,17nm,1.0s,mb4.9						
MDJ	**Mudanjiang**	**46.61**	**37**	P	**P**	**07 53 37.5**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.3						
MDJ				pmax	pmax		
	comp=Z,500nm,15.1s						
MDJ				LR	LR		
	comp=N,410nm,34.3s						
MDJ				LR	LR		
	comp=Z,390nm,39.0s,MS4.1						
KAKA	**Kakadu**	**46.81**	**119**	*e*P	**P**	**07 53 37.5**	**-1.8**
	comp=Z,14nm,0.6s,mb5.1						
AKTK	**Aktyubinsk**	**48.02**	**331**	P	**P**	**07 53 48.8**	**+0.6**
AKTO	**Aktyubinsk**	**48.02**	**331**	P	**P**	**07 53 48.8**	**+0.6**
	comp=Z,4.7nm,0.7s,mb4.6,baz=122,slow=7.3,SNR=18						
MAJO	**Matsushiro**	**48.89**	**51**	*e*P	**P**	**07 53 55.0**	**-0.1**
MJAR	**Matsushiro Arr**	**48.90**	**51**	P	**P**	**07 53 54.2**	**-1.0**
	comp=Z,0.6nm,0.3s,mb4.0,baz=249,slow=11,SNR=4.5						
MJAR				PcP	PcP	07 55 19.6	+0.3
	comp=Z,1.5nm,0.5s,baz=215,slow=2.6,SNR=3.3						
NWAO	**Narrogin (SRO)**	**50.06**	**152**	P	**P**	**07 54 03.2**	**-0.8**
	comp=Z,6.4nm,0.7s,mb4.8,baz=303,slow=5.0,SNR=6.9						
GNI	**Garni**	**50.52**	**313**	*e*P	**P**	**07 54 09.0**	**+1.6**
	comp=Z,24nm,1.2s,mb5.0						
GNI	**Garni**	**50.52**	**313**	P	**P**	**07 54 07.8**	**+0.4**
	comp=Z,3.7nm,0.4s,mb4.7,baz=25,slow=7.5,SNR=7.5						
GNI	**Garni**	**50.52**	**313**	⇑*e*P	**P**	**07 54 09.8**	**+2.4**
GNI				pmax	pmax		
	comp=Z,24nm,1.2s						
SVE	**Sverdlovsk**	**51.58**	**339**	⇓*e*P	**P**	**07 54 16.3**	**+1.2**
SVE				pmax	pmax		
	comp=Z,46nm,1.3s,mb5.2						
HABR	**Khabarovsk**	**51.86**	**35**	*e*P	**P**	**07 54 15.9**	**-1.4**
HABR				*e**SP	sP	07 54 27.9	-4.7
HABR				*eS*	**S**	**08 01 35.3**	**-2.0**
HABR				*e**SS	sS	08 01 49.9	-5.4
HABR				*e*		08 04 01.3	
HABR				*eSS*	SS	08 05 10.3	-4.0
HABR				pmax	pmax		
	comp=E,20nm,1.5s						
HABR				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.9						
HABR				pmax	pmax		
	comp=N,8.0nm,1.1s						
HABR				MLR	MLR		
	comp=Z,259nm,20.0s,MS4.3						
ARU	**Arti**	**52.04**	**337**	*e*P	**P**	**07 54 18.6**	**0.0

VORD Divnogorie 58.25 324 *e*P P 07 55 00.3 -3.1
VORD pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
VORD pmax pmax
comp=N,80nm,0.8s
VORD pmax pmax
comp=E,80nm,0.8s
VSR Storozhevoye 58.42 324 *e*P P 07 55 04.1 -0.6
VSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
VSR pmax pmax
comp=N,6.0nm,0.5s
VSR pmax pmax
comp=E,20nm,1.3s
BR131 Keskin Array S 58.56 310 *e*P P 07 55 05.7 -0.2
comp=E,5.4nm,0.9s,mb4.6
BRTR Keskin Array B 58.56 310 P P 07 55 05.3 -0.5
comp=E,4.4nm,0.8s,mb4.5,baz=119,slow=7.6,SNR=23
BBOO Buckleboo 60.76 138 *e*P P 07 55 20.6 -0.4
comp=E,11nm,0.9s,mb5.0
MOS Moscow 61.13 328 *e*P P 07 55 21.4 -1.8
MOS *e* 07 55 35.7
MOS pmax pmax
comp=Z,48nm,1.3s,mb5.5
OBN Obninsk 61.42 328⇑ *e*P P 07 55 25.9 +0.7
OBN *i* pP 07 55 39.3 +3.0
OBN *e* 07 56 02.1
OBN pmax pmax
comp=Z,60nm,2.0s,mb5.4
OBN MLR MLR
comp=Z,400nm,17.0s,MS4.6
QLP Quilpie 63.25 127 *e*P P 07 55 37.8 -0.1
QLP *e*pP pP 07 55 47.8 -1.2
TIRR Tirgusor 63.33 314⇑ *i*P pP 07 55 49.0 -0.3
TIRR Tirgusor 63.33 314⇑ *i*P pP 07 55 49.0 -0.3
STKA Stephens Creek 64.02 134 *e*P P 07 55 42.2 -0.7
comp=Z,5.5nm,0.9s,mb4.6
STKA Stephens Creek 64.02 134 *e*P P 07 55 42.5 -0.4
comp=Z,1.5nm,0.8s,mb4.1
STKA Stephens Creek 64.02 134 P P 07 55 42.4 -0.4
comp=Z,4.3nm,0.6s,mb4.7,baz=304,slow=5.2,SNR=12
STKA Stephens Creek 64.02 134 *e*P P 07 55 42.5 -0.4
STKA pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 64.19 321 P P 07 55 42.8 -0.9
comp=Z,0.5nm,0.3s,mb4.1,baz=80,slow=5.9,SNR=7.4
GRER 64.51 315⇓ *i*P pP 07 55 54.9 -2.1
VRI Vrincioaia 64.76 316⇑ P P 07 55 48.7 +1.2
VRI Vrincioaia 64.76 316⇑ *i*P P 07 55 48.7 +1.2
PLOR Plostina 64.81 316 ⇓P P 07 55 48.9 +1.0
PLOR Plostina 64.81 316 ⇓ *i*P P 07 55 48.9 +1.0
MLR Muntele Rosu 65.24 315 P P 07 55 51.9 +1.3
comp=Z,13nm,0.9s,mb5.0,baz=128,slow=3.0,SNR=11
MLR Muntele Rosu 65.24 315⇑ *i*P P 07 55 51.9 +1.3
VOIR 65.85 315 ⇓P P 07 55 53.5 -1.1
VOIR 65.85 315 ⇓ *i*P P 07 55 53.5 -1.1
BURAR Bucovina Array 66.10 317⇑ P P 07 55 56.9 +0.8
BURAR Bucovina Array 66.10 317⇑ *i*P P 07 55 56.9 +0.8
RMQ Roma 66.79 125 *e*P P 07 56 01.3 +0.4
comp=Z,17nm,1.0s,mb5.0
CMSA Cobar Meteorol 66.81 131 *e*P P 07 56 00.3 -0.6
CMSA *e*pP pP 07 56 10.9 -1.2
JOF Joensuu 66.96 334 *e*P P 07 56 00.9 -0.4
JOF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
JOF Joensuu 66.96 334 *e*p P 07 56 00.9 -0.4
comp=Z,9.2nm,0.7s,mb4.9
SEY Seymchan 67.06 26⇑ *e*P P 07 56 01.6 -0.4
EIDS Eidsvold 68.20 123 *e*P P 07 56 10.7 +0.8
comp=Z,4.5nm,0.4s,mb4.8
CRVS Cervenica-Dubn 68.77 318 *e*P P 07 56 13.0 0.0
comp=Z,12nm,1.2s,mb4.7
CRVS Cervenica-Dubn 68.77 318 *e*P P 07 56 13.0 0.0
CRVS pmax pmax
comp=Z,12nm,1.2s,mb4.7
CRVS Cervenica-Dubn 68.77 318 *e*P P 07 56 13.0 0.0
FINES FINESS Array B 68.79 332 P P 07 56 12.7 -0.2
comp=Z,9.7nm,0.9s,mb4.8,baz=98,slow=5.8,SNR=11
KAF Kangasniemi 68.88 333 *e*P P 07 56 12.6 -0.8
KAF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KAF Kangasniemi 68.88 333 *e*p P 07 56 12.6 -0.8
comp=Z,4.7nm,0.8s,mb4.5
KECS Kecovo 69.36 318 *e*P P 07 56 17.0 +0.3
comp=Z,2.1nm,0.8s,mb4.1
KECS Kecovo 69.36 318 *e*P P 07 56 17.0 +0.3
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
KECS Kecovo 69.36 318 *e*P P 07 56 17.0 +0.3
OJC Ojcow 70.01 319 *e*P P 07 56 20.7 0.0
VYHS Vyhne 70.46 318 *e*P P 07 56 23.4 0.0
comp=Z,3.7nm,1.4s,mb4.1
VYHS Vyhne 70.46 318 *e*P P 07 56 23.4 0.0
VYHS pmax pmax
comp=Z,4.0nm,1.4s,mb4.2
VYHS Vyhne 70.46 318 *e*P P 07 56 23.4 0.0
ARMA Armidale 70.78 128 *e*P P 07 56 26.9 +1.2
OKC Ostrava-Krasne 71.03 319 *e*P P 07 56 27.7 +0.8
OKC Ostrava-Krasne 71.03 319 *e*P P 07 56 27.7 +0.8
MORC Moravsky Berou 71.42 319 *e*P P 07 56 29.8 +0.5
comp=Z,2.7nm,1.0s,mb4.1
MORC Moravsky Berou 71.42 319 *e*P P 07 56 29.8 +0.6
MORC pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
ARCES ARCESS Array B 71.47 340 P P 07 56 30.0 +0.8
comp=Z,8.5nm,0.9s,mb4.7,baz=90,slow=6.1,SNR=19
DPC Dobruska-Polom 72.25 319 *e*P P 07 56 35.2 +1.0
DPC Dobruska-Polom 72.25 319 *e*P P 07 56 35.2 +1.0
UPC Upice 72.45 320 *e*P P 07 56 36.3 +0.9
UPC Upice 72.45 320 *e*P P 07 56 36.3 +0.9
PRU Pruhonice 73.37 319 *e*P P 07 56 42.1 +1.3
PRU Pruhonice 73.37 319 *e*P P 07 56 42.1 +1.3
LBTB Lobatse 73.73 240 P P 07 56 45.4 +1.9
comp=Z,2.9nm,0.6s,mb4.4,baz=109,slow=8.7,SNR=6.9
BRG Berggiesshubel 73.79 320 *e*P P 07 56 43.6 +0.3
comp=Z,7.3nm,1.0s,mb4.6
BRG *e* pP 07 56 57.2 +2.6
comp=Z,5.2nm,0.9s
BRG Berggiesshubel 73.79 320 *e*P P 07 56 43.6 +0.3
BRG *e* pP 07 56 57.2 +2.6
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
GEC2 GERESS Array S 73.87 318 *e*P P 07 56 44.2 +0.4
comp=Z,5.0nm,0.9s,mb4.4
GEC2 GERESS Array S 73.87 318 *e*P P 07 56 44.2 +0.4
GEC2 pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
KHC Kasperske Hory 73.96 318 *e*P P 07 56 44.4 0.0
KHC *e* pP 07 56 57.6 +1.9
KHC Kasperske Hory 73.96 318 *e*P P 07 56 44.4 0.0
KHC *e*PcP PcP 07 56 57.6 -2.0
BILL Bilibino 74.03 22 P P 07 56 44.0 -0.4
BILL *PP pP 07 56 53.0 -2.7
BILL pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
CLL Collm 74.40 320 *e*P P 07 56 46.7 -0.1
comp=Z,6.0nm,1.2s,mb4.4
CLL Collm 74.40 320 *i*P P 07 56 46.6 -0.2
comp=Z,8.0nm,1.2s,mb4.5
CLL Collm 74.40 320 *i*P P 07 56 46.6 -0.2
CLL pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
CLL Collm 74.40 320 *i*P P 07 56 46.6 -0.2
comp=Z,8.0nm,1.2s,mb4.5
CLL *e*PcP PcP 07 57 00.0 -1.4
WET Wettzell 74.42 318 *e*P P 07 56 47.3 +0.3
comp=Z,5.0nm,1.1s,mb4.4
WET Wettzell 74.42 318 *e*P P 07 56 47.3 +0.3
WET pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
HFS Hagfors 74.51 329 P P 07 56 47.1 -0.2
comp=Z,7.7nm,0.9s,mb4.6,baz=90,slow=5.9,SNR=9.3
NKC Novy Kostel 74.72 319 *e*P P 07 56 49.4 +0.6
NKC Novy Kostel 74.72 319 *e*P P 07 56 49.4 +0.6
WERN Wernitzgruen 74.77 319 *e*P P 07 56 49.5 +0.5
comp=Z,6.0nm,1.0s,mb4.5
GUNZ Gunzen 74.80 319 *e*P P 07 56 49.6 +0.4
comp=Z,5.0nm,1.0s,mb4.4
WERD Werda 74.82 319 *e*P P 07 56 49.4 +0.1
comp=Z,5.0nm,1.0s,mb4.4
ROTZ Rotzenmuhle 74.87 319 *e*P P 07 56 50.4 +0.8
comp=Z,6.0nm,1.1s,mb4.4
MOX Moxa 75.26 320 *e*P P 07 56 52.3 +0.4
comp=Z,11nm,1.5s,mb4.6
MOX Moxa 75.26 320 *e*P P 07 56 52.0 +0.1
comp=Z,8.0nm,1.3s,mb4.5
MOX Moxa 75.26 320 *e*P P 07 56 52.3 +0.4
MOX pmax pmax
comp=Z,11nm,1.5s,mb4.6
BOSA Boshof 75.30 236 P P 07 56 54.2 +1.7
comp=Z,5.3nm,0.7s,mb4.6,baz=88,slow=8.0,SNR=7.6
GRA1 Grafenberg Arr 75.51 319 *e*P P 07 56 53.9 +0.6
comp=Z,8.0nm,1.0s,mb4.6
GRA1 *e*pP pP 07 57 03.4 -1.3
GRA1 *e*sP sP 07 57 07.6 -1.3
GRF Grafenberg Arr 75.51 319 *e*P P 07 56 53.9 +0.6
comp=Z,8.0nm,1.0s,mb4.6
GRF *e*pP pP 07 57 03.4 -1.3
GRF *e*sP sP 07 57 07.6 -1.3
GRF Grafenberg Arr 75.51 319 *e*P P 07 56 53.9 +0.6
GRF *e**PP pP 07 57 03.4 -1.3
GRF *e**SP sP 07 57 07.6 -1.3
GRF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
GRF Grafenberg Arr 75.51 319 *e*P P 07 56 53.9 +0.6
GRF *e**PP pP 07 57 03.4 -1.3
GRF *e**SP sP 07 57 07.6 -1.3
GRF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
NOA NORSAR Array B 75.80 330 P P 07 56 54.6 -0.1
comp=Z,3.6nm,0.9s,mb4.3,baz=92,slow=6.0,SNR=8.8
BSEG Bad Segeberg 76.08 323 *e*P P 07 56 57.2 +0.7
comp=Z,11nm,1.0s,mb4.7
SPITS Spitsbergen Ar 76.24 348 P P 07 56 57.3 +0.3
comp=Z,15nm,0.9s,mb4.9,baz=133,slow=14,SNR=4.7
PGF Pioggiola 77.27 311 *e*P P 07 57 02.3 -1.2
comp=Z,14nm,1.0s,mb4.5
PGF Pioggiola 77.27 311 *e*P P 07 57 02.3 -1.2
comp=Z,7.2nm,1.0s,mb4.6
PGF Pioggiola 77.27 311 *e*P P 07 57 02.3 -1.2
PGF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
TNS Taunus Mts 77.29 319 *e*P P 07 57 03.7 +0.3
comp=Z,8.0nm,1.0s,mb4.6
TNS Taunus Mts 77.29 319 *e*P P 07 57 03.7 +0.3
TNS pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KEST Kesra 77.48 304 *e*P P 07 57 04.9 +0.1
KEST Kesra 77.48 304 P P 07 57 04.2 -0.6
comp=Z,2.1nm,0.9s,mb4.1,baz=5.8,slow=1.4,SNR=6.0
CDF Champ du Feu 78.14 317 *e*P P 07 57 07.0 -1.2
comp=Z,18nm,1.3s,mb4.5
CDF Champ du Feu 78.14 317 *e*P P 07 57 07.0 -1.2
comp=Z,8.9nm,1.3s,mb4.5
CDF Champ du Feu 78.14 317 *e*P P 07 57 07.0 -1.2
CDF pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
SBF Sospel 78.33 313 *e*P P 07 57 08.2 -1.1
comp=Z,21nm,0.9s,mb4.7
SBF Sospel 78.33 313 *e*P P 07 57 08.2 -1.1
comp=Z,10nm,0.9s,mb4.8
SBF Sospel 78.33 313 *e*P P 07 57 08.2 -1.1
SBF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
HINF Hinteralfeld 78.46 317 *e*P P 07 57 08.8 -1.2
LPG La Plagne 78.69 314 *e*P P 07 57 10.8 -0.5
comp=Z,14nm,1.0s,mb4.5
LPG La Plagne 78.69 314 *e*P P 07 57 10.8 -0.5
comp=Z,6.8nm,1.0s,mb4.5
LPG La Plagne 78.69 314 *e*P P 07 57 10.8 -0.5
LPG pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
LPL La Plagne 78.70 314 *e*P P 07 57 10.8 -0.6
comp=Z,12nm,0.8s,mb4.6
LPL La Plagne 78.70 314 *e*P P 07 57 10.8 -0.6
comp=Z,6.1nm,0.8s,mb4.6
LPL La Plagne 78.70 314 *e*P P 07 57 10.8 -0.6
LPL pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
MBDF Montbardon 78.74 314 *e*P P 07 57 10.2 -1.3
comp=Z,12nm,1.1s,mb4.5
MBDF Montbardon 78.74 314 *e*P P 07 57 10.2 -1.3
comp=Z,6.0nm,1.1s,mb4.4
MBDF Montbardon 78.74 314 *e*P P 07 57 10.2 -1.3
MBDF pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
HAU Haudompre 78.79 317 *e*P P 07 57 10.6 -1.1
comp=Z,23nm,1.1s,mb4.7
HAU Haudompre 78.79 317 *e*P P 07 57 10.6 -1.1
comp=Z,11nm,1.1s,mb4.7
HAU Haudompre 78.79 317 *e*P P 07 57 10.6 -1.1
HAU pmax pmax
comp=Z,11nm,1.1s,mb4.7
FRF La Foret Royal 78.92 312 *e*P P 07 57 11.5 -1.1
comp=Z,34nm,1.3s,mb4.8
FRF La Foret Royal 78.92 312 *e*P P 07 57 11.5 -1.1
comp=Z,17nm,1.3s,mb4.8
FRF La Foret Royal 78.92 312 *e*P P 07 57 11.5 -1.1
FRF pmax pmax
comp=Z,17nm,1.3s,mb4.8
LMR La Mourre 79.04 312 *e*P P 07 57 12.3 -0.9
comp=Z,12nm,0.9s,mb4.5
LMR La Mourre 79.04 312 *e*P P 07 57 12.3 -0.9
comp=Z,5.8nm,0.9s,mb4.5
LMR La Mourre 79.04 312 *e*P P 07 57 12.3 -0.9
LMR pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
CABF La Chapelle 79.07 316 *e*P P 07 57 12.7 -0.6
comp=Z,49nm,1.5s,mb4.9
CABF La Chapelle 79.07 316 *e*P P 07 57 12.7 -0.6
comp=Z,25nm,1.5s,mb4.9
CABF La Chapelle 79.07 316 *e*P P 07 57 12.7 -0.6
CABF pmax pmax
comp=Z,25nm,1.5s,mb4.9
ORIF Oris-en-Rattie 79.35 314 *e*P P 07 57 13.4 -1.5
MEZF Maizieres J'vi 79.61 318 *e*P P 07 57 15.3 -0.9
SFTF Sexfontaines 79.65 317 *e*P P 07 57 15.5 -0.9
comp=Z,43nm,1.1s,mb5.0
SFTF Sexfontaines 79.65 317 *e*P P 07 57 15.5 -0.9
comp=Z,43nm,1.1s,mb5.3
BAIF Baives 80.02 319 *e*P P 07 57 17.7 -0.7
comp=Z,24nm,1.2s,mb4.7
BAIF Baives 80.02 319 *e*P P 07 57 17.7 -0.7
comp=Z,12nm,1.2s,mb4.7
BAIF Baives 80.02 319 *e*P P 07 57 17.7 -0.7
BAIF pmax pmax
comp=Z,12nm,1.2s,mb4.7
VIVF Saint-Julien-l 80.21 314 *e*P P 07 57 18.8 -0.8
comp=Z,29nm,1.1s,mb4.8
VIVF Saint-Julien-l 80.21 314 *e*P P 07 57 18.8 -0.8
comp=Z,14nm,1.1s,mb4.8
VIVF Saint-Julien-l 80.21 314 *e*P P 07 57 18.8 -0.8
VIVF pmax pmax
comp=Z,14nm,1.1s,mb4.8
SSB Saint Sauveur 80.26 314 *e*P P 07 57 19.2 -0.6
comp=Z,9.0nm,1.1s,mb4.6
SSB Saint Sauveur 80.26 314 *e*P P 07 57 19.2 -0.6
SSB pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
LOR Lormes 80.53 316 *e*P P 07 57 20.1 -1.1
comp=Z,41nm,1.3s,mb4.9
LOR Lormes 80.53 316 *e*P P 07 57 20.1 -1.1
comp=Z,20nm,1.3s,mb4.9
LOR Lormes 80.53 316 *e*P P 07 57 20.1 -1.1
LOR pmax pmax
comp=Z,20nm,1.3s,mb4.9
SMF Signal de Mont 80.61 316 *e*P P 07 57 20.6 -1.1
comp=Z,16nm,1.1s,mb4.6
SMF Signal de Mont 80.61 316 *e*P P 07 57 20.6 -1.1
comp=Z,8.2nm,1.1s,mb4.6
SMF Signal de Mont 80.61 316 *e*P P 07 57 20.6 -1.1
SMF pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
SSF Saint Saulge 80.79 316 *e*P P 07 57 21.7 -0.9
LASF Ste Croix 80.88 313 *e*P P 07 57 22.7 -0.5
comp=Z,35nm,1.3s,mb4.8
AVF Avril sur Loir 80.92 316 *e*P P 07 57 22.3 -1.1
comp=Z,24nm,1.3s,mb4.7
AVF Avril sur Loir 80.92 316 *e*P P 07 57 22.3 -1.1
comp=Z,12nm,1.3s,mb4.7
AVF Avril sur Loir 80.92 316 *e*P P 07 57 22.3 -1.1
AVF pmax pmax
comp=Z,12nm,1.3s,mb4.7
BGF Bois d'Agland 81.30 316 *e*P P 07 57 24.7 -0.6
comp=Z,25nm,1.2s,mb4.7
BGF Bois d'Agland 81.30 316 *e*P P 07 57 24.7 -0.6
comp=Z,12nm,1.2s,mb4.7
BGF Bois d'Agland 81.30 316 *e*P P 07 57 24.7 -0.6
BGF pmax pmax
comp=Z,12nm,1.2s,mb4.7
TCF Toulx Ste Croi 81.77 316 *e*P P 07 57 27.2 -0.6
comp=Z,28nm,1.3s,mb4.7
TCF Toulx Ste Croi 81.77 316 *e*P P 07 57 27.2 -0.6
comp=Z,14nm,1.3s,mb4.7
TCF Toulx Ste Croi 81.77 316 *e*P P 07 57 27.2 -0.6
TCF pmax pmax
comp=Z,14nm,1.3s,mb4.7
CAF Calviac 82.05 314 *e*P P 07 57 28.9 -0.4
comp=Z,28nm,1.4s,mb4.7
CAF Calviac 82.05 314 *e*P P 07 57 28.9 -0.4
comp=Z,14nm,1.4s,mb4.7
CAF Calviac 82.05 314 *e*P P 07 57 28.9 -0.4
CAF pmax pmax
comp=Z,14nm,1.4s,mb4.7
MTLF Montolieu 82.15 313 *e*P P 07 57 29.3 -0.6
comp=Z,33nm,1.3s,mb4.8
MTLF Montolieu 82.15 313 *e*P P 07 57 29.3 -0.6
comp=Z,16nm,1.3s,mb4.8
MTLF Montolieu 82.15 313 *e*P P 07 57 29.3 -0.6
MTLF pmax pmax
comp=Z,16nm,1.3s,mb4.8
RJF Les Rejaudoux 82.38 315 *e*P P 07 57 30.7 -0.4
comp=Z,46nm,1.4s,mb4.9
RJF Les Rejaudoux 82.38 315 *e*P P 07 57 30.7 -0.4
comp=Z,23nm,1.4s,mb4.9
RJF Les Rejaudoux 82.38 315 *e*P P 07 57 30.7 -0.4
RJF pmax pmax
comp=Z,23nm,1.4s,mb4.9
MFF Saint Martin d 83.34 316 *e*P P 07 57 35.0 -1.0
comp=Z,36nm,1.3s,mb5.0
MFF Saint Martin d 83.34 316 *e*P P 07 57 35.0 -1.0
comp=Z,18nm,1.3s,mb5.0
MFF Saint Martin d 83.34 316 *e*P P 07 57 35.0 -1.0
MFF pmax pmax
comp=Z,18nm,1.3s,mb4.9
EKA Eskdalemuir Ar 83.76 325 P P 07 57 38.2 +0.3
comp=Z,2.1nm,0.8s,mb4.3,baz=103,slow=6.3,SNR=5.8
ETSF Etsaut 84.23 312 *e*P P 07 57 40.5 -0.1
SJPF Ste Jean 84.67 313 *e*P P 07 57 42.4 -0.5
ESDC Sonseca Array 87.35 310 P P 07 57 56.5 +0.3
comp=Z,0.2nm,0.3s,mb3.9,baz=20,slow=4.1,SNR=5.9
TORD Torodi Ar. Bea 87.56 283 P P 07 57 57.9 +0.2
TORD Torodi Ar. Bea 87.56 283 P P 07 57 57.9 +0.2
comp=Z,3.7nm,0.4s,mb4.9,baz=92,slow=6.8,SNR=5.2
TTA Tatalina 90.03 25 *e*P P 07 58 09.3 +1.0
comp=Z,36nm,1.8s,mb5.4
TTA Tatalina 90.03 25 *e*P P 07 58 09.3 +1.0
TTA pmax pmax
comp=Z,36nm,1.8s,mb5.4
SUMG Summit 90.51 347 *i*P P 07 58 11.2 +0.8
comp=Z,8.5nm,1.0s,mb5.0
SUMG *i* pP 07 58 20.4 -1.6
MCK McKinley 92.48 23 *e*P P 07 58 19.4 -0.3
comp=Z,12nm,1.4s,mb5.0
MCK McKinley 92.48 23 *e*P P 07 58 19.4 -0.3
MCK pmax pmax
comp=Z,12nm,1.4s,mb5.0
ILAR Eielson Array 92.68 21 P P 07 58 19.5 -1.1
comp=Z,1.1nm,0.9s,mb4.3,baz=299,slow=4.0,SNR=11
ILAR PP PP 08 02 06.2 +4.0
comp=Z,0.4nm,0.8s,baz=286,slow=6.5,SNR=4.8
PDAR Pinedale Array 122.99 19 PKP PKPdf 08 04 05.5 0.0
comp=Z,0.5nm,0.6s,baz=354,slow=3.0,SNR=5.7
NVAR Mina Array Bea 123.33 28 PKP PKPdf 08 04 07.5 +1.3
comp=Z,1.0nm,0.5s,baz=305,slow=2.3,SNR=11
MSU Marysvale 125.86 23 *e*PKPdf PKPdf 08 04 12.7 +1.6
TXAR Lajitas Array 137.18 20 PKP PKPdf 08 04 33.0 +0.3
comp=Z,1.2nm,1.0s,baz=31,slow=0.6,SNR=6.8
JCT Junction City 137.23 15 *e*PKPdf PKPdf 08 04 33.4 +0.6
CELP Cerrillos 143.98 323 *e*PKPdf PKPdf 08 04 42.5 -2.8
CRPR Cabo Rojo, PR 144.34 324 *e*PKPdf PKPdf 08 04 44.7 -1.2
SDDR Presa de Saban 145.76 331 *e*PKPdf PKPdf 08 04 49.4 +1.0
PLCA Paso Flores 146.57 205 PKPbc PKPbc 08 04 50.0 -0.5
comp=Z,2.7nm,1.0s,baz=319,slow=5.6,SNR=3.5
CPUP Villa Florida 147.11 238 PKPbc PKPbc 08 04 50.5 -2.0
comp=Z,1.5nm,0.6s,baz=41,slow=6.7,SNR=4.4

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*ISCJB **30** 08:22:57.7±0.2, 13.48N±0.05, 88.16W±0.04, h174km±2km, mb4.3/69, Error ellipse: s-maj=8.8km s-min=3.4km az=35.2*
*IDC **30** 08:22:57.5±0.7, 13.39N×88.14W, h173km±7km, mb3.8/15, mb1 4.0/16, mb1mx3.8/25, mbtmp3.7/16, MS4.3/1, Ms1 4.3/1, ms1mx2.8/36, Error ellipse: s-maj=20.1km s-min=8.4km az=54.0*
*NEIC **30** 08:22:59.1±0.7, 13.38N×88.14W, h186km±7km, mb4.5/64, Error ellipse: s-maj=7.8km s-min=5.3km az=225.0*
*CASC **30** 08:22:59.1±2.0, 13.25N×88.26W, h159km±8km, MD4.4, ML3.9, mb4.5(NEIC)*

ISC 30 08:22:58.8±0.2, 13.47N±0.04, 88.14W±0.04, h168km±2km, n385, s0978/387, mb4.3/69, 104C-118D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h	m	s	Res ISC
BLLM	**Bellamira**	**0.10**	**252**	*e*P		**Pn**		**08 23 20.8**			**-0.3**
VSM	**San Miguel**	**0.14**	**251**⇑	*e*P		**Pn**		**08 23 21.1**			**-0.1**
VSM				*e*S		**Sn**		**08 23 37.5**			**-0.7**
CAHU	**Cacacuatique**	**0.30**	**346**⇑	*e*P		**Pn**		**08 23 22.0**			**+0.5**
CNCH	**Conchagua**	**0.35**	**124**	*e*P		**Pn**		**08 23 21.6**			**-0.1**
CNCH				*e*S		**Sn**		**08 23 39.9**			**+0.7**
SNVI	**San Vicente**	**0.70**	**281**	*e*P		**Pn**		**08 23 22.9**			**-0.3**
SNVI				*e*S		**Sn**		**08 23 41.7**			**-0.2**
LFRS	**El Faro**	**0.91**	**279**	*e*P		**Pn**		**08 23 24.1**			**-0.6**
LFRS				*e*S		**Sn**		**08 23 43.0**			**-1.4**
LBRS	**Las Brisas**	**0.92**	**287**	*e*P		**Pn**		**08 23 24.7**			**0.0**
LBRS				*e*S		**Sn**		**08 23 45.2**			**+0.6**
LFU	**La Fuente**	**0.99**	**286**	*e*P		**Pn**		**08 23 25.4**			**+0.2**
TGUH	**Tegucigalpa,Un**	**1.02**	**55**⇓	*e*P		**Pn**		**08 23 26.4**			**+0.9**
SNET	**Serv Nac Est T**	**1.08**	**281**⇑	*e*P		**Pn**		**08 23 25.4**			**-0.6**
BOQS	**Boqueron**	**1.14**	**283**	*e*P		**Pn**		**08 23 26.4**			**-0.1**
CRIN	**San Cristobal**	**1.31**	**126**⇑	*e*P		**Pn**		**08 23 28.4**			**+0.4**
SNJE	**San Jose**	**1.48**	**286**	*e*P		**Pn**		**08 23 29.2**			**-0.4**
SNJE				*e*S		**Sn**		**08 23 52.9**			**-0.4**
SBLS	**San Blas**	**1.49**	**284**	*e*P		**Pn**		**08 23 29.2**			**-0.5**
RTR	**El Retiro**	**1.52**	**286**	*e*P		**Pn**		**08 23 29.9**			**-0.2**
TELN	**Telica**	**1.54**	**124**	*e*P		**Pn**		**08 23 30.3**			**+0.1**
TELN				AML		AML		08 24 06.7			
	comp=Z,112nm,0.4s										
LEON	**Leon**	**1.61**	**131**	*e*P		**Pn**		**08 23 30.4**			**-0.4**
LEON				AML		AML		08 23 57.7			
	comp=Z,9μm,0.3s										
CNGN	**Cerro Negro**	**1.70**	**124**	*e*P		**Pn**		**08 23 31.5**			**-0.4**
CNGN				AML		AML		08 24 07.0			
	comp=Z,991nm,0.6s										
COPN	**Copaltepe**	**1.98**	**130**	*e*P		**Pn**		**08 23 34.6**			**-0.3**
COPN				AML		AML		08 24 07.0			
	comp=Z,2μm,0.3s										
CSAN		**2.11**	**127**	*e*P		**Pn**		**08 23 37.0**			**+0.7**
XAVN	**Gruta Xavier**	**2.20**	**127**	*e*P		**Pn**		**08 23 37.4**			**0.0**
TISN	**Laguna Tiscapa**	**2.25**	**126**	*e*P		**Pn**		**08 23 36.9**			**-1.1**
TISN				AML		AML		08 24 12.7			
	comp=Z,2μm,0.2s										
CRUN	**El Crucero**	**2.33**	**129**	*e*P		**Pn**		**08 23 39.7**			**+0.9**
CRUN				AML		AML		08 24 35.2			
	comp=Z,292nm,0.6s										
TICN	**Ticuantepe**	**2.35**	**127**	*e*P		**Pn**		**08 23 39.9**			**+0.9**
BOAB	**BOACO BROADBAN**	**2.62**	**113**⇓	*e*P		**Pn**		**08 23 42.5**			**+0.3**
GBS2	**Las Lilas**	**3.71**	**135**	*i*S		**Sn**		**08 24 37.3**			**-3.0**
LIM1	**Limonal**	**3.95**	**134**	*i*P		**Pn**		**08 23 58.7**			**-0.2**
VCR	**Vista de Mar**	**4.13**	**143**⇑	*e*P		**Pn**		**08 24 01.7**			**+0.4**
JTS	**JuntasAbangare**	**4.44**	**135**	*e*Pn		**Pn**		**08 24 05.5**			**+0.3**
JTS				*e*Sn		**Sn**		**08 24 53.2**			**-4.0**
JCR	**Jicaral**	**4.66**	**140**⇑	*e*P		**Pn**		**08 24 08.7**			**+0.5**
CGA2	**Cerro Gallo 2**	**4.97**	**133**	*e*P		**Pn**		**08 24 13.0**			**+0.8**
PRS1	**Puriscal**	**5.11**	**132**⇑	*e*P		**Pn**		**08 24 16.1**			**+2.2**
SJS	**Escuela Geolog**	**5.32**	**131**	*e*P		**Pn**		**08 24 19.9**			**+3.1**
SJS				*e*S		**Sn**		**08 25 15.6**			**-2.3**
LAJ	**Bijagual**	**5.32**	**132**⇑	*e*P		**Pn**		**08 24 14.9**			**-1.9**
URSC	**Urasca**	**5.60**	**130**	*e*P		**Pn**		**08 24 23.5**			**+3.1**
QCR	**Quepos**	**5.60**	**136**⇓	*e*P		**Pn**		**08 24 21.5**			**+1.1**
BUS	**Buena Vista**	**5.79**	**132**	*e*P		**Pn**		**08 24 25.3**			**+2.3**
TEIG	**Tepich**	**6.72**	**359**	*e*Pn		**Pn**		**08 24 36.9**			**+1.8**
ACR	**Cerro Adams**	**6.84**	**134**	*e*P		**Pn**		**08 24 37.5**			**+0.8**
CMIG	**Matias Romero**	**7.44**	**300**	P		**Pn**		**08 24 43.7**			**-1.0**
	comp=Z,0.9nm,0.3s,baz=132,slow=9.0,SNR=24										
CMIG					S	**Sn**		**08 26 05.1**			**-3.0**
	comp=Z,1.4nm,0.3s,baz=299,slow=19,SNR=7.5										
HKT	**Hockley**	**17.88**	**338**	*e*P		**Pn**		**08 26 56.5**			**-0.5**
	comp=Z,6.1nm,1.0s										
VBMS	**Vicksburg**	**18.78**	**354**	*e*P		**P**		**08 27 06.8**			**+1.6**
	comp=Z,63nm,0.7s										
NATX	**Nacogdoches**	**19.16**	**343**	*e*P		**P**		**08 27 10.8**			**+1.5**
	comp=Z,30nm,0.7s										

LRAL **Lakeview Retre** 19.50 3 *e*P P 08 27 13.7 +0.7
comp=Z,18nm,0.9s
JCT **Junction City** 20.06 329 *e*P P 08 27 19.1 +0.1
comp=Z,6.0nm,0.7s
GOGA **Godfrey** 20.30 11 *e*P P 08 27 22.4 +0.9
comp=Z,28nm,0.8s
NHSC **New Hope** 20.85 19 *e*P P 08 27 28.5 +1.1
comp=Z,112nm,1.2s
OXF **Oxford** 20.98 357 *e*P P 08 27 27.7 -1.0
comp=Z,27nm,0.8s
628A **Black Gap, Mar** 20.99 322 ⇓P P 08 27 28.5 -0.5
baz=21,SNR=8.0
627A **Terlingua Ranc** 21.27 321 P P 08 27 31.8 -0.2
baz=21,SNR=9.7
TXAR **Lajitas Array** 21.36 320 P P 08 27 32.5 -0.4
comp=Z,4.9nm,0.6s,mb4.0,baz=137,slow=10,SNR=71
TXAR pP 08 28 03.7
comp=Z,1.3nm,0.9s,baz=183,slow=11,SNR=1.4
528A **Cox Ranch, San** 21.43 323 ⇑P P 08 27 33.5 -0.1
baz=22,SNR=8.0
UALR **University of** 21.55 351 *e*P P 08 27 34.9 +0.1
comp=Z,29nm,0.6s,mb4.9
MIAR **Mount Ida** 21.55 348 *e*P P 08 27 34.8 -0.1
comp=Z,48nm,0.8s,mb5.0
JSC **Jenkinsville** 21.63 16 *e*P P 08 27 36.3 +0.5
428A **Kincaid Ranch,** 21.79 324 ⇑P P 08 27 37.9 +0.5
baz=22,SNR=8.6
626A **Big Bend Ranch** 21.81 320 ⇑P P 08 27 36.7 -0.9
baz=22,SNR=16
527A **Woodward Ranch** 21.90 322 ⇓P P 08 27 37.6 -0.9
baz=22,SNR=9.0
CPCT **Cooper Cave** 22.12 8 *e*P P 08 27 40.8 0.0
526A **Mary Lane Ranc** 22.13 321 ⇓P P 08 27 40.1 -0.9
baz=22,SNR=6.2
427A **Hayter Ranch,** 22.29 323 ⇑P P 08 27 41.9 -0.5
baz=22
328A **Wristen Ranch,** 22.35 325 ⇑P P 08 27 42.0 -1.0
baz=22,SNR=40
TKL **Tuckaleechee C** 22.43 9 *e*P P 08 27 43.4 -0.2
TKL **Tuckaleechee C** 22.43 9 P P 08 27 43.7 0.0
comp=Z,34nm,0.8s,mb4.8,baz=183,slow=10,SNR=50
TKL LR LR 08 36 12.3
comp=Z,911nm,21.9s,baz=111,slow=35
426A **McDonald Obser** 22.53 322 ⇓P P 08 27 44.0 -0.6
baz=23,SNR=8.4
WVT **Waverly** 22.56 1 *e*P P 08 27 43.7 -1.1
comp=Z,4.6nm,0.6s,mb4.1
326A **Caldwell Ranch** 22.97 323 ⇑P P 08 27 47.4 -1.2
baz=23,SNR=16
227A **Bennet, Jal** 23.10 326 ⇑P P 08 27 49.4 -0.3
baz=23,SNR=6.7
425A **Indio Mountain** 23.19 321 ⇑P P 08 27 50.2 -0.4
baz=23,SNR=8.9
PCRV **Puerto La Cruz** 23.23 96 P P 08 27 50.8 -0.4
comp=Z,3.1nm,0.5s,mb4.0,baz=29,slow=20,SNR=5.4
WMOK **Wichita Mounta** 23.26 337 *e*P P 08 27 50.3 -1.0
comp=Z,10nm,0.8s,mb4.3
CNNC **Cliffs of the** 23.56 21 *e*P P 08 27 54.2 +0.2
comp=Z,24nm,0.8s,mb4.8
226A **Malaga, Loving** 23.59 324 P P 08 27 54.6 +0.4
baz=24,SNR=9.8
325A **Bean Ranch, Si** 23.59 322 ⇑P P 08 27 53.6 -0.7
baz=24,SNR=5.7
CLNB **Carlsbad** 23.61 325 *e*P P 08 27 53.9 -0.6
comp=Z,0.7nm,0.4s,mb3.5
127A **Arkansas Junct** 23.64 326 ⇑P P 08 27 53.9 -0.8
baz=24,SNR=9.7
GDL2 **Guadalupe Moun** 23.84 324 *e*P P 08 27 56.8 +0.3
comp=Z,1.2nm,0.4s,mb3.8
324A **Moseley Ranch,** 23.95 321 ⇓P P 08 27 56.4 -1.1
baz=24,SNR=10
126A **Clayton Basin,** 23.98 325 ⇓P P 08 27 57.4 -0.3
baz=24,SNR=5.1
225A **Deer Hill, Car** 24.04 323 ⇑P P 08 27 58.5 +0.2
baz=24
MNTX **Cornudas Mount** 24.07 322 ⇑P P 08 27 57.7 -1.0
baz=24,SNR=10.0
SIUC **Southern Illin** 24.16 358 *e*P P 08 27 58.3 -1.0
comp=Z,32nm,1.0s,mb4.8
CPRX **Cap Rock** 24.18 326 *e*P P 08 27 59.2 -0.5
comp=Z,13nm,0.8s,mb4.5
125A **Gardner Draw,** 24.34 324 ⇓P P 08 28 00.6 -0.6
baz=24
MSTX **Muleshoe** 24.35 329 ⇑P P 08 28 00.4 -0.8
baz=24,SNR=22
224A **Cornudas Mount** 24.42 322 ⇑P P 08 28 01.2 -0.6
baz=24,SNR=9.3
Z26A **Caprock** 24.43 326 ⇓P P 08 28 01.0 -0.9
baz=24,SNR=7.8
Y27A **Causey** 24.48 329 ⇑P P 08 28 01.5 -0.8
baz=25,SNR=21
FVM **French Village** 24.50 356 *e*P P 08 28 01.0 -1.4
comp=Z,4.1nm,0.7s,mb4.1
AMTX **Amarillo** 24.58 332 ⇓P P 08 28 02.8 -0.5
baz=25
AMTX **Amarillo** 24.58 332 *e*P P 08 28 03.0 -0.3
comp=Z,8.4nm,0.6s,mb4.5
BLA **Blacksburg** 24.62 15 *e*P P 08 28 03.7 +0.1
comp=Z,15nm,0.7s,mb4.6
CCM **Cathedral Cave** 24.64 354 *e*P P 08 28 02.3 -1.4
comp=Z,17nm,0.7s,mb4.7
WCI **Wyandotte Cave** 24.71 3 *e*P P 08 28 03.6 -0.8
comp=Z,20nm,0.7s,mb4.8
124A **Stringfield Ra** 24.83 323 ⇓P P 08 28 06.4 +0.9
baz=25,SNR=8.8
Z25A **Roswell** 24.84 325 ⇓P P 08 28 05.7 +0.1
baz=25,SNR=16
Y26A **Elida** 24.85 328 ⇓P P 08 28 05.3 -0.4
baz=25
X27A **F and S Farms,** 25.05 330 ⇓P P 08 28 06.7 -0.8
baz=25,SNR=8.1
Z24A **Sheeppen Canyo** 25.24 324 ⇑P P 08 28 10.0 +0.8
baz=25,SNR=6.9
Y25A **Mesa, Roswell** 25.31 326 ⇓P P 08 28 09.4 -0.4
baz=25,SNR=13
X26A **CR and CF Fran** 25.33 329 ⇓P P 08 28 09.4 -0.7
baz=25,SNR=6.3
Y24A **Capitan** 25.72 325 ⇓P P 08 28 13.8 +0.3
baz=26,SNR=10
X25A **Clemmons Ranch** 25.75 327 ⇑P P 08 28 14.1 +0.2
baz=26
221A **Mesquite Ranch** 25.77 319 ⇓P P 08 28 15.6 +1.6
baz=26
JSRW **J. Sargeant Re** 25.80 19 *e*P P 08 28 14.4 +0.3
Y23A **Lovelace Mesa,** 26.07 324 ⇑P P 08 28 17.3 +0.6
baz=26,SNR=8.3
121A **Cookes Peak, D** 26.12 320 ⇑P P 08 28 17.4 +0.1
baz=26
W25A **X Bar L Ranch,** 26.19 329 ⇑P P 08 28 18.0 +0.3
baz=26,SNR=9.5
220A **Playas Peak, P** 26.19 318 ⇑P P 08 28 18.0 +0.2
baz=26
V26A **Tequesquite Ra** 26.31 330 ⇑P P 08 28 18.5 -0.3
baz=26,SNR=13
CBN **Corbin** 26.42 19 *e*P P 08 28 20.6 +0.8
comp=Z,33nm,0.6s,mb5.1
BNM **Barren Site** 26.55 324 *e*P P 08 28 22.0 +1.0
comp=Z,21nm,1.8s,mb4.5
Y22A **Socorro** 26.60 323 ⇑P P 08 28 22.2 +0.7
baz=27,SNR=8.6
120A **U Bar Ranch, L** 26.67 319 ⇓P P 08 28 24.2 +2.1
baz=27
W24A **Lazy 6 Ranch,** 26.67 327 ⇑P P 08 28 22.4 +0.3
baz=27
V25A **Rancho No Teng** 26.75 329 ⇑P P 08 28 23.1 +0.3
baz=27,SNR=12
HDIL **Hopedale** 27.00 358 *e*P P 08 28 23.3 -1.6
comp=Z,8.9nm,0.7s,mb4.5
V24A **Rampart Ranch,** 27.00 328 ⇑P P 08 28 25.4 +0.4
baz=27
W23A **Werner Place,** 27.03 326 ⇑P P 08 28 26.0 +0.7
baz=27,SNR=7.6
ANMO **Albuquerque** 27.04 325 *e*P P 08 28 26.7 +1.3
comp=Z,5.0nm,0.8s,mb4.2
ANMO **Albuquerque** 27.04 325 P P 08 28 26.2 +0.8
comp=Z,2.1nm,0.9s,mb3.8,baz=152,slow=10.0,SNR=7.3
Y21A **Point of Rocks** 27.06 322 ⇓P P 08 28 26.6 +1.0
baz=27
MCWV **Mont Chateau** 27.09 14 *e*P P 08 28 25.4 -0.3
comp=Z,11nm,0.6s,mb4.7
X21A **Alamocita Cree** 27.44 323 ⇓P P 08 28 29.8 +0.9
baz=28,SNR=5.5
V23A **Ortiz Mt. (NFS** 27.49 327 ⇑P P 08 28 30.4 +1.0
baz=28
SDMD **Soldier's Deli** 27.69 19 *e*P P 08 28 31.1 0.0
comp=Z,17nm,0.7s,mb4.9
T25A **Trinidad** 27.69 331 ⇓P P 08 28 32.0 +0.8
baz=28

U23A **El Rito** 27.94 328 ⇓P P 08 28 34.3 +1.0
baz=28,SNR=22
T24A **Torres, Weston** 27.95 330 ⇑P P 08 28 34.3 +0.9
baz=28
V22A **San Miguel Ran** 28.00 326 ⇑P P 08 28 34.3 +0.3
baz=28
U22A **Llaves** 28.32 327 ⇓P P 08 28 37.5 +0.8
baz=28
W20A **Ramah** 28.33 323 ⇓P P 08 28 37.4 +0.5
baz=28
T23A **Casias Ranch,** 28.40 329 ⇓P P 08 28 38.4 +1.0
baz=28
R25A **Fountain Ranch** 28.46 333 ⇑P P 08 28 39.2 +1.3
baz=28
S24A **Houchin Ranch,** 28.48 331 ⇑P P 08 28 39.0 +0.9
baz=29
SSPA **Standing Stone** 28.51 16 *e*P P 08 28 38.4 0.0
comp=Z,8.1nm,0.6s,mb4.6
SDCO **Great Sand Dun** 28.70 330 ⇑P P 08 28 40.3 +0.3
baz=29,SNR=8.0
SDCO **Great Sand Dun** 28.70 330 *e*P P 08 28 40.3 +0.2
comp=Z,3.0nm,0.9s,mb4.0
AAM **Ann Arbor** 28.98 7 *e*P P 08 28 40.8 -1.8
comp=Z,14nm,0.7s,mb4.8
Q25A **Bedland, Calha** 29.07 334 ⇓P P 08 28 43.4 +0.1
baz=29
T21A **Navajo Lake** 29.14 327 ⇓P P 08 28 44.4 +0.4
baz=29
S22A **4UR Ranch, Cre** 29.35 329 ⇑P P 08 28 46.5 +0.7
baz=29,SNR=10
X16A **Lo Mia Camp, P** 29.67 319 ⇑P P 08 28 49.1 +0.4
baz=30
R22A **Saguache, Gunn** 29.69 329 ⇑P P 08 28 49.3 +0.5
baz=30
Q23A **Hartsel** 29.78 331 ⇓P P 08 28 49.4 -0.2
baz=30
S21A **Coal Bank Pass** 29.78 327 ⇑P P 08 28 50.3 +0.7
baz=30,SNR=5.7
V17A **Tonalea, Kykot** 30.04 321 ⇑P P 08 28 52.3 +0.3
baz=30
PAL **Palisades** 30.12 22 *e*P P 08 28 52.3 -0.2
comp=Z,17nm,0.7s,mb4.9
P23A **Jefferson** 30.16 332 ⇑P P 08 28 53.4 +0.5
baz=30
S20A **Disappointment** 30.20 327 ⇑P P 08 28 54.1 +0.7
baz=30
Q22A **Crested Butte,** 30.26 330 ⇓P P 08 28 53.6 -0.2
baz=30,SNR=6.1
ISCO **Idaho Springs** 30.40 333 ⇓P P 08 28 55.2 +0.2
baz=30
O24A **Longmont** 30.43 334 ⇓P P 08 28 55.6 +0.2
baz=30
R20A **Redvale** 30.48 327 ⇑P P 08 28 56.3 +0.5
baz=31
BINY **Binghamton** 30.50 18 *e*P P 08 28 55.7 -0.2
comp=Z,5.1nm,0.7s,mb4.4
T18A **Mexican Hat** 30.53 324 ⇓P P 08 28 57.0 +0.7
baz=31
PV01 **Paradox Valley** 30.54 327 *e*P P 08 28 57.1 +0.7
comp=Z,121nm,0.7s
S19A **Harvey Farm, M** 30.56 326 ⇓P P 08 28 56.9 +0.4
baz=31,SNR=7.4
U16A **Tuba City** 30.59 322 ⇓P P 08 28 58.1 +1.3
baz=31
P22A **Eagle** 30.76 331 ⇑P P 08 28 58.6 +0.3
baz=31
PV04 **Paradox Valley** 30.91 327 *e*P P 08 29 00.3 +0.8
PV10 **Paradox Valley** 30.97 327 *e*P P 08 28 59.9 -0.2
S18A **Hurst Farm, Bl** 30.99 325 ⇑P P 08 29 00.4 +0.1
baz=31,SNR=6.9
ECSD **EROS Data Cent** 31.02 348 *e*P P 08 28 58.7 -1.7
comp=Z,11nm,1.0s,mb4.5
R19A **Curley Farm, L** 31.02 327 ⇑P P 08 29 00.9 +0.3
baz=31,SNR=5.2
O22A **Kremmling** 31.12 332 ⇓P P 08 29 01.3 -0.1
baz=31
S17A **Black Ridge (B** 31.41 324 ⇓P P 08 29 03.7 -0.2
baz=32
R18A **Canyonlands Na** 31.43 326 ⇑P P 08 29 03.7 -0.5
baz=32
N23A **Red Feather La** 31.44 334 ⇓P P 08 29 04.2 0.0
baz=32
M24A **Cheyenne** 31.45 336 ⇓P P 08 29 04.9 +0.6
baz=32
P20A **De Beque** 31.48 329 ⇓P P 08 29 05.0 +0.4
baz=32,SNR=5.2
V14A **Boquillas Ranc** 31.49 319 ⇓P P 08 29 05.1 +0.4
baz=32
Q19A **Hogan Spring (** 31.51 327 ⇑P P 08 29 04.8 -0.1
baz=32,SNR=5.5
N22A **Wattenberg Ran** 31.59 333 ⇑P P 08 29 06.7 +1.2
baz=32
P19A **Cripple Cowboy** 31.88 329 ⇓P P 08 29 09.6 +1.6
baz=32
O20A **White River Ci** 31.89 330 ⇑P P 08 29 09.0 +0.8
baz=32,SNR=10
R17A **Hanksville Air** 31.91 325 ⇓P P 08 29 08.7 +0.3
baz=32,SNR=7.9
T15A **Red Dirt Ranch** 31.92 322 ⇓P P 08 29 09.2 +0.7
baz=32
U14A **Mt Trumbull** 32.03 320 ⇓P P 08 29 09.9 +0.5
baz=32
N21A **Black Mountain** 32.04 332 ⇓P P 08 29 11.5 +2.1
baz=32
Q18A **Rafter H Ranch** 32.08 327 ⇓P P 08 29 09.6 -0.2
baz=32
M22A **Cedar Creek Ra** 32.14 333 ⇓P P 08 29 11.9 +1.6
baz=32
R16A **Teasdale** 32.25 324 ⇑P P 08 29 12.1 +0.8
baz=32,SNR=6.6
SRU **San Rafael** 32.30 326 ⇓P P 08 29 12.1 +0.4
baz=32
SRU **San Rafael** 32.30 326 *e*P P 08 29 11.9 +0.2
comp=Z,4.7nm,0.7s,mb4.3
S15A **Panguitch** 32.34 323 ⇑P P 08 29 13.2 +1.0
baz=32
L23A **Garrett** 32.35 335 ⇓P P 08 29 12.1 0.0
baz=32
T14A **Hurricane** 32.38 321 ⇑P P 08 29 13.2 +0.7
baz=32
N20A **Spence Gulch,** 32.45 331 P P 08 29 13.6 +0.6
baz=32,SNR=9.2
O19A **Miners Draw (B** 32.45 329 ⇓P P 08 29 13.0 0.0
baz=32
Q16A **Castle Valley** 32.51 325 ⇓P P 08 29 14.3 +0.7
baz=33
P17A **Butcher Ranch,** 32.67 327 ⇓P P 08 29 15.2 +0.2
baz=33
O18A **Roosevelt** 32.87 328 P P 08 29 17.6 +1.0
baz=33,SNR=5.2
U12A **Valley of Fire** 32.90 319 ⇓P P 08 29 17.7 +0.7
baz=33
N19A **John Jarvie Ra** 32.93 330 P P 08 29 17.5 +0.3
baz=33,SNR=5.1
L21A **Rawlins** 32.94 333 ⇓P P 08 29 17.1 -0.2
baz=33,SNR=5.4
K22A **Casper** 33.14 335 ⇓P P 08 29 18.9 0.0
baz=33
S13A **Holt Ranch, En** 33.19 321 ⇑P P 08 29 20.6 +1.1
baz=33
O17A **Robinson Place** 33.20 327 ⇓P P 08 29 20.6 +1.1
baz=33
N18A **Larsen Ranch,** 33.24 330 ⇑P P 08 29 20.2 +0.3
baz=33,SNR=5.2
Q15A **Fillmore** 33.25 324 ⇓P P 08 29 20.5 +0.5
baz=33
P16A **Fountain Green** 33.27 326 ⇓P P 08 29 21.2 +1.0
baz=33
K21A **Alcova** 33.43 334 ⇓P P 08 29 21.9 +0.4
baz=34
RSSD **Black Hills** 33.44 339 *e*P P 08 29 21.7 +0.1
comp=Z,4.8nm,0.7s,mb4.3
MPU **Maple Canyon** 33.54 326 *e*P P 08 29 22.6 0.0
comp=Z,8.4nm,0.9s,mb4.5
P15A **Leamington** 33.58 325 ⇑P P 08 29 23.3 +0.4
baz=34
O16A **Springville** 33.61 327 ⇑P P 08 29 23.5 +0.4
baz=34
R13A **O'Grain Ranch,** 33.63 322 ⇑P P 08 29 24.5 +1.1
baz=34
Q14A **Sevier Lake (B** 33.75 323 ⇓P P 08 29 25.4 +1.0
baz=34
N17A **Moffit Pass** 33.80 328 ⇑P P 08 29 24.9 +0.3
baz=34
K20A **Yellowstone Ra** 33.92 333 P P 08 29 25.6 -0.1
baz=34,SNR=5.2
P14A **Drum Mountains** 34.04 324 ⇑P P 08 29 27.6 +0.8
baz=34,SNR=5.4

N16A **Rees Ranch, Co** 34.07 328 ⇑P P 08 29 27.2 +0.2
baz=34
J21A **Lysite** 34.09 335 ⇓P P 08 29 27.3 +0.1
baz=34,SNR=9.3
M17A **Scullys Gap (B** 34.10 329 P P 08 29 27.4 0.0
baz=34,SNR=15
R12A **Pony Springs,** 34.12 321 ⇑P P 08 29 28.5 +1.0
baz=34
L18A **Fontenelle, Gr** 34.13 330 ⇓P P 08 29 27.6 0.0
baz=34,SNR=7.1
Q13A **Wheeler Ranch,** 34.17 323 ⇓P P 08 29 28.0 +0.1
baz=34
O15A **The Old Anders** 34.18 326 ⇓P P 08 29 28.4 +0.4
baz=34
K19A **Absolon Red Bu** 34.28 332 P P 08 29 28.7 -0.1
baz=34,SNR=5.7
DUG **Dugway** 34.31 325 ⇓P P 08 29 29.7 +0.5
baz=34
DUG **Dugway** 34.31 325 *e*P P 08 29 29.0 -0.1
comp=Z,2.7nm,1.0s,mb3.9
J20A **Shoshoni** 34.37 334 ⇑P P 08 29 30.1 +0.6
baz=34
S11A **Rachel** 34.40 319 ⇑P P 08 29 30.8 +0.8
baz=34
I21A **Big Trails, Te** 34.41 335 ⇑P P 08 29 29.5 -0.4
baz=34
M16A **Huntsville** 34.48 328 ⇓P P 08 29 30.3 -0.3
baz=35
EYMN **Ely** 34.48 356 *e*P P 08 29 27.9 -2.6
comp=Z,6.4nm,0.6s,mb4.5
P13A **Bates Ranch, G** 34.49 323 ⇓P P 08 29 31.8 +1.0
baz=35,SNR=6.5
PDAR **Pinedale Array** 34.56 332 P P 08 29 30.9 -0.4
comp=Z,1.8nm,0.7s,mb3.8,baz=124,slow=11,SNR=20
BW06 **Boulder Array** 34.56 332 ⇑P P 08 29 30.9 -0.3
baz=35
BW06 **Boulder Array** 34.56 332 *e*P P 08 29 30.1 -1.2
comp=Z,1.5nm,0.7s,mb3.7
MPMC **Manual Prospec** 34.64 316 ⇓P P 08 29 31.9 -0.2
baz=35
N15A **Stansbury Isla** 34.64 327 ⇓P P 08 29 32.5 +0.5
baz=35
HWUT **Hardware Ranch** 34.66 328 *e*P P 08 29 32.3 +0.2
comp=Z,13nm,0.9s,mb4.5
K18A **Toltan Ranch,** 34.68 331 ⇑P P 08 29 32.9 +0.6
baz=35,SNR=17
J19A **Crowheart** 34.72 333 ⇑P P 08 29 32.5 -0.1
baz=35
I20A **Worland** 34.87 334 P P 08 29 34.1 +0.2
baz=35,SNR=8.4
L16A **Fish Haven** 34.89 329 ⇓P P 08 29 34.2 +0.1
baz=35,SNR=5.3
SPUT **South Promonto** 34.90 327 *e*P P 08 29 33.9 -0.3
comp=Z,4.0nm,0.7s,mb4.2
H21A **Big Horn, Sher** 34.99 336 P P 08 29 34.4 -0.5
baz=35,SNR=5.2
M15A **Larsen Ranch,** 35.01 327 P P 08 29 35.3 +0.2
baz=35,SNR=12
J18A **Kendall Valley** 35.12 332 P P 08 29 36.1 +0.1
baz=35,SNR=20
K17A **Gardner Place,** 35.19 330 ⇓P P 08 29 36.7 +0.1
baz=35
H20A **Greybull** 35.26 335 ⇓P P 08 29 36.7 -0.5
baz=35
AGMN **Agassiz Nation** 35.31 351 *e*P P 08 29 35.4 -2.1
comp=Z,15nm,0.8s,mb4.7
I19A **Meeteetse** 35.31 334 ⇓P P 08 29 38.5 +0.8
baz=35
L15A **Malad City** 35.37 328 P P 08 29 38.0 -0.2
baz=35,SNR=11
HVU **Hansel Valley** 35.41 327 *e*P P 08 29 37.3 -1.2
comp=Z,3.0nm,0.6s,mb4.1
I18A **Diamond G Ranc** 35.41 332 ⇓P P 08 29 38.3 -0.2
baz=36,SNR=6.8
O12A **Currie** 35.45 324 ⇑P P 08 29 39.6 +0.6
baz=36
G21A **Lodge Grass** 35.55 337 ⇓P P 08 29 38.9 -0.8
baz=36
J17A **Brown Place, J** 35.56 331 P P 08 29 40.5 +0.7
baz=36,SNR=16
LPAZ **La Paz** 35.57 146 *e*P P 08 29 39.8 -0.4
comp=Z,1.2nm,0.4s,mb3.9
LPAZ **La Paz** 35.57 146 P P 08 29 39.0 -1.2
comp=Z,1.2nm,0.4s,mb3.9,baz=338,slow=3.6,SNR=17
REDW **Red Top Meadow** 35.62 331 *e*P P 08 29 40.4 +0.1
comp=Z,18nm,0.7s,mb4.8
SNOW **Snow King Moun** 35.65 331 *e*P P 08 29 40.7 +0.1
comp=Z,22nm,0.8s,mb4.8
LOHW **Long Hollow** 35.70 332 *e*P P 08 29 41.3 +0.3
comp=Z,9.6nm,1.1s,mb4.3
TPAW **Teton Pass** 35.77 331 *e*P P 08 29 42.1 +0.5
comp=Z,9.4nm,0.7s,mb4.5
RRI2 **Red Ridge** 35.83 331 *e*P P 08 29 42.2 +0.1
comp=Z,7.0nm,0.9s,mb4.3
L14A **Malta** 35.83 327 ⇑P P 08 29 41.7 -0.4
baz=36,SNR=8.7
MOOW **Moose Ponds** 35.87 332 *e*P P 08 29 42.4 0.0
comp=Z,4.8nm,0.7s,mb4.2
J16A **Bone** 35.92 330 ⇓P P 08 29 43.2 +0.4
baz=36,SNR=7.8
I17A **Pilgrim Ck.** 35.92 332 P P 08 29 43.9 +1.1
baz=36,SNR=5.5
K15A **Arbon** 35.93 329 P P 08 29 43.2 +0.2
baz=36,SNR=6.2
G20A **Bridger** 35.95 336 ⇓P P 08 29 42.3 -0.8
baz=36
IMW **Indian Meadow** 36.07 332 *e*P P 08 29 44.5 +0.3
comp=Z,3.8nm,0.6s,mb4.2
FLWY **Flagg Ranch** 36.10 332 *e*P P 08 29 44.6 +0.2
comp=Z,7.2nm,0.9s,mb4.3
H18A **Shoshone NF, C** 36.11 334 P P 08 29 44.3 -0.2
baz=36,SNR=13
K14A **Jones Ranch, D** 36.16 328 ⇓P P 08 29 44.7 -0.2
baz=36,SNR=21
RLMT **Red Lodge** 36.30 334 ⇑P P 08 29 45.9 -0.1
baz=36,SNR=5.4
RLMT **Red Lodge** 36.30 334 *e*P P 08 29 46.0 0.0
comp=Z,2.4nm,0.5s,mb4.1
I16A **Newdale** 36.31 331 ⇓P P 08 29 46.4 +0.2
baz=36
F20A **Billings** 36.40 336 ⇓P P 08 29 47.0 +0.2
baz=36
J15A **Blackfoot** 36.41 330 ⇑P P 08 29 47.1 +0.1
baz=36,SNR=8.7
NVAR **Mina Array Bea** 36.50 318 P P 08 29 48.1 +0.3
comp=Z,1.3nm,0.7s,mb3.7,baz=126,slow=7.7,SNR=12
NVAR sP sP 08 30 42.8 -0.2
comp=Z,0.8nm,0.7s,baz=128,slow=7.5,SNR=4.6
NVAR PcP PcP 08 32 06.6 -1.3
comp=Z,0.4nm,0.8s,baz=132,slow=1.3,SNR=3.3
G18A **Lazy EL Ranch,** 36.58 334 ⇓P P 08 29 48.1 -0.3
baz=37
E21A **Keefer Ranch,** 36.61 338 ⇑P P 08 29 48.3 -0.4
baz=37
F19A **Roth Farm, Mol** 36.76 335 ⇓P P 08 29 49.5 -0.5
baz=37,SNR=7.7
H16A **Russell Place,** 36.83 332 ⇑P P 08 29 51.0 +0.4
baz=37,SNR=7.2
J14A **Carey** 36.90 329 ⇑P P 08 29 51.0 -0.1
baz=37
E20A **Meyer Farm, Mu** 36.98 337 P P 08 29 51.6 -0.1
baz=37,SNR=17
G17A **Pierce Place,** 37.09 333 ⇓P P 08 29 54.3 +1.6
baz=37,SNR=10.0
F18A **Big Timber** 37.12 335 P P 08 29 52.6 -0.4
baz=37,SNR=5.6
E19A **Rath Farm, Rou** 37.19 336 ⇑P P 08 29 53.3 -0.3
baz=37
ULM **Lac du Bonnet** 37.22 352 P P 08 29 51.6 -2.1
comp=Z,6.0nm,0.5s,mb4.5,baz=166,slow=11,SNR=6.6
J13A **Cove Ranch, Pi** 37.28 328 ⇓P P 08 29 54.1 -0.3
baz=37
I14A **Mackay** 37.30 329 P P 08 29 55.2 +0.7
baz=37,SNR=11
DGMT **Dagmar** 37.35 342 P P 08 29 54.6 -0.3
baz=38,SNR=9.0
DGMT **Dagmar** 37.35 342 *e*P P 08 29 54.5 -0.4
comp=Z,33nm,0.6s,mb5.2
H15A **Lima** 37.42 331 P P 08 29 56.7 +1.2
baz=38,SNR=24
D20A **Manuel Ranch,** 37.47 337 P P 08 29 55.9 0.0
baz=38,SNR=10
G16A **Moss Hill, Enn** 37.49 332 ⇓P P 08 29 56.9 +0.7
baz=38,SNR=7.9
F17A **Fitzpatrick Pl** 37.51 334 ⇓P P 08 29 56.4 +0.1
baz=38
HLID **Hailey** 37.52 328 ⇑P P 08 29 56.7 +0.3
baz=38,SNR=5.1

HLID	Hailey	37.52	328	*e*P		P	08 29 56.5	+0.1
	comp=Z,1.7nm,0.8s,mb3.7							
I13A	Wildhorse Cree	37.62	329	⇓P		P	08 29 57.8	+0.6
	baz=38,SNR=11							
MCMT	McKenzie Canyo	37.67	331	*e*P		P	08 29 58.5	+0.8
	comp=Z,8.6nm,0.8s,mb4.4							
E18A	Harlowton	37.73	335	⇓P		P	08 29 57.8	-0.3
	baz=38							
BOZ	Bozeman (W)	37.73	333	⇑P		P	08 29 58.0	-0.2
	baz=38,SNR=8.1							
G15A	Dillon	37.76	332	⇓P		P	08 29 58.7	+0.4
	baz=38,SNR=12							
H14A	Leadore	37.76	330	P		P	08 29 59.2	+0.8
	baz=38,SNR=22							
D19A	Cripps Ranch,	37.81	337	⇑P		P	08 29 58.8	0.0
	baz=38							
F16A	Kennard Place,	37.84	333	⇓P		P	08 29 59.3	+0.2
	baz=38							
C20A	Veseth Ranch,	37.94	338	⇑P		P	08 29 59.6	-0.2
	baz=38							
DLMT	Dillon	37.95	332	*e*P		P	08 30 00.0	0.0
	comp=Z,8.1nm,0.8s,mb4.4							
E17A	Martinsdale	38.04	334	⇓P		P	08 30 00.7	0.0
	baz=38							
I12A	Atlanta	38.06	328	⇑P		P	08 30 01.2	+0.3
	baz=38,SNR=6.0							
H13A	Challis	38.16	329	⇓P		P	08 30 02.0	+0.3
	baz=38,SNR=16							
MFID	Camas Ranch	38.16	327	⇓P		P	08 30 01.2	-0.5
	baz=38							
D18A	Linhart Farms,	38.20	336	⇓P		P	08 30 02.1	+0.1
	baz=38							
LRM	Limekiln Ridge	38.24	332	*e*P		P	08 30 02.8	+0.4
G14A	Jackson	38.27	331	⇑P		P	08 30 02.8	+0.1
	baz=38							
F15A	Butte	38.27	332	⇓P		P	08 30 02.8	+0.2
	baz=38,SNR=8.3							
C19A	Slack Wire Ran	38.35	337	P		P	08 30 03.2	0.0
	baz=38,SNR=8.0							
E16A	East Helena	38.44	334	⇑P		P	08 30 03.9	-0.1
	baz=38,SNR=8.8							
H12A	Diamond D Ranc	38.45	329	⇓P		P	08 30 04.0	-0.1
	baz=38,SNR=6.6							
D17A	Six Diamond Ra	38.52	335	P		P	08 30 04.5	-0.2
	baz=39,SNR=8.9							
G13A	Cobalt	38.53	330	P		P	08 30 04.6	-0.2
	baz=39,SNR=7.8							
HRY	Holter Researc	38.65	334	*e*P		P	08 30 05.9	+0.1
D16A	Dana Ranch, Ca	38.78	334	P		P	08 30 07.1	+0.2
	baz=39,SNR=5.7							
E15A	Deer Lodge	38.78	333	P		P	08 30 06.6	-0.3
	baz=39,SNR=10							
EGMT	Eagleton	38.85	337	⇑P		P	08 30 07.3	-0.1
	baz=39							
EGMT	Eagleton	38.85	337	*e*P		P	08 30 07.0	-0.5
	comp=Z,8.6nm,0.9s,mb4.4							
C17A	Wharram Farm,	38.93	336	⇓P		P	08 30 07.7	-0.4
	baz=39,SNR=7.2							
F13A	Darby	39.09	331	P		P	08 30 09.2	-0.2
	baz=39,SNR=13							
G12A	Big Creek, Yel	39.09	329	⇑P		P	08 30 09.2	-0.3
	baz=39,SNR=5.2							
E14A	Clinton	39.16	332	P		P	08 30 09.9	-0.1
	baz=39,SNR=5.4							
D15A	Lincoln	39.20	333	⇓P		P	08 30 10.4	+0.1
	baz=39,SNR=7.1							
CHMT	Chamberlain Mo	39.43	333	*e*P		P	08 30 12.0	-0.3
	comp=Z,0.8nm,0.7s,mb3.5							
C16A	Fuhringer Ranc	39.47	335	⇑P		P	08 30 12.1	-0.5
	baz=40							
B17A	L&G Farms, Che	39.48	336	⇑P		P	08 30 12.4	-0.2
	baz=40							
E13A	Victor	39.50	331	⇑P		P	08 30 12.4	-0.4
	baz=40,SNR=14							
F12A	Elk City	39.51	330	⇓P		P	08 30 12.5	-0.5
	baz=40,SNR=28							
J08A	Circle Bar Ran	39.58	325	⇑P		P	08 30 13.1	-0.5
	baz=40							
A18A	Metzger Ranch,	39.63	338	⇓P		P	08 30 13.2	-0.7
	baz=40,SNR=6.1							
SIV	San Ignacio	39.66	137	P		P	08 30 11.6	-3.0
	comp=Z,2.1nm,0.6s,mb4.0,baz=313,slow=8.2,SNR=13							
SIV				pP		pP	08 30 50.0	-0.9
	comp=Z,1.3nm,0.6s,baz=329,slow=9.3,SNR=3.7							
SIV				PcP		PcP	08 32 16.4	-1.7
	comp=Z,2.0nm,0.5s,baz=277,slow=4.7,SNR=11							
D14A	Greenough	39.67	333	⇓P		P	08 30 13.5	-0.7
	baz=40							
MSO	Missoula	39.67	332	⇓P		P	08 30 13.4	-0.8
	baz=40,SNR=8.2							
MSO	Missoula	39.67	332	*e*P		P	08 30 13.8	-0.4
	comp=Z,2.4nm,1.5s,mb4.2							
C15A	Salmond Ranch,	39.81	334	⇓P		P	08 30 15.4	+0.1
	baz=40,SNR=6.4							
B16A	M & M Farms, S	39.94	335	⇓P		P	08 30 15.3	-1.1
	baz=40							
A17A	Triple J Farms	39.97	337	⇓P		P	08 30 16.2	-0.5
	baz=40,SNR=7.3							
D13A	Huson	40.11	332	P		P	08 30 17.6	-0.2
	baz=40,SNR=6.5							
E12A	Beaver Dam Sad	40.13	330	⇑P		P	08 30 17.1	-0.9
	baz=40							
B15A	Bradely Ranch,	40.21	335	⇑P		P	08 30 18.0	-0.7
	baz=40							
D12A	Red Ives Fores	40.49	331	P		P	08 30 20.1	-0.9
	baz=41,SNR=5.9							
B14A	Marquette Ranc	40.55	334	⇓P		P	08 30 20.8	-0.7
	baz=41							
C13A	Hot Springs	40.60	332	⇑P		P	08 30 21.3	-0.6
	baz=41							
I07A	Izee	40.61	325	⇓P		P	08 30 21.0	-1.0
	baz=41							
F10A	Beach Ranch, E	40.64	329	⇓P		P	08 30 20.7	-1.5
	baz=41							
A15A	Johnson Ranch,	40.80	335	⇑P		P	08 30 23.1	-0.4
	baz=41,SNR=9.4							
C12B	Naegeli Ranch,	41.03	332	⇓P		P	08 30 24.4	-1.0
	baz=41							
B13A	Whitefish	41.07	333	⇑P		P	08 30 25.2	-0.5
	baz=41							
A14A	Double T Ranch	41.08	335	⇓P		P	08 30 25.2	-0.6
	baz=41,SNR=6.9							
A13A	Flathead Natio	41.47	334	⇓P		P	08 30 29.0	0.0
	baz=42							
C11A	Tepee Creek (N	41.48	331	⇓P		P	08 30 28.5	-0.6
	baz=42							
NEW	Newport	42.19	331	⇓P		P	08 30 33.6	-1.3
	baz=42							
NEW	Newport	42.19	331	*e*P		P	08 30 33.5	-1.3
	comp=Z,2.3nm,0.8s,mb3.9							
D08A	Wollman Farm,	42.24	329	⇑P		P	08 30 34.3	-1.0
	baz=42,SNR=5.1							
E07A	Sunnyside	42.39	327	⇓P		P	08 30 36.0	-0.5
	baz=42							
C09A	Chrisman Ranch	42.42	330	⇑P		P	08 30 36.2	-0.5
	baz=42							
H04A	Detroit Lake	42.50	324	⇓P		P	08 30 36.4	-1.0
	baz=43							
HOOD	Mount Hood Mea	42.58	325	*e*P		P	08 30 38.4	+0.4
	comp=Z,8.2nm,0.7s,mb4.5							
B08A	Colville Reser	43.32	330	⇑P		P	08 30 42.8	-1.1
	baz=43							
EDM	Edmonton	44.42	339	*e*P		P	08 30 51.5	-1.1
B06A	Marblemount	44.50	329	⇑P		P	08 30 52.0	-1.3
	baz=45							
SCHQ	Schefferville	44.50	17	P		P	08 30 51.3	-1.9
	comp=Z,12nm,0.7s,mb4.7,baz=218,slow=6.2,SNR=23							
FCC	Fort Churchill	45.42	356	*e*P		P	08 30 58.5	-1.9
	comp=Z,0.5nm,0.7s,mb3.2							
CPUP	Villa Florida	49.63	143	*e*P		P	08 31 35.0	+1.7
	comp=Z,5.3nm,0.8s,mb4.2							
CPUP				PcP		PcP	08 32 50.5	-1.8
CPUP	Villa Florida	49.63	143	P		P	08 31 30.2	-3.1
	comp=Z,1.2nm,0.5s,mb3.8,baz=321,slow=5.9,SNR=5.5							
CPUP				PcP		PcP	08 32 50.5	-1.8
	comp=Z,0.5nm,0.4s,baz=7.3,slow=17,SNR=4.7							
YKA	Yellowknife Ar	52.45	345	P		P	08 31 52.0	-1.8
YKA	Yellowknife Ar	52.45	345	P		P	08 31 52.0	-1.8
	comp=Z,2.6nm,0.7s,mb4.0,baz=132,slow=8.4,SNR=5.5							
DLBC	Dease Lake	54.70	335	*e*P		P	08 32 09.8	-0.5
PLCA	Paso Flores	56.34	164	P		P	08 32 19.9	-2.2
PLCA	Paso Flores	56.34	164	P		P	08 32 19.9	-2.2
	comp=Z,2.1nm,0.8s,mb4.0,baz=329,slow=5.7,SNR=4.2							
ILAR	Eielson Array	64.82	336	P		P	08 33 17.0	-2.2
	comp=Z,0.8nm,0.6s,mb3.8,baz=166,slow=4.7,SNR=20							
ILAR				pP		pP	08 33 59.1	0.0
	comp=Z,1.5nm,1.1s,baz=112,slow=4.5,SNR=5.0							
ESDC	Sonseca Array	77.09	52	P		P	08 34 32.7	-0.9

ESDC	Sonseca Array	77.09	52	P		P	08 34 32.7	-0.9
	comp=Z,0.9nm,0.6s,mb3.6,baz=282,slow=5.2,SNR=6.3							
CN2	Changchun	115.28	334	*e*PKP		PKPdf	08 41 18.5	-2.0
CN2				PP		PP	08 42 26.3	+3.7
BJI	Beijing	122.16	338	P		Pdif	08 38 01.5	-1.6
BJI				pmax		pmax		
	comp=Z,54nm,2.5s							
MAW	Mawson	122.68	167	PKP		PKPdf	08 41 31.9	-2.0
	comp=Z,1.1nm,0.6s,baz=180,slow=6.1,SNR=9.1							
WMQ	Urumqi	122.86	4	*e*PKP		PKPdf	08 41 33.3	-1.8
HHC	Hu-ho-hao-te	122.95	342	*e*PKP		PKPdf	08 41 33.0	-2.3
HHC				PP		PP	08 43 18.3	+3.2
HHC				PKS			08 45 08.8	
HHC				SKS		SKSdf	08 48 28.0	-3.6
HHC				SKKS		SKKSac	08 49 53.0	-5.4
HHC				SS		SS	08 59 44.3	-0.3
GYA	Guiyang	137.78	340	*e*Pdif		Pdif	08 39 10.0	-2.6
GYA				PKP		PKPdf	08 42 01.5	-2.3
GYA				sPKP			08 43 09.0	
GYA				PP		PP	08 44 52.3	+1.3
GYA				AMB		AMB		
	comp=Z,80nm,7.8s							
KMI	Kunming	140.20	345	PKP		PKPdf	08 42 06.8	-1.4

CSEM ***30*** *08:28:03.4±0.3,38.°1N×21.°71E,h2km,ML1.9/4,Error ellipse: s-maj=7.4km s-min=5.9km az=151.0*
THE ***30*** *08:28:03.2,38.°18N×21.°77E,h1km±2km,ML1.9/4,Error ellipse: s-maj=2.7km s-min=0.7km az=248.0*

ATH 30 08:28:04.6,38.°16N×21.°61E,h5km,MD3.3/9,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	Riolos of Patr	0.15	228	*e*PG	Pg	08 28 07.3	-0.3
RLS	Riolos of Patr	0.15	228	*e*Pg	Pg	08 28 07.3	-0.3
UPR	University Cam	0.19	48	*e*PG	Pg	08 28 08.7	+0.4
UPR				*e*SG	Sg	08 28 11.8	+1.0
UPR	University Cam	0.19	48	P	Pg	08 28 06.5	-1.8
UPR	University Cam	0.19	48	P	Pg	08 28 06.5	-1.8
UPR	University Cam	0.19	48	*e*Pg	Pg	08 28 08.7	+0.4
UPR				*e*Sg	Sg	08 28 11.8	+1.0
LAKA	Lakka	0.30	74	P	Pg	08 28 07.1	-3.3
LAKA				S	Sg	08 28 10.1	-4.3
LAKA	Lakka	0.30	74	P	Pg	08 28 07.1	-3.3
LAKA				S	Sg	08 28 10.1	-4.3
EFP	Efpalio	0.35	41	*e*PG	Pg	08 28 11.2	-0.2
EFP				*e*SB	Sg	08 28 16.2	+0.1
EFP	Efpalio	0.35	41	P	Pg	08 28 08.6	-2.8
EFP				S	Sg	08 28 12.3	-3.8
EFP	Efpalio	0.35	41	P	Pg	08 28 08.6	-2.8
EFP	Efpalio	0.35	41	*e*Pg	Pg	08 28 11.2	-0.2
EFP				S	Sg	08 28 12.3	-3.8
TRIZ	Trizonia	0.42	60	P	Pg	08 28 09.2	-3.5
TRIZ				S	Sg	08 28 13.6	-4.5
TRIZ	Trizonia	0.42	60	P	Pg	08 28 09.2	-3.5
TRIZ				S	Sg	08 28 13.6	-4.5
KALE	Kalithea	0.48	61	P	Pg	08 28 10.3	-3.5
KALE				S	Sg	08 28 15.7	-4.3
KALE	Kalithea	0.48	61	P	Pg	08 28 10.3	-3.5
KALE				S	Sg	08 28 15.7	-4.3
GUR	Goura	0.62	111	*e*PB	Pb	08 28 15.5	-2.4
GUR				*e*SB	Sg	08 28 24.5	0.0
GUR	Goura	0.62	111	P	Pg	08 28 12.9	-3.6
GUR				S	Sg	08 28 20.8	-3.7
GUR	Goura	0.62	111	P	Pg	08 28 12.9	-3.6
GUR	Goura	0.62	111	*e*Pb	Pb	08 28 15.5	-2.4
GUR				S	Sg	08 28 20.8	-3.7
GUR				*e*Sb	Sg	08 28 24.5	0.0
DSF	Desfina	0.76	71	P	Pg	08 28 15.0	-4.3
DSF				S	Sg	08 28 24.4	-4.8
DSF	Desfina	0.76	71	P	Pg	08 28 15.0	-4.3
DSF				S	Sg	08 28 24.4	-4.8
EVR	Evrytania	0.77	12	*e*PB	Pb	08 28 19.5	-1.0
EVR	Evrytania	0.77	12	*e*Pb	Pb	08 28 19.5	-1.0
VLS	Valsamata	0.80	272	*e*PB	Pb	08 28 20.1	-1.0
VLS	Valsamata	0.80	272	P	Pg	08 28 20.8	+0.8
VLS	Valsamata	0.80	272	*e*Pb	Pb	08 28 20.1	-1.0
VLS	Valsamata	0.80	272	P	Pg	08 28 20.8	+0.8
VLX	Vlachokerasia	1.00	142	*e*PN	Pn	08 28 24.1	-1.1
VLX				*e*SB	Sb	08 28 37.3	-0.4
VLX	Vlachokerasia	1.00	142	*e*Pn	Pn	08 28 24.1	-1.1
VLX				*e*Sb	Sb	08 28 37.3	-0.4
ITM	Ithomi	1.01	166	*e*Pn	Pn	08 28 24.2	-1.2
ITM	Ithomi	1.01	166	*e*PN	Pn	08 28 24.2	-1.2
ITM	Ithomi	1.01	166	*e*Pn	Pn	08 28 24.2	-1.2
AGG	Agios Georgios	1.03	33	*e*Pb	Pb	08 28 24.0	-0.9
AGG	Agios Georgios	1.03	33	*e*PB	Pb	08 28 24.0	-0.9
AGG	Agios Georgios	1.03	33	P	Pg	08 28 23.2	-1.2
AGG	Agios Georgios	1.03	33	P	Pg	08 28 23.2	-1.2
AGG	Agios Georgios	1.03	33	*e*Pb	Pb	08 28 24.0	-0.9
LKR	Lokris	1.20	65	*e*PG	Pg	08 28 26.9	-0.6
LKR	Lokris	1.20	65	*e*Pg	Pg	08 28 26.9	-0.6
DID	Didima	1.44	116	*e*PB	Pb	08 28 31.5	-0.5
DID	Didima	1.44	116	*e*Pb	Pb	08 28 31.5	-0.5

IDC ***30*** *08:30:50.7±0.3,26.°24N×101.°95E,h0km,mb5.2/45, mb1 5.2/45,mb1mx5.2/45,mbtmp5.2/45,MS5.5/33, Ms1 5.5/33,ms1mx5.4/39,Error ellipse: s-maj=9.7km s-min=7.7km az=58.0*
ISCJB ***30*** *08:30:52.5±0.1,26.°31N±0.°01×101.°91E±0.°02,h17km, mb5.6/403,MS5.8/264,Error ellipse: s-maj=2.2km s-min=1.8km az=35.3*
BJI ***30*** *08:30:52.6,26.°30N×102.°06E,h19km,mB6.0/35,mb5.4/49, ML6.1/7,Ms6.3/70,Ms7 6.1/59*
MOS ***30*** *08:30:53.7±0.9,26.°27N×101.°99E,h29km,mb5.8/154, MS5.7/83,Error ellipse: s-maj=6.1km s-min=3.2km az=122.5*
NEIC ***30*** *08:30:53.0±0.1,26.°24N×101.°89E,h11km,mb5.7/225, ME6.1,MS5.8/178,MW5.8,Error ellipse: s-maj=3.9km s-min=2.8km az=198.0 Broadband fault plane solution: P waves. NP1:φs200.00000°,δ65.00000°,λ30.00000°. NP2:φs96.00000°,δ63.00000°,λ152.00000°. Principal axes: T Plg38.0000°, Azm59.0000°; N Plg0.0000°, Azm0.0000°; P Plg1.0000°, Azm328.0000°; Moment Tensor Solution. s10 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.97; Mθθ=2.62; Mφφ=3.59; Mrθ=0.07; Mrφ=-5.42; Mθφ=-2.21; Best double couple: M₀6.70000×10¹⁷ NP1:φs195.00000°, δ89.00000°,λ19.00000°. NP2:φs104.00000°,δ71.00000°, λ179.00000°. Principal axes: T 7.2000, Plg13.0000°, Azm61.0000°; N -1.2000, Plg71.0000°, Azm196.0000°; P -5.9900, Plg12.0000°, Azm327.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC At least 32 people killed and 321 injured at Huili; 6 people killed and 132 injured at Chuxiong; 5 people killed and 132 injured at Panzhihua; 4 people injured at Kunming. At least 392,000 houses damaged or destroyed in the Sichuan-Yunnan area. At least 66 schools, 22 bridges, 131 roads and 19 reservoirs damaged at Panzhihua. Chengdu-Kunming railroad service interrupted. Strongly felt at Panzhihua and Xichang. Felt [III] at Kunming. Also felt at Chengdu, Dali and Yibin.
TEH ***30*** *08:30:54.0,26.°34N×101.°91E,h10km*
GCMT ***30*** *08:30:57.5±0.1,26.°19N×102.°04E,h24km,MW6.0, Moment Tensor Solution. s78,c129; s53,c72; Moment tensor: Scale 10¹⁸Nm; Mrr=0.02±.01; Mθθ=0.37±.01; Mφφ=0.35±.01; Mrθ=-0.01±.02; Mrφ=-1.03±.01; Mθφ=-0.07±.02; Best double couple: M₀1.10000×10¹⁸ NP1:φs100.00000°, δ86.00000°,λ180.00000°. NP2:φs190.00000°,δ90.00000°, λ4.00000°. Principal axes: T 1.0800, Plg3.0000°, Azm55.0000°; N 0.0200, Plg86.0000°, Azm192.0000°; P -1.1000, Plg2.0000°, Azm325.0000°; Data Used: II IU IC G CN. Surface waves: sta=106, comp=221, per= 50.*
SZGRF ***30*** *08:30:57.8,26.°15N×101.°77E,h33km,mb5.8,MS6.0, Yunnan, China*
DJA ***30*** *08:30:59,26.°26N×101.°81E,h45km,Mw6.1/49*
BGS ***30*** *08:31:19.4±1.6,28.°82N×96.°81E,h10km,mb5.3,MS5.9*

ISC 30 08:30:52.0±0.6,26.°31N±0.°01×101.°89E±0.°02,h2km±3km, h18km±1.7km:pP-P,n1256,σ1906/1165,mb5.6/403, MS5.8/264,113C-49D,Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	Kunming	1.41	147	⇓Pg	Pg	08 31 17.3	-1.6
KMI				Sg	Sg	08 31 35.5	-1.6
KMI				smax			
	comp=N,130μm,0.9s						
KMI				smax			
	comp=E,130μm,0.8s						
KMI				LR	LR		
	comp=N,872μm,5.9s						
KMI				LR	LR		
	comp=E,483μm,5.4s						
GYA	Guiyang	4.28	87	Pn	Pn	08 31 58.8	+0.7
GYA				Sn	Sn	08 32 46.5	-2.1
GYA				Sg	Sb	08 32 56.3	-3.7
GYA				LR	LR		
	comp=N,91μm,5.6s						
GYA				LR	LR		
	comp=E,45μm,7.0s						
GYA				LR	LR		
	comp=Z,91μm,5.9s						
CD2	Chengdu	4.87	19	Pn	Pn	08 32 09.5	+3.3
CD2				Sn	Sn	08 33 08.5	+5.4
CD2				Sg	Sg	08 33 28.5	+0.1
CD2				smax			
	comp=N,47μm,1.3s						
CD2				smax			
	comp=E,78μm,1.4s						
CD2				LR	LR		
	comp=N,1264μm,10.1s						
CD2				LR	LR		
	comp=Z,300μm,10.1s						
IMP	Imphal	7.35	260	*i* x	x	08 33 21.0	
IMP				*ex*	x	08 34 15.0	
ENH	Enshi	7.77	58	*e*Pn	Pn	08 32 47.6	+1.6
	comp=Z,3μm,0.9s						
CHTO	Chiang Mai	7.94	201	*e*Pn	Pn	08 32 51.3	+2.9
CHTO				*e*		08 33 22.6	
CHTO				*e*S	Sg	08 35 02.1	-5.0
CHTO	Chiang Mai	7.94	201	P	Pn	08 32 50.9	+2.5
	comp=Z,34nmcomp=Z,428nm,0.8s						
CHTO	Chiang Mai	7.94	201	P	Pn	08 32 51.8	+3.3
	SNR=146						
CMAR	Chiang Mai Arr	8.28	200	Pn	Pn	08 32 55.0	+1.9
	comp=Z,20nm,0.3s,baz=13,slow=12,SNR=170						
CMAR				Pg	Pg	08 33 27.9	-2.6
	comp=Z,42nm,0.3s,baz=9.7,slow=17,SNR=24						
CMAR				Lg		08 35 16.4	
	comp=Z,30nm,0.3s,baz=22,slow=25,SNR=12						
SHL	Shillong	9.04	268	*e*PKP	Pn	08 33 03.0	-0.5
SHL				*ex*	x	08 34 53.0	
BDT	Bhumibol Dam	9.41	197	P	Pn	08 33 12.0	+3.4
	comp=Z,196nm,0.8s						
XAN	Xi'an	9.81	37	P	Pn	08 33 13.8	-0.2
XAN				pP		08 33 16.5	
XAN				S	Sn	08 35 03.5	-1.3
XAN				pmax	pmax		
	comp=Z,73nm,0.9s						
XAN				pmax	pmax		
	comp=Z,650nm,6.0s						
XAN				LR	LR		
	comp=N,155μm,7.4s						
XAN				LR	LR		
	comp=E,61μm,6.8s						
LZH	Lanzhou	9.89	9	*e*P	Pn	08 33 18.5	+3.4
LZH				pP		08 33 21.5	
LZH				sP		08 33 24.3	
LZH				*e*S	Sn	08 35 08.0	+1.4
LZH				SS		08 35 20.3	
LZH				pmax	pmax		
	comp=Z,300nm,1.0s						
LZH				pmax	pmax		
	comp=Z,2μm,4.7s						
LZH				LR	LR		
	comp=N,59μm,5.3s						
LZH				LR	LR		
	comp=E,197μm,10.8s						
LZH				LR	LR		
	comp=Z,85μm,11.2s						
AGT	Agartala	9.95	258	*i* P	Pn	08 33 13.0	-2.9
AGT				*i* x	x	08 34 52.0	
LSA	Lhasa	10.08	292	P	Pn	08 33 22.8	+5.1
LSA				S	Sn	08 35 26.0	+15
LSA				LR	LR		
	comp=E,45μm,11.8s						
LSA				LR	LR		
	comp=Z,60μm,10.2s						
LSA	Lhasa	10.08	292	*e*Pn	Pn	08 33 20.5	+2.8
	comp=Z,255nm,0.9s						
LSA	Lhasa	10.08	292	*e*P	Pn	08 33 20.5	+2.8
LSA				pmax	pmax		
	comp=Z,255nm,0.9s						
QIZ	Qiongzhong	10.31	133	P	Pn	08 33 20.0	-0.9
QIZ				S	Sn	08 35 17.3	+0.2
QIZ				pmax	pmax		
	comp=Z,40nm,0.6s						
QIZ				pmax	pmax		
	comp=Z,770nm,6.8s						
QIZ				LR	LR		
	comp=N,81μm,10.8s						
QIZ				LR	LR		
	comp=Z,96μm,10.4s						
QIZ	Qiongzhong	10.31	133	*e*Pn	Pn	08 33 19.8	-1.1
	comp=Z,173nm,0.7s						
NST	Nakhon Sawan	10.71	189	PN	Pn	08 33 29.0	+2.6
GZH	Guangzhou	10.89	105	P	Pn	08 33 28.8	-0.1
GZH				S	Sn	08 35 30.0	-1.4
GZH				LR	LR		
	comp=N,50μm,8.3s						
GZH				LR	LR		
	comp=E,31μm,7.3s						
UBT	Ubonrachathani	11.39	165	⇓P	Pn	08 33 37.5	+1.8
WHN	Wuhan	11.74	66	⇑P	Pn	08 33 39.8	-0.7
WHN				pP		08 33 46.3	
WHN				S	Sn	08 35 43.8	-8.4
WHN				LR	LR		
	comp=N,135μm,6.6s						
WHN				LR	LR		
	comp=E,106μm,8.0s						
WHN				LR	LR		
	comp=Z,94μm,7.5s						
HKC	Hong Kong Obse	11.89	107	*i* P	Pn	08 33 42.0	-0.5
TAPN	Taplejung	12.71	278	*e*P	Pn	08 33 53.8	+0.1
	comp=Z,1μm,1.3s						
CAL	Calcutta	12.91	256	*e*PKP	Pn	08 33 54.0	-2.6
CAL				*ex*	x	08 36 29.2	
ODAN	Odare	12.99	276	*e*P	Pn	08 33 57.2	-0.4
	comp=Z,740nm,0.8s						
GTA	Gaotai	13.18	353	⇓P	Pn	08 34 01.8	+1.7
GTA				pP		08 34 05.5	
GTA				sP		08 34 08.5	
GTA				S	Sn	08 36 30.0	+2.7
GTA				sS		08 36 36.3	
GTA				SS		08 36 46.5	
GTA				pmax	pmax		
	comp=Z,16nm,2.1s						
GTA				pmax	pmax		
	comp=Z,3μm,5.7s						
GTA				LR	LR		
	comp=N,56μm,11.1s						
GTA				LR	LR		
	comp=E,157μm,13.8s						
GTA				LR	LR		
	comp=Z,76μm,9.6s						
RAMN	Ramite	13.70	276	*e*P	Pn	08 34 06.6	-0.6
	comp=Z,933nm,0.9s						
JIRN	Jiri	14.07	279	*e*P	Pn	08 34 12.3

QZH	**Quanzhou**	**15.12**	**92**	⇑*i*P		**Pn**	**08 34 24.0**	**-2.7**
QZH				S		**Sn**	**08 37 11.5**	**-3.3**
QZH				pmax	pmax			
	comp=Z,280nm,1.0s							
QZH				pmax	pmax			
	comp=Z,2μm,4.5s							
QZH				LR	LR			
	comp=N,400μm,8.9s							
QZH				LR	LR			
	comp=E,70μm,8.5s							
QZH				LR	LR			
	comp=Z,101μm,9.7s							
GKN	**Gorkha**	**15.46**	**280**	*e*P		**Pn**	**08 34 28.7**	**-2.3**
BTO	**Baotou**	**15.78**	**23**	*e*P		**Pn**	**08 34 33.3**	**-1.8**
BTO				LR	LR			
	comp=N,52μm,9.7s							
BTO				LR	LR			
	comp=E,23μm,8.9s							
NJ2	**Nanjing**	**15.87**	**65**	*e*P		**Pn**	**08 34 35.8**	**-0.7**
NJ2				pP	pP		08 34 39.0	-2.0
NJ2				sP	sP		08 34 42.8	+1.5
NJ2				S		**Sn**	**08 37 32.5**	**-0.5**
NJ2				sS	sS		08 37 38.0	-11
NJ2				SS			08 37 52.0	
NJ2				pmax	pmax			
	comp=Z,80nm,1.0s							
NJ2				pmax	pmax			
	comp=Z,3μm,5.6s							
NJ2				LR	LR			
	comp=N,53μm,20.0s							
NJ2				LR	LR			
	comp=E,68μm,18.2s							
NJ2				LR	LR			
	comp=Z,77μm,18.8s							
BWNR	**Bhubaneshwar**	**15.94**	**251**	*e*PKP		**Pn**	**08 34 35.0**	**-2.4**
DANN	**Dangsing**	**16.25**	**281**	*e*P		**Pn**	**08 34 39.4**	**-1.9**
	comp=Z,2μm,0.8s							
TIA	**Tai'an**	**16.32**	**49**	P		**Pn**	**08 34 41.5**	**-0.7**
TIA				S		**Sn**	**08 37 45.3**	**+1.5**
TIA				LR	LR			
	comp=N,40μm,11.6s							
TIA				LR	LR			
	comp=E,34μm,13.1s							
TIA				LR	LR			
	comp=Z,29μm,11.8s							
KOLN	**Koldanda**	**16.37**	**279**	*e*P		**Pn**	**08 34 41.2**	**-1.7**
	comp=Z,336nm,0.8s							
HHC	**Hu-ho-hao-te**	**16.57**	**27**	⇑P		**Pn**	**08 34 44.5**	**-0.9**
HHC				pP	pP		08 34 48.0	-0.7
HHC				sP	sP		08 34 52.0	+3.0
HHC				PP			08 34 58.0	
HHC				S		**Sn**	**08 37 48.0**	**-1.8**
HHC				sS	sS		08 37 54.0	-8.9
HHC				SS			08 38 08.0	
HHC				PcP	PcP		08 39 35.8	-0.4
HHC				pmax	pmax			
	comp=Z,76nm,1.1s							
HHC				pmax	pmax			
	comp=Z,3μm,4.8s							
HHC				LR	LR			
	comp=N,40μm,10.4s							
HHC				LR	LR			
	comp=E,48μm,7.2s							
HHC				LR	LR			
	comp=Z,58μm,8.5s							
TPUB	**Ta-pu**	**17.27**	**96**	*e*P		**Pn**	**08 34 56.7**	**+2.4**
	comp=Z,652nm,1.5s							
SSLB	**Suanglung**	**17.45**	**94**	*e*P		**Pn**	**08 34 59.2**	**+2.6**
	comp=Z,184nm,1.1s							
SSE	**Sheshan**	**17.58**	**70**	⇑P		**Pn**	**08 34 57.0**	**-1.1**
SSE				sP	sP		08 35 09.3	+9.1
SSE				PP			08 35 10.8	
SSE				S		**Sn**	**08 38 10.5**	**-3.9**
SSE				sS	sS		08 38 22.5	-1.1
SSE				ScS	ScS		08 46 47.8	-6.5
SSE				pmax	pmax			
	comp=Z,28nm,0.7s							
SSE				pmax	pmax			
	comp=Z,2μm,8.5s							
SSE				LR	LR			
	comp=N,90μm,16.4s							
SSE				LR	LR			
	comp=E,15μm,16.3s							
SSE				LR	LR			
	comp=Z,43μm,9.4s							
YHNB	**Yeheng**	**17.67**	**91**	*e*P		**Pn**	**08 35 01.8**	**+2.6**
	comp=Z,205nm,0.9s							
TATO	**Taipei**	**17.72**	**90**	*e*P		**Pn**	**08 35 03.0**	**+3.2**
	comp=Z,179nm,0.9s							
TATO	**Taipei**	**17.72**	**90**	P		Px	08 35 09.9	
	SNR=6.4							
TWG	**Pinlang**	**17.79**	**97**	*e*P		**Pn**	**08 35 04.2**	**+3.4**
	comp=Z,203nm,0.9s							
YULB	**Yu-li**	**17.85**	**95**	*e*P		**Pn**	**08 35 05.0**	**+3.5**
	comp=Z,106nm,0.9s							
NACB	**Ninganchiao**	**17.95**	**93**	*e*P		**Pn**	**08 35 06.2**	**+3.4**
	comp=Z,183nm,1.0s							
BJT	**Baijiatuan**	**18.12**	**37**	*e*P		**Pn**	**08 35 05.7**	**+0.9**
	comp=Z,580nm,0.9s							
BJT	**Baijiatuan**	**18.12**	**37**	*e*P		**Pn**	**08 35 05.7**	**+0.9**
BJT				pmax	pmax			
	comp=Z,580nm,0.9s							
BJI	**Beijing**	**18.14**	**37**	P		**Pn**	**08 35 05.5**	**+0.5**
BJI				S		**Sn**	**08 38 29.5**	**+1.6**
BJI				pmax	pmax			
	comp=Z,200nm,2.0s							
BJI				pmax	pmax			
	comp=Z,9μm,5.8s							
BJI				LR	LR			
	comp=N,73μm,16.4s							
BJI				LR	LR			
	comp=E,90μm,17.9s							
BJI				LR	LR			
	comp=Z,22μm,18.9s							
VIS	**Vishakhapatnam**	**19.20**	**247**	*e*PKP		**Pn**	**08 35 17.3**	**-0.7**
VIS				*i* x	x		08 39 01.5	
PTH	**Pithoragarh**	**19.42**	**285**	*e*PKP		**Pn**	**08 35 20.4**	**-0.2**
PTH				*ex*	x		08 38 55.3	
DL2	**Dalian**	**20.78**	**48**	P		**P**	**08 35 34.3**	**0.0**
DL2				S		**S**	**08 39 23.8**	**-3.0**
DL2				pmax	pmax			
	comp=Z,360nm,1.4s							
DL2				pmax	pmax			
	comp=Z,2μm,3.2s							
DL2				LR	LR			
	comp=N,11μm,13.6s							
DL2				LR	LR			
	comp=E,7μm,7.3s							
DL2				LR	LR			
	comp=Z,11μm,9.9s							
KTGM	**Kuala Trenggan**	**20.90**	**177**	P		**P**	**08 35 36.8**	**+1.1**
WMQ	**Urumqi**	**20.93**	**330**	P		**P**	**08 35 37.5**	**+1.7**
WMQ				pP			08 35 41.5	
WMQ				sP	sP		08 35 44.5	+7.7
WMQ				PP			08 36 00.3	
WMQ				S		**S**	**08 39 25.3**	**-4.4**
WMQ				sS	sS		08 39 32.5	+1.7
WMQ				PcP	PcP		08 39 44.5	+0.8
WMQ				SS			08 39 58.3	
WMQ				ScP	ScP		08 43 19.5	-1.9
WMQ				pmax	pmax			
	comp=Z,480nm,1.1s							
WMQ				pmax	pmax			
	comp=Z,9μm,8.6s							
WMQ				LR	LR			
	comp=N,36μm,12.8s,MS6.1							
WMQ				LR	LR			
	comp=E,33μm,12.8s,MS6.1							
WMQ				LR	LR			
	comp=Z,23μm,11.6s,MS5.8							
KULM	**Kulim**	**20.93**	**183**	*e*P		**P**	**08 35 36.7**	**+0.7**
	comp=Z,670nm,1.3s							
KULM				LR	LR			
	comp=Z,6μm,21.0s,MS5.0							
KULM	**Kulim**	**20.93**	**183**	P		**P**	**08 35 37.0**	**+1.0**
KULM	**Kulim**	**20.93**	**183**	P		**P**	**08 35 36.9**	**+0.8**
	comp=Z,6μmcomp=Z,393nm,1.4s							
DDI	**Dehra Dun**	**21.35**	**286**	*e*PKP		**P**	**08 35 38.9**	**-1.6**
DDI				*ex*	x		08 39 33.9	
TGY	**Tagaytay City**	**21.57**	**121**	P		**P**	**08 35 47.1**	**+4.1**
	comp=Z,122nm,0.5s,mb5.6,baz=87,slow=9.3,SNR=8.1							
TGY				LR	LR		08 44 23.0	
	comp=Z,36nm,18.9s,baz=312,slow=38							
TGY	**Tagaytay City**	**21.57**	**121**	P		**P**	**08 35 47.1**	**+4.2**
TGY				pmax	pmax			
	comp=Z,122nm,0.5s							
TGY				MLR	MLR			
	comp=Z,36nm,18.9s							
BSI	**Banda Aceh**	**21.64**	**198**	P		**P**	**08 35 44.5**	**+0.9**
	comp=Z,9μmcomp=Z,400nm,1.2s,mb5.7							
IPM	**Ipoh**	**21.72**	**182**	*e*P		**P**	**08 35 43.4**	**-1.1**
	comp=Z,710nm,1.5s,mb5.9							
IPM	**Ipoh**	**21.72**	**182**	P		**P**	**08 35 43.9**	**-0.6**
	comp=Z,5μmcomp=Z,278nm,1.4s,mb5.5							
SONM	**Songino Array**	**21.78**	**8**	P		**P**	**08 35 45.3**	**+0.5**
	comp=Z,135nm,0.7s,mb5.5,baz=194,slow=12,SNR=151							
SONM				S		**S**	**08 39 50.7**	**+4.4**
	comp=Z,5.0nm,0.9s,baz=150,slow=3.3,SNR=2.7							
SONM				Lg			08 42 25.0	
	comp=Z,9.9nm,1.1s,baz=165,slow=23,SNR=3.0							
SONM				LR	LR		08 45 21.0	
	comp=Z,13μm,21.1s,MS5.3,baz=186,slow=40							
ULN	**Ulaanbaatar**	**21.90**	**9**	*e*P		**P**	**08 35 46.7**	**+0.6**
	comp=Z,8μm,3.0s							
ULN	**Ulaanbaatar**	**21.90**	**9**	*i* P		**P**	**08 35 46.6**	**+0.4**
ULN	**Ulaanbaatar**	**21.90**	**9**	P		**P**	**08 35 46.5**	**+0.3**
	comp=Z,632nm,2.1s,mb5.7							
ULN	**Ulaanbaatar**	**21.90**	**9**	P		**P**	**08 35 47.2**	**+1.1**
	SNR=479							
NDI	**New Delhi**	**22.01**	**282**	*e*PKP		**P**	**08 35 45.0**	**-2.6**
NDI				*ex*	x		08 39 47.0	
SMLA	**Simla**	**22.19**	**288**	*i* P		**P**	**08 35 48.8**	**-0.8**
SMLA				AMb	AMB		08 35 52.7	
	comp=Z,114nm,0.2s,mb6.0							
SMLA				*i* x	x		08 39 49.9	
SDNR	**Sundarnagar**	**22.40**	**289**	*ex*	x		08 35 58.5	
SDNR				*ex*	x		08 39 55.5	
BHPL	**Bhopal**	**22.42**	**267**	*e*PKP		**P**	**08 35 51.8**	**-0.2**
BHPL				AMb	AMB		08 36 00.2	
	comp=Z,321nm,1.2s,mb5.6							
BHK	**Bhakra**	**22.86**	**289**	*ex*		**P**	**08 35 53.0**	**-3.6**
BHK				*ex*	x		08 36 17.0	
TSI	**Tuntungan**	**22.90**	**189**	P		**P**	**08 35 58.6**	**+1.5**
	comp=Z,1μm,1.1s,mb6.3							
FRIM	**Kepong**	**22.94**	**181**	P		**P**	**08 35 58.4**	**+0.8**
TPTI		**23.36**	**192**	P		**P**	**08 36 00.8**	**-1.2**
	comp=Z,2μmcomp=Z,181nm,0.9s,mb5.5							
HYB	**Hyderabad**	**23.37**	**252**	*i* P		**P**	**08 36 01.0**	**-1.1**
	comp=Z,300nm,1.0s,mb5.7							
HYB				*e*S		**S**	**08 40 14.0**	**-1.7**
HYB				LR	LR		08 47 20.0	
	comp=Z,13nm,16.0s							
DLH	**Dalhousie**	**23.39**	**292**	*e*PKP		**P**	**08 36 10.0**	**+7.8**
DLH				*e*S		**S**	**08 40 22.0**	**+6.2**
AKL	**Akola**	**23.47**	**261**	⇓*i*P		**P**	**08 36 03.7**	**+0.6**
AKL				AMP			08 36 11.0	
	comp=Z,361nm,1.5s							
AKL				*i* x	x		08 40 22.9	
PSI	**Prapat**	**23.55**	**187**	P		**P**	**08 36 03.8**	**-0.1**
PSI				S		**S**	**08 40 21.2**	**+2.7**
PSI				Lg			08 43 19.0	
PSI	**Prapat**	**23.55**	**187**	P		**P**	**08 36 03.8**	**-0.1**
	comp=Z,236nm,0.9s,mb5.6,baz=340,slow=8.4,SNR=105							
PSI				S		**S**	**08 40 21.2**	**+2.7**
	comp=Z,5.8nm,0.7s,baz=3.3,slow=11,SNR=1.7							
PSI				Lg			08 43 19.0	
	comp=Z,4.5nm,0.9s,baz=24,slow=7.0,SNR=3.7							
PSI	**Prapat**	**23.55**	**187**	P		**P**	**08 36 03.8**	**-0.1**
PSI				S		**S**	**08 40 21.2**	**+2.7**
PSI				pmax	pmax			
	comp=Z,236nm,0.9s,mb5.6							
PSI				smax				
	comp=N,6.0nm,0.7s							
JOW	**Kunigami**	**23.59**	**83**	*e*P		**P**	**08 36 02.3**	**-2.0**
	comp=N,105nm,0.8s,mb5.3							
JOW	**Kunigami**	**23.59**	**83**	P		**P**	**08 36 03.4**	**-0.9**
	comp=N,63nm,0.4s,mb5.4							
JOW				S		**S**	**08 40 19.4**	**+0.2**
JOW				Lg			08 43 22.4	
JOW				LR	LR		08 44 57.4	
	comp=N,29μm,18.5s,MS5.8,baz=273,slow=36							
SNY	**Shenyang**	**23.62**	**44**	⇑P		**P**	**08 36 00.0**	**-4.4**
SNY				S		**S**	**08 40 09.5**	**-10**
SNY				pmax	pmax			
	comp=Z,3μm,6.0s							
SNY				LR	LR			
	comp=N,29μm,13.5s,MS6.1							
SNY				LR	LR			
	comp=E,31μm,13.2s,MS6.1							
SNY				LR	LR			
	comp=Z,22μm,13.6s,MS5.8							
INCN	**Inchon**	**23.70**	**56**	*e*P		**P**	**08 36 05.6**	**+0.3**
	comp=Z,316nm,1.0s,mb5.7							
INCN				LR	LR			
	comp=Z,19μm,19.0s,MS5.6							
INCN	**Inchon**	**23.70**	**56**	P		**P**	**08 36 05.7**	**+0.4**
	SNR=24							
KDM	**Kudat**	**23.97**	**141**	P		**P**	**08 36 07.9**	**0.0**
ZAK	**Zakamensk**	**24.06**	**2**	*e*P		**P**	**08 36 09.5**	**+1.1**
ZAK				pmax	pmax			
	comp=Z,369nm,1.7s,mb5.5							
KGM	**Kluang**	**24.19**	**177**	P		**P**	**08 36 10.3**	**+0.4**
KKM	**Kota Kinabalu**	**24.35**	**143**	*e*P		**P**	**08 36 11.7**	**+0.4**
	comp=Z,428nm,1.0s,mb5.8							
KKM				LR	LR			
	comp=Z,9μm,22.0s,MS5.2							
KKM	**Kota Kinabalu**	**24.35**	**143**	P		**P**	**08 36 13.1**	**+1.8**
KKM	**Kota Kinabalu**	**24.35**	**143**	P		**P**	**08 36 12.8**	**+1.5**
	comp=Z,4μmcomp=Z,481nm,1.1s,mb5.8							
AJM	**Ajmer**	**24.40**	**277**	*e*PKP		**P**	**08 36 10.9**	**-0.8**
AJM				AMb	AMB		08 36 14.4	
	comp=Z,157nm,0.7s,mb5.6							
MYKOM	**Kota Tinggi**	**24.45**	**175**	P		**P**	**08 36 12.8**	**+0.6**
MYKOM	**Kota Tinggi**	**24.45**	**175**	P		**P**	**08 36 11.9**	**-0.3**
	comp=Z,5μmcomp=Z,266nm,1.1s,mb5.6							
KSRS	**Korea Array**	**24.66**	**57**	P		**P**	**08 36 11.7**	**-2.4**
	comp=Z,5.8nm,0.6s,mb4.3,baz=244,slow=9.4,SNR=18							
KSRS				Lg			08 43 57.7	
	comp=Z,1.8nm,0.9s,baz=255,slow=30,SNR=3.1							
KSRS				LR	LR		08 47 00.0	
	comp=Z,15μm,19.4s,MS5.5,baz=334,slow=39							
LATR	**Latur**	**24.68**	**257**	*e*PKP		**P**	**08 36 15.2**	**+0.9**
SDKM	**Sandakan**	**25.22**	**142**	P		**P**	**08 36 20.1**	**+0.8**
MOY	**Mondy**	**25.33**	**359**	*e*P		**P**	**08 36 21.4**	**+1.5**
MOY				pmax	pmax			
	comp=Z,1μm,3.0s							
KSH	**Kashi**	**25.33**	**308**	⇓*i*P		**P**	**08 36 22.8**	**+2.7**
KSH				*e*pP	pP		08 36 27.3	+6.5
KSH				*e*sP	sP		08 36 29.5	+8.4
KSH				*e*PP			08 37 01.8	
KSH				*e*PcP	PcP		08 39 56.3	+3.4
KSH				S		**S**	**08 40 47.3**	**+0.3**
KSH				SS			08 41 48.3	
KSH				*e*ScP	ScP		08 43 33.3	+0.1
KSH				*e*PcS	PcS		08 43 35.3	+2.0
KSH				pmax	pmax			
	comp=Z,2μm,2.3s,mb6.2							
KSH				LR	LR			
	comp=N,6μm,10.5s							
KSH				LR	LR			
	comp=E,7μm,8.9s							
KSH				LR	LR			
	comp=Z,27μm,19.1s							
BTM	**Bintulu**	**25.36**	**153**	P		**P**	**08 36 21.6**	**+1.1**
TLY	**Talaya**	**25.37**	**3**	*e*P		**P**	**08 36 22.2**	**+1.9**
	comp=Z,289nm,1.2s,mb5.7							
TLY				LR	LR			
	comp=Z,25μm,21.0s,MS5.7							
TLY	**Talaya**	**25.37**	**3**	*d* *i*P		**P**	**08 36 21.7**	**+1.4**
TLY				*e*S		**S**	**08 40 48.7**	**+1.4**
TLY				pmax	pmax			
	comp=Z,354nm,1.2s,mb5.8							
TLY				MLR	MLR			
	comp=Z,26μm,19.0s,MS5.8							
TLY	**Talaya**	**25.37**	**3**	P		**P**	**08 36 23.5**	**+3.2**
	comp=Z,969nm,1.1s,mb6.2							
TLY	**Talaya**	**25.37**	**3**	P		**P**	**08 36 22.1**	**+1.8**
	SNR=207							
MNSI	**Mandailing Nat**	**25.46**	**185**	P		**P**	**08 36 20.4**	**-1.0**
	comp=Z,2μmcomp=Z,54nm,0.8s,mb5.1							
MK31	**Makanchi Array**	**25.68**	**328**	*e*P		**P**	**08 36 24.3**	**+1.2**
MKAR	**Makanchi Array**	**25.68**	**328**	P		**P**	**08 36 24.2**	**+1.0**
MKAR				S		**S**	**08 40 56.5**	**+4.2**
MKAR				ScP	ScP		08 43 36.0	+2.0
MKAR	**Makanchi Array**	**25.68**	**328**	P		**P**	**08 36 24.2**	**+1.0**
	comp=Z,139nm,0.6s,mb5.7,baz=136,slow=11,SNR=229							
MKAR				S		**S**	**08 40 56.5**	**+4.2**
	comp=Z,5.8nm,0.9s,baz=107,slow=17,SNR=2.0							
MKAR				ScP	ScP		08 43 36.0	+2.0
	comp=Z,7.1nm,1.1s,baz=101,slow=11,SNR=5.9							
MKAR				PKiKP	PKiKP		08 47 29.8	-3.8
	comp=Z,3.0nm,0.9s,baz=163,slow=8.9,SNR=5.6							
MKAR				LR	LR		08 47 49.3	
	comp=Z,13μm,21.7s,MS5.4,baz=33,slow=40							
MKAR				P3KPbc			09 09 17.4	
	comp=Z,0.3nm,0.7s,baz=12,slow=6.2,SNR=4.2							
MKAR	**Makanchi Array**	**25.68**	**328**	*i* P		**P**	**08 36 24.2**	**+1.1**
MKAR				pmax	pmax			
	comp=Z,139nm,0.6s							
SBUM	**Sibu**	**25.71**	**156**	P		**P**	**08 36 24.4**	**+0.7**
SBUM	**Sibu**	**25.71**	**156**	P		**P**	**08 36 23.9**	**+0.2**
	comp=Z,4μmcomp=Z,213nm,1.7s,mb5.4							
BKNI	**Bangkinang**	**25.84**	**182**	P		**P**	**08 36 25.3**	**+0.4**
	comp=Z,4μmcomp=Z,335nm,1.1s,mb5.8							
IRK	**Irkutsk**	**25.96**	**3**	⇓*i*P		**P**	**08 36 28.3**	**+2.7**
IRK				pmax	pmax			
	comp=Z,3μm,1.8s,mb6.5							
KSM	**Kuching**	**25.98**	**160**	*e*P		**P**	**08 36 26.1**	**-0.1**
	comp=Z,159nm,1.0s,mb5.5							
KSM				LR	LR			
	comp=Z,19μm,19.0s,MS5.6							
KSM	**Kuching**	**25.98**	**160**	P		**P**	**08 36 26.3**	**+0.1**
KSM	**Kuching**	**25.98**	**160**	P		**P**	**08 36 25.9**	**-0.3**
	comp=Z,2μmcomp=Z,172nm,1.3s,mb5.4							
JNU	**Nakatsue**	**26.02**	**68**	*e*P		**P**	**08 36 25.8**	**-0.6**
	comp=Z,192nm,1.2s,mb5.5							
MYLDM	**Lahad Datu**	**26.33**	**140**	P		**P**	**08 36 30.4**	**+1.1**
MYLDM	**Lahad Datu**	**26.33**	**140**	P		**P**	**08 36 30.8**	**+1.4**
	comp=Z,3μmcomp=Z,273nm,1.0s,mb5.7							
ULHL	**Ulahol**	**26.36**	**314**	P		**P**	**08 36 31.7**	**+2.4**
	SNR=47							
AAA	**Alma-Ata**	**26.43**	**316**	*e*P		**P**	**08 36 32.5**	**+2.6**
AAA				*e*S		**S**	**08 41 02.5**	**-1.7**
AAA				pmax	pmax			
	comp=Z,7μm,3.2s							
AAA				smax				
	comp=N,35μm,13.3s							
AAA				MLR	MLR			
	comp=Z,15μm,15.0s,MS5.7							
RGRI	**Rengat**	**26.51**	**179**	P		**P**	**08 36 29.1**	**-1.8**
	comp=Z,578nm,0.4s,mb6.5							
PPI	**Padang Panjang**	**26.65**	**183**	P		**P**	**08 36 33.1**	**+0.9**
	comp=Z,2μmcomp=Z,38nm,0.9s,mb4.9							
TSM	**Tawau**	**26.71**	**142**	P		**P**	**08 36 33.8**	**+1.1**
HIA	**Hailar**	**26.78**	**26**	*e*P		**P**	**08 36 33.3**	**+0.2**
	comp=Z,256nm,0.8s,mb5.8							
HIA	**Hailar**	**26.78**	**26**	*e*P		**P**	**08 36 33.3**	**+0.2**
HIA				pmax	pmax			
	comp=Z,256nm,0.8s							
KZA	**Kyzart**	**26.93**	**313**	P		**P**	**08 36 37.1**	**+2.6**
	SNR=96							
KZA	**Kyzart**	**26.93**	**313**	*e*P		**P**	**08 36 37.2**	**+2.7**
	comp=Z,300nm,1.1s,mb5.7							
POO	**Poona**	**27.02**	**259**	*e*PKP		**P**	**08 36 35.5**	**-0.1**
POO				AMb	AMB		08 36 39.5	
	comp=Z,102nm,0.9s,mb5.4							
SDSI	**Sungai Dareh**	**27.09**	**181**	P		**P**	**08 36 41.0**	**+4.9**
PDSI	**Padang**	**27.10**	**183**	P		**P**	**08 36 34.5**	**-1.7**
	comp=Z,4μmcomp=Z,79nm,0.9s,mb5.2							
TKM2	**Tokmak 2**	**27.10**	**314**	P		**P**	**08 36 39.9**	**+3.9**
	SNR=39							
TKM2	**Tokmak 2**	**27.10**	**314**	*e*P		**P**	**08 36 38.4**	**+2.3**
	comp=Z,181nm,1.2s,mb5.5							
TKM2				LR	LR			
	comp=Z,21μm,20.0s,MS5.7							
TKM2	**Tokmak 2**	**27.10**	**314**	*e*P		**P**	**08 36 38.4**	**+2.4**
TKM2				pmax	pmax			
	comp=Z,181nm,1.2s,mb5.5							
TKM2				MLR	MLR			
	comp=Z,21μm,20.0s,MS5.7							
CIT	**Chita**	**27.15**	**16**	*e*P		**P**	**08 36 37.7**	**+1.3**
CIT				*e*			08 36 50.3	
CIT				*e*			08 37 19.4	
CIT				*e*			08 37 35.0	
CIT				pmax	pmax			
	comp=Z,1μm,2.0s,mb6.1							
KAD	**Karad**	**27.20**	**256**	*e*PKP		**P**	**08 36 37.2**	**+0.1**
KBK	**Karagaybulak**	**27.39**	**313**	P		**P**	**08 36 40.8**	**+2.1**
	SNR=36							
UCH	**Uchtor**	**27.48**	**312**	P		**P**	**08 36 43.4**	**+3.9**
	SNR=8.6							
UCH	**Uchtor**	**27.48**	**312**	*e*P		**P**	**08 36 42.5**	**+3.1**
	comp=Z,44nm,1.0s,mb5.0							
UCH				LR	LR			
	comp=Z,10μm,20.0s,MS5.4							
BHV	**Bhavnagar**	**27.52**	**267**	*e*PKP		**P**	**08 36 41.0**	**+1.0**
SISI	**Saibi**	**27.61**	**186**	P		**P**	**08 36 42.0**	**+1.2**
	comp=Z,4μmcomp=Z,242nm,1.4s,mb5.6							
PALK	**Pallekele**	**27.66**	**231**	P		**P**	**08 36 42.8**	**+1.4**
	comp=Z,1μm,1.0s,mb6.4,SNR=9.0							
PALK	**Pallekele**	**27.66**	**231**	*e*P		**P**	**08 36 41.4**	**0.0**
	comp=Z,187nm,0.9s,mb5.7							
PALK	**Pallekele**	**27.66**	**231**	*e*P		**P**	**08 36 41.4**	**0.0**
PALK				pmax	pmax			
	comp=Z,187nm,0.9s,mb5.7							
PALK	**Pallekele**	**27.66**	**231**	P		**P**	**08 36 44.7**	**+3.3**
	SNR=8.0							
AAK	**Ala-Archa**	**27.68**	**313**	P		**P**	**08 36 43.0**	**+1.8**
	SNR=28							
AAK	**Ala-Archa**	**27.68**	**313**	*e*P		**P**	**08 36 42.6**	**+1.3**
	comp=Z,308nm,1.2s,mb5.8							
AAK				LR	LR			
	comp=Z,24μm,20.0s,MS5.8							
AAK	**Ala-Archa**	**27.68**	**313**	P		**P**	**08 36 43.0**	**+1.7**
	comp=Z,27nm,0.6s,mb5.0,baz=121,slow=5.8,SNR=66							
AAK				ScP	ScP		08 43 43.5	+3.5
	comp=Z,6.3nm,0.7s,baz=202,slow=7.8,SNR=3.5							
AAK				LR	LR		08 49 35.0	
	comp=Z,27μm,21.5s,MS5.8,baz=4.0,slow=40							
AAK	**Ala-Archa**	**27.68**	**313**	*d* *i*P		**P**	**08 36 43.0**	**+1.8**
AAK				pmax	pmax			
	comp=Z,52nm,1.2s,mb5.0							
AAK	**Ala-Archa**	**27.68**	**313**	P		**P**	**08 36 43.3**	**+2.1**
	comp=Z,1μm,1.1s,mb6.4,SNR=54							
AAK	**Ala-Archa**	**27.68**	**313**	P		**P**	**08 36 43.2**	**+2.0**
	comp=Z,1μmcomp=Z,70nm,1.4s,mb5.1							
AAK	**Ala-Archa**	**27.68**	**313**	P		**P**	**08 36 43.9**	**+2.6**
	SNR=170							
CHMS	**Chumysh**	**27.68**	**314**	P		**P**	**08 36 44.2**	**+2.9**
	SNR=8.7							
FRU	**Bishkek**	**27.69**	**313**	*e*P		**P**	**08 36 43.0**	**+1.6**
FRU				*i*			08 36 47.0	
FRU				pmax	pmax		

comp=Z,9µm,19.9s,MS5.4,baz=340,slow=35
DAV Davao City (W) 29.57 126⇑ *e*P **P 08 37 00.1 +1.8**
VLA Vladivostok 29.61 48⇓ *i*P **P 08 36 56.4 -2.0**
VLA *i* 08 37 51.5
VLA *e* 08 40 00.7
VLA *i* S **S 08 41 50.0 -4.4**
VLA pmax pmax
comp=Z,139nm,1.5s,mb5.5
KSI Kapahiang 29.79 179 P **P 08 36 59.9 -0.3**
comp=Z,370nm,0.9s,mb6.1
KURK Kurchatov 30.18 330 P **P 08 37 04.7 +1.3**
comp=Z,1µm,1.2s,mb6.5,SNR=69
KURK Kurchatov 30.18 330 *e*P **P 08 37 04.1 +0.7**
comp=Z,3µm,2.7s,mb6.6
KURK LR LR
comp=Z,17µm,20.0s,MS5.7
KURK Kurchatov 30.18 330 S **S 08 42 08.9 +5.7**
comp=Z,1.3nm,0.3s,baz=132,slow=51,SNR=2.0
KURK ScP ScP 08 43 51.0 +3.2
comp=Z,6.1nm,0.8s,baz=144,slow=3.0,SNR=4.3
KURK LR LR 08 49 03.2
comp=Z,8µm,20.8s,MS5.3,baz=125,slow=36
KURK P3KPbc 09 08 59.0
comp=Z,2.1nm,0.8s,baz=313,slow=4.8,SNR=4.0
KURK Kurchatov 30.18 330 *d i*P **P 08 37 04.1 +0.7**
KURK pmax pmax
comp=Z,115nm,0.8s,mb5.7
KURK Kurchatov 30.18 330 P **P 08 37 04.3 +1.0**
SNR=170
ZAA0 Zalesovo Array 30.37 340 *e*P **P 08 37 05.3 +0.2**
ZALV Zalesovo Beam 30.37 340 P **P 08 37 05.1 +0.1**
comp=Z,44nm,0.8s,mb5.3,baz=150,slow=10.0,SNR=92
ZALV LR LR 08 50 01.5
comp=Z,9µm,19.9s,MS5.4,baz=149,slow=38
ZALV Zalesovo Beam 30.37 340 P **P 08 37 05.1 +0.1**
ZALV pmax pmax
comp=Z,44nm,0.8s,mb5.2
ZALV MLR MLR
comp=Z,9µm,19.9s,MS5.4
KK31 Karatay Array 30.53 311 *i* P **P 08 37 07.1 +0.5**
KK31 Karatay Array 30.53 311 *i* P **P 08 37 07.0 +0.4**
KK31 pmax pmax
comp=Z,52nm,1.2s,mb5.2
KKAR Karatay Array 30.53 311 *e*P **P 08 37 06.9 +0.3**
comp=Z,0.3nm,1.0s
MDSI Maura Dua 30.69 176 P **P 08 37 07.6 -0.6**
comp=Z,2µmcomp=Z,100nm,1.0s,mb5.6
KLSI 30.94 174 P **P 08 37 10.4 0.0**
comp=Z,6µmcomp=Z,245nm,1.9s,mb5.7
LWLI Liwa 31.21 176 P **P 08 37 13.3 +0.5**
comp=Z,172nm,0.9s,mb5.9
NVS Novosibirsk 31.62 339⇑ *i*P **P 08 37 14.7 -1.4**
NVS *i* PPP 08 38 34.0
NVS pmax pmax
comp=N,164nm,2.1s
NVS pmax pmax
comp=Z,232nm,2.1s,mb5.6
NVS pmax pmax
comp=E,135nm,2.4s
MRSI Marisa 32.13 140 P **P 08 37 27.0 +6.1**
RBSI Rajabasa 32.18 173 P **P 08 37 22.6 +1.3**
comp=E,2µmcomp=E,119nm,1.1s,mb5.7
MAJO Matsushiro 32.46 63 *e*P **P 08 37 21.8 -1.8**
comp=E,40nm,1.0s,mb5.2
MAJO LR LR
comp=Z,16µm,19.0s,MS5.7
MAJO Matsushiro 32.46 63 *e*P **P 08 37 21.8 -1.8**
MAJO pmax pmax
comp=Z,40nm,1.0s,mb5.2
MAJO MLR MLR
comp=Z,16µm,19.0s,MS5.7
MAT Matsushiro 32.46 63 P **P 08 37 21.3 -2.3**
MAT S **S 08 42 38.0 -1.1**
MJAR Matsushiro Arr 32.46 63 P **P 08 37 22.1 -1.6**
comp=Z,11nm,0.9s,mb4.7,baz=270,slow=7.8,SNR=15
MJAR PcP PcP 08 40 16.0 +5.2
comp=Z,8.3nm,0.8s,baz=263,slow=2.8,SNR=5.5
MJAR ScP ScP 08 44 01.4 +5.7
comp=Z,4.2nm,0.9s,baz=267,slow=4.9,SNR=4.6
MJAR LR LR 08 51 57.2
comp=Z,14µm,18.4s,MS5.7,baz=245,slow=39
MJAR Matsushiro Arr 32.46 63 P **P 08 37 22.1 -1.5**
MJAR 08 40 16.0
MJAR MLR MLR
comp=Z,14µm,18.4s
KBKI Kotabaru 32.51 153 P **P 08 37 26.2 +1.9**
comp=Z,2µmcomp=Z,70nm,1.5s,mb5.4
KLR Kul'dur 32.52 37 *e*P **P 08 37 20.0 -4.0**
KLR *e*S **S 08 42 34.5 -5.3**
KLR MLR MLR
comp=E,23µm,10.0s
KLR MLR MLR
comp=Z,36µm,10.0s,MS6.4
CGJI Cibinong 32.93 173 P **P 08 37 35.5 +7.6**
DBJI Dramaga 33.00 171 P **P 08 37 30.3 +1.8**
comp=Z,6µmcomp=Z,148nm,1.6s,mb5.7
MNI Manado 33.14 135 P **P 08 37 31.7 +1.9**
comp=Z,5µmcomp=Z,513nm,0.9s,mb6.5
KMSI Cibinong 33.27 137 P **P 08 37 35.0 +4.1**
comp=Z,9µmcomp=Z,1µm,0.8s,mb6.9
LEM Lembang 33.40 170 P **P 08 37 34.6 +2.6**
comp=Z,4µmcomp=Z,176nm,0.9s,mb6.0
JHJ Hachijo jima 2 33.47 69 LR LR 08 53 25.0
comp=Z,9µm,18.8s,MS5.5,baz=131,slow=40
LUWI Luwuk 33.84 140 P **P 08 37 36.3 +0.4**
comp=Z,5µmcomp=Z,535nm,0.9s,mb6.5
TTSI Tana Toraja 33.94 147 P **P 08 37 37.3 +0.5**
comp=Z,2µmcomp=Z,219nm,1.2s,mb6.0
HABR Khabarovsk 33.99 41*c i*P **P 08 37 36.8 -0.1**
HABR *e**PP pP 08 37 47.0 +9.4
HABR *e**SP sP 08 37 51.2 +13
HABR *e* 08 38 51.1
HABR *e*PPP 08 39 03.0
HABR 08 40 14.8
HABR *e*S **S 08 43 00.0 -2.7**
HABR *e**SS sS 08 43 17.0 +13
HABR *e*SS SS 08 45 09.3 -20
HABR *e*SSS 08 45 25.7
HABR *e* 08 47 58.6
HABR pmax pmax
comp=Z,809nm,3.8s
HABR pmax pmax
comp=N,53nm,1.2s
HABR pmax pmax
comp=Z,228nm,1.2s,mb6.0
HABR pmax pmax
comp=E,152nm,2.0s
HABR MLR MLR
comp=N,11µm,10.0s,MS6.1
HABR MLR MLR
comp=E,16µm,11.0s,MS6.1
HABR MLR MLR
comp=Z,18µm,10.0s,MS6.1
BJII Banjamegara 34.29 166 P **P 08 37 41.5 +1.8**
comp=Z,5µmcomp=Z,256nm,1.2s,mb6.0
CLNS Chul'man 34.68 22 *i* P **P 08 37 43.5 +0.8**
CLNS *e**PP pP 08 37 53.8 +10
CLNS *e* 08 38 53.6
CLNS *e*PPP 08 39 11.7
CLNS *e* 08 40 15.2
CLNS *e*S **S 08 43 10.2 -2.8**
CLNS *e*SSS 08 45 46.0
CLNS pmax pmax
comp=N,18nm,1.1s
CLNS pmax pmax
comp=E,23nm,1.0s
CLNS pmax pmax
comp=Z,71nm,1.3s,mb5.4
CLNS pmax pmax
comp=E,39nm,1.2s
CLNS pmax pmax
comp=N,38nm,1.2s
CLNS pmax pmax
comp=Z,17nm,1.0s,mb4.9
CLNS smax
comp=N,269nm,11.7s
CLNS smax
comp=E,317nm,11.9s
CLNS MLR MLR
comp=E,12µm,11.0s,MS6.1
CLNS MLR MLR
comp=N,14µm,12.0s,MS6.1
CLNS MLR MLR
comp=Z,26µm,16.0s,MS6.1
SPSI Sidrap Palu 34.72 147 P **P 08 37 43.8 +0.3**
comp=Z,3µmcomp=Z,278nm,1.1s,mb6.1
NGJI Ngawi 34.74 163 P **P 08 37 47.3 +3.7**
comp=Z,4µmcomp=Z,142nm,1.0s,mb5.9
UGM Wanagama 35.03 165 P **P 08 37 54.1 +7.9**
VOSK Vostochnaya 35.09 327 P **P 08 37 47.2 +0.9**
VOSK pmax pmax
comp=Z,70nm,0.9s,mb5.6
KMMI Kalianget 35.17 159 P **P 08 37 50.0 +2.6**
comp=Z,3µmcomp=Z,135nm,1.1s,mb5.8
SJI Sawahan 35.17 163 P **P 08 37 48.3 +0.9**
comp=Z,6µmcomp=Z,386nm,1.6s,mb6.1
TNTI Ternate 35.30 132 P **P 08 37 48.7 +0.2**
comp=Z,216nm,1.1s,mb6.0
PWJI Pagerwojo 35.46 163 P **P 08 37 50.5 +0.7**
comp=Z,2µmcomp=Z,122nm,1.4s,mb5.7
BVAR Borovoye Array 35.55 327 PcP PcP 08 40 18.3 -1.0
comp=Z,14nm,0.6s,baz=146,slow=2.1,SNR=7.0
BVAR ScP ScP 08 44 09.5 +3.2
comp=Z,12nm,1.0s,baz=101,slow=3.2,SNR=4.8
BRVK Borovoye 35.62 327 P **P 08 37 51.7 +0.8**
comp=Z,980nm,0.8s,mb6.8,SNR=31
BRVK Borovoye 35.62 327 *e*P **P 08 37 51.7 +0.8**
comp=Z,140nm,0.9s,mb5.9
BRVK LR LR
comp=Z,10µm,22.0s,MS5.5
BRVK Borovoye 35.62 327*d i*P **P 08 37 51.6 +0.7**
BRVK pmax pmax
comp=Z,218nm,1.2s,mb6.0
BRVK Borovoye 35.62 327 P **P 08 37 51.9 +1.0**
SNR=85
KRKI Karangkates 35.76 162 P **P 08 37 54.8 +2.4**
comp=Z,532nm,0.8s,mb6.5
CBIJ Chichi jima 35.90 79 LR LR 08 51 32.0
comp=Z,8µm,21.4s,MS5.5,baz=263,slow=35
BKSI Bulukumba 36.07 148 P **P 08 37 54.4 -0.7**
comp=Z,2µmcomp=Z,114nm,0.8s,mb5.9
GMJI Gumukmas 36.16 160 P **P 08 37 56.5 +0.7**
comp=Z,3µmcomp=Z,124nm,2.1s,mb5.5
KDI Kendari 36.16 143 P **P 08 37 56.2 +0.3**
comp=Z,2µmcomp=Z,94nm,0.9s,mb5.7
LBMI Labuha 36.44 133 P **P 08 38 01.8 +3.5**
comp=Z,2µmcomp=Z,164nm,0.9s,mb6.0
SRBI Singaraja 36.55 157 P **P 08 38 05.5 +6.3**
JAGI Jajag, Banyuwa 36.56 159 P **P 08 38 01.7 +2.4**
comp=Z,2µmcomp=Z,90nm,1.6s,mb5.3
NBBI Negara 36.62 159 P **P 08 38 07.9 +8.1**
IMYA Miami 36.83 296 *e*P **P 08 38 01.5 0.0**
ERM Erimo 37.18 54 P **P 08 38 03.5 -0.9**
comp=Z,557nm,0.9s,mb6.4,SNR=24
ERM Erimo 37.18 54 *e*P **P 08 38 03.1 -1.3**
comp=Z,103nm,0.9s,mb5.7
ERM LR LR
comp=Z,11µm,19.0s,MS5.7
ERM Erimo 37.18 54*d i*P **P 08 38 03.8 -0.6**
ASAJ Asahikawa 37.26 51 *e*P **P 08 38 03.9 -1.1**
comp=Z,70nm,0.9s,mb5.5
ISRO Mashad 37.34 296 *e*P **P 08 38 05.2 -0.6**
YSS Yuzh-Sakhalins 38.17 46 *e*P **P 08 38 12.2 -0.5**
comp=Z,101nm,1.0s,mb5.5
YSS LR LR
comp=Z,3µm,22.0s,MS5.1
YSS Yuzh-Sakhalins 38.17 46*ce*P **P 08 38 11.5 -1.2**
YSS *e* 08 39 44.0
YSS *e*PPP 08 40 02.5
YSS *e* 08 40 26.0
YSS *e*S **S 08 43 58.0 -8.7**
YSS pmax pmax
comp=Z,70nm,1.0s,mb5.3
YSS pmax pmax
comp=E,2µm,6.0s
YSS pmax pmax
comp=Z,500nm,6.0s
YSS MLR MLR
comp=Z,20µm,14.0s,MS6.1
YSS MLR MLR
comp=N,6µm,13.0s,MS6.2
YSS MLR MLR
comp=E,23µm,15.0s,MS6.2
NLAI Namlea 38.18 137 P **P 08 38 19.9 +6.9**
ABKT Ailbek 38.52 299 P **P 08 38 16.6 +0.8**
comp=E,547nm,0.7s,mb6.4,SNR=9.1
COCO West Island 38.58 188 PFAKE
COCO LR LR 08 38 30.0 +14
comp=Z,6µm,21.0s,MS5.4
AB31 Akbulak array 39.61 317 *i* P **P 08 38 25.2 +0.5**
AB31 Akbulak array 39.61 317 P **P 08 38 25.1 +0.4**
AB31 pmax pmax
comp=Z,141nm,1.2s,mb5.6
ABKAR Akbulak array 39.61 317 *e*P **P 08 38 25.2 +0.5**
comp=Z,13nm,0.4s,mb5.0
SMDO Samad 39.83 275 P **P 08 38 27.3 +0.4**
SNR=18
MMRI Maumere 39.96 148 P **P 08 38 27.2 -0.8**
comp=Z,7µmcomp=Z,602nm,1.7s,mb6.0
WSI Waingapu 39.99 151 P **P 08 38 26.8 -1.4**
comp=Z,963nm,0.9s,mb6.5
YAK Yakutsk 40.26 20 *e*P **P 08 38 29.1 -0.8**
comp=Z,246nm,1.0s,mb5.9
YAK LR LR
comp=Z,13µm,21.0s,MS5.8
YAK Yakutsk 40.26 20 *e*P **P 08 38 28.9 -1.0**
YAK *e**PP pP 08 38 40.3 +10
YAK *e* 08 40 01.3
YAK *e*PPP 08 40 28.4
YAK *e* 08 40 33.2
YAK *e*S **S 08 44 35.3 -2.4**
YAK *e*SSS 08 47 59.6
YAK *e* 08 48 30.2
YAK pmax pmax
comp=Z,122nm,1.1s,mb5.5
YAK pmax pmax
comp=N,47nm,1.2s
YAK pmax pmax
comp=E,44nm,1.3s
YAK pmax pmax
comp=Z,281nm,3.2s
YAK pmax pmax
comp=N,192nm,2.8s
YAK pmax pmax
comp=E,177nm,2.8s
YAK smax
comp=N,662nm,3.4s
YAK smax
comp=E,585nm,2.3s
YAK MLR MLR
comp=Z,17µm,12.0s,MS6.1
YAK MLR MLR
comp=E,10µm,12.0s,MS6.0
YAK MLR MLR
comp=N,8µm,12.0s,MS6.0
HOQ Hoqain 40.37 276 P **P 08 38 32.1 +0.7**
SNR=12
IBAF Bafgh 40.65 289 *e*P **P 08 38 32.6 -1.0**
BSY Bisya 40.67 275 P **P 08 38 34.4 +0.6**
SNR=16
HATD Hatta, Dubai 41.14 278 P **P 08 38 43.5 +5.7**
SNR=5.6
AKTK Aktyubinsk 41.18 318 P **P 08 38 37.1 -0.5**
AKTK LR LR 08 56 41.2
AKTO Aktyubinsk 41.18 318 P **P 08 38 37.1 -0.5**
comp=N,19nm,0.9s,mb4.7,baz=112,slow=7.7,SNR=6.7
AKTO LR LR 08 56 41.2
comp=N,10µm,19.5s,MS5.7,baz=294,slow=38
AKTO Aktyubinsk 41.18 318 P **P 08 38 37.2 -0.5**
AKTO pmax pmax
comp=Z,19nm,0.9s,mb4.7
AKTO MLR MLR
comp=Z,10µm,19.5s,MS5.7
ASHO Ashiyiah 41.24 278 P **P 08 38 41.0 +2.5**
SNR=13
IANJ Anjilo 41.83 295 *e*P **P 08 38 42.4 -0.9**
GUMO Guam 42.14 99 *e*P **P 08 38 46.6 +0.6**
comp=Z,98nm,0.9s,mb5.4
GUMO LR LR
comp=Z,7µm,22.0s,MS5.5
GUMO Guam 42.14 99 LR LR 08 53 25.7
comp=Z,6µm,21.8s,MS5.5,baz=301,slow=32
GUMO Guam 42.14 99 *e*P **P 08 38 46.6 +0.6**
GUMO pmax pmax
comp=Z,98nm,0.9s,mb5.4
GUMO MLR MLR
comp=Z,7µm,22.0s,MS5.5
ISAD Sadrabad 42.22 289 *e*P **P 08 38 45.0 -1.5**
SVE Sverdlovsk 42.34 327⇑ *e*P **P 08 38 48.1 +1.0**
SVE *e*S **S 08 45 10.9 +2.2**
SVE *e*SS SS 08 48 15.3 -1.7
SVE pmax pmax
comp=Z,272nm,0.9s,mb5.9
SVE MLR MLR
comp=Z,6µm,16.0s,MS5.6
IFIR Firoozkooh 42.77 295 *e*P **P 08 38 50.3 -0.7**
IPAR Pars 42.99 286 *e*P **P 08 38 52.1 -0.7**
ISRV Sarvestan 43.00 286 *e*P **P 08 38 51.3 -1.5**
ARU Arti 43.18 326 *e*P **P 08 38 54.1 +0.2**
comp=Z,279nm,1.0s,mb6.0
ARU LR LR
comp=Z,10µm,21.0s,MS5.7
ARU Arti 43.18 326*d i*P **P 08 38 54.3 +0.4**
ARU *e* 08 40 36.2
ARU *e* 08 40 43.6
ARU *e*PPP 08 41 11.0
ARU S **S 08 45 21.0 -0.1**
ARU SS SS 08 48 24.5 -9.0
ARU 08 48 47.6
ARU SSS 08 49 18.9
ARU pmax pmax
comp=Z,355nm,1.2s,mb6.0
ARU MLR MLR
comp=Z,10µm,20.0s,MS5.7
ARU Arti 43.18 326 P **P 08 38 54.0 +0.1**
comp=Z,2µm,1.1s,mb6.7,SNR=70
IZEF Zefreh 43.28 291 *e*P **P 08 38 55.3 +0.2**
IDMV Damavand 43.37 295 *e*P **P 08 38 54.8 -0.9**
IGAR Gharneh 43.56 290 *e*P **P 08 38 56.2 -1.2**
TLE Tual 43.62 132 P **P 08 38 58.9 +1.0**
comp=Z,231nm,0.8s,mb5.9
IVRN Varamin 43.64 294 *e*P **P 08 38 56.0 -2.0**
IVRN *e*P pP 08 38 57.1 -1.6
IKLH Kolahrood 43.87 292 *e*P **P 08 39 00.2 +0.4**
DGAR Diego Garcia 44.05 225 PFAKE 08 39 10.0 +8.6
DGAR LR LR
comp=Z,5µm,22.0s,MS5.4
IR3 Iran Long-Peri 44.19 295 *e*P **P 08 39 00.1 -2.3**
IPIR Pirpir 44.50 291 *e*P **P 08 39 05.8 +0.9**
SOKR Solikamsk 45.42 330*c i*P **P 08 39 14.0 +2.2**
SOKR S **S 08 45 54.7 +1.1**
SOKR pmax pmax
comp=Z,340nm,1.4s,mb6.0
SOKR MLR MLR
comp=Z,7µm,23.0s,MS5.5
ISRB Sarab 46.79 298 *e*P **P 08 39 22.8 -0.1**
MAK Makhachkala 46.92 305 *e*P **P 08 39 25.1 +1.2**
MAK *e* 08 40 54.3
MAK *e* 08 41 19.4
MAK *e*S **S 08 46 13.4 -2.3**
MAK *e* 08 49 17.5
MAK *e*SSS 08 50 46.6
MAK pmax pmax
comp=Z,325nm,1.7s,mb6.0
MAK MLR MLR
comp=Z,11µm,17.0s,MS5.9
QRN Al-Qurain 47.59 286 *e*P **P 08 39 28.0 -1.3**
QRN AMb AMB 08 39 31.3
comp=Z,95nm,0.6s,mb6.0
SKR Severo-Kuril's 47.63 44 *e*P **P 08 39 33.0 +3.7**
SKR *e* 08 41 12.0
SKR *e*PPP 08 42 10.0
SKR S **S 08 46 33.0 +7.5**
SKR pmax pmax
comp=N,1µm,12.0s
SKR pmax pmax
comp=Z,1µm,12.0s
SKR pmax pmax
comp=Z,150nm,0.9s,mb6.0
SKR MLR MLR
comp=N,9µm,14.0s,MS6.0
SKR MLR MLR
comp=E,8µm,14.0s,MS6.0
SKR MLR MLR
comp=Z,11µm,14.0s,MS6.0
KBD Kabd 47.70 286 *e*P **P 08 39 29.2 -1.0**
KBD AMb AMB 08 39 33.6
comp=Z,84nm,0.5s,mb6.0
TIXI Tiksi 47.82 11 *e*P **P 08 39 29.2 -1.2**
comp=Z,63nm,0.7s,mb5.8
TIXI LR LR
comp=Z,17µm,19.0s,MS6.0
TIXI Tiksi 47.82 11 *e*P **P 08 39 29.7 -0.7**
TIXI *e* 08 41 22.9
TIXI *e*S **S 08 46 23.7 -4.0**
TIXI *e*SSS 08 50 59.1
TIXI pmax pmax
comp=Z,222nm,1.5s,mb6.0
TIXI pmax pmax
comp=E,38nm,1.3s
TIXI pmax pmax
comp=N,61nm,1.5s
TIXI pmax pmax
comp=Z,357nm,7.0s
TIXI MLR MLR
comp=Z,15µm,15.0s,MS6.1
TIXI MLR MLR
comp=E,6µm,15.0s,MS5.8
TIXI MLR MLR
comp=N,4µm,14.0s,MS5.8
MIB Mutribah 47.90 287 *e*P **P 08 39 30.8 -0.9**
MIB AMb AMB 08 39 39.6
comp=Z,240nm,1.0s,mb6.2
IGHG Ghaleghazi 47.93 294 *e*P **P 08 39 29.4 -2.5**
IDHR Dehrash 48.04 294 *e*P **P 08 39 31.3 -1.4**
IAZR Azarshahr 48.13 298 *e*P **P 08 39 34.1 +0.7**
ISHB Shabestar 48.38 299 *e*P **P 08 39 35.7 +0.4**
DGRG David-gareji 48.48 303 P **P 08 39 36.4 +0.3**
KAKA Kakadu 48.85 139 *e*P **P 08 39 36.7 -2.4**
comp=Z,129nm,0.7s,mb6.1
KAKA Kakadu 48.85 139 *e*P **P 08 39 36.6 -2.6**
comp=Z,362nm,0.7s,mb6.5
KAKA Kakadu 48.85 139 P **P 08 39 37.0 -2.1**
MTA Mtatsminda 48.91 303 P **P 08 39 40.6 +1.2**
TBLG Delisi 48.95 304 *e*P **P 08 39 40.5 +0.8**
TBLG Delisi 48.95 304 P **P 08 39 40.5 +0.8**
GNI Garni 48.98 301 *e*P **P 08 39 42.2 +2.3**
comp=Z,191nm,1.3s,mb6.0
GNI LR LR
comp=Z,4µm,21.0s,MS5.4
GNI Garni 48.98 301 P **P 08 39 39.6 -0.3**
comp=Z,14nm,0.6s,mb5.2,baz=5.8,slow=8.3,SNR=13
GNI LR LR 09 04 02.2
comp=Z,4µm,19.3s,MS5.4,baz=94,slow=41
GNI Garni 48.98 301*d e*P **P 08 39 41.3 +1.4**
GNI pmax pmax
comp=Z,93nm,1.7s
GNI Garni 48.98 301 P **P 08 39 42.5 +2.6**
SNR=21
PETK Petropavlovsk- 49.02 41 P **P 08 39 38.3 -1.7**
comp=Z,25nm,1.0s,mb5.2,baz=186,slow=1.5,SNR=17
PETK LR LR 09 00 07.2
comp=Z,4µm,19.1s,MS5.4,baz=83,slow=36
PETK SKKP 09 05 47.6
comp=Z,0.8nm,0.4s,baz=176,slow=7.3,SNR=4.4
SEY Seymchan 49.21 28⇑ *i*P **P 08 39 40.3 -1.0**
KNA Kununurra 49.30 145 P **P 08 39 41.2 -1.3**
comp=Z,4µmcomp=Z,497nm,0.8s,mb6.6
GOR Gori 49.42 304 P **P 08 39 43.8 +0.5**
ZEI Tsey 49.57 305 *e*P **P 08 39 43.8 -0.6**
ZEI *e* 08 41 41.6
ZEI *e*S **S 08 46 59.1 +6.0**
ZEI *e* 08 49 33.5
ZEI pmax pmax
comp=Z,59nm,0.8s,mb5.7
ZEI MLR MLR
comp=Z,3µm,13.0s,MS5.5
PET Petropavlovsk 49.57 42 *e*P **P 08 39 42.8 -1.4**
comp=Z,74nm,1.0s,mb5.7
PET LR LR
comp=Z,6µm,22.0s,MS5.6
PET Petropavlovsk 49.57 42*ce*P **P 08 39 43.2 -1.0**
PET *e*S **S 08 46 48.3 -4.6**
PET *e*SS SS 08 50 23.5 -1.1
PET pmax pmax
comp=Z,600nm,5.8s
PET pmax pmax
comp=Z,400nm,11.5s
PET pmax pmax
comp=Z,71nm,1.2s,mb5.6
PET MLR MLR
comp=Z,12µm,16.0s,MS6.0
PET MLR MLR
comp=Z,11µm,15.0s
FITZ Fitzroy Crossi 49.81 150 *e*P **P 08 39 44.8 -1.6**
comp=Z,88nm,0.9s,mb5.8
FITZ *e*S **S 08 46 47.8 -9.0**

FITZ **Fitzroy Crossi 49.81 150** P **P** **08 39 45.0 -1.4**
comp=Z,36nm,0.7s,mb5.5,baz=341,slow=5.7,SNR=88
FITZ **Fitzroy Crossi 49.81 150** P **P** **08 39 45.0 -1.4**
comp=Z,188nm,1.3s,mb6.0
BHD **Baghdad 49.87 292** *ex* **P** **08 39 46.0 -0.8**
BHD *i* x x 08 41 41.0
BHD *i* x x 08 46 52.0
GOF Gofitskoye 50.21 308⇑*i*P Px 08 40 01.7
GOF *e*S **S** **08 47 09.4 +7.3**
GOF pmax pmax
comp=Z,190nm,0.8s,mb6.2
MBWA Marble Bar 50.26 158 *e*P **P** **08 39 48.5 -1.2**
MBWA Marble Bar 50.26 158 *e*P **P** **08 39 48.7 -1.0**
comp=Z,367nm,1.0s,mb6.4
MBWA LR LR
comp=Z,6μm,20.0s,MS5.6
MBWA Marble Bar 50.26 158 P **P** **08 39 48.5 -1.2**
SNR=30
KIV Kislovodsk 50.45 306 *e*P **P** **08 39 51.8 +0.7**
comp=Z,130nm,0.9s,mb6.0
KIV LR LR
comp=Z,5μm,19.0s,MS5.5
KIV Kislovodsk 50.45 306κ*e*P **P** **08 39 51.7 +0.7**
KIV *i* 08 39 56.4
KIV *i* S **S** **08 47 05.0 -0.4**
KIV *i* PS 08 47 12.7
KIV *e*SS SS 08 50 29.6 -9.4
KIV pmax pmax
comp=Z,167nm,1.0s,mb6.0
KIV MLR MLR
comp=Z,6μm,15.0s,MS5.8
KIV Kislovodsk 50.45 306 P **P** **08 39 52.6 +1.6**
comp=Z,823nm,1.0s,mb6.7,SNR=15
KIV Kislovodsk 50.45 306 P **P** **08 39 52.0 +1.0**
SNR=34
DDEM Demirkent 51.23 303⇑*i*P **P** **08 39 57.9 +0.9**
VRHR Novokhopersk 51.48 316 *e*P **P** **08 39 58.2 -0.5**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,40nm,0.7s
VRHR pmax pmax
comp=Z,80nm,0.7s,mb5.8
BEST Besiri 51.83 299⇑*i*P **P** **08 40 01.0 -0.5**
SOC Sochi 52.61 306 *e*P **P** **08 40 06.8 -0.4**
SOC *e**PP pP 08 40 15.9 +7.9
SOC *e* 08 41 19.0
SOC *e*S **S** **08 47 32.7 -2.5**
SOC *e**SS sS 08 47 40.5 +4.0
SOC *e* 08 49 52.8
SOC pmax pmax
comp=Z,49nm,0.8s,mb5.5
SOC MLR MLR
comp=Z,6μm,18.0s,MS5.7
VORD Divnogorie 52.94 315 *e*P **P** **08 40 10.2 +0.7**
VORD *e*S **S** **08 47 37.7 -1.8**
VORD *e*SS SS 08 51 21.5 +3.4
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=Z,40nm,0.6s,mb5.5
VORD pmax pmax
comp=E,40nm,0.8s
VORD smax
comp=N,510nm,3.8s
VORD smax
comp=E,450nm,3.8s
VORD smax
comp=Z,310nm,5.2s
VORD MLR MLR
comp=Z,6μm,24.0s,MS5.5
VORD MLR MLR
comp=N,8μm,18.0s
VORD MLR MLR
comp=E,9μm,20.0s
VSR Storozhevoye 53.03 316 *e*P **P** **08 40 09.1 -1.1**
VSR *e*S **S** **08 47 37.6 -3.1**
VSR *e*SS SS 08 51 19.6 0.0
VSR pmax pmax
comp=Z,70nm,0.8s,mb5.6
VSR pmax pmax
comp=N,8.0nm,0.5s
VSR pmax pmax
comp=E,20nm,0.6s
VSR smax
comp=N,480nm,4.2s
VSR smax
comp=Z,80nm,3.0s
VSR smax
comp=E,330nm,3.2s
VSR MLR MLR
comp=Z,3μm,12.0s,MS5.5
VSR MLR MLR
comp=N,5μm,14.0s,MS6.0
VSR MLR MLR
comp=E,7μm,15.0s,MS6.0
KEMA Kemaliye 53.85 301⇑*i*P **P** **08 40 16.2 -0.2**
GRSN GIRESUNGRSN 53.86 303⇑*i*P **P** **08 40 11.7 -4.7**
KLMR Klimovskoe 53.98 328 *e*P **P** **08 40 16.9 -0.1**
KLMR *e* 08 42 19.8
KLMR *i* S **S** **08 47 52.5 -0.8**
KLMR pmax pmax
comp=Z,307nm,1.2s,mb6.1
KLMR pmax pmax
comp=Z,431nm,6.4s
MALT Malatya 54.02 300 *e*P **P** **08 40 17.9 +0.2**
comp=Z,54nm,1.2s,mb5.3
MALT LR LR
comp=Z,4μm,22.0s,MS5.4
MALT Malatya 54.02 300 *e*P **P** **08 40 17.9 +0.3**
MALT pmax pmax
comp=Z,54nm,1.2s,mb5.3
MALT MLR MLR
comp=Z,4μm,22.0s,MS5.4
MALT Malatya 54.02 300 P **P** **08 40 18.9 +1.3**
comp=Z,2μmcomp=Z,40nm,1.4s,mb5.2
MALT Malatya 54.02 300 P PcP 08 41 19.7 -3.1
comp=Z,2μmcomp=Z,40nm,1.4s
ANN Anapa 54.19 308 *e*P **P** **08 40 17.7 -1.1**
ANN *e*PPP 08 43 32.6
ANN *e*S **S** **08 47 54.4 -2.3**
ANN pmax pmax
comp=Z,106nm,0.8s,mb5.8
ANN MLR MLR
comp=Z,7μm,19.0s,MS5.8
MOS Moscow 54.27 321*c i*P **P** **08 40 20.9 +1.7**
MOS *e* 08 42 24.1
MOS *i* S **S** **08 47 57.1 -0.3**
MOS *e* 08 50 07.2
MOS *i* SS SS 08 51 40.7 +1.7
MOS pmax pmax
comp=Z,226nm,1.1s,mb6.0
MOS pmax pmax
comp=Z,500nm,1.6s,mb6.2
AKCD Akcadag 54.41 300⇑*i*P **P** **08 40 21.2 +0.6**
MSEY Mahe Island 54.47 243 *e*P **P** **08 40 20.9 -0.4**
comp=Z,139nm,1.3s,mb5.7
MSEY LR LR
comp=Z,6μm,20.0s,MS5.7
MSEY Mahe Island 54.47 243 *e*P **P** **08 40 20.9 -0.3**
MSEY pmax pmax
comp=Z,139nm,1.3s,mb5.7
MSEY MLR MLR
comp=Z,6μm,20.0s,MS5.7
GZT Gaziantep 54.82 299⇓*i*P **P** **08 40 23.1 -0.4**
OBN Obninsk 54.83 320 *e*P **P** **08 40 24.0 +0.7**
comp=Z,239nm,1.4s,mb6.0
OBN LR LR
comp=Z,9μm,19.0s,MS5.8
OBN Obninsk 54.83 320α*i*P **P** **08 40 24.3 +1.1**
OBN *i* 08 40 33.3
OBN *i* 08 40 39.7
OBN *i* 08 42 33.8
OBN *i* PPP 08 43 46.1
OBN *i* S **S** **08 48 04.2 -0.7**
OBN *i* 08 48 09.9
OBN pmax pmax
comp=Z,231nm,1.7s,mb5.9
OBN MLR MLR
comp=Z,4μm,15.0s,MS5.7
OBN Obninsk 54.83 320 P **P** **08 40 24.9 +1.7**
comp=Z,678nm,1.0s,mb6.6,SNR=14
WRA Warramunga Arr 55.73 142 P **P** **08 40 28.9 -1.3**
WRA LR LR 09 06 29.8
WRA P'P' 09 10 27.4
WRA ⇑*e* 09 10 45.5
WRA Warramunga Arr 55.73 142 P **P** **08 40 28.9 -1.3**
comp=Z,73nm,0.6s,mb5.9,baz=331,slow=8.0,SNR=241
WRA LR LR 09 06 29.8
comp=Z,2μm,21.1s,MS5.1,baz=310,slow=38
WRA PKPPKP 09 10 27.4
comp=Z,1.4nm,1.0s,baz=168,slow=2.4,SNR=4.9
WRA PKP2bc 09 10 45.5
comp=Z,2.4nm,1.0s,baz=134,slow=2.0,SNR=5.6
WRA P4KPbc 09 17 49.6
comp=Z,0.5nm,0.7s,baz=328,slow=4.3,SNR=5.7
WB2 Warramunga Arr 55.73 142 *e*P **P** **08 40 29.1 -1.1**
ANDN Andirin 55.75 299⇑*i*P **P** **08 40 30.3 +0.1**
COBT Iskenderun 55.98 298⇑*i*P **P** **08 40 31.2 -0.7**
YAYL Yayladag 56.18 297⇑*i*P **P** **08 40 32.6 -0.8**
ASF Jabal al Asfar 56.27 292 P **P** **08 40 34.0 0.0**
ASF LR LR 09 08 02.9
ASF Jabal al Asfar 56.27 292 P **P** **08 40 34.0 0.0**
comp=Z,18nm,0.8s,mb5.2,baz=312,slow=5.8,SNR=36
ASF LR LR 09 08 02.9
comp=Z,4μm,18.8s,MS5.5,baz=127,slow=40
ASF Jabal al Asfar 56.27 292 P **P** **08 40 34.0 0.0**
ASF pmax pmax
comp=Z,18nm,0.8s
ASF MLR MLR
comp=Z,4μm,18.8s
BILL Bilibino 56.33 24 *e*P **P** **08 40 33.0 -0.9**
comp=Z,68nm,0.9s,mb5.7
BILL LR LR
comp=Z,16μm,20.0s,MS6.1
BILL Bilibino 56.33 24κ*e*P **P** **08 40 32.8 -1.1**
BILL *i**SP sP 08 40 38.0 +3.1
BILL *i* S **S** **08 48 22.6 -2.0**
BILL *e*PS 08 48 38.7
BILL *e*SS SS 08 52 14.8 +3.9
BILL *e*SSS 08 54 24.5
BILL pmax pmax
comp=Z,70nm,1.2s,mb5.6
BILL MLR MLR
comp=Z,18μm,16.0s,MS6.2
BOYT Boyabat 56.33 304⇑*i*P **P** **08 40 33.4 -0.9**
YURE YUREGIR 56.43 298⇑*i*P **P** **08 40 34.6 -0.5**
PMG Port Moresby 56.51 123 *e*P **P** **08 40 36.3 +0.4**
comp=Z,66nm,0.8s,mb5.7
PMG LR LR
comp=Z,2μm,20.0s,MS5.2
PMG Port Moresby 56.51 123*ce*P **P** **08 40 36.9 +1.0**
PMG pmax pmax
comp=Z,61nm,0.7s
PMG Port Moresby 56.51 123 P **P** **08 40 40.7 +4.8**
CTKT Corum 56.52 303⇑*i*P **P** **08 40 35.2 -0.5**
SIM Simferopol' 56.53 308*ce*P **P** **08 40 35.8 +0.1**
SIM *e*S **S** **08 48 29.0 +1.0**
SIM pmax pmax
comp=Z,75nm,0.8s,mb5.8
COEN Coen 56.69 130 *e*P **P** **08 40 39.0 +2.0**
comp=Z,347nm,0.8s,mb6.4
COEN Coen 56.69 130 P **P** **08 40 41.6 +4.5**
AVNT Avonos 56.73 301⇑*i*P **P** **08 40 37.2 +0.1**
CDAG Cicekdag 56.97 302⇑*i*P **P** **08 40 37.3 -1.6**
GULE Gulek 57.02 299⇑*i*P **P** **08 40 39.9 +0.6**
ILGA Ilgaz 57.27 303⇑*i*P **P** **08 41 01.0 +0.1**
MMAI Mount Meron Ar 57.33 294 P **P** **08 40 41.3 -0.2**
comp=Z,12nm,0.8s,mb5.0,baz=80,slow=9.4,SNR=16
MMAI LR LR 09 06 42.8
comp=Z,5μm,20.6s,MS5.6,baz=95,slow=38
LVZ Lovozero 57.36 336⇓*i*P **P** **08 40 41.7 +0.5**
LVZ LR LR
comp=Z,8μm,20.0s,MS5.8
LVZ Lovozero 57.36 336⇓*i*P **P** **08 40 41.6 +0.4**
LVZ pmax pmax
comp=Z,280nm,2.5s,mb5.8
BR131 Keskin Array S 57.52 302 *e*P **P** **08 40 42.1 -0.6**
comp=Z,17nm,0.7s,mb5.2
BR131 LR LR
comp=Z,2μm,22.0s,MS5.3
BRTR Keskin Array B 57.52 302 P **P** **08 40 42.0 -0.7**
comp=Z,22nm,0.8s,mb5.3,baz=122,slow=7.2,SNR=81
BRTR LR LR 09 12 11.6
comp=Z,2μm,19.6s,MS5.2,baz=266,slow=43
BRTR Keskin Array B 57.52 302 *i* P **P** **08 40 42.0 -0.8**
BRTR pmax pmax
comp=Z,23nm,0.8s
APA Apatity 57.77 335⇑*i*P **P** **08 40 45.2 +1.1**
APA *i* S **S** **08 48 42.0 -1.6**
APA *i* SS SS 08 52 39.0 +5.5
APA pmax pmax
comp=Z,54nm,1.2s,mb5.5
APA pmax pmax
comp=Z,2μm,3.9s
APA MLR MLR
comp=Z,9μm,16.0s,MS6.0
JOF Joensuu 58.09 329 *e*P **P** **08 40 46.0 -0.4**
JOF pmax pmax
comp=Z,58nm,0.6s,mb5.8
JOF Joensuu 58.09 329 *ep* **P** **08 40 46.0 -0.4**
comp=Z,58nm,0.6s,mb5.8
PUL Pulkovo 58.42 326⇓*e*P **P** **08 40 50.7 +2.0**
PUL Pulkovo 58.42 326⇓*e*P **P** **08 40 50.6 +1.9**
PUL pmax pmax
comp=Z,104nm,0.4s,mb6.2
EIL Elat 58.46 290 P **P** **08 40 48.1 -1.5**
comp=Z,43nm,0.8s,mb5.5,baz=345,slow=2.3,SNR=26
EIL LR LR 09 08 56.0
comp=Z,4μm,18.2s,MS5.6,baz=83,slow=39
ASAR Alice Springs 58.54 145 P **P** **08 40 49.1 -0.8**
ASAR P'P' 09 10 20.1
ASAR ⇑*e* 09 10 38.0
ASAR Alice Springs 58.54 145 P **P** **08 40 49.1 -0.8**
comp=Z,37nm,0.8s,mb5.5,baz=326,slow=6.6,SNR=193
ASAR PKPPKP 09 10 20.1
comp=Z,1.1nm,0.9s,baz=180,slow=3.0,SNR=6.8
ASAR PKP2bc 09 10 38.0
comp=Z,1.8nm,0.9s,baz=149,slow=2.9,SNR=5.1
ASAR P4KPbc 09 18 00.3
comp=Z,0.4nm,0.9s,baz=340,slow=5.7,SNR=3.2
CSS Prodhromos 58.61 296 *e*P **P** **08 40 49.5 -1.0**
comp=Z,116nm,1.0s,mb5.9
CSS LR LR
comp=Z,5μm,19.0s,MS5.7
ERMK Ermenek 58.61 298⇑*i*P **P** **08 40 50.1 -0.4**
KDHN Kadinhani 58.88 301⇑*i*P **P** **08 40 51.3 -1.0**
SMY Shemya 58.88 43 *e*P **P** **08 40 51.5 -0.6**
comp=Z,176nm,0.8s,mb6.1
SMY Shemya 58.88 43 *e*P **P** **08 40 51.5 -0.6**
SMY pmax pmax
comp=Z,176nm,0.8s,mb6.1
GAZI Gazipasa 59.16 298⇑*i*P **P** **08 40 52.1 -2.2**
AKASG Malin Array Be 59.32 315 P **P** **08 40 53.6 -1.5**
comp=Z,14nm,0.5s,mb5.3,baz=74,slow=6.9,SNR=44
AKASG LR LR 09 07 19.6
comp=Z,6μm,18.8s,MS5.7,baz=105,slow=37
AKASG Malin Array Be 59.32 315 P **P** **08 40 53.7 -1.5**
AKASG pmax pmax
comp=Z,15nm,0.5s
AKASG MLR MLR
comp=Z,6μm,18.8s
AKBB Malin Array Si 59.32 315 *e*P **P** **08 40 53.9 -1.2**
KIEV Kiev 59.33 315 *e*P **P** **08 40 53.7 -1.5**
comp=Z,28nm,0.6s,mb5.5
KIEV LR LR
comp=Z,6μm,20.0s,MS5.7
KIEV Kiev 59.33 315 *e*P **P** **08 40 53.7 -1.6**
KIEV pmax pmax
comp=Z,28nm,0.6s,mb5.5
KIEV MLR MLR
comp=Z,6μm,20.0s,MS5.7
HENT Hendek 59.41 304⇑*i*P **P** **08 40 54.7 -1.3**
KLBR Kellerberrin 59.53 164 *e*P **P** **08 40 57.2 +0.5**
comp=Z,91nm,0.8s,mb5.9
WAKE Wake Island 59.59 82 PFAKE 08 41 10.0 +12
WAKE LR LR
comp=Z,4μm,21.0s,MS5.6
BOLV Bolvadin 59.74 301⇑*i*P **P** **08 40 58.2 -0.1**
MICGM Minsk 59.85 320 *e*P **P** **08 40 59.0 +0.2**
MNK Minsk 59.88 320 *e*P **P** **08 40 59.0 0.0**
MNK *e* 08 43 14.0
MNK *e*PPP 08 44 40.0
MNK *e*S **S** **08 49 12.0 +0.6**
MNK pmax pmax
comp=Z,250nm,1.0s,mb6.2
MNK MLR MLR
comp=Z,19μm,20.0s,MS6.2
KIS Kishinev 59.99 311 *e*P **P** **08 40 59.0 -0.8**
comp=Z,500nm,3.0s
KIS Kishinev 59.99 311 *e*P **P** **08 40 59.0 -0.8**
KIS *e*PPP 08 44 40.0
KIS *e*S **S** **08 49 12.0 -1.0**
KIS *e* 08 50 50.0
KIS pmax pmax
comp=Z,500nm,3.0s
KIS pmax pmax
comp=Z,400nm,3.0s
KIS MLR MLR
comp=E,4μm,20.0s,MS5.8
KIS MLR MLR
comp=Z,8μm,20.0s,MS5.8
KIS MLR MLR
comp=N,6μm,17.0s,MS5.8
KIS MLR MLR
comp=Z,9μm,20.0s
TLCR 60.24 309⇓*i*P **P** **08 41 00.4 -1.2**
TLCR 60.24 309⇓*i*P **P** **08 41 00.4 -1.2**
VSU Vasula 60.27 324*c i*P **P** **08 41 02.9 +1.3**
VSU pmax pmax
comp=Z,256nm,1.0s,mb6.2
KEV Kevo 60.35 337 *e*P **P** **08 41 02.5 +0.5**
comp=Z,19nm,0.9s,mb5.1
KEV LR LR
comp=Z,4μm,19.0s,MS5.6
KEV Kevo 60.35 337 *e*P **P** **08 41 01.1 -0.8**
KEV pmax pmax
comp=Z,35nm,0.7s,mb5.5
KEV Kevo 60.35 337 *ep* **P** **08 41 01.1 -0.8**
comp=Z,35nm,0.7s,mb5.5
KAF Kangasniemi 60.39 328 *e*P **P** **08 41 01.1 -1.2**
KAF pmax pmax
comp=Z,25nm,0.6s,mb5.4
KAF Kangasniemi 60.39 328 *ep* **P** **08 41 01.1 -1.2**
comp=Z,25nm,0.6s,mb5.4
IDID Didziasalis 60.45 321 *e*P **P** **08 41 03.1 +0.3**
IDID AMB AMB 08 41 05.1
comp=Z,41nm,0.9s,mb5.4
NACGM Naroch 60.46 320 *e*P **P** **08 41 01.0 -1.9**
FINES FINESS Array B 60.51 328 P **P** **08 41 02.7 -0.5**
comp=Z,58nm,0.6s,mb5.9,baz=88,slow=7.7,SNR=92
FINES LR LR 09 08 15.3
comp=Z,8μm,20.1s,MS5.8,baz=102,slow=37
FINES FINESS Array B 60.51 328 P **P** **08 41 02.7 -0.5**
FINES pmax pmax
comp=Z,58nm,0.6s
FINES MLR MLR
comp=Z,8μm,20.1s
KORT Korkueli 60.55 299⇓*i*P **P** **08 41 02.4 -1.5**
TIRR Tirgusor 60.63 308 *e*P **P** **08 41 03.2 -1.1**
comp=Z,33nm,1.0s,mb5.4
TIRR Tirgusor 60.63 308⇓*i*P **P** **08 41 03.3 -1.0**
TIRR Tirgusor 60.63 308⇓*i*P **P** **08 41 03.3 -1.0**
NWAO Narrogin (SRO) 60.69 165 *e*P **P** **08 41 04.9 +0.3**
comp=Z,69nm,0.8s,mb5.8
NWAO LR LR
comp=Z,5μm,21.0s,MS5.6
NWAO Narrogin (SRO) 60.69 165 P **P** **08 41 04.2 -0.5**
comp=Z,73nm,0.8s,mb5.9,baz=324,slow=5.9,SNR=13
NWAO Narrogin (SRO) 60.69 165 *e*P **P** **08 41 04.9 +0.3**
NWAO pmax pmax
comp=Z,69nm,0.8s
NWAO MLR MLR
comp=Z,5μm,21.0s
IZAR Zarasai 60.70 321 *e*P **P** **08 41 04.3 -0.3**
IZAR AMB AMB 08 41 05.5
comp=Z,39nm,0.8s,mb5.6
CFR Carcaliu 60.71 309⇓*i*P **P** **08 41 04.2 -0.6**
CFR Carcaliu 60.71 309⇓*i*P **P** **08 41 04.2 -0.6**
IIGN Ignalina 60.74 321 *e*P **P** **08 41 05.1 +0.3**
IIGN AMB AMB 08 41 07.2
comp=Z,47nm,1.0s,mb5.6
ISAL Salakas 60.78 321 *e*P **P** **08 41 05.2 +0.1**
ISAL AMB AMB 08 41 07.5
comp=Z,42nm,0.7s,mb5.7
GDZ Gediz 60.80 302⇑*i*P **P** **08 41 04.3 -1.2**
ARCES ARCESS Array B 60.86 337 P **P** **08 41 05.2 -0.3**
comp=Z,15nm,0.8s,mb5.2,baz=89,slow=6.8,SNR=33
ARCES ARCESS Array B 60.86 337 P **P** **08 41 05.2 -0.2**
ARCES pmax pmax
comp=Z,15nm,0.8s
ARE0 ARCESS Array S 60.86 337 *e*P **P** **08 41 05.8 +0.4**
GOLH Golhisar 61.12 300⇑*i*P **P** **08 41 05.8 -2.0**
AKAS Kas 61.30 299 *i* P **P** **08 41 05.2 -3.8**
TESR 61.53 311⇓*i*P **P** **08 41 09.6 -0.8**
TESR 61.53 311⇓*i*P **P** **08 41 09.6 -0.8**
VRI Vrincioaia 61.58 310⇑*i*P **P** **08 41 11.0 +0.2**
VRI Vrincioaia 61.58 310⇑*i*P **P** **08 41 11.0 +0.3**
PLOR Plostina 61.64 310⇑*i*P **P** **08 41 11.9 +0.8**
PLOR Plostina 61.64 310⇑*i*P **P** **08 41 11.9 +0.8**
KTK1 Kautokeino 61.65 336 *e*P **P** **08 41 09.9 -0.9**
KTK1 *ep*P pP 08 41 15.5 +3.9
KTK1 *e*S **S** **08 49 33.0 -0.6**
KTK1 *e*SS SS 08 53 37.8 +3.4
KTK1 AMS AMS 09 05 46.1
comp=Z,11μm,21.4s,MS6.0
KTK1 Kautokeino 61.65 336 *i* P **P** **08 41 15.0 +4.2**
FORT Forrest 62.04 155 *e*P **P** **08 41 14.4 +0.6**
comp=Z,192nm,0.9s,mb6.2
FORT Forrest 62.04 155 *e*P **P** **08 41 14.2 +0.4**
comp=Z,313nm,1.0s,mb6.4
BALY Balya 62.08 303⇑*i*P **P** **08 41 13.2 -0.9**
MLR Muntele Rosu 62.19 310⇑*i*P **P** **08 41 15.2 +0.5**
MLR Muntele Rosu 62.19 310⇑*i*P **P** **08 41 15.3 +0.5**
AMKA Amchitka 62.22 44 *e*P **P** **08 41 15.0 +0.1**
comp=Z,77nm,0.9s,mb5.8
JMB Yambol 62.29 306 P **P** **08 41 15.4 -0.2**
BURAR Bucovina Array 62.32 312⇓*i*P **P** **08 41 15.6 -0.1**
BURAR Bucovina Array 62.32 312⇓*i*P **P** **08 41 15.6 -0.1**
BUR08 Bucovina Ar. S 62.33 312 *e*P **P** **08 41 15.4 -0.3**
AYDN Tasoluk 62.33 301⇑*i*P **P** **08 41 15.2 -0.7**
SUW Suwalki 62.64 319 *e*P **P** **08 41 18.4 +0.7**
SUW *e*S **S** **08 49 52.7 +6.1**
SUW LMZ 09 08 51.0
comp=Z,9μm,27.1s
SUW Suwalki 62.64 319 *e*P **P** **08 41 16.9 -0.7**
comp=Z,305nm,0.9s,mb6.4
SUW Suwalki 62.64 319 *e*P **P** **08 41 18.4 +0.7**
SUW *e*S **S** **08 49 52.7 +6.1**
LVV L'vov 62.74 315 *e*P **P** **08 41 19.3 +0.9**
LVV *e* 08 42 03.9
LVV *e*S **S** **08 49 50.1 +2.2**
LVV MLR MLR
comp=Z,4μm,20.0s,MS5.6
LVV MLR MLR
comp=N,3μm,15.0s
LVV MLR MLR
comp=E,3μm,21.0s
VOIR 62.81 310⇓*i*P **P** **08 41 18.0 -1.0**
VOIR 62.81 310⇓*i*P **P** **08 41 18.0 -1.0**
BJO Bjornoya 62.92 343 *e*S **S** **08 49 51.2 +1.6**
BJO AMS AMS 09 10 07.7
comp=Z,6μm,23.3s,MS5.7
ALN Alexandroupoli 63.01 304 P **P** **08 41 20.0 -0.4**
CTA Charters Tower 63.08 133 *e*P **P** **08 41 19.8 -1.2**
comp=Z,63nm,0.8s,mb5.8
CTA *e*S **S** **08 49 52.0 -0.9**
CTA Charters Tower 63.08 133 P **P** **08 41 20.1 -0.9**
comp=Z,72nm,0.8s,mb5.9,baz=325,slow=7.3,SNR=30
CTA Charters Tower 63.08 133 P **P** **08 41 20.2 -0.8**
CTA pmax pmax
comp=Z,72nm,0.8s
CTAO Charters Tower 63.08 133 *e*P **P** **08 41 20.0 -1.0**
comp=Z,91nm,0.8s,mb6.0
CTAO LR LR
comp=Z,3μm,22.0s,MS5.4
CTAO Charters Tower 63.08 133 *e*P **P** **08 41 20.0 -1.0**
CTAO pmax pmax
comp=Z,91nm,0.8s,mb6.0
CTAO MLR MLR
comp=Z,3μm,22.0s,MS5.4
CTAO Charters Tower 63.08 133 P **P** **08 41 21.2 +0.2**
comp=Z,120nm,0.8s,mb6.0
TRO Tromso 63.17 337 *e*P **P** **08 41 19.7 -1.2**
TRO *ep*P pP 08 41 25.1 +3.4
TRO AMB AMB 08 41 25.9
comp=Z,94nm,2.2s,mb5.5
TRO *e*S **S** **08 49 49.4 -3.3**
TRO *e*SS SS 08 53 56.7 -1.3
TRO AMS AMS 09 12 13.4
comp=Z,6μm,15.8s,MS5.9
TRO Tromso 63.17 337 *i* P **P** **08 41 23.0 +2.1**
PRK Paraskevi 63.20 303 P **P** **08 41 21.8 +0.1**
RDO Rodhopi 63.33 305 P **P** **08 41 23.1 +0.6**
BMR Baia Mare 63.45 312 P **P** **08 41 25.4 +2.2**

SPITS Spitsbergen Ar 63.53 347 P **P** **08 41 22.7 -0.6**
comp=Z,7,7nm,0.5s,mb5.0,baz=99,slow=11,SNR=17
SPITS Spitsbergen Ar 63.53 347 P **P** **08 41 22.7 -0.5**
SPITS pmax pmax
comp=Z,8.0nm,0.5s
CHOS Chios island 63.57 302 P **P** **08 41 23.4 -0.7**
KWP Kalwaria Pacla 63.62 315 *e*P **P** **08 41 24.3 0.0**
KWP *e*S **S** **08 50 05.4 +6.5**
KWP LMZ 09 11 13.5
comp=Z,12µm,23.1s
KWP Kalwaria Pacla 63.62 315 *e*P **P** **08 41 24.1 -0.1**
comp=Z,96nm,0.7s,mb5.9
KWP LR LR
comp=Z,4µm,20.0s,MS5.6
KWP Kalwaria Pacla 63.62 315⇑ *i*P **P** **08 41 24.3 +0.1**
PLD Plovdiv 63.73 306 P **P** **08 41 26.5 +1.3**
LIA Limnos Island 63.87 303 P **P** **08 41 26.4 +0.3**
UZH Uzhgorod 64.07 313 *i* P **P** **08 41 28.0 +0.8**
UZH *e*S **S** **08 50 05.0 +0.4**
UZH MLR MLR
comp=Z,1µm,14.0s,MS5.2
KAVA Kavala 64.12 305 P **P** **08 41 27.9 +0.2**
DRGR 64.15 311 ⇓P **P** **08 41 28.1 +0.3**
DRGR 64.15 311 ⇓ *i*P **P** **08 41 28.1 +0.3**
WAR Warsaw 64.20 318 *e*P **P** **08 41 30.2 +2.2**
WAR *e*pP pP 08 41 33.3 +4.4
WAR *e*S **S** **08 50 07.9 +1.8**
WAR LMZ 09 11 46.0
comp=Z,5µm,27.1s
ZKR Zakros 64.25 298 P **P** **08 41 27.8 -0.9**
APE Apeiranthos 64.29 300 ⇑P **P** **08 41 27.7 -1.2**
APE Apeiranthos 64.29 300 P **P** **08 41 27.6 -1.3**
APE Apeiranthos 64.29 300⇑ *i*P **P** **08 41 27.7 -1.2**
KBS Kingsbay 64.36 348 *e*P **P** **08 41 29.0 +0.3**
KBS AMB AMB 08 41 33.7
comp=Z,44nm,1.9s,mb5.2
KBS *e*S **S** **08 50 09.7 +2.3**
KBS AMS AMS 09 13 01.9
comp=Z,5µm,18.2s,MS5.8
KBS Kingsbay 64.36 348 PFAKE 08 41 40.0 +11
KBS LR LR
comp=Z,4µm,20.0s,MS5.6
GZR Gura Zlata 64.39 310 P **P** **08 41 30.1 +0.7**
GZR Gura Zlata 64.39 310⇑ *i*P **P** **08 41 21.7 -7.7**
CRVS Cervenica-Dubn 64.55 314 *e*P **P** **08 41 32.1 +1.7**
comp=Z,35nm,1.3s,mb5.2
CRVS Cervenica-Dubn 64.55 314 *e*P **P** **08 41 32.1 +1.7**
CRVS pmax pmax
comp=Z,35nm,1.3s,mb5.2
CRVS Cervenica-Dubn 64.55 314 *e*P **P** **08 41 32.1 +1.7**
STHS Stebnicka Huta 64.59 314 *e*P **P** **08 41 31.7 +1.0**
comp=Z,12nm,1.2s,mb4.8
STHS Stebnicka Huta 64.59 314 *e*P **P** **08 41 31.7 +1.0**
STHS pmax pmax
comp=Z,12nm,1.2s,mb4.8
STHS Stebnicka Huta 64.59 314 *e*P **P** **08 41 31.7 +1.0**
ADK Adak 64.60 43 PFAKE 08 41 40.0 +9.3
ADK LR LR
comp=Z,3µm,19.0s,MS5.5
OUR Ouranopolis 64.67 304 P **P** **08 41 31.6 +0.3**
VTS Vitosha 64.70 307 ⇑P **P** **08 41 31.2 -0.3**
VTS Vitosha 64.70 307 P **P** **08 41 31.1 -0.4**
VTS Vitosha 64.70 307⇑ *i*P **P** **08 41 31.2 -0.3**
SRS Serrai 64.77 305 P **P** **08 41 32.0 0.0**
LAST Lasithi 64.82 298 P **P** **08 41 31.4 -1.0**
PAIG Paliouri 64.99 304 P **P** **08 41 33.9 +0.5**
RER Riviere de l'E 65.02 228 *e*P **P** **08 41 31.3 -2.5**
comp=Z,148nm,0.9s,mb6.0
RER LR LR
comp=Z,3µm,20.0s,MS5.5
PLG Polygyros 65.06 304 P **P** **08 41 32.9 -1.0**
BZS Buzias 65.14 310 ⇑P **P** **08 41 33.5 -0.8**
BZS Buzias 65.14 310⇑ *i*P **P** **08 41 33.5 -0.8**
NIE Niedzica 65.19 315 *e*P **P** **08 41 36.4 +1.9**
MOR8 Moi Rana 65.23 333 *e*P **P** **08 41 33.6 -0.9**
MOR8 AMB AMB 08 41 40.9
comp=Z,98nm,2.3s,mb5.4
IDI Anoyia 65.25 299 *e*P **P** **08 41 34.4 -0.9**
comp=Z,53nm,0.8s,mb5.6
KNT Kendrikon 65.27 305 P **P** **08 41 34.2 -1.0**
LOF Lofoten 65.27 336 *e*P **P** **08 41 34.2 -0.6**
LOF AMB AMB 08 41 35.7
comp=Z,79nm,1.3s,mb5.6
LOF Lofoten 65.27 336 *i* P **P** **08 41 36.9 +2.2**
KECS Kecovo 65.27 314 *e*P **P** **08 41 36.6 +1.5**
comp=Z,10nm,1.2s,mb4.7
KECS Kecovo 65.27 314 *e*P **P** **08 41 36.6 +1.5**
KECS pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
KECS Kecovo 65.27 314 *e*P **P** **08 41 36.5 +1.4**
OJC Ojcow 65.35 316 *e*P **P** **08 41 35.8 +0.2**
OJC *es*P sP 08 41 37.7 +1.1
OJC *e*PP PP 08 43 57.0 -2.0
OJC *e*S S 08 50 20.6 +0.3
OJC e 08 50 25.2
OJC L 09 13 40.0
comp=Z,6.2nm,21.0s
OJC Ojcow 65.35 316 *e*P **P** **08 41 35.8 +0.2**
OJC *e* 08 43 57.0
OJC *e*S S 08 50 20.6 +0.3
OJC MLR MLR
comp=Z,6µm,21.0s,MS5.8
SIVA Sivas 65.39 298 P **P** **08 41 36.5 +0.4**
XOR Xorichti 65.50 303 P **P** **08 41 35.0 -1.7**
GRG Griva 65.68 305 P **P** **08 41 36.8 -1.1**
PSZ Piszkesteto 65.78 313 *e*P **P** **08 41 39.5 +1.1**
comp=Z,29nm,1.0s,mb5.3
PSZ LR LR
comp=Z,4µm,20.0s,MS5.6
PSZ Piszkesteto 65.78 313⇑P **P** **08 41 39.3 +0.9**
PSZ Piszkesteto 65.78 313⇑ *i*P **P** **08 41 39.3 +0.9**
PSZ Piszkesteto 65.78 313⇑ *e*P **P** **08 41 39.7 +1.3**
DID Didima 65.94 301 P **P** **08 41 43.1 +3.4**
KARN Karanos 65.99 299 P **P** **08 41 38.6 -1.4**
AGG Agios Georgios 66.23 303 P **P** **08 41 40.7 -0.8**
GKP Gorka Klasztor 66.26 319 *e*P **P** **08 41 40.3 -1.0**
GKP *e* pP 08 41 42.1 -0.1
GKP *e*S S 08 50 37.9 +6.6
GKP LMZ 09 12 10.5
comp=Z,8µm,18.9s
KZN Kozani 66.31 305 P **P** **08 41 41.8 -0.2**
VYHS Vyhne 66.34 314 *e*P **P** **08 41 42.8 +0.8**
comp=Z,20nm,1.4s,mb5.0
VYHS Vyhne 66.34 314 *e*P **P** **08 41 42.8 +0.8**
VYHS pmax pmax
comp=Z,20nm,1.4s,mb5.0
VYHS Vyhne 66.34 314 *e*P **P** **08 41 42.8 +0.8**
RAC Raciborz 66.38 316 *e*P **P** **08 41 42.5 +0.3**
RAC *e*S S 08 50 29.4 -3.5
RAC MLR MLR
comp=Z,3µm,14.0s,MS5.7
TNA Tin City 66.44 27 *e*P **P** **08 41 41.7 -0.7**
comp=Z,72nm,1.1s,mb5.6
BUD Budapest 66.45 313⇑ *e*P **P** **08 41 43.8 +1.1**
OKC Ostrava-Krasne 66.47 315 *e*P **P** **08 41 42.5 -0.3**
OKC *e* 08 45 53.4
OKC *e* 08 50 40.2
OKC MLR MLR
comp=Z,3µm,17.4s,MS5.6
OKC Ostrava-Krasne 66.47 315 *e*P **P** **08 41 42.5 -0.3**
OKC *ex* x 08 45 53.4
OKC *e*S S 08 50 40.2 +6.2
OKC AMS AMS 09 15 40.0
comp=Z,3µm,17.4s
FNA Florina 66.48 305 P **P** **08 41 42.1 -0.9**
GUR Goura 66.51 302 P **P** **08 41 42.4 -0.9**
NSS Namsos 66.55 332 *e*P **P** **08 41 42.5 -0.6**
NSS *e*S S 08 50 34.4 -0.1
NSS AMS AMS 09 12 11.7
comp=Z,5µm,14.9s,MS5.8
HNR Honiara 66.62 114 PFAKE 08 41 50.0 +5.8
HNR LR LR
comp=Z,2µm,20.0s,MS5.4
HFS Hagfors 66.69 327 P **P** **08 41 43.3 -0.7**
comp=Z,48nm,0.6s,mb5.7,baz=64,slow=3.4,SNR=77
HFS Hagfors 66.69 327 P **P** **08 41 43.3 -0.7**
HFS pmax pmax
comp=Z,48nm,0.6s
LAKA Lakka 66.70 302 P **P** **08 41 44.2 -0.3**
NEST Nestorio 66.81 305 P **P** **08 41 43.7 -1.5**
MORC Moravsky Berou 66.86 315 *e*P **P** **08 41 45.4 +0.1**
comp=Z,33nm,0.9s,mb5.4
MORC Moravsky Berou 66.86 315 ⇓P **P** **08 41 45.6 +0.3**
MORC Moravsky Berou 66.86 315⇓ *i*P **P** **08 41 45.6 +0.3**
comp=Z,45nm,0.9s,mb5.4
BRG Berggiesshubel 68.82 317 *i* P **P** **08 41 57.5 -0.1**
comp=Z,45nm,0.9s,mb5.4
BRG S S 08 51 04.0 +1.9
BRG SS SS 08 55 38.0 +12
BRG
comp=N,7µm,18.6s
BRG
comp=E,6µm,16.4s
BRG
comp=Z,3µm,23.5s
BRG Berggiesshubel 68.82 317 *i* P **P** **08 41 57.5 -0.1**
BRG S S 08 51 04.0 +1.9
BRG pmax pmax
comp=Z,27nm,0.9s,mb5.2
BRG MLR MLR
comp=N,4µm,18.6s,MS5.8
BRG MLR MLR
comp=E,4µm,16.4s,MS5.8
BRG MLR MLR
comp=Z,2µm,23.5s
MOL Molde 68.95 330 *e*P **P** **08 41 58.3 +0.1**
MOL AMB AMB 08 42 05.0
comp=Z,131nm,2.2s,mb5.5
MOL *e*S S 08 51 04.7 +1.4
MOL AMS AMS 09 14 01.4
comp=Z,9µm,16.8s,MS6.1
STKA Stephens Creek 69.15 144 *e*P **P** **08 41 58.7 -1.1**
comp=Z,30nm,0.8s,mb5.3
STKA Stephens Creek 69.15 144 *e*P **P** **08 41 58.6 -1.2**
comp=Z,9.3nm,0.9s,mb4.7
STKA Stephens Creek 69.15 144 P **P** **08 41 58.3 -1.5**
comp=Z,12nm,0.7s,mb4.9,baz=333,slow=6.8,SNR=19
STKA LR LR 09 15 29.8
comp=Z,5µm,20.4s,MS5.8,baz=295,slow=39
PERS Pernice 69.25 313 *i* P **P** **08 42 00.1 -0.3**
PERS *e*S S 08 51 07.9 +0.4
CLL Collm 69.27 318 *e*P **P** **08 42 00.4 0.0**
comp=Z,53nm,1.1s,mb5.4
CLL Collm 69.27 318 *i* P **P** **08 42 01.1 +0.7**
comp=Z,47nm,1.0s,mb5.4
CLL *i* 08 42 06.1
CLL *e*P'P' 09 10 14.0
CLL Collm 69.27 318 *i* P **P** **08 42 01.1 +0.7**
CLL *i* 08 42 06.1
CLL pmax pmax
comp=Z,47nm,1.0s,mb5.4
CLL Collm 69.27 318 *i* P **P** **08 42 01.1 +0.7**
comp=Z,47nm,1.0s,mb5.4
CLL *i* sP sP 08 42 06.1 +4.6
CLL *i* 08 42 11.4
CLL *e*PP PP 08 44 34.0 +1.0
CLL *e*SS SS 08 55 48.0 +15
CLL *e*SSS 08 59 06.0
CLL *e*PKPPKPdf 09 10 14.0
CLL LmV 09 15 00.0
comp=Z,7µm,20.6s
SOKA Soboth 69.30 313⇑ *i*P **P** **08 42 00.3 -0.3**
comp=Z,23nm,0.8s,mb5.1
MOA Molln 69.46 314⇑ *i*P **P** **08 42 01.6 -0.1**
comp=Z,24nm,0.8s,mb5.2,SNR=17
BOJS Bojanci 69.49 311 *i* P **P** **08 42 02.6 +0.8**
BOJS *e*S S 08 51 11.6 +1.3
KHC Kasperske Hory 69.53 316 *e*P **P** **08 42 01.5 -0.6**
comp=Z,17nm,0.9s,mb5.0
KHC Kasperske Hory 69.53 316 *e*P **P** **08 42 01.7 -0.4**
KHC *e* 08 42 07.3
KHC *e* 08 51 14.1
KHC MLR MLR
comp=Z,8µm,24.2s,MS5.9
KHC Kasperske Hory 69.53 316 *e*P **P** **08 42 01.7 -0.4**
KHC *ep*P pP 08 42 07.3 +4.4
KHC *e*S S 08 51 14.1 +3.5
KHC AMS AMS 09 14 20.0
comp=Z,8µm,24.2s
GEC2 GERESS Array S 69.53 315 *e*P **P** **08 42 02.5 +0.4**
comp=Z,35nm,1.0s,mb5.2
GEC2 GERESS Array S 69.53 315 *e*P **P** **08 42 02.5 +0.4**
GEC2 pmax pmax
comp=Z,35nm,1.0s,mb5.2
ABPO Ambohimpanom 69.61 235 *e*P **P** **08 42 01.9 -1.0**
comp=Z,150nm,1.4s,mb5.7
ABPO LR LR
comp=Z,4µm,22.0s,MS5.6
ABPO Ambohimpanom 69.61 235 *e*P **P** **08 42 01.9 -1.0**
ABPO pmax pmax
comp=Z,150nm,1.4s,mb5.7
ABPO MLR MLR
comp=Z,4µm,22.0s,MS5.6
LJU Ljubljana 69.82 312 *i* P **P** **08 42 04.9 +1.0**
LJU *e*S S 08 51 13.7 -0.4
TANN Tannenbergstha 69.85 317 *e*P **P** **08 42 04.4 +0.4**
comp=Z,40nm,1.0s,mb5.3
NKC Novy Kostel 69.91 317 *e*P **P** **08 42 04.8 +0.4**
NKC *e* 08 42 09.7
NKC MLR MLR
comp=Z,8µm,16.0s,MS6.1
NKC Novy Kostel 69.91 317 *e*P **P** **08 42 04.8 +0.4**
NKC *ep*P pP 08 42 09.7 +4.5
NKC *e*S S 08 51 21.5 +6.4
NKC AMS AMS 09 15 40.0
comp=Z,8µm,16.0s
WERD Werda 69.94 317 *e*P **P** **08 42 04.8 +0.3**
comp=Z,39nm,0.9s,mb5.3
WERN Wernitzgruen 69.94 317 *e*P **P** **08 42 05.0 +0.4**
comp=Z,44nm,1.0s,mb5.3
MUD Monsted U'grnd 69.94 324 *i* P **P** **08 42 05.2 +0.7**
MUD pmax pmax
comp=Z,64nm,0.7s,mb5.7
MUD MLR MLR
comp=Z,8µm,17.0s,MS6.0
MUD Monsted U'grnd 69.94 324 *i* P **P** **08 42 05.2 +0.7**
comp=Z,64nm,0.7s,mb5.7
MUD
comp=Z,8µm,17.0s
EIDS Eidsvold 69.94 133 *e*P **P** **08 42 03.9 -1.0**
comp=Z,41nm,0.8s,mb5.4
GUNZ Gunzen 69.94 317 *e*P **P** **08 42 05.0 +0.4**
comp=Z,63nm,0.9s,mb5.5
WET Wettzell 69.97 316 *e*P **P** **08 42 05.3 +0.5**
comp=Z,39nm,1.0s,mb5.3
WET Wettzell 69.97 316 *e*P **P** **08 42 05.3 +0.5**
WET pmax pmax
comp=Z,39nm,1.0s,mb5.3
NVLJ Novalja 70.03 311 P **P** **08 42 00.6 -4.6**
NEUB Neuenburg 70.03 318 *e*P **P** **08 42 05.3 +0.2**
comp=Z,92nm,0.9s,mb5.7
BSEG Bad Segeberg 70.07 321 *e*P **P** **08 42 06.2 +0.9**
comp=Z,98nm,0.9s,mb5.7
BSEG Bad Segeberg 70.07 321 *e*P **P** **08 42 06.2 +0.9**
BSEG pmax pmax
comp=Z,98nm,0.9s,mb5.7
JAVS Javornik 70.17 312 *i* P **P** **08 42 05.5 -0.6**
JAVS *e*S S 08 51 18.3 +0.1
ROTZ Rotzenmuhle 70.20 316 *e*P **P** **08 42 07.1 +0.9**
comp=Z,85nm,0.9s,mb5.7
MYKA Terra Mystica 70.23 313⇑ *i*P **P** **08 42 06.3 -0.2**
comp=Z,9.5nm,1.0s,mb4.7
VOY Vojsko 70.24 312 *e*P **P** **08 42 06.2 -0.3**
VOY *e* 08 42 14.3
VOY *e* 08 42 17.0
VOY *e* 08 42 35.4
KBA Koelnbreinsper 70.29 313⇑ *i*P **P** **08 42 06.1 -0.7**
comp=Z,22nm,0.8s,mb5.1,SNR=14
MOX Moxa 70.30 317 *e*P **P** **08 42 07.8 +1.0**
comp=Z,65nm,1.6s,mb5.3
MOX *e* 08 42 12.8
comp=Z,130nm,1.9s
MOX
comp=Z,5µm,22.0s
MOX Moxa 70.30 317 *e*P **P** **08 42 07.0 +0.2**
comp=Z,46nm,1.2s,mb5.3
MOX Moxa 70.30 317 *e*P **P** **08 42 07.8 +1.0**
MOX *e* 08 42 12.8
MOX pmax pmax
comp=Z,65nm,1.6s,mb5.3
MOX MLR MLR
comp=Z,5µm,22.0s,MS5.7
FOO Floro 70.37 330 *e*P **P** **08 42 05.7 -1.3**
FOO *e*S S 08 51 17.8 -2.2
FOO *e*SS SS 08 55 55.6 +5.7
FOO AMS AMS 09 15 31.3
comp=Z,6µm,18.5s,MS5.9
SNART Snartemo 70.38 326 *e*P **P** **08 42 06.5 -0.5**
SNART AMB AMB 08 42 14.7
comp=Z,65nm,1.8s,mb5.3
ARSA Arzberg 68.81 313⇑ *i*P **P** **08 41 57.4 -0.2**
comp=Z,26nm,1.2s,mb5.0,SNR=11
BRG Berggiesshubel 68.82 317 *e*P **P** **08 41 57.9 +0.3**

TRI Trieste 70.43 312 *e*P **P 08 42 07.7 0.0**
comp=Z,79nm,1.0s,mb5.6
TRI LR LR
comp=Z,4µm,19.0s,MS5.7
TRI Trieste 70.43 312 *e*P **P 08 42 07.7 +0.1**
TRI pmax pmax
comp=Z,79nm,1.0s,mb5.6
TRI MLR MLR
comp=Z,4µm,19.0s,MS5.7
MIDW Midway 70.44 68 PFAKE 08 42 20.0 +12
MIDW LR LR
comp=Z,2µm,22.0s,MS5.4
RJOB Jochberg 70.44 314 *e*P **P 08 42 08.1 +0.4**
comp=Z,54nm,0.9s,mb5.5
NRDL Niedersach Rie 70.63 320 *e*P **P 08 42 08.5 -0.2**
comp=Z,101nm,1.0s,mb5.7
BER Bergen 70.63 328 *e*P **P 08 42 09.6 +1.0**
BER *e*S S 08 51 24.4 +1.3
BER AMS AMS 09 14 23.6
comp=Z,7µm,19.2s,MS5.9
CLZ Clausthal 70.67 319 *e*P **P 08 42 09.7 +0.7**
comp=Z,96nm,1.0s,mb5.7
CLZ Clausthal 70.67 319 *e*P **P 08 42 09.7 +0.7**
CLZ pmax pmax
comp=Z,96nm,1.0s,mb5.7
CUC Castrocucco 70.77 306 *e*P **P 08 42 09.9 0.0**
comp=Z,17nm,0.8s,mb5.0
CUC LR LR
comp=Z,3µm,20.0s,MS5.5
GRA1 Grafenberg Arr 70.83 317 *e*P **P 08 42 10.8 +0.8**
comp=Z,87nm,1.1s,mb5.6
GRA1 LR LR
comp=Z,9µm,19.3s,MS6.0
GRF Grafenberg Arr 70.83 317 *e*P **P 08 42 10.8 +0.8**
comp=Z,87nm,1.1s,mb5.6
GRF *e*L 09 15 45.3
comp=Z,9µm,19.3s
GRF Grafenberg Arr 70.83 317 *e*P **P 08 42 10.8 +0.8**
GRF pmax pmax
comp=Z,87nm,1.1s,mb5.6
GRF MLR MLR
comp=Z,9µm,19.3s,MS6.0
GRF Grafenberg Arr 70.83 317 *e*P **P 08 42 10.8 +0.8**
GRF pmax pmax
comp=Z,87nm,1.1s,mb5.6
GRF MLR MLR
comp=Z,9µm,19.3s,MS6.0
GRFO Grafenberg 70.83 317 *e*P **P 08 42 10.9 +0.9**
comp=Z,70nm,1.1s,mb5.5
GRFO Grafenberg 70.83 317 *e*P **P 08 42 10.9 +0.9**
comp=Z,110nm,1.3s,mb5.6
GRFO Grafenberg 70.83 317 *e*P **P 08 42 10.9 +0.9**
GRFO pmax pmax
comp=Z,110nm,1.3s,mb5.6
DAG Danmarks Havn 71.10 348⇑ *i*P **P 08 42 11.1 -0.1**
DAG pmax pmax
comp=Z,11nm,0.5s,mb5.0
DAG MLR MLR
comp=Z,8µm,17.0s,MS6.0
DAG MLR MLR
comp=N,6µm,20.0s
DAG Danmarks Havn 71.10 348⇑ *i*P **P 08 42 11.1 -0.1**
comp=N,11nm,0.5s,mb5.0
DAG
comp=Z,8µm,17.0s
ALE Alert 71.12 358 P **P 08 42 12.6 +1.3**
comp=Z,152nm,1.0s,mb5.9,SNR=5.6
CEL Celeste 71.27 304 *e*P **P 08 42 12.4 -0.6**
comp=Z,78nm,0.9s,mb5.6
CEL LR LR
comp=Z,4µm,22.0s,MS5.6
FUR Furstenfeldbru 71.28 315 *e*P **P 08 42 13.5 +0.7**
comp=Z,136nm,0.9s,mb5.9
FUR Furstenfeldbru 71.28 315 *e*P **P 08 42 13.5 +0.7**
FUR pmax pmax
comp=Z,136nm,0.9s,mb5.9
WTTA Wattenberg 71.34 314⇑ *i*P **P 08 42 12.4 -0.8**
comp=Z,52nm,0.8s,mb5.5,SNR=23
WATA Walderalm 71.35 314⇓ *i*P **P 08 42 12.0 -1.2**
comp=Z,16nm,0.6s,mb5.1,SNR=9.5
MOTA Moosalm 71.65 314⇑ *i*P **P 08 42 14.3 -0.8**
comp=Z,47nm,0.7s,mb5.5,SNR=31
JMIC Jan Mayen 71.71 341 AMS AMS 09 12 50.8
comp=Z,4µm,25.8s,MS5.6
AQU L'Aquila 71.74 309 *e*P **P 08 42 16.5 +0.9**
comp=Z,150nm,1.1s,mb5.8
AQU LR LR
comp=Z,3µm,21.0s,MS5.6
AQU L'Aquila 71.74 309 *e*P **P 08 42 16.5 +0.8**
AQU pmax pmax
comp=Z,149nm,1.1s,mb5.8
AQU MLR MLR
comp=Z,3µm,21.0s,MS5.6
RETA Reutte 71.83 314⇑ *i*P **P 08 42 16.4 +0.3**
comp=Z,33nm,0.7s,mb5.4,SNR=16
FETA Feichten 72.00 314⇑ *i*P **P 08 42 16.6 -0.5**
comp=Z,69nm,0.8s,mb5.6,SNR=44
IBBN Ibbenburen 72.05 320 *e*P **P 08 42 17.9 +0.6**
comp=Z,72nm,0.8s,mb5.7
TTA Tatalina 72.19 28 *e*P **P 08 42 17.9 -0.1**
TOD Tromm 72.34 317 *e*P **P 08 42 20.4 +1.2**
TNS Taunus Mts 72.35 318 *e*P **P 08 42 19.5 +0.3**
comp=Z,86nm,0.9s,mb5.7
TNS Taunus Mts 72.35 318 *e*P **P 08 42 19.5 +0.3**
TNS pmax pmax
comp=Z,86nm,0.9s,mb5.7
STU Stuttgart 72.39 316 *e*P **P 08 42 19.8 +0.4**
comp=Z,92nm,0.9s,mb5.7
STU Stuttgart 72.39 316 *e*P **P 08 42 19.3 -0.1**
comp=Z,95nm,1.0s,mb5.7
STU Stuttgart 72.39 316 *e*P **P 08 42 19.3 -0.1**
STU pmax pmax
comp=Z,95nm,1.0s,mb5.7
DAVA Damuels 72.46 314⇑ *i*P **P 08 42 19.3 -0.6**
comp=Z,40nm,0.9s,mb5.3,SNR=15
WIT Witteveen 72.50 321 *e*P **P 08 42 22.0 +1.9**
comp=Z,570nm,0.7s,mb6.6
WIT Witteveen 72.50 321 *ex* x 08 42 27.0
comp=Z,429nm,1.6s
COLD Coldfoot 72.63 23 *e*P **P 08 42 20.0 -0.5**
comp=Z,140nm,1.5s,mb5.7
DAVOX Davos/Dischmat 72.63 314 P **P 08 42 20.8 -0.2**
comp=Z,74nm,0.7s,mb5.7,baz=82,slow=5.0,SNR=70
BUG Bochum--Univer 72.63 319 *e*P **P 08 42 21.3 +0.5**
comp=Z,67nm,1.0s,mb5.5
VAE Valguarnera 72.64 304 P **P 08 42 22.3 +1.2**
VAE Valguarnera 72.64 304 P **P 08 42 22.3 +1.2**
comp=Z,4.8nm,0.3s,mb4.8,baz=0.0,slow=7.1,SNR=2.2
WTSB Winterswijk 72.72 320 *e*P **P 08 42 21.5 +0.1**
comp=Z,99nm,0.7s,mb5.9
WTSB Winterswijk 72.72 320 *ex* x 08 42 27.6
comp=Z,130nm,2.1s
SPAK Spaichingen-Ko 72.87 316 *e*P **P 08 42 23.4 +1.1**
ABH Alteburg 73.01 318 *e*P **P 08 42 24.1 +1.0**
BFO Black Forest 73.08 316 P **P 08 42 23.6 0.0**
comp=Z,233nm,1.1s,mb6.0,SNR=11
BFO Black Forest 73.08 316 *e*P **P 08 42 23.5 -0.1**
comp=Z,50nm,1.0s,mb5.4
BFO Black Forest 73.08 316 *e*P **P 08 42 23.5 -0.1**
BFO pmax pmax
comp=Z,50nm,1.0s,mb5.4
TUE Stuetta 73.08 314 *e*P **P 08 42 23.1 -0.5**
comp=Z,54nm,0.9s,mb5.5
TUE LR LR
comp=Z,11µm,21.0s,MS6.1
SVW2 Sparrevohn 73.10 30 *e*P **P 08 42 24.2 +0.8**
comp=Z,140nm,1.2s,mb5.8
WDD Wield Dalam 73.11 302 PFAKE 08 42 30.0 +6.0
WDD LR LR
comp=Z,2µm,21.0s,MS5.3
LANF Langenberg 73.17 317 *e*P **P 08 42 25.2 +1.1**
VLC Villacollemand 73.20 311 PFAKE 08 42 30.0 +5.6
VLC LR LR
comp=Z,5µm,21.0s,MS5.7
RUP Ruppelstein 73.37 318 *e*P **P 08 42 25.5 +0.2**
FELD Feldberg im Sc 73.44 316 *e*P **P 08 42 26.1 +0.4**
CHGN Chignik 73.64 35 *e*P **P 08 42 25.5 -1.1**
HGN Heimansgroeve 73.66 319 *e*P **P 08 42 27.0 0.0**
comp=Z,39nm,0.6s,mb5.5
HGN Heimansgroeve 73.66 319 *ex* sP 08 42 32.8 +4.8
comp=Z,85nm,2.4s
HGN Heimansgroeve 73.66 319 *e*S S 08 51 59.4 +1.2
MEM Membach 73.67 319 P **P 08 42 26.9 -0.2**
comp=Z,29nm,1.2s,mb5.1
CDF Champ du Feu 73.71 316 *e*P **P 08 42 26.8 -0.4**
comp=Z,126nm,1.0s,mb5.5
CDF Champ du Feu 73.71 316 *e*P **P 08 42 26.8 -0.4**
comp=Z,63nm,1.0s,mb5.5
CDF Champ du Feu 73.71 316 *e*P **P 08 42 26.8 -0.4**
CDF pmax pmax
comp=Z,63nm,1.0s,mb5.5
LRW Lerwick 73.74 329 AMS AMS 09 17 07.3
comp=Z,6µm,19.2s,MS5.9
BPAW Bear Paw Mtn. 73.74 26 *e*P **P 08 42 26.8 -0.4**
comp=Z,115nm,0.8s,mb5.9
PPLA Purkeypile 73.79 27 *e*P **P 08 42 27.4 0.0**
comp=Z,210nm,0.9s,mb6.1
ARMA Armidale 73.80 137 *e*P **P 08 42 28.2 +0.3**
ARMA Armidale 73.80 137 *e*P **P 08 42 28.4 +0.5**
comp=Z,42nm,0.8s,mb5.4
BEBN Eben Emael 73.80 319 P **P 08 42 28.9 +1.1**
BEBN AP pP 08 42 33.5 +5.0
ECH Echery 73.85 316 *e*P **P 08 42 28.6 +0.5**
ECH Echery 73.85 316 *e*P **P 08 42 27.4 -0.7**
comp=Z,25nm,1.0s,mb5.1
ECH LR LR
comp=Z,4µm,19.0s,MS5.7
ECH Echery 73.85 316 *e*P **P 08 42 27.4 -0.7**
ECH pmax pmax
comp=Z,25nm,1.0s,mb5.1
ECH MLR MLR
comp=Z,4µm,19.0s,MS5.7
BBS Basel-Blauen 73.90 315 *e*P **P 08 42 28.6 +0.2**
WLF Walferdange 73.94 318 P **P 08 42 29.1 +0.5**
comp=Z,134nm,1.4s,mb5.7
WLF AP pP 08 42 35.2 +5.9
WLF Walferdange 73.94 318 *e*P **P 08 42 29.5 +0.9**
comp=Z,147nm,1.0s,mb5.9
WLF Walferdange 73.94 318 *e*P **P 08 42 29.1 +0.5**
comp=Z,156nm,1.0s,mb5.9
WLF LR LR
comp=Z,7µm,20.0s,MS5.9
WLF Walferdange 73.94 318 *e*P **P 08 42 29.1 +0.5**
WLF pmax pmax
comp=Z,156nm,1.0s,mb5.9
WLF MLR MLR
comp=Z,7µm,20.0s,MS5.9
MOF Molkenrain 74.00 316 *e*P **P 08 42 28.5 -0.5**
BCLA Clavier 74.16 319 P **P 08 42 30.4 +0.6**
comp=Z,41nm,1.2s,mb5.2
HINF Hinteralfeld 74.19 316 *e*P **P 08 42 29.3 -0.8**
comp=Z,64nm,0.9s,mb5.2
HINF Hinteralfeld 74.19 316 *e*P **P 08 42 29.3 -0.8**
comp=Z,32nm,0.9s,mb5.2
HINF Hinteralfeld 74.19 316 *e*P **P 08 42 29.3 -0.8**
HINF pmax pmax
comp=Z,32nm,0.9s,mb5.2
TRF Thorofare Moun 74.31 26 *e*P **P 08 42 30.6 +0.1**
comp=Z,56nm,0.8s,mb5.5
LOMF Lomont 74.38 315 *e*P **P 08 42 31.6 +0.4**
HAU Haudompre 74.43 316 *e*P **P 08 42 31.0 -0.5**
HAU *e*MLR MLR
comp=Z,7µm,21.5s,MS5.6
HAU Haudompre 74.43 316 *e*P **P 08 42 31.0 -0.5**
HAU MLR MLR
comp=Z,7µm,21.5s,MS5.9
GIVF Givet 74.57 318 *e*P **P 08 42 32.0 -0.2**
comp=Z,83nm,0.9s,mb5.4
GIVF Givet 74.57 318 *e*P **P 08 42 32.0 -0.2**
comp=Z,42nm,0.9s,mb5.4
GIVF Givet 74.57 318 *e*P **P 08 42 32.0 -0.2**
GIVF pmax pmax
comp=Z,42nm,0.9s,mb5.4
THEF They Montfort 74.58 316 *e*P **P 08 42 31.8 -0.5**
COLA College 74.58 25 *e*P **P 08 42 31.5 -0.5**
comp=Z,103nm,0.9s,mb5.8
COLA LR LR
comp=Z,7µm,19.0s,MS6.0
COLA College 74.58 25 *e*P **P 08 42 31.5 -0.5**
COLA pmax pmax
comp=Z,103nm,0.9s,mb5.8
COLA MLR MLR
comp=Z,7µm,19.0s,MS6.0
RSO Redoubt South 74.62 30 *e*P **P 08 42 33.6 +1.2**
DOU Dourbes 74.71 319 P **P 08 42 32.9 -0.1**
comp=Z,17nm,1.2s,mb4.8
MCK McKinley 74.72 26 *e*P **P 08 42 32.0 -0.9**
comp=Z,67nm,0.8s,mb5.6
MCK McKinley 74.72 26 *e*P **P 08 42 32.0 -0.8**
MCK pmax pmax
comp=Z,67nm,0.8s,mb5.6
PGF Pioggiola 74.72 310 *e*P **P 08 42 32.9 -0.4**
comp=Z,115nm,1.0s,mb5.4
PGF Pioggiola 74.72 310 *e*P **P 08 42 32.9 -0.4**
comp=Z,57nm,1.0s,mb5.5
PGF Pioggiola 74.72 310 *e*P **P 08 42 32.9 -0.4**
PGF pmax pmax
comp=Z,57nm,1.0s,mb5.5
SNF Seneffe 74.73 319 P **P 08 42 33.1 -0.1**
comp=Z,29nm,1.2s,mb5.1
BAIF Baives 74.95 319 *e*P **P 08 42 34.4 -0.1**
comp=Z,113nm,1.1s,mb5.4
BAIF Baives 74.95 319 *e*P **P 08 42 34.4 -0.1**
comp=Z,57nm,1.1s,mb5.4
BAIF Baives 74.95 319 *e*P **P 08 42 34.4 -0.1**
BAIF pmax pmax
comp=Z,57nm,1.1s,mb5.4
ILAR Eielson Array 74.99 24 P **P 08 42 32.4 -2.0**
comp=Z,3.0nm,0.4s,mb4.6,baz=280,slow=4.5,SNR=47
ILAR PKP2ab 09 09 51.6
comp=Z,0.5nm,0.9s,baz=180,slow=2.4,SNR=4.7
ILAR LR LR 09 15 02.1
comp=Z,6µm,22.0s,MS5.8,baz=298,slow=35
MEZF Maizieres J'vi 75.05 317 *e*P **P 08 42 34.7 -0.3**
comp=Z,143nm,0.9s,mb5.6
MEZF Maizieres J'vi 75.05 317 *e*P **P 08 42 34.7 -0.3**
comp=Z,143nm,0.9s,mb5.9
LPG La Plagne 75.12 314 *e*P **P 08 42 35.8 +0.2**
comp=Z,276nm,0.8s,mb5.9
LPG La Plagne 75.12 314 *e*P **P 08 42 35.8 +0.2**
comp=Z,138nm,0.8s,mb5.9
LPG La Plagne 75.12 314 *e*P **P 08 42 35.8 +0.2**
LPG pmax pmax
comp=Z,138nm,0.8s,mb5.9
CABF La Chapelle 75.12 315 *e*P **P 08 42 35.1 -0.4**
comp=Z,87nm,1.0s,mb5.3
CABF La Chapelle 75.12 315 *e*P **P 08 42 35.1 -0.4**
comp=Z,44nm,1.0s,mb5.3
CABF La Chapelle 75.12 315 *e*P **P 08 42 35.1 -0.4**
CABF pmax pmax
comp=Z,43nm,1.0s,mb5.3
LPL La Plagne 75.13 314 *e*P **P 08 42 35.8 +0.2**
comp=Z,240nm,0.7s,mb5.9
LPL La Plagne 75.13 314 *e*P **P 08 42 35.8 +0.2**
comp=Z,120nm,0.7s,mb5.9
LPL La Plagne 75.13 314 *e*P **P 08 42 35.8 +0.2**
LPL pmax pmax
comp=Z,120nm,0.7s,mb5.9
SAOF Saorge 75.17 312 *e*P **P 08 42 36.7 +0.9**
SFTF Sexfontaines 75.17 317 *e*P **P 08 42 35.1 -0.7**
comp=Z,148nm,0.9s,mb5.6
SFTF Sexfontaines 75.17 317 *e*P **P 08 42 35.1 -0.7**
comp=Z,148nm,0.9s,mb5.9
AUTN L'Aution 75.25 312 *e*P **P 08 42 37.4 +1.1**
SBF Sospel 75.29 312 *e*P **P 08 42 36.0 -0.6**
comp=Z,92nm,0.7s,mb5.5
SBF Sospel 75.29 312 *e*P **P 08 42 36.0 -0.6**
comp=Z,46nm,0.7s,mb5.5
SBF Sospel 75.29 312 *e*P **P 08 42 36.0 -0.6**
SBF pmax pmax
comp=Z,46nm,0.7s,mb5.5
LUCF Luceram 75.34 312 *e*P **P 08 42 37.7 +0.9**
TOUF Mont Tournerai 75.36 312 *e*P **P 08 42 38.0 +1.1**
MBDF Montbardon 75.40 313 *e*P **P 08 42 36.1 -1.1**
comp=Z,51nm,0.7s,mb5.3
MBDF Montbardon 75.40 313 *e*P **P 08 42 36.1 -1.1**
comp=Z,25nm,0.7s,mb5.3
MBDF Montbardon 75.40 313 *e*P **P 08 42 36.1 -1.1**
MBDF pmax pmax
comp=Z,25nm,0.7s,mb5.2
MVIF Mont Vial 75.47 312 *e*P **P 08 42 38.3 +0.7**
SURF Saint Ours 75.47 313 *e*P **P 08 42 38.4 +0.8**
TOO Toolangi 75.59 146 *e*P **P 08 42 39.1 +1.0**
VSL Villasalto 75.60 307 *e*P **P 08 42 37.7 -0.7**
comp=Z,44nm,1.1s,mb5.3
VSL LR LR
comp=Z,2µm,20.0s,MS5.3
GDM Grand'Maison 75.65 313 *e*P **P 08 42 39.8 +1.2**
RC01 Rabbit Creek A 75.65 28 *e*P **P 08 42 37.2 -1.1**
comp=Z,94nm,1.0s,mb5.7
PMR Palmer 75.67 28 *e*P **P 08 42 36.5 -1.9**
comp=Z,76nm,0.8s,mb5.7
PMR Palmer 75.67 28 *e*P **P 08 42 36.5 -1.9**
PMR pmax pmax
comp=Z,76nm,0.8s,mb5.7
CALN Calern 75.70 312 *e*P **P 08 42 39.6 +0.7**
CAN Canberra 75.76 142 *e*P **P 08 42 39.0 -0.2**
comp=Z,153nm,1.6s,mb5.7
CAN LR LR
comp=Z,4µm,19.0s,MS5.7
CAN Canberra 75.76 142 *e*P **P 08 42 39.0 -0.2**
CAN pmax pmax
comp=Z,153nm,1.6s,mb5.7
CAN MLR MLR
comp=Z,4µm,19.0s,MS5.7
MME1 Meikle Cairn 75.80 327⇑ *e*P **P 08 42 38.2 -0.9**
MCD Coleburn Disti 75.82 328⇑ *e*P **P 08 42 38.7 -0.6**
OHAK Old Harbor 75.82 33 *e*P **P 08 42 38.9 -0.4**
comp=Z,99nm,1.1s,mb5.7
SML Sawmill 75.89 27 *e*P **P 08 42 39.2 -0.5**
comp=Z,46nm,0.8s,mb5.5
SML Sawmill 75.89 27 *e*P **P 08 42 39.2 -0.5**
SML pmax pmax
comp=Z,46nm,0.8s,mb5.5
KDAK Kodiak Island 75.90 32 P **P 08 42 39.9 +0.1**
comp=Z,668nm,1.4s,mb6.4,SNR=18
KDAK Kodiak Island 75.90 32 *e*P **P 08 42 38.8 -1.0**
comp=Z,201nm,1.1s,mb6.0
KDAK LR LR
comp=Z,5µm,19.0s,MS5.8
KDAK Kodiak Island 75.90 32 P **P 08 42 38.6 -1.2**
comp=Z,34nm,0.6s,mb5.5,baz=268,slow=2.5,SNR=32
ORIF Orris-en-Rattie 75.91 313 *e*P **P 08 42 39.6 -0.5**
comp=Z,74nm,0.9s,mb5.3
ORIF *e*MLR MLR
comp=Z,3µm,18.2s,MS5.3
ORIF Orris-en-Rattie 75.91 313 *e*P **P 08 42 39.6 -0.5**
comp=Z,37nm,0.9s,mb5.3
ORIF Orris-en-Rattie 75.91 313 *e*P **P 08 42 39.6 -0.5**
ORIF pmax pmax
comp=Z,37nm,0.9s,mb5.3
FRF La Foret Royal 75.94 312 *e*P **P 08 42 39.6 -0.7**
comp=Z,101nm,1.1s,mb5.4
FRF La Foret Royal 75.94 312 *e*P **P 08 42 39.6 -0.7**
comp=Z,50nm,1.1s,mb5.4
FRF La Foret Royal 75.94 312 *e*P **P 08 42 39.6 -0.7**
FRF pmax pmax
comp=Z,51nm,1.1s,mb5.4
MENF Mencas 75.96 320 *e*P **P 08 42 39.9 -0.3**
CNB Canberra Magne 75.96 142 *e*P **P 08 42 39.4 -0.9**
MVH1 Achvaich 76.10 328 *e*P **P 08 42 40.9 0.0**
LMR La Mourre 76.12 312 *e*P **P 08 42 40.8 -0.5**
comp=Z,132nm,1.1s,mb5.5
LMR La Mourre 76.12 312 *e*P **P 08 42 40.8 -0.5**
comp=Z,66nm,1.1s,mb5.5
LMR La Mourre 76.12 312 *e*P **P 08 42 40.8 -0.5**
LMR pmax pmax
comp=Z,66nm,1.1s,mb5.5
ESY Stoneypath 76.25 326⇑ *e*P **P 08 42 40.6 -1.2**
SEW Seward 76.25 29 *e*P **P 08 42 40.6 -1.1**
comp=Z,67nm,0.8s,mb5.6
LOR Lormes 76.27 316 *e*P **P 08 42 41.2 -0.9**
comp=Z,92nm,1.0s,mb5.4
LOR *e*MLR MLR
comp=Z,7µm,22.2s,MS5.6
LOR Lormes 76.27 316 *e*P **P 08 42 41.2 -0.9**
comp=Z,46nm,1.0s,mb5.4
LOR LR LR
comp=Z,7µm,22.3s,MS5.9
LOR Lormes 76.27 316 *e*P **P 08 42 41.2 -0.9**
LOR pmax pmax
comp=Z,46nm,1.0s,mb5.4
LOR MLR MLR
comp=Z,7µm,22.3s,MS5.9
ELSH Elham, Standar 76.30 320 *e*P **P 08 42 39.7 -2.5**
ELSH AMB AMB 08 42 44.1
comp=Z,153nm,1.0s,mb5.9
RSC Scourie 76.37 329 *e*P **P 08 42 41.9 -0.5**
MDO Dochfour 76.41 328⇑ *e*P **P 08 42 42.1 -0.6**
PAX Paxson 76.45 26 *e*P **P 08 42 42.0 -0.8**
comp=Z,66nm,1.2s,mb5.4
PAX Paxson 76.45 26 *e*P **P 08 42 42.0 -0.8**
PAX pmax pmax
comp=Z,66nm,1.2s,mb5.4
SMRF Simiane la Rot 76.49 312 *e*P **P 08 42 43.2 -0.2**
comp=Z,95nm,1.1s,mb5.3
SMRF Simiane la Rot 76.49 312 *e*P **P 08 42 43.2 -0.2**
comp=Z,95nm,1.1s,mb5.6
EBL Broad Law 76.53 326⇑ *e*P **P 08 42 42.6 -0.8**
EDI Edinburgh 76.53 326 *e*P **P 08 42 42.5 -1.0**
EDI AMB AMB 08 42 49.8
comp=Z,75nm,2.5s,mb5.2
EDI AMS AMS 09 20 22.2
comp=Z,4µm,14.7s,MS5.8
SMF Signal de Mont 76.53 315 *e*P **P 08 42 43.0 -0.6**
comp=Z,193nm,1.1s,mb5.6
SMF Signal de Mont 76.53 315 *e*P **P 08 42 43.0 -0.6**
comp=Z,97nm,1.1s,mb5.6
SMF Signal de Mont 76.53 315 *e*P **P 08 42 43.0 -0.6**
SMF pmax pmax
comp=Z,97nm,1.1s,mb5.7
EBH Black Hill 76.55 326 *e*P **P 08 42 42.8 -0.6**
SSF Saint Saulge 76.58 316 *e*P **P 08 42 43.2 -0.6**
comp=Z,128nm,0.8s,mb5.6
SSF Saint Saulge 76.58 316 *e*P **P 08 42 43.2 -0.6**
comp=Z,64nm,0.8s,mb5.6
SSF Saint Saulge 76.58 316 *e*P **P 08 42 43.2 -0.6**
SSF pmax pmax
comp=Z,64nm,0.8s,mb5.6
HPK Haverah Park 76.61 324 P **P 08 42 43.5 -0.4**
HPK AMB AMB 08 42 49.5
comp=Z,68nm,2.7s,mb5.1
HPK AMS AMS 09 18 45.2
comp=Z,5µm,16.3s
HPK Haverah Park 76.61 324 *e*P **P 08 42 43.5 -0.4**
HPK AMB AMB 08 42 49.5
comp=Z,68nm,2.7s,mb5.1
HPK AMS AMS 09 18 45.2
comp=Z,5µm,16.3s,MS6.0
DOT Dot Lake 76.63 25 *e*P **P 08 42 45.1 +1.3**
comp=Z,67nm,0.7s,mb5.7
SSB Saint Sauveur 76.64 314 *e*P **P 08 42 44.3 +0.1**
SSB Saint Sauveur 76.64 314 *e*P **P 08 42 43.6 -0.7**
comp=Z,29nm,1.0s,mb5.2
SSB LR LR
comp=Z,3µm,19.0s,MS5.6
SSB Saint Sauveur 76.64 314 *e*P **P 08 42 43.6 -0.6**
SSB pmax pmax
comp=Z,29nm,1.0s,mb5.2
SSB MLR MLR
comp=Z,3µm,19.0s,MS5.6
EAU Auchinoon 76.70 326⇑ *e*P **P 08 42 43.6 -0.7**
VIVF Saint-Julien-l 76.73 314 *e*P **P 08 42 44.2 -0.5**
comp=Z,128nm,1.1s,mb5.5
VIVF Saint-Julien-l 76.73 314 *e*P **P 08 42 44.2 -0.5**
comp=Z,64nm,1.1s,mb5.5
VIVF Saint-Julien-l 76.73 314 *e*P **P 08 42 44.2 -0.5**
VIVF pmax pmax
comp=Z,64nm,1.1s,mb5.5
AVF Avril sur Loir 76.78 316 *e*P **P 08 42 44.4 -0.6**
comp=Z,160nm,1.0s,mb5.6
AVF Avril sur Loir 76.78 316 *e*P **P 08 42 44.4 -0.6**
comp=Z,80nm,1.0s,mb5.6
AVF Avril sur Loir 76.78 316 *e*P **P 08 42 44.4 -0.6**
AVF pmax pmax
comp=Z,80nm,1.0s,mb5.6
EKA Eskdalemuir Ar 76.79 325 P **P 08 42 43.8 -1.1**
comp=Z,22nm,0.8s,mb5.2,baz=64,slow=5.9,SNR=52
EKA Eskdalemuir Ar 76.79 325 P **P 08 42 43.8 -1.1**
EKA pmax pmax
comp=Z,23nm,0.8s
ESK Eskdalemuir 76.82 325 P **P 08 42 44.5 -0.5**
comp=Z,219nm,0.8s,mb6.1,SNR=5.6
ESK Eskdalemuir 76.82 325 P **P 08 42 43.3 -1.7**
ESK AMB AMB 08 42 49.0
comp=Z,85nm,3.6s
ESK AMS AMS 09 19 17.1
comp=Z,4µm,17.2s
ESK Eskdalemuir 76.82 325 *e*P **P 08 42 43.3 -1.7**
ESK AMB AMB 08 42 49.0
comp=Z,85nm,3.6s
ESK AMS AMS 09 19 17.1
comp=Z,4µm,17.2s,MS5.8
ESK Eskdalemuir 76.82 325 *e*P **P 08 42 44.4 -0.6**
comp=Z,61nm,1.1s,mb5.5
ESK LR LR
comp=Z,3µm,20.0s,MS5.7
ESK Eskdalemuir 76.82 325 *e*P **P 08 42 44.4 -0.6**
ESK pmax pmax
comp=Z,61nm,1.1s,mb5.4

ESK MLR MLR
comp=Z,3µm,20.0s,MS5.7
KAC Achnashellach 76.83 328 *eP* **P 08 42 44.4 -0.7**
ECK Cauldkaine Hil 76.84 325⇑ *eP* **P 08 42 44.3 -0.8**
KBI1 Birley Grange 76.87 323 *eP* **P 08 42 45.0 -0.3**
RRR Rubha Reidh 76.90 328 *eP* **P 08 42 44.5 -0.9**
LHO Holmfirth 76.92 323⇑ *eP* **P 08 42 45.0 -0.6**
PLDF La Plantade 76.95 315 *eP* **P 08 42 45.6 -0.4**
CWF Charnwood Fore 76.98 323 P **P 08 42 43.8 -2.2**
CWF AMB AMB 08 42 50.2
comp=Z,66nm,2.9s,mb5.1
CWF AMS AMS 09 19 06.5
comp=Z,6µm,16.9s
CWF Charnwood Fore 76.98 323 *eP* **P 08 42 43.8 -2.2**
CWF AMB AMB 08 42 50.2
comp=Z,66nm,2.9s,mb5.1
CWF AMS AMS 09 19 06.5
comp=Z,6µm,16.9s,MS6.0
EAB Aberfoyle 76.99 327 *eP* **P 08 42 46.0 +0.1**
HYF Humbligny 77.03 316 *eP* **P 08 42 46.3 -0.1**
EGAK Eagle 77.06 23 *eP* **P 08 42 45.6 -0.6**
comp=Z,88nm,1.5s,mb5.5
KEST Kesra 77.07 303 *eP* **P 08 42 47.0 +0.2**
KEST Kesra 77.07 303 P **P 08 42 47.5 +0.6**
comp=Z,2.3nm,0.9s,mb4.1,baz=142,slow=0.5,SNR=9.3
KEST LR LR 09 26 34.9
comp=Z,642nm,18.7s,MS5.0,baz=178,slow=43
KPL Plockton 77.08 328 P **P 08 42 46.5 0.0**
KPL AMB AMB 08 42 53.1
comp=Z,79nm,2.0s,mb5.3
KPL AMS AMS 09 20 08.9
comp=Z,5µm,14.2s
KPL Plockton 77.08 328 *eP* **P 08 42 46.5 0.0**
KPL AMB AMB 08 42 53.1
comp=Z,79nm,2.0s,mb5.3
KPL AMS AMS 09 20 08.9
comp=Z,5µm,14.2s,MS6.0
COLF Collangettes 77.09 314 *eP* **P 08 42 47.6 +0.8**
MENT Mentasta 77.14 25 *eP* **P 08 42 46.7 0.0**
BGF Bois d'Agland 77.19 316 *eP* **P 08 42 46.7 -0.6**
comp=Z,82nm,1.1s,mb5.3
BGF Bois d'Agland 77.19 316 *eP* **P 08 42 46.7 -0.6**
comp=Z,41nm,1.1s,mb5.3
BGF Bois d'Agland 77.19 316 *eP* **P 08 42 46.7 -0.6**
BGF pmax pmax
comp=Z,41nm,1.1s,mb5.3
AGO Saint Agoulin 77.23 315 *eP* **P 08 42 47.5 0.0**
PGBU Glenifferbraes 77.23 326 AMS AMS 09 20 33.8
comp=Z,4µm,17.7s,MS5.8
RRH Rhenigidale 77.28 329 *eP* **P 08 42 48.5 +0.9**
DIV Divide 77.30 27 *eP* **P 08 42 47.6 0.0**
comp=Z,81nm,0.9s,mb5.7
INK Inuvik 77.30 18 *eP* **P 08 42 46.5 -1.1**
comp=Z,116nm,1.0s,mb5.8
INK Inuvik 77.30 18 P **P 08 42 47.0 -0.5**
comp=Z,34nm,0.9s,mb5.3,baz=330,slow=6.5,SNR=23
INK Inuvik 77.30 18 *eP* **P 08 42 46.5 -1.0**
INK pmax pmax
comp=Z,116nm,1.0s
STNC Stoke 77.31 323 AMS AMS 09 18 37.8
comp=Z,3µm,34.3s,MS5.4
KAR1 Arisaig 77.36 328 *eP* **P 08 42 47.5 -0.6**
GCD Castle Douglas 77.40 325 *eP* **P 08 42 47.7 -0.6**
PYM Petit Puy Mans 77.43 315 *eP* **P 08 42 48.5 -0.2**
WOL Wolverton 77.57 321 AMS AMS 09 19 41.9
comp=Z,6µm,17.5s,MS6.0
LASF Ste Croix 77.58 313 *eP* **P 08 42 49.4 -0.1**
comp=Z,95nm,0.9s,mb5.4
TCF Toulx Ste Croi 77.71 316 *eP* **P 08 42 50.0 -0.2**
comp=Z,149nm,0.9s,mb5.6
TCF Toulx Ste Croi 77.71 316 *eP* **P 08 42 50.0 -0.2**
comp=Z,75nm,0.9s,mb5.6
TCF Toulx Ste Croi 77.71 316 *eP* **P 08 42 50.0 -0.2**
TCF pmax pmax
comp=Z,75nm,0.9s,mb5.6
SUMG Summit 77.75 349 *eP* **P 08 42 50.1 +0.1**
comp=Z,116nm,1.0s,mb5.8
SUMG Summit 77.75 349 *i* P **P 08 42 50.7 +0.7**
comp=Z,80nm,0.9s,mb5.7
SUMG
comp=Z,5µm,22.0s
GAL1 Galloway 77.80 325 *eP* **P 08 42 50.2 -0.3**
GAL1 AMB AMB 08 42 55.5
comp=Z,64nm,3.9s
GAL1 AMS AMS 09 21 19.9
comp=Z,4µm,17.0s,MS5.8
SWN1 Swindon 77.80 322 AMS AMS 09 19 47.1
comp=Z,5µm,16.5s,MS5.9
BMRM Bremner River 77.87 27 *eP* **P 08 42 50.7 -0.1**
comp=Z,246nm,0.9s,mb6.1
GIM North Isle of 77.94 325 *eP* **P 08 42 50.9 -0.5**
DAWY Dawson 78.10 23 *eP* **P 08 42 51.1 -0.9**
LDF La Druitiere 78.14 318 *eP* **P 08 42 52.0 -0.5**
comp=Z,34nm,0.5s,mb5.2
LDF La Druitiere 78.14 318 *eP* **P 08 42 52.0 -0.5**
comp=Z,17nm,0.5s,mb5.2
LDF La Druitiere 78.14 318 *eP* **P 08 42 52.0 -0.5**
LDF pmax pmax
comp=Z,17nm,0.5s,mb5.2
CMAH Djebel Manchou 78.14 305 P **P 08 42 53.4 +0.6**
MCH1 Michaelchurch 78.24 322 *eP* **P 08 42 52.0 -1.0**
MCH1 AMB AMB 08 43 00.0
comp=Z,81nm,1.5s,mb5.4
MCH1 AMS AMS 09 23 15.0
comp=Z,4µm,15.1s,MS5.9
ABSA Djebel Ababsia 78.24 305 P **P 08 42 54.2 +0.8**
FLN La Foliniere 78.28 319 *eP* **P 08 42 52.8 -0.5**
comp=Z,78nm,1.1s,mb5.3
FLN *e*MLR MLR
comp=Z,9µm,20.5s,MS5.8
FLN La Foliniere 78.28 319 *eP* **P 08 42 52.8 -0.5**
comp=Z,39nm,1.1s,mb5.2
FLN LR LR
comp=Z,9µm,20.5s,MS6.1
FLN La Foliniere 78.28 319 *eP* **P 08 42 52.8 -0.5**
FLN pmax pmax
comp=Z,39nm,1.1s,mb5.2
FLN MLR MLR
comp=Z,9µm,20.5s,MS6.1
HGH Gray Hill 78.30 322⇑ *eP* **P 08 42 52.9 -0.5**
HTR Trewern Hill 78.35 323⇑ *eP* **P 08 42 53.2 -0.4**
CAF Calviac 78.38 314 *eP* **P 08 42 54.1 +0.1**
comp=Z,121nm,1.1s,mb5.4
CAF Calviac 78.38 314 *eP* **P 08 42 54.1 +0.1**
comp=Z,60nm,1.1s,mb5.4
CAF Calviac 78.38 314 *eP* **P 08 42 54.1 +0.1**
CAF pmax pmax
comp=Z,60nm,1.1s,mb5.4
WLF1 Llynfaes 78.38 324 P **P 08 42 53.1 -0.7**
WLF1 AMB AMB 08 43 00.9
comp=Z,246nm,1.4s,mb5.9
WLF1 AMS AMS 09 20 36.3
comp=Z,18µm,15.5s
WLF1 Llynfaes 78.38 324 *eP* **P 08 42 53.1 -0.7**
WLF1 AMB AMB 08 43 00.9
comp=Z,246nm,1.4s,mb5.9
WLF1 AMS AMS 09 20 36.3
comp=Z,18µm,15.5s,MS6.5
RJF Les Rejaudoux 78.57 315 *eP* **P 08 42 55.2 +0.2**
comp=Z,175nm,1.0s,mb5.7
RJF *e*MLR MLR
comp=Z,4µm,22.5s,MS5.4
RJF Les Rejaudoux 78.57 315 *eP* **P 08 42 55.2 +0.2**
comp=Z,88nm,1.0s,mb5.6
RJF LR LR
comp=Z,4µm,22.5s,MS5.7
RJF Les Rejaudoux 78.57 315 *eP* **P 08 42 55.2 +0.2**
RJF pmax pmax
comp=Z,88nm,1.0s,mb5.6
RJF MLR MLR
comp=Z,4µm,22.5s,MS5.7
GRR Gorron 78.67 318 *eP* **P 08 42 55.0 -0.5**
comp=Z,105nm,0.8s,mb5.5
GRR Gorron 78.67 318 *eP* **P 08 42 55.0 -0.5**
comp=Z,53nm,0.8s,mb5.5
GRR Gorron 78.67 318 *eP* **P 08 42 55.0 -0.5**
GRR pmax pmax
comp=Z,53nm,0.8s,mb5.5
GMM Mts of Mourne 78.73 325 *eP* **P 08 42 56.0 +0.2**
DZM Mont Dzumac 78.86 121 *e*LQ 09 03 58.9
comp=Z,5µm,34.8s
DZM *e*LR LR 09 07 21.0
comp=Z,3µm,24.1s
DZM Mont Dzumac 78.86 121 *eP* **P 08 43 00.2 +3.3**
EJON La Jonquera 78.91 312 P **P 08 42 56.6 -0.3**
comp=Z,246nm,2.9s,mb5.6

MTLF Montolieu 78.97 313 *eP* **P 08 42 56.9 -0.3**
comp=Z,79nm,1.1s,mb5.3
MTLF Montolieu 78.97 313 *eP* **P 08 42 56.9 -0.3**
comp=Z,40nm,1.1s,mb5.3
MTLF Montolieu 78.97 313 *eP* **P 08 42 56.9 -0.3**
MTLF pmax pmax
comp=Z,40nm,1.1s,mb5.3
CASM Ain Smara 78.97 305 P **P 08 42 57.8 +0.4**
MFF Saint Martin d 79.04 317 *eP* **P 08 42 57.1 -0.5**
comp=Z,99nm,1.0s,mb5.4
MFF Saint Martin d 79.04 317 *eP* **P 08 42 57.1 -0.5**
comp=Z,50nm,1.0s,mb5.4
MFF Saint Martin d 79.04 317 *eP* **P 08 42 57.1 -0.5**
MFF pmax pmax
comp=Z,50nm,1.0s,mb5.4
JSA Saint Aubin 79.07 320 P **P 08 42 55.7 -2.0**
JSA AMB AMB 08 42 58.3
comp=Z,76nm,1.0s,mb5.6
JSA AMS AMS 09 20 36.9
comp=Z,5µm,16.7s
JSA Saint Aubin 79.07 320 *eP* **P 08 42 55.7 -2.0**
JSA AMB AMB 08 42 58.3
comp=Z,76nm,1.0s,mb5.6
JSA AMS AMS 09 20 36.9
comp=Z,5µm,16.7s,MS5.9
BORG Borgarnes 79.21 339 P **P 08 42 57.8 -0.3**
comp=Z,52nm,1.3s,mb5.3,baz=290,slow=16,SNR=2.1
BORG Borgarnes 79.21 339 P **P 08 42 57.8 -0.3**
BORG pmax pmax
comp=Z,52nm,1.3s
LFF La Frestale 79.22 315 *eP* **P 08 42 58.7 +0.1**
comp=Z,130nm,1.0s,mb5.5
LFF La Frestale 79.22 315 *eP* **P 08 42 58.7 +0.1**
comp=Z,65nm,1.0s,mb5.5
LFF La Frestale 79.22 315 *eP* **P 08 42 58.7 +0.1**
LFF pmax pmax
comp=Z,65nm,1.0s,mb5.5
DFRA Djebel Bou Aff 79.31 305 P **P 08 42 59.8 +0.6**
DSB Dublin 79.44 325 *eP* **P 08 43 00.4 +0.8**
comp=Z,36nm,1.1s,mb5.2
DYA Yadsworthy 79.49 321 P **P 08 42 58.3 -1.7**
DYA AMB AMB 08 43 04.5
comp=Z,74nm,3.1s
DYA AMS AMS 09 20 49.0
comp=Z,6µm,17.8s
DYA Yadsworthy 79.49 321 *eP* **P 08 42 58.3 -1.7**
DYA AMB AMB 08 43 04.5
comp=Z,74nm,3.1s
DYA AMS AMS 09 20 49.0
comp=Z,6µm,17.8s,MS6.0
CLLI Llivia 79.50 312 P **P 08 43 00.3 +0.2**
CFON Fontmartina 79.51 311 P **P 08 43 01.2 +1.0**
comp=Z,97nm,1.2s,mb5.6
VALF Valcebollere 79.51 312 *eP* **P 08 43 00.3 +0.1**
HTL Hartland 79.53 322 *eP* **P 08 42 59.5 -0.7**
HTL AMB AMB 08 43 06.2
comp=Z,93nm,2.9s,mb5.2
HTL AMS AMS 09 20 38.7
comp=Z,5µm,17.8s,MS5.9
SGMF Saint Gilles 79.73 319 *eP* **P 08 43 01.4 +0.1**
comp=Z,174nm,0.9s,mb5.7
SGMF Saint Gilles 79.73 319 *eP* **P 08 43 01.4 +0.1**
comp=Z,87nm,0.9s,mb5.7
SGMF Saint Gilles 79.73 319 *eP* **P 08 43 01.4 +0.1**
SGMF pmax pmax
comp=Z,87nm,0.9s,mb5.7
SET Setif 79.80 305 P **P 08 43 04.0 +2.1**
MLS Moulis 79.87 313 *eP* **P 08 43 01.3 -0.9**
SALF Salau 79.90 313 *eP* **P 08 43 02.5 +0.2**
EMIR Miracle 80.05 312 P **P 08 43 03.4 +0.2**
comp=Z,57nm,1.0s,mb5.5
CSOR Sort 80.11 312 P **P 08 43 02.9 -0.6**
comp=Z,101nm,1.4s,mb5.6
ETOS Mallorca 80.11 309 P **P 08 43 05.2 +1.6**
comp=Z,234nm,2.6s,mb5.7
ROSF Rostrenen 80.12 319 *eP* **P 08 43 03.4 0.0**
comp=Z,205nm,1.0s,mb5.7
ROSF Rostrenen 80.12 319 *eP* **P 08 43 03.4 0.0**
comp=Z,103nm,1.0s,mb5.7
ROSF Rostrenen 80.12 319 *eP* **P 08 43 03.4 0.0**
ROSF pmax pmax
comp=Z,103nm,1.0s,mb5.7
QUIF Quistinic 80.25 319 *eP* **P 08 43 03.8 -0.3**
comp=Z,136nm,1.2s,mb5.5
QUIF Quistinic 80.25 319 *eP* **P 08 43 03.8 -0.3**
comp=Z,68nm,1.2s,mb5.5
QUIF Quistinic 80.25 319 *eP* **P 08 43 03.8 -0.3**
QUIF pmax pmax
comp=Z,68nm,1.2s,mb5.5
EPF Esparros 80.33 313 *eP* **P 08 43 03.7 -1.0**
comp=Z,34nm,1.0s,mb4.9
EPF Esparros 80.33 313 *eP* **P 08 43 03.7 -1.0**
comp=Z,17nm,1.0s,mb4.9
EPF Esparros 80.33 313 *eP* **P 08 43 03.7 -1.0**
EPF pmax pmax
comp=Z,17nm,1.0s,mb4.9
CCA1 Carnmenellis 80.34 321 *eP* **P 08 43 04.4 -0.2**
CCA1 AMB AMB 08 43 08.9
comp=Z,58nm,3.7s
CCA1 AMS AMS 09 21 23.1
comp=Z,5µm,17.8s,MS5.9
PAF Port-aux-Franc 80.44 200 PFAKE
PAF LR LR 08 43 10.0 +5.2
comp=Z,4µm,19.0s,MS5.7
BST Brest 80.60 319 *eP* **P 08 43 06.5 +0.5**
EPOB Poblet 80.60 311 P **P 08 43 05.8 -0.3**
comp=Z,76nm,1.0s,mb5.6
VIEF Viey 80.61 313 *eP* **P 08 43 06.4 +0.2**
EBIE Bielsa 80.62 313 P **P 08 43 06.6 +0.4**
comp=Z,125nm,1.5s,mb5.6
PNL Peninsula 80.74 27 *eP* **P 08 43 06.9 +0.4**
comp=Z,107nm,0.9s,mb5.8
ETSF Etsaut 80.98 313 *eP* **P 08 43 08.3 +0.1**
comp=Z,47nm,0.6s,mb5.3
ETSF Etsaut 80.98 313 *eP* **P 08 43 08.3 +0.1**
comp=Z,24nm,0.6s,mb5.3
ETSF Etsaut 80.98 313 *eP* **P 08 43 08.3 +0.1**
ETSF pmax pmax
comp=Z,24nm,0.6s,mb5.3
LARF Larrau 81.20 314 *eP* **P 08 43 09.1 -0.2**
ABA Alger-Bouzarea 81.26 307 P **P 08 43 11.5 +1.7**
ERTA Horta de San J 81.28 311 P **P 08 43 09.7 -0.1**
comp=Z,117nm,1.1s,mb5.7
SJPF Ste Jean 81.32 314 *eP* **P 08 43 08.8 -1.1**
comp=Z,44nm,0.7s,mb5.2
SJPF Ste Jean 81.32 314 *eP* **P 08 43 08.8 -1.1**
comp=Z,22nm,0.7s,mb5.2
SJPF Ste Jean 81.32 314 *eP* **P 08 43 08.8 -1.1**
SJPF pmax pmax
comp=Z,22nm,0.7s,mb5.2
EALK Alkurruntz 81.45 314 P **P 08 43 12.2 +1.6**
comp=Z,112nm,2.0s,mb5.5
EIBI Ibiza 81.47 309 P **P 08 43 12.3 +1.5**
comp=Z,127nm,1.7s,mb5.6
ESAC San Caprasio 81.47 312 P **P 08 43 11.6 +0.9**
comp=Z,73nm,1.3s,mb5.5
ELIZ Elizondo 81.49 314 P **P 08 43 11.6 +0.7**
comp=Z,37nm,1.0s,mb5.3
ELIZ Elizondo 81.49 314 P **P 08 43 11.6 +0.8**
ELIZ pmax pmax
comp=Z,37nm,1.0s,mb5.3
JOHN Johnston Islan 81.52 76 PFAKE
JOHN LR LR 08 43 20.0 +8.6
comp=Z,3µm,22.0s,MS5.6
EMHD Djebel Mahouad 81.58 306 P **P 08 43 12.6 +1.1**
EMOS Mosqueruela 82.10 311 P **P 08 43 14.5 +0.4**
comp=Z,79nm,0.8s,mb5.7
SKAG Skagway 82.48 26 *eP* **P 08 43 16.5 +0.8**
comp=Z,75nm,1.1s,mb5.5
EBNR Beni Rached 82.57 307 P **P 08 43 26.0 +9.3**
ELAN Lanestosa 82.68 315 P **P 08 43 17.9 +0.8**
comp=Z,132nm,1.0s,mb5.9
EBEN Beniarda 82.70 310 P **P 08 43 18.1 +0.8**
comp=Z,83nm,2.2s,mb5.4
ECHA Ech Chlef 82.75 307 P **P 08 43 24.0 +6.4**
ECHE Chera 82.80 311 P **P 08 43 18.5 +0.7**
comp=Z,24nm,0.8s,mb5.3
ECHE Chera 82.80 311 P **P 08 43 18.5 +0.7**
ECHE pmax pmax
comp=Z,24nm,0.8s,mb5.3
ETOR Torete 82.95 312 P **P 08 43 18.1 -0.4**
comp=Z,9.6nm,0.7s,mb4.9
ETOR Torete 82.95 312 P **P 08 43 18.1 -0.4**
ETOR pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
EANR 'Ain N'Sour 83.04 307 P **P 08 43 20.5 +1.4**

ETRT Tiaret 83.15 306 P **P 08 43 19.4 -0.3**
ETOB Tobarra 83.64 310 P **P 08 43 22.9 +0.7**
comp=Z,152nm,1.6s,mb5.9
CART Cartagena 83.77 309 *eP* **P 08 43 22.3 -0.5**
comp=Z,66nm,1.0s,mb5.7
EARI Arriondas 83.77 315 P **P 08 43 25.4 +2.7**
comp=Z,300nm,2.3s,mb6.0
EMUR La Murta 83.81 309 P **P 08 43 23.9 +0.9**
comp=Z,46nm,1.0s,mb5.6
SIT Sitka 84.05 28 *eP* **P 08 43 26.0 +2.1**
comp=Z,77nm,1.0s,mb5.8
SIT Sitka 84.05 28 *eP* **P 08 43 26.0 +2.1**
SIT pmax pmax
comp=Z,77nm,1.0s,mb5.8
EVIA Vianos 84.30 310 P **P 08 43 25.4 -0.1**
comp=Z,62nm,1.0s,mb5.7
EVIA Vianos 84.30 310 P **P 08 43 25.4 -0.1**
EVIA pmax pmax
comp=Z,62nm,1.0s,mb5.7
GUD Guadarrama 84.42 313 P **P 08 43 26.2 0.0**
comp=Z,44nm,0.8s,mb5.6
GUD Guadarrama 84.42 313 P **P 08 43 26.2 +0.1**
GUD pmax pmax
comp=Z,44nm,0.8s,mb5.6
EHUE Huescar 84.76 310 P **P 08 43 28.1 +0.2**
comp=Z,32nm,0.9s,mb5.5
EHUE Huescar 84.76 310 P **P 08 43 28.1 +0.2**
EHUE pmax pmax
comp=Z,32nm,0.9s,mb5.5
ESDC Sonseca Array 84.78 312 P **P 08 43 28.7 +0.8**
comp=Z,27nm,1.1s,mb5.3
ESDC Sonseca Array 84.78 312 P **P 08 43 28.7 +0.8**
comp=Z,6.6nm,0.6s,mb4.9,baz=48,slow=5.5,SNR=60
ESDC LR LR 09 25 19.2
comp=Z,2µm,21.3s,MS5.5,baz=70,slow=38
ESLA Sonseca Array 84.78 312 *eP* **P 08 43 29.2 +1.3**
comp=Z,23nm,1.4s,mb5.1
ESLA LR LR
comp=Z,17µm,20.0s,MS6.4
ENIJ Nijar 84.90 309 P **P 08 43 29.4 +0.8**
comp=Z,15nm,0.7s,mb5.2
ENIJ Nijar 84.90 309 P **P 08 43 29.4 +0.8**
ENIJ pmax pmax
comp=Z,15nm,0.7s,mb5.2
EPON Pontenova 84.97 316 P **P 08 43 30.0 +1.1**
comp=Z,135nm,1.5s,mb5.8
EQES Quesada 85.10 310 P **P 08 43 29.1 -0.5**
comp=Z,135nm,1.2s,mb6.0
PAB San Pablo 85.10 312 *eP* **P 08 43 30.0 +0.5**
comp=Z,20nm,1.0s,mb5.2
PAB LR LR
comp=Z,2µm,22.0s,MS5.5
PAB San Pablo 85.10 312 *eP* **P 08 43 30.0 +0.4**
PAB pmax pmax
comp=Z,19nm,1.0s,mb5.2
PAB MLR MLR
comp=Z,2µm,22.0s,MS5.5
DLBC Dease Lake 85.20 25 *eP* **P 08 43 30.4 +0.7**
DLBC Dease Lake 85.20 25 P **P 08 43 30.0 +0.4**
comp=Z,2.1nm,0.5s,mb4.5,baz=6.6,slow=3.7,SNR=10
EBAN Banos Encina 85.41 310 P **P 08 43 31.8 +0.6**
comp=Z,24nm,0.6s,mb5.5
EBAN Banos Encina 85.41 310 P **P 08 43 31.8 +0.7**
EBAN pmax pmax
comp=Z,24nm,0.6s,mb5.5
EBER Berja 85.42 309 P **P 08 43 32.3 +1.1**
comp=Z,530nm,3.8s
ECAL Calabor 85.44 315 P **P 08 43 32.4 +1.2**
comp=Z,51nm,1.1s,mb5.6
PBRG Braganca 85.51 315 *eP* **P 08 43 32.9 +1.3**
comp=Z,44nm,1.7s,mb5.4
WRAK Wrangell Islan 85.70 27 *eP* **P 08 43 32.7 +0.6**
comp=Z,21nm,0.8s,mb5.4
ECOG Cogollos-Vega 85.70 310 P **P 08 43 33.0 +0.4**
comp=Z,2.8nm,0.5s,mb4.8
MSVF Nonsavu 85.91 112 PFAKE 08 43 40.0 +6.1
MSVF LR LR
comp=Z,2µm,20.0s,MS5.4
EGUA Guajares 85.92 309 P **P 08 43 33.2 -0.5**
comp=Z,310nm,0.9s,mb6.5
EADA Adamuz 85.95 311 P **P 08 43 34.8 +1.0**
comp=Z,107nm,1.7s,mb5.8
EPLA Plasencia 85.98 313 P **P 08 43 33.5 -0.5**
comp=Z,34nm,0.8s,mb5.6
EPLA Plasencia 85.98 313 P **P 08 43 33.5 -0.5**
EPLA pmax pmax
comp=Z,34nm,0.8s,mb5.6
MVO Moncorvo 86.03 314 *eP* **P 08 43 35.1 +1.0**
comp=Z,74nm,1.2s,mb5.8
MVO *e*LQ 09 12 50.5
MVO *e*LR LR 09 18 55.6
comp=Z,2µm,22.0s
MVO Moncorvo 86.03 314 P **P 08 43 35.5 +1.4**
ELUQ Luque 86.04 310 P **P 08 43 33.6 -0.7**
comp=Z,86nm,0.6s,mb6.2
ELUQ Luque 86.04 310 P **P 08 43 33.6 -0.7**
ELUQ pmax pmax
comp=Z,86nm,0.6s,mb6.2
STS Santiago 86.08 316 P **P 08 43 35.7 +1.4**
comp=Z,31nm,1.1s,mb5.5
STS Santiago 86.08 316 P **P 08 43 35.7 +1.4**
STS pmax pmax
comp=Z,31nm,1.1s,mb5.5
ELOJ Sierra Loja 86.17 310 P **P 08 43 34.5 -0.4**
comp=Z,9.3nm,0.7s,mb5.1
ELOJ Sierra Loja 86.17 310 P **P 08 43 34.5 -0.4**
ELOJ pmax pmax
comp=Z,9.0nm,0.7s,mb5.1
EMAZ Mazaricos 86.30 317 P **P 08 43 36.9 +1.4**
comp=Z,103nm,1.3s,mb5.9
ELOB Lobios 86.31 315 P **P 08 43 37.0 +1.4**
comp=Z,87nm,1.4s,mb5.8
PCAB Cabril 86.38 315 *eP* **P 08 43 37.0 +1.1**
comp=Z,88nm,1.1s,mb5.9
MTE Manteigas 86.76 314 *eP* **P 08 43 39.0 +1.2**
comp=Z,76nm,1.3s,mb5.8
MTE *e*S S 08 54 17.6 +1.2
MTE *e*LQ 09 12 58.0
MTE *e*LR LR 09 19 03.6
comp=Z,2µm,18.0s
MTE Manteigas 86.76 314 *eP* **P 08 43 38.9 +1.1**
comp=Z,39nm,1.0s,mb5.6
MTE LR LR
comp=Z,2µm,19.0s,MS5.5
YKA Yellowknife Ar 86.82 16 P **P 08 43 37.0 -0.6**
YKA LR LR 09 22 47.5
YKA Yellowknife Ar 86.82 16 P **P 08 43 37.0 -0.6**
comp=Z,3.4nm,0.5s,mb4.8,baz=334,slow=5.4,SNR=8.1
YKA LR LR 09 22 47.5
comp=Z,664nm,19.1s,MS5.1,baz=205,slow=36
YKA Yellowknife Ar 86.82 16 P **P 08 43 37.0 -0.6**
YKA pmax pmax
comp=Z,3.0nm,0.5s
YKA MLR MLR
comp=Z,664nm,19.1s
EMIJ Mijas 86.89 309 P **P 08 43 37.8 -0.7**
comp=Z,36nm,1.0s,mb5.5
PCBR Castelo Branco 87.02 313 *eP* **P 08 43 40.3 +1.3**
comp=Z,29nm,1.3s,mb5.3
PMRV Marv??o 87.18 313 *eP* **P 08 43 40.9 +1.1**
comp=Z,46nm,2.0s,mb5.4
PMRV *e*LQ 09 13 49.7
PMRV *e*LR LR 09 19 50.6
comp=Z,2µm,20.0s
EBAD Badajoz 87.28 312 P **P 08 43 41.1 +0.7**
comp=Z,92nm,1.8s,mb5.7
EJIF Jimena Fronter 87.43 310 P **P 08 43 40.4 -0.8**
comp=Z,23nm,0.8s,mb5.5
EJIF Jimena Fronter 87.43 310 P **P 08 43 40.4 -0.7**
EJIF pmax pmax
comp=Z,23nm,0.8s,mb5.5
ESPR Espera 87.48 310 P **P 08 43 42.3 +1.0**
comp=Z,25nm,1.3s,mb5.3
EMIN Mina Concepcio 87.57 311 P **P 08 43 42.8 +1.0**
comp=Z,107nm,1.4s,mb5.9
PBAR Barrancos 87.61 312 *eP* **P 08 43 42.3 +0.4**
comp=Z,66nm,1.5s,mb5.7
PBAR *e*SS SS 09 00 32.2 +23
PBAR *e*LQ 09 14 53.5
PBAR *e*LR LR 09 20 27.0
comp=Z,2µm,18.0s
PESTR Estremoz 87.61 313 *eP* **P 08 43 42.5 +0.6**
comp=Z,39nm,1.4s,mb5.4
PESTR *e*LQ 09 13 52.4
PESTR *e*LR LR 09 21 27.7
comp=Z,4µm,18.0s
PTOM Tomar 87.74 314 *eP* **P 08 43 43.3 +0.8**

comp=Z,66nm,1.1s,mb5.8
SFS San Fernando 87.93 310 PFAKE 08 43 50.0 +6.5
SFS LR LR
comp=Z,5µm,21.0s,MS5.9
EVO Evora 88.06 312 *e*P **P 08 43 44.1 0.0**
comp=Z,87nm,1.3s,mb5.5
EVO *e*MLR MLR
comp=Z,3µm,19.8s,MS5.4
EVO Evora 88.06 312 *e*P **P 08 43 45.1 +1.0**
comp=Z,49nm,1.4s,mb5.5
EVOP Sao Brissos 88.14 312 *e*P **P 08 43 45.0 +0.6**
EVOP AMS AMS 09 21 31.1
comp=N,3µm,20.9s
PBEJ Beja 88.24 312 *e*P **P 08 43 46.1 +1.2**
comp=N,50nm,1.3s,mb5.6
EGRO El Granado 88.24 311 P **P 08 43 46.0 +1.0**
comp=N,8.7nm,0.8s,mb5.0
PVAQ Vaqueiros 88.47 311 *e*P **P 08 43 47.1 +1.1**
comp=N,59nm,1.5s,mb5.6
PVAQ *e*LQ 09 15 01.2
PVAQ *e*LR LR 09 21 56.9
comp=N,1µm,18.0s
PCVE Castro Verde 88.56 312 *e*P **P 08 43 46.6 +0.1**
comp=N,42nm,1.5s,mb5.5
PCVE *e*LQ 09 15 14.3
PCVE *e*LR LR 09 22 00.8
comp=N,2µm,20.0s
MESJ Messejana 88.57 312 *e*P **P 08 43 46.3 -0.2**
MESJ *e*SS SS 09 00 25.8 +2.3
MESJ *e*SS SS 09 00 26.1 +2.5
MESJ AMS AMS 09 22 03.3
comp=N,4µm,22.4s
MESJ Messejana 88.57 312 *e*P **P 08 43 46.3 -0.2**
MESJ *e*SS SS 09 00 25.8 +2.3
MESJ Messejana 88.57 312 *e*P **P 08 43 46.2 -0.3**
PMAFR Mafra 88.67 313 *e*P **P 08 43 48.0 +1.0**
comp=N,131nm,1.5s,mb6.0
PMAFR *e*LQ 09 14 09.9
PMAFR *e*LR LR 09 23 30.5
comp=N,3µm,20.0s
PBDV Barranco-do-Ve 88.70 311 *e*P **P 08 43 47.8 +0.7**
comp=N,81nm,1.4s,mb5.9
PBDV *e*LQ 09 14 36.8
PBDV *e*LR LR 09 21 56.0
comp=N,2µm,18.0s
PTEO Sao Teotonio 89.07 312 *e*P **P 08 43 50.2 +1.3**
comp=N,92nm,1.5s,mb5.9
MORF Marmelete 89.15 312 *e*P **P 08 43 50.7 +1.5**
comp=N,72nm,1.3s,mb5.8
MORF *e*S S 08 54 44.5 +5.2
MORF *e*SS SS 09 00 42.4 +10
MORF *e*LQ 09 15 41.2
MORF *e*LR LR 09 20 40.2
comp=N,2µm,20.0s
MORF Marmelete 89.15 312 *e*P **P 08 43 49.9 +0.7**
KIP Kipapa 89.22 67 PFAKE 08 44 00.0 +10
KIP LR LR
comp=Z,2µm,19.0s,MS5.5
PFVI Vila Bisbo 89.36 312 *e*P **P 08 43 50.4 +0.2**
comp=Z,70nm,1.4s,mb5.8
PFVI *e*SS SS 09 00 54.5 +20
PFVI *e*LQ 09 15 06.8
PFVI *e*LR LR 09 22 33.5
comp=Z,3µm,20.0s
PFVI Vila Bisbo 89.36 312 P **P 08 43 51.9 +1.7**
LBTB Lobatse 89.57 242 *e*P **P 08 43 49.7 -1.5**
comp=Z,34nm,1.0s,mb5.6
LBTB LR LR
comp=Z,3µm,20.0s,MS5.8
LBTB Lobatse 89.57 242 *e*P **P 08 43 49.7 -1.6**
LBTB pmax pmax
comp=Z,34nm,1.0s,mb5.6
LBTB MLR MLR
comp=Z,3µm,20.0s,MS5.8
BBB Bella Bella 90.45 28 P **P 08 43 53.5 -1.5**
comp=Z,18nm,1.1s,mb5.3,baz=13,slow=13,SNR=2.4
BOSA Boshof 91.58 239 *e*P **P 08 43 58.7 -1.9**
comp=Z,37nm,1.1s,mb5.6
BOSA LR LR
comp=Z,2µm,19.0s,MS5.6
BOSA Boshof 91.58 239 P **P 08 43 59.0 -1.6**
comp=Z,12nm,0.9s,mb5.3,baz=61,slow=5.9,SNR=8.7
BOSA LR LR 09 25 21.3
comp=Z,1µm,18.1s,MS5.4,baz=54,slow=36
BOSA Boshof 91.58 239 *e*P **P 08 43 58.7 -1.9**
BOSA pmax pmax
comp=Z,37nm,1.1s,mb5.6
BOSA MLR MLR
comp=Z,2µm,19.0s,MS5.6
POHA Pohakuloa 92.06 67 PFAKE 08 44 10.0 +6.9
POHA LR LR
comp=Z,2µm,22.0s,MS5.5
CASY Casey 92.53 177 *e*P **P 08 44 02.9 -1.1**
CASY Casey 92.53 177 *e*P **P 08 44 02.4 -1.6**
comp=Z,290nm,2.1s,mb6.3
CASY LR LR
comp=Z,3µm,21.0s,MS5.7
MIR Mirnyy 92.81 184⇑ *i*P **P 08 44 04.0 -1.3**
MIR pmax pmax
comp=Z,25nm,1.0s,mb5.6
AFI Afiamalu 92.84 104 PFAKE 08 44 20.0 +13
AFI LR LR
comp=Z,2µm,21.0s,MS5.5
TORD Torodi Ar. Bea 93.17 286 P **P 08 44 06.5 -1.7**
comp=Z,3.1nm,0.9s,mb4.8,baz=60,slow=3.8,SNR=14
TORD PP PP 08 47 47.6 -3.8
comp=Z,5.0nm,1.0s,baz=60,slow=7.3,SNR=3.9
TORD PKKPbc PKKPbc 09 01 15.9 +0.1
comp=Z,1.0nm,0.9s,baz=226,slow=1.9,SNR=6.1
TORD LR LR 09 30 37.8
comp=Z,3µm,18.4s,MS5.8,baz=90,slow=38
TSUM Tsumeb 93.44 250 *e*P **P 08 44 08.2 -1.1**
comp=Z,2.9nm,1.1s,mb4.6
TSUM LR LR
comp=Z,2µm,22.0s,MS5.6
EDM Edmonton 95.08 20 *e*P **P 08 44 17.0 +0.7**
SNZO South Karori 95.17 134 PFAKE 08 44 30.0 +13
SNZO LR LR
comp=Z,3µm,20.0s,MS5.7
NLWA Neilton Lookou 95.86 29 PFAKE 08 44 30.0 +10
NLWA LR LR
comp=Z,4µm,22.0s,MS5.8
RPW Rockport 96.04 27 *e*P **P 08 44 22.9 +2.0**
comp=Z,8.1nm,0.7s,mb5.3
FFC Flin Flon 96.72 14 PFAKE 08 44 30.0 +6.2
FFC LR LR
comp=Z,6µm,19.0s,MS6.1
SUR Sutherland 96.73 237 PFAKE 08 44 30.0 +5.9
SUR LR LR
comp=Z,3µm,20.0s,MS5.8
NEW Newport 97.94 25 *e*P **P 08 44 29.6 +0.2**
comp=Z,8.2nm,0.9s,mb5.3
NEW Newport 97.94 25 *e*P **P 08 44 29.6 +0.2**
NEW pmax pmax
comp=Z,8.0nm,0.9s
MAW Mawson 98.04 194 *e*P **P 08 44 27.7 -1.5**
comp=Z,4.0nm,1.0s,mb4.9
MAW Mawson 98.04 194 P **P 08 44 28.1 -1.1**
MAW LR LR 09 25 30.6
MAW Mawson 98.04 194 P **P 08 44 28.1 -1.1**
comp=Z,2.8nm,0.9s,mb4.8,baz=26,slow=8.0,SNR=3.9
MAW LR LR 09 25 30.6
comp=Z,2µm,20.2s,MS5.7,baz=18,slow=34
COR Corvallis 98.26 31 PFAKE 08 44 40.0 +9.1
COR LR LR
comp=Z,3µm,19.0s,MS5.8
HAWA Hanford 98.49 28 PFAKE 08 44 40.0 +8.1
HAWA LR LR
comp=Z,3µm,20.0s,MS5.8
SCHQ Schefferville 98.61 353 P **P 08 44 33.2 +0.9**
comp=Z,4.0nm,0.7s,mb5.0,baz=260,slow=14,SNR=3.7
SCHQ PKiKP PKiKP 08 49 03.5 -0.4
comp=Z,6.0nm,0.8s,baz=9.1,slow=6.0,SNR=4.0
SCHQ LR LR 09 31 42.7
comp=Z,2µm,18.2s,MS5.7,baz=114,slow=37
XMAS Kiritimati 98.64 83 PFAKE 08 44 40.0 +6.7
XMAS LR LR
comp=Z,2µm,20.0s,MS5.6
CMLA Cha da Macela 99.41 320 PFAKE 08 44 50.0 +14
CMLA LR LR
comp=Z,3µm,19.0s,MS5.8
HUMO Hull Mountain 99.93 32 PFAKE 08 44 50.0 +12
HUMO LR LR
comp=Z,2µm,19.0s,MS5.6
SLMT Seeley Lake 100.14 24 *e*Pdif Pdif 08 44 43.4 +4.2
comp=Z,10.0nm,0.9s
MSO Missoula 100.32 24 *e*Pdif Pdif 08 44 41.4 +1.4
comp=Z,9.2nm,1.4s
MSO LR LR
comp=Z,4µm,19.0s,MS6.0
YBH Yreka Blue Hor 100.72 32 PFAKE 08 44 50.0 +8.2
YBH LR LR
comp=Z,2µm,21.0s,MS5.7
EGMT Eagleton 100.73 21 PFAKE 08 44 50.0 +8.1
EGMT LR LR
comp=Z,4µm,19.0s,MS6.0
WDC Whiskeytown Da 101.69 33 PFAKE 08 45 00.0 +14
WDC LR LR
comp=Z,2µm,22.0s,MS5.7
MOD Modoc 101.72 31 PFAKE 08 45 00.0 +14
MOD LR LR
comp=Z,1µm,20.0s,MS5.5
DBIC Dimbokro 101.89 284 PFAKE 08 45 00.0 +13
DBIC LR LR
comp=Z,2µm,19.0s,MS5.8
DGMT Dagmar 101.97 17 PFAKE 08 45 00.0 +13
DGMT LR LR
comp=Z,5µm,22.0s,MS6.0
BOZ Bozeman (W) 102.17 23 PFAKE 08 45 00.0 +12
BOZ LR LR
comp=Z,3µm,20.0s,MS5.8
HOPS Hopland 102.63 34 PFAKE 08 45 00.0 +10
HOPS LR LR
comp=Z,3µm,19.0s,MS5.8
HLID Hailey 102.89 26 *e*Pdif Pdif 08 44 53.5 +2.1
comp=Z,17nm,1.7s
LAO LASA Array 103.02 19 PFAKE 08 45 00.0 +8.0
LAO LR LR
comp=Z,4µm,20.0s,MS5.9
MCCM Marconi Confer 103.37 35 PFAKE 08 45 00.0 +6.4
MCCM LR LR
comp=Z,2µm,21.0s,MS5.7
RLMT Red Lodge 103.44 22 PFAKE 08 45 00.0 +6.1
RLMT LR LR
comp=Z,5µm,21.0s,MS6.0
LKWY Lake 103.54 23 PFAKE 08 45 00.0 +5.7
LKWY LR LR
comp=Z,10µm,21.0s,MS6.3
AGMN Agassiz Nation 104.05 12 PFAKE 08 45 10.0 +13
AGMN LR LR
comp=Z,4µm,20.0s,MS5.9
BMN Battle Mountai 104.29 30 PFAKE 08 45 10.0 +12
BMN LR LR
comp=Z,3µm,20.0s,MS5.9
CMB Columbia Colle 104.71 33 PFAKE 08 45 10.0 +10
CMB LR LR
comp=Z,2µm,22.0s,MS5.7
AHID Auburn Hatcher 104.84 25 PFAKE 08 45 10.0 +10
AHID LR LR
comp=Z,4µm,19.0s,MS6.0
SYO Syowa Base 105.12 199‖ *e*PKiKP 08 49 19.1
SAO San Andreas Ge 105.16 35 PFAKE 08 49 30.0 +14
SAO LR LR
comp=Z,3µm,21.0s,MS5.8
NVAR Mina Array Bea 105.40 32 Pdiff Pdif 08 45 05.8 +3.2
comp=Z,0.2nm,0.6s,baz=325,slow=49,SNR=2.8
NVAR PKiKP PKiKP 08 49 10.5 -6.1
comp=Z,1.4nm,1.0s,baz=295,slow=6.0,SNR=3.6
NVAR PKKPbc PKKPbc 09 00 41.0 -1.1
comp=Z,1.4nm,0.8s,baz=155,slow=4.0,SNR=7.1
BW06 Boulder Array 105.41 23 PFAKE 08 49 30.0 +13
BW06 LR LR
comp=Z,4µm,19.0s,MS5.9
PDAR Pinedale Array 105.41 23 Pdiff Pdif 08 45 06.6 +4.0
comp=Z,0.2nm,0.5s,baz=60,slow=33,SNR=2.2
PDAR PKiKP PKiKP 08 49 13.9 -2.6
comp=Z,1.2nm,1.0s,baz=5.7,slow=6.0,SNR=3.6
PDAR PKKPbc PKKPbc 09 00 41.0 -1.2
comp=Z,0.4nm,0.6s,baz=194,slow=4.3,SNR=3.5
HWUT Hardware Ranch 105.66 25 PFAKE 08 49 30.0 +13
HWUT LR LR
comp=Z,4µm,21.0s,MS5.9
RSSD Black Hills 106.00 19 PFAKE 08 49 30.0 +12
RSSD LR LR
comp=Z,4µm,20.0s,MS5.9
TPH Tonopah 106.19 31 PFAKE 08 49 30.0 +12
TPH LR LR
comp=Z,2µm,22.0s,MS5.6
DUG Dugway 106.37 27 PFAKE 08 49 30.0 +12
DUG LR LR
comp=Z,3µm,19.0s,MS5.9
COWI Conover 107.24 8 PFAKE 08 49 30.0 +10
COWI LR LR
comp=Z,5µm,19.0s,MS6.1
DAC Darwin (Calif) 107.46 33 PFAKE 08 49 30.0 +9.5
DAC LR LR
comp=Z,2µm,22.0s,MS5.7
ECSD EROS Data Cent 108.26 14 PFAKE 08 49 30.0 +8.2
ECSD LR LR
comp=Z,4µm,19.0s,MS6.0
PKME Peaks-Kenny Pk 108.32 353 PFAKE 08 49 30.0 +8.1
PKME LR LR
comp=Z,4µm,20.0s,MS6.0
LONY Lake Ozonia 109.34 357 PFAKE 08 49 30.0 +6.2
LONY LR LR
comp=Z,2µm,19.0s,MS5.8
LBNH Lisbon 109.57 355 PFAKE 08 49 30.0 +5.7
LBNH LR LR
comp=Z,4µm,20.0s,MS6.0
NCB Newcomb 109.98 357 PFAKE 08 49 30.0 +5.0
NCB LR LR
comp=Z,2µm,20.0s,MS5.7
PFO Pinyon Flat Ob 110.16 33 PFAKE 08 49 40.0 +14
PFO LR LR
comp=Z,3µm,20.0s,MS5.9
SBA Scott Base 110.49 168 PFAKE 08 49 30.0 +5.1
SBA LR LR
comp=Z,2µm,20.0s,MS5.7
MVCO Mesa Verde 110.65 26 PFAKE 08 49 40.0 +13
MVCO LR LR
comp=Z,3µm,20.0s,MS5.8
SCIA State Center 110.70 12 PFAKE 08 49 40.0 +14
SCIA LR LR
comp=Z,4µm,20.0s,MS6.0
SDCO Great Sand Dun 111.29 23 PFAKE 08 49 40.0 +12
SDCO LR LR
comp=Z,3µm,20.0s,MS5.9
AAM Ann Arbor 111.54 4 PFAKE 08 49 40.0 +12
AAM LR LR
comp=Z,4µm,21.0s,MS5.9
BINY Binghamton 111.81 358 PFAKE 08 49 40.0 +11
BINY LR LR
comp=Z,3µm,20.0s,MS5.9
ERPA Erie 111.90 2 PFAKE 08 49 40.0 +11
ERPA LR LR
comp=Z,4µm,20.0s,MS6.0
CBKS Cedar Bluff 112.13 18 PFAKE 08 49 40.0 +11
CBKS LR LR
comp=Z,5µm,20.0s,MS6.1
SHEL Horse Pasture 112.46 263 PFAKE 08 49 40.0 +10
SHEL LR LR
comp=Z,2µm,22.0s,MS5.6
HDIL Hopedale 112.67 9 PFAKE 08 49 40.0 +10
HDIL LR LR
comp=Z,3µm,20.0s,MS5.9
KSU1 Kansas State U 112.67 16 PFAKE 08 49 40.0 +10
KSU1 LR LR
comp=Z,5µm,21.0s,MS6.0
ANMO Albuquerque 113.42 25 PKiKP PKiKP 08 49 31.8 0.0
comp=Z,1.5nm,0.7s,baz=306,slow=2.4,SNR=3.1
ANMO PKKPbc PKKPbc 09 00 18.6 +2.2
comp=Z,2.6nm,0.9s,baz=190,slow=4.6,SNR=6.7
ANMO Albuquerque 113.42 25 *i* PKIKP PKiKP 08 49 31.8 0.0
ANMO pmax pmax
comp=Z,2.0nm,0.7s
ANMO pmax pmax
comp=Z,3.0nm,0.9s
ACSO Alum Creek Sta 113.65 4 PFAKE 08 49 40.0 +7.9
ACSO LR LR
comp=Z,4µm,21.0s,MS5.9
PPT Papeete 113.85 99 *e*LQ 09 18 37.9
comp=Z,3µm,25.2s
PPT *e*LR LR 09 23 31.4
comp=Z,2µm,25.0s
TUC Tucson 113.91 30 PFAKE 08 49 40.0 +7.2
TUC LR LR
comp=Z,2µm,20.0s,MS5.8
MCWV Mont Chateau 114.36 1 PFAKE 08 49 40.0 +6.5
MCWV LR LR
comp=Z,5µm,19.0s,MS6.1
CCM Cathedral Cave 114.80 11 PFAKE 08 49 40.0 +5.6
CCM LR LR
comp=Z,5µm,19.0s,MS6.1
AMTX Amarillo 115.17 21 PFAKE 08 49 50.0 +15
AMTX LR LR
comp=Z,4µm,19.0s,MS6.1
WCI Wyandotte Cave 115.34 7 PFAKE 08 49 50.0 +15
WCI LR LR
comp=Z,3µm,21.0s,MS5.9
CBN Corbin 115.82 359 PFAKE 08 49 50.0 +14
CBN LR LR
comp=Z,4µm,19.0s,MS6.1
QSPA South Pole Qui 116.10 180 PFAKE 08 49 50.0 +14
QSPA LR LR
comp=Z,2µm,20.0s,MS5.8
MNTX Cornudas Mount 116.72 26 *e*PKPdf PKPdf 08 49 37.7 -0.6
MNTX LR LR
comp=Z,3µm,19.0s,MS5.9
BLA Blacksburg 116.78 2 PFAKE 08 49 50.0 +12
BLA LR LR
comp=Z,4µm,20.0s,MS6.0
WVT Waverly 117.22 9 *e*PKPdf PKPdf 08 49 38.5 -0.6
MIAR Mount Ida 117.73 14 *e*PKPdf PKPdf 08 49 39.3 -0.8
TKL Tuckaleechee C 118.14 5 PKP PKPdf 08 49 39.8 -1.1
comp=Z,2.4nm,0.7s,baz=131,slow=6.1,SNR=6.9
TKL Tuckaleechee C 118.14 5 *e*PKIKP PKPdf 08 49 39.7 -1.2
CPCT Cooper Cave 118.28 6 *e*PKPdf PKPdf 08 49 39.9 -1.2
OXF Oxford 118.57 11 PFAKE 08 49 50.0 +8.2
OXF LR LR
comp=Z,5µm,19.0s,MS6.1
CNNC Cliffs of the 118.79 360 PFAKE 08 49 50.0 +7.8
CNNC LR LR
comp=Z,3µm,20.0s,MS5.9
TAOE Nuku Hiva Isla 118.90 86 *e*LR LR 09 26 03.1
comp=Z,2µm,29.5s
TXAR Lajitas Array 119.49 26 PKP PKPdf 08 49 42.5 -1.2
TXAR PP PP 08 51 07.0 +3.0
TXAR Lajitas Array 119.49 26 PKP PKPdf 08 49 42.5 -1.2
comp=Z,1.0nm,0.5s,baz=164,slow=0.2,SNR=31
TXAR PP PP 08 51 07.0 +3.0
comp=Z,2.9nm,1.0s,baz=355,slow=1.5,SNR=3.7
TXAR Lajitas Array 119.49 26 PKIKP PKPdf 08 49 42.5 -1.2
TXAR 08 51 07.0
TXAR pmax pmax
comp=Z,3.0nm,1.0s
JCT Junction City 119.84 22 *e*PKPdf PKPdf 08 49 43.8 -0.5
NATX Nacogdoches 120.13 16 PFAKE 08 49 50.0 +5.2
NATX LR LR
comp=Z,5µm,21.0s,MS6.1
BBSR BB Station 120.26 347 PFAKE 08 49 50.0 +4.9
BBSR LR LR
comp=Z,2µm,20.0s,MS5.7
LRAL Lakeview Retre 120.38 9 *e*PKPdf PKPdf 08 49 43.6 -1.7
LRAL LR LR
comp=Z,4µm,20.0s,MS6.0
GOGA Godfrey 120.39 5 PFAKE 08 50 00.0 +15
GOGA LR LR
comp=Z,4µm,19.0s,MS6.1
VBMS Vicksburg 120.61 12 PFAKE 08 50 00.0 +14
VBMS LR LR
comp=Z,5µm,19.0s,MS6.2
NHSC New Hope 120.88 2 PFAKE 08 50 00.0 +14
NHSC LR LR
comp=Z,4µm,19.0s,MS6.1
HKT Hockley 121.54 18 *e*PKPdf PKPdf 08 49 47.3 -0.2
HKT LR LR
comp=Z,7µm,20.0s,MS6.3
BRAL Brewton 122.36 9 PFAKE 08 50 00.0 +11
BRAL LR LR
comp=Z,3µm,20.0s,MS6.0
KVTX Kingsville 123.17 21 PFAKE 08 50 00.0 +9.2
KVTX LR LR
comp=Z,4µm,19.0s,MS6.1
DWPF Disney 125.80 4 PFAKE 08 50 10.0 +14
DWPF LR LR
comp=Z,3µm,22.0s,MS6.0
RKT Rikitea 128.59 99 *e*LQ 09 24 56.2
comp=Z,2µm,33.5s
RKT *e*LR LR 09 30 26.3
comp=Z,3µm,24.5s
GRTK Grand Turk 131.99 351 PFAKE 08 50 20.0 +12
GRTK LR LR
comp=Z,2µm,22.0s,MS5.9
TEIG Tepich 132.70 13 PFAKE 08 50 20.0 +11
TEIG LR LR
comp=Z,3µm,20.0s,MS6.0
ANWB Willy Bob 133.50 338 PFAKE 08 50 20.0 +9.4
ANWB LR LR
comp=Z,1µm,20.0s,MS5.6
GTBY Guantanamo Bay 133.95 356 PFAKE 08 50 20.0 +8.5
GTBY LR LR
comp=Z,2µm,22.0s,MS5.9
SJG San Juan 134.34 344 PFAKE 08 50 20.0 +7.8
SJG LR LR
comp=Z,2µm,20.0s,MS5.7
SDDR Presa de Saban 134.50 351 PFAKE 08 50 20.0 +7.5
SDDR LR LR
comp=Z,3µm,20.0s,MS6.1
RCBR Riachuelo 134.91 289 PFAKE 08 50 20.0 +6.6
RCBR LR LR
comp=Z,1µm,20.0s,MS5.7
MTDJ Mount Denham 135.73 359 PFAKE 08 50 20.0 +5.2
MTDJ LR LR
comp=Z,3µm,20.0s,MS6.0
FDF Fort de France 136.00 336 PFAKE 08 50 30.0 +15
FDF LR LR
comp=Z,2µm,22.0s,MS5.7
BBGH Gun Hill 136.84 333 PFAKE 08 50 30.0 +13
BBGH LR LR
comp=Z,3µm,22.0s,MS5.9
GRGR Grenville 138.57 335 PFAKE 08 50 30.0 +10
GRGR LR LR
comp=Z,2µm,20.0s,MS5.9
TGUH Tegucigalpa,Un 138.90 14 PFAKE 08 50 30.0 +9.3
TGUH LR LR
comp=Z,2µm,20.0s,MS5.8
PMSA Palmer Station 140.48 189 PFAKE 08 50 30.0 +8.0
PMSA LR LR
comp=Z,1µm,21.0s,MS5.7
PCRV Puerto La Cruz 141.44 338 PKP PKPdf 08 50 26.5 +1.1
comp=Z,6.5nm,0.6s,baz=48,slow=1.4,SNR=4.7
JTS JuntasAbangare 143.02 11 PFAKE 08 50 40.0 +12
JTS LR LR
comp=Z,2µm,22.0s,MS5.8
SDV Santo Domingo 144.27 347 *e*PKPdf PKPdf 08 50 27.9 -2.5
SDV LR LR
comp=Z,617nm,20.0s,MS5.4
BCIP Isla Barro Col 144.70 3 *e*PKPdf PKPdf 08 50 29.1 -2.1
BCIP LR LR
comp=Z,2µm,20.0s,MS5.8
CAM4 Nova Friburgo 147.44 269⇓ *i*P PKPdf 08 50 38.4 +2.9
CAM4 *i* 08 50 40.5
CAM4 *i* 08 50 44.4
CAM4 *i* 08 50 50.5
CAM4 *i* 08 50 55.6
CAM4 *i* 08 51 12.9
CAM4 *i* 08 51 55.5
CAM4 *i* 08 52 08.8
ROSC El Rosal 148.81 353 *e*PKPbc PKPbc 08 50 41.5 -0.4
ROSC El Rosal 148.81 353 PKPbc PKPbc 08 50 42.9 +1.0
comp=Z,72nm,0.6s,baz=113,slow=2.0,SNR=27
PAYG Puerto Ayora 151.94 27 PFAKE 08 50 50.0 +7.0
PAYG LR LR
comp=Z,2µm,21.0s,MS5.8
SPB Sao Paulo 152.09 269 *e*PKPbc PKPbc 08 50 48.4 -1.0
SPB LR LR
comp=Z,2µm,20.0s,MS5.9
OTAV Otavalo 153.61 1 *e*PKPdf PKPdf 08 50 46.5 +1.1
OTAV *e*PKPbc PKPbc 08 50 53.3 +0.1
OTAV *e*PKPab PKPab 08 51 04.6 -0.8
OTAV LR LR
comp=Z,1µm,22.0s,MS5.6
ATAH Atahualpa 160.93 1 PKP PKPdf 08 50 59.5 +4.9
comp=Z,4.1nm,0.6s,baz=160,slow=7.3,SNR=3.1
ATAH PKPab PKPab 08 51 41.9 +5.0
comp=Z,10nm,0.7s,baz=334,slow=10.0,SNR=3.7
SIV San Ignacio 161.11 300 PKP PKPdf 08 50 53.1 -1.6
comp=Z,1.4nm,0.9s,baz=118,slow=5.7,SNR=5.9
SIV PKPab PKPab 08 51 38.6 +0.9
comp=Z,8.0nm,0.9s,baz=62,slow=4.4,SNR=9.7
CPUP Villa Florida 161.37 265 PKP PKPdf 08 50 53.4 -1.3
CPUP PKPab PKPab 08 51 37.6 -1.2
CPUP LR LR
comp=Z,392nm,20.0s
CPUP Villa Florida 161.37 265 PKP PKPdf 08 50 53.4 -1.3
comp=Z,5.3nm,1.1s,baz=18,slow=3.7,SNR=3.9
CPUP PKPab PKPab 08 51 37.6 -1.2

comp=Z,5.1nm,1.0s,baz=52,slow=3.2,SNR=3.3
CPUP Villa Florida 161.37 265 PKIKP PKPdf 08 50 53.4 -1.3
CPUP 08 51 37.6
CPUP pmax pmax
comp=Z,5.0nm,1.1s
CPUP pmax pmax
comp=Z,5.0nm,1.0s
TRQA Tornquist 162.04 225 PFAKE 08 51 00.0 +5.0
TRQA LR LR
comp=Z,2μm,20.0s
PLCA Paso Flores 164.31 202 PKP PKPdf 08 50 56.5 -0.6
PLCA PKPab PKPab 08 51 49.4 -1.7
PLCA LR LR
comp=Z,997nm,20.0s
PLCA Paso Flores 164.31 202 PKP PKPdf 08 50 56.5 -0.6
comp=Z,4.3nm,0.9s,baz=340,slow=0.9,SNR=3.1
PLCA PKPab PKPab 08 51 49.4 -1.7
comp=Z,11nm,1.0s,baz=176,slow=3.9,SNR=6.5
PLCA Paso Flores 164.31 202 PKIKP PKPdf 08 50 56.6 -0.5
PLCA 08 51 49.4
PLCA pmax pmax
comp=Z,4.0nm,1.0s
PLCA pmax pmax
comp=Z,11nm,1.0s
NNA Nana 165.70 355 PFAKE 08 51 10.0 +11
NNA LR LR
comp=Z,2μm,21.0s
LPAZ La Paz 166.38 315 PKP PKPdf 08 50 59.4 -0.1
comp=Z,2.2nm,0.9s,baz=59,slow=4.9,SNR=11
LPAZ PKPab PKPab 08 52 00.8 -0.1
comp=Z,5.5nm,0.9s,baz=42,slow=7.7,SNR=4.0
LPAZ La Paz 166.38 315 ePKIKP PKPdf 08 50 59.3 -0.2
LPAZ MLR MLR
comp=Z,2μm,19.0s
CFAA Coronel Fontan 169.88 236 PKP PKPdf 08 51 00.7 -0.8
CFAA PKPab PKPab 08 52 14.0 -2.1
CFAA Coronel Fontan 169.88 236 PKP PKPdf 08 51 00.7 -0.8
comp=Z,0.2nm,0.8s,baz=358,slow=2.4,SNR=5.5
CFAA PKPab PKPab 08 52 14.0 -2.1
comp=Z,1.9nm,0.9s,baz=118,slow=3.7,SNR=10
LCO Las Campanas 172.90 246 PFAKE 08 51 10.0 +6.9
LCO LR LR
comp=Z,2μm,21.0s

MAN 30 08:44:06, 9.2°N×125.6°E, h1km, mb4.6, ML3.4, MS3.4, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**0.28**	**145**	*e*P	Pg	08 44 12.1	+0.6
BUTP				*e*S	Sg	08 44 18.5	+3.3
SCPH	**Surigao**	**0.58**	**3**	*i* P	Pg	08 44 17.5	+0.5
SCPH				*i* S	Sg	08 44 27.2	+2.7
CGP	**Cagayan de Oro**	**1.06**	**225**↑	*e*P	Pg	08 44 27.5	+1.2
CGP				*e*S	Sg	08 44 43.8	+3.8
TBP	**Tagbilaran**	**1.65**	**287**↑	*e*P	Pn	08 44 36.5	+0.4
TBP				*i* S	Sn	08 44 59.7	+1.9
DMPH	**Davao City--Mi**	**2.11**	**179**↑	*e*P	Pn	08 44 43.5	+1.0
DMPH				*e*S	Sn	08 45 13.1	+3.9
PAGZ	**Pagadian**	**2.45**	**237**	*e*P	Pn	08 44 49.0	+1.8
GUIM	**Jordan**	**3.16**	**297**	*e*P	Pn	08 44 57.5	+0.7
CNP	**Catarman**	**3.38**	**347**	*e*P	Pn	08 45 03.1	+3.2

*IDC **30** 08:49:30.7±1.4, 26°.20N×101°.96E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/23, mbtmp3.8/4, MS4.7/1, Ms1 4.7/1, ms1mx3.5/33, Error ellipse: s-maj=76.9km s-min=24.4km az=61.0*
*BJI **30** 08:49:31.7, 26°.34N×101°.88E, h14km, ML3.8/6*
ISC 30 08:49:32.4±0.9, 26°.27N±0°.05×102°.1E±0°.1, h10km, n8, σ0°78/9, mb3.8/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**1.28**	**152**	Pg	**Pg**	**08 49 56.5**	**-0.6**
KMI				Sg	**Sg**	**08 50 14.0**	**+0.3**
KMI				smax			
	comp=N,690nm,0.5s						
KMI				smax			
	comp=E,690nm,0.9s						
CD2	**Chengdu**	**4.86**	**17**	Pg	**Pn**	**08 50 49.8**	**+4.3**
CD2				Sn	**Sn**	**08 51 47.5**	**+5.7**
CD2				Sg	**Sg**	**08 52 08.0**	**-0.4**
CD2				smax			
	comp=N,170nm,0.8s						
CD2				smax			
	comp=E,110nm,0.7s						
CMAR	**Chiang Mai Arr**	**8.30**	**201**	Pg	Px	08 52 06.0	
	comp=E,0.6nm,0.3s,baz=357,slow=16,SNR=5.9						
CMAR				Lg		08 53 55.6	
	comp=E,0.3nm,0.3s,baz=16,slow=27,SNR=8.7						
SONM	**Songino Array**	**21.80**	**8**	P	**P**	**08 54 25.6**	**+1.1**
	comp=E,0.5nm,0.4s,mb3.3,baz=186,slow=10,SNR=3.7						
JOW	**Kunigami**	**23.42**	**83**	LR	LR	09 04 18.8	
	comp=E,2μm,18.7s,baz=180,slow=38						
MKAR	**Makanchi Array**	**25.80**	**328**	P	**P**	**08 55 04.2**	**+0.6**
	comp=E,1.4nm,0.6s,mb3.6,baz=133,slow=11,SNR=12						
WRA	**Warramunga Arr**	**55.59**	**143**	P	**P**	**08 59 08.4**	**0.0**
	comp=E,0.6nm,0.5s,mb3.9,baz=332,slow=8.4,SNR=11						
FINES	**FINESS Array B**	**60.64**	**328**	P	**P**	**08 59 42.0**	**-1.3**
	comp=E,1.8nm,0.9s,mb4.2,baz=66,slow=8.2,SNR=4.5						

*NIED **30** 09:28:00, 35°.40N×135°.90E, h38km, Mw4.3 Best double couple: M₀2.66000×10¹⁵ NP1:ϕs190.00000°, δ58.00000°, λ139.00000°. NP2:ϕs305.00000°, δ56.00000°, λ40.00000°.*
*IDC **30** 09:28:28.4±0.7, 35°.28N×135°.85E, h0km, mb3.8/12, mb1 4.0/15, mb1mx3.9/28, mbtmp3.8/15, ML3.7/3, Error ellipse: s-maj=17.0km s-min=12.6km az=168.0*
*ISCJB **30** 09:28:29.4±0.6, 35°.38N±0°.04×135°.86E±0°.03, h12km±3km, mb3.9/14, Error ellipse: s-maj=7.1km s-min=4.1km az=2.0*
*NEIC **30** 09:28:30.1, 35°.42N×135°.86E, h14km, mb4.0/2, After JMA.*
NEIC Recorded [3 JMA] in Fukui and Shiga; [2 JMA] in Kyoto; [1 JMA] in Aichi, Gifu, Hyogo, Ishikawa, Mie, Nara, Okayama and Osaka.
*JMA **30** 09:28:30.1, 35°.42N×135°.86E, h15km±1km, M4.2 Broadband fault plane solution: P waves. NP1: ϕs315.00000°, δ57.00000°, λ24.00000°. NP2: ϕs211.00000°, δ70.00000°, λ145.00000°. Principal axes: T Plg39.0000°, Azm169.0000°; N Plg50.0000°, Azm5.0000°; P Plg8.0000°, Azm265.0000°;*
JMA Felt III J1.
ISC 30 09:28:30.0±0.6, 35°.38N±0°.04×135°.87E±0°.03, h6km±4km, n24, σ0°97/34, mb3.9/14, 1C-3D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFM	**Mihama**	**0.17**	**32**	↑P	**Pg**	**09 28 33.9**	**+0.4**
JFM				S	**Sg**	**09 28 36.4**	**+0.5**
JWT	**Wachi**	**0.40**	**256**	↓P	**Pg**	**09 28 37.9**	**+0.2**
JWT				S	**Sg**	**09 28 43.1**	**+0.3**
JEG	**Eigenji**	**0.49**	**120**	↓P	**Pg**	**09 28 40.1**	**+0.6**
JEG				S	**Sg**	**09 28 47.0**	**+1.1**
JKY	**Yasaka**	**0.67**	**292**	↓P	**Pg**	**09 28 42.7**	**-0.2**
JKY				S	**Sg**	**09 28 51.5**	**-0.2**
MAJO	**Matsushiro**	**2.22**	**58**	*e*Pn	**Pn**	**09 29 07.2**	**-0.2**
MAJO				*e*Sg	**Sg**	**09 29 40.4**	**-1.0**
MAT	**Matsushiro**	**2.22**	**58**	P	**Pn**	**09 29 06.8**	**-0.6**
MAT				*e*S	**Sn**	**09 29 35.9**	**+0.7**
MJAR	**Matsushiro Arr**	**2.22**	**58**	Pn	**Pn**	**09 29 07.7**	**+0.3**
	44nm,0.3s,baz=239,slow=15,SNR=149						
MJAR				Pg	**Pg**	**09 29 11.9**	**-0.7**
	197nm,0.3s,baz=236,slow=18,SNR=484						
MJAR				Lg		09 29 41.4	
	22nm,0.3s,baz=246,slow=28,SNR=5.8						
JHJ	**Hachijo jima 2**	**3.95**	**124**	Pn	**Pn**	**09 29 30.8**	**-0.4**
	23nm,0.3s,baz=229,slow=9.9,SNR=14						
JHJ				Sn	**Sn**	**09 30 18.7**	**+0.9**
	14nm,0.3s,baz=62,slow=23,SNR=2.9						
JNU	**Nakatsue**	**4.71**	**243**	*e*Pn	**Pn**	**09 29 42.3**	**+0.7**
JNU				*e*Sg	**Sg**	**09 30 57.4**	**-3.8**
KSRS	**Korea Array**	**6.73**	**290**	Pn	**Pn**	**09 30 08.5**	**-0.9**
	0.4nm,0.3s,baz=103,slow=15,SNR=3.8						
KSRS				Sn	**Sn**	**09 31 28.4**	**+2.0**
	0.8nm,0.3s,baz=113,slow=23,SNR=5.2						
SONM	**Songino Array**	**25.14**	**309**	P	**P**	**09 33 55.7**	**0.0**
	5.0nm,1.0s,mb4.0,baz=116,slow=8.9,SNR=18						
MKAR	**Makanchi Array**	**41.22**	**303**	P	**P**	**09 36 14.7**	**-0.8**
	1.2nm,0.7s,mb3.6,baz=94,slow=9.8,SNR=16						
KKAR	**Karatay Array**	**50.06**	**300**	P	**P**	**09 37 24.7**	**-0.8**
	0.6nm,0.5s,mb3.9						
ILAR	**Eielson Array**	**53.26**	**31**	P	**P**	**09 37 47.8**	**-1.4**
	0.4nm,0.7s,mb3.5,baz=262,slow=5.3,SNR=6.3						
WRA	**Warramunga Arr**	**55.04**	**182**	P	**P**	**09 38 00.5**	**-2.0**
	0.8nm,0.5s,mb4.0,baz=359,slow=7.9,SNR=15						
ABKAR	**Akbulak array**	**55.55**	**310**	*e*P	**P**	**09 38 08.3**	**+2.3**
	1.6nm,0.7s,mb4.2						
ASAR	**Alice Springs**	**58.75**	**182**	P	**P**	**09 38 27.5**	**-1.3**
	0.3nm,0.7s,mb3.4,baz=19,slow=11,SNR=5.0						
FINES	**FINESS Array B**	**68.13**	**331**	P	**P**	**09 39 32.0**	**+1.5**
	1.2nm,0.8s,mb4.0,baz=115,slow=9.0,SNR=4.8						
GNI	**Garni**	**69.03**	**305**	P	**P**	**09 39 37.9**	**+1.4**
	2.7nm,0.4s,mb4.6,baz=163,slow=15,SNR=2.0						
NOA	**NORSAR Array B**	**73.89**	**335**	P	**P**	**09 40 03.9**	**-1.6**
	1.6nm,1.0s,mb3.9,baz=44,slow=5.9,SNR=4.3						
BRTR	**Keskin Array B**	**76.50**	**309**	P	**P**	**09 40 21.4**	**+0.5**
	2.0nm,1.2s,mb3.9,baz=112,slow=6.0,SNR=4.3						
NVAR	**Mina Array Bea**	**79.53**	**50**	P	**P**	**09 40 38.0**	**+0.2**
	0.3nm,0.8s,mb3.3,baz=324,slow=4.5,SNR=3.2						
PDAR	**Pinedale Array**	**81.97**	**43**	P	**P**	**09 40 50.4**	**-0.3**
	0.5nm,0.6s,mb3.6,baz=318,slow=2.0,SNR=3.7						
TXAR	**Lajitas Array**	**94.64**	**49**	P	**P**	**09 41 52.2**	**+0.1**
	0.6nm,0.8s,mb4.1,baz=295,slow=2.8,SNR=5.7						

*ISCJB **30** 09:38:05.9±1.4, 5°.28S±0°.09×147°.1E±0°.1, h188km±15km, mb3.8/7, Error ellipse: s-maj=26.2km s-min=10.6km az=28.3*
*NEIC **30** 09:38:08.7±1.9, 5°.35S×147°.09E, h205km±20km, mb3.7/1, Error ellipse: s-maj=23.6km s-min=15.2km az=129.0*
*IDC **30** 09:38:12.0±2.8, 5°.46S×147°.09E, h238km±26km, mb3.5/7, mb1 3.8/9, mb1mx3.6/16, mbtmp3.5/9, Error ellipse: s-maj=36.2km s-min=10.0km az=117.0*
ISC 30 09:38:09.2±1.2, 5°.5S±0°.1×147°.2E±0°.2, h210km±14km, n16, σ1°03/19, mb3.7/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.89**	**180**	*e*Pn	**Pn**	**09 39 09.9**	**-0.1**
PMG				*e*S	**Sn**	**09 39 56.4**	**-1.6**
COEN	**Coen**	**9.28**	**205**	*e*Pn	**Pn**	**09 40 20.7**	**+1.7**
COEN				*e*Sn	**Sn**	**09 42 02.9**	**-0.3**
CTA	**Charters Tower**	**14.54**	**183**	P	**Pn**	**09 41 27.8**	**+2.4**
	0.5nm,0.3s,baz=358,slow=14,SNR=5.1						
CTAO	**Charters Tower**	**14.54**	**183**	*e*Pn	**Pn**	**09 41 27.3**	**+1.9**
	1.5nm,0.4s						
KAKA	**Kakadu**	**16.19**	**243**	*e*P	**P**	**09 41 44.7**	**0.0**
	20μm,2.6s						
WRA	**Warramunga Arr**	**19.02**	**220**	P	**P**	**09 42 15.9**	**+0.5**
	3.8nm,0.3s,baz=43,slow=11,SNR=76						
WRA				S	**S**	**09 45 39.1**	**-1.0**
	baz=40,slow=20,SNR=4.6						
ASAR	**Alice Springs**	**22.12**	**214**	P	**P**	**09 42 48.5**	**+0.8**
	11nm,0.8s,mb4.5,baz=48,slow=7.8,SNR=131						
ASAR				S	**S**	**09 46 36.0**	**-0.1**
	0.9nm,0.8s,baz=29,slow=19,SNR=4.5						
FITZ	**Fitzroy Crossi**	**24.46**	**237**	P	**P**	**09 43 09.3**	**+0.2**
	28nm,0.4s,baz=52,slow=7.8,SNR=141						
PETK	**Petropavlovsk-**	**59.05**	**7**	P	**P**	**09 47 47.6**	**+0.6**
	1.1nm,0.5s,mb3.8,baz=159,slow=7.7,SNR=7.1						
SONM	**Songino Array**	**64.03**	**331**	P	**P**	**09 48 21.1**	**+0.7**
	0.8nm,0.8s,mb3.4,baz=142,slow=5.6,SNR=3.9						
MKAR	**Makanchi Array**	**77.20**	**320**	P	**P**	**09 49 39.6**	**-0.3**
	0.3nm,0.4s,mb3.3,baz=99,slow=7.5,SNR=3.6						
ZALV	**Zalesovo Beam**	**78.66**	**328**	P	**P**	**09 49 46.0**	**-1.8**
ZALV	**Zalesovo Beam**	**78.66**	**328**	P	**P**	**09 49 46.0**	**-1.8**
	1.1nm,0.3s,mb3.9,baz=111,slow=8.3,SNR=3.6						
ILAR	**Eielson Array**	**84.96**	**23**	P	**P**	**09 50 18.6**	**-1.7**
	0.6nm,0.6s,mb3.5,baz=252,slow=5.0,SNR=19						
NVAR	**Mina Array Bea**	**96.94**	**52**	P	**P**	**09 51 17.4**	**+0.4**
	0.3nm,0.7s,mb3.7,baz=258,slow=4.4,SNR=3.7						
TORD	**Torodi Ar. Bea**	**145.10**	**285**	PKPbc	PKPbc	09 57 21.3	-1.2
	0.9nm,0.5s,baz=65,slow=3.5,SNR=15						

*ISCJB **30** 09:41:13.6±1.3, 26°.35N±0°.04×102°.3E±0°.1, h11km±8km, mb3.6/5, Error ellipse: s-maj=16.6km s-min=6.1km az=7.0*
*IDC **30** 09:41:14.2±1.2, 26°.33N×102°.40E, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.4/24, mbtmp3.5/5, Error ellipse: s-maj=36.1km s-min=19.4km az=85.0*
*NEIC **30** 09:41:15.6±0.7, 26°.36N×102°.38E, h10km, mb4.2/1, Error ellipse: s-maj=27.2km s-min=11.5km az=92.0*
*BJI **30** 09:41:16.0, 26°.30N×101°.96E, h10km, mb4.0/1, mb3.7/1, ML3.6/10, Ms3.6/1, Ms7 3.2/1*
ISC 30 09:41:16.1±1.4, 26°.30N±0°.04×102°.2E±0°.1, h14km±9km, n11, σ1°03/15, mb3.6/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**1.26**	**158**	Pg	**Pg**	**09 41 38.5**	**-1.9**
KMI				Sg	**Sg**	**09 41 56.8**	**0.0**
KMI				smax			
	comp=N,940nm,0.4s						
KMI				smax			
	comp=E,760nm,0.3s						
KMI				LR	LR		
	comp=N,2μm,3.8s						
KMI				LR	LR		
	comp=E,1μm,3.8s						
GYA	**Guiyang**	**4.00**	**87**	Pn	**Pn**	**09 42 22.8**	**+5.7**
GYA				Pg	**Pg**	**09 42 34.3**	**+1.5**
GYA				smax			
	comp=N,20nm,0.6s						
GYA				smax			
	comp=E,40nm,0.7s						
CD2	**Chengdu**	**4.80**	**16**	Pn	**Pn**	**09 42 32.0**	**+4.0**
CD2				Sg	**Sg**	**09 43 50.0**	**-0.1**
CD2				smax			
	comp=N,190nm,0.9s						
CD2				smax			
	comp=E,240nm,1.1s						
CMAR	**Chiang Mai Arr**	**8.36**	**202**	Pn	**Pn**	**09 43 18.9**	**+1.8**
	baz=18,slow=12,SNR=6.3						
CMAR				Pg	Pn	09 43 49.5	+33
	comp=E,0.5nm,0.3s,baz=8.4,slow=16,SNR=6.5						
CMAR				Lg		09 45 41.0	
	comp=E,0.5nm,0.3s,baz=22,slow=2,SNR=10						
XAN	**Xi'an**	**9.66**	**35**	P	**Pn**	**09 43 35.5**	**+0.8**
XAN				S	**Sn**	**09 45 22.5**	**-0.6**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,60nm,11.2s						
XAN				LR	LR		
	comp=N,190nm,10.4s						
XAN				LR	LR		
	comp=E,140nm,8.9s						
XAN				LR	LR		
	comp=Z,130nm,11.2s						
SONM	**Songino Array**	**21.75**	**8**	P	**P**	**09 46 07.7**	**+0.5**
	comp=Z,1.0nm,0.9s,mb3.2,baz=187,slow=10,SNR=4.0						
ULN	**Ulaanbaatar**	**21.87**	**9**	*e*P	**P**	**09 46 07.0**	**-1.4**
	comp=Z,3.2nm,0.3s,mb4.2						
MKAR	**Makanchi Array**	**25.84**	**328**	P	**P**	**09 46 47.0**	**-0.1**
MKAR	**Makanchi Array**	**25.84**	**328**	P	**P**	**09 46 47.0**	**-0.1**
	comp=Z,0.7nm,0.7s,mb3.3,baz=139,slow=11,SNR=6.7						
WRA	**Warramunga Arr**	**55.54**	**143**	P	**P**	**09 50 50.6**	**-0.6**
	comp=Z,0.7nm,0.5s,mb3.9,baz=332,slow=8.3,SNR=7.7						
ASAR	**Alice Springs**	**58.37**	**146**	P	**P**	**09 51 11.3**	**+0.1**
	comp=Z,0.4nm,0.8s,mb3.5,baz=327,slow=7.1,SNR=4.0						

*ISCJB **30** 09:48:59.5±1.3, 32°.02N±0°.04×48°.53E±0°.05, h9km±9km, Error ellipse: s-maj=7.4km s-min=5.3km az=34.5*
*KISR **30** 09:48:59.0±1.0, 32°.10N×48°.54E, h44km±999km, ML3.0*
*TEH **30** 09:49:00.7, 32°.11N×48°.46E, h2km*
ISC 30 09:48:59.5±1.8, 32°.04N±0°.04×48°.48E±0°.06, h2km±12km, n14, σ0°72/18, Western Iran

JMA 30 09:46:35.8, 35°.42N×135°.86E, h14km±1km, M2.8, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFM	**Mihama**	**0.15**	**43**	P	Pg	09 46 39.5	-0.1
JFM				S	Sg	09 46 42.2	0.0
JWT	**Wachi**	**0.40**	**250**	P	Pg	09 46 43.6	-0.2
JWT				S	Sg	09 46 48.8	-0.4
JKY	**Yasaka**	**0.65**	**289**	P	Pg	09 46 48.3	-0.2
JKY				S	Sg	09 46 57.1	0.0
MAT	**Matsushiro**	**2.21**	**59**	P	Pn	09 47 13.4	+1.4
MAT				*e*S	Sn	09 47 41.2	+2.1

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IPIR	**Pirpir**	**2.14**	**72**	*e*Sg	**Sg**	**09 50 07.3**	**-1.1**
IKOM	**Komasi**	**2.28**	**339**	*e*Pn	**Pn**	**09 49 38.8**	**+0.7**
IKOM				*e*		09 49 42.8	
	comp=Z,2μm,0.2s						
MIB	**Mutribah**	**2.43**	**204**	*e*P	**Pn**	**09 49 40.0**	**-0.2**
MIB				*e*S	**Sn**	**09 50 09.9**	**-0.6**
MIB				AML	AML	09 50 16.0	
	comp=Z,92nm,0.6s						
IGHG	**Ghaleghazi**	**2.79**	**326**	*e*Pn	**Pn**	**09 49 45.5**	**+0.4**
IGHG				*e*		09 51 02.3	
	comp=Z,2μm,0.4s						
IKLH	**Kolahrood**	**2.91**	**63**	*e*Pn	**Pn**	**09 49 48.1**	**+1.3**
IKLH				*e*		09 49 55.3	
	comp=Z,1μm,0.2s						
IKLH				*e*Sn	**Sn**	**09 50 22.5**	**+0.1**
NAY	**Al-Naaiem**	**2.98**	**201**	*e*P	**Pn**	**09 49 47.3**	**-0.4**
NAY				*e*S	**Sn**	**09 50 24.4**	**+0.4**
NAY				AML	AML	09 50 30.4	
	comp=Z,19nm,0.5s						
IGAR	**Gharneh**	**3.04**	**82**	*e*Pn	**Pn**	**09 49 49.6**	**+0.9**
IGAR				*e*		09 49 57.9	
	comp=Z,911nm,0.2s						
ILIN	**Lien**	**3.14**	**337**	*e*Pn	**Pn**	**09 49 49.6**	**-0.3**
ILIN				*e*		09 50 44.5	
	comp=N,1μm,0.2s						
IDHR	**Dehrash**	**3.18**	**327**	*e*	**Sg**	**09 50 47.7**	**+6.1**
	comp=Z,2μm,0.2s						
QRN	**Al-Qurain**	**3.32**	**188**	*e*P	**Pn**	**09 49 52.2**	**-0.2**
QRN				*e*S	**Sn**	**09 50 32.1**	**-0.3**
QRN				AML	AML	09 50 32.4	
	comp=Z,42nm,0.4s						
IZEF	**Zefreh**	**3.37**	**74**	*e*Pn	**Pn**	**09 49 54.0**	**+0.9**
IZEF				*e*		09 50 03.5	
	comp=Z,896nm,0.3s						
IRAZ	**Razeghan**	**3.57**	**19**	*e*Sn	**Sn**	**09 50 36.9**	**-1.7**
IVRN	**Varamin**	**4.01**	**42**	*e*Pn	**Pn**	**09 50 02.0**	**+0.1**
IVRN				*e*		09 50 22.7	
	comp=Z,325nm,0.3s						
IDMV	**Damavand**	**4.61**	**39**	*e*Pn	**Pn**	**09 50 10.1**	**0.0**
IDMV				*e*		09 51 49.7	
	comp=Z,320nm,0.4s						

*ISCJB **30** 10:06:08.6±1.5, 22°.03S±0°.08×176°.8W±0°.1, h228km±15km, mb4.0/12, Error ellipse: s-maj=18.9km s-min=12.1km az=24.4*
*NEIC **30** 10:06:10.6±1.4, 21°.84S×176°.85W, h233km±13km, mb4.4/3, Error ellipse: s-maj=17.6km s-min=11.6km az=130.0*
*IDC **30** 10:06:10.3±2.9, 21°.83S×176°.86W, h229km±30km, mb3.9/9, mb1 4.0/11, mb1mx3.8/20, mbtmp3.9/11, MS4.0/2, Ms1 4.0/2, ms1mx3.4/24, Error ellipse: s-maj=25.3km s-min=15.0km az=133.0*
ISC 30 10:06:10.8±1.5, 21°.9S±0°.1×176°.8W±0°.1, h233km±15km, n29, σ0°99/29, mb4.0/12, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.33**	**309**	*e*Pn	**Pn**	**10 07 42.6**	**-0.3**
	30nm,0.9s						
AFI	**Afiamalu**	**9.24**	**32**	P	**Pn**	**10 08 20.0**	**+0.1**
AFI				S	**S**	**10 09 47.7**	**-16**
AFI	**Afiamalu**	**9.24**	**32**	P	**Pn**	**10 08 20.0**	**+0.1**
	4.3nm,0.3s,baz=32,slow=20,SNR=9.7						
AFI				S	**S**	**10 09 47.7**	**-16**
	4.7nm,0.3s,baz=64,slow=20,SNR=3.8						
DZM	**Mont Dzumac**	**15.53**	**266**	*e*P	**Pn**	**10 09 41.1**	**+3.0**
	30nm,0.9s						
URZ	**Urewera**	**17.17**	**196**	P	**P**	**10 09 53.7**	**-1.6**
	1.5nm,0.3s,baz=39,slow=3.6,SNR=8.9						
URZ				S	**S**	**10 12 53.3**	**-8.7**
	1.8nm,0.3s,baz=256,slow=22,SNR=9.8						
RPZ	**Rata Peaks**	**24.02**	**202**	P	**P**	**10 11 05.4**	**+1.0**
RPZ	**Rata Peaks**	**24.02**	**202**	P	**P**	**10 11 05.4**	**+1.0**
	50nm,1.4s,mb5.0,baz=26,slow=21,SNR=5.2						
ARMA	**Armidale**	**29.51**	**247**	*e*P	**P**	**10 11 54.5**	**+0.9**
EIDS	**Eidsvold**	**29.59**	**257**	*e*P	**P**	**10 11 55.2**	**+1.0**
	11nm,1.4s,mb4.3						
CTA	**Charters Tower**	**34.48**	**266**	*e*P	**P**	**10 12 37.4**	**+0.5**
	7.8nm,0.4s,mb4.6						
CTA	**Charters Tower**	**34.48**	**266**	P	**P**	**10 12 37.4**	**+0.5**
CTA				LR	LR	10 24 09.5	
CTA	**Charters Tower**	**34.48**	**266**	P	**P**	**10 12 37.4**	**+0.5**
	11nm,0.6s,mb4.6,baz=102,slow=9.7,SNR=20						
CTA				LR	LR	10 24 09.5	
	comp=Z,327nm,21.2s,baz=244,slow=31						
STKA	**Stephens Creek**	**38.22**	**246**	*e*P	**P**	**10 13 08.2**	**-0.2**
	3.1nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**38.22**	**246**	P	**P**	**10 13 08.1**	**-0.4**
	4.3nm,0.6s,mb4.2,baz=98,slow=8.9,SNR=9.5						
ASAR	**Alice Springs**	**45.30**	**258**	P	**P**	**10 14 05.2**	**-0.5**
	11nm,0.8s,mb4.2,baz=90,slow=8.3,SNR=76						
WRA	**Warramunga Arr**	**45.52**	**263**	P	**P**	**10 14 06.5**	**-1.1**
WRA				LR	LR	10 31 59.1	
WRA	**Warramunga Arr**	**45.52**	**263**	P	**P**	**10 14 06.5**	**-1.1**
	1.4nm,0.3s,mb3.8,baz=93,slow=8.0,SNR=65						
WRA				LR	LR	10 31 59.1	
	comp=Z,155nm,22.0s,baz=185,slow=34						
KAKA	**Kakadu**	**49.12**	**272**	*e*P	**P**	**10 14 34.5**	**-0.7**
	4.6nm,0.4s,mb4.2						
KAKA	**Kakadu**	**49.12**	**272**	*e*P	**P**	**10 14 34.4**	**-0.9**
FITZ	**Fitzroy Crossi**	**53.95**	**263**	*e*P	**P**	**10 15 10.6**	**-0.4**
	10nm,1.1s,mb4.3						
MJAR	**Matsushiro Arr**	**71.94**	**323**	P	**P**	**10 17 07.1**	**-1.8**
MJAR	**Matsushiro Arr**	**71.94**	**323**	P	**P**	**10 17 07.1**	**-1.8**
	0.7nm,0.4s,mb3.6,baz=161,slow=5.3,SNR=4.2						
TXAR	**Lajitas Array**	**86.86**	**57**	P	**P**	**10 18 30.2**	**+0.9**
TXAR	**Lajitas Array**	**86.86**	**57**	P	**P**	**10 18 30.2**	**+0.9**
	0.5nm,0.9s,mb3.2,baz=197,slow=3.9,SNR=5.0						
ILAR	**Eielson Array**	**89.38**	**12**	P	**P**	**10 18 40.5**	**+0.2**
	1.0nm,1.0s,mb3.6,baz=228,slow=6.6,SNR=8.9						
CMAR	**Chiang Mai Arr**	**91.60**	**289**	P	**P**	**10 18 52.7**	**+0.9**
	0.4nm,0.3s,mb3.8,baz=105,slow=3.2,SNR=4.1						
AKASG	**Malin Array Be**	**144.72**	**331**	PKP	PKPdf	10 25 17.8	-1.6
	0.9nm,0.5s,baz=40,slow=4.2,SNR=9.0						
CLL	**Collm**	**149.62**	**348**	↓P	PKPbc	10 25 33.0	+0.6

41nm,0.7s
CNGZ Carnagh Statio 10.23 200 PN **Pn** **10 36 26.8 -3.7**
MWZ Matawai 10.31 203 PN **Pn** **10 36 25.9 -5.6**
MWZ SN **Sn** **10 38 25.8 +0.3**
URZ Urewera 10.39 205 *e*Pn **Pn** **10 36 34.4 +1.7**
22nm,0.7s
URZ Sn **Sn** **10 38 24.8 -2.8**
URZ Urewera 10.39 205 Pn **Pn** **10 36 27.6 -5.1**
0.6nm,0.3s,baz=355,slow=18,SNR=11
URZ Sn **Sn** **10 38 24.8 -2.8**
13nm,0.3s,baz=212,slow=21,SNR=12
URZ Urewera 10.39 205 PN **Pn** **10 36 28.2 -4.4**
BKZ Black Stump Fm 11.42 205 PN **Pn** **10 36 41.0 -5.7**
MSVF Nonsavu 11.90 338 *e*Pn **Pn** **10 36 52.2 -1.2**
58nm,0.8s
MSVF Nonsavu 11.90 338 Pn **Pn** **10 36 52.9 -0.5**
460nm,0.9s,SNR=5.3
BFZ Birch Farm 12.85 202 PN **Pn** **10 37 05.0 -1.2**
BFZ SN **Sn** **10 39 22.8 -4.8**
MRZ Mangatainoka R 13.06 204 PN **Pn** **10 37 05.5 -3.7**
MRZ SN **Sn** **10 39 23.5 -9.3**
OGWZ Otaki Gorge 13.35 205 PN **Pn** **10 37 11.0 -2.1**
NNZ Nelson 14.41 209 SN **Sn** **10 39 57.3 -8.3**
KHZ Kahutara 15.35 206 Pn **Pn** **10 37 42.3 +2.8**
50nm,0.7s
KHZ *e*Sn **Sn** **10 40 18.5 -10**
AFI Afiamalu 15.81 20 Pn **Pn** **10 37 35.5 -10**
AFI Sn Sn 10 40 15.9 -24
AFI Afiamalu 15.81 20 Pn **Pn** **10 37 35.5 -10**
2.9nm,0.3s,baz=163,slow=21,SNR=4.8
AFI Sn Sn 10 40 15.9 -24
6.8nm,0.3s,baz=85,slow=23,SNR=6.2
DZM Mont Dzumac 16.12 291 *e*P **Pn** **10 37 55.7 +6.3**
130nm,1.3s
DZM *e*LR LR 10 41 41.4
4µm,25.3s
DZM Mont Dzumac 16.12 291 *e*P **Pn** **10 37 54.8 +5.4**
NOUC Port Laguerre 16.22 291 *e*P **Pn** **10 37 55.6 +4.9**
MQZ McQueen's Vall 16.79 206 SN **Sn** **10 40 47.7 -15**
RPZ Rata Peaks 17.44 209 *e*Pn **Pn** **10 38 04.9 -0.8**
RPZ *e*Sn **Sn** **10 41 01.8 -17**
RPZ Rata Peaks 17.44 209 P **Pn** **10 38 04.5 -1.2**
3.2nm,0.3s,baz=181,slow=1.7,SNR=17
RAR Rarotonga 17.68 68 P **Pn** **10 38 03.0 -5.8**
3.2nm,0.3s,baz=213,slow=13,SNR=4.4
RAR S S 10 41 03.3 -26
3.4nm,0.3s,baz=85,slow=18,SNR=3.7
RAR LR LR 10 42 37.1
comp=Z,1µm,21.7s,baz=224,slow=30
JCZ Jackson Bay 18.75 213 *e*PN **Pn** **10 38 17.8 -3.9**
ARMA Armidale 26.94 259 *e*P **P** **10 39 46.0 +3.4**
ARMA Armidale 26.94 259 *e*P **P** **10 39 45.8 +3.1**
24nm,0.9s,mb4.7
PPT Papeete 27.85 72 *e*LQ 10 45 16.3
965nm,24.8s
PPT *e*LR LR 10 46 49.8
2µm,26.0s,baz=242
PPT Papeete 27.85 72 LR LR 10 49 02.5
comp=Z,339nm,20.3s,MS3.9,baz=227,slow=32
EIDS Eidsvold 28.25 270 *e*P **P** **10 39 55.6 +1.2**
12nm,0.8s,mb4.6
EIDS *e*pP pP 10 40 11.5 +3.2
HNR Honiara 28.79 308 LR LR 10 49 33.1
comp=Z,242nm,20.1s,MS3.8,baz=290,slow=32
CNB Canberra Magne 29.80 249 *e*P **P** **10 40 02.2 +3.0**
CAN Canberra 29.10 249 *e*P **P** **10 40 04.4 +2.6**
29nm,1.1s,mb4.9
CAN Canberra 29.10 249 *e*P **P** **10 40 04.4 +2.6**
CAN pmax pmax
comp=Z,29nm,1.1s,mb4.9
TOO Toolangi 32.07 245 *e*P **P** **10 40 30.2 +2.1**
CTA Charters Tower 34.14 277 *e*P **P** **10 40 47.5 +1.2**
comp=Z,31nm,0.7s,mb5.3
CTA Charters Tower 34.14 277 LR LR 10 53 23.1
comp=Z,1µm,18.5s,MS4.6,baz=22,slow=34
CTAO Charters Tower 34.14 277 *e*P **P** **10 40 47.9 +1.7**
comp=Z,47nm,0.8s,mb5.5
CTAO Charters Tower 34.14 277 *e*P **P** **10 40 47.9 +1.6**
CTAO pmax pmax
comp=Z,47nm,0.8s,mb5.5
STKA Stephens Creek 35.37 255 *e*P **P** **10 40 58.3 +1.5**
comp=Z,18nm,0.7s,mb5.1
STKA Stephens Creek 35.37 255 *e*P **P** **10 40 58.1 +1.4**
comp=Z,4.2nm,0.7s,mb4.5
STKA Stephens Creek 35.37 255 P **P** **10 40 58.6 +1.9**
comp=Z,23nm,0.7s,mb5.2,baz=95,slow=9.7,SNR=42
STKA LR LR 10 53 15.8
comp=Z,814nm,18.4s,MS4.5,baz=59,slow=32
RKT Rikitea 38.38 91 *e*LR LR 10 51 49.9
comp=Z,1µm,26.2s,baz=257
BBOO Buckleboo 39.92 252 *e*P **P** **10 41 35.5 +0.3**
comp=Z,271nm,1.7s,mb5.7
TAOE Nuku Hiva Isla 40.23 68 *e*LR LR 10 52 14.7
comp=Z,979nm,28.2s
ASAR Alice Springs 43.76 265 P **P** **10 42 06.7 0.0**
comp=Z,12nm,0.6s,mb4.8,baz=97,slow=7.0,SNR=178
ASAR PcP PcP 10 43 54.8 +2.2
comp=Z,2.4nm,0.6s,baz=104,slow=4.8,SNR=3.5
WRA Warramunga Arr 44.62 270 P **P** **10 42 13.7 +0.1**
comp=Z,38nm,0.8s,mb5.3,baz=108,slow=8.0,SNR=202
WRA PcP PcP 10 43 58.0 +2.3
comp=Z,6.1nm,0.7s,baz=110,slow=3.1,SNR=5.7
WRA S **S** **10 48 50.4 +4.6**
comp=Z,1.5nm,0.9s,baz=109,slow=15,SNR=3.7
WRA LR LR 10 59 05.0
comp=Z,463nm,20.5s,MS4.4,baz=105,slow=34
WRA Warramunga Arr 44.62 270 P **P** **10 42 13.7 +0.2**
WRA 10 43 58.0
WRA S **S** **10 48 50.4 +4.6**
FORT Forrest 46.97 254 *e*P **P** **10 42 30.1 -1.9**
comp=Z,63nm,0.8s,mb5.6
FORT Forrest 46.97 254 *e*P **P** **10 42 31.8 -0.2**
comp=Z,79nm,0.8s,mb5.7
KAKA Kakadu 49.24 278 ⇓*i*P **P** **10 42 48.9 -0.8**
comp=Z,12nm,0.6s,mb5.1
KAKA Kakadu 49.24 278 *e*P **P** **10 42 48.8 -0.9**
comp=Z,31nm,0.6s,mb5.5
SBA Scott Base 49.55 184 *e*P **P** **10 42 56.4 +5.1**
comp=Z,84nm,0.9s,mb5.8
SBA Scott Base 49.55 184 *e*P **P** **10 42 56.4 +5.2**
SBA pmax pmax
comp=Z,84nm,0.9s,mb5.8
FITZ Fitzroy Crossi 52.93 268 *e*P **P** **10 43 17.0 -0.3**
comp=Z,53nm,0.9s,mb5.5
FITZ Fitzroy Crossi 52.93 268 *e*P **P** **10 43 17.1 -0.2**
comp=Z,56nm,1.1s,mb5.4
FITZ *e*pP pP 10 43 29.6 -2.5
FITZ Fitzroy Crossi 52.93 268 LR LR 11 05 35.7
comp=Z,447nm,20.7s,MS4.5,baz=129,slow=36
KLBR Kellerberrin 55.36 250 *e*P **P** **10 43 29.3 -5.6**
comp=Z,113nm,1.3s,mb5.7
NWAO Narrogin (SRO) 55.44 248 LR LR 11 06 28.6
comp=Z,318nm,20.9s,MS4.4,baz=122,slow=35
GUMO Guam 55.83 314 LR LR 11 03 49.3
comp=Z,135nm,20.6s,MS4.0,baz=95,slow=32
CASY Casey 56.70 207 ⇑*i*P **P** **10 43 44.7 +0.8**
CASY Casey 56.70 207 *e*P **P** **10 43 45.0 +1.1**
comp=Z,48nm,0.8s,mb5.6
CASY *e*PcP PcP 10 44 40.9 +1.5
MBWA Marble Bar 56.95 262 *e*P **P** **10 43 45.3 -1.0**
comp=Z,72nm,1.0s,mb5.7
RPN Rapa Nui 59.31 106 LR LR 11 05 35.0
comp=Z,139nm,18.2s,MS4.1,baz=221,slow=32
QSPA South Pole Qui 61.19 180 P **P** **10 44 18.3 +3.5**
comp=Z,22nm,0.9s,mb5.3,baz=38,slow=1.8,SNR=53
WSI Waingapu 61.21 275 P PcP 10 45 05.6 +7.4
comp=Z,4.5nmcomp=Z,783nm,0.5s
BKSI Bulukumba 63.43 279 P **P** **10 44 29.9 -0.9**
MIR Mirnyy 63.69 207 *e*P **P** **10 44 33.0 +1.3**
MIR pmax pmax
comp=Z,43nm,1.2s,mb5.3
TTSI Tana Toraja 64.83 281 P **P** **10 44 44.7 +4.8**
PCJ Palu 65.90 283 P **P** **10 44 53.6 +6.7**
SRBI Singaraja 66.39 274 P **P** **10 44 50.4 +0.4**
GMJI Gumukmas 67.85 273 P **P** **10 44 59.3 0.0**
comp=Z,0.2nmcomp=Z,52nm,1.1s,mb5.5
PCJI Pacitan 69.87 272 P **P** **10 45 12.3 +0.4**
comp=Z,0.5nmcomp=Z,142nm,1.1s,mb5.8
PMSA Palmer Station 73.39 156 LR LR 11 09 45.3
comp=Z,139nm,21.1s,MS4.2,baz=242,slow=29
LEM Lembang 73.63 271 P **P** **10 45 35.7 +1.3**
MAW Mawson 73.88 200 ⇑*i*P **P** **10 45 37.1 +2.1**
comp=Z,12nm,1.1s,mb4.8
MAW Mawson 73.88 200 *e*P **P** **10 45 37.2 +2.2**
comp=Z,9.5nm,1.4s,mb4.5
MAW Mawson 73.88 200 P **P** **10 45 37.2 +2.2**
comp=Z,16nm,0.9s,mb5.0,baz=125,slow=7.0,SNR=39
MAW Mawson 73.88 200 *e*P **P** **10 45 37.2 +2.2**
MAW pmax pmax
comp=Z,10.0nm,1.4s
KSM Kuching 75.30 280 *e*P **P** **10 45 43.8 -0.3**
comp=Z,19nm,1.0s,mb5.0
USHA Ushuaia 76.83 146 LR LR 11 10 49.8
comp=Z,204nm,21.0s,MS4.4,baz=258,slow=29
MJAR Matsushiro Arr 77.35 325 P **P** **10 45 53.9 -1.3**
comp=Z,12nm,0.8s,mb4.9,baz=162,slow=5.3,SNR=28
MAJO Matsushiro 77.35 325 *e*P **P** **10 45 53.9 -1.2**
comp=Z,15nm,0.8s,mb5.0
MAJO Matsushiro 77.35 325 *e*P **P** **10 45 53.9 -1.3**
MAJO pmax pmax
comp=Z,15nm,0.8s,mb5.0
MAT Matsushiro 77.35 325 P **P** **10 45 53.9 -1.3**
SYO Syowa Base 78.68 193 ⇓*e*P **P** **10 46 02.2 0.0**
SYO Syowa Base 78.68 193 ⇓*e*PcP PcP 10 46 09.0 -1.9
TPUB Ta-pu 79.10 304 *e*P **P** **10 46 00.0 -5.1**
comp=Z,15nm,0.9s,mb4.9
ERM Erimo 79.43 331 *e*P **P** **10 46 06.5 0.0**
ERM pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
VNA3 Neumayer Olymp 79.74 176 *e*P **P** **10 46 06.8 -1.1**
VNA3 *e* 10 46 12.8
VNA3 *e* pP 10 46 22.7 -0.9
VNA3 *e* 10 46 31.9
VNA2 Neumayer--Watz 80.18 177 *e*P **P** **10 46 09.6 -0.7**
baz=169,slow=3.9
VNA2 *e* 10 46 16.4
VNA2 *e* pP 10 46 25.5 -0.5
MAIT Maitri 80.38 183 *e*P **P** **10 46 12.1 +0.7**
NVL N'lazarevskaya 80.38 183 *e*P **P** **10 46 12.6 +1.2**
NVL pmax pmax
comp=Z,27nm,1.5s,mb5.0
VNA1 Neumayer--Stat 80.41 176 *e*P **P** **10 46 11.1 -0.4**
VNA1 *e* 10 46 17.5
VNA1 *e* pP 10 46 26.5 -0.7
ASAJ Asahikawa 81.39 332 *e*P **P** **10 46 17.5 +0.5**
comp=Z,13nm,0.9s,mb4.9
PLCA Paso Flores 83.11 133 P **P** **10 46 28.9 +2.6**
PLCA PKKPbc PKKPbc 11 04 44.7 -2.3
PLCA Paso Flores 83.11 133 P **P** **10 46 28.9 +2.6**
comp=Z,2.5nm,1.0s,mb4.2,baz=216,slow=15,SNR=3.3
PLCA PKKPbc PKKPbc 11 04 44.7 -2.3
comp=Z,1.2nm,0.4s,baz=130,slow=3.3,SNR=9.1
KSRS Korea Array 83.58 319 P **P** **10 46 28.6 +0.1**
comp=Z,7.2nm,0.8s,mb4.8,baz=137,slow=5.7,SNR=30
KSRS LR LR 11 23 44.8
comp=Z,78nm,18.4s,MS4.1,baz=20,slow=36
YSS Yuzh-Sakhalins 83.66 334 ⇑*e*P **P** **10 46 28.0 -0.7**
YSS *e* pP 10 46 41.9 -2.6
YSS pmax pmax
comp=Z,60nm,1.0s,mb5.7
BAR Barrett 84.07 48 *e*P **P** **10 46 30.4 -0.8**
comp=Z,22nm,1.6s,mb5.0
MWC Mount Wilson 84.18 46 *e*P **P** **10 46 31.3 -0.4**
comp=Z,13nm,1.3s,mb4.9
MWC Mount Wilson 84.18 46 *e*P **P** **10 46 31.3 -0.4**
MWC pmax pmax
comp=Z,13nm,1.3s,mb4.9
MURC Murrieta 84.32 47 ⇓P **P** **10 46 32.2 -0.2**
baz=84
MONP Monument Peak 84.36 48 ⇓P **P** **10 46 33.0 +0.3**
baz=84
DVTC Desert V Tower 84.42 48 ⇓P **P** **10 46 32.3 -0.7**
baz=84
BFSC Mount Baldy Ra 84.44 46 ⇑P **P** **10 46 32.6 -0.4**
baz=84
PETK Petropavlovsk- 84.52 345 P **P** **10 46 31.7 -1.2**
comp=Z,33nm,0.7s,mb5.6,baz=113,slow=6.6,SNR=106
VES Vestal, Richgr 84.60 44 ⇑P **P** **10 46 32.8 -1.0**
baz=85
EDW2 Edwards Air Fo 84.65 45 ⇓P **P** **10 46 34.0 0.0**
baz=85
PFO Pinyon Flat Ob 84.80 47 ⇑P **P** **10 46 35.1 +0.2**
baz=85
PFO Pinyon Flat Ob 84.80 47 *e*P **P** **10 46 35.1 +0.2**
comp=Z,9.2nm,1.2s,mb4.8
PFO Pinyon Flat Ob 84.80 47 *e*P **P** **10 46 35.1 +0.2**
PFO pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
IPM Ipoh 84.82 278 *e*P **P** **10 46 35.0 -0.5**
comp=Z,10.0nm,0.6s,mb5.1
ISA Isabella 84.86 44 ⇓P **P** **10 46 35.1 0.0**
baz=85
ISA Isabella 84.86 44 *e*P **P** **10 46 35.1 0.0**
comp=Z,17nm,1.1s,mb5.1
ISA Isabella 84.86 44 *e*P **P** **10 46 35.1 0.0**
ISA pmax pmax
comp=Z,17nm,1.1s,mb5.1
QIZ Qiongzhong 84.87 295 P **P** **10 46 40.5 +5.0**
LRMC Laurel Mountai 85.22 45 ⇑P **P** **10 46 37.3 +0.3**
CMB Columbia Colle 85.29 42 *e*P **P** **10 46 36.7 -0.6**
comp=Z,14nm,0.9s,mb5.1
CMB Columbia Colle 85.29 42 *e*P **P** **10 46 36.7 -0.5**
CMB pmax pmax
comp=Z,14nm,0.9s,mb5.1
BELC Belle Mtn. Jos 85.34 47 ⇓P **P** **10 46 37.9 +0.4**
baz=85
BC3 Big Chuckawall 85.47 48 ⇓P **P** **10 46 38.6 +0.4**
baz=86
HEC Hector,Ludlow 85.66 46 ⇑P **P** **10 46 39.3 +0.1**
baz=86
GSC Goldstone 85.66 46 ⇑P **P** **10 46 39.1 0.0**
baz=86
GSC Goldstone 85.66 46 *e*P **P** **10 46 39.0 -0.1**
comp=Z,15nm,1.1s,mb5.1
GSC Goldstone 85.66 46 *e*P **P** **10 46 39.0 -0.1**
GSC pmax pmax
comp=Z,15nm,1.1s,mb5.1
NJ2 Nanjing 85.71 310 *e*P **P** **10 46 40.5 +1.1**
NJ2 pmax pmax
comp=Z,20nm,0.8s,mb5.4
MPMC Manual Prospec 85.72 45 ⇓P **P** **10 46 39.5 +0.1**
baz=86
WDC Whiskeytown Da 85.82 39 *e*P **P** **10 46 39.1 -0.6**
comp=Z,26nm,1.1s,mb5.4
WDC Whiskeytown Da 85.82 39 *e*P **P** **10 46 39.1 -0.7**
WDC pmax pmax
comp=Z,26nm,1.1s,mb5.4
MTUM Tungsten Hills 85.92 43 *e*P **P** **10 46 40.0 -0.3**
MTUM *e*pP pP 10 46 56.7 +0.5
IRM Iron Mountain 85.99 47 ⇑P **P** **10 46 40.8 0.0**
baz=86
113A Mohawk Valley, 86.03 49 ⇑P **P** **10 46 41.3 +0.3**
baz=86
GMRC Granite Mounta 86.05 47 ⇓P **P** **10 46 40.9 -0.2**
baz=86
WAKR Walker 86.16 42 *e*P **P** **10 46 41.6 +0.1**
TUQ Turquoise Moun 86.30 46 ⇑P **P** **10 46 42.6 +0.3**
baz=86
Z13A Yuma Proving G 86.37 49 ⇑P **P** **10 46 42.8 +0.1**
baz=86,SNR=5.3
SHOC Shoshone 86.37 45 ⇓P **P** **10 46 42.4 -0.2**
baz=86
FURC Furnace Creek, 86.38 45 ⇓P **P** **10 46 42.6 0.0**
baz=86
GRAC Grapevine Rang 86.41 44 ⇓P **P** **10 46 43.1 +0.3**
baz=86
WCN Washoe City 86.51 41 ⇓P **P** **10 46 43.2 0.0**
baz=87
YBH Yreka Blue Hor 86.53 38 *e*P **P** **10 46 43.2 0.0**
comp=Z,16nm,1.2s,mb5.1
YBH Yreka Blue Hor 86.53 38 LR LR 11 15 40.7
comp=Z,208nm,20.8s,MS4.5,baz=177,slow=29
YBH Yreka Blue Hor 86.53 38 *e*P **P** **10 46 43.3 +0.1**
YBH pmax pmax
comp=Z,16nm,1.2s
LDFC Landfair 86.59 47 *e*P **P** **10 46 44.2 +0.5**
Y13A Saiome 86.63 48 ⇑P **P** **10 46 44.3 +0.4**
baz=87,SNR=10
U10A Ash Meadows, A 86.67 45 ⇓P **P** **10 46 44.6 +0.5**
baz=87
NVAR Mina Array Bea 86.78 42 P **P** **10 46 44.2 -0.3**
comp=Z,8.7nm,0.8s,mb5.0,baz=221,slow=8.2,SNR=50
NVAR PKKPbc PKKPbc 11 04 40.9 +1.1
comp=Z,0.9nm,0.8s,baz=64,slow=3.4,SNR=8.4
V11A Goodsprings 86.86 46 ⇑P **P** **10 46 45.3 +0.3**
baz=87,SNR=5.8
Z14A Wintersburg 86.94 49 ⇑P **P** **10 46 46.0 +0.5**
baz=87
PAHR Pah Rah Range 86.99 41 *e*P **P** **10 46 45.3 -0.3**
comp=Z,8.0nm,0.9s,mb5.0
115A Sonoran Desert 87.01 50 ⇓P **P** **10 46 46.3 +0.5**
baz=87
V12A Nelson 87.16 46 ⇓P **P** **10 46 46.9 +0.4**
baz=87,SNR=5.1
217A Green Valley 87.42 51 ⇑P **P** **10 46 48.2 +0.4**
baz=88
SHPR Sheep Range 87.45 46 *e*P **P** **10 46 48.2 +0.4**
S10A Tonopah Range, 87.47 44 P **P** **10 46 47.9 0.0**
baz=88,SNR=26
X14A Yava 87.65 48 ⇓P **P** **10 46 49.6 +0.8**
baz=88,SNR=9.3
Y15A Casa Rosa Ranc 87.70 49 ⇓P **P** **10 46 49.4 +0.3**
baz=88,SNR=9.2
MDJ Mudanjiang 87.72 325 P **P** **10 46 48.0 -0.9**
MDJ pmax pmax
comp=Z,17nm,1.2s,mb5.2
MDJ pmax pmax
comp=Z,68nm,10.9s
MDJ LR LR
comp=N,81nm,25.5s,MS4.1
MDJ LR LR
comp=E,69nm,30.0s,MS4.1
MDJ LR LR
comp=Z,170nm,21.8s
TUC Tucson 87.76 51 *e*P **P** **10 46 49.9 +0.5**
comp=Z,13nm,1.4s,mb5.0
TUC Tucson 87.76 51 *e*P **P** **10 46 49.9 +0.5**
TUC pmax pmax
comp=Z,13nm,1.4s,mb5.0
318A Bisbee 87.79 52 ⇑P **P** **10 46 50.0 +0.4**
baz=88,SNR=5.5
V13A Grand Canyon W 87.79 47 ⇓P **P** **10 46 49.7 +0.2**
baz=88,SNR=8.2
U12A Valley of Fire 87.80 46 ⇑P **P** **10 46 49.9 +0.4**
baz=88,SNR=7.2
S11A Rachel 87.81 44 ⇑P **P** **10 46 49.7 +0.2**
baz=88,SNR=5.4
T11A Corn Creek, Al 87.88 45 ⇓P **P** **10 46 50.3 +0.4**
baz=88
R10A Warm Springs 87.88 44 ⇑P **P** **10 46 50.0 +0.1**
baz=88,SNR=12
WHN Wuhan 87.90 307 P **P** **10 46 51.0 +0.9**
Z16A Peralta Trail, 87.94 50 P **P** **10 46 50.9 +0.6**
baz=88,SNR=5.9
MOD Modoc 87.95 39 *e*P **P** **10 46 49.4 -0.7**
comp=Z,8.9nm,0.9s,mb5.0
W14A Seligman 87.97 48 P **P** **10 46 51.3 +0.9**
baz=88,SNR=9.3
HABR Khabarovsk 88.03 331 *ce*P **P** **10 46 48.2 -2.1**
HABR *e**PP pP 10 46 58.6 -7.6
HABR *e**SP sP 10 47 02.5 -10
HABR *e* 10 50 13.1
HABR *e*S SKSac 10 57 12.9 -0.8
HABR *e* 10 57 27.1
HABR SS SS 11 03 15.6 -3.6
HABR *e*SSS 11 06 49.3
HABR MLR MLR
comp=Z,64nm,16.0s,MS4.1
218A Dragoon 88.06 52 P **P** **10 46 51.6 +0.7**
baz=88,SNR=7.1
X15A Humboldt 88.09 49 ⇓P **P** **10 46 51.8 +0.8**
baz=88,SNR=9.5
U13A Pakoon Wash 88.15 46 ⇓P **P** **10 46 51.8 +0.6**
baz=88,SNR=14
Q10A Clear Creek Ra 88.17 43 ⇑P **P** **10 46 51.7 +0.5**
baz=88,SNR=6.1
K05A Summer Lake 88.19 38 ⇑P **P** **10 46 51.3 +0.1**
baz=88,SNR=8.1
V14A Boquillas Ranc 88.22 47 ⇓P **P** **10 46 52.1 +0.6**
baz=88,SNR=10.0
Y16A Circle Bar Ran 88.22 49 ⇑P **P** **10 46 52.2 +0.6**
baz=88,SNR=13
319A Douglas 88.25 53 ⇓P **P** **10 46 52.7 +0.9**
baz=88
S12A Delamar Landin 88.34 45 ⇓P **P** **10 46 52.6 +0.5**
baz=88,SNR=12
R11A Troy Canyon, C 88.36 44 ⇑P **P** **10 46 51.7 -0.4**
baz=88,SNR=5.0
118A Homack Ranch, 88.51 51 P **P** **10 46 53.9 +0.9**
baz=89,SNR=8.0
Y17A Roosevelt 88.54 50 ⇓P **P** **10 46 53.8 +0.7**
baz=89,SNR=7.0
T13A Saint George 88.56 46 ⇑P **P** **10 46 53.8 +0.7**
baz=89,SNR=6.7
X16A Lo Mia Camp, P 88.57 49 ⇑P **P** **10 46 53.9 +0.7**
baz=89,SNR=15
219A White Tail Can 88.62 52 ⇑P **P** **10 46 54.0 +0.5**
baz=89
Q11A Duckwater 88.63 43 ⇑P **P** **10 46 53.1 -0.3**
baz=89,SNR=5.4
P10A Eureka 88.64 42 ⇓P **P** **10 46 53.2 -0.2**
baz=89
U14A Mt Trumbull 88.65 47 P **P** **10 46 54.1 +0.5**
baz=89,SNR=15
320A Kipp Ranch, An 88.75 53 ⇑P **P** **10 46 54.6 +0.4**
baz=89
KDAK Kodiak Island 88.84 13 LR LR 11 21 36.6
comp=Z,159nm,20.3s,MS4.4,baz=139,slow=32
V15A Nahbab Nationa 88.93 48 P **P** **10 46 55.8 +0.9**
baz=89,SNR=13
S13A Holt Ranch, En 88.94 45 P **P** **10 46 55.5 +0.6**
baz=89,SNR=9.7
R12A Pony Springs, 88.94 44 ⇓P **P** **10 46 55.0 +0.2**
baz=89,SNR=8.7
X17A Forest Lakes 88.94 49 ⇓P **P** **10 46 55.9 +1.0**
baz=89,SNR=8.2
P11A Circle Ranch, 89.02 43 ⇑P **P** **10 46 55.1 -0.1**
baz=89
220A Playas Peak, P 89.08 52 ⇓P **P** **10 46 56.6 +0.9**
baz=89,SNR=6.4
T14A Hurricane 89.11 46 ⇓P **P** **10 46 56.2 +0.6**
baz=89,SNR=8.3
Y18A Canyon Day Jun 89.13 50 ⇑P **P** **10 46 56.6 +0.8**
baz=89,SNR=17
U15A North Rim 89.22 47 P **P** **10 46 57.1 +0.9**
baz=89,SNR=22
WVOR Wild Horse Val 89.23 39 *e*P **P** **10 46 55.6 -0.5**
comp=Z,12nm,1.3s,mb5.1
WVOR Wild Horse Val 89.23 39 *e*P **P** **10 46 55.6 -0.5**
WVOR pmax pmax
comp=Z,12nm,1.3s,mb5.1
CCUT Cedar City 89.23 46 *e*P **P** **10 46 56.9 +0.6**
comp=Z,13nm,1.3s,mb5.1
CCUT *e*pP pP 10 47 12.6 +0.5
R13A O'Grain Ranch, 89.24 45 ⇑P **P** **10 46 57.2 +0.9**
baz=89,SNR=5.7
Q12A Willow Creek R 89.25 44 ⇓P **P** **10 46 56.2 -0.1**
baz=89,SNR=7.4
WUAZ Wupatki 89.27 48 ⇑P **P** **10 46 56.9 +0.5**
baz=89,SNR=10
WUAZ Wupatki 89.27 48 *e*P **P** **10 46 57.0 +0.5**
comp=Z,20nm,1.3s,mb5.3
WUAZ *e*pP pP 10 47 11.2 -1.2
CN2 Changchun 89.30 323 *e*P **P** **10 46 56.5 +0.1**
CN2 *e*S S 10 57 41.5 -0.1
CN2 pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
CN2 pmax pmax
comp=Z,200nm,4.0s
Z19A T-Link Ranch, 89.37 51 ⇓P **P** **10 46 58.1 +1.1**
baz=89
120A U Bar Ranch, L 89.37 52 ⇓P **P** **10 46 57.6 +0.6**
baz=89
E03A Lebam 89.47 34 ⇓P **P** **10 46 57.4 +0.2**
baz=90
P12A McGill 89.48 43 ⇑P **P** **10 46 57.5 +0.1**
baz=90
S14A Cedar City 89.48 46 ⇓P **P** **10 46 57.8 +0.4**
baz=90
T15A Red Dirt Ranch 89.52 46 ⇑P **P** **10 46 58.1 +0.5**
baz=90,SNR=9.8
VIPM Ingram Point 89.55 37 P **P** **10 46 57.3 -0.3**
F04A Amboy 89.61 35 ⇓P **P** **10 46 57.4 -0.4**
baz=90
X18A Snowflake 89.63 50 ⇓P **P** **10 46 58.6 +0.4**
baz=90,SNR=5.7
Q13A Wheeler Ranch, 89.69 44 P **P** **10 46 58.3 0.0**
baz=90,SNR=10.0
LVP Lakeview Peak 89.71 35 P **P** **10 46 58.3 +0.1**
V17A Tonalea, Kykot 89.71 48 ⇑P **P** **10 46 58.9 +0.3**
baz=90,SNR=12
Z20A Nine Sixteen R 89.72 51 ⇑P **P** **10 46 59.5 +0.8**
baz=90,SNR=6.1
Y19A Nutrioso 89.76 50 P **P** **10 46 59.9 +1.1**
baz=90,SNR=15
U16A Tuba City 89.80 48 ⇑P **P** **10 46 59.4 +0.4**
baz=90,SNR=15
I07A Izee 89.85 38 ⇓P **P** **10 46 58.8 -0.1**
baz=90,SNR=7.7

NLWA Neilton Lookou 89.92 33 *e*P P 10 46 58.9 -0.3
comp=Z,21nm,1.1s,mb5.4
NLWA *ep*P pP 10 47 13.5 -1.7
J08A Circle Bar Ran 89.93 39 ⇓P P 10 46 59.2 -0.2
baz=90,SNR=8.2
S15A Panguitch 89.94 46 P P 10 47 01.0 +1.4
baz=90,SNR=8.8
P13A Bates Ranch, G 90.00 44 ⇓P P 10 46 59.8 0.0
baz=90,SNR=14
G06A Carlson Farm, 90.04 36 ⇓P P 10 46 59.6 -0.2
baz=90
T16A Glen Canyon Da 90.06 47 ⇑P P 10 47 01.2 +1.0
baz=90
O12A Currie 90.07 43 ⇓P P 10 46 59.8 -0.3
baz=90
Q14A Sevier Lake (B 90.17 45 ⇓P P 10 47 00.6 +0.1
baz=90,SNR=14
R15A Junction 90.31 46 ⇑P P 10 47 02.3 +1.0
baz=90,SNR=5.9
Y20A Horse Springs, 90.33 51 ⇓P P 10 47 02.7 +1.2
baz=90,SNR=18
V18A Ganado 90.33 49 P P 10 47 02.1 +0.7
baz=90,SNR=10
W19A Sanders 90.34 49 ⇓P P 10 47 02.1 +0.6
baz=90,SNR=6.6
O13A Hicks Ranch, I 90.44 43 ⇑P P 10 47 02.1 +0.3
baz=90
S16A Weppner Ranch, 90.45 46 ⇑P P 10 47 02.0 +0.1
baz=90
HDW Hoodsport 90.50 33 P P 10 47 02.0 +0.1
T17A Navajo Res., N 90.52 47 ⇑P P 10 47 02.8 +0.5
baz=91
MSU Marysvale 90.56 45 *e*P P 10 47 03.0 +0.5
X20A Quemado 90.61 50 ⇓P P 10 47 03.5 +0.7
baz=91,SNR=20
D05A Enumclaw 90.69 34 ⇓P P 10 47 03.3 +0.5
baz=91,SNR=7.0
Q15A Fillmore 90.73 45 ⇑P P 10 47 03.6 +0.4
baz=91,SNR=5.3
U18A Rough Rock, Ch 90.79 48 ⇓P P 10 47 03.8 +0.2
baz=91
R16A Teasdale 90.86 46 ⇓P P 10 47 04.3 +0.5
baz=91,SNR=6.2
Y21A Point of Rocks 90.86 51 ⇓P P 10 47 05.0 +1.1
baz=91,SNR=17
S17A Black Ridge (B 90.90 47 ⇑P P 10 47 02.9 -1.2
baz=91
626A Big Bend Ranch 90.90 57 ⇓P P 10 47 04.2 -0.1
baz=91
Z22A Elephant Butte 90.93 52 ⇓P P 10 47 04.8 +0.5
baz=91,SNR=10
W20A Ramah 90.94 50 ⇓P P 10 47 05.1 +0.8
baz=91,SNR=16
G08A Pilot Rock 90.95 37 ⇑P P 10 47 03.8 -0.2
baz=91,SNR=18
425A Indio Mountain 90.95 55 ⇓P P 10 47 04.6 +0.2
baz=91
324A Moseley Ranch, 90.96 54 ⇑P P 10 47 04.3 -0.1
baz=91
X21A Alamocita Cree 91.04 51 P P 10 47 05.5 +0.8
baz=91,SNR=15
TXAR Lajitas Array 91.12 57 P P 10 47 05.4 +0.1
comp=Z,2.3nm,1.1s,mb4.4,baz=202,slow=6.3,SNR=12
TXAR PKKPbc PKKPbc 11 04 30.4 +2.0
comp=Z,0.4nm,0.7s,baz=69,slow=2.8,SNR=5.1
TXAR LR LR 11 24 20.7
comp=Z,118nm,18.1s,MS4.4,baz=190,slow=33
P15A Leamington 91.14 45 P P 10 47 05.2 +0.2
baz=91,SNR=7.2
U19A Dine' College, 91.15 49 ⇑P P 10 47 05.5 +0.3
baz=91,SNR=5.3
MNTX Cornudas Mount 91.17 54 ⇓P P 10 47 05.0 -0.4
baz=91
MNTX Cornudas Mount 91.17 54 *e*P P 10 47 05.3 -0.1
comp=Z,7.5nm,1.4s,mb4.8
MNTX *ep*P pP 10 47 20.7 -0.6
MNTX *es*P sP 10 47 25.9 -1.5
T18A Mexican Hat 91.20 48 ⇓P P 10 47 05.7 +0.2
baz=91,SNR=17
526A Mary Lane Ranc 91.21 56 ⇑P P 10 47 05.5 -0.1
baz=91
224A Cornudas Mount 91.28 54 ⇓P P 10 47 05.2 -0.7
baz=91
325A Bean Ranch, Si 91.28 55 ⇑P P 10 47 05.5 -0.5
baz=91
GYA Guiyang 91.30 300 P P 10 47 07.0 +0.8
GYA pP pP 10 47 22.8 +0.7
GYA sP sP 10 47 29.0 +0.9
GYA PP PP 10 50 47.0 +2.6
GYA SKS 10 57 34.5
GYA sS sS 10 58 24.8 -2.9
GYA SS SS 11 04 10.0 +2.5
GYA pmax pmax
comp=Z,20nm,1.0s,mb5.4
GYA pmax pmax
comp=Z,130nm,5.8s
GYA LR LR
comp=N,640nm,19.6s,MS5.2
GYA LR LR
comp=E,490nm,20.0s,MS5.2
GYA LR LR
comp=Z,510nm,18.9s,MS5.0
Y22A Socorro 91.31 52 ⇑P P 10 47 06.6 +0.6
baz=91,SNR=8.8
E07A Sunnyside 91.33 36 ⇑P P 10 47 05.3 -0.5
baz=91,SNR=6.5
RSW Rattlesnake Hi 91.36 36 *e*P P 10 47 06.0 +0.1
HAWA Hanford 91.39 36 *e*P P 10 47 06.1 0.0
comp=Z,20nm,1.0s,mb5.4
627A Terlingua Ranc 91.39 57 ⇑P P 10 47 06.4 -0.1
baz=92
R17A Hanksville Air 91.42 46 ⇑P P 10 47 06.6 +0.2
baz=92,SNR=8.3
Q16A Castle Valley 91.43 46 ⇓P P 10 47 06.8 +0.3
baz=92,SNR=5.9
MFID Camas Ranch 91.43 40 ⇑P P 10 47 06.3 -0.1
baz=92,SNR=13
Z23A Rita Site, Whi 91.44 52 ⇓P P 10 47 06.9 +0.2
baz=92
LAZ Ladron 91.45 51 *e*P P 10 47 06.5 -0.2
comp=Z,7.2nm,1.4s,mb4.8
W21A San Fidel 91.51 50 ⇑P P 10 47 07.5 +0.6
baz=92
426A McDonald Obser 91.58 56 ⇓P P 10 47 07.1 -0.2
baz=92
X22A Bernardo 91.60 51 ⇑P P 10 47 08.4 +1.0
baz=92
527A Woodward Ranch 91.60 56 ⇑P P 10 47 07.1 -0.4
baz=92
TMUT Trail Mountain 91.63 45 *e*P P 10 47 08.0 +0.6
comp=Z,11nm,0.9s,mb5.2
BNM Barren Site 91.66 52 *e*P P 10 47 07.9 +0.3
comp=Z,9.9nm,1.6s,mb4.9
124A Stringfield Ra 91.67 53 ⇑P P 10 47 07.6 -0.1
baz=92
LPM Los Pinos Moun 91.75 51 *e*P P 10 47 07.9 -0.1
628A Black Gap, Mar 91.78 57 ⇑P P 10 47 07.7 -0.6
baz=92
N15A Stansbury Isla 91.79 43 ⇑P P 10 47 07.6 -0.5
baz=92
ETW Entiat 91.80 35 *e*P P 10 47 07.3 -0.7
SLKM Skilak Lake 91.84 13 *e*P P 10 47 06.6 -1.2
R18A Canyonlands Na 91.92 47 ⇑P P 10 47 08.8 +0.1
baz=92,SNR=11
Y23A Lovelace Mesa, 91.93 52 ⇓P P 10 47 09.1 +0.2
baz=92
SRU San Rafael 91.95 46 ⇓P P 10 47 08.8 0.0
baz=92,SNR=9.4
SRU San Rafael 91.95 46 *e*P P 10 47 08.6 -0.2
comp=Z,16nm,1.3s,mb5.2
SRU San Rafael 91.95 46 *e*P P 10 47 08.6 -0.3
SRU pmax pmax
comp=Z,16nm,1.3s,mb5.2
O16A Springville 91.99 44 P P 10 47 08.9 -0.1
baz=92,SNR=7.5
W22A Albuquerque 92.01 51 ⇑P P 10 47 09.7 +0.4
baz=92
P17A Butcher Ranch, 92.03 45 ⇓P P 10 47 09.3 0.0
baz=92
S19A Harvey Farm, M 92.03 47 P P 10 47 09.3 0.0
baz=92,SNR=5.5
L14A Malta 92.06 42 P P 10 47 09.3 +0.1
baz=92,SNR=7.9
I12A Atlanta 92.06 40 P P 10 47 09.2 0.0
baz=92,SNR=15
Z24A Sheeppen Canyo 92.08 53 ⇑P P 10 47 09.8 +0.2
baz=92
SPUT South Promonto 92.08 43 *e*P P 10 47 09.2 -0.2
comp=Z,18nm,1.1s,mb5.3
427A Hayter Ranch, 92.13 56 ⇓P P 10 47 09.7 -0.2
baz=92
MVCO Mesa Verde 92.14 48 ⇑P P 10 47 09.9 +0.1
baz=92
D08A Wollman Farm, 92.14 36 P P 10 47 09.6 +0.1
baz=92,SNR=8.5
GDL2 Guadalupe Moun 92.17 54 *e*P P 10 47 09.7 -0.3
comp=Z,0.8nm,0.6s,mb4.2
HVU Hansel Valley 92.18 43 *e*P P 10 47 10.0 +0.2
comp=Z,15nm,1.2s,mb5.2
HVU Hansel Valley 92.18 43 *e*P P 10 47 10.0 +0.2
HVU pmax pmax
comp=Z,15nm,1.2s,mb5.2
M15A Larsen Ranch, 92.18 43 ⇑P P 10 47 09.5 -0.3
baz=92,SNR=11
E09A Wood Farm, Sta 92.18 36 ⇑P P 10 47 09.2 -0.6
baz=92
Q18A Rafter H Ranch 92.19 46 ⇓P P 10 47 09.7 -0.2
baz=92,SNR=6.6
125A Gardner Draw, 92.21 54 ⇓P P 10 47 10.1 -0.1
baz=92
ANMO Albuquerque 92.22 51 *e*P P 10 47 10.5 +0.3
comp=Z,8.3nm,1.3s,mb4.9
ANMO *ep*P pP 10 47 25.6 -0.5
ANMO Albuquerque 92.22 51 LR LR 11 19 14.1
comp=Z,149nm,18.8s,MS4.5,baz=194,slow=30
ANMO Albuquerque 92.22 51 *e*P P 10 47 10.5 +0.3
ANMO *e**PP pP 10 47 25.7 -0.5
ANMO pmax pmax
comp=Z,8.0nm,1.3s
U21A Nageezi 92.25 49 ⇑P P 10 47 10.5 +0.2
baz=92,SNR=12
BJI Beijing 92.26 315 P P 10 47 09.5 -0.8
BJI pmax pmax
comp=Z,16nm,1.1s,mb5.3
BJI pmax pmax
comp=Z,73nm,4.1s
JLU Jordanelle 92.26 44 *e*P P 10 47 10.3 0.0
comp=Z,8.7nm,1.3s,mb4.9
R19A Curley Farm, L 92.27 47 ⇓P P 10 47 09.9 -0.5
baz=92
226A Malaga, Loving 92.28 54 ⇓P P 10 47 10.3 -0.3
baz=92
F10A Beach Ranch, E 92.31 37 P P 10 47 09.2 -1.1
baz=92,SNR=16
HLID Hailey 92.33 40 ⇑P P 10 47 10.7 +0.2
baz=92,SNR=15
HLID Hailey 92.33 40 *e*P P 10 47 10.3 -0.2
comp=Z,7.4nm,0.9s,mb5.0
J13A Cove Ranch, Pi 92.36 41 ⇑P P 10 47 10.9 +0.3
baz=92,SNR=18
Y24A Capitan 92.36 52 ⇑P P 10 47 11.1 +0.3
baz=92
K14A Jones Ranch, D 92.41 42 ⇓P P 10 47 10.9 0.0
baz=92,SNR=5.8
P18A Preston Nutter 92.43 45 ⇓P P 10 47 10.8 -0.3
baz=92
N16A Rees Ranch, Co 92.44 44 ⇓P P 10 47 11.6 +0.5
baz=92
O17A Robinson Place 92.46 45 P P 10 47 11.4 +0.2
baz=92,SNR=14
RC01 Rabbit Creek A 92.47 13 *e*P P 10 47 09.8 -0.9
comp=Z,6.5nm,0.8s,mb5.0
RC01 *ep*P pP 10 47 25.4 -1.2
OD2 Odessa Site #2 92.47 36 *e*P P 10 47 10.8 -0.2
Z25A Roswell 92.51 53 ⇑P P 10 47 11.5 -0.1
baz=93
L15A Malad City 92.54 43 ⇓P P 10 47 11.2 -0.3
baz=93,SNR=12
M16A Huntsville 92.58 43 ⇓P P 10 47 11.5 -0.2
baz=93
S20A Disappointment 92.59 48 ⇓P P 10 47 11.8 0.0
baz=93
428A Kincaid Ranch, 92.59 56 ⇑P P 10 47 11.5 -0.5
baz=93
PV01 Paradox Valley 92.62 47 *e*P P 10 47 11.6 -0.4
comp=Z,562nm,1.1s
PV01 *ep*P pP 10 47 27.9 0.0
Q19A Hogan Spring (92.66 46 P P 10 47 11.8 -0.4
baz=93,SNR=5.2
J14A Carey 92.69 41 ⇑P P 10 47 12.6 +0.5
baz=93
H12A Diamond D Ranc 92.69 39 P P 10 47 11.8 -0.3
baz=93,SNR=19
I13A Wildhorse Cree 92.71 40 ⇓P P 10 47 12.4 +0.1
baz=93
U22A Llaves 92.75 50 ⇑P P 10 47 12.2 -0.5
baz=93
R20A Redvale 92.78 47 ⇓P P 10 47 12.0 -0.8
baz=93
HWUT Hardware Ranch 92.80 43 *e*P P 10 47 12.3 -0.4
comp=Z,6.4nm,1.3s,mb4.9
G12A Big Creek, Yel 92.80 39 ⇓P P 10 47 11.8 -0.8
baz=93
N17A Moffit Pass 92.84 44 ⇑P P 10 47 12.9 -0.1
baz=93
S21A Coal Bank Pass 92.86 48 ⇓P P 10 47 13.4 +0.3
baz=93,SNR=5.3
K15A Arbon 92.87 42 P P 10 47 12.9 -0.1
baz=93,SNR=6.4
O18A Roosevelt 92.95 45 ⇑P P 10 47 13.0 -0.5
baz=93
C09A Chrisman Ranch 92.96 35 ⇑P P 10 47 12.7 -0.6
baz=93
Z26A Caprock 93.02 54 ⇑P P 10 47 13.4 -0.5
baz=93
H13A Challis 93.04 40 P P 10 47 13.4 -0.3
baz=93,SNR=8.7
PMR Palmer 93.05 13 *e*P P 10 47 11.5 -1.9
comp=Z,6.5nm,0.9s,mb5.1
PMR Palmer 93.05 13 *e*P P 10 47 11.5 -1.8
PMR pmax pmax
comp=Z,7.0nm,0.9s,mb5.1
T22A Edith 93.08 49 ⇓P P 10 47 14.4 +0.3
baz=93
W24A Lazy 6 Ranch, 93.08 51 ⇑P P 10 47 14.4 +0.2
baz=93
I14A Mackay 93.10 41 ⇑P P 10 47 14.0 0.0
baz=93,SNR=11
TTA Tatalina 93.11 10 *e*P P 10 47 12.5 -1.1
comp=Z,8.3nm,1.1s,mb5.1
TTA Tatalina 93.11 10 *e*P P 10 47 12.5 -1.1
TTA pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
L16A Fish Haven 93.12 43 ⇑P P 10 47 13.8 -0.4
baz=93,SNR=10
U23A El Rito 93.17 50 ⇓P P 10 47 14.9 +0.3
baz=93
P19A Cripple Cowboy 93.22 46 ⇓P P 10 47 14.2 -0.6
baz=93
F12A Elk City 93.23 38 P P 10 47 14.0 -0.6
baz=93,SNR=14
M17A Scullys Gap (B 93.26 44 ⇓P P 10 47 14.5 -0.4
baz=93,SNR=5.3
Q20A Ridgley Place, 93.27 47 ⇓P P 10 47 14.5 -0.5
baz=93
NNA Nana 93.29 106 LR LR 11 20 04.3
comp=Z,163nm,20.7s,MS4.5,baz=309,slow=30
J15A Blackfoot 93.36 41 P P 10 47 15.7 +0.5
baz=94,SNR=13
G13A Cobalt 93.38 39 P P 10 47 14.8 -0.5
baz=94,SNR=6.8
R21A Cimarron 93.42 48 ⇓P P 10 47 15.8 +0.1
baz=94,SNR=6.9
CMAR Chiang Mai Arr 93.44 289 P P 10 47 16.9 +0.8
comp=Z,3.0nm,0.9s,mb4.7,baz=139,slow=3.3,SNR=17
CMAR PP PP 10 51 03.4 +2.0
comp=Z,0.4nm,0.3s,baz=130,slow=7.5,SNR=4.7
BMRM Bremner River 93.46 15 *e*P P 10 47 14.2 -1.1
comp=Z,9.4nm,1.0s,mb5.2
V24A Rampart Ranch, 93.46 51 ⇑P P 10 47 16.2 +0.2
baz=94
E12A Beaver Dam Sad 93.48 38 ⇓P P 10 47 14.5 -1.3
baz=94
K16A Soda Springs 93.51 42 ⇓P P 10 47 15.9 -0.1
baz=94,SNR=9.3
O19A Miners Draw (B 93.52 45 ⇓P P 10 47 15.9 -0.1
baz=94
P20A De Beque 93.52 46 ⇑P P 10 47 15.9 -0.2
baz=94,SNR=6.4
S22A 4UR Ranch, Cre 93.54 48 ⇓P P 10 47 16.6 +0.4
baz=94,SNR=6.0
H14A Leadore 93.57 40 ⇓P P 10 47 16.3 +0.1
baz=94,SNR=15
M18A Lyman 93.59 44 ⇑P P 10 47 16.6 +0.2
baz=94,SNR=5.5
CHTO Chiang Mai 93.61 289 *e*pP P 10 47 18.4 +1.5
KMI Kunming 93.65 297 P P 10 47 19.0 +1.9
KMI pmax pmax
comp=Z,8.0nm,0.5s,mb5.4
XAN Xi'an 93.66 307 P P 10 47 17.3 +0.4
XAN pmax pmax
comp=Z,3.0nm,1.1s,mb4.6
XAN pmax pmax
comp=Z,25nm,10.6s
T23A Casias Ranch, 93.67 49 ⇑P P 10 47 16.8 0.0
baz=94
I15A Monteview 93.70 41 P P 10 47 17.2 +0.4
baz=94,SNR=6.4
W25A X Bar L Ranch, 93.74 52 ⇓P P 10 47 17.0 -0.3
baz=94
F13A Darby 93.76 39 P P 10 47 16.1 -1.0
baz=94,SNR=9.3
J16A Bone 93.77 42 ⇓P P 10 47 17.4 +0.3
baz=94
X26A CR and CF Fran 93.83 53 ⇓P P 10 47 16.9 -0.7
baz=94
NEW Newport 93.85 36 ⇑P P 10 47 18.2 +0.8
baz=94
R22A Saguache, Gunn 93.86 48 ⇑P P 10 47 18.2 +0.5
baz=94
K17A Gardner Place, 93.86 43 P P 10 47 17.6 0.0
baz=94,SNR=9.3
G14A Jackson 93.90 39 ⇑P P 10 47 17.7 0.0
baz=94
Y27A Causey 93.92 53 ⇑P P 10 47 17.5 -0.6
baz=94
V25A Rancho No Teng 93.97 51 ⇓P P 10 47 18.1 -0.1
baz=94
H15A Lima 93.98 40 ⇑P P 10 47 18.6 +0.5
baz=94,SNR=7.5
O20A White River Ci 93.98 46 ⇓P P 10 47 17.7 -0.5
baz=94
RRI2 Red Ridge 93.98 42 *e*P P 10 47 18.4 +0.2
comp=Z,12nm,1.1s,mb5.2
RRI2 *ep*P pP 10 47 34.1 0.0
MCMT McKenzie Canyo 93.99 40 *e*P P 10 47 18.0 -0.1
comp=Z,3.9nm,1.1s,mb4.8
MCMT *ep*P pP 10 47 34.0 0.0
D12A Red Ives Fores 94.00 37 ⇓P P 10 47 17.3 -0.8
baz=94
C11A Tepee Creek (N 94.03 36 ⇓P P 10 47 17.4 -0.8
baz=94
Q22A Crested Butte, 94.11 48 ⇑P P 10 47 18.9 +0.1
baz=94
I16A Newdale 94.20 41 ⇓P P 10 47 19.5 +0.4
baz=94,SNR=15
MSTX Muleshoe 94.25 53 ⇑P P 10 47 19.0 -0.6
baz=94
SMCO Snowmass 94.25 47 *e*P P 10 47 19.1 -0.3
comp=Z,7.9nm,1.1s,mb5.1
SMCO *ep*P pP 10 47 35.5 +0.1
REDW Red Top Meadow 94.26 42 *e*P P 10 47 19.2 -0.2
comp=Z,13nm,1.0s,mb5.3
F14A Wisdom 94.30 39 ⇑P P 10 47 18.7 -0.8
baz=94
K18A Toltan Ranch, 94.32 43 ⇓P P 10 47 19.5 -0.2
baz=94,SNR=16
J17A Brown Place, J 94.35 42 P P 10 47 19.8 0.0
baz=94,SNR=9.1
C12B Naegeli Ranch, 94.35 37 ⇓P P 10 47 18.9 -0.8
baz=94
N20A Spence Gulch, 94.36 45 P P 10 47 19.6 -0.3
baz=94,SNR=5.7
SNOW Snow King Moun 94.38 42 *e*P P 10 47 19.6 -0.3
comp=Z,12nm,0.8s,mb5.4
G15A Dillon 94.40 40 ⇓P P 10 47 19.9 -0.1
baz=94,SNR=12
SDCO Great Sand Dun 94.41 49 ⇓P P 10 47 19.9 -0.4
baz=94
SDCO Great Sand Dun 94.41 49 *e*P P 10 47 20.3 0.0
comp=Z,4.0nm,1.3s,mb4.7
U25A Circle Dot Ran 94.41 51 ⇓P P 10 47 19.9 -0.4
baz=94
DLMT Dillon 94.46 40 *e*P P 10 47 19.8 -0.5
comp=Z,10.0nm,1.2s,mb5.1
D13A Huson 94.50 38 ⇓P P 10 47 20.6 +0.2
baz=95
IMW Indian Meadow 94.53 42 *e*P P 10 47 20.5 -0.1
comp=Z,8.1nm,1.0s,mb5.1
TRF Thorofare Moun 94.53 12 *e*P P 10 47 18.4 -1.7
comp=Z,9.8nm,0.8s,mb5.3
LOHW Long Hollow 94.56 42 *e*P P 10 47 20.5 -0.3
comp=Z,11nm,1.4s,mb5.1
MSO Missoula 94.61 38 ⇑P P 10 47 20.3 -0.6
baz=95
P22A Eagle 94.62 47 ⇑P P 10 47 21.0 -0.2
baz=95
SEY Seymchan 94.67 347 *e*P P 10 47 18.7 -2.1
J18A Kendall Valley 94.67 43 P P 10 47 20.9 -0.4
baz=95,SNR=22
BW06 Boulder Array 94.68 43 ⇑P P 10 47 20.7 -0.7
baz=95,SNR=5.7
BW06 Boulder Array 94.68 43 *e*P P 10 47 19.9 -1.4
comp=Z,3.8nm,1.0s,mb4.8
PDAR Pinedale Array 94.68 43 P P 10 47 20.6 -0.7
comp=Z,2.8nm,0.9s,mb4.7,baz=227,slow=2.7,SNR=21
PDAR PKKPbc PKKPbc 11 04 19.8 0.0
comp=Z,1.1nm,0.7s,baz=62,slow=4.4,SNR=11
PDAR LR LR 11 21 20.4
comp=Z,179nm,21.7s,MS4.5,baz=223,slow=30
I17A Pilgrim Ck. 94.75 42 ⇑P P 10 47 22.0 +0.3
baz=95
FLWY Flagg Ranch 94.78 42 *e*P P 10 47 22.1 +0.3
comp=Z,12nm,0.9s,mb5.3
N21A Black Mountain 94.79 46 ⇑P P 10 47 21.5 -0.4
baz=95
F15A Butte 94.81 39 ⇑P P 10 47 22.0 +0.1
baz=95
G16A Moss Hill, Enn 94.82 40 ⇓P P 10 47 21.1 -0.8
baz=95
H16A Russell Place, 94.83 41 ⇓P P 10 47 22.0 0.0
baz=95,SNR=10
R24A Sanders Place, 94.94 49 ⇑P P 10 47 22.2 -0.4
baz=95
L20A Wamsutter 94.98 44 ⇓P P 10 47 22.7 -0.1
baz=95
O22A Kremmling 95.07 47 ⇑P P 10 47 22.7 -0.5
baz=95
I18A Diamond G Ranc 95.07 42 ⇓P P 10 47 22.7 -0.4
baz=95
E15A Deer Lodge 95.08 39 ⇑P P 10 47 23.3 +0.2
baz=95
K19A Absolon Red Bu 95.14 43 ⇑P P 10 47 22.5 -1.0
baz=95
BOZ Bozeman (W) 95.17 40 ⇑P P 10 47 22.8 -0.7
baz=95
BOZ Bozeman (W) 95.17 40 *e*P P 10 47 23.5 0.0
comp=Z,7.3nm,1.2s,mb5.0
BOZ *ep*P pP 10 47 38.5 -1.0
BOZ Bozeman (W) 95.17 40 *e*P P 10 47 23.5 0.0
BOZ *e**PP pP 10 47 38.5 -1.0
BOZ pmax pmax
comp=Z,7.0nm,1.2s,mb5.0
MENT Mentasta 95.39 15 *e*P P 10 47 23.1 -1.0
HHC Hu-ho-hao-te 95.61 314 *e*P P 10 47 27.5 +1.9
HHC pP pP 10 47 44.8 +3.2
HHC sP sP 10 47 51.5 +3.9
HHC PP PP 10 51 22.0 +4.1
HHC SKS 10 57 56.5
HHC S S 10 58 36.5 -1.6
HHC sS sS 10 59 07.0 +1.8
HHC SS SS 11 05 11.8 +3.2
HHC pmax pmax
comp=Z,15nm,1.0s,mb5.4
HHC pmax pmax
comp=Z,100nm,5.9s
HHC LR LR
comp=N,140nm,17.8s,MS4.6
HHC LR LR
comp=E,120nm,17.8s,MS4.6
HHC LR LR
comp=Z,210nm,20.2s,MS4.6
I19A Meeteetse 95.75 42 ⇑P P 10 47 26.0 -0.2
baz=96
CD2 Chengdu 95.77 302 P P 10 47 27.5 +0.9
CD2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.4
CD2 pmax pmax
comp=Z,100nm,5.2s
N23A Red Feather La 95.86 46 ⇑P P 10 47 26.6 -0.2
baz=96
F17A Fitzpatrick Pl 95.87 40 ⇓P P 10 47 26.8 +0.1

baz=96
J20A Shoshoni 95.90 43 ⇑P P **10 47 26.8 -0.1**
baz=96
K21A Alcova 96.00 44 ⇑P P **10 47 26.7 -0.7**
baz=96
A14A Double T Ranch 96.21 37 ⇓P P **10 47 27.2 -1.0**
baz=96
RLMT Red Lodge 96.21 41 ⇑P P **10 47 28.3 0.0**
baz=96
COLA College 96.27 12 *e*P P **10 47 26.1 -2.0**
comp=Z,3.8nm,0.8s,mb4.9
COLA College 96.27 12 *e*P P **10 47 26.1 -2.0**
COLA pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
J21A Lysite 96.28 44 ⇓P P **10 47 28.3 -0.4**
baz=96
ILAR Eielson Array 96.36 13 P P **10 47 26.7 -1.8**
comp=Z,1.4nm,0.7s,mb4.5,baz=214,slow=5.1,SNR=21
ILAR PP PP 10 51 24.4 +1.2
comp=Z,0.7nm,1.0s,baz=224,slow=8.3,SNR=4.0
ILAR PKKPbc PKKPbc 11 04 17.7 +1.6
comp=Z,0.2nm,0.5s,baz=47,slow=3.6,SNR=4.3
ILAR Eielson Array 96.36 13 P P **10 47 26.7 -1.8**
ILAR 10 51 24.4
K22A Casper 96.46 45 ⇑P P **10 47 29.0 -0.5**
baz=96
D17A Six Diamond Ra 96.59 39 ⇑P P **10 47 29.6 -0.3**
baz=97
H20A Greybull 96.59 42 ⇑P P **10 47 29.3 -0.7**
baz=97
I21A Big Trails, Te 96.64 43 ⇓P P **10 47 29.2 -1.1**
baz=97
L23A Garrett 96.67 45 ⇓P P **10 47 30.2 -0.3**
baz=97
E18A Harlowton 96.68 40 ⇓P P **10 47 30.1 -0.3**
baz=97
F19A Roth Farm, Mol 96.82 41 ⇑P P **10 47 30.8 -0.2**
baz=97
C17A Wharram Farm, 96.83 39 ⇓P P **10 47 30.4 -0.6**
baz=97
BILL Bilibino 97.43 354 *e*P P **10 47 32.2 -1.0**
BILL *e* 10 47 41.2
BILL pmax pmax
comp=Z,4.0nm,1.2s,mb4.7
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.7
C19A Slack Wire Ran 97.83 39 ⇑P P **10 47 35.1 -0.5**
baz=98
LZH Lanzhou 98.28 307 *e*P P **10 47 40.5 +2.6**
LZH pmax pmax
comp=Z,14nm,1.1s,mb5.4
C20A Veseth Ranch, 98.40 40 ⇓P P **10 47 37.9 -0.2**
baz=98
RSSD Black Hills 98.78 44 *e*P P **10 47 39.6 -0.3**
comp=Z,7.7nm,1.0s,mb5.2
RSSD *e*pP pP 10 47 55.4 -0.5
RSSD Black Hills 98.78 44 *e*P P **10 47 39.6 -0.3**
RSSD *e**PP pP 10 47 55.4 -0.5
RSSD pmax pmax
comp=Z,8.0nm,1.0s,mb5.2
CPUP Villa Florida 100.46 128 PKKPbc PKKPbc 11 04 01.9 -0.7
comp=Z,1.2nm,0.7s,baz=115,slow=4.9,SNR=2.8
SONM Songino Array 102.41 318 P Pdif 10 47 54.0 -2.2
comp=Z,0.5nm,0.9s,baz=224,slow=8.3,SNR=3.7
SONM PKKPbc PKKPbc 11 03 59.3 +1.2
comp=Z,0.7nm,0.8s,baz=274,slow=2.2,SNR=4.7
GTA Gaotai 102.67 308 *e*P Pdif 10 48 01.3 +4.0
GTA pP 10 48 15.3
GTA sP 10 48 20.0
GTA pmax pmax
comp=Z,3.0nm,1.6s
HDIL Hopedale 106.81 53 *e*PKPdf PKiKP 10 52 29.1 +3.5
OLIL Olney 106.92 55 *e*PKiKP PKiKP 10 52 18.5 -7.3
WMQ Urumqi 112.74 309 *e*PKP PKiKP 10 52 36.5 -0.1
WMQ LR LR
comp=N,68nm,26.0s,MS4.3
WMQ LR LR
comp=E,92nm,28.0s,MS4.3
WMQ LR LR
comp=Z,130nm,24.5s,MS4.4
MK31 Makanchi Array 117.24 311 *e*PKPdf PKPdf 10 52 44.0 -1.2
MK31 Makanchi Array 117.24 311 *i* PKIKP PKPdf 10 52 43.8 -1.4
MK31 pmax pmax
comp=Z,3.0nm,0.6s
MKAR Makanchi Array 117.24 311 PKP PKPdf 10 52 43.8 -1.3
comp=Z,4.5nm,0.9s,baz=66,slow=2.9,SNR=30
ZALV Zalesovo Beam 117.29 319 PKP PKPdf 10 52 43.6 -1.4
comp=Z,2.1nm,0.8s,baz=112,slow=1.6,SNR=8.4
NVS Novosibirsk 118.37 320 *e*PKIKP PKPdf 10 52 44.1 -3.0
NVS pmax pmax
comp=N,3.0nm,1.2s
NVS pmax pmax
comp=Z,8.0nm,1.2s
BOSA Boshof 118.84 203 PKP PKPdf 10 52 50.3 +1.3
comp=Z,4.8nm,0.7s,baz=10,slow=5.5,SNR=7.4
KSH Kashi 119.95 301 *e*PKP PKPdf 10 52 51.0 +0.4
KSH *e*PKS 10 56 25.3
KSH *e*SKS SKSdf 10 59 58.3 +0.4
KSH AMB AMB
comp=Z,110nm,6.1s
KSH LR LR
comp=N,100nm,7.7s
KSH LR LR
comp=E,93nm,10.6s
KSH LR LR
comp=Z,100nm,5.3s
KURK Kurchatov 120.42 314 *e*PKPdf PKPdf 10 52 49.9 -1.3
KURK Kurchatov 120.42 314 *e*PKIKP PKPdf 10 52 49.6 -1.6
TKM2 Tokmak 2 121.00 305 PKIKP PKPdf 10 52 51.0 -1.5
TKM2 pmax pmax
comp=Z,5.0nm,0.9s
KZA Kyzart 121.08 304 *e*PKPdf PKPdf 10 52 53.2 +0.5
AAK Ala-Archa 121.74 304 *e*PKPdf PKPdf 10 52 53.8 -0.2
AAK Ala-Archa 121.74 304 *d* PKIKP PKPdf 10 52 53.8 -0.2
EKS2 Erkin-Say 122.26 304 *e*PKPdf PKPdf 10 52 54.6 -0.4
KBL Kabul 124.13 294 *e*PKPdf PKPdf 10 52 59.0 +0.1
KK31 Karatay Array 124.70 304 *i* PKIKP PKPdf 10 52 58.7 -0.9
KK31 pmax pmax
comp=Z,8.0nm,0.7s
KKAR Karatay Array 124.70 304 *e*PKPdf PKPdf 10 52 58.9 -0.7
CHM Chimkent 125.24 303 *e*PKPdf PKPdf 10 52 52.9 -7.8
VOSK Vostochnaya 125.35 316 PKIKP PKPdf 10 52 58.9 -1.7
VOSK pmax pmax
comp=Z,18nm,1.0s
BRVK Borovoye 125.79 317 *e*PKPdf PKPdf 10 53 00.8 -0.6
BRVK Borovoye 125.79 317 *i* PKIKP PKPdf 10 53 00.8 -0.6
ZRNK Zerenda 126.56 316 PKIKP PKPdf 10 53 01.9 -1.0
ZRNK pmax pmax
comp=Z,13nm,0.9s
ARU Arti 132.29 322 *i* PKIKP PKPdf 10 53 11.8 -1.8
ABKAR Akbulak array 132.35 312 *e*PKPdf PKPdf 10 53 13.2 -0.7
AKTO Aktyubinsk 133.50 313 PKIKP PKPdf 10 53 15.1 -1.0
AKTO pmax pmax
comp=Z,1.0nm,0.9s
KMBO Kilima Mbogo 135.39 234 PKP PKPdf 10 53 21.6 +0.7
comp=Z,5.4nm,0.9s,baz=180,slow=24,SNR=6.7
KMBO Kilima Mbogo 135.39 234 *e*PKIKP PKPdf 10 53 21.9 +1.0
KEV Kevo 136.80 348 *e*PKIKP PKPdf 10 53 19.8 -1.9
KEV Kevo 136.80 348 *e*pkp PKPdf 10 53 19.8 -1.9
ARCES ARCESS Array B 137.26 348 PKP PKPdf 10 53 21.5 -1.1
comp=Z,3.2nm,0.7s,baz=348,slow=1.7,SNR=7.9
KLMR Klimovskoe 139.71 333 PKHKP PKPpre 10 53 18.3
KLMR pmax pmax
comp=Z,23nm,1.5s
JOF Joensuu 141.24 339 *e*PKHKP PKPpre 10 53 21.5
JOF Joensuu 141.24 339 *e*pkp PKPpre 10 53 21.5
KAF Kangasniemi 143.33 342 *e*PKIKP PKPpre 10 53 29.2
KAF Kangasniemi 143.33 342 *e*pkp PKPpre 10 53 29.2
MOS Moscow 143.41 327 *e*PKIKP PKPpre 10 53 29.9
VRHR Novokhopersk 143.42 318 *e*PKHKP PKPpre 10 53 28.5
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.7s
GNI Garni 143.85 299 PKP PKPdf 10 53 33.7 -1.7
comp=E,3.2nm,0.4s,baz=352,slow=19,SNR=2.8
FINES FINESS Array B 143.94 341 PKHKP PKPpre 10 53 31.2
comp=E,6.6nm,0.8s,baz=57,slow=2.0,SNR=15
ZEI Tsey 144.17 304 *i* PKIKP PKPdf 10 53 33.5 -2.4
ZEI pmax pmax
comp=Z,11nm,0.5s
OBN Obninsk 144.26 327K *i* PKIKP PKPdf 10 53 33.0 -2.6
OBN *e* 10 53 42.5
OBN pmax pmax
comp=Z,50μm,0.9s
GOF Gofitskoye 144.34 308 *e*PKIKP PKPdf 10 53 45.6 +10
GOF pmax pmax
comp=Z,50nm,0.8s
VSR Storozhevoye 144.79 320 *e*PKIKP PKPdf 10 53 33.5 -3.1
VSR pmax pmax
comp=Z,50nm,0.7s
VSR pmax pmax
comp=N,20nm,0.9s
VSR pmax pmax
comp=E,20nm,0.9s
KIV Kislovodsk 144.82 306*c* *i* PKIKP PKPdf 10 53 35.5 -1.5
KIV *e* 10 53 48.7
KIV pmax pmax
comp=Z,29nm,1.0s
CUKT Cukurca 144.90 295 *e*P PKPdf 10 53 35.5 -1.8
AGRB Hanur-Agry 145.24 299 *e*P PKPbc 10 53 37.5 -0.2
EZM Erzurum 146.46 299 *e*P PKPdf 10 53 40.3 +0.4
SOC Sochi 147.00 306 *i* PKP2 PKPab 10 53 43.8 -0.6
NOA NORSAR Array B 147.37 352 PKPbc PKPbc 10 53 41.7 -1.5
comp=Z,7.6nm,0.8s,baz=15,slow=4.6,SNR=34
NAO01 NORSAR Array S 147.60 352 *e*PKPbc PKPbc 10 53 43.3 -0.5
GUMT Gumushane 147.81 301 *e*P PKPdf 10 53 42.4 +0.2
HFS Hagfors 147.90 350 PKPbc PKPbc 10 53 43.5 -1.2
comp=Z,15nm,0.8s,baz=79,slow=3.1,SNR=3.6
EZC Erzincan 148.01 300 *e*P PKPdf 10 53 42.8 +0.3
PTK Pertek 148.09 298 *e*P PKPdf 10 53 41.9 -0.7
SVRC Sivrice-ELAZID 148.22 297 *e*P PKPdf 10 53 44.0 +1.1
ANN Anapa 148.25 309 *e*PKIKP PKPdf 10 53 43.4 +0.7
ANN pmax pmax
comp=Z,75nm,0.9s
MICGM Minsk 148.57 332 *e*P PKPdf 10 53 44.0 +1.1
MNK Minsk 148.59 332 *e*PKIKP PKPdf 10 53 44.0 +1.1
NACGM Naroch 148.73 333 *e* PKPdf 10 53 43.0 -0.2
KONO Kongsberg 148.91 353 *e*PKPbc PKPbc 10 53 46.2 -1.1
KONO *e*PKPab PKPab 10 53 50.0 -1.4
MALT Malatya 148.91 297 *e*P PKPbc 10 53 47.0 -1.0
MALT Malatya 148.91 297 *e*PKPbc PKPbc 10 53 48.3 +0.3
MALT Malatya 148.91 297 ⇓*i*P PKPbc 10 53 48.3 +0.3
SVSK Karacayir 149.77 300 *e*P PKPbc 10 53 51.2 +1.1
KMRS Kahramanmaras 150.21 296 *e*P PKPbc 10 53 50.3 -1.0
SARI SarD1z-Kayseri 150.21 298 *e*P PKPbc 10 53 50.7 -0.5
KVT Kavak 150.24 303 *e*P PKPdf 10 53 49.0 +3.0
ASF Jabal al Asfar 150.38 285 PKPbc PKPbc 10 53 52.8 +1.0
comp=Z,25nm,0.9s,baz=348,slow=1.7,SNR=25
ASF PKPab PKPab 10 54 00.8 +2.4
comp=Z,6.1nm,0.8s,baz=292,slow=1.2,SNR=6.3
AKASG Malin Array Be 150.44 325 PKPbc PKPbc 10 53 49.8 -1.5
comp=Z,44nm,0.9s,baz=47,slow=2.5,SNR=21
AKASG PKPab PKPab 10 53 55.1 -2.9
comp=Z,41nm,0.9s,baz=47,slow=2.7,SNR=25
AKBB Malin Array Si 150.44 325 *e*PKPbc PKPbc 10 53 50.5 -0.9
KIEV Kiev 150.45 325 *e*PKPbc PKPbc 10 53 50.6 -0.7
SUW Suwalki 150.79 335 *e*PKP PKPbc 10 53 51.7 -0.3
SUW *e* 10 53 58.3
KOZT Kozan 151.06 296 *e*P PKPbc 10 53 52.0 -1.3
CORM Corum 151.50 302 *e*P PKPbc 10 53 54.9 +0.7
MMAI Mount Meron Ar 151.67 287 PKPbc PKPbc 10 53 55.4 +0.6
comp=Z,41nm,0.7s,baz=79,slow=4.3,SNR=44
MMAI PKPab PKPab 10 54 02.5 -1.3
comp=Z,10nm,0.5s,baz=75,slow=6.3,SNR=6.8
KARA Karaisali 151.70 296 *e*P PKPbc 10 53 54.0 -0.7
TOS Tosya 151.73 304 *e*P PKPbc 10 53 53.6 -1.1
EIL Elat 151.85 280 PKPbc PKPbc 10 53 55.4 +0.1
comp=Z,52nm,0.8s,baz=8.4,slow=1.4,SNR=31
BRTR Keskin Array B 152.34 301 PKP PKPdf 10 53 50.2 +1.0
comp=Z,1.4nm,0.9s,baz=186,slow=2.2,SNR=4.3
BRTR PKPbc PKPbc 10 53 56.1 0.0
comp=Z,9.1nm,0.6s,baz=131,slow=3.7,SNR=36
KAMT Kaman 152.37 300 *e*P PKPdf 10 53 49.0 -0.3
SAFT Safranbolu 152.65 305 *e*P PKPbc 10 53 54.5 -2.3
IKL Isikli 152.91 294 *e*P PKPbc 10 53 54.9 -2.6
EKA Eskdalemuir Ar 153.28 7 PKPbc PKPbc 10 53 56.8 -0.9
comp=Z,1.8nm,0.7s,baz=347,slow=2.9,SNR=3.1
EKA PKPab PKPab 10 54 08.5 -1.2
comp=Z,5.2nm,0.8s,baz=347,slow=2.9,SNR=5.5
CSS Prodhromos 153.32 291 *e*P PKPdf 10 53 52.4 +1.5
KIZT Kizilcal 153.87 300 *e*P PKPbc 10 53 58.0 -1.5
KWP Kalwaria Pacla 154.28 329 *e*PKP PKPbc 10 53 59.7 -0.3
KWP *e* 10 54 13.5
TESR 154.28 320 ⇓*i*P PKPab 10 54 13.5 -0.8
BSEG Bad Segeberg 154.38 349 *e*PKPab PKPab 10 54 13.4 -1.0
BURAR Bucovina Array 154.41 323 ⇑PKIKP PKPbc 10 54 00.1 -0.3
BURAR Bucovina Array 154.41 323 ⇑*i*P PKPbc 10 54 00.1 -0.3
VRI Vrincioaia 154.60 318 ⇓PKIKP PKPab 10 54 09.4 -6.3
VRI Vrincioaia 154.60 318 ⇓*i*P PKPab 10 54 09.4 -6.3
PLOR Plostina 154.66 318 ⇑PKIKP PKPab 10 54 07.2 -8.7
PLOR Plostina 154.66 318 ⇑*i*P PKPab 10 54 07.2 -8.7
OJC Ojcow 155.06 333 *e*PKP PKPdf 10 54 01.3 +8.5
MLR Muntele Rosu 155.27 318 PKPbc PKPdf 10 54 02.0 +8.7
comp=Z,1.4nm,0.3s,baz=188,slow=21,SNR=3.9
MLR PKPab PKPab 10 54 18.1 -0.5
comp=Z,6.8nm,0.9s,baz=140,slow=7.5,SNR=4.4
MLR Muntele Rosu 155.27 318 ⇓PKIKP PKPdf 10 54 02.6 +9.4
MLR Muntele Rosu 155.27 318 ⇓*i*P PKPdf 10 54 02.6 +9.4
CRVS Cervenica-Dubn 155.37 329 *e*PKP2 PKPab 10 54 17.4 -1.4
CRVS Cervenica-Dubn 155.37 329 *e*PKP PKPab 10 54 17.4 -1.4
KSP Ksiaz 155.80 339 *e*PKP PKPdf 10 54 03.1 +9.4
KSP *e* 10 54 20.1
NRDL Niedersach Rie 155.80 349 *e*PKPab PKPab 10 54 18.2 -2.3
VOIR 155.81 319 ⇑PKP2 PKPab 10 54 16.0 -4.9
VOIR 155.81 319 ⇑*i*P PKPab 10 54 16.0 -4.9
OKC Ostrava-Krasne 156.00 335 *e*PKP2 PKPab 10 54 20.5 -1.0
OKC Ostrava-Krasne 156.00 335 *e*PKPAB PKPab 10 54 20.5 -1.0
KECS Kecovo 156.11 330 *e*PKP2 PKPab 10 54 21.0 -1.0
KECS Kecovo 156.11 330 *e*PKP PKPab 10 54 21.0 -1.0
UPC Upice 156.18 339 *e*PKP2 PKPab 10 54 21.6 -0.6
UPC Upice 156.18 339 *e*PKPAB PKPab 10 54 21.6 -0.6
DPC Dobruska-Polom 156.22 338 *e*PKIKP PKPdf 10 54 04.3 +10
DPC *e* 10 54 21.9
DPC Dobruska-Polom 156.22 338 *e*PKPAB PKPab 10 54 21.9 -0.5
MORC Moravsky Berou 156.28 336 *e*PKPdf PKPdf 10 53 54.1 -0.3
MORC *e*PKPab PKPab 10 54 21.9 -0.7
LIC Lamto 156.29 161 *e*PKP2 PKPab 10 54 24.8 +1.2
CLL Collm 156.32 344 *e*PKPab PKPab 10 54 21.4 -1.4
CLL Collm 156.32 344 *e*PKIKP PKPdf 10 54 04.0 +10
CLL *i* 10 54 20.8
CLL pmax pmax
comp=Z,19nm,0.9s
CLL pmax pmax
comp=Z,25nm,1.9s
CLL Collm 156.32 344 *e*PKPdiff PKPdf 10 54 04.0 +10
CLL *i* PKPab PKPab 10 54 20.8 -2.0
comp=Z,19nm,0.9s
CLL LmV 12 13 00.0
comp=Z,100nm,20.8s
IBBN Ibbenburen 156.33 352 *e*PKPab PKPab 10 54 21.8 -1.0
CLZ Clausthal 156.38 348 *e*PKPab PKPab 10 54 22.1 -0.9
BRG Berggiesshubel 156.47 342 *e*PKPab PKPab 10 54 22.4 -1.0
BRG Berggiesshubel 156.47 342 *e*PKP PKPdf 10 53 58.1 +3.4
comp=Z,4.5nm,1.1s
BRG *i* 10 54 22.2
comp=Z,14nm,1.1s
BRG Berggiesshubel 156.47 342 *e*PKIKP PKPdf 10 53 58.1 +3.5
BRG *i* 10 54 22.2
BRG pmax pmax
comp=Z,3.0nm,1.1s
BRG pmax pmax
comp=Z,8.0nm,1.1s
PVCC Panska Ves 156.60 341 *e*PKP2 PKPab 10 54 23.3 -0.7
PVCC Panska Ves 156.60 341 *e*PKPAB PKPab 10 54 23.3 -0.7
NEUB Neuenburg 156.70 345 *e*PKPab PKPab 10 54 23.2 -1.2
PSZ Piszkesteto 156.80 330 *e*PKPab PKPab 10 54 24.3 -0.6
PSZ Piszkesteto 156.80 330 ⇓PKP2 PKPab 10 54 20.3 -4.7
PSZ Piszkesteto 156.80 330 ⇓*i*P PKPab 10 54 20.3 -4.7
PSZ Piszkesteto 156.80 330⇓*e*PPP PKPab 10 54 24.3 -0.7
VYHS Vyhne 156.81 332 *e*PKP2 PKPab 10 54 24.0 -1.0
VYHS Vyhne 156.81 332 *e*PKP PKPab 10 54 24.0 -1.0
VRAC Vranov 157.01 336 PKPbc PKPdf 10 54 04.8 +9.4
comp=Z,2.1nm,0.5s,baz=305,slow=19,SNR=3.2
VRAC PKPab PKPab 10 54 25.3 -0.5
comp=Z,13nm,0.8s,baz=32,slow=3.0,SNR=14
VRAC Vranov 157.01 336 ⇓PKP2 PKPab 10 54 19.5 -6.3
VRAC Vranov 157.01 336 ⇓*i*P PKPab 10 54 19.5 -6.3
PRU Pruhonice 157.09 340 *e*PKP2 PKPab 10 54 26.1 0.0
PRU Pruhonice 157.09 340 *e*PKPAB PKPab 10 54 26.1 0.0
MOX Moxa 157.26 345 *e*PKP PKPab 10 54 25.7 -1.1
comp=Z,19nm,1.3s
MOX Moxa 157.26 345 *e*PKPab PKPab 10 54 25.6 -1.2
MOX Moxa 157.26 345 *e*PKP2 PKPab 10 54 25.7 -1.1
MOX pmax pmax
comp=Z,19nm,1.3s
TANN Tannenbergstha 157.28 344 *e*PKPab PKPab 10 54 26.0 -0.9
WERD Werda 157.28 344 *e*PKPab PKPab 10 54 26.0 -0.9
GUNZ Gunzen 157.36 344 *e*PKPab PKPab 10 54 26.5 -0.8
TREC Trest 157.40 338 *e*PKP2 PKPab 10 54 26.5 -1.0
TREC Trest 157.40 338 *e*PKPAB PKPab 10 54 26.5 -1.0
WERN Wernitzgruen 157.41 344 *e*PKPab PKPab 10 54 26.8 -0.7
NKC Novy Kostel 157.45 343 *e*PKP2 PKPab 10 54 26.7 -1.0
NKC Novy Kostel 157.45 343 *e*PKPAB PKPab 10 54 26.7 -1.0
ROTZ Rotzenmuhle 157.94 343 *e*PKPab PKPab 10 54 29.1 -0.7
KHC Kasperske Hory 158.14 340 *e*PKP2 PKPab 10 54 30.0 -0.7
KHC Kasperske Hory 158.14 340 *e*PKPAB PKPab 10 54 30.0 -0.7
GRF Grafenberg Arr 158.24 345 *e*PKPab PKPab 10 54 30.4 -0.7
TNS Taunus Mts 158.27 350 *e*PKPab PKPab 10 54 30.1 -1.1
WET Wettzell 158.33 342 *e*PKPab PKPab 10 54 31.0 -0.5
GEC2 GERESS Array S 158.36 340 *e*PKPab PKPab 10 54 30.8 -0.9
CONA Conrad Observa 158.43 335 ⇑*i*PKPab PKPab 10 54 31.5 -0.6
comp=Z,19nm,1.1s,SNR=9.8
VTS Vitosha 158.51 315 ⇓PKP2 PKPab 10 54 24.6 -8.0
VTS Vitosha 158.51 315 ⇓*i*P PKPab 10 54 24.6 -8.0
BAIF Baives 158.85 357 *e*PKP2 PKPab 10 54 30.7 -3.0
MOA Molln 159.06 338 ⇑*i*PKPab PKPab 10 54 33.9 -0.8
comp=Z,12nm,1.1s
STU Stuttgart 159.54 348 *e*PKPdf PKPdf 10 53 57.8 -0.7
RJOB Jochberg 159.62 340 *e*PKPab PKPab 10 54 36.9 -0.3
FUR Furstenfeldbru 159.65 343 *e*PKPab PKPab 10 54 36.6 -0.7
SOKA Soboth 159.79 335 ⇓*i*PKPab PKPab 10 54 36.6 -1.4
comp=Z,14nm,1.0s
BFO Black Forest 160.12 349 *e*PKPab PKPab 10 54 37.9 -1.4
CDF Champ du Feu 160.21 351 *e*PKP2 PKPab 10 54 38.0 -1.7
comp=Z,22nm,1.2s
SGMF Saint Gilles 160.28 10 *e*PKP2 PKPab 10 54 38.1 -1.9
comp=Z,13nm,0.9s
MYKA Terra Mystica 160.33 337 ⇑*i*PKPab PKPab 10 54 38.4 -1.9
comp=Z,9.4nm,0.8s
MEZF Maizieres J'vi 160.36 355 *e*PKP2 PKPab 10 54 39.0 -1.3
GRR Gorron 160.37 7 *e*PKP2 PKPab 10 54 38.8 -1.6
WTTA Wattenberg 160.39 341 ⇑*i*PKPab PKPab 10 54 39.7 -0.8
comp=Z,14nm,0.7s,SNR=8.7
RETA Reutte 160.41 343 ⇑*i*PKPab PKPab 10 54 39.6 -1.0
comp=Z,17nm,1.2s,SNR=8.7
MOTA Moosalm 160.46 343 ⇑*i*PKPab PKPab 10 54 39.7 -1.1
comp=Z,18nm,1.2s
SFTF Sexfontaines 160.65 355 *e*PKP2 PKPab 10 54 40.1 -1.5
comp=Z,44nm,1.2s
HAU Haudompre 160.73 352 *e*PKP2 PKPab 10 54 40.3 -1.6
comp=Z,16nm,1.0s
DAVA Damuels 160.81 345 ⇑*i*PKPab PKPab 10 54 41.1 -1.3
comp=Z,13nm,0.8s
HINF Hinteralfeld 160.85 351 *e*PKP2 PKPab 10 54 40.5 -2.0
comp=Z,13nm,1.1s
DAVOX Davos/Dischmat 161.29 344 PKP PKPdf 10 54 00.4 -0.1
comp=Z,1.0nm,0.6s,baz=358,slow=18,SNR=2.7
DAVOX PKPab PKPab 10 54 43.8 -0.6
comp=Z,8.8nm,0.7s,baz=331,slow=4.0,SNR=12
LOR Lormes 161.66 357 *e*PKP2 PKPab 10 54 44.5 -1.5
comp=Z,30nm,1.4s
SSF Saint Saulge 161.87 358 *e*PKP2 PKPab 10 54 45.1 -1.9
comp=Z,9.3nm,0.8s
CABF La Chapelle 162.13 352 *e*PKP2 PKPab 10 54 47.0 -1.1
comp=Z,26nm,1.3s
AVF Avril sur Loir 162.15 358 *e*PKP2 PKPab 10 54 46.6 -1.6
comp=Z,17nm,1.2s
MFF Saint Martin d 162.21 6 *e*PKP2 PKPab 10 54 47.0 -1.5
comp=Z,46nm,1.6s
SMF Signal de Mont 162.28 357 *e*PKP2 PKPab 10 54 47.2 -1.5
comp=Z,40nm,1.2s
BGF Bois d'Agland 162.39 360 *e*PKP2 PKPab 10 54 47.2 -2.0
LPL La Plagne 163.12 350 *e*PKP2 PKPab 10 54 51.8 -0.7
comp=Z,19nm,1.1s
LPG La Plagne 163.13 350 *e*PKP2 PKPab 10 54 52.1 -0.4
comp=Z,30nm,1.2s
ORIF Oris-en-Rattie 163.82 352 *e*PKP2 PKPab 10 54 54.7 -0.9
comp=Z,18nm,1.0s
MBDF Montbardon 163.88 349 *e*PKP2 PKPab 10 54 54.5 -1.3
comp=Z,15nm,0.9s
VIVF Saint-Julien-l 164.01 355 *e*PKP2 PKPab 10 54 55.3 -1.1
TORD Torodi Ar. Bea 164.28 177 PKP PKPdf 10 54 04.4 0.0
comp=Z,7.1nm,1.0s,baz=311,slow=1.8,SNR=26
TORD PKPab PKPab 10 54 59.6 +1.3
comp=Z,5.6nm,0.9s,baz=184,slow=3.8,SNR=12
TORD PP PP 10 58 46.1 +3.3
comp=Z,1.2nm,0.9s,baz=215,slow=4.8,SNR=3.0
SBF Sospel 164.60 347 *e*PKP2 PKPab 10 54 57.1 -1.9
comp=Z,65nm,1.2s
SMRF Simiane la Rot 164.79 352 *e*PKP2 PKPab 10 54 58.9 -1.0
comp=Z,28nm,1.2s
LMR La Mourre 165.28 349 *e*PKP2 PKPab 10 55 00.4 -1.6
PGF Pioggiola 165.46 341 *e*PKP2 PKPab 10 55 01.2 -1.7
comp=Z,18nm,0.9s
EVO Evora 166.96 40 *e*PKIKP PKPdf 10 54 05.9 0.0
comp=Z,10nm,1.0s
VAE Valguarnera 166.97 314 PKPab PKPab 10 55 08.4 -1.4
comp=Z,9.4nm,0.3s,baz=206,slow=8.5,SNR=5.8
ESDC Sonseca Array 167.97 25 PKP PKPdf 10 54 05.9 -0.7
ESDC PKPab PKPab 10 55 12.7 -1.3
ESDC PKPab PKPab 10 55 28.7 +15
ESDC Sonseca Array 167.97 25 PKP PKPdf 10 54 05.9 -0.7
comp=Z,0.3nm,0.3s,baz=331,slow=2.0,SNR=8.0
ESDC PKPab PKPab 10 55 12.7 -1.3
comp=Z,1.7nm,0.7s,baz=318,slow=4.2,SNR=7.8
KEST Kesra 171.15 322 PKP PKPdf 10 54 09.6 +1.0
comp=Z,0.5nm,0.5s,baz=22,slow=5.4,SNR=3.2
KEST PKPab PKPab 10 55 28.7 +0.4
comp=Z,1.0nm,0.7s,baz=56,slow=4.3,SNR=4.3
MDT Midelt 172.66 56 PKP PKPdf 10 54 10.5 +1.1
comp=Z,4.9nm,1.1s,baz=263,slow=2.5,SNR=7.7

IDC 30 10:48:05.8±2.3, **13°82S**×**167°25E, h0**km, **mb3.8**/4, **mb1 4.0**/4, **mb1mx3.7**/17, **mbtmp3.8**/4, **Error ellipse: s-maj=117.6km s-min=29.1km az=138.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**29.57**	**228**	P	P	10 54 12.9	+0.5
	0.9nm,0.4s,baz=73,slow=11,SNR=4.2						
WRA	**Warramunga Arr**	**32.04**	**254**	P	P	10 54 34.8	+0.4
	0.4nm,0.4s,baz=85,slow=9.2,SNR=18						
ASAR	**Alice Springs**	**32.98**	**248**	P	P	10 54 42.4	-0.4
	0.6nm,0.4s,baz=75,slow=9.4,SNR=4.8						
ILAR	**Eielson Array**	**85.67**	**18**	P	P	11 00 47.0	+0.9
	0.4nm,0.8s,baz=231,slow=5.5,SNR=6.6						
ARCES	**ARCESS Array B**	**119.38**	**346**	PKP	PKPdf	11 06 55.2	-1.5
	3.1nm,1.0s,baz=47,slow=1.5,SNR=8.2						
SFTF	**Sexfontaines**	**142.68**	**340**	*e*PKP1	PKPdf	11 07 38.6	-2.5
	7.5nm,0.6s						
FLN	**La Foliniere**	**143.72**	**346**	*e*PKP1	PKPdf	11 07 41.4	-1.5
GRR	**Gorron**	**144.15**	**346**	*e*PKP1	PKPdf	11 07 42.0	-1.7
SSF	**Saint Saulge**	**144.18**	**341**	*e*PKP1	PKPdf	11 07 42.5	-1.2
	4.3nm,0.6s						
LPG	**La Plagne**	**144.37**	**336**	*e*PKP1	PKPdf	11 07 43.7	-0.4
SMF	**Signal de Mont**	**144.44**	**340**	*e*PKP1	PKPdf	11 07 43.1	-1.1
	11nm,1.0s						
AVF	**Avril sur Loir**	**144.47**	**341**	*e*PKP1	PKPdf	11 07 43.1	-1.2
	7.5nm,1.0s						
SGMF	**Saint Gilles**	**144.64**	**348**	*e*PKP1	PKPdf	11 07 42.9	-1.6
ORIF	**Oris-en-Rattie**	**145.19**	**337**	*e*PKP1	PKPbc	11 07 45.8	+0.7
TCF	**Toulx Ste Croi**	**145.27**	**342**	*e*PKP1	PKPbc	11 07 45.7	+0.4
	2.5nm,0.6s						

NEIC ***30*** *11:30:38.6, 44°.26S×167°.76E, h12km, ML4.6(WEL), After WEL.*

WEL 30 11:30:38.3±0.4, **44°24S×167°69E, h12**km, **ML4.7**/21, **Error ellipse: s-maj=3.5km s-min=1.8km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.46**	**159**	P*	Pg	11 30 47.1	-0.3
MSZ				S*	Sg	11 30 53.5	-0.1
MSZ	**Milford Sound**	**0.46**	**159**	P	Pg	11 30 47.1	-0.3
MSZ				S	Sg	11 30 53.0	-0.6
JCZ	**Jackson Bay**	**0.79**	**78**	P*	Pb	11 30 52.7	-1.2
JCZ				S*	Sb	11 31 03.0	-1.5
JCZ	**Jackson Bay**	**0.79**	**78**	P	Pg	11 30 52.7	-0.8
WKZ	**Wanaka**	**1.11**	**122**	P*	Pb	11 30 58.2	-1.2
WKZ				S*	Sb	11 31 13.1	-0.8
WKZ	**Wanaka**	**1.11**	**122**	P	Pb	11 30 58.2	-1.3
MLZ	**Mavora Lakes**	**1.16**	**163**	P*	Pb	11 30 59.5	-0.7
MLZ				S*	Sb	11 31 16.0	+0.8
MLZ	**Mavora Lakes**	**1.16**	**163**	P	Pb	11 30 59.5	-0.7
DCZ	**Deep Cove**	**1.29**	**197**	PN	Pn	11 31 00.1	-2.1
DCZ				S*	Sb	11 31 18.4	-0.7

DCZ	**Deep Cove**	**1.29 197**	P	Pn	11 31 00.1	-2.1
DCZ			S	Sb	11 31 18.4	-0.7
EAZ	**Earnscleugh**	**1.52 131**	PN	Pn	11 31 05.3	+0.1
EAZ	**Earnscleugh**	**1.52 131**	P	Pn	11 31 05.3	+0.1
FOZ	**Fox Glacier**	**1.59 66**	PN	Pn	11 31 07.7	+1.4
FOZ	**Fox Glacier**	**1.59 66**	P	Pn	11 31 04.7	-1.6
WHZ	**Wether Hill Ro**	**1.66 174**	PN	Pn	11 31 06.7	-0.5
WHZ	**Wether Hill Ro**	**1.66 174**	P	Pn	11 31 06.7	-0.5
LBZ	**Lake Benmore**	**1.79 96**	PN	Pn	11 31 09.1	0.0
LBZ	**Lake Benmore**	**1.79 96**	P	Pn	11 31 09.1	+0.1
PYZ	**Puysegur Point**	**2.06 200**	PN	Pn	11 31 11.9	-0.7
TUZ	**Tuapeka**	**2.20 142**	PN	Pn	11 31 14.3	-0.2
TUZ	**Tuapeka**	**2.20 142**	P	Pn	11 31 14.3	-0.3
ODZ	**Otahua Downs**	**2.25 112**	PN	Pn	11 31 14.5	-0.8
ODZ	**Otahua Downs**	**2.25 112**	P	Pn	11 31 14.5	-0.8
RPZ	**Rata Peaks**	**2.48 79**	PN	Pn	11 31 17.5	-1.0
RPZ	**Rata Peaks**	**2.48 79**	P	Pn	11 31 17.5	-1.0
WVZ	**Waitaha Valley**	**2.50 63**	PN	Pn	11 31 15.9	-2.8
WVZ	**Waitaha Valley**	**2.50 63**	P	Pn	11 31 15.9	-2.8
SYZ	**Scrubby Hill**	**2.51 157**	PN	Pn	11 31 18.8	-0.1
SYZ	**Scrubby Hill**	**2.51 157**	P	Pn	11 31 18.8	-0.1
APZ	**The Paps**	**2.60 176**	PN	Pn	11 31 19.7	-0.4
APZ	**The Paps**	**2.60 176**	P	Pn	11 31 19.7	-0.4
MQZ	**McQueen's Vall**	**3.62 83**	PN	Pn	11 31 32.1	-2.0
MQZ	**McQueen's Vall**	**3.62 83**	P	Pn	11 31 32.1	-2.0
CRLZ	**Canterbury Las**	**3.62 81**	PN	Pn	11 31 32.3	-1.8
CRLZ	**Canterbury Las**	**3.62 81**	P	Pn	11 31 32.3	-1.9
LTZ	**Lake Taylor**	**3.63 68**	PN	Pn	11 31 32.3	-2.0
LTZ	**Lake Taylor**	**3.63 68**	P	Pn	11 31 32.3	-2.0
DSZ	**Denniston Nort**	**3.91 52**	PN	Pn	11 31 35.8	-2.3
DSZ	**Denniston Nort**	**3.91 52**	P	Pn	11 31 35.8	-2.3
THZ	**Tophouse**	**4.55 59**	PN	Pn	11 31 45.3	-1.6
THZ	**Tophouse**	**4.55 59**	P	Pn	11 31 45.3	-1.7
QRZ	**Quartz Range**	**4.94 48**	PN	Pn	11 31 49.7	-2.5
QRZ	**Quartz Range**	**4.94 48**	P	Pn	11 31 49.7	-2.6
NNZ	**Nelson**	**5.16 56**	PN	Pn	11 31 54.4	-0.9
NNZ	**Nelson**	**5.16 56**	P	Pn	11 31 54.4	-0.9
TCW	**Tory Channel**	**5.71 60**	PN	Pn	11 32 02.1	-0.8
DUWZ	**D'Urville Isla**	**5.74 55**	PN	Pn	11 32 03.0	-0.2
NRZ	**Ngariki Road**	**6.76 46**	P	Pn	11 32 21.6	+4.3
NEZ	**North Egmont**	**6.90 46**	PN	Pn	11 32 17.3	-1.8
HIZ	**Hauiti**	**7.86 46**	PN	Pn	11 32 31.4	-0.9
HIZ	**Hauiti**	**7.86 46**	P	Pn	11 32 33.4	+1.1
WCZ	**Waipu Caves**	**9.73 34**	PN	Pn	11 32 56.4	-1.6
WCZ	**Waipu Caves**	**9.73 34**	P	Pn	11 32 56.4	-1.6

CASC 30 12:03:29.7±3.4, 7°28'N×81°86'W, h34km±999km, MD3.7, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**1.71**	**331**	*eP*	Pn	12 03 54.3	-2.9
ACR	**Cerro Adams**	**1.88**	**316**	*eP*	Pn	12 03 59.6	+0.1
ACR				*eS*	Sn	12 04 21.4	-0.7
BUS	**Buena Vista**	**2.94**	**320**	*eP*	Pn	12 04 16.2	+2.2
BUS				*eS*	Sn	12 04 50.3	+2.1
QCR	**Quepos**	**3.12**	**313**	*eP*	Pn	12 04 16.7	+0.1
URSC	**Urasca**	**3.17**	**323**	*eP*	Pn	12 04 20.1	+2.9
URSC				*eS*	Sn	12 04 55.7	+1.8
LAJ	**Bijagual**	**3.40**	**319**	*eP*	Pn	12 04 23.2	+2.8
PRS1	**Puriscal**	**3.62**	**318**	*eP*	Pn	12 04 24.2	+0.7
CGA2	**Cerro Gallo 2**	**3.75**	**317**	*eP*	Pn	12 04 26.6	+1.4
VSM	**San Miguel**	**8.78**	**315**	*eP*	Pn	12 04 47.9	-46

*IDC **30** 12:04:44.9±0.4, 12°.98N×124°.32E, h0km, mb4.7/23, mb1 4.8/24, mb1mx4.7/26, mbtmp4.7/24, MS4.6/16, Ms1 4.6/16, ms1mx4.3/34, Error ellipse: s-maj=17.0km s-min=11.6km az=87.0*

*MAN **30** 12:04:47, 13°.05N×124°.33E, h7km, mb5.7, ML4.7, MS5.1*
MAN INTENSITY V - LEGASPI CITY; INTENSITY IV - SAN ANDRES CATANDUANES; CABID-AN SORSOGON; INTENSITY III - CATARMAN NORTHERN SAMAR; IROSIN SORSOGON; INTENSITY II - CATBALOGAN NORTHERN SAMAR.

*MOS **30** 12:04:48.5±1.0, 13°.06N×124°.36E, h33km, mb5.4/48, MS4.7/16, Error ellipse: s-maj=9.1km s-min=5.0km az=114.0*

*BJI **30** 12:04:50.4, 13°.04N×124°.41E, h52km, mB5.3/38, mb5.1/66, Ms4.9/68, Ms7 4.7/64*

*ISCJB **30** 12:04:50.3±0.4, 13°.12N±0°.02×124°.35E±0°.03, h42km±3km, mb5.1/154, MS4.7/47, Error ellipse: s-maj=4.4km s-min=3.0km az=170.0*

*GCMT **30** 12:04:50.2±0.2, 13°.11N×124°.40E, h23km, MW5.2, Moment Tensor Solution. s55,c76; s87,c165; Moment tensor: Scale 10^{16}Nm; M_{rr}4.70±.24; $M_{\theta\theta}$0.73±.17; $M_{\phi\phi}$-5.44±.19; $M_{r\theta}$3.45±.30; $M_{r\phi}$6.38±.13; $M_{\theta\phi}$3.09±.31; Best double couple: $M_0$9.40000×10^{16} NP1:$\phi_1$113.00000°, δ57.00000°, λ33.00000°. NP2:$\phi_2$3.00000°, δ63.00000°, λ142.00000°. Principal axes: T 9.3000, Plg45.0000°, Azm326.0000°; N 0.1800, Plg45.0000°, Azm153.0000°; P -9.4900, Plg4.0000°, Azm59.0000°; Data Used: ll IU IC G CN.*

*NEIC **30** 12:04:52.3±0.6, 13°.01N×124°.32E, h50km±5km, mb5.1/56 Error ellipse: s-maj=5.6km s-min=4.4km az=82.0*

NEIC Felt [V PIVS] at Legaspi and [III PIVS] at Irosin, Luzon. Felt [IV PIVS] at San Andres, Catanduanes. Also felt [III PIVS] at Catarman and [II PIVS] at Catbalogan, Samar.

*DJA **30** 12:04:52, 13°.29N×124°.32E, h10km, mb5.2/25*

ISC 30 12:04:52.9±0.3, 13°.10N±0°.02×124°.32E±0°.03, h51km±3km, h43km±2.9km:pP-P, n417, σ1°§14/422, mb5.1/154, MS4.7/47, 33C-14D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.67**	**150**	*eP*	**Pn**	**12 05 00.3**	**-6.0**
AUQP	**San Andres**	**1.62**	**278**	*eP*	**Pn**	**12 05 21.4**	**+2.3**
BESP	**Borongan**	**1.84**	**144**	*eP*	**Pn**	**12 05 18.3**	**-3.8**
GQP	**Guinayangan**	**1.99**	**294**	*eP*	**Pn**	**12 05 23.2**	**-1.0**
OCLP	**Ormoc**	**2.05**	**172**	*eP*	**Pn**	**12 05 23.1**	**-1.8**
RCP	**Roxas**	**2.17**	**225**	*eP*	**Pn**	**12 05 24.5**	**-2.0**
OTRP	**Odiongan**	**2.36**	**255**	*eP*	**Pn**	**12 05 27.1**	**-2.0**
POLP	**Polillo Island**	**2.83**	**305**	*eP*	**Pn**	**12 05 37.2**	**+1.7**
LQP	**Lukban**	**2.89**	**291**	*eP*	**Pn**	**12 05 42.0**	**+5.6**
GUIM	**Jordan**	**2.98**	**215**	*eP*	**Pn**	**12 05 35.9**	**-1.8**
TBP	**Tagbilaran**	**3.41**	**188**	*eP*	Px	12 05 56.1	
TGY	**Tagaytay City**	**3.44**	**287**	Pn	**Pn**	**12 05 45.7**	**+1.8**
	83nm,0.3s,baz=128,slow=6.3,SNR=17						
TGY				Lg		12 06 41.2	
	197nm,0.3s,baz=68,slow=21,SNR=4.0						
TGY	**Tagaytay City**	**3.44**	**287**	*iP*	**Pn**	**12 05 43.2**	**-0.8**
SCPH	**Surigao**	**3.49**	**161**	*eP*	**Pn**	**12 05 43.7**	**-0.9**
SCPH				*eS*	**Sn**	**12 06 19.5**	**-5.2**
BALP	**Baler**	**3.74**	**315**	*eP*	**Pn**	**12 05 47.3**	**-0.8**
SNPH	**Sibulan**	**3.88**	**196**	*eP*	**Pn**	**12 05 52.2**	**+2.2**
CUYO	**Cuyo Island**	**3.93**	**236**	*eP*	**Pn**	**12 05 48.7**	**-2.0**
PCPH	**Palayan**	**3.97**	**308**	*eP*	**Pn**	**12 05 50.5**	**-0.8**
LUBP	**Lubang**	**4.01**	**280**	*eP*	**Pn**	**12 05 53.9**	**+2.0**
BUSP	**Coron**	**4.17**	**255**	*eP*	**Pn**	**12 05 52.5**	**-1.4**
BUTP	**Butuan**	**4.30**	**163**	*eP*	**Pn**	**12 06 00.6**	**+4.8**
PALP	**Palanan**	**4.35**	**335**	*eP*	**Pn**	**12 05 56.2**	**-0.2**
CAUP	**Cauayan**	**4.52**	**328**	*eP*	**Pn**	**12 05 57.9**	**-0.9**
CGP	**Cagayan de Oro**	**4.63**	**175**	*eP*	**Pn**	**12 06 07.2**	**+6.9**
SCZP	**Santa Cruz**	**5.03**	**302**	*eP*	**Pn**	**12 06 06.8**	**+0.9**
ENPP	**El Nido**	**5.14**	**249**	*eP*	**Pn**	**12 06 06.7**	**-0.6**
CVP	**Callao Caves**	**5.17**	**333**	*eP*	**Pn**	**12 06 06.7**	**-1.1**
BUKP	**Musuan**	**5.24**	**172**	*eP*	**Pn**	**12 06 09.7**	**+1.1**
PAGZ	**Pagadian**	**5.30**	**190**	*eP*	**Pn**	**12 06 07.4**	**-2.1**
BOLP	**Bolinao**	**5.37**	**308**	*eP*	**Pn**	**12 06 11.0**	**+0.5**
APYP	**Conner**	**5.59**	**328**	*eP*	**Pn**	**12 06 12.6**	**-0.9**
ABRA	**Dolores**	**5.71**	**323**	*eP*	**Pn**	**12 06 15.5**	**+0.4**
DMPH	**Davao City--Mi**	**6.09**	**169**	*eP*	**Pn**	**12 06 22.7**	**+2.4**
DMPH				*eS*	Sn	12 07 06.7	-22
DAV	**Davao City (W)**	**6.12**	**168**	Pn	**Pn**	**12 06 20.6**	**-0.1**
	68nm,0.3s,baz=333,slow=11,SNR=2.7						
DAV				Lg		12 08 00.9	
	33nm,0.3s,baz=218,slow=19,SNR=2.3						
DAV				LR	LR	12 09 08.8	
	comp=Z,18μm,18.3s,baz=186,slow=44						
MATI	**Mati**	**6.40**	**162**	*eP*	**Pn**	**12 06 28.7**	**+4.0**
BATP	**Bataraza**	**7.70**	**237**	*eP*	**Pn**	**12 06 42.5**	**0.0**
SGSI	**Sangihe**	**9.43**	**173**	P	**Pn**	**12 07 13.7**	**+7.6**
	4μm328nm,1.3s						
MYLDM	**Lahad Datu**	**9.74**	**217**	P	**Pn**	**12 07 12.5**	**+2.1**
TWG	**Pinlang**	**10.15**	**343**	*ePn*	**Pn**	**12 07 15.8**	**-0.3**
	75nm,0.8s						

SDKM	**Sandakan**	**10.21**	**224**	P	**Pn**	**12 07 17.2**	**+0.4**
KKM	**Kota Kinabalu**	**10.63**	**230**	P	**Pn**	**12 07 21.9**	**-0.7**
YULB	**Yu-li**	**10.63**	**345**	*ePn*	**Pn**	**12 07 21.7**	**-0.9**
	78nm,1.0s						
YULB				*eSn*	**Sn**	**12 09 10.7**	**-10**
TPUB	**Ta-pu**	**10.74**	**341**	*ePn*	**Pn**	**12 07 24.2**	**+0.2**
	141nm,1.0s						
TSM	**Tawau**	**10.82**	**217**	P	**Pn**	**12 07 27.6**	**+2.5**
SSLB	**Suanglung**	**11.10**	**344**	*ePn*	**Pn**	**12 07 29.2**	**+0.2**
	82nm,0.8s						
SSLB				*eSn*	**Sn**	**12 09 31.4**	**-0.3**
NACB	**Ninganchiao**	**11.32**	**347**	*ePn*	**Pn**	**12 07 32.5**	**+0.6**
	160nm,1.3s						
NACB				*eSn*	**Sn**	**12 09 35.6**	**-1.3**
MNI	**Manado**	**11.59**	**177**	P	**Pn**	**12 07 40.6**	**+4.9**
	3μm240nm,1.3s						
YHNB	**Yeheng**	**11.84**	**347**	*ePn*	**Pn**	**12 07 39.0**	**-0.1**
	158nm,1.2s						
TATO	**Taipei**	**12.12**	**348**	*ePn*	**Pn**	**12 07 45.1**	**+2.3**
TATO	**Taipei**	**12.12**	**348**	P	**Pn**	**12 07 45.3**	**+2.4**
	SNR=5.8						
TNTI	**Ternate**	**12.61**	**166**	P	**Pn**	**12 07 49.9**	**+0.2**
	2μm167nm,1.2s						
QZH	**Quanzhou**	**12.96**	**336**	*iP*	**Pn**	**12 07 52.3**	**-2.1**
QZH				S	**Sn**	**12 10 19.0**	**+1.8**
QZH				pmax	pmax		
	comp=Z,170nm,0.9s						
QZH				pmax	pmax		
	comp=Z,1μm,11.4s						
QZH				LR	LR		
	comp=N,6μm,16.1s						
QZH				LR	LR		
	comp=E,2μm,13.2s						
QZH				LR	LR		
	comp=Z,7μm,19.5s						
LBMI	**Labuha**	**14.01**	**167**	P	**Pn**	**12 08 10.1**	**+1.4**
	comp=Z,2μmcomp=Z,79nm,1.7s						
LUWI	**Luwuk**	**14.13**	**186**	P	**Pn**	**12 08 14.1**	**+3.7**
	comp=Z,4μmcomp=Z,348nm,1.1s						
JOW	**Kunigami**	**14.16**	**15**	*ePn*	**Pn**	**12 08 10.1**	**-0.6**
	comp=Z,36nm,0.9s						
JOW	**Kunigami**	**14.16**	**15**	Pn	**Pn**	**12 08 10.4**	**-0.2**
	baz=173,slow=8.1						
JOW				LR	LR	12 12 40.8	
	comp=Z,3μm,21.6s,baz=350,slow=33						
GZH	**Guangzhou**	**14.40**	**315**	P	**Pn**	**12 08 15.8**	**+1.9**
GZH				S	**Sn**	**12 10 53.0**	**+0.8**
GZH				LR	LR		
	comp=N,4μm,20.5s						
GZH				LR	LR		
	comp=E,3μm,16.3s						
GZH				LR	LR		
	comp=Z,5μm,21.0s						
BTM	**Bintulu**	**14.84**	**229**	P	**Pn**	**12 08 19.8**	**+0.1**
QIZ	**Qiongzhong**	**15.11**	**295**	P	**Pn**	**12 08 23.5**	**+0.3**
QIZ				S	**S**	**12 11 07.5**	**-17**
QIZ				pmax	pmax		
	comp=Z,35nm,2.2s						
QIZ				pmax	pmax		
	comp=Z,590nm,3.6s						
QIZ				LR	LR		
	comp=N,2μm,15.2s						
QIZ				LR	LR		
	comp=Z,3μm,15.4s						
SBUM	**Sibu**	**15.98**	**230**	P	**Pn**	**12 08 35.3**	**+1.0**
NLAI	**Namlea**	**16.46**	**170**	P	**Pn**	**12 08 46.8**	**+6.3**
TTSI	**Tana Toraja**	**16.65**	**196**	P	**Pn**	**12 08 44.8**	**+2.0**
	comp=Z,4μmcomp=Z,340nm,0.9s						
KDI	**Kendari**	**17.03**	**186**	P	**Pn**	**12 08 49.6**	**+2.1**
	comp=Z,1μmcomp=Z,52nm,1.3s						
SPSI	**Sidrap Palu**	**17.54**	**195**	P	**Pn**	**12 08 55.3**	**+1.4**
	comp=Z,114nm,1.0s						
KSM	**Kuching**	**18.05**	**231**	*eP*	**Pn**	**12 09 00.6**	**+0.4**
	comp=Z,70nm,1.0s						
KSM	**Kuching**	**18.05**	**231**	P	**Pn**	**12 09 01.1**	**+0.9**
SSE	**Sheshan**	**18.14**	**351**	*iP*	**Pn**	**12 09 01.5**	**+0.3**
SSE				S	**S**	**12 12 20.5**	**-5.7**
SSE				sS	sS	12 12 34.8	-10
SSE				pmax	pmax		
	comp=Z,52nm,0.9s						
SSE				pmax	pmax		
	comp=Z,640nm,11.0s						
SSE				LR	LR		
	comp=N,810nm,18.4s						
SSE				LR	LR		
	comp=E,3μm,18.4s						
SSE				LR	LR		
	comp=Z,2μm,17.1s						
BAKI	**Biak**	**18.39**	**140**	P	**Pn**	**12 09 08.9**	**+4.6**
	comp=Z,3μmcomp=Z,227nm,1.1s						
BBSI	**Bau Bau**	**18.54**	**185**	P	sP	12 09 21.0	-2.5
BKSI	**Bulukumba**	**18.77**	**193**	P	**Pn**	**12 09 13.0**	**+4.2**
	comp=Z,1μmcomp=Z,89nm,1.0s						
NJ2	**Nanjing**	**19.52**	**346**	*eP*	**Pn**	**12 09 17.5**	**-0.2**
NJ2				pP	pP	12 09 27.8	+0.1
NJ2				sP	sP	12 09 34.0	-0.2
NJ2				S	**S**	**12 12 55.0**	**+1.1**
NJ2				sS	sS	12 13 10.0	-2.7
NJ2				SS		12 13 22.0	
NJ2				pmax	pmax		
	comp=Z,60nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,530nm,10.8s						
NJ2				LR	LR		
	comp=N,2μm,25.5s						
NJ2				LR	LR		
	comp=E,2μm,24.9s						
NJ2				LR	LR		
	comp=Z,2μm,20.1s						
WHN	**Wuhan**	**19.66**	**334**	*iP*	**Pn**	**12 09 19.0**	**-0.3**
WHN				LR	LR		
	comp=N,7μm,16.6s						
WHN				LR	LR		
	comp=E,3μm,15.4s						
WHN				LR	LR		
	comp=Z,7μm,16.7s						
GUMO	**Guam**	**20.00**	**86**	*eP*	**P**	**12 09 21.9**	**+0.5**
	comp=Z,219nm,1.1s						
GUMO	**Guam**	**20.00**	**86**	P	**P**	**12 09 22.0**	**+0.6**
	comp=Z,139nm,1.0s,baz=198,slow=13,SNR=5.4						
GUMO	**Guam**	**20.00**	**86**	*eP*	**P**	**12 09 21.9**	**+0.5**
GUMO				pmax	pmax		
	comp=Z,219nm,1.1s						
JNU	**Nakatsue**	**20.81**	**16**	*eP*	**P**	**12 09 31.1**	**+1.0**
	comp=Z,34nm,1.0s						
GYA	**Guiyang**	**21.24**	**311**	*iP*	**P**	**12 09 35.0**	**+0.3**
GYA				pP		12 09 46.8	
GYA				sP	sP	12 09 53.0	0.0
GYA				PP		12 10 03.3	
GYA				sS	sS	12 13 44.3	-2.9
GYA				pmax	pmax		
	comp=Z,50nm,1.0s,mb4.8						
GYA				pmax	pmax		
	comp=Z,410nm,8.7s						
GYA				LR	LR		
	comp=N,960nm,16.7s,MS4.5						
GYA				LR	LR		
	comp=E,1μm,21.1s,MS4.5						
GYA				LR	LR		
	comp=Z,2μm,19.6s,MS4.5						
MMRI	**Maumere**	**21.69**	**186**	P	**P**	**12 09 48.3**	**+8.7**
	comp=Z,2μmcomp=Z,133nm,1.6s,mb5.1						
CBIJ	**Chichi jima**	**21.76**	**48**	P	**P**	**12 09 40.5**	**+0.2**
	comp=Z,48nm,0.9s,mb4.9,baz=213,slow=11,SNR=3.0						
CBIJ				LR	LR	12 16 17.3	
	comp=Z,1μm,20.5s,MS4.4,baz=239,slow=32						
KMMI	**Kalianget**	**22.50**	**208**	P	**P**	**12 09 50.3**	**+2.0**
	comp=Z,4μmcomp=Z,222nm,1.4s,mb5.4						
SRBI	**Singaraja**	**22.91**	**204**	P	**P**	**12 09 52.6**	**+0.1**
	comp=Z,3μmcomp=Z,232nm,1.1s,mb5.5						
MYKOM	**Kota Tinggi**	**23.17**	**243**	P	**P**	**12 09 55.6**	**+0.3**
KGM	**Kluang**	**23.52**	**244**	P	**P**	**12 09 58.9**	**+0.2**
PPBI	**Pangkal Pinang**	**23.57**	**231**	P	**P**	**12 10 01.5**	**+2.4**
	comp=Z,1μmcomp=Z,33nm,1.1s,mb4.7						
KMI	**Kunming**	**23.60**	**304**	*iP*	**P**	**12 10 00.0**	**+0.7**
KMI				pP		12 10 10.8	
KMI				sP	sP	12 10 15.0	-3.2
KMI				PP		12 10 34.5	
KMI				PcP	PcP	12 13 46.0	+2.8
KMI				S	**S**	**12 14 08.5**	**-1.5**
KMI				sS	sS	12 14 28.3	-3.6
KMI				SS		12 15 00.3	
KMI				pmax	pmax		
	comp=Z,54nm,1.2s,mb4.8						
KMI				pmax	pmax		
	comp=Z,510nm,3.1s						
KMI				LR	LR		
	comp=N,1μm,14.4s,MS4.7						
KMI				LR	LR		
	comp=E,1μm,12.4s,MS4.7						
KMI				LR	LR		
	comp=Z,1μm,20.1s						
JAGI	**Jajag, Banyuwa**	**23.69**	**206**	P	pP	12 10 10.1	-2.6
	comp=Z,2μmcomp=Z,80nm,1.2s						
GMJI	**Gumukmas**	**23.82**	**208**	P	**P**	**12 10 06.5**	**+5.1**
	comp=Z,2μmcomp=Z,84nm,1.3s,mb5.0						
TIA	**Tai'an**	**23.91**	**346**	*iP*	**P**	**12 10 02.0**	**0.0**
TIA				S	**S**	**12 14 14.5**	**-0.3**
TIA				LR	LR		
	comp=N,2μm,19.0s,MS4.9						
TIA				LR	LR		
	comp=E,3μm,14.3s,MS4.9						
TIA				LR	LR		
	comp=Z,2μm,19.6s						
NGJI	**Ngawi**	**24.01**	**213**	P	**P**	**12 10 05.7**	**+2.6**
	comp=Z,290nm,1.0s,mb5.7						
SJI	**Sawahan**	**24.16**	**212**	P	**P**	**12 10 05.9**	**+1.4**
KRKI	**Karangkates**	**24.18**	**210**	P	**P**	**12 10 12.4**	**+7.7**
	comp=Z,316nm,1.1s,mb5.7						
INCN	**Inchon**	**24.37**	**4**	*eP*	**P**	**12 10 06.4**	**+0.2**
	comp=Z,12nm,0.6s,mb4.5						
PWJI	**Pagerwojo**	**24.39**	**211**	P	**P**	**12 10 07.9**	**+1.4**
JHJ	**Hachijo jima 2**	**24.43**	**33**	LR	LR	12 18 20.7	
	comp=Z,1μm,18.4s,MS4.4,baz=259,slow=33						
CHRT	**Chiangrai**	**24.46**	**289**	P	**P**	**12 10 00.5**	**-6.7**
KSRS	**Korea Array**	**24.47**	**7**	P	**P**	**12 10 07.4**	**+0.3**
	comp=Z,53nm,1.2s,mb4.8,baz=186,slow=9.9,SNR=77						
KSRS				PcP	PcP	12 13 44.5	-0.3
	comp=Z,1.9nm,0.8s,baz=177,slow=2.4,SNR=4.9						
KSRS				LR	LR	12 19 06.5	
	comp=Z,2μm,19.8s,MS4.5,baz=189,slow=35						
FRIM	**Kepong**	**24.48**	**248**	P	**P**	**12 10 09.1**	**+1.6**
IPM	**Ipoh**	**24.54**	**252**	*eP*	**P**	**12 10 06.8**	**-1.2**
	comp=Z,77nm,1.3s,mb5.1						
IPM	**Ipoh**	**24.54**	**252**	P	**P**	**12 10 07.6**	**-0.4**
KULM	**Kulim**	**24.60**	**254**	*eP*	**P**	**12 10 08.1**	**-0.4**
	comp=Z,79nm,1.3s,mb5.1						
KULM	**Kulim**	**24.60**	**254**	P	**P**	**12 10 08.6**	**+0.1**
BDT	**Bhumibol Dam**	**24.77**	**283**	P	**P**	**12 10 09.0**	**-1.1**
PCJI	**Pacitan**	**24.86**	**212**	P	**P**	**12 10 12.8**	**+2.0**
	comp=Z,181nm,1.1s,mb5.5						
BJII	**Banjamegara**	**24.95**	**216**	P	**P**	**12 10 14.8**	**+3.1**
	comp=Z,2μmcomp=Z,124nm,1.6s,mb5.2						
CMAR	**Chiang Mai Arr**	**24.98**	**286**	P	**P**	**12 10 11.3**	**-0.7**
	comp=Z,15nm,0.7s,mb4.6,baz=100,slow=8.0,SNR=60						
CMAR				PcP	PcP	12 13 47.1	+0.9
	comp=Z,2.4nm,0.8s,baz=89,slow=0.9,SNR=7.2						
CMAR				LR	LR	12 21 01.7	
	comp=Z,973nm,18.5s,MS4.3,baz=115,slow=39						
CMAR	**Chiang Mai Arr**	**24.98**	**286**	P	**P**	**12 10 11.3**	**-0.7**
CMAR						12 13 47.2	
CHG	**Chiang Mai**	**25.04**	**286**	*iP*	**P**	**12 10 11.0**	**-1.5**
	comp=Z,15nm,1.0s,mb4.5						
CHTO	**Chiang Mai**	**25.04**	**286**	*eP*	**P**	**12 10 10.6**	**-1.9**
	comp=Z,10.0nm,0.8s,mb4.4						
CHTO				*e*PcP	PcP	12 13 46.9	+0.5
CHTO	**Chiang Mai**	**25.04**	**286**	*eP*	**P**	**12 10 10.6**	**-1.9**
CHTO				*e*		12 13 46.9	
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
CHTO	**Chiang Mai**	**25.04**	**286**	P	**P**	**12 10 11.6**	**-0.9**
	comp=Z,336nmcomp=Z,18nm,1.1s,mb4.5						
CHTO	**Chiang Mai**	**25.04**	**286**	P	**P**	**12 10 11.2**	**-1.3**
	SNR=9.4						
XAN	**Xi'an**	**25.11**	**329**	P	**P**	**12 10 12.8**	**-0.2**
XAN				pP	pP	12 10 24.0	-2.0
XAN				sP	sP	12 10 29.8	-2.3
XAN				pmax	pmax		
	comp=Z,21nm,1.5s,mb4.5						
XAN				pmax	pmax		
	comp=Z,110nm,5.8s						
XAN				LR	LR		
	comp=N,830nm,14.7s,MS4.5						
XAN				LR	LR		
	comp=E,550nm,14.7s,MS4.5						
XAN				LR	LR		
	comp=Z,680nm,14.7s,MS4.3						
DL2	**Dalian**	**25.82**	**355**	P	**P**	**12 10 20.0**	**+0.7**
DL2				S	**S**	**12 14 47.3**	**+2.1**
DL2				pmax	pmax		
	comp=Z,50nm,1.4s,mb4.8						
DL2				pmax	pmax		
	comp=Z,170nm,5.1s						
DL2				LR	LR		
	comp=E,1μm,16.3s						
DL2				LR	LR		
	comp=Z,970nm,16.3s,MS4.4						
LEM	**Lembang**	**25.83**	**221**	P	pP	12 10 31.9	-0.8
CD2	**Chengdu**	**25.95**	**316**	P	**P**	**12 10 21.3**	**+0.7**
CD2				pP	pP	12 10 32.8	-0.9
CD2				sP	sP	12 10 38.5	-1.3
CD2				PP		12 11 03.8	
CD2				PcP	PcP	12 13 48.5	+0.2
CD2				S	**S**	**12 14 47.3**	**-0.3**
CD2				sS	sS	12 15 07.0	-2.7
CD2				SS		12 15 57.0	
CD2				pmax	pmax		
	comp=Z,110nm,1.1s,mb5.3						
CD2				pmax	pmax		
	comp=Z,470nm,5.2s						
CD2				LR	LR		
	comp=N,3μm,18.6s,MS5.0						
CD2				LR	LR		
	comp=E,2μm,17.6s,MS5.0				

LZH SS SS 12 17 20.5 -27
LZH pmax pmax
comp=Z,33nm,1.1s,mb5.0
LZH pmax pmax
comp=Z,260nm,5.2s
LZH LR LR
comp=N,3µm,16.3s,MS5.1
LZH LR LR
comp=E,2µm,15.5s,MS5.1
LZH LR LR
comp=Z,4µm,16.8s,MS5.1
HHC Hu-ho-hao-te 29.82 340 *e*P **P 12 10 56.0 +0.9**
HHC pP pP 12 11 07.8 -0.4
HHC sP sP 12 11 13.3 -1.0
HHC PP PP 12 11 53.0 -10
HHC S **S 12 15 49.0 +0.8**
HHC sS sS 12 16 09.0 -1.4
HHC SS SS 12 17 28.0 -29
HHC pmax pmax
comp=Z,52nm,0.9s,mb5.3
HHC pmax pmax
comp=Z,280nm,5.1s
HHC LR LR
comp=N,1µm,14.3s,MS4.8
HHC LR LR
comp=E,1µm,13.5s,MS4.8
HHC LR LR
comp=Z,990nm,15.7s,MS4.5
BTO Baotou 30.14 338 *e*P **P 12 10 57.5 -0.4**
CN2 Changchun 30.61 2 *e*P **P 12 11 03.5 +1.5**
CN2 *e*S **S 12 16 02.8 +2.2**
CN2 SS SS 12 17 46.3 -27
CN2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,2µm,15.0s,MS4.9
CN2 LR LR
comp=E,1µm,15.0s,MS4.9
CN2 LR LR
comp=Z,300nm,15.0s,MS4.1
VLA Vladivostok 30.62 11 ⇓ *i*P **P 12 11 00.6 -1.5**
VLA *e* 12 12 04.7
VLA *e*S **S 12 15 55.7 -5.1**
VLA pmax pmax
comp=Z,73nm,1.4s,mb5.3
FITZ Fitzroy Crossi 31.03 178 *e*P **P 12 11 02.1 -3.8**
comp=Z,5.4nm,0.6s,mb4.5
FITZ Fitzroy Crossi 31.03 178 *e*P **P 12 11 02.4 -3.5**
comp=Z,8.0nm,0.8s,mb4.6
FITZ Fitzroy Crossi 31.03 178 P **P 12 11 02.7 -3.2**
comp=Z,2.7nm,0.7s,mb4.2,baz=354,slow=9.0,SNR=9.7
MDJ Mudanjiang 31.73 7 P **P 12 11 12.3 +0.4**
MDJ pP pP 12 11 21.3 -3.8
MDJ PcP PcP 12 14 03.0 +0.5
MDJ S **S 12 16 21.0 +2.9**
MDJ pmax pmax
comp=Z,50nm,1.6s,mb5.1
MDJ pmax pmax
comp=Z,120nm,5.7s
MDJ LR LR
comp=E,800nm,26.2s
MDJ LR LR
comp=Z,1µm,21.7s,MS4.5
GTA Gaotai 33.98 325 ⇑ P **P 12 11 32.5 +0.9**
GTA pP pP 12 11 44.5 -0.4
GTA sP sP 12 11 49.8 -1.1
GTA PcP PcP 12 14 10.0 +1.2
GTA S **S 12 16 56.0 +2.8**
GTA sS sS 12 17 17.0 +1.4
GTA pmax pmax
comp=Z,22nm,1.7s,mb4.8
GTA pmax pmax
comp=Z,330nm,6.0s
GTA LR LR
comp=N,830nm,16.5s,MS4.8
GTA LR LR
comp=E,1µm,14.7s,MS4.8
GTA LR LR
comp=Z,2µm,15.9s,MS4.8
WRA Warramunga Arr 34.28 163 P **P 12 11 31.3 -3.0**
comp=Z,5.2nm,0.6s,mb4.6,baz=343,slow=8.4,SNR=77
WRA PcP PcP 12 14 08.7 -1.2
comp=Z,2.4nm,0.6s,baz=341,slow=2.9,SNR=5.4
ASAJ Asahikawa 34.66 23 *e*P **P 12 11 37.2 -0.2**
comp=Z,9.8nm,1.2s,mb4.6
ASAJ Asahikawa 34.66 23 P **P 12 11 37.1 -0.3**
comp=Z,5.3nm,0.6s,mb4.6,baz=236,slow=14,SNR=11
ASAJ PcP PcP 12 14 11.2 +0.5
comp=Z,4.1nm,1.0s,baz=235,slow=3.0,SNR=3.1
ASAJ LR LR 12 25 37.9
comp=Z,888nm,19.3s,MS4.5,baz=73,slow=36
YUK Yuzh-Kuril'sk 35.94 27 ⇓ *i*P **P 12 11 45.7 -2.7**
YUK *i* 12 13 08.8
YUK pmax pmax
comp=N,30nm,3.0s
YUK pmax pmax
comp=E,20nm,3.0s
YUK pmax pmax
comp=Z,20nm,3.0s
HABR Khabarovsk 36.38 12*c e*P **P 12 11 50.7 -1.4**
HABR *e* 12 14 12.3
HABR *e*S **S 12 17 25.6 -4.2**
HABR *e* 12 21 56.4
HABR pmax pmax
comp=Z,79nm,2.6s,mb5.2
HABR pmax pmax
comp=E,29nm,1.5s
HABR pmax pmax
comp=N,44nm,2.3s
HABR MLR MLR
comp=Z,597nm,19.0s,MS4.4
KLR Kul'dur 36.55 8 *e*P **P 12 11 49.0 -4.5**
KLR *e* 12 13 14.5
KLR *e*S **S 12 17 25.5 -6.8**
KLR MLR MLR
comp=Z,1µm,15.0s,MS4.8
YSS Yuzh-Sakhalins 37.13 21 *e*P **P 12 11 57.0 -1.5**
YSS *e* pP 12 12 09.8 -2.1
YSS *e*PPP 12 13 44.0
YSS *e*S **S 12 17 46.0 +4.7**
YSS *e*SS SS 12 20 18.0 -7.6
YSS MLR MLR
comp=Z,500nm,18.0s,MS4.3
YSS MLR MLR
comp=E,500nm,17.0s
ODAN Odare 37.16 297 *e*P **P 12 11 57.3 -1.8**
comp=E,125nm,0.8s,mb5.8
ULN Ulaanbaatar 37.54 341 *e*P **P 12 12 02.6 +0.6**
comp=E,44nm,0.9s,mb5.2
ULN Ulaanbaatar 37.54 341 *e*P **P 12 12 02.6 +0.7**
ULN pmax pmax
comp=Z,44nm,0.9s,mb5.2
ULN Ulaanbaatar 37.54 341 P **P 12 12 03.4 +1.4**
SNR=42
ASAR Alice Springs 37.72 166 P **P 12 12 01.7 -2.0**
comp=Z,4.8nm,0.4s,mb4.6,baz=343,slow=6.8,SNR=108
ASAR S **S 12 17 50.0 -0.6**
comp=Z,2.7nm,0.8s,baz=354,slow=21,SNR=7.0
SONM Songino Array 37.73 340 P **P 12 12 04.3 +0.8**
comp=Z,15nm,0.9s,mb4.7,baz=161,slow=9.3,SNR=77
SONM LR LR 12 28 16.0
comp=Z,944nm,19.9s,MS4.6,baz=154,slow=37
RAMN Ramite 37.87 297 *e*P **P 12 12 04.7 -0.4**
JIRN Jiri 38.39 298 *e*P **P 12 12 09.1 -0.4**
GUN Gumba 38.72 298 *e*P **P 12 12 12.0 -0.2**
comp=Z,224nm,1.0s,mb5.8
PKI Pulchoki 39.04 298 *e*P **P 12 12 13.9 -1.0**
KKN Kakani 39.21 298 *e*P **P 12 12 14.7 -1.6**
comp=Z,58nm,0.9s,mb5.3
DMN Daman 39.31 298 *e*P **P 12 12 16.1 -1.1**
comp=Z,86nm,1.0s,mb5.4
CTA Charters Tower 39.41 146 *e*P **P 12 12 16.5 -1.5**
comp=Z,6.9nm,0.8s,mb4.4
VIS Vishakhapatnam 39.73 282 *e*PKP **P 12 12 20.6 -0.1**
VIS AMb AMB 12 12 24.4
comp=Z,44nm,1.6s,mb5.0
CIT Chita 39.78 350 *e*P **P 12 12 21.9 +1.2**
CIT pmax pmax
comp=Z,161nm,2.1s,mb5.4
GKN Gorkha 39.81 298 *e*P **P 12 12 20.1 -1.2**
DANN Dangsing 40.64 298 *e*P **P 12 12 27.8 -0.4**
comp=Z,89nm,0.8s,mb5.4
KOLN Koldanda 40.65 297 *e*P **P 12 12 27.5 -0.8**
comp=Z,65nm,0.9s,mb5.3

ZAK Zakamensk 40.96 339 ⇓ *i*P **P 12 12 30.0 -0.5**
ZAK *e* 12 14 09.1
ZAK pmax pmax
comp=Z,5.0nm,1.4s,mb4.0
HNR Honiara 41.86 121 LR LR 12 27 05.4
comp=Z,1µm,21.7s,MS4.7,baz=294,slow=32
TLY Talaya 41.95 341 *e*P **P 12 12 39.4 +0.9**
TLY *e*S **S 12 18 57.1 +3.7**
TLY pmax pmax
comp=Z,64nm,2.2s,mb4.9
TLY MLR MLR
comp=Z,476nm,16.0s,MS4.5
TLY Talaya 41.95 341 P **P 12 12 39.8 +1.3**
comp=Z,100nm,1.1s,mb5.4,SNR=6.6
IRK Irkutsk 42.24 342 *e*P **P 12 12 38.2 -2.7**
IRK *e* 12 14 24.1
IRK pmax pmax
comp=Z,49nm,1.7s,mb4.9
MOY Mondy 42.83 339 *e*P **P 12 12 46.6 +0.9**
MOY pmax pmax
comp=Z,106nm,4.0s
CLNS Chul'man 43.65 0 *e*P **P 12 12 52.2 0.0**
CLNS *e**PP pP 12 12 59.5 -6.3
CLNS *e* 12 14 33.6
CLNS *e* 12 14 38.7
CLNS *e*PPP 12 15 07.8
CLNS *e*S **S 12 19 21.5 +3.3**
CLNS pmax pmax
comp=E,16nm,1.2s
CLNS pmax pmax
comp=Z,44nm,1.2s,mb5.1
CLNS pmax pmax
comp=N,36nm,1.4s
CLNS pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
CLNS pmax pmax
comp=N,8.0nm,0.8s
CLNS pmax pmax
comp=E,5.0nm,1.0s
CLNS smax
comp=N,188nm,12.4s
CLNS smax
comp=E,113nm,14.3s
CLNS MLR MLR
comp=Z,630nm,17.0s,MS4.6
CLNS MLR MLR
comp=E,534nm,16.0s,MS4.7
CLNS MLR MLR
comp=N,459nm,15.0s,MS4.7
FORT Forrest 43.77 175 *e*P **P 12 12 50.8 -2.7**
comp=N,32nm,0.7s,mb5.2
FORT Forrest 43.77 175 *e*P **P 12 12 51.1 -2.4**
comp=N,42nm,0.9s,mb5.2
WMQ Urumqi 43.84 321 P **P 12 12 55.0 +1.1**
WMQ pP pP 12 13 07.3 -0.3
WMQ sP sP 12 13 12.8 -0.7
WMQ PP PP 12 14 39.5 +2.8
WMQ PcP PcP 12 14 40.5 +0.8
WMQ S **S 12 19 22.5 +1.2**
WMQ SS SS 12 22 32.8 -6.0
WMQ ScS ScS 12 22 47.3 -1.3
WMQ pmax pmax
comp=Z,45nm,1.4s,mb5.0
WMQ pmax pmax
comp=Z,470nm,3.2s
WMQ LR LR
comp=N,1µm,18.0s,MS5.0
WMQ LR LR
comp=E,1µm,18.8s,MS5.0
WMQ LR LR
comp=Z,1µm,18.7s,MS4.8
HYB Hyderabad 44.29 282 *i* P **P 12 12 58.0 +0.1**
HYB *e* 12 13 05.5
JOSI Joshimath 44.71 300 *e*PKP **P 12 13 01.3 +0.1**
JOSI AMb AMB 12 13 02.1
comp=Z,213nm,0.9s,mb6.0
BHPL Bhopal 45.52 290 *e*PKP **P 12 13 06.9 -0.7**
BHPL AMb AMB 12 13 08.1
comp=Z,20nm,0.6s,mb5.2
SKR Severo-Kuril's 45.53 28 *e*P **P 12 13 12.0 +4.7**
SKR *e* 12 14 39.0
SKR *e* 12 14 56.0
SKR *e*S **S 12 19 52.0 +6.3**
SKR *e* 12 22 57.0
SKR pmax pmax
comp=Z,600nm,5.0s
SKR pmax pmax
comp=Z,90nm,1.0s,mb5.7
SKR smax
comp=N,800nm,10.0s
SKR smax
comp=E,900nm,16.0s
SKR MLR MLR
comp=Z,900nm,16.0s,MS4.8
SKR MLR MLR
comp=N,800nm,18.0s
DDI Dehra Dun 45.93 300 *ex* **P 12 13 09.2 -1.7**
KLP Kalpa 46.02 301 *e*PKP **P 12 13 11.8 +0.3**
KLP AMb AMB 12 13 14.2
comp=Z,69nm,0.9s,mb5.6
EIDS Eidsvold 46.28 146 *e*P **P 12 13 13.3 -0.3**
comp=Z,22nm,1.0s,mb5.0
AYAN Aya Nagar 46.40 297 *e*PKP **P 12 13 12.4 -2.2**
AYAN AMb AMB 12 13 13.4
comp=Z,17nm,0.6s,mb5.2
SONA Sohna 46.40 297 *e*PKP **P 12 13 12.7 -1.8**
SONA AMb AMB 12 13 13.8
comp=Z,49nm,0.6s,mb5.6
KKR Kurukshetra 46.91 299 *e*PKP **P 12 13 18.1 -0.4**
KKR AMb AMB 12 13 21.8
comp=Z,153nm,0.2s
BBOO Buckleboo 47.01 166 *e*P **P 12 13 17.3 -1.8**
comp=Z,128nm,0.8s,mb5.9
KHET Khetri 47.49 296 *e*PKP **P 12 13 21.6 -1.4**
KHET AMb AMB 12 13 22.5
comp=Z,11nm,0.7s,mb4.9
STKA Stephens Creek 47.68 160 *e*P **P 12 13 22.7 -1.7**
comp=Z,16nm,0.7s,mb5.2
STKA Stephens Creek 47.68 160 *e*P **P 12 13 23.5 -0.9**
comp=Z,5.1nm,0.9s,mb4.5
STKA Stephens Creek 47.68 160 P **P 12 13 22.9 -1.5**
comp=Z,18nm,0.8s,mb5.2,baz=338,slow=7.6,SNR=14
PETK Petropavlovsk- 47.92 27 P **P 12 13 26.6 +0.6**
comp=Z,19nm,0.9s,mb5.1,baz=204,slow=3.7,SNR=36
PETK LR LR 12 33 26.5
comp=Z,392nm,19.3s,MS4.4,baz=226,slow=36
PET Petropavlovsk 48.28 27 *e*P **P 12 13 29.2 +0.4**
PET *e*S **S 12 20 25.1 +0.3**
PET pmax pmax
comp=Z,41nm,1.1s,mb5.4
PET pmax pmax
comp=Z,200nm,12.6s
PET MLR MLR
comp=Z,400nm,19.0s,MS4.4
AJM Ajmer 48.32 294 *e*PKP **P 12 13 29.1 -0.5**
AJM AMb AMB 12 13 32.3
comp=Z,49nm,0.9s,mb5.5
KAD Karad 48.46 282 *e*PKP **P 12 13 30.9 +0.1**
KAD AMb AMB 12 13 33.9
comp=Z,40nm,1.1s,mb5.4
MK31 Makanchi Array 48.64 322 *e*P **P 12 13 32.5 +0.9**
MKAR Makanchi Array 48.64 322 P **P 12 13 32.4 +0.8**
comp=Z,59nm,1.0s,mb5.6,baz=116,slow=8.5,SNR=242
POO Poona 48.74 283 *e*PKP **P 12 13 33.0 +0.1**
POO AMb AMB 12 13 37.4
comp=Z,50nm,1.5s,mb5.3
YAK Yakutsk 49.01 3*c i*P **P 12 13 34.0 -0.2**
YAK pmax pmax
comp=Z,38nm,0.9s,mb5.4
YAK pmax pmax
comp=N,31nm,1.2s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK MLR MLR
comp=Z,520nm,18.0s,MS4.6
YAK MLR MLR
comp=N,300nm,18.0s,MS4.6
YAK MLR MLR
comp=E,470nm,20.0s,MS4.6
KSH Kashi 49.94 311 P **P 12 13 44.0 +2.3**
KSH *e*pP pP 12 13 56.5 +1.0
KSH *es*P sP 12 14 01.5 0.0
KSH *e*PcP PcP 12 15 04.0 +2.6
KSH *e*PP PP 12 15 40.0 +3.0
KSH *e*ScP ScP 12 18 54.3 +1.3
KSH PcS PcS 12 18 59.3 +1.0

KSH *e*S **S 12 20 50.5 +2.0**
KSH *es*S sS 12 21 11.0 -0.7
KSH *e*ScS ScS 12 23 28.0 -0.8
KSH *e*SS SS 12 24 20.3 -1.6
KSH pmax pmax
comp=Z,24nm,1.2s,mb5.1
KSH pmax pmax
comp=Z,180nm,3.7s
KSH LR LR
comp=N,1µm,18.9s,MS5.0
KSH LR LR
comp=E,580nm,15.5s,MS5.0
KSH LR LR
comp=Z,700nm,14.6s,MS4.8
ARMA Armidale 50.62 149 *e*P **P 12 13 47.7 +0.8**
ARMA Armidale 50.62 149 *e*P **P 12 13 46.9 0.0**
comp=Z,55nm,1.4s,mb5.3
ULHL Ulahol 50.64 314 P **P 12 13 48.1 +1.1**
SNR=18
ZAA0 Zalesovo Array 51.24 331 *e*P **P 12 13 51.3 +0.1**
ZALV Zalesovo Beam 51.24 331 P **P 12 13 51.2 -0.1**
ZALV LR LR 12 36 22.5
ZALV Zalesovo Beam 51.24 331 P **P 12 13 51.2 -0.1**
comp=Z,15nm,0.7s,mb5.1,baz=118,slow=7.8,SNR=49
ZALV LR LR 12 36 22.5
comp=Z,485nm,20.0s,MS4.5,baz=103,slow=37
KZA Kyzart 51.28 314 P **P 12 13 53.6 +1.9**
SNR=17
KZA Kyzart 51.28 314 *e*P **P 12 13 53.1 +1.4**
comp=Z,117nm,1.5s,mb5.6
TKM2 Tokmak 2 51.32 315 P **P 12 13 53.1 +1.0**
SNR=12
TKM2 Tokmak 2 51.32 315 *e*P **P 12 13 52.9 +0.8**
comp=Z,154nm,2.1s,mb5.6
TKM2 Tokmak 2 51.32 315 *e*P **P 12 13 52.9 +0.8**
TKM2 pmax pmax
comp=Z,155nm,2.1s,mb5.6
KBK Karagaybulak 51.68 314 P **P 12 13 56.3 +1.5**
SNR=8.7
UCH Uchtor 51.85 314 P **P 12 13 58.6 +2.6**
SNR=8.0
UCH Uchtor 51.85 314 *e*P **P 12 13 58.0 +2.0**
comp=Z,34nm,1.3s,mb5.1
CHMS Chumysh 51.93 315 P **P 12 13 57.8 +1.2**
SNR=9.1
FRU Bishkek 51.97 315 ⇑ *i*P **P 12 13 57.0 +0.1**
FRU pmax pmax
comp=Z,125nm,2.2s,mb5.5
AAK Ala-Archa 51.99 314 *e*P **P 12 13 58.2 +1.1**
comp=Z,79nm,1.8s,mb5.3
AAK Ala-Archa 51.99 314*c i*P **P 12 13 57.7 +0.6**
AAK pmax pmax
comp=Z,25nm,2.5s,mb4.7
AAK Ala-Archa 51.99 314 P **P 12 13 58.6 +1.5**
comp=Z,70nm,1.3s,mb5.4,SNR=7.0
AAK Ala-Archa 51.99 314 P **P 12 13 58.5 +1.4**
SNR=17
USP Ospenovka 52.20 315 P **P 12 13 59.2 +0.6**
SNR=18
AML Almayashu 52.39 313 P **P 12 14 01.7 +1.6**
SNR=18
EKS2 Erkin-Say 52.50 314 P **P 12 14 02.1 +1.2**
SNR=18
EKS2 Erkin-Say 52.50 314 *e*P **P 12 14 02.1 +1.3**
comp=Z,29nm,1.2s,mb5.1
NVS Novosibirsk 52.52 331 *i* P **P 12 13 58.7 -2.1**
NVS pmax pmax
comp=N,47nm,1.4s
NVS pmax pmax
comp=E,53nm,1.4s
NVS pmax pmax
comp=Z,107nm,1.4s,mb5.6
KURK Kurchatov 52.67 325 P **P 12 14 02.2 +0.2**
comp=Z,674nm,1.2s,SNR=48
KURK Kurchatov 52.67 325 *e*P **P 12 14 02.7 +0.7**
comp=Z,253nm,1.3s,mb6.0
KURK Kurchatov 52.67 325*c i*P **P 12 14 02.3 +0.3**
KURK Kurchatov 52.67 325 P **P 12 14 03.0 +1.0**
SNR=110
CAN Canberra 53.53 155 *e*P **P 12 14 08.1 -0.4**
comp=Z,24nm,1.0s,mb5.1
CAN Canberra 53.53 155 *e*P **P 12 14 08.1 -0.3**
CAN pmax pmax
comp=Z,24nm,1.0s,mb5.1
SEY Seymchan 53.59 16*c i*P **P 12 14 08.8 +0.3**
CNB Canberra Magne 53.68 155 *e*P **P 12 14 08.1 -1.4**
TOO Toolangi 54.18 159 *e*P **P 12 14 15.8 +2.7**
KK31 Karatay Array 54.92 314 P **P 12 14 18.7 +0.1**
KK31 pmax pmax
comp=Z,68nm,1.4s,mb5.5
KKAR Karatay Array 54.92 314 *e*P **P 12 14 18.8 +0.2**
comp=Z,33nm,1.1s,mb5.3
KKAR Karatay Array 54.92 314 *e*P **P 12 14 18.8 +0.2**
KKAR pmax pmax
comp=Z,33nm,1.1s,mb5.3
VOSK Vostochnaya 57.82 325 P **P 12 14 38.3 -0.7**
VOSK pmax pmax
comp=Z,28nm,1.0s,mb5.2
BRVK Borovoye 58.34 325 P **P 12 14 43.4 +0.8**
comp=Z,355nm,1.1s,mb6.3,SNR=17
BRVK Borovoye 58.34 325 *e*P **P 12 14 43.2 +0.6**
comp=Z,84nm,1.1s,mb5.7
BRVK Borovoye 58.34 325*c i*P **P 12 14 42.8 +0.2**
BRVK pmax pmax
comp=Z,96nm,1.2s,mb5.7
BRVK Borovoye 58.34 325 P **P 12 14 43.6 +1.0**
SNR=35
TIXI Tiksi 58.59 2 *e*P **P 12 14 43.5 -0.6**
TIXI *e*S **S 12 22 45.7 +1.7**
TIXI pmax pmax
comp=Z,82nm,1.8s,mb5.5
TIXI MLR MLR
comp=Z,672nm,17.0s,MS4.8
BILL Bilibino 61.24 17*c i*P **P 12 15 02.8 +0.5**
BILL *e**PP pP 12 15 12.7 -3.8
BILL *SP sP 12 15 19.0 -3.3
BILL 12 15 47.0
BILL S **S 12 23 22.0 +3.8**
BILL SS SS 12 27 18.0 -0.8
BILL pmax pmax
comp=Z,71nm,1.7s,mb5.5
BILL MLR MLR
comp=Z,400nm,15.0s,MS4.7
AB31 Akbulak array 63.50 319 P **P 12 15 17.9 +0.1**
AB31 pmax pmax
comp=Z,19nm,0.7s,mb5.2
ABKAR Akbulak array 63.50 319 *e*P **P 12 15 17.7 -0.1**
comp=Z,33nm,1.0s,mb5.3
SVE Sverdlovsk 64.82 327 ⇓ *e*P **P 12 15 26.4 +0.2**
SVE *e*SSS 12 31 11.7
SVE pmax pmax
comp=Z,100nm,1.1s,mb5.8
SVE MLR MLR
comp=Z,741nm,23.0s,MS4.8
ARU Arti 65.83 326*c i*P **P 12 15 32.3 -0.5**
ARU *e* 12 16 01.6
ARU *e* 12 17 57.5
ARU S S 12 24 12.6 -3.1
ARU SS SS 12 28 29.3 -1.6
ARU pmax pmax
comp=Z,71nm,1.2s,mb5.6
ARU MLR MLR
comp=Z,645nm,18.0s,MS4.9
ARU Arti 65.83 326 P **P 12 15 32.8 0.0**
comp=Z,350nm,0.6s,SNR=11
SOKR Solikamsk 67.46 329*c i*P **P 12 15 42.7 -0.4**
SOKR pmax pmax
comp=Z,30nm,1.1s,mb5.2
MAK Makhachkala 71.58 311 *e*P **P 12 16 07.5 -1.4**
MAK *e* 12 16 31.3
MAK *e*S S 12 25 19.8 -4.6
MAK *e* 12 26 05.3
MAK pmax pmax
comp=Z,208nm,1.2s,mb5.9
MAK MLR MLR
comp=Z,639nm,22.0s,MS4.8
UMR Umm Al-Rimmam 72.11 297 *e*P **P 12 16 11.7 -0.6**
UMR AMb AMB 12 16 19.9
comp=Z,72nm,1.3s,mb5.4
KBD Kabd 72.17 297 *e*P **P 12 16 12.0 -0.7**
KBD AMb AMB 12 16 13.3
comp=Z,40nm,1.2s,mb5.2
MIB Mutribah 72.42 297 *e*P **P 12 16 13.2 -0.9**
MIB AMb AMB 12 16 14.5
comp=Z,99nm,0.8s,mb5.8
DGRG David-gareji 73.21 310 P **P 12 16 18.7 +0.1**

MTA	**Mtatsminda**	**73.63**	**310**	P		**P**		**12 16 20.8**	**-0.3**	
TBLG	**Delisi**	**73.67**	**310**	*e*P		**P**		**12 16 20.0**	**-1.3**	
TBLG	**Delisi**	**73.67**	**310**	P		**P**		**12 16 20.0**	**-1.3**	
TTA	**Tatalina**	**73.73**	**28**	*e*P		**P**		**12 16 21.8**	**+0.6**	
GNI	**Garni**	**73.76**	**308**	*e*P		**P**		**12 16 23.2**	**+1.3**	
	comp=Z,55nm,1.4s,mb5.3									
GNI	**Garni**	**73.76**	**308**	*e*P		**P**		**12 16 23.1**	**+1.2**	
GNI	**Garni**	**73.76**	**308**	P		**P**		**12 16 23.8**	**+2.0**	
	SNR=7.7									
SVW2	**Sparrevohn**	**73.85**	**30**	*e*P		**P**		**12 16 23.4**	**+1.4**	
	comp=Z,57nm,2.3s,mb5.1									
ZEI	**Tsey**	**74.23**	**311**	*e*P		**P**		**12 16 23.8**	**-0.8**	
ZEI					pmax	pmax				
	comp=Z,41nm,1.6s,mb5.1									
OHAK	**Old Harbor**	**74.98**	**34**	*e*P		**P**		**12 16 31.4**	**+2.7**	
KIV	**Kislovodsk**	**75.04**	**312**	α *i*P		**P**		**12 16 29.0**	**-0.3**	
KIV				*i*				12 16 36.8		
KIV				*i*		pP		12 16 41.0	-2.8	
KIV				*i*		pP		12 16 45.2	+1.4	
KIV					S	S		12 26 10.9	+7.3	
KIV					PS			12 26 51.0		
KIV					pmax	pmax				
	comp=Z,79nm,2.5s,mb5.2									
KIV					MLR	MLR				
	comp=Z,600nm,16.0s,MS5.0									
KIV	**Kislovodsk**	**75.04**	**312**	P		**P**		**12 16 30.2**	**+0.9**	
	comp=Z,134nm,0.7s,mb6.0,SNR=6.0									
RSO	**Redoubt South**	**75.22**	**31**	*e*P		**P**		**12 16 31.8**	**+1.9**	
VRHR	**Novokhopersk**	**75.35**	**320**	*e*P		**P**		**12 16 29.6**	**-1.3**	
VRHR					pmax	pmax				
	comp=Z,20nm,0.8s,mb5.1									
VRHR					pmax	pmax				
	comp=N,8.0nm,0.7s									
VRHR					pmax	pmax				
	comp=E,20nm,0.8s									
PPLA	**Purkeypile**	**75.48**	**28**	*e*P		**P**		**12 16 31.8**	**+0.4**	
	comp=E,39nm,1.4s,mb5.2									
BPAW	**Bear Paw Mtn.**	**76.00**	**27**	*e*P		**P**		**12 16 34.9**	**+0.5**	
	comp=E,54nm,0.9s,mb5.5									
KLMR	**Klimovskoe**	**76.14**	**330**	*e*P		**P**		**12 16 32.3**	**-2.9**	
KLMR					pmax	pmax				
	comp=Z,103nm,1.5s,mb5.5									
COLD	**Coldfoot**	**76.27**	**24**	*e*P		**P**		**12 16 36.9**	**+1.1**	
	comp=Z,15nm,0.9s,mb4.9									
TRF	**Thorofare Moun**	**76.33**	**27**	*e*P		**P**		**12 16 36.4**	**+0.2**	
	comp=Z,64nm,1.5s,mb5.3									
SLKM	**Skilak Lake**	**76.48**	**30**	*e*P		**P**		**12 16 36.0**	**-1.1**	
VORD	**Divnogorie**	**76.83**	**320**	*e*P		**P**		**12 16 37.8**	**-1.5**	
VORD					pmax	pmax				
	comp=N,40nm,0.6s									
VORD					pmax	pmax				
	comp=E,100nm,0.6s									
VORD					pmax	pmax				
	comp=Z,10.0nm,0.6s,mb4.9									
SEW	**Seward**	**76.88**	**31**	*e*P		**P**		**12 16 39.4**	**0.0**	
	comp=Z,24nm,0.9s,mb5.1									
VSR	**Storozhevoye**	**76.89**	**320**	*e*P		**P**		**12 16 38.5**	**-1.1**	
VSR					pmax	pmax				
	comp=Z,30nm,1.2s,mb5.1									
VSR					pmax	pmax				
	comp=N,10.0nm,1.4s									
VSR					pmax	pmax				
	comp=E,30nm,1.3s									
MCK	**McKinley**	**76.92**	**27**	*e*P		**P**		**12 16 39.5**	**-0.1**	
	comp=E,1.5nm,0.8s,mb4.0									
MCK	**McKinley**	**76.92**	**27**	*e*P		**P**		**12 16 39.5**	**-0.1**	
MCK					pmax	pmax				
	comp=Z,1.0nm,0.8s,mb3.8									
PMR	**Palmer**	**76.95**	**29**	*e*P		**P**		**12 16 39.0**	**-0.8**	
	comp=Z,63nm,2.1s,mb5.2									
PMR	**Palmer**	**76.95**	**29**	*e*P		**P**		**12 16 39.0**	**-0.8**	
PMR					pmax	pmax				
	comp=Z,63nm,2.1s,mb5.2									
SOC	**Sochi**	**77.22**	**312**	*e*P		**P**		**12 16 40.4**	**-1.2**	
SOC				*e*				12 19 31.9		
SOC				*e*S		S		12 26 20.8	-6.7	
SOC				*e*SS		SS		12 31 21.7	-4.2	
SOC					pmax	pmax				
	comp=Z,15nm,0.6s,mb5.1									
SOC					MLR	MLR				
	comp=Z,1μm,21.0s,MS5.2									
SML	**Sawmill**	**77.32**	**29**	*e*P		**P**		**12 16 41.6**	**-0.2**	
	comp=Z,21nm,1.5s,mb4.8									
SML	**Sawmill**	**77.32**	**29**	*e*P		**P**		**12 16 41.6**	**-0.2**	
SML					pmax	pmax				
	comp=Z,21nm,1.5s,mb4.8									
COLA	**College**	**77.33**	**26**	*e*P		**P**		**12 16 40.9**	**-0.9**	
	comp=Z,17nm,1.3s,mb4.8									
COLA	**College**	**77.33**	**26**	*e*P		**P**		**12 16 40.9**	**-0.9**	
COLA					pmax	pmax				
	comp=Z,17nm,1.3s,mb4.8									
MOS	**Moscow**	**77.44**	**325**	*e*P		**P**		**12 16 40.2**	**-2.4**	
ILAR	**Eielson Array**	**77.75**	**26**	P		**P**		**12 16 43.0**	**-1.2**	
	comp=Z,3.1nm,0.8s,mb4.3,baz=239,slow=4.2,SNR=37									
ILAR					PP	PP		12 19 37.3	-2.4	
	comp=Z,0.7nm,1.1s,baz=294,slow=6.8,SNR=3.2									
ILAR					LR	LR		12 52 58.6		
	comp=Z,180nm,19.1s,MS4.4,baz=288,slow=37									
ILAR	**Eielson Array**	**77.75**	**26**	P		**P**		**12 16 43.0**	**-1.2**	
ILAR								12 19 37.4		
OBN	**Obninsk**	**78.10**	**324**	$\Downarrow$ *i*P		**P**		**12 16 45.9**	**-0.4**	
OBN				*e*		pP		12 17 01.1	+0.1	
OBN					pmax	pmax				
	comp=Z,54nm,1.7s,mb5.2									
OBN					MLR	MLR				
	comp=Z,400nm,16.0s,MS4.8									
APA	**Apatity**	**78.35**	**337**	$\Uparrow$ *i*P		**P**		**12 16 52.0**	**+4.6**	
APA					pmax	pmax				
	comp=Z,92nm,1.6s,mb5.5									
APA					MLR	MLR				
	comp=Z,1μm,13.0s,MS5.3									
PAX	**Paxson**	**78.54**	**28**	*e*P		**P**		**12 16 49.2**	**+0.6**	
	comp=Z,17nm,1.0s,mb4.9									
PAX	**Paxson**	**78.54**	**28**	*e*P		**P**		**12 16 49.2**	**+0.6**	
PAX					pmax	pmax				
	comp=Z,17nm,1.0s,mb4.9									
DIV	**Divide**	**78.60**	**30**	*e*P		**P**		**12 16 50.0**	**+1.0**	
MALT	**Malatya**	**78.82**	**307**	*e*P		**P**		**12 16 51.6**	**+1.0**	
MALT	**Malatya**	**78.82**	**307**	$\Uparrow$ *i*P		**P**		**12 16 51.5**	**+0.9**	
DOT	**Dot Lake**	**79.09**	**27**	*e*P		**P**		**12 16 52.0**	**+0.4**	
	comp=Z,48nm,0.9s,mb5.4									
BMRM	**Bremner River**	**79.19**	**30**	*e*P		**P**		**12 16 52.8**	**+0.6**	
	comp=Z,18nm,1.0s,mb5.0									
MENT	**Mentasta**	**79.34**	**28**	*e*P		**P**		**12 16 53.1**	**+0.2**	
JOF	**Joensuu**	**79.82**	**332**	*e*P		**P**		**12 16 54.0**	**-1.6**	
JOF					pmax	pmax				
	comp=Z,11nm,0.7s,mb4.9									
JOF	**Joensuu**	**79.82**	**332**	*e*p		**P**		**12 16 54.0**	**-1.6**	
	comp=Z,11nm,0.7s,mb4.9									
EGAK	**Eagle**	**80.18**	**26**	*e*P		**P**		**12 16 58.2**	**+0.7**	
KEV	**Kevo**	**80.33**	**339**	*e*P		**P**		**12 17 07.6**	**+9.4**	
KEV					pmax	pmax				
	comp=Z,5.0nm,0.6s,mb4.6									
KEV	**Kevo**	**80.33**	**339**	*e*p		**P**		**12 17 07.6**	**+9.4**	
	comp=Z,5.4nm,0.6s,mb4.7									
ARCES	**ARCESS Array B**	**80.89**	**339**	P		**P**		**12 17 01.4**	**+0.1**	
	comp=Z,7.5nm,1.0s,mb4.6,baz=87,slow=6.2,SNR=8.4									
ASF	**Jabal al Asfar**	**81.00**	**301**	LR		LR		12 56 21.0		
	comp=Z,190nm,21.9s,MS4.4,baz=296,slow=38									
DAWY	**Dawson**	**81.07**	**26**	*e*P		**P**		**12 17 03.5**	**+1.2**	
PNL	**Peninsula**	**81.96**	**31**	*e*P		**P**		**12 17 08.2**	**+1.2**	
	comp=Z,17nm,0.9s,mb5.0									
KAF	**Kangasniemi**	**82.25**	**332**	*e*P		**P**		**12 17 06.7**	**-1.8**	
KAF					pmax	pmax				
	comp=Z,10.0nm,0.8s,mb4.8									
KAF	**Kangasniemi**	**82.25**	**332**	*e*p		**P**		**12 17 06.7**	**-1.8**	
	comp=Z,10nm,0.8s,mb4.8									
BR131	**Keskin Array S**	**82.28**	**309**	*e*P		**P**		**12 17 08.8**	**-0.4**	
	comp=Z,3.3nm,0.8s,mb4.3									
BRTR	**Keskin Array B**	**82.28**	**309**	P		**P**		**12 17 08.1**	**-1.1**	
	comp=Z,3.3nm,0.8s,mb4.3,baz=104,slow=5.2,SNR=9.2									
BRTR					PP	PP		12 20 18.8	+0.7	
	comp=Z,1.4nm,0.9s,baz=77,slow=5.3,SNR=3.8									
INK	**Inuvik**	**82.37**	**22**	*e*P		**P**		**12 17 09.8**	**+0.7**	
FINES	**FINESS Array B**	**82.51**	**331**	P		**P**		**12 17 09.2**	**-0.7**	
	comp=Z,8.3nm,0.9s,mb4.8,baz=106,slow=4.8,SNR=10									
HYT	**Haines Junctio**	**82.62**	**29**	*e*P		**P**		**12 17 11.9**	**+1.5**	
MICGM	**Minsk**	**83.16**	**324**	*e*		**P**		**12 17 12.0**	**-1.4**	
AKASG	**Malin Array Be**	**83.18**	**320**	P		**P**		**12 17 12.4**	**-1.1**	
	comp=Z,6.1nm,0.8s,mb4.7,baz=64,slow=4.9,SNR=14									
AKASG					PP	PP		12 20 24.9	-0.3	
	comp=Z,0.3nm,0.4s,baz=69,slow=8.3,SNR=4.1									
AKBB	**Malin Array Si**	**83.18**	**320**	*e*P		**P**		**12 17 12.7**	**-0.9**	
MNK	**Minsk**	**83.19**	**324**	*e*P		**P**		**12 17 12.0**	**-1.5**	
KIEV	**Kiev**	**83.19**	**320**	*e*P		**P**		**12 17 12.4**	**-1.2**	
	comp=Z,10.0nm,1.0s,mb4.8									
KIEV	**Kiev**	**83.19**	**320**	*e*P		**P**		**12 17 12.5**	**-1.2**	
KIEV					pmax	pmax				
	comp=Z,10.0nm,1.0s,mb4.8									
CSS	**Prodhromos**	**83.42**	**304**	*e*P		**P**		**12 17 15.6**	**+0.4**	
	comp=Z,18nm,0.9s,mb5.1									
NACGM	**Naroch**	**83.69**	**325**	*e*		**P**		**12 17 13.0**	**-3.1**	
SKAG	**Skagway**	**84.02**	**30**	*e*P		**P**		**12 17 19.5**	**+1.8**	
	comp=Z,30nm,1.4s,mb5.2									
TESR		**85.81**	**317**	$\Downarrow$ P		**P**		**12 17 27.1**	**+0.1**	
TESR		**85.81**	**317**	$\Downarrow$ *i*P		**P**		**12 17 27.1**	**+0.1**	
VRI	**Vrincioaia**	**85.92**	**316**	$\Downarrow$ P		**P**		**12 17 28.1**	**+0.6**	
VRI	**Vrincioaia**	**85.92**	**316**	$\Downarrow$ *i*P		**P**		**12 17 28.1**	**+0.6**	
SUW	**Suwalki**	**85.95**	**325**	*e*P		**P**		**12 17 27.1**	**-0.4**	
PLOR	**Plostina**	**85.98**	**316**	$\Downarrow$ P		**P**		**12 17 29.6**	**+1.8**	
PLOR	**Plostina**	**85.98**	**316**	$\Downarrow$ *i*P		**P**		**12 17 29.6**	**+1.8**	
BURAR	**Bucovina Array**	**86.47**	**318**	$\Uparrow$ P		**P**		**12 17 30.4**	**+0.2**	
BURAR	**Bucovina Array**	**86.47**	**318**	$\Uparrow$ *i*P		**P**		**12 17 30.4**	**+0.2**	
BUR08	**Bucovina Ar. S**	**86.48**	**318**	*e*P		**P**		**12 17 30.5**	**+0.2**	
MLR	**Muntele Rosu**	**86.55**	**316**	$\Uparrow$ P		**P**		**12 17 31.0**	**+0.4**	
MLR	**Muntele Rosu**	**86.55**	**316**	$\Uparrow$ *i*P		**P**		**12 17 31.0**	**+0.4**	
LVV	**L'vov**	**86.63**	**320**	*e*P		**P**		**12 17 30.1**	**-0.8**	
DLBC	**Dease Lake**	**86.95**	**30**	*e*P		**P**		**12 17 34.0**	**+1.7**	
KMBO	**Kilima Mbogo**	**87.40**	**268**	*e*P		**P**		**12 17 35.0**	**-0.4**	
	comp=Z,32nm,1.8s,mb5.2									
KMBO	**Kilima Mbogo**	**87.40**	**268**	P		**P**		**12 17 36.1**	**+0.7**	
	comp=Z,1.3nm,0.5s,mb4.4,baz=0.4,slow=24,SNR=5.4									
KMBO	**Kilima Mbogo**	**87.40**	**268**	*e*P		**P**		**12 17 35.0**	**-0.4**	
KMBO					pmax	pmax				
	comp=Z,32nm,1.8s									
KWP	**Kalwaria Pacla**	**87.51**	**320**	*e*P		**P**		**12 17 35.3**	**+0.1**	
UZH	**Uzhgorod**	**88.06**	**320**	$\Downarrow$ *i*P		**P**		**12 17 37.0**	**-0.9**	
DRGR		**88.35**	**318**	$\Uparrow$ P		**P**		**12 17 39.1**	**-0.1**	
DRGR		**88.35**	**318**	$\Uparrow$ *i*P		**P**		**12 17 39.1**	**-0.1**	
STHS	**Stebnicka Huta**	**88.48**	**320**	*e*P		**P**		**12 17 39.3**	**-0.5**	
	comp=Z,3.8nm,1.0s,mb4.6									
STHS	**Stebnicka Huta**	**88.48**	**320**	*e*P		**P**		**12 17 39.3**	**-0.5**	
STHS					pmax	pmax				
	comp=Z,4.0nm,1.0s,mb4.6									
STHS	**Stebnicka Huta**	**88.48**	**320**	*e*P		**P**		**12 17 39.3**	**-0.5**	
CRVS	**Cervenica-Dubn**	**88.50**	**320**	*e*P		**P**		**12 17 39.8**	**-0.1**	
	comp=Z,23nm,1.2s,mb5.4									
CRVS	**Cervenica-Dubn**	**88.50**	**320**	*e*P		**P**		**12 17 39.8**	**-0.1**	
CRVS					pmax	pmax				
	comp=Z,23nm,1.2s,mb5.4									
CRVS	**Cervenica-Dubn**	**88.50**	**320**	*e*P		**P**		**12 17 39.8**	**-0.1**	
NIE	**Niedzica**	**89.06**	**321**	*e*P		**P**		**12 17 43.3**	**+0.8**	
OJC	**Ojcow**	**89.11**	**322**	*e*P		**P**		**12 17 42.4**	**-0.3**	
KECS	**Kecovo**	**89.25**	**320**	*e*P		**P**		**12 17 43.4**	**-0.1**	
	comp=Z,5.0nm,1.1s,mb4.8									
KECS	**Kecovo**	**89.25**	**320**	*e*P		**P**		**12 17 43.4**	**-0.1**	
KECS					pmax	pmax				
	comp=Z,5.0nm,1.1s,mb4.8									
KECS	**Kecovo**	**89.25**	**320**	*e*P		**P**		**12 17 43.4**	**-0.1**	
NOA	**NORSAR Array B**	**89.39**	**333**	P		**P**		**12 17 42.4**	**-1.5**	
	comp=Z,2.8nm,0.9s,mb4.6,baz=68,slow=4.8,SNR=7.4									
OKC	**Ostrava-Krasne**	**90.24**	**322**	*e*P		**P**		**12 17 48.1**	**+0.1**	
OKC	**Ostrava-Krasne**	**90.24**	**322**	*e*P		**P**		**12 17 48.1**	**+0.1**	
PPT	**Papeete**	**90.25**	**108**	*e*S		S		12 28 42.5	+3.1	
	comp=Z,268nm,28.0s									
PPT					*e*LQ			12 42 25.1		
	comp=Z,772nm,33.8s									
PPT					*e*LR	LR		12 46 47.9		
	comp=Z,255nm,22.2s,baz=293									
PPT	**Papeete**	**90.25**	**108**	LR		LR		12 51 15.5		
	comp=Z,232nm,19.1s,MS4.6,baz=183,slow=31									
VYHS	**Vyhne**	**90.28**	**320**	*e*P		**P**		**12 17 48.0**	**-0.3**	
	comp=Z,23nm,2.4s,mb5.1									
VYHS	**Vyhne**	**90.28**	**320**	*e*P		**P**		**12 17 48.0**	**-0.3**	
VYHS					pmax	pmax				
	comp=Z,23nm,2.4s,mb5.1									
VYHS	**Vyhne**	**90.28**	**320**	*e*P		**P**		**12 17 48.0**	**-0.3**	
DPC	**Dobruska-Polom**	**91.15**	**322**	*e*P		**P**		**12 17 51.3**	**-1.0**	
DPC				*e*				12 17 59.7		
DPC	**Dobruska-Polom**	**91.15**	**322**	*e*P		**P**		**12 17 51.3**	**-1.0**	
DPC				*ex*		x		12 17 59.7		
UPC	**Upice**	**91.27**	**323**	*e*P		**P**		**12 17 52.4**	**-0.4**	
UPC	**Upice**	**91.27**	**323**	*e*P		**P**		**12 17 52.4**	**-0.4**	
MAW	**Mawson**	**91.69**	**200**	LR		LR		12 57 37.7		
	comp=Z,90nm,19.4s,MS4.2,baz=164,slow=35									
RUE	**Ruedersdorf**	**91.78**	**325**	*e*P		**P**		**12 17 55.4**	**+0.3**	
YKA	**Yellowknife Ar**	**91.95**	**23**	P		**P**		**12 17 55.0**	**-0.7**	
	comp=Z,1.9nm,0.7s,mb4.5,baz=307,slow=4.4,SNR=2.9									
BRG	**Berggiesshubel**	**92.34**	**324**	*e*P		**P**		**12 17 57.9**	**+0.1**	
	comp=Z,19nm,1.9s,mb5.1									
BRG	**Berggiesshubel**	**92.34**	**324**	*e*P		**P**		**12 17 57.7**	**-0.1**	
	comp=Z,7.5nm,1.3s,mb4.9									
BRG					*e*PP	PP		12 21 36.6	-1.9	
	comp=Z,16nm,1.7s									
BRG	**Berggiesshubel**	**92.34**	**324**	*e*P		**P**		**12 17 57.7**	**-0.1**	
BRG				*e*				12 21 36.6		
BRG					pmax	pmax				
	comp=Z,5.0nm,1.3s,mb4.7									
BRG					pmax	pmax				
	comp=Z,10.0nm,1.7s,mb4.9									
PRU	**Pruhonice**	**92.34**	**323**	*e*P		**P**		**12 17 58.2**	**+0.4**	
PRU	**Pruhonice**	**92.34**	**323**	*e*P		**P**		**12 17 58.2**	**+0.4**	
CLL	**Collm**	**92.70**	**324**	*e*PP		PP		12 21 40.0	-1.3	
	comp=Z,25nm,1.9s									
KHC	**Kasperske Hory**	**93.26**	**322**	*e*P		**P**		**12 18 01.3**	**-0.8**	
KHC				*e*				12 18 08.9		
KHC	**Kasperske Hory**	**93.26**	**322**	*e*P		**P**		**12 18 01.3**	**-0.8**	
KHC				*ex*		x		12 18 08.9		
GEC2	**GERESS Array S**	**93.31**	**322**	*e*P		**P**		**12 18 02.6**	**+0.3**	
	comp=Z,6.0nm,1.4s,mb4.8									
GEC2	**GERESS Array S**	**93.31**	**322**	*e*P		**P**		**12 18 02.6**	**+0.3**	
GEC2					pmax	pmax				
	comp=Z,6.0nm,1.4s,mb4.8									
TANN	**Tannenbergstha**	**93.39**	**324**	*e*P		**P**		**12 18 02.8**	**+0.2**	
	comp=Z,17nm,1.9s,mb5.2									
WERD	**Werda**	**93.46**	**324**	*e*P		**P**		**12 18 03.3**	**+0.3**	
	comp=Z,49nm,2.5s,mb5.5									
BOJS	**Bojanci**	**93.66**	**318**	*i* P		**P**		**12 18 03.9**	**-0.1**	
MOX	**Moxa**	**93.77**	**324**	*e*P		**P**		**12 18 04.6**	**+0.2**	
	comp=Z,7.0nm,1.5s,mb4.9									
NRDL	**Niederasch Hie**	**93.79**	**326**	*e*P		**P**		**12 18 03.8**	**-0.6**	
	comp=Z,31nm,2.0s,mb5.4									
VISS	**Visnje**	**93.81**	**319**	*i* P		**P**		**12 18 04.2**	**-0.5**	
CLZ	**Clausthal**	**93.94**	**325**	*e*P		**P**		**12 18 04.4**	**-0.7**	
	comp=Z,6.0nm,1.0s,mb5.0									
CLZ	**Clausthal**	**93.94**	**325**	*e*P		**P**		**12 18 04.4**	**-0.7**	
CLZ					pmax	pmax				
	comp=Z,6.0nm,1.0s,mb5.0									
JAVS	**Javornik**	**94.27**	**319**	*i* P		**P**		**12 18 05.8**	**-1.0**	
RJOB	**Jochberg**	**94.31**	**321**	*e*P		**P**		**12 18 07.2**	**+0.3**	
	comp=Z,7.0nm,1.1s,mb5.0									
GRA1	**Grafenberg Arr**	**94.42**	**323**	*e*P		**P**		**12 18 07.7**	**+0.3**	
	comp=Z,7.0nm,1.3s,mb4.9									
GRA1					LR	LR				
	comp=Z,2μm,19.5s,MS5.5									
GRF	**Grafenberg Arr**	**94.42**	**323**	*e*P		**P**		**12 18 07.7**	**+0.3**	
	comp=Z,7.0nm,1.3s,mb4.9									
GRF	**Grafenberg Arr**	**94.42**	**323**	*e*P		**P**		**12 18 07.7**	**+0.3**	
GRF					pmax	pmax				
	comp=Z,7.0nm,1.3s,mb4.9									
GRF					MLR	MLR				
	comp=Z,2μm,19.5s,MS5.5									
DAVOX	**Davos/Dischmat**	**96.52**	**321**	P		**P**		**12 18 15.2**	**-1.8**	
	comp=Z,3.9nm,0.9s,mb4.8,baz=72,slow=7.0,SNR=6.7									
TAOE	**Nuku Hiva Isla**	**97.31**	**97**	*e*LR		LR		12 49 59.3		
	comp=Z,246nm,22.1s									
LPG	**La Plagne**	**99.04**	**321**	*e*P		**P**		**12 18 28.3**	**-0.1**	
	comp=Z,12nm,1.1s,mb5.0									
LPG	**La Plagne**	**99.04**	**321**	*e*P		**P**		**12 18 28.3**	**-0.1**	
	comp=Z,5.9nm,1.1s,mb5.0									
LPG	**La Plagne**	**99.04**	**321**	*e*P		**P**		**12 18 28.3**	**-0.1**	
LPG					pmax	pmax				
	comp=Z,6.0nm,1.1s,mb5.0									
LPL	**La Plagne**	**99.04**	**321**	*e*P		**P**		**12 18 28.3**	**-0.1**	
	comp=Z,15nm,1.2s,mb5.1									
LPL	**La Plagne**	**99.04**	**321**	*e*P		**P**		**12 18 28.3**	**-0.1**	
	comp=Z,7.7nm,1.2s,mb5.1									
LPL	**La Plagne**	**99.04**	**321**	*e*P		**P**		**12 18 28.3**	**-0.1**	
LPL					pmax	pmax				
	comp=Z,8.0nm,1.2s,mb5.1									
ORIF	**Oris-en-Rattie**	**99.86**	**321**	*e*P		Pdif		12 18 31.6	-0.2	
NVAR	**Mina Array Bea**	**102.27**	**46**	P		Pdif		12 18 44.0	+1.5	
	comp=Z,0.6nm,0.7s,baz=263,slow=6.2,SNR=6.2									
NVAR					PP	PP		12 22 59.4	+4.2	
	comp=Z,0.5nm,0.8s,baz=266,slow=6.8,SNR=5.2									
RKT	**Rikitea**	**104.75**	**111**	*e*LR		LR		12 53 25.7		
	comp=Z,264nm,23.8s									
ESDC	**Sonseca Array**	**108.83**	**320**	PP		PP		12 23 42.7	-0.8	
	comp=Z,0.9nm,0.9s,baz=31,slow=7.8,SNR=6.5									
VNA2	**Neumayer--Watz**	**115.20**	**196**	*e*PKPdf		PKiKP		12 23 24.3	-3.6	
	baz=82,slow=0.9									
VNA2				*e*				12 24 26.9		
VNA3	**Neumayer Olymp**	**115.59**	**195**	*e*PKPdf		PKPdf		12 23 24.8	-3.9	
JFWS	**Jewell Farm**	**115.89**	**28**	*e*PKPdf		PKPdf		12 23 29.3	-0.9	
TXAR	**Lajitas Array**	**117.37**	**47**	PKP		PKPdf		12 23 33.0	-0.4	
	comp=Z,0.8nm,0.8s,baz=291,slow=0.2,SNR=11									
TXAR					PP	PP		12 24 46.7	+2.2	
	comp=Z,0.9nm,1.1s,baz=302,slow=7.4,SNR=2.7									
TORD	**Torodi Ar. Bea**	**117.44**	**292**	PKP		PKPdf		12 23 33.0	-0.9	
	comp=Z,1.2nm,0.9s,baz=32,slow=2.0,SNR=3.3									
TORD					PP	PP		12 24 49.9	+4.1	
	comp=Z,0.6nm,0.3s,baz=64,slow=6.9,SNR=5.0									
ACSO	**Alum Creek Sta**	**121.20**	**24**	*e*PKPdf		PKPdf		12 23 40.1	-0.4	
BINY	**Binghamton**	**121.89**	**18**	*e*PKPdf		PKPdf		12 23 41.8	0.0	
SWET	**Sewanee**	**124.05**	**30**	*e*PKPdf		PKPdf		12 23 45.4	-0.7	
JSRW	**J. Sargeant Re**	**125.35**	**22**	*e*PKPdf		PKPdf		12 23 48.7	+0.2	
PLCA	**Paso Flores**	**149.54**	**157**	PKPbc		PKPbc		12 24 36.9	0.0	
	comp=Z,6.1nm,1.1s,baz=243,slow=1.6,SNR=9.4									
LPAZ	**La Paz**	**167.54**	**106**	PKP		PKPdf		12 24 55.2	+1.0	
LPAZ				PKPab		PKPab		12 26 07.8	+7.5	
LPAZ	**La Paz**	**167.54**	**106**	PKP		PKPdf		12 24 55.2	+1.0	
	comp=Z,2.6nm,0.9s,baz=358,slow=5.2,SNR=8.9									
LPAZ				PKPab		PKPab		12 26 07.8	+7.5	
	comp=Z,5.0nm,1.0s,baz=288,slow=5.3,SNR=6.8									

*ISCJB **30** 12:15:51.1±1.1,26.4N±0.1×102.3E±0.4,h10km,mb3.4/3, Error ellipse: s-maj=58.9km s-min=8.1km az=163.7*
*IDC **30** 12:15:51.3±1.4,26.32N×102.29E,h0km,mb3.4/3, mb1 3.6/3,mb1mx3.3/23,mbtmp3.4/3,Error ellipse: s-maj=44.7km s-min=21.6km az=87.0*
*BJI **30** 12:15:52.8,26.15N×101.83E,h25km,ML3.4/6*
**ISC 30 12:15:52.8±1.2,26.3N±0.1×102.2E±0.4,h10km,n5, σ0s46/5,mb

MKAR Lg 12 49 02.8
MKAR LR LR 12 49 13.7
MKAR Makanchi Array 4.24 345 Pn **Pn 12 47 54.2 +1.8**
comp=Z,26nm,0.3s,baz=156,slow=14,SNR=218
MKAR Pg **Pb 12 48 03.8 +1.5**
comp=Z,276nm,0.3s,baz=154,slow=17,SNR=101
MKAR Sn **Sn 12 48 43.6 +1.6**
comp=Z,252nm,0.3s,baz=162,slow=20,SNR=5.1
MKAR Lg 12 49 02.8
comp=Z,555nm,0.3s,baz=163,slow=26,SNR=13
MKAR LR LR 12 49 13.7
comp=Z,3μm,19.9s,baz=204,slow=35
MKAR Makanchi Array 4.24 345 *i* P **Pn 12 47 54.2 +1.8**
MKAR pmax pmax
comp=Z,154nm,0.5s
KNDC Almaty 5.11 278 ⇑Pn **Pn 12 48 06.0 +1.7**
comp=Z,508nm,0.7s
KNDC ⇑Pg **Pg 12 48 22.7 -2.7**
comp=Z,2μm,0.8s
KNDC ⇑Lg 12 49 30.8
comp=Z,24μm,0.9s
AAA Alma-Ata 5.12 279 *e*P **Pg 12 48 23.6 -2.2**
AAA pmax pmax
comp=Z,2μm,0.6s
ULHL Ulahol 5.68 268 P **Pn 12 48 12.4 +0.3**
SNR=98
TKM2 Tokmak 2 6.10 275 ⇓Pn **Pn 12 48 19.3 +1.3**
comp=Z,636nm,1.3s
TKM2 ⇑Sn **Sn 12 49 32.2 +4.3**
comp=Z,1μm,0.8s
TKM2 ⇓Lg 12 50 02.4
comp=Z,8μm,0.8s
TKM2 Tokmak 2 6.10 275 P **Pn 12 48 19.8 +1.8**
SNR=168
TKM2 Tokmak 2 6.10 275 *e*Pn **Pn 12 48 19.5 +1.5**
comp=Z,21nm,0.4s
TKM2 *e*Sg **Sg 12 49 57.8 -5.7**
TKM2 Tokmak 2 6.10 275 *e*P **Pn 12 48 19.5 +1.5**
TKM2 pmax pmax
comp=Z,21nm,0.4s
KZA Kyzart 6.43 267 P **Pn 12 48 23.8 +1.3**
SNR=100
KZA Kyzart 6.43 267 *e*Pn **Pn 12 48 23.6 +1.2**
comp=Z,21nm,0.4s
KZA *e*Sg **Sg 12 50 09.0 -5.0**
KBK Karagaybulak 6.59 273 P **Pn 12 48 26.7 +2.0**
SNR=37
CHMS Chumysh 6.72 276 P **Pn 12 48 27.9 +1.4**
SNR=36
KSH Kashi 6.78 245 Pn **Pn 12 48 34.5 +7.3**
KSH Sn **Sn 12 49 56.0 +12**
KSH LR LR
comp=N,9μm,4.0s
KSH LR LR
comp=E,13μm,4.1s
KSH LR LR
comp=Z,16μm,7.4s
FRU Bishkek 6.83 274 ⇑*i*P **Pn 12 48 27.8 -0.1**
FRU *e* 12 49 53.0
FRU pmax pmax
comp=Z,250nm,1.8s
USP Ospenovka 6.91 278 P **Pn 12 48 31.3 +2.2**
SNR=50
AAK Ala-Archa 6.93 273 P **Pn 12 48 30.9 +1.6**
SNR=42
AAK Ala-Archa 6.93 273 *e*Pn **Pn 12 48 30.0 +0.7**
AAK *e*Sg **Sg 12 50 27.3 -2.6**
AAK Ala-Archa 6.93 273 Pn **Pn 12 48 30.8 +1.5**
comp=Z,7.8nm,0.3s,baz=103,slow=8.3,SNR=37
AAK Pg **Pg 12 48 51.7 -8.6**
comp=Z,17nm,0.3s,baz=73,slow=14,SNR=10
AAK Lg 12 50 23.3
comp=Z,78nm,0.3s,baz=203,slow=23,SNR=9.2
AAK LR LR 12 50 53.9
comp=Z,2μm,20.1s,baz=68,slow=36
AAK Ala-Archa 6.93 273*c i*P **Pn 12 48 30.4 +1.1**
AAK Ala-Archa 6.93 273 Pn **Pn 12 48 30.5 +1.2**
comp=Z,675nm,0.4s,SNR=28
AAK Ala-Archa 6.93 273 P **Pn 12 48 30.1 +0.8**
comp=Z,3.3nmcomp=Z,2μmcomp=Z,129nm,0.9s
AAK Ala-Archa 6.93 273 Pn **Pn 12 48 30.5 +1.2**
SNR=36
UCH Uchtor 6.95 269 P **Pn 12 48 31.5 +1.8**
SNR=34
UCH Uchtor 6.95 269 *e*Pn **Pn 12 48 31.1 +1.4**
comp=Z,21nm,0.4s
UCH *e*Sg **Sg 12 50 28.3 -2.4**
EKS2 Erkin-Say 7.45 273 P **Pn 12 48 37.8 +1.3**
SNR=62
EKS2 Erkin-Say 7.45 273 *e*Pn **Pn 12 48 37.0 +0.5**
comp=Z,51nm,0.5s
EKS2 *e*Sg **Sg 12 50 43.9 -2.9**
AML Almayashu 7.57 269 P **Pn 12 48 40.2 +2.1**
SNR=46
AML Almayashu 7.57 269 *e*Pn **Pn 12 48 39.3 +1.2**
KURBB Kurchatov Arra 8.73 337 ⇑Pn **Pn 12 48 53.2 -0.8**
comp=Z,37nm,0.7s
KURBB ⇑Lg 12 51 23.9
comp=Z,390nm,1.0s
KURK Kurchatov 8.79 338 Pn **Pn 12 48 54.5 -0.3**
comp=Z,502nm,0.4s,SNR=10
KURK Kurchatov 8.79 338 ⇑Pn **Pn 12 48 54.4 -0.4**
comp=Z,191nm,0.9s
KURK ⇑Lg 12 51 25.2
comp=Z,3μm,1.1s
KURK Kurchatov 8.79 338 *e*Pn **Pn 12 48 54.6 -0.2**
comp=Z,181nm,0.8s
KURK *e*Sn **Sn 12 50 33.2 -0.6**
KURK Kurchatov 8.79 338 Pn **Pn 12 48 53.8 -1.0**
comp=Z,4.3nm,0.3s,baz=153,slow=12,SNR=102
KURK Sn **Sn 12 50 30.0 -3.8**
comp=Z,12nm,0.3s,baz=177,slow=17,SNR=4.3
KURK Lg 12 51 23.0
comp=Z,13nm,0.3s,baz=150,slow=30,SNR=4.7
KURK LR LR 12 52 23.5
comp=Z,9μm,18.6s,baz=155,slow=39
KURK Kurchatov 8.79 338 P **Pn 12 48 53.8 -1.0**
KURK 12 50 30.0
KURK pmax pmax
comp=Z,4.0nm,0.3s
KURK smax
comp=N,12nm,0.3s
KURK MLR MLR
comp=Z,9μm,18.6s
KURK Kurchatov 8.79 338 Pn **Pn 12 48 57.4 +2.6**
SNR=40
KK31 Karatay Array 9.83 277 ⇑Pn **Pn 12 49 09.9 +0.8**
comp=Z,7.4nm,0.3s,baz=100,slow=8.8,SNR=209
KK31 ⇑Lg 12 52 01.9
comp=Z,196nm,0.5s,baz=78,slow=28,SNR=7.2
KK31 Karatay Array 9.83 277 P Px 12 49 24.5
KK31 pmax pmax
comp=Z,14nm,0.4s
KK31 pmax pmax
comp=Z,599nm,0.6s
KKAR Karatay Array 9.83 277 *e*Pn **Pn 12 49 08.8 -0.2**
comp=Z,0.2nm,0.4s
ZAA0 Zalesovo Array 11.26 3 *e*Pn **Pn 12 49 28.0 -0.7**
ZAA0 *e*Sn **Sn 12 51 31.9 -2.7**
ZALV Zalesovo Beam 11.26 3 Pn **Pn 12 49 28.0 -0.6**
ZALV Sn **Sn 12 51 32.4 -2.2**
ZALV Lg 12 52 44.6
ZALV LR LR 12 54 09.2
ZALV Zalesovo Beam 11.26 3 Pn **Pn 12 49 28.0 -0.6**
comp=Z,12nm,0.3s,baz=182,slow=13,SNR=156
ZALV Sn **Sn 12 51 32.4 -2.2**
comp=Z,41nm,0.3s,baz=170,slow=26,SNR=16
ZALV Lg 12 52 44.6
baz=184,slow=28,SNR=2.7
ZALV LR LR 12 54 09.2
comp=Z,6μm,20.1s,baz=187,slow=40
ZALV Zalesovo Beam 11.26 3 P **Pn 12 49 28.0 -0.7**
ZALV 12 51 32.4
ZALV pmax pmax
comp=Z,12nm,0.3s
ZALV smax
comp=N,41nm,0.3s
ZALV MLR MLR
comp=Z,6μm,20.1s
DLH Dalhousie 11.93 214 *ex* x 12 49 48.0
DLH *ex* x 12 51 44.0
KLP Kalpa 12.03 204 *e*PKP **Pn 12 49 36.4 -2.8**
KLP AMb AMB 12 49 47.5
comp=Z,46nm,0.9s
NVS Novosibirsk 12.15 358 *e*P **Pn 12 49 40.5 -0.3**
NVS pmax pmax
comp=N,76nm,0.7s
NVS pmax pmax
comp=E,21nm,0.7s
NVS pmax pmax
comp=Z,88nm,0.7s
CHCP Chirah Chowk 12.30 226 P **Pn 12 49 41.2 -1.7**
GTA Gaotai 12.46 100 ⇓P **Pn 12 49 44.8 -0.3**
GTA pP 12 49 48.0
GTA sP 12 49 51.3
GTA S **Sn 12 52 04.3 +0.2**
GTA SS 12 52 18.8
GTA pmax pmax
comp=Z,67nm,1.0s
GTA pmax pmax
comp=Z,300nm,6.6s
GTA LR LR
comp=N,21μm,10.5s
GTA LR LR
comp=E,12μm,9.3s
GTA LR LR
comp=Z,7μm,12.0s
SDNR Sundarnagar 12.47 208 *ex* **Pn 12 49 40.5 -4.8**
SDNR *ex* **Sn 12 52 04.5 +0.2**
JOSI Joshimath 12.62 197 *ex* **Pn 12 49 47.8 +0.5**
SMLA Simla 12.74 207 *i* P **Pn 12 49 46.6 -2.4**
SMLA *i* x x 12 52 02.7
BHK Bhakra 12.75 210 *e*PKP **Pn 12 49 47.0 -2.0**
BHK *ex* x 12 52 05.6
CEP Cherat 12.92 231 P **Pn 12 49 48.6 -2.9**
VOSK Vostochnaya 13.24 324 ⇑Pn **Pn 12 49 55.0 -0.7**
comp=Z,168nm,1.1s
VOSK ⇑Sn **Sn 12 52 24.7 +1.8**
comp=Z,206nm,0.9s
VOSK ⇓Lg 12 53 51.6
comp=Z,867nm,1.0s
VOSK Vostochnaya 13.24 324 P **Pn 12 49 55.2 -0.5**
VOSK pmax pmax
comp=Z,168nm,1.1s
PTH Pithoragarh 13.46 194 *e*PKP **Pn 12 49 57.7 -1.1**
BVA0 Borovoye Array 13.71 323 Pn **Pn 12 50 02.1 +0.1**
comp=Z,12nm,1.0s,baz=141,slow=15,SNR=130
BVA0 ⇑Lg 12 54 05.2
comp=Z,128nm,1.2s,baz=138,slow=33,SNR=4.8
BVAR Borovoye Array 13.71 323 Pn **Pn 12 50 01.4 -0.7**
BVAR Sn **Sn 12 52 26.9 -7.5**
BVAR Lg 12 53 59.0
BVAR LR LR 12 55 31.0
BVAR Borovoye Array 13.71 323 Pn **Pn 12 50 01.4 -0.7**
comp=Z,2.6nm,0.3s,baz=136,slow=14,SNR=38
BVAR Sn **Sn 12 52 26.9 -7.5**
baz=131,slow=15,SNR=2.4
BVAR Lg 12 53 59.0
comp=Z,6.5nm,0.3s,baz=130,slow=29,SNR=5.2
BVAR LR LR 12 55 31.0
comp=Z,168nm,18.6s,baz=298,slow=38
BRVK Borovoye 13.78 323 Pn **Pn 12 50 04.3 +1.3**
comp=Z,503nm,0.9s,SNR=28
BRVK Borovoye 13.78 323 *e*Pn **Pn 12 50 03.4 +0.4**
comp=Z,90nm,0.7s
BRVK *e*Sn **Sn 12 52 35.0 -1.1**
BRVK Borovoye 13.78 323*d i*P **Pn 12 50 04.5 +1.5**
BRVK Borovoye 13.78 323 Pn **Pn 12 50 05.2 +2.2**
SNR=64
THW Thamme Wali 13.78 228 P **Pn 12 49 59.1 -4.1**
KKR Kurukshetra 13.93 206 *ex* **Pn 12 50 02.5 -2.7**
KBL Kabul 14.17 240 *e*Pn **Pn 12 50 05.9 -2.6**
KBL *e*Sn **Sn 12 52 41.9 -3.9**
LSA Lhasa 14.23 153 P **Pn 12 50 11.8 +2.4**
LSA LR LR
comp=E,4μm,18.1s
LSA LR LR
comp=Z,9μm,18.2s
LSA Lhasa 14.23 153 *e*Pn **Pn 12 50 12.9 +3.5**
comp=Z,171nm,1.2s
LSA Lhasa 14.23 153 *e*P **Pn 12 50 12.9 +3.5**
LSA pmax pmax
comp=Z,171nm,1.2s
ZRNK Zerenda 14.29 321 ⇓Pn **Pn 12 50 10.3 +0.4**
comp=Z,319nm,1.4s
ZRNK ⇓Sn **Sn 12 52 51.0 +2.6**
comp=Z,128nm,0.9s
ZRNK ⇑Lg 12 54 23.6
comp=Z,887nm,1.2s
ZRNK Zerenda 14.29 321 P **Pn 12 50 08.5 -1.4**
ZRNK pmax pmax
comp=Z,319nm,1.5s
ORY Orie 14.32 27 ⇓*i*P **Pn 12 50 14.6 +4.2**
ORY *e*S **Sn 12 52 55.1 +5.8**
DANN Dangsing 14.33 180 *e*P **Pn 12 50 10.6 -0.1**
comp=Z,243nm,0.8s
MOY Mondy 14.65 46 *e*P **Pn 12 50 18.0 +3.1**
MOY *e* 12 53 04.1
MOY pmax pmax
comp=Z,272nm,2.9s
GKN Gorkha 14.69 177 *e*P **Pn 12 50 14.8 -0.7**
comp=Z,160nm,0.4s
GUN Gumba 14.85 173 *e*P **Pn 12 50 18.0 +0.2**
comp=Z,743nm,0.9s
KOLN Koldanda 14.91 181 *e*P **Pn 12 50 18.4 -0.2**
comp=Z,157nm,0.8s
KKN Kakani 14.93 175 *e*P **Pn 12 50 18.4 -0.4**
comp=Z,209nm,0.6s
NDI New Delhi 15.00 203 *e*PKP **Pn 12 50 14.0 -5.8**
NDI *e*S **Sn 12 52 58.0 -8.1**
DMN Daman 15.10 176 *e*P **Pn 12 50 20.6 -0.5**
comp=Z,90nm,0.7s
JIRN Jiri 15.13 172 *e*P **Pn 12 50 21.4 -0.2**
PKI Pulchoki 15.15 175 *e*P **Pn 12 50 20.7 -1.2**
comp=Z,153nm,0.6s
AYAN Aya Nagar 15.22 203 *ex* **Pn 12 50 18.2 -4.5**
AYAN AMb AMB 12 50 22.0
comp=Z,44nm,0.5s
ZAK Zakamensk 15.36 53 *e*P **Pn 12 50 27.2 +2.8**
ZAK pmax pmax
comp=Z,86nm,1.1s
SONA Sohna 15.45 203 *e*PKP **Pn 12 50 22.0 -3.7**
SONA AMb AMB 12 50 26.2
comp=Z,43nm,0.4s
TAPN Taplejung 15.64 167 *e*P **Pn 12 50 27.9 -0.3**
comp=Z,417nm,0.8s
TAPN *e*S **Sn 12 53 32.4 +11**
RAMN Ramite 15.88 171 *e*P **Pn 12 50 29.8 -1.5**
comp=Z,326nm,0.5s
KHET Khetri 16.01 207 *ex* **Pn 12 50 27.7 -5.3**
KHET AMb AMB 12 50 31.5
comp=Z,53nm,0.7s
ODAN Odare 16.07 169 *e*P **Pn 12 50 32.9 -0.9**
comp=Z,254nm,0.6s
ODAN *e*S **Sn 12 53 42.2 +10**
TLY Talaya 16.11 49 *e*P **Pn 12 50 37.7 +3.6**
comp=Z,15nm,0.8s
TLY Talaya 16.11 49 *e*P **Pn 12 50 37.8 +3.7**
TLY pmax pmax
comp=Z,31nm,1.0s
TLY MLR MLR
comp=Z,5μm,15.0s
TLY Talaya 16.11 49 P **Pn 12 50 42.4 +8.3**
comp=Z,152nm,0.9s,SNR=5.0
SONM Songino Array 16.63 64 Pn **Pn 12 50 42.0 +1.2**
comp=Z,4.2nm,0.3s,baz=258,slow=13,SNR=81
SONM Lg 12 55 33.4
comp=Z,0.5nm,0.3s,baz=256,slow=24,SNR=5.4
SONM LR LR 12 58 14.4
comp=Z,2μm,21.5s,baz=265,slow=42
IRK Irkutsk 16.70 48 *e*P **Pn 12 50 44.5 +2.8**
IRK pmax pmax
comp=Z,295nm,2.4s
LZH Lanzhou 16.76 107 *e*P **Pn 12 50 43.0 +0.4**
LZH pP pP 12 50 45.3 -2.0
LZH sP sP 12 50 47.3 -1.2
LZH PP 12 50 55.5
LZH *e*S **Sn 12 53 47.5 -1.3**
LZH sS sS 12 53 52.0 -12
LZH SS 12 54 06.5
LZH pmax pmax
comp=Z,15nm,1.0s
LZH pmax pmax
comp=Z,83nm,5.8s
LZH LR LR
comp=N,20μm,11.6s
LZH LR LR
comp=E,16μm,9.2s
LZH LR LR
comp=Z,10μm,11.8s
ULN Ulaanbaatar 17.07 64 *e*Pn **Pn 12 50 47.7 +1.3**
comp=Z,542nm,1.9s
ULN Ulaanbaatar 17.07 64 P **Pn 12 50 47.4 +1.0**
ULN Ulaanbaatar 17.07 64 Pn **Pn 12 50 47.6 +1.3**
SNR=91
AB31 Akbulak array 17.84 300 ⇓Pn **Pn 12 50 54.0 -2.0**
comp=Z,53nm,0.8s,baz=86,slow=13,SNR=298
AB31 ⇑Sn **Sn 12 54 17.8 +3.0**
comp=Z,26nm,0.8s,baz=174,slow=49,SNR=4.5
AB31 ⇓Lg 12 56 19.5
comp=Z,815nm,1.4s
AB31 Akbulak array 17.84 300 *e*P **Pn 12 50 54.8 -1.2**
AB31 pmax pmax
comp=Z,64nm,0.8s
ABKAR Akbulak array 17.84 300 *e*Pn **Pn 12 50 54.1 -1.9**
comp=Z,0.1nm,0.4s
ABKAR *e*Sn **Sn 12 54 04.9 -10**
AJM Ajmer 17.87 208 *e*PKP **Pn 12 50 53.7 -2.8**
AJM AMb AMB 12 50 58.1
comp=Z,83nm,1.2s
AJM *i* x x 12 54 01.0
SHL Shillong 18.32 156 ⇓*i*P **Pn 12 51 02.0 0.0**
SHL *e*S **Sn 12 54 27.0 +0.4**
QUE Quetta 18.45 233 *e*P Px 12 51 15.0
QUE *e*S sS 12 54 58.0 +20
AKTK Aktyubinsk 19.32 302 P **Pn 12 51 13.6 -0.4**
AKTK S **Sn 12 54 40.0 -11**
AKTK Lg 12 57 04.6
AKTK LR LR 12 59 10.5
AKTO Aktyubinsk 19.32 302 ⇑Pn **Pn 12 51 12.0 -2.0**
comp=Z,20nm,1.2s
AKTO ⇑Sn **Sn 12 54 55.4 +4.8**
comp=Z,24nm,2.0s
AKTO ⇑Lg 12 57 05.7
comp=Z,98nm,1.6s
AKTO Aktyubinsk 19.32 302 P **Pn 12 51 13.6 -0.4**
comp=Z,1.6nm,0.3s,baz=107,slow=15,SNR=43
AKTO S **Sn 12 54 40.0 -11**
comp=Z,1.0nm,0.3s,baz=70,slow=15,SNR=2.6
AKTO Lg 12 57 04.6
comp=Z,0.9nm,0.3s,baz=209,slow=19,SNR=4.2
AKTO LR LR 12 59 10.5
comp=Z,4μm,18.6s,baz=280,slow=38
AKTO Aktyubinsk 19.32 302 P **Pn 12 51 13.6 -0.4**
AKTO S **Sn 12 54 40.0 -11**
AKTO pmax pmax
comp=Z,2.0nm,0.3s
AKTO smax
comp=N,1.0nm,0.3s
AKTO MLR MLR
comp=Z,4μm,18.6s
BTO Baotou 19.61 87 *e*P **Pn 12 51 16.8 -0.8**
IMP Imphal 19.71 152 *e*PKP **Pn 12 51 19.0 +0.3**
IMP *ex* x 12 52 10.0
CD2 Chengdu 19.74 120 P **Pn 12 51 20.8 +1.7**
CD2 pP pP 12 51 24.5 +4.4
CD2 sP sP 12 51 27.8 +6.5
CD2 PP 12 51 39.5
CD2 S **Sn 12 54 57.8 -3.1**
CD2 sS sS 12 55 03.5 -0.6
CD2 SS 12 55 25.3
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,690nm,6.2s
CD2 LR LR
comp=N,9μm,13.5s
CD2 LR LR
comp=E,6μm,9.8s
CD2 LR LR
comp=Z,6μm,10.8s
AGT Agartala 19.74 160 *i* x **Pn 12 51 16.0 -3.2**
AGT *i* x x 12 51 57.0
BHPL Bhopal 20.15 198 *e*PKP **P 12 51 20.6 -1.5**
BHPL AMb AMB 12 51 35.4
comp=Z,58nm,1.9s
ABKT Ailbek 20.19 265 Pn **P 12 51 23.6 +1.1**
comp=Z,297nm,0.6s,SNR=21
VAN Vannovskaya 20.19 265 P **P 12 51 21.0 -1.5**
VAN *e*S **S 12 55 11.0 +1.9**
CAL Calcutta 20.45 168 ⇓*i*P **P 12 51 25.9 +0.5**
CAL *i* x x 12 55 21.7
SVE Sverdlovsk 20.48 322 ⇑*e*P **P 12 51 26.4 +0.9**
SVE *e*S **S 12 55 08.5 -6.0**
SVE pmax pmax
comp=Z,251nm,1.3s
SVE MLR MLR
comp=Z,7μm,10.0s,MS5.3
HHC Hu-ho-hao-te 20.69 86 *e*P **P 12 51 29.3 +1.4**
HHC pP 12 51 33.5
HHC sP sP 12 51 36.0 +4.5
HHC PP 12 51 50.5
HHC S **S 12 55 14.0 -5.0**
HHC sS sS 12 55 20.5 -2.5
HHC PcP PcP 12 55 39.8 +2.2
HHC SS 12 55 44.3
HHC pmax pmax
comp=Z,110nm,0.9s
HHC pmax pmax
comp=Z,410nm,4.9s
HHC LR LR
comp=N,5μm,7.3s
HHC LR LR
comp=E,5μm,10.4s
HHC LR LR
comp=Z,5μm,10.5s,MS5.2
ARU Arti 21.25 319 *e*P **P 12 51 33.6 -0.1**
comp=Z,247nm,1.1s,mb5.5
ARU *e*S **S 12 55 30.9 +1.2**
ARU Arti 21.25 319*c i*P **P 12 51 33.8 0.0**
ARU *e* 12 51 54.9
ARU *e*PPP 12 52 05.8
ARU S **S 12 55 29.9 +0.2**
ARU SS 12 55 54.6
ARU SSS 12 56 07.9
ARU pmax pmax
comp=Z,264nm,1.7s,mb5.3
ARU MLR MLR
comp=Z,8μm,18.0s,MS5.1
ARU Arti 21.25 319 P **P 12 51 34.9 +1.1**
comp=Z,1μm,0.9s,mb6.2,SNR=27
XAN Xi'an 21.39 106 P **P 12 51 37.0 +1.5**
CIT Chita 22.01 55 *e*P **P 12 51 44.8 +2.8**
CIT *e* 12 52 09.8
CIT pmax pmax
comp=Z,376nm,2.1s,mb5.5
TIY Taiyuan 22.31 93 *e*P **P 12 51 47.0 +1.7**
TIY pP 12 51 51.3
TIY sP sP 12 51 54.0 +5.0
TIY S **S 12 55 48.3 -2.5**
TIY SS 12 56 28.0
TIY LR LR
comp=N,3μm,6.4s
TIY LR LR
comp=E,5μm,9.4s
TIY LR LR
comp=Z,5μm,13.5s,MS5.1
BWNR Bhubaneshwar 22.41 175 *e*PKP **P 12 51 45.0 -1.4**
AKL Akola 22.69 197 ⇓*i*P **P 12 51 50.4 +0.9**
AKL AMP 12 52 00.1
comp=Z,136nm,1.4s
AKL *i* x x 12 55 55.0
BHV Bhavnagar 23.09 209 *ex* **P 12 51 56.0 +2.2**
KMI Kunming 23.41 133 P **P 12 51 58.8 +1.7**
KMI pP 12 52 01.0
KMI sP sP 12 52 02.0 +1.2
KMI PP 12 52 29.5
KMI S **S 12 56 07.5 -2.6**
KMI sS sS 12 56 12.3 -2.2
KMI SS 12 56 53.0
KMI pmax pmax
comp=Z,39nm,1.3s,mb4.7
KMI pmax pmax
comp=Z,370nm,3.1s
KMI LR LR
comp=N,2μm,11.3s,MS5.1
KMI LR LR
comp=E,3μm,13.0s,MS5.1
KMI LR LR
comp=Z,2μm,11.8s,MS4.8
SOKR Solikamsk 23.69 325*c i*P **P 12 51 59.7 +0.2**
SOKR S **S 12 56 17.1 +3.0**
SOKR pmax pmax

SOKR MLR MLR
comp=Z,5μm,18.0s,MS5.0
ENH Enshi 23.93 113 *e*P **P** **12 52 02.9 +0.9**
comp=Z,89nm,0.8s,mb5.2
BJI Beijing 24.30 85 P **P** **12 52 07.3 +2.1**
BJI S **S** **12 56 25.5 +1.3**
BJI pmax pmax
comp=Z,22nm,1.9s,mb4.3
BJI pmax pmax
comp=Z,470nm,5.0s
BJI LR LR
comp=N,4μm,10.7s,MS5.4
BJI LR LR
comp=E,6μm,11.8s,MS5.4
BJI LR LR
comp=Z,2μm,19.8s
GYA Guiyang 24.67 124⇓ *i*P **P** **12 52 10.8 +2.0**
GYA PP 12 52 45.8
GYA S **S** **12 56 31.5 +1.1**
GYA SS 12 57 23.5
GYA pmax pmax
comp=Z,100nm,1.0s,mb5.3
GYA pmax pmax
comp=Z,290nm,5.3s
GYA LR LR
comp=N,3μm,10.9s,MS5.2
GYA LR LR
comp=E,3μm,11.5s,MS5.2
GYA LR LR
comp=Z,4μm,13.7s,MS5.1
VIS Vishakhapatnam 24.91 181 *e*PKP **P** **12 52 10.0 -1.0**
VIS *i* P 12 52 10.9
VIS *ex* x 12 52 15.7
comp=Z,105nm,0.9s
VIS *i* x x 12 56 33.5
LATR Latur 25.00 197 *e*PKP **P** **12 52 13.1 +1.3**
POO Poona 25.57 203 *e*PKP **P** **12 52 16.8 -0.1**
POO AMb AMB 12 52 24.1
comp=Z,47nm,0.5s,mb5.3
HYB Hyderabad 25.62 192 *i* P **P** **12 52 16.0 -1.4**
HYB *e*S **S** **12 56 48.0 +2.4**
TIA Tai'an 26.35 93 P **P** **12 52 26.5 +2.6**
TIA S **S** **12 56 57.5 +0.5**
TIA LR LR
comp=N,5μm,13.1s,MS5.3
TIA LR LR
comp=E,3μm,14.9s,MS5.3
TIA LR LR
comp=Z,5μm,13.7s,MS5.2
CHRT Chiangrai 26.42 145 P **P** **12 52 25.0 +0.3**
comp=Z,184nm,1.0s,mb5.6
MAK Makhachkala 26.56 283 *e*P **P** **12 52 22.7 -3.0**
MAK *e*PPP 12 53 08.2
MAK *e*S **S** **12 56 59.9 -0.2**
MAK *e*SSS 12 58 03.5
MAK pmax pmax
comp=Z,6μm,12.2s
MAK MLR MLR
comp=Z,6μm,12.0s,MS5.3
KAD Karad 26.64 201 *e*PKP **P** **12 52 26.8 +0.2**
KAD *ex* x 12 57 24.6
CHG Chiang Mai 27.02 147⇑P **P** **12 52 30.0 -0.1**
comp=Z,43nm,1.0s,mb4.9
CHTO Chiang Mai 27.02 147 *e*P **P** **12 52 30.2 +0.2**
comp=Z,35nm,0.9s,mb4.9
CHTO Chiang Mai 27.02 147 *e*P **P** **12 52 30.2 +0.1**
CHTO pmax pmax
comp=Z,35nm,0.9s,mb4.9
CHTO Chiang Mai 27.02 147 P **P** **12 52 30.0 -0.1**
comp=Z,717nmcomp=Z,51nm,1.0s,mb5.0
CHTO Chiang Mai 27.02 147 P **P** **12 52 30.5 +0.4**
SNR=26
WHN Wuhan 27.14 107⇑P **P** **12 52 31.5 +0.4**
WHN S **S** **12 57 07.5 -2.1**
WHN LR LR
comp=N,15μm,10.2s,MS6.0
WHN LR LR
comp=E,15μm,10.6s,MS6.0
WHN LR LR
comp=Z,5μm,15.2s,MS5.2
CMAR Chiang Mai Arr 27.34 148 P **P** **12 52 33.3 +0.4**
comp=Z,55nm,0.9s,mb5.1,baz=322,slow=8.9,SNR=87
CMAR LR LR 13 06 24.6
comp=Z,764nm,18.6s,MS4.3,baz=354,slow=43
CMAR Chiang Mai Arr 27.34 148 P **P** **12 52 33.3 +0.4**
CMAR pmax pmax
comp=Z,55nm,0.9s
CMAR MLR MLR
comp=Z,764nm,18.7s
DGRG David-gareji 28.45 281 P **P** **12 52 42.9 +0.2**
BDT Bhumibol Dam 28.46 148 P **P** **12 52 45.0 +2.0**
MTA Mtatsminda 28.81 281 P **P** **12 52 46.6 +0.7**
TBLG Delisi 28.84 282 *e*P **P** **12 52 46.4 +0.2**
TBLG Delisi 28.84 282 P **P** **12 52 46.4 +0.2**
ZEI Tsey 29.18 284 *e*P **P** **12 52 49.5 +0.3**
ZEI pmax pmax
comp=Z,20nm,0.7s,mb5.0
SNY Shenyang 29.20 78 P **P** **12 52 49.3 -0.1**
SNY S **S** **12 57 41.5 -0.3**
SNY pmax pmax
comp=Z,41nm,0.6s,mb5.3
SNY LR LR
comp=N,4μm,10.2s,MS5.4
SNY LR LR
comp=E,3μm,14.1s,MS5.4
SNY LR LR
comp=Z,6μm,12.3s,MS5.4
GNI Garni 29.29 278 P **P** **12 52 52.2 +2.0**
GNI LR LR 13 05 40.0
GNI Garni 29.29 278 P **P** **12 52 52.2 +2.0**
comp=Z,8.7nm,0.5s,mb4.8,baz=26,slow=2.5,SNR=10
GNI LR LR 13 05 40.0
comp=Z,571nm,20.1s,MS4.2,baz=262,slow=39
GNI Garni 29.29 278 P **P** **12 52 52.2 +2.0**
GNI pmax pmax
comp=Z,9.0nm,0.5s
GNI MLR MLR
comp=Z,571nm,20.1s
GNI Garni 29.29 278 P **P** **12 52 52.8 +2.6**
SNR=14
GOF Gofitskoye 29.32 289 *e*P **P** **12 52 50.3 -0.1**
GOF *e*S x 12 59 26.3
GOF pmax pmax
comp=Z,70nm,1.2s,mb5.3
CLNS Chul'man 29.50 47 *e*P **P** **12 52 54.3 +2.4**
CLNS *e**PP pP 12 53 01.4 +6.8
CLNS *e* 12 53 47.7
CLNS *e*PPP 12 53 59.4
CLNS *e* 12 55 57.5
CLNS *e*S **S** **12 57 47.3 +1.0**
CLNS *e*SS SS 12 59 15.4 -36
CLNS *e* 12 59 41.5
CLNS pmax pmax
comp=Z,41nm,0.9s,mb5.2
CLNS pmax pmax
comp=E,28nm,1.0s
CLNS pmax pmax
comp=N,11nm,0.8s
CLNS pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
CLNS pmax pmax
comp=E,14nm,1.2s
CLNS pmax pmax
comp=N,6.0nm,0.9s
CLNS smax
comp=N,16nm,1.0s
CLNS smax
comp=E,9.0nm,1.1s
CLNS MLR MLR
comp=N,2μm,11.0s,MS5.2
CLNS MLR MLR
comp=E,3μm,13.0s,MS5.2
CLNS MLR MLR
comp=Z,5μm,17.0s,MS5.2
NJ2 Nanjing 29.56 99 *e*P **P** **12 52 53.0 +0.3**
NJ2 pP pP 12 52 57.5 +2.2
NJ2 sP sP 12 53 00.0 +3.6
NJ2 PP PP 12 53 48.8 -10
NJ2 S **S** **12 57 45.0 -2.6**
NJ2 sS sS 12 57 52.0 0.0
NJ2 pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
NJ2 pmax pmax
comp=Z,130nm,10.6s
NJ2 LR LR
comp=N,440nm,16.6s
NJ2 LR LR
comp=E,670nm,22.6s
NJ2 LR LR
comp=Z,510nm,18.0s,MS4.2
VRHR Novokhopersk 29.72 301 *e*P **P** **12 52 52.6 -1.3**
VRHR pmax pmax
comp=Z,30nm,0.6s,mb5.2
VRHR pmax pmax
comp=N,20nm,0.5s
VRHR pmax pmax
comp=E,20nm,0.6s
KIV Kislovodsk 29.78 287 *e*P **P** **12 52 54.5 0.0**
comp=E,12nm,0.5s,mb4.9
KIV Kislovodsk 29.78 287*j* *i*P **P** **12 52 55.1 +0.6**
KIV pmax pmax
comp=Z,48nm,1.6s,mb5.0
ARQ Araqi 29.79 238 P **P** **12 52 58.2 +3.4**
SNR=6.1
CN2 Changchun 30.06 74 *e*P **P** **12 52 58.5 +1.5**
CN2 *ep*P pP 12 53 03.0 +3.3
CN2 *es*P sP 12 53 05.5 +4.7
CN2 *e*S **S** **12 57 54.8 -0.5**
CN2 SS SS 12 59 30.5 -32
CN2 pmax pmax
comp=Z,40nm,0.6s,mb5.3
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,3μm,10.0s,MS5.5
CN2 LR LR
comp=E,4μm,10.0s,MS5.5
CN2 LR LR
comp=Z,400nm,11.0s,MS4.3
VORD Divnogorie 31.19 301 *e*P **P** **12 53 05.7 -1.2**
VORD *e*S **S** **12 58 10.7 -2.2**
VORD pmax pmax
comp=N,30nm,0.4s
VORD pmax pmax
comp=Z,10.0nm,0.4s,mb5.0
VORD pmax pmax
comp=E,20nm,0.8s
VORD smax
comp=N,30nm,0.9s
VORD smax
comp=Z,30nm,1.1s
VORD smax
comp=E,20nm,0.7s
VORD MLR MLR
comp=Z,2μm,15.0s,MS4.9
VORD MLR MLR
comp=N,2μm,17.0s,MS5.0
VORD MLR MLR
comp=E,2μm,19.0s,MS5.0
VSR Storozhevoye 31.26 301 *e*P **P** **12 53 06.7 -0.8**
VSR *e*S **S** **12 58 11.0 -3.0**
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,60nm,0.7s,mb5.5
VSR pmax pmax
comp=E,60nm,0.8s
VSR smax
comp=E,100nm,1.0s
VSR smax
comp=Z,40nm,1.2s
VSR smax
comp=N,60nm,1.1s
VSR MLR MLR
comp=Z,2μm,17.0s,MS4.9
VSR MLR MLR
comp=N,840nm,16.0s,MS4.8
VSR MLR MLR
comp=E,1μm,15.0s,MS4.8
GZH Guangzhou 31.29 119 P **P** **12 53 08.3 +0.3**
GZH S **S** **12 58 14.3 -0.6**
GZH LR LR
comp=N,5μm,11.5s,MS5.6
GZH LR LR
comp=E,6μm,10.6s,MS5.6
GZH LR LR
comp=Z,6μm,13.8s,MS5.5
SSE Sheshan 31.75 99 *e*P **P** **12 53 11.8 -0.3**
SSE pP pP 12 53 20.8 +6.1
SSE S **S** **12 58 19.0 -3.0**
SSE sS sS 12 58 34.3 +7.8
SSE pmax pmax
comp=Z,24nm,0.7s,mb5.1
SSE pmax pmax
comp=Z,82nm,3.5s
SSE LR LR
comp=N,5μm,16.2s,MS5.3
SSE LR LR
comp=E,3μm,16.2s,MS5.3
SSE LR LR
comp=Z,2μm,12.6s,MS5.0
UMR Umm Al-Rimmam 31.78 258 *e*P **P** **12 53 12.3 0.0**
UMR AMb AMB 12 53 17.5
comp=Z,152nm,1.3s,mb5.7
MIB Mutribah 31.91 258 *e*P **P** **12 53 13.5 0.0**
MIB AMb AMB 12 53 18.5
comp=Z,131nm,1.2s,mb5.7
SOC Sochi 31.96 287 *e*P **P** **12 53 13.4 -0.3**
SOC *e**PP pP 12 53 18.3 +1.9
SOC *e* 12 54 13.8
SOC *e*S **S** **12 58 18.3 -6.7**
SOC pmax pmax
comp=Z,52nm,0.6s,mb5.5
SOC MLR MLR
comp=Z,2μm,15.0s,MS5.0
KBD Kabd 32.01 257 *e*P **P** **12 53 14.6 +0.3**
KBD AMb AMB 12 53 19.2
comp=Z,72nm,0.8s,mb5.6
KLMR Klimovskoe 32.09 320 *e*P **P** **12 53 14.6 -0.1**
KLMR pmax pmax
comp=Z,297nm,1.7s,mb5.8
KLMR MLR MLR
comp=Z,8μm,20.0s,MS5.4
QRN Al-Qurain 32.10 256 *e*P **P** **12 53 15.1 0.0**
QRN AMb AMB 12 53 20.2
comp=Z,114nm,1.2s,mb5.6
QIZ Qiongzhong 32.22 129 P **P** **12 53 17.0 +0.8**
QIZ S **S** **12 58 26.3 -3.1**
QIZ pmax pmax
comp=Z,23nm,0.9s,mb5.0
QIZ pmax pmax
comp=Z,100nm,6.9s
QIZ LR LR
comp=E,2μm,18.2s
QIZ LR LR
comp=Z,2μm,13.0s
MOS Moscow 32.27 310 *e*P **P** **12 53 14.6 -1.7**
MOS *e* 12 54 20.4
MOS *e*S **S** **12 58 28.1 -1.5**
MOS pmax pmax
comp=Z,271nm,1.4s,mb5.9
MOS pmax pmax
comp=Z,500nm,1.5s,mb6.1
MOS MLR MLR
comp=E,4μm,13.0s
MOS MLR MLR
comp=Z,5μm,13.0s,MS5.4
BHD Baghdad 32.28 266 *ex* **P** **12 53 14.5 -2.2**
BHD *i* x **S** **12 58 25.5 -4.8**
MDJ Mudanjiang 32.79 71 P **P** **12 53 21.3 +0.3**
MDJ pP pP 12 53 24.0 +0.3
MDJ PP PP 12 54 35.8 +0.9
MDJ S **S** **12 58 36.0 -1.9**
MDJ pmax pmax
comp=Z,55nm,0.8s,mb5.5
MDJ pmax pmax
comp=Z,110nm,4.5s
MDJ LR LR
comp=N,2μm,23.9s
MDJ LR LR
comp=E,2μm,14.9s
MDJ LR LR
comp=Z,2μm,14.4s
OBN Obninsk 32.84 309 *e*P **P** **12 53 21.0 -0.3**
comp=Z,34nm,0.6s,mb5.5
OBN Obninsk 32.84 309*c* *i*P **P** **12 53 20.8 -0.5**
OBN *i* 12 53 31.8
OBN pmax pmax
comp=Z,79nm,1.5s,mb5.4
OBN MLR MLR
comp=Z,4μm,18.0s,MS5.2
OBN Obninsk 32.84 309 P **P** **12 53 21.4 +0.1**
comp=Z,474nm,1.4s,mb6.2,SNR=5.6
INCN Inchon 32.85 85 *e*P **P** **12 53 21.5 -0.1**
comp=Z,35nm,0.7s,mb5.4
YAK Yakutsk 33.04 38 *e*P **P** **12 53 22.4 -0.6**
YAK *e**PP pP 12 53 31.5 +5.8
YAK *e* 12 54 31.5
YAK *e* 12 56 07.0
YAK *e*S **S** **12 58 38.2 -3.2**
YAK pmax pmax
comp=Z,127nm,0.9s,mb5.8
YAK pmax pmax
comp=N,17nm,1.2s
YAK pmax pmax
comp=E,48nm,1.2s
YAK pmax pmax
comp=Z,17nm,1.4s,mb4.8
YAK pmax pmax
comp=N,15nm,1.6s
YAK pmax pmax
comp=E,61nm,2.0s
YAK smax
comp=N,233nm,1.9s
YAK smax
comp=E,125nm,1.6s
YAK MLR MLR
comp=Z,3μm,10.0s,MS5.3
YAK MLR MLR
comp=N,1μm,10.0s,MS5.2
YAK MLR MLR
comp=E,2μm,11.0s,MS5.2
ANN Anapa 33.27 290 *e*P **P** **12 53 23.0 -2.2**
ANN *e* 12 54 32.9
ANN *e*S **S** **12 58 41.4 -4.0**
ANN *e*SS SS 13 00 43.1 -25
ANN pmax pmax
comp=Z,76nm,0.5s,mb5.9
KLR Kul'dur 33.43 62 *e*P **P** **12 53 23.5 -3.1**
KLR *e*S **S** **12 58 41.5 -6.3**
KLR MLR MLR
comp=E,4μm,10.0s
KLR MLR MLR
comp=Z,8μm,10.0s,MS5.7
QZH Quanzhou 33.54 111 P **P** **12 53 28.5 +0.8**
QZH S **S** **12 58 46.3 -3.6**
QZH LR LR
comp=N,11μm,16.1s,MS5.8
QZH LR LR
comp=E,10μm,15.0s,MS5.8
QZH LR LR
comp=Z,4μm,14.3s,MS5.3
KSRS Korea Array 33.80 84 P **P** **12 53 29.2 -0.7**
comp=Z,15nm,0.6s,mb5.1,baz=288,slow=8.6,SNR=38
KSRS LR LR 13 08 15.3
comp=Z,1μm,20.1s,MS4.7,baz=288,slow=38
KSRS Korea Array 33.80 84 P **P** **12 53 29.2 -0.7**
KSRS pmax pmax
comp=Z,15nm,0.6s,mb5.1
KSRS MLR MLR
comp=Z,1μm,20.1s,MS4.7
MALT Malatya 34.52 278 *e*P **P** **12 53 37.6 +1.5**
comp=Z,73nm,1.4s,mb5.4
MALT Malatya 34.52 278⇑P **P** **12 53 37.8 +1.7**
MALT Malatya 34.52 278⇑*i*P **P** **12 53 37.8 +1.7**
MALT Malatya 34.52 278 P **P** **12 53 38.0 +1.9**
comp=Z,784nmcomp=Z,33nm,1.3s,mb5.1
VLA Vladivostok 34.78 73⇓*e*P **P** **12 53 37.6 -0.7**
VLA *e* 12 56 11.9
VLA S **S** **12 59 06.7 -2.0**
VLA pmax pmax
comp=Z,41nm,0.8s,mb5.4
SIM Simferopol' 35.53 291 P **P** **12 53 46.6 +1.9**
SIM MLR MLR
comp=Z,3.0nm,19.0s
YHNB Yeheng 35.65 108 *e*P **P** **12 53 47.2 +1.2**
comp=Z,74nm,1.1s,mb5.5
HABR Khabarovsk 35.70 63*de*P **P** **12 53 46.0 -0.2**
HABR *e**PP pP 12 53 54.5 +5.6
HABR *e* 12 55 05.1
HABR 12 56 12.7
HABR *e*S **S** **12 59 20.8 -2.0**
HABR *e*SS sS 12 59 36.5 +9.2
HABR SS SS 13 01 47.9 -10
HABR *e* 13 04 00.5
HABR pmax pmax
comp=N,6.0nm,0.7s
HABR pmax pmax
comp=Z,105nm,2.6s,mb5.3
HABR pmax pmax
comp=E,79nm,2.5s
HABR MLR MLR
comp=N,2μm,10.0s,MS5.5
HABR MLR MLR
comp=E,4μm,10.0s,MS5.5
HABR MLR MLR
comp=Z,4μm,9.0s
SSLB Suanglung 35.92 110 *e*P **P** **12 53 49.1 +0.8**
comp=Z,50nm,1.1s,mb5.4
TPUB Ta-pu 36.01 111 P **P** **12 53 49.2 0.0**
comp=Z,23nm,0.8s,mb5.2
TIXI Tiksi 36.28 22 P **P** **12 53 51.2 +0.4**
TIXI *e* 12 55 12.5
TIXI *e*S **S** **12 59 30.2 -0.9**
TIXI *e*SS SS 13 01 57.3 -12
TIXI pmax pmax
comp=Z,72nm,1.2s,mb5.5
TIXI MLR MLR
comp=Z,2μm,10.0s,MS5.2
JOF Joensuu 36.31 322 *e*P **P** **12 53 50.7 -0.5**
JOF pmax pmax
comp=Z,46nm,0.4s,mb5.8
JOF Joensuu 36.31 322 *ep* **P** **12 53 50.7 -0.5**
comp=Z,46nm,0.4s,mb5.8
YULB Yu-li 36.42 110 *e*P **P** **12 53 53.6 +1.0**
comp=Z,8.6nm,0.8s,mb4.7
APA Apatity 36.48 330⇑*i*P **P** **12 53 54.0 +1.4**
APA *i* 12 55 15.8
APA *e*S **S** **12 59 28.0 -6.3**
APA pmax pmax
comp=Z,120nm,1.4s,mb5.6
APA MLR MLR
comp=Z,2μm,12.0s,MS5.2
TWG Pinlang 36.64 111 *e*P **P** **12 53 56.0 +1.5**
comp=Z,63nm,0.8s,mb5.5
BR131 Keskin Array S 37.47 283 *e*P **P** **12 54 01.8 +0.4**
comp=Z,19nm,0.5s,mb5.2
BRTR Keskin Array B 37.47 283 P **P** **12 54 01.9 +0.5**
comp=Z,29nm,0.6s,mb5.3,baz=99,slow=8.8,SNR=117
BRTR LR LR 13 10 30.7
comp=Z,462nm,18.6s,MS4.3,baz=217,slow=38
BRTR Keskin Array B 37.47 283 P **P** **12 54 01.9 +0.5**
BRTR pmax pmax
comp=Z,29nm,0.6s
BRTR MLR MLR
comp=Z,462nm,18.6s
AKASG Malin Array Be 37.57 302 P **P** **12 54 01.4 -0.7**
comp=Z,20nm,0.6s,mb5.0,baz=67,slow=8.5,SNR=35
AKASG LR LR 13 10 04.6
comp=Z,2μm,18.8s,MS4.9,baz=105,slow=37
AKASG Malin Array Be 37.57 302 P **P** **12 54 01.4 -0.7**
AKASG pmax pmax
comp=Z,20nm,0.6s
AKASG MLR MLR
comp=Z,2μm,18.8s
AKBB Malin Array Si 37.57 302 *e*P **P** **12 54 01.3 -0.8**
KIEV Kiev 37.58 302 *e*P **P** **12 54 01.3 -0.9**
comp=Z,28nm,0.7s,mb5.1
KIEV Kiev 37.58 302 *e*P **P** **12 54 01.3 -0.9**
KIEV pmax pmax
comp=Z,28nm,0.7s,mb5.1
MICGM Minsk 37.88 308 *e*P **P** **12 54 04.0 -0.7**
MNK Minsk 37.91 308 *e*P **P** **12 54 04.0 -0.9**
ASF Jabal al Asfar 38.33 270 P **P** **12 54 09.9 +1.2**
comp=Z,7.5nm,0.7s,mb4.5,baz=306,slow=7.4,SNR=14
ASF Jabal al Asfar 38.33 270 P **P** **12 54 09.9 +1.2**
ASF pmax pmax
comp=Z,8.0nm,0.7s
NACGM Naroch 38.48 309 *e*P **P** **12 54 06.0 -3.7**
KAF Kangasniemi 38.53 320 *e*P **P** **12 54 09.5 -0.6**
KAF pmax pmax
comp=Z,14nm,0.5s,mb5.0
KAF Kangasniemi 38.53 320 *ep* **P** **12 54 09.5 -0.6**
comp=Z,14nm,0.5s,mb5.0
KIS Kishinev 38.60 296 *e*P **P** **12 54 20.0 +9.2**
KIS *e*LQ 13 07 42.0

KIS LRM 13 11 24.0
comp=Z,2µm,15.0s
KIS Kishinev 38.60 296 *e*P **P 12 54 20.0 +9.2**
KIS *i* 12 54 26.0
KIS *e* 12 55 50.0
KIS *e* 13 02 46.0
KIS MLR MLR
comp=Z,2µm,15.0s,MS4.9
KIS MLR MLR
comp=E,1µm,13.0s
KIS MLR MLR
comp=Z,2µm,16.0s
FINES FINESS Array B 38.62 319 P **P 12 54 10.6 -0.2**
comp=Z,16nm,0.4s,mb5.1,baz=92,slow=8.7,SNR=69
FINES PcP PcP 12 56 22.7 -0.1
comp=Z,5.2nm,0.6s,baz=108,slow=4.5,SNR=2.7
FINES LR LR 13 10 42.6
comp=Z,3µm,18.4s,MS5.2,baz=87,slow=37
FINES FINESS Array B 38.62 319 P **P 12 54 10.6 -0.2**
FINES 12 56 22.7
FINES pmax pmax
comp=Z,16nm,0.4s
FINES MLR MLR
comp=Z,3µm,18.5s
IZAR Zarasai 38.70 310 *e*P **P 12 54 09.7 -1.8**
IIGN Ignalina 38.75 310 *e*P **P 12 54 12.0 0.0**
ISAL Salakas 38.78 310 *e*P **P 12 54 12.3 0.0**
ISAL AMB AMB 12 54 16.7
comp=Z,25nm,1.5s,mb4.7
MMAI Mount Meron Ar 39.02 272 P **P 12 54 15.2 +0.7**
comp=Z,6.2nm,0.5s,mb4.6,baz=82,slow=12,SNR=14
MMAI PcP PcP 12 56 25.2 +0.6
comp=Z,2.7nm,0.6s,baz=80,slow=3.5,SNR=3.2
TLCR 39.08 293 ⇑P **P 12 54 14.9 0.0**
TLCR 39.08 293 ⇑*i*P **P 12 54 14.9 0.0**
KEV Kevo 39.31 333 *e*P **P 12 54 16.5 0.0**
comp=Z,23nm,0.6s,mb5.1
KEV Kevo 39.31 333 *e*P **P 12 54 16.2 -0.3**
KEV pmax pmax
comp=Z,25nm,0.6s,mb5.1
KEV Kevo 39.31 333 *ep* **P 12 54 16.2 -0.3**
comp=Z,25nm,0.6s,mb5.1
CFR Carcaliu 39.55 293 ⇑P **P 12 54 18.3 -0.5**
CFR Carcaliu 39.55 293 ⇑*i*P **P 12 54 18.3 -0.5**
TIRR Tirgusor 39.57 292 ⇓P **P 12 54 19.5 +0.5**
TIRR Tirgusor 39.57 292 ⇓*i*P **P 12 54 19.5 +0.5**
CSS Prodhromos 39.64 276 *e*P **P 12 54 19.8 +0.1**
comp=Z,17nm,0.7s,mb4.9
CSS Prodhromos 39.64 276 P **P 12 54 20.2 +0.5**
ARCES ARCESS Array B 39.78 332 P **P 12 54 20.6 +0.2**
comp=Z,19nm,0.6s,mb5.0,baz=92,slow=8.1,SNR=67
ARCES PcP PcP 12 56 27.0 +0.6
comp=Z,7.6nm,0.7s,baz=100,slow=5.0,SNR=2.9
ARCES ARCESS Array B 39.78 332 P **P 12 54 20.6 +0.2**
ARCES 12 56 27.0
ARCES pmax pmax
comp=Z,19nm,0.6s
ARE0 ARCESS Array S 39.78 332 *e*P **P 12 54 20.6 +0.2**
KULM Kulim 40.12 154 *e*P **P 12 54 23.2 -0.5**
comp=Z,49nm,0.9s,mb5.2
KULM Kulim 40.12 154 P **P 12 54 23.8 0.0**
KULM Kulim 40.12 154 P **P 12 54 23.7 -0.1**
comp=Z,606nmcomp=Z,51nm,1.0s,mb5.2
TESR 40.16 296 ⇑P **P 12 54 23.9 0.0**
TESR 40.16 296 ⇑*i*P **P 12 54 23.9 0.0**
GRER 40.27 294 ⇑P **P 12 54 26.2 +1.4**
GRER 40.27 294 ⇑*i*P **P 12 54 26.2 +1.4**
VRI Vrincioaia 40.30 295 ⇓P **P 12 54 26.0 +1.0**
VRI Vrincioaia 40.30 295 ⇓*i*P **P 12 54 26.0 +1.0**
PLOR Plostina 40.35 295 ⇓P **P 12 54 26.9 +1.5**
PLOR Plostina 40.35 295 ⇓*i*P **P 12 54 26.9 +1.5**
KTK1 Kautokeino 40.49 331 *e*P **P 12 54 25.3 -1.0**
KTK1 *e* pP 12 54 27.5 -1.5
KTK1 *e*S **S 13 00 33.5 -1.2**
KTK1 *e*SS SS 13 03 36.0 +2.3
KTK1 AMS AMS 13 11 29.1
comp=Z,4µm,12.3s,MS5.4
KTK1 Kautokeino 40.49 331 *i* P **P 12 54 29.0 +2.7**
SUW Suwalki 40.68 308 *e*P **P 12 54 28.0 0.0**
SUW *e*S **S 13 00 31.9 -6.0**
SUW Suwalki 40.68 308 *e*P **P 12 54 28.1 +0.1**
comp=Z,114nm,1.2s,mb5.4
BUR01 Bucovina Ar. S 40.81 298 P **P 12 54 30.2 +1.0**
BURAR Bucovina Array 40.81 298 ⇓P **P 12 54 29.4 +0.2**
BURAR Bucovina Array 40.81 298 ⇓*i*P **P 12 54 29.4 +0.2**
BUR08 Bucovina Ar. S 40.81 298 *e*P **P 12 54 29.4 +0.2**
MLR Muntele Rosu 40.93 294 ⇑P **P 12 54 31.0 +0.7**
MLR Muntele Rosu 40.93 294 ⇑*i*P **P 12 54 31.0 +0.8**
KTGM Kuala Trenggan 40.95 150 P **P 12 54 31.0 +0.3**
IPM Ipoh 41.00 153 *e*P **P 12 54 30.1 -1.0**
comp=Z,27nm,0.8s,mb4.9
IPM Ipoh 41.00 153 P **P 12 54 31.1 0.0**
IPM Ipoh 41.00 153 P **P 12 54 30.3 -0.8**
comp=Z,556nmcomp=Z,34nm,0.7s,mb5.1
LVV L'vov 41.01 301 *e*P **P 12 54 30.7 -0.1**
LVV MLR MLR
comp=N,2µm,17.0s,MS5.0
LVV MLR MLR
comp=E,1µm,17.0s,MS5.0
LVV MLR MLR
comp=Z,1µm,17.0s,MS4.8
EIL Elat 41.05 268 P **P 12 54 32.0 +0.7**
comp=Z,19nm,0.6s,mb4.9,baz=88,slow=7.6,SNR=11
EIL LR LR 13 13 25.4
comp=Z,744nm,18.4s,MS4.6,baz=278,slow=39
MUKL Al Mukalla 41.08 237 *e*P **P 12 54 32.0 +0.2**
YSS Yuzh-Sakhalins 41.11 63 *e*P **P 12 54 33.0 +1.3**
YSS *e*S **S 13 00 46.0 +1.4**
YSS *e*SSS 13 04 21.0
YSS MLR MLR
comp=N,2µm,13.0s,MS5.4
YSS MLR MLR
comp=E,2µm,13.0s,MS5.4
YSS MLR MLR
comp=Z,5µm,13.0s,MS5.5
DOPR Dopca 41.16 295 ⇑*i*P **P 12 54 33.1 +1.0**
JMB Yambol 41.48 290 P **P 12 54 36.9 +2.1**
VOIR 41.55 295 ⇓P **P 12 54 36.1 +0.8**
VOIR 41.55 295 ⇓*i*P **P 12 54 36.1 +0.8**
MAJO Matsushiro 41.68 80 *e*P **P 12 54 35.4 -1.1**
comp=Z,24nm,0.7s,mb4.9
MAJO Matsushiro 41.68 80 *e*P **P 12 54 35.4 -1.1**
MAJO pmax pmax
comp=Z,24nm,0.7s,mb4.9
MAT Matsushiro 41.68 80 P **P 12 54 34.4 -2.1**
MAT S **S 13 00 51.0 -2.2**
MJAR Matsushiro Arr 41.68 80 P **P 12 54 35.1 -1.4**
comp=Z,17nm,0.8s,mb4.7,baz=294,slow=10,SNR=24
MJAR LR LR 13 11 09.6
comp=Z,730nm,18.6s,MS4.6,baz=285,slow=35
MJAR Matsushiro Arr 41.68 80 P **P 12 54 35.1 -1.4**
MJAR pmax pmax
comp=Z,17nm,0.8s
MJAR MLR MLR
comp=Z,730nm,18.6s
ASAJ Asahikawa 41.88 67 *e*P **P 12 54 37.5 -0.5**
comp=Z,18nm,0.9s,mb4.7
ASAJ Asahikawa 41.88 67 P **P 12 54 37.5 -0.5**
comp=Z,17nm,0.8s,mb4.7,baz=291,slow=9.5,SNR=30
ASAJ Asahikawa 41.88 67 P **P 12 54 37.5 -0.5**
ASAJ pmax pmax
comp=Z,17nm,0.8s
KWP Kalwaria Pacla 41.89 301 *e*P **P 12 54 39.1 +1.1**
KWP *e*pP pP 12 54 42.4 +1.6
KWP *e*S **S 13 00 57.8 +1.8**
KWP Kalwaria Pacla 41.89 301 *e*P **P 12 54 38.8 +0.7**
comp=Z,163nm,1.2s,mb5.5
KWP Kalwaria Pacla 41.89 301 ⇑*i*P **P 12 54 38.9 +0.9**
PSI Prapat 41.94 157 P **P 12 54 38.1 -0.7**
comp=Z,13nm,0.8s,mb4.6,baz=355,slow=9.0,SNR=9.4
PSI Prapat 41.94 157 P **P 12 54 38.1 -0.7**
PSI pmax pmax
comp=Z,13nm,0.8s,mb4.6
TRO Tromso 42.08 332 *e*P **P 12 54 39.3 -0.1**
TRO *e*S **S 13 01 00.0 +1.7**
TRO *e*SS SS 13 04 09.0 +3.8
TRO AMS AMS 13 12 43.4
comp=Z,2µm,23.9s,MS4.8
WAR Warsaw 42.30 306 *e*P **P 12 54 42.7 +1.3**
WAR *e*S **S 13 00 55.7 -6.3**
FRIM Kepong 42.37 153 P **P 12 54 42.5 +0.2**
TRPA Tarpa 42.40 299 ⇑*i*P **P 12 54 42.5 +0.3**
UZH Uzhgorod 42.42 300 *e*P **P 12 54 44.0 +1.6**
UZH *e* 12 56 20.0
UZH *e*S **S 13 01 06.0 +2.2**
UZH MLR MLR
comp=N,3µm,15.0s,MS5.4
UZH MLR MLR
comp=E,1µm,15.0s,MS5.4
UZH MLR MLR
comp=Z,800nm,15.0s,MS4.7
ALN Alexandroupoli 42.43 288 P **P 12 54 43.6 +1.0**
DRGR 42.68 297 ⇑P **P 12 54 44.8 +0.3**
DRGR 42.68 297 ⇑*i*P **P 12 54 44.8 +0.3**
STHS Stebnicka Huta 42.87 301 *e*P **P 12 54 46.1 +0.1**
comp=Z,5.0nm,0.7s,mb4.3
STHS Stebnicka Huta 42.87 301 *e*P **P 12 54 46.1 +0.1**
STHS pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
STHS Stebnicka Huta 42.87 301 *e*P **P 12 54 46.1 +0.1**
CRVS Cervenica-Dubn 42.87 301 *e*P **P 12 54 46.2 +0.2**
comp=Z,9.3nm,1.3s,mb4.3
CRVS Cervenica-Dubn 42.87 301 *e*P **P 12 54 46.2 +0.2**
CRVS pmax pmax
comp=Z,9.0nm,1.3s,mb4.3
CRVS Cervenica-Dubn 42.87 301 *e*P **P 12 54 46.2 +0.2**
PRK Paraskevi 42.92 286 P **P 12 54 46.8 +0.3**
ERM Erimo 43.00 70 P **P 12 54 49.4 +2.2**
comp=Z,290nm,1.1s,mb5.9,SNR=9.4
ERM Erimo 43.00 70 *e*P **P 12 54 49.2 +2.0**
comp=Z,47nm,1.0s,mb5.2
ERM Erimo 43.00 70 ⇓*i*P **P 12 54 48.8 +1.6**
GZR Gura Zlata 43.08 295 P **P 12 54 48.7 +1.0**
CHOS Chios island 43.42 285 P **P 12 54 51.0 +0.3**
LIA Limnos Island 43.42 287 P **P 12 54 51.1 +0.5**
NIE Niedzica 43.45 302 *e*P **P 12 54 51.6 +0.9**
KAVA Kavala 43.46 289 P **P 12 54 51.9 +1.0**
OJC Ojcow 43.55 303 *e*P **P 12 54 51.3 -0.2**
OJC *e*sP sP 12 54 54.9 -0.4
OJC *e*PP PP 12 56 34.8 +2.3
OJC *e*SS SS 13 04 35.5 +0.9
OJC L 13 13 23.5
comp=Z,2.3nm,16.9s
OJC Ojcow 43.55 303 *e*P **P 12 54 51.3 -0.2**
OJC *e* 12 56 34.8
OJC MLR MLR
comp=Z,2µm,16.9s,MS5.2
SEY Seymchan 43.57 38*d i*P **P 12 54 51.0 -0.5**
KECS Kecovo 43.61 300 *e*P **P 12 54 52.8 +0.8**
comp=Z,6.0nm,0.8s,mb4.4
KECS Kecovo 43.61 300 *e*P **P 12 54 52.8 +0.8**
KECS pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
KECS Kecovo 43.61 300 *e*P **P 12 54 52.8 +0.8**
BDHA Al Bayda' **43.65 241**⇓*e*P **P 12 54 53.4 +0.7**
MOR8 Moi Rana 43.73 327 ⇑*i*P **P 12 54 51.6 -1.1**
MOR8 *e*pP pP 12 54 54.8 -0.7
MOR8 AMB AMB 12 54 56.2
comp=Z,72nm,1.6s,mb5.2
VTS Vitosha 43.76 291 ⇓P **P 12 54 54.8 +1.5**
VTS Vitosha 43.76 291 ⇓P **P 12 54 57.7 +4.4**
VTS Vitosha 43.76 291 ⇓*i*P **P 12 54 54.8 +1.5**
BZS Buzias 43.77 296 ⇓P **P 12 54 54.0 +0.6**
BZS Buzias 43.77 296 ⇓*i*P **P 12 54 54.0 +0.6**
LBOS 43.94 241⇑*e*P **P 12 54 55.6 +0.7**
LBOS AMb AMB 12 54 56.6
comp=Z,36nm,0.6s,mb5.3
DHBB Dhamar BB 43.98 242⇑*e*P **P 12 54 56.1 +0.8**
DHBB AMb AMB 12 54 57.7
comp=Z,23nm,0.6s,mb5.1
LOF Lofoten 43.99 329 *e*P **P 12 54 54.6 -0.2**
LOF *e*pP pP 12 54 57.7 +0.1
LOF AMB AMB 12 54 58.7
comp=Z,99nm,1.5s,mb5.3
LOF Lofoten 43.99 329 *i* P **P 12 54 55.2 +0.4**
SPITS Spitsbergen Ar 43.99 344 LR LR 13 17 57.6
comp=Z,1µm,19.1s,MS4.9,baz=75,slow=43
MNSI Mandailing Nat 44.04 157 P **P 12 54 54.9 -0.9**
comp=Z,95nm,0.8s,mb5.6
SRS Serrai 44.06 289 P **P 12 54 56.9 +1.2**
KGM Kluang 44.09 151 P **P 12 54 56.7 +0.5**
YUK Yuzh-Kuril'sk 44.12 66⇓*i*P **P 12 54 55.0 -1.2**
YUK pmax pmax
comp=N,40nm,4.0s
YUK pmax pmax
comp=E,40nm,4.0s
YUK pmax pmax
comp=Z,40nm,4.0s
YUK MLR MLR
comp=N,2µm,18.0s,MS5.4
YUK MLR MLR
comp=E,4µm,18.0s,MS5.4
YUK MLR MLR
comp=Z,2µm,18.0s,MS5.2
PSZ Piszkesteto 44.16 300 *e*P **P 12 54 56.7 +0.3**
comp=Z,20nm,1.0s,mb4.8
PSZ Piszkesteto 44.16 300 ⇑P **P 12 54 57.6 +1.2**
PSZ Piszkesteto 44.16 300 ⇑*i*P **P 12 54 57.6 +1.2**
PSZ Piszkesteto 44.16 300⇓*e*P **P 12 54 57.6 +1.2**
KONS Konsvik 44.24 327 *e*P **P 12 54 57.3 +0.5**
GKP Gorka Klasztor 44.29 308 *e*P **P 12 54 58.1 +0.7**
GKP *e*pP pP 12 55 01.6 +1.4
GKP *e*S **S 13 01 27.1 -4.1**
APE Apeiranthos 44.37 283 ⇑P **P 12 54 58.0 -0.2**
APE Apeiranthos 44.37 283 P **P 12 54 57.9 -0.4**
APE Apeiranthos 44.37 283 ⇑*i*P **P 12 54 58.0 -0.3**
PLG Polygyros 44.45 288 P **P 12 54 59.4 +0.5**
PAIG Paliouri 44.47 288 P **P 12 54 59.3 +0.3**
MYKOM Kota Tinggi 44.48 151 P **P 12 54 59.8 +0.5**
MYKOM Kota Tinggi 44.48 151 P **P 12 55 02.1 +2.7**
comp=Z,15nm,0.9s,mb4.7
KNT Kendrikon 44.52 290 P **P 12 55 00.4 +1.0**
VYHS Vyhne 44.65 301 *e*P **P 12 55 00.6 +0.2**
comp=Z,18nm,1.7s,mb4.6
VYHS Vyhne 44.65 301 *e*P **P 12 55 00.6 +0.2**
VYHS pmax pmax
comp=Z,18nm,1.7s,mb4.6
VYHS Vyhne 44.65 301 *e*P **P 12 55 00.5 +0.1**
OKC Ostrava-Krasne 44.68 303 *e*P **P 12 55 01.2 +0.6**
OKC MLR MLR
comp=Z,2µm,12.6s,MS5.1
OKC Ostrava-Krasne 44.68 303 *e*P **P 12 55 01.2 +0.6**
OKC *e*pP pP 12 55 03.9 +0.6
OKC AMS AMS 13 14 30.0
comp=Z,2µm,12.6s
BUD Budapest 44.85 299⇑*e*P **P 12 55 02.5 +0.5**
NSS Namsos 44.91 324 *e*P **P 12 54 59.6 -2.6**
NSS AMS AMS 13 14 10.3
comp=Z,4µm,12.7s,MS5.6
KBS Kingsbay 44.99 345 AMS AMS 13 18 51.8
comp=Z,2µm,14.9s,MS5.1
MORC Moravsky Berou 45.07 303 *e*P **P 12 55 04.1 +0.4**
MORC Moravsky Berou 45.07 303 ⇑P **P 12 55 04.7 +1.0**
MORC Moravsky Berou 45.07 303 ⇑*i*P **P 12 55 04.7 +1.0**
BSD Bornholm Skovb 45.17 311 *e*P **P 12 55 03.8 -0.6**
BSD MLR MLR
comp=Z,4µm,14.0s,MS5.4
BSD Bornholm Skovb 45.17 311 *i* P **P 12 55 03.8 -0.6**
BSD
comp=Z,3µm,14.0s
ATHU Athens Univers 45.22 285 P **P 12 55 06.8 +1.7**
LAST Lasithi 45.27 281 P **P 12 55 05.7 +0.2**
DIVS Divibare 45.39 295 P **P 12 55 04.6 -1.7**
KSP Ksiaz 45.52 305 *e*P **P 12 55 08.0 +0.7**
KSP *e*pP pP 12 55 11.1 +1.1
KSP *e*S **S 13 01 51.8 +2.9**
PKSM Moragy 45.53 298 ⇑P **P 12 55 07.9 +0.5**
PKSM Moragy 45.53 298 ⇑*i*P **P 12 55 07.9 +0.5**
IDI Anoyia 45.64 281 *e*P **P 12 55 07.5 -0.8**
comp=Z,53nm,0.5s,mb5.7
DPC Dobruska-Polom 45.65 304 *e*P **P 12 55 08.8 +0.6**
DPC MLR MLR
comp=Z,2µm,16.1s,MS5.2
DPC Dobruska-Polom 45.65 304 *e*P **P 12 55 08.8 +0.6**
DPC *e*pP pP 12 55 12.4 +1.4
DPC AMS AMS 13 14 10.0
comp=Z,2µm,16.1s
KZN Kozani 45.65 289 P **P 12 55 08.6 +0.2**
UPC Upice 45.79 304 *e*P **P 12 55 09.8 +0.4**
UPC Upice 45.79 304 *e*P **P 12 55 09.8 +0.4**
UPC *e*pP pP 12 55 12.7 +0.6
THL Klokotos Trika 45.79 288 P **P 12 55 08.6 -0.9**
NOA NORSAR Array B 45.80 320 P **P 12 55 08.8 -0.5**
NOA LR LR 13 15 04.9
NOA NORSAR Array B 45.80 320 P **P 12 55 08.8 -0.5**
comp=Z,14nm,0.6s,mb5.1,baz=79,slow=8.0,SNR=88
NOA LR LR 13 15 04.9
comp=Z,3µm,19.1s,MS5.3,baz=90,slow=37
NOA NORSAR Array B 45.80 320 P **P 12 55 08.8 -0.5**
NOA pmax pmax
comp=Z,14nm,0.6s
NOA MLR MLR
comp=Z,3µm,19.1s
VRAC Vranov 45.80 303 ⇑P **P 12 55 10.1 +0.6**
VRAC Vranov 45.80 303 ⇑*i*P **P 12 55 10.1 +0.6**
DID Didima 45.81 285 P **P 12 55 08.4 -1.4**
ZST Bratislava 45.84 301 *e*P **P 12 55 10.7 +0.9**
comp=Z,50nm,2.0s,mb5.1
ZST Bratislava 45.84 301 *e*P **P 12 55 10.7 +0.9**
ZST pmax pmax
comp=Z,50nm,2.0s,mb5.1
ZST Bratislava 45.84 301 *e*P **P 12 55 10.7 +0.9**
PDSI Padang 45.92 157 P **P 12 55 10.7 0.0**
comp=Z,135nm,0.9s,mb5.9
DSF Desfina 45.92 286 P **P 12 55 09.9 -0.7**
KDM Kudat 45.98 131 P **P 12 55 14.3 +3.1**
NAO01 NORSAR Array S 45.99 319 *e*P **P 12 55 10.4 -0.5**
comp=Z,12nm,0.4s,mb5.2
BCI Bajram Curri 46.00 292 *e*PN **P 12 55 12.4 +1.3**
KALE Kalithea 46.20 286 P **P 12 55 11.8 -1.0**
PUK Puka 46.24 292 *e*PN **P 12 55 13.5 +0.4**
GUR Goura 46.26 286 P **P 12 55 12.5 -0.8**
OSL Oslo 46.26 318 *e*P **P 12 55 12.9 0.0**
OSL Oslo 46.26 318 *i* P **P 12 55 14.0 +1.0**
TRIZ Trizonia 46.26 286 P **P 12 55 12.2 -1.1**
EFP Efpalio 46.35 287 P **P 12 55 13.8 -0.2**
KKM Kota Kinabalu 46.36 133 *e*P **P 12 55 15.1 +0.8**
comp=Z,69nm,1.2s,mb5.5
KKM Kota Kinabalu 46.36 133 P **P 12 55 17.0 +2.7**
SOP Sopron 46.36 301⇑*e*P **P 12 55 14.4 +0.5**
LAKA Lakka 46.38 286 P **P 12 55 12.8 -1.4**
COP Copenhagen 46.39 312 *e*P **P 12 55 15.4 +1.4**
COP MLR MLR
comp=Z,2µm,15.0s,MS5.2
COP Copenhagen 46.39 312 *i* P **P 12 55 15.4 +1.4**
COP
comp=Z,2µm,15.0s
TREC Trest 46.49 303 *e*P **P 12 55 15.9 +1.0**
TREC MLR MLR
comp=Z,1µm,11.4s,MS5.1
TREC Trest 46.49 303 *e*P **P 12 55 15.9 +1.0**
TREC AMS AMS 13 14 50.0
comp=Z,1µm,11.4s
RUE Ruedersdorf 46.52 308 *e*P **P 12 55 15.6 +0.5**
comp=Z,9.9nm,0.4s,mb5.1
PVCC Panska Ves 46.66 305 *e*P **P 12 55 17.6 +1.4**
PVCC MLR MLR
comp=Z,2µm,15.6s,MS5.3
PVCC Panska Ves 46.66 305 *e*P **P 12 55 17.6 +1.4**
PVCC AMS AMS 13 15 00.0
comp=Z,2µm,15.6s
CONA Conrad Observa 46.72 301⇑*i*pP pP 12 55 17.3 -2.1
comp=Z,58nm,1.3s,SNR=36
PRU Pruhonice 46.85 304 *e*P **P 12 55 18.3 +0.6**
PRU MLR MLR
comp=Z,2µm,14.8s,MS5.2
PRU Pruhonice 46.85 304 *e*P **P 12 55 18.3 +0.6**
PRU *e*pP pP 12 55 21.6 +1.1
PRU AMS AMS 13 15 10.0
comp=Z,2µm,14.8s
KONO Kongsberg 46.88 318 *e*P **P 12 55 18.7 +0.8**
KONO AMS AMS 13 15 14.2
comp=Z,4µm,13.4s,MS5.5
KONO Kongsberg 46.88 318 *e*P **P 12 55 17.5 -0.3**
comp=Z,40nm,1.2s,mb5.2
KONO Kongsberg 46.88 318 *e*P **P 12 55 17.5 -0.3**
KONO pmax pmax
comp=Z,40nm,1.2s,mb5.2
BRG Berggiesshubel 46.92 305 *e*P **P 12 55 18.5 +0.2**
comp=Z,72nm,1.6s,mb5.3
BRG Berggiesshubel 46.92 305 *i* P **P 12 55 18.3 0.0**
comp=Z,73nm,1.6s,mb5.3
BRG *i* PP PP 12 57 07.9 -0.4
comp=Z,9.9nm,1.0s
BRG *e*SCP ScP 12 59 39.5 -65
comp=Z,9.5nm,1.3s
BRG
comp=N,1µm,11.8s
BRG
comp=E,917nm,13.9s
BRG
comp=Z,2µm,15.3s
BRG Berggiesshubel 46.92 305 *i* P **P 12 55 18.3 0.0**
BRG *i* 12 57 07.9
BRG pmax pmax
comp=Z,44nm,1.6s,mb5.1
BRG pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
BRG MLR MLR
comp=N,819nm,11.8s,MS5.0
BRG MLR MLR
comp=E,549nm,13.9s,MS5.0
BRG MLR MLR
comp=Z,979nm,15.3s,MS4.9
SRN Sarande 47.06 289 *e*PN **P 12 55 18.3 -1.2**
LKD2 Lefkada island 47.07 288 P **P 12 55 18.8 -0.8**
PYL PYLOS 47.15 285 P **P 12 55 18.2 -2.1**
BTM Bintulu 47.16 138 P **P 12 55 22.7 +2.1**
ARSA Arzberg 47.17 300⇑*i*P **P 12 55 20.3 0.0**
comp=Z,17nm,0.9s,mb4.9
SDKM Sandakan 47.23 132 P **P 12 55 23.9 +2.8**
ATD Arta Tunnel 47.23 241 LR LR 13 16 33.2
comp=Z,592nm,21.8s,MS4.5,baz=28,slow=38
CLL Collm 47.35 306 *e*P **P 12 55 21.4 -0.2**
comp=Z,72nm,1.5s,mb5.4
CLL Collm 47.35 306 ⇑*i*P **P 12 55 21.5 -0.1**
comp=Z,24nm,0.7s,mb5.2
CLL LR LR
comp=Z,2µm,19.0s,MS5.1
CLL Collm 47.35 306⇑*i*P **P 12 55 21.5 -0.1**
CLL pmax pmax
comp=Z,24nm,0.7s,mb5.2
CLL MLR MLR
comp=Z,2µm,19.0s,MS5.1
CLL Collm 47.35 306 ⇑*i*P **P 12 55 21.5 -0.1**
comp=Z,24nm,0.7s,mb5.2
CLL *i* pP pP 12 55 24.9 +0.6
comp=Z,72nm,1.5s
CLL *e* 12 55 29.0
CLL *e*PP PP 12 57 11.0 -1.5
CLL *e*(S) S 13 02 48.0 +33
CLL *e*SS SS 13 05 42.0 -0.2
CLL Lm 13 15 00.0
comp=Z,2µm,19.0s
KSM Kuching 47.38 143 *e*P **P 12 55 23.2 +1.0**
comp=Z,54nm,0.8s,mb5.5
KSM Kuching 47.38 143 P **P 12 55 23.8 +1.6**
KSM Kuching 47.38 143 P **P 12 55 23.1 +0.9**
comp=Z,763nmcomp=Z,74nm,1.1s,mb5.5
SBUM Sibu 47.40 140 P **P 12 55 24.0 +1.7**
SBUM Sibu 47.40 140 P **P 12 55 23.5 +1.1**
comp=Z,782nmcomp=Z,81nm,1.1s,mb5.5
PERS Pernice 47.65 300 *i* P **P 12 55 23.9 -0.1**
SOKA Soboth 47.69 300⇑*i*P **P 12 55 24.3 0.0**
comp=Z,47nm,1.2s,mb5.4
KHC Kasperske Hory 47.73 303 *e*P **P 12 55 24.8 +0.2**
comp=Z,26nm,1.2s,mb5.1
KHC Kasperske Hory 47.73 303 *e*P **P 12 55 24.5 -0.1**
KHC MLR MLR
comp=Z,2µm,11.9s,MS5.2
KHC Kasperske Hory 47.73 303 *e*P **P 12 55 24.5 -0.1**
KHC *e*pP pP 12 55 27.9 +0.6
KHC AMS AMS 13 15 30.0
comp=Z,2µm,11.9s
GEC2 GERESS Array S 47.75 303 *e*P **P 12 55 25.1 +0.4**
comp=Z,46nm,1.6s,mb5.3
GEC2 GERESS Array S 47.75 303 *e*P **P 12 55 25.1 +0.4**
GEC2 pmax pmax
comp=Z,46nm,1.6s,mb5.3
MOA Molln 47.75 301 *i* P **P 12 55 24.9 +0.1**
comp=Z,19nm,1.8s,mb4.8,SNR=9.4
MUD Monsted U'grnd 47.94 314 *e*P **P 12 55 25.8 -0.3**
MUD MLR MLR
comp=Z,5µm,17.0s,MS5.6
MUD Monsted U'grnd 47.94 314 *i* P **P 12 55 25.8 -0.3**
MUD
comp=Z,5µm,17.0s
TANN Tannenbergstha 47.97 305 *e*P **P 12 55 26.8 +0.4**
comp=Z,57nm,1.5s,mb5.4
BOJS Bojanci 47.99 298 *i* P **P 12 55 26.7 0.0**
NKC Novy Kostel 48.03 305 *e*P **P 12 55 27.2 +0.3**
NKC MLR MLR
comp=Z,3µm,15.6s,MS5.3

NKC MLR MLR
comp=E,2µm,15.2s
NKC Novy Kostel 48.03 305 *e*P **P** **12 55 27.2 +0.3**
NKC *e*pP pP 12 55 31.1 +1.4
NKC AMS AMS 13 15 40.0
comp=E,3µm,15.6s
WERD Werda 48.05 305 *e*P **P** **12 55 27.3 +0.3**
comp=Z,50nm,1.6s,mb5.3
WERN Wernitzgruen 48.06 305 *e*P **P** **12 55 27.6 +0.5**
comp=Z,52nm,1.6s,mb5.3
GUNZ Gunzen 48.06 305 *e*P **P** **12 55 27.4 +0.3**
comp=Z,60nm,1.4s,mb5.4
NEUB Neuenburg 48.11 306 *e*P **P** **12 55 27.5 0.0**
comp=Z,103nm,1.6s,mb5.6
VISS Visnje 48.14 299 *i* P **P** **12 55 27.8 0.0**
WET Wettzell 48.15 304 *e*P **P** **12 55 28.3 +0.4**
comp=Z,56nm,1.5s,mb5.4
WET Wettzell 48.15 304 *e*P **P** **12 55 28.3 +0.4**
WET pmax pmax
comp=Z,56nm,1.5s,mb5.4
MYLDM Lahad Datu 48.33 131 P **P** **12 55 32.9 +3.2**
MYLDM Lahad Datu 48.33 131 P **P** **12 55 34.1 +4.5**
comp=Z,1µmcomp=Z,81nm,1.4s,mb5.6
ROTZ Rotzenmuhle 48.34 305 *e*P **P** **12 55 29.9 +0.6**
comp=Z,53nm,1.6s,mb5.3
MOX Moxa 48.39 306 *e*P **P** **12 55 29.7 0.0**
comp=Z,53nm,1.5s,mb5.3
MOX
comp=Z,1µm,17.0s
MOX Moxa 48.39 306 *e*P **P** **12 55 29.9 +0.2**
comp=Z,47nm,1.4s,mb5.3
MOX Moxa 48.39 306 *e*P **P** **12 55 29.7 0.0**
MOX pmax pmax
comp=Z,53nm,1.5s,mb5.3
MOX MLR MLR
comp=Z,1µm,17.0s,MS5.0
SNART Snartemo 48.42 317 *e*P **P** **12 55 30.1 +0.3**
PEA0B Petropavlovsk- 48.46 51 *e*P **P** **12 55 30.9 +0.7**
PETK Petropavlovsk- 48.46 51 P **P** **12 55 30.3 +0.1**
comp=Z,9.2nm,0.7s,mb4.9,baz=338,slow=3.2,SNR=20
PETK LR LR 13 17 28.4
comp=Z,2µm,18.1s,MS5.1,baz=288,slow=38
PETK Petropavlovsk- 48.46 51 P **P** **12 55 30.3 +0.1**
PETK pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
PETK MLR MLR
comp=Z,2µm,18.1s,MS5.1
BILL Bilibino 48.48 30*d* *i*P **P** **12 55 31.5 +1.4**
BILL *e* 12 55 42.5
BILL *e* 12 55 48.1
BILL *i* 12 57 22.9
BILL pmax pmax
comp=Z,33nm,1.3s,mb5.2
BILL MLR MLR
comp=Z,2µm,16.0s,MS5.2
FOO Floro 48.57 321 AMS AMS 13 16 19.0
comp=Z,4µm,15.9s,MS5.5
JAVS Javornik 48.61 299 *i* P **P** **12 55 30.8 -0.6**
KBA Koelnbreinsper 48.62 301⇑*i*P **P** **12 55 31.6 +0.1**
comp=Z,23nm,1.0s,mb5.2,SNR=8.8
NRDL Niedersach Rie 48.65 309 *e*P **P** **12 55 31.3 -0.4**
comp=Z,72nm,1.4s,mb5.5
TSM Tawau 48.72 132 P **P** **12 55 35.4 +2.8**
CLZ Clausthal 48.72 308 *e*P **P** **12 55 32.4 +0.2**
comp=Z,34nm,1.4s,mb5.2
CLZ Clausthal 48.72 308 *e*P **P** **12 55 32.4 +0.2**
CLZ pmax pmax
comp=Z,34nm,1.4s,mb5.2
BER Bergen 48.76 320 AMS AMS 13 16 29.5
comp=Z,4µm,23.1s,MS5.3
GRA1 Grafenberg Arr 48.97 305 *e*P **P** **12 55 35.0 +0.9**
comp=Z,108nm,1.3s,mb5.7
GRA1 LR LR
comp=Z,2µm,19.5s,MS5.0
GRF Grafenberg Arr 48.97 305 *e*P **P** **12 55 35.0 +0.9**
comp=Z,108nm,1.3s,mb5.7
GRF *e*L 13 15 48.4
comp=Z,2µm,19.5s
GRF Grafenberg Arr 48.97 305 *e*P **P** **12 55 35.0 +0.9**
GRF pmax pmax
comp=Z,108nm,1.3s,mb5.7
GRF MLR MLR
comp=Z,2µm,19.5s,MS5.0
GRF Grafenberg Arr 48.97 305 *e*P **P** **12 55 35.0 +0.9**
GRF pmax pmax
comp=Z,108nm,1.3s,mb5.7
GRF MLR MLR
comp=Z,2µm,19.5s,MS5.0
GRFO Grafenberg 48.97 305 *e*P **P** **12 55 35.0 +0.9**
comp=Z,62nm,1.1s,mb5.5
GRFO Grafenberg 48.97 305 *e*P **P** **12 55 35.0 +0.9**
GRFO pmax pmax
comp=Z,62nm,1.1s,mb5.5
PET Petropavlovsk 49.03 51 *e*P **P** **12 55 33.3 -1.3**
PET *e*S **S** **13 02 38.4 -0.6**
PET *e*SS SS 13 06 00.5 -9.0
PET pmax pmax
comp=Z,19nm,0.9s,mb5.1
PET MLR MLR
comp=Z,3µm,16.0s,MS5.4
PET MLR MLR
comp=Z,3µm,15.0s
ABTA Abfaltersbach 49.27 301⇑*i*P **P** **12 55 36.1 -0.3**
comp=Z,4.9nm,0.6s,mb4.7
WTTA Wattenberg 49.62 302⇓*i*P **P** **12 55 39.4 +0.2**
comp=Z,44nm,0.7s,mb5.6,SNR=29
WATA Walderalm 49.63 302⇑*i*P **P** **12 55 39.2 0.0**
comp=Z,20nm,0.6s,mb5.3,SNR=20
CUC Castrocucco 49.91 291 *e*P **P** **12 55 42.2 +0.8**
comp=Z,29nm,0.8s,mb5.4
MOTA Moosalm 49.92 302⇑*i*P **P** **12 55 41.4 -0.1**
comp=Z,37nm,0.7s,mb5.5,SNR=31
RETA Reutte 50.08 302 *i* pP pP 12 55 43.0 -2.5
comp=Z,46nm,1.1s,SNR=23
FETA Feichten 50.29 302 *i* P **P** **12 55 44.1 -0.2**
comp=Z,40nm,1.2s,mb5.3,SNR=24
TNS Taunus Mts 50.44 306 *e*P **P** **12 55 45.6 +0.3**
comp=Z,73nm,1.6s,mb5.5
TNS Taunus Mts 50.44 306 *e*P **P** **12 55 45.6 +0.3**
TNS pmax pmax
comp=Z,73nm,1.6s,mb5.5
AQU L'Aquila 50.50 295 *e*P **P** **12 55 46.0 +0.1**
comp=Z,33nm,0.9s,mb5.4
AQU L'Aquila 50.50 295⇑P **P** **12 55 46.7 +0.8**
AQU L'Aquila 50.50 295⇑*i*P **P** **12 55 46.7 +0.8**
STU Stuttgart 50.54 304 *e*P **P** **12 55 46.4 +0.3**
comp=Z,64nm,1.4s,mb5.4
STU Stuttgart 50.54 304 *e*P **P** **12 55 46.4 +0.3**
STU pmax pmax
comp=Z,64nm,1.4s,mb5.4
CEL Celeste 50.64 289 *e*P **P** **12 55 47.2 +0.2**
comp=Z,108nm,1.3s,mb5.6
DAVA Damuels 50.71 302⇑*i*P **P** **12 55 47.6 +0.2**
comp=Z,23nm,1.3s,mb4.9,SNR=9.2
WTSB Winterswijk 50.74 309 *e*P **P** **12 55 47.4 -0.2**
comp=Z,40nm,1.6s,mb5.1
DAVOX Davos/Dischmat 50.92 302 LR LR 13 18 13.3
comp=Z,1µm,20.6s,MS5.0,baz=74,slow=37
SPAK Spaichingen-Ko 51.06 304 *e*P **P** **12 55 50.4 +0.4**
JMIC Jan Mayen 51.07 335 LR LR 13 19 32.8
comp=Z,818nm,20.9s,MS4.7,baz=69,slow=38
BFO Black Forest 51.25 304 P **P** **12 55 52.5 +1.1**
comp=Z,126nm,1.2s,mb5.7,SNR=8.9
BFO Black Forest 51.25 304 *e*P **P** **12 55 51.3 -0.1**
comp=Z,49nm,1.4s,mb5.2
BFO Black Forest 51.25 304 *e*P **P** **12 55 51.3 -0.1**
BFO pmax pmax
comp=Z,49nm,1.4s,mb5.2
LANF Langenberg 51.30 305 *e*P **P** **12 55 52.0 +0.1**
TUE Stuetta 51.38 302 *e*P **P** **12 55 52.2 -0.3**
comp=Z,29nm,0.9s,mb5.2
RUP Ruppelstein 51.46 306 *e*P **P** **12 55 53.1 +0.1**
FELD Feldberg im Sc 51.63 304 *e*P **P** **12 55 54.2 -0.1**
VLC Villacollemand 51.70 298 *e*P **P** **12 55 55.6 +0.7**
comp=Z,24nm,0.7s,mb5.2
HGN Heimansgroeve 51.71 308 *e*P **P** **12 55 54.8 -0.1**
comp=Z,25nm,1.4s,mb5.0
MEM Membach 51.73 307 P **P** **12 55 55.7 +0.7**
comp=Z,16nm,1.9s,mb4.6
CDF Champ du Feu 51.86 304 *e*P **P** **12 55 55.6 -0.4**
comp=Z,111nm,1.7s,mb5.2
CDF Champ du Feu 51.86 304 *e*P **P** **12 55 55.6 -0.4**
comp=Z,55nm,1.7s,mb5.2
CDF Champ du Feu 51.86 304 *e*P **P** **12 55 55.6 -0.4**
CDF pmax pmax
comp=Z,55nm,1.7s,mb5.2
LRW Lerwick 51.92 321 AMS AMS 13 18 28.1
comp=Z,3µm,10.1s,MS5.6
ECH Echery 52.01 304 *e*P **P** **12 55 56.8 -0.3**
ECH Echery 52.01 304 *e*P **P** **12 55 56.5 -0.6**
comp=Z,28nm,1.3s,mb5.0
ECH Echery 52.01 304 *e*P **P** **12 55 56.6 -0.5**
ECH pmax pmax
comp=Z,28nm,1.3s,mb5.0
WLF Walferdange 52.02 306 P **P** **12 55 57.5 +0.3**
comp=Z,18nm,1.5s,mb4.8
WLF Walferdange 52.02 306 *e*P **P** **12 55 57.4 +0.3**
comp=Z,11nm,0.8s,mb4.8
WLF Walferdange 52.02 306 *e*P **P** **12 55 57.4 +0.2**
WLF pmax pmax
comp=Z,11nm,0.8s,mb4.8
BBS Basel-Blauen 52.11 303 *e*P **P** **12 55 57.0 -0.9**
MOF Molkenrain 52.17 304 *e*P **P** **12 55 58.2 -0.2**
BCLA Clavier 52.21 307 P **P** **12 55 59.8 +1.2**
comp=Z,20nm,1.7s,mb4.8
HINF Hinteralfeld 52.36 304 *e*P **P** **12 55 59.4 -0.4**
comp=Z,39nm,1.0s,mb5.0
HINF Hinteralfeld 52.36 304 *e*P **P** **12 55 59.4 -0.4**
comp=Z,20nm,1.0s,mb5.0
HINF Hinteralfeld 52.36 304 *e*P **P** **12 55 59.4 -0.4**
HINF pmax pmax
comp=Z,20nm,1.0s,mb5.0
LOMF Lomont 52.57 303 *e*P **P** **12 56 00.8 -0.6**
HAU Haudompre 52.59 304 *e*P **P** **12 56 00.9 -0.6**
comp=Z,32nm,1.0s,mb4.9
HAU *e*MLR MLR
comp=Z,916nm,19.8s,MS4.5
HAU Haudompre 52.59 304 *e*P **P** **12 56 00.9 -0.6**
comp=Z,16nm,1.0s,mb4.9
HAU LR LR
comp=Z,920nm,19.8s,MS4.8
HAU Haudompre 52.59 304 *e*P **P** **12 56 00.9 -0.6**
HAU pmax pmax
comp=Z,16nm,1.0s,mb4.9
HAU MLR MLR
comp=Z,920nm,19.8s,MS4.8
GIVF Givet 52.62 307 *e*P **P** **12 56 01.7 0.0**
comp=Z,94nm,1.3s,mb5.3
GIVF Givet 52.62 307 *e*P **P** **12 56 01.7 0.0**
comp=Z,47nm,1.3s,mb5.3
GIVF Givet 52.62 307 *e*P **P** **12 56 01.7 0.0**
GIVF pmax pmax
comp=Z,47nm,1.3s,mb5.3
THEF They Montfort 52.72 305 *e*P **P** **12 56 02.4 0.0**
DOU Dourbes 52.76 307 P **P** **12 56 03.8 +1.1**
comp=Z,14nm,1.9s,mb4.6
SNF Seneffe 52.77 308 P **P** **12 56 02.7 -0.1**
BAIF Baives 53.00 307 *e*P **P** **12 56 04.5 0.0**
comp=Z,46nm,1.2s,mb5.0
BAIF Baives 53.00 307 *e*P **P** **12 56 04.5 0.0**
comp=Z,23nm,1.2s,mb5.0
BAIF Baives 53.00 307 *e*P **P** **12 56 04.5 0.0**
BAIF pmax pmax
comp=Z,23nm,1.2s,mb5.0
MEZF Maizieres J'vi 53.16 305 *e*P **P** **12 56 05.9 +0.2**
comp=Z,196nm,1.3s,mb5.6
MEZF Maizieres J'vi 53.16 305 *e*P **P** **12 56 05.9 +0.2**
comp=Z,196nm,1.3s,mb5.9
SFTF Sexfontaines 53.30 305 *e*P **P** **12 56 06.5 -0.2**
comp=Z,105nm,1.2s,mb5.3
SFTF Sexfontaines 53.30 305 *e*P **P** **12 56 06.5 -0.2**
comp=Z,105nm,1.2s,mb5.6
PGF Pioggiola 53.32 297⇑*i*P **P** **12 56 06.8 -0.2**
comp=Z,131nm,1.3s,mb5.4
PGF Pioggiola 53.32 297⇑*i*P **P** **12 56 06.8 -0.2**
comp=Z,66nm,1.3s,mb5.4
PGF Pioggiola 53.32 297⇑*i*P **P** **12 56 06.8 -0.2**
PGF pmax pmax
comp=Z,66nm,1.3s,mb5.4
CABF La Chapelle 53.35 303 *e*P **P** **12 56 06.6 -0.5**
comp=Z,60nm,1.2s,mb5.1
CABF La Chapelle 53.35 303 *e*P **P** **12 56 06.6 -0.5**
comp=Z,30nm,1.2s,mb5.1
CABF La Chapelle 53.35 303 *e*P **P** **12 56 06.6 -0.5**
CABF pmax pmax
comp=Z,30nm,1.2s,mb5.1
LPG La Plagne 53.43 301⇑*i*P **P** **12 56 08.3 +0.6**
comp=Z,144nm,0.9s,mb5.6
LPG La Plagne 53.43 301⇑*i*P **P** **12 56 08.3 +0.6**
comp=Z,72nm,0.9s,mb5.6
LPG La Plagne 53.43 301⇑*i*P **P** **12 56 08.3 +0.6**
LPG pmax pmax
comp=Z,72nm,0.9s,mb5.6
LPL La Plagne 53.44 301⇑*i*P **P** **12 56 08.2 +0.5**
comp=Z,109nm,0.7s,mb5.6
LPL La Plagne 53.44 301⇑*i*P **P** **12 56 08.2 +0.5**
comp=Z,54nm,0.7s,mb5.6
LPL La Plagne 53.44 301⇑*i*P **P** **12 56 08.2 +0.5**
LPL pmax pmax
comp=Z,55nm,0.7s,mb5.6
SAOF Saorge 53.60 299 *e*P **P** **12 56 09.0 0.0**
AUTN L'Aution 53.68 299 *e*P **P** **12 56 10.3 +0.8**
SBF Sospel 53.74 299⇑*i*P **P** **12 56 09.8 -0.2**
comp=Z,67nm,0.7s,mb5.4
SBF Sospel 53.74 299⇑*i*P **P** **12 56 09.8 -0.2**
comp=Z,33nm,0.7s,mb5.4
SBF Sospel 53.74 299⇑*i*P **P** **12 56 09.8 -0.2**
SBF pmax pmax
comp=Z,33nm,0.7s,mb5.4
MBDF Montbardon 53.77 301 *e*P **P** **12 56 09.4 -0.8**
comp=Z,34nm,0.6s,mb5.1
MBDF Montbardon 53.77 301 *e*P **P** **12 56 09.4 -0.8**
comp=Z,17nm,0.6s,mb5.2
MBDF Montbardon 53.77 301 *e*P **P** **12 56 09.4 -0.8**
MBDF pmax pmax
comp=Z,17nm,0.6s,mb5.2
LUCF Luceram 53.78 299 *e*P **P** **12 56 10.3 0.0**
TOUF Mont Tournerai 53.79 300 *e*P **P** **12 56 10.6 +0.3**
MME1 Meikle Cairn 53.87 318 *e*P **P** **12 56 10.6 -0.2**
MVH1 Achvaich 54.21 319 *e*P **P** **12 56 13.2 0.0**
ORIF Oris-en-Rattie 54.24 301⇑*i*P **P** **12 56 13.2 -0.4**
comp=Z,47nm,0.6s,mb5.3
ORIF *e*MLR MLR
comp=Z,2µm,21.2s,MS4.9
ORIF Oris-en-Rattie 54.24 301⇑*i*P **P** **12 56 13.2 -0.4**
comp=Z,24nm,0.6s,mb5.3
ORIF Oris-en-Rattie 54.24 301⇑*i*P **P** **12 56 13.2 -0.4**
ORIF pmax pmax
comp=Z,24nm,0.6s,mb5.3
KBKI Kotabaru 54.30 139 P **P** **12 56 17.1 +2.7**
comp=Z,828nmcomp=Z,53nm,0.8s,mb5.5
FRF La Foret Royal 54.38 299 *e*P **P** **12 56 14.0 -0.7**
LOR Lormes 54.43 304⇑*i*P **P** **12 56 13.9 -1.0**
comp=Z,20nm,0.9s,mb4.8
LOR *e*MLR MLR
comp=Z,993nm,19.8s,MS4.6
LOR Lormes 54.43 304⇑*i*P **P** **12 56 13.9 -1.0**
comp=Z,9.9nm,0.9s,mb4.7
LOR LR LR
comp=Z,990nm,19.8s,MS4.9
LOR Lormes 54.43 304⇑*i*P **P** **12 56 13.9 -1.0**
LOR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
LOR MLR MLR
comp=Z,990nm,19.8s,MS4.9
MDO Dochfour 54.51 318⇑*e*P **P** **12 56 15.4 0.0**
RSC Scourie 54.51 320 *e*P **P** **12 56 15.4 +0.1**
EBL Broad Law 54.56 316 *e*P **P** **12 56 15.7 -0.1**
EDI Edinburgh 54.57 316 *e*P **P** **12 56 14.7 -1.1**
EDI AMB AMB 12 56 27.4
comp=Z,46nm,1.9s,mb5.2
EDI AMS AMS 13 20 41.3
comp=Z,3µm,13.1s,MS5.5
LMR La Mourre 54.58 299⇑*i*P **P** **12 56 15.5 -0.6**
comp=Z,104nm,1.4s,mb5.4
LMR La Mourre 54.58 299⇑*i*P **P** **12 56 15.5 -0.6**
comp=Z,52nm,1.4s,mb5.4
LMR La Mourre 54.58 299⇑*i*P **P** **12 56 15.5 -0.6**
LMR pmax pmax
comp=Z,52nm,1.4s,mb5.4
HPK Haverah Park 54.60 314 AMS AMS 13 20 57.2
comp=Z,3µm,20.6s,MS5.4
SMF Signal de Mont 54.72 304⇑*i*P **P** **12 56 16.4 -0.7**
comp=Z,102nm,1.2s,mb5.4
SMF Signal de Mont 54.72 304⇑*i*P **P** **12 56 16.4 -0.7**
comp=Z,51nm,1.2s,mb5.4
SMF Signal de Mont 54.72 304⇑*i*P **P** **12 56 16.4 -0.7**
SMF pmax pmax
comp=Z,51nm,1.2s,mb5.4
SSF Saint Saulge 54.73 304 *e*P **P** **12 56 16.3 -0.9**
EAU Auchinoon 54.73 316 *e*P **P** **12 56 16.2 -0.8**
OCF Saint Nazaire 54.77 301 *e*P **P** **12 56 17.8 +0.4**
OG26 St.-Nazaire-De 54.77 301 *e*P **P** **12 56 17.8 +0.4**
ESK Eskdalemuir 54.84 316 AMS AMS 13 21 02.3
comp=Z,3µm,17.3s,MS5.4
ESK Eskdalemuir 54.84 316 *e*P **P** **12 56 19.0 +1.2**
comp=Z,17nm,0.9s,mb5.1
ESK Eskdalemuir 54.84 316 *e*P **P** **12 56 19.0 +1.2**
ESK pmax pmax
comp=Z,17nm,0.9s,mb5.1
ECK Cauldkaine Hil 54.86 316⇑*e*P **P** **12 56 18.3 +0.3**
SMRF Simiane la Rot 54.87 300 *e*P **P** **12 56 18.1 -0.1**
comp=Z,47nm,1.3s,mb5.1
SMRF Simiane la Rot 54.87 300 *e*P **P** **12 56 18.1 -0.1**
comp=Z,47nm,1.3s,mb5.4
LHO Holmfirth 54.91 313 *e*P **P** **12 56 18.0 -0.3**
SSB Saint Sauveur 54.92 302 *e*P **P** **12 56 18.1 -0.4**
comp=Z,39nm,1.3s,mb5.3
SSB Saint Sauveur 54.92 302 *e*P **P** **12 56 18.1 -0.4**
SSB pmax pmax
comp=Z,39nm,1.3s,mb5.3
KAC Achnashellach 54.94 319 *e*P **P** **12 56 18.3 -0.1**
AVF Avril sur Loir 54.95 304⇑*i*P **P** **12 56 18.1 -0.7**
comp=Z,114nm,1.3s,mb5.4
AVF Avril sur Loir 54.95 304⇑*i*P **P** **12 56 18.1 -0.7**
comp=Z,57nm,1.3s,mb5.4
AVF Avril sur Loir 54.95 304⇑*i*P **P** **12 56 18.1 -0.7**
AVF pmax pmax
comp=Z,57nm,1.3s,mb5.4
CWF Charnwood Fore 54.97 312 AMS AMS 13 21 19.8
comp=Z,3µm,15.4s,MS5.5
VIVF Saint-Julien-l 55.03 302⇑*i*P **P** **12 56 19.0 -0.4**
comp=Z,26nm,0.8s,mb5.0
VIVF Saint-Julien-l 55.03 302⇑*i*P **P** **12 56 19.0 -0.4**
comp=Z,13nm,0.8s,mb5.0
VIVF Saint-Julien-l 55.03 302⇑*i*P **P** **12 56 19.0 -0.4**
VIVF pmax pmax
comp=Z,13nm,0.8s,mb5.0
KPL Plockton 55.18 319 AMS AMS 13 20 53.2
comp=Z,4µm,14.9s,MS5.6
PGBU Glenifferbraes 55.27 317 AMS AMS 13 21 00.2
comp=Z,3µm,17.0s,MS5.4
BGF Bois d'Agland 55.37 304 *e*P **P** **12 56 21.1 -0.7**
comp=Z,46nm,1.2s,mb5.1
BGF Bois d'Agland 55.37 304 *e*P **P** **12 56 21.1 -0.7**
comp=Z,23nm,1.2s,mb5.1
BGF Bois d'Agland 55.37 304 *e*P **P** **12 56 21.1 -0.7**
BGF pmax pmax
comp=Z,23nm,1.2s,mb5.1
AGO Saint Agoulin 55.43 303 *e*P **P** **12 56 22.8 +0.6**
PYM Petit Puy Mans 55.65 303 *e*P **P** **12 56 24.8 +1.0**
GAL1 Galloway 55.82 316 *e*P **P** **12 56 24.3 -0.5**
GAL1 AMB AMB 12 56 36.8
comp=Z,33nm,4.8s
GAL1 AMS AMS 13 21 40.8
comp=Z,2µm,15.7s,MS5.4
LUWI Luwuk 55.84 131 P **P** **12 56 29.6 +4.1**
comp=Z,60nm,1.0s,mb5.6
TCF Toulx Ste Croi 55.88 304⇑*i*P **P** **12 56 25.1 -0.4**
comp=Z,35nm,0.8s,mb5.2
TCF Toulx Ste Croi 55.88 304⇑*i*P **P** **12 56 25.1 -0.4**
comp=Z,18nm,0.8s,mb5.1
TCF Toulx Ste Croi 55.88 304⇑*i*P **P** **12 56 25.1 -0.4**
TCF pmax pmax
comp=Z,18nm,0.8s,mb5.2
LASF Ste Croix 55.92 301⇑*i*P **P** **12 56 25.7 -0.1**
comp=Z,125nm,1.2s,mb5.5
TTSI Tana Toraja 55.92 135 P **P** **12 56 27.5 +1.4**
comp=Z,579nmcomp=Z,47nm,1.3s,mb5.4
LDF La Druitiere 56.19 307 *e*P **P** **12 56 26.7 -0.9**
comp=Z,14nm,0.4s,mb5.0
MCH1 Michaelchurch 56.23 312 *e*P **P** **12 56 27.2 -0.7**
MCH1 AMB AMB 12 56 31.5
comp=Z,49nm,1.6s,mb5.3
MCH1 AMS AMS 13 22 00.1
comp=Z,2µm,16.6s,MS5.3
SJI Sawahan 56.27 146 P **P** **12 56 31.3 +2.8**
comp=Z,38nm,1.1s,mb5.3
HGH Gray Hill 56.29 312 *e*P **P** **12 56 27.8 -0.5**
FLN La Foliniere 56.32 308 *e*P **P** **12 56 27.6 -1.0**
FLN *e*MLR MLR
comp=Z,2µm,20.5s,MS5.0
FLN La Foliniere 56.32 308 *e*P **P** **12 56 27.6 -1.0**
FLN MLR MLR
comp=Z,2µm,20.5s,MS5.2
HTR Trewern Hill 56.34 312⇑*e*P **P** **12 56 28.1 -0.6**
WLF1 Llynfaes 56.38 314 AMS AMS 13 22 19.9
comp=Z,9µm,15.0s,MS6.0
KEST Kesra 56.45 290 *e*P **P** **12 56 29.4 -0.2**
KEST Kesra 56.45 290 P **P** **12 56 29.7 0.0**
comp=Z,2.6nm,0.6s,mb4.4,baz=77,slow=9.2,SNR=10
KEST LR LR 13 22 41.1
comp=Z,297nm,21.4s,MS4.3,baz=24,slow=38
CAF Calviac 56.63 303 *e*P **P** **12 56 30.9 +0.1**
comp=Z,42nm,1.1s,mb5.1
CAF Calviac 56.63 303 *e*P **P** **12 56 30.9 +0.1**
comp=Z,21nm,1.1s,mb5.1
CAF Calviac 56.63 303 *e*P **P** **12 56 30.9 +0.1**
CAF pmax pmax
comp=Z,21nm,1.1s,mb5.1
SPSI Sidrap Palu 56.67 136 P **P** **12 56 31.9 +0.4**
comp=Z,655nmcomp=Z,50nm,1.0s,mb5.5
GRR Gorron 56.72 307 *e*P **P** **12 56 30.6 -0.8**
comp=Z,45nm,0.8s,mb5.2
GRR Gorron 56.72 307 *e*P **P** **12 56 30.6 -0.8**
comp=Z,22nm,0.8s,mb5.2
GRR Gorron 56.72 307 *e*P **P** **12 56 30.6 -0.8**
GRR pmax pmax
comp=Z,22nm,0.8s,mb5.2
RJF Les Rejaudoux 56.78 303⇑*i*P **P** **12 56 32.0 +0.1**
comp=Z,95nm,1.2s,mb5.4
RJF *e*MLR MLR
comp=Z,754nm,21.2s,MS4.5
RJF Les Rejaudoux 56.78 303⇑*i*P **P** **12 56 32.0 +0.1**
comp=Z,47nm,1.2s,mb5.4
RJF LR LR
comp=Z,750nm,21.3s,MS4.8
RJF Les Rejaudoux 56.78 303⇑*i*P **P** **12 56 32.0 +0.1**
RJF pmax pmax
comp=Z,47nm,1.2s,mb5.4
RJF MLR MLR
comp=Z,750nm,21.3s,MS4.8
TNTI Ternate 57.05 125 P **P** **12 56 37.7 +3.5**
comp=Z,2µmcomp=Z,93nm,1.9s,mb5.5
JSA Saint Aubin 57.10 309 AMS AMS 13 22 19.7
comp=Z,2µm,21.7s,MS5.1
MFF Saint Martin d 57.16 305⇑*i*P **P** **12 56 33.8 -0.8**
comp=Z,45nm,1.1s,mb5.1
MFF Saint Martin d 57.16 305⇑*i*P **P** **12 56 33.8 -0.8**
comp=Z,22nm,1.1s,mb5.1
MFF Saint Martin d 57.16 305⇑*i*P **P** **12 56 33.8 -0.8**
MFF pmax pmax
comp=Z,22nm,1.1s,mb5.1
CMAH Djebel Manchou 57.31 292 P **P** **12 56 35.5 -0.3**
MTLF Montolieu 57.31 301⇑*i*P **P** **12 56 35.5 -0.2**
comp=Z,46nm,1.2s,mb5.1
MTLF Montolieu 57.31 301⇑*i*P **P** **12 56 35.5 -0.2**
comp=Z,23nm,1.2s,mb5.1
MTLF Montolieu 57.31 301⇑*i*P **P** **12 56 35.5 -0.2**
MTLF pmax pmax
comp=Z,23nm,1.2s,mb5.1
LFF La Frestale 57.44 303⇑*i*P **P** **12 56 36.7 +0.1**
comp=Z,61nm,0.9s,mb5.3
LFF La Frestale 57.44 303⇑*i*P **P** **12 56 36.7 +0.1**
comp=Z,31nm,0.9s,mb5.3
LFF La Frestale 57.44 303⇑*i*P **P** **12 56 36.7 +0.1**
LFF pmax pmax
comp=Z,31nm,0.9s,mb5.3
ABSA Djebel Ababsia 57.45 291 P **P** **12 56 37.0 +0.2**
DYA Yadsworthy 57.49 311 AMS AMS 13 23 21.9
comp=Z,3µm,15.4s,MS5.5
DLF Lyons Farm 57.50 315 *e*P **P** **12 56 35.0 -1.9**
HTL Hartland 57.52 312⇑*e*P **P** **12 56 36.6 -0.5**
HTL AMB AMB 12 56 39.8
comp=Z,31nm,1.8s,mb5.0
HTL AMS AMS 13 22 59.9
comp=Z,2µm,16.2s,MS5.3
SGMF Saint Gilles 57.78 308⇑*i*P **P** **12 56 38.5 -0.4**
comp=Z,98nm,1.3s,mb5.4
SGMF Saint Gilles 57.78 308⇑*i*P **P** **12 56 38.5 -0.4**
comp=Z,49nm,1.3s,mb5.4
SGMF Saint Gilles 57.78 308⇑*i*P **P** **12 56 38.5 -0.4**
SGMF pmax pmax
comp=Z,49nm,1.3s,mb5.4
CLLI Llivia 57.90 300 P **P** **12 56 40.0 +0.1**
VALF Valcebollere 57.91 300 *e*P **P** **12 56 40.0 +0.1**
CFON Fontmartina 57.97 299 P **P** **12 56 40.7 +0.3**
comp=Z,14nm,1.1s,mb4.9
BKSI Bulukumba 58.01 136 P **P** **12 56 43.7 +2.8**
comp=Z,27nm,1.3s,mb5.1

ROSF Rostrenen 58.15 308⇑ *i*P P 12 56 41.0 -0.5
comp=Z,68nm,1.2s,mb5.3
ROSF Rostrenen 58.15 308⇑ *i*P P 12 56 41.0 -0.5
comp=Z,34nm,1.2s,mb5.2
ROSF Rostrenen 58.15 308⇑ *i*P P 12 56 41.0 -0.5
ROSF pmax pmax
comp=Z,34nm,1.2s,mb5.2
MLS Moulis 58.22 301 *e*P P 12 56 41.1 -0.9
LBMI Labuha 58.25 126 P P 12 56 43.3 +0.7
SUMG Summit 58.29 343 *e*P P 12 56 42.4 +0.3
comp=Z,31nm,1.3s,mb5.2
SUMG Summit 58.29 343 *i* P P 12 56 45.0 +2.9
comp=Z,11nm,1.0s,mb4.9
QUIF Quistinic 58.30 308⇑ *i*P P 12 56 42.0 -0.5
comp=Z,28nm,0.7s,mb5.1
QUIF Quistinic 58.30 308⇑ *i*P P 12 56 42.0 -0.5
comp=Z,14nm,0.7s,mb5.1
QUIF Quistinic 58.30 308⇑ *i*P P 12 56 42.0 -0.5
QUIF pmax pmax
comp=Z,14nm,0.7s,mb5.1
CCA1 Carnmenellis 58.33 311 P P 12 56 41.7 -1.0
CCA1 AMB AMB 12 56 45.0
comp=Z,34nm,1.9s,mb5.1
CCA1 Carnmenellis 58.33 311 *e*P P 12 56 41.7 -1.0
CCA1 AMB AMB 12 56 45.0
comp=Z,34nm,1.9s,mb5.1
DFRA Djebel Bou Aff 58.40 292 P P 12 56 38.6 -4.9
EMIR Miracle 58.48 300 P P 12 56 44.7 +0.8
comp=Z,14nm,0.7s,mb5.1
CSOR Sort 58.49 300 P P 12 56 44.4 +0.4
comp=Z,16nm,0.8s,mb5.1
EPF Esparros 58.65 301⇑ *i*P P 12 56 44.1 -1.0
comp=Z,21nm,0.8s,mb4.9
EPF Esparros 58.65 301⇑ *i*P P 12 56 44.1 -1.0
comp=Z,10nm,0.8s,mb4.9
EPF Esparros 58.65 301⇑ *i*P P 12 56 44.1 -1.0
EPF pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
ETOS Mallorca 58.76 297 P P 12 56 47.0 +1.1
comp=Z,17nm,0.9s,mb5.1
VIEF Viey 58.93 301 *e*P P 12 56 46.7 -0.3
EBIE Bielsa 58.96 301 P P 12 56 47.6 +0.4
comp=Z,6.3nm,0.5s,mb4.9
EPOB Poblet 59.05 299 P P 12 56 47.3 -0.6
comp=Z,9.2nm,1.1s,mb4.7
ETSF Etsaut 59.29 302⇑ *i*P P 12 56 49.5 0.0
comp=Z,48nm,0.9s,mb5.2
ETSF Etsaut 59.29 302⇑ *i*P P 12 56 49.5 0.0
comp=Z,24nm,0.9s,mb5.2
ETSF Etsaut 59.29 302⇑ *i*P P 12 56 49.5 0.0
ETSF pmax pmax
comp=Z,24nm,0.9s,mb5.2
SJPF Ste Jean 59.59 302 *e*P P 12 56 51.7 +0.1
comp=Z,32nm,0.9s,mb5.0
SJPF Ste Jean 59.59 302 *e*P P 12 56 51.7 +0.1
comp=Z,16nm,0.9s,mb5.0
SJPF Ste Jean 59.59 302 *e*P P 12 56 51.7 +0.1
SJPF pmax pmax
comp=Z,16nm,0.9s,mb5.0
EALK Alkurruntz 59.71 302 P P 12 56 56.4 +4.0
comp=Z,13nm,1.5s,mb4.7
ERTA Horta de San J 59.74 299 P P 12 56 52.4 -0.3
comp=Z,9.9nm,0.9s,mb4.8
ELIZ Elizondo 59.75 302 P P 12 56 55.0 +2.2
comp=Z,8.8nm,0.8s,mb4.8
ELIZ Elizondo 59.75 302 P P 12 56 55.0 +2.3
ELIZ pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
KMBO Kilima Mbogo 60.48 237 P P 12 56 58.4 +0.4
KMBO Kilima Mbogo 60.48 237 P P 12 56 58.4 +0.4
comp=Z,6.9nm,0.3s,mb5.1,baz=17,slow=24,SNR=12
KMBO Kilima Mbogo 60.48 237 P P 12 56 58.4 +0.4
KMBO pmax pmax
comp=Z,7.0nm,0.3s
EMOS Mosqueruela 60.58 299 P P 12 56 58.4 0.0
comp=Z,24nm,1.2s,mb5.2
ELAN Lanestosa 60.90 303 P P 12 57 00.9 +0.3
comp=Z,15nm,0.9s,mb5.1
ECHE Chera 61.31 299 P P 12 57 04.7 +1.3
comp=Z,15nm,1.3s,mb5.0
ECHE Chera 61.31 299 P P 12 57 04.7 +1.3
ECHE pmax pmax
comp=Z,15nm,1.3s,mb5.0
ETOR Torete 61.34 300 P P 12 57 02.5 -1.1
comp=Z,4.5nm,0.6s,mb4.8
ETOR Torete 61.34 300 P P 12 57 02.5 -1.1
ETOR pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
EARI Arriondas 61.95 304 P P 12 57 08.9 +1.3
comp=Z,14nm,1.2s,mb5.0
ETOB Tobarra 62.21 298 P P 12 57 10.3 +0.8
comp=Z,9.0nm,0.9s,mb4.9
EMUR La Murta 62.46 297 P P 12 57 11.3 +0.1
comp=Z,21nm,1.2s,mb5.1
GUD Guadarrama 62.77 301 P P 12 57 14.4 +1.3
comp=Z,24nm,1.1s,mb5.2
GUD Guadarrama 62.77 301 P P 12 57 14.4 +1.2
GUD pmax pmax
comp=Z,24nm,1.1s,mb5.2
EVIA Vianos 62.84 299 P P 12 57 14.3 +0.7
comp=Z,20nm,1.2s,mb5.1
EVIA Vianos 62.84 299 P P 12 57 14.3 +0.6
EVIA pmax pmax
comp=Z,20nm,1.2s,mb5.1
COLD Coldfoot 62.99 21 *e*P P 12 57 13.9 -0.3
comp=Z,39nm,0.9s,mb5.5
EPON Pontenova 63.11 305 P P 12 57 17.8 +2.4
comp=Z,11nm,0.8s,mb5.0
ESDC Sonseca Array 63.19 300 P P 12 57 15.7 -0.3
comp=Z,6.2nm,0.6s,mb4.9
ESDC Sonseca Array 63.19 300 P P 12 57 15.7 -0.3
comp=Z,3.3nm,0.5s,mb4.7,baz=54,slow=6.8,SNR=53
ESDC LR LR 13 28 03.5
comp=Z,313nm,18.5s,MS4.5,baz=50,slow=39
ESLA Sonseca Array 63.19 300 *e*P P 12 57 15.7 -0.3
comp=Z,12nm,1.4s,mb4.8
EHUE Huescar 63.36 298 P P 12 57 17.9 +0.8
comp=Z,9.6nm,0.9s,mb4.9
EHUE Huescar 63.36 298 P P 12 57 17.9 +0.7
EHUE pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
PAB San Pablo 63.51 300 *e*P P 12 57 18.0 -0.1
comp=Z,22nm,1.3s,mb5.0
PAB San Pablo 63.51 300 *e*P P 12 57 18.0 -0.1
PAB pmax pmax
comp=Z,22nm,1.3s,mb5.0
ENIJ Nijar 63.59 297 P P 12 57 19.6 +0.9
comp=Z,8.6nm,0.8s,mb4.8
ENIJ Nijar 63.59 297 P P 12 57 19.6 +0.9
ENIJ pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
ECAL Calabor 63.64 304 P P 12 57 22.1 +3.1
comp=Z,8.5nm,0.8s,mb4.8
EQES Quesada 63.68 298 P P 12 57 19.9 +0.6
comp=Z,14nm,1.3s,mb4.8
EBAN Banos Encina 63.93 299 P P 12 57 21.4 +0.5
comp=Z,7.5nm,0.6s,mb4.9
EBAN Banos Encina 63.93 299 P P 12 57 21.4 +0.5
EBAN pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
EBER Berja 64.08 297 P P 12 57 21.7 -0.2
comp=Z,4.7nm,0.7s,mb4.6
MVO Moncorvo 64.27 303 *e*P P 12 57 23.7 +0.6
comp=Z,43nm,1.6s,mb5.2
MVO *e*LR LR 13 22 28.3
comp=Z,472nm,18.0s
MVO Moncorvo 64.27 303 P P 12 57 23.2 +0.2
ECOG Cogollos-Vega 64.30 298 P P 12 57 22.8 -0.6
comp=Z,5.0nm,0.6s,mb4.7
ECOG Cogollos-Vega 64.30 298 P P 12 57 22.8 -0.6
ECOG pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
EPLA Plasencia 64.31 302 P P 12 57 22.4 -1.0
comp=Z,15nm,1.3s,mb4.8
EPLA Plasencia 64.31 302 P P 12 57 22.4 -1.0
EPLA pmax pmax
comp=Z,15nm,1.3s,mb4.9
TTA Tatalina 64.42 26 *e*P P 12 57 27.0 +3.3
EADA Adamuz 64.44 299 P P 12 57 24.1 -0.2
comp=Z,5.1nm,0.8s,mb4.6
ELOB Lobios 64.49 304 P P 12 57 25.0 +0.4
comp=Z,6.6nm,0.8s,mb4.7
EGUA Guajares 64.56 297 P P 12 57 25.4 +0.4
comp=Z,94nm,1.0s,mb5.8
EGUA Guajares 64.56 297 P P 12 57 25.4 +0.4
EGUA pmax pmax
comp=Z,94nm,1.0s,mb5.8
PCAB Cabril 64.56 304 *e*P P 12 57 25.9 +0.9
comp=Z,53nm,1.8s,mb5.3
ELUQ Luque 64.59 298 P P 12 57 25.5 +0.2
comp=Z,11nm,0.6s,mb5.1
ELUQ Luque 64.59 298 P P 12 57 25.5 +0.2
ELUQ pmax pmax
comp=Z,11nm,0.6s,mb5.1
EALB Alboran 64.72 296 P P 12 57 26.1 0.0
comp=Z,18nm,0.7s,mb5.2
ELOJ Sierra Loja 64.76 298 P P 12 57 25.4 -0.9
comp=Z,5.4nm,0.8s,mb4.6
ELOJ Sierra Loja 64.76 298 P P 12 57 25.4 -1.0
ELOJ pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
MTE Manteigas 65.03 303 *e*P P 12 57 28.3 +0.2
comp=Z,42nm,2.0s,mb5.1
MTE *e*LR LR 13 22 44.5
comp=Z,515nm,18.0s
MTE Manteigas 65.03 303 *e*P P 12 57 28.4 +0.3
comp=Z,20nm,1.1s,mb5.1
BPAW Bear Paw Mtn. 65.11 23 *e*P P 12 57 27.8 -0.3
comp=Z,53nm,1.3s,mb5.4
BPAW *e*PcP PcP 12 58 01.6 +0.7
PCBR Castelo Branco 65.31 302 *e*P P 12 57 31.0 +1.1
comp=Z,25nm,2.3s,mb4.8
COLA College 65.40 22 *e*P P 12 57 30.1 0.0
comp=Z,27nm,0.9s,mb5.3
COLA College 65.40 22 *e*P P 12 57 30.1 0.0
COLA pmax pmax
comp=Z,27nm,0.9s,mb5.3
PMRV Marv??o 65.50 302 *e*P P 12 57 31.7 +0.6
comp=Z,42nm,1.8s,mb5.2
PMRV *e*LR LR 13 23 15.9
comp=Z,409nm,20.0s
PPLA Purkeypile 65.65 25 *e*P P 12 57 31.8 +0.1
comp=Z,39nm,0.9s,mb5.4
EBAD Badajoz 65.66 301 P P 12 57 31.8 -0.3
comp=Z,11nm,1.3s,mb4.7
ILAR Eielson Array 65.74 21 P P 12 57 31.2 -1.0
comp=Z,12nm,0.8s,mb5.0,baz=320,slow=4.7,SNR=75
ILAR LR LR 13 29 52.2
comp=Z,1μm,18.7s,MS5.2,baz=333,slow=39
ILAR Eielson Array 65.74 21 P P 12 57 31.3 -1.0
ILAR pmax pmax
comp=Z,12nm,0.8s
ILAR MLR MLR
comp=Z,1μm,18.7s
TRF Thorofare Moun 65.80 24 *e*P P 12 57 32.3 -0.4
comp=Z,16nm,0.9s,mb5.0
INK Inuvik 65.81 14 *e*P P 12 57 32.4 -0.3
comp=Z,71nm,1.4s,mb5.5
INK Inuvik 65.81 14 *e*P P 12 57 32.4 -0.3
INK pmax pmax
comp=Z,71nm,1.4s
SVW2 Sparrevohn 65.87 27 *e*P P 12 57 37.7 +4.5
comp=Z,29nm,1.3s,mb5.2
PESTR Esemoz 65.95 301 *e*P P 12 57 34.7 +0.6
comp=Z,26nm,1.3s,mb5.1
PESTR *e*LR LR 13 24 09.7
comp=Z,476nm,20.0s
MCK McKinley 65.98 23 *e*P P 12 57 33.9 0.0
comp=Z,7.4nm,0.7s,mb4.8
MCK McKinley 65.98 23 *e*P P 12 57 33.9 +0.1
MCK pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
PBAR Barrancos 66.01 300 *e*P P 12 57 35.1 +0.6
comp=Z,46nm,1.6s,mb5.3
PBAR *e*LR LR 13 24 09.0
comp=Z,627nm,18.0s
EJIF Jimena Fronter 66.02 298 P P 12 57 34.0 -0.6
comp=Z,8.5nm,0.7s,mb4.9
EJIF Jimena Fronter 66.02 298 P P 12 57 34.0 -0.6
EJIF pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
EMIN Mina Concepcio 66.02 300 P P 12 57 34.5 0.0
comp=Z,9.6nm,0.6s,mb5.0
ESPR Esera 66.03 299 P P 12 57 33.4 -1.2
comp=Z,15nm,1.3s,mb4.9
EVO Evora 66.42 301⇑ *i*P P 12 57 37.3 +0.2
comp=Z,55nm,1.4s,mb5.1
EVO *e*MLR MLR
comp=Z,916nm,21.5s,MS4.7
EVO Evora 66.42 301 *e*P P 12 57 37.5 +0.4
comp=Z,16nm,1.9s,mb4.7
PBEJ Beja 66.63 301 *e*P P 12 57 39.8 +1.4
comp=Z,31nm,1.3s,mb5.2
EGRO El Granado 66.68 300 P P 12 57 38.2 -0.6
comp=Z,5.5nm,0.7s,mb4.7
PVAQ Vaqueiros 66.90 300 *e*LR LR 13 24 34.2
comp=Z,455nm,18.0s
PMAFR Mafra 66.96 302 *e*P P 12 57 41.5 +1.0
comp=Z,78nm,1.4s,mb5.5
PMAFR A 13 31 27.7
comp=Z,493nm,18.0s
PCVE Castro Verde 66.97 300 *e*P P 12 57 41.8 +1.2
comp=Z,31nm,1.6s,mb5.1
PCVE *e*LR LR 13 24 59.4
comp=Z,825nm,18.0s
PBDV Barranco-do-Ve 67.14 300 *e*P P 12 57 41.4 -0.3
comp=Z,52nm,1.6s,mb5.3
PBDV *e*LR LR 13 25 00.7
comp=Z,508nm,18.0s
EGAK Eagle 67.20 19 *e*P P 12 57 41.2 -0.4
comp=Z,15nm,1.0s,mb5.0
RSO Redoubt South 67.28 27 *e*P P 12 57 42.9 +0.7
DOT Dot Lake 67.39 21 *e*P P 12 57 45.1 +2.3
comp=Z,44nm,1.0s,mb5.4
PTEO Sao Teotonio 67.46 301 *e*P P 12 57 44.7 +1.0
comp=Z,44nm,1.9s,mb5.2
PAX Paxson 67.55 22 *e*P P 12 57 43.4 -0.5
comp=Z,18nm,0.9s,mb5.1
PAX Paxson 67.55 22 *e*P P 12 57 43.4 -0.5
PAX pmax pmax
comp=Z,18nm,0.9s,mb5.1
MORF Marmelete 67.56 300 *e*LR LR 13 25 11.3
comp=Z,620nm,18.0s
PMR Palmer 67.57 24 *e*P P 12 57 45.7 +1.7
comp=Z,25nm,1.3s,mb5.1
PMR Palmer 67.57 24 *e*P P 12 57 45.7 +1.7
PMR pmax pmax
comp=Z,25nm,1.3s,mb5.1
SML Sawmill 67.65 24 *e*P P 12 57 44.2 -0.3
comp=Z,15nm,1.0s,mb5.0
SML Sawmill 67.65 24 *e*P P 12 57 44.2 -0.3
SML pmax pmax
comp=Z,15nm,1.0s,mb5.0
PFVI Vila Bisbo 67.77 300 *e*P P 12 57 46.8 +1.1
comp=Z,54nm,1.8s,mb5.3
PFVI *e*LR LR 13 25 13.3
comp=Z,665nm,20.0s
PFVI Vila Bisbo 67.77 300 P P 12 57 46.5 +0.8
RC01 Rabbit Creek A 67.78 25 P P 12 57 45.2 -0.1
comp=Z,33nm,0.9s,mb5.4
MENT Mentasta 68.06 21 *e*P P 12 57 46.7 -0.3
SLKM Skilak Lake 68.07 26 *e*P P 12 57 46.6 -0.5
DAWY Dawson 68.22 19 *e*P P 12 57 47.6 -0.5
SEW Seward 68.63 26 *e*P P 12 57 50.2 -0.4
comp=Z,14nm,0.9s,mb4.9
KDAK Kodiak Island 69.36 29 P P 12 57 55.2 0.0
comp=Z,208nm,0.7s,mb6.2,SNR=6.0
KDAK Kodiak Island 69.36 29 *e*P P 12 57 55.1 -0.1
comp=Z,27nm,0.8s,mb5.2
KDAK Kodiak Island 69.36 29 *e*P P 12 57 55.1 -0.1
KDAK pmax pmax
comp=Z,27nm,0.8s,mb5.2
BMRM Bremner River 69.41 23 *e*P P 12 57 55.6 +0.1
comp=Z,33nm,1.1s,mb5.2
OHAK Old Harbor 69.53 29 *e*P P 12 57 56.1 -0.1
comp=Z,108nm,1.5s,mb5.6
KAKA Kakadu 70.83 129 *e*P P 12 58 03.6 -1.2
comp=Z,12nm,0.5s,mb5.1
KAKA Kakadu 70.83 129 *e*P P 12 58 04.3 -0.5
comp=Z,92nm,1.0s,mb5.7
MBWA Marble Bar 71.63 145 *e*P P 12 58 09.4 0.0
comp=Z,42nm,1.3s,mb5.2
MBWA *e*PcP PcP 12 58 26.9 -1.8
FITZ Fitzroy Crossi 71.68 138 *e*P P 12 58 09.5 -0.3
comp=Z,26nm,0.9s,mb5.2
FITZ Fitzroy Crossi 71.68 138 *e*P P 12 58 10.0 +0.1
comp=Z,36nm,1.3s,mb5.1
PNL Peninsula 71.94 21 *e*P P 12 58 11.1 +0.2
comp=Z,12nm,0.7s,mb5.0
SKAG Skagway 73.18 20 *e*P P 12 58 21.5 +3.2
comp=Z,53nm,1.2s,mb5.3
YKA Yellowknife Ar 74.10 9 P P 12 58 22.5 -1.2
comp=Z,9.0nm,0.6s,mb4.9,baz=340,slow=6.0,SNR=14
YKA LR LR 13 31 32.8
comp=Z,109nm,21.9s,MS4.1,baz=355,slow=36
YKA Yellowknife Ar 74.10 9 P P 12 58 22.5 -1.2
YKA pmax pmax
comp=Z,9.0nm,0.6s
YKA MLR MLR
comp=Z,109nm,21.9s
DLBC Dease Lake 75.34 18 *e*P P 12 58 31.1 +0.2
TORD Torodi Ar. Bea 75.51 275 P P 12 58 31.5 -1.1
comp=Z,19nm,0.6s,mb5.2,baz=40,slow=5.2,SNR=109
TORD LR LR 13 35 60.0
comp=Z,283nm,18.7s,MS4.6,baz=65,slow=39
WRAK Wrangell Islan 76.62 20 *e*P P 12 58 38.8 +0.6
comp=Z,31nm,1.3s,mb5.1
WRA Warramunga Arr 77.74 132 P P 12 58 44.7 -0.2
comp=Z,20nm,0.8s,mb5.1,baz=336,slow=5.7,SNR=88
WRA PKKPbc PKKPbc 13 17 47.7 +0.9
comp=Z,0.4nm,0.8s,baz=144,slow=2.0,SNR=4.7
WRA LR LR 13 38 23.5
comp=Z,105nm,18.1s,MS4.2,baz=75,slow=40
SCHQ Schefferville 79.68 343 P P 12 58 53.9 -1.3
SCHQ LR LR 13 37 27.7
SCHQ Schefferville 79.68 343 P P 12 58 53.9 -1.3
comp=Z,16nm,0.7s,mb5.1,baz=16,slow=7.5,SNR=26
SCHQ LR LR 13 37 27.7
comp=Z,715nm,19.9s,MS5.0,baz=44,slow=38
KLBR Kellerberrin 80.21 151 *e*P P 12 58 57.3 -1.0
comp=Z,24nm,1.0s,mb5.1
ASAR Alice Springs 80.53 135 P P 12 59 00.1 -0.1
comp=Z,15nm,0.8s,mb5.0,baz=330,slow=4.9,SNR=107
ASAR Alice Springs 80.53 135 P P 12 59 00.1 -0.1
ASAR pmax pmax
comp=Z,15nm,0.8s
FFC Flin Flon 82.81 3 P P 12 59 11.9 0.0
comp=Z,286nm,0.7s,mb6.4,SNR=12
FFC Flin Flon 82.81 3 *e*P P 12 59 10.7 -1.2
comp=Z,32nm,0.7s,mb5.5
FFC Flin Flon 82.81 3 *e*P P 12 59 10.7 -1.2
FFC pmax pmax
comp=Z,32nm,0.7s,mb5.5
EDM Edmonton 83.30 10 *e*P P 12 59 13.7 -0.8
DBIC Dimbokro 84.61 274 P P 12 59 20.6 -1.2
comp=Z,5.9nm,0.6s,mb4.9,baz=39,slow=3.4,SNR=11
DBIC LR LR 13 45 36.3
comp=Z,345nm,18.8s,MS4.8,baz=23,slow=42
KIC Kosan Boka 84.73 274 *e*PKP1 P 12 59 21.9 -0.5
comp=Z,30nm,0.9s,mb5.4
TIC Toumodi 84.74 274 *e*PKP1 P 12 59 21.0 -1.5
comp=Z,20nm,1.1s,mb5.6
CTA Charters Tower 84.80 123 *e*P P 12 59 19.9 -2.6
comp=Z,15nm,1.2s,mb5.0
CTAO Charters Tower 84.80 123 *e*P P 12 59 22.5 +0.1
comp=Z,27nm,1.1s,mb5.3
CTAO Charters Tower 84.80 123 *e*P P 12 59 22.5 0.0
CTAO pmax pmax
comp=Z,27nm,1.1s,mb5.3
LIC Lamto 85.03 274 *e*PKP1 P 12 59 22.1 -1.8
comp=Z,137nm,1.9s,mb5.8
LIC Lamto 85.03 274 *e*P P 12 59 22.1 -1.8
LIC *e*MLR MLR
comp=Z,422nm,17.5s,MS4.6
LIC Lamto 85.03 274 *e*P P 12 59 22.1 -1.8
LIC LR LR
comp=Z,210nm,17.5s,MS4.6
RPW Rockport 86.51 17 *e*P P 12 59 30.7 0.0
comp=Z,3.8nm,0.4s,mb5.0
JCW Jim Creek 86.66 17 *e*P P 12 59 31.5 +0.1
comp=Z,61nm,1.2s,mb5.7
NLWA Neilton Lookou 86.98 18 *e*P P 12 59 33.7 +0.7
comp=Z,7.6nm,1.0s,mb4.9
B08A Colville Reser 87.03 15 ⇑P P 12 59 32.9 -0.3
baz=87
WALA Waterton Lakes 87.28 12 *e*P P 12 59 33.7 -0.7
comp=Z,0.7nm,1.2s,mb3.8
A13A Flathead Natio 87.33 12 ⇑P P 12 59 32.8 -1.9
baz=87
ULM Lac du Bonnet 87.42 360 P P 12 59 33.0 -2.1
comp=Z,4.5nm,0.5s,mb5.0,baz=332,slow=2.4,SNR=5.6
ULM LR LR 13 46 00.4
comp=Z,361nm,18.1s,MS4.8,baz=110,slow=41
A14A Double T Ranch 87.44 11 ⇑P P 12 59 34.3 -0.9
baz=87
A15A Johnson Ranch, 87.53 11 ⇓P P 12 59 34.6 -1.1
baz=87,SNR=33
NEW Newport 87.53 14 ⇓P P 12 59 35.2 -0.5
baz=87
NEW Newport 87.53 14 *e*P P 12 59 35.4 -0.2
comp=Z,17nm,1.1s,mb5.2
NEW Newport 87.53 14 *e*P P 12 59 35.4 -0.3
NEW pmax pmax
comp=Z,17nm,1.1s
ETW Entiat 87.55 16 *e*P P 12 59 35.3 -0.5
comp=Z,25nm,1.2s,mb5.3
A16A West Butte Ran 87.72 10 ⇑P P 12 59 34.8 -1.7
baz=87
A17A Triple J Farms 87.83 10 ⇑P P 12 59 36.0 -1.1
baz=87,SNR=12
B13A Whitefish 87.87 12 ⇑P P 12 59 36.2 -1.1
baz=88
TBM Table Mountain 87.91 16 P P 12 59 37.5 0.0
A18A Metzger Ranch, 87.96 9 ⇓P P 12 59 36.2 -1.5
baz=88,SNR=19
LON Longmire 88.05 17 *e*P P 12 59 38.4 +0.2
comp=Z,13nm,1.2s,mb5.0
LON Longmire 88.05 17 *e*P P 12 59 38.4 +0.2
LON pmax pmax
comp=Z,13nm,1.2s,mb5.0
B14A Marquette Ranc 88.06 11 ⇑P P 12 59 36.7 -1.5
baz=88
C11A Tepee Creek (N 88.09 13 ⇓P P 12 59 36.9 -1.5
baz=88
B15A Bradely Ranch, 88.21 11 ⇑P P 12 59 37.6 -1.3
baz=88,SNR=17
BLMT Blacktail Moun 88.24 12 *e*P P 12 59 39.1 0.0
comp=Z,35nm,1.3s,mb5.4
BSMT Basseo Peak 88.33 12 *e*P P 12 59 39.6 +0.1
comp=Z,28nm,1.0s,mb5.4
C12B Naegeli Ranch, 88.35 13 ⇓P P 12 59 39.5 -0.1
baz=88,SNR=10
B17A L&G Farms, Che 88.46 10 ⇑P P 12 59 38.7 -1.3
baz=88,SNR=7.3
B18A Beardsley Farm 88.48 9 ⇑P P 12 59 39.3 -0.9
baz=88,SNR=14
JTMT Jette 88.51 12 *e*P P 12 59 40.2 -0.1
comp=Z,23nm,1.1s,mb5.4
C13A Hot Springs 88.53 12 ⇓P P 12 59 40.1 -0.3
baz=88,SNR=31
C15A Salmond Ranch, 88.73 11 ⇓P P 12 59 40.5 -0.9
baz=88,SNR=15
SWMT Swartz Lake 88.78 12 *e*P P 12 59 41.5 -0.2
comp=Z,19nm,1.2s,mb5.3
C16A Fuhringer Ranc 88.82 10 ⇓P P 12 59 40.6 -1.2
baz=88,SNR=6.5
EGMT Eagleton 88.85 9 ⇓P P 12 59 41.2 -0.8
baz=88,SNR=6.3
EGMT Eagleton 88.85 9 *e*P P 12 59 41.1 -0.8
comp=Z,31nm,1.1s,mb5.5
DGMT Dagmar 88.92 5 ⇓P P 12 59 41.9 -0.4
baz=88,SNR=5.9
DGMT Dagmar 88.92 5 *e*P P 12 59 41.7 -0.6
comp=Z,75nm,1.2s,mb5.9
D12A Red Ives Fores 89.01 13 ⇓P P 12 59 42.2 -0.5
baz=89,SNR=8.3
C17A Wharram Farm, 89.11 10 ⇑P P 12 59 42.1 -1.1
baz=89,SNR=6.0
SLMT Seeley Lake 89.12 12 *e*P P 12 59 42.3 -0.9
comp=Z,24nm,1.0s,mb5.5
BOSA Boshof 89.12 229 P P 12 59 43.3 0.0
comp=Z,3.3nm,0.9s,mb4.7,baz=66,slow=8.4,SNR=3.1
BOSA Boshof 89.12 229 P P 12 59 43.3 0.0
BOSA pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
PKME Peaks-Kenny Pk 89.20 341 *e*P P 12 59 43.5 -0.1
comp=Z,68nm,1.6s,mb5.7
D14A Greenough 89.27 12 ⇑P P 12 59 43.0 -0.9
baz=89,SNR=10
C20A Veseth Ranch, 89.35 8 ⇓P P 12 59 43.3 -1.0
baz=89
G04A Mulino 89.36 18 ⇑P P 12 59 45.0 +0.6
baz=89,SNR=18
AGMN Agassiz Nation 89.38 360 *e*P P 12 59 43.0 -1.4
comp=Z,9.8nm,0.7s,mb5.2
HOOD Mount Hood Mea 89.44 18 *e*P P 12 59 45.0 +0.3
comp=Z,28nm,0.8s,mb5.6
MSO Missoula 89.45 12 ⇓P P 12 59 44.3 -0.5
baz=89,SNR=11
MSO Missoula 89.45 12 *e*P P 12 59 45.0 +0.2
comp=Z,9.4nm,1.2s,mb5.0
D15A Lincoln 89.46 11 ⇑P P 12 59 44.0 -0.8

baz=89,SNR=7.1
CHMT Chamberlain Mo 89.47 12 *e*P **P** 12 59 44.2 **-0.6**
comp=Z,11nm,0.9s,mb5.2
D17A Six Diamond Ra 89.60 10 ⇓P **P** 12 59 43.9 **-1.6**
baz=89,SNR=12
EYMN Ely 89.64 357 *e*P **P** 12 59 44.9 **-0.8**
comp=Z,30nm,1.2s,mb5.5
F10A Beach Ranch, E 89.72 15 ⇑P **P** 12 59 46.0 **0.0**
baz=89,SNR=11
G06A Carlson Farm, 89.75 17 ⇓P **P** 12 59 45.7 **-0.5**
baz=89
E13A Victor 89.79 12 ⇑P **P** 12 59 45.0 **-1.4**
baz=89
D19A Cripps Ranch, 89.80 9 ⇓P **P** 12 59 45.5 **-0.9**
baz=89
HRY Holter Researc 89.88 11 *e*P **P** 12 59 46.3 **-0.5**
comp=Z,13nm,1.1s,mb5.2
E14A Clinton 89.92 12 ⇓P **P** 12 59 45.7 **-1.3**
baz=90
H04A Detroit Lake 89.92 18 ⇑P **P** 12 59 47.3 **+0.3**
baz=90,SNR=5.4
D20A Manuel Ranch, 89.95 8 ⇓P **P** 12 59 45.8 **-1.3**
baz=90
E15A Deer Lodge 90.04 11 ⇓P **P** 12 59 47.0 **-0.6**
baz=90,SNR=8.8
E16A East Helena 90.07 11 ⇓P **P** 12 59 46.6 **-1.1**
baz=90
D21A La Casta Ranch 90.09 7 ⇑P **P** 12 59 47.4 **-0.4**
baz=90,SNR=5.2
E17A Martinsdale 90.25 10 ⇑P **P** 12 59 48.5 **0.0**
baz=90,SNR=9.2
E18A Harlowton 90.27 9 ⇓P **P** 12 59 49.0 **+0.3**
baz=90,SNR=7.6
F13A Darby 90.41 13 P **P** 12 59 48.4 **-0.9**
baz=90,SNR=18
GMO Grizzlie Mount 90.44 18 P **P** 12 59 53.9 **+4.4**
E19A Rath Farm, Rou 90.50 9 ⇑P **P** 12 59 48.6 **-1.1**
baz=90,SNR=12
E20A Meyer Farm, Mu 90.53 8 ⇑P **P** 12 59 47.6 **-2.2**
baz=90,SNR=6.4
LAO LASA Array 90.54 7 *e*P **P** 12 59 53.5 **+3.7**
comp=Z,6.5nm,0.4s,mb5.3
F15A Butte 90.64 11 ⇑P **P** 12 59 49.5 **-0.8**
baz=90,SNR=6.2
LRM Limekiln Ridge 90.66 11 *e*P **P** 12 59 50.2 **-0.2**
comp=Z,86nm,1.3s,mb5.9
F16A Kennard Place, 90.81 11 ⇓P **P** 12 59 50.8 **-0.4**
baz=90,SNR=8.7
F17A Fitzpatrick Pl 90.83 10 P **P** 12 59 51.3 **+0.1**
baz=90,SNR=17
F18A Big Timber 90.94 9 ⇑P **P** 12 59 49.0 **-2.8**
baz=91,SNR=8.8
BOZ Bozeman (W) 90.95 11 P **P** 12 59 51.7 **-0.1**
baz=91,SNR=22
BOZ Bozeman (W) 90.95 11 *e*P **P** 12 59 51.5 **-0.3**
comp=Z,20nm,1.2s,mb5.3
BOZ Bozeman (W) 90.95 11 *e*P **P** 12 59 51.5 **-0.3**
BOZ pmax pmax
comp=Z,20nm,1.2s,mb5.3
LONY Lake Ozonia 90.95 345 *e*P **P** 12 59 51.8 **0.0**
comp=Z,48nm,1.3s,mb5.7
GCMT Greycliff 91.06 9 P **P** 12 59 52.9 **+0.5**
comp=Z,14nm,1.0s,mb5.2
F19A Roth Farm, Mol 91.08 9 ⇓P **P** 12 59 51.5 **-0.9**
baz=91,SNR=9.9
DLMT Dillon 91.09 12 *e*P **P** 12 59 52.9 **+0.4**
comp=Z,26nm,1.3s,mb5.4
I07A Izee 91.09 17 ⇓P **P** 12 59 53.4 **+0.9**
baz=91,SNR=7.6
G13A Cobalt 91.10 13 ⇓P **P** 12 59 51.8 **-0.7**
baz=91,SNR=8.9
STKA Stephens Creek 91.15 134 *e*P **P** 12 59 51.9 **-0.8**
comp=Z,8.3nm,0.6s,mb5.2
STKA Stephens Creek 91.15 134 *e*P **P** 12 59 51.9 **-0.8**
comp=Z,2.4nm,0.7s,mb4.6
STKA Stephens Creek 91.15 134 P **P** 12 59 52.3 **-0.4**
comp=Z,10nm,0.6s,mb5.3,baz=327,slow=6.7,SNR=18
STKA LR LR 13 47 43.4
comp=Z,207nm,19.9s,MS4.6,baz=219,slow=40
MDV Middlebury 91.27 344 *e*P **P** 12 59 53.6 **+0.3**
comp=Z,21µm,0.6s
G15A Dillon 91.30 12 ⇓P **P** 12 59 53.0 **-0.4**
baz=91,SNR=7.9
G16A Moss Hill, Enn 91.33 11 ⇓P **P** 12 59 53.0 **-0.6**
baz=91,SNR=18
G17A Pierce Place, 91.39 10 ⇑P **P** 12 59 54.4 **+0.5**
baz=91
MCMT McKenzie Canyo 91.57 12 *e*P **P** 12 59 53.2 **-1.5**
comp=Z,8.2nm,1.1s,mb5.0
H13A Challis 91.61 13 ⇑P **P** 12 59 53.9 **-1.0**
baz=91,SNR=7.6
H14A Leadore 91.70 12 ⇑P **P** 12 59 53.6 **-1.7**
baz=91,SNR=28
HUMO Hull Mountain 91.70 19 *e*P **P** 12 59 56.1 **+0.8**
comp=Z,14nm,0.9s,mb5.3
RLMT Red Lodge 91.77 9 *e*P **P** 12 59 55.7 **+0.1**
comp=Z,29nm,1.3s,mb5.5
G20A Bridger 91.79 9 ⇓P **P** 12 59 55.0 **-0.7**
baz=91,SNR=12
H15A Lima 91.81 12 ⇑P **P** 12 59 51.9 **-3.9**
baz=91,SNR=5.4
H16A Russell Place, 91.93 11 ⇓P **P** 12 59 56.4 **0.0**
baz=92,SNR=6.3
K05A Summer Lake 92.08 18 ⇓P **P** 12 59 57.7 **+0.6**
baz=92,SNR=6.4
LKWY Lake 92.18 10 *e*P **P** 12 59 59.2 **+1.7**
comp=Z,18nm,0.8s,mb5.5
LKWY Lake 92.18 10 *e*P **P** 12 59 59.2 **+1.7**
LKWY pmax pmax
comp=Z,18nm,0.8s,mb5.5
I12A Atlanta 92.21 14 ⇓P **P** 12 59 57.3 **-0.4**
baz=92,SNR=20
I14A Mackay 92.36 12 ⇑P **P** 12 59 57.0 **-1.3**
baz=92,SNR=6.2
MFID Camas Ranch 92.45 14 ⇓P **P** 12 59 57.6 **-1.2**
baz=92,SNR=7.6
H20A Greybull 92.54 8 ⇑P **P** 12 59 58.1 **-1.1**
baz=92,SNR=9.0
HLID Hailey 92.56 13 ⇓P **P** 12 59 59.8 **+0.5**
baz=92,SNR=7.3
HLID Hailey 92.56 13 *e*P **P** 12 59 59.8 **+0.5**
comp=Z,7.8nm,1.0s,mb5.1
YBH Yreka Blue Hor 92.59 20 *e*P **P** 12 59 60.0 **+0.5**
comp=Z,3.9nm,0.7s,mb5.0
YBH Yreka Blue Hor 92.59 20 *e*P **P** 13 00 00.0 **+0.5**
YBH pmax pmax
comp=Z,4.0nm,0.7s
FLWY Flagg Ranch 92.61 10 *e*P **P** 12 59 59.9 **+0.3**
comp=Z,38nm,1.2s,mb5.7
I16A Newdale 92.70 11 ⇑P **P** 12 59 59.9 **-0.1**
baz=92,SNR=9.4
J13A Cove Ranch, Pi 92.76 13 ⇑P **P** 13 00 00.2 **0.0**
baz=92,SNR=7.2
IMW Indian Meadow 92.76 11 *e*P **P** 13 00 01.1 **+0.9**
comp=Z,21nm,1.3s,mb5.4
I17A Pilgrim Ck. 92.79 10 ⇑P **P** 13 00 00.0 **-0.3**
baz=92
WVOR Wild Horse Val 92.85 16 *e*P **P** 13 00 01.1 **+0.4**
comp=Z,18nm,1.1s,mb5.4
WVOR Wild Horse Val 92.85 16 *e*P **P** 13 00 01.1 **+0.5**
WVOR pmax pmax
comp=Z,18nm,1.1s,mb5.4
MOOW Moose Ponds 92.93 11 *e*P **P** 13 00 01.1 **+0.1**
comp=Z,44nm,2.0s,mb5.5
MOD Modoc 93.00 18 *e*P **P** 13 00 02.0 **+0.6**
comp=Z,22nm,1.1s,mb5.5
LOHW Long Hollow 93.08 10 *e*P **P** 13 00 03.2 **+1.5**
comp=Z,4.5nm,1.1s,mb4.8
TPAW Teton Pass 93.16 11 *e*P **P** 13 00 03.3 **+1.3**
comp=Z,2.9nm,0.6s,mb4.9
RSSD Black Hills 93.26 6 *e*P **P** 13 00 02.6 **+0.1**
comp=Z,31nm,1.4s,mb5.5
RSSD Black Hills 93.26 6 *e*P **P** 13 00 02.6 **+0.1**
RSSD pmax pmax
comp=Z,31nm,1.4s,mb5.5
I21A Big Trails, Te 93.28 8 ⇓P **P** 13 00 02.4 **-0.2**
baz=93
REDW Red Top Meadow 93.30 11 P **P** 13 00 03.0 **+0.4**
comp=Z,6.2nm,0.6s,mb5.2
LTIM Timbered Crate 93.41 19 P **P** 13 00 03.8 **+0.5**
J20A Shoshoni 93.65 9 ⇑P **P** 13 00 06.1 **+1.8**
baz=93,SNR=6.2
K15A Arbon 93.72 12 ⇓P **P** 13 00 04.5 **-0.1**
baz=93,SNR=5.8
J22A Midwest 93.76 8 ⇓P **P** 13 00 04.7 **-0.2**
baz=93
LBCM Butte Creek Ri 93.77 19 P **P** 13 00 05.2 **+0.3**
ECSD EROS Data Cent 93.94 0 *e*P **P** 13 00 04.8 **-0.8**
comp=Z,32nm,1.2s,mb5.6
BW06 Boulder Array 94.05 10 ⇓P **P** 13 00 04.8 **-1.4**
baz=94
PDAR Pinedale Array 94.05 10 P **P** 13 00 05.4 **-0.8**
comp=Z,2.1nm,0.7s,mb4.7,baz=52,slow=2.4,SNR=11
PDAR LR LR 13 44 36.1
comp=Z,741nm,21.4s,MS5.1,baz=352,slow=37
K19A Absolon Red Bu 94.08 9 ⇑P **P** 13 00 05.0 **-1.4**
baz=94
L14A Malta 94.24 13 ⇑P **P** 13 00 06.0 **-1.1**
baz=94,SNR=5.9
L15A Malad City 94.41 12 ⇑P **P** 13 00 07.8 **0.0**
baz=94,SNR=6.8
K21A Alcova 94.45 8 ⇓P **P** 13 00 08.0 **0.0**
baz=94
JFWS Jewell Farm 94.60 356 *e*P **P** 13 00 07.6 **-1.0**
comp=Z,25nm,0.7s,mb5.8
JFWS Jewell Farm 94.60 356 *e*P **P** 13 00 07.6 **-1.1**
JFWS pmax pmax
comp=Z,25nm,0.7s,mb5.8
HWUT Hardware Ranch 94.92 12 *e*P **P** 13 00 10.5 **+0.3**
comp=Z,24nm,1.0s,mb5.6
M15A Larsen Ranch, 94.92 12 ⇓P **P** 13 00 09.5 **-0.7**
baz=94
M16A Huntsville 95.19 12 ⇓P **P** 13 00 11.0 **-0.5**
baz=95
PHWY Pilot Hill 95.95 7 *e*P **P** 13 00 15.0 **+0.1**
comp=Z,16nm,1.1s,mb5.4
DUG Dugway 96.10 13 ⇓P **P** 13 00 14.7 **-0.9**
baz=96
DUG Dugway 96.10 13 *e*P **P** 13 00 15.8 **+0.1**
comp=Z,13nm,1.1s,mb5.3
DUG Dugway 96.10 13 *e*P **P** 13 00 15.8 **+0.2**
DUG pmax pmax
comp=Z,13nm,1.1s,mb5.3
N23A Red Feather La 96.31 7 ⇑P **P** 13 00 16.7 **+0.2**
baz=96
O19A Miners Draw (B 96.54 10 ⇓P **P** 13 00 17.8 **+0.2**
baz=96,SNR=5.5
NVAR Mina Array Bea 96.76 17 P **P** 13 00 19.3 **+0.7**
comp=Z,3.5nm,0.7s,mb4.9,baz=350,slow=4.7,SNR=17
Q12A Willow Creek R 96.88 15 ⇑P **P** 13 00 19.6 **+0.5**
baz=96,SNR=5.2
Q11A Duckwater 96.91 15 ⇓P **P** 13 00 19.5 **+0.2**
baz=96
O22A Kremmling 96.97 8 ⇓P **P** 13 00 19.6 **0.0**
baz=97
O23A Lake Granby, G 96.99 8 ⇑P **P** 13 00 20.1 **+0.4**
baz=97
R11A Troy Canyon, C 97.40 15 ⇓P **P** 13 00 21.5 **0.0**
baz=97
Q18A Rafter H Ranch 97.58 11 ⇓P **P** 13 00 22.1 **-0.2**
baz=97,SNR=5.1
S10A Tonopah Range, 97.61 16 ⇓P **P** 13 00 22.9 **+0.5**
baz=97
MSU Marysvale 97.85 13 *e*P **P** 13 00 23.4 **-0.1**
comp=Z,21nm,1.8s,mb5.4
MSU Marysvale 97.85 13 *e*P **P** 13 00 23.5 **0.0**
MSU pmax pmax
comp=Z,21nm,1.8s,mb5.4
Q22A Crested Butte, 98.22 8 ⇓P **P** 13 00 26.2 **+1.0**
baz=98,SNR=5.2
PV01 Paradox Valley 98.74 10 *e*P **P** 13 00 27.9 **+0.4**
comp=Z,295nm,0.8s
WCI Wyandotte Cave 98.95 352 *e*P **P** 13 00 28.2 **-0.2**
comp=Z,7.3nm,0.8s,mb5.3
WCI Wyandotte Cave 98.95 352 *e*P **P** 13 00 28.2 **-0.3**
WCI pmax pmax
comp=Z,7.0nm,0.8s,mb5.2
S20A Disappointment 99.07 10 ⇓P **P** 13 00 29.6 **+0.6**
baz=99,SNR=6.2
S22A 4UR Ranch, Cre 99.33 9 ⇓P **P** 13 00 30.7 **+0.5**
baz=99,SNR=7.5
DZM Mont Dzumac 99.43 111 *e*LR LR 13 32 56.8
comp=Z,441nm,25.0s
SDCO Great Sand Dun 99.47 8 ⇓P **P** 13 00 31.2 **+0.4**
baz=99,SNR=5.7
TKL Tuckaleechee C 101.20 350 P Pdif 13 00 39.8 **+1.3**
comp=Z,2.3nm,0.8s,baz=11,slow=10,SNR=2.9
TKL Tuckaleechee C 101.20 350 P Pdif 13 00 39.8 **+1.3**
TKL pmax pmax
comp=Z,2.0nm,0.8s
ANMO Albuquerque 102.14 9 P Pdif 13 00 44.6 **+1.9**
comp=Z,2.2nm,0.9s,baz=322,slow=4.9,SNR=3.5
ANMO Albuquerque 102.14 9 P Pdif 13 00 44.6 **+1.9**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
TXAR Lajitas Array 107.98 7 Pdiff Pdif 13 01 11.1 **+2.4**
comp=Z,0.2nm,0.7s,baz=36,slow=1.7,SNR=2.7
TXAR PKKP PKKPbc 13 16 40.6 **+13**
comp=Z,0.4nm,0.7s,baz=180,slow=6.2,SNR=3.9
PPT Papeete 128.41 78 *e*LR LR 13 46 25.4
comp=Z,251nm,24.2s
TAOE Nuku Hiva Isla 128.83 62 *e*LR LR 13 46 20.2
comp=Z,292nm,27.6s
VNA2 Neumayer--Watz 130.07 205 *e*PKPdf PKPdf 13 05 53.7 **-2.8**
baz=24,slow=2.7
VNA2 *e* 13 05 57.3
VNA2 *e* 13 08 07.2
VNA2 *e* 13 09 22.0
VNA2 *e* 13 15 10.1
VNA1 Neumayer--Stat 130.27 206 *e*PKPdf PKPdf 13 05 55.0 **-1.9**
VNA1 *e* 13 05 57.8
VNA1 *e* 13 08 09.6
VNA3 Neumayer Olymp 130.86 205 *e*PKPdf PKPdf 13 05 55.2 **-2.8**
VNA3 *e* 13 05 56.3
VNA3 *e* 13 05 58.7
VNA3 *e* 13 09 16.5
VNA3 *e* 13 09 24.6
VNA3 *e* 13 15 07.5
SIV San Ignacio 139.95 301 PKP PKPdf 13 06 16.5 **-0.1**
SIV San Ignacio 139.95 301 PKhKP PKPpre 13 06 09.1
comp=Z,0.6nm,0.5s,baz=64,slow=1.8,SNR=4.2
SIV PKP PKPdf 13 06 16.5 **-0.1**
comp=Z,1.3nm,0.5s,baz=124,slow=1.7,SNR=7.1
ATAH Atahualpa 141.27 331 PKhKP PKPpre 13 06 15.0
comp=Z,3.5nm,0.7s,baz=306,slow=5.1,SNR=3.7
RKT Rikitea 142.39 71 *e*LR LR 13 52 46.1
comp=Z,242nm,33.2s
LPAZ La Paz 144.44 309 PKP PKPdf 13 06 22.8 **-1.8**
comp=Z,3.1nm,0.5s,baz=51,slow=4.4,SNR=19
LPAZ La Paz 144.44 309 *e*PKIKP PKPdf 13 06 22.7 **-1.9**
CPUP Villa Florida 144.47 285 PKP PKPdf 13 06 21.9 **-2.5**
CPUP Villa Florida 144.47 285 PKP PKPdf 13 06 21.9 **-2.5**
comp=Z,5.4nm,0.6s,baz=55,slow=2.5,SNR=16
CPUP Villa Florida 144.47 285 PKIKP PKPdf 13 06 21.9 **-2.5**
CPUP pmax pmax
comp=Z,5.0nm,0.6s
NNA Nana 145.11 326 PKPbc PKPbc 13 06 25.0 **-0.3**
comp=Z,22nm,0.6s,baz=314,slow=6.1,SNR=13
PMSA Palmer Station 151.44 208 *e*PKPbc PKPbc 13 06 40.6 **-0.1**
TRQA Tornquist 153.70 269 *e*PKPdf PKPdf 13 06 38.5 **-0.3**
TRQA *e*PKPbc PKPbc 13 06 46.2 **-0.4**
PLCA Paso Flores 160.84 267 PKP PKPdf 13 06 48.2 **+0.4**
PLCA Paso Flores 160.84 267 PKP PKPdf 13 06 48.2 **+0.5**
comp=Z,3.2nm,0.7s,baz=153,slow=4.0,SNR=9.3
PLCA Paso Flores 160.84 267 PKIKP PKPdf 13 06 48.2 **+0.5**
PLCA pmax pmax
comp=Z,3.0nm,0.7s

*IDC **30** 12:52:36.7±1.3, 13°.66N×88°.33W, h0km, mb3.7/6, mb1 4.1/7, mb1mx3.8/22, mbtmp3.8/7, ML4.0/1, Error ellipse: s-maj=76.8km s-min=21.9km az=49.0*
*CASC **30** 12:52:40.7±1.8, 12°.91N×89°.15W, h24km±6km, MD4.0, ML4.2, mb4.1(NEIC)*
*ISCJB **30** 12:52:41.1±0.6, 12°.93N±0°.05×89°.14W±0°.04, h58km±5km, mb4.0/15, Error ellipse: s-maj=10.1km s-min=3.9km az=27.4*
*NEIC **30** 12:52:44.4±0.8, 13°.10N×89°.03W, h67km±8km, mb4.1/10, MD4.5(SNET), Error ellipse: s-maj=14.3km s-min=8.2km az=207.0*
NEIC Felt [III] at San Salvador.
ISC 30 12:52:42.0±0.6, 12°.93N±0°.05×89°.15W±0°.03, h48km±5km, n57, σ0s99/69, mb4.0/15, 4C-5D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.69**	**7**	⇓*e*P		**Pn**		**12 52 54.8**	**-0.8**
SNVI	**San Vicente**	**0.74**	**24**	*e*P		**Pn**		**12 52 55.6**	**-0.7**
SNVI				*e*S		**Sn**		**12 53 06.4**	**-0.1**
SNET	**Serv Nac Est T**	**0.75**	**354**	⇓*e*P		**Pn**		**12 52 55.8**	**-0.6**
SNET				*e*S		**Sn**		**12 53 06.1**	**-0.7**
SNET					AML	AML		12 53 10.1	
	comp=Z,20µm,0.2s								
BOQS	**Boqueron**	**0.81**	**351**	⇑*e*P		**Pn**		**12 52 56.8**	**-0.3**
SONS	**Sonsonate**	**0.97**	**325**	*e*P		**Pn**		**12 52 58.1**	**-1.2**
SONS				*e*S		**Sn**		**12 53 11.1**	**-1.0**
SONS					AML	AML		12 53 13.9	
	comp=Z,9µm,0.3s								
VSM	**San Miguel**	**0.98**	**60**	⇑*e*P		**Pn**		**12 52 59.6**	**+0.1**
SBLS	**San Blas**	**1.01**	**333**	⇓*e*P		**Pn**		**12 52 59.4**	**-0.5**
BLLM	**Bellamira**	**1.02**	**60**	*e*S		**Sn**		**12 53 13.2**	**0.0**
SNJE	**San Jose**	**1.03**	**334**	⇓*e*P		**Pn**		**12 52 59.5**	**-0.6**
RTR	**El Retiro**	**1.07**	**333**	⇓*e*P		**Pn**		**12 53 00.3**	**-0.4**
CAHU	**Cacacuatique**	**1.23**	**47**	*e*P		**Pn**		**12 53 03.1**	**+0.2**
CAHU				*e*S		**Sn**		**12 53 20.7**	**+2.3**
RBDL	**Robledal**	**1.28**	**336**	*e*P		**Pn**		**12 53 03.5**	**-0.1**
CNCH	**Conchagua**	**1.32**	**75**	*e*P		**Pn**		**12 53 03.8**	**-0.3**
CNCH				*e*S		**Sn**		**12 53 22.1**	**+1.5**
NBG	**Las Nubes**	**2.02**	**325**	*e*P		**Pn**		**12 53 15.0**	**+1.4**
PCG	**Pacaya**	**2.03**	**316**	*e*P		**Pn**		**12 53 14.9**	**+1.1**
CRIN	**San Cristobal**	**2.06**	**96**	*e*P		**Pn**		**12 53 14.1**	**0.0**
CRIN					AML	AML		12 53 52.3	
	comp=Z,2µm,0.3s								
TGUH	**Tegucigalpa,Un**	**2.14**	**58**	⇑*i*Pn		**Pn**		**12 53 15.4**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.14**	**58**	⇑*e*P		**Pn**		**12 53 15.5**	**+0.2**
MRL	**Marmol**	**2.19**	**346**	*e*P		**Pn**		**12 53 17.4**	**+1.5**
FG6		**2.34**	**314**	*e*P		**Pn**		**12 53 18.8**	**+0.8**
FG6				*e*S		**Sn**		**12 53 46.1**	**+0.6**
CNGN	**Cerro Negro**	**2.43**	**100**	*e*P		**Pn**		**12 53 18.2**	**-1.0**
CNGN					AML	AML		12 53 57.3	
	comp=Z,477nm,0.5s								
TP2	**Tecpan 2**	**2.59**	**316**	*e*P		**Pn**		**12 53 23.0**	**+1.6**
COPN	**Copaltepe**	**2.60**	**106**	*e*P		**Pn**		**12 53 20.5**	**-1.2**
COPN					AML	AML		12 54 01.6	
	comp=Z,1µm,0.6s								
CSAN		**2.76**	**105**	*e*P		**Pn**		**12 53 23.4**	**-0.5**
CSAN				*e*S		**Sn**		**12 53 56.4**	**+0.4**
XAVN	**Gruta Xavier**	**2.86**	**105**	*e*P		**Pn**		**12 53 23.6**	**-1.5**
XAVN					AML	AML		12 54 07.5	
	comp=Z,2µm,0.5s								
TICN	**Ticuantepe**	**2.98**	**107**	*e*P		**Pn**		**12 53 26.3**	**-0.6**
BOAB	**BOACO BROADBAN**	**3.43**	**98**	*e*P		**Pn**		**12 53 31.9**	**-1.1**
JTS	**JuntasAbangare**	**4.88**	**122**	*e*Pn		**Pn**		**12 53 54.4**	**+1.6**
JTS				*e*Sn		**Sn**		**12 55 06.0**	**+18**
SCX	**San Cristobal**	**5.07**	**319**	*e*P		**Pn**		**12 53 51.3**	**-4.1**
SCX				*i* S		**Sn**		**12 54 44.0**	**-8.7**
CMIG	**Matias Romero**	**6.91**	**307**	Pn		**Pn**		**12 54 21.9**	**+1.1**
CMIG				Sn		**Sn**		**12 55 37.6**	**-0.6**
CMIG	**Matias Romero**	**6.91**	**307**	Pn		**Pn**		**12 54 21.9**	**+1.1**
	comp=Z,2.5nm,0.3s,baz=100,slow=11,SNR=23								
CMIG				Sn		**Sn**		**12 55 37.6**	**-0.6**
	comp=Z,3.9nm,0.3s,baz=73,slow=19,SNR=3.0								
TEIG	**Tepich**	**7.30**	**6**	*e*Pn		**Pn**		**12 54 27.4**	**+1.3**
	comp=Z,14nm,0.6s								
HUIG	**Huatulco**	**7.31**	**294**	*i* P		**Pn**		**12 54 30.5**	**+4.3**
HUIG				*i* S		**Sn**		**12 55 55.2**	**+7.3**
PNIG	**Pinotepa**	**9.35**	**293**	*i* P		**Pn**		**12 54 57.6**	**+3.5**
PNIG				*i* S		**Sn**		**12 56 45.4**	**+7.5**
PPM	**Popocatepetl**	**10.96**	**305**	*i* P		**Pn**		**12 55 20.3**	**+4.0**
PPM				*i* S		**Sn**		**12 57 15.7**	**-1.9**
CAIG	**El Cayaco**	**11.49**	**292**	*e*P		**Pn**		**12 55 24.0**	**+0.4**
JCT	**Junction City**	**20.05**	**332**	*e*P		**P**		**12 57 10.7**	**-0.5**
	comp=Z,6.7nm,0.6s								
TXAR	**Lajitas Array**	**21.17**	**323**	P		**P**		**12 57 24.0**	**+0.7**
TXAR	**Lajitas Array**	**21.17**	**323**	P		**P**		**12 57 24.0**	**+0.7**
	comp=Z,2.1nm,0.5s,mb3.8,baz=140,slow=10,SNR=54								
MIAR	**Mount Ida**	**21.89**	**350**	P		**P**		**12 57 30.9**	**0.0**
	comp=Z,6.5nm,0.8s,mb4.1								
WMOK	**Wichita Mounta**	**23.40**	**340**	*e*P		**P**		**12 57 45.4**	**-1.3**
	comp=Z,1.6nm,0.5s,mb3.7								
MNTX	**Cornudas Mount**	**23.91**	**324**	*e*P		**P**		**12 57 51.9**	**+0.4**
	comp=Z,1.4nm,0.9s,mb3.4								
AMTX	**Amarillo**	**24.63**	**335**	*e*P		**P**		**12 57 57.5**	**-0.5**
	comp=Z,9.2nm,0.5s,mb4.6								
ISCO	**Idaho Springs**	**30.45**	**334**	*e*P		**P**		**12 58 49.9**	**-0.2**
	comp=Z,1.5nm,0.7s,mb3.8								
PV04	**Paradox Valley**	**30.84**	**329**	*e*P		**P**		**12 58 53.9**	**+0.3**
TCUT	**Toone Canyon**	**34.17**	**329**	*e*P		**P**		**12 59 32.0**	**+9.3**
	comp=Z,48nm,1.3s								
PDAR	**Pinedale Array**	**34.58**	**333**	P		**P**		**12 59 26.4**	**+0.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=122,slow=10,SNR=6.0								
SNOW	**Snow King Moun**	**35.66**	**333**	*e*P		**P**		**12 59 35.7**	**+0.2**
	comp=Z,10nm,0.6s,mb4.9								
LOHW	**Long Hollow**	**35.72**	**333**	*e*P		**P**		**12 59 36.2**	**+0.2**
	comp=Z,3.8nm,0.7s,mb4.4								
MOOW	**Moose Ponds**	**35.89**	**333**	*e*P		**P**		**12 59 37.5**	**0.0**
	comp=Z,2.0nm,0.8s,mb4.1								
IMW	**Indian Meadow**	**36.09**	**333**	*e*P		**P**		**12 59 39.7**	**+0.6**
	comp=Z,2.2nm,0.6s,mb4.3								
NVAR	**Mina Array Bea**	**36.26**	**320**	P		**P**		**12 59 42.1**	**+1.5**
	comp=Z,0.7nm,0.6s,mb3.8,baz=125,slow=8.6,SNR=7.8								
SIV	**San Ignacio**	**39.96**	**135**	P		**P**		**13 00 13.2**	**+1.1**
	comp=Z,0.9nm,0.6s,mb3.7,baz=296,slow=8.7,SNR=6.2								
YKA	**Yellowknife Ar**	**52.72**	**345**	P		**P**		**13 01 49.1**	**-2.5**
	comp=Z,1.4nm,0.6s,mb4.0,baz=147,slow=6.4,SNR=4.1								
ILAR	**Eielson Array**	**64.92**	**336**	P		**P**		**13 03 14.0**	**-2.2**
	comp=Z,0.3nm,0.7s,mb3.5,baz=162,slow=4.6,SNR=5.9								
WRA	**Warramunga Arr**	**137.81**	**255**	PKP		PKPdf		13 12 04.8	**+2.8**
	comp=Z,0.2nm,0.6s,baz=86,slow=2.5,SNR=2.2								
CMAR	**Chiang Mai Arr**	**147.81**	**345**	PKPbc		PKPbc		13 12 22.0	**-0.6**
	comp=Z,0.3nm,0.3s,baz=349,slow=3.7,SNR=3.5								

IDC 30 13:03:11.6±3.0, 32°.30S×178°.39W, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.8/17, mbtmp3.8/3, ML3.5/1, Error ellipse: s-maj=69.2km s-min=45.2km az=121.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.99**	**210**	Pn		Pn		13 04 53.5	-1.7
	0.9nm,0.3s,baz=10,slow=14,SNR=7.5								
URZ						Sn	Sn	13 06 07.7	-7.7
	1.8nm,0.3s,baz=223,slow=20,SNR=8.8								
ASAR	**Alice Springs**	**42.71**	**269**	P		P		13 11 10.8	+0.4
	0.7nm,0.5s,baz=108,slow=8.2,SNR=13								
WRA	**Warramunga Arr**	**43.87**	**274**	P		P		13 11 19.7	-0.2
	1.0nm,0.5s,baz=113,slow=8.0,SNR=32								
FINES	**FINESS Array B**	**146.80**	**339**	PKPbc		PKPbc		13 22 54.3	-0.6
	0.8nm,0.4s,baz=31,slow=3.2,SNR=6.7								

*IDC **30** 13:18:29.1±4.0, 12°.71N×123°.89E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.3/20, mbtmp3.5/3, Error ellipse: s-maj=360.1km s-min=27.2km az=64.0*
*MAN **30** 13:18:29, 13°.17N×124°.58E, h0km, mb4.3, ML3.2, MS3.0*
ISC 30 13:18:30.5±1.6, 13°.06N±0°.08×124°.6E±0°.1, h15km±10km, n11, σ1s29/11, mb3.5/3, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.55**	**173**	*e*P		**Pg**		**13 18 42.9**	**+1.5**
PVCP	**Virac**	**0.68**	**321**	*e*P		**Pg**		**13 18 41.6**	**-2.2**
AUQP	**San Andres**	**1.89**	**278**	*e*P		**Pn**		**13 19 02.9**	**+0.7**
BOAC	**Boac**	**2.71**	**279**	*e*P		**Pn**		**13 19 15.2**	**+1.7**
POLP	**Polilio Island**	**3.06**	**303**	*e*P		**Pn**		**13 19 19.5**	**+1.1**
GUIM	**Jordan**	**3.12**	**219**	*e*P		**Pn**		**13 19 18.3**	**-0.9**
CUYO	**Cuyo Island**	**4.13**	**238**	*e*P		**Pn**		**13 19 31.2**	**-1.9**
CAUP	**Cauayan**	**4.70**	**326**	*e*P		**Pn**		**13 19 41.7**	**+0.8**
WRA	**Warramunga Arr**	**34.17**	**164**	P		**P**		**13 25 13.8**	**-1.6**
	0.3nm,0.7s,mb3.3,baz=341,slow=9.5,SNR=4.1								
ASAR	**Alice Springs**	**37.62**	**166**	P		**P**		**13 25 45.3**	**+0.4**
	0.3nm,0.4s,mb3.3,baz=344,slow=7.3,SNR=14								
MKAR	**Makanchi Array**	**48.83**	**322**	P		**P**		**13 27 15.1**	**-0.2**
	0.6nm,0.8s,mb3.7,baz=107,slow=6.8,SNR=4.8								

*NEIC **30** 13:20:27.6±0.8, 30°.99N×103°.73E,

comp=N,8μm,0.6s
LZH Lanzhou 5.13 3 *e*Pg **Pb** **13 21 59.0 -0.3**
LZH Sg **Sb** **13 23 01.5 +1.1**
LZH smax
comp=N,19nm,0.5s
LZH smax
comp=E,31nm,0.6s
ENH Enshi 5.18 96 *e*Pn **Pn** **13 21 41.9 -4.4**
comp=E,7.5nm,0.5s
ENH *e* 13 21 49.9
XAN Xi'an 5.50 55 Pn **Pn** **13 21 49.5 -1.2**
XAN Pg **Pb** **13 22 07.3 +1.7**
XAN Sn **Sn** **13 22 51.5 -1.7**
XAN Sg **Sb** **13 23 14.3 +3.1**
XAN smax
comp=N,49nm,0.9s
XAN smax
comp=E,18nm,0.7s
CMAR Chiang Mai Arr 13.12 200 Pn **Pn** **13 23 34.5 -0.6**
comp=E,0.1nm,0.3s,baz=10,slow=9.5,SNR=4.0
SONM Songino Array 17.00 7 Pn **Pn** **13 24 25.1 -1.3**
comp=E,0.1nm,0.3s,baz=187,slow=11,SNR=2.6
KSRS Korea Array 21.16 66 P **P** **13 25 14.0 +0.2**
comp=E,2.5nm,0.6s,mb3.8,baz=263,slow=11,SNR=23
MKAR Makanchi Array 22.77 320 P **P** **13 25 31.2 +0.3**
MKAR Makanchi Array 22.77 320 P **P** **13 25 31.2 +0.3**
comp=E,0.2nm,0.7s,mb2.7,baz=133,slow=11,SNR=3.1
ZALV Zalesovo Beam 26.65 335 P **P** **13 26 06.5 -0.5**
comp=E,0.3nm,0.3s,mb3.3,baz=131,slow=7.9,SNR=2.3
KURK Kurchatov 27.07 324 P **P** **13 26 10.6 -0.3**
KURK Kurchatov 27.07 324 P **P** **13 26 10.6 -0.3**
comp=E,0.4nm,0.6s,mb3.1,baz=129,slow=8.8,SNR=2.8
WRA Warramunga Arr 58.62 146 P **P** **13 30 26.8 +1.2**
WRA Warramunga Arr 58.62 146 P **P** **13 30 26.8 +1.2**
comp=E,0.5nm,0.5s,mb3.8,baz=338,slow=7.8,SNR=18
ASAR Alice Springs 61.62 148 P **P** **13 30 48.2 +2.2**
comp=E,0.4nm,0.8s,mb3.6,baz=337,slow=7.2,SNR=6.1

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*NEIC **30** 13:39:44.4, 16°.28N×98°.03W, h15km, MD3.7(MEX), After MEX.*
MEX 30 13:39:44.4±0.6, 16°.28N×98°.03W, h15km±3km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.15**	**322**	*i* P	Pg	13 39 47.5	-0.8
PNIG				*i* S	Sg	13 39 50.6	-0.3
PNIG	**Pinotepa**	**0.15**	**322**	*i* P	Pg	13 39 47.5	-0.8
PNIG				*i* S	Sg	13 39 50.6	-0.3
VHO	**Vista Hermosa**	**1.48**	**57**	*i* P	Pn	13 40 07.2	-3.3
VHO				*i* S	Sn	13 40 24.4	-5.1
VHO	**Vista Hermosa**	**1.48**	**57**	*i* P	Pn	13 40 07.2	-3.3
VHO				*i* S	Sn	13 40 24.4	-5.1
ACX	**Acapulco**	**1.85**	**289**	*e*P	Pn	13 40 13.5	-2.0
ACX				*i* S	Sn	13 40 35.8	-2.9
ACX	**Acapulco**	**1.85**	**289**	*e*P	Pn	13 40 13.5	-2.0
ACX				*i* S	Sn	13 40 35.8	-2.9
HUIG	**Huatulco**	**1.92**	**105**	*e*P	Pn	13 40 13.9	-2.6
HUIG				*i* S	Sn	13 40 35.0	-5.4
HUIG	**Huatulco**	**1.92**	**105**	*e*P	Pn	13 40 13.9	-2.6
HUIG				*i* S	Sn	13 40 35.0	-5.4
TPIG	**Tehuac#an**	**2.23**	**17**	*e*P	Pn	13 40 18.1	-2.6
TPIG				*i* S	Sn	13 40 44.4	-3.6
MEIG	**Mezcala**	**2.23**	**317**	*e*P	Pn	13 40 17.8	-3.1
MEIG				*i* S	Sn	13 40 44.1	-4.1
CAIG	**El Cayaco**	**2.27**	**290**	*e*P	Pn	13 40 17.8	-3.6
CAIG				*i* S	Sn	13 40 44.1	-5.1
CAIG	**El Cayaco**	**2.27**	**290**	*e*P	Pn	13 40 17.8	-3.6
CAIG				*i* S	Sn	13 40 44.1	-5.1
PPM	**Popocatepetl**	**2.83**	**349**	*e*P	Pn	13 40 25.9	-3.2
PPM				*i* S	Sn	13 40 59.9	-3.1
PPM	**Popocatepetl**	**2.83**	**349**	*e*P	Pn	13 40 25.9	-3.2
PPM				*i* S	Sn	13 40 59.9	-3.1
MZVM		**3.11**	**339**	*e*P	Pn	13 40 31.8	-1.2
MZVM				*i* S	Sn	13 41 08.1	-1.8
SZVM	**Salazar**	**3.29**	**337**	*e*P	Pn	13 40 34.5	-1.0
SZVM				*i* S	Sn	13 41 13.8	-0.5
SZVM	**Salazar**	**3.29**	**337**	*e*P	Pn	13 40 34.5	-1.0
SZVM				*i* S	Sn	13 41 13.8	-0.5
IIO	**Organos**	**3.36**	**349**	*e*P	Pn	13 40 34.7	-1.7
IIO				*i* S	Sn	13 41 14.9	-1.1
IIO	**Organos**	**3.36**	**349**	*e*P	Pn	13 40 34.7	-1.7
IIO				*i* S	Sn	13 41 14.9	-1.1
ZIIG	**Zihuatanejo**	**3.54**	**292**	*e*P	Pn	13 40 36.4	-2.4
ZIIG				*i* S	Sn	13 41 21.1	+0.6
ZIIG	**Zihuatanejo**	**3.54**	**292**	*e*P	Pn	13 40 36.4	-2.4
ZIIG				*i* S	Sn	13 41 21.1	+0.6

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*ISCJB **30** 13:46:02.9±1.0, 51°.50N±0°.05×16°.11E±0°.04, h0km, Error ellipse: s-maj=7.5km s-min=3.4km az=15.6*
*CSEM **30** 13:46:05.5±1.1, 51°.45N×16°.07E, h2km, ML2.8/4, Error ellipse: s-maj=18.4km s-min=8.9km az=4.0*
*PRU **30** 13:46:06.3, 51°.44N×16°.10E, h0km*
*WAR **30** 13:46:06.1, 51°.50N×16°.09E, ML2.2, Mining Induced*
ISC 30 13:46:05.0±1.0, 51°.49N±0°.05×16°.10E±0°.04, h0km, n19, σ0s79/32, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.65**	**169**	*e*Pg	**Pg**	**13 46 18.6**	**+1.1**
KSP				*e*Sg	**Sg**	**13 46 27.6**	**+1.7**
KSP	**Ksiaz**	**0.65**	**169**	*e*Pg	**Pg**	**13 46 18.3**	**+0.8**
KSP				*e*Sg	**Sg**	**13 46 26.7**	**+0.7**
UPC	**Upice**	**0.98**	**183**	*e*PG	**Pg**	**13 46 24.8**	**+1.0**
UPC	**Upice**	**0.98**	**183**	Pg	**Pg**	**13 46 24.8**	**+1.0**
DPC	**Dobruska-Polom**	**1.15**	**173**	*e*PG	**Pg**	**13 46 26.9**	**0.0**
DPC				*e*SG	**Sg**	**13 46 41.6**	**-0.1**
comp=Z,14nm,0.4s							
DPC	**Dobruska-Polom**	**1.15**	**173**	Pg	**Pg**	**13 46 26.9**	**0.0**
DPC				Sg	**Sg**	**13 46 41.6**	**-0.1**
comp=Z,14nm,0.4s							
PVCC	**Panska Ves**	**1.36**	**226**	*e*PG	**Pg**	**13 46 31.5**	**+0.4**
PVCC				*e*SG	**Sg**	**13 46 49.1**	**+0.3**
comp=Z,36nm,0.2s							
PVCC	**Panska Ves**	**1.36**	**226**	Pg	**Pg**	**13 46 31.5**	**+0.4**
PVCC				Sg	**Sg**	**13 46 49.1**	**+0.3**
comp=Z,36nm,0.2s							
BRG	**Berggiesshubel**	**1.49**	**247**	PG	**Pg**	**13 46 33.7**	**+0.1**
BRG				SG	**Sg**	**13 46 53.2**	**+0.3**
comp=Z,17nm,0.4s							
PRU	**Pruhonice**	**1.80**	**214**	*e*SG	**Sg**	**13 47 02.6**	**-0.1**
comp=Z,9.7nm,0.5s							
PRU	**Pruhonice**	**1.80**	**214**	Sg	**Sg**	**13 47 02.6**	**-0.1**
comp=Z,9.7nm,0.5s							
MORC	**Moravsky Berou**	**1.94**	**151**	*e*Pn	**Pn**	**13 46 39.5**	**+0.3**
MORC				*e*Sg	**Sg**	**13 47 06.4**	**-0.9**
CLL	**Collm**	**1.95**	**266**	*e*Pg	**Pg**	**13 46 42.0**	**-0.4**
CLL				*e*Sg	**Sg**	**13 47 07.0**	**-0.7**
OKC	**Ostrava-Krasne**	**2.10**	**141**	*e*SG	**Sg**	**13 47 12.1**	**-0.3**
OKC	**Ostrava-Krasne**	**2.10**	**141**	Sg	**Sg**	**13 47 12.1**	**-0.3**
OJC	**Ojcow**	**2.66**	**117**	*e*PG	**Pg**	**13 46 55.5**	**-0.5**
OJC				*e*Sg	**Sg**	**13 47 30.8**	**+0.3**
KHC	**Kasperske Hory**	**2.86**	**215**	*e*PG	**Pg**	**13 46 58.0**	**-1.8**
KHC				*e*SG	**Sg**	**13 47 35.4**	**-1.4**
comp=Z,2.1nm,0.4s							
KHC	**Kasperske Hory**	**2.86**	**215**	Pg	**Pg**	**13 46 58.0**	**-1.8**
KHC				Sg	**Sg**	**13 47 35.4**	**-1.4**
comp=Z,2.1nm,0.4s							
MOX	**Moxa**	**2.95**	**255**	*e*PG	**Pg**	**13 47 01.4**	**-0.2**
MOX				*e*SG	**Sg**	**13 47 41.4**	**+1.5**

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*BJI **30** 13:53:25.7, 51°.73N×104°.37E, h13km, mB4.5/16, mb4.4/21, Ms4.1/16, Ms7 3.9/15*
*IDC **30** 13:53:26.8±0.7, 51°.60N×104°.20E, h0km, mb3.7/13, mb1 3.9/17, mb1mx3.8/30, mbtmp3.8/17, ML3.6/4, MS3.3/4, Ms1 3.3/4, ms1mx2.8/36, Error ellipse: s-maj=18.7km s-min=10.9km az=41.0*
*ISCJB **30** 13:53:26.8±0.2, 51°.57N±0°.02×104°.17E±0°.02, h10km, mb3.9/24, MS3.3/3, Error ellipse: s-maj=2.8km s-min=2.0km az=160.4*
*BYKL **30** 13:53:28.8±0.2, 51°.63N×104°.03E, h12km±3km, #FAULT_PLANE Typ Strike Dip Rake NP NS Plane Author # FM 103.00 60.00 -56.00 25 0 IEC + 230.00 44.00 -134.00 IEC #PRINAX sc T_val T_azim T_pl B_val B_azim B_pl P_val P_azim P_pl Author + eTv eTa eTp eBv eBa eBp ePv ePa ePp fCLVD # 170.00 9.00 265.00 28.00 64.00 60.00 IEC + 0.0 0.0 0.0 0.0 0.0 0.0 IEC FELT I=IV-V*

MSK at Kultuk,Slyudyanka,Talaya,Baykalsk, III-IV at Golubie Eli, III at Irkutsk,Yelantsy,Glubokaya, II-III - Angarsk, II - Zakamensk
*MOS **30** 13:53:28.2±1.1, 51°.63N×104°.05E, h20km, mb4.1/13, Error ellipse: s-maj=8.4km s-min=6.5km az=66.8*
MOS Felt (III-IV) at Slyudyanka, Irkutsk, (II-III) at Angarsk, (II) at Yelantsy.
*NEIC **30** 13:53:28.9±1.2, 51°.66N×104°.09E, h13km±7km, mb4.1/12, Error ellipse: s-maj=8.8km s-min=6.5km az=162.0*
NEIC Felt [III] at Irkutsk and [II] at Angarsk.
ISC 30 13:53:28.7±0.2, 51°.58N±0°.02×104°.18E±0°.02, h10km, n126, σ1s28/187, mb3.9/24, MS3.3/3, 25C-20D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLY	**Talaya**	**0.34**	**287**	*e*Pg	**Pg**	**13 53 33.8**	**-1.8**
TLY				*e*Sg	**Sg**	**13 53 37.3**	**-2.8**
TLY	**Talaya**	**0.34**	**287**	⇓*i*PG	**Pg**	**13 53 33.9**	**-1.6**
TLY				*e*S	**Sg**	**13 53 37.7**	**-2.5**
TLY	**Talaya**	**0.34**	**287**	⇓*i*Pg	**Pg**	**13 53 33.8**	**-1.7**
TLY				Pmax		13 53 36.3	
4μm,0.1s							
TLY				*e*Sg	**Sg**	**13 53 37.2**	**-3.0**
TLY				Smax		13 53 38.3	
102μm,0.1s							
LSTR	**Listvyanka**	**0.50**	**55**	⇓*i*PG	**Pg**	**13 53 39.2**	**+0.8**
LSTR				*e*		13 53 46.8	
LSTR				pmax	pmax		
comp=Z,1μm,0.3s							
LSTR				smax			
comp=N,3μm,0.4s							
LSTR	**Listvyanka**	**0.50**	**55**	⇓*i*Pg	**Pg**	**13 53 39.2**	**+0.8**
comp=N,260nm,0.6s							
LSTR				⇓*i*Pg	**Pg**	**13 53 39.2**	**+0.8**
comp=N,2μm,0.6s							
LSTR				⇓*i*Pg	**Pg**	**13 53 39.2**	**+0.8**
comp=N,1μm,0.6s							
LSTR				Pmax		13 53 41.0	
comp=N,711nm,0.4s							
LSTR				*i* Sg	**Sg**	**13 53 46.8**	**+1.8**
LSTR				Smax		13 53 47.3	
comp=N,13μm,0.6s							
IRK	**Irkutsk**	**0.67**	**5**	⇑*i*PG	**Pg**	**13 53 41.0**	**-0.6**
IRK				*e*		13 53 49.6	
IRK				pmax	pmax		
comp=Z,17μm,0.2s							
IRK				smax			
comp=N,83μm,0.5s							
IRK	**Irkutsk**	**0.67**	**5**	⇑*i*Pg	**Pg**	**13 53 41.1**	**-0.5**
comp=N,3μm,0.4s							
IRK				⇑*i*Pg	**Pg**	**13 53 41.1**	**-0.5**
comp=N,1μm,0.4s							
IRK				⇑*i*Pg	**Pg**	**13 53 41.1**	**-0.5**
comp=N,12μm,0.4s							
IRK				Pmax		13 53 41.6	
comp=N,12μm,0.1s							
IRK				*i* Sg	**Sg**	**13 53 49.7**	**-0.6**
IRK				Smax		13 53 50.2	
comp=N,61μm,0.2s							
ARS	**Arshan**	**1.14**	**288**	*e*PG	**Pg**	**13 53 48.0**	**-2.6**
ARS				*e*		13 54 01.2	
ARS				pmax	pmax		
comp=Z,7μm,0.3s							
ARS				smax			
comp=N,19μm,0.3s							
ARS	**Arshan**	**1.14**	**288**	⇓*i*Pg	**Pg**	**13 53 47.5**	**-3.1**
ARS				⇓*i*Pb	**Pb**	**13 53 50.7**	**+0.2**
ARS				max		13 53 53.0	
comp=N,7μm,0.3s							
ARS				*i* Sg	**Sg**	**13 54 01.0**	**-4.4**
ARS				Smax		13 54 02.6	
comp=N,24μm,0.8s							
ZAK	**Zakamensk**	**1.33**	**206**	⇑*i*PN	**Pn**	**13 53 52.5**	**-0.8**
ZAK				*e*		13 54 09.8	
ZAK				pmax	pmax		
comp=Z,2μm,0.3s							
ZAK				smax			
comp=E,11μm,0.8s							
ZAK	**Zakamensk**	**1.33**	**206**	⇓*i*Pg	**Pg**	**13 53 52.6**	**-1.6**
comp=E,2μm,0.5s							
ZAK				⇓*i*Pg	**Pg**	**13 53 52.6**	**-1.6**
comp=E,990nm,0.5s							
ZAK				⇑*i*Pg	**Pg**	**13 53 52.6**	**-1.6**
comp=E,1μm,0.5s							
ZAK				Pmax		13 53 52.9	
comp=E,662nm,0.4s							
ZAK				*i* Sg	**Sg**	**13 54 09.8**	**-1.6**
ZAK				*e*Sb	**Sb**	**13 54 11.2**	**+0.5**
ZAK				max		13 54 14.3	
comp=E,11μm,1.0s							
KAB	**Kabansk**	**1.61**	**72**	⇑*i*PN	**Pn**	**13 53 59.3**	**+2.2**
KAB				*i*		13 54 22.1	
KAB				pmax	pmax		
comp=Z,1μm,1.2s							
KAB				smax			
comp=N,19μm,0.6s							
KAB	**Kabansk**	**1.61**	**72**	⇑*i*Pg	**Pg**	**13 53 59.6**	**+0.1**
KAB				Pmax		13 54 00.4	
comp=N,1μm,1.2s							
KAB				*i* Sg	**Sg**	**13 54 21.7**	**+1.3**
KAB				Smax		13 54 22.8	
comp=N,18μm,0.6s							
HRMR	**Khuramsha**	**1.73**	**87**	*e*Pn	**Pn**	**13 54 00.3**	**+1.4**
HRMR				⇓*i*Pg	**Pg**	**13 54 01.4**	**-0.5**
HRMR				Pmax		13 54 01.7	
comp=N,2μm,0.4s							
HRMR				*e*Sg	**Sg**	**13 54 24.6**	**+0.2**
HRMR				*e*		13 54 25.9	
HRMR				max		13 54 27.1	
comp=N,18μm,0.7s							
TRG	**Tyrgan**	**1.78**	**48**	*e*P	**Pn**	**13 54 01.3**	**+1.8**
TRG	**Tyrgan**	**1.78**	**48**	⇑*i*PN	**Pn**	**13 54 00.5**	**+1.0**
TRG				*e*		13 54 01.3	
TRG				*e*		13 54 25.0	
TRG				pmax	pmax		
comp=Z,898nm,0.2s							
TRG				smax			
comp=N,11μm,0.2s							
TRG	**Tyrgan**	**1.78**	**48**	⇑*i*Pn	**Pn**	**13 54 00.7**	**+1.2**
comp=N,109nm,0.8s							
TRG				⇑*i*Pn	**Pn**	**13 54 00.7**	**+1.2**
comp=N,197nm,0.8s							
TRG				⇑*i*Pn	**Pn**	**13 54 00.7**	**+1.2**
comp=N,218nm,0.8s							
TRG				⇓*i*Pg	**Pg**	**13 54 01.6**	**-1.3**
TRG				Pmax		13 54 02.3	
comp=N,907nm,0.2s							
TRG				*e*Sn	**Sn**	**13 54 24.4**	**+2.2**
TRG				*e*Sg	**Sg**	**13 54 26.0**	**0.0**
TRG				Smax		13 54 27.6	
comp=N,12μm,0.3s							
MOY	**Mondy**	**1.98**	**274**	*e*P	**Pn**	**13 54 02.3**	**0.0**
MOY	**Mondy**	**1.98**	**274**	⇑*i*PN	**Pn**	**13 54 02.3**	**0.0**
MOY				*e*		13 54 27.2	
MOY				pmax	pmax		
comp=Z,3μm,0.5s							
MOY				smax			
comp=E,8μm,0.3s							
MOY	**Mondy**	**1.98**	**274**	⇑*i*Pn	**Pn**	**13 54 02.0**	**-0.3**
MOY				⇑*i*Pg	**Pg**	**13 54 03.1**	**-3.6**
MOY				Pmax		13 54 03.9	
comp=E,3μm,0.5s							
MOY				*e*		13 54 21.9	
MOY				*i* Sg	**Sg**	**13 54 27.9**	**-4.6**
MOY				Smax		13 54 30.0	
comp=E,8μm,0.5s							
ZRHB	**Zarechye**	**2.08**	**61**	*e*Pn	**Pn**	**13 54 05.2**	**+1.6**
ZRHB				*e*		13 54 06.5	
ZRHB				⇑*i*Pg	**Pg**	**13 54 07.3**	**-1.2**
ZRHB				Pmax		13 54 15.5	
comp=E,2μm,0.9s							
ZRHB				*i* Sg	**Sg**	**13 54 35.3**	**-0.2**
ZRHB				Smax		13 54 41.5	
comp=E,12μm,1.1s							
UUDB	**Ulan-Yde**	**2.19**	**81**	*e*Pn	**Pn**	**13 54 07.2**	**+2.1**
UUDB				⇓*i*Pg	**Pg**	**13 54 09.3**	**-1.3**
UUDB				Pmax		13 54 13.4	
comp=E,713nm,0.9s							
UUDB				*e*Sg	**Sg**	**13 54 39.3**	**+0.3**
UUDB				Smax		13 54 43.1	
comp=E,2μm,0.7s							
UUDB				*e*		13 54 49.1	
ORL	**Orlik**	**2.86**	**291**	*e*PN	**Pn**	**13 54 17.2**	**+2.9**
ORL				*e*		13 54 53.1	
ORL				pmax	pmax		
comp=Z,694nm,0.4s							
ORL				smax			
comp=N,8μm,0.8s							
ORL	**Orlik**	**2.86**	**291**	*e*	**Pn**	**13 54 14.8**	**+0.5**
ORL				⇑*i*Pg	**Pg**	**13 54 17.3**	**-6.2**
ORL				Pmax		13 54 19.4	
comp=N,692nm,0.4s							
ORL				*i* Sg	**Sg**	**13 54 53.6**	**-6.9**
ORL				Smax		13 54 59.4	
comp=N,8μm,0.6s							
OGRR	**Ongureny**	**2.93**	**44**	*e*PN	**Pn**	**13 54 16.3**	**+1.0**
OGRR				*e*		13 54 20.7	
OGRR				*e*		13 54 58.8	
OGRR				pmax	pmax		
comp=Z,846nm,0.4s							
OGRR				smax			
comp=E,9μm,0.6s							
OGRR	**Ongureny**	**2.93**	**44**	⇑*i*Pn	**Pn**	**13 54 16.3**	**+1.0**
OGRR				*e*		13 54 17.4	
OGRR				*e*Pg	**Pg**	**13 54 20.8**	**-4.1**
OGRR				⇑*i*		13 54 24.8	
OGRR				max		13 54 25.1	
comp=E,847nm,0.3s							
OGRR				*e*		13 54 48.5	
OGRR				*i* Sg	**Sg**	**13 54 58.7**	**-4.2**
OGRR				Smax		13 55 02.5	
comp=E,10μm,0.5s							
SONM	**Songino Array**	**4.02**	**158**	Pn	**Pn**	**13 54 31.9**	**+1.7**
comp=E,8.2nm,0.3s,baz=330,slow=14,SNR=172							
SONM				Pg	**Pg**	**13 54 41.0**	**-4.6**
comp=E,85nm,0.3s,baz=335,slow=18,SNR=160							
SONM				Sn	**Sn**	**13 55 16.6**	**-0.7**
comp=E,20nm,0.3s,baz=336,slow=17,SNR=3.8							
SONM				Lg		13 55 34.4	
comp=E,94nm,0.3s,baz=335,slow=28,SNR=14							
SONM	**Songino Array**	**4.02**	**158**	PN	**Pn**	**13 54 31.9**	**+1.7**
SONM						13 54 41.0	
SONM						13 55 16.6	
SONM				pmax	pmax		
comp=Z,8.0nm,0.3s							
SONM				pmax	pmax		
comp=Z,85nm,0.3s							
SONM				smax			
comp=N,20nm,0.3s							
SYVR	**Suvo**	**4.11**	**57**	*e*PN	**Pn**	**13 54 32.3**	**+0.8**
SYVR				*e*S	**Sg**	**13 55 36.3**	**-4.4**
SYVR				smax			
comp=N,708nm,1.1s							
SYVR	**Suvo**	**4.11**	**57**	⇑*i*Pn	**Pn**	**13 54 32.4**	**+0.9**
SYVR				*e*Pg	**Pg**	**13 54 41.7**	**-5.7**
SYVR				Pmax		13 54 54.7	
comp=N,73nm,0.8s							
SYVR				*e*		13 55 16.3	
SYVR				*e*Sg	**Sg**	**13 55 36.7**	**-4.0**
SYVR				Smax		13 55 53.0	
comp=N,692nm,1.1s							
ULN	**Ulaanbaatar**	**4.16**	**152**	*e*Pn	**Pn**	**13 54 33.6**	**+1.3**
ULN				*e*Pg	**Pg**	**13 54 43.8**	**-4.6**
ULN				*e*Sg	**Sg**	**13 55 40.3**	**-2.0**
TDJR	**Todzha**	**5.06**	**282**	*e*Pg	**Pg**	**13 54 56.9**	**-8.6**
TDJR				⇓*i*		13 54 58.7	
TDJR				*e*		13 55 41.5	
TDJR				*i* Sg	**Sg**	**13 56 01.1**	**-10**
TDJR				*e*		13 56 09.4	
NIZ	**Nizh Angarsk**	**5.27**	**35**	⇑*i*PN	**Pn**	**13 54 47.5**	**0.0**
NIZ				*e*		13 55 02.9	
NIZ				*e*S	**Sn**	**13 55 47.3**	**-0.9**
NIZ				*e*		13 56 10.5	
NIZ				pmax	pmax		
comp=Z,128nm,0.5s							
NIZ				smax			
comp=N,2μm,1.1s							
NIZ	**Nizh Angarsk**	**5.27**	**35**	⇑*i*Pn	**Pn**	**13 54 47.4**	**-0.1**
NIZ				*e*		13 54 56.0	
NIZ				Pg	**Pg**	**13 55 03.4**	**-6.2**
NIZ				Pmax		13 55 06.5	
comp=N,129nm,0.5s							
NIZ				*e*		13 55 45.1	
NIZ				*e*		13 55 51.1	
NIZ				*e*Sg	**Sg**	**13 56 11.2**	**-6.7**
NIZ				Smax		13 56 15.0	
comp=N,2μm,1.5s							
YLYR	**Ulyunkhan**	**5.34**	**49**	*e*PN	**Pn**	**13 54 49.4**	**+1.1**
YLYR				*e*		13 55 05.0	
YLYR				*e*		13 56 13.5	
YLYR				pmax	pmax		
comp=Z,51nm,0.4s							
YLYR				smax			
comp=N,925nm,1.1s							
YLYR	**Ulyunkhan**	**5.34**	**49**	⇓*i*Pn	**Pn**	**13 54 49.4**	**+1.1**
YLYR				⇑*i*		13 54 52.4	
YLYR				*e*Pg	**Pg**	**13 55 04.5**	**-6.4**
YLYR				*e*		13 55 05.2	
YLYR				max		13 55 11.2	
comp=N,51nm,0.4s							
YLYR				*e*Sg	**Sg**	**13 56 13.9**	**-6.0**
YLYR				Smax		13 56 20.4	
comp=N,925nm,1.9s							
CIT	**Chita**	**5.83**	**82**	*e*PN	**Pg**	**13 55 13.1**	**-7.3**
CIT				*e*		13 56 32.2	
CIT				pmax	pmax		
comp=Z,82nm,0.4s							
CIT				smax			
comp=N,624nm,1.5s							
CIT	**Chita**	**5.83**	**82**	*e*	**Sg**	**13 56 31.6**	**-4.3**
CIT				*e*Sg	**Sg**	**13 56 32.3**	**-3.6**
CIT				Smax		13 56 59.6	
comp=N,619nm,1.4s							
KMO	**Kumora**	**6.00**	**41**	*e*PN	**Pn**	**13 54 57.5**	**+0.1**
KMO				*e*		13 55 14.9	
KMO				*e*S	**Sn**	**13 56 02.7**	**-3.3**
KMO	**Kumora**	**6.00**	**41**	⇓*i*Pn	**Pn**	**13 54 57.5**	**+0.1**
KMO				*e*		13 55 06.0	
KMO				*e*Pg	**Pg**	**13 55 16.6**	**-6.9**
KMO				Pmax		13 55 19.9	
comp=N,95nm,0.7s							
KMO				*e*		13 56 02.8	
KMO				*e*		13 56 10.1	
KMO				*e*Sg	**Sg**	**13 56 35.0**	**-6.0**
KMO				Smax		13 56 40.9	
comp=N,1μm,1.5s							
YOA	**Uoyan**	**6.38**	**41**	*e*Pg	**Pg**	**13 55 23.6**	**-7.2**
YOA				Pmax		13 55 30.8	
comp=N,125nm,0.8s							
YOA				*e*		13 56 23.9	
YOA				*e*Sg	**Sg**	**13 56 47.2**	**-6.1**
YOA				Smax		13 57 17.0	
comp=N,4μm,1.4s							
ORY	**Orie**	**6.42**	**306**	*de*PN	**Pn**	**13 55 07.2**	**+3.9**
ORY				*e*S	**Sn**	**13 56 18.2**	**+1.7**
ORY						13 56 46.5	
MINR	**Mina**	**6.85**	**303**	*e*Pn	**Pn**	**13 55 07.2**	**-1.8**
MINR				*e*Pg	**Pg**	**13 55 30.5**	**-9.2**
MINR				*i* Sg	**Sg**	**13 57 00.9**	**-7.4**
CERR	**Cheremushki**	**7.94**	**284**	*e*	**Pb**	**13 55 48.1**	**+1.8**
CERR				*e*		13 56 03.3	
CERR				*e*Sg	**Sb**	**13 57 31.9**	**+11**
CERR				*e*		13 57 44.8	
VEH	**Verkhnyaya Baz**	**8.64**	**287**	*e*Pn	**Pn**	**13 55 35.7**	**+2.1**
VEH				*e*Pg	Pn	13 56 00.5	+27
VEH				*e*Sg	Sn	13 57 52.2	+41
VEH				*e*		13 57 59.7	
TEL	**Teeli**	**8.78**	**272**	⇑*i*Pn	**Pn**	**13 55 37.6**	**+2.1**
TEL				*e*Pg	Pn	13 56 04.1	+29
TEL				*e*		13 56 08.1	
TEL				*e*Sg	Sn	13 57 55.8	+41
TEL				*e*		13 58 10.3	
CRS	**Chara**	**9.81**	**52**	*e*Pg	Px	13 56 26.3	
CRS				*e*		13 56 30.8	
CRS				max		13 56

ARTR				*e*Pg	Pn	13 56 35.8	+37	
ARTR				*e*		13 57 42.6		
ARTR				*e*Sg	Sn	13 58 50.4	+54	
HHC	**Hu-ho-hao-te**	**11.88**	**152**	*e*P	**Pn**	**13 56 17.0**	**-1.1**	
HHC				pP		13 56 20.3		
HHC				sP		13 56 23.3		
HHC				PP		13 56 27.0		
HHC				S	**Sn**	**13 58 31.5**	**+0.9**	
HHC				sS		13 58 37.3		
HHC				SS		13 58 46.3		
HHC				pmax	pmax			
	comp=Z,22nm,1.0s							
HHC				pmax	pmax			
	comp=Z,69nm,4.0s							
HHC				LR	LR			
	comp=N,350nm,7.7s							
HHC				LR	LR			
	comp=E,350nm,7.7s							
HHC				LR	LR			
	comp=Z,290nm,7.6s							
ZAA0	**Zalesovo Array**	**11.96**	**289**	*e*Pn	**Pn**	**13 56 19.1**	**0.0**	
ZALV	**Zalesovo Beam**	**11.96**	**289**	Pn	**Pn**	**13 56 20.4**	**+1.4**	
	comp=Z,0.2nm,0.3s,baz=98,slow=7.9,SNR=5.5							
ZALV				Pg	Pn	13 57 01.2	+42	
	comp=Z,0.3nm,0.3s,baz=95,slow=15,SNR=5.3							
ZALV				Sn	**Sn**	**13 58 34.4**	**+2.0**	
	comp=Z,0.3nm,0.3s,baz=108,slow=18,SNR=3.5							
ZALV				Lg		13 59 32.3		
	comp=Z,1.2nm,0.3s,baz=92,slow=25,SNR=14							
ZALV				LR	LR	14 00 37.4		
	comp=Z,116nm,20.1s,baz=239,slow=36							
ZALV	**Zalesovo Beam**	**11.96**	**289**	P	**Pn**	**13 56 20.5**	**+1.5**	
ZALV						13 58 34.4		
ZALV				MLR	MLR			
	comp=Z,116nm,20.1s							
GTA	**Gaotai**	**12.55**	**196**	*e*P	**Pn**	**13 56 27.5**	**+0.3**	
GTA				pP		13 56 31.0		
GTA				sP		13 56 34.0		
GTA				S	**Sn**	**13 58 49.3**	**+2.4**	
GTA				pmax	pmax			
	comp=Z,2.0nm,1.0s							
GTA				pmax	pmax			
	comp=Z,140nm,5.7s							
GTA				LR	LR			
	comp=N,400nm,9.9s							
GTA				LR	LR			
	comp=E,190nm,8.1s							
GTA				LR	LR			
	comp=Z,430nm,9.3s							
TNDR	**Tynda**	**12.77**	**66**	*e*Sg	Sx	14 00 05.8		
TNDR				*e*		14 00 15.9		
TNDR				*e*		14 00 19.2		
CLNS	**Chul'man**	**13.19**	**58**	*e*Sg	Sx	14 00 21.1		
WMQ	**Urumqi**	**13.52**	**241**	*e*P	**Pn**	**13 56 40.5**	**0.0**	
WMQ				pP		13 56 44.0		
WMQ				PP		13 56 51.5		
WMQ				*e*S	**Sn**	**13 59 11.5**	**+0.8**	
WMQ				SS		13 59 27.0		
WMQ				pmax	pmax			
	comp=Z,8.0nm,0.8s							
WMQ				pmax	pmax			
	comp=Z,84nm,4.2s							
WMQ				LR	LR			
	comp=N,520nm,6.0s							
WMQ				LR	LR			
	comp=E,400nm,6.0s							
WMQ				LR	LR			
	comp=Z,320nm,6.0s							
BJI	**Beijing**	**14.23**	**140**	P	**Pn**	**13 56 48.5**	**-1.7**	
BJI				pmax	pmax			
	comp=Z,8.0nm,0.5s							
BJT	**Baijiatuau**	**14.25**	**140**	P	**Pn**	**13 56 46.9**	**-3.4**	
MK31	**Makanchi Array**	**15.07**	**260**	*e*Pn	**Pn**	**13 57 01.6**	**+0.2**	
MK31				*e*Lg		14 01 06.7		
MKAR	**Makanchi Array**	**15.07**	**260**	Pn	**Pn**	**13 57 02.3**	**+0.8**	
	comp=Z,0.2nm,0.3s,baz=69,slow=11,SNR=26							
MKAR				Lg		14 01 14.5		
	baz=63,slow=30,SNR=4.3							
MKAR	**Makanchi Array**	**15.07**	**260**	*i* P	**Pn**	**13 57 02.2**	**+0.7**	
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
LZH	**Lanzhou**	**15.49**	**181**	*e*P	**Pn**	**13 57 08.5**	**+1.4**	
LZH				pP	pP	13 57 11.5	-2.9	
LZH				sP	sP	13 57 14.0	-1.7	
LZH				PP		13 57 21.3		
LZH				*e*S	**Sn**	**13 59 58.5**	**-0.2**	
LZH				SS		14 00 19.0		
LZH				pmax	pmax			
	comp=Z,14nm,1.0s							
LZH				pmax	pmax			
	comp=Z,70nm,5.5s							
LZH				LR	LR			
	comp=N,400nm,9.0s							
LZH				LR	LR			
	comp=E,150nm,9.8s							
LZH				LR	LR			
	comp=Z,410nm,9.2s							
KURK	**Kurchatov**	**16.04**	**277**	*e*Pn	**Pn**	**13 57 11.7**	**-2.4**	
	comp=Z,7.9nm,0.9s							
KURK				*e*Sn	**Sn**	**13 59 57.4**	**-14**	
KURK				*e*Lg		14 01 47.5		
KURK	**Kurchatov**	**16.04**	**277**	Pn	**Pn**	**13 57 14.3**	**+0.2**	
	comp=Z,0.1nm,0.3s,baz=350,slow=4.8,SNR=14							
KURK				Lg		14 01 58.6		
	comp=Z,0.1nm,0.3s,baz=76,slow=32,SNR=4.1							
KURK				LR	LR	14 03 22.6		
	comp=Z,90nm,20.2s,baz=45,slow=37							
KURK	**Kurchatov**	**16.04**	**277**	*de*P	**Pn**	**13 57 12.8**	**-1.3**	
KURK				pmax	pmax			
	comp=Z,14nm,1.7s							
CN2	**Changchun**	**16.26**	**110**	*e*P	**Pn**	**13 57 16.3**	**-0.7**	
CN2				*e*S	**Sn**	**14 00 16.5**	**-0.8**	
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
CN2				pmax	pmax			
	comp=Z,200nm,3.0s							
CN2				LR	LR			
	comp=N,300nm,13.0s							
CN2				LR	LR			
	comp=E,400nm,13.0s							
CN2				LR	LR			
	comp=Z,300nm,13.0s							
YAK	**Yakutsk**	**17.32**	**43**	*e*Pn	**Pn**	**13 57 30.6**	**+0.4**	
	comp=Z,17nm,0.8s							
YAK				*e*Sn	**Sn**	**14 00 40.9**	**-1.8**	
YAK				*e*Lg		14 02 25.8		
YAK	**Yakutsk**	**17.32**	**43**	*e*P	**Pn**	**13 57 31.1**	**+0.8**	
YAK				pmax	pmax			
	comp=Z,15nm,0.9s							
YAK				pmax	pmax			
	comp=E,13nm,1.2s							
MDJ	**Mudanjiang**	**18.29**	**102**	P	**Pn**	**13 57 42.5**	**+0.1**	
MDJ				S	**Sn**	**14 01 07.0**	**+0.6**	
MDJ				pmax	pmax			
	comp=Z,2.0nm,0.8s							
MDJ				pmax	pmax			
	comp=Z,71nm,6.9s							
MDJ				LR	LR			
	comp=N,90nm,19.0s							
MDJ				LR	LR			
	comp=E,41nm,22.0s							
MDJ				LR	LR			
	comp=Z,87nm,18.0s							
HABR	**Khabarovsk**	**20.00**	**87**	P	**Pn**	**13 58 02.3**	**-0.6**	
HABR				*e**PP	pP	13 58 05.3	+1.3	
HABR				*e*S	**Sn**	**14 01 49.8**	**+2.1**	
HABR				*e*SS		14 02 08.1		
HABR						14 02 16.9		
HABR				MLR	MLR			
	comp=Z,118nm,16.0s,MS3.3							
BVAR	**Borovoye Array**	**20.61**	**287**	P	**Pn**	**13 58 06.8**	**-0.9**	
	comp=Z,4.5nm,0.5s,baz=91,slow=9.1,SNR=25							
BVAR	**Borovoye Array**	**20.61**	**287**	P	**P**	**13 58 06.8**	**-0.9**	
BVAR				pmax	pmax			
	comp=Z,5.0nm,0.5s							
CD2	**Chengdu**	**20.66**	**181**	P	**P**	**13 58 07.5**	**-0.9**	
CD2				pmax	pmax			
	comp=Z,10.0nm,0.4s							
CD2				pmax	pmax			
	comp=Z,80nm,4.6s							
BRVK	**Borovoye**	**20.66**	**287**	*e*Pn	**P**	**13 58 07.2**	**-1.2**	
	comp=Z,7.7nm,0.7s							
BRVK	**Borovoye**	**20.66**	**287**	*de*P	**P**	**13 58 07.4**	**-0.9**	
BRVK				pmax	pmax			
	comp=Z,9.0nm,0.8s							
ULHL	**Ulahol**	**21.13**	**255**	P	**P**	**13 58 14.8**	**+1.3**	
	SNR=5.1							
TKM2	**Tokmak 2**	**21.13**	**257**	P	**P**	**13 58 14.8**	**+1.3**	
	SNR=40							
TKM2	**Tokmak 2**	**21.13**	**257**	*e*P	**P**	**13 58 14.4**	**+0.9**	
USP	**Ospenovka**	**21.61**	**259**	P	**P**	**13 58 19.4**	**+0.8**	
	SNR=21							
KZA	**Kyzart**	**21.83**	**256**	P	**P**	**13 58 22.8**	**+1.8**	
	SNR=11							
KZA	**Kyzart**	**21.83**	**256**	*e*P	**P**	**13 58 22.4**	**+1.5**	
	comp=Z,58nm,1.4s,mb4.8							
KSRS	**Korea Array**	**21.92**	**121**	P	**P**	**13 58 21.2**	**-0.8**	
	comp=Z,0.4nm,0.7s,mb3.0,baz=317,slow=8.1,SNR=2.3							
AAK	**Ala-Archa**	**21.97**	**258**	*e*P	**P**	**13 58 22.3**	**-0.1**	
	comp=Z,3.8nm,0.8s,mb3.9							
AAK	**Ala-Archa**	**21.97**	**258**	P	**P**	**13 58 23.3**	**+0.9**	
	comp=Z,1.7nm,0.4s,mb3.8,baz=27,slow=10,SNR=6.3							
AAK				LR	LR	14 07 33.5		
	comp=Z,102nm,18.8s,MS3.3,baz=267,slow=38							
AAK	**Ala-Archa**	**21.97**	**258**	*de*P	**P**	**13 58 23.2**	**+0.8**	
AAK				pmax	pmax			
	comp=Z,4.0nm,1.3s,mb3.7							
UCH	**Uchtor**	**22.19**	**257**	P	**P**	**13 58 25.0**	**+0.2**	
	comp=Z,4.5nm,0.8s,mb4.0							
NJ2	**Nanjing**	**22.29**	**145**	*e*P	**P**	**13 58 23.5**	**-2.5**	
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.6s,mb4.4							
EKS2	**Erkin-Say**	**22.39**	**259**	P	**P**	**13 58 27.8**	**+0.9**	
	SNR=9.6							
EKS2	**Erkin-Say**	**22.39**	**259**	*e*Pn	**P**	**13 58 27.3**	**+0.3**	
	comp=Z,5.6nm,0.8s,mb4.0							
AML	**Almayashu**	**22.74**	**257**	*e*Pn	**P**	**13 58 31.2**	**+0.5**	
	comp=Z,2.4nm,0.8s,mb3.7							
TIXI	**Tiksi**	**22.96**	**20**	*e*P	**P**	**13 58 31.5**	**-1.2**	
	comp=Z,16nm,0.6s,mb4.6							
TIXI	**Tiksi**	**22.96**	**20**	*e*P	**P**	**13 58 33.5**	**+0.8**	
TIXI				pmax	pmax			
	comp=Z,26nm,1.2s,mb4.5							
KSH	**Kashi**	**22.98**	**249**	*e*P	**P**	**13 58 39.0**	**+5.7**	
KSH				*e*pP		13 58 43.0		
KSH				*e*sP	sP	13 58 45.8	+8.4	
KSH				*e*PP		13 59 11.3		
KSH				*e*PcP	PcP	14 02 25.5	+2.6	
KSH				*e*S	**S**	**14 02 49.3**	**+5.7**	
KSH				*e*sS	sS	14 02 56.3	+7.8	
KSH				*e*SS		14 03 37.0		
KSH				*e*ScP	ScP	14 06 01.5	+1.0	
KSH				*e*PcS	PcS	14 06 03.3	+1.5	
KSH				pmax	pmax			
	comp=Z,4.0nm,1.1s,mb3.8							
KSH				pmax	pmax			
	comp=Z,100nm,4.1s							
KSH				LR	LR			
	comp=N,270nm,18.6s							
KSH				LR	LR			
	comp=E,70nm,7.0s							
KSH				LR	LR			
	comp=Z,170nm,8.5s							
KKAR	**Karatay Array**	**24.16**	**263**	*e*Pn	**P**	**13 58 43.9**	**-0.8**	
	comp=Z,4.3nm,0.9s,mb3.9							
KKAR	**Karatay Array**	**24.16**	**263**	*e*P	**P**	**13 58 43.9**	**-0.8**	
KKAR				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb3.9							
GYA	**Guiyang**	**25.16**	**175**	P	**P**	**13 58 55.0**	**+1.0**	
GYA				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.4							
SVE	**Sverdlovsk**	**25.65**	**299**	*e*P	**P**	**13 58 57.2**	**-1.0**	
AKTK	**Aktyubinsk**	**28.70**	**286**	P	**P**	**13 59 23.9**	**-1.7**	
AKTK				LR	LR	14 11 03.2		
AKTO	**Aktyubinsk**	**28.70**	**286**	P	**P**	**13 59 23.9**	**-1.7**	
	comp=Z,1.1nm,0.5s,mb3.9,baz=85,slow=8.0,SNR=6.1							
AKTO				LR	LR	14 11 03.3		
	comp=Z,92nm,18.3s,MS3.4,baz=167,slow=37							
AKTO	**Aktyubinsk**	**28.70**	**286**	P	**P**	**13 59 23.9**	**-1.7**	
AKTO				pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.8							
AKTO				MLR	MLR			
	comp=Z,92nm,18.3s,MS3.4							
CMAR	**Chiang Mai Arr**	**33.31**	**189**	P	**P**	**14 00 06.0**	**-0.4**	
	comp=Z,0.4nm,0.8s,mb3.4,baz=353,slow=9.2,SNR=4.0							
FINES	**FINESS Array B**	**41.66**	**315**	P	**P**	**14 01 15.2**	**-1.5**	
	comp=Z,1.3nm,0.6s,mb3.7,baz=89,slow=7.8,SNR=8.3							
FINES	**FINESS Array B**	**41.66**	**315**	P	**P**	**14 01 15.2**	**-1.5**	
FINES				pmax	pmax			
	comp=Z,1.0nm,0.6s							
AKASG	**Malin Array Be**	**45.08**	**300**	P	**P**	**14 01 43.6**	**-0.9**	
	comp=Z,0.5nm,0.4s,mb3.7,baz=56,slow=8.5,SNR=2.7							
AKASG	**Malin Array Be**	**45.08**	**300**	P	**P**	**14 01 43.6**	**-0.9**	
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
MALT	**Malatya**	**46.84**	**280**	P	**P**	**14 01 59.6**	**+1.1**	
	comp=Z,3.6nm,1.0s,mb4.3							
MALT	**Malatya**	**46.84**	**280**	P	**P**	**14 01 59.7**	**+1.2**	
MALT				pmax	pmax			
	comp=Z,4.0nm,1.0s,mb4.3							
NOA	**NORSAR Array B**	**48.17**	**319**	P	**P**	**14 02 07.8**	**-0.8**	
	comp=Z,1.3nm,0.8s,mb4.0,baz=57,slow=7.8,SNR=3.6							
NOA	**NORSAR Array B**	**48.17**	**319**	P	**P**	**14 02 07.8**	**-0.7**	
NOA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
BR131	**Keskin Array S**	**48.87**	**285**	*e*P	**P**	**14 02 13.4**	**-0.9**	
BRTR	**Keskin Array B**	**48.87**	**285**	P	**P**	**14 02 14.2**	**0.0**	
	comp=Z,0.8nm,0.6s,mb3.9,baz=65,slow=5.9,SNR=6.6							
BRTR	**Keskin Array B**	**48.87**	**285**	*ce*P	**P**	**14 02 14.6**	**+0.3**	
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
COLA	**College**	**51.36**	**31**	P	**P**	**14 02 29.3**	**-3.5**	
	comp=Z,1.7nm,0.7s,mb4.1							
COLA	**College**	**51.36**	**31**	P	**P**	**14 02 29.3**	**-3.5**	
COLA				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.2							
ILAR	**Eielson Array**	**51.74**	**31**	P	**P**	**14 02 36.5**	**+0.8**	
	comp=Z,0.5nm,0.5s,mb3.7,baz=304,slow=5.2,SNR=13							
ILAR	**Eielson Array**	**51.74**	**31**	P	**P**	**14 02 36.5**	**+0.9**	
ILAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
RES	**Resolute Bay**	**53.37**	**6**	P	**P**	**14 02 44.9**	**-2.7**	
	comp=Z,49nm,0.9s							
RES	**Resolute Bay**	**53.37**	**6**	P	**P**	**14 02 44.9**	**-2.7**	
RES				pmax	pmax			
	comp=Z,49nm,0.9s							
ESDC	**Sonseca Array**	**69.70**	**309**	P	**P**	**14 04 38.4**	**0.0**	
	comp=Z,1.3nm,0.7s,mb4.0,baz=28,slow=6.4,SNR=8.7							
WRA	**Warramunga Arr**	**75.96**	**151**	P	**P**	**14 05 14.6**	**-0.9**	
	comp=Z,0.5nm,1.0s,mb3.4,baz=346,slow=6.5,SNR=4.7							
WRA	**Warramunga Arr**	**75.96**	**151**	P	**P**	**14 05 14.6**	**-1.0**	
WRA				pmax	pmax			
	comp=Z,1.0nm,1.0s							
ASAR	**Alice Springs**	**79.34**	**152**	P	**P**	**14 05 34.2**	**-0.1**	
	comp=Z,0.6nm,0.7s,mb3.7,baz=352,slow=5.7,SNR=11							
ASAR	**Alice Springs**	**79.34**	**152**	P	**P**	**14 05 34.3**	**-0.1**	
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
TORD	**Torodi Ar. Bea**	**87.41**	**288**	P	**P**	**14 06 15.8**	**-0.5**	
	comp=Z,1.0nm,0.9s,mb4.0,baz=22,slow=7.3,SNR=4.2							

*NEIC **30** 14:02:34.6±1.4,31°.28N×138°.71E,h369km±24km, Error ellipse: s-maj=70.3km s-min=19.4km az=69.0*
*ISCJB **30** 14:02:35.8±1.3,31°.6N±0°.1×139°.0E±0°.3,h394km±11km, mb3.0/7, Error ellipse: s-maj=35.0km s-min=20.0km az=6.9*
*IDC **30** 14:02:35.4±2.3,31°.28N×138°.68E,h377km±34km,mb2.9/7, mb1 2.9/8,mb1mx2.7/25,mbtmp2.8/8, Error ellipse: s-maj=78.7km s-min=17.1km az=69.0*
*JMA **30** 14:02:37.5±0.3,31°.65N×139°.19E,h386km, M3.4*

ISC 30 14:02:38.5±1.3,31°.8N±0°.1×139°.0E±0°.3, h397km±12km, n20,σ0°70/27,mb3.0/7,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.44**	**27**	P	**Pn**	**14 03 30.3**	**-0.6**
JHJ2				*e*S	**S**	**14 04 09.1**	**-4.2**
BSO3	**Boso 3**	**3.21**	**22**	P	**Pn**	**14 03 42.7**	**-0.4**
BSO3				*e*S	**S**	**14 04 35.3**	**-0.1**
BSO1	**Boso 1**	**3.26**	**29**	*e*S	**S**	**14 04 35.8**	**-0.3**
BSO4	**Boso 4**	**3.34**	**19**	*e*S	**S**	**14 04 38.8**	**+1.4**
JNY	**Yasuok**	**3.66**	**345**	P	**Pn**	**14 03 47.5**	**+0.5**
JHU	**Hanno**	**4.02**	**3**	P	**Pn**	**14 03 50.4**	**0.0**
JHU				*e*S	**S**	**14 04 48.8**	**0.0**
JRY	**Ryogami san**	**4.18**	**359**	P	**Pn**	**14 03 53.1**	**+1.2**
JYT	**Yasato**	**4.50**	**12**	P	**Pn**	**14 03 54.6**	**-0.4**
JYT				*e*S	**S**	**14 04 56.2**	**-1.0**
JAG	**Ashikaga**	**4.60**	**4**	P	**Pn**	**14 03 56.1**	**0.0**
JAG				S	**S**	**14 04 58.3**	**-0.8**
MJAR	**Matsushiro Arr**	**4.75**	**352**	P	**Pn**	**14 03 58.8**	**+1.2**
	1.0nm,0.3s,baz=174,slow=11,SNR=13						
MAJO	**Matsushiro**	**4.75**	**352**	*e*Pn	**Pn**	**14 03 56.8**	**-0.9**
MAJO				*e*S	**S**	**14 04 47.1**	**-15**
MAT	**Matsushiro**	**4.75**	**352**	P	**Pn**	**14 03 58.2**	**+0.6**
JHO	**Hitachi**	**4.94**	**14**	P	**Pn**	**14 03 59.9**	**+0.4**
JHO				S	**S**	**14 05 05.6**	**+0.1**
SONM	**Songino Array**	**29.46**	**312**	P	**P**	**14 08 07.5**	**0.0**
	0.3nm,0.5s,mb2.8,baz=125,slow=7.2,SNR=3.1						
ZALV	**Zalesovo Beam**	**44.15**	**316**	P	**P**	**14 10 09.0**	**-0.4**
	0.4nm,0.4s,mb3.1,baz=74,slow=5.2,SNR=2.8						
MKAR	**Makanchi Array**	**45.41**	**306**	P	**P**	**14 10 18.1**	**-1.2**
	0.2nm,0.4s,mb2.8,baz=98,slow=9.0,SNR=4.4						
KURK	**Kurchatov**	**47.76**	**312**	P	**P**	**14 10 37.1**	**-0.2**
	0.4nm,0.2s,mb3.3,baz=90,slow=7.3,SNR=3.0						
WRA	**Warramunga Arr**	**51.67**	**186**	P	**P**	**14 11 01.1**	**-5.6**
	0.1nm,0.3s,mb2.6,baz=360,slow=7.7,SNR=9.7						
BVAR	**Borovoye Array**	**52.74**	**315**	P	**P**	**14 11 14.5**	**+0.5**
	0.6nm,0.5s,mb3.1,baz=65,slow=10,SNR=3.6						
FINES	**FINESS Array B**	**72.50**	**332**	P	**P**	**14 13 23.6**	**+0.7**
	1.4nm,0.9s,mb3.5,baz=45,slow=10.0,SNR=4.2						

MAN 30 14:03:27,6°.85N×125°.76E,h32km,mb4.7,ML3.6,MS3.5, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.50**	**79**	*e*P	Pb	14 03 39.1	+1.5
MATI				*e*S	Sb	14 03 45.2	+0.4
KCP	**Kidapawan**	**0.69**	**283**	⇓*i*P	Pn	14 03 39.1	-1.4
GSPH	**General Santos**	**1.11**	**227**	*e*P	Pn	14 03 43.8	-2.5
GSPH				*e*S	Sn	14 03 56.4	-4.1
BUKP	**Musuan**	**1.24**	**326**	*e*P	Pn	14 03 49.0	+0.9
BUKP				*e*S	Sn	14 04 03.9	+0.2
CGP	**Cagayan de Oro**	**1.91**	**326**	*e*P	Pn	14 03 59.0	+1.6

*ISCJB **30** 14:06:40.4±1.0,26°.29N±0°.08×102°.3E±0°.2,h10km, mb3.2/3,Error ellipse: s-maj=27.6km s-min=8.1km az=162.1*
*IDC **30** 14:06:40.5±1.4,26°.25N×102°.45E,h0km,mb3.3/3, mb1 3.4/4,mb1mx3.2/24,mbtmp3.2/4,ML3.3/1,Error ellipse: s-maj=38.0km s-min=20.1km az=91.0*
*BJI **30** 14:06:41.1,26°.07N×101°.79E,h15km,ML3.2/6*

ISC 30 14:06:42.4±1.0,26°.30N±0°.07×102°.3E±0°.2,h10km,n5, σ1°.23/6,mb3.2/3,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**1.22**	**163**	Pg	**Pg**	**14 07 05.3**	**-0.6**
KMI				Sg	**Sg**	**14 07 22.3**	**+0.5**
KMI				smax			
	comp=N,530nm,0.4s						
KMI				smax			
	comp=E,280nm,0.6s						
CMAR	**Chiang Mai Arr**	**8.41**	**203**	Pn	**Pn**	**14 08 45.0**	**+0.6**
	comp=E,0.1nm,0.3s,baz=17,slow=11,SNR=5.3						
CMAR				Pg	Pn	14 09 14.9	+31
	comp=E,0.1nm,0.3s,baz=9.4,slow=17,SNR=5.7						
CMAR				Lg		14 11 05.0	
	comp=E,0.1nm,0.3s,baz=26,slow=29,SNR=6.1						
SONM	**Songino Array**	**21.73**	**7**	P	**P**	**14 11 35.1**	**+1.4**
	comp=E,0.5nm,0.8s,mb3.0,baz=194,slow=10,SNR=3.8						
MKAR	**Makanchi Array**	**25.90**	**327**	P	**P**	**14 12 13.6**	**-0.9**
	comp=E,0.2nm,0.6s,mb2.9,baz=132,slow=11,SNR=3.7						
WRA	**Warramunga Arr**	**55.47**	**143**	P	**P**	**14 16 16.6**	**-1.0**
	comp=E,0.6nm,0.6s,mb3.8,baz=332,slow=8.2,SNR=11						

KRSC 30 14:13:11.3±1.7,54°.81N×167°.65E,h10km±10km,ML3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.04**	**293**	*i* P	Pg	14 13 31.8	+0.5
BKI				*i* S	Sg	14 13 46.8	+1.9
KBTR	**Krutoberegovo**	**3.08**	**299**	*e*P	Pn	14 14 00.5	+0.5
KBTR				S	Sn	14 14 36.6	-0.2
MKZ	**Mys Kozlova**	**3.45**	**268**	*e*P	Pn	14 14 06.2	+1.3
MKZ				*e*S	Sn	14 14 46.6	+0.8
KLY	**Klyuchi**	**4.25**	**294**	S	Sn	14 15 06.8	+1.2
SRDR	**Sredinnyy**	**4.75**	**292**	P	Pn	14 14 26.6	+3.8
SPN	**Mys Shipunski**	**4.82**	**252**	S	Sn	14 15 19.3	-0.3
AVH	**Avacha**	**5.48**	**257**	P	Pn	14 14 36.0	+3.2
PET	**Petropavlovsk**	**5.61**	**255**	S	Sn	14 15 40.5	+1.4
GNL	**Ganaly**	**5.80**	**263**	P	Pn	14 14 40.3	+3.0

*NEIC **30** 14:17:23.8,32°.48S×70°.06W,h133km,MD3.7(GUC),After GUC.*

GUC 30 14:17:23.8±0.8,32°.48S×70°.06W,h133km±6km,MD3.7, ML4.0,11C-16D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JACH	**Jahuel**	**0.49**	**246**	⇑*i*P	Pn	14 17 43.3	+0.2
JACH	**Jahuel**	**0.49**	**246**	⇑*i*P	Pn	14 17 43.3	+0.2
PEL	**Peldehue**	**0.84**	**218**	⇓*i*P	Pn	14 17 45.7	+0.1
PEL				*i* S	Sn	14 18 02.2	+0.1
PEL				AML	AML	14 18 03.1	
	comp=N,12μm,0.4s						
FCH	**Farellones**	**0.86**	**193**	⇓*i*P	Pn	14 17 45.8	0.0
FCH				*e*S	Sn	14 18 02.8	+0.3
FCH	**Farellones**	**0.86**	**193**	⇓*i*P	Pn	14 17 45.8	0.0
FCH				*e*S	Sn	14 18 02.8	+0.3
FCH				AML	AML	14 18 04.9	
	comp=N,6μm,0.2s						
ROCH	**El Roble**	**0.94**	**238**	⇓*i*P	Pn	14 17 47.2	+0.8
ROCH				*i* S	Sn	14 18 04.9	+1.3
ROCH	**El Roble**	**0.94**	**238**	⇑*i*P	Pn	14 17 47.2	+0.8
ROCH				⇓*i*P		14 17 47.2	
ROCH				*i* S	Sn	14 18 04.9	+1.3
ROCH				*i* S	Sn	14 18 05.0	+1.5
ROCH				AML	AML	14 18 06.3	
	comp=N,5μm,0.2s						
FSR	**Penalolen**	**1.07**	**201**	⇑*i*P	Pn	14 17 48.1	+0.5
FSR				*i* S	Sn	14 18 06.7	+0.9
FSR	**Penalolen**	**1.07**	**201**	⇑*i*P	Pn	14 17 48.1	+0.5
FSR			

TLL	**Tololo Astrono**	**2.39**	**344**	⇑*i*P	Pn	14 18 03.9	+1.1
TLL				*i* S	Sn	14 18 33.9	+1.2
TLL	**Tololo Astrono**	**2.39**	**344**	⇑*i*P	Pn	14 18 03.9	+1.1
TLL				*i* S	Sn	14 18 33.9	+1.2
TLL				AML	AML	14 18 40.1	
	comp=E,451nm,0.6s						
LCO	**Las Campanas**	**3.50**	**351**	*e*Pn	Pn	14 18 17.3	+0.2
LCO				*e*Sn	Sn	14 18 57.6	-0.7
LCO	**Las Campanas**	**3.50**	**351**	AML	AML	14 19 00.3	
	comp=E,322nm,0.6s						
PLCA	**Paso Flores**	**8.24**	**183**	Pn	Pn	14 19 20.2	-0.3
TRQA	**Tornquist**	**8.63**	**132**	*e*Pn	Pn	14 19 21.4	-4.3
	comp=E,13nm,0.6s						

MAN 30 14:21:41,17.53N×119.85E,h21km,mb4.6,ML3.5,MS3.5, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**0.83**	**82**	*e*P	Pb	14 21 56.7	-0.1
ABRA				*e*S	Sb	14 22 02.9	-4.6
BOLP	**Bolinao**	**1.14**	**177**	*e*P	Pn	14 22 01.3	-0.5
BOLP				*e*S	Sb	14 22 10.0	-6.5
APYP	**Conner**	**1.37**	**76**	*e*P	Pn	14 22 05.3	+0.4
APYP				*e*S	Sn	14 22 22.4	0.0
SCZP	**Santa Cruz**	**1.75**	**178**	*e*P	Pn	14 22 09.8	-0.3
CVP	**Callao Caves**	**1.89**	**84**	*e*P	Pn	14 22 12.4	+0.4
CVP				*e*S	Sn	14 22 39.8	+4.5
CAUP	**Cauayan**	**1.97**	**107**	*e*P	Pn	14 22 15.4	+2.2
BALP	**Baler**	**2.43**	**137**	*e*P	Pn	14 22 21.2	+1.7
PALP	**Palanan**	**2.50**	**100**	*e*P	Pn	14 22 21.7	+1.2

*IDC **30** 14:28:04.7±7.2,30°.63S×178°.81W,h152km±55km,mb3.8/4, mb1 3.9/5,mb1mx3.5/17,mbtmp3.7/5,Error ellipse: s-maj=53.0km s-min=21.4km az=45.0*

ISC 30 14:28:11.0±3.7,30°.9S±0°.2×179°.0W±0°.3,h206km±27km, n17,σ1§27/19,mb3.9/4,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**7.53**	**197**	PN	**Pn**	**14 30 01.4**	**+3.4**
PUZ				SN	**Sn**	**14 31 22.6**	**-0.6**
MWZ	**Matawai**	**7.97**	**200**	PN	**Pn**	**14 30 03.2**	**-0.6**
MWZ				SN	**Sn**	**14 31 35.0**	**+1.3**
URZ	**Urewera**	**8.04**	**203**	P	**Pn**	**14 30 03.2**	**-1.4**
	0.3nm,0.3s,baz=22,slow=11,SNR=3.9						
URZ				S	**Sn**	**14 31 34.3**	**-1.0**
	1.3nm,0.3s,baz=328,slow=19,SNR=8.7						
URZ	**Urewera**	**8.04**	**203**	PN	**Pn**	**14 30 07.5**	**+2.9**
URZ				SN	**Sn**	**14 31 35.4**	**+0.2**
BKZ	**Black Stump Fm**	**9.06**	**203**	PN	**Pn**	**14 30 19.9**	**+2.0**
BHHZ	**Black Hill Sta**	**9.50**	**204**	PN	**Pn**	**14 30 24.7**	**+1.2**
TSZ	**Takapari Road**	**10.04**	**203**	PN	**Pn**	**14 30 29.2**	**-1.4**
CAW	**Cannon Point**	**11.28**	**204**	PN	**Pn**	**14 30 44.2**	**-2.2**
THZ	**Tophouse**	**12.67**	**209**	PN	**Pn**	**14 31 03.0**	**-1.0**
STKA	**Stephens Creek**	**33.55**	**258**	P	**P**	**14 34 33.4**	**+1.9**
	2.6nm,0.5s,mb4.0,baz=103,slow=12,SNR=8.8						
ASAR	**Alice Springs**	**42.24**	**268**	P	**P**	**14 35 43.7**	**-0.5**
	0.9nm,0.3s,mb3.6,baz=104,slow=7.6,SNR=16						
WRA	**Warramunga Arr**	**43.28**	**273**	P	**P**	**14 35 51.7**	**-0.7**
	2.9nm,0.3s,mb4.2,baz=110,slow=8.1,SNR=100						
QSPA	**South Pole Qui**	**59.23**	**180**	P	**P**	**14 37 50.7**	**+0.7**
	1.4nm,0.6s,mb3.8,baz=87,slow=17,SNR=15						
VNA3	**Neumayer Olymp**	**77.88**	**176**	*e*	**P**	**14 39 45.5**	**+0.1**
VNA2	**Neumayer--Watz**	**78.31**	**177**	*e*	**P**	**14 39 47.2**	**-0.5**
	baz=191,slow=5.5						
FINES	**FINESS Array B**	**145.30**	**339**	PKPbc	PKPbc	14 47 22.3	-1.3
	1.7nm,0.5s,baz=40,slow=4.9,SNR=15						
TORD	**Torodi Ar. Bea**	**162.34**	**182**	PKPab	PKPab	14 48 38.7	+2.0
	0.2nm,0.5s,baz=177,slow=4.1,SNR=4.1						

*BJI **30** 14:41:46.0,25°.99N×95°.68E,h100km,mB4.4/2,mb4.4/7*
*NEIC **30** 14:41:48.0±0.3,26°.04N×95°.68E,mb4.3/9,Error ellipse: s-maj=15.6km s-min=5.5km az=60.0*
*IDC **30** 14:41:48.3±0.7,26°.02N×95°.67E,h106km±6km,mb3.8/19, mb1 3.8/20,mb1mx3.7/31,mbtmp3.8/20,Error ellipse: s-maj=20.7km s-min=8.7km az=61.0*
*ISCJB **30** 14:41:49.1±0.8,25°.90N±0°.05×95°.32E±0°.05,h126km±8km, mb4.2/29,Error ellipse: s-maj=9.7km s-min=5.0km az=32.4*

ISC 30 14:41:49.1±0.7,25°.97N±0°.05×95°.42E±0°.05,h106km±7km, h106km±2.2km:pP-P,n71,σ1§26/84,mb4.2/29,3D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**3.21**	**264**	⇓*i*P	**Pn**	**14 42 39.0**	**+1.2**
SHL				*i* S	**Sn**	**14 43 17.0**	**+1.6**
AGT	**Agartala**	**4.31**	**242**	*e*S	**Sn**	**14 43 43.0**	**+1.1**
LSA	**Lhasa**	**5.30**	**316**	*e*Pn	**Pn**	**14 43 07.5**	**+1.6**
	88nm,0.3s						
LSA				*e*Sn	Sx	14 43 51.3	
KMI	**Kunming**	**6.67**	**96**	P	**Pn**	**14 43 20.3**	**-4.2**
KMI				smax			
	comp=N,21nm,0.9s						
KMI				smax			
	comp=E,26nm,0.7s						
TAPN	**Taplejung**	**7.03**	**283**	*e*Pn	**Pn**	**14 43 30.0**	**+0.6**
TAPN				*e*Sn	**Sn**	**14 44 47.3**	**-0.5**
	comp=E,217nm,0.3s						
ODAN	**Odare**	**7.25**	**279**	*e*Pn	**Pn**	**14 43 33.5**	**+1.1**
ODAN				*e*Sn	**Sn**	**14 44 53.9**	**+0.8**
	comp=E,572nm,0.6s						
CHRT	**Chiangrai**	**7.28**	**146**	⇓P	**Pn**	**14 43 32.5**	**-0.4**
	comp=E,184nm,0.9s						
CHG	**Chiang Mai**	**7.83**	**155**	⇓P	**Pn**	**14 43 40.6**	**+0.3**
	comp=E,24nm,0.8s						
CHTO	**Chiang Mai**	**7.83**	**155**	*e*Pn	**Pn**	**14 43 40.7**	**+0.4**
	comp=E,16nm,0.9s						
RAMN	**Ramite**	**7.96**	**279**	*e*Pn	**Pn**	**14 43 43.1**	**+1.1**
RAMN				*e*Sn	**Sn**	**14 45 09.0**	**-1.4**
	comp=E,74nm,0.2s						
CMAR	**Chiang Mai Arr**	**8.16**	**156**	P	**Pn**	**14 43 45.0**	**+0.2**
	comp=E,0.5nm,0.3s,baz=332,slow=13,SNR=72						
JIRN	**Jiri**	**8.41**	**284**	*e*Pn	**Pn**	**14 43 49.0**	**+0.8**
JIRN				*e*Sn	**Sn**	**14 45 19.1**	**-2.3**
	comp=E,178nm,0.2s						
GUN	**Gumba**	**8.73**	**285**	*e*Pn	**Pn**	**14 43 53.0**	**+0.6**
GUN				*e*Sn	**Sn**	**14 45 28.4**	**-0.7**
	comp=E,225nm,0.4s						
BOK	**Bokaro**	**8.92**	**258**	*e*PKP	**Pn**	**14 43 55.3**	**+0.3**
BOK				*e*S	**Sn**	**14 45 31.4**	**-2.3**
PKI	**Pulchoki**	**9.08**	**282**	*e*Pn	**Pn**	**14 43 57.1**	**-0.2**
PKI				*e*Sn	**Sn**	**14 45 35.4**	**-2.4**
	comp=E,189nm,0.7s						
PKIN	**Phulchoki**	**9.10**	**282**	*e*Pn	**Pn**	**14 43 57.7**	**+0.2**
PKIN				*e*Sn	**Sn**	**14 45 36.8**	**-1.2**
	comp=E,358nm,0.5s						
KKN	**Kakani**	**9.23**	**284**	*e*Pn	**Pn**	**14 43 59.4**	**+0.1**
KKN				*e*Sn	**Sn**	**14 45 40.5**	**-0.8**
	comp=E,181nm,0.4s						
DMN	**Daman**	**9.36**	**282**	*e*Pn	**Pn**	**14 44 00.7**	**-0.3**
DMN				*e*Sn	**Sn**	**14 45 43.8**	**-0.6**
	comp=E,52nm,0.3s						
GKN	**Gorkha**	**9.82**	**284**	*e*Pn	**Pn**	**14 44 06.4**	**-1.0**
GKN				*e*Sn	**Sn**	**14 45 54.4**	**-1.4**
	comp=E,117nm,0.3s						
DANN	**Dangsing**	**10.65**	**285**	*e*Pn	**Pn**	**14 44 16.5**	**-2.0**
DANN				*e*Sn	**Sn**	**14 46 12.0**	**-3.7**
	comp=E,112nm,0.4s						
KOLN	**Koldanda**	**10.70**	**282**	*e*Pn	**Pn**	**14 44 17.5**	**-1.8**
KOLN				*e*Sn	**Sn**	**14 46 14.2**	**-2.8**
	comp=E,143nm,0.4s						
ENH	**Enshi**	**13.14**	**68**	Pn	**Pn**	**14 44 41.2**	**-10**
VIS	**Vishakhapatnam**	**13.89**	**236**	*e*PKP	**Pn**	**14 45 03.8**	**+2.3**
JOSI	**Joshimath**	**14.70**	**292**	*e*PKP	**Pn**	**14 45 13.9**	**+2.2**
AGRA	**Agra**	**15.68**	**278**	*e*PKP	**Pn**	**14 45 25.9**	**+1.9**
DDI	**Dehra Dun**	**15.91**	**290**	*ex*	**Pn**	**14 45 25.0**	**-1.9**
KLP	**Kalpa**	**16.04**	**294**	*ex*	**Pn**	**14 45 26.5**	**-2.0**
KLP				AMb	AMB	14 45 28.7	
	comp=E,11nm,0.5s						
AYAN	**Aya Nagar**	**16.46**	**283**	*ex*	**Pn**	**14 45 29.2**	**-4.5**
AYAN				AMb	AMB	14 45 38.4	
	comp=E,12nm,0.4s						
SONA	**Sohna**	**16.48**	**282**	*e*PKP	**Pn**	**14 45 35.8**	**+1.8**
SONA				AMb	AMB	14 45 38.8	
	comp=E,25nm,0.7s						
BHPL	**Bhopal**	**16.59**	**264**	*e*PKP	**Pn**	**14 45 36.1**	**+0.8**
BHPL				AMb	AMB	14 45 39.6	
	comp=E,48nm,0.1s						
BHPL				*ex*	x	14 48 32.3	
KUDL	**Kundal**	**17.00**	**282**	*ex*	**Pn**	**14 45 35.4**	**-5.0**
KHET	**Khetri**	**17.60**	**281**	*e*PKP	**Pn**	**14 45 47.8**	**+0.2**
KHET				AMb	AMB	14 45 51.2	
	comp=E,178nm,0.5s						
HYB	**Hyderabad**	**17.82**	**245**	*i* P	**Pn**	**14 45 56.5**	**+6.2**
AJM	**Ajmer**	**18.64**	**276**	*e*PKP	**P**	**14 46 00.6**	**+2.0**
KSH	**Kashi**	**21.15**	**314**	P	**P**	**14 46 27.0**	**+1.4**
KSH				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.8						
KSH				pmax	pmax		
	comp=Z,92nm,5.0s						
KSH				LR	LR		
	comp=N,77nm,6.0s						
KSH				LR	LR		
	comp=E,95nm,7.8s						
KSH				LR	LR		
	comp=E,74nm,7.3s						
MK31	**Makanchi Array**	**23.25**	**337**	*e*P	**P**	**14 46 46.8**	**-0.1**
MK31				*e*pP		14 47 06.9	
MKAR	**Makanchi Array**	**23.25**	**337**	P	**P**	**14 46 46.8**	**-0.2**
	comp=Z,1.7nm,0.4s,mb3.7,baz=141,slow=8.8,SNR=39						
MKAR				pP		14 47 06.9	
	comp=Z,3.3nm,0.5s,baz=141,slow=12,SNR=7.7						
MKAR				PcP	PcP	14 50 31.0	-0.3
	comp=Z,0.4nm,0.5s,baz=151,slow=2.1,SNR=4.4						
PSI	**Prapat**	**23.28**	**171**	P	**P**	**14 46 47.8**	**+0.4**
	comp=Z,4.3nm,0.5s,mb4.0,baz=297,slow=9.0,SNR=5.7						
TKM2	**Tokmak 2**	**23.42**	**321**	*e*P	**P**	**14 46 49.3**	**+0.8**
	comp=Z,12nm,1.3s,mb4.1						
TKM2				*e*pP		14 47 12.1	
SONM	**Songino Array**	**23.48**	**19**	P	**P**	**14 46 48.5**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=232,slow=7.2,SNR=3.6						
SONM				pP		14 47 09.0	
	comp=Z,1.4nm,0.8s,baz=198,slow=10,SNR=5.1						
AAK	**Ala-Archa**	**23.88**	**319**	*e*P	**P**	**14 46 54.5**	**+1.8**
	comp=Z,5.0nm,0.7s,mb4.0						
AAK	**Ala-Archa**	**23.88**	**319**	P	**P**	**14 46 54.9**	**+2.2**
	comp=Z,3.6nm,0.6s,mb3.9,baz=139,slow=7.4,SNR=8.9						
AML	**Almayashu**	**24.06**	**318**	*e*P	**P**	**14 46 56.4**	**+2.1**
	comp=Z,5.5nm,0.6s,mb4.1						
AML				pP		14 47 22.9	
KBL	**Kabul**	**24.28**	**297**	*e*P	**P**	**14 46 58.6**	**+2.1**
	comp=Z,24nm,0.4s,mb4.9						
EKS2	**Erkin-Say**	**24.32**	**319**	*e*P	**P**	**14 46 58.0**	**+1.3**
	comp=Z,9.4nm,0.9s,mb4.1						
KURK	**Kurchatov**	**27.87**	**337**	P	**P**	**14 47 28.3**	**-0.2**
KURK				pP	pP	14 47 51.0	-1.1
KURK	**Kurchatov**	**27.87**	**337**	P	**P**	**14 47 28.3**	**-0.2**
	comp=Z,1.0nm,0.3s,mb3.8,baz=146,slow=9.6,SNR=3.6						
KURK				pP	pP	14 47 51.0	-1.1
	comp=Z,3.7nm,0.6s,baz=147,slow=9.8,SNR=4.3						
ZALV	**Zalesovo Beam**	**29.04**	**347**	P	**P**	**14 47 38.2**	**-0.7**
	comp=Z,1.1nm,0.4s,mb3.8,baz=165,slow=7.6,SNR=7.4						
ZALV				pP	pP	14 48 02.1	-0.3
	comp=Z,1.2nm,0.6s,baz=144,slow=5.5,SNR=3.4						
BVAR	**Borovoye Array**	**32.88**	**332**	P	**P**	**14 48 13.2**	**+0.5**
	comp=Z,0.8nm,0.4s,mb3.9,baz=144,slow=10,SNR=4.4						
BVAR				pP	pP	14 48 35.6	-0.9
	comp=Z,1.0nm,0.6s,baz=134,slow=11,SNR=3.4						
ABKAR	**Akbulak array**	**35.97**	**320**	*e*P	**P**	**14 48 40.4**	**+1.0**
	comp=Z,1.7nm,0.3s,mb4.5						
AKTK	**Aktyubinsk**	**37.62**	**320**	P	**P**	**14 48 53.7**	**+0.4**
AKTO	**Aktyubinsk**	**37.62**	**320**	P	**P**	**14 48 53.7**	**+0.4**
	comp=Z,1.5nm,0.4s,mb4.2,baz=106,slow=7.3,SNR=6.3						
ARU	**Arti**	**40.34**	**329**	*e*P	**P**	**14 49 15.8**	**-0.1**
	comp=Z,3.4nm,0.7s,mb4.3						
ASAJ	**Asahikawa**	**42.03**	**52**	P	**P**	**14 49 26.7**	**-3.3**
	comp=Z,0.7nm,0.6s,mb3.6,baz=286,slow=8.9,SNR=3.0						
BR131	**Kekin Array S**	**52.73**	**301**	*e*P	**P**	**14 50 53.6**	**+0.6**
	comp=Z,1.4nm,0.6s,mb4.2						
BRTR	**Keskin Array B**	**52.73**	**301**	P	**P**	**14 50 53.6**	**+0.6**
	comp=Z,1.7nm,0.6s,mb4.2,baz=114,slow=8.2,SNR=11						
FITZ	**Fitzroy Crossi**	**52.75**	**143**	P	**P**	**14 50 51.3**	**-1.9**
	comp=Z,2.2nm,0.5s,mb4.4,baz=7.1,slow=4.5,SNR=17						
AKASG	**Malin Array Be**	**55.45**	**315**	P	**P**	**14 51 11.1**	**-1.4**
	comp=Z,1.0nm,0.4s,mb4.2,baz=79,slow=6.7,SNR=3.7						
FINES	**FINESS Array B**	**57.69**	**328**	P	**P**	**14 51 27.6**	**-0.5**
	comp=Z,2.5nm,1.0s,mb4.2,baz=99,slow=12,SNR=4.4						
KEV	**Kevo**	**58.43**	**338**	P	**P**	**14 51 34.1**	**+0.9**
	comp=Z,22nm,1.0s,mb5.2						
ARCES	**ARCESS Array B**	**58.91**	**337**	P	**P**	**14 51 37.9**	**+1.3**
	comp=Z,3.4nm,0.9s,mb4.4,baz=106,slow=9.5,SNR=2.7						
WRA	**Warramunga Arr**	**59.26**	**137**	P	**P**	**14 51 38.2**	**-1.4**
	comp=Z,9.3nm,0.5s,mb5.1,baz=321,slow=7.5,SNR=210						
ASAR	**Alice Springs**	**61.82**	**140**	P	**P**	**14 51 55.9**	**-1.1**
	comp=Z,4.0nm,0.6s,mb4.6,baz=326,slow=6.7,SNR=52						
NWAO	**Narrogin (SRO)**	**62.14**	**159**	P	**P**	**14 51 57.9**	**-1.1**
	comp=Z,13nm,0.5s,mb5.2,baz=337,slow=6.3,SNR=25						
NOA	**NORSAR Array B**	**64.87**	**328**	P	**P**	**14 52 15.8**	**-0.7**
	comp=Z,0.2nm,0.5s,mb3.2,baz=83,slow=6.6,SNR=2.3						
KWAJ	**Kwajalein Atol**	**70.23**	**90**	*e*P	**P**	**14 52 57.1**	**+6.0**
STKA	**Stephens Creek**	**72.46**	**140**	P	**P**	**14 53 02.9**	**-1.1**
	comp=Z,2.3nm,0.8s,mb4.0,baz=333,slow=11,SNR=4.3						
STKA				pP	pP	14 53 30.1	-0.9
	comp=Z,1.9nm,0.7s,baz=306,slow=9.2,SNR=1.6						
ILAR	**Eielson Array**	**77.64**	**23**	P	**P**	**14 53 30.8**	**-2.6**
	comp=Z,0.7nm,1.0s,mb3.4,baz=289,slow=5.2,SNR=6.2						
LBTB	**Lobatse**	**84.34**	**239**	P	**P**	**14 54 09.8**	**+0.2**
	comp=Z,3.3nm,0.7s,mb4.3,baz=27,slow=11,SNR=4.3						
BOSA	**Boshof**	**86.49**	**236**	P	**P**	**14 54 20.2**	**+0.1**
	comp=Z,3.1nm,0.8s,mb4.3,baz=88,slow=1.8,SNR=3.7						
TXAR	**Lajitas Array**	**122.05**	**20**	PKP	PKPdf	15 00 30.0	-1.6
	comp=Z,0.2nm,0.6s,baz=0.0,slow=1.8,SNR=3.1						

*ISCJB **30** 14:42:28.1±0.5,20°.15S±0°.08×67°.21E±0°.07,h10km, mb4.3/32,MS4.1/13,Error ellipse: s-maj=12.8km s-min=9.3km az=155.5*
*NEIC **30** 14:42:28.0±4.0,20°.41S×67°.17E,h6km±24km,mb4.7/11, Error ellipse: s-maj=9.3km s-min=7.5km az=161.0*
*IDC **30** 14:42:28.6±0.6,20°.15S×67°.32E,h0km,mb4.2/21, mb1 4.3/21,mb1mx4.3/27,mbtmp4.2/21,MS4.1/12, Ms1 4.1/12,ms1mx3.9/20,Error ellipse: s-maj=19.1km s-min=15.7km az=180.0*
*GCMT **30** 14:42:35.4±0.2,20°.14S×67°.46E,h17km±1km,MW5.2, Moment Tensor Solution. s35,c42; s84,c149; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.45±.21; $M_{\theta\theta}$6.76±.20; $M_{\phi\phi}$-5.30±.17; $M_{r\theta}$-0.06±.43; $M_{r\phi}$-3.39±.17; $M_{\theta\phi}$3.60±.54; Best double couple: $M_0$7.90000×10^{16} NP1:ϕ243.00000°, δ66.00000°,λ-164.00000°. NP2:ϕ146.00000°, δ76.00000°,λ-25.00000°. Principal axes: T 7.7600, Plg7.0000°, Azm196.0000°; N 0.2800, Plg61.0000°, Azm299.0000°; P -8.0300, Plg28.0000°, Azm103.0000°; Data Used: II G IU IC CN.*

ISC 30 14:42:30.1±0.5,20°.18S±0°.08×67°.20E±0°.07,h10km,n53, σ1§01/49,mb4.3/32,MS4.1/13,1C,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**13.68**	**23**	*e*Pn	**Pn**	**14 45 46.1**	**+1.9**
	252nm,1.1s						
ABPO	**Ambohimpanom**	**18.85**	**270**	*e*Pn	**Pn**	**14 46 48.5**	**-2.4**
	42nm,1.5s						
OPO	**Ambohidratompo**	**18.95**	**271**	P	**Pn**	**14 46 50.2**	**-1.9**
	0.2nm,0.3s,baz=86,slow=14,SNR=2.7						
KMBO	**Kilima Mbogo**	**34.87**	**299**	P	**P**	**14 49 21.9**	**+0.1**
	0.6nm,0.4s,mb3.9,baz=354,slow=19,SNR=2.5						
KMBO				LR	LR	15 01 31.3	
	comp=Z,219nm,19.4s,MS3.9,baz=270,slow=33						
LBTB	**Lobatse**	**38.60**	**255**	P	**P**	**14 49 54.5**	**+1.0**
	8.1nm,1.1s,mb4.4,baz=63,slow=2.3,SNR=3.0						
PSI	**Prapat**	**38.61**	**57**	LR	LR	15 02 17.4	
	comp=Z,296nm,21.3s,MS4.1,baz=228,slow=31						
BOSA	**Boshof**	**38.95**	**249**	P	**P**	**14 49 58.6**	**+2.1**
	4.3nm,0.9s,mb4.2,baz=104,slow=12,SNR=4.0						
BOSA				LR	LR	15 05 16.9	
	comp=Z,173nm,18.6s,MS3.9,baz=90,slow=35						
MAW	**Mawson**	**47.49**	**182**	P	**P**	**14 51 00.5**	**-4.4**
	1.3nm,0.8s,mb3.9,baz=25,slow=11,SNR=4.0						
MAW				LR	LR	15 07 22.6	
	comp=Z,128nm,18.9s,MS3.9,baz=335,slow=31						
MBWA	**Marble Bar**	**48.97**	**101**	P	**P**	**14 51 12.0**	**-5.0**
	11nm,1.0s,mb4.8						
CMAR	**Chiang Mai Arr**	**49.43**	**41**	P	**P**	**14 51 20.8**	**+0.3**
CMAR				LR	LR	15 10 41.7	
CMAR	**Chiang Mai Arr**	**49.43**	**41**	P	**P**	**14 51 20.8**	**+0.3**
	5.5nm,0.9s,mb4.6,baz=235,slow=8.4,SNR=40						
CMAR				LR	LR	15 10 41.7	
	comp=Z,296nm,18.4s,MS4.3,baz=203,slow=34						
CHTO	**Chiang Mai**	**49.70**	**41**	*e*P	**P**	**14 51 21.3**	**-1.3**
	3.6nm,0.9s,mb4.4						
KBL	**Kabul**	**54.45**	**2**	P	**P**	**14 51 57.5**	**-0.1**
LSA	**Lhasa**	**54.70**	**26**	*e*P	**P**	**14 52 01.3**	**+1.8**
FITZ	**Fitzroy Crossi**	**55.00**	**98**	P	**P**	**14 52 01.0**	**-1.0**
	3.4nm,0.8s,mb4.4,baz=248,slow=11,SNR=4.5						
KSH	**Kashi**	**59.95**	**8**	⇑*i*P	**P**	**14 52 34.0**	**-2.4**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
KSH				pmax	pmax		
	comp=Z,48nm,4.1s						
KSH				LR	LR		
	comp=N,330nm,16.4s,MS4.6						
KSH				LR	LR		
	comp=E,180nm,16.9s,MS4.6						
KSH				LR	LR		
	comp=Z,170nm,12.6s,MS4.4						
ASAR	**Alice Springs**	**61.48**	**107**	P	**P**	**14 52 46.1**	**-1.2**
	comp=Z,1.4nm,0.8s,mb4.2,baz=260,slow=6.3,SNR=8.1						
AML	**Almayashu**	**62.29**	**5**	*e*P	**P**	**14 52 52.3**	**+0.1**
	comp=Z,16nm,1.5s,mb4.9						
WRA	**Warramunga Arr**	**62.64**	**103**	P	**P**	**14 52 54.4**	**-0.8**
	comp=Z,2.7nm,0.8s,mb4.4,baz=260,slow=6.1,SNR=7.7						
EKS2	**Erkin-Say**	**62.82**	**5**	*e*P	**P**	**14 52 56.5**	**+0.7**
	comp=Z,7.1nm,1.2s,mb4.7						
AAK	**Ala-Archa**	**62.86**	**6**	*e*P	**P**	**14 52 56.6**	**+0.6**
	comp=Z,6.9nm,1.0s,mb4.7						
AAK	**Ala-Archa**	**62.86**	**6**	P	**P**	**14 52 57.2**	**+1.2**
	comp=Z,1.2nm,0.3s,mb4.5,baz=226,slow=4.7,SNR=5.5						
KKAR	**Karatay Array**	**63.04**	**3**	*e*P	**P**	**14 52 57.0**	**-0.3**
	comp=Z,0.8nm,0.7s,mb4.0						
TKM2	**Tokmak 2**	**63.26**	**7**	*e*P	**P**	**14 52 59.0**	**+0.3**
	comp=Z,4.4nm,0.9s,mb4.6						
GNI	**Garni**	**63.57**	**341**	P	**P**	**14 53 00.7**	**-0.1**
	comp=Z,12nm,1.1s,mb4.8						
MALT	**Malatya**	**64.15**	**335**	P	**P**	**14 53 04.6**	**-0.1**
VNA2	**Neumayer--Watz**	**66.05**	**200**	*e*	**P**	**14 53 22.1**	**+5.4**
	baz=85,slow=5.5						
VNA2				*e*		14 53 28.6	
GTA	**Gaotai**	**66.66**	**27**	P	**P**	**14 53 21.5**	**+0.6**
GTA				pP	pP	14 53 28.8	+4.6
GTA				sP	sP	14 53 32.5	+7.1
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
STKA	**Stephens Creek**	**66.72**	**117**	LR	LR	15 20 00.6	
	comp=Z,221nm,19.9s,MS4.4,baz=206,slow=34						
VNA3	**Neumayer Olymp**	**66.83**	**200**	*e*	**P**	**14 53 24.3**	**+2.7**
VNA3				*e*	pP	14 53 26.9	+2.0
VNA3				*e*		14 53 33.5	
BRTR	**Keskin Array B**	**67.33**	**332**	P	**P**	**14 53 25.8**	**+0.6**
	comp=Z,1.5nm,0.9s,mb4.0,baz=123,slow=9.0,SNR=3.9						
BRTR				LR	LR	15 22 07.9	
	comp=Z,52nm,19.3s,MS3.8,baz=292,slow=35						
WHN	**Wuhan**	**67.81**	**43**	P	**P**	**14 53 28.8**	**+0.4**
MK31	**Makanchi Array**	**68.04**	**11**	*e*P	**P**	**14 53 28.8**	**-0.7**
MKAR	**Makanchi Array**	**68.04**	**11**	P	**P**	**14 53 29.0**	**-0.5**
	comp=Z,2.2nm,0.9s,mb4.2,baz=190,slow=6.2,SNR=14						
MKAR				LR	LR	15 23 04.5	
	comp=Z,122nm,20.1s,MS4.1,baz=192,slow=36						
ABKAR	**Akbulak array**	**69.42**	**355**	*e*P	**P**	**14 53 37.9**	**-0.1**
	comp=Z,3.8nm,0.8s,mb4.4						
ABKAR				*e*		14 53 49.0	
QSPA	**South Pole Qui**	**69.93**	**180**	P	**P**	**14 53 42.5**	**+1.6**
QSPA	**South Pole Qui**	**69.93**	**180**	P	**P**	**14 53 42.5**	**+1.6**
	comp=Z,6.1nm,1.0s,mb4.5,baz=270,slow=7.4,SNR=3.8						
AKTK	**Aktyubinsk**	**70.77**	**354**	P	**P**	**14 53 46.5**	**+0.2**
AKTO	**Aktyubinsk**	**70.77**	**354**	P	**P**	**14 53 46.5**	**+0.2**
	comp=Z,3.1nm,0.9s,mb4.2,baz=201,slow=4.5,SNR=7.6						
KURK	**Kurchatov**	**71.30**	**8**	*e*P	**P**	**14 53 48.7**	**-0.8**
	comp=Z,5.1nm,0.9s,mb4.5						
KURK				*e*		14 53 59.1	
KURK	**Kurchatov**	**71.30**	**8**	P	**P**	**14 53 48.8**	**-0

	comp=Z,77nm,0.9s								
DZM				*e*LR	LR	14 56 58.3			
	comp=Z,3μm,28.6s								
DZM	**Mont Dzumac**	**18.06**	**147**	*e*P	**Pn**	**14 52 29.6**	**-0.2**		
DZM	**Mont Dzumac**	**18.06**	**147**	*e*Pn	**Pn**	**14 52 29.9**	**+0.1**		
	comp=Z,39nm,0.6s								
EIDS	**Eidsvold**	**18.78**	**194**	*e*P	**Pn**	**14 52 37.0**	**-1.3**		
	comp=Z,23nm,1.0s								
KWAJ	**Kwajalein Atol**	**19.61**	**37**	*e*P	**Pn**	**14 52 48.8**	**+0.4**		
	comp=Z,660nm,0.4s								
TLE	**Tual**	**23.06**	**272**	P	**P**	**14 53 23.4**	**+0.4**		
	comp=Z,5μmcomp=Z,468nm,1.2s,mb5.7								
GUMO	**Guam**	**23.25**	**332**	P	**P**	**14 53 22.4**	**-2.3**		
GUMO	**Guam**	**23.25**	**332**	PcP	PcP	14 57 09.7	-0.4		
	comp=Z,35nm,0.7s,baz=186,slow=10,SNR=3.3								
GUMO				LR	LR	15 01 47.4			
	comp=Z,238nm,18.6s,baz=120,slow=35								
ARMA	**Armidale**	**23.58**	**189**	*e*P	**P**	**14 53 28.2**	**+0.7**		
ARMA				*e*		14 57 12.7			
ARMA	**Armidale**	**23.58**	**189**	*e*P	**P**	**14 53 27.8**	**+0.3**		
	comp=Z,46nm,1.2s,mb4.7								
ARMA				*e*PcP	PcP	14 57 11.9	+1.3		
KAKA	**Kakadu**	**23.77**	**255**	*e*P	**P**	**14 53 29.0**	**-0.4**		
	comp=Z,123nm,0.6s,mb5.4								
KAKA				*e*		14 57 11.4			
KAKA	**Kakadu**	**23.77**	**255**	*e*P	**P**	**14 53 28.8**	**-0.6**		
	comp=Z,334nm,0.6s,mb5.8								
KAKA				*e*PcP	PcP	14 57 11.3	+0.1		
KAKA	**Kakadu**	**23.77**	**255**	P	**P**	**14 53 29.1**	**-0.3**		
	comp=Z,2μmcomp=Z,297nm,0.7s,mb5.8								
MSVF	**Nonsavu**	**24.07**	**118**	*e*P	**P**	**14 53 32.9**	**+0.8**		
	comp=Z,66nm,0.8s,mb5.0								
MSVF	**Nonsavu**	**24.07**	**118**	P	**P**	**14 53 33.0**	**+0.9**		
	comp=Z,535nm,0.7s,mb6.0,SNR=14								
WRA	**Warramunga Arr**	**24.52**	**236**	P	**P**	**14 53 36.0**	**-0.3**		
WRA				pP		14 53 45.5			
WRA				PcP	PcP	14 57 13.4	+0.6		
WRA				ScP	ScP	15 00 47.6	+3.2		
WRA				LR	LR	15 03 07.9			
WRA	**Warramunga Arr**	**24.52**	**236**	P	**P**	**14 53 36.0**	**-0.2**		
	comp=Z,18nm,0.5s,mb4.8,baz=59,slow=9.2,SNR=163								
WRA				pP		14 53 45.5			
	comp=Z,30nm,0.5s,baz=60,slow=9.3,SNR=23								
WRA				PcP	PcP	14 57 13.4	+0.6		
	comp=Z,5.3nm,0.6s,baz=63,slow=2.5,SNR=11								
WRA				ScP	ScP	15 00 47.6	+3.2		
	comp=Z,2.7nm,0.8s,baz=66,slow=3.0,SNR=9.4								
WRA				LR	LR	15 03 07.9			
	comp=Z,1μm,18.6s,baz=55,slow=36								
WRA	**Warramunga Arr**	**24.52**	**236**	P	**P**	**14 53 36.0**	**-0.2**		
WRA				*PP		14 53 45.6			
WRA						14 57 13.4			
ASAR	**Alice Springs**	**26.80**	**230**	P	**P**	**14 53 55.9**	**-1.0**		
	comp=Z,12nm,0.6s,mb4.6,baz=60,slow=9.6,SNR=106								
ASAR				pP	pP	14 54 06.3	-9.4		
	comp=Z,13nm,0.5s,baz=60,slow=9.2,SNR=15								
ASAR				PcP	PcP	14 57 18.6	+0.6		
	comp=Z,6.8nm,0.5s,baz=69,slow=2.8,SNR=16								
ASAR				S	**S**	**14 58 34.0**	**+6.7**		
	comp=Z,0.4nm,0.7s,baz=57,slow=16,SNR=2.3								
ASAR				ScP	ScP	15 00 54.9	+3.9		
	comp=Z,4.1nm,1.0s,baz=59,slow=2.9,SNR=9.6								
ASAR	**Alice Springs**	**26.80**	**230**	P	**P**	**14 53 55.9**	**-1.0**		
ASAR				*PP	pP	14 54 06.4	-9.3		
ASAR						14 57 18.6			
ASAR				S	**S**	**14 58 34.0**	**+6.8**		
KNA	**Kununurra**	**27.93**	**250**	P	**P**	**14 54 07.2**	**+0.2**		
	comp=Z,1μmcomp=Z,174nm,0.8s,mb5.7								
STKA	**Stephens Creek**	**28.07**	**207**	*e*P	**P**	**14 54 07.5**	**-0.5**		
	comp=Z,9.4nm,0.6s,mb4.5								
STKA				*e*		14 57 21.5			
STKA	**Stephens Creek**	**28.07**	**207**	*e*P	**P**	**14 54 07.2**	**-0.8**		
	comp=Z,2.9nm,0.8s,mb3.9								
STKA	**Stephens Creek**	**28.07**	**207**	P	**P**	**14 54 07.4**	**-0.6**		
	comp=Z,13nm,0.7s,mb4.6,baz=38,slow=13,SNR=13								
STKA				PcP	PcP	14 57 21.4	+0.6		
	comp=Z,5.2nm,0.7s,baz=341,slow=3.3,SNR=4.8								
STKA				ScP	ScP	15 00 58.5	+3.9		
	comp=Z,4.1nm,0.9s,baz=333,slow=2.3,SNR=4.1								
STKA				LR	LR	15 05 12.0			
	comp=Z,2μm,18.2s,baz=28,slow=36								
CNB	**Canberra Magne**	**28.75**	**191**	*e*P	**P**	**14 54 14.5**	**+0.4**		
NLAI	**Namlea**	**28.92**	**276**	P	**P**	**14 54 20.9**	**+5.0**		
	comp=Z,689nmcomp=Z,29nm,0.8s,mb5.0								
TNTI	**Ternate**	**29.51**	**284**	P	**P**	**14 54 21.1**	**0.0**		
	comp=Z,817nmcomp=Z,47nm,1.5s,mb4.9								
FITZ	**Fitzroy Crossi**	**31.45**	**247**	*e*P	**P**	**14 54 37.5**	**-0.6**		
	comp=Z,91nm,0.7s,mb5.6								
FITZ	**Fitzroy Crossi**	**31.45**	**247**	*e*P	**P**	**14 54 37.5**	**-0.7**		
	comp=Z,53nm,0.7s,mb5.4								
FITZ	**Fitzroy Crossi**	**31.45**	**247**	P	**P**	**14 54 37.6**	**-0.6**		
	comp=Z,51nm,0.7s,mb5.4,baz=82,slow=7.7,SNR=115								
FITZ				PcP	PcP	14 57 30.4	+0.6		
	comp=Z,7.1nm,0.9s,baz=130,slow=4.3,SNR=3.5								
FITZ	**Fitzroy Crossi**	**31.45**	**247**	P	**P**	**14 54 37.3**	**-0.8**		
	comp=Z,144nm,0.8s,mb5.8								
MNI	**Manado**	**32.12**	**284**	P	**P**	**14 54 44.9**	**+0.8**		
	comp=Z,2μmcomp=Z,150nm,0.8s,mb5.8								
SGSI	**Sangihe**	**32.13**	**288**	P	**P**	**14 54 44.6**	**+0.4**		
	comp=Z,6μmcomp=Z,510nm,1.3s,mb6.1								
AFI	**Afiamalu**	**32.48**	**105**	P	**P**	**14 54 47.5**	**+0.3**		
AFI				LR	LR	15 05 39.7			
AFI	**Afiamalu**	**32.48**	**105**	P	**P**	**14 54 47.5**	**+0.3**		
	comp=Z,45nm,0.7s,mb5.3,baz=325,slow=8.4,SNR=8.7								
AFI				LR	LR	15 05 39.7			
	comp=Z,571nm,19.1s,baz=279,slow=32								
KMSI	**Cibinong**	**32.73**	**282**	P	**P**	**14 54 50.5**	**+1.0**		
	comp=Z,3μmcomp=Z,293nm,0.6s,mb6.3								
BBSI	**Bau Bau**	**33.16**	**271**	P	**P**	**14 54 54.5**	**+1.3**		
	comp=Z,1μmcomp=Z,81nm,1.2s,mb5.4								
MMRI	**Maumere**	**33.37**	**265**	P	**P**	**14 54 55.6**	**+0.5**		
	comp=Z,1μmcomp=Z,103nm,1.2s,mb5.5								
LUWI	**Luwuk**	**33.56**	**279**	P	**P**	**14 54 58.2**	**+1.5**		
	comp=Z,839nmcomp=Z,67nm,0.8s,mb5.5								
MRSI	**Marisa**	**34.69**	**281**	P	**P**	**14 55 06.5**	**0.0**		
	comp=Z,364nmcomp=Z,37nm,0.9s,mb5.2								
FORT	**Forrest**	**35.16**	**224**	*e*P	**P**	**14 55 09.7**	**-0.6**		
	comp=Z,95nm,0.6s,mb5.8								
BKSI	**Bulukumba**	**35.60**	**271**	P	**P**	**14 55 13.7**	**-0.6**		
	comp=Z,34nm,0.7s,mb5.4								
SPSI	**Sidrap Palu**	**36.08**	**273**	P	**P**	**14 55 17.4**	**-1.0**		
	comp=Z,40nm,0.9s,mb5.3								
TTSI	**Tana Toraja**	**36.15**	**274**	P	**P**	**14 55 19.2**	**+0.2**		
	comp=Z,418nmcomp=Z,33nm,1.2s,mb5.2								
URZ	**Urewera**	**36.52**	**151**	P	**P**	**14 55 22.5**	**+0.8**		
	comp=Z,9.1nm,0.5s,mb4.9,baz=337,slow=2.1,SNR=5.3								
URZ				LR	LR	15 08 58.7			
	comp=Z,328nm,19.5s,baz=129,slow=34								
BKZ	**Black Stump Fm**	**36.96**	**153**	P*	**P**	**14 55 25.3**	**-0.2**		
MBWA	**Marble Bar**	**37.65**	**244**	*e*P	**P**	**14 55 30.6**	**-1.1**		
	comp=Z,29nm,0.5s,mb5.4								
MBWA				*e*PcP	PcP	14 57 47.4	-0.3		
THZ	**Tophouse**	**37.71**	**159**	PN	**P**	**14 55 31.7**	**-0.1**		
KHZ	**Kahutara**	**38.52**	**159**	*e*P	**P**	**14 55 37.7**	**-0.8**		
	comp=Z,76nm,0.7s,mb5.6								
RPZ	**Rata Peaks**	**38.86**	**162**	*e*P	**P**	**14 55 41.7**	**+0.3**		
	comp=Z,58nm,0.8s,mb5.5								
RPZ	**Rata Peaks**	**38.86**	**162**	P	**P**	**14 55 41.9**	**+0.5**		
	comp=Z,52nm,0.7s,mb5.5,baz=250,slow=1.7,SNR=23								
RPZ				LR	LR	15 08 27.4			
	comp=Z,839nm,21.5s,baz=329,slow=31								
MYLDM	**Lahad Datu**	**39.25**	**287**	P	**P**	**14 55 45.3**	**+0.1**		
MYLDM	**Lahad Datu**	**39.25**	**287**	P	**P**	**14 55 45.7**	**+0.5**		
	comp=Z,787nmcomp=Z,69nm,1.1s,mb5.4								
TSM	**Tawau**	**39.59**	**285**	P	**P**	**14 55 48.2**	**+0.3**		
KBKI	**Kotabaru**	**39.73**	**273**	P	**P**	**14 55 49.4**	**+0.2**		
	comp=Z,4μmcomp=Z,34nm,0.8s,mb5.2								
SDKM	**Sandakan**	**40.63**	**287**	P	**P**	**14 55 56.0**	**-0.6**		
KKM	**Kota Kinabalu**	**41.68**	**287**	*e*P	**P**	**14 56 04.8**	**-0.3**		
	comp=Z,59nm,0.8s,mb5.4								
KKM	**Kota Kinabalu**	**41.68**	**287**	P	**P**	**14 56 05.6**	**+0.4**		
KKM	**Kota Kinabalu**	**41.68**	**287**	P	**P**	**14 56 05.3**	**+0.1**		
	comp=Z,711nmcomp=Z,98nm,0.9s,mb5.5								
KLBR	**Kellerberrin**	**43.13**	**230**	*e*P	**P**	**14 56 15.2**	**-1.5**		
	comp=Z,52nm,0.9s,mb5.3								
PWJI	**Pagerwojo**	**43.71**	**266**	P	**P**	**14 56 24.8**	**+3.2**		
	comp=Z,77nm,0.6s,mb5.6								
SJI	**Sawahan**	**43.75**	**266**	P	**P**	**14 56 25.4**	**+3.4**		
	comp=Z,45nm,0.6s,mb5.4								
BTM	**Bintulu**	**43.93**	**282**	P	**P**	**14 56 24.3**	**+0.9**		
NWAO	**Narrogin (SRO)**	**44.12**	**229**	*e*P	**P**	**14 56 24.1**	**-0.6**		
	comp=Z,22nm,0.8s,mb4.9								
NWAO	**Narrogin (SRO)**	**44.12**	**229**	P	**P**	**14 56 24.2**	**-0.4**		
	comp=Z,20nm,0.8s,mb4.9,baz=76,slow=7.4,SNR=12								
NWAO	**Narrogin (SRO)**	**44.12**	**229**	*e*P	**P**	**14 56 24.1**	**-0.6**		
NWAO				pmax	pmax				
	comp=Z,22nm,0.8s								
SBUM	**Sibu**	**44.60**	**281**	P	**P**	**14 56 29.8**	**+1.0**		
SBUM	**Sibu**	**44.60**	**281**	P	**P**	**14 56 29.4**	**+0.6**		
	comp=Z,400nmcomp=Z,23nm,1.6s,mb4.7								
RAR	**Rarotonga**	**45.06**	**113**	LR	LR	15 11 44.7			
	comp=Z,496nm,21.6s,baz=256,slow=31								
YULB	**Yu-li**	**45.38**	**313**	*e*P	**P**	**14 56 33.4**	**-1.4**		
	comp=Z,5.5nm,0.6s,mb4.5								
NACB	**Ninganchiao**	**45.64**	**314**	*e*P	**P**	**14 56 34.6**	**-2.2**		
	comp=Z,12nm,0.6s,mb4.8								
BJII	**Banjamegara**	**45.81**	**267**	P	**P**	**14 56 41.3**	**+3.0**		
	comp=Z,44nm,1.3s,mb5.0								
TPUB	**Ta-pu**	**45.81**	**312**	*e*P	**P**	**14 56 36.5**	**-1.7**		
	comp=Z,9.1nm,0.6s,mb4.7								
TPUB				*e*PcP	PcP	14 58 12.8	-1.7		
YHNB	**Yeheng**	**46.11**	**314**	*e*P	**P**	**14 56 39.4**	**-1.1**		
	comp=Z,52nm,1.4s,mb5.1								
KSM	**Kuching**	**46.27**	**279**	*e*P	**P**	**14 56 41.5**	**-0.5**		
	comp=Z,54nm,0.8s,mb5.3								
KSM	**Kuching**	**46.27**	**279**	P	**P**	**14 56 42.1**	**+0.1**		
KSM	**Kuching**	**46.27**	**279**	P	**P**	**14 56 41.8**	**-0.2**		
	comp=Z,559nmcomp=Z,63nm,0.8s,mb5.4								
MJAR	**Matsushiro Arr**	**46.44**	**340**	P	**P**	**14 56 41.2**	**-1.6**		
	comp=Z,3.9nm,0.7s,mb4.3,baz=167,slow=7.0,SNR=9.8								
MJAR				PcP	PcP	14 58 16.3	0.0		
	comp=Z,5.3nm,0.6s,baz=164,slow=4.9,SNR=9.0								
MJAR				LR	LR	15 14 06.3			
	comp=Z,195nm,21.6s,baz=120,slow=33								
MJAR	**Matsushiro Arr**	**46.44**	**340**	P	**P**	**14 56 41.2**	**-1.6**		
MJAR						14 58 16.3			
MAJO	**Matsushiro**	**46.44**	**340**	*e*P	**P**	**14 56 41.7**	**-1.2**		
	comp=Z,9.1nm,0.6s,mb4.7								
MAJO	**Matsushiro**	**46.44**	**340**	*e*P	**P**	**14 56 41.7**	**-1.2**		
MAJO				pmax	pmax				
	comp=Z,9.0nm,0.6s,mb4.7								
MAT	**Matsushiro**	**46.44**	**340**	P	**P**	**14 56 41.9**	**-1.0**		
CISI	**Cisompet, Garu**	**47.67**	**266**	P	**P**	**14 56 51.6**	**-1.3**		
	comp=Z,140nm,0.6s,mb6.0								
LEM	**Lembang**	**47.91**	**267**	P	**P**	**14 56 55.4**	**+0.7**		
	comp=Z,65nm,0.7s,mb5.6								
TPI	**Tanjungpandan**	**48.24**	**273**	P	**P**	**14 56 58.0**	**+0.7**		
	comp=Z,360nmcomp=Z,44nm,0.7s,mb5.4								
CBJI	**Citeko**	**48.69**	**268**	P	**P**	**14 57 01.0**	**+0.2**		
	comp=Z,199nm,0.6s,mb6.2								
CGJI	**Cibinong**	**49.83**	**267**	P	Px	14 57 21.0			
ERM	**Erimo**	**50.21**	**348**	P	**P**	**14 57 12.1**	**+0.4**		
	comp=Z,73nm,0.5s,mb5.9,SNR=7.0								
ERM	**Erimo**	**50.21**	**348**	*e*P	**P**	**14 57 13.5**	**+1.8**		
ERM				pmax	pmax				
	comp=Z,6.0nm,0.5s,mb4.8								
KASI	**Kota Agung**	**51.09**	**269**	P	**P**	**14 57 18.1**	**-0.9**		
	comp=Z,66nm,0.9s,mb5.7								
KSRS	**Korea Array**	**51.42**	**331**	P	**P**	**14 57 20.1**	**-0.8**		
	comp=Z,4.5nm,0.8s,mb4.5,baz=151,slow=8.0,SNR=18								
KSRS				PcP	PcP	14 58 35.2	+0.8		
	comp=Z,2.3nm,0.6s,baz=145,slow=4.2,SNR=6.3								
KSRS				LR	LR	15 16 05.7			
	comp=Z,164nm,21.6s,baz=120,slow=32								
MDSI	**Maura Dua**	**51.50**	**270**	P	**P**	**14 57 20.6**	**-1.4**		
	comp=Z,27nm,1.2s,mb5.1								
LWLI	**Liwa**	**51.57**	**269**	P	**P**	**14 57 23.5**	**+1.0**		
	comp=Z,74nm,0.8s,mb5.8								
YUK	**Yuzh-Kuril'sk**	**51.66**	**351**	⇓*i*P	pP	14 57 39.7	-3.2		
QIZ	**Qiongzhong**	**52.26**	**301**	P	**P**	**14 57 27.8**	**+0.3**		
QIZ				pP	pP	14 57 46.3	-1.6		
QIZ				sP	sP	14 57 58.0	+0.8		
QIZ				PP	PP	14 59 24.5	-2.4		
QIZ				S	**S**	**15 04 41.8**	**-5.0**		
QIZ				pmax	pmax				
	comp=Z,15nm,1.2s,mb4.9								
QIZ				pmax	pmax				
	comp=Z,45nm,5.9s								
QIZ				LR	LR				
	comp=N,280nm,20.3s								
QIZ				LR	LR				
	comp=Z,450nm,25.1s								
QIZ	**Qiongzhong**	**52.26**	**301**	*e*P	**P**	**14 57 27.1**	**-0.4**		
	comp=Z,16nm,1.0s,mb5.0								
ASAJ	**Asahikawa**	**52.34**	**348**	*e*P	**P**	**14 57 28.4**	**+0.7**		
	comp=Z,9.6nm,1.0s,mb4.8								
ASAJ	**Asahikawa**	**52.34**	**348**	P	**P**	**14 57 28.4**	**+0.8**		
	comp=Z,8.9nm,0.5s,mb5.0,baz=203,slow=8.6,SNR=36								
MYKOM	**Kota Tinggi**	**52.67**	**278**	P	**P**	**14 57 30.6**	**-0.2**		
MYKOM	**Kota Tinggi**	**52.67**	**278**	P	**P**	**14 57 30.2**	**-0.5**		
	comp=Z,381nmcomp=Z,37nm,1.0s,mb5.4								
KGM	**Kluang**	**53.24**	**278**	P	**P**	**14 57 34.9**	**0.0**		
KTGM	**Kuala Trenggan**	**54.07**	**282**	P	**P**	**14 57 40.9**	**0.0**		
PPT	**Papeete**	**54.12**	**107**	*e*S	**S**	**15 05 10.8**	**-1.3**		
	comp=Z,138nm,25.0s								
PPT				*e*LR	LR	15 13 30.2			
	comp=Z,306nm,22.5s								
PPT	**Papeete**	**54.12**	**107**	P	**P**	**14 57 42.0**	**+0.8**		
	comp=Z,26nm,0.5s,mb5.5,baz=245,slow=5.2,SNR=7.1								
PPT				LR	LR	15 16 16.8			
	comp=Z,258nm,21.4s,baz=174,slow=31								
VLA	**Vladivostok**	**54.50**	**339**	*e*P	**P**	**14 57 41.3**	**-2.2**		
VLA						14 58 41.1			
VLA						14 59 46.0			
VLA				S	**S**	**15 05 12.0**	**-4.3**		
VLA				pmax	pmax				
	comp=Z,38nm,1.5s,mb5.2								
SDSI	**Sungai Dareh**	**54.64**	**274**	P	**P**	**14 57 43.9**	**-1.2**		
	comp=Z,735nmcomp=Z,55nm,1.1s,mb5.5								
YSS	**Yuzh-Sakhalins**	**55.03**	**349**	*e*P	**P**	**14 57 47.5**	**+0.2**		
	comp=Z,20nm,0.8s,mb5.2								
YSS				*e*		14 58 00.8			
YSS	**Yuzh-Sakhalins**	**55.03**	**349**	*e*P	**P**	**14 57 47.2**	**0.0**		
YSS				pmax	pmax				
	comp=Z,30nm,1.0s,mb5.3								
FRIM	**Kepong**	**55.12**	**279**	P	**P**	**14 57 47.7**	**-0.9**		
PDSI	**Padang**	**55.60**	**274**	P	**P**	**14 57 50.8**	**-1.2**		
	comp=Z,2μmcomp=Z,83nm,0.6s,mb5.9								
PPI	**Padang Panjang**	**55.73**	**274**	P	**P**	**14 57 51.5**	**-1.4**		
	comp=Z,1μmcomp=Z,57nm,0.6s,mb5.8								
IPM	**Ipoh**	**55.95**	**280**	*e*P	**P**	**14 57 52.9**	**-1.6**		
	comp=Z,40nm,0.6s,mb5.6								
IPM				*e*PcP	PcP	14 58 52.5	+0.2		
IPM	**Ipoh**	**55.95**	**280**	P	**P**	**14 57 54.1**	**-0.5**		
IPM	**Ipoh**	**55.95**	**280**	P	**P**	**14 57 53.6**	**-0.9**		
	comp=Z,690nmcomp=Z,72nm,0.7s,mb5.8								
KULM	**Kulim**	**56.48**	**281**	*e*P	**P**	**14 57 56.9**	**-1.4**		
	comp=Z,16nm,0.6s,mb5.2								
KULM				*e*PcP	PcP	14 58 54.8	+0.4		
KULM	**Kulim**	**56.48**	**281**	P	**P**	**14 57 57.9**	**-0.4**		
KULM	**Kulim**	**56.48**	**281**	P	**P**	**14 57 57.5**	**-0.8**		
	comp=Z,591nmcomp=Z,62nm,1.0s,mb5.6								
MDJ	**Mudanjiang**	**56.63**	**338**	P	**P**	**14 57 59.3**	**+0.5**		
MDJ				sP	sP	14 58 28.5	-0.1		
MDJ				S	**S**	**15 05 46.8**	**+2.1**		
MDJ				sS	sS	15 06 21.3	+1.4		
MDJ				pmax	pmax				
	comp=Z,10.0nm,1.6s,mb4.6								
MDJ				pmax	pmax				
	comp=Z,85nm,9.6s								
MDJ				LR	LR				
	comp=N,72nm,32.6s								
MDJ				LR	LR				
	comp=E,55nm,29.1s								
MDJ				LR	LR				
	comp=Z,120nm,25.7s								
MDJ	**Mudanjiang**	**56.63**	**338**	*e*P	**P**	**14 57 58.8**	**0.0**		
	comp=Z,17nm,1.1s,mb5.0								
MNSI	**Mandailing Nat**	**56.72**	**276**	P	**P**	**14 57 58.3**	**-1.7**		
	comp=Z,2μmcomp=Z,67nm,0.7s,mb5.8								
CN2	**Changchun**	**57.63**	**334**	*e*P	**P**	**14 58 08.0**	**+2.2**		
CN2				*e*S	**S**	**15 06 00.0**	**+2.1**		
CN2				pmax	pmax				
	comp=Z,10.0nm,0.6s,mb5.0								
CN2				pmax	pmax				
	comp=Z,200nm,4.0s								
CN2				LR	LR				
	comp=N,100nm,18.0s								
CN2				LR	LR				
	comp=E,200nm,18.0s								
CN2				LR	LR				
	comp=Z,200nm,19.0s								
PSI	**Prapat**	**57.70**	**278**	P	**P**	**14 58 04.8**	**-2.1**		
	comp=Z,5.9nm,0.5s,mb4.9,baz=50,slow=15,SNR=6.5								
PSI				PcP	PcP	14 58 58.6	-0.5		
	comp=Z,4.6nm,0.6s,baz=80,slow=6.1,SNR=4.5								
ENH	**Enshi**	**57.94**	**312**	*e*P	**P**	**14 58 06.1**	**-2.1**		
	comp=Z,13nm,0.8s,mb5.0								
ENH				*e*PcP	PcP	14 58 59.0	-0.7		
TSI	**Tuntungan**	**58.17**	**279**	P	**P**	**14 58 11.2**	**+1.0**		
	comp=Z,39nm,1.6s,mb5.2								
GYA	**Guiyang**	**58.20**	**307**	P	**P**	**14 58 12.0**	**+1.8**		
GYA				pP	pP	14 58 33.0	+2.1		
GYA				sP	sP	14 58 43.3	+3.2		
GYA				PP	PP	15 00 23.5	+3.5		
GYA				ScP	ScP	15 02 54.3	+0.4		
GYA				S	**S**	**15 06 06.8**	**+0.8**		
GYA				sS	sS	15 06 42.5	+1.2		
GYA				SS	SS	15 10 01.0	+1.9		
GYA				pmax	pmax				
	comp=Z,20nm,1.0s,mb5.1								
GYA				pmax	pmax				
	comp=Z,130nm,5.0s								
GYA				LR	LR				
	comp=N,610nm,18.9s								
GYA				LR	LR				
	comp=E,590nm,19.5s								
GYA				LR	LR				
	comp=Z,560nm,17.7s								
HABR	**Khabarovsk**	**58.26**	**344**	*e*P	**P**	**14 58 10.4**	**+0.3**		
HABR				*e*		14 58 58.6			
HABR				*e*PPP		15 01 36.7			
HABR				*e*S	**S**	**15 06 03.6**	**-2.2**		
HABR				*e*		15 07 47.3			
HABR				*e*SS	SS	15 09 55.8	-3.3		
HABR				pmax	pmax				
	comp=N,23nm,1.9s								
HABR				pmax	pmax				
	comp=Z,42nm,1.5s,mb5.2								
HABR				pmax	pmax				
	comp=E,17nm,2.0s								
HABR				MLR	MLR				
	comp=Z,39nm,15.0s								
BJT	**Baijiatuau**	**59.47**	**325**	P	**P**	**14 58 11.1**	**-7.5**		
BJI	**Beijing**	**59.48**	**325**	P	**P**	**14 58 19.0**	**+0.3**		
BJI				S	**S**	**15 06 27.0**	**+5.0**		
BJI				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.6								
BJI				pmax	pmax				
	comp=Z,37nm,4.3s								
BJI				LR	LR				
	comp=N,210nm,21.1s								
BJI				LR	LR				
	comp=E,180nm,23.1s								
BJI				LR	LR				
	comp=Z,230nm,30.1s								
NST	**Nakhon Sawan**	**59.66**	**293**	P	**P**	**14 58 21.0**	**+0.6**		
	comp=Z,83nm,0.5s,mb6.0								
PET	**Petropavlovsk**	**59.90**	**2**	*e*P	**P**	**14 58 21.4**	**+0.1**		
	comp=Z,8.1nm,0.6s,mb4.9								
PET	**Petropavlovsk**	**59.90**	**2**	*e*P	**P**	**14 58 21.7**	**+0.4**		
PET				*e*S	**S**	**15 06 30.2**	**+3.4**		
PET				pmax	pmax				
	comp=Z,17nm,0.5s,mb5.3								
PETK	**Petropavlovsk-**	**59.95**	**1**	P	**P**	**14 58 22.2**	**+0.5**		
	comp=Z,8.9nm,0.6s,mb5.0,baz=155,slow=6.3,SNR=46								
PETK				LR	LR	15 20 29.3			
	comp=Z,271nm,20.7s,baz=184,slow=32								
KMI	**Kunming**	**60.80**	**304**	P	**P**	**14 58 29.8**	**+1.8**		
KMI				pP	pP	14 58 51.3	+2.4		
KMI				sP	sP	14 59 00.5	+2.5		
KMI				PP	PP	15 00 46.0	+3.0		
KMI				S	**S**	**15 06 39.3**	**-0.1**		
KMI				sS	sS	15 07 15.5	+0.6		
KMI				SS	SS	15 10 41.0	+1.2		
KMI				pmax	pmax				

comp=E,130nm,19.2s
GTA LR LR
comp=Z,190nm,17.7s
ULN Ulaanbaatar 69.54 327 *e*P **P** **14 59 25.1 +0.9**
comp=Z,49nm,1.2s,mb5.2
ULN Ulaanbaatar 69.54 327 *e*P **P** **14 59 25.1 +0.9**
ULN pmax pmax
comp=Z,49nm,1.2s,mb5.2
ULN Ulaanbaatar 69.54 327 P **P** **14 59 25.3 +1.1**
comp=Z,307nmcomp=Z,32nm,1.2s,mb5.0
SEY Seymchan 69.84 358*ce*P **P** **14 59 25.4 -0.3**
SONM Songino Array 69.88 327 P **P** **14 59 27.2 +1.0**
comp=Z,35nm,1.0s,mb5.2,baz=141,slow=6.9,SNR=123
SONM PKPPKP 15 27 31.0
comp=Z,1.1nm,0.9s,baz=307,slow=2.9,SNR=11
SBA Scott Base 70.99 178 *e*P **P** **14 59 34.2 +1.6**
comp=Z,60nm,1.9s,mb5.1
SBA Scott Base 70.99 178 *e*P **P** **14 59 34.2 +1.6**
SBA pmax pmax
comp=Z,60nm,1.9s,mb5.1
YAK Yakutsk 71.81 347 *e*P **P** **14 59 38.4 +0.7**
comp=Z,10nm,0.6s,mb4.8
YAK Yakutsk 71.81 347 *e*P **P** **14 59 37.0 -0.7**
YAK *e* pP 14 59 55.8 -3.3
YAK *e* 15 02 17.5
YAK *e*PPP 15 04 01.2
YAK *e*S S 15 08 49.5 -1.9
YAK *e* 15 09 32.1
YAK *e**SS sS 15 09 44.1 +16
YAK *e*SS SS 15 13 24.9 -4.5
YAK *e*SSS 15 16 42.1
YAK pmax pmax
comp=Z,11nm,1.0s,mb4.6
YAK pmax pmax
comp=Z,16nm,2.1s,mb4.5
YAK pmax pmax
comp=N,13nm,3.4s
YAK pmax pmax
comp=E,32nm,3.0s
YAK smax
comp=N,59nm,13.1s
YAK smax
comp=E,60nm,13.9s
LSA Lhasa 72.05 304 *e*P **P** **14 59 41.2 +1.4**
comp=E,87nm,0.6s,mb5.8
LSA Lhasa 72.05 304 *e*P **P** **14 59 41.3 +1.5**
LSA pmax pmax
comp=Z,87nm,0.6s,mb5.8
MIR Mirnyy 72.97 202⇓ *i*P **P** **14 59 45.4 +0.9**
MIR pmax pmax
comp=Z,53nm,1.4s,mb5.2
ZAK Zakamensk 73.02 328 *e*P **P** **14 59 45.5 +0.4**
ZAK pmax pmax
comp=Z,11nm,1.3s,mb4.5
TLY Talaya 73.58 329 P **P** **14 59 48.5 +0.2**
comp=Z,7.8nm,0.6s,mb4.6
TLY Talaya 73.58 329 *e*P **P** **14 59 48.9 +0.6**
TLY pmax pmax
comp=Z,16nm,1.0s,mb4.7
TAPN Taplejung 74.20 301 *e*P **P** **14 59 52.7 +0.1**
comp=Z,76nm,0.7s,mb5.5
ODAN Odare 74.34 300 *e*P **P** **14 59 54.2 +0.8**
comp=Z,155nm,0.6s,mb5.9
MOY Mondy 74.94 328 *e*P **P** **14 59 57.2 +0.9**
MOY pmax pmax
comp=Z,22nm,1.7s,mb4.6
RAMN Ramite 75.04 300 *e*P **P** **14 59 57.7 +0.3**
comp=Z,46nm,0.6s,mb5.4
BILL Bilibino 75.28 4 *e*P **P** **14 59 57.3 -0.6**
comp=Z,17nm,0.6s,mb5.0
BILL Bilibino 75.28 4*j* *i*P **P** **14 59 58.0 +0.1**
BILL 15 00 09.0
BILL S S 15 09 36.0 +5.7
BILL pmax pmax
comp=Z,42nm,1.2s,mb5.0
BILL MLR MLR
comp=Z,200nm,18.0s
JIRN Jiri 75.58 301 *e*P **P** **15 00 01.5 +1.0**
GUN Gumba 75.92 301 *e*P **P** **15 00 03.5 +1.1**
comp=Z,121nm,0.6s,mb5.8
PKI Pulchoki 76.23 301 *e*P **P** **15 00 04.7 +0.5**
comp=Z,26nm,0.5s,mb5.2
PKIN Phulchoki 76.24 301 *e*P **P** **15 00 04.6 +0.3**
comp=Z,34nm,0.6s,mb5.2
PALK Pallekele 76.33 279 *e*P **P** **15 00 04.5 -0.6**
comp=Z,72nm,1.4s,mb5.2
PALK Pallekele 76.33 279 *e*P **P** **15 00 04.5 -0.6**
PALK pmax pmax
comp=Z,72nm,1.4s,mb5.2
KKN Kakani 76.40 301 *e*P **P** **15 00 05.6 +0.5**
comp=Z,29nm,0.5s,mb5.3
DMN Daman 76.50 300 *e*P **P** **15 00 06.6 +0.9**
comp=Z,60nm,0.6s,mb5.5
KDAK Kodiak Island 76.84 26 P **P** **15 00 06.6 -0.3**
comp=Z,4.0nm,0.8s,mb4.2,baz=267,slow=7.3,SNR=4.2
GKN Gorkha 77.00 301 *e*P **P** **15 00 09.0 +0.5**
comp=Z,50nm,0.4s,mb5.5
KOLN Koldanda 77.83 300 *e*P **P** **15 00 13.4 +0.2**
comp=Z,56nm,0.5s,mb5.5
DANN Dangsing 77.84 301 *e*P **P** **15 00 13.3 +0.1**
comp=Z,75nm,0.5s,mb5.6
TTA Tatalina 78.77 20 *e*P **P** **15 00 17.9 +0.4**
comp=Z,4.2nm,0.8s,mb4.3
TTA Tatalina 78.77 20 *e*P **P** **15 00 17.9 +0.3**
TTA pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
WMQ Urumqi 79.48 317 P **P** **15 00 23.0 +1.1**
WMQ PcP PcP 15 00 31.3 +1.7
WMQ pP pP 15 00 43.3 -0.4
WMQ sP sP 15 00 51.8 -0.8
WMQ PP PP 15 03 25.8 +2.4
WMQ *e*S S 15 10 16.5 -0.3
WMQ SKS 15 10 27.5
WMQ SS SS 15 15 27.5 +1.2
WMQ pmax pmax
comp=Z,11nm,1.2s,mb4.6
WMQ pmax pmax
comp=Z,87nm,4.6s
WMQ LR LR
comp=N,290nm,23.0s
WMQ LR LR
comp=E,170nm,24.0s
WMQ LR LR
comp=Z,270nm,23.0s
RC01 Rabbit Creek A 79.96 24 *e*P **P** **15 00 24.0 -0.1**
comp=Z,33nm,1.2s,mb5.0
PPLA Purkeypile 80.10 21 *e*P **P** **15 00 24.9 +0.1**
comp=Z,4.2nm,0.7s,mb4.4
HYB Hyderabad 80.14 289 *i* P **P** **15 00 25.5 -0.5**
HYB *e* 15 00 38.0
PMR Palmer 80.49 23 *e*P **P** **15 00 26.1 -0.9**
comp=Z,5.1nm,0.8s,mb4.4
PMR Palmer 80.49 23 *e*P **P** **15 00 26.1 -0.8**
PMR pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
SML Sawmill 80.93 23 *e*P **P** **15 00 29.7 +0.5**
comp=Z,3.2nm,0.8s,mb4.2
SML Sawmill 80.93 23 *e*P **P** **15 00 29.7 +0.5**
SML pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
TRF Thorofare Moun 81.13 22 *e*P **P** **15 00 29.8 -0.5**
comp=Z,6.1nm,0.7s,mb4.5
BPAW Bear Paw Mtn. 81.26 21 *e*P **P** **15 00 30.2 -0.8**
comp=Z,1.5nm,0.6s,mb4.0
MCK McKinley 81.78 22 *e*P **P** **15 00 33.0 -0.7**
comp=Z,14nm,0.8s,mb4.8
MCK McKinley 81.78 22 *e*P **P** **15 00 33.0 -0.7**
MCK pmax pmax
comp=Z,14nm,0.8s,mb4.8
COLA College 82.82 21 *e*P **P** **15 00 37.8 -1.3**
comp=Z,6.6nm,0.8s,mb4.5
COLA College 82.82 21 *e*P **P** **15 00 37.8 -1.3**
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
QSPA South Pole Qui 82.92 180 P **P** **15 00 40.2 +0.7**
comp=Z,20nm,0.7s,mb5.1,baz=333,slow=0.6,SNR=126
ILAR Eielson Array 83.11 21 P **P** **15 00 39.6 -1.0**
ILAR PKKPbc PKKPbc 15 19 02.5 -2.6
ILAR LR LR 15 32 50.9
ILAR Eielson Array 83.11 21 P **P** **15 00 39.6 -1.0**
comp=Z,1.3nm,0.5s,mb4.0,baz=252,slow=4.9,SNR=37
ILAR PKKPbc PKKPbc 15 19 02.5 -2.6
comp=Z,0.3nm,0.6s,baz=8.1,slow=1.9,SNR=6.0
ILAR LR LR 15 32 50.9
comp=Z,327nm,21.5s,baz=63,slow=32
DDI Dehra Dun 83.14 302 *ex* **P** **15 00 39.5 -2.1**
MENT Mentasta 83.35 24 *e*P **P** **15 00 43.0 +1.0**
COLD Coldfoot 83.39 18 *e*P **P** **15 00 41.6 -0.4**
comp=Z,1.5nm,0.7s,mb3.9
DOT Dot Lake 83.57 23 *e*P **P** **15 00 43.1 +0.1**
comp=Z,19nm,1.0s,mb4.9
MK31 Makanchi Array 84.05 318 *e*P **P** **15 00 45.9 +0.1**
MKAR Makanchi Array 84.05 318 P **P** **15 00 46.0 +0.1**
comp=Z,38nm,0.7s,mb5.4,baz=98,slow=6.3,SNR=316
MKAR Makanchi Array 84.05 318 *i* P **P** **15 00 46.0 +0.2**
MKAR pmax pmax
comp=Z,38nm,0.6s
MAW Mawson 84.68 203⇑ *i*P **P** **15 00 48.6 -0.1**
comp=Z,15nm,0.6s,mb5.1
MAW Mawson 84.68 203 *e*P **P** **15 00 48.7 0.0**
comp=Z,3.8nm,0.7s,mb4.4
MAW Mawson 84.68 203 P **P** **15 00 49.3 +0.6**
comp=Z,15nm,0.6s,mb5.1,baz=98,slow=6.7,SNR=97
MAW Mawson 84.68 203 *e*P **P** **15 00 48.7 0.0**
MAW pmax pmax
comp=Z,4.0nm,0.7s
ZAA0 Zalesovo Array 84.73 326 *e*P **P** **15 00 47.9 -1.2**
ZALV Zalesovo Beam 84.73 326 P **P** **15 00 48.4 -0.7**
comp=Z,11nm,0.5s,mb5.1,baz=116,slow=5.8,SNR=50
POO Poona 84.74 289 *e*PKP **P** **15 00 48.0 -1.9**
EGAK Eagle 85.23 23 *e*P **P** **15 00 51.3 0.0**
comp=Z,5.8nm,0.8s,mb4.6
NVS Novosibirsk 85.90 326 *e*P **P** **15 00 52.5 -2.4**
NVS pmax pmax
comp=N,6.0nm,1.7s
NVS pmax pmax
comp=E,13nm,1.7s
NVS pmax pmax
comp=Z,52nm,1.7s,mb5.2
KSH Kashi 86.73 310⇓ P **P** **15 01 01.8 +2.4**
KSH *e*pP pP 15 01 21.5 +0.1
KSH *e*sP sP 15 01 31.0 +0.7
KSH *e*PP PP 15 04 26.0 +3.1
KSH *e*SKS 15 11 18.5
KSH *e*S S 15 11 30.3 -0.1
KSH *e*sS sS 15 12 06.5 -1.6
KSH *e*SS SS 15 17 16.3 +2.4
KSH pmax pmax
comp=Z,13nm,0.6s,mb5.0
KSH pmax pmax
comp=Z,56nm,3.2s
KSH LR LR
comp=N,160nm,8.7s
KSH LR LR
comp=E,130nm,8.2s
KSH LR LR
comp=Z,98nm,5.1s
ULHL Ulahol 87.10 313 P **P** **15 01 02.4 +1.3**
SNR=5.8
KURK Kurchatov 87.44 322 P **P** **15 01 02.1 -0.4**
comp=Z,142nm,0.4s,mb6.2,SNR=7.2
KURK Kurchatov 87.44 322 *e*P **P** **15 01 01.6 -0.9**
comp=Z,7.7nm,0.4s,mb5.0
KURK Kurchatov 87.44 322 P **P** **15 01 02.2 -0.3**
comp=Z,10nm,0.5s,mb5.0,baz=100,slow=4.3,SNR=31
KURK Kurchatov 87.44 322*ce*P **P** **15 01 01.9 -0.6**
KURK pmax pmax
comp=Z,34nm,1.8s,mb5.0
TKM2 Tokmak 2 87.71 314 P **P** **15 01 04.4 +0.4**
SNR=32
TKM2 Tokmak 2 87.71 314 *e*P **P** **15 01 04.0 0.0**
comp=Z,12nm,0.6s,mb5.1
TKM2 Tokmak 2 87.71 314 *e*P **P** **15 01 04.0 0.0**
TKM2 pmax pmax
comp=Z,12nm,0.6s,mb5.1
DLBC Dease Lake 87.74 30 *e*P **P** **15 01 03.8 0.0**
DLBC Dease Lake 87.74 30 P **P** **15 01 03.9 +0.1**
comp=Z,4.5nm,1.0s,mb4.5,baz=218,slow=6.7,SNR=5.2
KZA Kyzart 87.79 313 P **P** **15 01 05.5 +1.1**
SNR=12
KZA Kyzart 87.79 313 *e*P **P** **15 01 05.4 +1.0**
comp=Z,7.8nm,0.6s,mb4.9
CHMS Chumysh 88.33 314 P **P** **15 01 07.6 +0.6**
SNR=7.9
FRU Bishkek 88.40 313 *e*P **P** **15 01 06.0 -1.3**
AAK Ala-Archa 88.45 313 *e*P **P** **15 01 07.7 +0.2**
comp=Z,4.6nm,0.6s,mb4.7
AAK Ala-Archa 88.45 313 P **P** **15 01 08.1 +0.6**
comp=Z,4.8nm,0.5s,mb4.8,baz=101,slow=6.0,SNR=11
AAK Ala-Archa 88.45 313*ce*P **P** **15 01 08.2 +0.7**
AAK pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
AAK Ala-Archa 88.45 313 P **P** **15 01 08.2 +0.7**
comp=Z,2.7nm,0.9s,mb4.3
USP Ospenovka 88.56 314 P **P** **15 01 08.0 0.0**
SNR=15
AML Almayashu 88.94 313 P **P** **15 01 11.4 +1.6**
SNR=21
AML Almayashu 88.94 313 *e*P **P** **15 01 10.2 +0.4**
comp=Z,16nm,0.8s,mb5.1
EKS2 Erkin-Say 88.97 313 P **P** **15 01 10.9 +0.9**
SNR=11
EKS2 Erkin-Say 88.97 313 *e*P **P** **15 01 10.3 +0.3**
comp=Z,5.0nm,0.6s,mb4.7
INK Inuvik 89.47 21 *e*P **P** **15 01 11.5 -0.2**
comp=Z,9.8nm,1.3s,mb4.7
INK Inuvik 89.47 21 P **P** **15 01 11.4 -0.2**
comp=Z,3.1nm,0.5s,mb4.6,baz=252,slow=5.0,SNR=12
INK Inuvik 89.47 21 *e*P **P** **15 01 11.5 -0.2**
INK pmax pmax
comp=Z,10.0nm,1.3s
NVAR Mina Array Bea 91.06 52 P **P** **15 01 21.9 +2.1**
comp=Z,0.7nm,0.8s,mb3.9,baz=258,slow=6.4,SNR=5.6
KBL Kabul 91.37 304 *e*P **P** **15 01 20.1 -1.2**
comp=Z,12nm,0.7s,mb5.2
KBL Kabul 91.37 304 *e*P **P** **15 01 20.1 -1.3**
KBL pmax pmax
comp=Z,12nm,0.7s,mb5.1
KKAR Karatay Array 91.41 313 *e*P **P** **15 01 20.8 -0.5**
comp=Z,2.1nm,0.6s,mb4.4
KKAR Karatay Array 91.41 313 *e*P **P** **15 01 20.8 -0.5**
KKAR pmax pmax
comp=Z,2.0nm,0.6s,mb4.4
SYO Syowa Base 92.56 199⇓ *e*P **P** **15 01 24.6 -1.5**
SYO Syowa Base 92.56 199⇓ *e*PcP PcP 15 01 26.4 -0.4
BVAR Borovoye Array 92.89 323 P **P** **15 01 26.8 -1.1**
comp=Z,13nm,0.5s,mb5.5,baz=106,slow=5.3,SNR=68
BRVK Borovoye 92.95 323 *e*P **P** **15 01 26.6 -1.6**
comp=Z,6.3nm,0.5s,mb5.2
BRVK Borovoye 92.95 323*ce*P **P** **15 01 27.3 -0.9**
BRVK pmax pmax
comp=Z,12nm,0.9s,mb5.2
YKA Yellowknife Ar 95.98 28 P **P** **15 01 40.9 -1.0**
YKA LR LR 15 44 39.6
YKA Yellowknife Ar 95.98 28 P **P** **15 01 40.9 -1.0**
comp=Z,1.0nm,0.6s,mb4.4,baz=267,slow=4.8,SNR=3.6
YKA LR LR 15 44 39.6
comp=Z,19nm,18.6s,baz=10.0,slow=35
PDAR Pinedale Array 98.08 48 P **P** **15 01 52.2 +0.4**
comp=Z,0.4nm,0.8s,mb4.0,baz=279,slow=1.7,SNR=3.1
PDAR LR LR 15 42 21.5
comp=Z,227nm,18.9s,baz=326,slow=33
ABKAR Akbulak array 99.19 319 *e*P **P** **15 01 54.4 -2.2**
comp=Z,2.7nm,0.6s,mb5.0
ARU Arti 99.90 326 *e*P Pdif 15 01 57.2 -2.5
comp=Z,5.7nm,0.5s
ARU Arti 99.90 326*d* *i*P Pdif 15 01 56.7 -3.0
ARU pmax pmax
comp=Z,4.0nm,0.5s,mb5.3
VNA3 Neumayer Olymp 101.27 185 *e*Pdiff Pdif 15 02 02.6 -3.2
VNA3 *e* 15 06 26.5
VNA2 Neumayer--Watz 101.38 186 *e*Pdiff Pdif 15 02 03.0 -3.3
VNA2 *e* 15 06 27.2
TXAR Lajitas Array 102.50 62 P Pdif 15 02 15.5 +4.2
comp=Z,0.2nm,0.9s,baz=226,slow=3.6,SNR=2.2
TXAR PKKPbc PKKPbc 15 18 13.9 +1.1
comp=Z,0.3nm,0.6s,baz=106,slow=3.6,SNR=5.4
KEV Kevo 109.35 343 *e*pkp PKiKP 15 06 43.6 -0.8
ARCES ARCESS Array B 109.91 343 PKPdf PKiKP 15 06 45.2 -0.3
ARCES PKKPbc PKKPbc 15 17 47.5 -3.9
ARCES ARCESS Array B 109.91 343 PKiKP PKiKP 15 06 45.2 -0.3
comp=Z,2.4nm,0.4s,baz=98,slow=2.9,SNR=28
ARCES PKKPbc PKKPbc 15 17 47.5 -3.9
comp=Z,4.2nm,1.0s,baz=227,slow=3.6,SNR=5.5
JOF Joensuu 111.50 336 *e*PKiKP PKiKP 15 06 47.0 -1.7
JOF Joensuu 111.50 336 *e*pkp PKiKP 15 06 47.0 -1.7
KAF Kangasniemi 113.90 337 *e*PKiKP PKiKP 15 06 51.9 -1.4
KAF Kangasniemi 113.90 337 *e*pkp PKiKP 15 06 51.9 -1.4
FINES FINESS Array B 114.36 336 PKiKP PKiKP 15 06 53.4 -0.8
comp=Z,4.3nm,0.6s,baz=66,slow=2.0,SNR=22
FINES PKKPbc PKKPbc 15 17 34.0 -2.3
comp=Z,1.6nm,0.7s,baz=232,slow=2.2,SNR=4.6
MALT Malatya 115.82 309⇓ P PKPdf 15 06 58.3 +0.6
MALT Malatya 115.82 309⇓ *i*P PKPdf 15 06 58.3 +0.6
PLCA Paso Flores 116.12 142 PKP PKPdf 15 06 58.2 -0.1
PLCA PKKPbc PKKPbc 15 17 29.6 -0.1
PLCA Paso Flores 116.12 142 PKP PKPdf 15 06 58.2 -0.1
comp=Z,1.0nm,0.5s,baz=290,slow=4.0,SNR=5.7
PLCA PKKPbc PKKPbc 15 17 29.6 -0.1
comp=Z,2.2nm,0.6s,baz=16,slow=0.9,SNR=5.8
IDID Didziasalis 117.29 330 *e*P PKPdf 15 07 01.2 +1.2
ISAL Salakas 117.46 331 *e*P PKPdf 15 07 00.4 +0.1
ISAL AMB AMB 15 07 01.0
comp=Z,4.4nm,0.7s
IIGN Ignalina 117.53 330 *e*P PKPdf 15 07 00.8 +0.3
IIGN AMB AMB 15 07 01.9
comp=Z,5.3nm,0.5s
AKASG Malin Array Be 118.11 325 PKP PKPdf 15 07 01.2 -0.5
comp=Z,12nm,0.5s,baz=48,slow=2.6,SNR=49
KMBO Kilima Mbogo 118.25 265 PKP PKPdf 15 07 03.6 +0.5
comp=Z,1.7nm,0.6s,baz=360,slow=24,SNR=4.9
BRTR Keskin Array B 119.10 312 PKP PKPdf 15 07 03.2 -0.7
comp=Z,2.2nm,0.6s,baz=130,slow=3.3,SNR=14
NOA NORSAR Array B 120.05 341 PKP PKPdf 15 07 04.7 -0.4
NOA PKKPbc PKKPbc 15 17 14.7 -1.4
NOA NORSAR Array B 120.05 341 PKP PKPdf 15 07 04.7 -0.4
comp=Z,2.7nm,0.5s,baz=44,slow=1.9,SNR=25
NOA PKKPbc PKKPbc 15 17 14.7 -1.4
comp=Z,1.2nm,0.6s,baz=230,slow=3.6,SNR=8.5
BOSA Boshof 120.68 231 PKP PKPdf 15 07 07.6 +0.2
comp=Z,6.1nm,0.7s,baz=76,slow=3.6,SNR=19
CFR Carcaliu 121.08 319⇓ P PKPdf 15 07 07.7 +0.1
CFR Carcaliu 121.08 319⇓ *i*P PKPdf 15 07 07.7 +0.1
SCHQ Schefferville 121.43 27 PKP PKPdf 15 07 08.3 +0.3
SCHQ PKKPbc PKKPbc 15 17 09.2 -1.6
SCHQ Schefferville 121.43 27 PKP PKPdf 15 07 08.3 +0.3
comp=Z,4.3nm,1.0s,baz=252,slow=15,SNR=3.8
SCHQ PKKPbc PKKPbc 15 17 09.2 -1.6
comp=Z,2.1nm,0.9s,baz=130,slow=7.9,SNR=3.6
BUR08 Bucovina Ar. S 121.84 323 *e*PKPdf PKPdf 15 07 09.9 +0.9
BURAR Bucovina Array 121.85 323⇓ P PKPdf 15 07 10.7 +1.7
BURAR Bucovina Array 121.85 323⇓ *i*P PKPdf 15 07 10.7 +1.7
KWP Kalwaria Pacla 122.31 326⇑ P PKPdf 15 07 10.4 +0.6
KWP Kalwaria Pacla 122.31 326⇑ *i*P PKPdf 15 07 10.4 +0.6
GKP Gorka Klasztor 123.04 332 *e*PKP PKPdf 15 07 11.8 +0.7
STHS Stebnicka Huta 123.23 326 *e*PKP PKPdf 15 07 11.7 +0.1
STHS Stebnicka Huta 123.23 326 *e*PKP PKPdf 15 07 11.7 +0.1
CRVS Cervenica-Dubn 123.39 326 *e*PKP PKPdf 15 07 11.0 -0.9
CRVS Cervenica-Dubn 123.39 326 *e*PKP PKPdf 15 07 11.0 -0.9
OJC Ojcow 123.57 328 *e*PKP PKPdf 15 07 12.6 +0.4
DRGR 123.74 323⇑ P PKPdf 15 07 12.8 +0.1
DRGR 123.74 323⇑ *i*P PKPdf 15 07 12.8 +0.1
NIE Niedzica 123.74 327 *e*PKP PKPdf 15 07 13.7 +1.1
GZR Gura Zlata 124.38 321⇑ P PKPdf 15 07 14.4 +0.4
GZR Gura Zlata 124.38 321⇑ *i*P PKPdf 15 07 14.4 +0.5
OKC Ostrava-Krasne 124.66 328 *e*PKIKP PKPdf 15 07 13.7 -0.6
OKC Ostrava-Krasne 124.66 328 *e*PKPdf PKPdf 15 07 13.7 -0.6
PSZ Piszkesteto 124.79 325⇓ P PKPdf 15 07 15.1 +0.4
PSZ Piszkesteto 124.79 325⇓ *i*P PKPdf 15 07 15.1 +0.5
BZS Buzias 124.98 322⇓ P PKPdf 15 07 15.4 +0.3
BZS Buzias 124.98 322⇓ *i*P PKPdf 15 07 15.4 +0.3
KSP Ksiaz 125.01 330 *e*PKP PKPdf 15 07 16.0 +1.0
MORC Moravsky Berou 125.02 328⇓ P PKPdf 15 07 15.9 +0.9
MORC Moravsky Berou 125.02 328⇓ *i*P PKPdf 15 07 15.9 +0.9
VYHS Vyhne 125.06 326 *e*PKP PKPdf 15 07 15.5 +0.4
VYHS Vyhne 125.06 326 *e*PKP PKPdf 15 07 15.5 +0.4
RUE Ruedersdorf 125.15 333 *e*PKPdf PKPdf 15 07 16.1 +0.9
KOLL Kolacno 125.25 327 *e*PKP PKPdf 15 07 15.8 +0.3
KOLL Kolacno 125.25 327 *e*PKP PKPdf 15 07 15.8 +0.3
DPC Dobruska-Polom 125.30 329 *e*PKIKP PKPdf 15 07 16.0 +0.5
DPC Dobruska-Polom 125.30 329 *e*PKPdf PKPdf 15 07 16.0 +0.5
UPC Upice 125.35 330 *e*PKIKP PKPdf 15 07 16.5 +0.9
UPC Upice 125.35 330 *e*PKPdf PKPdf 15 07 16.5 +0.9
VTS Vitosha 125.40 318⇓ P PKPdf 15 07 16.5 +0.5
VTS Vitosha 125.40 318⇓ *i*P PKPdf 15 07 16.5 +0.5
BSEG Bad Segeberg 125.63 336 *e*PKPdf PKPdf 15 07 17.1 +1.0
PVCC Panska Ves 126.06 330 *e*PKIKP PKPdf 15 07 18.0 +1.0
PVCC Panska Ves 126.06 330 *e*PKPdf PKPdf 15 07 18.0 +1.0
BRG Berggiesshubel 126.14 331 *e*PKPdf PKPdf 15 07 18.0 +0.9
BRG Berggiesshubel 126.14 331 *i* PKP PKPdf 15 07 17.8 +0.7
comp=Z,15nm,0.6s
BRG *e*PKKS 15 20 48.7
comp=Z,4.5nm,1.3s
BRG Berggiesshubel 126.14 331 *i* PKIKP PKPdf 15 07 17.8 +0.7
BRG pmax pmax
comp=Z,9.0nm,0.6s
BRG pmax pmax
comp=Z,3.0nm,1.3s
ZST Bratislava 126.18 327 *e*PKP PKPdf 15 07 18.1 +0.8
ZST Bratislava 126.18 327 *e*PKP PKPdf 15 07 18.1 +0.8
CLL Collm 126.29 332 *e*PKPdf PKPdf 15 07 18.1 +0.7
CLL Collm 126.29 332⇓ *i*PKIKP PKPdf 15 07 18.0 +0.6
CLL pmax pmax
comp=Z,17nm,0.6s
CLL Collm 126.29 332⇓ *i*PKPdf PKPdf 15 07 18.0 +0.6
comp=Z,17nm,0.6s
TREC Trest 126.37 329 *e*PKIKP PKPdf 15 07 18.3 +0.7
TREC Trest 126.37 329 *e*PKPdf PKPdf 15 07 18.3 +0.7
PRU Pruhonice 126.42 330 *e*PKIKP PKPdf 15 07 19.1 +1.4
PRU Pruhonice 126.42 330 *e*PKPdf PKPdf 15 07 19.1 +1.4
PKSM Moragy 126.44 324⇑ P PKPdf 15 07 18.4 +0.5
PKSM Moragy 126.44 324⇑ *i*P PKPdf 15 07 18.4 +0.5
NRDL Niedersach Rie 126.76 335 *e*PKPdf PKPdf 15 07 18.3 0.0
NEUB Neuenburg 126.93 333 *e*PKPdf PKPdf 15 07 19.4 +0.8
CONA Conrad Observa 127.01 327⇑ *i*PKIKP PKPdf 15 07 19.6 +0.7
comp=Z,8.9nm,0.5s
CLZ Clausthal 127.11 334 *e*PKPdf PKPdf 15 07 20.2 +1.2
TANN Tannenbergstha 127.15 331 *e*PKPdf PKPdf 15 07 20.0 +0.9
WERD Werda 127.20 332 *e*PKPdf PKPdf 15 07 20.1 +0.9
GUNZ Gunzen 127.24 331 *e*PKPdf PKPdf 15 07 20.4 +1.1
WERN Wernitzgruen 127.27 331 *e*PKPdf PKPdf 15 07 20.4 +1.1
NKC Novy Kostel 127.28 331 *e*PKIKP PKPdf 15 07 19.9 +0.6
NKC Novy Kostel 127.28 331 *e*PKPdf PKPdf 15 07 19.9 +0.6
MOX Moxa 127.39 332 *e*PKP PKPdf 15 07 19.7 +0.2
MOX Moxa 127.39 332 *e*PKPdf PKPdf 15 07 20.2 +0.7
KHC Kasperske Hory 127.45 330 *e*PKPdf PKPdf 15 07 20.3 +0.6
KHC Kasperske Hory 127.45 330 *e*PKPdf PKPdf 15 07 20.7 +1.0
GEC2 GERESS Array S 127.57 329 *e*PKPdf PKPdf 15 07 20.9 +1.0
GEC2 GERESS Array S 127.57 329 *e*PKIKP PKPdf 15 07 20.8 +0.9
ROTZ Rotzenmuhle 127.70 331 *e*PKPdf PKPdf 15 07 21.1 +0.9
WET Wettzell 127.79 330 *e*PKPdf PKPdf 15 07 21.2 +0.9
IBBN Ibbenburen 127.88 336 *e*PKPdf PKPdf 15 07 21.3 +0.9
MOA Molln 127.91 328⇑ *i*PKiKP PKPdf 15 07 20.9 +0.3
comp=Z,5.0nm,0.5s
SOKA Soboth 128.22 326⇑ *i*PKiKP PKPdf 15 07 21.0 -0.2
comp=Z,3.2nm,0.5s
GRA1 Grafenberg Arr 128.22 331 *e*PKPdf PKPdf 15 07 21.8 +0.6
GRF Grafenberg Arr 128.22 331 *e*PKPdf PKPdf 15 07 21.8 +0.6
WATA Walderalm 129.63 329⇑ *i*PKiKP PKPdf 15 07 23.9 0.0
comp=Z,15nm,0.5s,SNR=9.6
WTTA Wattenberg 129.65 329⇑ *i*PKiKP PKPdf 15 07 24.3 +0.4
comp=Z,14nm,0.5s
MOTA Moosalm 129.87 329⇑ *i*PKiKP PKPdf 15 07 24.5 +0.2
comp=Z,15nm,0.4s,SNR=21
BEBN Eben Emael 129.87 336 PKP PKPdf 15 07 25.0 +0.7
MEM Membach 129.88 335 PKP PKPdf 15 07 24.4 +0.2
FETA Feichten 130.27 329⇓ *i*PKiKP PKPdf 15 07 25.6 +0.5
comp=Z,8.4nm,0.5s,SNR=14
BCLA Clavier 130.31 336 PKP PKPdf 15 07 24.0 -1.1
DAVA Damuels 130.52 330⇑ *i*PKiKP PKPdf 15 07 26.4 +0.8
comp=Z,12nm,0.5s,SNR=7.5
WLF Walferdange 130.53 334 PKP PKPdf 15 07 26.8 +1.3
BFO Black Forest 130.54 332 *e*PKPdf PKPdf 15 07 26.0 +0.4
LPAZ La Paz 130.64 118 PKP PKPdf 15 07 27.6 +0.9
comp=Z,1.0nm,0.4s,baz=192,slow=1.5,SNR=6.8
LPAZ SKPbc SKPbc 15 10 47.8 +4.4
comp=Z,1.8nm,0.8s,baz=280,slow=1.2,SNR=7.2
SNF Seneffe 130.66 336 PKP PKPdf 15 07 26.5 +0.7
GIVF Givet 130.75 336 *e*PKIKP PKPdf 15 07 26.3 +0.3
comp=Z,22nm,0.8s
DOU Dourbes 130.85 336 PKP PKPdf 15 07 26.3 +0.1
CDF Champ du Feu 130.97 333 *e*PKIKP PKPdf 15 07 26.2 -0.2
comp=Z,11nm,0.7s
BAIF Baives 131.04 336 *e*PKIKP PKPdf 15 07 26.8 +0.3
comp=Z,8.5nm,0.8s
TSUM Tsumeb 131.34 237 *e*PKPdf PKPdf 15 07 28.5 +0.5
TUE Stuetta 131.34 330 *e*PKPdf PKPdf 15 07 27.5 +0.3
TUE *e*SKP 15 10 49.1
HINF Hinteralfeld 131.59 332 *e*PKIKP PKPdf 15 07 27.5 -0.1
comp=Z,11nm,0.5s
HAU Haudompre 131.69 333 *e*PKIKP PKPdf 15 07 27.9 +0.1
comp=Z,31nm,0.6s
HAU *e*MLR MLR
comp=Z,126nm,20.0s
HAU Haudompre 131.69 333 *e*PKIKP PKPdf 15 07 27.9 +0.1

HAU			MLR	MLR		
	comp=Z,130nm,20.0s					
MEZF	**Maizieres J'vi**	**131.89 334**	*e*PKIKP	PKPdf	15 07 28.7	+0.6
	comp=Z,25nm,0.5s					
SFTF	**Sexfontaines**	**132.12 334**	*e*PKIKP	PKPdf	15 07 28.8	+0.2
	comp=Z,12nm,0.6s					
CABF	**La Chapelle**	**132.83 332**	*e*PKIKP	PKPdf	15 07 30.8	+0.8
	comp=Z,24nm,0.5s					
LPL	**La Plagne**	**133.32 330**	*e*PKIKP	PKPdf	15 07 31.8	+0.9
	comp=Z,18nm,0.5s					
LPG	**La Plagne**	**133.32 330**	*e*PKIKP	PKPdf	15 07 31.9	+1.0
	comp=Z,22nm,0.5s					
LOR	**Lormes**	**133.35 334**	*e*PKIKP	PKPdf	15 07 31.2	+0.3
	comp=Z,8.8nm,0.6s					
LOR			*e*MLR	MLR		
	comp=Z,203nm,22.2s					
LOR	**Lormes**	**133.35 334**	*e*PKIKP	PKPdf	15 07 31.2	+0.3
LOR			MLR	MLR		
	comp=Z,200nm,22.3s					
SSF	**Saint Saulge**	**133.66 334**	*e*PKIKP	PKPdf	15 07 31.7	+0.2
	comp=Z,11nm,0.6s					
CPUP	**Villa Florida**	**133.73 137**	PKP	PKPdf	15 07 32.3	-0.1
	comp=Z,0.9nm,0.5s,baz=334,slow=2.5,SNR=4.8					
SMF	**Signal de Mont**	**133.83 333**	*e*PKIKP	PKPdf	15 07 32.2	+0.3
	comp=Z,7.8nm,0.6s					
MBDF	**Montbardon**	**133.86 330**	*e*PKIKP	PKPdf	15 07 32.1	+0.1
	comp=Z,9.9nm,0.6s					
FLN	**La Foliniere**	**133.89 338**	*e*PKIKP	PKPdf	15 07 32.3	+0.4
	comp=Z,20nm,0.7s					
FLN			*e*MLR	MLR		
	comp=Z,169nm,20.8s					
FLN	**La Foliniere**	**133.89 338**	*e*PKIKP	PKPdf	15 07 32.3	+0.4
FLN			MLR	MLR		
	comp=Z,170nm,20.8s					
LDF	**La Druitiere**	**133.90 338**	*e*PKIKP	PKPdf	15 07 32.1	+0.2
	comp=Z,6.7nm,0.5s					
AVF	**Avril sur Loir**	**133.94 334**	*e*PKIKP	PKPdf	15 07 32.2	+0.1
	comp=Z,5.7nm,0.6s					
SBF	**Sospel**	**134.12 328**	*e*PKIKP	PKPdf	15 07 31.6	-0.9
	comp=Z,20nm,0.6s					
PGF	**Pioggiola**	**134.16 326**	*e*PKIKP	PKPdf	15 07 32.6	0.0
	comp=Z,32nm,0.6s					
ORIF	**Oris-en-Rattie**	**134.16 330**	*e*PKIKP	PKPdf	15 07 32.7	+0.1
	comp=Z,19nm,0.5s					
ORIF			*e*MLR	MLR		
	comp=Z,160nm,20.8s					
BGF	**Bois d'Agland**	**134.34 334**	*e*PKIKP	PKPdf	15 07 33.0	+0.2
	comp=Z,13nm,0.5s					
GRR	**Gorron**	**134.34 338**	*e*PKIKP	PKPdf	15 07 32.8	0.0
	comp=Z,13nm,0.6s					
FRF	**La Foret Royal**	**134.74 328**	*e*PKIKP	PKPdf	15 07 33.5	-0.2
	comp=Z,20nm,0.6s					
VIVF	**Saint-Julien-l**	**134.80 331**	*e*PKIKP	PKPdf	15 07 34.1	+0.4
	comp=Z,11nm,0.6s					
TCF	**Toulx Ste Croi**	**134.82 334**	*e*PKIKP	PKPdf	15 07 33.9	+0.2
	comp=Z,19nm,0.6s					
LMR	**La Mourre**	**134.97 328**	*e*PKIKP	PKPdf	15 07 33.8	-0.3
	comp=Z,21nm,0.6s					
SMRF	**Simiane la Rot**	**135.00 330**	*e*PKIKP	PKPdf	15 07 34.2	+0.1
	comp=Z,17nm,0.8s					
SGMF	**Saint Gilles**	**135.06 340**	*e*PKIKP	PKPdf	15 07 34.5	+0.4
	comp=Z,13nm,0.7s					
ROSF	**Rostrenen**	**135.23 340**	*e*PKIKP	PKPdf	15 07 33.4	-1.0
MFF	**Saint Martin d**	**135.55 336**	*e*PKIKP	PKPdf	15 07 35.3	+0.2
	comp=Z,12nm,0.6s					
QUIF	**Quistinic**	**135.56 340**	*e*PKIKP	PKPdf	15 07 35.0	-0.1
	comp=Z,9.3nm,0.8s					
LASF	**Ste Croix**	**135.77 331**	*e*PKIKP	PKPdf	15 07 36.0	+0.4
	comp=Z,22nm,0.7s					
CAF	**Calviac**	**135.95 333**	*e*PKIKP	PKPdf	15 07 36.5	+0.6
	comp=Z,6.2nm,0.6s					
MTLF	**Montolieu**	**137.10 332**	*e*PKIKP	PKPdf	15 07 38.2	+0.1
	comp=Z,9.2nm,0.5s					
KEST	**Kesra**	**138.14 318**	PKP	PKPdf	15 07 41.5	+1.2
	comp=Z,1.4nm,0.7s,baz=56,slow=3.9,SNR=4.5					
KEST			SKP		15 11 11.1	
	comp=Z,1.3nm,0.8s,baz=18,slow=4.4,SNR=4.9					
EPF	**Esparros**	**138.21 333**	*e*PKIKP	PKPdf	15 07 40.6	+0.5
	comp=Z,4.5nm,0.5s					
ETSF	**Etsaut**	**138.72 334**	*e*PKIKP	PKPdf	15 07 41.0	-0.1
	comp=Z,27nm,0.5s					
SJPF	**Ste Jean**	**138.83 334**	*e*PKIKP	PKPdf	15 07 41.9	+0.6
	comp=Z,11nm,0.6s					
ETOR	**Torete**	**141.05 333**	P	PKPdf	15 07 36.2	-9.1
GUD	**Guadarrama**	**142.11 335**	P	PKPdf	15 07 42.3	-5.0
MVO	**Moncorvo**	**142.79 338**	*e*PKP	PKPdf	15 07 44.9	-3.6
ESDC	**Sonseca Array**	**142.83 334**	P	PKPdf	15 07 44.6	-4.0
ESDC	**Sonseca Array**	**142.83 334**	*e*PKP	PKPdf	15 07 46.4	-2.2
	comp=Z,2.3nm,0.7s,baz=14,slow=2.6,SNR=17					
ESLA	**Sonseca Array**	**142.83 334**	*e*PKPdf	PKPdf	15 07 45.3	-3.3
EVIA	**Vianos**	**143.00 331**	P	PKPdf	15 07 43.6	-5.3
MTE	**Manteigas**	**143.65 338**	*e*PKP	PKPdf	15 07 48.6	-1.4
MTE	**Manteigas**	**143.65 338**	*e*PKPdf	PKPdf	15 07 48.1	-1.9
EHUE	**Huescar**	**143.69 331**	P	PKPdf	15 07 47.0	-3.2
EQES	**Quesada**	**143.93 331**	P	PKPdf	15 07 49.1	-1.4
EBAN	**Banos Encina**	**143.98 332**	P	PKPdf	15 07 49.3	-1.4
PCBR	**Castelo Branco**	**144.11 338**	*e*PKP	PKPdf	15 07 49.7	-1.1
ENIJ	**Nijar**	**144.16 329**	P	PKPdf	15 07 48.4	-2.6
EADA	**Adamuz**	**144.34 333**	P	PKPdf	15 07 50.5	-0.8
PMRV	**Marv??o**	**144.44 337**	*e*PKP	PKPdf	15 07 50.4	-1.0
EBER	**Berja**	**144.56 330**	P	PKPdf	15 07 49.2	-2.5
ECOG	**Cogollos-Vega**	**144.59 331**	P	PKPdf	15 07 50.8	-0.9
PTOM	**Tomar**	**144.65 339**	*e*PKP	PKPdf	15 07 51.7	-0.1
ELUQ	**Luque**	**144.69 332**	P	PKPdf	15 07 50.9	-1.0
EBAD	**Badajoz**	**144.87 336**	P	PKPdf	15 07 50.6	-1.6
ERON	**Agron**	**144.91 331**	P	PKPdf	15 07 50.9	-1.4
EGUA	**Guajares**	**144.94 331**	P	PKPdf	15 07 50.8	-1.6
ELOJ	**Sierra Loja**	**144.97 332**	P	PKPdf	15 07 51.7	-0.7
PESTR	**Estremoz**	**145.00 337**	*e*PKP	PKPdf	15 07 51.9	-0.5
EALB	**Alboran**	**145.38 329**	P	PKPdf	15 07 53.2	+0.1
PBAR	**Barrancos**	**145.38 336**	*e*PKP	PKPdf	15 07 53.0	-0.1
EVO	**Evora**	**145.46 337**	*e*PKIKP	PKPdf	15 07 54.0	+0.8
	comp=Z,34nm,0.5s					
EVO			*e*MLR	MLR		
	comp=Z,198nm,22.2s					
EVO	**Evora**	**145.46 337**	*e*PKP	PKPdf	15 07 53.5	+0.3
PMAFR	**Mafra**	**145.55 339**	*e*PKP	PKPdf	15 07 53.6	+0.3
EMIN	**Mina Concepcio**	**145.58 335**	P	PKPdf	15 07 54.6	+1.2
EMIJ	**Mijas**	**145.74 332**	P	PKPdf	15 07 53.6	-0.2
PBEJ	**Beja**	**145.84 337**	*e*PKP	PKPdf	15 07 55.1	+1.2
ESPR	**Espera**	**145.98 333**	P	PKPdf	15 07 56.0	+1.9
EGRO	**El Granado**	**146.11 336**	P	PKPdf	15 07 54.2	-0.2
EJIF	**Jimena Fronter**	**146.15 332**	P	PKPdf	15 07 54.5	+0.1
PCVE	**Castro Verde**	**146.25 337**	*e*PKP	PKPdf	15 07 56.0	+1.4
PVAQ	**Vaqueiros**	**146.32 336**	*e*PKP	PKPdf	15 07 56.1	+1.4
PBDV	**Barranco-do-Ve**	**146.54 336**	*e*PKP	PKPab	15 07 57.4	-0.3
PTEO	**Sao Teotonio**	**146.59 337**	*e*PKP	PKPab	15 07 58.0	+0.1
MORF	**Marmelete**	**146.77 337**	*e*PKP	PKPdf	15 07 57.3	+1.8
PFVI	**Vila Bisbo**	**146.99 337**	*e*PKP	PKPab	15 07 58.8	-0.7
TORD	**Torodi Ar. Bea**	**153.91 285**	PKP	PKPdf	15 08 06.7	-0.5
	comp=Z,1.9nm,0.6s,baz=53,slow=0.7,SNR=17					
TORD			PKPbc	PKPbc	15 08 14.6	-0.6
	comp=Z,15nm,0.7s,baz=52,slow=2.4,SNR=64					
TORD			PKPab	PKPab	15 08 28.4	-0.3
	comp=Z,10.0nm,0.6s,baz=66,slow=4.0,SNR=11					
KIC	**Kosan Boka**	**160.76 269**	*e*PKP2	PKPab	15 08 58.5	+0.2
	comp=Z,86nm,0.6s					
DBIC	**Dimbokro**	**160.89 270**	PKP	PKPdf	15 08 15.1	-0.9
	comp=Z,7.8nm,1.0s,baz=150,slow=6.6,SNR=3.4					
DBIC			PKPab	PKPab	15 08 59.0	+0.1
	comp=Z,28nm,0.6s,baz=76,slow=4.5,SNR=35					
DBIC	**Dimbokro**	**160.89 270**	*e*PKIKP	PKPdf	15 08 13.9	-2.1
LIC	**Lamto**	**161.03 269**	*e*PKP2	PKPab	15 08 59.6	+0.1
	comp=Z,87nm,0.7s					
LIC	**Lamto**	**161.03 269**	*e*PKP2	PKPab	15 08 59.3	-0.2
	comp=Z,54nm,0.7s					
TIC	**Toumodi**	**161.05 270**	*e*PKP2	PKPab	15 08 59.7	+0.1
	comp=Z,52nm,0.6s					

IDC 30 14:59:33.1±1.4, 19°.18N×120°.30E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/21, mbtmp3.5/5, Error ellipse: s-maj=147.2km s-min=19.7km az=65.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**30.74**	**342**	P	P	15 05 50.2	+0.3
	0.2nm,0.6s,baz=168,slow=7.4,SNR=2.3						
WRA	**Warramunga Arr**	**41.24**	**160**	P	P	15 07 19.2	-0.9
	0.6nm,0.7s,baz=341,slow=8.7,SNR=4.5						
MKAR	**Makanchi Array**	**41.50**	**320**	P	P	15 07 22.1	+0.1
	0.7nm,0.8s,baz=128,slow=9.0,SNR=3.8						
ASAR	**Alice Springs**	**44.60**	**162**	P	P	15 07 48.2	+0.9
	0.3nm,0.5s,baz=342,slow=7.0,SNR=6.2						
KURK	**Kurchatov**	**45.50**	**324**	P	P	15 07 54.0	-0.2
	0.7nm,0.6s,baz=122,slow=7.0,SNR=6.9						

*ISCJB **30** 15:08:49.0±0.4, 37°.89N±0°.01×26°.62E±0°.02, h4km±3km, Error ellipse: s-maj=3.1km s-min=2.4km az=167.2*
*ISK **30** 15:08:48.7, 37°.89N×26°.63E, h5km, MD3.5*
*THE **30** 15:08:49.2, 37°.91N×26°.66E, h0km±1km, ML3.3/4, Error ellipse: s-maj=1.3km s-min=0.6km az=121.0*
*ATH **30** 15:08:49.3, 37°.88N×26°.65E, h24km, ML3.0*
*NEIC **30** 15:08:49.3, 37°.88N×26°.65E, h24km, ML3.0(ATH), After ATH.*
*CSEM **30** 15:08:49.1±0.1, 37°.88N×26°.59E, h2km, ML3.0, Error ellipse: s-maj=3.2km s-min=2.6km az=84.0*
*DDA **30** 15:08:49.3, 37°.90N×26°.69E, h27km±1km, Md3.5*

ISC 30 15:08:49.8±0.4, 37°.88N±0°.01×26°.62E±0°.02, h6km±3km, n175, σ0.97/227, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.25**	**135**	*e*Pb	**Pg**	15 08 55.5	+0.9
SMG				*e*Sb	**Sg**	15 08 59.6	+1.7
SMG	**Samos**	**0.25**	**135**	*e*PB	**Pg**	15 08 55.5	+0.9
SMG				*e*SB	**Sg**	15 08 59.6	+1.7
SMG	**Samos**	**0.25**	**135**	*e*Pb	**Pg**	15 08 55.5	+0.9
SMG				*e*Sb	**Sg**	15 08 59.6	+1.7
URLA	**Izmir**	**0.48**	**358**	*i* P	**Pg**	15 08 57.9	-1.1
URLA				*i* S	**Sg**	15 09 04.9	-0.4
URLA	**Izmir**	**0.48**	**358**	*i* P	**Pg**	15 08 57.9	-1.1
URLA				*i* S	**Sg**	15 09 04.9	-0.3
GCAM	**G?zelcaml?**	**0.52**	**110**	*i* P	**Pg**	15 09 00.0	+0.2
GCAM				*i* S	**Sg**	15 09 07.7	+1.1
GCAM	**G?zelcaml?**	**0.52**	**110**	*i* P	**Pg**	15 09 00.0	+0.1
GCAM				*i* S	**Sg**	15 09 07.7	+1.0
BLCB	**Balcova**	**0.60**	**34**	PG	**Pg**	15 09 00.5	-1.0
BLCB				*e*SG	**Sg**	15 09 09.2	-0.1
BLCB	**Balcova**	**0.60**	**34**	P	**Pg**	15 09 00.9	-0.5
BLCB				S	**Sg**	15 09 09.2	-0.1
BLCB	**Balcova**	**0.60**	**34**	*i* Pg	**Pg**	15 09 00.5	-0.9
BLCB	**Balcova**	**0.60**	**34**	P	**Pg**	15 09 00.9	-0.5
BLCB				S	**Sg**	15 09 09.2	-0.1
CHOS	**Chios island**	**0.67**	**319**	*e*PN	**Pg**	15 09 03.0	+0.3
CHOS				*e*SN	**Sg**	15 09 13.2	+1.8
CHOS	**Chios island**	**0.67**	**319**	P	**Pg**	15 09 03.0	+0.3
CHOS				S	**Sg**	15 09 13.3	+1.9
CHOS	**Chios island**	**0.67**	**319**	P	**Pg**	15 09 03.0	+0.3
CHOS				S	**Sg**	15 09 13.3	+1.9
IZM	**Izmir**	**0.72**	**45**	PG	**Pg**	15 09 02.9	-0.8
IZM				*e*SG	**Sg**	15 09 13.3	+0.2
KDAG	**Bornova**	**0.73**	**45**	*i* P	**Pg**	15 09 02.4	-1.4
KDAG				*i* S	**Sg**	15 09 12.7	-0.7
KDAG	**Bornova**	**0.73**	**45**	*i* P	**Pg**	15 09 02.4	-1.4
KDAG				*i* S	**Sg**	15 09 12.7	-0.6
BODT	**Bodrum**	**0.99**	**146**	*e*PG	**Pg**	15 09 08.0	-0.8
BODT	**Bodrum**	**0.99**	**146**	*e*Pg	**Pg**	15 09 08.0	-0.8
AYDN	**Tasoluk**	**1.03**	**102**	*i* P	**Pg**	15 09 09.2	-0.3
AYDN				*i* S	**Sg**	15 09 21.8	-1.0
AYDN	**Tasoluk**	**1.03**	**102**	*i* P	**Pg**	15 09 09.2	-0.3
AYDN				*i* S	**Sg**	15 09 21.8	-1.0
BDRM	**Kayabasi**	**1.05**	**141**	*i* P	**Pg**	15 09 10.1	+0.2
BDRM				*i* S	**Sg**	15 09 24.3	+0.8
BDRM	**Kayabasi**	**1.05**	**141**	*i* P	**Pg**	15 09 10.1	+0.2
BDRM				*i* S	**Sg**	15 09 24.3	+0.8
MLSB	**Milas**	**1.09**	**122**	*e*PN	**Pg**	15 09 10.5	-0.3
MLSB	**Milas**	**1.09**	**122**	*e*Pn	**Pg**	15 09 10.5	-0.3
APE	**Apeiranthos**	**1.19**	**227**	*e*PN	**Pn**	15 09 11.7	-1.1
APE	**Apeiranthos**	**1.19**	**227**	*e*Pn	**Pn**	15 09 11.7	-1.1
APE				*e*Sn	**Sn**	15 09 29.5	+0.3
APE	**Apeiranthos**	**1.19**	**227**	*e*PN	**Pn**	15 09 11.7	-1.1
APE				*e*SN	**Sn**	15 09 29.5	+0.3
APE	**Apeiranthos**	**1.19**	**227**	P	**Pg**	15 09 11.8	-0.7
APE				S	**Sg**	15 09 30.5	+2.6
APE	**Apeiranthos**	**1.19**	**227**	P	**Pg**	15 09 11.8	-0.7
APE				*e*Sn	**Sn**	15 09 29.5	+0.3
APE				S	**Sg**	15 09 30.5	+2.6
NIS1	**Nisyros Isl.**	**1.35**	**160**	P	**Pn**	15 09 14.1	-1.1
NIS1	**Nisyros Isl.**	**1.35**	**160**	P	**Pn**	15 09 14.1	-1.1
AKS	**Akhisar**	**1.37**	**43**	*e*PN	**Pn**	15 09 14.9	-0.5
AKS	**Akhisar**	**1.37**	**43**	*e*Pn	**Pn**	15 09 14.9	-0.5
AKHS	**Akhisar**	**1.37**	**43**	*i* P	**Pn**	15 09 14.7	-0.7
AKHS				*i* S	**Sb**	15 09 33.9	+0.4
AKHS	**Akhisar**	**1.37**	**43**	*i* P	**Pn**	15 09 14.7	-0.7
AKHS				*i* S	**Sb**	15 09 33.9	+0.4
DAT	**Datca**	**1.38**	**146**	*e*PN	**Pn**	15 09 14.8	-0.8
DAT	**Datca**	**1.38**	**146**	*e*Pn	**Pn**	15 09 14.8	-0.8
PRK	**Paraskevi**	**1.39**	**349**	*e*Pn	**Pn**	15 09 15.2	-0.4
PRK				*e*Sn	**Sn**	15 09 34.4	+0.1
PRK	**Paraskevi**	**1.39**	**349**	*e*PN	**Pn**	15 09 15.2	-0.4
PRK				*e*SN	**Sn**	15 09 34.4	+0.1
PRK	**Paraskevi**	**1.39**	**349**	P	**Pn**	15 09 14.3	-1.3
PRK				S	**Sb**	15 09 34.6	+0.6
PRK	**Paraskevi**	**1.39**	**349**	P	**Pn**	15 09 14.3	-1.3
PRK	**Paraskevi**	**1.39**	**349**	*e*Pn	**Pn**	15 09 15.2	-0.4
PRK				*e*Sn	**Sn**	15 09 34.4	+0.1
AYVA	**Ayvalik**	**1.42**	**2**	*i* P	**Pn**	15 09 14.6	-1.6
AYVA				*i* S	**Sb**	15 09 36.9	+1.8
AYVA	**Ayvalik**	**1.42**	**2**	*i* P	**Pn**	15 09 14.6	-1.5
AYVA				*i* S	**Sb**	15 09 36.9	+1.8
SIGR	**SIGRI**	**1.45**	**336**	P	**Pn**	15 09 15.4	-1.2
SIGR				S	**Sn**	15 09 35.3	-0.6
SIGR	**SIGRI**	**1.45**	**336**	P	**Pn**	15 09 15.4	-1.2
SIGR				S	**Sn**	15 09 35.3	-0.6
YER	**Yerkesik**	**1.52**	**119**	*e*PN	**Pn**	15 09 16.6	-0.8
YER	**Yerkesik**	**1.52**	**119**	*e*Pn	**Pn**	15 09 16.7	-0.8
KULA	**Kula-Manisa**	**1.73**	**68**	*e*PN	**Pn**	15 09 20.1	-0.2
KULA	**Kula-Manisa**	**1.73**	**68**	*e*Pn	**Pn**	15 09 20.1	-0.3
THR1	**Thera Island**	**1.77**	**212**	P	**Pn**	15 09 20.5	-0.4
THR1	**Thera Island**	**1.77**	**212**	P	**Pn**	15 09 20.5	-0.4
THR5	**Thira Island,**	**1.78**	**215**	P	**Pn**	15 09 20.5	-0.5
THR5	**Thira Island,**	**1.78**	**215**	P	**Pn**	15 09 20.5	-0.5
DENT	**Denizli**	**1.92**	**93**	*e*PN	**Pn**	15 09 22.9	-0.1
DENT	**Denizli**	**1.92**	**93**	*e*Pn	**Pn**	15 09 22.9	0.0
DNZL	**Cakiroluk**	**1.94**	**95**	*i* P	**Pn**	15 09 21.4	-1.5
DNZL				*i* S	**Sg**	15 09 51.5	-0.5
DNZL	**Cakiroluk**	**1.94**	**95**	*i* P	**Pn**	15 09 21.4	-1.8
DNZL				*i* S	**Sg**	15 09 51.5	-0.5
EZN	**Ezine**	**1.95**	**353**	*e*PN	**Pn**	15 09 23.8	+0.4
EZN	**Ezine**	**1.95**	**353**	*e*Pn	**Pn**	15 09 23.8	+0.4
BOZC	**Bozcaada**	**2.00**	**348**	*i* P	**Pn**	15 09 23.4	-0.8
BOZC				*i* S	**Sg**	15 09 54.6	+0.4
BALB	**Balikesir**	**2.01**	**29**	*e*PN	**Pn**	15 09 24.7	+0.5
BALB	**Balikesir**	**2.01**	**29**	*e*Pn	**Pn**	15 09 24.7	+0.4
BALY	**Balya**	**2.01**	**23**	*i* P	**Pn**	15 09 22.6	-1.7
BALY				*i* S	**Sn**	15 09 48.7	-1.0
BALY	**Balya**	**2.01**	**23**	*i* P	**Pn**	15 09 22.6	-1.6
BALY				*i* S	**Sn**	15 09 48.7	-1.0
DEMI	**Demirci**	**2.02**	**54**	*i* P	**Pn**	15 09 26.9	+2.6
DEMI				*i* S	**Sn**	15 09 52.3	+2.5
DEMI	**Demirci**	**2.02**	**54**	*i* P	**Pn**	15 09 26.9	+2.6
DEMI				*i* S	**Sn**	15 09 52.3	+2.5
ARG	**Arkhangelos**	**2.06**	**144**	*e*PN	**Pn**	15 09 24.8	0.0
ARG	**Arkhangelos**	**2.06**	**144**	*e*PN	**Pn**	15 09 24.8	0.0
ARG	**Arkhangelos**	**2.06**	**144**	P	**Pn**	15 09 24.3	-0.5
ARG	**Arkhangelos**	**2.06**	**144**	P	**Pn**	15 09 24.3	-0.5
ARG	**Arkhangelos**	**2.06**	**144**	*e*Pn	**Pn**	15 09 24.8	0.0
VLY	**Voula,Athens**	**2.23**	**270**	*e*Pb	**Pn**	15 09 27.8	+0.5
VLY	**Voula,Athens**	**2.23**	**270**	*e*PB	**Pn**	15 09 27.8	+0.5
VLY	**Voula,Athens**	**2.23**	**270**	*e*Pb	**Pn**	15 09 27.8	+0.5
DURS	**Dursunbey**	**2.25**	**40**	*i* P	**Pn**	15 09 25.9	-1.6
DURS				*i* S	**Sn**	15 09 58.8	+3.3
DURS	**Dursunbey**	**2.25**	**40**	*i* P	**Pn**	15 09 25.9	-1.6
DURS				*i* S	**Sn**	15 09 58.8	+3.3
ATH	**Athens Observa**	**2.29**	**273**	*e*Pn	**Pn**	15 09 27.5	-0.6
ATH	**Athens Observa**	**2.29**	**273**	*e*PN	**Pn**	15 09 27.5	-0.6
ATH	**Athens Observa**	**2.29**	**273**	*e*Pn	**Pn**	15 09 27.5	-0.6
LIA	**Limnos Island**	**2.30**	**331**	*e*Pn	**Pn**	15 09 28.2	0.0
LIA	**Limnos Island**	**2.30**	**331**	*e*PN	**Pn**	15 09 28.2	0.0
LIA	**Limnos Island**	**2.30**	**331**	P	**Pn**	15 09 27.2	-1.0
LIA	**Limnos Island**	**2.30**	**331**	P	**Pn**	15 09 27.2	-1.0
LIA	**Limnos Island**	**2.30**	**331**	*e*Pn	**Pn**	15 09 28.2	0.0
GONE	**Gonen-Balikesi**	**2.32**	**21**	*e*PN	**Pn**	15 09 28.9	+0.5
GONE	**Gonen-Balikesi**	**2.32**	**21**	*e*Pn	**Pn**	15 09 28.9	+0.5
KHAL	**Karahalli**	**2.32**	**77**	*i* P	**Pn**	15 09 26.4	-2.0
KHAL				*i* S	**Sn**	15 09 56.8	-0.5
KHAL	**Karahalli**	**2.32**	**77**	*i* P	**Pn**	15 09 26.4	-2.1
KHAL				*i* S	**Sn**	15 09 56.8	-0.5
KHL	**Karahalli**	**2.34**	**78**	*e*PN	**Pn**	15 09 28.4	-0.3
KHL	**Karahalli**	**2.34**	**78**	*e*Pn	**Pn**	15 09 28.4	-0.3
GADA	**Gvkgeada**	**2.37**	**347**	*e*PN	**Pn**	15 09 28.6	-0.5
GADA	**Gvkgeada**	**2.37**	**347**	*e*Pn	**Pn**	15 09 28.7	-0.5
KARP	**Karpathos**	**2.37**	**169**	*e*Pn	**Pn**	15 09 28.4	-0.8
KARP	**Karpathos**	**2.37**	**169**	*e*PN	**Pn**	15 09 28.4	-0.8
KARP	**Karpathos**	**2.37**	**169**	*e*Pn	**Pn**	15 09 28.4	-0.8
GLHS	**Glhisar (BURDU**	**2.41**	**107**	*e*PN	**Pn**	15 09 29.8	+0.2
GLHS	**Glhisar (BURDU**	**2.41**	**107**	*e*Pn	**Pn**	15 09 29.8	+0.2
GOLH	**Golhisar**	**2.43**	**105**	*i* P	**Pn**	15 09 26.7	-3.3
GOLH	**Golhisar**	**2.43**	**105**	*i* P	**Pn**	15 09 26.7	-3.2
NAIG	**Nisos Aigina**	**2.48**	**268**	*e*Pn	**Pn**	15 09 30.2	-0.4
NAIG	**Nisos Aigina**	**2.48**	**268**	*e*PN	**Pn**	15 09 30.2	-0.4
NAIG	**Nisos Aigina**	**2.48**	**268**	*e*Pn	**Pn**	15 09 30.2	-0.4
LPK	**Lapseki**	**2.49**	**3**	*e*PN	**Pn**	15 09 31.5	+0.7
LPK	**Lapseki**	**2.49**	**3**	*e*Pn	**Pn**	15 09 31.5	+0.7
GELI	**Tayfur-Gelibol**	**2.51**	**358**	*e*PN	**Pn**	15 09 30.7	-0.4
GELI	**Tayfur-Gelibol**	**2.51**	**358**	*e*Pn	**Pn**	15 09 30.7	-0.4
GDZ	**Gediz**	**2.55**	**61**	*i* P	**Pn**	15 09 34.1	+2.5
GDZ				*i* S	**Sn**	15 10 08.5	+5.5
GDZ	**Gediz**	**2.55**	**61**	*i* P	**Pn**	15 09 34.1	+2.5
GDZ				*i* S	**Sn**	15 10 08.5	+5.5
EDC	**Edincik**	**2.65**	**21**	*e*PN	**Pn**	15 09 33.5	+0.6
EDC	**Edincik**	**2.65**	**21**	*e*Pn	**Pn**	15 09 33.5	+0.6
BNT	**Bandirma**	**2.67**	**22**	*e*PN	**Pn**	15 09 33.0	-0.2
BNT	**Bandirma**	**2.67**	**22**	*e*Pn	**Pn**	15 09 33.0	-0.3
KCTX	**Karacabey (Bur**	**2.74**	**29**	*e*PN	**Pn**	15 09 34.4	+0.2
KCTX	**Karacabey (Bur**	**2.74**	**29**	*e*Pn	**Pn**	15 09 34.4	+0.2
ZKR	**Zakros**	**2.78**	**187**	*e*Pn	**Pn**	15 09 34.7	-0.1
ZKR	**Zakros**	**2.78**	**187**	*e*PN	**Pn**	15 09 34.7	-0.1
ZKR	**Zakros**	**2.78**	**187**	*e*Pn	**Pn**	15 09 34.7	-0.1
ERIK	**Erikli-Kesan**	**2.79**	**358**	*e*PN	**Pn**	15 09 34.2	-0.7
ERIK	**Erikli-Kesan**	**2.79**	**358**	*e*Pn	**Pn**	15 09 34.2	-0.7
RKY	**Sarkoy-Tekirda**	**2.83**	**9**	*e*PN	**Pn**	15 09 36.2	+0.7
RKY	**Sarkoy-Tekirda**	**2.83**	**9**	*e*Pn	**Pn**	15 09 36.3	+0.8
SART	**Tekirdag**	**2.84**	**9**	*i* P	**Pn**	15 09 33.3	-2.2

comp=Z,6.2nm,0.6s
RDF Al-Radifah 3.87 192 *e*P **Pn 15 25 30.9 +0.4**
RDF *e*S **Sn 15 26 16.0 -0.1**
QRN Al-Qurain 3.99 187 *e*P **Pn 15 25 32.1 -0.2**
QRN *e*S **Sn 15 26 18.6 -0.7**
IDMV Damavand 4.10 45 *e*Pn **Pn 15 25 33.8 0.0**
IDMV *e* 15 26 44.9
comp=Z,425nm,0.4s
ILAS Lasjerd 4.57 53 *e*Pn **Pn 15 25 39.5 -0.8**
ILAS *e* 15 25 47.7
comp=Z,265nm,0.1s
IPAR Pars 4.86 125 *e*Pn **Pn 15 25 44.3 +0.1**
IPAR *e* 15 27 05.9
comp=Z,181nm,0.4s
ISRV Sarvestan 5.19 129 *e*Pn **Pn 15 25 48.2 -0.6**
ISRV *e* 15 26 53.0
comp=Z,233nm,0.1s

*DDA **30** 15:26:31.7, 40°.29N×39°.57E, h7km±3km, Md3.2*
*ISCJB **30** 15:26:32.3±0.6, 40°.29N±0°.03×39°.64E±0°.05, h7km±6km, Error ellipse: s-maj=6.8km s-min=4.8km az=31.7*
*ISK **30** 15:26:32.0, 40°.29N×39°.64E, h9km, MD3.2*
*CSEM **30** 15:26:32.3±0.2, 40°.28N×39°.63E, h2km, MD3.2, Error ellipse: s-maj=4.7km s-min=4.2km az=110.0*
ISC 30 15:26:32.7±0.7, 40°.28N±0°.03×39°.66E±0°.05, h6km±6km, n33, σ0↑9.79/43, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMT	**Gumushane**	**0.22**	**323**		PG	**Pg**		**15 26 37.0**	**-0.1**
GUMT					eSG	**Sg**		**15 26 40.4**	**+0.4**
EZC	**Erzincan**	**0.58**	**204**	*e*PG		**Pg**		**15 26 43.4**	**-0.4**
MACK	**Trabzon**	**0.66**	**7**	*i* P		**Pg**		**15 26 45.8**	**+0.4**
MACK				*i* S		**Sg**		**15 26 54.4**	**+0.3**
MACK	**Trabzon**	**0.66**	**7**	*i* P		**Pg**		**15 26 45.8**	**+0.4**
MACK				*i* S		**Sg**		**15 26 54.3**	**+0.2**
KOPT	**Kop Dagi**	**0.70**	**112**	*i* P		**Pg**		**15 26 46.4**	**+0.3**
KOPT				*i* S		**Sg**		**15 26 48.2**	**-6.9**
KOPT	**Kop Dagi**	**0.70**	**112**	*i* P		**Pg**		**15 26 46.3**	**+0.2**
ESPY	**Espiye-Giresun**	**0.95**	**312**	*e*PG		**Pg**		**15 26 50.1**	**-0.7**
ESPY	**Espiye-Giresun**	**0.95**	**312**	*e*Pg		**Pg**		**15 26 50.2**	**-0.7**
GRSN	**GIRESUNGRSN**	**1.23**	**302**	*i* P		**Pg**		**15 26 53.9**	**-2.4**
GRSN				*i* S		**Sg**		**15 27 06.4**	**-6.0**
GRSN	**GIRESUNGRSN**	**1.23**	**302**	*i* P		**Pg**		**15 26 53.9**	**-2.4**
PZAR	**Pazar-Rize**	**1.30**	**46**	*e*PN		**Pn**		**15 26 57.0**	**-0.3**
PZAR				*e*SN		**Sn**		**15 27 14.4**	**-0.6**
PZAR	**Pazar-Rize**	**1.30**	**46**	*e*Pn		**Pn**		**15 26 57.0**	**-0.3**
PZAR				*e*Sn		**Sn**		**15 27 14.4**	**-0.6**
KEMA	**Kemaliye**	**1.35**	**222**	*i* P		**Pn**		**15 26 56.7**	**-1.4**
KEMA				*i* S		**Pg**		**15 26 59.2**	**+0.6**
KEMA	**Kemaliye**	**1.35**	**222**	*i* P		**Pn**		**15 26 56.7**	**-1.4**
EZM	**Erzurum**	**1.36**	**106**	*e*PN		**Pn**		**15 26 58.2**	**+0.1**
PTK	**Pertek**	**1.41**	**188**	*e*PN		**Pn**		**15 26 57.7**	**-1.1**
PTK	**Pertek**	**1.41**	**188**	*e*Pn		**Pn**		**15 26 57.7**	**-1.1**
DDEM	**Demirkent**	**1.71**	**68**	*i* P		**Pn**		**15 27 04.0**	**+1.0**
DDEM				*i* S		**Sn**		**15 27 24.1**	**-0.9**
DDEM	**Demirkent**	**1.71**	**68**	*i* P		**Pn**		**15 27 04.0**	**+1.1**
DDEM				*i* S		**Sn**		**15 27 24.1**	**-1.0**
BCA	**Borcka**	**1.89**	**51**	*e*PN		**Pn**		**15 27 06.3**	**+0.8**
BCA	**Borcka**	**1.89**	**51**	*e*Pn		**Pn**		**15 27 06.3**	**+0.9**
SVRC	**Sivrice-ELAZID**	**1.92**	**188**	*e*PN		**Pn**		**15 27 06.2**	**+0.4**
SVRC	**Sivrice-ELAZID**	**1.92**	**188**	*e*Pn		**Pn**		**15 27 06.2**	**+0.3**
SVSK	**Karacayir**	**2.07**	**261**	*e*PN		**Pn**		**15 27 08.3**	**+0.4**
SVSK	**Karacayir**	**2.07**	**261**	*e*Pn		**Pn**		**15 27 08.3**	**+0.4**
MYA	**Malataya**	**2.18**	**206**	*e*PN		**Pn**		**15 27 09.6**	**+0.3**
MYA	**Malataya**	**2.18**	**206**	*e*Pn		**Pn**		**15 27 09.6**	**+0.2**
MALT	**Malatya**	**2.19**	**206**	*e*PN		**Pn**		**15 27 10.0**	**+0.5**
MALT	**Malatya**	**2.19**	**206**	*e*Pn		**Pn**		**15 27 10.0**	**+0.5**
KVT	**Kavak**	**2.86**	**287**	*e*PN		**Pn**		**15 27 19.5**	**+0.8**
KVT	**Kavak**	**2.86**	**287**	*e*Pn		**Pn**		**15 27 19.5**	**+0.8**
YOZ	**Yozgat**	**3.39**	**260**	*e*PN		**Pn**		**15 27 27.2**	**+1.1**
YOZ	**Yozgat**	**3.39**	**260**	*e*Pn		**Pn**		**15 27 27.2**	**+1.1**

*DMN **30** 16:12:52.5±0.6, 31°.46N×83°.23E, h2km, Ml4.5/3, Error ellipse: s-maj=14.1km s-min=8.1km az=125.0*
*IDC **30** 16:12:53.9±0.9, 30°.69N×83°.22E, h0km, mb3.7/9, mb1 3.9/11, mb1mx3.7/28, mbtmp3.7/11, ML3.3/2, MS3.2/7, Ms1 3.2/7, ms1mx3.0/35, Error ellipse: s-maj=31.1km s-min=17.2km az=60.0*
*NEIC **30** 16:12:56.0±0.6, 30°.76N×83°.30E, h10km, mb3.5/2, Error ellipse: s-maj=14.5km s-min=7.2km az=224.0*
*ISCJB **30** 16:12:56.3±0.3, 31°.02N±0°.03×83°.35E±0°.04, h10km, mb3.6/9, MS3.0/4, Error ellipse: s-maj=5.5km s-min=3.9km az=138.5*
*NDI **30** 16:12:59.9±3.7, 30°.58N×83°.60E, h10km, ML3.4, mb3.5(NEIC)*
ISC 30 16:12:57.7±0.3, 30°.97N±0°.03×83°.29E±0°.03, h10km, n43, σ1↑13/47, mb3.6/9, MS3.1/5, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.64**	**171**	*e*Pn		**Pn**		**16 13 41.4**	**+1.1**
DANN				*e*Sn		**Sb**		**16 14 17.4**	**-0.1**
	1µm,0.7s								
GKN	**Gorkha**	**3.18**	**158**	*e*Pn		**Pn**		**16 13 48.5**	**+0.8**
GKN				*e*Sn		**Sn**		**16 14 29.3**	**+3.7**
	550nm,0.8s								
KOLN	**Koldanda**	**3.20**	**175**	*e*Pn		**Pn**		**16 13 49.1**	**+1.1**
KOLN				*e*Sn		**Sn**		**16 14 30.5**	**+4.4**
	431nm,0.6s								
JOSI	**Joshimath**	**3.24**	**264**	*e*PKP		**Pb**		**16 13 54.8**	**-0.5**
JOSI				*e*S		**Sb**		**16 14 35.1**	**+0.4**
JOSI					AML	AML		16 15 12.0	
	comp=N,517nm,0.9s								
JOSI					AML	AML		16 15 17.7	
	comp=E,356nm,1.1s								
KKN	**Kakani**	**3.61**	**151**	*e*Pn		**Pn**		**16 13 53.8**	**+0.2**
DMN	**Daman**	**3.70**	**154**	*e*Pn		**Pn**		**16 13 55.4**	**+0.5**
GUN	**Gumba**	**3.79**	**143**	*e*Pn		**Pn**		**16 13 56.2**	**+0.1**
PKIN	**Phulchoki**	**3.84**	**151**	*e*Pn		**Pn**		**16 13 57.0**	**+0.1**
PKI	**Pulchoki**	**3.86**	**151**	*e*Pn		**Pn**		**16 13 56.9**	**-0.1**
JIRN	**Jiri**	**4.15**	**142**	*e*Pn		**Pn**		**16 14 01.9**	**+0.8**
KLP	**Kalpa**	**4.36**	**279**	*e*PKP		**Pg**		**16 14 26.9**	**+5.8**
KLP				*e*S		**Sg**		**16 15 16.0**	**-1.6**
KLP					AML	AML		16 15 31.9	
	comp=N,40nm,0.6s								
KLP					AML	AML		16 15 32.3	
	comp=E,95nm,0.7s								
DDI	**Dehra Dun**	**4.56**	**263**	*e*PKP		**Pn**		**16 14 11.0**	**+4.3**
DDI				*ex*		**Pg**		**16 14 27.0**	**+2.0**
RAMN	**Ramite**	**4.94**	**143**	*e*Pn		**Pn**		**16 14 11.4**	**-0.5**
TAPN	**Taplejung**	**5.28**	**132**	*e*Pn		**Pn**		**16 14 16.0**	**-0.6**
ODAN	**Odare**	**5.44**	**138**	*e*Pn		**Pn**		**16 14 18.3**	**-0.6**
AYAN	**Aya Nagar**	**5.91**	**247**	*e*PKP		**Pn**		**16 14 28.7**	**+3.5**
KUDL	**Kundal**	**6.56**	**246**	*ex*		**Pn**		**16 14 33.3**	**-0.9**
KUDL				*e*S		**Sn**		**16 15 49.5**	**+0.5**
KUDL					AML	AML		16 16 36.7	
	comp=N,17nm,0.7s								
KUDL					AML	AML		16 16 37.9	
	comp=E,18nm,0.4s								
LSA	**Lhasa**	**6.91**	**99**	P		**Pn**		**16 14 39.2**	**+0.2**
	comp=E,15nm,0.8s								
KHET	**Khetri**	**7.13**	**248**	*e*PKP		**Pn**		**16 14 45.9**	**+3.8**
KHET				*e*S		**Sn**		**16 16 01.5**	**-1.6**
KBL	**Kabul**	**12.51**	**290**	*e*Pn		**Pn**		**16 15 57.0**	**+1.3**
	comp=E,12nm,0.9s								
AAK	**Ala-Archa**	**13.60**	**331**		LR	LR		16 22 06.7	
	comp=E,148nm,19.7s,baz=299,slow=40								
EKS2	**Erkin-Say**	**13.93**	**330**	*e*Pn		**Pn**		**16 16 17.3**	**+2.3**
	comp=E,2.5nm,0.9s								
HYB	**Hyderabad**	**14.16**	**199**	*i* P		**Pn**		**16 16 15.0**	**-3.4**
KKAR	**Karatay Array**	**15.82**	**324**	*e*Pn		**Pn**		**16 16 40.5**	**+0.1**
MK31	**Makanchi Array**	**15.82**	**357**	*e*P		**Pn**		**16 16 45.6**	**+5.2**
MKAR	**Makanchi Array**	**15.82**	**357**		Pn	**Pn**		**16 16 39.8**	**-0.7**
MKAR					LR	LR		16 23 49.2	
MKAR	**Makanchi Array**	**15.82**	**357**		Pn	**Pn**		**16 16 39.8**	**-0.6**
	comp=E,0.1nm,0.3s,baz=184,slow=12,SNR=2.8								
MKAR					LR	LR		16 23 49.2	
	comp=E,101nm,18.7s,baz=176,slow=41								
CHTO	**Chiang Mai**	**18.63**	**127**	*e*P		**Pn**		**16 17 12.3**	**-3.4**
	comp=E,2.5nm,1.0s								
CMAR	**Chiang Mai Arr**	**18.87**	**128**	P		**Pn**		**16 17 13.9**	**-4.8**
	comp=E,0.1nm,0.3s,baz=314,slow=10,SNR=20								
KURK	**Kurchatov**	**20.04**	**351**	P		**P**		**16 17 30.6**	**0.0**
	comp=E,2.6nm,1.1s,baz=177,slow=9.6,SNR=15								
KURK					LR	LR		16 26 21.6	
	comp=E,85nm,19.1s,MS3.1,baz=330,slow=40								
ZAA0	**Zalesovo Array**	**22.99**	**2**	*e*P		**P**		**16 18 03.1**	**+0.8**
ZALV	**Zalesovo Beam**	**22.99**	**2**	P		**P**		**16 18 03.1**	**+0.7**
	comp=E,0.4nm,0.4s,mb3.2,baz=197,slow=9.0,SNR=6.1								
ZALV					LR	LR		16 29 00.6	
	comp=E,11nm,19.7s,MS2.3,baz=68,slow=42								
BVAR	**Borovoye Array**	**23.96**	**341**	P		**P**		**16 18 12.0**	**+0.1**
	comp=E,0.7nm,0.6s,mb3.3,baz=154,slow=8.0,SNR=2.4								
SONM	**Songino Array**	**24.40**	**40**	P		**P**		**16 18 16.1**	**+0.1**
	comp=E,0.6nm,0.8s,mb3.1,baz=224,slow=8.1,SNR=2.8								
ABKAR	**Akbulak array**	**25.38**	**323**	*e*P		**P**		**16 18 24.9**	**0.0**
	comp=E,1.1nm,0.6s,mb3.6								
AKTO	**Aktyubinsk**	**27.08**	**323**		LR	LR		16 30 34.1	
	comp=E,68nm,21.3s,MS3.2,baz=306,slow=39								
KSRS	**Korea Array**	**37.20**	**68**		LR	LR		16 36 35.9	
	comp=E,40nm,20.5s,MS3.2,baz=245,slow=38								
FINES	**FINESS Array B**	**47.74**	**327**	P		**P**		**16 21 33.6**	**-0.8**
	comp=E,2.0nm,0.9s,mb4.2,baz=111,slow=7.7,SNR=2.2								
NOA	**NORSAR Array B**	**54.84**	**325**		LR	LR		16 47 34.0	
	comp=E,39nm,19.2s,MS3.5,baz=195,slow=38								
WRA	**Warramunga Arr**	**70.46**	**129**	P		**P**		**16 24 10.1**	**-2.4**
	comp=E,2.3nm,0.7s,mb4.2,baz=323,slow=6.3,SNR=30								
ASAR	**Alice Springs**	**72.82**	**132**	P		**P**		**16 24 23.7**	**-2.9**
	comp=E,0.6nm,0.7s,mb3.6,baz=320,slow=5.4,SNR=5.4								
TORD	**Torodi Ar. Bea**	**76.23**	**277**	P		**P**		**16 24 44.6**	**-2.2**
	comp=E,0.3nm,0.5s,mb3.5,baz=46,slow=4.2,SNR=2.4								
ILAR	**Eielson Array**	**76.89**	**20**	P		**P**		**16 24 49.4**	**-0.3**
	comp=E,0.6nm,1.0s,mb3.5,baz=287,slow=5.0,SNR=5.1								

*ISCJB **30** 16:31:10.1±0.7, 30°.7N±0°.1×83°.14E±0°.08, h10km, mb3.4/5, Error ellipse: s-maj=15.1km s-min=9.6km az=20.6*
*IDC **30** 16:31:11.1±1.5, 30°.70N×83°.38E, h0km, mb3.4/6, mb1 3.5/8, mb1mx3.3/27, mbtmp3.3/8, ML3.1/2, MS3.4/2, Ms1 3.4/2, ms1mx2.6/32, Error ellipse: s-maj=51.1km s-min=19.0km az=64.0*
*NEIC **30** 16:31:12.0±0.9, 30°.73N×83°.13E, h10km, mb3.7/1, Error ellipse: s-maj=21.1km s-min=11.5km az=223.0*
ISC 30 16:31:11.8±0.7, 30°.68N±0°.10×83°.09E±0°.09, h10km, n14, σ1↑16/12, mb3.4/5, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**4.36**	**267**	*ex*		**Pb**		**16 32 28.0**	**-0.6**
LSA	**Lhasa**	**7.04**	**96**	*e*Pn		**Pn**		**16 32 56.8**	**+1.8**
	6.6nm,0.8s								
KBL	**Kabul**	**12.45**	**292**	Pn		**Pn**		**16 34 09.9**	**+0.7**
AAK	**Ala-Archa**	**13.77**	**332**	LR		LR		16 40 21.8	
	comp=Z,69nm,19.2s,baz=0.3,slow=40								
MKAR	**Makanchi Array**	**16.10**	**358**	Pn		**Pn**		**16 34 56.8**	**-1.4**
	0.0nm,0.3s,baz=175,slow=11,SNR=2.2								
CMAR	**Chiang Mai Arr**	**18.84**	**127**	P		**Pn**		**16 35 31.3**	**-1.2**
	0.1nm,0.3s,baz=310,slow=9.3,SNR=6.3								
KURK	**Kurchatov**	**20.29**	**352**	*e*P		**P**		**16 35 46.2**	**-1.4**
	5.9nm,1.4s								
KURK	**Kurchatov**	**20.29**	**352**	P		**P**		**16 35 47.5**	**-0.1**
	0.7nm,0.8s,baz=166,slow=10,SNR=7.4								
ZALV	**Zalesovo Beam**	**23.29**	**3**	P		**P**		**16 36 21.4**	**+1.7**
	0.3nm,0.4s,mb3.1,baz=174,slow=5.8,SNR=3.0								
SONM	**Songino Array**	**24.73**	**40**	P		**P**		**16 36 31.8**	**-1.4**
	0.1nm,0.2s,mb2.9,baz=255,slow=9.9,SNR=3.0								
FINES	**FINESS Array B**	**47.88**	**327**	P		**P**		**16 39 51.1**	**+1.3**
	1.5nm,0.8s,mb4.1,baz=91,slow=12,SNR=2.4								
ASAJ	**Asahikawa**	**48.16**	**56**	LR		LR		16 59 52.0	
	comp=Z,91nm,19.6s,baz=36,slow=36								
WRA	**Warramunga Arr**	**70.42**	**129**	P		**P**		**16 42 26.7**	**+0.3**
	1.2nm,0.9s,mb3.8,baz=321,slow=6.4,SNR=7.2								
ASAR	**Alice Springs**	**72.75**	**132**	P		**P**		**16 42 40.1**	**-0.3**
	0.3nm,0.8s,mb3.3,baz=308,slow=6.1,SNR=2.8								

IDC 30 16:39:58.7±1.8, 4°.36S×152°.38E, h0km, mb3.4/5, mb1 3.7/5, mb1mx3.5/17, mbtmp3.5/5, Error ellipse: s-maj=65.6km s-min=25.7km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.43**	**227**	P		P		16 45 09.8	+0.1
	0.6nm,0.3s,baz=52,slow=9.7,SNR=13								
ASAR	**Alice Springs**	**26.20**	**221**	P		P		16 45 36.4	+1.1
	0.3nm,0.7s,baz=57,slow=9.0,SNR=3.3								
FITZ	**Fitzroy Crossi**	**29.51**	**240**	P		P		16 46 03.4	-1.5
	0.6nm,0.3s,baz=54,slow=9.1,SNR=6.9								
CMAR	**Chiang Mai Arr**	**57.31**	**295**	P		P		16 49 49.5	+0.7
	0.5nm,0.6s,baz=121,slow=6.0,SNR=4.5								
ILAR	**Eielson Array**	**81.91**	**22**	P		P		16 52 19.5	-0.2
	0.1nm,0.5s,baz=232,slow=4.4,SNR=3.6								

*ISCJB **30** 16:43:22.9±0.9, 29°.8N±0°.1×90°.43E±0°.09, h10km, mb3.9/6, MS2.8/2, Error ellipse: s-maj=16.6km s-min=7.7km az=30.0*
*IDC **30** 16:43:22.3±1.6, 29°.70N×90°.04E, h0km, mb3.9/6, mb1 4.1/8, mb1mx3.8/26, mbtmp3.9/8, ML3.4/2, MS2.9/2, Ms1 2.9/2, ms1mx2.6/35, Error ellipse: s-maj=64.1km s-min=17.6km az=29.0*
*BJI **30** 16:43:27.9, 30°.05N×90°.67E, h5km, mB4.2/1, mb4.2/3, ML3.5/2, Ms3.7/2, Ms7 3.7/2*
ISC 30 16:43:24.9±0.9, 29°.9N±0°.1×90°.5E±0°.1, h10km, n10, σ0↑95/10, mb3.9/6, MS2.8/2, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**0.58**	**107**			**Pg**	**Pg**	**16 43 35.5**	**-0.7**
LSA						Sg	**Sg**	**16 43 43.5**	**-0.3**
LSA						smax			
	comp=N,4µm,0.6s								
LSA						smax			
	comp=E,400nm,0.5s								
CMAR	**Chiang Mai Arr**	**13.71**	**144**	Pn		**Pn**		**16 46 39.6**	**+0.1**
	comp=E,0.1nm,0.3s,baz=318,slow=12,SNR=20								
MKAR	**Makanchi Array**	**18.07**	**342**	P		**Pn**		**16 47 35.5**	**-0.4**
	comp=E,0.1nm,0.3s,baz=155,slow=12,SNR=11								
SONM	**Songino Array**	**21.72**	**30**	P		**P**		**16 48 18.8**	**+2.7**
	comp=E,7.4nm,0.9s,mb4.1,baz=217,slow=12,SNR=40								
SONM					LR	LR		16 58 43.4	
	comp=E,22nm,20.5s,MS2.5,baz=66,slow=42								
KURK	**Kurchatov**	**22.66**	**340**	P		**P**		**16 48 24.5**	**-1.6**
	comp=E,1.3nm,0.8s,mb3.4,baz=145,slow=11,SNR=7.1								
ZALV	**Zalesovo Beam**	**24.42**	**352**	P		**P**		**16 48 43.0**	**-0.3**
	comp=E,0.8nm,0.6s,mb3.3,baz=170,slow=18,SNR=6.2								
KSRS	**Korea Array**	**31.89**	**66**		LR	LR		17 04 42.8	
	comp=E,29nm,18.4s,MS3.0,baz=225,slow=40								
WRA	**Warramunga Arr**	**65.07**	**134**	P		**P**		**16 54 05.8**	**+0.1**
	comp=E,2.0nm,0.6s,mb4.3,baz=324,slow=6.7,SNR=18								
ASAR	**Alice Springs**	**67.61**	**137**	P		**P**		**16 54 22.3**	**+0.4**
	comp=E,1.5nm,0.7s,mb4.1,baz=323,slow=6.7,SNR=16								
ILAR	**Eielson Array**	**75.69**	**22**	P		**P**		**16 55 11.2**	**+1.0**
	comp=E,1.1nm,0.9s,mb3.8,baz=302,slow=5.6,SNR=14								

CASC 30 16:43:53.5±1.4, 12°.58N×88°.28W, h38km±148km, MD3.8, ML3.6, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.82**	**32**	*i* P		Pn		16 44 09.0	+0.4
CNCH				*e*S		Sn		16 44 21.2	+1.7
VSM	**San Miguel**	**0.85**	**1**	*i* P		Pn		16 44 09.6	+0.6
VSM				*e*S		Sn		16 44 21.1	+0.9
BLLM	**Bellamira**	**0.86**	**3**	*i* P		Pn		16 44 09.2	0.0
BLLM				*e*S		Sn		16 44 21.9	+1.3
SNVI	**San Vicente**	**1.16**	**332**	*i* P		Pn		16 44 13.5	+0.2
SNVI				*e*S		Sn		16 44 28.1	+0.1
CAHU	**Cacacuatique**	**1.19**	**3**	*i* P		Pn		16 44 14.3	+0.6
CAHU				*e*S		Sn		16 44 30.9	+2.3
CRIN	**San Cristobal**	**1.21**	**84**	*e*P		Pn		16 44 13.0	+0.4
CRIN				*e*S		Sn		16 44 30.4	+1.3
CRIN					AML	AML		16 44 33.0	
	comp=N,2µm,0.3s								
LFRS	**El Faro**	**1.29**	**324**	*i* P		Pn		16 44 14.9	-0.1
LFRS				*e*S		Sn		16 44 30.9	-0.1
BOQS	**Boqueron**	**1.51**	**320**	*e*P		Pn		16 44 18.9	+0.9
BOQS				*e*S		Sn		16 44 37.7	+1.3
CNGN	**Cerro Negro**	**1.55**	**93**	*e*P		Pn		16 44 18.5	-0.1
CNGN				*e*S		Sn		16 44 37.6	+0.1
CNGN					AML	AML		16 44 39.1	
	comp=E,412nm,0.4s								
TGUH	**Tegucigalpa,Un**	**1.77**	**34**	*e*P		Pn		16 44 22.2	+0.5
SBLS	**San Blas**	**1.81**	**314**	*e*P		Pn		16 44 23.4	+1.1
SBLS				*e*S		Sn		16 44 45.8	+1.9
CSAN		**1.86**	**102**	*e*P		Pn		16 44 22.8	0.0
RBDL	**Robledal**	**2.05**	**318**	*e*P		Pn		16 44 26.2	+0.7
HUEN		**2.08**	**96**	*e*P		Pn		16 44 25.5	-0.3
TICN	**Ticuantepe**	**2.08**	**105**	*e*P		Pn		16 44 26.2	+0.4

*CSEM **30** 16:49:20.1, 39°.02N×29°.14W, h0km, ML2.2, After PDA*
PDA 30 16:49:20.1±0.5, 39°.02N×29°.14W, h0km±12km, ML2.2, Error ellipse: s-maj=16.6km s-min=5.0km az=102.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.52**	**139**	*e*P		Pg		16 49 29.5	-0.6
PCED				*e*S		Sg		16 49 36.6	-0.2
PCED				A				16 49 37.1	
	21nm,0.1s								
PCED	**Cedros**	**0.52**	**139**	*e*P		Pg		16 49 29.5	-0.6
PCED				*e*S		Sg		16 49 36.6	-0.2
CALA	**Caldeira**	**0.56**	**142**	*e*P		Pg		16 49 30.1	-0.6
CALA	**Caldeira**	**0.56**	**142**	*e*P		Pg		16 49 30.1	-0.6
PCAN	**Candelaria**	**0.76**	**137**	*e*P		Pg		16 49 33.0	-1.6
PCAN				*e*S		Sg		16 49 42.9	-1.5
PCAN				A				16 49 43.8	
	49nm,0.1s								
PCAN	**Candelaria**	**0.76**	**137**	*e*P		Pg		16 49 33.0	-1.6
PCAN				*e*S		Sg		16 49 42.9	-1.5
ROSA	**Rosais**	**0.76**	**113**	*e*P		Pg		16 49 33.2	-1.5
ROSA	**Rosais**	**0.76**	**113**	*e*P		Pg		16 49 33.2	-1.5
PICO	**Pico**	**0.76**	**133**	*e*P		Pg		16 49 33.4	-1.3
PICO	**Pico**	**0.76**	**133**	*e*P		Pg		16 49 33.4	-1.3
PMAN	**Manadas**	**0.91**	**115**	*e*S		Sg		16 49 46.4	-2.8
PMAN				A				16 49 47.6	
	18nm,0.1s								
PMAN	**Manadas**	**0.91**	**115**	*e*S		Sg		16 49 46.4	-2.8

*ISCJB **30** 16:49:21.7±0.7, 37°.64N±0°.03×21°.26E±0°.05, h3km±8km, Error ellipse: s-maj=6.1km s-min=4.1km az=165.9*
*CSEM **30** 16:49:22.1±0.5, 37°.63N×21°.23E, h2km, ML3.5, Error ellipse: s-maj=9.3km s-min=5.6km az=62.0*
*NEIC **30** 16:49:23.5, 37°.64N×21°.30E, h10km, ML3.5(ATH), After ATH.*
*ATH **30** 16:49:23.5, 37°.64N×21°.30E, h10km±2km, ML3.5*
ISC 30 16:49:22.7±0.6, 37°.64N±0°.03×21°.26E±0°.04, h13km±6km, n54, σ1↑18/80, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.45**	**21**	*e*Pg		**Pg**		**16 49 31.4**	**-0.1**
RLS				*e*Sb		**Sg**		**16 49 38.0**	**+0.5**
RLS	**Riolos of Patr**	**0.45**	**21**	*e*PG		**Pg**		**16 49 31.4**	**-0.1**
RLS				*e*SB		**Sg**		**16 49 38.0**	**+0.5**
RLS	**Riolos of Patr**	**0.45**	**21**	*e*Pg		**Pg**		**16 49 31.4**	**-0.1**
RLS				*e*Sb		**Sg**		**16 49 38.0**	**+0.5**
ITM	**Ithomi**	**0.70**	**131**	*e*Pb		**Pg**		**16 49 36.1**	**-0.2**
ITM				*e*Sb		**Sg**		**16 49 46.5**	**+1.0**
ITM	**Ithomi**	**0.70**	**131**	*e*PB		**Pg**		**16 49 36.1**	**-0.2**
ITM				*e*SB		**Sg**		**16 49 46.5**	**+1.0**
ITM	**Ithomi**	**0.70**	**131**	*e*Pb		**Pg**		**16 49 36.1**	**-0.2**
ITM				*e*Sb		**Sg**		**16 49 46.5**	**+1.0**
VLS	**Valsamata**	**0.76**	**315**	*e*Pb		**Pg**		**16 49 38.6**	**+1.2**
VLS	**Valsamata**	**0.76**	**315**	*e*PB		**Pg**		**16 49 38.6**	**+1.2**
VLS	**Valsamata**	**0.76**	**315**	*e*Pb		**Pg**		**16 49 38.6**	**+1.2**
UPR	**University Cam**	**0.76**	**33**	*e*PB		**Pg**		**16 49 37.8**	**+0.3**
UPR				*e*SB		**Sg**		**16 49 48.5**	**+1.0**
UPR	**University Cam**	**0.76**	**33**	*e*Pb		**Pg**		**16 49 37.8**	**+0.3**
UPR				*e*Sb		**Sg**		**16 49 48.5**	**+1.0**
PYL	**PYLOS**	**0.84**	**153**	*e*PB		**Pg**		**16 49 38.3**	**-0.6**
PYL				*e*SB		**Sg**		**16 49 51.3**	**+1.5**
**

ADH	**Angra Heroismo**	**1.52**	**102**	*eP*	Pn	16 50 20.3	-4.5
BART	**Pico Bartolome**	**3.34**	**110**	*eP*	Pn	16 50 45.7	-4.2
BART	**Pico Bartolome**	**3.34**	**110**	*eP*	Pn	16 50 45.7	-4.2
PSMA	**Santa Maria**	**3.74**	**121**	*eP*	Pn	16 50 51.1	-4.3
PSMA				*eS*	Sn	16 51 31.2	-8.9
PSMA				A		16 51 33.6	
	6.0nm,0.1s						
PSMN	**Pico do Norte,**	**3.77**	**121**	*eP*	Pn	16 50 51.3	-4.6
PSMN	**Pico do Norte,**	**3.77**	**121**	*eP*	Pn	16 50 51.3	-4.6

*IDC **30** 17:05:41.6±1.1, 6°.31S×150°.46E, h0km, mb4.1/7, mb1 4.4/7, mb1mx4.0/16, mbtmp4.2/7, MS3.4/5, Ms1 3.4/5, ms1mx3.0/26, Error ellipse: s-maj=49.4km s-min=20.8km az=122.0*
*ISCJB **30** 17:05:48.2±3.3, 6°.4S±0°.1×150°.3E±0°.2, h61km±28km, mb4.1/8, Error ellipse: s-maj=26.3km s-min=22.4km az=12.6*
*NEIC **30** 17:05:49.1±2.6, 6°.36S×150°.35E, h54km±23km, mb4.5/2, Error ellipse: s-maj=22.6km s-min=17.6km az=110.0*

ISC 30 17:05:49.6±3.2, 6°.4S±0°.1×150°.2E±0°.1, h55km±27km, n21, σ1°09/18, mb4.1/8, MS3.3/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.25**	**225**	*e*Pn	**Pn**	**17 06 53.1**	**+1.2**
PMG				*e*Sn	**Sn**	**17 07 38.6**	**-1.5**
HNR	**Honiara**	**10.10**	**108**	LR	LR	17 11 13.2	
	comp=Z,163nm,19.0s,baz=169,slow=34						
CTAO	**Charters Tower**	**14.13**	**195**	Pn	**Pn**	**17 08 58.6**	**-8.3**
EIDS	**Eidsvold**	**18.87**	**178**	*e*P	**Pn**	**17 10 02.9**	**-3.6**
EIDS	**Eidsvold**	**18.87**	**178**	*e*P	**Pn**	**17 10 05.4**	**-1.1**
	18nm,1.1s						
RMQ	**Roma**	**20.01**	**184**	*e*P	**P**	**17 10 18.4**	**+0.5**
	14nm,0.9s						
WRA	**Warramunga Arr**	**20.46**	**227**	P	**P**	**17 10 24.0**	**+1.1**
	17nm,0.7s,baz=52,slow=11,SNR=69						
GUMO	**Guam**	**20.57**	**345**	*e*P	**P**	**17 10 15.0**	**-9.0**
GUMO	**Guam**	**20.57**	**345**	LR	LR	17 16 35.4	
	comp=Z,64nm,18.4s,MS3.0,baz=267,slow=32						
KNA	**Kununurra**	**22.98**	**244**	*e*P	**P**	**17 10 48.5**	**-1.3**
	7.2nm,0.7s,mb4.2						
ASAR	**Alice Springs**	**23.25**	**221**	P	**P**	**17 10 53.1**	**+0.6**
	3.8nm,0.9s,mb3.8,baz=56,slow=9.7,SNR=21						
STKA	**Stephens Creek**	**26.59**	**197**	*e*P	**P**	**17 11 22.6**	**-0.1**
	6.0nm,1.0s,mb4.1						
STKA	**Stephens Creek**	**26.59**	**197**	P	**P**	**17 11 23.0**	**+0.2**
	9.3nm,1.0s,mb4.3,baz=349,slow=12,SNR=6.0						
STKA				LR	LR	17 22 28.8	
	comp=Z,142nm,21.5s,MS3.5,baz=22,slow=38						
FITZ	**Fitzroy Crossi**	**26.64**	**242**	*e*P	**P**	**17 11 23.1**	**-0.3**
	6.1nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**26.64**	**242**	P	**P**	**17 11 24.3**	**+1.0**
	2.9nm,0.7s,mb3.9,baz=89,slow=8.6,SNR=7.5						
FITZ				LR	LR	17 23 44.7	
	comp=Z,91nm,19.3s,MS3.3,baz=268,slow=40						
MBWA	**Marble Bar**	**32.94**	**241**	*e*Pn	**P**	**17 12 19.5**	**+0.3**
	18nm,1.4s,mb4.8						
CBIJ	**Chichi jima**	**34.20**	**347**	LR	LR	17 24 58.2	
	comp=Z,84nm,20.6s,MS3.5,baz=116,slow=34						
SONM	**Songino Array**	**66.35**	**329**	P	**P**	**17 16 33.1**	**+0.6**
	0.8nm,1.0s,mb3.7,baz=15,slow=6.5,SNR=4.0						
ILAR	**Eielson Array**	**84.61**	**23**	P	**P**	**17 18 14.1**	**-2.7**
	0.7nm,0.8s,mb3.8,baz=259,slow=5.0,SNR=7.2						
NVAR	**Mina Array Bea**	**95.10**	**52**	P	**P**	**17 19 07.5**	**+0.5**
	0.6nm,0.7s,mb4.2,baz=232,slow=7.3,SNR=5.6						
TORD	**Torodi Ar. Bea**	**148.29**	**285**	PKPbc	PKPbc	17 25 31.1	+0.3
	2.1nm,0.6s,baz=64,slow=2.7,SNR=12						

IDC 30 17:14:29.6±2.5, 7°.38S×119°.15E, h0km, mb3.0/2, mb1 3.1/3, mb1mx3.0/19, mbtmp3.0/3, ML3.0/1, Error ellipse: s-maj=246.8km s-min=26.2km az=53.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.31**	**132**	P	Pn	17 18 56.5	-0.8
	0.1nm,0.3s,baz=307,slow=12,SNR=2.6						
ASAR	**Alice Springs**	**21.51**	**140**	P	P	17 19 20.4	+0.1
	0.2nm,0.5s,baz=318,slow=9.1,SNR=6.1						
MKAR	**Makanchi Array**	**63.10**	**332**	P	P	17 24 58.9	+0.1
	0.2nm,0.7s,baz=157,slow=7.8,SNR=2.5						

*IDC **30** 17:22:30.6±1.5, 2°.44S×138°.89E, h0km, mb3.6/4, mb1 4.0/5, mb1mx3.6/15, mbtmp3.7/5, ML4.2/1, Error ellipse: s-maj=64.2km s-min=23.4km az=103.0*

NEIC 30 17:22:32.3±1.0, 2°.46S×138°.81E, h10km, Error ellipse: s-maj=40.9km s-min=12.8km az=100.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WB2	**Warramunga Arr**	**17.92**	**194**	*e*Pn	Pn	17 29 42.1	+0.4
WB2				*e*Sn	Sn	17 29 46.3	-15
WRA	**Warramunga Arr**	**17.92**	**194**	P	Pn	17 26 41.3	-0.5
	0.8nm,0.3s,baz=18,slow=12,SNR=31						
WRA				S	Sn	17 29 47.1	-15
	0.4nm,0.3s,baz=13,slow=23,SNR=7.8						
FITZ	**Fitzroy Crossi**	**20.21**	**219**	P	P	17 27 07.6	0.0
	2.2nm,1.0s,baz=46,slow=9.7,SNR=4.2						
FITZ				S	S	17 30 39.6	-15
	3.0nm,0.5s,baz=213,slow=12,SNR=8.5						
ASAR	**Alice Springs**	**21.61**	**192**	P	P	17 27 23.0	+0.3
	3.1nm,0.7s,baz=20,slow=11,SNR=40						
ASAR				S	S	17 31 11.8	-10
	0.5nm,0.7s,baz=13,slow=25,SNR=3.0						
MKAR	**Makanchi Array**	**69.65**	**322**	P	P	17 33 42.1	+0.1
	0.6nm,0.7s,baz=117,slow=5.0,SNR=4.8						
ILAR	**Eielson Array**	**85.56**	**24**	P	P	17 35 10.6	0.0
	0.2nm,0.7s,baz=248,slow=4.5,SNR=3.1						

*IDC **30** 17:28:34.5±2.4, 8°.09N×126°.36E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/20, mbtmp3.4/3, Error ellipse: s-maj=180.9km s-min=26.8km az=66.0*
*MAN **30** 17:28:34, 8°.29N×127°.32E, h26km, mb4.6, ML3.4, MS3.4*
*ISCJB **30** 17:28:37.5±2.5, 8°.21N±0°.07×127°.1E±0°.2, h48km±24km, mb3.4/3, Error ellipse: s-maj=32.6km s-min=9.2km az=164.9*

ISC 30 17:28:38.8±2.6, 8°.20N±0°.07×127°.1E±0°.2, h41km±27km, n9, σ0°97/14, mb3.4/3, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.49**	**214**	*e*P	**Pn**	**17 29 01.7**	**-1.4**
MATI				*e*S	**Sn**	**17 29 20.5**	**-0.9**
BUTP	**Butuan**	**1.64**	**298**	*e*P	**Pn**	**17 29 05.1**	**-0.1**
BUTP				*e*S	**Sn**	**17 29 24.6**	**-0.5**
DMPH	**Davao City--Mi**	**1.92**	**235**	*i*P	**Pn**	**17 29 10.5**	**+1.5**
DMPH				*i*S	**Sn**	**17 29 26.6**	**-5.3**
BUKP	**Musuan**	**2.03**	**261**	*e*P	**Pn**	**17 29 11.6**	**+1.0**
BUKP				*e*S	**Sn**	**17 29 39.0**	**+4.3**
SCPH	**Surigao**	**2.23**	**315**	*e*P	**Pn**	**17 29 12.4**	**-1.0**
SCPH				*e*S	**Sn**	**17 29 40.1**	**+0.5**
CGP	**Cagayan de Oro**	**2.38**	**276**	*e*P	**Pn**	**17 29 16.0**	**+0.6**
WRA	**Warramunga Arr**	**28.86**	**166**	P	**P**	**17 34 37.3**	**+3.7**
	0.7nm,0.6s,mb3.6,baz=345,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**32.36**	**168**	P	**P**	**17 35 04.9**	**+0.4**
	0.1nm,0.6s,mb2.9,baz=340,slow=7.2,SNR=3.5						
MKAR	**Makanchi Array**	**54.16**	**323**	P	**P**	**17 37 59.0**	**-0.9**
	0.4nm,0.4s,mb3.7,baz=119,slow=7.2,SNR=6.5						

*ISCJB **30** 17:40:22.7±1.1, 35°.87N±0°.05×24°.53E±0°.05, h68km±15km, Error ellipse: s-maj=8.5km s-min=7.1km az=174.6*
*NEIC **30** 17:40:22.3, 35°.96N×24°.56E, h46km, MD3.1(ATH), After ATH.*
*ATH **30** 17:40:22.3, 35°.96N×24°.56E, h46km±35km, MD3.1/6*
*CSEM **30** 17:40:23.0±0.2, 35°.87N×24°.52E, h66km±3km, MD3.1, Error ellipse: s-maj=3.3km s-min=2.8km az=2.0*
*THE **30** 17:40:25.2, 35°.85N×24°.61E, h32km±21km, Error ellipse: s-maj=21.1km s-min=0.7km az=259.0*

ISC 30 17:40:23.2±1.1, 35°.87N±0°.05×24°.53E±0°.05, h66km±16km, n31, σ0°38/48, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAM	**Vamos**	**0.54**	**210**	*e*P	**Pn**	**17 40 36.1**	**+0.1**
VAM				*e*S	**Sn**	**17 40 45.4**	**0.0**
VAM	**Vamos**	**0.54**	**210**	*e*P	**Pn**	**17 40 36.1**	**+0.1**
VAM				*e*S	**Sn**	**17 40 45.4**	**0.0**
VAM	**Vamos**	**0.54**	**210**	*e*P	**Pn**	**17 40 36.1**	**+0.1**
VAM				*e*S	**Sn**	**17 40 45.4**	**0.0**
KARN	**Karanos**	**0.69**	**227**	*e*P	**Pn**	**17 40 38.0**	**+0.4**
KARN				*e*S	**Sn**	**17 40 48.6**	**+0.3**
KARN	**Karanos**	**0.69**	**227**	P	**Pn**	**17 40 38.0**	**+0.4**
KARN				*S*	**Sn**	**17 40 48.6**	**+0.3**
KARN	**Karanos**	**0.69**	**227**	*e*P	**Pn**	**17 40 38.0**	**+0.4**
KARN				*e*S	**Sn**	**17 40 48.6**	**+0.3**
THR5	**Thira Island,**	**0.86**	**50**	P	**Pn**	**17 40 39.5**	**-0.2**
THR5	**Thira Island,**	**0.86**	**50**	P	**Pn**	**17 40 39.5**	**-0.2**
SIVA	**Sivas**	**0.88**	**165**	P	**Pn**	**17 40 40.2**	**+0.2**
SIVA				S	**Sn**	**17 40 52.0**	**-0.4**
SIVA	**Sivas**	**0.88**	**165**	P	**Pn**	**17 40 40.2**	**+0.2**
SIVA				S	**Sn**	**17 40 52.0**	**-0.4**
THR3	**Thira Island,**	**0.89**	**52**	P	**Pn**	**17 40 40.2**	**+0.2**
THR3	**Thira Island,**	**0.89**	**52**	P	**Pn**	**17 40 40.2**	**+0.2**
THR1	**Thera Island**	**0.90**	**56**	P	**Pn**	**17 40 40.3**	**+0.1**
THR1				S	**Sn**	**17 40 52.5**	**-0.4**
THR1	**Thera Island**	**0.90**	**56**	P	**Pn**	**17 40 40.3**	**+0.1**
THR1				S	**Sn**	**17 40 52.5**	**-0.4**
LAST	**Lasithi**	**1.05**	**132**	*e*P	**Pn**	**17 40 42.1**	**0.0**
LAST				*e*S	**Sn**	**17 40 56.1**	**0.0**
LAST	**Lasithi**	**1.05**	**132**	*e*P	**Pn**	**17 40 42.1**	**0.0**
LAST				*e*S	**Sn**	**17 40 56.1**	**0.0**
LAST	**Lasithi**	**1.05**	**132**	P	**Pn**	**17 40 42.2**	**+0.1**
LAST				S	**Sn**	**17 40 54.7**	**-1.4**
LAST	**Lasithi**	**1.05**	**132**	P	**Pn**	**17 40 42.2**	**+0.1**
LAST				*e*S	**Sn**	**17 40 56.1**	**0.0**
NPS	**Neapolis**	**1.07**	**124**	*e*P	**Pn**	**17 40 42.1**	**-0.2**
NPS				*e*S	**Sn**	**17 40 56.9**	**+0.3**
NPS	**Neapolis**	**1.07**	**124**	*e*P	**Pn**	**17 40 42.1**	**-0.2**
NPS				*e*S	**Sn**	**17 40 56.9**	**+0.3**
NPS	**Neapolis**	**1.07**	**124**	*e*P	**Pn**	**17 40 42.1**	**-0.2**
NPS				*e*S	**Sn**	**17 40 56.9**	**+0.3**
KYTH	**Kithira**	**1.28**	**289**	*e*P	**Pn**	**17 40 44.6**	**-0.5**
KYTH	**Kithira**	**1.28**	**289**	*e*P	**Pn**	**17 40 44.6**	**-0.5**
KYTH	**Kithira**	**1.28**	**289**	*e*P	**Pn**	**17 40 44.6**	**-0.5**
APE	**Apeiranthos**	**1.44**	**34**	P	**Pn**	**17 40 48.1**	**+0.9**
APE	**Apeiranthos**	**1.44**	**34**	P	**Pn**	**17 40 48.1**	**+0.9**
VLI	**Veliai**	**1.54**	**304**	*e*P	**Pn**	**17 40 48.0**	**-0.5**
VLI	**Veliai**	**1.54**	**304**	*e*P	**Pn**	**17 40 48.0**	**-0.5**
VLI	**Veliai**	**1.54**	**304**	*e*P	**Pn**	**17 40 48.0**	**-0.5**
ZKR	**Zakros**	**1.57**	**118**	P	**Pn**	**17 40 48.9**	**0.0**
ZKR	**Zakros**	**1.57**	**118**	P	**Pn**	**17 40 48.9**	**0.0**

*PGC **30** 17:46:11.7±2.6, 49°.91N×130°.02W, h10km, ML3.2/10, Mw3.8, 204km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **30** 17:46:14.1±0.7, 50°.16N±0°.04×129°.61W±0°.09, h10km, mb3.7/4, MS3.4/2, Error ellipse: s-maj=8.6km s-min=5.6km az=152.4*
*IDC **30** 17:46:14.9±1.4, 50°.10N×129°.51W, h0km, mb3.8/4, mb1 4.0/9, mb1mx3.7/27, mbtmp3.8/9, ML3.7/5, MS3.2/6, Ms1 3.2/6, ms1mx2.9/35, Error ellipse: s-maj=23.9km s-min=12.6km az=72.0*
*NEIC **30** 17:46:17.6±1.0, 50°.24N×129°.42W, h10km, mb3.8/5, MW3.8(PGC), Error ellipse: s-maj=16.7km s-min=6.6km az=58.0*

ISC 30 17:46:14.4±0.6, 50°.30N±0°.05×129°.77W±0°.09, h10km, n50, σ1°18/52, mb3.8/4, MS3.4/2, 6D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.10**	**71**	⇑Pn	**Pn**	**17 46 35.4**	**-0.4**
BPBC	**Brooks Peninsu**	**1.29**	**96**	⇓Pn	**Pn**	**17 46 35.8**	**-2.7**
PHC	**Port Hardy**	**1.55**	**74**	⇑Pn	**Pn**	**17 46 41.6**	**-0.3**
PHC				⇓Sn	**Sn**	**17 47 02.4**	**+0.3**
MAYB	**Maynard**	**1.67**	**86**	⇑Pn	**Pn**	**17 46 42.0**	**-1.6**
EDB	**Eliza Dome**	**1.76**	**103**	⇑Pn	**Pn**	**17 46 41.5**	**-3.4**
WOSB	**Woss**	**2.06**	**93**	⇑Pn	**Pn**	**17 46 47.5**	**-1.5**
BBB	**Bella Bella**	**2.16**	**28**	Pn	**Pn**	**17 46 52.4**	**+2.1**
	35nm,0.3s,baz=359,slow=16,SNR=648						
BBB				Sn	**Sn**	**17 47 20.4**	**+3.3**
	12nm,0.3s,baz=144,slow=23,SNR=7.7						
BBB	**Bella Bella**	**2.16**	**28**	⇓Pn	**Pn**	**17 46 52.3**	**+2.0**
BBB				⇑Sn	**Sn**	**17 47 20.2**	**+3.1**
NCRB	**Newcastle Ridg**	**2.38**	**86**	⇓Pn	**Pn**	**17 46 52.9**	**-0.5**
GDR	**Gold River**	**2.47**	**101**	⇓Pn	**Pn**	**17 46 52.0**	**-0.6**
BNB	**Barry Inlet**	**2.59**	**332**	⇓Pn	**Pn**	**17 46 55.5**	**-0.9**
CBB	**Campbell River**	**2.85**	**94**	⇑Pn	**Pn**	**17 46 58.6**	**-1.2**
DIB	**Dawson Inlet,**	**3.36**	**331**	Pn	**Pn**	**17 47 06.7**	**-0.1**
DIB				Sn	**Sn**	**17 47 46.8**	**+0.1**
VIB	**Van Inlet**	**3.42**	**331**	Pn	**Pn**	**17 47 07.7**	**0.0**
VIB				Sn	**Sn**	**17 47 47.9**	**-0.4**
JCW	**Jim Creek**	**5.55**	**109**	*e*Pn	**Pn**	**17 47 36.6**	**-0.4**
	13nm,0.7s						
LON	**Longmire**	**6.37**	**121**	*e*Pn	**Pn**	**17 47 48.0**	**-0.2**
	6.7nm,0.7s						
ETW	**Entiat**	**6.78**	**110**	*e*Pn	**Pn**	**17 47 54.0**	**+0.2**
	14nm,0.8s						
OD2	**Odessa Site #2**	**7.86**	**108**	*e*Pn	**Pn**	**17 48 07.8**	**-0.8**
	16nm,0.9s						
HAWA	**Hanford**	**7.86**	**116**	*e*Pn	**Pn**	**17 48 07.7**	**-1.0**
	10nm,1.0s						
DLBC	**Dease Lake**	**8.15**	**359**	Pn	**Pn**	**17 48 17.7**	**+5.1**
	0.4nm,0.3s,baz=169,slow=15,SNR=4.1						
DLBC				LR	LR	17 51 28.9	
	comp=Z,121nm,18.2s,baz=359,slow=38						
LNOR	**Lincton Mounta**	**8.87**	**116**	*e*Pn	**Pn**	**17 48 22.9**	**+0.4**
	7.7nm,0.9s						
YBH	**Yreka Blue Hor**	**9.87**	**148**	LR	LR	17 52 14.7	
	comp=Z,85nm,19.8s,baz=338,slow=37						
WALA	**Waterton Lakes**	**10.36**	**91**	*e*Pn	**Pn**	**17 48 43.0**	**+0.1**
	0.2nm,0.9s						
WVOR	**Wild Horse Val**	**10.99**	**131**	*e*Pn	**Pn**	**17 48 52.3**	**+0.7**
	20nm,1.9s						
CHMT	**Chamberlain Mo**	**11.45**	**101**	*e*Pn	**Pn**	**17 48 56.9**	**-1.0**
	3.7nm,1.1s						
LRM	**Linekiln Ridge**	**12.42**	**104**	*e*Pn	**Pn**	**17 49 10.7**	**-0.4**
	22nm,1.3s						
HLID	**Hailey**	**12.46**	**117**	*e*Pn	**Pn**	**17 49 11.4**	**-0.3**
	2.8nm,0.8s						
MCMT	**McKenzie Canyo**	**12.66**	**109**	*e*Pn	**Pn**	**17 49 13.2**	**-1.3**
	0.9nm,0.6s						
EGMT	**Eagleton**	**13.29**	**92**	*e*Pn	**Pn**	**17 49 24.1**	**+1.1**
	6.1nm,0.8s						
IMW	**Indian Meadow**	**14.32**	**109**	*e*Pn	**Pn**	**17 49 38.0**	**+1.0**
	10nm,0.9s						
NVAR	**Mina Array Bea**	**14.40**	**141**	Pn	**Pn**	**17 49 39.3**	**+1.1**
	0.4nm,0.3s,baz=314,slow=12,SNR=3.0						
MOOW	**Moose Ponds**	**14.52**	**110**	*e*Pn	**Pn**	**17 49 41.7**	**+2.0**
	12nm,0.9s						
TPAW	**Teton Pass**	**14.54**	**111**	*e*Pn	**Pn**	**17 49 41.7**	**+1.7**
	20nm,1.0s						
SNOW	**Snow King Moun**	**14.67**	**110**	*e*Pn	**Pn**	**17 49 45.9**	**+4.1**
	9.0nm,0.9s						
LOHW	**Long Hollow**	**14.68**	**110**	*e*Pn	**Pn**	**17 49 43.0**	**+1.1**
	5.9nm,0.9s						
RLMT	**Red Lodge**	**14.73**	**103**	*e*Pn	**Pn**	**17 49 45.6**	**+3.0**
	8.3nm,1.2s						
DUG	**Dugway**	**15.61**	**124**	*e*Pn	**Pn**	**17 49 54.9**	**+0.6**
	4.7nm,1.0s						
PDAR	**Pinedale Array**	**15.79**	**111**	Pn	**Pn**	**17 49 58.7**	**+2.1**
	0.1nm,0.3s,baz=308,slow=10.0,SNR=12						
LAO	**LASA Array**	**16.00**	**94**	*e*Pn	**Pn**	**17 49 59.4**	**0.0**
	10nm,0.9s						
ILAR	**Eielson Array**	**17.07**	**335**	P	**Pn**	**17 50 18.0**	**+5.1**
	0.0nm,0.3s,baz=148,slow=10,SNR=7.2						
ILAR				LR	LR	17 56 40.0	
	comp=Z,38nm,19.5s,baz=121,slow=36						
INK	**Inuvik**	**18.16**	**356**	LR	LR	17 57 21.1	
	comp=Z,65nm,20.2s,baz=183,slow=36						
PV01	**Paradox Valley**	**19.38**	**121**	*e*P	**Pn**	**17 50 41.4**	**+0.1**
	1µm,1.6s						
SMCO	**Snowmass**	**19.56**	**116**	*e*P	**Pn**	**17 50 41.8**	**-1.7**
	2.6nm,0.9s						
MVCO	**Mesa Verde**	**20.09**	**123**	*e*P	**P**	**17 50 49.9**	**+1.9**
	7.2nm,1.1s						
ULM	**Lac du Bonnet**	**21.56**	**77**	P	**P**	**17 51 04.5**	**+0.8**
	18nm,0.9s,mb4.5,baz=289,slow=10,SNR=9.1						
ULM				LR	LR	18 00 07.4	
	comp=Z,108nm,18.9s,MS3.3,baz=283,slow=39						
ANMO	**Albuquerque**	**22.87**	**123**	*e*P	**P**	**17 51 17.3**	**-0.6**
	2.1nm,0.9s,mb3.6						
ANMO	**Albuquerque**	**22.87**	**123**	P	**P**	**17 51 17.6**	**-0.2**
	1.2nm,0.7s,mb3.4,baz=342,slow=10.0,SNR=6.2						
TXAR	**Lajitas Array**	**28.74**	**127**	P	**P**	**17 52 11.1**	**-0.8**
	0.5nm,0.8s,mb3.3,baz=311,slow=5.9,SNR=5.8						
SCHQ	**Schefferville**	**37.38**	**58**	LR	LR	18 07 30.9	
	comp=Z,75nm,18.3s,MS3.5,baz=253,slow=34						
PETK	**Petropavlovsk-**	**43.26**	**303**	P	**P**	**17 54 19.6**	**+4.0**
	1.8nm,0.9s,mb3.8,baz=81,slow=8.9,SNR=3.7						

IDC 30 17:52:02.3±1.8, 9°.51S×128°.36E, h0km, mb3.7/1, mb1 4.0/4, mb1mx3.6/17, mbtmp3.8/4, ML3.6/2, Error ellipse: s-maj=79.3km s-min=27.5km az=76.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**8.94**	**197**	Pn	Pn	17 54 13.0	+0.3
	0.2nm,0.3s,baz=23,slow=7.7,SNR=23						
FITZ				Sn	Sn	17 56 03.3	+9.1
	0.7nm,0.3s,baz=14,slow=19,SNR=6.4						
WRA	**Warramunga Arr**	**11.87**	**152**	Pn	Pn	17 54 53.2	+0.2
	1.0nm,0.3s,baz=324,slow=14,SNR=30						
WRA				Sn	Sn	17 57 17.9	+12
	0.9nm,0.3s,baz=332,slow=23,SNR=8.8						
ASAR	**Alice Springs**	**15.04**	**160**	Pn	Pn	17 55 35.7	-0.6
	0.6nm,0.3s,baz=342,slow=12,SNR=76						
ASAR				Sn	Sn	17 58 35.4	+12
	0.2nm,0.3s,baz=343,slow=25,SNR=5.2						
ZALV	**Zalesovo Beam**	**73.13**	**335**	P	P	18 03 34.5	+0.1
	0.3nm,0.3s,baz=116,slow=6.7,SNR=2.6						

IDC 30 18:17:58.4±2.2, 20°.70S×170°.20E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.8/15, mbtmp3.8/5, Error ellipse: s-maj=69.2km s-min=33.2km az=151.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**33.60**	**265**	P	P	18 24 40.1	-0.5
	0.3nm,0.3s,baz=97,slow=7.7,SNR=9.4						
ASAR	**Alice Springs**	**33.68**	**258**	P	P	18 24 41.5	+0.2
	2.5nm,0.6s,baz=90,slow=8.5,SNR=85						
MJAR	**Matsushiro Arr**	**64.46**	**332**	P	P	18 28 36.3	-0.4
	0.8nm,0.9s,baz=147,slow=7.2,SNR=2.9						
CMAR	**Chiang Mai Arr**	**79.92**	**294**	P	P	18 30 10.5	+0.8
	0.3nm,0.7s,baz=103,slow=5.8,SNR=4.2						
TXAR	**Lajitas Array**	**96.67**	**61**	P	P	18 31 30.9	+0.1
	0.4nm,1.1s,baz=224,slow=6.3,SNR=3.5						

CASC 30 18:22:26.2±2.8, 12°.26N×86°.85W, h153km±9km, MD4.0, ML3.8, 1C-2D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LEON	**Leon**	**0.16**	**344**	*e*P	Pn	18 22 46.5	-0.2
COPN	**Copaltepe**	**0.26**	**107**	*i* P	Pn	18 22 47.3	+0.3
COPN				*e*S	Sn	18 23 04.6	+1.9
CNGN	**Cerro Negro**	**0.28**	**31**	*e*P	Pn	18 22 46.9	-0.2
CNGN				*e*S	Sn	18 23 04.1	+1.2
CNGN				AML	AML	18 23 14.2	
	comp=N,989nm,0.5s						
MOMN	**Momotombo**	**0.34**	**64**	*e*P	Pn	18 22 47.7	+0.6
TELN	**Telica**	**0.34**	**3**	*e*P	Pn	18 22 47.5	+0.2
CSAN		**0.42**	**100**	*e*P	Pn	18 22 48.1	+0.6
CRIN	**San Cristobal**	**0.48**	**336**	*e*P	Pn	18 22 47.7	-0.1
CRIN				AML	AML	18 23 15.6	
	comp=E,2µm,0.6s						
XAVN	**Gruta Xavier**	**0.52**	**102**	*e*P	Pn	18 22 48.4	+0.4
TISN	**Laguna Tiscapa**	**0.58**	**102**	*e*P	Pn	18 22 48.4	+0.2
MGAN	**Managua**	**0.60**	**101**	*e*P	Pn	18 22 48.3	0.0
CRUN	**El Crucero**	**0.60**	**117**	*e*P	Pn	18 22 49.6	+1.2
TICN	**Ticuantepe**	**0.64**	**110**	*e*P	Pn	18 22 48.9	+0.3
WILN	**Americas 2**	**0.65**	**99**	*e*P	Pn	18 22 48.9	+0.2
HUEN		**0.66**	**83**	*e*P	Pn	18 22 49.0	+0.2
HUEN				*e*S	Sn	18 23 08.2	+2.2
BOAB	**BOACO BROADBAN**	**1.17**	**81**	⇓*i*P	Pn	18 22 52.3	-0.4
SSN	**San Juan del S**	**1.36**	**134**	*e*P	Pn	18 22 55.3	+0.7
SSN				*e*S	Sn	18 23 19.0	+2.8
CONN	**Concepcion**	**1.38**	**120**	*e*P	Pn	18 22 55.8	+1.1
CNCH	**Conchagua**	**1.40**	**317**	*i* P	Pn	18 22 54.6	-0.3
BLLM	**Bellamira**	**1.79**	**311**	*i* P	Pn	18 22 59.2	+0.1
BLLM				*e*S	Sn	18 23 27.4	+2.9
VSM	**San Miguel**	**1.81**	**310**	*i* P	Pn	18 22 59.8	+0.4
TGUH	**Tegucigalpa,Un**	**1.83**	**347**	⇓*i*P	Pn	18 22 59.2	-0.4
TGUH				*e*S	Sn	18 23 24.4	-0.9
**

mb3.8/9, Error ellipse: s-maj=25.0km s-min=10.9km az=142.7
NEIC ***30*** *19:22:12.8±2.0, 7.57S×127.86E, h108km±19km, mb4.1/6, Error ellipse: s-maj=20.2km s-min=9.9km az=51.0*
IDC ***30*** *19:22:14.0±3.9, 7.62S×127.64E, h112km±34km, mb3.5/6, mb1 3.9/9, mb1mx3.8/17, mbtmp3.8/9, Error ellipse: s-maj=47.0km s-min=14.6km az=64.0*

ISC 30 19:22:13.5±2.2, 7.71S±0.10×127.8E±0.1, h111km±22km, n25, σ1f41/29, mb3.8/9, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNA	**Kununurra**	**8.05**	**173**	⇓*iP*	**Pn**	**19 24 11.4**	**+3.7**
	270nm,0.9s						
KNA				*eS*	**Sn**	**19 25 35.8**	**-1.3**
FITZ	**Fitzroy Crossi**	**10.54**	**191**	*eP*	**Pn**	**19 24 42.2**	**+0.8**
	21nm,0.4s						
FITZ				*eS*	**Sn**	**19 26 26.2**	**-11**
FITZ	**Fitzroy Crossi**	**10.54**	**191**	P	**Pn**	**19 24 42.1**	**+0.7**
	3.4nm,0.3s,baz=24,slow=9.1,SNR=116						
FITZ				S	**Sn**	**19 26 34.6**	**-2.9**
	2.2nm,0.3s,baz=65,slow=14,SNR=6.9						
WRA	**Warramunga Arr**	**13.73**	**153**	P	**Pn**	**19 25 24.0**	**+0.5**
	4.1nm,0.3s,baz=324,slow=13,SNR=181						
WRA				S	**Sn**	**19 27 50.6**	**-4.2**
	5.9nm,0.3s,baz=329,slow=22,SNR=8.7						
WB2	**Warramunga Arr**	**13.73**	**153**	*ePn*	**Pn**	**19 25 23.6**	**+0.1**
WB2				*eSn*	**Sn**	**19 27 46.6**	**-8.4**
MBWA	**Marble Bar**	**15.46**	**209**	*ePn*	**Pn**	**19 25 46.7**	**+1.1**
	20nm,1.2s						
MBWA				*eSn*	**Sn**	**19 28 28.2**	**-8.6**
ASAR	**Alice Springs**	**16.92**	**160**	P	**Pn**	**19 26 06.1**	**+2.5**
	1.8nm,0.3s,baz=336,slow=9.4,SNR=246						
ASAR				S	**S**	**19 29 10.2**	**-2.2**
	1.1nm,0.3s,baz=325,slow=22,SNR=7.8						
KSM	**Kuching**	**19.66**	**297**	P	**P**	**19 26 34.3**	**+0.4**
	3.5nm,0.6s						
CTAO	**Charters Tower**	**21.72**	**126**	P	**P**	**19 26 54.5**	**-1.4**
	9.9nm,0.9s,mb4.1						
QLP	**Quilpie**	**24.43**	**142**	*eP*	**P**	**19 27 23.9**	**+2.0**
STKA	**Stephens Creek**	**27.28**	**154**	*eP*	**P**	**19 27 49.7**	**+2.2**
	3.4nm,0.5s,mb4.1						
STKA	**Stephens Creek**	**27.28**	**154**	*eP*	**P**	**19 27 49.6**	**+2.1**
	1.5nm,0.8s,mb3.6						
STKA				*e*		19 28 19.0	
STKA	**Stephens Creek**	**27.28**	**154**	P	**P**	**19 27 49.8**	**+2.3**
	5.0nm,0.5s,mb4.3,baz=322,slow=11,SNR=22						
CMSA	**Cobar Meteorol**	**29.01**	**147**	*eP*	**P**	**19 28 05.5**	**+2.6**
CMAR	**Chiang Mai Arr**	**38.54**	**313**	P	**P**	**19 29 25.5**	**+0.1**
	0.2nm,0.4s,mb3.3,baz=145,slow=5.5,SNR=4.3						
SONM	**Songino Array**	**58.44**	**343**	P	**P**	**19 31 57.8**	**+0.3**
	0.3nm,0.5s,mb3.6,baz=152,slow=6.5,SNR=3.2						
MKAR	**Makanchi Array**	**67.63**	**328**	P	**P**	**19 32 57.6**	**-0.7**
	0.4nm,0.4s,mb3.6,baz=133,slow=8.1,SNR=10						
ZAA0	**Zalesovo Array**	**71.26**	**335**	P	**P**	**19 33 18.6**	**-1.8**
ZALV	**Zalesovo Beam**	**71.26**	**335**	P	**P**	**19 33 19.0**	**-1.5**
	0.5nm,0.4s,mb3.7,baz=130,slow=4.6,SNR=4.1						
KURK	**Kurchatov**	**71.99**	**330**	*eP*	**P**	**19 33 23.8**	**-1.1**
	2.2nm,0.9s,mb4.0						
MAW	**Mawson**	**73.49**	**201**	P	**P**	**19 33 34.4**	**+0.9**
	1.5nm,1.0s,mb3.8,baz=61,slow=8.9,SNR=4.3						
QSPA	**South Pole Qui**	**82.27**	**180**	*eP*	**P**	**19 34 22.2**	**+0.2**
	4.9nm,0.9s,mb4.3						
TORD	**Torodi Ar. Bea**	**126.77**	**281**	PKP	PKPdf	19 41 03.4	-1.6
	0.4nm,0.5s,baz=69,slow=1.7,SNR=5.7						
LPAZ	**La Paz**	**151.43**	**147**	PKPbc	PKPbc	19 41 56.5	+1.2
	1.1nm,0.4s,baz=227,slow=15,SNR=12						
LPAZ				PKPab	PKPab	19 42 05.7	+1.9
	3.1nm,0.7s,baz=205,slow=4.2,SNR=18						
SIV	**San Ignacio**	**154.88**	**160**	PKPab	PKPab	19 42 18.9	+0.6
	1.1nm,0.8s,baz=277,slow=15,SNR=4.1						

ISCJB ***30*** *19:22:37.0±0.3, 32.04N±0.02×48.45E±0.03, h10km, Error ellipse: s-maj=3.9km s-min=3.0km az=13.4*
SGS ***30*** *19:22:37.5, 32.37N×48.38E, h63km*
KISR ***30*** *19:22:37.6±1.0, 32.06N×48.64E, h43km±999km, ML3.2*
CSEM ***30*** *19:22:37.5, 32.37N×48.38E, h63km, ML4.1, After SNSN*
TEH ***30*** *19:22:39.0, 31.98N×48.35E, h20km*

ISC 30 19:22:38.2±0.3, 32.03N±0.02×48.42E±0.03, h10km, n38, σ1f16/57, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IPIR	**Pirpir**	**2.19**	**72**	*ePn*	**Pn**	**19 23 16.6**	**+2.0**
IPIR				*eSn*	**Sn**	**19 23 42.5**	**+0.7**
IPIR				*e*		19 23 49.2	
	comp=Z,6μm,0.2s						
IKOM	**Komasi**	**2.27**	**341**	*ePn*	**Pn**	**19 23 15.4**	**-0.3**
IKOM				*eSn*	**Sn**	**19 23 44.3**	**+0.5**
IKOM				*e*		19 23 53.4	
	comp=Z,2μm,0.3s						
MIB	**Mutribah**	**2.41**	**203**	*eP*	**Pn**	**19 23 18.3**	**+0.7**
MIB				*eS*	**Sn**	**19 23 48.6**	**+1.6**
MIB				AML	AML	19 23 54.4	
	comp=Z,115nm,0.6s						
IVIS	**Veis**	**2.81**	**333**	*ePn*	**Pn**	**19 23 24.2**	**+1.0**
IVIS				*eSn*	**Sn**	**19 23 55.9**	**-1.3**
IVIS				*e*		19 24 20.3	
	comp=Z,1μm,0.5s						
NAY	**Al-Naaiem**	**2.95**	**200**	*eP*	**Pn**	**19 23 25.8**	**+0.7**
NAY				*eS*	**Sn**	**19 24 03.0**	**+2.4**
NAY				AML	AML	19 24 08.8	
	comp=Z,24nm,0.4s						
IKLH	**Kolahrood**	**2.96**	**63**	*ePn*	**Pn**	**19 23 26.5**	**+1.3**
IKLH				*e*		19 23 33.8	
	comp=Z,3μm,0.2s						
IKLH				*eSn*	**Sn**	**19 24 00.1**	**-0.6**
IGAR	**Gharneh**	**3.09**	**82**	*ePn*	**Pn**	**19 23 27.8**	**+0.8**
IGAR				*e*		19 23 36.3	
	comp=Z,2μm,0.1s						
IGAR				*eSn*	**Sn**	**19 24 03.9**	**-0.2**
ILIN	**Lien**	**3.13**	**337**	*ePn*	**Pn**	**19 23 27.2**	**-0.3**
ILIN				*eSn*	**Sn**	**19 24 03.7**	**-1.2**
ILIN				*e*		19 24 19.4	
	comp=N,735nm,0.2s						
IDHR	**Dehrash**	**3.16**	**328**	*ePn*	**Pn**	**19 23 27.4**	**-0.5**
IDHR				*e*		19 23 36.1	
	comp=Z,1μm,0.2s						
IDHR				*eSn*	**Sn**	**19 24 03.7**	**-2.0**
RDF	**Al-Radifah**	**3.18**	**194**	*eP*	**Pn**	**19 23 29.2**	**+0.9**
RDF				*eS*	**Sn**	**19 24 07.2**	**+1.0**
RDF				AML	AML	19 24 10.8	
	comp=Z,113nm,0.4s						
QRN	**Al-Qurain**	**3.30**	**188**	*eP*	**Pn**	**19 23 30.5**	**+0.6**
IZEF	**Zefreh**	**3.42**	**74**	*ePn*	**Pn**	**19 23 32.6**	**+1.1**
IZEF				*e*		19 23 42.3	
	comp=Z,2μm,0.1s						
IZEF				*eSn*	**Sn**	**19 24 11.5**	**-0.5**
IRAZ	**Razeghan**	**3.59**	**20**	*ePn*	**Pn**	**19 23 35.4**	**+1.5**
IRAZ				*eSn*	**Sn**	**19 24 17.3**	**+0.9**
IRAZ				*e*		19 24 32.0	
	comp=Z,831nm,0.2s						
BHD	**Baghdad**	**3.62**	**291**	*ex*	x	19 23 23.7	
BHD				*ex*	x	19 23 56.0	
KFJS		**3.85**	**186**	P	**Pn**	**19 23 37.3**	**-0.2**
KFJS		**3.85**	**186**	P	**Pn**	**19 23 37.3**	**-0.2**
KFJS				S	**Sn**	**19 24 21.8**	**-1.0**
ISFB	**Sefidab**	**3.95**	**53**	*ePn*	**Pn**	**19 23 38.9**	**+0.1**
ISFB				*e*		19 24 51.8	
	comp=Z,451nm,0.4s						
IVRN	**Varamin**	**4.05**	**42**	*ePn*	**Pn**	**19 23 40.6**	**+0.5**
IR3	**Iran Long-Peri**	**4.07**	**32**	*ePn*	**Pn**	**19 23 40.7**	**+0.3**
IMHD	**Mahdasht**	**4.10**	**27**	*ePn*	**Pn**	**19 23 41.8**	**+1.0**
IMHD				*eSn*	**Sn**	**19 24 27.3**	**-1.5**
IMHD				*e*		19 24 32.1	
	comp=Z,420nm,0.2s						
IPAR	**Pars**	**4.54**	**118**	*ePn*	**Pn**	**19 23 46.6**	**-0.3**
IPAR				*eSn*	**Sn**	**19 24 37.8**	**-1.9**
IPAR				*e*		19 24 42.5	
	comp=Z,343nm,0.3s						
IDMV	**Damavand**	**4.64**	**39**	*ePn*	**Pn**	**19 23 48.1**	**-0.2**
IDMV				*e*		19 25 08.4	
	comp=Z,300nm,0.3s						
ISRV	**Sarvestan**	**4.83**	**122**	*ePn*	**Pn**	**19 23 50.9**	**0.0**
ISRV				*eSn*	**Sn**	**19 24 43.0**	**-3.9**
ISRV				*e*		19 24 51.2	
	comp=Z,416nm,0.1s						
ILAS	**Lasjerd**	**5.05**	**47**	*ePn*	**Pn**	**19 23 54.0**	**+0.1**
ILAS				*e*		19 24 12.4	
	comp=Z,236nm,0.2s						
IFIR	**Firoozkooh**	**5.10**	**44**	*ePn*	**Pn**	**19 23 55.0**	**+0.4**
IFIR				*e*		19 23 56.1	
	comp=Z,266nm,0.2s						
IMEH	**Mehriz**	**5.32**	**95**	*ePn*	**Pn**	**19 23 58.0**	**+0.4**
IMEH				*eSn*	**Sn**	**19 24 56.5**	**-2.4**
IMEH				*e*		19 25 33.4	
	comp=Z,142nm,0.3s						
ISHM	**Shahmirzad**	**5.53**	**46**	*ePn*	**Pn**	**19 24 01.1**	**+0.6**
ISHM				*e*		19 24 12.8	
	comp=Z,317nm,0.1s						
IANJ	**Anjilo**	**5.72**	**52**	*e*	**Pg**	**19 24 23.1**	**-4.6**
	comp=Z,102nm,0.2s						
IANJ				*ePn*	**Pn**	**19 24 03.0**	**-0.1**
ASYS		**5.74**	**219**	P	**Pn**	**19 24 01.1**	**-2.3**
ASYS		**5.74**	**219**	P	**Pn**	**19 24 01.1**	**-2.3**
IBAF	**Bafgh**	**6.10**	**92**	*e*	**Pb**	**19 24 20.2**	**-4.3**
	comp=Z,99nm,0.0s						
IBAF				*ePn*	**Pn**	**19 24 08.2**	**-0.2**
IGLO	**Ghaloghah**	**6.32**	**44**	*ePn*	**Pn**	**19 24 13.0**	**+1.6**
IGLO				*e*		19 24 37.2	
	comp=Z,126nm,0.2s						
BTHS		**8.24**	**164**	P	**Pn**	**19 24 35.6**	**-2.1**
BTHS		**8.24**	**164**	P	**Pn**	**19 24 35.6**	**-2.1**
HRDDS		**9.12**	**174**	S	**Sn**	**19 26 26.3**	**-6.1**
HRDDS		**9.12**	**174**	P	**Pn**	**19 24 47.0**	**-2.7**
LYLS		**10.01**	**186**	P	**Pn**	**19 24 59.2**	**-2.8**
LYLS		**10.01**	**186**	P	**Pn**	**19 24 59.2**	**-2.8**
LYLS				S	**Sn**	**19 26 45.2**	**-9.2**

CSEM ***30*** *19:24:18.7, 39.01N×29.10W, h0km±12km, MD3.4,*

PDA 30 19:24:18.7±0.6, 39.01N×29.10W, h0km±12km, MD3.4, ML3.5, Error ellipse: s-maj=17.2km s-min=2.7km az=105.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCED	**Cedros**	**0.49**	**140**	*iP*	Pg	19 24 27.5	-0.5
PCED				*eS*	Sg	19 24 34.2	-0.1
PCED				A		19 24 36.3	
	1μm,0.3s						
CALA	**Caldeira**	**0.52**	**144**	*eP*	Pg	19 24 28.2	-0.5
CALA				*eS*	Sg	19 24 35.3	-0.2
CALA	**Caldeira**	**0.52**	**144**	*eP*	Pg	19 24 28.2	-0.5
CALA				*eS*	Sg	19 24 35.3	-0.2
HOR	**Horta**	**0.60**	**142**	*eP*	Pg	19 24 29.3	-0.9
HOR				*eS*	Sg	19 24 37.4	-0.6
HOR	**Horta**	**0.60**	**142**	*eP*	Pg	19 24 29.3	-0.9
HOR				*eS*	Sg	19 24 37.4	-0.6
PCAN	**Candelaria**	**0.72**	**138**	*iP*	Pg	19 24 31.0	-1.5
PCAN				*eS*	Sg	19 24 40.6	-1.3
PCAN				A		19 24 42.0	
	1μm,0.2s						
ROSA	**Rosais**	**0.73**	**113**	*eP*	Pg	19 24 31.2	-1.4
ROSA	**Rosais**	**0.73**	**113**	*eP*	Pg	19 24 31.2	-1.4
PICO	**Pico**	**0.73**	**134**	*eP*	Pg	19 24 31.6	-1.0
PICO				*eS*	Sg	19 24 41.1	-0.9
PICO	**Pico**	**0.73**	**134**	*eP*	Pg	19 24 31.6	-1.0
PICO				*eS*	Sg	19 24 41.1	-0.9
PMAN	**Manadas**	**0.87**	**115**	*eP*	Pg	19 24 33.2	-2.2
PMAN				*eS*	Sg	19 24 44.4	-2.3
PMAN				A		19 24 46.4	
	415nm,0.2s						
PMAN	**Manadas**	**0.87**	**115**	*eP*	Pg	19 24 33.2	-2.2
PMAN				*eS*	Sg	19 24 44.4	-2.3
PID	**Ribeirinha**	**0.95**	**126**	*iP*	Pg	19 24 34.4	-2.5
ADH	**Angra Heroismo**	**1.50**	**103**	*eP*	Pn	19 24 42.0	-4.8
ADH				*eS*	Sg	19 24 59.5	-7.2
ADH				A		19 25 00.8	
	134nm,0.2s						
ADH	**Angra Heroismo**	**1.50**	**103**	*eP*	Pn	19 24 42.0	-4.8
ADH				*eS*	Sg	19 24 59.5	-7.2
PSET	**Sete Cidades**	**2.90**	**113**	*eP*	Pn	19 25 01.6	-4.5
PSET				*eS*	Sn	19 25 33.5	-8.2
PSET				A		19 25 36.6	
	11nm,0.2s						
PSET	**Sete Cidades**	**2.90**	**113**	*eP*	Pn	19 25 01.6	-4.5
PSET				*eS*	Sn	19 25 33.5	-8.2
PDA	**Ponta Delgada**	**2.98**	**114**	*eP*	Pn	19 25 02.3	-4.8
PDA	**Ponta Delgada**	**2.98**	**114**	*eP*	Pn	19 25 02.3	-4.8
CMLA	**Cha da Macela**	**3.07**	**113**	*eP*	Pn	19 25 03.9	-4.5
CMLA				*eS*	Sn	19 25 37.7	-8.1
CMLA				A		19 25 42.1	
	136nm,0.3s						
CMLA				A		19 25 43.3	
	63nm,0.3s						
CMLA	**Cha da Macela**	**3.07**	**113**	*eP*	Pn	19 25 03.9	-4.5
CMLA				*eS*	Sn	19 25 37.7	-8.1
BART	**Pico Bartolome**	**3.32**	**110**	*eP*	Pn	19 25 07.2	-4.7
BART				*eS*	Sn	19 25 43.8	-8.2
BART				A		19 25 49.5	
	18nm,0.3s						
BART	**Pico Bartolome**	**3.32**	**110**	*eP*	Pn	19 25 07.2	-4.7
BART				*eS*	Sn	19 25 43.8	-8.2
PSMA	**Santa Maria**	**3.72**	**121**	*eP*	Pn	19 25 13.1	-4.3
PSMA				*eS*	Sn	19 25 53.3	-8.6
PSMA				A		19 25 56.7	
	24nm,0.2s						
PSMN	**Pico do Norte,**	**3.76**	**121**	*eP*	Pn	19 25 13.4	-4.5
PSMN				*eS*	Sn	19 25 54.4	-8.4
PSMN	**Pico do Norte,**	**3.76**	**121**	*eP*	Pn	19 25 13.4	-4.5
PSMN				*eS*	Sn	19 25 54.4	-8.4

CASC 30 19:31:16.7±1.2, 12.87N×89.44W, h21km±5km, MD3.7, ML3.2, 1C-2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LFRS	**El Faro**	**0.83**	**26**	*eP*	Pb	19 31 32.8	+0.3
BOQS	**Boqueron**	**0.87**	**10**	⇑*iP*	Pb	19 31 33.5	+0.3
BOQS				*eS*	Sb	19 31 45.9	+1.4
BOQS				AML	AML	19 31 48.6	
	comp=Z,719nm,0.2s						
SNVI	**San Vicente**	**0.94**	**38**	*iP*	Pb	19 31 34.4	0.0
SNVI				*eS*	Sb	19 31 47.6	+1.2
SBLS	**San Blas**	**0.98**	**350**	⇓*iP*	Pb	19 31 34.8	-0.2
SBLS				*eS*	Sb	19 31 48.8	+1.2
SNJE	**San Jose**	**1.00**	**351**	*iP*	Pb	19 31 35.1	-0.3
RTR	**El Retiro**	**1.04**	**349**	⇓*iP*	Pb	19 31 35.7	-0.3
RBDL	**Robledal**	**1.26**	**349**	*iP*	Pn	19 31 39.0	0.0
VSM	**San Miguel**	**1.26**	**64**	*eP*	Pn	19 31 39.1	-0.1
VSM				*eS*	Sn	19 31 57.3	+1.9
BLLM	**Bellamira**	**1.30**	**64**	*iP*	Pn	19 31 39.5	-0.1
BLLM				*eS*	Sn	19 31 57.5	+1.1
CAHU	**Cacacuatique**	**1.49**	**53**	*eP*	Pn	19 31 42.9	+0.6
CAHU				*eS*	Sn	19 32 02.8	+1.6
MTO2	**Montecristo 2**	**1.52**	**3**	*iP*	Pn	19 31 43.2	+0.6
CNCH	**Conchagua**	**1.62**	**75**	*eP*	Pn	19 31 44.0	+0.1
CNCH				*eS*	Sn	19 32 04.5	+0.3

IDC 30 19:48:11.1±4.1, 23.78S×177.03W, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.8/18, mbtmp3.8/5, Error ellipse: s-maj=143.7km s-min=61.5km az=148.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**34.20**	**269**	P	P	19 54 58.6	+0.1
	2.5nm,0.8s,baz=66,slow=11,SNR=2.8						
STKA	**Stephens Creek**	**37.29**	**248**	P	P	19 55 24.6	-0.4
	1.5nm,0.5s,baz=102,slow=16,SNR=4.5						
ASAR	**Alice Springs**	**44.73**	**260**	P	P	19 56 26.1	-0.3
	0.4nm,0.5s,baz=94,slow=7.7,SNR=9.1						
WRA	**Warramunga Arr**	**45.13**	**265**	P	P	19 56 30.2	+0.6
	0.6nm,0.5s,baz=104,slow=8.1,SNR=6.6						
CMAR	**Chiang Mai Arr**	**92.05**	**289**	P	P	20 01 21.9	-0.6
	0.2nm,0.5s,baz=145,slow=3.3,SNR=3.3						
MKAR	**Makanchi Array**	**114.08**	**312**	PKiKP	PKiKP	20 06 52.7	+0.5
	0.1nm,0.5s,baz=100,slow=1.2,SNR=3.2						

IDC 30 19:49:47.8±2.3, 19.72N×120.78E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/21, mbtmp3.5/4, Error ellipse: s-maj=238.7km s-min=21.4km az=63.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**41.38**	**320**	P	P	19 57 36.1	+0.5
	0.4nm,0.8s,baz=118,slow=8.3,SNR=4.9						
WRA	**Warramunga Arr**	**41.59**	**161**	P	P	19 57 37.0	-0.6
	1.1nm,0.7s,baz=338,slow=9.5,SNR=6.7						
ZALV	**Zalesovo Beam**	**43.84**	**330**	P	P	19 57 54.9	-0.6
	0.5nm,0.6s,baz=111,slow=7.9,SNR=2.9						
ASAR	**Alice Springs**	**44.98**	**163**	P	P	19 58 05.4	+0.5
	0.4nm,0.6s,baz=348,slow=6.8,SNR=11						

IGQ 30 19:57:56.5, 2.05S×81.38W, h10km±8km, Mb4.6, Ms4.4, 13C-4D, Error ellipse: s-maj=7.4km s-min=3.1km az=12.5, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHIS	**Cerro-Chispas-**	**1.19**	**33**	S	Sb	19 58 33.6	-1.1
CHIS	**Cerro-Chispas-**	**1.19**	**33**	P	Pb	19 58 19.7	+0.5
PECV	**Mancha de Ca P**	**1.84**	**46**	⇑S	Sn	19 58 46.9	-4.6
PECV	**Mancha de Ca P**	**1.84**	**46**	⇑P	Pn	19 58 26.6	-1.6
JAMA	**Jama**	**2.13**	**33**	P	Pn	19 58 33.9	+1.7
RIOE	**Riobamba**	**2.76**	**84**	P	Pn	19 58 41.8	+0.9
IGUA	**Igualata**	**2.80**	**79**	P	Pn	19 58 43.1	+1.8
BIL2	**Estacion Bilba**	**2.94**	**78**	S	Sn	19 59 18.9	+0.2
BIL2	**Estacion Bilba**	**2.94**	**78**	P	Pn	19 58 45.3	+2.0
BMAS	**Trigal station**	**2.95**	**79**	⇑S	Sn	19 59 22.4	+3.4
BMAS	**Trigal station**	**2.95**	**79**	⇑P	Pn	19 58 46.0	+2.5
BBIL	**Ulba Tungurahu**	**2.95**	**78**	P	Pn	19 58 45.6	+2.1
ARRY	**Arrayan**	**2.97**	**80**	⇑P	Pn	19 58 45.6	+1.8
JUI6	**Juive**	**2.98**	**78**	P	Pn	19 58 46.1	+2.3
PAT1	**Patacocha**	**2.99**	**80**	P	Pn	19 58 46.3	+2.2
RETU	**Refugio**	**2.99**	**79**	P	Pn	19 58 46.7	+2.7
RUN5	**Runtun**	**3.02**	**78**	P	Pn	19 58 46.9	+2.4
BULB	**Ulba Tungurahu**	**3.03**	**78**	⇓S	Sn	19 59 19.7	-1.2
BULB	**Ulba Tungurahu**	**3.03**	**78**	⇓P	Pn	19 58 47.1	+2.6
ULBA	**Ulba**	**3.03**	**79**	P	Pn	19 58 47.7	+3.1
BRUN	**Tungurahua Vol**	**3.03**	**78**	⇑P	Pn	19 58 47.3	+2.7
PISA	**Pisayambo**	**3.15**	**72**	S	Sn	19 59 27.1	+3.2
PISA	**Pisayambo**	**3.15**	**72**	P	Pn	19 58 49.2	+3.0
CAMI	**Rancho Maria**	**3.18**	**65**	P	Pn	19 58 50.0	+3.4
MACE	**Macas**	**3.19**	**94**	P	Pn	19 58 49.4	+2.7
BMOR	**Cotopaxi Volca**	**3.20**	**66**	⇑S	Sn	19 59 33.5	+8.4
BMOR	**Cotopaxi Volca**	**3.20**	**66**	⇑P	Pn	19 58 50.0	+3.1
MOV1	**Cotopaxi Vol s**	**3.23**	**66**	P	Pn	19 58 49.9	+2.6
BREF	**Cotopaxi Volca**	**3.24**	**65**	P	Pn	19 58 51.0	+3.5
BVC2	**Cotopaxi Volca**	**3.27**	**65**	⇑P	Pn	19 58 51.3	+3.4
BTAM	**Cotopaxi Volca**	**3.28**	**65**	⇑P	Pn	19 58 51.5	+3.5
VC1	**Cotopaxi 1**	**3.29**	**65**	P	Pn	19 58 51.8	+3.7
PITA	**Cotopaxi Volc**	**3.30**	**63**	P	Pn	19 58 51.4	+3.2
TAMB	**Tambo**	**3.30**	**66**	⇓P	Pn	19 58 51.7	+3.4
JUA2	**San Juan 2**	**3.32**	**57**	P	Pn	19 58 50.4	+1.8
COV1	**Cotopaxi Volc**	**3.33**	**66**	P	Pn	19 58 50.6	+1.9
TERV	**Terraza Guagua**	**3.34**	**56**	P	Pn	19 58 50.6	+1.8
PINO	**Pino**	**3.35**	**56**	⇑P	Pn	19 58 50.5	+1.5
GGP	**Refugio Guagua**	**3.35**	**56**	⇑P	Pn	19 58 50.7	+1.7
YANA	**Yana**	**3.40**	**56**	P	Pn	19 58 51.6	+1.9
ANTI	**Antisana**	**3.59**	**64**	⇑P	Pn	19 58 56.1	+3.8
COTA	**Cotacachi**	**3.86**	**52**	S	Sn	19 59 53.1	+12
COTA	**Cotacachi**	**3.86**	**52**	P	Pn	19 58 58.9	+3.0
CAYR	**Refugio Cayamb**	**3.95**	**59**	P	Pn	19 59 01.9	+4.6
CAYA	**Cayambe**	**3.99**	**58**	⇓P	Pn	19 59 02.3	+4.5
CONE	**Cono NE Rev Vo**	**4.22**	**62**	P	Pn	19 59 07.6	+6.6

BJI ***30*** *20:15:39.1, 36.10N×138.96E, h131km, mB4.7/16, mb4.5/28*
ISCJB ***30*** *20:15:41.9±0.2, 36.21N±0.03×138.65E±0.03, h137km±1km, mb4.3/85, Error ellipse: s-maj=4.8km s-min=3.8km az=25.7*
NEIC ***30*** *20:15:42.2±0.5, 36.28N×138.74E, h132km±3km, mb4.5/47, MW4.3(NIED), Error ellipse: s-maj=5.9km s-min=4.4km az=145.0*
NEIC Recorded [1 JMA] in Gumma, Ibaraki, Saitama and Tochigi.
IDC ***30*** *20:15:42.4±0.4, 36.20N×138.75E, h134km±2km, mb4.1/28, mb1 4.2/29, mb1mx4.2/33, mbtmp4.1/29, Error ellipse: s-maj=11.4km s-min=7.7km az=78.0*
MOS ***30*** *20:15:42.0±0.7, 36.51N×138.70E, h131km, mb4.4/45, Error ellipse: s-maj=9.5km s-min=5.4km az=101.9*
JMA ***30*** *20:15:43.1±0.1, 36.22N×138.90E, h133km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs233.00000°, δ33.00000°, λ-116.00000°. NP2: φs84.00000°, δ60.00000°, λ-74.00000°. Principal axes: T Plg14.0000°, Azm162.0000°; N Plg14.0000°, Azm256.0000°; P Plg70.0000°, Azm28.0000°;*
JMA Felt I J1.
NIED ***30*** *20:16:00, 36.20N×138.90E, h140km, Mw4.3 Best double couple: M0 3.22000×10^15 NP1:φs92.00000°, δ55.00000°, λ-68.00000°. NP2:φs237.00000°, δ40.00000°, λ-119.00000°.*

ISC 30 20:15:43.0±0.2, 36.22N±0.03×138.68E±0.03, h134km±1km, h122km±4.8km; pP-P, n382, σ9f78/408, mb4.3/85, 80C-98D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JRY	**Ryogami san**	**0.27**	**138**	⇓P	**Pn**	**20 16 01.7**	**+0.1**
JRY				S	**Sn**	**20 16 15.6**	**+0.1**
MJAR	**Matsushiro Arr**	**0.50**	**310**	P	**Pn**	**20 16 02.8**	**+0.3**
	822nm,0.3s

YUK pmax pmax
comp=E,30nm,0.2s
YUK pmax pmax
comp=Z,50nm,0.5s
YUK smax
comp=E,240nm,0.7s
YUK smax
comp=N,124nm,0.3s
YUK smax
comp=N,230nm,0.7s
YUK smax
comp=E,290nm,0.7s
CBIJ Chichi jima 9.57 161 P **Pn** **20 17 52.8 -4.9**
comp=E,8.4nm,0.3s,baz=287,slow=21,SNR=8.8
CBIJ S **Sn** **20 19 32.1 -11**
comp=E,18nm,0.3s,baz=283,slow=22,SNR=5.5
MDJ Mudanjiang 10.87 323 P **Pn** **20 18 15.3 +0.6**
MDJ S **Sn** **20 20 15.5 +1.0**
MDJ pmax pmax
comp=Z,28nm,0.9s
MDJ pmax pmax
comp=Z,49nm,5.1s
MDJ LR LR
comp=N,33nm,25.5s
MDJ LR LR
comp=E,33nm,21.8s
MDJ LR LR
comp=Z,41nm,24.0s
MDJ Mudanjiang 10.87 323 *e*Pn **Pn** **20 18 17.1 +2.4**
comp=Z,21nm,0.8s
YSS Yuzh-Sakhalins 11.15 15 *e*Pn **Pn** **20 18 14.9 -3.4**
comp=Z,23nm,0.6s
YSS Yuzh-Sakhalins 11.15 15⇑ *e*P **Pn** **20 18 14.8 -3.6**
YSS *e*S **Sn** **20 20 14.4 -6.8**
YSS pmax pmax
comp=Z,40nm,1.0s
CN2 Changchun 12.65 311 *e*P **Pn** **20 18 36.8 -1.2**
CN2 *e*S **Sn** **20 20 55.5 -1.9**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,3.0s
NJ2 Nanjing 16.93 262 *e*P **Pn** **20 19 33.3 +1.5**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
BJI Beijing 18.10 289 P **P** **20 19 42.8 -1.6**
BJI pmax pmax
comp=Z,3.0nm,0.8s
PETK Petropavlovsk- 21.52 32 P **P** **20 20 19.9 -1.2**
comp=Z,5.2nm,0.8s,mb4.0,baz=214,slow=8.1,SNR=8.0
PETK Petropavlovsk- 21.52 32 P **P** **20 20 19.9 -1.2**
PETK pmax pmax
comp=Z,5.0nm,0.8s,mb4.0
HHC Hu-ho-hao-te 21.67 291 *e*P **P** **20 20 21.8 -1.0**
HHC pP 20 20 46.8
HHC PP 20 20 53.3
HHC sP sP 20 21 02.0 -2.0
HHC S **S** **20 24 07.5 -7.0**
HHC SS 20 24 55.5
HHC pmax pmax
comp=Z,7.0nm,0.8s,mb4.1
HHC pmax pmax
comp=Z,68nm,4.3s
PET Petropavlovsk 21.89 34 *e*P **P** **20 20 22.6 -2.3**
comp=Z,22nm,1.2s,mb4.5
PET Petropavlovsk 21.89 34 *e*P **P** **20 20 22.6 -2.4**
PET pmax pmax
comp=Z,22nm,1.2s,mb4.5
GUMO Guam 23.21 165 *e*P **P** **20 20 36.4 -1.8**
comp=Z,27nm,0.7s,mb4.8
GUMO Guam 23.21 165 P **P** **20 20 36.4 -1.7**
comp=Z,27nm,0.6s,mb4.8,baz=198,slow=23,SNR=4.6
GUMO Guam 23.21 165 P **P** **20 20 36.4 -1.8**
GUMO pmax pmax
comp=Z,27nm,0.6s,mb4.8
ULN Ulaanbaatar 26.03 306 *e*Pn **P** **20 21 02.4 -1.0**
comp=Z,1.0nm,0.7s,mb3.5
ULN *e*PcP PcP 20 24 28.1 +0.3
ULN Ulaanbaatar 26.03 306 *e*P **P** **20 21 02.4 -1.0**
ULN *e* 20 24 28.1
ULN pmax pmax
comp=Z,1.0nm,0.7s,mb3.5
YAK Yakutsk 26.44 350 Pn **P** **20 21 05.6 -1.4**
comp=Z,20nm,0.6s,mb4.9
YAK Yakutsk 26.44 350 *e*P **P** **20 21 04.5 -2.5**
YAK e*PP pP 20 21 27.0 -8.4
YAK *e* 20 21 48.8
YAK *e* 20 24 32.7
YAK *e*S **S** **20 25 27.3 -3.2**
YAK *e* 20 31 45.9
YAK pmax pmax
comp=Z,11nm,0.9s,mb4.5
YAK pmax pmax
comp=Z,20nm,2.8s,mb4.2
YAK pmax pmax
comp=E,30nm,2.8s
YAK pmax pmax
comp=N,23nm,4.2s
YAK smax
comp=N,31nm,2.5s
YAK smax
comp=E,14nm,1.9s
SONM Songino Array 26.45 306 P **P** **20 21 06.6 -0.6**
comp=E,0.5nm,0.5s,mb3.4,baz=105,slow=9.3,SNR=7.5
SONM PcP PcP 20 24 28.5 -0.3
comp=E,0.8nm,0.5s,baz=152,slow=4.4,SNR=7.1
SONM ScP ScP 20 27 55.1 -1.1
comp=E,0.5nm,0.9s,baz=122,slow=1.9,SNR=3.3
SEY Seymchan 28.05 13⇑ *i*P **P** **20 21 20.7 -0.6**
GYA Guiyang 28.91 259 P **P** **20 21 31.0 +1.6**
GYA pP pP 20 21 58.5 +0.4
GYA sP sP 20 22 15.0 +1.4
GYA PP PP 20 22 30.5 -6.7
GYA PcP PcP 20 24 36.8 +1.6
GYA S **S** **20 26 11.3 +1.2**
GYA ScP ScP 20 28 05.5 +1.4
GYA PcS PcS 20 28 18.3 +0.2
GYA ScS ScS 20 31 57.8 -0.5
GYA pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
CD2 Chengdu 29.47 270 P **P** **20 21 34.5 +0.2**
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb4.8
KMI Kunming 32.66 260 P **P** **20 22 02.3 -0.1**
KMI pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
BILL Bilibino 35.45 17 P **P** **20 22 25.0 -0.9**
BILL pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
CMAR Chiang Mai Arr 39.16 254 P **P** **20 22 57.9 +0.2**
comp=Z,0.3nm,0.7s,baz=49,slow=8.5,SNR=3.4
CMAR PcP PcP 20 25 05.1 +0.5
comp=Z,0.2nm,0.3s,baz=24,slow=1.8,SNR=4.1
WMQ Urumqi 39.25 297 *e*P **P** **20 22 59.3 +1.0**
WMQ pP pP 20 23 27.5 -0.4
WMQ sP sP 20 23 42.0 -1.2
WMQ PP PP 20 24 36.0 +5.1
WMQ pmax pmax
comp=Z,8.0nm,1.0s,mb4.3
WMQ pmax pmax
comp=Z,81nm,4.1s
NIKO Nikolski 39.96 48 *e*P **P** **20 23 02.7 -1.3**
comp=Z,28nm,0.8s,mb5.0
ZAA0 Zalesovo Array 40.85 313 *e*P **P** **20 23 10.9 -0.4**
ZAA0 *e*PcP PcP 20 25 08.7 -0.7
ZALV Zalesovo Beam 40.85 313 P **P** **20 23 11.2 -0.1**
comp=Z,1.4nm,0.5s,mb3.9,baz=91,slow=6.3,SNR=9.2
ZALV PcP PcP 20 25 08.5 -0.9
comp=Z,3.8nm,0.4s,baz=101,slow=3.1,SNR=15
ZALV ScP ScP 20 28 44.5 -2.0
comp=Z,0.5nm,0.3s,baz=50,slow=2.3,SNR=3.6
NVS Novosibirsk 41.82 314 *e*P **P** **20 23 17.8 -1.4**
NVS pmax pmax
comp=Z,2.0nm,0.4s,mb4.1
NVS pmax pmax
comp=N,1.0nm,0.8s
NVS pmax pmax
comp=E,3.0nm,0.7s
MK31 Makanchi Array 42.69 302 *e*P **P** **20 23 26.4 +0.1**
MKAR Makanchi Array 42.69 302 P **P** **20 23 26.3 -0.1**
MKAR PcP PcP 20 25 13.7 -2.0
MKAR ScP ScP 20 28 52.9 -1.1
MKAR Makanchi Array 42.69 302 P **P** **20 23 26.3 -0.1**
comp=E,2.2nm,0.5s,mb4.0,baz=89,slow=10,SNR=40
MKAR PcP PcP 20 25 13.7 -2.0
comp=E,0.3nm,0.4s,baz=98,slow=2.9,SNR=4.2
MKAR ScP ScP 20 28 52.9 -1.1
comp=E,0.6nm,0.8s,baz=74,slow=5.8,SNR=4.8
KSM Kuching 43.42 224 *e*Pn **P** **20 23 33.3 +0.7**
comp=E,6.3nm,1.0s,mb4.2
KURK Kurchatov 44.71 308 *e*P **P** **20 23 42.2 -0.2**
comp=E,15nm,0.6s,mb4.8
KURK *e*PcP PcP 20 25 21.5 -0.9
KURK Kurchatov 44.71 308 *d i*P **P** **20 23 42.3 -0.1**
KURK pmax pmax
comp=Z,13nm,0.6s,mb4.7
TKM2 Tokmak 2 48.08 298 *e*P **P** **20 24 07.8 -1.1**
comp=Z,2.8nm,0.6s,mb4.1
TKM2 Tokmak 2 48.08 298 *i*P **P** **20 24 10.0 +1.1**
TKM2 pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
KSH Kashi 48.72 294 *e*P **P** **20 24 18.5 +4.6**
KSH *e*pP pP 20 24 47.0 +2.4
KSH *e*sP sP 20 25 01.0 +1.4
KSH *e*PcP PcP 20 25 40.0 +3.1
KSH *e*PP PP 20 26 14.0 +6.0
KSH *e*ScP ScP 20 29 22.0 +2.8
KSH *e*PcS PcS 20 29 35.0 +1.8
KSH *e*S **S** **20 31 12.3 +6.1**
KSH *e*sS sS 20 32 03.3 +3.9
KSH *e*ScS ScS 20 33 54.0 +1.5
KSH *e*SS SS 20 34 42.0 +4.0
KSH pmax pmax
comp=Z,2.0nm,0.5s,mb4.0
KSH pmax pmax
comp=Z,160nm,3.7s
KSH LR LR
comp=N,150nm,8.2s
KSH LR LR
comp=E,170nm,4.4s
KSH LR LR
comp=Z,250nm,4.4s
RSO Redoubt South 48.90 38 *e*P **P** **20 24 14.1 -0.8**
AAK Ala-Archa 48.94 298 *e*P **P** **20 24 15.7 +0.2**
comp=Z,3.0nm,0.8s,mb4.0
AAK Ala-Archa 48.94 298⇓ *e*P **P** **20 24 15.9 +0.5**
AAK pmax pmax
comp=Z,2.0nm,1.1s,mb3.7
PPLA Purkeypile 49.09 34 *e*P **P** **20 24 16.7 +0.5**
comp=Z,13nm,1.1s,mb4.5
KDAK Kodiak Island 49.17 41 P **P** **20 24 16.3 -0.7**
KDAK Kodiak Island 49.17 41 P **P** **20 24 16.3 -0.7**
comp=Z,8.1nm,0.4s,mb4.7,baz=282,slow=4.6,SNR=16
KDAK Kodiak Island 49.17 41 P **P** **20 24 16.3 -0.7**
KDAK pmax pmax
comp=Z,8.0nm,0.4s,mb4.7
EKS2 Erkin-Say 49.44 298 *e*P **P** **20 24 19.2 0.0**
BRVK Borovoye 49.55 312⇑ *e*P **P** **20 24 20.5 +0.6**
BRVK pmax pmax
comp=Z,3.0nm,0.9s,mb3.9
BPAW Bear Paw Mtn. 49.61 33 *e*P **P** **20 24 19.7 -0.5**
comp=Z,9.2nm,1.0s,mb4.4
AML Almayashu 49.64 298 *e*P **P** **20 24 22.3 +1.5**
comp=Z,8.6nm,0.7s,mb4.5
COLD Coldfoot 49.93 29 *e*P **P** **20 24 22.4 -0.2**
comp=Z,2.3nm,0.7s,mb3.9
TRF Thorofare Moun 49.94 34 *e*P **P** **20 24 22.3 -0.4**
comp=Z,6.2nm,0.7s,mb4.3
SLKM Skilak Lake 50.15 38 *e*P **P** **20 24 23.4 -0.9**
ZRNK Zerenda 50.33 313 *i*P **P** **20 24 25.7 -0.1**
ZRNK pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
MCK McKinley 50.53 33 *e*P **P** **20 24 26.7 -0.4**
comp=Z,10nm,0.9s,mb4.5
MCK McKinley 50.53 33 *e*P **P** **20 24 26.7 -0.4**
MCK pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
COLA College 50.93 32 *e*P **P** **20 24 30.2 0.0**
comp=Z,6.2nm,0.6s,mb4.4
COLA College 50.93 32 *e*P **P** **20 24 30.2 0.0**
COLA pmax pmax
comp=Z,6.0nm,0.6s,mb4.4
ILAR Eielson Array 51.35 32 P **P** **20 24 32.4 -0.8**
comp=Z,4.4nm,0.6s,mb4.3,baz=272,slow=5.0,SNR=79
ILAR Eielson Array 51.35 32 P **P** **20 24 32.4 -0.9**
ILAR pmax pmax
comp=Z,4.0nm,0.6s
KK31 Karatay Array 51.62 300 *i*P **P** **20 24 35.5 -0.2**
KKAR Karatay Array 51.62 300 *e*P **P** **20 24 36.0 +0.3**
comp=Z,0.9nm,0.4s,mb3.8
KKAR Karatay Array 51.62 300 *e*P **P** **20 24 36.0 +0.3**
KKAR pmax pmax
comp=Z,1.0nm,0.4s,mb3.8
DOT Dot Lake 52.70 33 *e*P **P** **20 24 42.5 -0.8**
comp=Z,13nm,0.6s,mb4.8
BMRM Bremner River 52.83 37 *e*P **P** **20 24 44.4 +0.1**
comp=Z,6.9nm,0.8s,mb4.4
EGAK Eagle 53.79 32 *e*P **P** **20 24 50.7 -0.5**
comp=Z,6.0nm,0.7s,mb4.4
SVE Sverdlovsk 54.30 319⇓ *e*P **P** **20 24 55.9 +0.9**
SVE pmax pmax
comp=Z,12nm,0.8s,mb4.7
FITZ Fitzroy Crossi 55.42 195 P **P** **20 25 03.4 0.0**
comp=Z,0.9nm,0.4s,mb3.9,baz=349,slow=3.5,SNR=6.4
ARU Arti 55.51 318 *e*P **P** **20 25 03.6 -0.1**
comp=Z,11nm,0.8s,mb4.7
ARU Arti 55.51 318 *d i*P **P** **20 25 03.7 0.0**
ARU *e* 20 27 07.4
ARU S **S** **20 32 39.0 +0.7**
ARU SS SS 20 36 22.1 -2.4
ARU pmax pmax
comp=Z,14nm,0.8s,mb4.8
KBL Kabul 55.64 290 *e*P **P** **20 25 04.5 -0.5**
comp=Z,2.3nm,0.8s,mb4.1
KBL Kabul 55.64 290 *e*P **P** **20 25 04.5 -0.6**
KBL pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
WRA Warramunga Arr 56.01 185 P **P** **20 25 06.6 -1.1**
comp=Z,3.1nm,0.4s,mb4.5,baz=0.4,slow=7.6,SNR=56
WRA Warramunga Arr 56.01 185 P **P** **20 25 06.6 -1.0**
WRA pmax pmax
comp=Z,3.0nm,0.4s
INK Inuvik 56.11 27 *e*P **P** **20 25 07.5 -0.3**
comp=Z,8.4nm,0.8s,mb4.6
INK Inuvik 56.11 27 P **P** **20 25 07.2 -0.6**
comp=Z,6.7nm,0.6s,mb4.6,baz=292,slow=8.6,SNR=8.4
INK Inuvik 56.11 27 *e*P **P** **20 25 07.5 -0.3**
INK pmax pmax
comp=Z,8.0nm,0.8s
AB31 Akbulak array 56.77 310 *i*P **P** **20 25 12.4 -0.4**
AB31 pmax pmax
comp=Z,6.0nm,0.5s,mb4.7
ABKAR Akbulak array 56.77 310 *e*P **P** **20 25 12.6 -0.2**
comp=Z,6.4nm,0.6s,mb4.6
AKTO Aktyubinsk 57.58 312 *i*P **P** **20 25 19.1 +0.7**
AKTO pmax pmax
comp=Z,1.0nm,0.6s,mb3.8
ASAR Alice Springs 59.73 185 P **P** **20 25 32.9 -0.7**
comp=Z,1.6nm,0.5s,mb4.1,baz=18,slow=12,SNR=39
ASAR Alice Springs 59.73 185 P **P** **20 25 32.9 -0.7**
ASAR pmax pmax
comp=Z,2.0nm,0.5s
MBWA Marble Bar 59.82 201 *e*P **P** **20 25 34.4 +0.2**
comp=Z,2.1nm,0.6s,mb4.1
KEV Kevo 63.41 339 *e*P **P** **20 25 56.9 -0.8**
KEV Kevo 63.41 339 *e*p **P** **20 25 56.9 -0.8**
ARCES ARCESS Array B 63.97 339 P **P** **20 26 01.2 -0.2**
ARCES ARCESS Array B 63.97 339 P **P** **20 26 01.2 -0.2**
comp=Z,3.6nm,0.8s,mb4.3,baz=45,slow=6.8,SNR=7.4
ARCES ARCESS Array B 63.97 339 P **P** **20 26 01.2 -0.2**
ARCES pmax pmax
comp=Z,4.0nm,0.8s
YKA Yellowknife Ar 65.60 29 P **P** **20 26 11.3 -0.7**
comp=Z,2.7nm,0.7s,mb4.2,baz=293,slow=6.7,SNR=4.8
YKA Yellowknife Ar 65.60 29 P **P** **20 26 11.3 -0.8**
YKA pmax pmax
comp=Z,3.0nm,0.7s
JOF Joensuu 65.63 331 *e*P **P** **20 26 12.0 -0.3**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.6
JOF Joensuu 65.63 331 *e*p **P** **20 26 12.0 -0.3**
comp=Z,4.0nm,0.4s,mb4.6
OBN Obninsk 67.42 323 P **P** **20 26 23.1 -0.7**
OBN Obninsk 67.42 323⇑ *e*P **P** **20 26 23.7 0.0**
OBN 20 26 48.0
OBN pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
OBN MLR MLR
comp=Z,100nm,15.0s
STKA Stephens Creek 67.80 177 P **P** **20 26 25.8 -0.4**
comp=Z,3.3nm,0.9s,mb4.0,baz=347,slow=12,SNR=3.0
KAF Kangasniemi 68.01 332 *e*P **P** **20 26 26.2 -1.1**
KAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
KAF Kangasniemi 68.01 332 *e*p **P** **20 26 26.2 -1.1**
comp=Z,3.4nm,0.6s,mb4.2
FINES FINESS Array B 68.49 332 P **P** **20 26 29.8 -0.6**
comp=Z,4.4nm,0.6s,mb4.3,baz=69,slow=5.6,SNR=35
FINES FINESS Array B 68.49 332 P **P** **20 26 29.8 -0.5**
FINES pmax pmax
comp=Z,4.0nm,0.6s
JCW Jim Creek 69.58 45 *e*P **P** **20 26 37.3 0.0**
comp=Z,12nm,0.7s,mb4.7
KIV Kislovodsk 69.76 310 *e*P **P** **20 26 39.1 +0.6**
comp=Z,6.6nm,0.7s,mb4.5
KIV Kislovodsk 69.76 310⇓ *e*P **P** **20 26 40.0 +1.5**
KIV pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
F04A Amboy 70.49 47 ⇓P **P** **20 26 42.9 0.0**
baz=70
B08A Colville Reser 70.95 44 ⇓P **P** **20 26 45.8 +0.1**
baz=71
H04A Detroit Lake 71.30 48 ⇓P **P** **20 26 48.2 +0.4**
baz=71
SUMG Summit 71.48 359 *e*P **P** **20 26 49.1 +0.7**
comp=Z,14nm,0.7s,mb4.8
SUMG Summit 71.48 359 *i*P **P** **20 26 49.3 +0.9**
comp=Z,12nm,0.7s,mb4.7
NWAO Narrogin (SRO) 71.66 199 P **P** **20 26 55.8 +5.9**
comp=Z,62nm,1.4s,mb5.1
NWAO Narrogin (SRO) 71.66 199 P **P** **20 26 55.8 +5.9**
NWAO pmax pmax
comp=Z,62nm,1.4s
C09A Chrisman Ranch 71.86 44 ⇓P **P** **20 26 51.2 +0.1**
baz=72
D08A Wollman Farm, 71.91 45 ⇓P **P** **20 26 51.2 -0.2**
baz=72
G06A Carlson Farm, 71.92 47 ⇓P **P** **20 26 51.7 +0.2**
baz=72
E08A Dider Farm, El 72.14 45 ⇑P **P** **20 26 52.7 -0.1**
baz=72
NEW Newport 72.23 43 ⇑P **P** **20 26 53.2 -0.1**
baz=72
YBH Yreka Blue Hor 72.57 51 P **P** **20 26 53.8 -1.7**
comp=Z,3.3nm,0.6s,mb4.2,baz=275,slow=3.7,SNR=5.7
YBH Yreka Blue Hor 72.57 51 P **P** **20 26 53.8 -1.7**
YBH pmax pmax
comp=Z,3.0nm,0.6s
E09A Wood Farm, Sta 72.65 45 ⇑P **P** **20 26 55.8 0.0**
baz=72
G08A Pilot Rock 72.87 46 ⇓P **P** **20 26 57.5 +0.4**
baz=72
C11A Tepee Creek (N 72.95 43 ⇑P **P** **20 26 57.9 +0.3**
baz=73
K05A Summer Lake 73.15 49 ⇓P **P** **20 26 59.8 +1.0**
baz=73
I07A Izee 73.23 47 ⇑P **P** **20 26 59.4 +0.1**
baz=73
A13A Flathead Natio 73.31 41 ⇓P **P** **20 26 59.9 +0.3**
baz=73
AKASG Malin Array Be 73.58 321 P **P** **20 27 00.4 -0.8**
comp=Z,3.7nm,0.6s,mb4.3,baz=48,slow=6.1,SNR=27
AKASG Malin Array Be 73.58 321 P **P** **20 27 00.4 -0.8**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKBB Malin Array Si 73.58 321 *e*P **P** **20 27 00.5 -0.7**
B13A Whitefish 73.61 42 ⇓P **P** **20 27 02.0 +0.5**
baz=73
A14A Double T Ranch 73.81 41 ⇓P **P** **20 27 02.8 +0.2**
baz=74
HFS Hagfors 73.90 335 P **P** **20 27 02.3 -0.7**
comp=Z,1.6nm,0.5s,mb4.0,baz=97,slow=4.6,SNR=12
HFS Hagfors 73.90 335 P **P** **20 27 02.3 -0.6**
HFS pmax pmax
comp=Z,2.0nm,0.5s
D12A Red Ives Fores 73.91 43 ⇓P **P** **20 27 03.1 -0.2**
baz=74
C13A Hot Springs 73.97 42 ⇑P **P** **20 27 03.8 +0.3**
baz=74
NOA NORSAR Array B 74.07 336 P **P** **20 27 03.4 -0.5**
comp=Z,3.2nm,0.7s,mb4.2,baz=41,slow=5.9,SNR=19
NOA NORSAR Array B 74.07 336 P **P** **20 27 03.4 -0.4**
NOA pmax pmax
comp=Z,3.0nm,0.7s
E12A Beaver Dam Sad 74.16 44 ⇓P **P** **20 27 05.2 +0.5**
baz=74
A15A Johnson Ranch, 74.17 40 ⇑P **P** **20 27 04.2 -0.5**
baz=74
J08A Circle Bar Ran 74.26 48 ⇓P **P** **20 27 05.9 +0.6**
baz=74
B14A Marquette Ranc 74.26 41 ⇓P **P** **20 27 05.4 +0.2**
baz=74
D13A Huson 74.38 43 ⇑P **P** **20 27 05.8 -0.1**
baz=74
B15A Bradely Ranch, 74.67 41 ⇓P **P** **20 27 07.7 +0.1**
baz=74,SNR=5.6
F12A Elk City 74.73 44 ⇑P **P** **20 27 08.0 0.0**
baz=74,SNR=7.1
D14A Greenough 74.91 42 ⇑P **P** **20 27 08.7 -0.3**
baz=75
C15A Salmond Ranch, 74.97 41 ⇓P **P** **20 27 09.8 +0.5**
baz=75,SNR=7.5
B16A M & M Farms, S 75.06 41 ⇑P **P** **20 27 09.9 +0.1**
baz=75
G12A Big Creek, Yel 75.06 45 ⇓P **P** **20 27 09.6 -0.3**
baz=75
F13A Darby 75.23 44 ⇓P **P** **20 27 10.3 -0.5**
baz=75
C16A Fuhringer Ranc 75.41 41 ⇓P **P** **20 27 11.8 -0.1**
baz=75
FFC Flin Flon 75.56 31 P **P** **20 27 11.3 -1.2**
comp=Z,10nm,1.2s,mb4.3
FFC Flin Flon 75.56 31 P **P** **20 27 11.3 -1.3**
FFC pmax pmax
comp=Z,10.0nm,1.2s,mb4.3
B17A L&G Farms, Che 75.61 40 ⇑P **P** **20 27 13.1 +0.2**
baz=75,SNR=6.4
FCC Fort Churchill 75.69 25 *e*P **P** **20 27 12.5 -0.7**
comp=Z,0.1nm,0.5s
A18A Metzger Ranch, 75.71 39 ⇓P **P** **20 27 13.4 -0.1**
baz=75,SNR=5.6
E15A Deer Lodge 75.78 43 ⇓P **P** **20 27 13.9 -0.1**
baz=75
MFID Camas Ranch 75.79 46 ⇓P **P** **20 27 14.3 +0.2**
baz=76
C17A Wharram Farm, 76.04 41 ⇑P **P** **20 27 15.3 -0.1**
baz=76
F15A Butte 76.22 43 ⇑P **P** **20 27 16.8 +0.3**
baz=76,SNR=12
EGMT Eagleton 76.32 40 ⇑P **P** **20 27 17.0 0.0**
baz=76,SNR=5.4
I13A Wildhorse Cree 76.48 45 ⇑P **P** **20 27 18.9 +0.9**
baz=76
HLID Hailey 76.53 46 ⇓P **P** **20 27 18.9 +0.7**
baz=76
G15A Dillon 76.64 43 ⇓P **P** **20 27 19.2 +0.3**
baz=76,SNR=5.1
E17A Martinsdale 76.72 42 ⇓P **P** **20 27 20.0 +0.7**
baz=76
J13A Cove Ranch, Pi 76.76 46 ⇑P **P** **20 27 20.4 +0.8**
baz=76
BOZ Bozeman (W) 76.81 43 ⇑P **P** **20 27 20.8 +1.0**
baz=76
I14A Mackay 76.86 45 ⇑P **P** **20 27 20.4 +0.3**
baz=76,SNR=8.7
C19A Slack Wire Ran 76.87 40 ⇓P **P** **20 27 20.4 +0.3**
baz=76
G16A Moss Hill, Enn 76.98 43 ⇓P **P** **20 27 21.0 +0.3**
baz=77
E18A Harlowton 77.16 41 ⇓P **P** **20 27 22.4 +0.6**
baz=77
F17A Fitzpatrick Pl 77.18 42 ⇓P **P** **20 27 22.1 +0.3**
baz=77
J14A Carey 77.19 45 ⇓P **P** **20 27 23.2 +1.2**
baz=77
NVAR Mina Array Bea 77.23 52 P **P** **20 27 22.7 +0.4**
comp=Z,4.0nm,0.7s,mb4.1,baz=291,slow=5.1,SNR=17
D19A Cripps Ranch, 77.33 40 ⇓P **P** **20 27 23.0 +0.3**
baz=77
C20A Veseth Ranch, 77.42 39 ⇓P **P** **20 27 23.7 +0.5**
baz=77
P10A Eureka 77.67 50 ⇑P **P** **20 27 25.5 +0.8**
baz=77
F18A Big Timber 77.69 42 ⇑P **P** **20 27 25.0 +0.3**
baz=77,SNR=9.0
BR131 Keskin Array S 77.72 310 *e*P **P** **20 27 25.3 +0.3**
comp=Z,0.9nm,0.5s,mb3.7
BRTR Keskin Array B 77.72 310 P **P** **20 27 25.5 +0.6**
comp=Z,2.8nm,0.7s,mb4.0,baz=98,slow=4.0,SNR=17
BRTR Keskin Array B 77.72 310 *i*P **P** **20 27 26.2 +1.2**

BRTR pmax pmax
comp=Z,3.0nm,0.6s
D20A Manuel Ranch, 77.76 40 ⇑P P 20 27 25.4 +0.3
baz=77
E19A Rath Farm, Rou 77.83 41 ⇑P P 20 27 25.8 +0.4
baz=78,SNR=10
K14A Jones Ranch, D 77.86 46 ⇓P P 20 27 26.6 +0.9
baz=78
FRB Frobisher Bay 78.05 12 P P 20 27 25.9 -0.4
comp=Z,11nm,0.7s,mb4.6,baz=357,slow=6.4,SNR=6.7
FRB Frobisher Bay 78.05 12 P P 20 27 26.0 -0.3
FRB pmax pmax
comp=Z,11nm,0.7s
F19A Roth Farm, Mol 78.14 41 ⇑P P 20 27 27.1 0.0
baz=78
E20A Meyer Farm, Mu 78.14 40 ⇓P P 20 27 27.5 +0.3
baz=78,SNR=5.4
Q10A Clear Creek Ra 78.19 50 ⇑P P 20 27 28.1 +0.5
baz=78
O12A Currie 78.33 48 ⇓P P 20 27 28.9 +0.5
baz=78
D21A La Casta Ranch 78.37 39 ⇓P P 20 27 28.2 -0.2
baz=78
RLMT Red Lodge 78.43 42 ⇑P P 20 27 29.4 +0.6
baz=78
H18A Shoshone NF, C 78.50 43 ⇓P P 20 27 29.7 +0.5
baz=78
S10A Tonopah Range, 78.61 51 ⇓P P 20 27 30.3 +0.3
baz=78
L15A Malad City 78.66 46 ⇑P P 20 27 30.8 +0.7
baz=78
P12A McGill 78.72 49 ⇑P P 20 27 31.2 +0.7
baz=78
NIE Niedzica 78.78 324 eP P 20 27 31.6 +1.0
G20A Bridger 78.94 41 ⇑P P 20 27 31.1 -0.4
baz=79
BGU Big Grassy Mou 78.95 47 eP P 20 27 31.9 +0.2
comp=Z,1.9nm,0.6s,mb3.9
M15A Larsen Ranch, 78.96 46 ⇑P P 20 27 32.1 +0.3
baz=79
R11A Troy Canyon, C 78.99 50 ⇑P P 20 27 32.4 +0.4
baz=79,SNR=5.8
Q12A Willow Creek R 79.03 50 ⇑P P 20 27 32.9 +0.7
baz=79
MPMC Manual Prospec 79.16 53 ⇓P P 20 27 33.0 0.0
baz=79,SNR=5.7
J18A Kendall Valley 79.25 44 ⇑P P 20 27 34.1 +0.8
baz=79
P13A Bates Ranch, G 79.28 49 ⇑P P 20 27 34.2 +0.6
baz=79
I19A Meeteetse 79.28 43 ⇑P P 20 27 34.1 +0.6
baz=79
M16A Huntsville 79.53 46 ⇑P P 20 27 34.8 -0.1
baz=79
EDW2 Edwards Air Fo 79.54 54 ⇑P P 20 27 34.9 -0.1
baz=79
DUG Dugway 79.54 48 ⇓P P 20 27 35.2 +0.2
baz=79
DUG Dugway 79.54 48 eP P 20 27 35.0 +0.1
comp=Z,4.4nm,1.1s,mb4.0
DUG Dugway 79.54 48 eP P 20 27 35.0 +0.1
DUG pmax pmax
comp=Z,4.0nm,1.1s,mb4.0
Q13A Wheeler Ranch, 79.58 49 ⇑P P 20 27 35.6 +0.4
baz=79
J19A Crowheart 79.75 43 ⇑P P 20 27 36.8 +0.8
baz=79
P14A Drum Mountains 79.76 48 ⇑P P 20 27 36.0 -0.1
baz=79
BW06 Boulder Array 79.79 44 ⇓P P 20 27 36.1 -0.2
baz=79
PDAR Pinedale Array 79.79 44 P P 20 27 36.0 -0.3
comp=Z,1.9nm,0.7s,mb3.8,baz=311,slow=1.8,SNR=20
MORC Moravsky Berou 79.81 326 eP P 20 27 35.2 -1.0
I20A Worland 79.81 42 ⇑P P 20 27 36.7 +0.4
baz=80
T11A Corn Creek, Al 79.89 51 ⇓P P 20 27 37.1 +0.2
baz=80
DPC Dobruska-Polom 79.95 327 eP P 20 27 37.3 +0.3
DPC Dobruska-Polom 79.95 327 eP P 20 27 37.3 +0.3
H21A Big Horn, Sher 79.95 41 ⇓P P 20 27 37.2 +0.1
baz=80
Q14A Sevier Lake (B 80.01 49 P P 20 27 38.2 +0.6
baz=80,SNR=11
PSZ Piszkesteto 80.02 323 eP P 20 27 35.8 -1.6
J20A Shoshoni 80.23 43 ⇓P P 20 27 38.4 -0.2
baz=80
TUQ Turquoise Moun 80.55 53 ⇓P P 20 27 40.8 +0.3
baz=80,SNR=7.0
BRG Berggiesshubel 80.61 328 *i* P P 20 27 40.4 0.0
comp=Z,3.3nm,0.7s,mb4.1
BRG
comp=N,603nm,17.9s
BRG
comp=E,521nm,24.4s
BRG
comp=Z,611nm,25.9s
BRG Berggiesshubel 80.61 328 *i* P P 20 27 40.4 -0.1
BRG pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
BRG MLR MLR
comp=N,361nm,17.9s
BRG MLR MLR
comp=E,312nm,24.4s
BRG MLR MLR
comp=Z,366nm,25.9s
CLL Collm 80.68 329 *i* P P 20 27 40.5 -0.3
comp=Z,5.0nm,0.7s,mb4.2
CLL Collm 80.68 329 *i* P P 20 27 40.5 -0.3
CLL pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
O17A Robinson Place 80.77 47 ⇓P P 20 27 42.1 +0.5
baz=80
T13A Saint George 80.85 51 ⇓P P 20 27 42.8 +0.7
baz=80
PRU Pruhonice 81.00 327 eP P 20 27 43.5 +0.9
PRU Pruhonice 81.00 327 eP P 20 27 43.5 +0.9
J22A Midwest 81.07 42 ⇓P P 20 27 42.6 -0.5
baz=81
TREC Trest 81.09 326 eP P 20 27 43.0 -0.1
TREC Trest 81.09 326 eP P 20 27 43.0 -0.1
GMRC Granite Mounta 81.12 53 P P 20 27 43.6 +0.1
baz=81,SNR=8.4
K21A Alcova 81.16 43 P P 20 27 43.6 0.0
baz=81,SNR=5.6
U13A Pakoon Wash 81.19 51 ⇓P P 20 27 44.4 +0.6
baz=81
P17A Butcher Ranch, 81.23 47 ⇑P P 20 27 44.7 +0.7
baz=81
W12A Cal Nev Ari 81.31 53 ⇑P P 20 27 44.7 +0.2
baz=81
PFO Pinyon Flat Ob 81.32 55 ⇓P P 20 27 44.5 0.0
baz=81
ULM Lac du Bonnet 81.37 32 P P 20 27 44.2 -0.3
comp=Z,3.9nm,0.7s,mb4.2,baz=350,slow=3.8,SNR=3.5
BELC Belle Mtn. Jos 81.38 54 ⇓P P 20 27 44.7 -0.2
baz=81,SNR=5.2
P18A Preston Nutter 81.42 47 ⇓P P 20 27 45.9 +0.8
baz=81,SNR=5.7
R16A Teasdale 81.55 48 ⇑P P 20 27 47.0 +1.3
baz=81
K22A Casper 81.55 43 ⇓P P 20 27 45.6 -0.1
baz=81
SRU San Rafael 81.59 47 P P 20 27 46.3 +0.4
baz=81,SNR=6.3
U14A Mt Trumbull 81.68 51 ⇓P P 20 27 47.0 +0.5
baz=81
MONP Monument Peak 81.78 55 ⇓P P 20 27 47.0 0.0
baz=82
M21A Separation Pea 81.78 44 ⇑P P 20 27 47.1 +0.2
baz=81
N20A Spence Gulch, 81.79 45 ⇑P P 20 27 47.3 +0.4
baz=81,SNR=5.9
T15A Red Dirt Ranch 81.80 50 ⇑P P 20 27 47.7 +0.6
baz=82
Q18A Rafter H Ranch 81.83 47 ⇓P P 20 27 47.2 0.0
baz=82
IRM Iron Mountain 81.83 54 ⇓P P 20 27 47.4 +0.1
baz=82
R17A Hanksville Air 81.93 48 ⇑P P 20 27 48.0 +0.3
baz=82
BC3 Big Chuckawall 81.95 54 ⇑P P 20 27 47.7 -0.2
baz=82
KHC Kasperske Hory 82.06 327 eP P 20 27 48.3 +0.2
KHC Kasperske Hory 82.06 327 eP P 20 27 48.3 +0.2
DVTC Desert V Tower 82.13 55 ⇓P P 20 27 48.7 -0.2
baz=82
P19A Cripple Cowboy 82.16 46 ⇑P P 20 27 49.4 +0.5
baz=82,SNR=5.6
U15A North Rim 82.23 50 ⇓P P 20 27 50.0 +0.7
baz=82,SNR=6.1
N21A Black Mountain 82.26 45 ⇑P P 20 27 49.8 +0.4
baz=82
L23A Garrett 82.36 43 ⇑P P 20 27 49.6 -0.3
baz=82
Q19A Hogan Spring (82.44 47 ⇑P P 20 27 50.5 +0.2
baz=82
GRA1 Grafenberg Arr 82.65 329 eP P 20 27 51.5 +0.3
comp=Z,8.0nm,1.3s,mb4.3
GRF Grafenberg Arr 82.65 329 eP P 20 27 51.5 +0.3
comp=Z,8.0nm,1.3s,mb4.3
GRF Grafenberg Arr 82.65 329 eP P 20 27 51.5 +0.3
GRF pmax pmax
comp=Z,8.0nm,1.3s,mb4.3
GRF Grafenberg Arr 82.65 329 eP P 20 27 51.5 +0.3
GRF pmax pmax
comp=Z,8.0nm,1.3s,mb4.3
V15A Kaibab Nationa 82.69 51 ⇑P P 20 27 52.5 +0.8
baz=82
S18A Hurst Farm, Bl 82.83 48 ⇓P P 20 27 52.2 -0.2
baz=82
R19A Curley Farm, L 82.88 47 ⇓P P 20 27 53.4 +0.7
baz=82
Y13A Salome 82.91 53 ⇓P P 20 27 52.9 0.0
baz=83
Q20A Ridgley Place, 83.01 46 ⇓P P 20 27 53.7 +0.4
baz=83
X14A Yava 83.10 52 ⇓P P 20 27 54.4 +0.6
baz=83
U16A Tuba City 83.14 50 ⇑P P 20 27 54.9 +0.9
baz=83,SNR=5.6
EKA Eskdalemuir Ar 83.14 339 P P 20 27 53.3 -0.3
comp=Z,0.6nm,0.4s,mb3.6,baz=31,slow=5.0,SNR=8.7
EKA Eskdalemuir Ar 83.14 339 P P 20 27 53.3 -0.3
EKA pmax pmax
comp=Z,1.0nm,0.4s
O22A Kremmling 83.21 44 ⇑P P 20 27 54.4 +0.1
baz=83,SNR=6.1
T18A Mexican Hat 83.26 49 ⇑P P 20 27 54.1 -0.5
baz=83,SNR=5.4
M24A Cheyenne 83.28 43 ⇑P P 20 27 55.4 +0.8
baz=83
S19A Harvey Farm, M 83.31 48 ⇓P P 20 27 55.1 +0.3
baz=83
Y14A Wickenburg 83.36 53 ⇑P P 20 27 55.4 +0.2
baz=83
WUAZ Wupatki 83.39 51 ⇓P P 20 27 56.1 +0.8
baz=83,SNR=5.0
Z13A Yuma Proving G 83.40 54 ⇑P P 20 27 55.6 +0.2
baz=83
R20A Redvale 83.47 47 ⇓P P 20 27 56.3 +0.7
baz=83
P22A Eagle 83.47 45 ⇓P P 20 27 56.0 +0.4
baz=83,SNR=5.3
X15A Humboldt 83.50 52 ⇓P P 20 27 56.4 +0.5
baz=83,SNR=8.0
113A Mohawk Valley, 83.60 54 ⇓P P 20 27 56.2 -0.2
baz=83
V17A Tonalea, Kykot 83.68 50 ⇓P P 20 27 57.3 +0.5
baz=83,SNR=12
S20A Disappointment 83.71 47 ⇑P P 20 27 57.6 +0.7
baz=83
U18A Rough Rock, Ch 83.73 49 ⇓P P 20 27 58.0 +0.9
baz=83
Y15A Casa Rosa Ranc 83.78 52 ⇓P P 20 27 57.6 +0.2
baz=84,SNR=5.4
R21A Cimarron 83.83 46 ⇓P P 20 27 58.3 +0.8
baz=84
Q22A Crested Butte, 83.88 46 ⇑P P 20 27 58.5 +0.8
baz=84
T19A Beclabito 83.97 48 ⇑P P 20 27 58.5 +0.2
baz=84,SNR=5.0
ISCO Idaho Springs 83.98 44 ⇓P P 20 27 59.0 +0.7
baz=84
MEM Membach 84.02 332 P P 20 27 58.4 +0.2
X16A Lo Mia Camp, P 84.05 51 ⇑P P 20 27 59.5 +0.8
baz=84
V18A Ganado 84.15 50 ⇓P P 20 28 00.0 +0.8
baz=84,SNR=5.5
S21A Coal Bank Pass 84.16 47 ⇑P P 20 28 00.0 +0.8
baz=84,SNR=5.3
STU Stuart 84.20 329 eP P 20 27 59.0 -0.2
U19A Dine' College, 84.22 49 ⇓P P 20 27 59.9 +0.4
baz=84
Y16A Circle Bar Ran 84.37 52 ⇓P P 20 28 00.8 +0.5
baz=84
S22A 4UR Ranch, Cre 84.67 46 ⇓P P 20 28 02.3 +0.5
baz=84
SNF Seneffe 84.75 333 P P 20 28 01.4 -0.5
comp=Z,9.6nm,1.8s,mb4.2
W19A Sanders 84.88 50 ⇑P P 20 28 03.6 +0.8
baz=85
Y17A Roosevelt 84.89 52 ⇑P P 20 28 03.5 +0.5
baz=85
U21A Nageezi 85.06 48 ⇓P P 20 28 04.3 +0.5
baz=85
BAIF Baives 85.14 333 eP P 20 28 03.4 -0.5
CDF Champ du Feu 85.27 330 eP P 20 28 03.6 -0.9
comp=Z,7.1nm,0.9s,mb4.1
CDF Champ du Feu 85.27 330 eP P 20 28 03.6 -0.9
comp=Z,3.5nm,0.9s,mb4.1
CDF Champ du Feu 85.27 330 eP P 20 28 03.6 -0.9
CDF pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
R24A Sanders Place, 85.34 45 ⇓P P 20 28 05.9 +0.8
baz=85
Y18A Canyon Day Jun 85.35 51 ⇑P P 20 28 06.0 +0.8
baz=85
SDCO Great Sand Dun 85.44 46 ⇓P P 20 28 06.3 +0.7
baz=85
DAVOX Davos/Dischmat 85.46 328 P P 20 28 05.4 -0.1
comp=Z,1.8nm,0.5s,mb4.0,baz=15,slow=12,SNR=4.9
T23A Casias Ranch, 85.62 47 ⇑P P 20 28 07.2 +0.7
baz=85
S24A Houchin Ranch, 85.68 46 ⇑P P 20 28 07.4 +0.6
baz=85
R25A Fountain Ranch 85.87 45 ⇑P P 20 28 07.6 -0.1
baz=86
HINF Hinteralfeld 85.92 330 eP P 20 28 06.3 -1.4
HAU Haudompre 85.97 330 eP P 20 28 06.7 -1.3
comp=Z,2.8nm,0.5s,mb3.9
HAU Haudompre 85.97 330 eP P 20 28 06.7 -1.3
comp=Z,1.4nm,0.5s,mb4.0
HAU Haudompre 85.97 330 eP P 20 28 06.7 -1.3
HAU pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
U23A El Rito 86.00 47 ⇑P P 20 28 08.7 +0.3
baz=86
MEZF Maizieres J'vi 86.09 331 eP P 20 28 07.7 -0.9
comp=Z,5.6nm,0.8s,mb4.1
MEZF Maizieres J'vi 86.09 331 eP P 20 28 07.7 -0.9
comp=Z,5.6nm,0.8s,mb4.3
SFTF Sexfontaines 86.33 331 eP P 20 28 08.7 -1.1
comp=Z,15nm,0.9s,mb4.4
SFTF Sexfontaines 86.33 331 eP P 20 28 08.7 -1.1
comp=Z,15nm,0.9s,mb4.7
SCHQ Schefferville 86.70 14 P P 20 28 11.0 -0.4
comp=Z,2.8nm,0.6s,mb4.3,baz=14,slow=6.7,SNR=5.1
LOR Lormes 87.56 331 eP P 20 28 15.0 -0.7
LPL La Plagne 87.81 328 eP P 20 28 16.0 -0.9
LPG La Plagne 87.81 328 eP P 20 28 16.0 -0.9
SSF Saint Saulge 87.86 331 eP P 20 28 15.8 -1.4
FLN La Foliniere 87.92 334 eP P 20 28 15.8 -1.6
LDF La Druitiere 87.94 334 eP P 20 28 16.0 -1.5
AVF Avril sur Loir 88.15 331 eP P 20 28 17.2 -1.3
comp=Z,4.0nm,0.6s,mb4.2
AVF Avril sur Loir 88.15 331 eP P 20 28 17.2 -1.3
comp=Z,2.0nm,0.6s,mb4.1
AVF Avril sur Loir 88.15 331 eP P 20 28 17.2 -1.3
AVF pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
GRR Gorron 88.37 334 eP P 20 28 18.2 -1.3
MBDF Montbardon 88.42 328 eP P 20 28 18.9 -0.9
comp=Z,4.3nm,0.6s,mb4.1
MBDF Montbardon 88.42 328 eP P 20 28 18.9 -0.9
comp=Z,2.2nm,0.6s,mb4.2
MBDF Montbardon 88.42 328 eP P 20 28 18.9 -0.9
MBDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
BGF Bois d'Agland 88.54 331 eP P 20 28 19.1 -1.2
SBF Sospel 88.82 327 eP P 20 28 20.6 -1.1
PGF Pioggiola 89.15 325 eP P 20 28 22.3 -1.0
FRF La Foret Royal 89.41 327 eP P 20 28 22.8 -1.7
SMRF Simiane la Rot 89.53 328 eP P 20 28 23.7 -1.4
MFF Saint Martin d 89.63 333 eP P 20 28 24.8 -0.7
LMR La Mourre 89.65 327 eP P 20 28 24.1 -1.5
comp=Z,3.6nm,0.7s,mb4.1
LMR La Mourre 89.65 327 eP P 20 28 24.1 -1.5
comp=Z,1.8nm,0.7s,mb4.1
LMR La Mourre 89.65 327 eP P 20 28 24.1 -1.5
LMR pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
MTLF Montolieu 91.45 330 eP P 20 28 31.8 -2.2
TXAR Lajitas Array 92.35 51 P P 20 28 38.1 -0.4
comp=Z,1.3nm,0.5s,mb4.2,baz=291,slow=2.5,SNR=21
TXAR Lajitas Array 92.35 51 P P 20 28 38.1 -0.3
TXAR pmax pmax
comp=Z,1.0nm,0.5s
MAW Mawson 117.87 205 PKP PKPdf 20 34 12.4 0.0
comp=Z,0.7nm,0.6s,baz=86,slow=8.7,SNR=6.2
MAW Mawson 117.87 205 PKIKP PKPdf 20 34 12.4 0.0
MAW pmax pmax
comp=Z,1.0nm,0.6s
QSPA South Pole Qui 125.97 180 ePKPdf PKPdf 20 34 27.1 -0.7
LPAZ La Paz 148.99 57 PKPbc PKPbc 20 35 15.9 +0.3
comp=Z,2.0nm,0.6s,baz=329,slow=3.3,SNR=14

IDC 30 20:17:18.8±4.3, 5°38S×151°19E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.5/16, mbtmp3.6/4, Error ellipse: s-maj=118.8km s-min=33.3km az=107.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.87**	**227**	P		P		20 22 11.6	-1.7
	1.3nm,0.5s,baz=52,slow=11,SNR=18								
ASAR	**Alice Springs**	**24.65**	**221**	P		P		20 22 41.6	+0.3
	0.2nm,0.5s,baz=56,slow=9.1,SNR=12								
FITZ	**Fitzroy Crossi**	**27.98**	**241**	P		P		20 23 12.7	+1.3
	1.8nm,0.8s,baz=83,slow=8.4,SNR=5.0								
MKAR	**Makanchi Array**	**79.71**	**319**	P		P		20 29 28.5	0.0
	0.2nm,0.7s,baz=114,slow=3.5,SNR=2.8								

*CSEM **30** 20:18:08.7, 39°.04N×29°.14W, h3km, ML3.1, After PDA*

PDA 30 20:18:08.7±0.7, 39°.04N×29°.14W, h3km±10km, MD3.6, ML3.1, Error ellipse: s-maj=10.7km s-min=3.6km az=101.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PCED	**Cedros**	**0.53**	**140**	*e*P		Pg		20 18 17.8	-1.1
PCED				*e*S		Sg		20 18 25.0	-0.8
PCED				A				20 18 25.4	
	255nm,0.2s								
PCED	**Cedros**	**0.53**	**140**	*e*P		Pg		20 18 17.8	-1.1
PCED				*e*S		Sg		20 18 25.0	-0.8
CALA	**Caldeira**	**0.57**	**143**	*e*P		Pg		20 18 18.6	-1.0
CALA				*e*S		Sg		20 18 26.2	-0.8
CALA	**Caldeira**	**0.57**	**143**	*e*P		Pg		20 18 18.6	-1.0
CALA				*e*S		Sg		20 18 26.2	-0.8
HOR	**Horta**	**0.65**	**142**	*e*P		Pg		20 18 19.5	-1.6
HOR				*e*S		Sg		20 18 28.1	-1.4
HOR	**Horta**	**0.65**	**142**	*e*P		Pg		20 18 19.5	-1.6
HOR				*e*S		Sg		20 18 28.1	-1.4
PCAN	**Candelaria**	**0.77**	**138**	*e*P		Pg		20 18 21.3	-2.1
PCAN				*e*S		Sg		20 18 31.2	-2.2
PCAN				A				20 18 32.0	
	382nm,0.2s								
PCAN	**Candelaria**	**0.77**	**138**	*e*P		Pg		20 18 21.3	-2.1
PCAN				*e*S		Sg		20 18 31.2	-2.2
ROSA	**Rosais**	**0.77**	**114**	*e*P		Pg		20 18 21.6	-1.8
ROSA				*i* P				20 18 26.1	
ROSA				*e*S		Sg		20 18 31.0	-2.4
ROSA	**Rosais**	**0.77**	**114**	*e*P		Pg		20 18 21.6	-1.8
ROSA				*e*S		Sg		20 18 31.0	-2.4
PICO	**Pico**	**0.77**	**134**	*e*P		Pg		20 18 21.6	-1.9
PICO				*e*S		Sg		20 18 31.1	-2.5
PICO	**Pico**	**0.77**	**134**	*e*P		Pg		20 18 21.6	-1.9
PICO				*e*S		Sg		20 18 31.1	-2.5
PMAN	**Manadas**	**0.91**	**116**	*e*P		Pg		20 18 23.5	-2.7
PMAN				*e*S		Sg		20 18 34.6	-3.5
PMAN				A				20 18 35.8	
	104nm,0.2s								
PMAN	**Manadas**	**0.91**	**116**	*e*P		Pg		20 18 23.5	-2.7
PMAN				*e*S		Sg		20 18 34.6	-3.5
PID	**Ribeirinha**	**0.99**	**126**	*e*P		Pg		20 18 24.6	-3.2
PID				*e*S		Sg		20 18 36.1	-4.6
PID	**Ribeirinha**	**0.99**	**126**	*e*P		Pg		20 18 24.6	-3.2
PID				*e*S		Sg		20 18 36.1	-4.6
CMLA	**Cha da Macela**	**3.11**	**113**	*e*P		Pn		20 18 54.0	-4.6
CMLA				*e*S		Sn		20 19 27.9	-8.4
CMLA				A				20 19 30.3	
	61nm,0.5s								
CMLA				A				20 19 31.6	
	31nm,0.4s								
CMLA				A				20 19 32.9	
	54nm,0.4s								
CMLA	**Cha da Macela**	**3.11**	**113**	*e*P		Pn		20 18 54.0	-4.6
CMLA				*e*S		Sn		20 19 27.9	-8.4
BART	**Pico Bartolome**	**3.36**	**111**	*e*P		Pn		20 18 57.4	-4.7
BART				*e*S		Sn		20 19 34.2	-8.3
BART				A				20 19 35.3	
	13nm,0.4s								
BART	**Pico Bartolome**	**3.36**	**111**	*e*P		Pn		20 18 57.4	-4.7
BART				*e*S		Sn		20 19 34.2	-8.3
PSMA	**Santa Maria**	**3.77**	**122**	*e*P		Pn		20 19 03.3	-4.3
PSMN	**Pico do Norte,**	**3.80**	**121**	*e*P		Pn		20 19 03.9	-4.2
PSMN	**Pico do Norte,**	**3.80**	**121**	*e*P		Pn		20 19 03.9	-4.2

IDC 30 20:19:18.4±2.7, 54°28N×34°49W, h0km, mb3.2/3, mb1 3.4/4, mb1mx3.2/29, mbtmp3.2/4, ML3.6/1, MS3.2/3, Ms1 3.1/3, ms1mx2.7/27, Error ellipse: s-maj=72.1km s-min=41.1km az=45.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EKA	**Eskdalemuir Ar**	**18.01**	**74**	P		Pn		20 23 27.9	-1.9
	0.1nm,0.3s,baz=284,slow=27,SNR=5.1								
SCHQ	**Schefferville**	**18.68**	**285**	LR		LR		20 29 20.6	
	comp=Z,34nm,21.2s,baz=271,slow=32								
ESDC	**Sonseca Array**	**25.18**	**113**	P		P		20 24 46.0	+0.8
	0.3nm,0.5s,baz=317,slow=10.0,SNR=4.6								
DAVOX	**Davos/Dischmat**	**28.77**	**87**	LR		LR		20 36 56.0	
	comp=Z,49nm,18.4s,baz=152,slow=37								
SADO	**Sadowa**	**30.04**	**270**	LR		LR		20 36 03.6	
	comp=Z,72nm,18.7s,baz=227,slow=34								
MKAR	**Makanchi Array**	**65.98**	**42**	P		P		20 30 05.7	-0.4
	0.1nm,0.6s,baz=350,slow=7.3,SNR=2.3								
SONM	**Songino Array**	**73.02**	**26**	P		P		20 30 51.8	+2.2
	0.2nm,0.6s,baz=356,slow=4.6,SNR=2.4								
ASAR	**Alice Springs**	**148.21**	**21**	PKPbc		PKPbc		20 39 03.9	-2.1
	1.1nm,0.6s,baz=358,slow=2.7,SNR=20								

*ISCJB **30** 20:45:55.2±0.4, 6°.80N±0°.05×72°.93W±0°.05, h164km±5km, mb3.7/10, Error ellipse: s-maj=9.2km s-min=5.0km az=135.8*

*NEIC **30** 20:45:55.9±0.8, 6°.76N×73°.06W, h154km±8km, mb4.4/8, Error ellipse: s-maj=12.9km s-min=9.2km az=123.0*

*IDC **30** 20:45:56.5±1.4, 6°.71N×73°.09W, h159km±13km, mb3.4/6, mb1 3.7/8, mb1mx3.5/22, mbtmp3.5/8, Error ellipse: s-maj=22.4km s-min=16.9km az=106.0*

*FUNV **30** 20:45:56.2, 6°.78N×73°.10W, h167km, MW4.0*

ISC 30 20:45:56.1±0.4, 6.77N±0°.05×72.91W±0°.05, h158km±5km, n49, σ1°15/62, mb3.7/10, 13C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.24**	**28**	⇑*i*P		**Pn**		**20 46 25.0**	**+1.2**
CAPV				*e*S		**Sn**		**20 46 46.1**	**+1.2**
ROSC	**El Rosal**	**2.37**	**217**	P		**Pn**		**20 46 36.5**	**+0.4**
ROSC				*e*Sn		**Sn**		**20 47 02.1**	**-4.7**
ROSC				S		**Sn**		**20 47 05.0**	**-1.8**
ROSC	**El Rosal**	**2.37**	**217**	P		**Pn**		**20 46 36.5**	**+0.5**
	106nm,0.3s,baz=83,slow=7.7,SNR=132								
ROSC				S		**Sn**		**20 47 05.0**	**-1.8**
	154nm,0.3s,baz=85,slow=22,SNR=19								
SOCV	**Socops**	**2.53**	**53**	⇑*e*P		**Pn**		**20 46 39.6**	**+1.6**
SOCV				*e*S		**Sn**		**20 47 11.3**	**+0.9**
VIGV	**El Vigia**	**2.57**	**37**	⇑*e*P		**Pn**		**20 46 39.5**	**+1.0**
VIGV				*e*S		**Sn**		**20 47 11.2**	**0.0**
SDV	**Santo Domingo**	**3.08**	**47**	*e*Pn		**Pn**		**20 46 46.2**	**+1.4**
SDV				*e*Sn		**Sn**		**20 47 23.5**	**+0.9**
ELOV	**Elorza**	**3.41**	**86**	⇓*e*P		**Pn**		**20 46 51.2**	**+2.2**
VIRV	**Villa del Rosa**	**3.74**	**8**	⇓*e*P		**Pn**		**20 46 52.0**	**-1.3**

VIRV				*e*S		**Sn**	**20 47 34.1**	**-3.7**
QARV	**Quebrada Arrib**	**4.15**	**34**⇑	*i*P		**Pn**	**20 46 59.5**	**+0.9**
QARV				*e*S		**Sn**	**20 47 45.1**	**-2.1**
SANV	**Sanarito**	**4.30**	**51**⇑	*i*P		**Pn**	**20 47 01.2**	**+0.6**
SANV				*e*S		**Sn**	**20 47 49.8**	**-1.0**
CURV	**Curarigua**	**4.35**	**42**⇑	*e*P		**Pn**	**20 47 01.9**	**+0.7**
CURV				*e*S		**Sn**	**20 47 50.2**	**-1.6**
DABV	**Dabajuro**	**4.70**	**28**	*e*P		**Pn**	**20 47 06.0**	**+0.3**
TEPV	**Terepaima**	**4.86**	**49**⇑	*e*P		**Pn**	**20 47 08.7**	**+0.9**
TEPV				*e*S		**Sn**	**20 48 01.8**	**-2.0**
SIQV	**Siquisique**	**4.93**	**38**⇑	*e*P		**Pn**	**20 47 08.8**	**+0.1**
SIQV				*e*S		**Sn**	**20 48 02.4**	**-3.0**
BAUV	**El Baul**	**5.29**	**66**⇑	*i*P		**Pn**	**20 47 13.3**	**-0.2**
BAUV				*e*S		**Sn**	**20 48 11.6**	**-2.3**
MAPV	**Macapo**	**5.35**	**55**⇑	*i*P		**Pn**	**20 47 15.1**	**+0.7**
IMOV	**Isla Los Monje**	**5.90**	**19**	*e*P		**Pn**	**20 47 20.8**	**-0.8**
MONV	**Montecano**	**5.91**	**29**⇑	*e*P		**Pn**	**20 47 20.9**	**-0.9**
TURV	**Turiamo**	**6.21**	**54**	*e*P		**Pn**	**20 47 25.5**	**-0.1**
CAOV	**Caicara del Or**	**6.56**	**85**	*e*P		**Pn**	**20 47 30.6**	**+0.2**
MERV	**Las Mercedes**	**7.00**	**69**	*e*P		**Pn**	**20 47 35.8**	**-0.4**
BCIP	**Isla Barro Col** 25nm,0.8s	**7.26**	**290**	*e*Pn		**Pn**	**20 47 35.0**	**-4.8**
BIRV	**Birongo**	**7.53**	**60**	*e*P		**Pn**	**20 47 43.0**	**-0.3**
CUPV	**Cœpira**	**7.77**	**65**⇑	*i*P		**Pn**	**20 47 46.2**	**-0.2**
OTAV	**Otavalo** 8.2nm,0.6s	**8.52**	**221**	*e*Pn		**Pn**	**20 47 54.3**	**-2.2**
OTAV				*e*Sn		**Sn**	**20 49 29.9**	**-1.6**
PCRV	**Puerto La Cruz** 2.5nm,0.3s,baz=268,slow=6.6,SNR=14	**8.86**	**67**	P		**Pn**	**20 48 04.1**	**+3.2**
PCRV				S		**Sn**	**20 49 39.3**	**-0.1**
PCRV	**Puerto La Cruz** 1.3nm,0.3s,baz=159,slow=21,SNR=2.5	**8.86**	**67**	*e*P		**Pn**	**20 48 01.1**	**+0.2**
SDDR	**Presa de Saban** 9.0nm,0.5s	**12.24**	**7**	*e*Pn		**Pn**	**20 48 47.4**	**+2.1**
MTDJ	**Mount Denham**	**12.25**	**339**	*e*Pn		**Pn**	**20 48 46.7**	**+1.2**
JTS	**JuntasAbangare**	**12.41**	**287**	Pn		**Pn**	**20 48 53.0**	**+5.4**
ICM	**Isla Caja Muer**	**12.69**	**29**	*e*Pn		**Pn**	**20 48 49.9**	**-1.3**
SJG	**San Juan**	**13.06**	**30**	P		**Pn**	**20 48 54.3**	**-1.6**
SJG	**San Juan** 3.4nm,0.3s,baz=220,slow=16,SNR=5.8	**13.06**	**30**	P		**Pn**	**20 48 54.3**	**-1.5**
GTBY	**Guantanamo Bay**	**13.25**	**351**	Pn		**Pn**	**20 49 01.3**	**+3.0**
TEIG	**Tepich** 29nm,1.1s	**20.03**	**313**	*e*P		**P**	**20 50 16.9**	**0.0**
LPAZ	**La Paz** 1.0nm,0.7s,mb3.4,baz=355,slow=9.4,SNR=5.2	**23.39**	**168**	P		**P**	**20 50 52.3**	**+1.4**
WVT	**Waverly** 2.8nm,0.6s,mb4.2	**32.26**	**337**	*e*P		**P**	**20 52 09.8**	**0.0**
CCM	**Cathedral Cave** 5.7nm,1.0s,mb4.2	**35.31**	**335**	*e*P		**P**	**20 52 35.4**	**-0.7**
TXAR	**Lajitas Array** 0.8nm,0.4s,mb3.7,baz=125,slow=8.9,SNR=22	**36.65**	**312**	P		**P**	**20 52 47.6**	**-0.1**
ANMO	**Albuquerque** 1.3nm,0.9s,mb3.6	**41.70**	**317**	P		**P**	**20 53 29.2**	**-0.3**
SCHQ	**Schefferville**	**48.17**	**5**	P		**P**	**20 54 21.2**	**+0.9**
SCHQ	**Schefferville** 1.7nm,0.5s,mb4.0,baz=264,slow=8.2,SNR=5.6	**48.17**	**5**	P		**P**	**20 54 21.2**	**+0.9**
HLID	**Hailey** 1.6nm,0.8s,mb3.7	**51.61**	**322**	*e*P		**P**	**20 54 46.8**	**+0.4**
NVAR	**Mina Array Bea** 0.6nm,0.5s,mb3.5,baz=120,slow=8.7,SNR=4.0	**51.67**	**315**	P		**P**	**20 54 47.4**	**+0.5**
YKA	**Yellowknife Ar** 1.2nm,0.5s,mb4.0,baz=134,slow=6.2,SNR=5.0	**63.38**	**340**	P		**P**	**20 56 08.3**	**-0.1**
ILAR	**Eielson Array** 0.2nm,0.5s,mb3.0,baz=66,slow=5.0,SNR=4.0	**77.10**	**335**	P		**P**	**20 57 31.3**	**-0.5**
CASY	**Casey**	**120.54**	**182**	*e*PKPdf	PKPdf		21 04 28.4	-0.2
ASAR	**Alice Springs** 0.2nm,0.3s,baz=117,slow=3.0,SNR=9.9	**149.25**	**234**	PKPbc	PKPbc		21 05 26.2	-0.7
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=107,slow=2.8,SNR=14	**150.50**	**241**	PKPbc	PKPbc		21 05 29.4	-0.6

IDC 30 20:57:50.5±1.7**, 6°03S×122°58E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.3/19, mbtmp3.3/3, ML2.9/1, Error ellipse: s-maj=273.1km s-min=27.5km az=58.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.0nm,0.3s,baz=324,slow=12,SNR=4.1	**17.95**	**142**	Op Pn		Pn	21 01 59.7	-2.0
ASAR	**Alice Springs** 1.3nm,0.8s,baz=321,slow=8.5,SNR=10	**20.65**	**149**	P		P	21 02 32.9	+1.0
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=134,slow=8.3,SNR=3.0	**63.55**	**330**	P		P	21 08 22.9	+0.1

*BJI **30** 21:20:18.0, 30.1N×83.0E, h18km, mB4.5/4, mb4.2/7, Ms4.4/4, Ms7 4.2/3*

*IDC **30** 21:20:21.6±0.8, 30.7N×83.4E, h0km, mb3.7/13, mb1 3.9/16, mb1mx3.8/29, mbtmp3.7/16, ML3.2/3, MS3.6/4, Ms1 3.6/4, ms1mx3.0/35, Error ellipse: s-maj=28.6km s-min=15.0km az=51.0*

*DMN **30** 21:20:22.7±0.5, 31.3N×83.2E, h60km, Ml4.7/3, Error ellipse: s-maj=12.5km s-min=7.0km az=127.0*

*NEIC **30** 21:20:23.2±0.6, 30.7N×83.3E, h10km, mb3.6/2, Error ellipse: s-maj=15.5km s-min=7.5km az=45.0*

*ISCJB **30** 21:20:23.1±0.3, 30.9S×83.3E±0.03, h10km, mb3.6/13, MS3.5/2, Error ellipse: s-maj=3.8km s-min=3.4km az=21.7*

*NDI **30** 21:20:24.5±4.8, 30.6S×83.4E, h15km±146km, ML3.5, mb3.6(NEIC)*

ISC 30 21:20:24.7±0.3**, 30.9°2N**±0.0°3×**83.3°6E**±0.0°3**, h10km, n57, σ1§45/67, mb3.6**/13**, MS3.5**/2**, 2D, Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.59**	**172**	*e*Pn		**Pn**	**21 21 08.6**	**+1.9**
DANN	3μm,1.1s			*e*Sn		**Sb**	**21 21 42.5**	**-0.6**
PTH	**Pithoragarh**	**3.04**	**244**	*e*PG		**Pg**	**21 21 22.1**	**-0.9**
PTH				*e*SG		**Sg**	**21 22 05.2**	**+2.7**
GKN	**Gorkha**	**3.12**	**159**	*e*Pn		**Pn**	**21 21 15.6**	**+1.7**
GKN	574nm,0.6s			*e*Sn		**Sn**	**21 21 55.3**	**+4.1**
KOLN	**Koldanda**	**3.15**	**176**	*e*Pn		**Pn**	**21 21 16.4**	**+2.0**
KOLN	906nm,0.8s			*e*Sn		**Sn**	**21 21 55.9**	**+3.9**
JOSI	**Joshimath**	**3.29**	**265**	*e*PKP		**Pn**	**21 21 16.0**	**-0.3**
JOSI	comp=N,428nm,0.0s			AML	AML		21 22 07.3	
KKN	**Kakani**	**3.54**	**151**	*e*Pn		**Pn**	**21 21 21.0**	**+1.2**
DMN	**Daman**	**3.64**	**155**	*e*Pn		**Pn**	**21 21 22.6**	**+1.5**
GUN	**Gumba**	**3.72**	**143**	*e*Pn		**Pn**	**21 21 23.4**	**+1.1**
PKIN	**Phulchoki**	**3.78**	**151**	*e*Pn		**Pn**	**21 21 24.2**	**+1.1**
PKI	**Pulchoki**	**3.79**	**151**	*e*Pn		**Pn**	**21 21 24.5**	**+1.3**
JIRN	**Jiri**	**4.09**	**142**	*e*Pn		**Pn**	**21 21 28.0**	**+0.7**
KLP	**Kalpa**	**4.42**	**279**	*e*PKP		**Pn**	**21 21 33.0**	**+1.2**
KLP	comp=E,106nm,0.7s			AML	AML		21 22 36.4	
DDI	**Dehra Dun**	**4.61**	**264**	*e*PKP		**Pn**	**21 21 38.0**	**+3.6**
DDI				*ex*		x	21 22 46.0	
RAMN	**Ramite**	**4.87**	**144**	*e*Pn		**Pn**	**21 21 38.0**	**-0.1**
TAPN	**Taplejung**	**5.21**	**132**	*e*Pn		**Pn**	**21 21 43.1**	**+0.3**
SMLA	**Simla**	**5.32**	**274**	*i*P		**Pn**	**21 21 43.9**	**-0.3**
SMLA				*i* x		x	21 22 49.9	
SMLA	comp=N,484nm,0.7s			⇓			21 22 56.5	
SMLA	comp=E,399nm,0.7s			⇓			21 22 57.2	
ODAN	**Odare**	**5.38**	**138**	*e*Pn		**Pn**	**21 21 45.5**	**+0.5**
NDI	**New Delhi**	**5.78**	**249**	*e*PKP		**Pn**	**21 21 48.3**	**-2.2**
AYAN	**Aya Nagar**	**5.94**	**247**	*e*PKP		**Pn**	**21 21 52.9**	**+0.1**
AGRA	**Agra**	**6.00**	**234**	*e*PKP		**Pn**	**21 21 51.6**	**-2.0**
AGRA				*ex*		**Sn**	**21 23 02.8**	**+0.5**
AGRA	comp=E,65nm,0.3s			AML	AML		21 23 09.6	
AGRA	comp=N,64nm,0.3s			AML	AML		21 23 10.4	
SONA	**Sohna**	**6.08**	**246**	*e*PKP		**Pn**	**21 21 52.9**	**-1.8**
SONA				*ex*		**Sg**	**21 23 43.9**	**+4.0**
SONA	comp=N,42nm,0.6s			AML	AML		21 23 45.4	
SONA	comp=E,35nm,0.9s			AML	AML		21 23 47.5	
KUDL	**Kundal**	**6.59**	**247**	*e*PKP		**Pn**	**21 21 59.2**	**-2.5**
LSA	**Lhasa** comp=E,28nm,0.9s	**6.85**	**98**	*e*Pn		**Pn**	**21 22 06.2**	**+1.0**
LSA				*e*S		**Sn**	**21 23 22.1**	**-1.1**
KHET	**Khetri**	**7.17**	**249**	*e*PKP		**Pn**	**21 22 07.5**	**-2.1**
BHPL	**Bhopal**	**9.30**	**216**	*e*PKP		**Pn**	**21 22 35.5**	**-3.3**
BHPL				*ex*		x	21 24 22.1	
BHPL				AML	AML		21 24 23.9	
BHPL	comp=E,25nm,0.5s			AML	AML		21 24 25.1	
KSH	**Kashi** comp=N,24nm,0.6s	**10.48**	**327**	P		**Pn**	**21 22 56.0**	**+1.0**
KSH				*ep*P			21 23 01.5	
KSH				*e*PP			21 23 04.5	
KSH				*es*P			21 23 05.5	
KSH				S		**Sn**	**21 24 53.0**	**+0.5**
KSH				*es*S			21 25 09.3	
KSH	comp=Z,250nm,5.2s			pmax	pmax			
KSH	comp=N,1μm,12.7s			LR	LR			
KSH	comp=E,2μm,11.9s			LR	LR			
KSH	comp=Z,590nm,5.2s			LR	LR			
AKL	**Akola**	**11.67**	**211**	*e*PKP		**Pn**	**21 23 06.6**	**-4.7**
KBL	**Kabul** comp=Z,7.8nm,0.6s	**12.58**	**290**	*e*Pn		**Pn**	**21 23 24.2**	**+0.5**
KBL				*e*S		**Sn**	**21 25 46.8**	**+2.9**
AML	**Almayashu** comp=Z,5.5nm,1.0s	**13.61**	**328**	*e*Pn		**Pn**	**21 23 39.1**	**+1.4**
AAK	**Ala-Archa** comp=Z,0.5nm,0.3s,baz=160,slow=12,SNR=2.9	**13.66**	**331**	Pn		**Pn**	**21 23 41.6**	**+3.1**
AAK	comp=Z,324nm,20.4s,baz=128,slow=40			LR	LR		21 29 34.6	
LATR	**Latur**	**13.89**	**208**	*e*PKP		**Pn**	**21 23 38.3**	**-3.5**
HYB	**Hyderabad**	**14.14**	**199**	*i* P		**Pn**	**21 23 41.5**	**-3.6**
HYB				*e*S		**Sn**	**21 26 09.0**	**-13**
MK31	**Makanchi Array**	**15.87**	**357**	*e*Pn		**Pn**	**21 24 08.9**	**+0.8**
MKAR	**Makanchi Array**	**15.87**	**357**	Pn		**Pn**	**21 24 08.7**	**+0.6**
MKAR				LR	LR		21 31 18.0	
MKAR	**Makanchi Array** comp=Z,0.0nm,0.3s,baz=179,slow=12,SNR=7.9	**15.87**	**357**	Pn		**Pn**	**21 24 08.7**	**+0.6**
MKAR	comp=Z,168nm,20.1s,baz=177,slow=41			LR	LR		21 31 18.0	
KKAR	**Karatay Array** comp=Z,3.1nm,0.8s	**15.88**	**323**	*e*Pn		**Pn**	**21 24 07.4**	**-0.9**
GTA	**Gaotai**	**15.88**	**53**	*e*P		**Pn**	**21 24 13.5**	**+5.2**
GTA				pP		pP	21 24 19.5	+4.6
GTA				sP		sP	21 24 22.5	+6.3
GTA	comp=Z,2.0nm,1.1s			pmax	pmax			
LZH	**Lanzhou**	**17.84**	**68**	*e*P		**Pn**	**21 24 34.3**	**+1.3**
LZH				pP		pP	21 24 38.5	+2.0
LZH				sP		sP	21 24 41.3	+3.5
LZH				*e*S		**Sn**	**21 27 49.5**	**-2.4**
LZH	comp=Z,19nm,1.4s			pmax	pmax			
LZH	comp=Z,58nm,4.7s			LR	LR			
LZH	comp=N,420nm,7.7s			LR	LR			
LZH	comp=E,390nm,10.1s			LR	LR			
LZH	comp=Z,580nm,11.0s			LR	LR			
CHTO	**Chiang Mai** comp=Z,5.0nm,1.0s	**18.56**	**127**	*e*Pn		**Pn**	**21 24 38.1**	**-3.9**
CMAR	**Chiang Mai Arr** comp=Z,0.1nm,0.3s,baz=312,slow=11,SNR=18	**18.80**	**128**	Pn		**Pn**	**21 24 40.5**	**-4.4**
KURK	**Kurchatov**	**20.09**	**351**	*e*P		**P**	**21 24 58.4**	**+0.1**
KURK				LR	LR		21 33 50.2	
KURK	**Kurchatov** comp=Z,4.2nm,1.0s,baz=170,slow=10,SNR=34	**20.09**	**351**	P		**P**	**21 24 57.6**	**-0.7**
KURK	comp=Z,246nm,19.1s,MS3.6,baz=170,slow=40			LR	LR		21 33 50.2	
XAN	**Xi'an**	**21.77**	**75**	P		**P**	**21 25 15.3**	**-1.3**
XAN	comp=Z,1.0nm,1.0s,mb3.2			pmax	pmax			
ZAA0	**Zalesovo Array**	**23.04**	**2**	*e*P		**P**	**21 25 29.6**	**-0.3**
ZALV	**Zalesovo Beam** comp=Z,0.7nm,0.3s,mb3.6,baz=182,slow=10,SNR=9.2	**23.04**	**2**	P		**P**	**21 25 30.2**	**+0.3**
BVAR	**Borovoye Array** comp=Z,0.5nm,0.5s,mb3.2,baz=144,slow=11,SNR=4.7	**24.02**	**341**	P		**P**	**21 25 41.9**	**+2.3**
SONM	**Songino Array** comp=Z,0.7nm,0.6s,mb3.2,baz=240,slow=8.9,SNR=8.4	**24.40**	**40**	P		**P**	**21 25 42.7**	**-0.4**
BRTR	**Keskin Array B** comp=Z,0.8nm,1.0s,mb3.3,baz=77,slow=7.6,SNR=4.8	**41.06**	**296**	P		**P**	**21 28 09.7**	**+1.2**
ATD	**Arta Tunnel** comp=Z,45nm,20.6s,MS3.3,baz=174,slow=36	**42.10**	**252**	LR	LR		21 45 59.3	
AKASG	**Malin Array Be**	**44.37**	**313**	P		**P**	**21 28 34.4**	**-0.7**
FINES	**FINESS Array B** comp=Z,0.4nm,0.4s,mb3.5,baz=83,slow=7.0,SNR=3.7	**47.80**	**327**	P		**P**	**21 29 03.0**	**+1.0**
NOA	**NORSAR Array B** comp=Z,2.1nm,0.9s,mb4.2,baz=141,slow=9.3,SNR=4.4	**54.90**	**326**	P		**P**	**21 29 53.3**	**-1.9**
ESDC	**Sonseca Array** comp=Z,0.1nm,0.4s,mb3.1,baz=41,slow=5.1,SNR=3.0	**69.14**	**304**	P		**P**	**21 31 30.3**	**-1.0**
WRA	**Warramunga Arr** comp=Z,1.8nm,0.7s,mb4.1,baz=324,slow=6.3,SNR=14	**70.39**	**129**	P		**P**	**21 31 36.9**	**-2.2**
ASAR	**Alice Springs** comp=Z,1.0nm,1.0s,mb3.7,baz=313,slow=6.4,SNR=5.2	**72.75**	**132**	P		**P**	**21 31 51.2**	**-2.1**
ILAR	**Eielson Array** comp=Z,0.5nm,0.7s,mb3.5,baz=307,slow=5.6,SNR=8.1	**76.91**	**20**	P		**P**	**21 32 15.2**	**-1.6**
STKA	**Stephens Creek** comp=Z,2.5nm,0.8s,mb4.3,baz=280,slow=6.1,SNR=3.4	**83.33**	**133**	P		**P**	**21 32 49.5**	**-2.3**

*IDC **30** 21:26:03.8±1.1, 26.2N×102.2E, h0km, mb3.2/5, mb1 3.4/6, mb1mx3.2/25, mbtmp3.2/6, ML3.4/1, Error ellipse: s-maj=37.1km s-min=18.0km az=76.0*

*BJI **30** 21:26:04.7, 26.0N×101.8E, h12km, ML3.3/7*

*NEIC **30** 21:26:05.4±0.7, 26.2S×102.3E, h10km, Error ellipse: s-maj=24.3km s-min=11.4km az=84.0*

*ISCJB **30** 21:26:07.0±0.7, 26.1S×102.0E±0.1, h33km, mb3.1/5, Error ellipse: s-maj=15.5km s-min=6.7km az=171.7*

ISC 30 21:26:06.5±1.8**, 26°18N**±0.0°4×**102°2E**±0.0°2**, h15**km±13km, n9, σ1§07/13, mb3.1/5, 1C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KMI	**Kunming**	**1.17**	**154**	⇑Pg		**Pg**	**21 26 28.3**	**-0.8**
KMI				Sg		**Sg**	**21 26 45.0**	**+0.6**
KMI	comp=N,640nm,0.3s			smax				
KMI	comp=E,370nm,0.4s			smax				
CD2	**Chengdu**	**4.92**	**16**	Pn		**Pn**	**21 27 22.0**	**+2.0**
CD2				Pg		**Pg**	**21 27 36.5**	**-4.2**
CD2				Sn		**Sn**	**21 28 20.3**	**+3.7**
CD2				Sg		**Sg**	**21 28 44.3**	**-0.1**
CD2	comp=N,50nm,0.9s			smax				
CMAR	**Chiang Mai Arr** comp=N,0.1nm,0.3s,baz=13,slow=13,SNR=5.3	**8.24**	**202**	Pn		**Pn**	**21 28 06.9**	**+1.3**
CMAR				Pg		Pn	21 28 38.6	+33
CMAR	comp=N,0.2nm,0.3s,baz=359,slow=16,SNR=15			Lg			21 30 26.1	
SONM	**Songino Array** comp=N,0.5nm,0.6s,mb3.1,baz=195,slow=11,SNR=4.3	**21.87**	**8**	P		**P**	**21 30 57.7**	**-1.0**
MKAR	**Makanchi Array**	**25.92**	**328**	P		**P**	**21 31 38.5**	**+0.4**
MKAR	**Makanchi Array** comp=N,0.2nm,0.5s,mb2.9,baz=129,slow=14,SNR=4.8	**25.92**	**328**	P		**P**	**21 31 38.5**	**+0.4**
KURK	**Kurchatov** comp=N,0.1nm,0.4s,mb2.9,baz=130,slow=11,SNR=2.2	**30.41**	**330**	P		**P**	**21 32 17.0**	**-1.2**
WRA	**Warramunga Arr** comp=N,0.4nm,0.8s,mb3.5,baz=331,slow=8.2,SNR=3.8	**55.47**	**143**	P		**P**	**21 35 40.2**	**-0.7**
ASAR	**Alice Springs** comp=N,0.3nm,0.9s,mb3.3,baz=339,slow=7.4,SNR=2.5	**58.29**	**145**	P		**P**	**21 36 00.5**	**-0.4**

*IDC **30** 21:28:26.9±13.0, 34.8N×98.1E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.3/28, mbtmp3.5/5, ML3.4/2, Error ellipse: s-maj=198.5km s-min=67.8km az=158.0*

*ISCJB **30** 21:28:34.4±0.9, 35.8ON×0.0°7×97.9°3E±0.0°6, h10km, Error ellipse: s-maj=10.5km s-min=7.1km az=3.0*

*BJI **30** 21:28:43.3, 35.7°1N×97.3°5E, h35km, ML3.3/5*

*NEIC **30** 21:28:44.1±6.6, 36.1°3N×97.6°2E, h35km, mb3.4/2, Error ellipse: s-maj=94.5km s-min=21.8km az=163.0*

ISC 30 21:28:35.7±0.9**, 35°69N**±0.0°7×**97°87E**±0.0°5**, h10km, n10, σ1§29/14, Qinghai**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**4.02**	**22**	Pg		**Pg**	**21 29 50.8**	**-1.9**
GTA				Sg		**Sg**	**21 30 45.0**	**+0.3**
GTA	comp=N,22nm,1.1s			smax				
GTA	comp=E,21nm,0.9s			smax				
LZH	**Lanzhou**	**4.87**	**84**	*e*Pn		**Pn**	**21 29 48.3**	**-0.6**
LZH				Pg		**Pb**	**21 29 59.8**	**-1.2**
LZH				Sn		**Sn**	**21 30 44.3**	**-0.9**
LZH				Sg		**Sb**	**21 31 02.0**	**+2.5**
LZH	comp=N,100nm,0.5s			smax				
LZH	comp=E,180nm,0.5s			smax				
LZH	comp=N,420nm,7.7s			LR	LR			
LZH	comp=E,310nm,7.0s			LR	LR			
LZH	comp=Z,560nm,8.3s			LR	LR			
SONM	**Songino Array** comp=Z,0.1nm,0.3s,baz=202,slow=17,SNR=3.8	**13.69**	**25**	P		**Pn**	**21 31 51.0**	**+1.3**
MK31	**Makanchi Array**	**16.10**	**318**	*e*Pn		**Pn**	**21 32 21.0**	**-1.0**
MKAR	**Makanchi Array** comp=Z,0.2nm,0.3s,baz=126,slow=14,SNR=11	**16.10**	**318**	Pn		**Pn**	**21 32 20.7**	**-1.3**
TKM2	**Tokmak 2** comp=Z,4.2nm,1.0s	**18.66**	**299**	*e*Pn		**Pn**	**21 32 55.3**	**+1.4**
ZALV	**Zalesovo Beam** comp=Z,1.8nm,0.7s,baz=147,slow=13,SNR=5.9	**20.41**	**337**	P		**P**	**21 33 14.9**	**+2.3**
KURK	**Kurchatov** comp=Z,1.0nm,0.7s	**20.46**	**323**	*e*P		**P**	**21 33 13.8**	**+0.6**
KURK	**Kurchatov** comp=Z,1.7nm,0.7s,baz=130,slow=11,SNR=12	**20.46**	**323**	P		**P**	**21 33 13.1**	**-0.1**
BVAR	**Borovoye Array** comp=Z,0.2nm,0.4s,baz=134,slow=8.3,SNR=5.9	**25.96**	**320**	P		**P**	**21 34 07.9**	**-0.2**

*ISCJB **30** 21:31:10.7±0.8, 30.8N±0.0°02×83.4°2E±0.0°2, h3km±5km, mb4.4/66, MS4.3/45, Error ellipse: s-maj=4.2km s-min=2.9km az=28.0*

*NDI **30** 21:31:10.9±5.5, 30.9S×83.6E, h10km, ML4.6, mb4.6(NEIC)*

*DMN **30** 21:31:10.4±0.6, 31.4N×83.2E, h60km, Ml5.3/3, Error ellipse: s-maj=13.1km s-min=8.8km az=133.0*

*IDC **30** 21:31:11.1±0.5, 30.7S×83.5E, h0km, mb4.2/25, mb1 4.3/28, mb1mx4.3/32, mbtmp4.2/28, ML3.5/3, MS4.2/30, Ms1 4.2/30, ms1mx4.1/38, Error ellipse: s-maj=14.8km s-min=12.1km az=30.0*

*BJI **30** 21:31:11.6, 30.8S×83.4E, h8km, mB4.8/28, mb4.5/41, Ms4.8/42, Ms7 4.4/39*

*NEIC **30** 21:31:12.9±0.3, 30.7N×83.4E, h10km, mb4.6/28, Error ellipse: s-maj=8.6km s-min=5.6km az=217.0*

*MOS **30** 21:31:14.6±1.4, 30.7N×83.4E, h33km, mb4.7/36, MS4.3/21, Error ellipse: s-maj=9.4km s-min=5.1km az=118.1*

*GCMT **30** 21:31:17.2±0.2, 30.7N×83.6E, h22km±1km, MW5.0, Moment Tensor Solution. s25,c32; s82,c136; Moment tensor: Scale 10^16Nm; Mrr0.05±.16; Mθθ-3.7±.12; Mφφ3.66±.12; Mrθ1.98±.23; Mrφ-1.94±.09; Mθφ0.38±.18; Best double couple: M04.60000×10^16 NP1:φs209.00000°, δ74.00000°, λ-15.00000°. NP2:φs303.00000°, δ76.00000°, λ-163.00000°. Principal axes: T 4.1400, Plg2.0000°, Azm76.0000°; N 0.8500, Plg68.0000°, Azm341.0000°; P -4.9900, Plg22.0000°, Azm166.0000°; Data Used: II IC IU G CN.*

ISC 30 21:31:14.0±0.8**, 30.7°7N**±0.0°02×**83.4°6E**±0.0°2**, h14**km±5km, n245, σ1§37/260, mb4.4**/66**, MS4.3**/45**, 15C-9D, Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.42**	**174**	*e*Pn		**Pb**	**21 31 57.4**	**+0.1**
DANN	10μm,0.9s			*e*Sn		**Sg**	**21 32 31.9**	**+0.1**
GKN	**Gorkha**	**2.94**	**159**	*e*Pn		**Pn**	**21 32 04.3**	**+4.1**
KOLN	**Koldanda**	**2.99**	**178**	*e*Pn		**Pb**	**21 32 05.0**	**-1.9**
KOLN	6μm,1.0s			*e*Sn		**Sb**	**21 32 45.3**	**+2.0**
PTH	**Pithoragarh**	**3.06**	**247**	*e*PB		**Pb**	**21 32 06.1**	**-2.0**
PTH				*e*SB		**Sg**	**21 32 53.9**	**+1.8**
JOSI	**Joshimath**	**3.36**	**267**	*e*PKP		**Pb**	**21 32 10.2**	**-3.1**
JOSI				*e*S		**Sb**	**21 32 53.4**	**-0.8**
JOSI	comp=N,4μm,0.8s			AML	AML		21 33 04.6	
JOSI	comp=E,2μm,0.7s			AML	AML		21 33 06.7	
KKN	**Kakani**	**3.37**	**151**	*e*Pn		**Pn**	**21 32 09.7**	**+3.6**
DMN	**Daman**	**3.46**	**155**	*e*Pn		**Pn**	**21 32 11.2**	**+3.8**
GUN	**Gumba**	**3.55**	**143**	*e*Pn		**Pn**	**21 32 12.0**	**+3.4**
GUN	comp=E,2μm,0.9s			*e*Sn		**Sb**	**21 32 58.1**	**-1.3**
PKIN	**Phulchoki**	**3.60**	**151**	*e*Pn		**Pn**	**21 32 12.8**	**+3.5**
PKI	**Pulchoki**	**3.61**	**151**	*e*Pn		**Pn**	**21 32 13.0**	**+3.5**
JIRN	**Jiri**	**3.91**	**142**	*e*Pn		**Pn**	**21 32 17.6**	**+4.0**
KLP	**Kalpa**	**4.53**	**281**	*e*PKP		**Pn**	**21 32 21.6**	**-0.4**
DDI	**Dehra Dun**	**4.68**	**266**	*i* P		**Pn**	**21 32 24.0**	**-0.1**
DDI				*ex*		**Sn**	**21 33 20.4**	**+2.2**
RAMN	**Ramite**	**4.70**	**143**	*e*Pn		**Pn**	**21 32 26.6**	**+2.2**
TAPN	**Taplejung**	**5.04**	**131**	*e*Pn		**Pn**	**21 32 31.7**	**+2.5**
ODAN	**Odare**	**5.20**	**137**	*e*Pn		**Pn**	**21 32 34.0**	**+2.7**
SMLA	**Simla**	**5.41**	**275**	*i* x		**Pn**	**21 32 36.5**	**+2.3**
SMLA				*i* x		**Sg**	**21 34 08.4**	**+0.6**
SDNR	**Sundarnagar**	**5.61**	**279**	*ex*		**Pn**	**21 32 38.5**	**+1.6**
SDNR				*ex*		**Sg**	**21 34 08.1**	**-5.9**
ALBI	**Allahabad**	**5.63**	**195**	*ex*		**Pn**	**21 33 01.5**	**-0.3**
BISR	**Bishrakh**	**5.67**	**249**	*e*PKP		**Pn**	**21 32 38.7**	**+0.9**
NDI	**New Delhi**	**5.81**	**251**	*e*PKP		**Pn**	**21 32 40.1**	**+0.5**
NDI				*ex*		x	21 34 37.0	
AYAN	**Aya Nagar**	**5.96**	**249**	*e*PKP		**Pn**	**21 32 42.1**	**+0.3**
AGRA	**Agra**	**5.97**	**235**	*e*PKP		**Pn**	**21 32 40.6**	**-1.4**
BHK	**Bhakra**	**6.07**	**278**	*ex*		**Pb**	**21 33 02.0**	**+2.5**
SONA	**Sohna**	**6.09**	**247**	*e*PKP

	comp=Z,240nm,17.2s,MS3.7								
ENH	**Enshi**		**22.42**	**85**	*e*P		**P**	**21 36 11.5**	**-0.7**
ZAA0	**Zalesovo Array**		**23.19**	**2**	*e*P		**P**	**21 36 19.9**	**-0.1**
ZALV	**Zalesovo Beam**		**23.19**	**2**	P		**P**	**21 36 19.8**	**-0.3**
	comp=Z,3.0nm,0.6s,mb3.9,baz=185,slow=10.0,SNR=21								
ZALV					LR		LR	21 44 55.7	
	comp=Z,88nm,18.8s,MS3.2,baz=352,slow=36								
ZALV	**Zalesovo Beam**		**23.19**	**2**	P		**P**	**21 36 19.8**	**-0.3**
ZALV					pmax		pmax		
	comp=Z,3.0nm,0.6s,mb3.9								
ZALV					MLR		MLR		
	comp=Z,88nm,18.8s,MS3.2								
BTO	**Baotou**		**23.63**	**58**	*e*P		**P**	**21 36 22.5**	**-2.2**
NVS	**Novosibirsk**		**24.06**	**360**	⇑*i*P		**P**	**21 36 26.3**	**-2.2**
NVS					*e*S		**S**	**21 40 42.6**	**-2.6**
NVS					pmax		pmax		
	comp=N,14nm,1.8s								
NVS					pmax		pmax		
	comp=Z,20nm,1.8s,mb4.2								
NVS					pmax		pmax		
	comp=E,3.0nm,1.2s								
NVS					smax				
	comp=N,8.0nm,1.9s								
NVS					smax				
	comp=E,6.0nm,1.9s								
BVAR	**Borovoye Array**		**24.20**	**341**	P		**P**	**21 36 29.8**	**0.0**
	comp=E,1.7nm,0.5s,mb3.8,baz=144,slow=8.7,SNR=16								
BVAR	**Borovoye Array**		**24.20**	**341**	P		**P**	**21 36 29.8**	**0.0**
BVAR					pmax		pmax		
	comp=Z,2.0nm,0.5s								
BRVK	**Borovoye**		**24.26**	**340**	*e*P		**P**	**21 36 30.1**	**-0.2**
	comp=Z,23nm,1.2s,mb4.5								
BRVK	**Borovoye**		**24.26**	**340**	⇑*i*P		**P**	**21 36 30.7**	**+0.4**
BRVK					pmax		pmax		
	comp=Z,16nm,1.7s,mb4.2								
BRVK	**Borovoye**		**24.26**	**340**	P		**P**	**21 36 31.3**	**+1.0**
	SNR=12								
SONM	**Songino Array**		**24.47**	**39**	P		**P**	**21 36 32.6**	**+0.3**
	comp=Z,3.3nm,0.8s,mb3.8,baz=228,slow=9.9,SNR=17								
SONM					ScP		ScP	21 43 47.6	-1.4
	comp=Z,0.5nm,0.9s,baz=232,slow=4.7,SNR=3.2								
SONM	**Songino Array**		**24.47**	**39**	P		**P**	**21 36 32.6**	**+0.3**
SONM					pmax		pmax		
	comp=Z,3.0nm,0.8s								
SONM					pmax		pmax		
	comp=N,1.0nm,1.0s								
ZAK	**Zakamensk**		**24.57**	**31**⇓	*e*P		**P**	**21 36 35.1**	**+1.9**
ZAK					pmax		pmax		
	comp=Z,4.0nm,1.6s,mb3.7								
HHC	**Hu-ho-hao-te**		**24.82**	**58**	*e*P		**P**	**21 36 36.8**	**+1.2**
HHC					pP			21 36 40.8	
HHC					sP		sP	21 36 43.8	+2.0
HHC					PP			21 37 12.5	
HHC					S		**S**	**21 40 54.5**	**-3.3**
HHC					sS		sS	21 41 02.3	-2.7
HHC					SS			21 41 49.5	
HHC					PcS		PcS	21 43 54.5	+2.8
HHC					pmax		pmax		
	comp=Z,11nm,0.9s,mb4.4								
HHC					pmax		pmax		
	comp=Z,180nm,5.0s								
HHC					LR		LR		
	comp=N,1μm,15.4s,MS4.6								
HHC					LR		LR		
	comp=E,470nm,10.5s,MS4.6								
HHC					LR		LR		
	comp=Z,700nm,12.7s,MS4.4								
ULN	**Ulaanbaatar**		**24.85**	**40**	*e*P		**P**	**21 36 35.6**	**-0.1**
	comp=Z,36nm,1.8s,mb4.6								
ULN	**Ulaanbaatar**		**24.85**	**40**	*e*P		**P**	**21 36 35.6**	**-0.1**
ULN					pmax		pmax		
	comp=Z,35nm,1.8s,mb4.6								
ULN	**Ulaanbaatar**		**24.85**	**40**	P		**P**	**21 36 36.3**	**+0.6**
	SNR=8.9								
ASHO	**Ashiyiah**		**24.96**	**263**	P		**P**	**21 36 40.9**	**+3.9**
	SNR=5.4								
AB31	**Akbulak array**		**25.62**	**323**	*i* P		**P**	**21 36 43.0**	**+0.2**
AB31					pmax		pmax		
	comp=Z,6.0nm,0.6s,mb4.3								
ABKAR	**Akbulak array**		**25.62**	**323**	*e*P		**P**	**21 36 43.3**	**+0.6**
	comp=Z,6.7nm,0.7s,mb4.3								
TLY	**Talaya**		**25.67**	**30**	*e*P		**P**	**21 36 46.7**	**+3.5**
TLY					pmax		pmax		
	comp=Z,4.0nm,0.7s,mb4.1								
TLY					pmax		pmax		
	comp=Z,436nm,13.0s								
WHN	**Wuhan**		**26.54**	**82**	P		**P**	**21 36 46.5**	**-4.8**
WHN					S		**S**	**21 41 23.5**	**-1.8**
WHN					LR		LR		
	comp=N,1μm,10.1s,MS4.9								
WHN					LR		LR		
	comp=E,970nm,10.0s,MS4.9								
WHN					LR		LR		
	comp=Z,1μm,23.3s								
QIZ	**Qiongzhong**		**26.57**	**110**	P		**P**	**21 36 53.8**	**+2.2**
QIZ					S		**S**	**21 41 26.8**	**+1.0**
QIZ					pmax		pmax		
	comp=Z,14nm,1.6s,mb4.2								
QIZ					pmax		pmax		
	comp=Z,150nm,10.6s								
QIZ					LR		LR		
	comp=N,1μm,20.1s								
QIZ					LR		LR		
	comp=Z,620nm,17.4s,MS4.2								
AKTK	**Aktyubinsk**		**27.33**	**323**	P		**P**	**21 36 58.2**	**+0.1**
AKTK					LR		LR	21 49 01.4	
AKTO	**Aktyubinsk**		**27.33**	**323**	P		**P**	**21 36 58.2**	**+0.1**
	comp=Z,0.8nm,0.4s,mb3.6,baz=99,slow=8.1,SNR=5.0								
AKTO					LR		LR	21 49 01.4	
	comp=Z,971nm,18.2s,MS4.4,baz=292,slow=39								
AKTO	**Aktyubinsk**		**27.33**	**323**	P		**P**	**21 36 58.3**	**+0.1**
AKTO					pmax		pmax		
	comp=Z,1.0nm,0.4s,mb3.7								
AKTO					MLR		MLR		
	comp=Z,971nm,18.2s,MS4.4								
BJI	**Beijing**		**28.10**	**62**	P		**P**	**21 37 06.8**	**+1.6**
BJI					S		**S**	**21 41 51.8**	**+2.1**
BJI					pmax		pmax		
	comp=Z,5.0nm,1.1s,mb4.1								
BJI					pmax		pmax		
	comp=Z,120nm,4.8s								
BJI					LR		LR		
	comp=N,1μm,22.1s								
BJI					LR		LR		
	comp=E,310nm,12.6s								
BJI					LR		LR		
	comp=Z,560nm,24.6s,MS4.1								
NJ2	**Nanjing**		**30.16**	**78**	*e*P		**P**	**21 37 27.0**	**+3.4**
NJ2					pmax		pmax		
	comp=Z,10.0nm,0.7s,mb4.7								
SVE	**Sverdlovsk**		**30.53**	**335**⇑	*e*P		**P**	**21 37 26.9**	**+0.3**
SVE					*e*S		**S**	**21 42 21.0**	**-6.5**
SVE					pmax		pmax		
	comp=Z,18nm,1.6s,mb4.7								
SVE					MLR		MLR		
	comp=Z,1μm,15.0s,MS4.6								
ARU	**Arti**		**31.02**	**333**	*e*P		**P**	**21 37 30.9**	**0.0**
	comp=Z,38nm,1.9s,mb4.9								
ARU	**Arti**		**31.02**	**333**	*d i*P		**P**	**21 37 30.8**	**-0.1**
ARU					*e*			21 38 29.8	
ARU					S		**S**	**21 42 34.2**	**-0.9**
ARU					SS		SS	21 44 14.4	-33
ARU					pmax		pmax		
	comp=Z,16nm,1.7s,mb4.6								
ARU					MLR		MLR		
	comp=Z,702nm,22.0s,MS4.3								
DGRG	**David-gareji**		**32.33**	**300**	P		**P**	**21 37 43.6**	**+1.0**
GNI	**Garni**		**32.68**	**297**	*e*P		**P**	**21 37 48.1**	**+2.4**
	comp=Z,40nm,1.6s,mb5.1								
GNI	**Garni**		**32.68**	**297**	P		**P**	**21 37 47.6**	**+2.0**
	comp=Z,1.5nm,0.5s,mb4.2,baz=10,slow=11,SNR=6.7								
GNI	**Garni**		**32.68**	**297**⇓	*e*P		**P**	**21 37 48.5**	**+2.8**
GNI					pmax		pmax		
	comp=Z,30nm,1.7s								
GNI	**Garni**		**32.68**	**297**	P		**P**	**21 37 49.2**	**+3.6**
	SNR=5.0								
MTA	**Mtatsminda**		**32.79**	**300**	P		**P**	**21 37 44.8**	**-1.8**
TBLG	**Delisi**		**32.84**	**300**	*e*P		**P**	**21 37 45.1**	**-1.9**
TBLG	**Delisi**		**32.84**	**300**	P		**P**	**21 37 45.0**	**-2.0**
BHD	**Baghdad**		**33.10**	**285**	*ex*		**P**	**21 37 42.7**	**-6.7**
BHD					*i* x		x	21 42 54.3	
ZEI	**Tsey**		**33.59**	**302**	*e*P		**P**	**21 37 55.7**	**+2.1**
ZEI					pmax		pmax		
	comp=Z,17nm,1.0s,mb4.9								
SOKR	**Solikamsk**		**33.93**	**336**	*d i*P		**P**	**21 37 58.8**	**+2.4**
SOKR					pmax		pmax		

	comp=Z,30nm,1.2s,mb5.1								
KIV	**Kislovodsk**		**34.63**	**304**	*e*P		**P**	**21 38 02.4**	**-0.2**
	comp=Z,8.5nm,0.9s,mb4.7								
KIV	**Kislovodsk**		**34.63**	**304**⇓	*e*P		**P**	**21 38 03.3**	**+0.7**
KIV					*e*			21 39 18.0	
KIV					pmax		pmax		
	comp=Z,20nm,1.7s,mb4.8								
KIV					MLR		MLR		
	comp=Z,300nm,14.0s,MS4.2								
SOC	**Sochi**		**36.72**	**303**	*e*P		**P**	**21 38 27.4**	**+6.9**
SOC					*e*			21 38 39.1	
SOC					*e*S		**S**	**21 44 09.1**	**+5.5**
SOC					pmax		pmax		
	comp=Z,33nm,1.4s,mb5.0								
VRHR	**Novokhopersk**		**36.92**	**316**	*e*P		**P**	**21 38 23.7**	**+1.6**
VRHR					pmax		pmax		
	comp=Z,30nm,1.3s,mb5.0								
VRHR					pmax		pmax		
	comp=N,20nm,0.6s								
VRHR					pmax		pmax		
	comp=E,50nm,0.8s								
KSRS	**Korea Array**		**37.15**	**67**	P		**P**	**21 38 22.9**	**-1.4**
	comp=E,1.2nm,0.6s,mb3.9,baz=276,slow=8.6,SNR=6.2								
KSRS					LR		LR	21 54 51.2	
	comp=E,601nm,19.4s,MS4.4,baz=282,slow=38								
KSRS	**Korea Array**		**37.15**	**67**	P		**P**	**21 38 22.9**	**-1.4**
KSRS					pmax		pmax		
	comp=Z,1.0nm,0.6s,mb3.8								
KSRS					MLR		MLR		
	comp=Z,601nm,19.4s,MS4.4								
MALT	**Malatya**		**37.55**	**294**	*e*P		**P**	**21 38 29.4**	**+1.8**
	comp=Z,11nm,1.4s,mb4.4								
MALT	**Malatya**		**37.55**	**294**	*e*P		**P**	**21 38 29.4**	**+1.7**
MALT					pmax		pmax		
	comp=Z,11nm,1.4s,mb4.4								
VORD	**Divnogorie**		**38.30**	**315**	*e*P		**P**	**21 38 33.1**	**-0.7**
VORD					pmax		pmax		
	comp=Z,9.0nm,1.2s,mb4.4								
VORD					pmax		pmax		
	comp=N,10.0nm,0.6s								
VORD					pmax		pmax		
	comp=E,20nm,0.8s								
VORD					MLR		MLR		
	comp=Z,700nm,12.0s,MS4.7								
VORD					MLR		MLR		
	comp=N,620nm,17.0s,MS4.6								
VORD					MLR		MLR		
	comp=E,420nm,12.0s,MS4.6								
VSR	**Storozhevoye**		**38.44**	**315**	*e*P		**P**	**21 38 34.1**	**-0.9**
VSR					pmax		pmax		
	comp=Z,10.0nm,1.1s,mb4.5								
VSR					pmax		pmax		
	comp=N,6.0nm,0.7s								
VSR					pmax		pmax		
	comp=E,8.0nm,0.8s								
VSR					MLR		MLR		
	comp=Z,510nm,10.0s,MS4.6								
VSR					MLR		MLR		
	comp=N,320nm,12.0s,MS4.5								
VSR					MLR		MLR		
	comp=E,360nm,12.0s,MS4.5								
MDJ	**Mudanjiang**		**38.53**	**56**	P		**P**	**21 38 36.5**	**+0.6**
MDJ					pP		pP	21 38 39.5	-0.8
MDJ					PP		PP	21 40 04.3	+0.3
MDJ					S		**S**	**21 44 25.8**	**-5.3**
MDJ					pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.2								
MDJ					pmax		pmax		
	comp=Z,60nm,7.3s								
MDJ					LR		LR		
	comp=N,520nm,27.1s								
MDJ					LR		LR		
	comp=Z,280nm,25.0s,MS4.0								
KSM	**Kuching**		**38.67**	**134**	*e*P		**P**	**21 38 36.6**	**-0.8**
	comp=Z,4.8nm,0.9s,mb4.2								
JOW	**Kunigami**		**39.28**	**84**	LR		LR	21 56 49.1	
	comp=Z,732nm,20.9s,MS4.5,baz=90,slow=39								
MOS	**Moscow**		**40.63**	**321**	*e*P		**P**	**21 38 51.8**	**-1.4**
OBN	**Obninsk**		**41.01**	**320**⇓	*e*P		**P**	**21 38 56.2**	**-0.1**
OBN					*e*			21 39 11.5	
OBN								21 40 35.0	
OBN					pmax		pmax		
	comp=Z,22nm,1.1s,mb4.7								
OBN					MLR		MLR		
	comp=Z,300nm,17.0s,MS4.2								
BR131	**Keskin Array S**		**41.21**	**297**	*e*P		**P**	**21 38 59.1**	**+0.9**
	comp=Z,5.4nm,1.3s,mb4.0								
BRTR	**Keskin Array B**		**41.21**	**297**	P		**P**	**21 38 58.9**	**+0.7**
	comp=Z,3.1nm,1.0s,mb3.9,baz=104,slow=5.2,SNR=14								
BRTR					LR		LR	21 58 46.9	
	comp=Z,217nm,21.6s,MS4.0,baz=218,slow=40								
BRTR	**Keskin Array B**		**41.21**	**297**	*ce*P		**P**	**21 38 59.2**	**+1.0**
BRTR					pmax		pmax		
	comp=Z,3.0nm,1.0s								
KLMR	**Klimovskoe**		**41.65**	**329**	P		**P**	**21 39 00.3**	**-1.2**
KLMR					pmax		pmax		
	comp=Z,55nm,1.8s,mb4.9								
ATD	**Arta Tunnel**		**42.14**	**252**	P		**P**	**21 39 07.8**	**+1.7**
	comp=Z,12nm,1.0s,mb4.5,baz=353,slow=10,SNR=7.3								
AKASG	**Malin Array Be**		**44.54**	**313**	P		**P**	**21 39 23.2**	**-1.8**
	comp=Z,0.6nm,0.4s,mb3.8,baz=92,slow=7.6,SNR=7.9								
AKASG					PP		PP	21 41 09.5	+0.7
	comp=Z,0.2nm,0.2s,baz=87,slow=8.4,SNR=4.3								
AKASG					LR		LR	22 01 27.2	
	comp=Z,323nm,20.4s,MS4.2,baz=110,slow=41								
AKASG	**Malin Array Be**		**44.54**	**313**	*ce*P		**P**	**21 39 26.2**	**+1.2**
AKASG					pmax		pmax		
	comp=Z,1.0nm,0.4s								
MJAR	**Matsushiro Arr**		**45.43**	**67**	P		**P**	**21 39 32.4**	**+0.1**
	comp=Z,1.5nm,0.9s,mb3.8,baz=305,slow=15,SNR=5.0								
MJAR					LR		LR	21 59 48.8	
	comp=Z,166nm,21.1s,MS4.0,baz=310,slow=38								
MJAR	**Matsushiro Arr**		**45.43**	**67**	P		**P**	**21 39 32.4**	**+0.1**
MJAR					pmax		pmax		
	comp=Z,2.0nm,0.9s								
MJAR					MLR		MLR		
	comp=Z,166nm,21.1s								
JOF	**Joensuu**		**46.03**	**330**	*e*P		**P**	**21 39 36.2**	**-0.5**
JOF					pmax		pmax		
	comp=Z,7.0nm,0.5s,mb4.8								
JOF	**Joensuu**		**46.03**	**330**	*ep*		**P**	**21 39 36.2**	**-0.5**
	comp=Z,7.1nm,0.5s,mb4.8								
VRI	**Vrincioaia**		**46.05**	**306**⇑	*i*P		**P**	**21 39 40.7**	**+3.6**
PLOR	**Plostina**		**46.10**	**306**⇑	*i*P		**P**	**21 39 39.1**	**+1.6**
MLR	**Muntele Rosu**		**46.61**	**305**⇓	*i*P		**P**	**21 39 42.7**	**+1.2**
BURAR	**Bucovina Array**		**47.05**	**308**⇓	*i*P		**P**	**21 39 47.3**	**+2.4**
VOIR			**47.24**	**305**⇑	*i*P		**P**	**21 39 45.9**	**-0.5**
JHJ	**Hachijo jima 2**		**47.37**	**72**	LR		LR	22 00 35.6	
	comp=Z,346nm,21.0s,MS4.3,baz=215,slow=37								
ASAJ	**Asahikawa**		**47.85**	**57**	LR		LR	22 00 53.2	
	comp=Z,340nm,18.8s,MS4.3,baz=275,slow=37								
FINES	**FINESS Array B**		**47.98**	**327**	P		**P**	**21 39 51.1**	**-0.9**
	comp=Z,3.8nm,0.5s,mb4.7,baz=103,slow=7.6,SNR=21								
FINES					LR		LR	22 01 52.9	
	comp=Z,424nm,18.2s,MS4.5,baz=112,slow=38								
FINES	**FINESS Array B**		**47.98**	**327**	P		**P**	**21 39 51.1**	**-0.9**
FINES					pmax		pmax		
	comp=Z,4.0nm,0.5s								
FINES					MLR		MLR		
	comp=Z,425nm,18.2s								
ERM	**Erimo**		**48.47**	**59**	*e*P		**P**	**21 39 57.3**	**+1.3**
	comp=Z,3.5nm,0.8s,mb4.4								
ERM	**Erimo**		**48.47**	**59**	*e*P		**P**	**21 39 57.3**	**+1.3**
ERM					pmax		pmax		
	comp=Z,4.0nm,0.8s,mb4.5								
DRGR			**48.79**	**307**⇓	*i*P		**P**	**21 39 59.3**	**+0.9**
UZH	**Uzhgorod**		**48.98**	**310**	*e*P		**P**	**21 40 06.0**	**+6.1**
UZH					*e*			21 41 24.7	
UZH					*e*S		**S**	**21 47 12.0**	**+8.4**
UZH					MLR		MLR		
	comp=N,400nm,17.0s,MS4.6								
UZH					MLR		MLR		
	comp=E,400nm,17.0s,MS4.6								
UZH					MLR		MLR		
	comp=Z,200nm,17.0s,MS4.2								
KEV	**Kevo**		**50.00**	**338**	*e*P		**P**	**21 40 06.4**	**-0.9**
KEV	**Kevo**		**50.00**	**338**	*ep*		**P**	**21 40 06.4**	**-0.9**
ARCES	**ARCESS Array B**		**50.42**	**337**	P		**P**	**21 40 11.2**	**+0.7**
	comp=Z,2.1nm,0.5s,mb4.5,baz=100,slow=8.2,SNR=19								
ARCES	**ARCESS Array B**		**50.42**	**337**	P		**P**	**21 40 11.2**	**+0.7**
ARCES					pmax		pmax		
	comp=Z,2.0nm,0.5s								
CBIJ	**Chichi jima**		**51.03**	**79**	LR		LR	22 03 00.5	
	comp=Z,162nm,18.3s,MS4.1,baz=120,slow=38								
OKC	**Ostrava-Krasne**		**51.63**	**311**	*e*P		**P**	**21 40 28.4**	**+8.5**
OKC					MLR		MLR		

comp=Z,300nm,20.3s,MS4.3
OKC Ostrava-Krasne 51.63 311 AMS AMS 22 01 00.0
comp=Z,300nm,20.3s
DPC Dobruska-Polom 52.76 312 *e*P **P** **21 40 28.5 +0.2**
DPC MLR MLR
comp=Z,400nm,13.0s,MS4.7
DPC Dobruska-Polom 52.76 312 *e*P **P** **21 40 28.5 +0.2**
DPC AMS AMS 22 05 40.0
comp=Z,400nm,13.0s
TREC Trest 53.41 311 AMS AMS 22 05 20.0
comp=Z,300nm,19.7s
SEY Seymchan 53.55 32⇑ *i*P **P** **21 40 34.4 +0.5**
PVCC Panska Ves 53.86 313 AMS AMS 22 05 50.0
comp=Z,500nm,15.9s
PRU Pruhonice 53.94 312 *e*P **P** **21 40 42.6 +5.7**
PRU MLR MLR
comp=Z,500nm,13.7s,MS4.7
PRU Pruhonice 53.94 312 *e*pP pP 21 40 42.6 +1.1
PRU AMS AMS 22 06 20.0
comp=Z,500nm,13.7s
KMBO Kilima Mbogo 54.15 243 *e*P **P** **21 40 39.3 +0.4**
comp=Z,6.1nm,1.1s,mb4.4
KMBO Kilima Mbogo 54.15 243 P **P** **21 40 39.5 +0.6**
comp=Z,3.9nm,0.8s,mb4.4,baz=0.3,slow=24,SNR=8.0
KMBO Kilima Mbogo 54.15 243 *e*P **P** **21 40 39.3 +0.4**
KMBO pmax pmax
comp=Z,6.0nm,1.1s
KHC Kasperske Hory 54.67 311 *e*P **P** **21 40 47.0 +4.7**
KHC MLR MLR
comp=Z,300nm,10.9s,MS4.6
KHC Kasperske Hory 54.67 311 *e*pP pP 21 40 47.0 +0.1
KHC AMS AMS 22 06 10.0
comp=Z,300nm,10.9s
CEL Celeste 55.07 297 *e*P **P** **21 40 45.0 -0.4**
comp=Z,41nm,1.1s,mb5.4
NOA NORSAR Array B 55.08 326 P **P** **21 40 43.2 -1.9**
comp=Z,2.9nm,0.9s,mb4.3,baz=88,slow=7.3,SNR=7.3
NOA LR LR 22 05 50.7
comp=Z,374nm,21.3s,MS4.4,baz=95,slow=38
NOA NORSAR Array B 55.08 326 P **P** **21 40 43.2 -1.9**
NOA pmax pmax
comp=Z,3.0nm,0.9s
NOA MLR MLR
comp=Z,374nm,21.3s
GRA1 Grafenberg Arr 56.11 312 *e*P **P** **21 40 47.8 -4.8**
comp=Z,14nm,2.0s,mb4.7
GRF Grafenberg Arr 56.11 312 *e*P **P** **21 40 47.8 -4.8**
comp=Z,14nm,2.0s,mb4.7
GRF Grafenberg Arr 56.11 312 *e*P **P** **21 40 47.8 -4.8**
GRF pmax pmax
comp=Z,14nm,2.0s,mb4.7
GRF Grafenberg Arr 56.11 312 *e*P **P** **21 40 47.8 -4.8**
GRF pmax pmax
comp=Z,14nm,2.0s,mb4.7
PETK Petropavlovsk- 56.84 44 P **P** **21 40 58.9 +1.1**
comp=Z,1.2nm,0.7s,mb4.0,baz=251,slow=4.4,SNR=3.0
PETK Petropavlovsk- 56.84 44 P **P** **21 40 58.9 +1.1**
PETK pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
GUMO Guam 58.71 92 LR LR 22 05 43.7
comp=Z,141nm,21.7s,MS4.0,baz=103,slow=35
SBF Sospel 59.88 306 *e*P **P** **21 41 20.6 +1.4**
comp=Z,31nm,1.0s,mb5.0
SBF Sospel 59.88 306 *e*P **P** **21 41 20.6 +1.4**
comp=Z,16nm,1.0s,mb5.0
SBF Sospel 59.88 306 *e*P **P** **21 41 20.6 +1.4**
SBF pmax pmax
comp=Z,16nm,1.0s,mb5.0
LPG La Plagne 59.93 308 *e*P **P** **21 41 19.2 -0.3**
comp=Z,12nm,1.0s,mb4.6
LPG La Plagne 59.93 308 *e*P **P** **21 41 19.2 -0.3**
comp=Z,5.9nm,1.0s,mb4.6
LPG La Plagne 59.93 308 *e*P **P** **21 41 19.2 -0.3**
LPG pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
LPL La Plagne 59.94 308 *e*P **P** **21 41 19.2 -0.4**
comp=Z,10.0nm,0.9s,mb4.5
LPL La Plagne 59.94 308 *e*P **P** **21 41 19.2 -0.4**
comp=Z,5.0nm,0.9s,mb4.5
LPL La Plagne 59.94 308 *e*P **P** **21 41 19.2 -0.4**
LPL pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
KEST Kesra 60.81 296 *e*P **P** **21 41 24.7 -1.0**
KEST Kesra 60.81 296 P **P** **21 41 24.9 -0.8**
comp=Z,3.6nm,1.0s,mb4.5,baz=337,slow=2.5,SNR=16
KEST LR LR 22 12 07.7
comp=Z,49nm,20.6s,MS3.6,baz=236,slow=40
SSF Saint Saulge 61.70 310 *e*P **P** **21 41 30.2 -1.3**
TCF Toulx Ste Croi 62.77 310 *e*P **P** **21 41 39.4 +0.7**
comp=Z,4.1nm,0.8s,mb4.3
TCF Toulx Ste Croi 62.77 310 *e*P **P** **21 41 39.4 +0.7**
comp=Z,2.0nm,0.8s,mb4.3
TCF Toulx Ste Croi 62.77 310 *e*P **P** **21 41 39.4 +0.7**
TCF pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
FITZ Fitzroy Crossi 63.29 134 LR LR 22 11 47.6
comp=Z,174nm,18.3s,MS4.3,baz=349,slow=38
LDF La Druitiere 63.60 313 *e*P **P** **21 41 42.8 -1.4**
comp=Z,3.6nm,0.6s,mb4.3
LDF La Druitiere 63.60 313 *e*P **P** **21 41 42.8 -1.4**
comp=Z,1.8nm,0.6s,mb4.3
LDF La Druitiere 63.60 313 *e*P **P** **21 41 42.8 -1.4**
LDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
ESDC Sonseca Array 69.29 304 P **P** **21 42 20.0 -0.8**
comp=Z,0.7nm,0.8s,mb3.6,baz=56,slow=7.9,SNR=5.3
ESDC LR LR 22 17 44.2
comp=Z,111nm,18.6s,MS4.1,baz=5.0,slow=40
SUMG Summit 69.62 344 *i* P **P** **21 42 22.2 0.0**
comp=Z,7.2nm,1.0s,mb4.6
WRA Warramunga Arr 70.23 129 P **P** **21 42 25.6 -1.0**
comp=Z,9.2nm,1.0s,mb4.7,baz=323,slow=6.3,SNR=50
WRA Warramunga Arr 70.23 129 P **P** **21 42 25.6 -1.1**
WRA pmax pmax
comp=Z,9.0nm,1.0s
WB2 Warramunga Arr 70.23 129 *e*P **P** **21 42 25.8 -1.0**
NWAO Narrogin (SRO) 70.95 150 LR LR 22 12 12.5
comp=Z,181nm,21.2s,MS4.3,baz=128,slow=35
ASAR Alice Springs 72.58 132 P **P** **21 42 39.8 -1.0**
comp=Z,2.4nm,0.9s,mb4.1,baz=312,slow=5.6,SNR=16
ASAR Alice Springs 72.58 132 P **P** **21 42 39.8 -1.0**
ASAR pmax pmax
comp=Z,2.0nm,0.9s
COLD Coldfoot 74.32 19 *e*P **P** **21 42 51.6 +1.1**
comp=Z,6.1nm,1.0s,mb4.5
BPAW Bear Paw Mtn. 76.27 22 *e*P **P** **21 43 02.0 +0.3**
comp=Z,5.5nm,1.0s,mb4.4
TORD Torodi Ar. Bea 76.40 277 P **P** **21 43 03.3 0.0**
comp=Z,1.3nm,0.6s,mb4.1,baz=45,slow=6.3,SNR=3.6
TORD LR LR 22 22 12.0
comp=Z,218nm,19.1s,MS4.5,baz=65,slow=40
COLA College 76.67 20 *e*P **P** **21 43 05.3 +1.3**
comp=Z,4.7nm,0.6s,mb4.6
COLA College 76.67 20 *e*P **P** **21 43 05.3 +1.3**
COLA pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
PPLA Purkeypile 76.71 23 *e*P **P** **21 43 04.4 +0.2**
ILAR Eielson Array 77.03 20 P **P** **21 43 05.2 -0.8**
comp=Z,4.9nm,1.1s,mb4.4,baz=303,slow=4.5,SNR=18
ILAR LR LR 22 20 48.5
comp=Z,120nm,18.7s,MS4.2,baz=355,slow=39
ILAR Eielson Array 77.03 20 P **P** **21 43 05.2 -0.8**
ILAR pmax pmax
comp=Z,5.0nm,1.1s
ILAR MLR MLR
comp=Z,120nm,18.7s
EGAK Eagle 78.62 18 *e*P **P** **21 43 16.2 +1.3**
comp=Z,8.8nm,1.2s,mb4.6
PMR Palmer 78.64 23 *e*P **P** **21 43 15.9 +0.9**
comp=Z,8.7nm,0.8s,mb4.7
PMR Palmer 78.64 23 *e*P **P** **21 43 15.9 +0.8**
PMR pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
SML Sawmill 78.75 22 *e*P **P** **21 43 15.9 +0.2**
comp=Z,3.7nm,0.9s,mb4.3
SML Sawmill 78.75 22 *e*P **P** **21 43 15.9 +0.2**
SML pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
DAWY Dawson 79.65 18 *e*P **P** **21 43 20.9 +0.3**
BOSA Boshof 81.01 229 P **P** **21 43 28.6 +0.3**
BOSA LR LR 22 15 42.9
BOSA Boshof 81.01 229 P **P** **21 43 28.6 +0.3**
comp=Z,5.1nm,1.1s,mb4.4,baz=14,slow=4.2,SNR=4.3
BOSA LR LR 22 15 42.9
comp=Z,186nm,19.1s,MS4.5,baz=344,slow=33
BOSA Boshof 81.01 229 P **P** **21 43 28.6 +0.3**
BOSA pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
BOSA MLR MLR
comp=Z,186nm,19.1s,MS4.5
HYT Haines Junctio 82.81 19 *e*P **P** **21 43 37.7 +0.3**
STKA Stephens Creek 83.16 133 P **P** **21 43 38.1 -1.4**
comp=Z,2.7nm,0.8s,mb4.4,baz=267,slow=4.7,SNR=6.2
STKA LR LR 22 28 39.4
comp=Z,118nm,18.1s,MS4.3,baz=23,slow=42
DBIC Dimbokro 85.19 275 P **P** **21 43 50.0 -0.3**
comp=Z,6.4nm,0.9s,mb4.8,baz=59,slow=5.9,SNR=4.8
DBIC LR LR 22 25 20.1
comp=Z,243nm,19.2s,MS4.6,baz=42,slow=38
DBIC Dimbokro 85.19 275 P **P** **21 43 50.1 -0.3**
DBIC pmax pmax
comp=Z,6.0nm,0.9s
DBIC MLR MLR
comp=Z,243nm,19.2s
YKA Yellowknife Ar 85.94 8 LR LR 22 24 27.8
comp=Z,15nm,20.1s,MS3.4,baz=135,slow=37
SCHQ Schefferville 91.00 343 LR LR 22 27 23.4
comp=Z,133nm,21.9s,MS4.3,baz=24,slow=37
MAW Mawson 99.28 188 LR LR 22 22 07.9
comp=Z,81nm,19.7s,MS4.2,baz=185,slow=31
ULM Lac du Bonnet 99.34 360 LR LR 22 34 04.9
comp=Z,150nm,19.7s,MS4.5,baz=320,slow=38
TXAR Lajitas Array 119.85 7 PKP PKPdf 21 50 02.8 -1.4
comp=Z,0.3nm,0.8s,baz=256,slow=2.7,SNR=3.2
CPUP Villa Florida 145.39 267 PKPbc PKPbc 21 50 49.2 -2.5
comp=Z,1.9nm,0.6s,baz=55,slow=2.4,SNR=4.8
LPAZ La Paz 150.34 293 PKPbc PKPbc 21 51 07.2 +1.8
LPAZ La Paz 150.34 293 PKPbc PKPbc 21 51 07.2 +1.9
comp=Z,1.7nm,0.8s,baz=333,slow=4.5,SNR=4.4

IDC ***30*** *21:48:40.2±1.7, 30.°54N×83.°25E, h0km, mb3.5/7, mb1 3.6/9, mb1mx3.4/28, mbtmp3.5/9, ML3.1/2, Error ellipse: s-maj=50.8km s-min=22.4km az=58.0*
NEIC ***30*** *21:48:42.8±0.8, 30.°64N×83.°28E, h10km, mb3.5/2, Error ellipse: s-maj=18.4km s-min=9.7km az=221.0*
ISCJB ***30*** *21:48:43.8±0.9, 30.°6N±0.°1×83.°2E±0.°1, h33km, mb3.5/7, Error ellipse: s-maj=19.3km s-min=10.1km az=39.7*
ISC 30 21:48:46.2±0.9, 30.°7N±0.°1×83.°3E±0.°1, h35km, n14, σ0s89/14, mb3.5/7, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**6.87**	**96**	*e*Pn	**Pn**	**21 50 26.4**	**+2.0**
	5.0nm,0.8s						
KBL	**Kabul**	**12.62**	**292**	*e*Pn	**Pn**	**21 51 44.0**	**+0.8**
MK31	**Makanchi Array**	**16.14**	**358**	Pn	**Pn**	**21 52 30.8**	**+0.6**
MKAR	**Makanchi Array**	**16.14**	**358**	Pn	**Pn**	**21 52 29.4**	**-0.8**
	0.0nm,0.3s,baz=180,slow=13,SNR=2.9						
CMAR	**Chiang Mai Arr**	**18.69**	**127**	Pn	**Pn**	**21 53 01.2**	**-0.8**
	0.0nm,0.3s,baz=310,slow=11,SNR=3.7						
KURK	**Kurchatov**	**20.35**	**351**	*e*P	**P**	**21 53 18.9**	**-0.4**
	2.6nm,1.0s						
KURK	**Kurchatov**	**20.35**	**351**	P	**P**	**21 53 17.8**	**-1.5**
	1.6nm,1.0s,baz=173,slow=9.8,SNR=11						
ZALV	**Zalesovo Beam**	**23.31**	**2**	P	**P**	**21 53 50.2**	**-0.8**
	0.4nm,0.2s,mb3.4,baz=212,slow=5.3,SNR=3.6						
BVAR	**Borovoye Array**	**24.26**	**341**	P	**P**	**21 53 60.0**	**+0.2**
	0.8nm,0.5s,mb3.5,baz=144,slow=12,SNR=4.6						
SONM	**Songino Array**	**24.65**	**39**	P	**P**	**21 54 04.2**	**+0.9**
	0.8nm,0.8s,mb3.3,baz=226,slow=9.0,SNR=8.2						
ABKAR	**Akbulak array**	**25.63**	**323**	*e*P	**P**	**21 54 12.7**	**+0.5**
	0.5nm,0.5s,mb3.3						
FINES	**FINESS Array B**	**48.00**	**327**	P	**P**	**21 57 21.6**	**+0.3**
	1.1nm,0.7s,mb4.0,baz=120,slow=8.3,SNR=3.2						
WRA	**Warramunga Arr**	**70.27**	**129**	P	**P**	**21 59 55.2**	**-0.8**
	0.4nm,0.5s,mb3.6,baz=323,slow=6.2,SNR=5.1						
ILAR	**Eielson Array**	**77.19**	**20**	P	**P**	**22 00 35.2**	**-0.8**
	0.2nm,0.7s,mb3.2,baz=334,slow=3.3,SNR=2.8						

IDC ***30*** *21:56:52.2±0.9, 0.°05N×124.°13E, h0km, mb3.6/8, mb1 3.9/9, mb1mx3.7/22, mbtmp3.7/9, ML4.0/1, MS3.8/2, Ms1 3.8/2, ms1mx2.8/29, Error ellipse: s-maj=52.7km s-min=16.5km az=66.0*
DJA ***30*** *21:56:55, 0.°26N×124.°59E, h10km, MLv4.5/13*
ISCJB ***30*** *21:56:56.3±0.6, 0.°23N±0.°05×124.°52E±0.°04, h45km±8km, mb3.6/8, Error ellipse: s-maj=7.9km s-min=7.2km az=4.2*
NEIC ***30*** *21:56:57.3±0.5, 0.°06N×124.°20E, h35km, mb3.8/1, Error ellipse: s-maj=27.8km s-min=8.6km az=67.0*
ISC 30 21:56:58.1±0.6, 0.°24N±0.°05×124.°57E±0.°04, h46km±8km, n28, σ1s05/28, mb3.6/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.67**	**300**	P	**Pn**	**21 57 07.2**	**-4.2**
MNI	**Manado**	**1.23**	**13**	P	**Pn**	**21 57 17.9**	**-1.0**
LUWI	**Luwuk**	**2.20**	**235**	P	**Pn**	**21 57 30.2**	**-2.0**
LUWI				S	**Sn**	**21 58 00.6**	**+2.4**
MRSI	**Marisa**	**2.64**	**275**	P	**Pn**	**21 57 36.0**	**-2.2**
TNTI	**Ternate**	**2.85**	**79**	P	**Pn**	**21 57 41.0**	**-0.1**
TNTI				S	**Sn**	**21 58 15.5**	**+1.3**
TOLI	**Toli-Toli**	**3.87**	**283**	P	**Pn**	**21 57 55.5**	**+0.3**
NLAI	**Namlea**	**4.28**	**144**	P	**Pn**	**21 58 00.1**	**-0.7**
KDI	**Kendari**	**4.60**	**205**	P	**Pn**	**21 58 04.5**	**-0.7**
TTSI	**Tana Toraja**	**5.76**	**235**	P	**Pn**	**21 58 21.1**	**0.0**
	2.3nm1µm76nm,0.8s						
BBSI	**Bau Bau**	**6.03**	**199**	P	**Pn**	**21 58 25.8**	**+1.0**
	0.2nm64nm,0.6s						
SPSI	**Sidrap Palu**	**6.36**	**229**	P	**Pn**	**21 58 30.1**	**+0.8**
	0.2nm699nm51nm,0.6s						
DAV	**Davao City (W)**	**6.86**	**8**	LR	LR	22 01 18.3	
	comp=Z,181nm,18.1s,baz=304,slow=37						
BKSI	**Bulukumba**	**7.09**	**219**	P	**Pn**	**21 58 40.2**	**+0.9**
	0.1nm318nm22nm,0.6s						
MYLDM	**Lahad Datu**	**7.80**	**309**	P	**Pn**	**21 58 49.9**	**+0.8**
KKM	**Kota Kinabalu**	**10.14**	**305**	P	**Pn**	**21 59 21.5**	**+0.4**
FITZ	**Fitzroy Crossi**	**18.26**	**177**	*e*Pn	**Pn**	**22 01 07.3**	**-0.8**
	5.9nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.26**	**177**	Pn	**Pn**	**22 01 07.2**	**-1.0**
	0.4nm,0.3s,baz=0.1,slow=5.3,SNR=12						
WRA	**Warramunga Arr**	**22.23**	**155**	P	**P**	**22 01 50.1**	**-0.8**
	0.7nm,0.4s,mb3.4,baz=333,slow=10,SNR=12						
WB2	**Warramunga Arr**	**22.23**	**155**	*e*P	**P**	**22 01 50.6**	**-0.4**
ASAR	**Alice Springs**	**25.43**	**160**	P	**P**	**22 02 21.8**	**+0.2**
	2.7nm,0.9s,mb3.8,baz=341,slow=7.5,SNR=19						
CMAR	**Chiang Mai Arr**	**31.00**	**307**	P	**P**	**22 03 09.5**	**-2.0**
	0.1nm,0.3s,mb3.1,baz=151,slow=5.7,SNR=2.8						
CMAR				PcP	PcP	22 06 15.5	+8.6
	0.2nm,0.6s,baz=117,slow=1.6,SNR=4.4						
STKA	**Stephens Creek**	**35.78**	**155**	P	**P**	**22 03 53.1**	**+0.2**
	3.9nm,0.8s,mb4.4,baz=351,slow=23,SNR=7.2						
MJAR	**Matsushiro Arr**	**38.27**	**18**	P	**P**	**22 04 17.4**	**+3.4**
	0.4nm,0.4s,mb3.5,baz=165,slow=7.2,SNR=3.3						
MKAR	**Makanchi Array**	**59.24**	**327**	P	**P**	**22 06 54.9**	**+0.1**
	0.2nm,0.5s,mb3.4,baz=112,slow=9.1,SNR=3.1						
KURK	**Kurchatov**	**63.56**	**329**	P	**P**	**22 07 24.0**	**+0.1**
	0.2nm,0.4s,mb3.5,baz=136,slow=6.5,SNR=2.5						
AKTK	**Aktyubinsk**	**75.07**	**323**	P	**P**	**22 08 35.6**	**+0.6**
AKTO	**Aktyubinsk**	**75.07**	**323**	P	**P**	**22 08 35.6**	**+0.6**
	0.7nm,0.5s,mb3.9,baz=105,slow=3.0,SNR=1.8						
PPT	**Papeete**	**86.12**	**108**	LR	LR	22 45 14.3	
	comp=Z,164nm,19.8s,baz=319,slow=34						

ISCJB ***30*** *22:12:21.0±0.6, 22.°82N±0.°03×121.°74E±0.°03, h18km±7km, Error ellipse: s-maj=5.3km s-min=4.6km az=18.6*
TAP ***30*** *22:12:22.7, 22.°84N×121.°64E, h15km, ML3.1, C*
JMA ***30*** *22:12:23.6±0.3, 22.°85N×121.°77E, h62km*
ISC 30 22:12:21.2±0.6, 22.°83N±0.°03×121.°71E±0.°02, h16km±3km, n34, σ0s99/61, 3C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.41**	**310**	*i* P	**Pg**	**22 12 29.9**	**+0.3**
	baz=317						
CHKT				*i* S	**Sg**	**22 12 35.0**	**-0.3**
	baz=317						
TTN	**Taitung**	**0.53**	**262**	*i* P	**Pg**	**22 12 32.0**	**+0.4**
	baz=259						
TTN				S	**Sg**	**22 12 38.8**	**+0.1**
	baz=259						
TWG	**Pinlang**	**0.59**	**269**	P	**Pg**	**22 12 32.7**	**-0.1**
	baz=268						
TWG				S	**Sg**	**22 12 40.7**	**+0.1**
	baz=268						
TWF1	**Yuli**	**0.64**	**324**	P	**Pg**	**22 12 34.0**	**+0.1**
	baz=330						
TWF1				S	**Sg**	**22 12 42.7**	**+0.3**
	baz=330						
ELDTW	**Lidau**	**0.73**	**299**⇑	*i*P	**Pg**	**22 12 34.8**	**-0.7**
	baz=314						
ELDTW				*e*S	**Sg**	**22 12 43.5**	**-1.7**
	baz=314						
ECL	**Taimali**	**0.73**	**252**	P	**Pg**	**22 12 35.2**	**-0.4**
	baz=249						
ECL				*e*S	**Sg**	**22 12 44.3**	**-0.9**
	baz=249						
EHY	**Hungye**	**0.76**	**332**	P	**Pg**	**22 12 36.2**	**+0.2**
	baz=348						
EHY				*e*S	**Sg**	**22 12 46.4**	**+0.2**
	baz=348						
TAW	**Tawu**	**0.89**	**238**	*e*P	**Pb**	**22 12 38.2**	**-0.1**
	baz=234						
TAW				*e*S	**Sb**	**22 12 48.5**	**-1.4**
	baz=234						
EAST	**Anshuo**	**0.91**	**241**	P	**Pb**	**22 12 38.1**	**-0.6**
	baz=238						
STYT	**Tauyuan**	**0.94**	**291**⇑	*i*P	**Pb**	**22 12 38.5**	**-0.6**
	baz=302						
STYT				S	**Sb**	**22 12 49.5**	**-1.9**
	baz=302						
YUS	**Yu-Shan**	**0.96**	**313**	*e*P	**Pb**	**22 12 39.2**	**-0.3**
	baz=317						
SSD	**Sandimen**	**1.00**	**265**⇑	*i*P	**Pb**	**22 12 39.4**	**-0.7**
	baz=270						
SSD				*e*S	**Sb**	**22 12 50.4**	**-2.7**
	baz=270						
ESL	**Shilin**	**1.01**	**346**	P	**Pb**	**22 12 39.8**	**-0.6**
	baz=358						
ESL				S	**Sb**	**22 12 51.6**	**-1.9**
	baz=358						
SGST	**Jiashian**	**1.07**	**284**	*e*P	**Pb**	**22 12 41.5**	**+0.1**
	baz=293						
ALS	**Alishan**	**1.07**	**309**	P	**Pb**	**22 12 41.5**	**+0.1**
	baz=312						
WTP	**Ta-pu**	**1.09**	**293**	P	**Pb**	**22 12 41.6**	**-0.1**
	baz=301						
WTP				*e*S	**Sb**	**22 12 57.5**	**+1.7**
	baz=301						
SCZT	**Fangliau**	**1.10**	**246**	*e*P	**Pb**	**22 12 42.5**	**+0.6**
	baz=243						
CHN1	**Nanshi**	**1.15**	**288**	*e*P	**Pn**	**22 12 42.9**	**+0.3**
	baz=298						
CHN1				*e*S	**Sb**	**22 12 59.5**	**+2.2**
	baz=298						
CHN4	**Tsaushan**	**1.15**	**297**	*e*P	**Pn**	**22 12 43.1**	**+0.4**
	baz=307						
CHN4				*e*S	**Sb**	**22 12 59.0**	**+1.5**
	baz=307						
CHN5	**Tsauling**	**1.22**	**309**	P	**Pn**	**22 12 44.5**	**+0.9**
	baz=312						
CHN5				*e*S	**Sb**	**22 13 01.1**	**+1.7**
	baz=312						
TWD	**Chiawan**	**1.25**	**355**	*e*P	**Pn**	**22 12 43.3**	**-0.7**
	baz=10.0						
SMLT	**Sun Moon Lake**	**1.28**	**325**	*e*P	**Pn**	**22 12 46.0**	**+1.4**
	baz=340						
SMLT				*e*S	**Sb**	**22 13 02.2**	**+0.8**
	baz=340						
TYC	**Yuchr**	**1.32**	**324**	*e*P	**Pn**	**22 12 46.1**	**+1.0**
	baz=339						
TYC				*e*S	**Sn**	**22 13 03.1**	**+0.6**
	baz=339						
WHF	**Hehuan Shan**	**1.37**	**343**	*e*P	**Pn**	**22 12 45.4**	**-0.3**
	baz=347						
WHF				*e*S	**Sn**	**22 13 01.7**	**-1.9**
	baz=347						
TWT	**Tachien**	**1.50**	**341**	*e*P	**Pn**	**22 12 48.3**	**+0.8**
	baz=345						
TWT				*e*S	**Sn**	**22 13 04.9**	**-1.9**
	baz=345						
TWQ1	**Liyutan**	**1.74**	**331**	*e*P	**Pn**	**22 12 52.5**	**+1.8**
	baz=335						
TWQ1				*e*S	**Sn**	**22 13 13.6**	**+0.9**
	baz=335						
ENTT	**Nioudou**	**1.81**	**356**	*e*P	**Pn**	**22 12 51.8**	**+0.1**
	baz=359						
NSK	**Sanguang**	**1.87**	**350**	*e*P	**Pn**	**22 12 53.0**	**+0.5**
	baz=354						
NSK				*e*S	**Sn**	**22 13 13.9**	**-1.9**
	baz=354						
YOJ	**Yonaguni jima**	**2.02**	**36**	P	**Pn**	**22 12 55.4**	**+0.8**
YOJ				*e*S	**Sn**	**22 13 18.9**	**-0.6**
HATJ	**Hateruma jima**	**2.28**	**57**	P	**Pn**	**22 12 59.0**	**+0.8**
HATJ				S	**Sn**	**22 13 25.0**	**-1.0**
IRIF	**Iriomote-Funau**	**2.38**	**51**	P	**Pn**	**22 13 00.0**	**+0.3**
IRIF				S	**Sn**	**22 13 28.9**	**+0.3**
JKRS	**Kuro-shima**	**2.53**	**56**	P	**Pn**	**22 13 02.8**	**+1.1**
JKRS				S	**Sn**	**22 13 31.6**	**-0.7**
JIJ	**Ishigaki jima**	**2.70**	**55**	P	**Pn**	**22 13 04.9**	**+0.8**
JIJ				S	**Sn**	**22 13 35.4**	**-1.1**
JTJ	**Tarama**	**3.28**	**56**	P	**Pn**	**22 13 13.1**	**+1.1**
JTJ				S	**Sn**	**22 13 50.1**	**-0.7**

CASC 30 22:19:11.6±4.0, 11.°59N×86.°95W, h0km±9km, MD4.1, ML3.3, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COPN	**Copaltepe**	**0.68**	**31**	*e*P	Pg	22 19 26.6	+2.0
CRUN	**El Crucero**	**0.74**	**59**	*e*P	Pg	22 19 27.5	+1.7
CSAN		**0.78**	**41**	*e*P	Pg	22 19 27.7	+1.1
LEON	**Leon**	**0.82**	**4**	*e*P	Pg	22 19 28.7	+1.4
XAVN	**Gruta Xavier**	**0.82**	**48**	*e*P	Pg	22 19 28.3	+1.0
TICN	**Ticuantepe**	**0.83**	**58**	*e*P	Pg	22 19 28.5	+1.0
TISN	**Laguna Tiscapa**	**0.86**	**51**	*e*P	Pg	22 19 28.8	+0.7
MASN	**Masaya**	**0.87**	**63**	*e*P	Pg	22 19 28.6	+0.2
MGAN	**Managua**	**0.88**	**51**	*e*P	Pg	22 19 29.1	+0.7
MOMN	**Momotombo**	**0.90**	**26**	*e*P	Pg	22 19 30.2	+1.2
CNGN	**Cerro Negro**	**0.93**	**15**	*e*P	Pg	22 19 30.4	+0.9
CNGN				*e*S	Sg	22 19 46.1	+4.5
CNGN				AML	AML	22 19 53.8	
	comp=E,791nm,0.3s						
TELN	**Telica**	**1.01**	**6**	*e*P	Pg	22 19 32.0	+1.0
HUEN		**1.06**	**46**	*e*P	Pg	22 19 31.6	-0.3
CRIN	**San Cristobal**	**1.10**	**355**	*e*P	Pg	22 19 32.9	+0.1
CRIN				*e*S	Sg	22 19 51.8	+4.7
CRIN				AML	AML	22 19 59.7	
	comp=N,1µm,0.4s						
SSN	**San Juan del S**	**1.11**	**105**	*e*P	Pg	22 19 30.0	-3.0
CONN	**Concepcion**	**1.30**	**91**	*e*P	Pg	22 19 33.3	-3.2
BOAB	**BOACO BROADBAN**	**1.52**	**56**	*e*P	Pn	22 19 37.2	-2.8
BOAB				*e*S	Sg	22 19 59.5	-0.8
CNCH	**Conchagua**	**1.88**	**333**	*e*P	Pn	22 19 43.0	-2.1
VCR	**Vista de Mar**	**1.95**	**138**	*e*P	Pn	22 19 47.3	+1.4
VCR				*e*S	Sn	22 20 13.8	+2.7
TGUH	**Tegucigalpa,Un**	**2.47**	**353**	*e*P	Pn	22 19 51.0	-2.1
CAHU	**Cacaquatique**	**2.49**	**330**	*e*P	Pn	22 19 52.4	-1.0
JCR	**Jicaral**	**2.50**	**134**	*e*P	Pn	22 19 53.4	-0.1
JCR				*e*S	Sn	22 20 29.5	+4.7
CGA2	**Cerro Gallo 2**	**2.90**	**122**	*e*P	Pn	22 20 00.5	+1.5
PRS1	**Puriscal**	**3.04**	**121**	*e*P	Pn	22 20 03.3	+2.3
LAJ	**Bijagual**	**3.27**	**121**	*e*P	Pn	22 20 00.3	-3.7
URSC	**Urasca**	**3.57**	**119**	*e*P	Pn	22 20 06.9	-1.4
BUS	**Buena Vista**	**3.73**	**123**	*e*P	Pn	22 20 10.1	-0.4

IDC 30 22:38:25.6±2.3, 10.°86S×163.°32E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.8/18, mbtmp3.9/5, ML4.1/1, Error ellipse: s-maj=48.1km s-min=36.6km az=121.0, Bougainville - Solomon Islands region

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

QSPA	**South Pole Qui**	**60.05 180**	P		P		23 37 06.0	+0.4
	1.8nm,1.0s,baz=274,slow=3.2,SNR=5.8								
CMAR	**Chiang Mai Arr**	**60.78 42**	P		P		23 37 11.3	+0.1
	1.0nm,0.8s,baz=229,slow=7.4,SNR=9.0								
ASAR	**Alice Springs**	**64.68 104**	P		P		23 37 37.9	+0.5
	0.4nm,0.8s,baz=253,slow=6.4,SNR=3.0								
WRA	**Warramunga Arr**	**66.56 100**	P		P		23 37 49.3	-0.3
	0.8nm,0.8s,baz=256,slow=4.2,SNR=3.6								
BRTR	**Keskin Array B**	**73.86 339**	P		P		23 38 34.1	+0.3
	0.6nm,0.8s,baz=72,slow=4.7,SNR=3.5								
MKAR	**Makanchi Array**	**79.01 15**	P		P		23 39 03.2	+0.4
	0.4nm,0.8s,baz=171,slow=3.6,SNR=4.0								
ZALV	**Zalesovo Beam**	**86.29 14**	P		P		23 39 40.3	-0.2
	0.6nm,0.6s,baz=202,slow=2.7,SNR=3.2								

*ISK **30** 23:45:26.8, 34˚.86N×33˚.95E, h30km, ML2.7*
*ISCJB **30** 23:45:28.0±0.5, 34˚.92N±0˚.05×33˚.89E±0˚.05, h54km±11km, Error ellipse: s-maj=8.1km s-min=7.1km az=156.1*
*CSEM **30** 23:45:28.8±0.1, 34˚.97N×33˚.88E, h30km, Mw2.9, Error ellipse: s-maj=4.6km s-min=3.2km az=43.0*
*NIC **30** 23:45:29.3±0.2, 35˚.02N×33˚.86E, h36km, ML2.8, MW2.9*
*NEIC **30** 23:45:29.3, 35˚.02N×33˚.86E, h36km, MD2.9(ISK), After NIC.*
*HLW **30** 23:45:35.2, 34˚.54N×33˚.93E, h25km±26km, Ml2.7*

ISC 30 23:45:29.1±0.5, 34˚.96N±0˚.05×33˚.89E±0˚.05, h44km±15km, n49, σ0°53/60, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFK	**Lefkose**	**0.43**	**318**	*e*PG	**Pn**	**23 45 38.8**	**-0.3**
LFK				*e*SG	**Sn**	**23 45 47.3**	**+1.0**
LFK	**Lefkose**	**0.43**	**318**	*e*Pg	**Pn**	**23 45 38.8**	**-0.4**
LFK				*e*Sg	**Sn**	**23 45 47.3**	**+1.0**
CSS	**Prodhromos**	**0.46**	**271**	P	**Pn**	**23 45 38.7**	**-0.7**
	5.9nm,0.4s						
CSS				S	**Sn**	**23 45 46.4**	**-0.4**
CSS	**Prodhromos**	**0.46**	**271**	*e*PG	**Pn**	**23 45 38.4**	**-1.0**
CSS				*e*SG	**Sn**	**23 45 46.6**	**-0.2**
CSS	**Prodhromos**	**0.46**	**271**	*e*Pg	**Pn**	**23 45 38.4**	**-1.1**
CSS				S	**Sn**	**23 45 46.4**	**-0.4**
CSS	**Prodhromos**	**0.46**	**271**	*e*Pg	**Pn**	**23 45 38.4**	**-1.0**
CSS	**Prodhromos**	**0.46**	**271**	P	**Pn**	**23 45 38.7**	**-0.7**
	5.9nm,0.4s						
CSS				*e*Sg	**Sn**	**23 45 46.6**	**-0.2**
MAMC	**Mammari**	**0.59**	**291**	P	**Pn**	**23 45 40.7**	**-0.4**
MAMC	**Mammari**	**0.59**	**291**	P	**Pn**	**23 45 40.7**	**-0.4**
EREN	**Erenkoy**	**0.61**	**22**	*e*PG	**Pn**	**23 45 40.9**	**-0.6**
EREN	**Erenkoy**	**0.61**	**22**	*e*Pg	**Pn**	**23 45 40.9**	**-0.6**
LEF	**Lefka**	**0.84**	**281**	*e*PG	**Pn**	**23 45 43.8**	**-0.6**
LEF	**Lefka**	**0.84**	**281**	*e*Pg	**Pn**	**23 45 43.8**	**-0.6**
SZAC	**Souni-Zanaja**	**0.85**	**257**	P	**Pn**	**23 45 44.6**	**0.0**
SZAC				S	**Sn**	**23 45 56.9**	**+0.9**
SZAC	**Souni-Zanaja**	**0.85**	**257**	P	**Pn**	**23 45 44.6**	**0.0**
SZAC				S	**Sn**	**23 45 56.9**	**+0.9**
ALFC	**Alevga**	**1.08**	**281**	P	**Pn**	**23 45 47.6**	**-0.1**
	2.4nm,0.2s						
ALFC				S	**Sn**	**23 46 01.5**	**0.0**
ALFC	**Alevga**	**1.08**	**281**	P	**Pn**	**23 45 47.6**	**-0.1**
	2.4nm,0.2s						
ALFC				S	**Sn**	**23 46 01.5**	**0.0**
PPCY	**Paphos**	**1.27**	**267**	P	**Pn**	**23 45 50.4**	**+0.1**
PPCY	**Paphos**	**1.27**	**267**	P	**Pn**	**23 45 50.4**	**+0.1**
IKL	**Isikli**	**1.29**	**353**	*e*PN	**Pn**	**23 45 50.0**	**-0.6**
IKL	**Isikli**	**1.29**	**353**	*e*Pn	**Pn**	**23 45 50.0**	**-0.6**
BHL	**Bhannes**	**1.80**	**125**	*e*P	**Pn**	**23 45 56.8**	**-0.8**
BHL	**Bhannes**	**1.80**	**125**	*e*P	**Pn**	**23 45 56.8**	**-0.8**
HWQ	**Hawqa**	**1.83**	**111**	*e*P	**Pn**	**23 45 58.1**	**+0.2**
HWQ	**Hawqa**	**1.83**	**111**	*e*P	**Pn**	**23 45 58.1**	**+0.1**
RCY	**Rachaya**	**2.17**	**132**	*e*P	**Pn**	**23 46 03.0**	**+0.3**
RCY	**Rachaya**	**2.17**	**132**	*e*P	**Pn**	**23 46 03.0**	**+0.3**
FKH	**Fakeheh**	**2.19**	**108**	*e*P	**Pn**	**23 46 04.1**	**+1.1**
FKH	**Fakeheh**	**2.19**	**108**	*e*P	**Pn**	**23 46 04.1**	**+1.1**
HDMB	**Hadim**	**2.30**	**331**	*e*PN	**Pn**	**23 46 05.5**	**+1.0**
HDMB	**Hadim**	**2.30**	**331**	*e*Pn	**Pn**	**23 46 05.5**	**+1.0**
KARA	**Karaisali**	**2.48**	**22**	*e*PN	**Pn**	**23 46 07.1**	**+0.1**
KARA	**Karaisali**	**2.48**	**22**	*e*Pn	**Pn**	**23 46 07.1**	**+0.1**
AMAG	**Maghara**	**4.34**	**188**	P	**Pn**	**23 46 32.3**	**-0.2**
	baz=190						
AMAG				S	**Sn**	**23 47 16.3**	**-5.5**
	baz=190						
AMAG	**Maghara**	**4.34**	**188**	P	**Pn**	**23 46 32.3**	**-0.2**
SUZ		**5.18**	**190**	P	**Pn**	**23 46 44.1**	**+0.1**
	baz=192						
SUZ		**5.18**	**190**	P	**Pn**	**23 46 44.2**	**+0.2**
HHAG	**Hagoal**	**5.21**	**197**	P	**Pn**	**23 46 45.0**	**+0.5**
	baz=200						
HHAG	**Hagoal**	**5.21**	**197**	P	**Pn**	**23 46 45.0**	**+0.5**
KOT	**Kottamia**	**5.31**	**200**	P	**Pn**	**23 46 45.7**	**-0.1**
	baz=202						
KOT	**Kottamia**	**5.31**	**200**	P	**Pn**	**23 46 45.7**	**-0.1**
GLL	**Jalalah**	**5.67**	**200**	P	**Pn**	**23 46 50.5**	**-0.3**
	baz=202						
GLL	**Jalalah**	**5.67**	**200**	P	**Pn**	**23 46 50.6**	**-0.2**
HBST	**Basata**	**5.77**	**173**	P	**Pn**	**23 46 52.3**	**+0.2**
	baz=172						
HBST				AMP		23 47 00.0	
	comp=E,10μm,0.3s,logA/T=4.5,baz=172						
HBST	**Basata**	**5.77**	**173**	P	**Pn**	**23 46 52.3**	**+0.2**
HKAT	**Jabal Katrina**	**6.42**	**179**	P	**Pn**	**23 47 00.8**	**-0.2**
	baz=179						
HKAT	**Jabal Katrina**	**6.42**	**179**	P	**Pn**	**23 47 00.8**	**-0.2**
TR2		**6.55**	**181**	P	**Pn**	**23 47 02.7**	**-0.2**
	baz=182						
TR2		**6.55**	**181**	P	**Pn**	**23 47 02.7**	**-0.2**

*IDC **31** 00:15:57.0±0.6, 47˚.70S×32˚.19E, h0km, mb4.4/15, mb1 4.5/17, mb1mx4.4/21, mbtmp4.4/17, ML4.5/2, MS3.9/10, Ms1 3.8/10, ms1mx3.7/24, Error ellipse: s-maj=22.8km s-min=13.7km az=63.0*
*ISCJB **31** 00:15:57.4±0.4, 47˚.63S±0˚.07×32˚.2E±0˚.2, h10km, mb4.3/17, MS3.8/8, Error ellipse: s-maj=18.3km s-min=9.2km az=160.1*
*NEIC **31** 00:15:58.8±0.4, 47˚.64S×32˚.25E, h10km, mb4.5/6, Error ellipse: s-maj=15.4km s-min=8.1km az=70.0*

ISC 31 00:15:59.0±0.4, 47˚.61S±0˚.07×32˚.3E±0˚.2, h10km, n36, σ0°80/30, mb4.3/17, MS3.8/8, 3D, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**17.54**	**326**	*e*Pn	**Pn**	**00 20 04.4**	**+1.0**
SUR				LR	LR	00 24 49.6	
SUR	**Sutherland**	**17.54**	**326**	P	**Pn**	**00 20 02.5**	**-1.0**
	2.5nm,0.3s,baz=146,slow=11,SNR=18						
SUR				LR	LR	00 24 49.6	
	comp=Z,569nm,20.2s,baz=148,slow=30						
BOSA	**Boshof**	**19.74**	**341**	*e*P	**Pn**	**00 20 29.8**	**-0.4**
	33nm,1.1s						
BOSA				LR	LR	00 26 32.3	
BOSA	**Boshof**	**19.74**	**341**	P	**Pn**	**00 20 30.4**	**+0.1**
	0.8nm,0.3s,baz=161,slow=12,SNR=15						
BOSA				LR	LR	00 26 32.3	
	comp=Z,420nm,20.9s,baz=159,slow=32						
SYO	**Syowa Base**	**21.77**	**173**	*e*P	**P**	**00 20 48.0**	**-2.4**
SYO	**Syowa Base**	**21.77**	**173**	*e*P	**P**	**00 20 51.6**	**+1.2**
SYO	**Syowa Base**	**21.77**	**173**	*i*P	**P**	**00 20 58.3**	**+7.9**
LBTB	**Lobatse**	**23.17**	**344**	*e*P	**P**	**00 21 05.2**	**-0.4**
	7.3nm,0.8s,mb4.2						
LBTB				LR	LR	00 28 58.1	
LBTB	**Lobatse**	**23.17**	**344**	P	**P**	**00 21 05.1**	**-0.5**
	8.5nm,0.8s,mb4.2,baz=178,slow=10.0,SNR=8.2						
LBTB				LR	LR	00 28 58.1	
	comp=Z,277nm,18.5s,MS3.7,baz=147,slow=34						
MAW	**Mawson**	**25.40**	**153**	*e*P	**P**	**00 21 26.1**	**0.0**
	12nm,1.0s,mb4.4						
MAW	**Mawson**	**25.40**	**153**	*e*P	**P**	**00 21 26.4**	**+0.2**
	3.8nm,1.0s,mb3.9						
MAW				LR	LR	00 28 47.9	
MAW	**Mawson**	**25.40**	**153**	P	**P**	**00 21 25.5**	**-0.7**
	14nm,0.9s,mb4.5,baz=310,slow=10,SNR=26						
MAW				LR	LR	00 28 47.9	
	comp=Z,151nm,19.9s,MS3.5,baz=318,slow=30						
TSUM	**Tsumeb**	**30.77**	**332**	*e*P	**P**	**00 22 14.8**	**+0.2**
	8.6nm,0.8s,mb4.6						
TSUM	**Tsumeb**	**30.77**	**332**	P	**P**	**00 22 14.9**	**+0.4**
	9.9nm,0.8s,mb4.7,baz=154,slow=8.3,SNR=15						
QSPA	**South Pole Qui**	**42.61**	**180**	*e*P	**P**	**00 23 53.4**	**-1.3**
	9.8nm,1.1s,mb4.5						
QSPA				*e*		00 25 23.9	
QSPA	**South Pole Qui**	**42.61**	**180**	P	**P**	**00 23 53.3**	**-1.4**

	5.6nm,0.8s,mb4.4,baz=251,slow=1.8,SNR=19								
KMBO	**Kilima Mbogo**	**46.50**	**7**	P		**P**	**00 24 26.4**	**0.0**
	1.8nm,0.8s,mb4.0,baz=0.0,slow=20,SNR=2.2								
KMBO				LR		LR	00 42 51.1		
	comp=Z,182nm,18.4s,MS4.1,baz=270,slow=35								
PMSA	**Palmer Station**	**50.70**	**213**	P		**P**	**00 24 59.8**	**+1.6**
	4.9nm,0.9s,mb4.4,baz=135,slow=7.6,SNR=4.0								
SBA	**Scott Base**	**51.74**	**169**	*e*P		**P**	**00 25 06.2**	**+0.3**
	13nm,1.1s,mb4.8								
DBIC	**Dimbokro**	**63.20**	**318**	P		**P**	**00 26 26.2**	**-1.2**
DBIC				LR		LR	00 48 50.3		
DBIC	**Dimbokro**	**63.20**	**318**	P		**P**	**00 26 26.2**	**-1.2**
	3.5nm,0.5s,mb4.7,baz=154,slow=10,SNR=4.3								
DBIC				LR		LR	00 48 50.3		
	comp=Z,56nm,18.9s,MS3.8,baz=134,slow=31								
TORD	**Torodi Ar. Bea**	**66.36**	**327**	P		**P**	**00 26 48.1**	**+0.2**
	1.2nm,0.4s,mb4.3,baz=165,slow=6.6,SNR=20								
PLCA	**Paso Flores**	**68.62**	**233**	LR		LR	00 54 04.2		
	comp=Z,42nm,20.0s,MS3.7,baz=94,slow=33								
CPUP	**Villa Florida**	**70.79**	**252**	P		**P**	**00 27 14.9**	**-0.7**
	6.6nm,0.9s,mb4.6,baz=112,slow=4.7,SNR=9.7								
CPUP				LR		LR	00 51 16.1		
	comp=Z,50nm,19.4s,MS3.8,baz=171,slow=30								
STKA	**Stephens Creek**	**78.67**	**125**	P		**P**	**00 28 01.1**	**-0.1**
	6.9nm,0.8s,mb4.6,baz=242,slow=6.8,SNR=5.6								
STKA				LR		LR	00 58 24.0		
	comp=Z,136nm,20.0s,MS4.3,baz=208,slow=32								
ASAR	**Alice Springs**	**80.28**	**114**	P		**P**	**00 28 09.7**	**-0.4**
	3.4nm,0.8s,mb4.3,baz=223,slow=4.4,SNR=24								
SIV	**San Ignacio**	**80.58**	**257**	P		**P**	**00 28 11.4**	**-0.5**
	1.3nm,0.7s,mb3.9,baz=129,slow=9.4,SNR=5.7								
WRA	**Warramunga Arr**	**83.30**	**112**	P		**P**	**00 28 26.1**	**0.0**
	1.6nm,0.8s,mb4.1,baz=216,slow=4.5,SNR=9.6								
LPAZ	**La Paz**	**84.96**	**251**	P		**P**	**00 28 35.8**	**+1.2**
	1.1nm,0.7s,mb4.1,baz=70,slow=9.7,SNR=5.5								
KEST	**Kesra**	**85.48**	**341**	LR		LR	01 06 08.9		
	comp=Z,47nm,18.3s,MS3.9,baz=273,slow=35								
BRTR	**Keskin Array B**	**86.97**	**1**	P		**P**	**00 28 44.4**	**+0.7**
	1.0nm,0.8s,mb4.1,baz=163,slow=9.0,SNR=5.9								
CMAR	**Chiang Mai Arr**	**88.70**	**61**	P		**P**	**00 28 53.4**	**+0.9**
	0.3nm,0.3s,mb4.0,baz=230,slow=4.2,SNR=3.3								
TXAR	**Lajitas Array**	**141.58**	**258**	PKhKP		PKPpre	00 35 26.2		
	0.4nm,0.8s,baz=248,slow=1.0,SNR=2.5								
ECSD	**EROS Data Cent**	**144.60**	**283**	*e*PKPdf		PKPdf	00 35 33.9	-1.1	
RSSD	**Black Hills**	**149.68**	**280**	*e*PKPdf		PKPdf	00 35 42.7	-0.8	
RSSD				*e*PKPbc		PKPbc	00 35 48.5	+0.3	
PDAR	**Pinedale Array**	**152.86**	**274**	PKPbc		PKPbc	00 35 54.2	-1.4	
	0.3nm,0.3s,baz=217,slow=4.4,SNR=3.2								

*MAN **31** 00:29:34, 13˚.01N×124˚.23E, h0km, mb5.6, ML4.6, MS5.0*
MAN INTENSITY III - SORSOGON CITY; IROSIN SORSOGON; CATARMAN NORTHERN SAMAR; INTENSITY II - BAGACAY ALBAY; LEGASPI CITY.
*BJI **31** 00:29:35.5, 12˚.99N×124˚.40E, h36km, mB4.9/29, mb4.8/50, Ms4.3/43, Ms7 4.1/41*
*MOS **31** 00:29:35.6±1.0, 13˚.04N×124˚.35E, h33km, mb5.1/42, MS4.0/7, Error ellipse: s-maj=9.3km s-min=5.2km az=116.0*
*ISCJB **31** 00:29:36.6±0.4, 13˚.06N±0˚.02×124˚.43E±0˚.03, h42km±3km, mb4.9/127, MS4.1/30, Error ellipse: s-maj=4.9km s-min=3.1km az=174.3*
*NEIC **31** 00:29:37.2±0.6, 12˚.97N×124˚.39E, h35km±4km, mb4.8/50, Error ellipse: s-maj=5.2km s-min=4.1km az=82.0*
NEIC Felt [III PIVS] at Catarman. Also felt [III PIVS] at Irosin and Sorsogon; [II PIVS] at Bagacay and Legaspi, Luzon.
*IDC **31** 00:29:37.0±2.2, 12˚.89N×124˚.29E, h36km±16km, mb4.6/20, mb1 4.6/21, mb1mx4.6/24, mbtmp4.6/21, ML4.2/1, MS4.1/13, Ms1 4.1/13, ms1mx3.8/36, Error ellipse: s-maj=17.8km s-min=10.1km az=73.0*
*DJA **31** 00:29:50, 12˚.92N×123˚.74E, h103km, mb4.9/19*

ISC 31 00:29:38.9±0.4, 13˚.04N±0˚.02×124˚.38E±0˚.03, h48km±3km, h44km±2.2km; pP-P, n350, σ1s07/360, mb4.9/127, MS4.1/30, 33C-17D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.60**	**152**	*e*P	**Pn**	**00 29 47.6**	**-3.7**
AUQP	**San Andres**	**1.69**	**280**	*e*P	**Pn**	**00 30 07.5**	**+1.5**
OCLP	**Ormoc**	**1.99**	**174**	*e*P	**Pn**	**00 30 10.9**	**+0.7**
GQP	**Guinayangan**	**2.07**	**295**	*i*P	**Pn**	**00 30 10.6**	**-0.6**
GQP				*e*S	**Sn**	**00 30 40.8**	**+5.0**
RCP	**Roxas**	**2.17**	**228**	*i*P	**Pn**	**00 30 10.9**	**-1.7**
RCP				*e*S	**Sn**	**00 30 39.7**	**+1.3**
OTRP	**Odiongan**	**2.40**	**254**	*e*P	**Pn**	**00 30 13.8**	**-2.0**
BOAC	**Boac**	**2.50**	**280**	*e*P	**Pn**	**00 30 16.7**	**-0.5**
POLP	**Polilio Island**	**2.90**	**306**	*e*P	**Pn**	**00 30 23.6**	**+0.9**
GUIM	**Jordan**	**2.97**	**216**	*e*P	**Pn**	**00 30 22.9**	**-0.8**
TBP	**Tagbilaran**	**3.37**	**189**	*e*P	**Pn**	**00 30 27.2**	**-1.9**
TBP				*e*S	Px	00 30 55.9	
SCPH	**Surigao**	**3.42**	**161**	*i*P	**Pn**	**00 30 30.6**	**+0.8**
SCPH				*e*S	**Sn**	**00 31 15.2**	**+6.2**
TGY	**Tagaytay City**	**3.51**	**288**	Pn	**Pn**	**00 30 31.6**	**+0.6**
	82nm,0.3s,baz=188,slow=3.2,SNR=8.9						
BALP	**Baler**	**3.82**	**315**	*e*P	**Pn**	**00 30 34.7**	**-0.6**
SNPH	**Sibulan**	**3.84**	**197**	*i*P	**Pn**	**00 30 35.4**	**-0.2**
SNPH				*e*S	**Sn**	**00 31 21.2**	**+1.6**
CUYO	**Cuyo Island**	**3.95**	**237**	*e*P	**Pn**	**00 30 35.7**	**-1.3**
PCPH	**Palayan**	**4.05**	**309**	*i*P	**Pn**	**00 30 37.2**	**-1.2**
LUBP	**Lubang**	**4.08**	**280**	*e*P	**Pn**	**00 30 42.1**	**+3.2**
BUSP	**Coron**	**4.21**	**256**	*e*P	**Pn**	**00 30 39.4**	**-1.3**
BUTP	**Butuan**	**4.23**	**163**	*e*P	**Pn**	**00 30 43.6**	**+2.8**
PALP	**Palanan**	**4.42**	**335**	*e*P	**Sn**	**00 31 35.2**	**+1.4**
CAUP	**Cauayan**	**4.60**	**328**	*e*P	**Pn**	**00 30 44.7**	**-1.3**
SCZP	**Santa Cruz**	**5.11**	**303**	*e*P	**Pn**	**00 30 54.1**	**+1.1**
BUKP	**Musuan**	**5.17**	**173**	*e*P	**Pn**	**00 30 55.3**	**+1.4**
ENPP	**El Nido**	**5.18**	**250**	*e*P	**Pn**	**00 30 52.7**	**-1.2**
PAGZ	**Pagadian**	**5.25**	**191**	*e*P	**Pn**	**00 30 54.3**	**-0.7**
BOLP	**Bolinao**	**5.45**	**308**	*e*P	**Pn**	**00 30 58.9**	**+1.2**
APYP	**Conner**	**5.67**	**328**	*e*P	**Pn**	**00 30 59.7**	**-0.9**
DAV	**Davao City (W)**	**6.05**	**169**	*e*Pn	**Pn**	**00 31 02.2**	**-3.7**
DAV				LR	LR	00 33 55.4	
DAV	**Davao City (W)**	**6.05**	**169**	Pn	**Pn**	**00 31 10.3**	**+4.4**
	64nm,0.3s,baz=248,slow=11,SNR=2.9						
DAV				LR	LR	00 33 55.4	
	comp=Z,4μm,18.0s,baz=187,slow=44						
BATP	**Bataraza**	**7.72**	**238**	*e*P	**Pn**	**00 31 29.3**	**+0.5**
MYLDM	**Lahad Datu**	**9.73**	**217**	P	**Pn**	**00 31 59.2**	**+2.8**
MYLDM	**Lahad Datu**	**9.73**	**217**	P	**Pn**	**00 31 58.7**	**+2.3**
	918nm93nm,1.1s						
SDKM	**Sandakan**	**10.21**	**225**	P	**Pn**	**00 32 05.8**	**+2.8**
TWG	**Pinlang**	**10.22**	**343**	*e*Pn	**Pn**	**00 32 02.3**	**-0.8**
	14nm,0.5s						
TWG				*e*Sn	**Sn**	**00 33 50.2**	**-6.1**
YULB	**Yu-li**	**10.70**	**345**	*e*Pn	**Pn**	**00 32 08.2**	**-1.4**
	23nm,0.9s						
YULB				*e*Sn	**Sn**	**00 34 02.6**	**-5.4**
TPUB	**Ta-pu**	**10.81**	**341**	*e*Pn	**Pn**	**00 32 11.0**	**-0.1**
	46nm,0.9s						
TSM	**Tawau**	**10.81**	**217**	P	**Pn**	**00 32 12.5**	**+1.3**
SSLB	**Suanglung**	**11.17**	**344**	*e*Pn	**Pn**	**00 32 16.0**	**0.0**
	40nm,0.9s						
SSLB				*e*Sn	**Sn**	**00 34 25.1**	**+5.6**
NACB	**Ninganchiao**	**11.38**	**347**	*e*Pn	**Pn**	**00 32 16.6**	**-2.3**
YHNB	**Yeheng**	**11.91**	**347**	*e*Pn	**Pn**	**00 32 27.5**	**+1.4**
	53nm,1.1s						
YHNB				*e*Sn	**Sn**	**00 34 39.7**	**+2.2**
QZH	**Quanzhou**	**13.04**	**336**	P	**Pn**	**00 32 39.3**	**-2.2**
QZH				S	**Sn**	**00 35 01.5**	**-3.7**
QZH				LR	LR		
	comp=N,2μm,16.6s						
QZH				LR	LR		
	comp=E,750nm,17.4s						
QZH				LR	LR		
	comp=Z,2μm,20.0s						
LUWI	**Luwuk**	**14.08**	**187**	P	**Pn**	**00 33 04.9**	**+9.0**
	comp=Z,2μmcomp=Z,158nm,0.9s						
JOW	**Kunigami**	**14.20**	**14**	Pn	**Pn**	**00 32 56.0**	**-1.4**
	comp=Z,2.3nm,0.3s,baz=181,slow=16,SNR=8.9						
BTM	**Bintulu**	**14.85**	**230**	P	**Pn**	**00 33 08.4**	**+2.4**
QIZ	**Qiongzhong**	**15.18**	**295**	P	**Pn**	**00 33 08.8**	**-1.5**
QIZ				S	**S**	**00 35 53.3**	**-19**
QIZ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,140nm,4.0s						
QIZ				LR	LR		
	comp=E,280nm,16.2s						
QIZ				LR	LR		
	comp=Z,650nm,15.3s						
SBUM	**Sibu**	**15.99**	**230**	P	**Pn**	**00 33 23.0**	**+2.2**
SBUM	**Sibu**	**15.99**	**230**	P	**Pn**	**00 33 22.2**	**+1.5**

	comp=Z,977nmcomp=Z,68nm,1.5s								
TTSI	**Tana Toraja**	**16.61**	**196**	P		**Pn**	**00 33 32.4**	**+3.8**
	comp=Z,1μmcomp=Z,160nm,0.7s								
KDI	**Kendari**	**16.98**	**186**	P		**Pn**	**00 33 36.8**	**+3.6**
	comp=Z,26nm,1.1s								
SPSI	**Sidrap Palu**	**17.51**	**195**	P		**Pn**	**00 33 42.1**	**+2.4**
	comp=Z,639nmcomp=Z,58nm,0.7s								
KSM	**Kuching**	**18.07**	**232**	*e*Pn		**Pn**	**00 33 47.4**	**+0.8**
	comp=Z,58nm,1.2s								
KSM	**Kuching**	**18.07**	**232**	P		**Pn**	**00 33 48.0**	**+1.5**
KSM	**Kuching**	**18.07**	**232**	P		**Pn**	**00 33 47.7**	**+1.1**
	comp=Z,580nmcomp=Z,44nm,1.1s								
SSE	**Sheshan**	**18.21**	**351**	P		**Pn**	**00 33 48.0**	**-0.2**
SSE				S		**S**	**00 37 15.3**	**+1.4**
SSE				pmax	pmax				
	comp=Z,25nm,0.6s								
SSE				pmax	pmax				
	comp=Z,160nm,7.5s								
SSE				LR	LR				
	comp=N,200nm,16.4s								
SSE				LR	LR				
	comp=E,570nm,16.7s								
SSE				LR	LR				
	comp=Z,400nm,16.3s								
BKSI	**Bulukumba**	**18.73**	**193**	P		**Pn**	**00 33 54.8**	**+0.2**
	comp=Z,591nmcomp=Z,47nm,0.9s								
NJ2	**Nanjing**	**19.59**	**346**	*e*P		**Pn**	**00 34 04.5**	**-0.3**
NJ2				pP		pP	00 34 13.0	-1.3	
NJ2				sP		sP	00 34 17.0	-3.3	
NJ2				PP			00 34 21.0		
NJ2				S		**S**	**00 37 28.5**	**-13**	
NJ2				sS		sS	00 37 46.5	-13	
NJ2				pmax	pmax				
	comp=Z,20nm,1.0s								
NJ2				pmax	pmax				
	comp=Z,180nm,5.7s								
NJ2				LR	LR				
	comp=N,640nm,18.2s								
NJ2				LR	LR				
	comp=E,670nm,16.4s								
NJ2				LR	LR				
	comp=Z,940nm,23.6s								
WHN	**Wuhan**	**19.73**	**334**	P		**Pn**	**00 34 06.0**	**-0.4**	
WHN				LR	LR				
	comp=N,1μm,15.3s								
WHN				LR	LR				
	comp=E,700nm,15.1s								
WHN				LR	LR				
	comp=Z,1μm,13.4s								
GUMO	**Guam**	**19.95**	**86**	P		**Pn**	**00 34 10.0**	**+0.8**	
	comp=Z,60nm,0.9s,baz=197,slow=15,SNR=3.8								
JNU	**Nakatsue**	**20.85**	**15**	*e*P		**P**	**00 34 17.1**	**+0.4**	
	comp=Z,18nm,1.0s								
GYA	**Guiyang**	**21.32**	**311**	*i*P		**P**	**00 34 22.0**	**+0.1**	
GYA				pP			00 34 34.8		
GYA				sP		sP	00 34 40.5	+1.2	
GYA				PP			00 34 50.0		
GYA				S		**S**	**00 38 13.5**	**-2.6**	
GYA				sS		sS	00 38 31.3	-3.1	
GYA				SS			00 38 50.0		
GYA				pmax	pmax				
	comp=Z,20nm,0.8s,mb4.5								
GYA				pmax	pmax				
	comp=Z,110nm,4.8s								
GYA				LR	LR				
	comp=N,610nm,14.9s,MS4.2								
GYA				LR	LR				
	comp=E,590nm,15.5s,MS4.2								
GYA				LR	LR				
	comp=Z,760nm,14.7s,MS4.2								
ENH	**Enshi**	**21.99**	**324**	*e*P		**P**	**00 34 30.0**	**+0.9**	
	comp=Z,50nm,1.0s,mb4.9								
KTGM	**Kuala Trenggan**	**22.32**	**252**	P		**P**	**00 34 33.4**	**+0.7**	
SRBI	**Singaraja**	**22.88**	**204**	P		**P**	**00 34 39.3**	**+0.7**	
	comp=Z,1μmcomp=Z,112nm,0.9s,mb5.3								
MYKOM	**Kota Tinggi**	**23.20**	**243**	P		**P**	**00 34 42.5**	**+0.6**	
MYKOM	**Kota Tinggi**	**23.20**	**243**	P		**P**	**00 34 41.8**	**-0.2**

comp=Z,3µm,18.8s,MS4.9
KLSI **26.29 229** P **P** **00 35 09.4 -0.8**
comp=Z,100nm,1.1s,mb5.3
MAJO **Matsushiro** **26.49 26** *e*P **P** **00 35 10.4 -1.3**
comp=Z,8.6nm,0.9s,mb4.3
MAJO **Matsushiro** **26.49 26** *e*P **P** **00 35 10.5 -1.3**
MAJO pmax pmax
comp=Z,9.0nm,0.9s,mb4.3
MAT **Matsushiro** **26.49 26** P **P** **00 35 10.3 -1.5**
MJAR **Matsushiro Arr** **26.49 26** P **P** **00 35 10.2 -1.6**
comp=Z,5.7nm,0.8s,mb4.2,baz=201,slow=9.0,SNR=14
MJAR PcP PcP 00 38 36.1 +0.3
comp=Z,5.7nm,0.8s,baz=180,slow=2.3,SNR=12
MJAR LR LR 00 44 34.6
comp=Z,339nm,19.8s,MS3.9,baz=220,slow=34
MJAR **Matsushiro Arr** **26.49 26** P **P** **00 35 10.2 -1.6**
MJAR 00 38 36.1
MDSI **Maura Dua** **26.57 230** P **P** **00 35 13.4 +0.7**
comp=Z,1µmcomp=Z,56nm,1.0s,mb5.0
KAKA **Kakadu** **26.81 162** *e*P **P** **00 35 13.1 -1.7**
comp=Z,16nm,0.6s,mb4.7
LWLI **Liwa** **27.01 230** P **P** **00 35 11.8 -4.9**
PSI **Prapat** **27.16 250** P **P** **00 35 16.6 -1.5**
comp=Z,7.0nm,0.6s,mb4.3,baz=336,slow=7.0,SNR=8.2
PSI PcP PcP 00 38 38.0 +0.1
comp=Z,7.5nm,0.9s,baz=297,slow=4.1,SNR=5.8
PSI LR LR 00 45 22.6
comp=Z,244nm,19.6s,MS3.8,baz=249,slow=35
PSI **Prapat** **27.16 250** P **P** **00 35 16.6 -1.4**
PSI 00 38 38.0
PPI **Padang Panjang** **27.30 242** P **P** **00 35 27.4 +8.1**
BJT **Baijiatuau** **27.83 346** *e*P **P** **00 35 23.4 -0.3**
comp=Z,26nm,0.8s,mb4.9
BJT **Baijiatuau** **27.83 346** *e*P **P** **00 35 23.4 -0.3**
BJT pmax pmax
comp=Z,26nm,0.8s
BJI **Beijing** **27.85 346** P **P** **00 35 24.0 +0.1**
BJI S **S** **00 40 00.3 -3.5**
BJI pmax pmax
comp=Z,29nm,1.0s,mb4.9
BJI pmax pmax
comp=Z,92nm,4.0s
BJI LR LR
comp=N,260nm,20.0s,MS4.0
BJI LR LR
comp=E,250nm,15.2s,MS4.0
BJI LR LR
comp=Z,220nm,21.8s
SNY **Shenyang** **28.69 359** ⇓P **P** **00 35 32.0 +0.7**
SNY S **S** **00 40 17.5 +0.5**
SNY pmax pmax
comp=Z,25nm,1.5s,mb4.7
SNY LR LR
comp=N,400nm,16.2s,MS4.2
SNY LR LR
comp=E,300nm,14.2s,MS4.2
SNY LR LR
comp=Z,430nm,15.2s,MS4.2
KNA **Kununurra** **28.93 171** P **P** **00 35 40.1 +6.3**
LZH **Lanzhou** **29.46 325** *e*P **P** **00 35 39.5 +1.2**
LZH pP pP 00 35 49.0 -1.8
LZH sP sP 00 35 55.0 -1.6
LZH PP PP 00 36 34.5 -11
LZH *e*S **S** **00 40 29.5 +0.2**
LZH sS sS 00 40 47.5 -2.9
LZH SS SS 00 42 07.8 -28
LZH pmax pmax
comp=Z,18nm,1.2s,mb4.7
LZH pmax pmax
comp=Z,85nm,7.6s
LZH LR LR
comp=N,680nm,15.9s,MS4.5
LZH LR LR
comp=E,340nm,11.5s,MS4.5
LZH LR LR
comp=Z,810nm,16.8s
HHC **Hu-ho-hao-te** **29.89 340** *e*P **P** **00 35 43.0 +0.9**
HHC pP pP 00 35 55.0 +0.4
HHC sP sP 00 36 00.3 0.0
HHC PP PP 00 36 42.0 -8.2
HHC S **S** **00 40 35.8 -0.1**
HHC sS sS 00 40 56.8 -0.3
HHC SS SS 00 42 15.3 -29
HHC pmax pmax
comp=Z,23nm,0.8s,mb5.0
HHC pmax pmax
comp=Z,88nm,3.6s
HHC LR LR
comp=N,230nm,11.7s,MS4.2
HHC LR LR
comp=E,270nm,12.7s,MS4.2
HHC LR LR
comp=Z,270nm,16.2s,MS4.0
CN2 **Changchun** **30.66 2** *e*P **P** **00 35 52.5 +3.7**
VLA **Vladivostok** **30.66 11***j* *i*P **P** **00 35 47.5 -1.3**
VLA *e* 00 36 47.9
VLA *e* 00 38 43.7
VLA *e*S **S** **00 40 49.2 +1.2**
VLA pmax pmax
comp=Z,35nm,1.5s,mb5.0
FITZ **Fitzroy Crossi** **30.97 178** *e*P **P** **00 35 49.3 -2.5**
comp=Z,5.1nm,0.6s,mb4.5
MDJ **Mudanjiang** **31.78 7** P **P** **00 35 59.0 +0.4**
MDJ pP pP 00 36 09.8 -1.4
MDJ sP sP 00 36 14.8 -2.2
MDJ S **S** **00 41 06.8 +1.4**
MDJ sS sS 00 41 25.5 -1.1
MDJ ScP ScP 00 42 29.5 +0.9
MDJ PcS PcS 00 42 34.0 +0.5
MDJ pmax pmax
comp=Z,24nm,1.4s,mb4.8
MDJ pmax pmax
comp=Z,51nm,3.8s
MDJ LR LR
comp=N,220nm,22.8s,MS3.9
MDJ LR LR
comp=E,150nm,21.3s,MS3.9
MDJ LR LR
comp=Z,320nm,20.7s,MS4.0
MDJ **Mudanjiang** **31.78 7** *e*P **P** **00 35 59.9 +1.3**
comp=Z,26nm,1.1s,mb5.0
GTA **Gaotai** **34.06 325** ⇓P **P** **00 36 19.5 +0.8**
GTA pP pP 00 36 31.8 +0.5
GTA sP sP 00 36 37.0 0.0
GTA S **S** **00 41 41.8 +0.8**
GTA sS sS 00 42 02.0 -0.3
GTA SS SS 00 43 53.5 -16
GTA pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
GTA pmax pmax
comp=Z,150nm,5.1s
GTA LR LR
comp=N,190nm,15.0s,MS4.2
GTA LR LR
comp=E,270nm,15.6s,MS4.2
GTA LR LR
comp=Z,440nm,14.1s,MS4.3
WRA **Warramunga Arr** **34.21 163** P **P** **00 36 18.1 -2.0**
comp=Z,6.0nm,0.6s,mb4.7,baz=341,slow=9.3,SNR=28
WRA PcP PcP 00 38 55.4 -0.8
comp=Z,2.6nm,0.5s,baz=342,slow=3.0,SNR=8.5
WRA S **S** **00 41 40.1 -3.4**
comp=Z,3.1nm,1.0s,baz=344,slow=15,SNR=4.6
WRA ScP ScP 00 42 37.9 +0.5
comp=Z,1.5nm,0.8s,baz=339,slow=4.0,SNR=5.1
WRA **Warramunga Arr** **34.21 163** P **P** **00 36 18.1 -2.0**
WRA 00 38 55.4
WRA S **S** **00 41 40.2 -3.4**
ASAJ **Asahikawa** **34.68 23** *e*P **P** **00 36 23.2 -0.8**
comp=Z,3.4nm,0.7s,mb4.4
LSA **Lhasa** **34.94 304** *e*P **P** **00 36 26.0 -0.4**
LSA **Lhasa** **34.94 304** *e*P **P** **00 36 27.0 +0.6**
comp=Z,12nm,0.7s,mb4.9
LSA **Lhasa** **34.94 304** *e*P **P** **00 36 27.0 +0.6**
LSA pmax pmax
comp=Z,12nm,0.7s,mb4.9
HIA **Hailar** **36.32 355** *e*P **P** **00 36 38.3 +0.4**
HABR **Khabarovsk** **36.42 12** *e*P **P** **00 36 37.9 -0.9**
HABR *PP pP 00 36 46.8 -4.7
HABR *e*SP sP 00 36 51.0 -6.2
HABR *e* 00 38 00.3
HABR PPP 00 38 15.8
HABR *e*S **S** **00 42 18.9 +1.9**
HABR *e*SS sS 00 42 34.1 -4.2
HABR *e*SSS 00 45 07.5
HABR *e* 00 46 51.3
HABR pmax pmax
comp=E,10.0nm,0.8s
HABR pmax pmax
comp=Z,21nm,1.4s,mb4.9
HABR pmax pmax
comp=N,17nm,1.7s
HABR MLR MLR
comp=Z,166nm,19.0s,MS3.8
KLR **Kul'dur** **36.59 8** *e*P **P** **00 36 36.8 -3.5**
COCO **West Island** **37.08 229** *i* P **P** **00 36 44.6 -0.2**
TAPN **Taplejung** **37.09 298** *e*P **P** **00 36 44.5 -0.3**
comp=Z,27nm,0.8s,mb5.1
YSS **Yuzh-Sakhalins** **37.16 21** *e*P **P** **00 36 45.0 -0.2**
YSS pmax pmax
comp=Z,20nm,0.9s,mb5.0
ODAN **Odare** **37.24 297** *e*P **P** **00 36 45.6 -0.5**
comp=Z,75nm,0.7s,mb5.6
ULN **Ulaanbaatar** **37.61 341** *e*P **P** **00 36 50.0 +1.1**
comp=Z,22nm,1.0s,mb4.8
ULN **Ulaanbaatar** **37.61 341** *e*P **P** **00 36 50.0 +1.1**
ULN pmax pmax
comp=Z,22nm,1.0s,mb4.8
ASAR **Alice Springs** **37.65 166** P **P** **00 36 48.4 -1.2**
comp=Z,8.3nm,0.4s,mb4.8,baz=343,slow=7.2,SNR=171
ASAR PcP PcP 00 39 05.5 -0.9
comp=Z,2.9nm,0.6s,baz=349,slow=3.5,SNR=7.1
ASAR S **S** **00 42 34.1 -2.1**
comp=Z,2.6nm,0.8s,baz=348,slow=16,SNR=8.9
ASAR ScP ScP 00 42 51.9 +1.9
comp=Z,1.9nm,0.9s,baz=354,slow=1.9,SNR=7.4
SONM **Songino Array** **37.80 340** P **P** **00 36 50.3 -0.2**
SONM LR LR 00 53 02.6
SONM **Songino Array** **37.80 340** P **P** **00 36 50.3 -0.2**
comp=Z,9.0nm,0.8s,mb4.5,baz=159,slow=9.6,SNR=43
SONM LR LR 00 53 02.6
comp=Z,218nm,20.5s,MS4.0,baz=154,slow=37
RAMN **Ramite** **37.94 297** *e*P **P** **00 36 51.8 -0.3**
comp=Z,57nm,0.7s,mb5.4
GUN **Gumba** **38.80 298** *e*P **P** **00 36 59.0 -0.3**
comp=Z,85nm,0.8s,mb5.5
PKI **Pulchoki** **39.12 298** *e*P **P** **00 37 01.0 -1.0**
comp=Z,37nm,0.8s,mb5.2
PKIN **Phulchoki** **39.13 298** *e*P **P** **00 37 01.0 -1.1**
KKN **Kakani** **39.28 298** *e*P **P** **00 37 02.5 -0.8**
comp=Z,40nm,0.9s,mb5.1
CTA **Charters Tower** **39.33 146** *e*P **P** **00 37 03.0 -0.7**
comp=Z,4.6nm,0.7s,mb4.3
DMN **Daman** **39.39 298** *e*P **P** **00 37 03.3 -0.9**
comp=Z,46nm,0.9s,mb5.2
GKN **Gorkha** **39.89 298** *e*P **P** **00 37 07.0 -1.3**
comp=Z,39nm,0.9s,mb5.2
DANN **Dangsing** **40.72 298** *e*P **P** **00 37 14.5 -0.7**
comp=Z,73nm,0.9s,mb5.3
KOLN **Koldanda** **40.73 297** *e*P **P** **00 37 14.4 -0.9**
comp=Z,45nm,0.8s,mb5.2
ZAK **Zakamensk** **41.03 339**⇑ *i*P **P** **00 37 17.2 -0.2**
ZAK *e* 00 39 14.3
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.6
TLY **Talaya** **42.02 341** *e*P **P** **00 37 26.5 +1.0**
comp=Z,9.4nm,0.8s,mb4.5
TLY **Talaya** **42.02 341** *e*P **P** **00 37 25.7 +0.2**
TLY pmax pmax
comp=Z,11nm,0.9s,mb4.5
TLY MLR MLR
comp=Z,137nm,18.0s,MS3.9
MORW **Morawa** **42.63 191** *e*P **P** **00 37 28.8 -1.9**
CLNS **Chul'man** **43.70 0** *e*P **P** **00 37 39.0 0.0**
CLNS pmax pmax
comp=Z,24nm,1.3s,mb4.8
CLNS pmax pmax
comp=E,11nm,1.0s
CLNS pmax pmax
comp=N,18nm,1.1s
CLNS MLR MLR
comp=Z,104nm,15.0s,MS3.9
CLNS MLR MLR
comp=E,170nm,15.0s,MS4.1
CLNS MLR MLR
comp=N,126nm,17.0s,MS4.1
FORT **Forrest** **43.71 175** *e*P **P** **00 37 37.5 -1.9**
comp=N,21nm,0.6s,mb5.0
QLP **Quilpie** **43.86 154** *e*P **P** **00 37 39.6 -1.1**
WMQ **Urumqi** **43.91 321** P **P** **00 37 42.0 +1.0**
WMQ pP pP 00 37 54.3 +0.4
WMQ sP sP 00 37 59.8 +0.2
WMQ PP PP 00 39 26.5 +2.6
WMQ *e*S **S** **00 44 09.5 +0.5**
WMQ SS SS 00 47 19.8 -7.1
WMQ ScS ScS 00 47 34.3 -1.5
WMQ pmax pmax
comp=Z,17nm,1.1s,mb4.7
WMQ pmax pmax
comp=Z,150nm,3.4s
WMQ LR LR
comp=N,290nm,18.4s,MS4.3
WMQ LR LR
comp=E,180nm,18.0s,MS4.3
WMQ LR LR
comp=Z,260nm,18.8s,MS4.2
KMBL **Kambalda** **44.22 183** *e*P **P** **00 37 40.8 -2.7**
comp=Z,103nm,0.6s,mb5.7
HYB **Hyderabad** **44.35 282** *i* P **P** **00 37 45.0 +0.1**
EIDS **Eidsvold** **46.20 146** *e*P **P** **00 37 58.8 -0.6**
comp=Z,13nm,1.0s,mb4.8
BBOO **Buckleboo** **46.94 167** *e*P **P** **00 38 03.7 -1.3**
comp=Z,26nm,0.6s,mb5.3
BBOO **Buckleboo** **46.94 167** *e*P **P** **00 38 03.8 -1.1**
comp=Z,196nm,1.3s,mb5.9
STKA **Stephens Creek** **47.61 160** *e*P **P** **00 38 09.2 -1.0**
comp=Z,12nm,0.9s,mb4.9
STKA **Stephens Creek** **47.61 160** *e*P **P** **00 38 09.2 -1.1**
comp=Z,3.8nm,0.9s,mb4.4
STKA **Stephens Creek** **47.61 160** P **P** **00 38 09.3 -0.9**
comp=Z,5.8nm,0.5s,mb4.8,baz=322,slow=6.4,SNR=9.3
STKA **Stephens Creek** **47.61 160** *e*P **P** **00 38 09.2 -1.0**
STKA pmax pmax
comp=Z,4.0nm,0.9s
PEA0B **Petropavlovsk-** **47.94 26** *e*P **P** **00 38 13.7 +1.2**
PETK **Petropavlovsk-** **47.94 26** P **P** **00 38 13.5 +1.0**
PETK LR LR 00 58 12.8
PETK **Petropavlovsk-** **47.94 26** P **P** **00 38 13.5 +1.0**
comp=Z,19nm,0.7s,mb5.2,baz=198,slow=4.9,SNR=49
PETK LR LR 00 58 12.8
comp=Z,92nm,19.0s,MS3.8,baz=112,slow=36
PET **Petropavlovsk** **48.30 27** *e*P **P** **00 38 14.8 -0.5**
comp=Z,82nm,1.5s,mb5.5
PET **Petropavlovsk** **48.30 27** *e*P **P** **00 38 16.3 +1.0**
PET *e*S **S** **00 45 13.8 +2.0**
PET pmax pmax
comp=Z,15nm,0.6s,mb5.2
MKAR **Makanchi Array** **48.71 322** P **P** **00 38 19.2 +0.6**
comp=Z,30nm,0.8s,mb5.4,baz=120,slow=8.4,SNR=216
MKAR PcP PcP 00 39 42.8 -0.4
comp=Z,4.7nm,0.8s,baz=116,slow=6.6,SNR=3.4
MKAR LR LR 00 59 44.5
comp=Z,160nm,21.7s,MS4.0,baz=125,slow=37
MKAR **Makanchi Array** **48.71 322***ce*P **P** **00 38 19.2 +0.6**
MKAR pmax pmax
comp=Z,30nm,0.8s
POO **Poona** **48.81 283** *e*PKP **P** **00 38 18.0 -1.8**
CMSA **Cobar Meteorol** **48.81 156** *e*P **P** **00 38 19.4 -0.1**
YAK **Yakutsk** **49.06 3** *e*P **P** **00 38 20.7 -0.3**
comp=Z,32nm,0.9s,mb5.3
YAK **Yakutsk** **49.06 3** *e*P **P** **00 38 19.7 -1.3**
YAK pmax pmax
comp=Z,30nm,0.9s,mb5.3
YAK pmax pmax
comp=N,16nm,1.0s
KSH **Kashi** **50.02 311** ⇑P **P** **00 38 31.0 +2.3**
KSH *epP pP 00 38 43.5 +1.6
KSH *esP sP 00 38 48.8 +1.3
KSH *ePcP PcP 00 39 51.0 +2.9
KSH *ePP PP 00 40 27.3 +3.3
KSH *eScP ScP 00 43 41.0 +0.9
KSH *ePcS PcS 00 43 46.5 +1.5
KSH *eS **S** **00 45 37.5 +1.2**
KSH *esS sS 00 45 58.3 0.0
KSH *eScS ScS 00 48 15.0 -1.1
KSH *eSS SS 00 49 07.0 -2.8
KSH pmax pmax
comp=Z,25nm,1.1s,mb5.2
KSH pmax pmax
comp=Z,160nm,4.4s
KSH LR LR
comp=N,260nm,8.1s
KSH LR LR
comp=E,280nm,10.8s
KSH LR LR
comp=Z,260nm,9.7s
ARMA **Armidale** **50.55 149** *e*P **P** **00 38 33.4 +0.7**
ARMA **Armidale** **50.55 149** *e*P **P** **00 38 33.0 +0.2**
comp=Z,14nm,0.9s,mb4.9
ULHL **Ulahol** **50.72 314** P **P** **00 38 35.4 +1.5**
SNR=8.4
ZAA0 **Zalesovo Array** **51.32 331** *e*P **P** **00 38 38.1 -0.1**
ZALV **Zalesovo Beam** **51.32 331** P **P** **00 38 38.1 -0.1**
comp=Z,12nm,0.7s,mb4.9,baz=117,slow=7.3,SNR=38
ZALV LR LR 01 02 47.6
comp=Z,110nm,18.5s,MS3.9,baz=245,slow=39
TKM2 **Tokmak 2** **51.40 315** P **P** **00 38 39.9 +0.9**
SNR=7.6
TKM2 **Tokmak 2** **51.40 315** *e*P **P** **00 38 39.8 +0.7**
comp=Z,4.0nm,0.7s,mb4.5
TKM2 **Tokmak 2** **51.40 315** *e*P **P** **00 38 39.8 +0.7**
TKM2 pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KBK **Karagaybulak** **51.76 314** P **P** **00 38 43.4 +1.6**
SNR=9.4
UCH **Uchtor** **51.92 314** *e*P **P** **00 38 45.0 +2.0**
comp=Z,3.2nm,0.7s,mb4.4
UCH **Uchtor** **51.92 314** *e*P **P** **00 38 45.0 +2.0**
UCH pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
CHMS **Chumysh** **52.01 315** P **P** **00 38 44.2 +0.6**
SNR=6.9
AAK **Ala-Archa** **52.07 314** *e*P **P** **00 38 44.5 +0.4**
comp=Z,6.0nm,1.1s,mb4.4
AAK **Ala-Archa** **52.07 314***ce*P **P** **00 38 45.2 +1.2**
AAK pmax pmax
comp=Z,7.0nm,1.7s,mb4.3
USP **Ospenovka** **52.28 315** P **P** **00 38 46.0 +0.5**
SNR=15
YNG **Young** **52.33 155** *e*P **P** **00 38 46.1 +0.2**
comp=Z,7.9nm,0.9s,mb4.6
AML **Almayashu** **52.47 313** P **P** **00 38 48.5 +1.4**
SNR=18
AML **Almayashu** **52.47 313** *e*P **P** **00 38 48.2 +1.2**
comp=Z,24nm,1.2s,mb5.0
AML *ePcP PcP 00 39 58.3 +1.1
AML **Almayashu** **52.47 313** *e*P **P** **00 38 48.2 +1.2**
AML *e* 00 39 58.3
AML pmax pmax
comp=Z,24nm,1.2s,mb5.0
EKS2 **Erkin-Say** **52.58 314** P **P** **00 38 48.6 +0.8**
SNR=12
EKS2 **Erkin-Say** **52.58 314** *e*P **P** **00 38 48.5 +0.7**
comp=Z,14nm,1.1s,mb4.8
EKS2 *ePcP PcP 00 39 57.9 +0.4
EKS2 **Erkin-Say** **52.58 314** *e*P **P** **00 38 48.5 +0.7**
EKS2 *e* 00 39 57.9
EKS2 pmax pmax
comp=Z,14nm,1.1s,mb4.8
NVS **Novosibirsk** **52.60 331**⇑ *i*P **P** **00 38 46.3 -1.4**
NVS pmax pmax
comp=N,16nm,1.2s
NVS pmax pmax
comp=E,20nm,1.2s
NVS pmax pmax
comp=Z,38nm,1.2s,mb5.2
KURK **Kurchatov** **52.75 325** *e*P **P** **00 38 49.5 +0.6**
comp=Z,88nm,1.1s,mb5.6
KURK **Kurchatov** **52.75 325** P **P** **00 38 48.5 -0.4**
comp=Z,35nm,1.0s,mb5.3,baz=120,slow=7.7,SNR=24
KURK **Kurchatov** **52.75 325***ce*P **P** **00 38 49.3 +0.4**
KURK pmax pmax
comp=Z,143nm,1.7s,mb5.6
CNB **Canberra Magne** **53.60 155** *e*P **P** **00 38 55.3 0.0**
SEY **Seymchan** **53.63 15***ce*P **P** **00 38 56.5 +1.3**
DZM **Mont Dzumac** **54.03 130** *e*P **P** **00 38 58.0 -0.7**
KBL **Kabul** **54.26 303** *e*P **P** **00 39 00.8 +0.4**
comp=Z,18nm,0.8s,mb5.1
KBL **Kabul** **54.26 303** *e*P **P** **00 39 00.8 +0.5**
KBL pmax pmax
comp=Z,18nm,0.8s,mb5.0
KK31 **Karatay Array** **55.00 314** *i* P **P** **00 39 05.5 0.0**
KK31 pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
KKAR **Karatay Array** **55.00 314** *e*P **P** **00 39 05.5 0.0**
comp=Z,19nm,1.1s,mb5.0
KKAR *ePcP PcP 00 40 07.1 +0.3
KKAR **Karatay Array** **55.00 314** *e*P **P** **00 39 05.5 0.0**
KKAR *e* 00 40 07.1
KKAR pmax pmax
comp=Z,19nm,1.1s,mb5.0
BVA0 **Borovoye Array** **58.35 325** P **P** **00 39 29.0 -0.1**
BVA0 pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
BVAR **Borovoye Array** **58.35 325** P **P** **00 39 29.3 +0.2**
comp=Z,18nm,0.9s,mb5.1,baz=120,slow=8.7,SNR=80
BVAR PcP PcP 00 40 18.9 -0.7
comp=Z,5.4nm,0.8s,baz=100,slow=4.8,SNR=4.0
BRVK **Borovoye** **58.42 325** *e*P **P** **00 39 30.1 +0.5**
comp=Z,40nm,0.8s,mb5.5
BRVK **Borovoye** **58.42 325***ce*P **P** **00 39 30.2 +0.6**
BRVK pmax pmax
comp=Z,59nm,1.0s,mb5.6
TIXI **Tiksi** **58.64 2** *e*P **P** **00 39 30.4 -0.4**
TIXI pmax pmax
comp=Z,27nm,0.9s,mb5.3
TIXI MLR MLR
comp=Z,163nm,17.0s,MS4.2
BILL **Bilibino** **61.27 17**⇑ *e*P **P** **00 39 49.7 +0.8**
BILL *e* 00 40 32.3
BILL *e*SS SS 00 52 11.6 +5.6
BILL pmax pmax
comp=Z,32nm,1.2s,mb5.3
BILL MLR MLR
comp=Z,100nm,16.0s,MS4.1
AB31 **Akbulak array** **63.58 319** *i* P **P** **00 40 04.3 -0.4**
AB31 pmax pmax
comp=Z,26nm,0.9s,mb5.3
ABKAR **Akbulak array** **63.58 319** *e*P **P** **00 40 04.5 -0.2**
comp=Z,17nm,0.8s,mb5.1
SVE **Sverdlovsk** **64.89 327**⇓ *e*P **P** **00 40 13.3 +0.2**
SVE pmax pmax
comp=Z,71nm,0.9s,mb5.7
AKTO **Aktyubinsk** **65.02 320** P **P** **00 40 13.9 -0.2**
AKTO pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
ARU **Arti** **65.91 326** *e*P **P** **00 40 18.6 -1.1**
ARU **Arti** **65.91 326***c* *i*P **P** **00 40 19.1 -0.6**
ARU *e* 00 42 44.4
ARU S S 00 49 05.9 +2.6
ARU SS SS 00 53 15.0 -3.7
ARU pmax pmax
comp=Z,59nm,1.0s,mb5.6
UMR **Umm Al-Rimmam** **72.19 297** *e*P **P** **00 40 58.4 -0.8**
UMR AMb AMB 00 40 59.4
comp=Z,50nm,1.1s,mb5.4
RDF **Al-Radifah** **72.39 296** *e*P **P** **00 40 59.4 -1.0**
RDF AMb AMB 00 41 00.7
comp=Z,52nm,1.0s,mb5.4
MIB **Mutribah** **72.49 297** *e*P **P** **00 41 00.1 -0.9**
MIB AMb AMB 00 41 01.2
comp=Z,69nm,0.8s,mb5.7
NAY **Al-Naaiem** **72.63 297** *e*P **P** **00 41 00.7 -1.1**
NAY AMb AMB 00 41 02.0
comp=Z,33nm,0.8s,mb5.3
TTA **Tatalina** **73.75 28** *e*P **P** **00 41 08.3 +0.5**
GNI **Garni** **73.84 308** *e*P **P** **00 41 09.8 +1.0**
comp=Z,5.6nm,1.0s,mb4.5
GNI **Garni** **73.84 308***ce*P **P** **00 41 10.7 +1.9**
GNI pmax pmax
comp=Z,11nm,1.2s
ZEI **Tsey** **74.31 311** *e*P **P** **00 41 10.9 -0.6**
ZEI pmax pmax
comp=Z,16nm,1.0s,mb4.9
KIV **Kislovodsk** **75.12 312** *e*P **P** **00 41 16.0 -0.1**
comp=Z,7.6nm,0.8s,mb4.7
KIV **Kislovodsk** **75.12 312**⇑ *e*P **P** **00 41 17.1 +1.0**
KIV *e* pP 00 41 29.8 -0.2
KIV *eSS SS 00 55 49.6 +8.8
KIV pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,100nm,14.0s,MS4.3
KDAK **Kodiak Island** **75.37 33** *e*P **P** **00 41 10.6 -6.6**
KDAK **Kodiak Island** **75.37 33***ce*P **P** **00 41 17.8 +0.6**
VRHR **Novokhopersk** **75.43 320** *e*P **P** **00 41 16.8 -1.0**
VRHR pmax pmax

comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,8.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.0
PPLA Purkeypile 75.50 28 *eP* **P 00 41 19.2 +1.3**
comp=Z,20nm,1.4s,mb4.8
BPAW Bear Paw Mtn. 76.03 27 *eP* **P 00 41 22.0 +1.1**
comp=Z,41nm,0.8s,mb5.4
KLMR Klimovskoe 76.22 330 P **P 00 41 20.3 -1.7**
KLMR pmax pmax
comp=Z,44nm,1.5s,mb5.2
COLD Coldfoot 76.30 24 *eP* **P 00 41 23.7 +1.3**
comp=Z,12nm,0.9s,mb4.8
TRF Thorofare Moun 76.35 27 *eP* **P 00 41 23.3 +0.6**
comp=Z,11nm,1.0s,mb4.7
VORD Divnogorie 76.91 320 *eP* **P 00 41 25.1 -1.1**
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,10.0nm,0.9s
VORD pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
MCK McKinley 76.94 27 *eP* **P 00 41 26.4 +0.3**
PMR Palmer 76.97 29 *eP* **P 00 41 25.4 -0.8**
comp=Z,7.6nm,0.6s,mb4.8
PMR Palmer 76.97 29 *eP* **P 00 41 25.5 -0.8**
PMR pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
VSR Storozhevoye 76.97 320 *eP* **P 00 41 25.2 -1.3**
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,20nm,1.0s
VSR pmax pmax
comp=Z,20nm,1.0s,mb5.0
SML Sawmill 77.33 29 *eP* **P 00 41 28.0 -0.3**
comp=Z,5.0nm,1.0s,mb4.4
SML Sawmill 77.33 29 *eP* **P 00 41 28.0 -0.3**
SML pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
ILAR Eielson Array 77.77 26 P **P 00 41 31.1 +0.4**
comp=Z,4.1nm,0.8s,mb4.4,baz=245,slow=6.0,SNR=43
OBN Obninsk 78.18 324⇑ *eP* **P 00 41 33.0 -0.1**
OBN *e* 00 44 30.0
OBN *e*SS SS 00 56 31.8 +5.5
OBN pmax pmax
comp=Z,19nm,1.7s,mb4.8
OBN MLR MLR
comp=Z,100nm,20.0s,MS4.1
DIV Divide 78.62 30 *eP* **P 00 41 36.4 +1.0**
comp=Z,18nm,0.8s,mb5.0
ANN Anapa 78.79 314 *eP* **P 00 41 32.1 -4.7**
ANN *e*S S 00 51 23.7 -7.3
ANN pmax pmax
comp=Z,63nm,1.2s,mb5.4
MALT Malatya 78.90 307 *eP* **P 00 41 37.6 +0.1**
comp=Z,5.5nm,1.0s,mb4.4
MALT Malatya 78.90 307 ⇑*P* **P 00 41 38.3 +0.8**
MALT Malatya 78.90 307 ⇑*iP* **P 00 41 38.3 +0.8**
BMRM Bremner River 79.20 30 *eP* **P 00 41 39.4 +0.8**
comp=Z,21nm,1.3s,mb4.9
JOF Joensuu 79.89 332 *eP* **P 00 41 41.4 -1.0**
JOF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
JOF Joensuu 79.89 332 *ep* **P 00 41 41.4 -1.0**
comp=Z,6.4nm,0.7s,mb4.7
EGAK Eagle 80.20 26 *eP* **P 00 41 44.6 +0.5**
comp=Z,4.6nm,0.6s,mb4.6
KEV Kevo 80.41 340 *eP* **P 00 41 45.0 0.0**
KEV Kevo 80.41 340 *ep* **P 00 41 45.0 0.0**
ARCES ARCESS Array B 80.97 339 P **P 00 41 48.3 +0.3**
comp=Z,8.5nm,1.0s,mb4.6,baz=71,slow=7.8,SNR=7.3
DAWY Dawson 81.09 26 *eP* **P 00 41 49.8 +1.0**
KAF Kangasniemi 82.33 332 *eP* **P 00 41 52.2 -3.1**
KAF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
KAF Kangasniemi 82.33 332 *ep* **P 00 41 52.2 -3.1**
comp=Z,7.4nm,0.8s,mb4.7
BR131 Keskin Array S 82.36 309 *eP* **P 00 41 55.3 -0.7**
comp=Z,3.8nm,0.9s,mb4.3
BRTR Keskin Array B 82.36 309 P **P 00 41 55.5 -0.5**
comp=Z,2.5nm,0.9s,mb4.2,baz=83,slow=4.5,SNR=8.6
INK Inuvik 82.40 22 *eP* **P 00 41 56.5 +0.8**
comp=Z,16nm,0.9s,mb5.0
INK Inuvik 82.40 22 P **P 00 41 54.8 -0.8**
comp=Z,16nm,1.0s,mb4.9,baz=266,slow=8.4,SNR=12
INK Inuvik 82.40 22 *eP* **P 00 41 56.5 +0.9**
INK pmax pmax
comp=Z,16nm,0.9s
FINES FINESS Array B 82.59 331 P **P 00 41 56.4 -0.3**
FINES LR LR 01 20 28.8
FINES FINESS Array B 82.59 331 P **P 00 41 56.4 -0.3**
comp=Z,7.7nm,0.9s,mb4.7,baz=72,slow=6.2,SNR=12
FINES LR LR 01 20 28.8
comp=Z,138nm,19.7s,MS4.3,baz=126,slow=37
HYT Haines Junctio 82.64 29 *eP* **P 00 41 58.7 +1.7**
AKASG Malin Array Be 83.26 320 P **P 00 41 59.1 -1.3**
comp=Z,4.6nm,0.7s,mb4.6,baz=67,slow=4.4,SNR=12
AKASG LR LR 01 23 17.4
comp=Z,111nm,18.9s,MS4.3,baz=70,slow=39
AKBB Malin Array Si 83.26 320 *eP* **P 00 41 59.6 -0.9**
SKAG Skagway 84.04 30 *eP* **P 00 42 06.2 +2.0**
TIRR Tirgusor 85.19 314 ⇓*P* **P 00 42 09.9 -0.4**
TIRR Tirgusor 85.19 314 ⇓*iP* **P 00 42 09.9 -0.4**
PETR 85.70 316 ⇑*P* **P 00 42 13.6 +0.7**
PETR 85.70 316 ⇑*iP* **P 00 42 13.6 +0.7**
TESR 85.89 317 ⇑*P* **P 00 42 13.3 -0.5**
TESR 85.89 317 ⇑*iP* **P 00 42 13.4 -0.4**
VRI Vrincioaia 86.00 316 ⇑*P* **P 00 42 14.4 0.0**
VRI Vrincioaia 86.00 316 ⇑*iP* **P 00 42 14.4 0.0**
SUW Suwalki 86.03 325 *eP* **P 00 42 13.9 -0.4**
PLOR Plostina 86.06 316 ⇓*P* **P 00 42 14.9 +0.3**
PLOR Plostina 86.06 316 ⇓*iP* **P 00 42 14.9 +0.3**
BURAR Bucovina Array 86.55 318 ⇑*P* **P 00 42 17.2 +0.2**
BURAR Bucovina Array 86.55 318 ⇑*iP* **P 00 42 17.2 +0.2**
BUR08 Bucovina Ar. S 86.56 318 *eP* **P 00 42 17.1 +0.1**
MLR Muntele Rosu 86.63 316 ⇓*P* **P 00 42 17.6 +0.2**
MLR Muntele Rosu 86.63 316 ⇓*iP* **P 00 42 17.6 +0.1**
DLBC Dease Lake 86.97 30 P **P 00 42 19.4 +0.6**
KMBO Kilima Mbogo 87.45 268 P **P 00 42 22.4 +0.3**
comp=Z,1.6nm,0.6s,mb4.4,baz=360,slow=24,SNR=5.2
KWP Kalwaria Pacla 87.58 320 *eP* **P 00 42 22.4 +0.4**
KWP Kalwaria Pacla 87.58 320 *eP* **P 00 42 22.2 +0.2**
comp=Z,26nm,1.0s,mb5.4
KWP Kalwaria Pacla 87.58 320 ⇓*P* **P 00 42 22.3 +0.3**
KWP Kalwaria Pacla 87.58 320 ⇓*iP* **P 00 42 22.3 +0.3**
UZH Uzhgorod 88.14 320 ⇑*iP* **P 00 42 25.0 +0.3**
UZH *e* pP 00 42 43.7 +4.9
DRGR 88.43 318 ⇓*P* **P 00 42 26.2 +0.1**
DRGR 88.43 318 ⇓*iP* **P 00 42 26.2 +0.1**
STHS Stebnicka Huta 88.56 320 *eP* **P 00 42 28.0 +1.4**
comp=Z,2.7nm,0.9s,mb4.6
STHS Stebnicka Huta 88.56 320 *eP* **P 00 42 28.0 +1.4**
STHS pmax pmax
comp=Z,3.0nm,0.9s,mb4.6
STHS Stebnicka Huta 88.56 320 *eP* **P 00 42 28.0 +1.4**
CRVS Cervenica-Dubn 88.58 320 *eP* **P 00 42 26.6 -0.1**
comp=Z,13nm,1.0s,mb5.2
CRVS Cervenica-Dubn 88.58 320 *eP* **P 00 42 26.6 -0.1**
CRVS pmax pmax
comp=Z,13nm,1.0s,mb5.2
CRVS Cervenica-Dubn 88.58 320 *eP* **P 00 42 26.6 -0.1**
NIE Niedzica 89.13 321 *eP* **P 00 42 30.0 +0.7**
OJC Ojcow 89.19 322 *eP* **P 00 42 29.1 -0.4**
KECS Kecovo 89.33 320 *eP* **P 00 42 30.3 0.0**
comp=Z,2.8nm,1.0s,mb4.5
KECS Kecovo 89.33 320 *eP* **P 00 42 30.3 0.0**
KECS pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
KECS Kecovo 89.33 320 *eP* **P 00 42 30.3 0.0**
NOA NORSAR Array B 89.47 333 P **P 00 42 29.2 -1.4**
comp=Z,3.3nm,0.9s,mb4.7,baz=67,slow=4.8,SNR=11
NOA LR LR 01 26 28.6
comp=Z,132nm,18.5s,MS4.4,baz=55,slow=38
PSZ Piszkesteto 89.89 319 ⇑*P* **P 00 42 29.1 -3.8**
PSZ Piszkesteto 89.89 319 ⇑*iP* **P 00 42 29.1 -3.8**
JMIC Jan Mayen 90.32 346 LR LR 01 26 01.6
comp=Z,112nm,19.8s,MS4.3,baz=78,slow=37
VYHS Vyhne 90.36 320 *eP* **P 00 42 34.7 -0.4**
VYHS Vyhne 90.36 320 *eP* **P 00 42 34.7 -0.4**
DPC Dobruska-Polom 91.22 322 *eP* **P 00 42 39.3 +0.2**
DPC Dobruska-Polom 91.22 322 *eP* **P 00 42 39.3 +0.2**
PKSM Moragy 91.27 318 ⇑*P* **P 00 42 38.8 -0.6**
PKSM Moragy 91.27 318 ⇑*iP* **P 00 42 38.8 -0.6**

UPC Upice 91.35 323 *eP* **P 00 42 39.7 +0.1**
UPC Upice 91.35 323 *eP* **P 00 42 39.7 +0.1**
ZST Bratislava 91.55 320 *eP* **P 00 42 40.9 +0.3**
comp=Z,1.9nm,0.7s,mb4.5
ZST Bratislava 91.55 320 *eP* **P 00 42 40.9 +0.3**
ZST pmax pmax
comp=Z,2.0nm,0.7s,mb4.6
ZST Bratislava 91.55 320 *eP* **P 00 42 40.9 +0.3**
TREC Trest 92.13 322 *eP* **P 00 42 43.6 +0.3**
TREC Trest 92.13 322 *eP* **P 00 42 43.6 +0.3**
BRG Berggiesshubel 92.42 324 *eP* **P 00 42 44.4 -0.1**
comp=Z,4.0nm,1.1s,mb4.7
BRG Berggiesshubel 92.42 324 *eP* **P 00 42 44.4 -0.1**
BRG pmax pmax
comp=Z,2.0nm,1.1s,mb4.4
KHC Kasperske Hory 93.34 322 *eP* **P 00 42 48.7 -0.2**
KHC Kasperske Hory 93.34 322 *eP* **P 00 42 48.7 -0.2**
LPG La Plagne 99.12 321 *eP* **P 00 43 15.4 +0.2**
comp=Z,4.5nm,0.8s,mb4.7
LPG La Plagne 99.12 321 *eP* **P 00 43 15.4 +0.2**
comp=Z,2.3nm,0.8s,mb4.8
LPG La Plagne 99.12 321 *eP* **P 00 43 15.4 +0.2**
LPG pmax pmax
comp=Z,2.0nm,0.8s,mb4.7
LPL La Plagne 99.12 321 *eP* **P 00 43 15.3 +0.1**
comp=Z,4.0nm,0.7s,mb4.7
LPL La Plagne 99.12 321 *eP* **P 00 43 15.3 +0.1**
comp=Z,2.0nm,0.7s,mb4.8
LPL La Plagne 99.12 321 *eP* **P 00 43 15.3 +0.1**
LPL pmax pmax
comp=Z,2.0nm,0.7s,mb4.8
NVAR Mina Array Bea 102.27 46 P Pdif 00 43 30.0 +1.1
comp=Z,0.7nm,0.6s,baz=294,slow=4.7,SNR=3.7
PDAR Pinedale Array 105.71 38 PKiKP PKiKP 00 47 58.4 +1.0
comp=Z,0.5nm,0.9s,baz=292,slow=6.1,SNR=3.7
ESDC Sonseca Array 108.91 320 PP PP 00 48 29.2 -1.1
comp=Z,0.1nm,0.4s,baz=40,slow=6.5,SNR=4.4
TXAR Lajitas Array 117.36 47 PKP PKPdf 00 48 20.3 +0.5
comp=Z,1.2nm,0.9s,baz=299,slow=1.3,SNR=11
TORD Torodi Ar. Bea 117.52 292 PKP PKPdf 00 48 18.7 -1.7
comp=Z,0.3nm,0.5s,baz=95,slow=1.8,SNR=4.1
TORD PP PP 00 49 21.1 -12
comp=Z,1.0nm,1.0s,baz=58,slow=5.1,SNR=3.9
JCT Junction City 119.35 44 *e*PKPdf PKPdf 00 48 24.1 +0.5
ACSO Alum Creek Sta 121.22 24 *e*PKPdf PKPdf 00 48 26.8 -0.1
BINY Binghamton 121.92 18 *e*PKPdf PKPdf 00 48 28.2 -0.1
WVT Waverly 122.41 31 *e*PKPdf PKPdf 00 48 29.2 -0.1
SDDR Presa de Saban 144.63 26 *e*PKPdf PKPdf 00 49 10.8 -0.4
LRS Lares 146.96 20 *e*PKPdf PKPdf 00 49 15.6 +0.4
LRS *e*PKPbc PKPbc 00 49 17.0 -0.1
CELP Cerrillos 147.24 20 *e*PKPdf PKPdf 00 49 16.6 +0.9
CELP *e*PKPbc PKPbc 00 49 18.8 +0.8
STVI Saint Thomas 147.47 17 *e*PKPdf PKPdf 00 49 15.9 -0.2
STVI *e*PKPbc PKPbc 00 49 19.8 +1.3
MTP Monte Pirata 147.54 18 *e*PKPbc PKPbc 00 49 19.9 +1.1
PLCA Paso Flores 149.47 157 PKPbc PKPbc 00 49 23.4 +0.3
comp=Z,3.0nm,0.6s,baz=229,slow=4.3,SNR=9.4
SDV Santo Domingo 153.60 35 *e*PKPdf PKPdf 00 49 26.9 +1.2
LPAZ La Paz 167.47 106 PKP PKPdf 00 49 41.2 +0.5
LPAZ PKPab PKPab 00 50 47.4 +1.0
LPAZ La Paz 167.47 106 PKP PKPdf 00 49 41.2 +0.5
comp=Z,1.2nm,0.9s,baz=14,slow=8.1,SNR=4.9
LPAZ PKPab PKPab 00 50 47.4 +1.0
comp=Z,0.6nm,0.8s,baz=259,slow=5.2,SNR=1.8

*ISCJB **31** 00:32:56.3±0.8, 42°38N±0°03×25°92E±0°04, h1km±7km, Error ellipse: s-maj=5.9km s-min=3.7km az=43.8*
*SKO **31** 00:32:56.2, 42°68N×25°99E, h0km*
*THE **31** 00:32:56.8, 42°40N×25°95E, h4km±2km, ML2.6/2, Error ellipse: s-maj=2.7km s-min=0.9km az=6.0*
*CSEM **31** 00:32:57.8±0.2, 42°35N×25°78E, h2km, ML2.6/2, Error ellipse: s-maj=6.9km s-min=4.1km az=121.0*
*NEIC **31** 00:32:59.3, 42°39N×25°71E, h10km, ML2.6(BUC), After BUC.*

ISC 31 00:32:57.1±0.8, 42°37N±0°03×25°95E±0°04, h3km±6km, n64, σ0s97/80, 24C-19D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JMB	**Yambol**	**0.48**	**78**	P		P	**Pg**	**00 33 05.9**	**-0.4**
JMB				S		S	**Sg**	**00 33 12.3**	**-0.2**
PLD	**Plovdiv**	**0.96**	**254**	P		P	**Pg**	**00 33 14.7**	**-0.8**
PLD				S		S	**Sg**	**00 33 29.1**	**+1.1**
PLD	**Plovdiv**	**0.96**	**254**	P		P	**Pg**	**00 33 14.7**	**-0.8**
ZIMR		**1.36**	**342**	⇓P		P	**Pn**	**00 33 23.1**	**+0.2**
ZIMR				S		S	**Sg**	**00 33 41.5**	**+0.8**
ZIMR		**1.36**	**342**	⇓*iP*		P	**Pn**	**00 33 23.1**	**+0.2**
ZIMR		**1.36**	**342**	S		S	**Sg**	**00 33 41.5**	**+0.8**
ALN	**Alexandroupoli**	**1.47**	**177**	P		P	**Pn**	**00 33 24.1**	**-0.4**
ALN				S		S	**Sb**	**00 33 44.8**	**+0.6**
ALN	**Alexandroupoli**	**1.47**	**177**	P		P	**Pn**	**00 33 24.1**	**-0.4**
ALN				S		S	**Sb**	**00 33 44.8**	**+0.6**
KAVA	**Kavala**	**1.74**	**219**	P		P	**Pn**	**00 33 27.7**	**-0.5**
KAVA	**Kavala**	**1.74**	**219**	P		P	**Pn**	**00 33 27.7**	**-0.5**
VTS	**Vitosha**	**2.04**	**277**	⇑P		P	**Pn**	**00 33 32.3**	**0.0**
VTS				S		S	**Sn**	**00 33 56.3**	**-2.0**
VTS	**Vitosha**	**2.04**	**277**	P		P	**Pn**	**00 33 32.3**	**0.0**
VTS				S		S	**Sn**	**00 33 57.5**	**-0.7**
VTS	**Vitosha**	**2.04**	**277**	⇑*iP*		P	**Pn**	**00 33 32.3**	**0.0**
VTS	**Vitosha**	**2.04**	**277**	S		S	**Sn**	**00 33 56.3**	**-1.9**
VTS	**Vitosha**	**2.04**	**277**	P		P	**Pn**	**00 33 32.3**	**0.0**
VTS				S		S	**Sn**	**00 33 56.3**	**-1.9**
SRS	**Serrai**	**2.16**	**235**	P		P	**Pn**	**00 33 33.6**	**-0.4**
SRS				S		S	**Sn**	**00 34 01.1**	**-0.2**
SRS	**Serrai**	**2.16**	**235**	P		P	**Pn**	**00 33 33.6**	**-0.4**
SRS				S		S	**Sn**	**00 34 01.1**	**-0.2**
SULR		**2.32**	**5**	⇑P		P	**Pb**	**00 33 37.6**	**-1.9**
SULR				S		S	**Sb**	**00 34 08.6**	**0.0**
SULR		**2.32**	**5**	⇑*iP*		P	**Pb**	**00 33 37.7**	**-1.8**
SULR		**2.32**	**5**	S		S	**Sb**	**00 34 08.6**	**0.0**
SULR		**2.32**	**5**	⇑P		P	**Pb**	**00 33 37.7**	**-1.8**
SULR				S		S	**Sb**	**00 34 08.6**	**0.0**
AMRR	**Amara**	**2.46**	**24**	⇑P		P	**Pb**	**00 33 41.3**	**-0.5**
AMRR				S		S	**Sb**	**00 34 12.1**	**-0.4**
AMRR	**Amara**	**2.46**	**24**	⇑*iP*		P	**Pb**	**00 33 41.3**	**-0.6**
AMRR	**Amara**	**2.46**	**24**	S		S	**Sb**	**00 34 12.1**	**-0.4**
AMRR	**Amara**	**2.46**	**24**	⇑P		P	**Pb**	**00 33 41.3**	**-0.6**
AMRR				S		S	**Sb**	**00 34 12.1**	**-0.4**
VAY	**Valandovo**	**2.73**	**249**	*e*Pn		P	**Pn**	**00 33 43.1**	**+1.3**
TIRR	**Tirgusor**	**2.75**	**40**	⇑P		P	**Pb**	**00 33 45.0**	**-2.0**
TIRR				S		S	**Sb**	**00 34 20.4**	**-0.7**
TIRR	**Tirgusor**	**2.75**	**40**	⇑*iP*		P	**Pb**	**00 33 45.0**	**-1.9**
TIRR	**Tirgusor**	**2.75**	**40**	S		S	**Sb**	**00 34 20.4**	**-0.7**
TIRR	**Tirgusor**	**2.75**	**40**	⇑P		P	**Pb**	**00 33 45.0**	**-1.9**
TIRR				S		S	**Sb**	**00 34 20.4**	**-0.7**
BARS	**Barje**	**3.08**	**280**	*e*Pn		P	**Pn**	**00 33 46.9**	**+0.2**
MLR	**Muntele Rosu**	**3.12**	**360**	⇓P		P	**Pn**	**00 33 48.1**	**+1.0**
MLR	**Muntele Rosu**	**3.12**	**360**	⇓*iP*		P	**Pn**	**00 33 48.1**	**+0.9**
MLR	**Muntele Rosu**	**3.12**	**360**	⇓P		P	**Pn**	**00 33 48.1**	**+0.9**
VOIR		**3.13**	**348**	⇓P		P	**Pn**	**00 33 47.2**	**-0.1**
VOIR		**3.13**	**348**	⇓*iP*		P	**Pn**	**00 33 47.2**	**-0.1**
VOIR		**3.13**	**348**	⇓P		P	**Pn**	**00 33 47.2**	**-0.1**
CFR	**Carcaliu**	**3.22**	**29**	⇓P		P	**Pn**	**00 33 50.9**	**+2.3**
CFR	**Carcaliu**	**3.22**	**29**	⇓*iP*		P	**Pn**	**00 33 50.9**	**+2.3**
CFR	**Carcaliu**	**3.22**	**29**	⇓P		P	**Pn**	**00 33 50.9**	**+2.3**
TLCR		**3.50**	**35**	⇑P		P	**Pn**	**00 33 54.9**	**+2.6**
TLCR		**3.50**	**35**	⇑*iP*		P	**Pn**	**00 33 54.9**	**+2.6**
TLCR		**3.50**	**35**	⇑P		P	**Pn**	**00 33 54.9**	**+2.6**
PLOR	**Plostina**	**3.52**	**8**	⇓*iP*		P	**Pn**	**00 33 53.8**	**+1.2**
PLOR	**Plostina**	**3.52**	**8**	⇓*iP*		P	**Pn**	**00 33 53.8**	**+1.2**
VRI	**Vrincioaia**	**3.54**	**9**	⇑P		P	**Pn**	**00 33 54.1**	**+1.2**
VRI	**Vrincioaia**	**3.54**	**9**	⇑*iP*		P	**Pn**	**00 33 54.1**	**+1.2**
VRI	**Vrincioaia**	**3.54**	**9**	⇑P		P	**Pn**	**00 33 54.1**	**+1.2**
DOPR	**Dopca**	**3.62**	**354**	⇑P		P	**Pn**	**00 33 53.7**	**-0.3**
DOPR	**Dopca**	**3.62**	**354**	⇑*iP*		P	**Pn**	**00 33 53.7**	**-0.3**
GZR	**Gura Zlata**	**3.79**	**324**	⇓P		P	**Pn**	**00 33 55.8**	**-0.6**
GZR	**Gura Zlata**	**3.79**	**324**	⇓*iP*		P	**Pn**	**00 33 55.8**	**-0.6**
GZR	**Gura Zlata**	**3.79**	**324**	⇓P		P	**Pn**	**00 33 55.8**	**-0.6**
GRUS	**Gruza**	**4.12**	**293**	*e*Pn		P	**Pn**	**00 33 59.9**	**-1.0**
TESR		**4.17**	**7**	⇑P		P	**Pn**	**00 34 01.5**	**-0.1**
TESR		**4.17**	**7**	⇑*iP*		P	**Pn**	**00 34 01.5**	**-0.1**
BZS	**Buzias**	**4.51**	**318**	⇓P		P	**Pn**	**00 34 05.2**	**-1.0**
BZS	**Buzias**	**4.51**	**318**	⇓*iP*		P	**Pn**	**00 34 05.2**	**-1.0**
BZS	**Buzias**	**4.51**	**318**	⇓P		P	**Pn**	**00 34 05.2**	**-1.0**
BURAR	**Bucovina Array**	**5.27**	**355**	⇑P		P	**Pn**	**00 34 17.8**	**+1.1**
BURAR	**Bucovina Array**	**5.27**	**355**	⇑*iP*		P	**Pn**	**00 34 17.8**	**+1.1**
BURAR	**Bucovina Array**	**5.27**	**355**	⇑P		P	**Pn**	**00 34 17.8**	**+1.1**
BUR08	**Bucovina Ar. S**	**5.30**	**355**	*e*Pn		P	**Pn**	**00 34 17.6**	**+0.5**
BUR08	**Bucovina Ar. S**	**5.30**	**355**	*e*Pn		P	**Pn**	**00 34 17.6**	**+0.5**

*IDC **31** 00:33:40.8±1.1, 1°20S×127°06E, h0km, mb4.0/5, mb1 4.0/6, mb1mx3.8/19, mbtmp3.9/6, ML3.5/1, Error ellipse: s-maj=67.2km s-min=20.6km az=72.0*
*ISCJB **31** 00:33:43.9±0.7, 1°2S±0°1×127°3E±0°2, h33km, mb4.6/10, Error ellipse: s-maj=34.6km s-min=13.0km az=153.5*

ISC 31 00:33:45.9±0.7, 1°2S±0°1×127°3E±0°2, h35km, n12, σ0s63/12, mb4.6/10, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.82**	**160**	P		P	**Pn**	**00 38 14.7**	**-0.7**
	0.2nm,0.3s,baz=339,slow=11,SNR=3.0								
ASAR	**Alice Springs**	**23.19**	**164**	P		P		**00 38 50.6**	**+0.8**
	1.9nm,0.8s,mb3.6,baz=359,slow=9.2,SNR=2.7								
GTA	**Gaotai**	**47.67**	**331**	*e*P		P		**00 42 20.0**	**+1.0**
GTA				pP		pP		00 42 24.5	-4.9
GTA				sP		sP		00 42 27.0	-6.6
GTA				pmax		pmax			
	comp=Z,4.0nm,1.1s,mb4.4								
RAMN	**Ramite**	**48.18**	**309**	*e*P		P		**00 42 23.5**	**+0.3**
	comp=Z,21nm,0.7s,mb5.3								
GUN	**Gumba**	**49.21**	**309**	*e*P		P		**00 42 31.3**	**+0.2**
	comp=Z,21nm,0.5s,mb5.4								
GKN	**Gorkha**	**50.22**	**309**	*e*P		P		**00 42 38.5**	**-0.2**
KOLN	**Koldanda**	**50.92**	**308**	*e*P		P		**00 42 44.2**	**+0.1**
	comp=Z,27nm,0.7s,mb5.3								
DANN	**Dangsing**	**51.06**	**309**	*e*P		P		**00 42 45.3**	**+0.2**
	comp=Z,36nm,0.7s,mb5.4								
SONM	**Songino Array**	**52.17**	**342**	P		P		**00 42 52.5**	**-0.6**
	comp=Z,0.9nm,0.7s,mb3.8,baz=155,slow=8.1,SNR=4.9								
PETK	**Petropavlovsk-**	**59.81**	**21**	P		P		**00 43 48.2**	**+0.6**
	comp=Z,1.0nm,0.5s,mb4.1,baz=190,slow=4.7,SNR=5.5								
MKAR	**Makanchi Array**	**61.97**	**327**	P		P		**00 44 01.8**	**-0.6**
	comp=Z,1.0nm,0.3s,mb4.4,baz=116,slow=7.5,SNR=12								
ZALV	**Zalesovo Beam**	**65.27**	**334**	P		P		**00 44 22.8**	**-1.2**
	comp=Z,0.7nm,0.5s,mb3.9,baz=93,slow=3.2,SNR=3.3								

*ISCJB **31** 00:34:01.8±0.7, 39°10N±0°03×40°94E±0°04, h2km±6km, Error ellipse: s-maj=4.9km s-min=4.6km az=24.2*
*ISK **31** 00:34:02.2, 39°23N×40°81E, h8km, MD3.0*
*DDA **31** 00:34:02.1, 39°08N×40°99E, h8km±3km, Md3.0*
*CSEM **31** 00:34:03.4±0.3, 39°20N×40°79E, h15km, MD3.0, Error ellipse: s-maj=10.1km s-min=7.1km az=117.0*

ISC 31 00:34:02.3±0.5, 39°09N±0°03×40°96E±0°04, h10km±4km, n26, σ1s32/40, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.20**	**133**	*i*P		P	**Pg**	**00 34 05.5**	**-1.0**
BNGL				*i*S		S	**Sg**	**00 34 08.9**	**-0.4**
BINT	**Bingol**	**0.42**	**240**	PG		P	**Pg**	**00 34 11.0**	**+0.4**
BINT				*e*SG		S	**Sg**	**00 34 17.3**	**+1.1**
BINT	**Bingol**	**0.42**	**240**	*i* Pg		P	**Pg**	**00 34 11.0**	**+0.4**
BINT				*e*Sg		S	**Sg**	**00 34 17.3**	**+1.0**
EZM	**Erzurum**	**0.87**	**21**	*e*PG		P	**Pg**	**00 34 18.4**	**-0.7**
KOPT	**Kop Dagi**	**1.00**	**339**	*i* P		P	**Pg**	**00 34 21.7**	**+0.2**
KOPT				*i* S		S	**Sg**	**00 34 36.0**	**+1.6**
KOPT	**Kop Dagi**	**1.00**	**339**	*i* P		P	**Pg**	**00 34 21.7**	**+0.2**
KOPT				*i* S		S	**Sg**	**00 34 36.0**	**+1.6**
TATV	**Tatvan**	**1.17**	**119**	*i* P		P	**Pb**	**00 34 21.2**	**-3.5**
TATV	**Tatvan**	**1.17**	**119**	*i* P		P	**Pb**	**00 34 21.2**	**-3.5**
HOMI	**Horasan**	**1.20**	**37**	*i* P		P	**Pb**	**00 34 24.6**	**-0.6**
HOMI				*i* S		S	**Sb**	**00 34 42.2**	**+1.4**
BEST	**Besiri**	**1.22**	**168**	*i* P		P	**Pn**	**00 34 25.6**	**+0.2**
BEST				*i* S		S	**Sb**	**00 34 42.9**	**+1.7**
PTK	**Pertek**	**1.24**	**261**	*e*PN		P	**Pn**	**00 34 23.8**	**-1.9**
PTK				*e*SN		S	**Sn**	**00 34 41.8**	**-0.7**
PTK	**Pertek**	**1.24**	**261**	*e*Pn		P	**Pn**	**00 34 23.8**	**-1.9**
PTK				*e*Sn		S	**Sn**	**00 34 41.8**	**-0.7**
DIYA	**Diyarbakir**	**1.34**	**210**	*i* P		P	**Pn**	**00 34 27.5**	**+0.5**
DIYA				*i* S		S	**Sb**	**00 34 46.4**	**+1.7**
DIYA	**Diyarbakir**	**1.34**	**210**	*i* P		P	**Pn**	**00 34 27.5**	**+0.5**
DIYA				*i* S		S	**Sb**	**00 34 46.4**	**+1.8**
EZC	**Erzincan**	**1.41**	**299**	*e*PN		P	**Pn**	**00 34 26.7**	**-1.4**
SVRC	**Sivrice-ELAZID**	**1.48**	**242**	*e*PN		P	**Pn**	**00 34 30.1**	**+1.2**
SVRC	**Sivrice-ELAZID**	**1.48**	**242**	*e*Pn		P	**Pn**	**00 34 30.1**	**+1.1**
AGRB	**Hanur-Agry**	**1.65**	**72**	*e*PN		P	**Pn**	**00 34 33.0**	**+1.7**
AGRB	**Hanur-Agry**	**1.65**	**72**	*e*Pn		P	**Pn**	**00 34 33.0**	**+1.7**
MARD	**Mardin**	**1.78**	**185**	*i* P		P	**Pn**	**00 34 32.4**	**-0.7**
MARD				*i* S		S	**Sn**	**00 34 54.1**	**-1.7**
GUMT	**Gumushane**	**1.78**	**321**	*e*PN		P	**Pn**	**00 34 30.6**	**-2.6**
GUMT	**Gumushane**	**1.78**	**321**	*e*Pn		P	**Pn**	**00 34 30.6**	**-2.6**
KEMA	**Kemaliye**	**1.93**	**276**	*i* P		P	**Pn**	**00 34 37.9**	**+2.8**
KEMA				*i* S		S	**Sg**	**00 35 03.2**	**-1.1**
KEMA	**Kemaliye**	**1.93**	**276**	*i* P		P	**Pn**	**00 34 37.9**	**+2.7**
KEMA				*i* S		S	**Sg**	**00 35 03.2**	**-1.1**
CUKT	**Cukurca**	**2.78**	**131**	*e*PN		P	**Pg**	**00 34 51.1**	**-4.5**
CUKT	**Cukurca**	**2.78**	**131**	*e*Pn		P	**Pg**	**00 34 51.1**	**-4.5**

*NEIC **31** 00:42:35.1, 17°13N×101°21W, h15km, MD3.7(MEX), After MEX.*

MEX 31 00:42:35.1±0.4, 17°13N×101°21W, h15km±8km, MD3.7, Near coast of Guerrero

| Code | Station Name | Δ° | AZ° | Phase | ID | Op | ISC

IDC **31** *01:15:23.5±0.3,61˚.25S×67˚.92W,h0km,mb5.3/21, mb1 5.3/23,mb1mx5.3/24,mbtmp5.3/23,ML5.0/2,MS4.9/19, Ms1 4.9/19,ms1mx4.8/22,Error ellipse: s-maj=17.0km s-min=11.2km az=87.0*

ISCJB **31** *01:15:23.8±0.2,61˚.23S±0˚.03×67˚.6W±0˚.1,h10km, mb5.5/70,MS4.9/204,Error ellipse: s-maj=8.5km s-min=4.4km az=169.1*

MOS **31** *01:15:24.7±0.8,61˚.16S×67˚.93W,h10km,mb5.6/44, MS4.9/55,Error ellipse: s-maj=23.8km s-min=9.5km az=85.6*

NEIC **31** *01:15:25.2±0.1,61˚.23S×67˚.74W,h10km,mb5.6/59, MS4.9/172,MW5.5,Error ellipse: s-maj=6.2km s-min=3.9km az=85.0*

GCMT **31** *01:15:26.6±0.1,61˚.18S×68˚.37W,h12km,MW5.5, Moment Tensor Solution. s60,c103; s38,c44; Moment tensor: Scale 10^17^Nm; Mrr2.21±.05; Mθθ0.30±.04; Mφφ-2.51±.04; Mrθ0.42±.12; Mθφ1.11±.03; Mφr-0.27±.10; Best double couple: M0 2.60000×10^17^ NP1:φs352.00000°, δ42.00000°,λ106.00000°. NP2:φs151.00000°,δ50.00000°, λ76.00000°. Principal axes: T 2.3000, Plg78.0000°, Azm2.0000°; N 0.6300, Plg11.0000°, Azm160.0000°; P -2.9300, Plg4.0000°, Azm250.0000°; Data Used: II IU G CN IC. Surface waves: sta= 87, comp=149, per= 50.*

DJA **31** *01:15:38,61˚.58S×67˚.51W,h95km,mb5.9/12*

ISC 31 01:15:25.4±0.2,61˚.24S±0˚.03×67˚.6W±0˚.1,h10km,n700, σ1s01/155,mb5.5/70,MS4.9/204,77C-17D,Drake Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMSA	**Palmer Station**	**3.91**	**157**	*e*Pn	**Pn**	**01 16 24.3**	**-1.0**
PMSA	**Palmer Station**	**3.91**	**157**	Pn	**Pn**	**01 16 25.0**	**-0.3**
	43nm,0.3s,baz=340,slow=11,SNR=187						
PMSA				Sn	**Sn**	**01 17 09.4**	**-1.8**
	64nm,0.3s,baz=190,slow=11,SNR=6.9						
PMSA				LR	LR	01 17 38.2	
	comp=Z,13μm,18.0s,baz=356,slow=34						
USHA	**Ushuaia**	**6.44**	**356**	Pn	**Pn**	**01 16 59.8**	**-0.3**
	6.4nm,0.3s,baz=158,slow=13,SNR=115						
USHA				Sn	**Sn**	**01 18 10.6**	**-2.8**
	11nm,0.3s,baz=286,slow=20,SNR=2.7						
COYC	**Coyhaique**	**15.91**	**349**	*e*P	**Pn**	**01 19 11.1**	**+2.0**
COYC	**Coyhaique**	**15.91**	**349**	*e*P	**Pn**	**01 19 11.1**	**+2.0**
ILCA	**Isla Las Cabra**	**19.43**	**349**	*i* P	**Pn**	**01 19 52.7**	**-0.1**
PLCA	**Paso Flores**	**20.61**	**354**	*e*P	**P**	**01 20 05.7**	**+1.3**
	94nm,1.0s						
PLCA				*e*PcP	PcP	01 24 15.8	+1.2
PLCA				LR	LR		
	comp=Z,5μm,19.0s,MS4.9						
PLCA	**Paso Flores**	**20.61**	**354**	P	**P**	**01 20 05.1**	**+0.7**
	comp=Z,68nm,1.1s,baz=173,slow=9.3,SNR=22						
PLCA				PcP	PcP	01 24 15.8	+1.3
	comp=Z,23nm,1.2s,baz=258,slow=0.3,SNR=4.8						
PLCA				LR	LR	01 28 16.4	
	comp=Z,4μm,20.1s,MS4.7,baz=166,slow=38						
PLCA	**Paso Flores**	**20.61**	**354**	P	**P**	**01 20 05.1**	**+0.7**
PLCA						01 24 15.9	
PLCA				pmax	pmax		
	comp=Z,69nm,1.1s						
PLCA				MLR	MLR		
	comp=Z,4μm,20.1s						
TRQA	**Tornquist**	**23.47**	**11**	⇑*i*P	**P**	**01 20 34.1**	**-0.8**
	comp=Z,76nm,0.8s,mb5.2						
TRQA				*e*PcP	PcP	01 24 20.6	+0.3
TRQA				LR	LR		
	comp=Z,1μm,21.0s,MS4.3						
VNA1	**Neumayer--Stat**	**24.86**	**137**	*e*P	**P**	**01 20 47.6**	**+0.1**
VNA1				*e*		01 20 49.3	
VNA1				*e*		01 24 21.1	
VNA2	**Neumayer--Watz**	**25.11**	**138**	*e*P	**P**	**01 20 49.5**	**-0.2**
VNA2				*e*	pP	01 20 51.4	-1.4
VNA2				*e*		01 24 20.8	
LPA	**La Plata**	**27.07**	**18**	*de*P	**P**	**01 21 10.0**	**+2.2**
LPA				SCS	ScS	01 31 56.0	-3.5
QSPA	**South Pole Qui**	**28.99**	**180**	⇑*i*P	**P**	**01 21 25.6**	**+1.1**
	comp=Z,297nm,1.2s,mb5.9						
QSPA				LR	LR		
	comp=Z,2μm,22.0s,MS4.7						
QSPA	**South Pole Qui**	**28.99**	**180**	P	**P**	**01 21 25.6**	**+1.1**
	comp=Z,143nm,1.0s,mb5.7,baz=151,slow=4.1,SNR=133						
QSPA				LR	LR	01 31 38.6	
	comp=Z,1μm,21.7s,MS4.5,baz=151,slow=34						
CFAA	**Coronel Fontan**	**29.64**	**359**	P	**P**	**01 21 29.9**	**-0.7**
	comp=Z,4.0nm,1.0s,baz=170,slow=7.7,SNR=29						
CFAA				PcP	PcP	01 24 33.8	-1.1
	comp=Z,1.8nm,0.9s,baz=204,slow=2.4,SNR=5.7						
CFAA				LR	LR	01 32 10.9	
	comp=Z,118nm,21.5s,baz=167,slow=34						
MAIT	**Maitri**	**31.20**	**141**	*e*P	**P**	**01 21 46.2**	**+2.1**
NVL	**N'lazarevskaya**	**31.23**	**141**	⇓*i*P	**P**	**01 21 43.3**	**-1.1**
NVL				*i* S	**S**	**01 26 46.2**	**-4.0**
NVL				pmax	pmax		
	comp=Z,178nm,1.3s,mb5.7						
NVL				MLR	MLR		
	comp=Z,685nm,14.0s,MS4.5						
LCO	**Las Campanas**	**32.29**	**355**	⇑*i*P	**P**	**01 21 54.2**	**+0.1**
	comp=Z,59nm,0.9s,mb5.4						
LCO				*e*PcP	PcP	01 24 42.5	+0.6
LCO				LR	LR		
	comp=Z,3μm,19.0s,MS5.0						
CPUP	**Villa Florida**	**35.59**	**16**	⇑*i*P	**P**	**01 22 22.4**	**-0.4**
	comp=Z,261nm,0.8s,mb6.2						
CPUP				LR	LR		
	comp=Z,332nm,20.0s,MS4.1						
CPUP	**Villa Florida**	**35.59**	**16**	P	**P**	**01 22 22.8**	**0.0**
	comp=Z,60nm,0.8s,mb5.6,baz=177,slow=7.4,SNR=174						
CPUP				LR	LR	01 37 40.7	
	comp=Z,2μm,18.1s,MS4.9,baz=171,slow=38						
CPUP	**Villa Florida**	**35.59**	**16**	⇑*i*P	**P**	**01 22 22.4**	**-0.3**
CPUP				pmax	pmax		
	comp=Z,261nm,0.8s						
CPUP				MLR	MLR		
	comp=Z,332nm,20.0s						
SBA	**Scott Base**	**37.28**	**197**	⇑*i*P	**P**	**01 22 39.3**	**+2.7**
	comp=Z,103nm,0.9s,mb5.7						
SBA				LR	LR		
	comp=Z,2μm,19.0s,MS4.9						
SBA	**Scott Base**	**37.28**	**197**	⇑*i*P	**P**	**01 22 39.3**	**+2.7**
SBA				pmax	pmax		
	comp=Z,103nm,0.9s,mb5.7						
SBA				MLR	MLR		
	comp=Z,2μm,19.0s,MS4.9						
SYO	**Syowa Base**	**40.11**	**148**	⇓*i*P	**P**	**01 23 00.0**	**-0.5**
SPB	**Sao Paulo**	**40.12**	**29**	*e*P	**P**	**01 23 01.8**	**+0.8**
	comp=Z,38nm,1.0s,mb5.1						
SPB				LR	LR		
	comp=Z,2μm,20.0s,MS4.9						
TRIS	**Tristan da Cun**	**41.81**	**81**	PFAKE		01 23 30.0	+15
TRIS				LR	LR		
	comp=Z,5μm,20.0s,MS5.3						
RPN	**Rapa Nui**	**44.04**	**301**	LR	LR	01 36 51.6	
	comp=Z,1μm,19.3s,MS4.8,baz=70,slow=29						
LPAZ	**La Paz**	**44.89**	**359**	⇑*i*P	**P**	**01 23 41.1**	**+1.3**
	comp=Z,55nm,0.8s,mb5.4						
LPAZ				*e*PcP	PcP	01 25 23.0	+1.7
LPAZ				LR	LR		
	comp=Z,1μm,19.0s,MS4.9						
LPAZ	**La Paz**	**44.89**	**359**	P	**P**	**01 23 41.1**	**+1.3**
	comp=Z,50nm,0.9s,mb5.3,baz=153,slow=4.2,SNR=181						
LPAZ				PcP	PcP	01 25 23.0	+1.8
	comp=Z,19nm,0.8s,baz=176,slow=2.0,SNR=4.4						
LPAZ				LR	LR	01 42 38.6	
	comp=Z,1μm,18.6s,MS4.8,baz=170,slow=36						
LPAZ	**La Paz**	**44.89**	**359**	P	**P**	**01 23 41.1**	**+1.3**
LPAZ						01 25 23.0	
LPAZ				pmax	pmax		
	comp=Z,50nm,0.9s						
LPAZ				MLR	MLR		
	comp=Z,1μm,18.6s						
MAW	**Mawson**	**46.53**	**156**	⇑*i*P	**P**	**01 23 52.4**	**+0.2**
	comp=Z,28nm,1.3s,mb5.0						
MAW				*e*PcP	PcP	01 25 26.3	+0.1
MAW				LR	LR		
	comp=Z,4μm,21.0s,MS5.4						
MAW	**Mawson**	**46.53**	**156**	P	**P**	**01 23 52.1**	**-0.1**
	comp=Z,51nm,1.0s,mb5.4,baz=209,slow=9.7,SNR=60						
MAW				PcP	PcP	01 25 25.8	-0.5
	comp=Z,23nm,0.9s,baz=148,slow=4.5,SNR=4.9						
MAW				LR	LR	01 43 37.5	
	comp=Z,2μm,20.2s,MS5.2,baz=212,slow=36						
MAW	**Mawson**	**46.53**	**156**	⇑*i*P	**P**	**01 23 52.4**	**+0.2**
MAW				*e*		01 25 26.3	
MAW				pmax	pmax		
	comp=Z,28nm,1.3s						
MAW				MLR	MLR		
	comp=Z,4μm,21.0s						
NNA	**Nana**	**49.62**	**348**	*e*P	**P**	**01 24 16.8**	**+0.1**
	comp=Z,15nm,0.8s,mb5.1						
MIR	**Mirnyy**	**51.72**	**170**	⇑*i*P	**P**	**01 24 31.4**	**-0.6**
MIR				pmax	pmax		
	comp=Z,240nm,1.4s,mb5.9						
MIR				pmax	pmax		
	comp=Z,909nm,3.0s						
MIR				pmax	pmax		
	comp=N,505nm,4.0s						
MIR				MLR	MLR		
	comp=N,1μm,18.0s,MS5.1						
MIR				MLR	MLR		
	comp=E,1μm,18.0s,MS5.1						
MIR				MLR	MLR		
	comp=Z,2μm,18.0s,MS5.2						
CASY	**Casey**	**52.78**	**179**	⇑*i*P	**P**	**01 24 40.3**	**+0.4**
	comp=Z,124nm,1.3s,mb5.7						
CASY				*e*PcP	PcP	01 25 49.0	-0.2
CASY				LR	LR		
	comp=Z,1μm,19.0s,MS5.0						
RKT	**Rikitea**	**59.11**	**278**	*e*S	**S**	**01 33 31.6**	**-1.2**
	comp=Z,1μm,29.0s						
RKT				*e*LQ		01 40 04.7	
	comp=Z,1μm,34.8s						
RKT				*e*LR	LR	01 42 49.2	
	comp=Z,5μm,28.8s,baz=149						
RCBR	**Riachuelo**	**60.16**	**37**	*e*P	**P**	**01 25 33.5**	**+0.4**
	comp=Z,48nm,1.4s,mb5.3						
RCBR				LR	LR		
	comp=Z,779nm,22.0s,MS4.8						
SUR	**Sutherland**	**61.48**	**106**	*e*P	**P**	**01 25 43.7**	**+1.9**
	comp=Z,2μm,2.6s						
SUR	**Sutherland**	**61.48**	**106**	P	**P**	**01 25 42.8**	**+0.9**
	comp=Z,88nm,1.0s,mb5.9,baz=219,slow=6.6,SNR=20						
SUR	**Sutherland**	**61.48**	**106**	P	**P**	**01 25 43.8**	**+2.0**
	comp=Z,771nm,1.1s,SNR=7.7						
OTAV	**Otavalo**	**61.87**	**348**	⇑*i*P	**P**	**01 25 45.9**	**+1.4**
	comp=Z,239nm,1.4s,mb6.1						
OTAV				LR	LR		
	comp=Z,430nm,19.0s,MS4.6						
RPZ	**Rata Peaks**	**65.13**	**223**	P	**P**	**01 26 05.7**	**-0.1**
	comp=Z,18nm,0.8s,mb5.1,baz=288,slow=2.6,SNR=6.7						
RPZ				LR	LR	01 47 37.2	
	comp=Z,1μm,20.5s,MS5.1,baz=144,slow=30						
SNZO	**South Karori**	**66.02**	**227**	PFAKE		01 26 20.0	+8.4
SNZO				LR	LR		
	comp=Z,2μm,20.0s,MS5.3						
ROSC	**El Rosal**	**66.10**	**353**	P	**P**	**01 26 13.1**	**+0.7**
	comp=Z,22nm,0.7s,mb5.3,baz=265,slow=22,SNR=18						
ROSC				LR	LR	01 54 12.7	
	comp=Z,476nm,21.4s,MS4.7,baz=192,slow=35						
BOSA	**Boshof**	**66.70**	**107**	*e*P	**P**	**01 26 16.7**	**+0.5**
	comp=Z,123nm,0.8s,mb6.0						
BOSA				LR	LR		
	comp=Z,2μm,21.0s,MS5.2						
BOSA	**Boshof**	**66.70**	**107**	P	**P**	**01 26 16.7**	**+0.5**
	comp=Z,113nm,0.8s,mb5.9,baz=207,slow=6.9,SNR=99						
BOSA				LR	LR	01 49 58.8	
	comp=Z,976nm,19.7s,MS5.0,baz=215,slow=31						
URZ	**Urewera**	**67.83**	**230**	*e*P	**P**	**01 26 23.2**	**-0.1**
	comp=Z,24nm,1.1s,mb5.1						
URZ	**Urewera**	**67.83**	**230**	P	**P**	**01 26 23.0**	**-0.3**
	comp=Z,17nm,1.0s,mb5.0,baz=308,slow=10,SNR=4.7						
URZ				LR	LR	01 48 33.8	
	comp=Z,1μm,20.6s,MS5.1,baz=138,slow=29						
LBTB	**Lobatse**	**69.92**	**105**	⇑*i*P	**P**	**01 26 36.9**	**+0.5**
	comp=Z,205nm,0.9s,mb6.1						
LBTB				LR	LR		
	comp=Z,2μm,22.0s,MS5.3						
LBTB	**Lobatse**	**69.92**	**105**	⇑*i*P	**P**	**01 26 36.9**	**+0.5**
LBTB				pmax	pmax		
	comp=Z,205nm,0.9s,mb6.1						
LBTB				MLR	MLR		
	comp=Z,2μm,22.0s,MS5.3						
SDV	**Santo Domingo**	**69.94**	**357**	⇑*i*P	**P**	**01 26 35.8**	**-0.7**
	comp=Z,30nm,0.8s,mb5.3						
SDV				LR	LR		
	comp=Z,275nm,20.0s,MS4.5						
TIAR	**Tiarei**	**70.79**	**269**	*e*P	**P**	**01 26 42.7**	**+0.9**
	comp=Z,107nm,1.0s,mb5.7						
PAE	**Paea**	**70.82**	**268**	*e*P	**P**	**01 26 44.1**	**+2.2**
	comp=Z,22nm,1.2s,mb5.0						
PAE	**Paea**	**70.82**	**268**	*e*P	**P**	**01 26 44.1**	**+2.2**
PAE				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.0						
BCIP	**Isla Barro Col**	**70.83**	**347**	⇑*i*P	**P**	**01 26 41.7**	**-0.3**
	comp=Z,26nm,0.7s,mb5.3						
BCIP				LR	LR		
	comp=Z,331nm,21.0s,MS4.6						
PPT	**Papeete**	**70.89**	**268**	*e*P	**P**	**01 26 44.6**	**+2.2**
	comp=Z,73nm,1.4s,mb5.4						
PPT				*e*S	S	01 35 56.3	-1.4
	comp=Z,2μm,26.2s						
PPT				*e*LR	LR	01 48 05.7	
	comp=Z,6μm,28.5s,baz=150						
PPT	**Papeete**	**70.89**	**268**	*e*P	**P**	**01 26 44.6**	**+2.2**
	comp=Z,73nm,1.4s,mb5.4						
PPT				*e*S	S	01 35 56.3	-1.4
PPT	**Papeete**	**70.89**	**268**	LR	LR	01 49 21.6	
	comp=Z,622nm,21.4s,MS4.8,baz=190,slow=29						
TSUM	**Tsumeb**	**71.08**	**95**	*e*P	**P**	**01 26 43.9**	**+0.3**
	comp=Z,18nm,0.9s,mb5.0						
TSUM				LR	LR		
	comp=Z,996nm,21.0s,MS5.0						
JTS	**JuntasAbangare**	**72.60**	**342**	*e*P	**P**	**01 26 53.2**	**+0.6**
	comp=Z,106nm,1.2s,mb5.6						
JTS				LR	LR		
	comp=Z,255nm,19.0s,MS4.5						
JTS	**JuntasAbangare**	**72.60**	**342**	⇑*i*P	**P**	**01 26 52.4**	**-0.1**
RAR	**Rarotonga**	**72.66**	**258**	LR	LR	01 51 15.9	
	comp=Z,631nm,18.5s,MS4.9,baz=273,slow=30						
MOO	**Moorlands**	**72.87**	**206**	*e*P	**P**	**01 26 54.4**	**+0.4**
GRGR	**Grenville**	**73.28**	**6**	*e*P	**P**	**01 26 53.4**	**-3.2**
	comp=Z,81nm,0.7s,mb5.8						
GRGR				LR	LR		
	comp=Z,701nm,20.0s,MS4.9						
TAOE	**Nuku Hiva Isla**	**73.89**	**281**	*e*LR	LR	01 49 46.5	
	comp=Z,3μm,27.2s						
BBGH	**Gun Hill**	**74.41**	**8**	PFAKE		01 27 10.0	+6.8
BBGH				LR	LR		
	comp=Z,905nm,19.0s,MS5.1						
BIM	**Bigot**	**75.68**	**7**	*e*P	**P**	**01 27 10.8**	**+0.4**
FDF	**Fort de France**	**75.89**	**6**	*e*P	**P**	**01 27 10.8**	**-0.8**
	comp=Z,197nm,1.1s,mb6.0						
FDF				LR	LR		
	comp=Z,480nm,21.0s,MS4.8						
FDF	**Fort de France**	**75.89**	**6**	*e*P	**P**	**01 27 10.8**	**-0.9**
FDF				pmax	pmax		
	comp=Z,197nm,1.1s,mb6.0						
FDF				MLR	MLR		
	comp=Z,480nm,21.0s,MS4.8						
FDF	**Fort de France**	**75.89**	**6**	*e*P	**P**	**01 27 12.0**	**+0.3**
TGUH	**Tegucigalpa,Un**	**76.65**	**340**	*e*P	**P**	**01 27 16.4**	**+0.3**
	comp=Z,192nm,1.2s,mb5.9						
TGUH				LR	LR		
	comp=Z,301nm,20.0s,MS4.6						
TOO	**Toolangi**	**77.90**	**206**	*e*P	**P**	**01 27 23.3**	**+0.3**
ANWB	**Willy Bob**	**78.77**	**6**	PFAKE		01 27 40.0	+12
ANWB				LR	LR		
	comp=Z,372nm,20.0s,MS4.7						
ICM	**Isla Caja Muer**	**78.86**	**1**	*e*P	**P**	**01 27 27.1**	**-1.2**
CRPR	**Cabo Rojo, PR**	**78.97**	**1**	*e*P	**P**	**01 27 28.5**	**-0.4**
	comp=Z,26nm,0.9s,mb5.2						
OBIP	**Obispado Ponce**	**79.01**	**1**	*e*P	**P**	**01 27 28.1**	**-1.0**
	comp=Z,171nm,1.3s,mb5.8						
CELP	**Cerrillos**	**79.04**	**1**	*e*P	**P**	**01 27 28.0**	**-1.2**
SJG	**San Juan**	**79.08**	**1**	*e*P	**P**	**01 27 28.1**	**-1.4**
	comp=Z,57nm,1.2s,mb5.4						
SJG				LR	LR		
	comp=Z,617nm,20.0s,MS4.9						
SJG	**San Juan**	**79.08**	**1**	P	**P**	**01 27 27.7**	**-1.8**
	comp=Z,34nm,1.1s,mb5.2,baz=191,slow=1.4,SNR=4.0						
SJG	**San Juan**	**79.08**	**1**	P	**P**	**01 27 27.7**	**-1.8**
SJG				pmax	pmax		
	comp=Z,34nm,1.1s						
HUMP	**Col San Antoni**	**79.11**	**2**	*e*P	**P**	**01 27 28.9**	**-0.8**
CNB	**Canberra Magne**	**79.18**	**210**	*e*P	**P**	**01 27 30.6**	**+0.6**
CBYP	**Canovanas**	**79.24**	**2**	*e*P	**P**	**01 27 28.5**	**-1.9**
	comp=Z,67nm,1.1s,mb5.5						
LRS	**Lares**	**79.25**	**1**	*e*P	**P**	**01 27 28.3**	**-2.1**
CAN	**Canberra**	**79.26**	**210**	*e*P	**P**	**01 27 30.8**	**+0.3**
	comp=Z,107nm,1.5s,mb5.5						
CAN				LR	LR		
	comp=Z,1μm,19.0s,MS5.2						
CAN	**Canberra**	**79.26**	**210**	*e*P	**P**	**01 27 30.8**	**+0.3**
CAN				pmax	pmax		
	comp=Z,107nm,1.5s,mb5.5						
CAN				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.2						
SDDR	**Presa de Saban**	**79.99**	**356**	*e*P	**P**	**01 27 34.3**	**-0.1**
	comp=Z,79nm,1.3s,mb5.5						
SDDR				LR	LR		
	comp=Z,421nm,21.0s,MS4.8						
YNG	**Young**	**80.38**	**210**	*e*P	**P**	**01 27 36.6**	**0.0**
	comp=Z,21nm,0.9s,mb5.1						
CMIG	**Matias Romero**	**81.05**	**334**	P	**P**	**01 27 39.0**	**-1.1**
	comp=Z,28nm,1.1s,mb5.1,baz=174,slow=4.7,SNR=12						
GTBY	**Guantanamo Bay**	**81.10**	**353**	*e*P	**P**	**01 27 39.1**	**-1.2**
	comp=Z,130nm,1.4s,mb5.7						
LIC	**Lamto**	**82.71**	**63**	*e*P	**P**	**01 27 49.5**	**+0.5**
	comp=Z,297nm,1.4s,mb6.1						
LIC	**Lamto**	**82.71**	**63**	⇑*i*P	**P**	**01 27 49.5**	**+0.5**
	comp=Z,319nm,1.4s,mb5.9						
LIC				*e*MLR	MLR		
	comp=Z,834nm,19.2s,MS4.8						
LIC	**Lamto**	**82.71**	**63**	⇑*i*P	**P**	**01 27 49.5**	**+0.5**
	comp=Z,160nm,1.4s,mb5.9						
LIC				LR	LR		
	comp=Z,420nm,19.3s,MS4.8						
TEIG	**Tepich**	**82.86**	**341**	*e*P	**P**	**01 27 49.6**	**0.0**
	comp=Z,110nm,1.2s,mb5.8						
KIC	**Kosan Boka**	**82.95**	**63**	*e*P	**P**	**01 27 50.7**	**+0.4**
	comp=Z,257nm,1.2s,mb6.1						
TIC	**Toumodi**	**83.09**	**63**	*e*P	**P**	**01 27 51.4**	**+0.4**
	comp=Z,241nm,1.2s,mb6.1						
TIC	**Toumodi**	**83.09**	**63**	*e*P	**P**	**01 27 51.4**	**+0.4**
TIC				pmax	pmax		
	comp=Z,241nm,1.2s,mb6.1						
DBIC	**Dimbokro**	**83.18**	**63**	*e*P	**P**	**01 27 52.2**	**+0.7**
	comp=Z,100nm,1.3s,mb5.7						
DBIC				LR	LR		
	comp=Z,713nm,19.0s,MS5.1						
DBIC	**Dimbokro**	**83.18**	**63**	P	**P**	**01 27 51.2**	**-0.3**
	comp=Z,36nm,1.0s,mb5.3,baz=190,slow=6.1,SNR=20						
DBIC				LR	LR	01 59 13.3	
	comp=Z,590nm,19.0s,MS5.0,baz=188,slow=32						
DBIC	**Dimbokro**	**83.18**	**63**	*e*P	**P**	**01 27 52.2**	**+0.7**
DBIC				pmax	pmax		
	comp=Z,100nm,1.3s						
DBIC				MLR	MLR		
	comp=Z,713nm,19.0s						
ARMA	**Armidale**	**83.25**	**213**	*e*P	**P**	**01 27 51.6**	**-0.2**
ARMA	**Armidale**	**83.25**	**213**	*e*P	**P**	**01 27 51.4**	**-0.4**
	comp=Z,74nm,1.2s,mb5.6						
STKA	**Stephens Creek**	**84.21**	**205**	*e*P	**P**	**01 27 56.3**	**-0.4**
	comp=Z,21nm,1.0s,mb5.2						
STKA	**Stephens Creek**	**84.21**	**205**	*e*P	**P**	**01 27 56.6**	**-0.1**
STKA	**Stephens Creek**	**84.21**	**205**	P	**P**	**01 27 55.4**	**-1.3**
	comp=Z,23nm,0.9s,mb5.3,baz=171,slow=7.8,SNR=14						
ABPO	**Ambohimpanom**	**84.78**	**120**	⇑*i*P	**P**	**01 28 01.4**	**+1.7**
	comp=Z,100nm,1.4s,mb5.8						
ABPO				LR	LR		
	comp=Z,714nm,20.0s,MS5.0						
ABPO	**Ambohimpanom**	**84.78**	**120**	⇑*i*P	**P**	**01 28 01.4**	**+1.7**
ABPO				pmax	pmax		
	comp=Z,101nm,1.4s,mb5.8						
ABPO				MLR	MLR		
	comp=Z,714nm,20.0s,MS5.0						
MSVF	**Nonsavu**	**85.69**	**241**	PFAKE		01 28 20.0	+16
MSVF				LR	LR		
	comp=Z,1μm,22.0s,MS5.3						
NWAO	**Narrogin (SRO)**	**86.09**	**184**	*e*P	**P**	**01 28 05.6**	**-0.4**
DZM	**Mont Dzumac**	**86.34**	**229**	*e*SS	SS	01 44 21.5	+0.3
	comp=Z,631nm,28.3s						
DZM				*e*LR	LR	01 55 26.1	
	comp=Z,5μm,28.6s						
KLBR	**Kellerberrin**	**87.40**	**185**	*e*P	**P**	**01 28 11.1**	**-1.4**
	comp=Z,51nm,0.9s,mb5.8						
KMBL	**Kambalda**	**87.40**	**188**	*e*P	**P**	**01 28 11.9**	**-0.6**
	comp=Z,137nm,1.0s,mb6.1						
FORT	**Forrest**	**87.43**	**193**	*e*P	**P**	**01 28 12.2**	**-0.4**
	comp=Z,53nm,0.8s,mb5.8						
FORT	**Forrest**	**87.43**	**193**	⇑*i*P	**P**	**01 28 11.7**	**-0.9**
	comp=Z,253nm,1.5s,mb6.2						
MRIV	**Mauritius Mete**	**87.68**	**130**	*e*P	**P**	**01 28 14.2**	**+0.2**
RMQ	**Roma**	**87.75**	**212**	*e*P	**P**	**01 28 14.5**	**+0.3**
	comp=Z,77nm,1.3s,mb5.8						
EIDS	**Eidsvold**	**89.19**	**214**	*e*P	**P**	**01 28 15.2**	**-1.2**
	comp=Z,51nm,1.5s,mb5.5						
DWPF	**Disney**	**89.73**	**348**	PFAKE		01 28 30.0	+6.8
DWPF				LR	LR		
	comp=Z,523nm,19.0s,MS5.0						
XMAS	**Kiritimati**	**91.68**	**271**	PFAKE		01 28 40.0	+7.2
XMAS				LR	LR		
	comp=Z,973nm,19.0s,MS5.3						
TORD	**Torodi Ar. Bea**	**91.81**	**66**	P	**P**	**01 28 34.0**	**+0.8**
TORD				PP	PP	01 32 11.2	-1.2
TORD				LR	LR	02 02 13.7	
TORD	**Torodi Ar. Bea**	**91.81**	**66**	P	**P**	**01 28 34.0**	**+0.8**
	comp=Z,33nm,0.9s,mb5.7,baz=229,slow=4.0,SNR=54						
TORD				PP	PP	01 32 11.2	-1.2
	comp=Z,9.3nm,1.0s,baz=207,slow=6.3,SNR=6.3						
TORD				LR	LR	02 02 13.7	
	comp=Z,619nm,19.6s,MS5.1,baz=195,slow=31						
KVTX	**Kingsville**	**91.81**	**333**	*e*P	**P**	**01 28 34.5**	**+1.6**
	comp=Z,163nm,1.1s,mb6.3						
BRAL	**Brewton**	**93.27**	**343**	*e*P	**P**	**01 28 39.9**	**+0.3**
	comp=Z,113nm,1.1s,mb6.2						
BRAL				LR	LR		
	comp=Z,260nm,19.0s,MS4.7						
MBAR	**Mbarara**	**93.52**	**98**	PFAKE		01 28 50.0	+8.8
MBAR				LR	LR		
	comp=Z,1μm,21.0s,MS5.3						

JCT Junction City 95.06 333 eP P 01 28 47.9 +0.1
comp=Z,22nm,1.1s,mb5.5
JCT LR LR
comp=Z,233nm,20.0s,MS4.7
JCT Junction City 95.06 333 eP P 01 28 47.9 +0.1
JCT pmax pmax
comp=Z,22nm,1.1s,mb5.5
JCT MLR MLR
comp=Z,233nm,20.0s,MS4.7
GOGA Godfrey 95.19 347 eP P 01 28 46.9 -1.4
comp=Z,20nm,1.2s,mb5.4
GOGA LR LR
comp=Z,318nm,20.0s,MS4.8
GOGA Godfrey 95.19 347 eP P 01 28 46.9 -1.4
GOGA pmax pmax
comp=Z,21nm,1.2s,mb5.4
GOGA MLR MLR
comp=Z,318nm,20.0s,MS4.8
626A Big Bend Ranch 95.20 329 ⇓P P 01 28 49.8 +1.4
baz=95
NATX Nacogdoches 95.24 337 PFAKE 01 29 00.0 +11
NATX LR LR
comp=Z,204nm,21.0s,MS4.6
LRAL Lakeview Retre 95.25 344 eP P 01 28 48.7 +0.1
LRAL LR LR
comp=Z,257nm,21.0s,MS4.7
527A Woodward Ranch 95.64 329 ⇓P P 01 28 51.7 +1.2
baz=96
526A Mary Lane Ranc 95.68 329 ⇑P P 01 28 51.8 +1.2
baz=96
KMBO Kilima Mbogo 96.15 104 eP P 01 28 55.8 +2.5
comp=Z,16nm,1.4s,mb5.2
KMBO LR LR
comp=Z,1μm,22.0s,MS5.4
KMBO Kilima Mbogo 96.15 104 P **P 01 28 54.0 +0.7**
comp=Z,4.7nm,1.1s,mb4.8,baz=360,slow=24,SNR=6.1
KMBO LR LR 02 07 09.8
comp=Z,1μm,21.2s,MS5.3,baz=270,slow=32
CNNC Cliffs of the 96.50 352 PFAKE 01 29 10.0 +16
CNNC LR LR
comp=Z,299nm,20.0s,MS4.8
OXF Oxford 97.05 342 eP P 01 28 55.0 -1.8
comp=Z,38nm,1.2s,mb5.7
OXF LR LR
comp=Z,201nm,21.0s,MS4.6
OXF Oxford 97.05 342 eP P 01 28 55.0 -1.7
OXF pmax pmax
comp=Z,38nm,1.2s,mb5.7
OXF MLR MLR
comp=Z,201nm,21.0s,MS4.6
WRA Warramunga Arr 97.19 201 P **P 01 28 56.7 -1.3**
WRA PP PP 01 32 45.1 -8.2
WRA LR LR 02 07 52.4
WRA Warramunga Arr 97.19 201 P **P 01 28 56.7 -1.3**
comp=Z,20nm,0.8s,mb5.6,baz=176,slow=4.1,SNR=85
WRA PP PP 01 32 45.1 -8.2
comp=Z,2.5nm,1.0s,baz=198,slow=5.0,SNR=4.8
WRA LR LR 02 07 52.4
comp=Z,879nm,20.9s,MS5.2,baz=155,slow=32
CPCT Cooper Cave 97.32 346 eP P 01 28 57.0 -1.0
MNTX Cornudas Mount 97.56 328 eP P 01 28 59.0 -0.1
comp=Z,8.4nm,1.5s,mb5.0
MNTX LR LR
comp=Z,254nm,19.0s,MS4.7
MBWA Marble Bar 97.68 187 PFAKE 01 29 10.0 +10
MBWA LR LR
comp=Z,610nm,19.0s,MS5.1
MIAR Mount Ida 97.76 339 eP P 01 29 00.1 +0.2
comp=Z,19nm,1.3s,mb5.5
MIAR LR LR
comp=Z,167nm,20.0s,MS4.5
MIAR Mount Ida 97.76 339 eP P 01 29 00.1 +0.2
MIAR pmax pmax
comp=Z,19nm,1.3s,mb5.5
MIAR MLR MLR
comp=Z,167nm,20.0s,MS4.5
UALR University of 97.77 340 eP P 01 29 00.7 +0.7
GDL2 Guadalupe Moun 97.78 329 eP P 01 29 00.1 -0.1
comp=Z,0.8nm,0.2s,mb4.9
WVT Waverly 98.41 344 eP P 01 29 01.7 -1.1
comp=Z,8.3nm,1.1s,mb5.2
WVT LR LR
comp=Z,241nm,21.0s,MS4.7
WVT Waverly 98.41 344 eP P 01 29 01.7 -1.1
WVT pmax pmax
comp=Z,8.0nm,1.1s,mb5.2
WVT MLR MLR
comp=Z,241nm,21.0s,MS4.7
BLA Blacksburg 98.65 350 PFAKE 01 29 10.0 +6.1
BLA LR LR
comp=Z,211nm,19.0s,MS4.7
JSRW J. Sargeant Re 98.94 352 eP P 01 29 05.4 +0.3
WMOK Wichita Mounta 98.95 334 eP P 01 29 04.6 -0.7
comp=Z,12nm,1.3s,mb5.3
WMOK LR LR
comp=Z,228nm,20.0s,MS4.7
WMOK Wichita Mounta 98.95 334 eP P 01 29 04.6 -0.7
WMOK pmax pmax
comp=Z,12nm,1.3s,mb5.3
WMOK MLR MLR
comp=Z,228nm,20.0s,MS4.7
CBN Corbin 99.41 352 PFAKE 01 29 20.0 +13
CBN LR LR
comp=Z,258nm,22.0s,MS4.7
TUC Tucson 99.60 324 PFAKE 01 29 20.0 +12
TUC LR LR
comp=Z,133nm,20.0s,MS4.4
AMTX Amarillo 99.72 332 PFAKE 01 29 20.0 +11
AMTX LR LR
comp=Z,256nm,19.0s,MS4.8
FITZ Fitzroy Crossi 100.22 193 eP Pdif 01 29 09.5 -2.2
comp=Z,10nm,1.2s
WCI Wyandotte Cave 100.28 345 PFAKE 01 29 20.0 +8.0
WCI LR LR
comp=Z,261nm,20.0s,MS4.7
HNR Honiara 100.33 228 PFAKE 01 29 20.0 +7.8
HNR LR LR
comp=Z,649nm,20.0s,MS5.1
LAZ Ladron 100.58 328 ePdif Pdif 01 29 13.4 +0.1
CCM Cathedral Cave 100.80 341 ePdif Pdif 01 29 12.3 -2.0
comp=Z,13nm,1.1s
CCM LR LR
comp=Z,221nm,21.0s,MS4.7
CCM Cathedral Cave 100.80 341 eP Pdif 01 29 12.3 -2.0
CCM pmax pmax
comp=Z,13nm,1.1s
CCM MLR MLR
comp=Z,221nm,21.0s,MS4.7
ANMO Albuquerque 100.93 328 ePdif Pdif 01 29 13.4 -1.4
comp=Z,3.9nm,1.2s
ANMO LR LR
comp=Z,339nm,22.0s,MS4.8
ANMO Albuquerque 100.93 328 P Pdif 01 29 13.0 -1.9
comp=Z,0.6nm,0.7s,baz=139,slow=9.3,SNR=2.3
ANMO Albuquerque 100.93 328 P Pdif 01 29 13.0 -1.8
ANMO pmax pmax
comp=Z,1.0nm,0.7s
MCWV Mont Chateau 101.03 350 PFAKE 01 29 30.0 +15
MCWV LR LR
comp=Z,283nm,20.0s,MS4.8
MSEY Mahe Island 101.10 122 PFAKE 01 29 30.0 +14
MSEY LR LR
comp=Z,401nm,21.0s,MS4.9
SSPA Standing Stone 101.86 352 ePdif Pdif 01 29 17.7 -1.3
comp=Z,12nm,1.4s
ACSO Alum Creek Sta 101.89 348 PFAKE 01 29 30.0 +11
ACSO LR LR
comp=Z,278nm,22.0s,MS4.7
KSU1 Kansas State U 102.74 337 PFAKE 01 29 30.0 +7.1
KSU1 LR LR
comp=Z,207nm,20.0s,MS4.7
WUAZ Wupatki 102.77 325 PFAKE 01 29 30.0 +7.0
WUAZ LR LR
comp=Z,231nm,19.0s,MS4.7
HDIL Hopedale 102.96 343 PFAKE 01 29 30.0 +6.1
HDIL LR LR
comp=Z,250nm,20.0s,MS4.7
CBKS Cedar Bluff 103.08 335 PFAKE 01 29 30.0 +5.6
CBKS LR LR
comp=Z,179nm,19.0s,MS4.6
BINY Binghamton 103.31 354 PFAKE 01 29 40.0 +15
BINY LR LR
comp=Z,323nm,21.0s,MS4.8
SDCO Great Sand Dun 103.34 330 PFAKE 01 29 40.0 +14
SDCO LR LR
comp=Z,238nm,20.0s,MS4.7

ERPA Erie 103.49 351 PFAKE 01 29 40.0 +14
ERPA LR LR
comp=Z,309nm,21.0s,MS4.8
MVCO Mesa Verde 103.59 327 PFAKE 01 29 40.0 +13
MVCO LR LR
comp=Z,223nm,20.0s,MS4.7
AAM Ann Arbor 104.00 348 PFAKE 01 29 40.0 +11
AAM LR LR
comp=Z,287nm,21.0s,MS4.8
CMLA Cha da Macela 104.44 33 PFAKE 01 29 40.0 +10
CMLA LR LR
comp=Z,566nm,22.0s,MS5.1
PMG Port Moresby 104.47 216 PFAKE 01 29 40.0 +9.4
PMG LR LR
comp=Z,656nm,22.0s,MS5.1
NCB Newcomb 104.99 355 PFAKE 01 29 40.0 +7.1
NCB LR LR
comp=Z,308nm,21.0s,MS4.8
LBNH Lisbon 105.18 357 PFAKE 01 34 00.0 +13
LBNH LR LR
comp=Z,402nm,21.0s,MS4.9
DAC Darwin (Calif) 105.31 320 PFAKE 01 34 00.0 +13
DAC LR LR
comp=Z,210nm,22.0s,MS4.6
ISCO Idaho Springs 105.32 331 PFAKE 01 34 00.0 +13
ISCO LR LR
comp=Z,239nm,21.0s,MS4.7
JFWS Jewell Farm 105.41 343 PFAKE 01 34 00.0 +13
JFWS LR LR
comp=Z,223nm,21.0s,MS4.7
OGNE Ogallala 105.61 334 PFAKE 01 34 00.0 +12
OGNE LR LR
comp=Z,202nm,19.0s,MS4.7
LONY Lake Ozonia 105.65 355 PFAKE 01 34 00.0 +12
LONY LR LR
comp=Z,329nm,21.0s,MS4.8
COCO West Island 105.79 164 PFAKE 01 34 00.0 +11
COCO LR LR
comp=Z,516nm,19.0s,MS5.1
POHA Pohakuloa 106.10 282 PFAKE 01 34 00.0 +11
POHA LR LR
comp=Z,1μm,19.0s,MS5.4
PKME Peaks-Kenny Pk 106.15 359 PFAKE 01 34 00.0 +11
PKME LR LR
comp=Z,521nm,20.0s,MS5.1
TPH Tonopah 106.86 321 PFAKE 01 34 00.0 +10
TPH LR LR
comp=Z,239nm,21.0s,MS4.7
ECSD EROS Data Cent 107.23 338 PFAKE 01 34 00.0 +9.4
ECSD LR LR
comp=Z,231nm,22.0s,MS4.7
NVAR Mina Array Bea 107.51 320 PKKP PKKPbc 01 45 22.0 +17
comp=Z,2.9nm,0.7s,baz=291,slow=3.4,SNR=14
DUG Dugway 107.55 325 PFAKE 01 34 00.0 +8.7
DUG LR LR
comp=Z,147nm,20.0s,MS4.5
CMB Columbia Colle 107.81 319 PFAKE 01 34 00.0 +8.1
CMB LR LR
comp=Z,204nm,20.0s,MS4.7
COWI Conover 108.39 344 PFAKE 01 34 00.0 +7.3
COWI LR LR
comp=Z,243nm,20.0s,MS4.8
HWUT Hardware Ranch 108.53 327 PFAKE 01 34 00.0 +6.9
HWUT LR LR
comp=Z,204nm,21.0s,MS4.7
BMN Battle Mountai 109.03 322 PFAKE 01 34 10.0 +16
BMN LR LR
comp=Z,229nm,20.0s,MS4.7
RSSD Black Hills 109.07 333 ePKP PKiKP 01 33 53.8 -0.3
BW06 Boulder Array 109.09 329 PFAKE 01 34 10.0 +16
BW06 LR LR
comp=Z,236nm,19.0s,MS4.8
PDAR Pinedale Array 109.09 329 Pdiff Pdif 01 29 49.0 -2.1
comp=Z,0.1nm,0.4s,baz=59,slow=5.9,SNR=2.2
PDAR PKiKP PKiKP 01 33 53.0 -1.2
comp=Z,1.0nm,0.9s,baz=108,slow=4.8,SNR=6.1
PDAR PP PP 01 34 20.7 -2.5
comp=Z,6.8nm,1.2s,baz=160,slow=5.8,SNR=5.0
PDAR PKKPbc PKKPbc 01 45 01.1 +1.2
comp=Z,1.1nm,0.6s,baz=0.0,slow=4.4,SNR=8.9
SFS San Fernando 109.36 49 PFAKE 01 34 10.0 +15
SFS LR LR
comp=Z,657nm,22.0s,MS5.2
AHID Auburn Hatcher 109.49 327 PFAKE 01 34 10.0 +15
AHID LR LR
comp=Z,205nm,20.0s,MS4.7
LOHW Long Hollow 110.15 328 ePKP PKiKP 01 33 56.1 0.0
JOHN Johnston Islan 110.24 268 PFAKE 01 34 10.0 +13
JOHN LR LR
comp=Z,1μm,20.0s,MS5.5
MOOW Moose Ponds 110.31 328 ePKP PKiKP 01 33 56.4 0.0
IMW Indian Meadow 110.50 328 ePKP PKiKP 01 33 59.0 +2.2
EYMN Ely 110.52 343 PFAKE 01 34 10.0 +13
EYMN LR LR
comp=Z,240nm,19.0s,MS4.8
WDC Whiskeytown Da 110.81 318 PFAKE 01 34 10.0 +13
WDC LR LR
comp=Z,309nm,20.0s,MS4.9
LKWY Lake 110.99 329 PFAKE 01 34 10.0 +12
LKWY LR LR
comp=Z,322nm,19.0s,MS4.9
HLID Hailey 111.11 325 ePKP PKiKP 01 33 58.6 +0.6
HLID ePP PP 01 34 35.6 -2.2
HLID LR LR
comp=Z,187nm,19.0s,MS4.7
RLMT Red Lodge 111.23 330 PFAKE 01 34 10.0 +12
RLMT LR LR
comp=Z,298nm,19.0s,MS4.9
WVOR Wild Horse Val 111.29 322 PFAKE 01 34 10.0 +12
WVOR LR LR
comp=Z,197nm,19.0s,MS4.7
MOD Modoc 111.31 320 PFAKE 01 34 10.0 +12
MOD LR LR
comp=Z,246nm,19.0s,MS4.8
AGMN Agassiz Nation 111.53 340 PFAKE 01 34 10.0 +11
AGMN LR LR
comp=Z,228nm,21.0s,MS4.7
LAO LASA Array 112.00 332 PFAKE 01 34 10.0 +10
LAO LR LR
comp=Z,235nm,20.0s,MS4.8
BOZ Bozeman (W) 112.31 328 ePKP PKiKP 01 33 58.8 -1.4
BOZ LR LR
comp=Z,142nm,19.0s,MS4.6
MTE Manteigas 112.39 46 PFAKE 01 34 10.0 +10
MTE LR LR
comp=Z,549nm,22.0s,MS5.1
PAB San Pablo 112.76 49 PFAKE 01 34 10.0 +8.8
PAB LR LR
comp=Z,339nm,20.0s,MS4.9
HUMO Hull Mountain 112.78 319 PFAKE 01 34 10.0 +8.9
HUMO LR LR
comp=Z,313nm,20.0s,MS4.9
ESDC Sonseca Array 113.02 49 PKiKP PKiKP 01 34 01.4 -0.3
comp=Z,1.0nm,0.8s,baz=196,slow=1.0,SNR=6.1
ESDC PP PP 01 34 49.1 -2.3
comp=Z,0.2nm,0.3s,baz=208,slow=5.2,SNR=7.3
ESLA Sonseca Array 113.02 49 PFAKE 01 34 10.0 +8.3
ESLA LR LR
comp=Z,2μm,22.0s,MS5.7
DGMT Dagmar 113.25 334 PFAKE 01 34 10.0 +8.2
DGMT LR LR
comp=Z,245nm,19.0s,MS4.8
CHMT Chamberlain Mo 113.91 328 ePKP PKiKP 01 34 03.5 +0.3
MSO Missoula 114.01 327 ePKP PKiKP 01 34 03.3 0.0
MSO ePP PP 01 34 56.3 -2.1
MSO LR LR
comp=Z,133nm,21.0s,MS4.5
EGMT Eagleton 114.07 330 PFAKE 01 34 20.0 +17
EGMT LR LR
comp=Z,173nm,19.0s,MS4.7
SWMT Swartz Lake 114.65 327 ePKP PKiKP 01 34 04.6 0.0
SWMT ePP PP 01 35 03.5 +0.5
HAWA Hanford 115.16 323 PFAKE 01 34 20.0 +14
HAWA LR LR
comp=Z,183nm,19.0s,MS4.7
SCHQ Schefferville 115.72 1 PKP PKPdf 01 34 05.2 -1.2
comp=Z,6.3nm,0.9s,baz=94,slow=4.3,SNR=4.0
OD2 Odessa Site #2 115.83 324 ePKPdf PKPdf 01 34 07.2 +0.4
NEW Newport 116.18 326 ePKPdf PKPdf 01 34 06.8 -0.6
NEW LR LR
comp=Z,226nm,19.0s,MS4.8
SJPF Ste Jean 117.02 49 ePKIKP PKPdf 01 34 08.9 -0.4
comp=Z,23nm,1.1s
ETSF Etsaut 117.08 49 ePKIKP PKPdf 01 34 09.9 +0.5
comp=Z,9.7nm,1.0s

WDD Wield Dalam 117.19 65 PFAKE 01 34 20.0 +10
WDD LR LR
comp=Z,773nm,20.0s,MS5.3
NLWA Neilton Lookou 117.35 321 PFAKE 01 34 20.0 +10
NLWA LR LR
comp=Z,234nm,22.0s,MS4.8
JCW Jim Creek 117.49 322 ePKPdf PKPdf 01 34 10.2 +0.3
EPF Esparros 117.53 50 ePKIKP PKPdf 01 34 09.6 -0.6
VSL Villasalto 118.06 59 PFAKE 01 34 20.0 +8.6
VSL LR LR
comp=Z,518nm,19.0s,MS5.2
MTLF Montolieu 118.49 51 ePKIKP PKPdf 01 34 11.7 -0.4
FFC Flin Flon 118.77 338 ePKPdf PKPdf 01 34 12.0 -0.2
FFC LR LR
comp=Z,237nm,22.0s,MS4.8
LFF La Frestale 119.31 49 ePKIKP PKPdf 01 34 13.6 0.0
LASF Ste Croix 119.74 52 ePKIKP PKPdf 01 34 14.4 -0.1
comp=Z,36nm,1.2s
EDM Edmonton 119.75 330 ePKPdf PKPdf 01 34 13.1 -1.0
CAF Calviac 119.79 50 ePKIKP PKPdf 01 34 14.8 +0.3
comp=Z,14nm,1.1s
CEL Celeste 119.79 64 PFAKE 01 34 30.0 +15
CEL LR LR
comp=Z,904nm,21.0s,MS5.4
RJF Les Rejaudoux 119.91 50 ePKIKP PKPdf 01 34 14.7 0.0
comp=Z,31nm,1.5s
RJF eMLR MLR
comp=Z,624nm,21.2s,MS4.9
RJF Les Rejaudoux 119.91 50 ePKIKP PKPdf 01 34 14.7 0.0
RJF MLR MLR
comp=Z,620nm,21.3s,MS5.2
LMR La Mourre 120.14 54 ePKIKP PKPdf 01 34 15.2 -0.1
comp=Z,19nm,1.2s
SMRF Simiane la Rot 120.32 53 ePKIKP PKPdf 01 34 16.2 +0.6
comp=Z,11nm,1.0s
KSM Kuching 120.37 178 ePKPdf PKPdf 01 34 16.2 -0.5
KSM LR LR
comp=Z,414nm,21.0s,MS5.0
FRF La Foret Royal 120.38 54 ePKIKP PKPdf 01 34 15.8 +0.1
comp=Z,12nm,1.0s
MFF Saint Martin d 120.42 48 ePKIKP PKPdf 01 34 15.5 -0.2
comp=Z,15nm,1.0s
PGF Pioggiola 120.47 57 ePKIKP PKPdf 01 34 15.9 0.0
comp=Z,16nm,0.9s
QUIF Quistinic 120.49 45 ePKIKP PKPdf 01 34 15.6 -0.2
comp=Z,75nm,1.3s
CALN Calern 120.64 54 PKP PKPdf 01 34 16.9 +0.7
CALN Calern 120.64 54 ePKIKP PKPdf 01 34 16.9 +0.7
VIVF Saint-Julien-l 120.71 52 ePKIKP PKPdf 01 34 15.6 -0.7
comp=Z,10.0nm,1.0s
ROSF Rostrenen 120.82 44 ePKIKP PKPdf 01 34 15.9 -0.5
comp=Z,20nm,0.9s
REVF Revere 120.82 55 PKP PKPdf 01 34 16.3 -0.2
REVF Revere 120.82 55 ePKIKP PKPdf 01 34 16.3 -0.2
LUCF Luceram 120.94 55 PKP PKPdf 01 34 17.2 +0.4
LUCF Luceram 120.94 55 eP PKPdf 01 34 17.2 +0.4
SBF Sospel 120.95 55 ePKIKP PKPdf 01 34 16.9 +0.1
comp=Z,35nm,1.1s
TCF Toulx Ste Croi 121.00 49 ePKIKP PKPdf 01 34 16.9 +0.1
comp=Z,13nm,1.1s
SSB Saint Sauveur 121.02 52 PFAKE 01 34 30.0 +13
SSB LR LR
comp=Z,255nm,20.0s,MS4.9
AUTN L'Aution 121.06 54 PKP PKPdf 01 34 17.4 +0.4
AUTN L'Aution 121.06 54 ePKIKP PKPdf 01 34 17.4 +0.4
SAOF Saorge 121.10 55 PKP PKPdf 01 34 17.0 -0.1
SAOF Saorge 121.10 55 ePKIKP PKPdf 01 34 17.0 -0.1
CUC Castrocucco 121.19 63 PFAKE 01 34 30.0 +13
CUC LR LR
comp=Z,340nm,21.0s,MS5.0
ORIF Oris-en-Rattie 121.23 53 ePKIKP PKPdf 01 34 17.7 +0.4
comp=Z,12nm,1.0s
ORIF eMLR MLR
comp=Z,682nm,22.2s,MS4.9
MBDF Montbardon 121.41 54 ePKIKP PKPdf 01 34 18.0 +0.3
comp=Z,15nm,0.9s
BGF Bois d'Agland 121.47 50 ePKIKP PKPdf 01 34 17.8 +0.1
comp=Z,9.1nm,0.9s
EIL Elat 121.52 85 PKP PKPdf 01 34 19.1 +0.7
comp=Z,18nm,1.2s,baz=194,slow=2.7,SNR=5.9
GRR Gorron 121.69 46 ePKIKP PKPdf 01 34 17.8 -0.3
comp=Z,18nm,1.0s
AVF Avril sur Loir 121.85 50 ePKIKP PKPdf 01 34 18.2 -0.2
comp=Z,23nm,1.2s
SMF Signal de Mont 121.91 50 ePKIKP PKPdf 01 34 18.3 -0.2
comp=Z,22nm,1.1s
HYF Humbligny 121.99 49 ePKIKP PKPdf 01 34 18.6 -0.1
LPG La Plagne 122.05 53 ePKIKP PKPdf 01 34 20.0 +1.2
comp=Z,16nm,0.8s
LPL La Plagne 122.06 53 ePKIKP PKPdf 01 34 19.8 +0.9
comp=Z,21nm,1.0s
AQU L'Aquila 122.12 60 ePKPdf PKPdf 01 34 16.6 -2.5
AQU LR LR
comp=Z,838nm,21.0s,MS5.4
LDF La Druitiere 122.12 46 ePKIKP PKPdf 01 34 18.3 -0.6
comp=Z,7.3nm,0.9s
SSF Saint Saulge 122.13 50 ePKIKP PKPdf 01 34 18.7 -0.3
comp=Z,18nm,1.3s
FLN La Foliniere 122.14 46 ePKIKP PKPdf 01 34 18.6 -0.3
comp=Z,12nm,1.0s
FLN eMLR MLR
comp=Z,377nm,22.0s,MS4.7
FLN La Foliniere 122.14 46 ePKIKP PKPdf 01 34 18.6 -0.3
FLN MLR MLR
comp=Z,380nm,22.0s,MS5.0
VLC Villacollemand 122.37 56 PFAKE 01 34 30.0 +10
VLC LR LR
comp=Z,242nm,19.0s,MS4.9
LOR Lormes 122.44 50 ePKIKP PKPdf 01 34 19.5 0.0
comp=Z,27nm,1.2s
LOR eMLR MLR
comp=Z,926nm,23.0s,MS5.1
LOR Lormes 122.44 50 ePKIKP PKPdf 01 34 19.5 0.0
LOR MLR MLR
comp=Z,930nm,23.0s,MS5.4
CABF La Chapelle 122.72 52 ePKIKP PKPdf 01 34 20.3 +0.2
comp=Z,9.6nm,0.9s
IPM Ipoh 122.73 167 ePKPdf PKPdf 01 34 20.3 -0.9
KULM Kulim 123.49 166 ePKPdf PKPdf 01 34 21.6 -1.1
KULM LR LR
comp=Z,481nm,20.0s,MS5.2
SFTF Sexfontaines 123.66 50 ePKIKP PKPdf 01 34 22.1 +0.3
comp=Z,67nm,1.2s
MIDW Midway 123.76 268 PFAKE 01 34 30.0 +7.3
MIDW LR LR
comp=Z,644nm,20.0s,MS5.3
TUE Stuetta 123.87 54 ePKPdf PKPdf 01 34 22.6 +0.3
TUE LR LR
comp=Z,449nm,20.0s,MS5.1
MEZF Maizieres J'vi 123.91 50 ePKIKP PKPdf 01 34 22.8 +0.5
comp=Z,61nm,1.2s
BBS Basel-Blauen 123.97 52 eP PKPdf 01 34 22.8 +0.3
HAU Haudompre 123.98 51 ePKIKP PKPdf 01 34 22.7 +0.2
comp=Z,24nm,1.0s
HAU eMLR MLR
comp=Z,473nm,21.0s,MS4.8
HAU Haudompre 123.98 51 ePKIKP PKPdf 01 34 22.7 +0.2
HAU MLR MLR
comp=Z,470nm,21.0s,MS5.1
HINF Hinteralfeld 124.02 52 ePKIKP PKPdf 01 34 22.8 +0.3
comp=Z,59nm,1.4s
THEF They Montfort 124.03 51 PKP PKPdf 01 34 22.7 +0.1
THEF They Montfort 124.03 51 ePKIKP PKPdf 01 34 22.7 +0.1
TIR Tirane 124.07 65 PFAKE 01 34 30.0 +7.1
TIR LR LR
comp=Z,540nm,21.0s,MS5.2
MOF Molkenrain 124.15 52 PKP PKPdf 01 34 23.3 +0.5
MOF Molkenrain 124.15 52 ePKIKP PKPdf 01 34 23.3 +0.5
DAVOX Davos/Dischmat 124.33 54 PKP PKPdf 01 34 24.2 +1.0
comp=Z,20nm,0.8s,baz=176,slow=2.7,SNR=28
ECH Echery 124.46 52 PKP PKPdf 01 34 23.6 +0.2
ECH Echery 124.46 52 ePKIKP PKPdf 01 34 23.3 -0.1
ECH MLR MLR
comp=Z,299nm,20.0s,MS5.0
FELD Feldberg im Sc 124.50 52 eP PKPdf 01 34 23.6 +0.1
ASF Jabal al Asfar 124.53 85 PKP PKPdf 01 34 25.2 +1.1
comp=Z,6.5nm,0.9s,baz=72,slow=1.8,SNR=9.3
ASF Jabal al Asfar 124.53 85 PKIKP PKPdf 01 34 25.2 +1.1
ASF pmax pmax
comp=Z,7.0nm,0.9s
CDF Champ du Feu 124.67 51 ePKIKP PKPdf 01 34 24.1 +0.3
comp=Z,16nm,1.0s
DAVA Damuels 124.75 54⇑*is*PKiKP PKPdf 01 34 24.4 +0.4
comp=Z,54nm,1.1s,SNR=19
KKM Kota Kinabalu 124.85 185 PFAKE 01 34 40.0 +15
KKM LR LR

comp=Z,133nm,21.0s,MS4.6
FETA Feichten 124.86 55 *i* sPKiKP PKPdf 01 34 24.6 +0.4
comp=Z,32nm,1.2s,SNR=14
BAIF Baives 124.89 48 *e*PKIKP PKPdf 01 34 24.6 +0.5
comp=Z,35nm,1.1s
BFO Black Forest 125.00 52 *e*PKPdf PKPdf 01 34 24.7 +0.3
BFO *eL* 02 27 49.9
comp=Z,331nm,19.4s
TRI Trieste 125.02 58 PFAKE 01 34 40.0 +15
TRI LR LR
comp=Z,428nm,22.0s,MS5.1
DAV Davao City (W) 125.05 196 PFAKE 01 34 40.0 +14
DAV LR LR
comp=Z,254nm,19.0s,MS4.9
DOU Dourbes 125.06 49 PKP PKPdf 01 34 25.2 +0.7
CSS Prodhromos 125.09 80 *e*PKPdf PKPdf 01 34 24.9 -0.2
CSS LR LR
comp=Z,605nm,20.0s,MS5.3
GIVF Givet 125.15 49 *e*PKIKP PKPdf 01 34 25.1 +0.5
comp=Z,55nm,1.3s
RETA Reutte 125.26 54 *i* sPKiKP PKPdf 01 34 25.2 +0.3
comp=Z,28nm,1.1s,SNR=15
MOTA Moosalm 125.28 55⇓ *i*sPKiKP PKPdf 01 34 25.2 +0.2
comp=Z,25nm,1.0s,SNR=17
WLF Walferdange 125.28 50 PKP PKPdf 01 34 26.1 +1.2
WLF Walferdange 125.28 50 *e*PKPdf PKPdf 01 34 25.8 +0.9
WLF *eL* 02 21 48.1
comp=Z,426nm,21.8s
WLF Walferdange 125.28 50 *e*PKIKP PKPdf 01 34 25.7 +0.8
WLF MLR MLR
comp=Z,515nm,20.0s,MS5.2
SNF Seneffe 125.29 48 PKP PKPdf 01 34 25.6 +0.7
LANF Langenberg 125.33 51 PKP PKPdf 01 34 25.7 +0.7
LANF Langenberg 125.33 51 *e*PKIKP PKPdf 01 34 25.7 +0.7
ABTA Abfaltersbach 125.35 56⇑ *i*sPKiKP PKPdf 01 34 25.3 +0.1
comp=Z,19nm,1.1s
WTTA Wattenberg 125.42 55 *i* sPKiKP PKPdf 01 34 25.7 +0.5
comp=Z,51nm,1.2s,SNR=22
WATA Walderalm 125.45 55⇑ *i*sPKiKP PKPdf 01 34 25.6 +0.3
comp=Z,22nm,1.1s,SNR=12
BCLA Clavier 125.59 49 PKP PKPdf 01 34 26.2 +0.8
RUP Ruppelstein 125.65 50 *e*PKIKP PKPdf 01 34 26.3 +0.7
STU Stuttgart 125.69 52 *e*PKPdf PKPdf 01 34 26.3 +0.6
STU *eL* 02 28 19.0
comp=Z,310nm,19.5s
STU Stuttgart 125.69 52 *e*PKIKP PKPdf 01 34 26.1 +0.4
MYKA Terra Mystica 125.71 57⇑ *i*pPKiKP PKPdf 01 34 25.9 +0.1
comp=Z,27nm,1.2s
KBA Koelnbreinsper 125.95 56⇓ *i*pPKiKP PKPdf 01 34 26.1 -0.1
comp=Z,14nm,1.1s
OBKA Obir 125.98 58⇑ *i*pPKiKP PKPdf 01 34 27.1 +0.7
comp=Z,36nm,1.1s
MEM Membach 126.00 49 PKP PKPdf 01 34 27.3 +1.0
FUR Furstenfeldbru 126.01 54 *e*PKPdf PKPdf 01 34 26.7 +0.4
FUR *eL* 02 22 52.2
comp=Z,382nm,21.1s
BEBN Eben Emael 126.03 49 PKP PKPdf 01 34 27.4 +1.1
HGN Heimansgroeve 126.10 49 *e*P PKPdf 01 34 26.5 +0.1
comp=Z,30nm,1.2s
RJOB Jochberg 126.27 56 *e*PKPdf PKPdf 01 34 26.8 -0.1
RJOB *eL* 02 22 55.8
comp=Z,475nm,22.0s
SOKA Soboth 126.32 58⇑ *i*pPKiKP PKPdf 01 34 27.5 +0.5
comp=Z,13nm,0.9s
VTS Vitosha 126.55 67⇓ *i*P PKPdf 01 34 28.2 +0.6
VTS Vitosha 126.55 67⇓ *i*P PKPdf 01 34 28.2 +0.6
TNS Taunus Mts 126.59 51 *e*PKPdf PKPdf 01 34 28.5 +1.1
TNS *eL* 02 27 21.4
comp=Z,541nm,19.8s
ESK Eskdalemuir 126.79 40 *e*PKPdf PKPdf 01 34 26.8 -0.8
ESK LR LR
comp=Z,363nm,22.0s,MS5.0
EKA Eskdalemuir Ar 126.81 40 PKP PKPdf 01 34 27.8 +0.1
comp=Z,10nm,0.8s,baz=253,slow=2.2,SNR=24
EKA Eskdalemuir Ar 126.81 40 PKIKP PKPdf 01 34 27.8 +0.2
EKA pmax pmax
comp=Z,10.0nm,0.8s
SMDO Samad 126.92 111 P PKPdf 01 34 29.1 +0.1
SNR=11
MOA Molln 126.94 57⇑ *i*pPKiKP PKPdf 01 34 28.1 -0.1
comp=Z,18nm,0.9s,SNR=9.6
WBK Wadi Bani Khal 126.95 112 P PKPdf 01 34 29.9 +0.9
SNR=6.3
ARSA Arzberg 126.98 58⇑ *i*pPKiKP PKPdf 01 34 28.5 +0.3
comp=Z,18nm,0.9s,SNR=9.4
HOQ Hoqain 127.04 110 P PKPdf 01 34 29.2 0.0
SNR=6.8
NAY Al-Naaiem 127.11 96 *e*P PKPdf 01 34 28.2 -0.9
NAY AMb AMB 01 34 30.2
comp=Z,31nm,1.3s
BUG Bochum--Univer 127.14 49 *e*PKPdf PKPdf 01 34 29.3 +0.9
BUG *eL* 02 23 05.8
comp=Z,344nm,21.6s
GRFO Grafenberg 127.22 53 *e*PKPdf PKPdf 01 34 29.0 +0.4
GRA1 Grafenberg Arr 127.22 53 *e*PKPdf PKPdf 01 34 29.3 +0.7
GRA1 LR LR
comp=Z,300nm,21.6s,MS4.9
GRF Grafenberg Arr 127.22 53 *e*PKPdf PKPdf 01 34 29.3 +0.7
GRF *eL* 02 22 36.7
comp=Z,307nm,21.6s
KBD Kabd 127.26 97 *e*P PKPdf 01 34 28.9 -0.5
KBD AMb AMB 01 34 31.5
comp=Z,50nm,1.4s
WTSB Winterswijk 127.40 49 *e*P PKPdf 01 34 29.4 +0.5
comp=Z,45nm,1.4s
WET Wettzell 127.43 55 *e*PKPdf PKPdf 01 34 29.0 0.0
WET *eL* 02 25 16.2
comp=Z,372nm,21.4s
PKSM Moragy 127.45 61⇓ *i*P PKPdf 01 34 29.2 0.0
PKSM Moragy 127.45 61⇓ *i*P PKPdf 01 34 29.2 0.0
GEC2 GERESS Array S 127.52 55 *e*PKPdf PKPdf 01 34 29.3 +0.1
GEC2 *eL* 02 27 41.1
comp=Z,256nm,20.2s
MIB Mutribah 127.61 96 *e*P PKPdf 01 34 29.6 -0.5
MIB AMb AMB 01 34 31.4
comp=Z,87nm,1.1s
CONA Conrad Observa 127.66 58⇑ *i*pPKiKP PKPdf 01 34 29.4 -0.1
comp=Z,6.7nm,0.8s
ROTZ Rotzenmuhle 127.66 54 *e*PKPdf PKPdf 01 34 29.7 +0.2
ROTZ *eL* 02 23 37.9
comp=Z,260nm,21.6s
KHC Kasperske Hory 127.69 55 *e*PKPdf PKPdf 01 34 29.5 0.0
KHC Kasperske Hory 127.69 55 *e*PKIKP PKPdf 01 34 29.9 +0.4
KHC *eSS* SS 01 54 05.3 +22
KHC MLR MLR
comp=Z,500nm,20.2s,MS5.2
KHC Kasperske Hory 127.69 55 *e*PKPdf PKPdf 01 34 29.9 +0.4
KHC *ex* x 01 54 05.3
KHC AMS AMS 02 25 40.0
comp=Z,500nm,20.2s
SOP Sopron 127.75 58⇑ *e*PKP PKPdf 01 34 28.9 -0.8
WRAK Wrangell Islan 127.79 321 *e*PKPdf PKPdf 01 34 30.2 +0.8
WRAK LR LR
comp=Z,253nm,20.0s,MS4.9
IBBN Ibbenburen 128.02 49 *e*PKPdf PKPdf 01 34 31.0 +0.9
IBBN *eL* 02 22 56.5
comp=Z,527nm,22.0s
NKC Novy Kostel 128.13 54 *e*PKIKP PKPdf 01 34 31.4 +1.1
NKC MLR MLR
comp=Z,300nm,18.2s,MS5.0
NKC Novy Kostel 128.13 54 *e*PKPdf PKPdf 01 34 31.4 +1.1
NKC AMS AMS 02 22 50.0
comp=Z,300nm,18.2s
MOX Moxa 128.13 53 *e*PKP PKPdf 01 34 30.7 +0.4
comp=Z,21nm,1.2s
MOX
comp=Z,300nm,21.0s
MOX Moxa 128.13 53 *e*PKPdf PKPdf 01 34 30.9 +0.6
MOX *eL* 02 30 52.1
comp=Z,317nm,19.3s
MOX Moxa 128.13 53 *e*PKIKP PKPdf 01 34 30.7 +0.4
MOX pmax pmax
comp=Z,21nm,1.2s
MOX MLR MLR
comp=Z,300nm,21.0s,MS5.0
WERN Wernitzgruen 128.14 53 *e*PKPdf PKPdf 01 34 31.0 +0.6
CRAR CRAIOVA 128.18 66 PKIKP PKPdf 01 34 32.4 +1.8
GUNZ Gunzen 128.19 53 *e*PKPdf PKPdf 01 34 31.0 +0.6
WERD Werda 128.25 53 *e*PKPdf PKPdf 01 34 31.1 +0.6
BZS Buzias 128.25 63⇑ P PKPdf 01 34 31.1 +0.4
BZS Buzias 128.25 63⇑ *i*P PKPdf 01 34 31.1 +0.4
TANN Tannenbergstha 128.28 53 *e*PKPdf PKPdf 01 34 31.2 +0.6
TANN *eL* 02 28 50.5
comp=Z,231nm,20.7s
YKA Yellowknife Ar 128.46 334 PKP PKPdf 01 34 30.6 0.0
comp=Z,12nm,0.9s,baz=143,slow=2.2,SNR=11
YKA Yellowknife Ar 128.46 334 PKIKP PKPdf 01 34 30.6 0.0
YKA pmax pmax
comp=Z,12nm,0.9s
GZR Gura Zlata 128.57 64 P PKPdf 01 34 32.4 +1.0
TREC Trest 128.59 56 *e*PKIKP PKPdf 01 34 32.1 +0.9
TREC *eSS* SS 01 54 14.7 +20
TREC MLR MLR
comp=Z,300nm,20.4s,MS5.0
TREC Trest 128.59 56 *e*PKPdf PKPdf 01 34 32.1 +0.9
TREC *ex* x 01 37 54.9
TREC *ex* x 01 54 14.7
TREC AMS AMS 02 23 40.0
comp=Z,300nm,20.4s
BUD Budapest 128.61 60⇑ *e*PKP PKPdf 01 34 31.3 0.0
CLZ Clausthal 128.62 51 *e*PKPdf PKPdf 01 34 32.3 +1.1
CLZ *eL* 02 26 10.4
comp=Z,368nm,21.4s
NEUB Neuenburg 128.65 52 *e*PKPdf PKPdf 01 34 31.7 +0.4
NEUB *eL* 02 27 52.3
comp=Z,237nm,20.1s
PRU Pruhonice 128.76 55 *e*PKIKP PKPdf 01 34 32.6 +1.1
PRU *eSS* SS 01 54 21.6 +25
PRU MLR MLR
comp=Z,500nm,21.2s,MS5.2
PRU Pruhonice 128.76 55 *e*PKPdf PKPdf 01 34 32.6 +1.1
PRU *ex* x 01 37 47.9
PRU *ex* x 01 54 21.6
PRU AMS AMS 02 26 00.0
comp=Z,500nm,21.2s
PRA Prague 128.78 55 PKPdf PKPdf 01 34 33.0 +1.4
PRA AMS AMS 02 23 00.0
DLBC Dease Lake 128.79 323 *e*PKPdf PKPdf 01 34 32.2 +0.9
BHD Baghdad 129.04 91 *ex* x 01 31 15.0
BHD *i x* x 01 34 02.5
BHD *i x* x 01 36 32.0
BHD *i x* x 01 37 54.0
BHD *i x* x 01 41 38.3
BHD *i x* x 01 46 48.3
NRDL Niedersach Rie 129.04 50 *e*PKPdf PKPdf 01 34 31.8 -0.2
NRDL *eL* 02 27 19.7
comp=Z,350nm,20.7s
VRAC Vranov 129.04 57 PKP PKPdf 01 34 31.7 -0.4
comp=Z,9.5nm,1.0s,baz=225,slow=2.9,SNR=22
VRAC Vranov 129.04 57⇓ PKIKP PKPdf 01 34 32.8 +0.7
VRAC Vranov 129.04 57⇓ *i*P PKPdf 01 34 32.8 +0.7
BR131 Keskin Array S 129.06 77 *e*PKPdf PKPdf 01 34 32.8 +0.3
BR131 LR LR
comp=Z,397nm,20.0s,MS5.1
BRTR Keskin Array B 129.06 77 PKP PKPdf 01 34 32.6 +0.2
comp=Z,15nm,0.9s,baz=184,slow=3.7,SNR=50
BRTR Keskin Array B 129.06 77 PKIKP PKPdf 01 34 32.7 +0.2
BRTR pmax pmax
comp=Z,15nm,1.0s
PVCC Panska Ves 129.19 55 *e*PKIKP PKPdf 01 34 33.4 +1.1
PVCC MLR MLR
comp=Z,400nm,29.1s,MS4.9
PVCC Panska Ves 129.19 55 *e*PKPdf PKPdf 01 34 33.4 +1.1
PVCC AMS AMS 02 21 10.0
comp=Z,400nm,29.1s
CLL Collm 129.20 53 *e*PKPdf PKPdf 01 34 32.5 +0.2
CLL *eL* 02 27 27.4
comp=Z,296nm,20.1s
CLL Collm 129.20 53⇑ *i*PKIKP PKPdf 01 34 32.2 -0.1
CLL pmax pmax
comp=Z,27nm,1.2s
CLL MLR MLR
comp=Z,300nm,20.1s,MS5.0
CLL Collm 129.20 53⇑ *i*PKPdf PKPdf 01 34 32.2 -0.1
comp=Z,27nm,1.2s
CLL *e* 01 48 00.0
CLL *ePPS* 01 48 29.0
CLL *eSS* SS 01 54 24.0 +22
CLL *eSSS* 01 59 00.0
CLL *eSSSS* 02 02 24.0
CLL LmV 02 27 00.0
comp=Z,300nm,20.1s
KOLL Kolacno 129.21 59 *e*PKP PKPdf 01 34 33.3 +0.8
KOLL Kolacno 129.21 59 *e*PKP PKPdf 01 34 33.3 +0.8
BRG Berggiesshubel 129.22 54 *e*PKPdf PKPdf 01 34 32.9 +0.5
BRG *eL* 02 24 00.8
comp=Z,439nm,21.9s
BRG Berggiesshubel 129.22 54 *i* PKP PKPdf 01 34 32.8 +0.4
comp=Z,38nm,1.7s
BRG
comp=N,282nm,22.0s
BRG
comp=E,244nm,24.9s
BRG
comp=Z,429nm,18.8s
BRG Berggiesshubel 129.22 54 *i* PKIKP PKPdf 01 34 32.8 +0.4
BRG pmax pmax
comp=Z,23nm,1.7s
BRG MLR MLR
comp=N,169nm,22.0s,MS4.8
BRG MLR MLR
comp=E,146nm,24.9s,MS4.8
BRG MLR MLR
comp=Z,257nm,18.8s
PSZ Piszkesteto 129.32 60 *e*PKPdf PKPdf 01 34 33.3 +0.6
PSZ LR LR
comp=Z,267nm,20.0s,MS4.9
PSZ Piszkesteto 129.32 60⇑ PKIKP PKPdf 01 34 32.8 +0.1
PSZ Piszkesteto 129.32 60⇑ *i*P PKPdf 01 34 32.8 +0.1
PSZ Piszkesteto 129.32 60⇑ *e*PKP PKPdf 01 34 33.2 +0.5
VYHS Vyhne 129.33 59 *e*PKP PKPdf 01 34 32.6 -0.1
VYHS Vyhne 129.33 59 *e*PKP PKPdf 01 34 32.6 -0.1
POO Poona 129.46 130 *ex* PKPdf 01 34 33.0 -0.9
HLG Helgoland 129.57 48 *e*L 02 23 47.8
comp=Z,401nm,22.0s
VOIR 129.61 66⇑ P PKPdf 01 34 33.3 0.0
VOIR 129.61 66⇑ *i*P PKPdf 01 34 33.3 0.0
DRGR 129.64 63⇑ P PKPdf 01 34 33.8 +0.5
DRGR 129.64 63⇑ *i*P PKPdf 01 34 33.8 +0.5
UPC Upice 129.75 56 *e*PKIKP PKPdf 01 34 34.3 +0.9
UPC Upice 129.75 56 *e*PKPdf PKPdf 01 34 34.3 +0.9
DPC Dobruska-Polom 129.75 56 *e*PKIKP PKPdf 01 34 34.7 +1.3
DPC *eSS* SS 01 54 34.1 +25
DPC MLR MLR
comp=Z,400nm,23.9s,MS5.0
DPC Dobruska-Polom 129.75 56 *e*PKPdf PKPdf 01 34 34.7 +1.3
DPC *eSKP* 01 38 00.8
DPC *ex* x 01 54 34.1
DPC AMS AMS 02 24 10.0
comp=Z,400nm,23.9s
MORC Moravsky Berou 129.80 57 *e*PKPdf PKPdf 01 34 33.7 +0.2
MORC Moravsky Berou 129.80 57⇑ PKIKP PKPdf 01 34 33.8 +0.3
MORC Moravsky Berou 129.80 57⇑ *i*P PKPdf 01 34 33.8 +0.3
KECO Kecovo 130.01 60 *e*PKP PKPdf 01 34 34.5 +0.5
KECS Kecovo 130.01 60 *e*PKP PKPdf 01 34 34.5 +0.5
MLR Muntele Rosu 130.04 66⇑ P PKPdf 01 34 34.1 0.0
MLR Muntele Rosu 130.04 66⇑ *i*P PKPdf 01 34 34.1 0.0
OKC Ostrava-Krasne 130.09 58 *e*PKIKP PKPdf 01 34 35.3 +1.2
OKC MLR MLR
comp=Z,300nm,17.9s,MS5.0
OKC Ostrava-Krasne 130.09 58 *e*PKPdf PKPdf 01 34 35.3 +1.2
OKC *eSKP* 01 38 00.1
OKC AMS AMS 02 24 00.0
comp=Z,300nm,17.9s
HYB Hyderabad 130.10 136 *i* P PKPdf 01 34 35.0 -0.1
KSP Ksiaz 130.12 56 *e*PKP PKPdf 01 34 35.1 +1.0
MALT Malatya 130.22 82 *e*PKPdf PKPdf 01 34 35.0 +0.2
MALT LR LR
comp=Z,261nm,22.0s,MS4.9
MALT Malatya 130.22 82⇑ PKIKP PKPdf 01 34 35.6 +0.9
MALT Malatya 130.22 82⇑ *i*P PKPdf 01 34 35.6 +0.9
BSEG Bad Segeberg 130.25 49 *e*PKPdf PKPdf 01 34 35.1 +0.9
BSEG *eL* 02 26 01.7
comp=Z,259nm,19.7s
RAC Raciborz 130.30 57 *e*PKIKP PKPdf 01 34 35.7 +1.2
TIRR Tirgusor 130.35 69 *e*PKPdf PKPdf 01 34 34.9 +0.1
TIRR Tirgusor 130.35 69⇑ *i*P PKPdf 01 34 34.9 +0.1
RUE Ruedersdorf 130.41 53 *e*PKPdf PKPdf 01 34 35.0 +0.4
PLOR Plostina 130.64 67⇑ PKIKP PKPdf 01 34 34.3 -0.9
PLOR Plostina 130.64 67⇑ *i*P PKPdf 01 34 34.3 -0.9
NIE Niedzica 130.66 59 *e*PKPdf PKPdf 01 34 35.6 +0.4
BMR Baia Mare 130.66 63 P PKPdf 01 34 36.1 +0.9
VRI Vrincioaia 130.68 67⇑ P PKPdf 01 34 34.8 -0.5
VRI Vrincioaia 130.68 67⇑ *i*P PKPdf 01 34 34.8 -0.5
CRVS Cervenica-Dubn 130.74 61 *e*PKP PKPdf 01 34 35.3 0.0
CRVS Cervenica-Dubn 130.74 61 *e*PKP PKPdf 01 34 35.3 0.0
UZH Uzhgorod 130.88 61⇑ *i*PKIKP PKPdf 01 34 36.0 +0.4
UZH *e* 01 34 37.8
UZH *e* 01 36 54.7
UZH *e* 01 41 44.6
UZH *e* 01 48 39.0
STHS Stebnicka Huta 131.05 60 *e*PKP PKPdf 01 34 34.3 -1.6
STHS Stebnicka Huta 131.05 60 *e*PKP PKPdf 01 34 34.3 -1.6
OJC Ojcow 131.06 58 *e*PKP PKPdf 01 34 36.5 +0.6
TESR 131.14 66⇑ P PKPdf 01 34 35.9 -0.3
TESR 131.14 66⇑ *i*P PKPdf 01 34 35.9 -0.3
SKAG Skagway 131.20 321 *e*PKPdf PKPdf 01 34 37.0 +1.1
BUR01 Bucovina Ar. S 131.36 64 P PKPdf 01 34 37.5 +1.0
BURAR Bucovina Array 131.36 64⇓ P PKPdf 01 34 37.0 +0.5
BURAR Bucovina Array 131.36 64⇓ *i*P PKPdf 01 34 37.0 +0.4
BUR08 Bucovina Ar. S 131.38 64 *e*PKPdf PKPdf 01 34 37.5 +0.9
MUD Monsted U'grnd 131.81 46⇑ *i*PKIKP PKPdf 01 34 37.9 +0.8
MUD pmax pmax
comp=Z,15nm,1.1s
MUD Monsted U'grnd 131.81 46⇑ *i*P PKPdf 01 34 37.9 +0.8
comp=Z,15nm,1.1s
KWP Kalwaria Pacla 131.83 61 *e*PKP PKPdf 01 34 37.8 +0.5
KWP Kalwaria Pacla 131.83 61 *e*PKIKP PKPdf 01 34 37.6 +0.2
KWP MLR MLR
comp=Z,621nm,20.0s,MS5.3
KWP Kalwaria Pacla 131.83 61⇑ *i*P PKPdf 01 34 37.8 +0.4
RGN Rugen 131.84 51 *eL* 02 28 49.0
comp=Z,431nm,20.3s
IAS Iasi 132.07 66 P PKPdf 01 34 38.5 +0.5
GKP Gorka Klasztor 132.36 54 *e*PKP PKPdf 01 34 38.7 +0.4
KIS Kishinev 132.48 67 *e*PKIKP PKPdf 01 34 38.0 -0.7
KIS MLR MLR
comp=Z,200nm,20.0s,MS4.8
KIS MLR MLR
comp=Z,300nm,24.0s
LVV L'vov 132.53 61 *e*PKIKP PKPdf 01 34 39.3 +0.6
PNL Peninsula 132.63 319 *e*PKPdf PKPdf 01 34 39.6 +1.1
BSD Bornholm Skovb 132.87 51⇑ *i*PKIKP PKPdf 01 34 38.7 -0.5
BSD Bornholm Skovb 132.87 51⇑ *i*P PKPdf 01 34 38.7 -0.5
SIM Simferopol' 133.33 73 *i* PKIKP PKPdf 01 34 40.3 -0.1
SIM *e* 01 37 08.0
SIM pmax pmax
comp=Z,12nm,0.8s
SIM MLR MLR
comp=Z,480nm,22.6s,MS5.2
KONO Kongsberg 134.41 44 PFAKE 01 34 50.0 +8.1
KONO LR LR
comp=Z,687nm,22.0s,MS5.3
GNI Garni 134.69 86 *e*PKPdf PKPdf 01 34 43.3 +0.2
GNI LR LR
comp=Z,401nm,21.0s,MS5.1
GNI Garni 134.69 86 PKP PKPdf 01 34 42.8 -0.3
comp=Z,6.5nm,0.7s,baz=54,slow=10,SNR=6.4
GNI Garni 134.69 86 PKIKP PKPdf 01 34 42.8 -0.3
GNI pmax pmax
comp=Z,7.0nm,0.7s
SOC Sochi 134.92 78 *i* PKIKP PKPdf 01 34 43.3 -0.1
SOC *e* 01 37 16.3
SOC pmax pmax
comp=Z,16nm,0.8s
SUMG Summit 135.02 12 *e*PKPdf PKPdf 01 34 43.9 +1.2
SUMG Summit 135.02 12 *i* P PKPdf 01 34 44.0 +1.3
comp=Z,35nm,1.0s
SUW Suwalki 135.29 57 *e*PKPdf PKPdf 01 34 42.9 -0.8
BMRM Bremner River 135.30 317 *e*PKPdf PKPdf 01 34 43.7 +0.1
KIEV Kiev 135.41 64 *e*PKPpre PKPpre 01 34 35.5
KIEV *e*PKPdf PKPdf 01 34 43.6 -0.5
KIEV LR LR
comp=Z,265nm,21.0s,MS4.9
AKASG Malin Array Be 135.42 64 PKP PKPpre 01 34 34.4
AKASG PKP PKPdf 01 34 43.2 -0.9
AKASG PP PP 01 37 20.4 -1.4
AKASG Malin Array Be 135.42 64 PKhKP PKPpre 01 34 34.4
comp=Z,5.3nm,0.6s,baz=220,slow=0.9,SNR=22
AKASG PKP PKPdf 01 34 43.2 -0.9
comp=Z,9.8nm,0.8s,baz=247,slow=2.0,SNR=16
AKASG PP PP 01 37 20.4 -1.4
comp=Z,0.9nm,0.6s,baz=224,slow=6.9,SNR=6.0
AKASG Malin Array Be 135.42 64 PKHKP PKPpre 01 34 34.4
AKASG 01 34 43.2
AKASG 01 37 20.4
AKASG pmax pmax
comp=Z,5.0nm,0.6s
AKASG pmax pmax
comp=Z,10.0nm,0.8s
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKBB Malin Array Si 135.42 64 *e*PKPpre PKPpre 01 34 36.5
AKBB *e*PKPdf PKPdf 01 34 43.6 -0.5
OHAK Old Harbor 135.60 309 *e*PKPdf PKPdf 01 34 43.4 -0.9
NAO01 NORSAR Array S 135.73 43 *e*PKPdf PKPdf 01 34 44.1 -0.2
KDAK Kodiak Island 135.74 310 *e*PKPdf PKPdf 01 34 43.8 -0.6
KDAK LR LR
comp=Z,256nm,20.0s,MS5.0
KDAK Kodiak Island 135.74 310 PKP PKPdf 01 34 43.6 -0.9
comp=Z,16nm,0.9s,baz=95,slow=4.5,SNR=6.5
KDAK Kodiak Island 135.74 310 PKIKP PKPdf 01 34 43.6 -0.9
KDAK pmax pmax
comp=Z,16nm,1.0s
DIV Divide 135.80 317 *e*PKPdf PKPdf 01 34 44.8 +0.3
DIV *e*SKPbc SKPbc 01 38 16.2 +0.6
NOA NORSAR Array B 135.98 43 PKP PKPdf 01 34 44.8 0.0
comp=Z,14nm,0.9s,baz=226,slow=1.8,SNR=33
NOA NORSAR Array B 135.98 43 PKIKP PKPdf 01 34 44.8 0.0
NOA pmax pmax
comp=Z,14nm,0.9s
DAWY Dawson 136.01 323 *e*PKPdf PKPdf 01 34 45.1 +0.4
HFS Hagfors 136.16 46 PKhKP PKPpre 01 34 37.3
comp=Z,2.2nm,0.9s,baz=193,slow=6.1,SNR=5.4
HFS PKP PKPdf 01 34 43.8 -1.3
comp=Z,15nm,0.9s,baz=177,slow=2.7,SNR=19
HFS Hagfors 136.16 46 PKHKP PKPpre 01 34 37.3
HFS 01 34 43.8
HFS pmax pmax
comp=Z,2.0nm,1.0s
HFS pmax pmax
comp=Z,15nm,0.9s
CM31 Chiang Mai Arr 136.22 161 *e*PKPdf PKPdf 01 34 46.7 +0.1
CMAR Chiang Mai Arr 136.22 161 PKHKP PKPpre 01 34 40.8
comp=Z,0.5nm,0.4s,baz=233,slow=4.1,SNR=4.0
CMAR PKP PKPdf 01 34 45.1 -1.5
comp=Z,11nm,0.9s,baz=222,slow=3.6,SNR=30
CMAR PP PP 01 37 25.3 -1.0
comp=Z,3.6nm,0.9s,baz=206,slow=5.7,SNR=7.8
CMAR Chiang Mai Arr 136.22 161 PKIKP PKPpre 01 34 40.8
CMAR 01 34 45.1
CMAR 01 37 25.3
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CMAR pmax pmax
comp=Z,11nm,0.9s
CMAR pmax pmax
comp=Z,4.0nm,0.9s
ZEI Tsey 136.30 82 *i* PKIKP PKPdf 01 34 42.0 -4.0
ZEI pmax pmax
comp=Z,19nm,1.4s
MENT Mentasta 136.48 320 *e*PKPdf PKPdf 01 34 46.3 +0.7
CHTO Chiang Mai 136.57 161 *e*PKPdf PKPdf 01 34 47.3 0.0
CHTO LR LR
comp=Z,355nm,21.0s,MS5.1
CHTO Chiang Mai 136.57 161 P PKPdf 01 34 47.9 +0.6
SNR=7.4
KIV Kislovodsk 136.61 80 *e*PKPdf PKPdf 01 34 46.7 +0.1
KIV LR LR
comp=Z,199nm,19.0s,MS4.9
KIV Kislovodsk 136.61 80 *e*PKIKP PKPdf 01 34 46.7 +0.2
KIV pmax pmax
comp=Z,23nm,0.9s
KIV Kislovodsk 136.61 80 P PKPdf 01 34 46.2 -0.4
SNR=8.4
SLKM Skilak Lake 136.86 314 *e*PKPdf PKPdf 01 34 47.2 +0.7
EGAK Eagle 137.06 323 *e*PKPdf PKPdf 01 34 46.5 -0.2
EGAK LR LR
comp=Z,336nm,19.0s,MS5.1
DOT Dot Lake 137.10 320 *e*PKPdf PKPdf 01 34 47.1 +0.3
RC01 Rabbit Creek A 137.11 315 *e*PKPdf PKPdf 01 34 46.8 -0.1
SML Sawmill 137.15 316 *e*PKPdf PKPdf 01 34 45.2 -1.7
PMR Palmer 137.26 316 *e*PKPdf PKPdf 01 34 46.7 -0.4
MNK Minsk 137.55 59 *e*PKIKP PKPdf 01 34 46.0 -1.9
MICGM Minsk 137.57 59 *e* PKPdf PKPdf 01 34 46.0 -1.9
INK Inuvik 137.65 330 *e*PKPdf PKPdf 01 34 47.2 -0.5
QIZ Qiongzhong 137.80 176 PKP PKPdf 01 34 49.5 0.0
QIZ SS SS 01 55 44.0 -1.0
QIZ AMB AMB
comp=Z,180nm,6.4s
QIZ LR LR

QIZ LR LR
comp=N,220nm,17.0s
QIZ LR LR
comp=Z,280nm,21.1s,MS5.0
MAK Makhachkala 138.18 85 *i* PKIKP PKPdf 01 34 48.1 -1.4
MAK *e* 01 41 59.1
MAK pmax pmax
comp=Z,346nm,1.4s
MAK MLR MLR
comp=Z,322nm,19.0s,MS5.1
MCK McKinley 138.70 318 *e*PKPdf PKPdf 01 34 49.3 -0.4
ILAR Eielson Array 138.77 320 PKhKP PKPpre 01 34 39.5
comp=Z,1.2nm,0.7s,baz=208,slow=2.9,SNR=14
ILAR PKP PKPdf 01 34 48.6 -1.2
comp=Z,15nm,0.9s,baz=154,slow=0.9,SNR=24
ILAR Eielson Array 138.77 320 PKHKP PKPpre 01 34 39.6
ILAR 01 34 48.6
ILAR pmax pmax
comp=Z,1.0nm,0.7s
ILAR pmax pmax
comp=Z,15nm,0.9s
TRF Thorofare Moun 138.94 317 *e*PKPdf PKPdf 01 34 49.6 -0.6
COLA College 139.14 320 *e*PKPdf PKPdf 01 34 48.7 -1.8
COLA LR LR
comp=Z,240nm,21.0s,MS4.9
PPLA Purkeypile 139.20 316 *e*PKPpre PKPpre 01 34 46.0
PPLA *e*PKPdf PKPdf 01 34 49.8 -0.9
BPAW Bear Paw Mtn. 139.61 318 *e*PKPpre PKPpre 01 34 40.9
BPAW *e*PKPdf PKPdf 01 34 49.9 -1.5
VSR Storozhevoye 140.21 70 *e*PKHKP PKPpre 01 34 45.2
VSR pmax pmax
comp=Z,10.0nm,1.1s
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,1.1s
TTA Tatalina 140.53 314 *e*PKPdf PKPdf 01 34 52.5 -0.6
DAG Danmarks Havn 141.13 16 *e*PKIKP PKPdf 01 34 54.0 +0.1
DAG pmax pmax
comp=Z,44nm,1.3s
DAG Danmarks Havn 141.13 16 *i* P PKPdf 01 34 54.0 +0.1
comp=Z,44nm,1.3s
VRHR Novokhopersk 141.25 72 *e*PKHKP PKPpre 01 34 48.9
VRHR pmax pmax
comp=N,10.0nm,1.0s
VRHR pmax pmax
comp=E,10.0nm,1.0s
VRHR pmax pmax
comp=Z,20nm,1.0s
KOLN Koldanda 141.39 137 *e*P PKPpre 01 34 49.0
comp=Z,48nm,1.0s
COLD Coldfoot 141.43 322 *e*PKPpre PKPpre 01 34 51.0
COLD *e*PKPdf PKPdf 01 34 54.3 -0.3
FINES FINESS Array B 141.50 50 PKP PKPpre 01 34 48.0
FINES FINESS Array B 141.50 50 PKhKP PKPpre 01 34 48.0
comp=Z,8.3nm,0.8s,baz=235,slow=1.8,SNR=22
FINES FINESS Array B 141.50 50 PKHKP PKPpre 01 34 48.0
FINES pmax pmax
comp=Z,8.0nm,0.8s
RAMN Ramite 141.57 141 *e*P PKPpre 01 34 50.1
comp=Z,57nm,0.8s
KBL Kabul 141.67 114 *e*PKPpre PKPpre 01 34 50.8
OBN Obninsk 141.68 64 *e*PKPpre PKPpre 01 34 49.7
OBN *e*PKPdf PKPdf 01 34 54.7 -0.7
OBN LR LR
comp=Z,436nm,21.0s,MS5.2
OBN Obninsk 141.68 64 *e*PKHKP PKPpre 01 34 49.9
OBN pmax pmax
comp=Z,19nm,0.9s
ADK Adak 141.69 289 PFAKE 01 35 10.0 +14
ADK LR LR
comp=Z,873nm,21.0s,MS5.5
ODAN Odare 141.72 142 *e*P PKPpre 01 34 50.6
comp=Z,75nm,1.1s
DMN Daman 141.73 139 *e*P PKPpre 01 34 50.3
comp=Z,58nm,1.0s
DDI Dehra Dun 141.73 128 *ex* PKPpre 01 34 49.8
PKI Pulchoki 141.79 139 *e*P PKPpre 01 34 50.5
comp=Z,60nm,1.1s
PKIN Phulchoki 141.79 139 *e*P PKPpre 01 34 50.5
GKN Gorkha 141.94 138 *e*P PKPpre 01 34 50.4
comp=Z,44nm,0.9s
KKN Kakani 141.95 139 *e*P PKPpre 01 34 50.8
comp=Z,65nm,1.2s
DANN Dangsing 141.98 137 *e*P PKPpre 01 34 51.2
comp=Z,74nm,0.8s
KAF Kangasniemi 142.01 50 *e*PKHKP PKPpre 01 34 48.7
KAF Kangasniemi 142.01 50 *e*pkp PKPpre 01 34 48.7
SSLB Suanglung 142.10 193 *e*PKPpre PKPpre 01 34 50.4
SSLB *e*PKPdf PKPdf 01 34 57.4 +0.1
GUN Gumba 142.25 140 *e*P PKPpre 01 34 52.6
TAPN Taplejung 142.28 143 *e*P PKPpre 01 34 52.8
YHNB Yeheng 142.93 194 *e*PKPpre PKPpre 01 34 52.6
YHNB LR LR
comp=Z,268nm,21.0s,MS5.0
TATO Taipei 143.22 194 PFAKE 01 35 10.0 +11
TATO LR LR
comp=Z,263nm,19.0s,MS5.0
KMI Kunming 143.31 165 PKP PKPdf 01 34 56.0 -3.3
KMI pPKP pPKPdf 01 35 03.5 +0.8
KMI sPKP 01 35 07.0
KMI AMB AMB
comp=Z,230nm,4.7s
KMI LR LR
comp=N,430nm,18.9s,MS5.2
KMI LR LR
comp=E,140nm,20.4s,MS5.2
KMI LR LR
comp=Z,560nm,18.4s,MS5.4
QZH Quanzhou 143.47 190 *i* PKPbc PKPdf 01 34 53.8 -5.8
QZH *e*PP PP 01 38 08.3 -2.5
QZH LR LR
comp=Z,450nm,20.1s,MS5.2
JOF Joensuu 144.35 51 *e*PKIKP PKPdf 01 34 57.2 -2.7
JOF Joensuu 144.35 51 *e*pkp PKPdf 01 34 57.2 -2.7
KTK1 Kautokeino 145.00 39 *i* P PKPdf 01 35 01.0 +0.1
GYA Guiyang 145.02 171 PKPbc PKPbc 01 35 02.8 +1.2
GYA PP PP 01 38 24.5 +4.4
GYA PKS 01 38 39.0
GYA SKS SKSdf 01 42 10.5 -0.8
GYA SKKS SKKSac 01 45 14.5 +1.9
GYA SS SS 01 57 13.0 +3.9
GYA AMB AMB
comp=Z,140nm,7.9s
GYA LR LR
comp=N,710nm,20.9s,MS5.6
GYA LR LR
comp=E,690nm,21.5s,MS5.6
GYA LR LR
comp=Z,860nm,20.7s,MS5.5
LSA Lhasa 145.47 146 *e*PKPbc PKPbc 01 35 03.9 +1.0
ARCES ARCESS Array B 145.96 39 PKPbc PKPbc 01 35 03.3 0.0
comp=Z,63nm,0.7s,baz=230,slow=1.9,SNR=214
ARCES ARCESS Array B 145.96 39 PKP2 PKPab 01 35 03.3 -0.6
ARCES pmax pmax
comp=Z,63nm,0.7s
ARE0 ARCESS Array S 145.96 39 *e*PKPbc PKPbc 01 35 03.2 -0.1
TNA Tin City 146.29 312 *e*PKPbc PKPbc 01 35 03.3 -1.1
KLMR Klimovskoe 146.41 58 *e*PKP2 PKPab 01 35 04.6 -1.2
KLMR *e* 01 38 30.5
KLMR pmax pmax
comp=Z,352nm,1.5s
SMY Shemya 146.52 284 *e*PKPbc PKPbc 01 35 04.5 -0.9
KEV Kevo 146.53 39 *e*PKPbc PKPbc 01 35 05.0 0.0
KEV LR LR
comp=Z,452nm,21.0s,MS5.2
KEV Kevo 146.53 39 *e*PKP2 PKPab 01 35 04.0 -2.0
KEV Kevo 146.53 39 *e*pkp PKPdf 01 35 04.0 +0.6
GAMB Gambell 146.75 308 *e*PKPdf PKPdf 01 35 02.7 -1.3
GAMB *e*PKPbc PKPbc 01 35 06.5 +0.7
KBS Kingsbay 147.33 21 *e*PKP2 PKPab 01 35 07.7 -1.4
KBS MLR MLR
comp=Z,216nm,20.0s,MS4.9
APA Apatity 147.54 45⇓ *i* PKP2 PKPab 01 35 08.0 -2.1
APA pmax pmax
comp=Z,170nm,1.0s
SPITS Spitsbergen Ar 147.78 23 PKPbc PKPbc 01 35 05.5 -2.8
comp=Z,134nm,1.2s,baz=116,slow=4.5,SNR=8.2
SPITS Spitsbergen Ar 147.78 23 PKIKP PKPbc 01 35 05.5 -2.8
SPITS pmax pmax
comp=Z,134nm,1.2s
LVZ Lovozero 148.12 44⇑ *i* PKP PKPbc 01 35 08.8 -0.6
LVZ LR LR
comp=Z,508nm,20.0s,MS5.3
LVZ Lovozero 148.12 44⇑ *i* PKP2 PKPbc 01 35 08.7 -0.7
AKTK Aktyubinsk 148.56 85 PKP PKPdf 01 35 06.5 -0.9
AKTK PKPbc PKPbc 01 35 10.9 -0.2
AKTO Aktyubinsk 148.56 85 PKP PKPdf 01 35 06.5 -0.9
comp=Z,31nm,1.1s,baz=194,slow=4.1,SNR=25
AKTO PKPbc PKPbc 01 35 10.9 -0.2
comp=Z,35nm,0.9s,baz=216,slow=4.9,SNR=43
AB31 Akbulak array 148.70 88 *i* PKHKP PKPdf 01 35 06.5 -1.2
AB31 pmax pmax
comp=Z,55nm,0.8s
ABKAR Akbulak array 148.70 88 *e*PKPdf PKPdf 01 35 06.8 -0.8
ABKAR *e*PKPbc PKPbc 01 35 10.8 -0.7
KSH Kashi 148.86 117 *i* PKPbc PKPdf 01 35 08.0 -0.3
KSH *e*PKPab PKPab 01 35 14.3 -1.9
KSH *e*PP PP 01 38 39.3 -3.9
KSH *e*PKS 01 38 42.3
KSH AMB AMB
comp=Z,650nm,6.5s
KSH LR LR
comp=N,450nm,16.2s,MS5.5
KSH LR LR
comp=E,230nm,11.5s,MS5.5
KSH LR LR
comp=Z,270nm,10.2s,MS5.3
ENH Enshi 148.97 175 *e*PKPbc PKPbc 01 35 12.4 -0.4
CD2 Chengdu 149.14 165 PKPbc PKPdf 01 35 11.0 +2.0
WHN Wuhan 149.27 183 PKPbc PKPdf 01 35 08.5 -0.7
WHN LR LR
comp=Z,580nm,24.4s,MS5.3
SSE Sheshan 149.29 195 PKPbc PKPbc 01 35 13.0 -0.6
SSE SS SS 01 58 00.0 +2.5
SSE LR LR
comp=N,140nm,29.1s,MS4.7
SSE LR LR
comp=E,130nm,30.0s,MS4.7
SSE LR LR
comp=Z,160nm,26.2s,MS4.7
KK31 Karatay Array 149.30 107 *i* PKIKP PKPdf 01 35 07.7 -1.1
KK31 pmax pmax
comp=Z,141nm,1.1s
KKAR Karatay Array 149.30 107 *e*PKPdf PKPdf 01 35 08.2 -0.6
KKAR *e*PKPbc PKPbc 01 35 13.0 -0.2
KKAR *e*PKPab PKPab 01 35 18.6 +0.7
KKAR *e*SKPdf SKPdf 01 38 41.0 -1.2
KKAR Karatay Array 149.30 107 *e*PKIKP PKPdf 01 35 08.3 -0.5
KKAR *e* 01 35 13.0
KKAR *e* 01 35 18.6
JNU Nakatsue 149.41 212 *e*PKPbc PKPbc 01 35 13.9 +0.1
AML Almayashu 149.99 112 P PKPdf 01 35 10.2 +0.2
SNR=13
AML Almayashu 149.99 112 *e*PKPdf PKPdf 01 35 10.0 0.0
AML *e*PKPbc PKPbc 01 35 15.8 +0.9
AML *e*PKPab PKPab 01 35 22.2 +1.5
MJAR Matsushiro Arr 150.39 225 PKPbc PKPbc 01 35 15.4 -0.6
comp=Z,46nm,1.1s,baz=180,slow=2.7,SNR=15
MJAR Matsushiro Arr 150.39 225 PKIKP PKPbc 01 35 15.5 -0.6
MJAR pmax pmax
comp=Z,46nm,1.1s
MAJO Matsushiro 150.39 225 *e*PKPdf PKPdf 01 35 10.5 -0.3
MAJO *e*PKPbc PKPbc 01 35 15.6 -0.5
MAJO LR LR
comp=Z,254nm,20.0s,MS5.0
MAT Matsushiro 150.39 225 PKP PKPbc 01 35 15.3 -0.8
UCH Uchtor 150.43 113 P PKPbc 01 35 17.6 +1.6
SNR=6.5
UCH Uchtor 150.43 113 *e*PKPdf PKPdf 01 35 12.1 +1.4
UCH *e*PKPbc PKPbc 01 35 17.1 +1.2
UCH *e*PKPab PKPab 01 35 22.8 +0.2
EKS2 Erkin-Say 150.44 111 P PKPdf 01 35 11.2 +0.5
SNR=15
EKS2 Erkin-Say 150.44 111 *e*PKPdf PKPdf 01 35 10.6 -0.1
EKS2 *e*PKPbc PKPbc 01 35 17.1 +1.1
EKS2 *e*PKPab PKPab 01 35 23.6 +1.0
NJ2 Nanjing 150.50 191 *e*PKPbc PKPbc 01 35 16.5 0.0
NJ2 PKPab PKPab 01 35 31.0 +7.9
NJ2 PKS 01 38 48.0
NJ2 PP PP 01 39 02.0 +10
NJ2 AMB AMB
comp=Z,430nm,6.9s
NJ2 LR LR
comp=N,230nm,22.2s,MS5.0
NJ2 LR LR
comp=E,160nm,20.7s,MS5.0
NJ2 LR LR
comp=Z,160nm,25.2s,MS4.7
AAK Ala-Archa 150.74 112 P PKPdf 01 35 11.3 +0.1
SNR=9.6
AAK Ala-Archa 150.74 112 *e*PKIKP PKPdf 01 35 11.1 0.0
AAK *e* 01 35 17.5
AAK MLR MLR
comp=Z,430nm,22.0s,MS5.2
AAK Ala-Archa 150.74 112 P PKPdf 01 35 11.4 +0.3
SNR=49
KBK Karagaybulak 150.96 113 P PKPbc 01 35 18.7 +1.5
SNR=13
CHMS Chumysh 151.15 112 P PKPbc 01 35 18.1 +0.4
SNR=14
ULHL Ulahol 151.21 115 P PKPbc 01 35 18.8 +1.0
SNR=18
USP Ospenovka 151.25 111 P PKPdf 01 35 12.0 +0.1
SNR=11
TKM2 Tokmak 2 151.46 113 P PKPdf 01 35 12.0 -0.3
SNR=14
TKM2 Tokmak 2 151.46 113 *e*PKIKP PKPdf 01 35 11.7 -0.5
TKM2 *e* 01 35 18.5
TKM2 *e* 01 38 57.3
ARU Arti 152.43 76 *e*PKPdf PKPdf 01 35 12.6 -0.6
ARU *e*PKPbc PKPbc 01 35 20.2 +0.1
ARU LR LR
comp=Z,415nm,22.0s,MS5.2
ARU Arti 152.43 76 *i* PKIKP PKPdf 01 35 11.9 -1.3
XAN Xi'an 152.70 174 PKPbc PKPdf 01 35 14.0 -0.4
XAN LR LR
comp=N,150nm,21.3s,MS4.8
XAN LR LR
comp=E,69nm,20.5s,MS4.8
XAN LR LR
comp=Z,96nm,21.3s,MS4.6
SOKR Solikamsk 153.20 69*c* *i* PKIKP PKPbc 01 35 22.4 +0.7
SOKR pmax pmax
comp=Z,80nm,1.4s
ERM Erimo 153.28 238 PFAKE 01 35 30.0 +15
ERM LR LR
comp=Z,450nm,21.0s,MS5.3
YUK Yuzh-Kuril'sk 153.79 244⇑ *i* PKIKP PKPdf 01 35 07.0 -8.6
YUK *i* PPP 01 42 42.0
SKR Severo-Kuril's 153.84 266 *e*PKIKP PKPbc 01 35 27.5 +4.1
SKR pmax pmax
comp=Z,110nm,1.0s
PET Petropavlovsk 154.08 273 *e*PKPdf PKPdf 01 35 15.3 -0.4
PET *e*PKPbc PKPbc 01 35 23.3 -0.5
PET *e*PKPab PKPab 01 35 37.0 -0.5
LZH Lanzhou 154.25 164 *e*PKPbc PKPdf 01 35 17.3 +0.7
LZH pPKP pPKPdf 01 35 25.5 +5.5
LZH PKS 01 38 46.5
LZH PP PP 01 39 13.0 -0.6
LZH SS SS 01 58 57.0 +4.8
LZH AMB AMB
comp=Z,330nm,4.3s
LZH LR LR
comp=N,160nm,16.7s,MS5.2
LZH LR LR
comp=E,220nm,15.9s,MS5.2
LZH LR LR
comp=Z,370nm,15.8s,MS5.3
KSRS Korea Array 154.26 209 PKP PKPdf 01 35 16.4 -0.1
comp=Z,7.0nm,1.2s,baz=196,slow=1.6,SNR=12
KSRS PKPbc PKPbc 01 35 25.0 +0.2
comp=Z,12nm,0.9s,baz=178,slow=1.6,SNR=26
KSRS PP PP 01 39 13.4 -0.3
comp=Z,4.0nm,1.1s,baz=171,slow=5.1,SNR=4.6
KSRS Korea Array 154.26 209 PKIKP PKPdf 01 35 16.4 -0.1
KSRS 01 39 13.5
KSRS pmax pmax
comp=Z,7.0nm,1.2s
KSRS pmax pmax
comp=Z,12nm,0.9s
KSRS pmax pmax
comp=Z,4.0nm,1.1s
INCN Inchon 154.59 207 PFAKE 01 35 30.0 +13
INCN LR LR
comp=Z,305nm,19.0s,MS5.1
PEA0B Petropavlovsk- 154.59 272 *e*PKPdf PKPdf 01 35 16.8 +0.4
PEA0B *e*PKPbc PKPbc 01 35 25.2 +0.3
PETK Petropavlovsk- 154.59 272 PKP PKPdf 01 35 16.9 +0.5
comp=Z,6.5nm,1.0s,baz=104,slow=6.3,SNR=6.3
PETK PKPbc PKPbc 01 35 24.6 -0.4
comp=Z,48nm,1.0s,baz=103,slow=6.4,SNR=22
PETK PKPab PKPab 01 35 36.9 -2.8
comp=Z,38nm,1.1s,baz=147,slow=6.2,SNR=5.5
PETK Petropavlovsk- 154.59 272 PKIKP PKPdf 01 35 16.9 +0.5
PETK 01 35 24.6
PETK 01 35 36.9
PETK pmax pmax
comp=Z,7.0nm,1.0s
PETK pmax pmax
comp=Z,48nm,1.0s
PETK pmax pmax
comp=Z,38nm,1.1s
ASAJ Asahikawa 155.25 240 *e*PKPdf PKPdf 01 35 15.6 -2.1
BRVK Borovoye 156.14 91 *e*PKPdf PKPdf 01 35 18.0 -0.5
BRVK *e*PKPab PKPab 01 35 45.9 -0.5
BRVK Borovoye 156.14 91 P PKPdf 01 35 18.2 -0.3
SNR=11
BVA0 Borovoye Array 156.17 91 PKIKP PKPdf 01 35 17.9 -0.7
BVA0 pmax pmax
comp=Z,5.0nm,1.2s
BVAR Borovoye Array 156.17 91 PKP PKPdf 01 35 18.0 -0.6
comp=Z,8.0nm,0.9s,baz=253,slow=1.5,SNR=3.0
BVAR Borovoye Array 156.17 91 PKIKP PKPdf 01 35 18.0 -0.6
BVAR pmax pmax
comp=Z,8.0nm,1.0s
BILL Bilibino 156.65 310 *e*PKP2 PKPab 01 35 48.2 0.0
BILL pmax pmax
comp=Z,32nm,1.0s
GTA Gaotai 156.81 155⇑ PKP PKPdf 01 35 20.0 +0.1
GTA PKPab PKPab 01 35 48.5 -1.1
GTA PP PP 01 39 26.5 -1.4
GTA SKS SKSdf 01 42 25.3 -0.2
GTA SKKS SKKSac 01 46 13.8 -3.1
GTA AMB AMB
comp=Z,290nm,5.7s
GTA LR LR
comp=N,180nm,20.7s,MS5.1
GTA LR LR
comp=E,200nm,18.6s,MS5.1
GTA LR LR
comp=Z,210nm,18.6s,MS5.0
WMQ Urumqi 157.23 129 PKP PKPdf 01 35 21.0 +0.7
WMQ PKS 01 38 53.5
WMQ PP PP 01 39 34.5 +4.0
WMQ SKS SKSdf 01 42 21.5 -4.2
WMQ SKKS SKKSac 01 46 18.3 -0.7
WMQ SS SS 01 59 24.0 -0.9
WMQ AMB AMB
comp=Z,320nm,6.6s
WMQ LR LR
comp=N,340nm,24.0s,MS5.2
WMQ LR LR
comp=E,240nm,22.3s,MS5.2
WMQ LR LR
comp=Z,370nm,22.2s,MS5.2
YSS Yuzh-Sakhalins 157.43 245 *e*PKPdf PKPdf 01 35 20.3 -0.1
YSS *e*PKPab PKPab 01 35 52.5 +0.4
YSS Yuzh-Sakhalins 157.43 245 *e*PKIKP PKPdf 01 35 18.0 -2.4
MK31 Makanchi Array 157.45 116 *e*PKPdf PKPdf 01 35 20.0 -0.4
MK31 *e*PKPab PKPab 01 35 53.0 +0.8
MKAR Makanchi Array 157.45 116 PKP PKPdf 01 35 20.1 -0.4
comp=Z,5.1nm,0.9s,baz=27,slow=1.0,SNR=27
MKAR PKPab PKPab 01 35 53.1 +0.9
comp=Z,47nm,0.8s,baz=223,slow=4.8,SNR=48
MKAR PP PP 01 39 25.9 -5.9
comp=Z,3.0nm,0.9s,baz=211,slow=4.2,SNR=5.2
MKAR Makanchi Array 157.45 116 PKIKP PKPdf 01 35 20.1 -0.3
MKAR pmax pmax
comp=Z,5.0nm,0.9s
MKAR pmax pmax
comp=Z,47nm,0.8s
MKAR pmax pmax
comp=Z,3.0nm,1.0s
BJT Baijiatuau 158.62 188 *e*PKPab PKPab 01 35 57.2 -0.2
KURK Kurchatov 158.64 104 PKP PKPdf 01 35 20.9 -0.8
comp=Z,10.0nm,0.9s,baz=234,slow=1.2,SNR=6.3
KURK PKPab PKPab 01 35 56.9 -0.4
comp=Z,31nm,1.0s,baz=236,slow=4.5,SNR=14
KURK Kurchatov 158.64 104 *e*PKIKP PKPdf 01 35 21.1 -0.7
KURK *e* 01 35 56.4
KURK Kurchatov 158.64 104 P PKPdf 01 35 21.6 -0.2
SNR=17
BJI Beijing 158.65 188 PKP PKPdf 01 35 21.5 -0.6
BJI SKS SKSdf 01 42 27.5 +0.2
BJI SS SS 01 59 44.0 +4.7
BJI AMB AMB
comp=Z,310nm,6.9s
BJI LR LR
comp=N,170nm,18.9s,MS5.0
BJI LR LR
comp=E,140nm,20.0s,MS5.0
BJI LR LR
comp=Z,240nm,32.7s
BTO Baotou 159.29 175 *e*PKP PKPdf 01 35 21.0 -1.9
HHC Hu-ho-hao-te 159.58 178 *e*PKP PKPdf 01 35 20.8 -2.4
HHC pPKP pPKPdf 01 35 30.8 +4.2
HHC PKPab PKPab 01 36 00.8 -0.7
HHC PKS 01 38 52.5
HHC PP PP 01 39 41.3 -1.6
HHC SKS SKSdf 01 42 21.8 -6.4
HHC SS SS 01 59 46.8 -2.4
HHC AMB AMB
comp=Z,190nm,6.7s
HHC LR LR
comp=N,270nm,17.5s,MS5.3
HHC LR LR
comp=E,190nm,14.3s,MS5.3
HHC LR LR
comp=Z,360nm,19.2s,MS5.2
MDJ Mudanjiang 160.49 219 PKP PKPdf 01 35 22.5 -1.6
MDJ AMB AMB
comp=Z,80nm,6.0s
MDJ LR LR
comp=N,190nm,39.0s
MDJ LR LR
comp=E,230nm,33.8s
MDJ LR LR
comp=Z,420nm,33.8s
HABR Khabarovsk 161.85 236*ce* PKIKP PKPdf 01 35 23.8 -1.6
HABR *e* 01 35 27.3
HABR *e* 01 36 10.7
HABR 01 39 53.4
HABR *e* 01 42 29.0
HABR *e*SS SS 02 00 13.1 -0.7
HABR SSS 02 06 30.2
HABR pmax pmax
comp=N,5.0nm,0.8s
HABR pmax pmax
comp=E,6.0nm,0.6s
HABR pmax pmax
comp=Z,14nm,1.6s
NVS Novosibirsk 163.41 100 *e*PKIKP PKPdf 01 35 22.8 -3.9
NVS *e* 01 36 16.7
NVS *e* 01 40 03.0
NVS pmax pmax
comp=N,8.0nm,1.5s
NVS pmax pmax
comp=E,10.0nm,1.5s
NVS pmax pmax
comp=Z,31nm,1.5s
ZAA0 Zalesovo Array 163.63 104 *e*PKPdf PKPdf 01 35 24.7 -2.2
ZAA0 *e*PKPab PKPab 01 36 17.9 -1.1
ZAA0 *e*PP PP 01 40 06.0 +0.8
ZALV Zalesovo Beam 163.63 104 PKP PKPdf 01 35 25.5 -1.5
comp=Z,1.9nm,0.5s,baz=228,slow=1.8,SNR=7.8
ZALV PKPab PKPab 01 36 18.1 -0.9
comp=Z,12nm,0.9s,baz=250,slow=3.0,SNR=12
ZALV PP PP 01 40 07.0 +1.8
comp=Z,5.4nm,0.9s,baz=268,slow=4.5,SNR=7.0
ZALV Zalesovo Beam 163.63 104 PKIKP PKPdf 01 35 25.5 -1.5
ZALV 01 36 18.1
ZALV 01 40 07.0
ZALV pmax pmax
comp=Z,2.0nm,0.5s
ZALV pmax pmax
comp=Z,12nm,0.9s
ZALV pmax pmax
comp=Z,5.0nm,0.9s
KLR Kul'dur 163.75 231 *e*PKIKP PKPdf 01 35 21.4 -5.8
KLR pmax pmax
comp=Z,50nm,2.0s
SONM Songino Array 166.14 163 PKP PKPdf 01 35 29.3 -0.1
comp=Z,6.3nm,1.2s,baz=185,slow=2.1,SNR=15
SONM PKPab PKPab 01 36 29.6 -0.5
comp=Z,31nm,1.0s,baz=190,slow=4.0,SNR=38

SONM				PP	PP	01 40 15.8	-1.9
	comp=Z,5.0nm,1.2s,baz=162,slow=6.9,SNR=4.6						
SONM	**Songino Array**	**166.14**	**163**	PKIKP	PKPdf	01 35 29.3	0.0
SONM						01 36 29.6	
SONM						01 40 15.8	
SONM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SONM				pmax	pmax		
	comp=Z,31nm,1.0s						
SONM				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ULN	**Ulaanbaatar**	**166.26**	**165**	*e*PKPdf	PKPdf	01 35 29.2	-0.2
ULN				*e*PKPab	PKPab	01 36 29.7	-1.0
ULN	**Ulaanbaatar**	**166.26**	**165**	P	PKPdf	01 35 29.8	+0.4
	SNR=8.9						
HIA	**Hailar**	**167.30**	**203**	*e*PKPab	PKPab	01 36 34.4	-0.8
TIXI	**Tiksi**	**167.71**	**335**	*e*PKP2	PKPab	01 36 35.9	-0.6
TIXI				pmax	pmax		
	comp=Z,57nm,1.4s						
ZAK	**Zakamensk**	**168.00**	**151**↑↑	*e*PKIKP	PKPdf	01 35 29.8	-0.8
ZAK				*i*		01 36 37.5	
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.6s						
MOY	**Mondy**	**168.55**	**142**	*e*PKIKP	PKPdf	01 35 31.0	+0.1
MOY				pmax	pmax		
	comp=Z,93nm,3.6s						
TLY	**Talaya**	**169.29**	**150**	*e*PKPdf	PKPdf	01 35 30.9	-0.5
TLY				*e*PKPab	PKPab	01 36 43.6	-0.4
TLY	**Talaya**	**169.29**	**150**	*i* PKIKP	PKPdf	01 35 30.9	-0.5
TLY				*e*		01 36 42.1	
TLY				*e*		01 40 33.2	
TLY				*e*		02 02 45.2	
TLY				pmax	pmax		
	comp=Z,45nm,1.5s						
TLY	**Talaya**	**169.29**	**150**	P	PKPdf	01 35 31.5	+0.1
	SNR=23						
IRK	**Irkutsk**	**169.96**	**150**	*e*PKIKP	PKPdf	01 35 30.3	-1.5
IRK				*e*		01 36 45.4	
IRK				pmax	pmax		
	comp=Z,84nm,1.9s						
YAK	**Yakutsk**	**171.71**	**283**	*e*PKIKP	PKPdf	01 35 26.9	-5.5
YAK				pmax	pmax		
	comp=Z,22nm,1.5s						
CLNS	**Chul'man**	**172.18**	**241**	*e*PKP2	PKPab	01 36 55.1	-1.6
CLNS				pmax	pmax		
	comp=E,6.0nm,1.0s						
CLNS				pmax	pmax		
	comp=N,6.0nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,19nm,1.0s						

NOU ***31*** *01:24:51.7±1.4, 15°.48S×167°.93E, h30km, MD3.6, ML4.3*
LDG ***31*** *01:24:54.7±0.2, 16°.21S×169°.18E, h140km, Error ellipse: s-maj=38.0km s-min=2.3km az=107.0*
IDC ***31*** *01:24:55.9±2.1, 15°.89S×167°.88E, h144km±17km, mb4.2/14, mb1 4.3/14, mb1mx4.2/22, mbtmp4.2/14, MS4.4/3, Ms1 4.4/3, ms1mx3.4/28, Error ellipse: s-maj=21.5km s-min=13.5km az=75.0*
ISCJB ***31*** *01:24:56.5±1.6, 15°.96S±0°.07×167°.9E±0°.1, h165km±13km, mb4.5/21, Error ellipse: s-maj=21.0km s-min=10.9km az=165.3*
NEIC ***31*** *01:25:01.3±2.0, 15°.98S×167°.82E, h190km±17km, mb4.8/8, Error ellipse: s-maj=15.8km s-min=8.1km az=79.0*

ISC 31 01:24:58.0±1.4, 16°.00S±0°.07×167°.9E±0°.1, h163km±12km, n73, σ1°.05/32, mb4.5/21, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
DZM	**Mont Dzumac**	**6.20**	**193**	*e*P		**Pn**	**01 26 27.0**	**-0.4**
DZM				*e*S		**Sn**	**01 27 36.6**	**-0.9**
DZM				AMP			01 27 40.7	
	comp=Z,479nm,0.5s							
BAYA	**Yate Dam**	**6.20**	**189**	*e*P		**Pn**	**01 26 27.4**	**-0.1**
BAYA				*e*S		**Sn**	**01 27 38.0**	**+0.5**
NOUC	**Port Laguerre**	**6.26**	**194**	*e*P		**Pn**	**01 26 27.5**	**-0.7**
NOUC				*e*S		**Sn**	**01 27 39.5**	**+0.7**
NOUC				AMP			01 27 43.9	
	comp=Z,15nm,5.1s							
HNR	**Honiara**	**10.14**	**309**	P		**Pn**	**01 27 22.0**	**+2.2**
	comp=Z,41nm,0.3s,baz=133,slow=4.4,SNR=4.2							
URZ	**Urewera**	**23.61**	**162**	P		**P**	**01 29 55.4**	**+1.3**
	comp=Z,8.3nm,0.5s,mb4.5,baz=11,slow=4.8,SNR=6.5							
URZ				LR		LR	01 38 01.4	
	comp=Z,408nm,20.8s,baz=231,slow=33							
COEN	**Coen**	**23.98**	**272**	*e*P		**P**	**01 29 58.6**	**+0.9**
	comp=Z,81nm,0.8s,mb5.3							
RPZ	**Rata Peaks**	**27.76**	**175**	P		**P**	**01 30 32.6**	**+1.2**
	comp=Z,14nm,0.6s,mb4.9,baz=315,slow=2.5,SNR=10							
STKA	**Stephens Creek**	**28.68**	**232**	P		**P**	**01 30 40.3**	**+0.6**
	comp=Z,6.6nm,0.6s,mb4.6,baz=33,slow=10,SNR=8.5							
WRA	**Warramunga Arr**	**32.15**	**258**	P		**P**	**01 31 08.5**	**-1.8**
	comp=Z,1.7nm,0.9s,mb3.8,baz=86,slow=8.6,SNR=8.1							
WRA				ScP		ScP	01 37 24.7	+0.6
	comp=Z,1.5nm,1.0s,baz=82,slow=3.8,SNR=5.0							
ASAR	**Alice Springs**	**32.83**	**251**	P		**P**	**01 31 16.0**	**-0.3**
	comp=Z,4.0nm,0.6s,mb4.3,baz=77,slow=9.2,SNR=38							
ASAR				ScP		ScP	01 37 27.4	+1.1
	comp=Z,5.2nm,1.1s,baz=102,slow=3.5,SNR=10							
GUMO	**Guam**	**37.19**	**321**	P		**P**	**01 31 52.2**	**-1.5**
	comp=Z,20nm,0.5s,mb5.0,baz=208,slow=17,SNR=3.9							
GUMO				LR		LR	01 44 13.7	
	comp=Z,2μm,21.9s,baz=110,slow=31							
FORT	**Forrest**	**39.20**	**241**	*e*P		**P**	**01 32 10.4**	**0.0**
	comp=Z,33nm,0.9s,mb5.0							
MJAR	**Matsushiro Arr**	**59.31**	**332**	P		**P**	**01 34 42.1**	**-0.6**
	comp=Z,12nm,0.8s,mb4.8,baz=168,slow=7.4,SNR=30							
MAJO	**Matsushiro**	**59.31**	**332**	*e*P		**P**	**01 34 42.1**	**-0.6**
	comp=Z,19nm,0.9s,mb4.9							
MAT	**Matsushiro**	**59.31**	**332**	P		**P**	**01 34 42.2**	**-0.5**
SBA	**Scott Base**	**61.88**	**180**	*e*P		**P**	**01 35 01.1**	**+1.6**
	comp=Z,9.5nm,0.8s,mb4.7							
CASY	**Casey**	**62.60**	**203**	*e*P		**P**	**01 35 04.6**	**+0.1**
	comp=Z,3.7nm,0.6s,mb4.4							
YSS	**Yuzh-Sakhalins**	**66.62**	**342**	*e*P		**P**	**01 35 31.7**	**+1.0**
	comp=Z,26nm,0.9s,mb5.1							
MDJ	**Mudanjiang**	**69.68**	**332**	*e*P		**P**	**01 35 50.8**	**+0.9**
	comp=Z,15nm,1.0s,mb4.7							
QSPA	**South Pole Qui**	**74.04**	**180**	P		**P**	**01 36 16.5**	**+1.1**
	comp=Z,18nm,0.8s,mb4.8,baz=16,slow=1.1,SNR=42							
CMAR	**Chiang Mai Arr**	**76.03**	**294**	P		**P**	**01 36 28.2**	**+0.4**
	comp=Z,1.6nm,0.7s,mb3.8,baz=121,slow=4.7,SNR=5.0							
MAW	**Mawson**	**80.95**	**202**	P		**P**	**01 36 54.3**	**+0.4**
	comp=Z,4.0nm,0.9s,mb4.1,baz=104,slow=8.2,SNR=7.3							
SONM	**Songino Array**	**83.88**	**323**	P		**P**	**01 37 09.8**	**+0.5**
	comp=Z,3.1nm,0.7s,mb4.2,baz=152,slow=6.1,SNR=3.2							
ILAR	**Eielson Array**	**87.53**	**18**	P		**P**	**01 37 25.4**	**-1.5**
	comp=Z,0.7nm,0.5s,mb3.7,baz=238,slow=5.1,SNR=9.5							
PMSA	**Palmer Station**	**90.38**	**160**	*e*P		**P**	**01 37 40.5**	**+0.1**
	comp=Z,10nm,0.9s,mb4.8							
PMSA	**Palmer Station**	**90.38**	**160**	P		**P**	**01 37 39.9**	**-0.6**
	comp=Z,7.2nm,0.8s,mb4.7,baz=200,slow=3.7,SNR=7.9							
VNA2	**Neumayer--Watz**	**93.24**	**182**	*e*		**P**	**01 37 50.8**	**-2.8**
VNA2				*e*			01 37 54.4	
VNA1	**Neumayer--Stat**	**93.54**	**181**	*e*		**P**	**01 37 52.4**	**-2.6**
PDAR	**Pinedale Array**	**95.35**	**47**	LR		LR	02 13 58.3	
	comp=Z,157nm,18.8s,baz=18,slow=31							
MKAR	**Makanchi Array**	**98.54**	**316**	P		**P**	**01 38 18.0**	**0.0**
	comp=Z,1.0nm,0.9s,mb4.3,baz=88,slow=5.9,SNR=3.8							
ARCES	**ARCESS Array B**	**121.63**	**345**	PKP		PKPdf	01 43 31.3	-0.4
ARCES	**ARCESS Array B**	**121.63**	**345**	PKP		PKPdf	01 43 31.3	-0.4
	comp=Z,2.7nm,0.8s,baz=48,slow=1.8,SNR=9.7							
FINES	**FINESS Array B**	**127.12**	**338**	PKP		PKPdf	01 43 42.0	-0.4
	comp=Z,1.8nm,0.8s,baz=90,slow=3.8,SNR=5.1							
NOA	**NORSAR Array B**	**132.00**	**345**	PKP		PKPdf	01 43 51.3	-0.4
	comp=Z,0.4nm,0.8s,baz=16,slow=1.6,SNR=2.7							
AKASG	**Malin Array Be**	**132.12**	**326**	PKP		PKPdf	01 43 53.2	+0.9
	comp=Z,0.2nm,0.2s,baz=51,slow=2.0,SNR=3.0							
AKASG				SKPbc		SKPbc	01 47 05.2	+1.6
	comp=Z,2.1nm,0.8s,baz=42,slow=4.4,SNR=5.9							
CDF	**Champ du Feu**	**143.98**	**338**	*e*PKP1		PKPdf	01 44 13.0	-1.0
	comp=Z,7.0nm,0.8s							
DAVOX	**Davos/Dischmat**	**144.28**	**334**	PKP		PKPdf	01 44 14.7	+0.1
	comp=Z,12nm,0.6s,baz=244,slow=1.7,SNR=44							
HINF	**Hinteralfeld**	**144.63**	**338**	*e*PKP1		PKPdf	01 44 14.4	-0.8
	comp=Z,12nm,0.9s							
HAU	**Haudompre**	**144.65**	**338**	*e*PKP1		PKPdf	01 44 14.7	-0.5
	comp=Z,12nm,0.6s							
MEZF	**Maizieres J'vi**	**144.66**	**340**	*e*PKP1		PKPdf	01 44 15.1	-0.1
	comp=Z,7.4nm,0.6s							
TUE	**Stuetta**	**144.75**	**334**	*e*PKPdf		PKPdf	01 44 15.5	+0.1
SFTF	**Sexfontaines**	**144.93**	**340**	*e*PKP1		PKPdf	01 44 15.9	+0.2
	comp=Z,38nm,0.8s							
AQU	**L'Aquila**	**145.83**	**325**	*e*PKPbc		PKPbc	01 44 18.7	+0.5
CABF	**La Chapelle**	**145.93**	**337**	*e*PKP1		PKPbc	01 44 19.3	+0.9
	comp=Z,14nm,0.8s							
FLN	**La Foliniere**	**145.97**	**346**	*e*PKP1		PKPbc	01 44 18.5	+0.1
	comp=Z,10nm,0.6s							
LDF	**La Druitiere**	**146.04**	**346**	*e*PKP1		PKPbc	01 44 18.6	-0.1
	comp=Z,3.2nm,0.5s							
LOR	**Lormes**	**146.13**	**340**	*e*PKP1		PKPbc	01 44 19.6	+0.6
	comp=Z,14nm,0.7s							
GRR	**Gorron**	**146.40**	**346**	*e*PKP1		PKPbc	01 44 20.1	+0.4
	comp=Z,9.8nm,0.8s							
SSF	**Saint Saulge**	**146.43**	**341**	*e*PKP1		PKPbc	01 44 20.5	+0.6
	comp=Z,17nm,0.7s							
LPL	**La Plagne**	**146.60**	**336**	*e*PKP1		PKPbc	01 44 21.5	+1.1
	comp=Z,11nm,0.7s							
LPG	**La Plagne**	**146.60**	**336**	*e*PKP1		PKPbc	01 44 21.5	+1.1
	comp=Z,12nm,0.6s							
SMF	**Signal de Mont**	**146.69**	**340**	*e*PKP1		PKPbc	01 44 20.9	+0.3
	comp=Z,13nm,1.0s							
AVF	**Avril sur Loir**	**146.72**	**341**	*e*PKP1		PKPbc	01 44 20.9	+0.2
	comp=Z,6.7nm,0.7s							
SGMF	**Saint Gilles**	**146.89**	**348**	*e*PKP1		PKPbc	01 44 21.3	+0.2
BGF	**Bois d'Agland**	**147.08**	**341**	*e*PKP1		PKPbc	01 44 22.3	+0.6
	comp=Z,16nm,0.7s							
MBDF	**Montbardon**	**147.23**	**335**	*e*PKP1		PKPbc	01 44 22.5	+0.3
	comp=Z,5.9nm,0.5s							
QUIF	**Quistinic**	**147.33**	**349**	*e*PKP1		PKPbc	01 44 21.9	-0.5
	comp=Z,13nm,0.9s							
ORIF	**Oris-en-Rattie**	**147.43**	**336**	*e*PKP1		PKPbc	01 44 23.4	+0.7
	comp=Z,8.6nm,0.6s							
TCF	**Toulx Ste Croi**	**147.52**	**341**	*e*PKP1		PKPbc	01 44 23.5	+0.6
	comp=Z,9.1nm,0.9s							
SBF	**Sospel**	**147.65**	**333**	*e*PKP1		PKPbc	01 44 23.3	-0.1
	comp=Z,22nm,0.9s							
MFF	**Saint Martin d**	**147.90**	**344**	*e*PKP1		PKPbc	01 44 24.2	+0.3
VIVF	**Saint-Julien-l**	**147.94**	**337**	*e*PKP1		PKPbc	01 44 24.7	+0.6
	comp=Z,3.6nm,0.7s							
PGF	**Pioggiola**	**147.96**	**330**	*e*PKP1		PKPbc	01 44 24.6	+0.4
	comp=Z,30nm,0.8s							
RCBR	**Riachuelo**	**147.97**	**131**	*e*PKPbc		PKPbc	01 44 24.6	-0.6
FRF	**La Foret Royal**	**148.23**	**334**	*e*PKP1		PKPbc	01 44 25.0	+0.1
	comp=Z,25nm,1.0s							
SMRF	**Simiane la Rot**	**148.33**	**335**	*e*PKP1		PKPbc	01 44 25.9	+0.7
	comp=Z,6.3nm,0.6s							
LMR	**La Mourre**	**148.47**	**334**	*e*PKP1		PKPbc	01 44 25.8	+0.3
	comp=Z,8.4nm,0.8s							
LASF	**Ste Croix**	**148.91**	**337**	*e*PKP1		PKPbc	01 44 27.3	+0.7
	comp=Z,13nm,0.9s							
EPF	**Esparros**	**151.04**	**341**	*e*PKP1		PKPbc	01 44 32.5	+0.7
	comp=Z,2.4nm,0.7s							
ETSF	**Etsaut**	**151.43**	**342**	*e*PKP1		PKPbc	01 44 33.0	+0.3
	comp=Z,4.6nm,0.6s							
KEST	**Kesra**	**152.58**	**320**	*e*PKPbc		PKPbc	01 44 36.1	+0.6
KEST	**Kesra**	**152.58**	**320**	PKPbc		PKPbc	01 44 36.1	+0.6
	comp=Z,0.6nm,0.6s,baz=149,slow=6.5,SNR=6.9							
LIC	**Lamto**	**168.08**	**216**	*e*PKIKP		PKPdf	01 44 43.9	-2.1
	comp=Z,43nm,1.3s							

ROM ***31*** *01:44:03.8±0.5, 43°.73N×16°.30E, h3km±6km, Md2.9/8, Ml2.6/2, Error ellipse: s-maj=8.2km s-min=3.1km az=63.0*
ISCJB ***31*** *01:44:04.8±0.5, 43°.78N±0°.03×16°.29E±0°.05, h10km, Error ellipse: s-maj=5.0km s-min=3.6km az=168.1*
CSEM ***31*** *01:44:04.7±0.2, 43°.76N×16°.27E, h2km, MD2.9/8, Error ellipse: s-maj=3.7km s-min=2.5km az=91.0*
VIE ***31*** *01:44:05.6±1.2, 43°.78N×16°.38E, h10km, mb2.4/3, ML2.3/3, Error ellipse: s-maj=18.2km s-min=8.6km az=74.0 30 km NNW of Split*

ISC 31 01:44:05.7±0.5, 43°.76N±0°.03×16°.30E±0°.05, h10km, n29, σ0°.82/57, 4C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
NVLJ	**Novalja**	**1.31**	**309**	*i* Pg		**Pn**	**01 44 28.3**	**-1.7**
NVLJ				Sg		**Sg**	**01 44 46.4**	**-1.4**
NVLJ	**Novalja**	**1.31**	**309**	*i* Pg		**Pn**	**01 44 28.3**	**-1.7**
NVLJ				Sg		**Sg**	**01 44 46.3**	**-1.5**
STON	**Ston**	**1.35**	**130**	*e*Pn		**Pn**	**01 44 28.3**	**-2.3**
STON				Sn		**Sn**	**01 44 49.9**	**+1.3**
SGRT	**San Giovanni R**	**2.04**	**192**	Pn		**Pn**	**01 44 39.5**	**-0.6**
SGRT				Sn		**Sn**	**01 45 06.5**	**+0.9**
SGRT	**San Giovanni R**	**2.04**	**192**	Pn		**Pn**	**01 44 39.5**	**-0.6**
SGRT				Sn		**Sn**	**01 45 06.5**	**+0.9**
MELA	**Melanico ??? S**	**2.22**	**203**	Pn		**Pn**	**01 44 42.8**	**+0.2**
MELA				Sn		**Sn**	**01 45 09.6**	**-0.5**
	125nm,1.5s							
MELA	**Melanico ??? S**	**2.22**	**203**	Pn		**Pn**	**01 44 42.8**	**+0.2**
MELA				Sn		**Sn**	**01 45 09.6**	**-0.5**
	125nm,1.5s							
FDMO	**Fiordimonte**	**2.45**	**254**	Pn		**Pn**	**01 44 45.0**	**-0.7**
FDMO				Sn		**Sn**	**01 45 15.4**	**-0.2**
FDMO	**Fiordimonte**	**2.45**	**254**	Pn		**Pn**	**01 44 45.0**	**-0.7**
FDMO				Sn		**Sn**	**01 45 15.4**	**-0.2**
FSSB	**Fossombrone**	**2.55**	**270**	Pn		**Pn**	**01 44 47.0**	**-0.1**
FSSB				Sn		**Sn**	**01 45 16.5**	**+0.1**
FSSB	**Fossombrone**	**2.55**	**270**	Pn		**Pn**	**01 44 47.0**	**-0.1**
FSSB				Sn		**Sn**	**01 45 18.3**	**+0.1**
TRI	**Trieste**	**2.66**	**318**	Pn		**Pn**	**01 44 48.5**	**-0.1**
TRI				Sn		**Sn**	**01 45 22.1**	**+1.2**
	21nm,0.5s							
TRI	**Trieste**	**2.66**	**318**	Pn		**Pn**	**01 44 48.5**	**-0.1**
TRI				Sn		**Sn**	**01 45 22.1**	**+1.2**
	21nm,0.5s							
ASS	**Assisi**	**2.75**	**257**	Pn		**Pn**	**01 44 49.8**	**0.0**
ASS				Sn		**Sn**	**01 45 23.8**	**+0.8**
	5.0nm,0.4s							
ASS	**Assisi**	**2.75**	**257**	Pn		**Pn**	**01 44 49.8**	**0.0**
ASS				Sn		**Sn**	**01 45 23.8**	**+0.8**
	5.0nm,0.4s							
MURB	**Monte Urbino**	**2.79**	**261**	Pn		**Pn**	**01 44 50.3**	**-0.1**
MURB				Sn		**Sn**	**01 45 25.0**	**+1.0**
MURB	**Monte Urbino**	**2.79**	**261**	Pn		**Pn**	**01 44 50.3**	**-0.1**
MURB				Sn		**Sn**	**01 45 25.0**	**+1.0**
VOY	**Vojsko**	**2.85**	**324**	*e*Pn		**Pn**	**01 44 51.0**	**-0.2**
VOY				*e*Sn		**Sn**	**01 45 26.2**	**+0.7**
VOY				*e*			01 45 28.8	
VOY	**Vojsko**	**2.85**	**324**	*e*Pn		**Pn**	**01 44 51.0**	**-0.2**
VOY				*e*Sn		**Sn**	**01 45 26.2**	**+0.7**
PARC	**Parchiule**	**2.94**	**269**	Pn		**Pn**	**01 44 52.6**	**+0.1**
PARC				Sn		**Sn**	**01 45 27.4**	**-0.5**
PARC	**Parchiule**	**2.94**	**269**	Pn		**Pn**	**01 44 52.6**	**+0.1**
PARC				Sn		**Sn**	**01 45 27.4**	**-0.5**
OBKA	**Obir**	**3.02**	**336**	*i* Pn		**Pn**	**01 44 54.2**	**+0.7**
OBKA				*i* Sn		**Sn**	**01 45 31.1**	**+1.4**
OBKA	**Obir**	**3.02**	**336**	Pn		**Pn**	**01 44 54.2**	**+0.7**
OBKA				Sn		**Sn**	**01 45 31.1**	**+1.4**
SOKA	**Soboth**	**3.06**	**343**	*i* Pn		**Pn**	**01 44 54.0**	**-0.1**
SOKA				*i* Sn		**Sn**	**01 45 29.8**	**-0.9**
SOKA	**Soboth**	**3.06**	**343**	Pn		**Pn**	**01 44 54.0**	**0.0**
SOKA				Sn		**Sn**	**01 45 29.8**	**-0.8**
MOA	**Molln**	**4.33**	**342**	*i* Pn		**Pn**	**01 45 11.6**	**0.0**
MOA				*i* Sn		**Sn**	**01 46 02.2**	**0.0**
MOA	**Molln**	**4.33**	**342**	Pn		**Pn**	**01 45 11.6**	**0.0**
MOA				Sn		**Sn**	**01 46 02.2**	**+0.1**
VYHS	**Vyhne**	**5.06**	**20**	*e*PN		**Pn**	**01 45 21.7**	**+0.2**
VYHS				*e*SN		**Sn**	**01 46 15.3**	**-4.6**
VYHS	**Vyhne**	**5.06**	**20**	*e*Pn		**Pn**	**01 45 21.7**	**+0.2**

IDC ***31*** *01:46:59.4±1.0, 12°.97N×124°.44E, h0km, mb3.8/9, mb1 4.0/10, mb1mx3.8/21, mbtmp3.9/10, Error ellipse: s-maj=36.2km s-min=18.6km az=64.0*
NEIC ***31*** *01:47:01.3±8.8, 12°.96N×124°.45E, h13km±54km, mb4.4/4, Error ellipse: s-maj=25.8km s-min=11.9km az=61.0*
ISCJB ***31*** *01:47:02.9±1.3, 13°.06N±0°.09×124°.6E±0°.1, h38km±12km, mb4.0/13, Error ellipse: s-maj=20.6km s-min=9.5km az=143.3*
MAN ***31*** *01:47:03, 12°.97N×124°.32E, h0km, mb4.6, ML3.5, MS3.4*

ISC 31 01:47:03.6±1.7, 13°.05N±0°.08×124°.59E±0°.08, h28km±13km, n26, σ0°.93/27, mb4.0/13, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
CNP	**Catarman**	**0.54**	**172**	*e*P		**Pb**	**01 47 14.7**	**+0.2**
AUQP	**San Andres**	**1.88**	**279**	*e*P		**Pn**	**01 47 33.7**	**-0.2**
OCLP	**Ormoc**	**1.98**	**179**	*e*P		**Pn**	**01 47 39.1**	**+3.8**
GQP	**Guinayangan**	**2.25**	**293**↓↓	*e*P		**Pn**	**01 47 38.9**	**-0.1**
GQP				*e*S		**Sn**	**01 48 06.1**	**+0.2**
OTRP	**Odiongan**	**2.59**	**255**	*e*P		**Pn**	**01 47 44.9**	**+1.2**
BOAC	**Boac**	**2.70**	**279**	*e*P		**Pn**	**01 47 48.3**	**+3.1**
POLP	**Polilio Island**	**3.07**	**303**	*e*P		**Pn**	**01 47 54.5**	**+4.3**
GUIM	**Jordan**	**3.10**	**219**	*e*P		**Pn**	**01 47 50.0**	**-0.7**
TGY	**Tagaytay City**	**3.70**	**287**	Pn		**Pn**	**01 47 57.2**	**-1.7**
	37nm,0.3s,baz=170,slow=14,SNR=1.8							

CAUP	**Cauayan**	**4.71**	**326**	*e*P		**Pn**	**01 48 12.1**	**-0.7**
CAUP				*e*S		Px	01 48 43.1	
CMAR	**Chiang Mai Arr**	**25.25**	**286**	P		**P**	**01 52 24.5**	**-3.1**
	0.9nm,0.4s,mb3.7,baz=96,slow=8.3,SNR=5.1							
WRA	**Warramunga Arr**	**34.16**	**164**	P		**P**	**01 53 46.1**	**-0.4**
	0.3nm,0.5s,mb3.5,baz=337,slow=10.0,SNR=3.0							
ASAR	**Alice Springs**	**37.61**	**166**	P		**P**	**01 54 16.0**	**-0.1**
	0.5nm,0.4s,mb3.6,baz=341,slow=6.9,SNR=12							
SONM	**Songino Array**	**37.86**	**340**	P		**P**	**01 54 18.3**	**+0.3**
	0.3nm,0.5s,mb3.3,baz=193,slow=5.9,SNR=3.1							
PETK	**Petropavlovsk-**	**47.85**	**26**	P		**P**	**01 55 38.6**	**-0.2**
	0.5nm,0.4s,mb3.9,baz=160,slow=4.6,SNR=2.5							
MK31	**Makanchi Array**	**48.84**	**322**	*e*P		**P**	**01 55 47.5**	**+1.0**
MKAR	**Makanchi Array**	**48.84**	**322**	P		**P**	**01 55 47.8**	**+1.2**
	2.9nm,0.6s,mb4.5,baz=121,slow=8.7,SNR=26							
ZALV	**Zalesovo Beam**	**51.41**	**331**	P		**P**	**01 56 06.7**	**+0.8**
	0.8nm,0.5s,mb3.9,baz=99,slow=9.2,SNR=4.1							
EKS2	**Erkin-Say**	**52.72**	**314**	*e*P		**P**	**01 56 15.3**	**-0.6**
	1.8nm,0.8s,mb4.0							
KURK	**Kurchatov**	**52.86**	**325**	*e*P		**P**	**01 56 17.0**	**+0.2**
	12nm,1.2s,mb4.7							
BRVK	**Borovoye**	**58.53**	**325**	*e*P		**P**	**01 56 58.2**	**+0.7**
	4.6nm,0.9s,mb4.5							
ABKAR	**Akbulak array**	**63.71**	**319**	*e*P		**P**	**01 57 32.4**	**-0.2**
	1.5nm,0.7s,mb4.1							
AKTK	**Aktyubinsk**	**65.15**	**320**	P		**P**	**01 57 41.0**	**-1.0**
AKTO	**Aktyubinsk**	**65.15**	**320**	P		**P**	**01 57 41.0**	**-1.0**
	0.8nm,0.5s,mb4.0,baz=106,slow=5.0,SNR=4.0							
FINES	**FINESS Array B**	**82.68**	**331**	P		**P**	**01 59 24.6**	**+0.1**
	1.0nm,0.7s,mb4.0,baz=350,slow=3.4,SNR=3.7							
BUR08	**Bucovina Ar. S**	**86.69**	**318**	*e*P		**P**	**01 59 45.3**	**+0.3**

KRSC 31 01:57:11.5±0.8, 50°.13N×156°.38E, h5km±5km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
ALID	**Alaid**	**0.91**	**325**	*e*P		Pg	01 57 30.2	+1.2
ALID				*e*S		Sg	01 57 43.1	+2.3
MIPR	**Malaya Ipel'ka**	**2.16**	**6**	*e*P		Pn	01 57 49.0	+0.9
MIPR				*e*S		Sn	01 58 17.0	+1.7
PET	**Petropavlovsk**	**3.23**	**25**	S		Sn	01 58 44.0	+2.5
AVH	**Avacha**	**3.46**	**24**	P		Pn	01 58 08.3	+2.3
GNL	**Ganaly**	**3.70**	**15**	*e*P		Pn	01 58 10.4	+1.2
SPN	**Mys Shipunski**	**3.74**	**36**	*e*S		Sn	01 58 54.4	+0.2

ISCJB ***31*** *02:37:29.7±5.8, 30°.5N±0°.1×83°.0E±0°.1, h6km±40km, mb3.5/7, MS3.9/2, Error ellipse: s-maj=24.7km s-min=12.6km az=37.0*
IDC ***31*** *02:37:30.9±1.7, 30°.52N×83°.20E, h0km, mb3.6/7, mb1 3.8/9, mb1mx3.6/27, mbtmp3.6/9, ML3.3/1, MS3.9/2, Ms1 3.9/2, ms1mx2.9/34, Error ellipse: s-maj=54.3km s-min=20.9km az=60.0*
NEIC ***31*** *02:37:32.4±0.7, 30°.53N×83°.07E, h10km, mb3.8/1, Error ellipse: s-maj=17.1km s-min=8.9km az=217.0*

**ISC 31 02:37:33.9±4.1, 30°.5N

UTMO				*i* S		Sn	03 03 27.4	-1.2
IIO	**Organos**	**2.74**	**41**	*e*P		Pn	03 02 54.0	-2.5
IIO				*i* S		Sn	03 03 25.2	-3.8
IIO	**Organos**	**2.74**	**41**	*e*P		Pn	03 02 54.0	-2.5
IIO				*i* S		Sn	03 03 25.2	-3.8

IDC 31 03:04:10.7±4.3, 4°72S×102°31E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/18, mbtmp3.6/5, MS3.2/1, Ms1 3.2/1, ms1mx2.6/30, Error ellipse: s-maj=186.8km s-min=22.2km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**26.40**	**122**	LR	LR	03 19 00.4	
	comp=Z,58nm,21.4s,baz=186,slow=34						
WRA	**Warramunga Arr**	**34.65**	**119**	P	P	03 11 02.3	+0.2
	0.5nm,1.1s,baz=309,slow=9.1,SNR=4.3						
ASAR	**Alice Springs**	**35.80**	**125**	P	P	03 11 11.9	-0.2
	0.3nm,0.4s,baz=300,slow=7.4,SNR=3.4						
SONM	**Songino Array**	**52.46**	**3**	P	P	03 13 25.7	+0.5
	0.6nm,0.5s,baz=188,slow=8.7,SNR=4.4						
MKAR	**Makanchi Array**	**54.27**	**343**	P	P	03 13 38.6	+0.1
	0.4nm,0.5s,baz=149,slow=8.5,SNR=5.6						
ZALV	**Zalesovo Beam**	**60.27**	**348**	P	P	03 14 20.4	-0.4
	0.9nm,0.5s,baz=169,slow=6.9,SNR=4.6						

*ISCJB **31** 03:07:20.7±0.4, 31°.31S±0°.03×69°.19W±0°.05, h119km±4km, mb3.9/9, Error ellipse: s-maj=7.1km s-min=5.2km az=2.9*
*NEIC **31** 03:07:21.7±0.4, 31°.32S×69°.15W, h116km±4km, mb3.7/3, MD3.8(GUC), Error ellipse: s-maj=8.3km s-min=6.1km az=94.0*
*IDC **31** 03:07:21.9±0.6, 31°.39S×69°.14W, h113km±4km, mb3.9/6, mb1 3.9/10, mb1mx3.7/19, mbtmp3.8/10, Error ellipse: s-maj=18.2km s-min=12.9km az=41.0*
*GUC **31** 03:07:21.9±0.8, 31°.32S×69°.51W, h145km, MD3.8, ML4.0*
ISC 31 03:07:21.8±0.4, 31°.30S±0°.03×69°.19W±0°.05, h113km±4km, n52, σ0s94/55, mb3.9/9, 8C-11D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.86**	**111**	P	Pn	**03 07 42.5**	**+0.7**
	26nm,0.3s,baz=285,slow=8.2,SNR=2831						
CFAA				S	Sn	**03 07 57.0**	**0.0**
	155nm,0.3s,baz=192,slow=20,SNR=216						
CMCH	**Combarbala**	**1.56**	**274**	⇓*i*P	Pn	**03 07 49.2**	**-0.2**
CMCH				*i* S	Sn	**03 08 10.4**	**-0.1**
CMCH	**Combarbala**	**1.56**	**274**	⇓*i*P	Pn	**03 07 49.2**	**-0.2**
CMCH				*i* S	Sn	**03 08 10.4**	**-0.1**
CMCH				AML	AML	03 08 16.7	
	comp=N,18μm,0.4s						
JACH	**Jahuel**	**1.82**	**221**	⇓*i*P	Pn	**03 07 53.3**	**+0.7**
JACH				*i* S	Sn	**03 08 17.0**	**+0.8**
JACH	**Jahuel**	**1.82**	**221**	⇓*i*P	Pn	**03 07 53.3**	**+0.7**
JACH				*i* S	Sn	**03 08 17.0**	**+0.8**
OVCH	**Ovalle**	**1.86**	**291**	⇓*i*P	Pn	**03 07 52.7**	**-0.5**
OVCH				*i* S	Sn	**03 08 15.8**	**-1.3**
OVCH	**Ovalle**	**1.86**	**291**	⇓*i*P	Pn	**03 07 52.7**	**-0.5**
OVCH				*i* S	Sn	**03 08 15.8**	**-1.3**
OVCH				AML	AML	03 08 21.0	
	comp=N,2μm,0.7s						
CHNG	**Los Chungos**	**2.06**	**253**	⇓*i*P	Pn	**03 07 51.7**	**-3.9**
CHNG				*i* S	Sn	**03 08 16.1**	**-5.3**
CHNG				AML	AML	03 08 25.2	
	comp=E,789nm,0.5s						
FCH	**Farellones**	**2.22**	**205**	⇓*i*P	Pn	**03 07 59.4**	**+1.7**
FCH				*i* S	Sn	**03 08 28.4**	**+3.2**
FCH	**Farellones**	**2.22**	**205**	⇓*i*P	Pn	**03 07 59.4**	**+1.7**
FCH				*i* S	Sn	**03 08 28.4**	**+3.2**
FCH				AML	AML	03 08 34.9	
	comp=N,574nm,0.4s						
PEL	**Peldehue**	**2.23**	**214**	⇓*i*P	Pn	**03 07 58.1**	**+0.3**
PEL				*i* S	Sn	**03 08 24.2**	**-1.2**
PEL				AML	AML	03 08 28.2	
	comp=E,801nm,0.7s						
ROCH	**El Roble**	**2.27**	**222**	⇓*i*P	Pn	**03 07 58.3**	**0.0**
ROCH				*i* S	Sn	**03 08 26.1**	**-0.3**
ROCH				AML	AML	03 08 31.1	
	comp=E,519nm,0.4s						
SAN	**Santiago**	**2.48**	**210**	*i* S	Sn	**03 08 31.7**	**+0.6**
ANTU	**Antumapu**	**2.57**	**208**	*i* S	Sn	**03 08 33.7**	**+0.5**
ANTU				AML	AML	03 08 38.5	
	comp=E,512nm,0.5s						
PCH	**Pirque**	**2.57**	**206**	⇑*i*P	Pn	**03 08 03.0**	**+0.9**
PCH	**Pirque**	**2.57**	**206**	⇑*i*P	Pn	**03 08 03.0**	**+0.9**
LCO	**Las Campanas**	**2.63**	**330**	*e*Pn	Pn	**03 08 03.2**	**+0.1**
LCO				*e*Sn	Sn	**03 08 34.2**	**-0.6**
LMEL	**Las Melosas**	**2.68**	**198**	⇑*i*P	Pn	**03 08 04.3**	**+0.7**
LMEL	**Las Melosas**	**2.68**	**198**	⇑*i*P	Pn	**03 08 04.3**	**+0.7**
LMEL				AML	AML	03 08 43.7	
	comp=N,341nm,0.3s						
TACH	**Talagante**	**2.77**	**212**	⇑*i*P	Pn	**03 08 04.6**	**-0.2**
TACH	**Talagante**	**2.77**	**212**	⇑*i*P	Pn	**03 08 04.6**	**-0.2**
CHCH	**Chadas Angostu**	**2.90**	**205**	*e*P	Pn	**03 08 06.6**	**+0.1**
CHCH				S	Sn	**03 08 39.5**	**-1.5**
CHCH	**Chadas Angostu**	**2.90**	**205**	*e*P	Pn	**03 08 06.6**	**+0.1**
CHCH				*i* S	Sn	**03 08 39.5**	**-1.5**
CACH	**El Canelo**	**3.05**	**203**	⇑*i*P	Pn	**03 08 09.1**	**+0.6**
CACH	**El Canelo**	**3.05**	**203**	⇑*i*P	Pn	**03 08 09.1**	**+0.6**
TRQA	**Tornquist**	**8.97**	**141**	*e*Pn	Pn	**03 09 27.4**	**-1.0**
	comp=N,50nm,0.6s						
PLCA	**Paso Flores**	**9.47**	**186**	P	Pn	**03 09 33.2**	**-1.9**
	comp=N,0.2nm,0.3s,baz=10,slow=11,SNR=3.4						
CPUP	**Villa Florida**	**11.52**	**67**	P	Pn	**03 10 01.6**	**-1.1**
	comp=N,0.4nm,0.3s,baz=221,slow=9.8,SNR=5.7						
LPAZ	**La Paz**	**14.98**	**4**	P	Pn	**03 10 49.4**	**+1.7**
	comp=N,0.4nm,0.3s,baz=180,slow=8.0,SNR=38						
SIV	**San Ignacio**	**16.95**	**28**	P	Pn	**03 11 11.8**	**-0.2**
	comp=N,0.5nm,0.3s,baz=206,slow=11,SNR=20						
USHA	**Ushuaia**	**23.52**	**179**	P	P	**03 12 19.8**	**-1.5**
	comp=N,9.2nm,0.9s,mb4.1,baz=4.8,slow=12,SNR=2.3						
PMSA	**Palmer Station**	**33.64**	**176**	P	P	**03 13 51.3**	**+0.1**
	comp=N,3.6nm,0.9s,mb4.2,baz=353,slow=7.8,SNR=4.6						
VNA2	**Neumayer--Watz**	**51.59**	**158**	*e*	P	**03 16 14.2**	**-1.7**
VNA2				*e*		03 16 17.6	
TXAR	**Lajitas Array**	**68.65**	**328**	P	P	**03 18 13.5**	**+0.7**
	comp=N,0.4nm,0.6s,mb3.4,baz=151,slow=8.2,SNR=6.5						
TXAR				pP	pP	03 18 42.9	+2.0
	comp=N,0.4nm,0.7s,baz=141,slow=5.8,SNR=4.4						
WVT	**Waverly**	**69.32**	**344**	*e*P	P	**03 18 16.8**	**-0.1**
	comp=N,4.4nm,0.6s,mb4.5						
MNTX	**Cornudas Mount**	**71.43**	**328**	*e*P	P	**03 18 29.2**	**-0.5**
	comp=N,0.6nm,0.6s,mb3.6						
DBIC	**Dimbokro**	**72.02**	**70**	P	P	**03 18 33.9**	**+0.2**
	comp=N,9.7nm,1.2s,mb4.5,baz=214,slow=17,SNR=4.4						
SDCO	**Great Sand Dun**	**76.61**	**331**	*e*P	P	**03 19 01.4**	**+1.7**
	comp=N,0.6nm,0.6s,mb3.5						
TORD	**Torodi Ar. Bea**	**81.01**	**69**	P	P	**03 19 24.7**	**+0.4**
	comp=N,1.3nm,0.5s,mb4.0,baz=241,slow=2.6,SNR=3.9						
PDAR	**Pinedale Array**	**82.50**	**331**	P	P	**03 19 32.0**	**+0.5**
	comp=N,0.3nm,0.7s,mb3.2,baz=94,slow=7.2,SNR=3.5						
PDAR				pP	pP	03 20 00.7	+0.1
	comp=N,0.3nm,0.8s,baz=179,slow=4.3,SNR=2.7						
ASAR	**Alice Springs**	**121.04**	**205**	PKP	PKPdf	03 26 00.6	-0.9
	comp=N,0.4nm,0.6s,baz=120,slow=2.0,SNR=4.5						
WRA	**Warramunga Arr**	**124.27**	**207**	PKP	PKPdf	03 26 07.2	-0.6
	comp=N,1.2nm,0.4s,baz=161,slow=1.7,SNR=14						
EKS2	**Erkin-Say**	**148.55**	**58**	*e*PKPbc	PKPbc	03 26 53.7	-1.5
AAK	**Ala-Archa**	**149.08**	**58**	PKPbc	PKPbc	03 26 56.8	+0.3
AAK				*e*PKPab	PKPab	03 26 58.1	-3.1
AAK	**Ala-Archa**	**149.08**	**58**	PKPbc	PKPbc	03 26 56.8	+0.3
	comp=N,1.8nm,0.4s,baz=34,slow=3.6,SNR=5.8						
KURK	**Kurchatov**	**149.27**	**42**	PKPbc	PKPbc	03 26 55.3	-1.5
	comp=N,0.5nm,0.4s,baz=297,slow=2.8,SNR=6.0						
KURK				pPKPbc	pPKPbc	03 27 25.6	-1.7
	comp=N,0.2nm,0.3s,baz=299,slow=3.1,SNR=2.1						
TKM2	**Tokmak 2**	**149.83**	**57**	*e*PKPbc	PKPbc	03 26 59.0	+0.6
ZAA0	**Zalesovo Array**	**150.67**	**32**	*e*PKPbc	PKPbc	03 27 00.2	+0.2
ZALV	**Zalesovo Beam**	**150.67**	**32**	PKPbc	PKPbc	03 27 00.9	+0.9
	comp=N,5.6nm,0.5s,baz=301,slow=3.0,SNR=13						
ZALV				pPKPbc	pPKPbc	03 27 31.3	+0.8
	comp=N,1.8nm,0.5s,baz=317,slow=3.3,SNR=2.2						
MK31	**Makanchi Array**	**153.18**	**47**	*e*PKPbc	PKPbc	03 27 03.1	-2.8
MK31				*e*PKPab	PKPab	03 27 17.8	-0.3
MKAR	**Makanchi Array**	**153.18**	**47**	PKPbc	PKPbc	03 27 06.4	+0.5
MKAR				PKPab	PKPab	03 27 17.9	-0.2
MKAR	**Makanchi Array**	**153.18**	**47**	PKPbc	PKPbc	03 27 06.4	+0.5
	comp=N,0.9nm,0.6s,baz=299,slow=2.0,SNR=10						
MKAR				PKPab	PKPab	03 27 17.9	-0.1
	comp=N,1.3nm,0.6s,baz=299,slow=3.2,SNR=9.4						

*IDC **31** 03:08:26.4±1.6, 8°.59S×128°.65E, h0km, mb3.6/2, mb1 3.8/5, mb1mx3.6/17, mbtmp3.6/5, ML3.9/3, Error ellipse: s-maj=85.6km s-min=24.6km az=77.0*
*ISCJB **31** 03:08:28.3±0.9, 8°.70S×0°.06×128°.8E±0°.1, h33km, mb3.7/3, Error ellipse: s-maj=19.9km s-min=8.4km az=168.3*
*NEIC **31** 03:08:38.1±2.6, 9°.07S×128°.64E, h120km±32km, mb3.7/1, Error ellipse: s-maj=26.0km s-min=22.5km az=130.0*
ISC 31 03:08:30.7±0.9, 8°.65S±0°.06×128°.9E±0°.1, h35km, n7, σ0s78/10, mb3.7/3, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**5.34**	**139**	*e*Pn	Pn	**03 09 53.4**	**+5.4**
	68nm,0.5s						
FITZ	**Fitzroy Crossi**	**9.91**	**198**	Pn	Pn	**03 10 51.1**	**+0.5**
	0.7nm,0.3s,baz=16,slow=9.9,SNR=22						
FITZ				Sn	Sn	**03 12 40.6**	**-0.1**
	0.8nm,0.3s,baz=286,slow=24,SNR=6.1						
WRA	**Warramunga Arr**	**12.41**	**155**	Pn	Pn	**03 11 26.6**	**+1.7**
	0.8nm,0.3s,baz=328,slow=14,SNR=25						
WRA				Sn	Sn	**03 13 41.3**	**-0.7**
	0.9nm,0.3s,baz=342,slow=22,SNR=6.0						
ASAR	**Alice Springs**	**15.69**	**163**	Pn	Pn	**03 12 09.0**	**-0.2**
	0.4nm,0.3s,baz=331,slow=9.7,SNR=14						
ASAR				Sn	Sn	**03 15 01.5**	**-0.4**
	0.2nm,0.3s,baz=320,slow=18,SNR=4.1						
SONM	**Songino Array**	**59.66**	**343**	P	P	**03 18 32.1**	**+0.7**
	0.2nm,0.3s,mb3.6,baz=168,slow=7.4,SNR=2.6						
MKAR	**Makanchi Array**	**69.00**	**328**	P	P	**03 19 32.2**	**-0.3**
	0.3nm,0.4s,mb3.5,baz=129,slow=7.5,SNR=7.2						
KURK	**Kurchatov**	**73.35**	**329**	*e*P	P	**03 19 57.7**	**-1.1**
	0.7nm,0.5s,mb3.9						

*IDC **31** 03:19:53.9±1.2, 15°.01N×120°.46E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/21, mbtmp3.7/4, Error ellipse: s-maj=59.4km s-min=10.0km az=60.0*
*ISCJB **31** 03:19:55.8±0.8, 13°.77N±0°.09×120°.7E±0°.1, h112km±10km, mb3.7/4, Error ellipse: s-maj=23.1km s-min=15.3km az=8.6*
*MAN **31** 03:19:55, 13°.78N×120°.61E, h99km, mb4.2, ML3.1, MS2.8*
ISC 31 03:19:56.8±0.8, 13°.76N±0°.09×120°.7E±0°.1, h104km±10km, n11, σ0s88/12, mb3.7/4, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.41**	**35**	⇓*i*P	Pn	**03 20 14.3**	**+1.7**
	211nm,0.3s,baz=174,slow=9.2,SNR=21						
TGY				Lg		03 20 26.9	
	579nm,0.3s,baz=330,slow=23,SNR=47						
TGY	**Tagaytay City**	**0.41**	**35**	⇓*i*P	Pn	**03 20 19.2**	**+6.7**
LUBP	**Lubang**	**0.44**	**267**	*e*P	Pn	**03 20 12.4**	**-0.3**
LUBP				*e*S	Sn	**03 20 17.4**	**-7.1**
BOAC	**Boac**	**1.16**	**105**	*e*P	Pn	**03 20 19.7**	**+0.4**
BUSP	**Coron**	**1.81**	**196**	*e*P	Pn	**03 20 26.4**	**-0.8**
BOLP	**Bolinao**	**2.71**	**344**	*e*P	Pn	**03 20 38.1**	**-0.8**
ENPP	**El Nido**	**2.82**	**206**	*e*P	Pn	**03 20 40.4**	**0.0**
CMAR	**Chiang Mai Arr**	**21.41**	**285**	P	P	**03 24 38.5**	**+2.1**
	0.5nm,0.3s,mb3.3,baz=90,slow=7.6,SNR=3.2						
SONM	**Songino Array**	**36.00**	**344**	P	P	**03 26 46.9**	**-0.7**
	0.6nm,0.5s,mb3.8,baz=159,slow=9.6,SNR=4.0						
MKAR	**Makanchi Array**	**45.98**	**324**	P	P	**03 28 09.4**	**0.0**
	0.6nm,0.6s,mb3.5,baz=139,slow=8.1,SNR=5.4						
KURK	**Kurchatov**	**50.14**	**326**	P	P	**03 28 41.0**	**-0.4**
	1.5nm,0.6s,mb4.1,baz=128,slow=7.8,SNR=6.8						

*CSEM **31** 03:24:26.5±0.8, 51°.23N×18°.96E, h2km, ML2.6/5, Error ellipse: s-maj=12.0km s-min=5.9km az=8.0*
*IPEC **31** 03:24:27.0±0.3, 51°.26N×19°.03E, h0km, ML1.8/3, Error ellipse: s-maj=2.1km s-min=1.2km az=7.0*
*PRU **31** 03:24:31.3, 51°.06N×18°.95E, h0km*
ISC 31 03:24:26.0±2.0, 51°.26N±0°.08×18°.97E±0°.07, h0km, n14, σ0s77/22, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**1.17**	**153**	*e*Pg	Pg	**03 24 48.3**	**0.0**
OJC				*e*Sg	Sg	**03 25 03.4**	**0.0**
OJC	**Ojcow**	**1.17**	**153**	*e*Pg	Pg	**03 24 48.2**	**-0.1**
	baz=335						
OJC				*e*Sg	Sg	**03 25 02.9**	**-0.5**
	baz=335						
OKC	**Ostrava-Krasne**	**1.52**	**201**	*e*PG	Pg	**03 24 53.9**	**-1.2**
OKC				*e*SG	Sg	**03 25 15.9**	**+1.2**
	comp=Z,11nm,0.5s						
OKC	**Ostrava-Krasne**	**1.52**	**201**	Pg	Pg	**03 24 53.9**	**-1.2**
OKC				Sg	Sg	**03 25 15.9**	**+1.2**
	comp=Z,11nm,0.5s						
MORC	**Moravsky Berou**	**1.74**	**212**	*e*Pn	Pn	**03 24 59.1**	**+1.7**
	baz=32						
MORC				*e*Sg	Sg	**03 25 21.3**	**-0.6**
	comp=Z,8.2nm,0.5s,baz=32						
DPC	**Dobruska-Polom**	**1.91**	**243**	*e*PG	Pg	**03 25 02.2**	**-0.4**
DPC				*e*SG	Sg	**03 25 27.1**	**-0.2**
	comp=Z,3.6nm,0.6s						
DPC	**Dobruska-Polom**	**1.91**	**243**	Pg	Pg	**03 25 02.2**	**-0.4**
DPC				Sg	Sg	**03 25 27.1**	**-0.2**
	comp=Z,3.6nm,0.6s						
VRAC	**Vranov**	**2.48**	**219**	*e*Sg	Sg	**03 25 46.3**	**+0.8**
	comp=Z,6.6nm,0.4s,baz=38						
KRUC	**Moravsky**	**2.75**	**218**	*e*Sg	Sg	**03 25 53.7**	**-0.7**
	comp=Z,2.6nm,0.4s,baz=37						
PRU	**Pruhonice**	**3.09**	**247**	*e*SG	Sg	**03 26 05.5**	**+0.2**
PRU	**Pruhonice**	**3.09**	**247**	Sg	Sg	**03 26 05.5**	**+0.2**
BRG	**Berggiesshubel**	**3.19**	**265**	PG	Pg	**03 25 34.0**	**+6.8**
BRG				SG	Sg	**03 26 13.8**	**+5.2**
	comp=Z,2.5nm,0.6s						
KHC	**Kasperske Hory**	**4.07**	**241**	*e*SG	Sg	**03 26 36.4**	**-0.2**
KHC	**Kasperske Hory**	**4.07**	**241**	Sg	Sg	**03 26 36.4**	**-0.2**

*ISCJB **31** 03:52:49.8±0.7, 5°.67S±0°.09×35°.9E±0°.2, h10km, mb4.0/8, MS3.5/3, Error ellipse: s-maj=27.0km s-min=8.7km az=20.6*
*IDC **31** 03:52:50.1±1.2, 5°.58S×35°.86E, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.8/20, mbtmp4.1/5, ML4.5/1, MS3.4/5, Ms1 3.4/5, ms1mx3.1/25, Error ellipse: s-maj=45.0km s-min=15.8km az=112.0*
*NEIC **31** 03:52:51.5±0.6, 5°.68S×35°.87E, h10km, mb4.3/4, Error ellipse: s-maj=24.5km s-min=11.1km az=114.0*
ISC 31 03:52:52.5±3.5, 5°.66S±0°.09×35°.9E±0°.2, h15km±22km, n14, σ0s71/16, mb4.0/8, MS3.5/3, Tanzania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**4.70**	**17**	Pn	Pn	**03 54 02.5**	**-0.5**
KMBO				Pg	Pb	**03 54 14.8**	**+0.1**
KMBO				Sn	Sn	**03 54 56.8**	**-0.5**
KMBO				Lg		03 55 13.7	
KMBO				LR	LR	03 56 04.2	
KMBO	**Kilima Mbogo**	**4.70**	**17**	Pn	Pn	**03 54 02.5**	**-0.5**
	21nm,0.3s,baz=196,slow=18,SNR=153						
KMBO				Pg	Pb	**03 54 14.8**	**+0.1**
	18nm,0.3s,baz=188,slow=17,SNR=27						
KMBO				Sn	Sn	**03 54 56.8**	**-0.5**
	24nm,0.3s,baz=247,slow=21,SNR=5.9						
KMBO				Lg		03 55 13.7	
	29nm,0.3s,baz=247,slow=23,SNR=5.4						
KMBO				LR	LR	03 56 04.1	
	comp=Z,332nm,18.5s,baz=90,slow=42						
ATD	**Arta Tunnel**	**18.43**	**22**	LR	LR	04 04 14.3	
	comp=Z,83nm,19.8s,baz=112,slow=37						
LBTB	**Lobatse**	**21.63**	**206**	*e*P	P	**03 57 41.5**	**-0.8**
	7.2nm,0.9s,mb4.1						
LBTB	**Lobatse**	**21.63**	**206**	P	P	**03 57 41.9**	**-0.4**
	4.1nm,0.8s,mb3.9,baz=29,slow=13,SNR=5.0						
BOSA	**Boshof**	**24.96**	**203**	P	P	**03 58 15.6**	**+0.2**
	2.8nm,0.7s,mb3.9,baz=29,slow=10,SNR=4.6						
BOSA				LR	LR	04 08 14.1	
	comp=Z,68nm,18.8s,MS3.2,baz=182,slow=37						
TORD	**Torodi Ar. Bea**	**38.75**	**299**	P	P	**04 00 16.1**	**-0.5**
	1.1nm,1.1s,mb3.5,baz=122,slow=7.6,SNR=4.5						
TORD				LR	LR	04 16 34.2	
	comp=Z,63nm,18.9s,MS3.5,baz=125,slow=37						
MALT	**Malatya**	**43.81**	**3**	*e*P	P	**04 01 00.0**	**+2.2**
	5.4nm,1.1s,mb4.2						
BBTS	**Babate**	**55.74**	**292**	LR	LR	04 27 02.5	
	comp=Z,87nm,18.4s,MS3.9,baz=310,slow=37						
MK31	**Makanchi Array**	**66.40**	**33**	*e*P	P	**04 03 40.6**	**-0.3**
MKAR	**Makanchi Array**	**66.40**	**33**	P	P	**04 03 41.2**	**+0.3**
	1.6nm,0.7s,mb4.2,baz=232,slow=6.1,SNR=16						
CHTO	**Chiang Mai**	**66.69**	**67**	*e*P	P	**04 03 43.4**	**+0.1**
	1.5nm,0.6s,mb4.2						
KURK	**Kurchatov**	**67.10**	**28**	*e*P	P	**04 03 44.7**	**-0.6**
	1.8nm,0.9s,mb4.1						
NOA	**NORSAR Array B**	**69.23**	**347**	P	P	**04 03 58.9**	**+0.5**
	1.5nm,0.9s,mb3.9,baz=151,slow=5.6,SNR=3.9						

*NEIC **31** 04:01:10.4±3.7, 34°.76S×179°.79E, h268km±14km, mb3.8/1, Error ellipse: s-maj=76.3km s-min=22.9km az=155.0*
ISC 31 04:01:11.6±1.9, 34°.8S±0°.2×179°.7E±0°.2, h280km±13km, n66, σ0s83/72, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.96**	**201**	P	Pn	**04 02 03.8**	**-1.7**
MXZ				S	S	**04 02 46.1**	**-2.2**
MXZ	**Matakaoa Point**	**2.96**	**201**	PN	Pn	**04 02 03.8**	**-1.7**
MXZ				SN	S	**04 02 46.0**	**-2.4**
PUZ	**Puketiti**	**3.45**	**199**	P	Pn	**04 02 09.7**	**-0.9**
PUZ	**Puketiti**	**3.45**	**199**	PN	Pn	**04 02 09.7**	**-0.9**
PUZ				SN	S	**04 02 58.4**	**+0.8**
CNGZ	**Carnagh Statio**	**3.85**	**197**	PN	Pn	**04 02 15.3**	**+0.3**
MWZ	**Matawai**	**3.92**	**205**	P	Pn	**04 02 15.5**	**-0.2**
MWZ				S	S	**04 03 08.4**	**+1.5**
MWZ	**Matawai**	**3.92**	**205**	PN	Pn	**04 02 15.5**	**-0.3**
MWZ				SN	S	**04 03 07.6**	**+0.7**
URZ	**Urewera**	**4.01**	**210**	*e*Pn	Pn	**04 02 16.9**	**+0.1**
URZ				*e*S	S	**04 03 08.4**	**-0.5**
URZ	**Urewera**	**4.01**	**210**	PN	Pn	**04 02 16.4**	**-0.4**
TARZ	**Mount Tarawera**	**4.26**	**216**	PN	Pn	**04 02 21.6**	**+2.0**
PRGZ	**Paritu Road**	**4.34**	**199**	PN	Pn	**04 02 22.9**	**+2.2**
KNZ	**Kokohu**	**4.49**	**200**	PN	Pn	**04 02 22.1**	**-0.2**
MHGZ	**Mahia Peninsul**	**4.56**	**198**	PN	Pn	**04 02 23.5**	**+0.4**
RAHZ	**Arahi**	**4.59**	**206**	PN	Pn	**04 02 23.2**	**-0.3**
NMHZ	**Naumai**	**4.85**	**207**	PN	Pn	**04 02 27.0**	**+0.5**
BKZ	**Black Stump Fm**	**5.03**	**209**	P	Pn	**04 02 29.0**	**+0.3**
BKZ	**Black Stump Fm**	**5.03**	**209**	PN	Pn	**04 02 28.1**	**-0.6**
MCHZ	**McNeill Hill**	**5.20**	**206**	PN	Pn	**04 02 31.6**	**+1.0**
KAHZ	**Kaharoraki**	**5.45**	**203**	PN	Pn	**04 02 34.2**	**+0.6**
BHHZ	**Black Hill Sta**	**5.48**	**211**	PN	Pn	**04 02 33.6**	**-0.4**
MOVZ	**Moawhango**	**5.55**	**213**	PN	Pn	**04 02 35.2**	**+0.4**
WNVZ	**Wahianoa**	**5.56**	**215**	PN	Pn	**04 02 35.5**	**+0.6**
MTVZ	**Mangateitei**	**5.66**	**215**	PN	Pn	**04 02 37.5**	**+1.2**
PNHZ	**Pukenui**	**5.79**	**207**	PN	Pn	**04 02 37.9**	**+0.1**
WPHZ	**Waipukurau**	**5.84**	**205**	PN	Pn	**04 02 39.5**	**+1.2**
PRHZ	**Porangahau**	**5.95**	**203**	PN	Pn	**04 02 40.4**	**+0.7**
TSZ	**Takapari Road**	**6.01**	**208**	P	Pn	**04 02 40.3**	**-0.1**
TSZ	**Takapari Road**	**6.01**	**208**	PN	Pn	**04 02 40.3**	**-0.1**
DVHZ	**Dannevirke**	**6.14**	**206**	PN	Pn	**04 02 42.2**	**+0.2**
WAZ	**Wanganui**	**6.19**	**216**	P	Pn	**04 02 43.7**	**+1.1**
WAZ	**Wanganui**	**6.19**	**216**	PN	Pn	**04 02 43.7**	**+1.1**
POWZ	**Post Office Ro**	**6.37**	**208**	PN	Pn	**04 02 44.8**	**0.0**
BFZ	**Birch Farm**	**6.45**	**204**	PN	Pn	**04 02 46.5**	**+0.7**
TIWZ	**Tintock**	**6.66**	**206**	PN	Pn	**04 02 47.9**	**-0.5**
MRZ	**Mangatainoka R**	**6.68**	**208**	P	Pn	**04 02 47.3**	**-1.2**
MRZ	**Mangatainoka R**	**6.68**	**208**	PN	Pn	**04 02 47.8**	**-0.8**
HOWZ	**Holdsworth Sta**	**6.91**	**207**	PN	Pn	**04 02 49.9**	**-1.5**
TMWZ	**Te Maipa**	**6.96**	**204**	PN	Pn	**04 02 52.0**	**0.0**
OGWZ	**Otaki Gorge**	**6.97**	**209**	PN	Pn	**04 02 51.5**	**-0.7**
KIW	**Kapiti Island**	**7.12**	**211**	P	Pn	**04 02 53.4**	**-0.5**
KIW	**Kapiti Island**	**7.12**	**211**	PN	Pn	**04 02 53.4**	**-0.5**
MTW	**Mount Morrison**	**7.14**	**206**	P	Pn	**04 02 54.2**	**0.0**
MTW	**Mount Morrison**	**7.14**	**206**	PN	Pn	**04 02 54.0**	**-0.2**
CAW	**Cannon Point**	**7.26**	**209**	PN	Pn	**04 02 55.1**	**-0.6**
PAWZ	**Paruwai Farm**	**7.36**	**206**	P	Pn	**04 02 56.4**	**-0.6**
PAWZ	**Paruwai Farm**	**7.36**	**206**	PN	Pn	**04 02 56.4**	**-0.6**
MSWZ	**Moikau Station**	**7.45**	**207**	P	Pn	**04 02 58.0**	**

DUG	**Dugway**	**64.54**	**3**	*eP*	**P**		**04 15 48.5**	**+0.5**
	4.2nm,1.0s,mb4.4								
BW06	**Boulder Array**	**67.30**	**5**	*eP*	**P**		**04 16 05.0**	**-0.7**
	1.7nm,0.8s,mb4.1								
PDAR	**Pinedale Array**	**67.30**	**5**	P	**P**		**04 16 04.7**	**-1.0**
	0.9nm,0.7s,mb3.9,baz=168,slow=7.6,SNR=11								
HLID	**Hailey**	**67.85**	**1**	*eP*	**P**		**04 16 08.7**	**-0.4**
	3.1nm,0.9s,mb4.3								
TPAW	**Teton Pass**	**67.92**	**4**	*eP*	**P**		**04 16 09.7**	**+0.1**
	4.9nm,0.9s,mb4.5								
LOHW	**Long Hollow**	**68.07**	**4**	*eP*	**P**		**04 16 09.7**	**-0.8**
	1.5nm,0.8s,mb4.1								
MOOW	**Moose Ponds**	**68.19**	**4**	*eP*	**P**		**04 16 11.2**	**-0.1**
	3.5nm,1.0s,mb4.3								
IMW	**Indian Meadow**	**68.33**	**4**	*eP*	**P**		**04 16 12.5**	**+0.3**
	4.1nm,1.1s,mb4.4								
MCMT	**McKenzie Canyo**	**69.16**	**2**	*eP*	**P**		**04 16 17.1**	**-0.2**
	1.7nm,1.2s,mb3.9								
NEW	**Newport**	**72.55**	**359**	*eP*	**P**		**04 16 37.8**	**0.0**
	3.9nm,1.1s,mb4.2								
DLBC	**Dease Lake**	**83.56**	**353**	*eP*	**P**		**04 17 40.1**	**+1.4**
ZALV	**Zalesovo Beam**	**146.82**	**337**	PKPbc	PKPbc		04 24 52.3	-0.7
	1.5nm,0.3s,baz=10,slow=2.8,SNR=6.8								
CMAR	**Chiang Mai Arr**	**146.99**	**266**	PKPbc	PKPbc		04 24 58.5	+3.9
	0.7nm,0.3s,baz=7.6,slow=2.2,SNR=6.5								
BRTR	**Keskin Array B**	**150.38**	**52**	PKPbc	PKPbc		04 25 02.7	0.0
	1.3nm,0.9s,baz=59,slow=0.7,SNR=4.7								
BRVK	**Borovoye**	**151.20**	**352**	*e*PKPdf	PKPdf		04 24 59.1	+0.8
KURK	**Kurchatov**	**151.59**	**340**	*e*PKPbc	PKPbc		04 25 04.1	-1.1
KURK	**Kurchatov**	**151.59**	**340**	PKPbc	PKPbc		04 25 04.9	-0.3
	1.4nm,0.7s,baz=22,slow=1.6,SNR=6.4								
MK31	**Makanchi Array**	**153.47**	**331**	*e*PKPdf	PKPdf		04 25 02.9	+1.0
MKAR	**Makanchi Array**	**153.47**	**331**	PKP	PKPdf		04 25 02.5	+0.7
MKAR				PKPbc	PKPbc		04 25 09.1	-0.4
MKAR	**Makanchi Array**	**153.47**	**331**	PKP	PKPdf		04 25 02.5	+0.7
	0.1nm,0.3s,baz=15,slow=6.0,SNR=4.6								
MKAR				PKPbc	PKPbc		04 25 09.1	-0.4
	0.6nm,0.7s,baz=42,slow=1.9,SNR=7.3								

*ISCJB **31** 04:06:42.0±0.4,24.°66N±0.°03×98.°02E±0.°05,h10km, mb3.8/11, Error ellipse: s-maj=6.8km s-min=3.7km az=158.2*

*IDC **31** 04:06:44.2±1.0,24.°98N×98.°09E,h0km,mb3.8/6, mb1 3.9/7,mb1mx3.7/25,mbtmp3.8/7,ML4.4/1,MS3.3/1, Ms1 3.3/1,ms1mx2.4/30, Error ellipse: s-maj=46.3km s-min=14.5km az=71.0*

*NEIC **31** 04:06:46.0±0.5,24.°77N×97.°66E,h10km,mb4.0/6, Error ellipse: s-maj=14.6km s-min=7.1km az=65.0*

*BJI **31** 04:06:47.9,25.°13N×98.°01E,h10km,mb3.9/4,ML4.1/6, Ms3.9/4,Ms7 3.6/4*

ISC 31 04:06:44.8±0.4,24.°78N±0.°03×98.°00E±0.°04,h10km,n25, σ1♀21/34,mb3.8/11,1C,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**4.32**	**85**	Pg	**Pg**	**04 08 07.5**	**0.0**
KMI				Sg	**Sg**	**04 09 02.0**	**-1.4**
KMI				*s*max			
	comp=N,430nm,1.3s						
KMI				*s*max			
	comp=E,290nm,0.9s						
KMI				LR	LR		
	comp=N,2μm,6.2s						
KMI				LR	LR		
	comp=E,1μm,5.9s						
KMI				LR	LR		
	comp=Z,710nm,9.0s						
CHRT	**Chiangrai**	**5.16**	**161**	PN	**Pn**	**04 08 02.0**	**-0.1**
CHRT	**Chiangrai**	**5.16**	**161**	PG	**Pg**	**04 08 23.0**	**-0.7**
CHRT				SG	**Sg**	**04 09 30.0**	**-0.5**
SHL	**Shillong**	**5.60**	**279**	*e*PKP	**Pn**	**04 08 15.0**	**+6.9**
SHL				*e*S	**Sb**	**04 09 29.0**	**-0.8**
CHG	**Chiang Mai**	**6.00**	**171**	PG	**Pn**	**04 08 15.9**	**+2.2**
CHG				SG	**Pg**	**04 08 37.0**	**-2.8**
CHTO	**Chiang Mai**	**6.00**	**171**	*e*Pn	**Pn**	**04 08 15.6**	**+1.9**
	comp=Z,56nm,0.6s						
CHTO				*e*Pg	**Pg**	**04 08 38.1**	**-1.7**
CHTO				*e*Sg	**Sg**	**04 09 57.5**	**-0.1**
CM31	**Chiang Mai Arr**	**6.36**	**172**	*e*Pn	**Pn**	**04 08 20.4**	**+1.9**
	comp=Z,50nm,0.6s						
CM31				*e*Pg	**Pg**	**04 08 44.2**	**-2.3**
CM31				*e*Sg	**Sg**	**04 10 09.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**6.36**	**172**	Pn	**Pn**	**04 08 21.0**	**+2.4**
	comp=Z,2.2nm,0.3s,baz=346,slow=13,SNR=17						
CMAR				Pg	**Pg**	**04 08 45.3**	**-1.3**
	comp=Z,4.8nm,0.3s,baz=349,slow=16,SNR=50						
CMAR				Lg		04 10 11.3	
	comp=Z,7.4nm,0.3s,baz=354,slow=29,SNR=8.6						
BDT	**Bhumibol Dam**	**7.56**	**173**	P	**Pn**	**04 08 38.0**	**+2.9**
	comp=Z,87nm,1.0s						
LSA	**Lhasa**	**7.82**	**310**	*e*Pn	**Pn**	**04 08 37.9**	**-0.7**
	comp=Z,7.6nm,0.6s						
GYA	**Guiyang**	**8.00**	**76↑**	*i*P	**Pn**	**04 08 42.0**	**+0.9**
GYA				LR	LR		
	comp=N,410nm,5.9s						
GYA				LR	LR		
	comp=E,480nm,7.1s						
GYA				LR	LR		
	comp=Z,560nm,7.6s						
ENH	**Enshi**	**11.56**	**59**	*e*Pn	**Pn**	**04 09 36.5**	**+6.5**
	comp=Z,13nm,0.8s						
SONM	**Songino Array**	**23.95**	**14**	P	**P**	**04 11 57.9**	**-1.1**
	comp=Z,1.3nm,0.8s,mb3.4,baz=202,slow=11,SNR=6.8						
ULN	**Ulaanbaatar**	**24.13**	**15**	*e*P	**P**	**04 12 02.5**	**+1.8**
	comp=Z,2.6nm,0.8s,mb3.7						
MK31	**Makanchi Array**	**25.30**	**334**	*e*P	**P**	**04 12 10.6**	**-0.8**
MKAR	**Makanchi Array**	**25.30**	**334**	P	**P**	**04 12 10.7**	**-0.7**
	comp=Z,3.3nm,0.8s,mb3.9,baz=146,slow=9.5,SNR=19						
TKM2	**Tokmak 2**	**25.82**	**320**	*e*P	**P**	**04 12 17.6**	**+1.4**
	comp=Z,3.4nm,1.0s,mb3.8						
AAK	**Ala-Archa**	**26.31**	**318**	*e*P	**P**	**04 12 20.6**	**+0.1**
	comp=Z,5.4nm,0.9s,mb4.1						
AAK				LR	LR	04 24 04.2	
AAK	**Ala-Archa**	**26.31**	**318**	P	**P**	**04 12 20.7**	**+0.1**
	comp=Z,1.1nm,0.3s,mb3.9,baz=153,slow=4.5,SNR=3.3						
AAK				LR	LR	04 24 04.3	
	comp=Z,57nm,19.6s,baz=22,slow=40						
AML	**Almayashu**	**26.52**	**317**	*e*P	**P**	**04 12 22.1**	**-0.3**
	comp=Z,6.2nm,0.9s,mb4.1						
EKS2	**Erkin-Say**	**26.76**	**318**	*e*P	**P**	**04 12 24.1**	**-0.5**
	comp=Z,3.3nm,0.9s,mb3.9						
ZALV	**Zalesovo Beam**	**30.75**	**345**	P	**P**	**04 13 00.3**	**+0.2**
	comp=Z,1.8nm,0.3s,mb4.3,baz=160,slow=9.0,SNR=2.6						
ABKAR	**Akbulak array**	**38.38**	**319**	*e*P	**P**	**04 14 06.2**	**+0.1**
	comp=Z,1.1nm,0.7s,mb3.7						
WRA	**Warramunga Arr**	**56.80**	**138**	P	**P**	**04 16 29.7**	**+0.2**
	comp=Z,0.4nm,0.8s,mb3.5,baz=327,slow=7.4,SNR=3.3						
ASAR	**Alice Springs**	**59.42**	**141**	P	**P**	**04 16 51.2**	**+3.4**
	comp=Z,0.5nm,0.8s,mb3.6,baz=316,slow=6.5,SNR=4.9						

*ISCJB **31** 04:11:20.7±1.6,9.°75S±0.°1×75.°0W±0.°1,h130km±19km, mb3.7/7, Error ellipse: s-maj=24.2km s-min=15.8km az=40.8*

*IDC **31** 04:11:21.2±2.6,9.°75S×74.°90W,h118km±27km,mb3.6/4, mb1 3.8/7,mb1mx3.5/20,mbtmp3.6/7, Error ellipse: s-maj=28.1km s-min=20.6km az=61.0*

*NEIC **31** 04:11:22.6±1.5,9.°76S×74.°90W,h133km±17km,mb3.8/3, Error ellipse: s-maj=23.3km s-min=12.2km az=206.0*

ISC 31 04:11:21.6±1.5,9.°7S±0.°1×74.°9W±0.°1,h118km±18km,n12, σ0♀61/12,mb3.9/7,Central Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.95**	**220**	P	**Pn**	**04 12 08.2**	**+1.0**
	17nm,0.3s,baz=21,slow=9.1,SNR=24						
NNA				S	**Sn**	**04 12 41.8**	**-0.6**
	62nm,0.3s,baz=310,slow=16,SNR=16						
ATAH	**Atahualpa**	**4.29**	**306**	P	**Pn**	**04 12 24.6**	**-0.4**
	1.8nm,0.3s,baz=13,slow=13,SNR=14						
ATAH				S	**Sn**	**04 13 04.3**	**-10**
	2.6nm,0.3s,baz=126,slow=19,SNR=4.0						
SIV	**San Ignacio**	**14.87**	**116**	P	**Pn**	**04 14 46.1**	**+0.2**
	1.3nm,0.3s,baz=308,slow=14,SNR=38						
TXAR	**Lajitas Array**	**47.69**	**325**	P	**P**	**04 19 47.0**	**+0.6**
	0.9nm,0.5s,mb3.9,baz=151,slow=8.7,SNR=31						
SDCO	**Great Sand Dun**	**55.20**	**331**	*e*P	**P**	**04 20 42.4**	**+0.2**
	1.1nm,0.9s,mb3.9						
PDAR	**Pinedale Array**	**61.05**	**331**	P	**P**	**04 21 22.3**	**-0.6**
	0.4nm,0.6s,mb3.6,baz=108,slow=5.8,SNR=4.4						
TPAW	**Teton Pass**	**62.27**	**331**	*e*P	**P**	**04 21 30.6**	**-0.4**
	0.8nm,0.6s,mb3.9						
NVAR	**Mina Array Bea**	**62.67**	**323**	P	**P**	**04 21 34.8**	**+1.0**
	0.3nm,0.6s,mb3.4,baz=123,slow=7.6,SNR=2.7						
BOZ	**Bozeman (W)**	**64.21**	**332**	*e*P	**P**	**04 21 43.7**	**-0.1**
	0.7nm,0.6s,mb3.7						
TORD	**Torodi Ar. Bea**	**79.37**	**75**	P	**P**	**04 23 14.3**	**-0.8**
	2.8nm,0.3s,mb4.6,baz=281,slow=4.8,SNR=3.8						
ASAR	**Alice Springs**	**136.48**	**220**	PKP	PKPdf	04 30 29.2	-1.2
	0.4nm,0.7s,baz=115,slow=2.2,SNR=5.2						
WRA	**Warramunga Arr**	**138.80**	**224**	PKP	PKPdf	04 30 34.5	-0.3
	0.6nm,0.6s,baz=128,slow=2.0,SNR=9.2						

JMA 31 04:12:19.8,34.°92N×136.°87E,h14km±1km,M3.1,2C-2D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAA	**Atsumi**	**0.36**	**142**	⇓P	Pg	04 12 27.0	-0.2
JAA				S	Sg	04 12 32.1	-0.1
TSUJ	**Tsu 2**	**0.43**	**241**	⇓P	Pg	04 12 28.0	-0.3
TSUJ				S	Sg	04 12 33.7	-0.3
JIE	**Ise**	**0.54**	**194**	⇑P	Pg	04 12 30.1	-0.4
JIE				S	Sg	04 12 37.4	-0.3
JGM	**Miyama**	**0.79**	**351**	⇑P	Pg	04 12 35.1	0.0
JGM				S	Sg	04 12 45.2	-0.3
MAT	**Matsushiro**	**1.95**	**34**	P	Pn	04 12 53.8	+1.3
MAT				S	Sn	04 13 19.9	+3.1

KRSC 31 04:29:05.6±0.9,54.°34N×160.°02E,h129km±38km,ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KII	**Karymskiy**	**0.45**	**228**	*e*P	Pn	04 29 25.3	+1.1
MKZ	**Mys Kozlova**	**1.02**	**77**	*e*P	Pn	04 29 29.5	+1.0
MKZ				*i*S	Sn	04 29 46.5	+0.5
NLC	**Nalytchevo**	**1.24**	**199**	*e*P	Pn	04 29 31.4	+0.7
NLC				*i*S	Sn	04 29 50.7	+0.9
AVH	**Avacha**	**1.32**	**216**	*e*P	Pn	04 29 33.1	+1.5
AVH				*i*S	Sn	04 29 53.1	+1.8
GNI	**Ganaly**	**1.39**	**243**	*e*P	Pn	04 29 33.0	+0.7
PET	**Petropavlovsk**	**1.55**	**212**	*e*P	Pn	04 29 35.2	+1.1
PET				*i*S	Sn	04 29 56.8	+0.9
BZMR	**Bezymyannaya**	**1.62**	**9**	*e*P	Pn	04 29 36.6	+1.7
KPT	**Kopyto**	**1.63**	**4**	*e*P	Pn	04 29 36.1	+1.0
KOZ	**Kozyrevsk**	**1.72**	**357**	*e*P	Pn	04 29 37.3	+1.2
SRDR	**Sredinnyy**	**1.99**	**355**	*e*P	Pn	04 29 40.0	+0.7
KBTR	**Krutoberegovo**	**2.46**	**39**	*e*P	Pn	04 29 47.4	+2.2
BKI	**Bering**	**3.56**	**73**	P	Pn	04 30 01.4	+2.1
BKI				*i*S	Sn	04 30 41.1	+0.2

*IDC **31** 04:30:37.3±28.0, 18.°57S×169.°21E,h165km±224km, mb3.7/5,mb1 4.0/5,mb1mx3.6/16,mbtmp3.7/5, Error ellipse: s-maj=135.5km s-min=85.1km az=99.0*

ISC 31 04:30:43.3±2.4,18.°5S±0.°1×168.°9E±0.°4,h200km,n8, σ0♀62/9,mb4.0/5,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.19**	**213**	*e*P	**Pn**	**04 31 47.5**	**+0.2**
DZM				*e*S	**Sn**	**04 32 37.6**	**-0.3**
NOUC	**Port Laguerre**	**4.29**	**214**	*e*P	**Pn**	**04 31 48.9**	**+0.3**
NOUC				*e*S	**Sn**	**04 32 44.4**	**+4.3**
CTA	**Charters Tower**	**21.41**	**262**	P	**P**	**04 35 16.6**	**+0.9**
	5.0nm,0.9s,mb4.0,baz=98,slow=7.1,SNR=3.0						
WRA	**Warramunga Arr**	**32.61**	**262**	P	**P**	**04 36 55.3**	**-1.0**
	1.3nm,0.3s,mb3.9,baz=88,slow=4.5,SNR=37						
ASAR	**Alice Springs**	**32.97**	**255**	P	**P**	**04 36 58.9**	**-0.5**
	7.8nm,0.5s,mb4.5,baz=82,slow=8.8,SNR=201						
CMAR	**Chiang Mai Arr**	**77.91**	**294**	P	**P**	**04 42 20.1**	**+0.6**
	0.9nm,0.3s,mb3.9,baz=89,slow=6.1,SNR=4.1						
SONM	**Songino Array**	**86.46**	**323**	P	**P**	**04 43 02.8**	**-0.3**
	0.5nm,0.5s,mb3.5,baz=142,slow=7.3,SNR=2.5						
ARCES	**ARCESS Array B**	**124.31**	**345**	PKP	PKPdf	04 49 15.1	-2.5
	2.9nm,1.0s,baz=46,slow=2.0,SNR=6.6						

*ISCJB **31** 04:33:19.6±0.2,46.°40N±0.°01×12.°88E±0.°02,h14km±1km, Error ellipse: s-maj=2.2km s-min=1.8km az=7.7*

*VIE **31** 04:33:19.7±0.1,46.°40N×12.°91E,h12km±1km,mb2.1/14, ML2.7/17, Error ellipse: s-maj=1.3km s-min=0.7km az=16.0 9 km W of Tolmezzo*

*NEIC **31** 04:33:20.1±0.4,46.°33N×12.°92E,h10km,ML2.6(LDG), ML2.6(FUR),ML2.5(SZGRF), Error ellipse: s-maj=5.6km s-min=4.0km az=189.0*

*ROM **31** 04:33:20.2±0.1,46.°42N×12.°95E,h7km±2km,Md2.7/2, Ml2.2/3, Error ellipse: s-maj=3.5km s-min=1.2km az=42.0*

*CSEM **31** 04:33:20.1±0.1,46.°39N×12.°89E,h10km, ML2.8/16, Error ellipse: s-maj=1.9km s-min=1.4km az=13.0*

*LDG **31** 04:33:21.1±0.1,46.°36N×12.°97E,h10km,Ml2.6/7, Error ellipse: s-maj=2.8km s-min=2.4km az=6.0*

*PRU **31** 04:33:22.2,46.°49N×12.°90E,h0km*

ISC 31 04:33:20.3±0.2,46.°41N±0.°01×12.°88E±0.°01,h10km±2km, n144,σ1♀01/265,15C-28D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUSE	**Fusea**	**0.08**	**86↑**	*i*Pg	**Pg**	**04 33 23.0**	**+0.3**
FUSE				*i*Sg	**Sg**	**04 33 25.0**	**+0.6**
FUSE	**Fusea**	**0.08**	**86**	*i*Pg	**Pg**	**04 33 23.0**	**+0.3**
FUSE				*i*Sg	**Sg**	**04 33 25.0**	**+0.5**
ZOU	**Zoufplan**	**0.16**	**23⇓**	*e*Pg	**Pg**	**04 33 24.6**	**+0.6**
ZOU				*e*Sg	**Sg**	**04 33 27.6**	**+1.2**
ZOU	**Zoufplan**	**0.16**	**23**	*e*Pg	**Pg**	**04 33 24.5**	**+0.6**
ZOU				*e*Sg	**Sg**	**04 33 27.6**	**+1.2**
BOO	**Bordano**	**0.18**	**120⇓**	*i*Pg	**Pg**	**04 33 23.9**	**-0.2**
BOO	**Bordano**	**0.18**	**120**	*i*Pg	**Pg**	**04 33 23.9**	**-0.2**
MPRI	**Monte Prat**	**0.18**	**156⇓**	*e*Pg	**Pg**	**04 33 24.2**	**-0.1**
MPRI				*e*Sg	**Sg**	**04 33 27.2**	**+0.3**
MPRI	**Monte Prat**	**0.18**	**156**	*e*Pg	**Pg**	**04 33 24.2**	**0.0**
MPRI				*e*Sg	**Sg**	**04 33 27.2**	**+0.3**
CSMI	**Casera Mimoias**	**0.19**	**303⇓**	*i*Pg	**Pg**	**04 33 24.9**	**+0.6**
CSMI				*i*Sg	**Sg**	**04 33 28.2**	**+1.1**
CSMI	**Casera Mimoias**	**0.19**	**303**	*i*Pg	**Pg**	**04 33 25.0**	**+0.6**
CSMI				*i*Sg	**Sg**	**04 33 28.2**	**+1.1**
FVI	**Forni Avoltri**	**0.20**	**340⇓**	*i*Pg	**Pg**	**04 33 25.1**	**+0.5**
FVI				Sg	**Sg**	**04 33 28.5**	**+1.1**
	367nm,0.2s						
FVI	**Forni Avoltri**	**0.20**	**340**	*i*Pg	**Pg**	**04 33 25.1**	**+0.5**
FVI				Sg	**Sg**	**04 33 28.5**	**+1.1**
	367nm,0.2s						
PLRO	**Paularo**	**0.23**	**53↑**	*e*Pg	**Pg**	**04 33 25.5**	**+0.4**
PLRO				*e*Sg	**Sg**	**04 33 29.2**	**+0.9**
PLRO	**Paularo**	**0.23**	**53**	*e*Pg	**Pg**	**04 33 25.5**	**+0.4**
PLRO				*e*Sg	**Sg**	**04 33 29.2**	**+0.8**
GMNA	**Gemona**	**0.28**	**118**	Pg	**Pg**	**04 33 24.7**	**-1.3**
GMNA				Sg	**Sg**	**04 33 28.3**	**-1.5**
GMNA	**Gemona**	**0.28**	**118**	Pg	**Pg**	**04 33 24.7**	**-1.3**
GMNA				Sg	**Sg**	**04 33 28.3**	**-1.5**
BAD	**Bernadia**	**0.30**	**124⇓**	*e*Pg	**Pg**	**04 33 26.0**	**-0.4**
BAD				*e*Sg	**Sg**	**04 33 30.7**	**+0.2**
BAD	**Bernadia**	**0.30**	**124**	*e*Pg	**Pg**	**04 33 26.0**	**-0.4**
BAD				*e*Sg	**Sg**	**04 33 30.7**	**+0.2**
VINO	**Villanova**	**0.32**	**119⇑**	*e*Pg	**Pg**	**04 33 26.1**	**-0.5**
VINO				*e*Sg	**Sg**	**04 33 30.8**	**-0.1**
VINO	**Villanova**	**0.32**	**119**	*e*Pg	**Pg**	**04 33 26.1**	**-0.5**
VINO				*e*Sg	**Sg**	**04 33 30.8**	**-0.1**
CIMO	**Cimolais**	**0.32**	**252⇓**	*e*Pg	**Pg**	**04 33 26.6**	**-0.1**
CIMO				*e*Sg	**Sg**	**04 33 31.1**	**+0.1**
CIMO	**Cimolais**	**0.32**	**252**	*e*Pg	**Pg**	**04 33 26.6**	**-0.1**
CIMO				*e*Sg	**Sg**	**04 33 31.1**	**+0.1**
MLNI	**Malnisio**	**0.32**	**216**	*e*Pg	**Pg**	**04 33 26.6**	**-0.1**
MLNI				*e*Sg	**Sg**	**04 33 31.9**	**+1.0**
MLNI	**Malnisio**	**0.32**	**216**	*e*Pg	**Pg**	**04 33 26.6**	**-0.1**
MLNI				*e*Sg	**Sg**	**04 33 31.9**	**+0.9**
PTCC	**Patocco-Chiusa**	**0.33**	**90**	Pg	**Pg**	**04 33 26.6**	**-0.2**
PTCC				Sg	**Sg**	**04 33 31.8**	**+0.6**
PTCC	**Patocco-Chiusa**	**0.33**	**90**	Pg	**Pg**	**04 33 26.6**	**-0.2**
PTCC				Sg	**Sg**	**04 33 31.8**	**+0.6**
CSO	**Casso**	**0.41**	**251⇓**	*e*Pg	**Pg**	**04 33 28.2**	**-0.2**
CSO				*e*Sg	**Sg**	**04 33 34.4**	**+0.7**
CSO	**Casso**	**0.41**	**251**	*e*Pg	**Pg**	**04 33 28.2**	**-0.1**
CSO				*e*Sg	**Sg**	**04 33 34.4**	**+0.6**
ABTA	**Abfaltersbach**	**0.42**	**323**	*e*Pg	**Pg**	**04 33 29.2**	**+0.5**
	SNR=148						
ABTA				⇑*i*Sg	**Sg**	**04 33 35.0**	**+0.8**
	76nm,0.2s						
ABTA	**Abfaltersbach**	**0.42**	**323**	Pg	**Pg**	**04 33 29.2**	**+0.6**
	SNR=148						
ABTA				Sg	**Sg**	**04 33 35.0**	**+0.7**
	76nm,0.2s						
COLI	**Coloredo**	**0.44**	**128⇑**	*e*Pg	**Pg**	**04 33 28.5**	**-0.5**
COLI				*e*Sg	**Sg**	**04 33 35.5**	**+0.7**
COLI	**Coloredo**	**0.44**	**128**	*e*Pg	**Pg**	**04 33 28.5**	**-0.5**
COLI				*e*Sg	**Sg**	**04 33 35.5**	**+0.7**
LSR	**Lussari**	**0.45**	**81⇓**	*e*Pg	**Pg**	**04 33 28.8**	**-0.3**
LSR	**Lussari**	**0.45**	**81**	*e*Pg	**Pg**	**04 33 28.8**	**-0.4**
ACOM	**Acomizza, Ital**	**0.46**	**72⇑**	*e*Pg	**Pg**	**04 33 29.4**	**+0.1**
ACOM				*e*Sg	**Sg**	**04 33 36.3**	**+1.0**
ACOM	**Acomizza, Ital**	**0.46**	**72**	*e*Pg	**Pg**	**04 33 29.4**	**+0.1**
ACOM				*e*Sg	**Sg**	**04 33 36.3**	**+0.9**
ROBS	**Robic**	**0.47**	**110**	*i*Pg	**Pg**	**04 33 28.5**	**-0.9**
ROBS							
	comp=Z,17nm,0.1s						
ROBS	**Robic**	**0.47**	**110**	*i*Pg	**Pg**	**04 33 28.5**	**-0.9**
CAE	**Caneva**	**0.51**	**218⇓**	*e*Pg	**Pg**	**04 33 30.2**	**0.0**
CAE				*e*Sg	**Sg**	**04 33 38.0**	**+1.1**
CAE	**Caneva**	**0.51**	**218**	*e*Pg	**Pg**	**04 33 30.2**	**0.0**
CAE				*e*Sg	**Sg**	**04 33 38.0**	**+1.2**
TLI	**Talmassons**	**0.51**	**162⇓**	*i*Pg	**Pg**	**04 33 30.0**	**-0.2**
TLI	**Talmassons**	**0.51**	**162**	*i*Pg	**Pg**	**04 33 30.0**	**-0.3**
MYKA	**Terra Mystica**	**0.57**	**67⇑**	*i*Pg	**Pg**	**04 33 31.2**	**-0.2**
MYKA				⇓*i*Sg	**Sg**	**04 33 39.5**	**+0.6**
	comp=Z,19nm,0.1s						
MYKA	**Terra Mystica**	**0.57**	**67**	Pg	**Pg**	**04 33 31.2**	**-0.2**
MYKA				Sg	**Sg**	**04 33 39.5**	**+0.6**
	comp=Z,19nm,0.1s						
CADS	**Cadrg**	**0.62**	**107**	*i*Pg	**Pg**	**04 33 31.2**	**-1.1**
CADS				*i*Sg	**Sg**	**04 33 41.2**	**+0.8**
CADS	**Cadrg**	**0.62**	**107**	*i*Pg	**Pg**	**04 33 31.2**	**-1.1**
CADS				*i*Sg	**Sg**	**04 33 41.2**	**+0.8**
CADS							
	comp=Z,27nm,0.1s						
CADS	**Cadrg**	**0.62**	**107**	*i*Pg	**Pg**	**04 33 31.2**	**-1.1**
CADS				*i*Sg	**Sg**	**04 33 41.2**	**+0.7**
FAU	**Forcella Aurin**	**0.65**	**254⇑**	*e*Pg	**Pg**	**04 33 32.8**	**0.0**
FAU	**Forcella Aurin**	**0.65**	**254**	*e*Pg	**Pg**	**04 33 32.8**	**-0.1**
SABO	**M.te Sabotino**	**0.66**	**130⇑**	*e*Pg	**Pg**	**04 33 32.6**	**-0.5**
SABO				*e*Sg	**Sg**	**04 33 42.9**	**+1.2**
SABO	**M.te Sabotino**	**0.66**	**130**	*e*Pg	**Pg**	**04 33 32.6**	**-0.5**
SABO				*e*Sg	**Sg**	**04 33 42.9**	**+1.2**
VARN	**Col Varnada, M**	**0.68**	**233**	*e*Pg	**Pg**	**04 33 32.9**	**-0.6**
VARN				*e*Sg	**Sg**	**04 33 43.2**	**+0.9**
VARN	**Col Varnada, M**	**0.68**	**233**	*e*Pg	**Pg**	**04 33 32.9**	**-0.6**
VARN				*e*Sg	**Sg**	**04 33 43.2**	**+0.8**
KBA	**Koelnbreinsper**	**0.74**	**25⇓**	*e*Pg	**Pg**	**04 33 34.4**	**-0.2**
	SNR=13						
KBA				⇓*i*Sg	**Sg**	**04 33 44.8**	**+0.4**
	comp=Z,34nm,0.2s						
KBA	**Koelnbreinsper**	**0.74**	**25**	Pg	**Pg**	**04 33 34.4**	**-0.3**
	SNR=13						
KBA				Sg	**Sg**	**04 33 44.8**	**+0.4**
	comp=Z,34nm,0.2s						
VOJS	**Vojsko**	**0.79**	**118**	*i*Pg	**Pg**	**04 33 34.2**	**-1.4**
VOJS				*e*Sg	**Sg**	**04 33 46.9**	**+1.0**
VOJS	**Vojsko**	**0.79**	**118**	*i*Pg	**Pg**	**04 33 34.2**	**-1.4**
VOJS				*e*Sg	**Sg**	**04 33 46.9**	**+1.0**
TRI	**Trieste**	**0.93**	**138**	*e*Pg	**Pg**	**04 33 37.1**	**-1.1**
TRI	**Trieste**	**0.93**	**138**	Pg	**Pg**	**04 33 37.4**	**-0.8**
TRI				Sg	**Sg**	**04 33 50.1**	**-0.3**
	comp=Z,57nm,0.1s						
TRI	**Trieste**	**0.93**	**138**	Pg	**Pg**	**04 33 37.4**	**-0.8**
TRI				Sg	**Sg**	**04 33 50.1**	**-0.3**
	comp=Z,57nm,0.1s						
SCE	**Schlegeis**	**1.02**	**308⇓**	*i*Pg	**Pg**	**04 33 40.2**	**+0.2**
SCE				*i*Sg	**

KHC					*e*Sn		**Sn**	04 34 38.4	+0.4
KHC					*e*Sg		**Sg**	04 34 47.9	-1.2
KHC	**Kasperske Hory**	**2.76**	**10**	*e*PN			**Pn**	04 34 05.8	+1.2
KHC					*e*SN		**Sn**	04 34 39.5	+1.5
KHC					*e*SG		**Sg**	04 34 47.8	-1.3
	comp=Z,9.0nm,0.7s								
KHC	**Kasperske Hory**	**2.76**	**10**	*e*Pn			**Pn**	04 34 05.2	+0.6
KHC					*e*Sn		**Sn**	04 34 38.4	+0.4
KHC					Sg		**Sg**	04 34 47.8	-1.3
	comp=Z,9.0nm,0.7s								
STU	**Stuttgart**	**3.44**	**315**	*e*Pn			**Pn**	04 34 15.8	+2.0
STU	**Stuttgart**	**3.44**	**315**	*e*Pn			**Pn**	04 34 15.8	+2.0
BFO	**Black Forest**	**3.64**	**304**	*e*Pn			**Pn**	04 34 18.4	+1.8
BFO	**Black Forest**	**3.64**	**304**	*e*Pn			**Pn**	04 34 18.4	+1.8
PRU	**Pruhonice**	**3.75**	**17**	*e*PN			**Pn**	04 34 19.3	+1.2
PRU				*ex*	x			04 34 28.4	
PRU					*e*SN		**Sn**	04 35 03.7	+1.4
PRU					*e*SG		**Sg**	04 35 19.2	-1.5
	comp=Z,5.1nm,0.6s								
PRU	**Pruhonice**	**3.75**	**17**	Pn			**Pn**	04 34 19.3	+1.2
PRU	**Pruhonice**	**3.75**	**17**	Pg			**Pg**	04 34 28.4	-3.7
PRU				Sn			**Sn**	04 35 03.7	+1.4
PRU				Sg			**Sg**	04 35 19.2	-1.5
	comp=Z,5.1nm,0.6s								
NKC	**Novy Kostel**	**3.84**	**356**	*e*SN			**Sn**	04 35 05.0	+0.6
NKC					*e*SG		**Sg**	04 35 21.0	-2.5
	comp=Z,6.5nm,0.5s								
NKC	**Novy Kostel**	**3.84**	**356**	Sn			**Sn**	04 35 05.0	+0.6
NKC				Sg			**Sg**	04 35 21.0	-2.5
	comp=Z,6.5nm,0.5s								
CDF	**Champ du Feu**	**4.30**	**300**	*e*Pg			**Pg**	04 34 41.7	-0.9
CDF					*e*Sn		**Sn**	04 35 14.2	-1.6
CDF					*e*Sg		**Sg**	04 35 37.1	-1.2
	comp=Z,1.7nm,0.4s								
CDF	**Champ du Feu**	**4.30**	**300**	*e*Pn			**Pn**	04 34 26.9	+1.2
CDF					*e*Pg		**Pg**	04 34 41.7	-0.9
CDF					*e*Sn		**Sn**	04 35 14.0	-1.6
CDF					*e*Sg		**Sg**	04 35 37.1	-1.2
CDF	**Champ du Feu**	**4.30**	**300**	*e*Pn			**Pn**	04 34 26.9	+1.2
CDF	**Champ du Feu**	**4.30**	**300**	*e*Pg			**Pg**	04 34 41.7	-0.9
CDF					*e*Sn		**Sn**	04 35 14.2	-1.6
CDF					*e*Sg		**Sg**	04 35 37.1	-1.2
	comp=Z,0.9nm,0.4s								
MOX	**Moxa**	**4.32**	**349**	*e*PN			**Pn**	04 34 26.6	+0.6
MOX					*e*SN		**Sn**	04 35 16.4	+0.1
MOX					*e*SG		**Sg**	04 35 37.7	-1.3
MOX	**Moxa**	**4.32**	**349**	*e*Pn			**Pn**	04 34 26.6	+0.6
MOX					*e*Sn		**Sn**	04 35 16.4	+0.1
HINF	**Hinteralfeld**	**4.35**	**291**	*e*Pn			**Pn**	04 34 27.0	+0.6
HINF					*e*Sn		**Sn**	04 35 15.1	-1.9
	comp=Z,5.3nm,0.4s								
HINF	**Hinteralfeld**	**4.35**	**291**	*e*Pn			**Pn**	04 34 27.0	+0.6
HINF					*e*Sn		**Sn**	04 35 15.1	-1.9
	comp=Z,2.7nm,0.4s								
LPG	**La Plagne**	**4.37**	**260**	*e*P			**Pn**	04 34 30.6	+3.9
LPG					*e*Sn		**Sn**	04 35 15.1	-2.5
	comp=Z,1.4nm,0.4s								
LPG	**La Plagne**	**4.37**	**260**	*e*P			**Pn**	04 34 30.6	+3.9
LPG					*e*Sn		**Sn**	04 35 15.1	-2.5
	comp=Z,0.7nm,0.4s								
BRG	**Berggiesshubel**	**4.52**	**9**	SG			**Sg**	04 35 43.5	-2.0
	comp=Z,2.7nm,0.7s								
DPC	**Dobruska-Polom**	**4.56**	**29**	*e*SG			**Sg**	04 35 44.7	-2.0
	comp=Z,2.7nm,0.7s								
DPC	**Dobruska-Polom**	**4.56**	**29**	Sg			**Sg**	04 35 44.7	-2.0
	comp=Z,2.7nm,0.7s								
MBDF	**Montbardon**	**4.61**	**251**	*e*Pn			**Pn**	04 34 29.7	-0.2
MBDF					*e*Sn		**Sn**	04 35 20.5	-2.9
	comp=Z,2.4nm,0.6s								
MBDF	**Montbardon**	**4.61**	**251**	*e*Pn			**Pn**	04 34 29.7	-0.2
MBDF					*e*Sn		**Sn**	04 35 20.5	-2.9
	comp=Z,1.2nm,0.6s								
SBF	**Sospel**	**4.62**	**238**	*e*P			**Pn**	04 34 32.8	+2.8
SBF					*e*Sn		**Sn**	04 35 20.6	-3.0
	comp=Z,3.9nm,0.3s								
SBF	**Sospel**	**4.62**	**238**	*e*Pn			**Pn**	04 34 28.9	-1.1
SBF				*e*P				04 34 32.8	
SBF					*e*Sn		**Sn**	04 35 20.6	-3.0
SBF	**Sospel**	**4.62**	**238**	*e*Pn			**Pn**	04 34 28.9	-1.1
SBF	**Sospel**	**4.62**	**238**	*e*P			**Pn**	04 34 32.8	+2.8
SBF					*e*Sn		**Sn**	04 35 20.6	-3.0
	comp=Z,2.0nm,0.3s								
CABF	**La Chapelle**	**4.69**	**275**	*e*Pn			**Pn**	04 34 32.2	+1.1
CABF	**La Chapelle**	**4.69**	**275**	*e*Pn			**Pn**	04 34 32.2	+1.1
HAU	**Haudompre**	**4.73**	**292**	*e*Pn			**Pn**	04 34 31.0	-0.6
HAU					*e*Sn		**Sn**	04 35 24.3	-2.1
	comp=Z,2.4nm,0.4s								
HAU	**Haudompre**	**4.73**	**292**	*e*Pn			**Pn**	04 34 31.0	-0.6
HAU					*e*Sn		**Sn**	04 35 24.3	-2.1
	comp=Z,1.2nm,0.4s								
CLL	**Collm**	**4.90**	**1**	*i* Pn			**Pn**	04 34 35.7	+1.7
CLL					*e*Sg		**Sg**	04 35 55.0	-2.7
CLL	**Collm**	**4.90**	**1**	*i* Pn			**Pn**	04 34 35.7	+1.7
CLL					*e*Sg		**Sg**	04 35 55.0	-2.7
	comp=Z,4.0nm,0.9s								
CLL	**Collm**	**4.90**	**1**	*i* Pn			**Pn**	04 34 35.7	+1.7
CLL					*e*Sg		**Sg**	04 35 55.0	-2.7
STON	**Ston**	**4.93**	**134**	*e*Pn			**Pn**	04 34 33.9	-0.5
STON	**Ston**	**4.93**	**134**	*e*Pn			**Pn**	04 34 33.9	-0.5
ORIF	**Oris-en-Rattie**	**5.13**	**256**	*e*Pn			**Pn**	04 34 37.1	0.0
ORIF					*e*Sn		**Sn**	04 35 33.0	-3.2
	comp=Z,1.6nm,0.5s								
ORIF	**Oris-en-Rattie**	**5.13**	**256**	*e*Pn			**Pn**	04 34 37.1	0.0
ORIF					*e*Sn		**Sn**	04 35 33.0	-3.2
	comp=Z,0.8nm,0.5s								
SMF	**Signal de Mont**	**6.24**	**275**	*e*Pn			**Pn**	04 34 52.6	+0.3
SMF	**Signal de Mont**	**6.24**	**275**	*e*Pn			**Pn**	04 34 52.6	+0.3
AVF	**Avril sur Loir**	**6.58**	**277**	*e*Pn			**Pn**	04 34 57.6	+0.7
AVF	**Avril sur Loir**	**6.58**	**277**	*e*Pn			**Pn**	04 34 57.6	+0.7

NEIC ***31*** *04:39:06.0,37.°88N×27.°05E,h5km,MD3.3(ISK), MD3.3(ATH),After ISK.*
DDA ***31*** *04:39:07.4,37.°92N×27.°10E,h15km±3km,Md3.2*
ATH ***31*** *04:39:07.7,37.°90N×27.°19E,h2km,MD3.3/8*
ISK ***31*** *04:39:07.0,37.°90N×27.°06E,h4km,MD3.3*
CSEM ***31*** *04:39:08.6±0.1,37.°91N×27.°13E,h2km,MD3.3,Error ellipse: s-maj=3.3km s-min=2.7km az=80.0*
ISCJB ***31*** *04:39:08.4±0.2,37.°91N±0.°01×27.°15E±0.°02,h10km,Error ellipse: s-maj=2.4km s-min=2.1km az=176.1*
THE ***31*** *04:39:09.4,37.°96N×27.°10E,h1km±2km,ML3.0/1,Error ellipse: s-maj=3.4km s-min=1.0km az=92.0*

ISC 31 04:39:08.4±0.3,37.°93N±0.°01×27.°15E±0.°02,h1km±3km, n129,σ1°09/176,5C,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.33**	**229**	*i*Pg	**Pg**	**04 39 14.0**	**-0.7**
SMG				*e*Sg	**Sg**	**04 39 19.4**	**+0.4**
SMG	**Samos**	**0.33**	**229**	*i*Pg	**Pg**	**04 39 14.0**	**-0.7**
SMG				*e*SG	**Sg**	**04 39 19.4**	**+0.4**
SMG	**Samos**	**0.33**	**229**	*i*Pg	**Pg**	**04 39 14.0**	**-0.7**
SMG				*e*Sg	**Sg**	**04 39 19.4**	**+0.4**
BLCB	**Balcova**	**0.47**	**350**	PG	**Pg**	**04 39 16.9**	**-0.4**
BLCB				*e*SG	**Sg**	**04 39 23.8**	**+0.4**
BLCB	**Balcova**	**0.47**	**350**	P	**Pg**	**04 39 17.6**	**+0.2**
BLCB				S	**Sg**	**04 39 24.3**	**+0.9**
BLCB	**Balcova**	**0.47**	**350**	*i* Pg	**Pg**	**04 39 16.9**	**-0.5**
BLCB	**Balcova**	**0.47**	**350**	P	**Pg**	**04 39 17.6**	**+0.2**
BLCB				S	**Sg**	**04 39 24.3**	**+0.9**
IZM	**Izmir**	**0.48**	**11**	*e*PG	**Pg**	**04 39 17.6**	**-0.1**
IZM				*e*SG	**Sg**	**04 39 25.2**	**+1.3**
IZM	**Izmir**	**0.48**	**11**	*e*Pg	**Pg**	**04 39 17.6**	**0.0**
IZM				*e*Sg	**Sg**	**04 39 25.2**	**+1.3**
URLA	**Izmir**	**0.61**	**315**	*i* P	**Pg**	**04 39 17.6**	**-2.6**
URLA				*i* S	**Sg**	**04 39 27.6**	**-0.6**
URLA	**Izmir**	**0.61**	**315**	*i* P	**Pg**	**04 39 17.6**	**-2.6**
URLA				*i* S	**Sg**	**04 39 27.6**	**-0.6**
AYDN	**Tasoluk**	**0.64**	**114**	*i* P	**Pg**	**04 39 21.1**	**+0.5**
AYDN				*i* S	**Sg**	**04 39 29.3**	**+0.4**
AYDN	**Tasoluk**	**0.64**	**114**	*i* P	**Pg**	**04 39 21.1**	**+0.5**
AYDN				*i* S	**Sg**	**04 39 29.3**	**+0.4**
MLSB	**Milas**	**0.80**	**141**	*e*PG	**Pg**	**04 39 24.4**	**+0.6**
MLSB	**Milas**	**0.80**	**141**	*e*Pg	**Pg**	**04 39 24.4**	**+0.6**
BODT	**Bodrum**	**0.87**	**171**	*e*PG	**Pg**	**04 39 23.5**	**-1.6**
BODT				*e*SG	**Sg**	**04 39 36.5**	**+0.1**
BODT	**Bodrum**	**0.87**	**171**	*e*Pg	**Pg**	**04 39 23.5**	**-1.6**
BDRM	**Kayabasi**	**0.89**	**165**	*i* P	**Pg**	**04 39 24.6**	**-0.9**
BDRM				*i* S	**Sg**	**04 39 36.6**	**-0.4**
BDRM	**Kayabasi**	**0.89**	**165**	*i* S	**Sg**	**04 39 36.6**	**-0.4**
BDRM	**Kayabasi**	**0.89**	**165**	*i* P	**Pg**	**04 39 24.6**	**-0.9**
CHOS	**Chios island**	**0.98**	**298**	*i*PG	**Pg**	**04 39 27.5**	**+0.3**
CHOS				*e*SG	**Sg**	**04 39 41.4**	**+1.6**
CHOS	**Chios island**	**0.98**	**298**	P	**Pg**	**04 39 26.9**	**-0.3**
CHOS				S	**Sg**	**04 39 41.0**	**+1.2**
CHOS	**Chios island**	**0.98**	**298**	P	**Pg**	**04 39 26.9**	**-0.3**
CHOS	**Chios island**	**0.98**	**298**	*i*Pg	**Pg**	**04 39 27.5**	**+0.3**
CHOS				S	**Sg**	**04 39 41.0**	**+1.2**
CHOS				*e*Sg	**Sg**	**04 39 41.4**	**+1.6**
AKHS	**Akhisar**	**1.09**	**29**	*i* P	**Pg**	**04 39 29.0**	**-0.3**
AKHS				*i* S	**Sg**	**04 39 41.7**	**-1.6**
AKHS	**Akhisar**	**1.09**	**29**	*i* P	**Pg**	**04 39 29.0**	**-0.2**
AKHS				*i* S	**Sg**	**04 39 41.7**	**-1.6**
AKS	**Akhisar**	**1.09**	**29**	*e*PN	**Pg**	**04 39 29.0**	**-0.3**
AKS	**Akhisar**	**1.09**	**29**	*e*Pn	**Pg**	**04 39 29.0**	**-0.2**
YER	**Yerkesik**	**1.20**	**131**	*e*PN	**Pn**	**04 39 30.6**	**-1.7**
YER	**Yerkesik**	**1.20**	**131**	*e*Pn	**Pn**	**04 39 30.6**	**-1.7**
DAT	**Datca**	**1.24**	**164**	*e*PN	**Pn**	**04 39 30.7**	**-2.2**
DAT	**Datca**	**1.24**	**164**	*e*Pn	**Pn**	**04 39 30.7**	**-2.2**
NIS1	**Nisyros Isl.**	**1.32**	**179**	P	**Pg**	**04 39 33.8**	**+0.1**
NIS1	**Nisyros Isl.**	**1.32**	**179**	P	**Pg**	**04 39 33.8**	**+0.1**
KULA	**Kula-Manisa**	**1.33**	**63**	*e*PN	**Pg**	**04 39 34.4**	**+0.5**
KULA	**Kula-Manisa**	**1.33**	**63**	*e*Pn	**Pg**	**04 39 34.4**	**+0.5**
AYVA	**Ayvalik**	**1.43**	**346**	*i* P	**Pn**	**04 39 34.8**	**-0.7**
AYVA				*i* S	**Sn**	**04 39 53.2**	**-1.6**
AYVA	**Ayvalik**	**1.43**	**346**	*i* P	**Pn**	**04 39 34.8**	**-0.7**
AYVA				*i* S	**Sn**	**04 39 53.2**	**-1.7**
PRK	**Paraskevi**	**1.49**	**333**	*e*Pb	**Pb**	**04 39 36.3**	**-0.5**
PRK				*e*Sb	**Sb**	**04 39 57.1**	**+0.9**
PRK	**Paraskevi**	**1.49**	**333**	*e*PB	**Pb**	**04 39 36.3**	**-0.5**
PRK				*e*SB	**Sb**	**04 39 57.1**	**+0.9**
PRK	**Paraskevi**	**1.49**	**333**	P	**Pn**	**04 39 35.8**	**-0.5**
PRK	**Paraskevi**	**1.49**	**333**	P	**Pn**	**04 39 35.8**	**-0.5**
PRK	**Paraskevi**	**1.49**	**333**	*e*Pb	**Pb**	**04 39 36.3**	**-0.5**
PRK				*e*Sb	**Sb**	**04 39 57.1**	**+0.9**
DENT	**Denizli**	**1.50**	**96**	*e*PN	**Pg**	**04 39 37.1**	**-0.1**
DENT	**Denizli**	**1.50**	**96**	*e*Pn	**Pg**	**04 39 37.1**	**-0.1**
DNZL	**Cakiroluk**	**1.52**	**98**	*i* P	**Pn**	**04 39 34.4**	**-2.4**
DNZL				*i* S	**Sg**	**04 39 59.7**	**+2.4**
DNZL	**Cakiroluk**	**1.52**	**98**	*i* P	**Pn**	**04 39 34.4**	**-2.4**
DNZL				*i* S	**Sg**	**04 39 59.7**	**+2.4**
APE	**Apeiranthos**	**1.54**	**237**	*e*PN	**Pn**	**04 39 34.9**	**-2.2**
APE	**Apeiranthos**	**1.54**	**237**	*e*Pg	**Pg**	**04 39 36.8**	**-1.2**
APE				*e*Sb	**Sg**	**04 39 59.0**	**+0.9**
APE	**Apeiranthos**	**1.54**	**237**	*e*PG	**Pg**	**04 39 36.8**	**-1.2**
APE				*e*SB	**Sg**	**04 39 59.0**	**+0.9**
APE	**Apeiranthos**	**1.54**	**237**	P	**Pn**	**04 39 36.2**	**-0.9**
APE				S	**Sn**	**04 39 58.0**	**+0.2**
APE	**Apeiranthos**	**1.54**	**237**	*e*Pn	**Pn**	**04 39 34.9**	**-2.2**
APE	**Apeiranthos**	**1.54**	**237**	P	**Pn**	**04 39 36.2**	**-0.9**
APE	**Apeiranthos**	**1.54**	**237**	*e*Pg	**Pg**	**04 39 36.8**	**-1.2**
APE				S	**Sn**	**04 39 58.0**	**+0.2**
APE				*e*Sb	**Sg**	**04 39 59.0**	**+0.9**
SIGR	**SIGRI**	**1.64**	**322**	P	**Pn**	**04 39 37.8**	**-0.5**
SIGR	**SIGRI**	**1.64**	**322**	P	**Pn**	**04 39 37.8**	**-0.5**
DEMI	**Demirci**	**1.66**	**47**	*i* P	**Pb**	**04 39 39.5**	**-0.3**
DEMI				*i* S	**Sn**	**04 39 58.0**	**-2.7**
DEMI	**Demirci**	**1.66**	**47**	*i* P	**Pb**	**04 39 39.5**	**-0.3**
DEMI				*i* S	**Sn**	**04 39 58.0**	**-2.6**
BALB	**Balikesir**	**1.81**	**18**	*e*PN	**Pb**	**04 39 41.2**	**-1.0**
BALB	**Balikesir**	**1.81**	**18**	*e*Pn	**Pb**	**04 39 41.2**	**-1.1**
BALY	**Balya**	**1.85**	**11**	*i* P	**Pb**	**04 39 42.0**	**-1.0**
BALY				*i* S	**Sb**	**04 40 06.5**	**-0.1**
BALY	**Balya**	**1.85**	**11**	*i* P	**Pb**	**04 39 42.0**	**-1.0**
BALY				*i* S	**Sb**	**04 40 06.5**	**-0.1**
ARG	**Arkhangelos**	**1.88**	**155**	*e*Pb	**Pb**	**04 39 43.0**	**-0.5**
ARG	**Arkhangelos**	**1.88**	**155**	*e*PB	**Pb**	**04 39 43.0**	**-0.5**
ARG	**Arkhangelos**	**1.88**	**155**	*e*Pb	**Pb**	**04 39 43.0**	**-0.5**
KHAL	**Karahalli**	**1.90**	**76**	P	**Pn**	**04 39 41.2**	**-0.7**
KHAL				*i* S	**Sg**	**04 40 10.2**	**+0.7**
KHAL	**Karahalli**	**1.90**	**76**	*i* P	**Pn**	**04 39 41.2**	**-0.8**
KHAL				*i* S	**Sg**	**04 40 10.2**	**+0.7**
KHL	**Karahalli**	**1.92**	**77**	*e*PN	**Pb**	**04 39 43.1**	**-1.1**
KHL	**Karahalli**	**1.92**	**77**	*e*Pn	**Pb**	**04 39 43.1**	**-1.0**
DURS	**Dursunbey**	**1.97**	**31**	*i* P	**Pn**	**04 39 41.4**	**-1.5**
DURS				*i* S	**Sn**	**04 40 05.4**	**-2.9**
DURS	**Dursunbey**	**1.97**	**31**	*i* P	**Pn**	**04 39 41.4**	**-1.5**
DURS				*i* S	**Sn**	**04 40 05.4**	**-2.8**
EZN	**Ezine**	**2.00**	**342**	*e*PN	**Pn**	**04 39 43.5**	**+0.1**
EZN	**Ezine**	**2.00**	**342**	*e*Pn	**Pn**	**04 39 43.5**	**+0.1**
GLHS	**Gihisar (BURDU**	**2.02**	**112**	*e*PN	**Pn**	**04 39 44.0**	**+0.4**
GLHS	**Gihisar (BURDU**	**2.02**	**112**	*e*Pn	**Pn**	**04 39 44.0**	**+0.4**
BOZC	**Bozcaada**	**2.10**	**336**	*i* P	**Pb**	**04 39 47.3**	**+0.1**
BOZC				*i* S	**Sb**	**04 40 16.8**	**+3.1**
GONE	**Gonen-Balikesi**	**2.16**	**11**	*e*PN	**Pn**	**04 39 46.1**	**+0.6**
GONE	**Gonen-Balikesi**	**2.16**	**11**	*e*Pn	**Pn**	**04 39 46.1**	**+0.7**
GDZ	**Gediz**	**2.17**	**57**	*i* P	**Pb**	**04 39 47.2**	**-1.3**
GDZ				*i* S	**Sb**	**04 40 16.1**	**+0.3**
GDZ	**Gediz**	**2.17**	**57**	*i* P	**Pb**	**04 39 47.2**	**-1.2**
GDZ				*i* S	**Sb**	**04 40 16.1**	**+0.3**
KARP	**Karpathos**	**2.37**	**180**	*e*PN	**Pn**	**04 39 50.1**	**+1.6**
KARP	**Karpathos**	**2.37**	**180**	*e*PN	**Pn**	**04 39 50.1**	**+1.6**
KARP	**Karpathos**	**2.37**	**180**	*e*Pn	**Pn**	**04 39 50.1**	**+1.6**
GADA	**Gvkgeada**	**2.46**	**337**	*e*PN	**Pn**	**04 39 49.8**	**+0.1**
GADA	**Gvkgeada**	**2.46**	**337**	*e*Pn	**Pn**	**04 39 49.8**	**+0.1**
EDC	**Edincik**	**2.48**	**13**	*e*PN	**Pn**	**04 39 50.8**	**+0.8**
EDC	**Edincik**	**2.48**	**13**	*e*Pn	**Pn**	**04 39 50.8**	**+0.8**
ELL	**Elmali**	**2.49**	**117**	*e*PN	**Pn**	**04 39 50.5**	**+0.4**
ELL	**Elmali**	**2.49**	**117**	*e*Pn	**Pn**	**04 39 50.5**	**+0.4**
KCTX	**Karacabey (Bur**	**2.52**	**22**	*e*PN	**Pn**	**04 39 51.3**	**+0.9**
KCTX	**Karacabey (Bur**	**2.52**	**22**	*e*Pn	**Pn**	**04 39 51.3**	**+0.8**
GELI	**Tayfur-Gelibol**	**2.52**	**348**	*e*PN	**Pn**	**04 39 51.0**	**+0.4**
GELI	**Tayfur-Gelibol**	**2.52**	**348**	*e*Pn	**Pn**	**04 39 51.0**	**+0.5**
ALT	**Altintas**	**2.58**	**63**	*e*PN	**Pn**	**04 39 52.3**	**+0.9**
ALT	**Altintas**	**2.58**	**63**	*e*Pn	**Pn**	**04 39 52.3**	**+0.9**
AKAS	**Kas**	**2.59**	**130**	*i* P	**Pn**	**04 39 50.1**	**-1.4**
AKAS				*i* S	**Sn**	**04 40 25.6**	**+2.0**
AKAS	**Kas**	**2.59**	**130**	*i* P	**Pn**	**04 39 50.1**	**-1.4**
AKAS				*i* S	**Sn**	**04 40 25.6**	**+2.0**
ULDT	**Uludag**	**2.70**	**34**	*i* P	**Pn**	**04 39 52.4**	**-0.6**
ULDT				*i* S	**Sn**	**04 40 25.4**	**-0.9**
ULDT	**Uludag**	**2.70**	**34**	*i* P	**Pn**	**04 39 52.4**	**-0.6**
ULDT				*i* S	**Sn**	**04 40 25.4**	**-0.9**
SHUT	**Suhut-Afyon**	**2.75**	**76**	*e*PN	**Pn**	**04 39 54.7**	**+1.1**
SHUT	**Suhut-Afyon**	**2.75**	**76**	*e*Pn	**Pn**	**04 39 54.7**	**+1.0**
RKY	**Sarkoy-Tekirda**	**2.76**	**0**	*e*PN	**Pn**	**04 39 54.5**	**+0.7**
RKY	**Sarkoy-Tekirda**	**2.76**	**0**	*e*Pn	**Pn**	**04 39 54.5**	**+0.7**
ERIK	**Erikli-Kesan**	**2.79**	**350**	*e*PN	**Pn**	**04 39 54.9**	**+0.7**
ERIK	**Erikli-Kesan**	**2.79**	**350**	*e*Pn	**Pn**	**04 39 54.9**	**+0.8**
MFT	**Murefte**	**2.86**	**2**	*e*PN	**Pn**	**04 39 54.9**	**-0.3**
MFT	**Murefte**	**2.86**	**2**	*e*Pn	**Pn**	**04 39 54.9**	**-0.2**
ENEZ	**Enez**	**2.91**	**345**	*e*PN	**Pn**	**04 39 56.4**	**+0.5**
ENEZ	**Enez**	**2.91**	**345**	*e*Pn	**Pn**	**04 39 56.4**	**+0.5**
ARMT	**Armutlu**	**2.95**	**26**	*e*PN	**Pn**	**04 39 57.3**	**+0.9**
ARMT	**Armutlu**	**2.95**	**26**	*e*Pn	**Pn**	**04 39 57.3**	**+0.9**
GEMT	**Gemlik**	**2.96**	**32**	*e*PN	**Pn**	**04 39 58.0**	**+1.4**
GEMT	**Gemlik**	**2.96**	**32**	*e*Pn	**Pn**	**04 39 58.0**	**+1.4**
LAST	**Lasithi**	**3.07**	**206**	*e*PN	**Pn**	**04 39 58.9**	**+0.9**
LAST	**Lasithi**	**3.07**	**206**	*e*PN	**Pn**	**04 39 58.9**	**+0.9**
LAST	**Lasithi**	**3.07**	**206**	*e*Pn	**Pn**	**04 39 58.9**	**+0.9**
ALN	**Alexandroupoli**	**3.09**	**344**	P	**Pn**	**04 39 58.0**	**-0.3**
ALN	**Alexandroupoli**	**3.09**	**344**	P	**Pn**	**04 39 58.0**	**-0.3**
CAVI	**Cavuskoy**	**3.09**	**42**	*e*PN	**Pn**	**04 39 59.9**	**+1.5**
CAVI	**Cavuskoy**	**3.09**	**42**	*e*Pn	**Pn**	**04 39 59.9**	**+1.5**
YLV	**Yalova**	**3.15**	**33**	*e*PN	**Pn**	**04 40 00.7**	**+1.5**
YLV	**Yalova**	**3.15**	**33**	*e*Pn	**Pn**	**04 40 00.7**	**+1.5**
IDI	**Anoyia**	**3.20**	**215**	*e*PN	**Pn**	**04 40 01.7**	**+1.9**
IDI	**Anoyia**	**3.20**	**215**	*e*PN	**Pn**	**04 40 01.7**	**+1.9**
IDI	**Anoyia**	**3.20**	**215**	*e*Pn	**Pn**	**04 40 01.7**	**+1.9**
ADVT	**Abdulvahap**	**3.21**	**38**	*e*PN	**Pn**	**04 40 01.4**	**+1.4**
ADVT	**Abdulvahap**	**3.21**	**38**	*e*Pn	**Pn**	**04 40 01.4**	**+1.4**
GULT	**Gulveren**	**3.62**	**45**	*e*PN	**Pn**	**04 40 07.3**	**+1.7**
GULT	**Gulveren**	**3.62**	**45**	*e*Pn	**Pn**	**04 40 07.3**	**+1.7**

MAN 31 04:39:35,15.°93N×120.°83E,h14km,mb4.5,ML3.4,MS3.2, 3C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCPH	**Palayan**	**0.45**	**145**	*e*P	Pg	04 39 43.6	-0.3
BALP	**Baler**	**0.74**	**105**	*e*P	Pg	04 39 49.0	-0.5
SCZP	**Santa Cruz**	**0.90**	**260**	*e*P	Pb	04 39 52.0	-0.3
BOLP	**Bolinao**	**0.99**	**297**	*e*P	Pb	04 39 53.3	-0.6
CAUP	**Cauayan**	**1.39**	**43**	*e*P	Pn	04 39 59.0	-0.9
POLP	**Polilio Island**	**1.61**	**138**	*e*P	Pn	04 40 03.8	+0.8
APYP	**Conner**	**1.96**	**12**	*e*P	Pn	04 40 08.3	+0.5
CVP	**Callao Caves**	**2.00**	**28**	*i*P	Pn	04 40 07.5	-0.9
SIPP	**Brgy, Tapao**	**2.01**	**350**	*i*P	Pn	04 40 08.1	-0.4
LUBP	**Lubang**	**2.26**	**195**	*e*P	Pn	04 40 12.2	+0.2

NIED ***31*** *05:04:00,39.°10N×142.°90E,h23km,Mw3.7 Best double couple: M0=4.24000×1014 NP1:φ=29.00000°,δ75.00000°, λ98.00000°. NP2:φ=180.00000°,δ17.00000°,λ62.00000°.*
NEIC ***31*** *05:04:21.6,39.°14N×142.°90E,h26km,MG3.7(JMA),After JMA.*
JMA ***31*** *05:04:21.6±0.2,39.°14N×142.°90E,h26km±2km,MS3.7*
ISCJB ***31*** *05:04:22.3±1.5,39.°20N±0.°06×142.°9E±0.°1,h42km±12km, mb3.5/4,Error ellipse: s-maj=20.4km s-min=7.1km az=21.0*
IDC ***31*** *05:04:23.9±3.0,39.°21N×143.°09E,h48km±27km,mb3.4/4, mb1 3.5/6,mb1mx3.3/24,mbtmp3.5/6,ML3.5/2,MS3.2/3, Ms1 3.2/3,ms1mx2.7/23,Error ellipse: s-maj=46.2km s-min=19.3km az=94.0*

ISC 31 05:04:24.8±1.4,39.°21N±0.°06×142.°8E±0.°2,h40km±12km, n23,σ0°99/25,mb3.5/4,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**0.82**	**297**	P	**Pn**	**05 04 38.7**	**-1.1**
OFUJ	**Ofunato**	**0.86**	**262**	P	**Pn**	**05 04 39.1**	**-1.3**
OFUJ				*e*S	**Sn**	**05 04 51.6**	**-0.1**
JTH	**Tanohata**	**1.00**	**317**	P	**Pn**	**05 04 41.6**	**-0.8**
JOM	**Ohasama**	**1.17**	**283**	P	**Pn**	**05 04 44.3**	**-0.3**
JMK	**Ichinoseki**	**1.23**	**258**	P	**Pn**	**05 04 44.8**	**-0.6**
JIO	**Ouri**	**

	242nm,0.8s								
MRVN	**Minervino Murg**	**1.01**	**236**		Pg	**Pg**	05 22 54.2	**-1.1**
MRVN					Sg	**Sg**	05 23 08.0	**-0.5**
	242nm,0.8s								
MS1	**Monte Sant'Ang**	**1.03**	**275**	*e*Pg	Pg	**Pg**	05 22 55.2	**-0.4**
MS1				*e*Sg	Sg	**Sg**	05 23 10.5	**+1.5**
MSAG	**Monte S. Angel**	**1.05**	**275**	Pg	Pg	**Pg**	05 22 55.3	**-0.8**
MSAG				Sg	Sg	**Sg**	05 23 10.0	**+0.2**
	540nm,0.6s								
MSAG	**Monte S. Angel**	**1.05**	**275**	Pg	Pg	**Pg**	05 22 55.3	**-0.8**
MSAG				Sg	Sg	**Sg**	05 23 10.0	**+0.2**
	540nm,0.6s								
MATE	**Matera**	**1.08**	**205**	Pg	Pg	**Pg**	05 22 55.7	**-0.8**
MATE				Sg	Sg	**Sg**	05 23 09.3	**-1.3**
	439nm,0.6s								
MATE	**Matera**	**1.08**	**205**	Pg	Pg	**Pg**	05 22 55.7	**-0.8**
MATE				Sg	Sg	**Sg**	05 23 09.3	**-1.3**
	439nm,0.6s								
SGRT	**San Giovanni R**	**1.18**	**277**	Pg	Pn	**Pg**	05 22 56.9	**-1.6**
SGRT				Sg	Sn	**Sn**	05 23 13.1	**-1.5**
	194nm,0.4s								
SGRT	**San Giovanni R**	**1.18**	**277**	Pg	Pn	**Pn**	05 22 56.9	**-1.6**
SGRT				Sg	Sn	**Sn**	05 23 13.1	**-1.5**
	194nm,0.4s								
HCY	**Herceg Novi**	**1.20**	**47**	⇓*i*Pg	Pg	**Pg**	05 22 58.0	**-0.9**
HCY				*e*Sg	Sg	**Sg**	05 23 16.3	**+1.8**
HCY	**Herceg Novi**	**1.20**	**47**	⇓*i*Pg	Pg	**Pg**	05 22 58.0	**-0.9**
HCY				*e*Sg	Sg	**Sg**	05 23 16.3	**+1.8**
MIGL	**Miglionico**	**1.22**	**213**	Pg	Pn	**Pn**	05 22 57.9	**-1.0**
MIGL				Sg	Sn	**Sn**	05 23 14.3	**-1.2**
	1µm,0.7s								
MIGL	**Miglionico**	**1.22**	**213**	Pg	Pn	**Pn**	05 22 57.9	**-1.0**
MIGL				Sg	Sn	**Sn**	05 23 14.3	**-1.2**
PALZ	**Palazzo San Ge**	**1.23**	**237**	Pg	Pn	**Pn**	05 22 58.0	**-1.1**
PALZ				Sg	Sn	**Sn**	05 23 15.3	**-0.4**
	734nm,0.8s								
PALZ	**Palazzo San Ge**	**1.23**	**237**	Pg	Pn	**Pn**	05 22 58.0	**-1.1**
PALZ				Sg	Sn	**Sn**	05 23 15.3	**-0.4**
	734nm,0.8s								
STON	**Ston**	**1.27**	**13**	*e*Pn	Pn	**Pn**	05 22 59.6	**-0.2**
STON				Sn	Sg	**Sg**	05 23 19.3	**+2.4**
STON	**Ston**	**1.27**	**13**	*e*Pn	Pn	**Pn**	05 22 59.5	**-0.2**
STON				Sn	Sg	**Sg**	05 23 19.2	**+2.4**
RGNG	**Rignano Grg**	**1.29**	**273**	Pg	Pn	**Pn**	05 22 58.4	**-1.6**
RGNG	**Rignano Grg**	**1.29**	**273**	Pg	Pn	**Pn**	05 22 58.4	**-1.6**
ACER	**Acerenza**	**1.33**	**231**	Pg	Pn	**Pn**	05 22 59.5	**-1.0**
ACER				Sg	Sn	**Sn**	05 23 17.2	**-1.1**
	413nm,0.6s								
ACER	**Acerenza**	**1.33**	**231**	Pg	Pn	**Pn**	05 22 59.5	**-1.0**
ACER				Sg	Sn	**Sn**	05 23 17.2	**-1.1**
	413nm,0.6s								
BUM	**Brajici-Budva**	**1.36**	**60**	⇑*i*Pg	Pg	**Pg**	05 23 01.4	**-0.5**
BUM				*e*Sg	Sg	**Sg**	05 23 21.5	**+2.0**
BUM	**Brajici-Budva**	**1.36**	**60**	⇑*i*Pg	Pg	**Pg**	05 23 01.4	**-0.5**
BUM				*e*Sg	Sg	**Sg**	05 23 21.5	**+2.0**
VULT	**Monte Vulture**	**1.45**	**243**	Pn	Pn	**Pn**	05 23 01.9	**-0.2**
	508nm,1.1s								
VULT	**Monte Vulture**	**1.45**	**243**	Pn	Pn	**Pn**	05 23 01.9	**-0.2**
	508nm,1.1s								
ULC	**Ulcinj**	**1.49**	**76**	⇑*i*Pg	Pg	**Pg**	05 23 03.9	**-0.4**
ULC				*e*Sg	Sg	**Sg**	05 23 27.7	**+4.1**
ULC	**Ulcinj**	**1.49**	**76**	⇑*i*Pg	Pg	**Pg**	05 23 03.9	**-0.4**
ULC				*e*Sg	Sg	**Sg**	05 23 27.7	**+4.1**
PZUN	**Potenza**	**1.50**	**230**	Pn	Pn	**Pn**	05 23 01.6	**-1.3**
PZUN				Sn	Sg	**Sg**	05 23 25.5	**+1.4**
PZUN	**Potenza**	**1.50**	**230**	Pn	Pn	**Pn**	05 23 01.6	**-1.3**
SGTA	**Sant Agata di**	**1.55**	**252**	Pn	Pn	**Pn**	05 23 03.5	**0.0**
SGTA				Sn	Sg	**Sg**	05 23 27.2	**+1.7**
	225nm,0.8s								
SGTA	**Sant Agata di**	**1.55**	**252**	Pn	Pn	**Pn**	05 23 03.5	**0.0**
BRY	**Bratogost**	**1.57**	**35**	*e*Pg	Pg	**Pg**	05 23 03.9	**-1.9**
BRY				*e*Sg	Sg	**Sg**	05 23 27.2	**+1.1**
BRY	**Bratogost**	**1.57**	**35**	*e*Pg	Pg	**Pg**	05 23 03.9	**-1.9**
BRY				*e*Sg	Sg	**Sg**	05 23 27.2	**+1.1**
FG5	**Orsara di Pugl**	**1.58**	**258**	Pn	Pn	**Pn**	05 23 04.8	**+0.9**
	133nm,0.6s								
FG5	**Orsara di Pugl**	**1.58**	**258**	Pn	Pn	**Pn**	05 23 04.8	**+0.9**
	133nm,0.6s								
MRLC	**Muro Lucano**	**1.63**	**238**	Pn	Pn	**Pn**	05 23 05.2	**+0.6**
	246nm,0.9s								
MRLC	**Muro Lucano**	**1.63**	**238**	Pn	Pn	**Pn**	05 23 05.2	**+0.6**
	246nm,0.9s								
MOCO	**Biccari - m.te**	**1.64**	**262**	Pn	Pn	**Pn**	05 23 05.5	**+0.8**
	195nm,1.0s								
MELA	**Melanico ??? S**	**1.64**	**273**	Pn	Pn	**Pn**	05 23 05.1	**+0.4**
MELA				Sn	Sg	**Sg**	05 23 27.8	**-0.7**
	380nm,0.8s								
MELA	**Melanico ??? S**	**1.64**	**273**	Pn	Pn	**Pn**	05 23 05.1	**+0.4**
MELA				Sn	Sg	**Sg**	05 23 27.8	**-0.7**
	380nm,0.8s								
PDG	**Podgorica**	**1.66**	**60**	⇓*i*Pn	Pg	**Pg**	05 23 06.2	**+1.2**
PDG				*e*Sn	Sg	**Sg**	05 23 31.6	**+2.5**
TTG	**Podgorica**	**1.66**	**60**	⇓*i*Pn	Pn	**Pn**	05 23 06.2	**+1.2**
TTG				*e*Sn	Sg	**Sg**	05 23 31.6	**+2.5**
TTG	**Podgorica**	**1.66**	**60**	⇓*i*Pn	Pn	**Pn**	05 23 06.2	**+1.2**
TTG				*e*Sn	Sg	**Sg**	05 23 31.6	**+2.5**
CAFE	**Carife**	**1.68**	**250**	Pn	Pn	**Pn**	05 23 05.1	**-0.1**
	85nm,1.0s								
CAFE	**Carife**	**1.68**	**250**	Pn	Pn	**Pn**	05 23 05.1	**-0.1**
	85nm,1.0s								
SCHR	**S. Chirico Rap**	**1.71**	**214**	Pn	Pn	**Pn**	05 23 06.2	**+0.5**
SCHR				Sn	Sg	**Sg**	05 23 30.6	**-0.1**
	68nm,0.6s								
SCHR	**S. Chirico Rap**	**1.71**	**214**	Pn	Pn	**Pn**	05 23 06.2	**+0.5**
SCHR				Sn	Sg	**Sg**	05 23 30.6	**-0.1**
	68nm,0.6s								
NKY	**Niksic**	**1.72**	**46**	⇓*i*Pn	Pg	**Pg**	05 23 07.4	**-1.4**
NKY				*e*Sn	Sg	**Sg**	05 23 32.3	**+1.1**
NKY	**Niksic**	**1.72**	**46**	⇓*i*Pn	Pg	**Pg**	05 23 07.4	**-1.4**
NKY				*e*Sn	Sg	**Sg**	05 23 32.3	**+1.1**
MCEL	**Monticello**	**1.73**	**222**	Pn	Pn	**Pn**	05 23 06.6	**+0.6**
	137nm,0.7s								
MCEL	**Monticello**	**1.73**	**222**	Pn	Pn	**Pn**	05 23 06.6	**+0.6**
	137nm,0.7s								
SNAL	**S. Angelo Dei**	**1.73**	**247**	Pn	Pn	**Pn**	05 23 07.2	**+1.2**
SNAL	**S. Angelo Dei**	**1.73**	**247**	Pn	Pn	**Pn**	05 23 07.2	**+1.2**
MTSN	**Montesano sull**	**1.80**	**222**	Pn	Pn	**Pn**	05 23 07.8	**+0.8**
	211nm,1.0s								
MTSN	**Montesano sull**	**1.80**	**222**	Pn	Pn	**Pn**	05 23 07.8	**+0.8**
	211nm,1.0s								
CIGN	**Sant'Elia a Pi**	**1.81**	**272**	Pn	Pn	**Pn**	05 23 08.2	**+1.2**
	111nm,0.7s								
CIGN	**Sant'Elia a Pi**	**1.81**	**272**	Pn	Pn	**Pn**	05 23 08.2	**+1.2**
	111nm,0.7s								
SIRI	**Monte Sirino -**	**1.81**	**218**	Pn	Pn	**Pn**	05 23 07.7	**+0.6**
	100nm,0.5s								
SIRI	**Monte Sirino -**	**1.81**	**218**	Pn	Pn	**Pn**	05 23 07.7	**+0.6**
	100nm,0.5s								
MCRV	**Calabrutti - M**	**1.83**	**243**	Pn	Pn	**Pn**	05 23 07.3	**0.0**
	84nm,0.5s								
MCRV	**Calabrutti - M**	**1.83**	**243**	Pn	Pn	**Pn**	05 23 07.3	**0.0**
	84nm,0.5s								
CSSN	**Cassano Irpino**	**1.89**	**247**	Pn	Pg	**Pg**	05 23 10.5	**-1.5**
	43nm,0.5s								
CSSN	**Cassano Irpino**	**1.89**	**247**	Pn	Pg	**Pn**	05 23 10.5	**-1.5**
	43nm,0.5s								
CDRU	**Civita di Ruta**	**1.90**	**234**	Pn	Pn	**Pn**	05 23 09.2	**+0.9**
	67nm,0.8s								
CDRU	**Civita di Ruta**	**1.90**	**234**	Pn	Pn	**Pn**	05 23 09.2	**+0.9**
	67nm,0.8s								
UPM	**Unac-Piva**	**1.97**	**36**	⇑*i*Pn	Pn	**Pn**	05 23 10.6	**+1.3**
UPM				*e*Sn	Sg	**Sg**	05 23 38.0	**-1.0**
UPM	**Unac-Piva**	**1.97**	**36**	⇑*i*Pn	Pn	**Pn**	05 23 10.6	**+1.3**
UPM				*e*Sn	Sg	**Sg**	05 23 38.0	**-1.0**
CUC	**Castrocucco**	**1.99**	**215**	Pn	Pn	**Pn**	05 23 10.4	**+0.8**
	107nm,0.8s								
CUC	**Castrocucco**	**1.99**	**215**	Pn	Pn	**Pn**	05 23 10.4	**+0.8**
	107nm,0.8s								
CMPR	**Campora**	**2.01**	**230**	Pn	Pn	**Pn**	05 23 09.2	**-0.6**
CMPR	**Campora**	**2.01**	**230**	Pn	Pn	**Pn**	05 23 09.2	**-0.6**
BSSO	**Busso**	**2.04**	**269**	Pn	Pn	**Pn**	05 23 11.5	**+1.2**
BSSO	**Busso**	**2.04**	**269**	Pn	Pn	**Pn**	05 23 11.5	**+1.2**
BULG	**Bulgheria - Ca**	**2.13**	**224**	Pn	Pn	**Pn**	05 23 10.9	**-0.6**
BULG	**Bulgheria - Ca**	**2.13**	**224**	Pn	Pn	**Pn**	05 23 10.9	**-0.6**
PVY	**Plav**	**2.20**	**63**	*e*Pn	Pg	**Pg**	05 23 14.8	**-3.2**
PVY				*e*Sn	Sg	**Sg**	05 23 45.3	**-1.3**
PVY	**Plav**	**2.20**	**63**	*e*Pn	Pg	**Pg**	05 23 14.8	**-3.2**
PVY				*e*Sn	Sg	**Sg**	05 23 45.3	**-1.3**
SGG	**Gregorio Mates**	**2.22**	**265**	Pn	Pn	**Pn**	05 23 12.8	**+0.1**
	95nm,0.6s								
SGG	**Gregorio Mates**	**2.22**	**265**	Pn	Pn	**Pn**	05 23 12.8	**+0.1**
	95nm,0.6s								
BEY	**Berane**	**2.29**	**56**	⇓*i*Pn	Pg	**Pg**	05 23 16.0	**-3.6**
BEY				*e*Sn	Sg	**Sg**	05 23 46.1	**-3.1**
IVA	**Berane**	**2.29**	**56**	⇓*i*Pn	Pg	**Pg**	05 23 16.0	**-3.6**
IVA				*e*Sn	Sg	**Sg**	05 23 46.1	**-3.1**
IVA	**Berane**	**2.29**	**56**	⇓*i*Pn	Pg	**Pg**	05 23 16.0	**-3.6**
IVA				*e*Sn	Sg	**Sg**	05 23 46.1	**-3.1**
PLE	**Pljevlja**	**2.29**	**41**	⇓*i*Pn	Pn	**Pn**	05 23 15.1	**+1.4**
PLE				*e*Sn	Sg	**Sg**	05 23 47.1	**-2.4**
PLE	**Pljevlja**	**2.29**	**41**	⇓*i*Pn	Pn	**Pn**	05 23 15.1	**+1.4**
PLE				*e*Sn	Sg	**Sg**	05 23 47.1	**-2.4**
VAGA	**Valle Agricola**	**2.32**	**266**	Pn	Pn	**Pn**	05 23 14.0	**-0.1**
	86nm,0.5s								
VAGA	**Valle Agricola**	**2.32**	**266**	Pn	Pn	**Pn**	05 23 14.0	**-0.1**
	86nm,0.5s								
RNI2	**Rionero Sannit**	**2.37**	**273**	Pn	Pn	**Pn**	05 23 15.4	**+0.6**
RNI2	**Rionero Sannit**	**2.37**	**273**	Pn	Pn	**Pn**	05 23 15.4	**+0.6**
CERA	**Filignano**	**2.47**	**270**	Pn	Pn	**Pn**	05 23 16.8	**+0.6**
	108nm,0.7s								
CERA	**Filignano**	**2.47**	**270**	Pn	Pn	**Pn**	05 23 16.8	**+0.6**
	108nm,0.7s								
INTR	**Introdacqua**	**2.58**	**280**	Pn	Pn	**Pn**	05 23 17.8	**+0.2**
	104nm,0.6s								
INTR	**Introdacqua**	**2.58**	**280**	Pn	Pn	**Pn**	05 23 17.8	**+0.2**
	104nm,0.6s								
SDI	**San Donato**	**2.62**	**273**	Pn	Pn	**Pn**	05 23 18.5	**+0.2**
	19nm,0.5s								
SDI	**San Donato**	**2.62**	**273**	Pn	Pn	**Pn**	05 23 18.5	**+0.2**
	19nm,0.5s								
BBLS	**Lazići**	**2.72**	**34**	*e*Pn	Pn	**Pn**	05 23 20.4	**+0.9**
VVLD	**Villa Vallelon**	**2.77**	**276**	Pn	Pn	**Pn**	05 23 20.5	**+0.2**
VVLD	**Villa Vallelon**	**2.77**	**276**	Pn	Pn	**Pn**	05 23 20.5	**+0.2**
NRCA	**Norcia**	**3.34**	**293**	Pn	Pn	**Pn**	05 23 28.5	**+0.3**
	18nm,1.0s								
NRCA	**Norcia**	**3.34**	**293**	Pn	Pn	**Pn**	05 23 28.5	**+0.3**
	18nm,1.0s								
NVLJ	**Novalja**	**3.44**	**329**	*e*Pn	Pn	**Pn**	05 23 29.5	**+0.1**
NVLJ				Sn	Sn	**Sn**	05 24 09.5	**-0.7**
NVLJ	**Novalja**	**3.44**	**329**	*e*Pn	Pn	**Pn**	05 23 29.5	**+0.1**
NVLJ				Sn	Sn	**Sn**	05 24 09.4	**-0.8**
FSSB	**Fossombrone**	**3.93**	**303**	Pn	Pn	**Pn**	05 23 36.5	**+0.3**
FSSB	**Fossombrone**	**3.93**	**303**	Pn	Pn	**Pn**	05 23 36.5	**+0.3**

*IDC **31** 05:26:06.7±1.2,5.°02S×152.°60E,h0km,mb4.1/10, mb1 4.3/10,mb1mx4.1/18,mbtmp4.1/10,MS3.5/7, Ms1 3.5/7,ms1mx3.1/21,Error ellipse: s-maj=44.3km s-min=19.0km az=127.0*

*ISCJB **31** 05:26:14.8±3.5,5.°0S±0.°2×152.°4E±0.°2,h69km±33km, mb4.1/16,Error ellipse: s-maj=41.5km s-min=19.1km az=137.8*

*NEIC **31** 05:26:17.4±2.0,5.°10S×152.°46E,h82km±19km,mb4.4/6, Error ellipse: s-maj=26.3km s-min=12.4km az=135.0*

ISC 31 05:26:17.3±2.8,5.°1S±0.°2×152.°5E±0.°2,h80km±26km,n23, σ0.°64/19,mb4.1/16,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.77**	**230**	*e*Pn	**Pn**	**05 27 54.5**	**+0.4**
PMG				*e*Sn	**Sn**	**05 29 09.5**	**-0.3**
GUMO	**Guam**	**20.03**	**338**	LR	LR	05 37 43.3	
	comp=Z,39nm,18.1s,baz=161,slow=35						
KAKA	**Kakadu**	**21.15**	**248**	*e*P	**P**	**05 30 55.8**	**-0.2**
	43nm,0.7s,mb4.9						
WRA	**Warramunga Arr**	**22.99**	**228**	P	**P**	**05 31 14.8**	**-0.6**
WRA	**Warramunga Arr**	**22.99**	**228**	P	**P**	**05 31 14.8**	**-0.6**
	1.1nm,0.3s,mb3.6,baz=53,slow=9.9,SNR=42						
ASAR	**Alice Springs**	**25.70**	**222**	P	**P**	**05 31 40.5**	**+0.4**
	0.9nm,0.4s,mb3.5,baz=60,slow=9.1,SNR=24						
STKA	**Stephens Creek**	**28.52**	**200**	LR	LR	05 43 24.9	
	comp=Z,136nm,21.1s,baz=25,slow=36						
FITZ	**Fitzroy Crossi**	**29.21**	**242**	P	**P**	**05 32 11.5**	**-0.1**
	1.1nm,0.4s,mb3.8,baz=64,slow=12,SNR=13						
NWAO	**Narrogin (SRO)**	**42.93**	**225**	LR	LR	05 53 23.9	
	comp=Z,121nm,18.5s,baz=310,slow=38						
CMAR	**Chiang Mai Arr**	**57.69**	**295**	P	**P**	**05 36 01.4**	**+1.5**
	2.1nm,0.8s,mb4.2,baz=112,slow=5.1,SNR=16						
PETK	**Petropavlovsk-**	**58.15**	**4**	P	**P**	**05 36 01.6**	**-0.9**
	1.6nm,0.5s,mb4.3,baz=174,slow=8.6,SNR=4.3						
PETK				LR	LR	05 56 26.2	
	comp=Z,34nm,19.6s,baz=262,slow=31						
PMR	**Palmer**	**80.10**	**24**	*e*P	**P**	**05 38 18.0**	**0.0**
	2.8nm,0.6s,mb4.3						
MKAR	**Makanchi Array**	**80.32**	**319**	P	**P**	**05 38 20.3**	**+0.7**
	0.3nm,0.4s,mb3.5,baz=95,slow=7.1,SNR=4.4						
MKAR				LR	LR	06 13 45.1	
	comp=Z,23nm,21.4s,baz=358,slow=36						
SML	**Sawmill**	**80.53**	**24**	*e*P	**P**	**05 38 20.9**	**+0.5**
	3.5nm,0.6s,mb4.4						
TRF	**Thorofare Moun**	**80.60**	**23**	*e*P	**P**	**05 38 20.4**	**-0.4**
	4.1nm,0.7s,mb4.4						
BPAW	**Bear Paw Mtn.**	**80.69**	**22**	*e*P	**P**	**05 38 20.6**	**-0.5**
	1.7nm,0.6s,mb4.0						
ZALV	**Zalesovo Beam**	**81.20**	**326**	P	**P**	**05 38 23.2**	**-0.9**
	1.4nm,0.6s,mb4.0,baz=92,slow=5.2,SNR=4.0						
ZALV				LR	LR	06 14 55.5	
	comp=Z,21nm,19.3s,baz=354,slow=36						
ILAR	**Eielson Array**	**82.56**	**22**	P	**P**	**05 38 30.4**	**-0.6**
	4.4nm,0.7s,mb4.4,baz=242,slow=5.8,SNR=55						
EGAK	**Eagle**	**84.77**	**23**	*e*P	**P**	**05 38 43.1**	**+0.8**
	3.2nm,0.9s,mb4.2						
MAW	**Mawson**	**85.17**	**203**	LR	LR	06 16 32.8	
	comp=Z,46nm,18.2s,baz=309,slow=36						
BVAR	**Borovoye Array**	**89.27**	**323**	P	**P**	**05 39 04.1**	**-0.3**
	0.8nm,0.6s,mb3.9,baz=84,slow=6.1,SNR=4.5						
NVAR	**Mina Array Bea**	**92.54**	**52**	P	**P**	**05 39 20.7**	**+0.7**
	0.2nm,0.5s,mb3.7,baz=274,slow=6.2,SNR=2.6						
TORD	**Torodi Ar. Bea**	**150.06**	**288**	PKPbc	PKPbc	05 46 00.2	+0.5
	2.3nm,0.7s,baz=93,slow=2.2,SNR=16						

NNC 31 05:32:28.0±13.0,38.°15N×70.°64E,h0km,mb3.7,mpv3.3, 5C,Error ellipse: s-maj=118.0km s-min=72.3km az=175.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.95**	**359**	⇑Pn	Pn	05 33 43.3	-0.2
	0.6nm,0.2s,baz=176,slow=13,SNR=10						
KK31				⇑Sn	Sn	05 34 45.0	+3.5
	7.9nm,0.5s,baz=185,slow=27,SNR=7.4						
TKM2	**Tokmak 2**	**6.08**	**37**	⇑Pn	Pn	05 34 01.2	+2.1
	2.8nm,0.6s						
TKM2				⇑Sn	Sn	05 35 07.2	-2.1
	4.1nm,0.7s						
AB31	**Akbulak array**	**13.51**	**329**	⇑P	Pn	05 35 40.0	-0.8
	0.6nm,0.5s,baz=169,slow=10,SNR=14						

*ISCJB **31** 05:32:59.7±0.9,35.°93N±0.°04×136.°34E±0.°05,h9km±5km, mb3.4/3,Error ellipse: s-maj=7.8km s-min=6.8km az=141.6*

*NIED **31** 05:33:00,36.°00N×136.°40E,h17km,Mw3.5 Best double couple: M0 2.33000×10^14 NP1:φs57.00000°,δ88.00000°, λ-176.00000°. NP2:φs327.00000°,δ86.00000°, λ-2.00000°.*

*IDC **31** 05:33:00.5±1.2,35.°80N×136.°37E,h0km,mb3.4/3, mb1 3.6/4,mb1mx3.3/24,mbtmp3.4/4,ML3.4/1,Error ellipse: s-maj=28.3km s-min=13.4km az=154.0*

*JMA **31** 05:33:00.6,35.°98N×136.°38E,h7km±1km,M3.8 Broadband fault plane solution: P waves. NP1: φs320.00000°,δ66.00000°,λ-13.00000°. NP2:φs56.00000°, δ78.00000°,λ-155.00000°. Principal axes: T Plg8.0000°, Azm186.0000°; N Plg63.0000°, Azm80.0000°; P Plg26.0000°, Azm280.0000°;*

JMA Felt II J1.

ISC 31 05:33:00.6±1.0,35.°96N±0.°04×136.°38E±0.°06,h1km±7km, n10,σ0.°70/15,mb3.4/3,1C-2D,Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKG	**Kaga**	**0.32**	**354**	⇑P	**Pg**	**05 33 06.9**	**0.0**
JKG				S	**Sg**	**05 33 11.2**	**+0.1**
JGM	**Miyama**	**0.38**	**132**	⇓P	**Pg**	**05 33 08.3**	**+0.4**
JGM				S	**Sg**	**05 33 13.4**	**+0.6**
JGN	**Niukaw**	**0.81**	**70**	⇓P	**Pg**	**05 33 15.7**	**-0.4**
JGN				S	**Sg**	**05 33 26.0**	**-0.6**
JTT	**Ttatey**	**1.01**	**50**	P	**Pg**	**05 33 19.7**	**-0.3**
JTT				S	**Sg**	**05 33 33.0**	**-0.1**
MAT	**Matsushiro**	**1.59**	**68**	P	**Pn**	**05 33 29.3**	**-0.7**
MAT				S	**Sn**	**05 33 52.2**	**+1.0**
MJAR	**Matsushiro Arr**	**1.59**	**68**	Pg	**Pg**	**05 33 31.6**	**+0.4**
	39nm,0.3s,baz=255,slow=17,SNR=296						
MJAR				Lg		05 33 53.6	
	16nm,0.3s,baz=256,slow=29,SNR=8.5						
KSRS	**Korea Array**	**6.95**	**285**	Pn	**Pn**	**05 34 43.6**	**0.0**
	0.7nm,0.3s,baz=101,slow=14,SNR=7.7						
SONM	**Songino Array**	**25.11**	**308**	P	**P**	**05 38 28.2**	**+1.3**
	0.8nm,0.7s,mb3.6,baz=114,slow=10,SNR=5.0						
WRA	**Warramunga Arr**	**55.62**	**182**	P	**P**	**05 42 36.5**	**-1.6**
	0.4nm,0.9s,mb3.5,baz=359,slow=7.6,SNR=5.9						
ASAR	**Alice Springs**	**59.34**	**183**	P	**P**	**05 43 03.9**	**-0.3**
	0.2nm,0.6s,mb3.3,baz=9.5,slow=13,SNR=2.6						

*NEIC **31** 06:12:02.5,38.°06S×176.°43E,h157km,MG4.5(WEL), After WEL.*

WEL 31 06:12:02.8±0.2,38.°08S×176.°45E,h155km±1km,ML4.5/24, 33C-4D,Error ellipse: s-maj=1.6km s-min=1.4km az=90.0,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OMRZ	**Omania**	**0.07**	**245**	⇑PN	Pn	06 12 23.5	+0.1
OMRZ				SN	Sn	06 12 39.7	+0.5
TARZ	**Mount Tarawera**	**0.16**	**164**	PN	Pn	06 12 23.8	+0.3
KARZ	**Kaharoa**	**0.17**	**289**	⇑PN	Pn	06 12 23.6	0.0
KARZ	**Kaharoa**	**0.17**	**289**	P	Pn	06 12 23.6	0.0
EDRZ	**Edgecumbe**	**0.23**	**97**	PN	Pn	06 12 23.5	-0.1
EDRZ	**Edgecumbe**	**0.23**	**97**	P	Pn	06 12 23.5	-0.2
OPRZ	**Ohinepanea**	**0.25**	**20**	PN	Pn	06 12 23.4	-0.4
RRRZ	**Republican Roa**	**0.27**	**169**	⇑PN	Pn	06 12 23.8	0.0
RRRZ	**Republican Roa**	**0.27**	**169**	P	Pn	06 12 23.8	0.0
HRRZ	**Handcock Road**	**0.34**	**203**	PN	Pn	06 12 24.2	+0.2
TGRZ	**Tauranga**	**0.38**	**337**	PN	Pn	06 12 23.8	-0.3
TGRZ				SN	Sn	06 12 40.7	+0.3
PRRZ	**Plateau Road**	**0.42**	**186**	⇑PN	Pn	06 12 24.3	0.0
PRRZ				SN	Sn	06 12 40.7	-0.1
ALRZ	**Allen Road**	**0.49**	**190**	PN	Pn	06 12 24.6	0.0
URZ	**Urewera**	**0.55**	**109**	⇑PN	Pn	06 12 24.4	-0.5
URZ				SN	Sn	06 12 40.6	-1.1
WHTZ	**Whakaora**	**0.70**	**213**	PN	Pn	06 12 26.4	+0.6
WHTZ	**Whakaora**	**0.70**	**213**	P	Pn	06 12 26.4	+0.6
TOZ	**Tahuroa Road**	**0.83**	**295**	PN	Pn	06 12 26.6	0.0
TOZ				SN	Sn	06 12 44.7	0.1
TOZ	**Tahuroa Road**	**0.83**	**295**	P	Pn	06 12 26.6	0.0
WATZ	**Wairara**	**0.85**	**222**	PN	Pn	06 12 27.0	+0.2
WATZ	**Wairara**	**0.85**	**222**	P	Pn	06 12 27.0	+0.3
HATZ	**Hinemaiaia**	**0.86**	**199**	PN	Pn	06 12 26.9	0.0
HATZ	**Hinemaiaia**	**0.86**	**199**	P	Pn	06 12 26.9	0.0
MWZ	**Matawai**	**0.89**	**107**	PN	Pn	06 12 27.0	-0.1
RATZ	**Rangitukua**	**0.95**	**214**	PN	Pn	06 12 27.7	+0.1
RITZ	**Rihia Road**	**1.01**	**207**	PN	Pn	06 12 28.4	+0.4
RITZ	**Rihia Road**	**1.01**	**207**	P	Pn	06 12 28.4	+0.3
NMHZ	**Naumai**	**1.06**	**165**	⇑PN	Pn	06 12 29.2	+0.8
KATZ	**Kak

RPZ				*e*Sn	Sn	06 14 50.8	-9.4
FOZ	**Fox Glacier**	**7.50**	**221**	PN	Pn	06 13 41.4	-8.0
LBZ	**Lake Benmore**	**7.87**	**215**	PN	Pn	06 13 48.6	-5.7
LBZ				SN	Sn	06 15 11.4	-11
ODZ	**Otahuna Downs**	**8.21**	**210**	PN	Pn	06 13 53.3	-5.5
WKZ	**Wanaka**	**8.75**	**217**	PN	Pn	06 14 00.1	-5.8
WKZ				SN	Sn	06 15 31.1	-12
EAZ	**Earnscleugh**	**8.92**	**215**	PN	Pn	06 14 02.5	-5.8
EAZ				SN	Sn	06 15 35.0	-12
TUZ	**Tuapeka**	**9.36**	**211**	PN	Pn	06 14 09.9	-4.2
SYZ	**Scrubby Hill**	**10.03**	**210**	PN	Pn	06 14 18.7	-4.3
APZ	**The Paps**	**10.75**	**213**	PN	Pn	06 14 27.6	-4.8

IDC 31 06:16:52.3±1.8,5°24S×152°89E,h0km,mb3.5/5, mb1 3.8/5,mb1mx3.6/17,mbtmp3.5/5,Error ellipse: s-maj=64.6km s-min=26.7km az=127.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.22**	**229**	P	P	06 22 01.5	+0.3
	0.2nm,0.3s,baz=53,slow=10.0,SNR=5.4						
ASAR	**Alice Springs**	**25.89**	**223**	P	P	06 22 26.5	+0.5
	0.1nm,0.3s,baz=60,slow=10,SNR=3.8						
FITZ	**Fitzroy Crossi**	**29.53**	**242**	P	P	06 22 57.8	-0.9
	0.7nm,0.7s,baz=49,slow=9.3,SNR=2.6						
CMAR	**Chiang Mai Arr**	**58.14**	**295**	P	P	06 26 48.5	+0.2
	0.6nm,0.3s,baz=128,slow=5.8,SNR=7.1						
ILAR	**Eielson Array**	**82.53**	**22**	P	P	06 29 16.9	+0.3
	0.4nm,0.6s,baz=252,slow=4.7,SNR=8.7						
TORD	**Torodi Ar. Bea**	**150.52**	**287**	PKPbc	PKPbc	06 36 46.3	-0.8
	0.2nm,0.4s,baz=84,slow=1.5,SNR=3.6						

IDC 31 06:31:11.1±2.9,16°10S×73°83W,h45km±24km,mb3.7/2, mb1 3.7/5,mb1mx3.4/19,mbtmp3.7/5,ML3.4/3,Error ellipse: s-maj=50.8km s-min=19.1km az=43.0,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**5.02**	**324**	P	Pn	06 32 23.1	-0.9
	1.3nm,0.3s,baz=155,slow=14,SNR=3.4						
NNA				S	Sn	06 33 21.9	+1.1
	5.5nm,0.3s,baz=284,slow=15,SNR=2.6						
LPAZ	**La Paz**	**5.48**	**93**	P	Pn	06 32 35.9	+5.6
	2.8nm,0.3s,baz=270,slow=13,SNR=74						
SIV	**San Ignacio**	**12.27**	**91**	P	Pn	06 34 02.9	-0.4
	0.7nm,0.3s,baz=280,slow=12,SNR=20						
CFAA	**Coronel Fontan**	**16.25**	**163**	P	Pn	06 34 57.5	+1.1
	0.0nm,0.3s,baz=336,slow=10.0,SNR=14						
TXAR	**Lajitas Array**	**53.57**	**327**	P	P	06 40 27.8	0.0
	0.3nm,1.0s,baz=158,slow=10,SNR=4.3						
TORD	**Torodi Ar. Bea**	**80.11**	**73**	P	P	06 43 17.1	+0.2
	2.1nm,0.8s,baz=259,slow=5.0,SNR=7.6						
WRA	**Warramunga Arr**	**134.73**	**219**	PKP	PKPdf	06 50 24.2	-1.5
	0.3nm,0.6s,baz=138,slow=1.6,SNR=4.9						
MKAR	**Makanchi Array**	**143.53**	**28**	PKP	PKPdf	06 50 38.1	-2.8
	0.2nm,0.6s,baz=336,slow=3.2,SNR=3.8						
SONM	**Songino Array**	**148.35**	**360**	PKPbc	PKPbc	06 50 53.0	+0.4
	1.0nm,0.6s,baz=354,slow=1.5,SNR=6.9						

*GUC **31** 06:52:00.0±0.7,22°10S×68°62W,h140km±16km,ML4.4*
*ISCJB **31** 06:52:01.1±0.2,22°12S±0°04×68°18W±0°05,h126km, mb4.6/69,Error ellipse: s-maj=6.9km s-min=5.5km az=154.0*
*NEIC **31** 06:52:02.1±0.3,22°21S×68°23W,mb4.7/59,Error ellipse: s-maj=9.9km s-min=6.1km az=66.0*
*IDC **31** 06:52:02.1±0.8,22°08S×68°27W,h122km±6km,mb4.2/12, mb1 4.3/15,mb1mx4.2/19,mbtmp4.1/15,MS3.2/2, Ms1 3.2/2,ms1mx2.7/20,Error ellipse: s-maj=19.0km s-min=12.6km az=63.0*
ISC 31 06:52:02.9±0.2,22°20S±0°04×68°16W±0°05,h128km, h128km±9km:pP-P,n382,σ0s72/371,mb4.5/69,136C-110D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACH	**Maria Elena**	**1.48**	**270**	⇑*i*P	**Pn**	**06 52 25.7**	**-4.9**
MACH				*i* S	**Sn**	**06 52 44.5**	**-7.3**
MACH				AML	AML	06 52 45.2	
	comp=N,186nm,0.1s						
CEN1	**Los Morros**	**2.23**	**237**	*e*P	**Pn**	**06 52 37.6**	**-1.9**
CEN1				*e*S	**Sn**	**06 53 05.9**	**-1.8**
CEN1				AML	AML	06 53 17.1	
	comp=N,2μm,0.5s						
HMBC	**Humberston**	**2.50**	**319**	⇑*i*P	**Pn**	**06 52 37.5**	**-5.5**
HMBC				*i* S	**Sn**	**06 53 06.3**	**-7.5**
HMBC				AML	AML	06 53 08.7	
	comp=N,14μm,0.5s						
ANCH	**Antofagasta**	**2.55**	**234**	AML	AML	06 53 08.2	
	comp=E,3μm,0.4s						
MNMC	**Miæe Miæ**	**3.33**	**336**	⇑*i*P	**Pn**	**06 52 49.6**	**-4.2**
MNMC				*i* S	**Sn**	**06 53 28.1**	**-5.1**
MNMC				AML	AML	06 53 55.4	
	comp=N,3μm,0.6s						
LPAZ	**La Paz**	**5.88**	**0**	*e*Pn	**Pn**	**06 53 26.4**	**-1.4**
LPAZ	**La Paz**	**5.88**	**0**	P	**Pn**	**06 53 26.0**	**-1.8**
	comp=N,13nm,0.3s,baz=189,slow=6.8,SNR=348						
LCO	**Las Campanas**	**7.16**	**198**	*e*Pn	**Pn**	**06 53 39.1**	**-6.0**
LCO				*e*Sn	**Sn**	**06 54 57.5**	**-7.5**
SIV	**San Ignacio**	**9.11**	**49**	P	**Pn**	**06 54 08.1**	**-3.3**
	comp=N,11nm,0.3s,baz=255,slow=11,SNR=241						
SIV				S	**Sn**	**06 55 44.5**	**-7.6**
	comp=N,0.6nm,0.3s,baz=128,slow=20,SNR=4.0						
CFAA	**Coronel Fontan**	**9.37**	**180**	P	**Pn**	**06 54 10.9**	**-3.8**
	comp=N,1.6nm,0.3s,baz=355,slow=13,SNR=225						
CFAA				S	**Sn**	**06 55 49.5**	**-8.9**
	comp=N,0.5nm,0.3s,baz=235,slow=19,SNR=4.6						
CPUP	**Villa Florida**	**10.70**	**115**	*e*Pn	**Pn**	**06 54 32.1**	**-0.5**
CPUP	**Villa Florida**	**10.70**	**115**	P	**Pn**	**06 54 32.5**	**-0.1**
	comp=N,0.5nm,0.3s,baz=276,slow=12,SNR=18						
CPUP				LR	LR	06 59 40.3	
	comp=N,126nm,20.3s,baz=111,slow=42						
NNA	**Nana**	**13.11**	**319**	P	**Pn**	**06 54 59.1**	**-5.2**
NNA				*e*Pn	**Pn**	**06 55 03.4**	**-0.9**
NNA	**Nana**	**13.11**	**319**	P	**Pn**	**06 54 59.1**	**-5.2**
	comp=N,0.4nm,0.3s,baz=170,slow=11,SNR=2.0						
TRQA	**Tornquist**	**16.68**	**163**	*e*Pn	**Pn**	**06 55 47.8**	**-1.1**
	comp=N,206nm,1.5s						
PLCA	**Paso Flores**	**18.59**	**186**	*e*P	**P**	**06 56 09.2**	**-0.9**
	comp=N,37nm,1.5s						
PLCA	**Paso Flores**	**18.59**	**186**	P	**P**	**06 56 09.6**	**-0.5**
	comp=N,0.4nm,0.3s,baz=3.6,slow=13,SNR=15						
OTAV	**Otavalo**	**24.45**	**334**	*e*P	**P**	**06 57 10.0**	**+0.1**
	comp=N,89nm,2.3s,mb4.9						
ROSC	**El Rosal**	**27.55**	**347**	LR	LR	07 09 52.0	
	comp=N,52nm,19.0s,baz=26,slow=39						
USHA	**Ushuaia**	**32.59**	**180**	P	**P**	**06 58 22.5**	**+0.7**
	comp=N,7.9nm,0.8s,mb4.5,baz=320,slow=7.9,SNR=3.1						
RCBR	**Riachuelo**	**35.15**	**67**	*e*P	**P**	**06 58 44.8**	**+0.3**
	comp=N,27nm,1.4s,mb4.7						
PMSA	**Palmer Station**	**42.65**	**177**	P	**P**	**06 59 47.6**	**+1.3**
	comp=N,2.4nm,0.7s,mb4.0,baz=19,slow=8.5,SNR=6.5						
JSC	**Jenkinsville**	**57.53**	**347**	*e*P	**P**	**07 01 37.6**	**-1.2**
CPCT	**Cooper Cave**	**59.39**	**344**	*e*P	**P**	**07 01 49.5**	**-2.2**
VNA1	**Neumayer--Stat**	**59.40**	**160**	*e*P	**P**	**07 01 48.5**	**-2.9**
SWET	**Sewanee**	**59.53**	**343**	*e*P	**P**	**07 01 50.5**	**-2.2**
SWET				*e*pP	pP	07 02 21.0	-2.4
VNA2	**Neumayer--Watz**	**59.77**	**161**	*e*P	**P**	**07 01 52.3**	**-1.6**
VNA2				*e*	pP	07 02 22.2	-2.4
JCT	**Junction City**	**60.55**	**329**	⇓P	**P**	**07 01 58.5**	**-1.2**
	baz=61,SNR=19						
JCT	**Junction City**	**60.55**	**329**	*e*P	**P**	**07 01 58.0**	**-1.8**
	comp=N,18nm,0.8s,mb5.0						
JCT				*e*pP	pP	07 02 28.7	-1.9
WVT	**Waverly**	**60.92**	**342**	*e*P	**P**	**07 01 59.4**	**-2.7**
	comp=N,8.8nm,1.0s,mb4.5						
WVT				*e*pP	pP	07 02 30.2	-2.7
628A	**Black Gap, Mar**	**61.30**	**326**	⇓P	**P**	**07 02 04.4**	**-0.5**
	baz=62,SNR=22						
MIAR	**Mount Ida**	**61.38**	**336**	*e*P	**P**	**07 02 03.6**	**-1.7**
	comp=N,13nm,1.3s,mb4.6						
MIAR				*e*pP	pP	07 02 34.4	-1.7
627A	**Terlingua Ranc**	**61.54**	**325**	⇑P	**P**	**07 02 05.6**	**-0.8**
	baz=62,SNR=12						
TXAR	**Lajitas Array**	**61.59**	**325**	P	**P**	**07 02 05.5**	**-1.3**
	comp=N,2.0nm,0.7s,mb4.1,baz=151,slow=8.9,SNR=30						
TXAR				pP	pP	07 02 33.9	-3.8
	comp=N,0.9nm,0.7s,baz=161,slow=8.0,SNR=4.4						
626A	**Big Bend Ranch**	**62.02**	**325**	⇓P	**P**	**07 02 08.9**	**-0.8**
	baz=62,SNR=26						
428A	**Kincaid Ranch,**	**62.19**	**327**	⇑P	**P**	**07 02 09.9**	**-0.8**
	baz=62,SNR=6.3						
526A	**Mary Lane Ranc**	**62.39**	**325**	⇑P	**P**	**07 02 11.4**	**-0.7**
	baz=63,SNR=20						
MCWV	**Mont Chateau**	**62.49**	**350**	*e*P	**P**	**07 02 12.1**	**-0.4**
	comp=N,13nm,0.8s,mb4.8						
427A	**Hayter Ranch,**	**62.66**	**326**	⇑P	**P**	**07 02 12.7**	**-1.2**
	baz=63,SNR=9.4						
328A	**Wristen Ranch,**	**62.78**	**327**	P	**P**	**07 02 13.5**	**-1.2**
	baz=63,SNR=14						
SIUC	**Southern Illin**	**62.80**	**341**	*e*P	**P**	**07 02 12.7**	**-1.9**
	comp=N,11nm,0.8s,mb4.7						
SIUC				*e*pP	pP	07 02 43.6	-2.1
426A	**McDonald Obser**	**62.84**	**325**	⇑P	**P**	**07 02 14.3**	**-0.8**
	baz=63,SNR=13						
326A	**Caldwell Ranch**	**63.33**	**326**	⇑P	**P**	**07 02 17.2**	**-1.1**
	baz=64,SNR=10.0						
FVM	**French Village**	**63.41**	**340**	*e*P	**P**	**07 02 16.7**	**-2.0**
	comp=N,12nm,0.8s,mb4.8						
FVM				*e*pP	pP	07 02 47.0	-2.8
425A	**Indio Mountain**	**63.44**	**325**	P	**P**	**07 02 18.1**	**-0.9**
	baz=64,SNR=26						
227A	**Bennet, Jal**	**63.53**	**327**	⇓P	**P**	**07 02 18.7**	**-0.9**
	baz=64,SNR=5.9						
ACSO	**Alum Creek Sta**	**63.62**	**347**	*e*P	**P**	**07 02 18.1**	**-1.9**
	comp=N,13nm,1.0s,mb4.7						
WMOK	**Wichita Mounta**	**63.65**	**332**	*e*P	**P**	**07 02 18.0**	**-2.3**
	comp=N,1.9nm,0.8s,mb4.0						
CCM	**Cathedral Cave**	**63.74**	**340**	*e*P	**P**	**07 02 18.5**	**-2.3**
	comp=N,7.3nm,0.8s,mb4.6						
325A	**Bean Ranch, Si**	**63.89**	**325**	P	**P**	**07 02 20.9**	**-1.0**
	baz=64,SNR=52						
226A	**Malaga, Loving**	**63.98**	**326**	⇓P	**P**	**07 02 22.0**	**-0.6**
	baz=64,SNR=10						
324A	**Moseley Ranch,**	**64.22**	**325**	P	**P**	**07 02 22.4**	**-1.7**
	baz=64,SNR=21						
GDL2	**Guadalupe Moun**	**64.22**	**326**	*e*P	**P**	**07 02 23.7**	**-0.4**
GDL2				*e*pP	pP	07 02 54.3	-1.0
MNTX	**Cornudas Mount**	**64.36**	**325**	P	**P**	**07 02 23.3**	**-1.8**
	baz=65,SNR=16						
MNTX	**Cornudas Mount**	**64.36**	**325**	*e*P	**P**	**07 02 23.0**	**-2.1**
	comp=N,8.7nm,1.0s,mb4.5						
MNTX				*e*pP	pP	07 02 53.9	-2.3
225A	**Deer Hill, Car**	**64.39**	**326**	P	**P**	**07 02 24.2**	**-1.1**
	baz=65,SNR=16						
126A	**Clayton Basin,**	**64.40**	**327**	⇑P	**P**	**07 02 24.4**	**-0.9**
	baz=65,SNR=6.3						
ALLY	**Allegheny Colle**	**64.48**	**350**	*e*P	**P**	**07 02 24.2**	**-1.4**
	comp=N,13nm,0.9s,mb4.8						
Z27A	**Tatum**	**64.53**	**328**	⇑P	**P**	**07 02 24.7**	**-1.4**
	baz=65						
CPRX	**Cap Rock**	**64.63**	**327**	*e*P	**P**	**07 02 26.2**	**-0.6**
	comp=N,9.9nm,0.7s,mb4.8						
224A	**Cornudas Mount**	**64.73**	**325**	P	**P**	**07 02 26.0**	**-1.4**
	baz=65,SNR=20						
125A	**Gardner Draw,**	**64.74**	**326**	⇑P	**P**	**07 02 26.0**	**-1.5**
	baz=65,SNR=7.6						
MSTX	**Muleshoe**	**64.85**	**329**	⇓P	**P**	**07 02 26.8**	**-1.4**
	baz=65,SNR=16						
Z26A	**Caprock**	**64.88**	**327**	⇓P	**P**	**07 02 27.2**	**-1.2**
	baz=65,SNR=11						
ERPA	**Erie**	**64.92**	**350**	*e*P	**P**	**07 02 27.6**	**-0.9**
	comp=N,18nm,0.7s,mb5.0						
Y27A	**Causey**	**64.97**	**328**	⇑P	**P**	**07 02 27.5**	**-1.5**
	baz=65,SNR=12						
124A	**Stringfield Ra**	**65.18**	**326**	⇑P	**P**	**07 02 29.7**	**-0.7**
	baz=66,SNR=16						
Z25A	**Roswell**	**65.26**	**327**	⇑P	**P**	**07 02 29.6**	**-1.3**
	baz=66,SNR=13						
Z24A	**Sheeppen Canyo**	**65.63**	**326**	⇑P	**P**	**07 02 32.5**	**-0.8**
	baz=66,SNR=21						
Y25A	**Mesa, Roswell**	**65.76**	**327**	⇑P	**P**	**07 02 32.7**	**-1.4**
	baz=66,SNR=11						
320A	**Kipp Ranch, An**	**65.81**	**323**	⇓P	**P**	**07 02 34.4**	**0.0**
	baz=66,SNR=8.2						
X26A	**CR and CF Fran**	**65.82**	**328**	⇓P	**P**	**07 02 33.5**	**-1.0**
	baz=66,SNR=14						
221A	**Mesquite Ranch**	**65.90**	**324**	⇓P	**P**	**07 02 35.2**	**+0.3**
	baz=66						
122A	**Conniff Cattle**	**66.00**	**325**	⇑P	**P**	**07 02 35.7**	**+0.1**
	baz=66,SNR=9.2						
Z23A	**Rita Site, Whi**	**66.03**	**326**	⇑P	**P**	**07 02 35.6**	**-0.2**
	baz=66,SNR=11						
220A	**Playas Peak, P**	**66.23**	**323**	⇓P	**P**	**07 02 37.0**	**-0.1**
	baz=66,SNR=12						
319A	**Douglas**	**66.26**	**322**	P	**P**	**07 02 37.4**	**0.0**
	baz=66,SNR=16						
121A	**Cookes Peak, D**	**66.30**	**324**	⇓P	**P**	**07 02 37.7**	**+0.2**
	baz=67,SNR=6.0						
Z22A	**Elephant Butte**	**66.41**	**325**	P	**P**	**07 02 38.4**	**+0.1**
	baz=67,SNR=43						
Y23A	**Lovelace Mesa,**	**66.46**	**326**	⇓P	**P**	**07 02 38.2**	**-0.3**
	baz=67						
W25A	**X Bar L Ranch,**	**66.67**	**328**	⇑P	**P**	**07 02 39.0**	**-0.9**
	baz=67,SNR=12						
219A	**White Tail Can**	**66.71**	**323**	⇑P	**P**	**07 02 40.2**	**+0.1**
	baz=67,SNR=9.3						
318A	**Bisbee**	**66.71**	**322**	P	**P**	**07 02 40.2**	**0.0**
	baz=67,SNR=9.6						
120A	**U Bar Ranch, L**	**66.77**	**323**	⇑P	**P**	**07 02 40.9**	**+0.3**
	baz=67,SNR=7.1						
V26A	**Tequesquite Ra**	**66.81**	**329**	⇓P	**P**	**07 02 39.9**	**-0.9**
	baz=67,SNR=6.3						
Z21A	**St. Cloud Mine**	**66.83**	**325**	⇑P	**P**	**07 02 41.4**	**+0.5**
	baz=67,SNR=18						
BNM	**Barren Site**	**66.93**	**326**	⇑P	**P**	**07 02 41.5**	**0.0**
	comp=N,8.6nm,1.0s,mb4.5						
Y22A	**Socorro**	**66.94**	**326**	⇑P	**P**	**07 02 41.6**	**0.0**
	baz=67,SNR=7.1						
LPM	**Los Pinos Moun**	**67.05**	**326**	*e*P	**P**	**07 02 42.4**	**+0.1**
LPM				*e*pP	pP	07 03 14.9	+1.3
W24A	**Lazy 6 Ranch,**	**67.14**	**327**	⇑P	**P**	**07 02 42.2**	**-0.7**
	baz=67,SNR=8.5						
Z20A	**Nine Sixteen R**	**67.18**	**324**	⇑P	**P**	**07 02 43.4**	**+0.2**
	baz=68,SNR=14						
V25A	**Rancho No Teng**	**67.25**	**328**	⇓P	**P**	**07 02 42.9**	**-0.6**
	baz=68,SNR=11						
119A	**Ashpeak Ranch,**	**67.31**	**323**	⇓P	**P**	**07 02 44.0**	**0.0**
	baz=68						
Y21A	**Point of Rocks**	**67.37**	**325**	⇑P	**P**	**07 02 45.1**	**+0.8**
	baz=68,SNR=9.5						
LAZ	**Lazbuddie**	**67.39**	**326**	*e*P	**P**	**07 02 44.6**	**+0.2**
	comp=N,4.7nm,1.4s,mb4.1						
217A	**Green Valley**	**67.44**	**321**	⇓P	**P**	**07 02 44.7**	**-0.1**
	baz=68,SNR=8.4						
ANMO	**Albuquerque**	**67.46**	**327**	*e*P	**P**	**07 02 44.5**	**-0.3**
	comp=N,10nm,0.8s,mb4.7						
W23A	**Werner Place,**	**67.47**	**327**	⇑P	**P**	**07 02 45.0**	**+0.1**
	baz=68,SNR=8.4						
V24A	**Rampart Ranch,**	**67.48**	**328**	⇓P	**P**	**07 02 44.5**	**-0.4**
	baz=68,SNR=11						
CBKS	**Cedar Bluff**	**67.52**	**334**	⇑P	**P**	**07 02 44.4**	**-0.7**
	baz=68						
118A	**Homack Ranch,**	**67.59**	**323**	⇓P	**P**	**07 02 45.8**	**+0.1**
	baz=68						
U25A	**Circle Dot Ran**	**67.60**	**329**	⇓P	**P**	**07 02 45.3**	**-0.4**
	baz=68,SNR=12						
Y20A	**Horse Springs,**	**67.67**	**325**	⇑P	**P**	**07 02 46.7**	**+0.5**
	baz=68,SNR=14						
X21A	**Alamocita Cree**	**67.76**	**325**	⇑P	**P**	**07 02 47.4**	**+0.6**
	baz=68,SNR=18						
W22A	**Albuquerque**	**67.77**	**326**	⇓P	**P**	**07 02 47.2**	**+0.4**
	baz=68,SNR=9.2						
TUC	**Tucson**	**67.81**	**322**	*e*P	**P**	**07 02 46.5**	**-0.6**
	comp=N,15nm,1.3s,mb4.6						
TUC				*e*pP	pP	07 03 18.1	-0.4
JFWS	**Jewell Farm**	**67.91**	**343**	*e*P	**P**	**07 02 45.8**	**-1.7**
	comp=N,162nm,2.8s,mb5.3						
LIC	**Lamto**	**67.92**	**73**	*e*P	**P**	**07 02 48.1**	**-0.1**
	comp=N,63nm,1.7s,mb5.1						
V23A	**Ortiz Mt. (NFS**	**67.95**	**327**	⇓P	**P**	**07 02 48.2**	**+0.3**
	baz=68,SNR=15						
216A	**Three Points,**	**67.97**	**321**	⇓P	**P**	**07 02 48.4**	**+0.3**
	baz=68,SNR=10						
117A	**Oracle**	**67.98**	**322**	⇓P	**P**	**07 02 48.3**	**+0.2**
	baz=68,SNR=15						
TIC	**Toumodi**	**68.11**	**73**	*e*P	**P**	**07 02 49.3**	**-0.1**
	comp=N,134nm,1.8s,mb5.4						
Y19A	**Nutrioso**	**68.18**	**324**	⇓P	**P**	**07 02 50.2**	**+0.9**
	baz=68,SNR=40						
W21A	**San Fidel**	**68.20**	**326**	⇓P	**P**	**07 02 50.0**	**+0.5**
	baz=68,SNR=7.1						
X20A	**Quemado**	**68.21**	**325**	⇑P	**P**	**07 02 50.2**	**+0.6**
	baz=68,SNR=11						
KIC	**Kosan Boka**	**68.23**	**73**	*e*P	**P**	**07 02 50.3**	**+0.1**
	comp=N,39nm,0.9s,mb5.1						
DBIC	**Dimbokro**	**68.27**	**73**	P	**P**	**07 02 50.7**	**+0.3**
	comp=N,10nm,0.7s,mb4.7,baz=204,slow=6.4,SNR=13						
U23A	**El Rito**	**68.41**	**328**	⇓P	**P**	**07 02 50.8**	**0.0**
	baz=69,SNR=7.4						
V22A	**San Miguel Ran**	**68.44**	**327**	⇓P	**P**	**07 02 51.3**	**+0.3**
	baz=69						
T24A	**Torres, Weston**	**68.45**	**329**	⇑P	**P**	**07 02 51.4**	**+0.4**
	baz=69,SNR=6.8						
Y18A	**Canyon Day Jun**	**68.47**	**323**	P	**P**	**07 02 51.2**	**0.0**
	baz=69,SNR=7.6						
S25A	**Robets Cordova**	**68.62**	**330**	⇑P	**P**	**07 02 52.0**	**0.0**
	baz=69,SNR=12						
W20A	**Ramah**	**68.66**	**325**	⇑P	**P**	**07 02 52.7**	**+0.4**
	baz=69,SNR=8.0						
214A	**Organ Pipe Nat**	**68.74**	**320**	⇑P	**P**	**07 02 53.1**	**+0.2**
	baz=69,SNR=5.0						
U22A	**Llaves**	**68.78**	**327**	⇑P	**P**	**07 02 53.7**	**+0.7**
	baz=69,SNR=7.2						
Y17A	**Roosevelt**	**68.86**	**323**	⇓P	**P**	**07 02 54.1**	**+0.5**
	baz=69,SNR=15						
T23A	**Casias Ranch,**	**68.89**	**328**	P	**P**	**07 02 53.8**	**0.0**
	baz=69,SNR=5.1						
Z16A	**Peralta Trail,**	**68.93**	**322**	⇑P	**P**	**07 02 54.3**	**+0.2**
	baz=69,SNR=7.1						
R25A	**Fountain Ranch**	**68.95**	**330**	⇓P	**P**	**07 02 53.4**	**-0.7**
	baz=69,SNR=10						
S24A	**Houchin Ranch,**	**68.98**	**329**	⇑P	**P**	**07 02 54.8**	**+0.6**
	baz=69,SNR=8.8						
X18A	**Snowflake**	**68.99**	**324**	⇓P	**P**	**07 02 54.9**	**+0.5**
	baz=69,SNR=5.7						
W19A	**Sanders**	**69.12**	**325**	⇓P	**P**	**07 02 55.8**	**+0.6**
	baz=69						
V20A	**Brimhall**	**69.16**	**326**	⇑P	**P**	**07 02 55.6**	**+0.2**
	baz=70,SNR=12						
SDCO	**Great Sand Dun**	**69.20**	**329**	⇑P	**P**	**07 02 55.9**	**+0.3**
	baz=70,SNR=30						
SDCO	**Great Sand Dun**	**69.20**	**329**	*e*P	**P**	**07 02 55.4**	**-0.2**
	comp=N,10nm,0.8s,mb4.6						
SDCO				*e*pP	pP	07 03 26.5	-0.6
U21A	**Nageezi**	**69.22**	**327**	⇑P	**P**	**07 02 56.1**	**+0.3**
	baz=70,SNR=10.0						
T22A	**Edith**	**69.30**	**328**	⇑P	**P**	**07 02 56.7**	**+0.5**
	baz=70,SNR=8.3						
X17A	**Forest Lakes**	**69.31**	**323**	⇓P	**P**	**07 02 57.3**	**+0.9**
	baz=70,SNR=13						
Y16A	**Circle Bar Ran**	**69.36**	**322**	⇓P	**P**	**07 02 57.3**	**+0.6**
	baz=70,SNR=9.4						
V19A	**Window Rock**	**69.39**	**325**	⇓P	**P**	**07 02 57.1**	**+0.2**
	baz=70,SNR=16						
R24A	**Sanders Place,**	**69.40**	**330**	⇑P	**P**	**07 02 57.2**	**+0.3**
	baz=70,SNR=20						
T21A	**Navajo Lake**	**69.60**	**327**	⇑P	**P**	**07 02 58.4**	**+0.3**
	baz=70,SNR=6.4						
U20A	**Newcomb**	**69.62**	**326**	⇑P	**P**	**07 02 58.5**	**+0.2**
	baz=70,SNR=7.4						
X16A	**Lo Mia Camp, P**	**69.73**	**323**	⇑P	**P**	**07 02 59.6**	**+0.7**
	baz=70,SNR=15						
W17A	**Winslow**	**69.81**	**324**	⇓P	**P**	**07 02 59.6**	**+0.2**
	baz=70						
Z14A	**Wintersburg**	**69.82**	**321**	⇑P	**P**	**07 02 59.7**	**+0.1**
	baz=70						
S22A	**4UR Ranch, Cre**	**69.84**	**328**	⇓P	**P**	**07 02 59.7**	**+0.1**
	baz=70						
V18A	**Ganado**	**69.86**	**325**	⇓P	**P**	**07 02 59.7**	**0.0**
	baz=70,SNR=7.0						
Y15A	**Casa Rosa Ranc**	**69.89**	**322**	⇑P	**P**	**07 03 00.0**	**0.0**
	baz=70,SNR=16						
U19A	**Dine' College,**	**69.92**	**326**	⇑P	**P**	**07 02 59.7**	**-0.3**
	baz=70,SNR=7.0						
P25A	**Willow Gulch B**	**70.00**	**331**	⇑P	**P**	**07 03 00.8**	**+0.3**
	baz=70,SNR=8.1						
Q24A	**Divide**	**70.01**	**330**	⇑P	**P**	**07 03 00.7**	**+0.1**
	baz=70,SNR=7.5						
Z13A	**Yuma Proving G**	**70.12**	**321**	⇑P	**P**	**07 03 01.6**	**+0.2**
	baz=70						
R22A	**Saguache, Gunn**	**70.18**	**329**	⇓P	**P**	**07 03 02.0**	**+0.3**
	baz=70,SNR=5.9						
X15A	**Humboldt**	**70.23**	**322**	⇑P	**P**	**07 02 59.7**	**+0.3**
	baz=70,SNR=16						
T19A	**Beclabito**	**70.23**	**326**	⇑P	**P**	**07 03 02.0**	**0.0**
	baz=70,SNR=13						
**S

baz=72,SNR=7.7
P20A De Beque 71.97 328 ⇓P P 07 03 12.6 +0.2
baz=72,SNR=5.5
Q19A Hogan Spring (71.98 327 ⇑P P 07 03 13.1 +0.6
baz=72,SNR=11
BELC Belle Mtn. Jos 72.08 320 ⇓P P 07 03 13.5 +0.4
baz=72
N22A Wattenberg Ran 72.08 330 ⇓P P 07 03 13.6 +0.6
baz=72,SNR=8.9
PFO Pinyon Flat Ob 72.08 319 ⇓P P 07 03 13.5 +0.3
baz=72
PFO Pinyon Flat Ob 72.08 319 *eP* P 07 03 13.7 +0.5
comp=N,4.5nm,1.0s,mb4.2
T15A Red Dirt Ranch 72.16 324 ⇑P P 07 03 14.5 +0.9
baz=72
U14A Mt Trumbull 72.16 323 ⇑P P 07 03 14.6 +1.0
baz=72,SNR=16
V13A Grand Canyon W 72.20 322 ⇑P P 07 03 14.3 +0.4
baz=72,SNR=14
S16A Weppner Ranch, 72.25 325 ⇓P P 07 03 14.4 +0.3
baz=72
R17A Hanksville Air 72.31 326 P P 07 03 14.6 +0.1
baz=73,SNR=19
W12A Cal Nev Ari 72.32 321 ⇓P P 07 03 14.7 +0.2
baz=73,SNR=7.6
P19A Cripple Cowboy 72.36 328 ⇑P P 07 03 15.3 +0.6
baz=73,SNR=32
O20A White River Ci 72.39 329 ⇓P P 07 03 15.3 +0.4
baz=73,SNR=12
GMRC Granite Mounta 72.42 320 ⇓P P 07 03 15.6 +0.4
baz=73,SNR=14
T14A Hurricane 72.57 324 ⇓P P 07 03 16.8 +0.8
baz=73
U13A Pakoon Wash 72.59 323 ⇑P P 07 03 16.8 +0.6
baz=73
V12A Nelson 72.61 322 ⇓P P 07 03 16.6 +0.3
baz=73,SNR=6.8
R16A Teasdale 72.61 326 ⇓P P 07 03 16.6 +0.4
baz=73,SNR=6.6
SRU San Rafael 72.73 327 ⇑P P 07 03 17.2 +0.2
baz=73,SNR=20
SRU San Rafael 72.73 327 *eP* P 07 03 17.2 +0.3
comp=N,15nm,0.8s,mb4.8
Q16A Castle Valley 72.92 326 ⇓P P 07 03 18.4 +0.4
baz=73,SNR=9.8
U12A Valley of Fire 72.93 322 ⇓P P 07 03 18.8 +0.6
baz=73,SNR=8.4
O19A Miners Draw (B 72.94 328 ⇑P P 07 03 18.3 +0.2
baz=73,SNR=13
N20A Spence Gulch, 72.95 329 P P 07 03 18.2 +0.1
baz=73,SNR=6.6
R15A Junction 72.97 325 ⇓P P 07 03 19.0 +0.6
baz=73,SNR=5.8
P18A Preston Nutter 72.99 327 ⇓P P 07 03 19.2 +0.8
baz=73,SNR=15
T13A Saint George 72.99 323 ⇑P P 07 03 19.3 +0.8
baz=73,SNR=9.1
V11A Goodsprings 73.02 321 ⇑P P 07 03 19.2 +0.5
baz=73
CCUT Cedar City 73.08 324 *eP* P 07 03 19.9 +0.9
comp=N,16nm,0.9s,mb4.8
P17A Butcher Ranch, 73.12 327 ⇑P P 07 03 19.5 +0.3
baz=73,SNR=14
S14A Cedar City 73.12 324 ⇓P P 07 03 20.1 +0.9
baz=73,SNR=5.6
M21A Separation Pea 73.13 330 ⇑P P 07 03 19.5 +0.2
baz=74,SNR=7.1
MSU Marysvale 73.14 325 *eP* P 07 03 19.9 +0.5
ARUT Antelope Range 73.29 324 *eP* P 07 03 21.0 +0.8
comp=N,16nm,0.9s,mb4.7
SHPR Sheep Range 73.33 322 *eP* P 07 03 20.5 0.0
O18A Roosevelt 73.35 328 P P 07 03 20.8 +0.3
baz=74,SNR=6.2
S13A Holt Ranch, En 73.37 324 ⇓P P 07 03 21.8 +1.1
baz=74,SNR=12
L21A Rawlins 73.42 331 ⇑P P 07 03 20.9 0.0
baz=74,SNR=14
M20A Sweetwater, Wa 73.42 330 ⇓P P 07 03 21.2 +0.3
baz=74
N19A John Jarvie Ra 73.43 329 ⇑P P 07 03 21.1 +0.1
baz=74,SNR=8.6
O17A Robinson Place 73.66 327 ⇓P P 07 03 22.8 +0.5
baz=74,SNR=18
RSSD Black Hills 73.72 334 *eP* P 07 03 22.3 -0.3
comp=N,5.4nm,0.8s,mb4.3
R13A O'Grain Ranch, 73.86 324 ⇑P P 07 03 24.6 +1.0
baz=74,SNR=6.6
T11A Corn Creek, Al 73.89 323 ⇑P P 07 03 24.6 +0.8
baz=74
K21A Alcova 73.90 331 ⇑P P 07 03 24.1 +0.4
baz=74,SNR=23
L20A Wamsutter 73.90 330 ⇓P P 07 03 23.9 +0.2
baz=74,SNR=9.2
MPU Maple Canyon 73.98 327 *eP* P 07 03 24.3 +0.1
comp=N,14nm,1.1s,mb4.6
O16A Springville 74.06 327 ⇓P P 07 03 25.5 +0.9
baz=74,SNR=6.4
Q14A Sevier Lake (B 74.08 325 ⇓P P 07 03 25.7 +0.9
baz=74,SNR=12
J22A Midwest 74.18 332 ⇓P P 07 03 25.0 -0.3
baz=74,SNR=9.7
N17A Moffit Pass 74.28 328 ⇓P P 07 03 26.7 +0.8
baz=75,SNR=16
R12A Pony Springs, 74.32 324 ⇓P P 07 03 27.0 +0.7
baz=75,SNR=13
JLU Jordanelle 74.33 327 *eP* P 07 03 26.4 +0.2
comp=N,7.7nm,0.8s,mb4.5
MPMC Manual Prospec 74.38 320 ⇑P P 07 03 26.6 -0.1
baz=75
P14A Drum Mountains 74.41 326 ⇑P P 07 03 27.6 +0.9
baz=75,SNR=12
K20A Yellowstone Ra 74.41 330 ⇑P P 07 03 26.4 -0.2
baz=75,SNR=9.3
AGMN Agassiz Nation 74.43 341 *eP* P 07 03 25.5 -1.2
comp=N,6.8nm,0.9s,mb4.4
Q13A Wheeler Ranch, 74.45 324 ⇑P P 07 03 27.1 +0.1
baz=75,SNR=6.0
J21A Lysite 74.55 331 ⇓P P 07 03 27.4 0.0
baz=75,SNR=6.8
L18A Fontenelle, Gr 74.64 329 P P 07 03 27.9 0.0
baz=75,SNR=13
ISA Isabella 74.70 319 *eP* P 07 03 28.4 +0.3
comp=N,5.0nm,0.8s,mb4.2
DUG Dugway 74.72 326 ⇓P P 07 03 28.8 +0.3
baz=75,SNR=6.4
DUG Dugway 74.72 326 *eP* P 07 03 29.0 +0.5
comp=N,9.7nm,1.1s,mb4.3
K19A Absolon Red Bu 74.77 330 ⇑P P 07 03 28.4 -0.4
baz=75,SNR=8.3
P13A Bates Ranch, G 74.81 325 ⇑P P 07 03 29.8 +0.8
baz=75,SNR=7.4
J20A Shoshoni 74.84 331 ⇓P P 07 03 29.4 +0.3
baz=75
I21A Big Trails, Te 74.85 332 ⇑P P 07 03 28.8 -0.3
baz=75,SNR=16
R11A Troy Canyon, C 74.87 323 ⇑P P 07 03 30.2 +0.8
baz=75,SNR=7.6
M16A Huntsville 74.95 328 ⇓P P 07 03 29.8 0.0
baz=75
Q12A Willow Creek R 74.95 324 ⇑P P 07 03 30.3 +0.4
baz=75,SNR=6.4
BW06 Boulder Array 75.06 330 *eP* P 07 03 29.8 -0.6
comp=N,37nm,2.6s,mb4.5
PDAR Pinedale Array 75.06 330 P P 07 03 29.9 -0.4
comp=N,1.3nm,0.7s,mb3.7,baz=136,slow=7.5,SNR=12
HWUT Hardware Ranch 75.14 328 *eP* P 07 03 30.4 -0.4
comp=N,9.3nm,1.0s,mb4.4
S10A Tonopah Range, 75.14 322 ⇑P P 07 03 31.4 +0.5
baz=75,SNR=7.6
VES Vestal, Richgr 75.18 319 ⇑P P 07 03 31.4 +0.1
baz=75
K18A Toltan Ranch, 75.19 329 ⇓P P 07 03 31.6 +0.5
baz=76,SNR=13
J19A Crowheart 75.21 330 ⇑P P 07 03 31.1 -0.1
baz=76,SNR=11
R10A Warm Springs 75.23 323 ⇓P P 07 03 32.6 +1.1
baz=76,SNR=11
Q11A Duckwater 75.26 323 ⇓P P 07 03 32.0 +0.3
baz=76
I20A Worland 75.33 331 ⇑P P 07 03 31.8 -0.1
baz=76,SNR=7.0
H21A Big Horn, Sher 75.39 332 ⇑P P 07 03 31.7 -0.5
baz=76,SNR=8.0
SYO Syowa Base 75.61 159 ⇑*eX* 07 03 33.2
J18A Kendall Valley 75.62 330 ⇑P P 07 03 33.3 -0.3
baz=76,SNR=9.9
K17A Gardner Place, 75.69 329 ⇑P P 07 03 33.8 -0.2
baz=76,SNR=8.7

H20A Greybull 75.69 332 ⇑P P 07 03 33.4 -0.6
baz=76,SNR=9.6
O12A Currie 75.78 325 ⇑P P 07 03 34.9 +0.3
baz=76,SNR=6.0
L15A Malad City 75.84 328 P P 07 03 34.8 -0.1
baz=76,SNR=9.8
I18A Diamond G Ranc 75.90 330 ⇑P P 07 03 35.6 +0.4
baz=76,SNR=9.8
G21A Lodge Grass 75.94 333 ⇑P P 07 03 34.8 -0.6
baz=76,SNR=5.1
J17A Brown Place, J 76.06 329 ⇑P P 07 03 36.6 +0.5
baz=76,SNR=5.5
K16A Soda Springs 76.07 329 ⇑P P 07 03 36.9 +0.7
baz=76,SNR=13
REDW Red Top Meadow 76.12 329 *eP* P 07 03 36.2 -0.2
comp=N,6.3nm,1.0s,mb4.2
SNOW Snow King Moun 76.15 329 *eP* P 07 03 37.1 +0.5
comp=N,8.2nm,0.8s,mb4.4
ULM Lac du Bonnet 76.19 342 P P 07 03 35.1 -1.5
comp=N,5.8nm,0.5s,mb4.5,baz=162,slow=4.4,SNR=4.0
LOHW Long Hollow 76.20 330 *eP* P 07 03 36.9 0.0
comp=N,17nm,1.5s,mb4.5
TPAW Teton Pass 76.27 329 *eP* P 07 03 37.3 0.0
comp=N,14nm,1.2s,mb4.5
L14A Malta 76.29 327 ⇑P P 07 03 37.4 -0.1
baz=77,SNR=5.5
RRI2 Red Ridge 76.33 329 *eP* P 07 03 37.6 0.0
comp=N,16nm,1.1s,mb4.6
MOOW Moose Ponds 76.37 330 *eP* P 07 03 37.7 -0.1
comp=N,2.8nm,0.8s,mb3.9
G20A Bridger 76.37 332 ⇓P P 07 03 37.3 -0.5
baz=77,SNR=8.9
I17A Pilgrim Ck. 76.42 330 ⇑P P 07 03 38.8 +0.7
baz=77,SNR=6.5
NVAR Mina Array Bea 76.47 322 P P 07 03 38.6 +0.1
comp=N,3.2nm,0.9s,mb3.9,baz=160,slow=7.0,SNR=16
NVAR pP pP 07 04 09.7 -0.9
comp=N,1.1nm,0.8s,baz=153,slow=6.8,SNR=3.8
IMW Indian Meadow 76.57 330 *eP* P 07 03 39.2 +0.2
comp=N,8.0nm,0.9s,mb4.3
H18A Shoshone NF, C 76.58 331 ⇓P P 07 03 39.1 +0.1
baz=77
FLWY Flagg Ranch 76.60 330 *eP* P 07 03 39.5 +0.4
comp=N,14nm,0.8s,mb4.6
SCHQ Schefferville 76.72 1 P P 07 03 38.5 -1.0
comp=N,4.3nm,0.7s,mb4.2,baz=165,slow=5.2,SNR=5.9
RLMT Red Lodge 76.75 331 ⇓P P 07 03 40.2 +0.3
baz=77,SNR=7.5
RLMT Red Lodge 76.75 331 *eP* P 07 03 39.3 -0.7
comp=N,31nm,1.8s,mb4.6
I16A Newdale 76.81 329 ⇑P P 07 03 40.8 +0.5
baz=77,SNR=6.8
LKWY Lake 76.83 330 *eP* P 07 03 40.8 +0.3
comp=N,8.4nm,1.0s,mb4.3
J15A Blackfoot 76.91 329 ⇑P P 07 03 41.3 +0.5
baz=77,SNR=9.8
TORD Torodi Ar. Bea 76.94 70 P P 07 03 41.6 0.0
TORD pP pP 07 04 13.6 -0.2
TORD Torodi Ar. Bea 76.94 70 P P 07 03 41.6 0.0
comp=N,7.6nm,0.8s,mb4.4,baz=252,slow=5.9,SNR=38
TORD pP pP 07 04 13.6 -0.2
comp=N,4.7nm,0.8s,baz=252,slow=5.3,SNR=4.0
G18A Lazy EL Ranch, 77.04 331 ⇓P P 07 03 41.7 +0.1
baz=77,SNR=9.9
H16A Russell Place, 77.33 330 ⇑P P 07 03 44.0 +0.8
baz=78,SNR=5.6
E20A Meyer Farm, Mu 77.35 333 ⇑P P 07 03 43.3 +0.1
baz=78,SNR=12
I15A Monteview 77.38 329 ⇑P P 07 03 44.5 +1.0
baz=78,SNR=6.4
J14A Carey 77.38 328 ⇑P P 07 03 44.1 +0.6
baz=78,SNR=7.7
GCMT Greycliff 77.45 332 *eP* P 07 03 43.9 +0.1
comp=N,5.0nm,0.9s,mb4.1
F18A Big Timber 77.56 332 ⇑P P 07 03 44.6 +0.1
baz=78,SNR=12
E19A Rath Farm, Rou 77.59 333 ⇑P P 07 03 44.6 0.0
baz=78,SNR=7.5
J13A Cove Ranch, Pi 77.76 328 ⇑P P 07 03 46.2 +0.6
baz=78,SNR=5.4
I14A Mackay 77.79 328 ⇑P P 07 03 46.8 +1.0
baz=78,SNR=11
D20A Manuel Ranch, 77.82 333 ⇑P P 07 03 45.6 -0.2
baz=78,SNR=5.2
PAHR Pah Rah Range 77.95 322 *eP* P 07 03 47.0 +0.3
comp=N,18nm,0.9s,mb4.7
F17A Fitzpatrick Pl 77.98 331 ⇑P P 07 03 47.3 +0.5
baz=78,SNR=6.1
HLID Hailey 78.00 328 ⇑P P 07 03 47.7 +0.7
baz=78,SNR=20
HLID Hailey 78.00 328 *eP* P 07 03 47.6 +0.6
comp=N,10nm,0.9s,mb4.5
I13A Wildhorse Cree 78.11 328 ⇑P P 07 03 48.5 +0.9
baz=78,SNR=8.8
MCMT McKenzie Canyo 78.17 329 *eP* P 07 03 48.3 +0.4
comp=N,6.5nm,1.1s,mb4.2
G15A Dillon 78.25 330 ⇑P P 07 03 48.5 +0.2
baz=79,SNR=6.8
H14A Leadore 78.26 329 ⇑P P 07 03 49.1 +0.8
baz=79,SNR=6.5
E17A Martindale 78.50 331 ⇓P P 07 03 49.9 +0.3
baz=79,SNR=5.6
I12A Atlanta 78.53 327 ⇑P P 07 03 50.5 +0.7
baz=79,SNR=8.7
H13A Challis 78.65 328 ⇓P P 07 03 51.3 +0.8
baz=79,SNR=16
LRM Limekiln Ridge 78.73 330 *eP* P 07 03 51.1 +0.3
F15A Butte 78.76 330 ⇓P P 07 03 51.4 +0.3
baz=79
H12A Diamond D Ranc 78.94 328 ⇑P P 07 03 52.6 +0.5
baz=79,SNR=9.6
D17A Six Diamond Ra 78.95 332 ⇑P P 07 03 52.0 0.0
baz=79,SNR=6.3
G13A Cobalt 79.03 329 ⇑P P 07 03 53.4 +0.8
baz=79,SNR=26
F14A Wisdom 79.15 330 ⇑P P 07 03 53.5 +0.4
baz=80,SNR=5.5
TSUM Tsumeb 79.17 106 *eP* P 07 03 55.7 +1.7
comp=N,11nm,0.9s,mb4.5
D16A Dana Ranch, Ca 79.24 331 ⇓P P 07 03 54.2 +0.6
baz=80,SNR=8.0
E15A Deer Lodge 79.27 330 ⇑P P 07 03 54.2 +0.4
baz=80,SNR=5.7
E13A Victor 80.00 330 ⇓P P 07 03 58.3 +0.6
baz=80,SNR=7.5
C15A Salmond Ranch, 80.27 331 ⇓P P 07 03 59.5 +0.3
baz=81,SNR=8.8
SLMT Seeley Lake 80.27 331 *eP* P 07 03 58.9 -0.3
A17A Triple J Farms 80.34 333 ⇓P P 07 03 59.2 -0.3
baz=81,SNR=6.5
D13A Huson 80.60 330 ⇓P P 07 04 01.2 +0.3
baz=81,SNR=6.9
B15A Bradely Ranch, 80.66 332 ⇑P P 07 04 00.6 -0.7
baz=81,SNR=6.6
C14A Swan Lake 80.78 331 ⇑P P 07 04 02.1 +0.2
baz=81
K05A Summer Lake 80.81 324 ⇓P P 07 04 02.8 +0.6
baz=81,SNR=5.2
C13A Hot Springs 81.09 330 ⇓P P 07 03 03.9 +0.3
baz=81,SNR=5.5
BSMT Bassoo Peak 81.31 330 *eP* P 07 04 04.7 0.0
B13A Whitefish 81.55 331 ⇑P P 07 04 06.1 +0.1
baz=82,SNR=5.3
WALA Waterton Lakes 81.81 332 *eP* P 07 04 07.3 0.0
comp=N,0.2nm,1.0s
A13A Flathead Natio 81.94 331 ⇑P P 07 04 08.3 +0.3
baz=82
C11A Tepee Creek (N 81.98 330 ⇓P P 07 04 08.0 -0.3
baz=82
BOSA Boshof 82.51 118 P P 07 04 12.4 +0.8
comp=N,6.9nm,0.8s,mb4.4,baz=221,slow=4.7,SNR=5.2
OD2 Odessa Site #2 82.85 328 *eP* P 07 04 12.8 0.0
C09A Chrisman Ranch 82.92 329 ⇓P P 07 04 13.1 0.0
baz=83,SNR=5.2
MAW Mawson 83.47 163 P P 07 04 16.8 +1.1
comp=N,1.7nm,0.8s,mb3.9,baz=243,slow=12,SNR=4.4
EDM Edmonton 84.68 335 *eP* P 07 04 20.5 -1.4
EDM epP pP 07 04 53.1 -1.5
YKA Yellowknife Ar 92.07 340 P P 07 04 55.5 -1.4
comp=N,5.6nm,0.8s,mb4.7,baz=138,slow=4.0,SNR=6.2
ASAR Alice Springs 129.62 207 PKP PKPdf 07 10 57.1 -0.3
comp=N,2.3nm,0.8s,baz=143,slow=2.4,SNR=19
WRA Warramunga Arr 132.70 209 PKP PKPdf 07 11 02.8 -0.6
comp=N,1.0nm,0.4s,baz=193,slow=2.1,SNR=8.8
KURK Kurchatov 141.52 34 PKP PKPdf 07 11 18.2 -0.3
comp=N,0.2nm,0.3s,baz=330,slow=1.8,SNR=3.0
ZALV Zalesovo Beam 142.28 26 PKP PKPdf 07 11 19.8 0.0
comp=N,4.1nm,0.6s,baz=270,slow=1.5,SNR=4.2

KSH Kashi 144.98 52 *e*PKP PKPdf 07 11 25.0 0.0
KSH *e*PKS 07 15 00.5
KSH AMB AMB
comp=Z,350nm,5.0s
KSH LR LR
comp=N,82nm,3.5s
KSH LR LR
comp=E,140nm,3.7s
KSH LR LR
comp=Z,87nm,3.8s
MK31 Makanchi Array 145.78 37 *e*PKPbc PKPbc 07 11 26.9 0.0
MKAR Makanchi Array 145.78 37 PKPbc PKPbc 07 11 27.0 +0.1
comp=Z,3.8nm,0.8s,baz=332,slow=2.1,SNR=27
ASAJ Asahikawa 146.53 318 *e*PKPbc PKPbc 07 11 28.7 -0.5
WMQ Urumqi 150.61 37 *e*PKPbc PKPdf 07 11 32.0 -2.1
MJAR Matsushiro Arr 153.05 308 PKPbc PKPbc 07 11 44.3 -1.1
comp=Z,1.9nm,0.8s,baz=42,slow=0.2,SNR=5.8
MJAR PKPab PKPab 07 11 56.2 -1.2
comp=Z,2.0nm,0.9s,baz=96,slow=2.0,SNR=5.5
SONM Songino Array 154.05 8 PKP PKPdf 07 11 40.2 +1.1
comp=Z,0.9nm,0.7s,baz=293,slow=1.9,SNR=5.2
SONM PKPbc PKPbc 07 11 47.7 +0.4
comp=Z,1.3nm,0.8s,baz=323,slow=2.2,SNR=5.0
SONM PKPab PKPab 07 12 01.3 +0.1
comp=Z,0.8nm,0.8s,baz=325,slow=1.9,SNR=3.5
CN2 Changchun 155.68 336 *e*PKP PKPdf 07 11 36.0 -5.5
HHC Hu-ho-hao-te 161.40 1 *e*PKP PKPdf 07 11 45.5 -2.9
HHC PKPab PKPab 07 12 33.0 -0.1
HHC PKS 07 15 18.3
HHC PP PP 07 16 17.3 +1.6
HHC SKS SKSdf 07 18 38.3 -3.3
HHC SKKS SKKSac 07 22 53.8 +1.1
HHC SS SS 07 36 21.5 +0.8
HHC AMB AMB
comp=Z,75nm,4.2s
HHC LR LR
comp=N,99nm,14.3s
HHC LR LR
comp=E,210nm,14.3s
HHC LR LR
comp=Z,88nm,15.5s
CD2 Chengdu 168.71 38 PKP PKPdf 07 11 56.0 +1.1
KMI Kunming 171.16 69 PKP PKPdf 07 11 54.0 -2.5
GYA Guiyang 173.65 47 *e*PKP PKPdf 07 11 55.0 -2.5
GYA pPKP pPKPdf 07 12 30.5 -1.8
GYA sPKP 07 12 42.8
GYA PKPab PKPab 07 13 28.0 +0.2
GYA PKS 07 15 25.5
GYA PP PP 07 17 20.5 +1.0
GYA AMB AMB
comp=Z,80nm,7.8s

IDC ***31*** *07:14:17.8±1.1, 1°.89N×127°.55E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.8/20, mbtmp3.8/7, ML3.9/1, Error ellipse: s-maj=86.5km s-min=16.2km az=71.0*
DJA ***31*** *07:14:28, 1°.56N×127°.21E, h130km, MLv3.7/3*
ISCJB ***31*** *07:14:30.1±0.9, 1°.67N±0°.08×127°.3E±0°.1, h123km±7km, mb3.8/6, Error ellipse: s-maj=20.2km s-min=8.5km az=146.9*
ISC 31 07:14:31.3±0.9, 1°.67N±0°.08×127°.3E±0°.1, h116km±7km, n11, σ0s86/14, mb3.8/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.90**	**173**	P	**Pn**	**Pn**	**07 14 52.3**	**+0.3**
TNTI				S	**Sn**	**Sn**	**07 15 07.4**	**-0.2**
LBMI	**Labuha**	**2.30**	**174**	P	**Pn**	**Pn**	**07 15 04.1**	**-4.3**
MNI	**Manado**	**2.42**	**265**	P	**Pn**	**Pn**	**07 15 11.7**	**+1.7**
MNI				S	**Sn**	**Sn**	**07 15 38.7**	**-0.9**
SGSI	**Sangihe**	**2.65**	**319**	P	**Pn**	**Pn**	**07 15 12.4**	**-0.4**
SGSI				S	**Sn**	**Sn**	**07 15 44.8**	**0.0**
FITZ	**Fitzroy Crossi**	**19.71**	**185**	P	**P**	**P**	**07 18 51.7**	**0.0**
	0.3nm,0.3s,baz=14,slow=12,SNR=9.4							
WRA	**Warramunga Arr**	**22.57**	**162**	P		**P**	**07 19 21.8**	**-0.5**
	4.7nm,0.5s,mb4.1,baz=342,slow=11,SNR=34							
ASAR	**Alice Springs**	**26.00**	**166**	P		**P**	**07 19 53.6**	**+0.1**
	0.9nm,0.5s,mb3.4,baz=350,slow=7.4,SNR=23							
STKA	**Stephens Creek**	**36.03**	**159**	P		**P**	**07 21 21.3**	**-0.1**
	2.2nm,0.8s,mb4.1,baz=319,slow=7.7,SNR=4.1							
SONM	**Songino Array**	**49.41**	**342**	P		**P**	**07 23 07.7**	**-1.5**
	0.4nm,0.5s,mb3.6,baz=169,slow=8.2,SNR=2.2							
MKAR	**Makanchi Array**	**59.54**	**326**	P		**P**	**07 24 24.3**	**+1.8**
	0.6nm,0.5s,mb3.9,baz=118,slow=8.6,SNR=8.9							
KURK	**Kurchatov**	**63.75**	**328**	P		**P**	**07 24 50.6**	**-0.1**
	0.4nm,0.2s,mb3.8,baz=128,slow=6.2,SNR=3.5							

ISCJB ***31*** *07:24:49.9±0.4, 32°.62N±0°.03×105°.77E±0°.04, h10km, mb3.8/6, Error ellipse: s-maj=5.0km s-min=4.3km az=174.4*
IDC ***31*** *07:24:50.7±0.9, 32°.66N×105°.81E, h0km, mb3.8/6, mb1 3.9/9, mb1mx3.7/27, mbtmp3.7/9, ML3.7/3, MS3.0/1, Ms1 3.0/1, ms1mx2.2/33, Error ellipse: s-maj=37.5km s-min=17.4km az=57.0*
BJI ***31*** *07:24:51.3, 32°.67N×105°.76E, h8km, mB4.2/2, mb4.1/2, ML4.4/14, Ms4.1/4, Ms7 3.6/5*
NEIC ***31*** *07:24:51.6±0.6, 32°.67N×105°.93E, h10km, Error ellipse: s-maj=18.7km s-min=9.3km az=57.0*
ISC 31 07:24:51.6±0.4, 32°.68N±0°.03×105°.72E±0°.04, h10km, n17, σ1s18/29, mb3.8/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.43**	**224**	Pn	**Pn**	**Pn**	**07 25 32.0**	**+0.7**
CD2				Pg	**Pg**	**Pg**	**07 25 36.5**	**-1.7**
CD2				Sg	**Sg**	**Sg**	**07 26 08.3**	**-1.3**
CD2				smax				
	comp=N,3μm,0.7s							
CD2				smax				
	comp=E,4μm,0.7s							
XAN	**Xi'an**	**3.00**	**62**	Pn	**Pn**	**Pn**	**07 25 41.3**	**+2.1**
XAN				Pg	**Pg**	**Pg**	**07 25 47.3**	**-1.9**
XAN				Sn	**Sn**	**Sn**	**07 26 15.5**	**+0.2**
XAN				Sg	**Sg**	**Sg**	**07 26 24.5**	**-3.6**
XAN				smax				
	comp=N,1μm,0.4s							
XAN				smax				
	comp=E,340nm,0.4s							
XAN				LR	LR			
	comp=N,920nm,6.2s							
XAN				LR	LR			
	comp=E,200nm,5.9s							
XAN				LR	LR			
	comp=Z,110nm,7.3s							
LZH	**Lanzhou**	**3.74**	**336**	*e*Pn	**Pn**	**Pn**	**07 25 49.8**	**+0.5**
LZH				Pg	**Pb**	**Pb**	**07 25 56.5**	**-1.1**
LZH				Sn	**Sn**	**Sn**	**07 26 32.5**	**-0.8**
LZH				Sg	**Sb**	**Sb**	**07 26 42.5**	**-0.5**
LZH				smax				
	comp=N,990nm,0.5s							
LZH				smax				
	comp=E,2μm,0.6s							
LZH				LR	LR			
	comp=N,1μm,5.7s							
LZH				LR	LR			
	comp=E,2μm,5.1s							
LZH				LR	LR			
	comp=Z,2μm,6.2s							
ENH	**Enshi**	**4.02**	**126**	*e*Pg	**Pg**	**Pg**	**07 26 04.8**	**-3.8**
GYA	**Guiyang**	**6.25**	**172**	Pn	**Pn**	**Pn**	**07 26 26.0**	**+2.1**
GYA				Sn	**Sn**	**Sn**	**07 27 34.8**	**-0.7**
GYA				Sg	**Sg**	**Sg**	**07 28 02.8**	**-10**
GYA				smax				
	comp=N,200nm,0.7s							
GYA				smax				
	comp=E,260nm,0.7s							
WHN	**Wuhan**	**7.66**	**104**	*e*P	**Pn**	**Pn**	**07 26 45.5**	**+2.2**
WHN				S	**Sn**	**Sn**	**07 28 09.5**	**-0.7**
WHN				LR	LR			
	comp=N,1μm,6.4s							
WHN				LR	LR			
	comp=E,660nm,6.9s							
WHN				LR	LR			
	comp=Z,480nm,9.0s							
GTA	**Gaotai**	**8.24**	**326**	*e*P	**Pn**	**Pn**	**07 26 55.0**	**+3.8**
GTA				pP			07 26 58.8	
GTA				sP			07 27 01.3	
GTA				S	**Sn**	**Sn**	**07 28 31.0**	**+6.7**
GTA				sS			07 28 36.5	
GTA				pmax	pmax			
	comp=Z,4.0nm,0.8s							
GTA				pmax	pmax			

	comp=Z,41nm,3.6s								
GTA					LR	LR			
	comp=N,320nm,7.4s								
GTA					LR	LR			
	comp=E,310nm,9.2s								
GTA					LR	LR			
	comp=Z,250nm,7.7s								
SONM	**Songino Array**	**15.15**	**2**	Pn	**Pn**		**07 28 25.3**	**-0.2**	
	comp=Z,0.1nm,0.3s,baz=179,slow=12,SNR=2.3								
CMAR	**Chiang Mai Arr**	**15.42**	**205**	Pn	**Pn**		**07 28 29.3**	**+0.1**	
	comp=Z,0.3nm,0.3s,baz=25,slow=12,SNR=5.0								
KSRS	**Korea Array**	**18.78**	**69**	P	**Pn**		**07 29 10.6**	**-0.8**	
	comp=Z,0.2nm,0.3s,baz=252,slow=12,SNR=3.8								
KSRS					LR	LR	07 36 30.3		
	comp=Z,39nm,18.3s,baz=270,slow=38								
MK31	**Makanchi Array**	**22.76**	**315**	*e*P	**P**		**07 29 54.4**	**+0.5**	
MKAR	**Makanchi Array**	**22.76**	**315**	P	**P**		**07 29 54.6**	**+0.7**	
	comp=Z,2.0nm,0.8s,mb3.6,baz=106,slow=12,SNR=13								
KURK	**Kurchatov**	**26.86**	**320**	P	**P**		**07 30 35.5**	**+3.3**	
	comp=Z,0.6nm,0.4s,mb3.5,baz=132,slow=9.3,SNR=4.0								
ARCES	**ARCESS Array B**	**56.40**	**335**	P	**P**		**07 34 33.3**	**+0.7**	
	comp=Z,1.5nm,0.8s,mb4.1,baz=68,slow=7.2,SNR=2.0								
FINES	**FINESS Array B**	**57.03**	**326**	P	**P**		**07 34 37.8**	**+0.4**	
	comp=Z,3.1nm,1.0s,mb4.3,baz=78,slow=7.3,SNR=3.3								
WRA	**Warramunga Arr**	**59.05**	**148**	P	**P**		**07 34 52.3**	**+0.4**	
	comp=Z,0.5nm,0.5s,mb3.8,baz=341,slow=7.4,SNR=5.9								
ASAR	**Alice Springs**	**62.16**	**151**	P	**P**		**07 35 13.6**	**+0.5**	
	comp=Z,0.4nm,0.5s,mb3.8,baz=334,slow=6.6,SNR=11								

*ISCJB **31** 07:34:54.9±0.7, 43.18N±0.05×75.88E±0.04, h10km, Error ellipse: s-maj=6.9km s-min=4.3km az=0.8*
*KNET **31** 07:34:54.9±0.7, 43.12N×75.85E, h20km±4km, ml1.9, Error ellipse: s-maj=4.6km s-min=2.1km az=37.0*
*NNC **31** 07:34:55.4±2.9, 42.88N×76.01E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=53.9km s-min=5.1km az=171.0*

ISC 31 07:34:55.0±0.7, 43.17N±0.05×75.87E±0.04, h10km, n11, σ0§92/20, 11C-9D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**0.32**	**219**	⇑P	**Pg**	**07 35 01.5**	**+0.1**
	1.4nm,0.1s						
TKM2				⇓S	**Sg**	**07 35 06.0**	**+0.3**
	27nm,0.1s						
TKM2	**Tokmak 2**	**0.32**	**219**	⇓P	**Pg**	**07 35 01.5**	**+0.2**
	20nm,0.1s,SNR=18						
TKM2				⇑S	**Sg**	**07 35 06.0**	**+0.3**
	290nm,0.1s						
KNDC	**Almaty**	**0.80**	**87**	⇑P	**Pg**	**07 35 09.4**	**-1.1**
	10nm,0.2s						
KNDC				⇑S	**Sg**	**07 35 21.8**	**+0.9**
	42nm,0.3s						
CHMS	**Chumysh**	**0.84**	**258**	⇑P	**Pg**	**07 35 10.5**	**-0.6**
	13nm,0.1s,SNR=28						
CHMS				⇓S	**Sg**	**07 35 21.7**	**-0.4**
	77nm,0.1s						
ULHL	**Ulahol**	**0.97**	**163**	⇓P	**Pg**	**07 35 12.9**	**-0.6**
	13nm,0.1s,SNR=16						
ULHL				⇓S	**Sg**	**07 35 25.6**	**-0.5**
	15nm,0.1s						
USP	**Ospenovka**	**1.01**	**276**	⇑P	**Pg**	**07 35 13.5**	**-0.8**
	4.6nm,0.1s,SNR=30						
USP				⇓S	**Sg**	**07 35 26.7**	**-0.7**
	26nm,0.2s						
AAK	**Ala-Archa**	**1.15**	**242**	⇑P	**Pb**	**07 35 16.1**	**-0.7**
	4.7nm,0.2s,SNR=5.4						
AAK				⇓S	**Sb**	**07 35 31.5**	**-0.3**
	14nm,0.2s						
KZA	**Kyzart**	**1.19**	**203**	⇑P	**Pb**	**07 35 17.3**	**-0.2**
	3.6nm,0.1s,SNR=21						
KZA				⇓S	**Sb**	**07 35 33.0**	**+0.1**
	10.0nm,0.2s						
EKS2	**Erkin-Say**	**1.62**	**252**	⇑P	**Pn**	**07 35 24.8**	**+1.2**
	8.6nm,0.2s,SNR=44						
EKS2				⇑S	**Sn**	**07 35 47.0**	**+2.5**
	10nm,0.2s						
AML	**Almayashu**	**1.91**	**238**	⇑P	**Pn**	**07 35 29.8**	**+2.2**
	4.1nm,0.2s,SNR=13						
KK31	**Karatay Array**	**3.92**	**271**	Pn	**Pb**	**07 36 03.9**	**-0.3**
	0.4nm,0.3s,baz=88,slow=16,SNR=13						
KK31				⇓Lg		07 36 59.1	
	1.4nm,0.3s,baz=86,slow=30,SNR=14						

*IDC **31** 07:39:26.5±1.6, 30.77N×83.29E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/25, mbtmp3.6/7, ML3.6/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/30, Error ellipse: s-maj=55.3km s-min=23.2km az=67.0*
*ISCJB **31** 07:39:30.4±0.9, 30.9N±0.1×83.4E±0.1, h33km, mb3.6/5, Error ellipse: s-maj=18.6km s-min=16.9km az=173.5*

ISC 31 07:39:32.4±0.9, 30.9N±0.1×83.4E±0.1, h35km, n9, σ1§00/8, mb3.6/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**4.65**	**264**	*ex*	**Pn**	**07 40 40.5**	**+0.4**
AAK	**Ala-Archa**	**13.68**	**331**	LR	LR	07 48 13.7	
	comp=Z,36nm,19.7s,baz=212,slow=38						
MKAR	**Makanchi Array**	**15.87**	**357**	Pn	**Pn**	**07 43 12.8**	**-0.1**
	0.2nm,0.3s,baz=184,slow=13,SNR=6.6						
KURK	**Kurchatov**	**20.09**	**351**	P	**P**	**07 44 00.3**	**-2.4**
	0.6nm,0.3s,baz=173,slow=10,SNR=5.3						
SONM	**Songino Array**	**24.37**	**40**	P	**P**	**07 44 48.5**	**+1.5**
	0.3nm,0.4s,mb3.1,baz=230,slow=11,SNR=3.1						
SONM				LR	LR	07 54 13.1	
	comp=Z,21nm,20.0s,baz=65,slow=36						
FINES	**FINESS Array B**	**47.83**	**327**	P	**P**	**07 48 06.7**	**+0.6**
	2.0nm,0.9s,mb4.2,baz=106,slow=8.8,SNR=4.0						
WRA	**Warramunga Arr**	**70.36**	**129**	P	**P**	**07 50 42.4**	**-0.4**
	0.5nm,0.4s,mb3.8,baz=326,slow=6.4,SNR=5.3						
ASAR	**Alice Springs**	**72.72**	**132**	P	**P**	**07 50 56.4**	**-0.6**
	0.3nm,0.9s,mb3.2,baz=312,slow=4.9,SNR=4.1						
ILAR	**Eielson Array**	**76.89**	**20**	P	**P**	**07 51 21.0**	**+0.4**
	0.6nm,0.8s,mb3.6,baz=296,slow=3.3,SNR=7.9						

*IDC **31** 08:07:11.8±0.7, 21.51S×174.49W, h0km, mb4.2/12, mb1 4.4/13, mb1mx4.3/20, mbtmp4.2/13, ML2.4/1, MS3.9/3, Ms1 3.9/3, ms1mx3.4/28, Error ellipse: s-maj=26.4km s-min=16.7km az=146.0*
*ISCJB **31** 08:07:15.2±0.6, 21.5S±0.1×174.5W±0.1, h33km, mb4.1/13, MS3.9/2, Error ellipse: s-maj=19.8km s-min=12.6km az=145.7*
*SZGRF **31** 08:07:20.6, 20.24S×173.09W, h33km, Tonga Islands*
*NEIC **31** 08:07:24.5±2.5, 21.73S×174.55W, h100km±20km, mb4.3/1, Error ellipse: s-maj=20.6km s-min=14.3km az=146.0*

ISC 31 08:07:17.2±0.6, 21.5S±0.1×174.5W±0.1, h35km, n60, σ0§98/24, mb4.1/13, MS3.9/2, 5C-2D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.96**	**297**	*e*Pn	**Pn**	**08 09 19.3**	**+8.9**
	75nm,0.9s						
AFI	**Afiamalu**	**7.97**	**19**	*e*Pn	**Pn**	**08 09 09.0**	**-1.7**
AFI				Sn	**Sn**	**08 10 26.2**	**-13**
AFI				*e*Sn	**Sn**	**08 10 31.2**	**-8.5**
AFI	**Afiamalu**	**7.97**	**19**	Pn	**Pn**	**08 09 08.0**	**-2.7**
	3.3nm,0.3s,baz=296,slow=20,SNR=4.7						
AFI				Sn	**Sn**	**08 10 26.2**	**-13**
	1.9nm,0.3s,baz=49,slow=18,SNR=2.5						
RAR	**Rarotonga**	**13.73**	**92**	LR	LR	08 14 20.6	
	comp=Z,387nm,19.4s,baz=263,slow=31						
PPT	**Papeete**	**23.80**	**85**	*e*LQ		08 16 44.9	
	271nm,24.5s						
PPT				*e*LR	LR	08 18 11.6	
	201nm,20.8s,baz=245						
PPT	**Papeete**	**23.80**	**85**	LR	LR	08 19 25.0	
	comp=Z,331nm,19.9s,MS3.8,baz=267,slow=31						
RPZ	**Rata Peaks**	**25.21**	**205**	P	**P**	**08 12 39.7**	**+0.2**
	9.6nm,0.6s,mb4.5,baz=171,slow=2.1,SNR=7.6						
TAOE	**Nuku Hiva Isla**	**35.36**	**74**	*e*LR	LR	08 23 32.2	
	261nm,24.8s						
RKT	**Rikitea**	**36.53**	**100**	*e*LR	LR	08 24 05.5	
	174nm,22.0s						
CTA	**Charters Tower**	**36.65**	**265**	P	**P**	**08 14 19.6**	**-1.2**
	2.9nm,0.6s,mb4.3,baz=101,slow=12,SNR=6.6						
CTAO	**Charters Tower**	**36.65**	**265**	*e*P	**P**	**08 14 21.1**	**+0.3**
	2.9nm,0.7s,mb4.2						
STKA	**Stephens Creek**	**40.33**	**246**	P	**P**	**08 14 50.7**	**-0.8**
	2.7nm,0.7s,mb4.1,baz=76,slow=12,SNR=3.5						
STKA				LR	LR	08 30 18.2	
	comp=Z,203nm,19.2s,MS4.0,baz=27,slow=34						
ASAR	**Alice Springs**	**47.48**	**257**	P	**P**	**08 15 48.5**	**-0.5**
	3.7nm,0.7s,mb4.4,baz=93,slow=7.8,SNR=38						

ASAR					PcP	PcP	08 17 18.9	-0.1	
	0.9nm,0.7s,baz=114,slow=3.5,SNR=5.0								
WB2	**Warramunga Arr**	**47.69**	**262**	*e*P	**P**		**08 15 50.2**	**-0.5**	
WRA	**Warramunga Arr**	**47.70**	**262**	P	**P**		**08 15 49.5**	**-1.3**	
	6.3nm,1.0s,mb4.6,baz=101,slow=7.8,SNR=20								
RPN	**Rapa Nui**	**59.08**	**109**	P	**P**		**08 17 14.4**	**+0.1**	
	37nm,0.3s,baz=266,slow=6.4,SNR=3.7								
MJAR	**Matsushiro Arr**	**72.97**	**322**	P	**P**		**08 18 43.8**	**+0.5**	
MJAR	**Matsushiro Arr**	**72.97**	**322**	P	**P**		**08 18 43.8**	**+0.5**	
	3.9nm,0.6s,mb4.5,baz=156,slow=5.7,SNR=11								
MAT	**Matsushiro**	**72.98**	**322**	P	**P**		**08 18 44.8**	**+1.5**	
PETK	**Petropavlovsk-**	**78.11**	**343**	P	**P**		**08 19 12.9**	**+0.6**	
	3.8nm,0.6s,mb4.5,baz=131,slow=7.9,SNR=9.7								
NVAR	**Mina Array Bea**	**79.54**	**42**	P	**P**		**08 19 19.4**	**-1.1**	
	0.5nm,0.7s,mb3.6,baz=244,slow=5.9,SNR=3.7								
KSRS	**Korea Array**	**79.82**	**317**	P	**P**		**08 19 22.8**	**+0.8**	
	0.9nm,0.5s,mb4.0,baz=129,slow=6.3,SNR=5.2								
TXAR	**Lajitas Array**	**84.87**	**56**	P	**P**		**08 19 48.7**	**0.0**	
	0.1nm,0.4s,mb3.3,baz=234,slow=7.7,SNR=3.1								
PDAR	**Pinedale Array**	**87.48**	**42**	P	**P**		**08 20 01.7**	**+0.5**	
	0.5nm,0.8s,mb3.8,baz=235,slow=6.0,SNR=4.2								
ILAR	**Eielson Array**	**88.59**	**11**	P	**P**		**08 20 06.3**	**+0.4**	
	0.4nm,0.9s,mb3.7,baz=217,slow=5.7,SNR=5.5								
CMAR	**Chiang Mai Arr**	**93.53**	**288**	P	**P**		**08 20 32.0**	**+2.0**	
	0.7nm,0.3s,mb4.6,baz=115,slow=2.8,SNR=7.1								
ZAA0	**Zalesovo Array**	**113.32**	**321**	*e*PKPdf	PKiKP		08 25 50.1	-0.9	
AKASG	**Malin Array Be**	**145.42**	**333**	PKPbc	PKPbc		08 26 51.8	+0.5	
	2.3nm,0.6s,baz=37,slow=4.1,SNR=12								
BSEG	**Bad Segeberg**	**147.40**	**355**	*e*PKPbc	PKPbc		08 26 58.4	+1.4	
RUE	**Ruedersdorf**	**148.41**	**350**	*e*PKPbc	PKPbc		08 27 01.0	+1.2	
NRDL	**Niedersach Rie**	**148.85**	**355**	*e*PKPbc	PKPbc		08 27 00.8	-0.1	
IBBN	**Ibbenburen**	**149.19**	**357**	*e*PKPbc	PKPbc		08 27 03.1	+1.3	
CLZ	**Clausthal**	**149.47**	**354**	*e*PKPbc	PKPbc		08 27 03.4	+0.9	
CLL	**Collm**	**149.67**	**351**	*e*PKPbc	PKPbc		08 27 04.2	+1.2	
CLL	**Collm**	**149.67**	**351**	⇓*i*P	PKPbc		08 27 03.9	+0.9	
CLL				*i*			08 27 15.3		
CLL	**Collm**	**149.67**	**351**	⇓*i*PKPbc	PKPbc		08 27 03.9	+0.9	
	comp=Z,15nm,1.5s								
CLL				*i*			08 27 15.3		
UPC	**Upice**	**149.88**	**347**	⇑*e*PKP	PKPbc		08 27 05.1	+1.6	
BRTR	**Keskin Array B**	**149.91**	**313**	PKPbc	PKPbc		08 27 04.8	+0.9	
	comp=Z,0.7nm,0.7s,baz=151,slow=3.3,SNR=3.0								
BRG	**Berggiesshubel**	**149.94**	**349**	*e*PKPbc	PKPbc		08 27 05.1	+1.5	
BRG	**Berggiesshubel**	**149.94**	**349**	*e*P	PKPbc		08 27 04.3	+0.6	
	comp=Z,14nm,1.6s								
NEUB	**Neuenburg**	**149.94**	**352**	*e*PKPbc	PKPbc		08 27 05.1	+1.5	
DPC	**Dobruska-Polom**	**149.96**	**346**	⇑*e*PKP	PKPbc		08 27 05.4	+1.7	
BUG	**Bochum--Univer**	**150.08**	**358**	*e*PKPbc	PKPbc		08 27 05.0	+1.0	
PVCC	**Panska Ves**	**150.16**	**348**	⇑*e*PKP	PKPbc		08 27 06.2	+2.0	
MORC	**Moravsky Berou**	**150.21**	**344**	*e*PKPbc	PKPbc		08 27 06.3	+1.9	
MOX	**Moxa**	**150.51**	**352**	*e*P	PKPbc		08 27 03.0	-2.0	
	comp=Z,27nm,2.0s								
MOX	**Moxa**	**150.51**	**352**	*e*PKPbc	PKPbc		08 27 06.2	+1.2	
WERD	**Werda**	**150.61**	**351**	*e*PKPbc	PKPbc		08 27 06.7	+1.4	
TANN	**Tannenbergstha**	**150.62**	**351**	*e*PKPbc	PKPbc		08 27 06.6	+1.3	
PRU	**Pruhonice**	**150.68**	**348**	⇑*e*PKP	PKPbc		08 27 07.0	+1.6	
GUNZ	**Gunzen**	**150.69**	**351**	*e*PKPbc	PKPbc		08 27 07.0	+1.5	
WERN	**Wernitzgruen**	**150.76**	**351**	*e*PKPbc	PKPbc		08 27 07.2	+1.6	
NKC	**Novy Kostel**	**150.80**	**351**	*e*PKPAB	PKPbc		08 27 09.5	+3.8	
TNS	**Taunus Mts**	**151.24**	**356**	*e*PKPbc	PKPbc		08 27 08.7	+1.1	
ROTZ	**Rotzenmuhle**	**151.29**	**351**	*e*PKPbc	PKPbc		08 27 08.4	+1.5	
GRA1	**Grafenberg Arr**	**151.50**	**352**	*e*PKPbc	PKPbc		08 27 08.5	+1.1	
GRF	**Grafenberg Arr**	**151.50**	**352**	*e*PKPbc	PKPbc		08 27 08.5	+1.1	
KHC	**Kasperske Hory**	**151.68**	**349**	*e*PKPbc	PKPbc		08 27 07.2	-0.6	
KHC	**Kasperske Hory**	**151.68**	**349**	⇑*e*PKP	PKPbc		08 27 09.5	+1.7	
GEC2	**GERESS Array S**	**151.93**	**348**	*e*PKPbc	PKPbc		08 27 09.7	+1.3	

*IDC **31** 08:16:46.9±2.2, 51.29N×179.69E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.8/27, mbtmp3.9/8, ML4.0/1, Error ellipse: s-maj=65.4km s-min=21.2km az=5.0*
*NEIC **31** 08:16:49.9, 50.97N×179.61E, h14km, ML3.8(PMR), ML3.4(AEIC), After AEIC.*
*ISCJB **31** 08:16:51.9±1.4, 51.4N±0.3×179.7E±0.1, h46km±10km, mb3.7/9, Error ellipse: s-maj=49.9km s-min=12.4km az=0.2*

ISC 31 08:16:52.9±1.3, 51.5N±0.3×179.7E±0.1, h31km±11km, n13, σ1§18/14, mb3.7/9, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.25**	**254**	*e*P	**Pb**	**08 16 59.4**	**-0.4**
SMY	**Shemya**	**3.68**	**293**	P	**Pn**	**08 17 48.7**	**+1.2**
SMY				S	**Sn**	**08 18 36.0**	**+6.3**
ATKA	**Atka Island**	**3.87**	**76**	P	**Pn**	**08 17 52.0**	**+2.0**
KDAK	**Kodiak Island**	**17.18**	**58**	P	**Pn**	**08 20 48.5**	**-1.7**
	0.5nm,0.3s,baz=290,slow=14,SNR=4.7						
ILAR	**Eielson Array**	**21.78**	**40**	P	**P**	**08 21 42.4**	**+0.7**
	0.3nm,0.7s,mb2.8,baz=243,slow=8.0,SNR=4.5						
NVAR	**Mina Array Bea**	**44.48**	**82**	P	**P**	**08 25 03.6**	**+2.7**
	0.5nm,0.8s,mb3.3,baz=305,slow=6.4,SNR=2.9						
SONM	**Songino Array**	**45.77**	**296**	P	**P**	**08 25 10.7**	**-0.3**
	0.3nm,0.5s,mb3.5,baz=46,slow=4.2,SNR=2.9						
PDAR	**Pinedale Array**	**47.19**	**71**	P	**P**	**08 25 22.4**	**+0.1**
	1.1nm,0.6s,mb4.0,baz=316,slow=3.8,SNR=13						
KURK	**Kurchatov**	**58.28**	**313**	P	**P**	**08 26 44.9**	**+0.8**
	0.9nm,0.4s,mb4.2,baz=43,slow=6.4,SNR=4.9						
TXAR	**Lajitas Array**	**59.58**	**80**	P	**P**	**08 26 51.8**	**-1.6**
	0.1nm,0.5s,mb3.1,baz=312,slow=4.7,SNR=4.5						
BVAR	**Borovoye Array**	**60.22**	**319**	P	**P**	**08 26 57.4**	**0.0**
	1.7nm,0.8s,mb4.1,baz=50,slow=7.9,SNR=3.9						
AKTO	**Aktyubinsk**	**67.08**	**324**	P	**P**	**08 27 42.0**	**-0.7**
	1.7nm,0.8s,mb4.1,baz=50,slow=7.9,SNR=3.9						
NOA	**NORSAR Array B**	**67.48**	**354**	P	**P**	**08 27 44.0**	**-1.1**
	0.8nm,0.8s,mb3.8,baz=7.0,slow=6.6,SNR=3.9						

*IDC **31** 08:24:43.5±0.7, 42.76N×83.86E, h0km, mb4.0/11, mb1 4.1/17, mb1mx4.0/29, mbtmp4.0/17, ML3.5/6, Error ellipse: s-maj=17.7km s-min=10.3km az=57.0*
*NEIC **31** 08:24:45.2±0.6, 42.76N×84.00E, h10km, mb3.7/2, Error ellipse: s-maj=9.2km s-min=8.0km az=120.0*
*BJI **31** 08:24:45.7, 42.51N×83.79E, h14km, mB4.7/2, mb4.0/2, ML4.2/9, Ms3.9/1, Ms7 3.7/2*
*MOS **31** 08:24:46.6±1.3, 42.75N×83.80E, h33km, mb4.2/5, Error ellipse: s-maj=13.8km s-min=8.1km az=114.2*
*NNC **31** 08:24:49.1±3.1, 42.97N×83.70E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=30.2km s-min=15.9km az=129.0*

ISC 31 08:24:46.2±1.0, 42.89N±0.03×83.88E±0.05, h10km±6km, n65, σ1§28/77, mb4.0/16, 12C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.94**	**70**	Pn	**Pb**	**08 25 39.0**	**+0.4**
WMQ				Sg	**Sg**	**08 26 23.0**	**+2.5**
WMQ				smax			
	comp=N,560nm,0.7s						
WMQ				smax			
	comp=E,920nm,0.8s						
WMQ				LR	LR		
	comp=Z,3μm,9.0s						
MK31	**Makanchi Array**	**4.07**	**344**	Pn	**Pn**	**08 25 51.8**	**+3.4**
	comp=Z,0.8nm,0.2s,baz=161,slow=16,SNR=450						
MK31				⇑Pg	**Pg**	**08 26 01.8**	**-2.3**
	comp=Z,29nm,0.3s,baz=169,slow=16,SNR=85						
MK31				⇑Lg		08 26 56.1	
	comp=Z,339nm,0.7s,baz=162,slow=28,SNR=13						
MK31	**Makanchi Array**	**4.07**	**344**	*e*Pn	**Pn**	**08 25 51.9**	**+3.5**
MK31				*e*Sg	**Sg**	**08 26 56.4**	**-0.4**
MKAR	**Makanchi Array**	**4.07**	**344**	Pn	**Pn**	**08 25 51.3**	**+2.9**
MKAR				Pg	**Pg**	**08 26 01.9**	**-2.2**
MKAR				Sn	**Sn**	**08 26 35.0**	**-1.0**
MKAR				Lg		08 26 56.6	
MKAR	**Makanchi Array**	**4.07**	**344**	Pn	**Pn**	**08 25 51.3**	**+2.9**
	comp=Z,2.1nm,0.3s,baz=162,slow=14,SNR=34						
MKAR				Pg	**Pg**	**08 26 01.9**	**-2.2**
	comp=Z,27nm,0.3s,baz=161,slow=18,SNR=129						
MKAR				Sn	**Sn**	**08 26 35.0**	**-1.0**
	comp=Z,17nm,0.3s,baz=166,slow=30,SNR=6.2						
MKAR				Lg		08 26 56.6	
	comp=Z,59nm,0.3s,baz=162,slow=29,SNR=9.4						
MKAR	**Makanchi Array**	**4.07**	**344**	P	**Pn**	**08 25 51.3**	**+2.9**
MKAR						08 26 35.0	
KNDC	**Almaty**	**5.08**	**276**	⇓Pn	**Pn**	**08 26 07.3**	**+5.0**
	comp=Z,67nm,0.6s						
KNDC				⇑Lg		08 27 27.5	
	comp=Z,411nm,0.8s						
TKM2	**Tokmak 2**	**6.08**	**273**	⇑Pn	**Pn**	**08 26 16.9**	**+0.8**
	comp=Z,23nm,0.5s						
TKM2				⇑Lg		08 27 55.0	
	comp=Z,99nm,0.6s						
TKM2	**Tokmak 2**	**6.08**	**273**	*e*Pn	**Pn**	**08 26 17.2**	**+1.1**
	comp=Z,33nm,0.8s						
TKM2				*e*Sn	**Sn**	**08 27 27.0**	**+1.2**
TKM2	**Tokmak 2**	**6.08**	**273**	*e*P	**Pn**	**08 26 17.3**	**+1.2**
TKM2				*e*		08 27 27.0	
TKM2				pmax	pmax		
	comp=Z,33nm,0.8s						
KZA	**Kyzart**	**6.43**	**266**	*e*Pn	**Pn**	**08 26 22.4**	**+1.5**
	comp=Z,33nm,0.8s						
KSH	**Kashi**	**6.85**	**243**	Pn	**Pn**	**08 26 32.0**	**+5.4**
KSH				*e*Sn	**Sn**	**08 27 52.5**	**+7.9**
AAK	**Ala-Archa**	**6.91**	**271**	Pn	**Pn**	**08 26 27.4**	**-0.1**
AAK				Lg		08 26 20.9	
AAK	**Ala-Archa**	**6.91**	**271**	Pn	**Pn**	**08 26 27.4**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=82,slow=14,SNR=3.5						
AAK				Lg		08 28 21.0	
	comp=Z,4.7nm,0.3s,baz=270,slow=20,SNR=6.3						
UCH	**Uchtor**	**6.95**	**268**	*e*Pn	**Pn**	**08 26 29.9**	**+1.9**
EKS2	**Erkin-Say**	**7.44**	**272**	Pn	**Pn**	**08 26 35.0**	**+0.3**
	comp=Z,809nm,0.2s						
AML	**Almayashu**	**7.56**	**268**	*e*Pn	**Pn**	**08 26 37.6**	**+1.2**
	comp=Z,26nm,0.7s						
AML				Sn	**Sn**	**08 28 03.9**	**+1.7**
KURBB	**Kurchatov Arra**	**8.56**	**336**	⇓Pn	**Pn**	**08 26 50.7**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=152,slow=12						
KURBB				⇑Lg		08 29 16.2	
	comp=Z,17nm,0.8s						
KURK	**Kurchatov**	**8.62**	**337**	⇑Pn	**Pn**	**08 26 49.6**	**-1.2**
	comp=Z,5.4nm,0.6s						
KURK				⇑Lg		08 29 17.3	
	comp=Z,81nm,0.7s						
KURK	**Kurchatov**	**8.62**	**337**	Pn	**Pn**	**08 26 50.9**	**0.0**
	comp=Z,0.4nm,0.3s,baz=151,slow=13,SNR=9.4						
KURK				Sn	**Sn**	**08 28 27.4**	**-0.7**
	comp=Z,1.3nm,0.3s,baz=156,slow=18,SNR=4.6						
KURK				Lg		08 29 20.1	
	comp=Z,1.8nm,0.3s,baz=163,slow=32,SNR=5.8						
KURK	**Kurchatov**	**8.62**	**337**	P	**Pn**	**08 26 50.9**	**0.0**
KURK						08 28 27.4	
ZAA0	**Zalesovo Array**	**11.09**	**3**	*e*Pn	**Pn**	**08 27 25.9**	**+1.3**
ZAA0				*e*Sn	**Sn**	**08 29 28.0**	**-0.6**
ZALV	**Zalesovo Beam**	**11.09**	**3**	Pn	**Pn**	**08 27 23.6**	**-1.1**
	comp=Z,2.5nm,0.3s,baz=185,slow=14,SNR=3.8						
ZALV				Sn	**Sn**	**08 29 30.5**	**+1.9**
	comp=Z,4.1nm,0.3s,baz=180,slow=20,SNR=4.2						
ZALV				Lg		08 30 38.3	
	comp=Z,6.4nm,0.3s,baz=179,slow=25,SNR=5.5						
ZALV	**Zalesovo Beam**	**11.09**	**3**	P	**Pn**	**08 27 23.6**	**-1.1**
ZALV						08 29 30.5	
NVS	**Novosibirsk**	**11.97**	**358**	*e*P	**Pn**	**08 27 38.1**	**+1.4**
GTA	**Gaotai**	**12.50**	**101**	*e*P	**Pn**	**08 27 48.8**	**+4.7**
GTA				pP		08 27 52.3	
GTA				sP		08 27 54.8	
GTA				S	**Sn**	**08 30 12.8**	**+9.5**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,66nm,4.5s						
GTA				LR	LR		
	comp=N,180nm,6.3s						
GTA				LR	LR		
	comp=E,120nm,6.9s						
GTA				LR	LR		
	comp=Z,79nm,8.4s						
VOSK	**Vostochnaya**	**13.10**	**323**	⇑Pn	**Pn**	**08 27 52.4**	**+0.3**
	comp=Z,6.5nm,0.8s						
VOSK				⇑Lg		08 31 44.4	
BVAR	**Borovoye Array**	**13.56**	**323**	Pn	**Pn**	**08 27 57.8**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=134,slow=12,SNR=3.1						
BVAR			

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**3.10**	**66**	Pn	**Pb**	**08 26 49.0**	**-0.4**
WMQ				Sg	**Sg**	**08 27 36.0**	**+2.3**
WMQ				smax			
	comp=N,1μm,0.7s						
WMQ				smax			
	comp=E,2μm,0.8s						
WMQ				LR	LR		
	comp=N,4μm,3.6s						
WMQ				LR	LR		
	comp=E,2μm,3.9s						
WMQ				LR	LR		
	comp=Z,2μm,4.6s						
MKAR	**Makanchi Array**	**4.29**	**346**	Lg		08 28 04.7	
	comp=Z,112nm,0.3s,baz=165,slow=28,SNR=6.1						
MKAR				LR	LR	08 28 45.8	
	comp=Z,290nm,21.6s,baz=165,slow=41						
AAK	**Ala-Archa**	**6.85**	**273**	Pn	**Pn**	**08 27 38.3**	**+3.6**
	comp=Z,3.0nm,0.3s,baz=94,slow=12,SNR=4.0						
AAK				Lg		08 29 29.2	
	comp=Z,7.4nm,0.3s,baz=347,slow=19,SNR=2.6						
AAK				LR	LR	08 29 58.7	
	comp=Z,85nm,18.9s,baz=58,slow=36						
KURK	**Kurchatov**	**8.82**	**338**	Pn	**Pn**	**08 28 01.2**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=151,slow=13,SNR=4.9						
KURK				Lg		08 30 30.1	
	comp=Z,2.8nm,0.3s,baz=153,slow=29,SNR=3.9						
KURK				LR	LR	08 31 29.4	
	comp=Z,109nm,21.1s,baz=135,slow=38						
ZAA0	**Zalesovo Array**	**11.34**	**3**	*e*Pn	**Pn**	**08 28 36.9**	**+0.7**
ZALV	**Zalesovo Beam**	**11.34**	**3**	Pn	**Pn**	**08 28 35.4**	**-0.8**
	comp=Z,3.0nm,0.3s,baz=186,slow=13,SNR=3.1						
ZALV				Lg		08 31 53.5	
	comp=Z,2.1nm,0.3s,baz=180,slow=24,SNR=2.9						
ZALV				LR	LR	08 33 25.0	
	comp=Z,82nm,18.0s,baz=247,slow=40						
CHCP	**Chirah Chowk**	**12.19**	**226**	P	**Pn**	**08 28 48.2**	**+0.2**
GTA	**Gaotai**	**12.53**	**100**	*e*P	**Pn**	**08 28 52.5**	**-0.1**
GTA				pP		08 28 56.0	
GTA				sP		08 28 58.5	
GTA				S	**Sn**	**08 31 14.0**	**+1.9**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,65nm,3.6s						
GTA				LR	LR		
	comp=N,300nm,8.4s						
GTA				LR	LR		
	comp=E,320nm,8.7s						
GTA				LR	LR		
	comp=Z,270nm,9.3s						
CEP	**Cherat**	**12.82**	**231**	P	**Pn**	**08 28 55.8**	**-0.7**
BVAR	**Borovoye Array**	**13.72**	**324**	Pn	**Pn**	**08 29 07.5**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=128,slow=16,SNR=2.3						
BVAR				Lg		08 33 04.6	
	comp=Z,0.8nm,0.3s,baz=133,slow=25,SNR=2.4						
BRVK	**Borovoye**	**13.79**	**324**	*e*Pn	**Pn**	**08 29 09.8**	**+0.2**
	comp=Z,2.9nm,0.6s						
GKN	**Gorkha**	**14.62**	**177**	*e*P	**Pn**	**08 29 28.6**	**+7.5**
	comp=Z,21nm,0.5s						
KKN	**Kakani**	**14.87**	**175**	*e*P	**Pn**	**08 29 30.9**	**+6.4**
	comp=Z,20nm,0.5s						
TAPN	**Taplejung**	**15.59**	**167**	*e*P	**Pn**	**08 29 37.4**	**+3.4**
RAMN	**Ramite**	**15.82**	**171**	*e*P	**Pn**	**08 29 36.9**	**-0.2**
	comp=Z,30nm,0.7s						
ODAN	**Odare**	**16.02**	**168**	*e*P	**Pn**	**08 29 39.0**	**-0.6**
	comp=Z,23nm,0.6s						
SONM	**Songimo Array**	**16.73**	**64**	Pn	**Pn**	**08 29 48.9**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=257,slow=13,SNR=5.6						
SONM				Lg		08 34 38.9	
	comp=Z,0.2nm,0.3s,baz=270,slow=30,SNR=3.4						
ABKAR	**Akbulak array**	**17.81**	**300**	*e*Pn	**Pn**	**08 30 01.8**	**-0.2**
AKTK	**Aktyubinsk**	**19.29**	**303**	P	**Pn**	**08 30 21.0**	**+0.9**
AKTO	**Aktyubinsk**	**19.29**	**303**	P	**Pn**	**08 30 21.0**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=97,slow=13,SNR=4.2						
XAN	**Xi'an**	**21.45**	**105**	P	**P**	**08 30 47.8**	**+5.2**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.6						
CMAR	**Chiang Mai Arr**	**27.32**	**147**	P	**P**	**08 31 40.0**	**+0.8**
	comp=Z,3.4nm,0.8s,mb3.9,baz=323,slow=9.4,SNR=7.5						
KSRS	**Korea Array**	**33.89**	**84**	P	**P**	**08 32 35.2**	**-1.9**
	comp=Z,1.5nm,0.6s,mb4.1,baz=279,slow=7.6,SNR=6.1						
BRTR	**Keskin Array B**	**37.41**	**283**	P	**P**	**08 33 07.8**	**+0.5**
	comp=Z,5.7nm,0.8s,mb4.4,baz=95,slow=7.0,SNR=15						
AKASG	**Malin Array Be**	**37.53**	**302**	P	**P**	**08 33 06.2**	**-2.0**
	comp=Z,2.9nm,0.7s,mb4.1,baz=68,slow=8.3,SNR=3.0						
FINES	**FINESS Array B**	**38.62**	**319**	P	**P**	**08 33 16.8**	**-0.4**
	comp=Z,1.8nm,0.6s,mb4.0,baz=92,slow=8.3,SNR=8.2						
ARCES	**ARCESS Array B**	**39.80**	**332**	P	**P**	**08 33 27.0**	**0.0**
	comp=Z,2.8nm,0.8s,mb4.0,baz=91,slow=7.4,SNR=6.6						
MJAR	**Matsushiro Arr**	**41.77**	**80**	P	**P**	**08 33 43.3**	**-0.4**
	comp=Z,1.3nm,0.7s,mb3.7,baz=297,slow=9.4,SNR=4.0						
ASAJ	**Asahikawa**	**41.98**	**67**	P	**P**	**08 33 45.5**	**+0.2**
	comp=Z,1.7nm,0.6s,mb3.9,baz=299,slow=10,SNR=3.3						
DPC	**Dobruska-Polom**	**45.62**	**304**	*e*P	**P**	**08 34 15.7**	**+1.2**
NOA	**NORSAR Array B**	**45.80**	**320**	P	**P**	**08 34 15.1**	**-0.7**
	comp=Z,1.5nm,0.4s,mb4.2,baz=79,slow=7.8,SNR=6.1						
CLL	**Collm**	**47.32**	**306**	⇓*i*P	**P**	**08 34 28.5**	**+0.7**
CLL				*i*	pP	08 34 31.4	+0.4
CLL	**Collm**	**47.32**	**306**	⇓*i*P	**P**	**08 34 28.5**	**+0.7**
CLL				*i* pP	pP	08 34 31.4	+0.4
CLL				*e*		08 34 42.0	
GRA1	**Grafenberg Arr**	**48.94**	**305**	*e*P	**P**	**08 34 41.5**	**+1.1**
	comp=Z,4.0nm,1.0s,mb4.4						
GRF	**Grafenberg Arr**	**48.94**	**305**	*e*P	**P**	**08 34 41.5**	**+1.1**
	comp=Z,4.0nm,1.0s						
GRF	**Grafenberg Arr**	**48.94**	**305**	*e*P	**P**	**08 34 41.5**	**+1.1**
	comp=Z,4.0nm,1.0s,mb4.4						
CDF	**Champ du Feu**	**51.83**	**305**	*e*P	**P**	**08 35 03.4**	**+1.2**
PGF	**Pioggiola**	**53.28**	**297**	*e*P	**P**	**08 35 13.6**	**+0.5**
LPG	**La Plagne**	**53.40**	**301**	*e*P	**P**	**08 35 15.1**	**+1.2**
	comp=Z,11nm,0.7s,mb4.6						
LPG	**La Plagne**	**53.40**	**301**	*e*P	**P**	**08 35 15.1**	**+1.2**
	comp=Z,5.6nm,0.7s,mb4.6						
LPL	**La Plagne**	**53.40**	**301**	*e*P	**P**	**08 35 15.1**	**+1.2**
	comp=Z,16nm,0.8s,mb4.7						
LPL	**La Plagne**	**53.40**	**301**	*e*P	**P**	**08 35 15.1**	**+1.2**
	comp=Z,7.9nm,0.8s,mb4.7						
SBF	**Sospel**	**53.70**	**299**	*e*P	**P**	**08 35 16.6**	**+0.5**
	comp=Z,15nm,0.8s,mb4.7						
SBF	**Sospel**	**53.70**	**299**	*e*P	**P**	**08 35 16.6**	**+0.5**
	comp=Z,7.4nm,0.8s,mb4.7						
MBDF	**Montbardon**	**53.73**	**301**	*e*P	**P**	**08 35 17.9**	**+1.6**
	comp=Z,5.8nm,0.8s,mb4.3						
MBDF	**Montbardon**	**53.73**	**301**	*e*P	**P**	**08 35 17.9**	**+1.6**
	comp=Z,2.9nm,0.8s,mb4.3						
ORIF	**Oris-en-Rattie**	**54.21**	**301**	*e*P	**P**	**08 35 20.1**	**+0.3**
	comp=Z,5.5nm,0.7s,mb4.3						
ORIF	**Oris-en-Rattie**	**54.21**	**301**	*e*P	**P**	**08 35 20.1**	**+0.3**
	comp=Z,2.8nm,0.7s,mb4.3						
SSF	**Saint Saulge**	**54.71**	**304**	*e*P	**P**	**08 35 24.4**	**+1.0**
VIVF	**Saint-Julien-l**	**55.00**	**301**	*e*P	**P**	**08 35 25.9**	**+0.3**
	comp=Z,3.7nm,0.7s,mb4.2						
VIVF	**Saint-Julien-l**	**55.00**	**301**	*e*P	**P**	**08 35 25.9**	**+0.3**
	comp=Z,1.9nm,0.7s,mb4.2						
TCF	**Toulx Ste Croi**	**55.86**	**304**	*e*P	**P**	**08 35 32.0**	**+0.3**
ESDC	**Sonseca Array**	**63.16**	**300**	P	**P**	**08 36 21.8**	**-0.4**
ESDC	**Sonseca Array**	**63.16**	**300**	P	**P**	**08 36 21.8**	**-0.4**
	comp=Z,0.4nm,0.4s,mb3.9,baz=51,slow=6.8,SNR=6.3						
ILAR	**Eielson Array**	**65.84**	**21**	P	**P**	**08 36 37.1**	**-2.2**
	comp=Z,1.0nm,0.7s,mb3.9,baz=316,slow=5.0,SNR=8.6						
INK	**Inuvik**	**65.90**	**14**	P	**P**	**08 36 38.5**	**-1.2**
	comp=Z,2.2nm,0.8s,mb4.2,baz=340,slow=6.4,SNR=3.2						
KDAK	**Kodiak Island**	**69.46**	**28**	P	**P**	**08 37 01.1**	**-1.1**
	comp=Z,4.8nm,0.8s,mb4.5,baz=302,slow=9.5,SNR=2.4						
YKA	**Yellowknife Ar**	**74.18**	**9**	P	**P**	**08 37 29.0**	**-1.6**
	comp=Z,1.3nm,0.8s,mb3.9,baz=342,slow=6.0,SNR=2.6						
TORD	**Toradi Ar. Bea**	**75.43**	**275**	P	**P**	**08 37 36.6**	**-2.0**
	comp=Z,4.7nm,0.6s,mb4.6,baz=46,slow=6.2,SNR=5.8						
WRA	**Warramunga Arr**	**77.75**	**132**	P	**P**	**08 37 50.1**	**-1.4**
	comp=Z,2.0nm,0.7s,mb4.2,baz=331,slow=5.5,SNR=8.8						
ASAR	**Alice Springs**	**80.54**	**134**	P	**P**	**08 38 06.2**	**-0.4**
	comp=Z,1.7nm,0.6s,mb4.1,baz=325,slow=5.1,SNR=12						
STKA	**Stephens Creek**	**91.16**	**134**	P	**P**	**08 38 58.3**	**-0.9**
	comp=Z,1.2nm,0.6s,mb4.4,baz=318,slow=14,SNR=2.8						
PDAR	**Pinedale Array**	**94.14**	**10**	P	**P**	**08 39 11.9**	**-1.1**
	comp=Z,0.1nm,0.5s,mb3.5,baz=259,slow=0.9,SNR=3.6						
NVAR	**Mina Array Bea**	**96.85**	**17**	P	**P**	**08 39 25.9**	**+0.5**
	comp=Z,0.3nm,0.5s,mb4.0,baz=23,slow=2.9,SNR=3.0						
CPUP	**Villa Florida**	**144.41**	**285**	PKP	PKPdf	08 45 31.2	+0.4
CPUP	**Villa Florida**	**144.41**	**285**	PKP	PKPdf	08 45 31.2	+0.4
	comp=Z,0.9nm,0.6s,baz=30,slow=4.4,SNR=4.5						
LPAZ	**La Paz**	**144.42**	**309**	PKP	PKPdf	08 45 31.1	0.0
	comp=Z,0.5nm,0.6s,baz=28,slow=7.3,SNR=4.0						

DJA 31 08:27:38,6°.51S×104°.42E,h17km,MLv3.5/8,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.98**	**4**	P	Pb	08 27 55.6	-1.0
CGJI	**Cibinong**	**1.27**	**95**	S	Sb	08 28 17.2	-0.3
BLSI	**Bandar Lampung**	**1.40**	**36**	P	Pn	08 28 03.5	+0.7
BLSI				S	Sn	08 28 20.5	-0.4
RBSI	**Rajabasa**	**1.47**	**63**	P	Pn	08 28 03.8	0.0
RBSI				S	Sn	08 28 23.4	+0.8
LWLI	**Liwa**	**1.53**	**346**	P	Pn	08 28 04.5	0.0
KLSI		**1.83**	**10**	P	Pn	08 28 09.3	+0.5
MDSI	**Maura Dua**	**2.02**	**353**	P	Pn	08 28 12.6	+1.2
DBJI	**Dramaga**	**2.31**	**91**	P	Pn	08 28 16.2	+0.8
MNAI	**Manna**	**2.58**	**326**	P	Pn	08 28 18.5	-0.6

*ISCJB **31** 08:31:08.8±0.1,26°.24N±0°.02×101°.93E±0°.02,h8km, mb5.4/358,MS5.2/237, Error ellipse: s-maj=2.4km s-min=1.9km az=30.7*

*BJI **31** 08:31:10.0,26°.27N×102°.06E,h13km,mB5.6/27,mb5.3/51, ML5.6/10,Ms5.8/64,Ms7 5.4/53*

*NEIC **31** 08:31:10.7±0.1,26°.23N×101°.97E,h10km,mb5.5/200, MS5.2/171,MW5.3,Error ellipse: s-maj=3.3km s-min=2.7km az=218.0,Moment Tensor Solution. s6 Moment tensor: Scale 10¹⁷Nm; Mrr=0.04; Mθθ0.20; Mφφ-0.17; Mrθ-0.03; Mθφ-1.25; Mφr-0.31; Best double couple: M₀1.30000×10¹⁷ NP1:φs86.00000°,δ76.00000°, λ-177.00000°. NP2:φs355.00000°,δ87.00000°, λ-14.00000°. Principal axes: T 1.3100, Plg7.0000°, Azm41.0000°; N -0.0100, Plg75.0000°, Azm165.0000°; P -1.3000, Plg11.0000°, Azm309.0000°;*

NEIC Two people killed in the Panzhihua area. Felt [III] at Kunming. Also felt at Xichang.

*TEH **31** 08:31:11.0,26°.23N×101°.95E,h10km*

*IDC **31** 08:31:12.6±2.2,26°.22N×101°.95E,h25km±14km,mb4.9/33, mb1 4.9/34,mb1mx4.9/34,mbtmp4.9/34,ML5.2/1,MS4.9/23, Ms1 4.9/23,ms1mx4.6/34,Error ellipse: s-maj=10.7km s-min=9.4km az=69.0*

*MOS **31** 08:31:12.5±0.8,26°.20N×101°.97E,h35km,mb5.5/122, MS5.0/72,Error ellipse: s-maj=6.0km s-min=3.4km az=119.1*

*DJA **31** 08:31:13,26°.21N×101°.84E,h10km,Mw5.8/35*

*GCMT **31** 08:31:14.2±0.1,26°.16N×102°.01E,h25km,MW5.6, Moment Tensor Solution. s73,c112; s33,c35; Moment tensor: Scale 10¹⁷Nm; Mrr-0.08±.04; Mθθ-0.97±.04; Mφφ1.05±.04; Mrθ-0.66±.09; Mθφ-2.39±.04; Mφr-0.18±.09; Best double couple: M₀2.70000×10¹⁷ NP1:φs11.00000°, δ77.00000°,λ-7.00000°. NP2:φs102.00000°,δ84.00000°, λ-167.00000°. Principal axes: T 2.6500, Plg5.0000°, Azm236.0000°; N 0.0700, Plg75.0000°, Azm128.0000°; P -2.7200, Plg14.0000°, Azm327.0000°; Data Used: II IU IC G CN. Surface waves: sta= 96, comp=198, per= 50.*

*SZGRF **31** 08:31:18.0,26°.44N×101°.47E,h33km,mb5.5,MS5.5, Yunnan, China*

*BGS **31** 08:31:19.1±1.5,26°.87N×99°.84E,h10km,mb5.1,MS5.2*

ISC 31 08:31:09.8±0.7,26°.25N±0°.02×101°.92E±0°.01,h3km±4km, h9km±3.1km:pP-P,n1182,σ0s93/1081,mb5.4/357, MS5.2/237,53C-43D,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**1.35**	**146**	Pg	**Pg**	**08 31 34.5**	**-1.2**
KMI				Sg	**Sg**	**08 31 52.5**	**-0.7**
KMI				smax			
	comp=N,122μm,0.9s						
KMI				smax			
	comp=E,98μm,0.7s						
GYA	**Guiyang**	**4.27**	**86**	⇑*i*Pn	**Pn**	**08 32 17.3**	**+1.6**
GYA				Sn	**Sn**	**08 33 06.3**	**+0.3**
GYA				Sg	**Sg**	**08 33 28.3**	**+1.4**
GYA				LR	LR		
	comp=N,82μm,6.0s						
GYA				LR	LR		
	comp=E,24μm,6.0s						
GYA				LR	LR		
	comp=Z,31μm,5.3s						
IMP	**Imphal**	**7.36**	**260**	*i* x	**Pn**	**08 33 03.0**	**+4.8**
IMP				*i* x	x	08 34 54.0	
ENH	**Enshi**	**7.79**	**57**	*e*Pn	**Pn**	**08 33 05.5**	**+1.5**
	comp=Z,2μm,1.0s						
CHG	**Chiang Mai**	**7.90**	**201**	⇓P	**Pn**	**08 33 08.9**	**+3.3**
	comp=Z,1μm,0.8s						
CHTO	**Chiang Mai**	**7.90**	**201**	*e*Pn	**Pn**	**08 33 08.1**	**+2.5**
CHTO	**Chiang Mai**	**7.90**	**201**	P	**Pn**	**08 33 08.7**	**+3.1**
	comp=Z,43nmcomp=Z,10μmcomp=Z,353nm,0.9s						
CHTO	**Chiang Mai**	**7.90**	**201**	P	**Pn**	**08 33 09.3**	**+3.7**
	SNR=78						
CMAR	**Chiang Mai Arr**	**8.23**	**200**	Pn	**Pn**	**08 33 11.5**	**+1.4**
	comp=Z,7.5nm,0.3s,baz=13,slow=13,SNR=176						
CMAR				Pg	**Pg**	**08 33 43.4**	**-4.1**
	comp=Z,15nm,0.3s,baz=11,slow=16,SNR=18						
CMAR				Lg		08 35 32.5	
	comp=Z,19nm,0.3s,baz=23,slow=30,SNR=6.1						
CMAR				LR	LR	08 36 53.8	
	comp=Z,5μm,19.1s,baz=197,slow=42						
CMAR	**Chiang Mai Arr**	**8.23**	**200**	P	**Pn**	**08 33 11.5**	**+1.3**
SHL	**Shillong**	**9.06**	**268**	*e*PKP	**Pn**	**08 33 22.0**	**+0.5**
SHL				*ex*	x	08 35 12.5	
BDT	**Bhumibol Dam**	**9.36**	**197**	P	**Pn**	**08 33 28.5**	**+2.8**
	comp=Z,229nm,1.1s						
XAN	**Xi'an**	**9.85**	**36**	P	**Pn**	**08 33 32.3**	**0.0**
XAN				pP		08 33 36.8	
XAN				S	**Sn**	**08 35 19.8**	**-3.6**
XAN				pmax	pmax		
	comp=Z,51nm,0.7s						
XAN				LR	LR		
	comp=N,40μm,7.7s						
XAN				LR	LR		
	comp=E,12μm,6.2s						
XAN				LR	LR		
	comp=Z,7μm,7.6s						
LZH	**Lanzhou**	**9.94**	**9**	*e*P	**Pn**	**08 33 37.5**	**+3.9**
LZH				pP		08 33 39.5	
LZH				sP		08 33 41.8	
LZH				*e*S	**Sn**	**08 35 27.0**	**+1.3**
LZH				sS		08 35 32.0	
LZH				SS		08 35 38.5	
LZH				pmax	pmax		
	comp=Z,63nm,1.4s						
LZH				pmax	pmax		
	comp=Z,290nm,5.5s						
LZH				LR	LR		
	comp=N,25μm,7.0s						
LZH				LR	LR		
	comp=E,52μm,11.6s						
LZH				LR	LR		
	comp=Z,12μm,12.2s						
AGT	**Agartala**	**9.95**	**259**	*i* P	**Pn**	**08 33 34.0**	**+0.2**
AGT				*i* x	x	08 35 42.0	
LSA	**Lhasa**	**10.12**	**292**	P	**Pn**	**08 33 36.3**	**+0.3**
LSA				S	**Sn**	**08 35 29.8**	**-0.2**
LSA				LR	LR		
	comp=Z,16μm,10.0s						
LSA	**Lhasa**	**10.12**	**292**	*e*Pn	**Pn**	**08 33 38.4**	**+2.3**
	comp=Z,89nm,0.6s						
LSA				*e*Sn	**Sn**	**08 35 33.8**	**+3.8**
LSA	**Lhasa**	**10.12**	**292**	*e*P	**Pn**	**08 33 38.4**	**+2.4**
LSA				*e*		08 35 33.8	
LSA				pmax	pmax		
	comp=Z,89nm,0.6s						
QIZ	**Qiongzhong**	**10.26**	**133**	P	**Pn**	**08 33 37.0**	**-1.0**
QIZ				S	**Sn**	**08 35 33.8**	**+0.2**
QIZ				pmax	pmax		
	comp=Z,23nm,0.4s						
QIZ				LR	LR		
	comp=N,25μm,7.9s						
QIZ				LR	LR		
	comp=Z,15μm,8.6s						
QIZ	**Qiongzhong**	**10.26**	**133**	*e*Pn	**Pn**	**08 33 36.8**	**-1.2**
	comp=Z,194nm,0.9s						
NST	**Nakhon Sawan**	**10.66**	**189**	P	**Pn**	**08 33 41.5**	**-2.0**
	comp=Z,700nm,1.2s						
GZH	**Guangzhou**	**10.86**	**104**	P	**Pn**	**08 33 46.5**	**+0.3**
GZH				S	**Sn**	**08 35 46.8**	**-1.5**
GZH				LR	LR		
	comp=N,14μm,8.6s						
GZH				LR	LR		
	comp=E,9μm,6.8s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UBT	**Ubonrachathani**	**11.33**	**165**	P	**Pn**	**08 33 55.0**	**+2.3**
WHN	**Wuhan**	**11.75**	**66**	P	**Pn**	**08 33 58.3**	**-0.1**
WHN				S	**Sn**	**08 36 08.0**	**-2.1**
WHN				LR	LR		
	comp=N,11μm,3.0s						
WHN				LR	LR		
	comp=E,29μm,7.7s						
WHN				LR	LR		
	comp=Z,19μm,6.3s						
TAPN	**Taplejung**	**12.74**	**278**	*e*P	**Pn**	**08 34 12.0**	**+0.1**
	comp=Z,449nm,0.8s						
TAPN				*e*S	**Sn**	**08 36 35.9**	**+1.6**
TAPN	**Taplejung**	**12.74**	**278**	*e*P	**Pn**	**08 34 11.7**	**-0.2**
CAL	**Calcutta**	**12.92**	**256**	*e*PKP	**Pn**	**08 34 14.2**	**-0.1**
CAL				*ex*	x	08 36 38.7	
ODAN	**Odare**	**13.02**	**276**	*e*P	**Pn**	**08 34 14.7**	**-1.0**
	comp=Z,596nm,0.8s						
ODAN	**Odare**	**13.02**	**276**	*e*P	**Pn**	**08 34 15.3**	**-0.4**
	comp=Z,293nm,0.8s						
RAMN	**Ramite**	**13.72**	**276**	*e*P	**Pn**	**08 34 24.6**	**-0.7**
	comp=Z,487nm,0.8s						
RAMN	**Ramite**	**13.72**	**276**	*e*P	**Pn**	**08 34 24.6**	**-0.7**
	comp=Z,303nm,0.9s						
JIRN	**Jiri**	**14.10**	**279**	*e*P	**Pn**	**08 34 29.9**	**-0.6**
GUN	**Gumba**	**14.38**	**280**	*e*P	**Pn**	**08 34 33.2**	**-1.1**
	comp=Z,475nm,0.7s						
GUN	**Gumba**	**14.38**	**280**	*e*P	**Pn**	**08 34 33.4**	**-0.9**
	comp=Z,140nm,0.4s						
TIY	**Taiyuan**	**14.48**	**35**	*e*P	**Pn**	**08 34 32.5**	**-3.2**
TIY				pP	pP	08 34 36.0	-7.4
TIY				sP	sP	08 34 39.5	-4.3
TIY				S	**Sn**	**08 37 09.3**	**-7.6**
TIY				pmax	pmax		
	comp=Z,420nm,1.0s						
TIY				LR	LR		
	comp=N,19μm,7.4s						
TIY				LR	LR		
	comp=E,18μm,10.0s						
TIY				LR	LR		
	comp=Z,14μm,9.2s						
PKI	**Pulchoki**	**14.79**	**279**	*e*P	**Pn**	**08 34 38.1**	**-1.8**
	comp=Z,468nm,0.5s						
PKI	**Pulchoki**	**14.79**	**279**	*e*P	**Pn**	**08 34 37.8**	**-2.1**
	comp=Z,468nm,0.5s						
PKIN	**Phulchoki**	**14.80**	**279**	*e*P	**Pn**	**08 34 38.4**	**-1.6**
	comp=Z,1μm,0.7s						
PKIN	**Phulchoki**	**14.80**	**279**	*e*P	**Pn**	**08 34 39.2**	**-0.8**
	comp=Z,504nm,0.6s						
KKN	**Kakani**	**14.91**	**280**	*e*P	**Pn**	**08 34 39.3**	**-2.2**
	comp=Z,833nm,1.0s						
KKN	**Kakani**	**14.91**	**280**	*e*P	**Pn**	**08 34 39.4**	**-2.1**
DMN	**Daman**	**15.06**	**279**	*e*P	**Pn**	**08 34 41.7**	**-1.8**
	comp=Z,836nm,0.9s						
DMN	**Daman**	**15.06**	**279**	*e*P	**Pn**	**08 34 41.5**	**-2.0**
QZH	**Quanzhou**	**15.11**	**91**	P	**Pn**	**08 34 40.3**	**-3.9**
QZH				S	**Sn**	**08 37 32.0**	**-0.1**
QZH				pmax	pmax		
	comp=Z,150nm,1.0s						
QZH				pmax	pmax		
	comp=Z,980nm,3.7s						
QZH				LR	LR		
	comp=N,87μm,9.8s						
QZH				LR	LR		
	comp=E,17μm,9.8s						
QZH				LR	LR		
	comp=Z,26μm,10.0s						
GKN	**Gorkha**	**15.48**	**280**	*e*P	**Pn**	**08 34 46.6**	**-2.6**
	comp=Z,363nm,0.8s						
GKN	**Gorkha**	**15.48**	**280**	*e*P	**Pn**	**08 34 46.3**	**-2.9**
BTO	**Baotou**	**15.82**	**23**	*e*P	**Pn**	**08 34 52.0**	**-1.5**
BTO				S	**Sn**	**08 37 52.8**	**+3.5**
BTO				LR	LR		
	comp=N,11μm,12.9s						
BTO				LR	LR		
	comp=E,14μm,13.7s						
NJ2	**Nanjing**	**15.88**	**65**	*e*P	**Pn**	**08 34 53.0**	**-1.3**
NJ2				pP	pP	08 34 57.0	-2.0
NJ2				sP	sP	08 35 00.0	+0.7
NJ2				PP		08 35 03.5	
NJ2				pmax	pmax		
	comp=Z,130nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,1μm,3.7s						
NJ2				LR	LR		
	comp=N,13μm,9.7s						
NJ2				LR	LR		
	comp=E,12μm,9.1s						
NJ2				LR	LR		
	comp=Z,14μm,7.5s						
BWNR	**Bhubaneshwar**	**15.94**	**252**	*ex*	**Pn**	**08 34 53.0**	**-2.2**
DANN	**Dangsing**	**16.27**	**281**	*e*P	**Pn**	**08 34 56.2**	**-3.2**
	comp=Z,971nm,0.6s						
DANN	**Dangsing**	**16.27**	**281**	*e*P	**Pn**	**08 34 56.7**	**-2.7**
	comp=Z,1μm,0.8s						
TIA	**Tai'an**	**16.34**	**49**	⇑P	**Pn**	**08 35 00.5**	**+0.2**
TIA				S	**Sn**	**08 38 06.5**	**+4.4**
TIA				pmax	pmax		
	comp=Z,110nm,1.6s						
TIA				pmax	pmax		
	comp=Z,2μm,4.8s						
TIA				LR	LR		
	comp=N,12μm,12.5s						
TIA				LR	LR		
	comp=E,9μm,10.4s						
TIA				LR	LR		
	comp=Z,8μm,12.2s						
KOLN	**Koldanda**	**16.39**	**279**	*e*P	**Pn**	**08 34 59.4**	**-1.6**
	comp=Z,360nm,0.9s						
KOLN	**Koldanda**	**16.39**	**279**	*e*P	**Pn**	**08 34 59.1**	**-1.9**
	comp=Z,360nm,0.9s						
HHC	**Hu-ho-hao-te**	**16.61**	**26**	*e*P	**Pn**	**08 35 03.0**	**-0.7**
HHC				pP	pP	08 35 06.3	-0.7
HHC				sP	sP	08 35 09.8	+2.4
HHC				PP		08 35 16.8	
HHC				S	**Sn**	**08 38 05.5**	**-3.1**

DL2 Dalian 20.81 48 P **P** **08 35 52.8 +0.5**
DL2 S **S** **08 39 40.3 -4.8**
DL2 pmax pmax
comp=Z,140nm,1.6s
DL2 pmax pmax
comp=Z,710nm,3.1s
DL2 LR LR
comp=N,3μm,15.4s
DL2 LR LR
comp=E,3μm,10.1s
DL2 LR LR
comp=Z,2μm,10.1s
KTGM Kuala Trenggan 20.84 177 P **P** **08 35 54.3 +1.5**
KULM Kulim 20.88 184 *e*P **P** **08 35 54.0 +0.7**
comp=Z,415nm,1.2s
KULM LR LR
comp=Z,4μm,19.0s,MS4.8
KULM Kulim 20.88 184 P **P** **08 35 54.5 +1.2**
KULM Kulim 20.88 184 P **P** **08 35 54.1 +0.8**
comp=Z,3μmcomp=Z,328nm,1.2s
KULM Kulim 20.88 184 P **P** **08 35 54.1 +0.8**
comp=Z,3μmcomp=Z,328nm,1.2s
WMQ Urumqi 20.99 330 P **P** **08 35 56.0 +1.8**
WMQ pP 08 36 00.0
WMQ sP sP 08 36 03.0 +7.6
WMQ PP 08 36 18.8
WMQ S **S** **08 39 44.8 -3.8**
WMQ sS sS 08 39 51.3 +1.5
WMQ PcP PcP 08 40 03.0 +1.4
WMQ SS 08 40 17.0
WMQ ScP ScP 08 43 38.0 -1.3
WMQ ScS ScS 08 47 20.3 -2.4
WMQ pmax pmax
comp=Z,310nm,1.1s
WMQ pmax pmax
comp=Z,2μm,3.2s
WMQ LR LR
comp=N,9μm,10.0s,MS5.5
WMQ LR LR
comp=E,8μm,12.2s,MS5.5
WMQ LR LR
comp=Z,6μm,12.8s,MS5.2
DDI Dehra Dun 21.39 286 *e*PKP **P** **08 35 56.8 -1.9**
DDI *ex* x 08 39 46.0
TGY Tagaytay City 21.53 120 P **P** **08 36 05.2 +4.9**
comp=Z,105nm,0.3s,mb5.7,baz=309,slow=6.5,SNR=3.9
TGY Tagaytay City 21.53 120 P **P** **08 36 05.2 +5.0**
IPM Ipoh 21.67 182 *e*P **P** **08 36 01.0 -0.7**
comp=Z,194nm,0.7s,mb5.6
IPM Ipoh 21.67 182 P **P** **08 36 01.3 -0.4**
IPM Ipoh 21.67 182 P **P** **08 36 01.0 -0.7**
comp=Z,3μmcomp=Z,312nm,0.8s,mb5.8
IPM Ipoh 21.67 182 P **P** **08 36 01.1 -0.6**
comp=Z,3μmcomp=Z,312nm,0.8s,mb5.8
SONM Songino Array 21.83 8 P **P** **08 36 04.0 +0.8**
comp=Z,147nm,1.0s,mb5.4,baz=190,slow=11,SNR=72
SONM S **S** **08 40 03.4 -1.6**
comp=Z,2.6nm,0.9s,baz=187,slow=30,SNR=2.1
SONM LR LR 08 45 21.9
comp=Z,3μm,21.3s,MS4.7,baz=186,slow=39
SONM Songino Array 21.83 8 P **P** **08 36 04.0 +0.8**
SONM S **S** **08 40 03.4 -1.6**
ULN Ulaanbaatar 21.95 9 *e*P **P** **08 36 05.8 +1.3**
comp=Z,531nm,1.1s,mb5.9
ULN Ulaanbaatar 21.95 9 *e*P **P** **08 36 05.8 +1.3**
ULN pmax pmax
comp=Z,531nm,1.1s,mb5.9
ULN Ulaanbaatar 21.95 9 P **P** **08 36 05.4 +0.9**
comp=Z,4μmcomp=Z,466nm,1.1s,mb5.8
ULN Ulaanbaatar 21.95 9 P **P** **08 36 05.8 +1.3**
comp=Z,4μmcomp=Z,466nm,1.1s,mb5.8
ULN Ulaanbaatar 21.95 9 P **P** **08 36 06.2 +1.7**
SNR=46
NDI New Delhi 22.04 282 *e*PKP **P** **08 36 04.0 -1.7**
NDI *ex* x 08 40 01.0
SMLA Simla 22.23 288 *i* P **P** **08 36 06.9 -0.8**
BHPL Bhopal 22.43 268 *e*PKP **P** **08 36 09.4 -0.5**
BHPL AMb AMB 08 36 12.3
comp=Z,489nm,1.1s,mb5.8
SDNR Sundarnagar 22.44 289 *e*PKP **P** **08 36 11.5 +1.6**
SDNR *ex* x 08 40 11.5
TSI Tuntungan 22.85 189 P **P** **08 36 15.8 +1.4**
comp=Z,1μm,1.1s,mb6.2
FRIM Kepong 22.89 181 P **P** **08 36 15.0 +0.2**
BHK Bhakra 22.90 289 *ex* **P** **08 36 11.8 -3.0**
TPTI 23.31 192 P **P** **08 36 17.2 -2.0**
comp=Z,1μmcomp=Z,174nm,0.8s,mb5.5
TPTI 23.31 192 P **P** **08 36 17.2 -2.0**
comp=Z,1μmcomp=Z,174nm,0.8s,mb5.5
HYB Hyderabad 23.37 253 *i* P **P** **08 36 19.0 -0.9**
HYB *e*S **S** **08 40 34.0 +0.6**
DLH Dalhousie 23.43 292 *ex* **P** **08 36 27.0 +6.6**
DLH *e*S **S** **08 40 34.0 -0.2**
AKL Akola 23.48 262 ⇑ *i* P **P** **08 36 21.9 +1.0**
AKL AMP 08 36 24.6
comp=Z,246nm,2.2s
AKL *i* S **S** **08 40 35.1 -0.1**
PSI Prapat 23.49 188 P **P** **08 36 21.4 +0.2**
comp=Z,134nm,0.9s,mb5.4,baz=340,slow=8.8,SNR=90
PSI Prapat 23.49 188 P **P** **08 36 21.4 +0.3**
JOW Kunigami 23.58 83 *e*P **P** **08 36 21.0 -1.0**
comp=Z,88nm,1.0s,mb5.1
JOW Kunigami 23.58 83 P **P** **08 36 21.5 -0.5**
comp=Z,31nm,0.4s,mb5.1,baz=282,slow=6.5,SNR=22
JOW LR LR 08 47 08.2
comp=Z,8μm,18.9s,MS5.2,baz=276,slow=41
SNY Shenyang 23.64 43 ⇑ P **P** **08 36 21.8 -0.6**
SNY S **S** **08 40 29.3 -8.2**
SNY pmax pmax
comp=Z,54nm,1.4s,mb4.8
SNY pmax pmax
comp=Z,290nm,2.6s,mb5.2
SNY LR LR
comp=N,8μm,16.7s,MS5.3
SNY LR LR
comp=E,6μm,18.1s,MS5.3
SNY LR LR
comp=Z,5μm,12.0s
INCN Inchon 23.72 56 *e*P **P** **08 36 20.7 -2.5**
comp=Z,288nm,1.1s,mb5.6
INCN LR LR
comp=Z,3μm,19.0s,MS4.7
INCN Inchon 23.72 56 P **P** **08 36 28.1 +4.9**
SNR=6.0
KDM Kudat 23.91 141 P **P** **08 36 25.8 +0.6**
ZAK Zakamensk 24.11 2 ⇓ *i* P **P** **08 36 28.2 +1.6**
ZAK pmax pmax
comp=Z,96nm,1.9s,mb4.9
KGM Kluang 24.14 177 P **P** **08 36 27.3 +0.1**
KKM Kota Kinabalu 24.29 143 *e*P **P** **08 36 29.2 +0.6**
comp=Z,397nm,1.1s,mb5.8
KKM LR LR
comp=Z,2μm,20.0s,MS4.5
KKM Kota Kinabalu 24.29 143 P **P** **08 36 29.8 +1.2**
KKM Kota Kinabalu 24.29 143 P **P** **08 36 29.2 +0.6**
comp=Z,3μmcomp=Z,335nm,1.1s,mb5.7
KKM Kota Kinabalu 24.29 143 P **P** **08 36 29.3 +0.7**
comp=Z,3μmcomp=Z,335nm,1.1s,mb5.7
MYKOM Kota Tinggi 24.39 175 P **P** **08 36 29.9 +0.4**
MYKOM Kota Tinggi 24.39 175 P **P** **08 36 29.4 -0.1**
comp=Z,2μmcomp=Z,249nm,1.1s,mb5.6
MYKOM Kota Tinggi 24.39 175 P **P** **08 36 29.6 +0.1**
comp=Z,2μmcomp=Z,249nm,1.1s,mb5.6
AJM Ajmer 24.42 277 *e*PKP **P** **08 36 29.1 -0.7**
AJM AMb AMB 08 36 37.4
comp=Z,168nm,0.6s,mb5.7
KSRS Korea Array 24.68 57 P **P** **08 36 30.4 -1.5**
comp=Z,11nm,0.6s,mb4.5,baz=246,slow=9.6,SNR=16
KSRS Korea Array 24.68 57 P **P** **08 36 30.4 -1.5**
LATR Latur 24.68 257 *e*PKP **P** **08 36 32.8 +0.6**
SDKM Sandakan 25.16 142 P **P** **08 36 36.8 +0.3**
BTM Bintulu 25.30 153 P **P** **08 36 39.3 +1.5**
KSH Kashi 25.38 308 P **P** **08 36 40.5 +2.2**
KSH *e*pP pP 08 36 44.8 +5.6
KSH *e*sP sP 08 36 47.8 +8.3
KSH *e*PP 08 37 20.3
KSH *e*PcP PcP 08 40 13.3 +2.5
KSH S **S** **08 41 05.0 -0.5**
KSH sS sS 08 41 13.8 +6.9
KSH SS 08 42 06.0
KSH *e*ScP ScP 08 43 51.5 +0.4
KSH *e*PcS PcS 08 43 53.3 +2.1
KSH LR LR
comp=N,7μm,9.0s
KSH LR LR
comp=E,5μm,16.4s
KSH LR LR
comp=Z,5μm,14.3s,MS5.2
MOY Mondy 25.39 359 *e*P **P** **08 36 40.6 +2.4**
MOY pmax pmax
comp=Z,208nm,2.0s,mb5.3
MNSI Mandailing Nat 25.41 185 P **P** **08 36 37.5 -1.2**
comp=Z,5μmcomp=Z,52nm,0.7s,mb5.2
MNSI Mandailing Nat 25.41 185 P **P** **08 36 36.2 -2.5**
comp=Z,5μmcomp=Z,52nm,0.7s,mb5.2
TLY Talaya 25.43 3 *e*P **P** **08 36 40.1 +1.5**
comp=Z,97nm,1.0s,mb5.3
TLY LR LR
comp=Z,3μm,22.0s,MS4.8
TLY Talaya 25.43 3 *e*P **P** **08 36 40.0 +1.4**
TLY *e*S **S** **08 41 07.4 +1.4**
TLY pmax pmax
comp=Z,113nm,1.0s,mb5.3
TLY MLR MLR
comp=Z,4μm,13.0s,MS5.2
TLY Talaya 25.43 3 P **P** **08 36 41.4 +2.8**
comp=Z,488nm,0.9s,mb6.0,SNR=10
TLY Talaya 25.43 3 P **P** **08 36 41.6 +3.0**
SNR=18
SBUM Sibu 25.65 156 P **P** **08 36 42.5 +1.6**
SBUM Sibu 25.65 156 P **P** **08 36 41.8 +0.8**
comp=Z,2μmcomp=Z,177nm,1.1s,mb5.5
SBUM Sibu 25.65 156 P **P** **08 36 41.9 +0.9**
comp=Z,2μmcomp=Z,177nm,1.1s,mb5.5
MK31 Makanchi Array 25.73 328 *e*P **P** **08 36 42.6 +1.2**
MKAR Makanchi Array 25.73 328 P **P** **08 36 42.9 +1.5**
MKAR ScP ScP 08 43 48.6 -3.3
MKAR Makanchi Array 25.73 328 P **P** **08 36 42.9 +1.5**
comp=Z,67nm,0.6s,mb5.3,baz=137,slow=12,SNR=88
MKAR ScP ScP 08 43 48.6 -3.3
comp=Z,3.1nm,0.8s,baz=127,slow=3.8,SNR=4.9
MKAR Makanchi Array 25.73 328 P **P** **08 36 42.9 +1.5**
BKNI Bangkinang 25.79 182 P **P** **08 36 42.6 +0.4**
comp=Z,3μmcomp=Z,361nm,1.2s,mb5.8
BKNI Bangkinang 25.79 182 P **P** **08 36 42.9 +0.7**
comp=Z,3μmcomp=Z,361nm,1.2s,mb5.8
CN2 Changchun 25.89 41 *e*P **P** **08 36 44.0 +1.1**
CN2 *es*P sP 08 36 51.3 +7.2
CN2 *e*S **S** **08 41 12.0 -1.6**
CN2 pmax pmax
comp=Z,90nm,0.8s,mb5.3
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,8μm,17.0s,MS5.4
CN2 LR LR
comp=E,4μm,17.0s,MS5.4
KSM Kuching 25.93 161 *e*P **P** **08 36 44.0 +0.5**
comp=E,160nm,1.2s,mb5.4
KSM LR LR
comp=Z,4μm,19.0s,MS5.0
KSM Kuching 25.93 161 P **P** **08 36 44.4 +0.9**
KSM Kuching 25.93 161 P **P** **08 36 43.7 +0.3**
comp=Z,1μmcomp=Z,123nm,1.8s,mb5.1
KSM Kuching 25.93 161 P **P** **08 36 43.9 +0.5**
comp=Z,1μmcomp=Z,123nm,1.8s,mb5.1
IRK Irkutsk 26.02 3 ⇑ *i* P **P** **08 36 46.1 +2.2**
IRK pmax pmax
comp=Z,1μm,1.4s,mb6.2
JNU Nakatsue 26.02 68 *e*Pn **P** **08 36 44.4 +0.2**
comp=Z,137nm,1.1s,mb5.4
MYLDM Lahad Datu 26.28 140 P **P** **08 36 48.3 +1.7**
MYLDM Lahad Datu 26.28 140 P **P** **08 36 47.7 +1.1**
comp=Z,2μmcomp=Z,188nm,0.9s,mb5.6
MYLDM Lahad Datu 26.28 140 P **P** **08 36 47.7 +1.1**
comp=Z,2μmcomp=Z,188nm,0.9s,mb5.6
ULHL Ulahol 26.41 314 P **P** **08 36 50.3 +2.7**
SNR=36
AAA Alma-Ata 26.48 316 *e*P **P** **08 36 48.3 +0.1**
AAA *e*S **S** **08 41 25.0 +2.2**
AAA pmax pmax
comp=Z,2μm,2.5s,mb6.1
AAA smax
comp=E,7μm,14.0s
AAA MLR MLR
comp=Z,4μm,12.0s,MS5.2
PPI Padang Panjang 26.59 183 P **P** **08 36 56.3 +6.8**
comp=Z,38nm,1.1s,mb4.8
PPI Padang Panjang 26.59 183 P **P** **08 36 48.0 -1.5**
comp=Z,38nm,1.1s,mb4.8
TSM Tawau 26.65 142 P **P** **08 36 51.4 +1.4**
HIA Hailar 26.82 26 *e*P **P** **08 36 51.3 +0.1**
comp=Z,186nm,1.1s,mb5.5
HIA LR LR
comp=Z,2μm,20.0s,MS4.7
HIA Hailar 26.82 26 *e*P **P** **08 36 51.3 +0.1**
HIA pmax pmax
comp=Z,186nm,1.1s
HIA MLR MLR
comp=Z,2μm,20.0s
KZA Kyzart 26.98 313 P **P** **08 36 55.8 +3.1**
SNR=11
KZA Kyzart 26.98 313 *e*P **P** **08 36 55.0 +2.3**
comp=Z,215nm,1.3s,mb5.5
POO Poona 27.02 259 *e*PKP **P** **08 36 52.6 -0.8**
POO AMb AMB 08 36 56.0
comp=Z,115nm,0.9s,mb5.4
SDSI Sungai Dareh 27.03 181 P **P** **08 36 54.5 +1.1**
comp=Z,161nm,1.4s,mb5.4
SDSI Sungai Dareh 27.03 181 P **P** **08 36 54.2 +0.8**
comp=Z,161nm,1.4s,mb5.4
PDSI Padang 27.04 183 P **P** **08 36 53.3 -0.2**
comp=Z,95nm,1.1s,mb5.2
TKM2 Tokmak 2 27.15 314 P **P** **08 36 56.8 +2.5**
SNR=7.4
TKM2 Tokmak 2 27.15 314 *e*P **P** **08 36 54.7 +0.4**
comp=Z,63nm,1.0s,mb5.1
TKM2 LR LR
comp=Z,2μm,20.0s,MS4.8
TKM2 Tokmak 2 27.15 314 *e*P **P** **08 36 54.7 +0.4**
TKM2 pmax pmax
comp=Z,63nm,1.0s,mb5.1
TKM2 MLR MLR
comp=Z,2μm,20.0s,MS4.8
CIT Chita 27.20 16 *e*P **P** **08 36 56.0 +1.4**
CIT *e* 08 37 09.5
CIT pmax pmax
comp=Z,279nm,1.3s,mb5.6
KAD Karad 27.20 257 *e*PKP **P** **08 36 54.3 -0.6**
KAD AMb AMB 08 36 55.9
comp=Z,52nm,0.9s,mb5.1
KBK Karagaybulak 27.44 313 P **P** **08 36 58.9 +2.0**
SNR=20
BHV Bhavnagar 27.53 267 *e*PKP **P** **08 36 57.0 -0.9**
UCH Uchtor 27.53 312 PFAKE 08 37 10.0 +12
UCH LR LR
comp=Z,3μm,22.0s,MS4.8
SISI Saibi 27.55 186 P **P** **08 36 57.3 -0.8**
comp=Z,163nm,1.0s,mb5.6
PALK Pallekele 27.64 231 P **P** **08 36 59.4 +0.5**
comp=Z,484nm,0.9s,mb6.1,SNR=6.3
PALK Pallekele 27.64 231 *e*P **P** **08 36 59.3 +0.4**
comp=Z,102nm,1.0s,mb5.4
PALK Pallekele 27.64 231 *e*P **P** **08 36 59.3 +0.4**
PALK pmax pmax
comp=Z,102nm,1.0s,mb5.4
PALK Pallekele 27.64 231 P **P** **08 37 03.1 +4.2**
SNR=7.1
AAK Ala-Archa 27.73 313 P **P** **08 37 01.8 +2.3**
SNR=13
AAK Ala-Archa 27.73 313 *e*P **P** **08 37 00.2 +0.7**
comp=Z,88nm,1.1s,mb5.3
AAK LR LR
comp=Z,2μm,19.0s,MS4.6
AAK Ala-Archa 27.73 313 P **P** **08 37 01.3 +1.8**
comp=Z,12nm,0.6s,mb4.7,baz=116,slow=9.2,SNR=15
AAK LR LR 08 49 53.3
comp=Z,7μm,20.3s,MS5.2,baz=106,slow=40
AAK Ala-Archa 27.73 313 *d* iP **P** **08 37 01.6 +2.1**
AAK pmax pmax
comp=Z,32nm,1.2s,mb4.8
AAK MLR MLR
comp=Z,3μm,23.0s,MS4.9
AAK Ala-Archa 27.73 313 P **P** **08 37 02.0 +2.5**
comp=Z,235nm,1.4s,mb5.6,SNR=14
AAK Ala-Archa 27.73 313 P **P** **08 37 02.7 +3.2**
comp=Z,254nmcomp=Z,16nm,1.0s,mb4.6
AAK Ala-Archa 27.73 313 P **P** **08 37 02.0 +2.5**
comp=Z,254nmcomp=Z,16nm,1.0s,mb4.6
AAK Ala-Archa 27.73 313 P **P** **08 37 02.2 +2.7**
SNR=22
USP Ospenovka 28.02 314 P **P** **08 37 03.8 +1.7**
SNR=23
AML Almayashu 28.04 312 P **P** **08 37 05.2 +3.0**
SNR=10
AML Almayashu 28.04 312 *e*P **P** **08 37 05.1 +2.9**
comp=Z,69nm,0.8s,mb5.3
AML LR LR
comp=Z,3μm,19.0s,MS4.9
EKS2 Erkin-Say 28.21 313 P **P** **08 37 06.0 +2.2**
SNR=23
EKS2 Erkin-Say 28.21 313 *e*P **P** **08 37 05.8 +1.9**
comp=Z,72nm,0.8s,mb5.4
EKS2 LR LR
comp=Z,4μm,20.0s,MS5.0
GOA Goa 28.29 253 ⇓ *e*PKP **P** **08 37 04.2 -0.5**
PPBI Pangkal Pinang 28.54 171 P **P** **08 37 07.8 +0.9**
comp=Z,4μmcomp=Z,49nm,1.2s,mb5.1
MDJ Mudanjiang 28.85 43 P **P** **08 37 08.8 -0.6**
MDJ pP pP 08 37 11.5 +1.2
MDJ S **S** **08 41 58.5 -1.6**
MDJ sS sS 08 42 03.8 +2.3
MDJ ScP ScP 08 43 59.5 -1.9
MDJ PcS PcS 08 44 00.8 -0.6
MDJ LR LR
comp=N,6μm,19.6s,MS5.3
MDJ LR LR
comp=E,3μm,18.2s,MS5.3
MDJ Mudanjiang 28.85 43 PFAKE 08 37 20.0 +11
MDJ LR LR
comp=Z,1μm,20.0s,MS4.6
ORY Orie 29.15 352 ⇓ *e*P **P** **08 37 13.1 +1.1**
ORY *e* 08 38 05.0
ORY *e* 08 40 21.2
KBL Kabul 29.43 294 *e*P **P** **08 37 15.5 +0.8**
comp=Z,88nm,1.0s,mb5.4
KBL Kabul 29.43 294 *e*P **P** **08 37 15.5 +0.8**
KBL pmax pmax
comp=Z,88nm,1.0s,mb5.4
DAV Davao City (W) 29.53 126 PFAKE 08 37 30.0 +14
DAV LR LR
comp=Z,2μm,20.0s,MS4.8
DAV Davao City (W) 29.53 126 LR LR 08 50 33.2
comp=Z,2μm,18.1s,MS4.8,baz=324,slow=39
DAV Davao City (W) 29.53 126 ⇑ *e*P **P** **08 37 00.9 -15**
VLA Vladivostok 29.63 48 ⇓ *i* P **P** **08 37 14.5 -1.9**
VLA *e* 08 38 09.3
VLA *e*S **S** **08 42 10.6 -1.9**
VLA pmax pmax
comp=Z,53nm,1.2s,mb5.2
KSI Kapahiang 29.73 179 P **P** **08 37 17.1 -0.4**
comp=Z,257nm,0.8s,mb6.0
KURK Kurchatov 30.24 330 P **P** **08 37 22.0 +0.4**
comp=Z,512nm,0.8s,mb6.3,SNR=20
KURK Kurchatov 30.24 330 *e*P **P** **08 37 22.7 +1.1**
comp=Z,77nm,0.9s,mb5.4
KURK LR LR
comp=Z,5μm,20.0s,MS5.1
KURK Kurchatov 30.24 330 P **P** **08 37 21.6 0.0**
comp=Z,38nm,0.7s,mb5.2,baz=133,slow=11,SNR=26
KURK LR LR 08 51 00.9
comp=Z,3μm,20.1s,MS4.9,baz=155,slow=39
KURK Kurchatov 30.24 330 *d* iP **P** **08 37 22.5 +0.9**
KURK pmax pmax
comp=Z,115nm,1.2s,mb5.5
KURK MLR MLR
comp=Z,3μm,19.0s,MS5.0
KURK Kurchatov 30.24 330 P **P** **08 37 23.0 +1.4**
SNR=18
PBKI Pangkalan Bun 30.29 160 P **P** **08 37 23.7 +1.2**
ZAA0 Zalesovo Array 30.43 340 *e*P **P** **08 37 23.7 +0.3**
ZALV Zalesovo Beam 30.43 340 P **P** **08 37 23.2 -0.1**
comp=Z,28nm,0.7s,mb5.1,baz=147,slow=11,SNR=23
ZALV Zalesovo Beam 30.43 340 P **P** **08 37 23.2 -0.1**
KK31 Karatay Array 30.58 311 ⇑ *e*P **P** **08 37 25.7 +0.9**
KKAR Karatay Array 30.58 311 *e*P **P** **08 37 25.9 +1.2**
comp=Z,14nm,0.8s,mb4.8
KKAR *e*PcP PcP 08 40 21.8 -1.7
KKAR Karatay Array 30.58 311 *e*P **P** **08 37 26.0 +1.2**
KKAR *e* 08 40 21.8
KKAR pmax pmax
comp=Z,14nm,0.8s,mb4.8
MDSI Maura Dua 30.64 176 P **P** **08 37 25.3 -0.2**
comp=Z,70nm,1.3s,mb5.3
KLSI 30.88 175 P **P** **08 37 28.1 +0.5**
comp=Z,137nm,1.2s,mb5.7
KLSI 30.88 175 P **P** **08 37 28.1 +0.5**
comp=Z,137nm,1.2s,mb5.7
NVS Novosibirsk 31.68 339 *e*P **P** **08 37 33.0 -1.4**
NVS pmax pmax
comp=N,34nm,2.0s
NVS pmax pmax
comp=E,33nm,2.0s
NVS pmax pmax
comp=Z,60nm,2.0s,mb5.1
KASI Kota Agung 31.69 175 P **P** **08 37 37.4 +2.7**
comp=Z,57nm,0.7s,mb5.5
MRSI Marisa 32.08 140 P **P** **08 37 39.2 +1.0**
comp=Z,1μmcomp=Z,78nm,1.0s,mb5.5
MRSI Marisa 32.08 140 P **P** **08 37 38.8 +0.6**
comp=Z,1μmcomp=Z,78nm,1.0s,mb5.5
MAJO Matsushiro 32.47 63 *e*P **P** **08 37 40.5 -1.0**
comp=Z,30nm,1.0s,mb5.1
MAJO LR LR
comp=Z,2μm,20.0s,MS4.8
MAJO Matsushiro 32.47 63 *e*P **P** **08 37 40.5 -1.0**
MAJO pmax pmax
comp=Z,30nm,1.0s,mb5.1
MAJO MLR MLR
comp=Z,2μm,20.0s,MS4.8
MAT Matsushiro 32.47 63 P **P** **08 37 39.6 -1.9**
MAT S **S** **08 42 56.0 -1.0**
MJAR Matsushiro Arr 32.47 63 P **P** **08 37 39.8 -1.7**
comp=Z,11nm,1.0s,mb4.6,baz=268,slow=10.0,SNR=20
MJAR PcP PcP 08 40 29.4 +0.7
comp=Z,7.4nm,0.9s,baz=260,slow=3.5,SNR=6.3
MJAR ScP ScP 08 44 10.6 -2.9
comp=Z,1.0nm,0.6s,baz=275,slow=2.9,SNR=4.0
MJAR Matsushiro Arr 32.47 63 P **P** **08 37 39.8 -1.7**
MJAR 08 40 29.4
KLR Kul'dur 32.55 37 *e*P **P** **08 37 37.5 -4.6**
KLR *e*S **S** **08 42 51.5 -6.5**
KLR MLR MLR
comp=N,8μm,10.0s,MS5.8
KLR MLR MLR
comp=E,5μm,10.0s,MS5.8
KLR MLR MLR
comp=Z,10μm,10.0s,MS5.8
DBJI Dramaga 32.95 171 P **P** **08 37 47.0 +1.2**
comp=Z,103nm,1.3s,mb5.6
MNI Manado 33.09 134 P **P** **08 37 48.1 +1.0**
comp=Z,3μmcomp=Z,268nm,0.8s,mb6.2
MNI Manado 33.09 134 P **P** **08 37 48.1 +1.0**
comp=Z,3μmcomp=Z,268nm,0.8s,mb6.2
KMSI Cibinong 33.22 137 P **P** **08 37 54.7 +6.5**
comp=Z,8μmcomp=Z,734nm,0.9s,mb6.6
KMSI Cibinong 33.22 137 P **P** **08 37 49.1 +0.9**
comp=Z,8μmcomp=Z,735nm,0.9s,mb6.6
LEM Lembang 33.34 170 P **P** **08 37 50.8 +1.5**
comp=Z,97nm,1.1s,mb5.7
LUWI Luwuk 33.79 140 P **P** **08 37 53.3 +0.1**
comp=Z,4μmcomp=Z,401nm,1.4s,mb6.2
LUWI Luwuk 33.79 140 P **P** **08 37 53.1 -0.1**
comp=Z,4μmcomp=Z,402nm,1.4s,mb6.2
TTSI Tana Toraja 33.89 147 P **P** **08 37 55.0 +0.9**
comp=Z,134nm,1.4s,mb5.7
TTSI Tana Toraja 33.89 147 P **P** **08 37 55.2 +1.1**
comp=Z,134nm,1.4s,mb5.7
HABR Khabarovsk 34.02 41 *ce*P **P** **08 37 53.8 -1.1**
HABR 08 39 05.1
HABR 08 40 30.1
HABR *e*S **S** **08 43 19.6 -1.3**
HABR *e*SS SS 08 45 26.9 -21
HABR *e* 08 48 16.6
HABR pmax pmax
comp=E,60nm,2.3s
HABR pmax pmax
comp=Z,77nm,1.7s,mb5.4
HABR pmax pmax
comp=N,28nm,2.1s
HABR MLR MLR
comp=N,4μm,11.0s
HABR MLR MLR
comp=Z,3μm,9.0s
HABR MLR MLR
comp=E,3μm,9.0s
BJII Banjamegara 34.23 166 P **P** **08 37 58.9 +1.9**
comp=E,2μmcomp=E,130nm,1.4s,mb5.7

SPSI	**Sidrap Palu**	**34.66**	**147**	P		**P**		**08 38 01.4**	**+0.6**
	comp=E,2µmcomp=E,174nm,1.5s,mb5.8								
SPSI	**Sidrap Palu**	**34.66**	**147**	P		**P**		**08 38 01.5**	**+0.7**
	comp=E,2µmcomp=E,174nm,1.5s,mb5.8								
CLNS	**Chul'man**	**34.72**	**22**	*e*P		**P**		**08 38 01.1**	**+0.3**
CLNS				*e**PP		pP		08 38 10.9	+9.2
CLNS				*e*				08 39 16.2	
CLNS				*e*				08 40 34.5	
CLNS				*e*S		**S**		**08 43 28.8**	**-2.6**
CLNS				*e*SS		SS		08 45 38.6	-23
CLNS				*e*SSS				08 46 14.7	
CLNS				pmax	pmax				
	comp=N,10.0nm,1.1s								
CLNS				pmax	pmax				
	comp=E,12nm,0.7s								
CLNS				pmax	pmax				
	comp=Z,12nm,0.9s,mb4.8								
CLNS				pmax	pmax				
	comp=Z,14nm,0.9s,mb4.9								
CLNS				pmax	pmax				
	comp=E,14nm,1.0s								
CLNS				pmax	pmax				
	comp=N,14nm,1.0s								
CLNS				smax					
	comp=E,164nm,12.8s								
CLNS				smax					
	comp=N,85nm,12.8s								
CLNS				MLR	MLR				
	comp=N,3µm,11.0s,MS5.3								
CLNS				MLR	MLR				
	comp=E,2µm,12.0s,MS5.3								
CLNS				MLR	MLR				
	comp=Z,2µm,10.0s,MS5.2								
SJI	**Sawahan**	**35.11**	**163**	P		**P**		**08 38 05.9**	**+1.3**
	comp=Z,3µmcomp=Z,256nm,0.8s,mb6.2								
TNTI	**Ternate**	**35.25**	**132**	P		**P**		**08 38 05.7**	**-0.2**
	comp=Z,2µmcomp=Z,123nm,1.2s,mb5.7								
TNTI	**Ternate**	**35.25**	**132**	P		**P**		**08 38 08.5**	**+2.6**
	comp=Z,2µmcomp=Z,123nm,1.2s,mb5.7								
PWJI	**Pagerwojo**	**35.40**	**163**	P		**P**		**08 38 07.9**	**+0.8**
	comp=Z,84nm,1.3s,mb5.5								
BVAR	**Borovoye Array**	**35.61**	**327**	P		**P**		**08 38 08.8**	**+0.2**
	comp=Z,23nm,0.7s,mb5.2,baz=122,slow=9.3,SNR=40								
BVAR				PcP		PcP		08 40 37.4	+0.1
	comp=Z,12nm,0.7s,baz=130,slow=5.8,SNR=7.5								
BVAR	**Borovoye Array**	**35.61**	**327**	P		**P**		**08 38 08.8**	**+0.2**
BVAR								08 40 37.4	
BRVK	**Borovoye**	**35.68**	**327**	P		**P**		**08 38 10.5**	**+1.3**
	comp=Z,492nm,0.8s,mb6.5,SNR=25								
BRVK	**Borovoye**	**35.68**	**327**	*e*P		**P**		**08 38 10.1**	**+0.9**
	comp=Z,75nm,0.9s,mb5.6								
BRVK				LR	LR				
	comp=Z,2µm,20.0s,MS5.0								
BRVK	**Borovoye**	**35.68**	**327**	*d* iP		**P**		**08 38 10.0**	**+0.8**
BRVK				pmax	pmax				
	comp=Z,123nm,1.2s,mb5.7								
BRVK				MLR	MLR				
	comp=Z,2µm,17.0s,MS4.9								
BRVK	**Borovoye**	**35.68**	**327**	P		**P**		**08 38 10.7**	**+1.5**
	SNR=18								
BKSI	**Bulukumba**	**36.01**	**148**	P		**P**		**08 38 12.6**	**+0.2**
	comp=Z,1µmcomp=Z,84nm,0.7s,mb5.8								
KDI	**Kendari**	**36.11**	**143**	P		**P**		**08 38 13.4**	**+0.2**
	comp=Z,2µmcomp=Z,133nm,1.0s,mb5.8								
LBMI	**Labuha**	**36.38**	**133**	P		**P**		**08 38 20.6**	**+5.0**
	comp=Z,1µmcomp=Z,148nm,1.1s,mb5.8								
LBMI	**Labuha**	**36.38**	**133**	P		**P**		**08 38 15.0**	**-0.6**
	comp=Z,1µmcomp=Z,148nm,1.1s,mb5.8								
NBBI	**Negara**	**36.56**	**159**	P		**P**		**08 38 24.7**	**+7.6**
	comp=Z,499nm,1.3s,mb6.2								
IMYA	**Miami**	**36.87**	**296**	*e*P		**P**		**08 38 20.3**	**+0.7**
IDAH	**Dahanechah**	**36.98**	**290**	*e*P		**P**		**08 38 18.8**	**-1.8**
ERM	**Erimo**	**37.20**	**54**	P		**P**		**08 38 24.2**	**+1.9**
	comp=Z,614nm,1.2s,mb6.3,SNR=7.6								
ERM	**Erimo**	**37.20**	**54**	*e*P		**P**		**08 38 22.1**	**-0.2**
	comp=Z,102nm,0.9s,mb5.7								
ERM				LR	LR				
	comp=Z,2µm,20.0s,MS4.9								
ERM	**Erimo**	**37.20**	**54**	*e*P		**P**		**08 38 22.1**	**-0.2**
ERM				pmax	pmax				
	comp=Z,102nm,0.9s,mb5.7								
ERM				MLR	MLR				
	comp=Z,2µm,20.0s,MS4.9								
ASAJ	**Asahikawa**	**37.28**	**51**	*e*P		**P**		**08 38 22.9**	**-0.1**
	comp=Z,34nm,0.8s,mb5.2								
ASAJ	**Asahikawa**	**37.28**	**51**	P		**P**		**08 38 22.4**	**-0.5**
	comp=Z,23nm,0.7s,mb5.1,baz=265,slow=8.6,SNR=17								
ASAJ	**Asahikawa**	**37.28**	**51**	P		**P**		**08 38 22.5**	**-0.5**
ASAJ				pmax	pmax				
	comp=Z,23nm,0.7s								
ISRO	**Mashad**	**37.38**	**296**	*e*P		**P**		**08 38 24.9**	**+1.0**
IMOG	**Moghan**	**37.47**	**296**	*e*P		**P**		**08 38 25.5**	**+0.8**
IPAY	**Payeh**	**37.77**	**296**	*e*P		**P**		**08 38 28.4**	**+1.2**
IAKL	**Akhelmad**	**37.97**	**297**	*e*P		**P**		**08 38 28.2**	**-0.7**
IEMG	**Emamgholi**	**38.11**	**298**	*e*P		**P**		**08 38 31.0**	**+0.9**
IKRD	**Kardeh**	**38.17**	**297**	*e*P		**P**		**08 38 25.5**	**-5.1**
YSS	**Yuzh-Sakhalins**	**38.20**	**46**	*e*P		**P**		**08 38 30.9**	**+0.2**
	comp=Z,62nm,0.8s,mb5.4								
YSS	**Yuzh-Sakhalins**	**38.20**	**46**⇓	*e*P		**P**		**08 38 31.0**	**+0.3**
YSS				*e**SP		sP		08 38 39.0	+7.1
YSS				*e*				08 40 06.0	
YSS				*e*				08 40 51.0	
YSS				*e*S		**S**		**08 44 20.0**	**-4.8**
YSS				pmax	pmax				
	comp=Z,500nm,4.0s								
YSS				pmax	pmax				
	comp=Z,30nm,1.0s,mb5.0								
YSS				MLR	MLR				
	comp=Z,2µm,15.0s,MS5.0								
YSS				MLR	MLR				
	comp=N,2µm,14.0s,MS5.2								
YSS				MLR	MLR				
	comp=E,2µm,14.0s,MS5.2								
COCO	**West Island**	**38.53**	**188**	PFAKE				08 38 50.0	+16
COCO				LR	LR				
	comp=Z,1µm,20.0s,MS4.8								
ISFR	**Sfrayin**	**38.60**	**297**	*e*P		**P**		**08 38 35.9**	**+1.7**
ISHV	**Shirvan**	**38.87**	**298**	*e*P		**P**		**08 38 37.5**	**+1.0**
YUK	**Yuzh-Kuril'sk**	**39.55**	**52**⇑	*i*P		**P**		**08 38 44.0**	**+1.9**
YUK				*e*S		**S**		**08 44 36.0**	**-9.3**
YUK				*e*SS		SS		08 47 23.0	-17
YUK				pmax	pmax				
	comp=N,10.0nm,2.0s								
YUK				pmax	pmax				
	comp=E,10.0nm,2.0s								
YUK				pmax	pmax				
	comp=Z,30nm,2.0s,mb4.7								
YUK				pmax	pmax				
	comp=Z,990nm,2.0s,mb6.2								
YUK				smax					
	comp=E,90nm,6.0s								
YUK				MLR	MLR				
	comp=N,1µm,11.0s,MS5.0								
YUK				MLR	MLR				
	comp=E,700nm,11.0s,MS5.0								
YUK				MLR	MLR				
	comp=Z,600nm,11.0s,MS4.7								
AB31	**Akbulak array**	**39.66**	**317**⇑	*e*P		**P**		**08 38 42.8**	**-0.1**
ABKAR	**Akbulak array**	**39.66**	**317**	*e*P		**P**		**08 38 43.1**	**+0.2**
	comp=Z,20nm,0.6s,mb5.0								
SMDO	**Samad**	**39.85**	**275**	P		**P**		**08 38 45.4**	**+0.6**
	SNR=21								
MMRI	**Maumere**	**39.91**	**148**	P		**P**		**08 38 45.0**	**-0.3**
	comp=Z,6µmcomp=Z,428nm,1.7s,mb5.9								
WSI	**Waingapu**	**39.93**	**151**	P		**P**		**08 38 48.7**	**+3.2**
	comp=Z,9µmcomp=Z,1µm,0.7s,mb6.7								
WSI	**Waingapu**	**39.93**	**151**	P		**P**		**08 38 43.8**	**-1.7**
	comp=Z,9µmcomp=Z,1µm,0.7s,mb6.7								
YAK	**Yakutsk**	**40.30**	**20**	*e*P		**P**		**08 38 47.8**	**-0.3**
	comp=Z,108nm,0.8s,mb5.6								
YAK				LR	LR				
	comp=Z,358nm,21.0s,MS4.2								
YAK	**Yakutsk**	**40.30**	**20**	*e*P		**P**		**08 38 47.6**	**-0.5**
YAK				*e**PP		pP		08 38 56.6	+7.7
YAK				*e*				08 40 27.6	
YAK				*e*PPP				08 40 44.4	
YAK				*e*				08 40 55.9	
YAK				*e*S		**S**		**08 44 52.6**	**-3.5**
YAK				*e*SS		SS		08 47 51.4	-2.8
YAK				*e*SSS				08 48 25.8	
YAK				*e*				08 48 47.4	
YAK				pmax	pmax				
	comp=Z,36nm,1.1s,mb5.0								
YAK				pmax	pmax				
	comp=N,16nm,1.1s								
YAK				pmax	pmax				
	comp=E,23nm,1.2s								
YAK				pmax	pmax				
	comp=Z,65nm,1.0s,mb5.3								
YAK				pmax	pmax				
	comp=E,57nm,1.2s								
YAK				pmax	pmax				
	comp=N,43nm,1.9s								
YAK				smax					
	comp=N,132nm,2.7s								
YAK				smax					
	comp=E,221nm,4.2s								
YAK				MLR	MLR				
	comp=Z,6µm,17.0s,MS5.5								
YAK				MLR	MLR				
	comp=N,2µm,12.0s,MS5.4								
YAK				MLR	MLR				
	comp=E,2µm,14.0s,MS5.4								
IBND	**Bandar-abas**	**40.33**	**282**	*e*P		**P**		**08 38 48.1**	**-0.7**
HOQ	**Hoqain**	**40.39**	**276**	P		**P**		**08 38 52.1**	**+2.7**
	SNR=7.8								
IBAF	**Bafgh**	**40.68**	**289**	*e*P		**P**		**08 38 51.7**	**+0.1**
BSY	**Bisya**	**40.69**	**275**	P		**P**		**08 38 52.5**	**+0.7**
	SNR=16								
AKTK	**Aktyubinsk**	**41.23**	**318**	P		**P**		**08 38 56.1**	**+0.2**
AKTK				LR	LR			08 57 54.3	
AKTO	**Aktyubinsk**	**41.23**	**318**	P		**P**		**08 38 56.1**	**+0.2**
	comp=E,7.6nm,0.9s,mb4.3,baz=107,slow=9.6,SNR=7.9								
AKTO				LR		LR		08 57 54.3	
	comp=E,2µm,18.1s,MS5.1,baz=291,slow=39								
AKTO	**Aktyubinsk**	**41.23**	**318**	P		**P**		**08 38 56.1**	**+0.2**
ICHK	**Chekchek**	**41.61**	**290**	*e*P		**P**		**08 38 58.8**	**-0.5**
IANJ	**Anjilo**	**41.87**	**295**	*e*P		**P**		**08 39 01.9**	**+0.5**
IGLO	**Ghaloghah**	**41.93**	**296**	*e*P		**P**		**08 39 02.7**	**+0.8**
GUMO	**Guam**	**42.11**	**99**	PFAKE				08 39 10.0	+6.4
GUMO				LR	LR				
	comp=Z,2µm,20.0s,MS5.0								
SVE	**Sverdlovsk**	**42.40**	**327**⇑	*e*P		**P**		**08 39 06.5**	**+1.2**
SVE				pmax	pmax				
	comp=Z,176nm,0.9s,mb5.7								
SVE				MLR	MLR				
	comp=Z,2µm,16.0s,MS5.1								
IPAR	**Pars**	**43.02**	**286**	*e*P		**P**		**08 39 11.3**	**+0.5**
ISRV	**Sarvestan**	**43.03**	**286**	*e*P		**P**		**08 39 10.7**	**-0.2**
IPRN	**Peran**	**43.14**	**296**	*e*P		**P**		**08 39 12.1**	**+0.4**
ARU	**Arti**	**43.23**	**326**	*e*P		**P**		**08 39 12.7**	**+0.5**
	comp=Z,189nm,1.1s,mb5.7								
ARU				*e*PcP		PcP		08 41 00.9	-0.5
ARU				LR	LR				
	comp=Z,2µm,19.0s,MS5.0								
ARU	**Arti**	**43.23**	**326**	*d* iP		**P**		**08 39 12.8**	**+0.7**
ARU				*e*				08 40 51.8	
ARU				*e*				08 40 59.7	
ARU				*e*PPP				08 41 28.3	
ARU				S		**S**		**08 45 41.1**	**+1.5**
ARU				SSS				08 49 34.6	
ARU				pmax	pmax				
	comp=Z,208nm,1.2s,mb5.7								
ARU				MLR	MLR				
	comp=Z,1µm,19.0s,MS4.9								
ARU	**Arti**	**43.23**	**326**	P		**P**		**08 39 13.4**	**+1.3**
	comp=Z,731nm,1.2s,mb6.3,SNR=15								
ISFB	**Sefidab**	**43.29**	**293**	*e*P		**P**		**08 39 12.9**	**0.0**
IDMV	**Damavand**	**43.41**	**295**	*e*P		**P**		**08 39 14.4**	**+0.6**
TLE	**Tual**	**43.57**	**132**	P		**P**		**08 39 16.8**	**+1.5**
	comp=Z,120nm,1.5s,mb5.4								
TLE	**Tual**	**43.57**	**132**	P		**P**		**08 39 15.8**	**+0.5**
	comp=Z,120nm,1.5s,mb5.4								
IGAR	**Gharneh**	**43.60**	**290**	*e*P		**P**		**08 39 15.9**	**+0.5**
IVRN	**Varamin**	**43.68**	**294**	*e*P		**P**		**08 39 13.3**	**-2.7**
IVRN				*e*P		pP		08 39 15.9	-1.0
IKLH	**Kolahrood**	**43.91**	**292**	*e*P		**P**		**08 39 18.7**	**+0.8**
DGAR	**Diego Garcia**	**44.02**	**225**	PFAKE				08 39 30.0	+11
DGAR				LR	LR				
	comp=Z,2µm,22.0s,MS4.9								
IR3	**Iran Long-Peri**	**44.23**	**295**	*e*P		**P**		**08 39 20.4**	**-0.1**
IPIR	**Pirpir**	**44.54**	**291**	*e*P		**P**		**08 39 23.2**	**+0.2**
IRAZ	**Razeghan**	**45.13**	**295**	*e*P		**P**		**08 39 28.2**	**+0.6**
SOKR	**Solikamsk**	**45.48**	**330**	*d* iP		**P**		**08 39 30.8**	**+0.8**
SOKR				S		**S**		**08 46 13.4**	**+1.2**
SOKR				pmax	pmax				
	comp=Z,240nm,1.3s,mb5.9								
SOKR				MLR	MLR				
	comp=Z,840nm,15.0s,MS4.8								
QRN	**Al-Qurain**	**47.62**	**286**	*e*P		**P**		**08 39 45.9**	**-1.4**
QRN				AMb	AMB			08 39 52.8	
	comp=Z,122nm,1.2s,mb5.8								
KBD	**Kabd**	**47.74**	**287**	*e*P		**P**		**08 39 46.9**	**-1.3**
KBD				AMb	AMB			08 39 54.1	
	comp=Z,83nm,1.1s,mb5.7								
TIXI	**Tiksi**	**47.87**	**11**	*e*P		**P**		**08 39 48.2**	**-0.5**
	comp=Z,26nm,0.6s,mb5.4								
TIXI				LR	LR				
	comp=Z,3µm,22.0s,MS5.3								
TIXI	**Tiksi**	**47.87**	**11**	*e*P		**P**		**08 39 47.9**	**-0.7**
TIXI				*e*S		**S**		**08 46 42.2**	**-3.9**
TIXI				pmax	pmax				
	comp=Z,106nm,1.9s,mb5.5								
TIXI				MLR	MLR				
	comp=Z,3µm,14.0s,MS5.4								
RDF	**Al-Radifah**	**47.91**	**286**	*e*P		**P**		**08 39 48.3**	**-1.3**
RDF				AMb	AMB			08 39 55.4	
	comp=Z,204nm,0.8s,mb6.2								
MIB	**Mutribah**	**47.94**	**287**	*e*P		**P**		**08 39 48.8**	**-1.0**
MIB				AMb	AMB			08 39 55.7	
	comp=Z,185nm,1.2s,mb6.0								
NAY	**Al-Naaiem**	**48.11**	**287**	*e*P		**P**		**08 39 50.0**	**-1.1**
NAY				AMb	AMB			08 39 57.5	
	comp=Z,173nm,0.9s,mb6.1								
IAZR	**Azarshahr**	**48.17**	**298**	*e*P		**P**		**08 39 51.9**	**+0.4**
IMRD	**Marand**	**48.34**	**300**	*e*P		**P**		**08 39 52.4**	**-0.4**
ISHB	**Shabestar**	**48.43**	**299**	*e*P		**P**		**08 39 54.9**	**+1.5**
DGRG	**David-gareji**	**48.52**	**303**	P		**P**		**08 39 54.9**	**+0.7**
KAKA	**Kakadu**	**48.80**	**139**	*e*P		**P**		**08 39 54.9**	**-1.6**
	comp=Z,68nm,0.8s,mb5.7								
KAKA	**Kakadu**	**48.80**	**139**	*e*P		**P**		**08 39 54.6**	**-1.9**
	comp=Z,213nm,0.8s,mb6.2								
KAKA	**Kakadu**	**48.80**	**139**	P		**P**		**08 39 55.2**	**-1.3**
MTA	**Mtatsminda**	**48.96**	**303**	P		**P**		**08 39 57.4**	**0.0**
TBLG	**Delisi**	**49.00**	**304**	*e*P		**P**		**08 39 58.8**	**+1.0**
TBLG	**Delisi**	**49.00**	**304**	P		**P**		**08 39 58.8**	**+1.1**
GNI	**Garni**	**49.03**	**301**	*e*P		**P**		**08 39 59.7**	**+1.7**
	comp=Z,91nm,1.0s,mb5.8								
GNI				LR	LR				
	comp=Z,1µm,21.0s,MS4.8								
GNI	**Garni**	**49.03**	**301**	P		**P**		**08 39 59.0**	**+1.0**
	comp=Z,9.3nm,0.4s,mb5.2,baz=222,slow=6.2,SNR=12								
GNI	**Garni**	**49.03**	**301**⇑	*e*P		**P**		**08 39 59.9**	**+1.9**
GNI				pmax	pmax				
	comp=Z,60nm,1.2s								
GNI				MLR	MLR				
	comp=Z,870nm,18.0s								
GNI	**Garni**	**49.03**	**301**	P		**P**		**08 40 00.3**	**+2.3**
	SNR=6.2								
PETK	**Petropavlovsk-**	**49.05**	**41**	P		**P**		**08 39 57.4**	**-0.6**
	comp=Z,16nm,1.2s,mb5.0,baz=234,slow=5.0,SNR=6.5								
PETK				LR	LR			09 03 01.5	
	comp=Z,1µm,20.0s,MS4.9,baz=81,slow=39								
PETK	**Petropavlovsk-**	**49.05**	**41**	P		**P**		**08 39 57.4**	**-0.6**
KNA	**Kununurra**	**49.24**	**145**	P		**P**		**08 39 58.5**	**-1.4**
	comp=Z,2µmcomp=Z,323nm,1.0s,mb6.3								
SEY	**Seymchan**	**49.25**	**28**⇓	*e*P		**P**		**08 39 59.2**	**-0.2**
SEY	**Seymchan**	**49.25**	**28**	*e*P		**P**		**08 39 59.2**	**-0.2**
GOR	**Gori**	**49.47**	**304**	P		**P**		**08 39 58.3**	**-3.0**
PET	**Petropavlovsk**	**49.60**	**42**	*e*P		**P**		**08 40 00.5**	**-1.7**
	comp=Z,48nm,1.0s,mb5.5								
PET				LR	LR				
	comp=Z,2µm,19.0s,MS5.1								
PET	**Petropavlovsk**	**49.60**	**42**	*e*P		**P**		**08 40 01.5**	**-0.7**
PET				*e*				08 41 56.9	
PET				*e*S		**S**		**08 47 03.8**	**-7.2**
PET				*e*SS		SS		08 50 33.8	-9.0
PET				pmax	pmax				
	comp=Z,30nm,0.7s,mb5.4								
PET				pmax	pmax				
	comp=Z,100nm,15.3s								
PET				pmax	pmax				
	comp=Z,100nm,15.4s								
PET				MLR	MLR				
	comp=Z,2µm,16.0s,MS5.3								
ZEI	**Tsey**	**49.62**	**305**	*e*P		**P**		**08 40 02.1**	**-0.4**
ZEI				pmax	pmax				
	comp=Z,19nm,0.5s,mb5.4								
FITZ	**Fitzroy Crossi**	**49.75**	**150**	*e*P		**P**		**08 40 02.9**	**-0.8**
	comp=Z,80nm,0.6s,mb5.9								
FITZ	**Fitzroy Crossi**	**49.75**	**150**	P		**P**		**08 40 03.0**	**-0.7**
	comp=Z,152nm,0.8s,mb6.1								
MBWA	**Marble Bar**	**50.20**	**158**	*e*P		**P**		**08 40 06.5**	**-0.6**
	comp=Z,173nm,0.9s,mb6.1								
MBWA				LR	LR				
	comp=Z,1µm,19.0s,MS5.0								
MBWA	**Marble Bar**	**50.20**	**158**	P		**P**		**08 40 07.0**	**0.0**
	SNR=12								
KIV	**Kislovodsk**	**50.50**	**306**	*e*P		**P**		**08 40 09.9**	**+0.8**
	comp=Z,119nm,1.0s,mb5.9								
KIV				LR	LR				
	comp=Z,1µm,19.0s,MS4.9								
KIV	**Kislovodsk**	**50.50**	**306**	*d* iP		**P**		**08 40 09.5**	**+0.3**
KIV				*e*				08 41 24.6	
KIV				*e*				08 42 06.9	
KIV				*e*S		**S**		**08 47 25.2**	**+1.4**
KIV				pmax	pmax				
	comp=Z,142nm,1.2s,mb5.9								
KIV				MLR	MLR				
	comp=Z,1µm,15.0s,MS5.0								
KIV	**Kislovodsk**	**50.50**	**306**	P		**P**		**08 40 10.3**	**+1.1**
	comp=Z,487nm,0.9s,mb6.5,SNR=8.6								
KIV	**Kislovodsk**	**50.50**	**306**	P		**P**		**08 40 10.3**	**+1.2**
	SNR=15								
VRHR	**Novokhopersk**	**51.53**	**316**	*e*P		**P**		**08 40 16.5**	**-0.3**
VRHR				pmax	pmax				
	comp=N,20nm,0.7s								
VRHR				pmax	pmax				
	comp=E,60nm,0.7s								
VRHR				pmax	pmax				
	comp=Z,70nm,0.7s,mb5.7								
VORD	**Divnogorie**	**52.99**	**315**	*e*P		**P**		**08 40 27.2**	**-0.5**
VORD				pmax	pmax				
	comp=N,10.0nm,0.6s								
VORD				pmax	pmax				
	comp=E,10.0nm,0.6s								
VORD				pmax	pmax				
	comp=Z,10.0nm,0.6s,mb4.9								
VORD				MLR	MLR				
	comp=N,1µm,17.0s,MS5.3								
VORD				MLR	MLR				
	comp=E,2µm,17.0s,MS5.3								
VORD				MLR	MLR				
	comp=Z,960nm,17.0s,MS4.9								
VSR	**Storozhevoye**	**53.08**	**316**	*e*P		**P**		**08 40 27.8**	**-0.6**
VSR				pmax	pmax				
	comp=N,3.0nm,0.7s								
VSR				pmax	pmax				
	comp=E,10.0nm,0.7s								
VSR				pmax	pmax				
	comp=Z,30nm,0.7s,mb5.3								
VSR				MLR	MLR				
	comp=N,2µm,14.0s,MS5.4								
VSR				MLR	MLR				
	comp=E,1µm,14.0s,MS5.4								
VSR				MLR	MLR				
	comp=Z,770nm,14.0s,MS4.9								
KLMR	**Klimovskoe**	**54.03**	**328**	*e*P		**P**		**08 40 34.2**	**-1.0**
KLMR				pmax	pmax				
	comp=Z,289nm,1.6s,mb6.0								
KLMR				pmax	pmax				
	comp=Z,117nm,6.5s								
MALT	**Malatya**	**54.06**	**300**	*e*P		**P**		**08 40 36.2**	**+0.5**
	comp=Z,25nm,1.0s,mb5.1								
MALT				LR	LR				
	comp=Z,705nm,20.0s,MS4.7								
MALT	**Malatya**	**54.06**	**300**	⇓P		**P**		**08 40 36.4**	**+0.7**
MALT	**Malatya**	**54.06**	**300**	⇓*i*P		**P**		**08 40 36.4**	**+0.7**
MALT	**Malatya**	**54.06**	**300**	P		**P**		**08 40 36.9**	**+1.2**
	comp=Z,624nmcomp=Z,24nm,1.0s,mb5.1								
MALT	**Malatya**	**54.06**	**300**	P		**P**		**08 40 36.8**	**+1.1**
	comp=Z,624nmcomp=Z,24nm,1.0s,mb5.1								
ANN	**Anapa**	**54.24**	**308**	*e*P		**P**		**08 40 34.5**	**-2.5**
ANN				pmax	pmax				
	comp=N,66nm,1.5s								
ANN				pmax	pmax				
	comp=Z,66nm,1.5s,mb5.3								
ANN				MLR	MLR				
	comp=N,2µm,21.0s,MS5.2								
ANN				MLR	MLR				
	comp=E,1µm,21.0s,MS5.2								
MOS	**Moscow**	**54.33**	**321**	*e*P		**P**		**08 40 36.0**	**-1.4**
MOS				*e*				08 42 41.0	
MOS				*e*S		**S**		**08 48 17.8**	**+1.9**
MOS				pmax	pmax				
	comp=Z,400nm,1.6s,mb6.1								
MOS				pmax	pmax				
	comp=Z,222nm,1.3s,mb5.9								
MSEY	**Mahe Island**	**54.46**	**243**	*e*P		**P**		**08 40 38.8**	**-0.1**
	comp=Z,23nm,0.9s,mb5.1								
MSEY				LR	LR				
	comp=Z,1µm,19.0s,MS5.0								
MSEY	**Mahe Island**	**54.46**	**243**	*e*P		**P**		**08 40 38.8**	**-0.2**
MSEY				pmax	pmax				
	comp=Z,23nm,0.9s,mb5.1								
MSEY				MLR	MLR				
	comp=Z,1µm,19.0s,MS5.0								
OBN	**Obninsk**	**54.88**	**320**	*e*P		**P**		**08 40 41.5**	**0.0**
	comp=Z,101nm,1.2s,mb5.7								
OBN				LR	LR				
	comp=Z,2µm,19.0s,MS5.1								
OBN	**Obninsk**	**54.88**	**320**	*d* iP		**P**		**08 40 41.2**	**-0.2**
OBN				*e*				08 42 45.9	
OBN				pmax	pmax				
	comp=Z,106nm,1.2s,mb5.8								
OBN				MLR	MLR				
	comp=Z,2µm,24.0s,MS5.1								
OBN	**Obninsk**	**54.88**	**320**	P		**P**		**08 40 41.3**	**-0.1**
	comp=Z,374nm,1.2s,m

comp=Z,371nm,19.0s,MS4.5
BRTR Keskin Array B 57.56 302 P **P** **08 41 00.0 -0.8**
comp=Z,9.7nm,0.6s,mb5.0,baz=110,slow=6.9,SNR=44
BRTR ScP ScP 08 45 52.4 -2.9
comp=Z,1.2nm,0.8s,baz=92,slow=4.6,SNR=2.7
BRTR LR LR 09 12 38.0
comp=Z,440nm,19.5s,MS4.6,baz=260,slow=43
BRTR Keskin Array B 57.56 302 P **P** **08 41 00.0 -0.9**
APA Apatity 57.83 335⇑ *e*P **P** **08 41 02.0 -0.2**
APA *i* 08 41 13.0
APA *e* 08 49 13.0
APA pmax pmax
comp=Z,24nm,0.8s,mb5.3
APA MLR MLR
comp=Z,2μm,12.0s,MS5.5
JOF Joensuu 58.15 329 *e*P **P** **08 41 04.1 -0.5**
JOF pmax pmax
comp=Z,45nm,0.6s,mb5.7
JOF Joensuu 58.15 329 *e*p **P** **08 41 04.1 -0.5**
comp=Z,45nm,0.6s,mb5.7
PUL Pulkovo 58.47 326⇑ *e*P **P** **08 41 09.1 +2.2**
PUL Pulkovo 58.47 326⇑ *e*P **P** **08 41 09.0 +2.1**
PUL pmax pmax
comp=Z,87nm,0.5s,mb6.0
PUL MLR MLR
comp=Z,893nm,15.0s,MS5.0
ASAR Alice Springs 58.48 145 P **P** **08 41 06.7 -0.7**
comp=Z,40nm,0.6s,mb5.6,baz=328,slow=6.6,SNR=136
ASAR PKPPKP 09 10 40.5
comp=Z,0.6nm,0.8s,baz=165,slow=3.8,SNR=4.4
ASAR Alice Springs 58.48 145 P **P** **08 41 06.7 -0.7**
EIL Elat 58.50 290 P **P** **08 41 06.3 -1.3**
EIL Elat 58.50 290 P **P** **08 41 06.3 -1.3**
comp=Z,15nm,0.7s,mb5.1,baz=80,slow=4.8,SNR=8.3
CSS Prodhromos 58.65 296 *e*P **P** **08 41 08.2 -0.4**
comp=Z,40nm,0.7s,mb5.6
CSS LR LR
comp=Z,1μm,19.0s,MS5.0
SMY Shemya 58.91 43 *e*P **P** **08 41 10.2 +0.1**
comp=Z,135nm,0.8s,mb6.0
SMY Shemya 58.91 43 *e*P **P** **08 41 10.2 +0.1**
SMY pmax pmax
comp=Z,135nm,0.8s,mb6.0
AKASG Malin Array Be 59.37 315 P **P** **08 41 12.0 -1.4**
comp=Z,8.9nm,0.5s,mb5.0,baz=80,slow=6.0,SNR=38
AKASG Malin Array Be 59.37 315 *i* P **P** **08 41 12.6 -0.7**
AKASG pmax pmax
comp=Z,9.0nm,0.5s
KIEV Kiev 59.38 315 *e*P **P** **08 41 12.2 -1.2**
comp=Z,26nm,0.8s,mb5.3
KIEV LR LR
comp=Z,1μm,19.0s,MS5.1
KIEV Kiev 59.38 315 *e*P **P** **08 41 12.2 -1.2**
KIEV pmax pmax
comp=Z,26nm,0.8s,mb5.3
KIEV MLR MLR
comp=Z,1μm,19.0s,MS5.1
KLBR Kellerberrin 59.48 164 *e*P **P** **08 41 13.8 -0.3**
comp=Z,24nm,0.5s,mb5.5
WAKE Wake Island 59.58 82 PFAKE 08 41 30.0 +15
WAKE LR LR
comp=Z,930nm,21.0s,MS4.9
MICGM Minsk 59.91 320 *e*P **P** **08 41 16.0 -0.9**
MNK Minsk 59.93 320 *e*P **P** **08 41 16.5 -0.6**
KIS Kishinev 60.04 311 *e*P **P** **08 41 16.0 -1.9**
KIS *e*S **S** **08 49 27.0 -4.4**
KIS *e*L 09 06 00.0
KIS LRM 09 11 34.0
comp=Z,2μm,17.0s
KIS Kishinev 60.04 311 *e*P **P** **08 41 16.0 -1.9**
KIS *e* 08 41 32.0
KIS *e*S **S** **08 49 27.0 -4.4**
KIS MLR MLR
comp=N,500nm,16.0s,MS5.2
KIS MLR MLR
comp=Z,1μm,16.0s,MS5.2
KIS MLR MLR
comp=E,1μm,14.0s,MS5.2
KIS MLR MLR
comp=Z,2μm,17.0s
TLCR 60.29 309 ⇑P **P** **08 41 20.4 +0.7**
TLCR 60.29 309 ⇑P **P** **08 41 20.4 +0.7**
TLCR 60.29 309⇑ *i*P **P** **08 41 20.4 +0.7**
VSU Vasula 60.33 324 *de*P **P** **08 41 19.8 0.0**
KEV Kevo 60.41 337 *e*P **P** **08 41 20.0 -0.1**
comp=Z,31nm,0.8s,mb5.4
KEV LR LR
comp=Z,919nm,21.0s,MS4.9
KEV Kevo 60.41 337 *e*P **P** **08 41 20.0 -0.1**
KEV pmax pmax
comp=Z,31nm,0.8s,mb5.4
KEV MLR MLR
comp=Z,919nm,21.0s,MS4.9
KEV Kevo 60.41 337 *e*p **P** **08 41 19.9 -0.2**
comp=Z,19nm,0.5s,mb5.4
KAF Kangasniemi 60.45 328 *e*P **P** **08 41 19.2 -1.3**
KAF pmax pmax
comp=Z,22nm,0.7s,mb5.3
KAF Kangasniemi 60.45 328 *e*p **P** **08 41 19.2 -1.3**
comp=Z,22nm,0.7s,mb5.3
IDID Didziasalis 60.51 321 *e*P **P** **08 41 21.4 +0.4**
IDID AMB AMB 08 41 22.9
comp=Z,16nm,1.1s,mb5.1
FINES FINESS Array B 60.57 328 P **P** **08 41 20.9 -0.4**
comp=Z,40nm,0.6s,mb5.7,baz=88,slow=8.2,SNR=138
FINES LR LR 09 08 33.5
comp=Z,1μm,19.6s,MS5.1,baz=104,slow=37
FINES FINESS Array B 60.57 328 P **P** **08 41 20.9 -0.4**
NWAO Narrogin (SRO) 60.63 165 *e*P **P** **08 41 21.8 -0.2**
comp=Z,29nm,0.6s,mb5.6
NWAO LR LR
comp=Z,1μm,22.0s,MS5.1
NWAO Narrogin (SRO) 60.63 165 *e*P **P** **08 41 21.8 -0.2**
NWAO pmax pmax
comp=Z,29nm,0.6s
NWAO MLR MLR
comp=Z,1μm,22.0s
IZAR Zarasai 60.76 321 AMB AMB 08 41 22.5
comp=Z,19nm,1.2s,mb5.1
ISAL Salakas 60.84 321 *e*P **P** **08 41 23.8 +0.5**
ISAL AMB AMB 08 41 25.1
comp=Z,16nm,1.2s,mb5.0
ARCES ARCESS Array B 60.92 337 P **P** **08 41 22.6 -1.0**
comp=Z,17nm,1.0s,mb5.1,baz=85,slow=7.1,SNR=48
ARCES ARCESS Array B 60.92 337 P **P** **08 41 22.6 -1.0**
TESR 61.58 311 ⇓P **P** **08 41 27.9 -0.6**
TESR 61.58 311 ⇓*i*P **P** **08 41 27.9 -0.6**
VRI Vrincioaia 61.63 310 ⇓P **P** **08 41 29.1 +0.2**
VRI Vrincioaia 61.63 310 ⇓P **P** **08 41 29.1 +0.3**
VRI Vrincioaia 61.63 310 ⇓*i*P **P** **08 41 29.1 +0.3**
KTK1 Kautokeino 61.71 336 *e*P **P** **08 41 29.9 +0.9**
KTK1 Kautokeino B 61.71 336 *i* P **P** **08 41 32.0 +3.0**
FORT Forrest 61.98 155 *e*P **P** **08 41 30.4 -0.8**
comp=Z,102nm,0.7s,mb6.1
FORT Forrest 61.98 155 *e*P **P** **08 41 31.0 -0.2**
comp=Z,105nm,0.7s,mb6.1
MLR Muntele Rosu 62.23 310 ⇑P **P** **08 41 33.1 +0.2**
MLR Muntele Rosu 62.23 310 ⇑P **P** **08 41 33.1 +0.2**
MLR Muntele Rosu 62.23 310⇑ *i*P **P** **08 41 33.1 +0.2**
AMKA Amchitka 62.24 44 P **P** **08 41 30.6 -2.2**
comp=Z,109nm,1.1s,mb5.9
BURAR Bucovina Array 62.37 312 ⇑P **P** **08 41 34.2 +0.5**
BURAR Bucovina Array 62.37 312 ⇑P **P** **08 41 34.2 +0.4**
BURAR Bucovina Array 62.37 312⇑ *i*P **P** **08 41 34.2 +0.4**
BUR08 Bucovina Ar. S 62.38 312 *e*P **P** **08 41 33.6 -0.2**
SUW Suwalki 62.70 319 *e*P **P** **08 41 35.6 -0.3**
SUW *ep*P pP 08 41 36.3 -0.4
SUW LMZ 09 09 07.5
comp=Z,2μm,24.8s
SUW Suwalki 62.70 319 *e*P **P** **08 41 35.6 -0.3**
comp=Z,151nm,1.0s,mb6.1
SUW Suwalki 62.70 319 *e*P **P** **08 41 35.6 -0.2**
SUW pmax pmax
comp=Z,151nm,1.0s,mb6.1
LVV L'vov 62.79 315 *e*P **P** **08 41 36.1 -0.4**
LVV MLR MLR
comp=N,540nm,16.0s,MS4.9
LVV MLR MLR
comp=E,290nm,16.0s,MS4.9
LVV MLR MLR
comp=Z,420nm,16.0s,MS4.7
VOIR 62.87 310 ⇑P **P** **08 41 37.5 +0.4**
VOIR 62.87 310 ⇑P **P** **08 41 37.5 +0.4**
VOIR 62.87 310⇑ *i*P **P** **08 41 37.5 +0.4**
CTA Charters Tower 63.03 133 *e*P **P** **08 41 38.0 -0.5**
comp=Z,44nm,0.9s,mb5.6
CTAO Charters Tower 63.03 133 *e*P **P** **08 41 38.1 -0.3**
comp=Z,75nm,0.9s,mb5.8
CTAO LR LR
comp=Z,884nm,22.0s,MS4.9
CTAO Charters Tower 63.03 133 *e*P **P** **08 41 38.1 -0.4**
CTAO pmax pmax
comp=Z,75nm,0.9s,mb5.8
CTAO MLR MLR
comp=Z,884nm,22.0s,MS4.9
CTAO Charters Tower 63.03 133 P **P** **08 41 38.7 +0.2**
comp=Z,85nm,1.0s,mb5.8
CTAO Charters Tower 63.03 133 P **P** **08 41 38.7 +0.2**
ALN Alexandroupoli 63.06 304 *e*P **P** **08 41 22.1 -16**
SMG Samos 63.17 301 *e*P **P** **08 41 39.1 -0.2**
TRO Tromso 63.23 337 *e*P **P** **08 41 38.8 -0.3**
TRO AMS AMS 09 14 06.3
comp=Z,1μm,22.9s,MS5.0
TRO Tromso 63.23 337 *i* P **P** **08 41 41.0 +1.9**
TRO Tromso 63.23 337 *i* P **P** **08 41 41.0 +1.9**
CHOS Chios island 63.61 302 *e*P **P** **08 41 37.5 -4.7**
KWP Kalwaria Pacla 63.67 315 *e*P **P** **08 41 42.5 +0.2**
KWP LMZ 09 11 30.4
comp=Z,2μm,23.4s
KWP Kalwaria Pacla 63.67 315 *e*P **P** **08 41 42.8 +0.5**
comp=Z,85nm,0.8s,mb5.8
KWP LR LR
comp=Z,981nm,21.0s,MS5.0
KWP Kalwaria Pacla 63.67 315 ⇑P **P** **08 41 43.1 +0.7**
KWP Kalwaria Pacla 63.67 315⇑ *i*P **P** **08 41 43.1 +0.7**
TRPA Tarpa 64.05 313 *i*P **P** **08 41 49.5 +4.6**
UZH Uzhgorod 64.12 314 *e*P **P** **08 41 45.5 +0.2**
UZH *e* 08 41 52.8
UZH *e*S **S** **08 50 19.5 -3.4**
UZH MLR MLR
comp=N,1μm,16.0s,MS5.3
UZH MLR MLR
comp=E,1μm,16.0s,MS5.3
UZH MLR MLR
comp=Z,700nm,16.0s,MS4.9
DRGR 64.20 311 ⇑P **P** **08 41 45.8 -0.1**
DRGR 64.20 311 ⇑P **P** **08 41 45.8 -0.1**
DRGR 64.20 311⇑ *i*P **P** **08 41 45.8 -0.1**
DEV Deva 64.25 310 ⇑P **P** **08 41 47.2 +0.9**
DEV Deva 64.25 310 ⇑P **P** **08 41 47.2 +0.9**
DEV Deva 64.25 310⇑ *i*P **P** **08 41 47.2 +0.9**
KBS Kingsbay 64.42 348 *e*P **P** **08 41 46.8 -0.1**
KBS AMS AMS 09 09 11.5
comp=Z,1μm,27.3s,MS5.0
KBS Kingsbay 64.42 348 PFAKE 08 42 00.0 +13
KBS LR LR
comp=Z,1μm,20.0s,MS5.0
NVR Nevrokopi 64.56 305 *e*P **P** **08 41 45.3 -3.1**
CRVS Cervenica-Dubn 64.61 314 *e*P **P** **08 41 48.6 +0.1**
CRVS Cervenica-Dubn 64.61 314 *e*P **P** **08 41 48.6 +0.1**
CRVS Cervenica-Dubn 64.61 314 *e*P **P** **08 41 48.6 +0.1**
STHS Stebnicka Huta 64.64 315 *e*P **P** **08 41 46.4 -2.4**
comp=Z,7.1nm,0.8s,mb4.8
STHS Stebnicka Huta 64.64 315 *e*P **P** **08 41 46.4 -2.4**
STHS pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
STHS Stebnicka Huta 64.64 315 *e*P **P** **08 41 46.4 -2.4**
LAST Lasithi 64.86 298 *e*Pn **P** **08 41 49.5 -1.0**
LAST Lasithi 64.86 298 *e*PN **P** **08 41 49.5 -1.0**
LAST Lasithi 64.86 298 *e*Pn **P** **08 41 49.5 -1.0**
RER Riviere de l'E 65.00 228 *e*P **P** **08 41 51.0 -0.4**
comp=Z,171nm,1.0s,mb6.0
PLG Polygyros 65.10 304 *e*P **P** **08 41 51.3 -0.6**
BZS Buzias 65.19 310 ⇑P **P** **08 41 53.4 +1.0**
BZS Buzias 65.19 310 ⇑P **P** **08 41 53.4 +1.0**
BZS Buzias 65.19 310⇑ *i*P **P** **08 41 53.4 +1.0**
NIE Niedzica 65.24 315 *e*P **P** **08 41 53.7 +1.1**
NIE Niedzica 65.24 315 *e*P **P** **08 41 53.7 +1.1**
MOR8 Moi Rana 65.29 333 *e*P **P** **08 41 51.2 -1.4**
IDI Anoyia 65.29 299 *e*P **P** **08 41 52.4 -0.9**
comp=Z,32nm,0.6s,mb5.5
KECS Kecovo 65.33 314 *e*P **P** **08 41 53.3 +0.1**
comp=Z,6.6nm,1.2s,mb4.5
KECS Kecovo 65.33 314 *e*P **P** **08 41 53.3 +0.1**
KECS pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
KECS Kecovo 65.33 314 *e*P **P** **08 41 53.3 +0.1**
LOF Lofoten 65.33 336 *e*P **P** **08 41 52.6 -0.3**
LOF Lofoten 65.33 336 *i* P **P** **08 41 57.8 +4.9**
OJC Ojcow 65.40 316 *e*P **P** **08 41 53.6 -0.1**
OJC *es*P sP 08 41 57.3 +2.4
OJC Ojcow 65.40 316 *e*P **P** **08 41 53.6 -0.1**
VAM Vamos 65.81 299 *e*Pn **P** **08 41 56.2 -0.4**
VAM Vamos 65.81 299 *e*P **P** **08 41 56.2 -0.4**
VAM Vamos 65.81 299 *e*PN **P** **08 41 56.2 -0.4**
VAM Vamos 65.81 299 *e*Pn **P** **08 41 56.2 -0.4**
PSZ Piszkesteto 65.83 313 *e*P **P** **08 41 56.4 -0.2**
comp=Z,46nm,1.4s,mb5.3
PSZ LR LR
comp=Z,1μm,19.0s,MS5.1
PSZ Piszkesteto 65.83 313 *e*P **P** **08 41 56.4 -0.1**
PSZ pmax pmax
comp=Z,46nm,1.4s,mb5.3
PSZ MLR MLR
comp=Z,1μm,19.0s,MS5.1
PSZ Piszkesteto 65.83 313⇑ *i*P **P** **08 42 04.0 +7.5**
PSZ Piszkesteto 65.83 313⇓ *e*P **P** **08 41 56.5 0.0**
KARN Karanos 66.03 299 *e*PN **P** **08 41 57.4 -0.6**
KARN Karanos 66.03 299 *e*Pn **P** **08 41 57.4 -0.6**
GKP Gorka Klasztor 66.31 319 *e*P **P** **08 41 59.4 -0.1**
GKP LMZ 09 12 51.8
comp=Z,2μm,21.4s
GKP Gorka Klasztor 66.31 319 *e*P **P** **08 41 59.4 -0.1**
GKP MLR MLR
comp=Z,2μm,21.4s,MS5.2
VYHS Vyhne 66.39 314 *e*P **P** **08 42 00.2 +0.1**
comp=Z,10nm,1.2s,mb4.7
VYHS Vyhne 66.39 314 *e*P **P** **08 42 00.2 +0.1**
VYHS pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
VYHS Vyhne 66.39 314 *e*P **P** **08 42 00.2 +0.1**
VLI Veliai 66.43 301 *e*Pn **P** **08 41 59.3 -1.3**
VLI Veliai 66.43 301 *e*PN **P** **08 41 59.2 -1.4**
VLI Veliai 66.43 301 *e*Pn **P** **08 41 59.3 -1.3**
KYTH Kithira 66.47 300 *e*Pn **P** **08 41 59.0 -1.9**
KYTH Kithira 66.47 300 *e*PN **P** **08 41 59.0 -1.9**
KYTH Kithira 66.47 300 *e*Pn **P** **08 41 59.0 -1.9**
BUD Budapest 66.51 313⇓ *e*P **P** **08 42 00.2 -0.6**
OKC Ostrava-Krasne 66.52 315 *e*P **P** **08 42 01.3 +0.4**
OKC MLR MLR
comp=Z,1μm,17.0s,MS5.1
OKC Ostrava-Krasne 66.52 315 *e*P **P** **08 42 01.3 +0.4**
OKC AMS AMS 09 12 50.0
comp=Z,1μm,17.0s
HNR Honiara 66.58 114 PFAKE 08 42 10.0 +8.2
HNR LR LR
comp=Z,864nm,22.0s,MS4.9
NSS Namsos 66.61 332 *e*P **P** **08 41 59.1 -2.1**
MORC Moravsky Berou 66.92 315 *e*P **P** **08 42 03.9 +0.4**
comp=Z,33nm,1.0s,mb5.3
MORC Moravsky Berou 66.92 315 ⇓P **P** **08 42 03.4 0.0**
MORC Moravsky Berou 66.92 315⇓ *i*P **P** **08 42 03.4 0.0**
PKSM Moragy 67.07 312 ⇓P **P** **08 42 04.0 -0.5**
PKSM Moragy 67.07 312 ⇓P **P** **08 42 04.0 -0.5**
PKSM Moragy 67.07 312⇓ *i*P **P** **08 42 04.0 -0.5**
BBOO Buckleboo 67.13 149 *e*P **P** **08 42 03.8 -1.1**
comp=Z,80nm,0.8s,mb5.8
BSD Bornholm Skovb 67.23 322 *i* P **P** **08 42 04.8 -0.5**
BSD pmax pmax
comp=Z,18nm,0.9s,mb5.1
BSD MLR MLR
comp=Z,1μm,16.0s,MS5.2
BSD Bornholm Skovb 67.23 322 *i* P **P** **08 42 04.8 -0.5**
comp=Z,18nm,0.9s,mb5.1
BSD
comp=Z,1μm,16.0s
KSP Ksiaz 67.44 317 *e*P **P** **08 42 06.7 -0.1**
KSP *ep*P pP 08 42 08.0 +0.4
KSP LMZ 09 13 26.3
comp=Z,3μm,19.8s
TIR Tirane 67.48 306 PFAKE 08 42 20.0 +13
TIR LR LR
comp=Z,917nm,20.0s,MS5.0
DPC Dobruska-Polom 67.54 316 *e*P **P** **08 42 08.3 +0.9**
DPC MLR MLR
comp=Z,2μm,22.2s,MS5.2
DPC Dobruska-Polom 67.54 316 *e*P **P** **08 42 08.3 +0.9**
DPC *ex* x 08 55 54.0
DPC *ex* x 08 58 53.2
DPC AMS AMS 09 13 20.0
comp=Z,2μm,22.2s
ZST Bratislava 67.59 314 *e*P **P** **08 42 07.9 +0.2**
comp=Z,4.9nm,0.8s,mb4.6
ZST Bratislava 67.59 314 *e*P **P** **08 42 07.9 +0.2**
ZST pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
ZST Bratislava 67.59 314 *e*P **P** **08 42 07.9 +0.2**
VRAC Vranov 67.63 315 ⇑P **P** **08 42 08.2 +0.2**
VRAC Vranov 67.63 315 ⇑P **P** **08 42 08.2 +0.2**
VRAC Vranov 67.63 315⇑ *i*P **P** **08 42 08.2 +0.2**
UPC Upice 67.69 316 *e*P **P** **08 42 09.7 +1.4**
UPC Upice 67.69 316 *e*P **P** **08 42 09.7 +1.4**
NOA NORSAR Array B 67.73 328 P **P** **08 42 07.1 -1.3**
comp=Z,19nm,0.7s,mb5.3,baz=77,slow=6.4,SNR=92
NOA LR LR 09 14 01.7
comp=Z,1μm,19.5s,MS5.1,baz=105,slow=38
NOA NORSAR Array B 67.73 328 P **P** **08 42 07.1 -1.3**
NAO01 NORSAR Array S 67.93 328 *e*P **P** **08 42 08.9 -0.8**
comp=Z,14nm,0.6s,mb5.2
NAO01 *e*PP PP 08 44 38.1 -1.0
NAO01 LR LR
comp=Z,1μm,21.0s,MS5.1
KMBO Kilima Mbogo 67.94 257 *e*P **P** **08 42 10.4 -0.1**
comp=Z,24nm,0.8s,mb5.3
KMBO LR LR
comp=Z,675nm,22.0s,MS4.8
KMBO Kilima Mbogo 67.94 257 P **P** **08 42 09.7 -0.8**
comp=Z,18nm,0.8s,mb5.1,baz=0.2,slow=24,SNR=38
KMBO LR LR 09 14 07.1
comp=Z,541nm,18.5s,MS4.8,baz=89,slow=38
KMBO Kilima Mbogo 67.94 257 *e*P **P** **08 42 10.4 -0.1**
KMBO pmax pmax
comp=Z,24nm,0.8s
KMBO MLR MLR
comp=Z,675nm,22.0s
KMBO Kilima Mbogo 67.94 257 P **P** **08 42 10.9 +0.4**
SNR=14
OSL Oslo 68.24 327 *e*P **P** **08 42 11.0 -0.6**
OSL Oslo 68.24 327 *i* P **P** **08 42 12.5 +0.9**
RGN Rugen 68.26 321 *e*P **P** **08 42 13.2 +1.3**
comp=Z,85nm,1.0s,mb5.7
TREC Trest 68.33 315 *e*P **P** **08 42 13.2 +0.8**
TREC MLR MLR
comp=Z,2μm,26.9s,MS5.3
TREC Trest 68.33 315 *e*P **P** **08 42 13.2 +0.8**
TREC AMS AMS 09 14 30.0
comp=Z,2μm,26.9s
COP Copenhagen 68.46 322 *i* P **P** **08 42 13.3 +0.3**
COP pmax pmax
comp=Z,22nm,0.9s,mb5.2
COP MLR MLR
comp=Z,810nm,18.0s,MS5.0
COP Copenhagen 68.46 322 *i* P **P** **08 42 13.3 +0.3**
comp=Z,22nm,0.9s,mb5.2
COP
comp=Z,800nm,18.0s
CONA Conrad Observa 68.46 314⇓ *i*P **P** **08 42 13.4 +0.2**
comp=Z,41nm,1.6s,mb5.2,SNR=18
RUE Ruedersdorf 68.53 319 *e*P **P** **08 42 13.8 +0.2**
comp=Z,67nm,1.2s,mb5.5
RUE Ruedersdorf 68.53 319 *e*P **P** **08 42 14.1 +0.5**
comp=Z,64nm,1.2s,mb5.4
PVCC Panska Ves 68.58 317 *e*P **P** **08 42 15.4 +1.5**
PVCC MLR MLR
comp=Z,2μm,14.9s,MS5.4
PVCC Panska Ves 68.58 317 *e*P **P** **08 42 15.4 +1.5**
PVCC AMS AMS 09 14 20.0
comp=Z,2μm,14.9s
KOGS Kog 68.61 312 *e*P **P** **08 42 14.0 -0.2**
KOGS *e*S S 08 51 15.2 -2.3
PRU Pruhonice 68.74 316 *e*P **P** **08 42 16.3 +1.4**
PRU *e*S S 08 51 15.8 -3.2
PRU MLR MLR
comp=Z,2μm,15.0s,MS5.4
PRU Pruhonice 68.74 316 *e*P **P** **08 42 16.3 +1.4**
PRU *e*S S 08 51 15.8 -3.2
PRU *ex* x 08 56 11.3
PRU *ex* x 08 59 16.0
PRU AMS AMS 09 14 00.0
comp=Z,2μm,15.0s
PRA Prague 68.79 316 P **P** **08 42 17.0 +1.8**
PRA S S 08 51 17.0 -2.5
PRA AMS AMS 09 12 30.0
ARSA Arzberg 68.86 313⇑ *i*P **P** **08 42 15.8 0.0**
comp=Z,11nm,1.1s,mb4.7,SNR=7.5
KONO Kongsberg 68.87 327 *e*P **P** **08 42 15.6 +0.1**
KONO AMS AMS 09 15 58.8
comp=Z,1μm,22.8s,MS5.0
KONO Kongsberg 68.87 327 *e*P **P** **08 42 15.2 -0.4**
comp=Z,35nm,0.8s,mb5.3
KONO LR LR
comp=Z,1μm,20.0s,MS5.2
KONO Kongsberg 68.87 327 *e*P **P** **08 42 15.2 -0.3**
KONO pmax pmax
comp=Z,35nm,0.8s,mb5.3
KONO MLR MLR
comp=Z,1μm,20.0s,MS5.2
BRG Berggiesshubel 68.87 317 *e*P **P** **08 42 15.8 +0.1**
comp=Z,23nm,1.1s,mb5.0
BRG Berggiesshubel 68.87 317 *i* P **P** **08 42 15.9 +0.2**
comp=Z,23nm,1.1s,mb5.0
i 08 42 23.3
comp=Z,18nm,0.8s
BRG S S 08 51 30.0 +10
BRG SS SS 08 55 57.0 +12
BRG
comp=N,566nm,24.7s
BRG
comp=E,2μm,18.4s
BRG
comp=Z,2μm,16.3s
BRG Berggiesshubel 68.87 317 *i* P **P** **08 42 15.9 +0.2**
BRG *i* 08 42 23.3
BRG pmax pmax
comp=Z,14nm,1.1s,mb4.8
BRG MLR MLR
comp=N,339nm,24.7s
BRG MLR MLR
comp=E,959nm,18.4s
BRG MLR MLR
comp=Z,1μm,16.3s
MOL Molde 69.01 330 *e*P **P** **08 42 15.3 -1.0**
STKA Stephens Creek 69.10 144 *e*P **P** **08 42 16.3 -0.9**
comp=Z,18nm,0.8s,mb5.1
STKA Stephens Creek 69.10 144 *e*P **P** **08 42 16.5 -0.7**
comp=Z,4.6nm,0.8s,mb4.5
STKA Stephens Creek 69.10 144 P **P** **08 42 15.8 -1.4**
comp=Z,12nm,0.8s,mb4.9,baz=321,slow=7.3,SNR=20
STKA LR LR 09 15 45.5
comp=Z,1μm,19.7s,MS5.2,baz=295,slow=39
PERS Pernice 69.31 313 *e*P **P** **08 42 18.2 -0.3**
CLL Collm 69.32 318 *e*P **P** **08 42 18.2 -0.3**
comp=Z,34nm,1.1s,mb5.2
CLL Collm 69.32 318⇓ *i*P **P** **08 42 18.1 -0.4**
comp=Z,34nm,1.1s,mb5.2
CLL *i* 08 42 25.2
CLL S S 08 51 22.0 -3.8
CLL Collm 69.32 318⇓ *i*P **P** **08 42 18.1 -0.4**
CLL *i* 08 42 25.2
CLL S S 08 51 22.0 -3.8
CLL pmax pmax
comp=Z,34nm,1.1s,mb5.2
CLL Collm 69.32 318⇓ *i*P **P** **08 42 18.1 -0.4**
comp=Z,34nm,1.1s,mb5.2
CLL *i* (sP) sP 08 42 25.2 +5.5
CLL *i* 08 42 36.3
CLL *e*PP PP 08 44 54.0 +2.7
comp=Z,16nm,1.2s
CLL *e*(S) S 08 51 22.0 -3.8
CLL *e*SS SS 08 56 06.0 +14
CLL *e*SSS 08 59 06.0
CLL *e*SSSS 09 00 42.0
CLL Lmax 09 21 00.0
SOKA Soboth 69.35 313⇓ *i*P **P** **08 42 18.4 -0.4**
comp=Z,12nm,0.9s,mb4.8
KHC Kasperske Hory 69.58 316 *e*P **P** **08 42 20.0 -0.1**
comp=Z,12nm,0.9s,mb4.8
KHC Kasperske Hory 69.58 316 *e*P **P** **08 42 20.5 +0.3**

KHC eS S 08 51 30.2 +1.2
KHC MLR MLR
comp=Z,2µm,18.7s,MS5.4
KHC Kasperske Hory 69.58 316 eP **P** **08 42 20.5 +0.3**
KHC eS S 08 51 30.2 +1.2
KHC ex x 08 56 32.4
KHC ex x 08 59 29.0
KHC AMS AMS 09 15 10.0
comp=Z,2µm,18.7s
GEC2 GERESS Array S 69.59 315 eP **P** **08 42 20.4 +0.2**
comp=Z,20nm,1.1s,mb5.0
GEC2 GERESS Array S 69.59 315 eP **P** **08 42 20.4 +0.2**
comp=Z,20nm,1.1s,mb5.0
GEC2 GERESS Array S 69.59 315 eP **P** **08 42 20.4 +0.2**
GEC2 pmax pmax
comp=Z,20nm,1.1s,mb5.0
ABPO Ambohimpanom 69.60 235 eP **P** **08 42 20.0 -0.7**
comp=Z,38nm,1.1s,mb5.2
ABPO LR LR
comp=Z,808nm,20.0s,MS5.0
ABPO Ambohimpanom 69.60 235 eP **P** **08 42 20.0 -0.6**
ABPO pmax pmax
comp=Z,38nm,1.1s,mb5.2
ABPO MLR MLR
comp=Z,808nm,20.0s,MS5.0
LJU Ljubljana 69.87 312 eP **P** **08 42 22.1 +0.1**
LJU Ljubljana 69.87 312 eP **P** **08 42 22.1 +0.1**
LJU Ljubljana 69.87 312 eP **P** **08 42 22.1 +0.1**
EIDS Eidsvold 69.89 133 eP **P** **08 42 22.5 +0.1**
comp=Z,25nm,0.9s,mb5.2
EIDS ePP PP 08 44 55.6 -1.6
TANN Tannenbergstha 69.90 317 eP **P** **08 42 22.2 +0.1**
comp=Z,18nm,1.0s,mb5.0
NKC Novy Kostel 69.97 317 eP **P** **08 42 23.0 +0.5**
NKC Novy Kostel 69.97 317 eP **P** **08 42 23.0 +0.5**
WERD Werda 69.99 317 eP **P** **08 42 22.7 +0.1**
comp=Z,23nm,1.1s,mb5.0
WERN Wernitzgruen 69.99 317 eP **P** **08 42 23.0 +0.3**
comp=Z,23nm,1.0s,mb5.1
MUD Monsted U'grnd 70.00 324 *i* P **P** **08 42 22.7 +0.1**
MUD pmax pmax
comp=Z,47nm,0.9s,mb5.4
MUD MLR MLR
comp=Z,2µm,17.0s,MS5.4
MUD Monsted U'grnd 70.00 324 *i* P **P** **08 42 22.7 +0.1**
comp=Z,47nm,0.9s,mb5.4
MUD
comp=Z,2µm,17.0s
GUNZ Gunzen 70.00 317 eP **P** **08 42 22.9 +0.2**
comp=Z,27nm,1.0s,mb5.1
WET Wettzell 70.02 316 eP **P** **08 42 23.2 +0.4**
comp=Z,25nm,1.1s,mb5.1
WET Wettzell 70.02 316 eP **P** **08 42 23.2 +0.4**
comp=Z,25nm,1.1s,mb5.1
WET Wettzell 70.02 316 eP **P** **08 42 23.2 +0.4**
WET pmax pmax
comp=Z,25nm,1.1s,mb5.1
NEUB Neuenburg 70.09 318 eP **P** **08 42 23.4 +0.2**
comp=Z,60nm,1.1s,mb5.4
BSEG Bad Segeberg 70.12 321 eP **P** **08 42 24.2 +0.8**
comp=Z,59nm,1.1s,mb5.4
BSEG Bad Segeberg 70.12 321 eP **P** **08 42 24.2 +0.8**
BSEG Bad Segeberg 70.12 321 eP **P** **08 42 24.2 +0.8**
ROTZ Rotzenmuhle 70.25 316 eP **P** **08 42 24.9 +0.6**
comp=Z,54nm,1.1s,mb5.4
VOY Vojsko 70.29 312 eP **P** **08 42 24.3 -0.3**
VOY *e* 08 42 32.8
VOY *e* 08 42 46.2
VOY *e* 08 42 53.2
VOY *e* 08 43 24.7
CADS Cadrg 70.34 313 eP **P** **08 42 24.2 -0.7**
KBA Koelnbreinsper 70.34 313 ⇑*i*P **P** **08 42 24.9 +0.1**
comp=Z,22nm,1.3s,mb4.9,SNR=9.4
MOX Moxa 70.35 317 eP **P** **08 42 24.9 0.0**
comp=Z,40nm,1.5s,mb5.1
MOX
comp=Z,800nm,21.0s
MOX Moxa 70.35 317 eP **P** **08 42 25.0 +0.1**
comp=Z,32nm,1.3s,mb5.1
MOX Moxa 70.35 317 eP **P** **08 42 24.9 0.0**
MOX pmax pmax
comp=Z,40nm,1.5s,mb5.1
MOX MLR MLR
comp=Z,800nm,21.0s,MS5.0
FOO Floro 70.43 330 AMS AMS 09 15 50.1
comp=Z,1µm,18.8s,MS5.2
TRI Trieste 70.48 312 PFAKE 08 42 40.0 +14
TRI LR LR
comp=Z,804nm,19.0s,MS5.0
RJOB Jochberg 70.49 314 eP **P** **08 42 26.0 +0.2**
comp=Z,31nm,1.3s,mb5.1
NRDL Niedersach Rie 70.68 320 eP **P** **08 42 26.5 -0.3**
comp=Z,58nm,1.1s,mb5.4
BER Bergen 70.69 328 eP **P** **08 42 27.4 +0.7**
BER AMS AMS 09 14 41.3
comp=Z,1µm,18.6s,MS5.3
CLZ Clausthal 70.73 319 eP **P** **08 42 27.6 +0.5**
comp=Z,61nm,1.1s,mb5.4
CLZ Clausthal 70.73 319 eP **P** **08 42 27.6 +0.5**
comp=Z,61nm,1.1s,mb5.4
CLZ Clausthal 70.73 319 eP **P** **08 42 27.6 +0.5**
CLZ pmax pmax
comp=Z,61nm,1.1s,mb5.4
CUC Castrocucco 70.82 306 eP **P** **08 42 26.8 -1.2**
comp=Z,18nm,0.8s,mb5.0
CUC LR LR
comp=Z,836nm,22.0s,MS5.0
GRA1 Grafenberg Arr 70.88 317 eP **P** **08 42 28.7 +0.6**
comp=Z,73nm,1.3s,mb5.5
GRA1 LR LR
comp=Z,2µm,18.0s,MS5.5
GRF Grafenberg Arr 70.88 317 eP **P** **08 42 28.7 +0.6**
comp=Z,73nm,1.3s,mb5.5
GRF eL 09 16 03.8
comp=Z,2µm,18.0s
GRF Grafenberg Arr 70.88 317 eP **P** **08 42 28.7 +0.6**
comp=Z,73nm,1.3s,mb5.5
GRF LR LR
comp=Z,2µm,18.0s,MS5.5
GRF Grafenberg Arr 70.88 317 eP **P** **08 42 28.7 +0.6**
GRF pmax pmax
comp=Z,73nm,1.3s,mb5.5
GRF MLR MLR
comp=Z,2µm,18.0s,MS5.5
GRF Grafenberg Arr 70.88 317 eP **P** **08 42 28.7 +0.6**
GRF pmax pmax
comp=Z,73nm,1.3s,mb5.5
GRF MLR MLR
comp=Z,2µm,18.0s,MS5.5
ABTA Abfaltersbach 70.98 313 ⇓*i*P **P** **08 42 27.6 -1.2**
comp=Z,9.8nm,0.8s,mb4.8,SNR=6.4
ALE Alert 71.18 358 P **P** **08 42 30.0 +0.6**
comp=Z,75nm,1.0s,mb5.6,SNR=6.3
CEL Celeste 71.32 304 eP **P** **08 42 30.6 -0.4**
comp=Z,47nm,0.9s,mb5.4
CEL LR LR
comp=Z,722nm,22.0s,MS4.9
FUR Furstenfeldbru 71.33 315 eP **P** **08 42 31.5 +0.6**
comp=Z,72nm,1.1s,mb5.5
FUR Furstenfeldbru 71.33 315 eP **P** **08 42 31.5 +0.6**
comp=Z,72nm,1.1s,mb5.5
FUR Furstenfeldbru 71.33 315 eP **P** **08 42 31.5 +0.6**
FUR pmax pmax
comp=Z,72nm,1.1s,mb5.5
WTTA Wattenberg 71.39 314 ⇓*i*P **P** **08 42 30.6 -0.6**
comp=Z,23nm,0.8s,mb5.2,SNR=12
WATA Walderalm 71.40 314 ⇓*i*P **P** **08 42 30.7 -0.6**
comp=Z,9.2nm,0.8s,mb4.8,SNR=8.0
MOTA Moosalm 71.70 314 ⇓*i*P **P** **08 42 32.6 -0.6**
comp=Z,43nm,1.2s,mb5.3,SNR=6.1
AQU L'Aquila 71.79 309 eP **P** **08 42 34.0 +0.3**
comp=Z,60nm,1.0s,mb5.5
AQU LR LR
comp=Z,952nm,20.0s,MS5.1
AQU L'Aquila 71.79 309 eP **P** **08 42 34.0 +0.3**
AQU pmax pmax
comp=Z,60nm,1.0s,mb5.5
AQU MLR MLR
comp=Z,952nm,20.0s,MS5.1
AQU L'Aquila 71.79 309 ⇑*i*P **P** **08 42 33.5 -0.2**
RETA Reutte 71.88 314 ⇓*i*P **P** **08 42 33.9 -0.3**
comp=Z,20nm,0.9s,mb5.0,SNR=6.0
FETA Feichten 72.05 314 *i* P **P** **08 42 35.0 -0.2**
comp=Z,42nm,0.9s,mb5.3,SNR=23
IBBN Ibbenburen 72.11 320 eP **P** **08 42 35.9 +0.5**
comp=Z,45nm,1.2s,mb5.3
TTA Tatalina 72.23 28 eP **P** **08 42 35.8 -0.2**
comp=Z,39nm,0.9s,mb5.3
TTA Tatalina 72.23 28 eP **P** **08 42 35.8 -0.2**
TTA pmax pmax
comp=Z,39nm,0.9s,mb5.3
TOD Tromm 72.40 317 eP **P** **08 42 37.3 0.0**
TOD Tromm 72.40 317 eP **P** **08 42 37.3 0.0**
TNS Taunus Mts 72.41 318 eP **P** **08 42 37.5 +0.2**
comp=Z,47nm,1.0s,mb5.4
TNS Taunus Mts 72.41 318 eP **P** **08 42 37.5 +0.2**
comp=Z,47nm,1.0s,mb5.4
TNS Taunus Mts 72.41 318 eP **P** **08 42 37.5 +0.2**
TNS pmax pmax
comp=Z,47nm,1.0s,mb5.4
STU Stuttgart 72.44 316 eP **P** **08 42 37.8 +0.3**
comp=Z,51nm,1.0s,mb5.4
STU Stuttgart 72.44 316 eP **P** **08 42 37.7 +0.2**
comp=Z,69nm,1.0s,mb5.5
STU Stuttgart 72.44 316 eP **P** **08 42 37.7 +0.2**
STU pmax pmax
comp=Z,69nm,1.0s,mb5.5
DAVA Damuels 72.51 314 ⇓*i*P **P** **08 42 37.6 -0.4**
comp=Z,32nm,1.4s,mb5.0,SNR=12
COLD Coldfoot 72.67 23 eP **P** **08 42 38.1 -0.5**
comp=Z,40nm,1.0s,mb5.3
BUG Bochum--Univer 72.69 319 eP **P** **08 42 39.2 +0.3**
comp=Z,40nm,1.0s,mb5.3
WTSB Winterswijk 72.78 320 eP **P** **08 42 39.7 +0.2**
comp=Z,55nm,1.3s,mb5.3
SPAK Spaichingen-Ko 72.92 316 eP **P** **08 42 40.6 +0.2**
BFO Black Forest 73.13 316 P **P** **08 42 41.6 0.0**
comp=Z,160nm,0.9s,mb6.0,SNR=8.7
BFO Black Forest 73.13 316 eP **P** **08 42 41.5 -0.1**
comp=Z,35nm,1.2s,mb5.2
BFO Black Forest 73.13 316 eP **P** **08 42 41.5 -0.1**
comp=Z,35nm,1.2s,mb5.2
BFO Black Forest 73.13 316 eP **P** **08 42 41.5 -0.1**
BFO pmax pmax
comp=Z,35nm,1.2s,mb5.2
TUE Stuetta 73.13 314 eP **P** **08 42 41.6 0.0**
comp=Z,35nm,0.9s,mb5.3
TUE LR LR
comp=Z,3µm,21.0s,MS5.5
WDD Wield Dalam 73.15 302 PFAKE 08 42 50.0 +8.0
WDD LR LR
comp=Z,323nm,19.0s,MS4.6
LANF Langenberg 73.23 317 eP **P** **08 42 42.4 +0.2**
LANF Langenberg 73.23 317 eP **P** **08 42 42.4 +0.2**
LANF Langenberg 73.23 317 eP **P** **08 42 42.4 +0.2**
VLC Villacollemand 73.25 311 PFAKE 08 42 50.0 +7.6
VLC LR LR
comp=Z,869nm,21.0s,MS5.0
RUP Ruppelstein 73.43 318 eP **P** **08 42 43.9 +0.5**
RUP Ruppelstein 73.43 318 eP **P** **08 42 43.9 +0.5**
MBAR Mbarara 73.43 261 PFAKE 08 43 00.0 +16
MBAR LR LR
comp=Z,915nm,22.0s,MS5.0
MBAR Mbarara 73.43 261 ⇑eP **P** **08 42 42.7 -1.3**
FELD Feldberg im Sc 73.50 316 eP **P** **08 42 43.9 +0.1**
HGN Heimansgroeve 73.72 319 eP **P** **08 42 44.9 -0.2**
comp=Z,16nm,0.7s,mb5.1
HGN Heimansgroeve 73.72 319 eS S 08 52 07.7 -9.0
MEM Membach 73.73 319 P **P** **08 42 45.7 +0.6**
comp=Z,20nm,1.1s,mb5.0
ARMA Armidale 73.74 137 eP **P** **08 42 45.8 +0.4**
ARMA Armidale 73.74 137 eP **P** **08 42 45.7 +0.3**
comp=Z,30nm,1.0s,mb5.2
CDF Champ du Feu 73.76 316 eP **P** **08 42 45.0 -0.3**
comp=Z,57nm,0.9s,mb5.2
CDF Champ du Feu 73.76 316 eP **P** **08 42 45.0 -0.3**
comp=Z,28nm,0.9s,mb5.2
CDF Champ du Feu 73.76 316 eP **P** **08 42 45.0 -0.3**
CDF pmax pmax
comp=Z,29nm,0.9s,mb5.2
BPAW Bear Paw Mtn. 73.78 26 eP **P** **08 42 45.0 -0.2**
comp=Z,62nm,0.7s,mb5.7
PPLA Purkeypile 73.83 27 eP **P** **08 42 46.1 +0.6**
comp=Z,177nm,1.2s,mb5.9
BEBN Eben Emael 73.86 319 P **P** **08 42 45.8 0.0**
ECH Echery 73.90 316 eP **P** **08 42 45.5 -0.7**
ECH Echery 73.90 316 eP **P** **08 42 45.9 -0.3**
comp=Z,17nm,1.0s,mb4.9
ECH LR LR
comp=Z,951nm,19.0s,MS5.1
ECH Echery 73.90 316 eP **P** **08 42 45.9 -0.3**
ECH pmax pmax
comp=Z,17nm,1.0s,mb4.9
ECH MLR MLR
comp=Z,951nm,19.0s,MS5.1
BBS Basel-Blauen 73.96 315 eP **P** **08 42 46.0 -0.5**
WLF Walferdange 73.99 318 P **P** **08 42 47.2 +0.6**
comp=Z,77nm,1.1s,mb5.5
WLF Walferdange 73.99 318 eP **P** **08 42 47.5 +0.8**
comp=Z,115nm,1.1s,mb5.7
WLF Walferdange 73.99 318 eP **P** **08 42 47.3 +0.7**
comp=Z,130nm,1.0s,mb5.8
WLF LR LR
comp=Z,1µm,22.0s,MS5.2
WLF Walferdange 73.99 318 eP **P** **08 42 47.3 +0.6**
WLF pmax pmax
comp=Z,130nm,1.0s,mb5.8
WLF MLR MLR
comp=Z,1µm,22.0s,MS5.2
MOF Molkenrain 74.05 316 eP **P** **08 42 46.7 -0.4**
MOF Molkenrain 74.05 316 eP **P** **08 42 46.7 -0.4**
MOF Molkenrain 74.05 316 eP **P** **08 42 46.7 -0.4**
BCLA Clavier 74.22 319 P **P** **08 42 48.4 +0.4**
comp=Z,25nm,1.1s,mb5.0
HINF Hinteralfeld 74.24 316 eP **P** **08 42 47.5 -0.7**
comp=Z,31nm,0.9s,mb5.0
HINF Hinteralfeld 74.24 316 eP **P** **08 42 47.5 -0.7**
comp=Z,16nm,0.9s,mb4.9
HINF Hinteralfeld 74.24 316 eP **P** **08 42 47.5 -0.7**
HINF pmax pmax
comp=Z,16nm,0.9s,mb5.0
TRF Thorofare Moun 74.36 26 eP **P** **08 42 48.1 -0.4**
comp=Z,27nm,0.7s,mb5.3
LOMF Lomont 74.43 315 eP **P** **08 42 48.5 -0.8**
LOMF Lomont 74.43 315 eP **P** **08 42 48.5 -0.8**
LOMF Lomont 74.43 315 eP **P** **08 42 48.5 -0.8**
HAU Haudompre 74.49 316 eP **P** **08 42 49.1 -0.5**
comp=Z,57nm,1.0s,mb5.1
HAU eMLR MLR
comp=Z,2µm,22.5s,MS5.0
HAU Haudompre 74.49 316 eP **P** **08 42 49.1 -0.5**
comp=Z,28nm,1.0s,mb5.2
HAU LR LR
comp=Z,2µm,22.5s,MS5.3
HAU Haudompre 74.49 316 eP **P** **08 42 49.1 -0.5**
HAU pmax pmax
comp=Z,29nm,1.0s,mb5.2
HAU MLR MLR
comp=Z,2µm,22.5s,MS5.3
COLA College 74.62 25 eP **P** **08 42 49.5 -0.5**
comp=Z,48nm,0.8s,mb5.5
COLA LR LR
comp=Z,1µm,19.0s,MS5.2
COLA College 74.62 25 eP **P** **08 42 49.5 -0.5**
COLA pmax pmax
comp=Z,48nm,0.8s,mb5.5
COLA MLR MLR
comp=Z,1µm,19.0s,MS5.2
GIVF Givet 74.62 318 eP **P** **08 42 50.3 0.0**
comp=Z,72nm,1.0s,mb5.2
GIVF Givet 74.62 318 eP **P** **08 42 50.3 0.0**
comp=Z,36nm,1.0s,mb5.3
GIVF Givet 74.62 318 eP **P** **08 42 50.3 0.0**
GIVF pmax pmax
comp=Z,36nm,1.0s,mb5.3
THEF They Montfort 74.63 316 eP **P** **08 42 50.6 +0.2**
THEF They Montfort 74.63 316 eP **P** **08 42 50.6 +0.2**
THEF They Montfort 74.63 316 eP **P** **08 42 50.6 +0.2**
RSO Redoubt South 74.66 30 eP **P** **08 42 50.5 +0.2**
MCK McKinley 74.76 26 eP **P** **08 42 50.6 -0.3**
comp=Z,39nm,0.7s,mb5.4
MCK McKinley 74.76 26 eP **P** **08 42 50.6 -0.3**
MCK pmax pmax
comp=Z,39nm,0.7s,mb5.5
DOU Dourbes 74.76 319 P **P** **08 42 51.1 0.0**
comp=Z,13nm,1.6s,mb4.6
PGF Pioggiola 74.77 310 eP **P** **08 42 51.2 -0.2**
comp=Z,55nm,0.8s,mb5.2
PGF Pioggiola 74.77 310 eP **P** **08 42 51.2 -0.2**
comp=Z,28nm,0.8s,mb5.2
PGF Pioggiola 74.77 310 eP **P** **08 42 51.2 -0.2**
PGF pmax pmax
comp=Z,28nm,0.8s,mb5.2
SNF Seneffe 74.79 319 P **P** **08 42 51.3 0.0**
comp=Z,22nm,1.4s,mb4.9
BAIF Baives 75.00 319 eP **P** **08 42 52.6 0.0**
comp=Z,85nm,1.1s,mb5.3
BAIF Baives 75.00 319 eP **P** **08 42 52.6 0.0**
comp=Z,42nm,1.1s,mb5.3
BAIF Baives 75.00 319 eP **P** **08 42 52.6 0.0**
BAIF pmax pmax
comp=Z,42nm,1.1s,mb5.3
ILAR Eielson Array 75.03 24 P **P** **08 42 51.2 -1.2**
comp=Z,5.3nm,0.8s,mb4.5,baz=289,slow=5.4,SNR=45
ILAR LR LR 09 17 18.6
comp=Z,820nm,19.2s,MS5.0,baz=127,slow=37
ILAR Eielson Array 75.03 24 P **P** **08 42 51.2 -1.2**
MEZF Maizieres J'vi 75.10 317 eP **P** **08 42 53.0 -0.1**
comp=Z,81nm,0.9s,mb5.3
MEZF Maizieres J'vi 75.10 317 eP **P** **08 42 53.0 -0.1**
comp=Z,81nm,0.9s,mb5.7
LPG La Plagne 75.17 314 eP **P** **08 42 54.1 +0.5**
comp=Z,151nm,0.7s,mb5.7
LPG La Plagne 75.17 314 eP **P** **08 42 54.1 +0.5**
comp=Z,76nm,0.7s,mb5.7
LPG La Plagne 75.17 314 eP **P** **08 42 54.1 +0.5**
LPG pmax pmax
comp=Z,76nm,0.7s,mb5.7
CABF La Chapelle 75.18 315 eP **P** **08 42 53.3 -0.3**
comp=Z,49nm,0.9s,mb5.1
CABF La Chapelle 75.18 315 eP **P** **08 42 53.3 -0.3**
comp=Z,24nm,0.9s,mb5.1
CABF La Chapelle 75.18 315 eP **P** **08 42 53.3 -0.3**
CABF pmax pmax
comp=Z,24nm,0.9s,mb5.1
LPL La Plagne 75.18 314 eP **P** **08 42 54.0 +0.3**
comp=Z,89nm,0.7s,mb5.5
LPL La Plagne 75.18 314 eP **P** **08 42 54.0 +0.3**
comp=Z,44nm,0.7s,mb5.5
LPL La Plagne 75.18 314 eP **P** **08 42 54.0 +0.3**
LPL pmax pmax
comp=Z,44nm,0.7s,mb5.5
SAOF Saorge 75.22 312 eP **P** **08 42 53.8 -0.1**
SAOF Saorge 75.22 312 eP **P** **08 42 53.8 -0.1**
SAOF Saorge 75.22 312 eP **P** **08 42 53.8 -0.1**
SFTF Sexfontaines 75.22 317 eP **P** **08 42 53.4 -0.4**
comp=Z,105nm,1.0s,mb5.4
SFTF Sexfontaines 75.22 317 eP **P** **08 42 53.4 -0.4**
comp=Z,105nm,1.0s,mb5.7
AUTN L'Aution 75.30 312 eP **P** **08 42 55.0 +0.6**
AUTN L'Aution 75.30 312 eP **P** **08 42 55.0 +0.6**
AUTN L'Aution 75.30 312 eP **P** **08 42 55.0 +0.6**
SBF Sospel 75.34 312 eP **P** **08 42 54.2 -0.4**
comp=Z,65nm,1.0s,mb5.2
SBF Sospel 75.34 312 eP **P** **08 42 54.2 -0.4**
comp=Z,32nm,1.0s,mb5.2
SBF Sospel 75.34 312 eP **P** **08 42 54.2 -0.4**
SBF pmax pmax
comp=Z,32nm,1.0s,mb5.2
LUCF Luceram 75.39 312 eP **P** **08 42 55.1 +0.2**
LUCF Luceram 75.39 312 eP **P** **08 42 55.1 +0.2**
TOUF Mont Tournerai 75.41 312 eP **P** **08 42 55.1 +0.1**
TOUF Mont Tournerai 75.41 312 eP **P** **08 42 55.1 +0.1**
TOUF Mont Tournerai 75.41 312 eP **P** **08 42 55.1 +0.1**
MBDF Montbardon 75.45 313 eP **P** **08 42 54.3 -1.0**
comp=Z,20nm,0.7s,mb5.0
MBDF Montbardon 75.45 313 eP **P** **08 42 54.3 -1.0**
comp=Z,13nm,0.6s,mb5.0
MBDF Montbardon 75.45 313 eP **P** **08 42 54.3 -1.0**
MBDF pmax pmax
comp=Z,13nm,0.6s,mb5.0
TOO Toolangi 75.53 146 eP **P** **08 42 54.0 -1.6**
VSL Villasalto 75.64 307 eP **P** **08 42 55.0 -1.4**
comp=Z,20nm,1.0s,mb5.0
VSL LR LR
comp=Z,442nm,21.0s,MS4.7
RC01 Rabbit Creek A 75.69 28 eP **P** **08 42 55.6 -0.7**
comp=Z,42nm,0.9s,mb5.4
PMR Palmer 75.71 28 eP **P** **08 42 55.8 -0.6**
comp=Z,66nm,0.7s,mb5.7
PMR Palmer 75.71 28 eP **P** **08 42 55.8 -0.6**
PMR pmax pmax
comp=Z,66nm,0.7s,mb5.7
CAN Canberra 75.71 142 eP **P** **08 42 56.2 -0.4**
comp=Z,16nm,0.9s,mb5.0
CAN LR LR
comp=Z,985nm,19.0s,MS5.1
CAN Canberra 75.71 142 eP **P** **08 42 56.2 -0.5**
CAN pmax pmax
comp=Z,16nm,0.9s,mb5.0
CAN MLR MLR
comp=Z,985nm,19.0s,MS5.1
SLKM Skilak Lake 75.76 29 eP **P** **08 42 55.6 -1.0**
SLKM Skilak Lake 75.76 29 eP **P** **08 42 55.7 -1.0**
MME1 Meikle Cairn 75.85 327 eP **P** **08 42 56.7 -0.6**
OHAK Old Harbor 75.85 33 eP **P** **08 42 56.9 -0.4**
comp=Z,9nm,0.8s,mb5.7
MCD Coleburn Disti 75.87 328 eP **P** **08 42 57.0 -0.4**
CNB Canberra Magne 75.91 142 eP **P** **08 43 03.4 +5.6**
SML Sawmill 75.93 27 eP **P** **08 42 57.7 +0.1**
comp=Z,23nm,0.7s,mb5.2
SML Sawmill 75.93 27 eP **P** **08 42 57.7 0.0**
SML pmax pmax
comp=Z,23nm,0.7s,mb5.2
KDAK Kodiak Island 75.94 32 P **P** **08 42 57.6 -0.2**
comp=Z,554nm,0.8s,mb6.5,SNR=10
KDAK Kodiak Island 75.94 32 eP **P** **08 42 57.4 -0.4**
comp=Z,166nm,1.3s,mb5.8
KDAK LR LR
comp=Z,798nm,19.0s,MS5.0
KDAK Kodiak Island 75.94 32 P **P** **08 42 57.1 -0.6**
comp=Z,45nm,0.7s,mb5.5,baz=294,slow=3.2,SNR=14
KDAK Kodiak Island 75.94 32 *i* P **P** **08 42 57.5 -0.3**
ORIF Oris-en-Rattie 75.97 313 eP **P** **08 42 58.1 -0.1**
comp=Z,61nm,0.9s,mb5.2
ORIF eMLR MLR
comp=Z,3µm,23.0s,MS5.2
ORIF Oris-en-Rattie 75.97 313 eP **P** **08 42 58.1 -0.1**
comp=Z,30nm,0.9s,mb5.2
ORIF Oris-en-Rattie 75.97 313 eP **P** **08 42 58.1 -0.1**
ORIF pmax pmax
comp=Z,31nm,0.9s,mb5.2
FRF La Foret Royal 75.99 312 eP **P** **08 42 57.7 -0.6**
comp=Z,51nm,1.1s,mb5.1
FRF La Foret Royal 75.99 312 eP **P** **08 42 57.7 -0.6**
comp=Z,26nm,1.1s,mb5.1
FRF La Foret Royal 75.99 312 eP **P** **08 42 57.7 -0.6**
FRF pmax pmax
comp=Z,26nm,1.1s,mb5.1
LMR La Mourre 76.17 312 eP **P** **08 42 58.9 -0.5**
comp=Z,99nm,1.2s,mb5.3
LMR La Mourre 76.17 312 eP **P** **08 42 58.9 -0.5**
comp=Z,50nm,1.2s,mb5.3
LMR La Mourre 76.17 312 eP **P** **08 42 58.9 -0.5**
LMR pmax pmax
comp=Z,50nm,1.2s,mb5.3
SEW Seward 76.29 29 eP **P** **08 42 58.9 -0.9**
comp=Z,43nm,0.9s,mb5.4
LOR Lormes 76.32 316 eP **P** **08 42 59.4 -0.8**
comp=Z,44nm,0.9s,mb5.1,baz=66
LOR eMLR MLR
comp=Z,2µm,22.8s,MS5.0
LOR Lormes 76.32 316 eP **P** **08 42 59.4 -0.8**
comp=Z,22nm,0.9s,mb5.1
LOR LR LR
comp=Z,2µm,22.8s,MS5.3
LOR Lormes 76.32 316 eP **P** **08 42 59.4 -0.8**
LOR pmax pmax
comp=Z,22nm,0.9s,mb5.1
LOR MLR MLR
comp=Z,2µm,22.8s,MS5.3
RSC Scourie 76.43 329 eP **P** **08 42 59.9 -0.7**
MDO Dochfour 76.47 328 eP **P** **08 43 00.2 -0.6**
OCF Saint Nazaire 76.48 313 eP **P** **08 43 01.8 +0.7**
OG26 St.-Nazaire-De 76.48 313 eP **P** **08 43 01.8 +0.7**
PAX Paxson 76.49 26 eP **P** **08 43 01.1 +0.3**
comp=Z,17nm,0.7s,mb5.1
PAX Paxson 76.49 26 eP **P** **08 43 01.1 +0.3**
PAX pmax pmax
comp=Z,17nm,0.7s,mb5.1
SMRF Simiane la Rot 76.54 312 eP **P** **08 43 01.4 0.0**
comp=Z,76nm,1.2s,mb5.2
SMRF Simiane la Rot 76.54 312 eP **P** **08 43 01.4 0.0**
comp=Z,76nm,1.2s,mb5.5
EBL Broad Law 76.59 326 eP **P** **08 43 00.4 -1.1**
SMF Signal de Mont 76.59 315 eP **P** **08 43 01.2 -0.5**
comp=Z,101nm,1.0s,mb5.4
SMF Signal de Mont 76.59 315 eP **P** **08 43 01.2 -0.5**
comp=Z,50nm,1.0s,mb5.4

SMF **Signal de Mont 76.59 315** *e*P P **08 43 01.2 -0.5**
SMF pmax pmax
comp=Z,50nm,1.0s,mb5.4
EDI **Edinburgh 76.59 326** *e*P P **08 43 00.6 -0.9**
EDI AMB AMB 08 43 04.8
comp=Z,55nm,2.3s,mb5.1
EDI AMS AMS 09 21 48.1
comp=Z,979nm,20.6s,MS5.1
EBH Black Hill 76.60 326 *e*P P **08 43 01.0 -0.6**
SSF Saint Saulge 76.63 316 *e*P P **08 43 01.4 -0.5**
comp=Z,96nm,0.9s,mb5.4
SSF Saint Saulge 76.63 316 *e*P P **08 43 01.4 -0.5**
comp=Z,48nm,0.9s,mb5.4
SSF Saint Saulge 76.63 316 *e*P P **08 43 01.4 -0.5**
SSF pmax pmax
comp=Z,48nm,0.9s,mb5.4
HPK Haverah Park 76.66 324 *e*P P **08 43 01.0 -0.9**
HPK AMB AMB 08 43 02.3
comp=Z,43nm,1.8s,mb5.1
HPK AMS AMS 09 18 54.3
comp=Z,1μm,18.9s,MS5.2
DOT Dot Lake 76.67 25 *e*P P **08 43 01.7 -0.1**
comp=Z,48nm,0.7s,mb5.5
SSB Saint Sauveur 76.69 314 *e*P P **08 43 01.8 -0.5**
SSB Saint Sauveur 76.69 314 *e*P P **08 43 01.7 -0.6**
comp=Z,12nm,0.9s,mb4.8
SSB LR LR
comp=Z,803nm,21.0s,MS5.0
SSB Saint Sauveur 76.69 314 *e*P P **08 43 01.7 -0.6**
SSB pmax pmax
comp=Z,12nm,0.9s,mb4.8
SSB MLR MLR
comp=Z,803nm,21.0s,MS5.0
EAU Auchinoon 76.76 326 *e*P P **08 43 02.0 -0.4**
VIVF Saint-Julien-l 76.78 314 *e*P P **08 43 02.5 -0.3**
comp=Z,62nm,1.1s,mb5.2
VIVF Saint-Julien-l 76.78 314 *e*P P **08 43 02.5 -0.3**
comp=Z,31nm,1.1s,mb5.2
VIVF Saint-Julien-l 76.78 314 *e*P P **08 43 02.5 -0.3**
VIVF pmax pmax
comp=Z,31nm,1.1s,mb5.2
AVF Avril sur Loir 76.83 316 *e*P P **08 43 02.6 -0.5**
comp=Z,83nm,1.0s,mb5.3
AVF Avril sur Loir 76.83 316 *e*P P **08 43 02.6 -0.5**
comp=Z,42nm,1.0s,mb5.3
AVF Avril sur Loir 76.83 316 *e*P P **08 43 02.6 -0.5**
AVF pmax pmax
comp=Z,42nm,1.0s,mb5.3
ESK Eskdalemuir 76.88 325 *e*P P **08 43 02.2 -0.9**
ESK AMB AMB 08 43 03.8
comp=Z,48nm,3.9s
ESK AMS AMS 09 19 36.8
comp=Z,1μm,13.6s,MS5.3
ESK Eskdalemuir 76.88 325 *e*P P **08 43 02.6 -0.5**
comp=Z,74nm,1.5s,mb5.4
ESK LR LR
comp=Z,1μm,19.0s,MS5.2
ESK Eskdalemuir 76.88 325 *i* P P **08 43 03.7 +0.6**
ECK Cauldkaine Hil 76.90 325 *e*P P **08 43 02.5 -0.7**
KBI1 Birley Grange 76.92 323 *e*P P **08 43 02.9 -0.5**
RRR Rubha Reidh 76.96 328 *e*P P **08 43 03.1 -0.5**
LHO Holmfirth 76.97 323 *e*P P **08 43 03.3 -0.4**
PLDF La Plantade 77.00 315 *e*P P **08 43 05.1 +1.1**
PLDF La Plantade 77.00 315 *e*P P **08 43 05.1 +1.1**
PLDF La Plantade 77.00 315 *e*P P **08 43 05.1 +1.1**
CWF Charnwood Fore 77.03 323 *e*P P **08 43 02.3 -1.7**
CWF AMB AMB 08 43 10.6
comp=Z,13nm,1.1s,mb4.8
CWF AMS AMS 09 19 33.4
comp=Z,1μm,15.8s,MS5.2
EAB Aberfoyle 77.04 327 *e*P P **08 43 03.3 -0.8**
HYF Humbligny 77.08 316 *e*P P **08 43 04.5 +0.1**
HYF Humbligny 77.08 316 *e*P P **08 43 04.5 +0.1**
EGAK Eagle 77.10 23 *e*P P **08 43 03.7 -0.5**
comp=Z,12nm,0.8s,mb4.9
EGAK LR LR
comp=Z,2μm,19.0s,MS5.4
KEST Kesra 77.11 304 *e*P P **08 43 04.7 -0.1**
KEST Kesra 77.11 304 P P **08 43 04.0 -0.8**
comp=Z,1.1nm,0.7s,mb3.9,baz=86,slow=5.3,SNR=5.2
KEST LR LR 09 24 40.8
comp=Z,123nm,18.0s,MS4.3,baz=8.6,slow=42
KPL Plockton 77.13 328 *e*P P **08 43 04.3 -0.2**
KPL AMB AMB 08 43 05.8
comp=Z,53nm,1.5s,mb5.2
KPL AMS AMS 09 20 34.7
comp=Z,1μm,16.0s,MS5.3
MENT Mentasta 77.19 25 *e*P P **08 43 05.0 +0.2**
BGF Bois d'Agland 77.25 316 *e*P P **08 43 05.0 -0.4**
comp=Z,56nm,1.1s,mb5.1
BGF Bois d'Agland 77.25 316 *e*P P **08 43 05.0 -0.4**
comp=Z,28nm,1.1s,mb5.1
BGF Bois d'Agland 77.25 316 *e*P P **08 43 05.0 -0.4**
BGF pmax pmax
comp=Z,28nm,1.1s,mb5.1
AGO Saint Agoulin 77.28 315 *e*P P **08 43 06.9 +1.3**
AGO Saint Agoulin 77.28 315 *e*P P **08 43 06.9 +1.3**
PGBU Glenifferbraes 77.29 326 *e*P P **08 43 05.2 -0.2**
PGBU AMB AMB 08 43 06.2
comp=Z,65nm,2.2s,mb5.2
PGBU AMS AMS 09 20 60.0
comp=Z,1μm,21.2s,MS5.1
DIV Divide 77.34 27 *e*P P **08 43 06.0 +0.3**
comp=Z,94nm,1.1s,mb5.6
RRH Rhenigidale 77.34 329 *e*P P **08 43 06.0 +0.4**
INK Inuvik 77.35 18 *e*P P **08 43 05.6 0.0**
comp=Z,80nm,1.1s,mb5.6
INK Inuvik 77.35 18 P P **08 43 05.3 -0.3**
comp=Z,38nm,1.1s,mb5.3,baz=321,slow=7.7,SNR=16
INK Inuvik 77.35 18 *e*P P **08 43 05.6 0.0**
INK pmax pmax
comp=Z,80nm,1.1s
KAR1 Arisaig 77.42 328 *e*P P **08 43 05.5 -0.7**
GCD Castle Douglas 77.46 325 *e*P P **08 43 05.7 -0.8**
PYM Petit Puy Mans 77.48 315 *e*P P **08 43 07.7 +1.0**
PYM Petit Puy Mans 77.48 315 *e*P P **08 43 07.7 +1.0**
PYM Petit Puy Mans 77.48 315 *e*P P **08 43 07.7 +1.0**
LASF Ste Croix 77.63 313 *e*P P **08 43 07.6 0.0**
comp=Z,95nm,1.1s,mb5.3
LASF Ste Croix 77.63 313 *e*P P **08 43 07.6 0.0**
TCF Toulx Ste Croi 77.76 316 *e*P P **08 43 08.2 -0.1**
comp=Z,107nm,1.0s,mb5.5
TCF Toulx Ste Croi 77.76 316 *e*P P **08 43 08.2 -0.1**
comp=Z,54nm,1.0s,mb5.4
TCF Toulx Ste Croi 77.76 316 *e*P P **08 43 08.2 -0.1**
TCF pmax pmax
comp=Z,54nm,1.0s,mb5.4
SUMG Summit 77.81 349 *e*P P **08 43 07.6 -0.5**
comp=Z,50nm,0.9s,mb5.5
SUMG Summit 77.81 349 *i* P P **08 43 07.6 -0.5**
SUMG
comp=Z,39nm,1.1s,mb5.2
comp=Z,1μm,25.0s
GAL1 Galloway 77.85 325 *e*P P **08 43 07.9 -0.7**
GAL1 AMB AMB 08 43 10.4
comp=Z,37nm,4.0s
GAL1 AMS AMS 09 21 47.3
comp=Z,1μm,18.4s,MS5.2
BMRM Bremner River 77.91 27 *e*P P **08 43 09.1 +0.3**
comp=Z,118nm,0.8s,mb5.9
DAWY Dawson 78.14 23 *e*P P **08 43 09.8 -0.3**
CMAH Djebel Manchou 78.19 305 P P **08 43 11.3 +0.4**
LDF La Druitiere 78.19 318 *e*P P **08 43 10.1 -0.5**
comp=Z,25nm,0.7s,mb5.0
LDF La Druitiere 78.19 318 *e*P P **08 43 10.1 -0.5**
comp=Z,13nm,0.7s,mb5.0
LDF La Druitiere 78.19 318 *e*P P **08 43 10.1 -0.5**
LDF pmax pmax
comp=Z,13nm,0.7s,mb5.0
ABSA Djebel Ababsia 78.29 305 P P **08 43 12.8 +1.4**
MCH1 Michaelchurch 78.29 322 *e*P P **08 43 10.7 -0.5**
MCH1 AMB AMB 08 43 12.4
comp=Z,33nm,3.1s
MCH1 AMS AMS 09 20 30.8
comp=Z,1μm,16.9s,MS5.3
FLN La Foliniere 78.33 319 *e*P P **08 43 11.1 -0.3**
comp=Z,164nm,1.7s,mb5.4
FLN *e*MLR MLR
comp=Z,2μm,21.8s,MS5.1
FLN La Foliniere 78.33 319 *e*P P **08 43 11.1 -0.3**
comp=Z,82nm,1.7s,mb5.4
FLN LR LR
comp=Z,2μm,21.8s,MS5.4
FLN La Foliniere 78.33 319 *e*P P **08 43 11.1 -0.3**
FLN pmax pmax
comp=Z,82nm,1.7s,mb5.4
FLN MLR MLR
comp=Z,2μm,21.8s,MS5.4
HGH Gray Hill 78.36 322 *e*P P **08 43 10.9 -0.5**
HTR Trewern Hill 78.41 323 *e*P P **08 43 11.1 -0.6**
CAF Calviac 78.43 314 *e*P P **08 43 12.2 +0.2**
comp=Z,59nm,1.0s,mb5.2
CAF Calviac 78.43 314 *e*P P **08 43 12.2 +0.2**
comp=Z,29nm,1.0s,mb5.2
CAF Calviac 78.43 314 *e*P P **08 43 12.2 +0.2**
CAF pmax pmax
comp=Z,29nm,1.0s,mb5.2
WLF1 Llynfaes 78.44 324 *e*P P **08 43 10.9 -0.9**
WLF1 AMB AMB 08 43 13.2
comp=Z,109nm,1.3s,mb5.6
WLF1 AMS AMS 09 17 56.2
comp=Z,2μm,25.3s,MS5.4
RJF Les Rejaudoux 78.62 315 *e*P P **08 43 13.4 +0.3**
comp=Z,96nm,1.0s,mb5.4
RJF *e*MLR MLR
comp=Z,1μm,22.5s,MS4.9
RJF Les Rejaudoux 78.62 315 *e*P P **08 43 13.4 +0.3**
comp=Z,48nm,1.0s,mb5.4
RJF LR LR
comp=Z,1μm,22.5s,MS5.2
RJF Les Rejaudoux 78.62 315 *e*P P **08 43 13.4 +0.3**
RJF pmax pmax
comp=Z,48nm,1.0s,mb5.4
RJF MLR MLR
comp=Z,1μm,22.5s,MS5.2
GRR Gorron 78.72 318 *e*P P **08 43 13.4 -0.1**
comp=Z,55nm,0.8s,mb5.2
GRR Gorron 78.72 318 *e*P P **08 43 13.4 -0.1**
comp=Z,28nm,0.8s,mb5.2
GRR Gorron 78.72 318 *e*P P **08 43 13.4 -0.1**
GRR pmax pmax
comp=Z,28nm,0.8s,mb5.2
GMM Mts of Mourne 78.79 325 *e*P P **08 43 13.4 -0.4**
CKFL Kef-Lekhel 78.80 305 P P **08 43 13.8 -0.4**
DZM Mont Dzumac 78.82 121 *e*LR LR 09 07 31.4
comp=Z,803nm,23.8s
MTLF Montolieu 79.02 313 *e*P P **08 43 15.2 -0.1**
comp=Z,47nm,1.0s,mb5.0
MTLF Montolieu 79.02 313 *e*P P **08 43 15.2 -0.1**
comp=Z,24nm,1.0s,mb5.1
MTLF Montolieu 79.02 313 *e*P P **08 43 15.2 -0.1**
MTLF pmax pmax
comp=Z,24nm,1.0s,mb5.1
CASM Ain Smara 79.02 305 P P **08 43 15.2 -0.3**
MFF Saint Martin d 79.09 317 *e*P P **08 43 15.3 -0.3**
comp=Z,49nm,0.9s,mb5.1
MFF Saint Martin d 79.09 317 *e*P P **08 43 15.3 -0.3**
comp=Z,24nm,0.9s,mb5.1
MFF Saint Martin d 79.09 317 *e*P P **08 43 15.3 -0.3**
MFF pmax pmax
comp=Z,25nm,0.9s,mb5.1
CTEI Djebel Teioual 79.16 305 P P **08 43 17.3 +1.1**
LFF La Frestale 79.28 315 *e*P P **08 43 16.9 +0.2**
comp=Z,60nm,1.0s,mb5.2
LFF La Frestale 79.28 315 *e*P P **08 43 16.9 +0.2**
comp=Z,30nm,1.0s,mb5.2
LFF La Frestale 79.28 315 *e*P P **08 43 16.9 +0.2**
LFF pmax pmax
comp=Z,30nm,1.0s,mb5.2
DFRA Djebel Bou Aff 79.35 305 P P **08 43 14.2 -3.1**
DYA Yadsworthy 79.55 321 P P **08 43 16.6 -1.5**
DYA AMB AMB 08 43 34.9
comp=Z,55nm,1.4s,mb5.3
DYA AMS AMS 09 21 16.9
comp=Z,1μm,16.6s
DYA Yadsworthy 79.55 321 *e*P P **08 43 16.6 -1.5**
DYA AMB AMB 08 43 34.9
comp=Z,55nm,1.4s,mb5.3
DYA AMS AMS 09 21 16.9
comp=Z,1μm,16.6s,MS5.3
CLLI Llivia 79.55 312 P P **08 43 18.9 +0.7**
DLF Lyons Farm 79.56 325 *e*P P **08 43 16.4 -1.6**
CFON Fontmartina 79.56 311 P P **08 43 18.6 +0.3**
comp=Z,12nm,0.7s,mb4.9
VALF Valcebollere 79.56 312 *e*P P **08 43 18.5 +0.2**
VALF Valcebollere 79.56 312 *e*P P **08 43 18.5 +0.2**
HTL Hartland 79.59 322 P P **08 43 17.3 -0.9**
HTL AMB AMB 08 43 19.9
comp=Z,38nm,0.9s,mb5.3
HTL AMS AMS 09 20 05.0
comp=Z,1μm,25.6s
HTL Hartland 79.59 322 *e*P P **08 43 17.3 -0.9**
HTL AMB AMB 08 43 19.9
comp=Z,38nm,0.9s,mb5.3
HTL AMS AMS 09 20 05.0
comp=Z,1μm,25.6s,MS5.0
SGMF Saint Gilles 79.79 319 *e*P P **08 43 19.6 +0.2**
comp=Z,116nm,1.0s,mb5.5
SGMF Saint Gilles 79.79 319 *e*P P **08 43 19.6 +0.2**
comp=Z,58nm,1.0s,mb5.5
SGMF Saint Gilles 79.79 319 *e*P P **08 43 19.6 +0.2**
SGMF pmax pmax
comp=Z,58nm,1.0s,mb5.5
SET Setif 79.85 305 P P **08 43 21.0 +1.0**
MLS Moulis 79.92 313 *e*P P **08 43 20.0 -0.2**
MLS Moulis 79.92 313 *e*P P **08 43 20.0 -0.2**
EMIR Miracle 80.10 312 P P **08 43 21.6 +0.4**
comp=Z,22nm,0.8s,mb5.2
CSOR Sort 80.16 312 P P **08 43 22.1 +0.6**
comp=Z,24nm,0.9s,mb5.1
ETOS Mallorca 80.16 309 P P **08 43 25.9 +4.3**
comp=Z,17nm,1.1s,mb4.9
ROSF Rostrenen 80.17 319 *e*P P **08 43 21.7 +0.2**
comp=Z,97nm,1.0s,mb5.4
ROSF Rostrenen 80.17 319 *e*P P **08 43 21.7 +0.2**
comp=Z,48nm,1.0s,mb5.4
ROSF Rostrenen 80.17 319 *e*P P **08 43 21.7 +0.2**
ROSF pmax pmax
comp=Z,48nm,1.0s,mb5.4
QUIF Quistinic 80.31 319 *e*P P **08 43 22.2 0.0**
comp=Z,95nm,1.2s,mb5.3
QUIF Quistinic 80.31 319 *e*P P **08 43 22.2 0.0**
comp=Z,48nm,1.2s,mb5.3
QUIF Quistinic 80.31 319 *e*P P **08 43 22.2 0.0**
QUIF pmax pmax
comp=Z,48nm,1.2s,mb5.3
EPF Esparros 80.39 313 *e*P P **08 43 22.4 -0.3**
comp=Z,19nm,0.8s,mb4.8
EPF Esparros 80.39 313 *e*P P **08 43 22.4 -0.3**
comp=Z,9.6nm,0.8s,mb4.8
EPF Esparros 80.39 313 *e*P P **08 43 22.4 -0.3**
EPF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
CCA1 Carnmenellis 80.40 321 AMS AMS 09 20 41.4
comp=Z,1μm,22.0s,MS5.2
RESF Ens 80.49 313 *e*P P **08 43 24.0 +0.7**
RESF Ens 80.49 313 *e*P P **08 43 24.0 +0.7**
EPOB Poblet 80.65 311 P P **08 43 24.4 +0.2**
comp=Z,67nm,1.3s,mb5.4
VIEF Viey 80.66 313 *e*P P **08 43 24.8 +0.6**
VIEF Viey 80.66 313 *e*P P **08 43 24.8 +0.6**
EBIE Bielsa 80.67 313 P P **08 43 25.4 +1.1**
comp=Z,52nm,1.3s,mb5.3
PNL Peninsula 80.78 27 *e*P P **08 43 25.4 +0.9**
comp=Z,80nm,0.8s,mb5.7
ETSF Etsaut 81.03 313 *e*P P **08 43 26.5 +0.3**
comp=Z,48nm,0.8s,mb5.2
ETSF Etsaut 81.03 313 *e*P P **08 43 26.5 +0.3**
comp=Z,24nm,0.8s,mb5.2
ETSF Etsaut 81.03 313 *e*P P **08 43 26.5 +0.3**
ETSF pmax pmax
comp=Z,24nm,0.8s,mb5.2
ERTA Horta de San J 81.33 311 P P **08 43 28.0 +0.2**
comp=Z,66nm,1.4s,mb5.4
SJPF Ste Jean 81.37 314 *e*P P **08 43 28.4 +0.4**
comp=Z,35nm,0.8s,mb5.0
SJPF Ste Jean 81.37 314 *e*P P **08 43 28.4 +0.4**
comp=Z,18nm,0.8s,mb5.0
SJPF Ste Jean 81.37 314 *e*P P **08 43 28.4 +0.4**
SJPF pmax pmax
comp=Z,18nm,0.8s,mb5.0
EALK Alkurruntz 81.50 314 P P **08 43 28.8 +0.2**
comp=Z,35nm,0.9s,mb5.3
ESAC San Caprasio 81.52 312 P P **08 43 29.9 +1.1**
comp=Z,15nm,0.7s,mb5.0
ELIZ Elizondo 81.54 314 P P **08 43 30.5 +1.6**
comp=Z,11nm,0.8s,mb4.8
ELIZ Elizondo 81.54 314 P P **08 43 30.5 +1.6**
ELIZ pmax pmax
comp=Z,11nm,0.8s,mb4.8
EMHD Djebel Mahouad 81.63 306 P P **08 43 30.0 +0.5**
EMOS Mosqueruela 82.15 311 P P **08 43 32.0 -0.2**
comp=Z,132nm,1.7s,mb5.6
SKAG Skagway 82.52 26 *e*P P **08 43 34.3 +0.6**
comp=Z,72nm,0.9s,mb5.7
EBNR Beni Rached 82.62 307 P P **08 43 34.5 -0.2**
ELAN Lanestosa 82.73 315 P P **08 43 36.2 +1.0**
comp=Z,57nm,1.0s,mb5.6
EBEN Beniarda 82.75 310 P P **08 43 35.6 +0.3**
comp=Z,12nm,1.3s,mb4.8
ECHA Ech Chlef 82.80 307 P P **08 43 35.0 -0.6**
ECHE Chera 82.85 311 P P **08 43 37.4 +1.6**
comp=Z,7.7nm,0.8s,mb4.8
ECHE Chera 82.85 311 P P **08 43 37.4 +1.6**
ECHE pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
ETOR Torete 83.00 312 P P **08 43 35.3 -1.3**
comp=Z,14nm,0.8s,mb5.0
ETOR Torete 83.00 312 P P **08 43 35.3 -1.3**
ETOR pmax pmax
comp=Z,14nm,0.8s,mb5.0
EANR 'Ain N'Sour 83.08 307 P P **08 43 37.0 -0.1**
ETRT Tiaret 83.19 306 P P **08 43 38.5 +0.8**
ETOB Tobarra 83.69 310 P P **08 43 40.4 +0.2**
comp=Z,68nm,1.4s,mb5.6
EARI Arriondas 83.82 315 P P **08 43 38.8 -2.0**
comp=Z,177nm,2.8s,mb5.7
EMUR La Murta 83.86 309 P P **08 43 40.8 -0.3**
comp=Z,110nm,1.6s,mb5.7
SIT Sitka 84.09 28 *e*P P **08 43 42.6 +0.7**
comp=Z,44nm,1.1s,mb5.4
SIT Sitka 84.09 28 *e*P P **08 43 42.6 +0.7**
SIT pmax pmax
comp=Z,44nm,1.1s,mb5.5
EVIA Vianos 84.35 310 P P **08 43 43.6 +0.1**
comp=Z,30nm,1.0s,mb5.4
EVIA Vianos 84.35 310 P P **08 43 43.6 0.0**
EVIA pmax pmax
comp=Z,30nm,1.0s,mb5.4
GUD Guadarrama 84.47 313 P P **08 43 44.0 -0.1**
comp=Z,28nm,0.9s,mb5.4
GUD Guadarrama 84.47 313 P P **08 43 44.1 -0.1**
GUD pmax pmax
comp=Z,29nm,0.9s,mb5.4
EHUE Huescar 84.81 310 P P **08 43 46.2 +0.3**
comp=Z,18nm,1.0s,mb5.2
EHUE Huescar 84.81 310 P P **08 43 46.2 +0.3**
EHUE pmax pmax
comp=Z,18nm,1.0s,mb5.2
ESDC Sonseca Array 84.83 312 P P **08 43 46.3 +0.3**
comp=Z,8.9nm,1.1s,mb4.8
ESDC Sonseca Array 84.83 312 P P **08 43 45.6 -0.3**
comp=Z,12nm,1.1s,mb5.0,baz=42,slow=4.2,SNR=41
ESDC LR LR 09 25 37.3
comp=Z,571nm,20.0s,MS5.0,baz=40,slow=38
ESLA Sonseca Array 84.83 312 *e*P P **08 43 45.9 -0.1**
comp=Z,8.9nm,1.2s,mb4.8
ESLA LR LR
comp=Z,4μm,20.0s,MS5.8
EPON Pontenova 85.02 316 P P **08 43 47.8 +0.9**
comp=Z,143nm,2.7s,mb5.6
EQES Quesada 85.15 310 P P **08 43 47.6 0.0**
comp=Z,60nm,1.1s,mb5.6
PAB San Pablo 85.15 312 *e*P P **08 43 48.0 +0.4**
comp=Z,23nm,1.3s,mb5.2
PAB LR LR
comp=Z,559nm,22.0s,MS4.9
PAB San Pablo 85.15 312 *e*P P **08 43 48.0 +0.4**
PAB pmax pmax
comp=Z,23nm,1.3s,mb5.2
PAB MLR MLR
comp=Z,559nm,22.0s,MS4.9
DLBC Dease Lake 85.24 25 *e*P P **08 43 48.3 +0.6**
DLBC Dease Lake 85.24 25 P P **08 43 48.0 +0.4**
comp=Z,4.5nm,1.0s,mb4.6,baz=315,slow=5.2,SNR=8.4
DLBC LR LR 09 22 01.5
comp=Z,1μm,21.5s,MS5.3,baz=133,slow=36
EBER Berja 85.47 309 P P **08 43 50.0 +0.8**
comp=Z,128nm,1.9s,mb5.7
ECAL Calabor 85.49 315 P P **08 43 49.3 +0.1**
comp=Z,97nm,1.9s,mb5.6
PBRG Braganca 85.56 315 *e*P P **08 43 50.3 +0.7**
comp=Z,24nm,1.4s,mb5.2
WRAK Wrangell Islan 85.74 27 *e*P P **08 43 51.0 +0.9**
comp=Z,32nm,1.2s,mb5.4
WRAK LR LR
comp=Z,1μm,20.0s,MS5.3
EGUA Guajares 85.97 309 P P **08 43 50.4 -1.3**
comp=Z,112nm,0.8s,mb6.2
EGUA Guajares 85.97 309 P P **08 43 50.4 -1.3**
EGUA pmax pmax
comp=Z,112nm,0.8s,mb6.2
EADA Adamuz 86.00 311 P P **08 43 51.6 -0.2**
comp=Z,118nm,2.6s,mb5.7
EPLA Plasencia 86.04 313 P P **08 43 51.8 -0.2**
comp=Z,12nm,1.0s,mb5.1
EPLA Plasencia 86.04 313 P P **08 43 51.8 -0.2**
EPLA pmax pmax
comp=Z,12nm,1.0s,mb5.1
ERON Agron 86.04 309 P P **08 43 51.7 -0.4**
comp=Z,2.1nm,0.5s,mb4.6
MVO Moncorvo 86.08 314 *e*P P **08 43 52.9 +0.7**
comp=Z,52nm,1.2s,mb5.6
MVO *e*SS SS 09 00 31.8 +27
MVO *e*LQ 09 13 11.6
MVO *e*LR LR 09 19 34.8
comp=Z,490nm,22.0s
MVO Moncorvo 86.08 314 P P **08 43 52.9 +0.8**
ELUQ Luque 86.09 310 P P **08 43 52.3 0.0**
comp=Z,70nm,1.0s,mb5.8
ELUQ Luque 86.09 310 P P **08 43 52.3 0.0**
ELUQ pmax pmax
comp=Z,70nm,1.0s,mb5.8
STS Santiago 86.13 316 P P **08 43 53.6 +1.2**
comp=Z,9.0nm,0.7s,mb5.1
STS Santiago 86.13 316 P P **08 43 53.6 +1.2**
STS pmax pmax
comp=Z,9.0nm,0.7s,mb5.1
ELOJ Sierra Loja 86.22 310 P P **08 43 52.8 -0.1**
comp=Z,6.9nm,0.7s,mb5.0
ELOJ Sierra Loja 86.22 310 P P **08 43 52.8 -0.1**
ELOJ pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
EMAZ Mazaricos 86.36 317 P P **08 43 53.9 +0.4**
comp=Z,18nm,1.4s,mb5.1
ELOB Lobios 86.37 315 P P **08 43 55.1 +1.5**
comp=Z,17nm,1.1s,mb5.2
PCAB Cabril 86.43 315 *e*P P **08 43 54.8 +0.9**
comp=Z,41nm,1.3s,mb5.5
PVRL Vila Real 86.46 315 *e*P P **08 43 54.5 +0.4**
comp=Z,33nm,1.4s,mb5.4
MTE Manteigas 86.82 314 *e*P P **08 43 56.4 +0.6**
comp=Z,50nm,1.2s,mb5.6
MTE *e*S S 08 54 36.8 +2.2
MTE *e*LQ 09 13 19.1
MTE *e*LR LR 09 19 42.2
comp=Z,424nm,20.0s
MTE Manteigas 86.82 314 *e*P P **08 43 56.3 +0.5**
comp=Z,35nm,1.0s,mb5.5
MTE LR LR
comp=Z,494nm,20.0s,MS4.9
YKA Yellowknife Ar 86.87 16 P P **08 43 54.6 -1.0**
comp=Z,3.9nm,0.7s,mb4.8,baz=330,slow=5.9,SNR=4.2
YKA LR LR 09 23 06.2
comp=Z,143nm,18.7s,MS4.4,baz=200,slow=36
YKA Yellowknife Ar 86.87 16 P P **08 43 54.6 -1.0**
PCBR Castelo Branco 87.07 313 *e*P P **08 43 57.6 +0.5**
comp=Z,29nm,1.4s,mb5.3
PMRV Marv??o 87.23 313 *e*P P **08 43 58.8 +1.0**
comp=Z,41nm,1.4s,mb5.5
PMRV *e*LR LR 09 20 45.0
comp=Z,571nm,20.0s
EBAD Badajoz 87.33 312 P P **08 43 58.5 +0.1**
comp=Z,9.8nm,1.0s,mb5.0
EJIF Jimena Fronter 87.48 310 P P **08 43 59.4 +0.3**
comp=Z,12nm,0.6s,mb5.3
EJIF Jimena Fronter 87.48 310 P P **08 43 59.4 +0.3**
EJIF pmax pmax
comp=Z,12nm,0.6s,mb5.3
ESPR Espera 87.53 310 P P **08 43 59.1 -0.2**
comp=Z,18nm,1.1s,mb5.2
EMIN Mina Concepcio 87.62 311 P P **08 44 00.0 +0.2**
comp=Z,52nm,1.3s,mb5.6
PBAR Barrancos 87.66 312 *e*P P **08 44 00.7 +0.8**
comp=Z,51nm,1.4s,mb5.6
PBAR *e*LQ 09 14 38.3
PBAR *e*LR LR 09 21 45.9
comp=Z,337nm,18.0s
PESTR Estremoz 87.66 313 *e*P P **08 44 00.6 +0.7**

PESTR eS S 08 54 48.6 +5.8
PESTR eLQ 09 14 24.8
PESTR eLR LR 09 21 47.5
comp=Z,868nm,20.0s
PTOM Tomar 87.80 314 eP **P 08 44 01.4 +0.8**
comp=Z,48nm,1.1s,mb5.6
SFS San Fernando 87.98 310 PFAKE 08 44 10.0 +8.5
SFS LR LR
comp=Z,1μm,20.0s,MS5.2
EVO Evora 88.12 312 ⇓iP **P 08 44 02.4 +0.3**
comp=Z,48nm,1.1s,mb5.3
EVO eMLR MLR
comp=Z,934nm,18.8s,MS4.9
EVO Evora 88.12 312 eP **P 08 44 02.5 +0.4**
comp=Z,37nm,1.6s,mb5.4
EVOP Sao Brissos 88.19 313 eP **P 08 44 02.8 +0.3**
EVOP AMS AMS 09 28 21.7
comp=Z,690nm,19.7s,MS5.1
EVOP Sao Brissos 88.19 313 eP **P 08 44 02.7 +0.2**
PBEJ Beja 88.29 312 eP **P 08 44 03.7 +0.8**
comp=Z,38nm,1.1s,mb5.5
EGRO El Granado 88.29 311 P **P 08 44 03.1 +0.1**
comp=Z,33nm,1.0s,mb5.5
PVAQ Vaqueiros 88.52 311 eP **P 08 44 04.5 +0.4**
comp=Z,50nm,1.4s,mb5.7
PVAQ eLQ 09 15 27.7
PVAQ eLR LR 09 22 31.6
comp=Z,349nm,18.0s
PCVE Castro Verde 88.61 312 eS S 08 54 53.1 +1.1
PCVE eLQ 09 14 56.7
PCVE eLR LR 09 22 38.0
comp=Z,605nm,20.0s
MESJ Messejana 88.62 312 eP **P 08 44 04.5 0.0**
MESJ AMS AMS 09 22 21.1
comp=N,966nm,27.7s
MESJ Messejana 88.62 312 eP **P 08 44 04.4 -0.1**
PMAFR Mafra 88.72 313 eP **P 08 44 05.7 +0.7**
comp=N,82nm,1.5s,mb5.8
PMAFR eLQ 09 14 30.6
PMAFR eLR LR 09 21 21.5
comp=N,594nm,20.0s
PBDV Barranco-do-Ve 88.75 311 eP **P 08 44 05.7 +0.6**
comp=N,51nm,1.3s,mb5.7
PBDV eLQ 09 16 07.4
PBDV eLR LR 09 22 05.1
comp=N,323nm,20.0s
PTEO Sao Teotonio 89.12 312 eP **P 08 44 07.7 +0.8**
comp=N,50nm,1.3s,mb5.7
MORF Marmelete 89.20 312 eP **P 08 44 07.7 +0.4**
comp=N,46nm,1.3s,mb5.7
MORF eLQ 09 16 18.6
MORF eLR LR 09 21 37.0
comp=N,618nm,20.0s
MORF Marmelete 89.20 312 eP **P 08 44 07.1 -0.2**
PFVI Vila Bisbo 89.41 312 eP **P 08 44 08.4 +0.1**
comp=N,49nm,1.4s,mb5.6
PFVI eLR LR 09 23 01.9
comp=N,660nm,18.0s
PFVI Vila Bisbo 89.41 312 P **P 08 44 08.8 +0.5**
LBTB Lobatse 89.56 242 eP **P 08 44 09.3 +0.3**
comp=N,12nm,0.6s,mb5.4
LBTB LR LR
comp=Z,1μm,19.0s,MS5.3
BBB Bella Bella 90.49 28 LR LR 09 25 10.1
comp=Z,637nm,18.2s,MS5.1,baz=333,slow=36
CASY Casey 92.47 177 eP **P 08 44 20.6 -0.9**
CASY Casey 92.47 177 eP **P 08 44 20.6 -0.9**
comp=Z,19nm,1.1s,mb5.3
CASY LR LR
comp=Z,954nm,22.0s,MS5.2
TORD Torodi Ar. Bea 93.20 286 P **P 08 44 24.2 -1.9**
comp=Z,1.6nm,0.4s,mb4.8,baz=51,slow=4.6,SNR=6.5
TORD PKKP PKKPbc 09 01 38.0 +4.6
comp=Z,0.9nm,0.9s,baz=131,slow=1.2,SNR=5.5
TORD LR LR 09 30 45.8
comp=Z,772nm,18.1s,MS5.2,baz=70,slow=38
TSUM Tsumeb 93.44 250 PFAKE 08 44 40.0 +13
TSUM LR LR
comp=Z,762nm,19.0s,MS5.2
EDM Edmonton 95.13 20 eP **P 08 44 35.0 +0.7**
EDM Edmonton 95.13 20 eP **P 08 44 35.1 +0.8**
NLWA Neilton Lookou 95.90 29 PFAKE 08 44 50.0 +12
NLWA LR LR
comp=Z,783nm,19.0s,MS5.2
FFC Flin Flon 96.77 14 PFAKE 08 44 50.0 +8.2
FFC LR LR
comp=Z,858nm,20.0s,MS5.2
NEW Newport 97.98 25 PFAKE 08 45 00.0 +13
NEW LR LR
comp=Z,1μm,19.0s,MS5.3
MAW Mawson 98.00 194 P **P 08 44 46.0 -0.7**
comp=Z,0.9nm,0.8s,mb4.4,baz=26,slow=8.7,SNR=2.9
MAW LR LR 09 25 47.2
comp=Z,366nm,19.1s,MS4.9,baz=31,slow=33
MAW Mawson 98.00 194 P **P 08 44 46.0 -0.7**
COR Corvallis 98.29 31 PFAKE 08 45 00.0 +11
COR LR LR
comp=Z,948nm,21.0s,MS5.3
HAWA Hanford 98.53 28 PFAKE 08 45 00.0 +10
HAWA LR LR
comp=Z,664nm,21.0s,MS5.1
SCHQ Schefferville 98.67 353 P **P 08 44 49.0 -1.3**
SCHQ LR LR 09 32 26.5
SCHQ Schefferville 98.67 353 P **P 08 44 49.0 -1.3**
comp=Z,3.2nm,0.8s,mb4.9,baz=22,slow=7.3,SNR=3.3
SCHQ LR LR 09 32 26.5
comp=Z,770nm,18.9s,MS5.2,baz=30,slow=37
HUMO Hull Mountain 99.97 32 PFAKE 08 45 10.0 +14
HUMO LR LR
comp=Z,781nm,21.0s,MS5.2
SLMT Seeley Lake 100.18 24 ePdif Pdif 08 44 57.3 +0.1
comp=Z,5.4nm,0.9s
MSO Missoula 100.36 24 PFAKE 08 45 10.0 +12
MSO LR LR
comp=Z,897nm,19.0s,MS5.3
YBH Yreka Blue Hor 100.76 32 PFAKE 08 45 10.0 +10
YBH LR LR
comp=Z,695nm,20.0s,MS5.2
EGMT Eagleton 100.78 21 PFAKE 08 45 10.0 +10
EGMT LR LR
comp=Z,1μm,19.0s,MS5.3
WDC Whiskeytown Da 101.72 33 PFAKE 08 45 20.0 +16
WDC LR LR
comp=Z,642nm,19.0s,MS5.2
MOD Modoc 101.76 31 PFAKE 08 45 20.0 +16
MOD LR LR
comp=Z,725nm,19.0s,MS5.2
DBIC Dimbokro 101.92 284 PFAKE 08 45 20.0 +15
DBIC LR LR
comp=Z,654nm,19.0s,MS5.2
DGMT Dagmar 102.02 17 PFAKE 08 45 20.0 +15
DGMT LR LR
comp=Z,1μm,19.0s,MS5.4
WVOR Wild Horse Val 102.09 29 PFAKE 08 45 20.0 +14
WVOR LR LR
comp=Z,701nm,22.0s,MS5.1
BOZ Bozeman (W) 102.21 23 PFAKE 08 45 20.0 +14
BOZ LR LR
comp=Z,770nm,20.0s,MS5.2
MCMT McKenzie Canyo 102.47 25 ePdif Pdif 08 45 09.1 +1.7
comp=Z,1.5nm,1.1s
HOPS Hopland 102.67 34 PFAKE 08 45 20.0 +12
HOPS LR LR
comp=Z,987nm,19.0s,MS5.3
HLID Hailey 102.93 26 PFAKE 08 45 20.0 +11
HLID LR LR
comp=Z,597nm,20.0s,MS5.1
LAO LASA Array 103.06 19 PFAKE 08 45 20.0 +10
LAO LR LR
comp=Z,830nm,20.0s,MS5.3
MCCM Marconi Confer 103.41 35 PFAKE 08 45 20.0 +8.5
MCCM LR LR
comp=Z,711nm,19.0s,MS5.2
RLMT Red Lodge 103.49 22 PFAKE 08 45 20.0 +8.1
RLMT LR LR
comp=Z,1μm,20.0s,MS5.3
LKWY Lake 103.58 23 PFAKE 08 45 20.0 +7.7
LKWY LR LR
comp=Z,2μm,22.0s,MS5.7
AGMN Agassiz Nation 104.10 12 PFAKE 08 45 30.0 +15
AGMN LR LR
comp=Z,792nm,21.0s,MS5.2
BMN Battle Mountai 104.33 30 PFAKE 08 45 30.0 +14
BMN LR LR
comp=Z,833nm,20.0s,MS5.3
CMB Columbia Colle 104.75 33 PFAKE 08 45 30.0 +13
CMB LR LR
comp=Z,721nm,21.0s,MS5.2
AHID Auburn Hatcher 104.89 25 PFAKE 08 45 30.0 +12
AHID LR LR
comp=Z,869nm,19.0s,MS5.3
EYMN Ely 105.17 9 PFAKE 08 49 40.0 +6.3
EYMN LR LR
comp=Z,1μm,22.0s,MS5.4
SAO San Andreas Ge 105.20 35 PFAKE 08 49 50.0 +16
SAO LR LR
comp=Z,883nm,19.0s,MS5.3
NVAR Mina Array Bea 105.44 32 Pdiff Pdif 08 45 24.5 +3.9
comp=Z,0.2nm,0.5s,baz=307,slow=8.9,SNR=2.5
NVAR PP PP 08 49 42.4 +0.8
comp=Z,0.6nm,0.7s,baz=321,slow=7.0,SNR=2.9
NVAR PKKP PKKPbc 09 01 05.3 +5.6
comp=Z,0.4nm,0.6s,baz=194,slow=1.9,SNR=3.5
BW06 Boulder Array 105.45 24 PFAKE 08 49 50.0 +16
BW06 LR LR
comp=Z,766nm,19.0s,MS5.3
PDAR Pinedale Array 105.45 24 Pdif Pdif 08 45 24.3 +3.7
PDAR PP PP 08 49 43.4 +2.0
PDAR PKKP PKKPbc 09 01 06.0 +6.1
PDAR Pinedale Array 105.45 24 Pdiff Pdif 08 45 24.3 +3.7
comp=Z,0.2nm,0.6s,baz=320,slow=5.2,SNR=1.9
PDAR PP PP 08 49 43.4 +2.0
comp=Z,2.0nm,1.1s,baz=349,slow=3.7,SNR=4.1
PDAR PKKP PKKPbc 09 01 06.0 +6.1
comp=Z,0.3nm,0.5s,baz=116,slow=6.1,SNR=3.8
HWUT Hardware Ranch 105.71 25 PFAKE 08 49 50.0 +15
HWUT LR LR
comp=Z,937nm,19.0s,MS5.3
RSSD Black Hills 106.04 19 PFAKE 08 49 50.0 +15
RSSD LR LR
comp=Z,1μm,19.0s,MS5.4
TPH Tonopah 106.23 31 PFAKE 08 49 50.0 +14
TPH LR LR
comp=Z,560nm,22.0s,MS5.1
DUG Dugway 106.41 27 PFAKE 08 49 50.0 +14
DUG LR LR
comp=Z,643nm,20.0s,MS5.2
COWI Conover 107.30 8 PFAKE 08 49 50.0 +12
COWI LR LR
comp=Z,913nm,19.0s,MS5.3
DAC Darwin (Calif) 107.50 33 PFAKE 08 49 50.0 +12
DAC LR LR
comp=Z,665nm,19.0s,MS5.2
MSU Marysvale 108.10 28 ePKPdf PKiKP 08 49 42.2 +2.7
ECSD EROS Data Cent 108.31 14 PFAKE 08 49 50.0 +10
ECSD LR LR
comp=Z,1μm,19.0s,MS5.5
PKME Peaks-Kenny Pk 108.38 353 PFAKE 08 49 50.0 +10
PKME LR LR
comp=Z,921nm,20.0s,MS5.3
GLMI Grayling 109.02 5 PFAKE 08 49 50.0 +9.0
GLMI LR LR
comp=Z,741nm,20.0s,MS5.2
LONY Lake Ozonia 109.40 357 PFAKE 08 49 50.0 +8.3
LONY LR LR
comp=Z,615nm,19.0s,MS5.2
ISCO Idaho Springs 109.45 22 PFAKE 08 49 50.0 +8.1
ISCO LR LR
comp=Z,1μm,19.0s,MS5.5
OGNE Ogallala 109.54 19 PFAKE 08 49 50.0 +7.9
OGNE LR LR
comp=Z,855nm,21.0s,MS5.3
LBNH Lisbon 109.63 355 PFAKE 08 49 50.0 +7.9
LBNH LR LR
comp=Z,771nm,20.0s,MS5.3
NCB Newcomb 110.03 357 PFAKE 08 49 50.0 +7.1
NCB LR LR
comp=Z,711nm,21.0s,MS5.2
PFO Pinyon Flat Ob 110.19 34 PFAKE 08 49 50.0 +6.5
PFO LR LR
comp=Z,732nm,20.0s,MS5.2
JFWS Jewell Farm 110.27 9 PFAKE 08 49 50.0 +6.6
JFWS LR LR
comp=Z,887nm,21.0s,MS5.3
MVCO Mesa Verde 110.69 26 PFAKE 08 50 00.0 +16
MVCO LR LR
comp=Z,531nm,20.0s,MS5.1
WUAZ Wupatki 110.97 29 PFAKE 08 50 00.0 +15
WUAZ LR LR
comp=Z,433nm,19.0s,MS5.0
SDCO Great Sand Dun 111.33 23 PFAKE 08 50 00.0 +14
SDCO LR LR
comp=Z,735nm,19.0s,MS5.3
AAM Ann Arbor 111.60 4 PFAKE 08 50 00.0 +14
AAM LR LR
comp=Z,921nm,20.0s,MS5.4
BINY Binghamton 111.86 358 PFAKE 08 50 00.0 +14
BINY LR LR
comp=Z,850nm,21.0s,MS5.3
ERPA Erie 111.95 2 PFAKE 08 50 00.0 +13
ERPA LR LR
comp=Z,809nm,20.0s,MS5.3
CBKS Cedar Bluff 112.18 18 PFAKE 08 50 00.0 +13
CBKS LR LR
comp=Z,1μm,19.0s,MS5.5
KSU1 Kansas State U 112.72 16 PFAKE 08 50 00.0 +12
KSU1 LR LR
comp=Z,1μm,20.0s,MS5.4
HDIL Hopedale 112.72 9 PFAKE 08 50 00.0 +12
HDIL LR LR
comp=Z,1μm,19.0s,MS5.5
ANMO Albuquerque 113.46 25 PFAKE 08 50 00.0 +10
ANMO LR LR
comp=Z,722nm,21.0s,MS5.2
ACSO Alum Creek Sta 113.70 4 PFAKE 08 50 00.0 +10
ACSO LR LR
comp=Z,835nm,20.0s,MS5.3
PPT Papeete 113.82 99 eLR LR 09 23 50.6
comp=Z,515nm,24.8s
TUC Tucson 113.95 30 PFAKE 08 50 00.0 +9.3
TUC LR LR
comp=Z,502nm,20.0s,MS5.1
MCWV Mont Chateau 114.41 1 PFAKE 08 50 00.0 +8.6
MCWV LR LR
comp=Z,936nm,19.0s,MS5.4
CCM Cathedral Cave 114.85 11 PFAKE 08 50 00.0 +7.7
CCM LR LR
comp=Z,874nm,20.0s,MS5.4
AMTX Amarillo 115.22 21 PFAKE 08 50 00.0 +6.9
AMTX LR LR
comp=Z,960nm,20.0s,MS5.4
WCI Wyandotte Cave 115.40 7 PFAKE 08 50 00.0 +6.7
WCI LR LR
comp=Z,767nm,21.0s,MS5.3
CBN Corbin 115.88 359 PFAKE 08 50 10.0 +16
CBN LR LR
comp=Z,1μm,20.0s,MS5.4
WMOK Wichita Mounta 116.25 19 PFAKE 08 50 10.0 +15
WMOK LR LR
comp=Z,1μm,20.0s,MS5.5
GDL2 Guadalupe Moun 116.70 25 ePKPdf PKPdf 08 49 55.7 -0.3
MNTX Cornudas Mount 116.76 26 ePKPdf PKPdf 08 49 56.2 +0.1
MNTX LR LR
comp=Z,686nm,19.0s,MS5.3
BLA Blacksburg 116.84 2 PFAKE 08 50 10.0 +14
BLA LR LR
comp=Z,823nm,21.0s,MS5.3
WVT Waverly 117.28 9 ePKPdf PKPdf 08 49 56.5 -0.5
WVT LR LR
comp=Z,808nm,19.0s,MS5.4
WVT Waverly 117.28 9 ePKIKP PKPdf 08 49 56.5 -0.5
WVT MLR MLR
comp=Z,808nm,19.0s,MS5.4
MIAR Mount Ida 117.78 14 ePKPdf PKPdf 08 49 57.5 -0.5
MIAR LR LR
comp=Z,957nm,22.0s,MS5.4
MIAR Mount Ida 117.78 14 ePKIKP PKPdf 08 49 57.5 -0.5
MIAR MLR MLR
comp=Z,957nm,22.0s,MS5.4
TKL Tuckaleechee C 118.19 5 ePKPdf PKPdf 08 49 58.9 +0.1
TKL Tuckaleechee C 118.19 5 ePKIKP PKPdf 08 49 58.9 +0.1
OXF Oxford 118.62 11 PFAKE 08 50 10.0 +10
OXF LR LR
comp=Z,1μm,19.0s,MS5.5
CNNC Cliffs of the 118.84 360 PFAKE 08 50 10.0 +10
CNNC LR LR
comp=Z,802nm,21.0s,MS5.3
TAOE Nuku Hiva Isla 118.89 86 eLR LR 09 26 09.5
comp=Z,476nm,28.1s
TXAR Lajitas Array 119.53 26 PKP PKPdf 08 50 00.1 -1.5
comp=Z,0.5nm,0.4s,baz=222,slow=2.1,SNR=16
TXAR PP PP 08 51 17.2 -4.9
comp=Z,1.6nm,0.9s,baz=30,slow=5.5,SNR=2.3
TXAR PKKPab PKKPab 09 00 11.6 -5.4
comp=Z,1.5nm,0.9s,baz=144,slow=6.7,SNR=6.0
TXAR Lajitas Array 119.53 26 PKIKP PKPdf 08 50 00.1 -1.4
JCT Junction City 119.88 22 ePKPdf PKPdf 08 50 01.8 -0.4
JCT LR LR
comp=Z,882nm,21.0s,MS5.4
JCT Junction City 119.88 22 ePKIKP PKPdf 08 50 01.8 -0.4
JCT MLR MLR
comp=Z,882nm,21.0s,MS5.4
NATX Nacogdoches 120.18 16 PFAKE 08 50 10.0 +7.3
NATX LR LR
comp=Z,887nm,20.0s,MS5.4
LRAL Lakeview Retre 120.43 9 PFAKE 08 50 10.0 +6.8
LRAL LR LR
comp=Z,996nm,22.0s,MS5.4
GOGA Godfrey 120.45 5 PFAKE 08 50 10.0 +6.8
GOGA LR LR
comp=Z,1μm,19.0s,MS5.6
VBMS Vicksburg 120.66 12 PFAKE 08 50 10.0 +6.4
VBMS LR LR
comp=Z,769nm,19.0s,MS5.4
VNA2 Neumayer--Watz 120.87 201 e PKPdf 08 50 06.7 +4.0
NHSC New Hope 120.94 2 PFAKE 08 50 20.0 +16
NHSC LR LR
comp=Z,929nm,20.0s,MS5.4
VNA1 Neumayer--Stat 121.20 201 e PKPdf 08 50 07.4 +4.1
HKT Hockley 121.59 18 PFAKE 08 50 20.0 +15
HKT LR LR
comp=Z,1μm,19.0s,MS5.5
BRAL Brewton 122.42 9 PFAKE 08 50 20.0 +13
BRAL LR LR
comp=Z,1μm,19.0s,MS5.5
KVTX Kingsville 123.22 21 PFAKE 08 50 20.0 +11
KVTX LR LR
comp=Z,1μm,19.0s,MS5.5
RKT Rikitea 128.56 100 eLR LR 09 30 37.9
comp=Z,533nm,23.8s
ANWB Willy Bob 133.56 338 PFAKE 08 50 40.0 +11
ANWB LR LR
comp=Z,390nm,19.0s,MS5.1
GTBY Guantanamo Bay 134.01 356 PFAKE 08 50 40.0 +11
GTBY LR LR
comp=Z,829nm,19.0s,MS5.5
SJG San Juan 134.40 344 PFAKE 08 50 40.0 +10
SJG LR LR
comp=Z,372nm,20.0s,MS5.1
SDDR Presa de Saban 134.55 351 PFAKE 08 50 40.0 +10
SDDR LR LR
comp=Z,813nm,21.0s,MS5.4
RCBR Riachuelo 134.94 289 PFAKE 08 50 40.0 +8.8
RCBR LR LR
comp=Z,369nm,20.0s,MS5.1
MTDJ Mount Denham 135.78 359 PFAKE 08 50 40.0 +7.3
MTDJ LR LR
comp=Z,603nm,21.0s,MS5.3
FDF Fort de France 136.06 336 PFAKE 08 50 40.0 +6.8
FDF LR LR
comp=Z,399nm,20.0s,MS5.1
BBGH Gun Hill 136.89 333 PFAKE 08 50 50.0 +15
BBGH LR LR
comp=Z,934nm,21.0s,MS5.5
GRGR Grenville 138.63 335 PFAKE 08 50 50.0 +12
GRGR LR LR
comp=Z,391nm,20.0s,MS5.2
TGUH Tegucigalpa,Un 138.95 14 PFAKE 08 50 50.0 +11
TGUH LR LR
comp=Z,567nm,20.0s,MS5.3
PMSA Palmer Station 140.43 189 PFAKE 08 50 50.0 +10
PMSA LR LR
comp=Z,519nm,21.0s,MS5.3
PCRV Puerto La Cruz 141.50 338 PKP PKPdf 08 50 40.7 -2.6
comp=Z,4.0nm,0.5s,baz=53,slow=4.1,SNR=4.6
JTS JuntasAbangare 143.07 11 PFAKE 08 51 00.0 +14
JTS LR LR
comp=Z,559nm,22.0s,MS5.3
SDV Santo Domingo 144.33 347 ePKPdf PKPdf 08 50 45.4 -2.9
SDV LR LR
comp=Z,158nm,19.0s,MS4.8
BCIP Isla Barro Col 144.75 3 ePKPdf PKPdf 08 50 45.9 -3.1
BCIP LR LR
comp=Z,369nm,20.0s,MS5.2
CAM4 Nova Friburgo 147.46 269 ⇓iP PKPdf 08 50 54.8 +1.5
CAM4 i 08 50 56.6
CAM4 i 08 51 03.0
CAM4 i 08 51 12.0
CAM4 i 08 51 15.6
CAM4 i 08 51 25.0
CAM4 i 08 51 30.3
CAM4 i 08 51 43.7
ROSC El Rosal 148.86 353 ePKPbc PKPbc 08 51 00.3 +0.5
ROSC El Rosal 148.86 353 PKPbc PKPbc 08 51 00.6 +0.8
comp=Z,51nm,0.7s,baz=164,slow=1.0,SNR=24
PAYG Puerto Ayora 151.99 27 PFAKE 08 51 10.0 +9.2
PAYG LR LR
comp=Z,423nm,19.0s,MS5.3
OTAV Otavalo 153.66 1 ePKPdf PKPdf 08 51 04.0 +0.7
OTAV LR LR
comp=Z,313nm,21.0s,MS5.1
ATAH Atahualpa 160.99 1 PKPab PKPab 08 51 55.0 +0.1
comp=Z,5.8nm,0.9s,baz=27,slow=2.3,SNR=3.8
SIV San Ignacio 161.15 299 PKP PKPdf 08 51 10.4 -2.1
comp=Z,1.4nm,0.8s,baz=162,slow=3.2,SNR=7.5
SIV PKPab PKPab 08 51 55.2 -0.6
comp=Z,5.6nm,0.7s,baz=69,slow=3.9,SNR=3.5
CPUP Villa Florida 161.39 265 PKP PKPdf 08 51 11.0 -1.5
comp=Z,1.6nm,0.8s,baz=141,slow=6.5,SNR=4.1
CPUP Villa Florida 161.39 265 PKIKP PKPdf 08 51 11.0 -1.5
TRQA Tornquist 162.02 225 PFAKE 08 51 20.0 +7.2
TRQA LR LR
comp=Z,442nm,20.0s
PLCA Paso Flores 164.26 202 PKP PKPdf 08 51 14.1 -0.8
comp=Z,2.5nm,0.9s,baz=324,slow=2.1,SNR=2.9
PLCA PKPab PKPab 08 52 06.2 -2.4
comp=Z,4.2nm,0.8s,baz=214,slow=3.6,SNR=4.4
PLCA Paso Flores 164.26 202 ePKIKP PKPdf 08 51 15.8 +1.0
PLCA e 08 52 07.5
PLCA MLR MLR
comp=Z,497nm,20.0s
NNA Nana 165.76 355 PFAKE 08 51 30.0 +13
NNA LR LR
comp=Z,502nm,22.0s
LPAZ La Paz 166.43 315 PKP PKPdf 08 51 17.7 +0.4
comp=Z,2.7nm,0.9s,baz=44,slow=1.3,SNR=11
LPAZ PKPab PKPab 08 52 17.2 -1.7
comp=Z,5.6nm,0.9s,baz=69,slow=3.0,SNR=4.8
LPAZ La Paz 166.43 315 ePKIKP PKPdf 08 51 17.7 +0.4
LPAZ e 08 52 18.5
LPAZ MLR MLR
comp=Z,572nm,19.0s
CFAA Coronel Fontan 169.86 236 PKP PKPdf 08 51 18.8 -0.5
CFAA PKPab PKPab 08 52 32.4 -1.4
CFAA Coronel Fontan 169.86 236 PKP PKPdf 08 51 18.8 -0.5
comp=Z,0.4nm,1.0s,baz=124,slow=1.7,SNR=4.8
CFAA PKPab PKPab 08 52 32.4 -1.4
comp=Z,1.3nm,0.8s,baz=123,slow=3.1,SNR=13
LCO Las Campanas 172.90 246 PFAKE 08 51 30.0 +9.1
LCO LR LR
comp=Z,575nm,20.0s

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*ISCJB **31** 08:41:12.4±0.5, 39°.34N±0°.03×38°.24E±0°.04, h7km±6km, Error ellipse: s-maj=5.1km s-min=4.1km az=144.2*
*ISK **31** 08:41:12.8, 39°.34N×38°.29E, h11km, MD3.0*
*DDA **31** 08:41:12.6, 39°.32N×38°.22E, h7km±2km, Md3.1*
*CSEM **31** 08:41:12.7±0.2, 39°.33N×38°.25E, h10km, MD3.1, Error ellipse: s-maj=4.8km s-min=3.5km az=65.0*
ISC 31 08:41:13.2±0.5, **39°.34N**±0°.03×**38°.25E**±0°.04, **h11**km±5km, **n27**, σ0**°79**/44, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KEMA	**Kemaliye**	**0.21**	**111**	*i* P		**Pg**	**08 41 17.4**	**-0.1**
KEMA				*i* S		**Sg**	**08 41 21.1**	**+0.6**
KEMA	**Kemaliye**	**0.21**	**111**	*i* P		**Pg**	**08 41 17.4**	**-0.1**
KEMA				*i* S		**Sg**	**08 41 21.1**	**+0.6**
EZC	**Erzincan**	**0.95**	**64**	*e*PG		**Pg**	**08 41 30.9**	**-0.6**

EZC				*e*SG	**Sg**	**08 41 43.9**	**+0.1**
PTK	**Pertek**	**1.00**	**116**	*e*PG	**Pg**	**08 41 32.0**	**-0.3**
PTK				*e*SG	**Sg**	**08 41 45.9**	**+0.5**
PTK	**Pertek**	**1.00**	**116**	*e*Pg	**Pg**	**08 41 32.0**	**-0.4**
PTK				*e*Sg	**Sg**	**08 41 45.9**	**+0.5**
SCER	**sogukcermik**	**1.01**	**301**	*i* P	**Pg**	**08 41 31.4**	**-1.1**
SCER				*i* S	**Sg**	**08 41 46.5**	**+0.9**
SCER	**sogukcermik**	**1.01**	**301**	*i* P	**Pg**	**08 41 31.4**	**-1.1**
SCER				*i* S	**Sg**	**08 41 46.5**	**+0.9**
ELZG	**Elazig**	**1.02**	**145**	*i* P	**Pg**	**08 41 30.7**	**-2.2**
ELZG				*i* S	**Sg**	**08 41 46.5**	**+0.3**
ELZG	**Elazig**	**1.02**	**145**	*i* P	**Pg**	**08 41 30.7**	**-2.1**
ELZG				*i* S	**Sg**	**08 41 46.5**	**+0.4**
MYA	**Malataya**	**1.03**	**172**	*e*PG	**Pg**	**08 41 33.0**	**+0.1**
MYA				*e*SG	**Sg**	**08 41 47.4**	**+1.2**
MYA	**Malataya**	**1.03**	**172**	*e*Pg	**Pg**	**08 41 33.0**	**+0.1**
MYA				*e*Sg	**Sg**	**08 41 47.4**	**+1.2**
MALT	**Malatya**	**1.04**	**172**	*e*PG	**Pg**	**08 41 32.2**	**-0.9**
MALT				*e*SG	**Sg**	**08 41 47.8**	**+1.1**
MALT	**Malatya**	**1.04**	**172**	*e*Pg	**Pg**	**08 41 32.2**	**-0.9**
MALT				*e*Sg	**Sg**	**08 41 47.8**	**+1.2**
AKCD	**Akcadag**	**1.08**	**194**	*i* P	**Pg**	**08 41 32.6**	**-1.2**
AKCD				*i* S	**Sg**	**08 41 48.0**	**+0.1**
AKCD	**Akcadag**	**1.08**	**194**	*i* P	**Pg**	**08 41 32.6**	**-1.3**
AKCD				*i* S	**Sg**	**08 41 48.0**	**+0.1**
SVSK	**Karacayir**	**1.12**	**301**	*e*PN	**Pg**	**08 41 34.7**	**0.0**
SVSK	**Karacayir**	**1.12**	**301**	*e*Pn	**Pg**	**08 41 34.7**	**0.0**
RSDY	**Resadiye-TOKAT**	**1.27**	**326**	*e*PN	**Pn**	**08 41 37.7**	**+0.9**
RSDY	**Resadiye-TOKAT**	**1.27**	**326**	*e*Pn	**Pn**	**08 41 37.7**	**+0.9**
SVRC	**Sivrice-ELAZID**	**1.27**	**139**	*e*PN	**Pn**	**08 41 36.5**	**-0.3**
SVRC				*e*SN	**Sn**	**08 41 53.6**	**-0.3**
SVRC	**Sivrice-ELAZID**	**1.27**	**139**	*e*Pn	**Pn**	**08 41 36.5**	**-0.3**
SVRC				*e*Sn	**Sn**	**08 41 53.6**	**-0.3**
SARI	**SarD1z-Kayseri**	**1.38**	**242**	*e*PN	**Pn**	**08 41 44.0**	**+5.7**
SARI	**SarD1z-Kayseri**	**1.38**	**242**	*e*Pn	**Pg**	**08 41 44.0**	**+4.4**
GUMT	**Gumushane**	**1.46**	**40**	*e*PN	**Pn**	**08 41 39.7**	**+0.2**
GUMT	**Gumushane**	**1.46**	**40**	*e*Pn	**Pn**	**08 41 39.7**	**+0.2**
ESPY	**Espiye-Giresun**	**1.61**	**13**	*e*PN	**Pn**	**08 41 42.2**	**+0.6**
ESPY	**Espiye-Giresun**	**1.61**	**13**	*e*Pn	**Pn**	**08 41 42.2**	**+0.6**

IDC 31 08:53:22.1±2.1, 30°53′N×83°12′E, h0km, mb3.5/6, mb1 3.7/8, mb1mx3.5/26, mbtmp3.5/8, ML3.5/2, Error ellipse: s-maj=66.6km s-min=21.1km az=64.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**16.25**	**358**	Pn	Pn	08 57 10.5	-1.1
	0.0nm,0.3s,baz=165,slow=11,SNR=2.4						
CMAR	**Chiang Mai Arr**	**18.73**	**126**	P	Pn	08 57 43.7	+1.0
	0.3nm,0.3s,baz=316,slow=11,SNR=7.1						
KURK	**Kurchatov**	**20.44**	**352**	P	P	08 57 59.6	-1.3
	1.8nm,0.5s,baz=179,slow=10.0,SNR=5.2						
ZALV	**Zalesovo Beam**	**23.43**	**3**	P	P	08 58 33.8	+1.0
	1.3nm,0.3s,baz=213,slow=10,SNR=3.6						
BVAR	**Borovoye Array**	**24.32**	**341**	P	P	08 58 41.5	+0.3
	0.4nm,0.4s,baz=161,slow=9.2,SNR=2.2						
SONM	**Songino Array**	**24.83**	**39**	P	P	08 58 45.6	-0.2
	0.9nm,0.8s,baz=260,slow=8.6,SNR=4.4						
WRA	**Warramunga Arr**	**70.30**	**129**	P	P	09 04 37.5	-0.1
	0.5nm,0.5s,baz=319,slow=6.4,SNR=3.4						
ILAR	**Eielson Array**	**77.35**	**20**	P	P	09 05 17.9	-0.4
	0.2nm,0.7s,baz=297,slow=4.0,SNR=2.7						

*MOS **31** 09:06:11.9±2.8,50°.31N×87°.68E, h15km, mb4.0/1, Error ellipse: s-maj=18.6km s-min=12.0km az=116.7*
*ISCJB **31** 09:06:13.6±0.8,50°.28N±0°.05×87°.73E±0°.09, h10km, Error ellipse: s-maj=8.9km s-min=5.9km az=32.6*
*IDC **31** 09:06:14.1±1.5,50°.36N×87°.56E, h0km, mb3.7/1, mb1 3.7/6, mb1mx3.5/27, mbtmp3.7/6, ML3.8/4, MS3.8/2, Ms1 3.9/2, ms1mx2.8/45, Error ellipse: s-maj=14.8km s-min=12.5km az=90.0*
*NNC **31** 09:06:18.9±4.3,50°.25N×87°.31E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=31.6km s-min=13.1km az=56.0*

ISC 31 09:06:15.1±0.8, 50°.36N±0°.05×87°.75E±0°.09, h10km, n19, σ1§15/23, 2C-2D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAR	**Aktash**	**0.09**	**246**	*i* PG	**Pg**	**09 06 14.8**	**-2.7**
UKR	**Ust'-Kan**	**1.98**	**288**	*e*PN	**Pn**	**09 06 48.2**	**-0.4**
UKR				*e*		09 07 14.5	
TASR	**Tashtagol**	**2.41**	**2**	*e*PN	**Pb**	**09 06 58.2**	**-0.3**
TASR				*e*		09 07 31.4	
ELT	**Yel'tsovka**	**3.06**	**343**	*e*PN	**Pn**	**09 07 06.1**	**+2.7**
ELT				*e*		09 07 45.8	
ZALV	**Zalesovo Beam**	**4.02**	**335**	Pn	**Pn**	**09 07 17.4**	**+0.8**
	9.3nm,0.3s,baz=154,slow=15,SNR=41						
ZALV				Pg	**Pb**	**09 07 25.7**	**-0.2**
	3.3nm,0.3s,baz=155,slow=17,SNR=12						
ZALV				Sn	**Sn**	**09 07 59.5**	**-4.3**
	3.6nm,0.3s,baz=158,slow=21,SNR=3.4						
ZALV				Lg		09 08 19.2	
	4.9nm,0.3s,baz=157,slow=27,SNR=4.3						
MK31	**Makanchi Array**	**5.08**	**228**	Pn	**Pn**	**09 07 32.2**	**+1.0**
	1.4nm,0.2s,baz=44,slow=12,SNR=206						
MK31				Sn	**Sn**	**09 08 30.4**	**+0.5**
	11nm,0.5s,baz=42,slow=21,SNR=5.9						
MK31				Lg		09 08 51.1	
	28nm,0.5s,baz=46,slow=32,SNR=11						
MKAR	**Makanchi Array**	**5.08**	**228**	Pn	**Pn**	**09 07 32.0**	**+0.8**
	7.3nm,0.3s,baz=49,slow=13,SNR=169						
MKAR				Sn	**Sn**	**09 08 28.9**	**-1.0**
	8.7nm,0.3s,baz=48,slow=16,SNR=12						
MKAR				Lg		09 08 50.6	
	9.9nm,0.3s,baz=44,slow=30,SNR=17						
MKAR	**Makanchi Array**	**5.08**	**228**	PN	**Pn**	**09 07 32.1**	**+0.9**
MKAR						09 08 28.9	
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
MKAR				smax			
	comp=N,9.0nm,0.3s						
NVS	**Novosibirsk**	**5.26**	**330**	*e*PN	**Pb**	**09 07 46.4**	**-0.7**
NVS				*e*		09 08 57.0	
KURK	**Kurchatov**	**5.83**	**277**	⇑Sn	**Sn**	**09 08 47.8**	**-0.5**
	comp=N,8.2nm,0.6s						
KURK				⇑Lg		09 09 13.4	
	comp=N,33nm,0.6s						
KURK	**Kurchatov**	**5.83**	**277**	Pn	**Pn**	**09 07 41.8**	**+0.3**
	comp=N,1.0nm,0.3s,baz=90,slow=15,SNR=14						
KURK				Sn	**Sn**	**09 08 48.7**	**+0.4**
	comp=N,0.5nm,0.3s,baz=88,slow=28,SNR=2.8						
KURK				Lg		09 09 14.9	
	comp=N,1.0nm,0.3s,baz=85,slow=33,SNR=7.5						
KURK				LR	LR	09 10 17.8	
	comp=N,378nm,18.7s,baz=135,slow=42						
KURK	**Kurchatov**	**5.83**	**277**	PN	**Pn**	**09 07 41.8**	**+0.3**
KURK						09 08 48.7	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK				smax			
	comp=N,1.0nm,0.3s						
KURK				MLR	MLR		
	comp=Z,378nm,18.7s						
KURBB	**Kurchatov Arra**	**5.89**	**276**	⇓Sn	**Sn**	**09 08 51.6**	**+1.8**
	comp=Z,2.2nm,0.4s						
KURBB				⇓Lg		09 09 15.1	
	comp=Z,9.3nm,0.6s						
BVAR	**Borovoye Array**	**11.10**	**291**	Pn	**Pn**	**09 08 50.7**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=98,slow=15,SNR=2.5						
BVAR				Sn	**Sn**	**09 10 49.3**	**-8.5**
	comp=Z,0.4nm,0.3s,baz=103,slow=22,SNR=4.0						
AAK	**Ala-Archa**	**11.95**	**235**	Sn	Sx	09 10 56.8	
	comp=Z,0.2nm,0.3s,baz=202,slow=19,SNR=3.0						
AAK				Lg		09 12 30.3	
	comp=Z,0.2nm,0.3s,baz=217,slow=20,SNR=2.0						
SONM	**Songino Array**	**12.48**	**94**	Pn	**Pn**	**09 09 12.8**	**+0.2**
	baz=302,slow=14,SNR=2.0						
SONM				Lg		09 12 53.7	
	comp=Z,0.2nm,0.3s,baz=286,slow=27,SNR=6.8						
BRTR	**Keskin Array B**	**38.88**	**276**	P	**P**	**09 13 39.9**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=73,slow=11,SNR=3.6						
BRTR	**Keskin Array B**	**38.88**	**276**	P	**P**	**09 13 39.9**	**-0.5**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	**NORSAR Array B**	**41.98**	**315**	LR	LR	09 33 45.7	
	comp=Z,312nm,18.6s,baz=55,slow=39						

*ISCJB **31** 09:34:47.1±0.8,26°.25N±0°.02×102°.01E±0°.03, h3km±5km, mb4.6/122, MS3.9/16, Error ellipse: s-maj=4.0km s-min=3.7km az=136.4*

*BJI **31** 09:34:49.1,26°.25N×102°.06E, h12km, mB4.7/21, mb4.7/40, ML5.1/12, Ms4.8/47, Ms7 4.3/41*
*NEIC **31** 09:34:49.8±0.2,26°.24N×102°.01E, h10km, mb4.7/73, Error ellipse: s-maj=5.6km s-min=4.5km az=60.0*
*MOS **31** 09:34:51.2±0.9,26°.21N×102°.01E, h33km, mb4.9/61, MS4.0/4, Error ellipse: s-maj=8.4km s-min=4.9km az=110.3*
*IDC **31** 09:34:52.4±3.6,26°.22N×102°.04E, h33km±28km, mb4.2/27, mb1 4.3/28, mb1mx4.2/31, mbtmp4.2/28, ML4.7/1, MS3.8/10, Ms1 3.8/10, ms1mx3.4/40, Error ellipse: s-maj=15.1km s-min=10.4km az=63.0*
*DJA **31** 09:34:52,26°.19N×102°.06E, h11km, mb4.8/11*
*SZGRF **31** 09:34:59.1,26°.89N×102°.44E, h33km, mb4.5, Sichuan, China*

ISC 31 09:34:50.3±0.8, 26°23N±0°.02×101°98E±0°.03, h13km±5km, h19km±2.2km: pP-P, n303, σ1§14/317, mb4.6/122, MS3.9/16, 10C-7D, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**1.29**	**148**	Pg	**Pg**	**09 35 13.3**	**-1.9**
KMI				Sg	**Sg**	**09 35 30.5**	**-1.5**
KMI				smax			
	comp=N,22μm,0.5s						
KMI				smax			
	comp=E,14μm,0.7s						
GYA	**Guiyang**	**4.21**	**86**	⇑*i*Pn	**Pn**	**09 35 56.3**	**+2.1**
GYA				Sn	**Sn**	**09 36 45.0**	**+1.8**
GYA				Sg	**Sg**	**09 37 05.5**	**+0.1**
GYA				LR	LR		
	comp=N,9μm,5.9s						
GYA				LR	LR		
	comp=E,3μm,4.0s						
GYA				LR	LR		
	comp=Z,5μm,5.6s						
CD2	**Chengdu**	**4.92**	**18**	Pn	**Pn**	**09 36 07.5**	**+3.5**
CD2				Sg	**Sg**	**09 37 27.8**	**-0.5**
CD2				smax			
	comp=N,3μm,1.0s						
CD2				smax			
	comp=E,3μm,1.1s						
CHRT	**Chiangrai**	**6.64**	**198**	P	**Pn**	**09 36 29.0**	**+1.3**
IMP	**Imphal**	**7.41**	**261**	*ex*	**Pn**	**09 36 42.0**	**+3.7**
IMP				*ex*	Sn	09 38 40.0	+38
ENH	**Enshi**	**7.75**	**57**	*e*Pn	**Pn**	**09 36 44.8**	**+2.0**
	comp=E,242nm,0.9s						
CHG	**Chiang Mai**	**7.89**	**201**	PG	**Pn**	**09 36 47.5**	**+2.6**
CHG				SG	x	09 37 15.8	
CHTO	**Chiang Mai**	**7.89**	**201**	*e*Pn	**Pn**	**09 36 47.4**	**+2.5**
CHTO				*e*		09 37 16.2	
CHTO				*e*S	Sx	09 38 58.1	
CHTO	**Chiang Mai**	**7.89**	**201**	P	**Pn**	**09 36 47.9**	**+3.0**
	comp=E,2.9nmcomp=E,2μmcomp=E,117nm,1.1s						
CMAR	**Chiang Mai Arr**	**8.23**	**201**	Pn	**Pn**	**09 36 51.4**	**+2.0**
	comp=E,2.8nm,0.3s,baz=13,slow=13,SNR=123						
CMAR				Pg	Pn	09 37 22.6	+33
	comp=E,7.9nm,0.3s,baz=0.8,slow=16,SNR=36						
CMAR				Lg		09 39 10.8	
	comp=E,7.6nm,0.3s,baz=21,slow=30,SNR=8.1						
CMAR				LR	LR	09 40 02.5	
	comp=E,523nm,20.8s,baz=30,slow=38						
SHL	**Shillong**	**9.12**	**268**	*e*PKP	**Pn**	**09 37 02.0**	**+0.3**
SHL				*ex*	x	09 39 24.0	
BDT	**Bhumibol Dam**	**9.36**	**198**	P	**Pn**	**09 37 07.0**	**+2.1**
	comp=E,64nm,1.1s						
XAN	**Xi'an**	**9.83**	**36**	P	**Pn**	**09 37 11.5**	**+0.1**
XAN				S	**Sn**	**09 38 58.5**	**-3.2**
XAN				pmax	pmax		
	comp=Z,24nm,0.7s						
XAN				pmax	pmax		
	comp=Z,24nm,5.6s						
XAN				LR	LR		
	comp=Z,520nm,8.6s						
LZH	**Lanzhou**	**9.96**	**9**	*e*P	**Pn**	**09 37 15.3**	**+2.2**
LZH				pP		09 37 18.3	
LZH				sP		09 37 20.5	
LZH				*e*S	**Sn**	**09 39 07.3**	**+2.5**
LZH				SS		09 39 19.5	
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,61nm,4.6s						
LZH				LR	LR		
	comp=N,2μm,11.0s						
LZH				LR	LR		
	comp=E,3μm,6.9s						
LZH				LR	LR		
	comp=Z,1μm,11.8s						
AGT	**Agartala**	**10.01**	**259**	*e*PKP	**Pn**	**09 37 13.0**	**-0.8**
LSA	**Lhasa**	**10.18**	**292**	P	**Pn**	**09 37 14.3**	**-1.9**
LSA				S	**Sn**	**09 39 08.3**	**-2.0**
LSA				LR	LR		
	comp=Z,770nm,1.8s						
LSA	**Lhasa**	**10.18**	**292**	*e*Pn	**Pn**	**09 37 17.3**	**+1.0**
	comp=Z,21nm,0.8s						
LSA	**Lhasa**	**10.18**	**292**	*e*P	**Pn**	**09 37 17.3**	**+1.1**
LSA				pmax	pmax		
	comp=Z,21nm,0.8s						
QIZ	**Qiongzhong**	**10.19**	**133**	P	**Pn**	**09 37 16.0**	**-0.4**
QIZ				S	**Sn**	**09 39 04.0**	**-6.7**
QIZ				pmax	pmax		
	comp=Z,12nm,0.5s						
QIZ				LR	LR		
	comp=N,1μm,9.6s						
QIZ				LR	LR		
	comp=Z,2μm,8.8s						
QIZ	**Qiongzhong**	**10.19**	**133**	*e*Pn	**Pn**	**09 37 15.2**	**-1.3**
	comp=Z,21nm,0.6s						
NST	**Nakhon Sawan**	**10.64**	**190**	P	**Pn**	**09 37 25.0**	**+2.4**
	comp=Z,68nm,1.5s						
GZH	**Guangzhou**	**10.79**	**104**	P	**Pn**	**09 37 25.8**	**+1.2**
GZH				S	**Sn**	**09 39 20.5**	**-4.9**
GZH				LR	LR		
	comp=N,810nm,5.5s						
GZH				LR	LR		
	comp=E,2μm,7.1s						
WHN	**Wuhan**	**11.71**	**66**	P	**Pn**	**09 37 38.0**	**+0.9**
WHN				S	**Sn**	**09 39 43.5**	**-4.2**
WHN				LR	LR		
	comp=N,3μm,6.7s						
WHN				LR	LR		
	comp=E,3μm,6.8s						
WHN				LR	LR		
	comp=Z,3μm,7.5s						
GTA	**Gaotai**	**13.27**	**353**	⇓*e*P	**Pn**	**09 38 02.8**	**+4.3**
GTA				pP		09 38 06.0	
GTA				sP		09 38 08.8	
GTA				S	**Sn**	**09 40 33.3**	**+7.4**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,110nm,5.1s						
GTA				LR	LR		
	comp=N,1μm,9.8s						
GTA				LR	LR		
	comp=E,3μm,12.2s						
GTA				LR	LR		
	comp=Z,1μm,9.2s						
QZH	**Quanzhou**	**15.04**	**91**	P	**Pn**	**09 38 19.3**	**-3.4**
QZH				LR	LR		
	comp=N,8μm,8.6s						
QZH				LR	LR		
	comp=E,2μm,6.0s						
QZH				LR	LR		
	comp=Z,2μm,10.5s						
BTO	**Baotou**	**15.82**	**23**	*e*P	**Pn**	**09 38 31.5**	**-1.3**
BTO				S	**Sn**	**09 41 32.3**	**+4.3**
BTO				LR	LR		
	comp=N,740nm,9.2s						
BTO				LR	LR		
	comp=E,770nm,12.6s						
NJ2	**Nanjing**	**15.84**	**65**	*e*P	**Pn**	**09 38 31.5**	**-1.5**
NJ2				pP	pP	09 38 34.0	-6.3
NJ2				sP	sP	09 38 37.5	-4.5
NJ2				PP		09 38 41.8	
NJ2				S	**Sn**	**09 41 32.5**	**+4.0**
NJ2				sS	sS	09 41 40.0	-8.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,70nm,5.4s						
NJ2				LR	LR		
	comp=N,3μm,12.5s						
NJ2				LR	LR		
	comp=E,1μm,9.4s						
NJ2				LR	LR		
	comp=Z,1μm,8.2s						
HHC	**Hu-ho-hao-te**	**16.61**	**26**	*e*P	**Pn**	**09 38 41.5**	**-1.4**
HHC				pP	pP	09 38 45.0	-3.8
HHC				sP	sP	09 38 48.8	-1.7
HHC				PP		09 38 55.3	
HHC				S	**Sn**	**09 41 43.8**	**-3.4**
HHC				SS		09 42 02.8	
HHC				PcP	PcP	09 43 34.5	+1.6
HHC				pmax	pmax		
	comp=Z,25nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,4.0s						
HHC				LR	LR		
	comp=N,980nm,7.7s						
HHC				LR	LR		
	comp=E,1μm,6.4s						
HHC				LR	LR		
	comp=Z,560nm,7.1s						
BJT	**Baijiatuao**	**18.14**	**37**	*e*P	**Pn**	**09 39 03.7**	**+1.8**
	comp=Z,60nm,0.9s						
BJT	**Baijiatuao**	**18.14**	**37**	*e*P	**Pn**	**09 39 03.7**	**+1.7**
BJT				pmax	pmax		
	comp=Z,60nm,0.9s						
BJI	**Beijing**	**18.16**	**37**	P	**Pn**	**09 39 01.8**	**-0.4**
BJI				pmax	pmax		
	comp=Z,27nm,1.0s						
BJI				pmax	pmax		
	comp=Z,290nm,6.0s						
BJI				LR	LR		
	comp=N,450nm,8.2s						
BJI				LR	LR		
	comp=E,600nm,8.2s						
BJI				LR	LR		
	comp=Z,240nm,20.4s						
VIS	**Vishakhapatnam**	**19.24**	**248**	*e*PKP	**Pn**	**09 39 13.6**	**-1.9**
VIS				AMb	AMB	09 39 17.6	
	comp=Z,16nm,0.9s						
JOSI	**Joshimath**	**20.19**	**288**	*e*PKP	**P**	**09 39 24.3**	**-0.5**
KULM	**Kulim**	**20.86**	**184**	*e*P	**P**	**09 39 33.0**	**+0.8**
	comp=Z,63nm,1.2s						
KULM	**Kulim**	**20.86**	**184**	P	**P**	**09 39 33.6**	**+1.5**
	comp=Z,447nmcomp=Z,45nm,1.2s						
WMQ	**Urumqi**	**21.04**	**330**	P	**P**	**09 39 34.8**	**+0.9**
WMQ				pP		09 39 39.0	
WMQ				sP	sP	09 39 41.8	+2.7
WMQ				PP		09 39 57.5	
WMQ				S	**S**	**09 43 23.5**	**-4.4**
WMQ				sS	sS	09 43 30.0	-3.6
WMQ				SS		09 43 55.8	
WMQ				LR	LR		
	comp=N,800nm,12.0s,MS4.5						
WMQ				LR	LR		
	comp=E,620nm,10.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,480nm,11.0s,MS4.1						
KLP	**Kalpa**	**21.43**	**290**	*e*PKP	**P**	**09 39 37.9**	**-0.3**
KLP				AMb	AMB	09 39 47.7	
	comp=Z,81nm,1.0s,mb5.0						
DDI	**Dehra Dun**	**21.45**	**286**	*e*PKP	**P**	**09 39 36.0**	**-2.5**
DDI				*e*S	**S**	**09 43 32.0**	**-4.2**
TGY	**Tagaytay City**	**21.46**	**121**	P	**P**	**09 39 38.2**	**-0.4**
	comp=Z,90nm,0.3s,mb5.5,baz=219,slow=6.5,SNR=3.0						
IPM	**Ipoh**	**21.64**	**183**	*e*P	**P**	**09 39 39.5**	**-1.1**
	comp=Z,25nm,0.9s,mb4.7						
IPM	**Ipoh**	**21.64**	**183**	P	**P**	**09 39 40.5**	**-0.1**
	comp=Z,28nm,1.1s,mb4.6						
SONM	**Songino Array**	**21.85**	**8**	P	**P**	**09 39 42.5**	**0.0**
	comp=Z,20nm,0.8s,mb4.6,baz=192,slow=11,SNR=97						
SONM				S	**S**	**09 43 42.4**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=190,slow=16,SNR=2.4						
SONM				LR	LR	09 48 36.5	
	comp=Z,259nm,18.1s,MS3.7,baz=4.1,slow=38						
SONM	**Songino Array**	**21.85**	**8**	P	**P**	**09 39 42.5**	**0.0**
SONM				S	**S**	**09 43 42.4**	**-1.2**
ULN	**Ulaanbaatar**	**21.96**	**9**	*e*P	**P**	**09 39 44.6**	**+0.9**
	comp=Z,37nm,0.8s,mb4.9						
ULN	**Ulaanbaatar**	**21.96**	**9**	*e*P	**P**	**09 39 44.6**	**+0.8**
ULN				pmax	pmax		
	comp=Z,37nm,0.8s,mb4.9						
ULN	**Ulaanbaatar**	**21.96**	**9**	P	**P**	**09 39 44.6**	**+0.8**
	comp=Z,513nmcomp=Z,49nm,0.8s,mb5.0						
NDI	**New Delhi**	**22.11**	**282**	*e*PKP	**P**	**09 39 45.0**	**-0.5**
SONA	**Sohna**	**22.22**	**281**	*e*PKP	**P**	**09 39 46.1**	**-0.6**
SONA				AMb	AMB	09 39 49.8	
	comp=Z,12nm,0.3s,mb4.8						
BHPL	**Bhopal**	**22.50**	**268**	*e*PKP	**P**	**09 39 50.4**	**+0.8**
BHPL				AMb	AMB	09 39 54.6	
	comp=Z,21nm,1.1s,mb4.5						
SDNR	**Sundarnagar**	**22.51**	**289**	*e*PKP	**P**	**09 39 49.5**	**-0.2**
BHK	**Bhakra**	**22.97**	**289**	*e*PKP	**P**	**09 39 52.8**	**-1.8**
TPTI		**23.30**	**192**	P	**P**	**09 39 56.4**	**-1.7**
	comp=Z,27nm,1.2s,mb4.5						
KHET	**Khetri**	**23.35**	**280**	*e*PKP	**P**	**09 39 56.8**	**-1.9**
KHET				AMb	AMB	09 40 03.5	
	comp=Z,12nm,0.6s,mb4.5						
HYB	**Hyderabad**	**23.42**	**253**	*i* P	**P**	**09 39 59.0**	**-0.5**
PSI	**Prapat**	**23.48**	**188**	P	**P**	**09 40 00.5**	**+0.4**
	comp=Z,22nm,0.9s,mb4.6,baz=359,slow=13,SNR=17						
ZAK	**Zakamensk**	**24.14**	**2**	⇑*i*P	**P**	**09 40 06.8**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.5						
KKM	**Kota Kinabalu**	**24.24**	**143**	*e*P	**P**	**09 40 08.2**	**+1.2**
	comp=Z,39nm,1.0s,mb4.8						
KKM	**Kota Kinabalu**	**24.24**	**143**	P	**P**	**09 40 08.3**	**+1.2**
	comp=Z,42nm,1.0s,mb4.8						
MYKOM	**Kota Tinggi**	**24.36**	**175**	P	**P**	**09 40 09.2**	**+1.0**
	comp=Z,29nm,1.1s,mb4.6						
AJM	**Ajmer**	**24.49**	**277**	*e*PKP	**P**	**09 40 08.1**	**-1.2**
AJM				AMb	AMB	09 40 11.2	
	comp=Z,18nm,0.6s,mb4.7						
KSRS	**Korea Array**	**24.64**	**57**	P	**P**	**09 40 09.3**	**-1.2**
	comp=Z,1.6nm,0.5s,mb3.8,baz=244,slow=9.4,SNR=5.0						
KSRS	**Korea Array**	**24.64**	**57**	P	**P**	**09 40 09.4**	**-1.2**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
MOY	**Mondy**	**25.42**	**359**	*e*P	**P**	**09 40 19.3**	**+1.8**
MOY				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.4						
KSH	**Kashi**	**25.45**	**308**	P	**P**	**09 40 20.0**	**+2.1**
KSH				*e*pP	pP	09 40 24.0	+2.3
KSH				*e*sP	sP	09 40 27.0	+3.7
KSH				*e*PP		09 40 59.8	
KSH				*e*PcP	PcP	09 43 51.0	+1.2
KSH				*e*S	**S**	**09 44 44.5**	**-0.1**
KSH				*e*sS	sS	09 44 52.0	+1.1
KSH				*e*SS		09 45 48.8	
KSH				*e*ScP	ScP	09 47 29.5	+0.6
KSH				*e*PcS	PcS	09 47 31.0	+0.8
KSH				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.5						

KSM Kuching 25.88 161 *e*P P **09 40 22.5 +0.5**
comp=Z,22nm,0.9s,mb4.7
KSM Kuching 25.88 161 P P **09 40 22.9 +0.9**
comp=Z,29nm,1.0s,mb4.7
JNU Nakatsue 25.98 68 *e*P P **09 40 22.0 -0.8**
comp=Z,15nm,0.9s,mb4.5
IRK Irkutsk 26.04 3 *e*P P **09 40 26.2 +3.1**
IRK pmax pmax
comp=Z,90nm,1.2s,mb5.2
HIA Hailar 26.82 26 *e*P P **09 40 30.5 +0.3**
comp=Z,36nm,0.8s,mb5.0
HIA Hailar 26.82 26 *e*P P **09 40 30.5 +0.3**
HIA pmax pmax
comp=Z,36nm,0.8s
KZA Kyzart 27.04 313 *e*P P **09 40 33.9 +1.5**
comp=Z,25nm,1.0s,mb4.7
TKM2 Tokmak 2 27.21 314 *e*P P **09 40 36.5 +2.7**
comp=Z,21nm,1.4s,mb4.5
TKM2 Tokmak 2 27.21 314 *e*P P **09 40 36.5 +2.6**
TKM2 pmax pmax
comp=Z,21nm,1.4s,mb4.5
PALK Pallekele 27.67 231 *e*P P **09 40 39.4 +1.2**
comp=Z,14nm,0.8s,mb4.6
PALK Pallekele 27.67 231 *e*P P **09 40 39.4 +1.2**
PALK pmax pmax
comp=Z,14nm,0.8s,mb4.6
AAK Ala-Archa 27.79 313 *e*P P **09 40 40.5 +1.5**
comp=Z,20nm,1.2s,mb4.6
AAK Ala-Archa 27.79 313 P P **09 40 40.2 +1.2**
comp=Z,2.7nm,0.4s,mb4.2,baz=97,slow=7.7,SNR=6.1
AAK LR LR 09 52 48.8
comp=Z,217nm,18.1s,MS3.8,baz=315,slow=39
AAK Ala-Archa 27.79 313 *e*P P **09 40 40.5 +1.5**
AAK pmax pmax
comp=Z,20nm,1.2s,mb4.6
AAK Ala-Archa 27.79 313 P P **09 40 42.4 +3.4**
comp=Z,3.6nm,1.3s,mb3.9
AML Almayashu 28.10 312 *e*P P **09 40 43.4 +1.5**
comp=Z,9.7nm,0.8s,mb4.5
EKS2 Erkin-Say 28.28 313 *e*P P **09 40 44.7 +1.3**
comp=Z,15nm,1.0s,mb4.6
MDJ Mudanjiang 28.82 43 P P **09 40 46.0 -2.2**
MDJ S S **09 45 34.5 -3.3**
MDJ ScP ScP 09 47 38.0 -1.0
MDJ PcS PcS 09 47 39.5 -0.7
MDJ pmax pmax
comp=Z,4.0nm,1.5s,mb3.9
MDJ pmax pmax
comp=Z,73nm,7.0s
MDJ LR LR
comp=N,160nm,13.0s,MS4.1
MDJ LR LR
comp=E,280nm,11.7s,MS4.1
MDJ LR LR
comp=Z,210nm,9.9s
ORY Orie 29.19 352⇓ *e*P P **09 40 51.2 -0.1**
ORY *e* 09 41 45.7
ORY *e* 09 43 57.0
ORY S S **09 45 47.3 +4.1**
DAV Davao City (W) 29.46 126 LR LR 09 53 08.4
comp=Z,152nm,18.9s,MS3.6,baz=233,slow=37
KBL Kabul 29.50 294 *e*P P **09 40 57.6 +3.3**
comp=Z,13nm,0.8s,mb4.7
KBL Kabul 29.50 294 *e*P P **09 40 57.6 +3.3**
KBL pmax pmax
comp=Z,13nm,0.8s,mb4.7
KURK Kurchatov 30.29 330 *e*P P **09 41 01.7 +0.5**
comp=Z,11nm,0.7s,mb4.7
KURK Kurchatov 30.29 330 P P **09 41 01.6 +0.4**
comp=Z,5.1nm,0.7s,mb4.4,baz=141,slow=8.8,SNR=25
KURK LR LR 09 53 12.5
comp=Z,125nm,18.7s,MS3.6,baz=120,slow=36
KURK Kurchatov 30.29 330 *e*P P **09 41 01.7 +0.6**
KURK pmax pmax
comp=Z,11nm,0.7s,mb4.7
ZAA0 Zalesovo Array 30.48 340 *e*P P **09 41 02.0 -0.7**
ZALV Zalesovo Beam 30.48 340 P P **09 41 03.0 +0.3**
comp=Z,3.8nm,0.3s,mb4.6,baz=145,slow=10,SNR=4.1
ZALV LR LR 09 54 00.4
comp=Z,116nm,18.5s,MS3.6,baz=256,slow=38
KKAR Karatay Array 30.64 311 *e*P P **09 41 04.1 -0.2**
comp=Z,2.1nm,0.6s,mb4.1
KKAR Karatay Array 30.64 311 *e*P P **09 41 04.1 -0.2**
KKAR pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
NVS Novosibirsk 31.73 339 *e*P P **09 41 18.6 +4.8**
MJAR Matsushiro Arr 32.42 63 LR LR 09 55 16.5
comp=Z,149nm,18.9s,MS3.7,baz=250,slow=38
SPSI Sidrap Palu 34.60 148 P P **09 41 40.9 +1.6**
SJI Sawahan 35.07 163 P Px 09 41 53.9
BVAR Borovoye Array 35.67 327 P P **09 41 47.7 -0.3**
comp=Z,4.0nm,0.6s,mb4.5,baz=123,slow=10,SNR=12
BVAR PcP PcP 09 44 16.0 -0.2
comp=Z,1.4nm,0.6s,baz=144,slow=1.7,SNR=3.7
BRVK Borovoye 35.74 327 *e*P P **09 41 49.0 +0.4**
comp=Z,12nm,0.6s,mb5.0
BRVK Borovoye 35.74 327 *e*P P **09 41 49.0 +0.4**
BRVK pmax pmax
comp=Z,12nm,0.6s,mb5.0
ASAJ Asahikawa 37.25 51 *e*P P **09 42 01.6 -0.1**
comp=Z,4.1nm,0.8s,mb4.3
ASAJ Asahikawa 37.25 51 P P **09 42 00.5 -1.2**
comp=Z,6.1nm,0.8s,mb4.5,baz=253,slow=11,SNR=6.3
ASAJ Asahikawa 37.25 51 P P **09 42 00.5 -1.2**
ASAJ pmax pmax
comp=Z,6.0nm,0.8s
YSS Yuzh-Sakhalins 38.17 46 *e*P P **09 42 09.7 +0.3**
comp=Z,11nm,0.6s,mb4.8
YSS Yuzh-Sakhalins 38.17 46 *e*P P **09 42 09.0 -0.4**
YSS pmax pmax
comp=Z,20nm,0.8s,mb4.9
ABKAR Akbulak array 39.73 317 *e*P P **09 42 22.6 +0.1**
comp=Z,5.2nm,0.7s,mb4.4
YAK Yakutsk 40.31 20 *e*P P **09 42 24.5 -2.6**
comp=Z,20nm,0.6s,mb5.0
YAK Yakutsk 40.31 20 *e*P P **09 42 24.9 -2.2**
YAK pmax pmax
comp=Z,12nm,1.0s,mb4.6
AKTK Aktyubinsk 41.29 318 P P **09 42 35.9 +0.5**
AKTK LR LR 10 02 34.2
AKTO Aktyubinsk 41.29 318 P P **09 42 35.9 +0.6**
comp=Z,1.4nm,0.3s,mb4.0,baz=94,slow=13,SNR=6.5
AKTO LR LR 10 02 34.2
comp=Z,151nm,20.4s,MS3.9,baz=216,slow=40
SVE Sverdlovsk 42.45 327⇓ *e*P P **09 42 45.9 +1.2**
SVE pmax pmax
comp=Z,16nm,0.8s,mb4.7
SOKR Solikamsk 45.53 330⇑ *i*P P **09 43 09.2 -0.2**
SOKR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
KAKA Kakadu 48.74 139 *e*P P **09 43 33.6 -1.4**
comp=Z,14nm,0.8s,mb5.0
KAKA Kakadu 48.74 139 *e*P P **09 43 33.3 -1.7**
comp=Z,26nm,0.7s,mb5.4
PETK Petropavlovsk- 49.03 41 P P **09 43 36.2 -0.6**
PETK LR LR 10 06 40.2
PETK Petropavlovsk- 49.03 41 P P **09 43 36.2 -0.6**
comp=Z,2.0nm,0.8s,mb4.2,baz=266,slow=8.5,SNR=3.6
PETK LR LR 10 06 40.2
comp=Z,90nm,20.2s,MS3.8,baz=77,slow=39
SEY Seymchan 49.25 28 *i*P P **09 43 39.5 +1.2**
ZEI Tsey 49.68 305 *e*P P **09 43 45.8 +3.9**
ZEI pmax pmax
comp=Z,9.0nm,0.4s,mb5.2
FITZ Fitzroy Crossi 49.70 150⇓ *i*P P **09 43 41.3 -0.9**
comp=Z,13nm,0.6s,mb5.1
MBWA Marble Bar 50.15 158 *e*P P **09 43 45.1 -0.5**
MBWA Marble Bar 50.15 158 *e*P P **09 43 44.9 -0.7**
comp=Z,39nm,1.0s,mb5.4
KIV Kislovodsk 50.56 306 *e*P P **09 43 47.9 -0.7**
comp=Z,14nm,0.9s,mb4.9
KIV Kislovodsk 50.56 306 *i*P P **09 43 49.0 +0.4**
KIV *e* 09 43 57.6
KIV *e*S S **09 51 03.6 +0.9**
KIV pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,100nm,15.0s,MS4.0
VRHR Novokhopersk 51.59 316 *e*P P **09 43 54.4 -1.8**
VRHR pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,1.0s
KLMR Klimovskoe 54.09 328 P P **09 44 15.5 +1.0**
KLMR pmax pmax
comp=Z,34nm,1.4s,mb5.1
ANN Anapa 54.31 308 *e*P Px 09 44 29.7
ANN pmax pmax
comp=Z,72nm,1.1s,mb5.5
MOS Moscow 54.39 321 *e*P P **09 44 18.9 +2.1**
OBN Obninsk 54.94 320 *i*P P **09 44 22.1 +1.3**
OBN *e**PP pP 09 44 27.4 +2.6
OBN *e* 09 46 23.1
OBN *e*S S **09 52 02.7 +0.6**
OBN *e*SS SS 09 55 48.0 +2.7
OBN pmax pmax
comp=Z,6.0nm,0.5s,mb4.9
OBN MLR MLR
comp=Z,100nm,20.0s,MS3.9
WRA Warramunga Arr 55.61 142 P P **09 44 25.0 -1.1**
comp=Z,21nm,0.6s,mb5.4,baz=331,slow=8.1,SNR=89
BILL Bilibino 56.37 24*d* *i*P P **09 44 30.3 -0.6**
BILL *e**PP pP 09 44 37.8 +2.9
BILL *e*S S **09 52 20.9 +0.1**
BILL *e*SS SS 09 56 09.2 +1.9
BILL pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
BILL MLR MLR
comp=Z,300nm,15.0s,MS4.5
MORW Morawa 56.61 165 *e*P P **09 44 33.4 +0.4**
BR131 Keskin Array S 57.63 302 *e*P P **09 44 43.4 +3.1**
comp=Z,1.5nm,0.6s,mb4.2
BRTR Keskin Array B 57.63 302 P P **09 44 39.5 -0.7**
comp=Z,2.2nm,0.8s,mb4.2,baz=72,slow=9.3,SNR=5.1
BRTR Keskin Array B 57.63 302 *i*P P **09 44 41.7 +1.4**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
JOF Joensuu 58.21 329 *e*P P **09 44 43.1 -0.8**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
JOF Joensuu 58.21 329 *e*p P **09 44 43.1 -0.8**
comp=Z,1.1nm,0.3s,mb4.4
ASAR Alice Springs 58.42 145 P P **09 44 45.5 -0.5**
comp=Z,11nm,0.6s,mb5.1,baz=329,slow=6.8,SNR=143
AKASG Malin Array Be 59.44 315 P P **09 44 51.1 -1.5**
comp=Z,1.5nm,0.5s,mb4.3,baz=73,slow=6.4,SNR=4.8
KEV Kevo 60.46 337 *e*P P **09 44 55.7 -3.7**
KEV pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
KEV Kevo 60.46 337 *e*p P **09 44 55.7 -3.7**
comp=Z,3.5nm,0.5s,mb4.7
KAF Kangasniemi 60.50 328 *e*P P **09 45 00.6 +0.8**
KAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
KAF Kangasniemi 60.50 328 *e*p P **09 45 00.6 +0.8**
comp=Z,3.4nm,0.6s,mb4.7
IDID Didziasalis 60.57 321 *e*P P **09 45 00.2 -0.2**
FINES FINESS Array B 60.62 328 P P **09 44 59.6 -1.0**
comp=Z,4.3nm,0.6s,mb4.8,baz=268,slow=30,SNR=14
IZAR Zarasai 60.81 321 *e*P P **09 45 01.8 -0.2**
IIGN Ignalina 60.86 321 *e*P P **09 45 02.2 -0.1**
ISAL Salakas 60.90 321 *e*P P **09 45 02.5 -0.1**
ARCES ARCESS Array B 60.97 337 P P **09 45 02.0 -0.8**
comp=Z,4.0nm,0.9s,mb4.6,baz=94,slow=8.2,SNR=7.8
VRI Vrincioaia 61.70 310⇑ *i*P P **09 45 08.5 +0.3**
PLOR Plostina 61.75 310⇑ *i*P P **09 45 08.8 +0.2**
MLR Muntele Rosu 62.30 310⇑ *i*P P **09 45 12.6 +0.4**
BURAR Bucovina Array 62.43 312⇑ *i*P P **09 45 16.9 +3.8**
SUW Suwalki 62.76 319 *e*P P **09 45 16.5 +1.4**
comp=Z,28nm,1.0s,mb5.3
SUW Suwalki 62.76 319 *e*P P **09 45 16.5 +1.4**
SUW pmax pmax
comp=Z,28nm,1.0s,mb5.3
VOIR 62.93 310⇑ *i*P P **09 45 15.4 -1.1**
CTAO Charters Tower 62.97 133 *e*P P **09 45 16.9 0.0**
comp=Z,7.1nm,0.7s,mb4.9
CTAO *e* 09 45 27.3
CTAO Charters Tower 62.97 133 *e*P P **09 45 16.9 -0.1**
CTAO *e* 09 45 27.3
CTAO pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
KWP Kalwaria Pacla 63.73 315 *e*P P **09 45 22.6 +1.0**
comp=Z,23nm,0.9s,mb5.2
KWP Kalwaria Pacla 63.73 315 *e*P P **09 45 22.7 +1.0**
KWP pmax pmax
comp=Z,23nm,0.9s,mb5.2
UZH Uzhgorod 64.18 314 *e*P P **09 45 18.0 -6.7**
UZH *e* 09 45 30.0
DRGR 64.26 311⇓ *i*P P **09 45 25.0 -0.2**
VTS Vitosha 64.82 307⇓ *i*P P **09 45 30.4 +1.5**
HFS Hagfors 66.80 327 P P **09 45 39.6 -1.8**
comp=Z,3.7nm,0.5s,mb4.6,baz=76,slow=6.1,SNR=17
MORC Moravsky Berou 66.98 315 *e*P P **09 45 42.9 +0.2**
comp=Z,3.5nm,0.9s,mb4.4
MORC Moravsky Berou 66.98 315 *e*P P **09 45 42.9 +0.2**
MORC pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
MORC Moravsky Berou 66.98 315⇑ *i*P P **09 45 42.5 -0.2**
DPC Dobruska-Polom 67.60 316 *e*P P **09 45 50.7 +4.0**
DPC Dobruska-Polom 67.60 316 *e*P P **09 45 50.7 +4.0**
VRAC Vranov 67.69 315 P P **09 45 45.5 -1.8**
comp=Z,1.6nm,0.5s,mb4.3,baz=121,slow=5.9,SNR=3.1
NOA NORSAR Array B 67.78 328 P P **09 45 45.6 -2.0**
comp=Z,3.4nm,0.6s,mb4.5,baz=76,slow=6.5,SNR=13
NOA LR LR 10 16 23.6
comp=Z,77nm,19.7s,MS3.9,baz=105,slow=37
KMBO Kilima Mbogo 67.99 257 *e*P P **09 45 49.1 -0.6**
comp=Z,2.5nm,0.6s,mb4.4
KMBO Kilima Mbogo 67.99 257 P P **09 45 49.1 -0.6**
comp=Z,2.0nm,0.8s,mb4.2,baz=0.4,slow=24,SNR=5.7
KMBO Kilima Mbogo 67.99 257 *e*P P **09 45 49.1 -0.6**
KMBO pmax pmax
comp=Z,3.0nm,0.6s
STKA Stephens Creek 69.04 144 *e*P P **09 45 55.4 -0.4**
comp=Z,1.6nm,0.9s,mb4.0
STKA Stephens Creek 69.04 144 P P **09 45 53.5 -2.3**
comp=Z,2.8nm,0.7s,mb4.3,baz=313,slow=6.5,SNR=7.9
CLL Collm 69.38 318 *e*P P **09 46 01.0 +3.2**
CLL *e* pP 09 46 06.0 +4.1
CLL Collm 69.38 318 *e*pP pP 09 46 01.0 -0.9
CLL *e* 09 46 06.0
CLL *e*PP PP 09 48 29.0 -1.8
KHC Kasperske Hory 69.65 316 *e*P P **09 46 09.3 +10**
GRA1 Grafenberg Arr 70.95 317 *e*P P **09 46 11.4 +4.0**
comp=Z,4.0nm,1.0s,mb4.3
GRF Grafenberg Arr 70.95 317 *e*P P **09 46 11.4 +4.0**
comp=Z,4.0nm,1.0s,mb4.3
GRF Grafenberg Arr 70.95 317 *e*P P **09 46 11.4 +4.0**
GRF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
GRF Grafenberg Arr 70.95 317 *e*P P **09 46 11.4 +4.0**
GRF pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
CMSA Cobar Meteorol 71.00 141 *e*P P **09 46 07.6 -0.2**
COLD Coldfoot 72.67 23 *e*P P **09 46 18.1 +0.7**
comp=Z,5.1nm,1.0s,mb4.4
DAVOX Davos/Dischmat 72.75 314 P P **09 46 17.6 -0.7**
comp=Z,5.3nm,0.7s,mb4.6,baz=68,slow=5.4,SNR=6.1
BFO Black Forest 73.19 316 *e*P P **09 46 21.4 +0.5**
comp=Z,4.5nm,1.0s,mb4.3
BFO Black Forest 73.19 316 *e*P P **09 46 21.4 +0.5**
BFO pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
TUE Stuetta 73.20 314 *e*P P **09 46 22.6 +1.7**
comp=Z,4.5nm,0.6s,mb4.6
BPAW Bear Paw Mtn. 73.78 26 *e*P P **09 46 23.9 -0.1**
comp=Z,12nm,0.7s,mb4.9
CDF Champ du Feu 73.82 316 *e*P P **09 46 24.0 -0.6**
comp=Z,14nm,1.1s,mb4.5
CDF Champ du Feu 73.82 316 *e*P P **09 46 24.0 -0.6**
comp=Z,6.8nm,1.1s,mb4.5
CDF Champ du Feu 73.82 316 *e*P P **09 46 24.0 -0.6**
CDF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
PPLA Purkeypile 73.83 27 *e*P P **09 46 24.9 +0.6**
comp=Z,13nm,0.8s,mb4.9
WLF Walferdange 74.05 318 P P **09 46 27.4 +1.5**
comp=Z,12nm,1.4s,mb4.6
WLF Walferdange 74.05 318 *e*P P **09 46 26.9 +1.0**
comp=Z,12nm,0.9s,mb4.8
WLF Walferdange 74.05 318 *e*P P **09 46 27.0 +1.1**
WLF pmax pmax
comp=Z,12nm,0.9s,mb4.8
BCLA Clavier 74.28 319 P P **09 46 28.5 +1.3**
comp=Z,8.0nm,1.6s,mb4.4
HINF Hinteralfeld 74.30 316 *e*P P **09 46 26.6 -0.8**
comp=Z,4.9nm,0.7s,mb4.2
HINF Hinteralfeld 74.30 316 *e*P P **09 46 26.6 -0.8**
comp=Z,2.5nm,0.7s,mb4.2
HINF Hinteralfeld 74.30 316 *e*P P **09 46 26.6 -0.8**
HINF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
TRF Thorofare Moun 74.35 26 *e*P P **09 46 28.8 +1.4**
comp=Z,5.9nm,0.8s,mb4.6
HAU Haudompre 74.55 316 *e*P P **09 46 28.2 -0.6**
COLA College 74.62 25 *e*P P **09 46 28.7 -0.2**
comp=Z,7.2nm,0.8s,mb4.7
COLA College 74.62 25 *e*P P **09 46 28.7 -0.2**
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
MCK McKinley 74.75 26 *e*P P **09 46 29.8 0.0**
comp=Z,7.4nm,0.7s,mb4.7
MCK McKinley 74.75 26 *e*P P **09 46 29.8 +0.1**
MCK pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
PGF Pioggiola 74.84 310 *e*P P **09 46 30.2 -0.4**
comp=Z,8.8nm,0.6s,mb4.5
PGF Pioggiola 74.84 310 *e*P P **09 46 30.2 -0.4**
comp=Z,4.4nm,0.6s,mb4.6
PGF Pioggiola 74.84 310 *e*P P **09 46 30.2 -0.4**
PGF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ILAR Eielson Array 75.03 24 P P **09 46 29.4 -1.9**
comp=Z,1.6nm,1.0s,mb3.9,baz=281,slow=6.1,SNR=19
BAIF Baives 75.06 319 *e*P P **09 46 31.8 0.0**
MEZF Maizieres J'vi 75.16 317 *e*P P **09 46 32.0 -0.4**
LPG La Plagne 75.24 314 *e*P P **09 46 33.1 +0.2**
comp=Z,27nm,0.7s,mb5.0
LPG La Plagne 75.24 314 *e*P P **09 46 33.1 +0.2**
comp=Z,14nm,0.7s,mb5.0
LPG La Plagne 75.24 314 *e*P P **09 46 33.1 +0.2**
LPG pmax pmax
comp=Z,14nm,0.7s,mb5.0
CABF La Chapelle 75.24 315 *e*P P **09 46 32.3 -0.6**
comp=Z,14nm,1.1s,mb4.5
CABF La Chapelle 75.24 315 *e*P P **09 46 32.3 -0.6**
comp=Z,6.8nm,1.1s,mb4.5
CABF La Chapelle 75.24 315 *e*P P **09 46 32.3 -0.6**
CABF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
LPL La Plagne 75.24 314 *e*P P **09 46 33.1 +0.2**
comp=Z,23nm,0.6s,mb5.0
LPL La Plagne 75.24 314 *e*P P **09 46 33.1 +0.2**
comp=Z,11nm,0.6s,mb5.0
LPL La Plagne 75.24 314 *e*P P **09 46 33.1 +0.2**
LPL pmax pmax
comp=Z,11nm,0.6s,mb5.0
SFTF Sexfontaines 75.28 317 *e*P P **09 46 32.6 -0.5**
SBF Sospel 75.41 312 *e*P P **09 46 33.2 -0.7**
comp=Z,22nm,0.9s,mb4.8
SBF Sospel 75.41 312 *e*P P **09 46 33.2 -0.7**
comp=Z,11nm,0.9s,mb4.8
SBF Sospel 75.41 312 *e*P P **09 46 33.2 -0.7**
SBF pmax pmax
comp=Z,11nm,0.9s,mb4.8
MBDF Montbardon 75.52 313 *e*P P **09 46 33.8 -0.7**
comp=Z,6.5nm,0.5s,mb4.5
MBDF Montbardon 75.52 313 *e*P P **09 46 33.8 -0.7**
comp=Z,3.3nm,0.5s,mb4.5
MBDF Montbardon 75.52 313 *e*P P **09 46 33.8 -0.7**
MBDF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
RC01 Rabbit Creek A 75.69 28 *e*P P **09 46 34.5 -0.6**
comp=Z,10nm,0.8s,mb4.8
RC01 *e* 09 46 49.3
PMR Palmer 75.70 28 *e*P P **09 46 34.8 -0.4**
comp=Z,9.5nm,0.8s,mb4.8
PMR Palmer 75.70 28 *e*P P **09 46 34.8 -0.4**
PMR pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SML Sawmill 75.93 27 *e*P P **09 46 36.4 -0.2**
comp=Z,3.3nm,0.7s,mb4.4
SML Sawmill 75.93 27 *e*P P **09 46 36.4 -0.1**
SML pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
ORIF Oris-en-Rattie 76.03 313 *e*P P **09 46 36.8 -0.6**
comp=Z,11nm,0.8s,mb4.5
ORIF Oris-en-Rattie 76.03 313 *e*P P **09 46 36.8 -0.6**
comp=Z,5.4nm,0.8s,mb4.5
ORIF Oris-en-Rattie 76.03 313 *e*P P **09 46 36.8 -0.6**
ORIF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LOR Lormes 76.39 316 *e*P P **09 46 38.5 -0.9**
comp=Z,10nm,1.1s,mb4.4
LOR Lormes 76.39 316 *e*P P **09 46 38.5 -0.9**
comp=Z,5.2nm,1.1s,mb4.4
LOR Lormes 76.39 316 *e*P P **09 46 38.5 -0.9**
LOR pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
PAX Paxson 76.49 26 *e*P P **09 46 40.3 +0.6**
comp=Z,2.7nm,0.6s,mb4.3
PAX Paxson 76.49 26 *e*P P **09 46 40.3 +0.6**
PAX pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
SMF Signal de Mont 76.65 315 *e*P P **09 46 40.2 -0.7**
comp=Z,10nm,0.8s,mb4.5
SMF Signal de Mont 76.65 315 *e*P P **09 46 40.2 -0.7**
comp=Z,5.2nm,0.8s,mb4.5
SMF Signal de Mont 76.65 315 *e*P P **09 46 40.2 -0.7**
SMF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
SSF Saint Saulge 76.69 316 *e*P P **09 46 40.4 -0.7**
comp=Z,9.3nm,0.8s,mb4.5
SSF Saint Saulge 76.69 316 *e*P P **09 46 40.4 -0.7**
comp=Z,4.7nm,0.8s,mb4.5
SSF Saint Saulge 76.69 316 *e*P P **09 46 40.4 -0.7**
SSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
VIVF Saint-Julien-l 76.84 314 *e*P P **09 46 41.5 -0.5**
comp=Z,11nm,1.0s,mb4.5
VIVF Saint-Julien-l 76.84 314 *e*P P **09 46 41.5 -0.5**
comp=Z,5.4nm,1.0s,mb4.4
VIVF Saint-Julien-l 76.84 314 *e*P P **09 46 41.5 -0.5**
VIVF pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
AVF Avril sur Loir 76.90 316 *e*P P **09 46 41.5 -0.8**
comp=Z,8.8nm,0.8s,mb4.5
AVF Avril sur Loir 76.90 316 *e*P P **09 46 41.5 -0.8**
comp=Z,4.4nm,0.8s,mb4.4
AVF Avril sur Loir 76.90 316 *e*P P **09 46 41.5 -0.8**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
EKA Eskdalemuir Ar 76.90 326 P P **09 46 40.7 -1.4**
comp=Z,2.1nm,0.9s,mb4.1,baz=64,slow=5.6,SNR=6.3
ESK Eskdalemuir 76.93 326 *e*P P **09 46 41.8 -0.5**
comp=Z,23nm,1.3s,mb5.0
ESK Eskdalemuir 76.93 326 *i*P P **09 46 43.6 +1.3**
EGAK Eagle 77.10 23 *e*P P **09 46 42.7 -0.4**
comp=Z,3.4nm,0.9s,mb4.3
EGAK *e* 09 46 56.6
BGF Bois d'Agland 77.31 316 *e*P P **09 46 43.8 -0.8**
INK Inuvik 77.36 18 *e*P P **09 46 44.4 -0.1**
comp=Z,7.2nm,0.8s,mb4.7
INK Inuvik 77.36 18 *e*P P **09 46 44.4 -0.1**
INK pmax pmax
comp=Z,7.0nm,0.8s
LASF Ste Croix 77.69 313 *e*P P **09 46 46.7 -0.1**
comp=Z,15nm,1.0s,mb4.6
TCF Toulx Ste Croi 77.82 316 *e*P P **09 46 47.2 -0.3**
comp=Z,16nm,1.0s,mb4.6
TCF Toulx Ste Croi 77.82 316 *e*P P **09 46 47.2 -0.3**
comp=Z,8.0nm,1.0s,mb4.6
TCF Toulx Ste Croi 77.82 316 *e*P P **09 46 47.2 -0.3**
TCF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
SUMG Summit 77.85 349 *e*P P **09 46 47.0 -0.2**
SUMG Summit 77.85 349 *i*P P **09 46 47.0 -0.2**
comp=Z,7.4nm,1.0s,mb4.6
BMRM Bremner River 77.90 27 *e*P P **09 46 47.7 0.0**
comp=Z,18nm,0.7s,mb5.1
DAWY Dawson 78.14 23 *e*P P **09 46 49.1 +0.2**
LDF La Druitiere 78.25 318 *e*P P **09 46 48.9 -0.9**
comp=Z,4.5nm,0.5s,mb4.4
LDF La Druitiere 78.25 318 *e*P P **09 46 48.9 -0.9**
comp=Z,2.3nm,0.5s,mb4.4
LDF La Druitiere 78.25 318 *e*P P **09 46 48.9 -0.9**
LDF pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
CAF Calviac 78.50 314 *e*P P **09 46 50.7 -0.6**
RJF Les Rejaudoux 78.68 315 *e*P P **09 46 52.5 +0.2**
comp=Z,14nm,0.8s,mb4.6
RJF Les Rejaudoux 78.68 315 *e*P P **09 46 52.5 +0.2**
comp=Z,7.1nm,0.8s,mb4.7
RJF Les Rejaudoux 78.68 315 *e*P P **09 46 52.5 +0.2**
RJF pmax pmax
comp=Z,7.0nm,0.8s,mb4.6

GRR	**Gorron**	**78.78**	**319**	*e*P		**P**	**09 46 52.3**	**-0.5**
MTLF	**Montolieu**	**79.08**	**313**	*e*P		**P**	**09 46 54.2**	**-0.3**
	comp=Z,7.9nm,0.9s,mb4.3							
MTLF	**Montolieu**	**79.08**	**313**	*e*P		**P**	**09 46 54.2**	**-0.3**
	comp=Z,4.0nm,0.9s,mb4.3							
MTLF	**Montolieu**	**79.08**	**313**	*e*P		**P**	**09 46 54.2**	**-0.3**
MTLF				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.3							
SGMF	**Saint Gilles**	**79.85**	**319**	*e*P		**P**	**09 46 58.6**	**0.0**
ROSF	**Rostrenen**	**80.23**	**319**	*e*P		**P**	**09 47 00.8**	**+0.1**
EPF	**Esparros**	**80.45**	**313**	*e*P		**P**	**09 47 01.4**	**-0.6**
PNL	**Peninsula**	**80.77**	**27**	*e*P		**P**	**09 47 04.0**	**+0.7**
	comp=Z,13nm,0.7s,mb5.0							
ETSF	**Etsaut**	**81.10**	**313**	*e*P		**P**	**09 47 05.5**	**+0.1**
	comp=Z,21nm,1.2s,mb4.7							
ETSF	**Etsaut**	**81.10**	**313**	*e*P		**P**	**09 47 05.5**	**+0.1**
	comp=Z,11nm,1.2s,mb4.7							
ETSF	**Etsaut**	**81.10**	**313**	*e*P		**P**	**09 47 05.5**	**+0.1**
ETSF				pmax		pmax		
	comp=Z,11nm,1.2s,mb4.7							
SKAG	**Skagway**	**82.52**	**26**	*e*P		**P**	**09 47 13.5**	**+0.9**
	comp=Z,11nm,0.8s,mb4.9							
ESDC	**Sonseca Array**	**84.89**	**312**	P		**P**	**09 47 24.4**	**-0.8**
	comp=Z,0.6nm,0.7s,mb3.9,baz=53,slow=5.0,SNR=4.2							
YKA	**Yellowknife Ar**	**86.88**	**16**	P		**P**	**09 47 33.1**	**-1.4**
	comp=Z,1.5nm,0.8s,mb4.3,baz=334,slow=4.2,SNR=3.8							
TORD	**Torodi Ar. Bea**	**93.26**	**286**	P		**P**	**09 48 05.2**	**-0.1**
	comp=Z,0.4nm,0.7s,mb4.0,baz=52,slow=2.4,SNR=3.0							
TXAR	**Lajitas Array**	**119.53**	**26**	PKP		PKPdf	09 53 39.7	-0.6
	comp=Z,0.3nm,0.5s,baz=310,slow=2.0,SNR=6.5							
SDV	**Santo Domingo**	**144.37**	**347**	*e*PKPdf		PKPdf	09 54 26.3	-0.8
ROSC	**El Rosal**	**148.90**	**353**	*e*PKPbc		PKPbc	09 54 39.7	+1.0
LPAZ	**La Paz**	**166.49**	**315**	PKP		PKPdf	09 54 57.1	+0.9
	comp=Z,1.3nm,1.2s,baz=90,slow=1.0,SNR=2.4							
LPAZ	**La Paz**	**166.49**	**315**	PKIKP		PKPdf	09 54 57.1	+0.9
LPAZ				pmax		pmax		
	comp=Z,1.0nm,1.2s							

*CRAAG **31** 09:49:29.3, 36°.37N×3°.08E, MI3.8*
*ISCJB **31** 09:49:31.3±0.5, 36°.52N±0°.03×2°.98E±0°.04, h10km, Error ellipse: s-maj=5.1km s-min=4.4km az=149.3*
*CSEM **31** 09:49:31.3±0.2, 36°.37N×3°.03E, h5km, ML3.8, Error ellipse: s-maj=7.0km s-min=5.2km az=22.0*
*MDD **31** 09:49:31.7±0.3, 36°.36N×3°.01E, h0km, mbLg2.4/11, Error ellipse: s-maj=4.9km s-min=4.0km az=58.0, PRIMO*
*NEIC **31** 09:49:33.4, 36°.51N×3°.01E, h0km, MG4.2(MDD), After MDD.*

ISC 31 09:49:31.9±0.4, 36°43N±0°03×3°02E±0°04, h10km, n133, σ1s46/167, 9C-6D, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMHD	**Djebel Mahouad**	**0.23**	**192**	P	**Pg**	**09 49 34.8**	**-1.9**
EMHD	**Djebel Mahouad**	**0.23**	**192**	P	**Pg**	**09 49 34.8**	**-1.9**
EMHD	**Djebel Mahouad**	**0.23**	**192**	P	**Pg**	**09 49 34.8**	**-1.9**
EMHD	**Djebel Mahouad**	**0.23**	**192**	P	**Pg**	**09 49 34.8**	**-1.9**
ABA	**Alger-Bouzarea**	**0.37**	**3**	P	**Pg**	**09 49 39.9**	**+0.6**
ABA	**Alger-Bouzarea**	**0.37**	**3**	P	**Pg**	**09 49 39.9**	**+0.6**
ABA	**Alger-Bouzarea**	**0.37**	**3**	P	**Pg**	**09 49 39.9**	**+0.6**
ABA	**Alger-Bouzarea**	**0.37**	**3**	P	**Pg**	**09 49 39.9**	**+0.6**
ADJB	**Djebel Djouab**	**0.44**	**128**	P	**Pg**	**09 49 38.4**	**-2.1**
ADJB	**Djebel Djouab**	**0.44**	**128**	P	**Pg**	**09 49 38.4**	**-2.1**
ADJB	**Djebel Djouab**	**0.44**	**128**	P	**Pg**	**09 49 38.4**	**-2.1**
ADJB	**Djebel Djouab**	**0.44**	**128**	P	**Pg**	**09 49 38.4**	**-2.1**
AKET	**Djebel Ketaf**	**0.80**	**118**	P	**Pg**	**09 49 45.8**	**-1.5**
AKET	**Djebel Ketaf**	**0.80**	**118**	P	**Pg**	**09 49 45.8**	**-1.5**
AKET	**Djebel Ketaf**	**0.80**	**118**	P	**Pg**	**09 49 45.8**	**-1.5**
AKET	**Djebel Ketaf**	**0.80**	**118**	P	**Pg**	**09 49 45.8**	**-1.5**
EBNR	**Beni Rached**	**1.21**	**264**	P	**Pn**	**09 49 55.0**	**+0.2**
EBNR	**Beni Rached**	**1.21**	**264**	P	**Pn**	**09 49 55.0**	**+0.2**
ECHA	**Ech Chlef**	**1.36**	**259**	P	**Pn**	**09 49 58.0**	**+1.0**
ECHA	**Ech Chlef**	**1.36**	**259**	P	**Pn**	**09 49 58.0**	**+1.0**
ECHF	**Ech Chlef**	**1.38**	**259**	P	**Pn**	**09 49 58.0**	**+0.8**
ECHF	**Ech Chlef**	**1.38**	**259**	P	**Pn**	**09 49 58.0**	**+0.8**
EANR	**'Ain N'Sour**	**1.62**	**253**	P	**Pn**	**09 50 00.0**	**-0.5**
EANR	**'Ain N'Sour**	**1.62**	**253**	P	**Pn**	**09 50 00.0**	**-0.5**
EANR	**'Ain N'Sour**	**1.62**	**253**	P	**Pn**	**09 50 00.0**	**-0.5**
EANR	**'Ain N'Sour**	**1.62**	**253**	P	**Pn**	**09 50 00.0**	**-0.5**
ETRT	**Tiaret**	**1.74**	**234**	P	**Pn**	**09 50 01.5**	**-0.6**
ETRT	**Tiaret**	**1.74**	**234**	P	**Pn**	**09 50 01.5**	**-0.6**
ETRT	**Tiaret**	**1.74**	**234**	P	**Pn**	**09 50 01.5**	**-0.6**
ETRT	**Tiaret**	**1.74**	**234**	P	**Pn**	**09 50 01.5**	**-0.6**
SET	**Setif**	**1.94**	**96**	P	Px	09 50 17.0	
SET	**Setif**	**1.94**	**96**	P	Px	09 50 17.0	
SET	**Setif**	**1.94**	**96**	P	Px	09 50 17.0	
OKGL	**Djebel Kef Gue**	**1.96**	**259**	P	**Pn**	**09 50 09.0**	**+3.8**
OKGL	**Djebel Kef Gue**	**1.96**	**259**	P	**Pn**	**09 50 09.0**	**+3.8**
OKGL	**Djebel Kef Gue**	**1.96**	**259**	P	**Pn**	**09 50 09.0**	**+3.8**
OJGS	**Djebel Guires**	**2.06**	**244**	P	**Pn**	**09 50 06.0**	**-0.5**
OJGS	**Djebel Guires**	**2.06**	**244**	P	**Pn**	**09 50 06.0**	**-0.5**
OJGS	**Djebel Guires**	**2.06**	**244**	P	**Pn**	**09 50 06.0**	**-0.5**
OJGS	**Djebel Guires**	**2.06**	**244**	P	**Pn**	**09 50 06.0**	**-0.5**
DFRA	**Djebel Bou Aff**	**2.31**	**86**	P	**Pn**	**09 50 12.0**	**+2.0**
DFRA	**Djebel Bou Aff**	**2.31**	**86**	P	**Pn**	**09 50 12.0**	**+2.0**
DFRA	**Djebel Bou Aff**	**2.31**	**86**	P	**Pn**	**09 50 12.0**	**+2.0**
DFRA	**Djebel Bou Aff**	**2.31**	**86**	P	**Pn**	**09 50 12.0**	**+2.0**
OJBR	**Djebel Berber**	**2.32**	**249**	P	**Pn**	**09 50 07.0**	**-3.2**
OJBR	**Djebel Berber**	**2.32**	**249**	P	**Pn**	**09 50 07.0**	**-3.2**
OJBR	**Djebel Berber**	**2.32**	**249**	P	**Pn**	**09 50 07.0**	**-3.2**
CASM	**Ain Smara**	**2.81**	**92**	P	**Pn**	**09 50 18.9**	**+2.0**
CASM	**Ain Smara**	**2.81**	**92**	P	**Pn**	**09 50 18.9**	**+2.0**
CASM	**Ain Smara**	**2.81**	**92**	P	**Pn**	**09 50 18.9**	**+2.0**
CASM	**Ain Smara**	**2.81**	**92**	P	**Pn**	**09 50 18.9**	**+2.0**
EIBI	**Ibiza**	**2.91**	**333**	⇓P	**Pn**	**09 50 18.6**	**+0.3**
EIBI				S	**Sn**	**09 50 52.3**	**-1.0**
EIBI	**Ibiza**	**2.91**	**333**	⇓P	**Pn**	**09 50 18.5**	**+0.3**
	17nm,0.1s,SNR=18						
EIBI				S	**Sn**	**09 50 50.7**	**-2.6**
	8.4nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**2.91**	**333**	⇓P	**Pn**	**09 50 18.5**	**+0.3**
	17nm,0.1s,SNR=18						
EIBI				S	**Sn**	**09 50 50.7**	**-2.6**
	8.4nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**2.91**	**333**	P	**Pn**	**09 50 18.6**	**+0.3**
	16nm,0.3s,SNR=18						
EIBI				S	**Sn**	**09 50 52.3**	**-1.0**
	8.4nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.34**	**357**	⇑P	**Pn**	**09 50 24.3**	**+0.2**
ETOS				S	**Sn**	**09 51 00.3**	**-3.5**
ETOS	**Mallorca**	**3.34**	**357**	⇑P	**Pn**	**09 50 24.3**	**+0.2**
	5.1nm,0.2s,SNR=18						
ETOS				S	**Sn**	**09 51 00.3**	**-3.5**
	2.8nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**3.34**	**357**	⇑P	**Pn**	**09 50 24.3**	**+0.2**
	5.1nm,0.2s,SNR=18						
ETOS				S	**Sn**	**09 51 00.3**	**-3.5**
	2.8nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**3.34**	**357**	P	**Pn**	**09 50 24.3**	**+0.2**
	1.8nm,0.1s,SNR=18						
EBEN	**Beniarda**	**3.43**	**312**	P	**Pn**	**09 50 25.1**	**-0.3**
EBEN	**Beniarda**	**3.43**	**312**	P	**Pn**	**09 50 25.1**	**-0.3**
	1.0nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**3.43**	**312**	P	**Pn**	**09 50 25.1**	**-0.3**
	1.0nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**3.43**	**312**	P	**Pn**	**09 50 25.1**	**-0.3**
	1.0nm,0.2s,SNR=7.9						
CMAH	**Djebel Manchou**	**3.55**	**86**	P	**Pn**	**09 50 24.5**	**-2.6**
CMAH	**Djebel Manchou**	**3.55**	**86**	P	**Pn**	**09 50 24.5**	**-2.6**
CMAH	**Djebel Manchou**	**3.55**	**86**	P	**Pn**	**09 50 24.5**	**-2.6**
CMAH	**Djebel Manchou**	**3.55**	**86**	P	**Pn**	**09 50 24.5**	**-2.6**
EMUR	**La Murta**	**3.68**	**294**	P	**Pn**	**09 50 28.9**	**+0.1**
EMUR				S	**Sn**	**09 51 09.3**	**-3.0**
EMUR	**La Murta**	**3.68**	**294**	P	**Pn**	**09 50 28.9**	**+0.1**
	2.2nm,0.3s,SNR=5.8						
EMUR				S	**Sn**	**09 51 09.3**	**-3.0**
	1.0nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**3.68**	**294**	P	**Pn**	**09 50 28.9**	**+0.1**
	2.2nm,0.3s,SNR=5.8						
EMUR				S	**Sn**	**09 51 09.3**	**-3.0**
	1.0nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**3.68**	**294**	P	**Pn**	**09 50 28.9**	**0.0**
	2.2nm,0.3s,SNR=5.8						
EMUR				S	**Sn**	**09 51 09.3**	**-3.0**
	1.0nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**4.25**	**303**	⇑P	**Pn**	**09 50 37.1**	**+0.5**
ETOB				S	**Sn**	**09 51 25.8**	**-0.4**
ETOB	**Tobarra**	**4.25**	**303**	⇑P	**Pn**	**09 50 37.1**	**+0.5**
	6.7nm,0.2s,SNR=18						
ETOB				S	**Sn**	**09 51 23.8**	**-2.5**
	1.4nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**4.25**	**303**	⇑P	**Pn**	**09 50 37.1**	**+0.5**
	6.7nm,0.2s,SNR=18						
ETOB				S	**Sn**	**09 51 25.8**	**-0.5**
	1.4nm,0.2s,SNR=7.9						
ECHE	**Chera**	**4.46**	**316**	P	**Pn**	**09 50 40.8**	**+1.3**
ECHE				S	**Sn**	**09 51 31.1**	**-0.3**
ECHE	**Chera**	**4.46**	**316**	P	**Pn**	**09 50 40.8**	**+1.3**
	3.7nm,0.2s,SNR=15						
ECHE				S	**Sn**	**09 51 29.0**	**-2.4**
	0.8nm,0.2s,SNR=7.9						
ECHE	**Chera**	**4.46**	**316**	P	**Pn**	**09 50 40.8**	**+1.3**
	3.7nm,0.2s,SNR=15						
ECHE				S	**Sn**	**09 51 29.0**	**-2.4**
	0.8nm,0.2s,SNR=7.9						
ECHE	**Chera**	**4.46**	**316**	P	**Pn**	**09 50 40.8**	**+1.3**
	3.7nm,0.2s,SNR=15						
ECHE				S	**Sn**	**09 51 31.1**	**-0.3**
	0.8nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**4.69**	**289**	P	**Pn**	**09 50 44.8**	**+2.0**
	1.0nm,0.3s,SNR=7.9						
EHUE	**Huescar**	**4.69**	**289**	P	**Pn**	**09 50 44.8**	**+2.0**
	1.0nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**4.79**	**326**	⇓P	**Pn**	**09 50 44.8**	**+0.8**
EMOS	**Mosqueruela**	**4.79**	**326**	⇓P	**Pn**	**09 50 44.8**	**+0.8**
	29nm,0.3s,SNR=18						
EMOS				S	**Sn**	**09 51 37.1**	**-2.5**
	2.6nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.79**	**326**	⇓P	**Pn**	**09 50 44.8**	**+0.8**
	29nm,0.3s,SNR=18						
EMOS				S	**Sn**	**09 51 37.1**	**-2.5**
	2.6nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.79**	**326**	P	**Pn**	**09 50 44.8**	**+0.7**
	29nm,0.3s,SNR=18						
ERTA	**Horta de San J**	**4.98**	**336**	P	**Pn**	**09 50 47.2**	**+0.5**
ERTA				S	**Sn**	**09 51 41.8**	**-2.6**
ERTA	**Horta de San J**	**4.98**	**336**	P	**Pn**	**09 50 47.2**	**+0.5**
	0.6nm,0.1s,SNR=7.9						
ERTA				S	**Sn**	**09 51 41.8**	**-2.6**
	1.4nm,0.2s,SNR=7.9					

GUC 31 10:12:40.3±0.7, 31.80S×70.07W, h146km±6km, MD3.6, ML3.8, 10C-8D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JACH	**Jahuel**	**0.98**	**206**	⇑*i*P	Pn	10 13 05.0	+0.5
JACH				*i* S	Sn	10 13 23.4	+0.3
JACH	**Jahuel**	**0.98**	**206**	⇑*i*P	Pn	10 13 05.0	+0.5
JACH				*i* S	Sn	10 13 23.4	+0.3
CMCH	**Combarbala**	**1.01**	**308**	⇓*i*P	Pn	10 13 04.8	+0.1
CMCH				*i* S	Sn	10 13 24.0	+0.6
CMCH	**Combarbala**	**1.01**	**308**	⇓*i*P	Pn	10 13 04.8	+0.1
CMCH				*i* S	Sn	10 13 24.0	+0.6
CMCH				AML	AML	10 13 25.1	
	comp=N,6μm,0.7s						
CHNG	**Los Chungos**	**1.22**	**266**	*e*P	Pn	10 13 04.7	-2.0
CHNG				*i* S	Sn	10 13 25.1	-1.6
ROCH	**El Roble**	**1.41**	**214**	⇓*i*P	Pn	10 13 09.4	+0.8
ROCH				*i* S	Sn	10 13 31.7	+1.3
PEL	**Peldehue**	**1.44**	**201**	⇓*i*P	Pn	10 13 09.2	+0.4
PEL				*i* S	Sn	10 13 31.1	+0.3
PEL				AML	AML	10 13 32.2	
	comp=N,1μm,0.3s						
OVCH	**Ovalle**	**1.53**	**321**	⇓*i*P	Pn	10 13 10.2	+0.4
OVCH				*i* S	Sn	10 13 33.2	+0.7
OVCH	**Ovalle**	**1.53**	**321**	⇓*i*P	Pn	10 13 10.2	+0.4
OVCH				*i* S	Sn	10 13 33.2	+0.7
FCH	**Farellones**	**1.54**	**187**	⇑*i*P	Pn	10 13 10.8	+0.9
FCH				*i* S	Sn	10 13 33.8	+1.2
FCH	**Farellones**	**1.54**	**187**	⇑*i*P	Pn	10 13 10.8	+0.9
FCH				*i* S	Sn	10 13 33.8	+1.2
FSR	**Penalolen**	**1.72**	**193**	*e*P	Pn	10 13 12.6	+0.7
FSR				*i* S	Sn	10 13 37.1	+0.9
FSR	**Penalolen**	**1.72**	**193**	*e*P	Pn	10 13 12.6	+0.7
FSR				*i* S	Sn	10 13 37.1	+0.9
FSR				AML	AML	10 13 39.0	
	comp=E,384nm,0.6s						
SAN	**Santiago**	**1.72**	**197**	*i* S	Sn	10 13 36.9	+0.6
ANTU	**Antumapu**	**1.83**	**195**	*i* S	Sn	10 13 38.8	+0.3
ANTU				AML	AML	10 13 39.6	
	comp=E,693nm,0.4s						
ANTU				AML	AML	10 13 41.5	
	comp=N,830nm,0.3s						
SJCH	**San Jose de Ma**	**1.85**	**187**	*e*P	Pn	10 13 14.2	+0.7
SJCH	**San Jose de Ma**	**1.85**	**187**	*e*P	Pn	10 13 14.2	+0.7
PCH	**Pirque**	**1.85**	**191**	⇓*i*P	Pn	10 13 14.2	+0.7
PCH				*i* S	Sn	10 13 40.1	+1.2
PCH	**Pirque**	**1.85**	**191**	⇓*i*P	Pn	10 13 14.2	+0.7
PCH				*i* S	Sn	10 13 40.1	+1.2
TACH	**Talagante**	**1.99**	**201**	*e*P	Pn	10 13 15.7	+0.7
TACH				*i* S	Sn	10 13 42.2	+0.5
TACH	**Talagante**	**1.99**	**201**	*e*P	Pn	10 13 15.7	+0.7
TACH				*i* S	Sn	10 13 42.2	+0.5
LMEL	**Las Melosas**	**2.05**	**183**	⇑*i*P	Pn	10 13 16.1	+0.5
LMEL				*i* S	Sn	10 13 44.2	+1.3
LMEL	**Las Melosas**	**2.05**	**183**	⇑*i*P	Pn	10 13 16.1	+0.5
LMEL				*i* S	Sn	10 13 44.2	+1.3
LMEL				AML	AML	10 13 50.9	
	comp=N,454nm,0.2s						
CHCH	**Chadas Angostu**	**2.18**	**193**	⇑*i*P	Pn	10 13 18.1	+0.7
CHCH				*i* S	Sn	10 13 46.8	+0.9
CHCH	**Chadas Angostu**	**2.18**	**193**	⇑*i*P	Pn	10 13 18.1	+0.7
CHCH				*i* S	Sn	10 13 46.8	+0.9
CACH	**El Canelo**	**2.35**	**191**	*e*P	Pn	10 13 20.6	+1.2
CACH				*i* S	Sn	10 13 51.5	+1.9
CACH	**El Canelo**	**2.35**	**191**	*e*P	Pn	10 13 20.6	+1.2
CACH				*i* S	Sn	10 13 51.5	+1.9
LNV	**Longovilo**	**2.43**	**207**	⇑*i*P	Pn	10 13 20.6	+0.4
LNV				*i* S	Sn	10 13 50.6	-0.5
LNV	**Longovilo**	**2.43**	**207**	⇑*i*P	Pn	10 13 20.6	+0.4
LNV				*i* S	Sn	10 13 50.6	-0.5
LCO	**Las Campanas**	**2.83**	**349**	*e*Pn	Pn	10 13 24.9	-0.5
LCO				*e*Sn	Sn	10 13 55.1	-5.1
TRQA	**Tornquist**	**9.12**	**135**	*e*Pn	Pn	10 14 44.7	-3.8
	comp=N,10nm,0.6s						
TRQA				*e*Sn	Sn	10 16 19.8	-10

PGC 31 10:15:14.2±7.9, 49.58N×130.37W, h10km, ML2.8/6, Mw3.5, 5D, 244km Wsw of Pt. Hardy, Bc Vancouver Island Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BPBC	**Brooks Peninsu**	**1.78**	**70**	⇓Pn	Pn	10 15 42.7	-2.2
BPBC				⇑Sn	Sn	10 16 03.1	-4.5
HOLB	**Holberg**	**1.79**	**53**	⇓Pn	Pn	10 15 43.2	-1.9
EDB	**Eliza Dome**	**2.13**	**81**	⇑Pn	Pn	10 15 48.2	-1.6
MAYB	**Maynard**	**2.22**	**67**	⇓Pn	Pn	10 15 49.1	-1.9
BBB	**Bella Bella**	**2.98**	**28**	⇓Pn	Pn	10 16 00.8	-0.5
BNB	**Barry Inlet**	**3.12**	**344**	⇑Pn	Pn	10 16 01.9	-1.5
CBB	**Campbell River**	**3.27**	**80**	⇑Pn	Pn	10 16 05.5	0.0
CBB				⇓Sn	Sn	10 16 40.7	-3.7

SKHL 31 10:40:17.6±0.4, 54.01N×127.98E, h19km±1km, mb4.0/7, 1C-2D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZEA	**Zeya**	**0.51**	**238**	⇓*i*Pg	Pg	10 40 26.8	-1.1
ZEA				AMB	AMB	10 40 27.2	
	340nm,0.4s						
ZEA				*e*Sg	Sg	10 40 33.0	-1.8
ZEA				A		10 40 33.2	
	3μm,0.5s						
ZEA				A		10 40 33.2	
	1μm,0.5s						
ZEA				A		10 40 33.5	
	3μm,0.5s						
ZEA				A		10 40 33.5	
	1μm,0.5s						
KROS	**Kirovskiy**	**0.73**	**306**	⇑*i*Pg	Pg	10 40 30.3	-1.6
KROS				AMB	AMB	10 40 31.5	
	84nm,0.4s						
KROS				AMB	AMB	10 40 31.5	
	71nm,0.4s						
KROS				AMB	AMB	10 40 31.5	
	90nm,0.4s						
KROS				pPg		10 40 35.6	
KROS				*i* Sg	Sg	10 40 40.0	-1.6
KROS				A		10 40 41.5	
	490nm,0.4s						
KROS				A		10 40 41.5	
	330nm,0.4s						
BMKR	**Bomnak**	**0.86**	**35**	⇓*i*Pg	Pg	10 40 33.6	-0.9
BMKR				AMB	AMB	10 40 34.0	
	340nm,0.3s						
BMKR				*e*Sg	Sg	10 40 45.5	-0.4
BMKR				A		10 40 46.1	
	625nm,0.5s						
EKMR	**Ekimchan**	**3.11**	**106**	*e*Pn	Pn	10 41 06.0	+0.4
EKMR				*e*Pg	Pg	10 41 13.5	-3.7
EKMR				AMB	AMB	10 41 15.2	
	12nm,0.4s						
EKMR				pPg		10 41 19.2	
EKMR				*e*Sg	Sg	10 41 55.0	-2.5
EKMR				A		10 41 59.0	
	110nm,0.5s						
EKMR				A		10 41 59.0	
	69nm,0.5s						
EKMR				A		10 41 59.0	
	62nm,0.5s						
CLNS	**Chul'man**	**3.33**	**329**	*e*Pg	Pg	10 41 19.0	-2.4
CLNS				AMB	AMB	10 41 24.2	
	7.0nm,0.2s						
CLNS				*e*Sg	Sg	10 42 03.5	-1.1
CLNS				A		10 42 06.6	
	238nm,0.6s						
CLNS				A		10 42 06.6	
	192nm,0.4s						
TUP	**Tupik**	**4.73**	**278**	*e*Pn	Pn	10 41 30.8	+3.0
TUP				*e*Pg	Pg	10 41 44.6	-3.5
TUP				AMB	AMB	10 41 48.3	
	7.0nm,0.4s						
TUP				*e*Sg	Sg	10 42 48.5	-0.8
TUP				A		10 42 51.4	
	115nm,0.9s						
GRNR	**Gornyy**	**6.10**	**119**	*e*Sg	Sn	10 43 28.2	+32
CRS	**Chara**	**6.24**	**302**	*e*Pg	Pn	10 42 11.2	+23
CRS				AMB	AMB	10 42 14.8	
	13nm,1.7s						
CRS				*e*Sg	Sn	10 43 33.8	+35
CRS				A		10 43 39.6	
	72nm,1.7s						
NKL	**Nikolayevsk**	**7.61**	**91**	*e*Sg	Sn	10 44 15.0	+42
NKL				A		10 44 25.3	
	9.0nm,0.9s						

NIED ***31*** *10:45:00, 22.90N×121.80E, h5km, Mw4.2 Best double couple: M0 2.27000×10^15 NP1:φs 126.00000°, δ62.00000°, λ-34.00000°. NP2:φs 234.00000°, δ60.00000°, λ-147.00000°.*

IDC ***31*** *10:45:39.9±0.7, 22.76N×121.94E, h0km, mb3.9/13, mb1 4.0/15, mb1mx3.9/29, mbtmp3.9/15, ML3.7/2, MS3.6/10, Ms1 3.6/10, ms1mx3.2/43, Error ellipse: s-maj=21.3km s-min=15.5km az=78.0*

ISCJB ***31*** *10:45:40.5±0.6, 22.84N±0.02×121.82E±0.02, h9km±4km, mb3.8/16, MS3.6/9, Error ellipse: s-maj=3.1km s-min=2.5km az=168.5*

NEIC ***31*** *10:45:42.1±0.7, 22.89N×121.78E, h10km, mb4.2/3, Error ellipse: s-maj=11.5km s-min=9.8km az=108.0*

TAP ***31*** *10:45:42.7, 22.83N×121.69E, h14km, ML4.6, C*

JMA ***31*** *10:45:44.8±0.2, 22.91N×121.81E, h68km, M4.2*

BJI ***31*** *10:45:49.5, 23.21N×121.04E, h10km, mB4.4/2, mb4.2/8, ML3.9/5, Ms4.1/3, Ms7 3.8/2*

ISC 31 10:45:40.5±0.4, 22.86N±0.02×121.82E±0.02, h0km±2km, n116, σ1§12/167, mb3.9/16, MS3.6/9, 19C-15D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.48**	**299**	⇑*i*P	Pg	**10 45 50.8**	**+1.1**
CHKT				*i* S	Sg	**10 45 55.5**	**-0.4**
	baz=324						
TTN	**Taitung**	**0.63**	**260**	⇑*i*P	Pg	**10 45 52.9**	**+0.3**
	baz=262						
TTN				S	Sg	**10 46 00.2**	**-0.5**
	baz=262						
TWF1	**Yuli**	**0.68**	**316**	⇑P	Pg	**10 45 54.6**	**+1.0**
	baz=326						
TWG	**Pinlang**	**0.69**	**267**	*e*Pg	Pg	**10 45 52.8**	**-0.9**
TWG				*e*Sg	Sg	**10 46 00.6**	**-2.1**
TWG	**Pinlang**	**0.69**	**267**	⇑*i*P	Pg	**10 45 53.5**	**-0.3**
	baz=270						
TWG				*e*S	Sg	**10 46 02.0**	**-0.7**
	baz=270						
YULB	**Yu-li**	**0.71**	**318**	*e*Pg	Pg	**10 45 54.9**	**+0.8**
EHY	**Hungye**	**0.79**	**325**	⇓*i*P	Pg	**10 45 56.5**	**+0.9**
	baz=335						
EHY				*e*S	Sg	**10 46 06.6**	**+0.9**
	baz=335						
ELDTW	**Lidau**	**0.81**	**294**	⇑*i*P	Pg	**10 45 55.6**	**-0.3**
	baz=301						
ECL	**Taimali**	**0.84**	**252**	⇓*i*P	Pg	**10 45 56.0**	**-0.7**
	baz=252						
LAY	**Lan-yu**	**0.86**	**197**	⇓*i*P	Pg	**10 45 56.5**	**-0.4**
	baz=188						
TEGC	**Jichi Village**	**0.88**	**343**	*e*P	Pg	**10 45 58.5**	**+1.2**
	baz=352						
TEGC				S	Sg	**10 46 09.6**	**+0.9**
	baz=352						
TAW	**Tawu**	**0.99**	**240**	⇓*i*P	Pg	**10 45 58.5**	**-1.0**
	baz=237						
ESL	**Shilin**	**1.01**	**340**	*i* P	Pg	**10 46 00.2**	**+0.4**
	baz=357						
ESL				S	Sg	**10 46 12.4**	**-0.5**
	baz=357						
YUS	**Yu-Shan**	**1.01**	**308**	⇑*i*P	Pg	**10 46 00.1**	**+0.2**
	baz=329						
EAST	**Anshuo**	**1.01**	**242**	⇓*i*P	Pg	**10 45 58.9**	**-1.1**
	baz=240						
STYT	**Tauyuan**	**1.02**	**287**	⇑*i*P	Pg	**10 45 59.4**	**-0.7**
	baz=303						
STYT				S	Sg	**10 46 11.1**	**-2.2**
	baz=303						
ESF	**Shoufeng Towns**	**1.04**	**344**	*e*P	Pg	**10 46 00.5**	**0.0**
	baz=351						
SSD	**Sandimen**	**1.10**	**264**	⇑*i*P	Pg	**10 46 00.3**	**-1.3**
	baz=266						
HWA	**Hwalien**	**1.12**	**350**	*e*P	Pg	**10 46 02.0**	**-0.1**
	baz=9.0						
HWA				*e*S	Sg	**10 46 17.7**	**+1.1**
	baz=9.0						
ALS	**Alishan**	**1.13**	**305**	⇑*i*P	Pg	**10 46 02.3**	**+0.1**
	baz=311						
WTP	**Ta-pu**	**1.17**	**289**	⇑*i*P	Pg	**10 46 02.7**	**-0.3**
	baz=302						
WTP				*e*S	Sg	**10 46 18.4**	**+0.2**
	baz=302						
TPUB	**Ta-pu**	**1.18**	**292**	*e*Pn	Pn	**10 46 02.5**	**-1.7**
SCZT	**Fangliau**	**1.21**	**246**	⇓*i*P	Pg	**10 46 02.0**	**-1.7**
	baz=253						
SCZT				*e*S	Sg	**10 46 14.2**	**-5.1**
	baz=253						
SSLB	**Suanglung**	**1.21**	**319**	*e*Pn	Pn	**10 46 03.4**	**-1.3**
CHN4	**Tsaushan**	**1.23**	**293**	⇑*i*P	Pg	**10 46 03.8**	**-0.2**
	baz=306						
CHN4				*e*S	Sg	**10 46 20.5**	**+0.6**
	baz=306						
TWD	**Chiawan**	**1.23**	**351**	⇓*i*P	Pg	**10 46 03.8**	**-0.3**
	baz=9.0						
TWD				*e*S	Sg	**10 46 18.4**	**-1.6**
	baz=9.0						
CHN1	**Nanshi**	**1.23**	**285**	⇑*i*P	Pg	**10 46 03.9**	**-0.2**
	baz=297						
CHN1				*e*S	Sg	**10 46 20.3**	**+0.3**
	baz=297						
SGLT	**Jiouru**	**1.23**	**264**	*e*P	Pg	**10 46 04.4**	**+0.3**
	baz=266						
CHN5	**Tsauling**	**1.28**	**305**	⇑*i*P	Pg	**10 46 05.1**	**+0.1**
	baz=311						
TSEB	**Hengchuen, Pin**	**1.28**	**222**	*e*P	Pg	**10 46 03.6**	**-1.5**
	baz=220						
TWM1	**Shoushan**	**1.29**	**268**	⇑*i*P	Pg	**10 46 05.3**	**+0.1**
	baz=262						
TWM1				*e*S	Sg	**10 46 24.7**	**+2.8**
	baz=262						
TWK1	**Hengchun**	**1.31**	**226**	*i* P	Pg	**10 46 03.4**	**-2.2**
	baz=222						
HEN	**Hengchun**	**1.31**	**230**	⇓*i*P	Pg	**10 46 04.0**	**-1.7**
	baz=227						
NACB	**Ninganchiao**	**1.32**	**351**	*e*Pn	Pn	**10 46 04.7**	**-1.5**
NACB				*e*Sn	Sn	**10 46 20.6**	**-3.8**
SMLT	**Sun Moon Lake**	**1.32**	**320**	*e*P	Pg	**10 46 05.3**	**-0.5**
	baz=336						
CHN3	**Shinhua**	**1.35**	**279**	*i* P	Pn	**10 46 07.2**	**+0.6**
	baz=284						
CHN3				*e*S	Sg	**10 46 25.4**	**+1.3**
	baz=284						
TYC	**Yuchr**	**1.36**	**320**	*e*P	Pn	**10 46 06.0**	**-0.6**
	baz=337						
TYC				*e*S	Sg	**10 46 24.0**	**-0.3**
	baz=337						
WHF	**Hehuan Shan**	**1.37**	**338**	⇓*i*P	Pn	**10 46 06.2**	**-0.6**
	baz=346						
WHF				*e*S	Sg	**10 46 21.9**	**-2.7**
	baz=346						
WGK	**Gukeng**	**1.42**	**306**	⇑*i*P	Pn	**10 46 08.0**	**+0.5**
	baz=329						
WGK				*e*S	Sg	**10 46 25.8**	**-0.2**
	baz=329						
KAU	**Kaohsiung**	**1.42**	**258**	*e*P	Pn	**10 46 08.4**	**+0.9**
	baz=260						
KAU				*e*S	Sg	**10 46 28.0**	**+1.7**
	baz=260						
CHY	**Chiayi**	**1.43**	**296**	⇑*i*P	Pn	**10 46 07.7**	**+0.1**
	baz=303						
CHY				*e*S	Sg	**10 46 25.4**	**-1.1**
	baz=303						
TWP	**Hsiaoliuchiu**	**1.44**	**249**	*e*P	Pn	**10 46 08.8**	**+1.0**
	baz=231						
TWP				*e*S	Sg	**10 46 29.6**	**+2.9**
	baz=231						
WNT	**Mingjian**	**1.45**	**314**	⇑P	Pn	**10 46 08.5**	**+0.6**
	baz=322						
WNT				*e*S	Sg	**10 46 26.7**	**-0.4**
	baz=322						
TAI1	**Yung-k'ang**	**1.48**	**277**	*e*P	Pn	**10 46 07.7**	**-0.6**
	baz=280						
TWT	**Tachien**	**1.50**	**337**	⇓*i*P	Pn	**10 46 08.8**	**+0.1**
	baz=356						
TWT				S	Sb	**10 46 26.3**	**-2.5**
	baz=356						
SCLT	**Jiali**	**1.53**	**282**	⇑P	Pn	**10 46 09.1**	**+0.1**
	baz=287						
SCLT				S	Sn	**10 46 28.7**	**-0.8**
	baz=287						
ENA	**Nanau**	**1.56**	**357**	⇓*i*P	Pn	**10 46 08.8**	**-0.6**
	baz=13						
ENA				*e*S	Sn	**10 46 27.7**	**-2.6**
	baz=13						
TCU	**Taichung**	**1.65**	**321**	*e*P	Pn	**10 46 11.9**	**+1.2**
	baz=328						
TCU				*e*S	Sn	**10 46 32.0**	**-0.6**
	baz=328						
WTCT	**Ta-ch'eng**	**1.73**	**305**	*e*P	Pn	**10 46 11.7**	**0.0**
	baz=312						
WTCT				*e*S	Sn	**10 46 33.5**	**-1.0**
	baz=312						
TWC	**Suao**	**1.74**	**1**	⇓*i*P	Pn	**10 46 12.1**	**+0.2**
	baz=15						
TWC				*e*S	Sn	**10 46 33.1**	**-1.6**
	baz=15						
TWQ1	**Liyutan**	**1.76**	**327**	⇓*i*P	Pn	**10 46 13.7**	**+1.6**
	baz=334						
TWQ1				*e*S	Sn	**10 46 35.0**	**-0.3**
	baz=334						
ENTT	**Nioudou**	**1.78**	**353**	P	Pn	**10 46 12.4**	**-0.1**
	baz=357						
NSY	**Sanyi**	**1.82**	**328**	*e*P	Pn	**10 46 14.7**	**+1.6**
	baz=335						
NSY				*e*S	Sn	**10 46 37.3**	**+0.5**
	baz=335						
YHNB	**Yeheng**	**1.84**	**347**	*e*Pn	Pn	**10 46 13.6**	**+0.2**
YHNB				*e*Sn	Sn	**10 46 27.7**	**-10**
NSK	**Sanguang**	**1.85**	**347**	⇓*i*P	Pn	**10 46 13.8**	**+0.4**
	baz=353						
NSK				*e*S	Sn	**10 46 34.9**	**-2.7**
	baz=353						
TWE	**Neicheng**	**1.85**	**356**	*e*P	Pn	**10 46 13.5**	**0.0**
	baz=347						
ILA	**Ilan**	**1.89**	**358**	*e*P	Pn	**10 46 14.9**	**+0.9**
	baz=348						
YOJ	**Yonaguni jima**	**1.93**	**34**	P	Pn	**10 46 15.5**	**+1.0**
YOJ				*e*S	Sn	**10 46 38.8**	**-0.7**
YOJ	**Yonaguni jima**	**1.93**	**34**	*e*P	Pn	**10 46 15.4**	**+0.9**
	baz=34						
YOJ				*e*S	Sn	**10 46 38.1**	**-1.4**
	baz=34						
HSN	**Hsinchu**	**2.08**	**338**	*e*P	Pn	**10 46 18.4**	**+1.8**
	baz=344						
TWA	**Mucha**	**2.12**	**354**	*e*P	Pn	**10 46 17.8**	**+0.7**
	baz=359						
TWA				*e*S	Sn	**10 46 44.4**	**+0.3**
	baz=359						
TATO	**Taipei**	**2.12**	**352**	*e*Pn	Pn	**10 46 17.7**	**+0.5**
TWB1	**Santiao Chiao**	**2.14**	**4**	*i* P	Pn	**10 46 18.5**	**+1.0**
	baz=18						
TWB1				*e*S	Sn	**10 46 43.9**	**-0.7**
	baz=18						
NCU	**National Centr**	**2.17**	**345**	*e*P	Pn	**10 46 17.9**	**0.0**
	baz=4.0						
HATJ	**Hateruma jima**	**2.18**	**57**	P	Pn	**10 46 19.1**	**+1.2**
HATJ				*e*S	Sn	**10 46 45.0**	**-0.6**
TAP1	**Taipei**	**2.18**	**353**	*e*P	Pn	**10 46 18.9**	**+0.9**
	baz=356						
PNG	**Penghu**	**2.20**	**289**	⇑P	Pn	**10 46 17.2**	**-1.0**
	baz=294						
PNG				*e*S	Sn	**10 46 42.1**	**-3.9**
	baz=294						
NWF	**Wu-fen Shan**	**2.20**	**359**	*e*P	Pn	**10 46 19.4**	**+1.2**
	baz=353						
NWF				*e*S	Sn	**10 46 46.9**	**+0.8**
	baz=353						
TWS1	**Kuangyinshan**	**2.26**	**351**	*e*P	Pn	**10 46 19.5**	**+0.5**
	baz=9.0						
TWS1				*e*S	Sn	**10 46 48.3**	**+0.8**
	baz=9.0						
IRIF	**Iriomote-Funau**	**2.29**	**50**	P	Pn	**10 46 20.9**	**+1.5**
IRIF				*e*S	Sn	**10 46 47.0**	**-1.2**
TWY	**Chenhua**	**2.41**	**355**	*e*P	Pn	**10 46 22.0**	**+0.9**
	baz=358						
JKRS	**Kuro-shima**	**2.43**	**55**	P	Pn	**10 46 23.0**	**+1.6**
JKRS				*e*S	Sn	**10 46 51.3**	**-0.6**
JIJ	**Ishigaki jima**	**2.60**	**55**	P	Pn	**10 46 24.9**	**+1.1**
JIJ				*e*S	Sn	**10 46 55.0**	**-1.1**
JTJ	**Tarama**	**3.18**	**56**	P	Pn	**10 46 33.1**	**+1.4**
JTJ				*e*S	Sn	**10 47 10.1**	**-0.2**
KNM	**Kinmen**	**3.47**	**297**	*e*P	Pn	**10 46 35.3**	**-0.4**
	baz=299						
QZH	**Quanzhou**	**3.60**	**306**	⇓*i*Pn	Pn	**10 46 35.8**	**-1.8**
QZH				Sn	Sn	**10 47 14.8**	**-6.0**
QZH				smax			
	comp=N,600nm,0.6s						
QZH				smax			
	comp=E,570nm,0.5s						
QZH				LR	LR		
	comp=N,3μm,12.3s						
QZH				LR	LR		
	comp=E,2μm,11.9s						
QZH				LR	LR		
	comp=Z,1μm,9.9s						
JMJ	**Miyako jima 2**	**3.73**	**58**	P	Pn	**10 46 41.0**	**+1.7**
JMJ				*e*S	Sn	**10 47 22.7**	**-1.2**
JMJ	**Miyako jima 2**	**3.73**	**58**	*e*P	Pn	**10 46 40.0**	**+0.8**
	baz=57						
JOGS	**Gusukube**	**3.79**	**59**	P	Pn	**10 46 41.6**	**+1.5**
JOGS				*e*S	Sn	**10 47 25.5**	**+0.1**
JKE	**Kume jima 2**	**5.69**	**52**	P	Pn	**10 47 06.5**	**+0.3**
JKE				*e*S	Sn	**10 48 10.1**	**-2.0**
JAGN	**Aguni-jima**	**6.17**	**52**	*e*S	Sn	**10 48 20.8**	**-3.3**
JIH	**Iheya**	**6.96**	**52**	P	Pn	**10 47 24.7**	**+1.1**
JIH				*e*S	Sn	**10 48 42.5**	**-0.9**
JOW	**Kunigami**	**7.07**	**55**	Pn	Pn	**10 47 24.9**	**-0.3**
	comp=Z,1.8nm,0.3s,baz=94,slow=22,SNR=12						
JOW				Sn	Sn	**10 48 41.5**	**-4.7**
JOW	**Kunigami**	**7.07**	**55**	P	Pn	**10 47 25.0**	**-0.2**
JOW				*e*S	Sn	**10 48 44.9**	**-1.4**
JOW	**Kunigami**	**7.07**	**55**	*e*P	Pn	**10 47 24.6**	**-0.6**
	baz=53						
GZH	**Guangzhou**	**7.81**	**273**	P	Pn	**10 47 31.8**	**-3.6**
GZH				S	Sn	**10 48 51.3**	**-13**
GZH				smax			
	comp=N,120nm,0.8s						
GZH				smax			
	comp=E,100nm,0.9s						
JTK	**Tokunoshima**	**8.10**	**51**	P	Pn	**10 47 38.1**	**-1.3**
JTK				*e*S	Sn	**10 49 05.2**	**-6.5**
JAM	**Amami Oshima**	**8.94**	**50**	P	Pn	**10 47 49.4**	**-1.4**
JMZ	**Minamidaito 2**	**9.06**	**69**	P	Pn	**10 47 50.5**	**-2.1**
JMZ				*e*S	Sn	**10 49 26.8**	**-8.6**
KSRS	**Korea Array**	**15.46**	**19**	Pn	Pn	**10 49 22.1**	**+2.2**
	comp=E,0.9nm,0.3s,baz=198,slow=12,SNR=28						
KSRS				LR	LR	10 55 03.6	
	comp=E,46nm,19.1s,baz=359,slow=36						
KKM	**Kota Kinabalu**	**17.57**	**199**	*e*P	Pn	**10 49 48.6**	**+1.7**
	comp=E,28nm,0.9s						
MJAR	**Matsushiro Arr**	**19.67**	**42**	P	Pn	**10 50 14.4**	**+2.1**
	comp=E,0.2nm,0.3s,baz=235,slow=9.7,SNR=5.2						
LZH	**Lanzhou**	**20.41**	**314**	*e*P	P	**10 50 21.0**	**+1.9**
LZH				pP		10 50 24.5	
LZH				sP	sP	10 50 26.3	+7.0
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
CMAR	**Chiang Mai Arr**	**21.84**	**263**	P	P	**10 50 36.1**	**+1.5**
	comp=Z,2.5nm,0.9s,mb3.6,baz=66,slow=8.1,SNR=11						
CMAR				LR	LR	11 00 27.2	
	comp=Z,120nm,18.4s,MS3.3,baz=198,slow=40						
GUMO	**Guam**	**23.73**	**109**	LR	LR	10 57 47.7	
	comp=Z,81nm,20.9s,MS3.2,baz=89,slow=31						
GTA	**Gaotai**	**24.93**	**316**	*e*P	P	**10 51 09.0**	**+3.7**

comp=Z,3.9nm,0.7s,mb4.3,baz=114,slow=8.1,SNR=14
KURK Kurchatov 43.48 321 P **P** **10 53 45.7 +0.4**
comp=Z,0.3nm,0.3s,mb3.5,baz=116,slow=7.3,SNR=2.8
AAK Ala-Archa 43.77 308 LR LR 11 12 27.6
comp=Z,82nm,19.1s,MS3.7,baz=319,slow=37
AML Almayashu 44.26 307 *e*P **P** **10 53 56.7 +5.0**
comp=Z,3.2nm,1.0s,mb4.0
WRA Warramunga Arr 44.27 163 P **P** **10 53 49.5 -2.4**
comp=Z,1.5nm,0.8s,mb3.8,baz=346,slow=8.7,SNR=7.1
KKAR Karatay Array 46.74 308 *e*P **P** **10 54 12.8 +1.5**
comp=Z,0.9nm,0.5s,mb4.2
ASAR Alice Springs 47.72 165 P **P** **10 54 17.6 -1.5**
comp=Z,0.5nm,0.5s,mb3.9,baz=344,slow=6.8,SNR=17
BVAR Borovoye Array 49.06 321 P **P** **10 54 30.1 +0.9**
comp=Z,0.4nm,0.5s,mb3.7,baz=96,slow=7.6,SNR=3.4
STKA Stephens Creek 57.63 160 P **P** **10 55 31.8 -0.6**
comp=Z,5.1nm,1.0s,mb4.5,baz=337,slow=13,SNR=3.0
ILAR Eielson Array 70.12 27 P **P** **10 56 53.0 -1.3**
comp=Z,0.1nm,0.5s,mb3.2,baz=282,slow=4.9,SNR=3.9
SPITS Spitsbergen Ar 70.89 348 LR LR 11 32 45.2
comp=Z,64nm,20.3s,MS3.9,baz=225,slow=40
HFS Hagfors 79.00 331 LR LR 11 35 29.3
comp=Z,94nm,19.6s,MS4.1,baz=66,slow=38
NOA NORSAR Array B 79.66 332 P **P** **10 57 51.5 +1.9**
comp=Z,0.8nm,0.7s,mb3.7,baz=58,slow=5.9,SNR=2.3

*NEIC **31** 10:50:21.8,41.23S×172.78E,h154km,MG3.8(WEL), After WEL.*
WEL 31 10:50:22.2±0.3,41°22S×172°76E,h148km±1km,ML3.8/16, Error ellipse: s-maj=2.0km s-min=1.8km az=90.0,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QRZ	**Quartz Range**	**0.43**	**336**	PN	Pn	10 50 43.3	+0.3
QRZ				SN	Sn	10 50 57.9	-0.7
QRZ	**Quartz Range**	**0.43**	**336**	P	Pn	10 50 43.3	+0.4
NNZ	**Nelson**	**0.47**	**90**	PN	Pn	10 50 43.2	+0.1
NNZ				SN	Sn	10 50 58.7	-0.2
NNZ	**Nelson**	**0.47**	**90**	P	Pn	10 50 43.2	+0.1
THZ	**Tophouse**	**0.56**	**169**	PN	Pn	10 50 43.9	+0.4
THZ				SN	Sn	10 50 59.9	0.0
THZ	**Tophouse**	**0.56**	**169**	P	Pn	10 50 43.9	+0.4
DSZ	**Denniston Nort**	**0.89**	**233**	PN	Pn	10 50 45.7	0.0
DSZ				SN	Sn	10 51 02.0	-1.8
DSZ	**Denniston Nort**	**0.89**	**233**	P	Pn	10 50 45.7	-0.1
TUWZ	**Tuamarina**	**0.92**	**104**	PN	Pn	10 50 46.4	+0.4
TUWZ				SN	Sn	10 51 03.7	-0.5
DUWZ	**D'Urville Isla**	**0.97**	**65**	PN	Pn	10 50 47.0	+0.5
DUWZ				SN	Sn	10 51 04.7	-0.3
BSWZ	**Blackbirch Sta**	**0.98**	**121**	PN	Pn	10 50 46.6	+0.1
BSWZ				SN	Sn	10 51 05.4	+0.3
TCW	**Tory Channel**	**1.15**	**90**	PN	Pn	10 50 48.3	+0.3
TCW				SN	Sn	10 51 06.7	-1.0
TCW	**Tory Channel**	**1.15**	**90**	P	Pn	10 50 48.3	+0.3
KHZ	**Kahutara**	**1.33**	**154**	PN	Pn	10 50 49.9	+0.2
KHZ				SN	Sn	10 51 09.2	-1.8
KHZ	**Kahutara**	**1.33**	**154**	P	Pn	10 50 49.9	+0.1
SNZO	**South Karori**	**1.47**	**94**	PN	Pn	10 50 50.9	-0.3
SNZO	**South Karori**	**1.47**	**94**	P	Pn	10 50 50.9	-0.3
WEL	**Wellington**	**1.52**	**93**	PN	Pn	10 50 51.4	-0.2
WEL	**Wellington**	**1.52**	**93**	P	Pn	10 50 51.4	-0.3
BHW	**Baring Head**	**1.60**	**97**	PN	Pn	10 50 52.2	-0.4
BHW	**Baring Head**	**1.60**	**97**	P	Pn	10 50 52.2	-0.4
LTZ	**Lake Taylor**	**1.60**	**193**	PN	Pn	10 50 52.7	+0.1
LTZ	**Lake Taylor**	**1.60**	**193**	P	Pn	10 50 52.7	+0.1
KIW	**Kapiti Island**	**1.67**	**78**	PN	Pn	10 50 53.1	-0.2
KIW	**Kapiti Island**	**1.67**	**78**	P	Pn	10 50 53.1	-0.2
CAW	**Cannon Point**	**1.75**	**87**	PN	Pn	10 50 53.7	-0.5
CAW	**Cannon Point**	**1.75**	**87**	P	Pn	10 50 53.7	-0.5
OGWZ	**Otaki Gorge**	**1.87**	**78**	PN	Pn	10 50 55.3	-0.3
PLWZ	**Palliser**	**1.91**	**101**	PN	Pn	10 50 55.6	-0.4
MTW	**Mount Morrison**	**2.07**	**89**	PN	Pn	10 50 57.1	-0.8
HOWZ	**Holdsworth Sta**	**2.11**	**82**	PN	Pn	10 50 57.7	-0.7
MRZ	**Mangatainoka R**	**2.21**	**76**	PN	Pn	10 50 58.7	-0.9
MRZ				SN	Sn	10 51 26.5	-1.8
MRZ	**Mangatainoka R**	**2.21**	**76**	P	Pn	10 50 58.7	-0.9
PKE	**Pukeiti**	**2.23**	**25**	PN	Pn	10 51 00.1	+0.3
WAZ	**Wanganui**	**2.24**	**50**	PN	Pn	10 51 00.3	+0.3
WAZ	**Wanganui**	**2.24**	**50**	P	Pn	10 51 00.3	+0.3
CRLZ	**Canterbury Las**	**2.36**	**182**	PN	Pn	10 51 00.7	-0.7
CRLZ	**Canterbury Las**	**2.36**	**182**	P	Pn	10 51 00.7	-0.7
WVZ	**Waitaha Valley**	**2.39**	**218**	PN	Pn	10 51 00.8	-0.9
WVZ	**Waitaha Valley**	**2.39**	**218**	P	Pn	10 51 00.8	-0.9
TIWZ	**Tintock**	**2.41**	**80**	PN	Pn	10 51 01.2	-0.8
MHEZ	**Mangahewa**	**2.45**	**30**	PN	Pn	10 51 02.7	+0.1
MQZ	**McQueen's Vall**	**2.49**	**182**	PN	Pn	10 51 01.9	-1.0
MQZ	**McQueen's Vall**	**2.49**	**182**	P	Pn	10 51 01.9	-1.0
VRZ	**Vera Road**	**2.59**	**37**	PN	Pn	10 51 04.1	-0.3
VRZ	**Vera Road**	**2.59**	**37**	P	Pn	10 51 04.1	-0.2
BFZ	**Birch Farm**	**2.70**	**80**	PN	Pn	10 51 05.1	-0.5
BFZ	**Birch Farm**	**2.70**	**80**	P	Pn	10 51 05.1	-0.5
TSZ	**Takapari Road**	**2.70**	**66**	PN	Pn	10 51 04.5	-1.1
TSZ	**Takapari Road**	**2.70**	**66**	P	Pn	10 51 04.5	-1.1
DVHZ	**Dannevirke**	**2.75**	**72**	PN	Pn	10 51 05.1	-1.1
RPZ	**Rata Peaks**	**2.79**	**206**	PN	Pn	10 51 05.6	-1.1
RPZ	**Rata Peaks**	**2.79**	**206**	P	Pn	10 51 05.6	-1.2
WNVZ	**Wahianoa**	**2.88**	**50**	PN	Pn	10 51 07.3	-0.6
FWVZ	**Far West T-bar**	**2.90**	**48**	PN	Pn	10 51 07.7	-0.4
MOVZ	**Moawhango**	**2.92**	**53**	PN	Pn	10 51 07.4	-1.0
PNHZ	**Pukenui**	**2.93**	**65**	PN	Pn	10 51 07.3	-1.2
WPVZ	**Whakapapa**	**2.93**	**48**	PN	Pn	10 51 07.9	-0.6
TUVZ	**Tukino**	**2.95**	**50**	PN	Pn	10 51 07.9	-0.9
TUVZ	**Tukino**	**2.95**	**50**	P	Pn	10 51 07.9	-0.9
WPHZ	**Waipukurau**	**3.03**	**69**	PN	Pn	10 51 08.6	-1.1
WPHZ				SN	Sn	10 51 45.3	-1.2
KRVZ	**Karewarewa**	**3.06**	**47**	PN	Pn	10 51 09.5	-0.7
PRHZ	**Porangahau**	**3.10**	**73**	PN	Pn	10 51 09.7	-0.9
HIZ	**Hauiti**	**3.15**	**32**	PN	Pn	10 51 10.4	-0.8
HIZ	**Hauiti**	**3.15**	**32**	P	Pn	10 51 10.4	-0.9
FOZ	**Fox Glacier**	**3.27**	**223**	PN	Pn	10 51 10.2	-2.6
FOZ	**Fox Glacier**	**3.27**	**223**	P	Pn	10 51 10.2	-2.5
PXZ	**Pawanui**	**3.34**	**71**	PN	Pn	10 51 12.4	-1.3
BKZ	**Black Stump Fm**	**3.52**	**56**	PN	Pn	10 51 14.4	-1.7
BKZ	**Black Stump Fm**	**3.52**	**56**	P	Pn	10 51 14.4	-1.7
LBZ	**Lake Benmore**	**3.69**	**210**	PN	Pn	10 51 16.7	-1.5
JCZ	**Jackson Bay**	**4.10**	**225**	PN	Pn	10 51 22.0	-1.6
ODZ	**Otahua Downs**	**4.12**	**201**	PN	Pn	10 51 22.5	-1.3
ODZ	**Otahua Downs**	**4.12**	**201**	P	Pn	10 51 22.5	-1.4
WKZ	**Wanaka**	**4.53**	**216**	PN	Pn	10 51 26.7	-2.5
MWZ	**Matawai**	**4.67**	**53**	PN	Pn	10 51 31.3	+0.2
EAZ	**Earnscleugh**	**4.74**	**211**	PN	Pn	10 51 29.8	-2.1
EAZ	**Earnscleugh**	**4.74**	**211**	P	Pn	10 51 29.8	-2.1
MSZ	**Milford Sound**	**4.95**	**224**	PN	Pn	10 51 33.0	-1.8
TUZ	**Tuapeka**	**5.25**	**205**	PN	Pn	10 51 37.1	-1.6
MLZ	**Mavora Lakes**	**5.31**	**218**	PN	Pn	10 51 38.4	-1.2
WHZ	**Wether Hill Ro**	**5.83**	**215**	PN	Pn	10 51 43.8	-2.7
WHZ	**Wether Hill Ro**	**5.83**	**215**	P	Pn	10 51 43.8	-2.7
SYZ	**Scrubby Hill**	**5.92**	**205**	PN	Pn	10 51 45.8	-1.9
SYZ	**Scrubby Hill**	**5.92**	**205**	P	Pn	10 51 45.8	-1.9

*ISCJB **31** 11:00:29.2±0.3,26°23N±0°03×101°96E±0°04,h10km, mb4.1/31,MS3.3/3,Error ellipse: s-maj=4.6km s-min=4.3km az=178.6*
*BJI **31** 11:00:30.9,26°16N×101°99E,h14km,mB4.5/5,mb4.3/13, ML4.3/14,Ms4.2/10,Ms7 3.6/9*
*NEIC **31** 11:00:31.8±0.5,26°24N×101°90E,h10km,mb4.4/10,Error ellipse: s-maj=12.0km s-min=8.6km az=88.0*
*IDC **31** 11:00:32.3±5.3,26°20N×102°04E,h20km±35km,mb3.9/20, mb1 4.0/21,mb1mx3.9/31,mbtmp3.9/21,MS3.3/3, Ms1 3.3/3,ms1mx2.7/42,Error ellipse: s-maj=21.0km s-min=13.1km az=64.0*
ISC 31 11:00:30.9±0.3,26°17N±0°03×101°91E±0°03,h10km,n66, σ1ᵽ25/69,mb4.1/31,MS3.3/3,Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**1.28**	**144**	Pg	**Pg**	**11 00 54.0**	**-1.6**
KMI				Sg	**Sg**	**11 01 12.3**	**+0.1**
KMI				smax			
	comp=N,3μm,0.5s						
KMI				smax			
	comp=E,4μm,0.6s						
KMI				LR	LR		
	comp=N,8μm,5.0s						
KMI				LR	LR		
	comp=E,6μm,4.2s						
KMI				LR	LR		
	comp=Z,3μm,7.2s						
GYA	**Guiyang**	**4.28**	**85**	Pn	**Pn**	**11 01 38.0**	**+1.8**
GYA				Sn	**Sn**	**11 02 32.5**	**+6.3**
GYA				Sg	**Sg**	**11 02 47.0**	**-1.5**
GYA				smax			
	comp=N,190nm,0.8s						
GYA				smax			
	comp=E,190nm,0.9s						
CD2	**Chengdu**	**5.00**	**19**	Pn	**Pn**	**11 01 47.8**	**+1.8**
CD2				Sg	**Sg**	**11 03 11.8**	**+0.3**
CD2				smax			
	comp=N,890nm,1.0s						
CD2				smax			
	comp=E,1μm,1.1s						
CHRT	**Chiangrai**	**6.56**	**198**	PG	**Pg**	**11 02 31.0**	**-5.7**
CHRT				SG	**Sg**	**11 03 55.0**	**-6.7**
CHG	**Chiang Mai**	**7.81**	**201**	PG	**Pn**	**11 02 28.9**	**+4.2**
CHG				SG	Pn	11 02 56.4	+32
CHTO	**Chiang Mai**	**7.81**	**201**	*e*Pn	**Pn**	**11 02 29.4**	**+4.7**
	comp=E,4.2nm,0.7s						
ENH	**Enshi**	**7.84**	**57**	*e*Pn	**Pn**	**11 02 27.6**	**+2.5**
	comp=E,69nm,0.8s						
CMAR	**Chiang Mai Arr**	**8.15**	**200**	Pn	**Pn**	**11 02 31.9**	**+2.6**
	comp=E,0.3nm,0.3s,baz=14,slow=12,SNR=33						
CMAR				Pg	Pn	11 03 03.7	+34
	comp=E,1.5nm,0.3s,baz=1.7,slow=16,SNR=34						
CMAR				Lg		11 04 50.5	
	comp=E,1.6nm,0.3s,baz=20,slow=30,SNR=6.1						
SHL	**Shillong**	**9.05**	**268**	*e*PKP	**Pn**	**11 02 45.0**	**+3.4**
BDT	**Bhumibol Dam**	**9.28**	**197**	P	**Pn**	**11 02 49.5**	**+4.7**
	comp=E,178nm,1.1s						
XAN	**Xi'an**	**9.92**	**36**	P	**Pn**	**11 02 52.5**	**-1.1**
XAN				S	**Sn**	**11 04 44.5**	**-0.5**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,26nm,8.3s						
XAN				LR	LR		
	comp=N,670nm,7.8s						
XAN				LR	LR		
	comp=E,260nm,7.3s						
XAN				LR	LR		
	comp=Z,150nm,8.8s						
LZH	**Lanzhou**	**10.03**	**9**	*e*P	**Pn**	**11 02 52.0**	**-3.0**
LZH				pP		11 02 55.8	
LZH				sP		11 02 58.8	
LZH				*e*S	**Sn**	**11 04 44.3**	**-3.3**
LZH				sS		11 04 49.8	
LZH				SS		11 05 00.5	
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
LZH				pmax	pmax		
	comp=Z,83nm,4.5s						
LZH				LR	LR		
	comp=N,530nm,4.6s						
LZH				LR	LR		
	comp=E,820nm,7.1s						
LZH				LR	LR		
	comp=Z,650nm,7.1s						
LSA	**Lhasa**	**10.14**	**293**	*e*Pn	**Pn**	**11 02 59.9**	**+3.2**
	comp=Z,10.0nm,0.8s						
WHN	**Wuhan**	**11.79**	**65**	P	**Pn**	**11 03 19.0**	**-0.3**
WHN				S	**Sn**	**11 05 24.5**	**-6.5**
WHN				LR	LR		
	comp=N,1μm,11.6s						
WHN				LR	LR		
	comp=E,530nm,11.0s						
WHN				LR	LR		
	comp=Z,620nm,6.7s						
TAPN	**Taplejung**	**12.74**	**278**	*e*P	**Pn**	**11 03 36.0**	**+3.8**
ODAN	**Odare**	**13.02**	**276**	*e*P	**Pn**	**11 03 35.8**	**-0.2**
RAMN	**Ramite**	**13.72**	**277**	*e*P	**Pn**	**11 03 43.4**	**-2.2**
PKI	**Pulchoki**	**14.79**	**279**	*e*P	**Pn**	**11 03 58.1**	**-2.1**
KKN	**Kakani**	**14.91**	**280**	*e*P	**Pn**	**11 04 01.1**	**-0.8**
	comp=Z,21nm,0.6s						
DMN	**Daman**	**15.06**	**279**	*e*P	**Pn**	**11 04 02.6**	**-1.3**
GKN	**Gorkha**	**15.49**	**281**	*e*P	**Pn**	**11 04 09.2**	**-0.3**
DANN	**Dangsing**	**16.28**	**282**	*e*P	**Pn**	**11 04 17.5**	**-2.3**
KOLN	**Koldanda**	**16.40**	**280**	*e*P	**Pn**	**11 04 16.9**	**-4.4**
BJT	**Baijiatuan**	**18.23**	**37**	*e*P	**Pn**	**11 04 46.2**	**+2.2**
	comp=Z,19nm,0.8s						
BJI	**Beijing**	**18.25**	**37**	P	**Pn**	**11 04 45.5**	**+1.2**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BJI				LR	LR		
	comp=Z,43nm,11.3s						
WMQ	**Urumqi**	**21.06**	**330**	*e*P	**P**	**11 05 14.8**	**-0.3**
WMQ				pP		11 05 19.5	
WMQ				sP	sP	11 05 21.8	+2.6
WMQ				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.2						
WMQ				pmax	pmax		
	comp=Z,130nm,6.4s						
IPM	**Ipoh**	**21.58**	**182**	*e*P	**P**	**11 05 21.1**	**+0.2**
	comp=Z,4.1nm,0.5s,mb4.1						
SONM	**Songino Array**	**21.92**	**8**	P	**P**	**11 05 24.6**	**+0.3**
	comp=Z,4.7nm,0.8s,mb4.0,baz=193,slow=11,SNR=19						
ULN	**Ulaanbaatar**	**22.04**	**9**	*e*P	**P**	**11 05 25.8**	**+0.3**
	comp=Z,13nm,0.8s,mb4.4						
PSI	**Prapat**	**23.41**	**188**	P	**P**	**11 05 41.5**	**+1.1**
	comp=Z,4.4nm,0.7s,mb4.0,baz=327,slow=11,SNR=4.9						
KSRS	**Korea Array**	**24.73**	**57**	P	**P**	**11 05 50.6**	**-1.9**
	comp=Z,0.4nm,0.6s,mb3.1,baz=254,slow=10,SNR=2.7						
MK31	**Makanchi Array**	**25.80**	**328**	*e*P	**P**	**11 06 02.9**	**+0.8**
MKAR	**Makanchi Array**	**25.80**	**328**	P	**P**	**11 06 02.9**	**+0.8**
MKAR	**Makanchi Array**	**25.80**	**328**	P	**P**	**11 06 02.9**	**+0.8**
	comp=Z,2.5nm,0.5s,mb4.0,baz=137,slow=11,SNR=29						
AAK	**Ala-Archa**	**27.78**	**313**	P	**P**	**11 06 21.8**	**+1.8**
	comp=Z,1.0nm,0.3s,mb4.0,baz=200,slow=22,SNR=2.2						
AML	**Almayashu**	**28.09**	**312**	*e*P	**P**	**11 06 24.1**	**+1.4**
	comp=Z,3.8nm,0.8s,mb4.1						
EKS2	**Erkin-Say**	**28.27**	**313**	*e*P	**P**	**11 06 24.5**	**+0.2**
	comp=Z,6.1nm,1.0s,mb4.2						
KURK	**Kurchatov**	**30.31**	**330**	*e*P	**P**	**11 06 42.0**	**-0.3**
	comp=Z,3.4nm,0.8s,mb4.1						
KURK	**Kurchatov**	**30.31**	**330**	P	**P**	**11 06 42.4**	**+0.1**
	comp=Z,1.2nm,0.6s,mb3.8,baz=140,slow=9.7,SNR=5.3						
ZAA0	**Zalesovo Array**	**30.51**	**340**	*e*P	**P**	**11 06 42.8**	**-1.2**
ZALV	**Zalesovo Beam**	**30.51**	**340**	P	**P**	**11 06 44.4**	**+0.4**
	comp=Z,1.0nm,0.4s,mb4.0,baz=153,slow=7.3,SNR=3.1						
MJAR	**Matsushiro Arr**	**32.52**	**63**	LR	LR	11 21 47.2	
	comp=Z,53nm,18.4s,MS3.3,baz=85,slow=39						
BVAR	**Borovoye Array**	**35.68**	**327**	P	**P**	**11 07 28.4**	**-0.8**
	comp=Z,1.1nm,0.6s,mb4.0,baz=106,slow=11,SNR=3.8						
BRVK	**Borovoye**	**35.75**	**327**	*e*P	**P**	**11 07 33.3**	**+3.5**
	comp=Z,3.9nm,0.8s,mb4.4						
ASAJ	**Asahikawa**	**37.34**	**51**	P	**P**	**11 07 42.1**	**-1.4**
	comp=Z,2.5nm,0.6s,mb4.2,baz=226,slow=29,SNR=2.9						
ABKAR	**Akbulak array**	**39.72**	**317**	*e*P	**P**	**11 08 04.7**	**+1.3**
GUMO	**Guam**	**42.11**	**99**	LR	LR	11 23 42.0	
	comp=Z,35nm,21.5s,MS3.2,baz=270,slow=33						
ARU	**Arti**	**43.30**	**326**	*e*P	**P**	**11 08 32.7**	**0.0**
	comp=Z,7.5nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**55.61**	**142**	P	**P**	**11 10 06.8**	**-0.3**
	comp=Z,5.5nm,0.6s,mb4.7,baz=332,slow=8.1,SNR=21						
ASF	**Jabal al Asfar**	**56.33**	**293**	LR	LR	11 36 59.9	
	comp=Z,29nm,18.6s,MS3.4,baz=113,slow=39						
BRTR	**Keskin Array B**	**57.60**	**302**	P	**P**	**11 10 21.5**	**+0.4**
	comp=Z,0.2nm,0.3s,mb3.6,baz=14,slow=34,SNR=2.1						
ASAR	**Alice Springs**	**58.42**	**145**	P	**P**	**11 10 26.7**	**-0.2**
	comp=Z,3.2nm,0.9s,mb4.4,baz=329,slow=6.8,SNR=40						
AKASG	**Malin Array Be**	**59.43**	**315**	P	**P**	**11 10 34.0**	**+0.3**
	comp=Z,1.2nm,0.6s,mb4.1,baz=76,slow=6.7,SNR=2.9						
FINES	**FINESS Array B**	**60.64**	**328**	P	**P**	**11 10 41.2**	**-0.6**
	comp=Z,2.7nm,0.8s,mb4.4,baz=90,slow=7.6,SNR=5.2						
ARCES	**ARCESS Array B**	**60.99**	**337**	P	**P**	**11 10 44.7**	**+0.6**
	comp=Z,3.6nm,0.9s,mb4.5,baz=116,slow=4.1,SNR=5.2						
HFS	**Hagfors**	**66.81**	**327**	P	**P**	**11 11 23.7**	**+1.1**
	comp=Z,0.8nm,0.5s,mb4.0,baz=168,slow=41,SNR=4.7						
NOA	**NORSAR Array B**	**67.80**	**328**	P	**P**	**11 11 27.4**	**-1.3**
	comp=Z,1.0nm,0.6s,mb4.0,baz=76,slow=6.3,SNR=2.9						
DAVOX	**Davos/Dischmat**	**72.74**	**314**	P	**P**	**11 11 59.2**	**-0.1**
	comp=Z,1.1nm,0.5s,mb4.0,baz=323,slow=16,SNR=2.6						
BPAW	**Bear Paw Mtn.**	**73.87**	**26**	*e*P	**P**	**11 12 06.1**	**+0.5**
	comp=Z,3.6nm,0.6s,mb4.5						
ILAR	**Eielson Array**	**75.11**	**24**	P	**P**	**11 12 11.5**	**-1.3**
	comp=Z,0.3nm,0.5s,mb3.5,baz=290,slow=4.7,SNR=6.3						
LPG	**La Plagne**	**75.23**	**314**	*e*P	**P**	**11 12 14.0**	**+0.1**
	comp=Z,8.7nm,0.7s,mb4.5						
LPL	**La Plagne**	**75.23**	**314**	*e*P	**P**	**11 12 13.9**	**0.0**
	comp=Z,8.5nm,0.6s,mb4.5						
EKA	**Eskdalemuir Ar**	**76.91**	**325**	P	**P**	**11 12 22.1**	**-1.1**
	comp=Z,0.5nm,0.7s,mb3.6,baz=64,slow=5.6,SNR=2.8						
BMRM	**Bremner River**	**77.99**	**27**	*e*P	**P**	**11 12 32.6**	**+3.4**
	comp=Z,5.7nm,0.7s,mb4.6						
TXAR	**Lajitas Array**	**119.61**	**26**	PKP	PKPdf	11 19 24.4	+2.8
	comp=Z,0.2nm,0.5s,baz=153,slow=0.5,SNR=5.6						
ROSC	**El Rosal**	**148.95**	**353**	PKPbc	PKPbc	11 20 20.9	+0.9
	comp=Z,3.4nm,0.4s,baz=106,slow=18,SNR=3.2						

*ISCJB **31** 11:15:25.8±0.6,50°25N±0°04×18°82E±0°03,h0km, Error ellipse: s-maj=5.8km s-min=3.0km az=6.3*
*CSEM **31** 11:15:26.5±0.3,50°29N×18°84E,h2km,ML2.7/7, Error ellipse: s-maj=7.6km s-min=3.4km az=6.0*
*WAR **31** 11:15:26.3,50°24N×18°92E*
*IPEC **31** 11:15:27.5±0.1,49°98N×19°01E,h0km,ML1.8/4,Error ellipse: s-maj=6.4km s-min=0.8km az=158.0*
*PRU **31** 11:15:27.4,50°24N×18°82E,h0km*
ISC 31 11:15:26.8±0.5,50°25N±0°04×18°84E±0°03,h0km,n29, σ1ᵽ21/50,1C-1D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.61**	**228**	*e*PG	**Pg**	**11 15 39.3**	**+1.0**
OKC				*e*SG	**Sg**	**11 15 48.2**	**+2.0**
	comp=Z,30nm,0.9s						
OKC	**Ostrava-Krasne**	**0.61**	**228**	*e*Pg	**Pg**	**11 15 39.3**	**+1.0**
	baz=76						
OKC				Sg	**Sg**	**11 15 48.2**	**+2.0**
	comp=Z,30nm,0.9s						
OJC	**Ojcow**	**0.62**	**92**	*e*Pg	**Pg**	**11 15 37.6**	**-0.9**
OJC				*e*Sg	**Sg**	**11 15 45.9**	**-0.6**
OJC	**Ojcow**	**0.62**	**92**	*e*Pg	**Pg**	**11 15 37.5**	**-1.1**
	baz=245						
OJC				*e*Sg	**Sg**	**11 15 45.8**	**-0.7**
	baz=245						
MORC	**Moravsky Berou**	**0.96**	**241**	*e*Pg	**Pg**	**11 15 45.1**	**0.0**
	baz=78						
MORC				*e*Sg	**Sg**	**11 15 58.0**	**+0.5**
	comp=Z,14nm,0.3s,baz=78						
NIE	**Niedzica**	**1.26**	**130**	*e*Pg	**Pg**	**11 15 49.9**	**-1.1**
NIE				*e*Sg	**Sg**	**11 16 07.2**	**-0.1**
NIE	**Niedzica**	**1.26**	**130**	*e*Pg	**Pg**	**11 15 49.9**	**-1.1**
NIE				*e*Sg	**Sg**	**11 16 07.2**	**-0.1**
JAVC	**Velka Javorina**	**1.58**	**209**	*e*Sg	**Sg**	**11 16 17.6**	**0.0**
	comp=Z,6.8nm,0.4s						
DPC	**Dobruska-Polom**	**1.62**	**275**	*e*PG	**Pg**	**11 15 56.2**	**-1.5**
DPC				*e*SG	**Sg**	**11 16 18.5**	**-0.2**
	comp=Z,14nm,0.4s						
DPC	**Dobruska-Polom**	**1.62**	**275**	Pg	**Pg**	**11 15 56.2**	**-1.5**
DPC				Sg	**Sg**	**11 16 18.5**	**-0.2**
	comp=Z,14nm,0.4s						
KSP	**Ksiaz**	**1.73**	**291**	*e*Pn	**Pn**	**11 15 59.7**	**+1.7**
KSP				*e*Pg	**Pg**	**11 16 02.5**	**+2.6**
KSP				*e*Sn	**Sn**	**11 16 24.1**	**+3.4**
KSP	**Ksiaz**	**1.73**	**291**	*e*Pg	**Pg**	**11 15 59.7**	**-0.2**
KSP				*e*Sg	**Sg**	**11 16 23.1**	**+0.8**
KSP	**Ksiaz**	**1.73**	**291**	*e*Pg	**Pg**	**11 15 59.7**	**-0.2**
KSP				*e*Sg	**Sg**	**11 16 23.1**	**+0.8**
VRAC	**Vranov**	**1.73**	**238**	*e*Pn	**Pn**	**11 15 58.8**	**+0.7**
	baz=66						
VRAC				*e*Sg	**Sg**	**11 16 20.9**	**-1.5**
	comp=Z,13nm,0.3s,baz=66						
VYHS	**Vyhne**	**1.75**	**180**	*e*PN	**Pn**	**11 15 59.2**	**+0.8**
VYHS				*e*SN	**Sn**	**11 16 19.5**	**-1.9**
VYHS	**Vyhne**	**1.75**	**180**	*e*Pn	**Pn**	**11 15 59.2**	**+0.8**
VYHS				*e*Sn	**Sn**	**11 16 19.5**	**-1.9**
STHS	**Stebnicka Huta**	**1.77**	**117**	*e*PN	**Pn**	**11 15 59.3**	**+0.8**
STHS				*e*SN	**Sn**	**11 16 24.4**	**+2.8**
STHS	**Stebnicka Huta**	**1.77**	**117**	*e*Pn	**Pn**	**11 15 59.3**	**+0.8**
STHS				*e*Sn	**Sn**	**11 16 24.4**	**+2.8**
KRUC	**Moravsky**	**1.98**	**234**	*e*Pn	**Pn**	**11 16 02.2**	**+0.7**
	baz=61						
KECS	**Kecovo**	**2.07**	**148**	*e*PN	**Pn**	**11 16 03.1**	**+0.4**
PSZ	**Piszkesteto**	**2.43**	**163**	⇑*i*P	**Pn**	**11 16 13.3**	**+5.6**
PSZ	**Piszkesteto**	**2.43**	**163**	*e*Pn	**Pn**	**11 16 12.7**	**+

mb3.7/13,mb1 3.9/15,mb1mx3.8/21,mbtmp3.7/15,Error ellipse: s-maj=29.5km s-min=12.2km az=147.0
*NEIC **31** 11:29:56.2±1.3,22.37S×177.90W,h338km±12km, mb4.4/16,Error ellipse: s-maj=13.7km s-min=9.2km az=121.0*
ISC 31 11:29:55.6±2.2,**22.37S**±0.09×**177.9W**±0.1,**h330**km±22km, **n83**,σ0**.94**/44,**mb4.1**/24,**6C**,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.97**	**320**	*e*Pn		**Pn**		**11 31 27.1**	**+1.6**
	20nm,0.6s								
AFI	**Afiamalu**	**10.23**	**36**	*e*Pn		**Pn**		**11 32 10.0**	**-6.4**
AFI				*e*Sn		**S**		**11 33 50.6**	**-21**
AFI	**Afiamalu**	**10.23**	**36**	P		**Pn**		**11 32 10.1**	**-6.3**
	9.6nm,0.3s,baz=291,slow=18,SNR=17								
AFI				S		**S**		**11 33 54.2**	**-18**
	11nm,0.3s,baz=80,slow=22,SNR=9.2								
URZ	**Urewera**	**16.41**	**194**	*e*P		**P**		**11 33 24.5**	**-1.8**
	13nm,0.4s								
URZ				S		**S**		**11 36 14.5**	**-6.7**
URZ	**Urewera**	**16.41**	**194**	P		**P**		**11 33 24.2**	**-2.1**
	4.9nm,0.3s,baz=291,slow=2.9,SNR=29								
URZ				S		**S**		**11 36 14.5**	**-6.7**
	2.8nm,0.3s,baz=120,slow=18,SNR=10								
CTA	**Charters Tower**	**33.44**	**267**	*e*P		**P**		**11 36 05.7**	**+1.1**
	9.1nm,0.4s,mb4.4								
CTA	**Charters Tower**	**33.44**	**267**	P		**P**		**11 36 05.8**	**+1.2**
CTA	**Charters Tower**	**33.44**	**267**	P		**P**		**11 36 05.8**	**+1.2**
	11nm,0.4s,mb4.4,baz=96,slow=11,SNR=18								
CTAO	**Charters Tower**	**33.44**	**267**	*e*P		**P**		**11 36 05.7**	**+1.1**
	10nm,0.4s,mb4.4								
CMSA	**Cobar Meteorol**	**33.58**	**246**	*e*P		**P**		**11 36 05.9**	**+0.2**
STKA	**Stephens Creek**	**37.09**	**246**	*e*P		**P**		**11 36 35.7**	**+0.4**
	4.5nm,0.4s,mb4.0								
STKA	**Stephens Creek**	**37.09**	**246**	*e*P		**P**		**11 36 35.1**	**-0.3**
	1.1nm,0.5s,mb3.3								
STKA	**Stephens Creek**	**37.09**	**246**	P		**P**		**11 36 35.9**	**+0.6**
	4.7nm,0.4s,mb4.1,baz=90,slow=11,SNR=10								
ASAR	**Alice Springs**	**44.21**	**259**	P		**P**		**11 37 33.0**	**-0.1**
	2.0nm,0.7s,mb3.4,baz=95,slow=7.6,SNR=37								
WRA	**Warramunga Arr**	**44.46**	**264**	P		**P**		**11 37 34.6**	**-0.5**
	1.1nm,0.5s,mb3.2,baz=96,slow=5.9,SNR=5.7								
KAKA	**Kakadu**	**48.12**	**273**	*e*P		**P**		**11 38 03.0**	**-0.6**
FORT	**Forrest**	**48.66**	**248**	*e*P		**P**		**11 38 06.2**	**-1.2**
	23nm,0.7s,mb4.5								
FITZ	**Fitzroy Crossi**	**52.89**	**264**	*e*P		**P**		**11 38 39.4**	**+0.6**
	4.0nm,0.6s,mb3.9								
FITZ	**Fitzroy Crossi**	**52.89**	**264**	*e*P		**P**		**11 38 39.3**	**+0.5**
	2.5nm,0.6s,mb3.7								
FITZ	**Fitzroy Crossi**	**52.89**	**264**	P		**P**		**11 38 39.3**	**+0.5**
	2.9nm,0.8s,mb3.7,baz=89,slow=6.2,SNR=13								
SBA	**Scott Base**	**56.02**	**184**	*e*P		**P**		**11 39 02.0**	**+1.8**
	1.7nm,0.7s,mb3.5								
CASY	**Casey**	**62.33**	**206**	*e*P		**P**		**11 39 42.8**	**-0.4**
	2.6nm,0.6s,mb3.9								
QSPA	**South Pole Qui**	**67.71**	**180**	*e*P		**P**		**11 40 18.1**	**+0.7**
	3.7nm,0.9s,mb4.1								
MJAR	**Matsushiro Arr**	**71.76**	**324**	P		**P**		**11 40 41.6**	**-0.9**
	1.8nm,0.6s,mb4.0,baz=158,slow=6.5,SNR=6.5								
ASAJ	**Asahikawa**	**75.40**	**332**	P		**P**		**11 41 03.9**	**+0.5**
	3.1nm,0.8s,mb4.1,baz=223,slow=16,SNR=2.9								
PETK	**Petropavlovsk-**	**78.09**	**345**	P		**P**		**11 41 17.1**	**-1.0**
	3.0nm,0.8s,mb4.1,baz=103,slow=10,SNR=7.8								
NVAR	**Mina Array Bea**	**82.32**	**43**	P		**P**		**11 41 41.6**	**+0.7**
	2.2nm,0.9s,mb4.0,baz=222,slow=9.3,SNR=9.0								
BMRM	**Bremner River**	**87.30**	**16**	*e*P		**P**		**11 42 04.7**	**-0.2**
	17nm,1.4s,mb4.7								
TXAR	**Lajitas Array**	**87.99**	**57**	P		**P**		**11 42 10.8**	**+1.8**
TXAR	**Lajitas Array**	**87.99**	**57**	P		**P**		**11 42 10.8**	**+1.8**
	0.5nm,0.9s,mb3.4,baz=207,slow=5.3,SNR=5.2								
TRF	**Thorofare Moun**	**88.25**	**12**	*e*P		**P**		**11 42 08.6**	**-0.7**
	13nm,0.8s,mb4.8								
MCK	**McKinley**	**88.77**	**12**	*e*P		**P**		**11 42 11.0**	**-0.7**
	7.0nm,0.9s,mb4.5								
MENT	**Mentasta**	**89.21**	**15**	*e*P		**P**		**11 42 13.8**	**0.0**
COLA	**College**	**90.00**	**12**	*e*P		**P**		**11 42 16.2**	**-1.3**
	11nm,1.1s,mb4.7								
ILAR	**Eielson Array**	**90.11**	**13**	P		**P**		**11 42 17.2**	**-0.8**
	2.9nm,1.0s,mb4.2,baz=226,slow=5.4,SNR=17								
PDAR	**Pinedale Array**	**90.25**	**43**	P		**P**		**11 42 19.6**	**+0.3**
	1.0nm,0.8s,mb3.8,baz=200,slow=1.8,SNR=10								
BOZ	**Bozeman (W)**	**90.48**	**40**	*e*P		**P**		**11 42 20.6**	**+0.4**
	1.6nm,0.8s,mb4.0								
CMAR	**Chiang Mai Arr**	**90.82**	**290**	P		**P**		**11 42 23.5**	**+1.1**
	1.7nm,0.8s,mb4.0,baz=127,slow=2.8,SNR=11								
CHTO	**Chiang Mai**	**90.95**	**290**	*e*P		**P**		**11 42 24.3**	**+1.3**
	1.9nm,0.8s,mb4.1								
EGAK	**Eagle**	**91.38**	**15**	*e*P		**P**		**11 42 23.3**	**-0.6**
	9.5nm,1.2s,mb4.6								
CPUP	**Villa Florida**	**104.81**	**127**	*e*P		Pdif		11 43 26.6	+1.7
	6.4nm,0.4s								
BVAR	**Borovoye Array**	**120.55**	**319**	PKP		PKPdf		11 48 06.9	-1.0
	0.6nm,0.3s,baz=101,slow=2.9,SNR=3.6								
ARCES	**ARCESS Array B**	**130.76**	**349**	PKP		PKPdf		11 48 26.3	-0.6
	3.0nm,0.8s,baz=347,slow=2.6,SNR=6.8								
FINES	**FINESS Array B**	**137.58**	**343**	PKP		PKPdf		11 48 39.8	-0.1
	1.1nm,0.7s,baz=131,slow=3.8,SNR=3.1								
BSEG	**Bad Segeberg**	**147.87**	**351**	*e*PKPbc		PKPbc		11 49 01.6	0.0
BRTR	**Keskin Array B**	**148.13**	**310**	PKPbc		PKPbc		11 49 02.3	-0.5
	1.5nm,0.6s,baz=129,slow=5.2,SNR=4.8								
BRTR				PKPab		PKPab		11 49 06.5	-0.3
	2.3nm,0.9s,baz=67,slow=2.1,SNR=4.9								
BUR08	**Bucovina Ar. S**	**148.70**	**329**	*e*PKPbc		PKPbc		11 49 04.2	+0.3
IBBN	**Ibbenburen**	**149.79**	**353**	*e*PKPbc		PKPbc		11 49 06.2	-0.3
UPC	**Upice**	**149.87**	**342**	*e*PKP		PKPbc		11 49 07.1	+0.4
CLZ	**Clausthal**	**149.89**	**350**	*e*PKPbc		PKPbc		11 49 06.9	+0.2
CLL	**Collm**	**149.89**	**346**	*e*PKPbc		PKPbc		11 49 06.5	-0.2
CLL	**Collm**	**149.89**	**346**	*i* PKPbc		PKPbc		11 49 06.5	-0.2
	comp=Z,12nm,0.9s								
CLL				*e*PKPab		PKPab		11 49 12.0	-1.5
	comp=Z,4.0nm,0.7s								
DPC	**Dobruska-Polom**	**149.92**	**342**	*e*PKP		PKPbc		11 49 07.4	+0.6
DPC				*e*PKPAB		PKPab		11 49 14.4	+0.7
BRG	**Berggiesshubel**	**150.08**	**345**	*e*PKPbc		PKPbc		11 49 07.3	+0.1
BRG	**Berggiesshubel**	**150.08**	**345**	*i* PKP		PKPbc		11 49 07.3	+0.1
	comp=Z,8.5nm,0.9s								
NEUB	**Neuenburg**	**150.24**	**348**	*e*PKPbc		PKPbc		11 49 07.4	-0.2
PVCC	**Panska Ves**	**150.24**	**344**	*e*PKP		PKPbc		11 49 08.0	+0.4
PRU	**Pruhonice**	**150.74**	**343**	*e*PKP		PKPbc		11 49 09.6	+0.8
MOX	**Moxa**	**150.81**	**348**	*e*PKPbc		PKPbc		11 49 08.7	-0.2
TANN	**Tannenbergstha**	**150.85**	**346**	*e*PKPbc		PKPbc		11 49 08.9	-0.1
WERD	**Werda**	**150.85**	**347**	*e*PKPbc		PKPbc		11 49 09.1	+0.1
GUNZ	**Gunzen**	**150.92**	**346**	*e*PKPbc		PKPbc		11 49 09.4	+0.2
GUNZ				*e*PKPab		PKPab		11 49 17.9	+0.1
WERN	**Wernitzgruen**	**150.99**	**346**	*e*PKPbc		PKPbc		11 49 09.5	+0.2
WERN				*e*PKPab		PKPab		11 49 18.4	+0.3
NKC	**Novy Kostel**	**151.02**	**346**	*e*PKP		PKPbc		11 49 09.8	+0.4
NKC				*e*PKPAB		PKPab		11 49 18.2	0.0
ROTZ	**Rotzenmuhle**	**151.51**	**346**	*e*PKPbc		PKPbc		11 49 10.4	-0.1
TNS	**Taunus Mts**	**151.75**	**351**	*e*PKPbc		PKPbc		11 49 11.0	-0.1
KHC	**Kasperske Hory**	**151.78**	**344**	*e*PKPbc		PKPbc		11 49 11.1	-0.1
KHC				*e*PKPab		PKPab		11 49 21.6	+0.1
KHC	**Kasperske Hory**	**151.78**	**344**	*e*PKP		PKPbc		11 49 11.2	0.0
KHC				*e*PKPAB		PKPab		11 49 21.8	+0.3
GRF	**Grafenberg Arr**	**151.79**	**347**	*e*PKPbc		PKPbc		11 49 10.8	-0.4
WET	**Wettzell**	**151.94**	**345**	*e*PKPab		PKPab		11 49 22.3	+0.2
GEC2	**GERESS Array S**	**152.01**	**344**	*e*PKPbc		PKPbc		11 49 11.4	-0.3
GIVF	**Givet**	**152.24**	**356**	*e*PKIKP		PKPbc		11 49 12.0	-0.2
BAIF	**Baives**	**152.31**	**357**	*e*PKIKP		PKPbc		11 49 12.2	-0.1
	comp=Z,7.9nm,0.8s								
WLF	**Walferdange**	**152.57**	**354**	*e*PKPbc		PKPbc		11 49 13.3	+0.4
WLF				*e*PKPab		PKPab		11 49 25.1	+0.3
FUR	**Furstenfeldbru**	**153.23**	**346**	*e*PKPab		PKPab		11 49 27.8	+0.2
RJOB	**Jochberg**	**153.27**	**344**	*e*PKPab		PKPab		11 49 28.4	+0.6
FLN	**La Foliniere**	**153.58**	**4**	*e*PKIKP		PKPbc		11 49 14.6	-0.5
BFO	**Black Forest**	**153.62**	**351**	*e*PKPab		PKPab		11 49 28.9	-0.3
CDF	**Champ du Feu**	**153.68**	**352**	*e*PKIKP		PKPbc		11 49 14.8	-0.6
LDF	**La Druitiere**	**153.77**	**3**	*e*PKIKP		PKPbc		11 49 14.8	-0.7
	comp=Z,3.2nm,0.5s								
GRR	**Gorron**	**153.93**	**4**	*e*PKIKP		PKPbc		11 49 15.4	-0.5
HINF	**Hinteralfeld**	**154.32**	**353**	*e*PKIKP		PKPbc		11 49 15.5	-1.2
ESDC	**Sonseca Array**	**161.99**	**15**	PKPab		PKPab		11 50 05.1	-0.6
	comp=Z,1.0nm,0.9s,baz=358,slow=7.4,SNR=5.2								

*DDA **31** 11:36:24.4,37.00N×29.18E,h7km±6km,Md3.0*
*ISCJB **31** 11:36:25.2±0.4,37.01N±0.03×29.18E±0.03,h10km, Error ellipse: s-maj=4.6km s-min=3.5km az=11.9*
*CSEM **31** 11:36:25.1±0.2,37.02N×29.18E,h8km,MD3.1,Error ellipse: s-maj=5.3km s-min=4.0km az=16.0*
*ISK **31** 11:36:25.1,37.07N×29.18E,h9km,MD3.1*
ISC 31 11:36:25.4±0.5,**37.00N**±0.03×**29.17E**±0.03,**h8**km±5km, **n36**,σ1**.06**/52,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.31**	**60**	*e*PG		**Pg**		**11 36 30.8**	**-0.6**
GLHS				*e*SG		**Sg**		**11 36 35.2**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.31**	**60**	*e*Pg		**Pg**		**11 36 30.8**	**-0.7**
GLHS				*e*Sg		**Sg**		**11 36 35.2**	**-0.4**
GOLH	**Golhisar**	**0.40**	**53**	*i* P		**Pg**		**11 36 31.8**	**-1.3**
GOLH				*i* S		**Sg**		**11 36 39.3**	**+1.0**
GOLH	**Golhisar**	**0.40**	**53**	*i* P		**Pg**		**11 36 31.8**	**-1.3**
GOLH				*i* S		**Sg**		**11 36 39.3**	**+1.0**
ELL	**Elmali**	**0.65**	**113**	*e*PG		**Pg**		**11 36 39.1**	**+1.2**
ELL				*e*SG		**Sg**		**11 36 47.9**	**+1.5**
ELL	**Elmali**	**0.65**	**113**	*e*Pg		**Pg**		**11 36 39.1**	**+1.2**
ELL				*e*Sg		**Sg**		**11 36 47.9**	**+1.6**
DNZL	**Cakiroluk**	**0.69**	**352**	*i* P		**Pg**		**11 36 37.3**	**-1.5**
DNZL				*i* S		**Sg**		**11 36 47.8**	**-0.1**
DNZL	**Cakiroluk**	**0.69**	**352**	*i* P		**Pg**		**11 36 37.3**	**-1.5**
DNZL				*i* S		**Sg**		**11 36 47.8**	**0.0**
YER	**Yerkesik**	**0.72**	**281**	*e*PG		**Pg**		**11 36 39.3**	**+0.1**
YER	**Yerkesik**	**0.72**	**281**	*e*Pg		**Pg**		**11 36 39.3**	**+0.1**
DENT	**Denizli**	**0.76**	**352**	*e*PG		**Pg**		**11 36 39.2**	**-0.8**
DENT	**Denizli**	**0.76**	**352**	*e*Pg		**Pg**		**11 36 39.2**	**-0.8**
AKAS	**Kas**	**0.84**	**155**	*i* P		**Pg**		**11 36 40.0**	**-1.6**
AKAS				*i* S		**Sg**		**11 36 52.7**	**+0.1**
AKAS	**Kas**	**0.84**	**155**	*i* P		**Pg**		**11 36 40.0**	**-1.6**
AKAS				*i* S		**Sg**		**11 36 52.7**	**+0.1**
MLSB	**Milas**	**1.15**	**285**	*e*PN		**Pn**		**11 36 46.9**	**-0.7**
MLSB	**Milas**	**1.15**	**285**	*e*Pn		**Pn**		**11 36 46.9**	**-0.8**
AYDN	**Tasoluk**	**1.22**	**303**	*i* P		**Pg**		**11 36 49.2**	**+0.5**
AYDN				*i* S		**Sg**		**11 37 06.6**	**+2.1**
AYDN	**Tasoluk**	**1.22**	**303**	*i* P		**Pg**		**11 36 49.2**	**+0.5**
AYDN				*i* S		**Sg**		**11 37 06.6**	**+2.0**
BCK	**Bucak**	**1.23**	**68**	*e*PN		**Pn**		**11 36 47.9**	**-0.9**
BCK	**Bucak**	**1.23**	**68**	*e*Pn		**Pn**		**11 36 47.9**	**-0.9**
DAT	**Datca**	**1.30**	**258**	*e*PN		**Pn**		**11 36 50.6**	**+0.8**
DAT	**Datca**	**1.30**	**258**	*e*Pn		**Pn**		**11 36 50.6**	**+0.8**
KHL	**Karahalli**	**1.35**	**12**	*e*PN		**Pn**		**11 36 50.1**	**-0.4**
KHL	**Karahalli**	**1.35**	**12**	*e*Pn		**Pn**		**11 36 50.1**	**-0.4**
BDRM	**Kayabasi**	**1.38**	**273**	*i* P		**Pn**		**11 36 48.0**	**-2.9**
BDRM				*i* S		**Sb**		**11 37 09.6**	**+0.5**
BDRM	**Kayabasi**	**1.38**	**273**	*i* P		**Pn**		**11 36 48.0**	**-2.9**
BDRM				*i* S		**Sb**		**11 37 09.6**	**+0.5**
KHAL	**Karahalli**	**1.39**	**11**	*i* P		**Pn**		**11 36 50.9**	**-0.2**
KHAL				*i* S		**Sb**		**11 37 11.4**	**+1.9**
KHAL	**Karahalli**	**1.39**	**11**	*i* P		**Pn**		**11 36 50.8**	**-0.2**
KHAL				*i* S		**Sb**		**11 37 11.4**	**+1.9**
BODT	**Bodrum**	**1.48**	**273**	*e*PN		**Pn**		**11 36 52.7**	**+0.4**
BODT	**Bodrum**	**1.48**	**273**	*e*Pn		**Pn**		**11 36 52.7**	**+0.4**
SUTC	**Sutluce-Ispart**	**1.54**	**71**	*e*PN		**Pn**		**11 36 52.4**	**-0.7**
SUTC	**Sutluce-Ispart**	**1.54**	**71**	*e*Pn		**Pn**		**11 36 52.4**	**-0.7**
KULA	**Kula-Manisa**	**1.56**	**345**	*e*PN		**Pn**		**11 36 52.8**	**-0.6**
KULA	**Kula-Manisa**	**1.56**	**345**	*e*Pn		**Pn**		**11 36 52.8**	**-0.6**
HDMB	**Hadim**	**2.66**	**90**	*e*PN		**Pn**		**11 37 09.7**	**+1.2**
HDMB	**Hadim**	**2.66**	**90**	*e*Pn		**Pn**		**11 37 09.7**	**+1.2**

*IDC **31** 11:37:54.0±1.4,27.72N×55.15E,h0km,mb3.8/12, mb1 3.9/12,mb1mx3.7/27,mbtmp3.9/12,Error ellipse: s-maj=32.3km s-min=20.9km az=160.0*
*ISCJB **31** 11:37:54.7±0.4,27.75N±0.04×55.11E±0.03,h10km, mb3.7/13,Error ellipse: s-maj=5.8km s-min=4.2km az=4.5*
*NEIC **31** 11:37:57.5,27.91N×55.24E,h14km,mb3.7/3, ML3.8(THR),MN3.7(TEH),After THR.*
*CSEM **31** 11:37:57.1±0.3,27.66N×55.22E,h20km,ML3.7,Error ellipse: s-maj=9.5km s-min=7.8km az=165.0*
*SGS **31** 11:37:58.8,28.03N×55.02E,h26km*
*TEH **31** 11:38:00.9,27.93N×55.26E,h18km*
ISC 31 11:37:56.7±0.4,**27.76N**±0.04×**55.19E**±0.04,**h10**km,**n71**, σ1**26**/76,**mb3.7**/13,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.94**	**112**	Pg		**Pg**		**11 38 15.0**	**+0.1**
BNDS				Sg		**Sg**		**11 38 29.0**	**+1.8**
BNDS	**Bandar-Abbas**	**0.94**	**112**	Pg		**Pg**		**11 38 15.0**	**+0.1**
IBND	**Bandar-abas**	**1.24**	**104**	*e*Sg		**Sg**		**11 38 40.4**	**+3.8**
IBND				*e*				11 38 53.4	
	comp=Z,85μm,0.4s								
ISRV	**Sarvestan**	**2.44**	**312**	Pn		**Pn**		**11 38 39.4**	**+2.8**
ISRV	**Sarvestan**	**2.44**	**312**	*e*Pn		**Pn**		**11 38 39.4**	**+2.8**
ISRV				*e*				11 39 38.4	
	comp=Z,6μm,0.7s								
ISRV	**Sarvestan**	**2.44**	**312**	*e*Pn		**Pn**		**11 38 39.4**	**+2.8**
KRBR	**Kerman**	**2.60**	**32**	Pn		**Pn**		**11 38 39.0**	**+0.1**
KRBR				Sg		**Sb**		**11 39 14.0**	**-1.6**
KRBR	**Kerman**	**2.60**	**32**	Pn		**Pn**		**11 38 39.0**	**+0.1**
IPAR	**Pars**	**2.80**	**318**	Pn		**Pn**		**11 38 43.6**	**+2.1**
IPAR	**Pars**	**2.80**	**318**	*e*Pn		**Pn**		**11 38 43.6**	**+2.1**
IPAR				*e*				11 39 47.0	
	comp=Z,2μm,0.4s								
IPAR	**Pars**	**2.80**	**318**	*e*Pn		**Pn**		**11 38 43.6**	**+2.1**
IMEH	**Mehriz**	**3.65**	**352**	Pn		**Pn**		**11 38 54.2**	**+1.0**
IMEH	**Mehriz**	**3.65**	**352**	*e*Pn		**Pn**		**11 38 54.2**	**+1.0**
IMEH				*e*				11 40 04.3	
	comp=Z,2μm,0.5s								
IMEH	**Mehriz**	**3.65**	**352**	*e*Pn		**Pn**		**11 38 54.2**	**+1.0**
IBAF	**Bafgh**	**3.83**	**5**	Pn		**Pn**		**11 38 56.3**	**+0.6**
IBAF	**Bafgh**	**3.83**	**5**	*e*Pn		**Pn**		**11 38 56.3**	**+0.6**
IBAF				*e*				11 40 14.0	
	comp=Z,1μm,0.4s								
IBAF	**Bafgh**	**3.83**	**5**	*e*Pn		**Pn**		**11 38 56.3**	**+0.6**
ISAD	**Sadrabad**	**4.34**	**343**	Pn		**Pn**		**11 39 05.9**	**+3.2**
ISAD	**Sadrabad**	**4.34**	**343**	*e*Pn		**Pn**		**11 39 06.0**	**+3.3**
ISAD				*e*				11 40 22.2	
	comp=Z,812nm,0.3s								
ISAD	**Sadrabad**	**4.34**	**343**	*e*Pn		**Pn**		**11 39 06.0**	**+3.3**
ZHSF	**Zahedan**	**5.24**	**68**	Pn		**Pn**		**11 39 16.0**	**+0.9**
ZHSF	**Zahedan**	**5.24**	**68**	Pn		**Pn**		**11 39 16.0**	**+0.9**
IGAR	**Gharneh**	**5.37**	**330**	*e*Pn		**Pn**		**11 39 18.2**	**+1.3**
IGAR				*e*				11 39 20.1	
	comp=Z,340nm,0.1s								
BTHS		**5.38**	**228**	P		**Pn**		**11 39 17.1**	**0.0**
BTHS		**5.38**	**228**	P		**Pn**		**11 39 17.1**	**0.0**
BTHS				S		**Sn**		**11 40 20.7**	**+1.5**
NASN	**Na'in**	**5.42**	**338**	Pn		**Pn**		**11 39 18.0**	**+0.4**
NASN	**Na'in**	**5.42**	**338**	Pn		**Pn**		**11 39 18.0**	**+0.4**
IZEF	**Zefreh**	**5.68**	**335**	Pn		**Pn**		**11 39 21.7**	**+0.5**
IZEF	**Zefreh**	**5.68**	**335**	*e*Pn		**Pn**		**11 39 21.8**	**+0.6**
IZEF				*e*				11 39 25.2	
	comp=Z,119nm,0.1s								
IZEF	**Zefreh**	**5.68**	**335**	*e*Pn		**Pn**		**11 39 21.8**	**+0.6**
IKLH	**Kolahrood**	**6.35**	**332**	Pn		**Pn**		**11 39 32.2**	**+1.8**
IKLH	**Kolahrood**	**6.35**	**332**	*e*Pn		**Pn**		**11 39 32.3**	**+1.9**
IKLH				*e*				11 40 57.8	
	comp=Z,128nm,0.2s								
IKLH	**Kolahrood**	**6.35**	**332**	*e*Pn		**Pn**		**11 39 32.3**	**+1.9**
RDF	**Al-Radifah**	**6.83**	**282**	*e*P		**Pn**		**11 39 36.6**	**-0.4**
NAY	**Al-Naaiem**	**7.15**	**284**	*e*P		**Pn**		**11 39 41.6**	**+0.2**
NAY				AML		AML		11 41 01.0	
	comp=Z,7.1nm,0.7s								
MIB	**Mutribah**	**7.18**	**288**	*e*P		**Pn**		**11 39 42.0**	**+0.2**
MIB				AML		AML		11 41 03.1	
	comp=Z,9.4nm,0.5s								
ASAO	**Ashtian**	**8.08**	**328**	Pn		**Pn**		**11 39 55.0**	**+0.9**
ASAO	**Ashtian**	**8.08**	**328**	Pn		**Pn**		**11 39 55.0**	**+0.9**
LYLS		**9.19**	**233**	P		**Pn**		**11 40 08.1**	**-1.3**
LYLS		**9.19**	**233**	P		**Pn**		**11 40 08.1**	**-1.3**
LYLS				S		**Sn**		**11 41 47.9**	**-5.0**
ASYS		**9.62**	**271**	S		**Sn**		**11 41 54.0**	**-10**
ASYS		**9.62**	**271**	P		**Pn**		**11 40 13.4**	**-1.9**
ASYS		**9.62**	**271**	P		**Pn**		**11 40 13.4**	**-1.9**
ASYS				S		**Sn**		**11 41 54.0**	**-10**
KKAR	**Karatay Array**	**19.70**	**35**	*e*P		**Pn**		**11 42 25.4**	**-2.2**
	comp=Z,1.6nm,0.8s								
KKAR	**Karatay Array**	**19.70**	**35**	*e*P		**Pn**		**11 42 25.4**	**-2.2**
	comp=Z,1.6nm,0.8s								
BRTR	**Keskin Array B**	**21.47**	**309**	P		**P**		**11 42 45.1**	**-0.2**
	comp=Z,0.7nm,0.6s,mb3.2,baz=138,slow=13,SNR=4.5								
BRTR	**Keskin Array B**	**21.47**	**309**	P		**P**		**11 42 45.1**	**-0.2**
AAK	**Ala-Archa**	**21.58**	**42**	*e*P		**P**		**11 42 46.7**	**+0.2**
	comp=Z,3.2nm,0.5s,mb4.0								
AAK	**Ala-Archa**	**21.58**	**42**	P		**P**		**11 42 47.2**	**+0.7**
	comp=Z,1.0nm,0.4s,mb3.6,baz=222,slow=7.1,SNR=5.2								
AAK	**Ala-Archa**	**21.58**	**42**	*e*P		**P**		**11 42 46.7**	**+0.2**
	comp=Z,3.2nm,0.5s,mb4.0								
ABKAR	**Akbulak array**	**21.77**	**8**	*e*P		**P**		**11 42 50.1**	**+1.7**
	comp=Z,2.8nm,0.8s,mb3.7								
ABKAR	**Akbulak array**	**21.77**	**8**	*e*P		**P**		**11 42 50.1**	**+1.7**
	comp=Z,2.8nm,0.8s,mb3.7								
AKTK	**Aktyubinsk**	**22.74**	**5**	P		**P**		**11 42 58.4**	**-0.4**
AKTK	**Aktyubinsk**	**22.74**	**5**	P		**P**		**11 42 58.3**	**-0.5**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AKTO	**Aktyubinsk**	**22.74**	**5**	P		**P**		**11 42 58.4**	**-0.4**
	comp=Z,1.1nm,0.3s,mb3.7,baz=184,slow=13,SNR=5.8								
BVAR	**Borovoye Array**	**27.64**	**20**	P		**P**		**11 43 43.2**	**-1.2**
	comp=Z,1.6nm,0.9s,mb3.6,baz=197,slow=7.5,SNR=4.4								
BVAR	**Borovoye Array**	**27.64**	**20**	P		**P**		**11 43 43.2**	**-1.2**
MKAR	**Makanchi Array**	**28.52**	**41**	P		**P**		**11 43 52.5**	**+0.2**
	comp=Z,0.4nm,0.5s,mb3.4,baz=231,slow=7.7,SNR=4.1								
KURK	**Kurchatov**	**29.00**	**31**	P		**P**		**11 43 54.8**	**-1.7**
	comp=Z,1.0nm,0.3s,mb4.0,baz=232,slow=9.3,SNR=3.7								
KURK	**Kurchatov**	**29.00**	**31**	P		**P**		**11 43 54.8**	**-1.7**
ZALV	**Zalesovo Beam**	**34.00**	**32**	P		**P**		**11 44 38.9**	**-1.5**
	comp=Z,1.5nm,0.5s,mb4.2,baz=239,slow=9.4,SNR=6.8								
FINES	**FINESS Array B**	**38.89**	**338**	P		**P**		**11 45 20.2**	**-1.8**
	comp=Z,3.1nm,0.9s,mb4.0,baz=120,slow=7.5,SNR=5.1								
FINES	**FINESS Array B**	**38.89**	**338**	P		**P**		**11 45 20.2**	**-1.8**
SONM

	baz=240							
WGK				*e*S		**Sn**	**11 41 32.9**	**+1.5**
	baz=240							
ELDTW	**Lidau**	**1.28**	**213**	*e*P		**Pn**	**11 41 13.4**	**-2.1**
	baz=201							
CHN4	**Tsaushan**	**1.42**	**230**	*e*P		**Pn**	**11 41 18.2**	**+0.8**
	baz=220							
CHN4				*e*S		**Sn**	**11 41 37.7**	**+2.3**
	baz=220							
TPUB	**Ta-pu**	**1.43**	**228**	*e*Pn		**Pn**	**11 41 17.6**	**+0.1**
TPUB				*e*Sn		**Sn**	**11 41 37.8**	**+2.2**
WTCT	**Ta-ch'eng**	**1.43**	**254**	*e*P		**Pn**	**11 41 17.0**	**-0.6**
	baz=251							
WTCT				*e*S		**Sn**	**11 41 36.1**	**+0.4**
	baz=251							
STYT	**Tauyuan**	**1.45**	**221**	*e*P		**Pn**	**11 41 17.6**	**-0.1**
	baz=210							
CHY	**Chiayi**	**1.46**	**239**	*e*P		**Pn**	**11 41 18.3**	**+0.3**
	baz=236							
CHY				*e*S		**Sn**	**11 41 38.3**	**+1.9**
	baz=236							
WTP	**Ta-pu**	**1.48**	**227**	*e*P		**Pn**	**11 41 18.3**	**+0.1**
	baz=213							
WTP				*e*S		**Sn**	**11 41 38.4**	**+1.7**
	baz=213							
CHN1	**Nanshi**	**1.58**	**227**	P		**Pn**	**11 41 20.1**	**+0.5**
	baz=217							
CHN1				*e*S		**Sn**	**11 41 40.8**	**+1.5**
	baz=217							
TWG	**Pinlang**	**1.58**	**205**	*e*Pn		**Pn**	**11 41 17.0**	**-2.6**
TWG	**Pinlang**	**1.58**	**205**	*e*P		**Pn**	**11 41 17.6**	**-1.9**
	baz=192							
SGST	**Jiashian**	**1.61**	**223**	*e*P		**Pn**	**11 41 20.6**	**+0.6**
	baz=212							
SGST				*e*S		**Sn**	**11 41 41.3**	**+1.2**
	baz=212							
SCLT	**Jiali**	**1.82**	**234**	*e*P		**Pn**	**11 41 23.0**	**+0.1**
	baz=219							
ECL	**Taimali**	**1.83**	**205**	*e*P		**Pn**	**11 41 23.4**	**+0.4**
	baz=195							
SSD	**Sandimen**	**1.85**	**215**	*e*P		**Pn**	**11 41 23.9**	**+0.7**
	baz=216							
EAST	**Anshuo**	**2.06**	**205**	*e*P		**Pn**	**11 41 26.3**	**+0.1**
	baz=197							
PNG	**Penghu**	**2.16**	**252**	*e*P		**Pn**	**11 41 25.6**	**-1.9**
	baz=250							
SCZT	**Fangliau**	**2.17**	**210**	*e*P		**Pn**	**11 41 28.3**	**+0.7**
	baz=199							
QZH	**Quanzhou**	**2.98**	**284**⇓	*i*Pn		**Pn**	**11 41 36.3**	**-2.6**
QZH				Sn		**Sn**	**11 42 07.8**	**-6.2**
QZH				smax				
	comp=N,90nm,0.9s							
QZH				smax				
	comp=E,80nm,0.7s							
KNM	**Kinmen**	**3.06**	**274**	*e*P		**Pn**	**11 41 39.4**	**-0.5**
	baz=272							

BJI ***31*** *12:11:53.9, 6.˚73S× 148.˚00E, h80km, mB5.0/18, mb4.8/30, Ms4.4/11, Ms7 4.3/13*

MOS ***31*** *12:11:54.7±0.8, 6.˚02S× 147.˚28E, h33km, mb4.9/23, Error ellipse: s-maj=13.0km s-min=7.2km az=96.5*

IDC ***31*** *12:11:59.3±1.9, 6.˚16S× 147.˚42E, h62km±16km, mb4.3/13, mb1 4.4/17, mb1mx4.4/20, mbtmp4.4/17, MS3.7/10, Ms1 3.7/10, ms1mx3.5/21, Error ellipse: s-maj=15.8km s-min=9.8km az=101.0*

ISCJB ***31*** *12:11:59.4±0.2, 6.˚26S±0.˚03× 147.˚42E±0.˚05, h83km, mb4.6/58, Error ellipse: s-maj=6.4km s-min=4.2km az=1.7*

NEIC ***31*** *12:12:00.7±0.9, 6.˚22S× 147.˚43E, h80km±8km, mb4.7/31, Error ellipse: s-maj=7.3km s-min=6.1km az=84.0*

NEIC Felt at Lae.

GCMT ***31*** *12:12:04.6±0.3, 6.˚40S× 147.˚58E, h108km±3km, MW5.0, Moment Tensor Solution. s21,c22; s64,c103; Moment tensor: Scale 10^{16}Nm; M_{rr}1.30±.14; $M_{\theta\theta}$1.63±.12; $M_{\phi\phi}$-2.93±.14; $M_{r\theta}$1.45±.08; $M_{\theta\phi}$-2.11±.12; $M_{\phi r}$-0.29±.12; Best double couple: M_o3.60000×10^{16} NP1:ϕ_s162.00000°, δ64.00000°, λ23.00000°. NP2:ϕ_s61.00000°, δ69.00000°, λ152.00000°. Principal axes: T 3.4500, Plg34.0000°, Azm20.0000°; N 0.3300, Plg56.0000°, Azm207.0000°; P -3.7700, Plg3.0000°, Azm112.0000°; Data Used: II IC IU G.*

ISC 31 12:12:01.2±0.2, 6˚28S±0˚03×147˚45E±0˚05, h85km, h85km±1.9km:pP-P,n167,σ1º08/121,mb4.6/58,5C-5D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.12**	**185**	*e*Pn		**Pn**	**12 12 46.7**	**-1.6**
PMG				*e*Sn		**Sn**	**12 13 24.1**	**-0.6**
COEN	**Coen**	**8.71**	**209**	*e*Pn		**Pn**	**12 14 03.0**	**-1.5**
	146nm,0.5s							
COEN				*e*Sn		**Sn**	**12 15 40.9**	**-0.2**
HNR	**Honiara**	**12.77**	**105**	*e*Pn		**Pn**	**12 15 00.5**	**+0.9**
	334nm,1.1s							
HNR	**Honiara**	**12.77**	**105**	P		**Pn**	**12 15 00.8**	**+1.1**
	baz=250,slow=1.1,SNR=4.5							
HNR				S		**Sn**	**12 17 22.1**	**+2.0**
	baz=143,slow=6.3,SNR=2.2							
HNR	**Honiara**	**12.77**	**105**	*e*P		**Pn**	**12 15 00.5**	**+0.9**
HNR				pmax	pmax			
	comp=Z,334nm,1.1s							
CTA	**Charters Tower**	**13.78**	**185**	*e*P		**Pn**	**12 15 13.2**	**+0.3**
	comp=Z,15nm,1.2s							
CTA	**Charters Tower**	**13.78**	**185**	P		**Pn**	**12 15 14.1**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=358,slow=14,SNR=6.0							
CTAO	**Charters Tower**	**13.78**	**185**	*e*Pn		**Pn**	**12 15 14.8**	**+2.0**
KAKA	**Kakadu**	**16.12**	**246**	*e*P		**Pn**	**12 15 42.4**	**-0.4**
	comp=Z,38nm,0.4s							
KAKA	**Kakadu**	**16.12**	**246**	*e*P		**Pn**	**12 15 42.6**	**-0.2**
WRA	**Warramunga Arr**	**18.62**	**222**	P		**Pn**	**12 16 12.0**	**-1.3**
WRA				PcP		PcP	12 20 39.6	+1.7
WRA				LR		LR	12 23 45.5	
WRA				ScP		ScP	12 24 09.8	+3.8
WRA	**Warramunga Arr**	**18.62**	**222**	P		**Pn**	**12 16 12.0**	**-1.3**
	comp=Z,2.0nm,0.3s,baz=47,slow=11,SNR=32							
WRA				PcP		PcP	12 20 39.6	+1.7
	comp=Z,0.4nm,0.3s,baz=27,slow=1.7,SNR=5.3							
WRA				LR		LR	12 23 45.5	
	comp=Z,151nm,20.6s,baz=60,slow=38							
WRA				ScP		ScP	12 24 09.8	+3.8
	comp=Z,0.2nm,0.3s,baz=34,slow=2.4,SNR=8.3							
EIDS	**Eidsvold**	**19.30**	**170**	*e*P		**Pn**	**12 16 20.7**	**-0.6**
	comp=Z,13nm,0.8s							
GUMO	**Guam**	**19.90**	**353**	*e*P		**Pn**	**12 16 26.5**	**-1.9**
	comp=Z,82nm,0.8s							
GUMO	**Guam**	**19.90**	**353**	P		**Pn**	**12 16 26.3**	**-2.1**
	comp=Z,6.8nm,0.3s,baz=156,slow=8.3,SNR=7.9							
GUMO				LR		LR	12 22 49.6	
	comp=Z,148nm,20.6s,baz=139,slow=33							
GUMO	**Guam**	**19.90**	**353**	*e*P		**Pn**	**12 16 26.5**	**-1.9**
GUMO				pmax	pmax			
	comp=Z,82nm,0.8s							
LBMI	**Labuha**	**20.68**	**285**	P		**P**	**12 16 39.4**	**+4.9**
ASAR	**Alice Springs**	**21.65**	**216**	P		**P**	**12 16 45.0**	**+0.2**
ASAR				S		**S**	**12 20 43.9**	**+4.1**
ASAR				ScP		ScP	12 24 16.9	+3.7
ASAR	**Alice Springs**	**21.65**	**216**	P		**P**	**12 16 45.0**	**+0.2**
	comp=Z,8.7nm,0.5s,mb4.4,baz=57,slow=8.2,SNR=169							
ASAR				S		**S**	**12 20 43.9**	**+4.1**
	comp=Z,8.2nm,1.0s,baz=26,slow=20,SNR=5.8							
ASAR				ScP		ScP	12 24 16.9	+3.7
	comp=Z,4.8nm,0.8s,baz=54,slow=3.0,SNR=12							
ASAR				PKiKP		PKiKP	12 28 29.4	-0.7
	comp=Z,0.5nm,0.9s,baz=25,slow=1.6,SNR=4.3							
ASAR	**Alice Springs**	**21.65**	**216**	P		**P**	**12 16 45.0**	**+0.2**
ASAR				S		**S**	**12 20 43.9**	**+4.1**
MNI	**Manado**	**23.84**	**288**	P		pP	12 17 24.9	-0.5
FITZ	**Fitzroy Crossi**	**24.31**	**239**	*e*P		**P**	**12 17 11.5**	**+0.5**
	comp=Z,65nm,0.6s,mb5.1							
FITZ	**Fitzroy Crossi**	**24.31**	**239**	*e*P		**P**	**12 17 11.7**	**+0.7**
	comp=Z,42nm,0.7s,mb4.9							
FITZ	**Fitzroy Crossi**	**24.31**	**239**	P		**P**	**12 17 12.0**	**+1.0**
	comp=Z,111nm,0.4s,mb4.6,baz=59,slow=6.8,SNR=92							
FITZ				LR		LR	12 27 35.6	
	comp=Z,111nm,18.1s,baz=63,slow=38							
ARMA	**Armidale**	**24.34**	**171**	*e*P		**P**	**12 17 11.4**	**+0.3**
ARMA	**Armidale**	**24.34**	**171**	*e*P		**P**	**12 17 11.4**	**+0.3**
	comp=Z,19nm,0.8s,mb4.5							
LUWI	**Luwuk**	**25.16**	**281**	P		**P**	**12 17 21.6**	**+2.8**
	comp=Z,0.5nmcomp=Z,1μmcomp=Z,116nm,1.3s,mb5.1							
STKA	**Stephens Creek**	**26.05**	**191**	*e*P		**P**	**12 17 26.7**	**+0.1**
	comp=Z,3.8nm,0.4s,mb4.2							
STKA	**Stephens Creek**	**26.05**	**191**	*e*P		**P**	**12 17 26.9**	**+0.2**
	comp=Z,17nm,1.9s,mb4.2							
STKA	**Stephens Creek**	**26.05**	**191**	P		**P**	**12 17 26.8**	**+0.2**
	comp=Z,3.9nm,0.4s,mb4.2,baz=11,slow=11,SNR=14							
STKA				LR		LR	12 27 01.9	
	comp=Z,231nm,21.8s,baz=270,slow=34							
STKA	**Stephens Creek**	**26.05**	**191**	*e*P		**P**	**12 17 26.9**	**+0.3**
STKA				pmax	pmax			
	comp=Z,17nm,1.9s							
MRSI	**Marisa**	**26.33**	**284**	P		pP	12 17 41.2	-7.5
MBWA	**Marble Bar**	**30.64**	**238**	*e*P		**P**	**12 18 07.9**	**+0.2**
	comp=Z,6.0nm,0.5s,mb4.6							
CBIJ	**Chichi jima**	**33.56**	**351**	P		**P**	**12 18 31.9**	**-1.3**
	comp=Z,55nm,0.4s,baz=280,slow=17,SNR=7.2							
KLBR	**Kellerberrin**	**37.48**	**224**	*e*P		**P**	**12 19 07.0**	**+0.3**
	comp=Z,71nm,1.6s,mb5.3							
KSM	**Kuching**	**37.87**	**281**	*e*P		**P**	**12 19 11.5**	**+1.2**
	comp=Z,11nm,0.9s,mb4.7							
YULB	**Yu-li**	**39.01**	**320**	*e*P		**P**	**12 19 19.2**	**-0.5**
	comp=Z,7.0nm,0.5s,mb4.8							
NACB	**Ninganchiao**	**39.39**	**321**	*e*P		**P**	**12 19 22.8**	**0.0**
	comp=Z,19nm,0.8s,mb5.0							
YHNB	**Yeheng**	**39.89**	**321**	*e*P		**P**	**12 19 26.0**	**-0.9**
	comp=Z,23nm,0.8s,mb5.1							
RPZ	**Rata Peaks**	**42.67**	**155**	P		**P**	**12 19 51.2**	**+1.7**
	comp=Z,12nm,0.6s,mb4.8,baz=292,slow=2.0,SNR=4.9							
MJAR	**Matsushiro Arr**	**43.46**	**349**	P		**P**	**12 19 55.0**	**-0.9**
	comp=Z,6.2nm,1.0s,mb4.3,baz=176,slow=7.1,SNR=11							
MAJO	**Matsushiro**	**43.46**	**349**	*e*P		**P**	**12 19 55.5**	**-0.5**
	comp=Z,13nm,0.9s,mb4.7							
MAJO	**Matsushiro**	**43.46**	**349**	*e*P		**P**	**12 19 55.5**	**-0.4**
MAJO				pmax	pmax			
	comp=Z,13nm,0.9s,mb4.7							
MAT	**Matsushiro**	**43.46**	**349**	P		**P**	**12 19 55.4**	**-0.5**
KSRS	**Korea Array**	**47.17**	**339**	P		**P**	**12 20 25.4**	**+0.3**
	comp=Z,5.1nm,0.7s,mb4.4,baz=156,slow=8.6,SNR=20							
KSRS				LR		LR	12 37 03.3	
	comp=Z,121nm,21.5s,baz=169,slow=32							
IPM	**Ipoh**	**47.56**	**282**	*e*P		**P**	**12 20 29.8**	**+1.1**
	comp=Z,5.2nm,0.5s,mb4.6							
IPM				*e*PcP		PcP	12 21 58.5	+1.0
KULM	**Kulim**	**48.11**	**283**	*e*P		**P**	**12 20 33.7**	**+0.8**
	comp=Z,6.0nm,0.7s,mb4.5							
KULM				*e*		pP	12 20 54.4	+0.7
ERM	**Erimo**	**48.22**	**356**	*i* P		**P**	**12 20 35.5**	**+2.3**
GYA	**Guiyang**	**51.20**	**311**	P		**P**	**12 20 58.0**	**+1.8**
GYA				pP		pP	12 21 18.8	+1.7
GYA				sP		sP	12 21 29.0	+2.4
GYA				PP		PP	12 22 56.5	+2.6
GYA				S		**S**	**12 28 09.5**	**+1.1**
GYA				sS		sS	12 28 45.5	+1.4
GYA				SS		SS	12 31 43.0	-2.0
GYA				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.8							
GYA				pmax	pmax			
	comp=Z,80nm,5.2s							
GYA				LR	LR			
	comp=N,460nm,19.9s							
GYA				LR	LR			
	comp=E,390nm,20.0s							
GYA				LR	LR			
	comp=Z,450nm,18.6s							
MDJ	**Mudanjiang**	**53.15**	**344**	P		**P**	**12 21 10.3**	**0.0**
MDJ				pP		pP	12 21 30.0	-1.3
MDJ				sP		sP	12 21 39.3	-1.5
MDJ				ScP		ScP	12 26 07.5	0.0
MDJ				PcS		PcS	12 26 16.3	+0.2
MDJ				S		**S**	**12 28 34.5**	**+0.1**
MDJ				sS		sS	12 29 09.0	-1.3
MDJ				pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.7							
MDJ				pmax	pmax			
	comp=Z,36nm,3.8s							
MDJ				LR	LR			
	comp=N,110nm,23.3s							
MDJ				LR	LR			
	comp=E,100nm,28.4s							
MDJ				LR	LR			
	comp=Z,150nm,22.8s							
YSS	**Yuzh-Sakhalins**	**53.16**	**356**	*e*P		**P**	**12 21 10.6**	**+0.3**
	comp=Z,5.3nm,0.4s,mb4.9							
YSS	**Yuzh-Sakhalins**	**53.16**	**356**⇑	*e*P		**P**	**12 21 10.0**	**-0.3**
KMI	**Kunming**	**53.52**	**308**	P		**P**	**12 21 14.3**	**+0.9**
KMI				pP		pP	12 21 36.3	+1.9
KMI				sP		sP	12 21 45.5	+1.6
KMI				PP		PP	12 23 18.8	+3.9
KMI				S		**S**	**12 28 41.0**	**+0.9**
KMI				sS		sS	12 29 18.0	+1.9
KMI				pmax	pmax			
	comp=Z,9.0nm,0.8s,mb4.8							
KMI				pmax	pmax			
	comp=Z,49nm,3.2s							
KMI				LR	LR			
	comp=N,100nm,17.9s							
KMI				LR	LR			
	comp=E,98nm,17.9s							
KMI				LR	LR			
	comp=Z,130nm,27.5s							
CN2	**Changchun**	**53.67**	**340**	*e*P		**P**	**12 21 18.0**	**+3.9**
CN2				*e*pP		pP	12 21 38.0	+2.9
CN2				pmax	pmax			
	comp=Z,10.0nm,0.8s,mb4.9							
CMAR	**Chiang Mai Arr**	**53.77**	**298**	P		**P**	**12 21 15.8**	**+0.5**
	comp=Z,1.0nm,0.4s,mb4.2,baz=124,slow=5.5,SNR=11							
CMAR				LR		LR	12 44 37.9	
	comp=Z,70nm,18.0s,baz=309,slow=36							
BJI	**Beijing**	**54.36**	**331**	P		**P**	**12 21 18.8**	**-0.4**
BJI				pmax	pmax			
	comp=Z,14nm,1.3s,mb4.8							
BJI				LR	LR			
	comp=Z,92nm,28.8s							
HABR	**Khabarovsk**	**55.59**	**350**	*e*P		**P**	**12 21 26.9**	**-1.0**
HABR				*e*			12 22 25.2	
HABR				*e*			12 23 31.3	
HABR				*e*PPP			12 24 44.7	
HABR				S		**S**	**12 29 08.4**	**+1.2**
HABR				*e*			12 31 08.7	
HABR				*e*SS		SS	12 32 55.3	+1.6
HABR				pmax	pmax			
	comp=Z,62nm,2.4s,mb5.2							
HABR				pmax	pmax			
	comp=N,44nm,3.2s							
HABR				pmax	pmax			
	comp=E,63nm,3.2s							
CD2	**Chengdu**	**55.78**	**314**	P		**P**	**12 21 31.8**	**+2.1**
CD2				pP		pP	12 21 51.0	+0.2
CD2				sP		sP	12 21 59.8	-0.5
CD2				PP		PP	12 23 38.8	+3.7
CD2				ScP		ScP	12 26 20.3	+0.9
CD2				S		**S**	**12 29 11.8**	**+1.4**
CD2				sS		sS	12 29 45.0	-1.5
CD2				ScS		ScS	12 31 10.0	-1.2
CD2				SS		SS	12 32 58.5	+1.2
CD2				pmax	pmax			
	comp=Z,10.0nm,0.4s,mb5.2							
CD2				pmax	pmax			
	comp=Z,110nm,5.9s							
KLR	**Kul'dur**	**56.95**	**348**	*e*P		**P**	**12 21 34.0**	**-3.6**
HHC	**Hu-ho-hao-te**	**57.30**	**328**	*e*P		**P**	**12 21 41.5**	**+1.3**
HHC				pP		pP	12 22 01.0	-0.5
HHC				sP		sP	12 22 10.0	-0.9
HHC				PP		PP	12 23 52.0	+3.6
HHC				S		**S**	**12 29 30.5**	**+0.5**
HHC				ScS		ScS	12 31 20.0	-1.7
HHC				SS		SS	12 33 21.8	+1.0
HHC				pmax	pmax			
	comp=Z,15nm,0.8s,mb5.1							
HHC				pmax	pmax			
	comp=Z,120nm,4.5s							
HHC				LR	LR			
	comp=N,120nm,17.8s							
HHC				LR	LR			
	comp=E,94nm,14.3s							
HHC				LR	LR			
	comp=Z,110nm,17.8s							
PETK	**Petropavlovsk-**	**59.79**	**7**	P		**P**	**12 21 58.2**	**+1.0**
	comp=Z,8.8nm,0.5s,mb5.0,baz=178,slow=7.2,SNR=18							
PETK				LR		LR	12 44 12.3	
	comp=Z,52nm,20.9s,baz=337,slow=32							
PET	**Petropavlovsk**	**59.83**	**8**	*e*P		**P**	**12 21 57.6**	**+0.1**
	comp=Z,24nm,1.4s,mb5.0							
PET	**Petropavlovsk**	**59.83**	**8**	*e*P		**P**	**12 21 58.0**	**+0.4**
PET				pmax	pmax			
	comp=Z,15nm,0.8s,mb5.1							
GTA	**Gaotai**	**63.24**	**320**⇓	*e*P		**P**	**12 22 21.8**	**+1.0**
GTA				pP		pP	12 22 44.0	+1.6
GTA				sP		sP	12 22 53.5	+1.7
GTA				pmax	pmax			
	comp=Z,6.0nm,1.2s,mb4.4							
ULN	**Ulaanbaatar**	**64.56**	**331**	*e*P		**P**	**12 22 29.6**	**+0.3**
	comp=Z,11nm,0.8s,mb4.7							
ULN	**Ulaanbaatar**	**64.56**	**331**	*e*P		**P**	**12 22 29.6**	**+0.3**
ULN				pmax	pmax			
	comp=Z,11nm,0.8s,mb4.7							
SONM	**Songino Array**	**64.86**	**331**	P		**P**	**12 22 32.0**	**+0.8**
	comp=Z,2.6nm,0.4s,mb4.4,baz=149,slow=7.4,SNR=29							
SONM				LR		LR	12 48 28.4	
	comp=Z,58nm,21.3s,baz=335,slow=34							
TLY	**Talaya**	**68.79**	**332**	*e*P		**P**	**12 22 56.3**	**+0.2**
TLY				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.3							
SEY	**Seymchan**	**69.11**	**2**⇓	*e*P		**P**	**12 22 58.7**	**+0.8**
YAK	**Yakutsk**	**69.48**	**351**	*e*P		**P**	**12 23 00.5**	**+0.3**
	comp=Z,147nm,2.0s,mb5.5							
YAK	**Yakutsk**	**69.48**	**351**	*e*P		**P**	**12 22 59.2**	**-0.9**
YAK				pmax	pmax			
	comp=N,6.0nm,0.9s							
YAK				pmax	pmax			
	comp=Z,17nm,1.0s,mb4.8							
WMQ	**Urumqi**	**73.29**	**319**	*e*P		**P**	**12 23 24.3**	**+0.8**
WMQ				PcP		PcP	12 23 40.5	+1.0
WMQ				pP		pP	12 23 46.8	+1.2
WMQ				sP		sP	12 23 56.5	+1.6
WMQ				PP		PP	12 26 10.8	+2.8
WMQ				pmax	pmax			
	comp=Z,14nm,0.8s,mb4.8							
WMQ				pmax	pmax			
	comp=Z,110nm,4.6s							
WMQ				LR	LR			
	comp=N,67nm,24.0s							
WMQ				LR	LR			
	comp=Z,50nm,18.0s							
BILL	**Bilibino**	**75.33**	**7**⇓	*e*P		**P**	**12 23 35.8**	**+1.0**
BILL				*e**PP		pP	12 23 51.6	-5.4
BILL				*e*S		S	12 33 11.8	+4.5
BILL				pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.4							
MK31	**Makanchi Array**	**77.99**	**320**	*e*P		**P**	**12 23 50.2**	**-0.1**
MKAR	**Makanchi Array**	**77.99**	**320**	P		**P**	**12 23 50.1**	**-0.2**
	comp=Z,3.5nm,0.6s,mb4.3,baz=99,slow=7.7,SNR=32							
ZAA0	**Zalesovo Array**	**79.48**	**328**	*e*P		**P**	**12 23 56.9**	**-1.4**
ZALV	**Zalesovo Beam**	**79.48**	**328**	P		**P**	**12 23 57.1**	**-1.2**
	comp=Z,10nm,0.4s,mb5.0,baz=111,slow=5.8,SNR=42							
ZALV				LR		LR	12 56 59.8	
	comp=Z,44nm,20.9s,baz=248,slow=34							
KSH	**Kashi**	**79.89**	**312**	*e*P		**P**	**12 24 02.5**	**+1.6**
KSH				*e*PcP		PcP	12 24 11.0	+2.8
KSH				*e*pP		pP	12 24 23.0	-0.3
KSH				*e*sP		sP	12 24 31.0	-1.5
KSH				*e*PP		PP	12 27 06.0	+2.4
KSH				*e*S		S	12 33 56.5	-1.2
KSH				*e*SKS			12 34 07.0	
KSH				*e*ScS		ScS	12 34 16.0	-2.2
KSH				pmax	pmax			
	comp=Z,5.0nm,0.4s,mb4.7							
KSH				pmax	pmax			
	comp=Z,200nm,5.7s							
KSH				LR	LR			
	comp=N,40nm,6.7s							
KSH				LR	LR			
	comp=E,63nm,4.6s							
KSH				LR	LR			
	comp=Z,86nm,5.3s							
NVS	**Novosibirsk**	**80.70**	**328**	*e*P		**P**	**12 24 01.9**	**-2.9**
NVS				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.2							
NVS				pmax	pmax			
	comp=E,5.0nm,1.1s							
TKM2	**Tokmak 2**	**81.15**	**315**	*e*P		**P**	**12 24 07.2**	**-0.3**
	comp=E,1.6nm,0.4s,mb4.2							
TKM2	**Tokmak 2**	**81.15**	**315**	*e*P		**P**	**12 24 07.2**	**-0.3**
TKM2				pmax	pmax			
	comp=Z,2.0nm,0.4s,mb4.3							
KURK	**Kurchatov**	**81.69**	**323**	*e*P		**P**	**12 24 09.1**	**-1.1**
	comp=Z,6.1nm,0.9s,mb4.4							
KURK				*e*		pP	12 24 33.4	+0.7
KURK	**Kurchatov**	**81.69**	**323**	*c i*P		**P**	**12 24 09.6**	**-0.6**
KURK				pmax	pmax			
	comp=Z,10.0nm,1.2s,mb4.5							
AAK	**Ala-Archa**	**81.85**	**315**	*e*P		**P**	**12 24 11.0**	**-0.2**
	comp=Z,3.8nm,0.8s,mb4.3							
AAK	**Ala-Archa**	**81.85**	**315**⇓	*e*P		**P**	**12 24 11.8**	**+0.6**
AAK				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.1							
MAW	**Mawson**	**82.17**	**203**	*e*P		**P**	**12 24 12.7**	**+0.3**
	comp=Z,0.4nm,0.7s							
MAW	**Mawson**	**82.17**	**203**	P		**P**	**12 24 15.1**	**+2.7**
	comp=Z,1.3nm,0.6s,mb4.0,baz=88,slow=7.3,SNR=11							
MAW				LR		LR	12 57 02.7	
	comp=Z,35nm,18.9s,baz=311,slow=33							
AML	**Almayashu**	**82.28**	**314**	*e*P		**P**	**12 24 13.9**	**+0.4**
	comp=Z,7.9nm,0.8s,mb4.6							
AML				*e*		pP	12 24 37.8	+1.8
AML	**Almayashu**	**82.28**	**314**	*e*P		**P**	**12 24 13.9**	**+0.4**
AML				pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.6							
EKS2	**Erkin-Say**	**82.36**	**314**	*e*P		**P**	**12 24 14.6**	**+0.7**
	comp=Z,4.4nm,0.7s,mb4.4							
EKS2	**Erkin-Say**	**82.36**	**314**	*e*P		**P**	**12 24 14.6**	**+0.7**
EKS2				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.4							
TRF	**Thorofare Moun**	**83.63**	**24**	*e*P		**P**	**12 24 18.8**	**-1.2**
	comp=Z,3.6nm,0.7s,mb4.3							
SML	**Sawmill**	**83.70**	**25**	*e*P		**P**	**12 24 19.5**	**-0.8**
	comp=Z,1.5nm,0.7s,mb3.9							
SML	**Sawmill**	**83.70**	**25**	*e*P		**P**	**12 24 19.5**	**-0.8**
SML				pmax	pmax			
	comp=Z,1.0nm,0.7s,mb3.8							
MCK	**McKinley**	**84.30**	**24**	*e*P		**P**	**12 24 22.5**	**-0.8**
	comp=Z,16nm,1.4s,mb4

comp=Z,0.5nm,0.8s,baz=116,slow=5.7,SNR=6.3

FINES	**FINESS Array B**	**110.11**	**334**	Pdif	Pdif	12 26 21.2	-0.5
FINES				PKPdf	PKiKP	12 30 22.3	-0.4
FINES	**FINESS Array B**	**110.11**	**334**	Pdiff	Pdif	12 26 21.2	-0.5
	comp=Z,2.2nm,0.9s,baz=5.7,slow=3.8,SNR=7.7						
FINES				PKiKP	PKiKP	12 30 22.3	-0.4
	comp=Z,1.4nm,0.8s,baz=70,slow=2.2,SNR=4.7						
BRG	**Berggiesshubel**	**121.17**	**328**	*e*PKPdf	PKPdf	12 30 44.3	+0.1
BRG	**Berggiesshubel**	**121.17**	**328**	*e*PKP	PKPdf	12 30 44.2	0.0
	comp=Z,3.0nm,0.7s						
BRG	**Berggiesshubel**	**121.17**	**328**	*e*PKIKP	PKPdf	12 30 44.2	0.0
BRG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CLL	**Collm**	**121.43**	**328**	*e*PKP	PKPdf	12 30 44.6	-0.1
CLL	**Collm**	**121.43**	**328**	*i*PKIKP	PKPdf	12 30 43.8	-0.9
CLL				*i*		12 30 53.5	
CLL	**Collm**	**121.43**	**328**	*i*PKPdf	PKPdf	12 30 43.8	-0.9
	comp=Z,3.0nm,0.7s						
CLL				*i*		12 30 53.5	
PLCA	**Paso Flores**	**121.65**	**147**	PKP	PKPdf	12 30 46.8	+1.3
	comp=Z,2.2nm,0.5s,baz=238,slow=2.4,SNR=11						
NRDL	**Niedersach Rie**	**122.20**	**331**	*e*PKPdf	PKPdf	12 30 46.3	+0.2
WERN	**Wernitzgruen**	**122.33**	**328**	*e*PKP	PKPdf	12 30 46.7	+0.2
PLN	**Plauen**	**122.33**	**328**	*e*PKP	PKPdf	12 30 46.5	0.0
GEC2	**GERESS Array S**	**122.39**	**326**	*e*PKPdf	PKPdf	12 30 46.7	+0.1
CLZ	**Clausthal**	**122.46**	**330**	*e*PKPdf	PKPdf	12 30 46.3	-0.4
MOX	**Moxa**	**122.53**	**328**	*e*PKPdf	PKPdf	12 30 46.8	0.0
RJOB	**Jochberg**	**123.48**	**325**	*e*PKPdf	PKPdf	12 30 48.3	-0.5
BUG	**Bochum--Univer**	**124.23**	**331**	*e*PKPdf	PKPdf	12 30 49.3	-0.8
TKL	**Tuckaleechee C**	**124.75**	**51**	PKP	PKPdf	12 30 51.6	0.0
	comp=Z,1.9nm,0.6s,baz=28,slow=1.4,SNR=4.6						
STU	**Stuttgart**	**124.90**	**328**	*e*PKPdf	PKPdf	12 30 51.6	+0.2
MEM	**Membach**	**125.38**	**331**	PKP	PKPdf	12 30 52.5	+0.2
BFO	**Black Forest**	**125.62**	**327**	*e*PKPdf	PKPdf	12 30 52.5	-0.3
CDF	**Champ du Feu**	**126.13**	**328**	*e*PKIKP	PKPdf	12 30 53.2	-0.6
BAIF	**Baives**	**126.61**	**331**	*e*PKIKP	PKPdf	12 30 54.8	+0.1
HINF	**Hinteralfeld**	**126.72**	**328**	*e*PKIKP	PKPdf	12 30 54.6	-0.4
	comp=Z,5.2nm,0.7s						
HAU	**Haudompre**	**126.87**	**328**	*e*PKIKP	PKPdf	12 30 55.1	-0.1
	comp=Z,5.9nm,0.4s						
CABF	**La Chapelle**	**127.88**	**327**	*e*PKIKP	PKPdf	12 30 57.6	+0.4
	comp=Z,8.7nm,0.9s						
LPL	**La Plagne**	**128.19**	**326**	*e*PKIKP	PKPdf	12 30 58.2	+0.4
	comp=Z,3.2nm,0.4s						
LPG	**La Plagne**	**128.19**	**325**	*e*PKIKP	PKPdf	12 30 58.2	+0.4
	comp=Z,3.2nm,0.6s						
PGF	**Pioggiola**	**128.53**	**321**	*e*PKIKP	PKPdf	12 30 58.5	-0.1
	comp=Z,3.6nm,0.4s						
SSF	**Saint Saulge**	**128.95**	**329**	*e*PKIKP	PKPdf	12 30 59.5	+0.3
ORIF	**Oris-en-Rattie**	**129.03**	**325**	*e*PKIKP	PKPdf	12 30 59.5	0.0
	comp=Z,3.0nm,0.6s						
CFAA	**Coronel Fontan**	**129.22**	**140**	PKP	PKPdf	12 31 00.9	+0.6
	comp=Z,0.4nm,0.5s,baz=268,slow=4.7,SNR=8.6						
FRF	**La Foret Royal**	**129.39**	**324**	*e*PKIKP	PKPdf	12 31 00.1	-0.1
	comp=Z,7.2nm,0.7s						
LDF	**La Druitiere**	**129.66**	**332**	*e*PKIKP	PKPdf	12 30 59.9	-0.6
	comp=Z,3.2nm,0.7s						
FLN	**La Foliniere**	**129.70**	**333**	*e*PKIKP	PKPdf	12 31 00.3	-0.3
TCF	**Toulx Ste Croi**	**130.13**	**329**	*e*PKIKP	PKPdf	12 31 02.0	+0.5
	comp=Z,4.4nm,0.6s						
GRR	**Gorron**	**130.15**	**333**	*e*PKIKP	PKPdf	12 31 01.2	-0.3
KEST	**Kesra**	**131.69**	**313**	PKP	PKPdf	12 31 06.4	+1.6
	comp=Z,0.5nm,0.5s,baz=168,slow=2.4,SNR=5.2						
LPAZ	**La Paz**	**138.26**	**123**	PKP	PKPdf	12 31 20.9	+3.3
	comp=Z,2.9nm,0.6s,baz=268,slow=1.3,SNR=12						
ROSC	**El Rosal**	**138.40**	**90**	PKP	PKPdf	12 31 19.7	+1.7
	comp=Z,9.8nm,0.5s,baz=72,slow=21,SNR=4.9						
CPUP	**Villa Florida**	**139.65**	**144**	PKP	PKPdf	12 31 20.8	+0.9
	comp=Z,1.7nm,0.6s,baz=156,slow=4.6,SNR=3.7						
SDV	**Santo Domingo**	**142.17**	**84**	*e*PKPdf	PKPdf	12 31 22.2	-2.5
SIV	**San Ignacio**	**144.13**	**128**	PKP	PKPdf	12 31 27.0	-1.2
	comp=Z,8.2nm,0.5s,baz=262,slow=4.3,SNR=23						
SJG	**San Juan**	**145.19**	**67**	PKPbc	PKPbc	12 31 29.9	+0.2
	comp=Z,16nm,0.5s,baz=348,slow=2.5,SNR=9.0						
TORD	**Torodi Ar. Bea**	**145.59**	**284**	PKPbc	PKPbc	12 31 31.3	+0.3
	comp=Z,20nm,0.7s,baz=45,slow=3.7,SNR=28						
STVI	**Saint Thomas**	**146.22**	**66**	*e*PKPbc	PKPbc	12 31 32.9	+0.1
PCRV	**Puerto La Cruz**	**148.02**	**81**	PKPbc	PKPbc	12 31 37.8	-0.2
	comp=Z,16nm,0.5s,baz=358,slow=3.1,SNR=18						
KIC	**Kosan Boka**	**152.36**	**272**	*e*PKIKP	PKPbc	12 31 49.6	+1.1
	comp=Z,30nm,0.9s						
DBIC	**Dimbokro**	**152.48**	**272**	PKPbc	PKPbc	12 31 49.9	+1.1
	comp=Z,9.3nm,0.6s,baz=110,slow=3.2,SNR=15						
DBIC				PKPab	PKPab	12 31 59.2	-0.1
	comp=Z,5.0nm,0.5s,baz=45,slow=7.0,SNR=7.5						
DBIC	**Dimbokro**	**152.48**	**272**	*e*PKIKP	PKPbc	12 31 49.4	+0.6
LIC	**Lamto**	**152.64**	**271**	*e*PKIKP	PKPbc	12 31 50.1	+1.0
	comp=Z,78nm,0.8s						
TIC	**Toumodi**	**152.64**	**272**	*e*PKIKP	PKPbc	12 31 50.1	+1.0
	comp=Z,9.7nm,0.2s						

IDC 31 12:31:18.6±7.0, 4.°64S×105.°73W, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.8/13, mbtmp3.5/3, MS3.1/5, Ms1 3.2/5, ms1mx2.9/23, Error ellipse: s-maj=371.2km s-min=57.3km az=106.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**27.30**	**97**	LR	LR	12 44 06.5	
	comp=Z,29nm,20.3s,baz=33,slow=28						
TXAR	**Lajitas Array**	**33.84**	**3**	P	P	12 38 03.2	+0.5
	0.7nm,1.1s,baz=185,slow=10.0,SNR=4.1						
TXAR				LR	LR	12 48 56.5	
	comp=Z,46nm,19.1s,baz=190,slow=31						
LPAZ	**La Paz**	**38.66**	**110**	LR	LR	12 50 56.8	
	comp=Z,38nm,19.7s,baz=78,slow=30						
CFAA	**Coronel Fontan**	**44.21**	**132**	LR	LR	12 52 18.5	
	comp=Z,5.2nm,18.8s,baz=38,slow=28						
PDAR	**Pinedale Array**	**47.31**	**356**	P	P	12 39 53.6	-0.4
	0.5nm,0.6s,baz=168,slow=7.6,SNR=4.4						
PLCA	**Paso Flores**	**47.82**	**144**	LR	LR	12 55 24.4	
	comp=Z,67nm,18.2s,baz=286,slow=30						
ILAR	**Eielson Array**	**75.58**	**343**	P	P	12 43 05.2	+0.4
	0.5nm,0.8s,baz=156,slow=5.1,SNR=6.7						
CMAR	**Chiang Mai Arr**	**152.26**	**302**	PKPbc	PKPbc	12 51 17.2	-0.2
	0.3nm,0.5s,baz=338,slow=1.9,SNR=2.9						

*NIED **31** 12:53:00, 45.°20N×149.°60E, h35km, Mw3.6 Best double couple: M0 2.75000×10^14 NP1:φ0 2.00000°, δ73.00000°, λ70.00000°. NP2:φ0 233.00000°, δ25.00000°, λ138.00000°.*
*JMA **31** 12:53:10.5±1.0, 45.°19N×149.°60E, h30km, M4.0*
*ISCJB **31** 12:53:11.2±1.3, 44.°7N±0.°1×149.°7E±0.°1, h64km±14km, mb3.3/5, Error ellipse: s-maj=26.5km s-min=9.5km az=144.2*
*IDC **31** 12:53:14.2±3.3, 44.°96N×149.°68E, h76km±31km, mb3.1/5, mb1 3.3/8, mb1mx3.2/25, mbtmp3.1/8, Error ellipse: s-maj=36.6km s-min=18.9km az=138.0*
ISC 31 12:53:13.2±1.2, 44.°8N±0.°1×149.°7E±0.°2, h64km±13km**, n26, σ1§01/33, mb3.3/5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**3.15**	**245**	P	**Pn**	**12 53 58.7**	**-1.7**
NEM2				*e*S	**Sn**	**12 54 34.4**	**-2.4**
JRA	**Rausu**	**3.36**	**258**	P	**Pn**	**12 54 03.3**	**0.0**
JNK	**Nakash**	**3.75**	**254**	P	**Pn**	**12 54 08.5**	**0.0**
JNK				*e*S	**Sn**	**12 54 51.1**	**-0.3**
JAK	**Akkeshi**	**4.00**	**246**	P	**Pn**	**12 54 11.4**	**-0.6**
JAK				*e*S	**Sn**	**12 54 56.7**	**-0.9**
JTKR	**Abashiri--Toko**	**4.21**	**261**	P	**Pn**	**12 54 15.5**	**+0.7**
JAR	**Ashorobuto**	**4.50**	**253**	P	**Pn**	**12 54 19.1**	**+0.3**
JAR				*e*S	**Sn**	**12 55 12.1**	**+2.3**
JMP	**Maruseppu**	**4.59**	**263**	P	**Pn**	**12 54 20.4**	**+0.4**
JOB	**Onbets**	**4.61**	**248**	P	**Pn**	**12 54 20.4**	**+0.1**
JKK2	**Kamakawa 2**	**5.05**	**262**	P	**Pn**	**12 54 27.5**	**+1.2**
JCH	**Churui**	**5.05**	**247**	P	**Pn**	**12 54 26.6**	**+0.3**
JCH				*e*S	**Sn**	**12 55 22.9**	**-0.4**
ASAJ	**Asahikawa**	**5.11**	**265**	P	**Pn**	**12 54 27.4**	**+0.3**
	0.9nm,0.3s,baz=71,slow=15,SNR=10						
ASAJ				S	**Sn**	**12 55 41.4**	**+17**
	baz=219,slow=30,SNR=2.0						
JFR	**Furan**	**5.35**	**255**	P	**Pn**	**12 54 31.7**	**+1.3**
JEM	**Erimo**	**5.48**	**242**	P	**Pn**	**12 54 32.7**	**+0.5**
JNBK	**Urakawa-nobuka**	**5.61**	**246**	P	**Pn**	**12 54 33.3**	**-0.6**
JBT2	**Biratori 2**	**5.65**	**252**	P	**Pn**	**12 54 34.5**	**0.0**
JNB	**Noboribetsu**	**6.67**	**253**	P	**Pn**	**12 54 48.6**	**+0.1**
JKB	**Kayabe**	**6.92**	**249**	P	**Pn**	**12 54 51.4**	**-0.5**
JKB				*e*S	**Sn**	**12 56 05.9**	**-3.2**
JYM2	**Yakumo 2**	**7.26**	**252**	P	**Pn**	**12 54 56.6**	**0.0**
JTH	**Tanohata**	**7.52**	**233**	*e*S	**Sn**	**12 56 17.5**	**-6.4**
PETK	**Petropavlovsk-**	**9.89**	**29**	P	**Pn**	**12 55 32.6**	**+0.3**
	baz=202,slow=11,SNR=2.8						

KSRS	**Korea Array**	**17.91**	**254**	P	**Pn**	**12 57 18.7**	**+1.0**
	0.1nm,0.3s,baz=66,slow=15,SNR=2.8						
ILAR	**Eielson Array**	**39.60**	**37**	P	**P**	**13 00 35.4**	**-2.5**
	0.4nm,1.0s,mb3.1,baz=273,slow=8.6,SNR=5.6						
MKAR	**Makanchi Array**	**45.73**	**298**	P	**P**	**13 01 27.2**	**-0.5**
	0.1nm,0.4s,mb3.1,baz=56,slow=7.7,SNR=2.8						
MKAR				PcP	PcP	13 03 03.7	-0.8
	0.4nm,0.7s,baz=80,slow=4.8,SNR=3.1						
WRA	**Warramunga Arr**	**65.88**	**196**	P	**P**	**13 03 52.8**	**+0.7**
	0.6nm,0.8s,mb3.7,baz=10,slow=6.4,SNR=2.7						
ASAR	**Alice Springs**	**69.59**	**195**	P	**P**	**13 04 16.9**	**+1.6**
	0.2nm,0.7s,mb3.2,baz=21,slow=4.5,SNR=5.3						
TXAR	**Lajitas Array**	**80.58**	**58**	P	**P**	**13 05 17.9**	**-0.9**
	0.2nm,0.4s,mb3.4,baz=297,slow=4.6,SNR=8.4						

*IDC **31** 13:00:36.6±1.1, 31.°36N×60.°11E, h0km, mb3.6/10, mb1 3.8/11, mb1mx3.6/29, mbtmp3.7/11, ML3.3/1, MS3.3/8, Ms1 3.3/8, ms1mx3.0/29, Error ellipse: s-maj=27.0km s-min=21.0km az=161.0*
*ISCJB **31** 13:00:36.2±0.9, 31.°55N±0.°03×60.°41E±0.°04, h6km±6km, mb3.6/11, MS3.2/5, Error ellipse: s-maj=6.1km s-min=5.1km az=175.9*
*CSEM **31** 13:00:38.6±0.6, 31.°59N×60.°18E, h2km, ML4.0, Error ellipse: s-maj=16.4km s-min=13.0km az=168.0*
*THR **31** 13:00:38.4±0.9, 31.°54N×60.°22E, h15km, ML4.0*
*NEIC **31** 13:00:39.7, 31.°50N×60.°18E, h18km, mb3.8/3, ML4.0(THR), MN4.0(TEH), After THR.*
*TEH **31** 13:00:43.1, 31.°79N×59.°86E, h8km*
ISC 31 13:00:39.3±0.8, 31.°52N±0.°03×60.°38E±0.°04, h17km±6km**, n81, σ1§41/86, mb3.6/11, MS3.2/5, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDAH	**Dahanechah**	**1.29**	**340**	*e*Pg	**Pn**	**13 01 00.0**	**-2.5**
IDAH				*e*		13 01 01.8	
	comp=Z,26μm,0.3s						
IDAH	**Dahanechah**	**1.29**	**340**	*e*Pg	**Pn**	**13 01 00.0**	**-2.5**
IKOO	**Kooshah**	**1.48**	**308**	*e*	**Pg**	**13 01 08.6**	**+0.8**
	comp=Z,35μm,0.2s						
IKOO				*e*Pg	**Pn**	**13 01 01.1**	**-4.0**
IMON	**Monand**	**1.77**	**340**	*e*	**Pg**	**13 01 16.8**	**+3.4**
	comp=Z,12μm,0.2s						
IMON				*e*Pn	**Pn**	**13 01 08.0**	**-1.2**
ZHSF	**Zahedan**	**1.93**	**170**	*e*Pg	**Pg**	**13 01 14.0**	**-2.4**
ZHSF				*e*Sg	**Sg**	**13 01 41.5**	**-0.1**
ZHSF				AML	AML	13 01 54.4	
	comp=E,1μm,0.7s						
ZHSF				AML	AML	13 01 57.6	
	comp=N,822nm,0.4s						
ITEG	**Tejag**	**1.95**	**315**	*e*	**Sg**	**13 01 41.4**	**-0.7**
	comp=Z,24μm,0.4s						
ITEG				*e*Pn	**Pn**	**13 01 09.8**	**-1.8**
KRBR	**Kerman**	**3.47**	**245**	*e*Pn	**Pn**	**13 01 32.7**	**+0.1**
KRBR				*e*Sg	**Sb**	**13 02 23.0**	**+0.8**
IBAF	**Bafgh**	**4.11**	**272**	Pn	**Pn**	**13 01 40.0**	**-1.3**
IBAF	**Bafgh**	**4.11**	**272**	*e*Pn	**Pn**	**13 01 40.0**	**-1.3**
IBAF				*e*		13 02 48.7	
	comp=Z,4μm,0.3s						
IBAF	**Bafgh**	**4.11**	**272**	*e*Pn	**Pn**	**13 01 40.0**	**-1.3**
IMOG	**Moghan**	**4.66**	**350**	Pn	**Pn**	**13 01 48.9**	**+0.1**
IMOG	**Moghan**	**4.66**	**350**	*e*Pn	**Pn**	**13 01 48.9**	**+0.1**
IMOG				*e*		13 02 09.3	
	comp=Z,2μm,0.8s						
IMOG	**Moghan**	**4.66**	**350**	*e*Pn	**Pn**	**13 01 48.9**	**+0.1**
IMYA	**Miami**	**4.81**	**357**	Pn	**Pn**	**13 01 51.5**	**+0.5**
IMYA	**Miami**	**4.81**	**357**	*e*Pn	**Pn**	**13 01 51.6**	**+0.6**
IMYA				*e*		13 03 22.5	
	comp=Z,1μm,0.4s						
IMYA	**Miami**	**4.81**	**357**	*e*Pn	**Pn**	**13 01 51.6**	**+0.6**
IMEH	**Mehriz**	**4.93**	**270**	Pn	**Pn**	**13 01 51.6**	**-1.0**
IMEH				*e*Sg	**Sb**	**13 03 02.8**	**-1.4**
IMEH	**Mehriz**	**4.93**	**270**	*e*Pn	**Pn**	**13 01 51.7**	**-0.9**
IMEH				*e*Sg	**Sb**	**13 03 02.9**	**-1.3**
IMEH				*e*		13 03 17.5	
	comp=Z,4μm,0.4s						
IMEH	**Mehriz**	**4.93**	**270**	*e*Pn	**Pn**	**13 01 51.7**	**-0.9**
IMEH				*e*Sg	**Sb**	**13 03 02.9**	**-1.3**
IPAY	**Payeh**	**5.05**	**347**	Pn	**Pn**	**13 01 54.3**	**+0.1**
IPAY	**Payeh**	**5.05**	**347**	*e*Pn	**Pn**	**13 01 54.3**	**+0.1**
IPAY				*e*		13 02 19.9	
	comp=Z,651nm,0.3s						
IPAY	**Payeh**	**5.05**	**347**	*e*Pn	**Pn**	**13 01 54.3**	**+0.1**
ICHK	**Chekchek**	**5.13**	**280**	Pn	**Pn**	**13 01 57.0**	**+1.6**
ICHK	**Chekchek**	**5.13**	**280**	*e*Pn	**Pn**	**13 01 57.1**	**+1.7**
ICHK				*e*		13 03 25.9	
	comp=Z,4μm,0.4s						
ICHK	**Chekchek**	**5.13**	**280**	*e*Pn	**Pn**	**13 01 57.1**	**+1.7**
IAKL	**Akhelmad**	**5.25**	**346**	Pn	**Pn**	**13 01 56.3**	**-0.6**
IAKL	**Akhelmad**	**5.25**	**346**	*e*Pn	**Pn**	**13 01 56.4**	**-0.5**
IAKL				*e*		13 02 20.4	
	comp=Z,574nm,0.3s						
IKRD	**Kardeh**	**5.47**	**344**	Pn	**Pn**	**13 01 58.0**	**-1.9**
IKRD	**Kardeh**	**5.47**	**344**	*e*Pn	**Pn**	**13 01 58.0**	**-1.9**
IKRD				*e*		13 03 41.8	
	comp=Z,1μm,0.5s						
BNDS	**Bandar-Abbas**	**5.51**	**223**	*e*Pn	**Pn**	**13 02 01.0**	**+0.5**
BNDS				AML	AML	13 03 40.9	
	comp=E,90nm,0.7s						
BNDS				AML	AML	13 03 44.4	
	comp=N,84nm,0.7s						
ISAD	**Sadrabad**	**5.72**	**276**	Pn	**Pn**	**13 02 11.2**	**+7.8**
ISAD	**Sadrabad**	**5.72**	**276**	*e*Pn	**Pn**	**13 02 11.2**	**+7.8**
ISAD				*e*		13 04 00.4	
	comp=Z,3μm,0.4s						
ISAD	**Sadrabad**	**5.72**	**276**	*e*Pn	**Pn**	**13 02 11.2**	**+7.8**
ISFR	**Sfrayin**	**5.86**	**341**	Pn	**Pn**	**13 02 04.3**	**-1.1**
ISFR	**Sfrayin**	**5.86**	**341**	*e*	**Pg**	**13 02 33.2**	**+1.7**
	comp=Z,604nm,0.3s						
ISFR				*e*Pn	**Pn**	**13 02 04.4**	**-0.9**
IEMG	**Emamgholi**	**6.05**	**347**	Pn	**Pn**	**13 02 07.8**	**-0.2**
IEMG	**Emamgholi**	**6.05**	**347**	*e*Pn	**Pn**	**13 02 07.8**	**-0.2**
IEMG				*e*		13 04 12.1	
	comp=Z,519nm,0.5s						
IEMG	**Emamgholi**	**6.05**	**347**	*e*Pn	**Pn**	**13 02 07.8**	**-0.2**
IANJ	**Anjilo**	**6.68**	**308**	Pn	**Pn**	**13 02 18.4**	**+1.7**
IANJ	**Anjilo**	**6.68**	**308**	*e*Pn	**Pn**	**13 02 18.5**	**+1.8**
IANJ				*e*		13 02 51.5	
	comp=Z,477nm,0.3s						
IANJ	**Anjilo**	**6.68**	**308**	*e*Pn	**Pn**	**13 02 18.5**	**+1.8**
IZEF	**Zefreh**	**6.96**	**283**	Pn	**Pn**	**13 02 22.4**	**+1.9**
IZEF	**Zefreh**	**6.96**	**283**	*e*Pn	**Pn**	**13 02 22.5**	**+2.0**
IZEF				*e*		13 04 27.9	
	comp=Z,877nm,0.5s						
IZEF	**Zefreh**	**6.96**	**283**	*e*Pn	**Pn**	**13 02 22.5**	**+2.0**
GHVR	**GHOM**	**8.18**	**294**	*e*Pn	**Pn**	**13 02 38.7**	**+1.4**
ASAO	**Ashtian**	**9.20**	**292**	*e*Pn	**Pn**	**13 02 51.3**	**+0.1**
GNI	**Garni**	**15.32**	**309**	LR	LR	13 10 37.8	
	comp=Z,118nm,19.7s,baz=185,slow=40						
EKS2	**Erkin-Say**	**15.40**	**40**	*e*P	**Pn**	**13 04 13.6**	**-2.1**
	comp=Z,5.2nm,1.0s						
EKS2	**Erkin-Say**	**15.40**	**40**	*e*P	**Pn**	**13 04 13.6**	**-2.1**
	comp=Z,5.2nm,1.0s						
AAK	**Ala-Archa**	**15.78**	**41**	Pn	**Pn**	**13 04 21.0**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=220,slow=12,SNR=3.6						
AAK				LR	LR	13 11 20.7	
	comp=Z,99nm,20.9s,baz=233,slow=40						
AAK	**Ala-Archa**	**15.78**	**41**	Pn	**Pn**	**13 04 21.0**	**+0.3**
ABKAR	**Akbulak array**	**17.72**	**359**	*e*P	**Pn**	**13 04 42.7**	**-2.4**
	comp=Z,7.5nm,1.0s						
ABKAR	**Akbulak array**	**17.72**	**359**	*e*P	**Pn**	**13 04 42.7**	**-2.4**
	comp=Z,7.5nm,1.0s						
AKTK	**Aktyubinsk**	**18.98**	**355**	P	**Pn**	**13 05 10.2**	**+10**
AKTK				LR	LR	13 13 43.5	
AKTK	**Aktyubinsk**	**18.98**	**355**	P	**Pn**	**13 05 10.2**	**+10**
AKTO	**Aktyubinsk**	**18.98**	**355**	P	**Pn**	**13 05 10.2**	**+10**
	comp=Z,0.1nm,0.3s,baz=185,slow=12,SNR=4.3						
AKTO				LR	LR	13 13 43.5	
	comp=Z,100nm,18.4s,baz=345,slow=41						
ASF	**Jabal al Asfar**	**19.96**	**278**	P	**Pn**	**13 05 15.3**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=348,slow=12,SNR=4.0						
MMAI	**Mount Meron Ar**	**21.16**	**281**	LR	LR	13 13 13.3	
	comp=Z,20nm,19.6s,MS2.5,baz=160,slow=36						
BVAR	**Borovoye Array**	**22.69**	**16**	P	**P**	**13 05 41.8**	**+2.1**
	comp=Z,2.5nm,0.9s,mb3.6,baz=186,slow=12,SNR=7.7						
BVAR	**Borovoye Array**	**22.69**	**16**	P	**P**	**13 05 41.8**	**+2.1**
BRVK	**Borovoye**	**22.69**	**16**	*e*P	**P**	**13 05 45.9**	**+6.1**
	comp=Z,7.4nm,0.9s,mb4.1						
MKAR	**Makanchi Array**	**22.72**	**42**	P	**P**	**13 05 44.0**	**+3.8**
MKAR	**Makanchi Array**	**22.72**	**42**	P	**P**	**13 05 44.0**	**+3.8**
	comp=Z,0.7nm,0.7s,mb3.2,baz=246,slow=8.8,SNR=5.0						
BRTR	**Keskin Array B**	**23.17**	**298**	P	**P**	**13 05 43.7**	**-1.3**
	comp=Z,1.1nm,0.8s,mb3.3,baz=123,slow=14,SNR=2.6						
BRTR	**Keskin Array B**	**23.17**	**298**	P	**P**	**13 05 43.7**	**-1.3**
KURK	**Kurchatov**	**23.48**	**30**	*e*P	**P**	**13 05 52.3**	**+4.2**
KURK				LR	LR	13 16 02.6	
KURK	**Kurchatov**	**23.48**	**30**	P	**P**	**13 05 48.1**	**+0.1**
	comp=Z,1.4nm,0.8s,mb3.4,baz=224,slow=8.8,SNR=8.4						
KURK				LR	LR	13 16 02.6	
	comp=Z,111nm,18.2s,MS3.4,baz=200,slow=39						
KURK	**Kurchatov**	**23.48**	**30**	*e*P	**P**	**13 05 52.3**	**+4.2**
ZALV	**Zalesovo Beam**	**28.45**	**31**	P	**P**	**13 06 36.3**	**+3.2**
	comp=Z,0.3nm,0.3s,mb3.3,baz=238,slow=8.3,SNR=3.5						
AKASG	**Malin Array Be**	**29.98**	**319**	P	**P**	**13 06 47.6**	**+1.0**
	comp=Z,0.2nm,0.3s,mb3.3,baz=124,slow=8.6,SNR=3.8						
AKASG	**Malin Array Be**	**29.98**	**319**	P	**P**	**13 06 47.6**	**+1.0**
CMAR	**Chiang Mai Arr**	**37.10**	**101**	LR	LR	13 23 56.8	
	comp=Z,64nm,19.6s,MS3.4,baz=185,slow=38						
FINES	**FINESS Array B**	**37.32**	**333**	P	**P**	**13 07 49.4**	**-1.0**
	comp=Z,1.1nm,0.6s,mb3.8,baz=153,slow=19,SNR=3.1						
FINES				LR	LR	13 26 12.0	
	comp=Z,58nm,19.2s,MS3.4,baz=4.1,slow=41						
FINES	**FINESS Array B**	**37.32**	**333**	P	**P**	**13 07 49.4**	**-0.9**
KSRS	**Korea Array**	**54.92**	**64**	LR	LR	13 36 11.0	
	comp=Z,31nm,21.5s,MS3.4,baz=60,slow=39						
TORD	**Torodi Ar. Bea**	**56.64**	**265**	P	**P**	**13 10 19.6**	**-2.1**
	comp=Z,1.4nm,0.5s,mb4.2,baz=64,slow=6.1,SNR=7.4						
WRA	**Warramunga Arr**	**87.38**	**115**	P	**P**	**13 13 27.2**	**+1.4**
WRA	**Warramunga Arr**	**87.38**	**115**	P	**P**	**13 13 27.2**	**+1.4**
	comp=Z,0.8nm,0.9s,mb4.0,baz=315,slow=4.5,SNR=5.3						
WRA	**Warramunga Arr**	**87.38**	**115**	P	**P**	**13 13 27.2**	**+1.4**
ASAR	**Alice Springs**	**89.17**	**118**	P	**P**	**13 13 34.5**	**+0.3**
	comp=Z,0.2nm,0.7s,mb3.6,baz=302,slow=5.0,SNR=4.1						
ASAR	**Alice Springs**	**89.17**	**118**	P	**P**	**13 13 34.5**	**+0.3**

*MOS **31** 13:19:45.4±1.0, 51.°16N×178.°09W, h33km, mb4.7/31, Error ellipse: s-maj=12.7km s-min=6.5km az=86.7*
*ISCJB **31** 13:19:47.2±0.7, 51.°15N±0.°06×178.°17W±0.°04, h50km±5km, mb4.4/73, MS3.3/3, Error ellipse: s-maj=10.3km s-min=3.7km az=3.1*
*BJI **31** 13:19:47.0, 51.°20N×178.°20W, h53km, mB5.0/6, mb4.7/17, Ms4.4/1, Ms7 4.4/1*
*NEIC **31** 13:19:49.0±0.6, 51.°16N×178.°21W, h53km±4km, mb4.4/44, ML4.2(AEIC), Error ellipse: s-maj=8.3km s-min=4.1km az=176.0*
*IDC **31** 13:19:49.9±7.6, 51.°29N×178.°22W, h61km±67km, mb3.8/17, mb1 4.0/17, mb1mx3.9/25, mbtmp3.8/17, MS3.2/2, Ms1 3.2/2, ms1mx2.8/28, Error ellipse: s-maj=21.6

HLID **Hailey** 42.62 74 eP P 13 27 40.6 +0.6
comp=Z,5.3nm,1.0s,mb4.2
H14A **Leadore** 42.67 72 ⇑P P 13 27 40.4 -0.1
baz=42,SNR=5.3
J13A **Cove Ranch, Pi** 42.86 74 ⇑P P 13 27 42.7 +0.7
baz=43,SNR=9.2
MCMT **McKenzie Canyo** 42.87 72 eP P 13 27 42.2 +0.2
comp=Z,2.1nm,0.6s,mb4.0
G15A **Dillon** 42.90 71 ⇓P P 13 27 42.4 0.0
baz=43
I14A **Mackay** 43.00 73 ⇓P P 13 27 43.6 +0.5
baz=43,SNR=6.7
BOZ **Bozeman (W)** 43.15 70 ⇓P P 13 27 44.5 +0.1
baz=43,SNR=9.4
BOZ **Bozeman (W)** 43.15 70 eP P 13 27 44.7 +0.3
comp=Z,2.8nm,0.6s,mb4.2
BOZ **Bozeman (W)** 43.15 70 eP P
BOZ pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
NVAR **Mina Array Bea** 43.19 83 P P 13 27 45.6 +0.8
comp=Z,0.5nm,0.3s,mb3.7,baz=271,slow=12,SNR=4.1
J14A **Carey** 43.30 74 ⇑P P 13 27 46.1 +0.6
baz=43,SNR=5.2
C19A **Slack Wire Ran** 43.56 66 ⇑P P 13 27 48.0 +0.4
baz=43,SNR=5.7
L14A **Malta** 44.20 76 ⇑P P 13 27 53.5 +0.7
baz=44,SNR=5.6
O12A **Currie** 44.30 79 ⇓P P 13 27 54.5 +0.9
baz=44
RLMT **Red Lodge** 44.84 70 ⇑P P 13 27 57.4 -0.4
baz=45
RLMT **Red Lodge** 44.84 70 eP P 13 27 58.5 +0.6
comp=Z,6.5nm,1.0s,mb4.4
R11A **Troy Canyon, C** 44.94 81 ⇑P P 13 27 58.7 0.0
baz=45
G20A **Bridger** 45.40 69 ⇓P P 13 28 02.6 +0.3
baz=45,SNR=5.8
DUG **Dugway** 45.53 77 ⇓P P 13 28 03.5 +0.1
baz=45,SNR=5.9
DUG **Dugway** 45.53 77 eP P 13 28 03.2 -0.3
comp=Z,5.6nm,1.0s,mb4.5
DUG **Dugway** 45.53 77 eP P
DUG pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
M16A **Huntsville** 45.59 75 ⇓P P 13 28 04.5 +0.6
baz=46
K18A **Toltan Ranch,** 45.78 73 ⇓P P 13 28 06.5 +1.1
baz=46
T11A **Corn Creek, Al** 45.85 82 ⇓P P 13 28 05.7 -0.3
baz=46
Q14A **Sevier Lake (B** 45.98 79 ⇓P P 13 28 08.0 +1.0
baz=46
BW06 **Boulder Array** 46.00 72 ⇑P P 13 28 07.0 -0.1
baz=46,SNR=13
PDAR **Pinedale Array** 46.00 72 P P 13 28 07.5 +0.4
comp=Z,5.8nm,0.8s,mb4.6,baz=307,slow=4.1,SNR=42
L18A **Fontenelle, Gr** 46.20 74 ⇑P P 13 28 09.3 +0.6
baz=46
P15A **Leamington** 46.24 78 ⇓P P 13 28 09.7 +0.7
baz=46
K19A **Absolon Red Bu** 46.39 72 ⇓P P 13 28 10.2 0.0
baz=46
ULN **Ulaanbaatar** 46.68 297 eP P 13 28 13.0 +0.6
comp=Z,8.0nm,1.0s,mb4.6
ULN **Ulaanbaatar** 46.68 297 eP P 13 28 13.0 +0.6
ULN pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
K20A **Yellowstone Ra** 46.79 72 ⇑P P 13 28 13.0 -0.3
baz=47
SONM **Songino Array** 47.07 297 P P 13 28 16.6 +1.2
comp=Z,3.5nm,0.7s,mb4.4,baz=55,slow=9.2,SNR=22
Q16A **Castle Valley** 47.32 78 ⇓P P 13 28 17.8 +0.4
baz=47
P18A **Preston Nutter** 47.45 76 ⇓P P 13 28 18.4 0.0
baz=47
R16A **Teasdale** 47.52 79 ⇑P P 13 28 18.5 -0.5
baz=47
O19A **Miners Draw (B** 47.73 75 ⇓P P 13 28 20.7 +0.1
baz=48,SNR=6.9
T15A **Red Dirt Ranch** 47.75 80 ⇑P P 13 28 20.4 -0.5
baz=48
Q18A **Rafter H Ranch** 47.84 77 ⇑P P 13 28 21.0 -0.5
baz=48,SNR=5.1
R17A **Hanksville Air** 47.91 78 ⇓P P 13 28 22.3 +0.2
baz=48
U15A **North Rim** 48.18 81 ⇑P P 13 28 23.9 -0.3
baz=48
P19A **Cripple Cowboy** 48.22 76 ⇑P P 13 28 24.7 +0.3
baz=48,SNR=5.1
S17A **Black Ridge (B** 48.34 79 ⇓P P 13 28 25.2 -0.2
baz=48
O20A **White River Ci** 48.36 75 ⇑P P 13 28 25.4 -0.1
baz=48,SNR=8.0
N21A **Black Mountain** 48.42 73 ⇑P P 13 28 25.8 -0.1
baz=48
R18A **Canyonlands Na** 48.43 77 ⇓P P 13 28 25.6 -0.5
baz=48
L23A **Garrett** 48.69 71 ⇑P P 13 28 27.9 0.0
baz=48,SNR=6.4
S18A **Hurst Farm, Bl** 48.81 78 ⇑P P 13 28 28.9 -0.1
baz=49
R19A **Curley Farm, L** 48.88 77 ⇑P P 13 28 29.3 -0.2
baz=49
N22A **Wattenberg Ran** 49.03 73 ⇓P P 13 28 30.6 -0.1
baz=49
PV04 **Paradox Valley** 49.03 77 eP P 13 28 30.7 0.0
Q20A **Ridgley Place,** 49.06 76 ⇓P P 13 28 30.4 -0.5
baz=49
T18A **Mexican Hat** 49.23 79 ⇓P P 13 28 31.3 -0.9
baz=49
N23A **Red Feather La** 49.28 72 ⇑P P 13 28 33.3 +0.7
baz=49
S19A **Harvey Farm, M** 49.30 78 ⇑P P 13 28 33.0 +0.3
baz=49
PV01 **Paradox Valley** 49.40 77 eP P 13 28 33.9 +0.4
comp=Z,522nm,0.8s
R20A **Redvale** 49.48 77 ⇓P P 13 28 33.9 -0.2
baz=49
O23A **Lake Granby, G** 49.72 73 ⇑P P 13 28 36.2 +0.3
baz=50
S20A **Disappointment** 49.72 77 ⇓P P 13 28 36.1 +0.2
baz=50,SNR=5.0
T19A **Beclabito** 49.95 78 P P 13 28 38.0 +0.3
baz=50,SNR=5.8
S21A **Coal Bank Pass** 50.18 77 ⇓P P 13 28 40.2 +0.8
baz=50
S22A **4UR Ranch, Cre** 50.71 76 ⇑P P 13 28 42.8 -0.6
baz=51
U21A **Nageezi** 51.05 78 ⇓P P 13 28 45.6 -0.4
baz=51
T22A **Edith** 51.13 77 ⇑P P 13 28 46.3 -0.3
baz=51
SDCO **Great Sand Dun** 51.52 75 ⇑P P 13 28 49.7 +0.2
baz=51
LAZ **Ladron** 52.69 79 P P 13 28 59.4 +1.1
comp=Z,0.8nm,0.9s,mb3.6
Y24A **Capitan** 54.06 79 ⇑P P 13 29 08.2 -0.1
baz=54
ZALV **Zalesovo Beam** 54.43 314 PcP PcP 13 30 13.8 +0.2
comp=Z,2.6nm,0.7s,baz=48,slow=3.2,SNR=6.9
ZALV LR LR 13 51 57.8
comp=Z,23nm,19.1s,MS3.3,baz=60,slow=36
Y25A **Mesa, Roswell** 54.52 78 ⇑P P 13 29 11.5 -0.2
baz=54
MNTX **Cornudas Mount** 55.60 81 ⇓P P 13 29 19.6 +0.2
baz=56
MNTX **Cornudas Mount** 55.60 81 P P 13 29 19.3 -0.2
comp=Z,2.3nm,0.9s,mb4.2
LZH **Lanzhou** 55.80 287 eP P 13 29 22.0 +1.2
LZH pP pP 13 29 34.0 -1.4
LZH sP sP 13 29 41.5 -0.1
LZH pmax pmax
comp=Z,14nm,1.2s,mb4.9
GTA **Gaotai** 55.99 292 ⇓P P 13 29 23.3 +1.2
GTA pP pP 13 29 36.0 -0.7
GTA sP sP 13 29 41.3 -1.6
GTA pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
626A **Big Bend Ranch** 57.86 82 ⇓P P 13 29 35.2 -0.3
baz=58
TXAR **Lajitas Array** 58.30 82 P P 13 29 38.3 -0.3
comp=Z,0.6nm,0.6s,mb3.8,baz=305,slow=5.0,SNR=13
ARCES **ARCESS Array B** 58.33 350 P P 13 29 37.5 -0.7
comp=Z,4.2nm,0.7s,mb4.6,baz=27,slow=8.2,SNR=9.2
CD2 **Chengdu** 59.39 282 P P 13 29 46.0 -0.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
CD2 pmax pmax
comp=Z,110nm,5.2s
KURK **Kurchatov** 59.42 314 *i* P P 13 29 45.2 -0.8
KURK pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
WMQ **Urumqi** 59.76 303 eP P 13 29 50.0 +1.6
WMQ pP pP 13 30 02.8 -0.4
WMQ sP sP 13 30 08.0 -1.3
WMQ PcP PcP 13 30 38.0 +3.3
WMQ pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
WMQ pmax pmax
comp=Z,35nm,3.9s
MK31 **Makanchi Array** 60.44 309 eP P 13 29 51.2 -1.9
MKAR **Makanchi Array** 60.44 309 P P 13 29 51.5 -1.6
comp=Z,1.0nm,0.5s,mb4.1,baz=48,slow=6.7,SNR=15
GYA **Guiyang** 60.72 277 eP P 13 29 55.8 +0.5
GYA pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
MIAR **Mount Ida** 60.83 70 eP P 13 29 54.3 -1.6
comp=Z,3.3nm,0.9s,mb4.5
MIAR **Mount Ida** 60.83 70 eP P 13 29 54.3 -1.6
MIAR pmax pmax
comp=Z,3.0nm,0.9s,mb4.4
OLIL **Olney** 61.08 63 eP P 13 29 56.2 -1.4
comp=Z,3.7nm,0.5s,mb4.8
BRVK **Borovoye** 61.29 320⇑eP P 13 29 58.0 -0.7
BRVK pmax pmax
comp=Z,6.0nm,2.5s,mb4.3
BRVK MLR MLR
comp=Z,45nm,17.0s,MS3.7
ARU **Arti** 62.95 329 eP P 13 30 09.9 +0.1
comp=Z,8.1nm,0.6s,mb5.0
ARU **Arti** 62.95 329*d* *i* P 13 30 09.8 0.0
ARU *e* 13 32 27.2
ARU S S 13 38 43.1 +7.7
ARU pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
JOF **Joensuu** 63.87 345 eP P 13 30 14.1 -1.6
JOF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
JOF **Joensuu** 63.87 345 ep P 13 30 14.1 -1.6
comp=Z,3.4nm,0.7s,mb4.5
KMI **Kunming** 64.13 278 P P 13 30 19.5 +1.5
KMI pP pP 13 30 31.8 -1.1
KMI sP sP 13 30 36.0 -3.0
KMI pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
KAF **Kangasniemi** 65.37 348 eP P 13 30 23.2 -2.3
KAF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
KAF **Kangasniemi** 65.37 348 ep P 13 30 23.2 -2.3
comp=Z,3.0nm,0.7s,mb4.4
FINES **FINESS Array B** 66.04 348 P P 13 30 28.1 -1.8
comp=Z,1.3nm,0.5s,mb4.3,baz=90,slow=5.6,SNR=9.2
NOA **NORSAR Array B** 67.86 355 P P 13 30 40.8 -0.6
comp=Z,0.9nm,0.7s,mb3.9,baz=4.5,slow=6.0,SNR=4.1
LSA **Lhasa** 67.86 290 P P 13 30 45.0 +3.1
LSA **Lhasa** 67.86 290 eP P 13 30 44.3 +2.4
comp=Z,7.8nm,0.6s,mb4.9
LSA **Lhasa** 67.86 290 eP P 13 30 44.3 +2.4
LSA pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
JSC **Jenkinsville** 68.10 62 eP P 13 30 43.7 +0.3
ABKAR **Akbulak array** 68.31 323 eP P 13 30 44.2 -0.2
comp=Z,0.9nm,0.5s,mb4.1
KKAR **Karatay Array** 68.79 313 eP P 13 30 47.0 -0.5
comp=Z,1.2nm,0.6s,mb4.0
KKAR **Karatay Array** 68.79 313 eP P 13 30 47.0 -0.5
KKAR pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
KSH **Kashi** 68.91 307 eP P 13 30 52.3 +3.9
KSH epP pP 13 31 05.0 +1.6
KSH esP sP 13 31 10.0 +0.5
KSH ePcP PcP 13 31 16.0 +3.6
KSH ePP PP 13 33 27.5 +7.0
KSH eScP 13 35 14.3
KSH ePcS 13 35 19.5
KSH eS S 13 39 53.0 +4.6
KSH esS sS 13 40 15.3 +1.7
KSH eScS ScS 13 40 45.3 +1.3
KSH eSS SS 13 44 22.0 +8.3
KSH pmax pmax
comp=Z,7.0nm,0.5s,mb4.8
KSH pmax pmax
comp=Z,98nm,3.5s
OBN **Obninsk** 70.17 340 eP P 13 30 56.6 +0.8
OBN *e* 13 33 29.5
OBN eS S 13 40 08.4 +5.7
OBN eSS SS 13 44 38.1 +6.0
OBN pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
CMAR **Chiang Mai Arr** 71.41 276 P P 13 31 04.0 +0.1
comp=Z,1.1nm,0.9s,mb3.8,baz=27,slow=6.5,SNR=7.3
AKASG **Malin Array Be** 75.83 342 P P 13 31 28.1 -1.3
comp=Z,3.1nm,0.5s,mb4.5,baz=19,slow=5.6,SNR=13
KIV **Kislovodsk** 78.81 331 *i* P P 13 31 47.3 +1.2
KIV *e* 13 34 43.4
KIV pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
GIVF **Givet** 79.04 358 eP P 13 31 47.1 -0.2
BAIF **Baives** 79.10 358 eP P 13 31 47.7 +0.1
comp=Z,17nm,1.0s,mb4.6
BAIF **Baives** 79.10 358 eP P 13 31 47.7 +0.1
comp=Z,8.4nm,1.0s,mb4.6
BAIF **Baives** 79.10 358 eP P 13 31 47.7 +0.1
BAIF pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
BUR08 **Bucovina Ar. S** 79.50 344 eP P 13 31 50.0 +0.1
ZEI **Tsey** 79.51 330 eP P 13 31 49.1 -0.9
ZEI pmax pmax
comp=Z,12nm,0.6s,mb5.0
BURAR **Bucovina Array** 79.53 344 ⇓P P 13 31 50.5 +0.5
BURAR **Bucovina Array** 79.53 344 ⇓*i*P P 13 31 50.5 +0.5
TESR 80.34 343 ⇓P P 13 31 54.5 +0.1
TESR 80.34 343 ⇓*i*P P 13 31 54.5 +0.1
FLN **La Foliniere** 80.40 2 eP P 13 31 54.3 -0.4
LDF **La Druitiere** 80.57 1 eP P 13 31 55.0 -0.6
comp=Z,12nm,0.5s,mb4.8
LDF **La Druitiere** 80.57 1 eP P 13 31 55.0 -0.6
comp=Z,5.9nm,0.5s,mb4.8
LDF **La Druitiere** 80.57 1 eP P 13 31 55.0 -0.6
LDF pmax pmax
comp=Z,6.0nm,0.5s,mb4.8
MEZF **Maizieres J'vi** 80.64 358 eP P 13 31 55.9 -0.1
CDF **Champ du Feu** 80.66 356 eP P 13 31 55.9 -0.2
DRGR 80.74 346 ⇓P P 13 31 56.8 +0.3
DRGR 80.74 346 ⇓*i*P P 13 31 56.8 +0.3
ROSF **Rostrenen** 80.75 3 eP P 13 31 56.3 -0.2
comp=Z,5.9nm,0.6s,mb4.4
ROSF **Rostrenen** 80.75 3 eP P 13 31 56.3 -0.2
comp=Z,3.0nm,0.6s,mb4.4
ROSF **Rostrenen** 80.75 3 eP P 13 31 56.3 -0.2
ROSF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
GRR **Gorron** 80.76 2 eP P 13 31 56.4 -0.2
comp=Z,16nm,0.8s,mb4.7
GRR **Gorron** 80.76 2 eP P 13 31 56.4 -0.2
comp=Z,8.1nm,0.8s,mb4.7
GRR **Gorron** 80.76 2 eP P 13 31 56.4 -0.2
GRR pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SGMF **Saint Gilles** 80.85 3 eP P 13 31 57.0 -0.1
comp=Z,24nm,0.8s,mb4.9
SGMF **Saint Gilles** 80.85 3 eP P 13 31 57.0 -0.1
comp=Z,12nm,0.8s,mb4.9
SGMF **Saint Gilles** 80.85 3 eP P 13 31 57.0 -0.1
SGMF pmax pmax
comp=Z,12nm,0.8s,mb4.9
SFTF **Sexfontaines** 80.94 358 eP P 13 31 57.5 -0.1
comp=Z,18nm,0.8s,mb4.8
SFTF **Sexfontaines** 80.94 358 eP P 13 31 57.5 -0.1
comp=Z,18nm,0.8s,mb5.0
VRI **Vrincioaia** 80.95 343 ⇓P P 13 31 58.3 +0.7
VRI **Vrincioaia** 80.95 343 ⇓*i*P P 13 31 58.3 +0.6
PLOR **Plostina** 80.97 343 ⇑P P 13 31 57.7 -0.1
PLOR **Plostina** 80.97 343 ⇑*i*P P 13 31 57.7 -0.1
QUIF **Quistinic** 81.17 3 eP P 13 31 58.5 -0.3
HINF **Hinteralfeld** 81.27 357 eP P 13 31 58.9 -0.4
comp=Z,2.8nm,0.7s,mb4.0
HINF **Hinteralfeld** 81.27 357 eP P 13 31 58.9 -0.4
comp=Z,1.4nm,0.7s,mb4.0
HINF **Hinteralfeld** 81.27 357 eP P 13 31 58.9 -0.4
HINF pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
GRER 81.37 342 ⇓P P 13 32 01.4 +1.5
GRER 81.37 342 ⇓*i*P P 13 32 01.4 +1.5
MLR **Muntele Rosu** 81.45 343 ⇓P P 13 32 01.8 +1.4
MLR **Muntele Rosu** 81.45 343 ⇓*i*P P 13 32 01.8 +1.4
WTTA **Wattenberg** 81.55 353 ⇑*i*P P 13 32 01.1 +0.3
comp=Z,4.4nm,0.7s,mb4.5
KBA **Koelnbreinsper** 81.60 352 ⇑*i*P P 13 32 01.8 +0.7
comp=Z,8.7nm,0.6s,mb4.9
VOIR 81.67 344 ⇑P P 13 32 01.9 +0.5
VOIR 81.67 344 ⇑*i*P P 13 32 02.0 +0.5
SOKA **Soboth** 81.84 351 ⇓*i*P P 13 32 02.6 +0.3
comp=Z,7.8nm,1.1s,mb4.5
LOR **Lormes** 81.89 359 eP P 13 32 02.5 -0.1
comp=Z,4.7nm,0.5s,mb4.3
LOR **Lormes** 81.89 359 eP P 13 32 02.5 -0.1
comp=Z,2.3nm,0.5s,mb4.4
LOR **Lormes** 81.89 359 eP P 13 32 02.5 -0.1
LOR pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
BZS **Buzias** 82.05 346 ⇓P P 13 32 03.5 0.0
BZS **Buzias** 82.05 346 ⇓*i*P P 13 32 03.5 0.0
SSF **Saint Saulge** 82.11 359 eP P 13 32 03.6 -0.2
comp=Z,4.3nm,0.6s,mb4.3
SSF **Saint Saulge** 82.11 359 eP P 13 32 03.6 -0.2
comp=Z,2.2nm,0.6s,mb4.3
SSF **Saint Saulge** 82.11 359 eP P 13 32 03.6 -0.2
SSF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
WRA **Warramunga Arr** 82.15 224 P P 13 32 02.9 -1.3
comp=Z,0.9nm,0.8s,mb3.8,baz=33,slow=6.1,SNR=4.7
AVF **Avril sur Loir** 82.38 359 eP P 13 32 05.0 -0.2
comp=Z,7.8nm,0.9s,mb4.3
AVF **Avril sur Loir** 82.38 359 eP P 13 32 05.0 -0.2
comp=Z,3.9nm,0.9s,mb4.3
AVF **Avril sur Loir** 82.38 359 eP P 13 32 05.0 -0.2
AVF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
CABF **La Chapelle** 82.50 357 eP P 13 32 05.8 0.0
SMF **Signal de Mont** 82.52 359 eP P 13 32 05.7 -0.2
MFF **Saint Martin d** 82.56 1 eP P 13 32 06.1 -0.1
comp=Z,10nm,0.8s,mb4.6
MFF **Saint Martin d** 82.56 1 eP P 13 32 06.1 -0.1
comp=Z,5.1nm,0.8s,mb4.6
MFF **Saint Martin d** 82.56 1 eP P 13 32 06.1 -0.1
MFF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
TCF **Toulx Ste Croi** 82.89 360 eP P 13 32 07.6 -0.3
LPG **La Plagne** 83.59 357 eP P 13 32 11.5 0.0
RJF **Les Rejaudoux** 83.88 0 eP P 13 32 13.0 +0.1
ORIF **Oris-en-Rattie** 84.20 357 eP P 13 32 14.4 -0.2
comp=Z,2.3nm,0.6s,mb4.2
ORIF **Oris-en-Rattie** 84.20 357 eP P 13 32 14.4 -0.2
comp=Z,1.1nm,0.6s,mb4.2
ORIF **Oris-en-Rattie** 84.20 357 eP P 13 32 14.4 -0.2
ORIF pmax pmax
comp=Z,1.0nm,0.6s,mb4.1
LFF **La Frestale** 84.24 1 eP P 13 32 14.7 -0.1
CAF **Calviac** 84.25 360 eP P 13 32 15.0 +0.1
comp=Z,6.6nm,0.8s,mb4.5
CAF **Calviac** 84.25 360 eP P 13 32 15.0 +0.1
comp=Z,3.3nm,0.8s,mb4.5
CAF **Calviac** 84.25 360 eP P 13 32 15.0 +0.1
CAF pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
MBDF **Montbardon** 84.36 356 eP P 13 32 16.1 +0.7
VTS **Vitosha** 84.75 344 ⇓P P 13 32 17.5 +0.1
VTS **Vitosha** 84.75 344 ⇓*i*P P 13 32 17.5 +0.1
LASF **Ste Croix** 85.09 359 eP P 13 32 19.5 +0.4
SMRF **Simiane la Rot** 85.15 357 eP P 13 32 20.2 +0.8
comp=Z,9.6nm,0.8s,mb4.7
SMRF **Simiane la Rot** 85.15 357 eP P 13 32 20.2 +0.8
comp=Z,9.6nm,0.8s,mb5.0
SBF **Sospel** 85.19 356 eP P 13 32 19.4 -0.2
comp=Z,25nm,0.9s,mb5.0
SBF **Sospel** 85.19 356 eP P 13 32 19.4 -0.2
comp=Z,12nm,0.9s,mb5.0
SBF **Sospel** 85.19 356 eP P 13 32 19.4 -0.2
SBF pmax pmax
comp=Z,12nm,0.9s,mb5.0
BR131 **Keskin Array S** 85.27 336 eP P 13 32 20.5 +0.4
comp=Z,1.4nm,0.6s,mb4.3
BRTR **Keskin Array B** 85.27 336 P P 13 32 20.3 +0.2
comp=Z,3.0nm,0.8s,mb4.5,baz=64,slow=2.9,SNR=9.8
BRTR **Keskin Array B** 85.27 336*d*eP P 13 32 20.2 +0.1
BRTR pmax pmax
comp=Z,3.0nm,0.8s
FRF **La Foret Royal** 85.53 356 eP P 13 32 21.1 -0.2
ASAR **Alice Springs** 85.62 223 P P 13 32 21.5 -0.3
comp=Z,1.5nm,0.7s,mb4.3,baz=26,slow=5.4,SNR=14
MTLF **Montolieu** 85.84 360 eP P 13 32 23.0 +0.2
comp=Z,8.6nm,0.9s,mb4.7
MTLF **Montolieu** 85.84 360 eP P 13 32 23.0 +0.2
comp=Z,4.3nm,0.9s,mb4.7
MTLF **Montolieu** 85.84 360 eP P 13 32 23.0 +0.2
MTLF pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
EPF **Esparros** 86.14 1 eP P 13 32 24.4 +0.1
ETSF **Etsaut** 86.26 2 eP P 13 32 25.5 +0.6
comp=Z,4.4nm,0.7s,mb4.5
ETSF **Etsaut** 86.26 2 eP P 13 32 25.5 +0.6
comp=Z,2.2nm,0.7s,mb4.5
ETSF **Etsaut** 86.26 2 eP P 13 32 25.5 +0.6
ETSF pmax pmax
comp=Z,2.0nm,0.7s,mb4.5
PGF **Pioggiola** 86.42 355 eP P 13 32 25.6 -0.1
comp=Z,13nm,0.7s,mb5.0
PGF **Pioggiola** 86.42 355 eP P 13 32 25.6 -0.1
comp=Z,6.4nm,0.7s,mb5.0
PGF **Pioggiola** 86.42 355 eP P 13 32 25.6 -0.1
PGF pmax pmax
comp=Z,6.0nm,0.7s,mb4.9
ESDC **Sonseca Array** 89.36 4 P P 13 32 38.7 -1.1
ESDC **Sonseca Array** 89.36 4 P P 13 32 38.7 -1.1
comp=Z,0.9nm,0.7s,mb4.2,baz=346,slow=4.2,SNR=6.3
STKA **Stephens Creek** 89.99 213 P P 13 32 43.0 +0.4
comp=Z,1.6nm,1.0s,mb4.3,baz=30,slow=12,SNR=4.3
DBIC **Dimbokro** 122.08 8 PKP PKPdf 13 38 37.6 -0.5
comp=Z,1.3nm,0.4s,baz=322,slow=3.1,SNR=4.4
MAW **Mawson** 146.58 218 PKPbc PKPbc 13 39 22.5 -0.8
comp=Z,4.2nm,1.0s,baz=72,slow=5.3,SNR=5.4
BOSA **Boshof** 151.38 313 PKPbc PKPbc 13 39 36.7 0.0
comp=Z,5.0nm,0.7s,baz=324,slow=8.7,SNR=3.7
VNA2 **Neumayer--Watz** 159.76 171 ePKPdf PKPab 13 40 15.5 -4.3
baz=171,slow=3.2

JMA 31 13:43:44.8±0.4, 30°.89N×141°.21E, h0km, M3.6,
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
JHJ2	**Mitsune**	2.51	332	P		Pn	13 44 28.1	+1.2
JHJ2				eS		Sn	13 44 59.5	+1.3
BSO1	**Boso 1**	3.76	357	P		Pn	13 44 46.4	+2.4
BSO3	**Boso 3**	3.94	352	P		Pn	13 44 49.1	+2.5
JHU	**Hanno**	5.20	342	P		Pn	13 45 06.1	+2.2
JHU				eS		Sn	13 46 06.6	+2.0
JRY	**Ryogami san**	5.46	340	P		Pn	13 45 11.5	+4.0
JHO	**Hitachi**	5.73	355	P		Pn	13 45 12.1	+1.0
JHO				S		Sn	13 46 19.0	+1.4
JFK	**Kawauchi**	6.47	358	eS		Sn	13 46 37.4	+1.7

*ISCJB **31** 13:54:19.9±1.0, 5°.85N±0°.10×73°.5W±0°.1, h125km±15km,*
Error ellipse: s-maj=25.8km s-min=8.8km az=34.3
*IDC **31** 13:54:20.0±6.3, 4°.93N×75°.87W, h69km±62km, Error*
ellipse: s-maj=58.8km s-min=44.4km az=91.0
*FUNV **31** 13:54:24.0, 6°.04N×73°.51W, h154km, MW3.6*
ISC 31 13:54:21.0±1.2, 5°.86N±0°.10×73°.5W±0°.1, h121km±18km,
n16, σ0.894/22, 1D, Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	1.31	221	P		Pn	13 54 45.7	-0.7
	25nm,0.3s,baz=271,slow=22,SNR=30							
ROSC				S		Sn	13 55 05.4	-0.2
	66nm,0.3s,baz=275,slow=21,SNR=11							
CAPV	**Capacho**	2.30	30	⇓eP		Pn	13 55 00.5	+2.2
CAPV				eS		Sn	13 55 27.7	+0.8
SOCV	**Socops**	3.54	47	eP		Pn	13 55 16.1	+1.6
SOCV				eS		Sn	13 55 54.9	-1.0
VIGV	**El Vigia**	3.63	35	eP		Pn	13 55 16.6	+1.1
VIGV				eS		Sn	13 55 56.0	-1.8
VIRV	**Villa del Rosa**	4.74	13	eP		Pn	13 55 29.7	-0.7
VIRV				eS		Sn	13 56 19.0	-5.4
QARV	**Quebrada Arrib**	5.21	34	eP		Pn	13 55 37.5	+0.6

CURV	**Curarigua**	**5.40**	**40**	*eP*	**Pn**	**13 55 40.0**	**+0.7**
CURV				*eS*	**Sn**	**13 56 34.7**	**-5.7**
TEPV	**Terepaima**	**5.88**	**46**	*eP*	**Pn**	**13 55 45.7**	**-0.1**
SIQV	**Siquisique**	**5.98**	**37**	*eP*	**Pn**	**13 55 46.6**	**-0.6**
SIQV				*eS*	**Sn**	**13 56 48.7**	**-5.8**
BAUV	**El Baul**	**6.19**	**60**	*eP*	**Pn**	**13 55 50.0**	**-0.1**
MONV	**Montecano**	**6.98**	**29**	*eP*	**Pn**	**13 56 00.1**	**-0.5**
TURV	**Turiamo**	**7.20**	**50**	*eP*	**Pn**	**13 56 03.4**	**-0.3**
TURV				*eS*	**Sn**	**13 57 16.3**	**-7.7**
CAOV	**Caicara del Or**	**7.25**	**78**	*eP*	**Pn**	**13 56 04.8**	**+0.4**
BIRV	**Birongo**	**8.47**	**57**	*eP*	**Pn**	**13 56 20.2**	**-0.8**
ASAR	**Alice Springs**	**148.26**	**233**	PKPbc	PKPbc	14 13 51.6	-2.2
	0.3nm,0.5s,baz=118,slow=3.6,SNR=17						
WRA	**Warramunga Arr**	**149.56**	**240**	PKPbc	PKPbc	14 13 55.1	-2.1
	0.6nm,0.5s,baz=106,slow=2.9,SNR=9.8						

*ISCJB **31** 14:21:00.7±0.7, 42°.44N×0°.03×18°.36E±0°.04, h12km±5km, Error ellipse: s-maj=6.6km s-min=4.3km az=37.4*
*NEIC **31** 14:21:02.0, 42°.46N×18°.43E, h8km, ML2.5(PDG), After PDG.*
*PDG **31** 14:21:02.0±0.1, 42°.46N×18°.43E, h8km, MD2.4/3, ML2.5/8, Error ellipse: s-maj=0.4km s-min=0.8km az=0.0*
*CSEM **31** 14:21:02.6±0.3, 42°.49N×18°.49E, h2km, ML2.5/8, Error ellipse: s-maj=5.7km s-min=3.9km az=49.0*

ISC 31 14:21:00.8±0.8, 42°.42N±0°.04×18°.32E±0°.05, h12km±5km, n27, σ0°99/49, 17C-5D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HCY	**Herceg Novi**	**0.13**	**78**	⇑*iPg*	**Pg**	**14 21 03.7**	**-0.3**
HCY				*eSg*	**Sg**	**14 21 05.2**	**-1.1**
HCY	**Herceg Novi**	**0.13**	**78**	⇑*iPg*	**Pg**	**14 21 03.7**	**-0.3**
HCY				*eSg*	**Sg**	**14 21 05.2**	**-1.1**
BUM	**Brajici-Budva**	**0.44**	**105**	⇑*iPg*	**Pg**	**14 21 09.5**	**0.0**
BUM				*eSg*	**Sg**	**14 21 15.3**	**-0.1**
BUM	**Brajici-Budva**	**0.44**	**105**	⇑*iPg*	**Pg**	**14 21 09.5**	**0.0**
BUM				*eSg*	**Sg**	**14 21 15.3**	**-0.1**
BRY	**Bratogost**	**0.51**	**19**	⇑*iPg*	**Pg**	**14 21 10.4**	**-0.3**
BRY				*eSg*	**Sg**	**14 21 17.6**	**+0.1**
BRY	**Bratogost**	**0.51**	**19**	⇑*iPg*	**Pg**	**14 21 10.4**	**-0.3**
BRY				*eSg*	**Sg**	**14 21 17.6**	**+0.1**
NKY	**Niksic**	**0.64**	**52**	⇓*iPg*	**Pg**	**14 21 12.0**	**-1.1**
NKY				*eSg*	**Sg**	**14 21 20.8**	**-0.7**
NKY	**Niksic**	**0.64**	**52**	⇓*iPg*	**Pg**	**14 21 12.0**	**-1.1**
NKY				*eSg*	**Sg**	**14 21 20.8**	**-0.7**
STON	**Ston**	**0.64**	**315**	⇑*iPg*	**Pg**	**14 21 13.9**	**+0.6**
STON				Sg	**Sg**	**14 21 24.7**	**+3.0**
PDG	**Podgorica**	**0.69**	**89**	⇑*iPg*	**Pg**	**14 21 13.3**	**-0.9**
PDG				*eSg*	**Sg**	**14 21 23.0**	**-0.3**
TTG	**Podgorica**	**0.69**	**89**	⇑*iPg*	**Pg**	**14 21 13.3**	**-0.9**
TTG				*eSg*	**Sg**	**14 21 23.0**	**-0.3**
TTG	**Podgorica**	**0.69**	**89**	⇑*iPg*	**Pg**	**14 21 13.3**	**-0.9**
TTG				*eSg*	**Sg**	**14 21 23.0**	**-0.3**
ULC	**Ulcinj**	**0.83**	**123**	⇑*iPg*	**Pg**	**14 21 16.4**	**-0.3**
ULC				*eSg*	**Sg**	**14 21 29.3**	**+1.8**
ULC	**Ulcinj**	**0.83**	**123**	⇑*iPg*	**Pg**	**14 21 16.4**	**-0.3**
ULC				*eSg*	**Sg**	**14 21 29.3**	**+1.8**
UPM	**Unac-Piva**	**0.89**	**29**	⇓*iPg*	**Pg**	**14 21 17.1**	**-0.9**
UPM				*eSg*	**Sg**	**14 21 30.1**	**+0.4**
UPM	**Unac-Piva**	**0.89**	**29**	⇓*iPg*	**Pg**	**14 21 17.1**	**-0.9**
UPM				*eSg*	**Sg**	**14 21 30.1**	**+0.4**
PLE	**Pljevlja**	**1.20**	**41**	⇑*iPg*	**Pn**	**14 21 22.6**	**-0.8**
PLE				*eSg*	**Sg**	**14 21 40.5**	**+0.9**
PLE	**Pljevlja**	**1.20**	**41**	⇑*iPg*	**Pn**	**14 21 22.6**	**-0.8**
PVY	**Plav**	**1.23**	**81**	⇑*iPg*	**Pn**	**14 21 23.5**	**-0.3**
PVY				*eSg*	**Sg**	**14 21 41.6**	**+1.1**
PVY	**Plav**	**1.23**	**81**	⇑*iPg*	**Pn**	**14 21 23.5**	**-0.3**
BEY	**Berane**	**1.25**	**68**	*ePg*	**Pn**	**14 21 23.7**	**-0.3**
IVA	**Berane**	**1.25**	**68**	*ePg*	**Pn**	**14 21 23.7**	**-0.3**
IVA				*eSg*	**Sg**	**14 21 41.7**	**+0.7**
IVA	**Berane**	**1.25**	**68**	*ePg*	**Pn**	**14 21 23.7**	**-0.3**
IVA				*eSg*	**Sg**	**14 21 41.7**	**+0.7**
NVLJ	**Novalja**	**3.30**	**312**	*ePn*	**Pn**	**14 21 56.8**	**+4.5**
NVLJ				Sn	**Sb**	**14 22 37.5**	**-1.9**
NVLJ	**Novalja**	**3.30**	**312**	*ePn*	**Pn**	**14 21 56.8**	**+4.5**
NVLJ				Sn	**Sb**	**14 22 37.5**	**-1.9**
PKSM	**Moragy**	**3.80**	**3**	⇓*iP*	**Pn**	**14 21 59.3**	**+0.2**
BZS	**Buzias**	**3.98**	**36**	⇑*iP*	**Pn**	**14 22 04.3**	**+2.7**

*IDC **31** 14:26:00.7±3.4, 12°.00N×122°.59E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/20, mbtmp3.3/3, Error ellipse: s-maj=353.0km s-min=26.4km az=63.0*
*ISCJB **31** 14:26:04.2±1.2, 11°.73N±0°.08×122°.1E±0°.3, h33km, mb3.4/3, Error ellipse: s-maj=47.0km s-min=11.8km az=0.7*

ISC 31 14:26:06.4±1.2, 11°.77N±0°.08×122°.2E±0°.3, h35km, n4, σ0°38/5, mb3.4/3, 1C, Panay

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GQP	**Guinayangan**	**2.14**	**8**	*eP*	**Pn**	**14 26 34.4**	**-5.3**
GQP				*eS*	**Sn**	**14 27 05.1**	**0.0**
WRA	**Warramunga Arr**	**33.72**	**159**	P	**P**	**14 32 44.2**	**-0.4**
	0.3nm,0.5s,mb3.5,baz=340,slow=9.7,SNR=3.1						
ASAR	**Alice Springs**	**37.05**	**162**	P	**P**	**14 33 13.6**	**+0.4**
	0.1nm,0.3s,mb3.1,baz=341,slow=6.8,SNR=14						
MKAR	**Makanchi Array**	**48.42**	**324**	P	**P**	**14 34 45.1**	**0.0**
	0.6nm,0.7s,mb3.7,baz=129,slow=9.6,SNR=5.9						

*BJI **31** 14:35:59.2, 3°.23S×99°.80E, h31km, mB5.0/3, mb4.8/7*
*IDC **31** 14:36:03.1±1.8, 2°.37S×99°.98E, h0km, mb4.2/9, mb1 4.3/10, mb1mx4.1/20, mbtmp4.2/10, ML3.1/1, MS3.7/6, Ms1 3.7/6, ms1mx3.4/23, Error ellipse: s-maj=61.6km s-min=16.3km az=61.0*
*NEIC **31** 14:36:07.4±3.9, 2°.38S×99°.92E, h32km±24km, mb4.6/8, Error ellipse: s-maj=26.3km s-min=7.3km az=56.0*
*DJA **31** 14:36:07, 2°.48S×99°.74E, h27km, MLv4.4/19*

ISC 31 14:36:05.9±1.7, 2°.54S±0°.04×99°.65E±0°.04, h26km±12km, n51, σ1°08/53, mb4.5/17, MS3.9/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SISI	**Saibi**	**1.33**	**335**	P	**Pn**	**14 36 28.9**	**+0.1**
SISI				S	**Sn**	**14 36 47.8**	**+2.2**
PDSI	**Padang**	**1.81**	**27**	P	**Pn**	**14 36 34.1**	**-1.3**
PDSI				S	**Sn**	**14 36 57.3**	**-0.3**
KRJI	**Kerinci**	**1.87**	**76**	P	**Pn**	**14 36 35.8**	**-0.4**
KRJI				S	**Sn**	**14 36 59.8**	**+0.8**
PPI	**Padang Panjang**	**2.20**	**20**	P	**Pn**	**14 36 39.9**	**-0.9**
PPI				S	**Sn**	**14 37 08.6**	**+1.4**
SDSI	**Sungai Dareh**	**2.39**	**48**	P	**Pn**	**14 36 42.0**	**-0.8**
SDSI				S	**Sn**	**14 37 11.7**	**-0.2**
KSI	**Kapahiang**	**3.14**	**111**	P	**Pn**	**14 36 56.7**	**+2.9**
KSI				S	**Sn**	**14 37 33.3**	**+2.8**
BKNI	**Bangkinang**	**3.17**	**26**	P	**Pn**	**14 36 54.1**	**0.0**
MNSI	**Mandailing Nat**	**3.31**	**359**	P	**Pn**	**14 36 57.5**	**+1.4**
MNSI				S	**Sn**	**14 37 35.8**	**+1.1**
RGRI	**Rengat**	**3.46**	**51**	P	**Pn**	**14 36 57.6**	**-0.5**
MNAI	**Manna**	**3.77**	**119**	P	**Pn**	**14 37 04.0**	**+1.7**
LHSI	**Lahat**	**4.08**	**108**	P	**Pn**	**14 37 07.0**	**+0.4**
MDSI	**Maura Dua**	**4.92**	**113**	P	**Pn**	**14 37 18.5**	**+0.3**
MDSI				S	**Sn**	**14 38 14.3**	**-0.1**
LWLI	**Liwa**	**5.04**	**119**	P	**Pn**	**14 37 20.2**	**+0.3**
PSI	**Prapat**	**5.35**	**352**	Pn	**Pn**	**14 37 21.5**	**-2.7**
	0.7nm,0.3s,baz=146,slow=13,SNR=7.0						
PSI				LR	LR	14 39 19.6	
	comp=Z,220nm,19.3s,baz=62,slow=38						
KLSI		**5.51**	**113**	P	**Pn**	**14 37 26.6**	**+0.3**
	0.2nm49nm,1.0s						
KASI	**Kota Agung**	**5.67**	**122**	P	**Pn**	**14 37 28.3**	**-0.3**
	0.5nm51nm,0.9s						
MYKOM	**Kota Tinggi**	**6.01**	**44**	P	**Pn**	**14 37 32.7**	**-0.5**
	0.2nm452nm37nm,1.1s						
TSI	**Tuntungan**	**6.10**	**350**	P	**Pn**	**14 37 42.6**	**+8.2**
TPTI		**6.26**	**337**	P	**Pn**	**14 37 37.9**	**+1.2**
	0.1nm14nm,1.1s						
IPM	**Ipoh**	**7.11**	**11**	*eP*	**Pn**	**14 37 49.2**	**+0.9**
	13nm,0.8s						
IPM	**Ipoh**	**7.11**	**11**	P	**Pn**	**14 37 48.2**	**-0.1**
	0.1nm18nm,1.0s						
KULM	**Kulim**	**7.84**	**7**	P	**Pn**	**14 37 56.6**	**-1.7**
	5.9nm,0.8s						
KULM	**Kulim**	**7.84**	**7**	P	**Pn**	**14 37 58.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**20.88**	**358**	P	**P**	**14 40 44.7**	**-1.5**
	4.5nm,0.9s,baz=186,slow=10.0,SNR=28						
CMAR				LR	LR	14 49 11.8	
	comp=Z,145nm,19.6s,MS3.4,baz=180,slow=38						

CHTO	**Chiang Mai**	**21.23**	**358**	*eP*	**P**	**14 40 48.8**	**-1.2**
	4.3nm,1.1s,mb3.7						
FITZ	**Fitzroy Crossi**	**29.81**	**123**	P	**P**	**14 42 11.4**	**+0.4**
FITZ	**Fitzroy Crossi**	**29.81**	**123**	LR	LR	14 55 03.0	
	comp=Z,111nm,21.1s,MS3.5,baz=262,slow=38						
WRA	**Warramunga Arr**	**38.03**	**120**	P	**P**	**14 43 21.9**	**-0.5**
	3.3nm,0.5s,mb4.3,baz=303,slow=9.0,SNR=26						
WB2	**Warramunga Arr**	**38.04**	**120**	*eP*	**P**	**14 43 21.1**	**-1.3**
ASAR	**Alice Springs**	**39.23**	**125**	P	**P**	**14 43 31.6**	**-0.8**
	1.1nm,0.5s,mb3.8,baz=298,slow=7.2,SNR=27						
BJI	**Beijing**	**45.00**	**18**	P	**P**	**14 44 19.3**	**+0.1**
BJI				*pmax*	*pmax*		
	comp=Z,17nm,0.8s,mb4.9						
KSRS	**Korea Array**	**47.66**	**31**	P	**P**	**14 44 38.6**	**-1.5**
	comp=Z,3.6nm,0.8s,mb4.4,baz=223,slow=9.0,SNR=10						
STKA	**Stephens Creek**	**49.06**	**131**	P	**P**	**14 44 51.5**	**+0.4**
	comp=Z,3.0nm,0.8s,mb4.3,baz=272,slow=14,SNR=3.4						
TKM2	**Tokmak 2**	**50.19**	**337**	*eP*	**P**	**14 45 00.7**	**+1.3**
	comp=Z,4.5nm,1.0s,mb4.5						
SONM	**Songino Array**	**50.51**	**6**	P	**P**	**14 45 02.3**	**+0.5**
	comp=Z,7.3nm,1.0s,mb4.6,baz=186,slow=9.4,SNR=32						
ULN	**Ulaanbaatar**	**50.61**	**6**	*eP*	**P**	**14 45 03.2**	**+0.7**
	comp=Z,5.3nm,1.1s,mb4.4						
ULN				*e*	*pP*	14 45 10.9	+0.5
EKS2	**Erkin-Say**	**50.70**	**335**	*eP*	**P**	**14 45 04.6**	**+1.3**
	comp=Z,4.3nm,0.9s,mb4.4						
MKAR	**Makanchi Array**	**51.45**	**345**	P	**P**	**14 45 09.6**	**+0.8**
	comp=Z,4.5nm,0.8s,mb4.5,baz=149,slow=8.2,SNR=41						
MK31	**Makanchi Array**	**51.45**	**345**	*eP*	**P**	**14 45 09.3**	**+0.5**
MJAR	**Matsushiro Arr**	**52.91**	**39**	P	**P**	**14 45 18.2**	**-1.7**
	comp=Z,2.4nm,1.0s,mb4.1,baz=222,slow=7.6,SNR=6.3						
KURK	**Kurchatov**	**56.02**	**344**	*eP*	**P**	**14 45 42.7**	**+0.4**
	comp=Z,6.4nm,0.9s,mb4.7						
ZAA0	**Zalesovo Array**	**57.63**	**350**	*eP*	**P**	**14 45 53.2**	**-0.4**
ZALV	**Zalesovo Beam**	**57.63**	**350**	P	**P**	**14 45 53.5**	**-0.1**
	comp=Z,5.0nm,0.9s,mb4.5,baz=170,slow=4.5,SNR=18						
ABKAR	**Akbulak array**	**61.94**	**332**	*eP*	**P**	**14 46 22.9**	**-0.5**
	comp=Z,3.8nm,0.8s,mb4.6						
ABKAR				*e*	*pP*	14 46 31.9	+0.4
YSS	**Yuzh-Sakhalins**	**62.12**	**32**	*eP*	**P**	**14 46 22.6**	**-2.0**
	comp=Z,11nm,1.0s,mb4.9						
YAK	**Yakutsk**	**68.35**	**15**	*eP*	**P**	**14 47 02.9**	**-1.8**
	comp=Z,9.9nm,0.4s,mb5.2						
MAW	**Mawson**	**69.68**	**194**	LR	LR	15 10 41.7	
	comp=Z,46nm,21.4s,MS3.7,baz=24,slow=30						
BOSA	**Boshof**	**75.09**	**241**	LR	LR	15 14 47.2	
	comp=Z,166nm,19.9s,MS4.3,baz=359,slow=31						
TSUM	**Tsumeb**	**81.67**	**251**	LR	LR	15 20 02.3	
	comp=Z,158nm,19.1s,MS4.4,baz=148,slow=32						
TXAR	**Lajitas Array**	**145.34**	**37**	PKPbc	PKPbc	14 55 42.5	+0.5
	comp=Z,4.5nm,0.8s,baz=276,slow=1.3,SNR=49						
JCT	**Junction City**	**146.66**	**32**	*e*PKPbc	PKPbc	14 55 45.9	-0.1
JCT				*e*		14 55 54.5	

*IDC **31** 14:43:04.5±0.9, 7°.06S×127°.91E, h0km, mb4.0/7, mb1 4.2/10, mb1mx4.0/19, mbtmp4.1/10, ML4.2/3, Error ellipse: s-maj=42.1km s-min=16.3km az=58.0*
*NEIC **31** 14:43:19.7±2.5, 7°.55S×127°.82E, h151km±27km, mb3.9/1, Error ellipse: s-maj=22.7km s-min=12.6km az=208.0*

ISC 31 14:43:21.6±1.5, 7°.92S±0°.08×127°.7E±0°.1, h180km±16km, n22, σ0°96/30, mb3.8/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.69**	**136**	*eP*	**Pn**	**14 44 57.0**	**-0.7**
	235nm,0.6s						
KAKA				*eS*	**Sn**	**14 46 04.9**	**-8.7**
KAKA	**Kakadu**	**6.69**	**136**	*eP*	**Pn**	**14 44 56.9**	**-0.8**
	475nm,0.5s						
FITZ	**Fitzroy Crossi**	**10.31**	**191**	*eP*	**Pn**	**14 45 44.6**	**-0.6**
	6.5nm,0.3s						
FITZ				*eS*	**Sn**	**14 47 38.3**	**-1.7**
FITZ	**Fitzroy Crossi**	**10.31**	**191**	*eP*	**Pn**	**14 45 45.3**	**+0.1**
FITZ				Sn	**Sn**	**14 47 39.4**	**-0.6**
FITZ	**Fitzroy Crossi**	**10.31**	**191**	P	**Pn**	**14 45 45.6**	**+0.4**
	1.5nm,0.3s,baz=34,slow=11,SNR=52						
FITZ				Sn	**Sn**	**14 47 39.4**	**-0.6**
	1.2nm,0.3s,baz=102,slow=22,SNR=7.3						
WRA	**Warramunga Arr**	**13.59**	**152**	P	**Pn**	**14 46 27.7**	**+0.4**
WRA				Sn	**Sn**	**14 48 51.2**	**-7.4**
WRA	**Warramunga Arr**	**13.59**	**152**	P	**Pn**	**14 46 27.7**	**+0.4**
	1.1nm,0.3s,baz=323,slow=14,SNR=25						
WRA				Sn	**Sn**	**14 48 51.2**	**-7.4**
	1.9nm,0.3s,baz=335,slow=22,SNR=14						
WB2	**Warramunga Arr**	**13.60**	**152**	*eP*	**Pn**	**14 46 27.7**	**+0.4**
WB2				S	**Sn**	**14 48 48.3**	**-10**
MBWA	**Marble Bar**	**15.23**	**209**	*eP*	**Pn**	**14 46 51.7**	**+4.1**
ASAR	**Alice Springs**	**16.77**	**160**	P	**Pn**	**14 47 08.9**	**+2.8**
	0.8nm,0.3s,baz=342,slow=11,SNR=126						
ASAR				S	**S**	**14 50 10.9**	**-0.3**
	0.9nm,0.3s,baz=343,slow=26,SNR=9.7						
CTA	**Charters Tower**	**21.69**	**126**	P	**P**	**14 48 00.6**	**+2.2**
	9.1nm,1.1s,mb4.1,baz=318,slow=12,SNR=5.7						
CTAO	**Charters Tower**	**21.69**	**126**	*eP*	**P**	**14 48 01.3**	**+2.9**
STKA	**Stephens Creek**	**27.11**	**155**	P	**P**	**14 48 56.0**	**+8.0**
	2.1nm,0.6s,mb3.9,baz=322,slow=12,SNR=6.2						
PSI	**Prapat**	**30.58**	**289**	P	**P**	**14 49 19.4**	**+0.7**
PSI	**Prapat**	**30.58**	**289**	P	**P**	**14 49 19.4**	**+0.7**
	5.1nm,0.8s,mb4.3,baz=106,slow=7.8,SNR=8.4						
CMAR	**Chiang Mai Arr**	**38.60**	**313**	P	**P**	**14 50 27.6**	**+0.2**
	0.8nm,0.7s,mb3.5,baz=144,slow=6.8,SNR=7.3						
DZM	**Mont Dzumac**	**39.88**	**115**	*eP*	**P**	**14 50 36.8**	**-1.2**
SONM	**Songino Array**	**58.61**	**343**	P	**P**	**14 52 59.0**	**-0.5**
	0.7nm,0.6s,mb3.7,baz=169,slow=6.9,SNR=4.4						
MK31	**Makanchi Array**	**67.75**	**328**	*eP*	**P**	**14 53 59.9**	**+0.3**
MKAR	**Makanchi Array**	**67.75**	**328**	P	**P**	**14 53 59.8**	**+0.1**
	0.4nm,0.5s,mb3.4,baz=125,slow=7.8,SNR=8.1						
ZALV	**Zalesovo Beam**	**71.40**	**335**	P	**P**	**14 54 21.0**	**-0.8**
	0.7nm,0.3s,mb3.8,baz=141,slow=5.8,SNR=6.2						
KURK	**Kurchatov**	**72.11**	**330**	*eP*	**P**	**14 54 25.9**	**-0.3**
	1.5nm,0.6s,mb3.9						

*IDC **31** 14:47:40.9±1.3, 11°.35S×167°.73E, h0km, mb4.2/8, mb1 4.3/8, mb1mx4.0/19, mbtmp4.2/8, Error ellipse: s-maj=40.3km s-min=24.2km az=122.0*
*ISCJB **31** 14:48:17.6±3.0, 12°.05S±0°.2×167°.5E±0°.1, h347km±34km, mb3.8/10, Error ellipse: s-maj=29.0km s-min=17.0km az=156.7*
*NEIC **31** 14:48:17.7±2.6, 11°.92S×167°.46E, h334km±30km, mb4.5/1, Error ellipse: s-maj=22.9km s-min=13.1km az=158.0*

ISC 31 14:48:17.7±3.1, 11°.9S±0°.2×167°.5E±0°.1, h333km±35km, n16, σ0°81/16, mb3.8/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**11.76**	**121**	*eP*	**Pn**	**14 50 57.1**	**+0.2**
EIDS	**Eidsvold**	**20.46**	**227**	*eP*	**P**	**14 52 31.0**	**0.0**
CTA	**Charters Tower**	**21.92**	**246**	P	**P**	**14 52 44.6**	**+0.1**
	5.3nm,0.7s,mb3.9,baz=106,slow=13,SNR=5.9						
CTAO	**Charters Tower**	**21.92**	**246**	*eP*	**P**	**14 52 45.8**	**+1.3**
STKA	**Stephens Creek**	**31.01**	**226**	*eP*	**P**	**14 54 05.7**	**+0.4**
STKA	**Stephens Creek**	**31.01**	**226**	P	**P**	**14 54 05.5**	**+0.2**
	1.7nm,0.4s,mb3.7,baz=58,slow=8.7,SNR=9.0						
RPZ	**Rata Peaks**	**31.84**	**175**	P	**P**	**14 54 12.2**	**-0.1**
	6.7nm,0.5s,mb4.1,baz=43,slow=8.5,SNR=4.4						
WRA	**Warramunga Arr**	**32.78**	**252**	P	**P**	**14 54 19.9**	**-0.9**
	0.6nm,0.5s,mb3.0,baz=79,slow=8.9,SNR=3.2						
ASAR	**Alice Springs**	**33.92**	**245**	P	**P**	**14 54 29.8**	**-0.8**
	0.5nm,0.5s,mb3.0,baz=70,slow=9.8,SNR=6.3						
FITZ	**Fitzroy Crossi**	**40.79**	**256**	*eP*	**P**	**14 55 27.7**	**-0.1**
FITZ	**Fitzroy Crossi**	**40.79**	**256**	P	**P**	**14 55 27.9**	**+0.1**
	2.5nm,0.6s,mb3.6,baz=98,slow=7.7,SNR=5.7						
SBA	**Scott Base**	**65.94**	**180**	*eP*	**P**	**14 58 28.3**	**+0.1**
ILAR	**Eielson Array**	**83.81**	**18**	P	**P**	**15 00 08.6**	**-1.2**
	4.9nm,0.6s,mb4.5,baz=246,slow=5.2,SNR=120						
EGAK	**Eagle**	**85.62**	**20**	*eP*	**P**	**15 00 18.2**	**-0.5**
	7.8nm,1.1s,mb4.5						
ZALV	**Zalesovo Beam**	**95.24**	**324**	P	**P**	**15 01 06.1**	**+2.3**
	1.3nm,0.4s,mb4.3,baz=92,slow=3.5,SNR=8.9						
MKAR	**Makanchi Array**	**95.30**	**317**	P	**P**	**15 01 04.7**	**+0.4**
	0.4nm,0.5s,mb3.7,baz=91,slow=6.2,SNR=5.5						

*IDC **31** 14:59:07.0±1.0, 12°.00N×143°.66E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/21, mbtmp3.5/5, Error ellipse: s-maj=39.7km s-min=18.7km az=112.0*
*ISCJB **31** 14:59:10.0±0.8, 12°.0N±0°.1×143°.6E±0°.2, h33km, mb3.4/5, Error ellipse: s-maj=29.0km s-min=9.4km az=35.9*
*NEIC **31** 14:59:14.4±1.8, 11°.95N×143°.97E, h64km±18km, Error ellipse: s-maj=33.4km s-min=14.4km az=98.0*

ISC 31 14:59:12.2±0.8, 11°.9N±0°.1×143°.7E±0°.2, h35km, n9, σ0°76/9, mb3.4/5, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.02**	**36**	*eP*	**Pn**	**14 59 43.9**	**+0.1**
GUMO				Sn	**Sn**	**15 00 08.6**	**+0.7**
GUMO	**Guam**	**2.02**	**36**	Pn	**Pn**	**14 59 42.9**	**-0.8**
	23nm,0.3s,baz=289,slow=2.5,SNR=20						
GUMO				Sn	**Sn**	**15 00 08.5**	**+0.7**
	30nm,0.3s,baz=150,slow=20,SNR=14						
WRA	**Warramunga Arr**	**32.98**	**196**	P	**P**	**15 05 43.8**	**-0.1**
	0.4nm,0.8s,mb3.4,baz=17,slow=9.5,SNR=7.2						
ASAR	**Alice Springs**	**36.65**	**195**	P	**P**	**15 06 16.2**	**+0.7**
	0.4nm,1.0s,mb3.2,baz=31,slow=11,SNR=4.7						
MKAR	**Makanchi Array**	**61.87**	**317**	P	**P**	**15 09 28.5**	**+0.6**
	0.1nm,0.5s,mb3.2,baz=99,slow=8.4,SNR=2.9						
ZALV	**Zalesovo Beam**	**62.28**	**325**	P	**P**	**15 09 30.5**	**-0.1**
	0.3nm,0.3s,mb3.9,baz=104,slow=5.2,SNR=2.8						
ILAR	**Eielson Array**	**70.56**	**25**	P	**P**	**15 10 21.8**	**-1.6**
	0.5nm,0.9s,mb3.5,baz=255,slow=4.4,SNR=6.4						
LPAZ	**La Paz**	**148.89**	**102**	*e*PKPdf	PKPdf	15 18 51.9	-1.4
LPAZ				PKPbc	PKPbc	15 18 59.0	+1.8
LPAZ	**La Paz**	**148.89**	**102**	PKPbc	PKPbc	15 18 59.0	+1.8
	0.7nm,0.5s,baz=288,slow=3.2,SNR=4.2						

*NEIC **31** 15:16:42.0, 17°.33N×101°.36W, h6km, MD3.5(MEX), After MEX.*

MEX 31 15:16:42.0±1.3, 17°.33N×101°.36W, h6km±129km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.29**	**340**	*iP*	Pg	15 16 46.7	-1.0
ZIIG				*iS*	Sg	15 16 52.4	+0.8
ZIIG	**Zihuatanejo**	**0.29**	**340**	*iP*	Pg	15 16 46.7	-1.0
ZIIG				*iS*	Sg	15 16 52.4	+0.8
CAIG	**El Cayaco**	**1.08**	**105**	*iP*	Pg	15 17 00.6	-2.1
CAIG				*iS*	Sg	15 17 12.1	-4.8
CAIG	**El Cayaco**	**1.08**	**105**	*iP*	Pg	15 17 00.6	-2.1
CAIG				*iS*	Sg	15 17 12.1	-4.8
ACX	**Acapulco**	**1.51**	**107**	*iP*	Pn	15 17 05.9	-3.7
ACX				*iS*	Sn	15 17 23.4	-6.2
ACX	**Acapulco**	**1.51**	**107**	*iP*	Pn	15 17 05.9	-3.7
ACX				*iS*	Sn	15 17 23.4	-6.2
MZVM		**2.74**	**47**	*eP*	Pn	15 17 24.2	-2.4
MZVM				*iS*	Sn	15 17 56.1	-4.0
PPM	**Popocatepetl**	**3.12**	**56**	*eP*	Pn	15 17 30.2	-1.6
PPM				*iS*	Sn	15 18 07.8	-1.7
PPM	**Popocatepetl**	**3.12**	**56**	*eP*	Pn	15 17 30.2	-1.6
PPM				*iS*	Sn	15 18 07.8	-1.7
IIO	**Organos**	**3.37**	**48**	*eP*	Pn	15 17 32.9	-2.3
IIO				*iS*	Sn	15 18 12.3	-3.2
IIO	**Organos**	**3.37**	**48**	*eP*	Pn	15 17 32.9	-2.3
IIO				*iS*	Sn	15 18 12.3	-3.2
UTMO	**Huajupan**	**3.43**	**81**	*eP*	Pn	15 17 34.4	-1.6
UTMO				*iS*	Sn	15 18 11.7

JOD2	**Odawara 2**	**1.54**	**64**	P	**Pn**	**15 46 41.2 +0.8**
JWZ	**Kozaga**	**1.75**	**233**	P	**Pn**	**15 46 41.9 0.0**
JWZ				*e*S	**S**	**15 47 17.5 -0.9**
JWT	**Wachi**	**1.77**	**293**	P	**Pn**	**15 46 42.3 +0.3**
JWT				*e*S	**S**	**15 47 17.0 -1.5**
JRY	**Ryogami san**	**1.88**	**41**	P	**Pn**	**15 46 43.7 +1.0**
JRY				*e*S	**S**	**15 47 20.1 +0.2**
JKG	**Kaga**	**1.89**	**333**	P	**Pn**	**15 46 42.9 +0.1**
JKG				*e*S	**S**	**15 47 19.7 -0.3**
MAJO	**Matsushiro**	**2.05**	**19**	*e*P	**Pn**	**15 46 44.4 +0.4**
MAT	**Matsushiro**	**2.05**	**19**	P	**Pn**	**15 46 44.3 +0.3**
MAT				S	**S**	**15 47 22.0 -0.3**
MAT	**Matsushiro**	**2.05**	**19**	P	**Pn**	**15 46 44.5 +0.5**
MAT				*e*S	**S**	**15 47 22.0 -0.3**
MJAR	**Matsushiro Arr**	**2.05**	**19**	P	**Pn**	**15 46 44.5 +0.5**
	16nm,0.3s,baz=200,slow=8.5,SNR=169					
MJAR				S	**S**	**15 47 22.5 +0.2**
	0.5nm,0.3s,baz=187,slow=18,SNR=3.8					
JHJ	**Hachijo jima 2**	**2.48**	**126**	P	**Pn**	**15 46 48.2 +0.5**
	18nm,0.3s,baz=246,slow=20,SNR=6.1					
JAG	**Ashikaga**	**2.48**	**42**	P	**Pn**	**15 46 47.1 -0.5**
JAG				*e*S	**S**	**15 47 26.1 -2.6**
JHJ2	**Mitsune**	**2.50**	**126**	P	**Pn**	**15 46 49.0 +1.1**
JAI	**Aioi**	**2.57**	**253**	P	**Pn**	**15 46 48.2 -0.3**
JAI				*e*S	**S**	**15 47 29.0 -1.3**
BSO1	**Boso 1**	**2.96**	**88**	P	**Pn**	**15 46 50.8 -1.3**
BSO1				*e*S	**S**	**15 47 34.8 -2.0**
JNU	**Nakatsue**	**5.62**	**257**	*e*P	**Pn**	**15 47 21.0 -0.1**
KSRS	**Korea Array**	**8.19**	**293**	P	**Pn**	**15 47 52.6 +0.7**
	1.1nm,0.3s,baz=108,slow=13,SNR=48					
CBIJ	**Chichi jima**	**8.53**	**150**	S	**S**	**15 49 23.1 -11**
	34nm,0.3s,baz=274,slow=22,SNR=9.9					
ASAJ	**Asahikawa**	**10.32**	**21**	*e*P	**Pn**	**15 48 15.8 -2.1**
	3.3nm,0.3s					
ASAJ	**Asahikawa**	**10.32**	**21**	P	**Pn**	**15 48 16.1 -1.9**
	3.0nm,0.3s,baz=232,slow=10,SNR=44					
YSS	**Yuzh-Sakhalins**	**12.99**	**17**	*e*P	**Pn**	**15 48 48.9 -1.3**
	26nm,0.5s					
PETK	**Petropavlovsk-**	**23.45**	**32**	P	**P**	**15 50 40.0 +1.6**
	2.4nm,0.9s,mb3.5,baz=251,slow=9.2,SNR=3.7					
XAN	**Xi'an**	**23.49**	**277**	P	**P**	**15 50 38.0 -1.0**
XAN				pmax	pmax	
	comp=Z,1.0nm,0.5s,mb3.4					
ULN	**Ulaanbaatar**	**26.20**	**310**	*e*P	**P**	**15 51 04.5 +1.4**
	comp=Z,5.5nm,0.9s,mb4.0					
SONM	**Songino Array**	**26.61**	**309**	P	**P**	**15 51 08.2 +1.5**
	comp=Z,2.6nm,0.5s,mb3.9,baz=114,slow=8.9,SNR=24					
ZALV	**Zalesovo Beam**	**41.22**	**315**	P	**P**	**15 53 11.4 +0.2**
	comp=Z,1.0nm,0.4s,mb3.4,baz=102,slow=9.7,SNR=5.7					
ZALV				PcP	PcP	15 55 03.6 +0.1
	comp=Z,0.5nm,0.4s,baz=111,slow=2.5,SNR=3.0					
MK31	**Makanchi Array**	**42.70**	**304**	*e*P	**P**	**15 53 23.3 +0.1**
MKAR	**Makanchi Array**	**42.70**	**304**	P	**P**	**15 53 23.7 +0.5**
	comp=Z,2.0nm,0.6s,mb3.5,baz=90,slow=9.9,SNR=27					
KURK	**Kurchatov**	**44.91**	**310**	*e*P	**P**	**15 53 40.5 -0.2**
KURK	**Kurchatov**	**44.91**	**310**	P	**P**	**15 53 40.9 +0.3**
	comp=Z,1.2nm,0.5s,mb3.4,baz=96,slow=7.6,SNR=15					
AML	**Almayashu**	**49.49**	**299**	*e*P	**P**	**15 54 16.2 +0.4**
	comp=Z,2.6nm,0.8s,mb3.6					
BVAR	**Borovoye Array**	**49.83**	**313**	P	**P**	**15 54 18.4 +0.3**
	comp=Z,0.8nm,0.3s,mb3.6,baz=100,slow=9.5,SNR=8.4					
BRVK	**Borovoye**	**49.89**	**313**	*e*P	**P**	**15 54 16.8 -1.8**
	comp=Z,1.5nm,0.5s,mb3.6					
ILAR	**Eielson Array**	**53.28**	**31**	P	**P**	**15 54 44.1 +0.8**
	comp=Z,0.3nm,0.5s,mb2.9,baz=270,slow=5.0,SNR=5.3					
FITZ	**Fitzroy Crossi**	**53.58**	**194**	P	**P**	**15 54 45.2 -0.9**
	comp=Z,1.1nm,0.4s,mb3.5,baz=3.0,slow=13,SNR=16					
WRA	**Warramunga Arr**	**54.31**	**184**	P	**P**	**15 54 50.6 -0.6**
	comp=Z,2.6nm,0.4s,mb3.9,baz=359,slow=7.6,SNR=28					
ABKAR	**Akbulak array**	**57.02**	**310**	*e*P	**P**	**15 55 09.7 -0.4**
	comp=Z,1.6nm,0.3s,mb3.9					
AKTK	**Aktyubinsk**	**57.88**	**312**	P	**P**	**15 55 16.3 +0.3**
AKTO	**Aktyubinsk**	**57.88**	**312**	P	**P**	**15 55 16.3 +0.3**
	comp=Z,1.9nm,0.6s,mb3.7,baz=78,slow=14,SNR=7.6					
ASAR	**Alice Springs**	**58.03**	**184**	P	**P**	**15 55 17.1 -0.3**
	comp=Z,0.7nm,0.3s,mb3.6,baz=356,slow=3.9,SNR=52					
JOF	**Joensuu**	**66.55**	**331**	*e*p	**P**	**15 56 12.6 -0.4**
KAF	**Kangasniemi**	**68.95**	**332**	*e*p	**P**	**15 56 26.6 -1.3**
	comp=Z,1.8nm,0.5s,mb4.1					
FINES	**FINESS Array B**	**69.42**	**331**	P	**P**	**15 56 30.9 +0.1**
	comp=Z,1.7nm,0.7s,mb3.9,baz=64,slow=4.4,SNR=8.3					

*ISCJB **31** 16:22:40.8±2.8, 12°.7N±0°.2×40°.2E±0°.2, h10km, Error ellipse: s-maj=36.0km s-min=6.7km az=40.1*
*DHMR **31** 16:22:42.5±2.9, 12°.43N×40°.47E, h12km±390km, ML3.9*
ISC 31 16:22:43.2±2.6, 12°.6N±0°.2×40°.3E±0°.2, h10km, n5, σ1§55/8, 1C-1D, Ethiopia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DESE	**Dese**	**1.64**	**203**	*e*P		**Sg**	**16 23 36.1**	**+0.2**
DESE				*e*S		x	16 24 03.6	
TRBA	**At Turbah**	**3.78**	**81**	⇓*i*P		**Pn**	**16 23 41.6**	**+0.1**
TRBA				*i* S		**Sn**	**16 24 27.4**	**+1.3**
TRBA				AML		AML	16 24 40.7	
	comp=N,488nm,0.6s							
AAE	**Adis Abeba**	**3.88**	**203**	*e*PN		**Sn**	**16 24 20.8**	**-7.8**
AAE				*e*S		x	16 25 14.0	
DHBB	**Dhamar BB**	**4.43**	**64**	*i* P		**Pn**	**16 23 51.2**	**+0.7**
DHBB				*i* S		**Sn**	**16 24 45.0**	**+2.9**
LBOS		**4.99**	**75**	⇑*i*P		**Pn**	**16 23 55.9**	**-2.2**
LBOS				*i* S		**Sn**	**16 24 53.4**	**-2.5**

IDC 31 16:29:51.1±2.6, 7°.46S×119°.05E, h0km, mb3.0/2, mb1 3.1/3, mb1mx3.0/19, mbtmp2.9/3, ML3.3/1, Error ellipse: s-maj=261.2km s-min=26.1km az=52.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.33**	**131**	P		Pn	16 34 17.8	-1.3
	0.1nm,0.3s,baz=307,slow=12,SNR=2.9							
ASAR	**Alice Springs**	**21.51**	**140**	P		P	16 34 42.3	+0.5
	0.1nm,0.3s,baz=315,slow=9.0,SNR=7.6							
MKAR	**Makanchi Array**	**63.12**	**333**	P		P	16 40 20.6	+0.1
	0.2nm,0.6s,baz=130,slow=7.8,SNR=2.8							

*NEIC **31** 16:30:38.9, 15°.75N×95°.97W, h17km, MD4.2(MEX), After MEX.*
MEX 31 16:30:39.0±0.4, 15°.79N×95°.96W, h13km±7km, MD4.2, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HUIG	**Huatulco**	**0.15**	**261**	*i* P		Pg	16 30 42.0	-0.6
HUIG				*e*S		Sg	16 30 44.6	-0.6
HUIG	**Huatulco**	**0.15**	**261**	*i* P		Pg	16 30 42.0	-0.6
HUIG				*e*S		Sg	16 30 44.6	-0.6
VHO	**Vista Hermosa**	**1.48**	**330**	*i* P		Pn	16 31 01.9	-3.4
VHO				*e*S		Sn	16 31 19.6	-4.9
VHO	**Vista Hermosa**	**1.48**	**330**	*i* P		Pn	16 31 01.9	-3.4
VHO				*e*S		Sn	16 31 19.6	-4.9
OXX	**Oaxaca**	**1.48**	**330**	*i* P		Pn	16 31 01.4	-3.9
OXX				*i* S		Sn	16 31 19.8	-4.8
OXX	**Oaxaca**	**1.48**	**330**	*i* P		Pn	16 31 01.4	-3.9
OXX				*i* S		Sn	16 31 19.8	-4.8
PNIG	**Pinotepa**	**2.17**	**286**	*i* P		Pn	16 31 12.1	-2.8
PNIG				*i* S		Sn	16 31 37.1	-4.6
PNIG	**Pinotepa**	**2.17**	**286**	*i* P		Pn	16 31 12.1	-2.8
PNIG				*i* S		Sn	16 31 37.1	-4.6
UTMO	**Huajuapan**	**2.69**	**319**	*i* P		Pn	16 31 20.6	-1.4
UTMO				*e*S		Sn	16 31 50.3	-4.2
TPIG	**Tehuac#an**	**2.94**	**333**	*i* P		Pn	16 31 23.8	-1.7
TPIG				*e*S		Sn	16 31 57.5	-3.1

GUC 31 16:40:18.5±1.0, 22°.56S×68°.54W, h87km±32km, ML3.8, 1C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MACH	**Maria Elena**	**1.18**	**288**	⇑*i*P		Pn	16 40 41.4	+1.2
MACH				*i* S		Sn	16 40 58.0	+1.5
MACH				AML		AML	16 40 59.2	
	comp=N,65nm,0.1s							
TOCH	**Tocopilla**	**1.61**	**286**	⇓*i*P		Pn	16 40 46.2	+0.7
TOCH				*i* S		Sn	16 41 06.7	+0.7
TOCH				AML		AML	16 41 12.7	
	comp=N,2µm,0.1s							
CEN1	**Los Morros**	**1.74**	**241**	⇓*i*P		Pn	16 40 47.5	+0.4
CEN1				*e*S		Sn	16 41 11.6	+2.6
CEN1				AML		AML	16 41 16.2	
	comp=N,1µm,0.7s							
MECH	**Mejillones**	**1.84**	**253**	⇓*i*P		Pn	16 40 48.6	+0.1
MECH				*i* S		Sn	16 41 13.0	+1.6
MECH				AML		AML	16 41 17.2	
	comp=E,2µm,0.5s							
ANCH	**Antofagasta**	**2.05**	**237**	AML		AML	16 41 15.0	
	comp=E,4µm,0.0s							
HMBC	**Humberston**	**2.59**	**331**	⇓*i*P		Pn	16 40 59.8	+1.3
HMBC				AML		AML	16 41 41.0	
	comp=N,622nm,0.7s							
MNMC	**Miaee Miæ**	**3.55**	**344**	*i* P		Pn	16 41 13.3	+1.9

*IDC **31** 16:45:01.1±2.1, 7°.56S×118°.86E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.4/20, mbtmp3.4/5, ML3.3/2, Error ellipse: s-maj=198.3km s-min=20.9km az=55.0*
*ISCJB **31** 16:45:03.0±0.7, 7°.90S±0°.07×118°.53E±0°.09, h33km, mb3.6/3, Error ellipse: s-maj=12.6km s-min=10.0km az=162.7*
*DJA **31** 16:45:04, 7°.91S×118°.53E, h47km, MLv4.0/3*
ISC 31 16:45:04.9±0.7, 7°.92S±0°.06×118°.56E±0°.09, h35km, n11, σ1§02/11, mb3.6/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WSI	**Waingapu**	**2.44**	**135**	P		Px	16 45 57.5	
BKSI	**Bulukumba**	**3.02**	**31**	P		**Pn**	**16 45 48.7**	**-1.5**
DNP	**Denpasar**	**3.39**	**257**	P		**Pn**	**16 45 54.6**	**-0.8**
MMRI	**Maumere**	**3.71**	**101**	P		**Pn**	**16 46 00.0**	**+0.2**
SPSI	**Sidrap Palu**	**4.11**	**17**	P		**Pn**	**16 46 05.5**	**+0.2**
TTSI	**Tana Toraja**	**5.00**	**15**	P		**Pn**	**16 46 17.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**12.24**	**146**	Pn		**Pn**	**16 47 57.9**	**+1.1**
	0.1nm,0.3s,baz=321,slow=13,SNR=2.9							
FITZ				Sn		**Sn**	**16 50 10.6**	**-1.6**
	0.1nm,0.3s,baz=50,slow=2.2,SNR=3.4							
WRA	**Warramunga Arr**	**19.41**	**130**	P		**Pn**	**16 49 29.2**	**-0.3**
	0.2nm,0.3s,baz=309,slow=11,SNR=6.7							
ASAR	**Alice Springs**	**21.49**	**139**	P		**P**	**16 49 52.9**	**+2.2**
	1.1nm,0.6s,mb3.4,baz=315,slow=9.4,SNR=20							
MKAR	**Makanchi Array**	**63.30**	**333**	P		**P**	**16 55 31.1**	**+0.9**
	0.4nm,0.5s,mb3.8,baz=140,slow=7.9,SNR=7.2							
ZALV	**Zalesovo Beam**	**67.88**	**339**	P		**P**	**16 55 59.4**	**-0.2**
	0.4nm,0.5s,mb3.7,baz=142,slow=4.9,SNR=2.4							

*NDI **31** 17:14:08.5±3.1, 30°.82N×83°.74E, h10km, ML3.7, mb3.7(NEIC)*
*BJI **31** 17:14:13.4, 30°.56N×83°.13E, h9km, mB4.2/1, mb4.1/3*
*IDC **31** 17:14:13.0±0.8, 30°.62N×83°.38E, h0km, mb3.9/14, mb1 4.0/16, mb1mx3.9/28, mbtmp3.9/16, ML3.6/2, MS3.2/4, Ms1 3.2/4, ms1mx2.8/33, Error ellipse: s-maj=23.4km s-min=15.3km az=45.0*
*NEIC **31** 17:14:14.7±0.6, 30°.59N×83°.29E, h10km, mb3.7/4, Error ellipse: s-maj=14.2km s-min=7.5km az=224.0*
ISC 31 17:14:15.2±1.6, 30°.61N±0°.05×83°.36E±0°.04, h13km±10km, n46, σ1§17/50, mb4.0/18, MS3.2/3, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PTH	**Pithoragarh**	**2.92**	**250**	*e*PKP		**Pb**	**17 15 08.4**	**+1.3**
PTH				*e*S		**Sg**	**17 15 48.1**	**-1.0**
JOSI	**Joshimath**	**3.28**	**270**	*e*PKP		**Pb**	**17 15 13.6**	**+0.3**
JOSI				*e*S		**Sb**	**17 15 54.8**	**+1.7**
JOSI				AML		AML	17 16 04.1	
	comp=E,225nm,0.6s							
JOSI				AML		AML	17 16 04.5	
	comp=N,326nm,1.0s							
KLP	**Kalpa**	**4.48**	**283**	*ex*		**Pn**	**17 15 27.6**	**+4.8**
KLP				*e*S		**Sn**	**17 16 13.0**	**-1.8**
DDI	**Dehra Dun**	**4.59**	**268**	*ex*		**Pn**	**17 15 29.2**	**+4.9**
NDI	**New Delhi**	**5.68**	**252**	*e*PKP		**Pn**	**17 15 42.0**	**+2.7**
NDI				*e*S		**Sn**	**17 16 47.0**	**+2.6**
AYAN	**Aya Nagar**	**5.83**	**250**	*e*PKP		**Pn**	**17 15 39.6**	**-1.7**
SONA	**Sohna**	**5.96**	**248**	*e*PKP		**Pn**	**17 15 43.3**	**+0.2**
SONA				*ex*		x	17 16 06.8	
KUDL	**Kundal**	**6.48**	**249**	*e*PKP		**Pn**	**17 15 48.4**	**-1.9**
KUDL				*ex*		x	17 16 52.1	
LSA	**Lhasa**	**6.80**	**96**	Pg		**Pn**	**17 15 58.5**	**+3.8**
LSA				Sg		**Pb**	**17 16 09.5**	**-3.8**
LSA				smax				
	comp=E,160nm,0.9s							
LSA	**Lhasa**	**6.80**	**96**	*e*P		**Pn**	**17 15 58.6**	**+3.9**
	comp=E,25nm,1.0s							
KHET	**Khetri**	**7.06**	**251**	*e*PKP		**Pn**	**17 15 57.4**	**-0.9**
KHET				*e*S		**Sn**	**17 17 13.9**	**-4.5**
KSH	**Kashi**	**10.75**	**328**	P		**Pn**	**17 16 49.0**	**+0.2**
KSH				S		**Sn**	**17 18 42.5**	**-6.5**
KBL	**Kabul**	**12.70**	**292**	*e*P		**Pn**	**17 17 15.8**	**+0.3**
	comp=E,9.0nm,0.8s							
KZA	**Kyzart**	**13.17**	**333**	*e*P		**Pn**	**17 17 23.7**	**+1.8**
AML	**Almayashu**	**13.88**	**329**	*e*P		**Pn**	**17 17 30.7**	**-0.8**
	comp=E,2.8nm,0.8s							
AAK	**Ala-Archa**	**13.94**	**332**	LR		LR	17 23 34.9	
	comp=E,48nm,20.3s,baz=1.4,slow=40							
EKS2	**Erkin-Say**	**14.27**	**330**	*e*P		**Pn**	**17 17 37.8**	**+1.0**
	comp=E,2.6nm,0.8s							
GTA	**Gaotai**	**16.07**	**52**	*e*P		**Pn**	**17 18 04.8**	**+4.0**
GTA				pP		pP	17 18 08.8	+1.0
GTA				sP		sP	17 18 11.8	+2.3
GTA				pmax		pmax		
	comp=Z,5.0nm,0.6s							
KKAR	**Karatay Array**	**16.14**	**324**	*e*P		**Pn**	**17 18 00.3**	**-1.4**
	comp=Z,1.9nm,0.7s							
MK31	**Makanchi Array**	**16.18**	**357**	*e*P		**Pn**	**17 18 04.9**	**+2.6**
MKAR	**Makanchi Array**	**16.18**	**357**	Pn		**Pn**	**17 18 00.9**	**-1.3**
	comp=Z,0.0nm,0.3s,baz=181,slow=12,SNR=3.4							
LZH	**Lanzhou**	**17.95**	**67**	*e*P		**Pn**	**17 18 26.3**	**+1.8**
LZH				pP		pP	17 18 29.5	+0.8
LZH				sP		sP	17 18 32.0	+1.6
LZH				pmax		pmax		
	comp=Z,13nm,1.0s							
CHTO	**Chiang Mai**	**18.37**	**126**	*e*P		**Pn**	**17 18 29.1**	**-0.5**
	comp=Z,3.5nm,1.0s							
CMAR	**Chiang Mai Arr**	**18.61**	**127**	P		**Pn**	**17 18 32.5**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=304,slow=12,SNR=22							
KURK	**Kurchatov**	**20.40**	**351**	P		**P**	**17 18 50.6**	**-1.0**
	comp=Z,4.0nm,0.9s,baz=173,slow=10,SNR=11							
ZAA0	**Zalesovo Array**	**23.35**	**2**	*e*P		**P**	**17 19 21.2**	**-2.0**
ZALV	**Zalesovo Beam**	**23.35**	**2**	P		**P**	**17 19 22.9**	**-0.3**
	comp=Z,1.6nm,0.7s,mb3.6,baz=186,slow=9.9,SNR=6.4							
BVAR	**Borovoye Array**	**24.32**	**341**	P		**P**	**17 19 32.6**	**+0.3**
	comp=Z,0.7nm,0.5s,mb3.3,baz=150,slow=9.9,SNR=6.2							
SONM	**Songino Array**	**24.64**	**39**	P		**P**	**17 19 35.6**	**+0.3**
	comp=Z,1.8nm,0.7s,mb3.7,baz=231,slow=10,SNR=12							
SONM				LR		LR	17 30 03.7	
	comp=Z,67nm,19.0s,MS3.2,baz=107,slow=39							
ULN	**Ulaanbaatar**	**25.02**	**40**	*e*P		**P**	**17 19 39.2**	**+0.5**
	comp=Z,3.6nm,1.0s,mb3.9							
ABKAR	**Akbulak array**	**25.70**	**323**	*e*P		**P**	**17 19 45.5**	**+0.6**
	comp=Z,2.2nm,0.6s,mb3.9							
KSRS	**Korea Array**	**37.28**	**67**	P		**P**	**17 21 25.9**	**-0.9**
	comp=Z,1.0nm,0.5s,mb3.9,baz=278,slow=9.4,SNR=6.0							
KSRS				LR		LR	17 38 01.0	
	comp=Z,35nm,20.3s,MS3.1,baz=295,slow=38							
AKASG	**Malin Array Be**	**44.59**	**313**	P		**P**	**17 22 26.6**	**-0.3**
	comp=Z,0.4nm,0.4s,mb3.6,baz=89,slow=6.8,SNR=3.7							
ASAJ	**Asahikawa**	**48.00**	**56**	LR		LR	17 44 00.1	
	comp=Z,37nm,21.8s,MS3.3,baz=35,slow=37							
FINES	**FINESS Array B**	**48.07**	**327**	P		**P**	**17 22 53.9**	**-0.2**
	comp=Z,2.9nm,0.8s,mb4.3,baz=120,slow=7.5,SNR=7.6							
ARCES	**ARCESS Array B**	**50.54**	**337**	P		**P**	**17 23 13.1**	**+0.2**
	comp=Z,3.1nm,0.8s,mb4.3,baz=96,slow=6.2,SNR=6.5							
NOA	**NORSAR Array B**	**55.17**	**326**	P		**P**	**17 23 46.3**	**-0.8**
	comp=Z,1.7nm,0.9s,mb4.1,baz=90,slow=6.9,SNR=4.0							
LPG	**La Plagne**	**59.96**	**308**	*e*P		**P**	**17 24 21.0**	**-0.2**
	comp=Z,6.5nm,0.9s,mb4.3							
LPL	**La Plagne**	**59.97**	**308**	*e*P		**P**	**17 24 21.0**	**-0.2**
	comp=Z,3.4nm,0.6s,mb4.2							
MBDF	**Montbardon**	**60.14**	**307**	*e*P		**P**	**17 24 25.1**	**+2.7**
	comp=Z,12nm,1.3s,mb4.5							
KEST	**Kesra**	**60.81**	**296**	P		**P**	**17 24 27.6**	**+0.5**
	comp=Z,2.3nm,1.1s,mb4.2,baz=79,slow=5.2,SNR=3.8							
WRA	**Warramunga Arr**	**70.19**	**129**	P		**P**	**17 25 28.1**	**+0.3**
	comp=Z,1.5nm,0.5s,mb4.1,baz=323,slow=6.4,SNR=13							
ASAR	**Alice Springs**	**72.53**	**132**	P		**P**	**17 25 42.0**	**0.0**
	comp=Z,0.5nm,0.7s,mb3.5,baz=318,slow=5.5,SNR=5.8							
TORD	**Torodi Ar. Bea**	**76.34**	**277**	P		**P**	**17 26 04.4**	**0.0**
	comp=Z,1.6nm,0.8s,mb4.0,baz=61,slow=5.1,SNR=7.1							
ILAR	**Eielson Array**	**77.21**	**20**	P		**P**	**17 26 07.5**	**-1.0**
	comp=Z,1.0nm,1.0s,mb3.7,baz=304,slow=4.9,SNR=6.5							
CPUP	**Villa Florida**	**145.30**	**267**	PKPbc		PKPbc	17 33 52.3	-0.6
	comp=Z,3.8nm,1.0s,baz=119,slow=2.3,SNR=4.8							

IDC 31 17:14:49.3±1.9, 7°.77S×118°.59E, h0km, mb3.5/5, mb1 3.5/6, mb1mx3.4/19, mbtmp3.5/6, ML3.4/1, Error ellipse: s-maj=141.0km s-min=21.5km az=54.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.48**	**130**	P		Pn	17 19 17.9	-1.2
	0.1nm,0.3s,baz=309,slow=11,SNR=4.3							
ASAR	**Alice Springs**	**21.58**	**139**	P		P	17 19 40.9	+0.2
	0.8nm,0.6s,baz=315,slow=9.1,SNR=17							
SONM	**Songino Array**	**56.40**	**350**	P		P	17 24 32.9	+0.5
	0.3nm,0.6s,baz=179,slow=5.8,SNR=2.7							
MKAR	**Makanchi Array**	**63.18**	**333**	P		P	17 25 19.6	+0.5
	0.4nm,0.6s,baz=137,slow=6.9,SNR=4.8							
ZALV	**Zalesovo Beam**	**67.75**	**339**	P		P	17 25 47.9	-0.7
	0.5nm,0.4s,baz=162,slow=8.0,SNR=3.1							
BVAR	**Borovoye Array**	**73.02**	**332**	P		P	17 26 21.1	+0.3
	0.4nm,0.5s,baz=116,slow=6.6,SNR=5.2							

*IDC **31** 17:16:34.3±1.1, 11°.93N×143°.70E, h0km, mb3.4/6, mb1 3.6/7, mb1mx3.4/25, mbtmp3.4/7, Error ellipse: s-maj=34.7km s-min=18.5km az=109.0*
*ISCJB **31** 17:16:37.5±3.4, 11°.9N±0°.1×143°.6E±0°.3, h34km±35km, mb3.5/6, Error ellipse: s-maj=46.0km s-min=17.7km az=16.0*
*NEIC **31** 17:16:37.8±7.8, 11°.93N×143°.69E, h23km±60km, mb4.0/1, Error ellipse: s-maj=40.0km s-min=13.5km az=99.0*
ISC 31 17:16:36.7±7.1, 11°.9N±0°.1×143°.7E±0°.2, h15km±45km, n9, σ0§45/11, mb3.5/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**2.01**	**35**	*e*P		**Pn**	**17 17 10.3**	**+0.2**
GUMO				*e*S		**Sn**	**17 17 34.4**	**-0.7**
GUMO	**Guam**	**2.01**	**35**	Pn		**Pn**	**17 17 09.9**	**-0.2**
	13nm,0.3s,baz=211,slow=11,SNR=15							
GUMO				Sn		**Sn**	**17 17 35.7**	**+0.7**
	40nm,0.3s,baz=202,slow=19,SNR=26							
WRA	**Warramunga Arr**	**32.98**	**196**	P		**P**	**17 23 10.6**	**-0.6**
	0.6nm,0.6s,mb3.7,baz=19,slow=9.9,SNR=2.8							
ASAR	**Alice Springs**	**36.65**	**195**	P		**P**	**17 23 43.5**	**+0.6**
	0.3nm,0.7s,mb3.2,baz=20,slow=13,SNR=4.6							
MKAR	**Makanchi Array**	**61.90**	**317**	P		**P**	**17 26 55.9**	**+0.3**
	0.1nm,0.5s,mb3.2,baz=102,slow=6.7,SNR=2.9							
KURK	**Kurchatov**	**65.12**	**321**	*e*P		**P**	**17 27 16.6**	**-0.3**
	0.9nm,0.7s,mb3.9							
KURK	**Kurchatov**	**65.12**	**321**	P		**P**	**17 27 17.3**	**+0.5**
	0.5nm,0.7s,mb3.6,baz=107,slow=6.5,SNR=3.8							
BVAR	**Borovoye Array**	**70.52**	**322**	P		**P**	**17 27 50.5**	**-0.4**
	0.3nm,0.3s,mb3.6,baz=92,slow=6.6,SNR=4.4							
ILAR	**Eielson Array**	**70.55**	**25**	P		**P**	**17 27 50.7**	**-0.1**
	0.2nm,0.6s,mb3.2,baz=264,slow=5.3,SNR=4.1							

*ISCJB **31** 17:22:42.5±0.7, 42°.38N±0°.03×25°.94E±0°.04, h2km±6km, Error ellipse: s-maj=5.3km s-min=3.9km az=44.3*
*CSEM **31** 17:22:43.2±0.2, 42°.35N×25°.96E, h5km, ML2.6/1, Error ellipse: s-maj=5.7km s-min=5.1km az=103.0*
*THE **31** 17:22:43.3, 42°.37N×25°.98E, h2km±2km, ML2.6/1, Error ellipse: s-maj=3.4km s-min=0.7km az=352.0*
ISC 31 17:22:43.4±0.7, 42°.37N±0°.03×25°.95E±0°.04, h4km±5km, n43, σ1§18/54, 11C-7D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JMB	**Yambol**	**0.48**	**78**	P		**Pg**	**17 22 52.1**	**-0.5**
JMB				S		**Sg**	**17 22 58.5**	**-0.3**
JMB	**Yambol**	**0.48**	**78**	P		**

1.6nm,1.2s,mb3.9,baz=52,slow=8.0,SNR=4.3
TXAR Lajitas Array 57.44 82 P **P** 18 00 29.6 **-0.4**
1.0nm,0.8s,mb3.9,baz=300,slow=5.5,SNR=9.6
ARCES ARCESS Array B 59.71 351 P **P** 18 00 45.4 **+0.1**
1.6nm,0.6s,mb4.3,baz=20,slow=8.8,SNR=11
MKAR Makanchi Array 62.03 310 P **P** 18 01 00.9 **-0.5**
0.2nm,0.5s,mb3.5,baz=44,slow=5.3,SNR=4.2
NOA NORSAR Array B 69.16 356 P **P** 18 01 47.3 **+0.1**
0.5nm,0.8s,mb3.5,baz=6.7,slow=6.9,SNR=3.2
CMAR Chiang Mai Arr 72.61 278 P **P** 18 02 08.1 **-0.7**
0.5nm,0.6s,mb3.6,baz=38,slow=7.0,SNR=2.4
WRA Warramunga Arr 82.03 226 P **P** 18 02 59.8 **-1.6**
0.4nm,0.6s,mb3.5,baz=32,slow=5.8,SNR=7.6
BRTR Keskin Array B 86.81 337 P **P** 18 03 25.4 **-0.1**
0.7nm,0.6s,mb4.1,baz=28,slow=4.7,SNR=4.0
MAW Mawson 146.23 216 PKPbc PKPbc 18 10 19.1 -1.2
0.8nm,0.7s,baz=107,slow=8.0,SNR=4.4

*ISCJB **31** 17:56:44.2±1.1,26.27N±0.04×102.2E±0.2,h10km, mb3.4/3,Error ellipse: s-maj=22.6km s-min=5.7km az=175.3*
*IDC **31** 17:56:44.9±1.5,26.38N×102.43E,h0km,mb3.4/3, mb1 3.7/3,mb1mx3.3/22,mbtmp3.4/3,Error ellipse: s-maj=69.4km s-min=27.7km az=61.0*
*BJI **31** 17:56:47.2,26.17N×101.87E,h15km,ML3.5/8*
ISC 31 17:56:46.6±1.1,26.17N±0.05×102.1E±0.2,h10km,n6, σ0s90/8,mb3.4/3,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KMI	**Kunming**	**1.20**	**150**	Pg		**Pg**	**17 57 09.0**	**-0.6**
KMI				Sg		**Sg**	**17 57 25.5**	**+0.3**
KMI				smax				
	comp=N,270nm,0.9s							
KMI				smax				
	comp=E,310nm,0.6s							
KMI				LR	LR			
	comp=N,360nm,3.8s							
KMI				LR	LR			
	comp=E,250nm,3.8s							
KMI				LR	LR			
	comp=Z,180nm,7.1s							
CD2	**Chengdu**	**4.95**	**17**	Pn		**Pn**	**17 58 03.3**	**+2.3**
CD2				Pg		**Pg**	**17 58 17.3**	**-4.2**
CD2				Sg		**Sg**	**17 59 25.0**	**-0.6**
CD2				smax				
	comp=N,80nm,0.8s							
CD2				smax				
	comp=E,90nm,0.8s							
CMAR	**Chiang Mai Arr**	**8.20**	**201**	Pg		Px	17 59 19.7	
	comp=E,0.2nm,0.3s,baz=8.7,slow=19,SNR=6.5							
CMAR				Lg			18 01 08.6	
	comp=E,0.1nm,0.3s,baz=14,slow=30,SNR=11							
MKAR	**Makanchi Array**	**25.89**	**328**	P		**P**	**18 02 18.2**	**-0.3**
	comp=E,0.3nm,0.5s,mb3.0,baz=123,slow=13,SNR=4.1							
WRA	**Warramunga Arr**	**55.51**	**142**	P		**P**	**18 06 21.7**	**-0.3**
	comp=E,0.8nm,0.7s,mb3.9,baz=330,slow=8.5,SNR=11							
ASAR	**Alice Springs**	**58.33**	**145**	P		**P**	**18 06 42.0**	**0.0**
	comp=E,0.2nm,0.5s,mb3.4,baz=327,slow=7.6,SNR=4.5							

IDC 31 17:58:02.1±2.2,6.61S×149.99E,h0km,mb3.2/3, mb1 3.6/3,mb1mx3.3/15,mbtmp3.3/3,Error ellipse: s-maj=141.2km s-min=30.6km az=127.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
WRA	**Warramunga Arr**	**20.16**	**227**	P		P	18 02 38.8	+0.6
	0.4nm,0.6s,baz=53,slow=11,SNR=5.8							
ASAR	**Alice Springs**	**22.94**	**221**	P		P	18 03 07.6	-0.5
	0.5nm,0.8s,baz=54,slow=9.7,SNR=7.4							
ILAR	**Eielson Array**	**84.89**	**23**	P		P	18 10 38.8	+0.2
	0.4nm,0.7s,baz=233,slow=5.5,SNR=4.6							

KRSC 31 18:15:49.3±0.9,49.43N×157.12E,h47km±46km,ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
ALID	**Alaid**	**1.76**	**326**	*e*P		Pn	18 16 18.4	+1.1
ALID				*i* S		Sn	18 16 39.4	+1.0
MIPR	**Malaya Ipel'ka**	**2.86**	**356**	*e*P		Pn	18 16 35.8	+3.5
MIPR				*e*S		Sn	18 17 10.5	+5.0
PET	**Petropavlovsk**	**3.73**	**14**	*e*P		Pn	18 16 48.0	+3.8
PET				*i* S		Sn	18 17 31.0	+4.2
NLC	**Nalytchevo**	**4.00**	**20**	*e*P		Pn	18 16 51.0	+3.1
NLC				*i* S		Sn	18 17 36.3	+2.8
MKZ	**Mys Kozlova**	**5.87**	**27**	*e*P		Pn	18 17 16.7	+3.1
MKZ				*i* S		Sn	18 18 21.0	+1.5
KBTR	**Krutoberegovo**	**7.61**	**25**	*e*P		Pn	18 17 41.3	+3.8

*TAP **31** 18:22:07.0,22.95N×120.96E,h5km,ML3.7,C*
*JMA **31** 18:22:06.6±0.3,22.70N×120.97E,h50km,M3.2*
*NEIC **31** 18:22:07.7±1.1,22.97N×120.99E,h10km,Error ellipse: s-maj=16.6km s-min=10.2km az=72.0*
ISC 31 18:22:07.9±0.2,22.96N±0.01×121.04E±0.02,h4km±3km, n71,σ1s08/128,1C-14D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
TWG	**Pinlang**	**0.14**	**169**	*e*Pg		**Pg**	**18 22 11.0**	**+0.4**
TWG				*e*Sg		**Sg**	**18 22 13.5**	**+1.1**
TWG	**Pinlang**	**0.14**	**169**	⇓*i*P		**Pg**	**18 22 11.3**	**+0.7**
	baz=140							
TWG				*i* S		**Sg**	**18 22 13.9**	**+1.5**
	baz=140							
TTN	**Taitung**	**0.22**	**154**	*i* P		**Pg**	**18 22 13.8**	**+1.6**
	baz=138							
TTN				S		**Sg**	**18 22 18.7**	**+3.6**
	baz=138							
ELDTW	**Lidau**	**0.23**	**354**	⇓*i*P		**Pg**	**18 22 12.4**	**-0.1**
	baz=12							
ELDTW				*i* S		**Sg**	**18 22 15.9**	**+0.4**
	baz=12							
CHKT	**Chengkung**	**0.33**	**64**	⇓*i*P		**Pg**	**18 22 16.6**	**+2.4**
	baz=56							
CHKT				*e*S		**Sg**	**18 22 23.9**	**+5.3**
	baz=56							
STYT	**Tauyuan**	**0.34**	**308**	⇓*i*P		**Pg**	**18 22 13.2**	**-1.2**
	baz=318							
STYT				*i* S		**Sg**	**18 22 17.1**	**-1.7**
	baz=318							
ECL	**Taimali**	**0.37**	**193**	⇑*e*P		**Pg**	**18 22 14.1**	**-0.9**
	baz=183							
ECL				*e*S		**Sg**	**18 22 18.3**	**-1.4**
	baz=183							
SSD	**Sandimen**	**0.43**	**241**	⇓*i*P		**Pg**	**18 22 13.8**	**-2.4**
	baz=230							
SSD				*e*S		**Sg**	**18 22 18.1**	**-3.8**
	baz=230							
SGST	**Jiashian**	**0.44**	**287**	⇓*i*P		**Pg**	**18 22 15.3**	**-1.1**
	baz=296							
SGST				S		**Sg**	**18 22 20.7**	**-1.5**
	baz=296							
TWF1	**Yuli**	**0.46**	**31**	⇓*i*P		**Pg**	**18 22 17.4**	**+0.6**
	baz=35							
TWF1				S		**Sg**	**18 22 23.8**	**+1.0**
	baz=35							
WTP	**Ta-pu**	**0.49**	**306**	⇓*i*P		**Pg**	**18 22 16.7**	**-0.6**
	baz=316							
WTP				*e*S		**Sg**	**18 22 23.2**	**-0.5**
	baz=316							
YULB	**Yu-li**	**0.49**	**28**	*e*Pg		**Pg**	**18 22 17.1**	**-0.3**
TPUB	**Ta-pu**	**0.51**	**312**	*e*Pg		**Pg**	**18 22 16.9**	**-0.9**
CHN1	**Nanshi**	**0.53**	**296**	⇓*i*P		**Pg**	**18 22 17.4**	**-0.6**
	baz=306							
CHN1				*e*S		**Sg**	**18 22 25.2**	**+0.3**
	baz=306							
YUS	**Yu-Shan**	**0.54**	**351**	⇓*i*P		**Pg**	**18 22 18.1**	**-0.2**
	baz=5.0							
YUS				*e*S		**Sg**	**18 22 25.2**	**-0.1**
	baz=5.0							
SGLT	**Jiouru**	**0.56**	**246**	⇓*i*P		**Pg**	**18 22 17.5**	**-1.2**
	baz=245							
SGLT				*e*S		**Sg**	**18 22 26.5**	**+0.6**
	baz=245							
CHN4	**Tsaushan**	**0.57**	**314**	P		**Pg**	**18 22 18.6**	**-0.3**
	baz=326							
CHN4				*e*S		**Sg**	**18 22 26.5**	**+0.2**
	baz=326							
TWM1	**Shoushan**	**0.59**	**257**	⇓*i*P		**Pg**	**18 22 18.4**	**-0.8**
	baz=250							
TWM1				*e*S		**Sg**	**18 22 27.7**	**+0.9**
	baz=250							
ALS	**Alishan**	**0.59**	**338**	⇓*i*P		**Pg**	**18 22 18.9**	**-0.4**
	baz=345							
ALS				S		**Sg**	**18 22 27.3**	**+0.2**
	baz=345							
EAST	**Anshuo**	**0.60**	**198**	P		**Pg**	**18 22 18.4**	**-1.0**
	baz=192							
EAST				*e*S		**Sg**	**18 22 28.2**	**+1.0**
	baz=192							
EHY	**Hungye**	**0.60**	**25**	P		**Pg**	**18 22 19.6**	**0.0**
	baz=29							
EHY				*e*S		**Sg**	**18 22 28.0**	**+0.6**
	baz=29							
TAW	**Tawu**	**0.61**	**193**	P		**Pg**	**18 22 18.7**	**-0.9**
	baz=198							
TAW				*e*S		**Sg**	**18 22 27.9**	**+0.4**
	baz=198							
CHN3	**Shinhua**	**0.64**	**281**	*e*P		**Pg**	**18 22 20.5**	**+0.3**
	baz=286							
CHN3				*e*S		**Sg**	**18 22 31.3**	**+2.9**
	baz=286							
SCZT	**Fangliau**	**0.70**	**214**	P		**Pg**	**18 22 19.6**	**-1.8**
	baz=209							
CHN5	**Tsauling**	**0.72**	**332**	⇓P		**Pg**	**18 22 21.5**	**-0.3**
	baz=337							
CHN5				*e*S		**Sg**	**18 22 31.7**	**+0.5**
	baz=337							
TAI1	**Yung-k'ang**	**0.76**	**277**	*e*P		**Pg**	**18 22 21.7**	**-0.8**
	baz=295							
TAI1				*e*S		**Sg**	**18 22 35.1**	**+2.9**
	baz=295							
KAU	**Kaohsiung**	**0.78**	**241**	*e*P		**Pg**	**18 22 22.9**	**0.0**
	baz=229							
CHY	**Chiayi**	**0.79**	**314**	*e*P		**Pg**	**18 22 22.5**	**-0.5**
	baz=317							
CHY				*e*S		**Sg**	**18 22 33.5**	**+0.3**
	baz=317							
SCLT	**Jiali**	**0.81**	**286**	*e*P		**Pg**	**18 22 23.4**	**-0.1**
	baz=302							
SCLT				*e*S		**Sg**	**18 22 36.6**	**+2.5**
	baz=302							
SSLB	**Suanglung**	**0.83**	**354**	*e*P		**Pg**	**18 22 22.3**	**-1.6**
WGK	**Gukeng**	**0.85**	**329**	*e*P		**Pg**	**18 22 24.6**	**+0.3**
	baz=332							
WGK				*e*S		**Sg**	**18 22 36.3**	**+0.9**
	baz=332							
TWP	**Hsiaoliuchiu**	**0.87**	**226**	*e*P		**Pg**	**18 22 25.7**	**+1.0**
	baz=216							
TWP				*e*S		**Sg**	**18 22 40.6**	**+4.6**
	baz=216							
ESL	**Shilin**	**0.93**	**23**	P		**Pg**	**18 22 25.0**	**-0.8**
	baz=31							
ESL				*e*S		**Sg**	**18 22 39.5**	**+1.7**
	baz=31							
TYC	**Yuchr**	**0.96**	**350**	P		**Pg**	**18 22 25.9**	**-0.5**
	baz=1.0							
TYC				*e*S		**Sg**	**18 22 40.4**	**+1.5**
	baz=1.0							
WNT	**Mingjian**	**0.98**	**340**	*e*P		**Pg**	**18 22 26.9**	**+0.2**
	baz=343							
WNT				*e*S		**Sg**	**18 22 41.0**	**+1.7**
	baz=343							
HEN	**Hengchun**	**0.99**	**197**	*e*P		**Pg**	**18 22 26.6**	**-0.2**
	baz=196							
HEN				*e*S		**Sg**	**18 22 40.9**	**+1.3**
	baz=196							
LAY	**Lan-yu**	**1.03**	**153**	*e*P		**Pg**	**18 22 26.6**	**-1.0**
	baz=148							
TWK1	**Hengchun**	**1.03**	**192**	*e*P		**Pg**	**18 22 27.9**	**+0.2**
	baz=192							
TWK1				*e*S		**Sg**	**18 22 42.6**	**+1.5**
	baz=192							
TSEB	**Hengchuen, Pin**	**1.06**	**187**	*e*P		**Pg**	**18 22 29.1**	**+0.9**
	baz=198							
TSEB				*e*S		**Sg**	**18 22 44.8**	**+2.9**
	baz=198							
HWA	**Hwalien**	**1.14**	**27**	*e*P		**Pg**	**18 22 30.6**	**+0.8**
	baz=30							
WTCT	**Ta-ch'eng**	**1.14**	**322**	*e*P		**Pg**	**18 22 29.1**	**-0.7**
	baz=324							
WTCT				*e*S		**Sg**	**18 22 45.7**	**+0.9**
	baz=324							
WHF	**Hehuan Shan**	**1.20**	**10**	*e*P		**Pg**	**18 22 29.9**	**-1.1**
	baz=17							
WHF				S		**Sg**	**18 22 46.9**	**+0.4**
	baz=17							
TWD	**Chiawan**	**1.23**	**24**	*e*P		**Pg**	**18 22 30.5**	**-1.0**
	baz=33							
TWD				*e*S		**Sg**	**18 22 48.2**	**+0.7**
	baz=33							
TCU	**Taichung**	**1.23**	**344**	*e*P		**Pg**	**18 22 31.9**	**+0.3**
	baz=346							
TCU				*e*S		**Sg**	**18 22 48.7**	**+1.1**
	baz=346							
TWT	**Tachien**	**1.30**	**5**	*e*P		**Pn**	**18 22 32.2**	**-0.7**
	baz=16							
TWT				*e*S		**Sg**	**18 22 50.0**	**+0.3**
	baz=16							
NACB	**Ninganchiao**	**1.31**	**23**	*e*P		**Pn**	**18 22 32.3**	**-0.8**
TWQ1	**Liyutan**	**1.41**	**350**	*e*P		**Pn**	**18 22 35.0**	**+0.6**
	baz=351							
TWQ1				*e*S		**Sb**	**18 22 55.0**	**+1.8**
	baz=351							
NSY	**Sanyi**	**1.48**	**350**	*e*P		**Pn**	**18 22 35.9**	**+0.5**
	baz=351							
NSY				*e*S		**Sg**	**18 22 57.6**	**+2.1**
	baz=351							
PNG	**Penghu**	**1.50**	**294**	P		**Pn**	**18 22 33.2**	**-2.4**
	baz=294							
PNG				S		**Sn**	**18 22 52.0**	**-3.7**
	baz=294							
ENA	**Nanau**	**1.60**	**23**	*e*P		**Pn**	**18 22 35.6**	**-1.5**
	baz=25							
ENA				*e*S		**Sn**	**18 22 59.3**	**+1.2**
	baz=25							
YHNB	**Yeheng**	**1.73**	**10**	*e*Pn		**Pn**	**18 22 39.9**	**+1.0**
NSK	**Sanguang**	**1.74**	**9**	*e*P		**Pn**	**18 22 39.9**	**+1.0**
	baz=21							
NSK				*e*S		**Sg**	**18 23 03.2**	**-0.6**
	baz=21							
ENTT	**Nioudou**	**1.74**	**16**	*e*P		**Pn**	**18 22 38.9**	**-0.1**
	baz=31							
ENTT				*e*S		**Sg**	**18 23 04.7**	**+0.7**
	baz=31							
TWC	**Suao**	**1.81**	**24**	*e*P		**Pn**	**18 22 40.0**	**+0.2**
	baz=26							
TWC				*e*S		**Sg**	**18 23 05.3**	**-0.6**
	baz=26							
HSN	**Hsinchu**	**1.84**	**358**	*e*P		**Pg**	**18 22 43.3**	**+0.1**
	baz=345							
TWE	**Neicheng**	**1.85**	**18**	*e*P		**Pg**	**18 22 42.1**	**-1.2**
	baz=40							
TWE				*e*S		**Sg**	**18 23 06.6**	**-0.7**
	baz=40							
NCU	**National Centr**	**2.01**	**4**	*e*P		**Pg**	**18 22 45.9**	**-0.6**
	baz=6.0							
TATO	**Taipei**	**2.05**	**11**	*e*Pn		**Pn**	**18 22 45.0**	**+1.8**
TWA	**Mucha**	**2.08**	**14**	*e*P		**Pn**	**18 22 44.7**	**+1.1**
	baz=30							
TWA				*e*S		**Sg**	**18 23 15.6**	**+1.0**
	baz=30							
TAP1	**Taipei**	**2.12**	**12**	*e*P		**Pn**	**18 22 45.4**	**+1.2**
	baz=26							
TAP1				*e*S		**Sn**	**18 23 11.9**	**+0.9**
	baz=26							
TWS1	**Kuangyinshan**	**2.16**	**9**	*e*P		**Pg**	**18 22 47.5**	**-1.9**
	baz=19							
TWS1				*e*S		**Sg**	**18 23 16.2**	**-1.2**
	baz=19							
NWF	**Wu-fen Shan**	**2.21**	**18**	*e*P		**Pn**	**18 22 46.7**	**+1.2**
	baz=34							
NWF				*e*S		**Sg**	**18 23 17.5**	**-1.5**
	baz=34							
TWB1	**Santiao Chiao**	**2.22**	**23**	*e*P		**Pn**	**18 22 46.5**	**+1.0**
	baz=38							
TWB1				*e*S		**Sg**	**18 23 16.6**	**-2.7**
	baz=38							
YOJ	**Yonaguni jima**	**2.34**	**50**	P		**Pn**	**18 22 46.8**	**-0.5**
YOJ				*e*S		**Sn**	**18 23 16.7**	**+0.1**
TWY	**Chenhua**	**2.37**	**12**	*e*P		**Pg**	**18 22 51.2**	**-2.1**
	baz=31							
HATJ	**Hateruma jima**	**2.76**	**66**	P		**Pn**	**18 22 52.0**	**-1.0**
HATJ				*e*S		**Sn**	**18 23 25.9**	**-1.0**
IRIF	**Iriomote-Funau**	**2.82**	**60**	P		**Pn**	**18 22 53.6**	**-0.2**
IRIF				*e*S		**Sn**	**18 23 28.8**	**+0.5**
JKRS	**Kuro-shima**	**3.00**	**64**	P		**Pn**	**18 22 55.7**	**-0.7**
JKRS				*e*S		**Sn**	**18 23 31.8**	**-1.1**
JIJ	**Ishigaki jima**	**3.17**	**63**	P		**Pn**	**18 22 57.6**	**-1.0**
JIJ				*e*S		**Sn**	**18 23 36.4**	**-0.5**
JTJ	**Tarama**	**3.75**	**63**	P		**Pn**	**18 23 05.8**	**-0.8**
JTJ				*e*S		**Sn**	**18 23 51.8**	**+0.6**
JOGS	**Gusukube**	**4.38**	**65**	P		**Pn**	**18 23 14.9**	**-0.4**

*IDC **31** 18:34:22.9±0.9,6.12S×155.06E,h122km±6km,mb3.8/12, mb1 4.0/12,mb1mx3.9/17,mbtmp3.8/12,Error ellipse: s-maj=25.2km s-min=13.4km az=97.0*
*NEIC **31** 18:34:23.4±0.5,5.99S×154.85E,mb3.9/1,Error ellipse: s-maj=13.2km s-min=10.0km az=78.0*
*ISCJB **31** 18:34:28.1±1.6,6.13S±0.08×155.03E±0.08,h186km±15km, mb3.9/13,Error ellipse: s-maj=14.0km s-min=13.5km az=35.6*
ISC 31 18:34:27.8±1.9,6.10S±0.09×154.95E±0.10,h166km±20km, h121km±2.4km:pP-P,n28,σ0s79/26,mb3.9/13, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
HNR	**Honiara**	**5.95**	**124**	P		**Pn**	**18 35 53.6**	**-0.4**
	4.7nm,0.3s,baz=6.3,slow=18,SNR=2.3							
PMG	**Port Moresby**	**8.39**	**246**	P		**Pn**	**18 36 30.0**	**+3.6**
CTA	**Charters Tower**	**16.27**	**210**	P		**Pn**	**18 38 08.2**	**+1.1**
	0.3nm,0.3s,baz=26,slow=14,SNR=6.2							
DZM	**Mont Dzumac**	**19.37**	**146**	*e*P		**P**	**18 38 40.7**	**-0.2**
DZM	**Mont Dzumac**	**19.37**	**146**	*e*P		**P**	**18 38 40.5**	**-0.4**
EIDS	**Eidsvold**	**19.51**	**191**	*e*P		**P**	**18 38 42.7**	**+0.3**
KAKA	**Kakadu**	**23.15**	**252**	*e*P		**P**	**18 39 19.2**	**-0.5**
WB2	**Warramunga Arr**	**24.29**	**234**	*e*P		**P**	**18 39 30.3**	**+0.3**
WB2				*e*pP			18 39 58.5	
WRA	**Warramunga Arr**	**24.30**	**234**	P		**P**	**18 39 30.2**	**+0.1**
WRA				pP			18 39 57.0	
WRA				PcP		PcP	18 43 06.1	+0.4
WRA	**Warramunga Arr**	**24.30**	**234**	P		**P**	**18 39 30.2**	**+0.1**
	8.4nm,0.6s,mb4.5,baz=56,slow=9.7,SNR=57							
WRA				pP			18 39 57.0	
	16nm,1.1s,baz=58,slow=9.5,SNR=7.6							
WRA				PcP		PcP	18 43 06.1	+0.4
	0.8nm,0.8s,baz=70,slow=2.6,SNR=5.1							
ASAR	**Alice Springs**	**26.74**	**227**	P		**P**	**18 39 51.7**	**-0.4**
	1.0nm,0.5s,mb3.7,baz=58,slow=9.2,SNR=38							
ASAR				PcP		PcP	18 43 11.6	+0.4
	0.7nm,0.7s,baz=56,slow=2.5,SNR=5.7							
STKA	**Stephens Creek**	**28.52**	**204**	P		**P**	**18 40 07.1**	**-0.7**
	0.8nm,0.4s,mb3.8,baz=0.0,slow=9.1,SNR=5.0							
FITZ	**Fitzroy Crossi**	**30.98**	**245**	*e*P		**P**	**18 40 27.7**	**-2.0**
URZ	**Urewera**	**37.80**	**151**	P		**P**	**18 41 28.4**	**+0.3**
MJAR	**Matsushiro Arr**	**45.23**	**341**	P		**P**	**18 42 28.1**	**-0.4**
	0.8nm,0.7s,mb3.4,baz=158,slow=9.2,SNR=4.9							
PETK	**Petropavlovsk-**	**59.03**	**2**	P		**P**	**18 44 11.4**	**+1.3**
	3.8nm,0.8s,mb4.3,baz=172,slow=8.1,SNR=8.5							
CMAR	**Chiang Mai Arr**	**60.37**	**295**	P		**P**	**18 44 20.8**	**+0.9**
	1.9nm,0.7s,mb4.1,baz=123,slow=5.5,SNR=23							
CMAR				pP		pP	18 44 48.8	-10
	0.4nm,0.7s,baz=108,slow=5.8,SNR=2.2							
ULN	**Ulaanbaatar**	**68.23**	**327**	*e*P		**P**	**18 45 10.7**	**+0.3**
	1.3nm,0.7s,mb3.8							
SONM	**Songino Array**	**68.57**	**327**	P		**P**	**18 45 13.2**	**+0.7**
	1.0nm,0.6s,mb3.8,baz=134,slow=4.6,SNR=11							
ILAR	**Eielson Array**	**82.57**	**22**	P		**P**	**18 46 31.4**	**-0.5**
	0.3nm,0.6s,mb3.2,baz=242,slow=4.8,SNR=5.0							
MK31	**Makanchi Array**	**82.71**	**319**	*e*P		**P**	**18 46 33.1**	**+0.2**
MKAR	**Makanchi Array**	**82.71**	**319**	P		**P**	**18 46 33.2**	**+0.3**
	4.3nm,0.7s,mb4.3,baz=101,slow=5.3,SNR=44							
MKAR				pP		pP	18 47 05.7	-8.4
	0.6nm,0.7s,baz=77,slow=5.4,SNR=2.3							
ZAA0	**Zalesovo Array**	**83.42**	**326**	*e*P		**P**	**18 46 35.3**	**-1.1**
ZALV	**Zalesovo Beam**	**83.42**	**326**	P		**P**	**18 46 35.4**	**-1.1**
	3.1nm,0.7s,mb4.2,baz=108,slow=5.5,SNR=14							
QSPA	**South Pole Qui**	**83.86**	**180**	P		**P**	**18 46 38.9**	**+0.6**
	1.8nm,0.6s,mb4.0,baz=346,slow=0.5,SNR=23							
QSPA				pP		pP	18 47 09.4	-10
	1.8nm,0.5s,baz=311,slow=1.3,SNR=4.0							
MAW	**Mawson**	**85.20**	**203**	P		**P**	**18 46 45.8**	**+0.6**
	4.1nm,0.9s,mb4.2,baz=84,slow=8.3,SNR=9.1							
MAW				pP		pP	18 47 16.4	-10
	1.3nm,0.8s,baz=80,slow=5.9,SNR=2.7							
LPAZ	**La Paz**	**131.92**	**118**	PKP		PKPdf	18 53 23.6	+1.1
	0.6nm,0.3s,baz=274,slow=4.5,SNR=9.6							
TORD	**Torodi Ar. Bea**	**152.74**	**287**	PKPbc		PKPbc	18 54 05.2	-0.8
	0.8nm,0.7s,baz=208,slow=4.2,SNR=4.5							

IDC 31 18:56:49.4±2.2,6.53S×149.88E,h0km,mb3.1/3, mb1 3.6/3,mb1mx3.3/15,mbtmp3.2/3,Error ellipse: s-maj=150.1km s-min=30.3km az=126.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
WRA	**Warramunga Arr**	**20.14**	**227**	P		P	19 01 25.7	+0.5
	0.5nm,0.7s,baz=53,slow=10,SNR=3.5							
ASAR	**Alice Springs**	**22.94**	**220**	P		P	19 01 54.8	-0.5
	0.5nm,0.8s,baz=55,slow=9.1,SNR=6.9							
ILAR	**Eielson Array**	**84.85**	**23**	P		P	19 09 25.9	+0.3
	0.3nm,0.8s,baz=260,slow=5.5,SNR=5.0							

CASC 31 19:08:19.1±2.3,13.52N×91.41W,h50km,MD3.6,1C-2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JAT	**Jato**	**0.82**	**345**	⇓*e*P		Pn	19 08 36.1	+1.7
IXG	**Ixpaco**	**1.13**	**55**	⇑*e*P		Pn	19 08 38.1	-0.5
FG6		**1.15**	**27**	*e*P		Pn	19 08 39.4	+0.5
FG6				*e*S		Sn	19 08 54.0	+0.4
TP2	**Tecpan 2**	**1.31**	**17**	⇓*e*P		Pn	19 08 42.3	+1.3
TP2				*e*S		Sn	19 08 58.9	+1.5
NBG	**Las Nubes**	**1.48**	**44**	*e*P		Pn	19 08 44.5	+1.2
NBG				*e*S		Sn	19 09 03.7	+2.2
SBLS	**San Blas**	**1.77**	**80**	*e*P		Pn	19 08 46.3	-0.9
RBDL	**Robledal**	**1.78**	**71**	*e*P		Pn	19 08 47.3	-0.1
BOQS	**Boqueron**	**2.08**	**84**	*e*P		Pn	19 08 50.5	-1.1
BOQS				*e*P			19 08 51.7	
BOQS				*e*S		Sn	19 09 19.8	+3.3
SNET	**Serv Nac Est T**	**2.13**	**85**	*e*P		Pn	19 08 52.7	+0.5
MTO2	**Montecristo 2**	**2.17**	**66**	*e*P		Pn	19 08 53.1	+0.3
MRL	**Marmol**	**2.27**	**47**	*e*

BSO1	**Boso 1**	**3.61**	**353**	P		**Pn**	**19 34 46.9**	**-1.1**
BSO1				*eS*		**Sn**	**19 35 27.9**	**-1.5**
JKO	**Kozu shima**	**3.71**	**328**	P		**Pn**	**19 34 49.5**	**+0.1**
BSO2	**Boso 2**	**3.74**	**350**	*eS*		**Sn**	**19 35 33.8**	**+1.3**
BSO3	**Boso 3**	**3.83**	**347**	P		**Pn**	**19 34 51.4**	**+0.4**
CBIJ	**Chichi jima**	**3.99**	**171**	Pn		**Pn**	**19 34 52.9**	**-0.4**
	26nm,0.3s,baz=290,slow=23,SNR=9.1							
CBIJ					Sn	**Sn**	**19 35 35.2**	**-3.6**
	17nm,0.3s,baz=53,slow=20,SNR=3.2							
CBIJ					LR	LR	19 36 33.0	
	comp=Z,716nm,18.4s,baz=111,slow=41							
CBIJ	**Chichi jima**	**3.99**	**171**	P		**Pn**	**19 34 54.3**	**+1.0**
CBIJ				*eS*		**Sn**	**19 35 39.0**	**+0.2**
BSO4	**Boso 4**	**4.04**	**346**	P		**Pn**	**19 34 54.2**	**+0.3**
BSO4				*eS*		**Sn**	**19 35 41.2**	**+1.2**
JOD2	**Odawara 2**	**4.66**	**335**	P		**Pn**	**19 35 03.4**	**+1.0**
HMMJ	**Hamamatsu 2**	**4.95**	**321**	P		**Pn**	**19 35 08.4**	**+2.0**
JYT	**Yasato**	**5.27**	**348**	P		**Pn**	**19 35 11.4**	**+0.6**
JYT				S		**Sn**	**19 36 09.4**	**-0.9**
JAG	**Ashikaga**	**5.62**	**343**	P		**Pn**	**19 35 15.0**	**-0.6**
JAG				S		**Sn**	**19 36 18.3**	**-0.6**
MJAR	**Matsushiro Arr**	**6.12**	**334**	Pn		**Pn**	**19 35 22.8**	**+0.3**
	4.7nm,0.3s,baz=34,slow=9.8,SNR=46							
MJAR					Sn	**Sn**	**19 36 31.5**	**+0.3**
	baz=189,slow=19,SNR=2.0							
MAJO	**Matsushiro**	**6.12**	**334**	*eP*		**Pn**	**19 35 23.4**	**+0.9**
	28nm,0.8s							
MAJO	**Matsushiro**	**6.12**	**334**	*eP*		**Pn**	**19 35 23.4**	**+0.9**
MAJO				*pmax*	*pmax*			
	comp=Z,28nm,0.8s							
MAT	**Matsushiro**	**6.12**	**334**	P		**Pn**	**19 35 22.8**	**+0.3**
MAT				S		**Sn**	**19 36 30.6**	**-0.7**
ERM	**Erimo**	**11.01**	**6**	*eP*		**Pn**	**19 36 27.8**	**-1.7**
KSRS	**Korea Array**	**12.92**	**303**	Pn		**Pn**	**19 36 57.9**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=104,slow=13,SNR=2.6							
KSRS					LR	LR	19 41 48.9	
	comp=Z,86nm,19.3s,baz=63,slow=37							
ASAJ	**Asahikawa**	**13.06**	**3**	*eP*		**Pn**	**19 36 53.1**	**-4.4**
ASAJ	**Asahikawa**	**13.06**	**3**	Pn		**Pn**	**19 36 53.2**	**-4.3**
	comp=Z,1.5nm,0.3s,baz=232,slow=12,SNR=15							
ASAJ					Sn	**Sn**	**19 39 10.0**	**-11**
	comp=Z,0.2nm,0.3s,baz=15,slow=20,SNR=2.2							
YSS	**Yuzh-Sakhalins**	**15.90**	**3**	*eP*		**Pn**	**19 37 40.0**	**+4.6**
YULB	**Yu-li**	**19.52**	**252**	*eP*		**Pn**	**19 38 19.9**	**-0.4**
	comp=Z,12nm,0.7s							
SSLB	**Suanglung**	**19.62**	**253**	*eP*		**Pn**	**19 38 21.4**	**-0.1**
	comp=Z,26nm,0.8s							
BJI	**Beijing**	**22.43**	**301**	P		**P**	**19 38 48.8**	**-1.2**
BJI				*pmax*	*pmax*			
	comp=Z,9.0nm,1.2s,mb4.1							
BJI				LR	LR			
	comp=N,200nm,15.1s,MS3.8							
BJI				LR	LR			
	comp=E,210nm,17.2s,MS3.8							
PETK	**Petropavlovsk-**	**24.98**	**23**	LR		LR	19 50 18.2	
	comp=E,30nm,18.1s,MS2.8,baz=37,slow=40							
ULN	**Ulaanbaatar**	**31.13**	**313**	*eP*		**P**	**19 40 09.3**	**-0.2**
	comp=E,2.2nm,0.6s,mb4.2							
ULN	**Ulaanbaatar**	**31.13**	**313**	*eP*		**P**	**19 40 09.4**	**-0.1**
ULN				*pmax*	*pmax*			
	comp=Z,2.0nm,0.6s,mb4.1							
SONM	**Songino Array**	**31.54**	**312**	P		**P**	**19 40 13.8**	**+0.7**
	comp=Z,2.1nm,0.8s,mb4.0,baz=115,slow=8.3,SNR=15							
TLY	**Talaya**	**34.56**	**318**	*eP*		**P**	**19 40 39.8**	**+0.3**
TLY				*pmax*	*pmax*			
	comp=Z,3.0nm,0.9s,mb4.2							
TLY				MLR	MLR			
	comp=Z,66nm,18.0s,MS3.4							
BILL	**Bilibino**	**39.75**	**14**	*i P*		**P**	**19 41 32.3**	**+9.1**
BILL				*pmax*	*pmax*			
	comp=Z,4.0nm,0.4s,mb4.5							
BILL				MLR	MLR			
	comp=Z,100nm,18.0s,MS3.7							
CHTO	**Chiang Mai**	**40.26**	**263**	*eP*		**P**	**19 41 26.9**	**-1.1**
	comp=Z,2.7nm,0.7s,mb4.1							
CHTO	**Chiang Mai**	**40.26**	**263**	*eP*		**P**	**19 41 26.9**	**-1.1**
CHTO				*pmax*	*pmax*			
	comp=Z,3.0nm,0.7s,mb4.1							
CM31	**Chiang Mai Arr**	**40.41**	**262**	*eP*		**P**	**19 41 28.1**	**-1.2**
CMAR	**Chiang Mai Arr**	**40.41**	**262**	P		**P**	**19 41 28.9**	**-0.5**
	comp=Z,1.3nm,0.7s,mb3.8,baz=54,slow=7.9,SNR=15							
CMAR					LR	LR	20 00 15.4	
	comp=Z,105nm,18.5s,MS3.7,baz=238,slow=39							
ZAA0	**Zalesovo Array**	**46.16**	**317**	*eP*		**P**	**19 42 14.8**	**-0.6**
ZALV	**Zalesovo Beam**	**46.16**	**317**	P		**P**	**19 42 15.9**	**+0.6**
	comp=Z,1.6nm,0.7s,mb4.1,baz=98,slow=7.5,SNR=10							
ZALV					PcP	PcP	19 43 51.0	+0.2
	comp=Z,1.3nm,0.7s,baz=99,slow=3.3,SNR=5.7							
NVS	**Novosibirsk**	**47.18**	**318**	*eP*		**P**	**19 42 20.9**	**-2.3**
NVS				*pmax*	*pmax*			
	comp=Z,6.0nm,1.2s,mb4.4							
NVS				*pmax*	*pmax*			
	comp=E,5.0nm,1.1s							
MK31	**Makanchi Array**	**47.57**	**307**	*eP*		**P**	**19 42 26.4**	**0.0**
MKAR	**Makanchi Array**	**47.57**	**307**	P		**P**	**19 42 26.2**	**-0.2**
	comp=E,1.0nm,0.4s,mb4.2,baz=87,slow=8.6,SNR=29							
MKAR					LR	LR	20 03 26.1	
	comp=E,40nm,18.3s,MS3.4,baz=243,slow=37							
KURK	**Kurchatov**	**49.85**	**312**	*eP*		**P**	**19 42 43.2**	**-0.7**
KURK	**Kurchatov**	**49.85**	**312**	*c iP*		**P**	**19 42 43.5**	**-0.3**
KURK				*pmax*	*pmax*			
	comp=Z,5.0nm,0.8s,mb4.6							
KURK				MLR	MLR			
	comp=Z,114nm,16.0s,MS4.0							
WRA	**Warramunga Arr**	**51.17**	**189**	P		**P**	**19 42 54.0**	**-0.1**
	comp=Z,8.0nm,0.3s,mb5.1,baz=5.8,slow=7.7,SNR=65							
WRA					PcP	PcP	19 44 11.4	+2.2
	comp=Z,0.4nm,0.4s,baz=1.2,slow=3.8,SNR=4.6							
KSH	**Kashi**	**53.12**	**298**	P		**P**	**19 43 12.3**	**+3.8**
KSH				*epP*		*pP*	19 43 22.5	+3.0
KSH				*esP*		*sP*	19 43 26.0	+2.1
KSH				*ePcP*		PcP	19 44 21.0	+4.6
KSH				*ePP*		PP	19 45 13.5	+5.0
KSH				*eScP*		ScP	19 48 14.5	+3.4
KSH				PcS		PcS	19 48 18.3	+3.1
KSH				*eS*		**S**	**19 50 37.0**	**+0.7**
KSH				*esS*		sS	19 50 53.3	-1.2
KSH				*eScS*		ScS	19 52 56.3	+1.1
KSH				*eSS*		SS	19 54 14.8	-1.0
KSH					pmax	*pmax*		
	comp=Z,3.0nm,0.6s,mb4.4							
KSH					pmax	*pmax*		
	comp=Z,200nm,4.1s							
KSH					LR	LR		
	comp=N,76nm,9.1s							
KSH					LR	LR		
	comp=E,160nm,6.8s							
KSH					LR	LR		
	comp=Z,100nm,6.3s							
AML	**Almayashu**	**54.27**	**302**	*eP*		**P**	**19 43 18.1**	**+1.2**
	comp=Z,5.6nm,0.9s,mb4.5							
ILAR	**Eielson Array**	**54.55**	**30**	P		**P**	**19 43 17.8**	**-0.7**
	comp=Z,0.5nm,0.7s,mb3.7,baz=260,slow=6.7,SNR=6.4							
BVAR	**Borovoye Array**	**54.78**	**316**	P		**P**	**19 43 20.5**	**+0.2**
	comp=Z,2.0nm,0.5s,mb4.4,baz=93,slow=6.6,SNR=18							
BVAR					PcP	PcP	19 44 22.9	+0.5
	comp=Z,0.9nm,0.7s,baz=108,slow=4.7,SNR=2.7							
BRVK	**Borovoye**	**54.84**	**316**	*eP*		**P**	**19 43 20.9**	**+0.1**
	comp=Z,2.6nm,0.8s,mb4.3							
BRVK	**Borovoye**	**54.84**	**316**	*eP*		**P**	**19 43 20.9**	**+0.1**
BRVK				*pmax*	*pmax*			
	comp=Z,3.0nm,0.8s,mb4.4							
ASAR	**Alice Springs**	**54.90**	**189**	P		**P**	**19 43 21.5**	**0.0**
	comp=Z,4.9nm,0.4s,mb4.8,baz=1.4,slow=5.1,SNR=201							
KKAR	**Karatay Array**	**56.35**	**304**	*eP*		**P**	**19 43 32.0**	**+0.2**
	comp=Z,1.7nm,0.5s,mb4.3							
KKAR	**Karatay Array**	**56.35**	**304**	*eP*		**P**	**19 43 32.0**	**+0.2**
KKAR				*pmax*	*pmax*			
	comp=Z,2.0nm,0.5s,mb4.4							
INK	**Inuvik**	**59.70**	**25**	P		**P**	**19 43 54.6**	**-0.2**
	comp=Z,3.0nm,0.9s,mb4.3,baz=230,slow=7.3,SNR=3.5							
SVE	**Sverdlovsk**	**59.76**	**321↑**	*eP*		**P**	**19 43 56.4**	**+0.9**
SVE				*pmax*	*pmax*			
	comp=Z,13nm,0.9s,mb5.0							
KBL	**Kabul**	**59.80**	**294**	*eP*		**P**	**19 43 56.1**	**-0.1**
	comp=Z,3.5nm,0.8s,mb4.4							
KBL	**Kabul**	**59.80**	**294**	*eP*		**P**	**19 43 56.1**	**0.0**
KBL				*pmax*	*pmax*			
	comp=Z,3.0nm,0.8s,mb4.4							
ARU	**Arti**	**60.97**	**321**	*eP*		**P**	**19 44 03.5**	**-0.2**
	comp=Z,8.0nm,0.6s,mb5.0							
ARU	**Arti**	**60.97**	**321**	*c iP*		**P**	**19 44 03.8**	**+0.1**
ARU				S		**S**	**19 52 15.9**	**-3.3**
ARU				SS		SS	19 56 21.5	+3.1
ARU				*pmax*	*pmax*			
	comp=Z,19nm,1.2s,mb5.1							

ABKAR	**Akbulak array**	**61.95**	**313**	*eP*		**P**	**19 44 10.6**	**+0.1**
	comp=Z,8.8nm,0.6s,mb5.1							
STKA	**Stephens Creek**	**62.59**	**180**	P		**P**	**19 44 14.5**	**-0.3**
	comp=Z,2.5nm,0.5s,mb4.6,baz=342,slow=9.6,SNR=6.9							
ARCES	**ARCESS Array B**	**69.62**	**340**	P		**P**	**19 44 59.3**	**-0.3**
	comp=Z,6.8nm,1.0s,mb4.5,baz=67,slow=8.1,SNR=3.2							
JOF	**Joensuu**	**71.29**	**333**	*eP*		**P**	**19 45 09.1**	**-0.7**
JOF					pmax	*pmax*		
	comp=Z,1.0nm,0.4s,mb4.1							
JOF	**Joensuu**	**71.29**	**333**	*ep*		**P**	**19 45 09.1**	**-0.7**
	comp=Z,1.4nm,0.4s,mb4.2							
OBN	**Obninsk**	**72.96**	**325**	*eP*		**P**	**19 45 21.8**	**+1.8**
OBN					pmax	*pmax*		
	comp=Z,3.0nm,0.8s,mb4.3							
KAF	**Kangasniemi**	**73.67**	**334**	*eP*		**P**	**19 45 24.2**	**+0.2**
KAF					pmax	*pmax*		
	comp=Z,2.0nm,0.5s,mb4.3							
KAF	**Kangasniemi**	**73.67**	**334**	*ep*		**P**	**19 45 24.2**	**+0.2**
	comp=Z,1.6nm,0.5s,mb4.2							
FINES	**FINESS Array B**	**74.15**	**333**	P		**P**	**19 45 27.1**	**+0.3**
	comp=Z,1.3nm,0.4s,mb4.2,baz=64,slow=4.4,SNR=16							
ZEI	**Tsey**	**74.72**	**311**	*eP*		**P**	**19 45 25.2**	**-5.3**
ZEI					pmax	*pmax*		
	comp=Z,8.0nm,0.5s,mb4.9							
KIV	**Kislovodsk**	**74.94**	**312**	*eP*		**P**	**19 45 30.8**	**-0.9**
KIV				*e*			19 45 48.1	
KIV					pmax	*pmax*		
	comp=Z,4.0nm,1.1s,mb4.3							
LRM	**Limekiln Ridge**	**78.39**	**43**	*eP*		**P**	**19 45 51.6**	**+0.4**
	comp=Z,1.3nm,0.7s,mb5.0							
NOA	**NORSAR Array B**	**79.73**	**338**	P		**P**	**19 45 58.5**	**+0.3**
	comp=Z,0.7nm,0.7s,mb3.7,baz=38,slow=5.7,SNR=3.7							
PDAR	**Pinedale Array**	**81.81**	**45**	P		**P**	**19 46 10.4**	**+0.7**
	comp=Z,0.6nm,0.8s,mb3.6,baz=276,slow=2.6,SNR=2.7							
PPT	**Papeete**	**81.92**	**116**	LR		LR	20 18 21.4	
	comp=Z,0.9nm,19.8s,baz=229,slow=33							
BR131	**Keskin Array S**	**82.90**	**312**	*eP*		**P**	**19 46 14.9**	**-0.6**
	comp=Z,0.5nm,0.5s,mb3.8							
BRTR	**Keskin Array B**	**82.90**	**312**	P		**P**	**19 46 16.2**	**+0.7**
	comp=Z,2.3nm,0.9s,mb4.2,baz=118,slow=4.2,SNR=9.5							
BRTR	**Keskin Array B**	**82.90**	**312**	*i P*		**P**	**19 46 16.7**	**+1.2**
BRTR					pmax	*pmax*		
	comp=Z,2.0nm,0.9s							
CLL	**Collm**	**86.32**	**331**	*eP*		**P**	**19 46 33.0**	**+0.5**
CLL					pmax	*pmax*		
	comp=Z,5.0nm,1.3s,mb4.6							
CLL	**Collm**	**86.32**	**331**	*eP*		**P**	**19 46 33.0**	**+0.5**
	comp=Z,5.0nm,1.3s,mb4.6							
TXAR	**Lajitas Array**	**93.69**	**53**	P		**P**	**19 47 08.5**	**+0.9**
	comp=Z,0.7nm,0.7s,mb4.2,baz=295,slow=3.1,SNR=10							
LPAZ	**La Paz**	**149.24**	**68**	PKPbc		PKPbc	19 53 41.4	+1.6
	comp=Z,1.9nm,0.8s,baz=360,slow=3.1,SNR=8.4							

IDC ***31*** *19:48:27.3±3.8, 17.92N×122.55E, h0km, mb3.3/3, mb1 3.8/4, mb1mx3.4/21, mbtmp3.6/4, ML4.1/1, Error ellipse: s-maj=83.4km s-min=32.5km az=35.0*
MAN ***31*** *19:48:32, 18.06N×122.19E, h1km, mb5.1, ML4.1, MS4.2*
MAN INTENSITY III - STA ANA CAGAYAN.

ISC 31 19:48:28.1±1.9, 18°33N±0.09×122°49E±0.08, h13km±10km, n15, σ1s42/18, mb3.2/3, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
					Op	ISC	h m s	ISC
SGCP	**Mt. Cagua**	**0.43**	**258**	*eP*		**Pg**	**19 48 36.9**	**+0.1**
CVP	**Callao Caves**	**0.89**	**226**	*↓iP*		**Pg**	**19 48 44.0**	**-1.5**
PALP	**Palanan**	**1.26**	**183**	*eP*		**Pn**	**19 48 51.2**	**-0.3**
PALP				*eS*		**Sb**	**19 49 09.5**	**+1.5**
APYP	**Conner**	**1.28**	**249**	*eP*		**Pn**	**19 48 50.6**	**-1.1**
APYP				*eS*		**Sb**	**19 49 07.2**	**-1.2**
CAUP	**Cauayan**	**1.52**	**205**	*eP*		**Pn**	**19 48 57.0**	**+1.9**
ABRA	**Dolores**	**1.82**	**248**	*eP*		**Pn**	**19 48 59.3**	**+0.1**
BALP	**Baler**	**2.72**	**199**	*eP*		**Pn**	**19 49 12.8**	**+1.2**
BOLP	**Bolinao**	**3.13**	**232**	*eP*		**Pn**	**19 49 17.7**	**+0.4**
SCZP	**Santa Cruz**	**3.54**	**225**	*eP*		**Pn**	**19 49 24.2**	**+1.3**
POLP	**Polillo Island**	**3.62**	**188**	*eP*		**Pn**	**19 49 26.9**	**+2.9**
GQP	**Guinayangan**	**4.40**	**181**	*↓eP*		**Pn**	**19 49 34.7**	**0.0**
GQP				*eS*		**Sn**	**19 50 22.4**	**-3.5**
TGY	**Tagaytay City**	**4.46**	**200**	Pn		**Pn**	**19 49 31.1**	**-4.5**
	11nm,0.3s,baz=60,slow=17,SNR=2.1							
CMAR	**Chiang Mai Arr**	**22.34**	**274**	P		**P**	**19 53 27.9**	**+1.9**
	0.6nm,1.0s,mb3.0,baz=78,slow=8.4,SNR=6.9							
WRA	**Warramunga Arr**	**39.77**	**162**	P		**P**	**19 55 58.6**	**-2.3**
	0.2nm,0.4s,mb3.2,baz=344,slow=9.4,SNR=2.9							
ASAR	**Alice Springs**	**43.20**	**165**	P		**P**	**19 56 27.1**	**-1.9**
	0.5nm,0.9s,mb3.3,baz=343,slow=6.5,SNR=4.0							

ISCJB ***31*** *19:48:42.8±0.4, 32.04N±0.03×48.51E±0.05, h10km, Error ellipse: s-maj=6.6km s-min=4.0km az=35.4*
KISR ***31*** *19:48:42.1±0.8, 31.95N×48.16E, h5km±999km, ML2.9*
SGS ***31*** *19:48:42.7, 31.88N×48.42E, h0km*
TEH ***31*** *19:48:43.1, 32.04N×48.41E, h5km*

ISC 31 19:48:43.8±0.4, 32°04N±0.04×48°47E±0.05, h10km, n25, σ0s96/29, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
					Op	ISC	h m s	ISC
IPIR	**Pirpir**	**2.15**	**72**	*ePn*		**Pn**	**19 49 21.3**	**+1.7**
IPIR				*eSg*		**Sg**	**19 49 51.6**	**-1.2**
IPIR				*e*			19 49 53.9	
	comp=Z,3μm,0.2s							
IKOM	**Komasi**	**2.28**	**340**	*ePn*		**Pn**	**19 49 20.9**	**-0.6**
IKOM				*e*			19 49 23.0	
	comp=Z,2μm,0.1s							
MIB	**Mutribah**	**2.43**	**204**	*eP*		**Pn**	**19 49 23.3**	**-0.3**
MIB				*eS*		**Sn**	**19 49 53.6**	**+0.3**
MIB					AML	AML	19 49 59.2	
	comp=Z,103nm,0.6s							
IGHG	**Ghaleghazi**	**2.79**	**326**	*ePn*		**Pn**	**19 49 29.5**	**+1.1**
IGHG				*e*			19 50 25.8	
	comp=Z,1μm,0.3s							
IKLH	**Kolahrood**	**2.92**	**63**	*ePn*		**Pn**	**19 49 31.2**	**+1.0**
IKLH				*e*			19 49 38.6	
	comp=Z,2μm,0.1s							
NAY	**Al-Naaiem**	**2.97**	**201**	*eP*		**Pn**	**19 49 30.6**	**-0.4**
NAY				*eS*		**Sn**	**19 50 07.8**	**+1.1**
NAY					AML	AML	19 50 11.0	
	comp=Z,15nm,0.4s							
IGAR	**Gharneh**	**3.05**	**82**	*ePn*		**Pn**	**19 49 32.7**	**+0.7**
IGAR				*e*			19 49 41.1	
	comp=Z,923nm,0.1s							
ILIN	**Lien**	**3.14**	**337**	*ePn*		**Pn**	**19 49 32.7**	**-0.6**
ILIN				*e*			19 50 13.4	
	comp=N,1μm,0.1s							
IDHR	**Dehrash**	**3.18**	**327**	*ePn*		**Pn**	**19 49 33.2**	**-0.6**
IDHR				*e*			19 49 41.1	
	comp=Z,2μm,0.2s							
RDF	**Al-Radifah**	**3.20**	**195**	*eP*		**Pn**	**19 49 34.6**	**+0.5**
RDF				*eS*		**Sn**	**19 50 13.7**	**+1.4**
RDF					AML	AML	19 50 16.5	
	comp=Z,93nm,0.5s							
IZEF	**Zefreh**	**3.37**	**74**	*ePn*		**Pn**	**19 49 37.2**	**+0.7**
IZEF				*e*			19 49 47.1	
	comp=Z,925nm,0.2s							
IRAZ	**Razeghan**	**3.57**	**19**	*ePn*		**Pn**	**19 49 40.4**	**+1.2**
IRAZ				*e*			19 50 42.0	
	comp=Z,767nm,0.3s							
KFJS		**3.86**	**187**	P		**Pn**	**19 49 42.2**	**-1.1**
ISFB	**Sefidab**	**3.91**	**53**	*ePn*		**Pn**	**19 49 43.6**	**-0.3**
ISFB				*e*			19 49 55.2	
	comp=Z,267nm,0.3s							
ISAD	**Sadrabad**	**4.43**	**90**	*ePn*		**Pn**	**19 49 51.4**	**+0.3**
ISAD				*e*			19 50 57.6	
	comp=Z,353nm,0.3s							
IDMV	**Damavand**	**4.61**	**39**	*ePn*		**Pn**	**19 49 53.1**	**-0.4**
IDMV				*e*			19 49 55.0	
	comp=Z,197nm,0.1s							
ICHK	**Chekchek**	**5.04**	**86**	*ePn*		**Pn**	**19 49 59.2**	**-0.2**
ICHK				*e*			19 50 03.5	
	comp=Z,251nm,0.1s							
IFIR	**Firoozkooh**	**5.06**	**44**	*ePn*		**Pn**	**19 49 59.6**	**-0.1**
IFIR				*e*			19 50 00.9	
	comp=Z,210nm,0.2s							
IMEH	**Mehriz**	**5.27**	**95**	*ePn*		**Pn**	**19 50 02.2**	**-0.4**
IMEH				*e*			19 51 38.1	
	comp=Z,118nm,0.3s							
ASYS		**5.77**	**220**	S		**Sn**	**19 51 08.7**	**-6.9**
ASYS		**5.77**	**220**	P		**Pn**	**19 50 06.0**	**-3.4**
BTHS		**8.23**	**165**	S		**Sn**	**19 52 08.5**	**-7.9**
BTHS		**8.23**	**165**	P		**Pn**	**19 50 40.0**	**-3.3**
LYLS		**10.02**	**187**	S		**Sn**	**19 52 50.0**	**-10**
LYLS		**10.02**	**187**	P		**Pn**	**19 51 04.3**	**-3.5**

ISCJB ***31*** *20:00:02.2±0.5, 10.47N±0.03×62.48W±0.03, h90km±6km, Error ellipse: s-maj=6.7km s-min=3.9km az=139.9*
FUNV ***31*** *20:00:02.9, 10.54N×62.40W, h89km, MW3.2*
NEIC ***31*** *20:00:05.1, 10.46N×62.26W, h85km, MD3.1(TRN), After TRN.*
TRN ***31*** *20:00:05.1, 10.46N×62.26W, h85km, MD3.1*

ISC 31 20:00:03.1±0.5, 10°47N±0.03×62°48W±0.03, h84km±6km, n29, σ1s00/50, 4C-4D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
					Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.30**	**54**	*↓iP*		**Pn**	**20 00 15.8**	**0.0**
GUIV				*eS*		**Sn**	**20 00 24.1**	**-1.2**
GUNV	**Guanoco**	**0.55**	**236**	*↑iP*		**Pn**	**20 00 19.7**	**+2.0**
GUNV				*eS*		**Sn**	**20 00 30.5**	**+2.0**
TCE	**Chacachacare**	**0.74**	**72**	*eP*		**Pn**	**20 00 20.1**	**+0.5**
TCE				*eS*		**Sn**	**20 00 31.2**	**-0.7**
TCE	**Chacachacare**	**0.74**	**72**	*eP*		**Pn**	**20 00 20.1**	**+0.5**
TCE				*eS*		**Sn**	**20 00 31.2**	**-0.7**
CRUV	**Carupano**	**0.78**	**285**	*↑iP*		**Pn**	**20 00 20.4**	**+0.4**
CRUV				*eS*		**Sn**	**20 00 32.1**	**-0.3**
TRN	**Trinidad (W)**	**1.07**	**80**	*↓iP*		**Pn**	**20 00 23.8**	**+0.5**
TRN				*eS*		**Sn**	**20 00 35.3**	**-3.1**
TRN	**Trinidad (W)**	**1.07**	**80**	*↓iP*		**Pn**	**20 00 23.8**	**+0.5**
TRN				*eS*		**Sn**	**20 00 35.3**	**-3.1**
ITEV	**Isla Los Testi**	**1.09**	**324**	*↓iP*		**Pn**	**20 00 23.7**	**+0.2**
ITEV				*eS*		**Sn**	**20 00 37.9**	**-1.0**
ORIV	**Oritupano**	**1.67**	**214**	*eP*		**Pn**	**20 00 31.1**	**+0.3**
ORIV				*eS*		**Sn**	**20 00 53.3**	**+1.6**
GRGR	**Grenville**	**1.84**	**26**	*eP*		**Pn**	**20 00 32.8**	**-0.2**
GRW	**Mount Saint Ca**	**1.86**	**25**	*eP*		**Pn**	**20 00 34.3**	**+1.0**
GRW	**Mount Saint Ca**	**1.86**	**25**	*eP*		**Pn**	**20 00 34.3**	**+1.0**
GRIC	**Isle de Caille**	**2.00**	**26**	*eP*		**Pn**	**20 00 36.2**	**+1.0**
GRIC				*eS*		**Sn**	**20 00 59.5**	**-0.1**
GRSS	**Sisters**	**2.00**	**25↑**	*eP*		**Pn**	**20 00 36.3**	**+1.1**
GRSS				*eS*		**Sn**	**20 00 59.4**	**-0.3**
GRSS	**Sisters**	**2.00**	**25↑**	*eP*		**Pn**	**20 00 36.3**	**+1.1**
GRSS				*eS*		**Sn**	**20 00 59.4**	**-0.3**
TOSP	**Speyside**	**2.08**	**66**	*eP*		**Pn**	**20 00 36.3**	**+0.1**
TOSP				*eS*		**Sn**	**20 00 58.6**	**-2.8**
PCRV	**Puerto La Cruz**	**2.15**	**262**	*eP*		**Pn**	**20 00 36.9**	**-0.2**
PCRV				*eS*		**Sn**	**20 01 02.2**	**-0.8**
GRCU	**Cariacou**	**2.23**	**27**	*eP*		**Pn**	**20 00 39.5**	**+1.4**
GRCU				*eS*		**Sn**	**20 01 04.8**	**-0.1**
GRCU	**Cariacou**	**2.23**	**27**	*eP*		**Pn**	**20 00 39.5**	**+1.4**
GRCU				*eS*		**Sn**	**20 01 04.8**	**-0.1**
IBAV	**Isla La Blanqu**	**2.46**	**303**	*eP*		**Pn**	**20 00 41.3**	**0.0**
RIOV	**Rio Grande**	**2.47**	**165**	*eP*		**Pn**	**20 00 41.5**	**+0.1**
GURV	**El Guri**	**2.76**	**193**	*eP*		**Pn**	**20 00 45.7**	**+0.4**
SVB	**Belmont**	**3.03**	**23**	*eP*		**Pn**	**20 00 50.2**	**+1.2**
SVB				*eS*		**Sn**	**20 01 24.3**	**0.0**
SVB	**Belmont**	**3.03**	**23**	*eP*		**Pn**	**20 00 50.2**	**+1.2**
SVB				*eS*		**Sn**	**20 01 24.3**	**0.0**
CUPV	**Cœpira**	**3.29**	**263**	*eP*		**Pn**	**20 00 52.5**	**+0.1**
CUPV				*eS*		**Sn**	**20 01 30.1**	**-0.4**
MERV	**Las Mercedes**	**3.96**	**253**	*eP*		**Pn**	**20 01 01.0**	**-0.6**
MERV				*eS*		**Sn**	**20 01 44.0**	**-2.8**
LUEV	**Luepa**	**4.71**	**168**	*eP*		**Pn**	**20 01 11.0**	**-0.7**
LUEV				*eS*

5.4nm,1.1s,baz=130,slow=5.7,SNR=3.4
ESDC Sonseca Array 151.96 345 PKPbc PKPbc 20 42 04.4 -1.6
0.2nm,0.5s,baz=79,slow=2.7,SNR=3.0

IDC 31 20:55:32.4±1.7, 1.73N×127.10E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/19, mbtmp3.5/5, ML3.4/1, Error ellipse: s-maj=114.4km s-min=20.4km az=70.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.76**	**184**	P	Pn	21 00 04.7	-0.8
	0.1nm,0.3s,baz=5.7,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	**22.68**	**162**	P	P	21 00 35.2	-0.4
	1.0nm,0.7s,baz=340,slow=11,SNR=10						
ASAR	**Alice Springs**	**26.10**	**166**	P	P	21 01 08.2	+0.2
	0.2nm,0.5s,baz=345,slow=11,SNR=4.7						
MKAR	**Makanchi Array**	**59.40**	**326**	P	P	21 05 37.0	+0.3
	0.2nm,0.3s,baz=114,slow=7.0,SNR=6.4						
KURK	**Kurchatov**	**63.62**	**328**	P	P	21 06 04.8	-0.3
	0.8nm,0.5s,baz=127,slow=7.1,SNR=4.9						

*IDC **31** 20:58:29.8±1.0,24.38S×116.21W,h0km,mb4.1/10, mb1 4.4/10,mb1mx4.2/18,mbtmp4.1/10,MS4.2/14, Ms1 4.2/14,ms1mx4.2/17,Error ellipse: s-maj=34.8km s-min=21.6km az=40.0*
*ISCJB **31** 20:58:31.9±0.8,24.2S±0.1×115.7W±0.1,h10km,mb4.7/33, MS4.4/19,Error ellipse: s-maj=18.5km s-min=11.5km az=31.0*
*NEIC **31** 20:58:31.3±0.6,24.46S×116.09W,h10km,mb5.0/23, Error ellipse: s-maj=19.4km s-min=11.9km az=58.0*
*GCMT **31** 20:58:36.8±0.3,24.61S×115.93W,h17km±1km,MW5.0, Moment Tensor Solution. s25,c35; s76,c110; Moment tensor: Scale 10¹⁶Nm; Mrr0.04±.12; Mθθ-2.52±.11; Mφφ2.48±.11; Mrθ-0.61±.28; Mrφ0.59±.10; Mθφ0.11±.29; Best double couple: M₀3.70000×10¹⁶ NP1:φs158.00000°, δ82.00000°,λ-175.00000°. NP2:φs68.00000°,δ85.00000°, λ-8.00000°. Principal axes: T 3.5900, Plg2.0000°, Azm113.0000°; N 0.1300, Plg81.0000°, Azm217.0000°; P -3.7200, Plg9.0000°, Azm23.0000°; Data Used: IU II IC CN G.*

ISC 31 20:58:33.1±0.8, 24.4S±0.1×115.8W±0.1, h10km, n180, σ0s72/154, mb4.7/33, MS4.4/19, 56C-58D, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**6.44**	**116**	LR	LR	21 01 57.6	
	comp=Z,3μm,18.4s,baz=126,slow=31						
RPN				T		21 06 34.6	
	14nm,0.3s,baz=67,slow=3.8,SNR=3.2						
RKT	**Rikitea**	**17.59**	**270**	*e*LQ		21 05 50.9	
	2μm,27.0s						
RKT				*e*LR	LR	21 06 33.8	
	3μm,26.8s,baz=109						
TAOE	**Nuku Hiva Isla**	**27.90**	**300**	*e*S	**S**	**21 09 08.3**	**+1.0**
	173nm,25.5s						
TAOE				*e*LR	LR	21 11 22.5	
	2μm,25.6s,baz=121						
PPT	**Papeete**	**32.19**	**276**	*e*S	**S**	**21 10 16.0**	**+1.5**
	82nm,25.8s						
PPT				*e*LQ		21 12 10.2	
	525nm,26.0s						
PPT				*e*LR	LR	21 13 11.2	
	1μm,27.5s,baz=107						
PPT	**Papeete**	**32.19**	**276**	LR	LR	21 14 04.1	
	comp=Z,565nm,20.8s,MS4.2,baz=129,slow=29						
ATAH	**Atahualpa**	**39.72**	**71**	P	**P**	**21 06 08.2**	**+2.2**
	10nm,0.9s,mb4.6,baz=280,slow=6.1,SNR=4.8						
PLCA	**Paso Flores**	**41.00**	**125**	P	**P**	**21 06 17.0**	**+0.7**
	4.9nm,1.0s,mb4.1,baz=289,slow=8.6,SNR=7.3						
PLCA				LR	LR	21 19 14.7	
	comp=Z,576nm,18.9s,MS4.5,baz=268,slow=30						
OTAV	**Otavalo**	**43.71**	**61**	*e*P	**P**	**21 06 37.5**	**-1.2**
	14nm,1.2s,mb4.6						
LPAZ	**La Paz**	**45.25**	**89**	P	**P**	**21 06 52.6**	**+1.6**
	4.4nm,0.8s,mb4.3,baz=263,slow=4.4,SNR=24						
LPAZ				LR	LR	21 21 58.8	
	comp=Z,236nm,18.1s,MS4.2,baz=74,slow=31						
CMIG	**Matias Romero**	**46.03**	**29**	P	**P**	**21 06 55.9**	**-1.1**
	4.3nm,1.1s,mb4.3,baz=218,slow=11,SNR=2.3						
ROSC	**El Rosal**	**49.76**	**60**	LR	LR	21 22 49.6	
	comp=Z,118nm,20.9s,MS3.9,baz=23,slow=29						
CPUP	**Villa Florida**	**52.49**	**105**	P	**P**	**21 07 47.2**	**+0.8**
	0.6nm,0.4s,mb3.8,baz=236,slow=7.3,SNR=2.7						
CPUP				LR	LR	21 26 18.3	
	comp=Z,257nm,18.1s,MS4.3,baz=225,slow=32						
TXAR	**Lajitas Array**	**54.70**	**13**	P	**P**	**21 08 02.0**	**-0.4**
	0.7nm,0.8s,mb3.7,baz=202,slow=8.9,SNR=7.3						
TXAR				LR	LR	21 27 24.8	
	comp=Z,100nm,18.1s,MS3.9,baz=55,slow=32						
626A	**Big Bend Ranch**	**54.81**	**12**	⇓P	**P**	**21 08 03.6**	**+0.3**
	baz=55,SNR=7.6						
627A	**Terlingua Ranc**	**54.87**	**13**	⇑P	**P**	**21 08 03.8**	**+0.1**
	baz=55						
628A	**Black Gap, Mar**	**55.01**	**14**	⇑P	**P**	**21 08 04.9**	**+0.2**
	baz=55,SNR=5.6						
526A	**Mary Lane Ranc**	**55.32**	**12**	⇓P	**P**	**21 08 07.4**	**+0.5**
	baz=56						
527A	**Woodward Ranch**	**55.49**	**13**	⇓P	**P**	**21 08 08.8**	**+0.6**
	baz=56						
528A	**Cox Ranch, San**	**55.68**	**14**	⇓P	**P**	**21 08 09.1**	**-0.4**
	baz=56						
318A	**Bisbee**	**55.81**	**6**	⇑P	**P**	**21 08 10.8**	**+0.3**
	baz=56,SNR=8.0						
319A	**Douglas**	**55.82**	**7**	⇓P	**P**	**21 08 11.1**	**+0.5**
	baz=56						
425A	**Indio Mountain**	**55.85**	**11**	⇑P	**P**	**21 08 10.6**	**-0.2**
	baz=56,SNR=7.6						
426A	**McDonald Obser**	**55.92**	**12**	⇑P	**P**	**21 08 11.0**	**-0.2**
	baz=56						
217A	**Green Valley**	**56.07**	**5**	⇑P	**P**	**21 08 12.9**	**+0.5**
	baz=56,SNR=11						
214A	**Organ Pipe Nat**	**56.12**	**3**	⇑P	**P**	**21 08 13.4**	**+0.7**
	baz=57						
427A	**Hayter Ranch,**	**56.22**	**13**	⇑P	**P**	**21 08 13.3**	**-0.1**
	baz=57						
428A	**Kincaid Ranch,**	**56.25**	**14**	⇑P	**P**	**21 08 13.9**	**+0.3**
	baz=57,SNR=5.3						
324A	**Moseley Ranch,**	**56.41**	**11**	⇓P	**P**	**21 08 14.5**	**-0.3**
	baz=57,SNR=10.0						
325A	**Bean Ranch, Si**	**56.43**	**11**	⇓P	**P**	**21 08 14.6**	**-0.2**
	baz=57,SNR=6.7						
220A	**Playas Peak, P**	**56.43**	**7**	⇑P	**P**	**21 08 15.2**	**+0.3**
	baz=57						
219A	**White Tail Can**	**56.44**	**7**	⇑P	**P**	**21 08 15.5**	**+0.5**
	baz=57,SNR=7.4						
TUC	**Tucson**	**56.60**	**5**	*e*P	**P**	**21 08 15.8**	**-0.3**
	10nm,1.3s,mb4.7						
MNTX	**Cornudas Mount**	**56.68**	**11**	*e*P	**P**	**21 08 16.1**	**-0.5**
	baz=57,SNR=10.0						
MNTX	**Cornudas Mount**	**56.68**	**11**	*e*P	**P**	**21 08 15.2**	**-1.4**
	14nm,1.4s,mb4.8						
JCT	**Junction City**	**56.70**	**17**	⇓P	**P**	**21 08 16.8**	**0.0**
	baz=57,SNR=7.7						
JCT	**Junction City**	**56.70**	**17**	*e*P	**P**	**21 08 16.3**	**-0.5**
	13nm,0.6s,mb5.2						
DVTC	**Desert V Tower**	**56.75**	**360**	⇓P	**P**	**21 08 17.1**	**0.0**
	baz=57						
116A	**Eloy**	**56.79**	**4**	⇑P	**P**	**21 08 17.9**	**+0.4**
	baz=57						
222A	**Williams Famil**	**56.81**	**9**	⇑P	**P**	**21 08 17.7**	**+0.1**
	baz=57						
328A	**Wristen Ranch,**	**56.85**	**13**	⇓P	**P**	**21 08 17.3**	**-0.6**
	baz=57						
117A	**Oracle**	**56.87**	**5**	⇑P	**P**	**21 08 18.6**	**+0.6**
	baz=57,SNR=8.8						
115A	**Sonoran Desert**	**56.89**	**4**	⇓P	**P**	**21 08 18.6**	**+0.4**
	baz=57						
114A	**Black Gap (USA**	**56.91**	**3**	⇓P	**P**	**21 08 18.7**	**+0.5**
	baz=57,SNR=5.5						
118A	**Homack Ranch,**	**57.00**	**6**	⇑P	**P**	**21 08 19.1**	**+0.2**
	baz=58						
224A	**Cornudas Mount**	**57.02**	**10**	⇓P	**P**	**21 08 19.2**	**+0.1**
	baz=58,SNR=15						
120A	**U Bar Ranch, L**	**57.05**	**7**	⇓P	**P**	**21 08 19.8**	**+0.5**
	baz=58						
121A	**Cookes Peak, D**	**57.14**	**8**	⇓P	**P**	**21 08 20.4**	**+0.5**
	baz=58,SNR=7.0						
119A	**Ashpeak Ranch,**	**57.19**	**7**	⇓P	**P**	**21 08 20.6**	**+0.3**
	baz=58						
Z13A	**Yuma Proving G**	**57.33**	**2**	⇓P	**P**	**21 08 21.7**	**+0.5**
	baz=58						
HKT	**Hockley**	**57.35**	**21**	P	**P**	**21 08 20.6**	**-0.8**
	18nm,1.4s,mb4.9						
Z20A	**Nine Sixteen R**	**57.61**	**7**	⇓P	**P**	**21 08 23.8**	**+0.5**
	baz=58						
124A	**Stringfield Ra**	**57.64**	**10**	⇑P	**P**	**21 08 23.7**	**+0.3**
	baz=58,SNR=10						
125A	**Gardner Draw,**	**57.74**	**11**	⇑P	**P**	**21 08 23.6**	**-0.5**
	baz=58,SNR=14						
Z21A	**St. Cloud Mine**	**57.92**	**8**	⇓P	**P**	**21 08 25.9**	**+0.5**
	baz=58,SNR=7.6						
Z23A	**Rita Site, Whi**	**58.07**	**9**	⇑P	**P**	**21 08 27.1**	**+0.6**
	baz=58						
Y14A	**Wickenburg**	**58.09**	**3**	⇓P	**P**	**21 08 26.9**	**+0.3**
	baz=59						
BELC	**Belle Mtn. Jos**	**58.09**	**360**	⇑P	**P**	**21 08 27.3**	**+0.7**
	baz=59						
Y16A	**Circle Bar Ran**	**58.11**	**4**	⇓P	**P**	**21 08 27.3**	**+0.6**
	baz=59						
Z24A	**Sheeppen Canyo**	**58.27**	**10**	⇓P	**P**	**21 08 27.9**	**0.0**
	baz=59						
Z25A	**Roswell**	**58.33**	**11**	⇑P	**P**	**21 08 28.2**	**-0.1**
	baz=59						
Y19A	**Nutrioso**	**58.38**	**6**	⇓P	**P**	**21 08 29.2**	**+0.6**
	baz=59,SNR=6.7						
Y20A	**Horse Springs,**	**58.42**	**7**	⇓P	**P**	**21 08 29.7**	**+0.8**
	baz=59						
Y21A	**Point of Rocks**	**58.61**	**8**	⇓P	**P**	**21 08 30.9**	**+0.7**
	baz=59,SNR=7.1						
X14A	**Yava**	**58.62**	**3**	⇓P	**P**	**21 08 30.8**	**+0.5**
	baz=59,SNR=8.5						
Y22A	**Socorro**	**58.63**	**9**	P	**P**	**21 08 30.4**	**+0.1**
	baz=59,SNR=7.1						
X15A	**Humboldt**	**58.67**	**3**	⇑P	**P**	**21 08 30.8**	**+0.2**
	baz=59,SNR=8.1						
Y23A	**Lovelace Mesa,**	**58.76**	**9**	⇑P	**P**	**21 08 31.7**	**+0.5**
	baz=59,SNR=7.3						
Y24A	**Capitan**	**58.85**	**10**	⇓P	**P**	**21 08 32.0**	**+0.1**
	baz=59,SNR=7.8						
LENM	**Lemitar**	**58.85**	**9**	*e*P	**P**	**21 08 32.2**	**+0.2**
	14nm,1.1s,mb4.9						
X18A	**Snowflake**	**58.88**	**6**	⇓P	**P**	**21 08 32.7**	**+0.7**
	baz=59,SNR=5.4						
BNM	**Barren Site**	**58.89**	**9**	*e*P	**P**	**21 08 31.9**	**-0.2**
	13nm,1.5s,mb4.7						
Y25A	**Mesa, Roswell**	**58.97**	**11**	⇑P	**P**	**21 08 32.2**	**-0.5**
	baz=59,SNR=6.4						
X21A	**Alamocita Cree**	**59.02**	**8**	⇑P	**P**	**21 08 33.5**	**+0.4**
	baz=60,SNR=5.4						
X20A	**Quemado**	**59.04**	**7**	⇓P	**P**	**21 08 33.7**	**+0.5**
	baz=60						
LAZ	**Ladron**	**59.06**	**8**	*e*P	**P**	**21 08 33.2**	**-0.2**
	15nm,1.7s,mb4.8						
Y27A	**Causey**	**59.21**	**12**	⇓P	**P**	**21 08 33.6**	**-0.8**
	baz=60						
W14A	**Seligman**	**59.35**	**3**	⇑P	**P**	**21 08 36.2**	**+0.9**
	baz=60,SNR=12						
W20A	**Ramah**	**59.61**	**7**	⇓P	**P**	**21 08 37.9**	**+0.8**
	baz=60						
ANMO	**Albuquerque**	**59.70**	**9**	*e*P	**P**	**21 08 35.2**	**-2.5**
	12nm,1.7s,mb4.7						
WUAZ	**Wupatki**	**59.75**	**4**	P	**P**	**21 08 38.0**	**-0.1**
	22nm,1.5s,mb5.0						
V14A	**Boquillas Ranc**	**59.77**	**3**	⇓P	**P**	**21 08 38.8**	**+0.6**
	baz=60						
V11A	**Goodsprings**	**59.92**	**0**	⇓P	**P**	**21 08 40.3**	**+1.0**
	baz=60						
W23A	**Werner Place,**	**59.95**	**9**	⇓P	**P**	**21 08 40.0**	**+0.5**
	baz=60						
V13A	**Grand Canyon W**	**59.96**	**2**	⇑P	**P**	**21 08 40.1**	**+0.6**
	baz=60						
V15A	**Kaibab Nationa**	**60.00**	**3**	P	**P**	**21 08 40.3**	**+0.5**
	baz=60,SNR=8.1						
V18A	**Ganado**	**60.05**	**6**	⇓P	**P**	**21 08 40.8**	**+0.7**
	baz=60,SNR=5.8						
W24A	**Lazy 6 Ranch,**	**60.11**	**10**	⇓P	**P**	**21 08 40.5**	**0.0**
	baz=61,SNR=7.0						
U16A	**Tuba City**	**60.39**	**4**	⇓P	**P**	**21 08 43.0**	**+0.6**
	baz=61						
SHPR	**Sheep Range**	**60.59**	**1**	*e*P	**P**	**21 08 44.1**	**+0.3**
	30nm,1.5s,mb5.2						
U15A	**North Rim**	**60.60**	**3**	⇑P	**P**	**21 08 44.6**	**+0.7**
	baz=61,SNR=8.5						
U18A	**Rough Rock, Ch**	**60.76**	**5**	⇑P	**P**	**21 08 45.3**	**+0.3**
	baz=61,SNR=7.3						
U17A	**Shonto**	**60.87**	**5**	⇑P	**P**	**21 08 46.0**	**+0.2**
	baz=61						
U21A	**Nageezi**	**61.00**	**8**	⇓P	**P**	**21 08 46.6**	**0.0**
	baz=62,SNR=7.1						
WMOK	**Wichita Mounta**	**61.00**	**16**	*e*P	**P**	**21 08 44.7**	**-2.0**
U23A	**El Rito**	**61.09**	**9**	⇓P	**P**	**21 08 47.4**	**+0.2**
	baz=62,SNR=8.3						
T13A	**Saint George**	**61.12**	**2**	⇑P	**P**	**21 08 48.0**	**+0.6**
	baz=62,SNR=10						
T15A	**Red Dirt Ranch**	**61.18**	**3**	⇑P	**P**	**21 08 48.4**	**+0.6**
	baz=62,SNR=7.2						
T19A	**Beclabito**	**61.24**	**6**	⇓P	**P**	**21 08 48.1**	**-0.1**
	baz=62,SNR=7.1						
T17A	**Navajo Res., N**	**61.26**	**5**	⇑P	**P**	**21 08 49.0**	**+0.6**
	baz=62						
T22A	**Edith**	**61.67**	**8**	⇑P	**P**	**21 08 51.3**	**+0.2**
	baz=62,SNR=13						
CCUT	**Cedar City**	**61.67**	**2**	*e*P	**P**	**21 08 51.4**	**+0.2**
	24nm,1.4s,mb5.1						
MVCO	**Mesa Verde**	**61.68**	**7**	*e*P	**P**	**21 08 49.7**	**-1.5**
	31nm,1.5s,mb5.2						
S13A	**Holt Ranch, En**	**61.69**	**2**	⇑P	**P**	**21 08 51.8**	**+0.6**
	baz=62						
ARUT	**Antelope Range**	**61.91**	**2**	P	**P**	**21 08 52.9**	**+0.2**
	3.6nm,0.7s,mb4.6						
S20A	**Disappointment**	**62.30**	**7**	⇓P	**P**	**21 08 55.6**	**+0.2**
	baz=63						
S22A	**4UR Ranch, Cre**	**62.40**	**8**	⇑P	**P**	**21 08 56.5**	**+0.5**
	baz=63						
NVAR	**Mina Array Bea**	**62.55**	**358**	P	**P**	**21 08 54.9**	**-2.1**
	1.8nm,0.6s,mb4.3,baz=187,slow=10,SNR=4.3						
SDCO	**Great Sand Dun**	**62.58**	**9**	⇓P	**P**	**21 08 57.1**	**-0.1**
	baz=63,SNR=6.6						
SDCO	**Great Sand Dun**	**62.58**	**9**	*e*P	**P**	**21 08 56.4**	**-0.8**
	11nm,1.1s,mb4.9						
R19A	**Curley Farm, L**	**62.67**	**6**	⇑P	**P**	**21 08 57.9**	**0.0**
	baz=63,SNR=5.5						
PV04	**Paradox Valley**	**62.81**	**6**	*e*P	**P**	**21 08 57.6**	**-1.1**
Q11A	**Duckwater**	**62.92**	**0**	⇑P	**P**	**21 09 00.6**	**+1.1**
	baz=63						
R21A	**Cimarron**	**62.92**	**7**	⇓P	**P**	**21 09 00.0**	**+0.5**
	baz=63,SNR=7.5						
Q19A	**Hogan Spring (**	**63.33**	**6**	⇑P	**P**	**21 09 02.1**	**-0.1**
	baz=64						
SRU	**San Rafael**	**63.38**	**5**	P	**P**	**21 09 00.8**	**-1.7**
	18nm,1.3s,mb5.0						
Q18A	**Rafter H Ranch**	**63.40**	**5**	⇑P	**P**	**21 09 02.9**	**+0.2**
	baz=64						
Q20A	**Ridgley Place,**	**63.42**	**7**	⇓P	**P**	**21 09 02.7**	**-0.1**
	baz=64						
P13A	**Bates Ranch, G**	**63.55**	**2**	⇑P	**P**	**21 09 04.3**	**+0.6**
	baz=64						
Q23A	**Hartsel**	**63.67**	**9**	⇓P	**P**	**21 09 04.8**	**+0.3**
	baz=64						
P17A	**Butcher Ranch,**	**63.73**	**4**	⇑P	**P**	**21 09 04.7**	**-0.1**
	baz=64						
P15A	**Leamington**	**63.73**	**3**	⇓P	**P**	**21 09 04.6**	**-0.2**
	baz=64						
P23A	**Jefferson**	**64.13**	**9**	⇑P	**P**	**21 09 07.8**	**+0.3**
	baz=65						
DUG	**Dugway**	**64.33**	**3**	*e*P	**P**	**21 09 07.7**	**-1.1**
	17nm,1.3s,mb4.9						
JLU	**Jordanelle**	**64.80**	**4**	*e*P	**P**	**21 09 10.9**	**-0.9**
	23nm,1.4s,mb5.0						
N17A	**Moffit Pass**	**65.18**	**4**	⇓P	**P**	**21 09 14.9**	**+0.6**
	baz=66						
N20A	**Spence Gulch,**	**65.29**	**6**	⇓P	**P**	**21 09 15.0**	**0.0**
	baz=66						
MOD	**Modoc**	**66.11**	**356**	*e*P	**P**	**21 09 19.9**	**-0.4**
	21nm,1.4s,mb5.0						
L14A	**Malta**	**66.15**	**2**	⇑P	**P**	**21 09 20.3**	**-0.3**
	baz=67						
PDAR	**Pinedale Array**	**67.09**	**5**	P	**P**	**21 09 24.9**	**-1.7**
	1.8nm,0.7s,mb4.2,baz=159,slow=6.2,SNR=7.0						
PDAR				LR	LR	21 33 24.9	
	comp=Z,90nm,19.3s,MS4.0,baz=234,slow=31						
J16A	**Bone**	**67.46**	**3**	⇑P	**P**	**21 09 28.3**	**-0.5**
	baz=68						
J13A	**Cove Ranch, Pi**	**67.49**	**1**	⇓P	**P**	**21 09 29.0**	**0.0**
	baz=68						
J15A	**Blackfoot**	**67.54**	**3**	⇑P	**P**	**21 09 29.1**	**-0.2**
	baz=68						
RRI2	**Red Ridge**	**67.55**	**4**	*e*P	**P**	**21 09 28.1**	**-1.3**
	21nm,1.3s,mb5.0						
HLID	**Hailey**	**67.65**	**1**	⇓P	**P**	**21 09 30.3**	**+0.3**
	baz=68						
HLID	**Hailey**	**67.65**	**1**	*e*P	**P**	**21 09 29.9**	**-0.2**
	18nm,1.4s,mb4.9						
J20A	**Shoshoni**	**67.80**	**6**	⇑P	**P**	**21 09 30.3**	**-0.7**
	baz=68						
J21A	**Lysite**	**67.86**	**7**	⇑P	**P**	**21 09 30.7**	**-0.7**
	baz=68						
I12A	**Atlanta**	**67.87**	**1**	⇑P	**P**	**21 09 31.3**	**-0.1**
	baz=68						
I13A	**Wildhorse Cree**	**68.00**	**1**	⇓P	**P**	**21 09 32.3**	**+0.1**
	baz=68						
I07A	**Izee**	**68.24**	**357**	⇑P	**P**	**21 09 33.9**	**+0.1**
	baz=69						
I21A	**Big Trails, Te**	**68.33**	**7**	⇑P	**P**	**21 09 33.6**	**-0.7**
	baz=69						
I20A	**Worland**	**68.39**	**6**	⇑P	**P**	**21 09 33.8**	**-0.8**
	baz=69						
I19A	**Meeteetse**	**68.39**	**5**	⇑P	**P**	**21 09 34.0**	**-0.7**
	baz=69						
H15A	**Lima**	**68.75**	**2**	⇓P	**P**	**21 09 36.8**	**-0.1**
	baz=69						
G12A	**Big Creek, Yel**	**69.20**	**0**	⇓P	**P**	**21 09 39.4**	**-0.3**
	baz=70						
G15A	**Dillon**	**69.30**	**3**	⇑P	**P**	**21 09 39.5**	**-0.8**
	baz=70						
G08A	**Pilot Rock**	**69.42**	**358**	⇓P	**P**	**21 09 41.1**	**0.0**
	baz=70						
DLMT	**Dillon**	**69.50**	**2**	P	**P**	**21 09 41.3**	**-0.3**
	18nm,1.4s,mb4.8						
G18A	**Lazy EL Ranch,**	**69.62**	**5**	⇓P	**P**	**21 09 41.9**	**-0.4**
	baz=70						
F12A	**Elk City**	**69.83**	**0**	⇓P	**P**	**21 09 44.0**	**+0.4**
	baz=70						
F17A	**Fitzpatrick Pl**	**70.13**	**4**	⇑P	**P**	**21 09 45.5**	**+0.1**
	baz=71						
F19A	**Roth Farm, Mol**	**70.20**	**5**	⇓P	**P**	**21 09 44.4**	**-1.4**
	baz=71						
F20A	**Billings**	**70.22**	**6**	⇑P	**P**	**21 09 44.4**	**-1.6**
	baz=71						
DZM	**Mont Dzumac**	**70.55**	**254**	*e*LR	LR	21 31 15.5	
	220nm,22.8s						
CHMT	**Chamberlain Mo**	**71.02**	**2**	P	**P**	**21 09 49.9**	**-1.0**
	11nm,1.5s,mb4.5						
VNA3	**Neumayer Olymp**	**72.13**	**161**	*e*P	**P**	**21 09 54.3**	**-3.1**
A17A	**Triple J Farms**	**73.16**	**4**	⇓P	**P**	**21 10 03.7**	**0.0**
	baz=74						
ULM	**Lac du Bonnet**	**76.40**	**13**	LR	LR	21 39 56.1	
	comp=Z,112nm,18.5s,MS4.2,baz=331,slow=32						
SADO	**Sadowa**	**76.56**	**26**	LR	LR	21 41 29.5	
	comp=Z,202nm,18.1s,MS4.5,baz=210,slow=34						
YKA	**Yellowknife Ar**	**86.61**	**1**	P	**P**	**21 11 14.3**	**-1.7**
	1.3nm,0.7s,mb4.3,baz=193,slow=4.4,SNR=2.9						
YKA				LR	LR	21 45 02.1	
	comp=Z,9.9nm,21.3s,baz=60,slow=32						
STKA	**Stephens Creek**	**87.31**	**236**	LR	LR	21 46 48.3	
	comp=Z,168nm,18.7s,MS4.5,baz=204,slow=33						
MAW	**Mawson**	**88.26**	**179**	LR	LR	21 45 26.5	
	comp=Z,164nm,21.5s,MS4.4,baz=176,slow=32						
SCHQ	**Schefferville**	**89.37**	**26**	LR	LR	21 50 02.5	
	comp=Z,109nm,18.0s,MS4.3,baz=258,slow=35						
ILAR	**Eielson Array**	**92.10**	**347**	P	**P**	**21 11 40.6**	**-1.3**
	0.3nm,1.0s,mb3.6,baz=174,slow=8.9,SNR=3.2						
FRB	**Frobisher Bay**	**95.33**	**19**	LR	LR	21 49 41.0	
	comp=Z,99nm,19.0s,MS4.3,baz=150,slow=32						
MDJ	**Mudanjiang**	**123.96**	**308**	PKP	PKPdf	21 17 29.0	-2.5
BJI	**Beijing**	**133.97**	**303**	PKP	PKPdf	21 17 48.0	-2.7
BJI				LR	LR		
	comp=N,160nm,23.1s,MS4.8						
BJI				LR	LR		
	comp=E,150nm,20.8s,MS4.8						
BJI				LR	LR		
	comp=Z,130nm,22.1s,MS4.6						
HHC	**Hu-ho-hao-te**	**137.40**	**304**	*e*PKP	PKPdf	21 17 51.8	-5.2
HHC				PP	PP	21 20 42.0	-0.8
HHC				PKS		21 21 26.0	
HHC				SKKS	SKKSac	21 27 28.0	-9.3
HHC				SS	SS	21 38 45.0	-5.5
HHC				AMB	AMB		
	comp=Z,37nm,4.0s						
HHC				LR	LR		
	comp=N,100nm,15.5s,MS4.9						
HHC				LR	LR		
	comp=E,140nm,17.8s,MS4.9						
HHC				LR	LR		
	comp=Z,200nm,21.4s,MS4.8						
GYA	**Guiyang**	**141.71**	**282**	PKP	PKPdf	21 18 02.0	-3.3
GYA				PP	PP	21 21 12.0	+2.1
GYA				PKS		21 21 37.5	
GYA				SKS	SKSdf	21 25 09.8	-5.9
GYA				SKKS	SKKSac	21 28 01.3	-2.0
GYA				SS	SS	21 39 41.8	-0.4
GYA				AMB	AMB		
	comp=Z,120nm,7.9s						
GYA				LR	LR		
	comp=N,120nm,21.9s,MS4.7						
GYA				LR	LR		
	comp=E,110nm,22.0s,MS4.7						
GYA				LR	LR		
	comp=Z,140nm,24.6s,MS4.6						
LZH	**Lanzhou**	**144.05**	**298**	PKP	PKPdf	21 18 03.8	-5.4
LZH				pPKP	pPKPdf	21 18 10.5	-2.1
LZH				sPKP		21 18 14.3	
LZH				PP	PP	21 21 23.5	-0.1
LZH				AMB	AMB		
	comp=Z,130nm,4.6s						
CD2	**Chengdu**	**144.49**	**289**	PKP	PKPdf	21 18 09.5	-0.6
KMI	**Kunming**	**145.06**	**279**	PKP	PKPdf	21 18 09.5	-1.8
KMI				pPKP

THIG				*i* S		**Sn**	**21 02 36.5 -1.6**
PCG	**Pacaya**	**1.21**	**63**	*e*P		**Pn**	**21 02 23.1 +0.2**
PCG				*e*S		**Sn**	**21 02 37.8 -0.9**
IXG	**Ixpaco**	**1.27**	**75**⇑	*e*P		**Pn**	**21 02 23.0 -0.7**
NBG	**Las Nubes**	**1.52**	**61**	*e*P		**Pn**	**21 02 28.4 +1.3**
NBG				*e*S		**Sn**	**21 02 47.3 +1.3**
SBLS	**San Blas**	**2.04**	**90**	*e*P		**Pn**	**21 02 33.4 -0.7**
MRL	**Marmol**	**2.31**	**58**	*e*P		**Pn**	**21 02 38.5 +0.8**
PCIG		**2.35**	**322**	*i* P		**Pn**	**21 02 39.3 +1.0**
PCIG				*i* S		**Sn**	**21 03 03.1 -3.0**
BOQS	**Boqueron**	**2.37**	**92**	*e*P		**Pn**	**21 02 38.4 -0.2**
BOQS				*e*S		**Sn**	**21 03 06.4 -0.3**
LFRS	**El Faro**	**2.59**	**95**	*e*P		**Pn**	**21 02 41.5 -0.1**
LFRS				*e*S		**Sn**	**21 03 10.5 -1.5**
SNVI	**San Vicente**	**2.81**	**94**	*e*P		**Pn**	**21 02 44.5 0.0**
SNVI				*e*S		**Sn**	**21 03 17.3 0.0**
SCX	**San Cristobal**	**3.01**	**343**	*e*P		**Pn**	**21 02 52.2 +4.9**
SCX				*i* S		**Sn**	**21 03 23.1 +1.0**
SCX	**San Cristobal**	**3.01**	**343**	*e*P		**Pn**	**21 02 51.2 +3.9**
SCX				*i* S		**Sn**	**21 03 23.5 +1.3**
TGIG		**3.21**	**335**	*i* P		**Pn**	**21 02 54.4 +4.3**
TGIG				*i* S		**Sn**	**21 03 26.3 -1.0**
BLLM	**Bellamira**	**3.41**	**96**	*e*P		**Pn**	**21 02 52.0 -0.7**
CAHU	**Cacacuatique**	**3.41**	**91**	*e*P		**Pn**	**21 02 52.0 -0.8**
CNCH	**Conchagua**	**3.82**	**98**	*e*P		**Pn**	**21 02 59.0 +0.6**
TGUH	**Tegucigalpa,Un**	**4.32**	**87**	Pn		Px	21 03 19.8
TGUH	**Tegucigalpa,Un**	**4.32**	**87**	*e*P		**Pn**	**21 03 05.7 +0.4**
HUIG	**Huatulco**	**4.66**	**295**	*i* P		**Pn**	**21 03 10.7 +0.9**
HUIG				*i* S		**Sn**	**21 03 59.5 -3.0**
HUIG	**Huatulco**	**4.66**	**295**	*i* P		**Pn**	**21 03 10.7 +0.9**
HUIG				*i* S		**Sn**	**21 03 58.5 -4.0**
UTMO	**Huajuapan**	**7.07**	**305**	*e*P		**Pn**	**21 03 44.4 +1.5**
UTMO				*i* S		**Sn**	**21 04 59.9 -1.9**
JTS	**JuntasAbangare**	**7.50**	**117**	*e*Pn		Px	21 04 04.2

*ISCJB **31** 21:11:33.6±0.3,38°.26N±0°.02×73°.49E±0°.04,h111km±4km, mb4.2/35, Error ellipse: s-maj=5.0km s-min=3.2km az=164.2*

*MOS **31** 21:11:36.2±0.9,38°.43N×73°.45E,h127km, mb4.1/18, Error ellipse: s-maj=8.5km s-min=4.9km az=114.8*

*NEIC **31** 21:11:37.4±0.6,38°.43N×73°.48E,h123km±5km, mb4.3/22, Error ellipse: s-maj=6.7km s-min=5.2km az=179.0*

*IDC **31** 21:11:37.0±3.5,38°.35N×73°.54E,h120km±28km, mb3.8/13, mb1 4.0/17, mb1mx3.8/28, mbtmp3.8/17, MS4.1/4, Ms1 4.1/4, ms1mx2.8/44, Error ellipse: s-maj=27.2km s-min=15.9km az=176.0*

*NNC **31** 21:11:40.9±8.5,39°.17N×73°.63E,h0km, mb4.4, mpv4.3, Error ellipse: s-maj=74.5km s-min=44.1km az=168.0*

*TEH **31** 21:12:37.5,38°.13N×67°.43E,h18km*

ISC 31 21:11:34.8±0.3,38°.27N±0°.02×73°.47E±0°.04,h104km±3km, n193,σ1°28/220,mb4.2/35,13C-21D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSH	**Kashi**	**2.32**	**57**⇑	*i*P		**Pn**	**21 12 09.5**	**-2.1**
KSH				S		**Sn**	**21 12 32.5**	**-7.4**
KSH				smax				
	comp=N,2μm,0.7s							
KSH				smax				
	comp=E,3μm,1.1s							
AML	**Almayashu**	**3.87**	**2**	P		**Pn**	**21 12 34.2**	**+2.0**
	SNR=422							
AML	**Almayashu**	**3.87**	**2**	⇓*i*Pn		**Pn**	**21 12 34.1**	**+2.0**
AML				*e*Sn		**Sn**	**21 13 16.1**	**-0.5**
UCH	**Uchtor**	**4.04**	**11**	P		**Pn**	**21 12 36.9**	**+2.4**
	SNR=6.1							
UCH	**Uchtor**	**4.04**	**11**	*e*Pn		**Pn**	**21 12 36.7**	**+2.2**
UCH				*e*Sn		**Sn**	**21 13 20.9**	**+0.1**
KZA	**Kyzart**	**4.04**	**19**	P		**Pn**	**21 12 36.6**	**+2.0**
	SNR=21							
KZA	**Kyzart**	**4.04**	**19**	*e*Pn		**Pn**	**21 12 36.6**	**+2.1**
KZA				*e*Sn		**Sn**	**21 13 21.8**	**+0.8**
EKS2	**Erkin-Say**	**4.40**	**3**	P		**Pn**	**21 12 41.6**	**+2.3**
	SNR=81							
EKS2	**Erkin-Say**	**4.40**	**3**	*e*Pn		**Pn**	**21 12 41.6**	**+2.2**
EKS2				*e*Sn		**Sn**	**21 13 28.9**	**-0.6**
AAK	**Ala-Archa**	**4.43**	**10**	P		**Pn**	**21 12 42.0**	**+2.2**
	SNR=16							
AAK	**Ala-Archa**	**4.43**	**10**	*e*Pn		**Pn**	**21 12 41.1**	**+1.3**
AAK				P			21 12 42.1	
AAK				*e*Sn		**Sn**	**21 13 30.1**	**-0.2**
AAK				S		**Sn**	**21 13 30.9**	**+0.6**
AAK	**Ala-Archa**	**4.43**	**10**	P		**Pn**	**21 12 42.1**	**+2.3**
	comp=E,4.7nm,0.3s,baz=152,slow=6.0,SNR=25							
AAK				S		**Sn**	**21 13 30.9**	**+0.6**
	comp=E,6.3nm,0.3s,baz=350,slow=21.5,SNR=4.4							
AAK	**Ala-Archa**	**4.43**	**10**	*e*PN		**Pn**	**21 12 41.1**	**+1.3**
AAK				S		**Sn**	**21 13 30.9**	**+0.6**
ULHL	**Ulahol**	**4.51**	**27**	P		**Pn**	**21 12 43.0**	**+2.2**
	SNR=16							
KBK	**Karagaybulak**	**4.53**	**14**	P		**Pn**	**21 12 43.4**	**+2.3**
	SNR=16							
CHCP	**Chirah Chowk**	**4.60**	**182**	P		**Pn**	**21 12 47.7**	**+5.6**
CEP	**Cherat**	**4.61**	**196**	P		**Pn**	**21 12 47.2**	**+4.9**
CEP				S		**Sn**	**21 13 40.0**	**+5.3**
CHMS	**Chumysh**	**4.83**	**11**	P		**Pn**	**21 12 47.1**	**+1.9**
	SNR=7.3							
TKM2	**Tokmak 2**	**4.92**	**19**	⇑P		**Pn**	**21 12 48.2**	**+1.8**
TKM2	comp=E,9.8nm,0.6s			⇓S		**Sn**	**21 13 29.6**	**-13**
	comp=E,34nm,0.6s							
TKM2	**Tokmak 2**	**4.92**	**19**	P		**Pn**	**21 12 48.5**	**+2.1**
	SNR=26							
TKM2	**Tokmak 2**	**4.92**	**19**	*e*Pn		**Pn**	**21 12 48.2**	**+1.8**
TKM2				*e*Sn		**Sn**	**21 13 42.2**	**0.0**
CHM	**Chimkent**	**5.01**	**325**	*e*Pn		**Pn**	**21 12 46.4**	**-1.2**
CHM				*e*Sn		**Sn**	**21 13 39.2**	**-5.1**
USP	**Ospenovka**	**5.06**	**9**	P		**Pn**	**21 12 50.2**	**+2.0**
	SNR=11							
KBL	**Kabul**	**5.15**	**225**	*e*Pn		**Pn**	**21 12 54.2**	**+4.6**
	comp=E,47nm,0.4s							
KBL				*e*Sn		**Sn**	**21 13 53.8**	**+6.0**
KBL	**Kabul**	**5.15**	**225**	*e*PN		**Pn**	**21 12 54.2**	**+4.6**
KBL				*e*			21 13 53.8	
KBL				pmax	pmax			
	comp=Z,47nm,0.4s							
KK31	**Karatay Array**	**5.33**	**336**	⇑P		**Pn**	**21 12 53.3**	**+1.4**
	comp=Z,64nm,0.3s,baz=152,slow=13,SNR=2758							
KK31				S		**Sn**	**21 13 49.3**	**-2.7**
	comp=Z,172nm,0.6s,baz=157,slow=24,SNR=24							
KK31	**Karatay Array**	**5.33**	**336**	*ce*PN		**Pn**	**21 12 53.3**	**+1.4**
KK31				pmax	pmax			
	comp=Z,77nm,0.2s							
KKAR	**Karatay Array**	**5.33**	**336**	⇓*i*Pn		**Pn**	**21 12 53.4**	**+1.4**
	comp=Z,156nm,0.4s							
KKAR				Sn		**Sn**	**21 13 49.2**	**-2.8**
KKAR	**Karatay Array**	**5.33**	**336**	⇓*i*PN		**Pn**	**21 12 53.4**	**+1.5**
KKAR				pmax	pmax			
	comp=Z,156nm,0.4s							
THW	**Thamme Wali**	**5.64**	**195**	P		**Pn**	**21 13 00.2**	**+4.0**
THW				S		**Sn**	**21 13 57.0**	**-2.6**
SARP	**Sargodha**	**6.36**	**186**	P		**Pn**	**21 13 09.3**	**+3.3**
SDNR	**Sundarnagar**	**7.34**	**156**	*e*PKP		**Pn**	**21 13 21.5**	**+2.3**
SDNR				*e*S		**Sn**	**21 14 41.5**	**+0.6**
SMLA	**Simla**	**7.74**	**156**	*i* P		**Pn**	**21 13 24.7**	**-0.1**
SMLA				*i* S		**Sn**	**21 14 44.9**	**-5.9**
SMLA				AML	AML		21 14 53.5	
	comp=N,139nm,0.4s							
SMLA				⇓AML	AML		21 14 54.0	
	comp=E,234nm,0.5s							
KLP	**Kalpa**	**7.78**	**148**	*e*PKP		**Pn**	**21 13 26.7**	**+1.4**
KLP				*e*S		**Sn**	**21 14 46.7**	**-5.0**
KLP				AML	AML		21 15 05.6	
	comp=N,143nm,0.5s							
KLP				AML	AML		21 15 08.1	
	comp=E,159nm,0.7s							
KKR	**Kurukshetra**	**8.73**	**160**	*e*PKP		**Pn**	**21 13 39.4**	**+1.2**
DDI	**Dehra Dun**	**8.78**	**153**	*e*PKP		**Pn**	**21 13 38.5**	**-0.4**
JOSI	**Joshimath**	**9.19**	**145**	*e*PKP		**Pn**	**21 13 45.5**	**+1.1**
JOSI				*e*S		**Sn**	**21 15 21.2**	**-4.7**
JOSI				AML	AML		21 15 27.7	
	comp=E,224nm,0.7s							
JOSI				AML	AML		21 15 29.2	
	comp=N,234nm,0.8s							
NDI	**New Delhi**	**10.05**	**161**	*ex*		x	21 14 28.0	
NDI				*e*S		**Sn**	**21 15 40.0**	**-7.0**
AYAN	**Aya Nagar**	**10.22**	**162**	*e*PKP		**Pn**	**21 13 59.1**	**+0.6**
AYAN				*e*S		**Sn**	**21 15 43.7**	**-7.5**
KHET	**Khetri**	**10.35**	**168**	*e*PKP		**Pn**	**21 13 59.6**	**-0.6**
KHET				*e*S		**Sn**	**21 15 45.6**	**-8.7**
KUDL	**Kundal**	**10.40**	**165**	*e*PKP		**Pn**	**21 13 57.2**	**-3.7**
KUDL				*e*S		**Sn**	**21 15 44.2**	**-11**
MK31	**Makanchi Array**	**10.72**	**35**	⇓P		**Pn**	**21 14 05.4**	**+0.4**
	comp=N,3.4nm,0.7s,baz=206,slow=13,SNR=30							
MK31	**Makanchi Array**	**10.72**	**35**	*e*Pn		**Pn**	**21 14 05.8**	**+0.7**
MK31				Sn		**Sn**	**21 16 00.1**	**-2.8**
MK31	**Makanchi Array**	**10.72**	**35**	*ce*P		**Pn**	**21 14 05.4**	**+0.3**
MK31				pmax	pmax			
	comp=Z,1.0nm,0.4s							
MKAR	**Makanchi Array**	**10.72**	**35**	P		**Pn**	**21 14 05.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=210,slow=14,SNR=30							
IMYA	**Miami**	**10.82**	**264**	*e*Pn		**Pn**	**21 14 06.4**	**-0.2**
IMYA				*e*			21 16 05.1	
	comp=Z,1μm,0.2s							
IMOG	**Moghan**	**11.48**	**264**	*e*Pn		**Pn**	**21 14 14.9**	**-0.4**
IMOG				*e*			21 16 19.7	
	comp=Z,740nm,0.3s							
IPAY	**Payeh**	**11.66**	**266**	*e*Pn		**Pn**	**21 14 17.7**	**-0.1**
IPAY				*e*			21 16 26.6	
	comp=Z,1μm,0.2s							
IEMG	**Emamgholi**	**11.75**	**270**	*e*Pn		**Pn**	**21 14 18.3**	**-0.6**
IEMG				*e*			21 16 26.8	
	comp=Z,1μm,0.2s							
IAKL	**Akhelmad**	**11.82**	**266**	*e*Pn		**Pn**	**21 14 19.4**	**-0.4**
IAKL				*e*			21 16 29.8	
	comp=Z,928nm,0.2s							
ISFR	**Sfrayin**	**12.32**	**269**	*e*Pn		**Pn**	**21 14 26.3**	**-0.2**
ISFR				*e*			21 16 53.3	
	comp=Z,658nm,0.3s							
ISHV	**Shirvan**	**12.48**	**272**	*e*Pn		**Pn**	**21 14 28.0**	**-0.6**
ISHV				*e*Sg		**Sn**	**21 16 38.2**	**-7.6**
ISHV				*e*			21 16 49.1	
	comp=Z,1μm,0.3s							
KURBB	**Kurchatov Arra**	**12.87**	**15**	⇑P		**Pn**	**21 14 30.8**	**-2.8**
	comp=Z,1.4nm,0.6s							
KURK	**Kurchatov**	**12.97**	**15**	⇓P		**Pn**	**21 14 34.1**	**-0.9**
	comp=Z,7.3nm,0.6s							
KURK	**Kurchatov**	**12.97**	**15**	*e*Pn		**Pn**	**21 14 32.8**	**-2.2**
KURK				*e*			21 14 41.2	
KURK				*e*Sn		**Sn**	**21 17 03.9**	**+6.3**
KURK	**Kurchatov**	**12.97**	**15**	P		**Pn**	**21 14 31.2**	**-3.8**
	comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=13							
KURK	**Kurchatov**	**12.97**	**15**	⇓*e*P		**Pn**	**21 14 33.2**	**-1.8**
KURK				pmax	pmax			
	comp=Z,7.0nm,2.5s							
DANN	**Dangsing**	**13.10**	**136**	*e*P		**Pn**	**21 14 34.1**	**-2.7**
	comp=Z,27nm,0.4s							
KOLN	**Koldanda**	**13.47**	**138**	*e*P		**Pn**	**21 14 39.3**	**-2.4**
	comp=Z,26nm,0.5s							
GKN	**Gorkha**	**13.85**	**134**	*e*P		**Pn**	**21 14 43.9**	**-2.7**
	comp=Z,21nm,0.4s							
DMN	**Daman**	**14.42**	**134**	*e*P		**Pn**	**21 14 51.4**	**-2.5**
	comp=Z,14nm,0.5s							
VOSK	**Vostochnaya**	**14.56**	**354**	⇓P		**Pn**	**21 14 52.9**	**-2.6**
	comp=Z,5.1nm,0.8s							
PKI	**Pulchoki**	**14.62**	**133**	*e*P		**Pn**	**21 14 53.9**	**-2.6**
	comp=Z,22nm,0.6s							
GUN	**Gumba**	**14.64**	**131**	*e*P		**Pn**	**21 14 55.0**	**-1.7**
AB31	**Akbulak array**	**14.68**	**323**	⇓P		**Pn**	**21 14 55.6**	**-1.4**
	comp=Z,7.4nm,0.5s							
AB31	**Akbulak array**	**14.68**	**323**	*i* P		**Pn**	**21 14 55.0**	**-2.0**
AB31				pmax	pmax			
	comp=Z,5.0nm,0.2s							
ABKAR	**Akbulak array**	**14.68**	**323**	*e*Pn		**Pn**	**21 14 54.9**	**-2.1**
	comp=Z,17nm,0.6s							
ABKAR				*e*Sn		**Sn**	**21 17 25.9**	**-13**
BVA0	**Borovoye Array**	**14.91**	**353**	⇑P		**Pn**	**21 14 59.5**	**-0.5**
	comp=Z,2.4nm,0.7s,baz=178,slow=11,SNR=122							
BVAR	**Borovoye Array**	**14.91**	**353**	P		**Pn**	**21 14 58.4**	**-1.6**
	comp=Z,1.0nm,0.3s,baz=152,slow=11,SNR=27							
BRVK	**Borovoye**	**14.96**	**353**	*e*Pn		**Pn**	**21 14 57.5**	**-3.0**
	comp=Z,21nm,0.8s							
BRVK				*e*Sn		**Sn**	**21 17 43.3**	**-2.2**
BRVK	**Borovoye**	**14.96**	**353**	*d i*P		**Pn**	**21 14 58.8**	**-1.7**
BRVK				pmax	pmax			
	comp=Z,6.0nm,0.8s							
ZRNK	**Zerenda**	**15.01**	**350**	⇓P		**Pn**	**21 14 59.5**	**-1.7**
	comp=Z,20nm,0.8s							
RAMN	**Ramite**	**15.78**	**132**	*e*P		**Pn**	**21 15 08.7**	**-2.4**
	comp=Z,35nm,0.6s							
ODAN	**Odare**	**16.32**	**130**	*e*P		**Pn**	**21 15 15.4**	**-2.4**
	comp=Z,15nm,0.6s							
AKTK	**Aktyubinsk**	**16.39**	**323**	P		**Pn**	**21 15 18.0**	**-0.5**
AKTK				S		**S**	**21 18 07.6**	**-18**
AKTO	**Aktyubinsk**	**16.39**	**323**	⇓P		**Pn**	**21 15 18.2**	**-0.3**
	comp=Z,1.3nm,0.5s							
AKTO	**Aktyubinsk**	**16.39**	**323**	P		**Pn**	**21 15 18.0**	**-0.5**
	comp=Z,2.9nm,0.3s,baz=129,slow=11,SNR=52							
AKTO				S		**S**	**21 18 07.6**	**-18**
	comp=Z,0.3nm,0.3s,baz=336,slow=20,SNR=4.7							
LSA	**Lhasa**	**16.95**	**115**	*e*Pn		**Pn**	**21 15 27.6**	**+2.1**
	comp=Z,3.6nm,0.9s							
LSA	**Lhasa**	**16.95**	**115**	*e*P		**Pn**	**21 15 27.7**	**+2.2**
LSA				pmax	pmax			
	comp=Z,4.0nm,0.9s							
ZAA0	**Zalesovo Array**	**17.51**	**23**	*e*Pn		**Pn**	**21 15 30.8**	**-1.3**
ZALV	**Zalesovo Beam**	**17.51**	**23**	P		**Pn**	**21 15 30.9**	**-1.1**
	comp=Z,2.1nm,0.3s,baz=213,slow=11,SNR=50							
NVS	**Novosibirsk**	**17.86**	**19**	*e*P		**Pn**	**21 15 33.1**	**-3.1**
NVS				pmax	pmax			
	comp=Z,5.0nm,0.8s							
NVS				pmax	pmax			
	comp=N,6.0nm,0.9s							
SVE	**Sverdlovsk**	**20.43**	**340**	⇓*e*P		**P**	**21 16 04.1**	**+0.7**
SVE				pmax	pmax			
	comp=Z,18nm,0.8s							
GTA	**Gaotai**	**20.54**	**79**	*e*P		**P**		
GTA				pmax	pmax			
	comp=Z,3.0nm,1.1s							
ARU	**Arti**	**20.71**	**336**	*e*P		**P**	**21 16 06.4**	**-0.1**
	comp=Z,11nm,0.8s							
ARU	**Arti**	**20.71**	**336**	*d i*P		**P**	**21 16 06.7**	**+0.3**
ARU				S		**S**	**21 19 49.0**	**-2.7**
ARU				SS			21 20 09.1	
ARU				pmax	pmax			
	comp=Z,23nm,1.2s							
GNI	**Garni**	**22.30**	**284**	P		**P**	**21 16 28.0**	**+4.5**
	comp=Z,5.1nm,0.7s,mb3.9,baz=141,slow=14,SNR=3.5							
GNI	**Garni**	**22.30**	**284**	*e*P		**P**	**21 16 25.1**	**+1.5**
KIV	**Kislovodsk**	**23.80**	**294**	*e*P		**P**	**21 16 38.1**	**+0.3**
	comp=Z,5.4nm,0.6s,mb4.0							
KIV	**Kislovodsk**	**23.80**	**294**	*e*P		**P**	**21 16 38.1**	**+0.3**
KIV				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.0							
SONM	**Songino Array**	**25.72**	**58**	P		**P**	**21 16 56.5**	**+1.3**
	comp=Z,0.8nm,0.8s,mb3.2,baz=256,slow=9.7,SNR=8.0							
ULN	**Ulaanbaatar**	**26.16**	**58**	*e*P		**P**	**21 16 59.1**	**0.0**
	comp=Z,2.6nm,1.0s,mb3.6							
ULN	**Ulaanbaatar**	**26.16**	**58**	*e*P		**P**	**21 16 59.2**	**0.0**
ULN				pmax	pmax			
	comp=Z,3.0nm,1.0s,mb3.7							
CMAR	**Chiang Mai Arr**	**29.70**	**125**	pP		pP	21 18 00.2	+6.1
	comp=Z,0.7nm,1.0s,baz=328,slow=9.6,SNR=2.4							
BRTR	**Keskin Array B**	**30.82**	**285**	P		**P**	**21 17 43.0**	**+2.3**
	comp=Z,0.9nm,0.5s,mb3.8,baz=101,slow=9.0,SNR=5.5							
BRTR	**Keskin Array B**	**30.82**	**285**	*e*P		**P**	**21 17 43.1**	**+2.5**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
PALK	**Pallekele**	**31.54**	**166**	P		**P**	**21 17 49.7**	**+2.5**
	comp=Z,6.0nm,0.8s,mb4.4							
PALK	**Pallekele**	**31.54**	**166**	P		**P**	**21 17 49.7**	**+2.5**
PALK				pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.4							
TIRR	**Tirgusor**	**34.04**	**295**	*e*P		**P**	**21 18 07.8**	**-0.9**
	comp=Z,9.1nm,0.7s,mb4.7							
TIRR	**Tirgusor**	**34.04**	**295**	*e*P		**P**	**21 18 07.8**	**-0.9**
TIRR				pmax	pmax			
	comp=Z,9.0nm,0.7s,mb4.7							
TESR		**35.11**	**299**	⇓P		**P**	**21 18 19.2**	**+1.3**
TESR		**35.11**	**299**	⇓*i*P		**P**	**21 18 19.2**	**+1.3**
PLOR	**Plostina**	**35.16**	**298**	⇑P		**P**	**21 18 20.2**	**+1.9**
PLOR	**Plostina**	**35.16**	**298**	⇑*i*P		**P**	**21 18 20.1**	**+1.8**
JOF	**Joensuu**	**35.37**	**328**	*e*P		**P**	**21 18 18.8**	**-1.1**
JOF				pmax	pmax			
	comp=Z,8.0nm,0.5s,mb4.8							
JOF	**Joensuu**	**35.37**	**328**	*e*p		**P**	**21 18 18.8**	**-1.1**
	comp=Z,8.4nm,0.5s,mb4.8							
MLR	**Muntele Rosu**	**35.68**	**297**	⇑P		**P**	**21 18 25.8**	**+3.0**
MLR	**Muntele Rosu**	**35.68**	**297**	⇑*i*P		**P**	**21 18 25.8**	**+3.0**
BURAR	**Bucovina Array**	**36.02**	**301**	⇓P		**P**	**21 18 25.9**	**+0.2**
BURAR	**Bucovina Array**	**36.02**	**301**	⇓*i*P		**P**	**21 18 25.9**	**+0.2**
VOIR		**36.31**	**297**	⇓P		**P**	**21 18 29.6**	**+1.3**
VOIR		**36.31**	**297**	⇓*i*P		**P**	**21 18 29.6**	**+1.4**
FINES	**FINESS Array B**	**37.16**	**324**	P		**P**	**21 18 35.7**	**+0.5**
	comp=Z,5.7nm,0.5s,mb4.7,baz=111,slow=9.5,SNR=49							
KAF	**Kangasniemi**	**37.26**	**325**	*e*P		**P**	**21 18 35.8**	**-0.2**
KAF				pmax	pmax			
	comp=Z,3.0nm,0.6s,mb4.4							
KAF	**Kangasniemi**	**37.26**	**325**	*ep*		**P**	**21 18 35.8**	**-0.2**
	comp=Z,3.1nm,0.6s,mb4.4							
NJ2	**Nanjing**	**37.33**	**85**	*e*P		**P**	**21 18 39.3**	**+2.3**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.5s,mb5.0							
KWP	**Kalwaria Pacla**	**37.60**	**304**	*e*P		**P**	**21 18 40.1**	**+1.1**
	comp=Z,3.6nm,0.4s,mb4.5							
KWP	**Kalwaria Pacla**	**37.60**	**304**	⇑P		**P**	**21 18 40.9**	**+1.9**
KWP	**Kalwaria Pacla**	**37.60**	**304**	⇑*i*P		**P**	**21 18 40.9**	**+1.9**
KEV	**Kevo**	**39.92**	**337**	*e*P		**P**	**21 18 58.4**	**+0.2**
	comp=Z,2.3nm,0.5s,mb4.3							
KEV	**Kevo**	**39.92**	**337**	*e*P		**P**	**21 18 58.4**	**+0.2**
KEV				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.2							
ARCES	**ARCESS Array B**	**40.30**	**336**	P		**P**	**21 19 01.7**	**+0.4**
	comp=Z,6.2nm,0.4s,mb4.8,baz=111,slow=8.7,SNR=70							
ARE0	**ARCESS Array S**	**40.30**	**336**	*e*P		**P**	**21 19 01.8**	**+0.6**
YHNB	**Yeheng**	**42.60**	**94**	P		**P**	**21 19 20.7**	**0.0**
HFS	**Hagfors**	**42.92**	**321**	P		**P**	**21 19 23.1**	**+0.4**
	comp=Z,10nm,0.5s,mb4.8,baz=98,slow=11,SNR=64							
CLL	**Collm**	**43.64**	**308**	*i* P		**P**	**21 19 29.8**	**+1.1**
CLL	**Collm**	**43.64**	**308**	*i* P		**P**	**21 19 29.8**	**+1.1**
NOA	**NORSAR Array B**	**44.18**	**322**	P		**P**	**21 19 32.8**	**-0.1**
	comp=Z,6.6nm,0.6s,mb4.6,baz=92,slow=7.9,SNR=11							
NAO01	**NORSAR Array S**	**44.34**	**322**	*e*P		**P**	**21 19 34.0**	**-0.2**
	comp=Z,3.8nm,0.6s,mb4.3							
DAVOX	**Davos/Dischmat**	**46.48**	**302**	P		**P**	**21 19 52.1**	**+0.9**
	comp=Z,4.0nm,0.6s,mb4.3,baz=104,slow=5.6,SNR=15							
CDF	**Champ du Feu**	**47.81**	**305**	*e*P		**P**	**21 20 01.8**	**+0.3**
PGF	**Pioggiola**	**48.22**	**297**	*e*P		**P**	**21 20 04.5**	**-0.3**
	comp=Z,3.8nm,0.7s,mb4.0							
PGF	**Pioggiola**	**48.22**	**297**	*e*P		**P**	**21 20 04.5**	**-0.3**
	comp=Z,1.9nm,0.7s,mb4.0							
PGF	**Pioggiola**	**48.22**	**297**	*e*P		**P**	**21 20 04.5**	**-0.3**
PGF				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.1							
HINF	**Hinteralfeld**	**48.23**	**304**	*e*P		**P**	**21 20 04.3**	**-0.4**
HAU	**Haudompre**	**48.51**	**304**	*e*P		**P**	**21 20 06.5**	**-0.4**
LPG	**La Plagne**	**48.91**	**301**	*e*P		**P**	**21 20 10.6**	**+0.6**
LPL	**La Plagne**	**48.92**	**301**	*e*P		**P**	**21 20 10.6**	**+0.6**
	comp=Z,4.1nm,0.7s,mb4.2							
LPL	**La Plagne**	**48.92**	**301**	*e*P		**P**	**21 20 10.6**	**+0.6**
	comp=Z,2.0nm,0.7s,mb4.2							
LPL	**La Plagne**	**48.92**	**301**	*e*P		**P**	**21 20 10.6**	**+0.6**
LPL				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.2							
SBF	**Sospel**	**48.92**	**299**	*e*P		**P**	**21 20 09.7**	**-0.4**
	comp=Z,8.0nm,0.8s,mb4.4							
SBF	**Sospel**	**48.92**	**299**	*e*P		**P**	**21 20 09.7**	**-0.4**
	comp=Z,4.0nm,0.8s,mb4.4							
SBF	**Sospel**	**48.92**	**299**	*e*P		**P**	**21 20 09.7**	**-0.4**
SBF				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.4							
GIVF	**Givet**	**48.97**	**307**	*e*P		**P**	**21 20 10.5**	**+0.1**
CABF	**La Chapelle**	**49.05**	**303**	*e*P		**P**	**21 20 11.3**	**+0.3**
MBDF	**Montbardon**	**49.12**	**300**	*e*P		**P**	**21 20 11.2**	**-0.4**
MEZF	**Maizieres J'vi**	**49.22**	**305**	*e*P		**P**

KARN	**Karanos**	**0.48**	**56**	*e*P		**Pn**	**21 24 36.9**	**-1.8**
VAM	**Vamos**	**0.69**	**66**	*e*P		**Pn**	**21 24 40.0**	**-0.8**
VAM				*e*S		**Sn**	**21 24 50.8**	**-0.9**
VAM	**Vamos**	**0.69**	**66**	*e*P		**Pn**	**21 24 40.0**	**-0.8**
VAM				*e*S		**Sn**	**21 24 50.8**	**-0.9**
VAM	**Vamos**	**0.69**	**66**	*e*P		**Pn**	**21 24 40.0**	**-0.8**
VAM				*e*S		**Sn**	**21 24 50.8**	**-0.9**
SIVA	**Sivas**	**1.14**	**95**	*e*P		**Pn**	**21 24 46.0**	**-0.2**
SIVA				*e*S		**Sn**	**21 25 01.5**	**+0.2**
SIVA	**Sivas**	**1.14**	**95**	*e*P		**Pn**	**21 24 46.0**	**-0.2**
SIVA				*e*S		**Sn**	**21 25 01.5**	**+0.2**
SIVA	**Sivas**	**1.14**	**95**	*e*P		**Pn**	**21 24 46.0**	**-0.2**
SIVA				*e*S		**Sn**	**21 25 01.5**	**+0.2**
KYTH	**Kithira**	**1.19**	**344**	*e*P		**Pn**	**21 24 46.4**	**-0.5**
KYTH	**Kithira**	**1.19**	**344**	*e*P		**Pn**	**21 24 46.4**	**-0.5**
KYTH	**Kithira**	**1.19**	**344**	*e*P		**Pn**	**21 24 46.4**	**-0.5**
VLI	**Veliai**	**1.63**	**346**	*e*P		**Pn**	**21 24 53.0**	**+0.3**
VLI				*e*S		**Sn**	**21 25 12.0**	**-0.9**
VLI	**Veliai**	**1.63**	**346**	*e*P		**Pn**	**21 24 53.0**	**+0.3**
VLI				*e*S		**Sn**	**21 25 12.0**	**-0.9**
VLI	**Veliai**	**1.63**	**346**	*e*P		**Pn**	**21 24 53.0**	**+0.3**
VLI				*e*S		**Sn**	**21 25 12.0**	**-0.9**
LAST	**Lasithi**	**1.68**	**88**	*e*P		**Pn**	**21 24 53.8**	**+0.6**
LAST				*e*S		**Sn**	**21 25 13.7**	**-0.2**
LAST	**Lasithi**	**1.68**	**88**	*e*P		**Pn**	**21 24 53.8**	**+0.6**
LAST				*e*S		**Sn**	**21 25 13.7**	**-0.2**
LAST	**Lasithi**	**1.68**	**88**	*e*P		**Pn**	**21 24 53.8**	**+0.6**
LAST				*e*S		**Sn**	**21 25 13.7**	**-0.2**
NPS	**Neapolis**	**1.79**	**85**	*e*P		**Pn**	**21 24 55.5**	**+0.8**
NPS	**Neapolis**	**1.79**	**85**	*e*P		**Pn**	**21 24 55.5**	**+0.8**
NPS	**Neapolis**	**1.79**	**85**	*e*P		**Pn**	**21 24 55.5**	**+0.8**
PYL	**PYLOS**	**2.23**	**323**	*e*P		**Pn**	**21 25 00.6**	**-0.1**
PYL	**PYLOS**	**2.23**	**323**	*e*P		**Pn**	**21 25 00.6**	**-0.1**
ZKR	**Zakros**	**2.28**	**90**	*e*P		**Pn**	**21 25 02.3**	**+0.9**
ZKR				*e*S		**Sn**	**21 25 29.3**	**+0.8**
ZKR	**Zakros**	**2.28**	**90**	*e*P		**Pn**	**21 25 02.3**	**+0.9**
ZKR				*e*S		**Sn**	**21 25 29.3**	**+0.8**
ZKR	**Zakros**	**2.28**	**90**	*e*P		**Pn**	**21 25 02.3**	**+0.9**
ZKR				*e*S		**Sn**	**21 25 29.3**	**+0.8**
DID	**Didima**	**2.38**	**356**	*e*P		**Pn**	**21 25 02.3**	**-0.3**
DID				*e*S		**Sn**	**21 25 30.8**	**0.0**
DID	**Didima**	**2.38**	**356**	*e*P		**Pn**	**21 25 02.3**	**-0.3**
DID				*e*S		**Sn**	**21 25 30.8**	**0.0**
ITM	**Ithomi**	**2.38**	**330**	*e*P		**Pn**	**21 25 03.6**	**+0.9**
ITM	**Ithomi**	**2.38**	**330**	*e*P		**Pn**	**21 25 03.6**	**+0.9**
ITM	**Ithomi**	**2.38**	**330**	*e*P		**Pn**	**21 25 03.6**	**+0.9**
VLX	**Vlachokerasia**	**2.39**	**339**	*e*P		**Pn**	**21 25 03.4**	**+0.6**
VLX	**Vlachokerasia**	**2.39**	**339**	*e*P		**Pn**	**21 25 03.4**	**+0.6**
APE	**Apeiranthos**	**2.58**	**41**	*e*P		**Pn**	**21 25 05.2**	**-0.1**
APE	**Apeiranthos**	**2.58**	**41**	*e*P		**Pn**	**21 25 05.2**	**-0.1**
APE	**Apeiranthos**	**2.58**	**41**	*e*P		**Pn**	**21 25 05.2**	**-0.1**
NAIG	**Nisos Aigina**	**2.62**	**1**	*e*P		**Pn**	**21 25 06.3**	**+0.3**
NAIG	**Nisos Aigina**	**2.62**	**1**	*e*P		**Pn**	**21 25 06.3**	**+0.3**
NAIG	**Nisos Aigina**	**2.62**	**1**	*e*P		**Pn**	**21 25 06.3**	**+0.3**
VLY	**Voula,Athens**	**2.73**	**6**	*e*P		**Pn**	**21 25 07.2**	**-0.3**
VLY	**Voula,Athens**	**2.73**	**6**	*e*P		**Pn**	**21 25 07.2**	**-0.3**
VLY	**Voula,Athens**	**2.73**	**6**	*e*P		**Pn**	**21 25 07.2**	**-0.3**
ATH	**Athens Observa**	**2.84**	**5**	*e*P		**Pn**	**21 25 08.8**	**-0.2**
ATH	**Athens Observa**	**2.84**	**5**	*e*P		**Pn**	**21 25 08.8**	**-0.2**
ATH	**Athens Observa**	**2.84**	**5**	*e*P		**Pn**	**21 25 08.8**	**-0.2**
LTK	**Loutraki**	**2.91**	**353**	*e*P		**Pn**	**21 25 10.4**	**+0.5**
LTK	**Loutraki**	**2.91**	**353**	*e*P		**Pn**	**21 25 10.4**	**+0.5**
PTL	**Penteli**	**2.93**	**7**	P		**Pn**	**21 25 11.8**	**+1.6**
PTL	**Penteli**	**2.93**	**7**	P		**Pn**	**21 25 11.8**	**+1.6**
GUR	**Goura**	**2.93**	**343**	*e*P		**Pn**	**21 25 09.9**	**-0.3**
GUR				*e*S		**Sn**	**21 25 44.5**	**+0.2**
GUR	**Goura**	**2.93**	**343**	*e*P		**Pn**	**21 25 09.9**	**-0.3**
GUR				*e*S		**Sn**	**21 25 44.5**	**+0.2**
KARP	**Karpathos**	**3.08**	**81**	*e*P		**Pn**	**21 25 13.0**	**+0.9**
KARP	**Karpathos**	**3.08**	**81**	*e*P		**Pn**	**21 25 13.0**	**+0.9**
KARP	**Karpathos**	**3.08**	**81**	*e*P		**Pn**	**21 25 13.0**	**+0.9**
EFP	**Efpalio**	**3.51**	**340**	*e*P		**Pn**	**21 25 18.7**	**+0.7**
EFP				*e*S		**Sn**	**21 25 58.0**	**-0.4**
EFP	**Efpalio**	**3.51**	**340**	*e*P		**Pn**	**21 25 18.7**	**+0.7**
EFP				*e*S		**Sn**	**21 25 58.0**	**-0.4**
LKR	**Lokris**	**3.53**	**354**	*e*P		**Pn**	**21 25 18.8**	**+0.5**
LKR	**Lokris**	**3.53**	**354**	*e*P		**Pn**	**21 25 18.8**	**+0.5**
LKR	**Lokris**	**3.53**	**354**	*e*P		**Pn**	**21 25 18.8**	**+0.5**
ARG	**Arkhangelos**	**3.97**	**73**	P		**Pn**	**21 25 28.1**	**+3.8**
ARG	**Arkhangelos**	**3.97**	**73**	P		**Pn**	**21 25 28.1**	**+3.8**
THL	**Klokotos Trika**	**4.57**	**346**	*e*P		**Pn**	**21 25 33.0**	**+0.5**
THL				*e*S		**Sn**	**21 26 23.2**	**-1.0**
THL	**Klokotos Trika**	**4.57**	**346**	*e*P		**Pn**	**21 25 33.0**	**+0.5**
THL				*e*S		**Sn**	**21 26 23.3**	**-0.9**
OUR	**Ouranopolis**	**5.21**	**5**	P		**Pn**	**21 25 44.3**	**+3.0**
OUR	**Ouranopolis**	**5.21**	**5**	P		**Pn**	**21 25 44.3**	**+3.0**
HORT	**Hortiatis**	**5.46**	**357**	P		**Pn**	**21 25 46.7**	**+2.0**
HORT	**Hortiatis**	**5.46**	**357**	P		**Pn**	**21 25 46.7**	**+2.0**
VAE	**Valguarnera**	**7.65**	**290**	Sn		**Sn**	**21 27 40.0**	**+0.3**
	0.8nm,0.3s,baz=103,slow=17,SNR=2.4							
STON	**Ston**	**8.92**	**332**	*e*Pn		**Pn**	**21 26 24.7**	**-7.2**
STON				Sn		**Sn**	**21 28 00.2**	**-11**
BRTR	**Keskin Array B**	**9.32**	**58**	Pn		**Pn**	**21 26 39.2**	**+1.8**
BRTR				Sn		**Sn**	**21 28 24.7**	**+4.1**
BRTR	**Keskin Array B**	**9.32**	**58**	Pn		**Pn**	**21 26 39.2**	**+1.8**
	0.0nm,0.3s,baz=247,slow=15,SNR=2.3							
BRTR				Sn		**Sn**	**21 28 24.7**	**+4.1**
	0.1nm,0.3s,baz=241,slow=21,SNR=2.3							
BRTR	**Keskin Array B**	**9.32**	**58**	Pn		**Pn**	**21 26 39.2**	**+1.8**
MMAI	**Mount Meron Ar**	**10.15**	**99**	Pn		**Pn**	**21 26 43.4**	**-5.4**
	baz=281,slow=11,SNR=2.2							
MMAI				Sn		**Sn**	**21 28 31.6**	**-9.3**
	0.8nm,0.3s,baz=305,slow=28,SNR=3.6							
EIL	**Elat**	**11.15**	**116**	Pn		**Pn**	**21 26 58.0**	**-4.4**
	0.3nm,0.3s,baz=347,slow=2.5,SNR=5.7							
EIL				Sn		**Sn**	**21 28 52.4**	**-13**
	0.4nm,0.3s,baz=65,slow=17,SNR=3.0							
NVLJ	**Novalja**	**11.48**	**328**	*e*Pn		**Pn**	**21 27 03.5**	**-3.3**
NVLJ				Sn		**Sn**	**21 29 04.8**	**-8.4**
HFS	**Hagfors**	**25.81**	**349**	P		**P**	**21 29 50.5**	**+0.5**
	0.7nm,0.4s,mb3.5,baz=148,slow=8.7,SNR=8.5							
HFS	**Hagfors**	**25.81**	**349**	P		**P**	**21 29 50.5**	**+0.5**
FINES	**FINESS Array B**	**26.39**	**3**	P		**P**	**21 29 54.5**	**-0.7**
	1.8nm,0.9s,mb3.5,baz=171,slow=9.7,SNR=2.8							
FINES	**FINESS Array B**	**26.39**	**3**	P		**P**	**21 29 54.5**	**-0.7**
NOA	**NORSAR Array B**	**27.09**	**347**	P		**P**	**21 30 02.0**	**+0.5**
	0.5nm,0.8s,mb3.1,baz=154,slow=11,SNR=5.2							
NOA	**NORSAR Array B**	**27.09**	**347**	P		**P**	**21 30 02.0**	**+0.5**
EKA	**Eskdalemuir Ar**	**27.26**	**326**	P		**P**	**21 30 02.8**	**-0.3**
	0.8nm,0.9s,mb3.2,baz=124,slow=8.6,SNR=3.2							
EKA				pP		pP	21 30 07.4	-13
	0.6nm,0.6s,baz=121,slow=11,SNR=2.0							
EKA	**Eskdalemuir Ar**	**27.26**	**326**	P		**P**	**21 30 02.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**29.41**	**227**	P		**P**	**21 30 22.3**	**-0.3**
	0.3nm,0.8s,mb3.0,baz=28,slow=9.6,SNR=4.3							
ARCES	**ARCESS Array B**	**34.48**	**1**	P		**P**	**21 31 05.8**	**-0.7**
	3.5nm,0.9s,mb4.2,baz=171,slow=13,SNR=4.4							
ARCES	**ARCESS Array B**	**34.48**	**1**	P		**P**	**21 31 05.8**	**-0.6**
MKAR	**Makanchi Array**	**44.97**	**56**	P		**P**	**21 32 31.8**	**-2.0**
MKAR				pP		pP	21 32 35.5	-16
MKAR	**Makanchi Array**	**44.97**	**56**	P		**P**	**21 32 31.8**	**-2.0**
	0.5nm,0.4s,mb3.6,baz=266,slow=8.0,SNR=7.0							
MKAR				pP		pP	21 32 35.5	-16
	0.6nm,0.5s,baz=272,slow=7.5,SNR=5.4							
ZALV	**Zalesovo Beam**	**46.05**	**46**	P		**P**	**21 32 40.3**	**-1.8**
	0.6nm,0.4s,mb3.7,baz=269,slow=9.5,SNR=4.0							
TSUM	**Tsumeb**	**54.32**	**187**	LR		LR	22 00 47.2	
	comp=Z,188nm,18.9s,baz=174,slow=40							
SONM	**Songino Array**	**60.60**	**50**	P		**P**	**21 34 27.9**	**-1.0**
	0.4nm,0.5s,mb3.7,baz=290,slow=7.2,SNR=8.1							
SONM				pP		pP	21 34 31.0	-17
	0.4nm,0.5s,baz=290,slow=7.3,SNR=5.6							
WRA	**Warramunga Arr**	**118.00**	**96**	PKP		PKPdf	21 43 05.4	+0.7
	0.8nm,1.2s,baz=334,slow=1.6,SNR=3.3							
WRA	**Warramunga Arr**	**118.00**	**96**	PKIKP		PKPdf	21 43 05.4	+0.7

IDC 31 21:30:08.2±1.2, 24°28S×115°99W, h0km, mb4.0/2, mb1 4.2/2, mb1mx3.8/16, mbtmp4.0/2, MS3.8/6, Ms1 3.8/6, ms1mx3.5/21, Error ellipse: s-maj=76.3km s-min=31.7km az=23.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKT	**Rikitea**	**17.42**	**270**	*e*LQ		21 37 39.8	
	422nm,26.0s						
RKT				*e*LR	LR	21 38 08.6	
	638nm,25.5s,baz=110						
TAOE	**Nuku Hiva Isla**	**27.70**	**300**	*e*LR	LR	21 42 43.5	
	366nm,25.7s						
PPT	**Papeete**	**32.02**	**276**	*e*S	S	21 41 35.1	-14
	43nm,28.8s						
PPT				*e*LR	LR	21 44 48.8	
	310nm,27.0s						
PPT	**Papeete**	**32.02**	**276**	LR	LR	21 45 28.1	
	comp=Z,239nm,20.0s,baz=35,slow=29						
PLCA	**Paso Flores**	**41.21**	**125**	P	P	21 37 54.4	-0.3
	1.4nm,0.8s,baz=310,slow=7.9,SNR=2.8						
PLCA				LR	LR	21 50 32.8	
	comp=Z,154nm,20.3s,baz=37,slow=30						
LPAZ	**La Paz**	**45.41**	**89**	P	P	21 38 29.6	+0.6
	2.1nm,0.8s,baz=261,slow=5.9,SNR=10						
LPAZ				LR	LR	21 52 24.4	
	comp=Z,57nm,20.4s,baz=36,slow=29						
ROSC	**El Rosal**	**49.84**	**60**	LR	LR	21 54 28.3	
	comp=Z,59nm,18.8s,baz=179,slow=29						
CPUP	**Villa Florida**	**52.68**	**105**	LR	LR	21 57 14.0	
	comp=Z,86nm,19.9s,baz=78,slow=31						
MAW	**Mawson**	**88.40**	**180**	LR	LR	22 16 30.0	
	comp=Z,53nm,19.6s,baz=25,slow=32						
ZALV	**Zalesovo Beam**	**146.51**	**338**	PKPbc	PKPbc	21 49 49.8	-1.3
	0.9nm,0.7s,baz=10,slow=2.4,SNR=3.9						
CMAR	**Chiang Mai Arr**	**147.01**	**267**	PKPbc	PKPbc	21 49 53.6	0.0
	0.8nm,0.8s,baz=118,slow=2.6,SNR=6.0						
BRTR	**Keskin Array B**	**150.17**	**52**	PKPbc	PKPbc	21 50 02.3	+1.1
	0.6nm,0.8s,baz=297,slow=6.3,SNR=2.2						
MKAR	**Makanchi Array**	**153.18**	**331**	PKPbc	PKPbc	21 50 06.7	-1.2
	0.3nm,0.7s,baz=44,slow=6.4,SNR=3.1						

*NNC **31** 22:15:08.2±2.0, 42°.11N×76°.04E, h0km, mb2.5, mpv2.6, Error ellipse: s-maj=12.1km s-min=6.3km az=11.0*
*ISCJB **31** 22:15:09.8±1.1, 42°.16N±0°.07×76°.07E±0°.05, h10km, Error ellipse: s-maj=10.0km s-min=4.8km az=174.8*
*KNET **31** 22:15:09.2±0.7, 42°.18N×76°.03E, h2km±12km, ml1.9, Error ellipse: s-maj=9.0km s-min=2.2km az=8.0*

ISC 31 22:15:09.4±1.1, 42°.14N±0°.07×76°.08E±0°.05, h10km, n11, σ0s97/17, 10C-7D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.17**	**48**	⇓P	**Pg**	**22 15 12.4**	**-0.6**
	50nm,0.1s						
ULHL				⇑S	**Sg**	**22 15 15.2**	**-0.3**
	564nm,0.1s						
TKM2	**Tokmak 2**	**0.86**	**336**	⇓P	**Pg**	**22 15 25.3**	**-0.8**
	7.0nm,0.2s						
TKM2				⇓S	**Sg**	**22 15 37.6**	**+0.3**
	7.3nm,0.3s						
TKM2	**Tokmak 2**	**0.86**	**336**	P	**Pg**	**22 15 25.4**	**-0.6**
	22nm,0.1s,SNR=30						
KBK	**Karagaybulak**	**0.99**	**302**	⇓P	**Pg**	**22 15 27.7**	**-0.7**
	9.9nm,0.1s,SNR=6.0						
KBK				⇑S	**Sg**	**22 15 41.6**	**+0.4**
	32nm,0.2s						
KNDC	**Almaty**	**1.26**	**31**	⇓P	**Pn**	**22 15 32.6**	**-0.5**
	1.3nm,0.2s						
KNDC				⇑S	**Sb**	**22 15 50.6**	**+0.9**
	9.7nm,0.2s						
AAK	**Ala-Archa**	**1.27**	**294**	⇓P	**Pn**	**22 15 32.5**	**-0.7**
	8.1nm,0.2s,SNR=7.7						
AAK				⇓S	**Sb**	**22 15 49.6**	**-0.3**
	24nm,0.3s						
CHMS	**Chumysh**	**1.31**	**312**	⇑P	**Pn**	**22 15 33.5**	**-0.2**
	2.2nm,0.1s,SNR=8.1						
CHMS				⇑S	**Sb**	**22 15 50.8**	**0.0**
	13nm,0.2s						
USP	**Ospenovka**	**1.62**	**315**	⇑P	**Pn**	**22 15 39.0**	**+0.9**
	2.9nm,0.1s,SNR=20						
AML	**Almayashu**	**1.77**	**271**	⇑P	**Pn**	**22 15 41.7**	**+1.6**
	3.0nm,0.2s,SNR=8.0						
EKS2	**Erkin-Say**	**1.78**	**288**	⇑P	**Pn**	**22 15 42.4**	**+2.1**
	2.6nm,0.2s,SNR=9.0						
KK31	**Karatay Array**	**4.22**	**285**	⇑Pg	**Pg**	**22 16 27.8**	**-2.5**
	0.2nm,0.4s,baz=96,slow=16,SNR=7.8						
KK31				⇑Lg		22 17 19.3	
	0.6nm,0.4s,baz=104,slow=28,SNR=4.9						

*ISCJB **31** 22:28:06.8±0.5, 18°.75S±0°.1×65°.56E±0°.08, h10km, mb4.0/12, MS4.1/2, Error ellipse: s-maj=17.0km s-min=11.1km az=174.8*
*IDC **31** 22:28:07.1±0.8, 18°.63S×65°.56E, h0km, mb3.9/10, mb1 4.1/11, mb1mx3.9/23, mbtmp3.9/11, ML3.7/1, MS4.1/2, Ms1 4.1/2, ms1mx3.4/19, Error ellipse: s-maj=26.4km s-min=22.4km az=68.0*
*NEIC **31** 22:28:08.7±0.4, 18°.66S×65°.55E, h10km, mb4.1/4, Error ellipse: s-maj=13.0km s-min=8.1km az=173.0*

ISC 31 22:28:08.8±0.5, 18°.7S±0°.1×65°.54E±0°.08, h10km, n21, σ0s71/18, mb4.0/12, MS4.1/2, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.55**	**253**	*e*Pn	**Pn**	**22 30 25.1**	**-1.3**
ABPO	**Ambohimpanom**	**17.34**	**266**	*e*Pn	**Pn**	**22 32 11.2**	**0.0**
	11nm,1.2s						
OPO	**Ambohidratompo**	**17.40**	**267**	P	**Pn**	**22 32 13.7**	**+1.9**
	0.2nm,0.3s,baz=116,slow=18,SNR=3.1						
PSI	**Prapat**	**39.16**	**60**	LR	LR	22 47 31.0	
	comp=Z,289nm,18.8s,MS4.1,baz=136,slow=30						
CMAR	**Chiang Mai Arr**	**49.37**	**44**	P	**P**	**22 36 59.5**	**+0.7**
	0.8nm,0.7s,mb3.9,baz=233,slow=7.4,SNR=8.2						
CASY	**Casey**	**55.80**	**160**	*e*P	**P**	**22 37 45.2**	**-0.5**
	2.1nm,0.7s,mb4.3						
FITZ	**Fitzroy Crossi**	**56.78**	**100**	P	**P**	**22 37 53.8**	**+0.2**
ASAR	**Alice Springs**	**63.42**	**108**	P	**P**	**22 38 38.6**	**-0.4**
	1.1nm,1.1s,mb3.9,baz=198,slow=15,SNR=5.7						
WRA	**Warramunga Arr**	**64.50**	**104**	P	**P**	**22 38 46.0**	**-0.3**
	1.0nm,0.8s,mb3.9,baz=259,slow=5.3,SNR=5.9						
MKAR	**Makanchi Array**	**66.88**	**12**	P	**P**	**22 39 00.5**	**-0.4**
MKAR	**Makanchi Array**	**66.88**	**12**	P	**P**	**22 39 00.5**	**-0.4**
	0.8nm,0.8s,mb3.8,baz=210,slow=7.0,SNR=6.1						
STKA	**Stephens Creek**	**68.81**	**118**	*e*P	**P**	**22 39 14.0**	**+0.4**
	0.9nm,0.8s,mb3.8						
QSPA	**South Pole Qui**	**71.44**	**180**	*e*P	**P**	**22 39 29.6**	**+0.7**
	3.1nm,0.8s,mb4.3						
QSPA	**South Pole Qui**	**71.44**	**180**	P	**P**	**22 39 29.6**	**+0.7**
	2.2nm,0.8s,mb4.2,baz=253,slow=3.5,SNR=16						
DBIC	**Dimbokro**	**73.79**	**283**	LR	LR	23 09 03.9	
	comp=Z,96nm,18.8s,MS4.1,baz=71,slow=33						
ZALV	**Zalesovo Beam**	**74.19**	**12**	P	**P**	**22 39 44.8**	**-0.6**
	2.3nm,0.6s,mb4.3,baz=199,slow=6.5,SNR=14						
SONM	**Songino Array**	**75.63**	**27**	P	**P**	**22 39 54.5**	**+0.6**
	0.4nm,0.7s,mb3.5,baz=203,slow=6.7,SNR=3.9						
AKASG	**Malin Array Be**	**76.09**	**337**	P	**P**	**22 39 55.6**	**-0.8**
	0.9nm,0.6s,mb3.9,baz=162,slow=6.1,SNR=5.4						
ESDC	**Sonseca Array**	**86.91**	**314**	P	**P**	**22 40 53.8**	**-0.2**
	0.3nm,0.6s,mb3.7,baz=119,slow=4.1,SNR=4.5						
MJAR	**Matsushiro Arr**	**87.77**	**50**	P	**P**	**22 40 58.3**	**+0.1**
	0.7nm,0.3s,mb4.3,baz=259,slow=3.7,SNR=3.7						
TXAR	**Lajitas Array**	**165.51**	**319**	PKPab	PKPab	22 49 12.3	-0.2
	0.3nm,0.8s,baz=50,slow=5.2,SNR=4.8						

*ISCJB **31** 22:30:46.0±0.4, 18°.69S±0°.08×65°.37E±0°.07, h10km, mb4.2/20, MS3.9/6, Error ellipse: s-maj=11.3km s-min=9.1km az=157.5*
*IDC **31** 22:30:46.5±0.6, 18°.64S×65°.42E, h0km, mb4.1/15, mb1 4.2/16, mb1mx4.1/25, mbtmp4.1/16, ML3.4/1, MS3.8/6, Ms1 3.8/6, ms1mx3.5/17, Error ellipse: s-maj=18.7km s-min=17.2km az=62.0*
*NEIC **31** 22:30:47.6±0.3, 18°.68S×65°.36E, h10km, mb4.6/7, Error ellipse: s-maj=11.1km s-min=7.8km az=160.0*

ISC 31 22:30:48.0±0.4, 18°.68S±0°.08×65°.36E±0°.07, h10km, n43, σ0s93/37, mb4.2/20, MS3.9/6, 4C-4D, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.38**	**253**	*e*Pn	**Pn**	**22 33 03.2**	**0.0**
ABPO	**Ambohimpanom**	**17.17**	**266**	*e*Pn	**Pn**	**22 34 46.6**	**-1.5**
OPO	**Ambohidratompo**	**17.23**	**267**	P	**Pn**	**22 34 47.7**	**-1.1**
	0.1nm,0.3s,baz=81,slow=18,SNR=2.9						
TRD	**Trivandrum**	**29.34**	**24**	*e*PKP	**P**	**22 36 42.7**	**-8.5**
PALK	**Pallekele**	**29.90**	**32**	*e*P	**P**	**22 36 55.9**	**-0.3**
	4.2nm,0.7s,mb4.3						
LBTB	**Lobatse**	**37.34**	**253**	*e*P	**P**	**22 38 00.9**	**+0.1**
	21nm,1.3s,mb4.8						
LBTB	**Lobatse**	**37.34**	**253**	P	**P**	**22 38 00.6**	**-0.2**
	4.1nm,0.8s,mb4.3,baz=135,slow=7.8,SNR=3.4						
BOSA	**Boshof**	**37.89**	**247**	*e*P	**P**	**22 38 05.6**	**+0.1**
	50nm,1.8s,mb4.9						
BOSA	**Boshof**	**37.89**	**247**	LR	LR	22 51 21.7	
	comp=Z,192nm,20.4s,MS3.9,baz=166,slow=32						
MAW	**Mawson**	**48.93**	**181**	P	**P**	**22 39 34.9**	**+1.0**
	2.8nm,0.8s,mb4.4,baz=10.0,slow=9.5,SNR=6.7						
CMAR	**Chiang Mai Arr**	**49.50**	**44**	P	**P**	**22 39 39.2**	**+0.2**
	1.5nm,0.9s,mb4.0,baz=237,slow=8.6,SNR=9.6						
CMAR				LR	LR	22 55 26.7	
	comp=Z,108nm,20.9s,MS3.8,baz=191,slow=30						
CASY	**Casey**	**55.84**	**160**	*e*P	**P**	**22 40 24.5**	**-0.7**
	5.7nm,1.1s,mb4.5						
FITZ	**Fitzroy Crossi**	**56.95**	**100**	*e*P	**P**	**22 40 33.5**	**-0.4**
	2.5nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**56.95**	**100**	P	**P**	**22 40 33.4**	**-0.5**
	1.0nm,0.9s,mb3.8,baz=270,slow=5.1,SNR=3.6						
ASAR	**Alice Springs**	**63.57**	**108**	P	**P**	**22 41 18.6**	**-0.6**
	1.2nm,0.7s,mb4.0,baz=270,slow=5.4,SNR=9.6						
WRA	**Warramunga Arr**	**64.67**	**104**	P	**P**	**22 41 26.2**	**-0.3**
	0.7nm,0.6s,mb3.9,baz=260,slow=5.3,SNR=7.9						
BRTR	**Keskin Array B**	**65.22**	**333**	P	**P**	**22 41 30.3**	**+0.7**
	1.0nm,0.8s,mb3.9,baz=153,slow=15,SNR=6.1						
GTA	**Gaotai**	**66.16**	**29**	*e*P	**P**	**22 41 32.0**	**-3.6**
GTA				pP	pP	22 41 36.5	-2.4
GTA				sP	sP	22 41 39.0	-1.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
MKAR	**Makanchi Array**	**66.94**	**13**	P	**P**	**22 41 40.1**	**-0.4**
	comp=Z,2.4nm,1.0s,mb4.2,baz=217,slow=9.0,SNR=8.6						
MKAR				LR	LR	23 06 24.6	
	comp=Z,47nm,21.2s,MS3.7,baz=51,slow=32						
STKA	**Stephens Creek**	**68.95**	**118**	LR	LR	23 06 51.0	
	comp=Z,89nm,20.1s,MS4.0,baz=204,slow=31						
KURK	**Kurchatov**	**70.07**	**9**	*e*P	**P**	**22 41 59.2**	**-0.8**
	comp=Z,8.2nm,1.4s,mb4.5						
QSPA	**South Pole Qui**	**71.42**	**180**	*e*P	**P**	**22 42 09.8**	**+1.9**
	comp=Z,5.1nm,0.8s,mb4.5						
QSPA	**South Pole Qui**	**71.42**	**180**	P	**P**	**22 42 09.7**	**+1.7**
	comp=Z,4.0nm,0.8s,mb4.4,baz=257,slow=2.7,SNR=12						
VRI	**Vrincioaia**	**73.16**	**333**	⇓*i*P	**P**	**22 42 19.9**	**+1.2**
PLOR	**Plostina**	**73.18**	**333**	⇓*i*P	**P**	**22 42 20.4**	**+1.5**
MLR	**Muntele Rosu**	**73.21**	**332**	⇓*i*P	**P**	**22 42 20.9**	**+1.9**
VOIR		**73.57**	**332**	⇓*i*P	**P**	**22 42 21.6**	**+0.5**
ZAA0	**Zalesovo Array**	**74.24**	**12**	*e*P	**P**	**22 42 23.5**	**-1.4**
ZALV	**Zalesovo Beam**	**74.24**	**12**	P	**P**	**22 42 24.6**	**-0.3**
	comp=Z,3.0nm,0.7s,mb4.4,baz=206,slow=6.6,SNR=16						
SBA	**Scott Base**	**74.25**	**168**	*e*P	**P**	**22 42 24.7**	**0.0**
BUR08	**Bucovina Ar. S**	**75.21**	**333**	*e*P	**P**	**22 42 31.1**	**+0.5**
BZS	**Buzias**	**75.29**	**330**	⇑*i*P	**P**	**22 42 28.9**	**-2.

MAW	Mawson	80.58	200	*e*P		P	23 26 32.8	+0.3
COCO	West Island	82.50	260	*e*P		P	23 26 43.6	0.0
MDJ	Mudanjiang	82.62	324	*e*P		P	23 26 43.1	-0.3
KULM	Kulim	85.40	278	*e*P		P	23 26 58.4	+0.3
PMR	Palmer	86.21	13	*e*P		P	23 27 00.5	-0.3
DIV	Divide	86.53	14	*e*P		P	23 27 01.4	-1.0
	1.9nm,0.4s,mb4.3							
TRF	Thorofare Moun	87.68	11	*e*P		P	23 27 07.6	-0.2
	3.7nm,0.7s,mb4.3							
MCK	McKinley	88.19	12	P		P	23 27 09.8	-0.4
ILAR	Eielson Array	89.53	12	P		P	23 27 16.5	+0.2
	0.2nm,0.5s,mb3.3,baz=216,slow=5.1,SNR=7.3							
CMAR	Chiang Mai Arr	91.98	289	P		P	23 27 30.4	+1.6
	0.6nm,0.6s,mb3.7,baz=103,slow=5.7,SNR=4.6							
AKASG	Malin Array Be	145.07	331	PKP	PKPdf		23 33 53.6	-0.8
	3.0nm,0.6s,baz=42,slow=4.1,SNR=19							
BRTR	Keskin Array B	148.95	311	PKPbc	PKPbc		23 34 06.8	+1.1
	1.0nm,0.6s,baz=145,slow=4.2,SNR=6.7							
CLL	Collm	149.90	348	i PKPbc	PKPbc		23 34 09.5	+1.9

DJA 31 23:20:20,1°.20N×121°.27E,h15km,MLv3.9/4,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOLI	Toli-Toli	0.48	261	P	Pg	23 20 31.1	+1.5
TOLI				S	Sg	23 20 37.9	+1.8
MRSI	Marisa	0.98	137	P	Pb	23 20 37.0	-1.7
MRSI				S	Sb	23 20 47.9	-3.6
APSI	Ampana	2.13	170	P	Pn	23 20 54.4	-0.7
LUWI	Luwuk	2.69	146	P	Pn	23 21 03.3	+0.6
LUWI				S	Sn	23 21 35.7	+0.7

*ISCJB **31** 23:26:00.7±2.1,7.44S±0.07×127.91E±0.10,h114km±21km, mb3.8/8,Error ellipse: s-maj=16.7km s-min=10.2km az=159.4*
*NEIC **31** 23:26:04.2±1.8,7.45S×127.93E,h132km±18km,mb3.9/5, Error ellipse: s-maj=15.6km s-min=11.1km az=54.0*
*IDC **31** 23:26:09.7±5.8,7.58S×127.75E,h181km±56km,mb3.3/4, mb1 3.5/7,mb1mx3.3/17,mbtmp3.3/7,Error ellipse: s-maj=91.7km s-min=19.6km az=61.0*
ISC 31 23:26:01.9±2.0,7.46S±0.09×127.9E±0.1,h108km±20km, n30,σ1°03/35,mb3.8/8,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	6.88	140	*e*Pn	Pn	23 27 38.6	-1.6
	41nm,0.4s						
KAKA				e*S*n	Sn	23 28 47.4	-10
FITZ	Fitzroy Crossi	10.80	192	*e*Pn	Pn	23 28 37.5	+4.0
FITZ				S	Sn	23 30 30.2	-2.3
FITZ				e*S*n	Sn	23 30 35.4	+2.9
FITZ	Fitzroy Crossi	10.80	192	P	Pn	23 28 37.7	+4.2
	0.3nm,0.3s,baz=16,slow=3.8,SNR=11						
FITZ				S	Sn	23 30 30.2	-2.3
	2.2nm,0.3s,baz=96,slow=22,SNR=7.8						
WRA	Warramunga Arr	13.90	154	P	Pn	23 29 17.5	+3.3
	0.7nm,0.3s,baz=337,slow=12,SNR=6.8						
WRA				S	Sn	23 31 36.1	-11
	1.1nm,0.3s,baz=340,slow=22,SNR=5.4						
MBWA	Marble Bar	15.74	209	*e*Pn	Pn	23 29 39.5	+1.9
ASAR	Alice Springs	17.12	161	P	Pn	23 29 55.1	+0.5
	0.6nm,0.3s,baz=339,slow=10,SNR=32						
ASAR				S	S	23 32 58.7	-6.9
	0.2nm,0.3s,baz=350,slow=26,SNR=4.0						
KSM	Kuching	19.66	296	*e*P	P	23 30 23.0	+0.5
NWAO	Narrogin (SRO)	27.20	200	*e*P	P	23 31 35.2	-0.3
	8.6nm,0.9s,mb4.3						
STKA	Stephens Creek	27.45	154	*e*P	P	23 31 37.9	+0.1
	0.5nm,0.8s,mb3.1						
STKA	Stephens Creek	27.45	154	P	P	23 31 40.2	+2.5
	1.0nm,0.4s,mb3.7,baz=336,slow=23,SNR=4.2						
KULM	Kulim	29.98	294	*e*P	P	23 32 00.4	-0.2
HNR	Honiara	31.76	96	*e*P	P	23 32 18.0	+1.8
	51nm,0.7s						
MDJ	Mudanjiang	51.85	2	*e*P	P	23 34 58.4	-0.6
MCQ	Macquarie Isla	53.11	158	P	P	23 35 03.0	-5.2
YSS	Yuzh-Sakhalins	55.76	12	*e*P	P	23 35 28.4	+1.0
SONM	Songino Array	58.24	343	P	P	23 35 45.8	+0.9
	0.3nm,0.5s,mb3.6,baz=161,slow=6.8,SNR=2.6						
MK31	Makanchi Array	67.48	328	*e*P	P	23 36 46.3	+0.1
MKAR	Makanchi Array	67.48	328	P	P	23 36 46.7	+0.5
	0.3nm,0.4s,mb3.5,baz=117,slow=8.2,SNR=11						
UCH	Uchtor	69.33	320	*e*P	P	23 36 58.2	+0.3
KBL	Kabul	69.47	311	*e*P	P	23 36 59.3	+0.4
	1.5nm,0.4s,mb4.2						
AAK	Ala-Archa	69.55	321	*e*P	P	23 36 59.2	0.0
EKS2	Erkin-Say	70.02	321	*e*P	P	23 37 02.0	0.0
ZALV	Zalesovo Beam	71.08	335	P	P	23 37 07.5	-0.7
	0.6nm,0.4s,mb3.7,baz=114,slow=3.6,SNR=3.1						
KURK	Kurchatov	71.83	330	*e*P	P	23 37 12.0	-0.9
	0.8nm,0.6s,mb3.7						
BRVK	Borovoye	77.42	329	*e*P	P	23 37 44.9	-0.1
	1.1nm,0.5s,mb3.8						
QSPA	South Pole Qui	82.52	180	*e*P	P	23 38 11.1	-1.1
ARU	Arti	84.99	329	*e*P	P	23 38 24.1	-1.0
GNI	Garni	89.55	310	*e*P	P	23 38 47.1	-0.3
KIV	Kislovodsk	91.68	314	P	P	23 38 56.2	-1.0
LPAZ	La Paz	151.57	146	PKPbc	PKPbc	23 45 43.0	-1.5
	0.3nm,0.4s,baz=214,slow=3.6,SNR=4.1						
LPAZ				PKPab	PKPab	23 45 52.5	-0.8
	0.5nm,0.6s,baz=219,slow=6.5,SNR=3.7						

*ISK **31** 23:28:34.1,36°.93N×27°.55E,h20km,ML1.7*
*ISCJB **31** 23:28:35.2±1.0,36°.91N±0°.05×27°.57E±0°.07,h9km±8km, Error ellipse: s-maj=9.8km s-min=8.0km az=151.4*
*CSEM **31** 23:28:35.2±0.2,36°.91N×27°.58E,h8km,ML1.7,Error ellipse: s-maj=5.0km s-min=4.5km az=133.0*
*DDA **31** 23:28:35.0,36°.91N×27°.59E,h7km±2km,Md2.6*
ISC 31 23:28:35.5±0.9,36°.90N±0°.05×27°.58E±0°.07,h7km±11km, n14,σ0°65/24,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAT	Datca	0.17	179	*e*PG	Pg	23 28 39.5	+0.5
DAT	Datca	0.17	179	*e*Pg	Pg	23 28 39.5	+0.5
BDRM	Kayabasi	0.19	327	*i* P	Pg	23 28 39.6	+0.2
BDRM				*i* S	Sg	23 28 42.7	+0.6
BDRM	Kayabasi	0.19	327	*i* P	Pg	23 28 39.6	+0.2
BDRM				*i* S	Sg	23 28 42.7	+0.7
BODT	Bodrum	0.27	307	*e*PG	Pg	23 28 40.1	-0.6
BODT				e*S*g	Sg	23 28 44.4	+0.2
BODT	Bodrum	0.27	307	*e*Pg	Pg	23 28 40.2	-0.5
BODT				e*S*g	Sg	23 28 44.4	+0.1
MLSB	Milas	0.42	22	*e*PG	Pg	23 28 42.9	-0.8
MLSB				e*S*G	Sg	23 28 49.6	+0.3
MLSB	Milas	0.42	22	*e*Pg	Pg	23 28 42.9	-0.8
MLSB				e*S*g	Sg	23 28 49.6	+0.3
YER	Yerkesik	0.61	68	*e*PG	Pg	23 28 46.9	-0.4
YER	Yerkesik	0.61	68	*e*Pg	Pg	23 28 46.9	-0.4
AYDN	Tasoluk	0.80	18	*i* P	Pg	23 28 50.5	-0.3
AYDN				*i* S	Sg	23 29 00.8	-0.3
AYDN	Tasoluk	0.80	18	*i* P	Pg	23 28 50.5	-0.3
AYDN				*i* S	Sg	23 29 00.8	-0.3
DNZL	Cakiroluk	1.41	56	*i* P	Pn	23 29 00.6	-0.9
DNZL				*i* S	Sb	23 29 21.8	+1.5
DNZL	Cakiroluk	1.41	56	*i* P	Pn	23 29 00.6	-0.9
DNZL				*i* S	Sb	23 29 21.8	+1.5

*DDA **31** 23:37:05.6,38°.95N×30°.02E,h7km±5km,Md2.8*
*ISCJB **31** 23:37:06.1±0.5,38°.92N±0°.03×30°.01E±0°.03,h8km±5km, Error ellipse: s-maj=5.0km s-min=4.2km az=161.7*
*ISK **31** 23:37:06.2,38°.90N×30°.02E,h5km,MD2.6*
*CSEM **31** 23:37:06.2±0.1,38°.94N×29°.99E,h8km,MD2.6,Error ellipse: s-maj=2.7km s-min=2.2km az=149.0*
ISC 31 23:37:06.4±0.5,38°.93N±0°.03×30°.01E±0°.03,h7km±7km, n24,σ0°65/40,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALT	Altintas	0.15	33	PG	Pg	23 37 10.0	+0.5
ALT				e*S*G	Sg	23 37 12.8	+1.2
ALT	Altintas	0.15	33	*i* Pg	Pg	23 37 10.0	+0.5
ALT				e*S*g	Sg	23 37 12.8	+1.2
GDZ	Gediz	0.44	291	*i* P	Pg	23 37 14.2	-0.7
GDZ				*i* S	Sg	23 37 20.5	-0.1
GDZ	Gediz	0.44	291	*i* P	Pg	23 37 14.2	-0.7
GDZ				*i* S	Sg	23 37 20.5	-0.1
SHUT	Suhut-Afyon	0.57	131	*e*PG	Pg	23 37 18.1	+0.7
SHUT				e*S*G	Sg	23 37 24.4	-0.4
SHUT	Suhut-Afyon	0.57	131	*e*Pg	Pg	23 37 18.1	+0.7
SHUT				e*S*g	Sg	23 37 24.4	-0.4
KHAL	Karahalli	0.69	216	*i* P	Pg	23 37 19.5	-0.1
KHAL				*i* S	Sg	23 37 28.4	-0.2
KHAL	Karahalli	0.69	216	*i* P	Pg	23 37 19.5	-0.1
KHAL				*i* S	Sg	23 37 28.4	-0.2
KHL	Karahalli	0.71	212	*e*PG	Pg	23 37 20.2	0.0
KHL	Karahalli	0.71	212	*e*Pg	Pg	23 37 20.2	+0.1
BOLV	Bolvadin	0.77	106	*i* P	Pg	23 37 20.7	-0.5
BOLV				*i* S	Sg	23 37 31.6	+0.4
BOLV	Bolvadin	0.77	106	*i* P	Pg	23 37 20.7	-0.5
BOLV				*i* S	Sg	23 37 31.5	+0.4
ESKT	Eskisehir	0.88	48	*i* P	Pg	23 37 21.9	-1.4
ESKT				*i* S	Sg	23 37 34.3	-0.5
SEYT	Eskypehyr	0.88	48	*i* P	Pg	23 37 21.9	-1.4
SEYT				*i* S	Sg	23 37 34.3	-0.5
BORA	Eskisehir	1.01	20	*i* P	Pg	23 37 25.6	-0.2
BORA				*i* S	Sg	23 37 38.1	-0.8
BORA	Eskisehir	1.01	20	*i* P	Pg	23 37 25.6	-0.2
BORA				*i* S	Sg	23 37 38.2	-0.7
DEMI	Demirci	1.01	277	*i* P	Pg	23 37 26.0	+0.2
DEMI				*i* S	Sg	23 37 39.7	+0.8
DEMI	Demirci	1.01	277	*i* P	Pg	23 37 26.0	+0.2
DEMI				*i* S	Sg	23 37 39.7	+0.8
KULA	Kula-Manisa	1.13	249	*e*PN	Pn	23 37 28.1	-0.6
KULA	Kula-Manisa	1.13	249	*e*Pn	Pn	23 37 28.1	-0.6
KIZT	Kizilcal	1.46	91	*e*PN	Pn	23 37 34.0	+0.7
KIZT	Kizilcal	1.46	91	*e*Pn	Pn	23 37 34.0	+0.7
GULT	Gulveren	1.55	15	*e*PN	Pn	23 37 35.3	+0.8
GULT	Gulveren	1.55	15	*e*Pn	Pn	23 37 35.3	+0.8

*IDC **31** 23:56:39.4±7.7,35°.05N×23°.37E,h28km±56km,mb4.0/10, mb1 3.9/12,mb1mx3.8/28,mbtmp3.9/12,ML3.6/2,MS3.2/1, Ms1 3.2/1,ms1mx2.3/41,Error ellipse: s-maj=22.9km s-min=17.9km az=16.0*
*ISCJB **31** 23:56:40.0±0.4,34°.87N±0°.03×23°.41E±0°.04,h64km±5km, mb3.8/14,Error ellipse: s-maj=6.6km s-min=3.2km az=146.6*
*THE **31** 23:56:40.3,34°.82N×23°.32E,h106km±6km,ML3.5/5,Error ellipse: s-maj=7.1km s-min=1.4km az=62.0*
*CSEM **31** 23:56:41.6±0.1,34°.88N×23°.37E,h60km,ML3.4,Error ellipse: s-maj=4.6km s-min=2.7km az=57.0*
*ATH **31** 23:56:43.5,35°.15N×23°.48E,h60km±2km,ML3.4*
*NEIC **31** 23:56:43.5,35°.15N×23°.44E,h43km,mb3.8/6,After ATH.*
*HLW **31** 23:56:43.2,34°.86N×23°.46E,h33km±40km,Ml3.9*
ISC 31 23:56:41.7±0.3,34°.88N±0°.03×23°.40E±0°.04,h57km±5km, n207,σ1°03/233,mb3.8/14,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAM	Vamos	0.84	51	*e*P	Pn	23 56 57.8	+0.2
VAM				e*S*	Sn	23 57 08.4	-0.9
VAM	Vamos	0.84	51	*e*P	Pn	23 56 57.8	+0.2
VAM				e*S*	Sn	23 57 08.4	-0.9
VAM	Vamos	0.84	51	*e*P	Pn	23 56 57.8	+0.2
VAM				e*S*	Sn	23 57 08.4	-0.9
SIVA	Sivas	1.17	83	*e*P	Pn	23 57 03.7	+1.8
SIVA				e*S*	Sn	23 57 20.6	+3.7
SIVA	Sivas	1.17	83	*e*P	Pn	23 57 03.7	+1.8
SIVA	Sivas	1.17	83	P	Pn	23 57 03.4	+1.5
SIVA				S	Sn	23 57 19.7	+2.8
SIVA	Sivas	1.17	83	P	Pn	23 57 03.4	+1.5
SIVA				S	Sn	23 57 19.7	+2.8
KYTH	Kithira	1.43	348	*e*P	Pn	23 57 05.3	-0.1
KYTH	Kithira	1.43	348	*e*P	Pn	23 57 05.3	-0.1
KYTH	Kithira	1.43	348	*e*P	Pn	23 57 05.3	-0.1
LAST	Lasithi	1.73	80	*e*P	Pn	23 57 11.3	+1.8
LAST				S	Sn	23 57 35.2	+4.7
LAST	Lasithi	1.73	80	*e*P	Pn	23 57 11.3	+1.8
LAST	Lasithi	1.73	80	P	Pn	23 57 11.3	+1.8
LAST				S	Sn	23 57 35.2	+4.7
LAST	Lasithi	1.73	80	*e*P	Pn	23 57 11.3	+1.8
LAST				S	Sn	23 57 35.2	+4.7
NPS	Neapolis	1.86	78	*e*P	Pn	23 57 12.7	+1.5
NPS	Neapolis	1.86	78	*e*P	Pn	23 57 12.7	+1.5
NPS	Neapolis	1.86	78	*e*P	Pn	23 57 12.7	+1.5
VLI	Veliai	1.87	349	*e*P	Pn	23 57 11.1	-0.3
VLI	Veliai	1.87	349	*e*P	Pn	23 57 11.1	-0.3
VLI	Veliai	1.87	349	*e*P	Pn	23 57 11.1	-0.3
THR5	Thira Island,	2.21	45	P	Pn	23 57 16.3	+0.3
THR5	Thira Island,	2.21	45	P	Pn	23 57 16.3	+0.3
THR5	Thira Island,	2.21	45	P	Pn	23 57 16.3	+0.3
ZKR	Zakros	2.33	83	P	Pn	23 57 18.2	+0.6
ZKR	Zakros	2.33	83	P	Pn	23 57 18.2	+0.6
ZKR	Zakros	2.33	83	P	Pn	23 57 18.2	+0.6
PYL	PYLOS	2.42	327	*e*P	Pn	23 57 19.6	+0.8
PYL	PYLOS	2.42	327	P	Pn	23 57 17.3	-1.5
PYL	PYLOS	2.42	327	*e*P	Pn	23 57 19.6	+0.8
ITM	Ithomi	2.58	333	*e*P	Pn	23 57 21.0	-0.1
ITM	Ithomi	2.58	333	*e*P	Pn	23 57 21.0	-0.1
ITM	Ithomi	2.58	333	P	Pn	23 57 20.4	-0.7
ITM	Ithomi	2.58	333	*e*P	Pn	23 57 21.0	-0.1
VLX	Vlachokerasia	2.62	342	*e*P	Pn	23 57 22.5	+0.9
VLX				e*S*	Sn	23 57 48.9	-3.2
VLX	Vlachokerasia	2.62	342	P	Pn	23 57 22.4	+0.8
VLX				S	Sn	23 57 52.9	+0.8
VLX	Vlachokerasia	2.62	342	P	Pn	23 57 22.4	+0.8
VLX				S	Sn	23 57 52.9	+0.8
DID	Didima	2.62	357	*e*P	Pn	23 57 21.6	0.0
DID				e*S*	Sn	23 57 49.4	-2.9
DID	Didima	2.62	357	P	Pn	23 57 21.4	-0.2
DID	Didima	2.62	357	*e*P	Pn	23 57 21.6	0.0
APE	Apeiranthos	2.79	38	*e*P	Pn	23 57 23.9	0.0
APE				e*S*	Sn	23 57 53.5	-2.8
APE	Apeiranthos	2.79	38	*e*P	Pn	23 57 23.9	0.0
APE				e*S*	Sn	23 57 53.5	-2.8
APE	Apeiranthos	2.79	38	P	Pn	23 57 23.4	-0.5
APE				S	Sn	23 57 57.3	+1.0
APE	Apeiranthos	2.79	38	*e*P	Pn	23 57 23.9	0.0
APE				S	Sn	23 57 57.3	+1.0
LTBQ	Tobruq	2.85	171	*i* P	Pn	23 57 28.0	+3.2
	SNR=46						
NAIG	Nisos Aigina	2.87	1	*e*P	Pn	23 57 24.7	-0.4
NAIG	Nisos Aigina	2.87	1	*e*P	Pn	23 57 24.7	-0.4
NAIG	Nisos Aigina	2.87	1	*e*P	Pn	23 57 24.7	-0.4
VLY	Voula,Athens	2.98	6	*e*P	Pn	23 57 26.2	-0.4
VLY	Voula,Athens	2.98	6	*e*P	Pn	23 57 26.2	-0.4
VLY	Voula,Athens	2.98	6	*e*P	Pn	23 57 26.2	-0.4
ATH	Athens Observa	3.10	5	*e*P	Pn	23 57 27.4	-0.7
ATH	Athens Observa	3.10	5	*e*P	Pn	23 57 27.4	-0.7
ATH	Athens Observa	3.10	5	*e*P	Pn	23 57 27.4	-0.7
ATHU	Athens Univers	3.10	6	P	Pn	23 57 28.8	+0.7
ATHU	Athens Univers	3.10	6	P	Pn	23 57 28.8	+0.7
LTK	Loutraki	3.15	354	*e*P	Pn	23 57 29.2	+0.3
LTK	Loutraki	3.15	354	P	Pn	23 57 29.1	+0.2
LTK	Loutraki	3.15	354	P	Pn	23 57 29.1	+0.2
GUR	Goura	3.17	345	*e*P	Pn	23 57 29.9	+0.8
GUR	Goura	3.17	345	P	Pn	23 57 29.9	+0.8
GUR				S	Sn	23 58 07.9	+2.3
GUR	Goura	3.17	345	*e*P	Pn	23 57 29.9	+0.8
GUR				S	Sn	23 58 07.9	+2.3
PTL	Penteli	3.18	7	*e*P	Pn	23 57 28.9	-0.4
PTL	Penteli	3.18	7	*e*P	Pn	23 57 28.9	-0.4
PTL	Penteli	3.18	7	*e*P	Pn	23 57 28.9	-0.4
RLS	Riolos of Patr	3.53	334	*e*P	Pn	23 57 34.5	+0.4
RLS	Riolos of Patr	3.53	334	*e*P	Pn	23 57 34.5	+0.4
RLS	Riolos of Patr	3.53	334	*e*P	Pn	23 57 34.5	+0.4
LAKA	Lakka	3.54	342	P	Pn	23 57 34.2	0.0
LAKA				S	Sn	23 58 15.8	+1.0
LAKA	Lakka	3.54	342	P	Pn	23 57 34.2	0.0
LAKA				S	Sn	23 58 15.8	+1.0
DSF	Desfina	3.59	349	P	Pn	23 57 34.8	-0.1
DSF				S	Sn	23 58 16.7	+0.7
DSF	Desfina	3.59	349	P	Pn	23 57 34.8	-0.1
DSF				S	Sn	23 58 16.7	+0.7
TRIZ	Trizonia	3.64	343	P	Pn	23 57 34.3	-1.2
TRIZ				S	Sn	23 58 18.5	+1.4
TRIZ	Trizonia	3.64	343	P	Pn	23 57 34.3	-1.2
TRIZ				S	Sn	23 58 18.5	+1.4
KALE	Kalithea	3.65	344	P	Pn	23 57 35.7	+0.1
KALE	Kalithea	3.65	344	P	Pn	23 57 35.7	+0.1
SLUM		3.71	155	P	Pn	23 57 37.0	+0.5
EFP	Efpalio	3.74	342	*e*P	Pn	23 57 37.4	+0.5
EFP				e*S*	Sn	23 58 16.2	-3.4
EFP	Efpalio	3.74	342	P	Pn	23 57 37.4	+0.5
EFP				S	Sn	23 58 21.1	+1.5
EFP	Efpalio	3.74	342	*e*P	Pn	23 57 37.4	+0.5
EFP				S	Sn	23 58 21.1	+1.5
LKR	Lokris	3.78	355	*e*P	Pn	23 57 37.5	+0.1
LKR	Lokris	3.78	355	*e*P	Pn	23 57 37.5	+0.1
LKR	Lokris	3.78	355	P	Pn	23 57 37.2	-0.2
LKR	Lokris	3.78	355	P	Pn	23 57 37.2	-0.2
VLS	Valsamata	3.99	326	P	Pn	23 57 38.8	-1.5
VLS	Valsamata	3.99	326	P	Pn	23 57 38.8	-1.5
VLS	Valsamata	3.99	326	P	Pn	23 57 38.8	-1.5
ARG	Arkhangelos	4.08	70	*e*P	Pn	23 57 42.5	+0.9
ARG	Arkhangelos	4.08	70	*e*P	Pn	23 57 42.5	+0.9
ARG	Arkhangelos	4.08	70	P	Pn	23 57 42.5	+0.9
ARG	Arkhangelos	4.08	70	*e*P	Pn	23 57 42.5	+0.9
CHOS	Chios island	4.10	31	P	Pn	23 57 41.6	-0.3
CHOS	Chios island	4.10	31	P	Pn	23 57 41.6	-0.3
LKD2	Lefkada island	4.48	331	P	Pn	23 57 46.1	-0.9
LKD2	Lefkada island	4.48	331	P	Pn	23 57 46.1	-0.9
LJBD	Adjabya	4.78	215	*i* P	Pn	23 57 51.0	-0.2
	SNR=45						
THL	Klokotos Trika	4.80	347	*e*P	Pn	23 57 51.5	0.0
THL	Klokotos Trika	4.80	347	P	Pn	23 57 50.9	-0.6
THL	Klokotos Trika	4.80	347	*e*P	Pn	23 57 51.5	0.0
HMAT	Matruh	4.89	140	P	Pn	23 57 52.7	0.0
HMAT				S	Sn	23 58 45.8	-2.2
PAIG	Paliouri	5.04	2	P	Pn	23 57 54.1	-0.6
PAIG	Paliouri	5.04	2	P	Pn	23 57 54.1	-0.6
PAIG	Paliouri	5.04	2	P	Pn	23 57 54.1	-0.6
AKAS	Kas	5.24	73	*i* P	Pn	23 57 55.1	-2.4
AKAS	Kas	5.24	73	*i* P	Pn	23 57 55.1	-2.4
IGT	Igoumenitsa	5.25	333	P	Pn	23 57 56.2	-1.3
IGT	Igoumenitsa	5.25	333	P	Pn	23 57 56.2	-1.3
IGT	Igoumenitsa	5.25	333	P	Pn	23 57 56.2	-1.3
DNZL	Cakiroluk	5.36	57	*i* P	Pn	23 57 59.6	+0.6
DNZL	Cakiroluk	5.36	57	*i* P	Pn	23 57 59.6	+0.6
OUR	Ouranopolis	5.46	5	P	Pn	23 57 59.5	-1.0
OUR	Ouranopolis	5.46	5	P	Pn	23 57 59.5	-1.0
OUR	Ouranopolis	5.46	5	P	Pn	23 57 59.5	-1.0
PLG	Polygyros	5.48	0	P	Pn	23 58 00.2	-0.6
PLG	Polygyros	5.48	0	P	Pn	23 58 00.2	-0.6
PLG	Polygyros	5.48	0	P	Pn	23 58 00.2	-0.6
KZN	Kozani	5.57	347	P	Pn	23 58 01.5	-0.4
KZN	Kozani	5.57	347	P	Pn	23 58 01.5	-0.4
KZN	Kozani	5.57	347	P	Pn	23 58 01.5	-0.4
KEK	Kerkira	5.61	330	P	Pn	23 58 01.0	-1.5
KEK	Kerkira	5.61	330	P	Pn	23 58 01.0	-1.5
KEK	Kerkira	5.61	330	P	Pn	23 58 01.0	-1.5
HORT	Hortiatis	5.71	358	P	Pn	23 58 03.2	-0.7
HORT	Hortiatis	5.71	358	P	Pn	23 58 03.2	-0.7
HORT	Hortiatis	5.71	358	P	Pn	23 58 03.2	-0.7
NEST	Nestorio	5.83	342	P	Pn	23 58 05.5	0.0
NEST	Nestorio	5.83	342	P	Pn	23 58 05.5	0.0
SWA2		5.89	162	P	Pn	23 58 07.0	+0.6
SOH	Sokhos	5.93	360	P	Pn	23 58 06.8	-0.1
SOH	Sokhos	5.93	360	P	Pn	23 58 06.8	-0.1
SOH	Sokhos	5.93	360	P	Pn	23 58 06.8	-0.1
KHAL	Karahalli	6.01	53	*i* P	Pn	23 58 09.2	+1.1
KHAL	Karahalli	6.01	53	*i* P	Pn	23 58 09.2	+1.2
FNA	Florina	6.11	345	P	Pn	23 58 08.2	-1.1
FNA	Florina	6.11	345	P	Pn	23 58 08.2	-1.1
FNA	Florina	6.11	345	P	Pn	23 58 08.2	-1.1
GRG	Griva	6.12	353	P	Pn	23 58 07.8	-1.7
GRG	Griva	6.12	353	P	Pn	23 58 07.8	-1.7
GRG	Griva	6.12	353	P	Pn	23 58 07.8	-1.7
SRS	Serrai	6.23	1	P	Pn	23 58 10.6	-0.4
SRS	Serrai	6.23	1	P	Pn	23 58 10.6	-0.4
SRS	Serrai	6.23	1	P	Pn	23 58 10.6	-0.4
KNT	Kendrikon	6.28	357	P	Pn	23 58 11.7	0.0
KNT	Kendrikon	6.28	357	P	Pn	23 58 11.7	0.0
KNT	Kendrikon	6.28	357	P	Pn	23 58 11.7	0.0
HNAT	Natroun	8.05	129	P	Pn	23 58 35.8	-0.1
AWBH		8.05	143	P	Pn	23 58 35.8	-0.2
HMYD	Mayadein	8.06	127	P	Pn	23 58 36.4	+0.3
KOT	Kottamia	8.67	122	P	Pn	23 58 44.6	+0.1
HSAF	As Saff	8.67	125	P

comp=Z,1.2nm,0.5s,mb4.0,baz=273,slow=7.1,SNR=20
MKAR Makanchi Array 45.13 56 P **P 00 04 52.9 +0.6**
ZALV Zalesovo Beam 46.24 46 P **P 00 05 00.7 -0.3**
comp=Z,0.8nm,0.4s,mb4.0,baz=271,slow=8.5,SNR=5.4
ZALV Zalesovo Beam 46.24 46 P **P 00 05 00.7 -0.3**
SONM Songino Array 60.78 50 P **P 00 06 48.8 +1.3**
comp=Z,0.9nm,0.5s,mb4.2,baz=285,slow=6.9,SNR=8.9
WRA Warramunga Arr 118.00 96 PKP PKPdf 00 15 23.5 +1.2
comp=Z,0.2nm,0.6s,baz=323,slow=1.9,SNR=4.0
WRA Warramunga Arr 118.00 96 PKIKP PKPdf 00 15 23.5 +1.2
ASAR Alice Springs 119.43 100 PKP PKPdf 00 15 25.7 +0.7
comp=Z,0.3nm,0.6s,baz=294,slow=0.9,SNR=4.1
ASAR Alice Springs 119.43 100 PKIKP PKPdf 00 15 25.7 +0.7

*ISCJB **31** 23:58:33.5±2.7,5.°04N±0.°07×127.°36E±0.°09, h226km±28km, mb3.7/15, Error ellipse: s-maj=15.4km s-min=11.1km az=164.9*
*NEIC **31** 23:58:35.7±1.4,5.°05N×127.°38E, h232km±15km, mb4.0/9, Error ellipse: s-maj=7.6km s-min=5.5km az=75.0*
*IDC **31** 23:58:36.9±12.0,5.°06N×127.°41E, h241km±130km, mb3.3/9, mb1 3.5/9, mb1mx3.3/22, mbtmp3.3/9, Error ellipse: s-maj=62.1km s-min=20.9km az=59.0*

ISC 31 23:58:35.6±2.5, 5.°05N±0.°07×127.°39E±0.°09, h230km±26km, n30, σ0°47/30, mb3.7/15, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
KSM	**Kuching**	**17.42**	**259**	*e*P		**P**		**00 02 22.8**	**-0.5**
	3.1nm,0.5s								
YULB	**Yu-li**	**19.16**	**343**	*e*P		**P**		**00 02 42.3**	**+0.2**
GUMO	**Guam**	**19.21**	**63**	*e*P		**P**		**00 02 42.5**	**-0.2**
TPUB	**Ta-pu**	**19.29**	**341**	*e*P		**P**		**00 02 43.4**	**0.0**
	9.5nm,0.6s								
YHNB	**Yeheng**	**20.35**	**344**	*e*P		**P**		**00 02 55.6**	**+0.9**
PMG	**Port Moresby**	**24.38**	**126**	*e*P		**P**		**00 03 33.2**	**+0.1**
	3.3nm,0.5s,mb4.2								
WRA	**Warramunga Arr**	**25.75**	**165**	P		**P**		**00 03 45.6**	**+0.2**
	0.6nm,0.6s,mb3.4,baz=341,slow=12,SNR=9.5								
ASAR	**Alice Springs**	**29.24**	**168**	P		**P**		**00 04 17.1**	**+0.8**
	0.2nm,0.3s,mb3.2,baz=345,slow=7.2,SNR=5.4								
ENH	**Enshi**	**30.24**	**328**	*e*P		**P**		**00 04 24.7**	**-0.5**
MAJO	**Matsushiro**	**32.88**	**16**	*e*P		**P**		**00 04 47.7**	**-0.4**
NWAO	**Narrogin (SRO)**	**38.98**	**194**	P		**P**		**00 05 39.0**	**-0.7**
ASAJ	**Asahikawa**	**41.15**	**17**	*e*P		**P**		**00 05 56.8**	**-0.7**
HIA	**Hailar**	**44.54**	**353**	*e*P		**P**		**00 06 23.4**	**-1.1**
	6.3nm,0.4s,mb4.3								
ULN	**Ulaanbaatar**	**46.09**	**341**	*e*P		**P**		**00 06 37.0**	**+0.4**
	2.0nm,0.6s,mb3.6								
SONM	**Songino Array**	**46.28**	**340**	P		**P**		**00 06 38.0**	**-0.1**
	0.4nm,0.5s,mb3.0,baz=156,slow=9.5,SNR=4.6								
PALK	**Pallekele**	**46.46**	**275**	*e*P		**P**		**00 06 39.7**	**-0.4**
TLY	**Talaya**	**50.50**	**341**	*e*P		**P**		**00 07 10.8**	**+0.6**
PET	**Petropavlovsk**	**54.27**	**23**	*e*P		**P**		**00 07 37.8**	**-0.1**
MKAR	**Makanchi Array**	**56.87**	**324**	P		**P**		**00 07 56.9**	**+0.5**
	0.9nm,0.4s,mb3.7,baz=111,slow=8.0,SNR=17								
YAK	**Yakutsk**	**56.88**	**1**	*e*P		**P**		**00 07 56.3**	**0.0**
TKM2	**Tokmak 2**	**59.21**	**318**	*e*P		**P**		**00 08 12.7**	**0.0**
	1.1nm,0.6s,mb3.7								
AML	**Almayashu**	**60.19**	**316**	*e*P		**P**		**00 08 20.2**	**+0.8**
	0.9nm,0.6s,mb3.6								
KURK	**Kurchatov**	**61.00**	**327**	*e*P		**P**		**00 08 25.1**	**+0.4**
	4.7nm,0.6s,mb4.3								
KURK	**Kurchatov**	**61.00**	**327**	P		**P**		**00 08 24.8**	**+0.1**
	1.4nm,0.4s,mb3.9,baz=124,slow=6.2,SNR=3.1								
BVAR	**Borovoye Array**	**66.59**	**326**	P		**P**		**00 09 01.1**	**0.0**
	1.2nm,0.7s,mb3.6,baz=131,slow=10,SNR=6.0								
BRVK	**Borovoye**	**66.66**	**326**	*e*P		**P**		**00 09 01.4**	**-0.1**
	1.6nm,0.5s,mb3.9								
AKTK	**Aktyubinsk**	**73.05**	**321**	P		**P**		**00 09 40.7**	**+0.2**
AKTO	**Aktyubinsk**	**73.05**	**321**	P		**P**		**00 09 40.7**	**+0.2**
	0.9nm,0.6s,mb3.6,baz=78,slow=9.1,SNR=5.1								
ILAR	**Eielson Array**	**83.64**	**25**	P		**P**		**00 10 38.3**	**+0.3**
	0.4nm,0.5s,mb3.4,baz=247,slow=5.4,SNR=14								
ARCES	**ARCESS Array B**	**89.45**	**340**	P		**P**		**00 11 05.4**	**-0.6**
	2.2nm,0.8s,mb4.0,baz=80,slow=6.5,SNR=3.2								

*ISCJB **31** 23:59:27.7±0.3,18.°55S±0.°06×65.°59E±0.°07, h10km, mb4.3/23, MS3.9/7, Error ellipse: s-maj=9.4km s-min=9.2km az=140.8*
*IDC **31** 23:59:28.0±0.6,18.°60S×65.°54E, h0km, mb4.2/18, mb1 4.3/19, mb1mx4.2/29, mbtmp4.2/19, ML4.1/1, MS3.9/7, Ms1 3.9/7, ms1mx3.6/24, Error ellipse: s-maj=19.1km s-min=15.6km az=73.0*
*NEIC **31** 23:59:29.5±0.3,18.°57S×65.°54E, h10km, mb4.6/11, Error ellipse: s-maj=7.7km s-min=6.8km az=155.0*

ISC 31 23:59:29.6±0.4, 18.°57S±0.°06×65.°55E±0.°07, h10km, n59, σ0°71/47, mb4.3/23, MS3.9/7, 3C-2D, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
RER	**Riviere de l'E**	**9.58**	**253**	*e*Pn			**Pn**	**00 01 43.0**	**-4.7**
	57nm,0.8s								
DGAR	**Diego Garcia**	**12.97**	**32**	Pn			**Pn**	**00 02 33.8**	**-0.3**
ABPO	**Ambohimpanom**	**17.36**	**266**	*e*Pn			**Pn**	**00 03 31.9**	**-0.2**
OPO	**Ambohidratompo**	**17.41**	**267**	P			**Pn**	**00 03 34.5**	**+1.7**
	0.7nm,0.3s,baz=91,slow=12,SNR=6.2								
PALK	**Pallekele**	**29.71**	**32**	P			**P**	**00 05 36.5**	**+0.3**
COCO	**West Island**	**30.79**	**83**	*e*P			**P**	**00 05 45.8**	**+0.1**
KMBO	**Kilima Mbogo**	**32.73**	**299**	*e*P			**P**	**00 06 02.2**	**-0.6**
	4.3nm,1.3s,mb4.2								
LBTB	**Lobatse**	**37.55**	**253**	*e*P			**P**	**00 06 43.7**	**-0.6**
	5.2nm,0.8s,mb4.3								
LBTB	**Lobatse**	**37.55**	**253**	P			**P**	**00 06 43.4**	**-0.8**
	4.0nm,0.8s,mb4.2,baz=108,slow=17,SNR=4.1								
BOSA	**Boshof**	**38.10**	**247**	LR			LR	00 19 15.9	
	comp=Z,125nm,20.2s,MS3.7,baz=164,slow=31								
PSI	**Prapat**	**39.12**	**61**	LR			LR	00 19 05.8	
	comp=Z,316nm,21.0s,MS4.1,baz=213,slow=30								
NWAO	**Narrogin (SRO)**	**48.25**	**118**	*e*P			**P**	**00 08 10.7**	**-0.2**
MAW	**Mawson**	**49.04**	**181**	P			**P**	**00 08 17.1**	**+0.7**
	2.6nm,0.8s,mb4.3,baz=332,slow=9.7,SNR=4.8								
CMAR	**Chiang Mai Arr**	**49.30**	**44**	P			**P**	**00 08 20.9**	**+1.8**
	1.7nm,0.7s,mb4.2,baz=236,slow=8.4,SNR=11								
CMAR						LR	LR	00 25 37.5	
	comp=Z,128nm,21.3s,MS3.9,baz=198,slow=32								
KBL	**Kabul**	**52.92**	**4**	*e*P			**P**	**00 08 44.6**	**-1.4**
CASY	**Casey**	**55.88**	**160**	*e*P			**P**	**00 09 07.7**	**+0.6**
	3.3nm,0.3s,mb4.8								
FITZ	**Fitzroy Crossi**	**56.79**	**100**	*e*P			**P**	**00 09 14.9**	**+0.5**
	3.7nm,0.8s,mb4.5								
FITZ	**Fitzroy Crossi**	**56.79**	**100**	P			**P**	**00 09 13.8**	**-0.6**
	3.4nm,0.8s,mb4.4,baz=250,slow=1.4,SNR=6.0								
EKS2	**Erkin-Say**	**61.40**	**7**	*e*P			**P**	**00 09 45.5**	**-0.3**
	3.0nm,1.0s,mb4.4								
AAK	**Ala-Archa**	**61.45**	**8**	*e*P			**P**	**00 09 46.4**	**+0.1**
	2.6nm,0.8s,mb4.4								
AAK	**Ala-Archa**	**61.45**	**8**	P			**P**	**00 09 47.2**	**+1.0**
	1.0nm,0.3s,mb4.4,baz=209,slow=10,SNR=3.5								
GNI	**Garni**	**61.56**	**342**	*e*P			**P**	**00 09 47.7**	**+0.7**
	10nm,0.9s,mb5.0								
GNI						*e*PcP	PcP	00 10 29.0	+0.3
GNI	**Garni**	**61.56**	**342**	P			**P**	**00 09 48.8**	**+1.8**
	10nm,0.9s,mb4.9,baz=259,slow=2.7,SNR=7.7								
ASAR	**Alice Springs**	**63.43**	**108**	P			**P**	**00 09 59.9**	**-0.1**
	1.2nm,0.8s,mb4.1,baz=257,slow=6.6,SNR=12								
WRA	**Warramunga Arr**	**64.52**	**104**	P			**P**	**00 10 07.5**	**+0.3**
	2.6nm,0.8s,mb4.3,baz=263,slow=6.0,SNR=18								
BRTR	**Keskin Array B**	**65.20**	**333**	P			**P**	**00 10 11.2**	**+0.1**
	0.7nm,0.8s,mb3.8,baz=163,slow=10,SNR=4.4								
MKAR	**Makanchi Array**	**66.79**	**12**	P			**P**	**00 10 21.1**	**-0.1**
	1.9nm,0.8s,mb4.2,baz=217,slow=7.6,SNR=10								
AKTK	**Aktyubinsk**	**69.02**	**355**	P			**P**	**00 10 35.0**	**-0.2**
AKTO	**Aktyubinsk**	**69.02**	**355**	P			**P**	**00 10 35.0**	**-0.2**
	0.7nm,0.7s,mb3.7,baz=135,slow=4.3,SNR=3.1								
KURK	**Kurchatov**	**69.94**	**9**	*e*P			**P**	**00 10 41.0**	**+0.2**
	4.7nm,0.7s,mb4.5								
KURK	**Kurchatov**	**69.94**	**9**	P			**P**	**00 10 40.2**	**-0.6**
	1.8nm,0.5s,mb4.2,baz=207,slow=6.5,SNR=4.2								
TORD	**Torodi Ar. Bea**	**70.39**	**292**	LR			LR	00 38 47.2	
	comp=Z,73nm,18.4s,MS4.0,baz=160,slow=34								
BVAR	**Borovoye Array**	**71.42**	**3**	P			**P**	**00 10 49.4**	**-0.4**
	3.4nm,0.8s,mb4.3,baz=166,slow=7.5,SNR=18								
QSPA	**South Pole Qui**	**71.53**	**180**	*e*P			**P**	**00 10 50.4**	**+0.1**
	4.2nm,0.8s,mb4.4								
QSPA	**South Pole Qui**	**71.53**	**180**	P			**P**	**00 10 50.5**	**+0.3**
	4.0nm,0.7s,mb4.5,baz=270,slow=2.3,SNR=25								
VRI	**Vrincioaia**	**73.15**	**333**	↑*i*P			**P**	**00 11 01.1**	**+0.8**
PLOR	**Plostina**	**73.17**	**333**	↓*i*P			**P**	**00 11 01.0**	**+0.6**
VOIR		**73.56**	**332**	↑*i*P			**P**	**00 11 02.5**	**-0.2**
DBIC	**Dimbokro**	**73.78**	**283**	LR			LR	00 41 21.7	
	comp=Z,98nm,18.1s,MS4.1,baz=281,slow=34								
ZAA0	**Zalesovo Array**	**74.10**	**12**	*e*P			**P**	**00 11 05.0**	**-0.7**
ZALV	**Zalesovo Beam**	**74.10**	**12**	P			**P**	**00 11 05.3**	**-0.4**
ZALV	**Zalesovo Beam**	**74.10**	**12**	P			**P**	**00 11 05.3**	**-0.4**
	5.6nm,0.7s,mb4.6,baz=204,slow=6.1,SNR=28								
SBA	**Scott Base**	**74.31**	**168**	*e*P			**P**	**00 11 05.8**	**-1.0**
ARU	**Arti**	**74.94**	**356**	P			**P**	**00 11 10.3**	**-0.2**
	8.5nm,0.7s,mb4.8								
BZS	**Buzias**	**75.29**	**330**	↓*i*P			**P**	**00 11 11.6**	**-1.2**
SONM	**Songino Array**	**75.55**	**27**	P			**P**	**00 11 15.0**	**+0.8**
SONM						LR	LR	00 43 08.1	
SONM	**Songino Array**	**75.55**	**27**	P			**P**	**00 11 15.0**	**+0.8**
	1.4nm,0.8s,mb3.9,baz=210,slow=6.3,SNR=9.4								
SONM						LR	LR	00 43 08.1	
	comp=Z,70nm,21.3s,MS3.9,baz=236,slow=35								
DRGR		**75.65**	**331**	↑*i*P			**P**	**00 11 15.3**	**+0.5**
KSRS	**Korea Array**	**80.89**	**46**	LR			LR	00 48 58.6	
	comp=Z,38nm,18.7s,MS3.8,baz=242,slow=37								
FINES	**FINESS Array B**	**85.75**	**342**	P			**P**	**00 12 08.7**	**+0.1**
	2.6nm,0.8s,mb4.5,baz=134,slow=11,SNR=5.3								
ESDC	**Sonseca Array**	**86.86**	**314**	P			**P**	**00 12 14.5**	**-0.1**
	0.4nm,0.5s,mb3.9,baz=107,slow=4.2,SNR=6.6								
PMSA	**Palmer Station**	**88.46**	**199**	*e*P			**P**	**00 12 20.8**	**-1.1**
	7.6nm,0.8s,mb5.0								
ULM	**Lac du Bonnet**	**145.09**	**339**	PKPbc		PKPbc		00 19 05.2	-1.4
ULM	**Lac du Bonnet**	**145.09**	**339**	PKPbc		PKPbc		00 19 05.2	-1.4
	2.9nm,0.6s,baz=17,slow=1.5,SNR=4.1								
EDM	**Edmonton**	**145.41**	**359**	*e*PKP		PKPdf		00 19 07.6	-0.1
ECSD	**EROS Data Cent**	**150.77**	**333**	*e*PKPdf		PKPdf		00 19 15.8	-1.0
ECSD				*e*PKPbc		PKPbc		00 19 21.9	-0.4
SWMT	**Swartz Lake**	**151.14**	**359**	*e*PKPdf		PKPdf		00 19 18.2	+1.0
SWMT				*e*PKPbc		PKPbc		00 19 23.0	-0.1
NVAR	**Mina Array Bea**	**159.93**	**9**	PKPab		PKPab		00 20 09.1	+0.6
	0.6nm,0.4s,baz=287,slow=3.7,SNR=3.4								
TXAR	**Lajitas Array**	**165.46**	**319**	PKPab		PKPab		00 20 33.5	+0.4
	0.7nm,0.8s,baz=77,slow=4.1,SNR=8.7								

ISC Computed Locations for August 2008

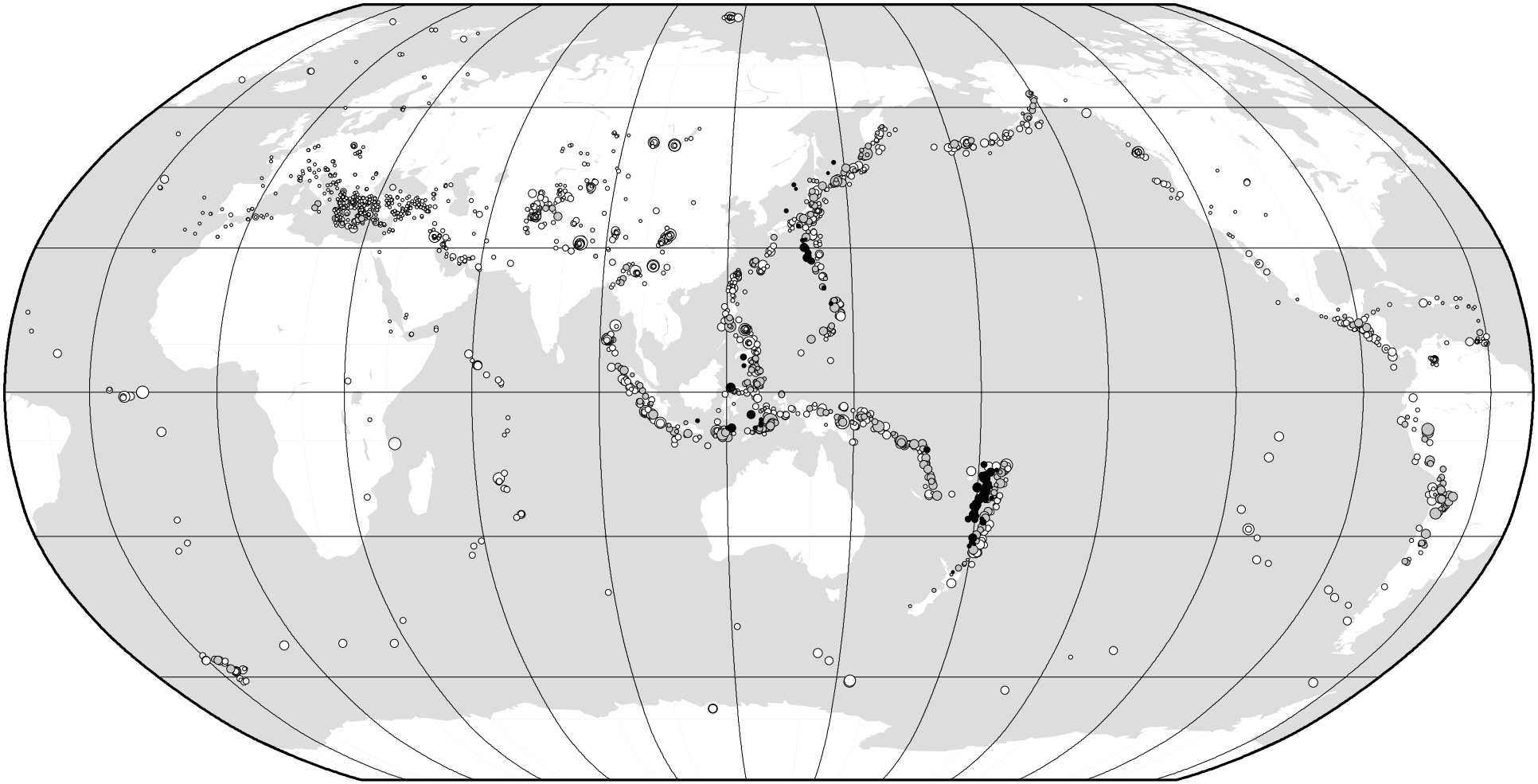

Depth (km)	0-70	70-300	>300
M=8			
M=6.5			
M=4			

Robinson Projection, centred on 0˚N,130˚E

2695 Events